

PRESENT DEVELOPMENT STAGE OF AUTOMATIC BASELINE CONTROLLING DIDD
(ABCD) MAGNETOMETER

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Most widely used observatory instrument is the fluxgate magnetometer. This is a relative instrument giving the temporal variation measured from its baseline. This baseline usually is changing more or less during the operation. To reconstruct absolute value of geomagnetic field for any moment, regular absolute observation is necessary to follow the baseline changes. This operation is time consuming and can be particularly difficult in remote places.

dIdD magnetometer gives absolute values for the total field (F) but it is a variometer for inclination (I) and declination (D). On the other hand I and D are absolute in the reference frame of the coil system of the instrument. If we can monitor the position of the coil system in the geographic coordinate system we can get the absolute values of I and D.

An automatic procedure was developed to monitor I and D baseline of dIdD magnetometer. The modified dIdD test instrument was built and put into operation in Tihany Observatory. In this presentation we show the operation principle of the new instrument and our first test results.