

**Data Acquisition and Processing Report**  
**NOAA Ship RAINIER**  
OPR-P182-RA-03  
SW Alaska Peninsula  
Hydrographic Letter Instructions dated July 3, 2003  
Chief of Party: Commander John W. Humphrey, NOAA

## **A. EQUIPMENT**

This Data Acquisition and Processing Report describes all the RAINIER's survey equipment and the standard methods the equipment is used. Not necessarily all equipment described within this report was used during data acquisition for this project. Data are acquired by the RAINIER and RAINIER survey launches:

| <u>Name</u> | <u>Hull Number</u> |
|-------------|--------------------|
| RAINIER     | S-221              |
| RA1         | 1101               |
| RA2         | 1103               |
| RA4         | 1016               |
| RA5         | 1006               |
| RA6         | 1015               |
| RA7         | 817                |

Vessels RA4, RA5, and RA6 are used to acquire shallow-water multibeam (SWMB) data and sound velocity profiles. Vessels RA1, RA2, and RA7 are used to collect vertical-beam echosounder (VBES) data and detached positions. Any vessel may be utilized for collecting bottom samples. No unusual vessel configurations or problems were encountered on this project. Vessel descriptions and offset measurements are included in Appendix III of this report. In addition a Trimble backpack DGPS system was used for detached positions.

Five different categories of echosounder systems were utilized for project OPR-P182-RA-03. The individual system(s) chosen for use in a given area were decided at the discretion of the Hydrographer using the guidance stated in the Standing Project Instructions, the Hydrographic Letter Instructions, and the Field Procedures Manual, and depended upon the limitations of each system, the bottom topography, the water depth, and the ability of the platform vessel to safely navigate the area. These systems are described in the following section.

### **Sounding Equipment:**

#### **1. Ship Shallow-Water and Intermediate-Depth Multibeam**

RAINIER is equipped with a hull-mounted SeaBeam/Elac (Elac) 1050D MKII, which is a dual frequency (180 kHz, 50 kHz), high-resolution multibeam echo sounder system for shallow- and intermediate-water depths. The Elac 1050D MKII transmits utilizing two narrow beamwidth transducer arrays pinging into 14 sectors. The receiving beamformer generates 3 narrow beams for each sector with a beam width of 1.5° and a spacing of 1.25°. Each fan is comprised of three subfans. Hence, there are 14 sectors x 3 beams x 3 subfans resulting in 126 total beams (at an acquisition swath width of 151°). The high-frequency array (180 kHz) was used in depths of approximately 30 to 300 meters, while the low-frequency array (50 kHz) is used in depths of approximately 300 to 1500 meters.

## **2. RESON 8101 Launch Shallow-Water Multibeam (SWMB)**

Vessels RA5 is equipped with a hull-mounted Reson SeaBat 8101, with option 033, Angle-Independent Imagery, and option 040, Extended Range Projector. The SeaBat 8101 is a 240 kHz multibeam system that measures relative water depths across a 150° swath, consisting of 101 individual 1.5° x 1.5° beams. This system was used to obtain full-bottom coverage in depths generally from 4 meters to 200 meters, with varying range scale values dependent upon the depth of water and across-track slope.

## **3. RESON 8125 Launch Shallow-Water Multibeam (SWMB)**

Vessel RA4 is equipped with a hull-mounted Reson SeaBat 8125, with option 033, Angle-Independent Imagery. The SeaBat 8125 is a 455 kHz multibeam system that uses high frequency focused near-field beam forming to measures relative water depths across a 120° swath, consisting of 240 individual 0.5° x 1.0° beams. This system was used to obtain full-bottom coverage in depths generally from 4 meters to 60 meters, with varying range scale values dependent upon the depth of water and across-track slope. Surface sound velocity was measured using an Odom Digibar Pro, model db1200, velocimeter and digitally input into the Seabat 8125 during acquisition.

## **4. ELAC 1180 Launch Shallow-Water Multibeam (SWMB)**

Vessels RA4 and RA6 are equipped with a hull-mounted Elac 1180, which is a single frequency (180 kHz), multibeam echosounder system for shallow- and intermediate-water depths. The transducer assembly consists of two arrays, one starboard and one port, each mounted at a 38° angle from horizontal. The Elac 1180 transmits utilizing both transducer arrays pinging into 14 sectors. The receiving beamformer generates 3 narrow beams within each sector with a beam width of 1.5° and a spacing of 1.25°. Three subfans are one total fan. Hence, there are 14 sectors x 3 beams x 3 subfans resulting in 126 total beams, at an acquisition swath width of 151°. The Elac 1180 was generally used in depths of 50 to 100 meters with an acquisition swath width of 131° and narrower swath widths to 300 meters.

Multibeam sounding lines are generally run parallel to the contours and at line spacing three times the water depth.

## **5. Launch Vertical-Beam Echosounder (VBES)**

RAINIER launches RA1 through RA6 are equipped with a Knudsen Engineering Limited 320M, which is a dual frequency (100 kHz, 24 kHz) digital recording vertical-beam echo sounder with an analog paper record. The beam widths for the high and low frequency are 7° and 25° respectively. Soundings were acquired in meters for both frequencies, with high frequency utilized as the primary frequency, although in shallow water frequently the low frequency was not used because it distorted the echosounder trace.

RAINIER launch RA7 is equipped with a Ross Laboratories 950 series hydrographic survey system, which is a single frequency (120 kHz) digitally recording vertical beam echo sounder. The beam width for the high frequency is 7° and respectively. Soundings were acquired in meters for both frequencies, with high frequency utilized as the primary frequency.

Vertical-beam echo sounder data were collected in near shore areas to define the four-meter curve and the limit of shallow-water multibeam hydrography, and over offshore reefs and shoals, in depths generally ranging from 4 meters to 20 meters. Sounding lines were run perpendicular to depth contours at a line spacing sufficient to generalize the near shore contours, with splits run at a reduced line spacing to develop

shoal areas that were deemed too shallow for the safe or effective use of a vessel equipped with shallow-water multibeam.

## **6. Side Scan Sonar**

All the SWMB used by the RAINIER provide a low-resolution digital SSS record of the multibeam swath. This SSS imagery is primarily used during processing of the multibeam depth data to aid in determining whether anomalous soundings are true features or noise.

RA-1 tows the Klein 3000 dual frequency towfish. All Klein 3000 side-scan sonar data are recorded digitally from the Series 3000 Transceiver and Processing Unit (TPU) using the ISIS software and archived in the Extended Triton Format (\*.XTF). KLEIN 3000 towfish transmits at 100 kHz and 500 kHz.

Side scan sonar lines are planned to run parallel to bottom contours, spaced according to the range scale appropriate for the water depth. Range scale of 75 meters is selected based on the Homeland Security project instructions. Lines are planned with 15m of overlap with adjacent swaths on either side.

Vessel speed is adjusted to ensure that an object one meter in characteristic size would be detected and clearly imaged across the sonar swath. Confidence checks are performed and noted frequently to ensure this standard of resolution is met.

RA1 is equipped with a 3PS cable counter that measures the side scan towfish tow cable by counting revolutions of the towing block on the J-frame. The length of cable deployed is computed automatically and output to the TPU.

## **7. Diver Least-Depth Gauge**

Not Applicable

## **8. Lead Line**

Lead lines are used to acquire depths over rocks and other features during shoreline acquisition, for features that are too shallow to acquire soundings using echo sounders. RAINIER personnel calibrated lead lines in April 2003. Calibration reports are included in Appendix IV of this report.

### **Positioning Equipment:**

Vessels RA1, RA2, RA7, and RAINIER are equipped with a Trimble DSM212L to measure and calculate position. The DSM212L is an integrated 12-channel GPS receiver and dual-channel DGPS beacon receiver. The beacon receiver can simultaneously monitor two independent U.S. Coast Guard (USCG) DGPS beacons. There are three modes: Auto-Range, which locks onto the beacon nearest the vessel; Auto-Power, which locks onto the beacon with the greatest signal strength; and Manual, which allows the user to select the desired beacon. Additionally, the DSM212L can accept differential correctors (RTCM messages) from an external source such as a user-established DGPS reference station. The following parameters were monitored in real-time through Trimble's TSIPTalker software to ensure position data quality: number of satellites used in the solution, horizontal dilution of precision (HDOP), latency of correctors, and beacon signal strength. The DSM212L was configured in the manual mode to only use correctors from the nearest USCG beacon, to go off-line if the age of DGPS correctors exceeded 20 seconds, and was also configured to exclude satellites with an altitude below 8 degrees.

Vessels RA4, RA5, and RA6 are equipped with a TSS POS/MV Position and Orientation Sensor to measure and calculate position. The POS/MV is a GPS-aided inertial navigation system, which provides a blended position solution derived from both an Inertial Motion Unit (IMU) and an integrated GPS receiver. The IMU

and GPS receiver are complementary sensors, and data from one are used to filter and constrain errors from the other, resulting in higher position accuracy and fewer errors than either system alone. Position accuracy is displayed in real time by the POS/MV software and was monitored to ensure that positioning accuracy requirements as outlined in the NOS Hydrographic Surveys Specifications and Deliverables were not exceeded. In addition, the POS/MV software displays HDOP and number of satellites used in position computation. Data acquisition was generally halted when an HDOP of 2.5 was exceeded or the number of satellites available dropped below four. However, because positional accuracy can be maintained by the POS/MV through short GPS outages with the help of the IMU, data acquisition was not halted during short periods of time when the HDOP and number of satellites used exceeded stated parameters.

**Software:**

Reson 8101 and 8125 Shallow-water multibeam (SWMB) echosounder data, along with position and attitude data from the POS/MV, were recorded using Triton-Elics' ISIS software version 6.06 and logged in the Extended Triton Format (XTF). Elac 1050 and 1180 Shallow-water multibeam (SWMB) echosounder data, along with position and attitude data were recorded using Elac's Hydrostar software version 3.4.0 and logged in the Hydrostar exchange format (XSE). SWMB data were processed using the CARIS Hydrographic Information Processing System (HIPS) and Hydrographic Data Cleaning System (HDCS) software version 5.3 for windows environment.

All VBES data were acquired using Coastal Oceanographic's HYPACK MAX version 2.12, in the "RAW" format. VBES data were processed using CARIS HIPS for Windows NT version 5.3.

Detached positions (DPs) were acquired with HYPACK MAX in the format of target (".tgt") files and processed with "Pydro" version 3.6 or later version supplied by the Hydrographic Systems and Technology Program (HSTP) N/CS11.

HYPACK MAX was also used for vessel navigation and line tracking during acquisition of both SWMB and VBES data.

Sound velocity profiles were computed from raw pressure, temperature, and conductivity measurements using VelocWin 8.21 supplied by the NOS Hydrographic Systems and Technology Programs N/CS11 (HSTP).

A complete list of software and versions is included in Appendix I.

**B. DATA PROCESSING AND QUALITY CONTROL****Shallow-Water Multibeam Data**

Shallow-water multibeam data were monitored in real-time using the 2-D and 3-D data display windows in Isis, the on-screen display for the Reson SeaBat 8101, 8125 sonars, and the Elac HydroStar Online bathymetry data display for the Elac 1180 sonar. Adjustable user parameters used common for all sonars are range scale, power, gain, and pulse width. In addition the swath width and bottom slope type are additional user parameters for the Elac 1050D and 1180 used during acquisition. These parameters were adjusted as necessary to ensure the best data quality. Additionally, vessel speed was adjusted as necessary, and in accordance with the NOS Specifications and Deliverables and Draft Standing Project Instructions, to ensure the required along-track coverage for object detection.

Following acquisition, Reson shallow-water multibeam data were converted from XTF to HDCS using CARIS HIPS and SIPS Conversion Wizard, XTF version 5.3.2.2. Elac shallow-water multibeam data were converted from XSE to HDCS using the CARIS HIPS and SIPS Conversion Wizard, Elac version 5.3.2.1,

the CARIS xtfToHDCS program, and initially reviewed with the HDCS program SwathEdit. All soundings beyond a maximum angle of 60° off-nadir were rejected in accordance with the Draft Standing Project Instructions to reduce the noise and refraction errors possible in these outer beams. Soundings with poor quality flags, 0 for Reson and 3 for Elac system, were also rejected. All soundings were reviewed and obvious depth fliers were identified and manually flagged as “rejected”. Vessel positioning and attitude data from each system were similarly displayed and manually cleaned. Fliers or gaps in positioning and attitude data were rejected and interpolated for small periods in time and outright rejected for larger periods in time in which the characteristic of the curve was ambiguous. Elac gyro data was later converted using the XSE to HDCS version 5.3.3.1 (hotfix 3) to correct for anomalous gyro data time-stamping. Additionally, when it was felt that the quality of the data was reduced due to environmental conditions such as sea conditions or extreme variance in sound velocity, data were filtered to a lesser swath width to ensure data quality. Specific data quality factors are discussed in the Descriptive Report for each survey.

After review and cleaning in Swath Editor, depth, position and attitude data were merged with sound velocity, tide, vessel offset, and dynamic draft correctors to compute the corrected depth and position of each sounding. All soundings were then again reviewed, spatially referenced with the CARIS HIPS and SIPS Subset Editor. Data were compared with adjacent lines and crosslines, for systematic errors such as tide or sound velocity errors. Questionable soundings were also compared with adjacent or overlapping data for confirmation or further rejection. Depth fliers and noisy data that were not rejected in SwathEdit were rejected in Subset Mode.

Sun-illuminated Digital Terrain Model images (DTMs) were created to demonstrate coverage and to further check for systematic errors such as tide, sound velocity, or attitude and/or timing errors. DTMs for quality-assurance purposes were created using CARIS NT and a 2-meter 9-pixel resolution.

A statistical analysis of all SWMB data is performed using the CARIS HIPS Quality Control Report function. Each SWMB system either ran two sets of orthogonal lines at the deeper end of its designed depth range or one set of lines over a reference surface for a beam-by-beam comparison in order to statistically determine the accuracy of each beam. Beams not meeting accuracy requirements as described in the NOS Hydrographic Surveys Specifications and Deliverables were further filtered and rejected. Results from each system’s QCR can be found in Appendix IV. Crosslines of greater than 5% of mainscheme lines were run on each survey and manually compared to the mainscheme lines in CARIS subset mode for an additional qualitative QC comparison that are discussed in the descriptive report for each survey.

### **Vertical-Beam Echosounder Data**

Following acquisition, vertical-beam echosounder data were converted from HYPACK to the CARIS HDCS format using the CARIS HIPS Conversion Wizard for Windows NT. VBES data were processed using CARIS HIPS Single-Beam Editor (“SBEdit”). Obvious fliers were rejected, and analog fathograms of vertical-beam echo soundings were compared graphically with digital data in SBEdit to ensure that peaks of shoals and abrupt changes in slope were properly digitized by the echosounder. After review and cleaning in SBEdit, were merged using the HDCS program HDCSLineMerge, with sound velocity, tide, vessel offset, and dynamic draft correctors to compute the corrected depth and position of each VBES sounding. DTMs of VBES soundings were created using Vertical Mapper to further inspect for fliers and to look for systematic errors such as tide errors.

### **Data Decimation and Field Sheet Production**

All VBES and SWMB soundings were combined in the same HDCS project. To produce the final reduced data set represented by the final field sheet, all non-rejected soundings having passed all other quality-assurance checks were imported into a Pydro Preliminary Smooth Sheet (PSS) file using shoal-biased “line-by-line” binning using a cell size of 1.5 millimeters x 1.5 millimeters at survey scale. The resultant thinned

data were then excessed in Pydro using a 3-millimeter character size, ensuring that the largest spacing between selected soundings would not exceed 5 millimeters at survey scale. Final selected soundings were exported to MapInfo from Pydro, and plotted in MapInfo at a 2-millimeter character size. Data processing flow diagrams are included in Appendix II of this report.

## C. CORRECTIONS TO ECHO SOUNDINGS

### Sound Velocity

Sound velocity profiles were acquired with SeaBird Electronics SeaCat SBE19 and SBE 19Plus Conductivity, Temperature, and Depth (CTD) profilers (S/N 219, 281, 4039, 4114, and 4343). Raw conductivity, temperature, and pressure data were processed using the program VelocWin version 8.21 which generated sound velocity y profiles for CARIS. Calibration reports and dates of the SeaCat profilers are included in Appendix IV of this report.

The speed of sound through the water was determined by a minimum of one cast every four hours of SWMB acquisition, in accordance with the Standing Project Instructions and the NOS Hydrographic Surveys Specifications and Deliverables Manual. Casts were conducted more frequently when changing survey areas, or when it was felt that conditions, such as a change in weather, tide, or current, would warrant additional sound velocity profiles.

### Vessel Offsets and Dynamic Draft Correctors

The following table shows when the vessel offsets and dynamic draft correctors used for this survey were last determined:

| Vessel No. | Date of Static Draft and Transducer Offset Measurements | Method of Settlement and Squat Measurement | Date of Settlement and Squat Measurement | Location of Settlement and Squat Measurement |
|------------|---------------------------------------------------------|--------------------------------------------|------------------------------------------|----------------------------------------------|
| RAINIER    | March 1999                                              | OTF*                                       | March 1999                               | Port Angeles, WA                             |
| RA1        | March 2001                                              | Rod leveling                               | April 2003                               | Deep Bay, AK                                 |
| RA2        | May 2000                                                | Rod leveling                               | March 2003                               | Shilshole Bay, WA                            |
| RA4        | May 2003                                                | Rod leveling                               | March 2003                               | Shilshole Bay, WA                            |
| RA5        | May 2000                                                | Rod leveling                               | April 2003                               | Deep Bay, AK                                 |
| RA6        | May 2000                                                | Rod leveling                               | March 2003                               | Shilshole Bay, WA                            |
| RA7        | May 2000                                                | Rod leveling                               | April 2003                               | Fish Bay, AK                                 |

\*OTF: "On-the-fly" GPS techniques

In March 2002 settlement and squat observations were taken on the RAINIER using a fixed-point method. Although less accurate it showed the values collected in March of 1999 using OTF techniques are still valid and the 1999 values have continued to be used.

Sensor offset and dynamic draft values were applied to Detached Positions in Pydro and to VBES and SWMB data in CARIS during post-processing. These values are stored in CARIS Vessel Configuration Files (VCFs). Vessel offset diagrams and dynamic draft tables are included in Appendix III of this report. The VCFs themselves are submitted with the digital HDCS data.

**Heave, Pitch, Roll and Heading, Including Biases and Navigation Timing Errors**

SWMB launches (Vessels RA4, RA5, and RA6) utilized a TSS POS/MV Model 320 Position and Orientation System – Marine Vessel (POS/MV), which provides accurate navigation and attitude data to correct for the effects of heave, pitch, roll and heading. The POS generates attitude data in three axes (roll, pitch and heading) to an accuracy of 0.05° or better. Heave measurements supplied by the POS/MV maintain an accuracy of 5% of the measured vertical displacement for movements that have a period of up to 20 seconds. The POS/MV delivers heading measurements by two distinct methods. First, the Dynamic Heading Alignment determines the vessels heading by using the data supplied by the Internal Measurement Unit (IMU) and GPS receivers to achieve heading that is, at best, accurate to within 0.25°. This method suffers from drift but is relatively unaffected by noise. Second, the GPS Azimuth Measurement System (GAMS) determines the geographic vector between two GPS antennas fixed to the vessel by comparing the phase of satellite signals they receive. The error from this method is largely due to noise, but exhibits no drift. The POS/MV uses the advantages of each method to compensate for the disadvantages of the other to arrive at an optimal accuracy of 0.05°.

Heave, roll, pitch, and navigation latency biases were determined in accordance with NOS Hydrographic Specifications and Deliverables. SWMB vessel offsets, dynamic draft correctors, and system bias values are contained in CARIS Vessel Configuration Files (VCFs) and were created using the program Vessel Editor in CARIS. These offsets and biases are applied to the sounding data during processing in CARIS. The VCFs and Patch Test data are included with the digital HDCS data.

**Water Level Correctors**

Soundings were reduced to Mean Lower-Low Water (MLLW) using unverified observed tide data for station Sand Point, AK (945-9450) obtained from the Center for Operational Oceanographic Products and Services (CO-OPS) web site through TideBot. These data were used in creating the observed tide corrector table (\*.tid file) in CARIS. Raw observed water level data from the primary station in Sand Point were applied to the survey depths in CARIS using height ratio and time correctors from the CO-OPS provided zone definition file (\*.zdf).

Refer to the Horizontal and Vertical Control Report for specific information on the tidal gauges used in during this project and individual Descriptive Reports for further information regarding water level correctors specific to each survey.

**D. APPROVAL**

As Chief of Party, I have ensured that standard field surveying and processing procedures were used during this project in accordance with the Hydrographic Manual, Fourth Edition; Hydrographic Survey Guidelines; Field Procedures Manual, and the NOS Hydrographic Surveys Specifications and Deliverables Manual, as updated for 2003.

I acknowledge that all of the information contained in this report is complete and accurate to the best of my knowledge.

Approved and Forwarded:

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John W. Humphrey  
Commander, NOAA  
Commanding Officer

In addition, the following individual was also responsible for overseeing data acquisition and processing of this project:

Field Operations Officer:

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Richard A. Fletcher  
Lieutenant Commander, NOAA

Chief Survey Technician:

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James Jacobson  
NOAA

## APPENDIX I

### Software Versions and Hardware Serial Numbers

| <b>Software</b>                                 | <b>Version</b> |
|-------------------------------------------------|----------------|
| <b>Acquisition</b>                              |                |
| Hypack Max                                      | 2.12           |
| Survey Data Acquisition Program                 | 4.11.3.0       |
| POS/MV Controller v2                            | 3.0            |
| POS/MV Controller v3                            | 1.3            |
| Isis                                            | 6.06           |
| Hydrostar (VN RAINIER, RA4, RA6)                | 3.4.0          |
| Sonar_Pro (for Klein 3000)                      | 6.4            |
| <b>Processing</b>                               |                |
| <b>HYDROSOFT</b>                                |                |
| Pydro                                           | 3.3.1 – 3.7.1  |
| HP Tools                                        | 10.9.1         |
| KapConv                                         | 1.3            |
| Projman                                         | 2.0            |
| MapInfo                                         | 6.5            |
| Vertical Mapper                                 | 3.0            |
| Exceed                                          | 7.1.1          |
| CARIS HIPS/SIPS                                 | 5.3            |
| CARIS GIS                                       | 4.4a           |
| <b>Utilities</b>                                |                |
| Tides and Currents for Windows                  | 2.5b           |
| <b>Horizontal Control</b>                       |                |
| Starlink Initialization                         | 5.00.3716      |
| Probeacon                                       | 3.0            |
| TSIP Talker                                     | 2.00           |
| DSX/National Geodetic Society DSData Extraction | 6.04           |
| GPPS/Geodetic Post Processing Software          | 5.0.00         |
| Ashtech Mission Planner                         | 3.0            |
| Fillnet                                         | 3.1            |
| <b>Vertical Control</b>                         |                |
| <b>Sound Velocity</b>                           |                |
| VelocWin                                        | 8.21           |
| SBE SeaTerm                                     | 1.09           |
| <b>Leveling</b>                                 |                |
| Newiz                                           | 1.2            |
| <b>Tides</b>                                    |                |
| LogPlot                                         | 1.3            |
| LogStats                                        | 1.1            |
| LogPrn Convert                                  | 1.6            |

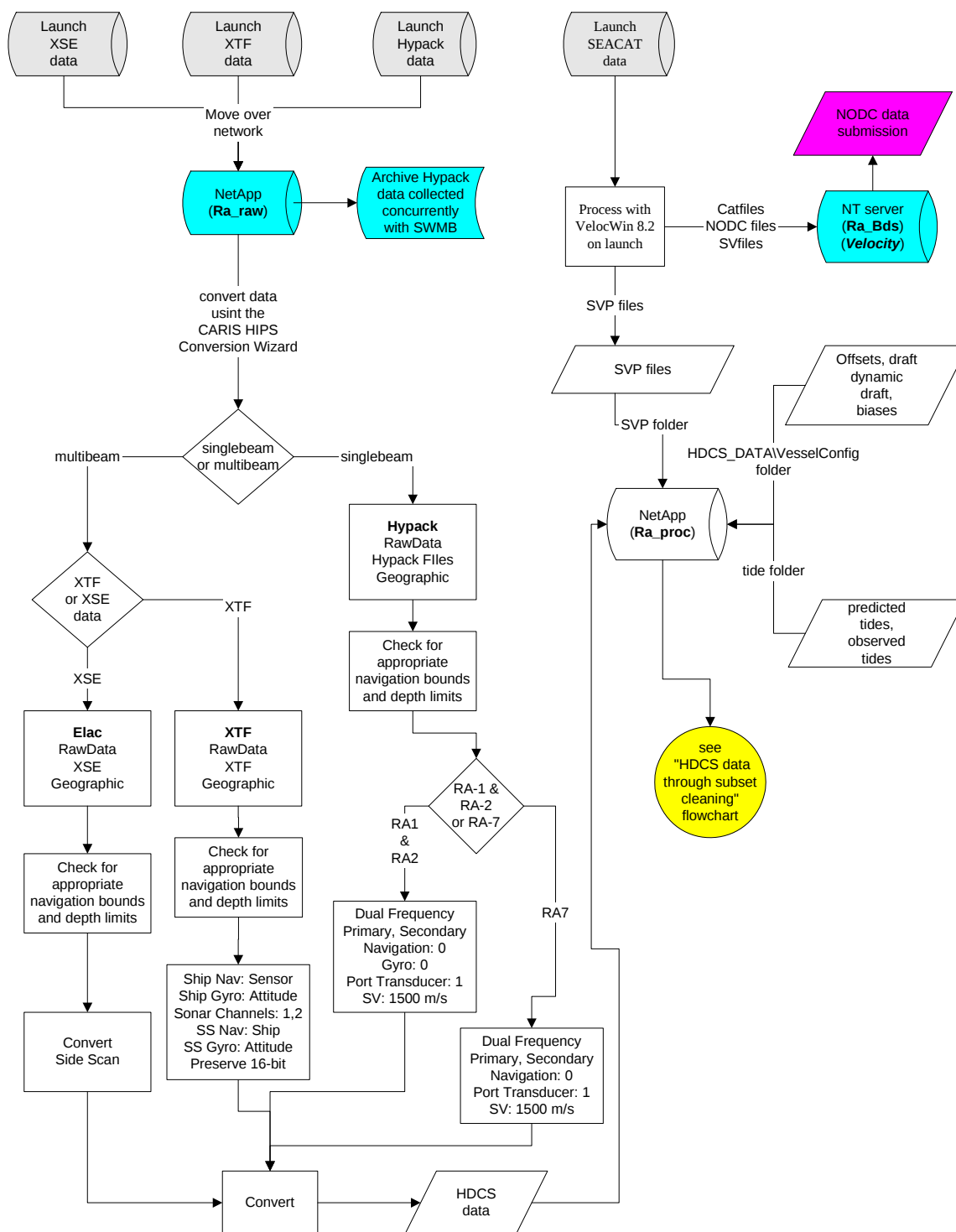
## Equipment

| Description                                          | Vessel  | Serial Number |
|------------------------------------------------------|---------|---------------|
| Knudsen Engineering Limited 320M Marine Echosounders | Spare   | K96388        |
|                                                      | RA2     | K98579        |
|                                                      | RA5     | K96387        |
|                                                      | RA1     | K99323        |
|                                                      | RA4     | K99322        |
|                                                      | RA6     | K99324        |
| RESON 8101 SONAR Processor                           | RA5     | 31676         |
| RESON 8125 Sonar Processor                           | RA4     | 29979         |
| Seabeam/Elac 1180                                    | RA6     | 76            |
|                                                      | RA4     | 77            |
|                                                      | RAINIER | 62            |
| Trimble DSM212L                                      | RA0     | 0220157923    |
|                                                      | RA1     | 0220159717    |
|                                                      | RA2     | 0020159719    |
|                                                      | Spare   | 0220157914    |
| TSS Position & Orientation System POS/MV             | RA5     | 021           |
| TSS Position & Orientation System POS/MV V3          | RA6     | 304           |
|                                                      | RA4     | 295           |
| TSS IMU                                              | RA4     | 131           |
|                                                      | RA5     | 028           |
|                                                      | RA6     | 037           |
| DMS-O5                                               | RAINIER | 002062        |

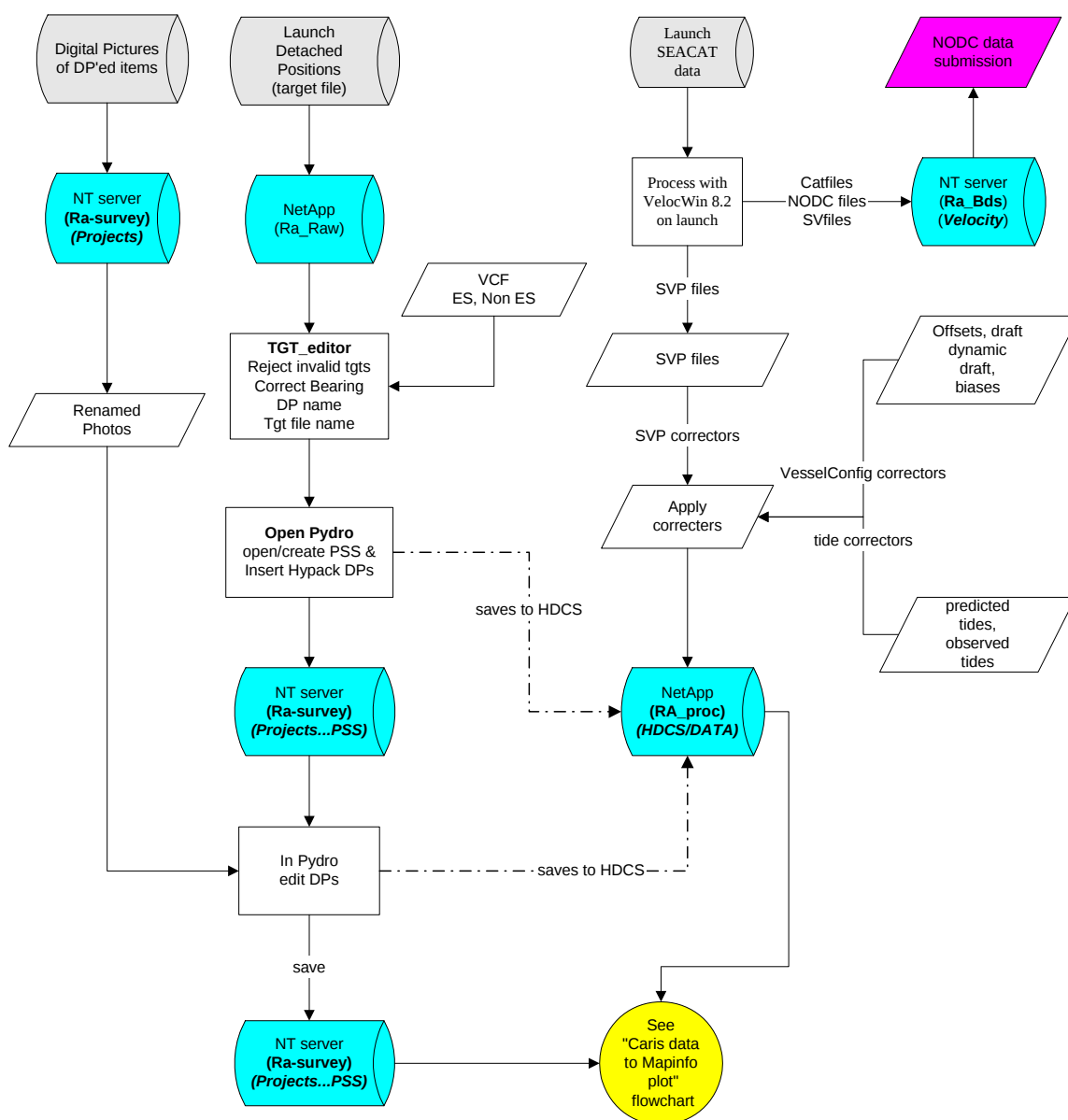
## **APPENDIX II**

### **Data Processing Flow Diagrams**

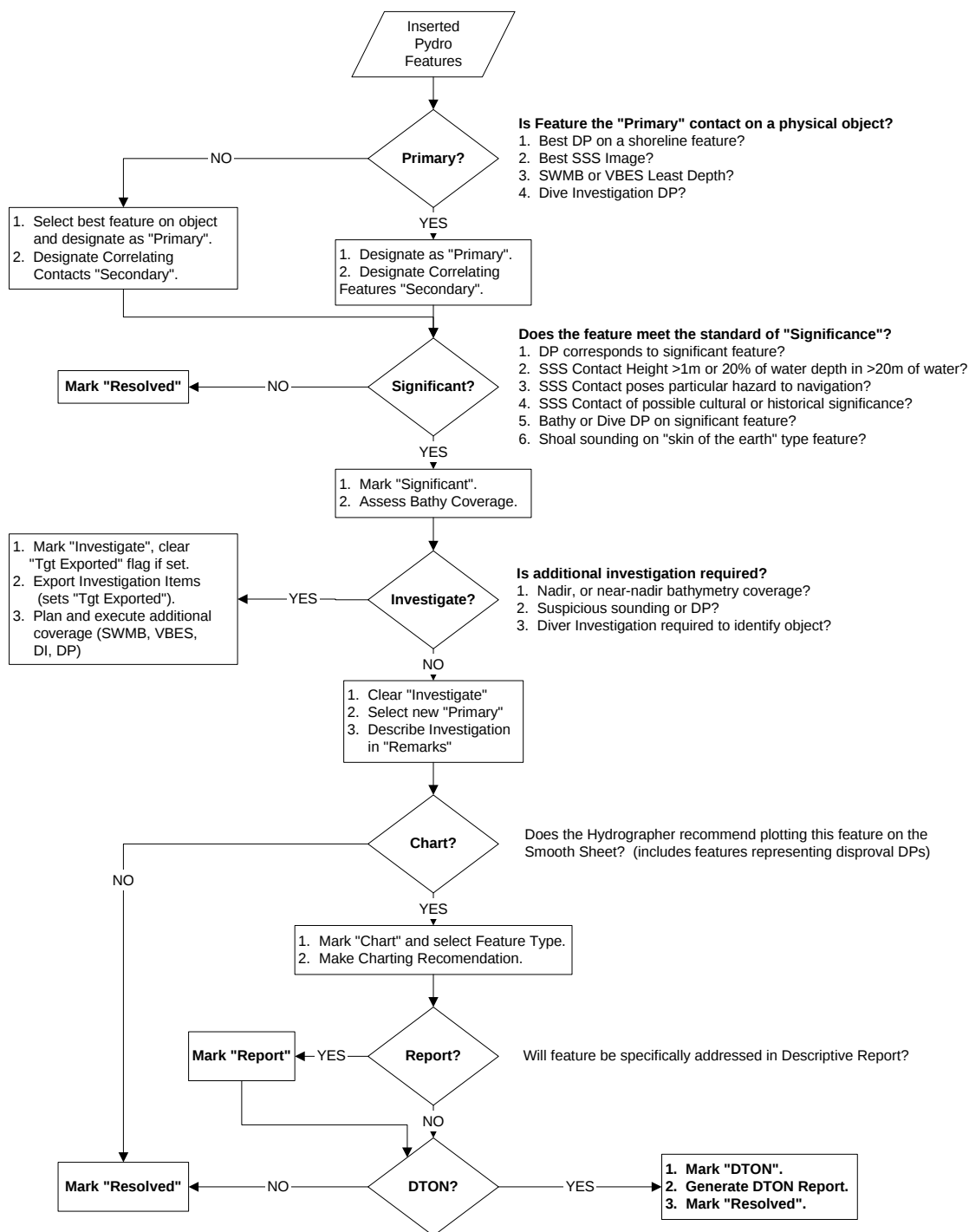
## Raw sounding data to HDCS



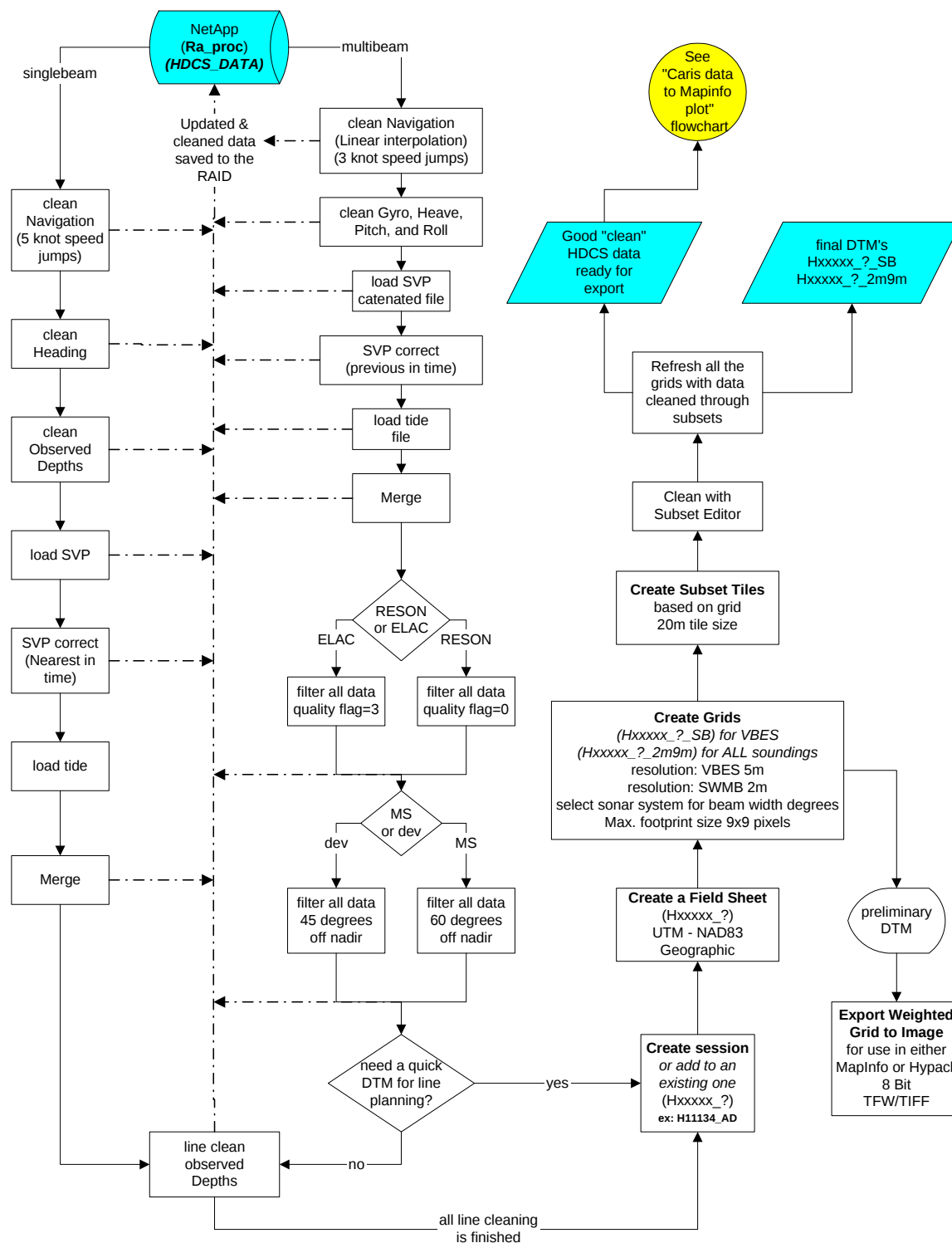
## Detached Position processing (Raw DP's to Pydro)



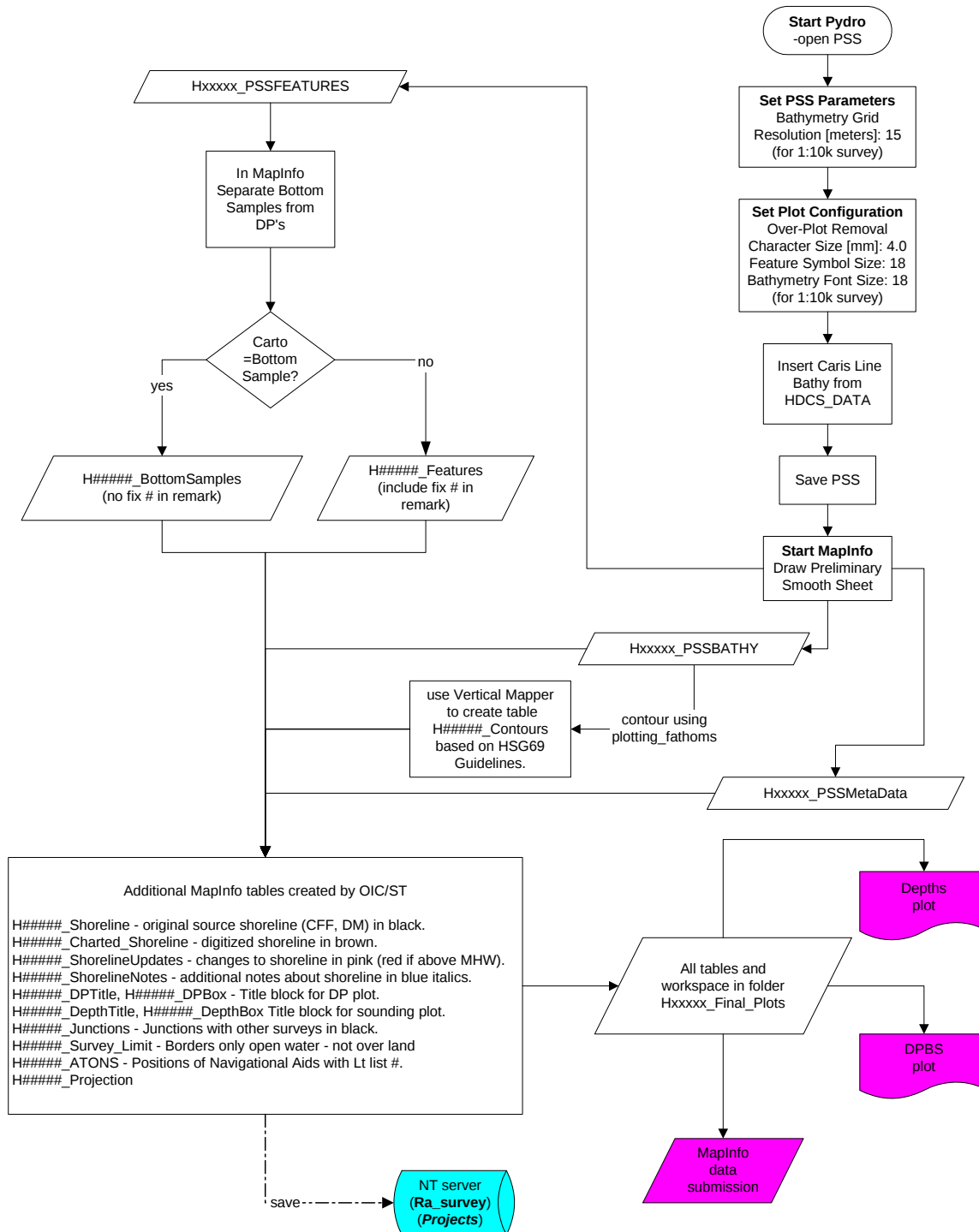
# Detached Position processing in Pydro



# HDCS data through subset cleaning



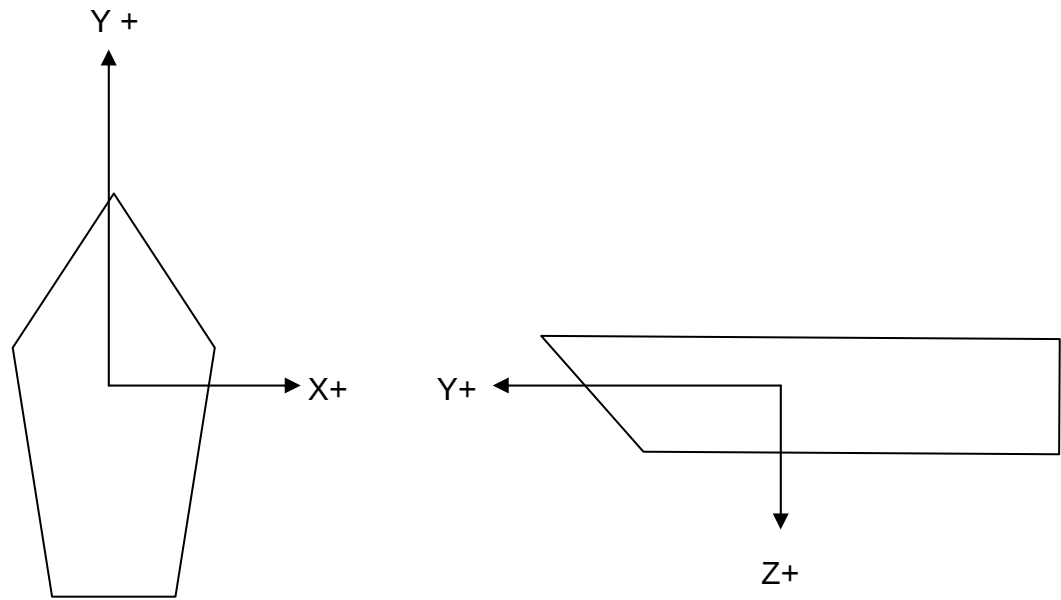
# Caris data to MapInfo plot



## **APPENDIX III**

### **Vessel Offset Diagrams**

## CARIS Offset Sign Conventions



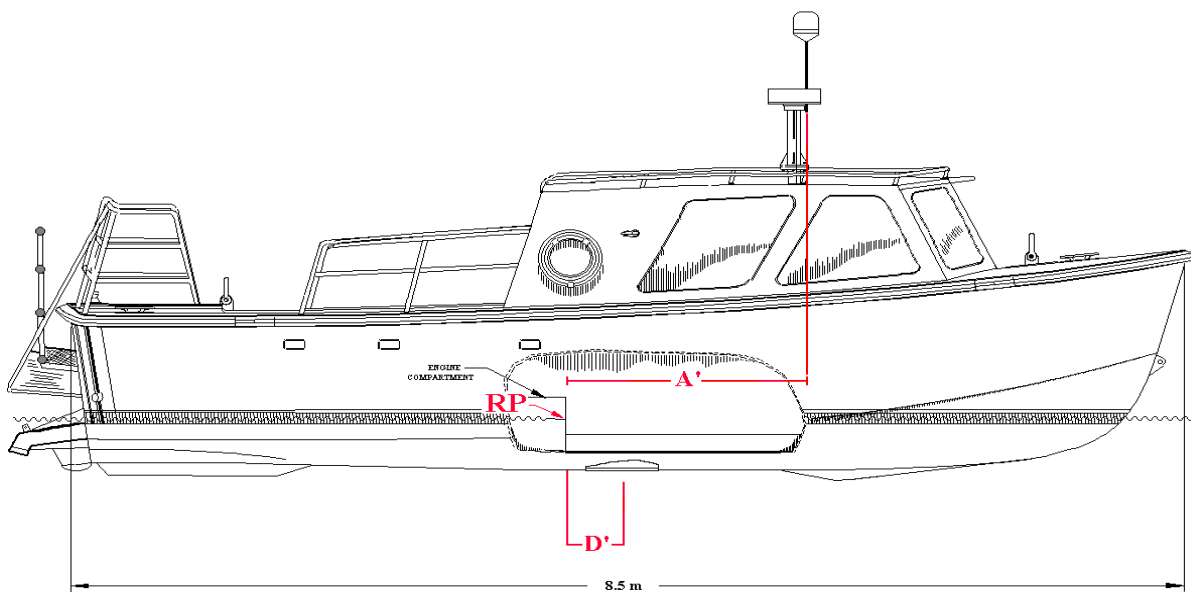
## RA1 (hull 1101) Vessel Offset Measurements

9/3/2003

Description: Aluminum Jensen survey launch, jet drive

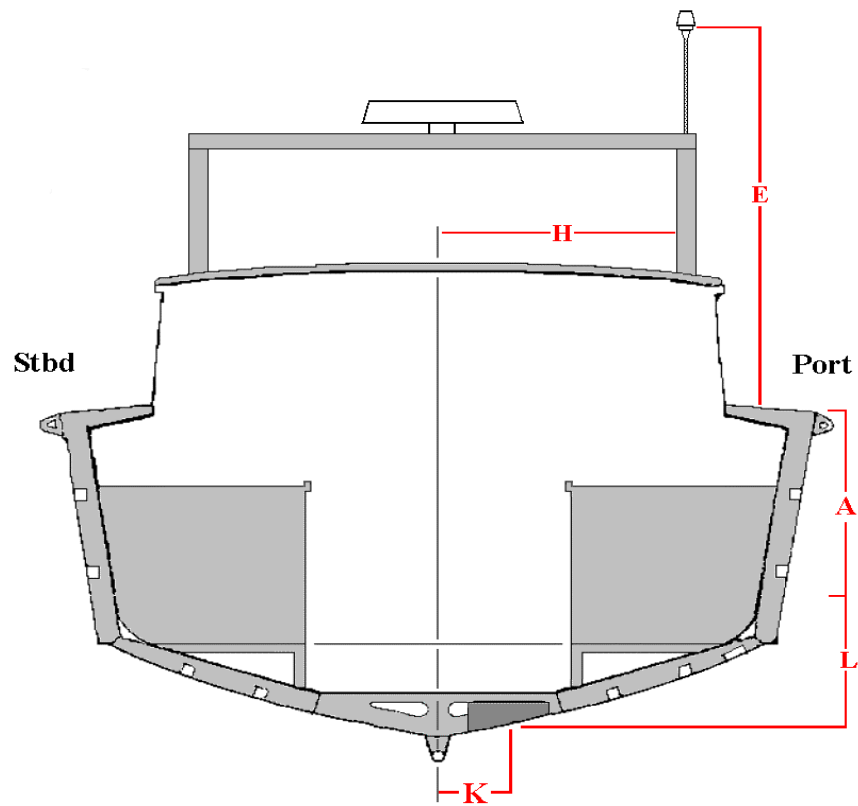
LOA: 29 feet

Weigh: 14,000 lbs



\* Assume RP at waterline &amp; centerline of engine bulkhead

|                       |    | cm.   | date<br>measured |
|-----------------------|----|-------|------------------|
| RP to GPS             | A' | 180.0 | 3/21/01          |
| RP to VBES transducer | D' | 45.5  | 3/21/01          |



|                               |   | cm.   | date measured |
|-------------------------------|---|-------|---------------|
| Waterline to deck             | A | 101.0 | 3/21/01       |
| Deck to bottom of GPS         | E | 254.0 | 3/21/01       |
| Centerline to GPS             | H | 81.0  | 3/21/01       |
| Centerline to VBES transducer | K | 26.0  | 3/21/01       |
| Waterline to VBES transducer  | L | 43.0  | 3/21/01       |

**CARIS** configuration is based on a Reference Position (RP)

RP is assumed to be centerline, at the waterline, on the forward side of the bulkhead separating the engine compartment from the cabin

**X** athwartship distance [+ starboard]  
**Y** along-ship distance [+ towards bow]  
**Z** vertical distance [+ into water]

|          |                                   |       |              |
|----------|-----------------------------------|-------|--------------|
| <b>X</b> | RP to VBES transducer (equals K)  | -0.26 | Depth sensor |
|          | RP to GPS (equals H)              | -0.81 |              |
| <b>Y</b> | RP to VBES transducer (equals D') | 0.46  | NAV          |
|          | RP to GPS (equals A')             | 1.80  |              |
| <b>Z</b> | RP to VBES transducer (equals L)  | 0.43  |              |
|          | RP to GPS (equals A + E)          | -3.55 |              |

### CARIS R1SB\_2003 VCF Summary

| Singlebeam | Date     | Time Error | X     | Y    | Z    |
|------------|----------|------------|-------|------|------|
|            | 2002-001 | 0.00       | -0.26 | 0.46 | 0.43 |

| Navigation | Date     | Time Error | X     | Y    | Z     |
|------------|----------|------------|-------|------|-------|
|            | 2002-001 | 0.00       | -0.81 | 1.80 | -3.55 |

#### Dynamic Draft

| Speed | 0.00 | 3.50 | 4.80 | 5.60 | 6.30 | 6.80 | 7.40 | 8.00 | 8.90 | 9.50  |
|-------|------|------|------|------|------|------|------|------|------|-------|
| Draft | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.05 | 0.02 | -0.02 |

| SVP 1 | Date     | Top X | Top Y | Top Z | Bot X | Bot Y | Bot Z | Roll | Pitch | Yaw  |
|-------|----------|-------|-------|-------|-------|-------|-------|------|-------|------|
|       | 2002-001 | -0.26 | 0.46  | 0.43  | -0.26 | 0.46  | 0.43  | 0.00 | 0.00  | 0.00 |

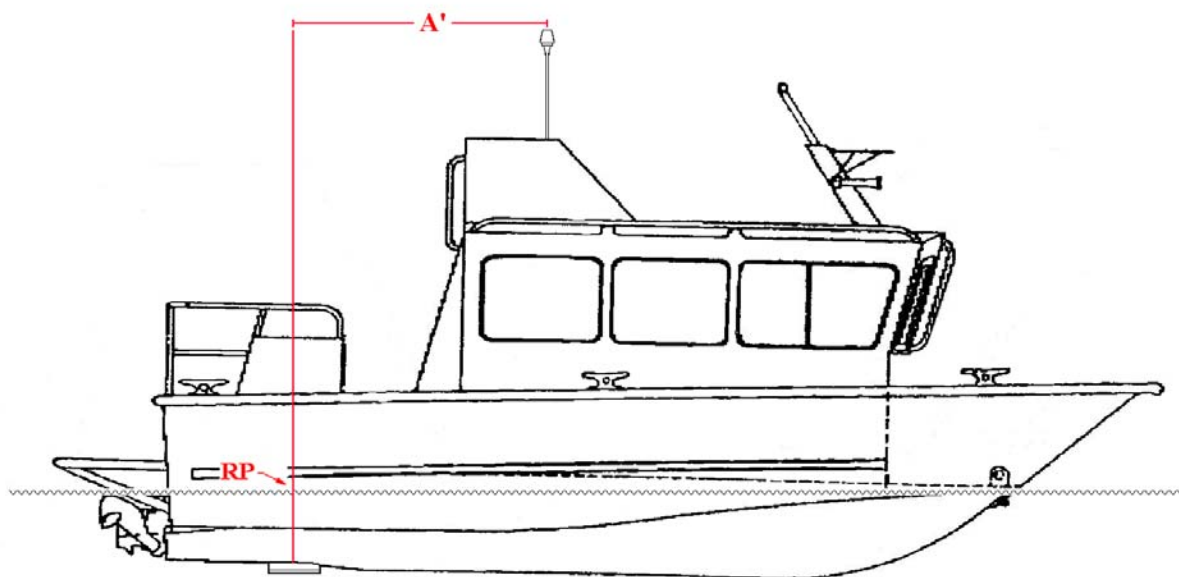
## RA2 (hull 1103) Vessel Offset Measurements

9/2/2003

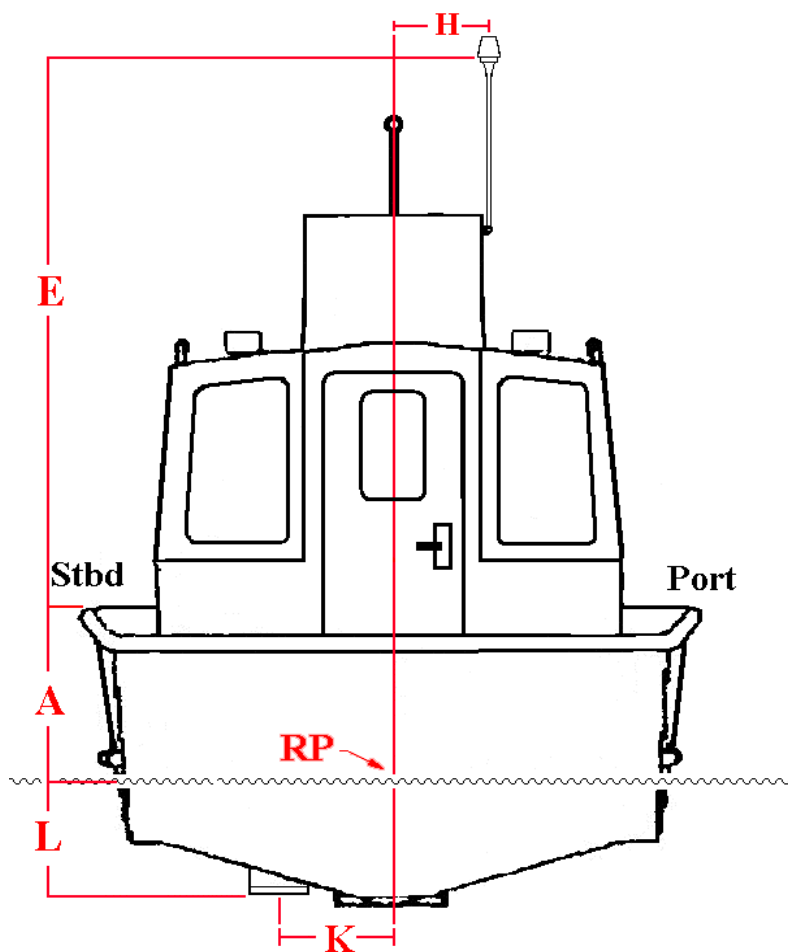
Description: Munson aluminum work boat, jet drive

LOA: 28 feet

Weigh: 10,200 lbs



|                       |    | cm.   | date<br>measured |
|-----------------------|----|-------|------------------|
| RP to GPS             | A' | 196.0 | Mar-98           |
| RP to VBES transducer |    | 0.0   | n/a              |



|                               |   | date  |          |
|-------------------------------|---|-------|----------|
|                               |   | cm.   | measured |
| Waterline to deck             | A | 87.5  | Mar-98   |
| Deck to bottom of GPS         | E | 265.0 | May-00   |
| Centerline to GPS             | H | 49.0  | May-00   |
| Centerline to VBES transducer | K | 62.0  | May-00   |
| Waterline to VBES transducer  | L | 53.0  | Mar-98   |

**CARIS** configuration is based on a Reference Position (RP)  
In RA-2 the RP is assumed to be centerline, at the waterline,  
above the transducer

**X** athwartship distance [+ starboard]  
**Y** along-ship distance [+ towards bow]  
**Z** vertical distance [+ into water]

|          |                                   |       |              |
|----------|-----------------------------------|-------|--------------|
| <b>X</b> | RP to VBES transducer (equals K)  | 0.62  | Depth sensor |
|          | RP to GPS (equals H)              | -0.49 |              |
| <b>Y</b> | RP to VBES transducer (equals D') | 0.00  | NAV          |
|          | RP to GPS (equals A')             | 1.96  |              |
| <b>Z</b> | RP to VBES transducer (equals L)  | 0.53  |              |
|          | RP to GPS (equals A + E)          | -3.53 |              |

### CARIS R2SB\_2003 VCF Summary

| Singlebeam | Date     | Time Error | X    | Y    | Z    |
|------------|----------|------------|------|------|------|
|            | 2003-110 | 0.00       | 0.62 | 0.00 | 0.53 |

| Navigation | Date     | Time Error | X     | Y    | Z     |
|------------|----------|------------|-------|------|-------|
|            | 2003-110 | 0.00       | -0.49 | 1.96 | -3.53 |

#### Dynamic Draft

| Speed | 0.00 | 2.00 | 3.80 | 4.90 | 6.00 | 6.90 | 7.80 | 8.70 | 9.60 | 10.40 |
|-------|------|------|------|------|------|------|------|------|------|-------|
| Draft | 0.00 | 0.01 | 0.03 | 0.05 | 0.10 | 0.15 | 0.20 | 0.24 | 0.28 | 0.30  |

| SVP 1 | Date     | Top X | Top Y | Top Z | Bot X | Bot Y | Bot Z | Roll | Pitch | Yaw  |
|-------|----------|-------|-------|-------|-------|-------|-------|------|-------|------|
|       | 2003-110 | 0.62  | 0.00  | 0.53  | 0.62  | 0.00  | 0.53  | 0.00 | 0.00  | 0.00 |

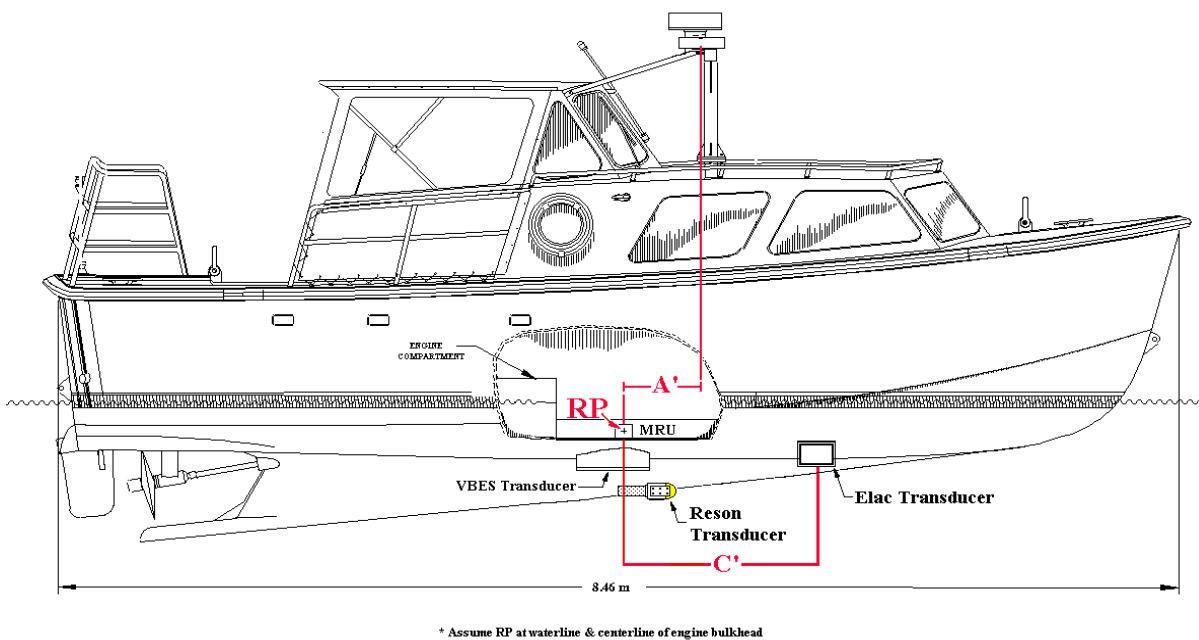
## RA4 (hull 1016) Vessel Offset Measurements, Elac

9/2/2003

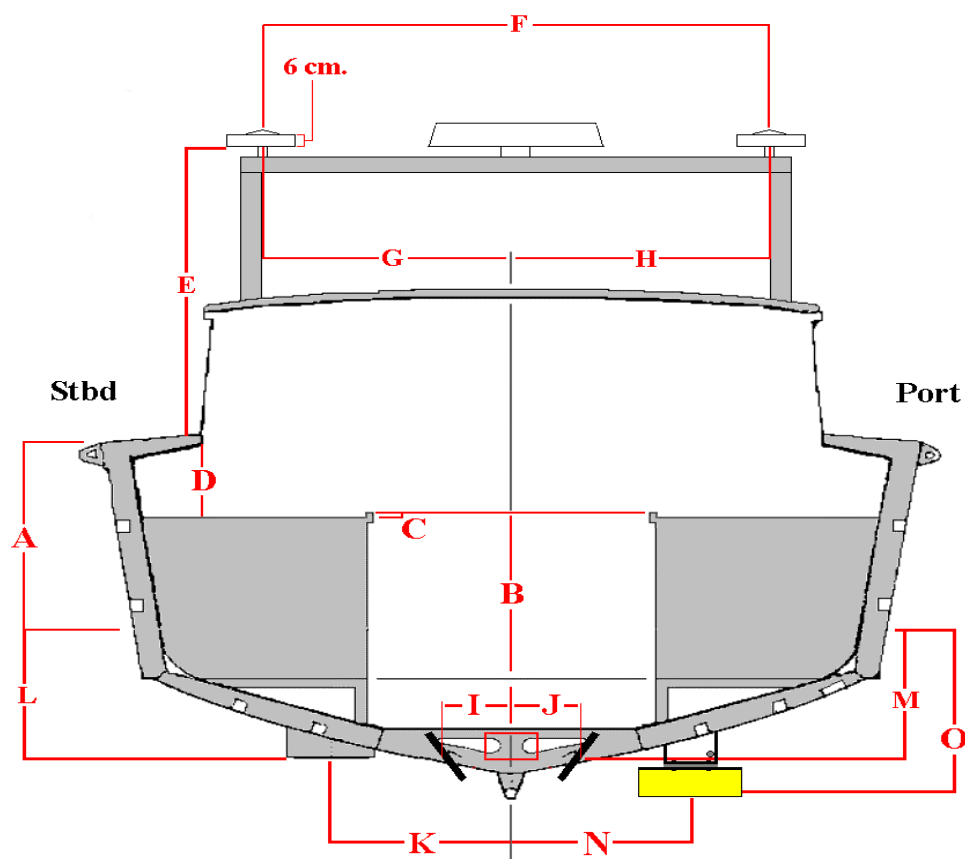
Description: Aluminum Jensen survey launch

LOA: 29 feet

Weigh: 14,000 lbs



|                  |    | cm.   | date measured |
|------------------|----|-------|---------------|
| RP to GPS        | A' | 35.0  | May-00        |
| RP to Elac ducer | C' | 156.0 | May-00        |



|                                |   | cm.   | date<br>measured |
|--------------------------------|---|-------|------------------|
| Waterline to deck              | A | 96.5  | May-00           |
| MRU to counter top rail        | B | 104.9 | May-00           |
| Countertop rail                | C | 0.0   | May-00           |
| Countertop to deck             | D | 21.8  | May-00           |
| Deck to bottom of GPS          | E | 170.9 | May-00           |
| GPS to GPS                     | F | 174.5 | May-00           |
| Centerline to Stbd GPS         | G | 87.5  | May-00           |
| Centerline to Port GPS         | H | 87.0  | May-00           |
| Centerline to Stbd Elac ducer  | I | 33.3  | May-00           |
| Centerline to Port Elac ducer  | J | 33.4  | May-00           |
| Centerline to VBES transducer  | K | 34.9  | May-00           |
| Waterline to VBES transducer   | L | 61.0  | Mar-98           |
| Waterline to Elac transducer   | M | 57.0  | May-00           |
| Centerline to Reson transducer | N | 38.0  | May-03           |
| Waterline to Reson transducer  | O | 76.0  | May-03           |

**CARIS** configuration is based on a Reference Position (RP)  
The RP has been defined to coincide with the location of the MRU

**X** athwartship distance [+ starboard]  
**Y** along-ship distance [+ towards bow]  
**Z** vertical distance [+ into water]

|          |                                                                                                               |     |       |                                       |
|----------|---------------------------------------------------------------------------------------------------------------|-----|-------|---------------------------------------|
| <b>X</b> | Elac transducer offset (equals average I & J )<br>MRU to RP (mounted centerline)                              | +/- | 0.33  | Elac                                  |
|          |                                                                                                               |     | 0.00  |                                       |
| <b>Y</b> | RP to Elac transducer (equals C')<br>RP to MRU (equals B')                                                    |     | 1.56  | NAV<br>GYRO<br>Heave<br>PITCH<br>ROLL |
|          |                                                                                                               |     | 0.00  |                                       |
| <b>Z</b> | Elac transducer to RP (equals M-(B+D-C-A))<br>MRU to RP (equals B+D-C-A)<br>MRU to waterline (equals A-D+C-B) |     | 0.27  | Waterline                             |
|          |                                                                                                               |     | 0.00  |                                       |
|          |                                                                                                               |     | -0.30 |                                       |

## CARIS R4EL\_2003 VCF Summary

|         | Date     | Time Error | Beams | X    | Y    | Z    | Roll | Pitch | Yaw  |
|---------|----------|------------|-------|------|------|------|------|-------|------|
| Swath 1 | 2003-168 | 0.00       | 63    | 0.33 | 1.56 | 0.27 | 0.45 | -2.20 | 0.30 |

|         | Date     | Time Error | Beams | X     | Y    | Z    | Roll | Pitch | Yaw   |
|---------|----------|------------|-------|-------|------|------|------|-------|-------|
| Swath 2 | 2003-168 | 0.00       | 63    | -0.33 | 1.56 | 0.27 | 0.80 | -0.85 | -0.60 |

|            | Date     | Time Error | X    | Y    | Z    |
|------------|----------|------------|------|------|------|
| Navigation | 2003-168 | 0.20       | 0.00 | 0.00 | 0.00 |

|       | Date     | Time Error | X    | Y    | Z    |
|-------|----------|------------|------|------|------|
| Gyro  | 2003-168 | 0.00       | 0.00 | 0.00 | 0.00 |
| Heave | 2003-168 | 0.00       | 0.00 | 0.00 | 0.00 |
| Pitch | 2003-168 | 0.00       | 0.00 | 0.00 | 0.00 |
| Roll  | 2003-168 | 0.00       | 0.00 | 0.00 | 0.00 |

|           | Date     | Time | Waterline |
|-----------|----------|------|-----------|
| Waterline | 2003-168 | 0.00 | -0.30     |

### Dynamic Draft

| Speed | 0.00 | 5.00 | 5.50 | 6.00 | 7.50 | 8.50 | 9.00 | 9.70 | 10.50 | 11.50 |
|-------|------|------|------|------|------|------|------|------|-------|-------|
| Draft | 0.00 | 0.02 | 0.03 | 0.04 | 0.06 | 0.05 | 0.03 | 0.00 | -0.04 | -0.06 |

|       | Date     | Top X | Top Y | Top Z | Bot X | Bot Y | Bot Z | Roll   | Pitch | Yaw  |
|-------|----------|-------|-------|-------|-------|-------|-------|--------|-------|------|
| SVP 1 | 2003-168 | 0.33  | 1.56  | 0.00  | 0.33  | 1.56  | 0.27  | -38.00 | 0.00  | 0.00 |
| SVP 2 | 2003-168 | -0.33 | 1.56  | 0.00  | -0.33 | 1.56  | 0.27  | 38.00  | 0.00  | 0.00 |

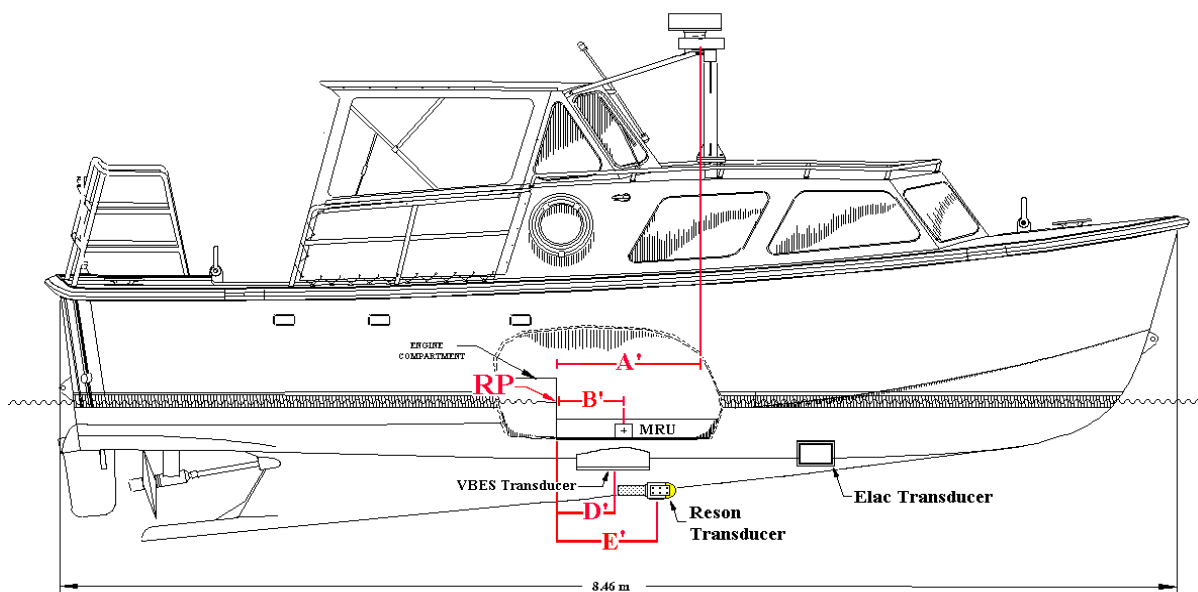
## RA4 (hull 1016) Vessel Offset Measurements, Reson

9/2/2003

Description: Aluminum Jensen survey launch

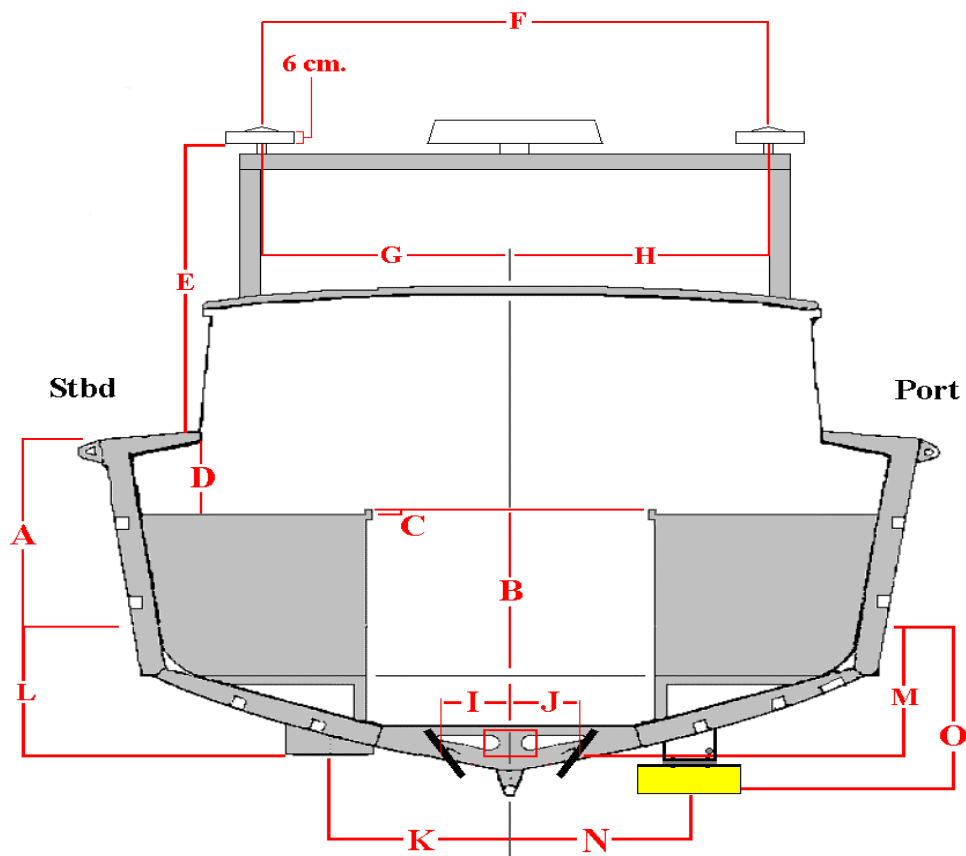
LOA: 29 feet

Weigh: 14,000 lbs



\* Assume RP at waterline &amp; centerline of engine bulkhead

|                   |    | cm.  | date measured |
|-------------------|----|------|---------------|
| RP to GPS         | A' | 83.0 | May-00        |
| RP to MRU         | B' | 48.0 | May-00        |
| RP to VBES ducer  | D' | 43.4 | May-00        |
| RP to Reson ducer | E' | 81.0 | May-03        |



|                                |   | cm.   | date<br>measured |
|--------------------------------|---|-------|------------------|
| Waterline to deck              | A | 96.5  | May-00           |
| MRU to counter top rail        | B | 104.9 | May-00           |
| Countertop rail                | C | 0.0   | May-00           |
| Countertop to deck             | D | 21.8  | May-00           |
| Deck to bottom of GPS          | E | 170.9 | May-00           |
| GPS to GPS                     | F | 174.5 | May-00           |
| Centerline to Stbd GPS         | G | 87.5  | May-00           |
| Centerline to Port GPS         | H | 87.0  | May-00           |
| Centerline to Stbd Elac ducer  | I | 33.3  | May-00           |
| Centerline to Port Elac ducer  | J | 33.4  | May-00           |
| Centerline to VBES transducer  | K | 34.9  | May-00           |
| Waterline to VBES transducer   | L | 61.0  | Mar-98           |
| Waterline to Elac transducer   | M | 57.0  | May-00           |
| Centerline to Reson transducer | N | 38.0  | May-03           |
| Waterline to Reson transducer  | O | 76.0  | May-03           |

