

ABOVE Regional Weather Briefing

Based on the GMAO GEOS meteorology and aerosol forecast fields
Model Initialized 00z 27 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 28 July through 2359z 28 July

The largest values of aerosol optical thickness continue to affect an area in southern BC, expanding to southern AB. The vicinity of Kokrines, AK will also continue to be affected by a small fire. Areas between the Great Bear Lake and the Great Slave Lake with large aerosol optical thickness will become clear through the day; this aerosol contamination will move to the east and south of the Great Slave Lake. Smoke/Haze is forecasted to contaminate most of SK, with larger amounts north of 55N. A frontal system, making its way south-east, brings heavy precipitation along western AK through the day. Heavy precipitation is also forecasted to affect southern AK and NWT, associated with a low pressure system moving east over Nunavut. Weather conditions over central and northern NWT, and northern YKT improve as a high pressure moves into these regions. Flights over the Yukon Flats, and between PASC and PABR could be possible through most of the day. Another opportunity for clear sky conditions is over northern YKT and NWT. The southern portions of SK will see clear cloud conditions through the day, with some sporadic clearing over the northern portions in the morning. Over AB, sporadic cloud-clear skies are seen in the morning through the area, with an increase in low clouds over the northern regions in the afternoon. Southern BC will also see some sporadic clouds through this forecast.

Day-2 Outlook

Valid 1500z 29 July through 2359z 29 July

Large values of aerosol optical thickness will be found over central BC and central AB. Southern SK will see small values of aerosol optical thickness through the day. Near Fort Smith, a small fire continues to burn, affecting its vicinity and the most northern portions of SK. Smoke/hazy conditions continue in the vicinity of Kokrines, AK. Precipitation over western and interior AK develops through the day, deteriorating weather conditions in the region. Heavy precipitation begins to affect western BC early on, as a low pressure system over the Pacific Ocean moves eastward. Additional precipitation could be possible over the northern most portions of SK, associated with a low pressure system moving over Nunavut. Unfortunately, most of AK will be

under cloudy conditions through this forecast. The areas between PASC and PABR could be possible targets to fly, with the low cloud boundary approaching this region later in the afternoon. Areas in the northern most points of the YKT (mainly north of 67N) will see some clear skies. Clear sky conditions could be also found between Inuvik to Norman Wells to the Great Bear Lake. Another region free of clouds could be found between the Great Bear Lake and Fort Simpson in the morning. Areas over AB will have sporadic clear conditions through this day. Similar conditions can be seen over southern SK. The southern most portions of BC will also be cloud free.

Day-3 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, with the exception of near Kokrines where a small fire continues to produce smoke and haziness. Large values of aerosol optical thickness are predicted to affect a small area over southern BC, extending through the northern half of AB and SK, and up to the Great Slave Lake. Another fire over Montana, US, will bring haziness to southern SK in the afternoon. A frontal system begins to move over western AK. 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 most of AK, YKT, northern BC, western NWT, and some areas in northern AB and SK. Conditions over AK do not improve in this forecast period. Possible targets to fly will be found over north-eastern YKT up to north-western NWT. Most of the NWT will see sporadic clearing in the morning, with conditions deteriorating in the afternoon. The SK region will mostly see clear cloud conditions through the afternoon, when low clouds begin to affect portions of the northern SK area. In AB, a mixture of low and middle clouds could be found through the day, with most of the southern portions cloud free. Southern BC could also have cloud free conditions through this period.

