

# TPOT Status

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for the TPOT team  
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## Micromegas detectors

- 8/10 modules HV tested in nominal gas at SBU
  - all drift electrodes work (8/8, 100% yield)
  - 59 out of 64 resistive strip channels work (92% yield). They were all working at Saclay. Saclay experts are at BNL this week and the next, to recover the remaining 5 channels
- remaining 2 detectors will be tested this week and the next
- we only need 8 fully working modules out of the available 10 modules

## Mechanics

- TPOT support structure has been fully assembled at BNL, on transportation cart.
- Detector installation on support structure has started. Will happen this week and the next
- Next: cable detectors to patch panel (all parts available at BNL), until end October, system test until end November
- TPOT installation mechanics: Rich Ruggiero is working with Walter Sondheim to finalize the design. lifting fixtures built at MIT/BATES
- Contract between BNL and LANL is signed and money is available at LANL to place remaining orders for installation mechanics

## Others

- All FEE boards for TPOT readily available and tested
- All orders for TPOT detector placed (including HV cables from patch panel to CAEN mainframe)
- Remaining items: remaining TPOT installation mechanics, beyond lifting fixtures, most of it which is common with TPC

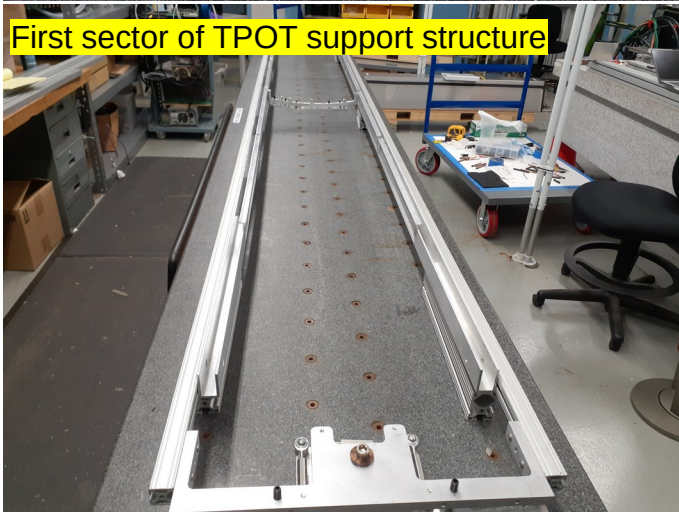
# High level milestones and risk

Milestone	date	Status	risk
Number of TPOT modules produced	Today	10	done
FEA analysis finished and reviewed	18/05/22	FDR happened. more FEA analyses requested. Agreed with TC to move forward	done
First batch of 5 TPOT Modules assembled & tested (Saclay)	07/06/22	6 modules assembled, test ongoing	done
FEE to detector fabricated and tested	07/23/22	cables/boards received on 6/21	done
HV system tested	06/16/22	happened on Week 21 (May 23)	done
Second batch of 5 TPOT modules assembled & tested (Saclay)	07/22/22		done
Characterization of all TPOT modules at SBU	09/09/22	80% done. Two more modules to test, and 5 channels to recover	low
Gas system designed, ES&H reviewed and tested	07/07/22 → ?	designed and ESRC reviewed on 6/21	low
TPOT mechanical support assembled	09/16/22	delayed due to last minute modifications	done
installation of modules on support structures	09/23/22	First 5 modules will be assembled this week. Remaining modules the next, pending validation	low
End of TPOT assembly	10/21/22		low
Installation of TPOT in sPHENIX	early December 2022	also depends on sPHENIX schedule	moderate

