

**ABOVE Regional Weather Briefing**

Based on the GMAO GEOS meteorology and aerosol forecast fields  
Model Initialized 00z 30 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 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 continues to be smoke/haze free. Areas between the Great Slave Lake and the northern most points of AB and SK will see large aerosol optical thickness values due to a fire near Fort Smith. A frontal system begins to make its way through western AK, bringing heavy precipitation through most of the mission targets. Precipitation also develops along southern YKT, northern BC, and northern AB and SK due to an occluded front over Nunavut. The mission targets over AK will continue to mostly be under cloudy conditions through this forecast, with a very small morning window to fly over the Yukon Delta depending on the vicinity of the low cloud boundary. North and central 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 also be possible targets in the morning.** Southern BC, AB, and SK will also be mostly cloud clear, with some sporadic low clouds present over southern AB.

***Day-2 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 the same fire near Fort Smith. 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 and southern SK, 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 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 and from the Great Bear Lake and Great Slave Lake to Fort Simpson and Fort Liard until 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-3 Outlook***

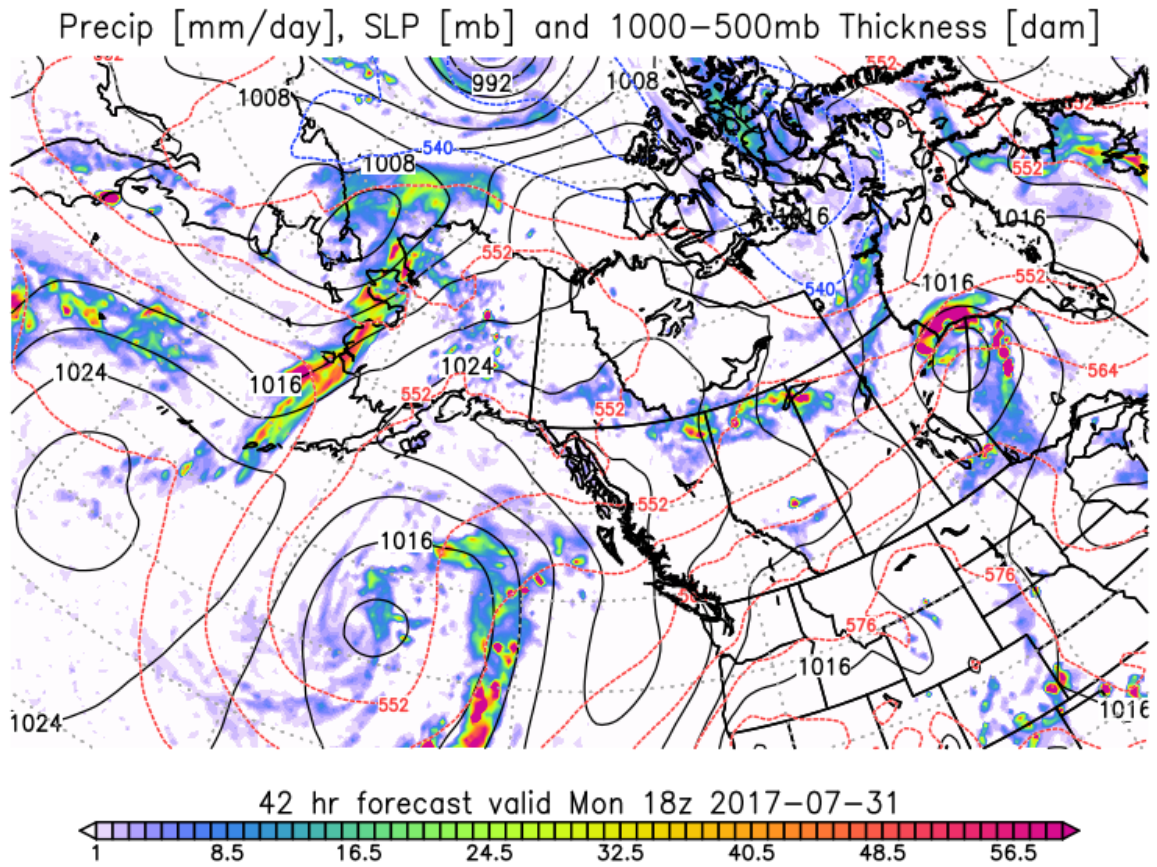
***Valid 1500z 02 August through 2359z 02 August***

The mission areas over AK will continue to be free of smoke/haze through this period. 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 YKT and most of the NWT in the morning.** Most of BC will also be free of clouds through this period, while conditions over AB and SK continue to be cloudy.

