ABOVE Regional Weather Briefing

Based on the GMAO GEOS meteorology and aerosol forecast fields
Model Initialized 00z 07 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 Forecast
Valid 1500z 08 July through 2359z 08 July
As of Thursday evening, there were more than 80 fires burning between Fairbanks and
Deadhorse. More than 50 fires are burning in YKT. There is a band of thin to occasionally thick
aerosol optical thickness that runs from the Anchorage area east towards the Klondike region
and northeast through the eastern edge of the Yukon Flats. A large area of moderate to heavy
precipitation in the southeast is moving into the area from the south and spreading north and
west. The clouds associated with this system cover most of the southern half of the state by the
end of this period. The northern half of the state has some clouds to the north but they are
optically thin clouds and the only precipitation in the northern third of the state is over Barrow
early on. North Slope and PASC look fairly clear.

Day-2 Forecast
Valid 1500z 09 July through 2359z 09 July
This period is forecast to see the highest aerosol optical thickness values we have seen over a
fairly large area from just east of the Seward Peninsula and westward to the Canadian border
from the southern Brooks Range south through Yukon Flats, Fort Yukon, Fairbanks through the
northern slopes of the Alaska Range. A weak low pressure center forms over the Seward
Peninsula and the band of clouds and rain stretch from there back east to clouds and rain
associated with another low pressure system over southeast YKT drifting towards the Alaska
state line. The northern 1/3 of the state may be the only partially clear area during this forecast
period.

Day-3 Outlook
Valid 1500z 10 July through 2359z 10 July
The aerosol values are lower this period thanks to the wind and rain washing and moving the
aerosols. Yet there still exists an aerosol optical thickness area thin with occasional thick
patches that stretches from near Whitehorse up along the North Slope through Deadhorse and
west through Barrow. The area of low pressure over Seward peninsula has moved to the
northwest and is now over open water. The area of low pressure near south YKT has deepened
a bit and has begun to rotate in place spinning a comma shaped patch of clouds and

precipitation towards and eventually past the Alaska state line. Depending on the local Fairbanks conditions, it may be possible to head towards Nome, Galena, Yukon Delta or Denali. Also there may be a chance for some flights between PABR and PASC during this period.
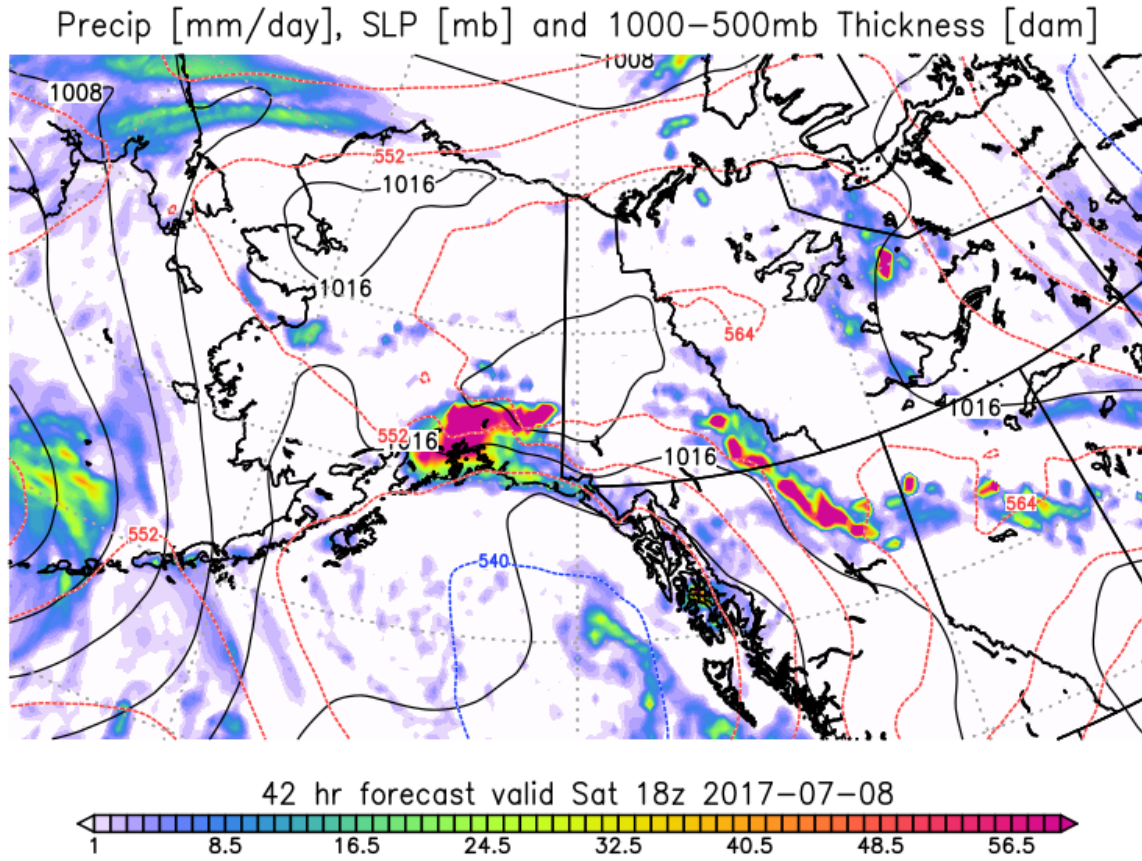
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Austin Conaty, SSAI   Global Modeling and Assimilation Office
301-614-6149 (ph)   NASA Goddard Space Flight Center
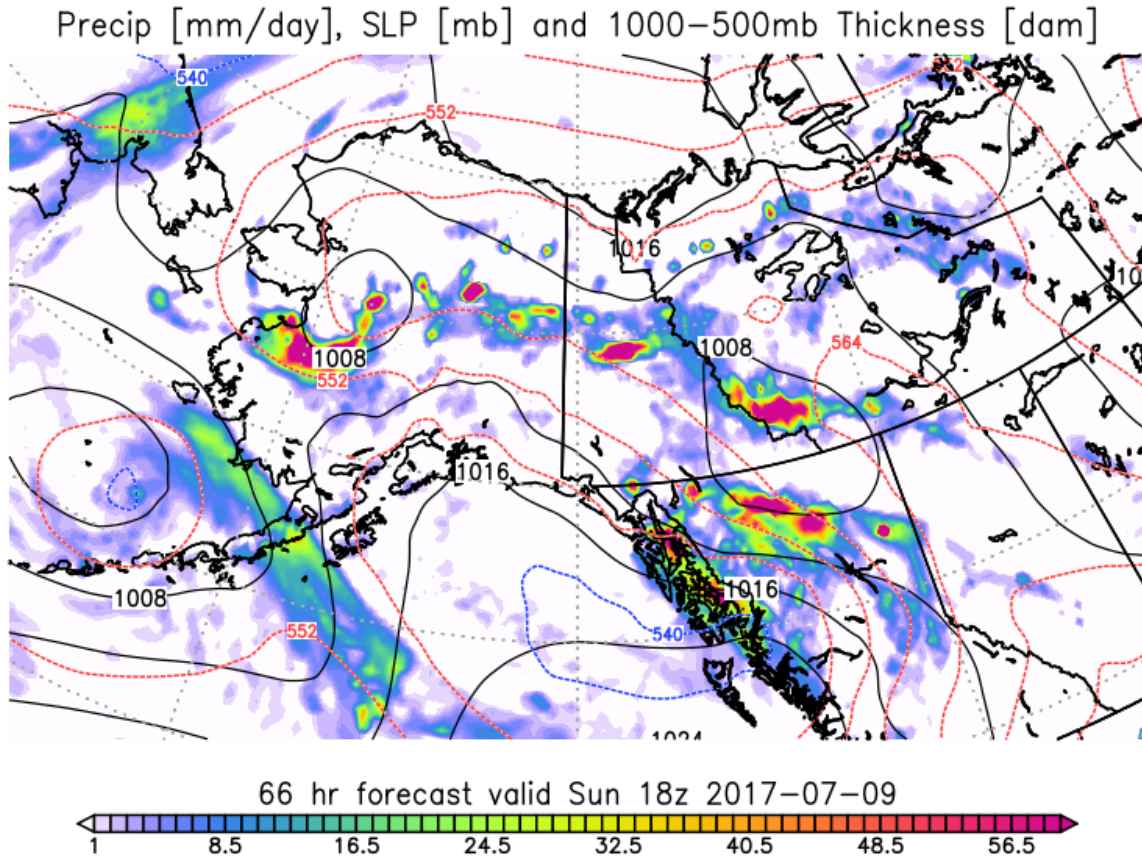301-614-6297 (fax)   Code 610.1 Greenbelt, MD 20771

