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OP Aql AND V926 Aql

HAZEN, M.L.¹; HOFFLEIT, D.²; KAZAROVETS, E.³; KROLL, P.⁴; SAMUS, N.^{3,5}; WEBBINK, R.F.⁶

¹ Harvard College Observatory, 60 Garden St., Cambridge, MA 02138, USA, e-mail: mhazen@cfa.harvard.edu

² Department of Astronomy, Yale University, PO Box 208101, New Haven, CT 06520, USA

³ Institute of Astronomy, Russian Academy of Sciences, 48, Pyatnitskaya St., Moscow 119017, Russia, e-mail: elena_k@sai.msu.ru, samus@sai.msu.ru

⁴ Sonneberg Observatory, Sternwartestr. 32, D-96515 Sonneberg, Germany, e-mail: pk@stw.tu-ilmeneau.de

⁵ Sternberg Astronomical Institute, 13, University Ave., Moscow 119992, Russia

⁶ Department of Astronomy, University of Illinois, 1002 W. Green St., Urbana, IL 61801, USA, e-mail: webbink@astro.uiuc.edu

Presenting accurate coordinates for all catalogued variable stars, especially for those originally announced with only approximate positional information and no finding charts, is an urgent task in our era of extensive automatic variable star surveys, and considerable effort is being dedicated to it (cf. Samus et al., 2002). In the course of a large-scale project aimed at improving positions for many variable stars discovered at Harvard Observatory (Webbink et al., 2002), a case of confusion concerning OP Aql and V926 Aql was revealed. This paper describes the circumstances and announces decisions taken by the Sonneberg Observatory and by the team of the General Catalogue of Variable Stars (GCVS) to minimize confusion.

The discovery of Harvard variable star HV 5469, of unknown type or period, was announced by Hoffleit (1932). This star was soon named OP Aql (Guthnick & Prager 1932), though it remained unstudied. The discoverer did not publish a finding chart.

Several decades later in Sonneberg, Gessner (1959) found that OP Aql was an eclipsing star with 3^d:227797 period, and published a finding chart. The chart shows two variable stars, one of them labeled OP Aql, and the other one S 5341. Gessner announced the latter star as a new discovery, also an Algol, with a period of 2^d:97303. Kukarkin, Efremov, & Kholopov (1960) assigned S 5341 the GCVS designation V926 Aql. Several minima have since been published for each of these two stars by amateur astronomers.

A search in the plate stacks of the Harvard Observatory, using Hoffleit's original notebooks, shows beyond doubt that the original HV 5469 is actually the star labeled S 5341 in Gessner (1959), whereas OP Aql in the same chart is a new variable discovered by Gessner.

In order to minimize further confusion, we take the following decisions.

We announce that V926 Aql = HV 5469 = S 5341, and thus OP Aql is a new eclipsing variable discovered by Gessner (1959). This is scarcely the first case of a variable star

having both HV and Sonneberg Veränderlicher Stern numbers. With the designation HV 5469 transferred to V926 Aql, the finding chart in Gessner (1959) remains quite correct, and the ephemeris of each variable remains correct as published. The finding chart for OP Aql in Tsesevich & Kazanasmas (1971) also shows the right star. We give OP Aql the new Sonneberg number, S 10948. We hope that astronomers will not be taken aback by the paradox that the name “OP Aql” had been first introduced decades before the variable now called OP Aql was actually discovered. Figure 1 presents a Digitized Sky Survey finding chart of OP Aql and V926 Aql, with the relevant identifications given in the caption.

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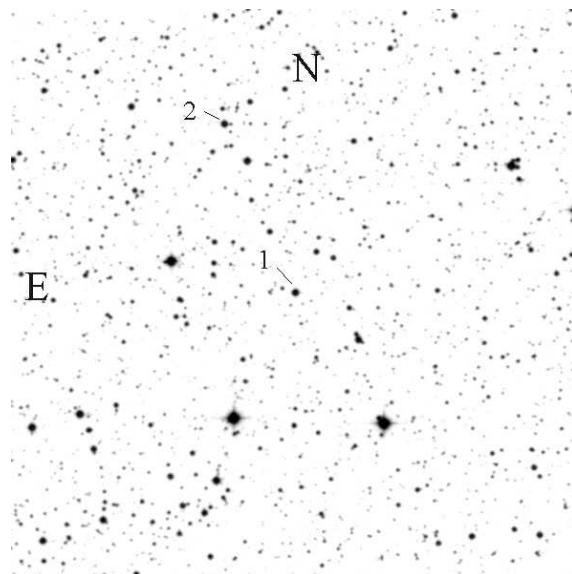


Figure 1. The photographic $10' \times 10'$ finding chart for OP Aql and V926 Aql (from the blue-light image of the Second Digitized Sky Survey). 1: OP Aql = S 10948 = GSC 1058.0287 ($19^{\text{h}}48^{\text{m}}08^{\text{s}}.3$, $+9^{\circ}20'45''$, 2000.0). 2: V926 Aql = HV 5469 = S 5341 = GSC 1062.0024 ($19^{\text{h}}48^{\text{m}}13^{\text{s}}.4$, $+9^{\circ}23'43''$, 2000.0).

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