

Using Radar Altimetry Satellite to Provide Digital Maps

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Abstract

Radar altimeters were designed to collect height data over surfaces where there are few sudden changes in elevation to send the instrument off-lock. One third of the earth's land area is arid. Information of the surface topography of this region is difficult to obtain with methods. Operating conditions some of these areas are very different when it comes to surveying and photogrammetric methods to provide digital elevation maps and it is very time consuming. It is therefore tempting to consider the use of radar altimeters to try to obtain the height of data points without it being necessary to come into direct with the surface. The purpose of an altimeters to make accurate and precise measurements of surface height. Height refers to the distance of the surface above a reference, and is computed from satellite altitude and altimeter range.

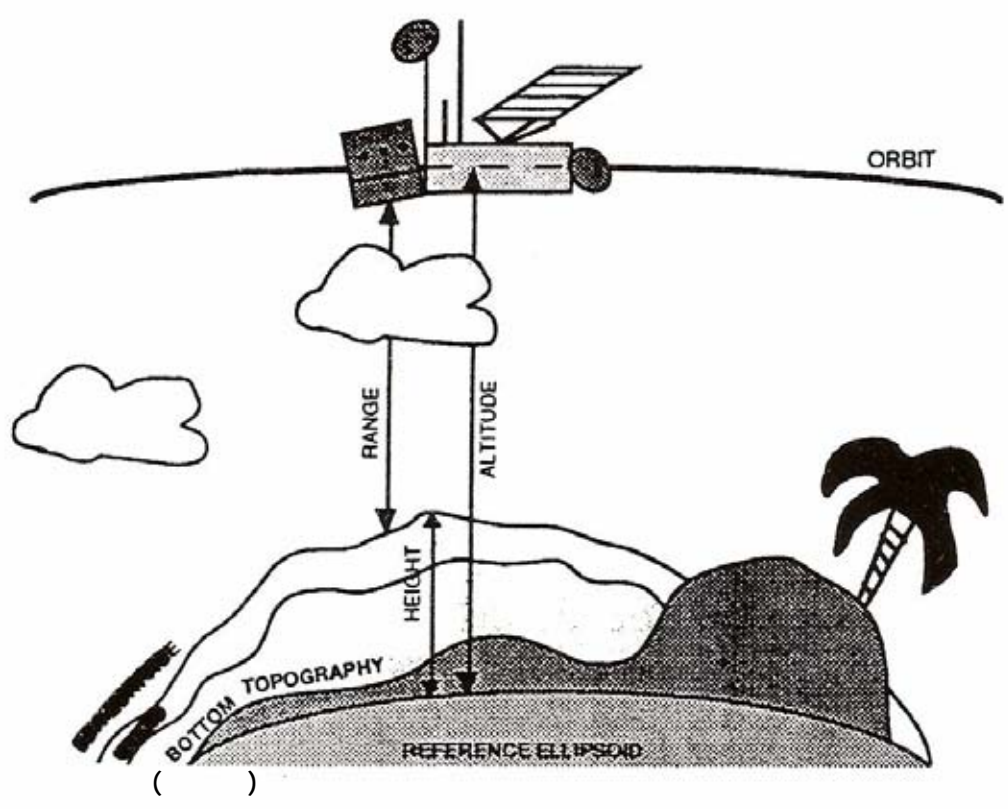
Key words: Satellite, Digital map, Radar altimetry, Geoid, ellipsoid

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- 1- Reference
 - 2- Altitude
 - 3- Altimeter Range

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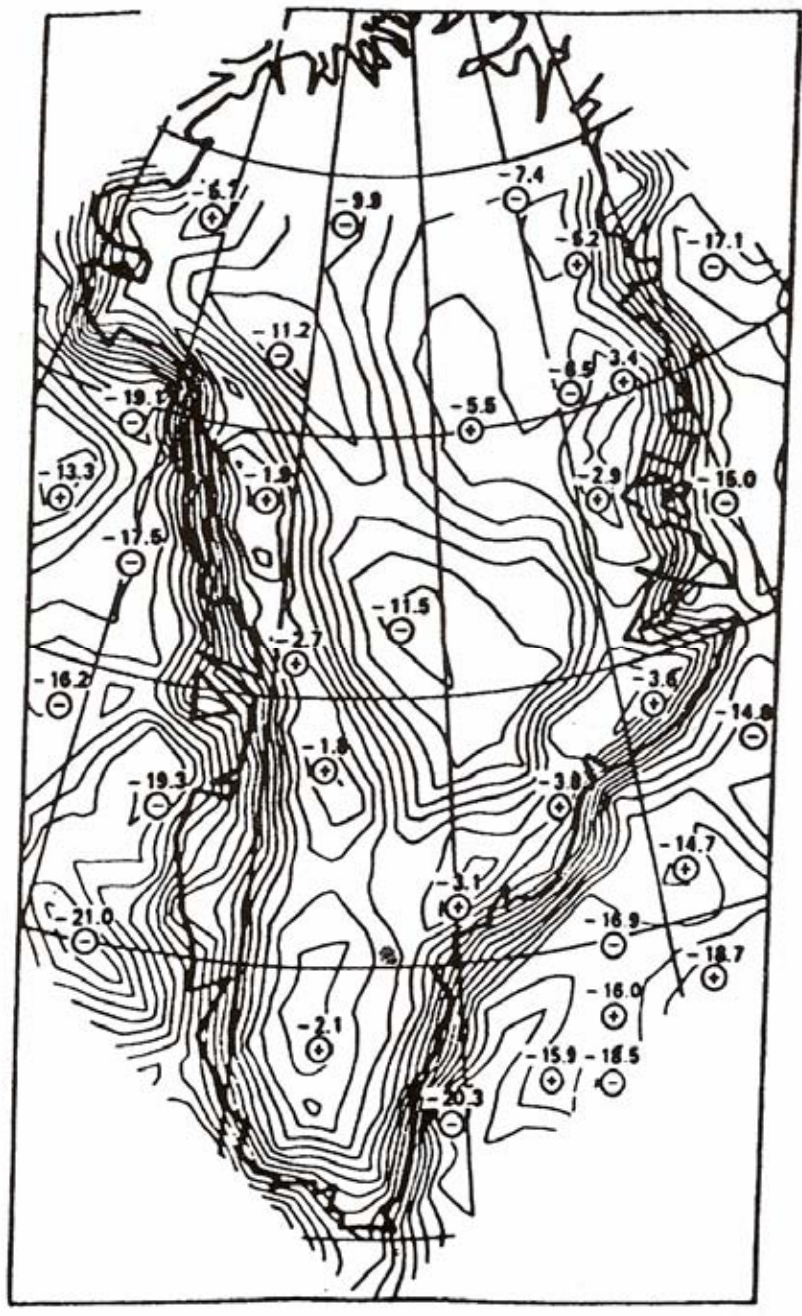
Topex GDR-M

