

## ***Interactive comment on “Halley Research Station, Antarctica: calving risks and monitoring strategies” by R. Anderson et al.***

**Anonymous Referee #2**

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This is an important piece of work addressing the likelihood of changes in the Brunt Ice Shelf and the associated risks for the Halley Research Station. The potential risks mean that an understanding of the ice shelf behaviour is vital, through interpretation of existing data, analysis of past changes, further monitoring and a predictive assessment of future changes. The authors have addressed each of these in detail and present a clear assessment of the threats to the station, ranked in order of likelihood. Despite historical data being fairly limited the authors' approach has maximised the data that does exist, and combined with more plentiful recent satellite image data and an analysis of a GPS network for continued monitoring, it is a thorough review of possible risks. The paper provides an overview to improve understanding of the behaviour of the ice shelf and it presents an innovative approach to continue monitoring, essential in the event

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of imminent risks to the base. The paper is well written and provides full explanations of the geography and ice shelf behaviour in the region. One concern is that a reliability assessment hasn't been made for the historical ice front positions and no description of how errors may affect the projected ice front positions. Most of my specific comments are regarding methodology clarifications, small changes to the text and suggestions for additions to the figures. I would recommend this paper for publication after corrections are made.

See supplement for specific comments.

Please also note the supplement to this comment:  
<http://www.nat-hazards-earth-syst-sci-discuss.net/1/C2103/2013/nhessd-1-C2103-2013-supplement.pdf>

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