**CARIS** configuration is based on a Reference Position (RP)

RP is assumed to be centerline, at the waterline, on the forward side of the bulkhead separating the engine compartment from the cabin

**X** athwartship distance [+ starboard]  
**Y** along-ship distance [+ towards bow]  
**Z** vertical distance [+ into water]

**X** Reson transducer offset (equals N )  
 MRU to RP (mounted centerline)

-0.38

0.00

Reson

**Y** RP to Reson transducer (equals E')  
 RP to MRU (equals B')

0.81

0.48

NAV  
 GYRO  
 Heave  
 PITCH  
 ROLL

**Z** Reson transducer to RP (equals O)  
 MRU to RP (equals B+D-C-A)

0.76

0.30

## CARIS R4RE\_2003 VCF Summary

Swath

| Date     | Time Error | Beams | X     | Y    | Z    | Roll  | Pitch | Yaw   |
|----------|------------|-------|-------|------|------|-------|-------|-------|
| 2003-079 | 0.00       | 240   | -0.38 | 0.81 | 0.76 | 0.01  | -0.85 | -0.60 |
| 2003-115 | 0.00       | 240   | -0.38 | 0.81 | 0.76 | -0.04 | -0.56 | -0.73 |
| 2003-159 | 0.00       | 240   | -0.38 | 0.81 | 0.76 | 0.12  | -2.00 | -0.40 |

Navigation

| Date     | Time Error | X    | Y    | Z    |
|----------|------------|------|------|------|
| 2003-079 | 0.02       | 0.00 | 0.48 | 0.30 |
| 2003-115 | 0.04       | 0.00 | 0.48 | 0.30 |
| 2003-159 | 0.00       | 0.00 | 0.48 | 0.30 |

Gyro  
Heave  
Pitch  
Roll

| Date     | Time Error | X    | Y    | Z    |
|----------|------------|------|------|------|
| 2003-079 | 0.00       | 0.00 | 0.48 | 0.30 |
| 2003-079 | 0.00       | 0.00 | 0.48 | 0.30 |
| 2003-079 | 0.00       | 0.00 | 0.48 | 0.30 |
| 2003-079 | 0.00       | 0.00 | 0.48 | 0.30 |

### Dynamic Draft

| Speed | 0.00 | 5.00 | 5.50 | 6.00 | 7.50 | 8.50 | 9.00 | 9.70 | 10.50 | 11.50 |
|-------|------|------|------|------|------|------|------|------|-------|-------|
| Draft | 0.00 | 0.02 | 0.03 | 0.04 | 0.06 | 0.05 | 0.03 | 0.00 | -0.04 | -0.06 |

SVP 1

| Date     | Top X | Top Y | Top Z | Bot X | Bot Y | Bot Z | Roll | Pitch | Yaw  |
|----------|-------|-------|-------|-------|-------|-------|------|-------|------|
| 2003-079 | -0.38 | 0.81  | 0.00  | -0.38 | 0.81  | 0.76  | 0.00 | 0.00  | 0.00 |

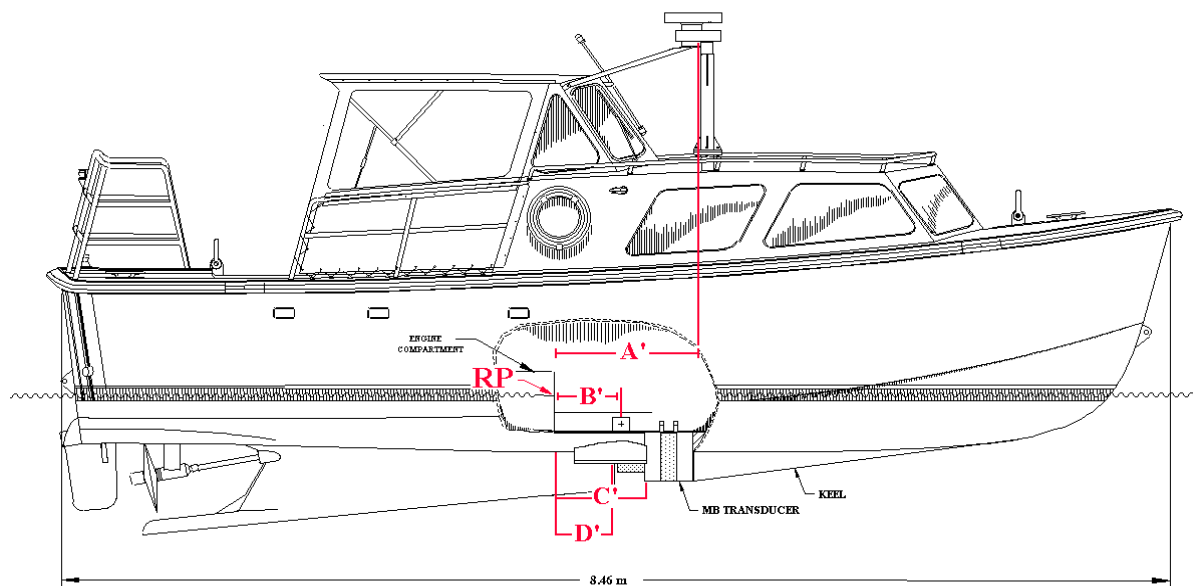
## RA5 (hull 1006) Vessel Offset Measurements

9/2/2003

Description: Aluminum Jensen survey launch

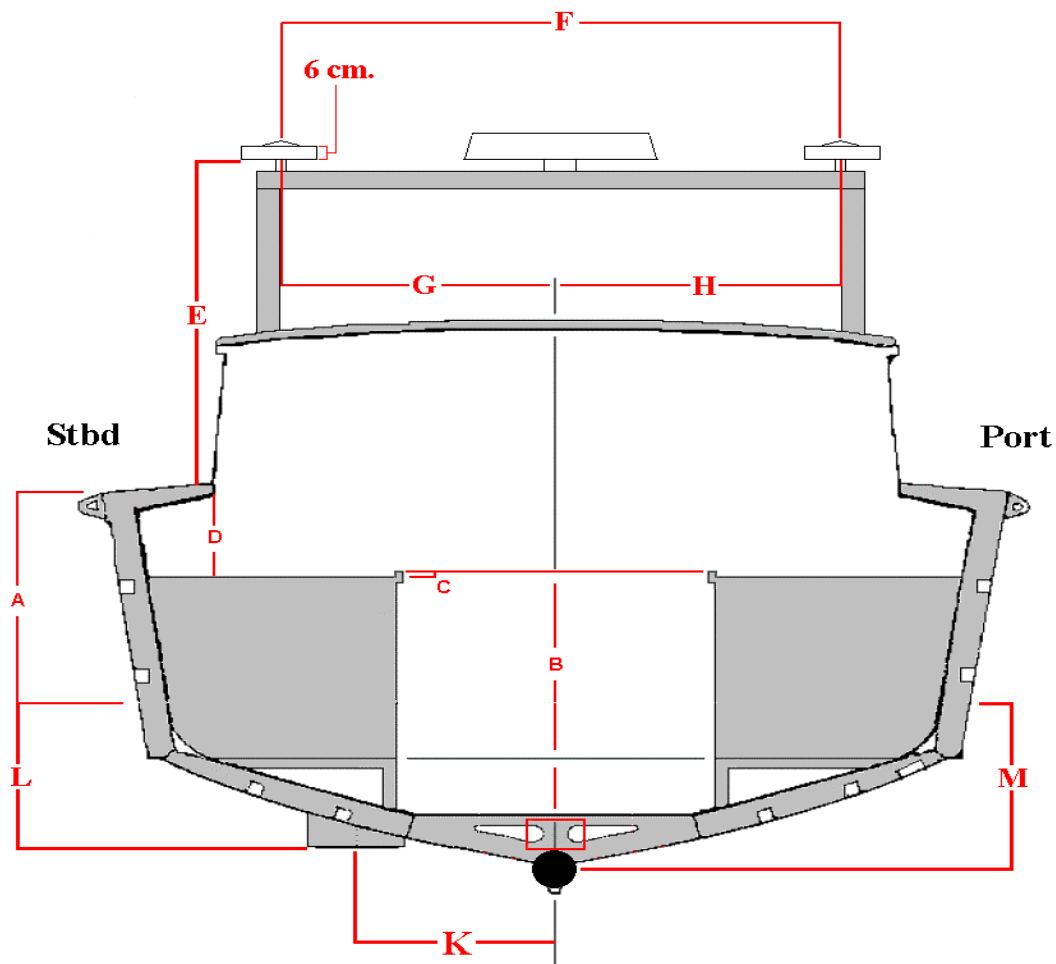
LOA: 29 feet

Weigh: 14,000 lbs



\* Assume RP at waterline &amp; centerline of engine bulkhead

|                  |    | date |             |
|------------------|----|------|-------------|
|                  |    | cm.  | measured    |
| RP to GPS        | A' | 95.6 | 5/00 & 4/98 |
| RP to MRU        | B' | 51.9 | Mar-99      |
| RP to SWMB ducer | C' | 73.3 | Mar-99      |
| RP to VBES ducer | D' | 40.5 | May-00      |



|                               |   | cm.   | date measured |
|-------------------------------|---|-------|---------------|
| Waterline to deck             | A | 100.0 | Mar-99        |
| MRU to counter top rail       | B | 105.0 | Mar-99        |
| Countertop rail               | C | 1.8   | Mar-99        |
| Countertop to deck            | D | 14.7  | Mar-99        |
| Deck to bottom of GPS         | E | 176.0 | May-00        |
| GPS to GPS                    | F | 181.0 | Apr-98        |
| Centerline to Stbd GPS        | G | 90.0  | Apr-98        |
| Centerline to Port GPS        | H | 91.0  | Apr-98        |
| Centerline to VBES transducer | K | 49.7  | May-00        |
| Waterline to VBES transducer  | L | 53.0  | Apr-98        |
| Waterline to SWMB transducer  | M | 49.6  | Mar-99        |

**CARIS** configuration is based on a Reference Position (RP)

RP is assumed to be centerline, at the waterline, on the forward side of the bulkhead separating the engine compartment from the cabin

**X** athwartship distance [+ starboard]  
**Y** along-ship distance [+ towards bow]  
**Z** vertical distance [+ into water]

|          |                                        |      |                                       |
|----------|----------------------------------------|------|---------------------------------------|
| <b>X</b> | SWMB-ducer offset (mounted centerline) | 0.00 | SWMB                                  |
|          | MRU to RP (mounted centerline)         | 0.00 |                                       |
| <b>Y</b> | RP to MB-ducer (equals C')             | 0.73 | NAV<br>GYRO<br>Heave<br>PITCH<br>ROLL |
|          | RP to MRU (equals B')                  | 0.52 |                                       |
| <b>Z</b> | MB-ducer to RP (equals M)              | 0.50 |                                       |
|          | MRU to RP (equals B+D-C-A)             | 0.18 |                                       |

**CARIS R5RE\_2003 VCF Summary**

| Swath 1 | Date     | Time Error | Beams | X    | Y    | Z    | Roll  | Pitch | Yaw   |
|---------|----------|------------|-------|------|------|------|-------|-------|-------|
|         | 2003-085 | 0.00       | 101   | 0.00 | 0.73 | 0.50 | -0.36 | 1.50  | -0.31 |
|         | 2003-188 | 0.00       | 101   | 0.00 | 0.73 | 0.50 | -0.89 | 1.48  | 0.06  |

| Navigation | Date     | Time Error | X    | Y    | Z    |
|------------|----------|------------|------|------|------|
|            | 2003-085 | 0.14       | 0.00 | 0.52 | 0.18 |
|            | 2003-188 | 0.15       | 0.00 | 0.52 | 0.18 |

| Gyro<br>Heave<br>Pitch<br>Roll | Date     | Time Error | X    | Y    | Z    |
|--------------------------------|----------|------------|------|------|------|
|                                | 2003-085 | 0.00       | 0.00 | 0.52 | 0.18 |
|                                | 2003-085 | 0.00       | 0.00 | 0.52 | 0.18 |
|                                | 2003-085 | 0.00       | 0.00 | 0.52 | 0.18 |

**Dynamic Draft**

| Speed | 0.00 | 3.50 | 5.00 | 6.00 | 7.00 | 8.20 | 9.00 | 10.10 | 13.30 | 15.50 |
|-------|------|------|------|------|------|------|------|-------|-------|-------|
| Draft | 0.00 | 0.01 | 0.02 | 0.04 | 0.05 | 0.04 | 0.02 | -0.02 | -0.18 | -0.25 |

| SVP 1 | Date     | Top X | Top Y | Top Z | Bot X | Bot Y | Bot Z | Roll | Pitch | Yaw  |
|-------|----------|-------|-------|-------|-------|-------|-------|------|-------|------|
|       | 2003-085 | 0.00  | 0.73  | 0.50  | 0.00  | 0.73  | 0.50  | 0.00 | 0.00  | 0.00 |

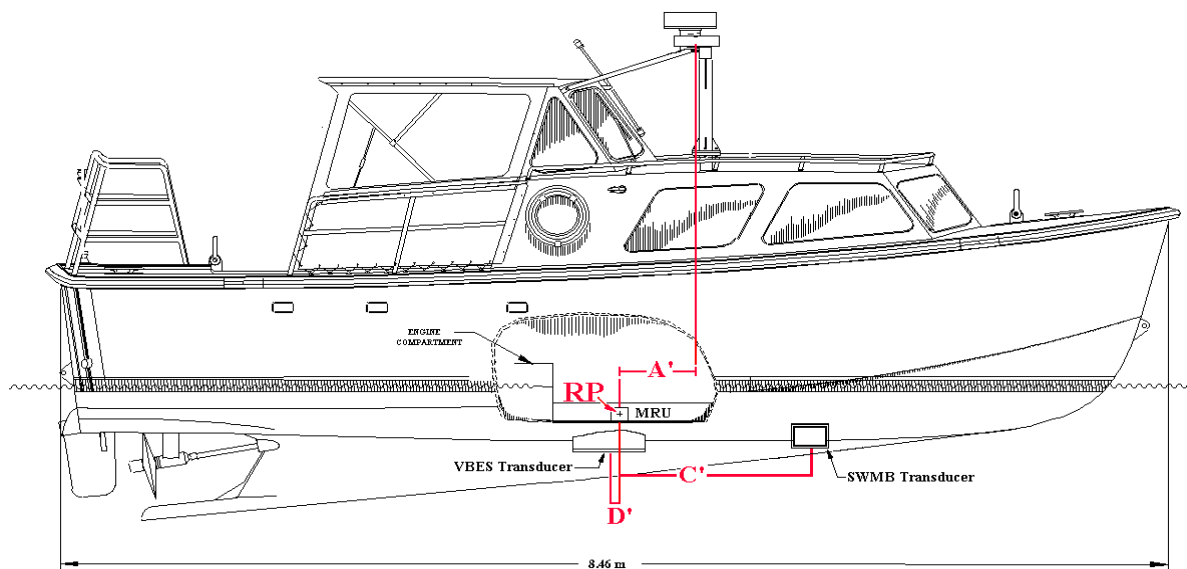
## RA6 (hull 1015) Vessel Offset Measurements

9/2/2003

Description: Aluminum Jensen survey launch

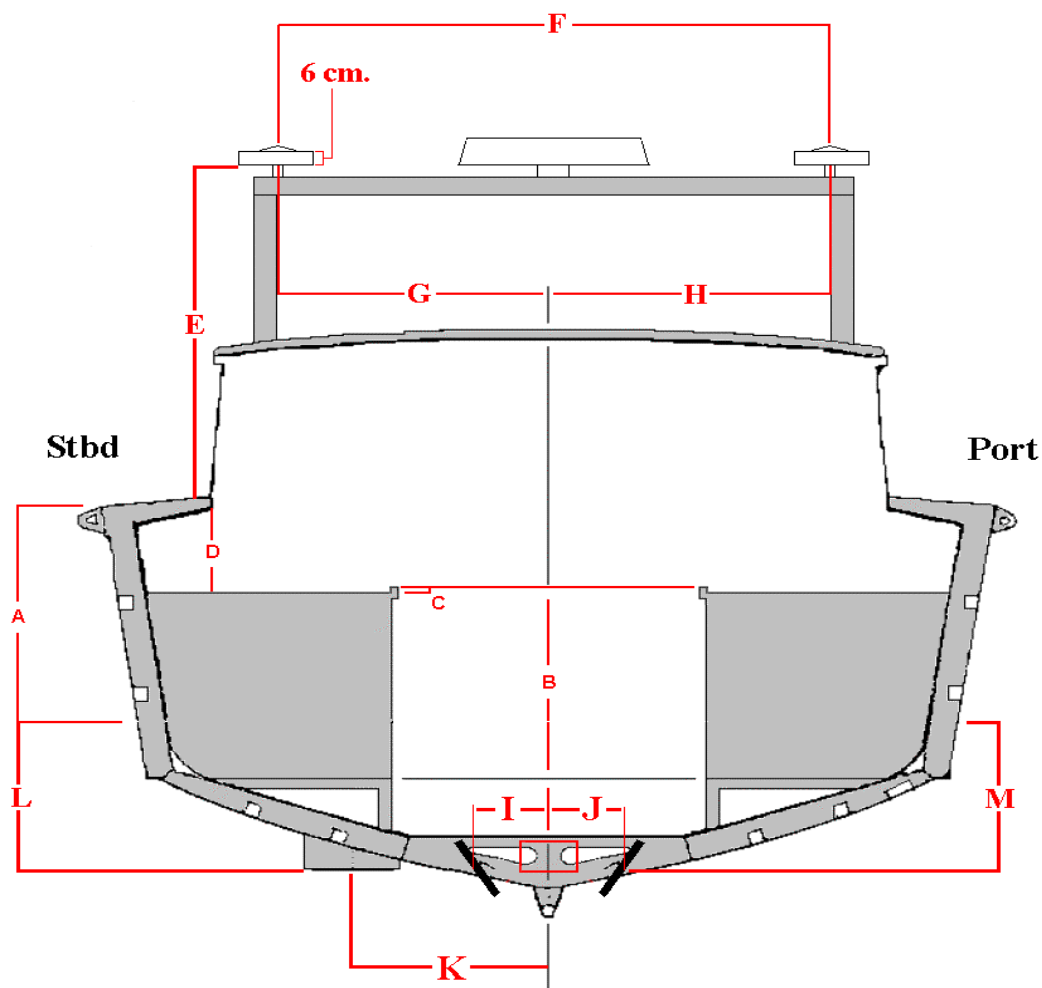
LOA: 29 feet

Weigh: 14,000 lbs



\* Assume RP at waterline &amp; centerline of engine bulkhead

|                  |    | cm.   | date measured |
|------------------|----|-------|---------------|
| RP to GPS        | A' | 51.2  | May-00        |
| RP to SWMB ducer | C' | 156.0 | May-00        |
| RP to VBES ducer | D' | 3.2   | May-00        |



|                               |   | date  |          |
|-------------------------------|---|-------|----------|
|                               |   | cm.   | measured |
| Waterline to deck             | A | 100.5 | May-00   |
| MRU to counter top rail       | B | 103.6 | May-00   |
| Countertop rail               | C | 0.0   | May-00   |
| Countertop to deck            | D | 21.4  | May-00   |
| Deck to bottom of GPS         | E | 175.6 | May-00   |
| GPS to GPS                    | F | 170.3 | May-00   |
| Centerline to Stbd GPS        | G | 85.8  | May-00   |
| Centerline to Port GPS        | H | 84.5  | May-00   |
| Centerline to Stbd SWMB ducer | I | 33.8  | May-00   |
| Centerline to Port SWMB ducer | J | 34.4  | May-00   |
| Centerline to VBES transducer | K | 51.8  | May-00   |
| Waterline to VBES transducer  | L | 42.0  | May-00   |
| Waterline to SWMB transducer  | M | 46.2  | May-00   |

**CARIS** configuration is based on a Reference Position (RP)

The RP has been defined to coincide with the location of the MRU

**X** athwartship distance [+ starboard]  
**Y** along-ship distance [+ towards bow]  
**Z** vertical distance [+ into water]

|          |                                                                                       |            |              |                                                  |
|----------|---------------------------------------------------------------------------------------|------------|--------------|--------------------------------------------------|
| <b>X</b> | SWMB-ducer offset (equals average I & J )<br>MRU to RP (mounted centerline)           | <b>+/-</b> | <b>0.34</b>  | <b>SWMB</b>                                      |
|          |                                                                                       |            | <b>0.00</b>  |                                                  |
| <b>Y</b> | RP to MB-ducer (equals C')<br>RP to MRU (equals B')                                   |            | <b>1.56</b>  | <b>NAV<br/>GYRO<br/>Heave<br/>PITCH<br/>ROLL</b> |
|          |                                                                                       |            | <b>0.00</b>  |                                                  |
| <b>Z</b> | MB-ducer to RP (equals M-(B+D-C-A))<br>MRU to RP<br>MRU to waterline (equals A-D+C-B) |            | <b>0.22</b>  | <b>Waterline</b>                                 |
|          |                                                                                       |            | <b>0.00</b>  |                                                  |
|          |                                                                                       |            | <b>-0.25</b> |                                                  |

## CARIS R6EL\_2003 VCF Summary

| Swath 1 | Date     | Time Error | Beams | X    | Y    | Z    | Roll  | Pitch | Yaw  |
|---------|----------|------------|-------|------|------|------|-------|-------|------|
|         | 2003-001 | 0.00       | 63    | 0.34 | 1.56 | 0.22 | -0.22 | -1.10 | 0.70 |
|         | 2003-178 | 0.00       | 63    | 0.34 | 1.56 | 0.22 | -0.22 | -1.10 | 0.70 |
|         | 2003-203 | 0.00       | 63    | 0.34 | 1.56 | 0.22 | -0.79 | -1.10 | 0.70 |
|         | 2003-204 | 0.00       | 63    | 0.34 | 1.56 | 0.22 | -1.52 | -1.10 | 0.70 |

| Swath 2 | Date     | Time Error | Beams | X     | Y    | Z    | Roll | Pitch | Yaw   |
|---------|----------|------------|-------|-------|------|------|------|-------|-------|
|         | 2003-001 | 0.00       | 63    | -0.34 | 1.56 | 0.22 | 0.75 | -0.40 | -0.85 |
|         | 2003-178 | 0.00       | 63    | -0.34 | 1.56 | 0.22 | 0.75 | -0.40 | -0.85 |
|         | 2003-203 | 0.00       | 63    | -0.34 | 1.56 | 0.22 | 1.52 | -0.40 | -0.85 |
|         | 2003-204 | 0.00       | 63    | -0.34 | 1.56 | 0.22 | 1.52 | -0.40 | -0.85 |

| Navigation | Date     | Time Error | X    | Y    | Z    |
|------------|----------|------------|------|------|------|
|            | 2003-001 | -0.05      | 0.00 | 0.00 | 0.00 |
|            | 2003-203 | 0.00       | 0.00 | 0.00 | 0.00 |

| Gyro<br>Heave<br>Pitch<br>Roll | Date     | Time Error | X    | Y    | Z    |
|--------------------------------|----------|------------|------|------|------|
|                                | 2003-060 | 0.00       | 0.00 | 0.00 | 0.00 |
|                                | 2003-060 | 0.00       | 0.00 | 0.00 | 0.00 |
|                                | 2003-060 | 0.00       | 0.00 | 0.00 | 0.00 |
|                                | 2003-060 | 0.00       | 0.00 | 0.00 | 0.00 |

| Waterline | Date     | Time | Waterline |
|-----------|----------|------|-----------|
|           | 2003-060 | 0.00 | -0.25     |

### Dynamic Draft

| Speed | 0.00 | 3.5  | 5    | 5.5  | 6.2  | 7.4  | 8.6  | 9.3  | 11.2 | 13    |
|-------|------|------|------|------|------|------|------|------|------|-------|
| Draft | 0.00 | 0.01 | 0.03 | 0.04 | 0.05 | 0.06 | 0.05 | 0.04 | 0    | -0.03 |

| SVP 1<br>SVP 2 | Date     | Top X | Top Y | Top Z | Bot X | Bot Y | Bot Z | Roll   | Pitch | Yaw  |
|----------------|----------|-------|-------|-------|-------|-------|-------|--------|-------|------|
|                | 2003-123 | 0.34  | 1.56  | 0.00  | 0.34  | 1.56  | 0.22  | -37.80 | 0.00  | 0.00 |
|                | 2003-123 | -0.34 | 1.56  | 0.00  | -0.34 | 1.56  | 0.22  | 37.80  | 0.00  | 0.00 |

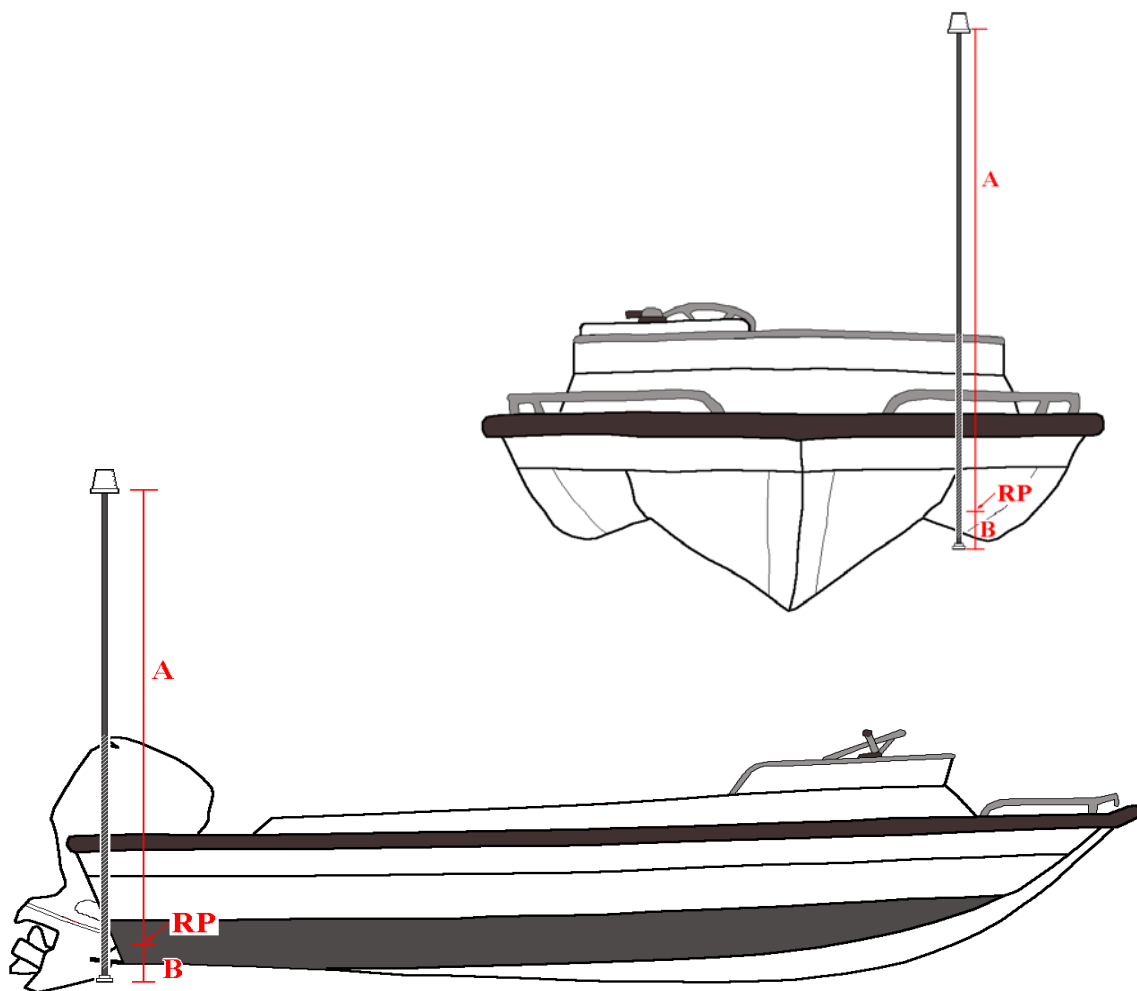
**RA7 (hull 817) Vessel Offset Measurements (2003)**

9/2/2003

Description: Aluminum SeaArk survey skiff

LOA: feet

Weigh: lbs



|                  |   | cm.   | date<br>measured |
|------------------|---|-------|------------------|
| RP to GPS        | A | 214.0 | Apr-03           |
| RP to transducer | B | 25.0  | Apr-03           |

**CARIS** configuration is based on a Reference Position (RP)

On RA7 the RP is assumed to be at the waterline,

directly below the GPS antenna and above the transducer

**X** athwartship distance [+ starboard]  
**Y** along-ship distance [+ towards bow]  
**Z** vertical distance [+ into water]

|          |                                  |       |              |
|----------|----------------------------------|-------|--------------|
| <b>X</b> | RP to VBES transducer            | 0.00  | Depth sensor |
|          | RP to GPS                        | 0.00  |              |
| <b>Y</b> | RP to VBES transducer            | 0.00  | NAV          |
|          | RP to GPS                        | 0.00  |              |
| <b>Z</b> | RP to VBES transducer (equals B) | 0.25  |              |
|          | RP to GPS (equals A)             | -2.14 |              |

### CARIS R7SB\_2003 VCF Summary

| Singlebeam | Date     | Time Error | X    | Y    | Z    |
|------------|----------|------------|------|------|------|
|            | 2003-112 | 0.00       | 0.00 | 0.00 | 0.25 |

| Navigation | Date     | Time Error | X    | Y    | Z     |
|------------|----------|------------|------|------|-------|
|            | 2003-112 | 0.00       | 0.00 | 0.00 | -2.14 |

#### Dynamic Draft

| Speed | 0.00 | 1.00  | 2.40 | 4.50 | 6.00 | 7.50 | 10.00 | 11.50 | 13.00 | 15.00 |
|-------|------|-------|------|------|------|------|-------|-------|-------|-------|
| Draft | 0.00 | -0.01 | 0.00 | 0.05 | 0.11 | 0.17 | 0.16  | 0.13  | 0.08  | 0.00  |

| SVP 1 | Date     | Top X | Top Y | Top Z | Bot X | Bot Y | Bot Z | Roll | Pitch | Yaw  |
|-------|----------|-------|-------|-------|-------|-------|-------|------|-------|------|
|       | 2003-112 | 0.00  | 0.00  | 0.25  | 0.00  | 0.00  | 0.25  | 0.00 | 0.00  | 0.00 |

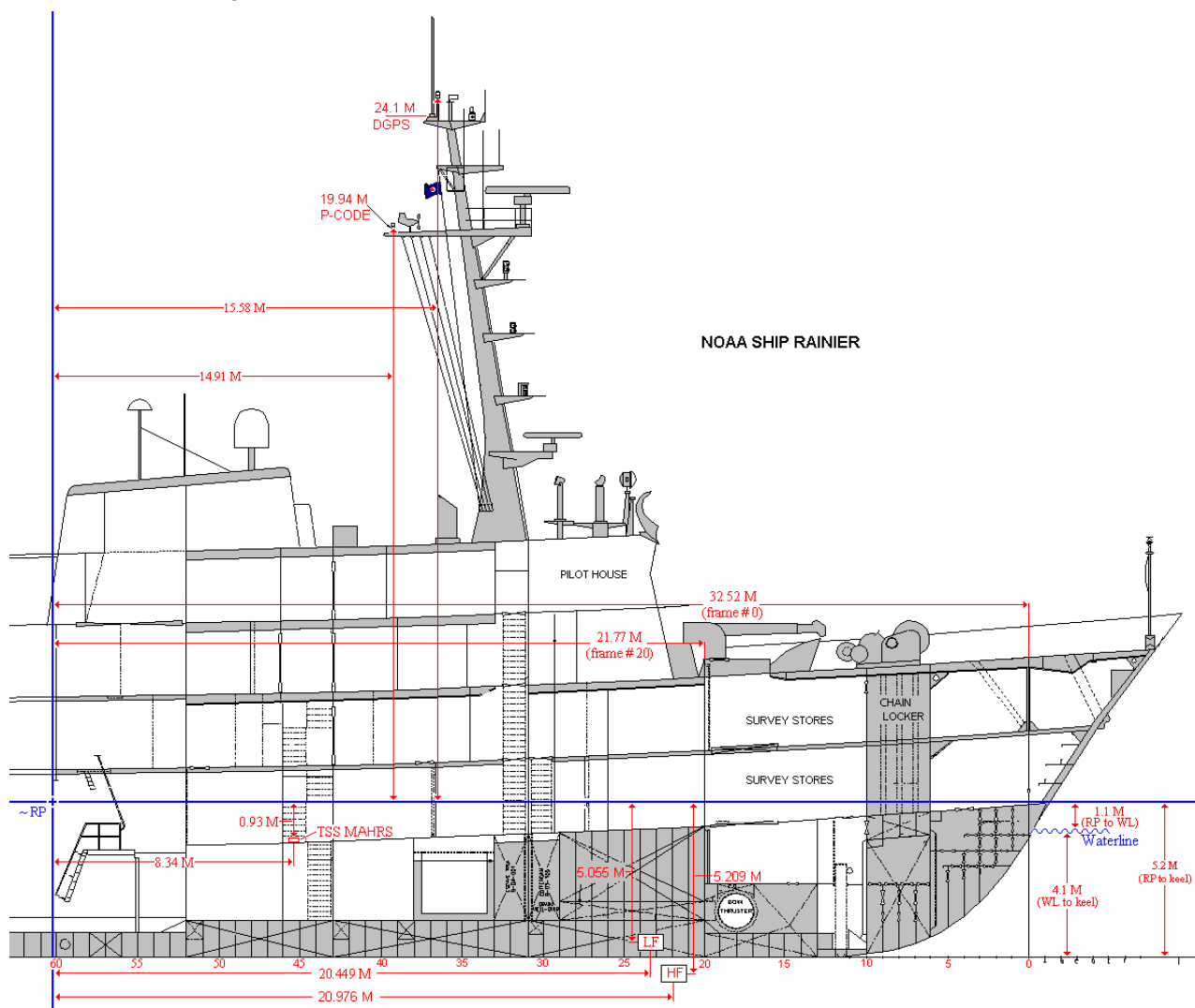
## RAINIER (S-221) Vessel Offset Measurements

9/3/2003

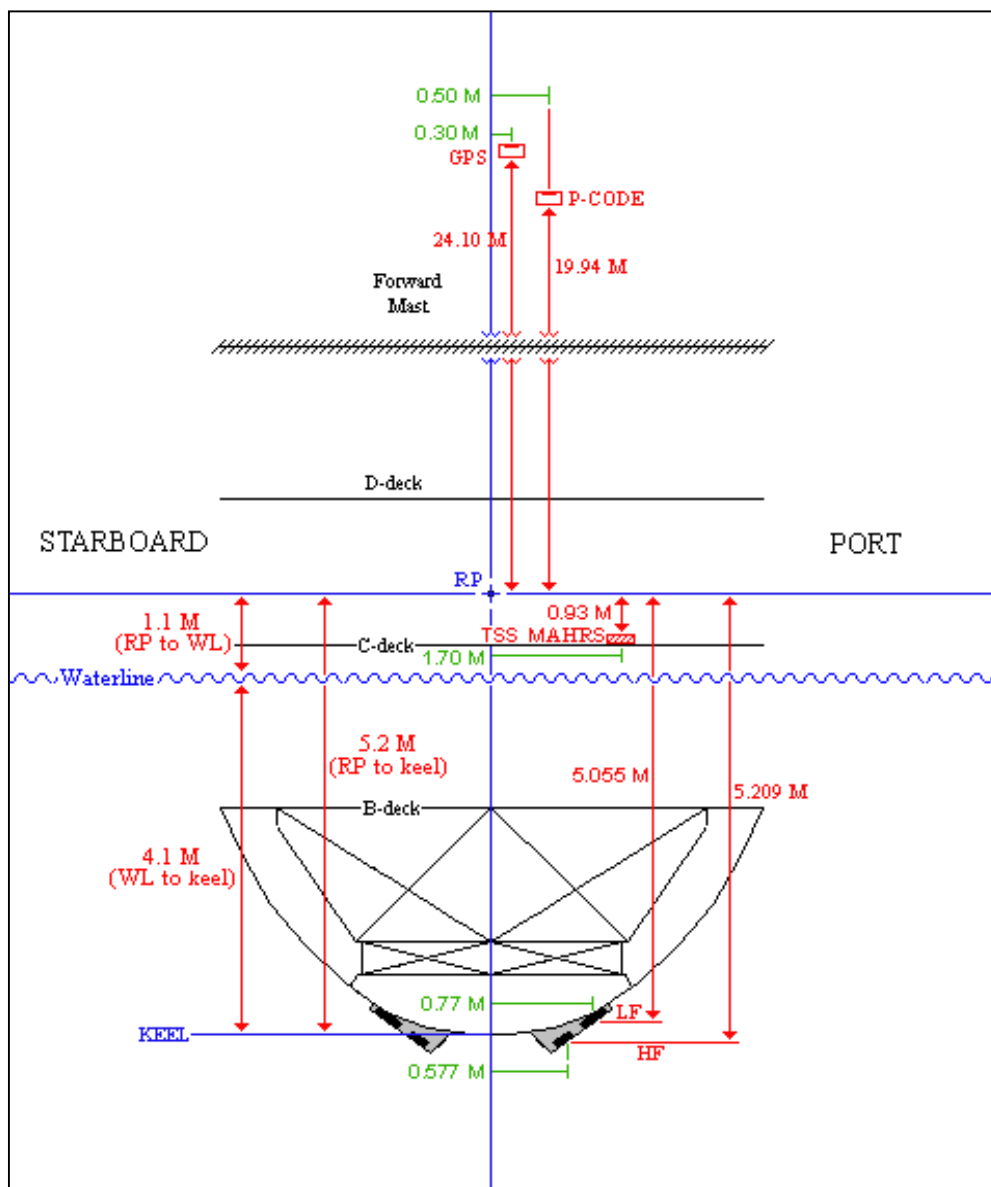
Description: Steel hydrographic ship

LOA: 231 feet

Weigh: 1591 Tons



|                        | Y (along-ship) |               |
|------------------------|----------------|---------------|
|                        | cm.            | date measured |
| RP to P-code           | 1491.0         | Mar-95        |
| RP to GPS              | 1558.0         | Mar-95        |
| RP to TSS MAHRS        | 834.0          | Apr-03        |
| RP to LF MB transducer | 2044.9         | Apr-98        |
| RP to HF MB transducer | 2097.6         | Apr-98        |
| RP to frame #0         | 3252.0         | Mar-95        |



|                        | X (athwartship) |          | Z (vertical) |          |
|------------------------|-----------------|----------|--------------|----------|
|                        | date            |          | date         |          |
|                        | cm.             | measured | cm.          | measured |
| RP to P-code           | 50.0            | Mar-95   | 1994.0       | Mar-95   |
| RP to GPS              | 30.0            | Mar-95   | 2410.0       | Mar-95   |
| RP to TSS MAHRS        | 170.0           | Apr-03   | 93.0         | Apr-03   |
| RP to LF MB transducer | 77.0            | Apr-98   | 505.5        | Apr-98   |
| RP to HF MB transducer | 57.7            | Apr-98   | 520.9        | Apr-98   |
| RP to keel             |                 |          | 520.0        | Mar-95   |
| RP to Waterline        |                 |          | 110.0        | Mar-03   |

**CARIS** configuration is based on a Reference Position (RP)  
 RP is assumed to be centerline, 5.20 meters above the keel,  
 32.52 meters aft of frame # 0, somewhere in the main engine's compartment

**X** athwartship distance [+ starboard]  
**Y** along-ship distance [+ towards bow]  
**Z** vertical distance [+ into water]

|          |                         | meters   |              |
|----------|-------------------------|----------|--------------|
| <b>X</b> | HF MB transducer offset | +/- 0.58 | HF MB        |
|          | LF MB transducer offset | +/- 0.77 | LF MB        |
|          | RP to GPS               | -0.30    | NAV (GPS)    |
|          | RP to P-code            | -0.50    | NAV (P-code) |
|          | RP to TSS MAHRS         | -1.70    |              |
| <b>Y</b> | RP to HF MB transducer  | 20.98    |              |
|          | RP to LF MB transducer  | 20.45    |              |
|          | RP to GPS               | 15.58    | TSS GYRO     |
|          | RP to P-code            | 14.91    | MAHRS Heave  |
|          | RP to TSS MAHRS         | 8.34     | PITCH        |
| <b>Z</b> | RP to HF MB transducer  | 5.21     | ROLL         |
|          | RP to LF MB transducer  | 5.06     |              |
|          | RP to GPS               | -24.10   |              |
|          | RP to P-code            | -19.94   |              |
|          | RP to TSS MAHRS         | 0.93     |              |
|          | RP to waterline         | 1.10     | Waterline    |

## CARIS RAHF\_2003 VCF Summary

|         | Date     | Time Error | Beams | X     | Y     | Z    | Roll  | Pitch | Yaw  |
|---------|----------|------------|-------|-------|-------|------|-------|-------|------|
| Swath 1 | 2003-152 | 0.00       | 63    | 0.58  | 20.98 | 5.21 | -0.92 | 0.78  | 1.40 |
| Swath 2 | 2003-152 | 0.00       | 63    | -0.58 | 20.98 | 5.21 | -1.14 | 0.00  | 1.50 |

|            | Date     | Time Error | X     | Y     | Z      |
|------------|----------|------------|-------|-------|--------|
| Navigation | 2003-152 | 0.00       | -0.30 | 15.58 | -24.10 |

|       | Date     | Time Error | X     | Y    | Z    |
|-------|----------|------------|-------|------|------|
| Gyro  | 2003-152 | 0.00       | -1.70 | 8.34 | 0.93 |
| Heave | 2003-152 | 0.00       | -1.70 | 8.34 | 0.93 |
| Pitch | 2003-152 | 0.00       | -1.70 | 8.34 | 0.93 |
| Roll  | 2003-152 | 0.00       | -1.70 | 8.34 | 0.93 |

|           | Date     | Time | Waterline |
|-----------|----------|------|-----------|
| Waterline | 2003-153 | 0.00 | 1.10      |

### Dynamic Draft

| Speed | 0.00 | 3.00 | 4.00 | 6.00 | 7.00 | 9.00 | 10.00 | 11.50 | 12.80 | 20.00 |
|-------|------|------|------|------|------|------|-------|-------|-------|-------|
| Draft | 0.00 | 0.00 | 0.10 | 0.20 | 0.30 | 0.30 | 0.30  | 0.40  | 0.40  | 0.40  |

|       | Date     | Top X | Top Y | Top Z | Bot X | Bot Y | Bot Z | Roll   | Pitch | Yaw  |
|-------|----------|-------|-------|-------|-------|-------|-------|--------|-------|------|
| SVP 1 | 2003-140 | 0.58  | 20.98 | 0.00  | 0.58  | 20.98 | 5.21  | -38.00 | 0.00  | 0.00 |
| SVP 2 | 2003-140 | -0.58 | 20.98 | 0.00  | -0.58 | 20.98 | 5.21  | 38.00  | 0.00  | 0.00 |

## **Appendix IV**

### **Calibration Reports**

- **SWMB QC Reports**
  - **Lead Line**
- **Sound Velocity Profiler**

### 2003 Patch Test Summary (Rainier & launches)

| vessel  | system                     | date           | yyyy-ddd    | 1 0.023<br>% pass | location                     | reference surface<br>used |
|---------|----------------------------|----------------|-------------|-------------------|------------------------------|---------------------------|
| RA4     | Reson SeaBat 8125          | March 20, 2003 | 2003-079    | 98.79             | Shilshole Marina, Washington | (a)                       |
|         | Reson SeaBat 8125          | April 25, 2003 | 2003-115*   | 100.00            | Juneau, Alaska               | (b)                       |
|         | Reson SeaBat 8125          | June 8, 2003   | 2003-159**  | 96.79             | Edgecombe, Sitka, Alaska     | (b)                       |
|         | Seabeam/Elac 1180          | June 17, 2003  | 2003-168    | 99.96             | Old Sitka Rocks, Alaska      | (b)                       |
| RA5     | Reson SeaBat 8101          | March 26, 2003 | 2003-085    | 97.54             | Shilshole Marina, Washington | (a)                       |
|         | Reson SeaBat 8101          | July 7, 2003   | 2003-188*** | 99.78             | Seward, Alaska               | (b)                       |
| RA6     | Seabeam/Elac 1180          | May 22, 2003   | 2003-142    | 100.00            | Old Sitka Rocks, Alaska      | (b)                       |
| Rainier | HF Seabeam/Elac 1050D MKII | April 30, 2003 | 2003-120    | 98.57             | Hoonah Sound, Alaska         | (b)                       |

\* Reson transducer hit rock April 24th (DN114) & re-patched

\*\* Reson transducer knocked off June 3rd (DN154) & replaced

\*\*\* New high speed transducer replaced older model

(a) Shilshole reference surface

(b) Surface collected concurrent with checklines

**R4RE\_2003****DN079**

Quality Control Report for file : C:\Temp\2003\_Patch\_tests\Shilshole\_surface\r4\_dn079

Surface lines: used Shilshole reference surface

Checkline lines: 014\_2028, 015\_2023, 016\_2021, 017\_2018, 018\_2030, 019\_2033

Elevation Range is : -30.018(m) -10.406(m)

Total number of 3D points used: 729506

Starting Time: 20-MAR-2003 20:18:30.40

Ending Time: 20-MAR-2003 20:34:48.32

Minimum tidal reduction: 150 (mm)

Maximum tidal reduction: 159 (mm)

| User# | Total | Max(+) | Max(-) | Mean   | Std.   | 3dm(%) | 5dm(%) | 1%(%) | 1.6%(%) |
|-------|-------|--------|--------|--------|--------|--------|--------|-------|---------|
| ===== | ===== | =====  | =====  | =====  | =====  | =====  | =====  | ===== | =====   |
| 1     | 3014  | 2.876  | -7.141 | -0.225 | 0.6460 | 90.3   | 96.1   | 75.4  | 92.6    |
| 2     | 3020  | 2.634  | -7.092 | -0.220 | 0.6207 | 91.1   | 96.3   | 76.1  | 92.8    |
| 3     | 3028  | 2.110  | -7.157 | -0.221 | 0.6102 | 91.5   | 96.4   | 73.9  | 93.5    |
| 4     | 3031  | 1.803  | -7.079 | -0.218 | 0.6005 | 91.9   | 96.6   | 75.1  | 94.6    |
| 5     | 3043  | 1.428  | -7.085 | -0.216 | 0.5848 | 91.9   | 96.8   | 76.0  | 94.8    |
| 6     | 3047  | 1.123  | -6.897 | -0.213 | 0.5647 | 92.5   | 97.1   | 75.7  | 95.5    |
| 7     | 3041  | 1.221  | -6.646 | -0.215 | 0.5481 | 92.6   | 97.1   | 75.4  | 95.9    |
| 8     | 3044  | 0.991  | -6.367 | -0.212 | 0.5262 | 92.3   | 97.2   | 75.3  | 95.7    |
| 9     | 3047  | 1.114  | -6.366 | -0.209 | 0.5054 | 92.5   | 97.1   | 75.3  | 95.4    |
| 10    | 3044  | 1.818  | -6.701 | -0.207 | 0.4859 | 91.6   | 96.9   | 73.1  | 94.9    |
| 11    | 3050  | 1.631  | -6.916 | -0.202 | 0.4703 | 90.9   | 96.8   | 73.3  | 94.3    |
| 12    | 3049  | 1.677  | -6.924 | -0.199 | 0.4473 | 91.5   | 96.6   | 72.4  | 94.5    |
| 13    | 3043  | 1.680  | -6.861 | -0.197 | 0.4269 | 91.8   | 96.7   | 72.2  | 94.7    |
| 14    | 3038  | 1.575  | -6.770 | -0.200 | 0.4112 | 91.4   | 96.7   | 69.8  | 94.5    |
| 15    | 3047  | 2.156  | -6.708 | -0.198 | 0.4069 | 91.3   | 96.6   | 69.8  | 94.4    |
| 16    | 3050  | 1.974  | -6.132 | -0.198 | 0.3959 | 91.3   | 96.6   | 69.9  | 94.6    |
| 17    | 3045  | 2.283  | -5.610 | -0.198 | 0.3815 | 91.6   | 96.7   | 68.3  | 94.7    |
| 18    | 3044  | 3.362  | -5.095 | -0.197 | 0.3635 | 91.3   | 96.9   | 67.1  | 94.8    |
| 19    | 3051  | 2.561  | -4.779 | -0.200 | 0.3315 | 91.4   | 96.8   | 67.8  | 94.5    |
| 20    | 3053  | 3.501  | -4.213 | -0.195 | 0.3277 | 91.4   | 96.5   | 67.9  | 94.6    |
| 21    | 3048  | 3.294  | -3.757 | -0.195 | 0.3125 | 91.3   | 96.6   | 67.1  | 94.4    |
| 22    | 3053  | 3.635  | -3.302 | -0.194 | 0.3100 | 90.6   | 96.6   | 66.3  | 93.9    |
| 23    | 3054  | 3.821  | -3.199 | -0.191 | 0.3067 | 90.9   | 96.6   | 67.0  | 93.6    |
| 24    | 3048  | 3.779  | -3.208 | -0.188 | 0.3000 | 90.9   | 96.5   | 67.3  | 93.8    |
| 25    | 3055  | 3.863  | -3.170 | -0.189 | 0.2952 | 90.9   | 96.5   | 66.6  | 93.6    |
| 26    | 3049  | 3.624  | -3.179 | -0.187 | 0.2866 | 91.0   | 96.6   | 66.0  | 93.7    |
| 27    | 3049  | 3.626  | -3.262 | -0.186 | 0.2850 | 91.3   | 96.4   | 64.9  | 93.8    |
| 28    | 3049  | 3.357  | -3.086 | -0.187 | 0.2740 | 91.4   | 96.4   | 65.6  | 93.8    |
| 29    | 3047  | 3.160  | -3.267 | -0.189 | 0.2688 | 91.4   | 96.5   | 64.2  | 93.8    |
| 30    | 3045  | 2.911  | -3.162 | -0.191 | 0.2618 | 91.5   | 96.5   | 63.5  | 93.9    |
| 31    | 3046  | 3.321  | -3.169 | -0.191 | 0.2676 | 92.2   | 96.5   | 64.3  | 94.2    |
| 32    | 3046  | 3.184  | -3.159 | -0.192 | 0.2627 | 92.2   | 96.3   | 63.9  | 94.3    |
| 33    | 3046  | 3.166  | -3.209 | -0.196 | 0.2617 | 92.3   | 96.2   | 62.4  | 94.4    |
| 34    | 3047  | 2.900  | -3.235 | -0.195 | 0.2576 | 92.6   | 96.2   | 63.8  | 94.7    |
| 35    | 3047  | 3.402  | -3.208 | -0.196 | 0.2582 | 92.6   | 96.3   | 63.1  | 94.6    |
| 36    | 3042  | 3.122  | -3.267 | -0.201 | 0.2609 | 92.5   | 96.3   | 63.7  | 94.5    |
| 37    | 3042  | 2.851  | -3.341 | -0.203 | 0.2607 | 92.5   | 96.4   | 62.9  | 94.4    |
| 38    | 3045  | 1.882  | -3.368 | -0.208 | 0.2610 | 92.9   | 96.4   | 62.5  | 94.6    |
| 39    | 3043  | 2.280  | -3.408 | -0.209 | 0.2673 | 92.5   | 96.6   | 62.8  | 94.6    |
| 40    | 3047  | 2.578  | -3.515 | -0.212 | 0.2830 | 92.3   | 96.7   | 62.3  | 94.3    |
| 41    | 3045  | 2.480  | -3.595 | -0.212 | 0.2809 | 92.4   | 96.7   | 62.1  | 94.5    |
| 42    | 3049  | 2.375  | -3.730 | -0.213 | 0.2907 | 92.7   | 96.7   | 62.4  | 94.6    |
| 43    | 3050  | 2.157  | -4.488 | -0.215 | 0.3073 | 92.6   | 96.9   | 62.3  | 94.6    |
| 44    | 3051  | 1.889  | -4.683 | -0.217 | 0.3166 | 92.8   | 96.8   | 61.7  | 94.6    |
| 45    | 3048  | 1.842  | -4.674 | -0.219 | 0.3236 | 92.7   | 96.9   | 61.8  | 94.6    |

|     |      |       |        |        |        |      |      |      |      |
|-----|------|-------|--------|--------|--------|------|------|------|------|
| 46  | 3048 | 1.636 | -4.704 | -0.219 | 0.3312 | 93.1 | 96.9 | 62.3 | 94.7 |
| 47  | 3048 | 1.474 | -5.281 | -0.222 | 0.3452 | 93.2 | 96.8 | 62.4 | 94.6 |
| 48  | 3048 | 1.032 | -5.236 | -0.224 | 0.3552 | 93.3 | 96.7 | 62.1 | 94.6 |
| 49  | 3049 | 1.302 | -5.588 | -0.223 | 0.3747 | 93.3 | 96.9 | 62.9 | 94.9 |
| 50  | 3050 | 0.879 | -5.758 | -0.225 | 0.3818 | 93.1 | 97.0 | 62.6 | 94.7 |
| 51  | 3046 | 0.858 | -6.011 | -0.222 | 0.3742 | 93.3 | 97.0 | 63.2 | 95.0 |
| 52  | 3048 | 0.812 | -5.983 | -0.221 | 0.3649 | 93.2 | 97.1 | 61.5 | 95.1 |
| 53  | 3052 | 1.403 | -5.922 | -0.221 | 0.3762 | 93.4 | 96.9 | 61.5 | 95.1 |
| 54  | 3050 | 1.361 | -5.877 | -0.222 | 0.3873 | 93.5 | 97.0 | 61.3 | 95.0 |
| 55  | 3055 | 1.018 | -5.709 | -0.220 | 0.3700 | 93.4 | 97.1 | 61.4 | 95.1 |
| 56  | 3052 | 1.563 | -5.732 | -0.221 | 0.3861 | 93.1 | 97.3 | 61.5 | 95.3 |
| 57  | 3053 | 1.222 | -5.609 | -0.223 | 0.3903 | 93.3 | 97.3 | 61.2 | 95.5 |
| 58  | 3048 | 1.082 | -5.851 | -0.223 | 0.4038 | 94.0 | 97.4 | 61.8 | 95.6 |
| 59  | 3052 | 1.321 | -5.660 | -0.226 | 0.4095 | 93.8 | 97.4 | 60.4 | 95.5 |
| 60  | 3049 | 1.068 | -5.847 | -0.226 | 0.4149 | 93.5 | 97.5 | 61.4 | 95.3 |
| 61  | 3047 | 0.586 | -5.961 | -0.228 | 0.4283 | 93.9 | 97.7 | 61.0 | 95.5 |
| 62  | 3046 | 0.615 | -6.360 | -0.231 | 0.4559 | 93.7 | 97.8 | 60.8 | 95.6 |
| 63  | 3050 | 0.762 | -6.426 | -0.231 | 0.4531 | 93.5 | 97.8 | 59.8 | 95.6 |
| 64  | 3053 | 1.056 | -7.365 | -0.232 | 0.4685 | 93.1 | 97.8 | 60.8 | 95.4 |
| 65  | 3051 | 0.577 | -7.351 | -0.234 | 0.4770 | 93.5 | 97.8 | 60.5 | 95.6 |
| 66  | 3051 | 0.379 | -7.431 | -0.237 | 0.4934 | 93.8 | 97.6 | 61.1 | 95.6 |
| 67  | 3049 | 0.397 | -7.111 | -0.237 | 0.4854 | 93.5 | 97.7 | 60.4 | 95.5 |
| 68  | 3046 | 0.432 | -7.413 | -0.238 | 0.4859 | 93.4 | 97.5 | 60.9 | 95.3 |
| 69  | 3047 | 0.402 | -7.350 | -0.238 | 0.4804 | 93.5 | 97.5 | 61.3 | 95.3 |
| 70  | 3050 | 0.506 | -7.844 | -0.239 | 0.4814 | 93.5 | 97.6 | 60.5 | 95.2 |
| 71  | 3051 | 0.365 | -7.894 | -0.243 | 0.5123 | 93.2 | 97.6 | 60.0 | 95.3 |
| 72  | 3053 | 0.709 | -7.849 | -0.241 | 0.4897 | 93.7 | 97.5 | 60.7 | 95.6 |
| 73  | 3054 | 0.070 | -7.364 | -0.241 | 0.4786 | 93.1 | 97.5 | 60.1 | 95.5 |
| 74  | 3054 | 0.074 | -7.554 | -0.243 | 0.4881 | 93.4 | 97.4 | 59.4 | 95.8 |
| 75  | 3054 | 0.234 | -7.678 | -0.241 | 0.4792 | 93.7 | 97.5 | 61.2 | 95.3 |
| 76  | 3053 | 0.278 | -8.096 | -0.241 | 0.4791 | 93.6 | 97.5 | 58.3 | 95.5 |
| 77  | 3054 | 0.350 | -7.689 | -0.241 | 0.4861 | 93.0 | 97.6 | 60.0 | 95.5 |
| 78  | 3051 | 1.098 | -7.915 | -0.239 | 0.4747 | 93.3 | 97.6 | 59.8 | 95.4 |
| 79  | 3052 | 1.101 | -7.640 | -0.243 | 0.5059 | 93.3 | 97.5 | 59.5 | 95.2 |
| 80  | 3049 | 0.400 | -7.789 | -0.241 | 0.4958 | 93.6 | 97.5 | 59.8 | 95.2 |
| 81  | 3049 | 0.440 | -7.832 | -0.238 | 0.4829 | 93.8 | 97.6 | 60.8 | 95.4 |
| 82  | 3051 | 1.205 | -8.164 | -0.237 | 0.4945 | 94.0 | 97.5 | 60.8 | 95.2 |
| 83  | 3051 | 0.641 | -8.635 | -0.238 | 0.5147 | 94.0 | 97.6 | 61.6 | 95.5 |
| 84  | 3052 | 0.667 | -8.722 | -0.239 | 0.5245 | 94.5 | 97.6 | 60.3 | 95.8 |
| 85  | 3049 | 1.563 | -8.254 | -0.237 | 0.5139 | 94.3 | 97.7 | 61.1 | 95.6 |
| 86  | 3051 | 0.435 | -8.086 | -0.236 | 0.4855 | 94.1 | 97.8 | 60.0 | 96.0 |
| 87  | 3051 | 0.090 | -8.922 | -0.239 | 0.5339 | 94.8 | 97.7 | 60.7 | 96.2 |
| 88  | 3050 | 0.056 | -8.949 | -0.239 | 0.5222 | 95.1 | 97.7 | 61.1 | 96.5 |
| 89  | 3048 | 0.064 | -8.913 | -0.240 | 0.5420 | 95.2 | 97.8 | 60.1 | 96.7 |
| 90  | 3047 | 0.626 | -8.952 | -0.240 | 0.5480 | 95.0 | 97.8 | 61.6 | 96.6 |
| 91  | 3050 | 0.678 | -8.640 | -0.236 | 0.5284 | 95.7 | 97.9 | 61.1 | 97.0 |
| 92  | 3048 | 1.489 | -8.851 | -0.237 | 0.5499 | 95.6 | 97.9 | 61.2 | 96.9 |
| 93  | 3048 | 0.078 | -8.683 | -0.239 | 0.5476 | 95.7 | 98.0 | 61.3 | 97.1 |
| 94  | 3046 | 0.054 | -8.935 | -0.235 | 0.5343 | 95.6 | 98.1 | 61.3 | 97.2 |
| 95  | 3043 | 0.099 | -8.908 | -0.231 | 0.5110 | 96.1 | 98.3 | 61.2 | 97.2 |
| 96  | 3046 | 1.446 | -8.523 | -0.230 | 0.5267 | 96.0 | 98.2 | 62.0 | 97.2 |
| 97  | 3047 | 1.122 | -8.311 | -0.234 | 0.5441 | 96.1 | 98.3 | 62.3 | 97.1 |
| 98  | 3055 | 1.353 | -8.736 | -0.234 | 0.5668 | 96.0 | 98.3 | 61.7 | 97.3 |
| 99  | 3052 | 1.900 | -8.317 | -0.230 | 0.5564 | 96.1 | 98.3 | 61.8 | 97.3 |
| 100 | 3050 | 1.951 | -8.985 | -0.230 | 0.5472 | 96.3 | 98.3 | 62.6 | 97.4 |
| 101 | 3046 | 2.053 | -9.130 | -0.230 | 0.5476 | 96.3 | 98.3 | 61.4 | 97.2 |
| 102 | 3044 | 1.657 | -8.864 | -0.233 | 0.5315 | 95.8 | 98.4 | 62.5 | 97.0 |
| 103 | 3042 | 0.158 | -8.719 | -0.237 | 0.5526 | 96.3 | 98.4 | 61.7 | 97.1 |
| 104 | 3047 | 0.140 | -8.703 | -0.234 | 0.5290 | 96.0 | 98.5 | 61.5 | 97.1 |
| 105 | 3044 | 0.071 | -8.671 | -0.227 | 0.4814 | 96.1 | 98.6 | 61.4 | 97.4 |
| 106 | 3044 | 0.057 | -8.654 | -0.230 | 0.4977 | 96.2 | 98.6 | 60.3 | 97.0 |
| 107 | 3042 | 0.175 | -8.051 | -0.226 | 0.4735 | 96.1 | 98.7 | 60.6 | 97.3 |
| 108 | 3046 | 0.162 | -8.337 | -0.233 | 0.5237 | 96.0 | 98.6 | 61.0 | 97.1 |
| 109 | 3043 | 0.159 | -8.494 | -0.227 | 0.4795 | 96.0 | 98.6 | 61.0 | 96.9 |
| 110 | 3039 | 0.104 | -8.355 | -0.227 | 0.4853 | 95.6 | 98.5 | 62.2 | 96.7 |

|     |      |       |        |        |        |      |      |      |      |
|-----|------|-------|--------|--------|--------|------|------|------|------|
| 111 | 3038 | 0.092 | -7.846 | -0.222 | 0.4596 | 95.5 | 98.6 | 61.5 | 96.7 |
| 112 | 3041 | 0.136 | -7.884 | -0.221 | 0.4589 | 95.8 | 98.6 | 62.6 | 96.4 |
| 113 | 3047 | 0.124 | -7.549 | -0.219 | 0.4531 | 95.7 | 98.6 | 63.7 | 96.9 |
| 114 | 3042 | 0.120 | -7.593 | -0.213 | 0.4104 | 96.0 | 98.7 | 64.0 | 96.7 |
| 115 | 3045 | 0.116 | -7.560 | -0.221 | 0.4754 | 95.7 | 98.5 | 63.8 | 96.3 |
| 116 | 3041 | 0.050 | -7.531 | -0.219 | 0.4522 | 95.6 | 98.7 | 63.3 | 96.6 |
| 117 | 3039 | 0.106 | -7.361 | -0.214 | 0.4150 | 95.8 | 98.7 | 64.3 | 96.5 |
| 118 | 3034 | 0.079 | -7.444 | -0.211 | 0.3787 | 95.6 | 98.9 | 62.9 | 96.6 |
| 119 | 3037 | 0.109 | -7.428 | -0.217 | 0.4281 | 95.2 | 98.9 | 62.8 | 96.6 |
| 120 | 3032 | 0.272 | -7.792 | -0.214 | 0.4107 | 95.7 | 98.9 | 62.7 | 96.4 |
| 121 | 3034 | 0.278 | -8.039 | -0.221 | 0.4583 | 95.6 | 98.9 | 62.6 | 96.5 |
| 122 | 3031 | 0.312 | -7.977 | -0.217 | 0.4222 | 95.1 | 99.0 | 61.9 | 96.1 |
| 123 | 3034 | 0.238 | -8.207 | -0.221 | 0.4537 | 95.8 | 98.9 | 61.4 | 96.7 |
| 124 | 3032 | 0.273 | -8.156 | -0.220 | 0.4458 | 95.7 | 99.0 | 61.9 | 96.4 |
| 125 | 3034 | 0.122 | -8.170 | -0.220 | 0.4415 | 95.4 | 99.0 | 61.8 | 96.7 |
| 126 | 3031 | 0.129 | -7.687 | -0.217 | 0.4192 | 96.1 | 99.1 | 62.8 | 96.8 |
| 127 | 3035 | 0.123 | -8.318 | -0.216 | 0.4340 | 95.9 | 99.1 | 62.7 | 96.7 |
| 128 | 3041 | 0.287 | -8.389 | -0.218 | 0.4484 | 95.8 | 99.1 | 61.5 | 96.6 |
| 129 | 3035 | 0.332 | -7.633 | -0.211 | 0.3706 | 95.7 | 99.1 | 61.7 | 96.8 |
| 130 | 3034 | 0.376 | -7.504 | -0.207 | 0.3472 | 95.9 | 99.2 | 62.3 | 96.7 |
| 131 | 3031 | 0.377 | -8.036 | -0.208 | 0.3600 | 96.0 | 99.2 | 63.3 | 96.8 |
| 132 | 3031 | 0.411 | -8.178 | -0.212 | 0.3927 | 95.5 | 99.1 | 62.5 | 96.7 |
| 133 | 3033 | 0.427 | -8.083 | -0.216 | 0.4284 | 95.4 | 99.1 | 62.5 | 96.6 |
| 134 | 3031 | 0.411 | -8.062 | -0.207 | 0.3577 | 95.7 | 99.2 | 61.9 | 96.9 |
| 135 | 3032 | 0.384 | -8.129 | -0.210 | 0.3852 | 95.4 | 99.1 | 61.2 | 96.7 |
| 136 | 3033 | 0.387 | -7.969 | -0.210 | 0.3744 | 95.2 | 99.1 | 61.3 | 96.7 |
| 137 | 3032 | 0.377 | -7.895 | -0.210 | 0.3645 | 95.4 | 99.1 | 61.3 | 96.7 |
| 138 | 3031 | 0.382 | -7.816 | -0.207 | 0.3459 | 95.9 | 99.1 | 61.4 | 96.7 |
| 139 | 3032 | 0.343 | -8.739 | -0.211 | 0.3826 | 95.5 | 99.1 | 61.0 | 96.7 |
| 140 | 3032 | 0.352 | -8.835 | -0.210 | 0.3775 | 95.3 | 99.2 | 61.8 | 97.0 |
| 141 | 3035 | 0.343 | -8.724 | -0.211 | 0.3766 | 95.8 | 99.2 | 61.5 | 97.1 |
| 142 | 3031 | 0.334 | -8.894 | -0.210 | 0.3853 | 95.6 | 99.2 | 60.9 | 97.2 |
| 143 | 3030 | 0.296 | -9.036 | -0.212 | 0.3983 | 96.0 | 99.2 | 60.4 | 97.2 |
| 144 | 3033 | 0.277 | -8.892 | -0.214 | 0.4018 | 95.7 | 99.2 | 60.5 | 97.0 |
| 145 | 3030 | 0.267 | -8.647 | -0.209 | 0.3642 | 96.0 | 99.2 | 60.8 | 97.4 |
| 146 | 3029 | 0.185 | -8.703 | -0.210 | 0.3837 | 96.0 | 99.3 | 60.5 | 97.5 |
| 147 | 3033 | 0.207 | -8.854 | -0.215 | 0.4211 | 96.0 | 99.2 | 60.2 | 97.5 |
| 148 | 3036 | 0.165 | -8.666 | -0.218 | 0.4462 | 95.9 | 99.2 | 59.9 | 97.4 |
| 149 | 3034 | 0.183 | -8.435 | -0.212 | 0.4033 | 96.5 | 99.3 | 61.2 | 97.7 |
| 150 | 3033 | 0.083 | -8.898 | -0.215 | 0.4158 | 95.9 | 99.2 | 61.0 | 97.4 |
| 151 | 3029 | 0.100 | -8.143 | -0.211 | 0.3604 | 95.5 | 99.3 | 59.8 | 97.6 |
| 152 | 3027 | 0.069 | -7.567 | -0.208 | 0.3303 | 95.9 | 99.3 | 60.1 | 97.6 |
| 153 | 3026 | 0.034 | -7.571 | -0.208 | 0.3175 | 95.9 | 99.3 | 59.8 | 97.6 |
| 154 | 3029 | 0.042 | -7.654 | -0.210 | 0.3389 | 96.0 | 99.3 | 59.0 | 97.6 |
| 155 | 3030 | 0.602 | -8.346 | -0.211 | 0.3477 | 95.3 | 99.2 | 58.7 | 97.0 |
| 156 | 3036 | 0.106 | -8.116 | -0.218 | 0.3960 | 95.2 | 99.2 | 57.9 | 96.8 |
| 157 | 3035 | 0.062 | -7.976 | -0.216 | 0.3673 | 95.3 | 99.1 | 58.4 | 96.9 |
| 158 | 3032 | 0.057 | -8.073 | -0.217 | 0.3767 | 94.5 | 99.0 | 58.0 | 96.9 |
| 159 | 3030 | 0.155 | -6.711 | -0.216 | 0.3406 | 94.8 | 98.9 | 57.0 | 96.5 |
| 160 | 3034 | 0.132 | -7.454 | -0.221 | 0.3827 | 94.8 | 98.7 | 57.2 | 96.5 |
| 161 | 3036 | 0.125 | -7.211 | -0.221 | 0.3701 | 94.6 | 98.6 | 57.2 | 96.5 |
| 162 | 3036 | 0.106 | -6.497 | -0.217 | 0.3254 | 94.1 | 98.5 | 56.5 | 96.6 |
| 163 | 3034 | 0.098 | -6.714 | -0.218 | 0.3104 | 94.0 | 98.3 | 55.9 | 96.3 |
| 164 | 3036 | 0.114 | -6.874 | -0.220 | 0.3254 | 94.0 | 98.3 | 56.2 | 96.0 |
| 165 | 3036 | 0.170 | -6.447 | -0.220 | 0.3330 | 94.0 | 98.3 | 57.0 | 96.4 |
| 166 | 3029 | 0.186 | -6.699 | -0.218 | 0.2958 | 94.1 | 98.2 | 57.1 | 96.1 |
| 167 | 3032 | 0.174 | -6.680 | -0.224 | 0.3298 | 93.7 | 98.1 | 55.8 | 96.1 |
| 168 | 3031 | 0.118 | -6.758 | -0.225 | 0.3369 | 93.9 | 97.9 | 55.6 | 96.1 |
| 169 | 3029 | 0.116 | -6.325 | -0.226 | 0.3263 | 94.0 | 98.0 | 55.3 | 96.1 |
| 170 | 3032 | 0.104 | -6.673 | -0.225 | 0.3225 | 93.8 | 98.0 | 55.2 | 96.1 |
| 171 | 3032 | 0.153 | -6.773 | -0.227 | 0.3217 | 93.6 | 98.0 | 54.7 | 96.0 |
| 172 | 3028 | 0.371 | -6.537 | -0.228 | 0.3307 | 93.3 | 98.1 | 54.4 | 96.1 |
| 173 | 3029 | 0.095 | -6.667 | -0.230 | 0.3409 | 93.5 | 98.0 | 53.9 | 95.8 |
| 174 | 3037 | 0.879 | -6.730 | -0.234 | 0.3604 | 93.2 | 97.9 | 54.5 | 96.0 |
| 175 | 3032 | 0.062 | -6.539 | -0.234 | 0.3587 | 93.5 | 97.9 | 54.5 | 95.8 |

|     |      |       |        |        |        |      |      |      |      |
|-----|------|-------|--------|--------|--------|------|------|------|------|
| 176 | 3035 | 0.041 | -6.710 | -0.234 | 0.3621 | 93.3 | 97.9 | 55.1 | 95.9 |
| 177 | 3032 | 0.042 | -6.780 | -0.236 | 0.3635 | 93.6 | 97.9 | 54.7 | 96.2 |
| 178 | 3032 | 0.123 | -6.757 | -0.233 | 0.3486 | 93.7 | 98.0 | 54.2 | 96.2 |
| 179 | 3034 | 0.998 | -6.777 | -0.226 | 0.3419 | 94.1 | 98.2 | 54.4 | 96.4 |
| 180 | 3028 | 0.458 | -6.792 | -0.222 | 0.3192 | 93.6 | 98.4 | 53.8 | 96.6 |
| 181 | 3032 | 0.720 | -6.832 | -0.226 | 0.3404 | 93.6 | 98.1 | 53.5 | 95.9 |
| 182 | 3033 | 0.863 | -6.618 | -0.224 | 0.3281 | 93.7 | 97.9 | 53.4 | 95.9 |
| 183 | 3035 | 1.333 | -6.934 | -0.224 | 0.3336 | 93.6 | 98.1 | 55.5 | 96.0 |
| 184 | 3040 | 1.226 | -7.093 | -0.224 | 0.3288 | 94.0 | 98.1 | 53.2 | 96.2 |
| 185 | 3037 | 1.790 | -6.465 | -0.221 | 0.3187 | 94.1 | 98.1 | 55.1 | 96.1 |
| 186 | 3040 | 2.003 | -6.713 | -0.221 | 0.3220 | 93.8 | 97.9 | 54.9 | 96.0 |
| 187 | 3039 | 1.395 | -7.001 | -0.222 | 0.3233 | 94.4 | 98.0 | 54.8 | 95.9 |
| 188 | 3040 | 1.693 | -7.139 | -0.223 | 0.3253 | 93.9 | 97.9 | 55.0 | 95.4 |
| 189 | 3041 | 2.549 | -7.197 | -0.222 | 0.3288 | 93.9 | 97.9 | 54.2 | 95.6 |
| 190 | 3039 | 1.974 | -6.654 | -0.221 | 0.3229 | 93.9 | 97.9 | 55.5 | 95.5 |
| 191 | 3038 | 2.097 | -6.914 | -0.220 | 0.3213 | 94.0 | 97.9 | 56.4 | 95.4 |
| 192 | 3037 | 2.792 | -7.072 | -0.220 | 0.3191 | 94.0 | 98.1 | 55.8 | 95.6 |
| 193 | 3038 | 2.370 | -7.289 | -0.221 | 0.3238 | 94.0 | 98.2 | 54.9 | 95.3 |
| 194 | 3036 | 2.377 | -7.386 | -0.219 | 0.3219 | 94.3 | 98.3 | 56.9 | 95.5 |
| 195 | 3032 | 2.668 | -6.978 | -0.218 | 0.3176 | 94.3 | 98.4 | 55.6 | 95.6 |
| 196 | 3035 | 3.238 | -7.363 | -0.217 | 0.3195 | 94.2 | 98.4 | 55.4 | 95.5 |
| 197 | 3038 | 2.528 | -7.418 | -0.216 | 0.3185 | 93.8 | 98.5 | 56.4 | 95.5 |
| 198 | 3033 | 2.822 | -7.389 | -0.214 | 0.3153 | 94.4 | 98.6 | 57.4 | 95.7 |
| 199 | 3036 | 1.976 | -6.812 | -0.215 | 0.3001 | 94.5 | 98.5 | 56.7 | 95.7 |
| 200 | 3040 | 3.327 | -6.827 | -0.215 | 0.3080 | 94.3 | 98.4 | 56.6 | 95.5 |
| 201 | 3043 | 3.608 | -6.232 | -0.214 | 0.2972 | 93.9 | 98.3 | 55.8 | 95.4 |
| 202 | 3041 | 3.789 | -5.829 | -0.210 | 0.2742 | 94.1 | 98.3 | 57.9 | 95.4 |
| 203 | 3040 | 4.020 | -5.718 | -0.207 | 0.2815 | 94.1 | 98.3 | 57.8 | 95.2 |
| 204 | 3041 | 4.326 | -5.567 | -0.206 | 0.2693 | 93.9 | 98.8 | 57.1 | 95.4 |
| 205 | 3041 | 4.400 | -5.412 | -0.201 | 0.2589 | 94.0 | 98.9 | 58.7 | 95.2 |
| 206 | 3037 | 4.525 | -5.276 | -0.202 | 0.2538 | 94.4 | 98.9 | 58.9 | 95.4 |
| 207 | 3039 | 4.646 | -5.158 | -0.200 | 0.2511 | 94.7 | 98.8 | 58.8 | 95.4 |
| 208 | 3037 | 4.253 | -4.973 | -0.200 | 0.2480 | 94.8 | 98.9 | 58.0 | 95.4 |
| 209 | 3040 | 4.428 | -4.823 | -0.197 | 0.2174 | 95.2 | 98.8 | 60.2 | 95.4 |
| 210 | 3040 | 4.105 | -4.681 | -0.198 | 0.2070 | 95.3 | 98.7 | 60.9 | 95.5 |
| 211 | 3041 | 4.798 | -4.181 | -0.193 | 0.2228 | 95.2 | 98.8 | 60.6 | 95.4 |
| 212 | 3040 | 5.012 | -4.029 | -0.195 | 0.2086 | 95.6 | 98.8 | 62.1 | 95.4 |
| 213 | 3037 | 5.283 | -3.216 | -0.190 | 0.2154 | 96.2 | 98.7 | 63.7 | 95.9 |
| 214 | 3031 | 5.091 | -2.986 | -0.192 | 0.1981 | 96.4 | 98.6 | 62.9 | 95.9 |
| 215 | 3026 | 3.776 | -2.767 | -0.196 | 0.1531 | 96.1 | 98.7 | 62.0 | 96.2 |
| 216 | 3023 | 5.115 | -2.137 | -0.193 | 0.1708 | 96.5 | 98.6 | 61.7 | 96.5 |
| 217 | 3024 | 5.332 | -2.035 | -0.189 | 0.1933 | 96.5 | 98.4 | 63.0 | 96.7 |
| 218 | 3035 | 5.583 | -2.016 | -0.186 | 0.2213 | 96.2 | 98.3 | 62.4 | 96.9 |
| 219 | 3033 | 5.286 | -1.996 | -0.187 | 0.2055 | 96.3 | 98.4 | 62.6 | 97.0 |
| 220 | 3028 | 4.978 | -2.551 | -0.186 | 0.1960 | 96.4 | 98.3 | 64.8 | 96.9 |
| 221 | 3031 | 5.766 | -2.585 | -0.185 | 0.2329 | 96.2 | 98.4 | 64.6 | 97.1 |
| 222 | 3033 | 5.512 | -2.712 | -0.187 | 0.2244 | 95.9 | 98.2 | 64.9 | 97.1 |
| 223 | 3032 | 3.984 | -2.911 | -0.193 | 0.1923 | 96.0 | 98.1 | 64.2 | 97.0 |
| 224 | 3034 | 5.266 | -2.961 | -0.190 | 0.2282 | 95.8 | 98.1 | 65.3 | 97.1 |
| 225 | 3031 | 4.507 | -3.030 | -0.192 | 0.2258 | 95.7 | 98.2 | 65.2 | 97.1 |
| 226 | 3030 | 4.783 | -2.988 | -0.194 | 0.2291 | 95.7 | 98.3 | 65.0 | 97.3 |
| 227 | 3034 | 4.960 | -2.817 | -0.192 | 0.2486 | 95.6 | 98.4 | 64.9 | 97.2 |
| 228 | 3032 | 5.306 | -2.723 | -0.185 | 0.2497 | 95.6 | 98.3 | 67.0 | 97.2 |
| 229 | 3032 | 4.629 | -2.919 | -0.184 | 0.2283 | 95.3 | 98.4 | 66.4 | 97.1 |
| 230 | 3033 | 4.112 | -2.628 | -0.182 | 0.2090 | 95.5 | 98.5 | 66.2 | 97.4 |
| 231 | 3033 | 4.404 | -2.656 | -0.184 | 0.1942 | 95.6 | 98.5 | 66.4 | 97.4 |
| 232 | 3029 | 2.975 | -2.721 | -0.180 | 0.1642 | 95.9 | 98.7 | 67.8 | 97.6 |
| 233 | 3026 | 2.807 | -2.485 | -0.177 | 0.1418 | 95.9 | 98.9 | 68.0 | 97.8 |
| 234 | 3026 | 3.045 | -2.301 | -0.174 | 0.1443 | 95.9 | 98.9 | 68.5 | 97.4 |
| 235 | 3022 | 3.323 | -2.452 | -0.172 | 0.1422 | 95.8 | 99.0 | 69.0 | 97.3 |
| 236 | 3024 | 3.530 | -2.407 | -0.171 | 0.1448 | 95.7 | 99.1 | 69.2 | 97.3 |
| 237 | 3018 | 3.771 | -2.292 | -0.169 | 0.1376 | 96.0 | 99.1 | 70.8 | 97.7 |
| 238 | 3018 | 4.021 | -2.111 | -0.168 | 0.1401 | 95.5 | 99.2 | 69.7 | 97.2 |
| 239 | 3002 | 4.229 | -1.924 | -0.160 | 0.1422 | 96.0 | 99.5 | 71.5 | 97.4 |
| 240 | 2989 | 4.466 | -1.752 | -0.156 | 0.1771 | 95.0 | 99.4 | 70.6 | 97.1 |

