CDR IN OPERATIONS

GridSat-B1
Gridded Satellite ISCCP B1 data

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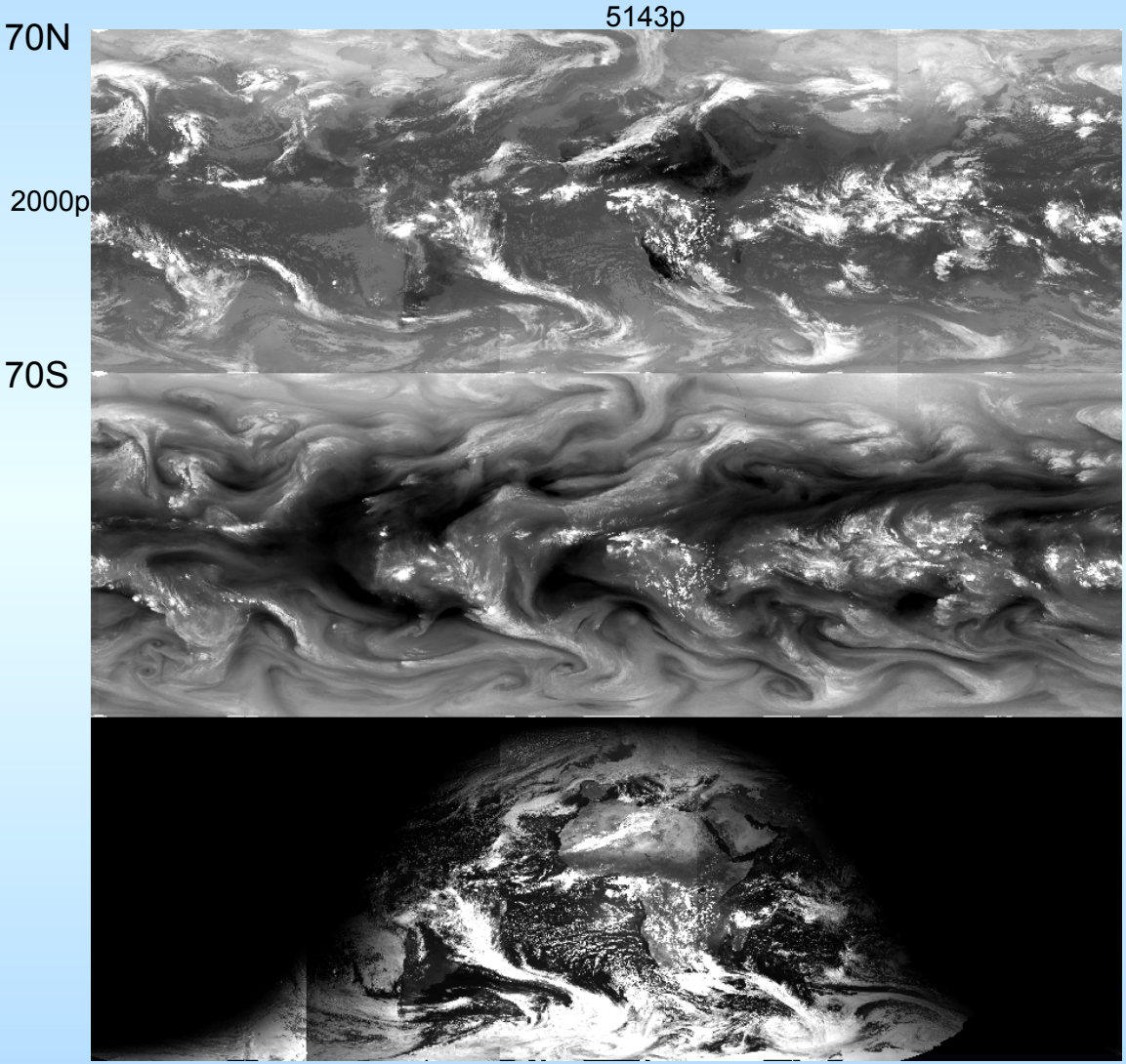
GridSat-B1 Summary

- Infrared window data
  - From ISCCP B1 files
- Geostationary satellites
- Gridded to facilitate…
  - Reading
  - Calibrating
  - Processing
- NetCDF format
- 3 hourly for 1980-2012
- ~8 km resolution
- Collateral products
  - Visible channel
  - Infrared water vapor
- Used for…
  - Solar energy
  - Precipitation
  - Diurnal cycle of OLR
  - ITCZ & SPCZ studies
  - Hurricane studies
  - Sfc heat fluxes
  - Famine early warning

