

ABOVE Regional Weather Briefing  
Based on the GMAO GEOS meteorology and aerosol forecast fields  
Model Initialized 00z 28 June 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*

**Day-1 Forecast**  
**Valid 1500z 29 June through 2359z 29 June**

High pressure will be centered over the Beaufort Sea and affecting the adjacent Arctic latitudes of Alaska and Canada. Meanwhile a low pressure system will spin in from the north Gulf of Alaska and overspread warm frontal clouds and rainfall ashore southern Alaska into northwest BC. A weak pressure pattern will be found in between from PAFA through interior YKT and down to Fort Liard. In this weak pressure pattern region, early day skies will favor good visual flight lines, with deteriorating conditions later in the afternoon (driven by the heating of the day and near terrain). Showers and a few thunderstorms will develop from Bear Lake southwest to Liard and then into northern AB.

Best opportunities for clear or mainly clear skies on Thursday will exist along the southern borders of AB into BC. Then up north, stretches of clear targets should exist in a box bound by 63-70N and 150W-130W, including PAFA and PASC. As is typical for PASC, temporary periods of low scattered to broken clouds can always exist there at flight level 003-008. While not optically thick, some slight aerosol haze may be noted over northeast Alaska and adjacent northern YKT. A fire also appears to be ongoing near 60N/114W.

**Day-2 Forecast**  
**Valid 1500z 30 June through 2359z 30 June**

On Friday a more organized long and narrow line of showers and thunderstorms will develop out ahead of the Gulf of Alaska low approaching the south Alaskan coast. at 18z Friday this line will be draped from the Seward Peninsula...to PAFA...through the center of the YKT...to Liard...and into northern AB. This line of shower and thunderstorms will move from SSW to NNE and get stronger throughout the daylight hours.

Other organized cloud cover will be located in the vicinity of the NWT large lakes.

Clear sky opportunities on Friday appear to be limited to the Arctic Circle latitudes from Inuvik west to PASC. Down south, there will be mainly clear skies for the south half of BC and into southwestern AB. Any haze from smoke/aerosol should stay confined to near the line of showers/t-storms. A couple of small fires are signaled over Washington state and southern BC.

**Day-3 Outlook****Valid 1500z 01 July through 2359z 01 July**

The large scale weather pattern over the Alaska/adjacent Canada region on Saturday will feature a broad gyre of low pressure over the northern Gulf into southern Alaska. A weaker trough of low pressure will then be found from interior Alaska into the YKT...over the western NWT...and down through AB. Saturday is not shaping up to be a favorable day for clear visuals most areas of the mission region.

Broken to overcast cloud cover of multiple layers will be omnipresent region-wide. With later forecasts perhaps we can refine some potential clear targets...but at the moment, large stretches of these clear areas are not being forecast by the model.

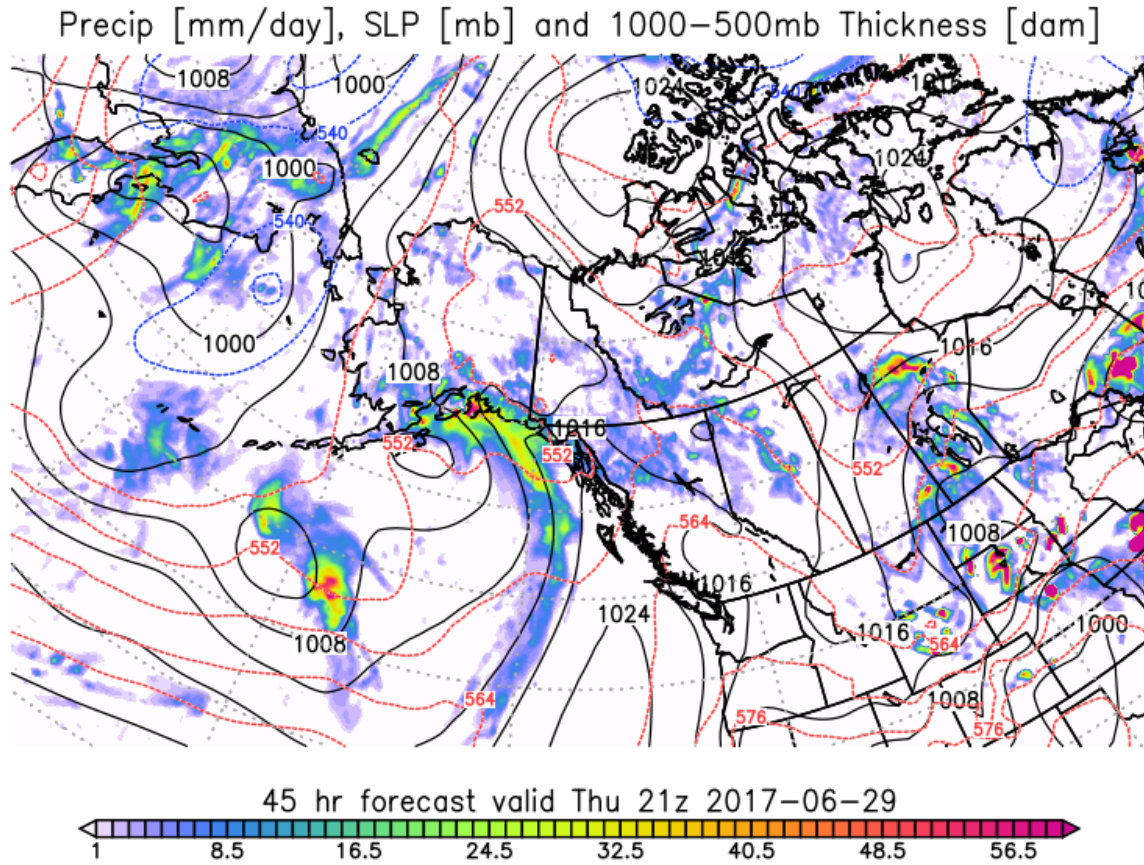
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Gary Partyka

