120 GeV Target
Summary – Workshop # 1

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Challenges OVERVIEW

Driven by 120 GeV/170 TP-per-spill

- **Short Term: 170 TPs/2us-spill (materials tolerate that ?)**
- **Long Term: Irradiation damage, accelerated corrosion/oxidation, life limitation**
- **Windows are also targets**
- **Magnetic horn (issues from increased power)**
- **Activation & handling**
- **Upgrading an existing 400 kW facility – Constraints**

Presentations - Discussions

- **Engineering Issues for the NuMi Beamline at 2 MW**
  - **Put requirements into perspective as compared to other machines (operational or in dream state)**
  - **Project-X parameters ← → energy density is crucial parameter**
  - **Shock/pressure waves limiting life**
  - **Project X and the NuMI operating experience (corrosion/oxidation, handling activated components, etc). Look into ceramics, coatings/plating, etc.**
  - **Remote handling at 2.3 MW**
  - **Shielding requirements at this elevated power**

- **Activation and Remote Handling**
  - **Remote handling experience from other facilities**

Presentations – Discussions (cont.)

- **IHEP 2 Megawatt Target Design**
  - **similarities with Project-X**
  - **graphite-based target**
  - **optimization fro neutrino yield**

- **Liquids vs. Solid Targets**
  - **pros and cons**

SUMMARY

Exchange of target ideas to continue with

Radiation damage and its limiting effects – R&D and lessons

Targets for muon colliders – Lessons from experimental studies