



NOAA

29 Apr 2025

HRIT/EMWIN Status

GOES DCS Technical Working Group Meeting

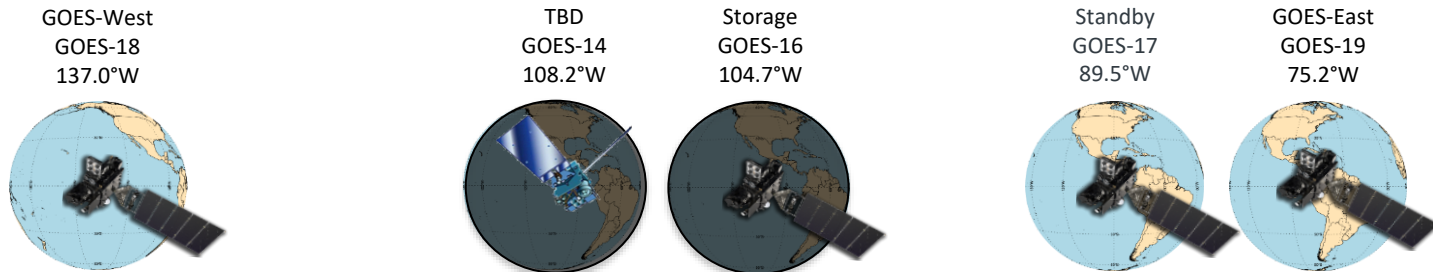
Ian Avruch
NESDIS/OSPO/DSB



GOES Constellation



July, 2025 – Final Configuration (GOES-19 as GOES-East, GOES-16 drift to Storage, GOES-17 drift to Standby)



- GOES-19 is operational GOES-East from 07-April-2025
- GOES-16 is drifting from 75.5°W to 104.7°W 11 April – 07 Jun to Storage mode
- GOES-17 will drift from 104.4°W to 89.5°W ~15 Jun – ~15 Jul to Storage mode
- GOES-14 plans are TBD, but following GOES-16 taking over Storage slot there may not be a further need to keep GOES-14 as Standby satellite
- GOES-16 is the first choice for contingency use, then GOES-17