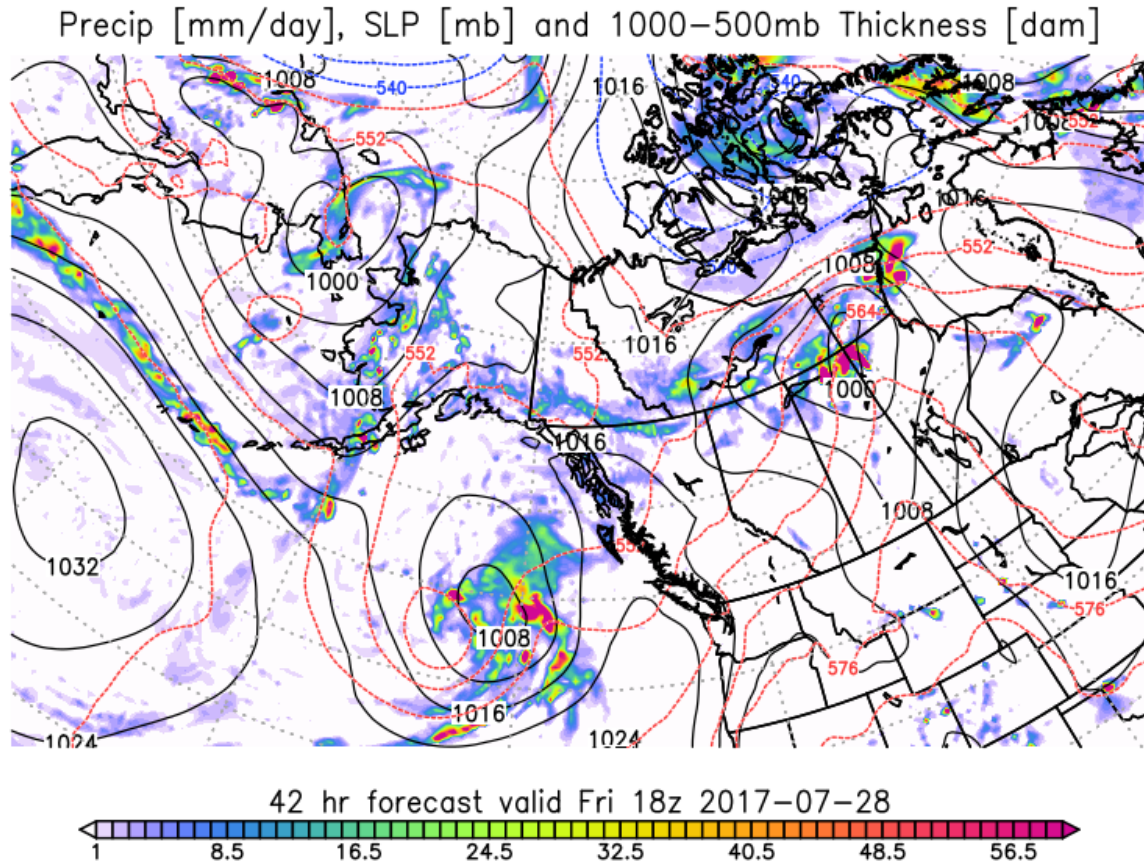
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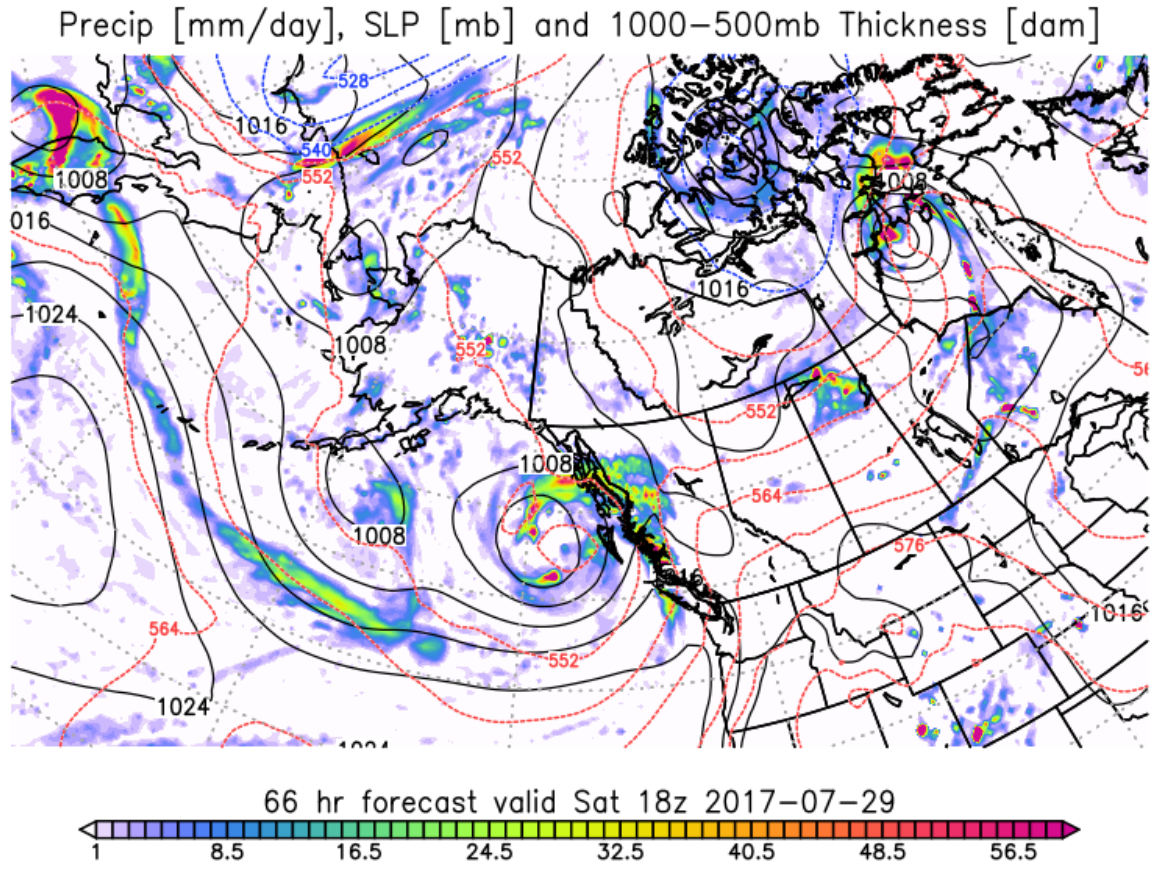
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NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-07-27



