Timeline for DarkLight

Peter Fisher

Sept. 21, 2010

Table of contents

Prespective

DarkLight

- is a challenging experiment
- will cost more than $2M
- will take at least five years to construct and operate

We will look where no one else has with high precision.

Immediate tasks

Immediate: determine candidate locations at the FEL IR or UV branches. Start today.

Near term (next three months)

- Establish beam parameters from FEL
- Plan program of calculations and measurements at the candidate locations to determine halos, backgrounds from the target and the emittance increase from the target
- Develop detector concept and first simulation

Goal: Scientific proposal to PAC37 in Dec. 2010

Medium term (three to six months)

- Develop target design and establish a luminosity baseline based on measurements
- Establish a detector baseline design and assess performance, determine running time needed for 1/ab.
- Determine backgrounds and mitigation strategy.
- Develop first version of commissioning and run plan
- Develop first cost estimate of the project.

Long term (past six months)

- Iterate target and detector design
- Develop full simulation for a final proposal
- Engineering design for proposal
- Final cost estimate