

**ABOVE Regional Weather Briefing**

Based on the GMAO GEOS meteorology and aerosol forecast fields  
Model Initialized 00z 29 July 2017

*Note: Saskatchewan (SK), Alberta (AB), Manitoba (MB), Northwest Territory (NWT), Yukon Territory (YKT), British Columbia (BC)*

*PAFA = Fairbanks Airport, Alaska*

*PASC = Deadhorse Airport, Prudhoe Bay Alaska*

*PABR = Barrow*

**Day-1 Outlook**

**Valid 1500z 30 July through 2359z 30 July**

The mission areas over AK will continue to be mostly free of smoke/haze through this period. Large values of aerosol optical thickness are predicted to affect a small area over south-central BC, extending through the northern half of AB and SK. A fire near Fort Smith will bring large quantities of smoke from the Great Slave Lake to the northern most portions of SK. Precipitation associated with a frontal system moving over northern AK will deteriorate conditions in this area through this period. Simultaneously, a low pressure system begins to make its way through northern BC. These two weather systems contribute to the increase in precipitation and clouds over the northern and southern most points of AK and YKT, northern BC, western NWT, and some areas in northern AB and SK. An abundance of low clouds will be present over AK through this forecast period. **Possible targets to fly will be found over a small area in the Yukon Flats up to early afternoon, depending on the vicinity of the low cloud boundary.** Sporadic clouds will be present in the vicinity of Anchorage in the morning, becoming more cloudy in the afternoon. **Over the YKT, north of 65N, flights can be planned during the morning hours. The north-western NWT will see sporadic cloud clearing through the day. The best cloud-free flying targets through this period will be located over southern BC, AB, and SK, with southern SK becoming cloudy in the afternoon.**

**Day-2 Outlook**

**Valid 1500z 31 July through 2359z 31 July**

The largest values of aerosol optical thickness continue to affect an area in southern BC, expanding to southern AB and west of Saskatoon. The AK mission area will be smoke/haze free. Areas between the Great Slave Lake and the northern SK will see large aerosol optical thickness values due to a fire near Fort Smith. A frontal system makes its way through AK, bringing heavy precipitation through most of the mission targets. Precipitation also develops along southern YKT, southern NWT, northern BC, and northern AB and SK. The mission targets over AK will continue to be under cloudy conditions through this forecast, with a very small morning window to fly over the Yukon Delta where sporadic clouds will be seen. The northern YKT could

be a target in the morning hours. **Cloud free targets can be found between Inuvik to Norman Wells to the Great Bear Lake, with some sporadic clouds present. Areas between the Great Bear Lake, Great Slave Lake, and Daring Lake could be possible targets.** Southern BC, AB, and SK will also be mostly cloud clear, with some sporadic low clouds present over southern AB.

***Day-3 Outlook***

***Valid 1500z 01 August through 2359z 01 August***

Large values of aerosol optical thickness will be found over southern BC and AB. Areas between the Great Slave Lake, northern most points of AB, and northern SK will be affected by large values of aerosol optical thickness, due to the same fire near Fort Smith. Precipitation continues over most of AK and central YKT. Another low pressure system moving eastward begins to affect western AK in the afternoon. Heavy precipitation also develops along northern AB through this period, with this precipitation moving into north-western SK in the afternoon. Most of BC and the vicinity of Whitehorse will be cloud-free, with some middle and high clouds over BC along 55N. Possible targets could also be found over the northern portions of the NWT until mid-afternoon. The AK, AB, and SK areas will be mostly cloud covered.

