

ABOVE Regional Weather Briefing  
Based on the GMAO GEOS meteorology and aerosol forecast fields  
Model Initialized 00z 26 June 2017

*Note: Saskatchewan (SK), Alberta (AB), Manitoba (MB), Northwest Territory (NWT), Yukon Territory (YKT), British Columbia (BC)*

### **Day-1 Forecast**

**Valid 1500z 27 June through 2359z 27 June**

A vigorous low pressure system will be located over northern AB with a trough extending from it well into the NWT. Clouds and precipitation will be found between the large lakes of the NWT and the border with the YKT. Heavy rainfall with convection will occur over the north half of AB, with a line of showers and thunderstorms expected to slice down the long spine of SK as a front extends from the low pressure center. The model and MODIS imagery corroborates that smoke from fires in the YKT is advecting over parts of the northern and central NWT...as well as aerosol matter getting involved with the vigorous AB low pressure center.

The YKT and BC stand the best chances of clear, aerosol-free scenes on Tuesday. Elsewhere, potential clear to mainly clear areas Tuesday includes southern AB and southwest SK. MB should see just mainly high clouds.

Up north, 60-65N and 100-115W in the NWT may also have mainly clear skies.

### **Day-2 Forecast**

**Valid 1500z 28 June through 2359z 28 June**

The AB low pressure center will slowly move to the AB/SK border. A broader trough of low pressure is found from western AB to central SK to central and southeast MB. Up north, high pressure builds in westward from Nunavut to the NWT. A line of showers and thundershowers is expected 18-21z Wednesday between Bear and Slave Lakes.

Multi-layer overcast all of AB and SK except clear skies far southern AB and the southern third of SK. Elsewhere, potential clear regions on Wednesday includes 60-65N and 102W - 115W...including much of the area around Slave Lake...but caution for that line of showers and thundershower approaching from 120W. Much of the YKT and far western NWT will be partly cloudy except additional cloud cover over the higher terrain along the border of YKT/NWT. Mainly clear over BC.

Any smoke aerosol is expected to be co-located with regions of cloud cover mentioned above (see aerosol figure for Wednesday afternoon).

### **Day-3 Outlook**

**Valid 1500z 29 June through 2359z 29 June**

The outlook period shows a weak pressure pattern across the mission region. The old low pressure system over the Prairie Provinces weakens as it moves towards the southern SK/MB

border. Scattered afternoon showers may pop up over northern AB and western NWT associated with daytime heating but with weak large-scale forcing. A Gulf of Alaska low pressure system comes ashore the BC/Alaska coastline with rainfall.

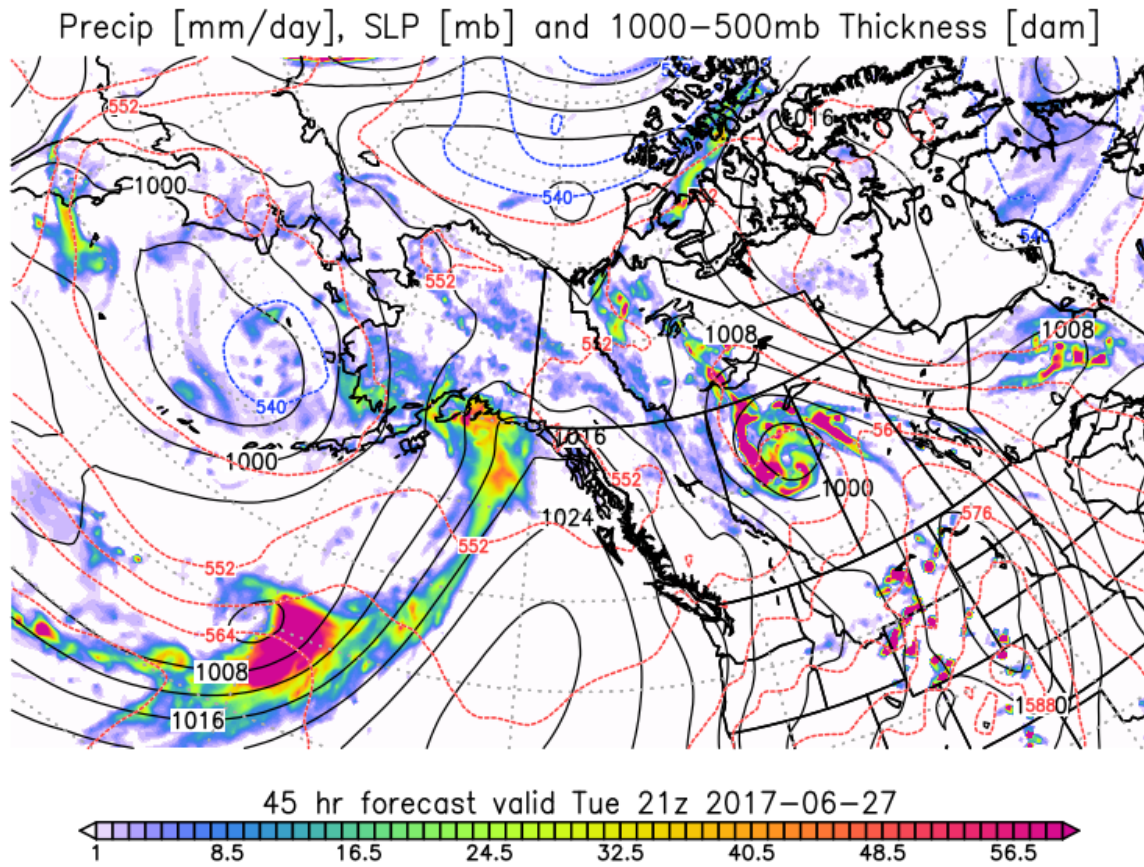
Patches of alternating clear and partly cloudy (up to 50%) skies expected over most or all of YKT and NWT as well as southern BC. Can not rule out an isolated shower forming western NWT and northern AB.

