

**ABOVE Regional Weather Briefing**

Based on the GMAO GEOS meteorology and aerosol forecast fields  
Model Initialized 00z 31 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 01 August through 2359z 01 August**

Large values of aerosol optical thickness will be found over southern BC and AB, and in the vicinity of Saskatoon and points south. Areas over northern AB and the north-west points of SK will be affected by large values of aerosol optical thickness due to a fire near Fort Smith. A small area over the Yukon Flats, north of PAFA, could see high values of aerosol optical thickness as well. Precipitation continues over most of AK through this day, associated with a frontal system moving eastward. Additional precipitation develops over central YKT and western NWT in the afternoon. Heavy precipitation also develops along central SK and AB, associated with an occluded front over Nunavut. Sporadic low clouds will be present over south-east AK in the morning, with cloud covered areas increasing in the afternoon. Most of BC will be cloud-free, with some middle and high clouds along 55N and with low clouds developing over northern BC in the afternoon. The vicinity of Whitehorse as well as the northern most portions of YKT will also be cloud free. Possible targets could also be found over the northern portions of the NWT, and from the Great Bear Lake and Great Slave Lake to Fort Simpson and Fort Liard, with clouds increasing over western NWT mid-afternoon. Additionally, the immediate vicinity of the Daring Lake will be cloud-free through this period. The AB and SK areas will be mostly cloud covered.

**Day-2 Outlook**

**Valid 1500z 02 August through 2359z 02 August**

The mission areas over AK will continue to be mostly free of smoke/haze through this period, with the exception of a small region over the Yukon Flats. Large values of aerosol optical thickness are predicted to affect southern BC and AB. A fire in the vicinity of Fort Smith will continue to bring smoke/haze to areas south of the Great Slave Lake, and northern AB and SK. No improvement in the weather conditions over most of AK is seen through this forecast, as heavy precipitation continues. Conditions over the YKT and western NWT also deteriorate. The mission targets over AK will be overcast through this forecast. Possible options for flying can be found over the northern YKT and the vicinity of Whitehorse during the early morning.

Areas between Inuvik, Norman Wells, and the Great Bear Lake will see sporadic low clouds in the morning, with middle and high clouds over Norman Wells and the Great Bear Lake. The areas between Great Bear Lake to Fort Simpson and Fort Liard will also see a mixture of middle and high clouds, with some sporadic low clouds mixed in. Areas between the Great Bear Lake and the Great Slave Lake will be mostly clear in the morning. The Daring Lake vicinity appears to become overcast in the afternoon. Most of BC will also be free of clouds through this period, with conditions over northern BC deteriorating in the afternoon. Over AB and SK, weather continues to be cloudy.

### ***Day-3 Outlook***

***Valid 1500z 03 August through 2359z 03 August***

The largest values of aerosol optical thickness could be found over a small area north of PAFA, southern BC and AB, north-eastern AB, south of the Great Slave Lake, and northern SK. A low pressure system that developed at the edge of the front begins to deteriorate weather conditions over south-west AK, bringing heavy precipitation to areas between the Yukon Delta and the Seward Peninsula. Weather conditions over AK do not improve through this period. Short periods of cloud clearing could be possible in the PAFA and PASC vicinity. Sporadic clouds can be found over most of the NWT in the morning, with clouds increasing in the afternoon. The BC area continues to be cloud-free, while the YKT, AB, and SK become overcast by mid-morning.

--

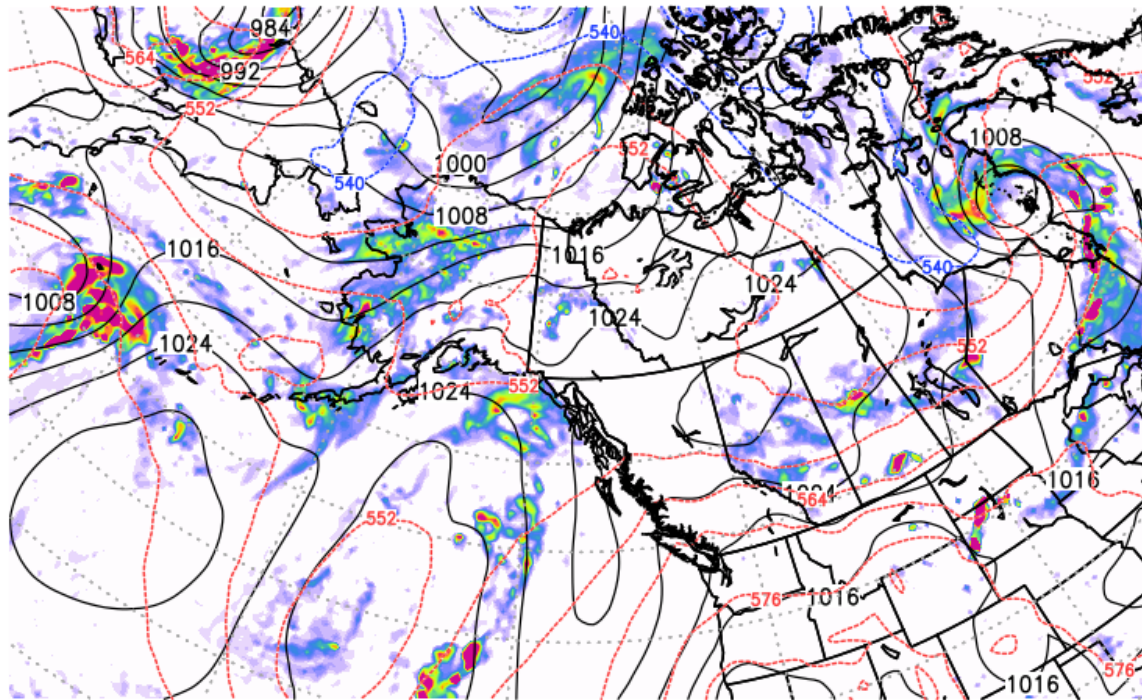
Marangelly Cordero-Fuentes, Ph. D.  
Senior Research Scientist/Task Lead  
Science Systems and Applications, Inc.  
NASA Global Modeling and Assimilation Office  
Code 610.1, Goddard Space Flight Center, Greenbelt, MD 20771  
Bldg. 33, Rm. B-227A

