
Tracker WBS Level 5

WBS 4.1.4.3.1 **Description** Silicon Strip Detectors

Project ID	Project Name	Project Description
2	Specify and define SSDs	Finalize the SSD design and prepare for production.
21	Prototype Detector Testing	Test the preproduction prototype detectors to validate the specifications and the manufacturing.

WBS 4.1.4.3.2 **Description** Tray Mechanical

Project ID	Project Name	Project Description
8	Tray Mechanical Assembly	Complete the final design and prototyping of the carbon-fiber based trays for the flight instrument.
14	Tracker Converters	Procurement of the converter foils and development of the procedures for mounting them on trays.
22	Mechanical Engineering Model	Build the mechanical structure for the tracker engineering model.

WBS 4.1.4.3.3 **Description** Tray Electronics

Project ID	Project Name	Project Description
5	Hybrid PC Board Development	Develop techniques and parts for assembly of the hybrid and attachment to the trays.
6	Detector Bias Circuit	Design and fabricate the bias circuit for the planes of SSD.
9	Front-end Readout ASIC	Final design and prototyping of the GTFE64 chip in the process to be used for flight.
10	Readout Controller ASIC	Final design and prototyping of the GTRC chip in the process to be used for flight.
11	Electronics Requirements	Complete the specifications and design of the tracker front-end readout system.
17	Electronics Review	Prepare for and hold the electronics design review.
23	Electronics Engineering Model	Build fully functional trays for the tracker engineering model.
24	ASIC Testing & Qualification	Space qualification testing of the prototype chips. Construction of testing systems.

WBS 4.1.4.3.4 **Description** Tray Assembly

Project ID	Project Name	Project Description
3	Ladder Assembly	Develop the ladder assembly techniques and production equipment.
4	Ladder Placement	Develop the techniques and jigs for placement of ladders onto trays. Includes studies of the adhesives and thermal issues.

WBS	4.1.4.3.5	Description	Tray Production Facilities	
	Project ID	Project Name	Project Description	
	13	Wire Bonder	Acquire, set up, and test the wire bonder for tray production at SLAC.	
WBS	4.1.4.4.1	Description	Tower Structure	
	Project ID	Project Name	Project Description	
	15	Tracker Tower Design	Overall tracker tower mechanical and thermal design, including walls, Vectran cables, ACD snubbers, interface to grid.	
WBS	4.1.4.4.2	Description	Tower Cable Plant	
	Project ID	Project Name	Project Description	
	7	Flex Readout Cable	Update the design of the tracker flexible readout cables for the flight instrument.	
WBS	4.1.4.1.1	Description	Management	
	Project ID	Project Name	Project Description	
	1	Tracker Layout	Fix the parameters of the overall Tracker layout.	
	12	Management	Schedules, WBS, documentation, database, standards	
	16	Tracker Requirements	Document the tracker requirements and specifications	
	20	Tracker Web Page	Create and maintain the tracker web pages	
WBS	4.1.4.2.2	Description	Quality Assurance	
	Project ID	Project Name	Project Description	
	19	Tracker Electronics Q&A	Tracker electronics quality assurance at UCSC	