

ABOVE Regional Weather Briefing

Based on the GMAO GEOS meteorology and aerosol forecast fields
Model Initialized 00z 19 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 20 July through 2359z 20 July

The largest values of aerosol optical thickness will be found over south-central BC, central AB, and central of SK (up to the vicinity of Saskatoon) through this period. Smaller fires continue to affect the northern portion of the YKT to Inuvik, and near Kokrines, AK to PAFA. Most of interior AK continues to have little to no aerosol optical thickness values through this forecast. A low pressure system near the Anchorage area, moving south-east, continues to produce precipitation over southern AK. Meanwhile, a frontal system, moving through the Beaufort Sea, deteriorates conditions over the north-eastern half of AK and northern half of the YKT through this period. Heavy precipitation also develops along southern BC, central AB, and central SK, associated with an occluded frontal system over Nunavut. Areas over AK free of clouds could be found over the Seward Peninsula and Norton Sound coast through most of the day. Areas between PAFA and the Yukon Flats will see sporadic clearing early on, becoming cloudy in the afternoon. Additional possible targets to fly through this period are along most of the NWT, with conditions being cloudy over Fort Liard and in the vicinity of Fort Simpson through most of the day. Central SK will see cloudy conditions, with some large values of aerosol optical thickness affecting the southern half of SK. Points between Fort Smith to near Lake Athabasca could also be mostly clear in this forecast. Similar conditions will be found over AB, in points south of 55N and east of 115W.

Day-2 Outlook

Valid 1500z 21 July through 2359z 21 July

The mission areas over AK will be mostly free of smoke/haze through this period. Large values of aerosol optical thickness are seen in the southern half of BC, AB, and SK. Some smoke contamination could affect the northern YKT, and areas between Inuvik and Norman Wells through this period. The frontal system affecting northern AK continues to move south-east, deteriorating weather conditions from PAFA through YKT, and western NWT. A low pressure system begins to affect north-western AK by the afternoon. Precipitation associated to an occluded front over Nunavut continues to affect central AB and SK through this period. Clear targets over AK could be found along the Norton Sound coast and northern Bethel up to mid-

afternoon. Depending on the boundary of the low clouds, there could be an opportunity for clear conditions between PAFA and the Yukon Flats through this forecast, while the PASC region becomes mostly clear by the early afternoon. Over the NWT, cloud clear weather conditions could be seen between the Great Bear Lake to Yellowknife to Daring Lake. The vicinity of Fort Simpson and Fort Liard will be cloud free in the morning. Additional targets can be possible along the northern half of SK, while conditions over AB are cloudy through the day.

Day-3 Outlook***Valid 1500z 22 July through 2359z 22 July***

Large values of aerosol optical thickness continue to affect central BC, expanding to most of AB and the southern half of SK. Smaller values of aerosol optical thickness are forecasted to contaminate most of central AK, from the Seward Peninsula to PAFA. The low pressure system moving through the Beaufort Sea, continues to deteriorate conditions over most of the northern half of AK and YKT. Clouds and precipitation, associated with a frontal system, will affect the southern half of the NWT and southern YKT. A low pressure system, moving east, brings precipitation to BC by the afternoon. Additional precipitation will also develop along northern AB by late morning and northern SK in the afternoon. Flights over interior AK, the PAFA vicinity, and Yukon Flats could be possible early, with skies becoming cloudy over the Yukon Flats in the afternoon. Another opportunity for clear sky conditions is over northern Bethel, becoming also cloudy in the afternoon. Areas in central YKT and northern NWT will also be cloud free. The AB and SK region could see sporadic clouds in the morning, with conditions beginning to deteriorate by noon.

