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The Lincoln Sea - Nares Strait region

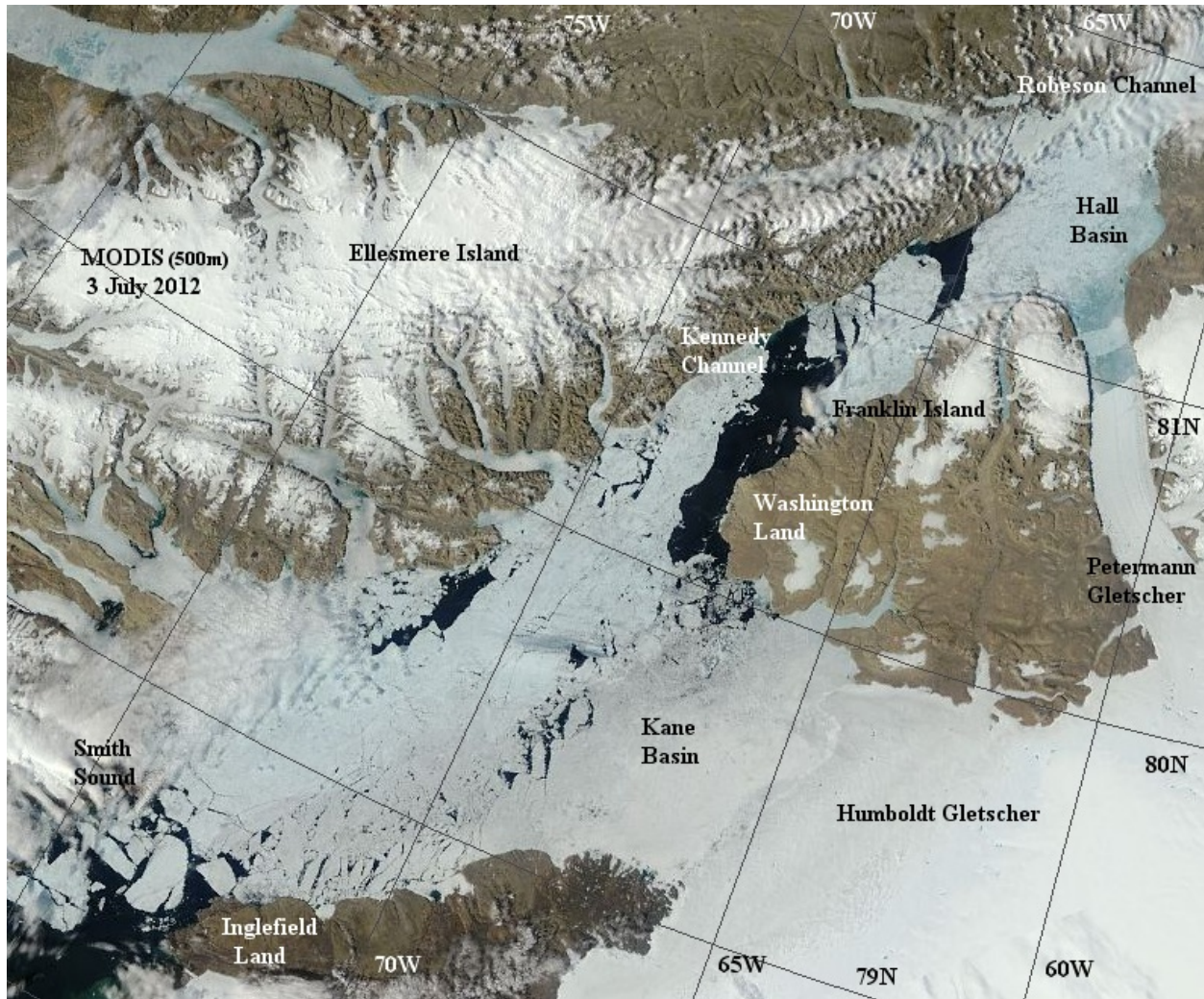
The arch-like barrier that formed in the southern part of the Kane Basin in the beginning of December 2011 broke down 29 June 2012 resulting in great changes in the ice canopy in the Kane Basin. In fact, changes are taking place while drafting these notes.

This follows a relatively cold winter so we estimated that the barrier would withstand external forces until mid-July, and in fact the meteorological conditions during the month of May and June measured at Littleton Island at the coast of Greenland in the Smith Sound were not very different from previous years. Even more, the dissolution of the barrier might have been delayed due to the persistent southern wind that changed to north during the last hour of 28 June and few hours later at Hans Island on the center of the Kennedy Channel.

Already by 8 June open-water areas were observed along the coasts of Ellesmere Island and Washington Land, Greenland, increasing in extent during the last two to three weeks. On 2-3 July this extended to cover a large area from coast to coast north of Franklin Island. We may therefore expect appreciable south-going movement of ice during the coming week probably including ice from the Hall Basin.

North of this – in the Robeson Channel a brief opening in the cloud cover showed the formation of a lead formation crossing the Channel filled with broken-off floes (24 June). Most likely, it is a tidal formation as previously observed in the Channel indicating that the ice canopy is fixed between the shores on both sides and may therefore serve as a barrier for the south-going flow of ice. This may delay the flow of ice out of the Lincoln Sea by two to three weeks to begin during the last week of July– depending upon air temperatures and winds.

The Lincoln Sea has been covered by clouds during the last two months so the state of this area is unknown. Short glimpses through clouds have shown few leads between floes, however, indicating internal movements since the area was last observed shortly before the European Envisat ceased operation in the beginning of April.



Scene acquired by Terra MODIS on 3 July 2012 of the region composed from south to north of Smith Sound over Kane Basin, Kennedy Channel, Hall Basin to Robeson Channel. The Robeson Channel and the Lincoln Sea (off the upper right-hand corner) are covered by clouds.