Global Modeling and Assimilation Office - GSFC

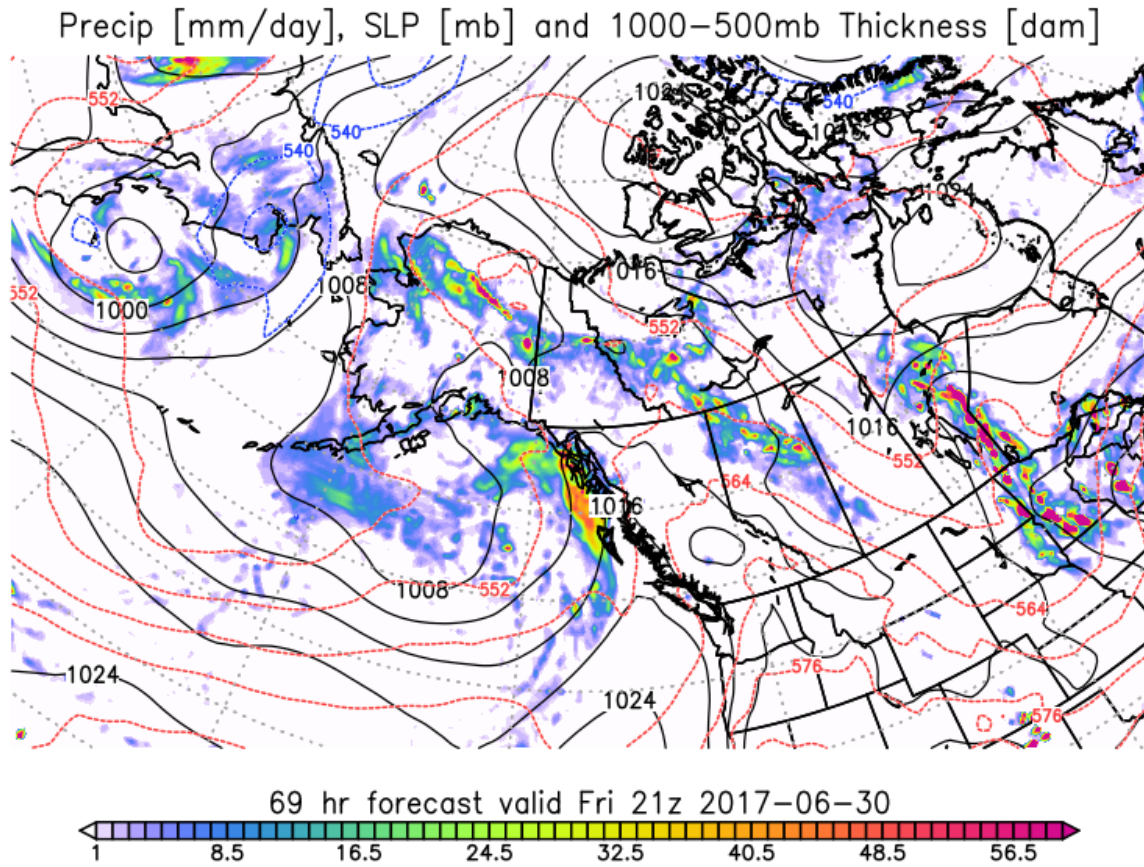
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NASA/GMAO - GEOS-5 Forecast Initialized on 00z 2017-06-28



