

**ABOVE Regional Weather Briefing**

Based on the GMAO GEOS meteorology and aerosol forecast fields  
Model Initialized 00z 18 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 19 July through 2359z 19 July**

Large values of aerosol optical thickness continue to affect central BC, expanding to central AB. Some slight haziness, associated with these fires could reach southern SK though this period. Smaller values of aerosol optical thickness are seen along the northern YKT, near Old Crow, and Kokrines, AK. A low pressure system continues to move through south-west AK, bringing precipitation to the Bethel/Alaska Peninsula/Anchorage areas. The occluded front over Nunavut moves east rapidly, improving the conditions along Yellowknife and the Daring Lake. A frontal system moving through the Beaufort Sea begins to deteriorate conditions over northern AK through this forecast, while additional precipitation develops in central YKT in the afternoon. The vicinity of Fort Simpson and Fort Liard could be affected by precipitation by mid-day. Clear cloud conditions will be found in the NWT, mainly along the Mackenzie River, Inuvik, Norman Wells, Yellowknife, Daring Lake, and the Great Bear Lake. Meanwhile, areas nearing Fort Simpson and Fort Liard will be mostly cloudy by mid-day. Over AK, conditions along PAFA, PASC, and the Yukon Flats will continue to see sporadic clearing in the morning. Flights can also be possible over southern BC, AB, and SK, including the Saskatoon vicinity, but some low values of aerosol optical thickness could be present in this area.

**Day-2 Outlook**

**Valid 1500z 20 July through 2359z 20 July**

Several fires continue to affect the northern portion of the YKT, south-central BC, central AB, and the southern half of SK. Interior AK continues to have little to no aerosol optical thickness values through this forecast, with the exception of near Kokrines and north of Fort Yukon early on. A low pressure system near the Anchorage area continues to produce precipitation over southern AK, while a frontal system, moving through the Beaufort Sea, deteriorates conditions over northern AK and YKT though this period. Heavy precipitation also develops along southern BC, central AB, and central SK, associated with an occluded frontal system over Nunavut. 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. Interior AK, the Yukon Flats, and the YKT might see some sporadic cloud clearing in the morning. Another

area mostly free of clouds is southern SK, with some large values of aerosol optical thickness affecting the southern half of SK though the day. Southern AB could also have mostly clear conditions in this forecast.

**Day-3 Outlook****Valid 1500z 21 July through 2359z 21 July**

The mission areas over AK appear to be mostly free of smoke/haze through this period. Areas in the vicinity of PAFA could see some smoke/haze due to fires near Kokrines. The largest values of aerosol optical thickness are seen over the northern YKT, near the Eagle Plains. These fires will bring smoke to areas between Inuvik, Norman Wells, and Great Bear Lake through this period. The southern half of BC, AB, and SK seems to also be affected by large aerosol optical thickness. The frontal system affecting northern AK continues to move south-east, deteriorating weather conditions from PASC to PAFA, and the northern half of the YKT and NWT. A low pressure system begins to affect north-western AK by the afternoon. Precipitation associated to an occluded front over Nunavut begins to affect the Saskatoon vicinity through this period. Clear targets could be found from the Great Bear Lake to Yellowknife to Daring Lake. The vicinity of Fort Simpson and Fort Liard will be cloud free through the day. Additional targets can be possible along the Anchorage area, with some sporadic clearing through the day. The PASC region could also see sporadic clearing in the afternoon, while the northern half of SK shows clear cloud conditions through the day.

