

Gan Magnetic Observatory

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**Aerial view of the Island of Gan located in the south of the Maldivian archipelago.
The observatory is located just to the south of the center of the main runway**



Gan Observatory

Gan Observatory (IAGA code: GAN)

Location: Gan International Airport,

Addu Atoll, Maldives

Latitude : 00°41'40.55" S

Longitude : 73°09'13.47" E,

Altitude: 3 m

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NOTE:

The data used to produce the following magnetograms has been derived from the system installed in April 2011 and must be regarded as preliminary data only. These plots have been generated to check the operation of the data logging system, scale values have not been checked and only provisional baselines have been allocated.

Gan Observatory was installed by the Institut für Geophysik, ETH Zürich, Switzerland in April 2011. The instruments include a DMI Suspended FGE 3 component fluxgate magnetometer measuring variations in the horizontal (H) and vertical (Z) intensities and the changes in the declination (D) along with temperatures in the sensor head and fluxgate electronics. Total Field (F) is measured by a GEM Systems GSM 90 magnetometer which also supports a GPS receiver used to provide accurate timing control for the data logging. All magnetic components are sampled once a second with magnetometer sampling, data storage and systems housekeeping controlled by a low powered UNIX based PC which operates from a 12 Volt supply. As well as storing the data locally a transmission link has been set up between the observatory and the local Meteorological Office in Gan Airport. At this office Internet facilities are available to transmit all recorded data to Zurich where an on-line display has been set up (<http://koblizek.ethz.ch/gan.html>). The observatory is completely self-contained with all power provided using battery backed solar panels.

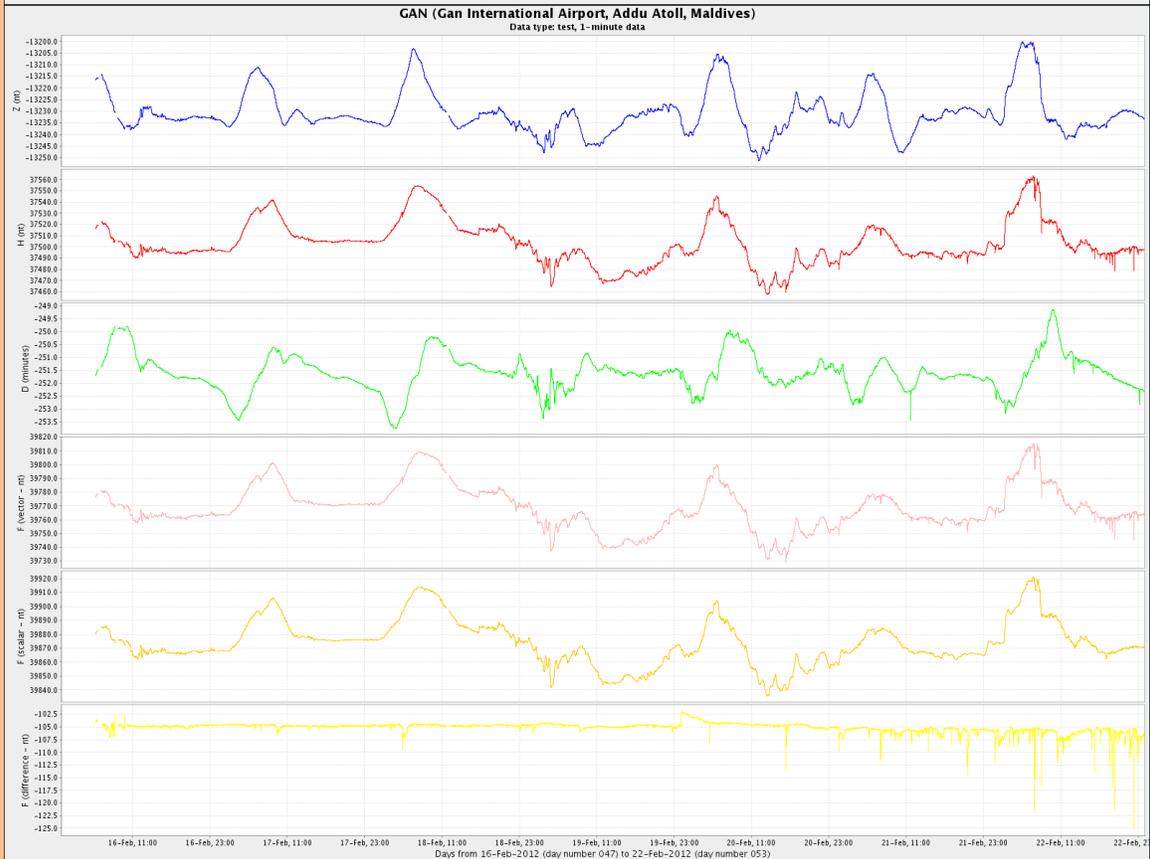
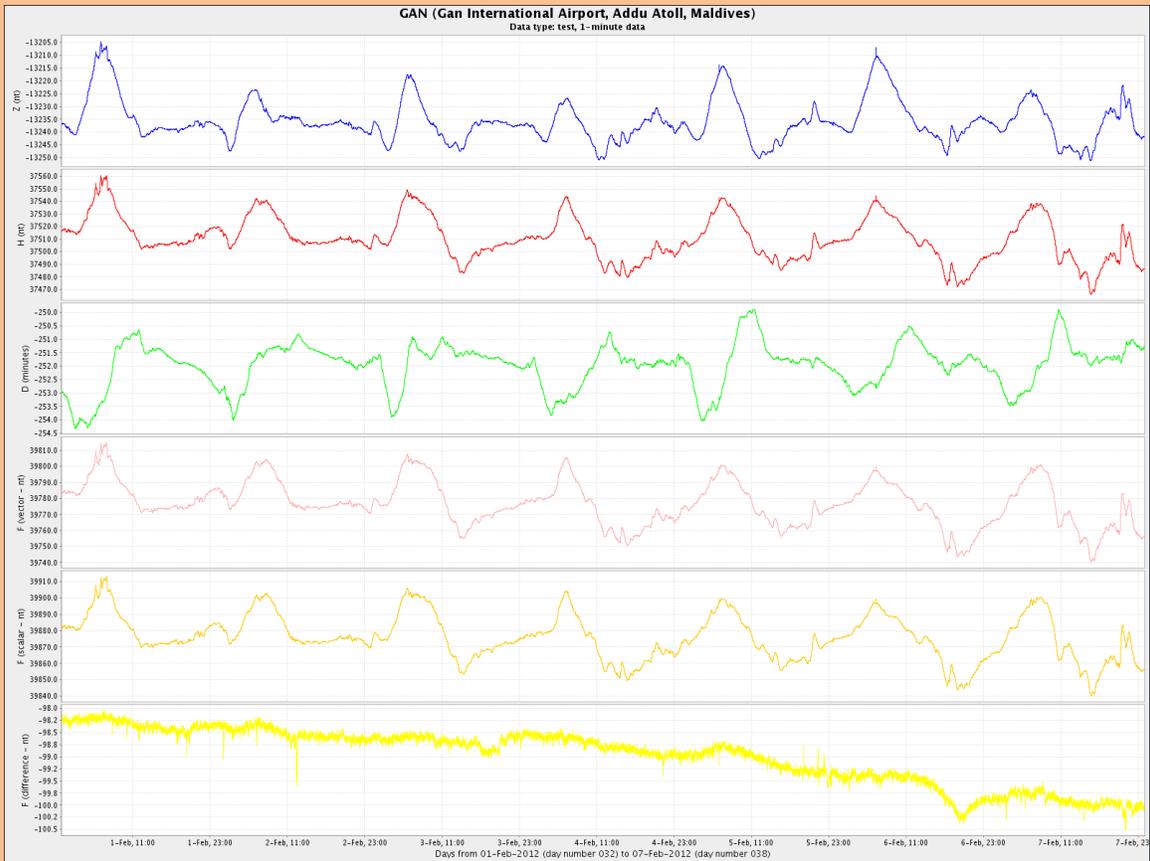
To provide absolute control for the fluxgate variometers an absolute observing position has also been established and in September 2011 a program of regular absolute observations commenced carried out by a local observer.

