



Front End - Decision Point



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Front End Decision Point



- Getting close to the point where we have to make a decision on which front end lattice to take forward to engineering design
- Options are:
 - FS2A lattice i.e. baseline
 - Short bunch lattice
 - Shielded RF lattice
 - HP gaseous insulated lattice
 - High B-field lattice
 - Not too late for others!
- To make a decision, need an idea of:
 - Cost
 - Performance
 - Technical risk
- Hope to make a decision by Fermilab IDS meeting
 - 2 months away!
 - Great to come with a consensus by then


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Cost

- Too early for costing
- But we can at least make an inventory of required hardware
- RF cavities
 - frequencies
 - voltages
- Coils
 - physical size
 - current densities
- Absorbers for cooling
- Other stuff
 - e.g. High pressure gas equipment



Performance



- Main performance criterion is number mu per proton in 30 mm acceptance
 - Also emittances
- What about shorter bunch train?
 - Need feedback from storage rings to assess how useful this is
- Made an area to store lattices, beam files, etc
 - http://www.astec.ac.uk/groups/beams/users/rogers/Front_End/Beams_and_Lattices/

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Technical risk

- How to assess technical risk?
 - RF cavities in B-fields are still an unknown
 - High pressure gas insulated cavities?
 - General physical robustness of lattices?