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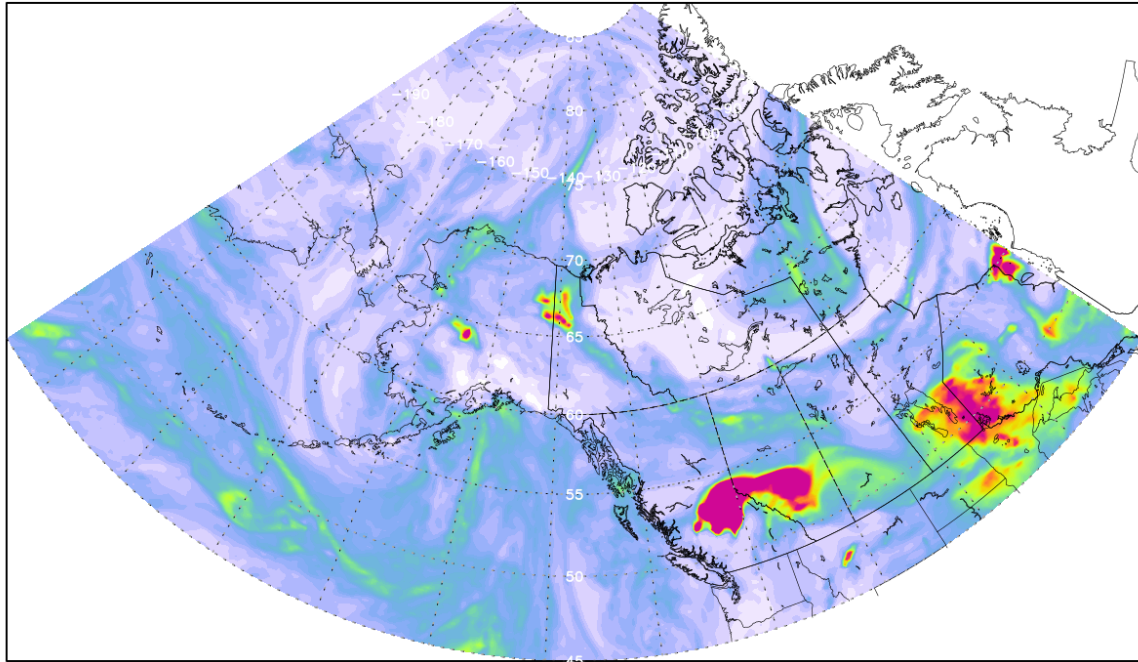
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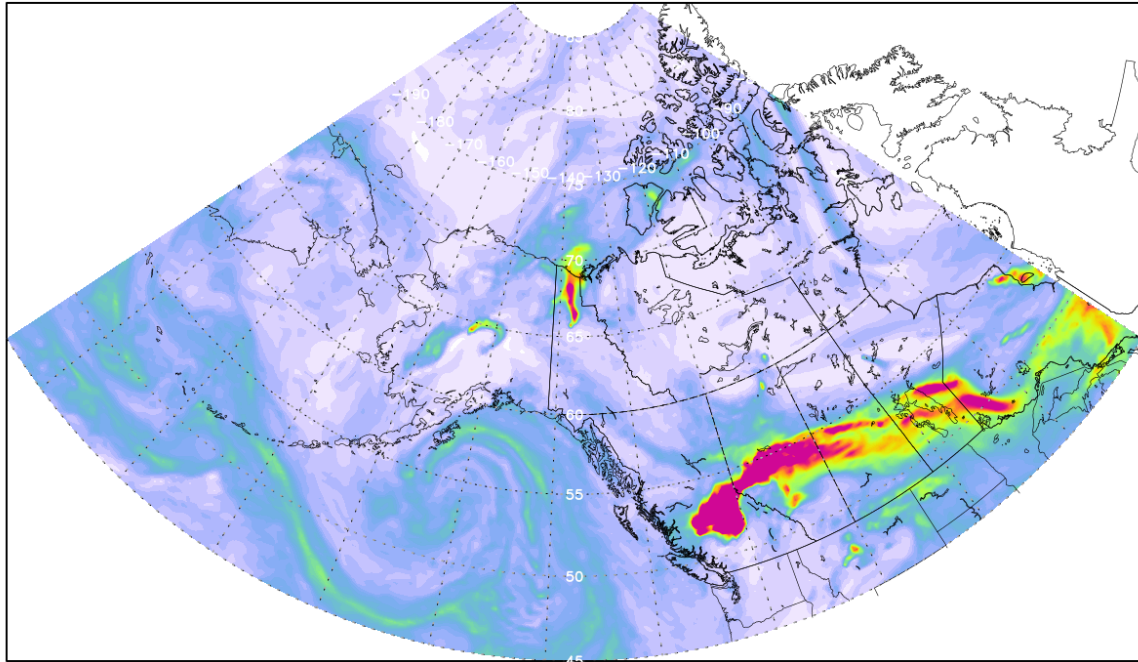
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GEOS Aerosol Optical Depth  
Initial time 18 JUL. 00z  
Valid time 19 JUL. 21z



