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FIVE NEW DHK VARIABLES

My continuing photographic patrol has resulted in the discovery of four more variable stars that are not listed in the General Catalogue of Variable Stars (Kholopov et al., 1985) or the subsequent Name Lists of the Variable Stars (Kholopov et al., 1985, 1987, 1989; Kazarovets and Samus 1990; Kazarovets et al., 1993). Nor are they listed in the New Catalogue of Suspected Variable Stars (Kholopov et al., 1982). In addition, a fifth new variable star, DHK 38, was discovered photoelectrically during observations of Nova Aql 1993 (Green, 1993). Positions and preliminary magnitude ranges, types, and periods are given in Table 1, which continues the list in Kaiser (1992).

I have confirmed photoelectrically the variability of DHK 37, 38, 40 and 41. David B. Williams has examined DHK 37 and 39-41 on the Harvard patrol plates, confirmed their variability, and provided the photographic magnitude ranges cited in the Table. Marvin E. Baldwin has visually monitored the new eclipsing binaries, detected additional minima, and helped to determine the periods. The observations of each star will be published when analysis is completed.

DHK 39-41 were discovered using photographs taken with the newly completed Automatic Photographic Patrol (APP). The APP is an automated camera in equatorial mount controlled by computer. It will be described in detail elsewhere.

Table 1

Var. Designation	RA (1950)	Dec (1950)	Range	Type	P (days)
DHK 37= GSC 2457:0279	$07^h35^m11^s$	32°39' 41"	10.4-11.8 pg	SR:	?
DHK 38=SAO 124400 HD 179624 PPM 167402	19 10 43	01 29 29	9.31-9.69 V	Lb:	–
DHK 39= GSC 2661:1058	19 10 21	35 18 13	10.9-11.6 pg	SR:	?
DHK 40=SAO 46698 BD+49°2630 PPM 56164	17 23 09	49 41 16	9.38-9.87 V	EB	0.530
DHK 41=SAO 76494 HD 284195	04 09 06	21 49 11	8.98-9.4: V	EA	3.176

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