Classification report 1 of 3

IHO statistics a/b are : 0.250 0.008

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 1     | 3014  | 284    | 9.42   | 2730   | 90.58  |
| 2     | 3020  | 255    | 8.44   | 2765   | 91.56  |
| 3     | 3028  | 236    | 7.79   | 2792   | 92.21  |
| 4     | 3031  | 234    | 7.72   | 2797   | 92.28  |
| 5     | 3043  | 222    | 7.30   | 2821   | 92.70  |
| 6     | 3047  | 204    | 6.70   | 2843   | 93.30  |
| 7     | 3041  | 207    | 6.81   | 2834   | 93.19  |
| 8     | 3044  | 208    | 6.83   | 2836   | 93.17  |
| 9     | 3047  | 215    | 7.06   | 2832   | 92.94  |
| 10    | 3044  | 244    | 8.02   | 2800   | 91.98  |
| 11    | 3050  | 264    | 8.66   | 2786   | 91.34  |
| 12    | 3049  | 248    | 8.13   | 2801   | 91.87  |
| 13    | 3043  | 242    | 7.95   | 2801   | 92.05  |
| 14    | 3038  | 247    | 8.13   | 2791   | 91.87  |
| 15    | 3047  | 246    | 8.07   | 2801   | 91.93  |
| 16    | 3050  | 239    | 7.84   | 2811   | 92.16  |
| 17    | 3045  | 241    | 7.91   | 2804   | 92.09  |
| 18    | 3044  | 243    | 7.98   | 2801   | 92.02  |
| 19    | 3051  | 247    | 8.10   | 2804   | 91.90  |
| 20    | 3053  | 247    | 8.09   | 2806   | 91.91  |
| 21    | 3048  | 251    | 8.23   | 2797   | 91.77  |
| 22    | 3053  | 265    | 8.68   | 2788   | 91.32  |
| 23    | 3054  | 261    | 8.55   | 2793   | 91.45  |
| 24    | 3048  | 254    | 8.33   | 2794   | 91.67  |
| 25    | 3055  | 258    | 8.45   | 2797   | 91.55  |
| 26    | 3049  | 251    | 8.23   | 2798   | 91.77  |
| 27    | 3049  | 244    | 8.00   | 2805   | 92.00  |
| 28    | 3049  | 243    | 7.97   | 2806   | 92.03  |
| 29    | 3047  | 238    | 7.81   | 2809   | 92.19  |
| 30    | 3045  | 222    | 7.29   | 2823   | 92.71  |
| 31    | 3046  | 213    | 6.99   | 2833   | 93.01  |
| 32    | 3046  | 212    | 6.96   | 2834   | 93.04  |
| 33    | 3046  | 203    | 6.66   | 2843   | 93.34  |
| 34    | 3047  | 198    | 6.50   | 2849   | 93.50  |
| 35    | 3047  | 192    | 6.30   | 2855   | 93.70  |
| 36    | 3042  | 195    | 6.41   | 2847   | 93.59  |
| 37    | 3042  | 207    | 6.80   | 2835   | 93.20  |
| 38    | 3045  | 193    | 6.34   | 2852   | 93.66  |
| 39    | 3043  | 198    | 6.51   | 2845   | 93.49  |
| 40    | 3047  | 210    | 6.89   | 2837   | 93.11  |
| 41    | 3045  | 200    | 6.57   | 2845   | 93.43  |
| 42    | 3049  | 205    | 6.72   | 2844   | 93.28  |
| 43    | 3050  | 204    | 6.69   | 2846   | 93.31  |
| 44    | 3051  | 217    | 7.11   | 2834   | 92.89  |
| 45    | 3048  | 212    | 6.96   | 2836   | 93.04  |
| 46    | 3048  | 201    | 6.59   | 2847   | 93.41  |
| 47    | 3048  | 198    | 6.50   | 2850   | 93.50  |
| 48    | 3048  | 201    | 6.59   | 2847   | 93.41  |
| 49    | 3049  | 193    | 6.33   | 2856   | 93.67  |
| 50    | 3050  | 198    | 6.49   | 2852   | 93.51  |
| 51    | 3046  | 190    | 6.24   | 2856   | 93.76  |
| 52    | 3048  | 196    | 6.43   | 2852   | 93.57  |
| 53    | 3052  | 196    | 6.42   | 2856   | 93.58  |
| 54    | 3050  | 187    | 6.13   | 2863   | 93.87  |
| 55    | 3055  | 185    | 6.06   | 2870   | 93.94  |
| 56    | 3052  | 192    | 6.29   | 2860   | 93.71  |
| 57    | 3053  | 188    | 6.16   | 2865   | 93.84  |
| 58    | 3048  | 170    | 5.58   | 2878   | 94.42  |
| 59    | 3052  | 181    | 5.93   | 2871   | 94.07  |

|     |      |     |      |      |       |
|-----|------|-----|------|------|-------|
| 60  | 3049 | 193 | 6.33 | 2856 | 93.67 |
| 61  | 3047 | 183 | 6.01 | 2864 | 93.99 |
| 62  | 3046 | 183 | 6.01 | 2863 | 93.99 |
| 63  | 3050 | 178 | 5.84 | 2872 | 94.16 |
| 64  | 3053 | 195 | 6.39 | 2858 | 93.61 |
| 65  | 3051 | 186 | 6.10 | 2865 | 93.90 |
| 66  | 3051 | 184 | 6.03 | 2867 | 93.97 |
| 67  | 3049 | 180 | 5.90 | 2869 | 94.10 |
| 68  | 3046 | 185 | 6.07 | 2861 | 93.93 |
| 69  | 3047 | 190 | 6.24 | 2857 | 93.76 |
| 70  | 3050 | 194 | 6.36 | 2856 | 93.64 |
| 71  | 3051 | 196 | 6.42 | 2855 | 93.58 |
| 72  | 3053 | 186 | 6.09 | 2867 | 93.91 |
| 73  | 3054 | 202 | 6.61 | 2852 | 93.39 |
| 74  | 3054 | 199 | 6.52 | 2855 | 93.48 |
| 75  | 3054 | 194 | 6.35 | 2860 | 93.65 |
| 76  | 3053 | 190 | 6.22 | 2863 | 93.78 |
| 77  | 3054 | 197 | 6.45 | 2857 | 93.55 |
| 78  | 3051 | 201 | 6.59 | 2850 | 93.41 |
| 79  | 3052 | 202 | 6.62 | 2850 | 93.38 |
| 80  | 3049 | 195 | 6.40 | 2854 | 93.60 |
| 81  | 3049 | 182 | 5.97 | 2867 | 94.03 |
| 82  | 3051 | 186 | 6.10 | 2865 | 93.90 |
| 83  | 3051 | 179 | 5.87 | 2872 | 94.13 |
| 84  | 3052 | 158 | 5.18 | 2894 | 94.82 |
| 85  | 3049 | 167 | 5.48 | 2882 | 94.52 |
| 86  | 3051 | 158 | 5.18 | 2893 | 94.82 |
| 87  | 3051 | 153 | 5.01 | 2898 | 94.99 |
| 88  | 3050 | 139 | 4.56 | 2911 | 95.44 |
| 89  | 3048 | 138 | 4.53 | 2910 | 95.47 |
| 90  | 3047 | 136 | 4.46 | 2911 | 95.54 |
| 91  | 3050 | 119 | 3.90 | 2931 | 96.10 |
| 92  | 3048 | 124 | 4.07 | 2924 | 95.93 |
| 93  | 3048 | 125 | 4.10 | 2923 | 95.90 |
| 94  | 3046 | 115 | 3.78 | 2931 | 96.22 |
| 95  | 3043 | 112 | 3.68 | 2931 | 96.32 |
| 96  | 3046 | 109 | 3.58 | 2937 | 96.42 |
| 97  | 3047 | 108 | 3.54 | 2939 | 96.46 |
| 98  | 3055 | 106 | 3.47 | 2949 | 96.53 |
| 99  | 3052 | 106 | 3.47 | 2946 | 96.53 |
| 100 | 3050 | 105 | 3.44 | 2945 | 96.56 |
| 101 | 3046 | 115 | 3.78 | 2931 | 96.22 |
| 102 | 3044 | 116 | 3.81 | 2928 | 96.19 |
| 103 | 3042 | 116 | 3.81 | 2926 | 96.19 |
| 104 | 3047 | 106 | 3.48 | 2941 | 96.52 |
| 105 | 3044 | 101 | 3.32 | 2943 | 96.68 |
| 106 | 3044 | 129 | 4.24 | 2915 | 95.76 |
| 107 | 3042 | 110 | 3.62 | 2932 | 96.38 |
| 108 | 3046 | 121 | 3.97 | 2925 | 96.03 |
| 109 | 3043 | 123 | 4.04 | 2920 | 95.96 |
| 110 | 3039 | 127 | 4.18 | 2912 | 95.82 |
| 111 | 3038 | 122 | 4.02 | 2916 | 95.98 |
| 112 | 3041 | 133 | 4.37 | 2908 | 95.63 |
| 113 | 3047 | 126 | 4.14 | 2921 | 95.86 |
| 114 | 3042 | 125 | 4.11 | 2917 | 95.89 |
| 115 | 3045 | 131 | 4.30 | 2914 | 95.70 |
| 116 | 3041 | 123 | 4.04 | 2918 | 95.96 |
| 117 | 3039 | 125 | 4.11 | 2914 | 95.89 |
| 118 | 3034 | 128 | 4.22 | 2906 | 95.78 |
| 119 | 3037 | 131 | 4.31 | 2906 | 95.69 |
| 120 | 3032 | 136 | 4.49 | 2896 | 95.51 |
| 121 | 3034 | 134 | 4.42 | 2900 | 95.58 |
| 122 | 3031 | 147 | 4.85 | 2884 | 95.15 |
| 123 | 3034 | 122 | 4.02 | 2912 | 95.98 |
| 124 | 3032 | 129 | 4.25 | 2903 | 95.75 |

|     |      |     |      |      |       |
|-----|------|-----|------|------|-------|
| 125 | 3034 | 140 | 4.61 | 2894 | 95.39 |
| 126 | 3031 | 122 | 4.03 | 2909 | 95.97 |
| 127 | 3035 | 127 | 4.18 | 2908 | 95.82 |
| 128 | 3041 | 125 | 4.11 | 2916 | 95.89 |
| 129 | 3035 | 127 | 4.18 | 2908 | 95.82 |
| 130 | 3034 | 124 | 4.09 | 2910 | 95.91 |
| 131 | 3031 | 121 | 3.99 | 2910 | 96.01 |
| 132 | 3031 | 134 | 4.42 | 2897 | 95.58 |
| 133 | 3033 | 137 | 4.52 | 2896 | 95.48 |
| 134 | 3031 | 128 | 4.22 | 2903 | 95.78 |
| 135 | 3032 | 136 | 4.49 | 2896 | 95.51 |
| 136 | 3033 | 136 | 4.48 | 2897 | 95.52 |
| 137 | 3032 | 131 | 4.32 | 2901 | 95.68 |
| 138 | 3031 | 131 | 4.32 | 2900 | 95.68 |
| 139 | 3032 | 136 | 4.49 | 2896 | 95.51 |
| 140 | 3032 | 135 | 4.45 | 2897 | 95.55 |
| 141 | 3035 | 136 | 4.48 | 2899 | 95.52 |
| 142 | 3031 | 130 | 4.29 | 2901 | 95.71 |
| 143 | 3030 | 129 | 4.26 | 2901 | 95.74 |
| 144 | 3033 | 131 | 4.32 | 2902 | 95.68 |
| 145 | 3030 | 122 | 4.03 | 2908 | 95.97 |
| 146 | 3029 | 120 | 3.96 | 2909 | 96.04 |
| 147 | 3033 | 123 | 4.06 | 2910 | 95.94 |
| 148 | 3036 | 124 | 4.08 | 2912 | 95.92 |
| 149 | 3034 | 113 | 3.72 | 2921 | 96.28 |
| 150 | 3033 | 131 | 4.32 | 2902 | 95.68 |
| 151 | 3029 | 129 | 4.26 | 2900 | 95.74 |
| 152 | 3027 | 123 | 4.06 | 2904 | 95.94 |
| 153 | 3026 | 128 | 4.23 | 2898 | 95.77 |
| 154 | 3029 | 124 | 4.09 | 2905 | 95.91 |
| 155 | 3030 | 144 | 4.75 | 2886 | 95.25 |
| 156 | 3036 | 150 | 4.94 | 2886 | 95.06 |
| 157 | 3035 | 152 | 5.01 | 2883 | 94.99 |
| 158 | 3032 | 160 | 5.28 | 2872 | 94.72 |
| 159 | 3030 | 162 | 5.35 | 2868 | 94.65 |
| 160 | 3034 | 156 | 5.14 | 2878 | 94.86 |
| 161 | 3036 | 167 | 5.50 | 2869 | 94.50 |
| 162 | 3036 | 168 | 5.53 | 2868 | 94.47 |
| 163 | 3034 | 177 | 5.83 | 2857 | 94.17 |
| 164 | 3036 | 180 | 5.93 | 2856 | 94.07 |
| 165 | 3036 | 179 | 5.90 | 2857 | 94.10 |
| 166 | 3029 | 175 | 5.78 | 2854 | 94.22 |
| 167 | 3032 | 184 | 6.07 | 2848 | 93.93 |
| 168 | 3031 | 181 | 5.97 | 2850 | 94.03 |
| 169 | 3029 | 184 | 6.07 | 2845 | 93.93 |
| 170 | 3032 | 192 | 6.33 | 2840 | 93.67 |
| 171 | 3032 | 195 | 6.43 | 2837 | 93.57 |
| 172 | 3028 | 201 | 6.64 | 2827 | 93.36 |
| 173 | 3029 | 199 | 6.57 | 2830 | 93.43 |
| 174 | 3037 | 213 | 7.01 | 2824 | 92.99 |
| 175 | 3032 | 201 | 6.63 | 2831 | 93.37 |
| 176 | 3035 | 206 | 6.79 | 2829 | 93.21 |
| 177 | 3032 | 192 | 6.33 | 2840 | 93.67 |
| 178 | 3032 | 187 | 6.17 | 2845 | 93.83 |
| 179 | 3034 | 179 | 5.90 | 2855 | 94.10 |
| 180 | 3028 | 195 | 6.44 | 2833 | 93.56 |
| 181 | 3032 | 196 | 6.46 | 2836 | 93.54 |
| 182 | 3033 | 199 | 6.56 | 2834 | 93.44 |
| 183 | 3035 | 189 | 6.23 | 2846 | 93.77 |
| 184 | 3040 | 187 | 6.15 | 2853 | 93.85 |
| 185 | 3037 | 184 | 6.06 | 2853 | 93.94 |
| 186 | 3040 | 191 | 6.28 | 2849 | 93.72 |
| 187 | 3039 | 184 | 6.05 | 2855 | 93.95 |
| 188 | 3040 | 191 | 6.28 | 2849 | 93.72 |
| 189 | 3041 | 185 | 6.08 | 2856 | 93.92 |

|     |      |     |      |      |       |
|-----|------|-----|------|------|-------|
| 190 | 3039 | 185 | 6.09 | 2854 | 93.91 |
| 191 | 3038 | 193 | 6.35 | 2845 | 93.65 |
| 192 | 3037 | 201 | 6.62 | 2836 | 93.38 |
| 193 | 3038 | 197 | 6.48 | 2841 | 93.52 |
| 194 | 3036 | 187 | 6.16 | 2849 | 93.84 |
| 195 | 3032 | 187 | 6.17 | 2845 | 93.83 |
| 196 | 3035 | 196 | 6.46 | 2839 | 93.54 |
| 197 | 3038 | 197 | 6.48 | 2841 | 93.52 |
| 198 | 3033 | 188 | 6.20 | 2845 | 93.80 |
| 199 | 3036 | 172 | 5.67 | 2864 | 94.33 |
| 200 | 3040 | 188 | 6.18 | 2852 | 93.82 |
| 201 | 3043 | 187 | 6.15 | 2856 | 93.85 |
| 202 | 3041 | 192 | 6.31 | 2849 | 93.69 |
| 203 | 3040 | 192 | 6.32 | 2848 | 93.68 |
| 204 | 3041 | 192 | 6.31 | 2849 | 93.69 |
| 205 | 3041 | 185 | 6.08 | 2856 | 93.92 |
| 206 | 3037 | 182 | 5.99 | 2855 | 94.01 |
| 207 | 3039 | 171 | 5.63 | 2868 | 94.37 |
| 208 | 3037 | 176 | 5.80 | 2861 | 94.20 |
| 209 | 3040 | 150 | 4.93 | 2890 | 95.07 |
| 210 | 3040 | 153 | 5.03 | 2887 | 94.97 |
| 211 | 3041 | 160 | 5.26 | 2881 | 94.74 |
| 212 | 3040 | 153 | 5.03 | 2887 | 94.97 |
| 213 | 3037 | 143 | 4.71 | 2894 | 95.29 |
| 214 | 3031 | 135 | 4.45 | 2896 | 95.55 |
| 215 | 3026 | 137 | 4.53 | 2889 | 95.47 |
| 216 | 3023 | 119 | 3.94 | 2904 | 96.06 |
| 217 | 3024 | 105 | 3.47 | 2919 | 96.53 |
| 218 | 3035 | 113 | 3.72 | 2922 | 96.28 |
| 219 | 3033 | 111 | 3.66 | 2922 | 96.34 |
| 220 | 3028 | 111 | 3.67 | 2917 | 96.33 |
| 221 | 3031 | 113 | 3.73 | 2918 | 96.27 |
| 222 | 3033 | 116 | 3.82 | 2917 | 96.18 |
| 223 | 3032 | 120 | 3.96 | 2912 | 96.04 |
| 224 | 3034 | 124 | 4.09 | 2910 | 95.91 |
| 225 | 3031 | 131 | 4.32 | 2900 | 95.68 |
| 226 | 3030 | 130 | 4.29 | 2900 | 95.71 |
| 227 | 3034 | 129 | 4.25 | 2905 | 95.75 |
| 228 | 3032 | 131 | 4.32 | 2901 | 95.68 |
| 229 | 3032 | 141 | 4.65 | 2891 | 95.35 |
| 230 | 3033 | 136 | 4.48 | 2897 | 95.52 |
| 231 | 3033 | 139 | 4.58 | 2894 | 95.42 |
| 232 | 3029 | 131 | 4.32 | 2898 | 95.68 |
| 233 | 3026 | 129 | 4.26 | 2897 | 95.74 |
| 234 | 3026 | 125 | 4.13 | 2901 | 95.87 |
| 235 | 3022 | 136 | 4.50 | 2886 | 95.50 |
| 236 | 3024 | 130 | 4.30 | 2894 | 95.70 |
| 237 | 3018 | 125 | 4.14 | 2893 | 95.86 |
| 238 | 3018 | 135 | 4.47 | 2883 | 95.53 |
| 239 | 3002 | 130 | 4.33 | 2872 | 95.67 |
| 240 | 2989 | 157 | 5.25 | 2832 | 94.75 |

Classification report 2 of 3

IHO statistics a/b are : 0.500 0.013

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 1     | 3014  | 107    | 3.55   | 2907   | 96.45  |
| 2     | 3020  | 105    | 3.48   | 2915   | 96.52  |
| 3     | 3028  | 102    | 3.37   | 2926   | 96.63  |
| 4     | 3031  | 99     | 3.27   | 2932   | 96.73  |
| 5     | 3043  | 91     | 2.99   | 2952   | 97.01  |
| 6     | 3047  | 82     | 2.69   | 2965   | 97.31  |
| 7     | 3041  | 82     | 2.70   | 2959   | 97.30  |
| 8     | 3044  | 82     | 2.69   | 2962   | 97.31  |
| 9     | 3047  | 84     | 2.76   | 2963   | 97.24  |
| 10    | 3044  | 85     | 2.79   | 2959   | 97.21  |
| 11    | 3050  | 89     | 2.92   | 2961   | 97.08  |
| 12    | 3049  | 90     | 2.95   | 2959   | 97.05  |
| 13    | 3043  | 88     | 2.89   | 2955   | 97.11  |
| 14    | 3038  | 91     | 3.00   | 2947   | 97.00  |
| 15    | 3047  | 94     | 3.09   | 2953   | 96.91  |
| 16    | 3050  | 95     | 3.11   | 2955   | 96.89  |
| 17    | 3045  | 91     | 2.99   | 2954   | 97.01  |
| 18    | 3044  | 88     | 2.89   | 2956   | 97.11  |
| 19    | 3051  | 85     | 2.79   | 2966   | 97.21  |
| 20    | 3053  | 88     | 2.88   | 2965   | 97.12  |
| 21    | 3048  | 89     | 2.92   | 2959   | 97.08  |
| 22    | 3053  | 92     | 3.01   | 2961   | 96.99  |
| 23    | 3054  | 98     | 3.21   | 2956   | 96.79  |
| 24    | 3048  | 89     | 2.92   | 2959   | 97.08  |
| 25    | 3055  | 89     | 2.91   | 2966   | 97.09  |
| 26    | 3049  | 84     | 2.76   | 2965   | 97.24  |
| 27    | 3049  | 84     | 2.76   | 2965   | 97.24  |
| 28    | 3049  | 87     | 2.85   | 2962   | 97.15  |
| 29    | 3047  | 86     | 2.82   | 2961   | 97.18  |
| 30    | 3045  | 84     | 2.76   | 2961   | 97.24  |
| 31    | 3046  | 87     | 2.86   | 2959   | 97.14  |
| 32    | 3046  | 94     | 3.09   | 2952   | 96.91  |
| 33    | 3046  | 99     | 3.25   | 2947   | 96.75  |
| 34    | 3047  | 101    | 3.31   | 2946   | 96.69  |
| 35    | 3047  | 97     | 3.18   | 2950   | 96.82  |
| 36    | 3042  | 100    | 3.29   | 2942   | 96.71  |
| 37    | 3042  | 92     | 3.02   | 2950   | 96.98  |
| 38    | 3045  | 87     | 2.86   | 2958   | 97.14  |
| 39    | 3043  | 81     | 2.66   | 2962   | 97.34  |
| 40    | 3047  | 91     | 2.99   | 2956   | 97.01  |
| 41    | 3045  | 89     | 2.92   | 2956   | 97.08  |
| 42    | 3049  | 92     | 3.02   | 2957   | 96.98  |
| 43    | 3050  | 88     | 2.89   | 2962   | 97.11  |
| 44    | 3051  | 87     | 2.85   | 2964   | 97.15  |
| 45    | 3048  | 87     | 2.85   | 2961   | 97.15  |
| 46    | 3048  | 81     | 2.66   | 2967   | 97.34  |
| 47    | 3048  | 86     | 2.82   | 2962   | 97.18  |
| 48    | 3048  | 82     | 2.69   | 2966   | 97.31  |
| 49    | 3049  | 86     | 2.82   | 2963   | 97.18  |
| 50    | 3050  | 78     | 2.56   | 2972   | 97.44  |
| 51    | 3046  | 81     | 2.66   | 2965   | 97.34  |
| 52    | 3048  | 81     | 2.66   | 2967   | 97.34  |
| 53    | 3052  | 87     | 2.85   | 2965   | 97.15  |
| 54    | 3050  | 84     | 2.75   | 2966   | 97.25  |
| 55    | 3055  | 77     | 2.52   | 2978   | 97.48  |
| 56    | 3052  | 74     | 2.42   | 2978   | 97.58  |
| 57    | 3053  | 73     | 2.39   | 2980   | 97.61  |
| 58    | 3048  | 73     | 2.40   | 2975   | 97.60  |
| 59    | 3052  | 70     | 2.29   | 2982   | 97.71  |

|     |      |    |      |      |       |
|-----|------|----|------|------|-------|
| 60  | 3049 | 66 | 2.16 | 2983 | 97.84 |
| 61  | 3047 | 64 | 2.10 | 2983 | 97.90 |
| 62  | 3046 | 65 | 2.13 | 2981 | 97.87 |
| 63  | 3050 | 63 | 2.07 | 2987 | 97.93 |
| 64  | 3053 | 65 | 2.13 | 2988 | 97.87 |
| 65  | 3051 | 65 | 2.13 | 2986 | 97.87 |
| 66  | 3051 | 70 | 2.29 | 2981 | 97.71 |
| 67  | 3049 | 68 | 2.23 | 2981 | 97.77 |
| 68  | 3046 | 69 | 2.27 | 2977 | 97.73 |
| 69  | 3047 | 70 | 2.30 | 2977 | 97.70 |
| 70  | 3050 | 69 | 2.26 | 2981 | 97.74 |
| 71  | 3051 | 70 | 2.29 | 2981 | 97.71 |
| 72  | 3053 | 73 | 2.39 | 2980 | 97.61 |
| 73  | 3054 | 76 | 2.49 | 2978 | 97.51 |
| 74  | 3054 | 76 | 2.49 | 2978 | 97.51 |
| 75  | 3054 | 74 | 2.42 | 2980 | 97.58 |
| 76  | 3053 | 72 | 2.36 | 2981 | 97.64 |
| 77  | 3054 | 70 | 2.29 | 2984 | 97.71 |
| 78  | 3051 | 70 | 2.29 | 2981 | 97.71 |
| 79  | 3052 | 71 | 2.33 | 2981 | 97.67 |
| 80  | 3049 | 68 | 2.23 | 2981 | 97.77 |
| 81  | 3049 | 68 | 2.23 | 2981 | 97.77 |
| 82  | 3051 | 72 | 2.36 | 2979 | 97.64 |
| 83  | 3051 | 67 | 2.20 | 2984 | 97.80 |
| 84  | 3052 | 68 | 2.23 | 2984 | 97.77 |
| 85  | 3049 | 69 | 2.26 | 2980 | 97.74 |
| 86  | 3051 | 67 | 2.20 | 2984 | 97.80 |
| 87  | 3051 | 64 | 2.10 | 2987 | 97.90 |
| 88  | 3050 | 66 | 2.16 | 2984 | 97.84 |
| 89  | 3048 | 66 | 2.17 | 2982 | 97.83 |
| 90  | 3047 | 65 | 2.13 | 2982 | 97.87 |
| 91  | 3050 | 62 | 2.03 | 2988 | 97.97 |
| 92  | 3048 | 62 | 2.03 | 2986 | 97.97 |
| 93  | 3048 | 57 | 1.87 | 2991 | 98.13 |
| 94  | 3046 | 52 | 1.71 | 2994 | 98.29 |
| 95  | 3043 | 48 | 1.58 | 2995 | 98.42 |
| 96  | 3046 | 46 | 1.51 | 3000 | 98.49 |
| 97  | 3047 | 51 | 1.67 | 2996 | 98.33 |
| 98  | 3055 | 52 | 1.70 | 3003 | 98.30 |
| 99  | 3052 | 51 | 1.67 | 3001 | 98.33 |
| 100 | 3050 | 52 | 1.70 | 2998 | 98.30 |
| 101 | 3046 | 47 | 1.54 | 2999 | 98.46 |
| 102 | 3044 | 46 | 1.51 | 2998 | 98.49 |
| 103 | 3042 | 48 | 1.58 | 2994 | 98.42 |
| 104 | 3047 | 46 | 1.51 | 3001 | 98.49 |
| 105 | 3044 | 40 | 1.31 | 3004 | 98.69 |
| 106 | 3044 | 41 | 1.35 | 3003 | 98.65 |
| 107 | 3042 | 41 | 1.35 | 3001 | 98.65 |
| 108 | 3046 | 44 | 1.44 | 3002 | 98.56 |
| 109 | 3043 | 42 | 1.38 | 3001 | 98.62 |
| 110 | 3039 | 42 | 1.38 | 2997 | 98.62 |
| 111 | 3038 | 41 | 1.35 | 2997 | 98.65 |
| 112 | 3041 | 42 | 1.38 | 2999 | 98.62 |
| 113 | 3047 | 39 | 1.28 | 3008 | 98.72 |
| 114 | 3042 | 36 | 1.18 | 3006 | 98.82 |
| 115 | 3045 | 41 | 1.35 | 3004 | 98.65 |
| 116 | 3041 | 36 | 1.18 | 3005 | 98.82 |
| 117 | 3039 | 35 | 1.15 | 3004 | 98.85 |
| 118 | 3034 | 29 | 0.96 | 3005 | 99.04 |
| 119 | 3037 | 29 | 0.95 | 3008 | 99.05 |
| 120 | 3032 | 27 | 0.89 | 3005 | 99.11 |
| 121 | 3034 | 29 | 0.96 | 3005 | 99.04 |
| 122 | 3031 | 27 | 0.89 | 3004 | 99.11 |
| 123 | 3034 | 30 | 0.99 | 3004 | 99.01 |
| 124 | 3032 | 27 | 0.89 | 3005 | 99.11 |

|     |      |    |      |      |       |
|-----|------|----|------|------|-------|
| 125 | 3034 | 30 | 0.99 | 3004 | 99.01 |
| 126 | 3031 | 27 | 0.89 | 3004 | 99.11 |
| 127 | 3035 | 26 | 0.86 | 3009 | 99.14 |
| 128 | 3041 | 28 | 0.92 | 3013 | 99.08 |
| 129 | 3035 | 24 | 0.79 | 3011 | 99.21 |
| 130 | 3034 | 24 | 0.79 | 3010 | 99.21 |
| 131 | 3031 | 25 | 0.82 | 3006 | 99.18 |
| 132 | 3031 | 25 | 0.82 | 3006 | 99.18 |
| 133 | 3033 | 28 | 0.92 | 3005 | 99.08 |
| 134 | 3031 | 24 | 0.79 | 3007 | 99.21 |
| 135 | 3032 | 25 | 0.82 | 3007 | 99.18 |
| 136 | 3033 | 26 | 0.86 | 3007 | 99.14 |
| 137 | 3032 | 25 | 0.82 | 3007 | 99.18 |
| 138 | 3031 | 25 | 0.82 | 3006 | 99.18 |
| 139 | 3032 | 26 | 0.86 | 3006 | 99.14 |
| 140 | 3032 | 25 | 0.82 | 3007 | 99.18 |
| 141 | 3035 | 24 | 0.79 | 3011 | 99.21 |
| 142 | 3031 | 24 | 0.79 | 3007 | 99.21 |
| 143 | 3030 | 23 | 0.76 | 3007 | 99.24 |
| 144 | 3033 | 24 | 0.79 | 3009 | 99.21 |
| 145 | 3030 | 21 | 0.69 | 3009 | 99.31 |
| 146 | 3029 | 20 | 0.66 | 3009 | 99.34 |
| 147 | 3033 | 23 | 0.76 | 3010 | 99.24 |
| 148 | 3036 | 24 | 0.79 | 3012 | 99.21 |
| 149 | 3034 | 22 | 0.73 | 3012 | 99.27 |
| 150 | 3033 | 22 | 0.73 | 3011 | 99.27 |
| 151 | 3029 | 21 | 0.69 | 3008 | 99.31 |
| 152 | 3027 | 20 | 0.66 | 3007 | 99.34 |
| 153 | 3026 | 20 | 0.66 | 3006 | 99.34 |
| 154 | 3029 | 20 | 0.66 | 3009 | 99.34 |
| 155 | 3030 | 23 | 0.76 | 3007 | 99.24 |
| 156 | 3036 | 23 | 0.76 | 3013 | 99.24 |
| 157 | 3035 | 24 | 0.79 | 3011 | 99.21 |
| 158 | 3032 | 25 | 0.82 | 3007 | 99.18 |
| 159 | 3030 | 29 | 0.96 | 3001 | 99.04 |
| 160 | 3034 | 33 | 1.09 | 3001 | 98.91 |
| 161 | 3036 | 36 | 1.19 | 3000 | 98.81 |
| 162 | 3036 | 39 | 1.28 | 2997 | 98.72 |
| 163 | 3034 | 43 | 1.42 | 2991 | 98.58 |
| 164 | 3036 | 46 | 1.52 | 2990 | 98.48 |
| 165 | 3036 | 48 | 1.58 | 2988 | 98.42 |
| 166 | 3029 | 49 | 1.62 | 2980 | 98.38 |
| 167 | 3032 | 51 | 1.68 | 2981 | 98.32 |
| 168 | 3031 | 52 | 1.72 | 2979 | 98.28 |
| 169 | 3029 | 56 | 1.85 | 2973 | 98.15 |
| 170 | 3032 | 55 | 1.81 | 2977 | 98.19 |
| 171 | 3032 | 56 | 1.85 | 2976 | 98.15 |
| 172 | 3028 | 54 | 1.78 | 2974 | 98.22 |
| 173 | 3029 | 54 | 1.78 | 2975 | 98.22 |
| 174 | 3037 | 61 | 2.01 | 2976 | 97.99 |
| 175 | 3032 | 61 | 2.01 | 2971 | 97.99 |
| 176 | 3035 | 61 | 2.01 | 2974 | 97.99 |
| 177 | 3032 | 62 | 2.04 | 2970 | 97.96 |
| 178 | 3032 | 58 | 1.91 | 2974 | 98.09 |
| 179 | 3034 | 51 | 1.68 | 2983 | 98.32 |
| 180 | 3028 | 46 | 1.52 | 2982 | 98.48 |
| 181 | 3032 | 52 | 1.72 | 2980 | 98.28 |
| 182 | 3033 | 56 | 1.85 | 2977 | 98.15 |
| 183 | 3035 | 55 | 1.81 | 2980 | 98.19 |
| 184 | 3040 | 53 | 1.74 | 2987 | 98.26 |
| 185 | 3037 | 56 | 1.84 | 2981 | 98.16 |
| 186 | 3040 | 59 | 1.94 | 2981 | 98.06 |
| 187 | 3039 | 56 | 1.84 | 2983 | 98.16 |
| 188 | 3040 | 63 | 2.07 | 2977 | 97.93 |
| 189 | 3041 | 61 | 2.01 | 2980 | 97.99 |

|     |      |    |      |      |       |
|-----|------|----|------|------|-------|
| 190 | 3039 | 59 | 1.94 | 2980 | 98.06 |
| 191 | 3038 | 59 | 1.94 | 2979 | 98.06 |
| 192 | 3037 | 55 | 1.81 | 2982 | 98.19 |
| 193 | 3038 | 50 | 1.65 | 2988 | 98.35 |
| 194 | 3036 | 47 | 1.55 | 2989 | 98.45 |
| 195 | 3032 | 45 | 1.48 | 2987 | 98.52 |
| 196 | 3035 | 45 | 1.48 | 2990 | 98.52 |
| 197 | 3038 | 44 | 1.45 | 2994 | 98.55 |
| 198 | 3033 | 41 | 1.35 | 2992 | 98.65 |
| 199 | 3036 | 45 | 1.48 | 2991 | 98.52 |
| 200 | 3040 | 47 | 1.55 | 2993 | 98.45 |
| 201 | 3043 | 48 | 1.58 | 2995 | 98.42 |
| 202 | 3041 | 49 | 1.61 | 2992 | 98.39 |
| 203 | 3040 | 45 | 1.48 | 2995 | 98.52 |
| 204 | 3041 | 30 | 0.99 | 3011 | 99.01 |
| 205 | 3041 | 29 | 0.95 | 3012 | 99.05 |
| 206 | 3037 | 29 | 0.95 | 3008 | 99.05 |
| 207 | 3039 | 33 | 1.09 | 3006 | 98.91 |
| 208 | 3037 | 26 | 0.86 | 3011 | 99.14 |
| 209 | 3040 | 27 | 0.89 | 3013 | 99.11 |
| 210 | 3040 | 29 | 0.95 | 3011 | 99.05 |
| 211 | 3041 | 30 | 0.99 | 3011 | 99.01 |
| 212 | 3040 | 32 | 1.05 | 3008 | 98.95 |
| 213 | 3037 | 36 | 1.19 | 3001 | 98.81 |
| 214 | 3031 | 35 | 1.15 | 2996 | 98.85 |
| 215 | 3026 | 34 | 1.12 | 2992 | 98.88 |
| 216 | 3023 | 35 | 1.16 | 2988 | 98.84 |
| 217 | 3024 | 43 | 1.42 | 2981 | 98.58 |
| 218 | 3035 | 47 | 1.55 | 2988 | 98.45 |
| 219 | 3033 | 43 | 1.42 | 2990 | 98.58 |
| 220 | 3028 | 41 | 1.35 | 2987 | 98.65 |
| 221 | 3031 | 45 | 1.48 | 2986 | 98.52 |
| 222 | 3033 | 44 | 1.45 | 2989 | 98.55 |
| 223 | 3032 | 48 | 1.58 | 2984 | 98.42 |
| 224 | 3034 | 45 | 1.48 | 2989 | 98.52 |
| 225 | 3031 | 44 | 1.45 | 2987 | 98.55 |
| 226 | 3030 | 46 | 1.52 | 2984 | 98.48 |
| 227 | 3034 | 47 | 1.55 | 2987 | 98.45 |
| 228 | 3032 | 49 | 1.62 | 2983 | 98.38 |
| 229 | 3032 | 45 | 1.48 | 2987 | 98.52 |
| 230 | 3033 | 44 | 1.45 | 2989 | 98.55 |
| 231 | 3033 | 41 | 1.35 | 2992 | 98.65 |
| 232 | 3029 | 38 | 1.25 | 2991 | 98.75 |
| 233 | 3026 | 28 | 0.93 | 2998 | 99.07 |
| 234 | 3026 | 26 | 0.86 | 3000 | 99.14 |
| 235 | 3022 | 26 | 0.86 | 2996 | 99.14 |
| 236 | 3024 | 23 | 0.76 | 3001 | 99.24 |
| 237 | 3018 | 22 | 0.73 | 2996 | 99.27 |
| 238 | 3018 | 18 | 0.60 | 3000 | 99.40 |
| 239 | 3002 | 14 | 0.47 | 2988 | 99.53 |
| 240 | 2989 | 18 | 0.60 | 2971 | 99.40 |

Classification report 3 of 3

IHO statistics a/b are : 1.000 0.023

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 1     | 3014  | 86     | 2.85   | 2928   | 97.15  |
| 2     | 3020  | 83     | 2.75   | 2937   | 97.25  |
| 3     | 3028  | 81     | 2.68   | 2947   | 97.32  |
| 4     | 3031  | 76     | 2.51   | 2955   | 97.49  |
| 5     | 3043  | 72     | 2.37   | 2971   | 97.63  |
| 6     | 3047  | 68     | 2.23   | 2979   | 97.77  |
| 7     | 3041  | 64     | 2.10   | 2977   | 97.90  |
| 8     | 3044  | 59     | 1.94   | 2985   | 98.06  |
| 9     | 3047  | 60     | 1.97   | 2987   | 98.03  |
| 10    | 3044  | 58     | 1.91   | 2986   | 98.09  |
| 11    | 3050  | 65     | 2.13   | 2985   | 97.87  |
| 12    | 3049  | 66     | 2.16   | 2983   | 97.84  |
| 13    | 3043  | 64     | 2.10   | 2979   | 97.90  |
| 14    | 3038  | 61     | 2.01   | 2977   | 97.99  |
| 15    | 3047  | 64     | 2.10   | 2983   | 97.90  |
| 16    | 3050  | 57     | 1.87   | 2993   | 98.13  |
| 17    | 3045  | 57     | 1.87   | 2988   | 98.13  |
| 18    | 3044  | 55     | 1.81   | 2989   | 98.19  |
| 19    | 3051  | 46     | 1.51   | 3005   | 98.49  |
| 20    | 3053  | 50     | 1.64   | 3003   | 98.36  |
| 21    | 3048  | 51     | 1.67   | 2997   | 98.33  |
| 22    | 3053  | 49     | 1.60   | 3004   | 98.40  |
| 23    | 3054  | 51     | 1.67   | 3003   | 98.33  |
| 24    | 3048  | 51     | 1.67   | 2997   | 98.33  |
| 25    | 3055  | 50     | 1.64   | 3005   | 98.36  |
| 26    | 3049  | 50     | 1.64   | 2999   | 98.36  |
| 27    | 3049  | 48     | 1.57   | 3001   | 98.43  |
| 28    | 3049  | 43     | 1.41   | 3006   | 98.59  |
| 29    | 3047  | 45     | 1.48   | 3002   | 98.52  |
| 30    | 3045  | 43     | 1.41   | 3002   | 98.59  |
| 31    | 3046  | 45     | 1.48   | 3001   | 98.52  |
| 32    | 3046  | 44     | 1.44   | 3002   | 98.56  |
| 33    | 3046  | 47     | 1.54   | 2999   | 98.46  |
| 34    | 3047  | 47     | 1.54   | 3000   | 98.46  |
| 35    | 3047  | 42     | 1.38   | 3005   | 98.62  |
| 36    | 3042  | 42     | 1.38   | 3000   | 98.62  |
| 37    | 3042  | 43     | 1.41   | 2999   | 98.59  |
| 38    | 3045  | 44     | 1.44   | 3001   | 98.56  |
| 39    | 3043  | 44     | 1.45   | 2999   | 98.55  |
| 40    | 3047  | 45     | 1.48   | 3002   | 98.52  |
| 41    | 3045  | 46     | 1.51   | 2999   | 98.49  |
| 42    | 3049  | 47     | 1.54   | 3002   | 98.46  |
| 43    | 3050  | 48     | 1.57   | 3002   | 98.43  |
| 44    | 3051  | 52     | 1.70   | 2999   | 98.30  |
| 45    | 3048  | 52     | 1.71   | 2996   | 98.29  |
| 46    | 3048  | 58     | 1.90   | 2990   | 98.10  |
| 47    | 3048  | 58     | 1.90   | 2990   | 98.10  |
| 48    | 3048  | 57     | 1.87   | 2991   | 98.13  |
| 49    | 3049  | 58     | 1.90   | 2991   | 98.10  |
| 50    | 3050  | 58     | 1.90   | 2992   | 98.10  |
| 51    | 3046  | 56     | 1.84   | 2990   | 98.16  |
| 52    | 3048  | 50     | 1.64   | 2998   | 98.36  |
| 53    | 3052  | 52     | 1.70   | 3000   | 98.30  |
| 54    | 3050  | 55     | 1.80   | 2995   | 98.20  |
| 55    | 3055  | 50     | 1.64   | 3005   | 98.36  |
| 56    | 3052  | 49     | 1.61   | 3003   | 98.39  |
| 57    | 3053  | 44     | 1.44   | 3009   | 98.56  |
| 58    | 3048  | 44     | 1.44   | 3004   | 98.56  |
| 59    | 3052  | 47     | 1.54   | 3005   | 98.46  |

|     |      |    |      |      |       |
|-----|------|----|------|------|-------|
| 60  | 3049 | 46 | 1.51 | 3003 | 98.49 |
| 61  | 3047 | 49 | 1.61 | 2998 | 98.39 |
| 62  | 3046 | 50 | 1.64 | 2996 | 98.36 |
| 63  | 3050 | 50 | 1.64 | 3000 | 98.36 |
| 64  | 3053 | 50 | 1.64 | 3003 | 98.36 |
| 65  | 3051 | 53 | 1.74 | 2998 | 98.26 |
| 66  | 3051 | 54 | 1.77 | 2997 | 98.23 |
| 67  | 3049 | 53 | 1.74 | 2996 | 98.26 |
| 68  | 3046 | 56 | 1.84 | 2990 | 98.16 |
| 69  | 3047 | 58 | 1.90 | 2989 | 98.10 |
| 70  | 3050 | 57 | 1.87 | 2993 | 98.13 |
| 71  | 3051 | 59 | 1.93 | 2992 | 98.07 |
| 72  | 3053 | 58 | 1.90 | 2995 | 98.10 |
| 73  | 3054 | 59 | 1.93 | 2995 | 98.07 |
| 74  | 3054 | 58 | 1.90 | 2996 | 98.10 |
| 75  | 3054 | 57 | 1.87 | 2997 | 98.13 |
| 76  | 3053 | 58 | 1.90 | 2995 | 98.10 |
| 77  | 3054 | 56 | 1.83 | 2998 | 98.17 |
| 78  | 3051 | 57 | 1.87 | 2994 | 98.13 |
| 79  | 3052 | 58 | 1.90 | 2994 | 98.10 |
| 80  | 3049 | 55 | 1.80 | 2994 | 98.20 |
| 81  | 3049 | 54 | 1.77 | 2995 | 98.23 |
| 82  | 3051 | 54 | 1.77 | 2997 | 98.23 |
| 83  | 3051 | 50 | 1.64 | 3001 | 98.36 |
| 84  | 3052 | 50 | 1.64 | 3002 | 98.36 |
| 85  | 3049 | 49 | 1.61 | 3000 | 98.39 |
| 86  | 3051 | 48 | 1.57 | 3003 | 98.43 |
| 87  | 3051 | 47 | 1.54 | 3004 | 98.46 |
| 88  | 3050 | 45 | 1.48 | 3005 | 98.52 |
| 89  | 3048 | 43 | 1.41 | 3005 | 98.59 |
| 90  | 3047 | 42 | 1.38 | 3005 | 98.62 |
| 91  | 3050 | 40 | 1.31 | 3010 | 98.69 |
| 92  | 3048 | 43 | 1.41 | 3005 | 98.59 |
| 93  | 3048 | 44 | 1.44 | 3004 | 98.56 |
| 94  | 3046 | 43 | 1.41 | 3003 | 98.59 |
| 95  | 3043 | 42 | 1.38 | 3001 | 98.62 |
| 96  | 3046 | 41 | 1.35 | 3005 | 98.65 |
| 97  | 3047 | 42 | 1.38 | 3005 | 98.62 |
| 98  | 3055 | 46 | 1.51 | 3009 | 98.49 |
| 99  | 3052 | 44 | 1.44 | 3008 | 98.56 |
| 100 | 3050 | 43 | 1.41 | 3007 | 98.59 |
| 101 | 3046 | 41 | 1.35 | 3005 | 98.65 |
| 102 | 3044 | 41 | 1.35 | 3003 | 98.65 |
| 103 | 3042 | 39 | 1.28 | 3003 | 98.72 |
| 104 | 3047 | 39 | 1.28 | 3008 | 98.72 |
| 105 | 3044 | 35 | 1.15 | 3009 | 98.85 |
| 106 | 3044 | 36 | 1.18 | 3008 | 98.82 |
| 107 | 3042 | 34 | 1.12 | 3008 | 98.88 |
| 108 | 3046 | 34 | 1.12 | 3012 | 98.88 |
| 109 | 3043 | 33 | 1.08 | 3010 | 98.92 |
| 110 | 3039 | 33 | 1.09 | 3006 | 98.91 |
| 111 | 3038 | 31 | 1.02 | 3007 | 98.98 |
| 112 | 3041 | 29 | 0.95 | 3012 | 99.05 |
| 113 | 3047 | 28 | 0.92 | 3019 | 99.08 |
| 114 | 3042 | 26 | 0.85 | 3016 | 99.15 |
| 115 | 3045 | 26 | 0.85 | 3019 | 99.15 |
| 116 | 3041 | 25 | 0.82 | 3016 | 99.18 |
| 117 | 3039 | 23 | 0.76 | 3016 | 99.24 |
| 118 | 3034 | 21 | 0.69 | 3013 | 99.31 |
| 119 | 3037 | 24 | 0.79 | 3013 | 99.21 |
| 120 | 3032 | 23 | 0.76 | 3009 | 99.24 |
| 121 | 3034 | 26 | 0.86 | 3008 | 99.14 |
| 122 | 3031 | 23 | 0.76 | 3008 | 99.24 |
| 123 | 3034 | 26 | 0.86 | 3008 | 99.14 |
| 124 | 3032 | 25 | 0.82 | 3007 | 99.18 |

|     |      |    |      |      |       |
|-----|------|----|------|------|-------|
| 125 | 3034 | 25 | 0.82 | 3009 | 99.18 |
| 126 | 3031 | 25 | 0.82 | 3006 | 99.18 |
| 127 | 3035 | 23 | 0.76 | 3012 | 99.24 |
| 128 | 3041 | 25 | 0.82 | 3016 | 99.18 |
| 129 | 3035 | 22 | 0.72 | 3013 | 99.28 |
| 130 | 3034 | 21 | 0.69 | 3013 | 99.31 |
| 131 | 3031 | 21 | 0.69 | 3010 | 99.31 |
| 132 | 3031 | 22 | 0.73 | 3009 | 99.27 |
| 133 | 3033 | 25 | 0.82 | 3008 | 99.18 |
| 134 | 3031 | 21 | 0.69 | 3010 | 99.31 |
| 135 | 3032 | 21 | 0.69 | 3011 | 99.31 |
| 136 | 3033 | 21 | 0.69 | 3012 | 99.31 |
| 137 | 3032 | 21 | 0.69 | 3011 | 99.31 |
| 138 | 3031 | 20 | 0.66 | 3011 | 99.34 |
| 139 | 3032 | 22 | 0.73 | 3010 | 99.27 |
| 140 | 3032 | 21 | 0.69 | 3011 | 99.31 |
| 141 | 3035 | 19 | 0.63 | 3016 | 99.37 |
| 142 | 3031 | 19 | 0.63 | 3012 | 99.37 |
| 143 | 3030 | 19 | 0.63 | 3011 | 99.37 |
| 144 | 3033 | 20 | 0.66 | 3013 | 99.34 |
| 145 | 3030 | 19 | 0.63 | 3011 | 99.37 |
| 146 | 3029 | 18 | 0.59 | 3011 | 99.41 |
| 147 | 3033 | 21 | 0.69 | 3012 | 99.31 |
| 148 | 3036 | 21 | 0.69 | 3015 | 99.31 |
| 149 | 3034 | 20 | 0.66 | 3014 | 99.34 |
| 150 | 3033 | 21 | 0.69 | 3012 | 99.31 |
| 151 | 3029 | 20 | 0.66 | 3009 | 99.34 |
| 152 | 3027 | 17 | 0.56 | 3010 | 99.44 |
| 153 | 3026 | 17 | 0.56 | 3009 | 99.44 |
| 154 | 3029 | 18 | 0.59 | 3011 | 99.41 |
| 155 | 3030 | 18 | 0.59 | 3012 | 99.41 |
| 156 | 3036 | 21 | 0.69 | 3015 | 99.31 |
| 157 | 3035 | 22 | 0.72 | 3013 | 99.28 |
| 158 | 3032 | 23 | 0.76 | 3009 | 99.24 |
| 159 | 3030 | 22 | 0.73 | 3008 | 99.27 |
| 160 | 3034 | 24 | 0.79 | 3010 | 99.21 |
| 161 | 3036 | 23 | 0.76 | 3013 | 99.24 |
| 162 | 3036 | 19 | 0.63 | 3017 | 99.37 |
| 163 | 3034 | 19 | 0.63 | 3015 | 99.37 |
| 164 | 3036 | 21 | 0.69 | 3015 | 99.31 |
| 165 | 3036 | 23 | 0.76 | 3013 | 99.24 |
| 166 | 3029 | 23 | 0.76 | 3006 | 99.24 |
| 167 | 3032 | 30 | 0.99 | 3002 | 99.01 |
| 168 | 3031 | 36 | 1.19 | 2995 | 98.81 |
| 169 | 3029 | 38 | 1.25 | 2991 | 98.75 |
| 170 | 3032 | 39 | 1.29 | 2993 | 98.71 |
| 171 | 3032 | 41 | 1.35 | 2991 | 98.65 |
| 172 | 3028 | 41 | 1.35 | 2987 | 98.65 |
| 173 | 3029 | 45 | 1.49 | 2984 | 98.51 |
| 174 | 3037 | 50 | 1.65 | 2987 | 98.35 |
| 175 | 3032 | 50 | 1.65 | 2982 | 98.35 |
| 176 | 3035 | 52 | 1.71 | 2983 | 98.29 |
| 177 | 3032 | 52 | 1.72 | 2980 | 98.28 |
| 178 | 3032 | 44 | 1.45 | 2988 | 98.55 |
| 179 | 3034 | 38 | 1.25 | 2996 | 98.75 |
| 180 | 3028 | 32 | 1.06 | 2996 | 98.94 |
| 181 | 3032 | 34 | 1.12 | 2998 | 98.88 |
| 182 | 3033 | 31 | 1.02 | 3002 | 98.98 |
| 183 | 3035 | 33 | 1.09 | 3002 | 98.91 |
| 184 | 3040 | 31 | 1.02 | 3009 | 98.98 |
| 185 | 3037 | 30 | 0.99 | 3007 | 99.01 |
| 186 | 3040 | 35 | 1.15 | 3005 | 98.85 |
| 187 | 3039 | 37 | 1.22 | 3002 | 98.78 |
| 188 | 3040 | 43 | 1.41 | 2997 | 98.59 |
| 189 | 3041 | 43 | 1.41 | 2998 | 98.59 |

|     |      |    |      |      |       |
|-----|------|----|------|------|-------|
| 190 | 3039 | 42 | 1.38 | 2997 | 98.62 |
| 191 | 3038 | 37 | 1.22 | 3001 | 98.78 |
| 192 | 3037 | 37 | 1.22 | 3000 | 98.78 |
| 193 | 3038 | 35 | 1.15 | 3003 | 98.85 |
| 194 | 3036 | 32 | 1.05 | 3004 | 98.95 |
| 195 | 3032 | 26 | 0.86 | 3006 | 99.14 |
| 196 | 3035 | 26 | 0.86 | 3009 | 99.14 |
| 197 | 3038 | 28 | 0.92 | 3010 | 99.08 |
| 198 | 3033 | 26 | 0.86 | 3007 | 99.14 |
| 199 | 3036 | 28 | 0.92 | 3008 | 99.08 |
| 200 | 3040 | 25 | 0.82 | 3015 | 99.18 |
| 201 | 3043 | 24 | 0.79 | 3019 | 99.21 |
| 202 | 3041 | 19 | 0.62 | 3022 | 99.38 |
| 203 | 3040 | 18 | 0.59 | 3022 | 99.41 |
| 204 | 3041 | 19 | 0.62 | 3022 | 99.38 |
| 205 | 3041 | 18 | 0.59 | 3023 | 99.41 |
| 206 | 3037 | 17 | 0.56 | 3020 | 99.44 |
| 207 | 3039 | 17 | 0.56 | 3022 | 99.44 |
| 208 | 3037 | 15 | 0.49 | 3022 | 99.51 |
| 209 | 3040 | 13 | 0.43 | 3027 | 99.57 |
| 210 | 3040 | 13 | 0.43 | 3027 | 99.57 |
| 211 | 3041 | 15 | 0.49 | 3026 | 99.51 |
| 212 | 3040 | 15 | 0.49 | 3025 | 99.51 |
| 213 | 3037 | 14 | 0.46 | 3023 | 99.54 |
| 214 | 3031 | 13 | 0.43 | 3018 | 99.57 |
| 215 | 3026 | 14 | 0.46 | 3012 | 99.54 |
| 216 | 3023 | 15 | 0.50 | 3008 | 99.50 |
| 217 | 3024 | 17 | 0.56 | 3007 | 99.44 |
| 218 | 3035 | 17 | 0.56 | 3018 | 99.44 |
| 219 | 3033 | 18 | 0.59 | 3015 | 99.41 |
| 220 | 3028 | 22 | 0.73 | 3006 | 99.27 |
| 221 | 3031 | 24 | 0.79 | 3007 | 99.21 |
| 222 | 3033 | 27 | 0.89 | 3006 | 99.11 |
| 223 | 3032 | 26 | 0.86 | 3006 | 99.14 |
| 224 | 3034 | 26 | 0.86 | 3008 | 99.14 |
| 225 | 3031 | 27 | 0.89 | 3004 | 99.11 |
| 226 | 3030 | 30 | 0.99 | 3000 | 99.01 |
| 227 | 3034 | 34 | 1.12 | 3000 | 98.88 |
| 228 | 3032 | 32 | 1.06 | 3000 | 98.94 |
| 229 | 3032 | 28 | 0.92 | 3004 | 99.08 |
| 230 | 3033 | 25 | 0.82 | 3008 | 99.18 |
| 231 | 3033 | 25 | 0.82 | 3008 | 99.18 |
| 232 | 3029 | 18 | 0.59 | 3011 | 99.41 |
| 233 | 3026 | 12 | 0.40 | 3014 | 99.60 |
| 234 | 3026 | 11 | 0.36 | 3015 | 99.64 |
| 235 | 3022 | 10 | 0.33 | 3012 | 99.67 |
| 236 | 3024 | 8  | 0.26 | 3016 | 99.74 |
| 237 | 3018 | 6  | 0.20 | 3012 | 99.80 |
| 238 | 3018 | 5  | 0.17 | 3013 | 99.83 |
| 239 | 3002 | 5  | 0.17 | 2997 | 99.83 |
| 240 | 2989 | 7  | 0.23 | 2982 | 99.77 |

R4RE 2003      DN115

Quality Control Report for file : C:\Temp\2003\_Patch\_tests\R4RE\_2\checkline

Surface lines: 003\_2208

Checkline lines: 003\_2219

Elevation Range is :      -59.573(m)      -46.323(m)

Total number of 3D points used:      204750

Starting Time: 25-APR-2003 22:19:12.00

Ending Time: 25-APR-2003 22:24:01.61

Minimum tidal reduction: 1279 (mm)

Maximum tidal reduction: 1335 (mm)

| User# | Total | Max(+) | Max(-) | Mean   | Std.   | 3dm(%) | 5dm(%) | 1%(%) | 1.6%(%) |
|-------|-------|--------|--------|--------|--------|--------|--------|-------|---------|
| ===== | ===== | =====  | =====  | =====  | =====  | =====  | =====  | ===== | =====   |
| 1     | 28    | 0.033  | -0.857 | -0.330 | 0.2286 | 53.6   | 78.6   | 78.6  | 96.4    |
| 2     | 69    | 0.489  | -0.748 | -0.258 | 0.2246 | 46.4   | 89.9   | 91.3  | 100.0   |
| 3     | 111   | 0.290  | -0.937 | -0.312 | 0.2477 | 48.6   | 76.6   | 77.5  | 97.3    |
| 4     | 159   | 0.524  | -0.981 | -0.267 | 0.2613 | 56.6   | 79.2   | 80.5  | 97.5    |
| 5     | 232   | 0.389  | -1.072 | -0.269 | 0.2122 | 55.6   | 87.1   | 87.5  | 99.6    |
| 6     | 344   | 0.446  | -0.908 | -0.257 | 0.2426 | 55.2   | 83.7   | 85.2  | 100.0   |
| 7     | 489   | 0.396  | -0.965 | -0.267 | 0.2133 | 57.3   | 86.9   | 88.3  | 99.6    |
| 8     | 623   | 0.389  | -0.894 | -0.283 | 0.2055 | 54.1   | 85.4   | 87.8  | 99.8    |
| 9     | 714   | 0.445  | -1.081 | -0.294 | 0.2061 | 49.2   | 84.9   | 88.4  | 99.7    |
| 10    | 779   | 0.338  | -1.021 | -0.278 | 0.1953 | 56.0   | 87.5   | 90.5  | 99.5    |
| 11    | 795   | 0.392  | -1.174 | -0.287 | 0.1848 | 55.6   | 89.1   | 91.2  | 99.7    |
| 12    | 804   | 0.332  | -0.956 | -0.287 | 0.1681 | 58.7   | 90.2   | 92.7  | 99.8    |
| 13    | 813   | 0.207  | -0.946 | -0.264 | 0.1585 | 63.7   | 92.9   | 95.3  | 99.9    |
| 14    | 824   | 0.175  | -0.921 | -0.267 | 0.1535 | 64.3   | 92.4   | 95.0  | 100.0   |
| 15    | 826   | 0.333  | -0.800 | -0.263 | 0.1519 | 66.0   | 93.2   | 95.2  | 100.0   |
| 16    | 842   | 0.320  | -0.721 | -0.247 | 0.1279 | 70.9   | 96.4   | 97.6  | 100.0   |
| 17    | 836   | 0.224  | -0.842 | -0.245 | 0.1343 | 72.7   | 95.0   | 96.8  | 100.0   |
| 18    | 851   | 0.170  | -0.788 | -0.243 | 0.1308 | 72.3   | 95.3   | 97.6  | 100.0   |
| 19    | 862   | 0.072  | -0.650 | -0.229 | 0.1187 | 76.8   | 96.4   | 99.0  | 100.0   |
| 20    | 873   | 0.141  | -0.631 | -0.226 | 0.1206 | 79.4   | 96.4   | 99.3  | 100.0   |
| 21    | 865   | 0.070  | -0.723 | -0.211 | 0.1170 | 80.9   | 96.9   | 99.4  | 100.0   |
| 22    | 877   | 0.065  | -0.762 | -0.203 | 0.1097 | 84.2   | 98.3   | 99.4  | 100.0   |
| 23    | 878   | 0.070  | -0.607 | -0.195 | 0.1049 | 87.1   | 98.5   | 99.9  | 100.0   |
| 24    | 876   | 0.074  | -0.708 | -0.194 | 0.1075 | 85.3   | 98.9   | 99.8  | 100.0   |
| 25    | 873   | 0.231  | -0.732 | -0.179 | 0.1102 | 87.7   | 98.5   | 99.4  | 100.0   |
| 26    | 878   | 0.101  | -0.642 | -0.169 | 0.0973 | 91.1   | 99.7   | 99.9  | 100.0   |
| 27    | 880   | 0.134  | -0.500 | -0.165 | 0.0923 | 91.4   | 100.0  | 100.0 | 100.0   |
| 28    | 880   | 0.222  | -0.629 | -0.158 | 0.0910 | 92.3   | 99.9   | 99.9  | 100.0   |
| 29    | 880   | 0.060  | -0.636 | -0.159 | 0.0924 | 91.6   | 99.8   | 99.9  | 100.0   |
| 30    | 883   | 0.060  | -0.753 | -0.148 | 0.0833 | 94.9   | 99.9   | 99.9  | 100.0   |
| 31    | 883   | 0.067  | -0.450 | -0.141 | 0.0808 | 95.1   | 100.0  | 100.0 | 100.0   |
| 32    | 884   | 0.063  | -0.486 | -0.135 | 0.0767 | 95.4   | 100.0  | 100.0 | 100.0   |
| 33    | 885   | 0.069  | -0.454 | -0.138 | 0.0792 | 94.8   | 100.0  | 100.0 | 100.0   |
| 34    | 885   | 0.070  | -0.594 | -0.130 | 0.0758 | 96.3   | 99.9   | 99.9  | 100.0   |
| 35    | 885   | 0.066  | -0.450 | -0.127 | 0.0743 | 95.9   | 100.0  | 100.0 | 100.0   |
| 36    | 884   | 0.041  | -0.452 | -0.123 | 0.0752 | 96.4   | 100.0  | 100.0 | 100.0   |
| 37    | 887   | 0.082  | -0.446 | -0.119 | 0.0731 | 96.6   | 100.0  | 100.0 | 100.0   |
| 38    | 888   | 0.035  | -0.461 | -0.115 | 0.0716 | 96.8   | 100.0  | 100.0 | 100.0   |
| 39    | 888   | 0.050  | -0.419 | -0.109 | 0.0719 | 97.3   | 100.0  | 100.0 | 100.0   |
| 40    | 888   | 0.043  | -0.416 | -0.113 | 0.0689 | 98.0   | 100.0  | 100.0 | 100.0   |
| 41    | 888   | 0.067  | -0.452 | -0.108 | 0.0701 | 97.4   | 100.0  | 100.0 | 100.0   |
| 42    | 889   | 0.071  | -0.415 | -0.103 | 0.0657 | 98.3   | 100.0  | 100.0 | 100.0   |
| 43    | 888   | 0.054  | -0.426 | -0.099 | 0.0654 | 98.9   | 100.0  | 100.0 | 100.0   |
| 44    | 889   | 0.047  | -0.355 | -0.099 | 0.0644 | 98.4   | 100.0  | 100.0 | 100.0   |
| 45    | 890   | 0.050  | -0.404 | -0.097 | 0.0631 | 98.7   | 100.0  | 100.0 | 100.0   |

|     |     |       |        |        |        |       |       |       |       |
|-----|-----|-------|--------|--------|--------|-------|-------|-------|-------|
| 46  | 890 | 0.089 | -0.380 | -0.092 | 0.0627 | 99.2  | 100.0 | 100.0 | 100.0 |
| 47  | 888 | 0.069 | -0.360 | -0.090 | 0.0593 | 99.2  | 100.0 | 100.0 | 100.0 |
| 48  | 890 | 0.050 | -0.368 | -0.093 | 0.0598 | 98.9  | 100.0 | 100.0 | 100.0 |
| 49  | 891 | 0.044 | -0.398 | -0.090 | 0.0600 | 98.9  | 100.0 | 100.0 | 100.0 |
| 50  | 890 | 0.048 | -0.405 | -0.088 | 0.0583 | 99.1  | 100.0 | 100.0 | 100.0 |
| 51  | 893 | 0.078 | -0.399 | -0.088 | 0.0595 | 99.1  | 100.0 | 100.0 | 100.0 |
| 52  | 894 | 0.056 | -0.400 | -0.088 | 0.0568 | 99.1  | 100.0 | 100.0 | 100.0 |
| 53  | 894 | 0.055 | -0.376 | -0.087 | 0.0568 | 99.3  | 100.0 | 100.0 | 100.0 |
| 54  | 894 | 0.087 | -0.365 | -0.088 | 0.0566 | 99.1  | 100.0 | 100.0 | 100.0 |
| 55  | 894 | 0.067 | -0.302 | -0.087 | 0.0526 | 99.9  | 100.0 | 100.0 | 100.0 |
| 56  | 896 | 0.062 | -0.309 | -0.088 | 0.0519 | 99.9  | 100.0 | 100.0 | 100.0 |
| 57  | 896 | 0.052 | -0.350 | -0.087 | 0.0514 | 99.6  | 100.0 | 100.0 | 100.0 |
| 58  | 895 | 0.061 | -0.329 | -0.089 | 0.0499 | 99.9  | 100.0 | 100.0 | 100.0 |
| 59  | 896 | 0.063 | -0.324 | -0.089 | 0.0512 | 99.9  | 100.0 | 100.0 | 100.0 |
| 60  | 896 | 0.064 | -0.299 | -0.088 | 0.0511 | 100.0 | 100.0 | 100.0 | 100.0 |
| 61  | 897 | 0.044 | -0.274 | -0.087 | 0.0494 | 100.0 | 100.0 | 100.0 | 100.0 |
| 62  | 897 | 0.089 | -0.318 | -0.084 | 0.0517 | 99.9  | 100.0 | 100.0 | 100.0 |
| 63  | 896 | 0.090 | -0.281 | -0.085 | 0.0521 | 100.0 | 100.0 | 100.0 | 100.0 |
| 64  | 900 | 0.070 | -0.275 | -0.083 | 0.0477 | 100.0 | 100.0 | 100.0 | 100.0 |
| 65  | 900 | 0.075 | -0.344 | -0.082 | 0.0489 | 99.9  | 100.0 | 100.0 | 100.0 |
| 66  | 900 | 0.066 | -0.302 | -0.080 | 0.0492 | 99.9  | 100.0 | 100.0 | 100.0 |
| 67  | 900 | 0.044 | -0.303 | -0.082 | 0.0470 | 99.9  | 100.0 | 100.0 | 100.0 |
| 68  | 900 | 0.036 | -0.300 | -0.079 | 0.0493 | 100.0 | 100.0 | 100.0 | 100.0 |
| 69  | 901 | 0.046 | -0.318 | -0.077 | 0.0477 | 99.7  | 100.0 | 100.0 | 100.0 |
| 70  | 901 | 0.066 | -0.272 | -0.076 | 0.0475 | 100.0 | 100.0 | 100.0 | 100.0 |
| 71  | 900 | 0.070 | -0.329 | -0.073 | 0.0494 | 99.8  | 100.0 | 100.0 | 100.0 |
| 72  | 901 | 0.084 | -0.346 | -0.074 | 0.0503 | 99.8  | 100.0 | 100.0 | 100.0 |
| 73  | 901 | 0.088 | -0.350 | -0.073 | 0.0520 | 99.6  | 100.0 | 100.0 | 100.0 |
| 74  | 902 | 0.071 | -0.348 | -0.071 | 0.0525 | 99.6  | 100.0 | 100.0 | 100.0 |
| 75  | 902 | 0.063 | -0.323 | -0.071 | 0.0509 | 99.3  | 100.0 | 100.0 | 100.0 |
| 76  | 902 | 0.071 | -0.347 | -0.070 | 0.0519 | 99.4  | 100.0 | 100.0 | 100.0 |
| 77  | 902 | 0.072 | -0.346 | -0.069 | 0.0539 | 99.6  | 100.0 | 100.0 | 100.0 |
| 78  | 902 | 0.069 | -0.369 | -0.072 | 0.0539 | 99.3  | 100.0 | 100.0 | 100.0 |
| 79  | 903 | 0.078 | -0.396 | -0.070 | 0.0573 | 99.2  | 100.0 | 100.0 | 100.0 |
| 80  | 903 | 0.109 | -0.361 | -0.068 | 0.0554 | 99.1  | 100.0 | 100.0 | 100.0 |
| 81  | 902 | 0.093 | -0.385 | -0.069 | 0.0566 | 99.1  | 100.0 | 100.0 | 100.0 |
| 82  | 903 | 0.083 | -0.391 | -0.065 | 0.0547 | 99.3  | 100.0 | 100.0 | 100.0 |
| 83  | 904 | 0.059 | -0.348 | -0.065 | 0.0540 | 99.1  | 100.0 | 100.0 | 100.0 |
| 84  | 904 | 0.089 | -0.369 | -0.064 | 0.0565 | 99.1  | 100.0 | 100.0 | 100.0 |
| 85  | 905 | 0.098 | -0.337 | -0.065 | 0.0538 | 99.6  | 100.0 | 100.0 | 100.0 |
| 86  | 905 | 0.061 | -0.395 | -0.063 | 0.0577 | 99.0  | 100.0 | 100.0 | 100.0 |
| 87  | 905 | 0.084 | -0.351 | -0.065 | 0.0565 | 99.1  | 100.0 | 100.0 | 100.0 |
| 88  | 905 | 0.115 | -0.367 | -0.062 | 0.0569 | 99.1  | 100.0 | 100.0 | 100.0 |
| 89  | 905 | 0.064 | -0.358 | -0.063 | 0.0561 | 99.3  | 100.0 | 100.0 | 100.0 |
| 90  | 905 | 0.088 | -0.377 | -0.062 | 0.0564 | 99.3  | 100.0 | 100.0 | 100.0 |
| 91  | 905 | 0.076 | -0.354 | -0.063 | 0.0561 | 99.1  | 100.0 | 100.0 | 100.0 |
| 92  | 905 | 0.068 | -0.360 | -0.059 | 0.0573 | 98.9  | 100.0 | 100.0 | 100.0 |
| 93  | 905 | 0.090 | -0.349 | -0.060 | 0.0569 | 99.7  | 100.0 | 100.0 | 100.0 |
| 94  | 905 | 0.092 | -0.338 | -0.058 | 0.0553 | 99.4  | 100.0 | 100.0 | 100.0 |
| 95  | 905 | 0.105 | -0.376 | -0.058 | 0.0562 | 99.8  | 100.0 | 100.0 | 100.0 |
| 96  | 905 | 0.071 | -0.309 | -0.058 | 0.0549 | 99.8  | 100.0 | 100.0 | 100.0 |
| 97  | 903 | 0.116 | -0.305 | -0.056 | 0.0556 | 99.7  | 100.0 | 100.0 | 100.0 |
| 98  | 904 | 0.074 | -0.305 | -0.053 | 0.0570 | 99.9  | 100.0 | 100.0 | 100.0 |
| 99  | 905 | 0.094 | -0.324 | -0.055 | 0.0577 | 99.7  | 100.0 | 100.0 | 100.0 |
| 100 | 905 | 0.068 | -0.370 | -0.056 | 0.0563 | 99.9  | 100.0 | 100.0 | 100.0 |
| 101 | 902 | 0.069 | -0.398 | -0.056 | 0.0570 | 99.7  | 100.0 | 100.0 | 100.0 |
| 102 | 904 | 0.096 | -0.287 | -0.053 | 0.0569 | 100.0 | 100.0 | 100.0 | 100.0 |
| 103 | 905 | 0.068 | -0.341 | -0.054 | 0.0579 | 99.9  | 100.0 | 100.0 | 100.0 |
| 104 | 905 | 0.093 | -0.333 | -0.054 | 0.0574 | 99.7  | 100.0 | 100.0 | 100.0 |
| 105 | 905 | 0.083 | -0.320 | -0.054 | 0.0584 | 99.7  | 100.0 | 100.0 | 100.0 |
| 106 | 904 | 0.082 | -0.300 | -0.053 | 0.0580 | 100.0 | 100.0 | 100.0 | 100.0 |
| 107 | 905 | 0.105 | -0.311 | -0.054 | 0.0595 | 99.9  | 100.0 | 100.0 | 100.0 |
| 108 | 904 | 0.082 | -0.286 | -0.055 | 0.0597 | 100.0 | 100.0 | 100.0 | 100.0 |
| 109 | 905 | 0.097 | -0.291 | -0.057 | 0.0621 | 100.0 | 100.0 | 100.0 | 100.0 |
| 110 | 902 | 0.067 | -0.291 | -0.056 | 0.0614 | 100.0 | 100.0 | 100.0 | 100.0 |