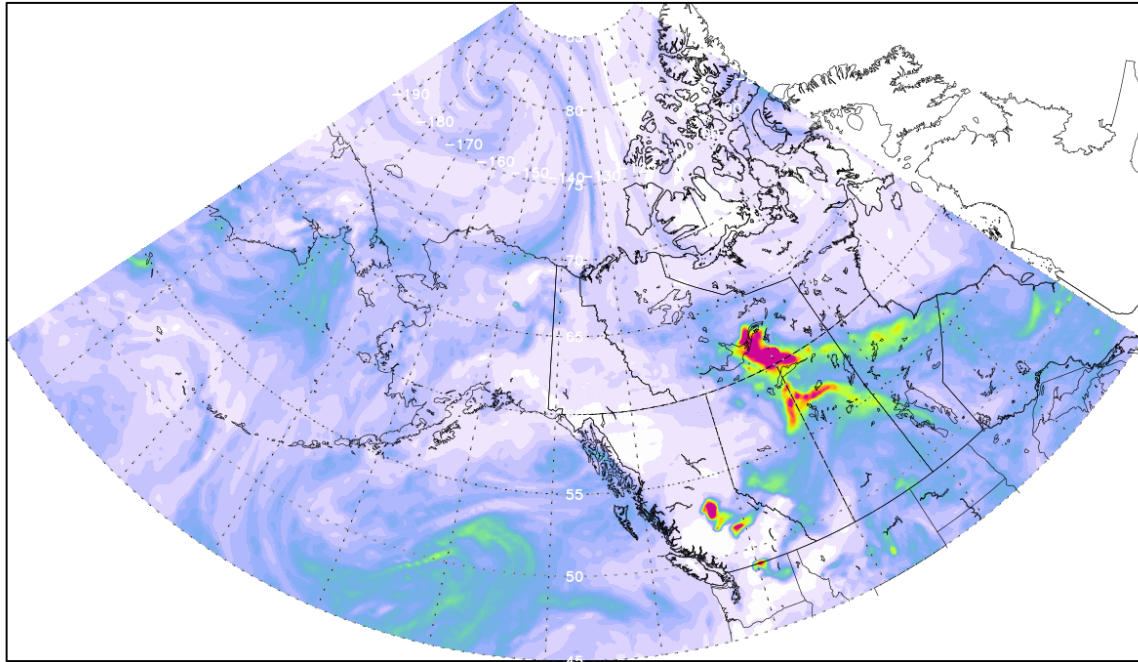
--

Marangelly Cordero-Fuentes, Ph. D.  
Senior Research Scientist/Task Lead  
Science Systems and Applications, Inc.  
NASA Global Modeling and Assimilation Office  
Code 610.1, Goddard Space Flight Center, Greenbelt, MD 20771  
Bldg. 33, Rm. B-227A

Phone: 301-614-6162 | Fax: 301-614-6246  
E-Mail: [Marangelly.Fuentes-1@nasa.gov](mailto:Marangelly.Fuentes-1@nasa.gov)

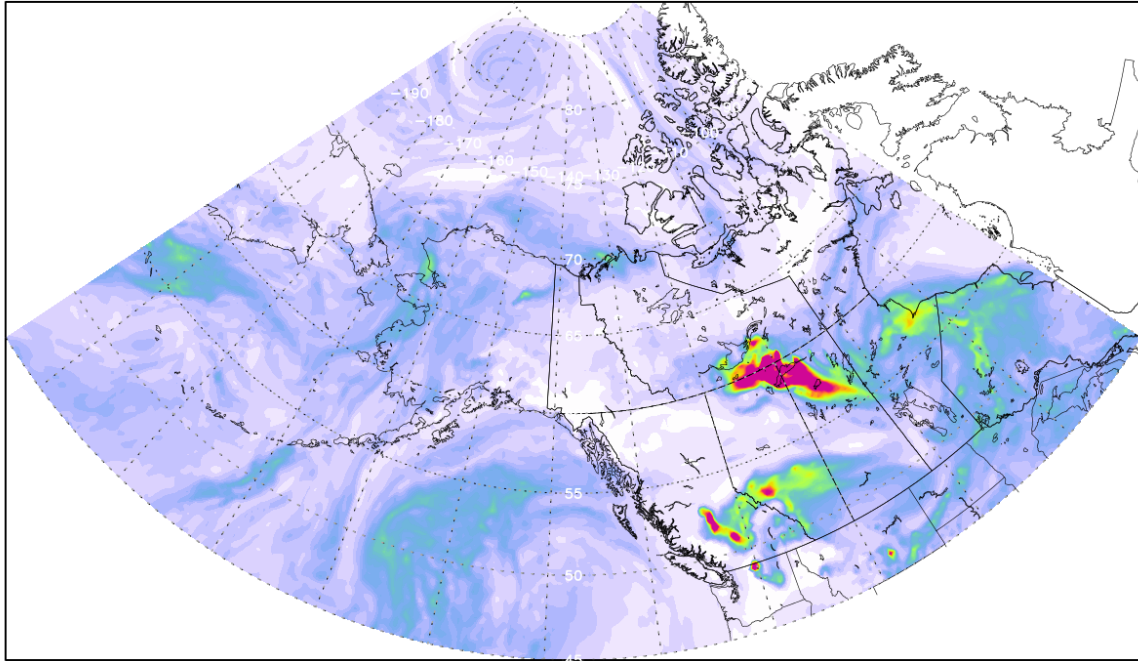
ABOVE\_Total\_AOD\_IT\_00z29JUL\_VT\_21z30JUL.png

GEOS Aerosol Optical Depth  
Initial time 29 JUL. 00z  
Valid time 30 JUL. 21z



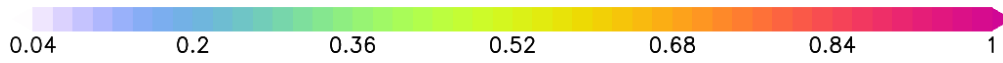
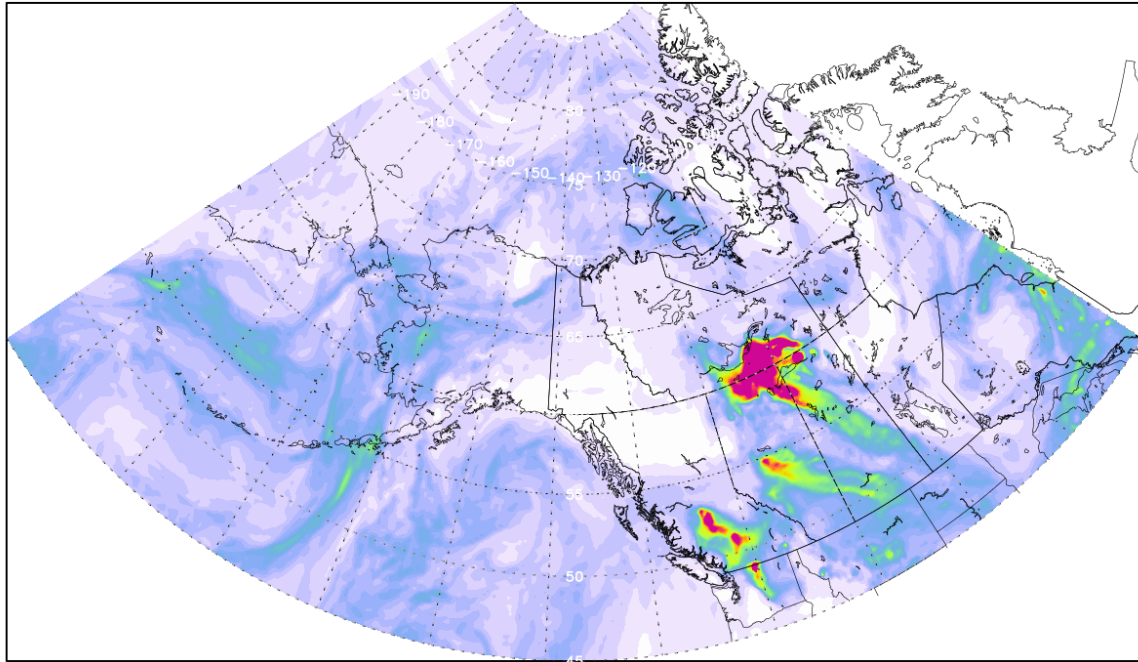
ABOVE\_Total\_AOD\_IT\_00z29JUL\_VT\_21z31JUL.png

