

NIGHTTIME ASTRONOMICAL SKY SURVEYS AND
UNIDENTIFIED FLARING OBJECTS

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There are several instances of extended observations of large fields of view of the night sky by trained astronomical observers. These observations are usually performed in the context of meteor studies. One such is the Harvard Meteor Project, in which visual and photographic observations were performed (the latter with Super-Detamax cameras, and a 90 degree field of view) in New Mexico during the period 1956-1958. Note that this is a locale and period characterized by extensive reports of unidentified flying objects. In all, a surface area of 7×10^4 km² was observed to 80 km altitude for a total period of 2×10^3 minutes. Observations were good down to magnitude +4. No unexplained objects were detected.

A second example of such an observation program is the photographic and visual Flaring Network of the Smithsonian Astrophysical Observatory. The total area covered is about 10^5 km², but only bright objects - brighter than magnitude +4 - can be photographed. The cameras cover essentially the entire sky, and the network encompasses parts of the states of Iowa, Kansas, Nebraska, North Dakota, Oklahoma, Illinois, Colorado, and Missouri. In 2000 hours observing to date, no unexplained flying objects have been detected. In fact, in the case of both the Harvard Meteor Project and the Smithsonian Astrophysical Observatory Flaring Network, no bright moving objects other than meteors and occasional aircraft were detected. An area much smaller than our survey, similar in scope, was performed during the I.O.V. under the direction of Dr. Peter Williams of the National Research Council of Canada. Unfortunately, much of this data is still unsearched.

These sky surveys are much more extensive in area and time than such previous stellar astronomical surveys as the Palomar 500 Atlas, which also showed no unusual objects. Especially considering the experience of the observers in the foregoing observations, it seems likely that the frequent reports of unidentified flying objects observed at night by individuals relatively unfamiliar with the skies are due to misinterpretations of common astronomical objects.

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