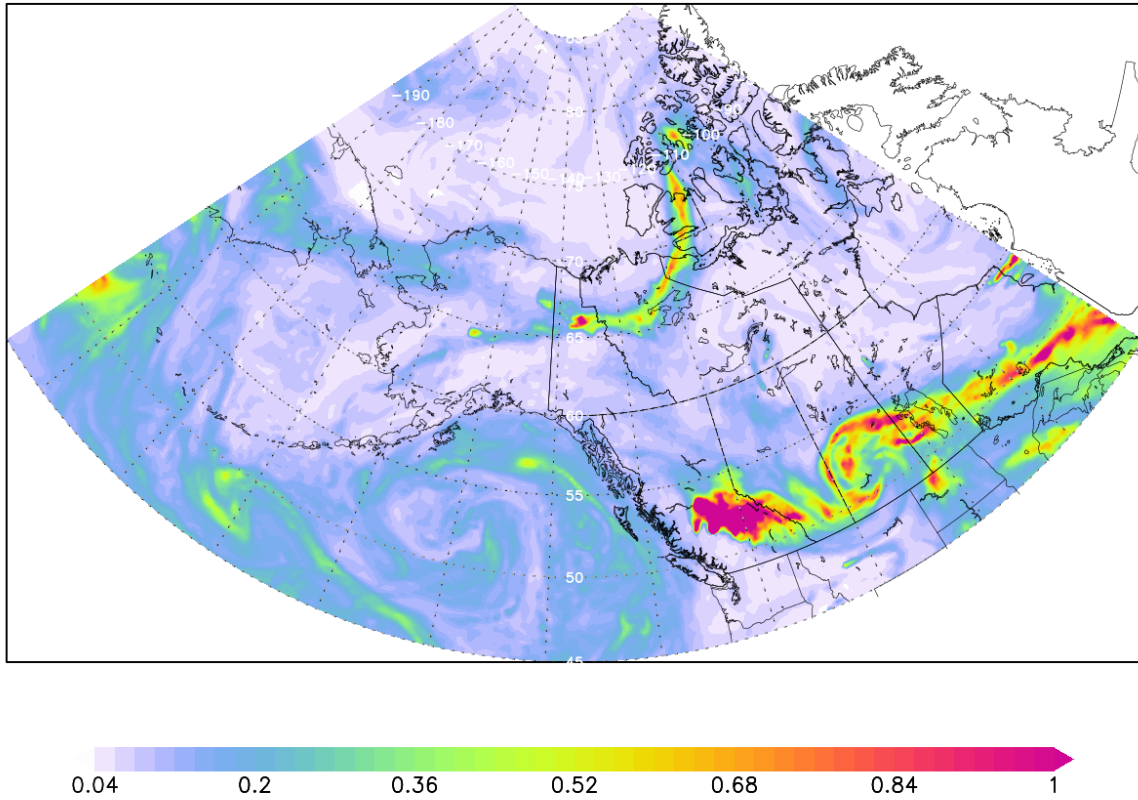
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GEOS Aerosol Optical Depth  
Initial time 18 JUL. 00z  
Valid time 20 JUL. 21z