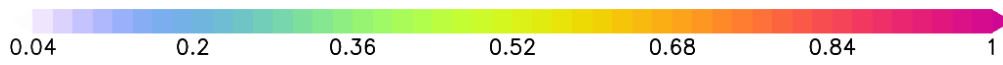
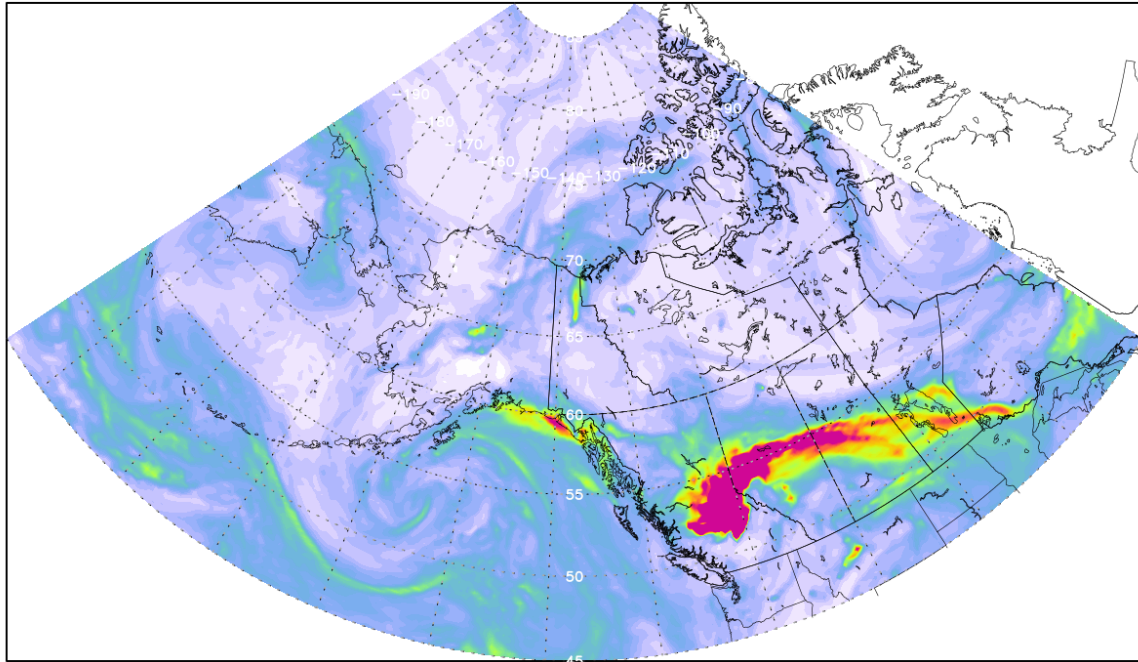
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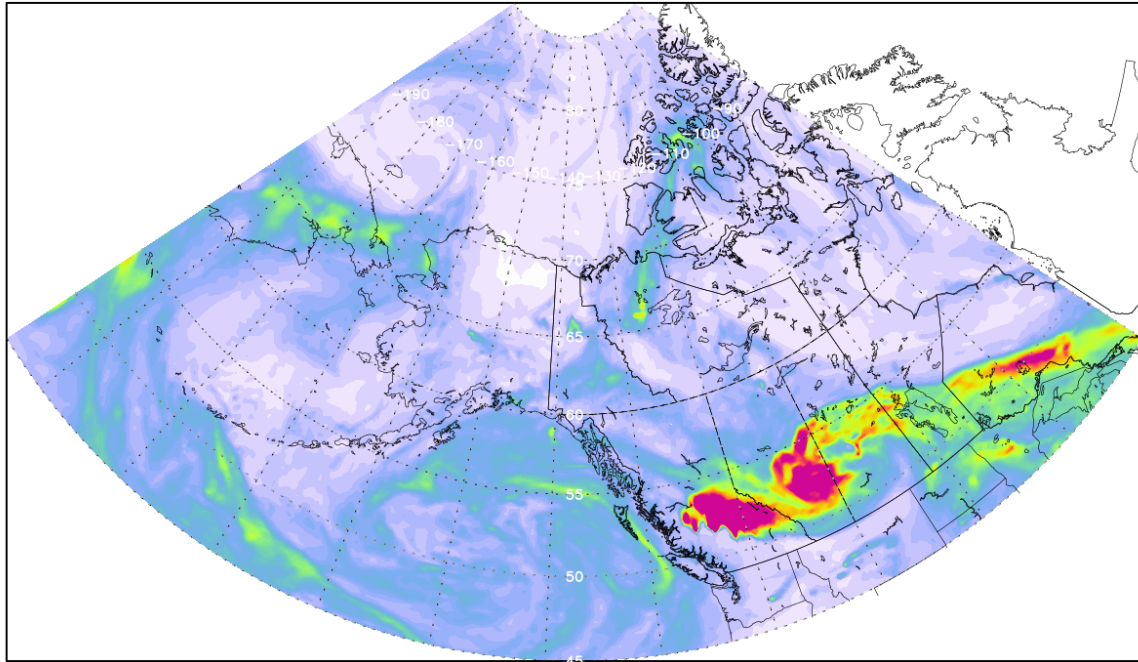
ABOVE_Total_AOD_IT_00z19JUL_VT_21z20JUL.png

