Study Leaders' Decisions

• It is late in the game
  — we must stay the course

• We prefer to be in the position of aiming for optimized performance and feasibility
  — positioning ourselves such that further studies and R&D give us good likelihood of achieving comparable performance and reduced cost is okay
    ○ this is not a cost-optimized design

• Remember that initial write-ups are due in a few weeks
Study Leaders’ Decisions

• Feasibility Study-II baseline
  — mini-cool will remain as LH₂
    o alternative of solid absorber, along with higher solenoidal field to compensate for its effects, will be mentioned in Appendix
  — phase rotation using three induction linacs will be maintained
    o possibility to eliminate IL2 and use two independent pulsers to drive the remaining core will be mentioned in Appendix
  — target solenoid field will remain 20 T
    o baseline is hollow-conductor insert; “plug-compatible” Bitter magnet option will be mentioned in Appendix (if work is done)
  — double-flip cooling channel will be discussed in Appendix
    o “differential” costing will be done if there is time
  — near detector should be located on the production straight

• We do not intend the Appendix to be longer than the document itself!
Areas Needing Attention

- Decide on target environment (vacuum, gas) [Spampinato, Ravn, McDonald]
- Develop beam dump concept [Spampinato, Ravn, McDonald]
- Design target solenoid and hollow-conductor insert [Weggel, Pearson]
- Evaluate heat load into magnets in decay channel and phase rotation section [Kirk, Mokhov]
- Design special magnets in flux reversal section [Green]
- Evaluate quench protection scheme and need for “firebreak” magnets [Green]
- Resolve spatial constraints in cooling channel layout [Black, Green, Hseuh, Rimmer]
- Understand Be window prestress [Rimmer]
- Design matching section between cooling channel and preacceleration linac [Palmer, Lebedev, Kim]
Areas Needing Attention

• Generate list of possible fault scenarios, and means to address them [Norem, Lebedev]

• Define foils and/or valves for vacuum isolation [Lebedev, Hseuh, Parker, Zisman]

• Define approaches to measure polarization and beam divergence [Norem, O'Brien, Geer]

• Evaluate multipole content of storage ring dipole and assess dynamic aperture [Parker, Makino]

• Evaluate need for RF system in storage ring [Parker, O'Brien, Geer, Ozaki]
Summary

• Feasibility Study-II work has progressed very well

• Now we need to focus on:
  — completing remaining technical work
  — producing initial write-ups by February 16 (see Gallardo talk)
  — evaluating costs of all systems
  — defining phased implementation approach