ABOVE\_Total\_AOD\_IT\_00z18JUL\_VT\_21z21JUL.png

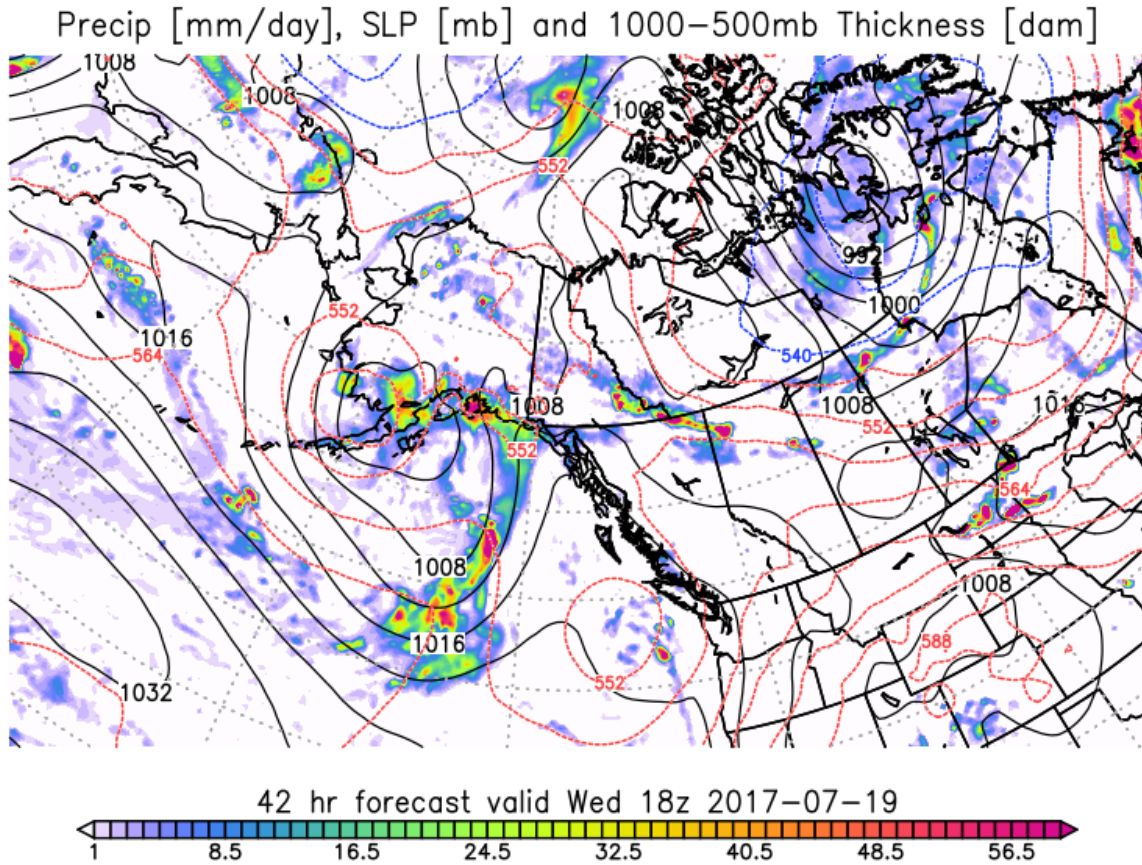
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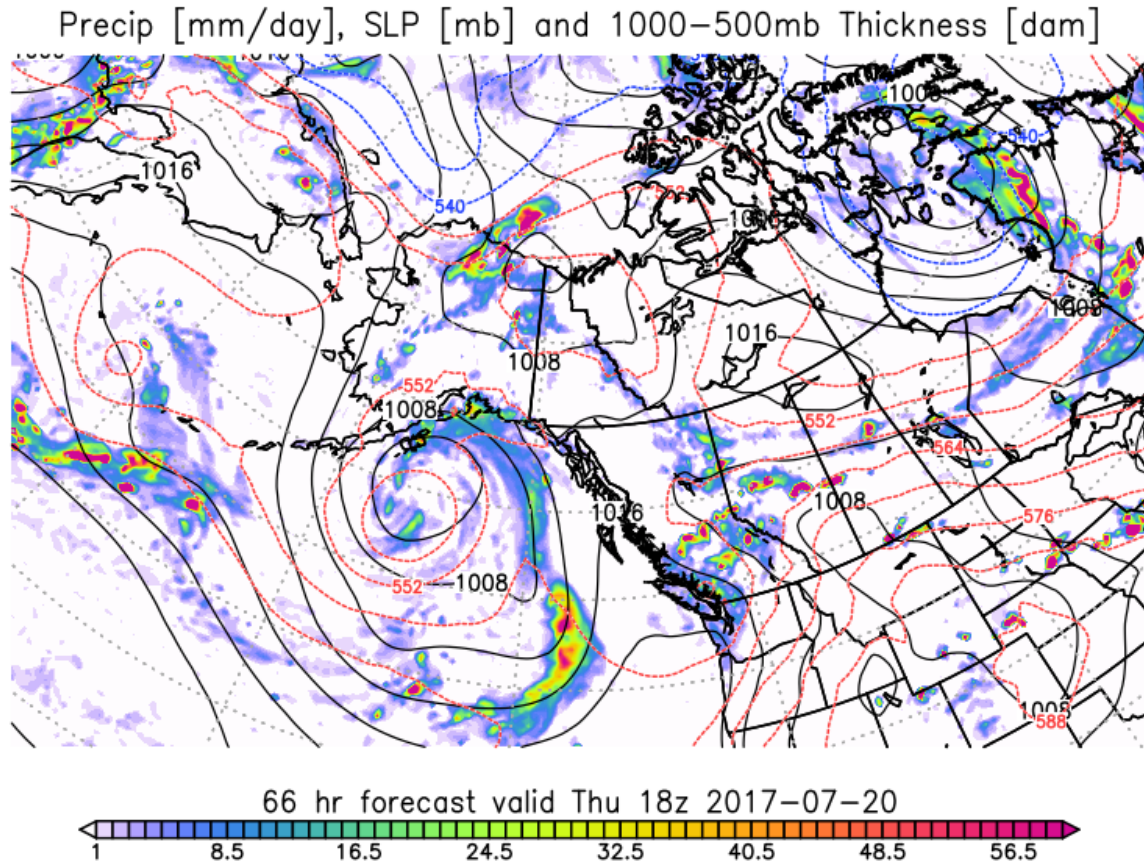
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NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-07-18



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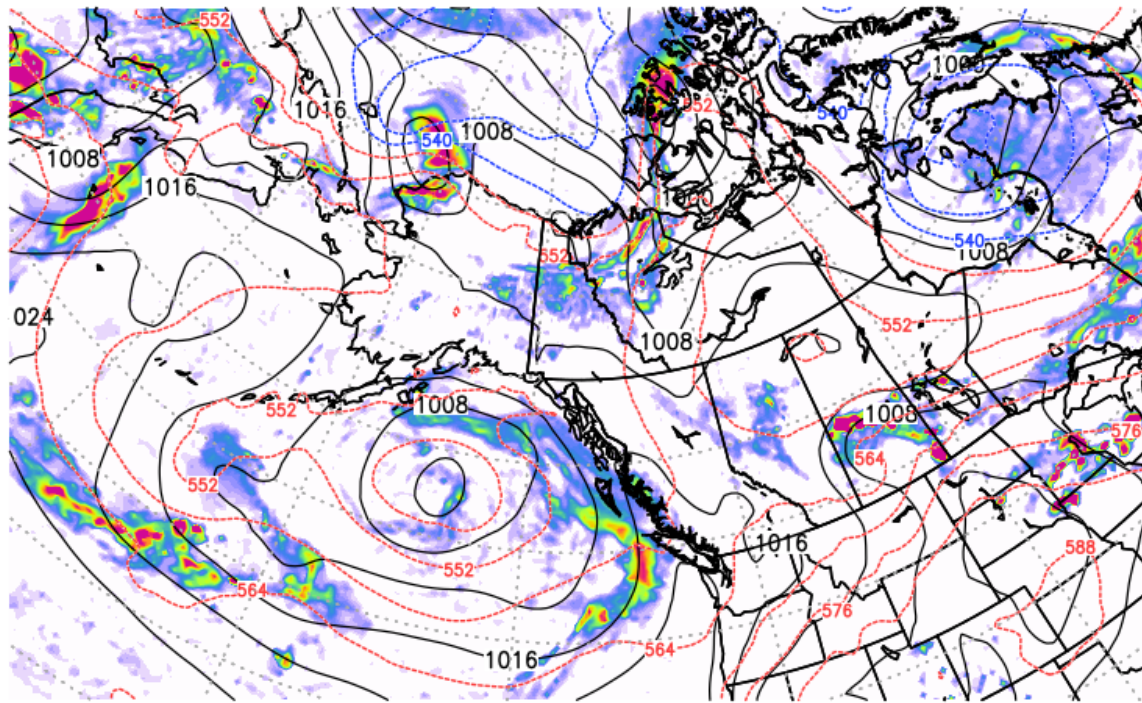
NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-07-18



