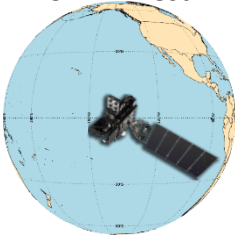




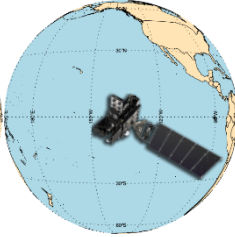
GOES Constellation with West Transition Plan

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

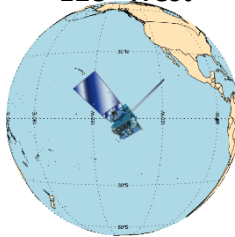
GOES-West
GOES-17
137.2° West



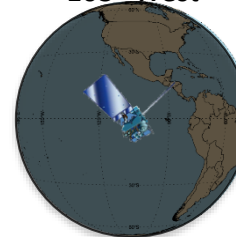
Checkout
GOES-18
136.8° West



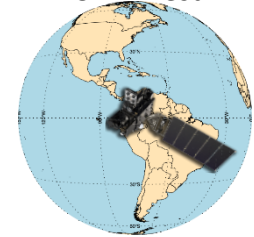
Supp. Ops.
GOES-15
128° West



Standby
GOES-14
105° West

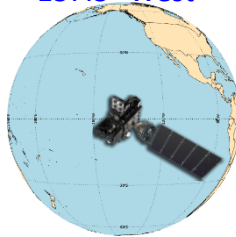


GOES-East
GOES-16
75.2° West

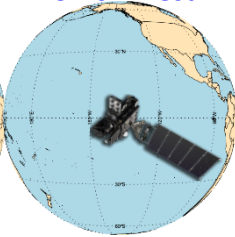


GOES-17 and GOES-18 orbit nudges (July, 2022)

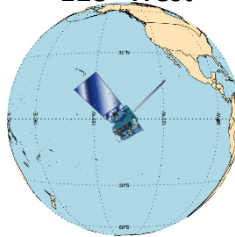
GOES-West
GOES-17
137.3° West



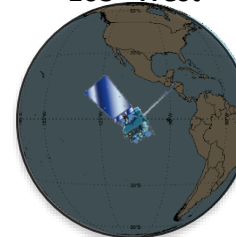
Checkout
GOES-18
137.0° West



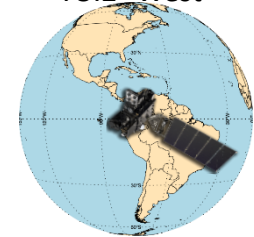
Supp. Ops.
GOES-15
128° West



Standby
GOES-14
105° West

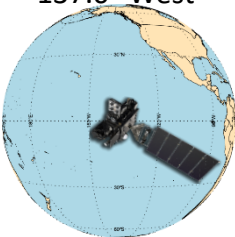


GOES-East
GOES-16
75.2° West

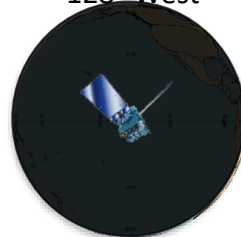


GOES-18 as GOES-West, GOES-17 drift to Standby (January, 2023)

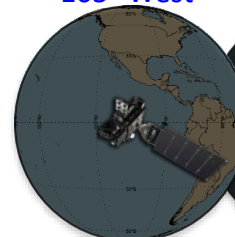
GOES-West
GOES-18
137.0° West



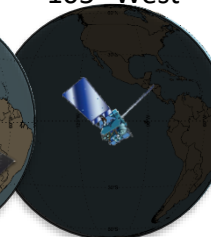
Storage
GOES-15
128° West



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 T20 Overview

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 ●89.5W				Drift				PLT & PLPT Part 2 ●137.0W (G17 137.3W) Nudges				▲ Handover to OSPO				PLPT Continues				G18 = GOES-West				▲																			
G18 Maturity	ABI 1st Public Image ♦ ▲ ABI Beta				GLM 1st Public Image ♦				GMAG 1st Public Data ♦				SEISS 1st Public Data ♦				EXIS 1st Public Data ♦				SUVI 1st Public Image ♦ ▲ SUVI Beta				▲ ABI L1b/CMI Provisional ▲				▲ GLM Beta ▲				▲ GLM Provisional				▲ ABI Groups 1-4 L2+ Provisional									
G18 ABI PD	GRB	PDA	LZSS	AWIPS	HRIT/EMWIN	GNC-A	G18 ABI L1b & SCMI 'supplemental' via GeoCloud for NWS GOES-West Users																										Ops													
G17 ABI PD	GRB	PDA	LZSS	AWIPS	HRIT/EMWIN	GNC-A	G17 ABI Warm Period				G17 ABI Warm Period				G17 ABI Warm Period				17 w/ 18 ABI Interleave				17 w/ 18 ABI Interleave				18 ABI SCMI				18 ABI SCMI				17 ABI L2+ w/ 18 ABI CMI				17 ABI L2+, GLM w/ 18 ABI CMI							
West PD	GLM	SpWx	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

Planning a 'split' Post Launch Test phase, beginning at 89.5°W and then drifting to 136.8°W in order to have early use of the GOES-18 Imager in the West location to mitigate the GOES-17 Imager thermal anomaly



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
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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
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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				● 89.5W	Drift				● 136.8W	PLT & PLPT Part 2				● 137.0W (G17)	● 137.3W Nudges				▲ Handover to OSPO	PLPT Continues				▲ G18 = GOES-West																			
G18 Maturity	ABI 1st Public Image				▲ ABI Beta		GLM 1st Public Image		GMAG 1st Public Data		SEISS 1st Public Data		EXIS 1st Public Data		SUVI 1st Public Image		▲ ABI L1b/CMI Provisional		▲ GLM Beta		▲ GMAG Provisional		▲ SGPS		▲ MPS-Hi		▲ ABI Groups 1-4 L2+ Provisional		▲ GLM Provisional		▲ EHIS, MPS-Lo Provisional		▲ EXIS Provisional		▲ SUVI 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													

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