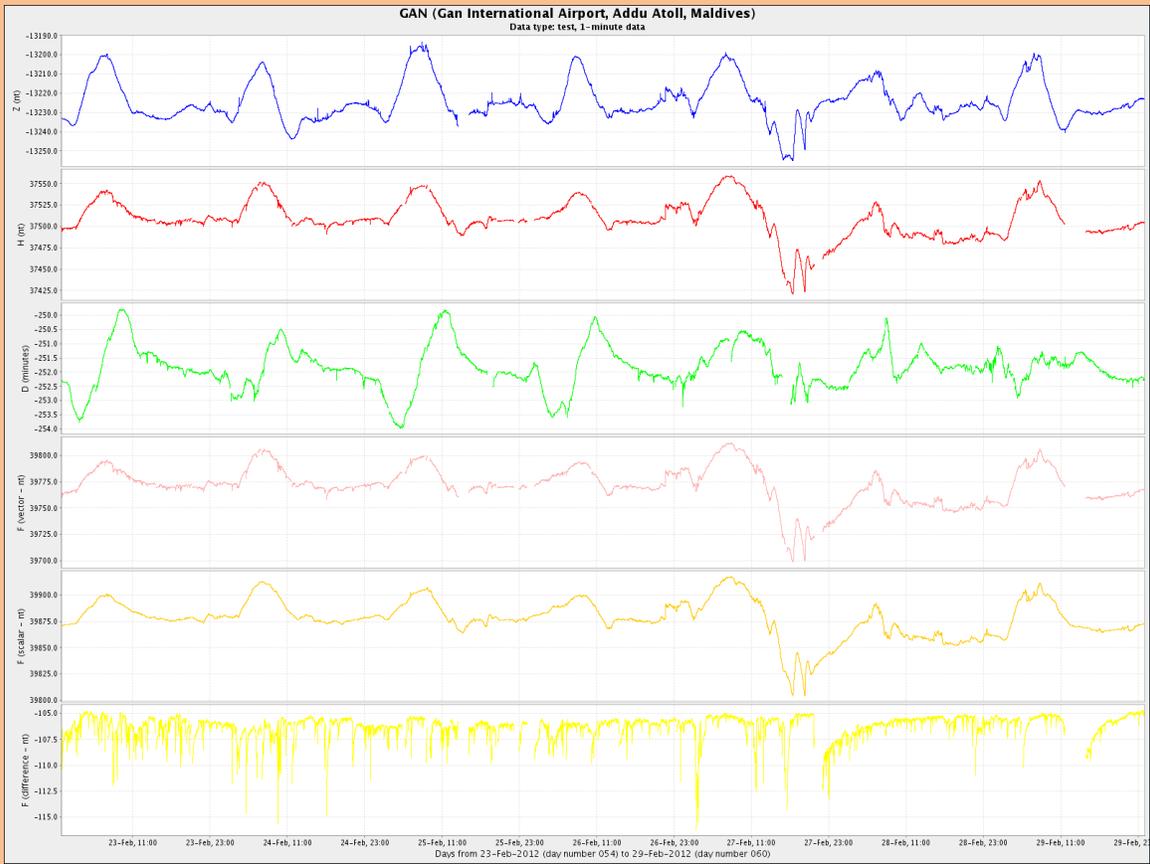


The installation team – left to right, Jakub Velimsky, Chandrasekhar Rao, Lars Pedersen, Ahmed Muslim.

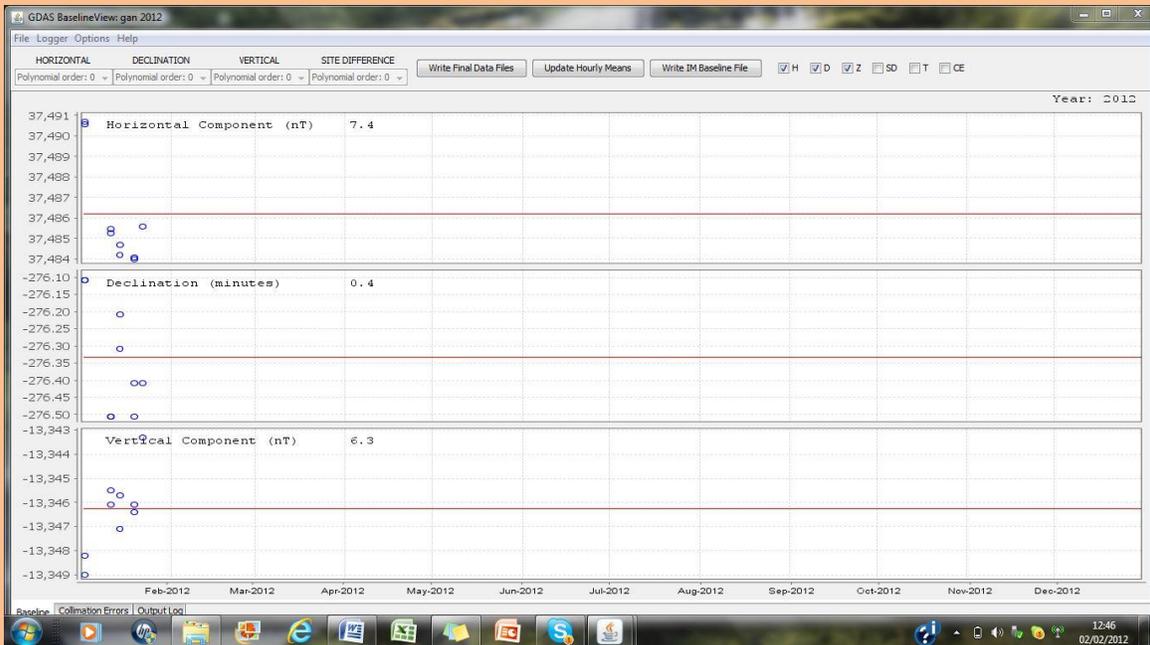
Solar panel array provide a 12 Volt DC supply used to operate the observator







Gan Baselines 2012



Operational Notes:

To investigate drifts in the $F_{\text{proton}} - F_{\text{fluxgate}}$ (closing error) changes, the Meanwell DC/DC converter supplying DC power to the proton magnetometer was replaced with a TracoPower THL 20-2412WI device on the 8 February. After exchanging this device the PC failed to reboot and it was necessary to replace the PC on 22 February after which time data logging restarted.

These changes, exchange of DC/DC and replacement of the PC have resulted in an increased amount of noise affecting the fluxgate horizontal and vertical components. This noise interference has continued up to the end of the month. This interference can be clearly seen on the F difference magnetogram plots. Investigations into the cause of this interference are continuing.