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NASA/GMAO - GEOS-5 Forecast Initialized on 00z 2017-07-18

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



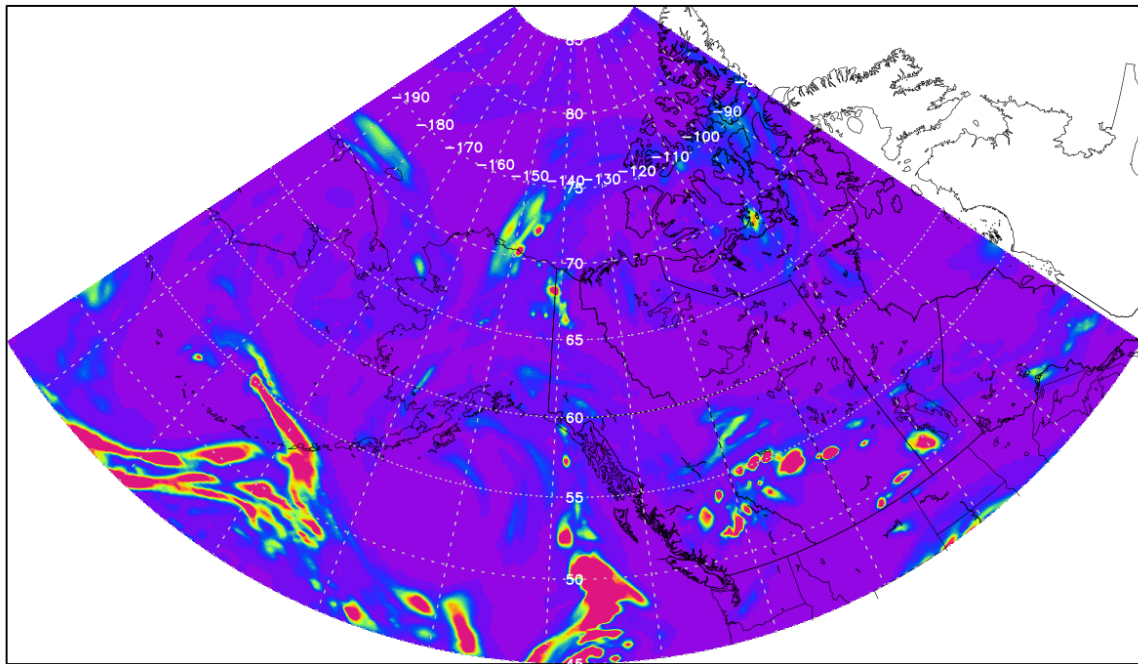
90 hr forecast valid Fri 18z 2017-07-21





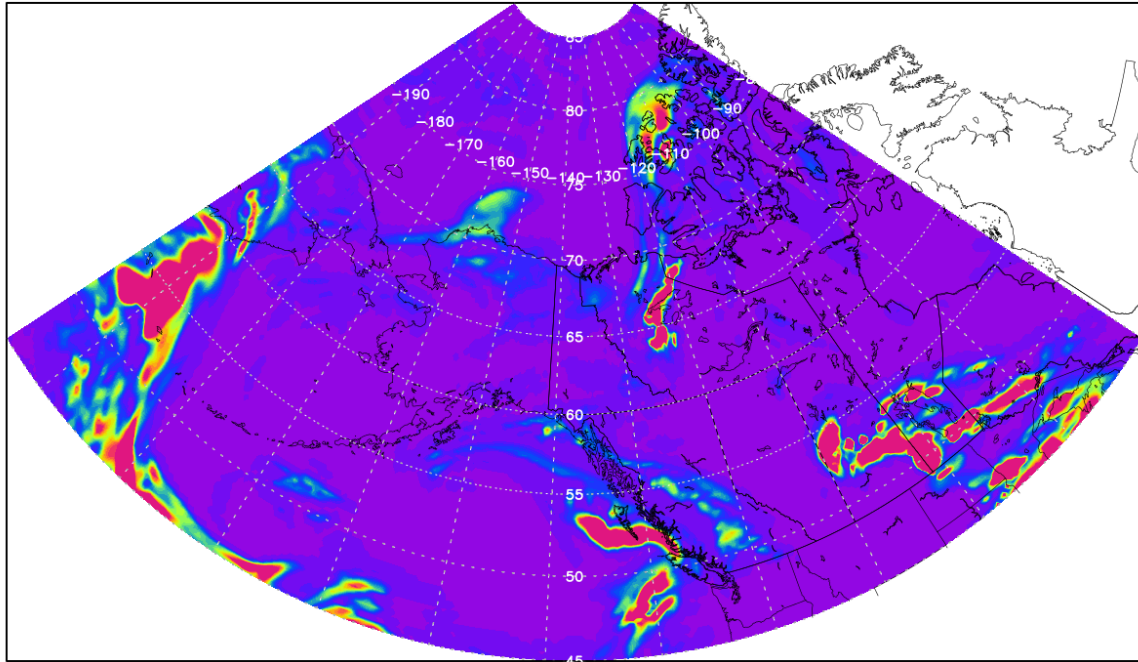
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GEOS High Cloud Optical Depth  
Initial time 18 JUL. 00z  
Valid time 20 JUL. 18z