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

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

NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-07-31

Precip [mm/day], SLP [mb] and 1000–500mb Thickness [dam]

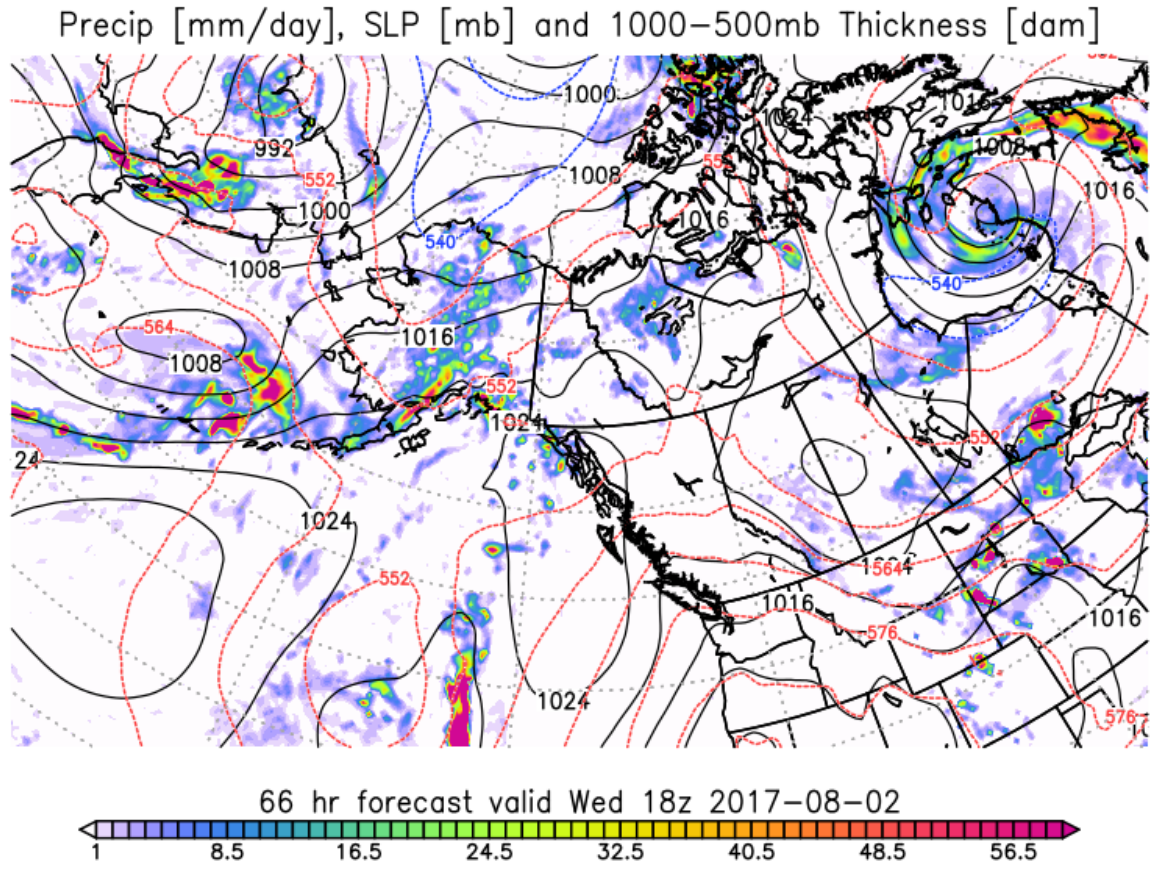


42 hr forecast valid Tue 18z 2017-08-01



