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ILS Brown Dwarfs overview

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We as the Euclid ILS team, hereby present our preliminary results of one of the Euclid ERO programme, probing the young free-floating planets in the hotbed of the sigma Orionis cluster. We used known, spectroscopically-confirmed substellar benchmarks to proceed with high-purity selection for new members in the Euclid catalogue and we were able to probe down to objects with 4 Jovian masses. The low-mass-tail of the IMF has been estimated which follows a multi-power-law distribution. We would like to present our preparation of exploring and characterizing substellar objects in the canonical surveys and deep surveys, including ultracool dwarf template selection in the three deep fields and their reconnaissance spectroscopy with 10.4-m Gran Telescopio Canarias and 8.2-m Very Large Telescope.

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