

Station 3 drift chambers

at UIUC/FNAL

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Budget situation

- Grant-in-Aid for Scientific Research
 - We had submitted several budget requests
 - Second largest budget request (by Shibata-san) was approved
 - Roughly speaking, a half of the cost of fabrication of Station 3 drift chamber can be covered with this budget
 - At mid-May, we will know whether our largest budget request is approved or not
 - Other smaller-budget requests were not approved
- US-Japan Science-Technology Cooperation Program
 - We had requested cost of travel and detector shipping
 - It was not approved
- Other sources
 - Miyachi-san has submitted a request to Yamada Science Foundation
 - travel and readout electronics
 - US-Japan bilateral cooperation will be open for application sometime in summer
 - (mainly for travel cost)

Design and schedule

- Station 3 chamber will be constructed in Japan
 - with feed-through (no winding machine)
- Two options
 - Depending on technical difficulty, available money, etc.
 - Option-1: one large chamber
 - 3.2m x 2m
 - more difficult to construct
 - wire stability issue (etc.), wire support may be necessary
 - Option-2: two chambers
 - 1.6m x 2m x 2
 - more readout electronics necessary
 - may require larger cell size to decrease # of readout channels
 - flexible configuration possible
 - e.g. gap at $y=0$ to reduce background rate, etc.

Design and schedule

- Very preliminary cost estimate
 - JPY 45,000,000 for option-1 (one large chamber)
 - difficult to construct with currently available money
- Station 3 chamber review at FNAL
 - review committee
 - Bill Cooper (FNAL, chair), Dave Pushka (FNAL), Karen Kephart (FNAL)
 - request to review
 - ability of the chamber to meet the rate and resolution requirements for E-906/Drell-Yan
 - geometry of the station and its acceptance for Drell-Yan events
 - mechanical properties of the chambers
 - electrostatic properties of the chambers
 - construction plans for the chambers
 - two options will be discussed

Design and schedule

- Updated cost estimate for two options after the review
 - option-1 possible?
- Construction schedule
 - final design review in May or June
 - construction from late summer to winter (Feb. 2010?)
 - in option-2 (two-chamber option)
 - can we construct only one chamber first, and use one new chamber + old station-2 chamber (1.7m x 1.8m) at the beginning of the beam time?
 - number of readout channels with available readout electronics?