|     |     |       |        |        |        |       |       |       |       |
|-----|-----|-------|--------|--------|--------|-------|-------|-------|-------|
| 111 | 902 | 0.102 | -0.378 | -0.057 | 0.0646 | 99.4  | 100.0 | 100.0 | 100.0 |
| 112 | 902 | 0.092 | -0.330 | -0.059 | 0.0632 | 99.7  | 100.0 | 100.0 | 100.0 |
| 113 | 889 | 0.107 | -0.374 | -0.057 | 0.0643 | 99.6  | 100.0 | 100.0 | 100.0 |
| 114 | 899 | 0.083 | -0.319 | -0.057 | 0.0626 | 99.9  | 100.0 | 100.0 | 100.0 |
| 115 | 894 | 0.089 | -0.385 | -0.059 | 0.0660 | 99.6  | 100.0 | 100.0 | 100.0 |
| 116 | 898 | 0.102 | -0.343 | -0.056 | 0.0619 | 99.9  | 100.0 | 100.0 | 100.0 |
| 117 | 899 | 0.112 | -0.317 | -0.054 | 0.0660 | 99.8  | 100.0 | 100.0 | 100.0 |
| 118 | 903 | 0.107 | -0.336 | -0.054 | 0.0645 | 99.9  | 100.0 | 100.0 | 100.0 |
| 119 | 900 | 0.117 | -0.449 | -0.055 | 0.0660 | 99.3  | 100.0 | 100.0 | 100.0 |
| 120 | 896 | 0.130 | -0.499 | -0.055 | 0.0683 | 99.3  | 100.0 | 100.0 | 100.0 |
| 121 | 898 | 0.135 | -0.335 | -0.052 | 0.0622 | 99.8  | 100.0 | 100.0 | 100.0 |
| 122 | 899 | 0.129 | -0.342 | -0.053 | 0.0605 | 99.9  | 100.0 | 100.0 | 100.0 |
| 123 | 897 | 0.132 | -0.293 | -0.052 | 0.0606 | 100.0 | 100.0 | 100.0 | 100.0 |
| 124 | 898 | 0.125 | -0.366 | -0.054 | 0.0609 | 99.9  | 100.0 | 100.0 | 100.0 |
| 125 | 900 | 0.133 | -0.289 | -0.055 | 0.0598 | 100.0 | 100.0 | 100.0 | 100.0 |
| 126 | 900 | 0.133 | -0.342 | -0.054 | 0.0608 | 99.8  | 100.0 | 100.0 | 100.0 |
| 127 | 901 | 0.112 | -0.307 | -0.054 | 0.0590 | 99.9  | 100.0 | 100.0 | 100.0 |
| 128 | 903 | 0.113 | -0.255 | -0.052 | 0.0564 | 100.0 | 100.0 | 100.0 | 100.0 |
| 129 | 905 | 0.122 | -0.332 | -0.050 | 0.0566 | 99.9  | 100.0 | 100.0 | 100.0 |
| 130 | 903 | 0.116 | -0.280 | -0.049 | 0.0567 | 100.0 | 100.0 | 100.0 | 100.0 |
| 131 | 904 | 0.111 | -0.255 | -0.049 | 0.0551 | 100.0 | 100.0 | 100.0 | 100.0 |
| 132 | 905 | 0.126 | -0.246 | -0.051 | 0.0556 | 100.0 | 100.0 | 100.0 | 100.0 |
| 133 | 905 | 0.129 | -0.274 | -0.050 | 0.0548 | 100.0 | 100.0 | 100.0 | 100.0 |
| 134 | 904 | 0.158 | -0.265 | -0.047 | 0.0558 | 100.0 | 100.0 | 100.0 | 100.0 |
| 135 | 903 | 0.181 | -0.286 | -0.049 | 0.0559 | 100.0 | 100.0 | 100.0 | 100.0 |
| 136 | 905 | 0.143 | -0.313 | -0.047 | 0.0572 | 99.9  | 100.0 | 100.0 | 100.0 |
| 137 | 903 | 0.113 | -0.259 | -0.048 | 0.0563 | 100.0 | 100.0 | 100.0 | 100.0 |
| 138 | 905 | 0.137 | -0.318 | -0.048 | 0.0579 | 99.8  | 100.0 | 100.0 | 100.0 |
| 139 | 904 | 0.137 | -0.279 | -0.046 | 0.0576 | 100.0 | 100.0 | 100.0 | 100.0 |
| 140 | 904 | 0.140 | -0.263 | -0.047 | 0.0579 | 100.0 | 100.0 | 100.0 | 100.0 |
| 141 | 904 | 0.115 | -0.276 | -0.049 | 0.0583 | 100.0 | 100.0 | 100.0 | 100.0 |
| 142 | 904 | 0.126 | -0.260 | -0.047 | 0.0589 | 100.0 | 100.0 | 100.0 | 100.0 |
| 143 | 904 | 0.146 | -0.271 | -0.048 | 0.0580 | 100.0 | 100.0 | 100.0 | 100.0 |
| 144 | 905 | 0.140 | -0.255 | -0.050 | 0.0568 | 100.0 | 100.0 | 100.0 | 100.0 |
| 145 | 904 | 0.135 | -0.255 | -0.051 | 0.0580 | 100.0 | 100.0 | 100.0 | 100.0 |
| 146 | 905 | 0.120 | -0.256 | -0.050 | 0.0590 | 100.0 | 100.0 | 100.0 | 100.0 |
| 147 | 904 | 0.115 | -0.250 | -0.051 | 0.0567 | 100.0 | 100.0 | 100.0 | 100.0 |
| 148 | 905 | 0.134 | -0.301 | -0.052 | 0.0583 | 99.9  | 100.0 | 100.0 | 100.0 |
| 149 | 905 | 0.116 | -0.229 | -0.053 | 0.0581 | 100.0 | 100.0 | 100.0 | 100.0 |
| 150 | 905 | 0.148 | -0.224 | -0.053 | 0.0592 | 100.0 | 100.0 | 100.0 | 100.0 |
| 151 | 905 | 0.139 | -0.243 | -0.054 | 0.0593 | 100.0 | 100.0 | 100.0 | 100.0 |
| 152 | 905 | 0.135 | -0.205 | -0.057 | 0.0597 | 100.0 | 100.0 | 100.0 | 100.0 |
| 153 | 905 | 0.116 | -0.247 | -0.056 | 0.0579 | 100.0 | 100.0 | 100.0 | 100.0 |
| 154 | 903 | 0.148 | -0.217 | -0.056 | 0.0588 | 100.0 | 100.0 | 100.0 | 100.0 |
| 155 | 905 | 0.131 | -0.248 | -0.055 | 0.0616 | 100.0 | 100.0 | 100.0 | 100.0 |
| 156 | 905 | 0.196 | -0.240 | -0.058 | 0.0613 | 100.0 | 100.0 | 100.0 | 100.0 |
| 157 | 905 | 0.159 | -0.253 | -0.058 | 0.0609 | 100.0 | 100.0 | 100.0 | 100.0 |
| 158 | 905 | 0.155 | -0.258 | -0.060 | 0.0614 | 100.0 | 100.0 | 100.0 | 100.0 |
| 159 | 904 | 0.142 | -0.247 | -0.058 | 0.0620 | 100.0 | 100.0 | 100.0 | 100.0 |
| 160 | 905 | 0.133 | -0.246 | -0.058 | 0.0625 | 100.0 | 100.0 | 100.0 | 100.0 |
| 161 | 905 | 0.133 | -0.329 | -0.059 | 0.0642 | 99.9  | 100.0 | 100.0 | 100.0 |
| 162 | 904 | 0.128 | -0.258 | -0.062 | 0.0630 | 100.0 | 100.0 | 100.0 | 100.0 |
| 163 | 905 | 0.166 | -0.282 | -0.062 | 0.0657 | 100.0 | 100.0 | 100.0 | 100.0 |
| 164 | 905 | 0.145 | -0.330 | -0.063 | 0.0638 | 99.9  | 100.0 | 100.0 | 100.0 |
| 165 | 905 | 0.156 | -0.330 | -0.063 | 0.0673 | 99.7  | 100.0 | 100.0 | 100.0 |
| 166 | 903 | 0.174 | -0.335 | -0.062 | 0.0676 | 99.8  | 100.0 | 100.0 | 100.0 |
| 167 | 904 | 0.129 | -0.332 | -0.062 | 0.0682 | 99.8  | 100.0 | 100.0 | 100.0 |
| 168 | 905 | 0.138 | -0.323 | -0.064 | 0.0680 | 99.8  | 100.0 | 100.0 | 100.0 |
| 169 | 905 | 0.112 | -0.385 | -0.063 | 0.0701 | 99.4  | 100.0 | 100.0 | 100.0 |
| 170 | 905 | 0.155 | -0.327 | -0.065 | 0.0686 | 99.6  | 100.0 | 100.0 | 100.0 |
| 171 | 905 | 0.152 | -0.340 | -0.068 | 0.0684 | 99.8  | 100.0 | 100.0 | 100.0 |
| 172 | 904 | 0.121 | -0.388 | -0.067 | 0.0709 | 99.0  | 100.0 | 100.0 | 100.0 |
| 173 | 905 | 0.120 | -0.413 | -0.063 | 0.0690 | 99.8  | 100.0 | 100.0 | 100.0 |
| 174 | 905 | 0.132 | -0.336 | -0.066 | 0.0694 | 99.4  | 100.0 | 100.0 | 100.0 |
| 175 | 904 | 0.129 | -0.335 | -0.064 | 0.0716 | 99.3  | 100.0 | 100.0 | 100.0 |

|     |     |       |        |        |        |      |       |       |       |
|-----|-----|-------|--------|--------|--------|------|-------|-------|-------|
| 176 | 905 | 0.135 | -0.341 | -0.064 | 0.0719 | 99.4 | 100.0 | 100.0 | 100.0 |
| 177 | 905 | 0.128 | -0.316 | -0.067 | 0.0729 | 99.4 | 100.0 | 100.0 | 100.0 |
| 178 | 905 | 0.128 | -0.356 | -0.068 | 0.0690 | 99.4 | 100.0 | 100.0 | 100.0 |
| 179 | 905 | 0.229 | -0.317 | -0.062 | 0.0734 | 99.6 | 100.0 | 100.0 | 100.0 |
| 180 | 903 | 0.131 | -0.330 | -0.065 | 0.0724 | 99.9 | 100.0 | 100.0 | 100.0 |
| 181 | 904 | 0.132 | -0.315 | -0.065 | 0.0693 | 99.9 | 100.0 | 100.0 | 100.0 |
| 182 | 904 | 0.120 | -0.359 | -0.067 | 0.0713 | 99.4 | 100.0 | 100.0 | 100.0 |
| 183 | 905 | 0.136 | -0.312 | -0.062 | 0.0702 | 99.8 | 100.0 | 100.0 | 100.0 |
| 184 | 903 | 0.136 | -0.308 | -0.063 | 0.0689 | 99.9 | 100.0 | 100.0 | 100.0 |
| 185 | 905 | 0.119 | -0.329 | -0.063 | 0.0703 | 99.7 | 100.0 | 100.0 | 100.0 |
| 186 | 903 | 0.121 | -0.333 | -0.063 | 0.0687 | 99.8 | 100.0 | 100.0 | 100.0 |
| 187 | 905 | 0.142 | -0.389 | -0.062 | 0.0688 | 99.4 | 100.0 | 100.0 | 100.0 |
| 188 | 905 | 0.155 | -0.336 | -0.061 | 0.0691 | 99.6 | 100.0 | 100.0 | 100.0 |
| 189 | 904 | 0.110 | -0.343 | -0.064 | 0.0709 | 99.1 | 100.0 | 100.0 | 100.0 |
| 190 | 904 | 0.172 | -0.402 | -0.060 | 0.0710 | 99.2 | 100.0 | 100.0 | 100.0 |
| 191 | 904 | 0.108 | -0.385 | -0.061 | 0.0695 | 99.2 | 100.0 | 100.0 | 100.0 |
| 192 | 903 | 0.130 | -0.376 | -0.061 | 0.0729 | 98.8 | 100.0 | 100.0 | 100.0 |
| 193 | 905 | 0.134 | -0.391 | -0.062 | 0.0719 | 98.9 | 100.0 | 100.0 | 100.0 |
| 194 | 905 | 0.136 | -0.335 | -0.059 | 0.0719 | 99.0 | 100.0 | 100.0 | 100.0 |
| 195 | 903 | 0.130 | -0.347 | -0.059 | 0.0713 | 99.0 | 100.0 | 100.0 | 100.0 |
| 196 | 904 | 0.105 | -0.352 | -0.061 | 0.0704 | 98.9 | 100.0 | 100.0 | 100.0 |
| 197 | 902 | 0.095 | -0.369 | -0.059 | 0.0720 | 98.7 | 100.0 | 100.0 | 100.0 |
| 198 | 903 | 0.115 | -0.372 | -0.056 | 0.0721 | 98.7 | 100.0 | 100.0 | 100.0 |
| 199 | 903 | 0.115 | -0.374 | -0.059 | 0.0740 | 98.0 | 100.0 | 100.0 | 100.0 |
| 200 | 902 | 0.118 | -0.425 | -0.058 | 0.0749 | 98.0 | 100.0 | 100.0 | 100.0 |
| 201 | 905 | 0.094 | -0.412 | -0.062 | 0.0756 | 98.0 | 100.0 | 100.0 | 100.0 |
| 202 | 903 | 0.133 | -0.434 | -0.057 | 0.0769 | 98.0 | 100.0 | 100.0 | 100.0 |
| 203 | 904 | 0.106 | -0.447 | -0.061 | 0.0787 | 98.1 | 100.0 | 100.0 | 100.0 |
| 204 | 905 | 0.100 | -0.411 | -0.060 | 0.0790 | 97.8 | 100.0 | 100.0 | 100.0 |
| 205 | 905 | 0.131 | -0.417 | -0.059 | 0.0795 | 97.7 | 100.0 | 100.0 | 100.0 |
| 206 | 904 | 0.145 | -0.515 | -0.059 | 0.0805 | 97.7 | 99.9  | 100.0 | 100.0 |
| 207 | 903 | 0.118 | -0.442 | -0.059 | 0.0797 | 97.7 | 100.0 | 100.0 | 100.0 |
| 208 | 903 | 0.093 | -0.424 | -0.063 | 0.0787 | 98.0 | 100.0 | 100.0 | 100.0 |
| 209 | 905 | 0.118 | -0.450 | -0.061 | 0.0807 | 97.7 | 100.0 | 100.0 | 100.0 |
| 210 | 903 | 0.115 | -0.449 | -0.064 | 0.0807 | 97.5 | 100.0 | 100.0 | 100.0 |
| 211 | 903 | 0.183 | -0.469 | -0.066 | 0.0830 | 97.1 | 100.0 | 100.0 | 100.0 |
| 212 | 902 | 0.108 | -0.415 | -0.067 | 0.0801 | 97.2 | 100.0 | 100.0 | 100.0 |
| 213 | 901 | 0.201 | -0.446 | -0.067 | 0.0858 | 97.6 | 100.0 | 100.0 | 100.0 |
| 214 | 900 | 0.172 | -0.462 | -0.065 | 0.0883 | 97.2 | 100.0 | 100.0 | 100.0 |
| 215 | 894 | 0.262 | -0.611 | -0.079 | 0.1038 | 95.5 | 99.6  | 99.8  | 100.0 |
| 216 | 903 | 0.204 | -0.516 | -0.083 | 0.0935 | 96.5 | 99.9  | 100.0 | 100.0 |
| 217 | 895 | 0.199 | -0.512 | -0.080 | 0.0935 | 96.4 | 99.8  | 100.0 | 100.0 |
| 218 | 893 | 0.281 | -0.683 | -0.092 | 0.1041 | 95.3 | 99.4  | 99.7  | 100.0 |
| 219 | 892 | 0.292 | -0.670 | -0.083 | 0.1039 | 95.7 | 99.7  | 99.8  | 100.0 |
| 220 | 892 | 0.238 | -0.743 | -0.089 | 0.1157 | 94.3 | 98.8  | 99.7  | 100.0 |
| 221 | 897 | 0.228 | -0.690 | -0.093 | 0.1107 | 94.9 | 99.1  | 99.4  | 100.0 |
| 222 | 888 | 0.283 | -0.723 | -0.092 | 0.1176 | 94.3 | 98.9  | 99.3  | 100.0 |
| 223 | 890 | 0.367 | -0.890 | -0.106 | 0.1269 | 93.1 | 98.8  | 99.1  | 99.9  |
| 224 | 881 | 0.332 | -0.830 | -0.107 | 0.1338 | 93.1 | 98.0  | 98.5  | 100.0 |
| 225 | 869 | 0.421 | -0.903 | -0.109 | 0.1487 | 91.3 | 97.7  | 98.2  | 99.8  |
| 226 | 875 | 0.542 | -0.940 | -0.113 | 0.1552 | 90.4 | 97.8  | 98.2  | 99.9  |
| 227 | 866 | 0.414 | -0.751 | -0.105 | 0.1492 | 90.0 | 98.2  | 98.8  | 100.0 |
| 228 | 847 | 0.542 | -0.908 | -0.087 | 0.1718 | 89.4 | 97.4  | 98.5  | 99.9  |
| 229 | 847 | 0.567 | -0.900 | -0.110 | 0.1807 | 86.3 | 96.6  | 97.8  | 99.9  |
| 230 | 837 | 0.709 | -1.123 | -0.116 | 0.1823 | 85.1 | 97.0  | 98.2  | 99.9  |
| 231 | 821 | 0.605 | -1.005 | -0.099 | 0.1976 | 84.5 | 97.0  | 97.4  | 99.8  |
| 232 | 779 | 0.795 | -0.970 | -0.084 | 0.2246 | 82.2 | 95.6  | 97.2  | 99.5  |
| 233 | 708 | 0.596 | -1.431 | -0.098 | 0.2310 | 79.0 | 95.5  | 96.9  | 99.7  |
| 234 | 621 | 0.801 | -1.118 | -0.072 | 0.2440 | 78.7 | 95.8  | 96.9  | 99.8  |
| 235 | 485 | 0.730 | -0.730 | -0.028 | 0.2476 | 76.7 | 94.8  | 95.9  | 100.0 |
| 236 | 366 | 0.886 | -0.715 | -0.011 | 0.2751 | 73.8 | 92.3  | 94.0  | 99.7  |
| 237 | 219 | 0.833 | -0.585 | -0.019 | 0.2635 | 73.5 | 95.9  | 96.8  | 100.0 |
| 238 | 141 | 0.622 | -0.628 | 0.014  | 0.2642 | 69.5 | 96.5  | 95.7  | 100.0 |
| 239 | 78  | 0.870 | -0.513 | 0.007  | 0.2958 | 67.9 | 93.6  | 93.6  | 100.0 |
| 240 | 49  | 0.423 | -0.609 | -0.010 | 0.2298 | 83.7 | 95.9  | 95.9  | 100.0 |

Classification report 1 of 3

IHO statistics a/b are : 0.250 0.008

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 1     | 28    | 7      | 25.00  | 21     | 75.00  |
| 2     | 69    | 10     | 14.49  | 59     | 85.51  |
| 3     | 111   | 30     | 27.03  | 81     | 72.97  |
| 4     | 159   | 41     | 25.79  | 118    | 74.21  |
| 5     | 232   | 42     | 18.10  | 190    | 81.90  |
| 6     | 344   | 72     | 20.93  | 272    | 79.07  |
| 7     | 489   | 88     | 18.00  | 401    | 82.00  |
| 8     | 623   | 122    | 19.58  | 501    | 80.42  |
| 9     | 714   | 135    | 18.91  | 579    | 81.09  |
| 10    | 779   | 133    | 17.07  | 646    | 82.93  |
| 11    | 795   | 113    | 14.21  | 682    | 85.79  |
| 12    | 804   | 109    | 13.56  | 695    | 86.44  |
| 13    | 813   | 85     | 10.46  | 728    | 89.54  |
| 14    | 824   | 75     | 9.10   | 749    | 90.90  |
| 15    | 826   | 77     | 9.32   | 749    | 90.68  |
| 16    | 842   | 37     | 4.39   | 805    | 95.61  |
| 17    | 836   | 46     | 5.50   | 790    | 94.50  |
| 18    | 851   | 44     | 5.17   | 807    | 94.83  |
| 19    | 862   | 32     | 3.71   | 830    | 96.29  |
| 20    | 873   | 33     | 3.78   | 840    | 96.22  |
| 21    | 865   | 29     | 3.35   | 836    | 96.65  |
| 22    | 877   | 17     | 1.94   | 860    | 98.06  |
| 23    | 878   | 14     | 1.59   | 864    | 98.41  |
| 24    | 876   | 12     | 1.37   | 864    | 98.63  |
| 25    | 873   | 14     | 1.60   | 859    | 98.40  |
| 26    | 878   | 3      | 0.34   | 875    | 99.66  |
| 27    | 880   | 1      | 0.11   | 879    | 99.89  |
| 28    | 880   | 1      | 0.11   | 879    | 99.89  |
| 29    | 880   | 2      | 0.23   | 878    | 99.77  |
| 30    | 883   | 1      | 0.11   | 882    | 99.89  |
| 31    | 883   | 0      | 0.00   | 883    | 100.00 |
| 32    | 884   | 0      | 0.00   | 884    | 100.00 |
| 33    | 885   | 0      | 0.00   | 885    | 100.00 |
| 34    | 885   | 1      | 0.11   | 884    | 99.89  |
| 35    | 885   | 0      | 0.00   | 885    | 100.00 |
| 36    | 884   | 0      | 0.00   | 884    | 100.00 |
| 37    | 887   | 0      | 0.00   | 887    | 100.00 |
| 38    | 888   | 0      | 0.00   | 888    | 100.00 |
| 39    | 888   | 0      | 0.00   | 888    | 100.00 |
| 40    | 888   | 0      | 0.00   | 888    | 100.00 |
| 41    | 888   | 0      | 0.00   | 888    | 100.00 |
| 42    | 889   | 0      | 0.00   | 889    | 100.00 |
| 43    | 888   | 0      | 0.00   | 888    | 100.00 |
| 44    | 889   | 0      | 0.00   | 889    | 100.00 |
| 45    | 890   | 0      | 0.00   | 890    | 100.00 |
| 46    | 890   | 0      | 0.00   | 890    | 100.00 |
| 47    | 888   | 0      | 0.00   | 888    | 100.00 |
| 48    | 890   | 0      | 0.00   | 890    | 100.00 |
| 49    | 891   | 0      | 0.00   | 891    | 100.00 |
| 50    | 890   | 0      | 0.00   | 890    | 100.00 |
| 51    | 893   | 0      | 0.00   | 893    | 100.00 |
| 52    | 894   | 0      | 0.00   | 894    | 100.00 |
| 53    | 894   | 0      | 0.00   | 894    | 100.00 |
| 54    | 894   | 0      | 0.00   | 894    | 100.00 |
| 55    | 894   | 0      | 0.00   | 894    | 100.00 |
| 56    | 896   | 0      | 0.00   | 896    | 100.00 |
| 57    | 896   | 0      | 0.00   | 896    | 100.00 |
| 58    | 895   | 0      | 0.00   | 895    | 100.00 |
| 59    | 896   | 0      | 0.00   | 896    | 100.00 |

|     |     |   |      |     |        |
|-----|-----|---|------|-----|--------|
| 60  | 896 | 0 | 0.00 | 896 | 100.00 |
| 61  | 897 | 0 | 0.00 | 897 | 100.00 |
| 62  | 897 | 0 | 0.00 | 897 | 100.00 |
| 63  | 896 | 0 | 0.00 | 896 | 100.00 |
| 64  | 900 | 0 | 0.00 | 900 | 100.00 |
| 65  | 900 | 0 | 0.00 | 900 | 100.00 |
| 66  | 900 | 0 | 0.00 | 900 | 100.00 |
| 67  | 900 | 0 | 0.00 | 900 | 100.00 |
| 68  | 900 | 0 | 0.00 | 900 | 100.00 |
| 69  | 901 | 0 | 0.00 | 901 | 100.00 |
| 70  | 901 | 0 | 0.00 | 901 | 100.00 |
| 71  | 900 | 0 | 0.00 | 900 | 100.00 |
| 72  | 901 | 0 | 0.00 | 901 | 100.00 |
| 73  | 901 | 0 | 0.00 | 901 | 100.00 |
| 74  | 902 | 0 | 0.00 | 902 | 100.00 |
| 75  | 902 | 0 | 0.00 | 902 | 100.00 |
| 76  | 902 | 0 | 0.00 | 902 | 100.00 |
| 77  | 902 | 0 | 0.00 | 902 | 100.00 |
| 78  | 902 | 0 | 0.00 | 902 | 100.00 |
| 79  | 903 | 0 | 0.00 | 903 | 100.00 |
| 80  | 903 | 0 | 0.00 | 903 | 100.00 |
| 81  | 902 | 0 | 0.00 | 902 | 100.00 |
| 82  | 903 | 0 | 0.00 | 903 | 100.00 |
| 83  | 904 | 0 | 0.00 | 904 | 100.00 |
| 84  | 904 | 0 | 0.00 | 904 | 100.00 |
| 85  | 905 | 0 | 0.00 | 905 | 100.00 |
| 86  | 905 | 0 | 0.00 | 905 | 100.00 |
| 87  | 905 | 0 | 0.00 | 905 | 100.00 |
| 88  | 905 | 0 | 0.00 | 905 | 100.00 |
| 89  | 905 | 0 | 0.00 | 905 | 100.00 |
| 90  | 905 | 0 | 0.00 | 905 | 100.00 |
| 91  | 905 | 0 | 0.00 | 905 | 100.00 |
| 92  | 905 | 0 | 0.00 | 905 | 100.00 |
| 93  | 905 | 0 | 0.00 | 905 | 100.00 |
| 94  | 905 | 0 | 0.00 | 905 | 100.00 |
| 95  | 905 | 0 | 0.00 | 905 | 100.00 |
| 96  | 905 | 0 | 0.00 | 905 | 100.00 |
| 97  | 903 | 0 | 0.00 | 903 | 100.00 |
| 98  | 904 | 0 | 0.00 | 904 | 100.00 |
| 99  | 905 | 0 | 0.00 | 905 | 100.00 |
| 100 | 905 | 0 | 0.00 | 905 | 100.00 |
| 101 | 902 | 0 | 0.00 | 902 | 100.00 |
| 102 | 904 | 0 | 0.00 | 904 | 100.00 |
| 103 | 905 | 0 | 0.00 | 905 | 100.00 |
| 104 | 905 | 0 | 0.00 | 905 | 100.00 |
| 105 | 905 | 0 | 0.00 | 905 | 100.00 |
| 106 | 904 | 0 | 0.00 | 904 | 100.00 |
| 107 | 905 | 0 | 0.00 | 905 | 100.00 |
| 108 | 904 | 0 | 0.00 | 904 | 100.00 |
| 109 | 905 | 0 | 0.00 | 905 | 100.00 |
| 110 | 902 | 0 | 0.00 | 902 | 100.00 |
| 111 | 902 | 0 | 0.00 | 902 | 100.00 |
| 112 | 902 | 0 | 0.00 | 902 | 100.00 |
| 113 | 889 | 0 | 0.00 | 889 | 100.00 |
| 114 | 899 | 0 | 0.00 | 899 | 100.00 |
| 115 | 894 | 0 | 0.00 | 894 | 100.00 |
| 116 | 898 | 0 | 0.00 | 898 | 100.00 |
| 117 | 899 | 0 | 0.00 | 899 | 100.00 |
| 118 | 903 | 0 | 0.00 | 903 | 100.00 |
| 119 | 900 | 0 | 0.00 | 900 | 100.00 |
| 120 | 896 | 1 | 0.11 | 895 | 99.89  |
| 121 | 898 | 0 | 0.00 | 898 | 100.00 |
| 122 | 899 | 0 | 0.00 | 899 | 100.00 |
| 123 | 897 | 0 | 0.00 | 897 | 100.00 |
| 124 | 898 | 0 | 0.00 | 898 | 100.00 |

|     |     |   |      |     |        |
|-----|-----|---|------|-----|--------|
| 125 | 900 | 0 | 0.00 | 900 | 100.00 |
| 126 | 900 | 0 | 0.00 | 900 | 100.00 |
| 127 | 901 | 0 | 0.00 | 901 | 100.00 |
| 128 | 903 | 0 | 0.00 | 903 | 100.00 |
| 129 | 905 | 0 | 0.00 | 905 | 100.00 |
| 130 | 903 | 0 | 0.00 | 903 | 100.00 |
| 131 | 904 | 0 | 0.00 | 904 | 100.00 |
| 132 | 905 | 0 | 0.00 | 905 | 100.00 |
| 133 | 905 | 0 | 0.00 | 905 | 100.00 |
| 134 | 904 | 0 | 0.00 | 904 | 100.00 |
| 135 | 903 | 0 | 0.00 | 903 | 100.00 |
| 136 | 905 | 0 | 0.00 | 905 | 100.00 |
| 137 | 903 | 0 | 0.00 | 903 | 100.00 |
| 138 | 905 | 0 | 0.00 | 905 | 100.00 |
| 139 | 904 | 0 | 0.00 | 904 | 100.00 |
| 140 | 904 | 0 | 0.00 | 904 | 100.00 |
| 141 | 904 | 0 | 0.00 | 904 | 100.00 |
| 142 | 904 | 0 | 0.00 | 904 | 100.00 |
| 143 | 904 | 0 | 0.00 | 904 | 100.00 |
| 144 | 905 | 0 | 0.00 | 905 | 100.00 |
| 145 | 904 | 0 | 0.00 | 904 | 100.00 |
| 146 | 905 | 0 | 0.00 | 905 | 100.00 |
| 147 | 904 | 0 | 0.00 | 904 | 100.00 |
| 148 | 905 | 0 | 0.00 | 905 | 100.00 |
| 149 | 905 | 0 | 0.00 | 905 | 100.00 |
| 150 | 905 | 0 | 0.00 | 905 | 100.00 |
| 151 | 905 | 0 | 0.00 | 905 | 100.00 |
| 152 | 905 | 0 | 0.00 | 905 | 100.00 |
| 153 | 905 | 0 | 0.00 | 905 | 100.00 |
| 154 | 903 | 0 | 0.00 | 903 | 100.00 |
| 155 | 905 | 0 | 0.00 | 905 | 100.00 |
| 156 | 905 | 0 | 0.00 | 905 | 100.00 |
| 157 | 905 | 0 | 0.00 | 905 | 100.00 |
| 158 | 905 | 0 | 0.00 | 905 | 100.00 |
| 159 | 904 | 0 | 0.00 | 904 | 100.00 |
| 160 | 905 | 0 | 0.00 | 905 | 100.00 |
| 161 | 905 | 0 | 0.00 | 905 | 100.00 |
| 162 | 904 | 0 | 0.00 | 904 | 100.00 |
| 163 | 905 | 0 | 0.00 | 905 | 100.00 |
| 164 | 905 | 0 | 0.00 | 905 | 100.00 |
| 165 | 905 | 0 | 0.00 | 905 | 100.00 |
| 166 | 903 | 0 | 0.00 | 903 | 100.00 |
| 167 | 904 | 0 | 0.00 | 904 | 100.00 |
| 168 | 905 | 0 | 0.00 | 905 | 100.00 |
| 169 | 905 | 0 | 0.00 | 905 | 100.00 |
| 170 | 905 | 0 | 0.00 | 905 | 100.00 |
| 171 | 905 | 0 | 0.00 | 905 | 100.00 |
| 172 | 904 | 0 | 0.00 | 904 | 100.00 |
| 173 | 905 | 0 | 0.00 | 905 | 100.00 |
| 174 | 905 | 0 | 0.00 | 905 | 100.00 |
| 175 | 904 | 0 | 0.00 | 904 | 100.00 |
| 176 | 905 | 0 | 0.00 | 905 | 100.00 |
| 177 | 905 | 0 | 0.00 | 905 | 100.00 |
| 178 | 905 | 0 | 0.00 | 905 | 100.00 |
| 179 | 905 | 0 | 0.00 | 905 | 100.00 |
| 180 | 903 | 0 | 0.00 | 903 | 100.00 |
| 181 | 904 | 0 | 0.00 | 904 | 100.00 |
| 182 | 904 | 0 | 0.00 | 904 | 100.00 |
| 183 | 905 | 0 | 0.00 | 905 | 100.00 |
| 184 | 903 | 0 | 0.00 | 903 | 100.00 |
| 185 | 905 | 0 | 0.00 | 905 | 100.00 |
| 186 | 903 | 0 | 0.00 | 903 | 100.00 |
| 187 | 905 | 0 | 0.00 | 905 | 100.00 |
| 188 | 905 | 0 | 0.00 | 905 | 100.00 |
| 189 | 904 | 0 | 0.00 | 904 | 100.00 |

|     |     |    |       |     |        |
|-----|-----|----|-------|-----|--------|
| 190 | 904 | 0  | 0.00  | 904 | 100.00 |
| 191 | 904 | 0  | 0.00  | 904 | 100.00 |
| 192 | 903 | 0  | 0.00  | 903 | 100.00 |
| 193 | 905 | 0  | 0.00  | 905 | 100.00 |
| 194 | 905 | 0  | 0.00  | 905 | 100.00 |
| 195 | 903 | 0  | 0.00  | 903 | 100.00 |
| 196 | 904 | 0  | 0.00  | 904 | 100.00 |
| 197 | 902 | 0  | 0.00  | 902 | 100.00 |
| 198 | 903 | 0  | 0.00  | 903 | 100.00 |
| 199 | 903 | 0  | 0.00  | 903 | 100.00 |
| 200 | 902 | 0  | 0.00  | 902 | 100.00 |
| 201 | 905 | 0  | 0.00  | 905 | 100.00 |
| 202 | 903 | 0  | 0.00  | 903 | 100.00 |
| 203 | 904 | 0  | 0.00  | 904 | 100.00 |
| 204 | 905 | 0  | 0.00  | 905 | 100.00 |
| 205 | 905 | 0  | 0.00  | 905 | 100.00 |
| 206 | 904 | 1  | 0.11  | 903 | 99.89  |
| 207 | 903 | 0  | 0.00  | 903 | 100.00 |
| 208 | 903 | 0  | 0.00  | 903 | 100.00 |
| 209 | 905 | 0  | 0.00  | 905 | 100.00 |
| 210 | 903 | 0  | 0.00  | 903 | 100.00 |
| 211 | 903 | 0  | 0.00  | 903 | 100.00 |
| 212 | 902 | 0  | 0.00  | 902 | 100.00 |
| 213 | 901 | 0  | 0.00  | 901 | 100.00 |
| 214 | 900 | 0  | 0.00  | 900 | 100.00 |
| 215 | 894 | 5  | 0.56  | 889 | 99.44  |
| 216 | 903 | 6  | 0.66  | 897 | 99.34  |
| 217 | 895 | 3  | 0.34  | 892 | 99.66  |
| 218 | 893 | 5  | 0.56  | 888 | 99.44  |
| 219 | 892 | 6  | 0.67  | 886 | 99.33  |
| 220 | 892 | 12 | 1.35  | 880 | 98.65  |
| 221 | 897 | 9  | 1.00  | 888 | 99.00  |
| 222 | 888 | 13 | 1.46  | 875 | 98.54  |
| 223 | 890 | 17 | 1.91  | 873 | 98.09  |
| 224 | 881 | 18 | 2.04  | 863 | 97.96  |
| 225 | 869 | 27 | 3.11  | 842 | 96.89  |
| 226 | 875 | 24 | 2.74  | 851 | 97.26  |
| 227 | 866 | 19 | 2.19  | 847 | 97.81  |
| 228 | 847 | 26 | 3.07  | 821 | 96.93  |
| 229 | 847 | 34 | 4.01  | 813 | 95.99  |
| 230 | 837 | 32 | 3.82  | 805 | 96.18  |
| 231 | 821 | 28 | 3.41  | 793 | 96.59  |
| 232 | 779 | 43 | 5.52  | 736 | 94.48  |
| 233 | 708 | 39 | 5.51  | 669 | 94.49  |
| 234 | 621 | 37 | 5.96  | 584 | 94.04  |
| 235 | 485 | 39 | 8.04  | 446 | 91.96  |
| 236 | 366 | 33 | 9.02  | 333 | 90.98  |
| 237 | 219 | 21 | 9.59  | 198 | 90.41  |
| 238 | 141 | 8  | 5.67  | 133 | 94.33  |
| 239 | 78  | 8  | 10.26 | 70  | 89.74  |
| 240 | 49  | 2  | 4.08  | 47  | 95.92  |

Classification report 2 of 3

IHO statistics a/b are : 0.500 0.013

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 1     | 28    | 1      | 3.57   | 27     | 96.43  |
| 2     | 69    | 0      | 0.00   | 69     | 100.00 |
| 3     | 111   | 3      | 2.70   | 108    | 97.30  |
| 4     | 159   | 3      | 1.89   | 156    | 98.11  |
| 5     | 232   | 1      | 0.43   | 231    | 99.57  |
| 6     | 344   | 1      | 0.29   | 343    | 99.71  |
| 7     | 489   | 3      | 0.61   | 486    | 99.39  |
| 8     | 623   | 1      | 0.16   | 622    | 99.84  |
| 9     | 714   | 3      | 0.42   | 711    | 99.58  |
| 10    | 779   | 4      | 0.51   | 775    | 99.49  |
| 11    | 795   | 4      | 0.50   | 791    | 99.50  |
| 12    | 804   | 2      | 0.25   | 802    | 99.75  |
| 13    | 813   | 1      | 0.12   | 812    | 99.88  |
| 14    | 824   | 1      | 0.12   | 823    | 99.88  |
| 15    | 826   | 0      | 0.00   | 826    | 100.00 |
| 16    | 842   | 0      | 0.00   | 842    | 100.00 |
| 17    | 836   | 0      | 0.00   | 836    | 100.00 |
| 18    | 851   | 0      | 0.00   | 851    | 100.00 |
| 19    | 862   | 0      | 0.00   | 862    | 100.00 |
| 20    | 873   | 0      | 0.00   | 873    | 100.00 |
| 21    | 865   | 0      | 0.00   | 865    | 100.00 |
| 22    | 877   | 0      | 0.00   | 877    | 100.00 |
| 23    | 878   | 0      | 0.00   | 878    | 100.00 |
| 24    | 876   | 0      | 0.00   | 876    | 100.00 |
| 25    | 873   | 0      | 0.00   | 873    | 100.00 |
| 26    | 878   | 0      | 0.00   | 878    | 100.00 |
| 27    | 880   | 0      | 0.00   | 880    | 100.00 |
| 28    | 880   | 0      | 0.00   | 880    | 100.00 |
| 29    | 880   | 0      | 0.00   | 880    | 100.00 |
| 30    | 883   | 0      | 0.00   | 883    | 100.00 |
| 31    | 883   | 0      | 0.00   | 883    | 100.00 |
| 32    | 884   | 0      | 0.00   | 884    | 100.00 |
| 33    | 885   | 0      | 0.00   | 885    | 100.00 |
| 34    | 885   | 0      | 0.00   | 885    | 100.00 |
| 35    | 885   | 0      | 0.00   | 885    | 100.00 |
| 36    | 884   | 0      | 0.00   | 884    | 100.00 |
| 37    | 887   | 0      | 0.00   | 887    | 100.00 |
| 38    | 888   | 0      | 0.00   | 888    | 100.00 |
| 39    | 888   | 0      | 0.00   | 888    | 100.00 |
| 40    | 888   | 0      | 0.00   | 888    | 100.00 |
| 41    | 888   | 0      | 0.00   | 888    | 100.00 |
| 42    | 889   | 0      | 0.00   | 889    | 100.00 |
| 43    | 888   | 0      | 0.00   | 888    | 100.00 |
| 44    | 889   | 0      | 0.00   | 889    | 100.00 |
| 45    | 890   | 0      | 0.00   | 890    | 100.00 |
| 46    | 890   | 0      | 0.00   | 890    | 100.00 |
| 47    | 888   | 0      | 0.00   | 888    | 100.00 |
| 48    | 890   | 0      | 0.00   | 890    | 100.00 |
| 49    | 891   | 0      | 0.00   | 891    | 100.00 |
| 50    | 890   | 0      | 0.00   | 890    | 100.00 |
| 51    | 893   | 0      | 0.00   | 893    | 100.00 |
| 52    | 894   | 0      | 0.00   | 894    | 100.00 |
| 53    | 894   | 0      | 0.00   | 894    | 100.00 |
| 54    | 894   | 0      | 0.00   | 894    | 100.00 |
| 55    | 894   | 0      | 0.00   | 894    | 100.00 |
| 56    | 896   | 0      | 0.00   | 896    | 100.00 |
| 57    | 896   | 0      | 0.00   | 896    | 100.00 |
| 58    | 895   | 0      | 0.00   | 895    | 100.00 |
| 59    | 896   | 0      | 0.00   | 896    | 100.00 |

|     |     |   |      |     |        |
|-----|-----|---|------|-----|--------|
| 60  | 896 | 0 | 0.00 | 896 | 100.00 |
| 61  | 897 | 0 | 0.00 | 897 | 100.00 |
| 62  | 897 | 0 | 0.00 | 897 | 100.00 |
| 63  | 896 | 0 | 0.00 | 896 | 100.00 |
| 64  | 900 | 0 | 0.00 | 900 | 100.00 |
| 65  | 900 | 0 | 0.00 | 900 | 100.00 |
| 66  | 900 | 0 | 0.00 | 900 | 100.00 |
| 67  | 900 | 0 | 0.00 | 900 | 100.00 |
| 68  | 900 | 0 | 0.00 | 900 | 100.00 |
| 69  | 901 | 0 | 0.00 | 901 | 100.00 |
| 70  | 901 | 0 | 0.00 | 901 | 100.00 |
| 71  | 900 | 0 | 0.00 | 900 | 100.00 |
| 72  | 901 | 0 | 0.00 | 901 | 100.00 |
| 73  | 901 | 0 | 0.00 | 901 | 100.00 |
| 74  | 902 | 0 | 0.00 | 902 | 100.00 |
| 75  | 902 | 0 | 0.00 | 902 | 100.00 |
| 76  | 902 | 0 | 0.00 | 902 | 100.00 |
| 77  | 902 | 0 | 0.00 | 902 | 100.00 |
| 78  | 902 | 0 | 0.00 | 902 | 100.00 |
| 79  | 903 | 0 | 0.00 | 903 | 100.00 |
| 80  | 903 | 0 | 0.00 | 903 | 100.00 |
| 81  | 902 | 0 | 0.00 | 902 | 100.00 |
| 82  | 903 | 0 | 0.00 | 903 | 100.00 |
| 83  | 904 | 0 | 0.00 | 904 | 100.00 |
| 84  | 904 | 0 | 0.00 | 904 | 100.00 |
| 85  | 905 | 0 | 0.00 | 905 | 100.00 |
| 86  | 905 | 0 | 0.00 | 905 | 100.00 |
| 87  | 905 | 0 | 0.00 | 905 | 100.00 |
| 88  | 905 | 0 | 0.00 | 905 | 100.00 |
| 89  | 905 | 0 | 0.00 | 905 | 100.00 |
| 90  | 905 | 0 | 0.00 | 905 | 100.00 |
| 91  | 905 | 0 | 0.00 | 905 | 100.00 |
| 92  | 905 | 0 | 0.00 | 905 | 100.00 |
| 93  | 905 | 0 | 0.00 | 905 | 100.00 |
| 94  | 905 | 0 | 0.00 | 905 | 100.00 |
| 95  | 905 | 0 | 0.00 | 905 | 100.00 |
| 96  | 905 | 0 | 0.00 | 905 | 100.00 |
| 97  | 903 | 0 | 0.00 | 903 | 100.00 |
| 98  | 904 | 0 | 0.00 | 904 | 100.00 |
| 99  | 905 | 0 | 0.00 | 905 | 100.00 |
| 100 | 905 | 0 | 0.00 | 905 | 100.00 |
| 101 | 902 | 0 | 0.00 | 902 | 100.00 |
| 102 | 904 | 0 | 0.00 | 904 | 100.00 |
| 103 | 905 | 0 | 0.00 | 905 | 100.00 |
| 104 | 905 | 0 | 0.00 | 905 | 100.00 |
| 105 | 905 | 0 | 0.00 | 905 | 100.00 |
| 106 | 904 | 0 | 0.00 | 904 | 100.00 |
| 107 | 905 | 0 | 0.00 | 905 | 100.00 |
| 108 | 904 | 0 | 0.00 | 904 | 100.00 |
| 109 | 905 | 0 | 0.00 | 905 | 100.00 |
| 110 | 902 | 0 | 0.00 | 902 | 100.00 |
| 111 | 902 | 0 | 0.00 | 902 | 100.00 |
| 112 | 902 | 0 | 0.00 | 902 | 100.00 |
| 113 | 889 | 0 | 0.00 | 889 | 100.00 |
| 114 | 899 | 0 | 0.00 | 899 | 100.00 |
| 115 | 894 | 0 | 0.00 | 894 | 100.00 |
| 116 | 898 | 0 | 0.00 | 898 | 100.00 |
| 117 | 899 | 0 | 0.00 | 899 | 100.00 |
| 118 | 903 | 0 | 0.00 | 903 | 100.00 |
| 119 | 900 | 0 | 0.00 | 900 | 100.00 |
| 120 | 896 | 0 | 0.00 | 896 | 100.00 |
| 121 | 898 | 0 | 0.00 | 898 | 100.00 |
| 122 | 899 | 0 | 0.00 | 899 | 100.00 |
| 123 | 897 | 0 | 0.00 | 897 | 100.00 |
| 124 | 898 | 0 | 0.00 | 898 | 100.00 |

|     |     |   |      |     |        |
|-----|-----|---|------|-----|--------|
| 125 | 900 | 0 | 0.00 | 900 | 100.00 |
| 126 | 900 | 0 | 0.00 | 900 | 100.00 |
| 127 | 901 | 0 | 0.00 | 901 | 100.00 |
| 128 | 903 | 0 | 0.00 | 903 | 100.00 |
| 129 | 905 | 0 | 0.00 | 905 | 100.00 |
| 130 | 903 | 0 | 0.00 | 903 | 100.00 |
| 131 | 904 | 0 | 0.00 | 904 | 100.00 |
| 132 | 905 | 0 | 0.00 | 905 | 100.00 |
| 133 | 905 | 0 | 0.00 | 905 | 100.00 |
| 134 | 904 | 0 | 0.00 | 904 | 100.00 |
| 135 | 903 | 0 | 0.00 | 903 | 100.00 |
| 136 | 905 | 0 | 0.00 | 905 | 100.00 |
| 137 | 903 | 0 | 0.00 | 903 | 100.00 |
| 138 | 905 | 0 | 0.00 | 905 | 100.00 |
| 139 | 904 | 0 | 0.00 | 904 | 100.00 |
| 140 | 904 | 0 | 0.00 | 904 | 100.00 |
| 141 | 904 | 0 | 0.00 | 904 | 100.00 |
| 142 | 904 | 0 | 0.00 | 904 | 100.00 |
| 143 | 904 | 0 | 0.00 | 904 | 100.00 |
| 144 | 905 | 0 | 0.00 | 905 | 100.00 |
| 145 | 904 | 0 | 0.00 | 904 | 100.00 |
| 146 | 905 | 0 | 0.00 | 905 | 100.00 |
| 147 | 904 | 0 | 0.00 | 904 | 100.00 |
| 148 | 905 | 0 | 0.00 | 905 | 100.00 |
| 149 | 905 | 0 | 0.00 | 905 | 100.00 |
| 150 | 905 | 0 | 0.00 | 905 | 100.00 |
| 151 | 905 | 0 | 0.00 | 905 | 100.00 |
| 152 | 905 | 0 | 0.00 | 905 | 100.00 |
| 153 | 905 | 0 | 0.00 | 905 | 100.00 |
| 154 | 903 | 0 | 0.00 | 903 | 100.00 |
| 155 | 905 | 0 | 0.00 | 905 | 100.00 |
| 156 | 905 | 0 | 0.00 | 905 | 100.00 |
| 157 | 905 | 0 | 0.00 | 905 | 100.00 |
| 158 | 905 | 0 | 0.00 | 905 | 100.00 |
| 159 | 904 | 0 | 0.00 | 904 | 100.00 |
| 160 | 905 | 0 | 0.00 | 905 | 100.00 |
| 161 | 905 | 0 | 0.00 | 905 | 100.00 |
| 162 | 904 | 0 | 0.00 | 904 | 100.00 |
| 163 | 905 | 0 | 0.00 | 905 | 100.00 |
| 164 | 905 | 0 | 0.00 | 905 | 100.00 |
| 165 | 905 | 0 | 0.00 | 905 | 100.00 |
| 166 | 903 | 0 | 0.00 | 903 | 100.00 |
| 167 | 904 | 0 | 0.00 | 904 | 100.00 |
| 168 | 905 | 0 | 0.00 | 905 | 100.00 |
| 169 | 905 | 0 | 0.00 | 905 | 100.00 |
| 170 | 905 | 0 | 0.00 | 905 | 100.00 |
| 171 | 905 | 0 | 0.00 | 905 | 100.00 |
| 172 | 904 | 0 | 0.00 | 904 | 100.00 |
| 173 | 905 | 0 | 0.00 | 905 | 100.00 |
| 174 | 905 | 0 | 0.00 | 905 | 100.00 |
| 175 | 904 | 0 | 0.00 | 904 | 100.00 |
| 176 | 905 | 0 | 0.00 | 905 | 100.00 |
| 177 | 905 | 0 | 0.00 | 905 | 100.00 |
| 178 | 905 | 0 | 0.00 | 905 | 100.00 |
| 179 | 905 | 0 | 0.00 | 905 | 100.00 |
| 180 | 903 | 0 | 0.00 | 903 | 100.00 |
| 181 | 904 | 0 | 0.00 | 904 | 100.00 |
| 182 | 904 | 0 | 0.00 | 904 | 100.00 |
| 183 | 905 | 0 | 0.00 | 905 | 100.00 |
| 184 | 903 | 0 | 0.00 | 903 | 100.00 |
| 185 | 905 | 0 | 0.00 | 905 | 100.00 |
| 186 | 903 | 0 | 0.00 | 903 | 100.00 |
| 187 | 905 | 0 | 0.00 | 905 | 100.00 |
| 188 | 905 | 0 | 0.00 | 905 | 100.00 |
| 189 | 904 | 0 | 0.00 | 904 | 100.00 |

|     |     |   |      |     |        |
|-----|-----|---|------|-----|--------|
| 190 | 904 | 0 | 0.00 | 904 | 100.00 |
| 191 | 904 | 0 | 0.00 | 904 | 100.00 |
| 192 | 903 | 0 | 0.00 | 903 | 100.00 |
| 193 | 905 | 0 | 0.00 | 905 | 100.00 |
| 194 | 905 | 0 | 0.00 | 905 | 100.00 |
| 195 | 903 | 0 | 0.00 | 903 | 100.00 |
| 196 | 904 | 0 | 0.00 | 904 | 100.00 |
| 197 | 902 | 0 | 0.00 | 902 | 100.00 |
| 198 | 903 | 0 | 0.00 | 903 | 100.00 |
| 199 | 903 | 0 | 0.00 | 903 | 100.00 |
| 200 | 902 | 0 | 0.00 | 902 | 100.00 |
| 201 | 905 | 0 | 0.00 | 905 | 100.00 |
| 202 | 903 | 0 | 0.00 | 903 | 100.00 |
| 203 | 904 | 0 | 0.00 | 904 | 100.00 |
| 204 | 905 | 0 | 0.00 | 905 | 100.00 |
| 205 | 905 | 0 | 0.00 | 905 | 100.00 |
| 206 | 904 | 0 | 0.00 | 904 | 100.00 |
| 207 | 903 | 0 | 0.00 | 903 | 100.00 |
| 208 | 903 | 0 | 0.00 | 903 | 100.00 |
| 209 | 905 | 0 | 0.00 | 905 | 100.00 |
| 210 | 903 | 0 | 0.00 | 903 | 100.00 |
| 211 | 903 | 0 | 0.00 | 903 | 100.00 |
| 212 | 902 | 0 | 0.00 | 902 | 100.00 |
| 213 | 901 | 0 | 0.00 | 901 | 100.00 |
| 214 | 900 | 0 | 0.00 | 900 | 100.00 |
| 215 | 894 | 0 | 0.00 | 894 | 100.00 |
| 216 | 903 | 0 | 0.00 | 903 | 100.00 |
| 217 | 895 | 0 | 0.00 | 895 | 100.00 |
| 218 | 893 | 0 | 0.00 | 893 | 100.00 |
| 219 | 892 | 0 | 0.00 | 892 | 100.00 |
| 220 | 892 | 0 | 0.00 | 892 | 100.00 |
| 221 | 897 | 0 | 0.00 | 897 | 100.00 |
| 222 | 888 | 0 | 0.00 | 888 | 100.00 |
| 223 | 890 | 1 | 0.11 | 889 | 99.89  |
| 224 | 881 | 0 | 0.00 | 881 | 100.00 |
| 225 | 869 | 2 | 0.23 | 867 | 99.77  |
| 226 | 875 | 2 | 0.23 | 873 | 99.77  |
| 227 | 866 | 0 | 0.00 | 866 | 100.00 |
| 228 | 847 | 1 | 0.12 | 846 | 99.88  |
| 229 | 847 | 2 | 0.24 | 845 | 99.76  |
| 230 | 837 | 2 | 0.24 | 835 | 99.76  |
| 231 | 821 | 2 | 0.24 | 819 | 99.76  |
| 232 | 779 | 4 | 0.51 | 775 | 99.49  |
| 233 | 708 | 2 | 0.28 | 706 | 99.72  |
| 234 | 621 | 2 | 0.32 | 619 | 99.68  |
| 235 | 485 | 0 | 0.00 | 485 | 100.00 |
| 236 | 366 | 1 | 0.27 | 365 | 99.73  |
| 237 | 219 | 0 | 0.00 | 219 | 100.00 |
| 238 | 141 | 0 | 0.00 | 141 | 100.00 |
| 239 | 78  | 0 | 0.00 | 78  | 100.00 |
| 240 | 49  | 0 | 0.00 | 49  | 100.00 |

Classification report 3 of 3

IHO statistics a/b are : 1.000 0.023

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 1     | 28    | 0      | 0.00   | 28     | 100.00 |
| 2     | 69    | 0      | 0.00   | 69     | 100.00 |
| 3     | 111   | 0      | 0.00   | 111    | 100.00 |
| 4     | 159   | 0      | 0.00   | 159    | 100.00 |
| 5     | 232   | 0      | 0.00   | 232    | 100.00 |
| 6     | 344   | 0      | 0.00   | 344    | 100.00 |
| 7     | 489   | 0      | 0.00   | 489    | 100.00 |
| 8     | 623   | 0      | 0.00   | 623    | 100.00 |
| 9     | 714   | 0      | 0.00   | 714    | 100.00 |
| 10    | 779   | 0      | 0.00   | 779    | 100.00 |
| 11    | 795   | 0      | 0.00   | 795    | 100.00 |
| 12    | 804   | 0      | 0.00   | 804    | 100.00 |
| 13    | 813   | 0      | 0.00   | 813    | 100.00 |
| 14    | 824   | 0      | 0.00   | 824    | 100.00 |
| 15    | 826   | 0      | 0.00   | 826    | 100.00 |
| 16    | 842   | 0      | 0.00   | 842    | 100.00 |
| 17    | 836   | 0      | 0.00   | 836    | 100.00 |
| 18    | 851   | 0      | 0.00   | 851    | 100.00 |
| 19    | 862   | 0      | 0.00   | 862    | 100.00 |
| 20    | 873   | 0      | 0.00   | 873    | 100.00 |
| 21    | 865   | 0      | 0.00   | 865    | 100.00 |
| 22    | 877   | 0      | 0.00   | 877    | 100.00 |
| 23    | 878   | 0      | 0.00   | 878    | 100.00 |
| 24    | 876   | 0      | 0.00   | 876    | 100.00 |
| 25    | 873   | 0      | 0.00   | 873    | 100.00 |
| 26    | 878   | 0      | 0.00   | 878    | 100.00 |
| 27    | 880   | 0      | 0.00   | 880    | 100.00 |
| 28    | 880   | 0      | 0.00   | 880    | 100.00 |
| 29    | 880   | 0      | 0.00   | 880    | 100.00 |
| 30    | 883   | 0      | 0.00   | 883    | 100.00 |
| 31    | 883   | 0      | 0.00   | 883    | 100.00 |
| 32    | 884   | 0      | 0.00   | 884    | 100.00 |
| 33    | 885   | 0      | 0.00   | 885    | 100.00 |
| 34    | 885   | 0      | 0.00   | 885    | 100.00 |
| 35    | 885   | 0      | 0.00   | 885    | 100.00 |
| 36    | 884   | 0      | 0.00   | 884    | 100.00 |
| 37    | 887   | 0      | 0.00   | 887    | 100.00 |
| 38    | 888   | 0      | 0.00   | 888    | 100.00 |
| 39    | 888   | 0      | 0.00   | 888    | 100.00 |
| 40    | 888   | 0      | 0.00   | 888    | 100.00 |
| 41    | 888   | 0      | 0.00   | 888    | 100.00 |
| 42    | 889   | 0      | 0.00   | 889    | 100.00 |
| 43    | 888   | 0      | 0.00   | 888    | 100.00 |
| 44    | 889   | 0      | 0.00   | 889    | 100.00 |
| 45    | 890   | 0      | 0.00   | 890    | 100.00 |
| 46    | 890   | 0      | 0.00   | 890    | 100.00 |
| 47    | 888   | 0      | 0.00   | 888    | 100.00 |
| 48    | 890   | 0      | 0.00   | 890    | 100.00 |
| 49    | 891   | 0      | 0.00   | 891    | 100.00 |
| 50    | 890   | 0      | 0.00   | 890    | 100.00 |
| 51    | 893   | 0      | 0.00   | 893    | 100.00 |
| 52    | 894   | 0      | 0.00   | 894    | 100.00 |
| 53    | 894   | 0      | 0.00   | 894    | 100.00 |
| 54    | 894   | 0      | 0.00   | 894    | 100.00 |
| 55    | 894   | 0      | 0.00   | 894    | 100.00 |
| 56    | 896   | 0      | 0.00   | 896    | 100.00 |
| 57    | 896   | 0      | 0.00   | 896    | 100.00 |
| 58    | 895   | 0      | 0.00   | 895    | 100.00 |
| 59    | 896   | 0      | 0.00   | 896    | 100.00 |

|     |     |   |      |     |        |
|-----|-----|---|------|-----|--------|
| 60  | 896 | 0 | 0.00 | 896 | 100.00 |
| 61  | 897 | 0 | 0.00 | 897 | 100.00 |
| 62  | 897 | 0 | 0.00 | 897 | 100.00 |
| 63  | 896 | 0 | 0.00 | 896 | 100.00 |
| 64  | 900 | 0 | 0.00 | 900 | 100.00 |
| 65  | 900 | 0 | 0.00 | 900 | 100.00 |
| 66  | 900 | 0 | 0.00 | 900 | 100.00 |
| 67  | 900 | 0 | 0.00 | 900 | 100.00 |
| 68  | 900 | 0 | 0.00 | 900 | 100.00 |
| 69  | 901 | 0 | 0.00 | 901 | 100.00 |
| 70  | 901 | 0 | 0.00 | 901 | 100.00 |
| 71  | 900 | 0 | 0.00 | 900 | 100.00 |
| 72  | 901 | 0 | 0.00 | 901 | 100.00 |
| 73  | 901 | 0 | 0.00 | 901 | 100.00 |
| 74  | 902 | 0 | 0.00 | 902 | 100.00 |
| 75  | 902 | 0 | 0.00 | 902 | 100.00 |
| 76  | 902 | 0 | 0.00 | 902 | 100.00 |
| 77  | 902 | 0 | 0.00 | 902 | 100.00 |
| 78  | 902 | 0 | 0.00 | 902 | 100.00 |
| 79  | 903 | 0 | 0.00 | 903 | 100.00 |
| 80  | 903 | 0 | 0.00 | 903 | 100.00 |
| 81  | 902 | 0 | 0.00 | 902 | 100.00 |
| 82  | 903 | 0 | 0.00 | 903 | 100.00 |
| 83  | 904 | 0 | 0.00 | 904 | 100.00 |
| 84  | 904 | 0 | 0.00 | 904 | 100.00 |
| 85  | 905 | 0 | 0.00 | 905 | 100.00 |
| 86  | 905 | 0 | 0.00 | 905 | 100.00 |
| 87  | 905 | 0 | 0.00 | 905 | 100.00 |
| 88  | 905 | 0 | 0.00 | 905 | 100.00 |
| 89  | 905 | 0 | 0.00 | 905 | 100.00 |
| 90  | 905 | 0 | 0.00 | 905 | 100.00 |
| 91  | 905 | 0 | 0.00 | 905 | 100.00 |
| 92  | 905 | 0 | 0.00 | 905 | 100.00 |
| 93  | 905 | 0 | 0.00 | 905 | 100.00 |
| 94  | 905 | 0 | 0.00 | 905 | 100.00 |
| 95  | 905 | 0 | 0.00 | 905 | 100.00 |
| 96  | 905 | 0 | 0.00 | 905 | 100.00 |
| 97  | 903 | 0 | 0.00 | 903 | 100.00 |
| 98  | 904 | 0 | 0.00 | 904 | 100.00 |
| 99  | 905 | 0 | 0.00 | 905 | 100.00 |
| 100 | 905 | 0 | 0.00 | 905 | 100.00 |
| 101 | 902 | 0 | 0.00 | 902 | 100.00 |
| 102 | 904 | 0 | 0.00 | 904 | 100.00 |
| 103 | 905 | 0 | 0.00 | 905 | 100.00 |
| 104 | 905 | 0 | 0.00 | 905 | 100.00 |
| 105 | 905 | 0 | 0.00 | 905 | 100.00 |
| 106 | 904 | 0 | 0.00 | 904 | 100.00 |
| 107 | 905 | 0 | 0.00 | 905 | 100.00 |
| 108 | 904 | 0 | 0.00 | 904 | 100.00 |
| 109 | 905 | 0 | 0.00 | 905 | 100.00 |
| 110 | 902 | 0 | 0.00 | 902 | 100.00 |
| 111 | 902 | 0 | 0.00 | 902 | 100.00 |
| 112 | 902 | 0 | 0.00 | 902 | 100.00 |
| 113 | 889 | 0 | 0.00 | 889 | 100.00 |
| 114 | 899 | 0 | 0.00 | 899 | 100.00 |
| 115 | 894 | 0 | 0.00 | 894 | 100.00 |
| 116 | 898 | 0 | 0.00 | 898 | 100.00 |
| 117 | 899 | 0 | 0.00 | 899 | 100.00 |
| 118 | 903 | 0 | 0.00 | 903 | 100.00 |
| 119 | 900 | 0 | 0.00 | 900 | 100.00 |
| 120 | 896 | 0 | 0.00 | 896 | 100.00 |
| 121 | 898 | 0 | 0.00 | 898 | 100.00 |
| 122 | 899 | 0 | 0.00 | 899 | 100.00 |
| 123 | 897 | 0 | 0.00 | 897 | 100.00 |
| 124 | 898 | 0 | 0.00 | 898 | 100.00 |

|     |     |   |      |     |        |
|-----|-----|---|------|-----|--------|
| 125 | 900 | 0 | 0.00 | 900 | 100.00 |
| 126 | 900 | 0 | 0.00 | 900 | 100.00 |
| 127 | 901 | 0 | 0.00 | 901 | 100.00 |
| 128 | 903 | 0 | 0.00 | 903 | 100.00 |
| 129 | 905 | 0 | 0.00 | 905 | 100.00 |
| 130 | 903 | 0 | 0.00 | 903 | 100.00 |
| 131 | 904 | 0 | 0.00 | 904 | 100.00 |
| 132 | 905 | 0 | 0.00 | 905 | 100.00 |
| 133 | 905 | 0 | 0.00 | 905 | 100.00 |
| 134 | 904 | 0 | 0.00 | 904 | 100.00 |
| 135 | 903 | 0 | 0.00 | 903 | 100.00 |
| 136 | 905 | 0 | 0.00 | 905 | 100.00 |
| 137 | 903 | 0 | 0.00 | 903 | 100.00 |
| 138 | 905 | 0 | 0.00 | 905 | 100.00 |
| 139 | 904 | 0 | 0.00 | 904 | 100.00 |
| 140 | 904 | 0 | 0.00 | 904 | 100.00 |
| 141 | 904 | 0 | 0.00 | 904 | 100.00 |
| 142 | 904 | 0 | 0.00 | 904 | 100.00 |
| 143 | 904 | 0 | 0.00 | 904 | 100.00 |
| 144 | 905 | 0 | 0.00 | 905 | 100.00 |
| 145 | 904 | 0 | 0.00 | 904 | 100.00 |
| 146 | 905 | 0 | 0.00 | 905 | 100.00 |
| 147 | 904 | 0 | 0.00 | 904 | 100.00 |
| 148 | 905 | 0 | 0.00 | 905 | 100.00 |
| 149 | 905 | 0 | 0.00 | 905 | 100.00 |
| 150 | 905 | 0 | 0.00 | 905 | 100.00 |
| 151 | 905 | 0 | 0.00 | 905 | 100.00 |
| 152 | 905 | 0 | 0.00 | 905 | 100.00 |
| 153 | 905 | 0 | 0.00 | 905 | 100.00 |
| 154 | 903 | 0 | 0.00 | 903 | 100.00 |
| 155 | 905 | 0 | 0.00 | 905 | 100.00 |
| 156 | 905 | 0 | 0.00 | 905 | 100.00 |
| 157 | 905 | 0 | 0.00 | 905 | 100.00 |
| 158 | 905 | 0 | 0.00 | 905 | 100.00 |
| 159 | 904 | 0 | 0.00 | 904 | 100.00 |
| 160 | 905 | 0 | 0.00 | 905 | 100.00 |
| 161 | 905 | 0 | 0.00 | 905 | 100.00 |
| 162 | 904 | 0 | 0.00 | 904 | 100.00 |
| 163 | 905 | 0 | 0.00 | 905 | 100.00 |
| 164 | 905 | 0 | 0.00 | 905 | 100.00 |
| 165 | 905 | 0 | 0.00 | 905 | 100.00 |
| 166 | 903 | 0 | 0.00 | 903 | 100.00 |
| 167 | 904 | 0 | 0.00 | 904 | 100.00 |
| 168 | 905 | 0 | 0.00 | 905 | 100.00 |
| 169 | 905 | 0 | 0.00 | 905 | 100.00 |
| 170 | 905 | 0 | 0.00 | 905 | 100.00 |
| 171 | 905 | 0 | 0.00 | 905 | 100.00 |
| 172 | 904 | 0 | 0.00 | 904 | 100.00 |
| 173 | 905 | 0 | 0.00 | 905 | 100.00 |
| 174 | 905 | 0 | 0.00 | 905 | 100.00 |
| 175 | 904 | 0 | 0.00 | 904 | 100.00 |
| 176 | 905 | 0 | 0.00 | 905 | 100.00 |
| 177 | 905 | 0 | 0.00 | 905 | 100.00 |
| 178 | 905 | 0 | 0.00 | 905 | 100.00 |
| 179 | 905 | 0 | 0.00 | 905 | 100.00 |
| 180 | 903 | 0 | 0.00 | 903 | 100.00 |
| 181 | 904 | 0 | 0.00 | 904 | 100.00 |
| 182 | 904 | 0 | 0.00 | 904 | 100.00 |
| 183 | 905 | 0 | 0.00 | 905 | 100.00 |
| 184 | 903 | 0 | 0.00 | 903 | 100.00 |
| 185 | 905 | 0 | 0.00 | 905 | 100.00 |
| 186 | 903 | 0 | 0.00 | 903 | 100.00 |
| 187 | 905 | 0 | 0.00 | 905 | 100.00 |
| 188 | 905 | 0 | 0.00 | 905 | 100.00 |
| 189 | 904 | 0 | 0.00 | 904 | 100.00 |

|     |     |   |      |     |        |
|-----|-----|---|------|-----|--------|
| 190 | 904 | 0 | 0.00 | 904 | 100.00 |
| 191 | 904 | 0 | 0.00 | 904 | 100.00 |
| 192 | 903 | 0 | 0.00 | 903 | 100.00 |
| 193 | 905 | 0 | 0.00 | 905 | 100.00 |
| 194 | 905 | 0 | 0.00 | 905 | 100.00 |
| 195 | 903 | 0 | 0.00 | 903 | 100.00 |
| 196 | 904 | 0 | 0.00 | 904 | 100.00 |
| 197 | 902 | 0 | 0.00 | 902 | 100.00 |
| 198 | 903 | 0 | 0.00 | 903 | 100.00 |
| 199 | 903 | 0 | 0.00 | 903 | 100.00 |
| 200 | 902 | 0 | 0.00 | 902 | 100.00 |
| 201 | 905 | 0 | 0.00 | 905 | 100.00 |
| 202 | 903 | 0 | 0.00 | 903 | 100.00 |
| 203 | 904 | 0 | 0.00 | 904 | 100.00 |
| 204 | 905 | 0 | 0.00 | 905 | 100.00 |
| 205 | 905 | 0 | 0.00 | 905 | 100.00 |
| 206 | 904 | 0 | 0.00 | 904 | 100.00 |
| 207 | 903 | 0 | 0.00 | 903 | 100.00 |
| 208 | 903 | 0 | 0.00 | 903 | 100.00 |
| 209 | 905 | 0 | 0.00 | 905 | 100.00 |
| 210 | 903 | 0 | 0.00 | 903 | 100.00 |
| 211 | 903 | 0 | 0.00 | 903 | 100.00 |
| 212 | 902 | 0 | 0.00 | 902 | 100.00 |
| 213 | 901 | 0 | 0.00 | 901 | 100.00 |
| 214 | 900 | 0 | 0.00 | 900 | 100.00 |
| 215 | 894 | 0 | 0.00 | 894 | 100.00 |
| 216 | 903 | 0 | 0.00 | 903 | 100.00 |
| 217 | 895 | 0 | 0.00 | 895 | 100.00 |
| 218 | 893 | 0 | 0.00 | 893 | 100.00 |
| 219 | 892 | 0 | 0.00 | 892 | 100.00 |
| 220 | 892 | 0 | 0.00 | 892 | 100.00 |
| 221 | 897 | 0 | 0.00 | 897 | 100.00 |
| 222 | 888 | 0 | 0.00 | 888 | 100.00 |
| 223 | 890 | 0 | 0.00 | 890 | 100.00 |
| 224 | 881 | 0 | 0.00 | 881 | 100.00 |
| 225 | 869 | 0 | 0.00 | 869 | 100.00 |
| 226 | 875 | 0 | 0.00 | 875 | 100.00 |
| 227 | 866 | 0 | 0.00 | 866 | 100.00 |
| 228 | 847 | 0 | 0.00 | 847 | 100.00 |
| 229 | 847 | 0 | 0.00 | 847 | 100.00 |
| 230 | 837 | 0 | 0.00 | 837 | 100.00 |
| 231 | 821 | 0 | 0.00 | 821 | 100.00 |
| 232 | 779 | 0 | 0.00 | 779 | 100.00 |
| 233 | 708 | 0 | 0.00 | 708 | 100.00 |
| 234 | 621 | 0 | 0.00 | 621 | 100.00 |
| 235 | 485 | 0 | 0.00 | 485 | 100.00 |
| 236 | 366 | 0 | 0.00 | 366 | 100.00 |
| 237 | 219 | 0 | 0.00 | 219 | 100.00 |
| 238 | 141 | 0 | 0.00 | 141 | 100.00 |
| 239 | 78  | 0 | 0.00 | 78  | 100.00 |
| 240 | 49  | 0 | 0.00 | 49  | 100.00 |

**R4RE\_2003 DN159**

Quality Control Report for file : C:\Temp\2003\_Patch\_tests\R4RE\_3\checkline

Surface lines: 001\_2019, 002\_2024, 003\_2029, 004\_2011, 004\_2015, 005\_2007

Checkline lines: 006\_2033, 008\_2038, 009\_2042, 010\_2046

Elevation Range is : -63.243(m) -39.997(m)

Total number of 3D points used: 506757

Starting Time: 8-JUN-2003 20:33:46.00

Ending Time: 8-JUN-2003 20:49:34.15

Minimum tidal reduction: 224 (mm)

