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:

  Ø 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.

  Ø 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.).
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.
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.
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.