

# Project X with Rapid Cycling and Dual Storage Superconducting Synchrotrons

Henryk Piekarz (Fermilab)

(Submitted on 7 May 2012)

Investigation of neutrino oscillations and rare meson decays are main physics goals of Project X. The successful physics outcome relies on the feasibility of high-intensity neutrino and meson ( $K^+$  and  $\mu$ ) beams. In order to meet this goal we propose accelerator system dominated by the synchrotrons (Option A) as a technologically easier and significantly more cost-effective alternative to the accelerator system dominated by the linear accelerators (Option B). The synchrotron-based accelerator system and its main components are outlined and the expected proton beam power for the neutrino and meson beams production is presented and discussed.

Comments: 8 pp

Subjects: **Accelerator Physics (physics.acc-ph)**

Report number: FERMILAB-TM-2550-APC

Cite as: [arXiv:1205.1527](https://arxiv.org/abs/1205.1527) [physics.acc-ph]

(or [arXiv:1205.1527v1](https://arxiv.org/abs/1205.1527v1) [physics.acc-ph] for this version)

## Submission history

From: Piekarz, Henryk [[view email](#)] [via ROB proxy]

[v1] Mon, 7 May 2012 20:14:37 GMT (439kb)

[Which authors of this paper are endorsers?](#)

## Download:

- [PDF only](#)

Current browse context:

physics.acc-ph

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1205](#)

Change to browse by:

[physics](#)

## References & Citations

- [INSPIRE HEP](#)  
([refers to](#) | [cited by](#))
- [NASA ADS](#)

## Bookmark([what is this?](#))



Science  
WISE