GEOS Aerosol Optical Depth  
Initial time 29 JUL. 00z  
Valid time 31 JUL. 21z



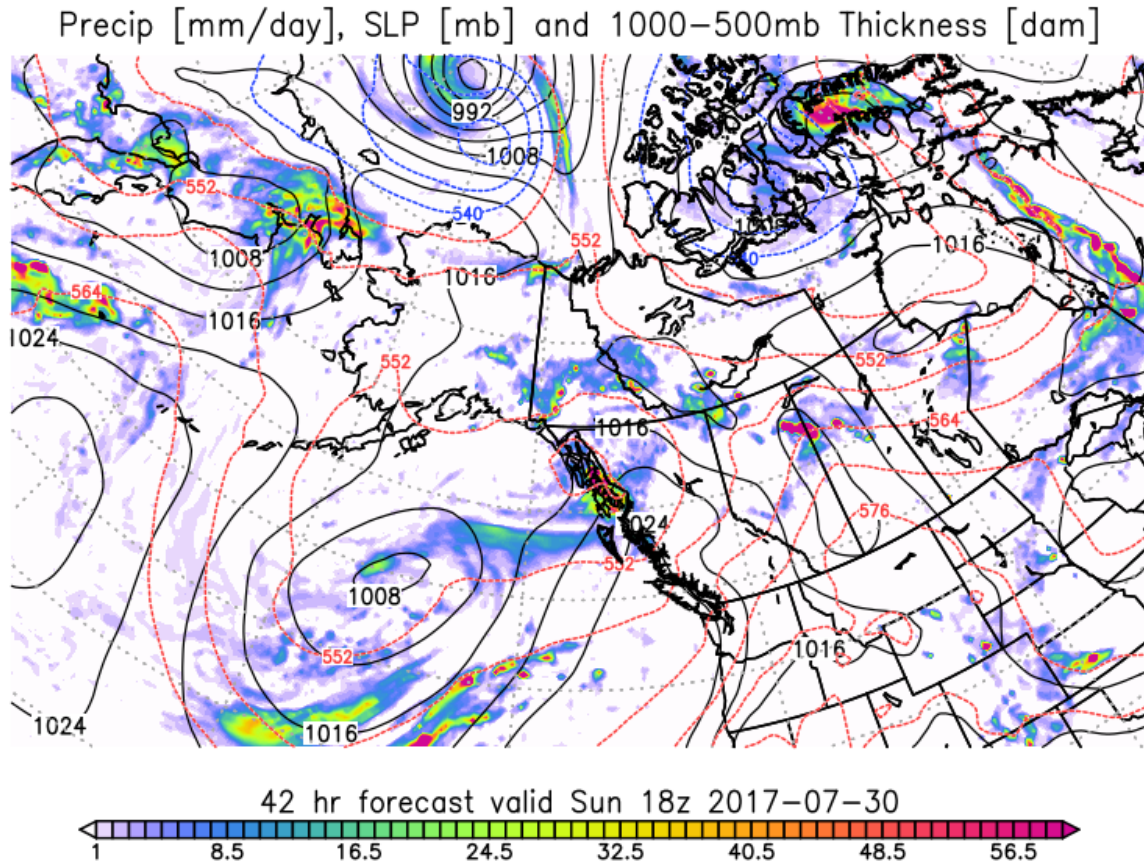
ABOVE\_Total\_AOD\_IT\_00z29JUL\_VT\_21z01AUG.png

