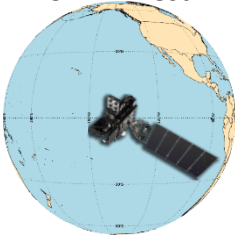




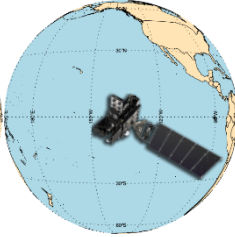
GOES Constellation with West Transition Plan

GOES-18 PLT Part 2: GOES-18 post-drift (June 7, 2022)

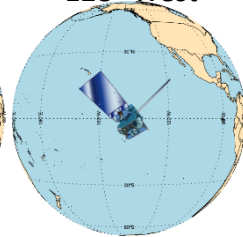
GOES-West
GOES-17
137.2° West



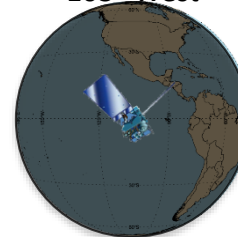
Checkout
GOES-18
136.8° West



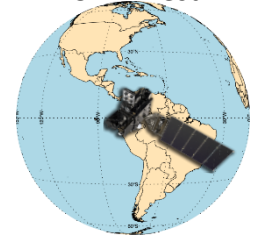
Supp. Ops.
GOES-15
128° West



Standby
GOES-14
105° West

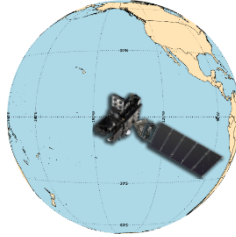


GOES-East
GOES-16
75.2° West

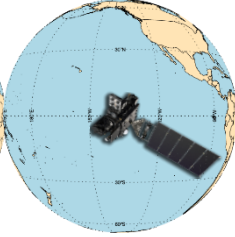


GOES-17 and GOES-18 orbit nudges (July, 2022)

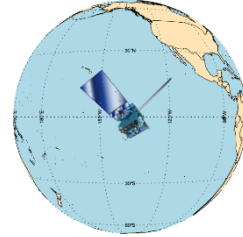
GOES-West
GOES-17
137.3° West



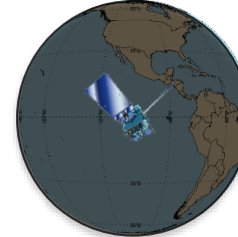
Checkout
GOES-18
137.0° West



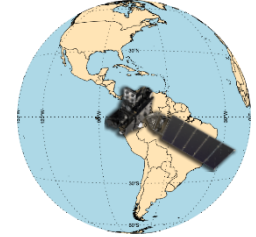
Supp. Ops.
GOES-15
128° West



Standby
GOES-14
105° West

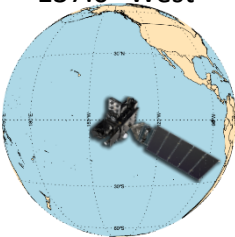


GOES-East
GOES-16
75.2° West

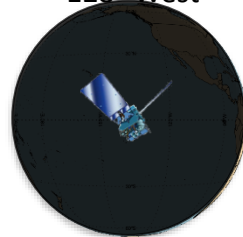


GOES-18 as GOES-West, GOES-17 drift to Standby (January, 2023)

