Abstract Submitted
for the NWS06 Meeting of
The American Physical Society

LITE Effects in the Interpretation of Eclipse Times of the Binary System 44i-Bootes[1] SCOTT HENDERSON, KASANDRA JORGENSEN, THOMAS OLSEN, Lewis & Clark College, Portland, OR — Observers, including ourselves, have collected data on the eclipse times of the eclipsing binary star system 44i-Bootes. The binary system is gravitationally bound to a third star, forming a visual binary. To infer the time of eclipse in the frame of the eclipsing binary system, one must account for the varying travel time of the light on its way to the Earth: the Light Time Effect (LITE). In this work we find that LITE alters the apparent rate at which the period between eclipses is slowly increasing from 10.5 $\frac{\mu s}{orbit}$ to 8.5 $\frac{\mu s}{orbit}$.

[1]Rogers Science Research Program & Murdock Charitable Trust

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Date submitted: 21 Apr 2006 Electronic form version 1.4