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

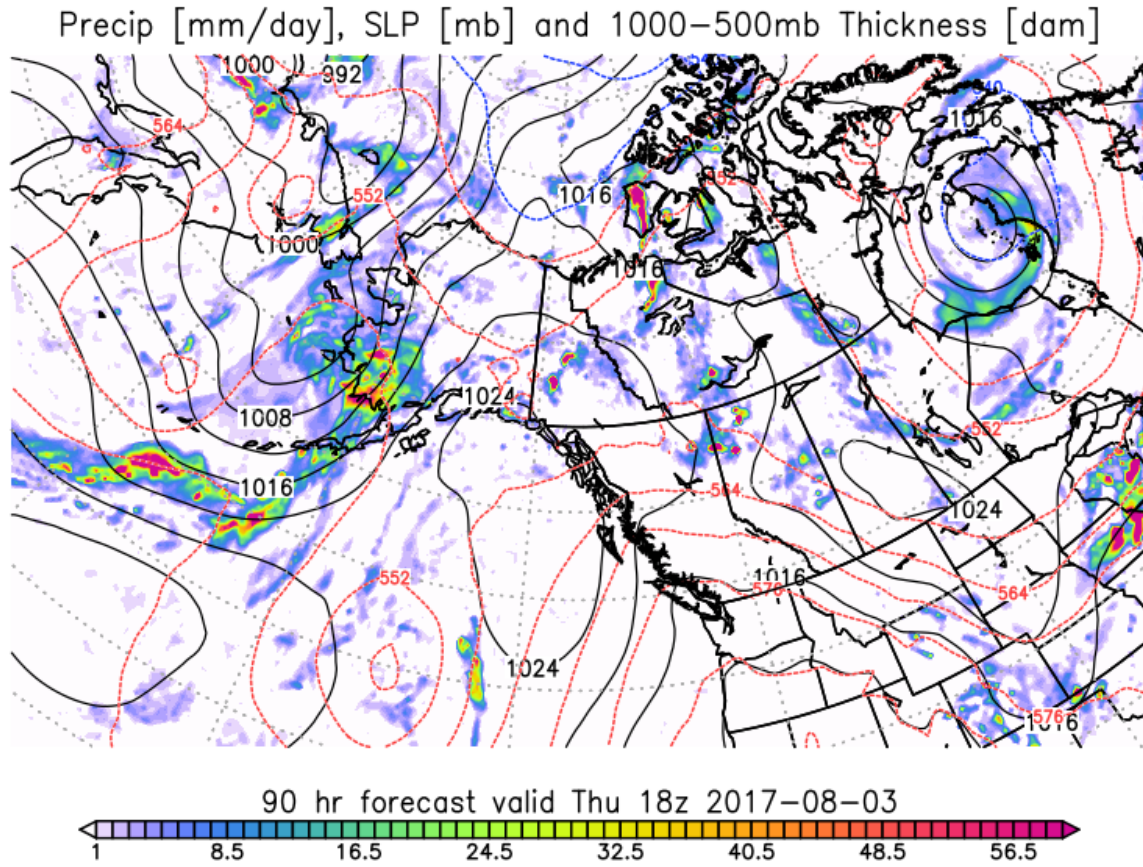
NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-07-31





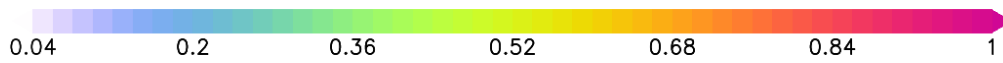
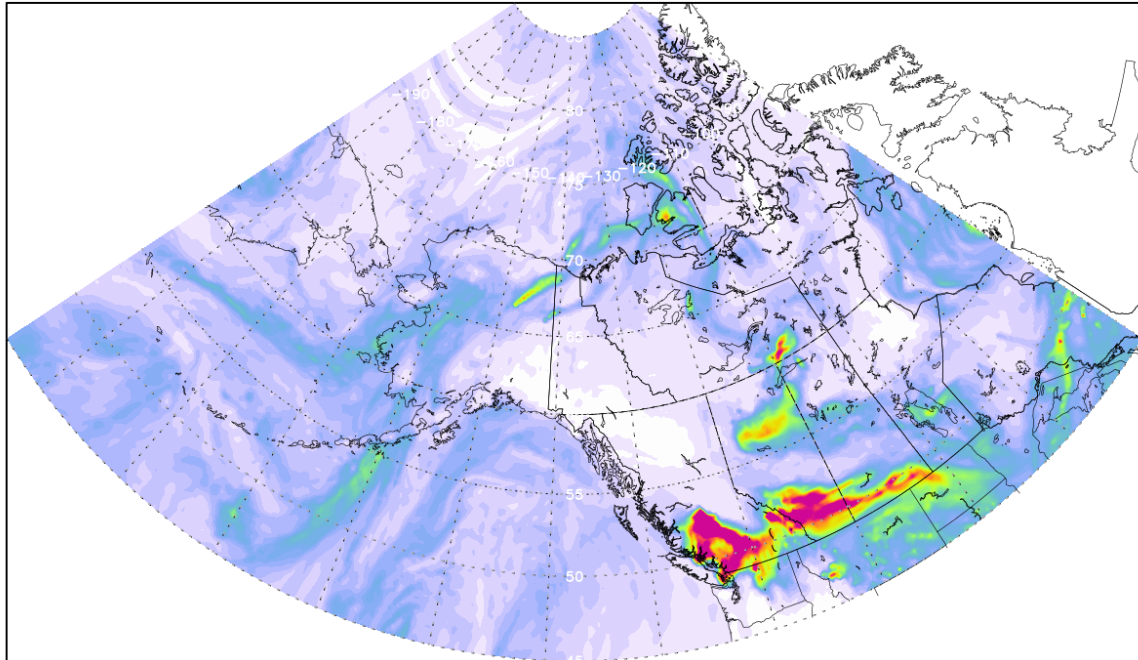
fp.8prec.sfc.090.above\_lg.png

NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-07-31



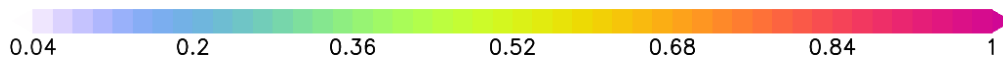
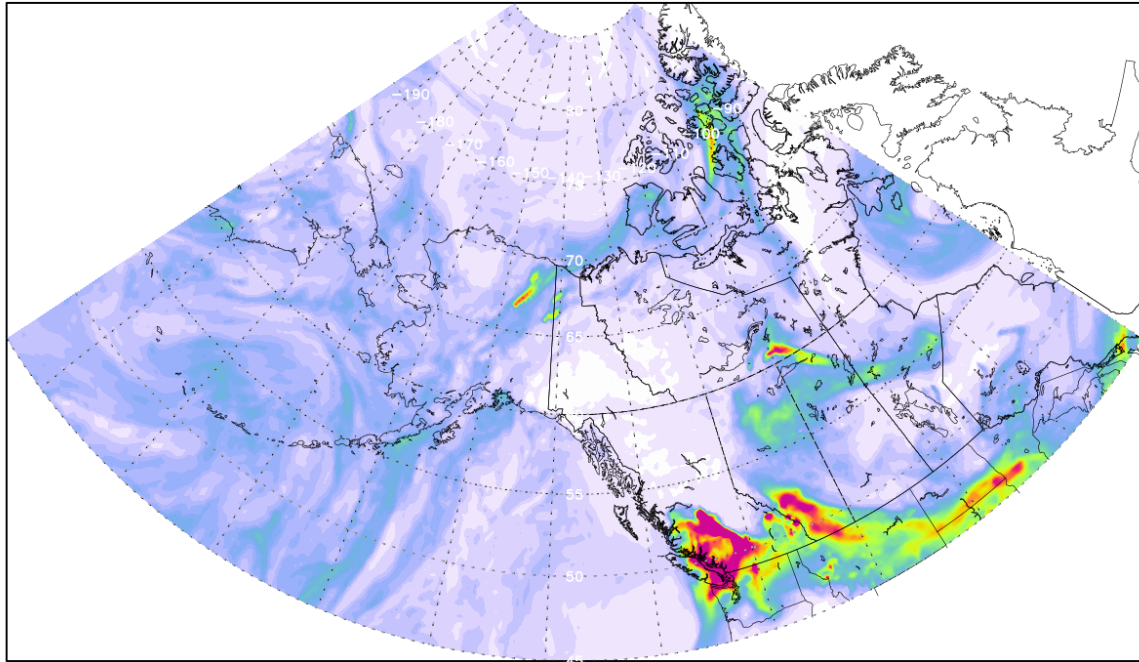
ABOVE\_Total\_AOD\_IT\_00z31JUL\_VT\_21z01AUG.png

GEOS Aerosol Optical Depth  
Initial time 31 JUL. 00z  
Valid time 01 AUG. 21z



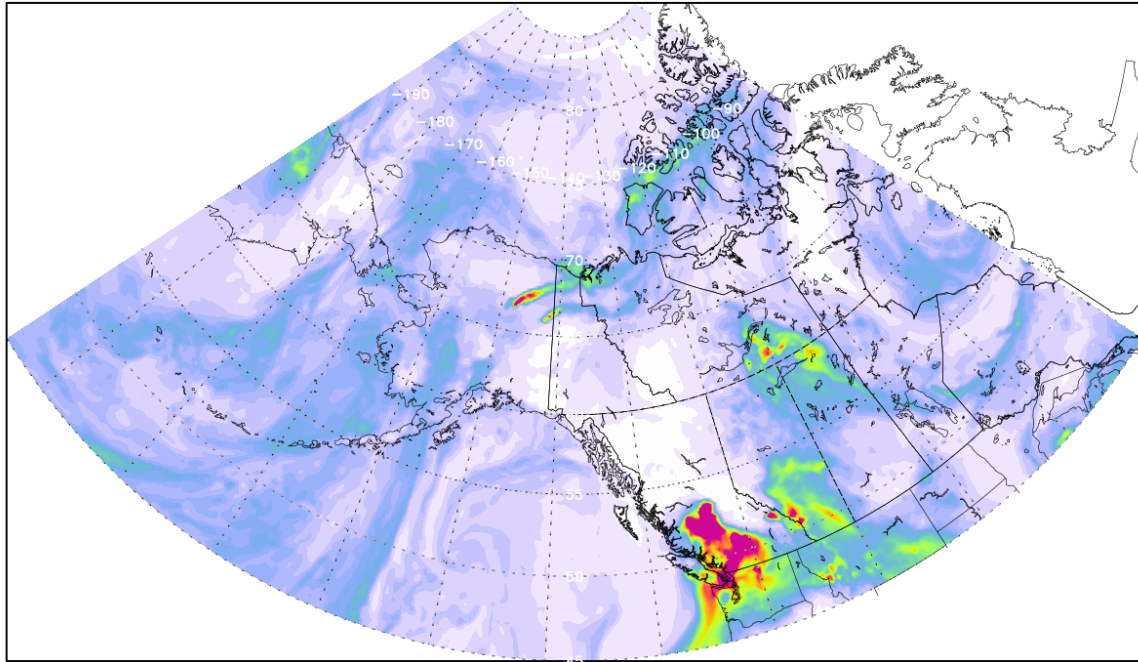
ABOVE\_Total\_AOD\_IT\_00z31JUL\_VT\_21z02AUG.png