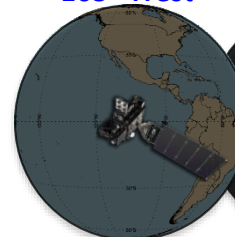
GOES-West
GOES-18
137.0° West



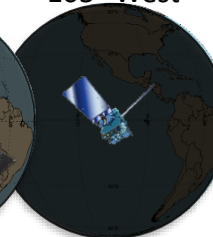
Storage
GOES-15
128° West



Standby
GOES-17
105° West



Storage
GOES-14
105° West



GOES-East
GOES-16
75.2° West



Changes by phase are indicated in blue

Note: GOES-18 PLT Part 1 was pre-drift checkout at 89.5° West



GOES-West Transition Plan - Swap of GOES-17/18

| Date (Based on 3/1/22 Launch) | GOES-17 | | GOES-18 | |
|-------------------------------------|----------|---|----------|---|
| | Location | Activity | Location | Activity |
| 3/1 – 3/23 | 137.2°W | GOES-West Operations | | Launch and Orbit Raising |
| 3/24 – 5/15 | | | 89.5°W | GOES-18 PLT Part 1 <ul style="list-style-type: none"> Instrument Outgassing, Spacecraft PLT First ABI Image (Vis & IR) @ 89.5W |
| 5/16 – 6/6 | | | 136.8W | GOES-18 Drift from 89.5W to 136.8W <ul style="list-style-type: none"> PLT activities paused; Science data for GMAG, but no other data. |
| 6/7 | | | | GOES-18 PLT Part 2 begins and PLPT begins |
| 7/5 – 7/15 (21) | 137.3°W | Orbit Nudge 137.2W to 137.3W: July 5-15, 2022 (10 days) <ul style="list-style-type: none"> Antennas smaller than 7m should not need to repoint Antennas larger than 7m should repoint All users should re-peak antennas once nudge is over | 137.0°W | Orbit Nudge 136.8W to 137.0W: July 5-21, 2022 (16 days) <ul style="list-style-type: none"> Antennas smaller than 7m should not need to repoint Antennas larger than 7m should repoint All users should re-peak antennas once nudge is over |
| 7/27 | | | | GOES-18 ABI reaches Provisional maturity <ul style="list-style-type: none"> GOES-18 ABI 'supplemental' data via Cloud for NWS |
| 8/1-9/6 | | GOES-17 ABI Warm Period <ul style="list-style-type: none"> GOES-18 ABI interleaved in GOES-17 GRB | | GOES-18 ABI data interleaved in GOES-17 GRB |
| 9/6-10/15 | | GOES-West Operations <ul style="list-style-type: none"> GOES-17 Nominal Distribution | | GOES-18 product maturation continues <ul style="list-style-type: none"> PLT Part 2 ends Oct 3, 2022 |
| 10/15-11/11 | | GOES-17 ABI Warm Period <ul style="list-style-type: none"> GOES-18 ABI interleaved in GOES-17 GRB | | GOES-18 ABI data interleaved in GOES-17 GRB |
| 11/11-1/3 | | GOES-West Operations <ul style="list-style-type: none"> GOES-17 Nominal Distribution | | GOES-18 product maturation continues <ul style="list-style-type: none"> PLPT ends Jan 3, 2023 |
| 1/3 | | X-band downlink off and instruments shut down | | GOES-18 Declared operational GOES-West <ul style="list-style-type: none"> Begin GOES-18 GRB broadcast / nominal distribution SAR/DCS services transitioned to GOES-18 |
| 1/12 | 105°W | GOES-17 drift to 105°W followed by storage mode | | |



GOES-18 L1b Science Product Validation Status

| ABI L1b Product | Beta | Provisional | Full |
|---|-----------|-------------|------|
| Radiances | 5/11/2022 | 7/27/2022 | FY23 |
| GLM L2 Product | | | |
| Lightning: Events, Groups, Flashes | 9/19/2022 | 10/31/2022 | FY23 |
| SEISS L1b Products | | | |
| Energetic Heavy Ions | 7/29/2022 | 11/15/2022 | FY23 |
| Magnetospheric e ⁻ /p ⁺ : Low Energy | 7/29/2022 | 11/18/2022 | FY23 |
| Magnetospheric e ⁻ /p ⁺ : High Energy | 7/29/2022 | 10/11/2022 | FY23 |
| Solar & Galactic Protons | 7/29/2022 | 9/13/2022 | FY23 |
| EXIS L1b Products | | | |
| Solar Flux: EUV | 7/22/2022 | 11/14/2022 | FY23 |
| Solar Flux: X-ray Irradiance | 7/22/2022 | 11/14/2022 | FY23 |
| SUVI L1b Product | | | |
| Solar EUV Imagery | 8/2/2022 | 11/22/2022 | FY23 |
| GMAG L1b Product | | | |
| Geomagnetic Field | 7/11/2022 | 9/6/2022 | FY23 |

6/9/22

Synced with SOE v1.21

Validation Maturity Levels:

| | | | |
|---------------|---------------|----------------------|---------------|
| Not Validated | Beta Maturity | Provisional Maturity | Full Maturity |
|---------------|---------------|----------------------|---------------|



GOES-18 L2+ Science Product Validation Status

| L2+ Products | Beta | Prov | Full |
|---|-----------|------------|------|
| Cloud and Moisture Imagery (CMI) and Sectorized CMI (KPP) | 5/11/2022 | 7/27/2022 | FY23 |
| Aerosol Detection (Smoke & Dust) | 5/11/2022 | 11/9/2022 | |
| Aerosol Optical Depth | 5/11/2022 | 11/9/2022 | |
| Clear Sky Mask | 5/11/2022 | 9/24/2022 | |
| Cloud Cover Layers | 5/11/2022 | 9/24/2022 | |
| Cloud Optical Depth | 5/11/2022 | 10/12/2022 | |
| Cloud Particle Size Distribution | 5/11/2022 | 10/12/2022 | |
| Cloud Top Height | 5/11/2022 | 9/24/2022 | |
| Cloud Top Phase | 5/11/2022 | 9/24/2022 | |
| Cloud Top Pressure | 5/11/2022 | 9/24/2022 | |
| Cloud Top Temperature | 5/11/2022 | 9/24/2022 | |
| Derived Motion Winds | 5/11/2022 | 9/24/2022 | |
| Derived Stability Indices | 5/11/2022 | 10/12/2022 | |
| Downward S/W Radiation: Surface | 5/11/2022 | 11/9/2022 | |