Maximum tidal reduction: 291 (mm)

| User# | Total | Max(+) | Max(-) | Mean   | Std.   | 3dm(%) | 5dm(%) | 1%(%) | 1.6%(%) |
|-------|-------|--------|--------|--------|--------|--------|--------|-------|---------|
| ===== | ===== | =====  | =====  | =====  | =====  | =====  | =====  | ===== | =====   |
| 1     | 531   | 1.621  | -5.106 | -0.314 | 0.6653 | 38.0   | 59.7   | 59.5  | 80.2    |
| 2     | 695   | 1.650  | -4.740 | -0.309 | 0.6361 | 38.3   | 59.3   | 60.7  | 79.3    |
| 3     | 879   | 1.747  | -4.813 | -0.324 | 0.6339 | 40.8   | 58.4   | 59.4  | 78.2    |
| 4     | 1107  | 1.910  | -4.527 | -0.287 | 0.6057 | 41.1   | 60.6   | 61.3  | 79.9    |
| 5     | 1275  | 1.897  | -4.417 | -0.284 | 0.5832 | 42.0   | 60.8   | 61.9  | 80.8    |
| 6     | 1450  | 1.826  | -4.181 | -0.280 | 0.5757 | 42.8   | 60.9   | 62.2  | 82.0    |
| 7     | 1624  | 2.110  | -4.167 | -0.278 | 0.5772 | 43.9   | 61.1   | 62.1  | 80.2    |
| 8     | 1763  | 2.005  | -4.160 | -0.271 | 0.5755 | 44.2   | 63.4   | 63.9  | 80.8    |
| 9     | 1878  | 1.746  | -4.054 | -0.276 | 0.5666 | 44.2   | 62.5   | 63.8  | 82.1    |
| 10    | 1970  | 1.911  | -3.943 | -0.288 | 0.5580 | 44.9   | 63.0   | 64.4  | 82.2    |
| 11    | 2041  | 1.878  | -3.815 | -0.286 | 0.5581 | 44.9   | 62.5   | 64.0  | 81.9    |
| 12    | 2078  | 1.976  | -3.769 | -0.301 | 0.5658 | 44.2   | 62.1   | 63.9  | 81.6    |
| 13    | 2127  | 2.052  | -3.705 | -0.307 | 0.5542 | 45.3   | 63.0   | 65.0  | 81.1    |
| 14    | 2152  | 2.006  | -3.633 | -0.337 | 0.5595 | 43.5   | 61.0   | 63.0  | 81.1    |
| 15    | 2154  | 2.006  | -3.483 | -0.342 | 0.5579 | 42.6   | 61.1   | 63.6  | 81.2    |
| 16    | 2164  | 1.957  | -3.479 | -0.354 | 0.5547 | 41.8   | 61.2   | 63.1  | 80.9    |
| 17    | 2171  | 2.170  | -3.461 | -0.359 | 0.5486 | 42.5   | 61.1   | 63.0  | 80.1    |
| 18    | 2173  | 2.133  | -3.473 | -0.356 | 0.5409 | 41.7   | 60.3   | 62.2  | 79.8    |
| 19    | 2176  | 2.033  | -3.458 | -0.364 | 0.5427 | 41.8   | 59.9   | 62.4  | 80.2    |
| 20    | 2171  | 2.167  | -3.422 | -0.353 | 0.5440 | 42.0   | 60.6   | 62.3  | 80.4    |
| 21    | 2173  | 2.106  | -3.200 | -0.346 | 0.5486 | 42.8   | 61.8   | 62.9  | 79.7    |
| 22    | 2169  | 2.104  | -3.329 | -0.351 | 0.5577 | 43.4   | 61.5   | 62.8  | 80.1    |
| 23    | 2175  | 2.066  | -3.213 | -0.336 | 0.5572 | 44.2   | 62.0   | 63.3  | 80.9    |
| 24    | 2179  | 2.028  | -3.153 | -0.341 | 0.5596 | 45.3   | 62.3   | 63.5  | 80.5    |
| 25    | 2179  | 1.924  | -3.032 | -0.339 | 0.5543 | 44.5   | 61.9   | 63.3  | 80.0    |
| 26    | 2185  | 1.827  | -3.102 | -0.339 | 0.5544 | 44.3   | 61.7   | 64.0  | 80.1    |
| 27    | 2185  | 1.838  | -3.162 | -0.336 | 0.5484 | 43.7   | 62.0   | 63.6  | 80.2    |
| 28    | 2187  | 1.826  | -3.219 | -0.335 | 0.5487 | 43.6   | 61.5   | 63.9  | 80.4    |
| 29    | 2185  | 1.791  | -3.281 | -0.343 | 0.5505 | 44.0   | 61.3   | 63.6  | 79.8    |
| 30    | 2185  | 1.778  | -3.076 | -0.340 | 0.5475 | 45.7   | 62.1   | 64.0  | 80.4    |
| 31    | 2186  | 1.745  | -3.273 | -0.340 | 0.5504 | 45.3   | 61.4   | 62.7  | 80.7    |
| 32    | 2186  | 1.733  | -3.072 | -0.341 | 0.5486 | 45.4   | 62.3   | 63.9  | 80.6    |
| 33    | 2188  | 1.752  | -3.290 | -0.345 | 0.5530 | 45.3   | 60.7   | 62.8  | 80.2    |
| 34    | 2189  | 1.837  | -3.260 | -0.342 | 0.5570 | 46.4   | 60.4   | 61.9  | 79.8    |
| 35    | 2191  | 1.792  | -3.171 | -0.340 | 0.5631 | 47.0   | 61.3   | 62.5  | 79.2    |
| 36    | 2191  | 3.047  | -3.208 | -0.341 | 0.5653 | 46.7   | 61.4   | 62.6  | 80.4    |
| 37    | 2190  | 1.755  | -3.255 | -0.344 | 0.5610 | 46.7   | 61.6   | 62.6  | 79.5    |
| 38    | 2189  | 1.728  | -3.176 | -0.343 | 0.5571 | 46.4   | 62.0   | 63.3  | 79.0    |
| 39    | 2193  | 1.633  | -3.105 | -0.346 | 0.5463 | 46.5   | 61.8   | 63.6  | 80.1    |
| 40    | 2191  | 1.614  | -3.032 | -0.354 | 0.5479 | 45.4   | 61.3   | 62.8  | 78.9    |
| 41    | 2188  | 1.676  | -3.020 | -0.360 | 0.5483 | 45.2   | 61.2   | 62.5  | 79.0    |
| 42    | 2191  | 1.628  | -2.977 | -0.371 | 0.5518 | 44.2   | 60.7   | 62.3  | 78.3    |
| 43    | 2192  | 1.553  | -2.963 | -0.373 | 0.5520 | 44.6   | 60.8   | 62.4  | 77.6    |
| 44    | 2192  | 1.787  | -2.830 | -0.385 | 0.5489 | 43.9   | 59.9   | 62.0  | 77.4    |
| 45    | 2191  | 1.752  | -2.583 | -0.394 | 0.5449 | 44.0   | 59.5   | 61.0  | 77.3    |

|     |      |       |        |        |        |      |      |      |      |
|-----|------|-------|--------|--------|--------|------|------|------|------|
| 46  | 2194 | 2.236 | -2.538 | -0.395 | 0.5482 | 44.2 | 58.8 | 60.9 | 77.4 |
| 47  | 2192 | 2.084 | -2.564 | -0.404 | 0.5476 | 43.6 | 59.3 | 60.9 | 77.1 |
| 48  | 2192 | 2.372 | -2.504 | -0.414 | 0.5528 | 43.2 | 58.9 | 60.5 | 76.4 |
| 49  | 2192 | 2.398 | -2.576 | -0.418 | 0.5611 | 43.3 | 59.0 | 60.0 | 76.4 |
| 50  | 2194 | 2.309 | -2.908 | -0.428 | 0.5722 | 42.9 | 58.0 | 59.5 | 75.3 |
| 51  | 2194 | 2.273 | -2.910 | -0.433 | 0.5789 | 41.9 | 57.8 | 59.1 | 75.7 |
| 52  | 2193 | 2.211 | -2.825 | -0.441 | 0.5803 | 40.9 | 57.5 | 58.5 | 75.6 |
| 53  | 2194 | 2.139 | -2.738 | -0.449 | 0.5840 | 40.7 | 56.4 | 58.0 | 74.6 |
| 54  | 2194 | 2.088 | -2.913 | -0.452 | 0.5824 | 41.5 | 56.6 | 57.8 | 74.5 |
| 55  | 2194 | 1.973 | -2.990 | -0.453 | 0.5775 | 41.8 | 56.4 | 57.9 | 74.6 |
| 56  | 2194 | 1.843 | -3.076 | -0.449 | 0.5742 | 41.8 | 56.7 | 57.8 | 74.1 |
| 57  | 2194 | 1.703 | -3.147 | -0.447 | 0.5725 | 42.5 | 56.7 | 58.6 | 74.6 |
| 58  | 2194 | 1.740 | -3.163 | -0.439 | 0.5703 | 42.4 | 56.5 | 58.3 | 76.2 |
| 59  | 2194 | 2.440 | -3.163 | -0.430 | 0.5701 | 42.4 | 56.8 | 58.9 | 76.4 |
| 60  | 2194 | 2.036 | -3.196 | -0.427 | 0.5568 | 42.0 | 56.4 | 58.5 | 77.2 |
| 61  | 2195 | 2.043 | -2.948 | -0.425 | 0.5532 | 41.4 | 56.8 | 58.8 | 76.9 |
| 62  | 2195 | 1.865 | -2.952 | -0.420 | 0.5436 | 41.7 | 56.8 | 58.7 | 77.9 |
| 63  | 2195 | 2.000 | -3.004 | -0.422 | 0.5393 | 41.3 | 57.4 | 58.9 | 78.3 |
| 64  | 2195 | 2.069 | -2.727 | -0.420 | 0.5362 | 41.6 | 57.2 | 59.0 | 78.6 |
| 65  | 2195 | 2.099 | -2.603 | -0.420 | 0.5290 | 42.2 | 57.0 | 59.3 | 78.4 |
| 66  | 2195 | 2.028 | -2.709 | -0.416 | 0.5272 | 43.6 | 58.4 | 60.3 | 78.1 |
| 67  | 2195 | 1.813 | -2.716 | -0.420 | 0.5273 | 42.3 | 58.4 | 60.9 | 78.3 |
| 68  | 2195 | 2.065 | -2.621 | -0.418 | 0.5311 | 42.7 | 59.5 | 61.5 | 78.4 |
| 69  | 2195 | 2.134 | -2.722 | -0.422 | 0.5301 | 44.1 | 59.0 | 61.6 | 78.0 |
| 70  | 2194 | 2.180 | -2.651 | -0.428 | 0.5311 | 42.9 | 59.2 | 61.1 | 77.2 |
| 71  | 2194 | 2.291 | -2.663 | -0.432 | 0.5352 | 42.9 | 58.8 | 60.8 | 76.7 |
| 72  | 2195 | 2.247 | -2.662 | -0.434 | 0.5375 | 43.8 | 58.5 | 60.5 | 76.6 |
| 73  | 2195 | 2.215 | -2.668 | -0.432 | 0.5408 | 43.7 | 58.5 | 60.5 | 76.4 |
| 74  | 2195 | 2.304 | -2.708 | -0.437 | 0.5409 | 44.1 | 58.8 | 60.2 | 75.3 |
| 75  | 2194 | 2.376 | -2.700 | -0.437 | 0.5396 | 42.4 | 57.7 | 59.8 | 74.7 |
| 76  | 2195 | 2.507 | -2.694 | -0.434 | 0.5384 | 41.6 | 57.3 | 59.0 | 75.6 |
| 77  | 2195 | 2.432 | -2.687 | -0.436 | 0.5353 | 42.1 | 56.2 | 58.2 | 75.8 |
| 78  | 2195 | 2.492 | -2.685 | -0.434 | 0.5329 | 42.2 | 56.6 | 58.8 | 76.4 |
| 79  | 2195 | 2.503 | -2.686 | -0.429 | 0.5313 | 42.5 | 58.1 | 59.7 | 75.8 |
| 80  | 2194 | 2.714 | -2.693 | -0.429 | 0.5296 | 43.1 | 57.9 | 59.4 | 75.8 |
| 81  | 2195 | 2.633 | -2.725 | -0.428 | 0.5286 | 41.8 | 57.5 | 59.2 | 75.9 |
| 82  | 2192 | 2.750 | -2.335 | -0.426 | 0.5303 | 42.2 | 57.7 | 59.4 | 75.8 |
| 83  | 2191 | 2.777 | -2.362 | -0.423 | 0.5318 | 43.1 | 57.8 | 59.7 | 76.1 |
| 84  | 2193 | 2.856 | -2.209 | -0.425 | 0.5297 | 42.6 | 57.6 | 59.3 | 76.7 |
| 85  | 2189 | 2.860 | -2.061 | -0.424 | 0.5280 | 43.0 | 57.8 | 59.4 | 76.4 |
| 86  | 2191 | 2.842 | -2.143 | -0.421 | 0.5257 | 43.6 | 57.6 | 59.7 | 76.4 |
| 87  | 2181 | 2.829 | -2.359 | -0.423 | 0.5289 | 43.8 | 58.2 | 59.9 | 76.9 |
| 88  | 2188 | 2.891 | -2.127 | -0.422 | 0.5257 | 43.5 | 58.4 | 60.1 | 77.0 |
| 89  | 2193 | 2.829 | -2.157 | -0.430 | 0.5256 | 43.4 | 58.0 | 59.8 | 76.7 |
| 90  | 2191 | 2.590 | -2.258 | -0.429 | 0.5255 | 43.7 | 57.5 | 59.7 | 77.7 |
| 91  | 2193 | 2.392 | -2.278 | -0.425 | 0.5218 | 44.0 | 58.2 | 59.8 | 78.2 |
| 92  | 2194 | 2.274 | -2.223 | -0.424 | 0.5185 | 44.3 | 58.3 | 59.4 | 78.6 |
| 93  | 2192 | 2.114 | -2.433 | -0.424 | 0.5187 | 44.5 | 58.2 | 59.7 | 78.5 |
| 94  | 2188 | 2.039 | -2.210 | -0.426 | 0.5184 | 44.2 | 58.4 | 60.1 | 78.3 |
| 95  | 2195 | 2.136 | -2.369 | -0.427 | 0.5161 | 44.0 | 58.5 | 60.3 | 78.5 |
| 96  | 2194 | 2.046 | -2.449 | -0.427 | 0.5124 | 44.0 | 58.4 | 59.8 | 79.7 |
| 97  | 2192 | 1.826 | -2.786 | -0.431 | 0.5130 | 43.5 | 58.5 | 59.7 | 79.4 |
| 98  | 2194 | 1.887 | -2.812 | -0.432 | 0.5134 | 43.8 | 58.6 | 59.6 | 78.7 |
| 99  | 2195 | 2.257 | -2.781 | -0.434 | 0.5173 | 43.8 | 57.4 | 59.5 | 78.7 |
| 100 | 2194 | 2.296 | -2.813 | -0.436 | 0.5174 | 42.9 | 58.2 | 59.8 | 78.2 |
| 101 | 2195 | 2.446 | -2.794 | -0.440 | 0.5235 | 43.2 | 57.9 | 59.2 | 77.6 |
| 102 | 2195 | 2.454 | -2.925 | -0.443 | 0.5275 | 43.6 | 57.8 | 59.1 | 77.3 |
| 103 | 2195 | 2.457 | -2.954 | -0.447 | 0.5300 | 43.7 | 57.5 | 58.8 | 77.3 |
| 104 | 2195 | 2.396 | -2.931 | -0.451 | 0.5321 | 43.1 | 56.8 | 58.3 | 77.0 |
| 105 | 2195 | 2.481 | -2.822 | -0.449 | 0.5346 | 43.4 | 56.9 | 57.9 | 77.8 |
| 106 | 2195 | 2.435 | -2.790 | -0.452 | 0.5370 | 44.1 | 56.7 | 58.3 | 76.8 |
| 107 | 2195 | 2.455 | -2.701 | -0.454 | 0.5418 | 44.0 | 57.1 | 58.0 | 76.1 |
| 108 | 2195 | 2.423 | -2.648 | -0.456 | 0.5472 | 44.1 | 57.2 | 58.4 | 75.4 |
| 109 | 2195 | 2.618 | -2.604 | -0.456 | 0.5492 | 43.6 | 57.9 | 58.7 | 75.5 |
| 110 | 2195 | 2.785 | -2.678 | -0.453 | 0.5528 | 44.3 | 57.8 | 58.8 | 76.3 |

|     |      |       |        |        |        |      |      |      |      |
|-----|------|-------|--------|--------|--------|------|------|------|------|
| 111 | 2195 | 2.872 | -2.700 | -0.451 | 0.5545 | 43.0 | 58.9 | 60.0 | 76.9 |
| 112 | 2195 | 2.917 | -2.832 | -0.449 | 0.5537 | 43.7 | 58.6 | 59.9 | 77.7 |
| 113 | 2195 | 2.927 | -2.743 | -0.451 | 0.5551 | 43.3 | 58.7 | 59.4 | 77.8 |
| 114 | 2195 | 2.955 | -2.785 | -0.451 | 0.5554 | 43.5 | 57.9 | 59.4 | 77.5 |
| 115 | 2193 | 2.893 | -2.879 | -0.451 | 0.5540 | 43.3 | 58.1 | 59.1 | 77.3 |
| 116 | 2193 | 2.821 | -2.859 | -0.448 | 0.5524 | 42.0 | 57.4 | 58.9 | 77.9 |
| 117 | 2193 | 2.869 | -2.821 | -0.445 | 0.5532 | 42.5 | 57.7 | 59.2 | 78.0 |
| 118 | 2194 | 2.737 | -2.779 | -0.440 | 0.5492 | 42.5 | 58.9 | 60.6 | 78.5 |
| 119 | 2194 | 2.919 | -2.686 | -0.436 | 0.5471 | 43.6 | 59.8 | 60.6 | 78.8 |
| 120 | 2193 | 2.870 | -2.682 | -0.434 | 0.5472 | 43.0 | 60.0 | 60.9 | 78.9 |
| 121 | 2192 | 2.845 | -2.666 | -0.435 | 0.5466 | 42.9 | 60.2 | 61.2 | 78.8 |
| 122 | 2195 | 2.832 | -2.811 | -0.435 | 0.5459 | 42.4 | 59.9 | 60.9 | 78.5 |
| 123 | 2194 | 2.716 | -2.766 | -0.434 | 0.5448 | 41.6 | 60.0 | 61.4 | 78.2 |
| 124 | 2193 | 2.653 | -2.771 | -0.432 | 0.5451 | 42.9 | 59.4 | 60.4 | 78.4 |
| 125 | 2194 | 2.750 | -2.724 | -0.435 | 0.5437 | 43.3 | 59.8 | 61.2 | 77.9 |
| 126 | 2194 | 2.661 | -2.800 | -0.436 | 0.5400 | 43.5 | 60.7 | 61.6 | 78.3 |
| 127 | 2193 | 2.638 | -2.743 | -0.435 | 0.5424 | 44.8 | 59.9 | 61.2 | 79.1 |
| 128 | 2195 | 2.643 | -2.758 | -0.432 | 0.5439 | 44.6 | 60.9 | 62.3 | 78.7 |
| 129 | 2193 | 2.663 | -2.748 | -0.431 | 0.5414 | 45.2 | 60.1 | 61.2 | 79.2 |
| 130 | 2193 | 2.574 | -2.726 | -0.429 | 0.5408 | 45.0 | 60.4 | 61.5 | 79.2 |
| 131 | 2193 | 2.517 | -2.745 | -0.434 | 0.5411 | 44.3 | 59.9 | 61.1 | 78.8 |
| 132 | 2194 | 2.446 | -2.733 | -0.438 | 0.5385 | 43.8 | 58.6 | 59.1 | 79.4 |
| 133 | 2194 | 2.162 | -2.614 | -0.443 | 0.5342 | 43.6 | 57.5 | 58.3 | 78.2 |
| 134 | 2195 | 2.095 | -2.534 | -0.445 | 0.5367 | 44.0 | 58.0 | 58.9 | 77.5 |
| 135 | 2193 | 2.199 | -2.490 | -0.449 | 0.5364 | 44.6 | 57.8 | 58.6 | 76.4 |
| 136 | 2193 | 2.161 | -2.584 | -0.452 | 0.5335 | 43.3 | 57.5 | 58.6 | 76.4 |
| 137 | 2193 | 2.136 | -2.626 | -0.452 | 0.5303 | 43.1 | 57.5 | 58.4 | 76.2 |
| 138 | 2192 | 2.158 | -2.633 | -0.456 | 0.5240 | 43.7 | 57.1 | 57.9 | 76.2 |
| 139 | 2193 | 2.065 | -2.614 | -0.461 | 0.5178 | 42.8 | 56.6 | 58.0 | 76.1 |
| 140 | 2194 | 1.976 | -2.491 | -0.461 | 0.5164 | 42.3 | 56.3 | 57.2 | 75.7 |
| 141 | 2193 | 1.883 | -2.303 | -0.461 | 0.5109 | 42.6 | 56.6 | 57.6 | 76.1 |
| 142 | 2193 | 5.450 | -2.225 | -0.460 | 0.5214 | 42.0 | 56.8 | 57.2 | 76.1 |
| 143 | 2191 | 1.848 | -2.173 | -0.464 | 0.5054 | 41.9 | 56.8 | 57.9 | 76.4 |
| 144 | 2193 | 1.698 | -2.176 | -0.467 | 0.5050 | 41.8 | 56.9 | 58.1 | 75.9 |
| 145 | 2193 | 1.578 | -2.386 | -0.468 | 0.5114 | 41.7 | 56.7 | 58.7 | 76.1 |
| 146 | 2192 | 1.552 | -2.288 | -0.470 | 0.5115 | 41.1 | 56.5 | 58.2 | 76.2 |
| 147 | 2189 | 1.137 | -2.231 | -0.469 | 0.5127 | 40.1 | 56.7 | 58.0 | 75.8 |
| 148 | 2188 | 1.050 | -2.319 | -0.466 | 0.5203 | 40.4 | 56.9 | 58.5 | 75.8 |
| 149 | 2188 | 1.005 | -2.431 | -0.465 | 0.5206 | 40.1 | 55.9 | 58.1 | 76.6 |
| 150 | 2187 | 1.146 | -2.273 | -0.463 | 0.5198 | 39.4 | 56.9 | 58.2 | 76.6 |
| 151 | 2189 | 1.285 | -2.302 | -0.465 | 0.5147 | 40.0 | 56.6 | 58.0 | 77.4 |
| 152 | 2179 | 1.393 | -2.237 | -0.465 | 0.5109 | 40.2 | 56.3 | 57.3 | 77.3 |
| 153 | 2181 | 1.453 | -2.258 | -0.456 | 0.5059 | 40.6 | 56.6 | 57.8 | 77.8 |
| 154 | 2186 | 1.470 | -2.275 | -0.455 | 0.5054 | 41.3 | 58.0 | 59.1 | 77.7 |
| 155 | 2179 | 1.406 | -2.886 | -0.452 | 0.5148 | 40.4 | 57.4 | 58.3 | 77.5 |
| 156 | 2161 | 1.091 | -3.231 | -0.456 | 0.5201 | 40.8 | 57.0 | 58.0 | 77.7 |
| 157 | 2182 | 1.138 | -3.137 | -0.456 | 0.5270 | 41.1 | 57.9 | 59.6 | 77.5 |
| 158 | 2176 | 1.166 | -3.131 | -0.455 | 0.5380 | 40.9 | 57.8 | 58.7 | 77.5 |
| 159 | 2181 | 1.207 | -2.975 | -0.458 | 0.5397 | 41.0 | 57.5 | 58.3 | 77.5 |
| 160 | 2183 | 1.333 | -2.931 | -0.453 | 0.5404 | 40.9 | 57.3 | 58.0 | 78.1 |
| 161 | 2182 | 1.236 | -3.084 | -0.450 | 0.5448 | 41.2 | 57.1 | 58.0 | 78.1 |
| 162 | 2182 | 1.137 | -2.995 | -0.446 | 0.5497 | 40.3 | 57.4 | 58.5 | 77.8 |
| 163 | 2182 | 1.156 | -2.938 | -0.442 | 0.5513 | 40.4 | 57.1 | 58.7 | 77.9 |
| 164 | 2181 | 1.102 | -2.946 | -0.442 | 0.5536 | 39.9 | 57.3 | 58.6 | 78.6 |
| 165 | 2180 | 1.241 | -2.927 | -0.443 | 0.5529 | 39.4 | 57.0 | 57.9 | 78.4 |
| 166 | 2181 | 1.312 | -3.057 | -0.442 | 0.5544 | 39.1 | 56.3 | 57.6 | 78.5 |
| 167 | 2180 | 1.301 | -2.979 | -0.442 | 0.5555 | 39.1 | 55.8 | 57.4 | 78.0 |
| 168 | 2180 | 1.359 | -2.961 | -0.438 | 0.5506 | 39.4 | 56.7 | 58.2 | 78.3 |
| 169 | 2179 | 1.367 | -2.917 | -0.442 | 0.5460 | 39.0 | 57.1 | 58.9 | 78.4 |
| 170 | 2180 | 1.449 | -2.918 | -0.444 | 0.5389 | 39.9 | 57.3 | 59.1 | 78.2 |
| 171 | 2180 | 1.580 | -3.101 | -0.447 | 0.5363 | 40.3 | 57.2 | 58.7 | 77.6 |
| 172 | 2180 | 1.532 | -3.136 | -0.446 | 0.5357 | 41.3 | 56.6 | 58.0 | 78.3 |
| 173 | 2179 | 1.287 | -3.129 | -0.448 | 0.5358 | 41.6 | 56.8 | 58.0 | 77.7 |
| 174 | 2179 | 1.321 | -3.099 | -0.452 | 0.5333 | 41.9 | 56.3 | 57.9 | 78.1 |
| 175 | 2177 | 1.169 | -3.025 | -0.454 | 0.5215 | 41.6 | 57.0 | 58.6 | 78.0 |

|     |      |       |        |        |        |      |      |      |      |
|-----|------|-------|--------|--------|--------|------|------|------|------|
| 176 | 2175 | 1.113 | -2.895 | -0.453 | 0.5209 | 42.2 | 57.3 | 58.0 | 77.8 |
| 177 | 2176 | 1.193 | -2.883 | -0.455 | 0.5243 | 42.6 | 56.8 | 58.5 | 77.6 |
| 178 | 2177 | 1.281 | -2.799 | -0.458 | 0.5275 | 41.9 | 57.5 | 58.8 | 77.2 |
| 179 | 2176 | 0.817 | -2.743 | -0.458 | 0.5268 | 42.0 | 57.8 | 58.8 | 77.3 |
| 180 | 2176 | 0.904 | -2.700 | -0.458 | 0.5253 | 40.8 | 57.4 | 58.4 | 77.4 |
| 181 | 2175 | 1.053 | -2.695 | -0.456 | 0.5251 | 41.2 | 57.5 | 58.7 | 77.1 |
| 182 | 2174 | 1.054 | -2.915 | -0.455 | 0.5260 | 40.8 | 57.4 | 58.4 | 76.5 |
| 183 | 2175 | 1.071 | -3.089 | -0.455 | 0.5211 | 41.5 | 56.7 | 58.1 | 77.1 |
| 184 | 2175 | 1.218 | -2.936 | -0.453 | 0.5199 | 41.1 | 57.1 | 58.5 | 77.3 |
| 185 | 2174 | 1.279 | -2.931 | -0.451 | 0.5170 | 40.0 | 57.5 | 58.8 | 78.5 |
| 186 | 2174 | 0.967 | -2.945 | -0.449 | 0.5133 | 40.5 | 57.2 | 58.8 | 77.8 |
| 187 | 2174 | 1.005 | -2.802 | -0.442 | 0.5145 | 40.7 | 57.3 | 58.1 | 77.9 |
| 188 | 2172 | 1.077 | -2.886 | -0.437 | 0.5144 | 41.0 | 58.6 | 59.8 | 78.2 |
| 189 | 2176 | 1.256 | -2.709 | -0.431 | 0.5180 | 41.6 | 58.7 | 59.2 | 77.8 |
| 190 | 2174 | 1.225 | -2.399 | -0.429 | 0.5242 | 42.2 | 58.6 | 59.4 | 78.0 |
| 191 | 2175 | 1.227 | -2.387 | -0.430 | 0.5278 | 42.4 | 58.8 | 59.6 | 77.0 |
| 192 | 2174 | 1.171 | -2.111 | -0.427 | 0.5313 | 41.5 | 58.1 | 59.0 | 76.5 |
| 193 | 2174 | 1.009 | -2.135 | -0.430 | 0.5359 | 41.4 | 58.1 | 58.7 | 77.1 |
| 194 | 2174 | 1.104 | -2.262 | -0.424 | 0.5377 | 42.7 | 58.8 | 59.2 | 76.3 |
| 195 | 2174 | 1.039 | -2.138 | -0.425 | 0.5448 | 43.2 | 58.5 | 59.2 | 76.3 |
| 196 | 2172 | 1.040 | -2.435 | -0.433 | 0.5543 | 42.8 | 58.1 | 58.9 | 75.3 |
| 197 | 2174 | 1.075 | -2.271 | -0.434 | 0.5528 | 42.2 | 57.9 | 58.4 | 74.6 |
| 198 | 2174 | 1.063 | -2.253 | -0.432 | 0.5523 | 42.1 | 57.9 | 58.6 | 75.0 |
| 199 | 2174 | 1.080 | -2.244 | -0.431 | 0.5543 | 42.4 | 58.6 | 59.2 | 75.4 |
| 200 | 2173 | 1.044 | -2.253 | -0.435 | 0.5614 | 42.8 | 58.7 | 59.0 | 75.3 |
| 201 | 2172 | 1.101 | -2.759 | -0.436 | 0.5606 | 41.4 | 57.6 | 58.9 | 74.8 |
| 202 | 2171 | 1.173 | -2.505 | -0.433 | 0.5578 | 40.7 | 57.0 | 57.8 | 74.9 |
| 203 | 2170 | 1.190 | -2.426 | -0.428 | 0.5600 | 40.6 | 57.4 | 58.6 | 75.6 |
| 204 | 2172 | 1.198 | -2.338 | -0.424 | 0.5614 | 39.5 | 58.0 | 58.9 | 75.3 |
| 205 | 2171 | 1.287 | -2.308 | -0.421 | 0.5617 | 42.0 | 57.4 | 58.5 | 74.5 |
| 206 | 2173 | 1.244 | -2.291 | -0.423 | 0.5580 | 41.4 | 57.8 | 58.5 | 74.7 |
| 207 | 2171 | 1.249 | -2.261 | -0.424 | 0.5624 | 39.7 | 56.2 | 57.3 | 74.7 |
| 208 | 2171 | 1.225 | -2.688 | -0.423 | 0.5667 | 39.4 | 55.6 | 57.0 | 75.8 |
| 209 | 2173 | 1.218 | -2.615 | -0.415 | 0.5646 | 38.8 | 56.5 | 58.0 | 75.7 |
| 210 | 2167 | 1.370 | -2.531 | -0.411 | 0.5628 | 40.1 | 56.7 | 58.0 | 77.0 |
| 211 | 2165 | 1.402 | -2.454 | -0.416 | 0.5615 | 39.5 | 58.0 | 59.0 | 76.8 |
| 212 | 2167 | 1.276 | -2.600 | -0.418 | 0.5543 | 40.4 | 58.2 | 58.9 | 77.2 |
| 213 | 2167 | 1.378 | -2.638 | -0.416 | 0.5516 | 39.4 | 58.7 | 59.4 | 77.1 |
| 214 | 2161 | 1.411 | -2.803 | -0.424 | 0.5448 | 40.1 | 58.4 | 59.7 | 77.1 |
| 215 | 2162 | 1.392 | -3.051 | -0.431 | 0.5448 | 39.8 | 58.3 | 59.7 | 77.5 |
| 216 | 2160 | 1.105 | -3.088 | -0.446 | 0.5416 | 39.2 | 58.0 | 59.2 | 76.5 |
| 217 | 2157 | 0.999 | -3.034 | -0.448 | 0.5371 | 39.3 | 57.8 | 58.8 | 76.4 |
| 218 | 2156 | 1.043 | -2.928 | -0.460 | 0.5403 | 39.1 | 57.4 | 58.9 | 75.5 |
| 219 | 2155 | 1.075 | -2.974 | -0.469 | 0.5387 | 37.9 | 55.8 | 57.4 | 75.4 |
| 220 | 2157 | 1.032 | -3.157 | -0.465 | 0.5408 | 38.5 | 55.1 | 56.2 | 75.6 |
| 221 | 2155 | 1.127 | -3.106 | -0.467 | 0.5394 | 37.6 | 55.3 | 56.3 | 75.7 |
| 222 | 2152 | 1.081 | -3.101 | -0.467 | 0.5318 | 37.9 | 56.2 | 57.2 | 76.3 |
| 223 | 2146 | 1.022 | -3.113 | -0.467 | 0.5252 | 36.8 | 56.6 | 57.6 | 77.0 |
| 224 | 2139 | 0.890 | -3.128 | -0.465 | 0.5225 | 37.0 | 56.4 | 57.9 | 76.9 |
| 225 | 2134 | 0.871 | -3.946 | -0.472 | 0.5263 | 37.1 | 55.4 | 56.7 | 76.1 |
| 226 | 2118 | 0.903 | -4.006 | -0.472 | 0.5195 | 36.7 | 54.7 | 56.2 | 76.8 |
| 227 | 2108 | 0.843 | -3.997 | -0.467 | 0.5234 | 37.4 | 55.0 | 56.9 | 76.2 |
| 228 | 2090 | 1.031 | -4.093 | -0.467 | 0.5339 | 37.6 | 54.4 | 56.2 | 75.9 |
| 229 | 2061 | 1.192 | -4.505 | -0.470 | 0.5537 | 36.2 | 54.2 | 55.7 | 75.5 |
| 230 | 2036 | 1.301 | -4.401 | -0.475 | 0.5450 | 35.1 | 52.8 | 54.1 | 75.2 |
| 231 | 1999 | 1.197 | -4.753 | -0.488 | 0.5587 | 34.7 | 52.5 | 53.8 | 72.6 |
| 232 | 1932 | 1.208 | -4.788 | -0.482 | 0.5496 | 34.1 | 51.0 | 51.6 | 73.3 |
| 233 | 1831 | 1.259 | -4.935 | -0.484 | 0.5615 | 32.0 | 50.6 | 51.8 | 72.3 |
| 234 | 1712 | 1.187 | -5.169 | -0.487 | 0.5708 | 31.8 | 49.0 | 50.5 | 72.5 |
| 235 | 1561 | 1.233 | -4.749 | -0.473 | 0.5694 | 32.3 | 48.7 | 49.6 | 71.2 |
| 236 | 1389 | 1.412 | -4.572 | -0.464 | 0.5638 | 32.4 | 48.7 | 49.5 | 72.4 |
| 237 | 1169 | 1.593 | -3.587 | -0.461 | 0.5731 | 31.7 | 48.3 | 49.0 | 71.1 |
| 238 | 970  | 1.206 | -2.077 | -0.464 | 0.5450 | 28.2 | 49.1 | 49.8 | 73.3 |
| 239 | 773  | 1.389 | -2.409 | -0.474 | 0.5616 | 27.8 | 47.2 | 48.3 | 71.3 |
| 240 | 574  | 1.323 | -2.265 | -0.504 | 0.5610 | 27.2 | 44.3 | 45.1 | 69.9 |

Classification report 1 of 3

IHO statistics a/b are : 0.250 0.008

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 1     | 531   | 238    | 44.82  | 293    | 55.18  |
| 2     | 695   | 306    | 44.03  | 389    | 55.97  |
| 3     | 879   | 391    | 44.48  | 488    | 55.52  |
| 4     | 1107  | 476    | 43.00  | 631    | 57.00  |
| 5     | 1275  | 544    | 42.67  | 731    | 57.33  |
| 6     | 1450  | 626    | 43.17  | 824    | 56.83  |
| 7     | 1624  | 678    | 41.75  | 946    | 58.25  |
| 8     | 1763  | 702    | 39.82  | 1061   | 60.18  |
| 9     | 1878  | 759    | 40.42  | 1119   | 59.58  |
| 10    | 1970  | 784    | 39.80  | 1186   | 60.20  |
| 11    | 2041  | 821    | 40.23  | 1220   | 59.77  |
| 12    | 2078  | 838    | 40.33  | 1240   | 59.67  |
| 13    | 2127  | 851    | 40.01  | 1276   | 59.99  |
| 14    | 2152  | 903    | 41.96  | 1249   | 58.04  |
| 15    | 2154  | 902    | 41.88  | 1252   | 58.12  |
| 16    | 2164  | 900    | 41.59  | 1264   | 58.41  |
| 17    | 2171  | 893    | 41.13  | 1278   | 58.87  |
| 18    | 2173  | 908    | 41.79  | 1265   | 58.21  |
| 19    | 2176  | 920    | 42.28  | 1256   | 57.72  |
| 20    | 2171  | 914    | 42.10  | 1257   | 57.90  |
| 21    | 2173  | 902    | 41.51  | 1271   | 58.49  |
| 22    | 2169  | 894    | 41.22  | 1275   | 58.78  |
| 23    | 2175  | 895    | 41.15  | 1280   | 58.85  |
| 24    | 2179  | 877    | 40.25  | 1302   | 59.75  |
| 25    | 2179  | 877    | 40.25  | 1302   | 59.75  |
| 26    | 2185  | 895    | 40.96  | 1290   | 59.04  |
| 27    | 2185  | 892    | 40.82  | 1293   | 59.18  |
| 28    | 2187  | 897    | 41.02  | 1290   | 58.98  |
| 29    | 2185  | 904    | 41.37  | 1281   | 58.63  |
| 30    | 2185  | 897    | 41.05  | 1288   | 58.95  |
| 31    | 2186  | 900    | 41.17  | 1286   | 58.83  |
| 32    | 2186  | 882    | 40.35  | 1304   | 59.65  |
| 33    | 2188  | 915    | 41.82  | 1273   | 58.18  |
| 34    | 2189  | 915    | 41.80  | 1274   | 58.20  |
| 35    | 2191  | 904    | 41.26  | 1287   | 58.74  |
| 36    | 2191  | 902    | 41.17  | 1289   | 58.83  |
| 37    | 2190  | 895    | 40.87  | 1295   | 59.13  |
| 38    | 2189  | 883    | 40.34  | 1306   | 59.66  |
| 39    | 2193  | 901    | 41.09  | 1292   | 58.91  |
| 40    | 2191  | 912    | 41.62  | 1279   | 58.38  |
| 41    | 2188  | 908    | 41.50  | 1280   | 58.50  |
| 42    | 2191  | 919    | 41.94  | 1272   | 58.06  |
| 43    | 2192  | 910    | 41.51  | 1282   | 58.49  |
| 44    | 2192  | 929    | 42.38  | 1263   | 57.62  |
| 45    | 2191  | 944    | 43.09  | 1247   | 56.91  |
| 46    | 2194  | 954    | 43.48  | 1240   | 56.52  |
| 47    | 2192  | 949    | 43.29  | 1243   | 56.71  |
| 48    | 2192  | 951    | 43.39  | 1241   | 56.61  |
| 49    | 2192  | 948    | 43.25  | 1244   | 56.75  |
| 50    | 2194  | 970    | 44.21  | 1224   | 55.79  |
| 51    | 2194  | 976    | 44.48  | 1218   | 55.52  |
| 52    | 2193  | 976    | 44.51  | 1217   | 55.49  |
| 53    | 2194  | 1004   | 45.76  | 1190   | 54.24  |
| 54    | 2194  | 994    | 45.31  | 1200   | 54.69  |
| 55    | 2194  | 999    | 45.53  | 1195   | 54.47  |
| 56    | 2194  | 989    | 45.08  | 1205   | 54.92  |
| 57    | 2194  | 993    | 45.26  | 1201   | 54.74  |
| 58    | 2194  | 1000   | 45.58  | 1194   | 54.42  |
| 59    | 2194  | 994    | 45.31  | 1200   | 54.69  |

|     |      |      |       |      |       |
|-----|------|------|-------|------|-------|
| 60  | 2194 | 1010 | 46.03 | 1184 | 53.97 |
| 61  | 2195 | 1019 | 46.42 | 1176 | 53.58 |
| 62  | 2195 | 1002 | 45.65 | 1193 | 54.35 |
| 63  | 2195 | 1008 | 45.92 | 1187 | 54.08 |
| 64  | 2195 | 995  | 45.33 | 1200 | 54.67 |
| 65  | 2195 | 986  | 44.92 | 1209 | 55.08 |
| 66  | 2195 | 968  | 44.10 | 1227 | 55.90 |
| 67  | 2195 | 957  | 43.60 | 1238 | 56.40 |
| 68  | 2195 | 945  | 43.05 | 1250 | 56.95 |
| 69  | 2195 | 938  | 42.73 | 1257 | 57.27 |
| 70  | 2194 | 953  | 43.44 | 1241 | 56.56 |
| 71  | 2194 | 956  | 43.57 | 1238 | 56.43 |
| 72  | 2195 | 962  | 43.83 | 1233 | 56.17 |
| 73  | 2195 | 957  | 43.60 | 1238 | 56.40 |
| 74  | 2195 | 947  | 43.14 | 1248 | 56.86 |
| 75  | 2194 | 971  | 44.26 | 1223 | 55.74 |
| 76  | 2195 | 993  | 45.24 | 1202 | 54.76 |
| 77  | 2195 | 1013 | 46.15 | 1182 | 53.85 |
| 78  | 2195 | 998  | 45.47 | 1197 | 54.53 |
| 79  | 2195 | 972  | 44.28 | 1223 | 55.72 |
| 80  | 2194 | 987  | 44.99 | 1207 | 55.01 |
| 81  | 2195 | 978  | 44.56 | 1217 | 55.44 |
| 82  | 2192 | 980  | 44.71 | 1212 | 55.29 |
| 83  | 2191 | 980  | 44.73 | 1211 | 55.27 |
| 84  | 2193 | 994  | 45.33 | 1199 | 54.67 |
| 85  | 2189 | 985  | 45.00 | 1204 | 55.00 |
| 86  | 2191 | 987  | 45.05 | 1204 | 54.95 |
| 87  | 2181 | 959  | 43.97 | 1222 | 56.03 |
| 88  | 2188 | 968  | 44.24 | 1220 | 55.76 |
| 89  | 2193 | 973  | 44.37 | 1220 | 55.63 |
| 90  | 2191 | 982  | 44.82 | 1209 | 55.18 |
| 91  | 2193 | 970  | 44.23 | 1223 | 55.77 |
| 92  | 2194 | 970  | 44.21 | 1224 | 55.79 |
| 93  | 2192 | 974  | 44.43 | 1218 | 55.57 |
| 94  | 2188 | 968  | 44.24 | 1220 | 55.76 |
| 95  | 2195 | 960  | 43.74 | 1235 | 56.26 |
| 96  | 2194 | 964  | 43.94 | 1230 | 56.06 |
| 97  | 2192 | 964  | 43.98 | 1228 | 56.02 |
| 98  | 2194 | 971  | 44.26 | 1223 | 55.74 |
| 99  | 2195 | 992  | 45.19 | 1203 | 54.81 |
| 100 | 2194 | 980  | 44.67 | 1214 | 55.33 |
| 101 | 2195 | 977  | 44.51 | 1218 | 55.49 |
| 102 | 2195 | 985  | 44.87 | 1210 | 55.13 |
| 103 | 2195 | 986  | 44.92 | 1209 | 55.08 |
| 104 | 2195 | 999  | 45.51 | 1196 | 54.49 |
| 105 | 2195 | 999  | 45.51 | 1196 | 54.49 |
| 106 | 2195 | 995  | 45.33 | 1200 | 54.67 |
| 107 | 2195 | 985  | 44.87 | 1210 | 55.13 |
| 108 | 2195 | 988  | 45.01 | 1207 | 54.99 |
| 109 | 2195 | 972  | 44.28 | 1223 | 55.72 |
| 110 | 2195 | 969  | 44.15 | 1226 | 55.85 |
| 111 | 2195 | 960  | 43.74 | 1235 | 56.26 |
| 112 | 2195 | 954  | 43.46 | 1241 | 56.54 |
| 113 | 2195 | 965  | 43.96 | 1230 | 56.04 |
| 114 | 2195 | 978  | 44.56 | 1217 | 55.44 |
| 115 | 2193 | 975  | 44.46 | 1218 | 55.54 |
| 116 | 2193 | 983  | 44.82 | 1210 | 55.18 |
| 117 | 2193 | 991  | 45.19 | 1202 | 54.81 |
| 118 | 2194 | 962  | 43.85 | 1232 | 56.15 |
| 119 | 2194 | 937  | 42.71 | 1257 | 57.29 |
| 120 | 2193 | 933  | 42.54 | 1260 | 57.46 |
| 121 | 2192 | 937  | 42.75 | 1255 | 57.25 |
| 122 | 2195 | 951  | 43.33 | 1244 | 56.67 |
| 123 | 2194 | 954  | 43.48 | 1240 | 56.52 |
| 124 | 2193 | 952  | 43.41 | 1241 | 56.59 |

|     |      |      |       |      |       |
|-----|------|------|-------|------|-------|
| 125 | 2194 | 952  | 43.39 | 1242 | 56.61 |
| 126 | 2194 | 935  | 42.62 | 1259 | 57.38 |
| 127 | 2193 | 941  | 42.91 | 1252 | 57.09 |
| 128 | 2195 | 927  | 42.23 | 1268 | 57.77 |
| 129 | 2193 | 940  | 42.86 | 1253 | 57.14 |
| 130 | 2193 | 939  | 42.82 | 1254 | 57.18 |
| 131 | 2193 | 945  | 43.09 | 1248 | 56.91 |
| 132 | 2194 | 976  | 44.48 | 1218 | 55.52 |
| 133 | 2194 | 990  | 45.12 | 1204 | 54.88 |
| 134 | 2195 | 980  | 44.65 | 1215 | 55.35 |
| 135 | 2193 | 982  | 44.78 | 1211 | 55.22 |
| 136 | 2193 | 987  | 45.01 | 1206 | 54.99 |
| 137 | 2193 | 1005 | 45.83 | 1188 | 54.17 |
| 138 | 2192 | 1002 | 45.71 | 1190 | 54.29 |
| 139 | 2193 | 1016 | 46.33 | 1177 | 53.67 |
| 140 | 2194 | 1019 | 46.44 | 1175 | 53.56 |
| 141 | 2193 | 1019 | 46.47 | 1174 | 53.53 |
| 142 | 2193 | 1013 | 46.19 | 1180 | 53.81 |
| 143 | 2191 | 1011 | 46.14 | 1180 | 53.86 |
| 144 | 2193 | 995  | 45.37 | 1198 | 54.63 |
| 145 | 2193 | 1005 | 45.83 | 1188 | 54.17 |
| 146 | 2192 | 1019 | 46.49 | 1173 | 53.51 |
| 147 | 2189 | 1011 | 46.19 | 1178 | 53.81 |
| 148 | 2188 | 1009 | 46.12 | 1179 | 53.88 |
| 149 | 2188 | 1019 | 46.57 | 1169 | 53.43 |
| 150 | 2187 | 1009 | 46.14 | 1178 | 53.86 |
| 151 | 2189 | 1021 | 46.64 | 1168 | 53.36 |
| 152 | 2179 | 1012 | 46.44 | 1167 | 53.56 |
| 153 | 2181 | 1001 | 45.90 | 1180 | 54.10 |
| 154 | 2186 | 996  | 45.56 | 1190 | 54.44 |
| 155 | 2179 | 979  | 44.93 | 1200 | 55.07 |
| 156 | 2161 | 997  | 46.14 | 1164 | 53.86 |
| 157 | 2182 | 974  | 44.64 | 1208 | 55.36 |
| 158 | 2176 | 965  | 44.35 | 1211 | 55.65 |
| 159 | 2181 | 989  | 45.35 | 1192 | 54.65 |
| 160 | 2183 | 999  | 45.76 | 1184 | 54.24 |
| 161 | 2182 | 1010 | 46.29 | 1172 | 53.71 |
| 162 | 2182 | 1005 | 46.06 | 1177 | 53.94 |
| 163 | 2182 | 1000 | 45.83 | 1182 | 54.17 |
| 164 | 2181 | 1000 | 45.85 | 1181 | 54.15 |
| 165 | 2180 | 1011 | 46.38 | 1169 | 53.62 |
| 166 | 2181 | 1023 | 46.91 | 1158 | 53.09 |
| 167 | 2180 | 1033 | 47.39 | 1147 | 52.61 |
| 168 | 2180 | 1018 | 46.70 | 1162 | 53.30 |
| 169 | 2179 | 1004 | 46.08 | 1175 | 53.92 |
| 170 | 2180 | 1002 | 45.96 | 1178 | 54.04 |
| 171 | 2180 | 1005 | 46.10 | 1175 | 53.90 |
| 172 | 2180 | 1012 | 46.42 | 1168 | 53.58 |
| 173 | 2179 | 1002 | 45.98 | 1177 | 54.02 |
| 174 | 2179 | 1013 | 46.49 | 1166 | 53.51 |
| 175 | 2177 | 990  | 45.48 | 1187 | 54.52 |
| 176 | 2175 | 994  | 45.70 | 1181 | 54.30 |
| 177 | 2176 | 990  | 45.50 | 1186 | 54.50 |
| 178 | 2177 | 985  | 45.25 | 1192 | 54.75 |
| 179 | 2176 | 983  | 45.17 | 1193 | 54.83 |
| 180 | 2176 | 986  | 45.31 | 1190 | 54.69 |
| 181 | 2175 | 997  | 45.84 | 1178 | 54.16 |
| 182 | 2174 | 990  | 45.54 | 1184 | 54.46 |
| 183 | 2175 | 1009 | 46.39 | 1166 | 53.61 |
| 184 | 2175 | 994  | 45.70 | 1181 | 54.30 |
| 185 | 2174 | 988  | 45.45 | 1186 | 54.55 |
| 186 | 2174 | 995  | 45.77 | 1179 | 54.23 |
| 187 | 2174 | 985  | 45.31 | 1189 | 54.69 |
| 188 | 2172 | 968  | 44.57 | 1204 | 55.43 |
| 189 | 2176 | 967  | 44.44 | 1209 | 55.56 |

|     |      |      |       |      |       |
|-----|------|------|-------|------|-------|
| 190 | 2174 | 961  | 44.20 | 1213 | 55.80 |
| 191 | 2175 | 961  | 44.18 | 1214 | 55.82 |
| 192 | 2174 | 980  | 45.08 | 1194 | 54.92 |
| 193 | 2174 | 971  | 44.66 | 1203 | 55.34 |
| 194 | 2174 | 955  | 43.93 | 1219 | 56.07 |
| 195 | 2174 | 953  | 43.84 | 1221 | 56.16 |
| 196 | 2172 | 955  | 43.97 | 1217 | 56.03 |
| 197 | 2174 | 974  | 44.80 | 1200 | 55.20 |
| 198 | 2174 | 970  | 44.62 | 1204 | 55.38 |
| 199 | 2174 | 954  | 43.88 | 1220 | 56.12 |
| 200 | 2173 | 958  | 44.09 | 1215 | 55.91 |
| 201 | 2172 | 981  | 45.17 | 1191 | 54.83 |
| 202 | 2171 | 983  | 45.28 | 1188 | 54.72 |
| 203 | 2170 | 981  | 45.21 | 1189 | 54.79 |
| 204 | 2172 | 974  | 44.84 | 1198 | 55.16 |
| 205 | 2171 | 975  | 44.91 | 1196 | 55.09 |
| 206 | 2173 | 975  | 44.87 | 1198 | 55.13 |
| 207 | 2171 | 1015 | 46.75 | 1156 | 53.25 |
| 208 | 2171 | 1025 | 47.21 | 1146 | 52.79 |
| 209 | 2173 | 1003 | 46.16 | 1170 | 53.84 |
| 210 | 2167 | 983  | 45.36 | 1184 | 54.64 |
| 211 | 2165 | 969  | 44.76 | 1196 | 55.24 |
| 212 | 2167 | 966  | 44.58 | 1201 | 55.42 |
| 213 | 2167 | 952  | 43.93 | 1215 | 56.07 |
| 214 | 2161 | 954  | 44.15 | 1207 | 55.85 |
| 215 | 2162 | 968  | 44.77 | 1194 | 55.23 |
| 216 | 2160 | 967  | 44.77 | 1193 | 55.23 |
| 217 | 2157 | 968  | 44.88 | 1189 | 55.12 |
| 218 | 2156 | 976  | 45.27 | 1180 | 54.73 |
| 219 | 2155 | 1015 | 47.10 | 1140 | 52.90 |
| 220 | 2157 | 1017 | 47.15 | 1140 | 52.85 |
| 221 | 2155 | 1019 | 47.29 | 1136 | 52.71 |
| 222 | 2152 | 1012 | 47.03 | 1140 | 52.97 |
| 223 | 2146 | 1004 | 46.78 | 1142 | 53.22 |
| 224 | 2139 | 990  | 46.28 | 1149 | 53.72 |
| 225 | 2134 | 1024 | 47.99 | 1110 | 52.01 |
| 226 | 2118 | 1028 | 48.54 | 1090 | 51.46 |
| 227 | 2108 | 993  | 47.11 | 1115 | 52.89 |
| 228 | 2090 | 1010 | 48.33 | 1080 | 51.67 |
| 229 | 2061 | 1009 | 48.96 | 1052 | 51.04 |
| 230 | 2036 | 1027 | 50.44 | 1009 | 49.56 |
| 231 | 1999 | 1018 | 50.93 | 981  | 49.07 |
| 232 | 1932 | 1016 | 52.59 | 916  | 47.41 |
| 233 | 1831 | 977  | 53.36 | 854  | 46.64 |
| 234 | 1712 | 924  | 53.97 | 788  | 46.03 |
| 235 | 1561 | 847  | 54.26 | 714  | 45.74 |
| 236 | 1389 | 757  | 54.50 | 632  | 45.50 |
| 237 | 1169 | 634  | 54.23 | 535  | 45.77 |
| 238 | 970  | 528  | 54.43 | 442  | 45.57 |
| 239 | 773  | 437  | 56.53 | 336  | 43.47 |
| 240 | 574  | 338  | 58.89 | 236  | 41.11 |

Classification report 2 of 3

IHO statistics a/b are : 0.500 0.013

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 1     | 531   | 105    | 19.77  | 426    | 80.23  |
| 2     | 695   | 140    | 20.14  | 555    | 79.86  |
| 3     | 879   | 192    | 21.84  | 687    | 78.16  |
| 4     | 1107  | 216    | 19.51  | 891    | 80.49  |
| 5     | 1275  | 241    | 18.90  | 1034   | 81.10  |
| 6     | 1450  | 256    | 17.66  | 1194   | 82.34  |
| 7     | 1624  | 314    | 19.33  | 1310   | 80.67  |
| 8     | 1763  | 329    | 18.66  | 1434   | 81.34  |
| 9     | 1878  | 329    | 17.52  | 1549   | 82.48  |
| 10    | 1970  | 348    | 17.66  | 1622   | 82.34  |
| 11    | 2041  | 368    | 18.03  | 1673   | 81.97  |
| 12    | 2078  | 378    | 18.19  | 1700   | 81.81  |
| 13    | 2127  | 395    | 18.57  | 1732   | 81.43  |
| 14    | 2152  | 406    | 18.87  | 1746   | 81.13  |
| 15    | 2154  | 399    | 18.52  | 1755   | 81.48  |
| 16    | 2164  | 413    | 19.09  | 1751   | 80.91  |
| 17    | 2171  | 423    | 19.48  | 1748   | 80.52  |
| 18    | 2173  | 434    | 19.97  | 1739   | 80.03  |
| 19    | 2176  | 426    | 19.58  | 1750   | 80.42  |
| 20    | 2171  | 419    | 19.30  | 1752   | 80.70  |
| 21    | 2173  | 437    | 20.11  | 1736   | 79.89  |
| 22    | 2169  | 430    | 19.82  | 1739   | 80.18  |
| 23    | 2175  | 412    | 18.94  | 1763   | 81.06  |
| 24    | 2179  | 419    | 19.23  | 1760   | 80.77  |
| 25    | 2179  | 422    | 19.37  | 1757   | 80.63  |
| 26    | 2185  | 434    | 19.86  | 1751   | 80.14  |
| 27    | 2185  | 436    | 19.95  | 1749   | 80.05  |
| 28    | 2187  | 419    | 19.16  | 1768   | 80.84  |
| 29    | 2185  | 434    | 19.86  | 1751   | 80.14  |
| 30    | 2185  | 425    | 19.45  | 1760   | 80.55  |
| 31    | 2186  | 417    | 19.08  | 1769   | 80.92  |
| 32    | 2186  | 423    | 19.35  | 1763   | 80.65  |
| 33    | 2188  | 429    | 19.61  | 1759   | 80.39  |
| 34    | 2189  | 435    | 19.87  | 1754   | 80.13  |
| 35    | 2191  | 452    | 20.63  | 1739   | 79.37  |
| 36    | 2191  | 428    | 19.53  | 1763   | 80.47  |
| 37    | 2190  | 448    | 20.46  | 1742   | 79.54  |
| 38    | 2189  | 452    | 20.65  | 1737   | 79.35  |
| 39    | 2193  | 429    | 19.56  | 1764   | 80.44  |
| 40    | 2191  | 459    | 20.95  | 1732   | 79.05  |
| 41    | 2188  | 449    | 20.52  | 1739   | 79.48  |
| 42    | 2191  | 476    | 21.73  | 1715   | 78.27  |
| 43    | 2192  | 479    | 21.85  | 1713   | 78.15  |
| 44    | 2192  | 489    | 22.31  | 1703   | 77.69  |
| 45    | 2191  | 493    | 22.50  | 1698   | 77.50  |
| 46    | 2194  | 495    | 22.56  | 1699   | 77.44  |
| 47    | 2192  | 498    | 22.72  | 1694   | 77.28  |
| 48    | 2192  | 511    | 23.31  | 1681   | 76.69  |
| 49    | 2192  | 518    | 23.63  | 1674   | 76.37  |
| 50    | 2194  | 535    | 24.38  | 1659   | 75.62  |
| 51    | 2194  | 536    | 24.43  | 1658   | 75.57  |
| 52    | 2193  | 538    | 24.53  | 1655   | 75.47  |
| 53    | 2194  | 556    | 25.34  | 1638   | 74.66  |
| 54    | 2194  | 554    | 25.25  | 1640   | 74.75  |
| 55    | 2194  | 558    | 25.43  | 1636   | 74.57  |
| 56    | 2194  | 571    | 26.03  | 1623   | 73.97  |
| 57    | 2194  | 556    | 25.34  | 1638   | 74.66  |
| 58    | 2194  | 531    | 24.20  | 1663   | 75.80  |
| 59    | 2194  | 511    | 23.29  | 1683   | 76.71  |

|     |      |     |       |      |       |
|-----|------|-----|-------|------|-------|
| 60  | 2194 | 499 | 22.74 | 1695 | 77.26 |
| 61  | 2195 | 502 | 22.87 | 1693 | 77.13 |
| 62  | 2195 | 488 | 22.23 | 1707 | 77.77 |
| 63  | 2195 | 479 | 21.82 | 1716 | 78.18 |
| 64  | 2195 | 471 | 21.46 | 1724 | 78.54 |
| 65  | 2195 | 479 | 21.82 | 1716 | 78.18 |
| 66  | 2195 | 477 | 21.73 | 1718 | 78.27 |
| 67  | 2195 | 478 | 21.78 | 1717 | 78.22 |
| 68  | 2195 | 480 | 21.87 | 1715 | 78.13 |
| 69  | 2195 | 483 | 22.00 | 1712 | 78.00 |
| 70  | 2194 | 504 | 22.97 | 1690 | 77.03 |
| 71  | 2194 | 518 | 23.61 | 1676 | 76.39 |
| 72  | 2195 | 515 | 23.46 | 1680 | 76.54 |
| 73  | 2195 | 525 | 23.92 | 1670 | 76.08 |
| 74  | 2195 | 545 | 24.83 | 1650 | 75.17 |
| 75  | 2194 | 549 | 25.02 | 1645 | 74.98 |
| 76  | 2195 | 534 | 24.33 | 1661 | 75.67 |
| 77  | 2195 | 530 | 24.15 | 1665 | 75.85 |
| 78  | 2195 | 519 | 23.64 | 1676 | 76.36 |
| 79  | 2195 | 535 | 24.37 | 1660 | 75.63 |
| 80  | 2194 | 525 | 23.93 | 1669 | 76.07 |
| 81  | 2195 | 525 | 23.92 | 1670 | 76.08 |
| 82  | 2192 | 527 | 24.04 | 1665 | 75.96 |
| 83  | 2191 | 530 | 24.19 | 1661 | 75.81 |
| 84  | 2193 | 515 | 23.48 | 1678 | 76.52 |
| 85  | 2189 | 518 | 23.66 | 1671 | 76.34 |
| 86  | 2191 | 512 | 23.37 | 1679 | 76.63 |
| 87  | 2181 | 505 | 23.15 | 1676 | 76.85 |
| 88  | 2188 | 507 | 23.17 | 1681 | 76.83 |
| 89  | 2193 | 515 | 23.48 | 1678 | 76.52 |
| 90  | 2191 | 489 | 22.32 | 1702 | 77.68 |
| 91  | 2193 | 476 | 21.71 | 1717 | 78.29 |
| 92  | 2194 | 465 | 21.19 | 1729 | 78.81 |
| 93  | 2192 | 468 | 21.35 | 1724 | 78.65 |
| 94  | 2188 | 481 | 21.98 | 1707 | 78.02 |
| 95  | 2195 | 474 | 21.59 | 1721 | 78.41 |
| 96  | 2194 | 456 | 20.78 | 1738 | 79.22 |
| 97  | 2192 | 454 | 20.71 | 1738 | 79.29 |
| 98  | 2194 | 460 | 20.97 | 1734 | 79.03 |
| 99  | 2195 | 472 | 21.50 | 1723 | 78.50 |
| 100 | 2194 | 473 | 21.56 | 1721 | 78.44 |
| 101 | 2195 | 485 | 22.10 | 1710 | 77.90 |
| 102 | 2195 | 490 | 22.32 | 1705 | 77.68 |
| 103 | 2195 | 494 | 22.51 | 1701 | 77.49 |
| 104 | 2195 | 493 | 22.46 | 1702 | 77.54 |
| 105 | 2195 | 496 | 22.60 | 1699 | 77.40 |
| 106 | 2195 | 506 | 23.05 | 1689 | 76.95 |
| 107 | 2195 | 525 | 23.92 | 1670 | 76.08 |
| 108 | 2195 | 535 | 24.37 | 1660 | 75.63 |
| 109 | 2195 | 537 | 24.46 | 1658 | 75.54 |
| 110 | 2195 | 514 | 23.42 | 1681 | 76.58 |
| 111 | 2195 | 514 | 23.42 | 1681 | 76.58 |
| 112 | 2195 | 487 | 22.19 | 1708 | 77.81 |
| 113 | 2195 | 488 | 22.23 | 1707 | 77.77 |
| 114 | 2195 | 490 | 22.32 | 1705 | 77.68 |
| 115 | 2193 | 497 | 22.66 | 1696 | 77.34 |
| 116 | 2193 | 484 | 22.07 | 1709 | 77.93 |
| 117 | 2193 | 483 | 22.02 | 1710 | 77.98 |
| 118 | 2194 | 470 | 21.42 | 1724 | 78.58 |
| 119 | 2194 | 464 | 21.15 | 1730 | 78.85 |
| 120 | 2193 | 471 | 21.48 | 1722 | 78.52 |
| 121 | 2192 | 473 | 21.58 | 1719 | 78.42 |
| 122 | 2195 | 476 | 21.69 | 1719 | 78.31 |
| 123 | 2194 | 484 | 22.06 | 1710 | 77.94 |
| 124 | 2193 | 485 | 22.12 | 1708 | 77.88 |

|     |      |     |       |      |       |
|-----|------|-----|-------|------|-------|
| 125 | 2194 | 487 | 22.20 | 1707 | 77.80 |
| 126 | 2194 | 475 | 21.65 | 1719 | 78.35 |
| 127 | 2193 | 466 | 21.25 | 1727 | 78.75 |
| 128 | 2195 | 473 | 21.55 | 1722 | 78.45 |
| 129 | 2193 | 459 | 20.93 | 1734 | 79.07 |
| 130 | 2193 | 459 | 20.93 | 1734 | 79.07 |
| 131 | 2193 | 473 | 21.57 | 1720 | 78.43 |
| 132 | 2194 | 459 | 20.92 | 1735 | 79.08 |
| 133 | 2194 | 472 | 21.51 | 1722 | 78.49 |
| 134 | 2195 | 498 | 22.69 | 1697 | 77.31 |
| 135 | 2193 | 520 | 23.71 | 1673 | 76.29 |
| 136 | 2193 | 521 | 23.76 | 1672 | 76.24 |
| 137 | 2193 | 523 | 23.85 | 1670 | 76.15 |
| 138 | 2192 | 514 | 23.45 | 1678 | 76.55 |
| 139 | 2193 | 525 | 23.94 | 1668 | 76.06 |
| 140 | 2194 | 528 | 24.07 | 1666 | 75.93 |
| 141 | 2193 | 533 | 24.30 | 1660 | 75.70 |
| 142 | 2193 | 522 | 23.80 | 1671 | 76.20 |
| 143 | 2191 | 514 | 23.46 | 1677 | 76.54 |
| 144 | 2193 | 519 | 23.67 | 1674 | 76.33 |
| 145 | 2193 | 523 | 23.85 | 1670 | 76.15 |
| 146 | 2192 | 521 | 23.77 | 1671 | 76.23 |
| 147 | 2189 | 532 | 24.30 | 1657 | 75.70 |
| 148 | 2188 | 528 | 24.13 | 1660 | 75.87 |
| 149 | 2188 | 517 | 23.63 | 1671 | 76.37 |
| 150 | 2187 | 506 | 23.14 | 1681 | 76.86 |
| 151 | 2189 | 510 | 23.30 | 1679 | 76.70 |
| 152 | 2179 | 493 | 22.63 | 1686 | 77.37 |
| 153 | 2181 | 490 | 22.47 | 1691 | 77.53 |
| 154 | 2186 | 493 | 22.55 | 1693 | 77.45 |
| 155 | 2179 | 490 | 22.49 | 1689 | 77.51 |
| 156 | 2161 | 477 | 22.07 | 1684 | 77.93 |
| 157 | 2182 | 489 | 22.41 | 1693 | 77.59 |
| 158 | 2176 | 491 | 22.56 | 1685 | 77.44 |
| 159 | 2181 | 495 | 22.70 | 1686 | 77.30 |
| 160 | 2183 | 481 | 22.03 | 1702 | 77.97 |
| 161 | 2182 | 477 | 21.86 | 1705 | 78.14 |
| 162 | 2182 | 474 | 21.72 | 1708 | 78.28 |
| 163 | 2182 | 472 | 21.63 | 1710 | 78.37 |
| 164 | 2181 | 459 | 21.05 | 1722 | 78.95 |
| 165 | 2180 | 466 | 21.38 | 1714 | 78.62 |
| 166 | 2181 | 466 | 21.37 | 1715 | 78.63 |
| 167 | 2180 | 481 | 22.06 | 1699 | 77.94 |
| 168 | 2180 | 480 | 22.02 | 1700 | 77.98 |
| 169 | 2179 | 471 | 21.62 | 1708 | 78.38 |
| 170 | 2180 | 473 | 21.70 | 1707 | 78.30 |
| 171 | 2180 | 482 | 22.11 | 1698 | 77.89 |
| 172 | 2180 | 479 | 21.97 | 1701 | 78.03 |
| 173 | 2179 | 485 | 22.26 | 1694 | 77.74 |
| 174 | 2179 | 478 | 21.94 | 1701 | 78.06 |
| 175 | 2177 | 476 | 21.86 | 1701 | 78.14 |
| 176 | 2175 | 485 | 22.30 | 1690 | 77.70 |
| 177 | 2176 | 491 | 22.56 | 1685 | 77.44 |
| 178 | 2177 | 505 | 23.20 | 1672 | 76.80 |
| 179 | 2176 | 497 | 22.84 | 1679 | 77.16 |
| 180 | 2176 | 494 | 22.70 | 1682 | 77.30 |
| 181 | 2175 | 492 | 22.62 | 1683 | 77.38 |
| 182 | 2174 | 506 | 23.28 | 1668 | 76.72 |
| 183 | 2175 | 493 | 22.67 | 1682 | 77.33 |
| 184 | 2175 | 496 | 22.80 | 1679 | 77.20 |
| 185 | 2174 | 465 | 21.39 | 1709 | 78.61 |
| 186 | 2174 | 479 | 22.03 | 1695 | 77.97 |
| 187 | 2174 | 489 | 22.49 | 1685 | 77.51 |
| 188 | 2172 | 473 | 21.78 | 1699 | 78.22 |
| 189 | 2176 | 485 | 22.29 | 1691 | 77.71 |

|     |      |     |       |      |       |
|-----|------|-----|-------|------|-------|
| 190 | 2174 | 480 | 22.08 | 1694 | 77.92 |
| 191 | 2175 | 488 | 22.44 | 1687 | 77.56 |
| 192 | 2174 | 503 | 23.14 | 1671 | 76.86 |
| 193 | 2174 | 490 | 22.54 | 1684 | 77.46 |
| 194 | 2174 | 510 | 23.46 | 1664 | 76.54 |
| 195 | 2174 | 513 | 23.60 | 1661 | 76.40 |
| 196 | 2172 | 524 | 24.13 | 1648 | 75.87 |
| 197 | 2174 | 546 | 25.11 | 1628 | 74.89 |
| 198 | 2174 | 536 | 24.66 | 1638 | 75.34 |
| 199 | 2174 | 533 | 24.52 | 1641 | 75.48 |
| 200 | 2173 | 525 | 24.16 | 1648 | 75.84 |
| 201 | 2172 | 540 | 24.86 | 1632 | 75.14 |
| 202 | 2171 | 542 | 24.97 | 1629 | 75.03 |
| 203 | 2170 | 530 | 24.42 | 1640 | 75.58 |
| 204 | 2172 | 530 | 24.40 | 1642 | 75.60 |
| 205 | 2171 | 550 | 25.33 | 1621 | 74.67 |
| 206 | 2173 | 552 | 25.40 | 1621 | 74.60 |
| 207 | 2171 | 545 | 25.10 | 1626 | 74.90 |
| 208 | 2171 | 524 | 24.14 | 1647 | 75.86 |
| 209 | 2173 | 508 | 23.38 | 1665 | 76.62 |
| 210 | 2167 | 494 | 22.80 | 1673 | 77.20 |
| 211 | 2165 | 504 | 23.28 | 1661 | 76.72 |
| 212 | 2167 | 481 | 22.20 | 1686 | 77.80 |
| 213 | 2167 | 488 | 22.52 | 1679 | 77.48 |
| 214 | 2161 | 482 | 22.30 | 1679 | 77.70 |
| 215 | 2162 | 478 | 22.11 | 1684 | 77.89 |
| 216 | 2160 | 496 | 22.96 | 1664 | 77.04 |
| 217 | 2157 | 499 | 23.13 | 1658 | 76.87 |
| 218 | 2156 | 521 | 24.17 | 1635 | 75.83 |
| 219 | 2155 | 525 | 24.36 | 1630 | 75.64 |
| 220 | 2157 | 520 | 24.11 | 1637 | 75.89 |
| 221 | 2155 | 520 | 24.13 | 1635 | 75.87 |
| 222 | 2152 | 503 | 23.37 | 1649 | 76.63 |
| 223 | 2146 | 492 | 22.93 | 1654 | 77.07 |
| 224 | 2139 | 490 | 22.91 | 1649 | 77.09 |
| 225 | 2134 | 507 | 23.76 | 1627 | 76.24 |
| 226 | 2118 | 496 | 23.42 | 1622 | 76.58 |
| 227 | 2108 | 495 | 23.48 | 1613 | 76.52 |
| 228 | 2090 | 494 | 23.64 | 1596 | 76.36 |
| 229 | 2061 | 496 | 24.07 | 1565 | 75.93 |
| 230 | 2036 | 500 | 24.56 | 1536 | 75.44 |
| 231 | 1999 | 542 | 27.11 | 1457 | 72.89 |
| 232 | 1932 | 517 | 26.76 | 1415 | 73.24 |
| 233 | 1831 | 509 | 27.80 | 1322 | 72.20 |
| 234 | 1712 | 463 | 27.04 | 1249 | 72.96 |
| 235 | 1561 | 448 | 28.70 | 1113 | 71.30 |
| 236 | 1389 | 376 | 27.07 | 1013 | 72.93 |
| 237 | 1169 | 332 | 28.40 | 837  | 71.60 |
| 238 | 970  | 255 | 26.29 | 715  | 73.71 |
| 239 | 773  | 220 | 28.46 | 553  | 71.54 |
| 240 | 574  | 172 | 29.97 | 402  | 70.03 |

