



IN43A-18

Subsetting Satellite Level 2 Data at NASA GES DISC

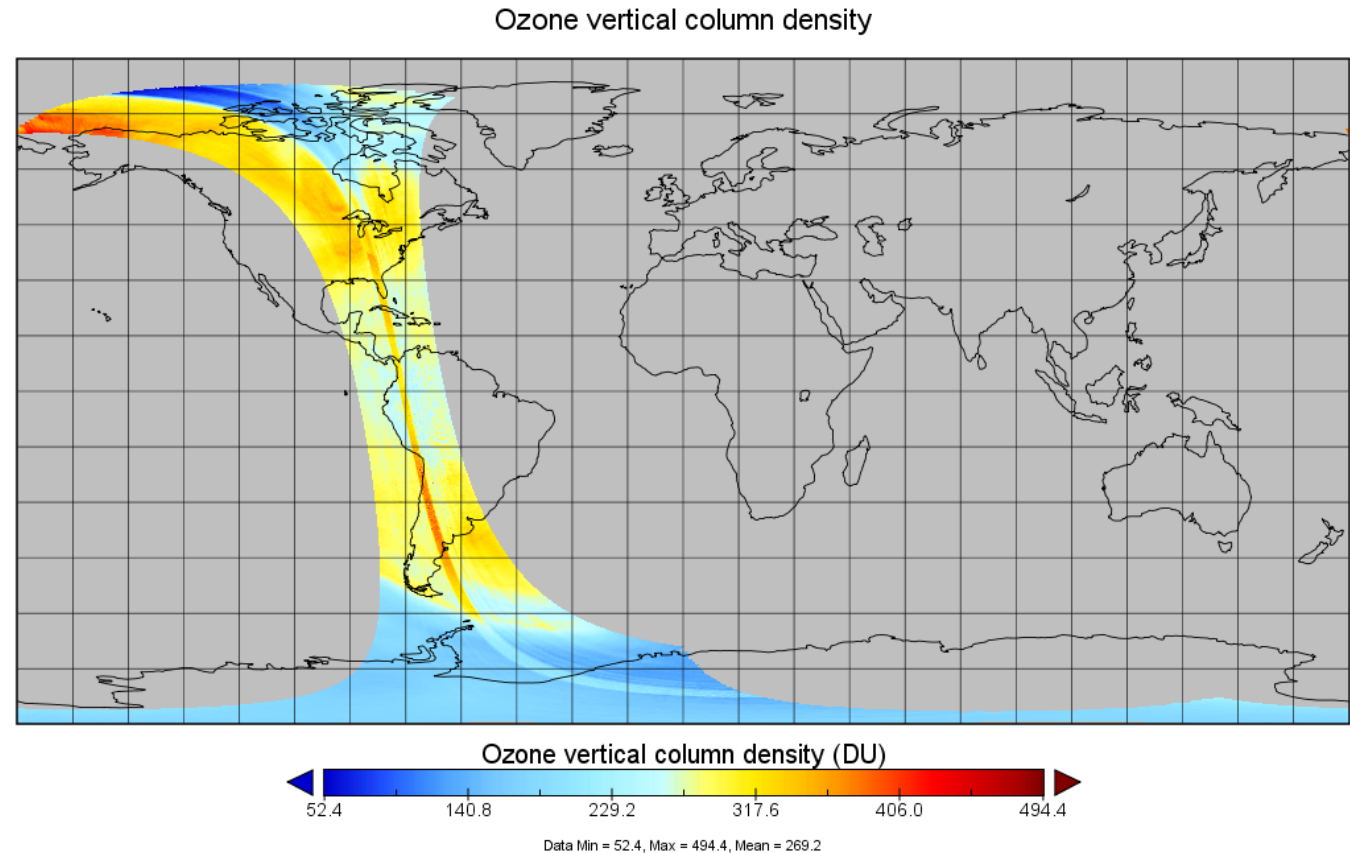
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Jennifer Adams^{1,2}, Bruce Vollmer¹

