

A New Double Star in Andromeda

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Abstract: A new double star has been found in Andromeda, (0:02:01.73 +23:46:51.0, J2000). A measurement made with the Aladin tool¹ of the new double gives 27.9 arc seconds of separation and a position angle of 292°. The APASS² visual magnitudes, as reported by the UCAC4³ are 9.049 and 9.735.

The pair was found during a computer search of the UCAC4 catalog, comparing all stars listed brighter than 12.0mv, with nearby stars brighter than 13.0mv and closer to the first star than 1 arc minute against listings in the Washington Double Star Catalog (WDS)⁴. 12mv was chosen as it is the limiting magnitude for my 20 cm SCT when observing double stars. The pair at coordinates 0:02:01.73 +23:46:51.0 in particular was noticed as being fairly bright with similar proper motions, and it was not listed in the WDS.

The proper motion of the primary is 26.9 mas/yr in right ascension and 6.0 mas/yr in declination, and that of the secondary is 26.7 mas/yr in right ascension and 6.2 mas/yr in declination.

The primary's UCAC4 id is 569-000097, the secondary's UCAC4 id is 569-000094.

The above data were generated using the Aladin Sky Atlas tool.

Information about the find was communicated to William Hartkopf⁵, of the USNO, who suggested I report this find to the JDSO. He has also researched the pair itself, and found it in the Tycho2⁶, 2MASS⁷, UCAC4, WFC⁸, and the AC 2000⁹ catalogs, so "pre-discovery" measures in the WDS now date back to 1893. Dr. Hartkopf further adds that the pair is bright

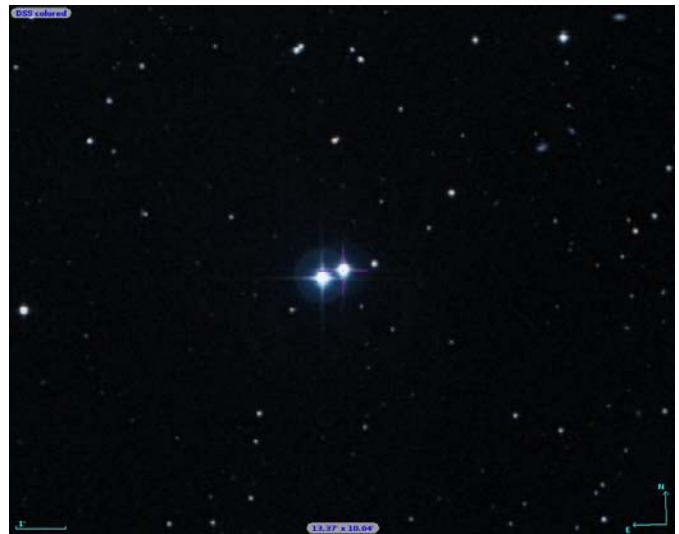


Figure 1. DSS image of the Proposed new double star.

enough to have been an easy target for the Herschels or Struves. Perhaps it was an early double that was later lost, due to poor coordinates.

The pair has been provisionally entered into the WDS under designation 00020+2347 TVB 2.

Figure 1 is a photo of the new binary from the DSS

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as rendered by the Aladin Sky Atlas tool.

References

- 1) Aladin web site, <http://aladin.u-strasbg.fr/>
- 2) AAVSO APASS web site, <http://www.aavso.org/apass>
- 3) Zacharias, et al, 2012. *US Naval Observatory CCD Astrograph Catalog (UCAC4)*, <http://www.usno.navy.mil/USNO/astrometry/optical-IR-prod/ucac>
- 4) Brian D. Mason, Gary L. Wycoff, William I. Hartkopf, Geoffrey G. Douglass, and Charles E. Worley, 2001. *The Washington Double Star Catalog*, <http://ad.usno.navy.mil/wds/>
- 5) William Hartkopf, Astrometry Department, U.S. Naval Observatory 3450 Massachusetts Ave, NW, Washington, DC 20392
- 6) Tycho-2 web site, <http://www.astro.ku.dk/~erik/Tycho-2/>
- 7) 2MASS web site, <http://www.ipac.caltech.edu/2mass/>
- 8) WFC Explanatory paper, <http://iopscience.iop.org/1538-3881/132/1/50/fulltext/205198.text.html>
- 9) AC 2000 web site, <http://ad.usno.navy.mil/ac/>