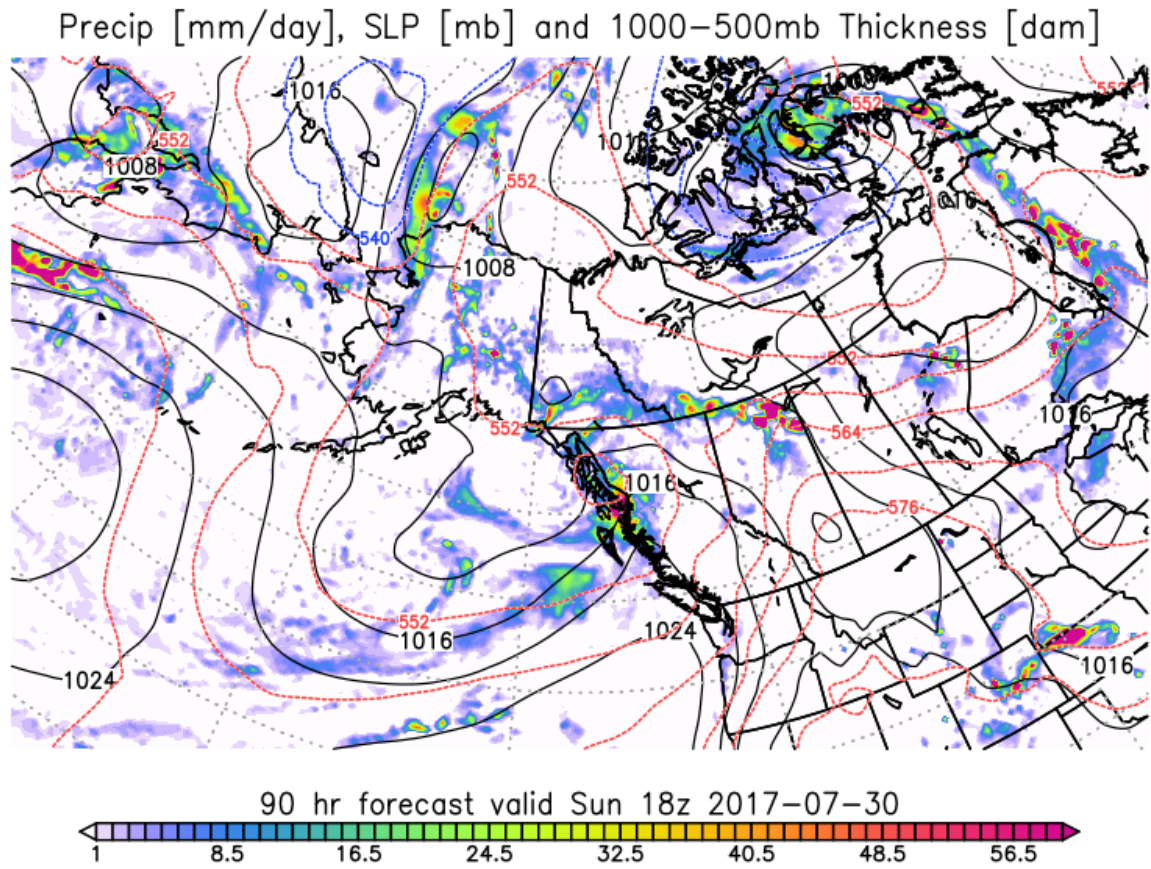
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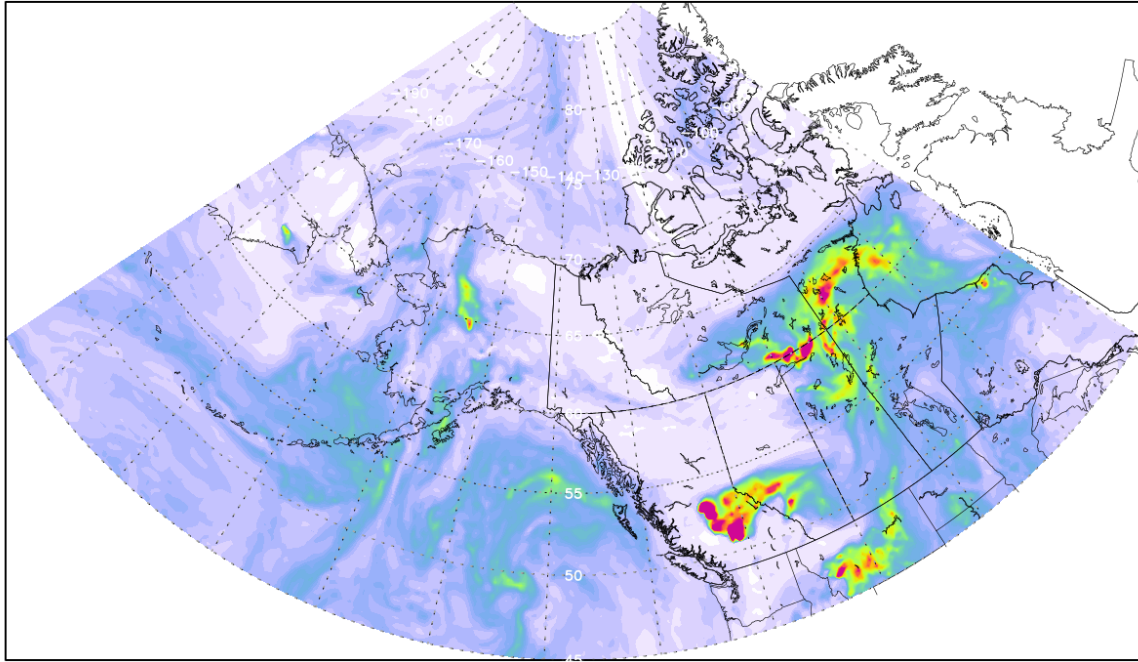
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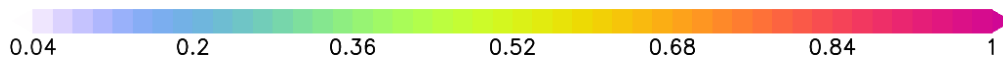