GEOS Aerosol Optical Depth  
Initial time 29 JUL. 00z  
Valid time 01 AUG. 21z



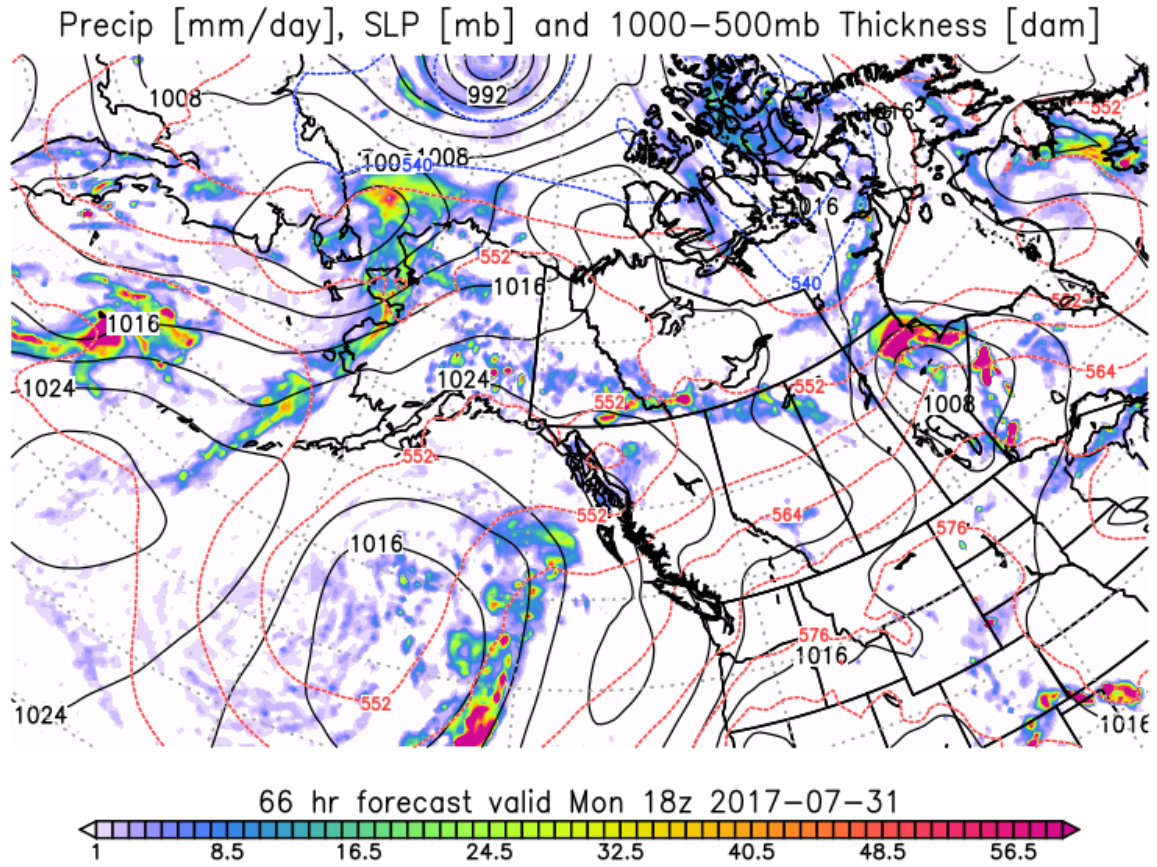
fp.8prec.sfc.042.above\_lg.png

NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-07-29



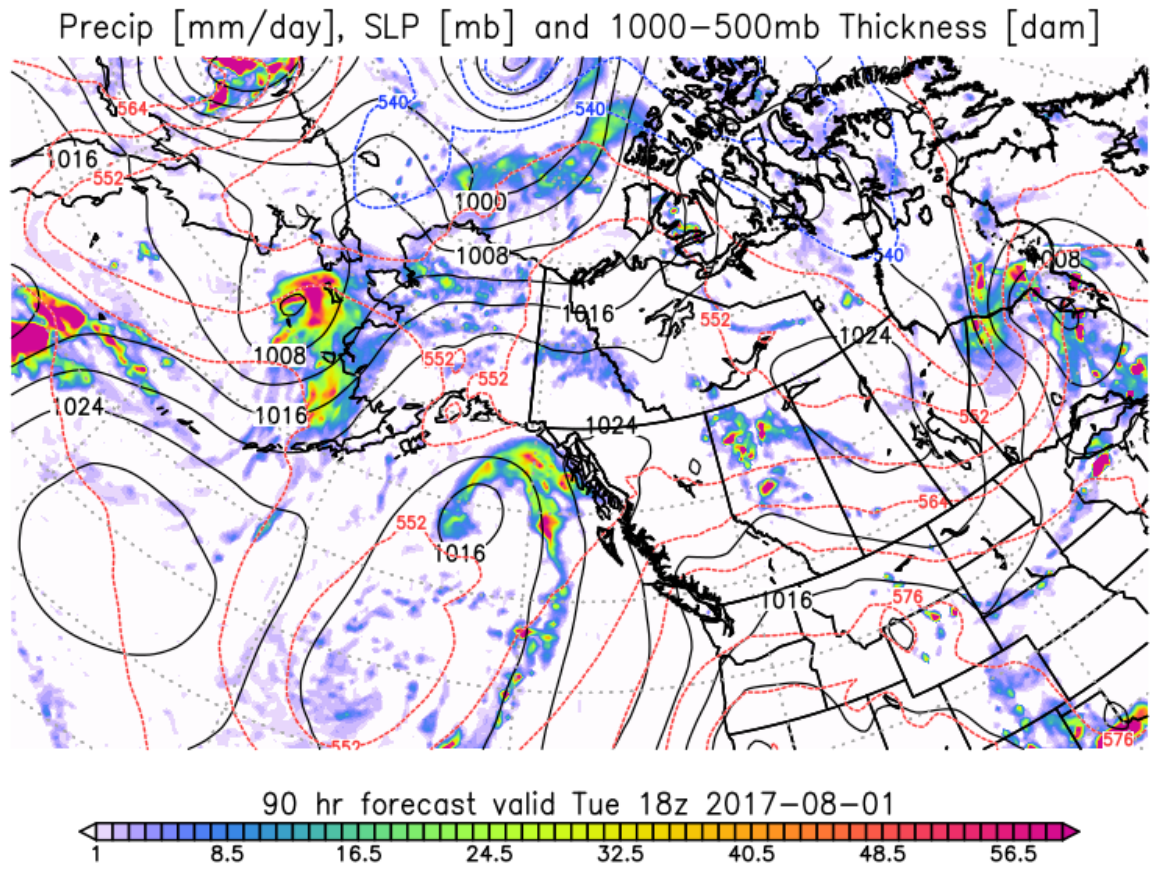
fp.8prec.sfc.066.above\_lg.png

NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-07-29