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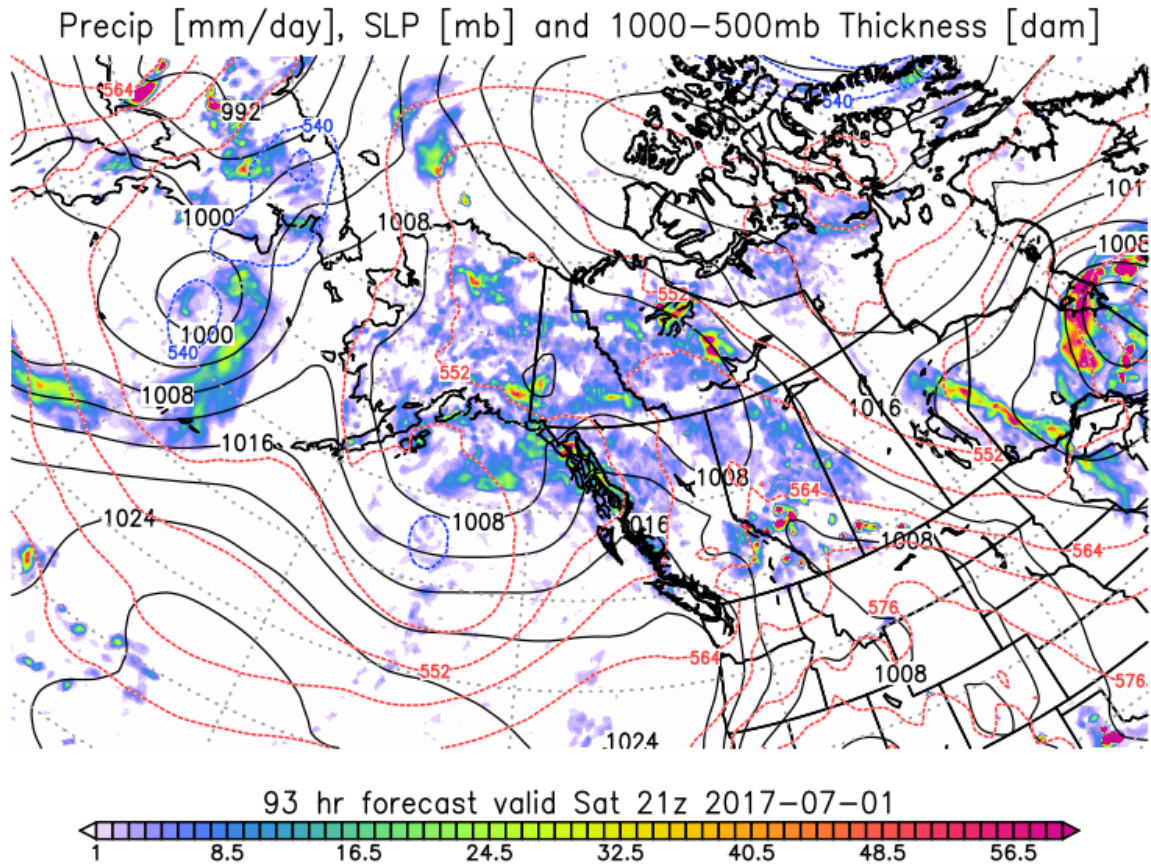
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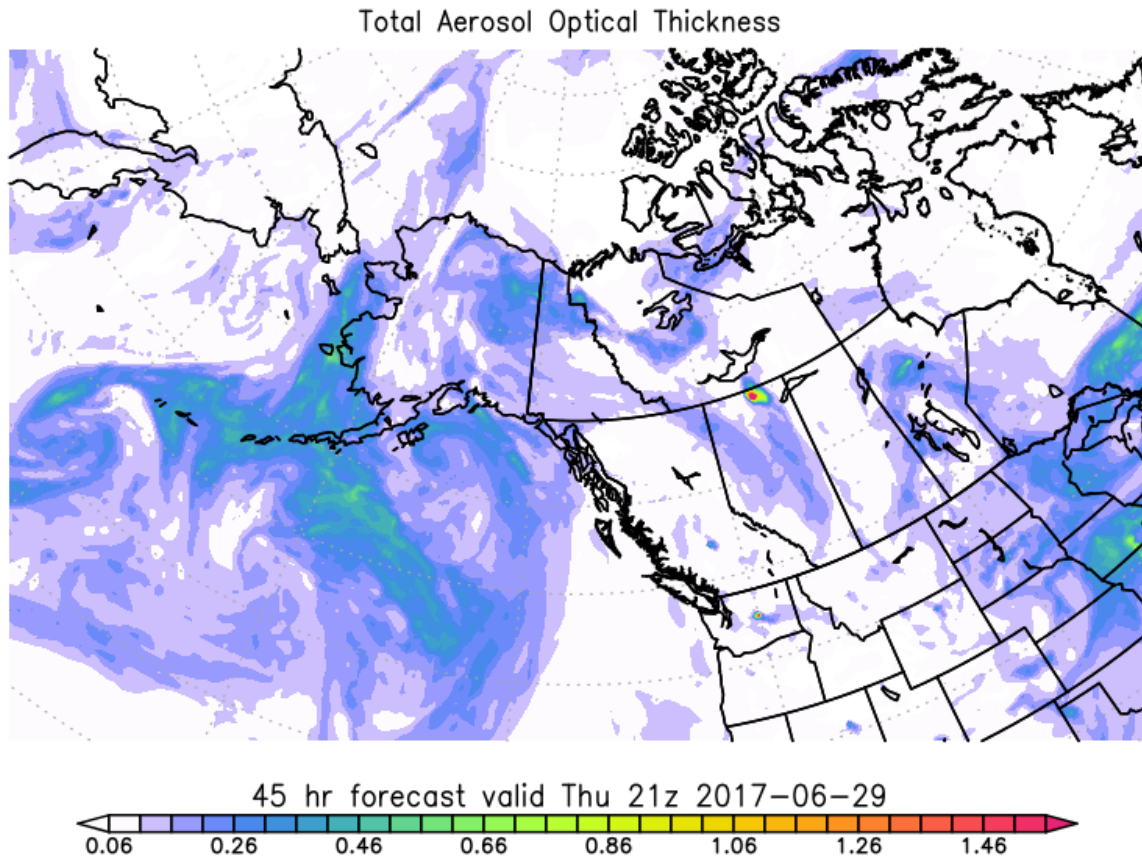
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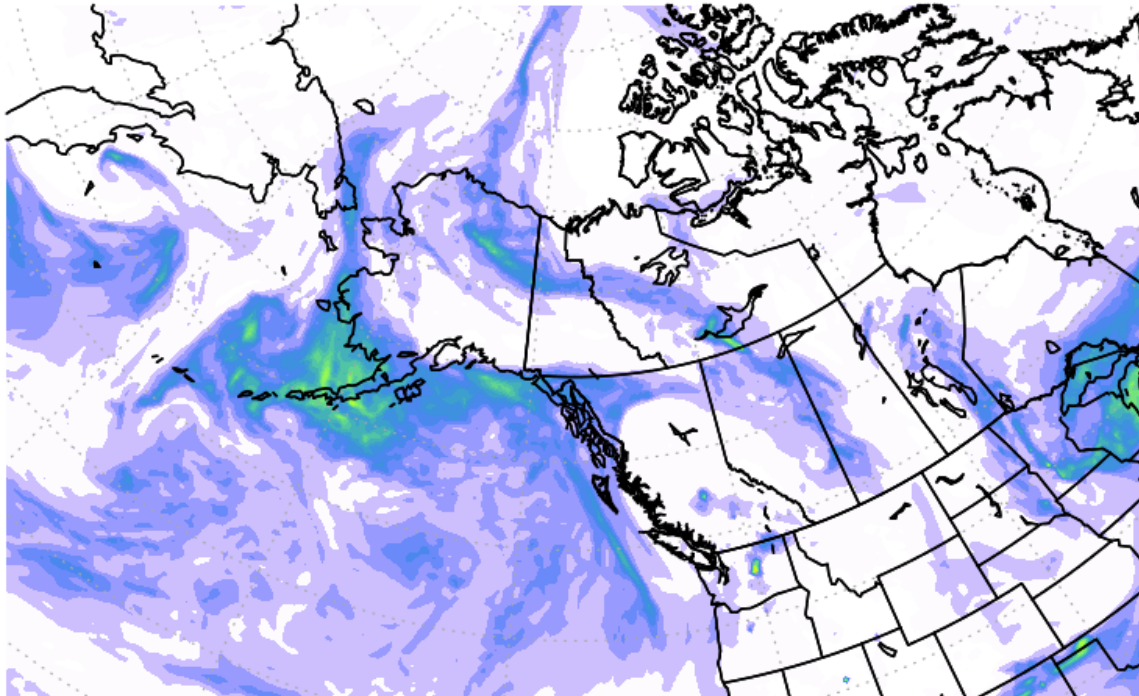
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Total Aerosol Optical Thickness

