| 10.96 | M  |
| 1568.733 | MP |
| 0.732 | (M) 6 |
| 0.573 | (M) 3 |
| -0.368 | (M) 1 |

| 73.597 | V  |
| -47.22 | V |
| 0.233 | t |
| 0.718 | t |
| 0.656 | t |

| 76.498 | U  |
| 3510.183 | U |
| 0.640 | t |
| 0.394 | t |
| 0.659 | t |

| -26.800 | VEL. |
| 17 |  |
| 1.140 |  |

| 1.234 | 0 |
| -1277 | 0 |
| 8.400 |  |
| 14.450 |  |

| 17 |  |
| 1.140 |  |

| 1.234 | 0 |
| -1277 | 0 |
| 8.400 |  |
| 14.450 |  |

| 17 |  |
| 1.140 |  |
R.A. : 16.250
DEC. : 67.350
l. R.A. : 1083.000
l. DEC. : 89.000
STANCE : 0.230
10DULUS : 11
v. VEL. : -22.000

q1 (U) : -0.326
q2 (U) : 0.936
q3 (U) : 0.133
dU : 1158.153
U : 9.941

q1 (V) : 0.641
q2 (V) : 0.115
q3 (V) : 0.759
dV : 1452.860
V : -32.845

q1 (W) : -0.695
q2 (W) : -0.333
q3 (W) : 0.638
dW : 1486.805
W : 2.503
8° 43° 52
4° 38° 45

Date (Kuprin) at = 0° 12
Δ m = 0° 1

Orbit

G.C. 22805 - 799 - 878

6° 74° 31
HD 152951

Common name: with Kleff
629 (11.5 mag.), MS.

Kleff 63° 10° 10.0, 17° years, also com
with No 3845, 12° distance, No M, V, W rel.
par. an mean of 2 determinations
Also Van Biesen, etc.

154 10

6° 59° 33
7° 78 + 11° 8 R
10° 35 + 11° 22

-81
-890
-98
+131

-0.827 - 0.877

-802 - 890
\[ R \beta \gamma \approx 5 \text{ mod } 2 \]

\[ R \alpha = 0.5 \text{ mod } 1 \]

\[ b_1 = 0.25 \]

\[ b_2 = 0.25 \]

\[ b_3 = 0.25 \]

\[ b_4 = 0.25 \]

\[ b_5 = 0.25 \]

\[ l = 0.75 \]

\[ \frac{l}{2} = 0.375 \]

\[ R = \frac{1}{2} \]

\[ \alpha = 0.25 \]

\[ \beta = \frac{1}{4} \]

\[ \gamma = \frac{1}{4} \]

S. Route

Pineview College 1973 1976
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\[ \begin{align*}
+25^\circ & \ 3173 \\
\div & \ 16 \\
\div & \ 16 \\
\quad & \ 52.3 \\
+25 & \ 59 \\
+25 & \ 55 \\
+25 & \ 50.34 \\
\end{align*} \]

\[ \begin{align*}
Y & \ 3857 \\
Y & \ 444 \\
L & \ 9782 \\
63 & \ YK(6) \\
99 & \text{Fatin} \\
\end{align*} \]

\[ \text{L07} \]

\[ \begin{align*}
97 \pm 12 & \ UV \\
111 & \text{M(4)} \\
63 & \text{YK(6)} \\
99 & \text{Fatin} \\
\end{align*} \]

\[ \begin{align*}
0.0 & \text{10cm} \\
4.3 & \pm 1.9 \text{ OCw} \\
+11 & \text{C 3 w} \\
\text{AMZ} & \end{align*} \]

\[ \begin{align*}
C & \ 20.1014 \\
-11 & \ -55 \\
\end{align*} \]

\[ \begin{align*}
-0.440 & \ -9.550 \\
\quad & \text{Fatin} \\
\end{align*} \]

