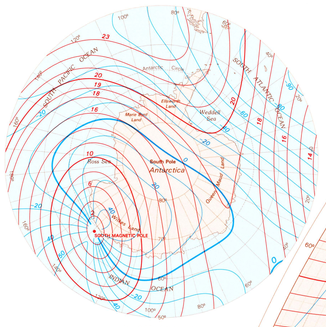

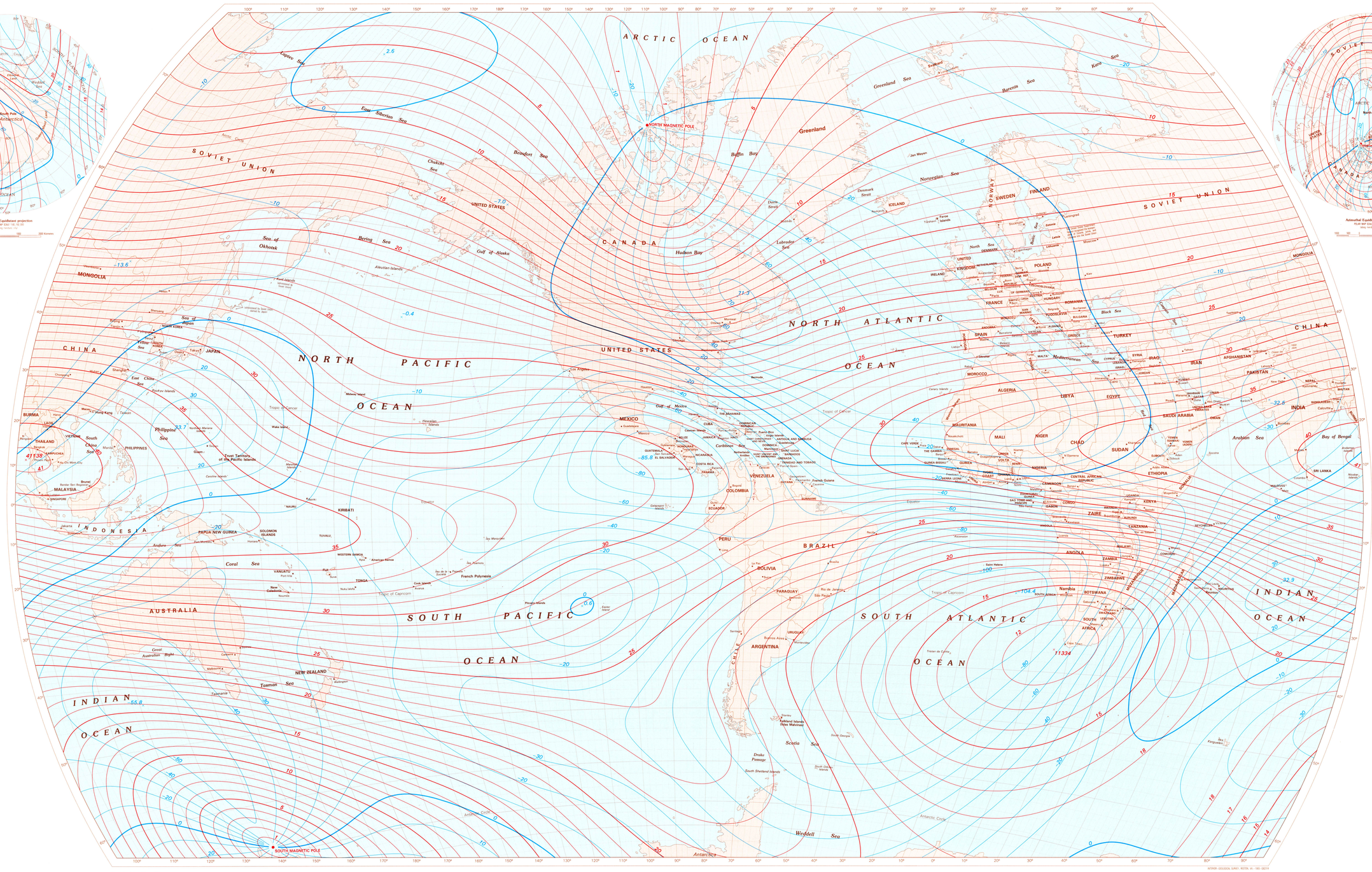

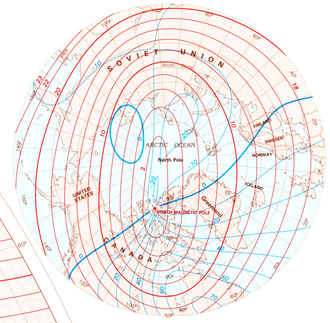

1000 800 600 400 200 0 1000 2000 3000 Nautical Miles

1000 800 600 400 200 0 1000 2000 Statute Miles

1000 800 600 400 200 0 1000 2000 3000 Kilometers

Van der Grinten projection
SCALE 1:40 000 000
Mapping sources: 1:4,000

Boundary and names representation are not necessarily authoritative

EXPLANATION

MAGNETIC HORIZONTAL INTENSITY

Red lines indicate the value of the horizontal intensity of the Earth's magnetic field in units of thousands of nanotesla (*30 = 30,000* nanotesla = *30,000* gammas). The symbol x indicates a local minimum or maximum.

ANNUAL CHANGE IN MAGNETIC HORIZONTAL INTENSITY

Blue lines indicate the estimated rate of change in units of nanotesla per year (*1* nanotesla = *1* gamma). Negative values denote decreasing intensity. The symbol x indicates a local minimum or maximum.

THE MAGNETIC FIELD OF THE EARTH, 1980

MAGNETIC HORIZONTAL INTENSITY

Compiled by
E. B. Fabiano, N. W. Peddie, and A. K. Zunde

1983

NOTE

This map is one of a series of five World maps showing contours of various elements of the Earth's magnetic field at sea level. The series consists of declination, inclination, horizontal intensity, vertical intensity, and total intensity, all for the year 1980. The information on the Earth's magnetic field was derived from IGRF 1980, the International Geomagnetic Reference Field for 1980, a mathematical model consisting of solid internal spherical harmonics up to the tenth degree and order.

ACKNOWLEDGMENTS

The National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration, and the magnetic observatory and field survey personnel of the U.S. Geological Survey provided much of the data essential for the development of this series of maps.

REFERENCES

Fabiano, E. B., Peddie, N. W., Barraclough, D. R., and Zunde, A. K., 1983, International geomagnetic reference field 1980—Charts and grid values (IAGA Bulletin No. 47): U.S. Geological Survey Circular 873, 142 p.

International Association of Geomagnetism and Aeronomy Division 1, Working Group 1, 1981, International geomagnetic reference fields; DGRF 1965, DGRF 1970, DGRF 1975, IGRF 1980: EOS (American Geophysical Union Transactions), v. 62, no. 49, p. 1169.

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