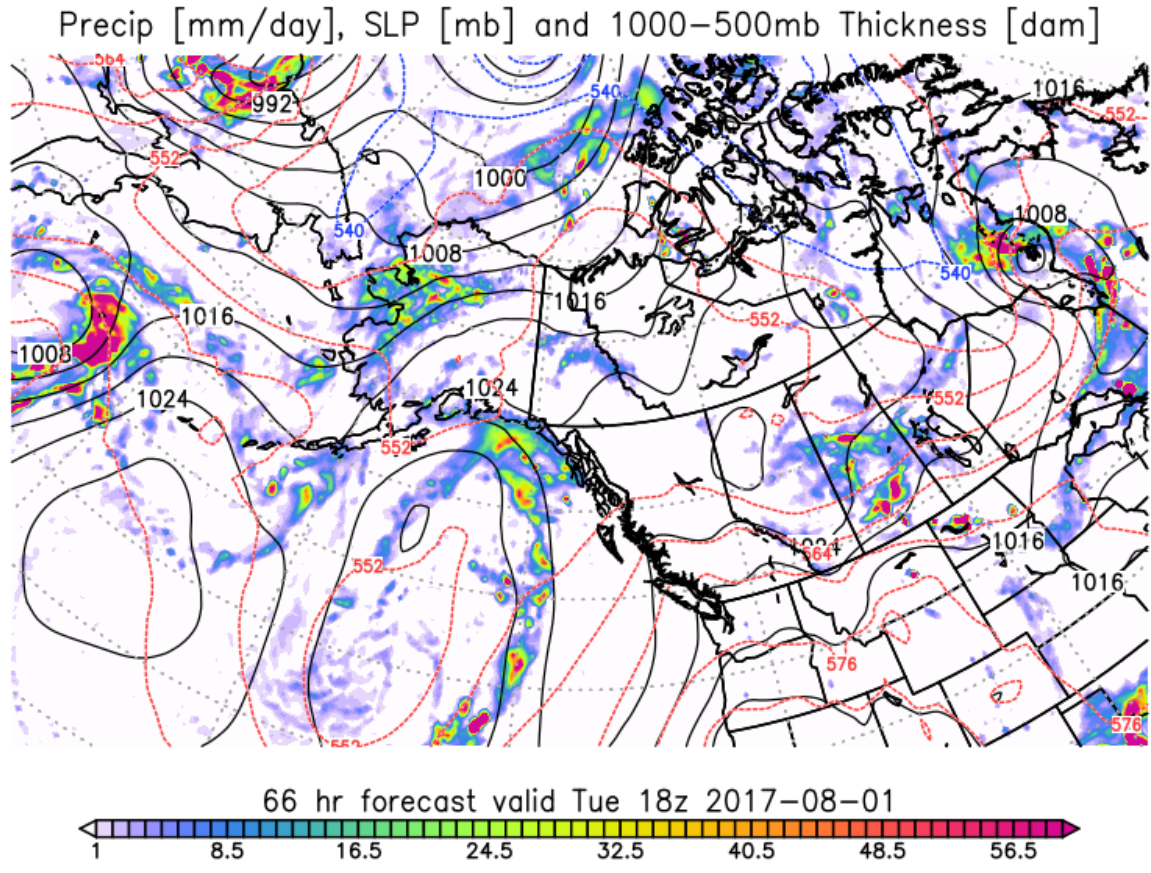
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NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-07-30



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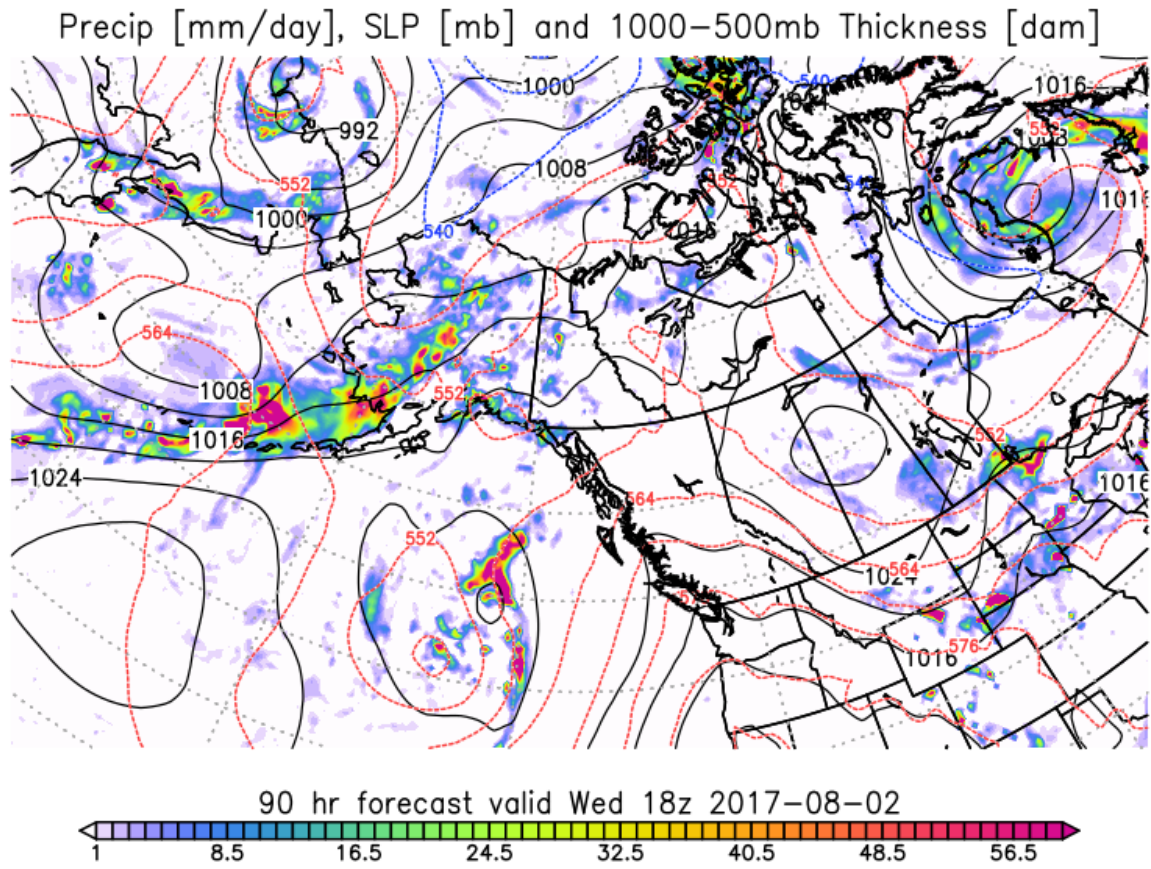
NASA/GMAO - GEOS-5 Forecast Initialized on 00z 2017-07-30