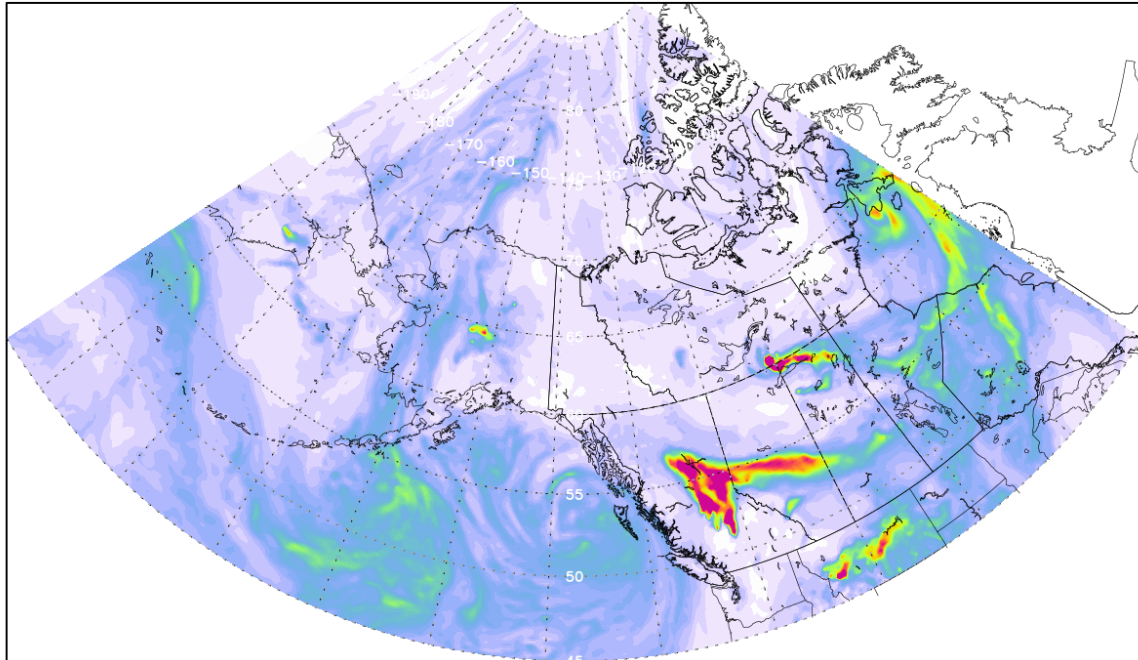
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GEOS Aerosol Optical Depth
Initial time 27 JUL. 00z
Valid time 28 JUL. 21z