M. Dahya / M. McHugh / I. Avruch



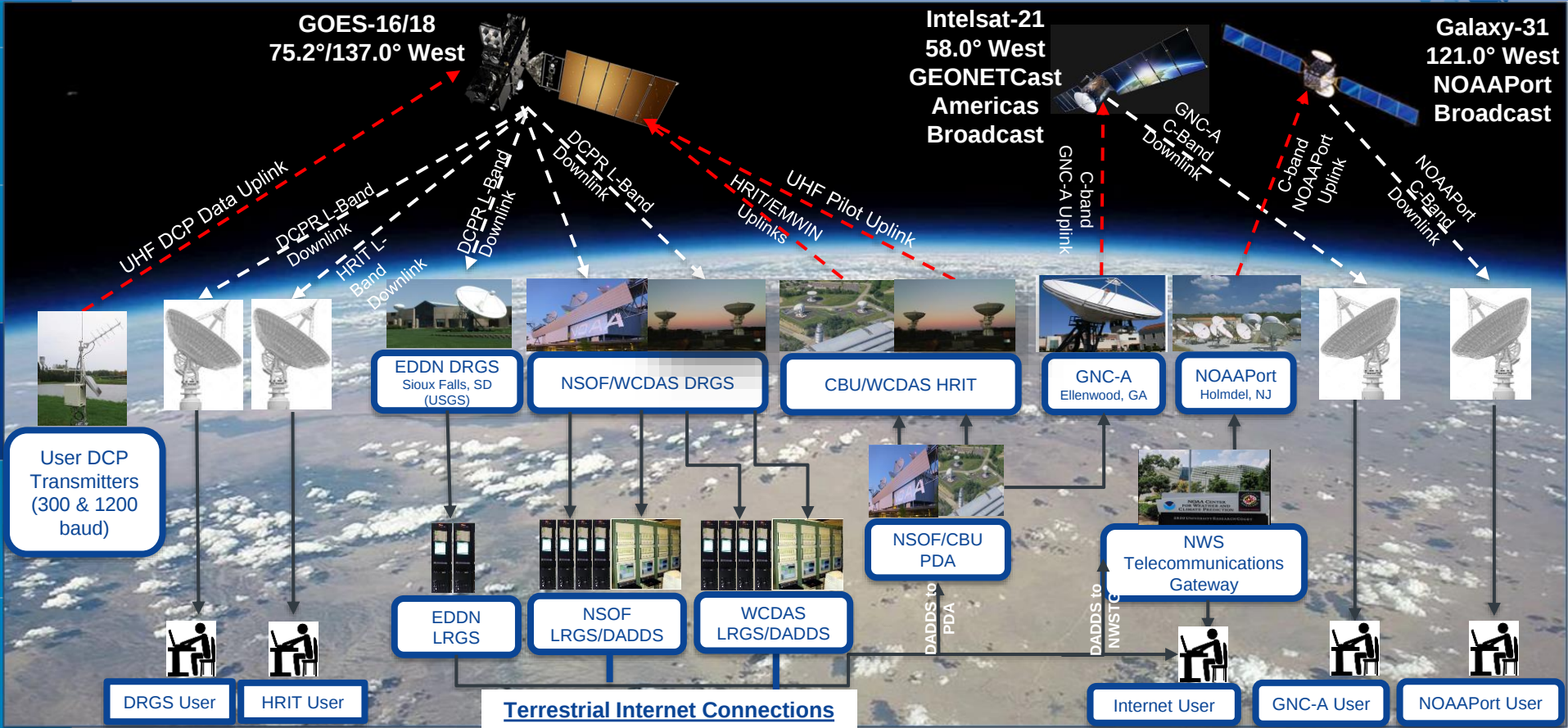
Overview of NESDIS Rebroadcasts



Acronym	System Name	Description
GRB	GOES Rebroadcast	The primary near-real-time broadcast relay of GOES-R Level-1b data products (all instruments L1b and Geostationary Lightning Mapper L2). These data are available to all users with GRB receivers in view of a GOES-R series satellite at the East or West operational longitudes.
HRIT/ EMWIN	High Rate Information Transmission/ Emergency Managers Weather Information Network	The HRIT/EMWIN service is a high data rate (400 Kbps) broadcast for GOES-R satellite imagery and selected products to remotely-located user terminals. Combines LRIT and the EMWIN direct broadcast service that provides users with weather forecasts, warnings, graphics and other information directly from the NWS in near real-time. Also included is a copy of GOES-DCS.
GNC-A	GEONETCast-Americas	GEONETCast-Americas is the Western Hemisphere component of GEONETCast, a near-real-time global network of satellite-based data dissemination systems designed to distribute space-based, air-borne, and in situ data, metadata, and products to diverse communities. Data are broadcast from a commercial satellite under contract with NOAA.



GOES Data Collection System





HRIT/EMWIN Virtual Channel Listing (07-Apr-2025)