GEOS Aerosol Optical Depth
Initial time 19 JUL. 00z
Valid time 20 JUL. 21z



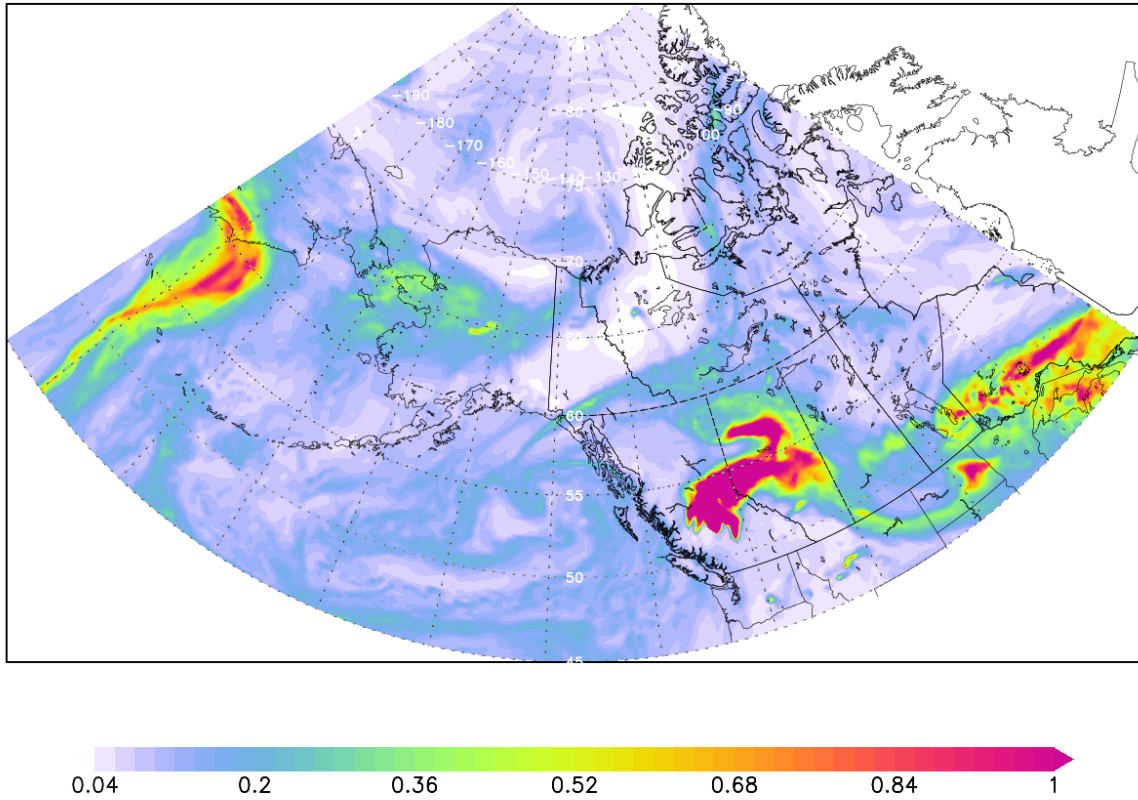
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GEOS Aerosol Optical Depth
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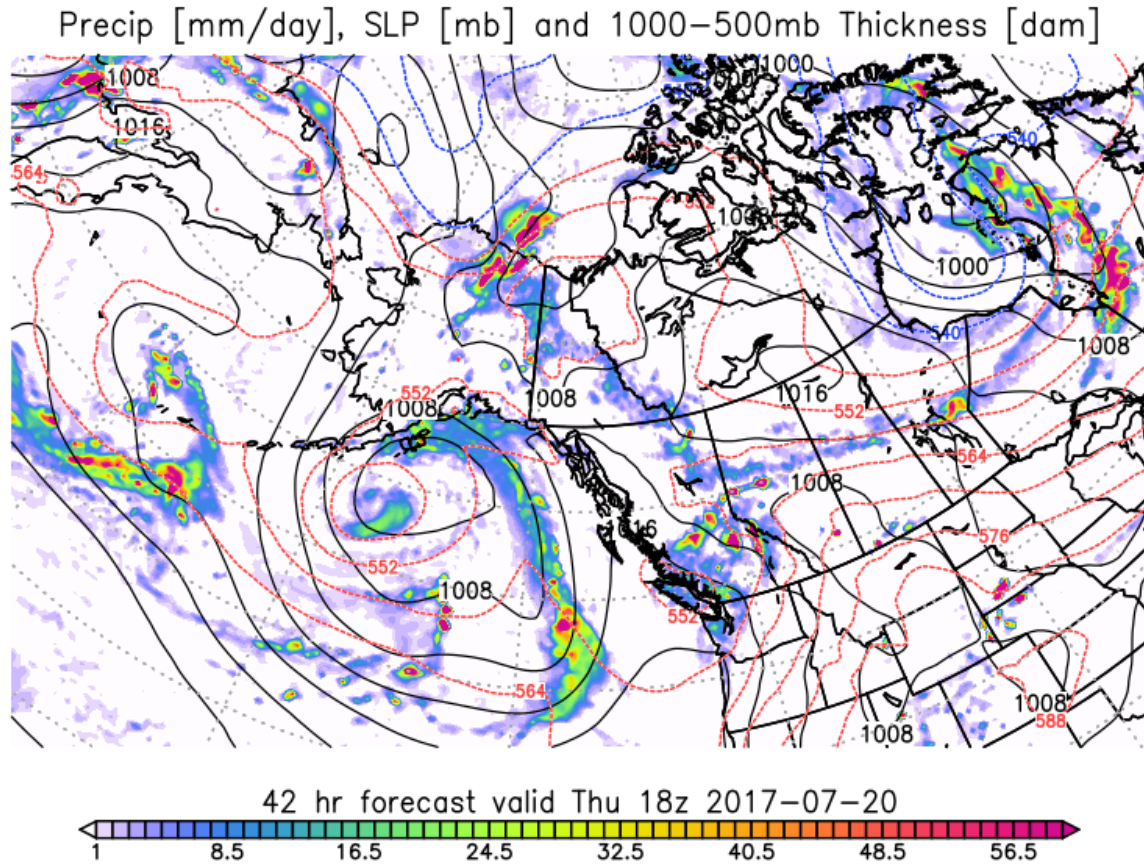
