

ABOVE Regional Weather Briefing

Based on the GMAO GEOS meteorology and aerosol forecast fields
Model Initialized 00z 15 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 Forecast**Valid 1500z 16 July through 2359z 16 July**

Several fires continue to affect much of the ABoVE region under varying thickness of haze/smoke. The largest aerosol thickness values are located near northern Yukon Flats through the Richardson Mountains, in southern half of BC and northern half of AB. A frontal system with clouds and rain continues to make its way south through the NWT, bringing clouds and precipitation from the Great Bear Lake to Yellowknife during this period. Increasing clouds and precipitation associated with this front will affect weather conditions over PAFA. The forecast continues to call for a very cloudy and rainy day for most of AK. The only clear sky opportunity to fly through this period is around the northern two thirds of NWT, and along PASC by the end of the period, thanks to a high pressure ridge building up along this area. Southern portions of SK and AB look cloud free but showers and thunderstorms are expected in BC, and the northern half of AB and SKT.

Day-2 Outlook**Valid 1500z 17 July through 2359z 17 July**

The largest values of aerosol optical thickness are seen near Old Crow up to the Mackenzie Bay, near Inuvik, and southern half of BC. Smaller fires appear to begin near Tanana, AK and Fort Good Hope. Precipitation along western AK and points south of PAFA continue through this period, associated with a low pressure system moving east and the frontal system that moved southward through the NWT. Clean cloud conditions will be present from Inuvik to the Great Bear Lakes and down to Fort Simpson. A small portion of the Yukon Flats will also be clear. Southern portions of BC, AB, and SK will be cloud clear, as well as, portions of the central east YKT, up to the Mackenzie River. Flights along the Mackenzie River to Norman Wells should be ok. Areas between Great Bear Lakes and Yellowknife will contain thick low clouds through this period.

Day-3 Outlook**Valid 1500z 18 July through 2359z 18 July**

Areas with large values of aerosol optical thickness are reduced over the AK area. While, regions north of Old Crow, from Inuvik to Great Bear Lake to Fort Simpson, and along southern

half of BC show increasing amounts of aerosol optical thickness in their vicinity. An occluded front continues to move over western AK through this period, bringing heavy rain and thunderstorms from the Seward Peninsula down to the Alaska Peninsula. Precipitation also develops over southern YKT and western NWT through this period. Portions along eastern AK, including PAFA and the Yukon Flats, could see sporadic clear cloud conditions early in the period. Clearing could be seen between Yellowknife and Normal Wells. Portions north of the Great Bear Lake will be cloud free as well as most of BC and southern AB. Conditions along the YKT, northern AB, and SK deteriorate.