VCID #	Product Name	GOES-E(19) Availability	GOES-W(18) Availability	Frequency (Minutes)	Priority on Broadcast	Guaranteed Bandwidth	Format	Resolution	Product Status
0	Admin Text	X	X	60	1	87%	Text Messages	N/A	Active and available
1	Mesoscale Imagery	X	X	15	12	87%	HRIT/LRIT	0.5km Band 2, 2km for bands 7 and 13	Both Meso scenes active and available
2	CMI Band 2	X	X	30	7	87%	HRIT/LRIT	2 km	Active and available
5	(GOES-14 TBD)								
6	(GOES-14 TBD)								
7	CMI Band 7	X	X	30	6	87%	HRIT/LRIT	2 km	Active and available
8	CMI Band 8	X	X	30	8	87%	HRIT/LRIT	2 km	Active and available
9	CMI Band 9	X	X	30	9	87%	HRIT/LRIT	2 km	Active and available
13	CMI Band 13	X	X	30	5	87%	HRIT/LRIT	2 km	Active and available
14	CMI Band 14	X	X	30	10	87%	HRIT/LRIT	2 km	Active and available
15	CMI Band 15	X	X	30	11	87%	HRIT/LRIT	2 km	Active and available
16	G19 CMI Band 13		X	60	17	87%	HRIT/LRIT	4 km	Active and available
17	G18 CMI Band 13	X		60	17	87%	HRIT/LRIT	4 km	Active and available
20	EMWIN – High Priority	X	X	Continuous	1	8%	Text	N/A	Active and available
21	EMWIN - Graphics	X	X	15 - 60	3	8%	Graphic (e.g. GIF, JPEG)	N/A	Active and available
22	EMWIN – Low Priority	X	X	Continuous	2	8%	Text	N/A	Active and available
24	NHC Maritime Graphics	X	X	Variable	14	87%	Graphic (e.g. GIF, JPEG)	N/A	Active and available
25	GOES-E/W Level II Ancillary Products	X	X	Variable	15	87%	HRIT/LRIT	2 - 10 km	Active and available
32	DCS Data	X	X	Continuous	4	5%	DCS Formatted Text	N/A	Active and available
60	Himawari-9		X	60	16	87%	HRIT/LRIT	4 km	Active and available