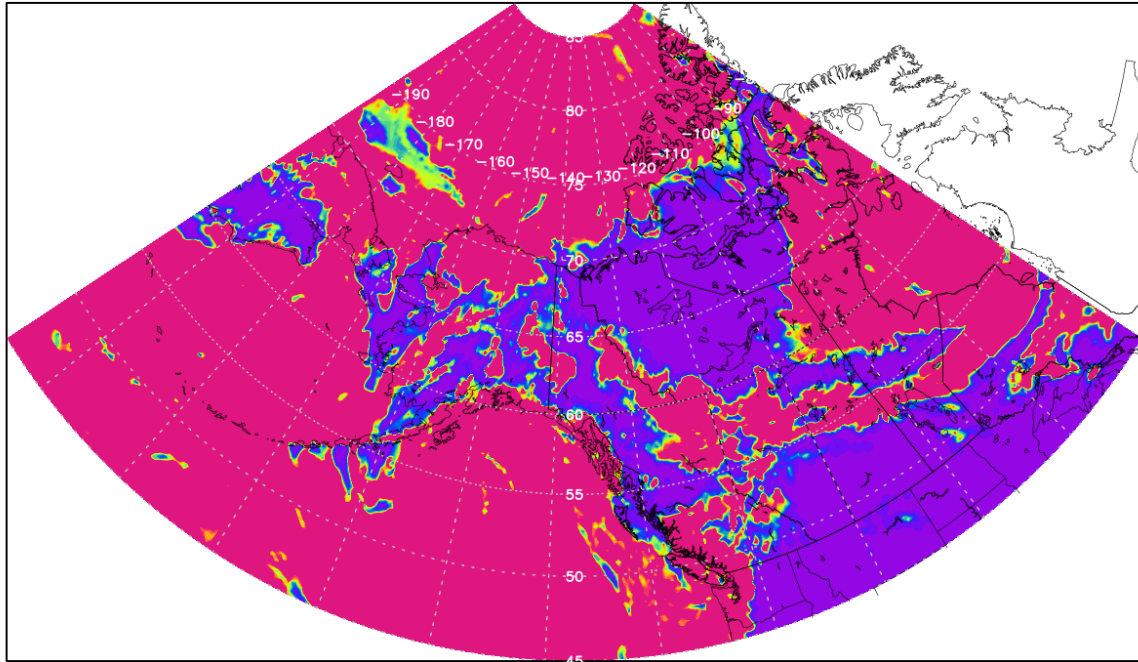
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GEOS High Cloud Optical Depth  
Initial time 18 JUL. 00z  
Valid time 21 JUL. 18z



