GOES-19 EUVS-A and -B Responsivities
2026-03-11

There are 2 channels, EUVS-A and EUVS-B, with 24 diodes for each channel.
There are 7 solar lines: 3 for EUVS-A and 4 for EUVS-B.
Each channel has 2 dark diodes (not exposed to sunlight): 0 and 11 (EUVS-A), 12 and 23 (EUVS-B).
Provided responsivities are undegraded values at launch.
For EUVS-A, responsivities are for the primary science filter.
The dark diodes have the responsivities and wavelengths as fill values and should not be used.
The central diodes for 30.4 and 121.6 nm have split diodes (top and bottom).
The mask provides one responsivity value for each pair of split diodes.

GOES-19 EUVS-A line wavelengths [nm]
[25.6, 28.4, 30.4]

GOES-19 EUVS-A diode wavelengths [nm]
[-1.0 24.371 24.575 24.780 24.985 25.191 27.962 28.176 28.391 28.606
28.822 -1.0 30.805 30.583 30.363 30.363 30.143 29.923 26.438 26.229 26.020
25.812 25.604 25.397]

GOES-19 EUVS-A diode responsivities [Amps * m^2 * nm / Watt]
[1.0000000e-15 2.0163875e-08 1.9826350e-08 1.9577050e-08 1.9330150e-08 1.9085525e-08
1.5660325e-08 1.5437625e-08 1.5335850e-08 1.5286150e-08 1.5073375e-08 1.0000000e-15
1.5104650e-08 1.4959025e-08 1.4621402e-08 1.4621402e-08 1.4566675e-08 1.4425275e-08
1.7430525e-08 1.7710125e-08 1.7911700e-08 1.8273100e-08 1.8527200e-08 1.8760900e-08]

GOES-19 EUVS-A line masks
25.6 nm [0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1]
28.4 nm [0 0 0 0 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0]
30.4 nm [0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 1 0 0 0 0 0 0]

GOES-19 EUVS-B line wavelengths [nm]
[117.5, 121.6, 133.5, 140.5]

GOES-19 EUVS-B diode wavelengths [nm]
[141.97 141.14 140.31 139.47 138.64 137.81 122.46 122.04 121.62 121.62
121.20 120.77 -1.0 116.79 117.21 117.63 118.05 118.47 132.72 133.14
133.56 133.98 134.40 -1.0]

GOES-19 EUVS-B diode responsivities [Amps * m^2 * nm / Watt]
[2.3831818e-09 2.6772727e-09 3.0386364e-09 3.4777273e-09 3.9600000e-09 4.5872727e-09
9.4422727e-09 9.0618182e-09 8.3886364e-09 8.3886364e-09 8.0263636e-09 7.6163636e-09

1.0000000e-15 3.9463636e-09 4.2913636e-09 4.6363636e-09 4.9881818e-09 5.3577273e-09
9.2359091e-09 8.6809091e-09 8.1027273e-09 7.5840909e-09 7.1004546e-09 1.0000000e-15]

GOES-19 EUVS-B line masks
117.5 nm [0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0 0 0 0 0 0 0 0]
121.6 nm [0 0 0 0 0 0 0 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0]
133.5 nm [0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0 0]
140.5 nm [0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]