

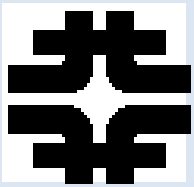
Responding to the main MAP Review



Closeout Recommendation:

“A revised R&D plan addressing the issues described earlier must be submitted by November 30, 2010.”

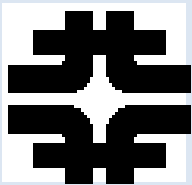
- The timescale constrains the scope of what is being requested.
- During the same period, (i) the FY11 budget & the corresponding plan are being established , and (ii) the tools to enable MAP to manage the FY11 budget and rapidly assess schedule implications resulting from changes to the plan are also being established.
- To mitigate the risk of “screwing up” whilst making these updates, we plan to proceed in a 2 step process:
 - ∅ Update the MAP proposal to respond to the recommendations without changing what is assumed for the Year 2 resources (Year 1 was FY10), and submit the revised proposal by Nov. 30th.
 - ∅ After Nov. 30th (when we have the tools we need), revise the plan to account for the this-year budget reality (we will have to do this every year anyway).



Game Plan



- L1 Managers have been asked to make a first pass, in consultation with their L2 teams, at updating the MAP R&D plans to respond to the review recommendations.
- Working discussions on the updated plans will take place this week.
- Integrate the pieces into a coherent plan next week.
- Present/discuss/finalize the updated plan in a TB meeting, to be scheduled. Thursday Nov. 18th ?
- Aim to finalize the updated MAP proposal document before Thanksgiving (which is 25th Nov.).



RF Systems Recommendations



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2. RF Systems (7/7)

Recommendations:

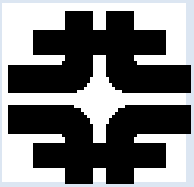
1. Continue R&D on RF systems.
2. Take advantage of ongoing effort on world-wide high gradient R&D
3. By 30-Nov-10, prepare a revised R&D plan that addresses the issues mentioned in the comments and consider the following suggestions:
 - Focus on key issues: 1) High gradient in the presence of B , 2) absorber filled cavities and their issues (pressure, “beam loading”), 3) large synchrotron tune RCS.
 - To allow prioritization of the test program for the next few years, rough cost studies of the various scenarios are encouraged. They will also help the down selection.
 - The testing program should be intensified: do more tests of the existing 201 MHz cavity and build more of the 805 MHz cavities to improve statistics
 - Delay down-selection: The present plan calls for an RF system down-selection by 2012, which seems too early; we recommend to postpone this, tied to milestones rather than calendar dates.

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Beam Physics and Simulation Recommendations



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3. Beam Physics and Simulation

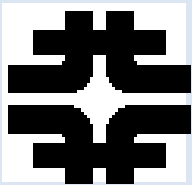
3.3 Recommendation: Provide a revised R&D Program that

- Better streamlines and prioritizes the tasks according to overall goals, in particular,
 - Focusing on the new issues in Muon system, ionization cooling, huge beam loss, radiation damage, plasma creation, magnetic loss of accelerating gradient, and other intense beam effects...
 - Not trying to design a Muon collider.
- Validates simulation codes using experimental results from MICE as earlier as possible, so that they can be confidently used in the design process
- Estimates intense beam, plasma, other collective effects, and if they are possibly important, establishes a simulation program for helping to understand them.
- Includes hosting a workshop to engage the accelerator community to solve these tough problems.

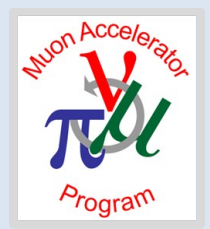
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Magnet Systems Recommendations



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4. Magnet Systems Recommendations

Recommendations:

1. Delivery of the magnet systems for MICE is a near-term and overdue commitment. Articulate to DOE management a detailed plan to deliver on this commitment by September 30, 2010.
2. Prioritize hardware activities on high-field solenoids to demonstrate that the most critical technical issues can be solved. Rely upon the large-scope efforts at NHMFL and VHFSMC for development of core technology. Focus MAP R&D upon those elements of the technology that are particular to MAP.
3. Establish intermediate technical milestones that accomplish the most important or significant tasks pertinent to strategic down-selects.

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