

# Working Groups Charge

Cavity/Cryomodule/Cryogenics

LLRF/Timing/Synchronization/Diagnostics

SPX Design Study Mini-Workshop

July 18-20, 2011

# Working Groups Charge

1. Review and evaluate progress since the July 2010 meeting. Are R&D elements on track for SPX0 implementation? Have high-risk technical issues been adequately addressed to go forward with SPX0 systems design and fabrication?
2. Discuss and identify remaining R&D items. Develop a list of R&D priorities to address critical issues consistent with the SPX0 installation in September 2013.
3. To what degree can the technical systems performance be relaxed to produce realistic engineering specs? Discuss pros and cons and their impact on SPX0 and SPX expected performance.
4. Are the interfaces between cavity system, LLRF, Diagnostics and Timing and Synchronization adequately defined?
5. Identify all sources of errors and discuss the overall system design strategy with the necessary system engineering and integration plan to manage errors.
6. Identify a minimum set of diagnostics ( RF, beam, and x-ray/optical ) that are needed for SPX0, including synchronization to user laser.
7. Are there adequate engineering design and performance margins for each system?

