

Sunday September 28 weather briefing for ARISE, Fairbanks Alaska mission region

** target area of the day: satellite underpass tracks in the area of 72-76N and 125-150W **

Current synoptic overview and short range forecast for the next flight day, Monday Sept. 29:

A dip in the jet stream following an upper level trough is bringing north and northwesterly winds to the western part of the state and southerly flow ahead of the trough in eastern Alaska. The well stacked upper level low shows up as a 522 DAM low at 500 hPa centered over Barrow and moves eastward. The surface cyclone and associated trough and frontal system is located north of Barrow in the Beaufort Sea. Distinct bands of precipitation associated with this frontal system and trailing trough can be seen in the forecast maps as several areas of widespread precipitation. Most of the state is free of high clouds as the high clouds associated with the front have wrapped around the low and stretch across the Beaufort Sea and down through western Canada. It may be challenging to find flight paths free of rain, freezing rain, and snow at this time.

Outlook for succeeding flight day, Tuesday Sept. 30:

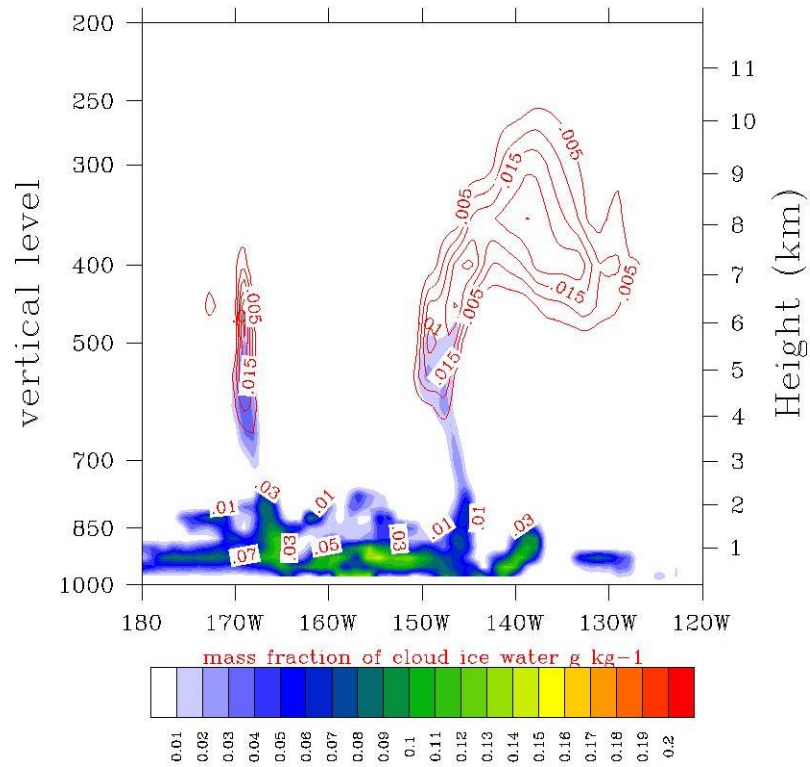
The 300 hPa jet stream trough pattern continues to move eastward bringing northwesterly winds to most of the interior. Winds in most of western Canada are forecasted southerly as the jet follows the eastern edge of the upper level trough. As the low over the southern Beaufort Sea flattens and stretches eastward, a new 536 DAM low has formed at the base of the trough near Ketchikan. Tropopause heights in the 5-6 km range are forecasted near the Alaska Canada border near the Beaufort Sea and in the vicinity of Juneau. High clouds are absent in the target area until the frontal band of clouds half way between the Alaska Canada border and Banks Island. At the surface, unsettled troughs and the remains of frontal precipitation stretch across the state overing areas from Kotzebue to Fairbanks and near Barrow and along the north shore of the state. Forecasted widespread areas of precipitation and the lack of expansive cloud free zones may prove challenging for flight planning purposes.