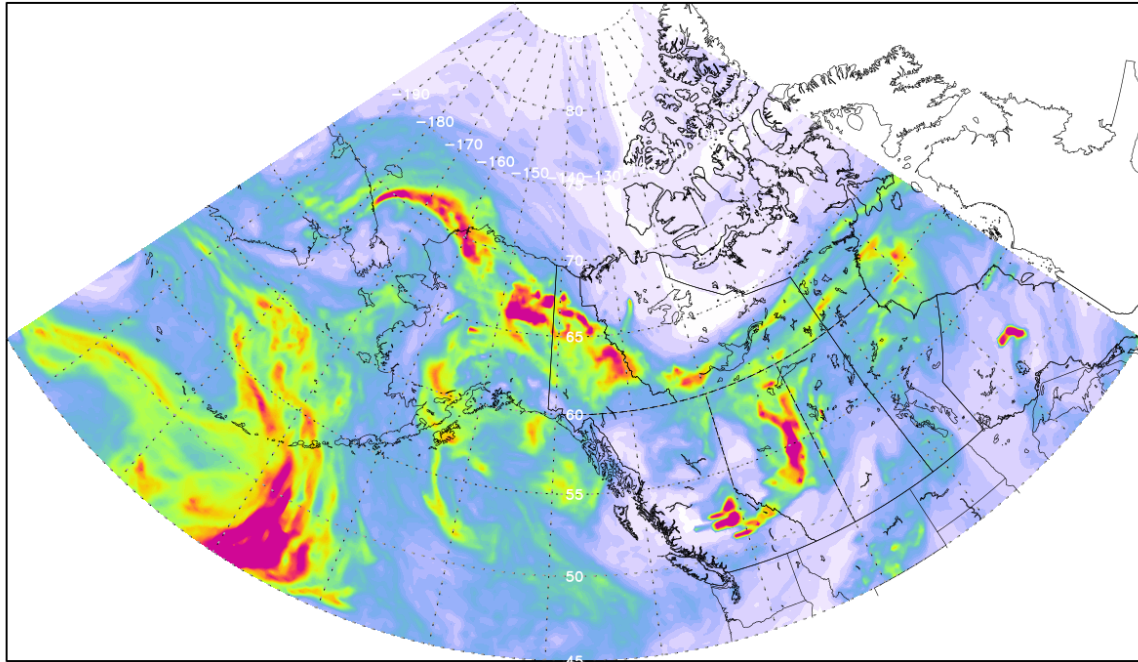
--

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

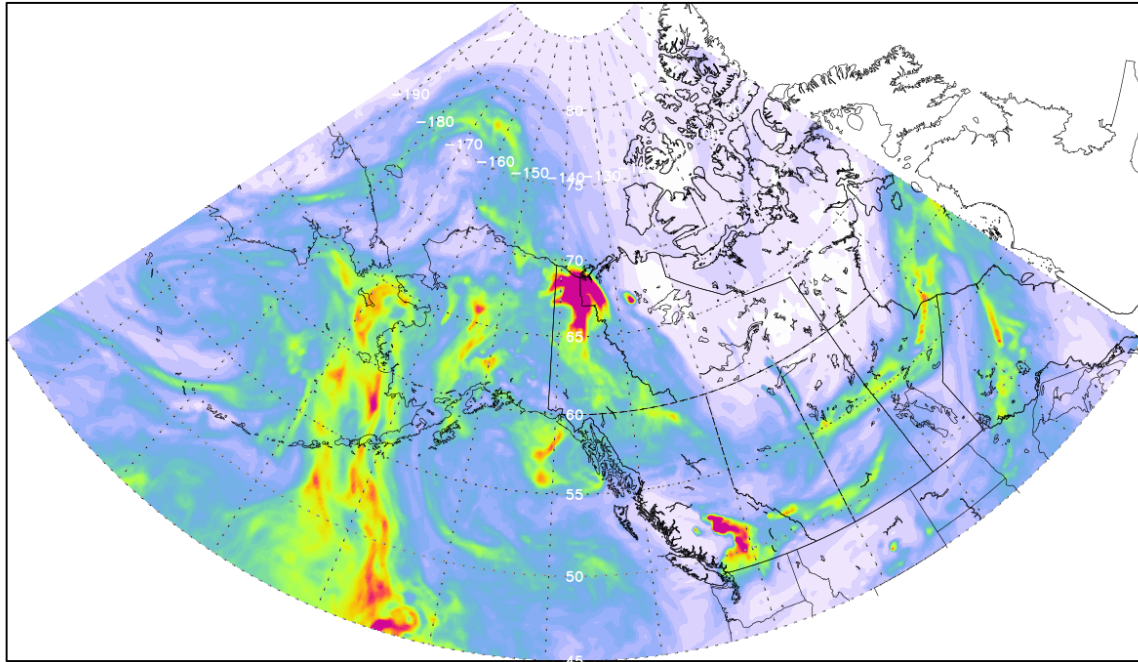
ABOVE_Total_AOD_IT_00z15JUL_VT_21z16JUL.png

GEOS Aerosol Optical Depth
Initial time 15 JUL. 00z
Valid time 16 JUL. 21z



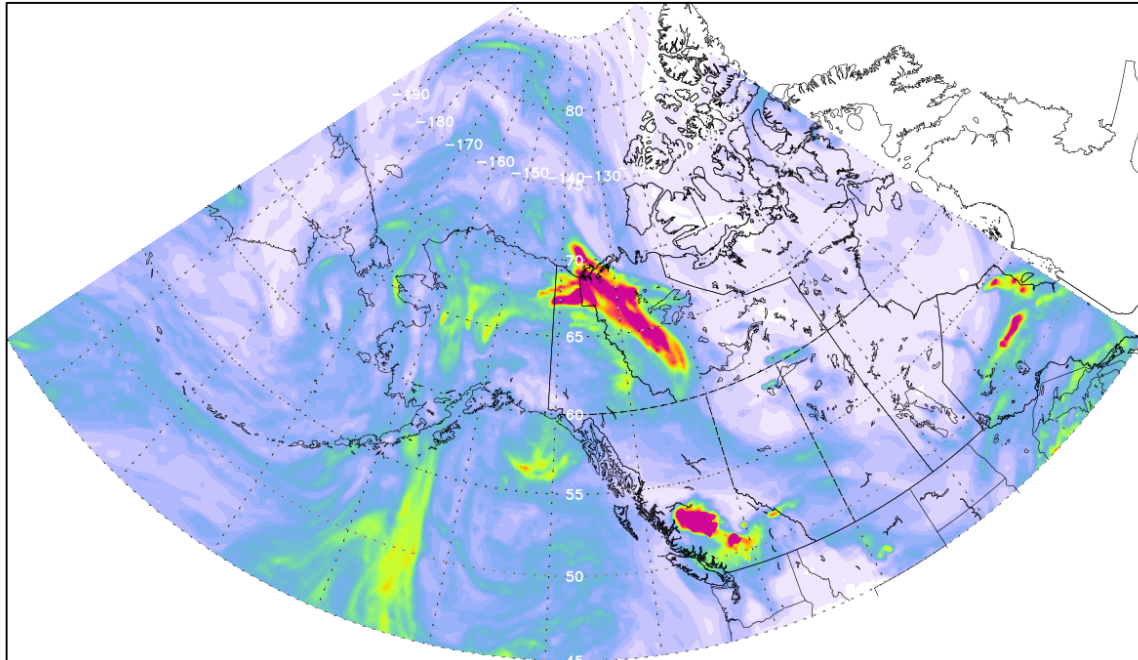
ABOVE_Total_AOD_IT_00z15JUL_VT_21z17JUL.png

