The guide stars observed with the ACA are chosen from the Chandra Star Catalog, which is composite catalog derived from the Hubble Telescope Guide Star Catalog, the Hipparchos Tycho catalog and othe alogs. The color transformation from V and B-V to ACA instrummagnitude in the guide star catalog has been calibrated using ACA vations between 1999 and 2001. The calibration residuals are plotted a demonstrating the photometric accuracy of the ACA. (Results are corof Paul Green, CXC).