

ABOVE Regional Weather Briefing

Based on the GMAO GEOS meteorology and aerosol forecast fields
Model Initialized 00z 21 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 22 July through 2359z 22 July

Up in the arctic north, a frontal zone will cross the region swiftly from Barrow early in the day to Deadhorse around 21z, then reaching Inuvik by the end of the day. Multi-layer clouds and precipitation will accompany the passage of this front. There may be some clear scenes inland away from the Arctic Ocean coast 18z-23z between PABR and PASC. Much of the rest of Alaska will be relatively cloud-free on Saturday, except for the Aleutians and the Seward Peninsula. Modest smoke haze from Russian fires will be located over northern interior Alaska. The southern half of Alaska looks pristine from an aerosol perspective. Fires are still an issue over BC. Smoke from these fires will spread eastward into most of AB and SK on Saturday. From a meteorological viewpoint, except for far northern SK, the Prairie Provinces will have fair weather on Saturday. Up over the YKT and NWT on Saturday, expect a region of mainly clear skies over the majority of the YKT as well as north and west of the large lakes of the NWT. A low pressure center will be located ashore BC with clouds and showers over much of northern and central BC.

Day-2 Outlook

Valid 1500z 23 July through 2359z 23 July

The next in a series of storm systems blasts ashore northwestern Alaska overspreading clouds and rainfall west to east throughout the day Sunday. Scattered showers and thunderstorms will also be located on Sunday over AB and northern SK associated with a weak trough of low pressure that stretches from those provinces up into Nunavut.

GEOS is forecasting a nice clear region 60-65N and 110-140W on Sunday with little in the way of aerosol including around the Yellowknife vicinity. A thin cloudy band will be found north of 65N, but clear skies again up towards the Inuvik region by 18-21Z. Mainly cloud-free skies over southern SK but may pick up some light smoke haze...though not optically very thick. The larger aerosol optical haze will be noticed from the BC fires then to the northeast over central AB and on into northern SK. Skies will be mainly clear a couple hundred km either side of the US-Canadian border from Washington State clear across to North Dakota.

Day-3 Outlook

Valid 1500z 24 July through 2359z 24 July

One low pressure system will be located over the Beaufort Sea quickly overspreading clouds and rainfall over much of Alaska and the northern YKT and NWT. Another compact, but potent low pressure system will bring showers and thunderstorms on Monday to the border region of northern AB and SK. Expect heavy thunderstorm activity and turbulence to be an issue over north and north-central SK.

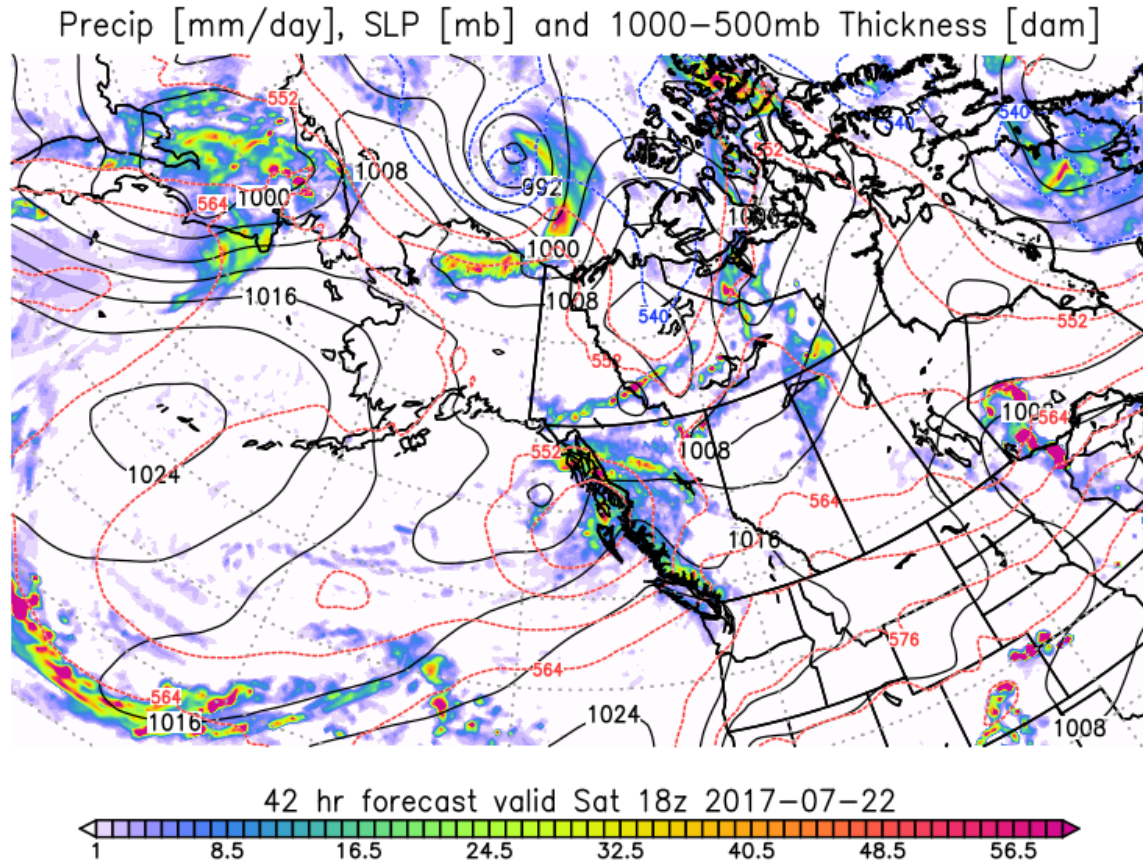
Possible clear scenes include:

Southern SK, most of AB except east-central AB, BC, and the vicinity of Yellowknife. Smoke from fires shouldn't be much of an issue Monday region-wide (except southwest BC). Some moderate smoke over north-central SK....but bad weather Monday would otherwise prevent flights here anyways.

Gary Partyka
GMAO at the Goddard Space Flight Center

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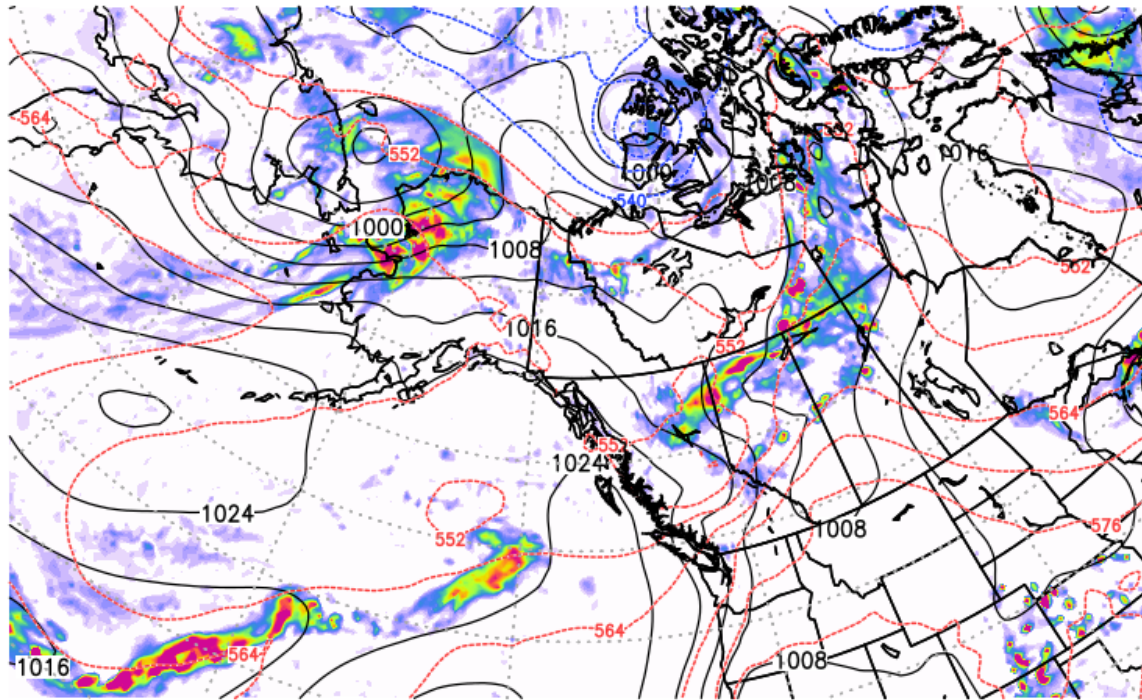
NASA/GMAO - GEOS-5 Forecast Initialized on 00z 2017-07-21



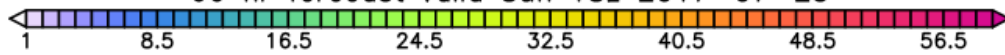
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NASA/GMAO - GEOS-5 Forecast Initialized on 00z 2017-07-21

