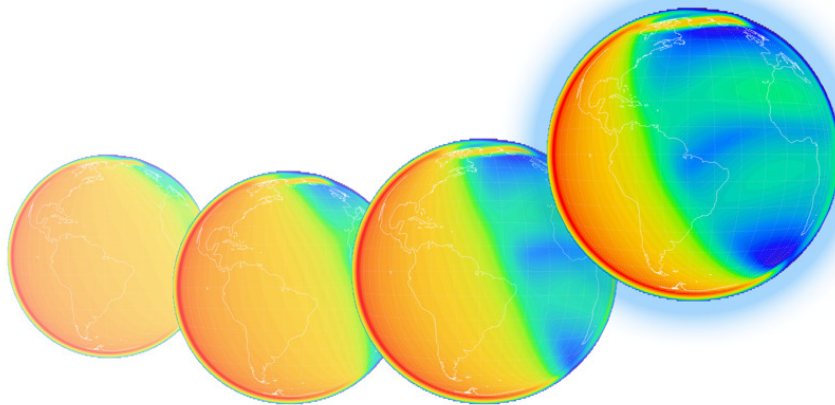
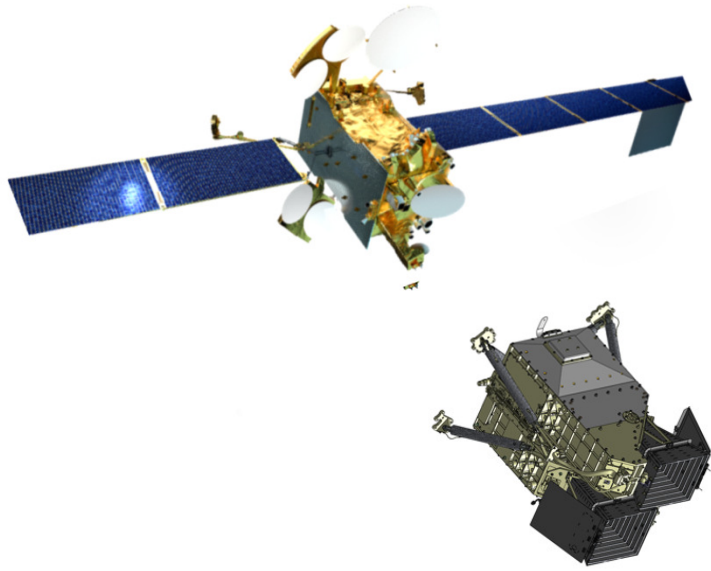


