Magnetic Declination

Magnetic declination, sometimes called magnetic variation, is the angle between magnetic north and true north. Declination is considered positive east of true north and negative when west.

The Earth acts like a great spherical magnet, in that it is surrounded by a magnetic field. This magnetic field changes both with time and with location on the Earth and resembles, in general, the field generated by a dipole magnet (i.e., a straight magnet with a North and South Pole) located at the center of the Earth. The axis of the dipole is offset from the axis of the Earth's rotation by approximately 11 degrees. This means that the north and south geographic poles and the north and south magnetic poles are not located in the same place. At any point and time, the Earth's magnetic field is characterized by a direction and intensity which can be measured. Often the parameters measured are the magnetic declination, D, the horizontal intensity, H, and the vertical intensity, Z. From these elements, all other parameters of the magnetic field can be calculated.

This information and more can be found at:

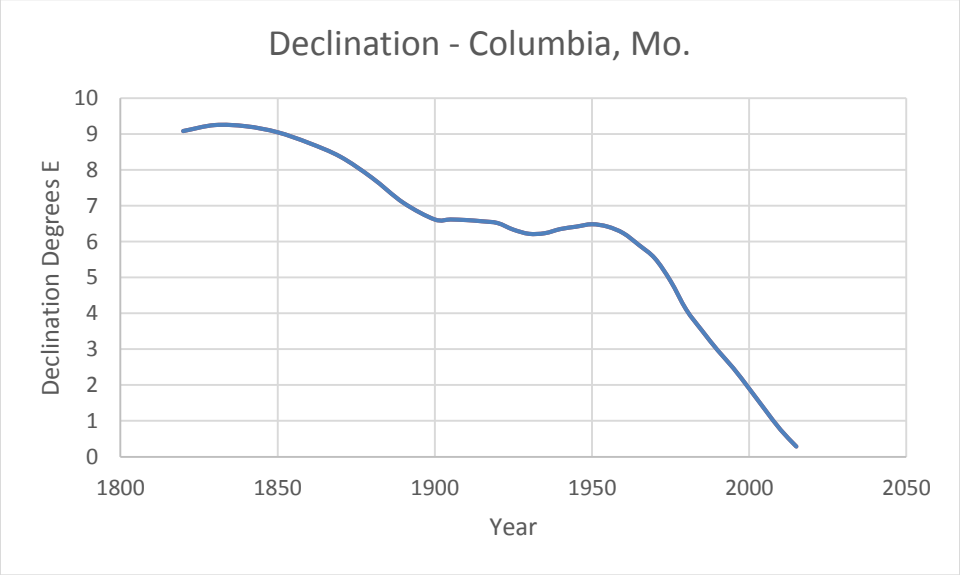
http://www.ngdc.noaa.gov/geomag/declination.shtml