GEOS Aerosol Optical Depth
Initial time 15 JUL. 00z
Valid time 17 JUL. 21z



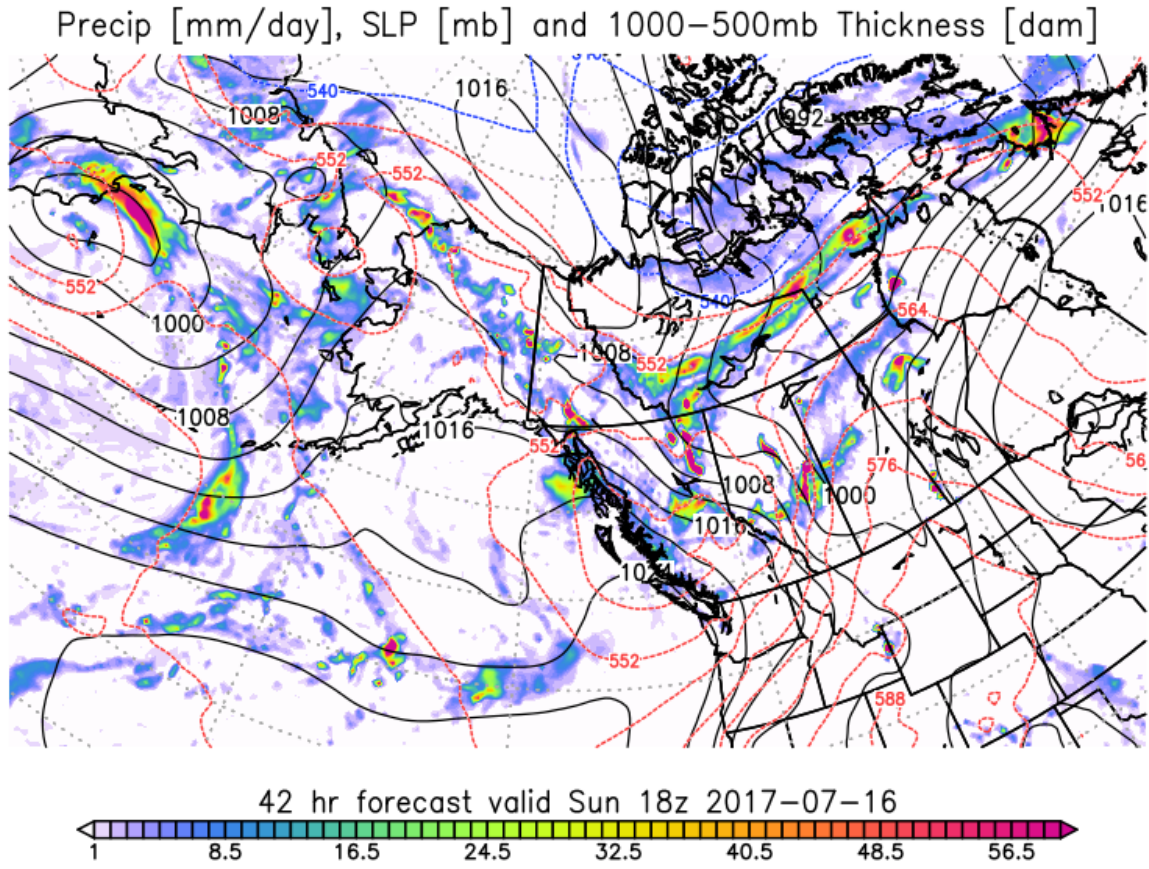
ABOVE_Total_AOD_IT_00z15JUL_VT_21z18JUL.png