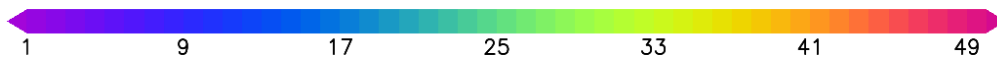
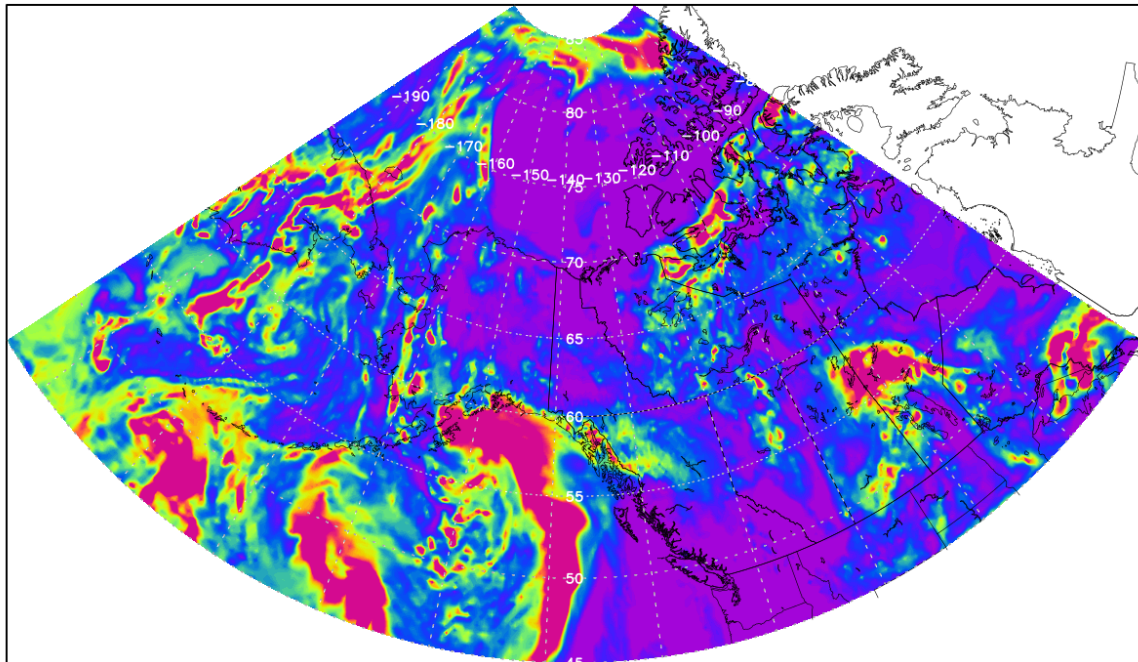