fp.8prec.sfc.090.above\_lg.png

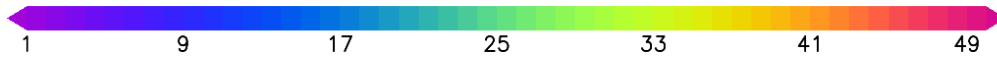
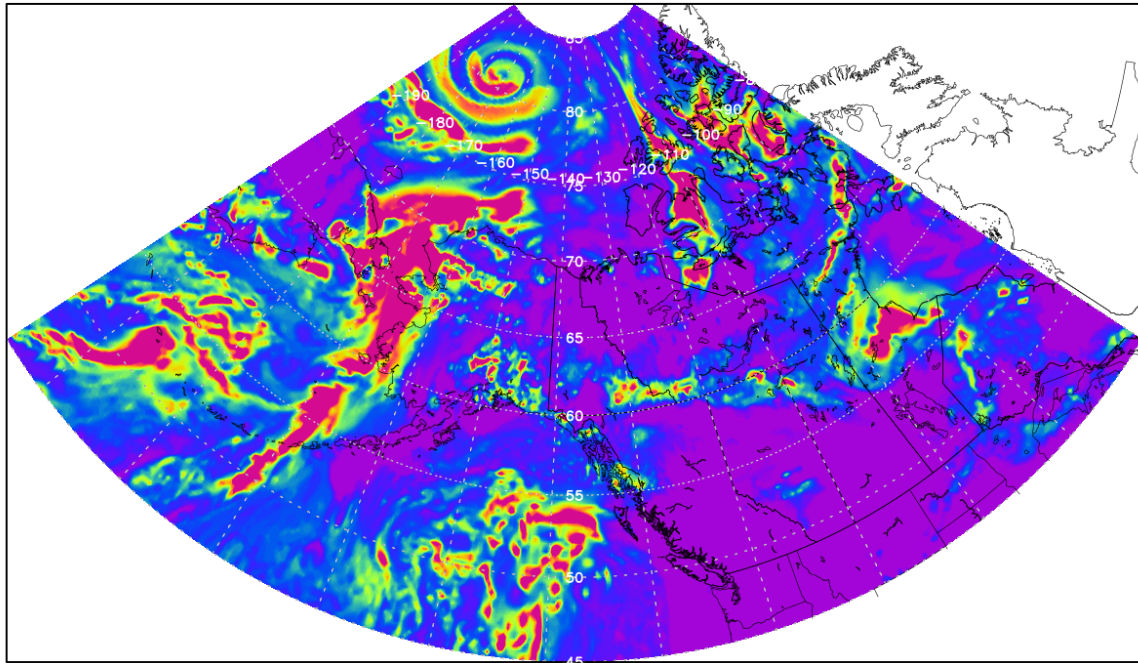
NASA/GMAO - GEOS-5 Forecast Initialized on 00z 2017-07-29





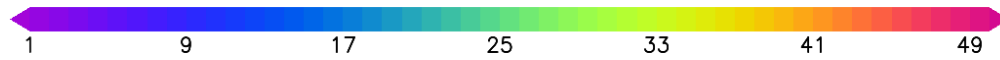
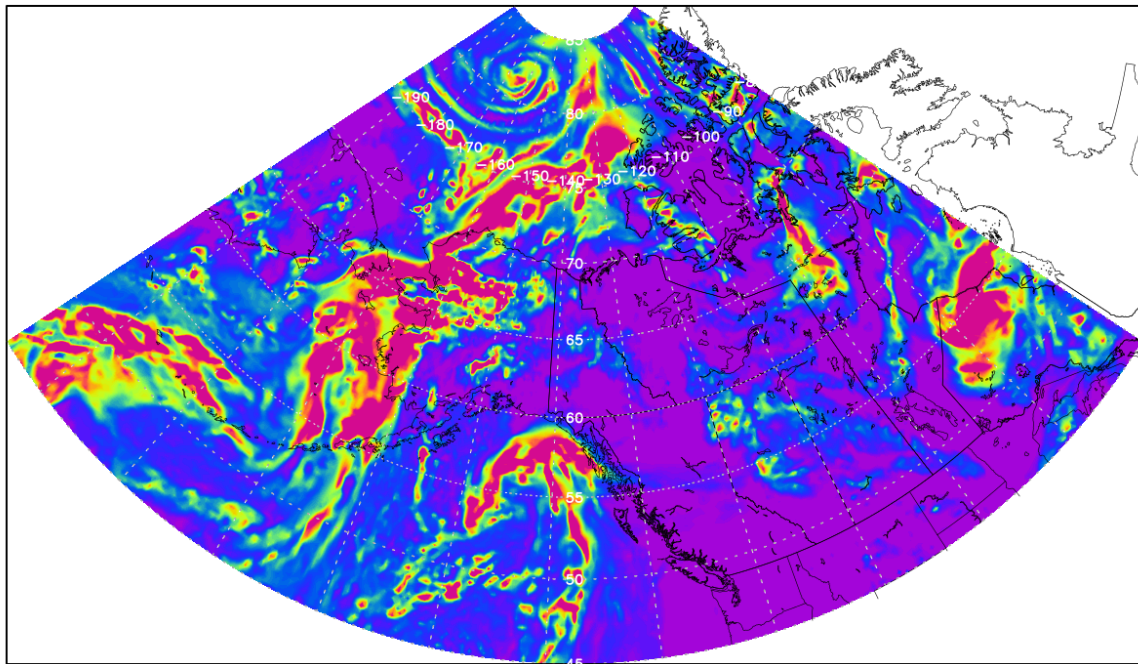
ABOVE\_Total\_Cloud\_IT\_00z29JUL\_VT\_18z31JUL.png

