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# Watching astrometrically the periastron passage of Achernar A & B

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## Abstract

The bright and closest Be star (Achernar) presents several characteristics (e.g. fast-rotation, binarity, and periodic mass ejections), which makes it a key star to understand the physical mechanism behind the Be phenomenon and fast-rotators in general. Using high angular resolution (HAR) observations at the VLT we have detected a lower mass companion and characterized as most probably a A1V-A3V star (Kervella Domiciano de Souza 2007; Kervella et al. 2008). The next important step after these first results is to study the binary orbit and its possible implications to the Be phenomenon. We thus present in this work a detailed investigation of the last two periastron passages, based on AMBER and SPHERE observations.

**Keywords:** High angular resolution, interferometry, Achernar, Be phenomenon, binary, periastron

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