69 hr forecast valid Fri 21z 2017-06-30



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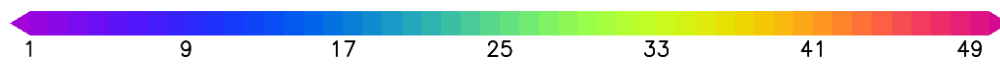
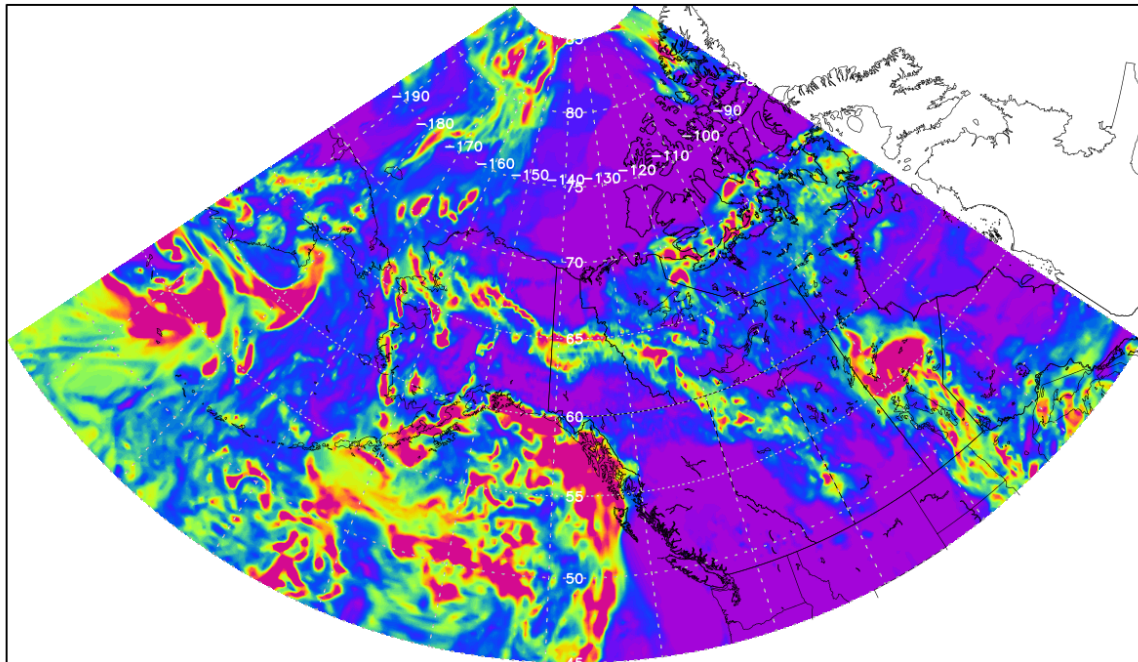
GEOS Total Cloud Optical Depth  
Initial time 28 JUN. 00z  
Valid time 29 JUN. 18z