GEOS Total Cloud Optical Depth  
Initial time 29 JUL. 00z  
Valid time 31 JUL. 18z



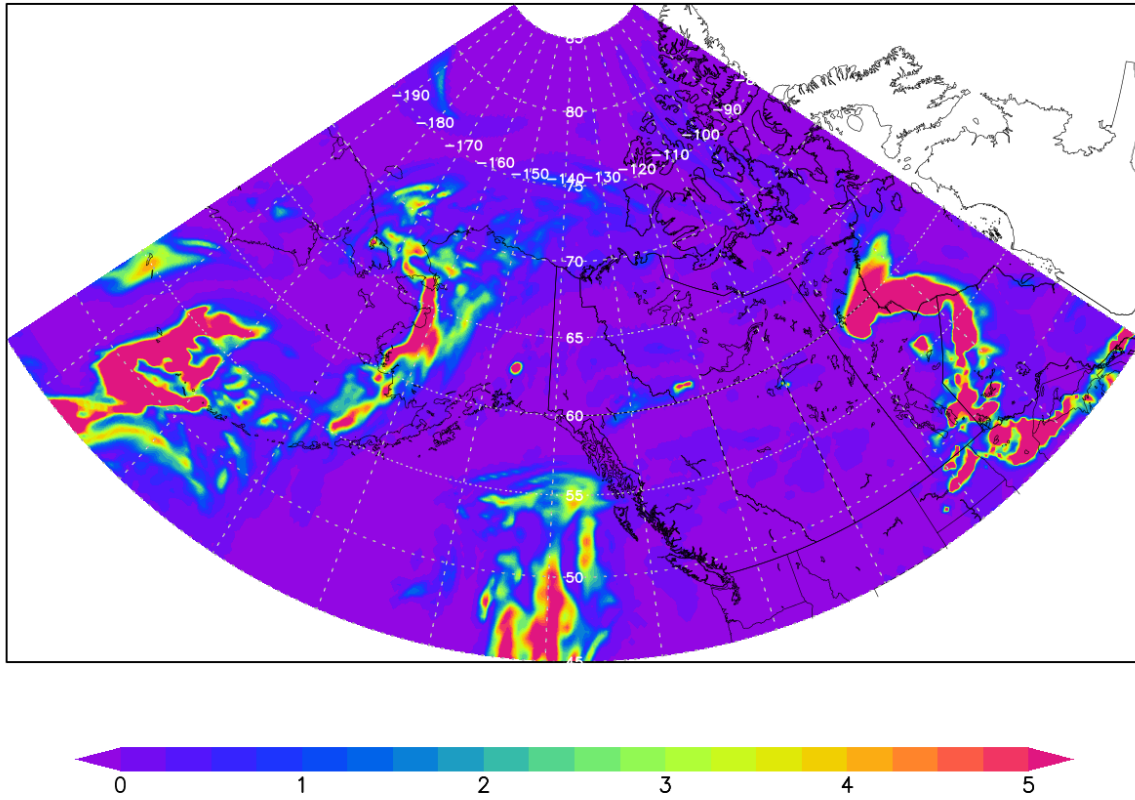
ABOVE\_Total\_Cloud\_IT\_00z29JUL\_VT\_18z01AUG.png

GEOS Total Cloud Optical Depth  
Initial time 29 JUL. 00z  
Valid time 01 AUG. 18z