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Gary Partyka  
Global Modeling and Assimilation Office - GSFC

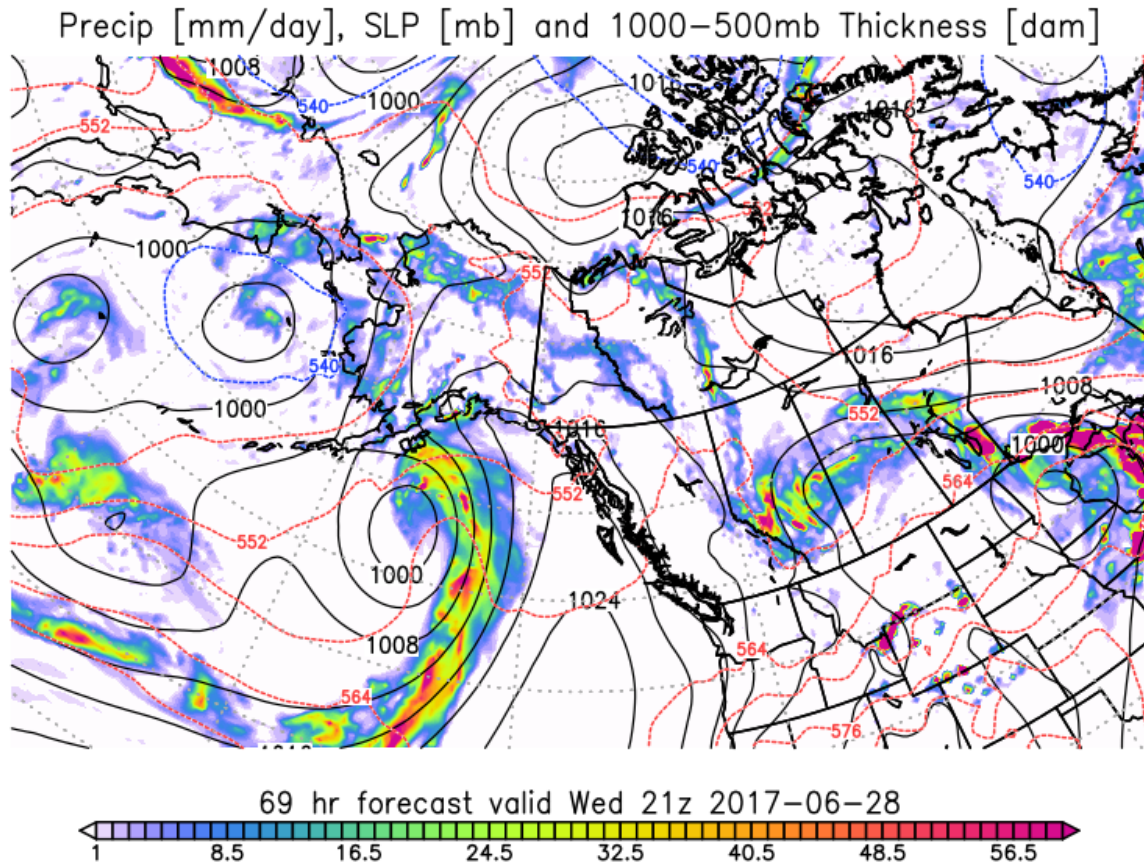
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NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-06-26



