



## **The Brunt Ice Shelf: Calving risks and ice shelf velocity**

K. Hayes

British Antarctic Survey, High Cross, Madingley Road, Cambridge, CB3 0ET, United Kingdom.

khay@bas.ac.uk

The Brunt Ice Shelf is located on the eastern edge of the Weddell Sea in West Antarctica. It has provided the location for the British Antarctic Survey base station, Halley, since the early 1950's and Halley V currently resides there. The Brunt Ice Shelf is of interest not only due to the presence of a permanently manned research station, but also due to the increasing risk of ice shelf break-up through calving. Several threats of calving have been identified e.g., the advanced state of the Brunt Ice Shelf, a 1967-1970 calving event and its effect on ice shelf velocity, iceberg collision from the collapse of Stancomb-Wills (an ice stream further north) and the possible joining of two features on the ice shelf called the N9 fault line and First Chasm. Furthermore, recent observations e.g., deceleration of the ice shelf, and future work e.g., generation of velocity maps using feature tracking of satellite imagery and installation of linear motion sensors on surface cracks, will all contribute to providing an improved understanding of the Brunt Ice Shelf in terms of its dynamics, stability and fracture mechanics.