

Abstract Submitted
for the 4CF15 Meeting of
The American Physical Society

**Spectral Measurements of Geosynchronous Satellites during
Glint Season** ANITA DUNSMORE, JOSHUA KEY, FRANCIS CHUN, ROGER
TIPPETS, United States Air Force Academy — During certain times of the year,
stable geosynchronous (GEO) satellites are known to glint or exhibit a very bright
specular reflection, which is easily observed through broadband photometric filters.
The glints are typically brighter in the Johnson red filter compared to the Johnson
blue filter. In previous years, USAFA cadets have developed and refined techniques
to take, calibrate and process satellite spectral data using a diffraction grating on
the USAFA 16-inch, f/8.2 telescope (i.e. slitless spectroscopy). We present research
from an Air Force Academy senior physics capstone project on observing glints off
of GEO satellites using slitless spectroscopy. We discuss the calibration of the mea-
surements using solar analog stars, as well as results of the spectra of a glinting GEO
satellite.

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Date submitted: 11 Sep 2015

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