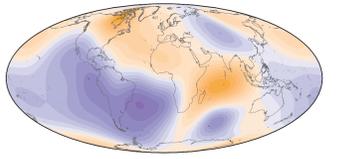
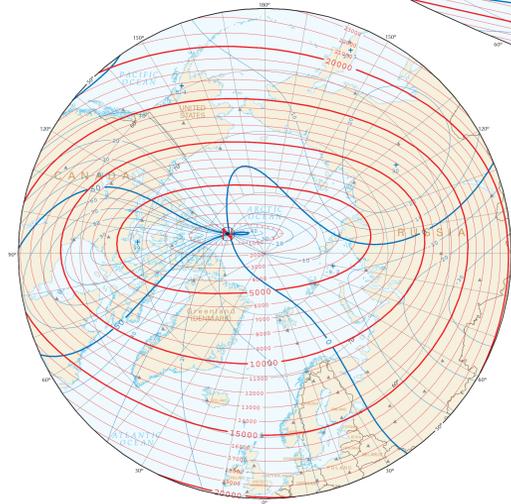
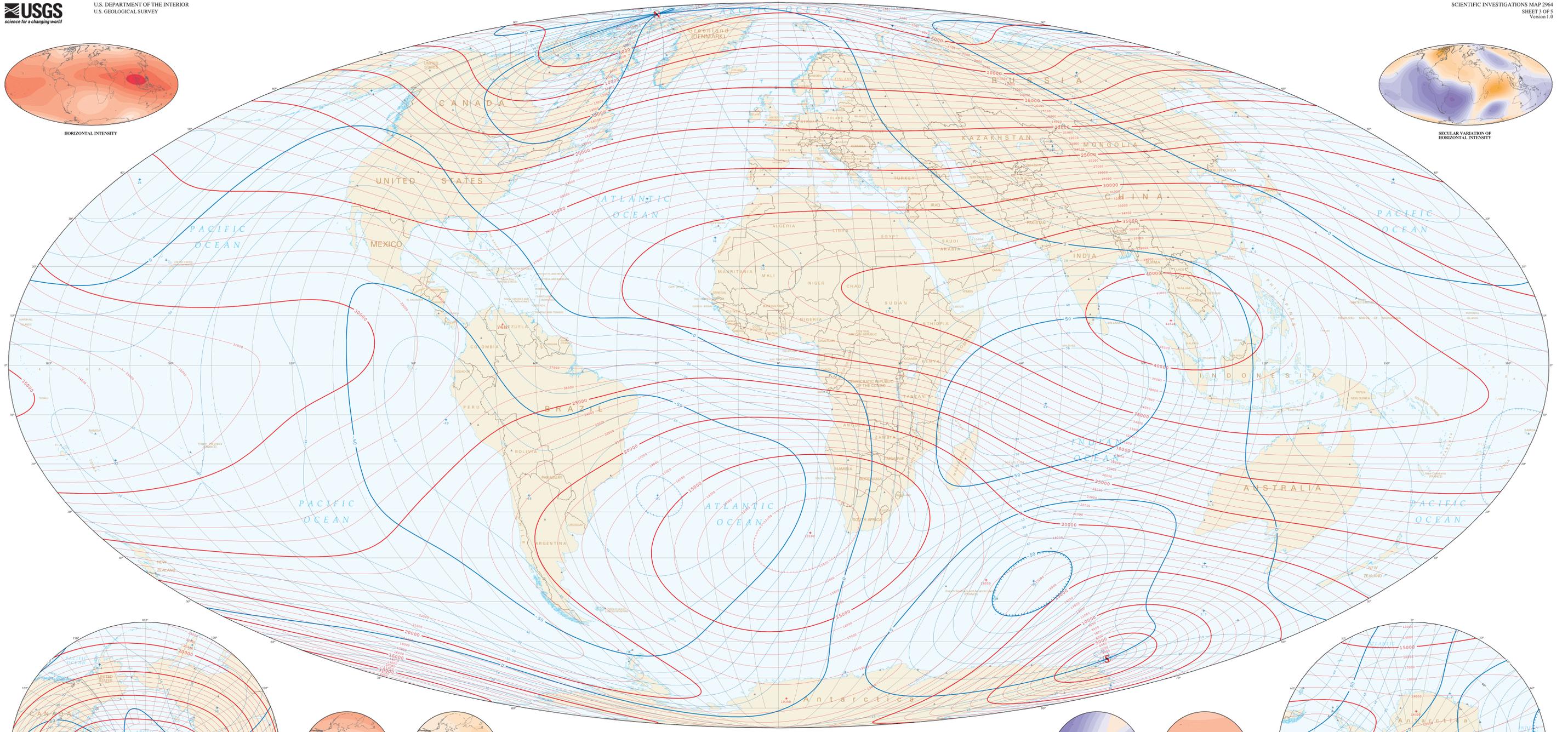