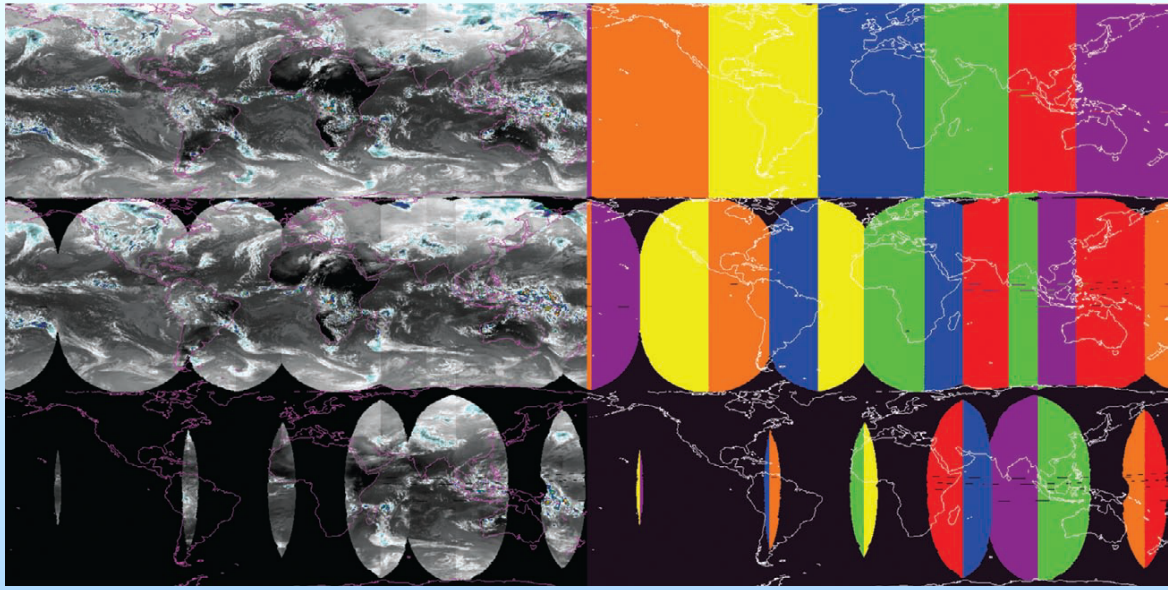


Product details

CDR(s)	Period of Record	Temporal Resolution	Update Frequency	Update Lag	Spatial Resolution	Data file distinction criteria	Do you publicly serve the CDR at your institution?
Gridded Infrared Window Brightness Temperatures	1980-2012	3-hourly	Annually, but could be increased	2 months (but could be decreased)	~8 km	3 hourly files	Yes