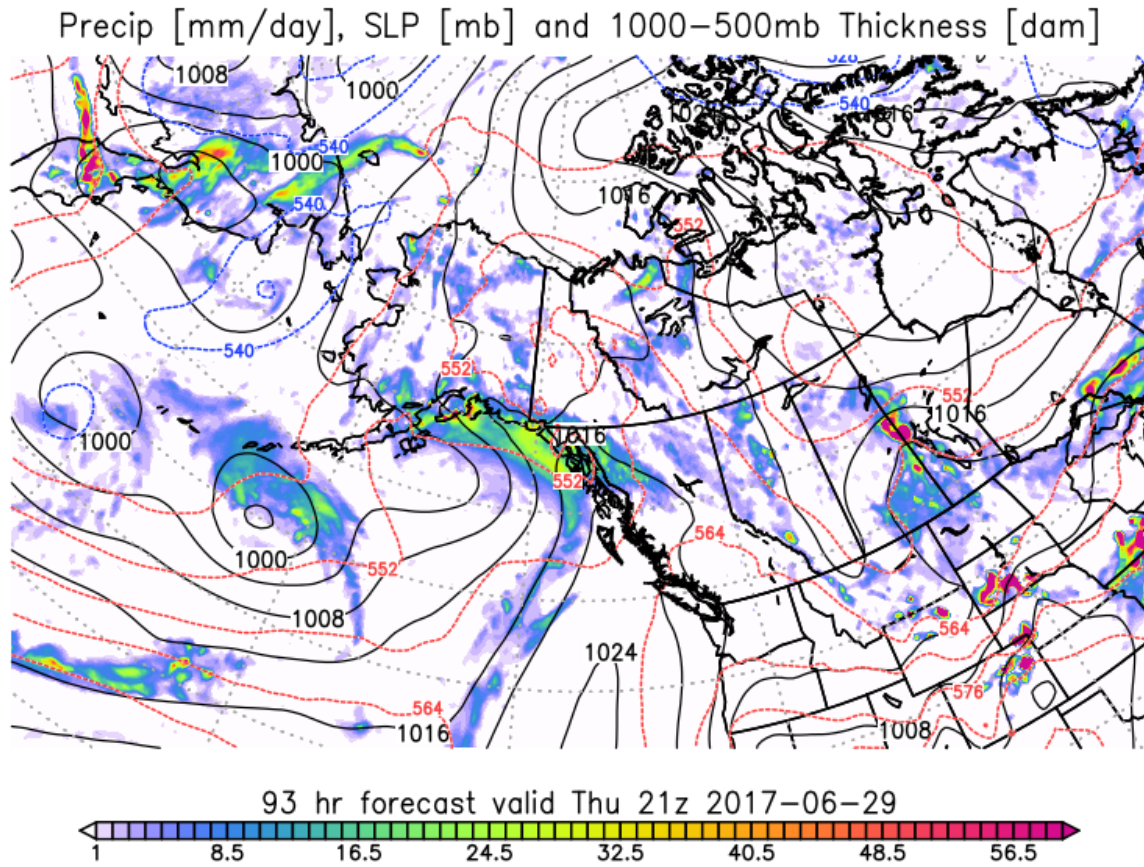
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NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-06-26



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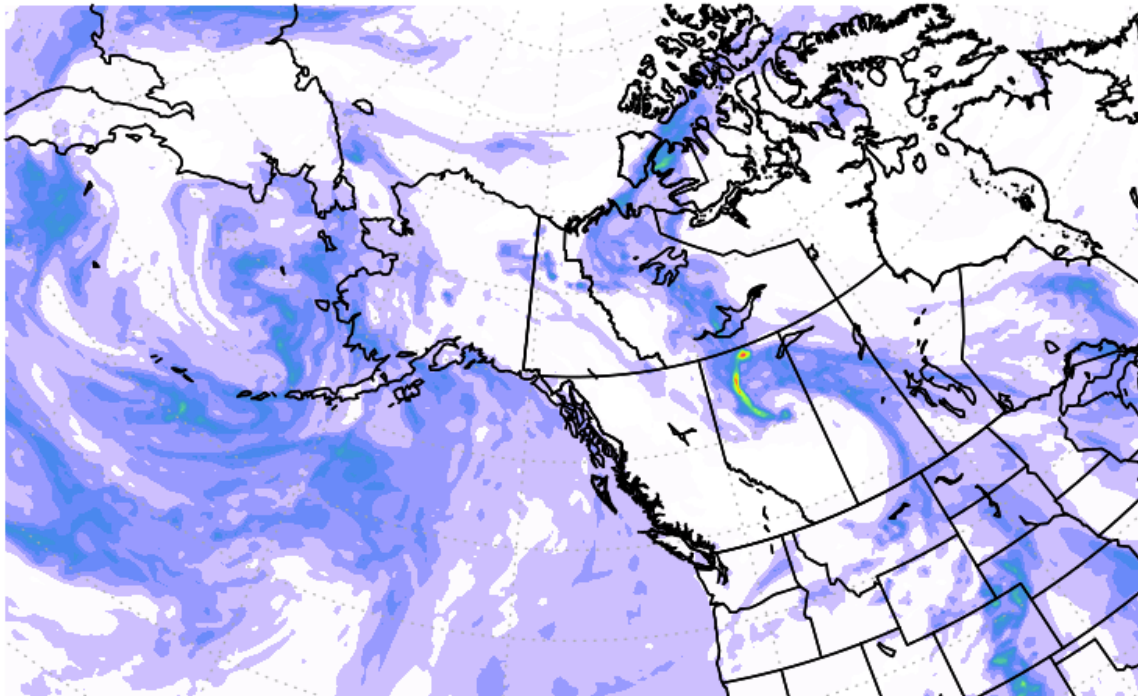
NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-06-26



