



Cost and Schedule

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PIP-II Beam Instrumentation Laser Wire

Final Design Review

May 2, 2024

A Partnership of:

US/DOE

India/DAE

Italy/INFN

UK/UKRI-STFC

France/CEA, CNRS/IN2P3

Poland/WUST

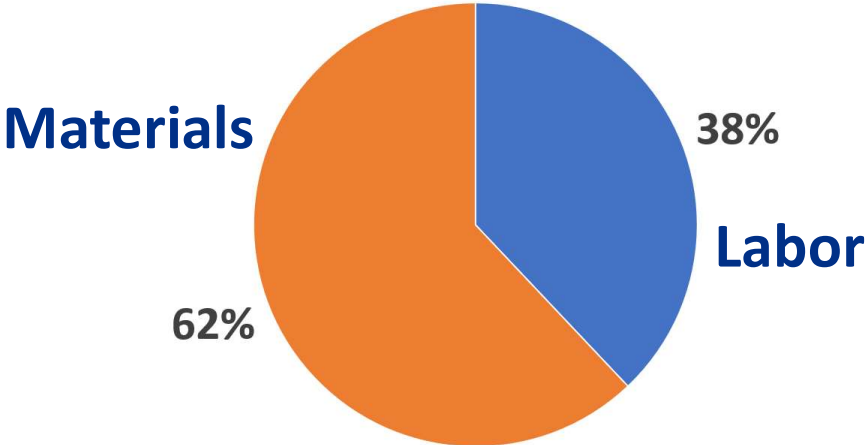


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Cost

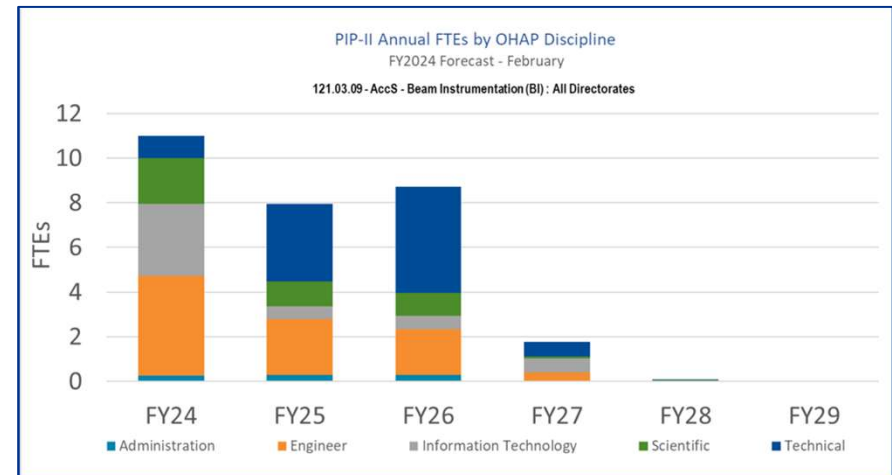
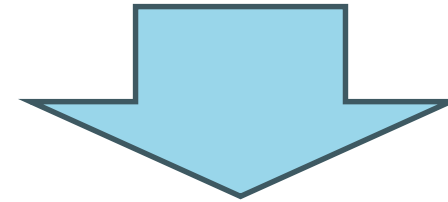
Work Breakdown Structure	Estimate	Direct Hours	Direct M&S	Full Burden + Esc
121.03.09.03.03.01 AccS - BI - PIP-II - BProMS - Transverse Profile Monitor	01 Design	1,224	\$0	\$172,224
	02 Laser Wire FDR	661	\$0	\$92,129
	03 Laserwire Beamline Components	6,296	\$0	\$983,727
	04 Optical Transport Line	872	\$0	\$126,047
	06 DAQ and Controls Hardware	696	\$0	\$128,336
	Labor	9,749	\$0	\$1,502,463
	03 Laserwire Beamline Components	0	\$1,264,275	\$1,611,962
	04 Optical Transport Line	0	\$249,104	\$322,424
	05 Laser System	0	\$245,953	\$258,251
	06 DAQ and Controls Hardware	0	\$203,971	\$264,007
	Material	0	\$1,963,303	\$2,456,643
	Grand Total	9,749	\$1,963,303	\$3,959,106
	FTE	5.5		



Resources

- Laser Wire effort of order 5.5 FTE
- Technical demand rises to build production units
- Resource demand drop with handoff to installation and commissioning with beam
 - Still have BI personnel working under installation and commissioning
- Resources needs identified in P6
 - Actively recruiting new hires
 - Engineering physicist hired in 2023
 - Two electrical engineers hired in 2023
 - Two electrical engineers lost in the past year
 - Part-time technicians coming from College Of DuPage
 - DOE funding agreement
- Coordinating with directorate for additional personnel

Total PIP-II Beam Instrumentation Staffing Plan



Laser Wire Procurement Planning

- Laser Wire Beamline Hardware
 - 1st Units for Vacuum, Optical Components, and Stand
 - Remaining production ordering will occur post-first units assembly and evaluation
 - Orders from a single vendor exceeding \$250K will require Procurement Readiness Review (PRR)
- Bundled Procurements (primarily <\$250K)
 - Optical Transport Line
 - Laser System
 - DAQ and Controls Hardware
- Assembly and Testing will be performed in-house

Summary

- Overall scheme, scope of work is \$4M
- Labor and M&S budget identified, working against this plan
 - Labor estimates will be reassessed to ensure staffing plans remain adequate
- Bulk of cost is M&S
- Work expected to be completed well before needed