

HST INS Work Item Data Sheet

1. SI/Title: WFC3/ APT Bright Object Protection (IR Channel Persistence)
2. INS Lead:
3. Description of Work:

Determine requirements for identifying bright objects for all WFC3 IR pointings using the 2MASS and GSC-II catalogs. Requirements will depend on the actual characteristics of the IR channel, particularly its susceptibility to persistent images. Implement the requirements in the APT ROBOT software, and test the implementation.
4. Schedule Constraints and Dependencies:

Work should proceed quickly due to Ron Downes' leaving STScI in the Spring of 2006. The implementation needs to account for the fact that the IR detector characteristics are unknown, and thus will need flexibility and ease of updating.
5. Risks and Open Issues:

Risk – Given the lack of knowledge of the IR detector's characteristics, the implementation could be wrong and/or need considerable revision. Mitigate by making the detector-dependent portions as easy to update as possible.

Open Issue – ROBOT will identify problem pointings, but the rest of the Planning and Scheduling System will need to do something about it. What, exactly, should be done is not known at this time, but could range from nothing (if persistence is a small effect; unlikely) to forcing separations between visits if a problem is found (if persistence is a significant effect; likely); there are options between these two that would need to be considered, too.
6. Priority: High
7. Priority Justification:

Need to have the APT work done while Ron Downes is available.
8. Resources (including estimated calendar duration for each portion):
 - a. Requirements
WFC3 Instrument Scientist(s)
APT Developer and/or Ron Downes
 - b. Development
APT Developer
 - c. Testing
WFC3 Instrument Scientist(s)
APT Test Engineer
Ron Downes
9. Documentation and Deliverables:

Requirements Document
APT (ROBOT) Code Delivery

Test Report