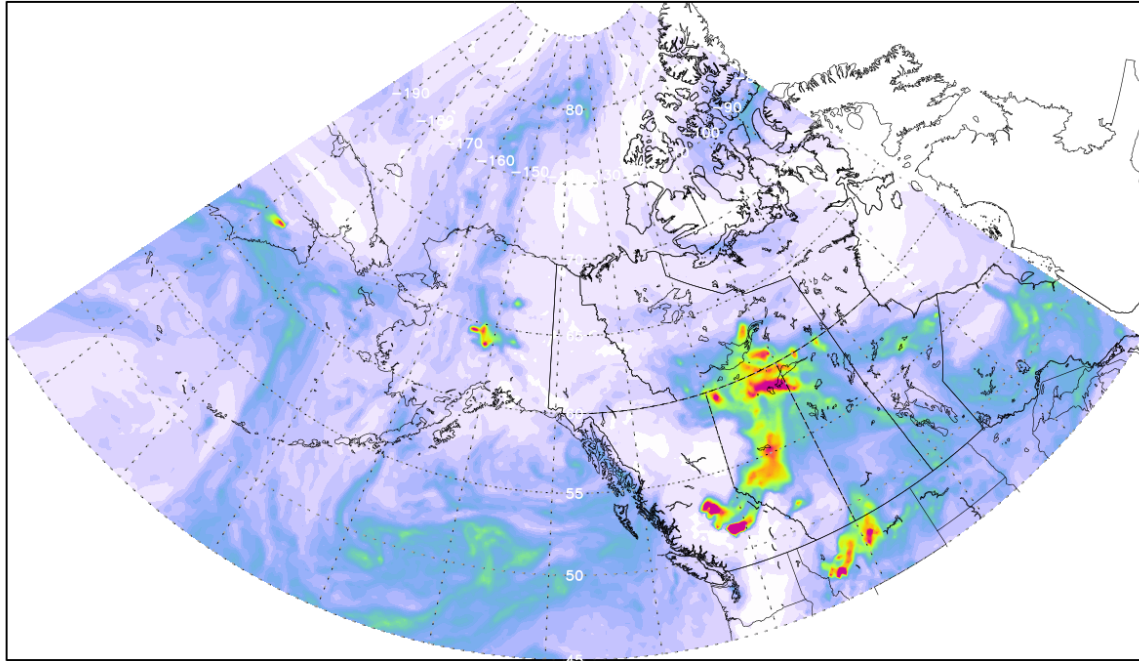
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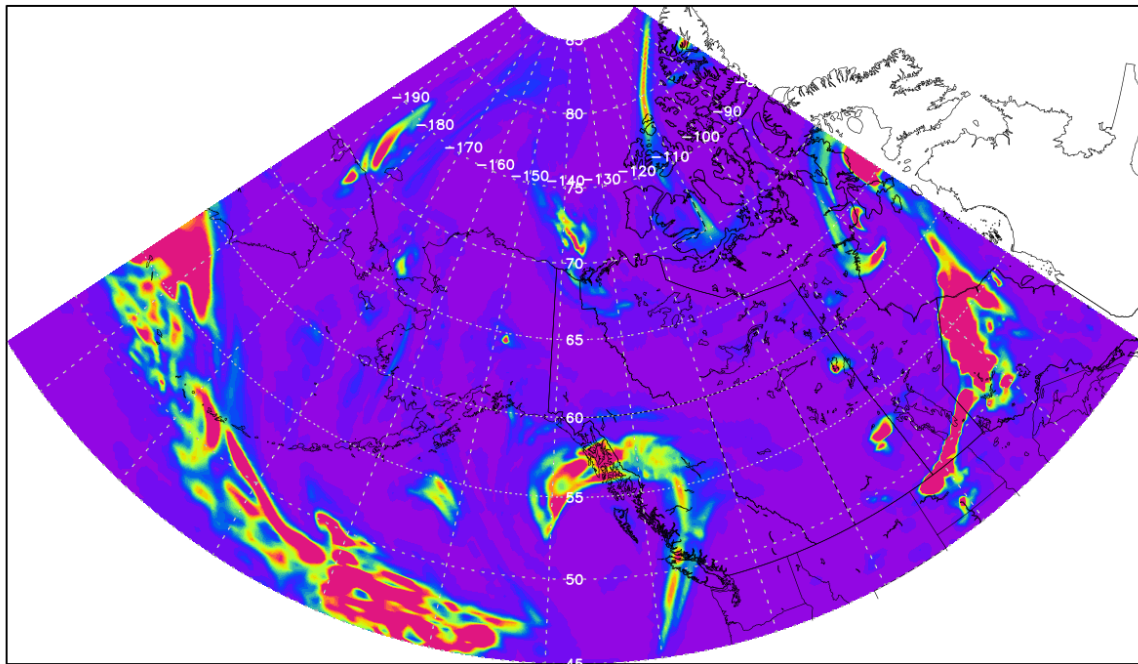
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GEOS Aerosol Optical Depth
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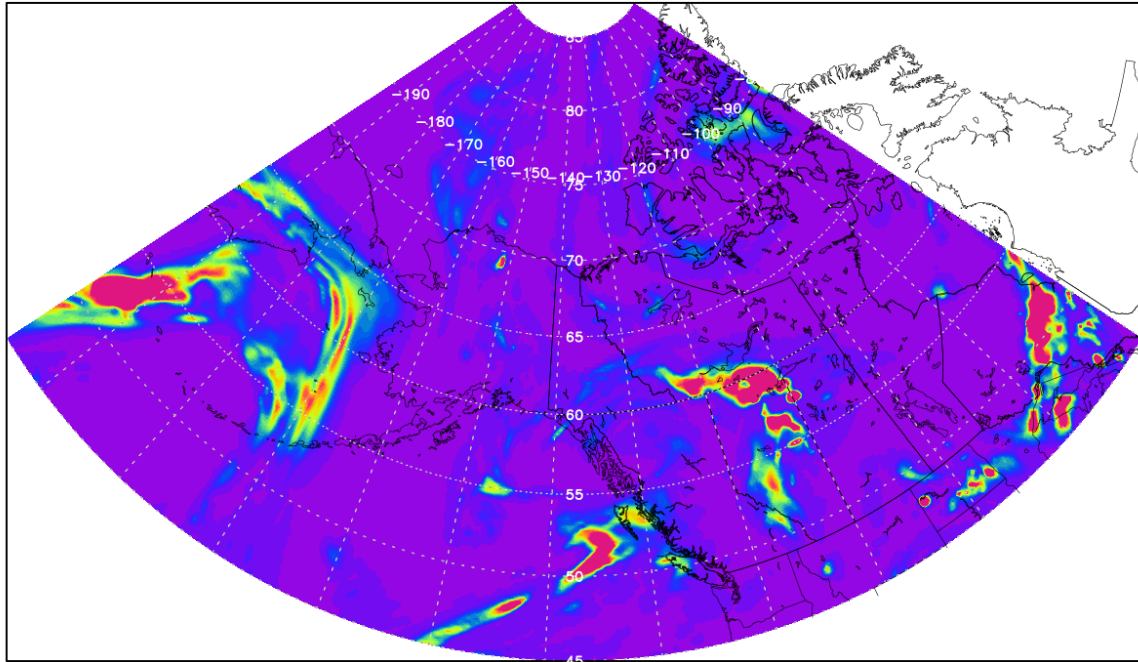
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GEOS High Cloud Optical Depth
