

Research Titel Measurement of Position and Magnitude of Asteroid
 Ceres by Photographic Method

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Abstract

In this study photographs of sky, which included the asteroid Ceres and reference stars on the same film, were taken. A camera with 350 mm lens was attached on a 16-inch telescope which was used to track stars. The photographs were taken several time a night for some night succesively to show the movements of the Ceres among the stars. The Ceres and its movements were searched by means of a pair of blink projectors. A travelling microscope was used to measure the diameter of the negative images of stars and the Ceres. A photometer was used to determine the density of the negative images of these stellar objects.

From these parameters, the diameters and the density of negative images of stars and the Ceres, were use to plotted two calibration curves against the visual magnitude of the reference stars to determine the visual magnitude of the Ceres and the results were compared.

The travelling microscope was also used to measure the positions of the reference stars and the Ceres on films and then the results were calculated to determine the celestial coordinates of the Ceres.