

Polar View Sea ice information support



Andrew Fleming ahf@bas.ac.uk









Polar View provides near real time satellite imagery and information about sea ice conditions in the Arctic and Antarctic

Up to date information helps ships to improve safety, increase efficiency & reduce risk to the environment

Polar View is funded by the European Space Agency and UK Foreign & Commonwealth Office



Data products, formats, temporal coverage

- High resolution Envisat ASAR WSM (~100m pixel size)
 - ✓ GeoTIFF, JPEG, JPEG2000 streaming
 - ✓ Minimum coverage once every three days
- Sea ice concentration (DTU, University of Bremen)
 - ✓ GeoTIFF, GIF, KML
 - ✓ Daily coverage
- Sea ice edge
 - ✓ ESRI Shape, KML
 - ✓ Daily coverage
- Sea ice drift vectors from SAR imagery
 - ✓ Currently calculated from Envisat ASAR imagery
 - ✓ Investigating possibility of calculating from Radarsat SAR imagery
- Sea ice chart (Met.no, U.S. NIC)
 - ✓ GeoTIFF, JPEG, ESRI Shape, KML
 - ✓ Bi-weekly (met.no) and daily (NIC)
- Optical satellite imagery
 - ✓ NASA MODIS mosaics
 - ✓ ESA MERIS mosaics

Radarsat and Envisat SAR imagery available in website automatically







Example Envisat ASAR image from 2011-04-16 21:25:58 UTC









Envisat SAR coverage in addition to Radarsat ordered by NIC





Sea ice concentration information



JEAR

OR PLANET EARTH

NIC and Norwegian ice charts automatically updated



OR PLANET EARTH

Automatic emails immediately notify users of new relevant imagery







Imagery delivery can be based on ship location or predefined AOI



PI.

ANET EARTH

Low bandwidth solution allows access over poor data connections







All imagery and information available in Google Earth



OR PLANET EARTH

All systems routinely monitored and maintained



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Improvements planned ahead of the 2011 season

- Addition of Envisat ASAR GMM (Global Monitoring Mode) images
 - ✓ Lower resolution (1km pixels spacing ...
 - ✓ ... but very regular acquisitions
- Add information about planned future acquisitions where available
 - ✓ Adds a 'forward look' component to aide planning
 - ✓ Need to confirm access to this information from both Radarsat and Envisat
- Ensure low bandwidth image access option is working onboard before cruise
 - ✓ Need to check port settings
 - ✓ Will investigate compatibility beyond Windows platforms and GMA Java Webstart
- Improve display of SAR imagery
 - ✓ Include a correction to normalise the cross-track brightness gradient
 - ✓ Investigate other useful delivery formats, e.g. MrSID
- Include sea ice drift vectors derived from SAR imagery
 - \checkmark This will initially be based on Envisat ASAR data but depends on image repeat
 - ✓ We will investigate the potential of deriving this information from Radarsat SAR imagery
- All other suggestions and feedback gratefully received