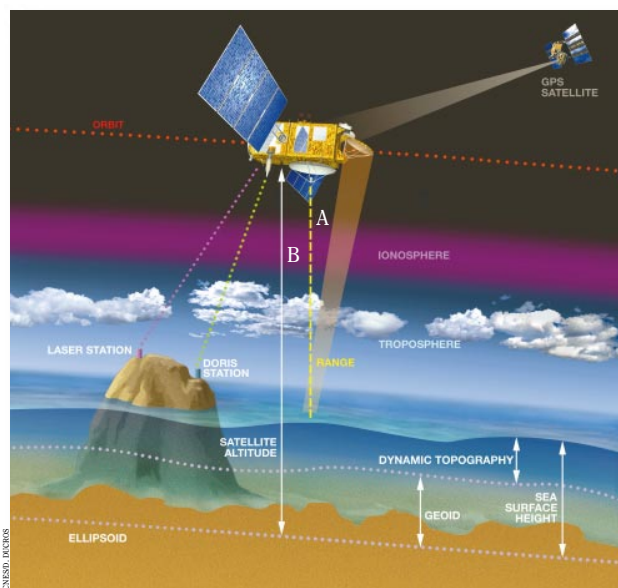


## Altimetry yields a wealth of information

*Today satellite-borne radar altimeters are vital tools for collecting precious data about the oceans day and night, and in all weather. Since 1992, TOPEX/POSEIDON has been keeping constant watch over our oceans, helping scientists to develop a global, long-term approach that will be sustained by the new Jason series of satellites.*

### How do we calculate sea surface height?



The radar altimeter measures the satellite-to-ocean range (A) **with centimeter accuracy**. It needs to know also the satellite's position relative to the Earth's center (B). This position, calculated using DORIS, GPS, and laser measurements, is accurate to around one centimeter. Attaining this level of accuracy has been a huge step for altimetry missions. Sea surface height is obtained by subtracting A from B, after correcting for atmospheric path delays that affect the radar signal.

▶ Altimetry measurements provide information relative to ocean dynamics from the sea surface to the seabed.

### A ten-day global picture

TOPEX/POSEIDON and Jason-1 acquire measurements along the ground tracks shown here in red. They revisit the same point on the globe every ten days, having completed 127 orbital revolutions.

*Every ten days the satellites collect some 500,000 measurements—an acquisition rate of 95%.*