GEOS Aerosol Optical Depth
Initial time 15 JUL. 00z
Valid time 18 JUL. 21z



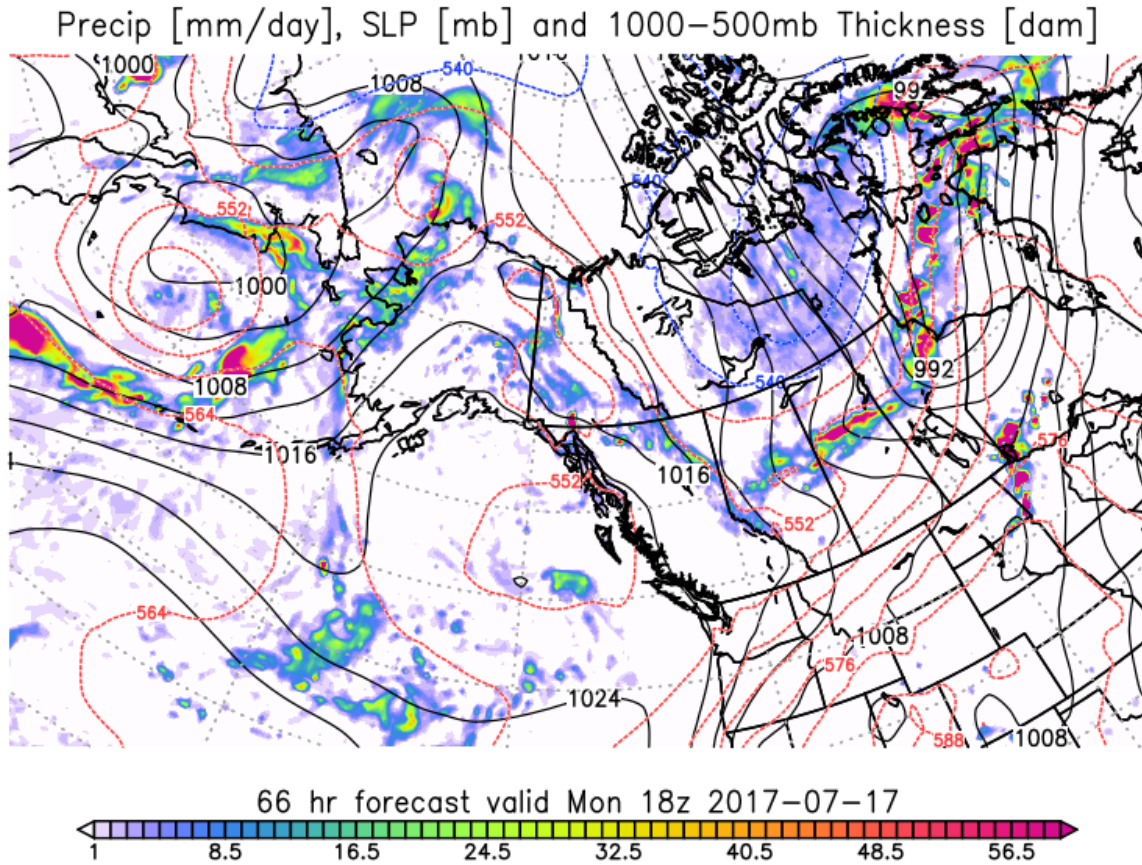
fp.8prec.sfc.042.above_lg.png

NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-07-15



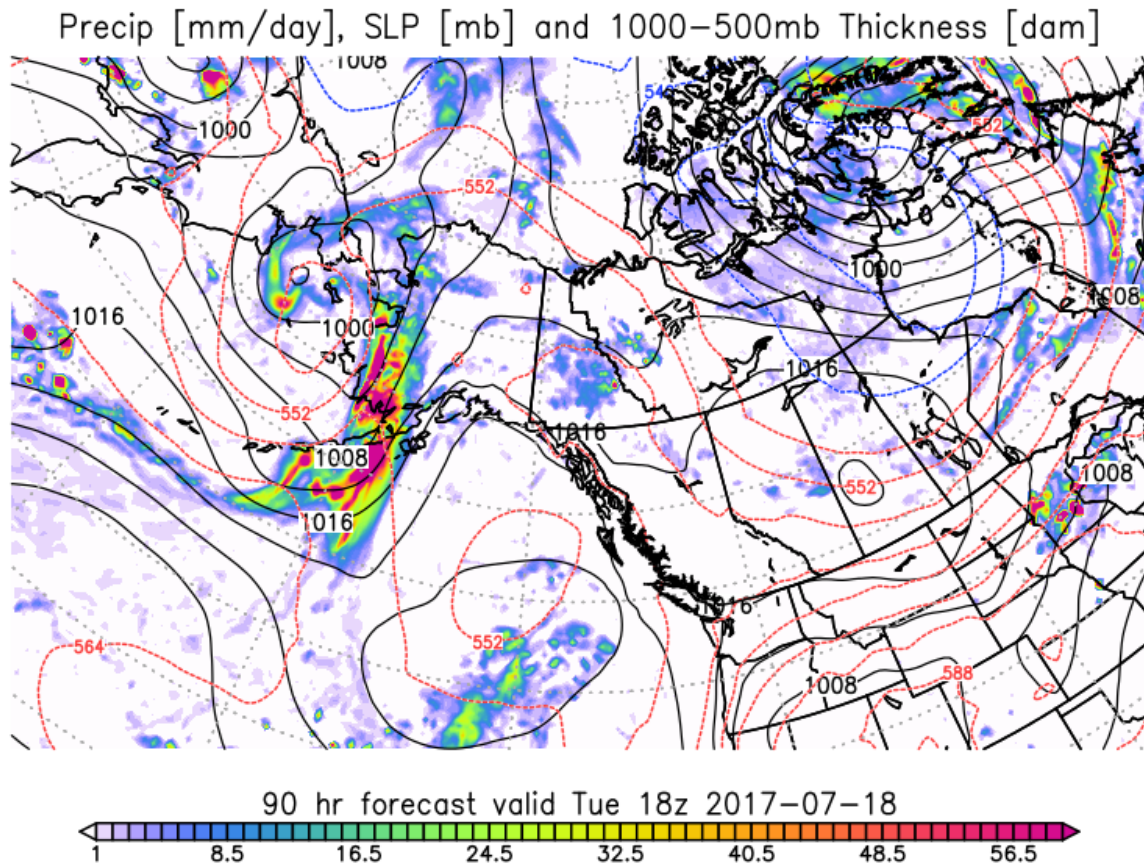
fp.8prec.sfc.066.above_lg.png

NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-07-15



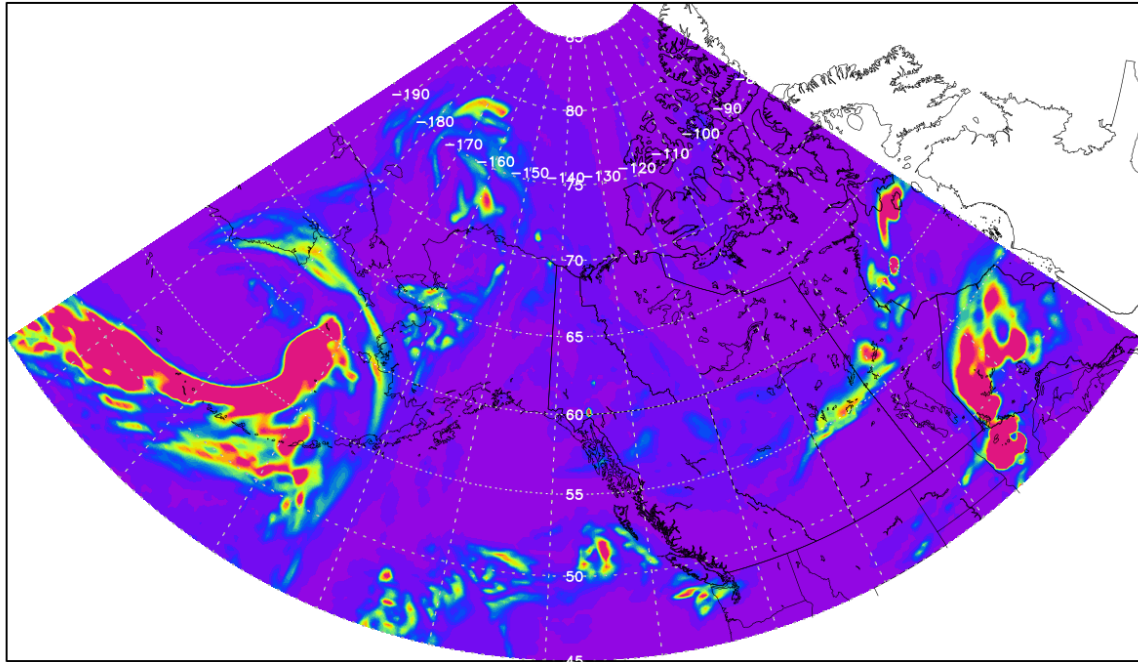
fp.8precis.sfc.090.above_lg.png

NASA/GMAO - GEOS-5 Forecast Initialized on 00z 2017-07-15



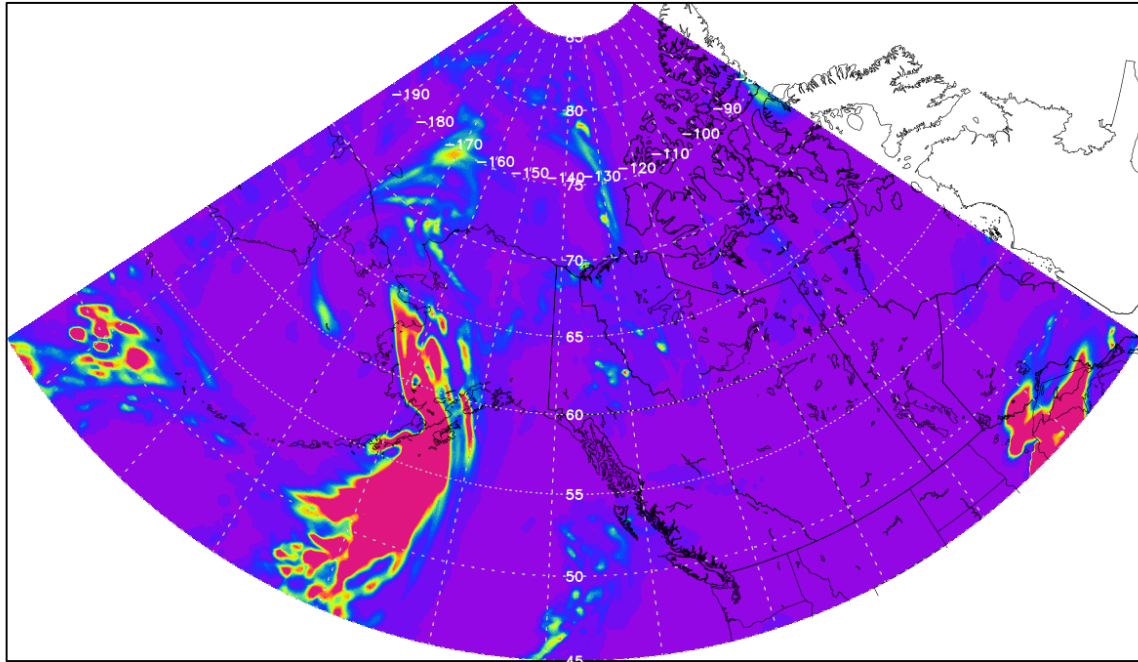
ABOVE_High_Cloud_Optical_Depth_IT_00z15JUL_VT_18z17JUL.png