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

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

42 hr forecast valid Sat 18z 2017-07-08

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

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

66 hr forecast valid Sun 18z 2017-07-09

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

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

90 hr forecast valid Mon 18z 2017-07-10
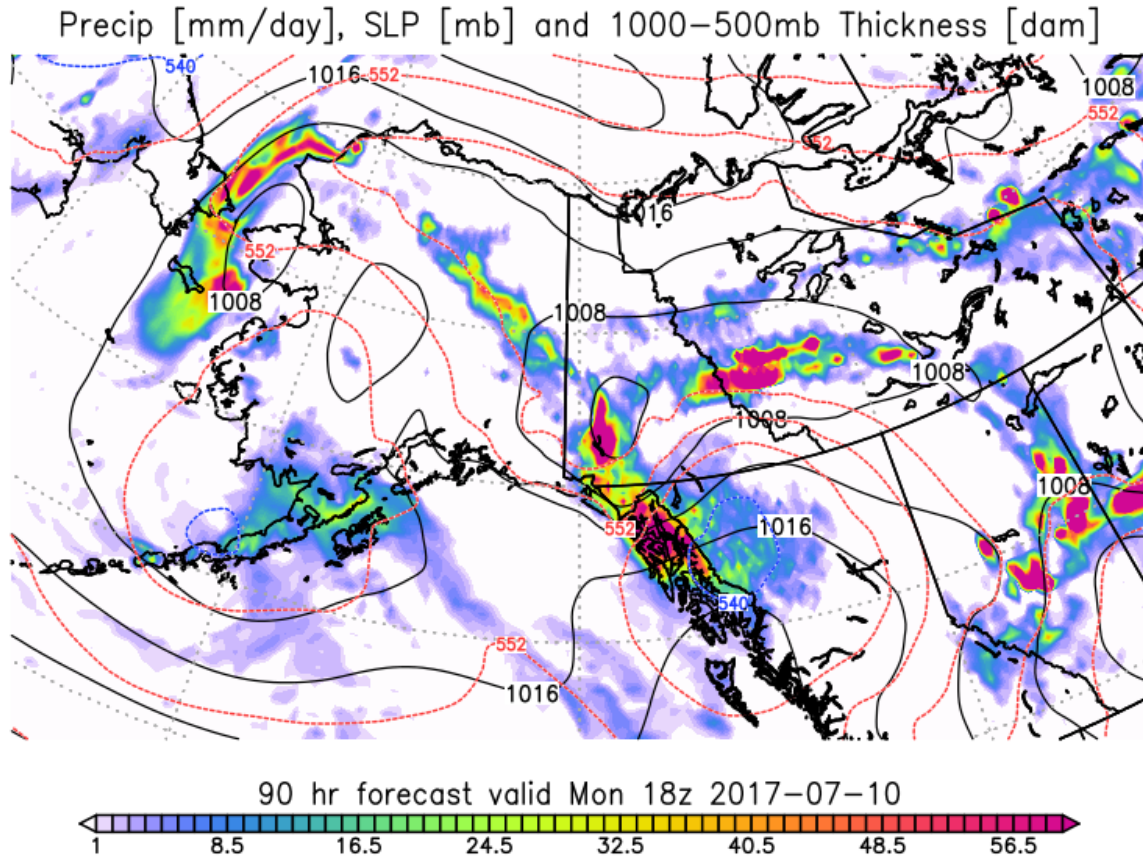
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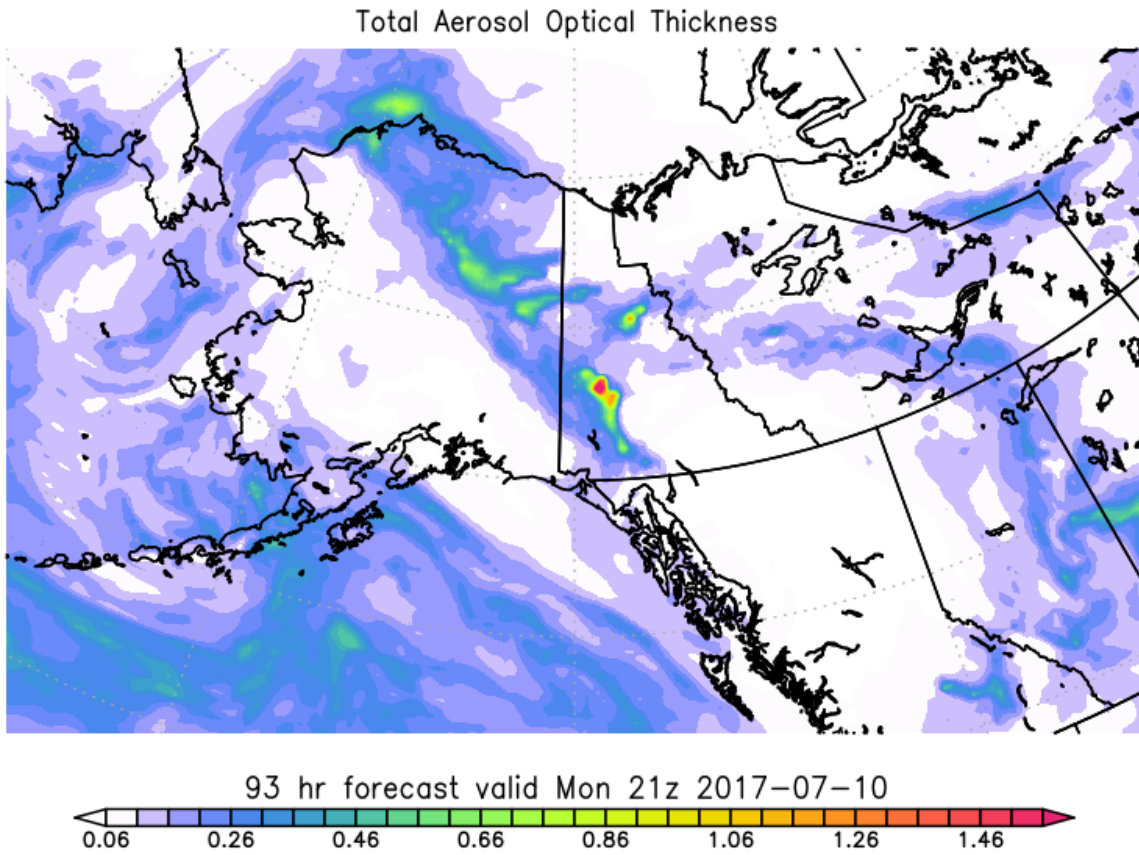
NASA/GMAO — GEOS-5 Forecast Initialized on 00z 2017-07-07

