

**EXPLANATION**

**Total Intensity**  
 25000 Contours of total intensity expressed in nanoTeslas. Total intensity is the strength (magnitude) of the magnetic field vector and is always positive. Hatchures point in direction of decreasing values.  
 20000  
 15000  
 10000  
 5000  
 0  
 -5000  
 -10000  
 -15000  
 -20000

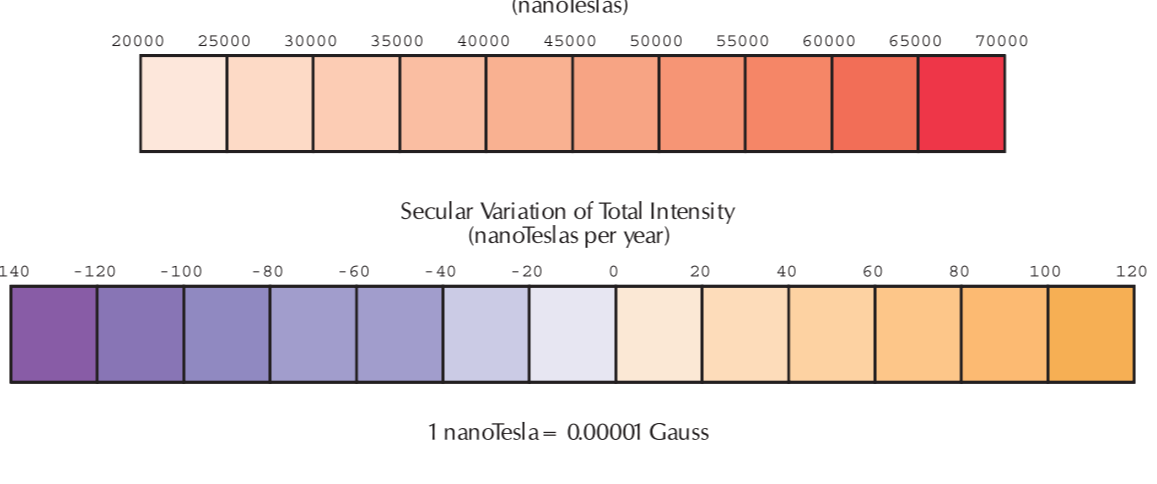
Point value of total intensity expressed in nanoTeslas. Point values enclosed by a single contour are local maxima or minima.

**Secular Variation of Total Intensity**  
 50 Contours of the estimated rate of change of total intensity (secular variation) expressed in nanoTeslas per year. To apply changes, add algebraically. Hatchures point in direction of decreasing values.  
 0  
 -50  
 -100  
 -150  
 -200  
 -250  
 -300  
 -350  
 -400  
 -450  
 -500

Point value of the estimated rate of change of total intensity (secular variation) expressed in nanoTeslas per year. To apply changes, 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 harmonics International Geomagnetic Reference Field 2005 model, is effectively zero at 2000.0.

Geomagnetic observatory recording data since 1990



TOTAL INTENSITY CHART THE INTERNATIONAL GEOMAGNETIC REFERENCE FIELD, 2005

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**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-8. Analysis of the Global and Regional Geomagnetic Field and the Secular Variation Prediction of the IGRF depends on the world-wide 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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Base map data from ERI Inc. A01060113A. Reprinted/modified for publication March 8, 2007. Digital data prepared with ArcGIS 9.1 running under Windows 2000.

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