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

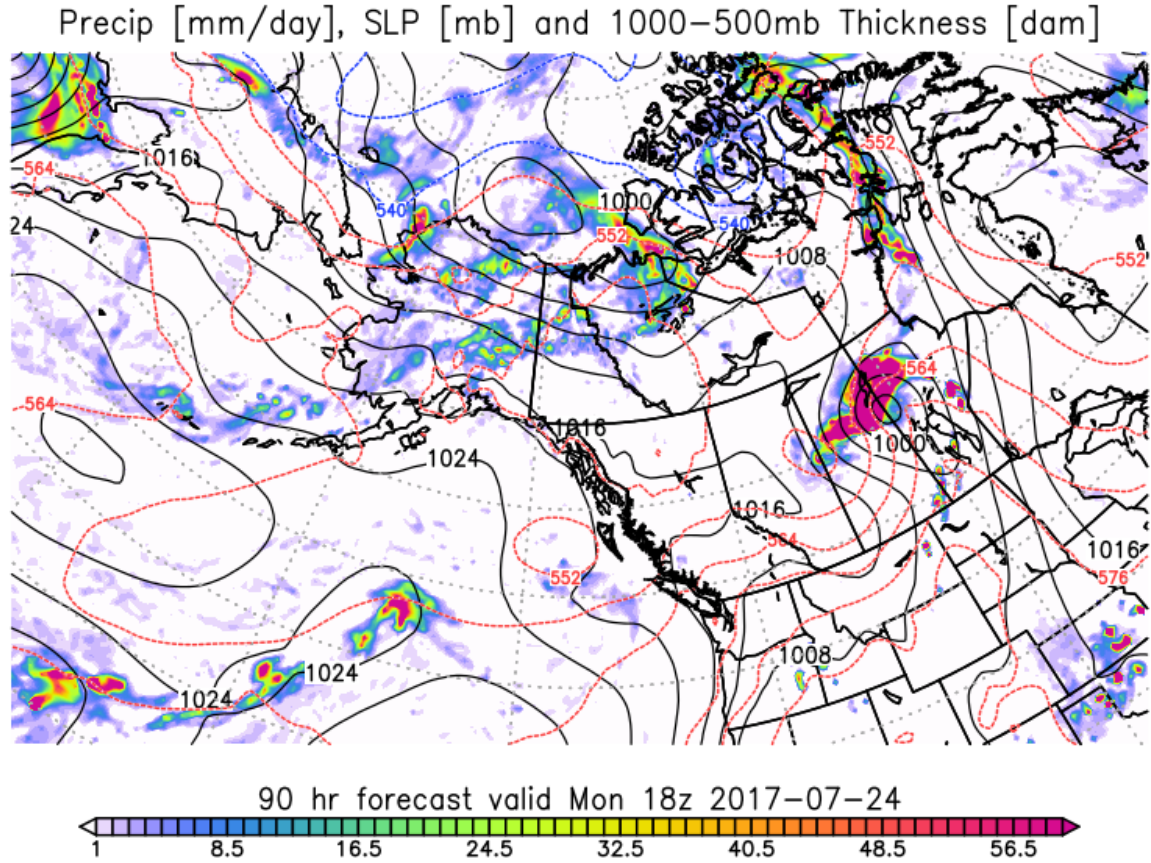


66 hr forecast valid Sun 18z 2017-07-23



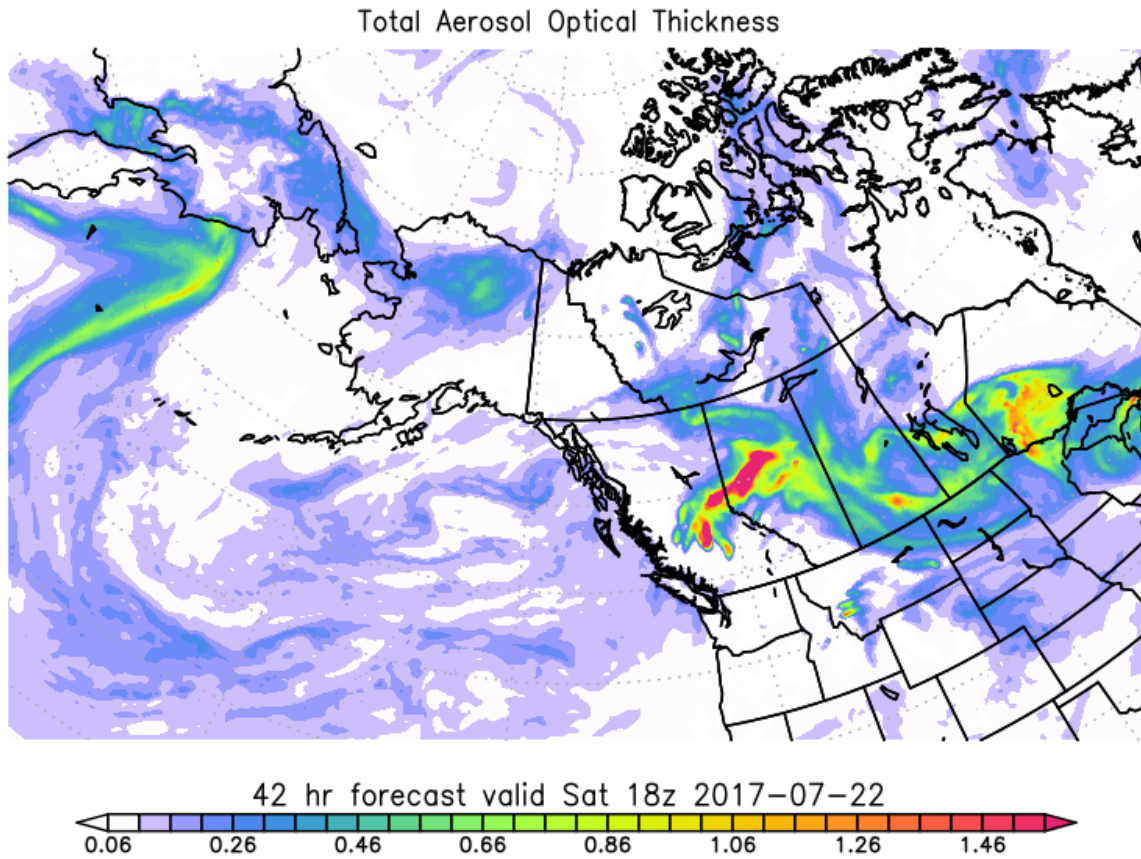
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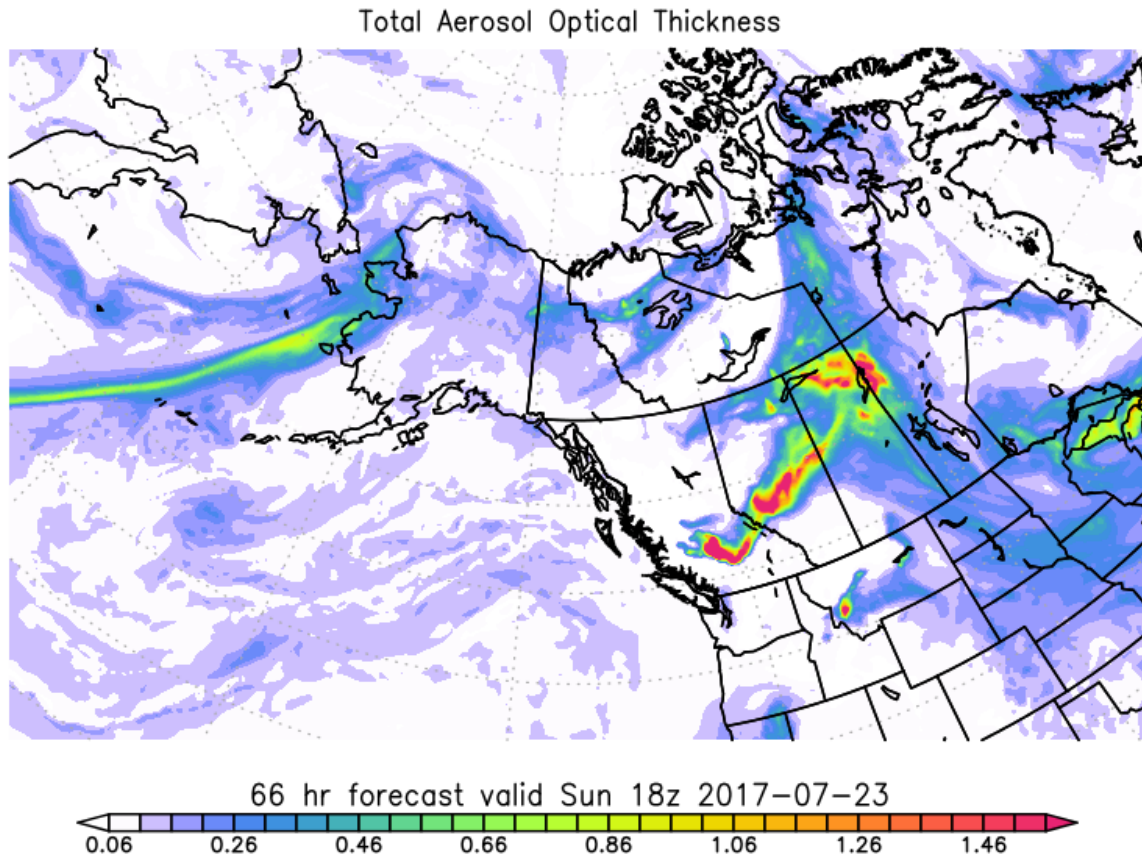
