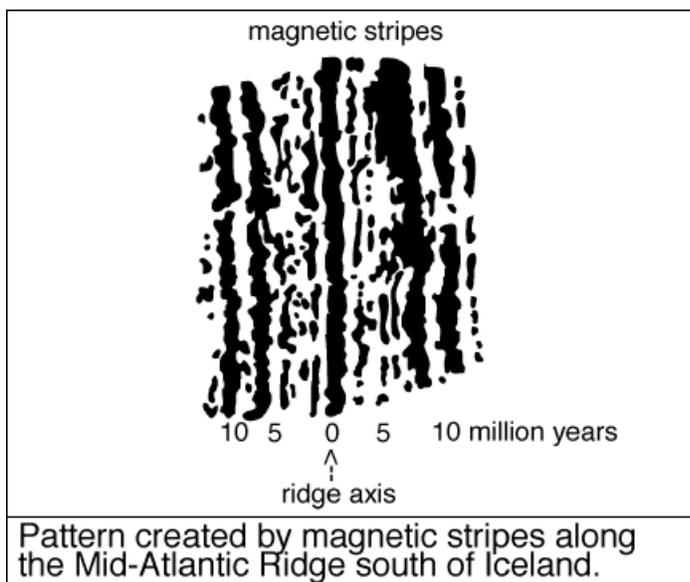
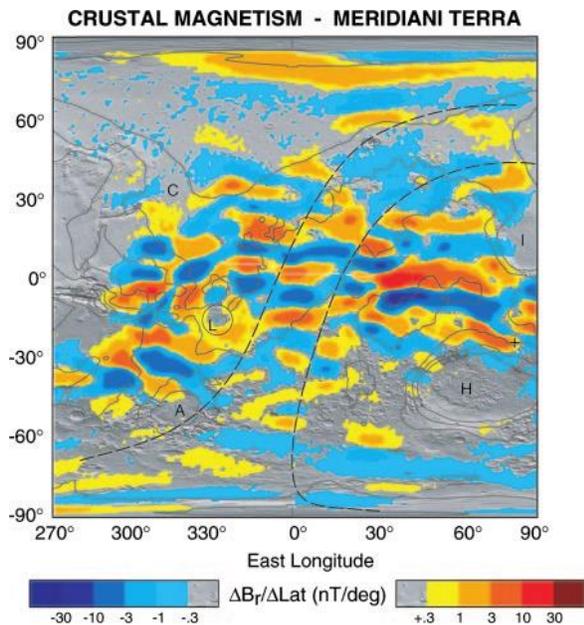




# Mars for Earthlings



**Figure 1** Source: [http://www.london-oratory.org/chemistry\\_folder/Revision/Earth&Rocks/New/student%20workbook%202.htm](http://www.london-oratory.org/chemistry_folder/Revision/Earth&Rocks/New/student%20workbook%202.htm)



7. Describe the crustal magnetism of Mars at Meridiani Terra (Figure 3). Do you see any banding? If so, what is the orientation?

**Figure 2** Crustal magnetism at Meridiani Terra Mars. Warmer colors are positive anomalies (Connerney, 2005\*).

\* Connerney, J.E.P., et al., 2005 Tectonic implications of Mars crustal magnetism: PNAS v. 201, p. 14970-14975.



## Mars for Earthlings

### Recording changes in the EM field on Earth

Different stations on Earth are recording the changes in Earth's electromagnetic field. One such station is found in Sweden.

8. Navigate to the following website:  
[http://www.irf.se/Observatory/?link\[Magnetometers\]=Data/](http://www.irf.se/Observatory/?link[Magnetometers]=Data/)
9. Note the legend and discuss the "description" tab. What do the X, Y, and Z data represent in the graphs?

10. Why is there activity in the data?

### The Real Question

11. Does Mars have a magnetic field and what studies in the future could reveal new discoveries about the potential for Mars to have had a magnetic field in the past?