Total Aerosol Optical Thickness

45 hr forecast valid Sat 21z 2017-07-08
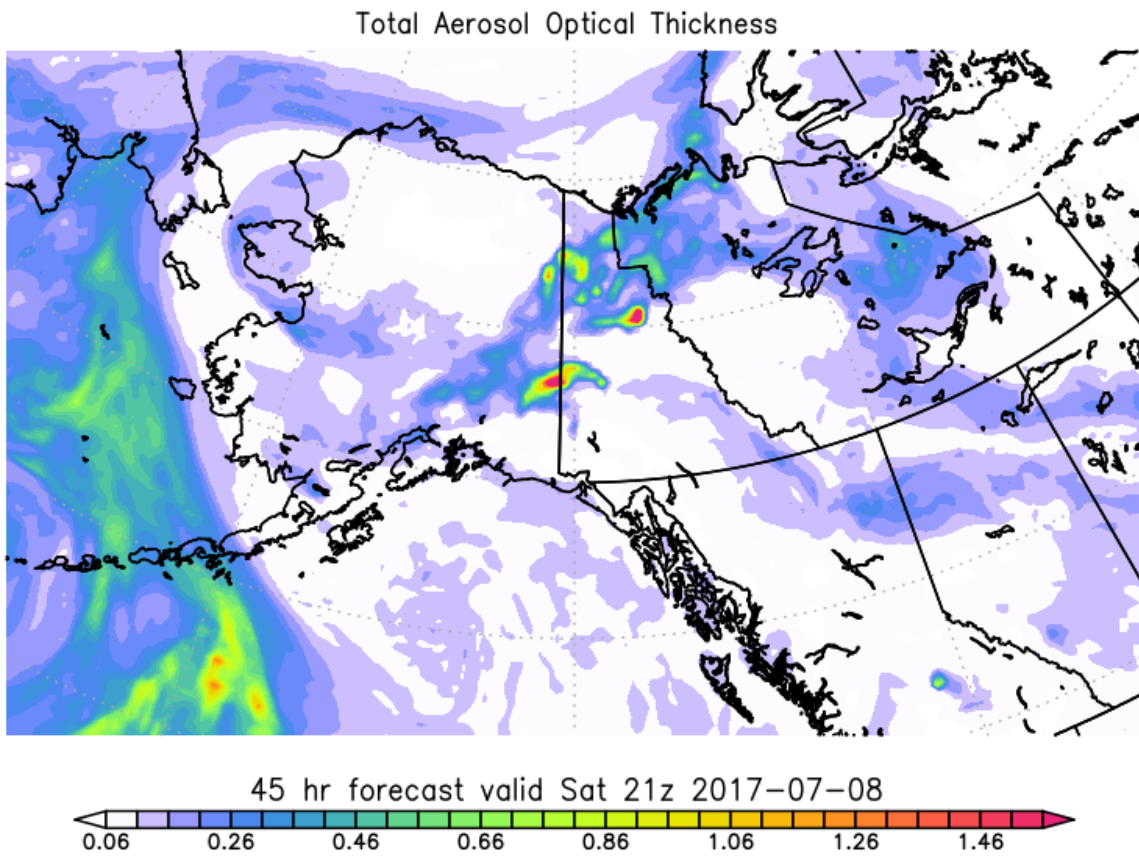
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NASA/GMAO – GEOS-5 Forecast Initialized on 00z 2017-07-07

Total Aerosol Optical Thickness

69 hr forecast valid Sun 21z 2017-07-09

0.06　　0.26　　0.46　　0.66　　0.86　　1.06　　1.26　　1.46
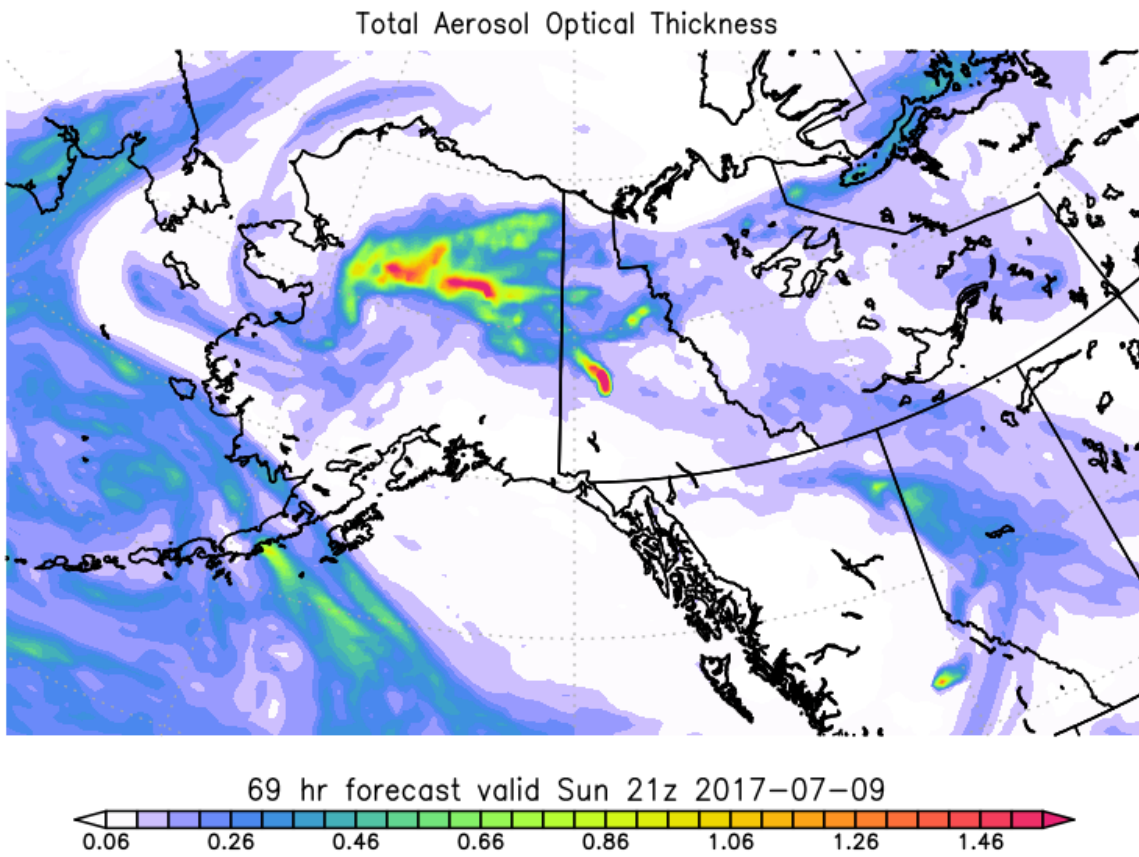
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NASA/GMAO — GEOS-5 Forecast Initialized on 00z 2017-07-07

Total Aerosol Optical Thickness

93 hr forecast valid Mon 21z 2017-07-10

ABOVE_Low_Cloud_Optical_Depth_IT_00z07JUL_VT_18z09JUL.png

GEOS Low Cloud Optical Depth
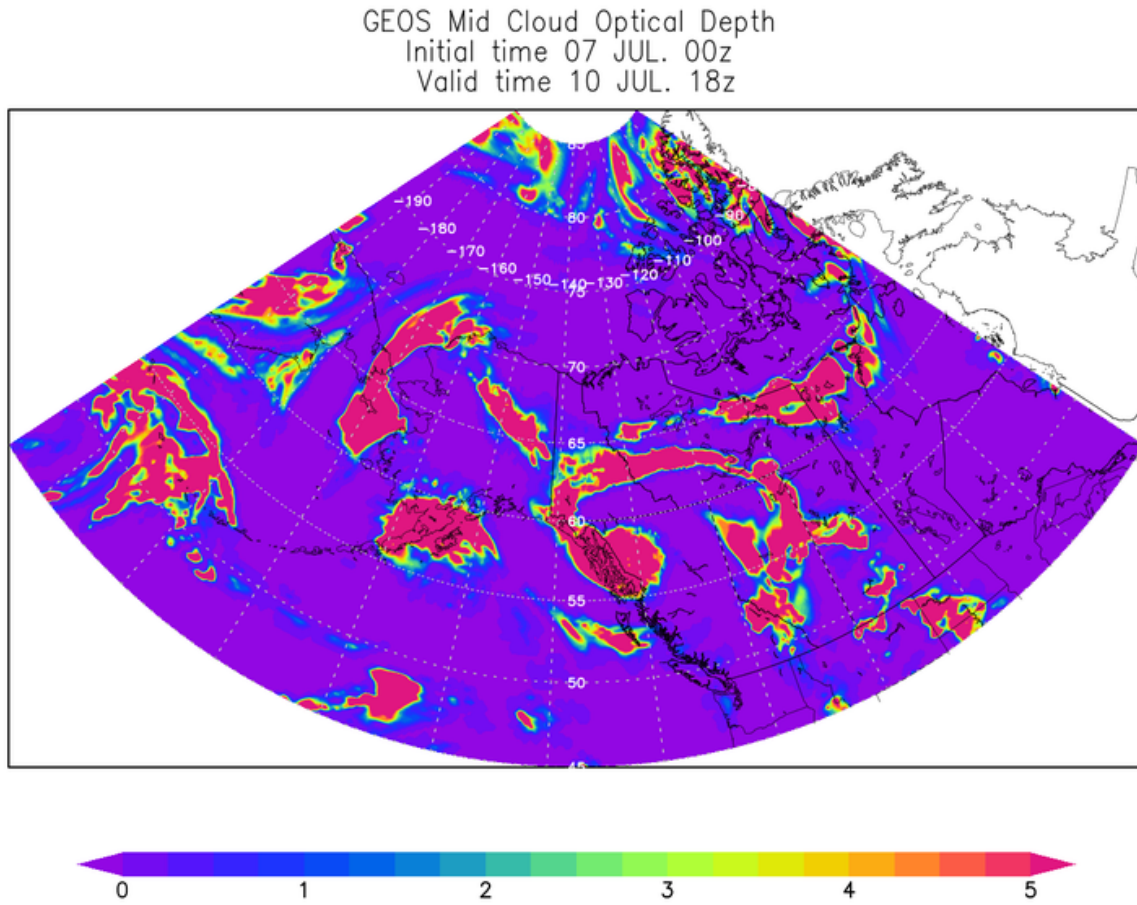Initial time 07 JUL. 00z
