

# Argonne-Fermilab Collaboration on Project X (Accelerator)

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*[projectx.fnal.gov](http://projectx.fnal.gov)*

Argonne-Fermilab Collaboration Meeting  
November 27, 2007

# Outline

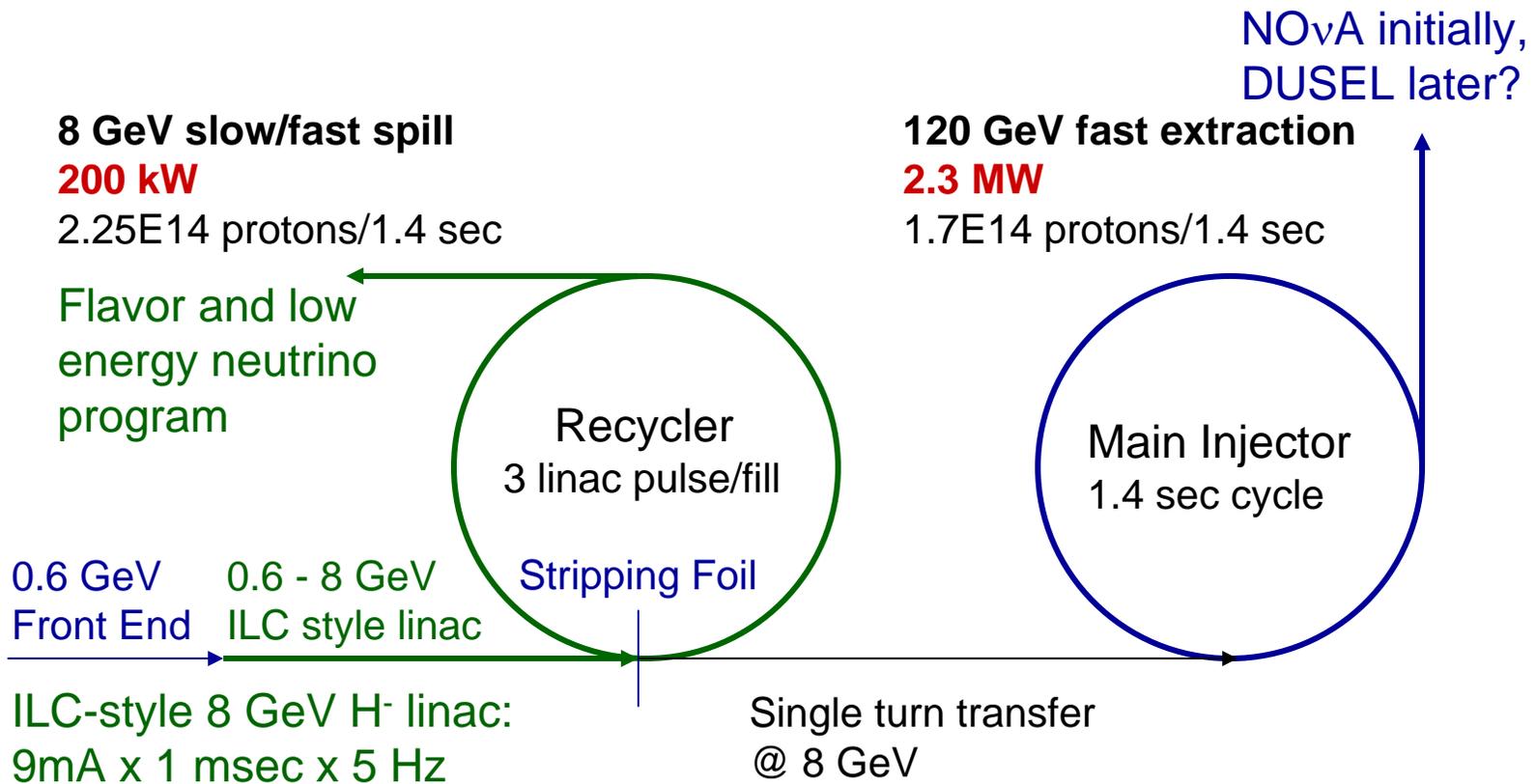


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- Project X Program – Steve H.
    - What is Project X?
    - November 12-13 Workshop
    - Areas of collaboration
    - Modes of collaboration
  
  - High Intensity Neutrino Source (HINS) Program – Giorgio A.
    - Goals of the program
    - Areas of collaboration
    - Relationship to Project X

# What is Project X?



Project X is a proton facility that would support a world-leading program in neutrinos & rare decays. **Goal: CD-1 level design in 2010**



# Project X

## November 12-13 Workshop

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- Goals:
  - Discuss accelerator design concepts and issues;
  - Identify capabilities/interests outside Fermilab that could be brought to bear within the design/R&D phase.
- 174 registrants
  - 79 from 25 outside institutions including international (UK, Italy, India)
- Next steps
  - Meeting of the chairs from the 5 breakout groups (right now)
  - Summary report to be issued including compendium of expressions of interest
  - Fermilab to propose an organizational structure (for the design phase)
  - Fermilab request to DOE for R&D funds (starting FY09)
  - HEPAP/P5 review and make recommendation on R&D funding (spring)

# Project X

## Areas of Collaboration

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- We (Fermilab) do not have resources (people) to undertake Project X R&D and design on our own, and fulfill our other commitments.
  - ⇒ **We need collaborators on R&D, design(, and construction when/if this goes ahead)**
- Long lists generated at the workshop covering the entire facility.
- Possible areas of ANL collaboration:
  - Linac beam dynamics simulations and design optimization
  - Low energy linac accelerating structures (spoke resonators)
  - Cavity processing (low and high energy linac)
  - Controls system
  - Electron source
  - ⇒ **Many of these build on existing collaboration on HINS (Giorgio)**

# Project X

## Modes of Collaboration

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- Project X Collaboration
    - Concept is a Project X Collaboration MOU establishing basic goals and means of organizing work
      - Covering the design/R&D phase
    - Implement specific work through a series of bi-lateral MOUs between Fermilab and the collaborating institutions
    - Collaboration Council to assist in providing coordination
  - ANL-FNAL collaboration
    - Umbrella MOU exists (signed on Illinois Accelerator Day)
      - Addenda cover the collaboration on HINS
      - Expansion into new areas to be covered by further addenda
      - (It would be great if this could be kick started by LDRD support)
    - Joint working group exists (HINS-AEBL)
    - Status updates at the semi-annual ANL-FNAL meeting
    - FY08 funding will be via the HINS program
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