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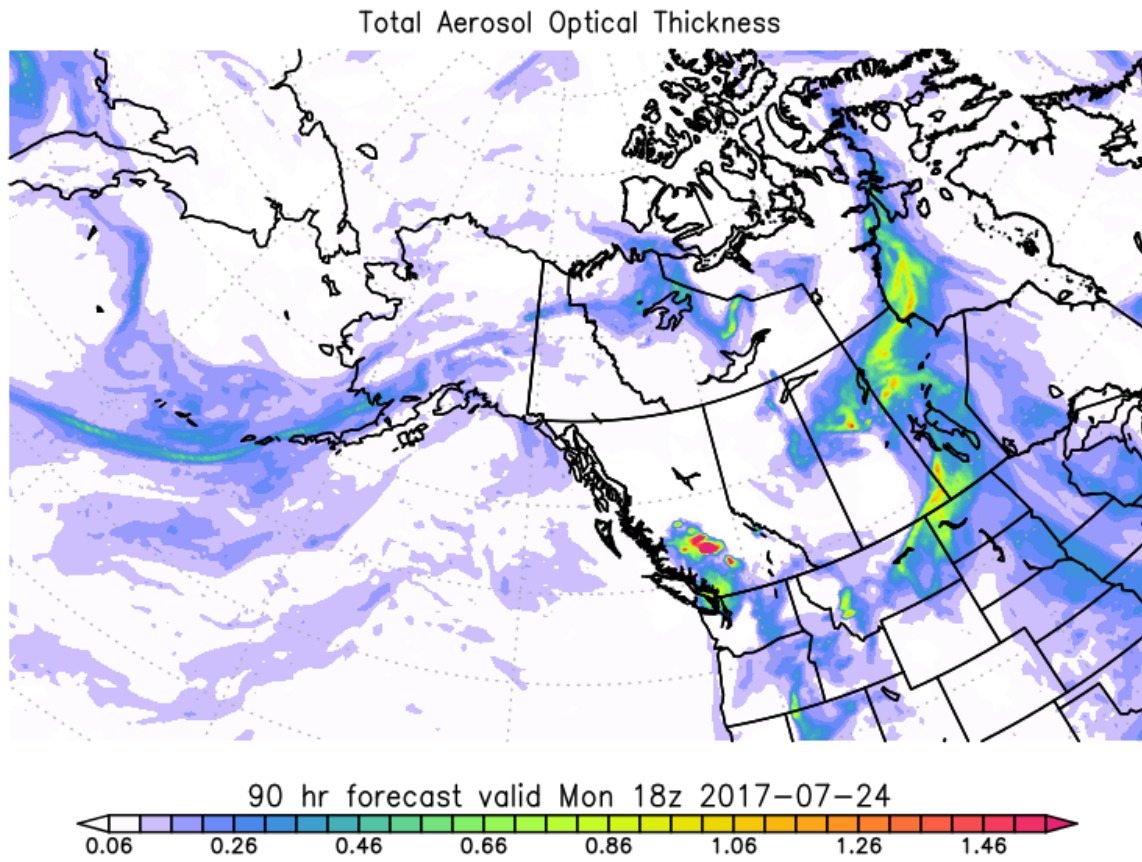
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NASA/GMAO - GEOS-5 Forecast Initialized on 00z 2017-07-21



