

Observations of low mass companions to massive stars

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Massive stars are known to be multiple systems, often in tight, short-period OB stars binaries (SB1 and SB2, found by spectroscopic monitoring). However, little is known about low-mass companions to massive stars, such as A, F, and G stars with masses in the range of 1 to 3 solar masses. Yet systems of massive stars with wide low-mass companions (of the order of a few AU) must exist, for these are the progenitors of LMXB and HMXB (low-mass and high-mass X-ray binaries).

We discuss observational techniques to detect such high-mass/low-mass physical pairs, including long-baseline interferometry and astrometry (e.g. AMBER and PRIMA at the ESO VLTI on Paranal). The time has come to discover this new class of extreme contrast (1:100 to 1:10,000) binary systems, an effort similar to image exo-planets in the glare of solar-type main sequence stars.