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ON FOUR VARIABLE STARS IN THE GLOBULAR CLUSTER M 2

Four variable stars (V18, 19, 20 and 21) were discovered in 1967 by R.Margoni and R.Stagni (1) and preliminarily investigated by myself (2). According to 160 estimates on Moscow plates obtained in 1960, 1963, 1968 and 1969 and about 170 estimates in B and 90 in V by R.Margoni and R.Stagni (3) (1965-1968) the following results were established:

V 18 Very interesting star with strong variable period and light curve. The following four systems of linear elements were obtained:

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|----------------------------|-----------------------------------|
| I. Before JD 2437450 | $t_0 = 2437162.392 + 0^d.36201.E$ |
| II. From 2437450 to 39250 | $t_0 = 2438282.178 + 0.36189.E$ |
| III. From 2439250 to 39950 | $t_0 = 2439351.255 + 0.36205.E$ |
| IV. From 2439950 to | $t_0 = 2440088.467 + 0.36226.E$ |

V 19 Two systems of linear elements represent all observations very well.

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|----------------------|------------------------------------|
| I. Before JD 2438850 | $t_0 = 2437162.373 + 0^d.319299.E$ |
| II. After JD 2438850 | $t_0 = 2439089.384 + 0.319403.E$ |

V 20 The following linear elements represent satisfactorily all available observations from JD 2437087 to 2440478:

$$t_0 = 2437162.281 + 0^d.2863224.E.$$

V 21 Two systems of linear elements were determined:

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|----------------------|------------------------------------|
| I. Before JD 2439700 | $t_0 = 2437162.376 + 0^d.712154.E$ |
| II. After JD 2439700 | $t_0 = 2439789.516 + 0.712178.E$ |

The symbol t_0 denotes the moment of the median magnitude on the ascending branch of the light curve.

References:

1. R.Margoni, R.Stagni, IBVS 239, Dec.9, 1967
2. B.Kukarkin, IBVS 253, Febr.8, 1968 and 254, Febr.16, 1968.
3. R.Margoni, R.Stagni, Asiago Contr. 213, 1969.

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