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GEOS Aerosol Optical Depth
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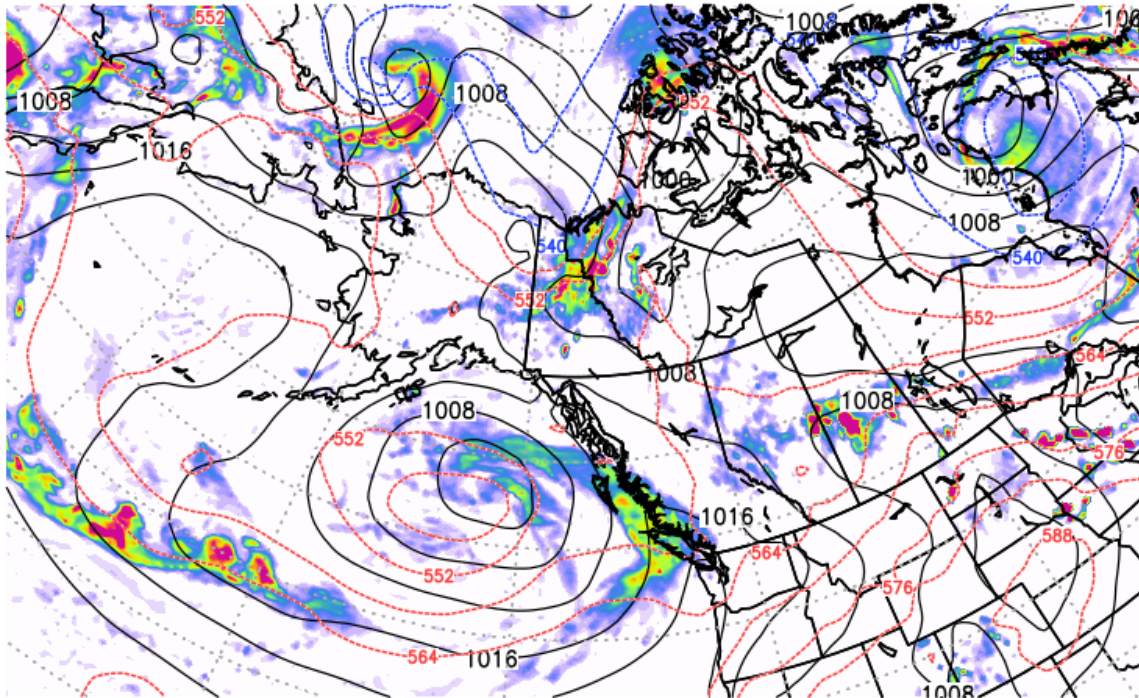
NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-07-19