GEOS Aerosol Optical Depth  
Initial time 31 JUL. 00z  
Valid time 02 AUG. 21z



ABOVE\_Total\_AOD\_IT\_00z31JUL\_VT\_21z03AUG.png

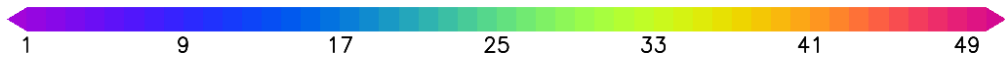
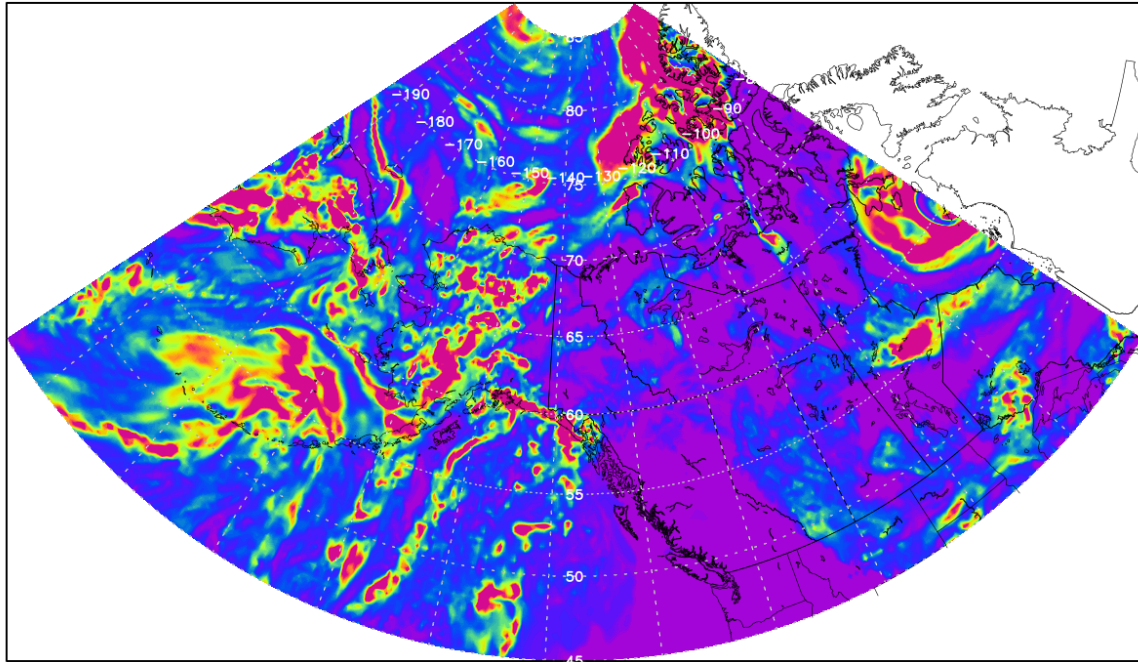
GEOS Aerosol Optical Depth  
Initial time 31 JUL. 00z  
Valid time 03 AUG. 21z





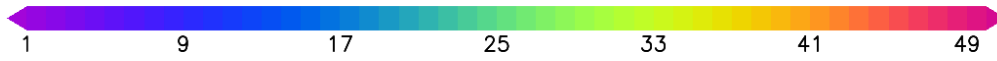
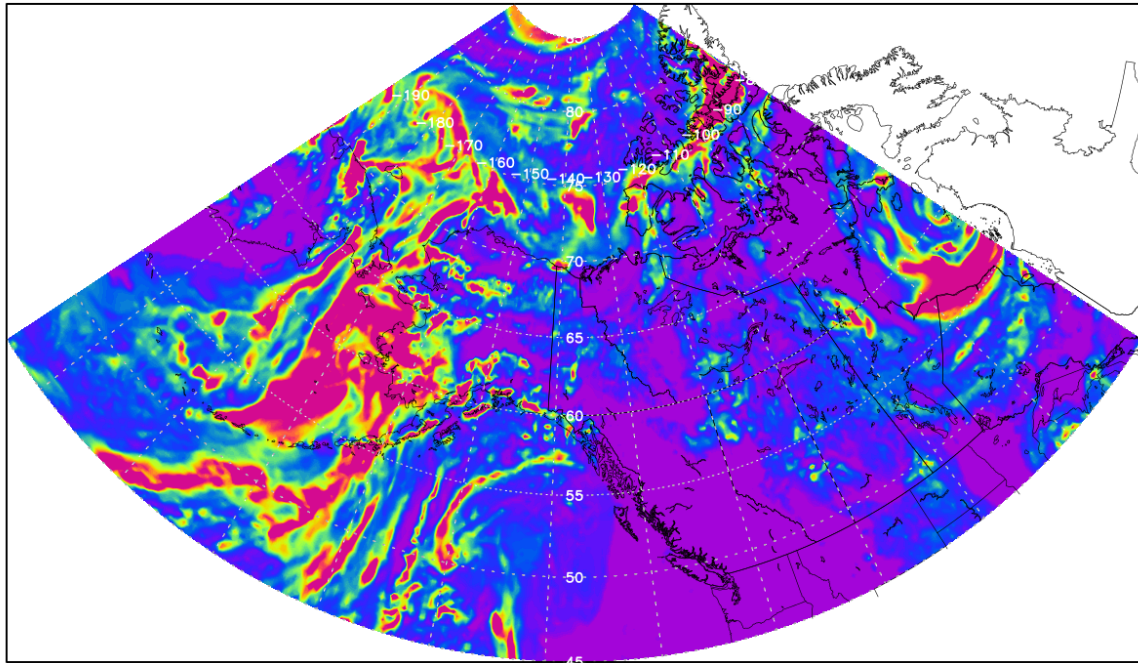
ABOVE\_Total\_Cloud\_IT\_00z31JUL\_VT\_18z02AUG.png