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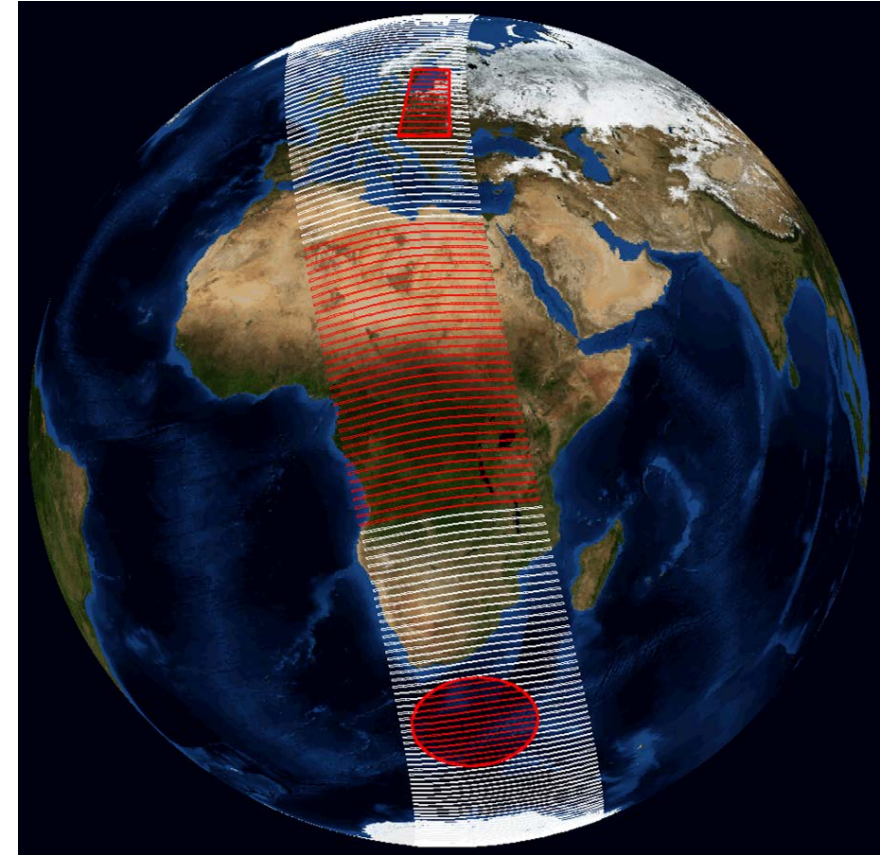
Level 2 Satellite Data

- Derived geophysical variables at the same resolution and location as the instrument source data
- Satellite observation geometry, not gridded
- Products are geospatially & temporally referenced



Why Subset?

- Allows users to select desired variables, spatial domains, time slices, and dimensions
- Eliminates need to download entire file
- Streamlines file layout and contents
- Reduces file size
- Saves storage and bandwidth resources





Level 2 Subsetting Features

Estimated size of results
1 days, 19 links, 37.55 MB

Refine Search ?

► Refine Date Range: ✓ 2016-04-20 to 2016-04-20 [Reset]

▼ Refine Spatial Region: ✓ -110.312, 23.368, -80.156, 46.571 [Reset]

-110.312, 23.368, -80.156, 46.571 [Default Range]



Available Range: -180, -90, 180, 90 Cursor Coordinates: -79.288, -161.367

Subset Options ?

► Spatial Subset: ✓ -110.312, 23.368, -80.156, 46.571 [Reset]

► Variables: Get all variables [Reset]

► Dimensions: Get all dimensions [Reset]

Output format ?