\[ \begin{align*}
-133 & \ -450 \text{ VVR} \\
109 & \text{ Fatin} \\
109 & \text{ Fatin} \\
\end{align*} \]

\[ \begin{align*}
115 & \ 6.80 \\
50 & \ +50 \\
129 & \ 467 \\
164 & \ 447 \\
875 & \ 500 \\
-115 & \ -500 \\
\end{align*} \]

\[ \begin{align*}
19 & \ 86 \\
198 & \ 188 \\
\end{align*} \]
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| q1 (U) | -0.17 |
| q2 (U) | 0.80 |
| q3 (U) | -0.50 |
| dU | -1773 |
| U | -18.8 |

| q1 (V) | 0.596 |
| q2 (V) | 0.539 |
| q3 (V) | 0.594 |
| dV | -1573.405 |
| V | -13.961 |

| q1 (W) | -0.784 |
| q2 (W) | 0.232 |
| q3 (W) | 0.576 |
| dW | -105.147 |
| W | 0.407 |
\[ 97.5 - 56.95 - 26 \]
\[ 5.1089 - 3.027 - 2.2036 \]
\[ 1.0294 + 1.0964 + 5 \]

\[ 55.7 - 30.8 - 9.932 \]

\[ 5.8 - 27 \]
R.A. : 17.400
DEC. : -46.850
PM. R.A. : 828.000
PM. DEC. : -872.000
DISTANCE : -1.650

MODULUS : 5
AD. VEL. : -10.200

q1 (U) : -0.070
q2 (U) : -0.306
q3 (U) : -0.949
dU : 1075.267
  U : 14.714

q1 (V) :  0.557
q2 (V) :  0.778
q3 (V) : -0.292
dV : %-1718.270
  V :  -5.061

q1 (W) : -0.827
q2 (W) :  0.549
q3 (W) : -0.116
dW : %-4492.234
  W :  -19.832
+61.26806  17  34.0  +61 47  62
17  34 57.0  +61 43.81

Cp to 26th Dec 732"

0.359 - $15\pi$  [AR - MN]

285  - 5x

PASP 33.319  +235 - 525

587
-515

0.280
12.7

16.3 M2
R.A. : 17.600
DEC. : 61.700
PM. R.A. : 537.000
PM. DEC. : -515.000
DISTANCE : 0.800
MODULUS : 14
RAD. VEL. : -12.700

q1 (U) : -0.025
q2 (U) : 1.000
q3 (U) : 0.011
dU : %-2469.919
U : -35.840

q1 (V) : 0.537
q2 (V) : 0.004
q3 (V) : 0.844
dV : 638.358
V : -1.485

q1 (W) : -0.843
q2 (W) : -0.027
q3 (W) : 0.537
dW : -952.458
W : -20.587
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540 - 330
264 - 330
51 - 58.5 U
30 V - 330 U
52 - 332
52 - 322
52 - 322
52 - 322
52 - 322
52 - 322
52 - 322
52 - 322
52 - 322
52 - 322
52 - 322
52 - 322
52 - 322
52 - 322
9.2 V ± 0.3
165 ± 2.2
R.A.  :  18.05
DEC.  :  -3.05
PM. R.A.  :  560.00
PM. DEC.  :  -330.00
DISTANCE :  -0.40
MODULUS  :  8
RAD. VEL. :  31.70

q1 (U) :  0.078
q2 (U) :  0.483
q3 (U) :  -0.892
dU      :  -474.89
U       :  -32.36

q1 (V) :  0.487
q2 (V) :  0.763
q3 (V) :  0.412
dV      :  89.262
V       :  13.945

q1 (W) :  -0.870
q2 (W) :  0.469
q3 (W) :  0.152
dW      :  -3039.5
W       :  -20.455
-19.31 : M
-14.40 : MP
-0.19 : (M) 3b
0.44 : (M) 2b
-0.87 : (M) 1b
-18.68 : \n
\%
-13.91 : \n\n-0.17 : (\n) 3b
0.85 : (\n) 2b
0.48 : (\n) 1b