| L2+ Products | Beta | Prov | Full |
|-------------------------------------|-----------|------------|------|
| Fire/Hot Spot Characterization | 5/11/2022 | 10/12/2022 | FY23 |
| Ice Age & Thickness | 5/11/2022 | 11/21/2022 | |
| Ice Concentration & Extent | 5/11/2022 | 11/21/2022 | |
| Ice Motion | 5/11/2022 | 11/21/2022 | |
| Land Surface Albedo | 5/11/2022 | 11/9/2022 | |
| Land Surface Reflectance | 5/11/2022 | 11/9/2022 | |
| Land Surface Temperature | 5/11/2022 | 11/9/2022 | |
| Legacy Vertical Moisture Profile | 5/11/2022 | 10/12/2022 | |
| Legacy Vertical Temperature Profile | 5/11/2022 | 10/12/2022 | |
| Rainfall Rate/QPE | 5/11/2022 | 10/12/2022 | |
| Reflected S/W Radiation: TOA | 5/11/2022 | 11/9/2022 | |
| Sea Surface Temperature | 5/11/2022 | 11/21/2022 | |
| Snow Cover | N/A | 11/21/2022 | |
| Total Precipitable Water | 5/11/2022 | 10/12/2022 | |

Validation Maturity Levels:

| | | | |
|---------------|---------------|----------------------|---------------|
| Not Validated | Beta Maturity | Provisional Maturity | Full Maturity |
|---------------|---------------|----------------------|---------------|

5/11/22

Synced with SOE v1.19



GOES-18 Data Sharing Policy

| |
|-------------|
| Not Allowed |
| Caveats |
| Allowed |

| | Images/Social Media | Data Files | Publications |
|---|---|---|---|
| Between Launch and “First Light” Public Release | Not allowed | Not allowed | Allowed; You may include pre-Provisional instrument data/images/plots as long as it will not be published until after Provisional validation is declared for that instrument. Exercise caution in publishing data regarding apparent anomalies or artifacts especially during ongoing instrument and product tests (PLTs and PLPTs). |
| Between First Public Release and Beta Certification | Allowed; must contain the caveat: “GOES-18 Preliminary, Non-Operational Data” | Not allowed | |
| Between Beta and Provisional | Allowed; must contain the caveat: “GOES-18 Preliminary, Non-Operational Data” | Not allowed | |
| ABI Interleaved Data | Allowed (ABI Only) | Allowed (ABI Only) | |
| Between Provisional (or Interleave Period(s) for ABI) and Operational Declaration | Allowed; must contain the caveat: “GOES-18 Preliminary, Non-Operational Data” | Allowed; must contain the caveat: “GOES-18 Preliminary, Non-Operational Data” | |
| GOES-West Operations onwards | Allowed | Allowed | |

Table description: Policy for sharing images on social media, data files, and publications as it evolves during post-launch phases of satellite testing and data maturity.



GOES-18 Schedule w/ Interleave Overlays

| Activity | March | | April | | | | May | | | | June | | | | July | | | | August | | | | September | | | | October | | | | November | | | | December | | | | January | | | | | | | |
|--------------|----------|-------------|-------------------|------|----------|-----|-------|------|----------------|-----|-------------------|------|-----------------|------|--------------------|------|------------|------|----------------|------|-------------------|------|-------------------|-----|----------------------------------|------|---------|-----|------|------|----------|------|-------|-------|----------|------|------|-------|---------|-------|------|-------|-------|-------|-----|------|
| | 3/1 | 3/8 | 3/15 | 3/22 | 3/29 | 4/5 | 4/12 | 4/19 | 4/26 | 5/3 | 5/10 | 5/17 | 5/24 | 5/31 | 6/7 | 6/14 | 6/21 | 6/28 | 7/5 | 7/12 | 7/19 | 7/26 | 8/2 | 8/9 | 8/16 | 8/23 | 8/30 | 9/6 | 9/13 | 9/20 | 9/27 | 10/4 | 10/11 | 10/18 | 10/25 | 11/1 | 11/8 | 11/15 | 11/22 | 11/29 | 12/6 | 12/13 | 12/20 | 12/27 | 1/3 | 1/10 |
| G18 Events | ▲ Launch | Raise Orbit | PLT & PLPT Part 1 | | | | Drift | | | | PLT & PLPT Part 2 | | | | ▲ Handover to OSPO | | | | PLPT Continues | | | | ▲ G18 = GOES-West | | | | | | | | | | | | | | | | | | | | | | | |
| G18 Maturity | ● 89.5W | | | | ▲ 136.8W | | | | ● 137.0W (G17) | | | | ▲ 137.3W Nudges | | | | ▲ GLM Beta | | | | ▲ GLM Provisional | | | | ▲ ABI Groups 1-4 L2+ Provisional | | | | | | | | | | | | | | | | | | | | | |
| G18 ABI PD | GRB | | | | PDA | | | | LZSS | | | | AWIPS | | | | HRIT/EMWIN | | | | GNC-A | | | | Ops | | | | | | | | | | | | | | | | | | | | | |
| G17 ABI PD | GRB | | | | PDA | | | | LZSS | | | | AWIPS | | | | HRIT/EMWIN | | | | GNC-A | | | | Ops | | | | | | | | | | | | | | | | | | | | | |
| West PD | GLM | | | | SpWx | | | | Ops | | | | Ops | | | | Ops | | | | Ops | | | | Ops | | | | | | | | | | | | | | | | | | | | | |