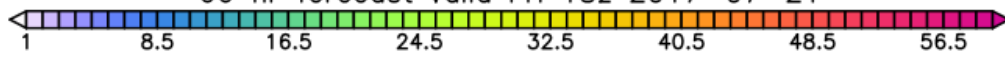
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NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-07-19

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

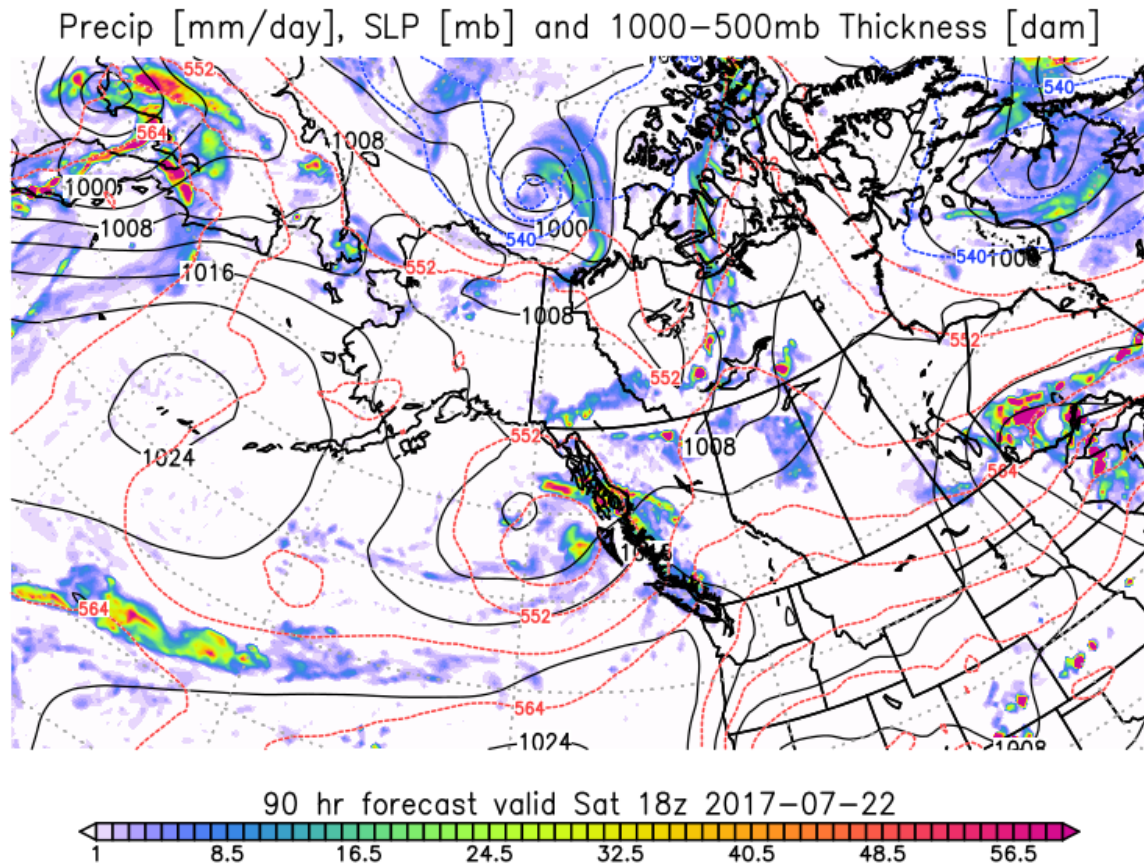


66 hr forecast valid Fri 18z 2017-07-21



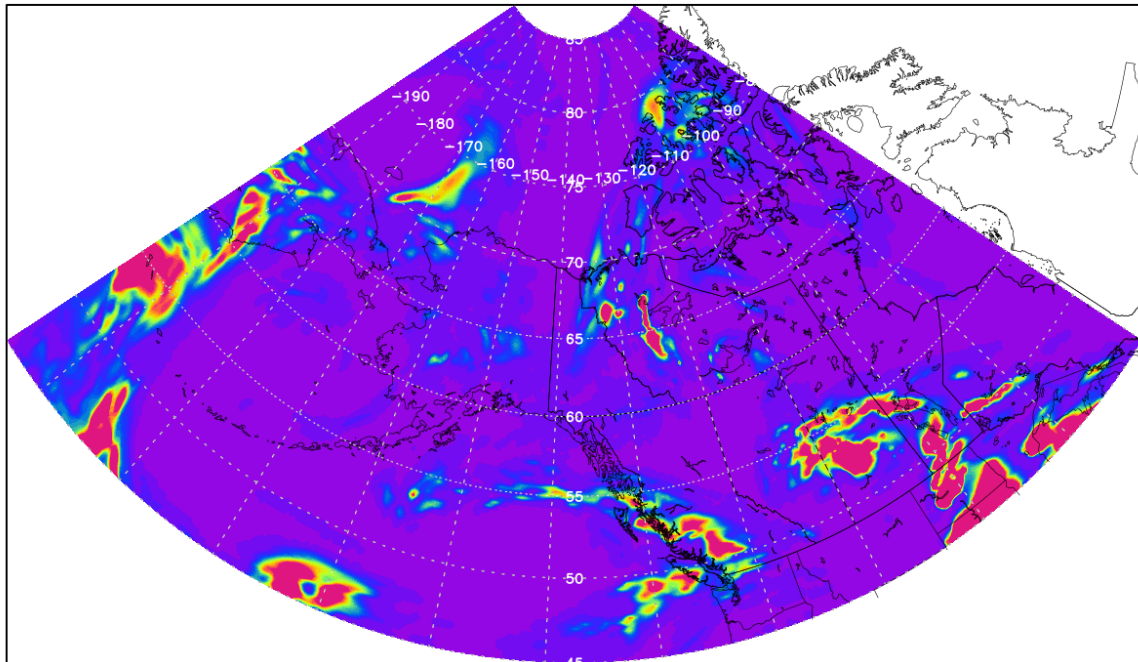
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NASA/GMAO - GEOS-5 Forecast Initialized on 00z 2017-07-19