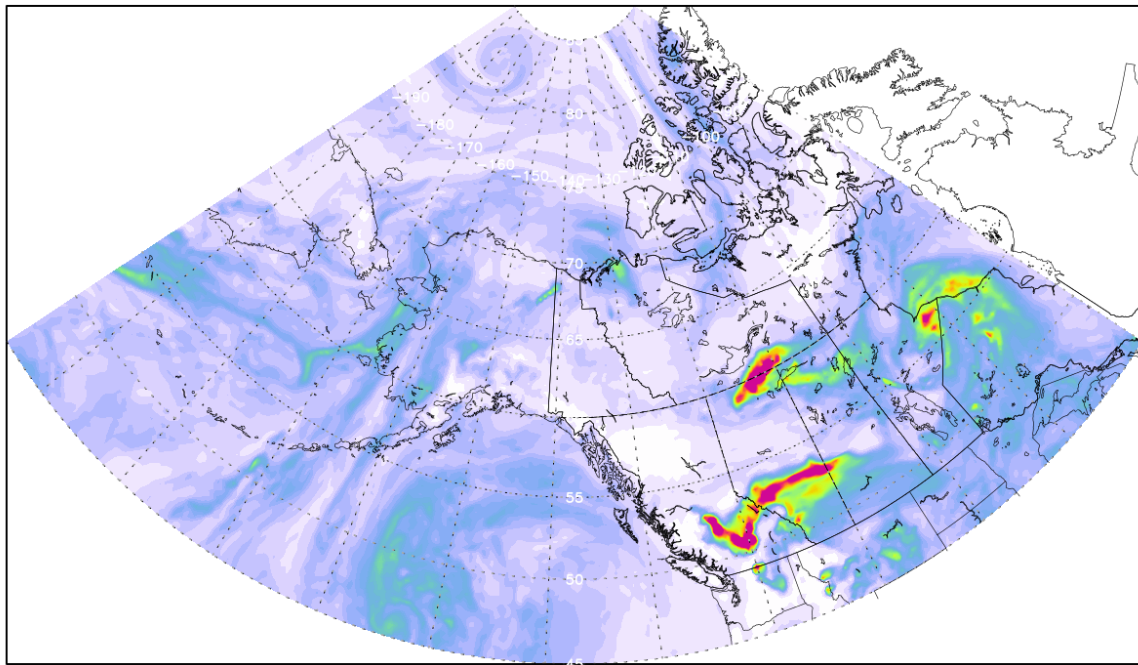
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NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-07-30