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NASA/GMAO - GEOS-5 Forecast Initialized on 00z 2017-06-26

Total Aerosol Optical Thickness

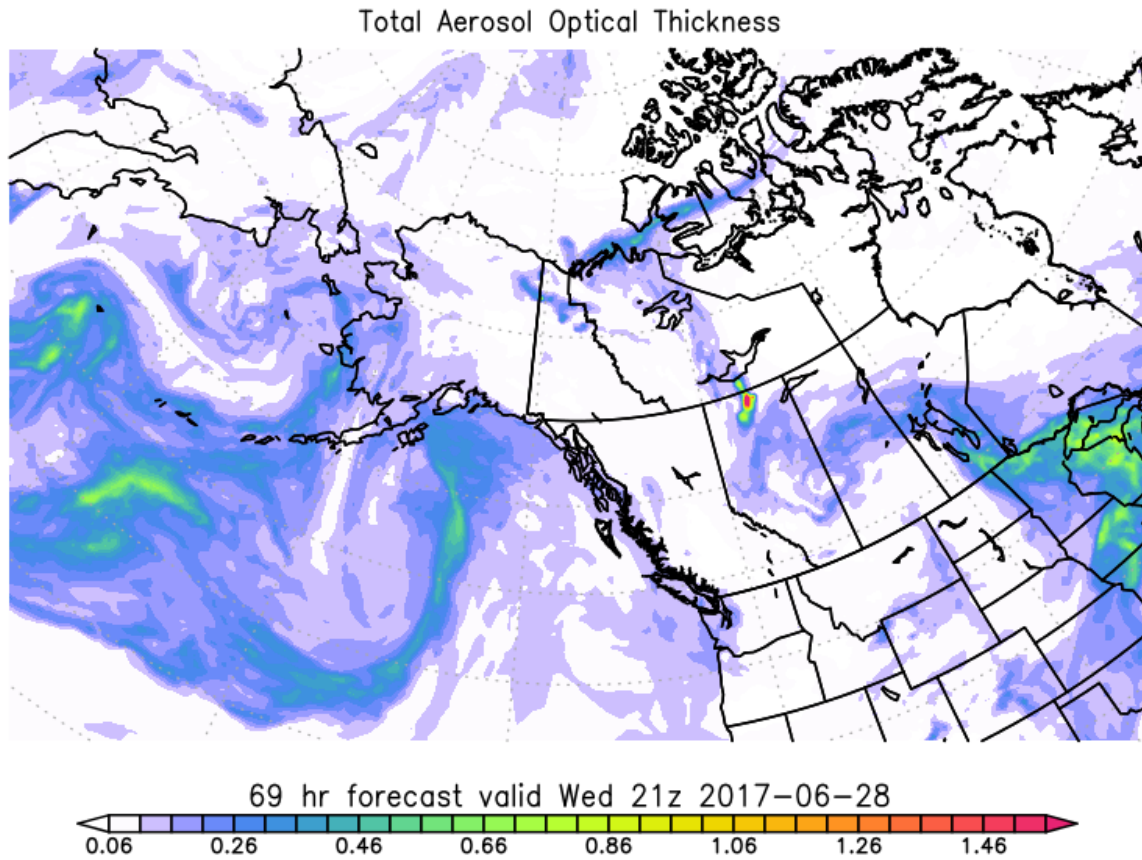


45 hr forecast valid Tue 21z 2017-06-27



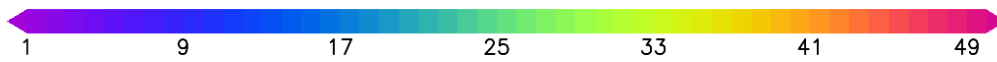
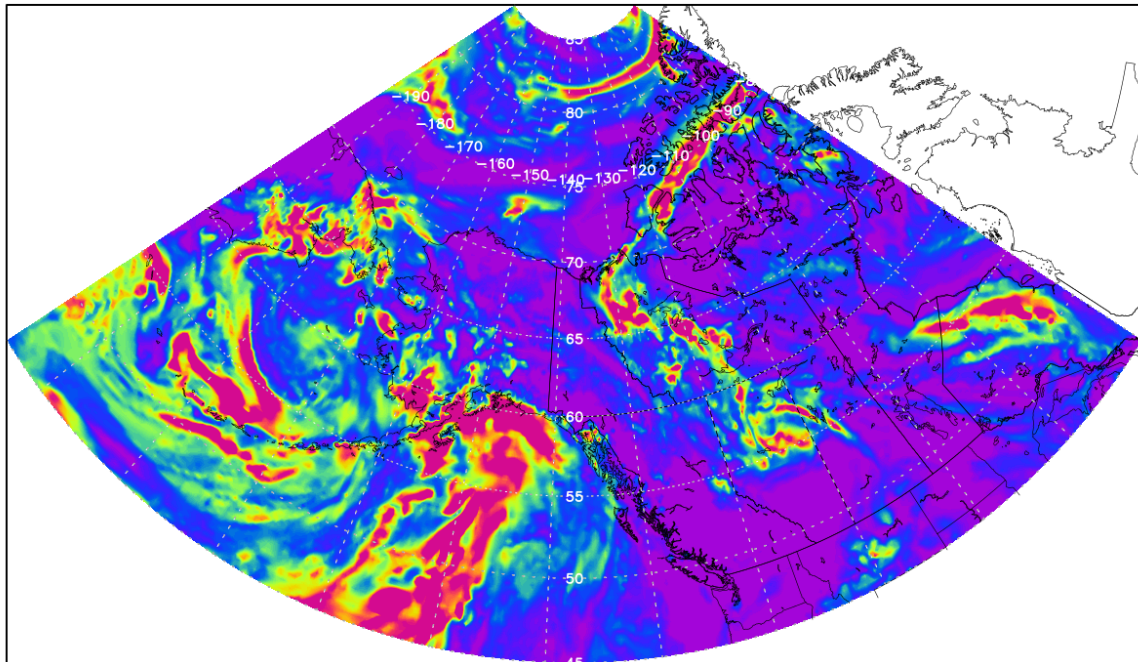