Valid time 09 JUL. 18z
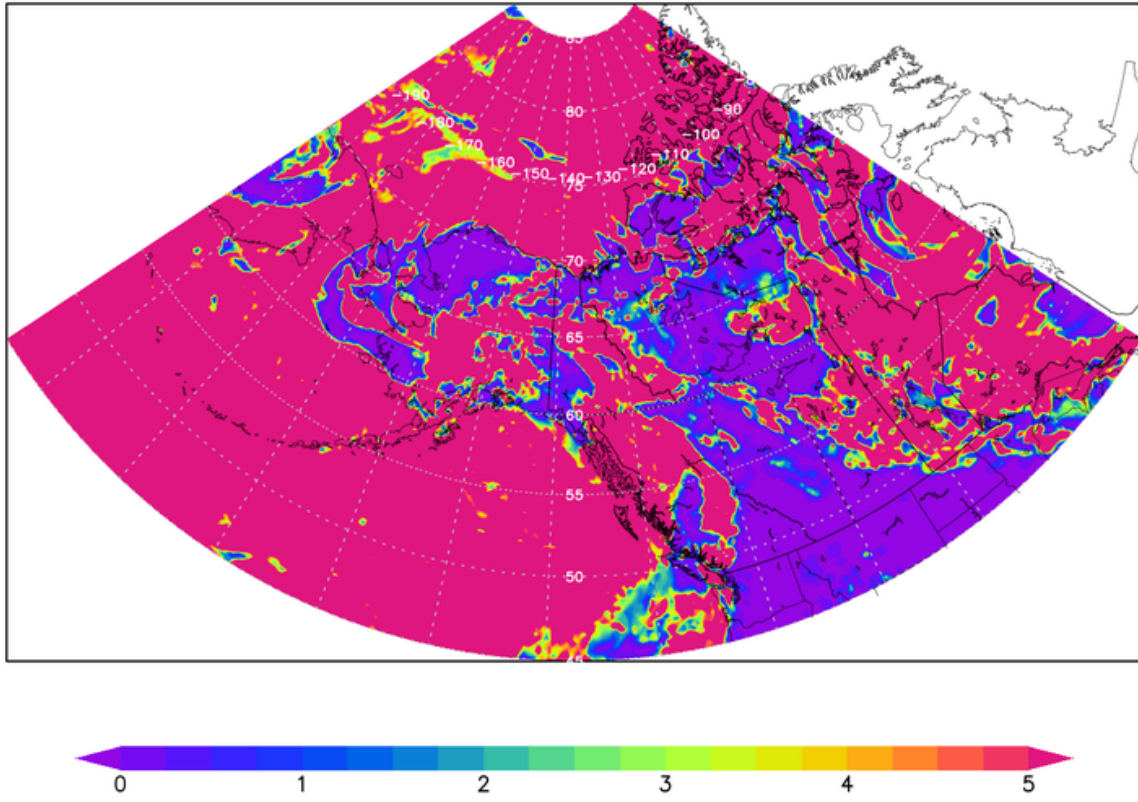
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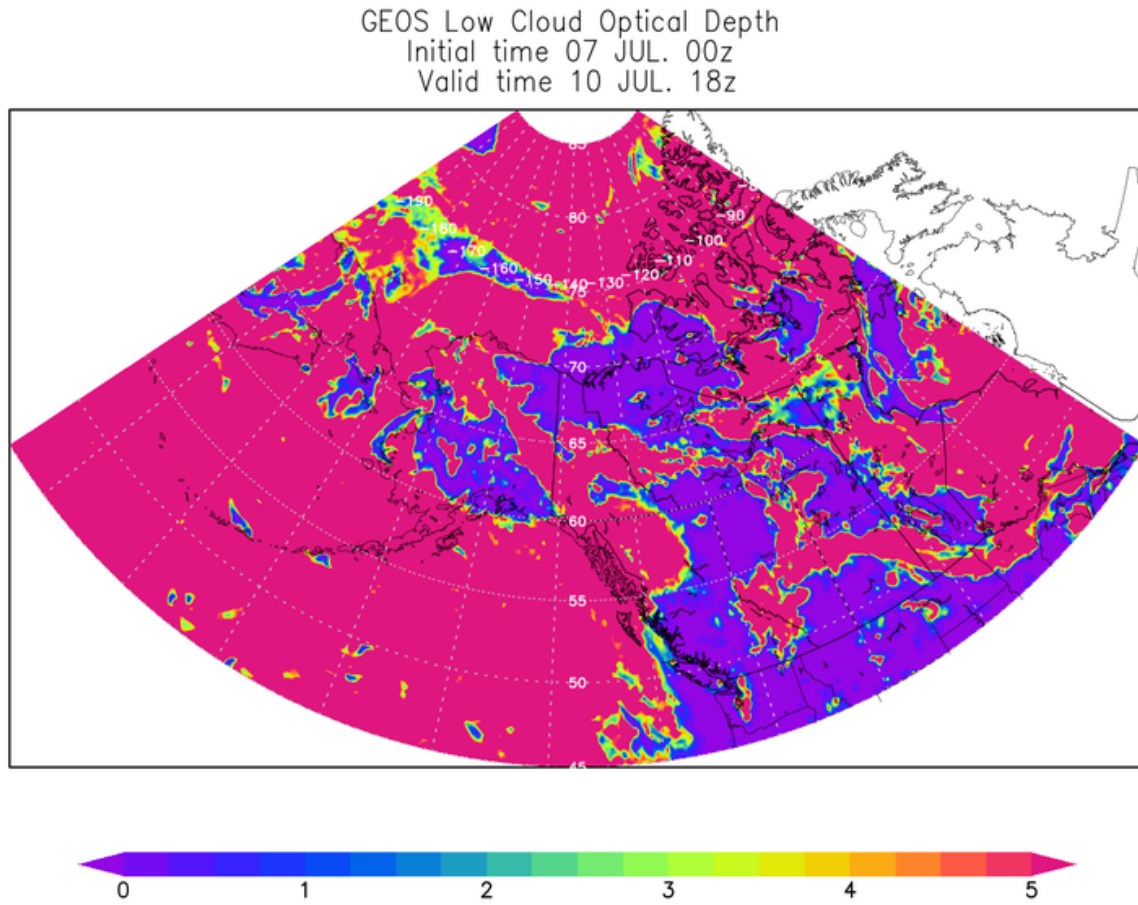
