

# Engineering in Antarctica

## Halley V Platform Monitoring System

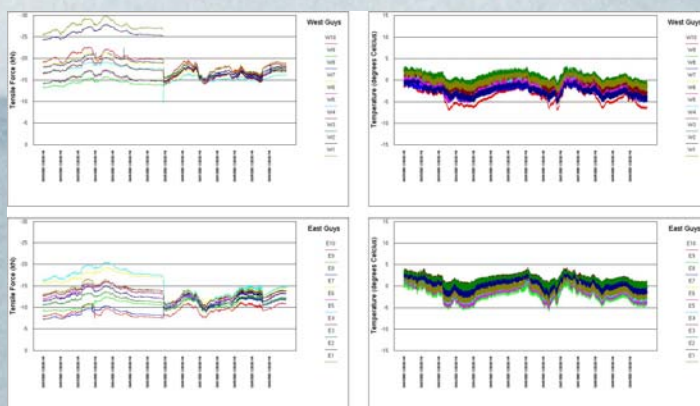
Mark Preston and Tim Harriss

British Antarctic Survey, High Cross, Madingley Road, Cambridge CB3 0ET, UK  
(E-mail: mopr@bas.ac.uk)



Halley V base

The British Antarctic Survey's Halley base is built on a floating ice shelf. The accommodation building is constructed on a steel platform above the ice. Differential movement of the ice shelf causes uneven displacement of the legs supporting the platform, which could cause permanent structural damage. Adjustments are made using steel cables to tension each leg in relation to the others. Consequently monitoring this movement is crucial to the success of this process. A system, developed by BAS engineers provides real-time data and analysis using a network of load cells linked to a logging system. Using this information, the on site structural engineer is able to make informed decisions with regard to adjustments.



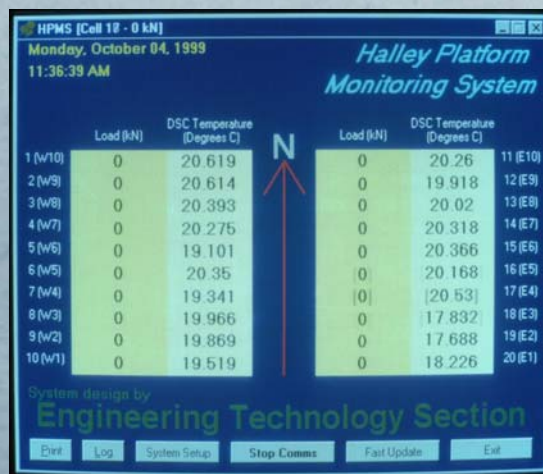
Output Graphs



DSC Junction Box



Platform Monitoring System



Real Time Display