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ABOVE\_Total\_Cloud\_IT\_00z26JUN\_VT\_18z27JUN.png

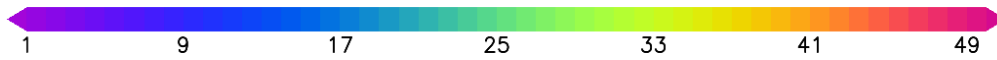
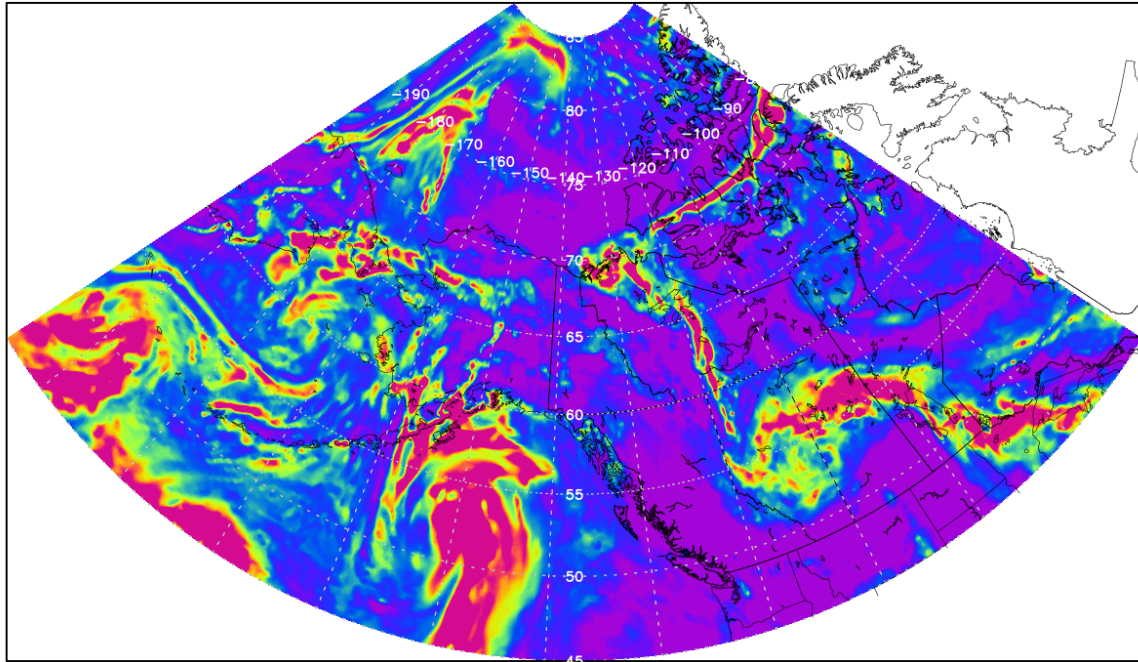
GEOS Total Cloud Optical Depth  
Initial time 26 JUN. 00z  
Valid time 27 JUN. 18z