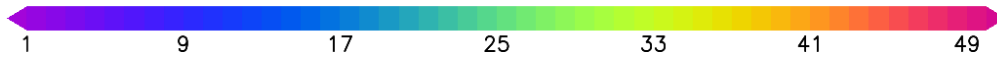
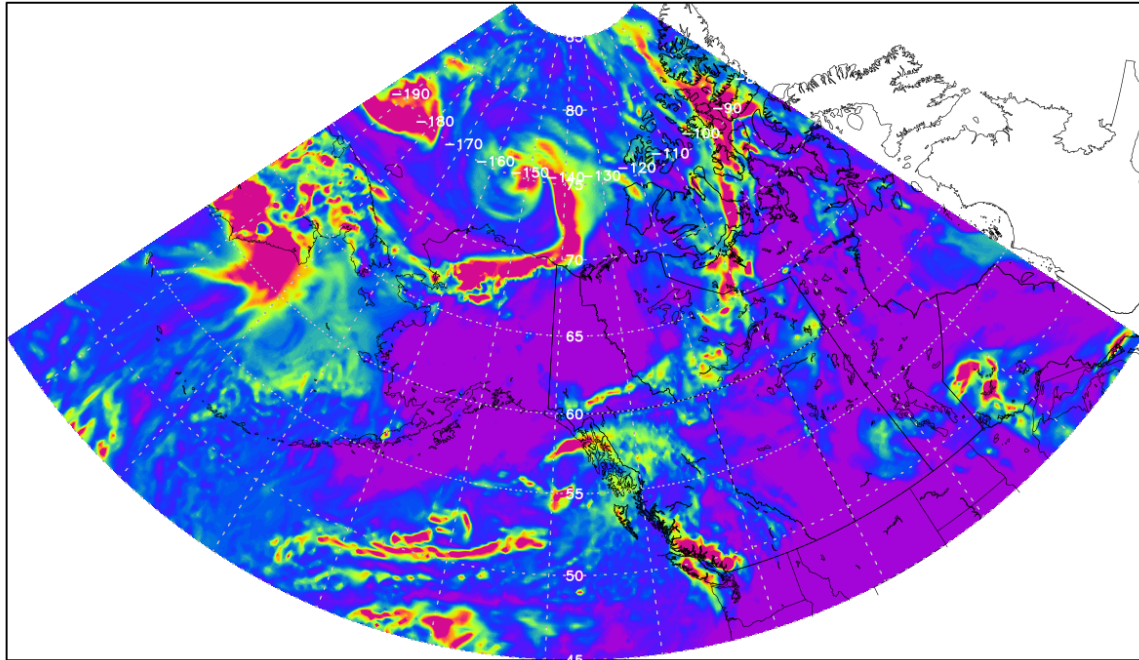
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NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-07-21