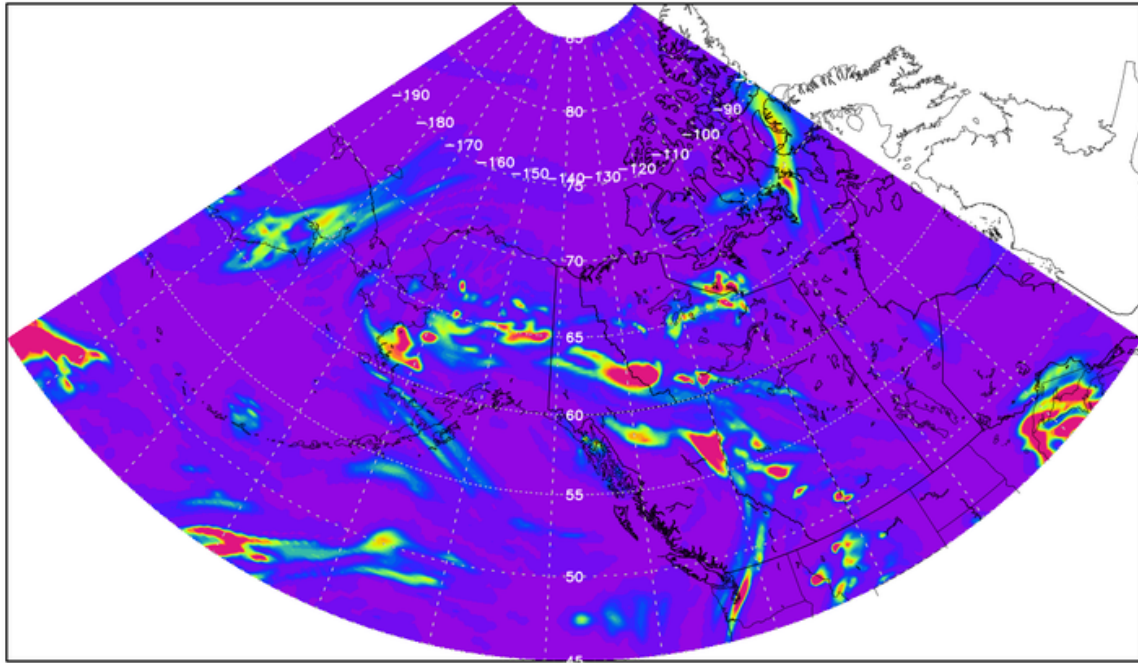ABOVE_Mid_Cloud_Optical_Depth_IT_00z07JUL_VT_18z09JUL.png
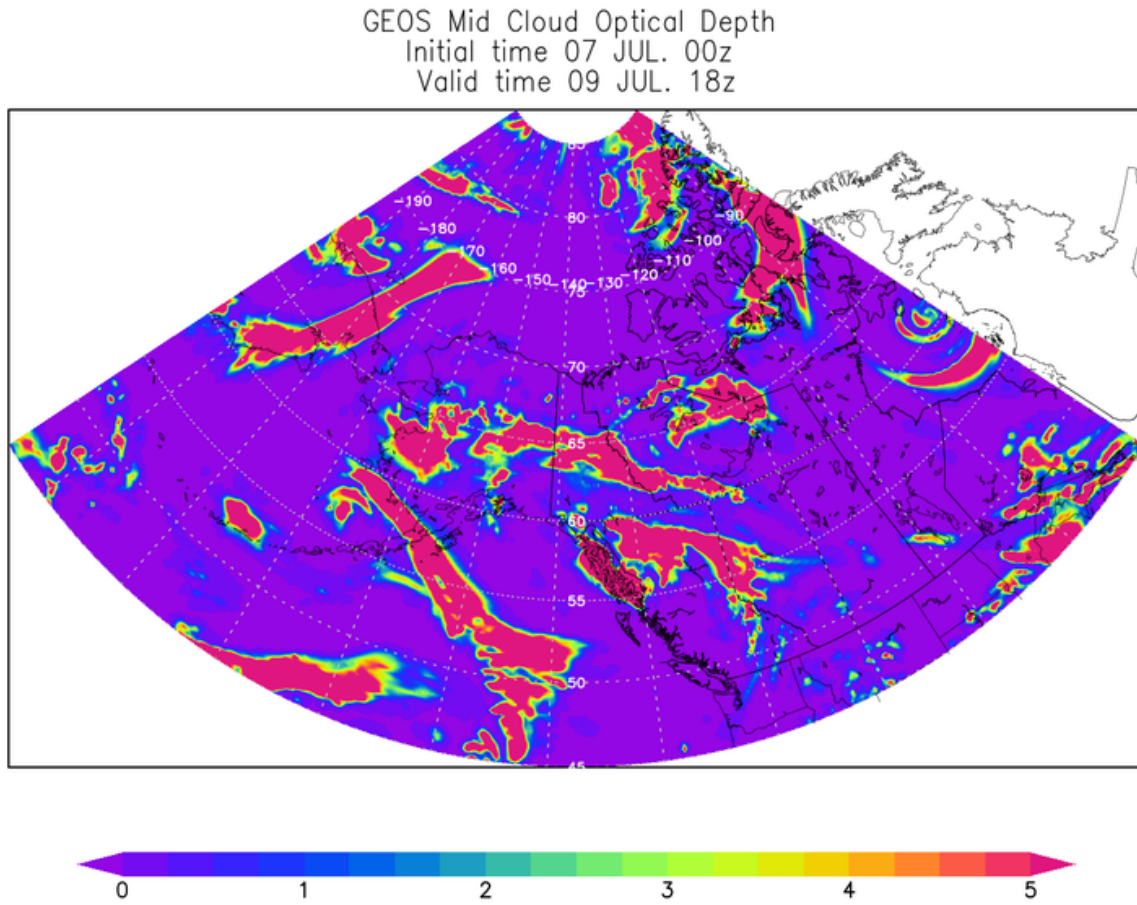
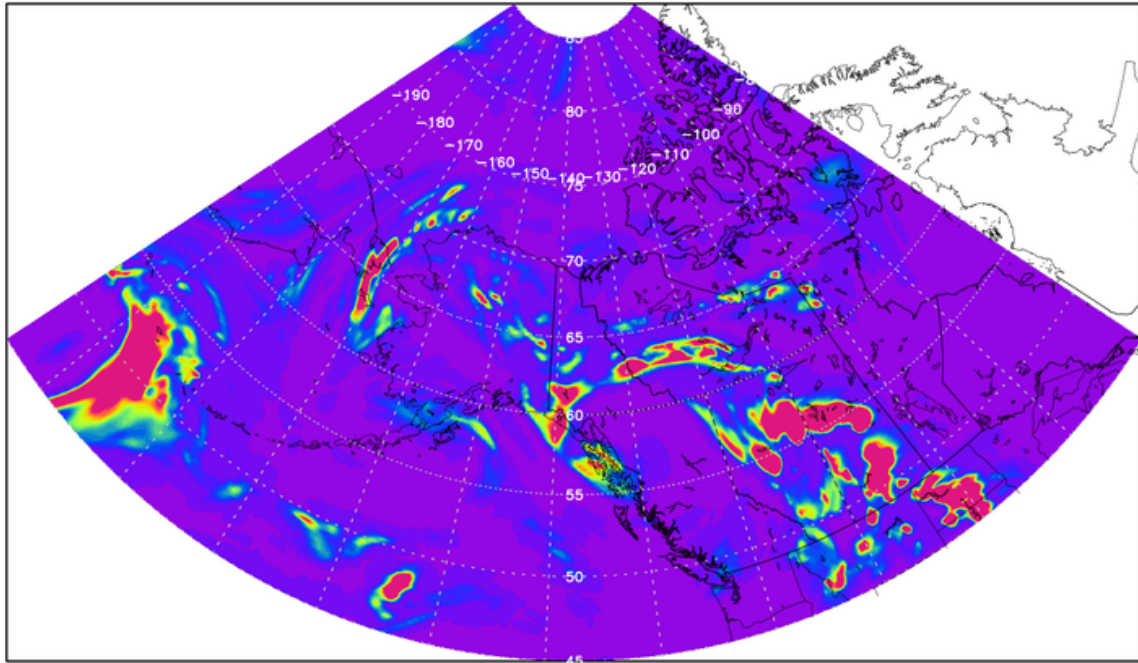ABOVE_Mid_Cloud_Optical_Depth_IT_00z07JUL_VT_18z10JUL.png