GEOS High Cloud Optical Depth
Initial time 15 JUL. 00z
Valid time 17 JUL. 18z



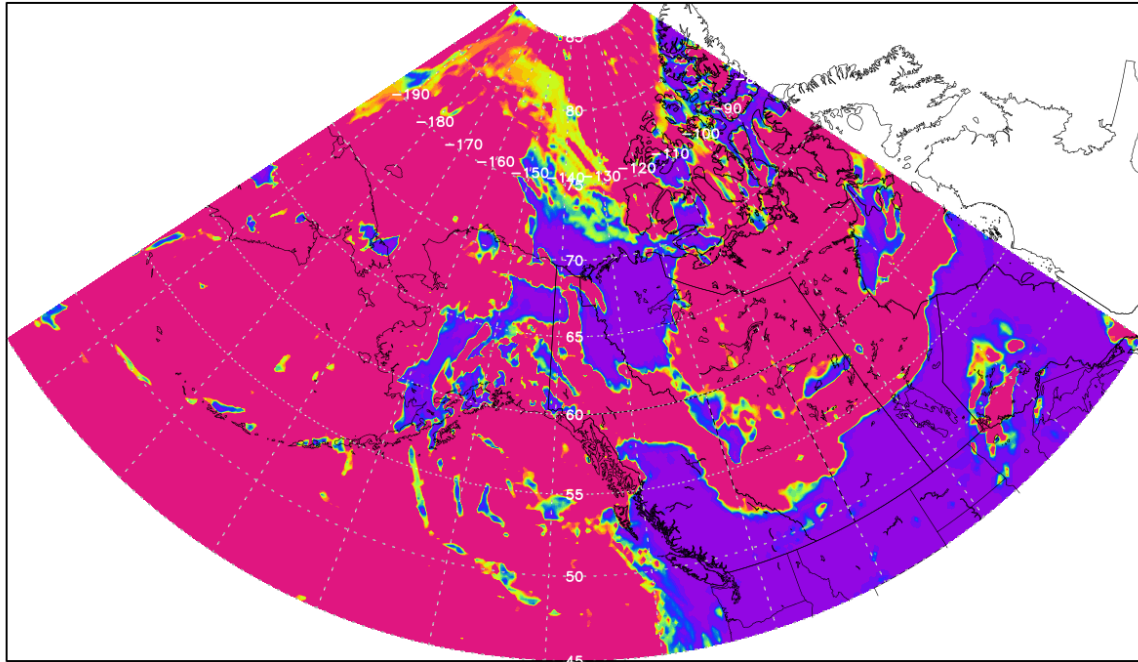
ABOVE_High_Cloud_Optical_Depth_IT_00z15JUL_VT_18z18JUL.png

