

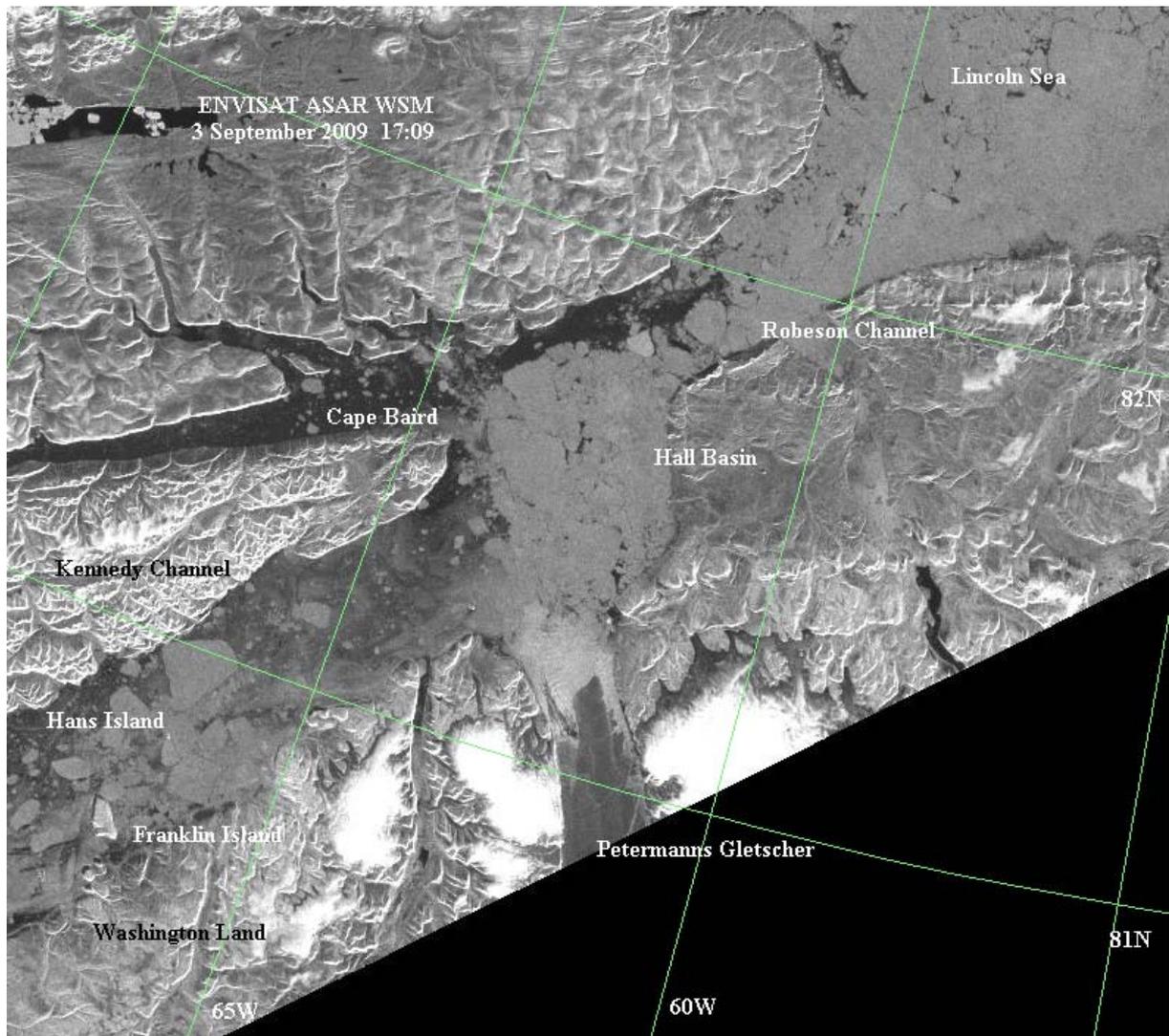
Nares Strait, an outlet of the Arctic Ocean

After the break down of the ice barrier in southern Lincoln Sea in the beginning of July, sea ice drifted unhindered through Nares Strait to Baffin Bay in July and August. Large potentially blocking floes break in pieces, small enough to pass the narrow parts of the Strait – when properly oriented. New blockings may occur during the coming winter with the recurrent ice bridge in southern Kane Basin as an outstanding example. Generally it forms in the November-March period to break-down by the following summer. So far we have no means of predicting the occurrence of this and other hindrances. A short-term example is the observation of the ice being caught in a cyclonic gyre in Hall Basin by 18-20 August 2009 reducing the flow of multiyear ice into Kennedy Channel. By 3 September it is still present.

During its August cruise to Nares Strait the Canadian icebreaker CCGS Henry Larsen was blocked in front of Petermann Gletscher during a 15-hour period by this gyre. Ice thickness of 3-6 meter were reported from this place. At other places an average ice thickness of 9 m with a maximum of 20 m were recorded by a drill team from the ship. (Progress Reports by Humfrey Melling, Institute of Ocean Sciences, Sidney BC).

During its cruise, a number of moorings was recovered in southern Kennedy Channel (deployed in 2007) and new moorings deployed at Franklin Island, to be retrieved in 2011. With the installation of an automatic weather station at Cape Baird that juts out in Hall Basin, refurbishment of one on Brevoort Island (in Kane Basin) and that on Hans Island (in the centre of Kennedy Channel) good meteorological monitoring is accomplished in this very dynamic region.

Radar image on next page.



Near-range scene from the Advanced Synthetic Aperture Radar on ENVISAT in its Wide Swath Mode processed to a spatial resolution of 150 m showing the ice blocking in Hall Basin. The wind-roughened open-water surface in front of Petermanns Gletscher is due to a katabatic wind. The thickness of the front of the glacier was measured to 60 m. The white surfaces on the ice caps indicate that freezing has begun at these altitudes while this is not the case on the surface of the glacier.