

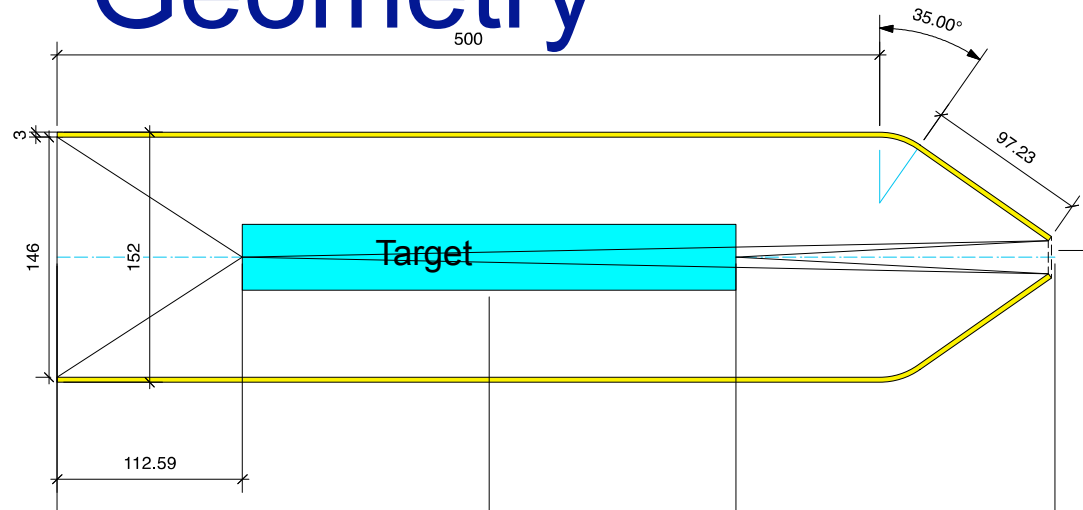
# Start Counter Update

W. U. Boeglin

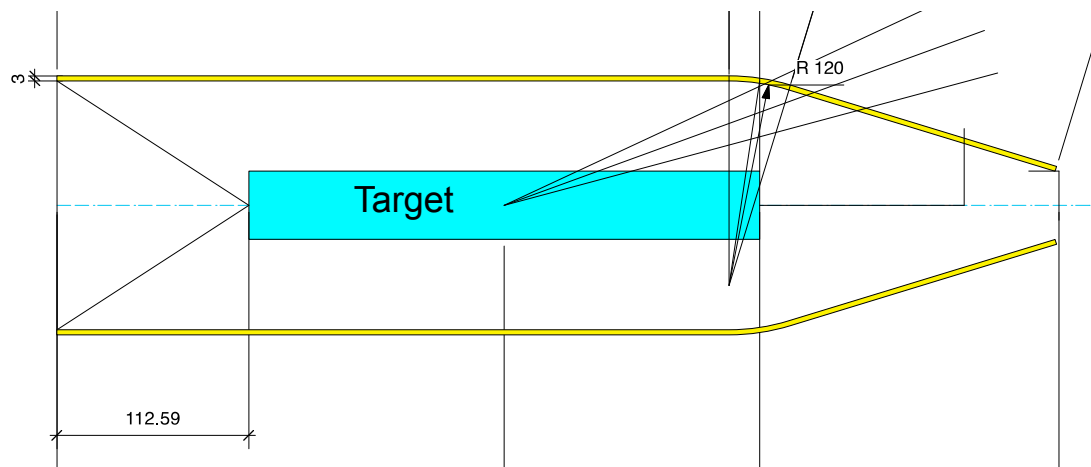
- Geometry change
- Measurements on EJ-200 scintillator bars

# Geometry

Old Geometry:



New Geometry:

