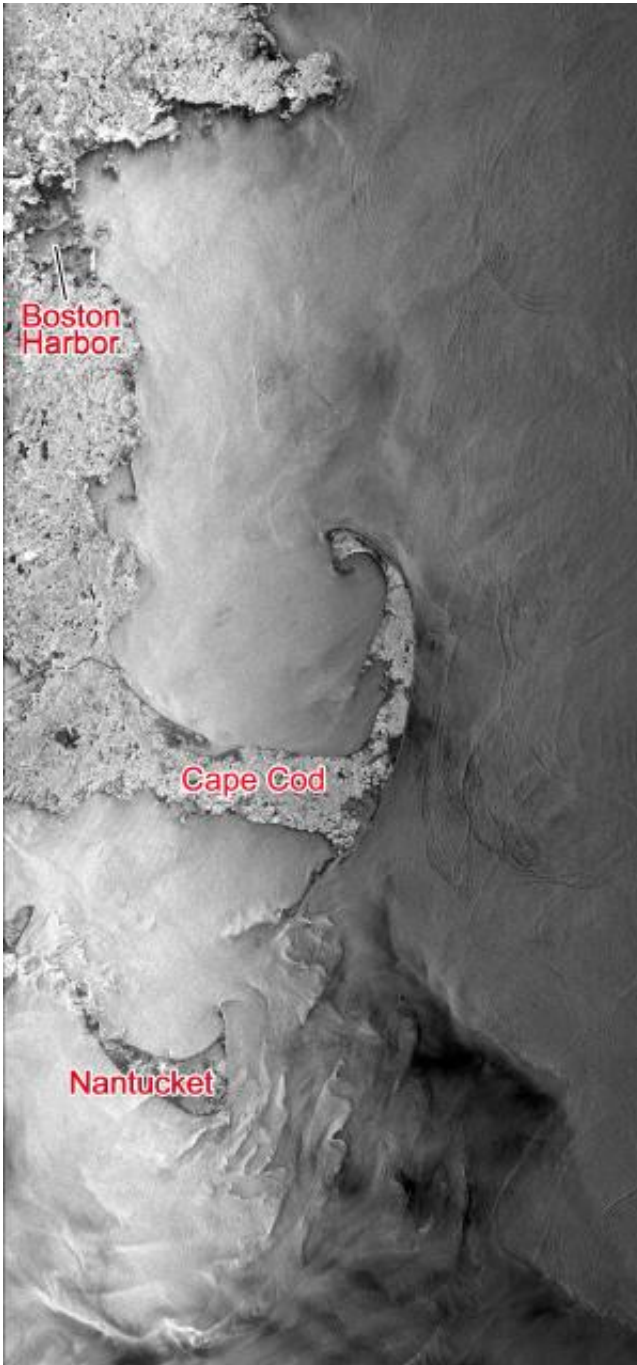


NASA historic Earth images still hold research value

March 19 2014



This Seasat synthetic aperture radar image from Aug. 27, 1978, shows the Massachusetts coast from Nantucket Island in the south past Cape Cod and Boston to Cape Ann in the north. The dark patch east and south of Nantucket is caused by the Nantucket Shoals, where a shallow ocean bottom creates surface waves and currents that appear as variations in brightness on the image. More subtle darker and lighter stripes to the east and north of Cape Cod are caused by internal waves, which are formed within the ocean by tides, rather than on the

ocean surface by winds. Credit: NASA/JPL-Caltech/Alaska Satellite Facility

(Phys.org) —NASA's Seasat satellite became history long ago, but it left a legacy of images of Earth's ocean, volcanoes, forests and other features that were made by the first synthetic aperture radar ever mounted on a satellite. Potential research uses for the recently released 35-year-old images are outlined in a paper published in the journal *Eos* today, March 18.

Seasat, which was managed by NASA's Jet Propulsion Laboratory in Pasadena, Calif., was the first satellite mission designed specifically to observe the ocean. Launched in 1978, it suffered a mission-ending power failure after 105 days of operation. But in that short time, Seasat collected more information about the ocean than had been acquired in the previous hundred years of shipboard research, said Benjamin Holt, a research scientist at JPL and coauthor of the *Eos* paper. The complete catalog of Seasat images has been processed digitally and is freely available from the Alaska Satellite Facility.

"There's still unique oceanographic data in these products that haven't been duplicated by more recent missions," said Holt. "We see different things in the Seasat images of the [ocean currents](#) than are seen by other satellites carrying [synthetic aperture radar](#)." This technology allows researchers to create very high-resolution images using complex information-processing techniques.

The 1978 data set also has value for climate studies of land cover simply because of its age. Holt noted that the images of Alaskan, Canadian and Norwegian glaciers are much earlier than any other [satellite images](#) that are currently available. This gives glaciologists an earlier baseline against which to measure the glaciers' rates of change.

More information: To access the Seasat images, visit:
<https://www.asf.alaska.edu/seasat/>.

Provided by NASA

Citation: NASA historic Earth images still hold research value (2014, March 19) retrieved 2 May 2024 from <https://phys.org/news/2014-03-nasa-historic-earth-images.html>

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