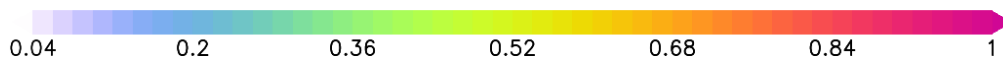
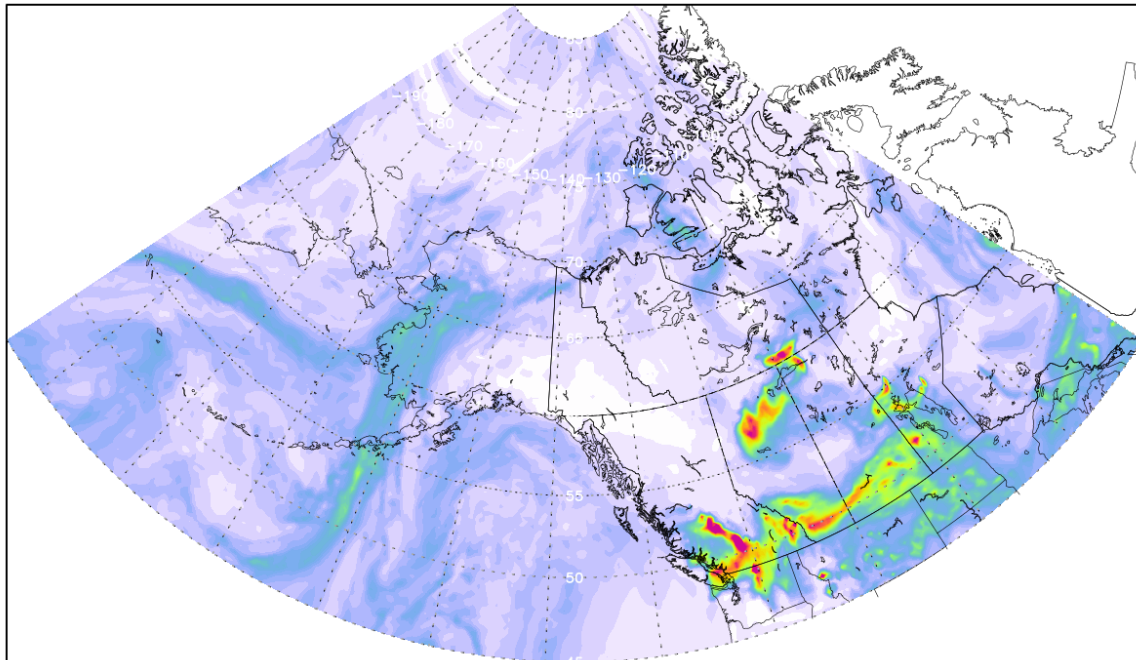
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GEOS Aerosol Optical Depth  
Initial time 30 JUL. 00z  
Valid time 31 JUL. 21z



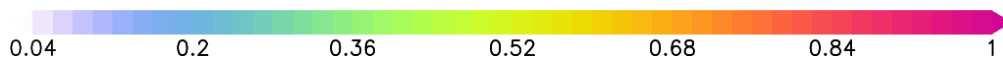
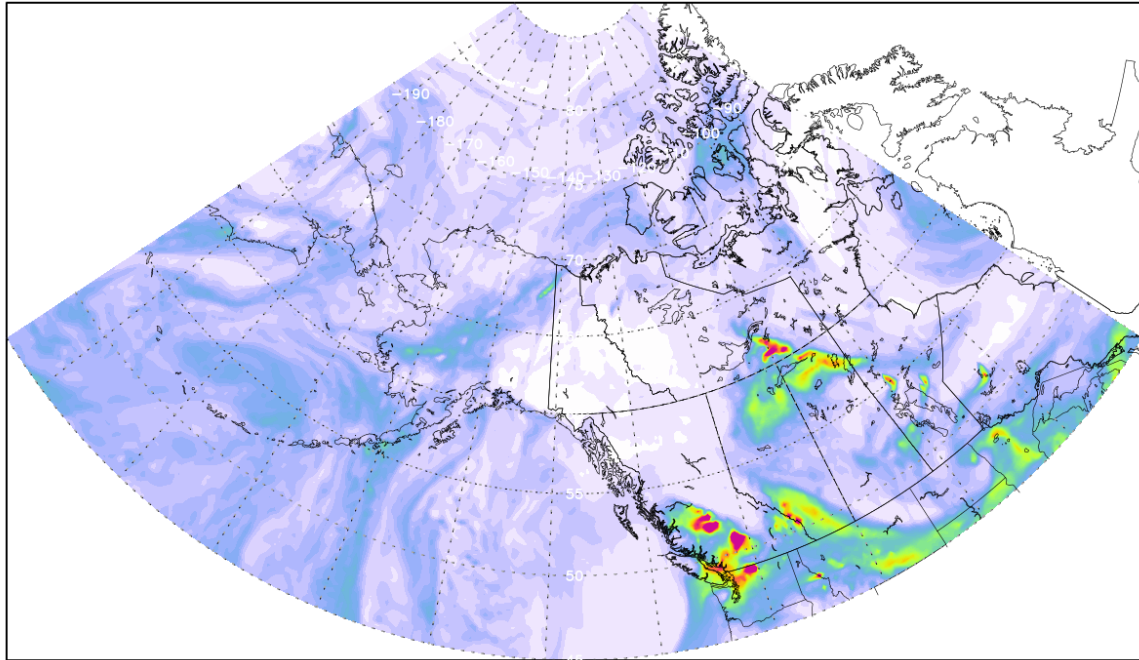
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GEOS Aerosol Optical Depth  
Initial time 30 JUL. 00z  
Valid time 01 AUG. 21z



