
SCIENCE NEWS

Discovery of asteroid number 4130

We report the discovery of a new asteroid, number 4130, from India. The last asteroid discovery from India was by Pogson in 1885. In fact Norman Robert Pogson discovered five asteroids between 1861 and 1885. The sky survey project^{1,2} with the 45 cm Schmidt telescope has now led to the discovery of this asteroid. In figure 1 the arrow indicates the position of the new asteroid as observed on our plate taken on 17 February 1988.

This object was given the temporary designation 1988DQ1, and based on the preliminary orbital elements by Nakano³ an ephemerides for future positions was calculated. At its next opposition in May 1989 it was recovered on our plates and these positions were communicated to the Minor Planet Center.

The complete listing of all observations from Kavalur for this object can be found in the Minor Planet Circulars^{4,5} published on behalf of Commis-

sion 20 of the International Astronomical Union by the Director of the Minor Planet Center at Cambridge, USA. The final orbital elements together with the residuals (observed minus calculated positions) have been calculated by Nakano^{3,6}.

The apparent magnitude of the asteroid at the 1988 opposition was about 14.3 magnitudes. The orbital period is 5.34 years. The orbital plane is inclined to the ecliptic at about 9.80 degrees.

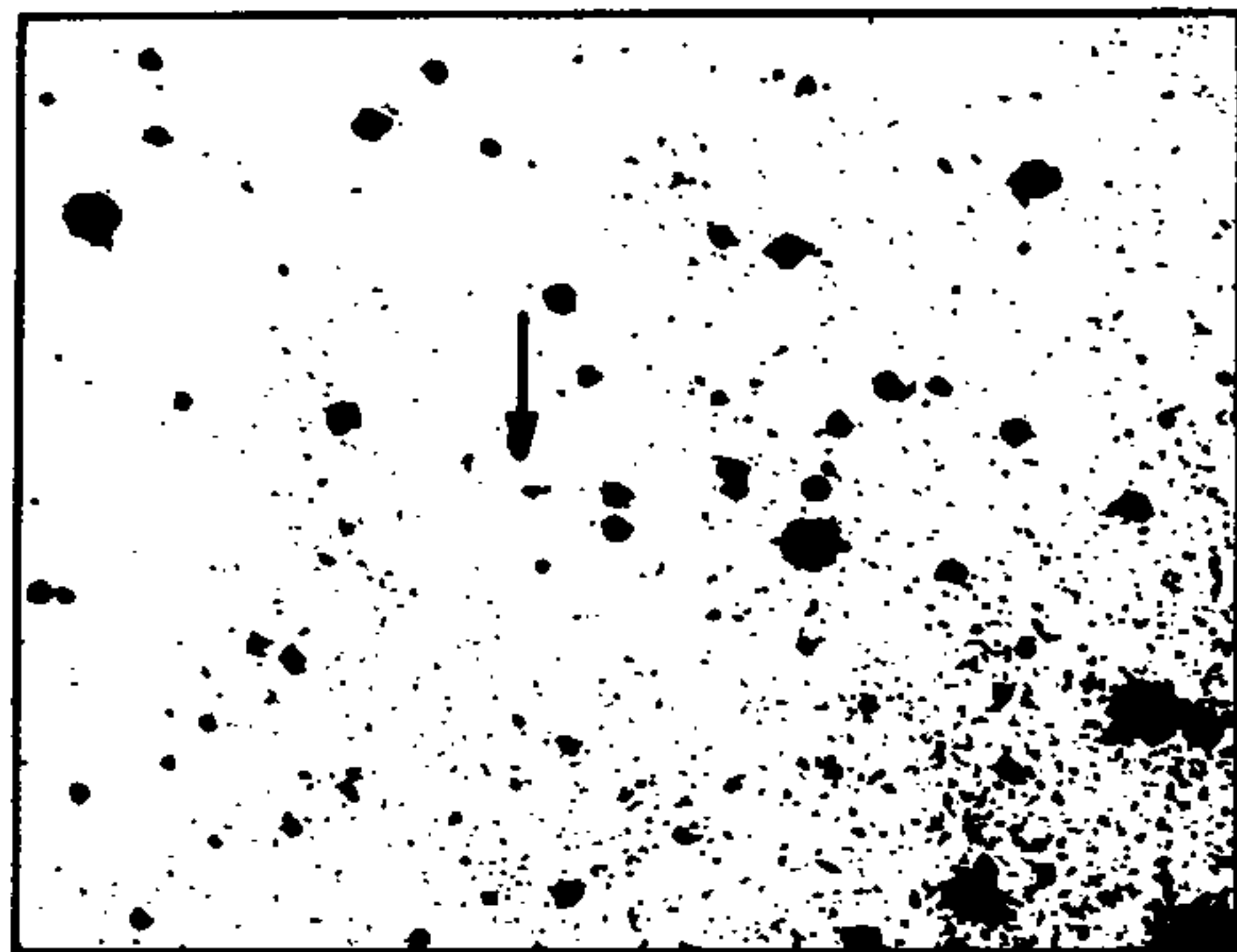
We thank Prof. T. Gehrels of the Lunar and Planetary Laboratory, University of Arizona, for his extremely helpful advice at the start of our search project for asteroids and the tenth planet.

