

Poster on solar observations of the FeXIV/FeX line ratio

During the [13th European Solar Physics Meeting](#) (held in Rhodes, Greece, September 12-16, 2011), we had the opportunity to present our work on spectroscopic observations of the Sun.

Observations of FeXIV/FeX line ratio during the extended Solar minimum (2006-2010) total Solar eclipses

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Abstract:

During the last four eclipses we were able to image the spectrum of the Solar Chromosphere and the Solar Corona. We report the drop of the FeXIV line intensity and the rise of the FeX line until the eclipse of 2009 and the rise of the FeXIV and from of FeX line during the total solar eclipse of 2010 from the Island of Mangaia (Cook Islands). As a result of our observations we will present that the Temperature of the Solar Corona is following the Solar Cycle and the Sunspot Cycle. In the end we attribute that the rise of the FeXIV line indicates that the new Solar Cycle has already started between the end of 2009 and beginning of 2010.

Imaging dense globular clusters like M3 and M15

During the Society for Astronomical Sciences 29th Annual Symposium on Telescope Science (held May 11-13, 2010 at Big Bear Lake, CA) the following work was published:

Imaging dense globular clusters like M3 and M15

Rodney Howe, Iakovos-Marios Strikis, Ido Bareket, Dimitrios Stouraitis

Abstract

The objective for this study will be to explore new photometric methods for amateur telescope observations of 'cluster variables' and globular clusters using CCD photometry. Amateur telescope photometric observations of 'cluster variables' in globular clusters are limited because of dense, crowded star fields. However, with improvements in CCD photometric methods, there are opportunities to observe cluster variables, such as RR Lyrae and SX Phoenicis type stars, through time series analysis of multiple exposures of whole cluster images. Traditional methods for determining light curves in 'field' RR Lyrae and SX Phoenicis type stars require selection of comparison and perhaps check stars to perform differential photometry; i.e. subtraction of flux density measures between a non-variable (comparison star) and the variable star as they change in magnitudes over time. We explore the possibility of measuring the variable star's periodicity in areas, or sections of a globular cluster, to sort different stellar type 'cluster variables' within each

section of the cluster. There are areas or regions of a globular cluster which 'pulsate' at a variable rate which is representative of 'cluster variables' that make up that region. For example: we have detected different variability periods within the 'core' of a cluster compared to the outer circumference areas of the cluster.

A link to the work can be found to NASA/ADS: [2010SASS...29..129H](#)