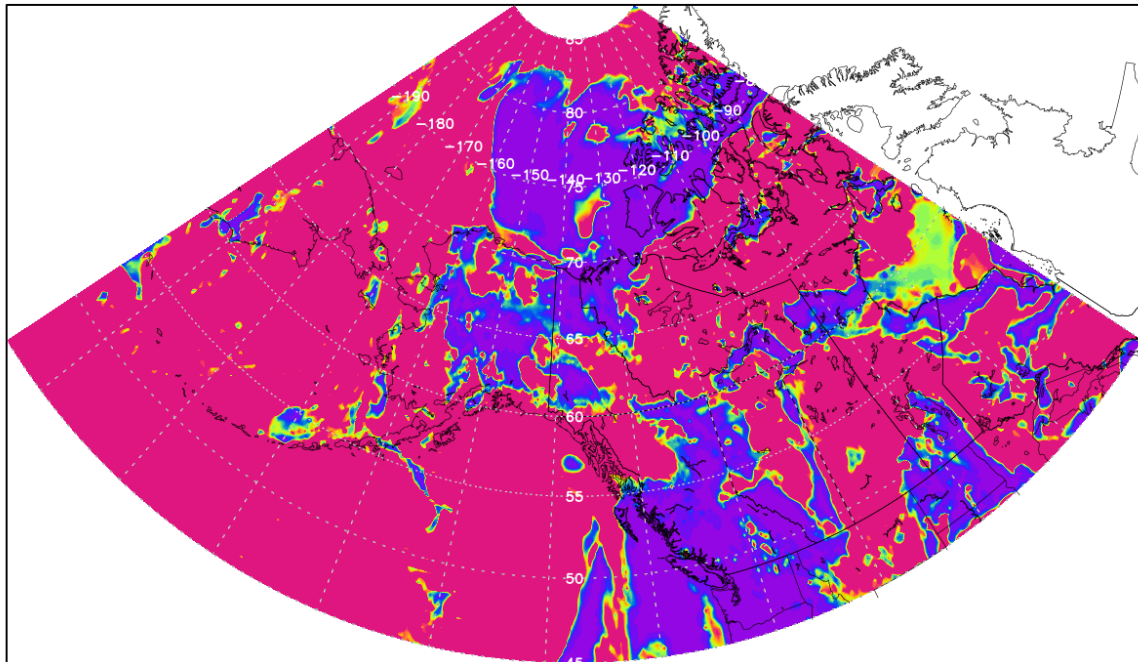
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GEOS Total Cloud Optical Depth  
Initial time 28 JUN. 00z  
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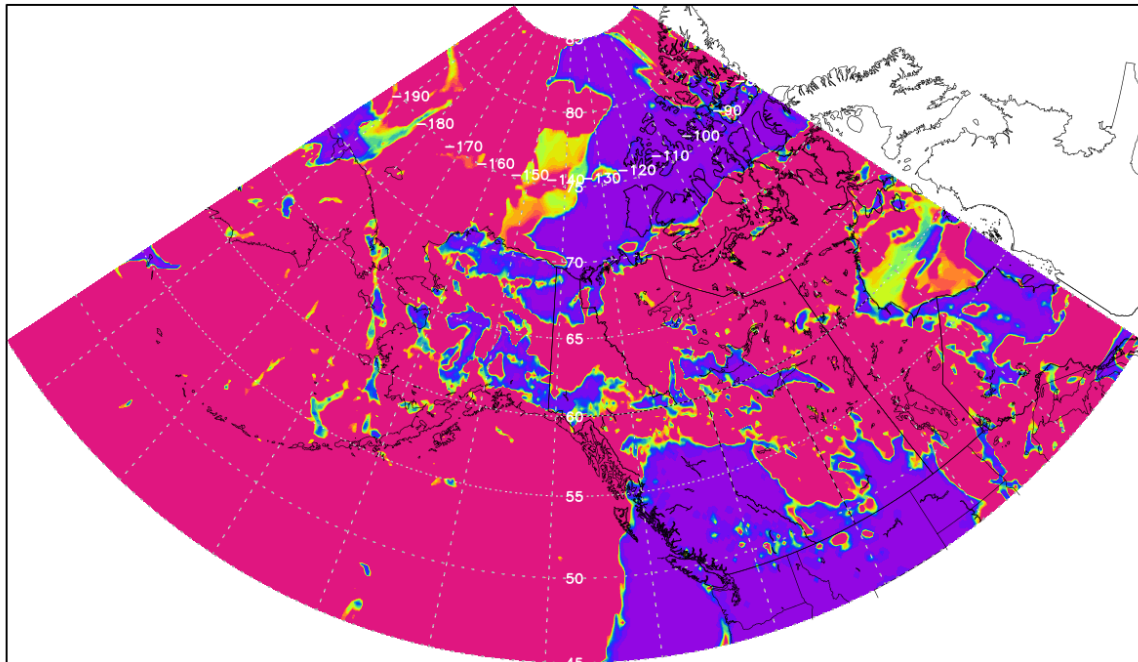
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GEOS Low Cloud Optical Depth  
Initial time 28 JUN. 00z  
Valid time 29 JUN. 18z