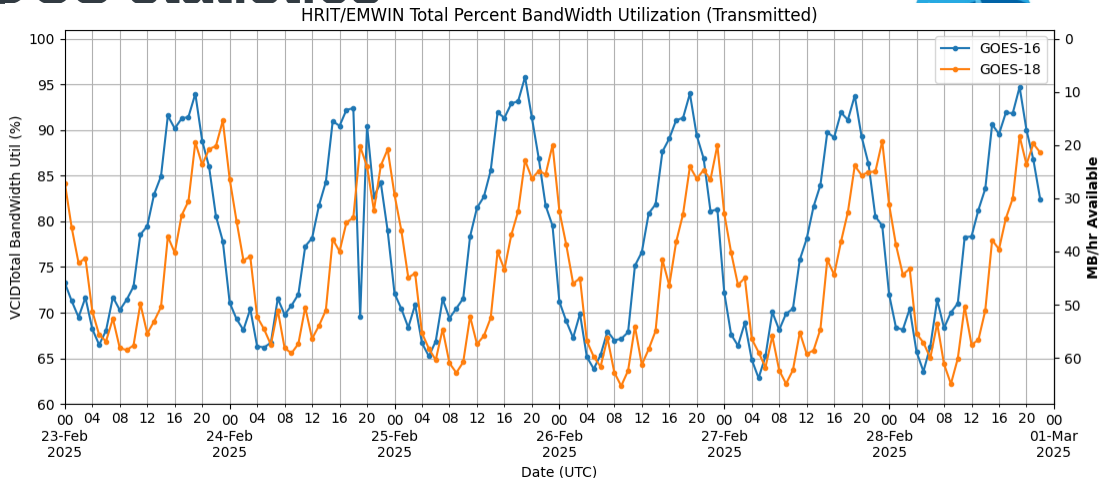


HRIT-DCS statistics



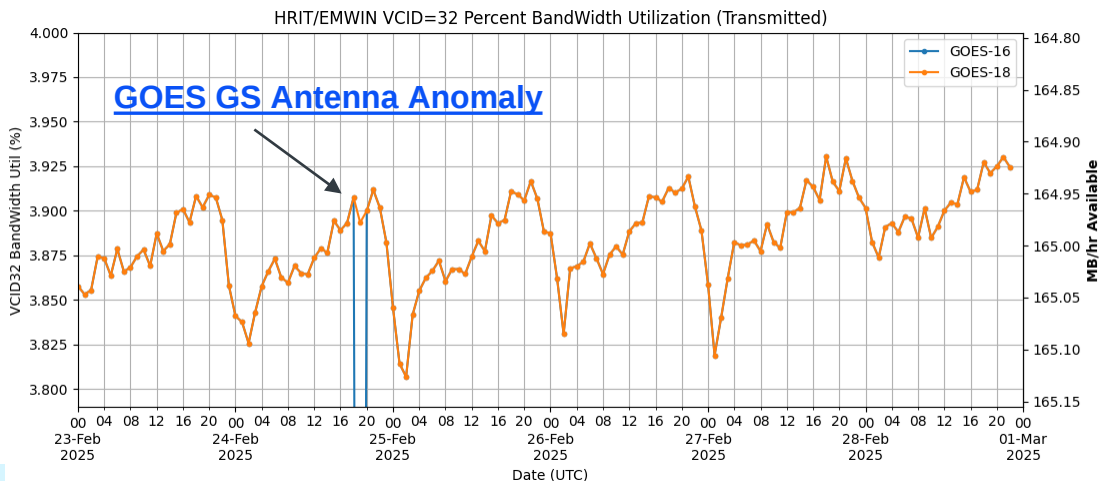
Total 400kbps HRIT/EMWIN BandWidth

- Hard limits:
 - priority 1 EMWIN 8%
 - **priority 2 DCS 5%**
 - priority 3 GOES Imagery 87%
- Diurnal variation is due to compressibility of images



DCS (VCID32)

- DCS messages gathered into ~8kB files of 40-50 messages
- ~20K files per day
- DCS data volume peaks ~2000z



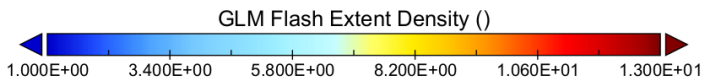
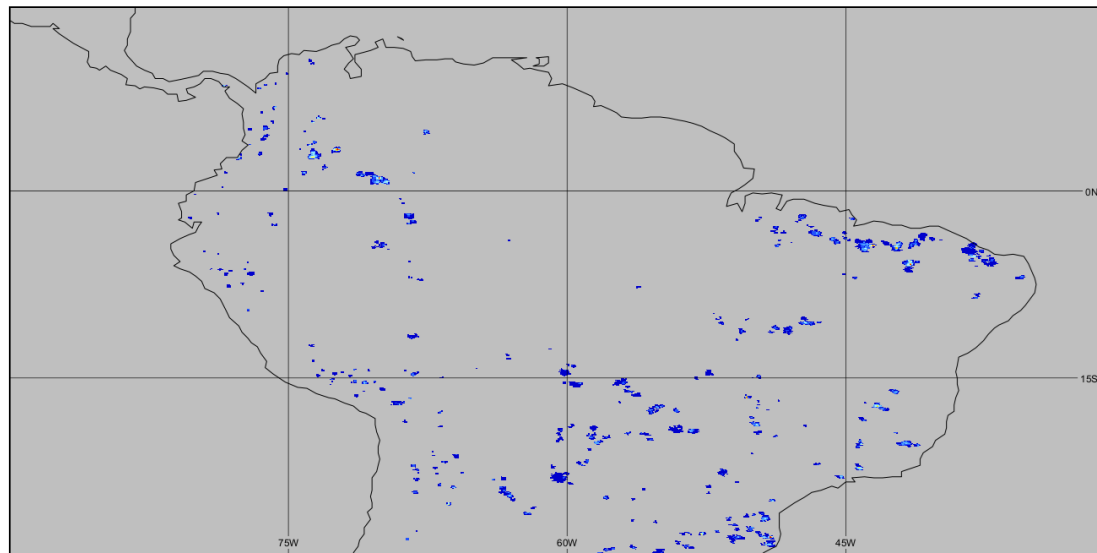


HRIT/EMWIN Broadcast News



- A gridded GOES Global Lightning Mapper product is being developed and we're evaluating the Flash Extent Density for inclusion on the HRIT/EMWIN broadcast

GLM Flash Extent Density



- 3 or 5 minute (TBD) accumulation.
- 2km resolution at nadir
- GOES ABI fixed grid projection



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