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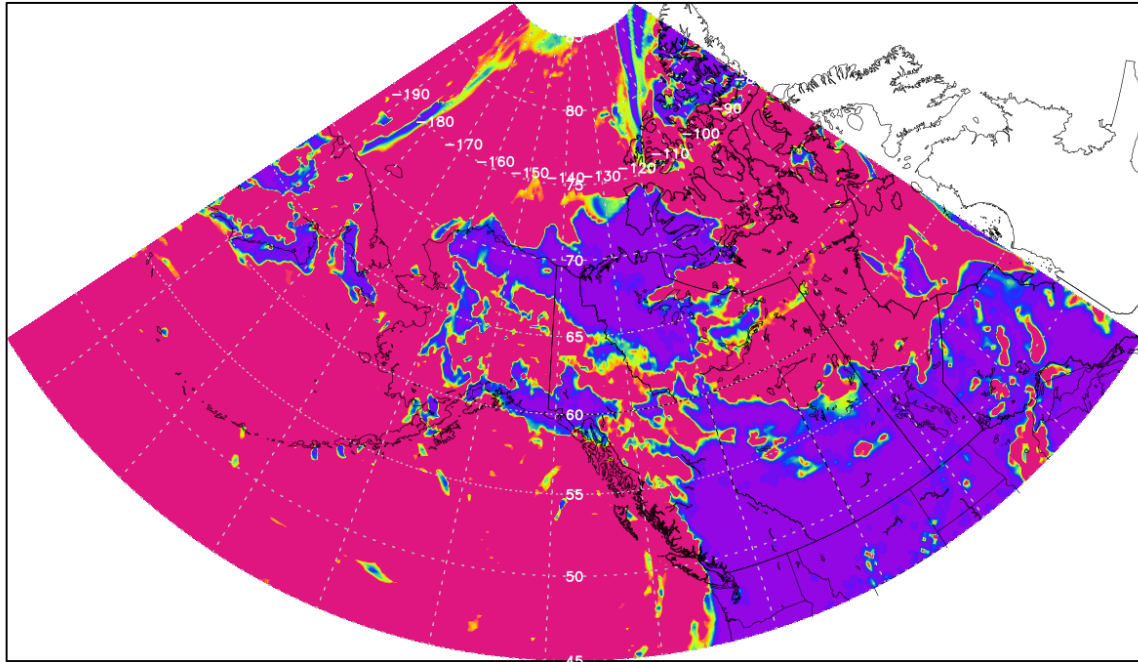
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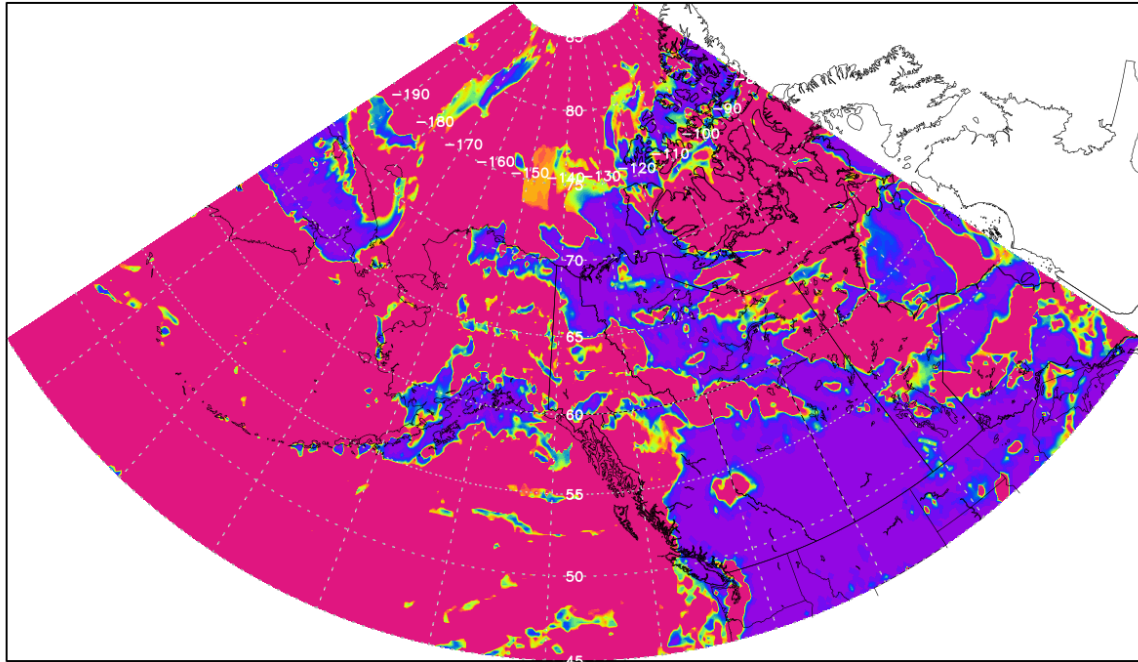
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GEOS Low Cloud Optical Depth
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Valid time 29 JUL. 18z