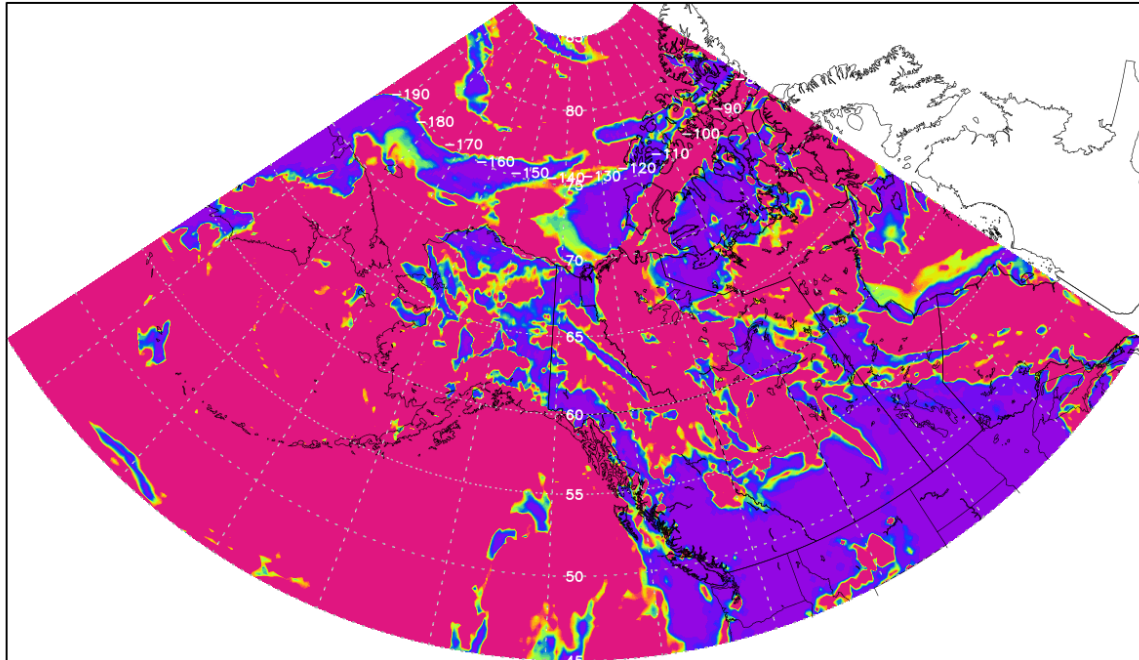
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GEOS Total Cloud Optical Depth  
Initial time 26 JUN. 00z  
Valid time 28 JUN. 18z



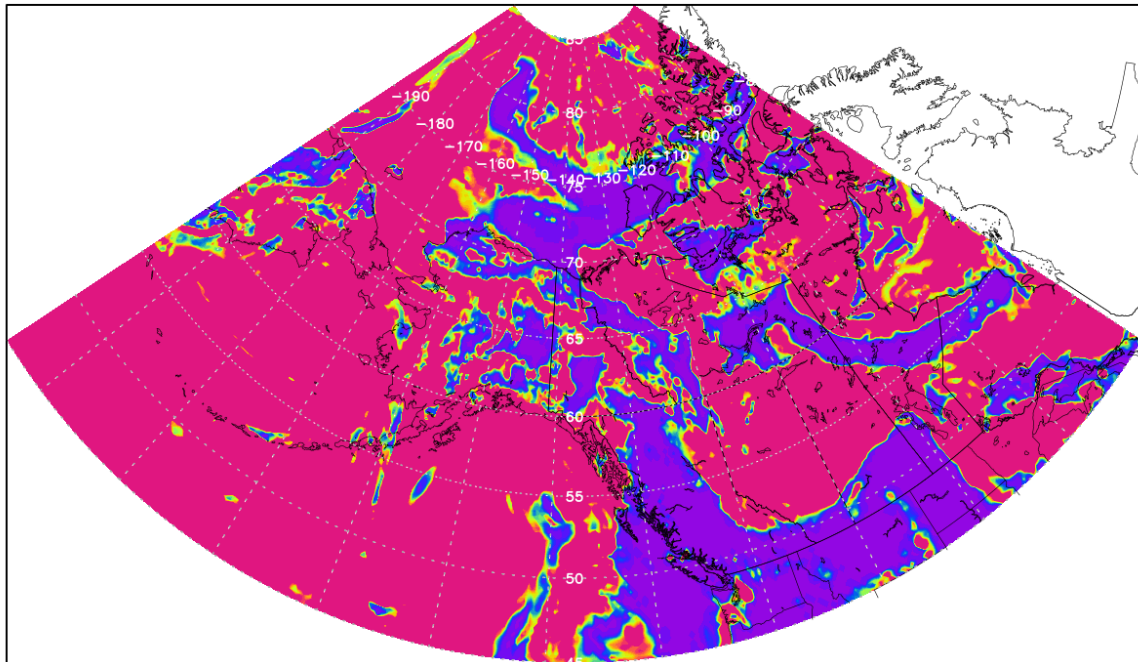
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GEOS Low Cloud Optical Depth  
Initial time 26 JUN. 00z  
Valid time 27 JUN. 18z



