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| **ECR Title: ECR:**  **Fiber Polarization Correction** | | | DCC No: E12xxxxx-vx |
| Date: 10/2/2012 |
| **Requester:**  Daniel Sigg | **Impacted Subsystem(s):**  ISC | |  |
| **Description of Proposed Change(s):**  Add a motorized polarization controller at the launch point of the fibers (MSR). Add a polarizer and a sampler to each fiber exit port in the end stations. | | | |
| **Reason for Change(s):**  We observed during OAT that the polarization of the fiber beam on ISCBT10R changed slowly over time. This required us to manually adjust a halfwave plate. Worse, we had no diagnostics to indicate the problem. Adding a polarizer and measuring both the passed-through and the rejected beam will remedy this problem. Adding a motorized polarization controller further allows us to correct for polarization drift automatically. | | | |
| **Estimated Cost:**  Fiber Control MPC1-2-2-2-FC-UPC-R (3 dual channel units): 34,500 Optics (polarizer, sampler, mounts): $4,800  Total: $39,300 | | | |
| **Schedule Impact Estimate:**  None. | | | |
| **Nature of Change (check all that apply):**  **Safety**  **Correct Hardware**  **Correct Documentation** | | **Improve Hardware**  **Improve/clarify Documentation**  **Change Interface**  **Change Requirement** | |
| **Importance:**  **Desirable for ease of use, maintenance, safety**  **Desirable for improved performance, reliability**  **Essential for performance, reliability**  **Essential for function**  **Essential for safety** | | **Urgency:**  **no urgency**  **desirable by date/event: \_Feb 2013\_\_\_\_**  **Essential by date/event: \_\_\_\_\_\_\_\_\_\_\_\_**  **Immediately (ASAP)** | |
| **Impacted Hardware (select all that apply):**  **Repair/modify. List part & SNs: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Scrap & Replace. List part & SNs:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Installed units? List IFO, part & SNs: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Future units to be built** | | **Impacted Documentation** (list all dwgs, design reports, test reports, specifications, etc.):  D1100607, MSR drawing | |
| **Disposition (to be completed by Systems Engineering):**  **TRB**  **CCB**  **Approved**  **Additional information required. Define:**  *[Requester re-submits with new information with the same DCC E-number for the ECR but the next version number.]*  **Concurrence by Project Management: (Acknowledged Electronically in DCC)**   |  |  |  |  | | --- | --- | --- | --- | | **Project Systems Engineer**: Dennis Coyne |  | **Project Systems Scientist**: Peter Fritschel |  | | | | |