Gdr-M

- 1- Retracking
- 2- Orbit

Sea Sat

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Sea

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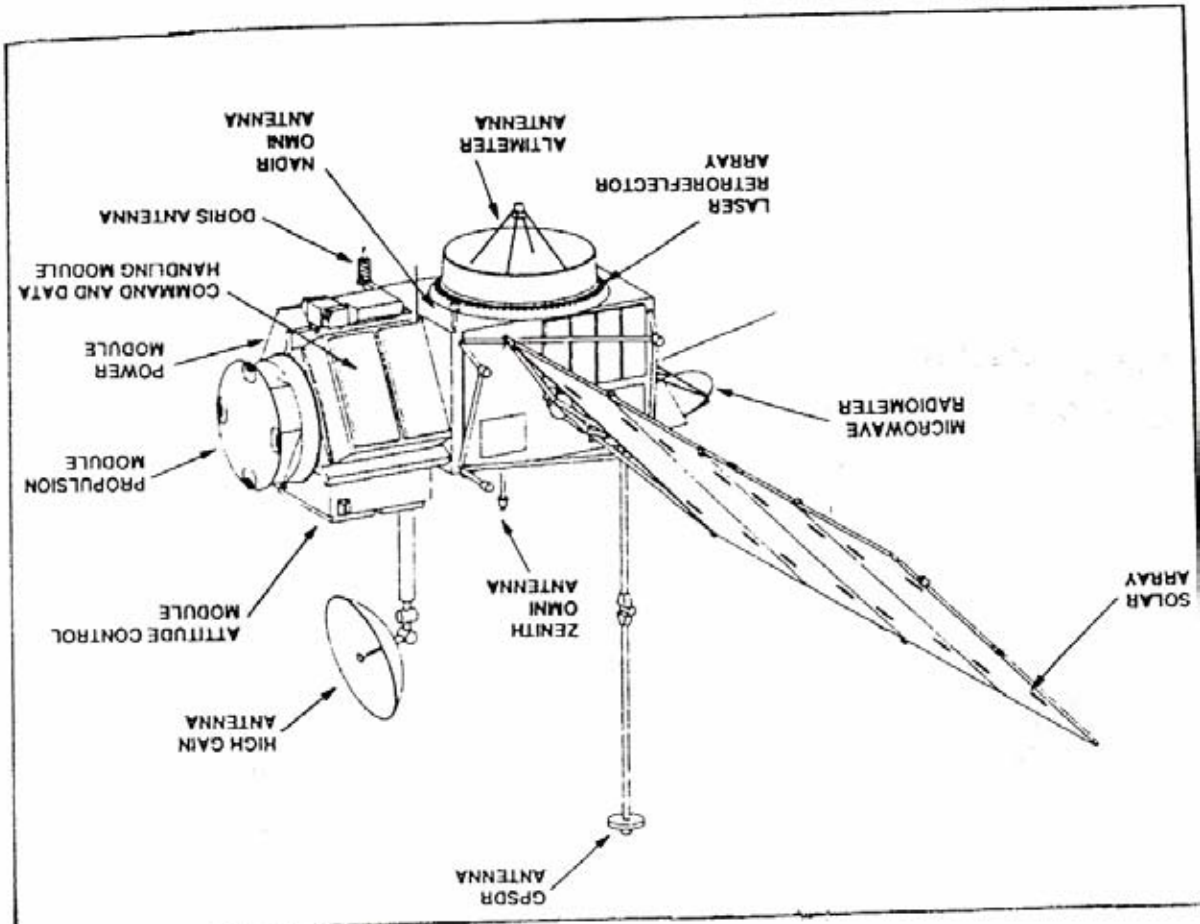
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Geo Sat -

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ERS-2 -

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Topex

Topex	()	SAR	
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Topex/Poseidon