Legend: GOES-18 GOES-17 PD = Product Distribution G17 ABI Warm Period 17 w/ 18 ABI Interleave 1st Public Image ▲ Beta Maturity ▲ Provisional Maturity ● Orbit Change

Interleave Test
G18 ABI

Jul/Aug Interleave
G18 ABI

Oct/Nov Interleave
G18 ABI



GOES-West Interleave Data Content per Distribution Service

GRB: (netCDF file orbital slot will be "GOES-West")

- G18 ABI L1b
- G17 GLM L2+
- G17 Space Wx L1b

PDA: ("GOES-West" for products below)

- G18 ABI L1b, CMI (no L2+)
- G17 ABI L1b, CMI, L2+
- G17 GLM L1b, L2+
- G17 Space Wx L1b
- Note PDA cal/val subscriptions have additional G18 data access

CLASS:

- G17 ABI L1b, CMI, L2+
- G17 GLM L1b, L2+
- G17 Space Wx L1b
- Note CLASS cal/val subscriptions have additional G18 data access

NODD (formerly BDP) via AWS:

- G18 ABI Rad, CMI
- G17 ABI Rad, CMI, L2+
- G17 GLM L2+
- G17 Space Wx L1b

HRIT/EMWIN:

- G18 ABI CMI
- G17 ABI L2+

GNC-A:

- G18 ABI CMI

AWIPS:

- G18 ABI SCMI
- G17 GLM L2+

During the June 14th test, GOES-18 ABI data will still be at a "Beta" level of maturity, minimally validated, and may contain significant errors. Nonetheless, GOES-18 ABI data obtained during this test will be advised for operational use, and may be shared without restriction.

During the Aug-Sept and Oct-Nov interleave periods, GOES-18 ABI data will be at "Provisional" level of maturity, fit for operational use and may be shared without restriction.



GRB Spacecraft IDs & Metadata Decoder for Interleave Test & Nominal Interleave

| | G17 Nominal as GOES-West | G18 PLT Test "GND-008" | Nominal Interleave (two periods) | G18 Nominal as GOES-West |
|---|---|--|--|---|
| Description | Current | Post-drift test of Interleave | Early ops access to G18 ABI data as a mitigation for G17 ABI saturated images | Future |
| Dates | Through January 2023 | June 14, 2022 for four hours (16-20 UTC) | 1 st : August 1 – September 6, 2022 2 nd : October 15 – November 11, 2022 | Starting January 2023 |
| GRB Content | <u>G18 GRB at 136.8/137.0° West:</u> <ul style="list-style-type: none"> N/A <u>G17 GRB at 137.2/137.3° West:</u> <ul style="list-style-type: none"> G17 ABI, GLM, Space Wx L1b | <u>G18 GRB at 136.8° West:</u> <ul style="list-style-type: none"> N/A <u>G17 GRB at 137.2° West:</u> <ul style="list-style-type: none"> <u>G18 ABI L1b (from 136.8° West)</u> G17 GLM L2, Space Wx L1b | <u>G18 GRB at 137.0° West:</u> <ul style="list-style-type: none"> N/A <u>G17 GRB at 137.3° West:</u> <ul style="list-style-type: none"> <u>G18 ABI L1b (from 137.0° West)</u> G17 GLM L2, Space Wx L1b | <u>G18 GRB at 137.0° West:</u> <ul style="list-style-type: none"> G18 ABI, GLM, Space Wx L1b <u>G17 GRB at 137.3° West:</u> <ul style="list-style-type: none"> N/A |
| <u>Data Relay</u> GRB Spacecraft ID (SCID) AOS frame header (8 bits) | 0x82 | 0x82 | 0x82 | 0xE4 |
| <u>Data Source</u> platform_ID metadata within ABI packets | G17 | G18 | G18 | G18 |
| <u>Data Source</u> instrument_ID metadata within ABI packets | FM2 | FM3 | FM3 | FM3 |