

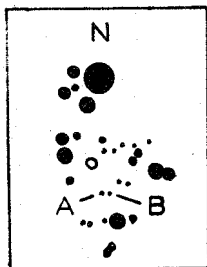
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PREOUTBURST OBSERVATIONS OF NOVA SCUTI 1970

The nova that G. Alcock discovered on July 31, 1970 (1) was visible on 45 blue-light plates (103a-0, no filter) taken on five consecutive nights by A. Sandage with the 48-inch Palomar Schmidt between JD 2,435,279 and 2,435,283. These plates have been made available to M. Harwood for her continuing study of the variables in the Scutum Star Cloud.

From precise positions by H. Kosai (2) and T. Seki (3) the nova was identified; it is marked by an open circle on the finder chart (3'.5 by 2'.7). The brightest star is 8th magnitude SAO 142593. An independent identification of the nova was made on Sky Survey prints at Tokyo Observatory (2) and M. Huruwata (4) confirms that the same star was selected there.



A flyspanker was used for determining the magnitudes of comparison stars A ($m_{pg} = 19.0$) and B ($m_{pg} = 19.5$), by extrapolation of sequence Krieger C, which has been photoelectrically placed on the international system (5)

No convincing variation of Nova Scuti 1970 was found from eye estimates, the star never being brighter than A nor fainter than B. The average magnitude from all 45 estimates was 19.3.

For magnitudes cited in the IAU Circulars and unpublished AAVSO observations (6), it appears that maximum light occurred on or shortly before the date of discovery at $m_{vis} \sim 6.9$. On that date B-V was probably +0.8. Hence the blue magnitude would have been 7.7, indicating an increase of at least 11.6 magnitudes.

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References

1. IAU Circular 2269
2. IAU Circular 2272
3. IAU Circular 2274
4. Private communication
5. M. Harwood, Leiden Annals, 21, 387
6. Courtesy M.W. Mayall