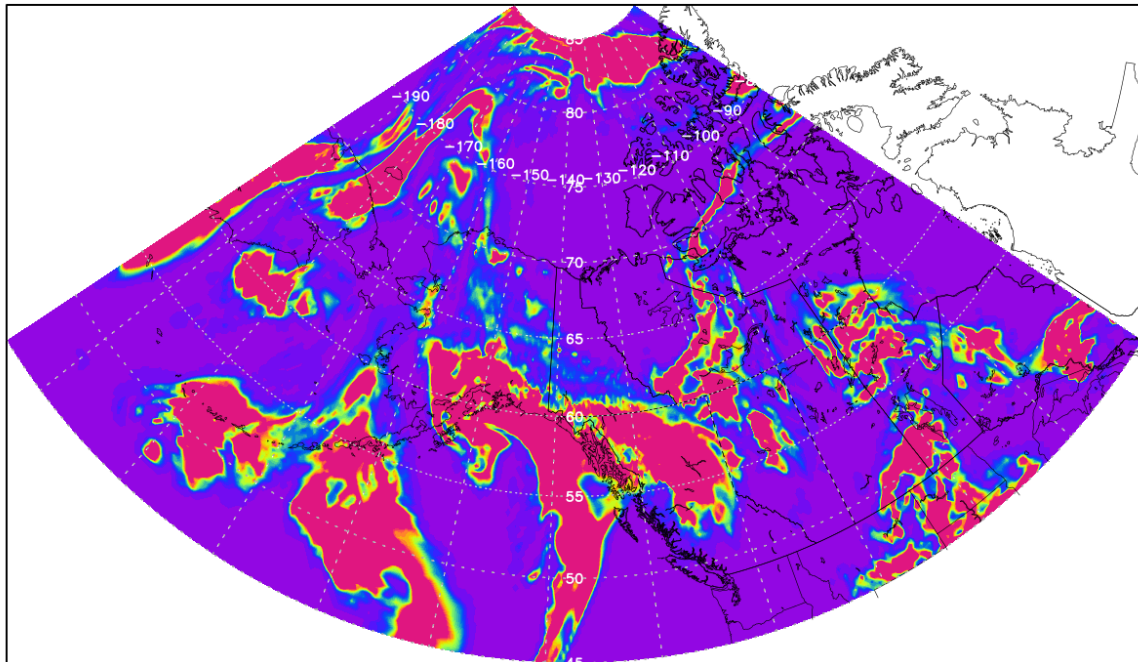
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GEOS Low Cloud Optical Depth  
Initial time 28 JUN. 00z  
Valid time 30 JUN. 18z



