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REMARK CONCERNING NGC 404

The extragalactic nebula NGC 404 was suspected of being variable by Geyer (IAUC 2380, see also IAUC 2382 and IBVS 614). I have estimated the object on about 200 Sonneberg Sky Patrol plates (Tessar 1: 3.5, f=250 mm) of the years 1961 to 1971, taken by Huth. On this short focus material, which is photographically completely homogeneous, the nebula appears nearly starlike. No variability could be detected.

This statement is confirmed by observations on 50 astrophographic plates (1 : 4, f=1600 mm) of 1965 to 1971, which also show no sign of variability of the object.

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IMPROVED ELEMENTS OF 3 RR-LYRAE VARIABLES IN AQUILA

The stars V 691 Aql = 451.1936
V 709 Aql = 456.1936
V 717 Aql = 460.1936

are poorly known variables. The elements in GCVS 1969 are inexact. On 90 plates of Sonneberg Observatory (JD 2429110 - 31673; 2438289 - 40837) we examined these variables and determined improved elements.

V 691 Aql. The variable was discovered by Hoffmeister. He announced the star as a shortperiod variable ($14^m.5-16^m$ phg, Astr. Nachr. 259.37.1936). Preliminary elements were derived by Ahnert (Veröff. Sternw. Sonneberg, Band 1 Nr. 3. 1949). Our improved elements are:

Max.hel. = J.D. 2430932.412 + $0^d.552162$ E
RRab, $13^m.9 - 15^m.5$ phg, M - m = $0^m.20$

Observed maxima:

J.D.hel.24...	Epoch	O - C	J.D.hel.24...	Epoch	O - C
30932.412	0	0 ^d .000	40469.349	17272	- 0 ^d .005
933.529	2	+ .013	470.468	17274	+ .010
31673.448	1342	+ .035	803.438	17877	+ .026
40444.483	17227	- .024			

V 709 Aql. Hoffmeister announced this star as a short-period variable between 14^m.5 - 15^m phg (Astr. Nachr. 259,37.1936). Ahnert gave preliminary elements (Veröff. Sternw. Sonneberg, Band 1 Nr. 3. 1949). We found the improved elements:

$$\text{Max.hel.} = \text{J.D. } 2430932.496 + 0^{\text{d}}.607783 \text{ E}$$

$$\text{RRab, } 14^{\text{m}}.2 - 15^{\text{m}}.5 \text{ phg, } M - m = 0^{\text{p}}.16$$

Observed maxima:

J.D.hel.24...	Epoch	O - C
30932.496	0	0 ^d .000
40470.445	15693	+ .010
780.428	16203	+ .028

V 717 Aql. Hoffmeister found shortperiodic light variations between 15^m - 16^m phg (Astr. Nachr. 259,37.1936). The first elements were published by Ahnert (Veröff. Sternw. Sonneberg, Band 1 Nr. 3. 1949).

The new elements found by the authors are:

$$\text{Max.hel.} = \text{J.D. } 2430930.454 + 0^{\text{d}}.486594 \text{ E}$$

$$\text{RRab, } 15^{\text{m}}.6 - 15^{\text{m}}.5 \text{ phg, } M - m = 0^{\text{p}}.17$$

Observed maxima:

J.D.hel.24...	Epoch	O - C	J.D.hel.24...	Epoch	O - C
30930.454	0	0 ^d .000	40781.519	20245	- 0 ^d .022
931.448	2	+ .021	803.438	20290	.000
932.412	4	+ .012	824.378	20333	+ .016
31673.490	1527	+ .008			

Light curves and comparison stars will be published in "Mitteilungen der Bruno H. Bürgel - Sternwarte Hartha, Heft 4".

Bruno-H.-Bürgel-Sternwarte Hartha

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