GEOS High Cloud Optical Depth
Initial time 15 JUL. 00z
Valid time 18 JUL. 18z



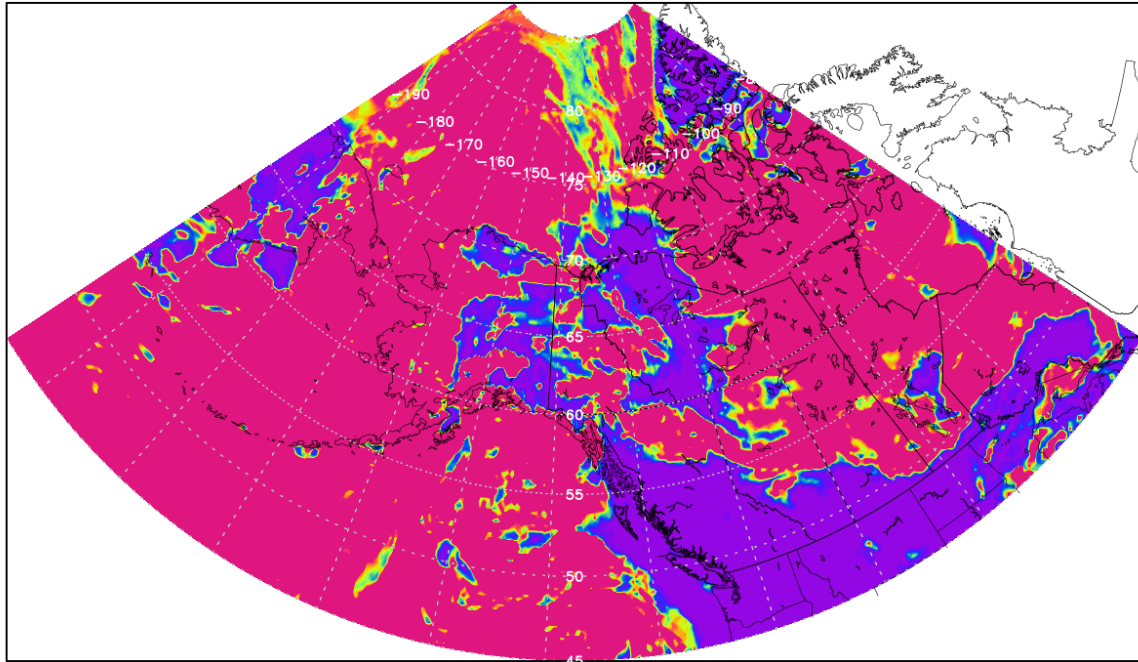
ABOVE_Low_Cloud_Optical_Depth_IT_00z15JUL_VT_18z17JUL.png

GEOS Low Cloud Optical Depth
Initial time 15 JUL. 00z
Valid time 17 JUL. 18z



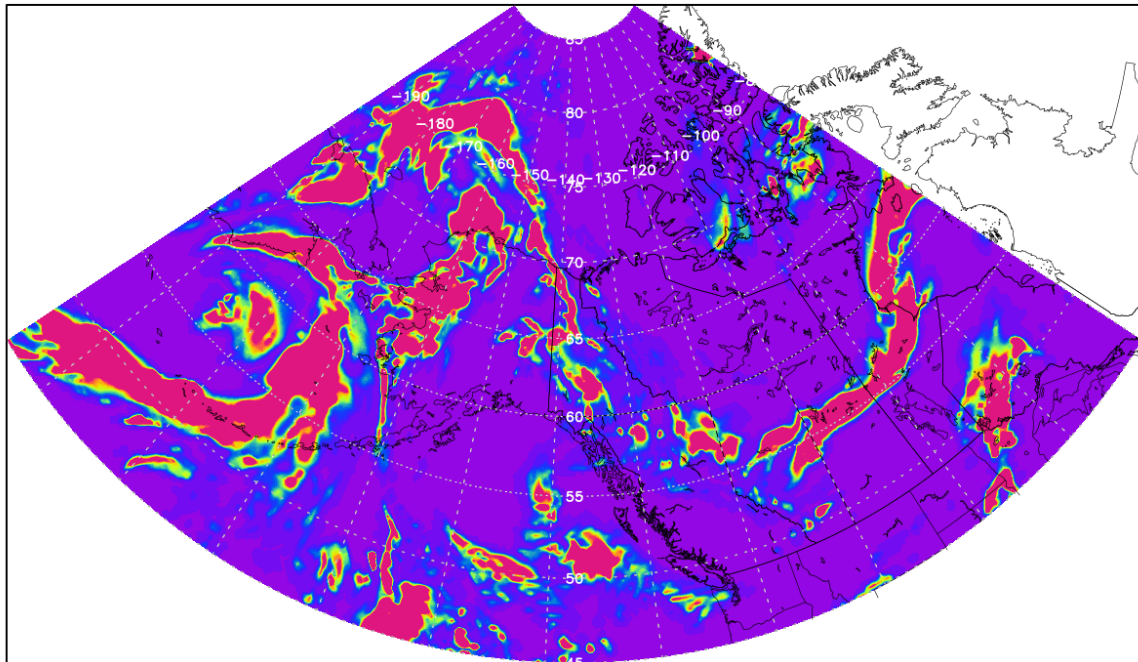
ABOVE_Low_Cloud_Optical_Depth_IT_00z15JUL_VT_18z18JUL.png