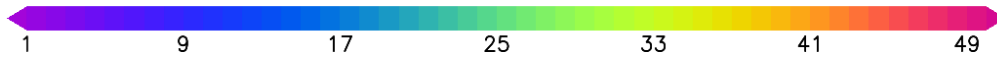
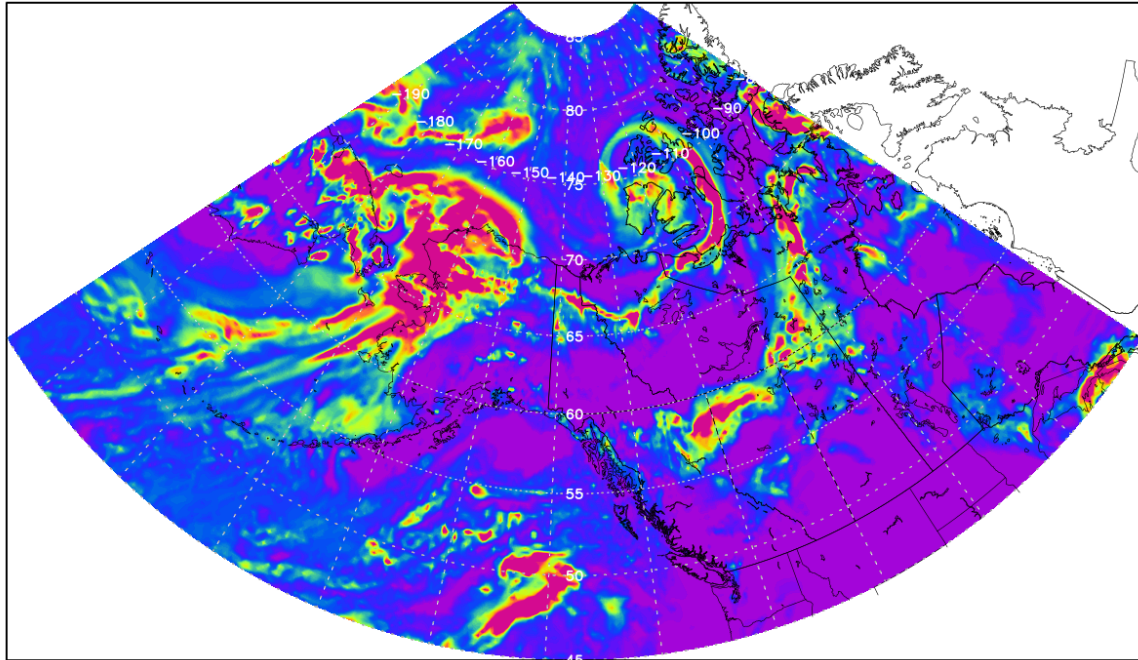
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GEOS Total Cloud Optical Depth
Initial time 21 JUL. 00z
Valid time 22 JUL. 18z



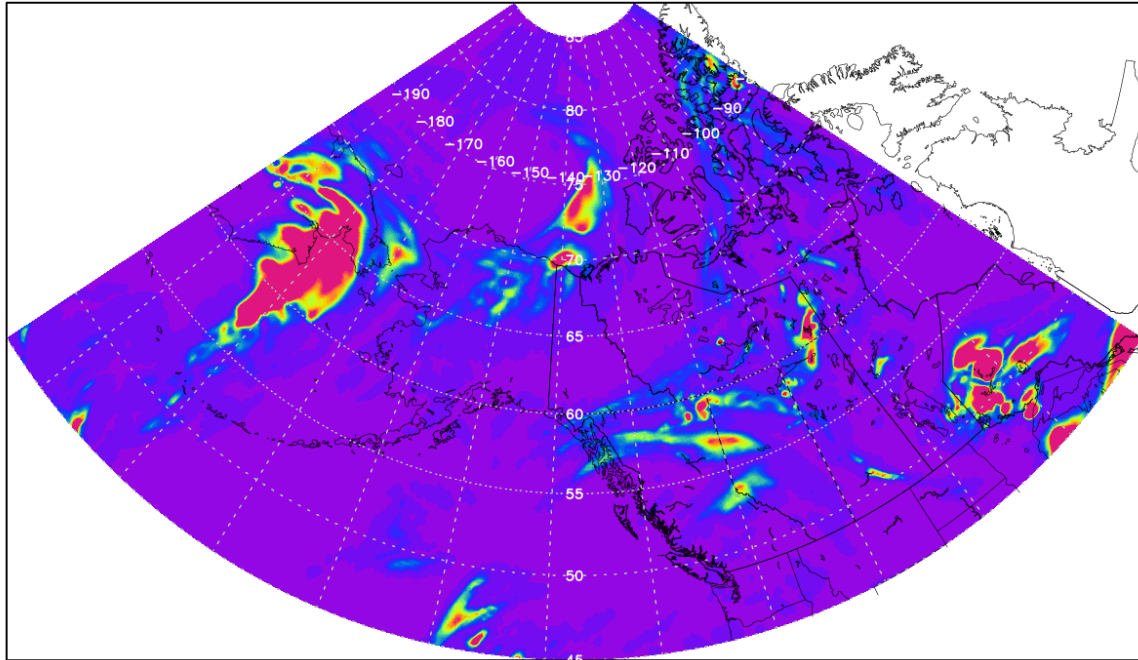
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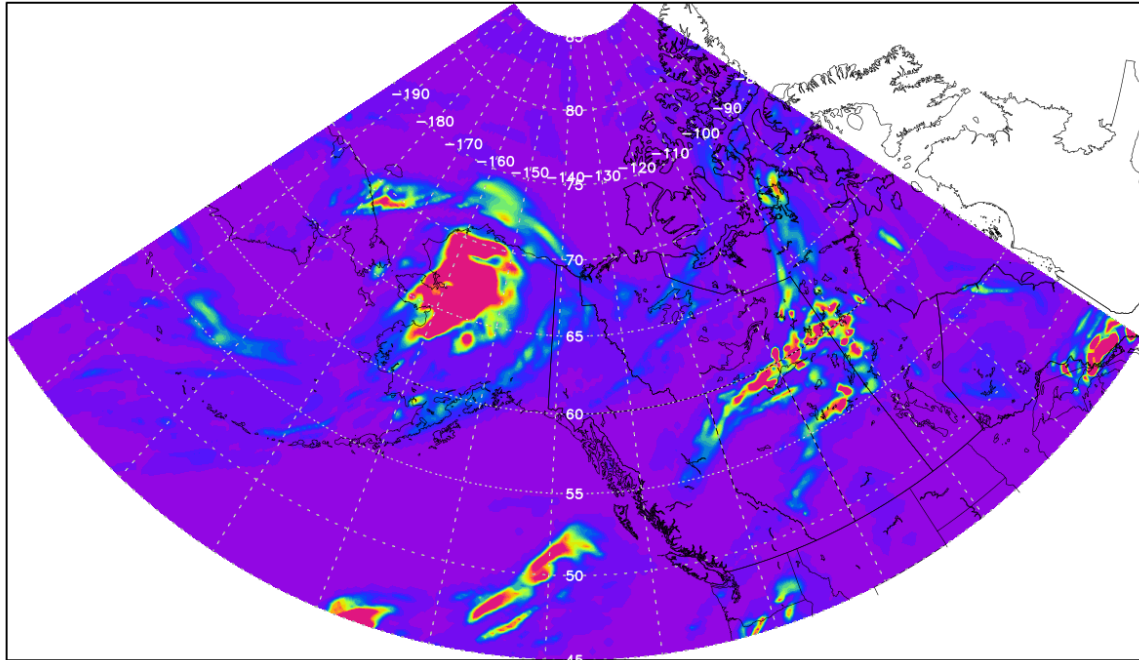
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GEOS High Cloud Optical Depth
Initial time 21 JUL. 00z
Valid time 22 JUL. 18z