Spatial Resolution: 0.25° x 0.25°

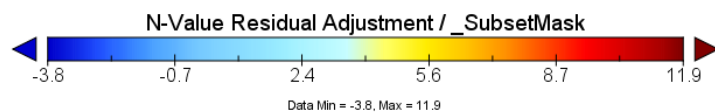
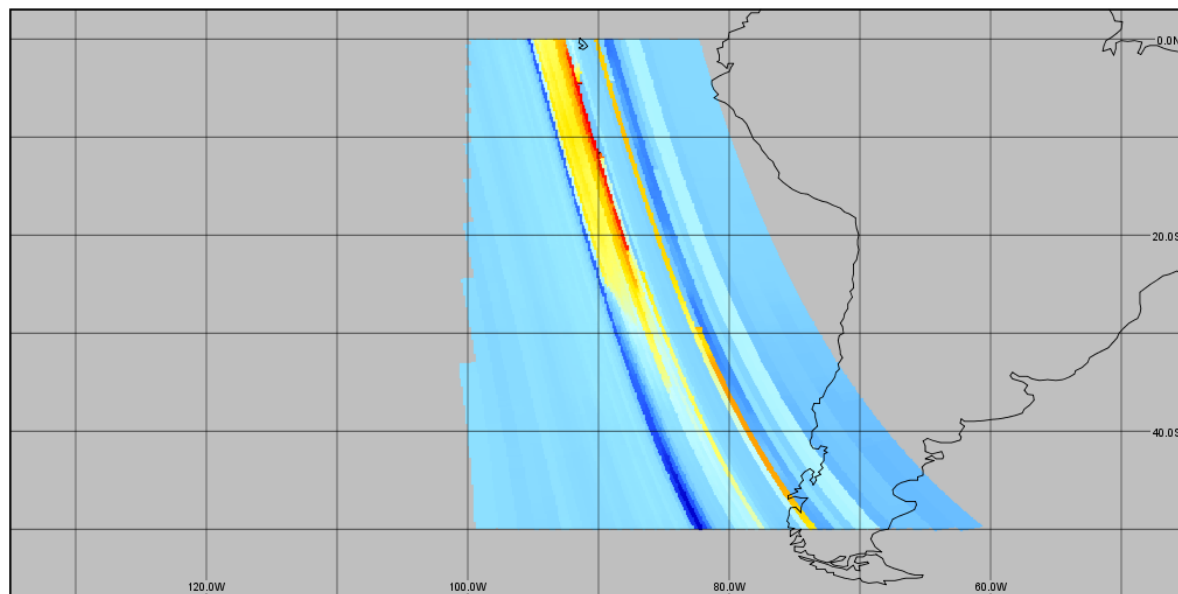
13 km x 24 km

