

(The ERS (AMI) wind scatterometer data are copyright ESA, 1994-1996, and provided through A0 project ERS.A02.AUS103, CI N Young)

The movie has been compiled from microwave backscatter data from the wind scatterometer instrument aboard ESA's ERS-1 and ERS-2 satellites. Each frame of the movie represents a compilation of data from 70 satellite passes over the Antarctic region during a 5-day period.

The movie spans two cycles of sea-ice growth and decay, starting from sea-ice minimum in Feb 1994 through to Jan 1996. Motion of the pack ice is clearly visible as is structure within the sea ice. This structure, exhibited as variations in brightness is related to the age and composition of the sea ice through its thickness, crystal size, size and distribution of brine inclusions in the ice, as well as roughness characteristics related to its deformation history, floe size, conditions during formation, etc.

The sequence of images also shows the drift of large icebergs and a major calving event from the West Ice Shelf (88 deg E) in May 1994, which generated two very large icebergs (approx. 1800 sq.km each). The first of those icebergs drifts with the ocean current to the west around the coastline, while the second becomes grounded a short distance from the east end of the ice shelf. That iceberg was subsequently seen to move from its grounded position and break up into a number of smaller icebergs in May 1996. The large iceberg seen in the Amundsen Sea (120deg W) is B10 (approx. 8000 sq.km). Other icebergs can be seen drifting in the Weddell Sea and around the Antarctic Peninsula.

In the summer months, the effect of snow melt in the Antarctic Peninsula, particularly over Larsen Ice Shelf is exhibited by the temporary presence of dark tones, where the surface is usually bright. Breakup of Larsen "A" Ice Shelf occurs in the first few months of 1995 in this sequence.