

Micrometer measurements of double stars from the Spanish observatories at Calar Alto and Santiago de Compostela*

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Abstract. This paper reports 458 micrometer observations of visual double stars made with the 152 cm. telescope at Calar Alto Observatory (Almería, Spain) and with the 35 cm. telescope at Ramón María Aller Observatory (Santiago de Compostela, Spain).

Key words: astrometry — stars: binaries: close — binaries: visual

1. Introduction

Almost 40% of the observations presented here were made with the 152 cm. Spanish telescope at E.O.C.A., Calar Alto Observatory (Almería, Spain) during an observation run at the end of July 1995. The procedure was the same as for the earlier runs performed with this telescope and using the same micrometer, see Couteau et al. (1989) and Docobo & Prieto (1993).

Together with these data, micrometer measurements made with the 35 cm reflector at Ramón María Aller Observatory (Santiago de Compostela, Spain) are included. In this latter case, the observations were carried out in 1994 and 1995 and to a lesser extent in 1996 and 1997.

Although the micrometers used at the two Observatories were different (both were made at Nice Observatory, France), the eyepieces were the same: 12, 10 and 8 mm (x_{1017} , x_{1220} , x_{1525} at Calar Alto and x_{325} , x_{390} , x_{488} at Santiago de Compostela, respectively).

With respect to the small micrometer in the 35 cm telescope, its angular equivalent of the screw pitch was $23''.35$, i.e., $0''.467$ per division. Using this telescope in good seeing conditions, a bright double star close to $0''.5$ can be separated.

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* Tables 1 and 2 only available in electronic form at CDS via anonymous ftp to cdsarc.u-strasbg.fr (130.79.128.5) or via <http://cdsweb.u-strasbg.fr/Abstract.html>

2. Observations

The 458 micrometer measurements are listed in Tables 1 and 2. Table 1 includes 179 observations of 102 stars performed at Calar Alto Observatory and Table 2 includes 279 observations of 102 stars at Ramón María Aller Observatory. The results are presented in the same format in both Tables: each binary is identified by its WDS catalogue number (Worley & Douglass 1996), followed by the star's name and its ADS catalogue number (Aitken 1932) if any. Letters denote the components in the case of the multiple star systems. Subsequent columns represent the observation epoch, the position angle, the angular separation together with the number of nights on which the star was observed. In no case did the measurements averaged differ by more than 2° for position angles. For angular separation, the estimated error varies from 10% for the very close pairs to less than 1% for the very wide ones.

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