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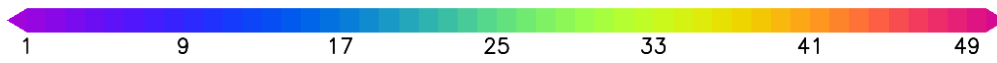
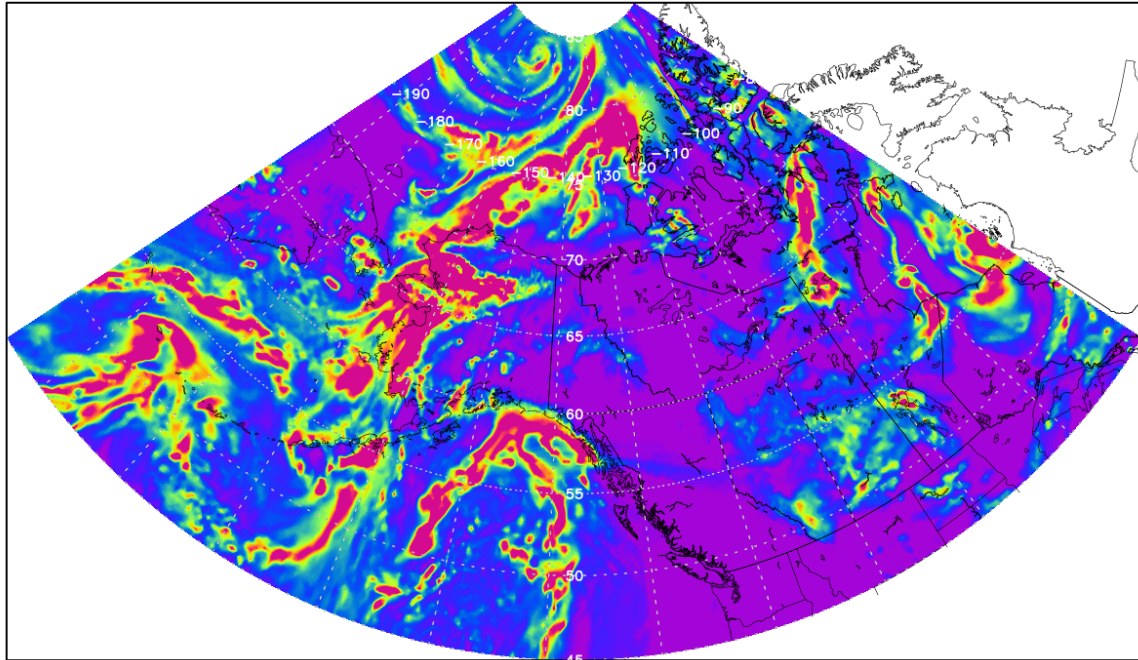
GEOS Aerosol Optical Depth  
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Valid time 02 AUG. 21z





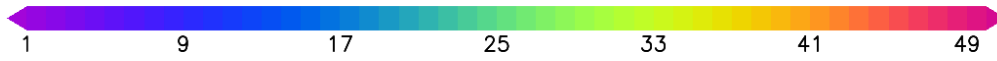
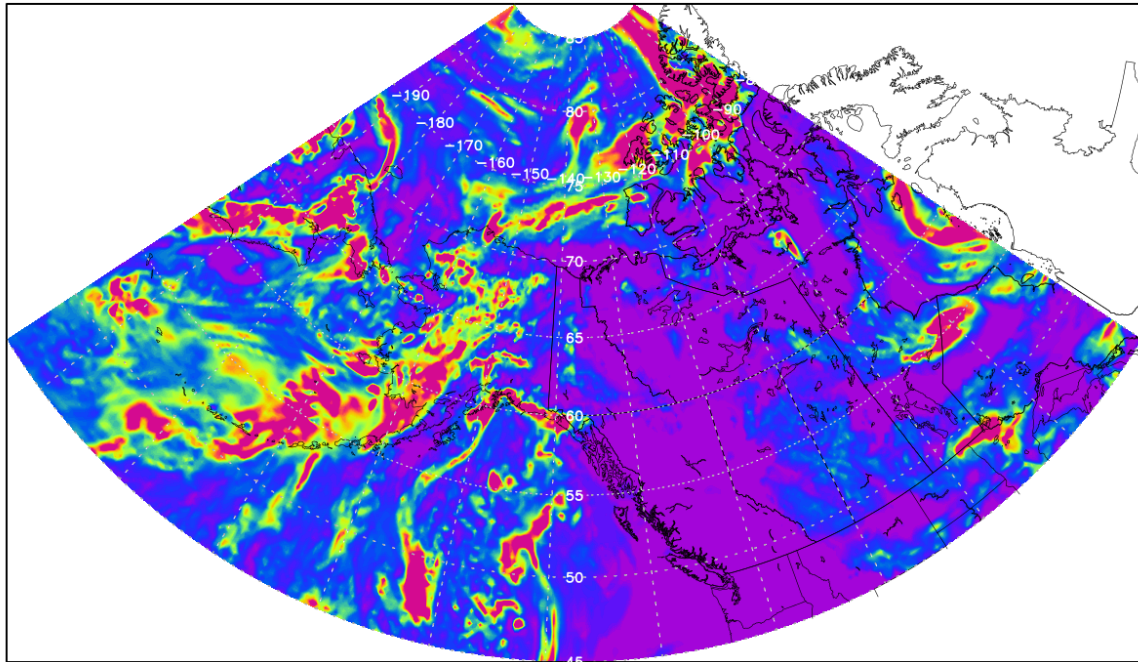
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GEOS Total Cloud Optical Depth  
Initial time 30 JUL. 00z  
Valid time 01 AUG. 18z