ABOVE_High_Cloud_Optical_Depth_IT_00z07JUL_VT_18z09JUL.png

GEOS High Cloud Optical Depth
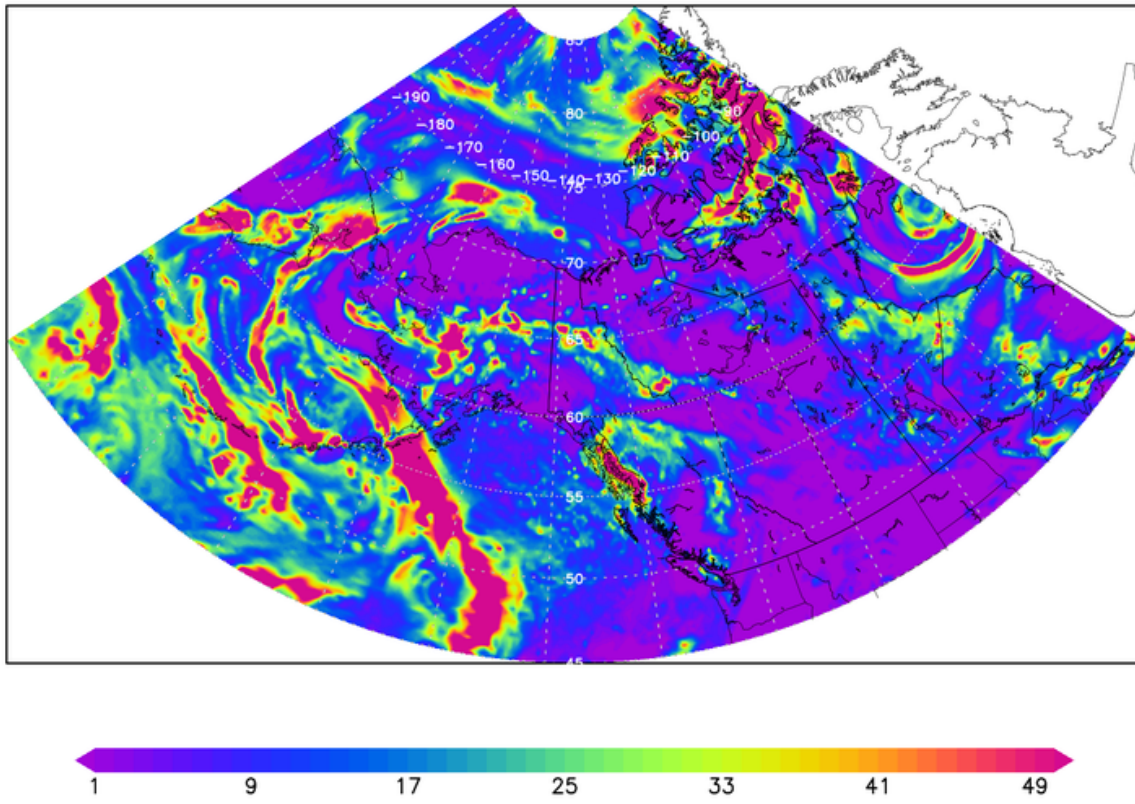Initial time 07 JUL. 00z
Valid time 09 JUL. 18z

ABOVE_High_Cloud_Optical_Depth_IT_00z07JUL_VT_18z10JUL.png

ABOVE_Total_Cloud_IT_00z07JUL_VT_18z09JUL.png

GEOS Total Cloud Optical Depth
Initial time 07 JUL. 00z
Valid time 09 JUL. 18z

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GEOS Total Cloud Optical Depth
Initial time 07 JUL. 00z
Valid time 10 JUL. 18z