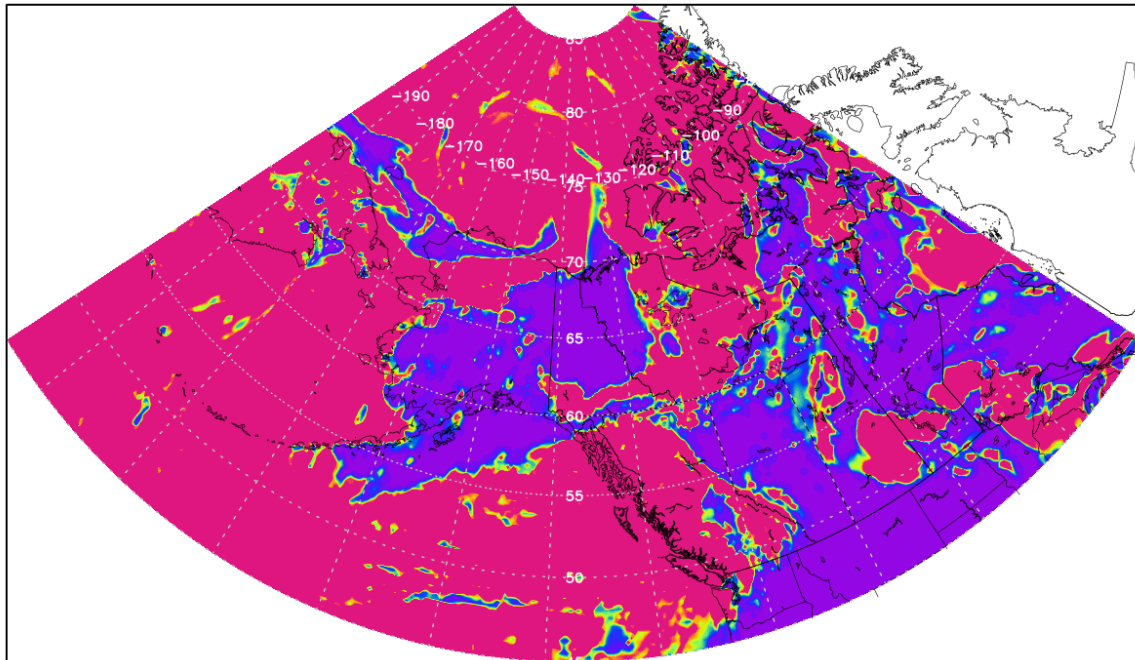
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GEOS High Cloud Optical Depth
Initial time 21 JUL. 00z
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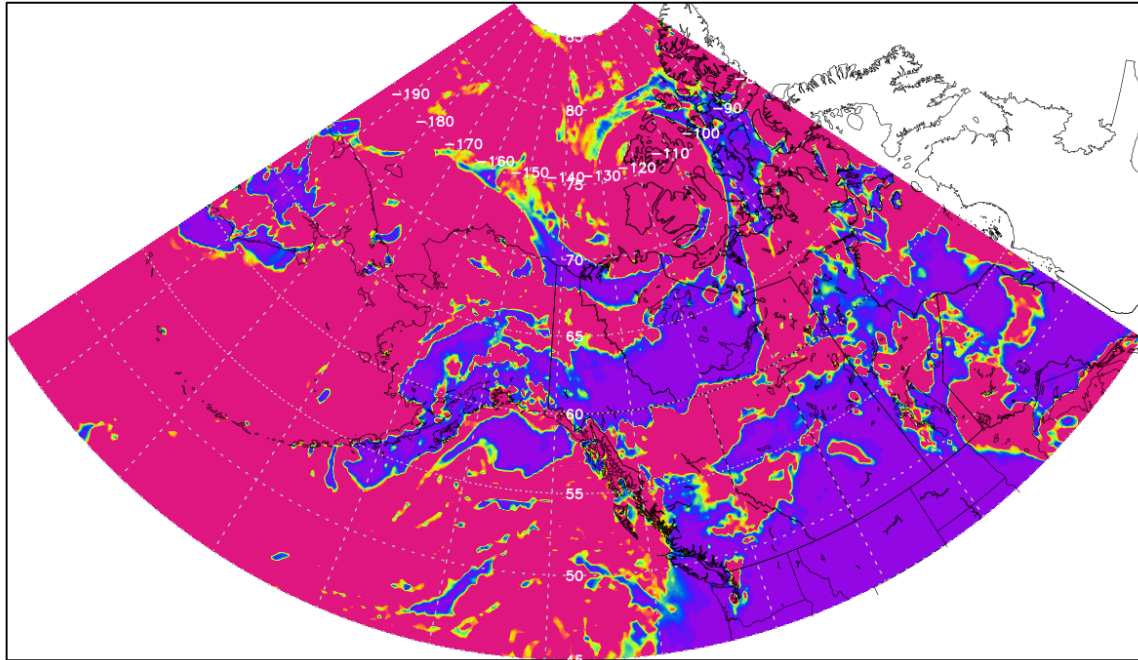
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GEOS Low Cloud Optical Depth
Initial time 21 JUL. 00z
Valid time 22 JUL. 18z



