



Open Seminar Series
Geoscience & Remote Sensing

Observing polar ice loss from space

Dr. Bert Wouters, University of Bristol, April 23, 2015, 12.40 – 13.30, CiTG room 3.02

Cryosat-2, launched in April 2010, provides repeat height measurements of land surfaces between 88°N and 88°S. Unlike earlier radar altimeters, the mission provides dense groundtrack coverage and is able to geolocate off-nadir radar echoes. These characteristics make Cryosat-2 an excellent tool to measure height changes of the Earth's ice covered regions. In this presentation, I will discuss the mission's performance and limitations, and show some applications in Antarctica. Combining the Cryosat-2 observations with data from previous altimetry missions such as Envisat and ICESat, and gravimetry data from the GRACE mission, yields a very complete picture of the evolution of the Antarctic ice sheet in the last decade. This has allowed us to identify rapid destabilization of a number of glaciers in the Antarctic Peninsula, occurring around 2009, accounting for a substantial fraction of Antarctica's current contribution to sea level rise.