GEOS Total Cloud Optical Depth  
Initial time 31 JUL. 00z  
Valid time 02 AUG. 18z



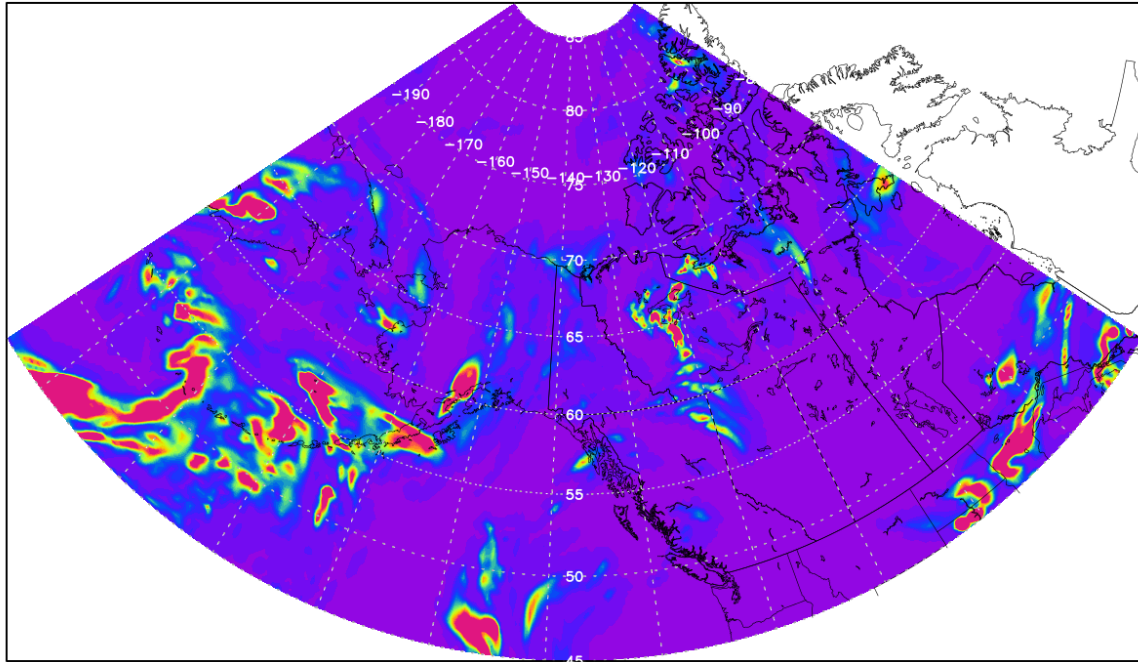
ABOVE\_Total\_Cloud\_IT\_00z31JUL\_VT\_18z03AUG.png

GEOS Total Cloud Optical Depth  
Initial time 31 JUL. 00z  
Valid time 03 AUG. 18z