Classification report 3 of 3

IHO statistics a/b are : 1.000 0.023

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 1     | 531   | 14     | 2.64   | 517    | 97.36  |
| 2     | 695   | 19     | 2.73   | 676    | 97.27  |
| 3     | 879   | 27     | 3.07   | 852    | 96.93  |
| 4     | 1107  | 28     | 2.53   | 1079   | 97.47  |
| 5     | 1275  | 24     | 1.88   | 1251   | 98.12  |
| 6     | 1450  | 34     | 2.34   | 1416   | 97.66  |
| 7     | 1624  | 33     | 2.03   | 1591   | 97.97  |
| 8     | 1763  | 42     | 2.38   | 1721   | 97.62  |
| 9     | 1878  | 36     | 1.92   | 1842   | 98.08  |
| 10    | 1970  | 38     | 1.93   | 1932   | 98.07  |
| 11    | 2041  | 46     | 2.25   | 1995   | 97.75  |
| 12    | 2078  | 57     | 2.74   | 2021   | 97.26  |
| 13    | 2127  | 54     | 2.54   | 2073   | 97.46  |
| 14    | 2152  | 61     | 2.83   | 2091   | 97.17  |
| 15    | 2154  | 63     | 2.92   | 2091   | 97.08  |
| 16    | 2164  | 68     | 3.14   | 2096   | 96.86  |
| 17    | 2171  | 58     | 2.67   | 2113   | 97.33  |
| 18    | 2173  | 51     | 2.35   | 2122   | 97.65  |
| 19    | 2176  | 61     | 2.80   | 2115   | 97.20  |
| 20    | 2171  | 59     | 2.72   | 2112   | 97.28  |
| 21    | 2173  | 56     | 2.58   | 2117   | 97.42  |
| 22    | 2169  | 62     | 2.86   | 2107   | 97.14  |
| 23    | 2175  | 57     | 2.62   | 2118   | 97.38  |
| 24    | 2179  | 61     | 2.80   | 2118   | 97.20  |
| 25    | 2179  | 54     | 2.48   | 2125   | 97.52  |
| 26    | 2185  | 57     | 2.61   | 2128   | 97.39  |
| 27    | 2185  | 51     | 2.33   | 2134   | 97.67  |
| 28    | 2187  | 57     | 2.61   | 2130   | 97.39  |
| 29    | 2185  | 56     | 2.56   | 2129   | 97.44  |
| 30    | 2185  | 55     | 2.52   | 2130   | 97.48  |
| 31    | 2186  | 57     | 2.61   | 2129   | 97.39  |
| 32    | 2186  | 65     | 2.97   | 2121   | 97.03  |
| 33    | 2188  | 62     | 2.83   | 2126   | 97.17  |
| 34    | 2189  | 57     | 2.60   | 2132   | 97.40  |
| 35    | 2191  | 56     | 2.56   | 2135   | 97.44  |
| 36    | 2191  | 56     | 2.56   | 2135   | 97.44  |
| 37    | 2190  | 57     | 2.60   | 2133   | 97.40  |
| 38    | 2189  | 52     | 2.38   | 2137   | 97.62  |
| 39    | 2193  | 47     | 2.14   | 2146   | 97.86  |
| 40    | 2191  | 54     | 2.46   | 2137   | 97.54  |
| 41    | 2188  | 55     | 2.51   | 2133   | 97.49  |
| 42    | 2191  | 56     | 2.56   | 2135   | 97.44  |
| 43    | 2192  | 61     | 2.78   | 2131   | 97.22  |
| 44    | 2192  | 64     | 2.92   | 2128   | 97.08  |
| 45    | 2191  | 65     | 2.97   | 2126   | 97.03  |
| 46    | 2194  | 63     | 2.87   | 2131   | 97.13  |
| 47    | 2192  | 69     | 3.15   | 2123   | 96.85  |
| 48    | 2192  | 67     | 3.06   | 2125   | 96.94  |
| 49    | 2192  | 77     | 3.51   | 2115   | 96.49  |
| 50    | 2194  | 82     | 3.74   | 2112   | 96.26  |
| 51    | 2194  | 87     | 3.97   | 2107   | 96.03  |
| 52    | 2193  | 91     | 4.15   | 2102   | 95.85  |
| 53    | 2194  | 87     | 3.97   | 2107   | 96.03  |
| 54    | 2194  | 89     | 4.06   | 2105   | 95.94  |
| 55    | 2194  | 87     | 3.97   | 2107   | 96.03  |
| 56    | 2194  | 78     | 3.56   | 2116   | 96.44  |
| 57    | 2194  | 74     | 3.37   | 2120   | 96.63  |
| 58    | 2194  | 74     | 3.37   | 2120   | 96.63  |
| 59    | 2194  | 86     | 3.92   | 2108   | 96.08  |

|     |      |    |      |      |       |
|-----|------|----|------|------|-------|
| 60  | 2194 | 86 | 3.92 | 2108 | 96.08 |
| 61  | 2195 | 77 | 3.51 | 2118 | 96.49 |
| 62  | 2195 | 73 | 3.33 | 2122 | 96.67 |
| 63  | 2195 | 76 | 3.46 | 2119 | 96.54 |
| 64  | 2195 | 70 | 3.19 | 2125 | 96.81 |
| 65  | 2195 | 71 | 3.23 | 2124 | 96.77 |
| 66  | 2195 | 74 | 3.37 | 2121 | 96.63 |
| 67  | 2195 | 71 | 3.23 | 2124 | 96.77 |
| 68  | 2195 | 82 | 3.74 | 2113 | 96.26 |
| 69  | 2195 | 77 | 3.51 | 2118 | 96.49 |
| 70  | 2194 | 75 | 3.42 | 2119 | 96.58 |
| 71  | 2194 | 74 | 3.37 | 2120 | 96.63 |
| 72  | 2195 | 80 | 3.64 | 2115 | 96.36 |
| 73  | 2195 | 83 | 3.78 | 2112 | 96.22 |
| 74  | 2195 | 76 | 3.46 | 2119 | 96.54 |
| 75  | 2194 | 62 | 2.83 | 2132 | 97.17 |
| 76  | 2195 | 57 | 2.60 | 2138 | 97.40 |
| 77  | 2195 | 61 | 2.78 | 2134 | 97.22 |
| 78  | 2195 | 60 | 2.73 | 2135 | 97.27 |
| 79  | 2195 | 64 | 2.92 | 2131 | 97.08 |
| 80  | 2194 | 60 | 2.73 | 2134 | 97.27 |
| 81  | 2195 | 57 | 2.60 | 2138 | 97.40 |
| 82  | 2192 | 64 | 2.92 | 2128 | 97.08 |
| 83  | 2191 | 63 | 2.88 | 2128 | 97.12 |
| 84  | 2193 | 59 | 2.69 | 2134 | 97.31 |
| 85  | 2189 | 59 | 2.70 | 2130 | 97.30 |
| 86  | 2191 | 58 | 2.65 | 2133 | 97.35 |
| 87  | 2181 | 61 | 2.80 | 2120 | 97.20 |
| 88  | 2188 | 60 | 2.74 | 2128 | 97.26 |
| 89  | 2193 | 58 | 2.64 | 2135 | 97.36 |
| 90  | 2191 | 61 | 2.78 | 2130 | 97.22 |
| 91  | 2193 | 60 | 2.74 | 2133 | 97.26 |
| 92  | 2194 | 62 | 2.83 | 2132 | 97.17 |
| 93  | 2192 | 59 | 2.69 | 2133 | 97.31 |
| 94  | 2188 | 60 | 2.74 | 2128 | 97.26 |
| 95  | 2195 | 57 | 2.60 | 2138 | 97.40 |
| 96  | 2194 | 60 | 2.73 | 2134 | 97.27 |
| 97  | 2192 | 62 | 2.83 | 2130 | 97.17 |
| 98  | 2194 | 62 | 2.83 | 2132 | 97.17 |
| 99  | 2195 | 59 | 2.69 | 2136 | 97.31 |
| 100 | 2194 | 55 | 2.51 | 2139 | 97.49 |
| 101 | 2195 | 55 | 2.51 | 2140 | 97.49 |
| 102 | 2195 | 62 | 2.82 | 2133 | 97.18 |
| 103 | 2195 | 64 | 2.92 | 2131 | 97.08 |
| 104 | 2195 | 62 | 2.82 | 2133 | 97.18 |
| 105 | 2195 | 70 | 3.19 | 2125 | 96.81 |
| 106 | 2195 | 68 | 3.10 | 2127 | 96.90 |
| 107 | 2195 | 68 | 3.10 | 2127 | 96.90 |
| 108 | 2195 | 75 | 3.42 | 2120 | 96.58 |
| 109 | 2195 | 76 | 3.46 | 2119 | 96.54 |
| 110 | 2195 | 79 | 3.60 | 2116 | 96.40 |
| 111 | 2195 | 85 | 3.87 | 2110 | 96.13 |
| 112 | 2195 | 84 | 3.83 | 2111 | 96.17 |
| 113 | 2195 | 96 | 4.37 | 2099 | 95.63 |
| 114 | 2195 | 97 | 4.42 | 2098 | 95.58 |
| 115 | 2193 | 87 | 3.97 | 2106 | 96.03 |
| 116 | 2193 | 88 | 4.01 | 2105 | 95.99 |
| 117 | 2193 | 91 | 4.15 | 2102 | 95.85 |
| 118 | 2194 | 89 | 4.06 | 2105 | 95.94 |
| 119 | 2194 | 84 | 3.83 | 2110 | 96.17 |
| 120 | 2193 | 88 | 4.01 | 2105 | 95.99 |
| 121 | 2192 | 84 | 3.83 | 2108 | 96.17 |
| 122 | 2195 | 84 | 3.83 | 2111 | 96.17 |
| 123 | 2194 | 83 | 3.78 | 2111 | 96.22 |
| 124 | 2193 | 82 | 3.74 | 2111 | 96.26 |

|     |      |     |      |      |       |
|-----|------|-----|------|------|-------|
| 125 | 2194 | 83  | 3.78 | 2111 | 96.22 |
| 126 | 2194 | 86  | 3.92 | 2108 | 96.08 |
| 127 | 2193 | 85  | 3.88 | 2108 | 96.12 |
| 128 | 2195 | 78  | 3.55 | 2117 | 96.45 |
| 129 | 2193 | 81  | 3.69 | 2112 | 96.31 |
| 130 | 2193 | 83  | 3.78 | 2110 | 96.22 |
| 131 | 2193 | 84  | 3.83 | 2109 | 96.17 |
| 132 | 2194 | 86  | 3.92 | 2108 | 96.08 |
| 133 | 2194 | 81  | 3.69 | 2113 | 96.31 |
| 134 | 2195 | 80  | 3.64 | 2115 | 96.36 |
| 135 | 2193 | 82  | 3.74 | 2111 | 96.26 |
| 136 | 2193 | 84  | 3.83 | 2109 | 96.17 |
| 137 | 2193 | 70  | 3.19 | 2123 | 96.81 |
| 138 | 2192 | 65  | 2.97 | 2127 | 97.03 |
| 139 | 2193 | 61  | 2.78 | 2132 | 97.22 |
| 140 | 2194 | 58  | 2.64 | 2136 | 97.36 |
| 141 | 2193 | 54  | 2.46 | 2139 | 97.54 |
| 142 | 2193 | 54  | 2.46 | 2139 | 97.54 |
| 143 | 2191 | 60  | 2.74 | 2131 | 97.26 |
| 144 | 2193 | 64  | 2.92 | 2129 | 97.08 |
| 145 | 2193 | 75  | 3.42 | 2118 | 96.58 |
| 146 | 2192 | 75  | 3.42 | 2117 | 96.58 |
| 147 | 2189 | 69  | 3.15 | 2120 | 96.85 |
| 148 | 2188 | 68  | 3.11 | 2120 | 96.89 |
| 149 | 2188 | 66  | 3.02 | 2122 | 96.98 |
| 150 | 2187 | 76  | 3.48 | 2111 | 96.52 |
| 151 | 2189 | 67  | 3.06 | 2122 | 96.94 |
| 152 | 2179 | 67  | 3.07 | 2112 | 96.93 |
| 153 | 2181 | 62  | 2.84 | 2119 | 97.16 |
| 154 | 2186 | 64  | 2.93 | 2122 | 97.07 |
| 155 | 2179 | 62  | 2.85 | 2117 | 97.15 |
| 156 | 2161 | 71  | 3.29 | 2090 | 96.71 |
| 157 | 2182 | 78  | 3.57 | 2104 | 96.43 |
| 158 | 2176 | 95  | 4.37 | 2081 | 95.63 |
| 159 | 2181 | 98  | 4.49 | 2083 | 95.51 |
| 160 | 2183 | 96  | 4.40 | 2087 | 95.60 |
| 161 | 2182 | 95  | 4.35 | 2087 | 95.65 |
| 162 | 2182 | 100 | 4.58 | 2082 | 95.42 |
| 163 | 2182 | 97  | 4.45 | 2085 | 95.55 |
| 164 | 2181 | 102 | 4.68 | 2079 | 95.32 |
| 165 | 2180 | 100 | 4.59 | 2080 | 95.41 |
| 166 | 2181 | 98  | 4.49 | 2083 | 95.51 |
| 167 | 2180 | 93  | 4.27 | 2087 | 95.73 |
| 168 | 2180 | 92  | 4.22 | 2088 | 95.78 |
| 169 | 2179 | 87  | 3.99 | 2092 | 96.01 |
| 170 | 2180 | 86  | 3.94 | 2094 | 96.06 |
| 171 | 2180 | 79  | 3.62 | 2101 | 96.38 |
| 172 | 2180 | 85  | 3.90 | 2095 | 96.10 |
| 173 | 2179 | 81  | 3.72 | 2098 | 96.28 |
| 174 | 2179 | 78  | 3.58 | 2101 | 96.42 |
| 175 | 2177 | 66  | 3.03 | 2111 | 96.97 |
| 176 | 2175 | 66  | 3.03 | 2109 | 96.97 |
| 177 | 2176 | 72  | 3.31 | 2104 | 96.69 |
| 178 | 2177 | 77  | 3.54 | 2100 | 96.46 |
| 179 | 2176 | 72  | 3.31 | 2104 | 96.69 |
| 180 | 2176 | 72  | 3.31 | 2104 | 96.69 |
| 181 | 2175 | 70  | 3.22 | 2105 | 96.78 |
| 182 | 2174 | 73  | 3.36 | 2101 | 96.64 |
| 183 | 2175 | 67  | 3.08 | 2108 | 96.92 |
| 184 | 2175 | 67  | 3.08 | 2108 | 96.92 |
| 185 | 2174 | 72  | 3.31 | 2102 | 96.69 |
| 186 | 2174 | 66  | 3.04 | 2108 | 96.96 |
| 187 | 2174 | 64  | 2.94 | 2110 | 97.06 |
| 188 | 2172 | 63  | 2.90 | 2109 | 97.10 |
| 189 | 2176 | 61  | 2.80 | 2115 | 97.20 |

|     |      |    |      |      |       |
|-----|------|----|------|------|-------|
| 190 | 2174 | 60 | 2.76 | 2114 | 97.24 |
| 191 | 2175 | 68 | 3.13 | 2107 | 96.87 |
| 192 | 2174 | 65 | 2.99 | 2109 | 97.01 |
| 193 | 2174 | 71 | 3.27 | 2103 | 96.73 |
| 194 | 2174 | 69 | 3.17 | 2105 | 96.83 |
| 195 | 2174 | 75 | 3.45 | 2099 | 96.55 |
| 196 | 2172 | 80 | 3.68 | 2092 | 96.32 |
| 197 | 2174 | 79 | 3.63 | 2095 | 96.37 |
| 198 | 2174 | 79 | 3.63 | 2095 | 96.37 |
| 199 | 2174 | 81 | 3.73 | 2093 | 96.27 |
| 200 | 2173 | 98 | 4.51 | 2075 | 95.49 |
| 201 | 2172 | 86 | 3.96 | 2086 | 96.04 |
| 202 | 2171 | 80 | 3.68 | 2091 | 96.32 |
| 203 | 2170 | 88 | 4.06 | 2082 | 95.94 |
| 204 | 2172 | 86 | 3.96 | 2086 | 96.04 |
| 205 | 2171 | 78 | 3.59 | 2093 | 96.41 |
| 206 | 2173 | 70 | 3.22 | 2103 | 96.78 |
| 207 | 2171 | 63 | 2.90 | 2108 | 97.10 |
| 208 | 2171 | 67 | 3.09 | 2104 | 96.91 |
| 209 | 2173 | 79 | 3.64 | 2094 | 96.36 |
| 210 | 2167 | 76 | 3.51 | 2091 | 96.49 |
| 211 | 2165 | 85 | 3.93 | 2080 | 96.07 |
| 212 | 2167 | 86 | 3.97 | 2081 | 96.03 |
| 213 | 2167 | 82 | 3.78 | 2085 | 96.22 |
| 214 | 2161 | 69 | 3.19 | 2092 | 96.81 |
| 215 | 2162 | 72 | 3.33 | 2090 | 96.67 |
| 216 | 2160 | 75 | 3.47 | 2085 | 96.53 |
| 217 | 2157 | 65 | 3.01 | 2092 | 96.99 |
| 218 | 2156 | 75 | 3.48 | 2081 | 96.52 |
| 219 | 2155 | 72 | 3.34 | 2083 | 96.66 |
| 220 | 2157 | 71 | 3.29 | 2086 | 96.71 |
| 221 | 2155 | 69 | 3.20 | 2086 | 96.80 |
| 222 | 2152 | 75 | 3.49 | 2077 | 96.51 |
| 223 | 2146 | 71 | 3.31 | 2075 | 96.69 |
| 224 | 2139 | 64 | 2.99 | 2075 | 97.01 |
| 225 | 2134 | 55 | 2.58 | 2079 | 97.42 |
| 226 | 2118 | 54 | 2.55 | 2064 | 97.45 |
| 227 | 2108 | 57 | 2.70 | 2051 | 97.30 |
| 228 | 2090 | 59 | 2.82 | 2031 | 97.18 |
| 229 | 2061 | 68 | 3.30 | 1993 | 96.70 |
| 230 | 2036 | 60 | 2.95 | 1976 | 97.05 |
| 231 | 1999 | 64 | 3.20 | 1935 | 96.80 |
| 232 | 1932 | 54 | 2.80 | 1878 | 97.20 |
| 233 | 1831 | 47 | 2.57 | 1784 | 97.43 |
| 234 | 1712 | 48 | 2.80 | 1664 | 97.20 |
| 235 | 1561 | 41 | 2.63 | 1520 | 97.37 |
| 236 | 1389 | 33 | 2.38 | 1356 | 97.62 |
| 237 | 1169 | 31 | 2.65 | 1138 | 97.35 |
| 238 | 970  | 20 | 2.06 | 950  | 97.94 |
| 239 | 773  | 23 | 2.98 | 750  | 97.02 |
| 240 | 574  | 21 | 3.66 | 553  | 96.34 |

**R4EL\_2003****DN168**

Quality Control Report for file : C:\Temp\2003\_Patch\_tests\R4EL\_2003\checkline

Surface lines: 20030617171525\_003, 20030617171929\_004, 20030617172735\_005

Checkline lines: 20030617170500\_001, 20030617170917\_002, 20030617174238\_007

Elevation Range is : -146.988(m) -114.470(m)

Total number of 3D points used: 33676

Starting Time: 17-JUN-2003 17:04:47.52

Ending Time: 17-JUN-2003 17:45:18.84

Minimum tidal reduction: -648 (mm)

Maximum tidal reduction: -490 (mm)

| User# | Total | Max(+) | Max(-) | Mean   | Std.   | 3dm(%) | 5dm(%) | 1%(%) | 1.6%(%) |
|-------|-------|--------|--------|--------|--------|--------|--------|-------|---------|
| ===== | ===== | =====  | =====  | =====  | =====  | =====  | =====  | ===== | =====   |
| 19    | 361   | 1.102  | -3.223 | -1.214 | 1.0110 | 15.2   | 23.5   | 49.3  | 86.4    |
| 20    | 366   | 1.049  | -3.329 | -1.332 | 0.9918 | 16.1   | 25.1   | 48.6  | 82.0    |
| 21    | 375   | 1.172  | -3.235 | -1.167 | 0.9835 | 20.8   | 28.8   | 50.7  | 88.5    |
| 22    | 375   | 0.784  | -3.443 | -1.447 | 1.0179 | 15.7   | 25.1   | 42.7  | 76.3    |
| 23    | 377   | 0.777  | -3.439 | -1.418 | 0.9925 | 15.1   | 24.1   | 40.3  | 79.6    |
| 24    | 369   | 0.824  | -3.290 | -1.341 | 0.9100 | 13.6   | 22.2   | 45.8  | 85.9    |
| 25    | 376   | 0.358  | -3.450 | -1.569 | 0.8082 | 6.9    | 12.2   | 38.6  | 78.2    |
| 26    | 377   | 0.394  | -3.020 | -1.502 | 0.7098 | 4.0    | 9.5    | 44.3  | 86.7    |
| 27    | 377   | 0.707  | -3.088 | -1.416 | 0.6632 | 5.3    | 8.8    | 47.5  | 92.3    |
| 28    | 377   | 0.035  | -3.569 | -1.682 | 0.6640 | 2.4    | 4.2    | 34.0  | 79.8    |
| 29    | 376   | 0.201  | -3.422 | -1.655 | 0.6610 | 2.7    | 4.3    | 35.6  | 81.6    |
| 30    | 378   | 0.555  | -3.230 | -1.433 | 0.6602 | 5.3    | 9.3    | 46.6  | 89.9    |
| 31    | 376   | 0.630  | -3.348 | -1.566 | 0.6552 | 2.1    | 4.5    | 43.4  | 86.4    |
| 32    | 375   | 0.388  | -3.343 | -1.490 | 0.6593 | 3.7    | 6.4    | 45.9  | 89.3    |
| 33    | 378   | 0.552  | -3.073 | -1.394 | 0.6722 | 5.8    | 9.5    | 50.0  | 91.0    |
| 34    | 377   | 0.399  | -2.989 | -1.520 | 0.6338 | 2.9    | 6.4    | 41.9  | 89.9    |
| 35    | 376   | 0.498  | -3.033 | -1.376 | 0.5977 | 5.3    | 8.8    | 51.3  | 93.6    |
| 36    | 378   | 0.779  | -2.582 | -1.284 | 0.6158 | 5.8    | 10.1   | 57.9  | 97.4    |
| 37    | 378   | 0.779  | -3.103 | -1.343 | 0.6196 | 5.3    | 9.5    | 54.5  | 95.0    |
| 38    | 378   | 0.604  | -2.631 | -1.251 | 0.5907 | 6.6    | 11.6   | 57.9  | 97.4    |
| 39    | 378   | 0.532  | -2.620 | -1.162 | 0.5632 | 9.0    | 13.5   | 66.1  | 99.5    |
| 40    | 378   | 0.440  | -2.483 | -1.235 | 0.5624 | 6.3    | 10.8   | 57.9  | 98.7    |
| 41    | 378   | 0.451  | -2.433 | -1.180 | 0.5603 | 9.0    | 12.7   | 60.8  | 99.2    |
| 42    | 378   | 0.553  | -2.344 | -1.117 | 0.5741 | 7.7    | 14.3   | 69.3  | 99.2    |
| 43    | 378   | 0.393  | -2.452 | -1.200 | 0.5380 | 5.3    | 11.6   | 62.7  | 98.1    |
| 44    | 378   | 0.460  | -2.599 | -1.178 | 0.5617 | 8.7    | 12.7   | 64.8  | 98.9    |
| 45    | 378   | 0.566  | -2.433 | -1.072 | 0.5942 | 9.8    | 15.9   | 72.8  | 98.7    |
| 46    | 378   | 0.487  | -2.731 | -1.132 | 0.5690 | 8.5    | 14.8   | 68.8  | 98.4    |
| 47    | 378   | 0.520  | -2.487 | -1.065 | 0.5670 | 10.6   | 15.9   | 74.3  | 98.4    |
| 48    | 378   | 1.078  | -2.514 | -0.978 | 0.5998 | 13.5   | 20.6   | 77.5  | 98.9    |
| 49    | 378   | 0.704  | -2.670 | -1.023 | 0.5606 | 10.6   | 16.9   | 76.2  | 97.9    |
| 50    | 378   | 0.476  | -2.706 | -0.952 | 0.5473 | 11.6   | 18.3   | 82.5  | 99.2    |
| 51    | 377   | 0.726  | -2.353 | -0.888 | 0.5292 | 12.5   | 21.5   | 86.7  | 99.7    |
| 52    | 378   | 0.411  | -2.618 | -0.895 | 0.5676 | 13.0   | 21.2   | 83.9  | 98.9    |
| 53    | 378   | 0.653  | -2.635 | -0.857 | 0.5477 | 13.0   | 24.3   | 86.8  | 98.9    |
| 54    | 378   | 0.444  | -2.394 | -0.756 | 0.5467 | 18.5   | 30.7   | 89.2  | 99.5    |
| 55    | 378   | 0.567  | -2.291 | -0.667 | 0.5296 | 21.2   | 38.4   | 92.1  | 99.7    |
| 56    | 378   | 0.890  | -2.292 | -0.598 | 0.5246 | 24.9   | 41.8   | 93.1  | 99.7    |
| 57    | 378   | 1.046  | -2.095 | -0.527 | 0.5123 | 26.7   | 46.0   | 95.2  | 100.0   |
| 58    | 377   | 0.685  | -2.356 | -0.579 | 0.5211 | 27.6   | 45.6   | 93.6  | 99.5    |
| 59    | 377   | 0.890  | -2.211 | -0.492 | 0.5212 | 34.0   | 53.6   | 95.0  | 100.0   |
| 60    | 377   | 0.942  | -1.940 | -0.386 | 0.5200 | 35.5   | 54.1   | 97.3  | 100.0   |
| 61    | 378   | 1.377  | -1.966 | -0.364 | 0.5128 | 37.3   | 56.3   | 97.6  | 100.0   |
| 62    | 378   | 1.151  | -1.730 | -0.287 | 0.4798 | 43.4   | 60.8   | 99.5  | 100.0   |
| 63    | 378   | 1.172  | -1.353 | -0.180 | 0.4448 | 49.7   | 68.5   | 100.0 | 100.0   |

|     |     |       |        |        |        |      |      |       |       |
|-----|-----|-------|--------|--------|--------|------|------|-------|-------|
| 64  | 378 | 1.245 | -1.591 | -0.204 | 0.4714 | 50.5 | 68.5 | 98.9  | 100.0 |
| 65  | 378 | 1.008 | -2.408 | -0.444 | 0.4625 | 31.0 | 51.1 | 98.1  | 99.7  |
| 66  | 378 | 1.285 | -1.622 | -0.535 | 0.4464 | 19.0 | 39.2 | 99.5  | 100.0 |
| 67  | 378 | 1.498 | -1.755 | -0.336 | 0.5003 | 35.7 | 55.3 | 98.4  | 100.0 |
| 68  | 378 | 1.301 | -1.509 | -0.406 | 0.4506 | 31.2 | 54.2 | 99.5  | 100.0 |
| 69  | 378 | 1.033 | -1.659 | -0.549 | 0.4523 | 19.3 | 39.2 | 98.4  | 100.0 |
| 70  | 378 | 1.238 | -1.276 | -0.253 | 0.4431 | 41.0 | 64.0 | 100.0 | 100.0 |
| 71  | 378 | 1.434 | -1.436 | -0.364 | 0.4504 | 32.8 | 56.3 | 98.9  | 100.0 |
| 72  | 378 | 1.156 | -1.763 | -0.543 | 0.4263 | 23.0 | 40.2 | 98.9  | 100.0 |
| 73  | 378 | 1.017 | -1.615 | -0.270 | 0.4166 | 38.4 | 66.1 | 99.7  | 100.0 |
| 74  | 378 | 1.015 | -1.422 | -0.335 | 0.4250 | 37.8 | 64.3 | 99.7  | 100.0 |
| 75  | 378 | 1.040 | -1.733 | -0.398 | 0.4215 | 34.1 | 58.5 | 98.9  | 100.0 |
| 76  | 377 | 1.392 | -1.367 | -0.266 | 0.4607 | 40.3 | 62.1 | 99.5  | 100.0 |
| 77  | 378 | 0.953 | -1.698 | -0.345 | 0.4433 | 32.5 | 58.5 | 99.2  | 100.0 |
| 78  | 377 | 1.049 | -1.670 | -0.362 | 0.4264 | 32.9 | 57.3 | 99.5  | 100.0 |
| 79  | 376 | 1.075 | -1.200 | -0.163 | 0.4181 | 47.6 | 71.5 | 100.0 | 100.0 |
| 80  | 378 | 0.990 | -1.537 | -0.245 | 0.4291 | 44.7 | 68.3 | 99.7  | 100.0 |
| 81  | 378 | 1.120 | -1.688 | -0.329 | 0.4427 | 36.5 | 60.3 | 99.2  | 100.0 |
| 82  | 378 | 1.072 | -1.126 | -0.167 | 0.3692 | 51.3 | 77.5 | 100.0 | 100.0 |
| 83  | 378 | 0.832 | -1.335 | -0.214 | 0.3810 | 50.3 | 75.1 | 100.0 | 100.0 |
| 84  | 378 | 0.788 | -1.340 | -0.309 | 0.3872 | 43.1 | 67.7 | 99.7  | 100.0 |
| 85  | 378 | 1.194 | -1.235 | -0.141 | 0.4103 | 48.1 | 75.9 | 100.0 | 100.0 |
| 86  | 378 | 1.548 | -1.179 | -0.141 | 0.3983 | 52.4 | 75.7 | 99.7  | 100.0 |
| 87  | 378 | 0.928 | -1.404 | -0.230 | 0.3909 | 47.4 | 72.5 | 99.7  | 100.0 |
| 88  | 378 | 1.244 | -1.046 | -0.095 | 0.3933 | 56.6 | 76.7 | 100.0 | 100.0 |
| 89  | 378 | 1.174 | -1.251 | -0.144 | 0.4264 | 45.8 | 75.4 | 100.0 | 100.0 |
| 90  | 378 | 1.443 | -1.397 | -0.212 | 0.4612 | 42.6 | 68.3 | 98.7  | 100.0 |
| 91  | 378 | 1.489 | -1.388 | -0.105 | 0.4835 | 50.5 | 72.2 | 98.7  | 100.0 |
| 92  | 378 | 1.371 | -1.713 | -0.164 | 0.4770 | 45.5 | 70.9 | 98.7  | 100.0 |
| 93  | 378 | 1.376 | -1.950 | -0.226 | 0.5030 | 42.1 | 63.8 | 98.4  | 100.0 |
| 94  | 378 | 1.987 | -1.311 | -0.094 | 0.4944 | 46.0 | 70.1 | 98.7  | 100.0 |
| 95  | 376 | 1.496 | -1.370 | -0.132 | 0.4953 | 44.1 | 69.9 | 98.1  | 100.0 |
| 96  | 378 | 1.453 | -1.657 | -0.104 | 0.5122 | 46.3 | 68.5 | 98.9  | 100.0 |
| 97  | 378 | 1.820 | -1.310 | 0.070  | 0.5285 | 45.2 | 70.4 | 97.9  | 100.0 |
| 98  | 378 | 1.799 | -1.790 | 0.034  | 0.5489 | 45.2 | 69.3 | 97.6  | 100.0 |
| 99  | 378 | 1.808 | -1.275 | -0.033 | 0.5625 | 44.7 | 65.1 | 97.6  | 100.0 |
| 100 | 378 | 1.984 | -1.254 | 0.342  | 0.5697 | 37.3 | 55.3 | 94.7  | 100.0 |
| 101 | 373 | 2.459 | -1.161 | 0.271  | 0.6197 | 34.0 | 56.6 | 94.4  | 99.7  |
| 102 | 361 | 2.772 | -1.137 | 0.339  | 0.6218 | 39.9 | 58.7 | 92.5  | 98.9  |
| 103 | 364 | 2.691 | -0.918 | 0.542  | 0.6441 | 29.7 | 47.8 | 87.4  | 98.4  |
| 104 | 350 | 2.429 | -1.285 | 0.455  | 0.6623 | 31.4 | 50.0 | 88.6  | 98.9  |
| 105 | 343 | 2.583 | -2.025 | 0.576  | 0.7105 | 25.4 | 42.6 | 86.6  | 98.0  |
| 106 | 329 | 2.962 | -3.706 | 0.757  | 0.8156 | 21.9 | 35.9 | 76.6  | 94.5  |
| 107 | 322 | 3.741 | -2.736 | 0.746  | 0.7703 | 23.0 | 38.2 | 79.8  | 94.7  |
| 108 | 308 | 5.873 | -1.233 | 0.984  | 0.9124 | 16.6 | 26.6 | 72.4  | 90.3  |

Classification report 1 of 3

IHO statistics a/b are : 0.250 0.008

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 19    | 361   | 216    | 59.83  | 145    | 40.17  |
| 20    | 366   | 220    | 60.11  | 146    | 39.89  |
| 21    | 375   | 215    | 57.33  | 160    | 42.67  |
| 22    | 375   | 239    | 63.73  | 136    | 36.27  |
| 23    | 377   | 238    | 63.13  | 139    | 36.87  |
| 24    | 369   | 229    | 62.06  | 140    | 37.94  |
| 25    | 376   | 265    | 70.48  | 111    | 29.52  |
| 26    | 377   | 265    | 70.29  | 112    | 29.71  |
| 27    | 377   | 264    | 70.03  | 113    | 29.97  |
| 28    | 377   | 319    | 84.62  | 58     | 15.38  |
| 29    | 376   | 306    | 81.38  | 70     | 18.62  |
| 30    | 378   | 267    | 70.63  | 111    | 29.37  |
| 31    | 376   | 287    | 76.33  | 89     | 23.67  |
| 32    | 375   | 279    | 74.40  | 96     | 25.60  |
| 33    | 378   | 264    | 69.84  | 114    | 30.16  |
| 34    | 377   | 288    | 76.39  | 89     | 23.61  |
| 35    | 376   | 273    | 72.61  | 103    | 27.39  |
| 36    | 378   | 252    | 66.67  | 126    | 33.33  |
| 37    | 378   | 264    | 69.84  | 114    | 30.16  |
| 38    | 378   | 247    | 65.34  | 131    | 34.66  |
| 39    | 378   | 227    | 60.05  | 151    | 39.95  |
| 40    | 378   | 241    | 63.76  | 137    | 36.24  |
| 41    | 378   | 233    | 61.64  | 145    | 38.36  |
| 42    | 378   | 223    | 58.99  | 155    | 41.01  |
| 43    | 378   | 232    | 61.38  | 146    | 38.62  |
| 44    | 378   | 237    | 62.70  | 141    | 37.30  |
| 45    | 378   | 204    | 53.97  | 174    | 46.03  |
| 46    | 378   | 217    | 57.41  | 161    | 42.59  |
| 47    | 378   | 190    | 50.26  | 188    | 49.74  |
| 48    | 378   | 159    | 42.06  | 219    | 57.94  |
| 49    | 378   | 173    | 45.77  | 205    | 54.23  |
| 50    | 378   | 149    | 39.42  | 229    | 60.58  |
| 51    | 377   | 140    | 37.14  | 237    | 62.86  |
| 52    | 378   | 127    | 33.60  | 251    | 66.40  |
| 53    | 378   | 110    | 29.10  | 268    | 70.90  |
| 54    | 378   | 92     | 24.34  | 286    | 75.66  |
| 55    | 378   | 65     | 17.20  | 313    | 82.80  |
| 56    | 378   | 55     | 14.55  | 323    | 85.45  |
| 57    | 378   | 48     | 12.70  | 330    | 87.30  |
| 58    | 377   | 49     | 13.00  | 328    | 87.00  |
| 59    | 377   | 45     | 11.94  | 332    | 88.06  |
| 60    | 377   | 31     | 8.22   | 346    | 91.78  |
| 61    | 378   | 30     | 7.94   | 348    | 92.06  |
| 62    | 378   | 19     | 5.03   | 359    | 94.97  |
| 63    | 378   | 8      | 2.12   | 370    | 97.88  |
| 64    | 378   | 18     | 4.76   | 360    | 95.24  |
| 65    | 378   | 27     | 7.14   | 351    | 92.86  |
| 66    | 378   | 34     | 8.99   | 344    | 91.01  |
| 67    | 378   | 27     | 7.14   | 351    | 92.86  |
| 68    | 378   | 23     | 6.08   | 355    | 93.92  |
| 69    | 378   | 38     | 10.05  | 340    | 89.95  |
| 70    | 378   | 13     | 3.44   | 365    | 96.56  |
| 71    | 378   | 17     | 4.50   | 361    | 95.50  |
| 72    | 378   | 34     | 8.99   | 344    | 91.01  |
| 73    | 378   | 7      | 1.85   | 371    | 98.15  |
| 74    | 378   | 19     | 5.03   | 359    | 94.97  |
| 75    | 378   | 17     | 4.50   | 361    | 95.50  |
| 76    | 377   | 20     | 5.31   | 357    | 94.69  |
| 77    | 378   | 13     | 3.44   | 365    | 96.56  |

|     |     |     |       |     |       |
|-----|-----|-----|-------|-----|-------|
| 78  | 377 | 16  | 4.24  | 361 | 95.76 |
| 79  | 376 | 4   | 1.06  | 372 | 98.94 |
| 80  | 378 | 10  | 2.65  | 368 | 97.35 |
| 81  | 378 | 16  | 4.23  | 362 | 95.77 |
| 82  | 378 | 2   | 0.53  | 376 | 99.47 |
| 83  | 378 | 6   | 1.59  | 372 | 98.41 |
| 84  | 378 | 7   | 1.85  | 371 | 98.15 |
| 85  | 378 | 4   | 1.06  | 374 | 98.94 |
| 86  | 378 | 5   | 1.32  | 373 | 98.68 |
| 87  | 378 | 5   | 1.32  | 373 | 98.68 |
| 88  | 378 | 3   | 0.79  | 375 | 99.21 |
| 89  | 378 | 6   | 1.59  | 372 | 98.41 |
| 90  | 378 | 15  | 3.97  | 363 | 96.03 |
| 91  | 378 | 21  | 5.56  | 357 | 94.44 |
| 92  | 378 | 20  | 5.29  | 358 | 94.71 |
| 93  | 378 | 21  | 5.56  | 357 | 94.44 |
| 94  | 378 | 21  | 5.56  | 357 | 94.44 |
| 95  | 376 | 19  | 5.05  | 357 | 94.95 |
| 96  | 378 | 22  | 5.82  | 356 | 94.18 |
| 97  | 378 | 24  | 6.35  | 354 | 93.65 |
| 98  | 378 | 27  | 7.14  | 351 | 92.86 |
| 99  | 378 | 26  | 6.88  | 352 | 93.12 |
| 100 | 378 | 46  | 12.17 | 332 | 87.83 |
| 101 | 373 | 44  | 11.80 | 329 | 88.20 |
| 102 | 361 | 44  | 12.19 | 317 | 87.81 |
| 103 | 364 | 73  | 20.05 | 291 | 79.95 |
| 104 | 350 | 63  | 18.00 | 287 | 82.00 |
| 105 | 343 | 82  | 23.91 | 261 | 76.09 |
| 106 | 329 | 114 | 34.65 | 215 | 65.35 |
| 107 | 322 | 102 | 31.68 | 220 | 68.32 |
| 108 | 308 | 127 | 41.23 | 181 | 58.77 |

Classification report 2 of 3

IHO statistics a/b are : 0.500 0.013

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 19    | 361   | 109    | 30.19  | 252    | 69.81  |
| 20    | 366   | 133    | 36.34  | 233    | 63.66  |
| 21    | 375   | 95     | 25.33  | 280    | 74.67  |
| 22    | 375   | 158    | 42.13  | 217    | 57.87  |
| 23    | 377   | 144    | 38.20  | 233    | 61.80  |
| 24    | 369   | 117    | 31.71  | 252    | 68.29  |
| 25    | 376   | 154    | 40.96  | 222    | 59.04  |
| 26    | 377   | 120    | 31.83  | 257    | 68.17  |
| 27    | 377   | 87     | 23.08  | 290    | 76.92  |
| 28    | 377   | 133    | 35.28  | 244    | 64.72  |
| 29    | 376   | 135    | 35.90  | 241    | 64.10  |
| 30    | 378   | 96     | 25.40  | 282    | 74.60  |
| 31    | 376   | 120    | 31.91  | 256    | 68.09  |
| 32    | 375   | 105    | 28.00  | 270    | 72.00  |
| 33    | 378   | 81     | 21.43  | 297    | 78.57  |
| 34    | 377   | 113    | 29.97  | 264    | 70.03  |
| 35    | 376   | 66     | 17.55  | 310    | 82.45  |
| 36    | 378   | 68     | 17.99  | 310    | 82.01  |
| 37    | 378   | 70     | 18.52  | 308    | 81.48  |
| 38    | 378   | 43     | 11.38  | 335    | 88.62  |
| 39    | 378   | 29     | 7.67   | 349    | 92.33  |
| 40    | 378   | 41     | 10.85  | 337    | 89.15  |
| 41    | 378   | 22     | 5.82   | 356    | 94.18  |
| 42    | 378   | 24     | 6.35   | 354    | 93.65  |
| 43    | 378   | 33     | 8.73   | 345    | 91.27  |
| 44    | 378   | 32     | 8.47   | 346    | 91.53  |
| 45    | 378   | 30     | 7.94   | 348    | 92.06  |
| 46    | 378   | 31     | 8.20   | 347    | 91.80  |
| 47    | 378   | 22     | 5.82   | 356    | 94.18  |
| 48    | 378   | 25     | 6.61   | 353    | 93.39  |
| 49    | 378   | 21     | 5.56   | 357    | 94.44  |
| 50    | 378   | 18     | 4.76   | 360    | 95.24  |
| 51    | 377   | 12     | 3.18   | 365    | 96.82  |
| 52    | 378   | 21     | 5.56   | 357    | 94.44  |
| 53    | 378   | 18     | 4.76   | 360    | 95.24  |
| 54    | 378   | 10     | 2.65   | 368    | 97.35  |
| 55    | 378   | 8      | 2.12   | 370    | 97.88  |
| 56    | 378   | 5      | 1.32   | 373    | 98.68  |
| 57    | 378   | 2      | 0.53   | 376    | 99.47  |
| 58    | 377   | 9      | 2.39   | 368    | 97.61  |
| 59    | 377   | 5      | 1.33   | 372    | 98.67  |
| 60    | 377   | 1      | 0.27   | 376    | 99.73  |
| 61    | 378   | 1      | 0.26   | 377    | 99.74  |
| 62    | 378   | 0      | 0.00   | 378    | 100.00 |
| 63    | 378   | 0      | 0.00   | 378    | 100.00 |
| 64    | 378   | 0      | 0.00   | 378    | 100.00 |
| 65    | 378   | 1      | 0.26   | 377    | 99.74  |
| 66    | 378   | 0      | 0.00   | 378    | 100.00 |
| 67    | 378   | 0      | 0.00   | 378    | 100.00 |
| 68    | 378   | 0      | 0.00   | 378    | 100.00 |
| 69    | 378   | 0      | 0.00   | 378    | 100.00 |
| 70    | 378   | 0      | 0.00   | 378    | 100.00 |
| 71    | 378   | 0      | 0.00   | 378    | 100.00 |
| 72    | 378   | 0      | 0.00   | 378    | 100.00 |
| 73    | 378   | 0      | 0.00   | 378    | 100.00 |
| 74    | 378   | 0      | 0.00   | 378    | 100.00 |
| 75    | 378   | 0      | 0.00   | 378    | 100.00 |
| 76    | 377   | 0      | 0.00   | 377    | 100.00 |
| 77    | 378   | 0      | 0.00   | 378    | 100.00 |

|     |     |    |       |     |        |
|-----|-----|----|-------|-----|--------|
| 78  | 377 | 0  | 0.00  | 377 | 100.00 |
| 79  | 376 | 0  | 0.00  | 376 | 100.00 |
| 80  | 378 | 0  | 0.00  | 378 | 100.00 |
| 81  | 378 | 0  | 0.00  | 378 | 100.00 |
| 82  | 378 | 0  | 0.00  | 378 | 100.00 |
| 83  | 378 | 0  | 0.00  | 378 | 100.00 |
| 84  | 378 | 0  | 0.00  | 378 | 100.00 |
| 85  | 378 | 0  | 0.00  | 378 | 100.00 |
| 86  | 378 | 0  | 0.00  | 378 | 100.00 |
| 87  | 378 | 0  | 0.00  | 378 | 100.00 |
| 88  | 378 | 0  | 0.00  | 378 | 100.00 |
| 89  | 378 | 0  | 0.00  | 378 | 100.00 |
| 90  | 378 | 0  | 0.00  | 378 | 100.00 |
| 91  | 378 | 0  | 0.00  | 378 | 100.00 |
| 92  | 378 | 0  | 0.00  | 378 | 100.00 |
| 93  | 378 | 1  | 0.26  | 377 | 99.74  |
| 94  | 378 | 1  | 0.26  | 377 | 99.74  |
| 95  | 376 | 0  | 0.00  | 376 | 100.00 |
| 96  | 378 | 0  | 0.00  | 378 | 100.00 |
| 97  | 378 | 1  | 0.26  | 377 | 99.74  |
| 98  | 378 | 0  | 0.00  | 378 | 100.00 |
| 99  | 378 | 1  | 0.26  | 377 | 99.74  |
| 100 | 378 | 1  | 0.26  | 377 | 99.74  |
| 101 | 373 | 3  | 0.80  | 370 | 99.20  |
| 102 | 361 | 9  | 2.49  | 352 | 97.51  |
| 103 | 364 | 13 | 3.57  | 351 | 96.43  |
| 104 | 350 | 9  | 2.57  | 341 | 97.43  |
| 105 | 343 | 22 | 6.41  | 321 | 93.59  |
| 106 | 329 | 34 | 10.33 | 295 | 89.67  |
| 107 | 322 | 28 | 8.70  | 294 | 91.30  |
| 108 | 308 | 45 | 14.61 | 263 | 85.39  |

Classification report 3 of 3

IHO statistics a/b are : 1.000 0.023

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 19    | 361   | 0      | 0.00   | 361    | 100.00 |
| 20    | 366   | 0      | 0.00   | 366    | 100.00 |
| 21    | 375   | 0      | 0.00   | 375    | 100.00 |
| 22    | 375   | 1      | 0.27   | 374    | 99.73  |
| 23    | 377   | 2      | 0.53   | 375    | 99.47  |
| 24    | 369   | 0      | 0.00   | 369    | 100.00 |
| 25    | 376   | 1      | 0.27   | 375    | 99.73  |
| 26    | 377   | 0      | 0.00   | 377    | 100.00 |
| 27    | 377   | 0      | 0.00   | 377    | 100.00 |
| 28    | 377   | 1      | 0.27   | 376    | 99.73  |
| 29    | 376   | 1      | 0.27   | 375    | 99.73  |
| 30    | 378   | 0      | 0.00   | 378    | 100.00 |
| 31    | 376   | 0      | 0.00   | 376    | 100.00 |
| 32    | 375   | 0      | 0.00   | 375    | 100.00 |
| 33    | 378   | 0      | 0.00   | 378    | 100.00 |
| 34    | 377   | 0      | 0.00   | 377    | 100.00 |
| 35    | 376   | 0      | 0.00   | 376    | 100.00 |
| 36    | 378   | 0      | 0.00   | 378    | 100.00 |
| 37    | 378   | 0      | 0.00   | 378    | 100.00 |
| 38    | 378   | 0      | 0.00   | 378    | 100.00 |
| 39    | 378   | 0      | 0.00   | 378    | 100.00 |
| 40    | 378   | 0      | 0.00   | 378    | 100.00 |
| 41    | 378   | 0      | 0.00   | 378    | 100.00 |
| 42    | 378   | 0      | 0.00   | 378    | 100.00 |
| 43    | 378   | 0      | 0.00   | 378    | 100.00 |
| 44    | 378   | 0      | 0.00   | 378    | 100.00 |
| 45    | 378   | 0      | 0.00   | 378    | 100.00 |
| 46    | 378   | 0      | 0.00   | 378    | 100.00 |
| 47    | 378   | 0      | 0.00   | 378    | 100.00 |
| 48    | 378   | 0      | 0.00   | 378    | 100.00 |
| 49    | 378   | 0      | 0.00   | 378    | 100.00 |
| 50    | 378   | 0      | 0.00   | 378    | 100.00 |
| 51    | 377   | 0      | 0.00   | 377    | 100.00 |
| 52    | 378   | 0      | 0.00   | 378    | 100.00 |
| 53    | 378   | 0      | 0.00   | 378    | 100.00 |
| 54    | 378   | 0      | 0.00   | 378    | 100.00 |
| 55    | 378   | 0      | 0.00   | 378    | 100.00 |
| 56    | 378   | 0      | 0.00   | 378    | 100.00 |
| 57    | 378   | 0      | 0.00   | 378    | 100.00 |
| 58    | 377   | 0      | 0.00   | 377    | 100.00 |
| 59    | 377   | 0      | 0.00   | 377    | 100.00 |
| 60    | 377   | 0      | 0.00   | 377    | 100.00 |
| 61    | 378   | 0      | 0.00   | 378    | 100.00 |
| 62    | 378   | 0      | 0.00   | 378    | 100.00 |
| 63    | 378   | 0      | 0.00   | 378    | 100.00 |
| 64    | 378   | 0      | 0.00   | 378    | 100.00 |
| 65    | 378   | 0      | 0.00   | 378    | 100.00 |
| 66    | 378   | 0      | 0.00   | 378    | 100.00 |
| 67    | 378   | 0      | 0.00   | 378    | 100.00 |
| 68    | 378   | 0      | 0.00   | 378    | 100.00 |
| 69    | 378   | 0      | 0.00   | 378    | 100.00 |
| 70    | 378   | 0      | 0.00   | 378    | 100.00 |
| 71    | 378   | 0      | 0.00   | 378    | 100.00 |
| 72    | 378   | 0      | 0.00   | 378    | 100.00 |
| 73    | 378   | 0      | 0.00   | 378    | 100.00 |
| 74    | 378   | 0      | 0.00   | 378    | 100.00 |
| 75    | 378   | 0      | 0.00   | 378    | 100.00 |
| 76    | 377   | 0      | 0.00   | 377    | 100.00 |
| 77    | 378   | 0      | 0.00   | 378    | 100.00 |

|     |     |   |      |     |        |
|-----|-----|---|------|-----|--------|
| 78  | 377 | 0 | 0.00 | 377 | 100.00 |
| 79  | 376 | 0 | 0.00 | 376 | 100.00 |
| 80  | 378 | 0 | 0.00 | 378 | 100.00 |
| 81  | 378 | 0 | 0.00 | 378 | 100.00 |
| 82  | 378 | 0 | 0.00 | 378 | 100.00 |
| 83  | 378 | 0 | 0.00 | 378 | 100.00 |
| 84  | 378 | 0 | 0.00 | 378 | 100.00 |
| 85  | 378 | 0 | 0.00 | 378 | 100.00 |
| 86  | 378 | 0 | 0.00 | 378 | 100.00 |
| 87  | 378 | 0 | 0.00 | 378 | 100.00 |
| 88  | 378 | 0 | 0.00 | 378 | 100.00 |
| 89  | 378 | 0 | 0.00 | 378 | 100.00 |
| 90  | 378 | 0 | 0.00 | 378 | 100.00 |
| 91  | 378 | 0 | 0.00 | 378 | 100.00 |
| 92  | 378 | 0 | 0.00 | 378 | 100.00 |
| 93  | 378 | 0 | 0.00 | 378 | 100.00 |
| 94  | 378 | 0 | 0.00 | 378 | 100.00 |
| 95  | 376 | 0 | 0.00 | 376 | 100.00 |
| 96  | 378 | 0 | 0.00 | 378 | 100.00 |
| 97  | 378 | 0 | 0.00 | 378 | 100.00 |
| 98  | 378 | 0 | 0.00 | 378 | 100.00 |
| 99  | 378 | 0 | 0.00 | 378 | 100.00 |
| 100 | 378 | 0 | 0.00 | 378 | 100.00 |
| 101 | 373 | 0 | 0.00 | 373 | 100.00 |
| 102 | 361 | 0 | 0.00 | 361 | 100.00 |
| 103 | 364 | 0 | 0.00 | 364 | 100.00 |
| 104 | 350 | 0 | 0.00 | 350 | 100.00 |
| 105 | 343 | 0 | 0.00 | 343 | 100.00 |
| 106 | 329 | 2 | 0.61 | 327 | 99.39  |
| 107 | 322 | 1 | 0.31 | 321 | 99.69  |
| 108 | 308 | 6 | 1.95 | 302 | 98.05  |

**R5RE\_2003****DN085**

Quality Control Report for file : C:\Temp\2003\_Patch\_tests\Shilshole\_surface\r5\_dn085

Surface lines: used Shilshole reference surface

Checkline lines: 001\_2046\_pitchB\_8\_az294, 002\_2034\_pitch\_8\_az132, 004\_2055\_hdgB\_7\_az132, 005\_2057\_hdgB\_7\_az132

Elevation Range is : -27.579(m) -8.425(m)

Total number of 3D points used: 121570

Starting Time: 26-MAR-2003 20:34:27.72

Ending Time: 26-MAR-2003 20:58:51.22

Minimum tidal reduction: 2267 (mm)

Maximum tidal reduction: 2417 (mm)

| User# | Total | Max(+) | Max(-) | Mean   | Std.   | 3dm(%) | 5dm(%) | 1%(%) | 1.6%(%) |
|-------|-------|--------|--------|--------|--------|--------|--------|-------|---------|
| ===== | ===== | =====  | =====  | =====  | =====  | =====  | =====  | ===== | =====   |
| 1     | 334   | 3.443  | -6.490 | -0.216 | 0.8798 | 74.0   | 88.0   | 50.3  | 73.4    |
| 2     | 457   | 2.759  | -7.232 | -0.272 | 0.8985 | 77.2   | 90.8   | 51.2  | 78.6    |
| 3     | 511   | 2.740  | -6.719 | -0.285 | 0.9093 | 83.0   | 93.2   | 56.0  | 86.1    |
| 4     | 560   | 3.337  | -7.298 | -0.259 | 0.8500 | 88.4   | 94.6   | 63.9  | 87.7    |
| 5     | 595   | 3.793  | -6.650 | -0.164 | 0.6498 | 91.9   | 94.3   | 71.1  | 91.8    |
| 6     | 624   | 3.703  | -7.046 | -0.149 | 0.6006 | 90.9   | 95.0   | 71.3  | 91.3    |
| 7     | 637   | 3.414  | -5.364 | -0.143 | 0.5453 | 92.5   | 95.8   | 77.9  | 93.2    |
| 8     | 643   | 2.013  | -6.337 | -0.190 | 0.6598 | 91.6   | 95.8   | 81.6  | 92.2    |
| 9     | 656   | 2.216  | -6.529 | -0.195 | 0.7250 | 90.5   | 94.4   | 78.4  | 91.0    |
| 10    | 748   | 1.495  | -4.658 | -0.130 | 0.4465 | 92.0   | 96.0   | 84.9  | 92.4    |
| 11    | 1081  | 3.091  | -7.918 | -0.080 | 0.4334 | 93.7   | 96.6   | 88.4  | 93.8    |
| 12    | 1308  | 3.144  | -7.397 | -0.085 | 0.4945 | 94.6   | 95.9   | 89.9  | 94.6    |
| 13    | 1380  | 3.516  | -6.996 | -0.085 | 0.4771 | 93.6   | 95.3   | 89.3  | 93.8    |
| 14    | 1383  | 3.435  | -5.237 | -0.089 | 0.3967 | 92.8   | 94.5   | 90.4  | 93.1    |
| 15    | 1382  | 3.792  | -3.816 | -0.086 | 0.3740 | 93.4   | 95.1   | 91.5  | 93.8    |
| 16    | 1381  | 3.930  | -3.890 | -0.087 | 0.3926 | 93.1   | 94.9   | 91.0  | 93.3    |
| 17    | 1382  | 4.132  | -4.517 | -0.081 | 0.4334 | 93.1   | 94.6   | 91.3  | 93.2    |
| 18    | 1384  | 3.906  | -5.365 | -0.078 | 0.4425 | 93.7   | 95.4   | 90.3  | 93.8    |
| 19    | 1385  | 4.096  | -6.377 | -0.083 | 0.4949 | 94.4   | 96.0   | 90.5  | 94.6    |
| 20    | 1382  | 3.916  | -6.214 | -0.107 | 0.5449 | 94.1   | 95.8   | 89.9  | 94.4    |
| 21    | 1385  | 1.378  | -5.984 | -0.114 | 0.5310 | 94.2   | 96.2   | 90.5  | 94.3    |
| 22    | 1385  | 2.902  | -5.106 | -0.100 | 0.4638 | 94.1   | 95.9   | 91.3  | 94.0    |
| 23    | 1385  | 2.420  | -4.091 | -0.087 | 0.4082 | 94.0   | 95.7   | 91.5  | 94.2    |
| 24    | 1386  | 2.226  | -2.732 | -0.066 | 0.3215 | 94.3   | 95.7   | 91.7  | 94.1    |
| 25    | 1386  | 2.268  | -2.231 | -0.067 | 0.2816 | 94.6   | 95.5   | 91.1  | 94.6    |
| 26    | 1386  | 2.324  | -2.477 | -0.068 | 0.3068 | 93.6   | 95.3   | 91.3  | 93.7    |
| 27    | 1386  | 2.402  | -2.244 | -0.061 | 0.2946 | 95.0   | 95.9   | 91.8  | 95.2    |
| 28    | 1386  | 2.509  | -2.025 | -0.058 | 0.2833 | 95.2   | 96.0   | 92.3  | 95.2    |
| 29    | 1386  | 2.577  | -2.591 | -0.052 | 0.2680 | 95.6   | 96.3   | 92.6  | 95.5    |
| 30    | 1386  | 2.162  | -3.228 | -0.051 | 0.2657 | 95.5   | 96.2   | 93.0  | 95.6    |
| 31    | 1386  | 1.904  | -3.847 | -0.050 | 0.2781 | 95.2   | 96.2   | 93.8  | 95.3    |
| 32    | 1386  | 1.875  | -5.014 | -0.047 | 0.3221 | 94.5   | 96.4   | 93.3  | 94.9    |
| 33    | 1386  | 2.085  | -5.379 | -0.042 | 0.3360 | 94.8   | 97.0   | 92.4  | 95.5    |
| 34    | 1386  | 2.147  | -5.576 | -0.047 | 0.3643 | 94.2   | 96.8   | 92.3  | 94.8    |
| 35    | 1386  | 2.159  | -5.970 | -0.053 | 0.3771 | 94.0   | 95.7   | 92.1  | 94.2    |
| 36    | 1385  | 2.193  | -3.973 | -0.052 | 0.3310 | 93.2   | 95.2   | 91.3  | 93.8    |
| 37    | 1386  | 2.337  | -4.946 | -0.048 | 0.3829 | 92.9   | 94.8   | 90.8  | 93.1    |
| 38    | 1386  | 2.269  | -5.859 | -0.051 | 0.4150 | 92.7   | 94.9   | 90.7  | 92.7    |
| 39    | 1385  | 2.357  | -5.677 | -0.039 | 0.4018 | 93.1   | 95.1   | 90.8  | 93.1    |
| 40    | 1386  | 2.192  | -5.644 | -0.037 | 0.4002 | 92.9   | 95.2   | 90.7  | 93.1    |
| 41    | 1386  | 3.013  | -4.779 | -0.038 | 0.3751 | 93.1   | 95.4   | 91.3  | 93.4    |
| 42    | 1385  | 2.154  | -5.621 | -0.043 | 0.3958 | 93.6   | 95.2   | 91.4  | 93.6    |
| 43    | 1386  | 2.096  | -5.695 | -0.042 | 0.3948 | 93.4   | 95.2   | 91.2  | 93.6    |
| 44    | 1386  | 2.096  | -5.833 | -0.052 | 0.4153 | 92.9   | 94.7   | 91.3  | 93.0    |

|     |      |       |        |        |        |      |      |      |      |
|-----|------|-------|--------|--------|--------|------|------|------|------|
| 45  | 1385 | 3.003 | -5.510 | -0.054 | 0.4145 | 92.3 | 94.4 | 91.0 | 92.6 |
| 46  | 1382 | 2.033 | -5.858 | -0.054 | 0.4338 | 92.7 | 94.9 | 90.9 | 92.8 |
| 47  | 1385 | 2.077 | -5.892 | -0.059 | 0.4362 | 92.6 | 94.7 | 90.0 | 92.9 |
| 48  | 1386 | 2.328 | -6.199 | -0.067 | 0.4505 | 92.9 | 94.7 | 90.1 | 92.9 |
| 49  | 1386 | 2.333 | -6.364 | -0.064 | 0.4495 | 92.5 | 94.9 | 90.1 | 92.6 |
| 50  | 1385 | 3.227 | -6.551 | -0.051 | 0.4282 | 93.0 | 95.0 | 90.1 | 92.6 |
| 51  | 1384 | 2.508 | -5.604 | -0.044 | 0.4203 | 92.8 | 95.2 | 90.3 | 92.8 |
| 52  | 1378 | 2.610 | -5.580 | -0.052 | 0.4291 | 92.4 | 94.5 | 90.1 | 92.4 |
| 53  | 1383 | 3.624 | -5.753 | -0.046 | 0.4021 | 92.9 | 94.4 | 90.5 | 92.8 |
| 54  | 1384 | 2.550 | -5.937 | -0.055 | 0.4189 | 93.4 | 94.7 | 90.8 | 93.4 |
| 55  | 1386 | 2.478 | -6.167 | -0.050 | 0.4140 | 93.4 | 95.1 | 91.2 | 93.4 |
| 56  | 1386 | 2.339 | -6.069 | -0.045 | 0.4072 | 93.4 | 95.7 | 91.7 | 93.6 |
| 57  | 1386 | 2.238 | -6.343 | -0.046 | 0.4362 | 93.9 | 96.0 | 92.2 | 94.1 |
| 58  | 1386 | 2.595 | -6.713 | -0.037 | 0.4163 | 94.2 | 96.2 | 92.1 | 94.6 |
| 59  | 1383 | 2.286 | -6.891 | -0.040 | 0.4395 | 94.9 | 96.5 | 93.2 | 94.9 |
| 60  | 1384 | 2.848 | -6.924 | -0.040 | 0.4190 | 94.9 | 96.2 | 93.1 | 95.2 |
| 61  | 1381 | 2.165 | -7.068 | -0.046 | 0.4393 | 95.1 | 96.3 | 93.8 | 95.1 |
| 62  | 1384 | 2.072 | -7.161 | -0.041 | 0.4444 | 95.0 | 96.1 | 93.9 | 95.2 |
| 63  | 1386 | 2.065 | -7.254 | -0.045 | 0.4462 | 95.5 | 96.4 | 94.2 | 95.5 |
| 64  | 1386 | 2.045 | -7.363 | -0.050 | 0.4448 | 95.5 | 96.6 | 95.0 | 95.7 |
| 65  | 1385 | 2.102 | -7.327 | -0.046 | 0.4391 | 95.4 | 96.6 | 94.5 | 95.7 |
| 66  | 1382 | 2.187 | -7.457 | -0.045 | 0.4416 | 95.7 | 96.7 | 95.1 | 95.8 |
| 67  | 1379 | 2.219 | -7.672 | -0.045 | 0.4403 | 96.2 | 97.3 | 95.4 | 96.5 |
| 68  | 1381 | 2.374 | -6.655 | -0.040 | 0.3920 | 96.4 | 97.4 | 95.4 | 96.5 |
| 69  | 1382 | 2.546 | -7.014 | -0.043 | 0.4014 | 96.3 | 97.5 | 94.7 | 96.5 |
| 70  | 1384 | 2.562 | -6.972 | -0.047 | 0.3959 | 96.5 | 97.8 | 95.2 | 96.6 |
| 71  | 1382 | 2.597 | -7.194 | -0.047 | 0.4056 | 96.9 | 98.0 | 95.7 | 97.0 |
| 72  | 1384 | 2.442 | -7.250 | -0.048 | 0.4095 | 97.0 | 98.0 | 95.5 | 97.3 |
| 73  | 1383 | 2.570 | -7.115 | -0.050 | 0.4100 | 96.7 | 97.8 | 94.5 | 96.9 |
| 74  | 1380 | 2.863 | -7.401 | -0.054 | 0.4270 | 96.6 | 97.8 | 94.5 | 96.6 |
| 75  | 1382 | 2.928 | -7.624 | -0.062 | 0.4484 | 96.1 | 97.4 | 93.6 | 96.4 |
| 76  | 1383 | 3.138 | -7.389 | -0.075 | 0.4627 | 95.7 | 97.0 | 91.9 | 96.0 |
| 77  | 1382 | 3.276 | -7.509 | -0.091 | 0.4916 | 95.2 | 95.9 | 91.2 | 94.7 |
| 78  | 1380 | 3.376 | -7.099 | -0.094 | 0.4880 | 94.3 | 95.9 | 91.1 | 93.9 |
| 79  | 1381 | 3.615 | -7.567 | -0.101 | 0.5233 | 94.3 | 95.6 | 91.0 | 94.2 |
| 80  | 1379 | 3.834 | -8.007 | -0.100 | 0.5285 | 94.0 | 95.0 | 90.9 | 93.7 |
| 81  | 1379 | 3.972 | -8.097 | -0.091 | 0.5339 | 94.1 | 95.5 | 90.9 | 93.7 |
| 82  | 1381 | 4.151 | -8.268 | -0.085 | 0.5649 | 94.2 | 95.7 | 89.6 | 93.9 |
| 83  | 1380 | 3.624 | -7.885 | -0.079 | 0.5314 | 94.3 | 95.9 | 89.7 | 93.6 |
| 84  | 1378 | 4.096 | -8.699 | -0.085 | 0.5894 | 94.0 | 95.3 | 89.6 | 93.7 |
| 85  | 1376 | 4.529 | -7.657 | -0.072 | 0.5141 | 94.0 | 95.1 | 89.5 | 93.8 |
| 86  | 1373 | 3.498 | -8.203 | -0.098 | 0.5469 | 93.7 | 95.9 | 90.2 | 93.1 |
| 87  | 1370 | 3.729 | -7.691 | -0.091 | 0.4880 | 94.9 | 97.4 | 91.2 | 94.9 |
| 88  | 1370 | 4.090 | -6.822 | -0.086 | 0.4473 | 94.7 | 97.5 | 90.0 | 94.6 |
| 89  | 1357 | 3.889 | -7.395 | -0.088 | 0.4980 | 94.7 | 97.2 | 89.1 | 94.6 |
| 90  | 1330 | 3.110 | -7.164 | -0.092 | 0.4784 | 94.7 | 97.5 | 88.4 | 94.9 |
| 91  | 1182 | 3.011 | -7.718 | -0.116 | 0.5589 | 94.2 | 97.2 | 87.1 | 94.5 |
| 92  | 839  | 3.178 | -7.699 | -0.134 | 0.6323 | 94.3 | 97.4 | 80.3 | 94.2 |
| 93  | 593  | 2.193 | -7.430 | -0.161 | 0.6255 | 93.8 | 96.1 | 70.5 | 93.9 |
| 94  | 496  | 1.935 | -5.447 | -0.144 | 0.4450 | 95.0 | 96.8 | 65.1 | 93.8 |
| 95  | 475  | 1.897 | -2.186 | -0.125 | 0.2538 | 93.1 | 97.1 | 61.9 | 91.2 |
| 96  | 433  | 4.737 | -2.262 | -0.111 | 0.4201 | 92.4 | 96.8 | 55.2 | 90.8 |
| 97  | 388  | 3.910 | -1.377 | -0.117 | 0.3639 | 90.2 | 96.9 | 52.1 | 84.0 |
| 98  | 357  | 3.730 | -0.927 | -0.144 | 0.3782 | 83.8 | 94.1 | 45.7 | 75.4 |
| 99  | 326  | 3.349 | -1.128 | -0.146 | 0.4350 | 73.6 | 90.8 | 40.8 | 66.6 |
| 100 | 294  | 3.510 | -1.185 | -0.172 | 0.4819 | 56.1 | 79.9 | 28.9 | 52.0 |
| 101 | 227  | 1.040 | -1.345 | -0.176 | 0.4935 | 39.2 | 63.0 | 27.8 | 40.5 |

Classification report 1 of 3

IHO statistics a/b are : 0.250 0.008

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 1     | 334   | 92     | 27.54  | 242    | 72.46  |
| 2     | 457   | 111    | 24.29  | 346    | 75.71  |
| 3     | 511   | 89     | 17.42  | 422    | 82.58  |
| 4     | 560   | 75     | 13.39  | 485    | 86.61  |
| 5     | 595   | 52     | 8.74   | 543    | 91.26  |
| 6     | 624   | 63     | 10.10  | 561    | 89.90  |
| 7     | 637   | 49     | 7.69   | 588    | 92.31  |
| 8     | 643   | 55     | 8.55   | 588    | 91.45  |
| 9     | 656   | 66     | 10.06  | 590    | 89.94  |
| 10    | 748   | 62     | 8.29   | 686    | 91.71  |
| 11    | 1081  | 73     | 6.75   | 1008   | 93.25  |
| 12    | 1308  | 75     | 5.73   | 1233   | 94.27  |
| 13    | 1380  | 90     | 6.52   | 1290   | 93.48  |
| 14    | 1383  | 102    | 7.38   | 1281   | 92.62  |
| 15    | 1382  | 91     | 6.58   | 1291   | 93.42  |
| 16    | 1381  | 98     | 7.10   | 1283   | 92.90  |
| 17    | 1382  | 97     | 7.02   | 1285   | 92.98  |
| 18    | 1384  | 92     | 6.65   | 1292   | 93.35  |
| 19    | 1385  | 80     | 5.78   | 1305   | 94.22  |
| 20    | 1382  | 84     | 6.08   | 1298   | 93.92  |
| 21    | 1385  | 82     | 5.92   | 1303   | 94.08  |
| 22    | 1385  | 86     | 6.21   | 1299   | 93.79  |
| 23    | 1385  | 84     | 6.06   | 1301   | 93.94  |
| 24    | 1386  | 83     | 5.99   | 1303   | 94.01  |
| 25    | 1386  | 80     | 5.77   | 1306   | 94.23  |
| 26    | 1386  | 91     | 6.57   | 1295   | 93.43  |
| 27    | 1386  | 71     | 5.12   | 1315   | 94.88  |
| 28    | 1386  | 68     | 4.91   | 1318   | 95.09  |
| 29    | 1386  | 63     | 4.55   | 1323   | 95.45  |
| 30    | 1386  | 66     | 4.76   | 1320   | 95.24  |
| 31    | 1386  | 66     | 4.76   | 1320   | 95.24  |
| 32    | 1386  | 76     | 5.48   | 1310   | 94.52  |
| 33    | 1386  | 72     | 5.19   | 1314   | 94.81  |
| 34    | 1386  | 84     | 6.06   | 1302   | 93.94  |
| 35    | 1386  | 84     | 6.06   | 1302   | 93.94  |
| 36    | 1385  | 94     | 6.79   | 1291   | 93.21  |
| 37    | 1386  | 99     | 7.14   | 1287   | 92.86  |
| 38    | 1386  | 104    | 7.50   | 1282   | 92.50  |
| 39    | 1385  | 99     | 7.15   | 1286   | 92.85  |
| 40    | 1386  | 105    | 7.58   | 1281   | 92.42  |
| 41    | 1386  | 95     | 6.85   | 1291   | 93.15  |
| 42    | 1385  | 91     | 6.57   | 1294   | 93.43  |
| 43    | 1386  | 96     | 6.93   | 1290   | 93.07  |
| 44    | 1386  | 99     | 7.14   | 1287   | 92.86  |
| 45    | 1385  | 107    | 7.73   | 1278   | 92.27  |
| 46    | 1382  | 103    | 7.45   | 1279   | 92.55  |
| 47    | 1385  | 104    | 7.51   | 1281   | 92.49  |
| 48    | 1386  | 101    | 7.29   | 1285   | 92.71  |
| 49    | 1386  | 107    | 7.72   | 1279   | 92.28  |
| 50    | 1385  | 106    | 7.65   | 1279   | 92.35  |
| 51    | 1384  | 103    | 7.44   | 1281   | 92.56  |
| 52    | 1378  | 108    | 7.84   | 1270   | 92.16  |
| 53    | 1383  | 101    | 7.30   | 1282   | 92.70  |
| 54    | 1384  | 93     | 6.72   | 1291   | 93.28  |
| 55    | 1386  | 93     | 6.71   | 1293   | 93.29  |
| 56    | 1386  | 92     | 6.64   | 1294   | 93.36  |
| 57    | 1386  | 87     | 6.28   | 1299   | 93.72  |
| 58    | 1386  | 82     | 5.92   | 1304   | 94.08  |
| 59    | 1383  | 73     | 5.28   | 1310   | 94.72  |

|     |      |     |       |      |       |
|-----|------|-----|-------|------|-------|
| 60  | 1384 | 71  | 5.13  | 1313 | 94.87 |
| 61  | 1381 | 70  | 5.07  | 1311 | 94.93 |
| 62  | 1384 | 71  | 5.13  | 1313 | 94.87 |
| 63  | 1386 | 65  | 4.69  | 1321 | 95.31 |
| 64  | 1386 | 63  | 4.55  | 1323 | 95.45 |
| 65  | 1385 | 64  | 4.62  | 1321 | 95.38 |
| 66  | 1382 | 60  | 4.34  | 1322 | 95.66 |
| 67  | 1379 | 52  | 3.77  | 1327 | 96.23 |
| 68  | 1381 | 51  | 3.69  | 1330 | 96.31 |
| 69  | 1382 | 51  | 3.69  | 1331 | 96.31 |
| 70  | 1384 | 48  | 3.47  | 1336 | 96.53 |
| 71  | 1382 | 43  | 3.11  | 1339 | 96.89 |
| 72  | 1384 | 42  | 3.03  | 1342 | 96.97 |
| 73  | 1383 | 46  | 3.33  | 1337 | 96.67 |
| 74  | 1380 | 48  | 3.48  | 1332 | 96.52 |
| 75  | 1382 | 56  | 4.05  | 1326 | 95.95 |
| 76  | 1383 | 63  | 4.56  | 1320 | 95.44 |
| 77  | 1382 | 73  | 5.28  | 1309 | 94.72 |
| 78  | 1380 | 84  | 6.09  | 1296 | 93.91 |
| 79  | 1381 | 81  | 5.87  | 1300 | 94.13 |
| 80  | 1379 | 84  | 6.09  | 1295 | 93.91 |
| 81  | 1379 | 87  | 6.31  | 1292 | 93.69 |
| 82  | 1381 | 83  | 6.01  | 1298 | 93.99 |
| 83  | 1380 | 85  | 6.16  | 1295 | 93.84 |
| 84  | 1378 | 86  | 6.24  | 1292 | 93.76 |
| 85  | 1376 | 83  | 6.03  | 1293 | 93.97 |
| 86  | 1373 | 90  | 6.55  | 1283 | 93.45 |
| 87  | 1370 | 74  | 5.40  | 1296 | 94.60 |
| 88  | 1370 | 80  | 5.84  | 1290 | 94.16 |
| 89  | 1357 | 72  | 5.31  | 1285 | 94.69 |
| 90  | 1330 | 73  | 5.49  | 1257 | 94.51 |
| 91  | 1182 | 72  | 6.09  | 1110 | 93.91 |
| 92  | 839  | 49  | 5.84  | 790  | 94.16 |
| 93  | 593  | 39  | 6.58  | 554  | 93.42 |
| 94  | 496  | 31  | 6.25  | 465  | 93.75 |
| 95  | 475  | 45  | 9.47  | 430  | 90.53 |
| 96  | 433  | 44  | 10.16 | 389  | 89.84 |
| 97  | 388  | 50  | 12.89 | 338  | 87.11 |
| 98  | 357  | 78  | 21.85 | 279  | 78.15 |
| 99  | 326  | 104 | 31.90 | 222  | 68.10 |
| 100 | 294  | 144 | 48.98 | 150  | 51.02 |
| 101 | 227  | 142 | 62.56 | 85   | 37.44 |