13 km x 24 km

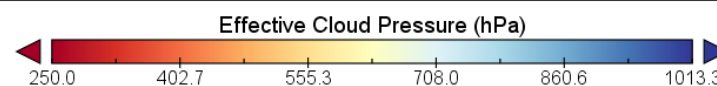
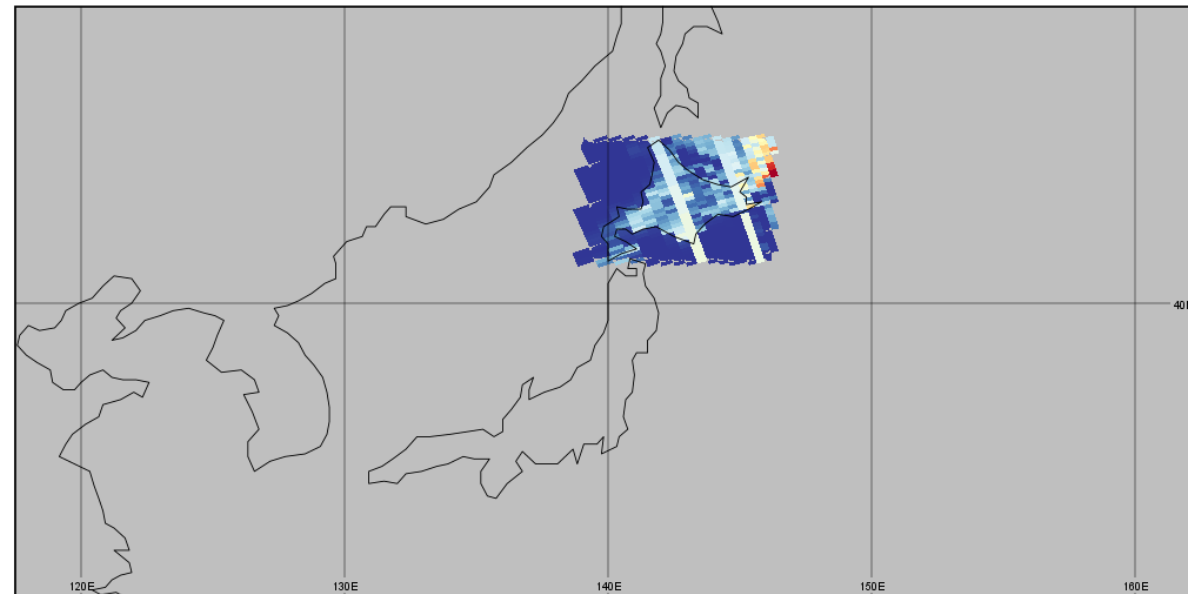
- Spatial subsetting (box, circle, and point)
- Variable selection
- Dimensional subsetting
- Temporal search
- Guide:
<https://disc.gsfc.nasa.gov/information/howto?title=How%20to%20Subset%20Level-2%20Data>

