



KONGSBERG

200

# INTRODUCTION TO RISAT-1

KSAT is pleased to bring a new Synthetic Aperture Radar (SAR) satellite to commercial users around the world. RISAT-1, owned by the Government of India and operated by ISRO, was launched in April 2012. It carries a C-band radar sensor, is one of the most complex radar satellites ever built and offers a variety of resolutions and unique polarization modes.

ANTRIX has granted KSAT the right to schedule acquisitions, download, process and deliver RISAT-1 imagery to commercial users worldwide. KSAT's unique ground station network and operating facilities allow KSAT to deliver RISAT-1 imagery in near real-time. This readily accessible source complements our existing constellation of offerings to provide a full portfolio of SAR options to our global clients.

## RISAT-1 HIGHLIGHTS

- Global acquisitions
- Delivery available in near real-time
- Unique circular polarization
- Resolutions from 3 to 50 m
- Scene widths from 25 to 220 km
- Right and left looking acquisition

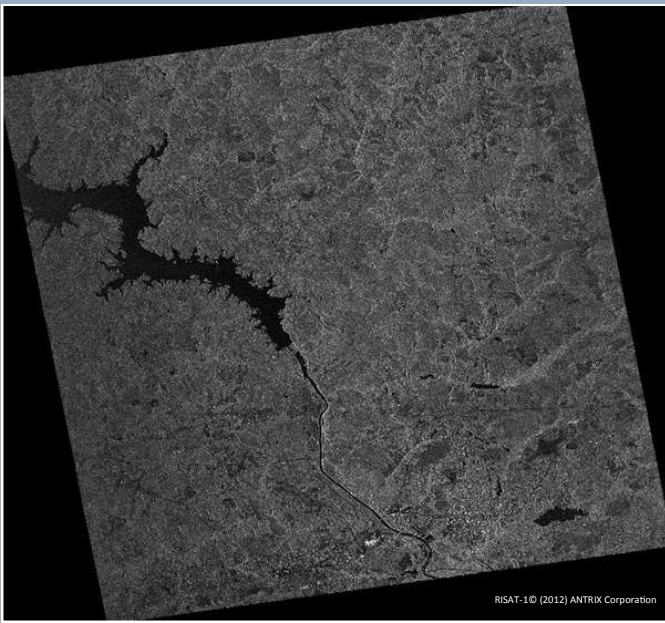
## IMAGING MODES

Fine Resolution Stripmap Mode-1 (FRS-1) 3m resolution, 25 km swath

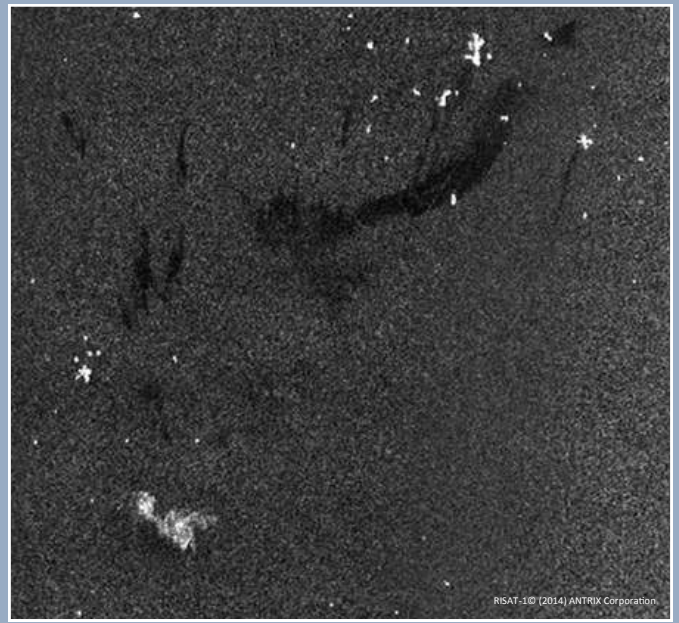
Fine Resolution Stripmap Mode-2 (FRS-2) 9m resolution, 25 km swath

Medium Resolution ScanSAR Mode (MRS) 25m resolution, 115 km swath

Coarse Resolution ScanSAR Mode (CRS) 50m resolution, 220 km swath



RISAT-1 FRS-1 3 m resolution mode.

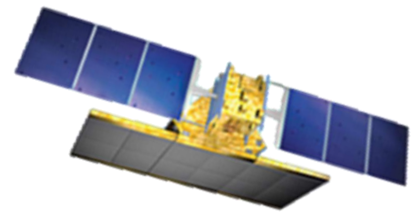


RISAT-1 CRS 50 m resolution mode.

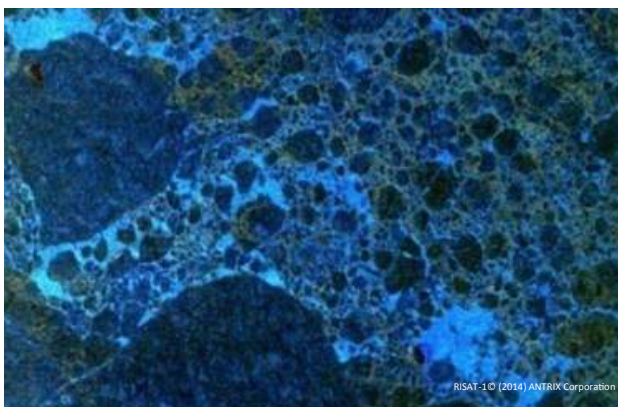
## CIRCULAR POLARIZATION / HYBRID POLARIZATION MODE

In addition to the traditional linear polarizations widely available on commercial SAR satellites, RISAT-1 opens a new dimension across a wide range of applications by offering a unique circular polarization.

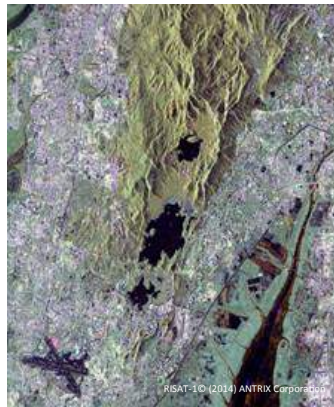
The conventional SAR single/dual polarization combinations do not fully exploit the vector nature of a scattered wave, resulting in unnecessary loss of information. By transmitting a signal with this unique circular polarization and receiving simultaneous linear polarization returns, a hybrid mode is achieved which provides additional useful information for a wide variety of applications. This polarization is available for FRS-1, MRS and CRS beam modes.



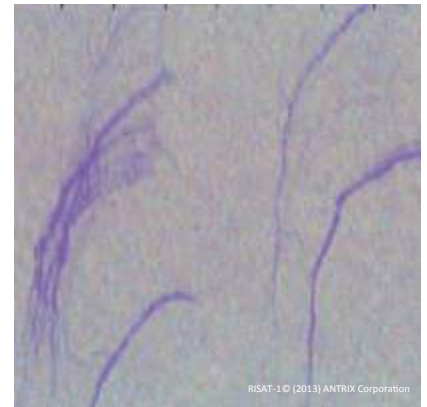
### COMPOSED RISAT-1 HYBRID POL SAR IMAGE



Sea Ice characterization



Land classification



Oil spill detection

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