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1988 Feb.17

17.4 Hrs UT



1988 Feb.17

18.3 Hrs UT

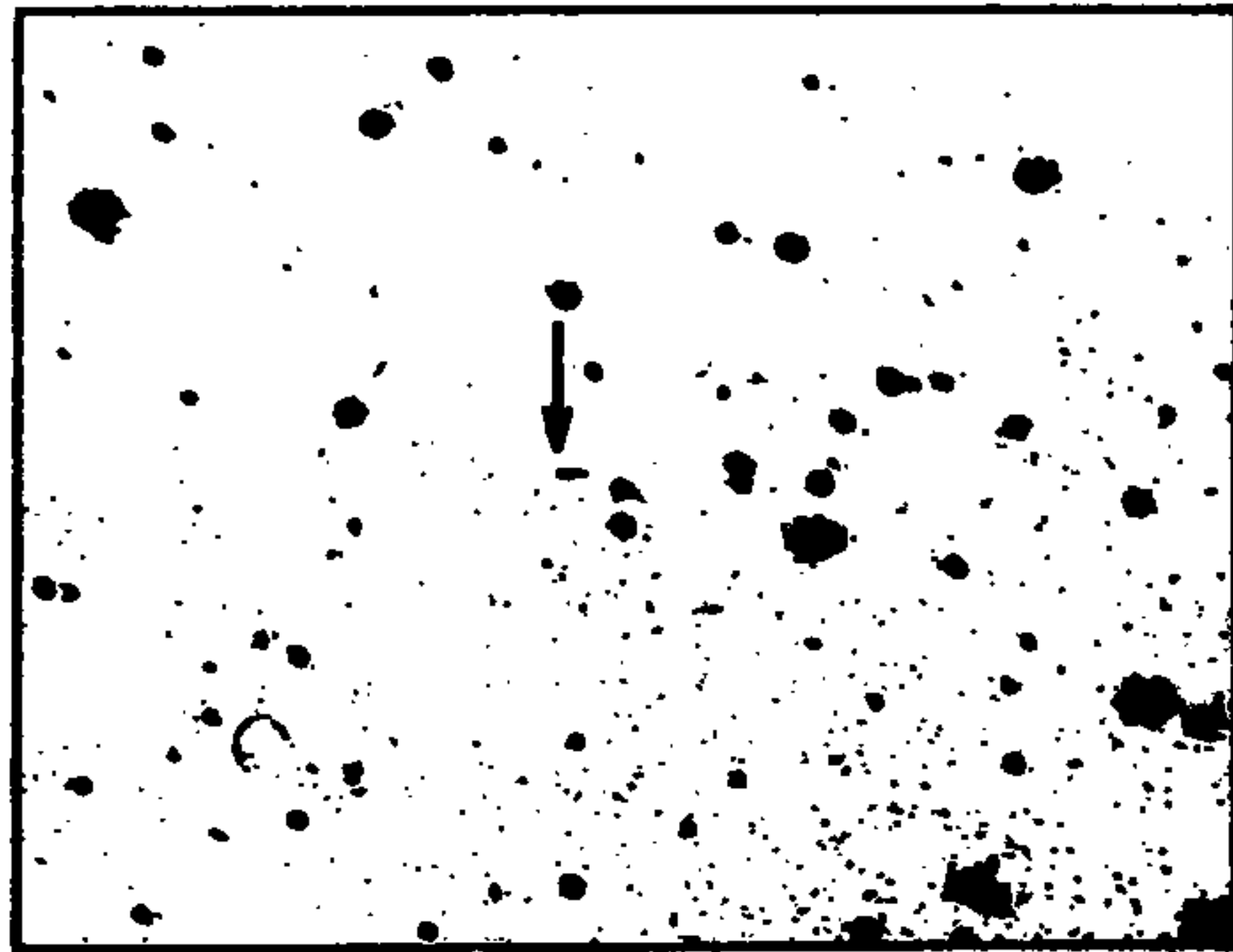


Figure 1. Asteroid Number 4130 discovered with the Kavalur 45 cm Schmidt telescope on 17 February 1988.

1. Rajamohan, R., Bhattacharyya, J. C., Kuppaswamy, K. and Paranjpye, A., *Bull. Astron. Soc. India*, 1987, 15, 174.
2. Rajamohan, R., Shankar, P. N., Bhattacharyya, J. C., Kuppaswamy, K. and Paranjpye, A., *Bull. Astron. Soc. India*, 1988, 16, 21.
3. Nakano, S., Minor Planet Circular Number

13054, 1988.

4. Rajamohan, R., Minor Planet Circular Number 13011, 1988.
5. Rajamohan, R., Minor Planet Circular Number 14719, 1989.
6. Nakano, S., Minor Planet Circular Number 14777, 1989.