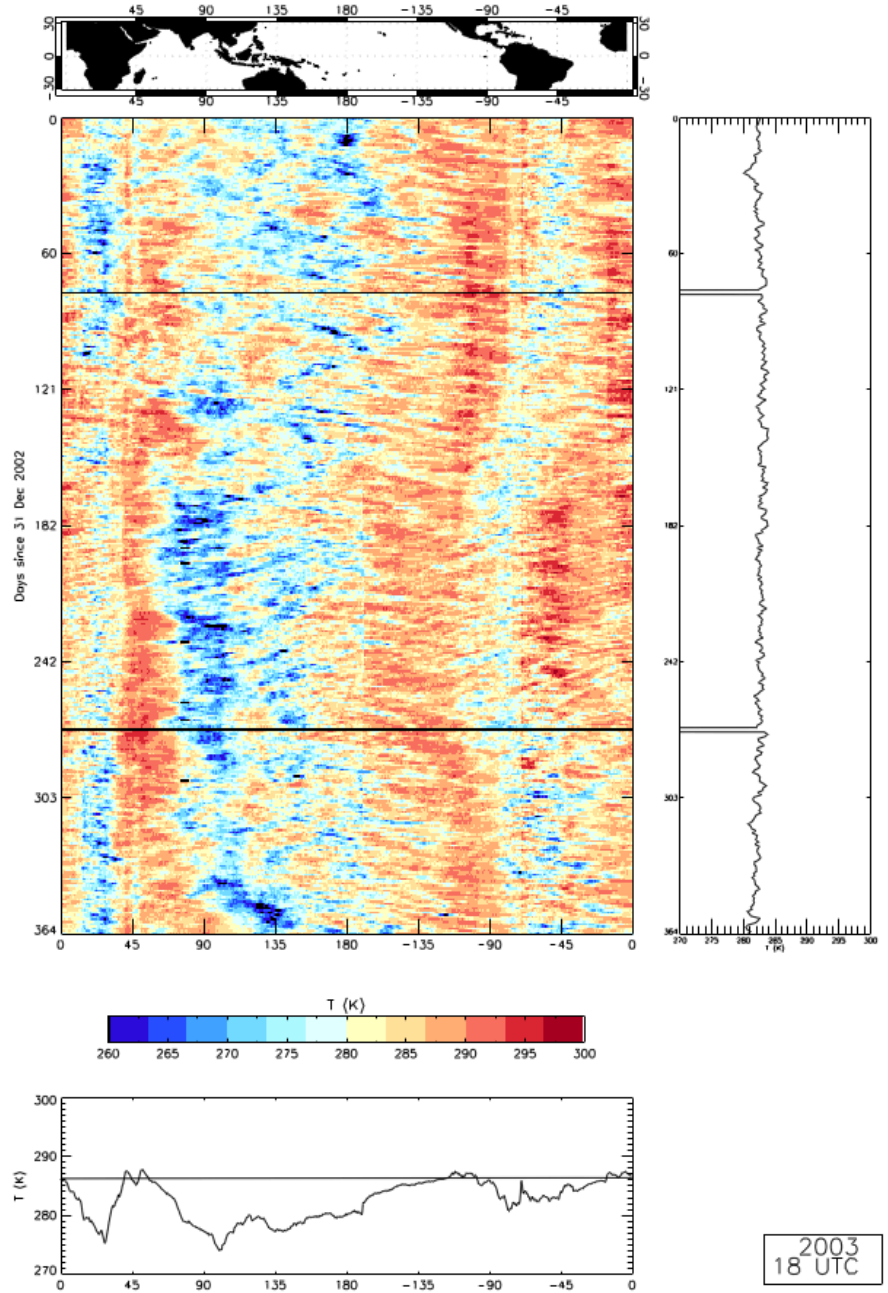
Collateral data

- Other channels (with nearly climate quality calibration)
  - Infrared water vapor
  - Visible
- Other views
  - The primary dataset is the Nadir-most observation
  - Secondary and tertiary views allow reconstruction of satellite FOV



Validation & Quality Assurance

- Validation
  - Cross calibration with HIRS
- Quality - Hovmullers
  - Check for
    - Completeness
    - Calibration
    - Navigation
  - 8 * 33 = 248 graphs (per channel)



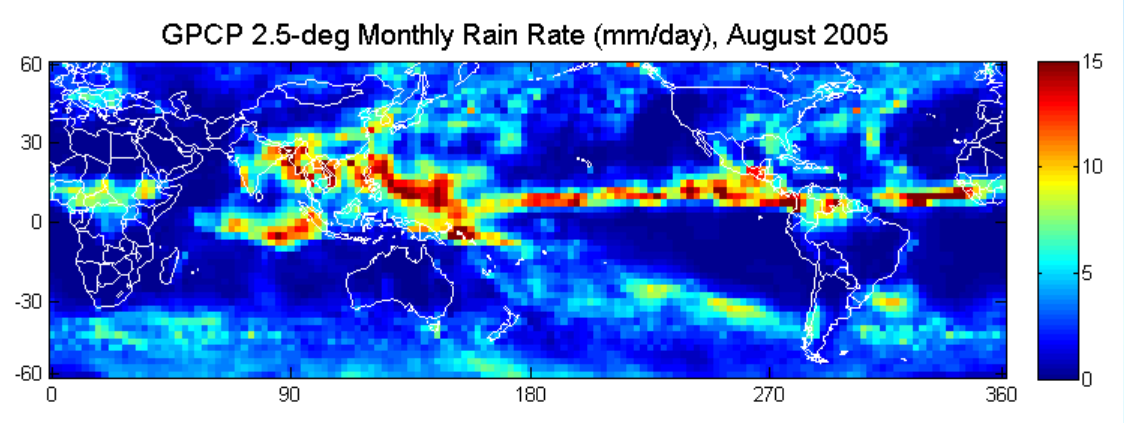
Concerns, Risks and Issues

- Issues
  - View zenith angle correction needs improvement
    - Now provide correction adjustment to allow undoing the correction
    - New correction has been studied but not fully developed or implemented
- Technical risks or issues
  - Likely replaced by ISCCP HGX data