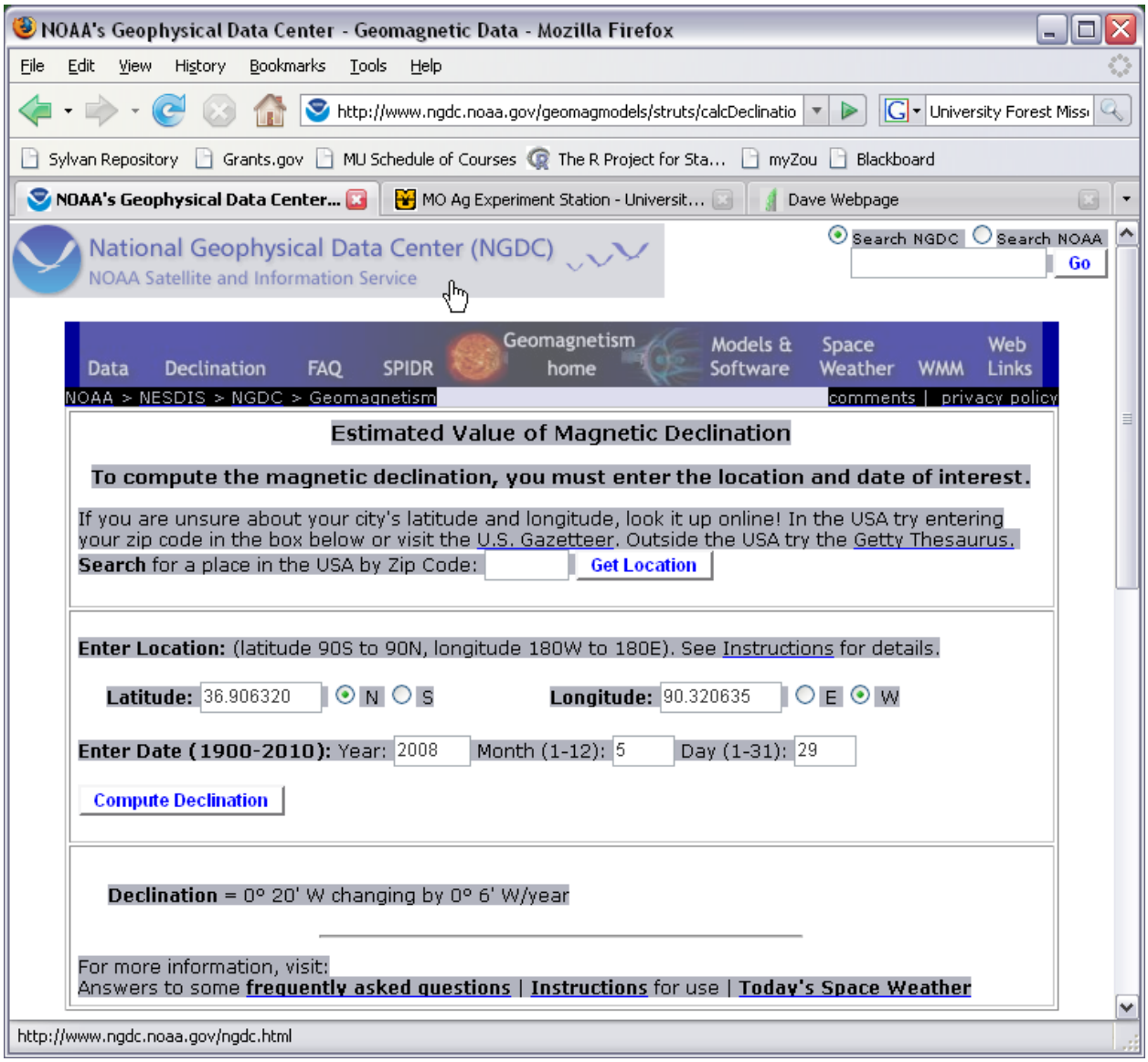
I used their website to calculate the current magnetic declination at three locations in the US.

