PEA: NEW MAGNETIC OBSERVATORY IN EAST ANTARCTICA NEAR UTSTEINEN

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This talk is about how we are setting up an Antarctic geomagnetic observatory in the Belgian Base Princess Elizabeth PEA (S71°57'14" E23°20'51"). Information on the Base can be found on several websites: http://www.antarcticstation.org/ , http://www.polarfoundation.org/ and https://www.belspo.be/belspo/research/polar_en.stm .

A minimum requirement for an observatory is to have continuous triaxial variometric recordings of the geomagnetic field regularly supported by at least weekly absolute measurements of the geomagnetic field strength and direction.

The installation meets some difficult challenges:

- The whole observatory is to be configured in one radomelike nonmagnetic shelter mounted on rocky terrain (nunatak).
- The rocklike terrain in the vicinity of PEA shows a sizeable magnetic signature so finding a good spot is difficult.
- Because the base is presently unattended during the Antarctic winter, fully automatic operation even for the absolute measurements is a requirement .
- The equipment has to be working down to -40degC

We explain about the PEA and unmanned facilities available in antarctic winter time: how can the observation be continued and by what means: power, communications and costs.

We finally would like to say a few words on the Belgium Antarctic Research Expedirions and their future prospect. Also of interest is how a new research or collaborative observation plan is accepted in BELARE, especially coming from foreign countries.