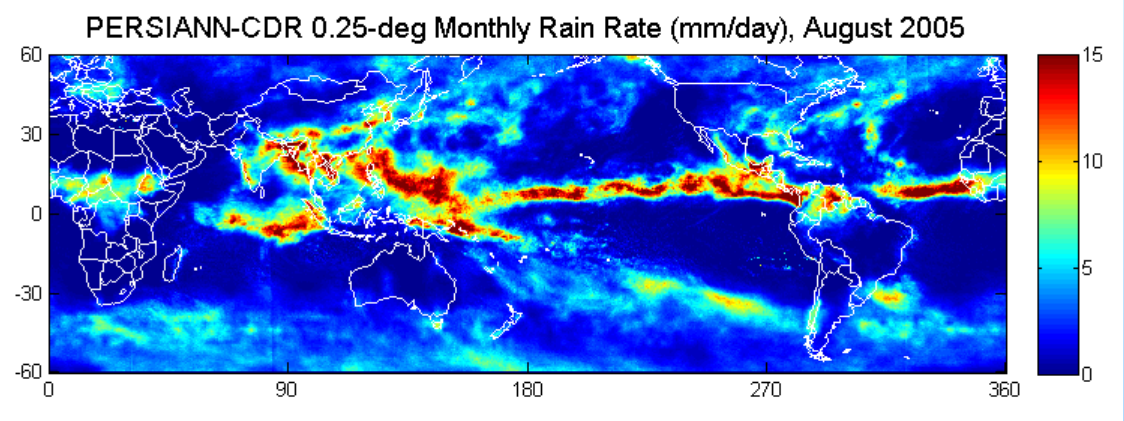
Application: Precipitation: PERSIANN

- Input to provide higher resolution global precipitation
- Monthly → daily
- 2.5 deg → 0.25 deg

GPCP (2.5 deg)

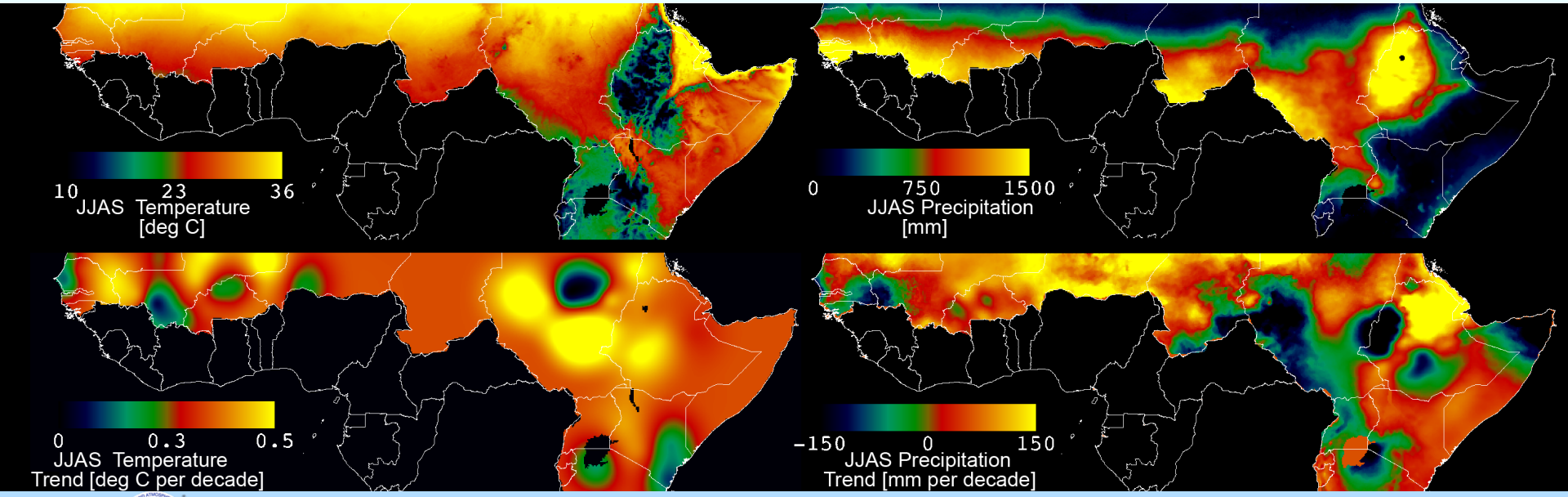


GPCP (0.25 deg)



Application: Famine Early Warning

- Information on temperature & precipitation in data sparse regions
- Looks at long term changes



Schedule

- GridSat-B1 status
  - Up to date through 2012
  - Will likely update for 2013 and 2014

- 1-3 Year Planning Horizon
  - Better infrared window VZA correction
  - Improve calibration
    - Visible
    - Infrared water vapor
  - Compare ISCCP HGX with GridSat
  - Investigate routine updating (quarterly? Monthly?)