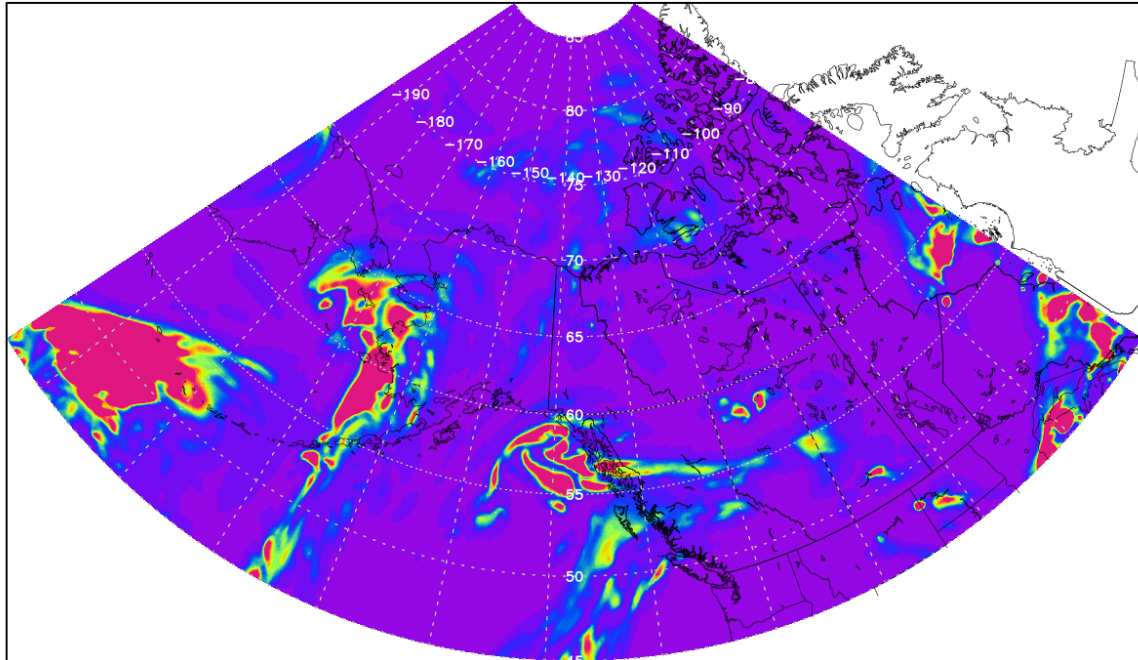
ABOVE\_High\_Cloud\_Optical\_Depth\_IT\_00z29JUL\_VT\_18z31JUL.png

GEOS High Cloud Optical Depth  
Initial time 29 JUL. 00z  
Valid time 31 JUL. 18z



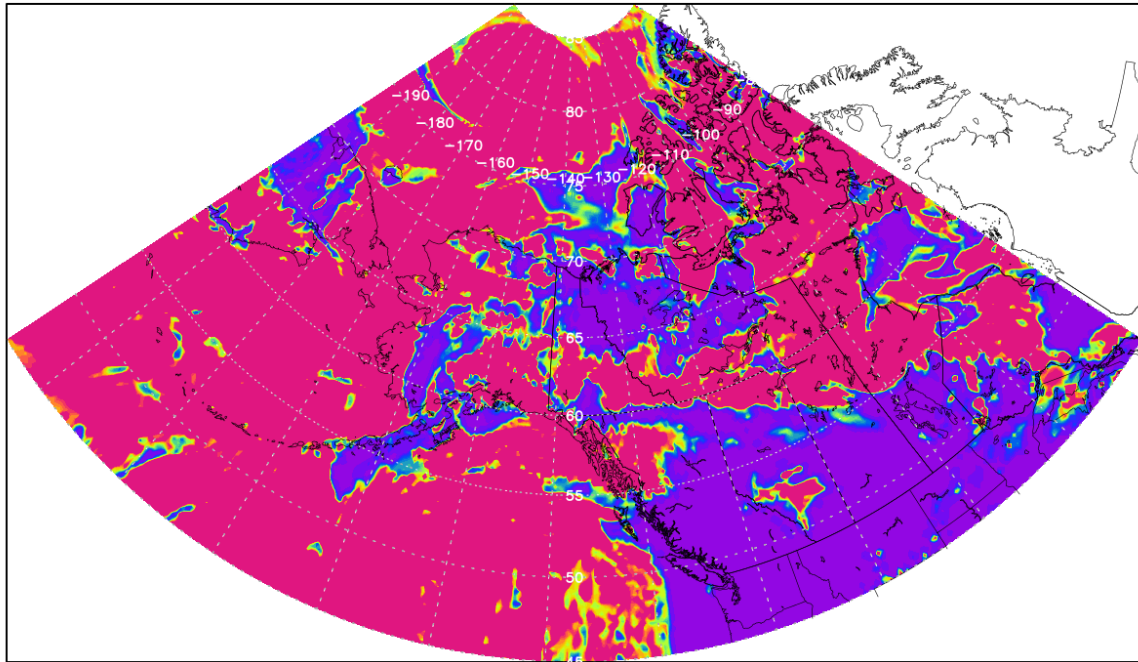
ABOVE\_High\_Cloud\_Optical\_Depth\_IT\_00z29JUL\_VT\_18z01AUG.png

GEOS High Cloud Optical Depth  
Initial time 29 JUL. 00z  
Valid time 01 AUG. 18z



