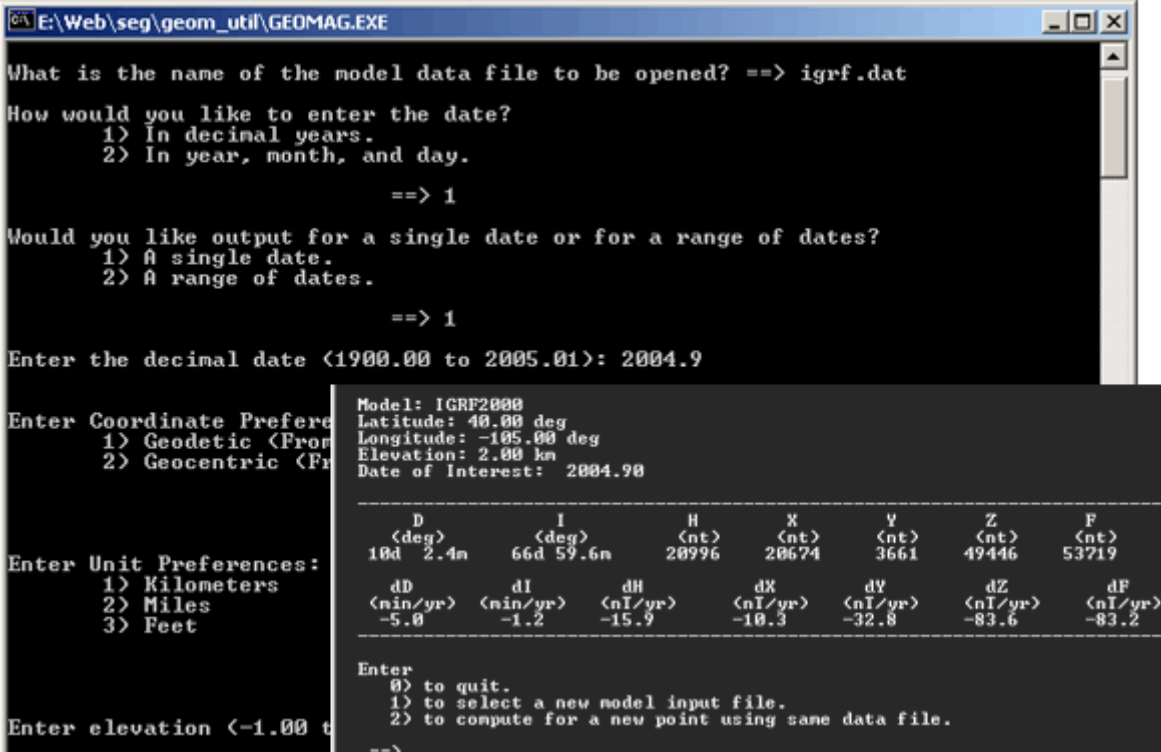


## Fields from the IGRF Model (GEOMAG)

The GEOMAG program provides field values computed from the geomagnetic reference field model (IGRF) applicable to a user-selected date from January 1, 1900 to December 31, 2004 (see ALL-IGRF.TAB file below). This program, provided by S. McLean of NGDC, is an abbreviated version of the "Geomagnetic Field Models and Synthesis Software" package for field models from 1900 that can be obtained, with detailed documentation, at nominal cost from the World Data Center for Solid Earth Geophysics, NGDC/NOAA, 325 Broadway, Boulder, Colorado 80305, USA. That organization notes "If the programs are incorporated into other software, a statement identifying them may be required under 17 U.S.C. 403 to appear with any copyright notice." An example screen is shown below. Do not download geomag.exe and igrf from our ftp site using your browser. Download the zipped file "geomagz.exe". The file structure of the model file, igrf, is not preserved when using the "File > Save As" option from the browser.



```
E:\Web\seg\geom_util\GEOMAG.EXE
What is the name of the model data file to be opened? ==> igrf.dat
How would you like to enter the date?
  1) In decimal years.
  2) In year, month, and day.
      ==> 1
Would you like output for a single date or for a range of dates?
  1) A single date.
  2) A range of dates.
      ==> 1
Enter the decimal date <1900.00 to 2005.01>: 2004.9
Enter Coordinate Preferences:
  1) Geodetic (Degrees, Minutes, Seconds)
  2) Geocentric (Degrees, Minutes, Seconds)
Enter Unit Preferences:
  1) Kilometers
  2) Miles
  3) Feet
Enter elevation <-1.00 to 1.00>:

Model: IGRF2000
Latitude: 40.00 deg
Longitude: -105.00 deg
Elevation: 2.00 km
Date of Interest: 2004.98

-----
      D           I           H           X           Y           Z           F
      (deg)      (deg)      (nt)      (nt)      (nt)      (nt)      (nt)
10d  2.4n    66d 59.6n    20996    20674    3661    49446    53719
-----
      dD          dI          dH          dX          dY          dZ          dF
      (nI/yr)    (nI/yr)    (nI/yr)    (nI/yr)    (nI/yr)    (nI/yr)    (nI/yr)
      -5.0        -1.2        -15.9      -10.3      -32.8      -83.6      -83.2
-----

Enter
  0) to quit.
  1) to select a new model input file.
  2) to compute for a new point using same data file.
      ==> _
```

To run the program insert the disk in the computer, select the drive letter that is being used for the disk, and enter GEOMAG. There is an explanatory text at the start of the program. When prompted for the model file name, enter "igrf.dat". The program will prompt you for the date and location (latitude and longitude) of interest. Entry of location is in either decimal degrees or degrees, minutes, and seconds. Entry of date is in decimal year or year, month, and day. With decimal year entry, use 0 for 1 January and .5 for midyear (e.g. 2000.0 for January 1, 2000, and 2000.5 for July 2, 2000).