Abstract

The nearby stars have gained new respect and interest in recent times because of their importance in such fundamental questions as

"What is the nature of the Sun's neighbors?"

"Are there planets circling nearby stars?"

"Is there life on any of those planets?"

Here we present first results from research initiatives supported by NASA's NStars (Nearby Stars) Project. To a horizon of 25 pc, the NStars Sample currently includes more than 2600 stars. We anticipate that the population within this distance will climb to roughly 10,000 objects when the sample is complete (see panel to the right). Such a robust sample allows us to develop comprehensive luminosity and mass functions for the local Galactic population, as well as identify interesting subsamples such as the smallest stars, white dwarfs, and stars with extrasolar planet candidates. The current NStars Database can be found at

http://nstars.arc.nasa.gov

The core of the NStars Sample is comprised of the 316 objects known within 10 pc, as determined by RECONS . The mass function determined from that sample is shown in the panel below. Shown in the final two rows of this poster are first results from an NOAO-supported southern sky parallax program known as CTIOPI, which targets sample members missing from the RECONS and NStars samples. This is precisely the type of research effort the NStars Project is supporting, where special is paid to efforts that discover and characterize nearby stars that lurk unidentified in the solar neighborhood.

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