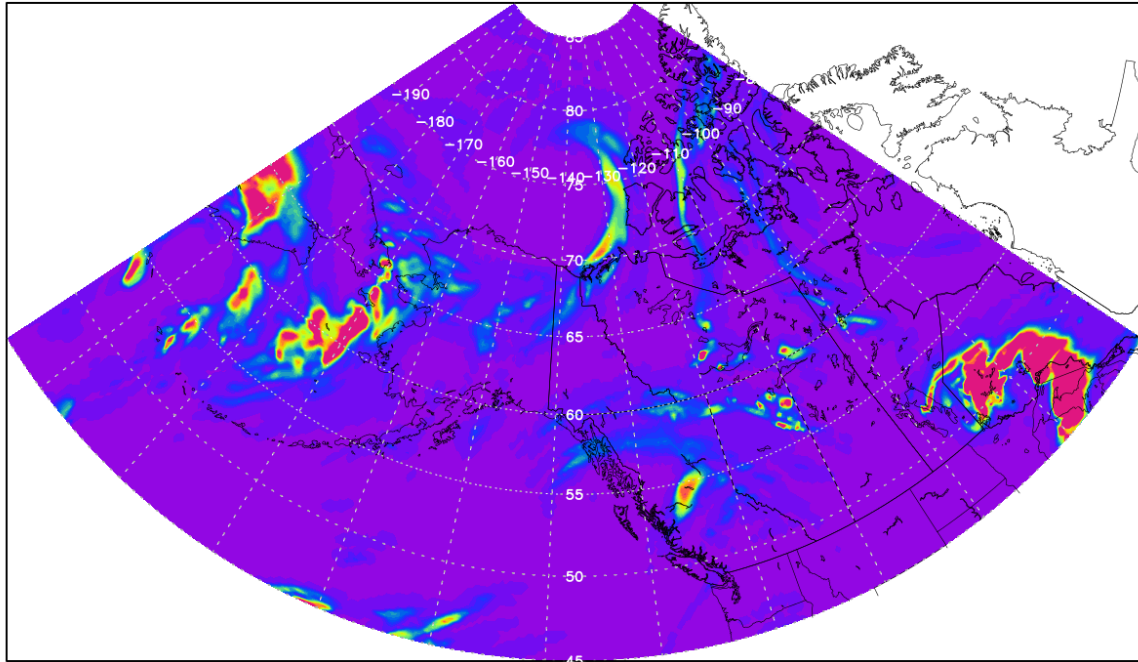
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GEOS High Cloud Optical Depth
Initial time 19 JUL. 00z
Valid time 21 JUL. 18z



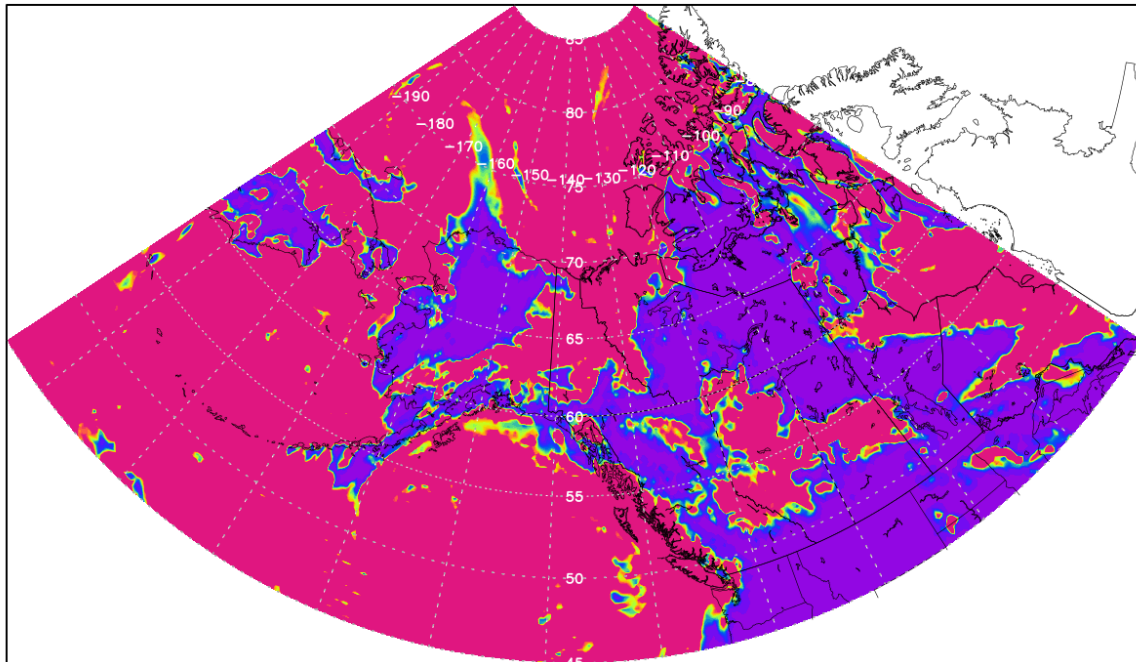
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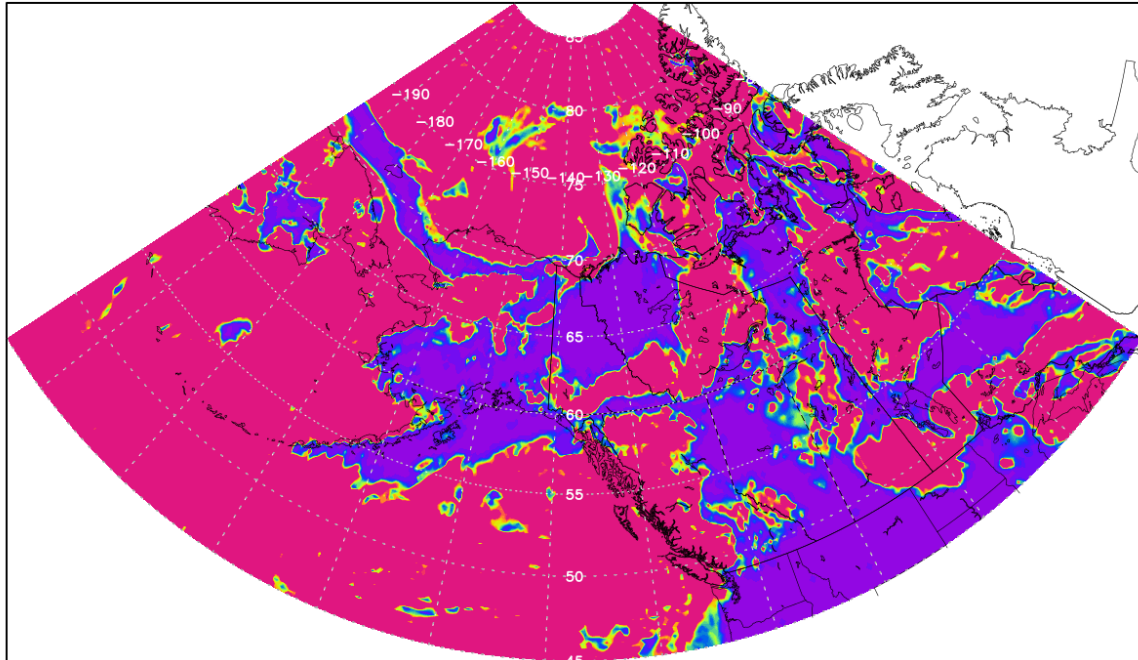
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Valid time 21 JUL. 18z