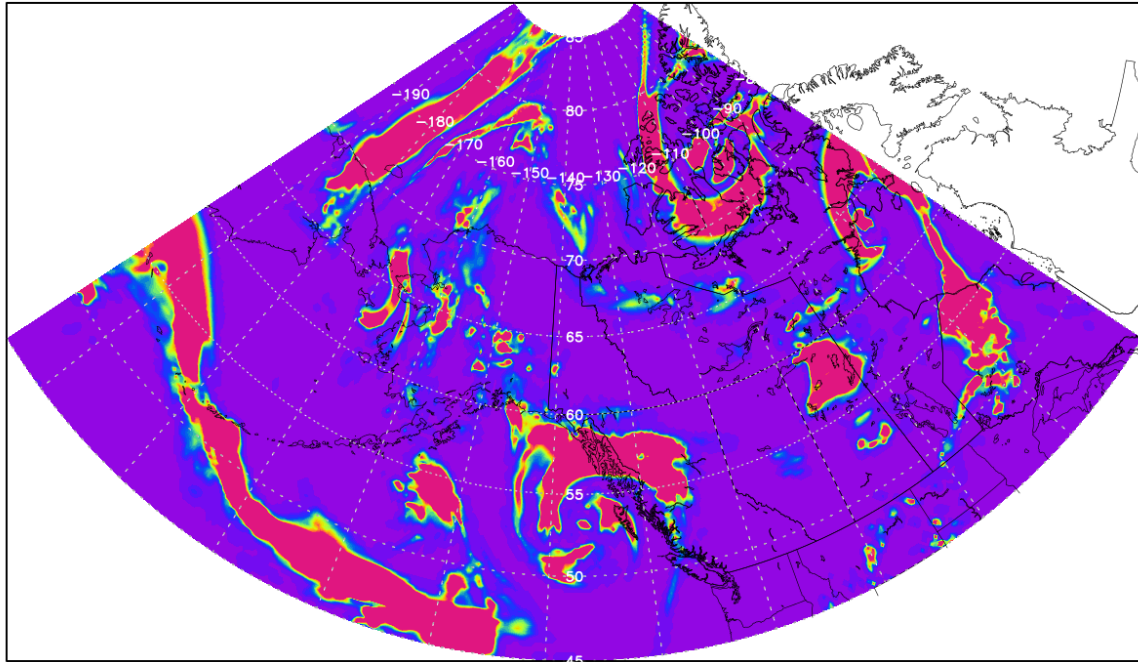
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GEOS Low Cloud Optical Depth
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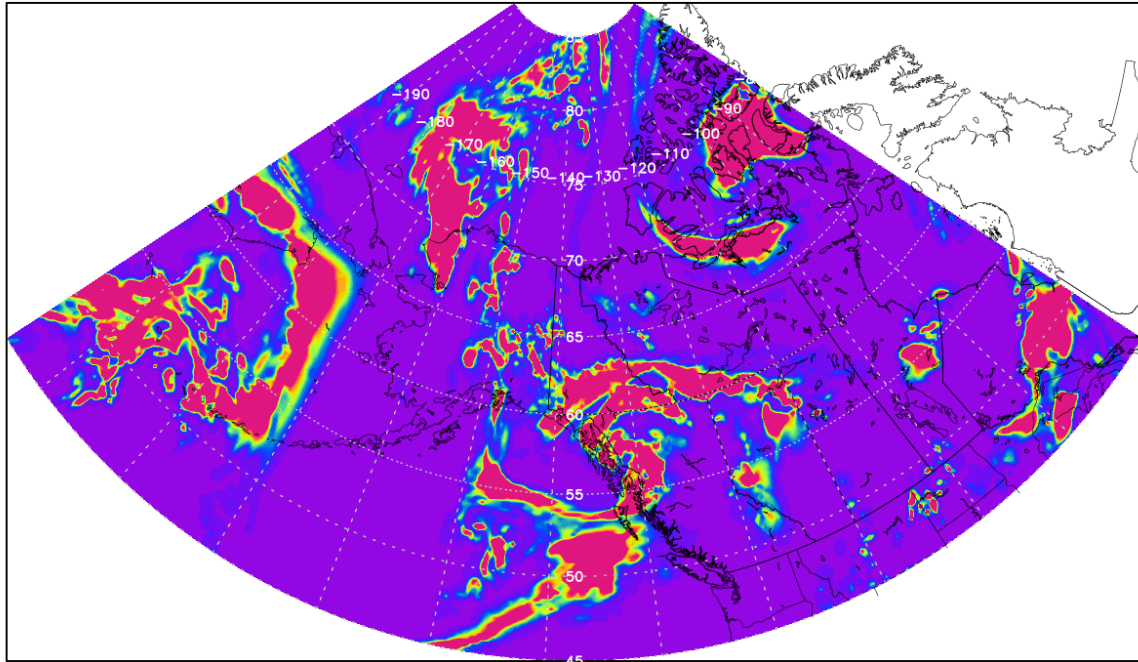
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GEOS Mid Cloud Optical Depth
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Valid time 29 JUL. 18z



