The NPS magnet

Status and Items from the Action list

Bogdan Wojtsekhowski (JLab)

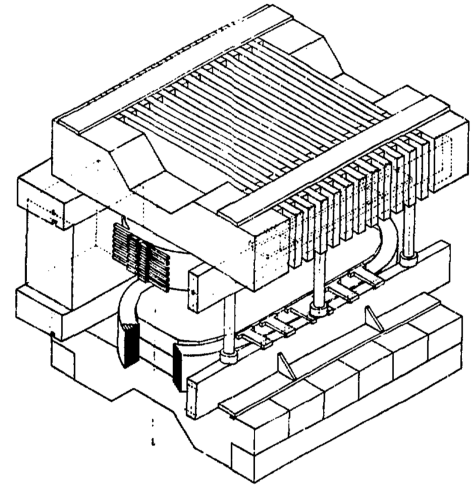
Construction status

Main coil	- ordered by CUA
Yoke	- ordered by ODU
Corrector coils	?

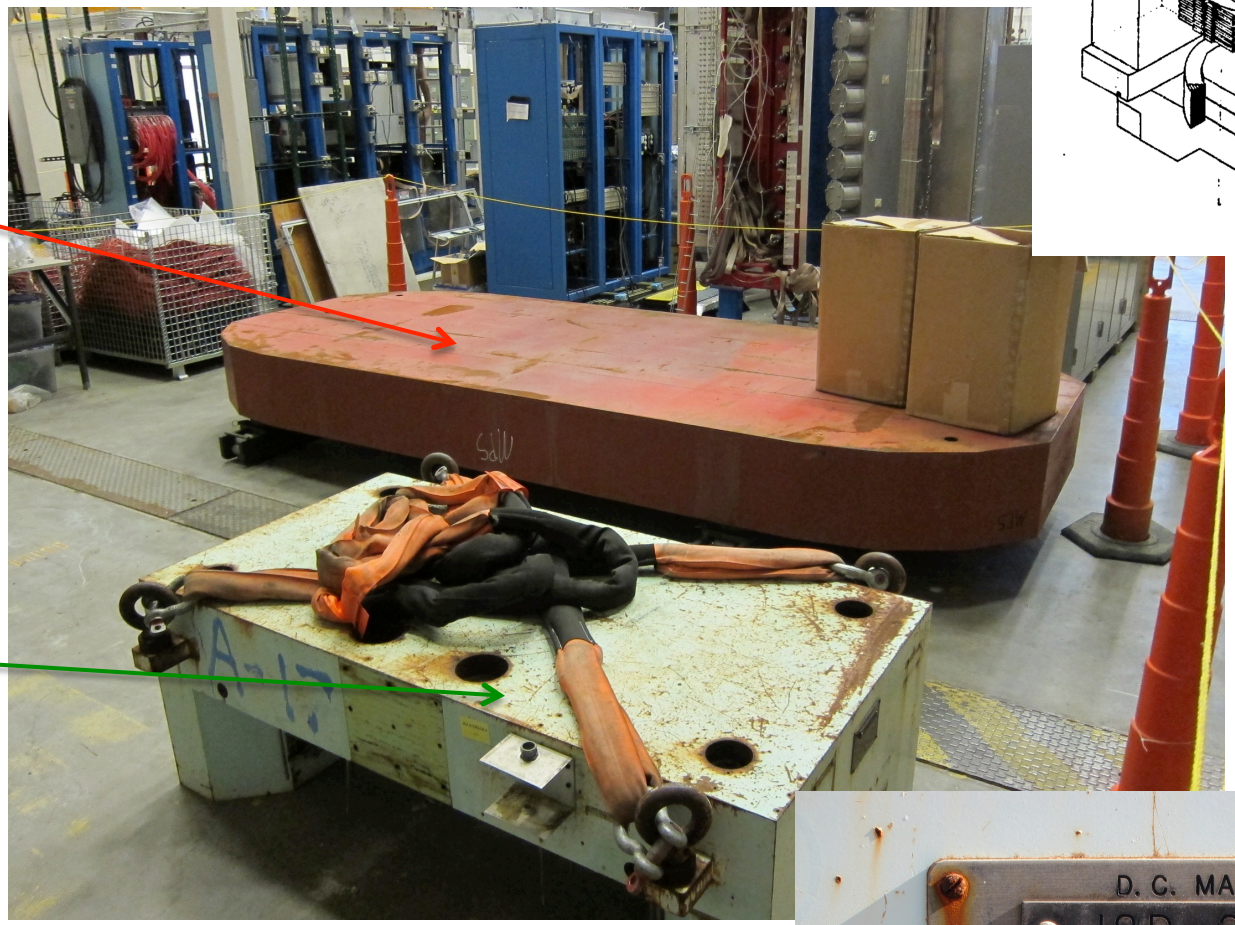
Projected delivery ~ July-August
Assembly at Test Lab