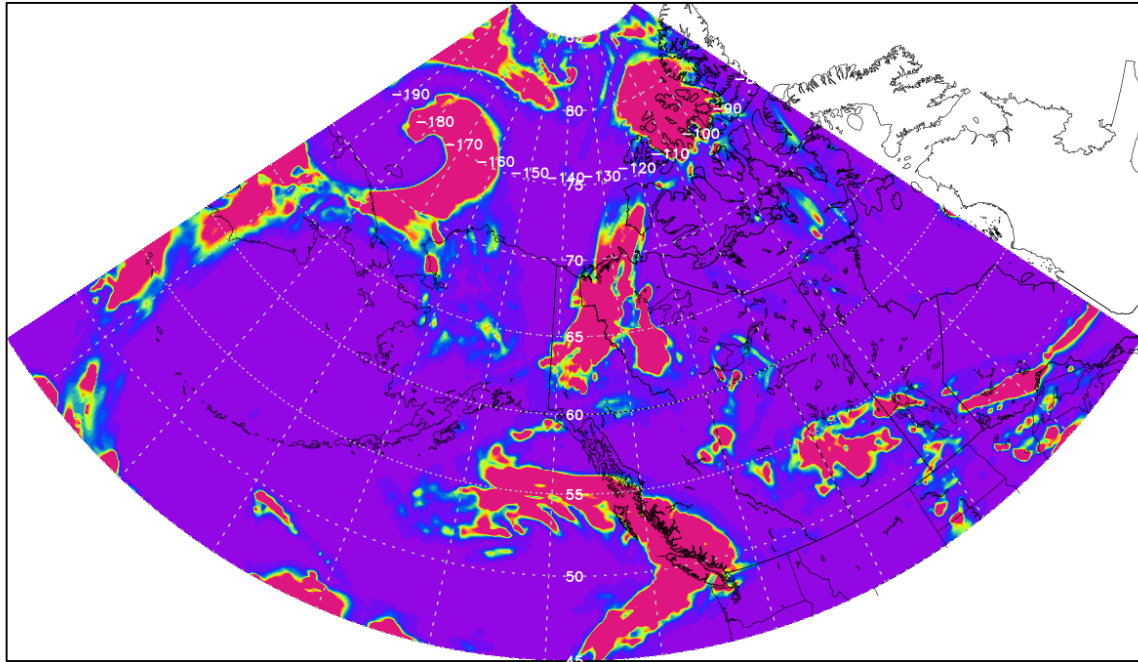
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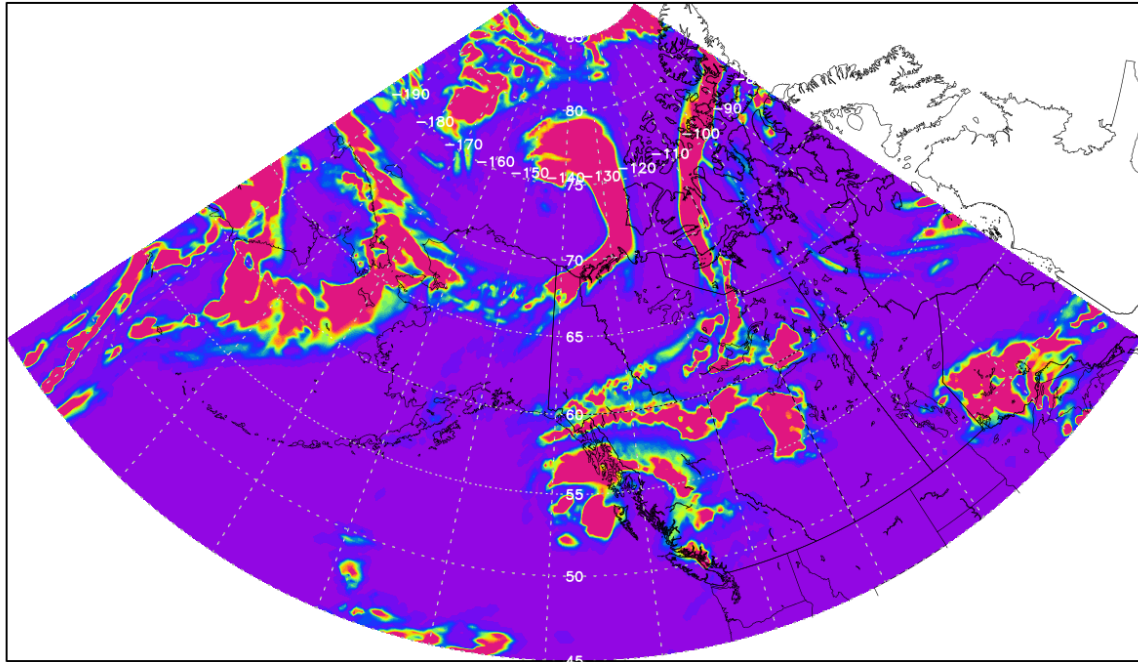
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GEOS Mid Cloud Optical Depth
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Valid time 21 JUL. 18z



