

ABSTRACTS OF PAPERS PRESENTED AT THE 76th ANNUAL MEETING
OF THE AAVSO HELD IN CAMBRIDGE, MA
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CHILDREN'S CAMERA PLATFORM FOR TIME EXPOSURES OF THE STARS

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Abstract

A demonstration will be given of how to build an astro-camera platform with readily-available materials at a small cost. The device employs some tricks of invention so good results can be obtained along with an understanding of some important concepts of astronomy. This platform would be of value to children in the third grade and beyond.

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THE NEW SUNSPOT CYCLE

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Abstract

The New Sunspot Cycle began last year in October. Since then the Solar activity has been increasing very slowly. We still have spotless days from time to time.

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ANALYSIS OF AAVSO VISUAL OBSERVATIONS OF CEPHEID VARIABLE STARS

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Abstract

Since 1966, the American Association of Variable Star Observers (AAVSO) has collected visual observations of Cepheid variable stars. These observations have been edited and archived in machine-readable form. We have carried out an analysis of these observations in order to determine (1) what scientific information can be derived from them; (2) whether the program should continue; and (3) if so, what changes to it should be made.

For the 31 stars on the program, the number of observations per star ranges from 100 to 8000, the period from 10 to 45 days, the amplitude from 0.4 to 1.8 magnitudes, and the mean visual magnitude from 3.9 to 12.2. For each star, we first used a "bootstrap" method to determine a mean light curve from all the observations. We then used a method due to Murdin to fit this mean curve to subsets of the observations in order to determine long-term changes (if any) in the period, amplitude, and mean visual magnitude.

We will compare the results of this analysis with the results derived from photoelectric observations. On this basis, we will recommend which stars are most suitable for visual observation.

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