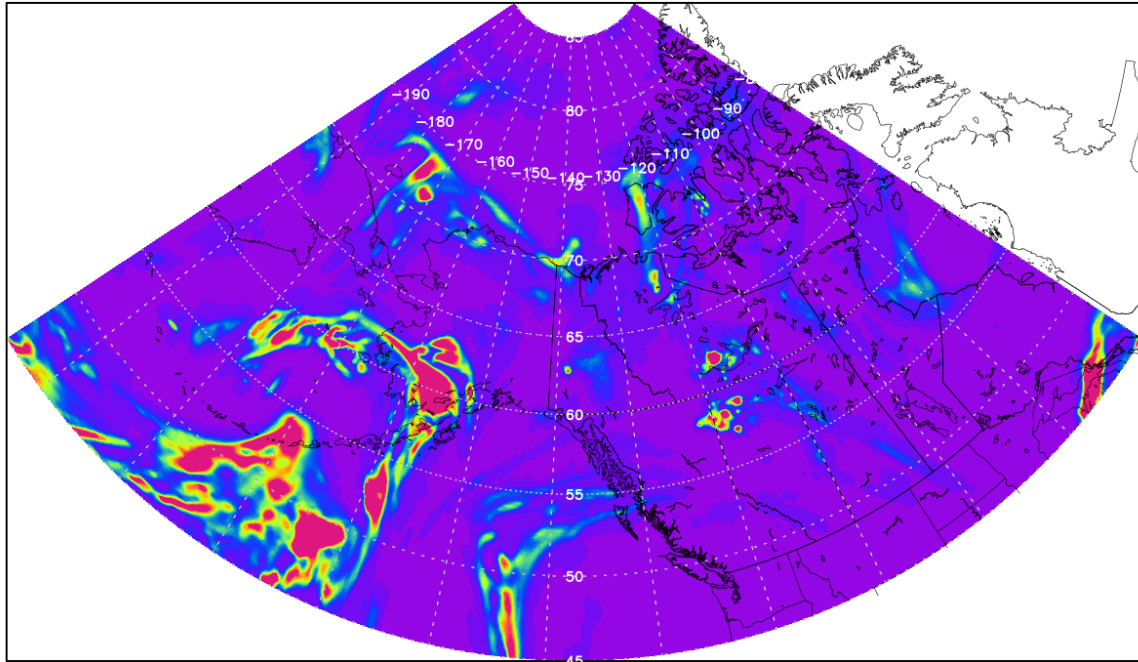
ABOVE\_High\_Cloud\_Optical\_Depth\_IT\_00z31JUL\_VT\_18z02AUG.png

GEOS High Cloud Optical Depth  
Initial time 31 JUL. 00z  
Valid time 02 AUG. 18z



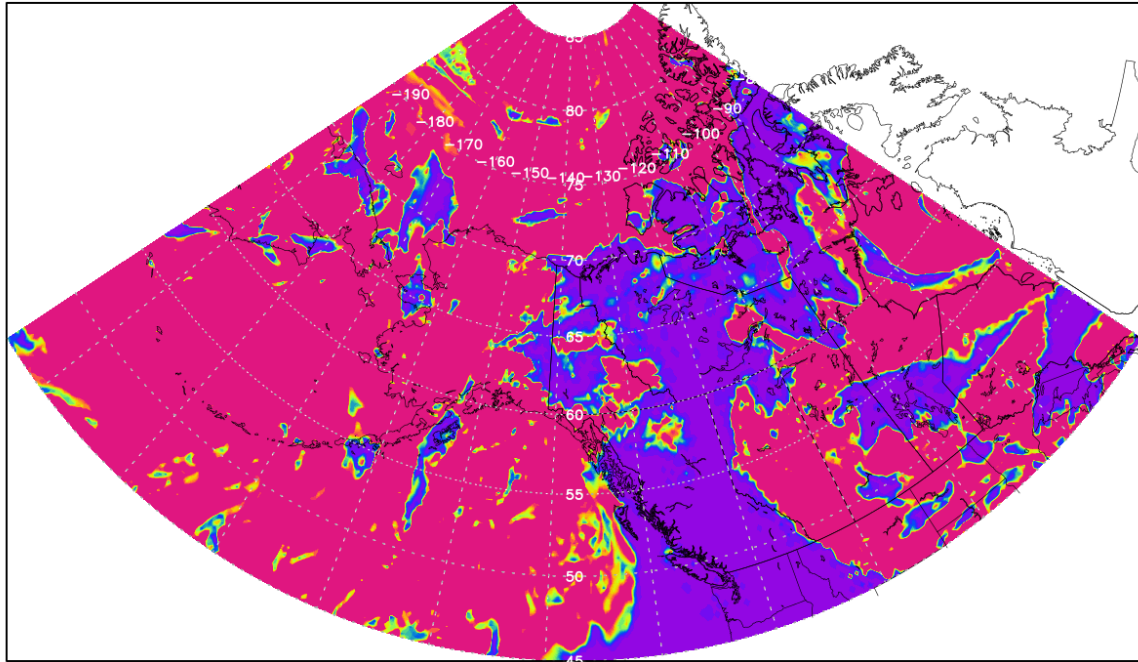
ABOVE\_High\_Cloud\_Optical\_Depth\_IT\_00z31JUL\_VT\_18z03AUG.png

GEOS High Cloud Optical Depth  
Initial time 31 JUL. 00z  
Valid time 03 AUG. 18z



