Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

Sorting Category: 16.12.3 (E)

Experiments on the Goos-Hänchen shift with negative and positive index of refraction materials NATHAN ORLOFF, MICHAEL RICCI, Univ. of Maryland, College Park, COLLIN ANDERSON, Yale University, CHRISTIAN LONG, SUDEEP DUTTA, STEVEN ANLAGE, Univ. of Maryland, College Park — The negative Goos-Hänchen shift occurs when a beam of radiation having a finite transverse extent undergoes total internal reflection at a positive to negative index of refraction interface, hence the reflected beam experiences a negative lateral shift. This phenomenon has been predicted for materials with a negative index of refraction. We investigate a composite wire and split-ring resonator medium between 8-12 GHz, based on that first implemented by [1]. In addition, we present an experiment to investigate the Goos-Hänchen shift and show preliminary results on transmission, refraction, and total internal reflection. Work supported by NSF/ECS-0322844. [1] R. Shelby, D. R. Smith and S. Schultz, Science, 292, 77 (2001)

[X] Prefer Oral Session
[ ] Prefer Poster Session

Nathan Orloff
orloff@mail.umd.edu
Univ. of Maryland, College Park

Date submitted: 11 Jan 2006 Electronic form version 1.4