Spatial Subsetting - Box

N-Value Residual Adjustment

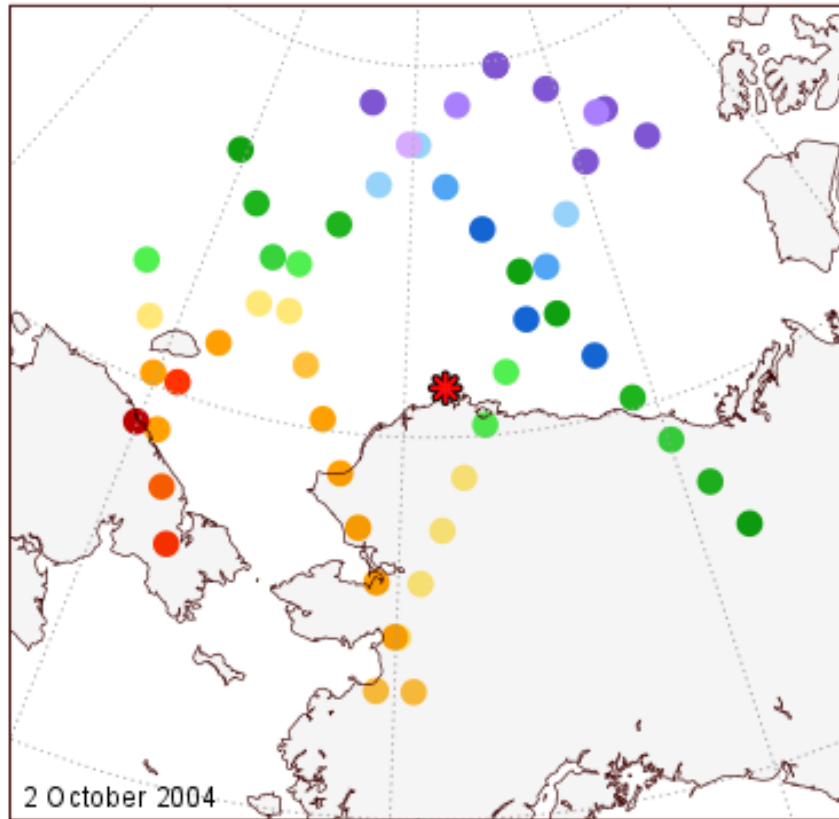


Effective Cloud Pressure



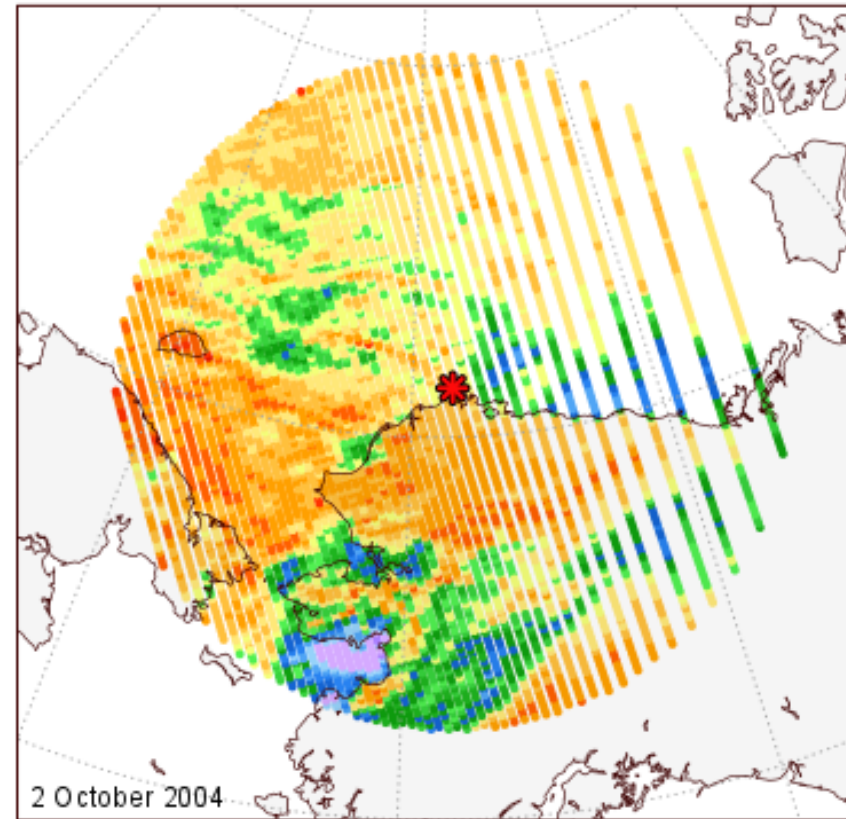
Spatial Subsetting – Circle

Ozone Column within 1000km of Barrow, Alaska



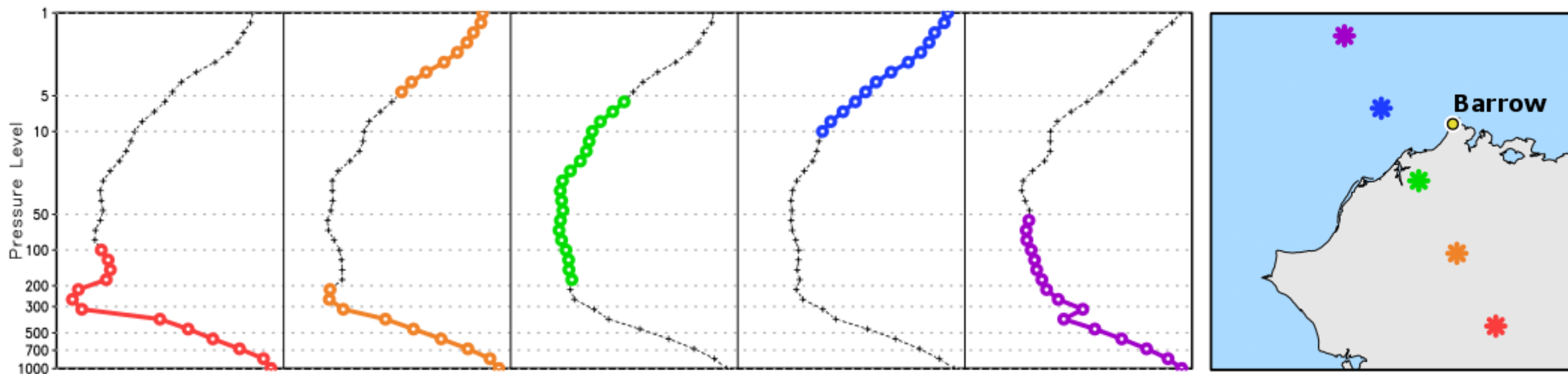
Microwave Limb Sounder (MLS)