ABOVE\_Low\_Cloud\_Optical\_Depth\_IT\_00z31JUL\_VT\_18z02AUG.png

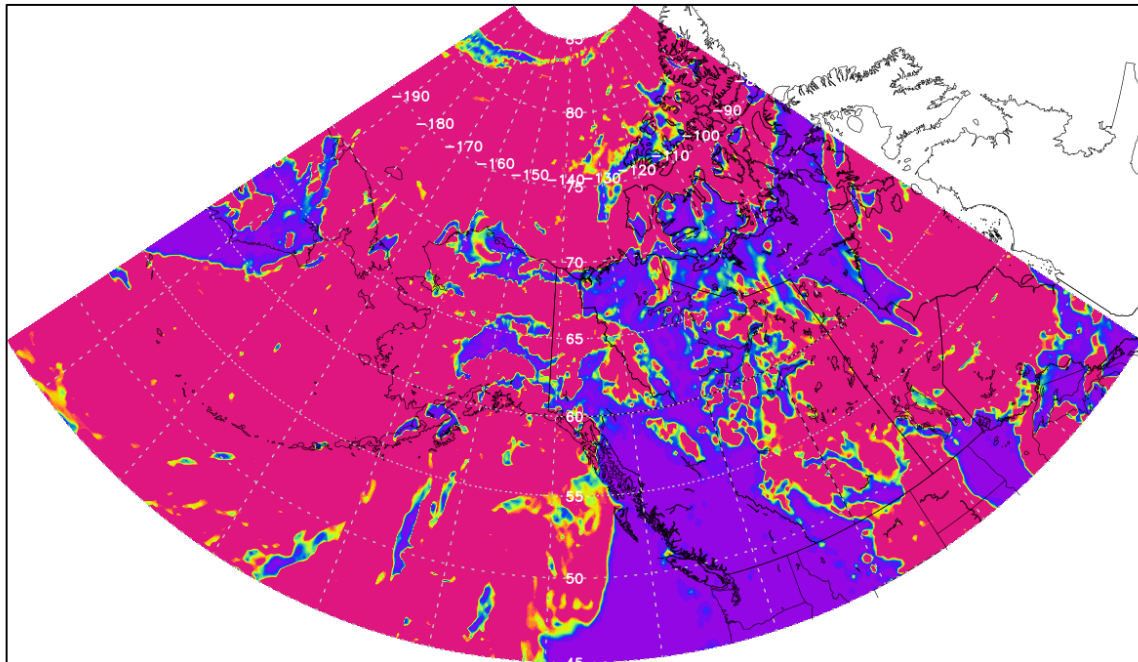
GEOS Low Cloud Optical Depth  
Initial time 31 JUL. 00z  
Valid time 02 AUG. 18z





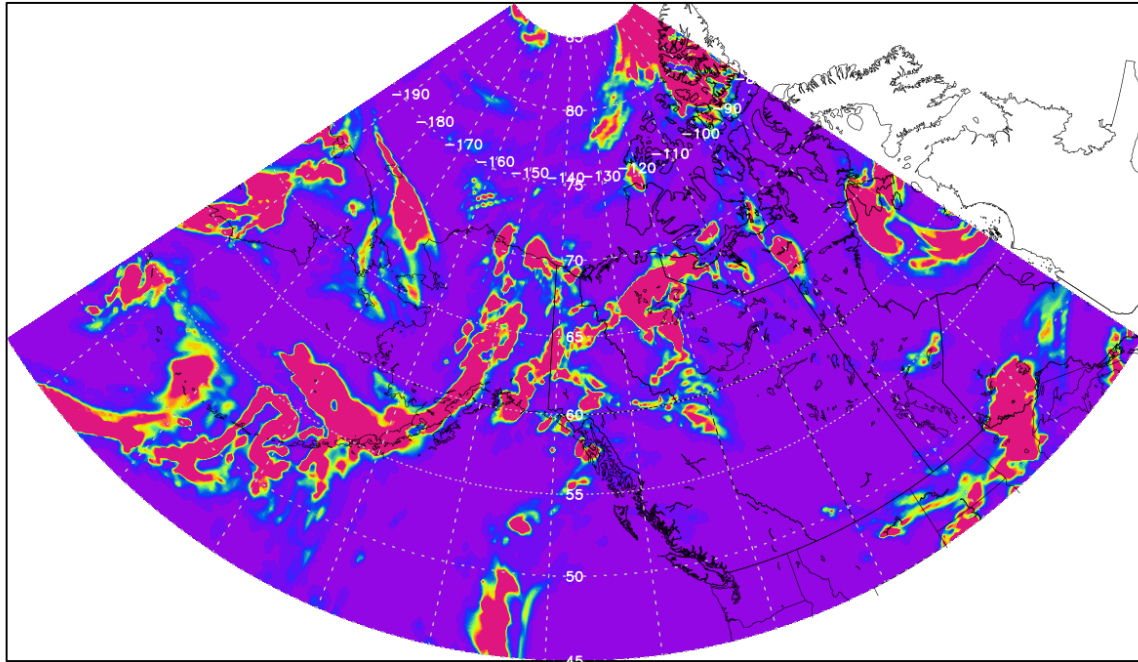
ABOVE\_Low\_Cloud\_Optical\_Depth\_IT\_00z31JUL\_VT\_18z03AUG.png

GEOS Low Cloud Optical Depth  
Initial time 31 JUL. 00z  
Valid time 03 AUG. 18z



ABOVE\_Mid\_Cloud\_Optical\_Depth\_IT\_00z31JUL\_VT\_18z02AUG.png

GEOS Mid Cloud Optical Depth  
Initial time 31 JUL. 00z  
Valid time 02 AUG. 18z



ABOVE\_Mid\_Cloud\_Optical\_Depth\_IT\_00z31JUL\_VT\_18z03AUG.png

GEOS Mid Cloud Optical Depth  
Initial time 31 JUL. 00z  
Valid time 03 AUG. 18z