Classification report 2 of 3

IHO statistics a/b are : 0.500 0.013

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 1     | 334   | 32     | 9.58   | 302    | 90.42  |
| 2     | 457   | 34     | 7.44   | 423    | 92.56  |
| 3     | 511   | 30     | 5.87   | 481    | 94.13  |
| 4     | 560   | 28     | 5.00   | 532    | 95.00  |
| 5     | 595   | 32     | 5.38   | 563    | 94.62  |
| 6     | 624   | 26     | 4.17   | 598    | 95.83  |
| 7     | 637   | 25     | 3.92   | 612    | 96.08  |
| 8     | 643   | 25     | 3.89   | 618    | 96.11  |
| 9     | 656   | 33     | 5.03   | 623    | 94.97  |
| 10    | 748   | 28     | 3.74   | 720    | 96.26  |
| 11    | 1081  | 37     | 3.42   | 1044   | 96.58  |
| 12    | 1308  | 51     | 3.90   | 1257   | 96.10  |
| 13    | 1380  | 60     | 4.35   | 1320   | 95.65  |
| 14    | 1383  | 73     | 5.28   | 1310   | 94.72  |
| 15    | 1382  | 65     | 4.70   | 1317   | 95.30  |
| 16    | 1381  | 66     | 4.78   | 1315   | 95.22  |
| 17    | 1382  | 70     | 5.07   | 1312   | 94.93  |
| 18    | 1384  | 60     | 4.34   | 1324   | 95.66  |
| 19    | 1385  | 51     | 3.68   | 1334   | 96.32  |
| 20    | 1382  | 54     | 3.91   | 1328   | 96.09  |
| 21    | 1385  | 48     | 3.47   | 1337   | 96.53  |
| 22    | 1385  | 53     | 3.83   | 1332   | 96.17  |
| 23    | 1385  | 57     | 4.12   | 1328   | 95.88  |
| 24    | 1386  | 57     | 4.11   | 1329   | 95.89  |
| 25    | 1386  | 59     | 4.26   | 1327   | 95.74  |
| 26    | 1386  | 62     | 4.47   | 1324   | 95.53  |
| 27    | 1386  | 55     | 3.97   | 1331   | 96.03  |
| 28    | 1386  | 53     | 3.82   | 1333   | 96.18  |
| 29    | 1386  | 51     | 3.68   | 1335   | 96.32  |
| 30    | 1386  | 49     | 3.54   | 1337   | 96.46  |
| 31    | 1386  | 51     | 3.68   | 1335   | 96.32  |
| 32    | 1386  | 42     | 3.03   | 1344   | 96.97  |
| 33    | 1386  | 34     | 2.45   | 1352   | 97.55  |
| 34    | 1386  | 40     | 2.89   | 1346   | 97.11  |
| 35    | 1386  | 52     | 3.75   | 1334   | 96.25  |
| 36    | 1385  | 61     | 4.40   | 1324   | 95.60  |
| 37    | 1386  | 66     | 4.76   | 1320   | 95.24  |
| 38    | 1386  | 68     | 4.91   | 1318   | 95.09  |
| 39    | 1385  | 65     | 4.69   | 1320   | 95.31  |
| 40    | 1386  | 64     | 4.62   | 1322   | 95.38  |
| 41    | 1386  | 59     | 4.26   | 1327   | 95.74  |
| 42    | 1385  | 62     | 4.48   | 1323   | 95.52  |
| 43    | 1386  | 63     | 4.55   | 1323   | 95.45  |
| 44    | 1386  | 67     | 4.83   | 1319   | 95.17  |
| 45    | 1385  | 70     | 5.05   | 1315   | 94.95  |
| 46    | 1382  | 64     | 4.63   | 1318   | 95.37  |
| 47    | 1385  | 71     | 5.13   | 1314   | 94.87  |
| 48    | 1386  | 70     | 5.05   | 1316   | 94.95  |
| 49    | 1386  | 69     | 4.98   | 1317   | 95.02  |
| 50    | 1385  | 66     | 4.77   | 1319   | 95.23  |
| 51    | 1384  | 65     | 4.70   | 1319   | 95.30  |
| 52    | 1378  | 72     | 5.22   | 1306   | 94.78  |
| 53    | 1383  | 74     | 5.35   | 1309   | 94.65  |
| 54    | 1384  | 69     | 4.99   | 1315   | 95.01  |
| 55    | 1386  | 63     | 4.55   | 1323   | 95.45  |
| 56    | 1386  | 57     | 4.11   | 1329   | 95.89  |
| 57    | 1386  | 48     | 3.46   | 1338   | 96.54  |
| 58    | 1386  | 47     | 3.39   | 1339   | 96.61  |
| 59    | 1383  | 46     | 3.33   | 1337   | 96.67  |

|     |      |    |       |      |       |
|-----|------|----|-------|------|-------|
| 60  | 1384 | 48 | 3.47  | 1336 | 96.53 |
| 61  | 1381 | 42 | 3.04  | 1339 | 96.96 |
| 62  | 1384 | 45 | 3.25  | 1339 | 96.75 |
| 63  | 1386 | 45 | 3.25  | 1341 | 96.75 |
| 64  | 1386 | 42 | 3.03  | 1344 | 96.97 |
| 65  | 1385 | 42 | 3.03  | 1343 | 96.97 |
| 66  | 1382 | 40 | 2.89  | 1342 | 97.11 |
| 67  | 1379 | 36 | 2.61  | 1343 | 97.39 |
| 68  | 1381 | 35 | 2.53  | 1346 | 97.47 |
| 69  | 1382 | 33 | 2.39  | 1349 | 97.61 |
| 70  | 1384 | 28 | 2.02  | 1356 | 97.98 |
| 71  | 1382 | 24 | 1.74  | 1358 | 98.26 |
| 72  | 1384 | 23 | 1.66  | 1361 | 98.34 |
| 73  | 1383 | 25 | 1.81  | 1358 | 98.19 |
| 74  | 1380 | 29 | 2.10  | 1351 | 97.90 |
| 75  | 1382 | 32 | 2.32  | 1350 | 97.68 |
| 76  | 1383 | 39 | 2.82  | 1344 | 97.18 |
| 77  | 1382 | 52 | 3.76  | 1330 | 96.24 |
| 78  | 1380 | 55 | 3.99  | 1325 | 96.01 |
| 79  | 1381 | 58 | 4.20  | 1323 | 95.80 |
| 80  | 1379 | 66 | 4.79  | 1313 | 95.21 |
| 81  | 1379 | 60 | 4.35  | 1319 | 95.65 |
| 82  | 1381 | 58 | 4.20  | 1323 | 95.80 |
| 83  | 1380 | 56 | 4.06  | 1324 | 95.94 |
| 84  | 1378 | 62 | 4.50  | 1316 | 95.50 |
| 85  | 1376 | 61 | 4.43  | 1315 | 95.57 |
| 86  | 1373 | 54 | 3.93  | 1319 | 96.07 |
| 87  | 1370 | 35 | 2.55  | 1335 | 97.45 |
| 88  | 1370 | 31 | 2.26  | 1339 | 97.74 |
| 89  | 1357 | 31 | 2.28  | 1326 | 97.72 |
| 90  | 1330 | 26 | 1.95  | 1304 | 98.05 |
| 91  | 1182 | 25 | 2.12  | 1157 | 97.88 |
| 92  | 839  | 21 | 2.50  | 818  | 97.50 |
| 93  | 593  | 21 | 3.54  | 572  | 96.46 |
| 94  | 496  | 14 | 2.82  | 482  | 97.18 |
| 95  | 475  | 12 | 2.53  | 463  | 97.47 |
| 96  | 433  | 14 | 3.23  | 419  | 96.77 |
| 97  | 388  | 12 | 3.09  | 376  | 96.91 |
| 98  | 357  | 17 | 4.76  | 340  | 95.24 |
| 99  | 326  | 25 | 7.67  | 301  | 92.33 |
| 100 | 294  | 48 | 16.33 | 246  | 83.67 |
| 101 | 227  | 68 | 29.96 | 159  | 70.04 |

Classification report 3 of 3

IHO statistics a/b are : 1.000 0.023

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 1     | 334   | 20     | 5.99   | 314    | 94.01  |
| 2     | 457   | 22     | 4.81   | 435    | 95.19  |
| 3     | 511   | 22     | 4.31   | 489    | 95.69  |
| 4     | 560   | 26     | 4.64   | 534    | 95.36  |
| 5     | 595   | 25     | 4.20   | 570    | 95.80  |
| 6     | 624   | 21     | 3.37   | 603    | 96.63  |
| 7     | 637   | 19     | 2.98   | 618    | 97.02  |
| 8     | 643   | 20     | 3.11   | 623    | 96.89  |
| 9     | 656   | 22     | 3.35   | 634    | 96.65  |
| 10    | 748   | 17     | 2.27   | 731    | 97.73  |
| 11    | 1081  | 20     | 1.85   | 1061   | 98.15  |
| 12    | 1308  | 29     | 2.22   | 1279   | 97.78  |
| 13    | 1380  | 35     | 2.54   | 1345   | 97.46  |
| 14    | 1383  | 41     | 2.96   | 1342   | 97.04  |
| 15    | 1382  | 40     | 2.89   | 1342   | 97.11  |
| 16    | 1381  | 41     | 2.97   | 1340   | 97.03  |
| 17    | 1382  | 40     | 2.89   | 1342   | 97.11  |
| 18    | 1384  | 39     | 2.82   | 1345   | 97.18  |
| 19    | 1385  | 36     | 2.60   | 1349   | 97.40  |
| 20    | 1382  | 31     | 2.24   | 1351   | 97.76  |
| 21    | 1385  | 30     | 2.17   | 1355   | 97.83  |
| 22    | 1385  | 32     | 2.31   | 1353   | 97.69  |
| 23    | 1385  | 37     | 2.67   | 1348   | 97.33  |
| 24    | 1386  | 37     | 2.67   | 1349   | 97.33  |
| 25    | 1386  | 35     | 2.53   | 1351   | 97.47  |
| 26    | 1386  | 35     | 2.53   | 1351   | 97.47  |
| 27    | 1386  | 33     | 2.38   | 1353   | 97.62  |
| 28    | 1386  | 34     | 2.45   | 1352   | 97.55  |
| 29    | 1386  | 28     | 2.02   | 1358   | 97.98  |
| 30    | 1386  | 23     | 1.66   | 1363   | 98.34  |
| 31    | 1386  | 15     | 1.08   | 1371   | 98.92  |
| 32    | 1386  | 20     | 1.44   | 1366   | 98.56  |
| 33    | 1386  | 19     | 1.37   | 1367   | 98.63  |
| 34    | 1386  | 20     | 1.44   | 1366   | 98.56  |
| 35    | 1386  | 21     | 1.52   | 1365   | 98.48  |
| 36    | 1385  | 33     | 2.38   | 1352   | 97.62  |
| 37    | 1386  | 41     | 2.96   | 1345   | 97.04  |
| 38    | 1386  | 45     | 3.25   | 1341   | 96.75  |
| 39    | 1385  | 40     | 2.89   | 1345   | 97.11  |
| 40    | 1386  | 40     | 2.89   | 1346   | 97.11  |
| 41    | 1386  | 37     | 2.67   | 1349   | 97.33  |
| 42    | 1385  | 37     | 2.67   | 1348   | 97.33  |
| 43    | 1386  | 33     | 2.38   | 1353   | 97.62  |
| 44    | 1386  | 39     | 2.81   | 1347   | 97.19  |
| 45    | 1385  | 46     | 3.32   | 1339   | 96.68  |
| 46    | 1382  | 43     | 3.11   | 1339   | 96.89  |
| 47    | 1385  | 41     | 2.96   | 1344   | 97.04  |
| 48    | 1386  | 41     | 2.96   | 1345   | 97.04  |
| 49    | 1386  | 43     | 3.10   | 1343   | 96.90  |
| 50    | 1385  | 39     | 2.82   | 1346   | 97.18  |
| 51    | 1384  | 37     | 2.67   | 1347   | 97.33  |
| 52    | 1378  | 41     | 2.98   | 1337   | 97.02  |
| 53    | 1383  | 37     | 2.68   | 1346   | 97.32  |
| 54    | 1384  | 34     | 2.46   | 1350   | 97.54  |
| 55    | 1386  | 30     | 2.16   | 1356   | 97.84  |
| 56    | 1386  | 30     | 2.16   | 1356   | 97.84  |
| 57    | 1386  | 29     | 2.09   | 1357   | 97.91  |
| 58    | 1386  | 29     | 2.09   | 1357   | 97.91  |
| 59    | 1383  | 27     | 1.95   | 1356   | 98.05  |

|     |      |    |      |      |       |
|-----|------|----|------|------|-------|
| 60  | 1384 | 30 | 2.17 | 1354 | 97.83 |
| 61  | 1381 | 28 | 2.03 | 1353 | 97.97 |
| 62  | 1384 | 28 | 2.02 | 1356 | 97.98 |
| 63  | 1386 | 28 | 2.02 | 1358 | 97.98 |
| 64  | 1386 | 28 | 2.02 | 1358 | 97.98 |
| 65  | 1385 | 25 | 1.81 | 1360 | 98.19 |
| 66  | 1382 | 27 | 1.95 | 1355 | 98.05 |
| 67  | 1379 | 25 | 1.81 | 1354 | 98.19 |
| 68  | 1381 | 26 | 1.88 | 1355 | 98.12 |
| 69  | 1382 | 23 | 1.66 | 1359 | 98.34 |
| 70  | 1384 | 20 | 1.45 | 1364 | 98.55 |
| 71  | 1382 | 20 | 1.45 | 1362 | 98.55 |
| 72  | 1384 | 19 | 1.37 | 1365 | 98.63 |
| 73  | 1383 | 20 | 1.45 | 1363 | 98.55 |
| 74  | 1380 | 24 | 1.74 | 1356 | 98.26 |
| 75  | 1382 | 27 | 1.95 | 1355 | 98.05 |
| 76  | 1383 | 33 | 2.39 | 1350 | 97.61 |
| 77  | 1382 | 36 | 2.60 | 1346 | 97.40 |
| 78  | 1380 | 43 | 3.12 | 1337 | 96.88 |
| 79  | 1381 | 47 | 3.40 | 1334 | 96.60 |
| 80  | 1379 | 46 | 3.34 | 1333 | 96.66 |
| 81  | 1379 | 40 | 2.90 | 1339 | 97.10 |
| 82  | 1381 | 42 | 3.04 | 1339 | 96.96 |
| 83  | 1380 | 37 | 2.68 | 1343 | 97.32 |
| 84  | 1378 | 35 | 2.54 | 1343 | 97.46 |
| 85  | 1376 | 35 | 2.54 | 1341 | 97.46 |
| 86  | 1373 | 26 | 1.89 | 1347 | 98.11 |
| 87  | 1370 | 20 | 1.46 | 1350 | 98.54 |
| 88  | 1370 | 20 | 1.46 | 1350 | 98.54 |
| 89  | 1357 | 20 | 1.47 | 1337 | 98.53 |
| 90  | 1330 | 22 | 1.65 | 1308 | 98.35 |
| 91  | 1182 | 19 | 1.61 | 1163 | 98.39 |
| 92  | 839  | 18 | 2.15 | 821  | 97.85 |
| 93  | 593  | 19 | 3.20 | 574  | 96.80 |
| 94  | 496  | 10 | 2.02 | 486  | 97.98 |
| 95  | 475  | 8  | 1.68 | 467  | 98.32 |
| 96  | 433  | 11 | 2.54 | 422  | 97.46 |
| 97  | 388  | 8  | 2.06 | 380  | 97.94 |
| 98  | 357  | 7  | 1.96 | 350  | 98.04 |
| 99  | 326  | 9  | 2.76 | 317  | 97.24 |
| 100 | 294  | 7  | 2.38 | 287  | 97.62 |
| 101 | 227  | 3  | 1.32 | 224  | 98.68 |

**R5RE\_2003****DN188**

Quality Control Report for file : C:\Temp\2003\_Patch\_tests\R5RE\_DN188\checkline

Surface lines: 012\_2131, 013\_2138, 014\_2059, 014\_2107

Checkline lines: 015\_2116, 016\_2123

Elevation Range is : -165.320(m) -114.240(m)

Total number of 3D points used: 88242

Starting Time: 7-JUL-2003 21:16:17.10

Ending Time: 7-JUL-2003 21:29:17.25

Minimum tidal reduction: 444 (mm)

Maximum tidal reduction: 495 (mm)

| User# | Total | Max(+) | Max(-) | Mean   | Std.   | 3dm(%) | 5dm(%) | 1%(%) | 1.6%(%) |
|-------|-------|--------|--------|--------|--------|--------|--------|-------|---------|
| ===== | ===== | =====  | =====  | =====  | =====  | =====  | =====  | ===== | =====   |
| 10    | 6     | 1.525  | -0.303 | 0.625  | 0.7526 | 16.7   | 33.3   | 83.3  | 100.0   |
| 11    | 28    | 1.647  | -2.234 | 0.402  | 0.9553 | 25.0   | 32.1   | 82.1  | 100.0   |
| 12    | 90    | 2.403  | -1.909 | 0.585  | 0.9326 | 20.0   | 28.9   | 78.9  | 98.9    |
| 13    | 197   | 2.377  | -2.246 | 0.533  | 0.9470 | 16.2   | 28.4   | 80.7  | 99.5    |
| 14    | 416   | 3.057  | -3.308 | 0.490  | 0.9894 | 13.7   | 25.5   | 82.0  | 97.6    |
| 15    | 641   | 2.871  | -2.712 | 0.361  | 0.9419 | 18.6   | 28.9   | 86.6  | 98.9    |
| 16    | 829   | 2.725  | -2.619 | 0.282  | 0.7990 | 22.3   | 38.4   | 92.0  | 99.4    |
| 17    | 1013  | 2.339  | -3.322 | 0.190  | 0.7977 | 23.9   | 41.8   | 92.4  | 99.6    |
| 18    | 1133  | 2.878  | -3.073 | 0.045  | 0.7692 | 29.8   | 51.2   | 93.0  | 99.2    |
| 19    | 1175  | 2.766  | -2.397 | 0.027  | 0.6889 | 32.3   | 58.1   | 95.2  | 99.7    |
| 20    | 1197  | 1.929  | -2.780 | -0.093 | 0.6313 | 39.7   | 61.6   | 96.0  | 99.7    |
| 21    | 1222  | 1.559  | -2.343 | -0.113 | 0.6188 | 37.8   | 62.8   | 96.7  | 99.9    |
| 22    | 1232  | 1.335  | -2.505 | -0.164 | 0.6343 | 40.2   | 63.6   | 95.9  | 99.6    |
| 23    | 1236  | 1.101  | -2.991 | -0.217 | 0.6384 | 40.4   | 64.7   | 95.0  | 99.4    |
| 24    | 1234  | 1.035  | -3.294 | -0.286 | 0.6370 | 45.1   | 64.0   | 93.8  | 99.4    |
| 25    | 1238  | 1.016  | -3.174 | -0.352 | 0.6317 | 45.3   | 63.7   | 92.6  | 99.3    |
| 26    | 1236  | 1.012  | -3.156 | -0.391 | 0.6204 | 44.2   | 63.4   | 92.2  | 99.3    |
| 27    | 1237  | 0.882  | -2.841 | -0.424 | 0.6051 | 44.2   | 62.0   | 92.1  | 99.2    |
| 28    | 1235  | 0.634  | -2.952 | -0.472 | 0.5919 | 43.0   | 59.8   | 92.5  | 98.9    |
| 29    | 1236  | 1.076  | -2.629 | -0.470 | 0.5838 | 44.1   | 60.0   | 91.8  | 99.1    |
| 30    | 1237  | 0.900  | -2.514 | -0.484 | 0.5803 | 41.5   | 58.9   | 91.2  | 99.4    |
| 31    | 1232  | 0.974  | -2.581 | -0.483 | 0.5756 | 39.9   | 56.3   | 91.6  | 99.6    |
| 32    | 1236  | 0.815  | -2.844 | -0.511 | 0.5614 | 37.1   | 54.2   | 92.2  | 99.4    |
| 33    | 1235  | 0.961  | -2.394 | -0.540 | 0.5706 | 36.8   | 53.8   | 91.5  | 99.4    |
| 34    | 1245  | 0.833  | -2.477 | -0.582 | 0.5831 | 36.5   | 51.6   | 90.4  | 99.5    |
| 35    | 1242  | 0.783  | -2.526 | -0.626 | 0.5862 | 34.6   | 49.4   | 88.8  | 99.3    |
| 36    | 1244  | 0.483  | -2.530 | -0.634 | 0.6039 | 33.6   | 50.2   | 87.9  | 99.1    |
| 37    | 1244  | 0.749  | -2.727 | -0.628 | 0.6217 | 32.8   | 50.0   | 87.1  | 98.4    |
| 38    | 1247  | 0.601  | -2.910 | -0.639 | 0.6440 | 33.0   | 51.2   | 87.5  | 97.4    |
| 39    | 1249  | 0.776  | -3.007 | -0.650 | 0.6548 | 31.6   | 49.3   | 87.4  | 96.7    |
| 40    | 1253  | 1.051  | -3.078 | -0.661 | 0.6627 | 29.8   | 45.7   | 87.0  | 97.3    |
| 41    | 1254  | 1.064  | -2.915 | -0.679 | 0.6661 | 28.8   | 43.8   | 85.8  | 97.4    |
| 42    | 1254  | 1.195  | -2.730 | -0.675 | 0.6724 | 28.4   | 45.4   | 84.8  | 97.8    |
| 43    | 1255  | 1.044  | -2.549 | -0.677 | 0.6619 | 28.2   | 43.8   | 84.5  | 98.3    |
| 44    | 1254  | 1.267  | -2.621 | -0.686 | 0.6420 | 26.8   | 42.8   | 84.7  | 98.2    |
| 45    | 1255  | 0.912  | -2.539 | -0.688 | 0.6421 | 28.8   | 42.7   | 85.7  | 97.5    |
| 46    | 1254  | 0.962  | -2.699 | -0.685 | 0.6536 | 28.6   | 42.9   | 86.8  | 96.3    |
| 47    | 1253  | 0.816  | -3.181 | -0.690 | 0.6648 | 28.1   | 43.5   | 88.2  | 95.5    |
| 48    | 1253  | 0.815  | -3.875 | -0.703 | 0.6758 | 28.6   | 43.5   | 88.4  | 95.5    |
| 49    | 1252  | 0.593  | -5.081 | -0.709 | 0.6944 | 28.8   | 45.5   | 88.3  | 96.1    |
| 50    | 1254  | 0.504  | -4.726 | -0.702 | 0.6790 | 27.2   | 45.9   | 88.1  | 96.7    |
| 51    | 1255  | 0.662  | -4.571 | -0.680 | 0.6454 | 29.5   | 47.6   | 88.5  | 97.8    |
| 52    | 1257  | 0.757  | -3.844 | -0.657 | 0.6042 | 31.3   | 47.9   | 88.1  | 98.0    |
| 53    | 1255  | 0.877  | -2.673 | -0.633 | 0.5734 | 30.4   | 50.1   | 89.1  | 98.4    |
| 54    | 1254  | 0.827  | -2.623 | -0.620 | 0.5641 | 31.5   | 52.2   | 90.0  | 98.4    |

|    |      |       |        |        |        |      |       |       |       |
|----|------|-------|--------|--------|--------|------|-------|-------|-------|
| 55 | 1253 | 0.814 | -2.651 | -0.616 | 0.5717 | 31.2 | 52.4  | 89.7  | 98.4  |
| 56 | 1253 | 0.636 | -2.638 | -0.613 | 0.5810 | 34.1 | 52.5  | 89.2  | 98.1  |
| 57 | 1253 | 0.545 | -2.755 | -0.605 | 0.5802 | 34.2 | 52.8  | 90.2  | 98.3  |
| 58 | 1256 | 0.972 | -2.643 | -0.591 | 0.5878 | 35.0 | 53.5  | 90.2  | 98.3  |
| 59 | 1255 | 0.893 | -2.642 | -0.588 | 0.6035 | 37.4 | 53.5  | 89.8  | 98.0  |
| 60 | 1257 | 0.940 | -2.712 | -0.594 | 0.6338 | 39.7 | 54.1  | 89.0  | 97.1  |
| 61 | 1255 | 0.781 | -3.128 | -0.607 | 0.6613 | 39.0 | 54.8  | 88.8  | 96.0  |
| 62 | 1256 | 1.229 | -3.285 | -0.615 | 0.7043 | 39.6 | 55.8  | 87.1  | 95.7  |
| 63 | 1257 | 1.139 | -3.548 | -0.608 | 0.7207 | 40.3 | 57.1  | 88.3  | 95.1  |
| 64 | 1255 | 1.133 | -3.140 | -0.565 | 0.6703 | 41.0 | 58.2  | 89.1  | 97.1  |
| 65 | 1254 | 1.263 | -2.720 | -0.516 | 0.6245 | 40.9 | 59.6  | 89.8  | 98.4  |
| 66 | 1253 | 1.261 | -2.477 | -0.480 | 0.6068 | 40.7 | 57.2  | 91.1  | 98.8  |
| 67 | 1251 | 1.129 | -2.484 | -0.447 | 0.6078 | 42.0 | 56.8  | 92.2  | 98.6  |
| 68 | 1252 | 1.162 | -2.521 | -0.411 | 0.6096 | 43.4 | 58.5  | 93.6  | 98.6  |
| 69 | 1252 | 1.143 | -2.380 | -0.380 | 0.6031 | 43.8 | 62.1  | 93.1  | 99.4  |
| 70 | 1249 | 0.921 | -2.583 | -0.357 | 0.6027 | 43.4 | 61.9  | 92.3  | 99.8  |
| 71 | 1245 | 0.931 | -2.653 | -0.340 | 0.6200 | 45.9 | 63.3  | 92.0  | 99.4  |
| 72 | 1238 | 1.197 | -2.678 | -0.296 | 0.6388 | 42.8 | 63.5  | 93.0  | 98.9  |
| 73 | 1239 | 1.460 | -2.479 | -0.213 | 0.6524 | 40.8 | 61.8  | 93.9  | 99.2  |
| 74 | 1239 | 1.497 | -2.373 | -0.166 | 0.6434 | 40.8 | 62.6  | 95.6  | 99.5  |
| 75 | 1242 | 1.245 | -2.262 | -0.115 | 0.5828 | 39.0 | 63.8  | 97.4  | 100.0 |
| 76 | 1242 | 1.335 | -2.174 | -0.121 | 0.5485 | 42.6 | 65.9  | 97.7  | 100.0 |
| 77 | 1241 | 1.211 | -2.000 | -0.128 | 0.5636 | 41.4 | 65.1  | 96.7  | 100.0 |
| 78 | 1242 | 1.162 | -2.163 | -0.095 | 0.5818 | 42.3 | 66.3  | 96.3  | 100.0 |
| 79 | 1241 | 2.409 | -2.295 | -0.063 | 0.6109 | 40.5 | 64.5  | 95.1  | 99.9  |
| 80 | 1241 | 1.851 | -2.390 | 0.009  | 0.6494 | 38.3 | 59.8  | 95.3  | 99.8  |
| 81 | 1223 | 2.006 | -3.463 | 0.002  | 0.7130 | 33.5 | 54.2  | 95.1  | 99.7  |
| 82 | 1205 | 2.205 | -2.689 | 0.113  | 0.7098 | 31.5 | 49.5  | 94.8  | 99.7  |
| 83 | 1144 | 2.599 | -3.844 | 0.233  | 0.7524 | 26.5 | 44.5  | 93.9  | 99.2  |
| 84 | 1006 | 2.863 | -3.381 | 0.401  | 0.8170 | 23.3 | 37.6  | 89.9  | 99.5  |
| 85 | 781  | 2.987 | -2.397 | 0.454  | 0.7749 | 22.8 | 38.0  | 88.9  | 99.0  |
| 86 | 569  | 3.220 | -3.020 | 0.517  | 0.8081 | 21.8 | 34.8  | 86.3  | 97.9  |
| 87 | 403  | 3.886 | -2.100 | 0.602  | 0.9100 | 18.4 | 30.0  | 76.9  | 94.8  |
| 88 | 239  | 3.540 | -2.349 | 0.660  | 0.9450 | 19.2 | 29.7  | 72.8  | 95.8  |
| 89 | 101  | 2.783 | -2.260 | 0.795  | 1.0590 | 16.8 | 31.7  | 64.4  | 85.1  |
| 90 | 35   | 4.096 | -1.401 | 1.082  | 1.4051 | 11.4 | 28.6  | 71.4  | 77.1  |
| 91 | 10   | 3.116 | -0.612 | 0.677  | 1.0731 | 20.0 | 30.0  | 90.0  | 90.0  |
| 92 | 1    | 0.000 | -0.458 | -0.458 | 0.0000 | 0.0  | 100.0 | 100.0 | 100.0 |

Classification report 1 of 3

IHO statistics a/b are : 0.250 0.008

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 10    | 6     | 1      | 16.67  | 5      | 83.33  |
| 11    | 28    | 11     | 39.29  | 17     | 60.71  |
| 12    | 90    | 31     | 34.44  | 59     | 65.56  |
| 13    | 197   | 69     | 35.03  | 128    | 64.97  |
| 14    | 416   | 143    | 34.38  | 273    | 65.62  |
| 15    | 641   | 168    | 26.21  | 473    | 73.79  |
| 16    | 829   | 163    | 19.66  | 666    | 80.34  |
| 17    | 1013  | 171    | 16.88  | 842    | 83.12  |
| 18    | 1133  | 157    | 13.86  | 976    | 86.14  |
| 19    | 1175  | 119    | 10.13  | 1056   | 89.87  |
| 20    | 1197  | 105    | 8.77   | 1092   | 91.23  |
| 21    | 1222  | 110    | 9.00   | 1112   | 91.00  |
| 22    | 1232  | 130    | 10.55  | 1102   | 89.45  |
| 23    | 1236  | 139    | 11.25  | 1097   | 88.75  |
| 24    | 1234  | 143    | 11.59  | 1091   | 88.41  |
| 25    | 1238  | 159    | 12.84  | 1079   | 87.16  |
| 26    | 1236  | 163    | 13.19  | 1073   | 86.81  |
| 27    | 1237  | 166    | 13.42  | 1071   | 86.58  |
| 28    | 1235  | 165    | 13.36  | 1070   | 86.64  |
| 29    | 1236  | 163    | 13.19  | 1073   | 86.81  |
| 30    | 1237  | 167    | 13.50  | 1070   | 86.50  |
| 31    | 1232  | 171    | 13.88  | 1061   | 86.12  |
| 32    | 1236  | 175    | 14.16  | 1061   | 85.84  |
| 33    | 1235  | 201    | 16.28  | 1034   | 83.72  |
| 34    | 1245  | 229    | 18.39  | 1016   | 81.61  |
| 35    | 1242  | 249    | 20.05  | 993    | 79.95  |
| 36    | 1244  | 258    | 20.74  | 986    | 79.26  |
| 37    | 1244  | 239    | 19.21  | 1005   | 80.79  |
| 38    | 1247  | 241    | 19.33  | 1006   | 80.67  |
| 39    | 1249  | 249    | 19.94  | 1000   | 80.06  |
| 40    | 1253  | 263    | 20.99  | 990    | 79.01  |
| 41    | 1254  | 281    | 22.41  | 973    | 77.59  |
| 42    | 1254  | 282    | 22.49  | 972    | 77.51  |
| 43    | 1255  | 281    | 22.39  | 974    | 77.61  |
| 44    | 1254  | 280    | 22.33  | 974    | 77.67  |
| 45    | 1255  | 274    | 21.83  | 981    | 78.17  |
| 46    | 1254  | 277    | 22.09  | 977    | 77.91  |
| 47    | 1253  | 272    | 21.71  | 981    | 78.29  |
| 48    | 1253  | 275    | 21.95  | 978    | 78.05  |
| 49    | 1252  | 290    | 23.16  | 962    | 76.84  |
| 50    | 1254  | 277    | 22.09  | 977    | 77.91  |
| 51    | 1255  | 277    | 22.07  | 978    | 77.93  |
| 52    | 1257  | 276    | 21.96  | 981    | 78.04  |
| 53    | 1255  | 273    | 21.75  | 982    | 78.25  |
| 54    | 1254  | 263    | 20.97  | 991    | 79.03  |
| 55    | 1253  | 270    | 21.55  | 983    | 78.45  |
| 56    | 1253  | 263    | 20.99  | 990    | 79.01  |
| 57    | 1253  | 253    | 20.19  | 1000   | 79.81  |
| 58    | 1256  | 226    | 17.99  | 1030   | 82.01  |
| 59    | 1255  | 230    | 18.33  | 1025   | 81.67  |
| 60    | 1257  | 230    | 18.30  | 1027   | 81.70  |
| 61    | 1255  | 235    | 18.73  | 1020   | 81.27  |
| 62    | 1256  | 261    | 20.78  | 995    | 79.22  |
| 63    | 1257  | 252    | 20.05  | 1005   | 79.95  |
| 64    | 1255  | 232    | 18.49  | 1023   | 81.51  |
| 65    | 1254  | 213    | 16.99  | 1041   | 83.01  |
| 66    | 1253  | 205    | 16.36  | 1048   | 83.64  |
| 67    | 1251  | 185    | 14.79  | 1066   | 85.21  |
| 68    | 1252  | 179    | 14.30  | 1073   | 85.70  |

|    |      |     |       |      |        |
|----|------|-----|-------|------|--------|
| 69 | 1252 | 161 | 12.86 | 1091 | 87.14  |
| 70 | 1249 | 152 | 12.17 | 1097 | 87.83  |
| 71 | 1245 | 148 | 11.89 | 1097 | 88.11  |
| 72 | 1238 | 142 | 11.47 | 1096 | 88.53  |
| 73 | 1239 | 131 | 10.57 | 1108 | 89.43  |
| 74 | 1239 | 118 | 9.52  | 1121 | 90.48  |
| 75 | 1242 | 75  | 6.04  | 1167 | 93.96  |
| 76 | 1242 | 76  | 6.12  | 1166 | 93.88  |
| 77 | 1241 | 91  | 7.33  | 1150 | 92.67  |
| 78 | 1242 | 99  | 7.97  | 1143 | 92.03  |
| 79 | 1241 | 99  | 7.98  | 1142 | 92.02  |
| 80 | 1241 | 99  | 7.98  | 1142 | 92.02  |
| 81 | 1223 | 123 | 10.06 | 1100 | 89.94  |
| 82 | 1205 | 133 | 11.04 | 1072 | 88.96  |
| 83 | 1144 | 155 | 13.55 | 989  | 86.45  |
| 84 | 1006 | 220 | 21.87 | 786  | 78.13  |
| 85 | 781  | 175 | 22.41 | 606  | 77.59  |
| 86 | 569  | 146 | 25.66 | 423  | 74.34  |
| 87 | 403  | 131 | 32.51 | 272  | 67.49  |
| 88 | 239  | 97  | 40.59 | 142  | 59.41  |
| 89 | 101  | 43  | 42.57 | 58   | 57.43  |
| 90 | 35   | 18  | 51.43 | 17   | 48.57  |
| 91 | 10   | 4   | 40.00 | 6    | 60.00  |
| 92 | 1    | 0   | 0.00  | 1    | 100.00 |

Classification report 2 of 3

IHO statistics a/b are : 0.500 0.013

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 10    | 6     | 0      | 0.00   | 6      | 100.00 |
| 11    | 28    | 1      | 3.57   | 27     | 96.43  |
| 12    | 90    | 8      | 8.89   | 82     | 91.11  |
| 13    | 197   | 12     | 6.09   | 185    | 93.91  |
| 14    | 416   | 23     | 5.53   | 393    | 94.47  |
| 15    | 641   | 41     | 6.40   | 600    | 93.60  |
| 16    | 829   | 14     | 1.69   | 815    | 98.31  |
| 17    | 1013  | 15     | 1.48   | 998    | 98.52  |
| 18    | 1133  | 24     | 2.12   | 1109   | 97.88  |
| 19    | 1175  | 14     | 1.19   | 1161   | 98.81  |
| 20    | 1197  | 11     | 0.92   | 1186   | 99.08  |
| 21    | 1222  | 13     | 1.06   | 1209   | 98.94  |
| 22    | 1232  | 19     | 1.54   | 1213   | 98.46  |
| 23    | 1236  | 21     | 1.70   | 1215   | 98.30  |
| 24    | 1234  | 24     | 1.94   | 1210   | 98.06  |
| 25    | 1238  | 27     | 2.18   | 1211   | 97.82  |
| 26    | 1236  | 29     | 2.35   | 1207   | 97.65  |
| 27    | 1237  | 33     | 2.67   | 1204   | 97.33  |
| 28    | 1235  | 47     | 3.81   | 1188   | 96.19  |
| 29    | 1236  | 41     | 3.32   | 1195   | 96.68  |
| 30    | 1237  | 48     | 3.88   | 1189   | 96.12  |
| 31    | 1232  | 43     | 3.49   | 1189   | 96.51  |
| 32    | 1236  | 40     | 3.24   | 1196   | 96.76  |
| 33    | 1235  | 44     | 3.56   | 1191   | 96.44  |
| 34    | 1245  | 48     | 3.86   | 1197   | 96.14  |
| 35    | 1242  | 55     | 4.43   | 1187   | 95.57  |
| 36    | 1244  | 60     | 4.82   | 1184   | 95.18  |
| 37    | 1244  | 65     | 5.23   | 1179   | 94.77  |
| 38    | 1247  | 76     | 6.09   | 1171   | 93.91  |
| 39    | 1249  | 89     | 7.13   | 1160   | 92.87  |
| 40    | 1253  | 98     | 7.82   | 1155   | 92.18  |
| 41    | 1254  | 90     | 7.18   | 1164   | 92.82  |
| 42    | 1254  | 93     | 7.42   | 1161   | 92.58  |
| 43    | 1255  | 91     | 7.25   | 1164   | 92.75  |
| 44    | 1254  | 78     | 6.22   | 1176   | 93.78  |
| 45    | 1255  | 79     | 6.29   | 1176   | 93.71  |
| 46    | 1254  | 91     | 7.26   | 1163   | 92.74  |
| 47    | 1253  | 87     | 6.94   | 1166   | 93.06  |
| 48    | 1253  | 82     | 6.54   | 1171   | 93.46  |
| 49    | 1252  | 74     | 5.91   | 1178   | 94.09  |
| 50    | 1254  | 73     | 5.82   | 1181   | 94.18  |
| 51    | 1255  | 68     | 5.42   | 1187   | 94.58  |
| 52    | 1257  | 55     | 4.38   | 1202   | 95.62  |
| 53    | 1255  | 39     | 3.11   | 1216   | 96.89  |
| 54    | 1254  | 37     | 2.95   | 1217   | 97.05  |
| 55    | 1253  | 40     | 3.19   | 1213   | 96.81  |
| 56    | 1253  | 45     | 3.59   | 1208   | 96.41  |
| 57    | 1253  | 45     | 3.59   | 1208   | 96.41  |
| 58    | 1256  | 53     | 4.22   | 1203   | 95.78  |
| 59    | 1255  | 62     | 4.94   | 1193   | 95.06  |
| 60    | 1257  | 69     | 5.49   | 1188   | 94.51  |
| 61    | 1255  | 81     | 6.45   | 1174   | 93.55  |
| 62    | 1256  | 90     | 7.17   | 1166   | 92.83  |
| 63    | 1257  | 96     | 7.64   | 1161   | 92.36  |
| 64    | 1255  | 87     | 6.93   | 1168   | 93.07  |
| 65    | 1254  | 55     | 4.39   | 1199   | 95.61  |
| 66    | 1253  | 40     | 3.19   | 1213   | 96.81  |
| 67    | 1251  | 33     | 2.64   | 1218   | 97.36  |
| 68    | 1252  | 32     | 2.56   | 1220   | 97.44  |

|    |      |    |       |      |        |
|----|------|----|-------|------|--------|
| 69 | 1252 | 29 | 2.32  | 1223 | 97.68  |
| 70 | 1249 | 21 | 1.68  | 1228 | 98.32  |
| 71 | 1245 | 25 | 2.01  | 1220 | 97.99  |
| 72 | 1238 | 28 | 2.26  | 1210 | 97.74  |
| 73 | 1239 | 23 | 1.86  | 1216 | 98.14  |
| 74 | 1239 | 19 | 1.53  | 1220 | 98.47  |
| 75 | 1242 | 11 | 0.89  | 1231 | 99.11  |
| 76 | 1242 | 7  | 0.56  | 1235 | 99.44  |
| 77 | 1241 | 3  | 0.24  | 1238 | 99.76  |
| 78 | 1242 | 8  | 0.64  | 1234 | 99.36  |
| 79 | 1241 | 17 | 1.37  | 1224 | 98.63  |
| 80 | 1241 | 27 | 2.18  | 1214 | 97.82  |
| 81 | 1223 | 32 | 2.62  | 1191 | 97.38  |
| 82 | 1205 | 16 | 1.33  | 1189 | 98.67  |
| 83 | 1144 | 16 | 1.40  | 1128 | 98.60  |
| 84 | 1006 | 36 | 3.58  | 970  | 96.42  |
| 85 | 781  | 20 | 2.56  | 761  | 97.44  |
| 86 | 569  | 22 | 3.87  | 547  | 96.13  |
| 87 | 403  | 38 | 9.43  | 365  | 90.57  |
| 88 | 239  | 24 | 10.04 | 215  | 89.96  |
| 89 | 101  | 24 | 23.76 | 77   | 76.24  |
| 90 | 35   | 8  | 22.86 | 27   | 77.14  |
| 91 | 10   | 1  | 10.00 | 9    | 90.00  |
| 92 | 1    | 0  | 0.00  | 1    | 100.00 |

Classification report 3 of 3

IHO statistics a/b are : 1.000 0.023

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 10    | 6     | 0      | 0.00   | 6      | 100.00 |
| 11    | 28    | 0      | 0.00   | 28     | 100.00 |
| 12    | 90    | 0      | 0.00   | 90     | 100.00 |
| 13    | 197   | 0      | 0.00   | 197    | 100.00 |
| 14    | 416   | 0      | 0.00   | 416    | 100.00 |
| 15    | 641   | 0      | 0.00   | 641    | 100.00 |
| 16    | 829   | 0      | 0.00   | 829    | 100.00 |
| 17    | 1013  | 0      | 0.00   | 1013   | 100.00 |
| 18    | 1133  | 1      | 0.09   | 1132   | 99.91  |
| 19    | 1175  | 0      | 0.00   | 1175   | 100.00 |
| 20    | 1197  | 0      | 0.00   | 1197   | 100.00 |
| 21    | 1222  | 0      | 0.00   | 1222   | 100.00 |
| 22    | 1232  | 0      | 0.00   | 1232   | 100.00 |
| 23    | 1236  | 0      | 0.00   | 1236   | 100.00 |
| 24    | 1234  | 0      | 0.00   | 1234   | 100.00 |
| 25    | 1238  | 0      | 0.00   | 1238   | 100.00 |
| 26    | 1236  | 0      | 0.00   | 1236   | 100.00 |
| 27    | 1237  | 0      | 0.00   | 1237   | 100.00 |
| 28    | 1235  | 0      | 0.00   | 1235   | 100.00 |
| 29    | 1236  | 0      | 0.00   | 1236   | 100.00 |
| 30    | 1237  | 0      | 0.00   | 1237   | 100.00 |
| 31    | 1232  | 0      | 0.00   | 1232   | 100.00 |
| 32    | 1236  | 0      | 0.00   | 1236   | 100.00 |
| 33    | 1235  | 0      | 0.00   | 1235   | 100.00 |
| 34    | 1245  | 0      | 0.00   | 1245   | 100.00 |
| 35    | 1242  | 0      | 0.00   | 1242   | 100.00 |
| 36    | 1244  | 0      | 0.00   | 1244   | 100.00 |
| 37    | 1244  | 0      | 0.00   | 1244   | 100.00 |
| 38    | 1247  | 0      | 0.00   | 1247   | 100.00 |
| 39    | 1249  | 0      | 0.00   | 1249   | 100.00 |
| 40    | 1253  | 0      | 0.00   | 1253   | 100.00 |
| 41    | 1254  | 0      | 0.00   | 1254   | 100.00 |
| 42    | 1254  | 0      | 0.00   | 1254   | 100.00 |
| 43    | 1255  | 0      | 0.00   | 1255   | 100.00 |
| 44    | 1254  | 0      | 0.00   | 1254   | 100.00 |
| 45    | 1255  | 0      | 0.00   | 1255   | 100.00 |
| 46    | 1254  | 0      | 0.00   | 1254   | 100.00 |
| 47    | 1253  | 0      | 0.00   | 1253   | 100.00 |
| 48    | 1253  | 4      | 0.32   | 1249   | 99.68  |
| 49    | 1252  | 11     | 0.88   | 1241   | 99.12  |
| 50    | 1254  | 11     | 0.88   | 1243   | 99.12  |
| 51    | 1255  | 8      | 0.64   | 1247   | 99.36  |
| 52    | 1257  | 1      | 0.08   | 1256   | 99.92  |
| 53    | 1255  | 0      | 0.00   | 1255   | 100.00 |
| 54    | 1254  | 0      | 0.00   | 1254   | 100.00 |
| 55    | 1253  | 0      | 0.00   | 1253   | 100.00 |
| 56    | 1253  | 0      | 0.00   | 1253   | 100.00 |
| 57    | 1253  | 0      | 0.00   | 1253   | 100.00 |
| 58    | 1256  | 0      | 0.00   | 1256   | 100.00 |
| 59    | 1255  | 0      | 0.00   | 1255   | 100.00 |
| 60    | 1257  | 0      | 0.00   | 1257   | 100.00 |
| 61    | 1255  | 0      | 0.00   | 1255   | 100.00 |
| 62    | 1256  | 0      | 0.00   | 1256   | 100.00 |
| 63    | 1257  | 1      | 0.08   | 1256   | 99.92  |
| 64    | 1255  | 0      | 0.00   | 1255   | 100.00 |
| 65    | 1254  | 0      | 0.00   | 1254   | 100.00 |
| 66    | 1253  | 0      | 0.00   | 1253   | 100.00 |
| 67    | 1251  | 0      | 0.00   | 1251   | 100.00 |
| 68    | 1252  | 0      | 0.00   | 1252   | 100.00 |

|    |      |   |       |      |        |
|----|------|---|-------|------|--------|
| 69 | 1252 | 0 | 0.00  | 1252 | 100.00 |
| 70 | 1249 | 0 | 0.00  | 1249 | 100.00 |
| 71 | 1245 | 0 | 0.00  | 1245 | 100.00 |
| 72 | 1238 | 0 | 0.00  | 1238 | 100.00 |
| 73 | 1239 | 0 | 0.00  | 1239 | 100.00 |
| 74 | 1239 | 0 | 0.00  | 1239 | 100.00 |
| 75 | 1242 | 0 | 0.00  | 1242 | 100.00 |
| 76 | 1242 | 0 | 0.00  | 1242 | 100.00 |
| 77 | 1241 | 0 | 0.00  | 1241 | 100.00 |
| 78 | 1242 | 0 | 0.00  | 1242 | 100.00 |
| 79 | 1241 | 0 | 0.00  | 1241 | 100.00 |
| 80 | 1241 | 0 | 0.00  | 1241 | 100.00 |
| 81 | 1223 | 0 | 0.00  | 1223 | 100.00 |
| 82 | 1205 | 0 | 0.00  | 1205 | 100.00 |
| 83 | 1144 | 1 | 0.09  | 1143 | 99.91  |
| 84 | 1006 | 1 | 0.10  | 1005 | 99.90  |
| 85 | 781  | 0 | 0.00  | 781  | 100.00 |
| 86 | 569  | 0 | 0.00  | 569  | 100.00 |
| 87 | 403  | 2 | 0.50  | 401  | 99.50  |
| 88 | 239  | 1 | 0.42  | 238  | 99.58  |
| 89 | 101  | 0 | 0.00  | 101  | 100.00 |
| 90 | 35   | 5 | 14.29 | 30   | 85.71  |
| 91 | 10   | 0 | 0.00  | 10   | 100.00 |
| 92 | 1    | 0 | 0.00  | 1    | 100.00 |

**R6EL\_2003****DN142**

Quality Control Report for file : C:\Temp\2003\_Patch\_tests\RA6EL\_2003\checkline

Surface lines: 20030522222809\_013, 20030522223207\_014, 20030522223543\_015

Checkline lines: 20030522221651\_010, 20030522222029\_011, 20030522222354\_012

Elevation Range is : -144.602(m) -119.322(m)

Total number of 3D points used: 24303

Starting Time: 22-MAY-2003 22:16:40.09

Ending Time: 22-MAY-2003 22:26:02.35

Minimum tidal reduction: 354 (mm)

Maximum tidal reduction: 400 (mm)

| User# | Total | Max(+) | Max(-) | Mean   | Std.   | 3dm(%) | 5dm(%) | 1%(%) | 1.6%(%) |
|-------|-------|--------|--------|--------|--------|--------|--------|-------|---------|
| ===== | ===== | =====  | =====  | =====  | =====  | =====  | =====  | ===== | =====   |
| 19    | 178   | 0.796  | -1.614 | -0.260 | 0.4639 | 52.2   | 68.5   | 98.9  | 100.0   |
| 20    | 175   | 0.589  | -1.660 | -0.566 | 0.4278 | 26.3   | 40.6   | 98.9  | 100.0   |
| 21    | 182   | 0.734  | -1.661 | -0.385 | 0.4360 | 40.7   | 60.4   | 98.9  | 100.0   |
| 22    | 186   | 2.259  | -1.906 | -0.389 | 0.6342 | 28.5   | 51.1   | 92.5  | 98.9    |
| 23    | 195   | 2.249  | -1.468 | -0.129 | 0.6757 | 44.1   | 62.1   | 92.8  | 99.0    |
| 24    | 226   | 1.984  | -1.569 | 0.014  | 0.6395 | 46.0   | 65.9   | 93.4  | 99.6    |
| 25    | 246   | 1.189  | -1.395 | -0.014 | 0.4700 | 45.9   | 70.7   | 100.0 | 100.0   |
| 26    | 259   | 1.744  | -1.462 | -0.002 | 0.4242 | 56.0   | 78.8   | 98.8  | 100.0   |
| 27    | 274   | 1.347  | -1.499 | -0.015 | 0.4249 | 53.6   | 80.3   | 99.6  | 100.0   |
| 28    | 281   | 0.871  | -1.650 | -0.160 | 0.4143 | 55.2   | 77.6   | 99.6  | 100.0   |
| 29    | 282   | 1.057  | -1.628 | -0.223 | 0.3833 | 57.1   | 80.1   | 99.3  | 100.0   |
| 30    | 282   | 0.736  | -1.718 | -0.154 | 0.4086 | 54.3   | 78.4   | 98.6  | 100.0   |
| 31    | 283   | 0.712  | -1.458 | -0.150 | 0.3904 | 59.0   | 83.0   | 98.9  | 100.0   |
| 32    | 283   | 0.862  | -1.265 | -0.158 | 0.3567 | 62.5   | 83.0   | 100.0 | 100.0   |
| 33    | 281   | 0.805  | -1.865 | -0.099 | 0.3957 | 59.8   | 81.5   | 98.9  | 100.0   |
| 34    | 280   | 0.656  | -1.506 | -0.152 | 0.3701 | 56.1   | 79.3   | 99.3  | 100.0   |
| 35    | 282   | 0.809  | -1.941 | -0.176 | 0.4341 | 55.3   | 78.4   | 98.9  | 100.0   |
| 36    | 283   | 0.867  | -2.083 | -0.159 | 0.3964 | 62.2   | 81.3   | 98.6  | 100.0   |
| 37    | 282   | 0.741  | -1.478 | -0.129 | 0.3477 | 59.9   | 80.1   | 99.6  | 100.0   |
| 38    | 284   | 0.612  | -1.381 | -0.128 | 0.3507 | 63.0   | 83.5   | 100.0 | 100.0   |
| 39    | 284   | 0.801  | -1.272 | -0.069 | 0.3252 | 67.6   | 87.3   | 100.0 | 100.0   |
| 40    | 285   | 0.657  | -1.149 | -0.129 | 0.3062 | 61.8   | 87.4   | 100.0 | 100.0   |
| 41    | 285   | 0.814  | -2.457 | -0.098 | 0.3415 | 67.0   | 91.2   | 99.6  | 99.6    |
| 42    | 285   | 0.790  | -1.565 | -0.044 | 0.3178 | 70.2   | 88.4   | 99.6  | 100.0   |
| 43    | 282   | 0.751  | -1.618 | -0.181 | 0.3285 | 59.2   | 83.3   | 99.3  | 100.0   |
| 44    | 282   | 0.603  | -1.389 | -0.093 | 0.3164 | 70.6   | 88.3   | 100.0 | 100.0   |
| 45    | 282   | 0.855  | -1.561 | -0.054 | 0.3435 | 67.0   | 85.5   | 99.6  | 100.0   |
| 46    | 285   | 0.562  | -1.262 | -0.125 | 0.3131 | 60.0   | 85.6   | 100.0 | 100.0   |
| 47    | 284   | 0.729  | -1.183 | -0.081 | 0.3158 | 68.0   | 88.4   | 100.0 | 100.0   |
| 48    | 284   | 0.685  | -1.014 | -0.054 | 0.2935 | 70.8   | 90.1   | 100.0 | 100.0   |
| 49    | 284   | 0.577  | -1.083 | -0.137 | 0.2948 | 63.0   | 85.2   | 100.0 | 100.0   |
| 50    | 284   | 0.620  | -1.452 | -0.094 | 0.3103 | 70.4   | 90.5   | 99.6  | 100.0   |
| 51    | 285   | 0.583  | -1.300 | -0.042 | 0.2495 | 77.9   | 96.1   | 100.0 | 100.0   |
| 52    | 281   | 0.523  | -1.968 | -0.180 | 0.2836 | 69.0   | 92.9   | 99.6  | 100.0   |
| 53    | 281   | 0.714  | -1.582 | -0.158 | 0.3121 | 66.5   | 86.8   | 99.6  | 100.0   |
| 54    | 281   | 0.668  | -1.829 | -0.126 | 0.3164 | 69.4   | 90.7   | 99.6  | 100.0   |
| 55    | 284   | 0.551  | -0.981 | -0.088 | 0.2355 | 77.1   | 96.5   | 100.0 | 100.0   |
| 56    | 285   | 1.115  | -1.047 | -0.008 | 0.2556 | 82.5   | 95.1   | 100.0 | 100.0   |
| 57    | 283   | 0.828  | -0.728 | 0.022  | 0.2471 | 80.2   | 95.4   | 100.0 | 100.0   |
| 58    | 285   | 0.697  | -0.794 | -0.047 | 0.2549 | 78.6   | 94.7   | 100.0 | 100.0   |
| 59    | 285   | 1.159  | -0.835 | -0.027 | 0.2453 | 81.1   | 96.8   | 100.0 | 100.0   |
| 60    | 285   | 0.791  | -0.615 | 0.023  | 0.2443 | 79.6   | 95.4   | 100.0 | 100.0   |
| 61    | 280   | 0.926  | -1.163 | -0.050 | 0.2405 | 82.9   | 96.1   | 100.0 | 100.0   |
| 62    | 281   | 0.632  | -1.160 | -0.028 | 0.2277 | 83.6   | 98.6   | 100.0 | 100.0   |
| 63    | 281   | 0.880  | -1.612 | -0.003 | 0.2747 | 74.4   | 95.0   | 99.6  | 100.0   |

|     |     |       |        |        |        |      |      |       |       |
|-----|-----|-------|--------|--------|--------|------|------|-------|-------|
| 64  | 283 | 0.755 | -0.869 | 0.027  | 0.2596 | 76.3 | 95.8 | 100.0 | 100.0 |
| 65  | 284 | 0.493 | -1.117 | -0.249 | 0.3008 | 57.4 | 81.3 | 100.0 | 100.0 |
| 66  | 284 | 0.380 | -1.353 | -0.383 | 0.2831 | 38.0 | 68.7 | 100.0 | 100.0 |
| 67  | 285 | 0.414 | -2.353 | -0.236 | 0.3411 | 55.4 | 76.8 | 99.6  | 99.6  |
| 68  | 284 | 0.416 | -1.485 | -0.232 | 0.2792 | 63.0 | 83.8 | 99.6  | 100.0 |
| 69  | 285 | 0.205 | -1.047 | -0.364 | 0.2237 | 40.0 | 72.6 | 100.0 | 100.0 |
| 70  | 284 | 0.737 | -0.862 | -0.107 | 0.2886 | 71.5 | 87.3 | 100.0 | 100.0 |
| 71  | 283 | 0.382 | -1.601 | -0.240 | 0.2957 | 61.1 | 82.3 | 99.6  | 100.0 |
| 72  | 284 | 0.487 | -0.963 | -0.322 | 0.2372 | 45.8 | 78.2 | 100.0 | 100.0 |
| 73  | 285 | 1.175 | -1.044 | -0.074 | 0.2931 | 68.8 | 90.9 | 100.0 | 100.0 |
| 74  | 285 | 1.259 | -0.937 | -0.120 | 0.2760 | 71.9 | 90.9 | 100.0 | 100.0 |
| 75  | 285 | 0.647 | -1.478 | -0.236 | 0.3139 | 57.5 | 80.7 | 99.6  | 100.0 |
| 76  | 283 | 0.727 | -1.391 | -0.174 | 0.3175 | 61.1 | 83.7 | 100.0 | 100.0 |
| 77  | 285 | 0.571 | -1.239 | -0.195 | 0.3293 | 59.6 | 84.2 | 100.0 | 100.0 |
| 78  | 284 | 0.401 | -1.087 | -0.252 | 0.2855 | 51.1 | 83.1 | 100.0 | 100.0 |
| 79  | 284 | 0.734 | -1.036 | -0.122 | 0.3235 | 65.8 | 84.5 | 100.0 | 100.0 |
| 80  | 285 | 0.737 | -1.333 | -0.146 | 0.3317 | 62.5 | 84.9 | 100.0 | 100.0 |
| 81  | 285 | 0.581 | -1.169 | -0.257 | 0.3201 | 51.6 | 77.2 | 100.0 | 100.0 |
| 82  | 285 | 0.677 | -1.051 | -0.169 | 0.3510 | 55.8 | 81.1 | 100.0 | 100.0 |
| 83  | 282 | 0.943 | -1.434 | -0.182 | 0.3482 | 62.8 | 81.2 | 99.6  | 100.0 |
| 84  | 284 | 0.643 | -1.173 | -0.267 | 0.3465 | 48.9 | 74.3 | 100.0 | 100.0 |
| 85  | 285 | 0.735 | -1.190 | -0.182 | 0.3264 | 64.6 | 81.8 | 100.0 | 100.0 |
| 86  | 285 | 0.763 | -1.299 | -0.166 | 0.3065 | 63.2 | 84.9 | 100.0 | 100.0 |
| 87  | 285 | 0.815 | -1.620 | -0.289 | 0.3588 | 47.0 | 70.2 | 99.6  | 100.0 |
| 88  | 284 | 0.566 | -1.252 | -0.197 | 0.3174 | 60.2 | 84.5 | 100.0 | 100.0 |
| 89  | 285 | 0.729 | -1.321 | -0.228 | 0.3322 | 53.7 | 81.8 | 100.0 | 100.0 |
| 90  | 285 | 0.851 | -1.460 | -0.359 | 0.3438 | 44.9 | 65.6 | 99.6  | 100.0 |
| 91  | 284 | 0.828 | -1.428 | -0.332 | 0.3636 | 44.7 | 69.0 | 99.6  | 100.0 |
| 92  | 284 | 0.539 | -1.479 | -0.307 | 0.3537 | 47.5 | 73.9 | 99.6  | 100.0 |
| 93  | 285 | 0.773 | -1.339 | -0.397 | 0.3779 | 36.8 | 60.4 | 100.0 | 100.0 |
| 94  | 285 | 0.582 | -1.314 | -0.315 | 0.3307 | 48.4 | 71.2 | 100.0 | 100.0 |
| 95  | 284 | 0.539 | -1.437 | -0.314 | 0.3215 | 47.9 | 75.7 | 100.0 | 100.0 |
| 96  | 284 | 0.643 | -1.314 | -0.368 | 0.3663 | 36.3 | 61.3 | 100.0 | 100.0 |
| 97  | 285 | 0.590 | -1.367 | -0.270 | 0.3792 | 53.0 | 74.4 | 100.0 | 100.0 |
| 98  | 283 | 0.555 | -1.382 | -0.336 | 0.3786 | 41.0 | 68.6 | 100.0 | 100.0 |
| 99  | 283 | 0.516 | -1.519 | -0.401 | 0.3764 | 35.7 | 59.4 | 98.9  | 100.0 |
| 100 | 276 | 1.067 | -1.760 | -0.260 | 0.4061 | 48.6 | 71.7 | 98.9  | 100.0 |
| 101 | 280 | 0.735 | -1.824 | -0.308 | 0.4041 | 45.0 | 71.1 | 99.3  | 100.0 |
| 102 | 278 | 0.892 | -1.646 | -0.429 | 0.4877 | 32.4 | 54.7 | 97.8  | 100.0 |
| 103 | 229 | 0.793 | -1.565 | -0.412 | 0.4506 | 35.4 | 57.6 | 98.7  | 100.0 |
| 104 | 197 | 0.473 | -1.593 | -0.675 | 0.3951 | 16.2 | 29.4 | 99.0  | 100.0 |
| 105 | 192 | 0.663 | -1.998 | -0.659 | 0.4810 | 22.9 | 41.7 | 94.8  | 100.0 |
| 106 | 162 | 0.216 | -2.276 | -0.906 | 0.5165 | 14.2 | 22.8 | 86.4  | 99.4  |
| 107 | 163 | 0.376 | -2.959 | -0.926 | 0.5668 | 10.4 | 20.2 | 81.0  | 98.8  |
| 108 | 185 | 0.972 | -1.700 | -0.356 | 0.5854 | 39.5 | 56.8 | 96.2  | 100.0 |

Classification report 1 of 3

IHO statistics a/b are : 0.250 0.008

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 19    | 178   | 10     | 5.62   | 168    | 94.38  |
| 20    | 175   | 22     | 12.57  | 153    | 87.43  |
| 21    | 182   | 11     | 6.04   | 171    | 93.96  |
| 22    | 186   | 29     | 15.59  | 157    | 84.41  |
| 23    | 195   | 29     | 14.87  | 166    | 85.13  |
| 24    | 226   | 23     | 10.18  | 203    | 89.82  |
| 25    | 246   | 7      | 2.85   | 239    | 97.15  |
| 26    | 259   | 5      | 1.93   | 254    | 98.07  |
| 27    | 274   | 4      | 1.46   | 270    | 98.54  |
| 28    | 281   | 6      | 2.14   | 275    | 97.86  |
| 29    | 282   | 9      | 3.19   | 273    | 96.81  |
| 30    | 282   | 8      | 2.84   | 274    | 97.16  |
| 31    | 283   | 8      | 2.83   | 275    | 97.17  |
| 32    | 283   | 6      | 2.12   | 277    | 97.88  |
| 33    | 281   | 4      | 1.42   | 277    | 98.58  |
| 34    | 280   | 3      | 1.07   | 277    | 98.93  |
| 35    | 282   | 9      | 3.19   | 273    | 96.81  |
| 36    | 283   | 6      | 2.12   | 277    | 97.88  |
| 37    | 282   | 1      | 0.35   | 281    | 99.65  |
| 38    | 284   | 4      | 1.41   | 280    | 98.59  |
| 39    | 284   | 2      | 0.70   | 282    | 99.30  |
| 40    | 285   | 1      | 0.35   | 284    | 99.65  |
| 41    | 285   | 4      | 1.40   | 281    | 98.60  |
| 42    | 285   | 2      | 0.70   | 283    | 99.30  |
| 43    | 282   | 5      | 1.77   | 277    | 98.23  |
| 44    | 282   | 4      | 1.42   | 278    | 98.58  |
| 45    | 282   | 3      | 1.06   | 279    | 98.94  |
| 46    | 285   | 1      | 0.35   | 284    | 99.65  |
| 47    | 284   | 1      | 0.35   | 283    | 99.65  |
| 48    | 284   | 0      | 0.00   | 284    | 100.00 |
| 49    | 284   | 0      | 0.00   | 284    | 100.00 |
| 50    | 284   | 2      | 0.70   | 282    | 99.30  |
| 51    | 285   | 1      | 0.35   | 284    | 99.65  |
| 52    | 281   | 3      | 1.07   | 278    | 98.93  |
| 53    | 281   | 2      | 0.71   | 279    | 99.29  |
| 54    | 281   | 2      | 0.71   | 279    | 99.29  |
| 55    | 284   | 0      | 0.00   | 284    | 100.00 |
| 56    | 285   | 1      | 0.35   | 284    | 99.65  |
| 57    | 283   | 0      | 0.00   | 283    | 100.00 |
| 58    | 285   | 0      | 0.00   | 285    | 100.00 |
| 59    | 285   | 1      | 0.35   | 284    | 99.65  |
| 60    | 285   | 0      | 0.00   | 285    | 100.00 |
| 61    | 280   | 1      | 0.36   | 279    | 99.64  |
| 62    | 281   | 1      | 0.36   | 280    | 99.64  |
| 63    | 281   | 1      | 0.36   | 280    | 99.64  |
| 64    | 283   | 0      | 0.00   | 283    | 100.00 |
| 65    | 284   | 3      | 1.06   | 281    | 98.94  |
| 66    | 284   | 5      | 1.76   | 279    | 98.24  |
| 67    | 285   | 3      | 1.05   | 282    | 98.95  |
| 68    | 284   | 2      | 0.70   | 282    | 99.30  |
| 69    | 285   | 0      | 0.00   | 285    | 100.00 |
| 70    | 284   | 0      | 0.00   | 284    | 100.00 |
| 71    | 283   | 4      | 1.41   | 279    | 98.59  |
| 72    | 284   | 0      | 0.00   | 284    | 100.00 |
| 73    | 285   | 1      | 0.35   | 284    | 99.65  |
| 74    | 285   | 1      | 0.35   | 284    | 99.65  |
| 75    | 285   | 1      | 0.35   | 284    | 99.65  |
| 76    | 283   | 2      | 0.71   | 281    | 99.29  |
| 77    | 285   | 4      | 1.40   | 281    | 98.60  |

|     |     |    |       |     |        |
|-----|-----|----|-------|-----|--------|
| 78  | 284 | 2  | 0.70  | 282 | 99.30  |
| 79  | 284 | 0  | 0.00  | 284 | 100.00 |
| 80  | 285 | 2  | 0.70  | 283 | 99.30  |
| 81  | 285 | 1  | 0.35  | 284 | 99.65  |
| 82  | 285 | 0  | 0.00  | 285 | 100.00 |
| 83  | 282 | 4  | 1.42  | 278 | 98.58  |
| 84  | 284 | 3  | 1.06  | 281 | 98.94  |
| 85  | 285 | 2  | 0.70  | 283 | 99.30  |
| 86  | 285 | 1  | 0.35  | 284 | 99.65  |
| 87  | 285 | 5  | 1.75  | 280 | 98.25  |
| 88  | 284 | 2  | 0.70  | 282 | 99.30  |
| 89  | 285 | 4  | 1.40  | 281 | 98.60  |
| 90  | 285 | 4  | 1.40  | 281 | 98.60  |
| 91  | 284 | 5  | 1.76  | 279 | 98.24  |
| 92  | 284 | 7  | 2.46  | 277 | 97.54  |
| 93  | 285 | 17 | 5.96  | 268 | 94.04  |
| 94  | 285 | 2  | 0.70  | 283 | 99.30  |
| 95  | 284 | 8  | 2.82  | 276 | 97.18  |
| 96  | 284 | 9  | 3.17  | 275 | 96.83  |
| 97  | 285 | 10 | 3.51  | 275 | 96.49  |
| 98  | 283 | 10 | 3.53  | 273 | 96.47  |
| 99  | 283 | 11 | 3.89  | 272 | 96.11  |
| 100 | 276 | 8  | 2.90  | 268 | 97.10  |
| 101 | 280 | 11 | 3.93  | 269 | 96.07  |
| 102 | 278 | 29 | 10.43 | 249 | 89.57  |
| 103 | 229 | 20 | 8.73  | 209 | 91.27  |
| 104 | 197 | 29 | 14.72 | 168 | 85.28  |
| 105 | 192 | 34 | 17.71 | 158 | 82.29  |
| 106 | 162 | 66 | 40.74 | 96  | 59.26  |
| 107 | 163 | 63 | 38.65 | 100 | 61.35  |
| 108 | 185 | 25 | 13.51 | 160 | 86.49  |

Classification report 2 of 3

IHO statistics a/b are : 0.500 0.013

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 19    | 178   | 0      | 0.00   | 178    | 100.00 |
| 20    | 175   | 0      | 0.00   | 175    | 100.00 |
| 21    | 182   | 0      | 0.00   | 182    | 100.00 |
| 22    | 186   | 4      | 2.15   | 182    | 97.85  |
| 23    | 195   | 7      | 3.59   | 188    | 96.41  |
| 24    | 226   | 3      | 1.33   | 223    | 98.67  |
| 25    | 246   | 0      | 0.00   | 246    | 100.00 |
| 26    | 259   | 0      | 0.00   | 259    | 100.00 |
| 27    | 274   | 0      | 0.00   | 274    | 100.00 |
| 28    | 281   | 0      | 0.00   | 281    | 100.00 |
| 29    | 282   | 0      | 0.00   | 282    | 100.00 |
| 30    | 282   | 0      | 0.00   | 282    | 100.00 |
| 31    | 283   | 0      | 0.00   | 283    | 100.00 |
| 32    | 283   | 0      | 0.00   | 283    | 100.00 |
| 33    | 281   | 1      | 0.36   | 280    | 99.64  |
| 34    | 280   | 0      | 0.00   | 280    | 100.00 |
| 35    | 282   | 1      | 0.35   | 281    | 99.65  |
| 36    | 283   | 3      | 1.06   | 280    | 98.94  |
| 37    | 282   | 0      | 0.00   | 282    | 100.00 |
| 38    | 284   | 0      | 0.00   | 284    | 100.00 |
| 39    | 284   | 0      | 0.00   | 284    | 100.00 |
| 40    | 285   | 0      | 0.00   | 285    | 100.00 |
| 41    | 285   | 1      | 0.35   | 284    | 99.65  |
| 42    | 285   | 0      | 0.00   | 285    | 100.00 |
| 43    | 282   | 0      | 0.00   | 282    | 100.00 |
| 44    | 282   | 0      | 0.00   | 282    | 100.00 |
| 45    | 282   | 0      | 0.00   | 282    | 100.00 |
| 46    | 285   | 0      | 0.00   | 285    | 100.00 |
| 47    | 284   | 0      | 0.00   | 284    | 100.00 |
| 48    | 284   | 0      | 0.00   | 284    | 100.00 |
| 49    | 284   | 0      | 0.00   | 284    | 100.00 |
| 50    | 284   | 0      | 0.00   | 284    | 100.00 |
| 51    | 285   | 0      | 0.00   | 285    | 100.00 |
| 52    | 281   | 1      | 0.36   | 280    | 99.64  |
| 53    | 281   | 0      | 0.00   | 281    | 100.00 |
| 54    | 281   | 0      | 0.00   | 281    | 100.00 |
| 55    | 284   | 0      | 0.00   | 284    | 100.00 |
| 56    | 285   | 0      | 0.00   | 285    | 100.00 |
| 57    | 283   | 0      | 0.00   | 283    | 100.00 |
| 58    | 285   | 0      | 0.00   | 285    | 100.00 |
| 59    | 285   | 0      | 0.00   | 285    | 100.00 |
| 60    | 285   | 0      | 0.00   | 285    | 100.00 |
| 61    | 280   | 0      | 0.00   | 280    | 100.00 |
| 62    | 281   | 0      | 0.00   | 281    | 100.00 |
| 63    | 281   | 0      | 0.00   | 281    | 100.00 |
| 64    | 283   | 0      | 0.00   | 283    | 100.00 |
| 65    | 284   | 0      | 0.00   | 284    | 100.00 |
| 66    | 284   | 0      | 0.00   | 284    | 100.00 |
| 67    | 285   | 1      | 0.35   | 284    | 99.65  |
| 68    | 284   | 0      | 0.00   | 284    | 100.00 |
| 69    | 285   | 0      | 0.00   | 285    | 100.00 |
| 70    | 284   | 0      | 0.00   | 284    | 100.00 |
| 71    | 283   | 0      | 0.00   | 283    | 100.00 |
| 72    | 284   | 0      | 0.00   | 284    | 100.00 |
| 73    | 285   | 0      | 0.00   | 285    | 100.00 |
| 74    | 285   | 0      | 0.00   | 285    | 100.00 |
| 75    | 285   | 0      | 0.00   | 285    | 100.00 |
| 76    | 283   | 0      | 0.00   | 283    | 100.00 |
| 77    | 285   | 0      | 0.00   | 285    | 100.00 |

|     |     |   |      |     |        |
|-----|-----|---|------|-----|--------|
| 78  | 284 | 0 | 0.00 | 284 | 100.00 |
| 79  | 284 | 0 | 0.00 | 284 | 100.00 |
| 80  | 285 | 0 | 0.00 | 285 | 100.00 |
| 81  | 285 | 0 | 0.00 | 285 | 100.00 |
| 82  | 285 | 0 | 0.00 | 285 | 100.00 |
| 83  | 282 | 0 | 0.00 | 282 | 100.00 |
| 84  | 284 | 0 | 0.00 | 284 | 100.00 |
| 85  | 285 | 0 | 0.00 | 285 | 100.00 |
| 86  | 285 | 0 | 0.00 | 285 | 100.00 |
| 87  | 285 | 0 | 0.00 | 285 | 100.00 |
| 88  | 284 | 0 | 0.00 | 284 | 100.00 |
| 89  | 285 | 0 | 0.00 | 285 | 100.00 |
| 90  | 285 | 0 | 0.00 | 285 | 100.00 |
| 91  | 284 | 0 | 0.00 | 284 | 100.00 |
| 92  | 284 | 0 | 0.00 | 284 | 100.00 |
| 93  | 285 | 0 | 0.00 | 285 | 100.00 |
| 94  | 285 | 0 | 0.00 | 285 | 100.00 |
| 95  | 284 | 0 | 0.00 | 284 | 100.00 |
| 96  | 284 | 0 | 0.00 | 284 | 100.00 |
| 97  | 285 | 0 | 0.00 | 285 | 100.00 |
| 98  | 283 | 0 | 0.00 | 283 | 100.00 |
| 99  | 283 | 0 | 0.00 | 283 | 100.00 |
| 100 | 276 | 0 | 0.00 | 276 | 100.00 |
| 101 | 280 | 0 | 0.00 | 280 | 100.00 |
| 102 | 278 | 0 | 0.00 | 278 | 100.00 |
| 103 | 229 | 0 | 0.00 | 229 | 100.00 |
| 104 | 197 | 0 | 0.00 | 197 | 100.00 |
| 105 | 192 | 3 | 1.56 | 189 | 98.44  |
| 106 | 162 | 3 | 1.85 | 159 | 98.15  |
| 107 | 163 | 9 | 5.52 | 154 | 94.48  |
| 108 | 185 | 0 | 0.00 | 185 | 100.00 |

