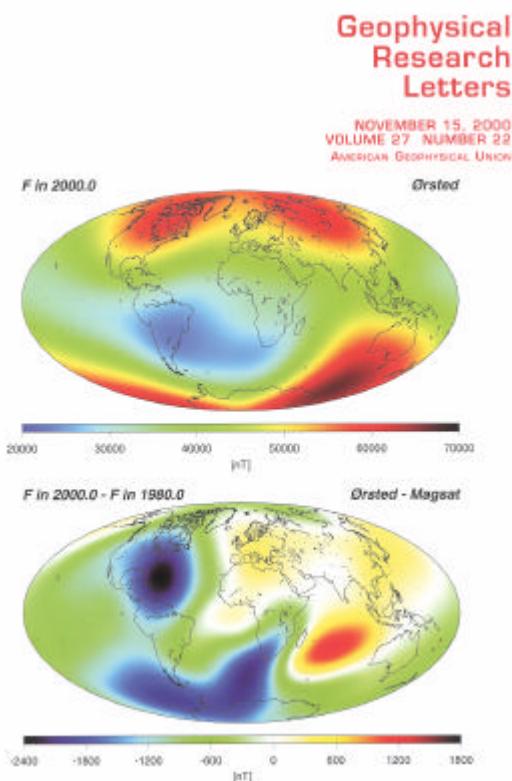


## 9. Ørsted mange enestående resultater

### 9.1. Forsideillustrationer i internationale videnskabelige tidsskrifter



# EOS

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### Ørsted Satellite Captures High-Precision Geomagnetic Field Data

Spacecraft instruments have demonstrated a precision equal to or better than 1 part in 10,000 for the first time. This is due to the combination of the highly accurate magnetometer and the effect of 47 plasma wave instruments on board the satellite. During the first 22 months of its orbit, the satellite has captured more than 100 million data points. The new data are being used to improve the International Geomagnetic Reference Field (IGRF) model. The new model is expected to be available in 2003.

For more information, see the article by K. W. Hulme et al. in this issue.

The 40 and 60-micron resolution for the magnetic field data is a significant improvement over the previous 100-micron resolution. The new data will be used to improve the IGRF model, which is currently based on data from the last 10 years. The new data will also be used to improve the IGRF model, which is currently based on data from the last 10 years.

For more information, see the article by K. W. Hulme et al. in this issue.

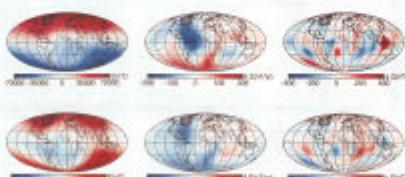
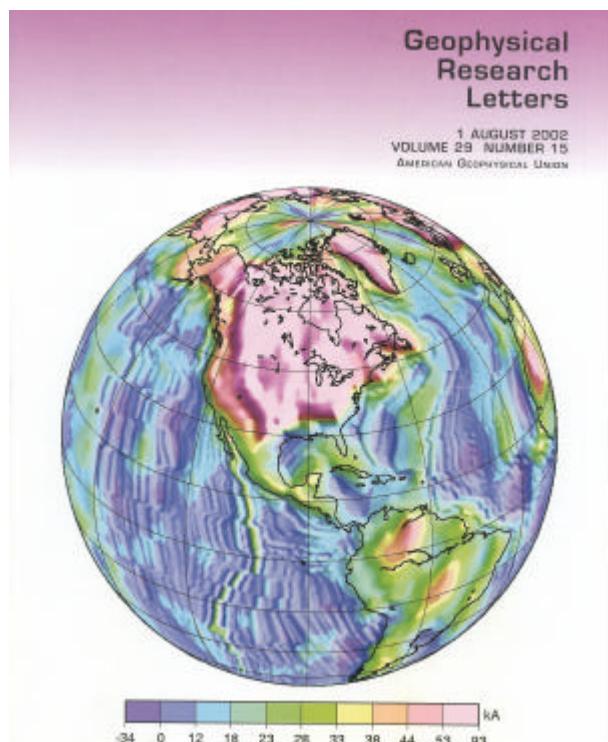


Fig. 1. Global distributions of geomagnetic data resulting from the 1996-2000 (top) and 1997-2001 (bottom) Earth surveys obtained from the Ørsted magnetic anomalies (1) for the entire survey period. The left column shows the total intensity of the magnetic field, the middle column shows the horizontal component of the field, and the right column shows the vertical component of the field. The color bar indicates the range of the data.

Revised March 2002 (see page 47)



## 9.2 Ørsted-baserede geomagnetiske modeller

### International Geomagnetisk Reference IGRF2000

Degree/order of main field	13
Deg/order of secular variations	8
Deg/order of external field	0

**References:** Olsen, Sabaka and Tøffner-Clausen, Earth, Planets and Space, 52, 1175-1182, 2000

### Ørsted Initial Field Model (OIFM)

Degree/order of main field	19
Deg/order of secular variations	8
Deg/order of external field	0

**References:** Olsen et al., Geoph. Res. Lett., Vol.27, No. 22, p. 3607 - 3610, Nov. 15, 2000.

### Ørsted Main and Secular Variation Model (OSVM)

Degree/order of main field	29
Deg/order of secular variations	13
Deg/order of external field	0

**References:** Olsen, Geophys. J. Int., 149, 454-462, 2002. Lowes & Olsen, Proceedings of the OIST-4 meeting, 2003

### CHAMP-Oersted (CO2) Model

Degree/order of main field	29
Deg/order of secular variations	13
Deg/order of external field	2

**References:** Holme et al., Proceedings of the First CHAMP Science Meeting, CNES 2001., Holme et al., First CHAMP Mission Results, Springer 2003.

### Comprehensive Model CM3e\_J-2

Degree/order of main field	65
Deg/order of secular variations	13
Deg/order of external field	2

**References:** Sabaka et al, Geophys. J. Int., 151, 32-68, 2002.

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