

Searching for common proper-motion companions in the Local Association and its young kinematic subgroups

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Abstract

We describe the results of an ongoing project aimed to identify new members of young associations by searching for common proper-motion companions to already-known members. We have used the Aladin sky atlas of the Virtual Observatory and the 2MASS, USNO-B1 and PPMXL astro-photometric catalogues to look for new faint members in the the Local Association and its young kinematic groups (Tucana-Horologium, β Pictoris, AB Doradus). We have discovered several new late-type stellar companions. For one of the new identified objects, we have taken low-resolution spectroscopy to confirm its young nature and characterise its stellar properties. A detailed study of Tucana-Horologium has provided an unprecedented view of the moving group nucleus around $\beta^{01+02+03}$ Tuc, which lies at the centre of the remnant of the cluster that originated the group.

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