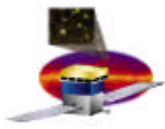


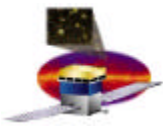
On-Site LAT QA & MIPS

- **LAT QA has hired a full-time on-site representative (Donald Knaepple) to perform in-process Mandatory Inspection Points (MIPs), Source Inspection and process oversight.**
- **Training for Donald Knaepple has started. He will receive additional training in conjunction with last ten (10) preproduction units (LAT-DS-00899).**
- **TMCM MANDATORY INSPECTION POINTS**
 - Four (4) MIPS are required and are documented in LAT-PS-01971, section 9.
 - The four MIPS will be also be called out in Teledyne's 7108742 Process Instructions once the PO is finalized.
- **9.1 MIP 1: PITCH-ADAPTER ATTACHMENT VISUAL INSPECTION**
 - The Teledyne inspection of the attachment of the pitch-adapter flex-circuit to the PWB is repeated, following the instructions in Teledyne Drawing #7108742.



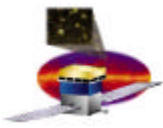
On-Site LAT QA & MIPS

- **9.2 MIP 2: PRE-ENCAPSULATE ELECTRICAL TEST AND 100% VISUAL INSPECTION**
- The operator visually inspects the MCM to verify:
 - that the wire bonds are protected by a properly installed wire-bond protection cover.
 - that the MCM is installed correctly on the backing plate with screws, including a single grounding screw.
 - that all tantalum capacitors are installed with the correct polarity.
 - that the connectors and connector savers are properly installed, and that the MCM is not visibly damaged.
 - The wire bonds are inspected, with special attention paid to those connecting the chips and board to the pitch-adaptor flex circuit (since these cannot be verified by the electrical test).
 - The operator checks that each bias wire bond is doubled. If bad wire bonds were found, or another defect was found that could be corrected by
- If bad wire bonds were found, or another defect was found that could be corrected by standard rework, then the operator fills in the DRH (Discrepancy Rework History) on the back of the Teledyne traveler.
- If the inspection or debugging indicates a problem that cannot be isolated or cannot be corrected by standard rework, then an NCR is completed and submitted.



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- **9.3 MIP 3: POST-CONFORMAL-COAT ELECTRICAL TEST AND VISUAL INSPECTION**
- For an MCM to be tested post-encapsulation, the operator removes the test article from its ESD storage bag and places the black plastic storage box flat on a clear work surface.
- The lid is carefully removed, and the operator performs a visual inspection to verify that:
 - the MCM has two connector savers properly attached.
 - the encapsulation properly covers the chips and wire bonds and does not spill over into areas where it can cause problems.
 - the conformal coat covers the circuit and is not peeling off, and that there is no apparent damage to the MCM.
 - The 10x microscope may be used in this inspection if needed.
 - If a defect was found during inspection that could be corrected by standard rework (such as reworking the conformal coat), then the operator fills in the DRH form on the back of the Teledyne traveler.
 - If a defect is found during inspection that cannot be corrected by standard rework, or if the MCM fails the final electrical test, then an NCR is completed and submitted documenting the failure.



On-Site LAT QA & MIPS

- **9.4 MIP 4: END-ITEM DATA PACKAGE REVIEW AND APPROVAL**
- This is the source inspection of the MCMs and their EIDP by SLAC prior to taking ownership of them and shipping them to SLAC.
- The inspector shall check the following items:
 - 1. Each MCM shall be vacuum packed in an ESD protective bag. The serial number shall be clearly marked and visible.
 - 2. The Teledyne shipper shall correctly identify the serial numbers of the MCMs.
 - 3. The shipper shall also specify the revision levels of the assembly drawing, LATDS-00898 or LAT-DS-00899, and of the process specification, 7108742, to which the MCM was built.
 - 4. There shall be a Teledyne Certificate of Compliance applicable to each MCM.
 - 5. Each MCM shall have a complete copy of the Teledyne shop traveler, including the electrical test report summaries.
 - 6. Together with the traveler shall be a copy of each NCR, if any, applicable to the MCM. Any such NCR shall clearly state the disposition by the MRB.
 - 7. The inspector shall complete and attach the SLAC traveler for the MIPS.