The Search for Faint Infrared Calibration Standards - Extending Landolt's Standards to V=19

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We describe the first results of a programme to extend the Landolt calibration standards to at least V=19 and to calibrate fields separated from the celestial equator. This programme is one of several coordinated efforts to find faint type AV and KIII stars suitable for the mid-IR calibration of the Spanish 10-m Gran Telescopio Canarias. We have obtained a total of 34 712 measures of 432 stars in 26 quasar fields between Declination −30 and +70, calculating magnitudes with high precision in the visible and near-infrared (UBVRIJHK). The next stage of the project is

1. To increase the number of fields covered
2. To take additional observations of poorly covered fields.
3. To use our existing database to extend photometry of Selected Areas to include many stars not previously measured by Landolt.
4. To spectral type all candidate KIII and AV stars in the sample.

We describe the results obtained and the characteristics of the samples of stars. Very few candidate type AV or KIII stars are found, either in our sample of amongst the fainter Landolt stars. We conclude that both samples are increasingly dominated by local dwarfs at increasingly faint magnitudes. We discuss the implications for taking mid-infrared calibration to increasingly faint limits.