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**PHOTOELECTRIC BVI_C OBSERVATIONS AND A NEW CLASSIFICATION
FOR V804 ARAE**

V804 Ara was included in our program of photoelectric observations for Cepheids because it is classified in GCVS-IV as a possible Cepheid. We observed the star at CTIO during the period September-November 1996 using the 1.0-m reflector. A total of 30 BVI_C measurements were obtained (Table 1), the accuracy of the individual data being near $\pm 0^m02$ in all filters.

Our observations are plotted in Figure 1. The data indicate a range of light variability of 0^m50 in V , 0^m15 in $B - V$ and 0^m30 in $V - I_c$, but the star cannot be a Cepheid because, first, changes in $B - V$ color are asynchronous with the changes in V – which is atypical of Cepheids – and second, it has a very large infrared excess. It seems more likely that V804 Ara is a semiregular variable.

Table 1

| JD_{hel} | V | B-V | V-I _c | JD_{hel} | V | B-V | V-I _c |
|------------|--------|-------|------------------|------------|--------|-------|------------------|
| 2450300+ | | | | 2450300+ | | | |
| 48.5687 | 13.165 | 1.605 | 3.325 | 80.5499 | 13.471 | 1.531 | 3.533 |
| 50.6595 | 13.205 | 1.595 | 3.310 | 81.5341 | 13.472 | 1.491 | 3.527 |
| 51.5575 | 13.118 | 1.657 | 3.282 | 82.5295 | 13.494 | 1.486 | 3.505 |
| 52.5768 | 13.122 | – | 3.283 | 83.5303 | 13.421 | 1.592 | 3.493 |
| 53.5251 | 13.073 | 1.594 | 3.247 | 84.5372 | 13.379 | – | 3.453 |
| 54.5386 | 13.099 | 1.594 | 3.296 | 85.5161 | 13.401 | 1.537 | 3.477 |
| 55.5262 | 13.079 | 1.608 | 3.282 | 85.5183 | 13.424 | 1.565 | 3.471 |
| 57.5245 | 13.034 | 1.622 | 3.258 | 86.5265 | 13.330 | 1.558 | 3.451 |
| 58.5286 | 13.044 | 1.618 | 3.249 | 87.5219 | 13.420 | 1.605 | 3.473 |
| 59.5219 | 13.049 | 1.581 | 3.268 | 88.5254 | 13.370 | 1.560 | 3.466 |
| 60.5278 | 13.079 | 1.588 | 3.279 | 89.5250 | 13.302 | 1.546 | 3.409 |
| 61.5347 | 13.065 | 1.650 | 3.262 | 90.5201 | 13.343 | 1.592 | 3.453 |
| 62.5313 | 13.093 | 1.585 | 3.281 | 91.5201 | 13.328 | 1.540 | 3.442 |
| 63.5327 | 13.105 | 1.592 | 3.305 | 92.5142 | 13.303 | 1.623 | 3.422 |
| 79.5499 | 13.424 | 1.562 | 3.499 | 93.5171 | 13.325 | 1.617 | 3.435 |

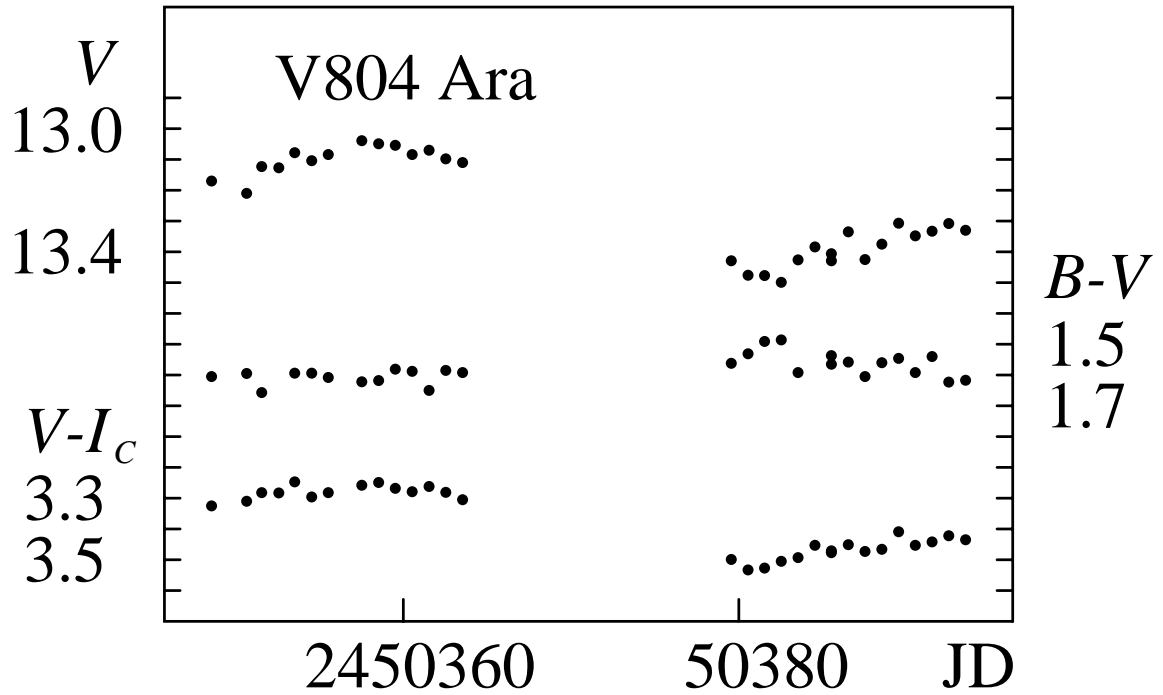


Figure 1

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