GEOS Low Cloud Optical Depth
Initial time 15 JUL. 00z
Valid time 18 JUL. 18z



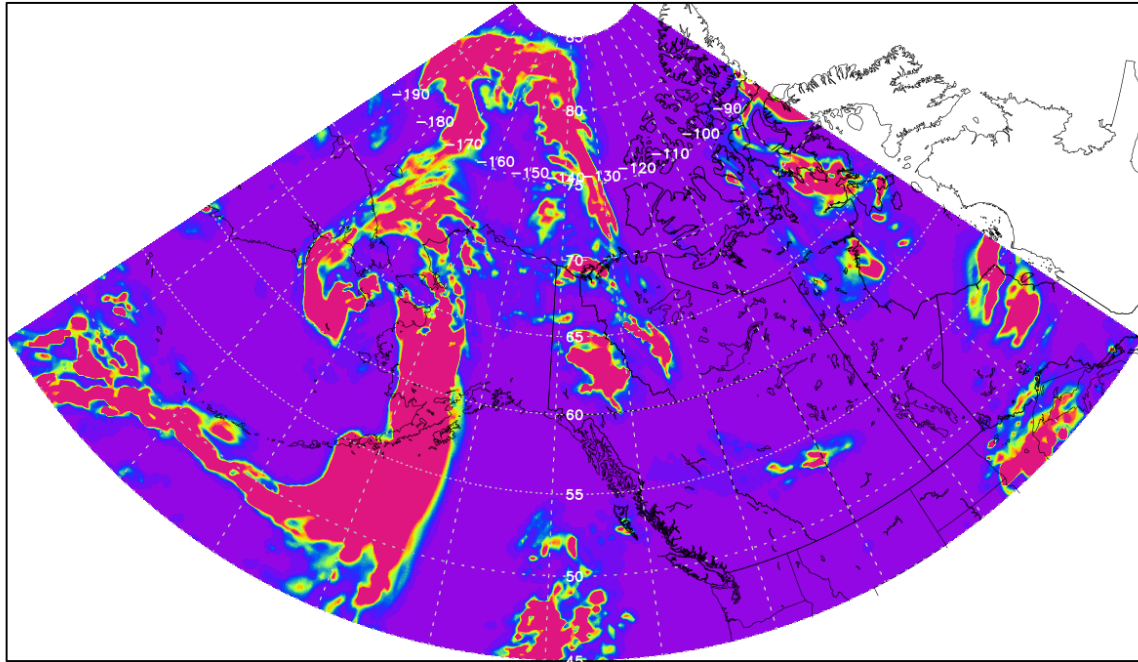
ABOVE_Mid_Cloud_Optical_Depth_IT_00z15JUL_VT_18z17JUL.png

GEOS Mid Cloud Optical Depth
Initial time 15 JUL. 00z
Valid time 17 JUL. 18z



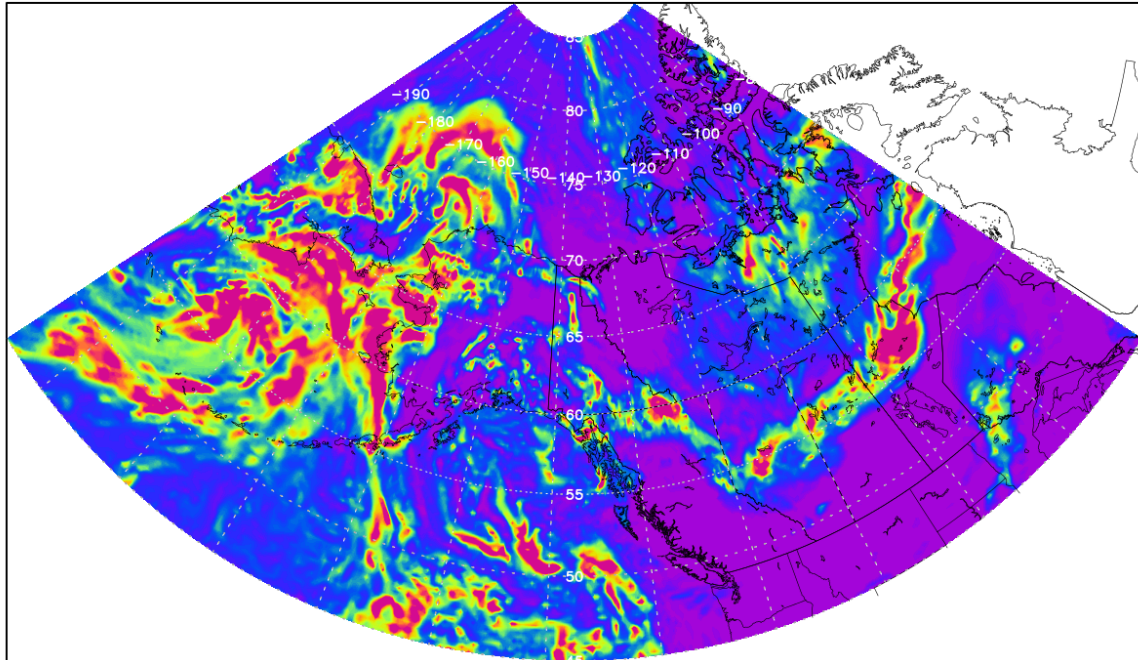
ABOVE_Mid_Cloud_Optical_Depth_IT_00z15JUL_VT_18z18JUL.png

GEOS Mid Cloud Optical Depth
Initial time 15 JUL. 00z
Valid time 18 JUL. 18z



ABOVE_Total_Cloud_IT_00z15JUL_VT_18z17JUL.png

GEOS Total Cloud Optical Depth
Initial time 15 JUL. 00z
Valid time 17 JUL. 18z



ABOVE_Total_Cloud_IT_00z15JUL_VT_18z18JUL.png

GEOS Total Cloud Optical Depth
Initial time 15 JUL. 00z
Valid time 18 JUL. 18z

