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Wide binaries in the Orion OB association

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Some studies indicate that OB associations are not just structures that evolved from dispersing dense stellar clusters, but most likely were formed in a configuration similar to how they appear today - i.e. as an assembly of loose stellar groups. Early evolution of multiple stellar systems in such low density subgroups might be significantly different from their evolution in a dense stellar cluster environment. While wide binaries are dynamically destroyed in a dense stellar environment, in agreement with the observed low fractions of wide binaries in young stellar clusters, they could be numerous in OB associations. The fraction of wide binaries in OB associations is therefore an important diagnostics not only for binary star formation studies but also for testing the aforementioned finding. In this contribution I will present the results of our imaging survey for wide binaries in the Orion OB 1a/1b associations. With a total target sample size of ~1150 stars we are able to put our derived wide binary fraction on solid statistical grounds. We compare our results with the expected fractions of companions found in dense young stellar clusters and in T-associations, and analyse our findings in the context of binary star formation in OB-associations.

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