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NOTES ON FOUR VARIABLE STARS

YY Del

This well observed star was discovered by Hoffmeister, C. and announced as an eclipsing binary ($11\overset{m}{.}1$ - $11\overset{m}{.}9$ ph). The star was suspected to have a variable period. Using 436 sky-patrol plates (Sonneberg Observatory) I could derive linear elements for two intervals:

J.D. 2425000 - 2436100
Min.(hel.)= J.D.2427685.391+$0\overset{d}{.}7930882$·E (EA)

and J.D. 2436100 - 2443700
Min.(hel.)= J.D.2438210.391+$0\overset{d}{.}7930935$·E (EA)
($11\overset{m}{.}31$ - $12\overset{m}{.}02/11\overset{m}{.}35$ ph; D = $0\overset{p}{.}19$)

AL Del

Hoffmeister, C. discovered this variable star in 1931. There are not many observations of this star, only Jensch, A. (1938) and Whitney, B.S. (1951) have published some times of minima. Observations on 131 plates of the Sonneberg 40 cm-astrograph (1940 to 1973) confirm the elements of the GCVS 1969. The star is fainter than given in GCVS.

DM Del

This bright star was find to be variable by Hoffmeister, C. in 1935. Visual and photographic observations (Hartha Sky-Patrol) were carried out in 1978.
From 12 newly observed minima I obtained the following improved elements:

Min.(hel.) = J.D. 2442685.302+0.8446733·E (E)
($8\overset{m}{.}7$ - $8\overset{m}{.}90/8\overset{m}{.}86$ ph)

Note that this elements satisfy all the observations published except some minima of BBSAG.

Diethelm, R. derived new elements (BBSAG Bull. 27.5.1976) which are clearly erroneous (see also for example Schneller's photo-

electric observations in AN 285.265,1960).

BH Ser

This RR Lyrae-variable was discovered by Vyssotsky in 1941. Investigations of this star were carried out on Sonneberg Sky Patrol plates from 1930 to 1977.
There has been a period-jump from $0^d.434545$ to $0^d.4345527$ in 1955.
The present elements are:

$$\text{Max.(hel.)} = \text{J.D. } 2441482.427 + 0^d.4345527 \cdot E.$$

Further particulars will be published in "Mitteilungen der Bruno-H.-Bürgel-Sternwarte Hartha".

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