Field mapping requires 1 kA x 100 kW power/cooling

Steel plate is waiting for a truck in the Test Lab

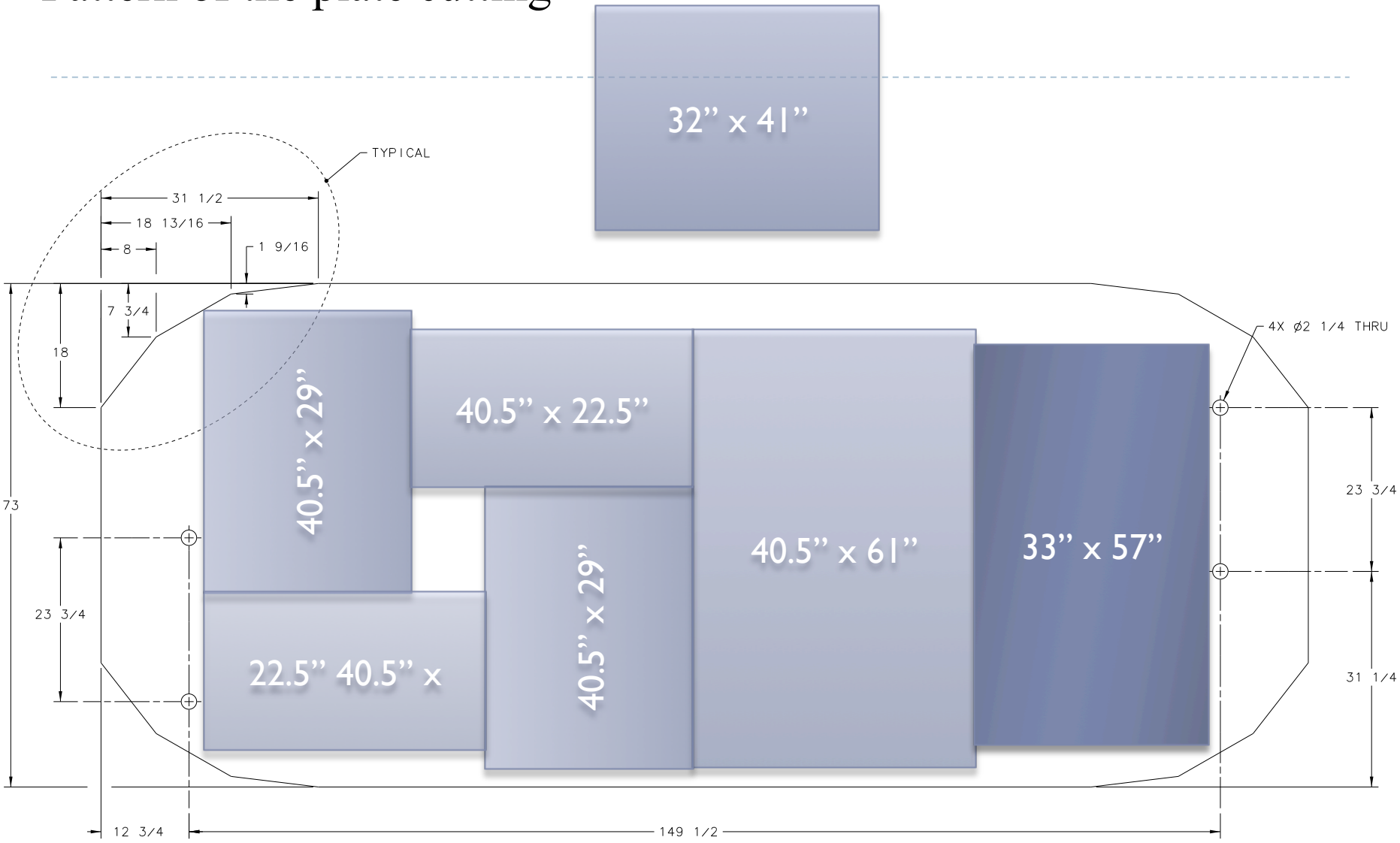


Used at BNL
for a 1000 tons
MPS



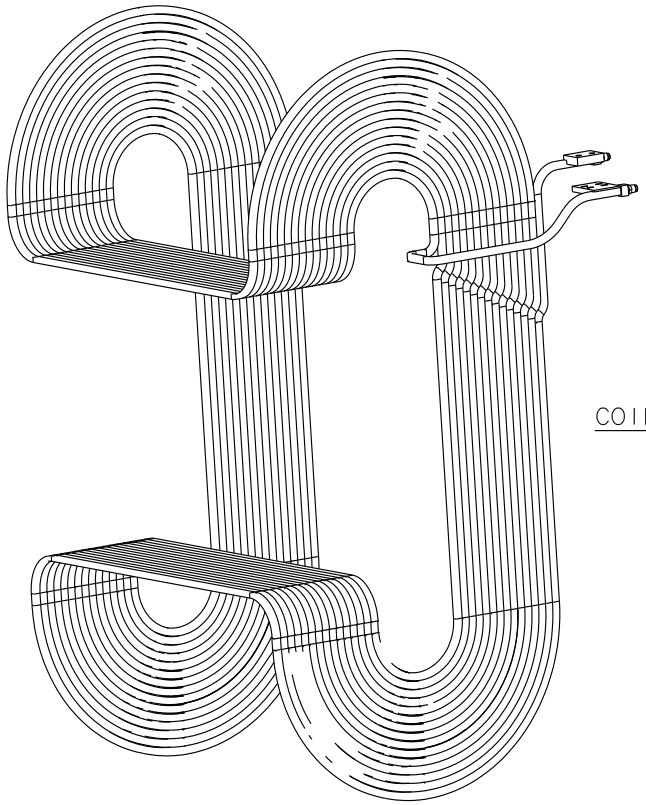
Used at BNL
Princeton
and later at
Los Alamos

Pattern of the plate cutting



Adjustment of the main coil design by Buckley

Our design
Dec. 6, 2016



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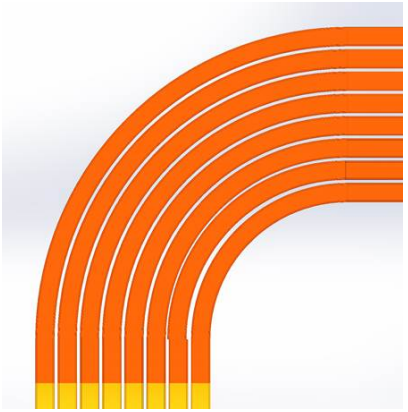

Standard

Cost efficient

Example

NPS 2017 Action Items

- Finalize complete NPS detector frame mechanical design
  - Complete removal in design of last small interferences at small angles
  - Finalize light monitoring and curing systems concepts and integrate with design of NPS frame
  - Finalize integration of temperature-stabilization system at 18° C.

- Finalize designs for fringe field mitigation including the beam dump line, for NPS at small angles, and the HMS snout, for both NPS and HMS at small angles.

- Finalize NPS magnet (steel, main coil, and corrector coil).
  - Determine magnet mapping needs and a plan to complete the required mapping data
  - Map NPS magnet to confirm fringe field estimates.

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- Field on the beam line
- Field in the detector acceptance
- Field in the detector PMT area