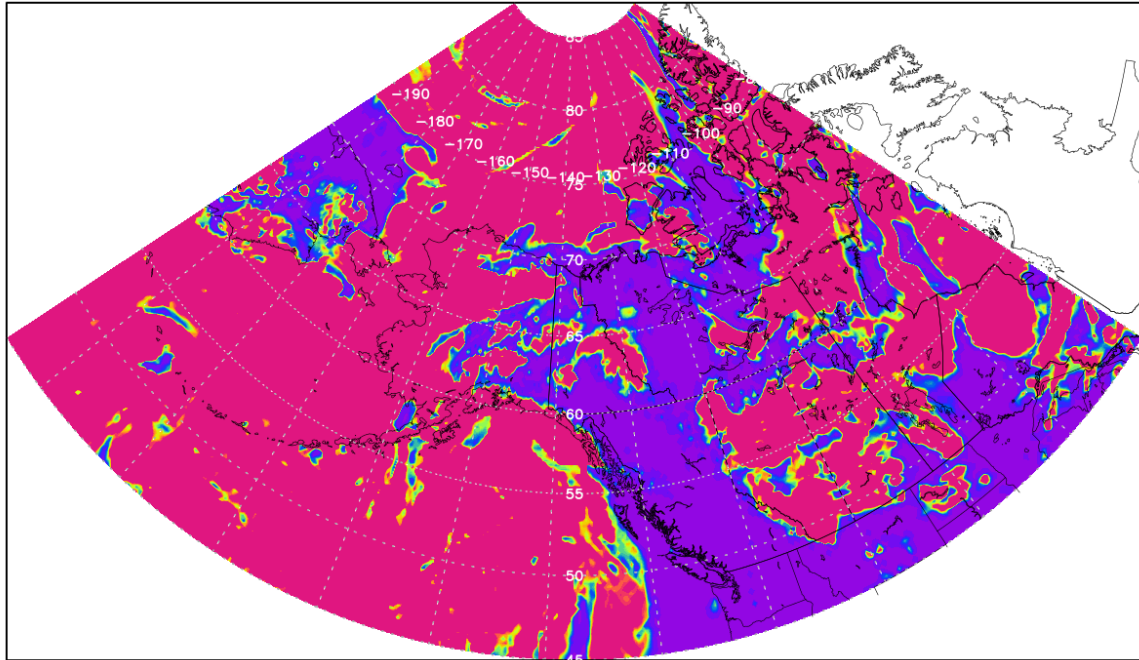
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GEOS Total Cloud Optical Depth  
Initial time 30 JUL. 00z  
Valid time 02 AUG. 18z



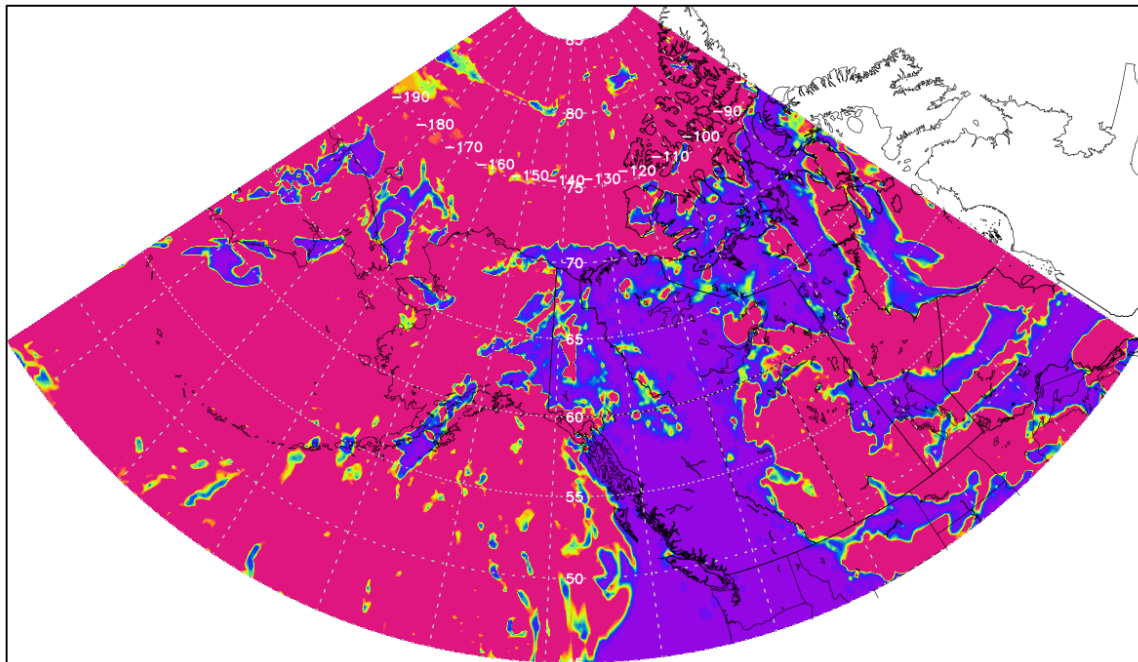
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GEOS Low Cloud Optical Depth  
Initial time 30 JUL. 00z  
Valid time 01 AUG. 18z