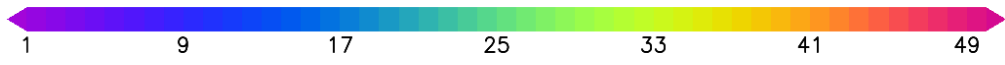
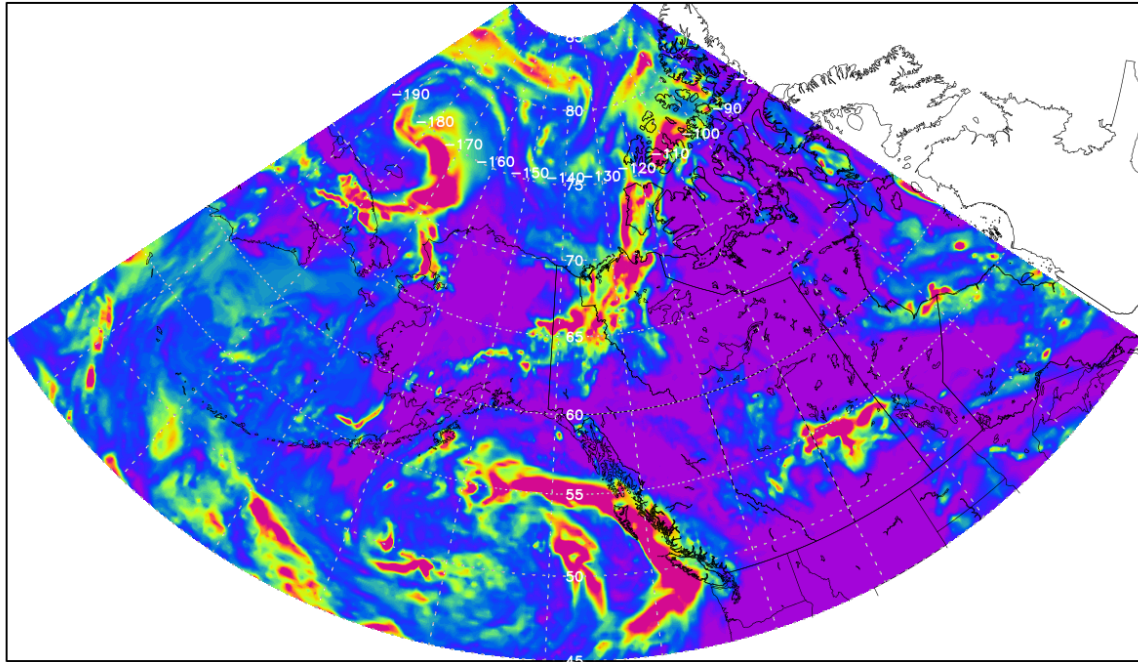
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GEOS Mid Cloud Optical Depth
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ABOVE_Total_Cloud_IT_00z19JUL_VT_18z21JUL.png

GEOS Total Cloud Optical Depth
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Valid time 21 JUL. 18z



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