## Abstract Submitted for the MAR05 Meeting of The American Physical Society

**Electromagnetic Gravitation** JERRY MONTGOMERY, Weber State University, PHILMORE RUSSELL, North Carolina Central University — Recent analysis of radio metric data from several space probes deployed by NASA indicate that they are being slowed by an anomalous constant acceleration with an average magnitude of  $\approx 8 \times 10^{-10} m/s^2$  oriented with respect to the sun. Analysis of their slowdown, in addition to many other anomalous astrophysical phenomena indicates that a negative curvature of the space-time continuum is produced by the electromagnetic radiation of the sun. The acceleration appears to have a close relation to the wavelength  $\lambda_{\max}$  at which the sun radiates most intensely. The evidence that supports our hypothesis may also provide solutions to the flat rotation curve of the galaxy, and rogue stars and planets within the galaxy. Calculations using the data concerning the four probes result in the formula  $-a = \hbar \frac{c^2}{\lambda_{\text{max}}}$  which expresses a negative acceleration that is proportional to the speed of light divided by the peak wavelength, multiplied by a new constant k. The evidence also gives a strong indication that light, in addition to its particle-wave nature, produces gravitational field-like characteristics through interacting with the space-time continuum.

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