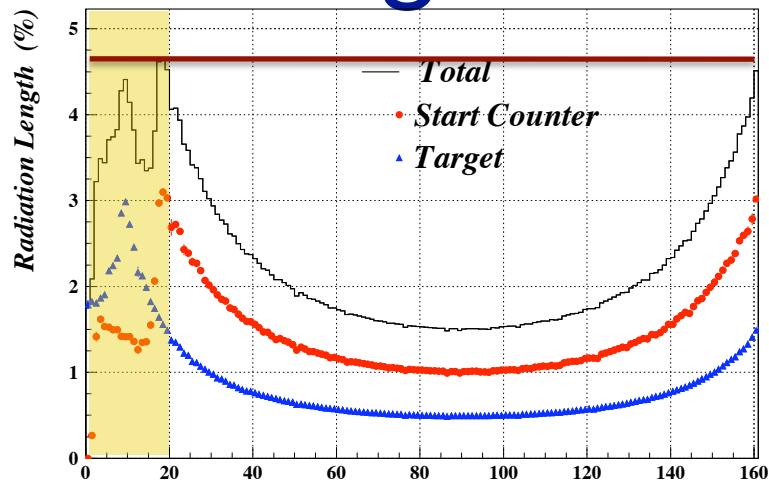


1/27/10

Collaboration Meeting Jan 2010  
Start Counter

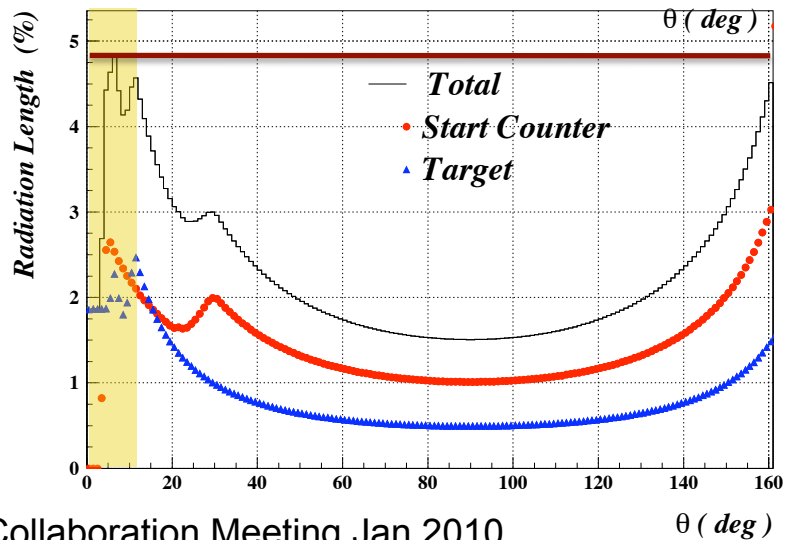
# Radiation Length Scan

Old geometry



New geometry

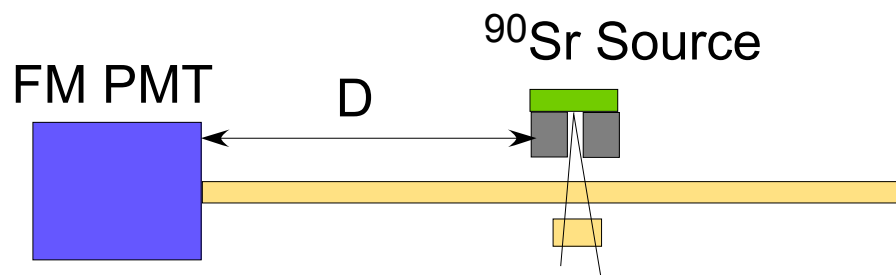
Rad. length at  $20^\circ$   
reduced by a  
factor  $\sim 1.5$



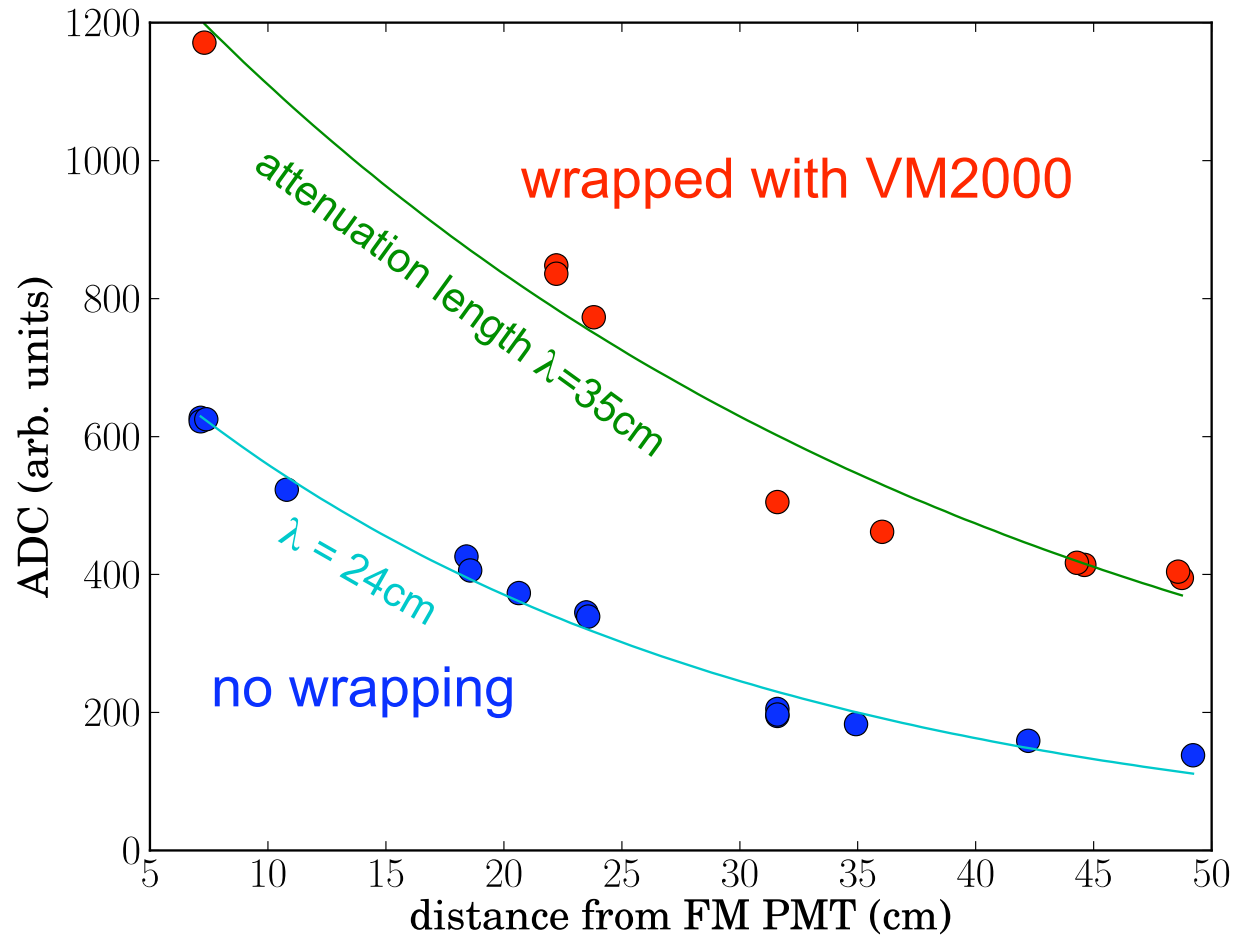
# EJ-200 Scintillator Bar

- Dimensions: 10 mm x 600 mm: thicknesses: 2, 3, 5 mm
- Measurements on 2 and 3 mm detector
- with and without wrapping mounted in dark box
- FMPMT touches end of scintillator
- Used  $^{90}\text{Sr}$  source

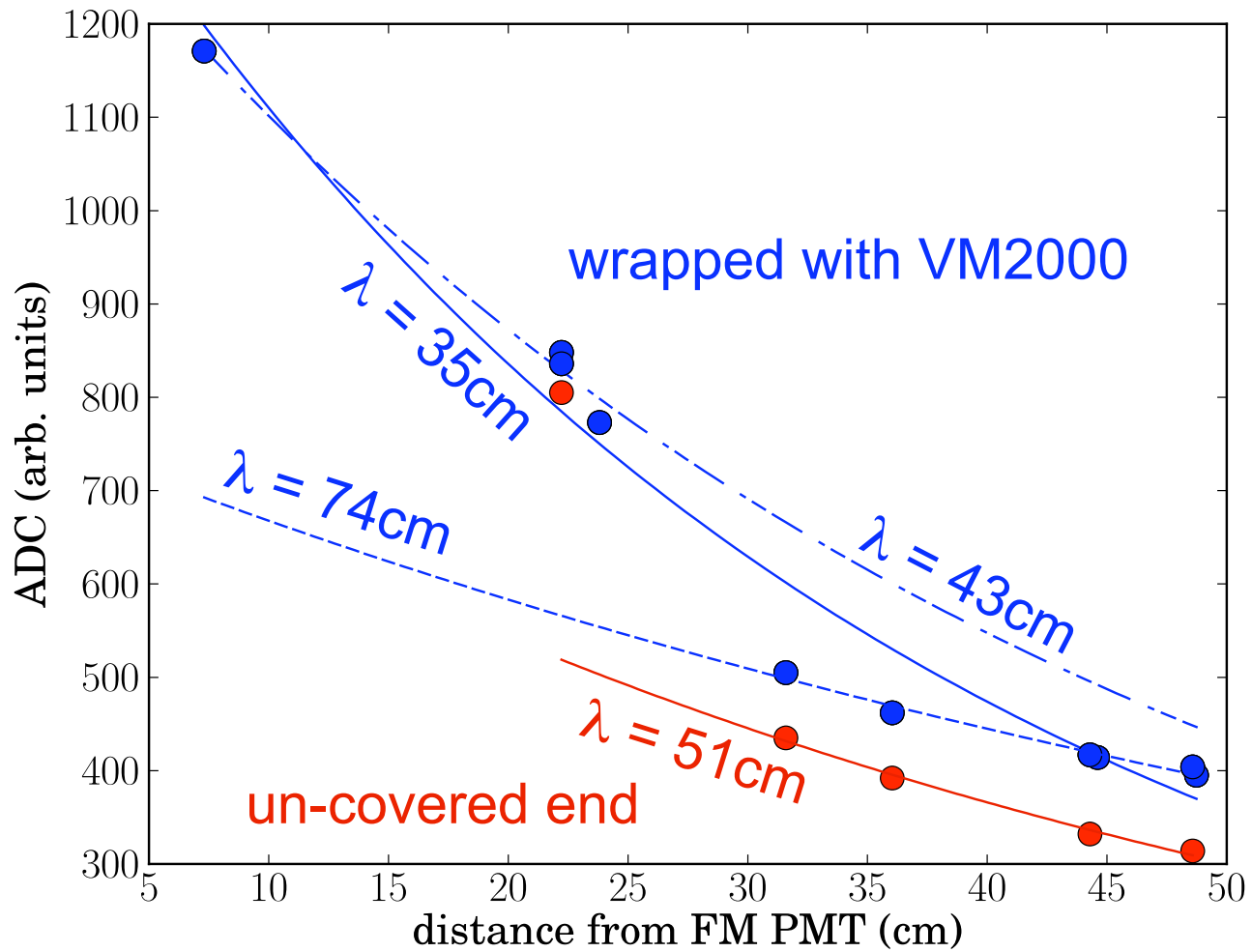
Light output measurements:



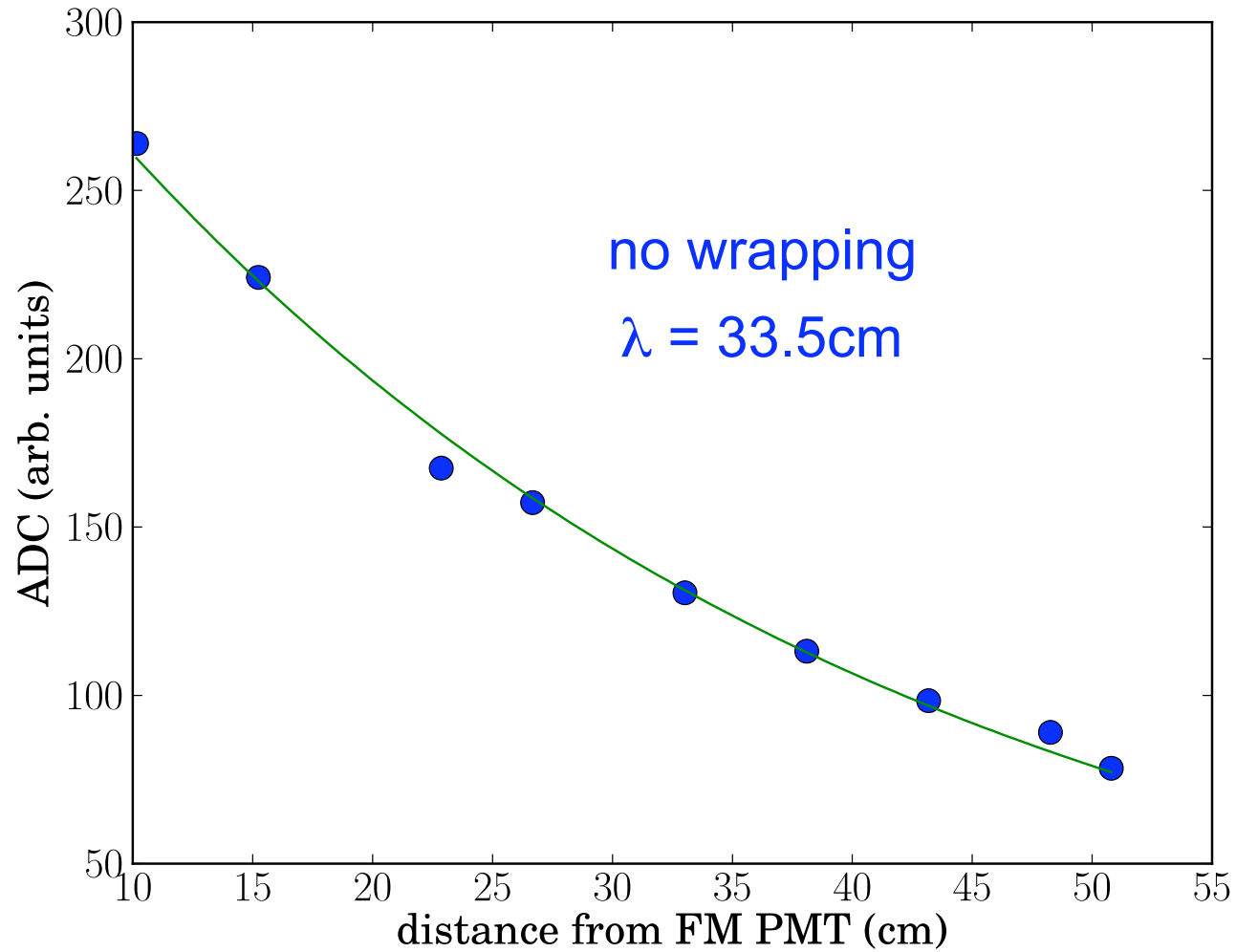
# 3mm



# 3 mm



# 2 mm



# Summary

- $\sigma \sim 0.35$  ns for good bunch identification seem to be feasible
- more studies to understand the 3mm scintillator
- 5 mm measurements under way
- wrapping material VM2000 greatly increases light output
- availability issues, alternative materials
- test with new SiPM and small light guide for optimal coupling