ABOVE\_Mid\_Cloud\_Optical\_Depth\_IT\_00z28JUN\_VT\_18z29JUN.png

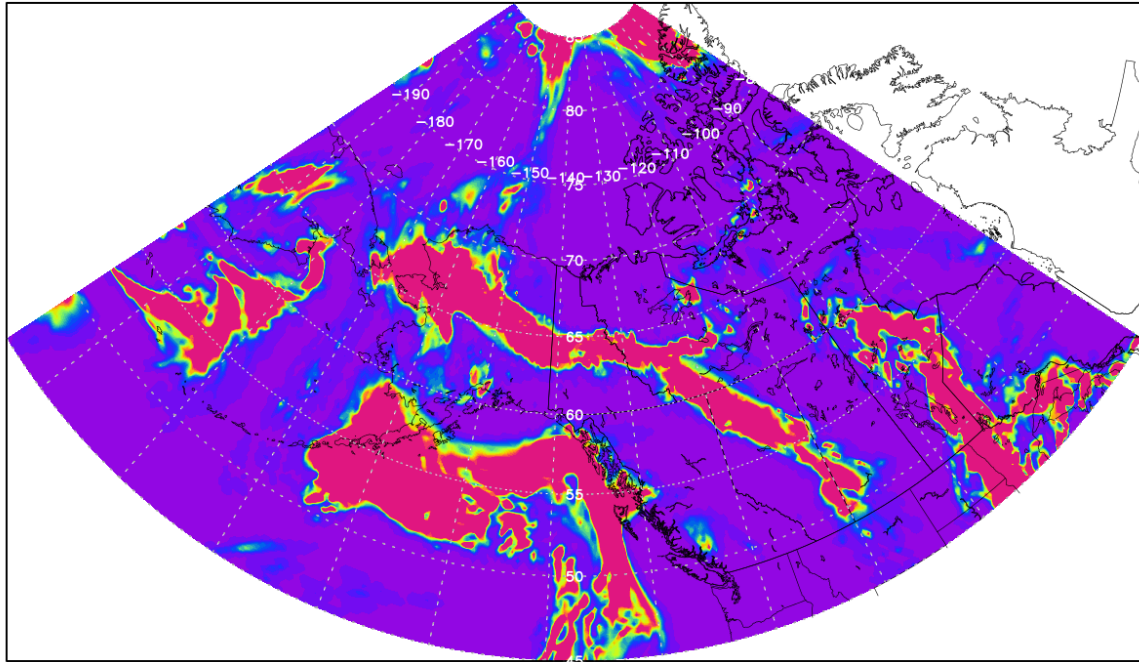
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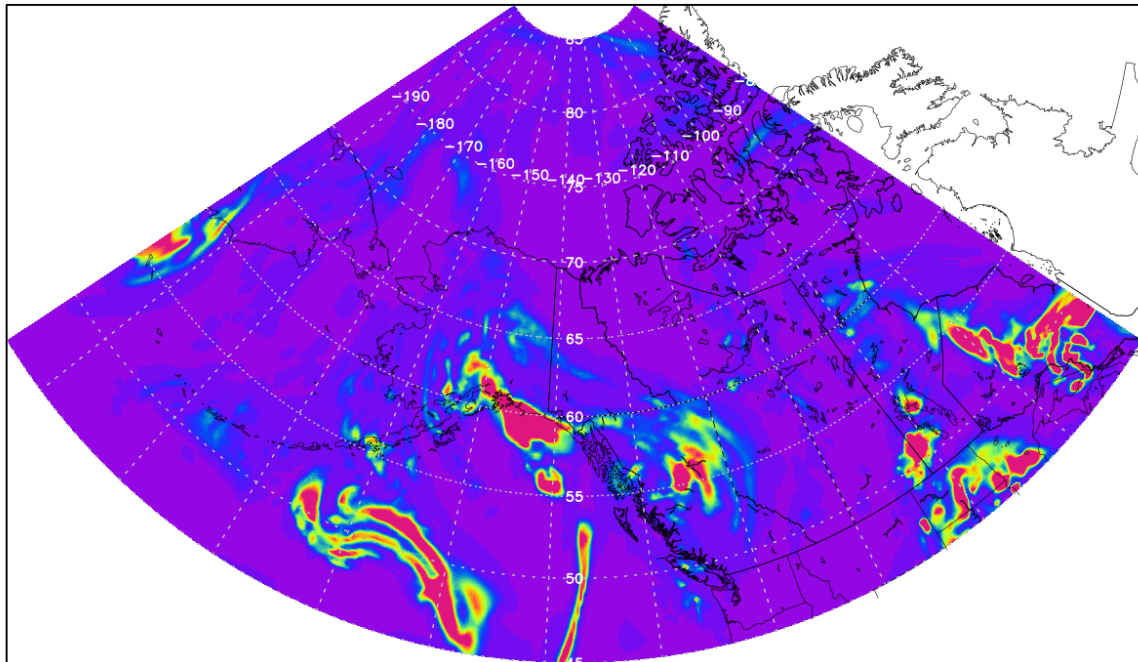
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GEOS Mid Cloud Optical Depth  
Initial time 28 JUN. 00z  
Valid time 30 JUN. 18z



ABOVE\_High\_Cloud\_Optical\_Depth\_IT\_00z28JUN\_VT\_18z29JUN.png

GEOS High Cloud Optical Depth  
Initial time 28 JUN. 00z  
Valid time 29 JUN. 18z



ABOVE\_High\_Cloud\_Optical\_Depth\_IT\_00z28JUN\_VT\_18z30JUN.png

GEOS High Cloud Optical Depth  
Initial time 28 JUN. 00z  
Valid time 30 JUN. 18z