# Global-scale Observations of the Limb and Disk (GOLD)

Katelynn Greer  
GOLD Team



6/25/2019





## Status

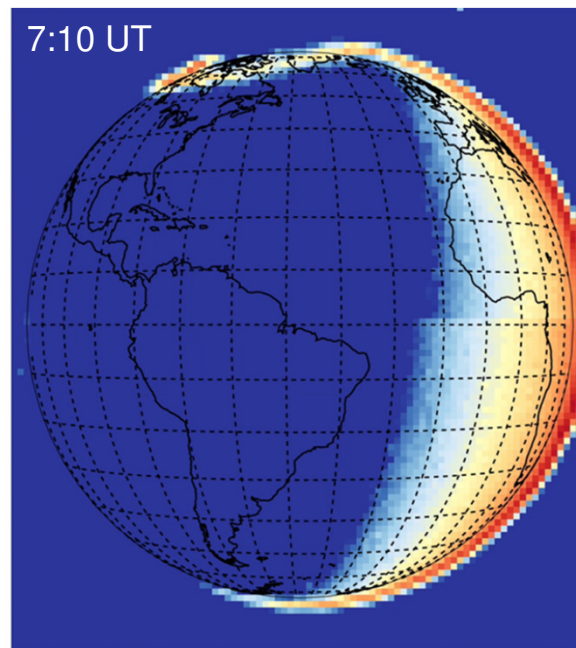


- **GOLD began science operations on October 17, 2018**
- ***Routine observations include:***
  - *Dayside disk scans, limb scans & stellar occultations (03:00 – 20:00 LT)*
  - *Nightside disk scans (17:00 – 21:00 LT, to 21:30 LT in 2019)*
- **Level 1 data released March 2019 (<http://gold.cs.ucf.edu>, also at SPDF)**
  - **Channel A - October 6, 2018 – March 14, 2019**
- **Level 2 data released June 3, 2019 (at same locations as L1)**
  - *Tdisk, Texo, O<sub>2</sub> density profiles – October 6, 2018 – March 14, 2019*
  - *O/N<sub>2</sub> – October 6, 2018 – December 31, 2018; through February 2019 after reprocessing*





# Aurora? Particle Precipitation?



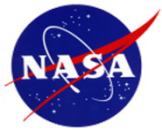
30-minute disk images

**135.6 nm Radiance, Day 282 2018**

## Morning Scans

- Aurora is visible above North America

Brightness (kR)



## Equatorial Electrojet?



Observing O 135.6 nm emissions  
from Appleton anomaly

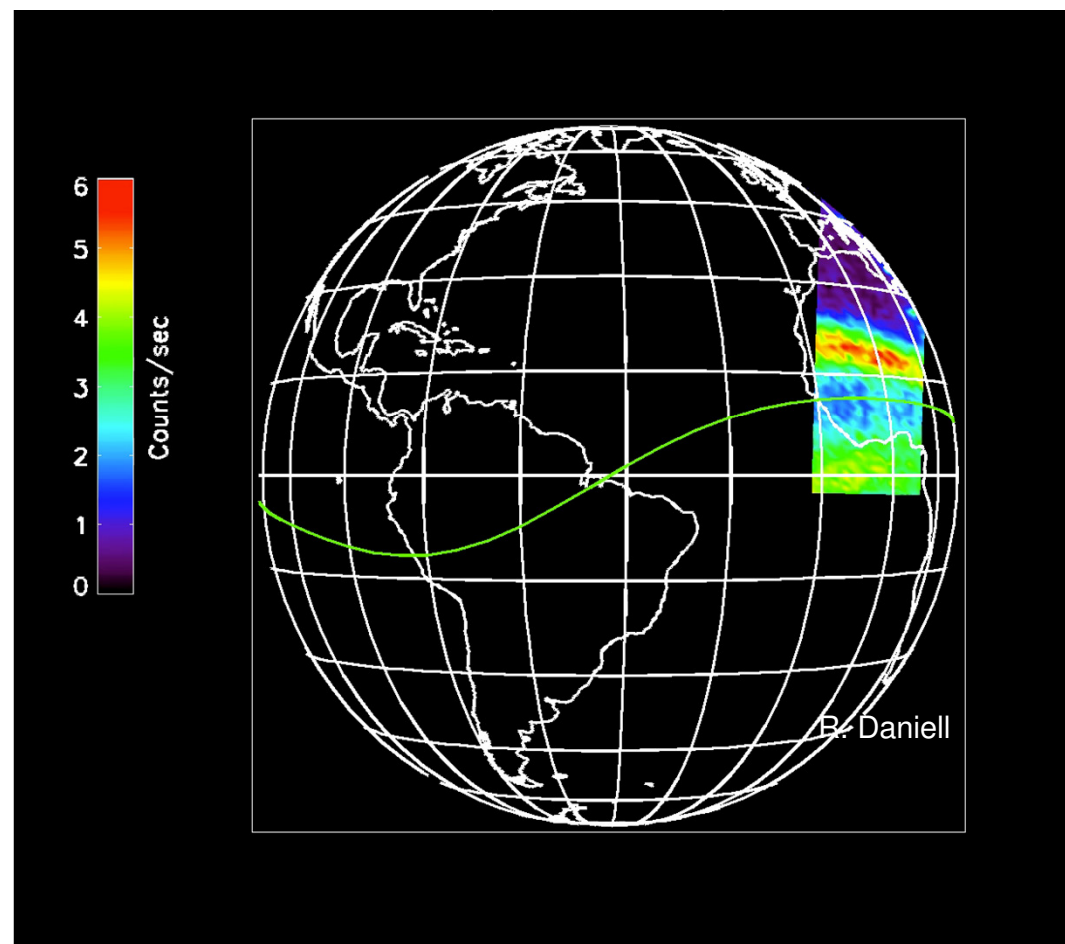
*Single channel 17-20 LT; 30 min  
imaging cadence*

