

MEMORANDUM

November 12, 1996

File: /proj/asc/MP/DOCUMENTS/ssa/test.gs.and.as/test.gs.and.as.tex
To: File
From: M. Garcia
Subject: Magnitude Effect of Joint Guide/Acq Star Selection

In order to search for effects of selecting acquisition stars from guide stars, ~ 1000 target positions were run through the SSA. For one run, acquisition stars were required to come from acceptable guide star sets, for the other run no such restriction was applied. The acquisition stars were required to be 'good' for a 180° slew, assuming a 4σ mispoint error of $133''$.

The magnitude histogram of jointly selected acquisition stars is shown in Figure 1. Figure 2 is for independently selected acquisition stars. For completeness, the magnitude histogram of the guide stars is show in Figure 3. The MEAN magnitude of jointly selected acquisitions stars is ~ 0.5 higher (fainter). However, the 95% point for 2 selected Acquisition stars remains unchanged.

	3-Acq	2-Acq	5-Guide
Mean,Joint	8.25	7.99	8.68
Mean,Sep	7.74	7.45	8.68
95%,Joint	9.6	9.2	10.1
95%,Sep	9.4	9.2	10.1

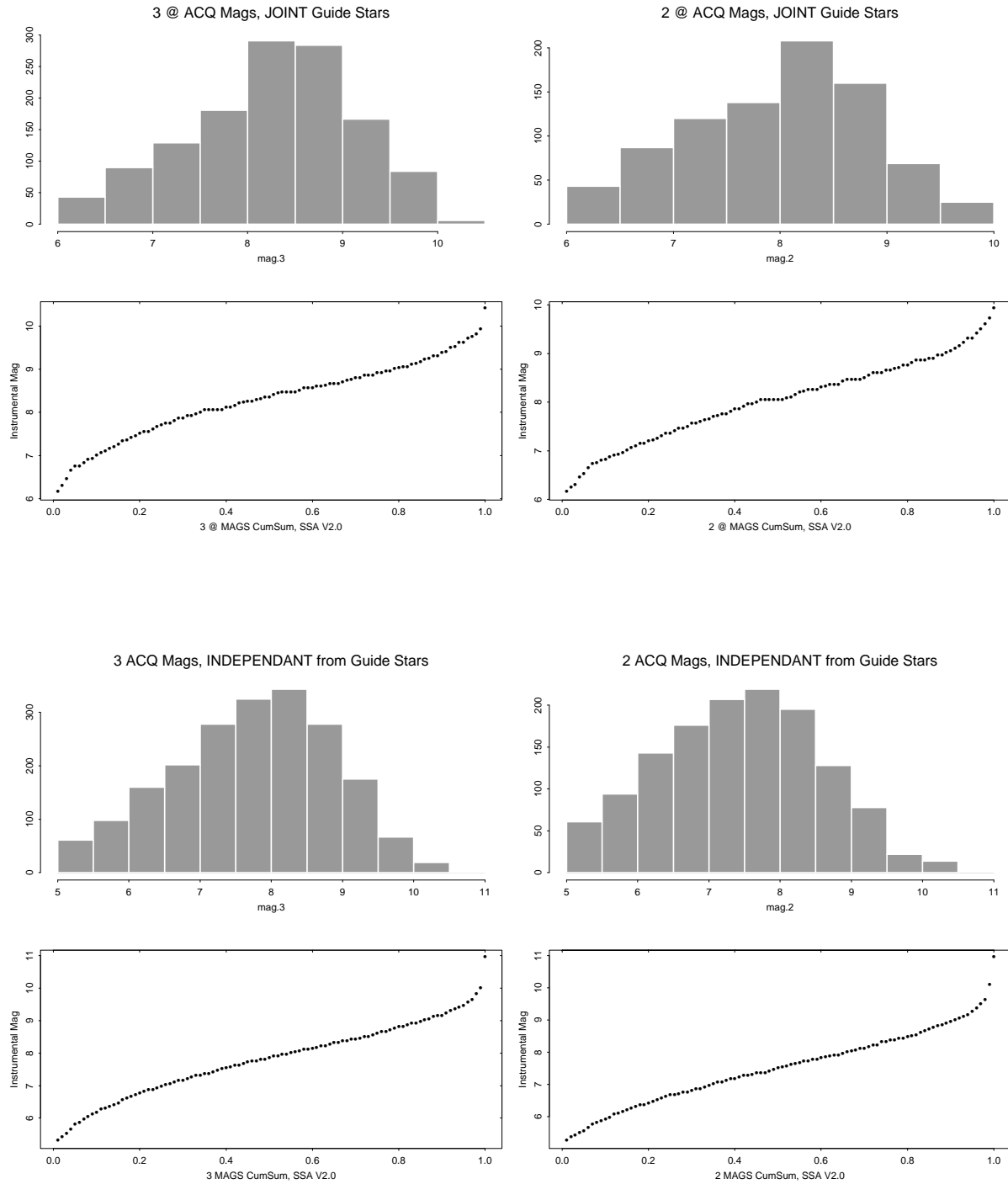


Figure 1: Jointly/Independently selected Acquisition Stars

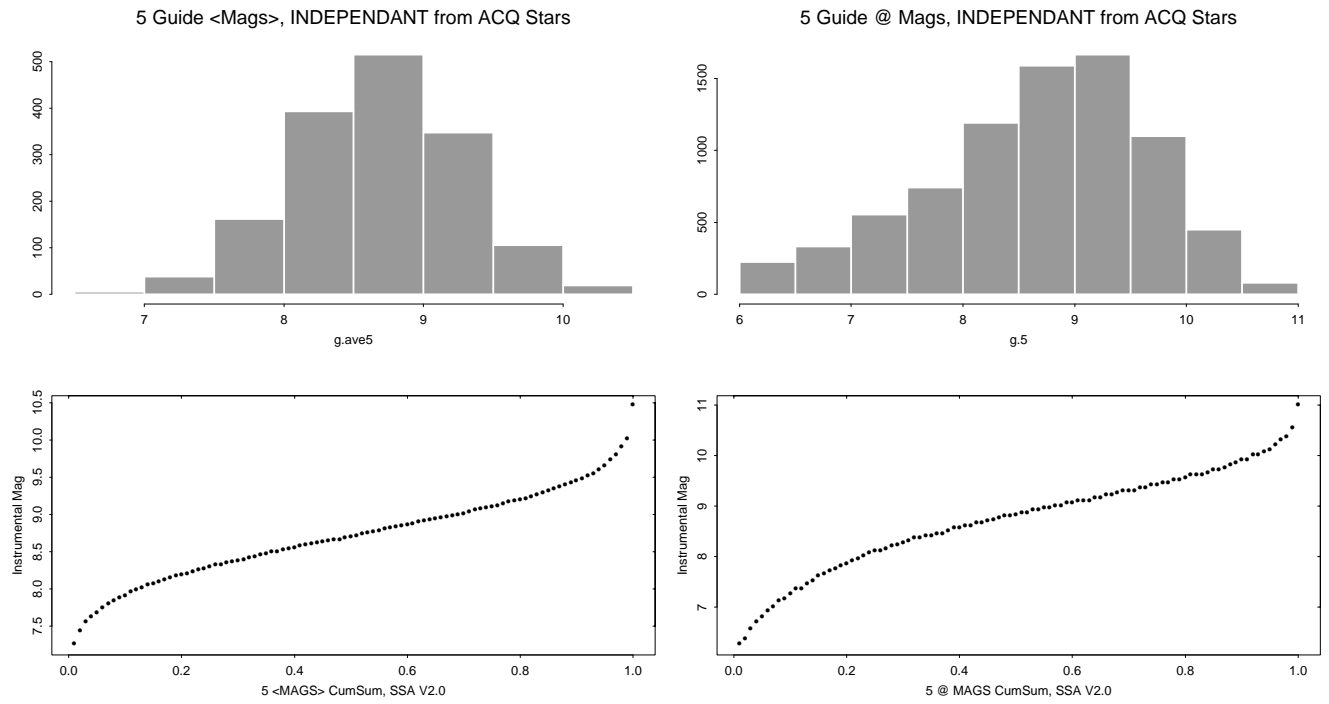


Figure 2: Guide Star Magnitudes