HORIZONTAL INTENSITY



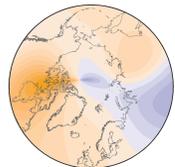
SECULAR VARIATION OF HORIZONTAL INTENSITY



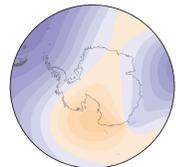
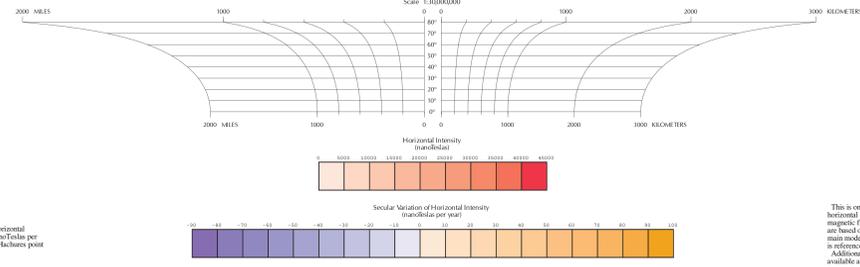
Arctic Region



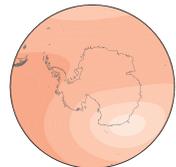
HORIZONTAL INTENSITY



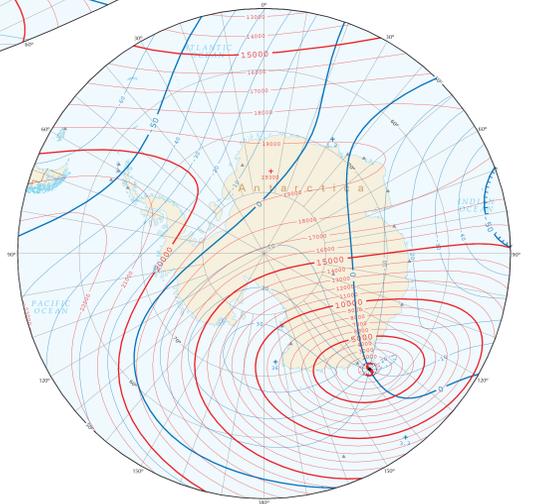
SECULAR VARIATION OF HORIZONTAL INTENSITY



SECULAR VARIATION OF HORIZONTAL INTENSITY



HORIZONTAL INTENSITY



Antarctic Region

**Horizontal Intensity**  
 Contours of horizontal intensity expressed in nanoTeslas. The horizontal component is the projection of the geomagnetic field vector onto the tangent plane attached to a point on the Earth's surface. The horizontal intensity is the field strength (magnitude) of the horizontal component and is always positive. Hachures point in direction of decreasing values.

**Secular Variation of Horizontal Intensity**  
 Contours of the estimated rate of change of horizontal intensity (secular variation) expressed in nanoTeslas per year. To apply change, add algebraically. Hachures point in direction of decreasing values.

**Point values of horizontal intensity expressed in nanoTeslas.** Point values enclosed by a single contour are local maxima or minima.

**Point values of the estimated rate of change of horizontal intensity (secular variation) expressed in nanoTeslas per year.** To apply change, add algebraically. Point values enclosed by a single contour are local maxima or minima.

**North and south magnetic poles.** Magnetic poles are defined as the locations at which the horizontal magnetic intensity, computed from the degree and order spherical harmonic International Geomagnetic Reference Field 2005 model, is effectively zero at 2000.0.

**Geomagnetic observatory recording data since 1900**

HORIZONTAL INTENSITY CHART THE INTERNATIONAL GEOMAGNETIC REFERENCE FIELD, 2005

By Kenneth S. Rukstales and Jeffrey J. Love 2007

**DISCUSSION**  
 This is one of five world charts showing the declination, inclination, horizontal intensity, vertical component, and total intensity of the Earth's magnetic field at mean sea level at the beginning of 2005. The charts are based on the International Geomagnetic Reference Field (IGRF) main model for 2005 and secular change model for 2005-2010. The IGRF is referenced to the World Geodetic System 1984 ellipsoid. Additional information about the USGS geomagnetism program is available at: <http://geomag.usgs.gov/>

**ACKNOWLEDGMENTS**  
 The IGRF is produced by the International Association of Geomagnetism and Aeronomy (IAGA) Division V Working Group V-A. Analysis of the Global and Regional Geomagnetic Field and its Secular Variation. Production of the IGRF depends on the worldwide efforts of the magnetic-field modelers and the staff of magnetic observatory programs and satellite programs which produce the data from which the models are derived.

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