Columbia, Missouri
2015-06-09 0° 14' E ± 0° 21' changing by 0° 5' W per year

Boston
2015-06-09 14° 48' W ± 0° 22' changing by 0° 4' E per year

Seattle Washington
2015-06-09 16° 5' E ± 0° 22' changing by 0° 8' W per year

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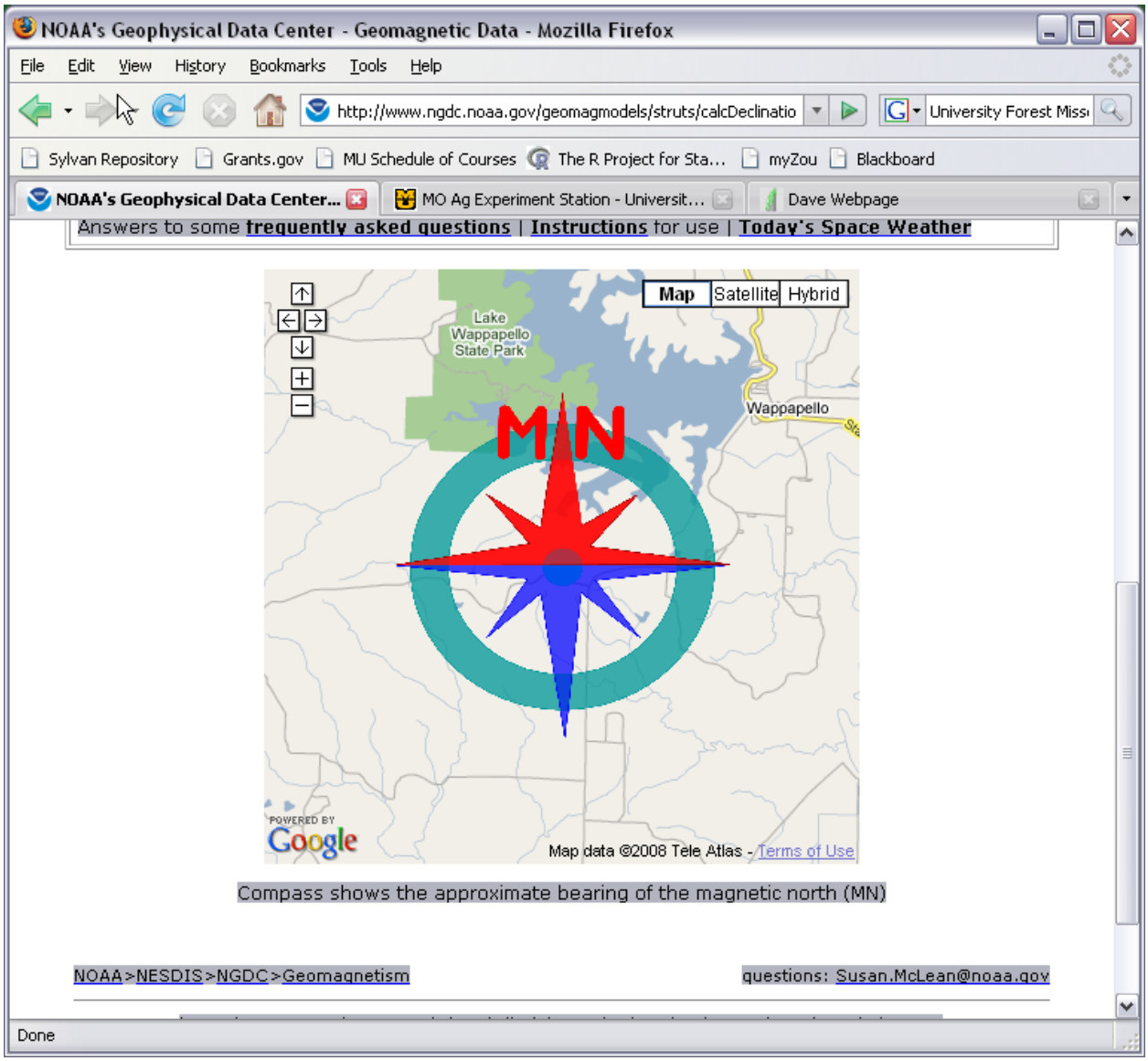
Estimated Value of Magnetic Declination
To compute the magnetic declination, you must enter the location and date of interest.
If you are unsure about your city's latitude and longitude, look it up online! In the USA try entering your zip code in the box below or visit the U.S. Gazetteer. Outside the USA try the Getty Thesaurus.
Search for a place in the USA by Zip Code:
Get Location
Enter Location: (latitude 90S to 90N, longitude 180W to 180E). See Instructions for details.
Latitude: 36.906320 N S
Longitude: 90.320635 E W
Enter Date (1900-2010): Year: 2008 Month (1-12): 5 Day (1-31): 29
Compute Declination
Declination = 0° 20' W changing by 0° 6' W/year
For more information, visit:
Answers to some frequently asked questions | Instructions for use | Today's Space Weather
http://www.ngdc.noaa.gov/ngdc.html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Hybrid
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Wappapello
MN
POWERED BY Google
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Compass shows the approximate bearing of the magnetic north (MN)
NOAA>NESDIS>NGDC>Geomagnetism
questions: Susan.McLean@noaa.gov
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