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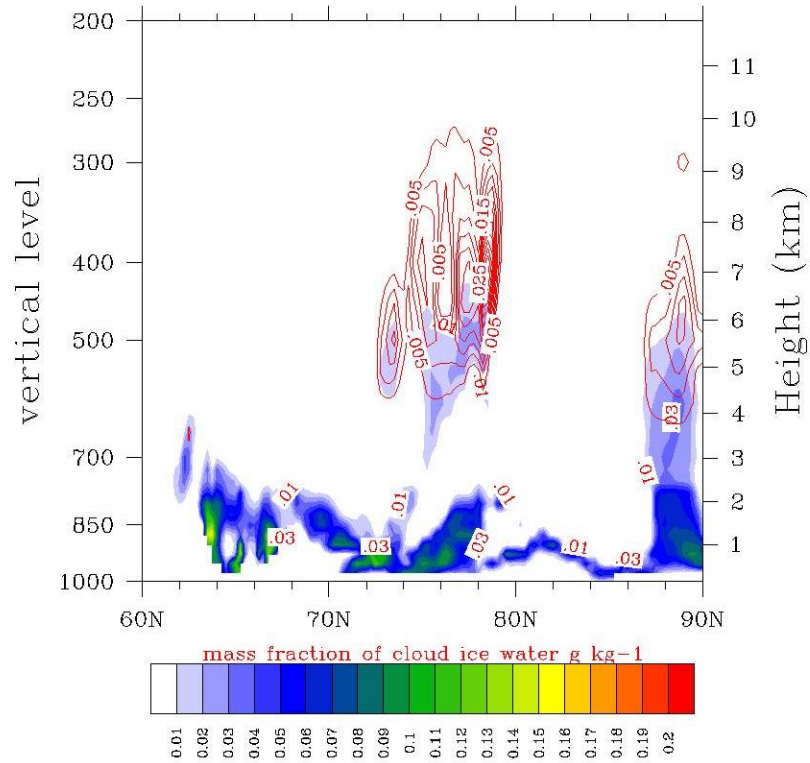
Austin Conaty, SSAI

Global Modeling and Assimilation Office

Init-20140928 00Z Valid-20140929 1800Z



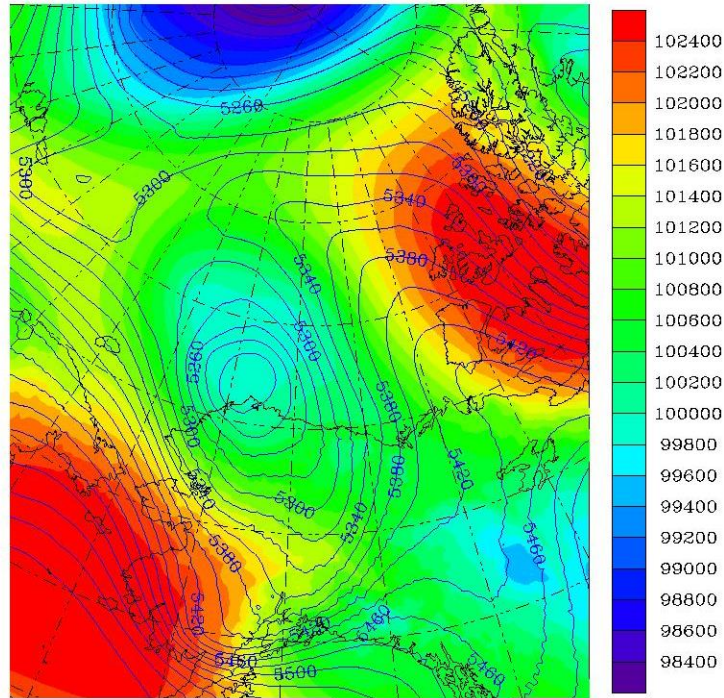
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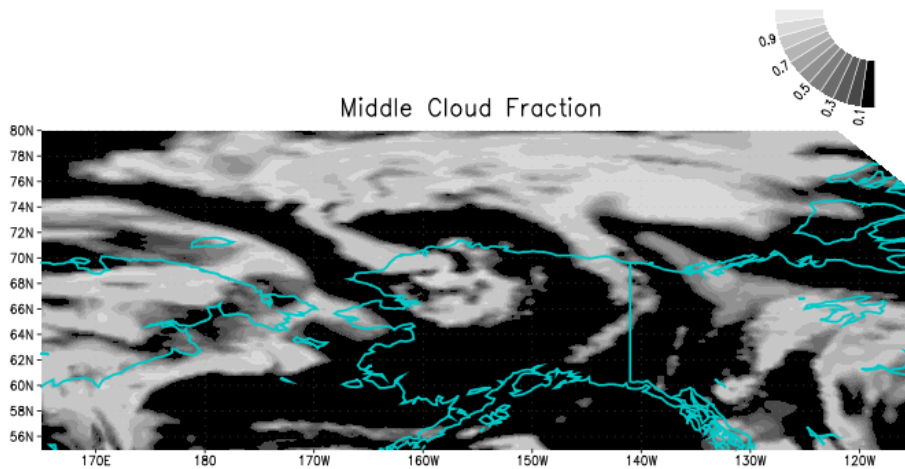
sea level pressure