VIS Aerosol Index within 1000km of Barrow, Alaska



Ozone Monitoring Instrument (OMI)

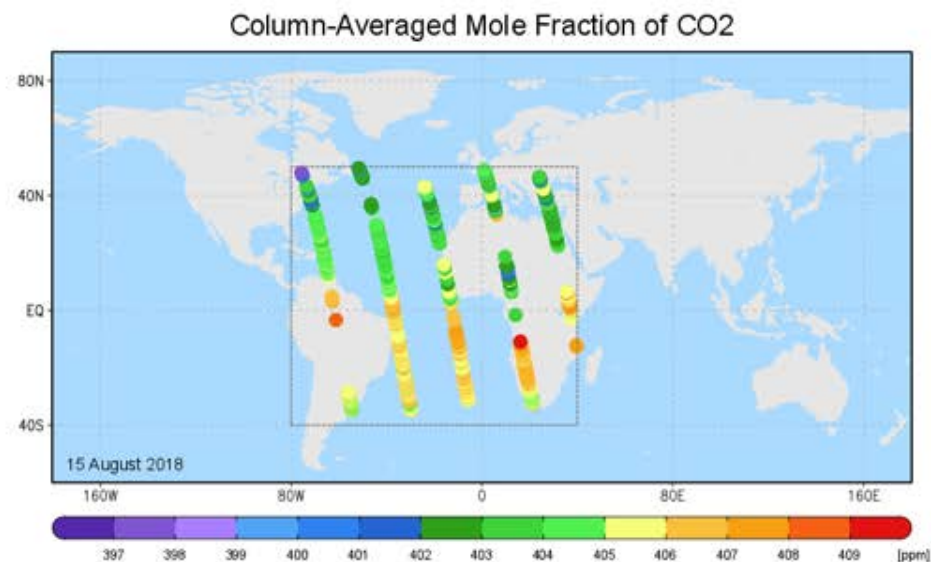
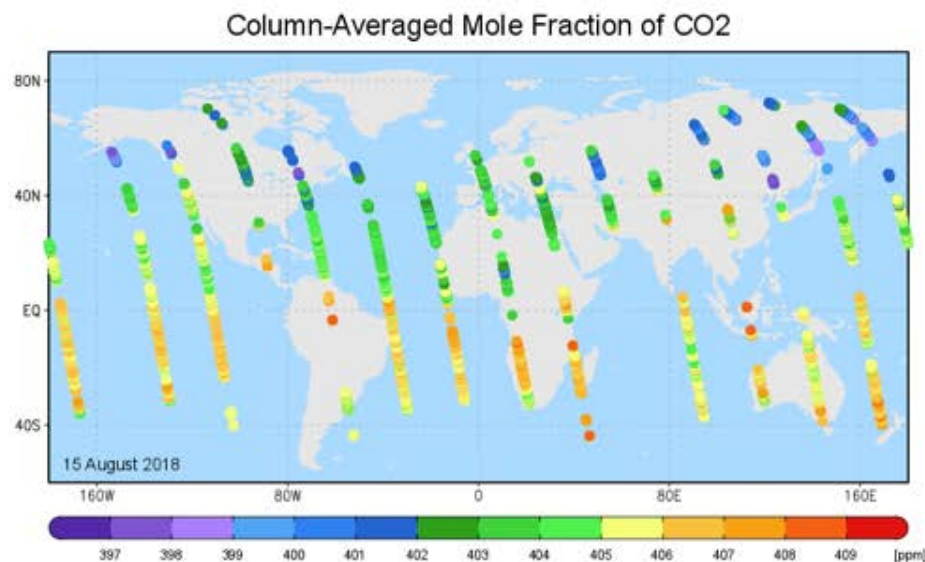
Dimensional Subsetting