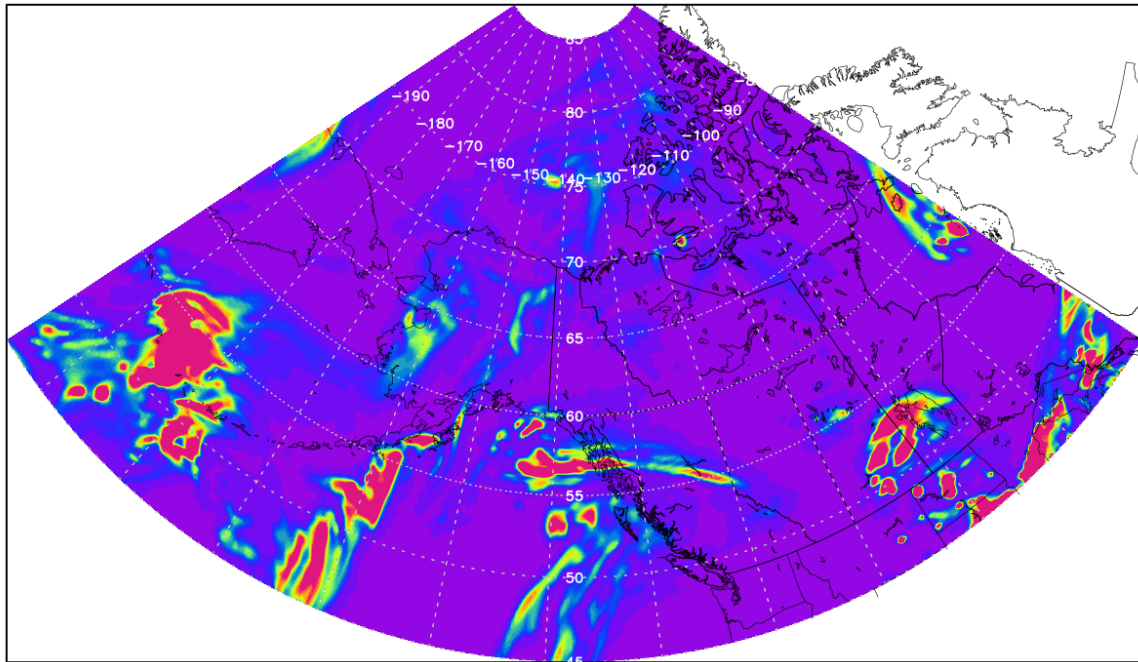
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GEOS Low Cloud Optical Depth  
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Valid time 02 AUG. 18z