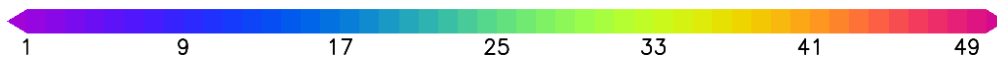
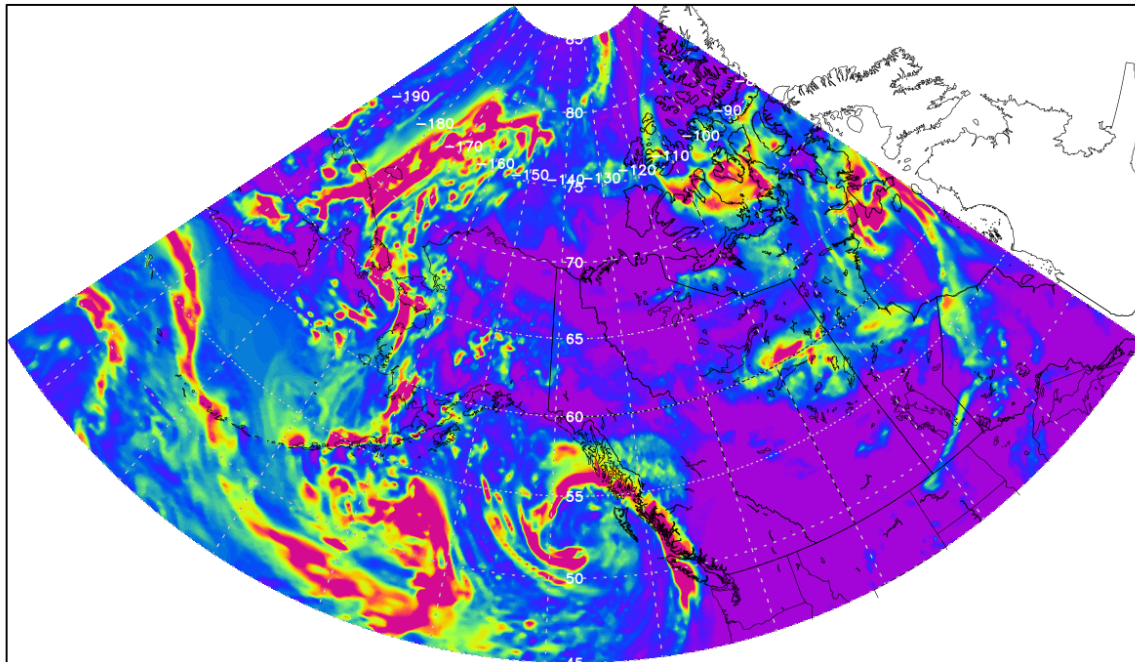
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GEOS Mid Cloud Optical Depth
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ABOVE_Total_Cloud_IT_00z27JUL_VT_18z29JUL.png

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



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