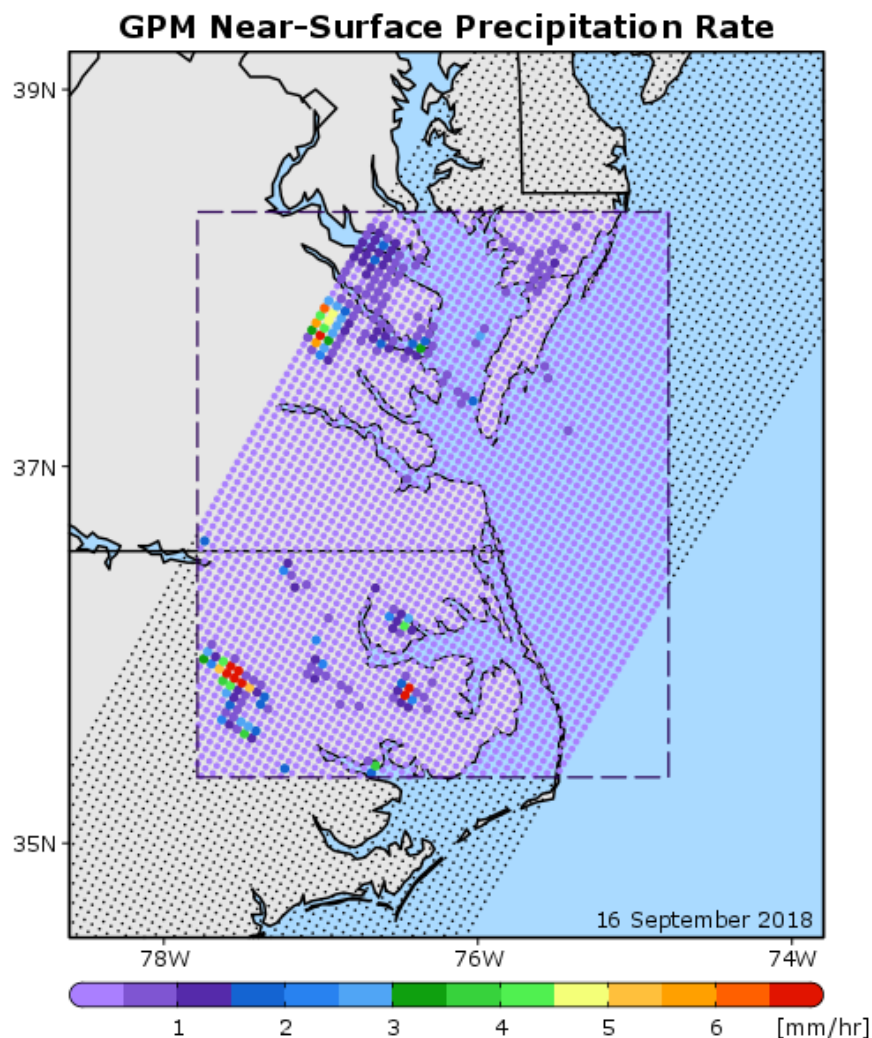
Pressure Level subsets of Temperature observations from five MLS soundings

Supported Missions

- OMI L2 (regular, zoom, and L2G) [HDF-EOS5]
- MLS L2 [HDF-EOS5]
- OCO2 & ACOS Lite L2 [NetCDF4]



Global Precipitation Measurement (GPM) Data



- Initial support: GPM_2ADPR.06 [HDF5]
- Dual-Frequency Precipitation Radar
- https://disc.gsfc.nasa.gov/datasets?keywords=GPM_2ADPR



Thank You

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<https://disc.gsfc.nasa.gov>