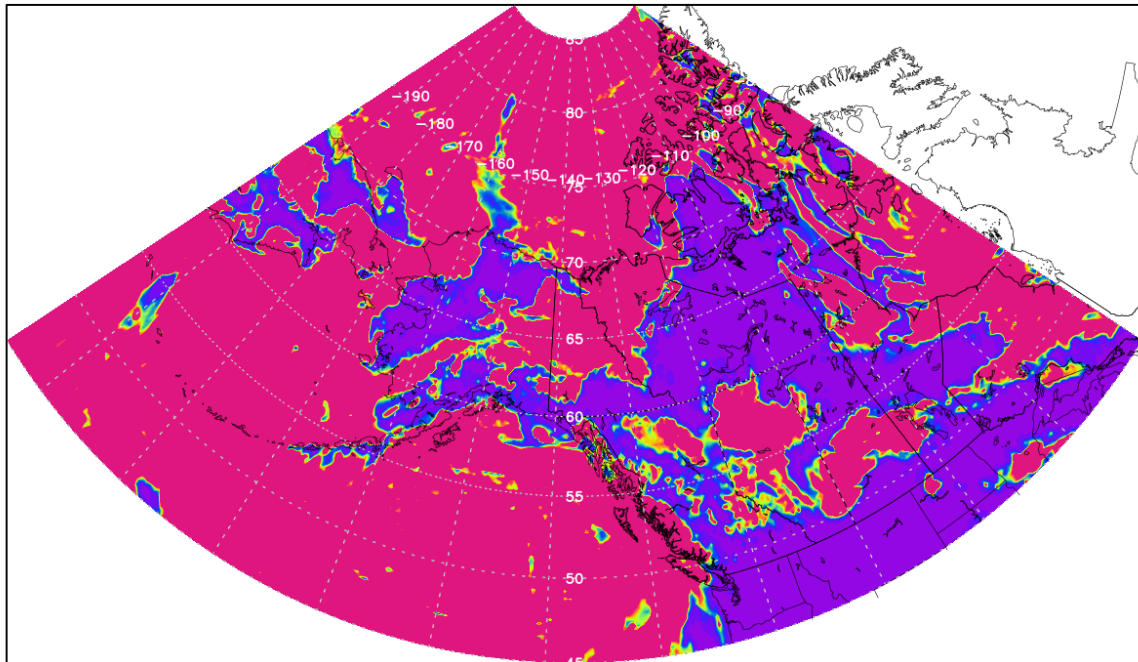
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GEOS Low Cloud Optical Depth  
Initial time 18 JUL. 00z  
Valid time 20 JUL. 18z



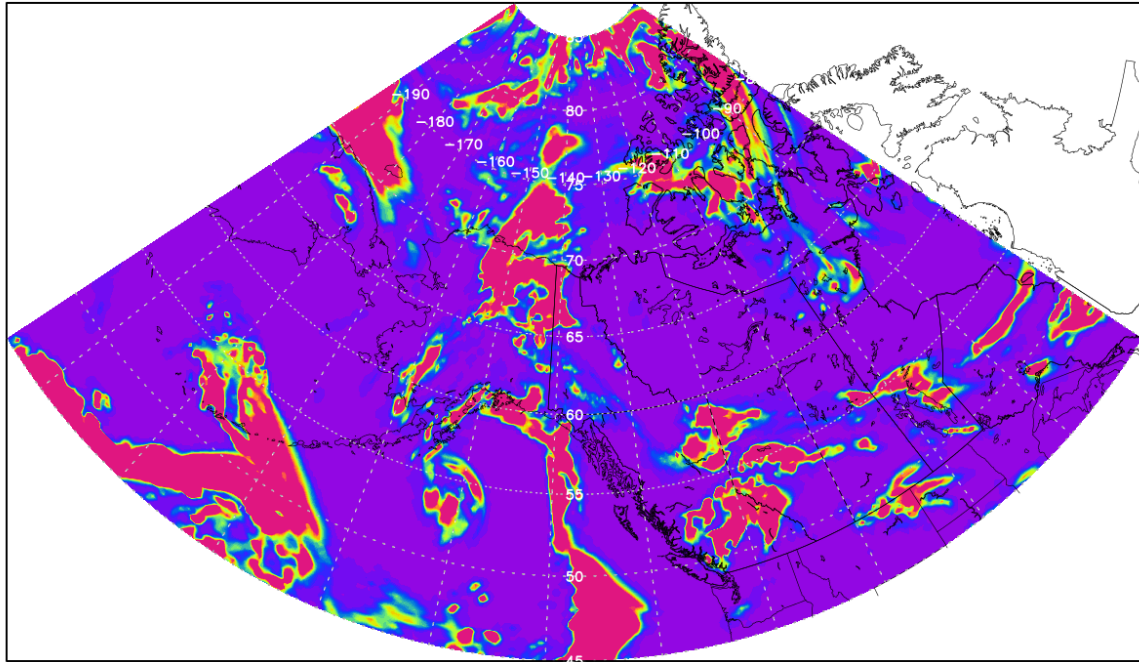
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GEOS Low Cloud Optical Depth  
Initial time 18 JUL. 00z  
Valid time 21 JUL. 18z