Classification report 3 of 3

IHO statistics a/b are : 1.000 0.023

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 19    | 178   | 0      | 0.00   | 178    | 100.00 |
| 20    | 175   | 0      | 0.00   | 175    | 100.00 |
| 21    | 182   | 0      | 0.00   | 182    | 100.00 |
| 22    | 186   | 0      | 0.00   | 186    | 100.00 |
| 23    | 195   | 0      | 0.00   | 195    | 100.00 |
| 24    | 226   | 0      | 0.00   | 226    | 100.00 |
| 25    | 246   | 0      | 0.00   | 246    | 100.00 |
| 26    | 259   | 0      | 0.00   | 259    | 100.00 |
| 27    | 274   | 0      | 0.00   | 274    | 100.00 |
| 28    | 281   | 0      | 0.00   | 281    | 100.00 |
| 29    | 282   | 0      | 0.00   | 282    | 100.00 |
| 30    | 282   | 0      | 0.00   | 282    | 100.00 |
| 31    | 283   | 0      | 0.00   | 283    | 100.00 |
| 32    | 283   | 0      | 0.00   | 283    | 100.00 |
| 33    | 281   | 0      | 0.00   | 281    | 100.00 |
| 34    | 280   | 0      | 0.00   | 280    | 100.00 |
| 35    | 282   | 0      | 0.00   | 282    | 100.00 |
| 36    | 283   | 0      | 0.00   | 283    | 100.00 |
| 37    | 282   | 0      | 0.00   | 282    | 100.00 |
| 38    | 284   | 0      | 0.00   | 284    | 100.00 |
| 39    | 284   | 0      | 0.00   | 284    | 100.00 |
| 40    | 285   | 0      | 0.00   | 285    | 100.00 |
| 41    | 285   | 0      | 0.00   | 285    | 100.00 |
| 42    | 285   | 0      | 0.00   | 285    | 100.00 |
| 43    | 282   | 0      | 0.00   | 282    | 100.00 |
| 44    | 282   | 0      | 0.00   | 282    | 100.00 |
| 45    | 282   | 0      | 0.00   | 282    | 100.00 |
| 46    | 285   | 0      | 0.00   | 285    | 100.00 |
| 47    | 284   | 0      | 0.00   | 284    | 100.00 |
| 48    | 284   | 0      | 0.00   | 284    | 100.00 |
| 49    | 284   | 0      | 0.00   | 284    | 100.00 |
| 50    | 284   | 0      | 0.00   | 284    | 100.00 |
| 51    | 285   | 0      | 0.00   | 285    | 100.00 |
| 52    | 281   | 0      | 0.00   | 281    | 100.00 |
| 53    | 281   | 0      | 0.00   | 281    | 100.00 |
| 54    | 281   | 0      | 0.00   | 281    | 100.00 |
| 55    | 284   | 0      | 0.00   | 284    | 100.00 |
| 56    | 285   | 0      | 0.00   | 285    | 100.00 |
| 57    | 283   | 0      | 0.00   | 283    | 100.00 |
| 58    | 285   | 0      | 0.00   | 285    | 100.00 |
| 59    | 285   | 0      | 0.00   | 285    | 100.00 |
| 60    | 285   | 0      | 0.00   | 285    | 100.00 |
| 61    | 280   | 0      | 0.00   | 280    | 100.00 |
| 62    | 281   | 0      | 0.00   | 281    | 100.00 |
| 63    | 281   | 0      | 0.00   | 281    | 100.00 |
| 64    | 283   | 0      | 0.00   | 283    | 100.00 |
| 65    | 284   | 0      | 0.00   | 284    | 100.00 |
| 66    | 284   | 0      | 0.00   | 284    | 100.00 |
| 67    | 285   | 0      | 0.00   | 285    | 100.00 |
| 68    | 284   | 0      | 0.00   | 284    | 100.00 |
| 69    | 285   | 0      | 0.00   | 285    | 100.00 |
| 70    | 284   | 0      | 0.00   | 284    | 100.00 |
| 71    | 283   | 0      | 0.00   | 283    | 100.00 |
| 72    | 284   | 0      | 0.00   | 284    | 100.00 |
| 73    | 285   | 0      | 0.00   | 285    | 100.00 |
| 74    | 285   | 0      | 0.00   | 285    | 100.00 |
| 75    | 285   | 0      | 0.00   | 285    | 100.00 |
| 76    | 283   | 0      | 0.00   | 283    | 100.00 |
| 77    | 285   | 0      | 0.00   | 285    | 100.00 |

|     |     |   |      |     |        |
|-----|-----|---|------|-----|--------|
| 78  | 284 | 0 | 0.00 | 284 | 100.00 |
| 79  | 284 | 0 | 0.00 | 284 | 100.00 |
| 80  | 285 | 0 | 0.00 | 285 | 100.00 |
| 81  | 285 | 0 | 0.00 | 285 | 100.00 |
| 82  | 285 | 0 | 0.00 | 285 | 100.00 |
| 83  | 282 | 0 | 0.00 | 282 | 100.00 |
| 84  | 284 | 0 | 0.00 | 284 | 100.00 |
| 85  | 285 | 0 | 0.00 | 285 | 100.00 |
| 86  | 285 | 0 | 0.00 | 285 | 100.00 |
| 87  | 285 | 0 | 0.00 | 285 | 100.00 |
| 88  | 284 | 0 | 0.00 | 284 | 100.00 |
| 89  | 285 | 0 | 0.00 | 285 | 100.00 |
| 90  | 285 | 0 | 0.00 | 285 | 100.00 |
| 91  | 284 | 0 | 0.00 | 284 | 100.00 |
| 92  | 284 | 0 | 0.00 | 284 | 100.00 |
| 93  | 285 | 0 | 0.00 | 285 | 100.00 |
| 94  | 285 | 0 | 0.00 | 285 | 100.00 |
| 95  | 284 | 0 | 0.00 | 284 | 100.00 |
| 96  | 284 | 0 | 0.00 | 284 | 100.00 |
| 97  | 285 | 0 | 0.00 | 285 | 100.00 |
| 98  | 283 | 0 | 0.00 | 283 | 100.00 |
| 99  | 283 | 0 | 0.00 | 283 | 100.00 |
| 100 | 276 | 0 | 0.00 | 276 | 100.00 |
| 101 | 280 | 0 | 0.00 | 280 | 100.00 |
| 102 | 278 | 0 | 0.00 | 278 | 100.00 |
| 103 | 229 | 0 | 0.00 | 229 | 100.00 |
| 104 | 197 | 0 | 0.00 | 197 | 100.00 |
| 105 | 192 | 0 | 0.00 | 192 | 100.00 |
| 106 | 162 | 0 | 0.00 | 162 | 100.00 |
| 107 | 163 | 0 | 0.00 | 163 | 100.00 |
| 108 | 185 | 0 | 0.00 | 185 | 100.00 |

**RAHF\_2003****DN120**

Quality Control Report for file : C:\Temp\2003\_Patch\_tests\RAHF\checkline

Surface lines: 004\_1533, 005\_1522, 006\_1513

Checkline lines: 001\_1638, 002\_1624, 003\_1547

Elevation Range is : -258.825(m) -202.220(m)

Total number of 3D points used: 29472

Starting Time: 30-APR-2003 15:47:40.98

Ending Time: 30-APR-2003 16:44:24.36

Minimum tidal reduction: 8 (mm)

Maximum tidal reduction: 319 (mm)

| User# | Total | Max(+) | Max(-)  | Mean   | Std.   | 3dm(%) | 5dm(%) | 1%(%) | 1.6%(%) |
|-------|-------|--------|---------|--------|--------|--------|--------|-------|---------|
| ===== | ===== | =====  | =====   | =====  | =====  | =====  | =====  | ===== | =====   |
| 10    | 37    | 4.897  | -4.503  | 0.357  | 2.6038 | 0.0    | 2.7    | 51.4  | 83.8    |
| 11    | 126   | 2.737  | -9.069  | -0.567 | 2.0521 | 15.1   | 24.6   | 80.2  | 92.1    |
| 12    | 125   | 2.307  | -7.336  | -2.698 | 1.9275 | 3.2    | 5.6    | 34.4  | 69.6    |
| 13    | 104   | 6.896  | -7.906  | 0.441  | 1.9078 | 18.3   | 29.8   | 83.7  | 96.2    |
| 14    | 183   | 5.339  | -8.603  | -0.511 | 2.1541 | 18.0   | 26.8   | 76.5  | 91.3    |
| 15    | 213   | 4.005  | -10.834 | -1.648 | 2.4149 | 8.5    | 15.5   | 54.9  | 80.8    |
| 16    | 242   | 6.248  | -6.127  | 0.167  | 1.8817 | 12.8   | 22.7   | 83.1  | 91.3    |
| 17    | 256   | 6.909  | -8.574  | -0.874 | 2.3343 | 7.4    | 13.7   | 71.9  | 89.1    |
| 18    | 265   | 7.035  | -11.206 | -1.766 | 2.7297 | 3.4    | 6.4    | 46.0  | 78.5    |
| 19    | 287   | 6.825  | -13.096 | -0.952 | 2.5121 | 7.3    | 11.8   | 68.3  | 89.5    |
| 20    | 300   | 7.153  | -20.931 | -0.863 | 2.8045 | 9.7    | 16.3   | 67.0  | 88.0    |
| 21    | 305   | 8.271  | -23.396 | -1.138 | 2.8919 | 8.9    | 14.1   | 65.9  | 84.9    |
| 22    | 305   | 7.218  | -8.727  | -0.993 | 2.2344 | 7.9    | 13.8   | 65.2  | 85.6    |
| 23    | 308   | 6.882  | -6.474  | -0.606 | 2.1303 | 10.7   | 16.6   | 76.3  | 90.3    |
| 24    | 309   | 7.806  | -5.281  | -0.741 | 2.1372 | 8.7    | 15.9   | 72.5  | 86.7    |
| 25    | 306   | 6.098  | -6.301  | -1.199 | 1.8800 | 9.8    | 15.4   | 66.3  | 90.8    |
| 26    | 304   | 6.210  | -8.710  | -0.585 | 1.7244 | 13.2   | 22.4   | 85.2  | 92.4    |
| 27    | 312   | 7.000  | -8.476  | -0.723 | 1.9390 | 13.5   | 23.7   | 77.2  | 91.7    |
| 28    | 313   | 6.925  | -8.075  | -1.669 | 1.7782 | 6.7    | 11.5   | 58.8  | 91.1    |
| 29    | 307   | 7.259  | -5.484  | -1.099 | 1.5647 | 11.7   | 20.8   | 77.9  | 93.8    |
| 30    | 312   | 5.911  | -7.216  | -1.134 | 1.4725 | 15.7   | 24.7   | 79.2  | 95.5    |
| 31    | 311   | 4.638  | -6.589  | -1.847 | 1.5286 | 6.8    | 11.9   | 57.6  | 90.7    |
| 32    | 311   | 4.094  | -4.779  | -1.208 | 1.3354 | 11.6   | 19.6   | 80.1  | 94.9    |
| 33    | 310   | 4.376  | -5.207  | -1.289 | 1.3989 | 14.8   | 21.3   | 77.4  | 92.9    |
| 34    | 311   | 3.583  | -5.741  | -1.514 | 1.4146 | 7.4    | 13.5   | 68.8  | 93.9    |
| 35    | 311   | 5.286  | -6.329  | -1.061 | 1.5133 | 12.9   | 23.2   | 81.7  | 94.5    |
| 36    | 309   | 2.220  | -5.162  | -1.170 | 1.3132 | 16.2   | 26.2   | 81.6  | 95.5    |
| 37    | 311   | 3.729  | -6.407  | -1.259 | 1.5940 | 6.4    | 13.5   | 69.1  | 94.5    |
| 38    | 310   | 3.251  | -4.409  | -1.020 | 1.2155 | 14.8   | 24.5   | 83.2  | 98.4    |
| 39    | 311   | 4.603  | -4.068  | -0.940 | 1.4428 | 12.9   | 22.5   | 77.8  | 97.7    |
| 40    | 310   | 3.573  | -4.529  | -1.177 | 1.2986 | 9.7    | 18.7   | 79.4  | 96.8    |
| 41    | 309   | 5.890  | -4.645  | -0.981 | 1.4631 | 12.9   | 23.9   | 76.4  | 96.4    |
| 42    | 309   | 6.026  | -4.593  | -1.130 | 1.5297 | 11.7   | 20.1   | 73.5  | 94.5    |
| 43    | 311   | 4.652  | -4.096  | -0.833 | 1.3346 | 15.1   | 24.1   | 82.6  | 99.0    |
| 44    | 311   | 5.664  | -4.674  | -0.737 | 1.4619 | 15.1   | 23.2   | 82.0  | 97.7    |
| 45    | 309   | 4.987  | -3.331  | -0.602 | 1.2841 | 18.8   | 28.8   | 87.1  | 99.4    |
| 46    | 312   | 4.535  | -4.971  | -0.707 | 1.4581 | 14.1   | 22.1   | 80.8  | 98.7    |
| 47    | 308   | 4.813  | -5.874  | -0.888 | 1.4256 | 13.6   | 25.6   | 84.1  | 96.1    |
| 48    | 311   | 3.264  | -4.508  | -0.937 | 1.3136 | 14.5   | 23.8   | 83.6  | 98.1    |
| 49    | 312   | 3.848  | -5.456  | -0.569 | 1.3225 | 17.9   | 29.5   | 87.2  | 98.7    |
| 50    | 311   | 3.460  | -4.996  | -0.539 | 1.3021 | 18.0   | 30.9   | 87.8  | 98.7    |
| 51    | 310   | 4.313  | -4.850  | -0.576 | 1.2045 | 24.8   | 36.8   | 91.6  | 97.4    |
| 52    | 312   | 4.333  | -3.535  | -0.402 | 1.0879 | 20.2   | 32.4   | 93.6  | 99.7    |
| 53    | 312   | 5.824  | -3.606  | -0.363 | 1.1907 | 21.2   | 32.4   | 92.6  | 99.7    |
| 54    | 310   | 4.169  | -4.194  | -0.797 | 1.2012 | 17.1   | 27.4   | 89.4  | 97.7    |

|     |     |       |         |        |        |      |      |      |       |
|-----|-----|-------|---------|--------|--------|------|------|------|-------|
| 55  | 312 | 2.458 | -3.767  | -0.659 | 1.1924 | 16.7 | 26.9 | 89.7 | 98.7  |
| 56  | 310 | 2.812 | -4.037  | -0.492 | 1.3071 | 18.7 | 31.6 | 88.4 | 98.1  |
| 57  | 311 | 3.396 | -4.561  | -1.258 | 1.2950 | 7.7  | 14.5 | 76.2 | 97.4  |
| 58  | 314 | 2.896 | -4.840  | -0.744 | 1.3538 | 15.0 | 22.3 | 87.3 | 98.4  |
| 59  | 312 | 3.591 | -6.414  | -0.770 | 1.4693 | 10.9 | 19.9 | 81.4 | 99.0  |
| 60  | 311 | 3.306 | -3.912  | -1.131 | 1.2248 | 10.9 | 20.3 | 81.7 | 98.1  |
| 61  | 313 | 3.277 | -4.827  | -0.702 | 1.2957 | 16.6 | 25.9 | 85.9 | 99.4  |
| 62  | 313 | 2.628 | -6.418  | -0.643 | 1.3971 | 15.3 | 25.6 | 85.0 | 99.0  |
| 63  | 308 | 3.265 | -3.491  | 0.212  | 1.3781 | 15.6 | 27.9 | 87.7 | 100.0 |
| 64  | 311 | 3.505 | -2.575  | 0.780  | 1.1996 | 11.6 | 18.6 | 89.1 | 99.7  |
| 65  | 311 | 3.424 | -3.550  | 0.721  | 1.1023 | 14.8 | 22.5 | 92.9 | 99.7  |
| 66  | 312 | 4.087 | -5.829  | 0.777  | 1.2238 | 16.3 | 26.0 | 86.9 | 99.0  |
| 67  | 294 | 4.476 | -3.675  | 0.779  | 1.1123 | 14.6 | 24.5 | 90.5 | 99.0  |
| 68  | 293 | 6.514 | -4.678  | 0.891  | 1.2900 | 13.3 | 23.9 | 87.7 | 97.6  |
| 69  | 299 | 4.344 | -4.532  | 0.666  | 1.2711 | 16.1 | 29.1 | 88.0 | 98.3  |
| 70  | 307 | 3.352 | -3.743  | 0.497  | 1.1214 | 18.2 | 26.4 | 93.5 | 99.7  |
| 71  | 310 | 3.095 | -4.020  | 0.392  | 1.2855 | 15.2 | 22.6 | 91.6 | 99.7  |
| 72  | 309 | 3.074 | -3.176  | 0.317  | 1.1089 | 20.4 | 35.0 | 94.8 | 100.0 |
| 73  | 307 | 2.134 | -4.272  | 0.063  | 1.0864 | 23.8 | 40.1 | 96.4 | 99.3  |
| 74  | 306 | 3.451 | -2.976  | 0.268  | 1.1203 | 15.4 | 32.0 | 96.1 | 99.7  |
| 75  | 303 | 2.859 | -2.741  | 0.141  | 1.0998 | 20.1 | 35.3 | 96.7 | 100.0 |
| 76  | 293 | 4.166 | -5.965  | 0.041  | 1.2073 | 18.1 | 35.5 | 93.5 | 98.6  |
| 77  | 288 | 3.159 | -6.040  | 0.489  | 1.1267 | 17.4 | 28.8 | 95.1 | 99.0  |
| 78  | 287 | 3.425 | -4.971  | 0.110  | 1.2808 | 17.1 | 26.8 | 91.3 | 99.3  |
| 79  | 286 | 2.275 | -3.995  | 0.136  | 1.0554 | 22.4 | 36.4 | 96.5 | 99.7  |
| 80  | 286 | 3.246 | -5.128  | 0.289  | 1.1272 | 25.2 | 36.7 | 94.1 | 99.3  |
| 81  | 284 | 2.732 | -5.374  | 0.204  | 1.2407 | 25.4 | 39.4 | 93.7 | 97.9  |
| 82  | 283 | 3.349 | -5.428  | 0.156  | 1.2336 | 19.1 | 37.8 | 93.6 | 98.9  |
| 83  | 281 | 2.556 | -4.908  | 0.065  | 1.2122 | 23.1 | 36.3 | 94.7 | 98.9  |
| 84  | 277 | 3.022 | -5.353  | 0.064  | 1.3071 | 16.2 | 28.2 | 91.3 | 98.6  |
| 85  | 280 | 2.869 | -6.122  | 0.289  | 1.1494 | 25.0 | 40.0 | 92.9 | 99.3  |
| 86  | 277 | 2.891 | -5.974  | -0.124 | 1.1913 | 23.1 | 41.2 | 93.1 | 98.6  |
| 87  | 276 | 3.133 | -5.904  | -0.010 | 1.3159 | 19.9 | 34.4 | 92.4 | 99.3  |
| 88  | 277 | 3.855 | -8.119  | 0.211  | 1.4181 | 22.7 | 37.2 | 93.9 | 97.1  |
| 89  | 276 | 2.806 | -11.087 | -0.072 | 1.5242 | 22.5 | 38.8 | 94.9 | 97.5  |
| 90  | 277 | 4.054 | -5.669  | -0.114 | 1.2907 | 20.9 | 34.7 | 93.1 | 97.8  |
| 91  | 276 | 3.092 | -6.632  | 0.146  | 1.2631 | 29.3 | 43.1 | 93.5 | 98.2  |
| 92  | 275 | 4.039 | -5.614  | -0.069 | 1.2367 | 24.0 | 33.8 | 94.5 | 97.8  |
| 93  | 275 | 3.583 | -6.063  | -0.273 | 1.4193 | 16.7 | 27.6 | 90.2 | 97.8  |
| 94  | 276 | 2.527 | -5.399  | 0.018  | 1.3003 | 19.9 | 35.1 | 93.5 | 97.1  |
| 95  | 274 | 3.315 | -6.312  | -0.152 | 1.3655 | 24.5 | 37.2 | 93.8 | 97.1  |
| 96  | 274 | 3.009 | -7.849  | -0.464 | 1.5399 | 20.4 | 29.6 | 88.7 | 98.2  |
| 97  | 276 | 3.066 | -9.451  | 0.215  | 1.3813 | 20.7 | 34.1 | 93.1 | 98.2  |
| 98  | 276 | 2.568 | -8.398  | -0.165 | 1.2954 | 20.7 | 31.9 | 95.7 | 98.6  |
| 99  | 274 | 2.130 | -5.898  | -0.579 | 1.3227 | 19.3 | 29.9 | 90.5 | 97.1  |
| 100 | 274 | 2.851 | -5.736  | 0.302  | 1.1324 | 22.3 | 36.9 | 94.5 | 99.3  |
| 101 | 274 | 2.608 | -4.819  | -0.120 | 1.0680 | 22.3 | 37.6 | 94.5 | 99.6  |
| 102 | 268 | 3.666 | -7.146  | -0.356 | 1.2006 | 19.8 | 38.8 | 91.8 | 99.3  |
| 103 | 267 | 4.608 | -4.896  | 0.209  | 1.2652 | 25.5 | 35.6 | 93.6 | 98.9  |
| 104 | 259 | 3.371 | -3.469  | 0.059  | 1.0699 | 27.4 | 43.2 | 94.6 | 100.0 |
| 105 | 236 | 2.684 | -4.290  | -0.271 | 1.1364 | 22.0 | 32.6 | 95.3 | 99.6  |
| 106 | 224 | 4.462 | -1.987  | 0.393  | 1.1778 | 28.1 | 39.7 | 91.1 | 98.2  |
| 107 | 205 | 2.416 | -4.134  | -0.096 | 1.0080 | 25.4 | 36.1 | 96.1 | 99.5  |
| 108 | 204 | 3.178 | -2.916  | 0.308  | 0.8616 | 24.0 | 33.8 | 99.0 | 100.0 |
| 109 | 205 | 5.428 | -3.101  | 0.270  | 1.3621 | 19.0 | 32.2 | 91.7 | 97.1  |
| 110 | 203 | 3.373 | -3.308  | 0.217  | 1.1159 | 21.7 | 40.9 | 93.6 | 100.0 |
| 111 | 183 | 3.816 | -7.093  | 1.174  | 1.5711 | 9.3  | 16.4 | 76.0 | 96.2  |
| 112 | 201 | 3.932 | -5.302  | -0.902 | 1.7228 | 16.4 | 24.9 | 75.6 | 91.5  |
| 113 | 194 | 4.091 | -7.034  | 0.630  | 1.7273 | 16.0 | 22.7 | 79.4 | 95.4  |
| 114 | 90  | 5.946 | -4.903  | 2.534  | 2.3306 | 4.4  | 4.4  | 20.0 | 61.1  |
| 115 | 185 | 9.167 | -4.808  | -0.294 | 2.1369 | 13.0 | 18.4 | 69.2 | 94.1  |
| 116 | 119 | 6.870 | -1.237  | 2.841  | 1.5264 | 1.7  | 2.5  | 34.5 | 72.3  |
| 117 | 40  | 8.818 | 0.000   | 4.344  | 1.6671 | 0.0  | 0.0  | 10.0 | 32.5  |

Classification report 1 of 3

IHO statistics a/b are : 0.250 0.008

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 10    | 37    | 26     | 70.27  | 11     | 29.73  |
| 11    | 126   | 36     | 28.57  | 90     | 71.43  |
| 12    | 125   | 95     | 76.00  | 30     | 24.00  |
| 13    | 104   | 33     | 31.73  | 71     | 68.27  |
| 14    | 183   | 63     | 34.43  | 120    | 65.57  |
| 15    | 213   | 118    | 55.40  | 95     | 44.60  |
| 16    | 242   | 59     | 24.38  | 183    | 75.62  |
| 17    | 256   | 107    | 41.80  | 149    | 58.20  |
| 18    | 265   | 184    | 69.43  | 81     | 30.57  |
| 19    | 287   | 155    | 54.01  | 132    | 45.99  |
| 20    | 300   | 139    | 46.33  | 161    | 53.67  |
| 21    | 305   | 155    | 50.82  | 150    | 49.18  |
| 22    | 305   | 150    | 49.18  | 155    | 50.82  |
| 23    | 308   | 121    | 39.29  | 187    | 60.71  |
| 24    | 309   | 123    | 39.81  | 186    | 60.19  |
| 25    | 306   | 156    | 50.98  | 150    | 49.02  |
| 26    | 304   | 80     | 26.32  | 224    | 73.68  |
| 27    | 312   | 101    | 32.37  | 211    | 67.63  |
| 28    | 313   | 182    | 58.15  | 131    | 41.85  |
| 29    | 307   | 113    | 36.81  | 194    | 63.19  |
| 30    | 312   | 106    | 33.97  | 206    | 66.03  |
| 31    | 311   | 183    | 58.84  | 128    | 41.16  |
| 32    | 311   | 111    | 35.69  | 200    | 64.31  |
| 33    | 310   | 110    | 35.48  | 200    | 64.52  |
| 34    | 311   | 142    | 45.66  | 169    | 54.34  |
| 35    | 311   | 106    | 34.08  | 205    | 65.92  |
| 36    | 309   | 100    | 32.36  | 209    | 67.64  |
| 37    | 311   | 146    | 46.95  | 165    | 53.05  |
| 38    | 310   | 89     | 28.71  | 221    | 71.29  |
| 39    | 311   | 109    | 35.05  | 202    | 64.95  |
| 40    | 310   | 110    | 35.48  | 200    | 64.52  |
| 41    | 309   | 107    | 34.63  | 202    | 65.37  |
| 42    | 309   | 117    | 37.86  | 192    | 62.14  |
| 43    | 311   | 92     | 29.58  | 219    | 70.42  |
| 44    | 311   | 96     | 30.87  | 215    | 69.13  |
| 45    | 309   | 78     | 25.24  | 231    | 74.76  |
| 46    | 312   | 94     | 30.13  | 218    | 69.87  |
| 47    | 308   | 87     | 28.25  | 221    | 71.75  |
| 48    | 311   | 94     | 30.23  | 217    | 69.77  |
| 49    | 312   | 74     | 23.72  | 238    | 76.28  |
| 50    | 311   | 69     | 22.19  | 242    | 77.81  |
| 51    | 310   | 56     | 18.06  | 254    | 81.94  |
| 52    | 312   | 44     | 14.10  | 268    | 85.90  |
| 53    | 312   | 57     | 18.27  | 255    | 81.73  |
| 54    | 310   | 69     | 22.26  | 241    | 77.74  |
| 55    | 312   | 69     | 22.12  | 243    | 77.88  |
| 56    | 310   | 67     | 21.61  | 243    | 78.39  |
| 57    | 311   | 140    | 45.02  | 171    | 54.98  |
| 58    | 314   | 98     | 31.21  | 216    | 68.79  |
| 59    | 312   | 95     | 30.45  | 217    | 69.55  |
| 60    | 311   | 103    | 33.12  | 208    | 66.88  |
| 61    | 313   | 82     | 26.20  | 231    | 73.80  |
| 62    | 313   | 92     | 29.39  | 221    | 70.61  |
| 63    | 308   | 79     | 25.65  | 229    | 74.35  |
| 64    | 311   | 87     | 27.97  | 224    | 72.03  |
| 65    | 311   | 66     | 21.22  | 245    | 78.78  |
| 66    | 312   | 69     | 22.12  | 243    | 77.88  |
| 67    | 294   | 62     | 21.09  | 232    | 78.91  |
| 68    | 293   | 80     | 27.30  | 213    | 72.70  |

|     |     |    |       |     |       |
|-----|-----|----|-------|-----|-------|
| 69  | 299 | 66 | 22.07 | 233 | 77.93 |
| 70  | 307 | 50 | 16.29 | 257 | 83.71 |
| 71  | 310 | 64 | 20.65 | 246 | 79.35 |
| 72  | 309 | 51 | 16.50 | 258 | 83.50 |
| 73  | 307 | 31 | 10.10 | 276 | 89.90 |
| 74  | 306 | 43 | 14.05 | 263 | 85.95 |
| 75  | 303 | 44 | 14.52 | 259 | 85.48 |
| 76  | 293 | 34 | 11.60 | 259 | 88.40 |
| 77  | 288 | 41 | 14.24 | 247 | 85.76 |
| 78  | 287 | 47 | 16.38 | 240 | 83.62 |
| 79  | 286 | 35 | 12.24 | 251 | 87.76 |
| 80  | 286 | 38 | 13.29 | 248 | 86.71 |
| 81  | 284 | 39 | 13.73 | 245 | 86.27 |
| 82  | 283 | 47 | 16.61 | 236 | 83.39 |
| 83  | 281 | 43 | 15.30 | 238 | 84.70 |
| 84  | 277 | 43 | 15.52 | 234 | 84.48 |
| 85  | 280 | 38 | 13.57 | 242 | 86.43 |
| 86  | 277 | 28 | 10.11 | 249 | 89.89 |
| 87  | 276 | 50 | 18.12 | 226 | 81.88 |
| 88  | 277 | 39 | 14.08 | 238 | 85.92 |
| 89  | 276 | 31 | 11.23 | 245 | 88.77 |
| 90  | 277 | 46 | 16.61 | 231 | 83.39 |
| 91  | 276 | 35 | 12.68 | 241 | 87.32 |
| 92  | 275 | 37 | 13.45 | 238 | 86.55 |
| 93  | 275 | 56 | 20.36 | 219 | 79.64 |
| 94  | 276 | 39 | 14.13 | 237 | 85.87 |
| 95  | 274 | 38 | 13.87 | 236 | 86.13 |
| 96  | 274 | 69 | 25.18 | 205 | 74.82 |
| 97  | 276 | 37 | 13.41 | 239 | 86.59 |
| 98  | 276 | 33 | 11.96 | 243 | 88.04 |
| 99  | 274 | 55 | 20.07 | 219 | 79.93 |
| 100 | 274 | 34 | 12.41 | 240 | 87.59 |
| 101 | 274 | 30 | 10.95 | 244 | 89.05 |
| 102 | 268 | 40 | 14.93 | 228 | 85.07 |
| 103 | 267 | 49 | 18.35 | 218 | 81.65 |
| 104 | 259 | 32 | 12.36 | 227 | 87.64 |
| 105 | 236 | 36 | 15.25 | 200 | 84.75 |
| 106 | 224 | 30 | 13.39 | 194 | 86.61 |
| 107 | 205 | 13 | 6.34  | 192 | 93.66 |
| 108 | 204 | 8  | 3.92  | 196 | 96.08 |
| 109 | 205 | 33 | 16.10 | 172 | 83.90 |
| 110 | 203 | 31 | 15.27 | 172 | 84.73 |
| 111 | 183 | 84 | 45.90 | 99  | 54.10 |
| 112 | 201 | 67 | 33.33 | 134 | 66.67 |
| 113 | 194 | 64 | 32.99 | 130 | 67.01 |
| 114 | 90  | 75 | 83.33 | 15  | 16.67 |
| 115 | 185 | 82 | 44.32 | 103 | 55.68 |
| 116 | 119 | 98 | 82.35 | 21  | 17.65 |
| 117 | 40  | 38 | 95.00 | 2   | 5.00  |

Classification report 2 of 3

IHO statistics a/b are : 0.500 0.013

| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 10    | 37    | 8      | 21.62  | 29     | 78.38  |
| 11    | 126   | 14     | 11.11  | 112    | 88.89  |
| 12    | 125   | 57     | 45.60  | 68     | 54.40  |
| 13    | 104   | 5      | 4.81   | 99     | 95.19  |
| 14    | 183   | 31     | 16.94  | 152    | 83.06  |
| 15    | 213   | 65     | 30.52  | 148    | 69.48  |
| 16    | 242   | 29     | 11.98  | 213    | 88.02  |
| 17    | 256   | 38     | 14.84  | 218    | 85.16  |
| 18    | 265   | 94     | 35.47  | 171    | 64.53  |
| 19    | 287   | 52     | 18.12  | 235    | 81.88  |
| 20    | 300   | 59     | 19.67  | 241    | 80.33  |
| 21    | 305   | 63     | 20.66  | 242    | 79.34  |
| 22    | 305   | 69     | 22.62  | 236    | 77.38  |
| 23    | 308   | 42     | 13.64  | 266    | 86.36  |
| 24    | 309   | 57     | 18.45  | 252    | 81.55  |
| 25    | 306   | 56     | 18.30  | 250    | 81.70  |
| 26    | 304   | 32     | 10.53  | 272    | 89.47  |
| 27    | 312   | 39     | 12.50  | 273    | 87.50  |
| 28    | 313   | 60     | 19.17  | 253    | 80.83  |
| 29    | 307   | 39     | 12.70  | 268    | 87.30  |
| 30    | 312   | 30     | 9.62   | 282    | 90.38  |
| 31    | 311   | 68     | 21.86  | 243    | 78.14  |
| 32    | 311   | 33     | 10.61  | 278    | 89.39  |
| 33    | 310   | 36     | 11.61  | 274    | 88.39  |
| 34    | 311   | 46     | 14.79  | 265    | 85.21  |
| 35    | 311   | 27     | 8.68   | 284    | 91.32  |
| 36    | 309   | 35     | 11.33  | 274    | 88.67  |
| 37    | 311   | 40     | 12.86  | 271    | 87.14  |
| 38    | 310   | 23     | 7.42   | 287    | 92.58  |
| 39    | 311   | 27     | 8.68   | 284    | 91.32  |
| 40    | 310   | 36     | 11.61  | 274    | 88.39  |
| 41    | 309   | 24     | 7.77   | 285    | 92.23  |
| 42    | 309   | 36     | 11.65  | 273    | 88.35  |
| 43    | 311   | 17     | 5.47   | 294    | 94.53  |
| 44    | 311   | 24     | 7.72   | 287    | 92.28  |
| 45    | 309   | 8      | 2.59   | 301    | 97.41  |
| 46    | 312   | 20     | 6.41   | 292    | 93.59  |
| 47    | 308   | 24     | 7.79   | 284    | 92.21  |
| 48    | 311   | 22     | 7.07   | 289    | 92.93  |
| 49    | 312   | 11     | 3.53   | 301    | 96.47  |
| 50    | 311   | 11     | 3.54   | 300    | 96.46  |
| 51    | 310   | 15     | 4.84   | 295    | 95.16  |
| 52    | 312   | 5      | 1.60   | 307    | 98.40  |
| 53    | 312   | 5      | 1.60   | 307    | 98.40  |
| 54    | 310   | 16     | 5.16   | 294    | 94.84  |
| 55    | 312   | 13     | 4.17   | 299    | 95.83  |
| 56    | 310   | 13     | 4.19   | 297    | 95.81  |
| 57    | 311   | 21     | 6.75   | 290    | 93.25  |
| 58    | 314   | 12     | 3.82   | 302    | 96.18  |
| 59    | 312   | 17     | 5.45   | 295    | 94.55  |
| 60    | 311   | 24     | 7.72   | 287    | 92.28  |
| 61    | 313   | 13     | 4.15   | 300    | 95.85  |
| 62    | 313   | 15     | 4.79   | 298    | 95.21  |
| 63    | 308   | 9      | 2.92   | 299    | 97.08  |
| 64    | 311   | 6      | 1.93   | 305    | 98.07  |
| 65    | 311   | 6      | 1.93   | 305    | 98.07  |
| 66    | 312   | 16     | 5.13   | 296    | 94.87  |
| 67    | 294   | 6      | 2.04   | 288    | 97.96  |
| 68    | 293   | 13     | 4.44   | 280    | 95.56  |

|     |     |    |       |     |        |
|-----|-----|----|-------|-----|--------|
| 69  | 299 | 13 | 4.35  | 286 | 95.65  |
| 70  | 307 | 4  | 1.30  | 303 | 98.70  |
| 71  | 310 | 9  | 2.90  | 301 | 97.10  |
| 72  | 309 | 3  | 0.97  | 306 | 99.03  |
| 73  | 307 | 6  | 1.95  | 301 | 98.05  |
| 74  | 306 | 2  | 0.65  | 304 | 99.35  |
| 75  | 303 | 0  | 0.00  | 303 | 100.00 |
| 76  | 293 | 8  | 2.73  | 285 | 97.27  |
| 77  | 288 | 6  | 2.08  | 282 | 97.92  |
| 78  | 287 | 7  | 2.44  | 280 | 97.56  |
| 79  | 286 | 3  | 1.05  | 283 | 98.95  |
| 80  | 286 | 6  | 2.10  | 280 | 97.90  |
| 81  | 284 | 7  | 2.46  | 277 | 97.54  |
| 82  | 283 | 5  | 1.77  | 278 | 98.23  |
| 83  | 281 | 7  | 2.49  | 274 | 97.51  |
| 84  | 277 | 7  | 2.53  | 270 | 97.47  |
| 85  | 280 | 5  | 1.79  | 275 | 98.21  |
| 86  | 277 | 5  | 1.81  | 272 | 98.19  |
| 87  | 276 | 6  | 2.17  | 270 | 97.83  |
| 88  | 277 | 10 | 3.61  | 267 | 96.39  |
| 89  | 276 | 7  | 2.54  | 269 | 97.46  |
| 90  | 277 | 12 | 4.33  | 265 | 95.67  |
| 91  | 276 | 7  | 2.54  | 269 | 97.46  |
| 92  | 275 | 6  | 2.18  | 269 | 97.82  |
| 93  | 275 | 10 | 3.64  | 265 | 96.36  |
| 94  | 276 | 9  | 3.26  | 267 | 96.74  |
| 95  | 274 | 9  | 3.28  | 265 | 96.72  |
| 96  | 274 | 12 | 4.38  | 262 | 95.62  |
| 97  | 276 | 6  | 2.17  | 270 | 97.83  |
| 98  | 276 | 5  | 1.81  | 271 | 98.19  |
| 99  | 274 | 11 | 4.01  | 263 | 95.99  |
| 100 | 274 | 4  | 1.46  | 270 | 98.54  |
| 101 | 274 | 3  | 1.09  | 271 | 98.91  |
| 102 | 268 | 5  | 1.87  | 263 | 98.13  |
| 103 | 267 | 9  | 3.37  | 258 | 96.63  |
| 104 | 259 | 3  | 1.16  | 256 | 98.84  |
| 105 | 236 | 2  | 0.85  | 234 | 99.15  |
| 106 | 224 | 9  | 4.02  | 215 | 95.98  |
| 107 | 205 | 3  | 1.46  | 202 | 98.54  |
| 108 | 204 | 1  | 0.49  | 203 | 99.51  |
| 109 | 205 | 11 | 5.37  | 194 | 94.63  |
| 110 | 203 | 3  | 1.48  | 200 | 98.52  |
| 111 | 183 | 15 | 8.20  | 168 | 91.80  |
| 112 | 201 | 30 | 14.93 | 171 | 85.07  |
| 113 | 194 | 17 | 8.76  | 177 | 91.24  |
| 114 | 90  | 56 | 62.22 | 34  | 37.78  |
| 115 | 185 | 24 | 12.97 | 161 | 87.03  |
| 116 | 119 | 57 | 47.90 | 62  | 52.10  |
| 117 | 40  | 29 | 72.50 | 11  | 27.50  |

Classification report 3 of 3

IHO statistics a/b are : 1.000 0.023

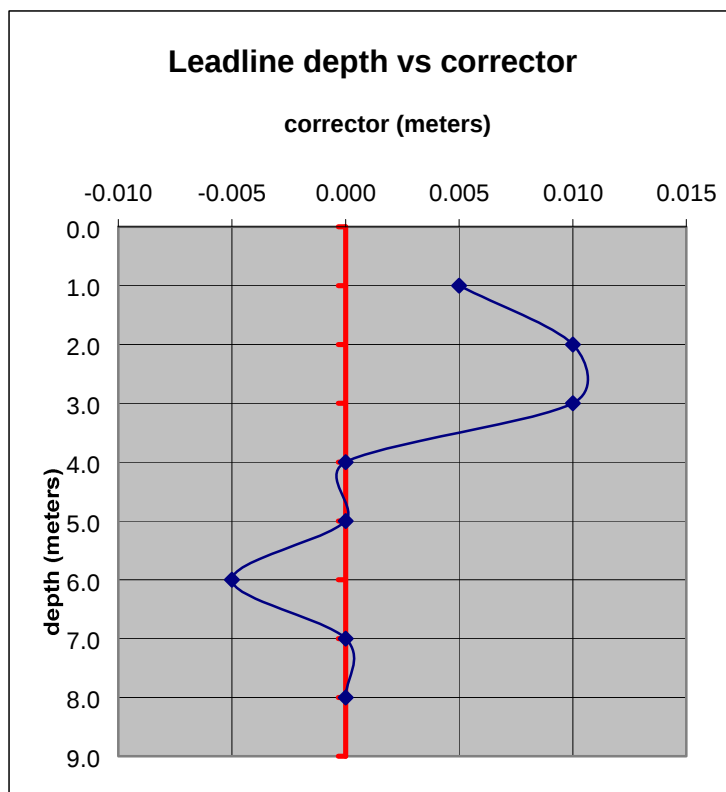
| User# | Total | # fail | % fail | # pass | % pass |
|-------|-------|--------|--------|--------|--------|
| ===== | ===== | =====  | =====  | =====  | =====  |
| 10    | 37    | 0      | 0.00   | 37     | 100.00 |
| 11    | 126   | 5      | 3.97   | 121    | 96.03  |
| 12    | 125   | 13     | 10.40  | 112    | 89.60  |
| 13    | 104   | 3      | 2.88   | 101    | 97.12  |
| 14    | 183   | 5      | 2.73   | 178    | 97.27  |
| 15    | 213   | 11     | 5.16   | 202    | 94.84  |
| 16    | 242   | 5      | 2.07   | 237    | 97.93  |
| 17    | 256   | 18     | 7.03   | 238    | 92.97  |
| 18    | 265   | 26     | 9.81   | 239    | 90.19  |
| 19    | 287   | 14     | 4.88   | 273    | 95.12  |
| 20    | 300   | 15     | 5.00   | 285    | 95.00  |
| 21    | 305   | 24     | 7.87   | 281    | 92.13  |
| 22    | 305   | 12     | 3.93   | 293    | 96.07  |
| 23    | 308   | 13     | 4.22   | 295    | 95.78  |
| 24    | 309   | 11     | 3.56   | 298    | 96.44  |
| 25    | 306   | 5      | 1.63   | 301    | 98.37  |
| 26    | 304   | 4      | 1.32   | 300    | 98.68  |
| 27    | 312   | 13     | 4.17   | 299    | 95.83  |
| 28    | 313   | 11     | 3.51   | 302    | 96.49  |
| 29    | 307   | 4      | 1.30   | 303    | 98.70  |
| 30    | 312   | 4      | 1.28   | 308    | 98.72  |
| 31    | 311   | 5      | 1.61   | 306    | 98.39  |
| 32    | 311   | 0      | 0.00   | 311    | 100.00 |
| 33    | 310   | 0      | 0.00   | 310    | 100.00 |
| 34    | 311   | 2      | 0.64   | 309    | 99.36  |
| 35    | 311   | 6      | 1.93   | 305    | 98.07  |
| 36    | 309   | 0      | 0.00   | 309    | 100.00 |
| 37    | 311   | 1      | 0.32   | 310    | 99.68  |
| 38    | 310   | 0      | 0.00   | 310    | 100.00 |
| 39    | 311   | 0      | 0.00   | 311    | 100.00 |
| 40    | 310   | 0      | 0.00   | 310    | 100.00 |
| 41    | 309   | 1      | 0.32   | 308    | 99.68  |
| 42    | 309   | 2      | 0.65   | 307    | 99.35  |
| 43    | 311   | 0      | 0.00   | 311    | 100.00 |
| 44    | 311   | 1      | 0.32   | 310    | 99.68  |
| 45    | 309   | 0      | 0.00   | 309    | 100.00 |
| 46    | 312   | 0      | 0.00   | 312    | 100.00 |
| 47    | 308   | 2      | 0.65   | 306    | 99.35  |
| 48    | 311   | 0      | 0.00   | 311    | 100.00 |
| 49    | 312   | 1      | 0.32   | 311    | 99.68  |
| 50    | 311   | 0      | 0.00   | 311    | 100.00 |
| 51    | 310   | 0      | 0.00   | 310    | 100.00 |
| 52    | 312   | 0      | 0.00   | 312    | 100.00 |
| 53    | 312   | 1      | 0.32   | 311    | 99.68  |
| 54    | 310   | 0      | 0.00   | 310    | 100.00 |
| 55    | 312   | 0      | 0.00   | 312    | 100.00 |
| 56    | 310   | 0      | 0.00   | 310    | 100.00 |
| 57    | 311   | 0      | 0.00   | 311    | 100.00 |
| 58    | 314   | 0      | 0.00   | 314    | 100.00 |
| 59    | 312   | 1      | 0.32   | 311    | 99.68  |
| 60    | 311   | 0      | 0.00   | 311    | 100.00 |
| 61    | 313   | 0      | 0.00   | 313    | 100.00 |
| 62    | 313   | 1      | 0.32   | 312    | 99.68  |
| 63    | 308   | 0      | 0.00   | 308    | 100.00 |
| 64    | 311   | 0      | 0.00   | 311    | 100.00 |
| 65    | 311   | 0      | 0.00   | 311    | 100.00 |
| 66    | 312   | 1      | 0.32   | 311    | 99.68  |
| 67    | 294   | 0      | 0.00   | 294    | 100.00 |
| 68    | 293   | 1      | 0.34   | 292    | 99.66  |

|     |     |    |       |     |        |
|-----|-----|----|-------|-----|--------|
| 69  | 299 | 0  | 0.00  | 299 | 100.00 |
| 70  | 307 | 0  | 0.00  | 307 | 100.00 |
| 71  | 310 | 0  | 0.00  | 310 | 100.00 |
| 72  | 309 | 0  | 0.00  | 309 | 100.00 |
| 73  | 307 | 0  | 0.00  | 307 | 100.00 |
| 74  | 306 | 0  | 0.00  | 306 | 100.00 |
| 75  | 303 | 0  | 0.00  | 303 | 100.00 |
| 76  | 293 | 1  | 0.34  | 292 | 99.66  |
| 77  | 288 | 1  | 0.35  | 287 | 99.65  |
| 78  | 287 | 0  | 0.00  | 287 | 100.00 |
| 79  | 286 | 0  | 0.00  | 286 | 100.00 |
| 80  | 286 | 0  | 0.00  | 286 | 100.00 |
| 81  | 284 | 0  | 0.00  | 284 | 100.00 |
| 82  | 283 | 1  | 0.35  | 282 | 99.65  |
| 83  | 281 | 0  | 0.00  | 281 | 100.00 |
| 84  | 277 | 0  | 0.00  | 277 | 100.00 |
| 85  | 280 | 1  | 0.36  | 279 | 99.64  |
| 86  | 277 | 1  | 0.36  | 276 | 99.64  |
| 87  | 276 | 2  | 0.72  | 274 | 99.28  |
| 88  | 277 | 4  | 1.44  | 273 | 98.56  |
| 89  | 276 | 4  | 1.45  | 272 | 98.55  |
| 90  | 277 | 1  | 0.36  | 276 | 99.64  |
| 91  | 276 | 2  | 0.72  | 274 | 99.28  |
| 92  | 275 | 1  | 0.36  | 274 | 99.64  |
| 93  | 275 | 3  | 1.09  | 272 | 98.91  |
| 94  | 276 | 1  | 0.36  | 275 | 99.64  |
| 95  | 274 | 4  | 1.46  | 270 | 98.54  |
| 96  | 274 | 4  | 1.46  | 270 | 98.54  |
| 97  | 276 | 2  | 0.72  | 274 | 99.28  |
| 98  | 276 | 2  | 0.72  | 274 | 99.28  |
| 99  | 274 | 3  | 1.09  | 271 | 98.91  |
| 100 | 274 | 1  | 0.36  | 273 | 99.64  |
| 101 | 274 | 0  | 0.00  | 274 | 100.00 |
| 102 | 268 | 1  | 0.37  | 267 | 99.63  |
| 103 | 267 | 0  | 0.00  | 267 | 100.00 |
| 104 | 259 | 0  | 0.00  | 259 | 100.00 |
| 105 | 236 | 0  | 0.00  | 236 | 100.00 |
| 106 | 224 | 0  | 0.00  | 224 | 100.00 |
| 107 | 205 | 0  | 0.00  | 205 | 100.00 |
| 108 | 204 | 0  | 0.00  | 204 | 100.00 |
| 109 | 205 | 1  | 0.49  | 204 | 99.51  |
| 110 | 203 | 0  | 0.00  | 203 | 100.00 |
| 111 | 183 | 3  | 1.64  | 180 | 98.36  |
| 112 | 201 | 0  | 0.00  | 201 | 100.00 |
| 113 | 194 | 3  | 1.55  | 191 | 98.45  |
| 114 | 90  | 2  | 2.22  | 88  | 97.78  |
| 115 | 185 | 3  | 1.62  | 182 | 98.38  |
| 116 | 119 | 9  | 7.56  | 110 | 92.44  |
| 117 | 40  | 12 | 30.00 | 28  | 70.00  |

**Leadline RA 6S**

calibrated 4/2/2003

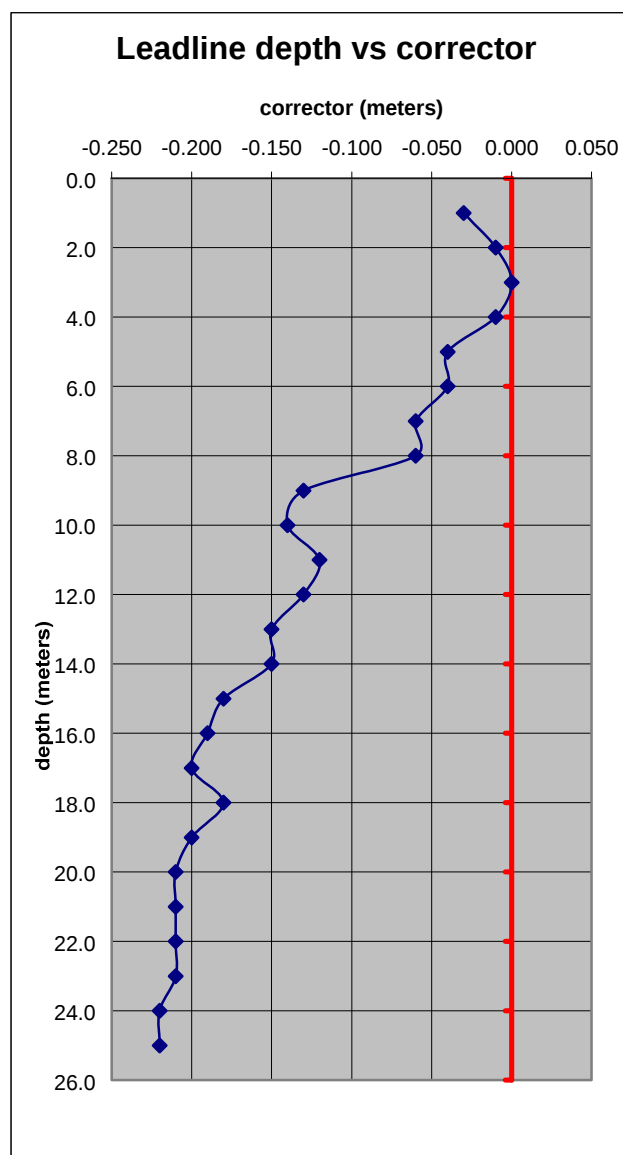
| Meter Marks        | Measurement | Corrector |
|--------------------|-------------|-----------|
| 1.0                | 0.995       | 0.005     |
| 2.0                | 1.990       | 0.010     |
| 3.0                | 2.990       | 0.010     |
| 4.0                | 4.000       | 0.000     |
| 5.0                | 5.000       | 0.000     |
| 6.0                | 6.005       | -0.005    |
| 7.0                | 7.000       | 0.000     |
| 8.0                | 8.000       | 0.000     |
| Average correction |             | 0.002     |
| Standard deviation |             | 0.005     |



**Leadline RA204**

calibrated 4/2/2003

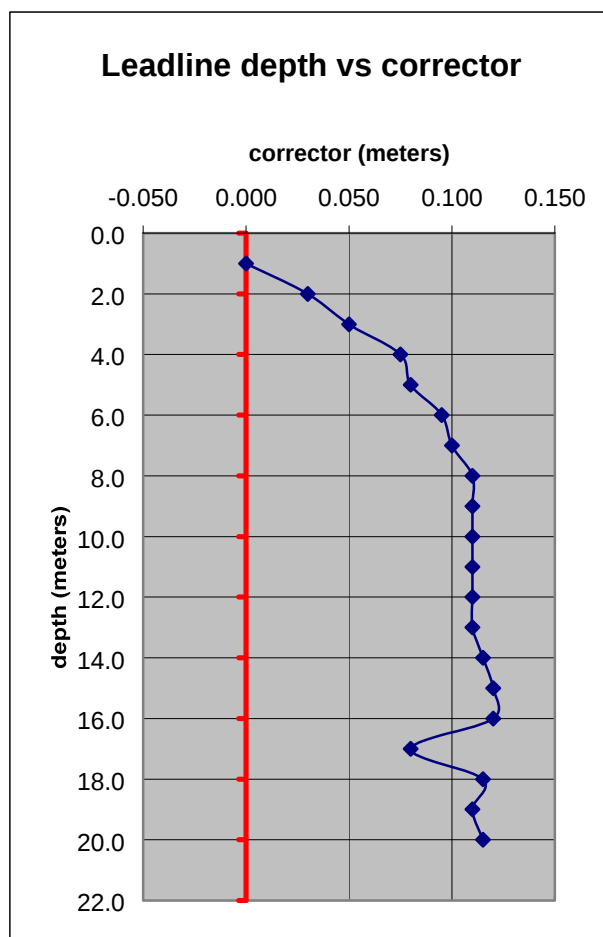
| Meter Mark         | Measurement | Corrector |
|--------------------|-------------|-----------|
| 1.0                | 1.030       | -0.030    |
| 2.0                | 2.010       | -0.010    |
| 3.0                | 3.000       | 0.000     |
| 4.0                | 4.010       | -0.010    |
| 5.0                | 5.040       | -0.040    |
| 6.0                | 6.040       | -0.040    |
| 7.0                | 7.060       | -0.060    |
| 8.0                | 8.060       | -0.060    |
| 9.0                | 9.130       | -0.130    |
| 10.0               | 10.140      | -0.140    |
| 11.0               | 11.120      | -0.120    |
| 12.0               | 12.130      | -0.130    |
| 13.0               | 13.150      | -0.150    |
| 14.0               | 14.150      | -0.150    |
| 15.0               | 15.180      | -0.180    |
| 16.0               | 16.190      | -0.190    |
| 17.0               | 17.200      | -0.200    |
| 18.0               | 18.180      | -0.180    |
| 19.0               | 19.200      | -0.200    |
| 20.0               | 20.210      | -0.210    |
| 21.0               | 21.210      | -0.210    |
| 22.0               | 22.210      | -0.210    |
| 23.0               | 23.210      | -0.210    |
| 24.0               | 24.220      | -0.220    |
| 25.0               | 25.220      | -0.220    |
| Average Correction |             | -0.031    |
| Standard deviation |             | 0.023     |



## Lead Line RA107

calibrated 4/2/2003

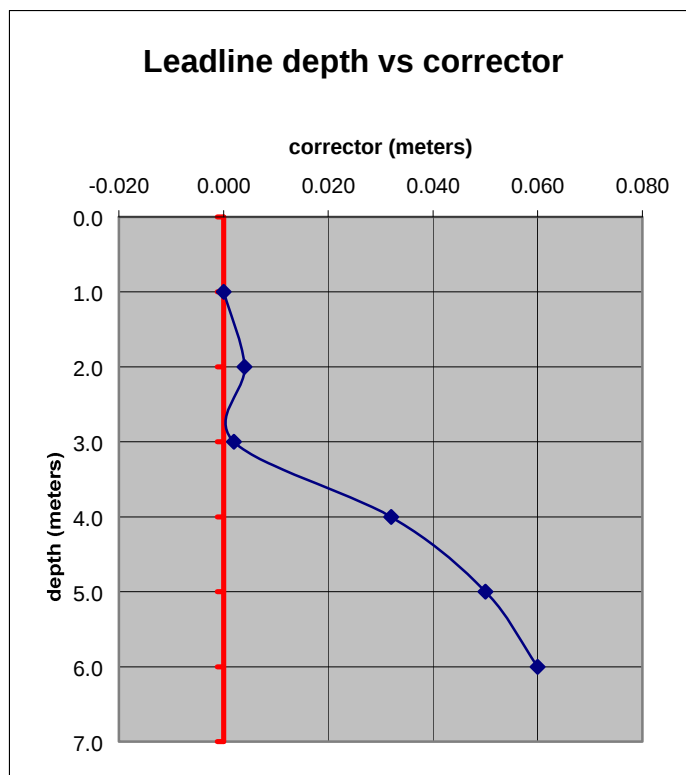
| Meter Mark         | Measurement | Corrector |
|--------------------|-------------|-----------|
| 1.0                | 1.000       | 0.000     |
| 2.0                | 1.970       | 0.030     |
| 3.0                | 2.950       | 0.050     |
| 4.0                | 3.925       | 0.075     |
| 5.0                | 4.920       | 0.080     |
| 6.0                | 5.905       | 0.095     |
| 7.0                | 6.900       | 0.100     |
| 8.0                | 7.890       | 0.110     |
| 9.0                | 8.890       | 0.110     |
| 10.0               | 9.890       | 0.110     |
| 11.0               | 10.890      | 0.110     |
| 12.0               | 11.890      | 0.110     |
| 13.0               | 12.890      | 0.110     |
| 14.0               | 13.885      | 0.115     |
| 15.0               | 14.880      | 0.120     |
| 16.0               | 15.880      | 0.120     |
| 17.0               | 16.920      | 0.080     |
| 18.0               | 17.885      | 0.115     |
| 19.0               | 18.890      | 0.110     |
| 20.0               | 19.885      | 0.115     |
| Average Correction |             | 0.110     |
| Standard deviation |             | 0.033     |



## Lead Line RA201

calibrated 4/2/2003

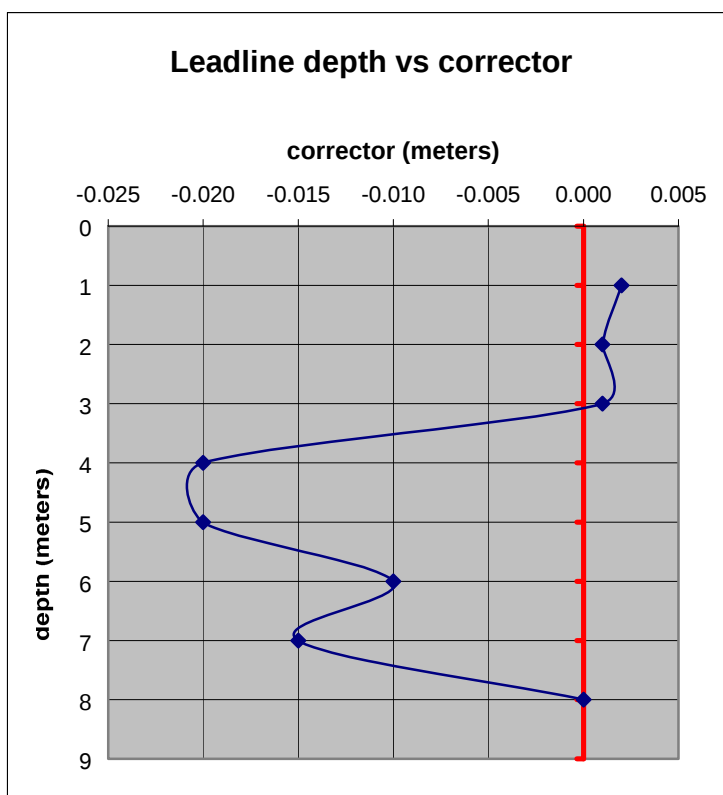
| Meter Mark         | Measurement | Corrector |
|--------------------|-------------|-----------|
| 1.0                | 1.000       | 0.000     |
| 2.0                | 1.996       | 0.004     |
| 3.0                | 2.998       | 0.002     |
| 4.0                | 3.968       | 0.032     |
| 5.0                | 4.950       | 0.050     |
| 6.0                | 5.940       | 0.060     |
| Average Correction |             | 0.025     |
| Standard deviation |             | 0.026     |



## Lead Line RA36

calibrated 4/2/2003

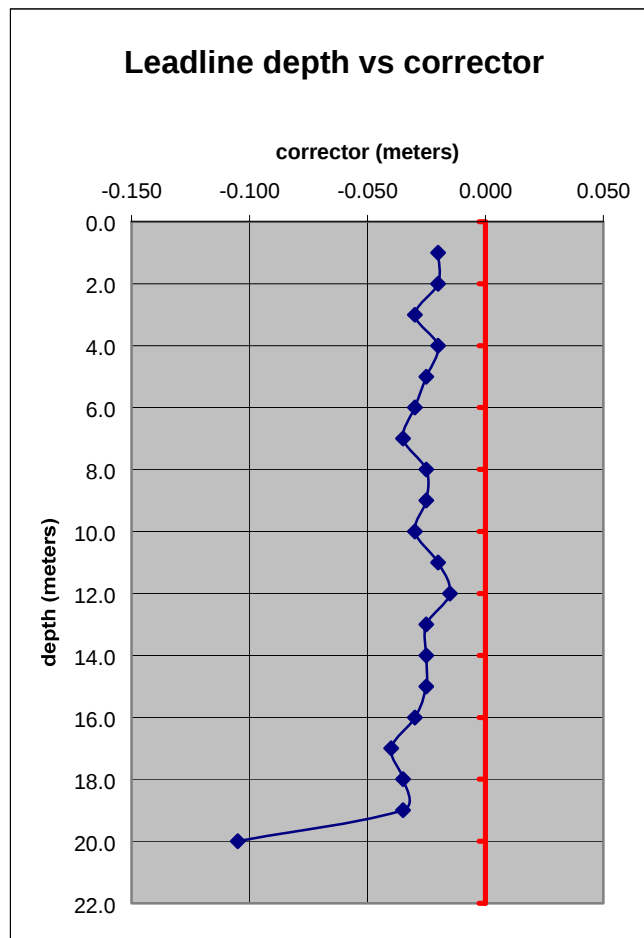
| Meter Marks        | Measurement | Corrector |
|--------------------|-------------|-----------|
| 1                  | 0.998       | 0.002     |
| 2                  | 1.999       | 0.001     |
| 3                  | 2.999       | 0.001     |
| 4                  | 4.020       | -0.020    |
| 5                  | 5.020       | -0.020    |
| 6                  | 6.010       | -0.010    |
| 7                  | 7.015       | -0.015    |
| 8                  | 8.000       | 0.000     |
| Average Correction |             | -0.008    |
| Standard deviation |             | 0.010     |



## Lead Line RA203

calibrated 4/2/2003

| Meter Mark         | Measurement | Corrector |
|--------------------|-------------|-----------|
| 1.0                | 1.020       | -0.020    |
| 2.0                | 2.020       | -0.020    |
| 3.0                | 3.030       | -0.030    |
| 4.0                | 4.020       | -0.020    |
| 5.0                | 5.025       | -0.025    |
| 6.0                | 6.030       | -0.030    |
| 7.0                | 7.035       | -0.035    |
| 8.0                | 8.025       | -0.025    |
| 9.0                | 9.025       | -0.025    |
| 10.0               | 10.030      | -0.030    |
| 11.0               | 11.020      | -0.020    |
| 12.0               | 12.015      | -0.015    |
| 13.0               | 13.025      | -0.025    |
| 14.0               | 14.025      | -0.025    |
| 15.0               | 15.025      | -0.025    |
| 16.0               | 16.030      | -0.030    |
| 17.0               | 17.040      | -0.040    |
| 18.0               | 18.035      | -0.035    |
| 19.0               | 19.035      | -0.035    |
| 20.0               | 20.105      | -0.105    |
| Average Correction |             | -0.031    |
| Standard deviation |             | 0.019     |



## SV Cast Comparisons

### OPR-O112-RA-03, Sitka Sound, Alaska

```

>
> -----
> SUMMARY OF RESULTS - COMPARE 2 CASTS  VELOCITY, Version 8.20
>
> REFERENCE PROFILE: S:\Velocity\2003Projects\OPR-O112-RA-03_Sitka\H11117_SheetM\SV
files\RA5\03143162.R5Q
> COMPARISON PROFILE: S:\Velocity\2003Projects\OPR-O112-RA-03_Sitka\H11117_SheetM\SV
files\RA6\03143163.R6Q
>
> SYSTEM: RESON 8125
> TRANSDUCER VELOCITY = N/A
> ANGLE OFFSET = 0 Degrees
> NOMINAL ANGLE = 60.00 Degrees
> TRUE REFERENCE ANGLE = 60.00 Degrees
> TRUE COMPARISON ANGLE = 60.00 Degrees
> MAXIMUM COMMON DEPTH = 153.31 M
> DRAFT = .5 M
>
>
> TRAVEL    AVERAGE    DEPTH    PERCENT    AVERAGE    CROSSTRACK    PERCENT
> TIME      DEPTH      DIFF      DIFF      CROSSTRACK    DIFF      DIFF
> SEC       M          M          M          M          M          M
> -----
> 0.010      7.93      0.00      0.04      12.84      0.00      -0.03
> 0.020     15.40      0.01      0.03      25.61     -0.01     -0.02
> 0.030     22.89      0.01      0.03      38.35     -0.01     -0.02
> 0.040     30.40      0.01      0.03      51.07     -0.01     -0.02
> 0.050     37.90      0.02      0.04      63.78     -0.02     -0.03
> 0.060     45.41      0.01      0.03      76.48     -0.02     -0.02
> 0.070     52.92      0.02      0.03      89.17     -0.02     -0.02
> 0.080     60.44      0.02      0.03     101.86     -0.02     -0.02
> 0.090     67.95      0.02      0.03     114.56     -0.02     -0.02
> 0.100     75.47      0.03      0.05     127.25     -0.05     -0.04
> 0.110     82.99      0.03      0.04     139.94     -0.04     -0.03
> 0.120     90.50      0.04      0.05     152.64     -0.05     -0.04
> 0.130     98.02      0.04      0.04     165.32     -0.06     -0.03
> 0.140    105.54      0.04      0.04     178.01     -0.06     -0.03
> 0.150    113.05      0.04      0.04     190.70     -0.06     -0.03
> 0.160    120.56      0.05      0.04     203.39     -0.05     -0.03
> 0.170    128.07      0.05      0.04     216.09     -0.06     -0.03
> 0.180    135.58      0.06      0.04     228.80     -0.07     -0.03
> 0.190    143.08      0.06      0.04     241.50     -0.07     -0.03
> 0.200    150.59      0.06      0.04     254.22     -0.08     -0.03
>
>
> RESULTS OK.
>

```

SUMMARY OF RESULTS - COMPARE 2 CASTS VELOCITY, Version 8.20

REFERENCE PROFILE:

S:\Velocity\2003Projects\OPR-0112-RA-03\_Sitka\H11134\_SheetAD\SV  
files\RAINIER\03147045.R4Q

COMPARISON PROFILE:

S:\Velocity\2003Projects\OPR-0112-RA-03\_Sitka\H11134\_SheetAD\SV  
files\RAINIER\03147104.R4Q

SYSTEM: ELAC/Seabeam 1050D

TRANSDUCER VELOCITY = N/A

ANGLE OFFSET = 0 Degrees

NOMINAL ANGLE = 60.00 Degrees

TRUE REFERENCE ANGLE = 60.00 Degrees

TRUE COMPARISON ANGLE = 60.00 Degrees

MAXIMUM COMMON DEPTH = 209. M

DRAFT = 4.1 M

| TRAVEL<br>TIME<br>SEC | AVERAGE<br>DEPTH<br>M | DEPTH<br>DIFF<br>M | PERCENT<br>DIFF | AVERAGE<br>CROSSTRACK<br>M | CROSSTRACK<br>DIFF<br>M | PERCENT<br>DIFF |
|-----------------------|-----------------------|--------------------|-----------------|----------------------------|-------------------------|-----------------|
| -----                 | -----                 | -----              | -----           | -----                      | -----                   | -----           |
| 0.010                 | 11.52                 | 0.01               | 0.04            | 12.84                      | 0.00                    | -0.03           |
| 0.020                 | 18.93                 | 0.00               | 0.01            | 25.67                      | 0.01                    | 0.02            |
| 0.030                 | 26.36                 | 0.01               | 0.02            | 38.49                      | 0.00                    | 0.01            |
| 0.040                 | 33.79                 | 0.00               | 0.01            | 51.30                      | 0.01                    | 0.03            |
| 0.050                 | 41.22                 | 0.00               | 0.00            | 64.12                      | 0.03                    | 0.04            |
| 0.060                 | 48.66                 | 0.03               | 0.06            | 76.91                      | -0.02                   | -0.03           |
| 0.070                 | 56.11                 | 0.07               | 0.12            | 89.68                      | -0.08                   | -0.09           |
| 0.080                 | 63.57                 | 0.11               | 0.17            | 102.45                     | -0.15                   | -0.15           |
| 0.090                 | 71.02                 | 0.16               | 0.22            | 115.22                     | -0.23                   | -0.20           |
| 0.100                 | 78.49                 | 0.20               | 0.25            | 127.98                     | -0.29                   | -0.23           |
| 0.110                 | 85.95                 | 0.22               | 0.26            | 140.73                     | -0.33                   | -0.24           |
| 0.120                 | 93.42                 | 0.24               | 0.26            | 153.47                     | -0.36                   | -0.23           |
| 0.130                 | 100.89                | 0.25               | 0.25            | 166.21                     | -0.36                   | -0.22           |
| 0.140                 | 108.36                | 0.26               | 0.24            | 178.96                     | -0.38                   | -0.21           |
| 0.150                 | 115.83                | 0.25               | 0.22            | 191.71                     | -0.36                   | -0.19           |
| 0.160                 | 123.30                | 0.26               | 0.21            | 204.45                     | -0.37                   | -0.18           |
| 0.170                 | 130.77                | 0.28               | 0.22            | 217.18                     | -0.41                   | -0.19           |
| 0.180                 | 138.25                | 0.31               | 0.22            | 229.90                     | -0.45                   | -0.20           |
| 0.190                 | 145.73                | 0.33               | 0.23            | 242.63                     | -0.49                   | -0.20           |
| 0.200                 | 153.21                | 0.35               | 0.23            | 255.35                     | -0.51                   | -0.20           |
| 0.210                 | 160.69                | 0.36               | 0.23            | 268.08                     | -0.53                   | -0.20           |
| 0.220                 | 168.17                | 0.38               | 0.23            | 280.81                     | -0.58                   | -0.21           |
| 0.230                 | 175.65                | 0.41               | 0.23            | 293.53                     | -0.62                   | -0.21           |
| 0.240                 | 183.13                | 0.43               | 0.24            | 306.26                     | -0.66                   | -0.22           |
| 0.250                 | 190.61                | 0.46               | 0.24            | 318.98                     | -0.70                   | -0.22           |
| 0.260                 | 198.09                | 0.48               | 0.24            | 331.71                     | -0.71                   | -0.21           |
| 0.270                 | 205.57                | 0.50               | 0.24            | 344.44                     | -0.73                   | -0.21           |

RESULTS OK.

Percent depth difference is within recommended bounds.

## SUMMARY OF RESULTS - COMPARE 2 CASTS VELOCITY, Version 8.20

## REFERENCE PROFILE:

S:\Velocity\2003Projects\OPR-0112-RA-03\_Sitka\H11134\_SheetAD\SV  
files\RAINIER\03147045.R4Q

## COMPARISON PROFILE:

S:\Velocity\2003Projects\OPR-0112-RA-03\_Sitka\H11134\_SheetAD\SV  
files\RAINIER\03147104.R4Q

SYSTEM: ELAC/Seabeam 1050D

TRANSDUCER VELOCITY = N/A

ANGLE OFFSET = 0 Degrees

NOMINAL ANGLE = 60.00 Degrees

TRUE REFERENCE ANGLE = 60.00 Degrees

TRUE COMPARISON ANGLE = 60.00 Degrees

MAXIMUM COMMON DEPTH = 209. M

DRAFT = 4.1 M

| TRAVEL<br>TIME<br>SEC | AVERAGE<br>DEPTH<br>M | DEPTH<br>DIFF<br>M | PERCENT<br>DIFF | AVERAGE<br>CROSSTRACK<br>M | CROSSTRACK<br>DIFF<br>M | PERCENT<br>DIFF |
|-----------------------|-----------------------|--------------------|-----------------|----------------------------|-------------------------|-----------------|
| 0.010                 | 11.52                 | 0.01               | 0.04            | 12.84                      | 0.00                    | -0.03           |
| 0.020                 | 18.93                 | 0.00               | 0.01            | 25.67                      | 0.01                    | 0.02            |
| 0.030                 | 26.36                 | 0.01               | 0.02            | 38.49                      | 0.00                    | 0.01            |
| 0.040                 | 33.79                 | 0.00               | 0.01            | 51.30                      | 0.01                    | 0.03            |
| 0.050                 | 41.22                 | 0.00               | 0.00            | 64.12                      | 0.03                    | 0.04            |
| 0.060                 | 48.66                 | 0.03               | 0.06            | 76.91                      | -0.02                   | -0.03           |
| 0.070                 | 56.11                 | 0.07               | 0.12            | 89.68                      | -0.08                   | -0.09           |
| 0.080                 | 63.57                 | 0.11               | 0.17            | 102.45                     | -0.15                   | -0.15           |
| 0.090                 | 71.02                 | 0.16               | 0.22            | 115.22                     | -0.23                   | -0.20           |
| 0.100                 | 78.49                 | 0.20               | 0.25            | 127.98                     | -0.29                   | -0.23           |
| 0.110                 | 85.95                 | 0.22               | 0.26            | 140.73                     | -0.33                   | -0.24           |
| 0.120                 | 93.42                 | 0.24               | 0.26            | 153.47                     | -0.36                   | -0.23           |
| 0.130                 | 100.89                | 0.25               | 0.25            | 166.21                     | -0.36                   | -0.22           |
| 0.140                 | 108.36                | 0.26               | 0.24            | 178.96                     | -0.38                   | -0.21           |
| 0.150                 | 115.83                | 0.25               | 0.22            | 191.71                     | -0.36                   | -0.19           |
| 0.160                 | 123.30                | 0.26               | 0.21            | 204.45                     | -0.37                   | -0.18           |
| 0.170                 | 130.77                | 0.28               | 0.22            | 217.18                     | -0.41                   | -0.19           |
| 0.180                 | 138.25                | 0.31               | 0.22            | 229.90                     | -0.45                   | -0.20           |
| 0.190                 | 145.73                | 0.33               | 0.23            | 242.63                     | -0.49                   | -0.20           |
| 0.200                 | 153.21                | 0.35               | 0.23            | 255.35                     | -0.51                   | -0.20           |
| 0.210                 | 160.69                | 0.36               | 0.23            | 268.08                     | -0.53                   | -0.20           |
| 0.220                 | 168.17                | 0.38               | 0.23            | 280.81                     | -0.58                   | -0.21           |
| 0.230                 | 175.65                | 0.41               | 0.23            | 293.53                     | -0.62                   | -0.21           |
| 0.240                 | 183.13                | 0.43               | 0.24            | 306.26                     | -0.66                   | -0.22           |
| 0.250                 | 190.61                | 0.46               | 0.24            | 318.98                     | -0.70                   | -0.22           |
| 0.260                 | 198.09                | 0.48               | 0.24            | 331.71                     | -0.71                   | -0.21           |
| 0.270                 | 205.57                | 0.50               | 0.24            | 344.44                     | -0.73                   | -0.21           |

RESULTS OK.

Percent depth difference is within recommended bounds.

## SUMMARY OF RESULTS - COMPARE 2 CASTS VELOCITY, Version 8.21

REFERENCE PROFILE: C:\velocity\SVFILES\03173195.RAQ

COMPARISON PROFILE: C:\velocity\SVFILES\03173195.R3Q

SYSTEM: ELAC/Seabeam 1050D

TRANSDUCER VELOCITY = N/A

ANGLE OFFSET = 0 Degrees

NOMINAL ANGLE = 60.00 Degrees

TRUE REFERENCE ANGLE = 60.00 Degrees

TRUE COMPARISON ANGLE = 60.00 Degrees

MAXIMUM COMMON DEPTH = 149.24 M

DRAFT = 4.1 M

| TRAVEL<br>TIME<br>SEC | AVERAGE<br>DEPTH<br>M | DEPTH<br>DIFF<br>M | PERCENT<br>DIFF | AVERAGE<br>CROSSTRACK<br>M | CROSSTRACK<br>DIFF<br>M | PERCENT<br>DIFF |
|-----------------------|-----------------------|--------------------|-----------------|----------------------------|-------------------------|-----------------|
| -----                 | -----                 | -----              | -----           | -----                      | -----                   | -----           |
| 0.010                 | 11.56                 | 0.00               | -0.01           | 12.91                      | 0.00                    | 0.01            |
| 0.020                 | 19.02                 | 0.00               | -0.01           | 25.81                      | 0.00                    | 0.01            |
| 0.030                 | 26.51                 | 0.01               | 0.02            | 38.66                      | -0.01                   | -0.03           |
| 0.040                 | 34.03                 | 0.01               | 0.02            | 51.47                      | -0.02                   | -0.03           |
| 0.050                 | 41.56                 | 0.01               | 0.02            | 64.25                      | -0.02                   | -0.03           |
| 0.060                 | 49.10                 | 0.01               | 0.02            | 77.02                      | -0.02                   | -0.03           |
| 0.070                 | 56.64                 | 0.01               | 0.02            | 89.77                      | -0.02                   | -0.03           |
| 0.080                 | 64.19                 | 0.01               | 0.02            | 102.52                     | -0.03                   | -0.03           |
| 0.090                 | 71.76                 | 0.02               | 0.02            | 115.23                     | -0.03                   | -0.03           |
| 0.100                 | 79.33                 | 0.02               | 0.02            | 127.94                     | -0.04                   | -0.03           |
| 0.110                 | 86.90                 | 0.02               | 0.02            | 140.64                     | -0.04                   | -0.03           |
| 0.120                 | 94.48                 | 0.02               | 0.02            | 153.34                     | -0.04                   | -0.02           |
| 0.130                 | 102.06                | 0.02               | 0.02            | 166.02                     | -0.04                   | -0.02           |
| 0.140                 | 109.65                | 0.02               | 0.02            | 178.69                     | -0.04                   | -0.02           |
| 0.150                 | 117.26                | 0.02               | 0.02            | 191.35                     | -0.04                   | -0.02           |
| 0.160                 | 124.86                | 0.02               | 0.02            | 203.99                     | -0.05                   | -0.02           |
| 0.170                 | 132.47                | 0.02               | 0.02            | 216.62                     | -0.05                   | -0.02           |
| 0.180                 | 140.09                | 0.03               | 0.02            | 229.23                     | -0.06                   | -0.02           |
| 0.190                 | 147.72                | 0.03               | 0.02            | 241.84                     | -0.06                   | -0.03           |

RESULTS OK.

Percent depth difference is within recommended bounds.