

Project Details

ROSES ID: NRA-01-OSS-01

Selection Year: 2002

Program Element: Independent Investigation: Solar Helio LWS

Project Title:

The Magnitude and Variability of the Solar Soft X-ray Irradiance

PI Name: Scott M. Bailey

PI Email: atn@g.ucla.edu

Affiliation: University of Alaska, Fairbanks

Summary:

The overall goal of the proposed effort is to determine the magnitude and variability of the solar soft X-ray irradiance; in particular, we wish to understand how the solar soft X-ray irradiance varies during the approach to and during solar maximum conditions. This will be accomplished through analysis of existing data from the Student Nitric Oxide Explorer (SNOE) satellite. While the SNOE mission has produced significant advances in our understanding of the solar soft X-ray irradiance, important questions remain. We seek to answer the following questions: 1. What is the magnitude of the solar soft X-ray irradiance during solar maximum conditions? 2. How does the 27-day variability of the solar soft X-ray irradiance during solar maximum conditions compare to the 27-day variability during moderate and solar minimum conditions? 3. How does the solar soft X-ray irradiance relate to commonly available proxies such as F10.7 and He II core-to-wing ratios during solar maximum conditions? Are linear relationships derived from moderate solar activity observations valid at high solar activity?

Publication References:

no references