

**Recommendations from the March 2016 P2MAC  
iTrack Review ID # 45006**

#	Committee Recommendation	Assigned	Status
R1	Investigate/estimate the uncontrolled variations of the linac beam energy.	Lebedev	Two studies were completed: 1. Study phase and voltage stability of a single cavity in the beam absence 2. Study limits of the RF voltage stabilization with beam-based feedback system
R2	Optimize the pulsed current and structure for linac operating in pulsed mode.	Lebedev	A superconducting linac based on 5 mA current is incorporated into the PIP-II Analysis of Alternatives.
R3	Prioritize the design for the Booster injection girder and the whole injection scheme to demonstrate the feasibility of the long injection time needed with a 2 mA linac beam.	Lebedev	Work to finalize the Booster injection concept, including concepts for all major components, has not proceeded due to lack of resources.
R4	Pursue simulation and code development for RF gymnastics in the rings I collaboration with other laboratories.	Lebedev	Five steps have been identified: 1. Test algorithms for computations (done) 2. Write manual describing user interfaces for computations (in process) 3. Perform coding and testing (in process) 4. Establish collaboration with CERN (done) 5. Write user manual (in process) While there has been significant progress, this work will not be completed until early 2018.
R5	Continue to address the identified R&D areas but further prioritize in case of resource challenges.	Derwent	We have adjusted priorities based on funding available for FY17. Adjusted priorities were presented to DOE at November 2016 Review.
R6	Identify the risk of single source dependencies and	Garcia	The single source dependencies and their mitigation

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	develop mitigation plans were appropriate.		plans are combined with the development of the risk registry which already includes a generic risk for the cost associated with schedule delay.
R7	Project management and system engineering practice have to be standardized throughout the PIP-II project (Progress report, Quality Assurance, Engineering documentation validation and storage). All contributions should be monitored in a similar fashion by various review and advisory committees.	Mitchell	Project team is in place. All engineering documentation is being managed within Teamcenter. All non-revision controlled documentation is being managed within SharePoint. All project reports and scientific documents are being managed in Docdb. Collaborators have access to Teamcenter and SharePoint. Guidelines and requirements for document management exist in Teamcenter. Refer to Teamcenter item ED0001224 for a complete e-BOM structure of project documentation.
R8	Resonance control of the SRF cavities is a crucial subject which deserves additional efforts. Allocating more time for testing with cold cavities is highly recommended.	Holmes	A protocol was developed for providing adequate time for resonance control experiments interspersed with qualification of SSR1 dressed cavities at STC. Significant time was devoted to resonance testing in the summer/fall of 2016. Feedback and feedforward algorithms were developed that demonstrate performance within a factor of 2 of PIP-II requirements. Results are summarized in an invited talk at the Linac2016 Conference, "SRF Cavity Resonance Control for Future Linear Accelerators", W. Schappert (to be published) and will be described at the spring 2017 P2MAC meeting.
R9	For the solid state amplifiers, place order early to reach nominal performance in time.	Derwent	Solid state amplifiers are being provided by India/DAE. We are finalized the TRS. A circulator vendor has been identified with prototype passing all requirements. Will pursue contracts when funding profile is favorable.