Geomagnetic measurements and mapping for aeronautics in Germany

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Abstract: This report is about activities of the Geophysical Observatory Fürstenfeldbruck in providing aeronautics in Germany with the infrastructure to use magnetic compass navigation accurately in aircrafts. Three prerequisites are important to accurately use the geomagnetic field for aircraft navigation purposes. First, the compass or magnetic field sensor employed on an aircraft has to work properly. Second, the direction of the horizontal component of the magnetic field and its temporal and spatial changes have to be known for all points of a given area. Third, the magnetic influence of the aircraft on the field sensor has to be known for all headings. This report deals mainly with the second and the third requirements described above. It specifically addresses the practical and technical details of magnetic measurements for aeronautics.

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