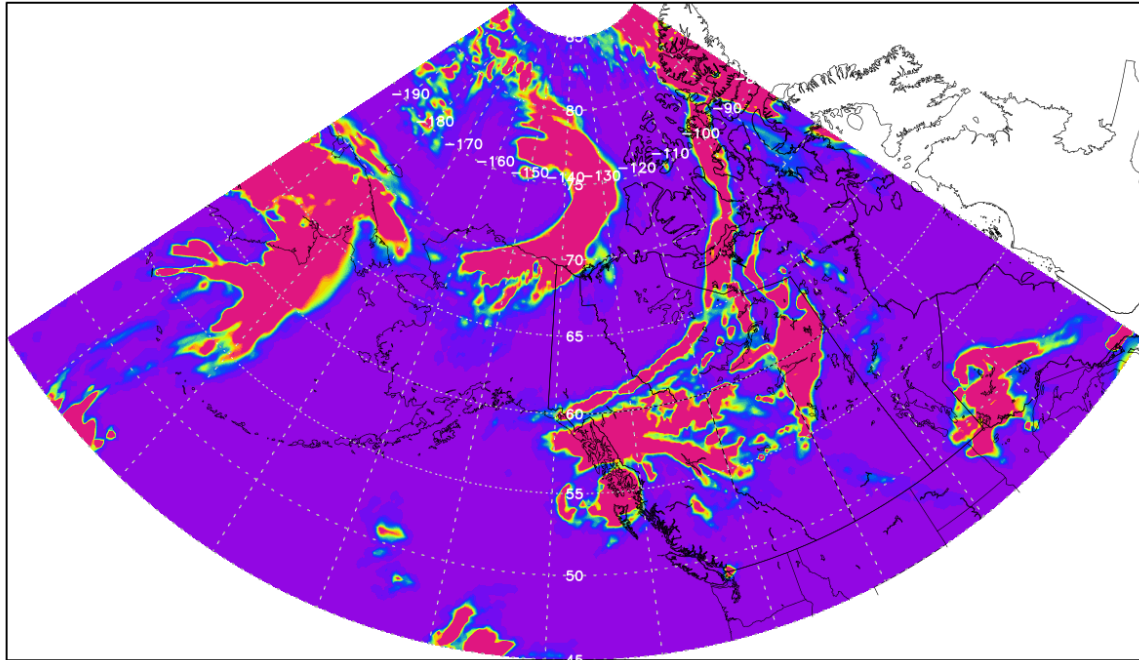
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GEOS Low Cloud Optical Depth
Initial time 21 JUL. 00z
Valid time 23 JUL. 18z



ABOVE_Mid_Cloud_Optical_Depth_IT_00z21JUL_VT_18z22JUL.png

GEOS Mid Cloud Optical Depth
Initial time 21 JUL. 00z
Valid time 22 JUL. 18z



ABOVE_Mid_Cloud_Optical_Depth_IT_00z21JUL_VT_18z23JUL.png

GEOS Mid Cloud Optical Depth
Initial time 21 JUL. 00z
Valid time 23 JUL. 18z