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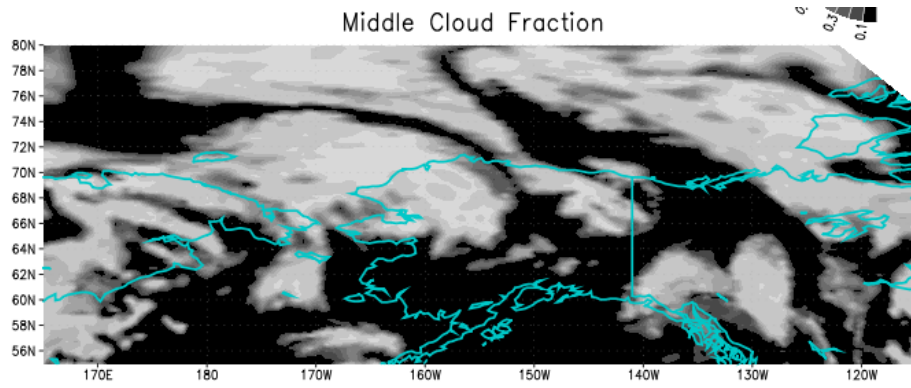


height at 500 hPa m

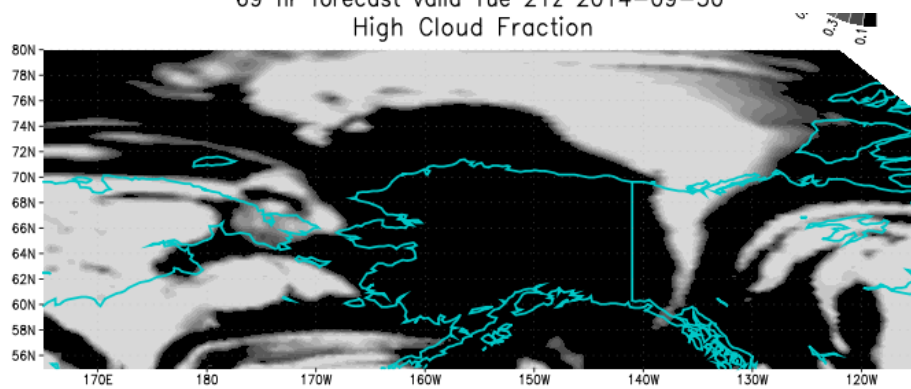
NASA/GMAO - GEOS-5 Forecast Initialized on 00z 2014-09-28



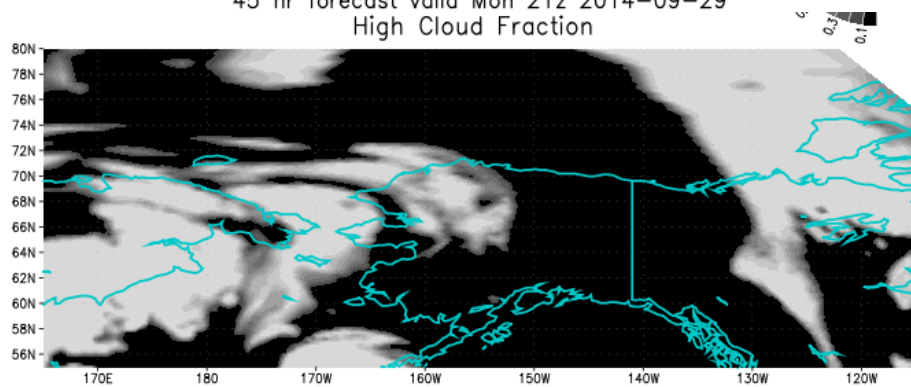
45 hr forecast valid Mon 21z 2014-09-29



69 hr forecast valid Tue 21z 2014-09-30
High Cloud Fraction



45 hr forecast valid Mon 21z 2014-09-29
High Cloud Fraction



69 hr forecast valid Tue 21z 2014-09-30