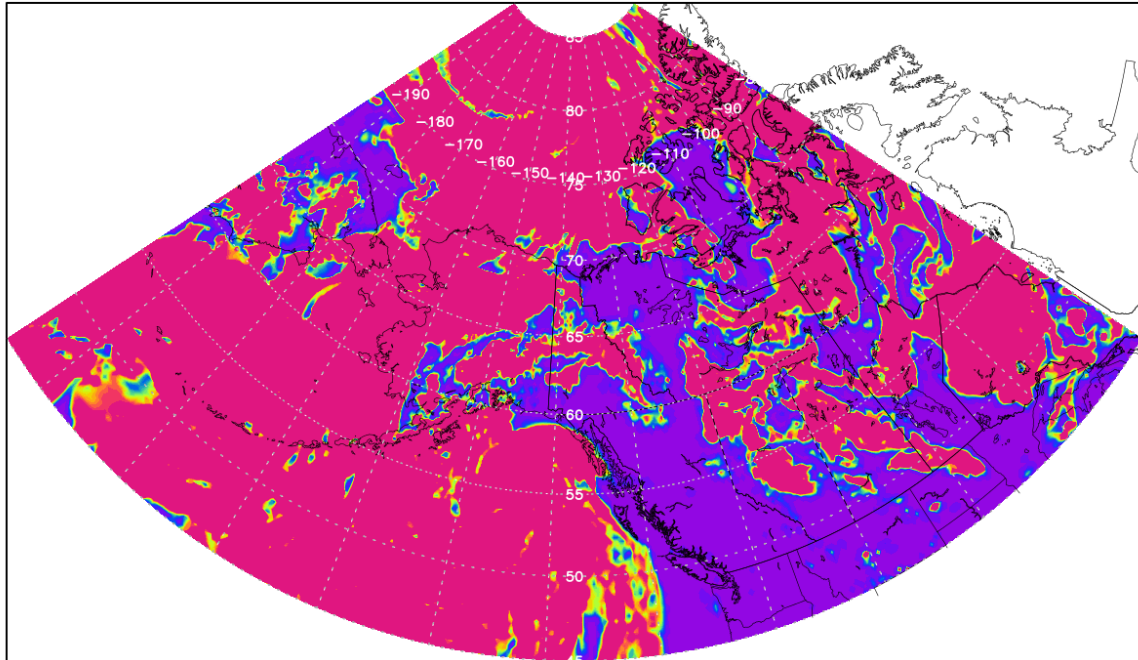
ABOVE\_Low\_Cloud\_Optical\_Depth\_IT\_00z29JUL\_VT\_18z31JUL.png

GEOS Low Cloud Optical Depth  
Initial time 29 JUL. 00z  
Valid time 31 JUL. 18z



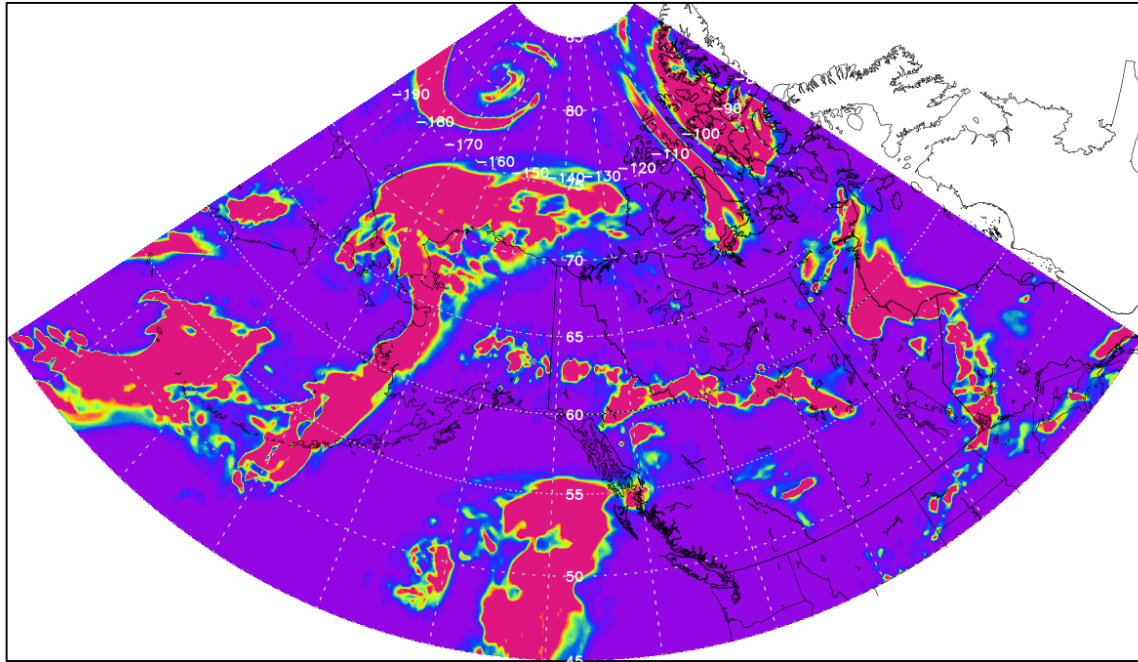
ABOVE\_Low\_Cloud\_Optical\_Depth\_IT\_00z29JUL\_VT\_18z01AUG.png

GEOS Low Cloud Optical Depth  
Initial time 29 JUL. 00z  
Valid time 01 AUG. 18z



ABOVE\_Mid\_Cloud\_Optical\_Depth\_IT\_00z29JUL\_VT\_18z31JUL.png

GEOS Mid Cloud Optical Depth  
Initial time 29 JUL. 00z  
Valid time 31 JUL. 18z



ABOVE\_Mid\_Cloud\_Optical\_Depth\_IT\_00z29JUL\_VT\_18z01AUG.png

GEOS Mid Cloud Optical Depth  
Initial time 29 JUL. 00z  
Valid time 01 AUG. 18z