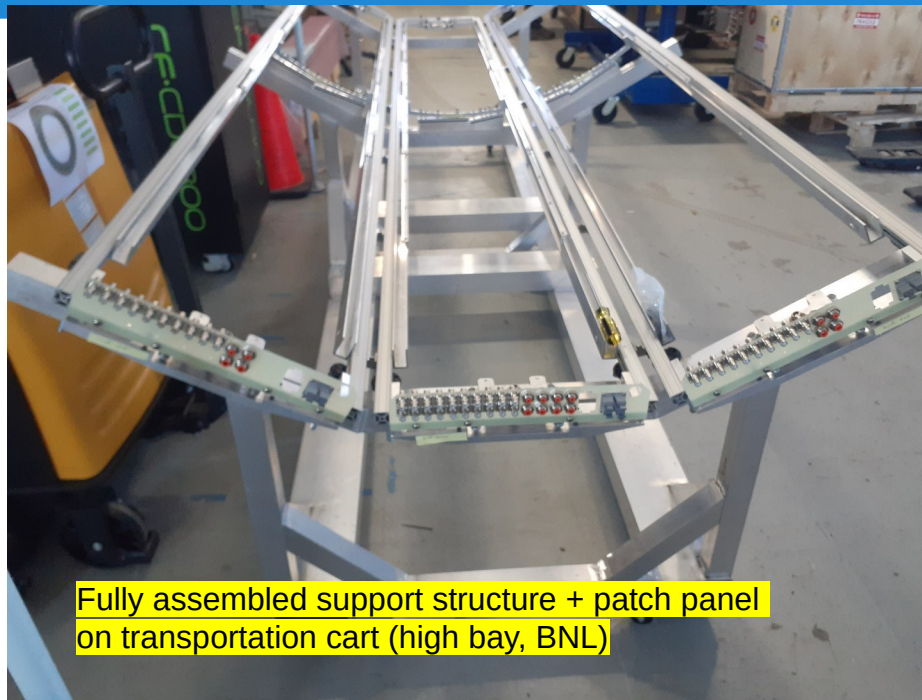
# Pictures



Transportation Cart at BNL



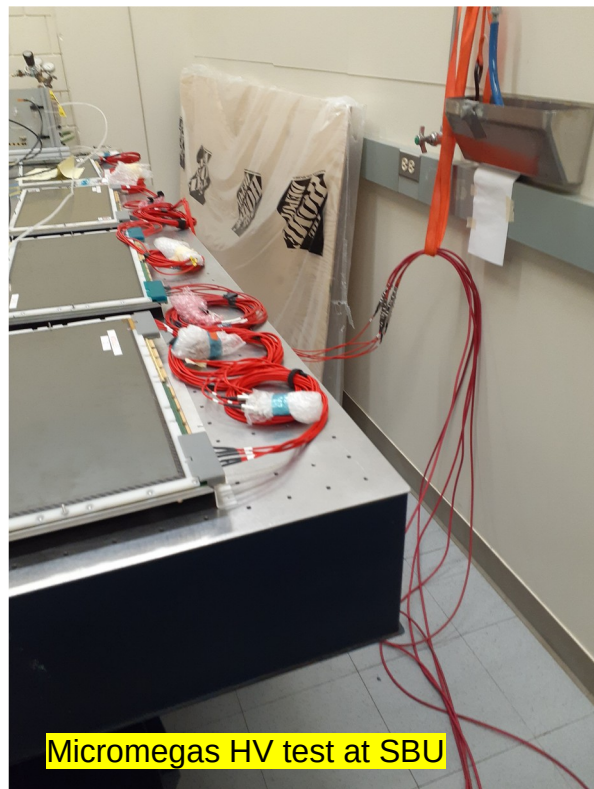
First sector of TPOT support structure



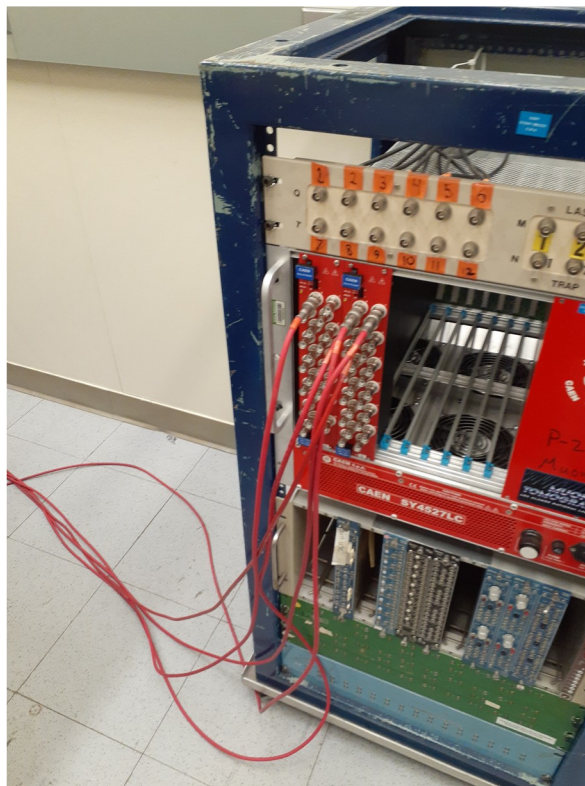
Fully assembled support structure + patch panel on transportation cart (high bay, BNL)



# Pictures (cont.)



Micromegas HV test at SBU



Micromegas modules and FEE ready to be mounted on support structure (high bay, BNL)



# Pictures (cont.)



Two modules being assembled and cabled on the 4-modules sector