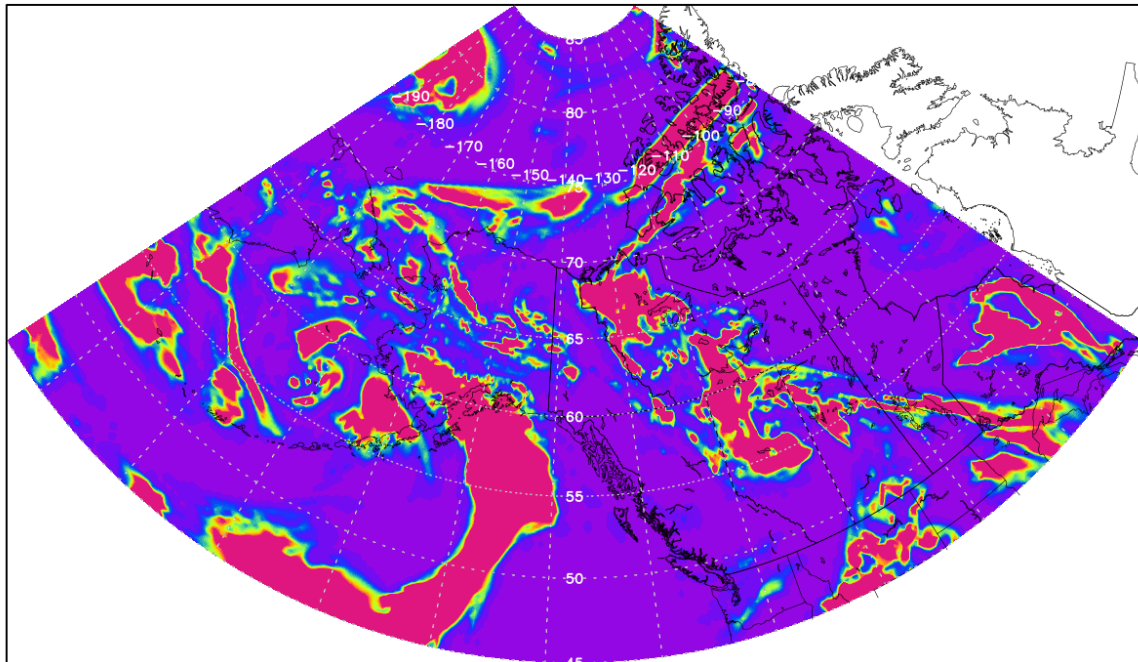
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GEOS Low Cloud Optical Depth  
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Valid time 28 JUN. 18z