9.49 : \n
546.96 : \n\n9.66 : (\n) 3b
-0.24 : (\n) 2b
-0.00 : (\n) 1b

0.00 : -2.00

14 : MODULUS
0.68 : DISTANCE
-417.00 : PM. DEC.
185.00 : PM. R.A.
-43.45 : DEC.
18.10 : R.A.
171314 18 31.2 122 17 dm1 +56.56 (y)

661003
272
2727
w1020
x2030406

8.94 +1.12 +1.16 mesh
9.33 +1.16

-0.027 +480 Cindy
-188 -470 Y

-0.0135
-0114
-0.202

-154 -476 A12

70M (a)
>50 (v)
70±5

200
\[ T = 36.5 \text{ min} \]
803 + 2203406 = 2719079

8.91 + 11.12 + 105 = 125.03

\[ \frac{36.1 \text{ up}}{36.5} - 0.127 \times 480 = \frac{36.4}{0.05} \]

\[ + 36.8 \]
R.A. : 18.500
DEC. : 22.300
PM. R.A. : -190.000
PM. DEC. : -480.000
DISTANCE : 1.780
MODULUS : 23
RAD. VEL. : 38.000

q1 (U) : 0.180
g2 (U) : 0.772
g3 (U) : -0.609
dU : % -1907.625
U : -66.443

q1 (V) : 0.430
g2 (V) : 0.495
g3 (V) : 0.755
dV : % -1484.46
V : -5.000

q1 (W) : -0.985
g2 (W) : 0.398
g3 (W) : 0.243
dW : -168.036
W : 5.407
| AD. VEL. | 36.500 |
| MODULUS | 26 |
| DISTANCE | 2.060 |
| PM. DEC. | -480.000 |
| PM. R.A. | -190.000 |
| DEC. | 22.300 |
| R.A. | 18.500 |
R.A. : 18.550
DEC. : 45.650
PM. R.A. : 658.000
PM. DEC. : 360.000
DISTANCE : 0.850
MODULUS : 15
RAD. VEL. : -31.800

q1 (U) : 0.192
q2 (U) : 0.949
q3 (U) : -0.251
dU : 2036.577
U : 38.114

q1 (V) : 0.423
q2 (V) : 0.151
q3 (V) : 0.893
dV : 1180.348
V : -10.953

q1 (W) : -0.886
q2 (W) : 0.277
q3 (W) : 0.372
dW : 71457.5
W : -38.401
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\[
\begin{align*}
14.140 & \quad 1904.7 \\
8.109   & \quad 3937.2 \\
22.1269 & \quad 23.65 \\
17.69   & \quad 23.65 \\
21      & \quad -21 \\
172     & \quad 172 \\
151     & \quad 1717
\end{align*}
\]
| ST/ | R.A.: 18.700 | Date: / - / |
|     | DEC.: 59.550 |           |
|     | PM. R.A.: %-2599.000 | TIME |
|     | PM. DEC.: 1814.000 |       |
|     | DISTANCE: -2.310 |       |
|     | MODULUS: 3 |       |
|     | RAD. VEL.: -2.000 |       |
|     | q1 (U): 0.225 |       |
|     | q2 (U): 0.974 |       |
|     | q3 (U): -0.012 |       |
|     | dU: 6973.268 |       |
|     | U: 24.092 |       |
|     | q1 (V): 0.402 |       |
|     | q2 (V): -0.082 |       |
|     | q3 (V): 0.912 |       |
|     | dV: %-3215.55 |       |
|     | V: -12.922 |       |
|     | q1 (W): -0.887 |       |
|     | q2 (W): 0.210 |       |
|     | q3 (W): 0.410 |       |
|     | dW: 7344.580 |       |
|     | W: 24.528 |       |

Comments: