

TOFW

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Summary

- **You can't always get what you want, but sometimes you find, you get what you need**
- **CDR design**
- **Present design**
- **Extensions for the future**

CDR Design

- **Detector element**
 - Slat with curved light pipes and pmt on each end
 - Scintillator size $0.6 \times 0.6 \times 22$. Cm³
 - Pmt was either 1cm or 1.9 cm
- **TOF wall parameters**
 - Slats were 400 cm from vertex (210 cm from D5 center)
 - Approx. 240 slats before reduction
 - Desired tof resolution was 75 ps

Actual design

- **Slats made with larger dimensions**
 - Could not produce working prototype with CDR parameters
 - Had existing slats from E866 tof wall
 - Tested a prototype which exceeded desired parameters
- **Slat parameters**
 - 1.27x1.3x22 cm³
 - Distance to vertex is 435 cm (245 cm from D5 center)

Status

- **4 panels of 20 slats ready for pmts to be mounted**
- **Parts for 4 straight slats exist**
- **Frame is installed**
- **Electronics installed**
- **Cabling nearly complete**
- **Start run with 84 slats (4x20+4x1)**
- **Slats will be placed on the side with less background**

Future extensions

- **will place several slats in the area with the highest background and track density**
- **With measured background and particle density will determine segmentation need for upgrade**
- **Implementation of upgrade takes 4-5 months once design determined**
- **Will test several 1 pmt element designs**
 - **Present slat cut in half**
 - **Flashlight design**

Conclusions

- **At the start of the run will have nearly full coverage for one polarity of particle**
- **Additional coverage may be added during the run**
- **Information for extensions will be obtained**
- **Several elements for upgrade will be tested**
- **Present setup allows for future changes**