Why are Jason Wave Heights important

Wave Height information is critical for shipping concerns over the ocean where observations are scarce. Jason Wave Heights are altimetric: the satellite detects its own height above the sea surface, to an accuracy of better than 3-1/2 cm. Jason satellites monitor the height of the ocean at high precision, to document ocean elevation changes over long periods of time. Wave actions are a by-product of this accuracy. Ocean altimetry satellites include JASON-3, Saral/AltiKA, Cryosat-2 and Sentinel-3b). Only JASON is in AWIPS. **Significant Wave Height** is defined as the mean of the highest third of all waves that occur in a time period.

Specifications

- **Coverage over oceans and Great Lakes**
- **Spatial resolution** depends on sea state, but generally about 5 km (cross-track) and 11 km (along-track)
- **You should ignore points** over land or within 15-20 km of land
- **Estimated accuracy** to within 0.5 m or 10%, whichever is larger
- **Does not require clear field of view**
- **Coverage Equatorward of 66°**, Repeat Cycle of 9.9 days after 254 orbits

Impact on Operations

**Primary Application**: JASON wave heights are an important ground truth in wave estimates in regions where ship and buoy information is scarce.

**Jason acronym**: Joint Altimetry Satellite Oceanography Network. Jason lead the argonauts seeking the golden fleece.

**Characterization**: Wave height is derived from the shape and intensity of the altimeter radar echo, a ~2-5 km footprint (depending on sea state), to within 10% or 0.5 meters, whichever is greater.

**Online**: [Jason data at OSPO](https://www.nos.noaa.gov/data/jasondata.html). [Significant Wave Height from NOAA STAR](https://www.star.nos.noaa.gov).

Resources

- [NOAA OSPO](https://www.nos.noaa.gov)
- [Jason-3 Product Handbook](https://www.nos.noaa.gov/data/jason3.html)
- [COMET Training](https://comet.jpl.nasa.gov)

Hyperlinks will not work in AWIPS, but they do in VLab.

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