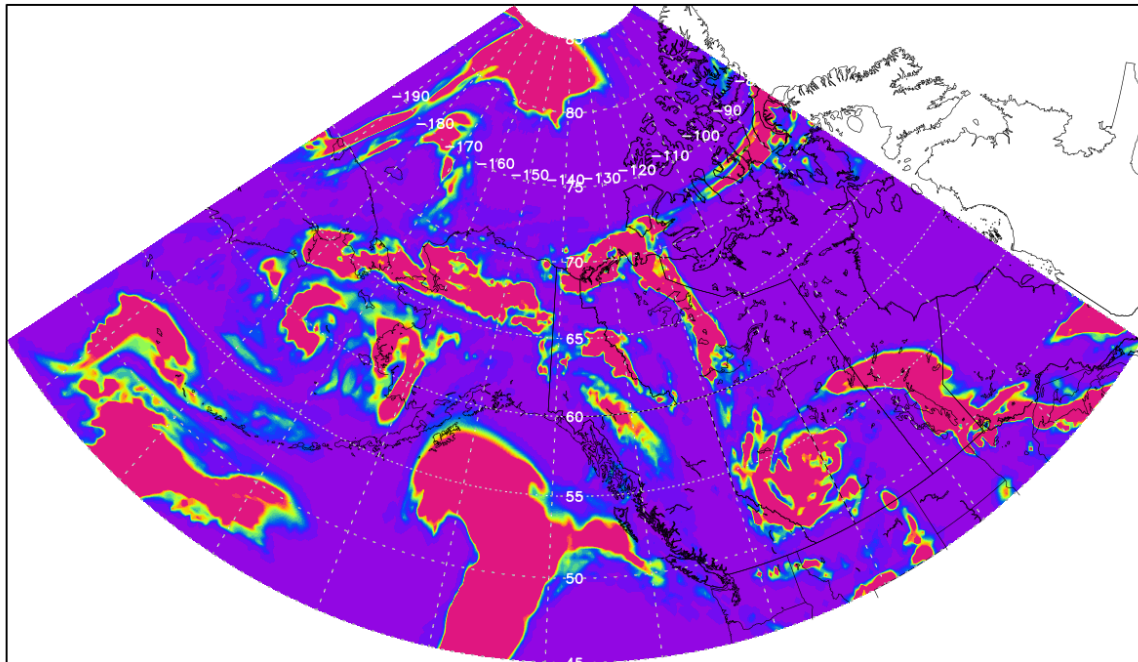
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Valid time 27 JUN. 18z



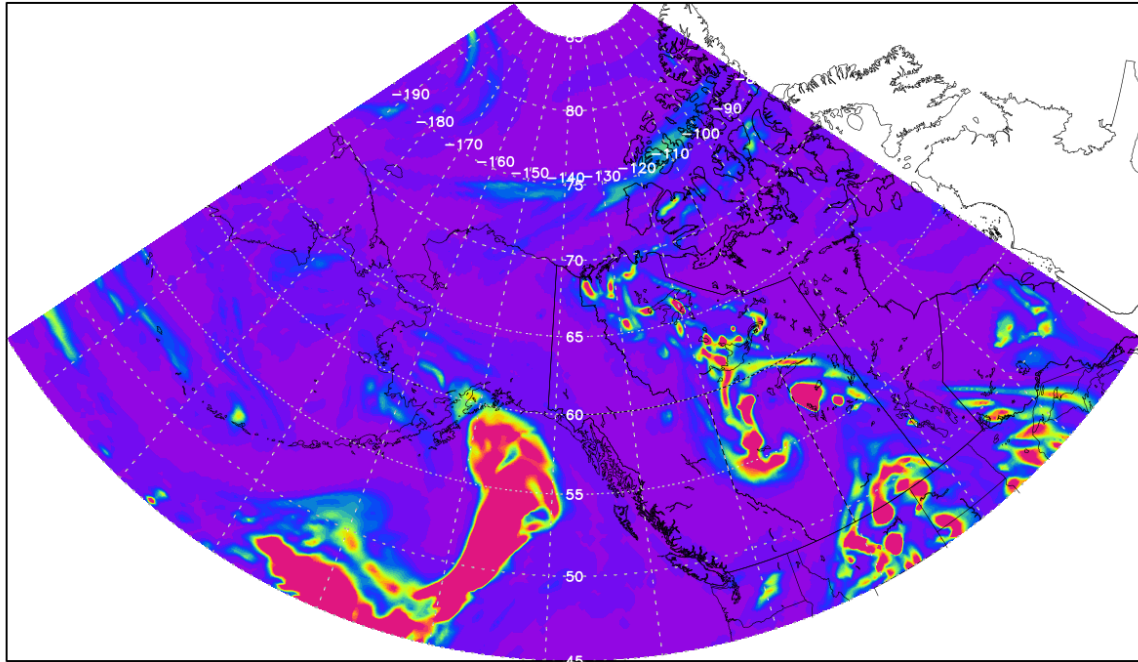
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GEOS Mid Cloud Optical Depth  
Initial time 26 JUN. 00z  
Valid time 28 JUN. 18z



ABOVE\_High\_Cloud\_Optical\_Depth\_IT\_00z26JUN\_VT\_18z27JUN.png

GEOS High Cloud Optical Depth  
Initial time 26 JUN. 00z  
Valid time 27 JUN. 18z



ABOVE\_High\_Cloud\_Optical\_Depth\_IT\_00z26JUN\_VT\_18z28JUN.png

GEOS High Cloud Optical Depth  
Initial time 26 JUN. 00z  
Valid time 28 JUN. 18z

