

Antarctica

a flying tour of the frozen continent

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During the last two decades scientists have witnessed large and rapid changes on outlet glaciers in both Greenland and Antarctica. Outlet glaciers drain the majority of the polar ice sheets and consequently these changes can threaten their stability and lead to rising sea levels. At least part of the changes has been ascribed to changes in the dynamics of these glaciers. It is therefore important to investigate their flow governing processes and document changes herein. Fortunately, repeat airborne and satellite imagery, together with remote sensing analysis and image processing techniques, have facilitated data collection in recent years. A great opportunity to study Antarctica arose for glaciologists with the launch of the Canadian RADARSAT-1 satellite in 1995 and the RADARSAT-1 Antarctic Mapping Project (RAMP), which completed two mapping missions in 1997 and 2000. RAMP provided the first complete high-resolution radar mosaic of Antarctica and allowed for unprecedented detailed velocity measurements of Antarctic ice streams. This talk highlights some of the advances that have been made in our understanding of ice flow in Antarctica.

Jan Wuite started his academic career at the Department of Environmental Sciences of the University of Amsterdam. He received his PhD in geology from the Ohio State University, where he specialized in glaciology and worked at the Byrd Polar Research Center under a NASA fellowship. His main interests go out to remote sensing and field studies of past and present glaciations. His research focuses in particular on the polar regions. He has been involved in several international research projects focused on monitoring changes in the cryosphere. At present he works at the Geophysics Laboratory of the University of Luxembourg and is involved in a project to infer ice mass changes in Greenland using GPS measurements.



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