ABOVE\_Mid\_Cloud\_Optical\_Depth\_IT\_00z18JUL\_VT\_18z20JUL.png

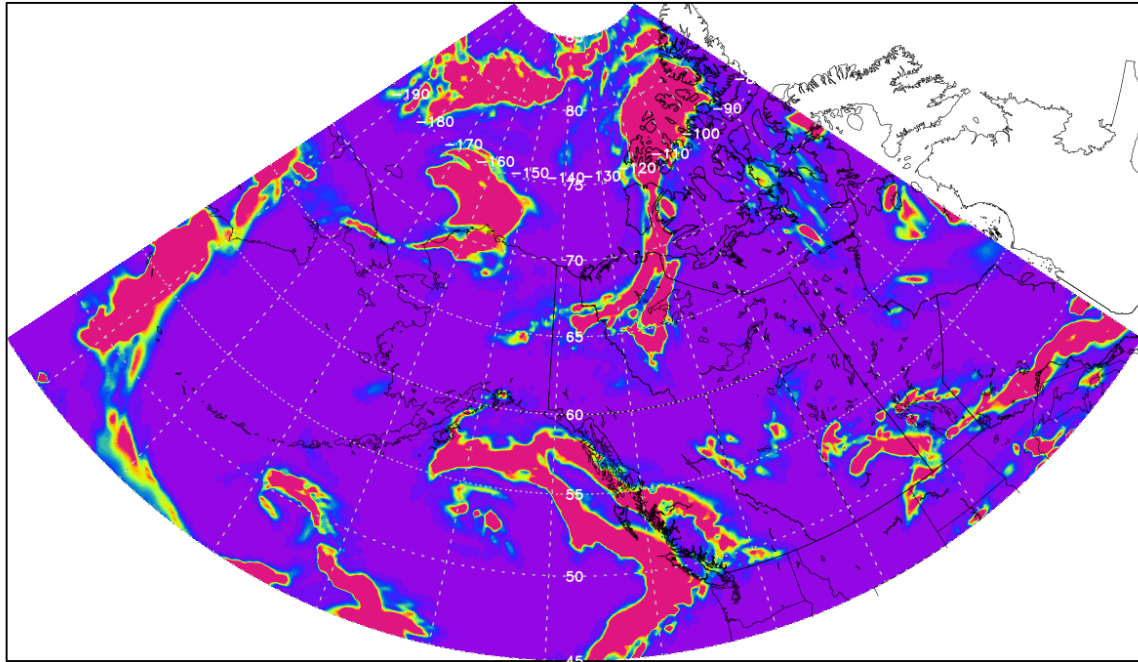
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Initial time 18 JUL. 00z  
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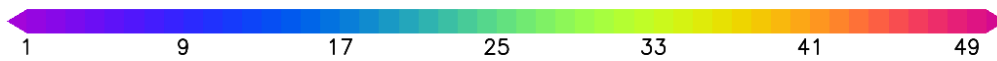
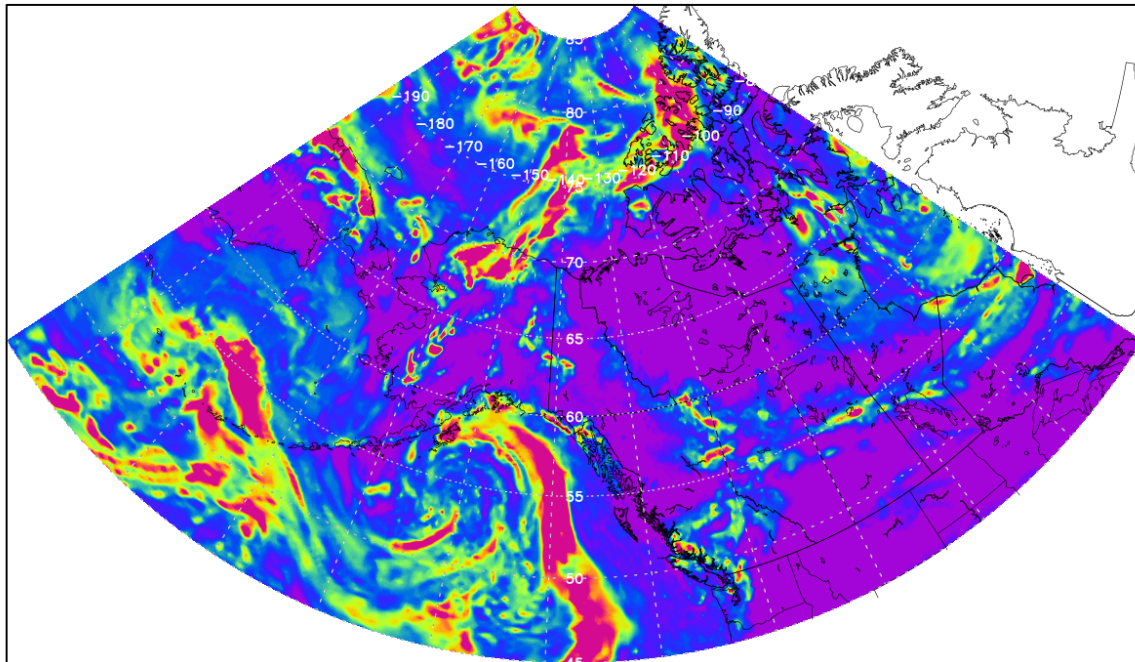
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GEOS Mid Cloud Optical Depth  
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Valid time 21 JUL. 18z



ABOVE\_Total\_Cloud\_IT\_00z18JUL\_VT\_18z20JUL.png

GEOS Total Cloud Optical Depth  
Initial time 18 JUL. 00z  
Valid time 20 JUL. 18z



ABOVE\_Total\_Cloud\_IT\_00z18JUL\_VT\_18z21JUL.png

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

