

DU Aquarii is the Minor Planet (57) Mnemosyne

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Star Name:	DU Aqr, (57) Mnemosyne
Coordinates (J2000):	21 43 20.8, -01 06 11
Variability type:	Minor planet; Limits, System:
Period:	Epoch: JD

Remarks:

The discovery of the variable star AN 1937.79 = HV 9727 was announced by Luyten (1937), who gave the photographic magnitude range 12.0 - 16 for the object. Sandig (1950) claimed the star to be a Mira with a tentative period of 372 days, and it got its GCVS name of DU Aqr. Hazen and Samus (1999) erroneously identified DU Aqr with GSC 5209-00644. This identification was based on the search made by Martha Hazen in Harvard plate stacks. She found two plates used for Luyten's discovery, with the position of HV 9727 marked. However, GSC 5209-00644 is a misidentification, the star does not vary in the ASAS-3 data base and is not red. Moreover, a large field around it shows no objects red enough for a Mira. An attentive inspection of the photocopy of the field of DU Aqr on the Harvard plate A9862 (October 17/18, 1909) permitted us to find the object really intended by Luyten to be HV 9727. It is a rather bright star-like object (elongated like surrounding stars), missing on the second plate, A18554 (May 29/30, 1936), and below plate limits of Moscow plates, of the POSS and similar surveys. Upon our request, the Minor Planet Center (USA) checked their database and revealed that the minor planet (57) Mnemosyne had been exactly at the position of DU Aqr in 1909. We estimate the position of DU Aqr on the plate, taken on 1909 Oct. 18.081 UT, as 21h43m21s -01d06'.2 (2000.0), and the ephemeride position for 1909 Oct. 18.1 UT is 21h43m20s.8 -01d06'11" (2000.0). Thus, DU Aqr does not exist as a star, and the data in Sandig (1950) must refer to a different object.

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