Both channels 20-21 LT; 15 min  
imaging cadence

*Green line on magnetic equator*

October 2018 – March 2019 data  
are available

October 17, 2018 (day 290)





# Radiation Environment?



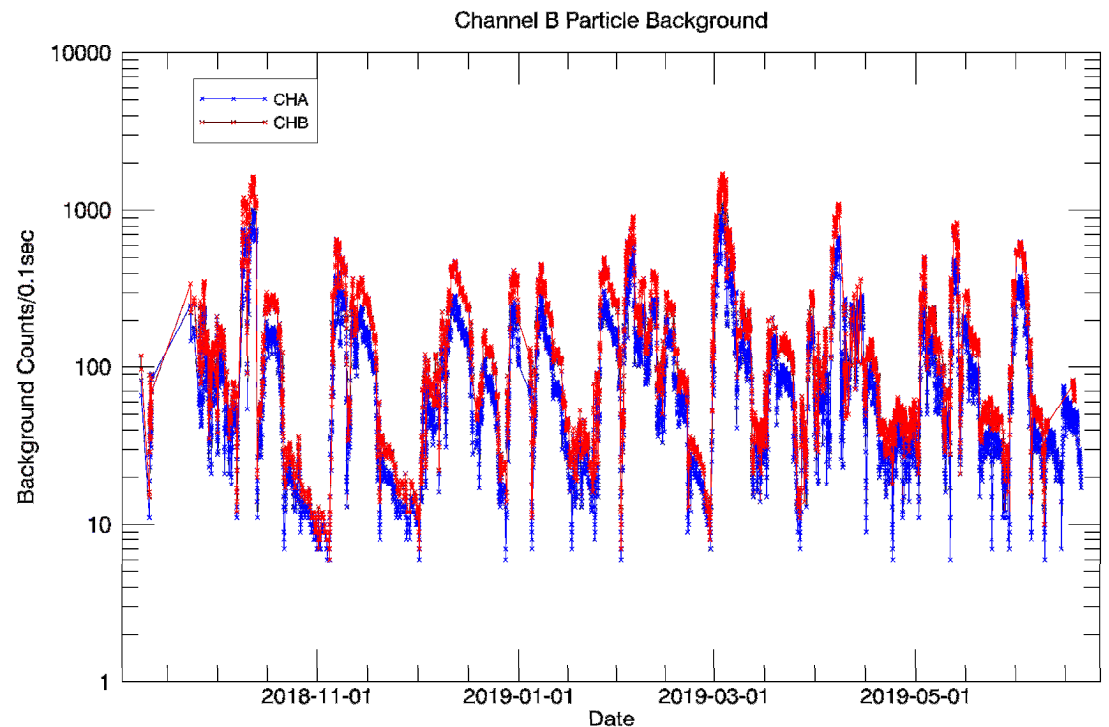
We monitor particle background for SNR on our detectors

$$SNR = \frac{S \cdot R \cdot t}{\sqrt{S \cdot R \cdot t + B \cdot t}}$$

3 orders of magnitude variability

Not a standard data product

- I can put you in touch with the right people to get you this data





## Wrap-up



- **Campaign modes are available**
  - Gravity wave and solar eclipse campaigns
- **Instrument performance is nominal and consistent with planned performance**
- **What data might be of interest to the GEM community?**
  - Opportunities for collaboration and campaigns
- <http://gold.cs.ucf.edu>, also at SPDF
- [Katelynn.greer@lasp.colorado.edu](mailto:Katelynn.greer@lasp.colorado.edu)