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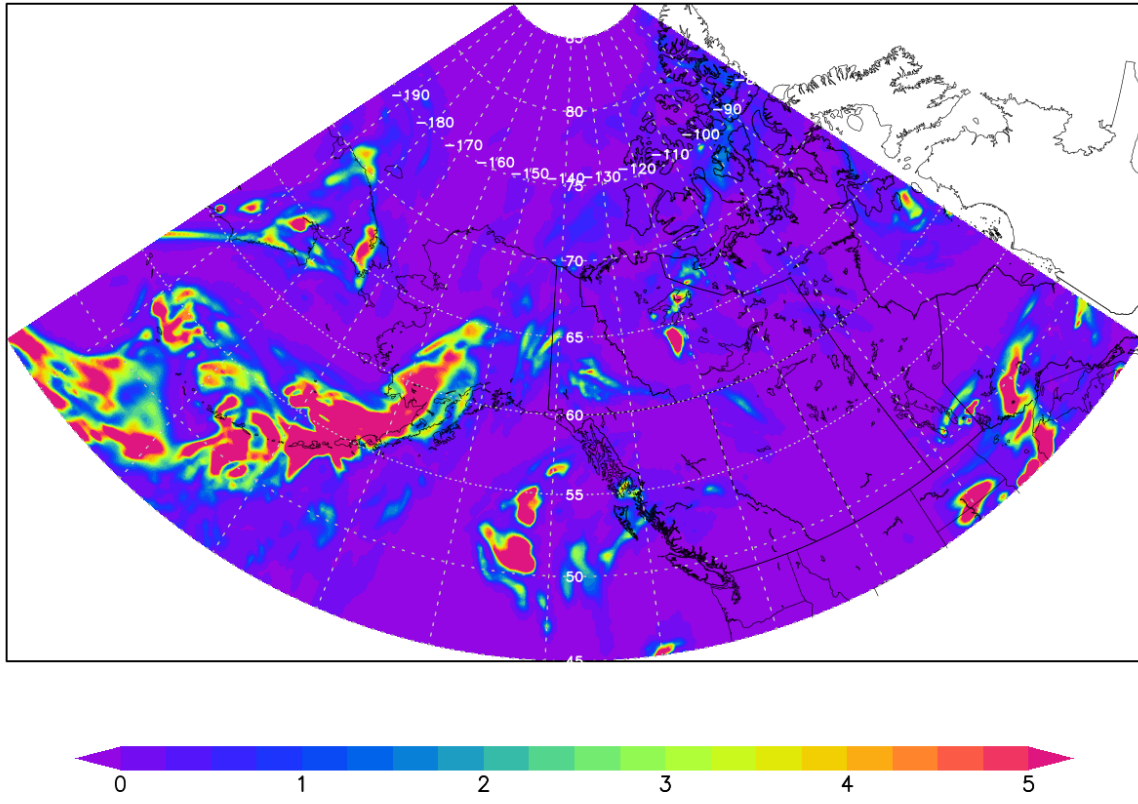
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Valid time 01 AUG. 18z





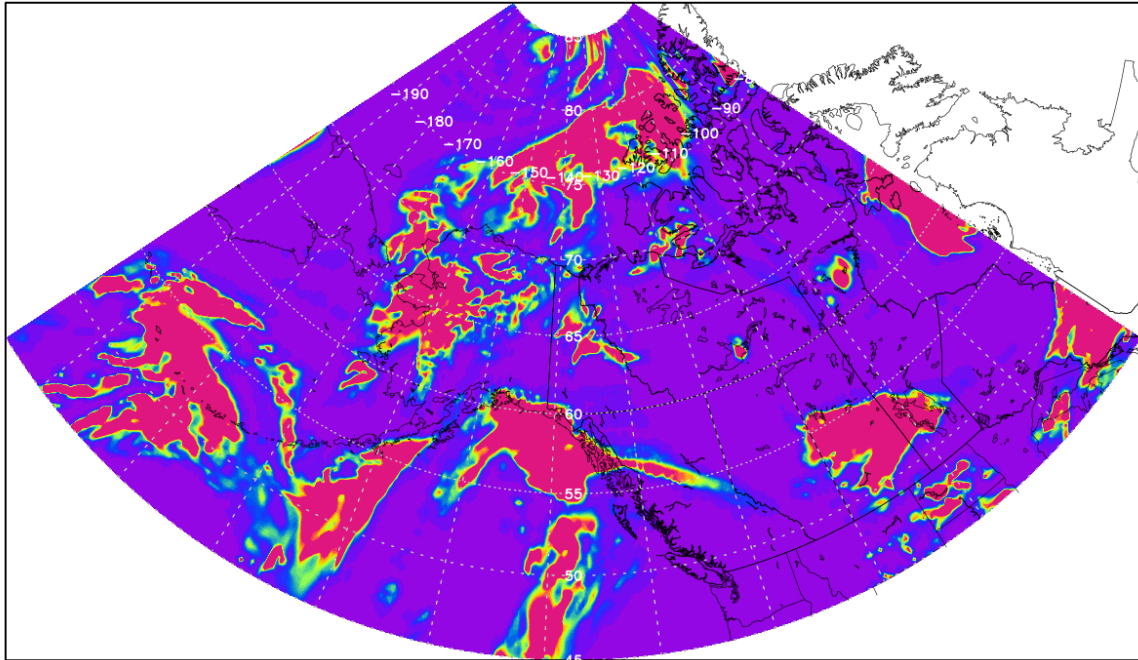
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GEOS High Cloud Optical Depth  
Initial time 30 JUL. 00z  
Valid time 02 AUG. 18z



ABOVE\_Mid\_Cloud\_Optical\_Depth\_IT\_00z30JUL\_VT\_18z01AUG.png

GEOS Mid Cloud Optical Depth  
Initial time 30 JUL. 00z  
Valid time 01 AUG. 18z



ABOVE\_Mid\_Cloud\_Optical\_Depth\_IT\_00z30JUL\_VT\_18z02AUG.png

GEOS Mid Cloud Optical Depth  
Initial time 30 JUL. 00z  
Valid time 02 AUG. 18z

