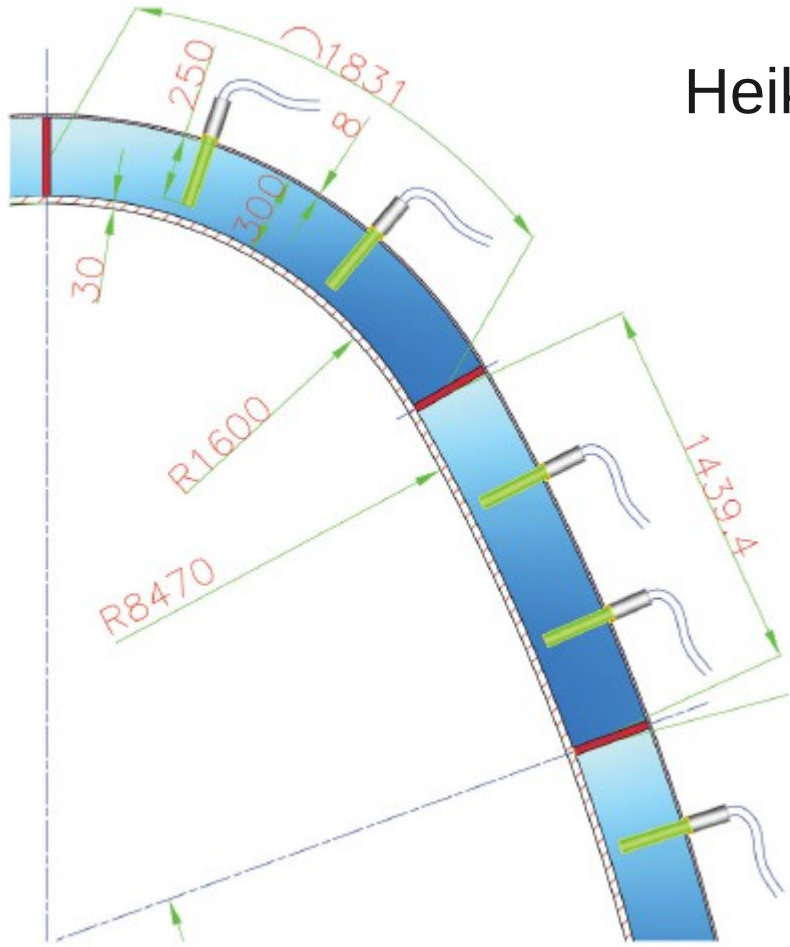


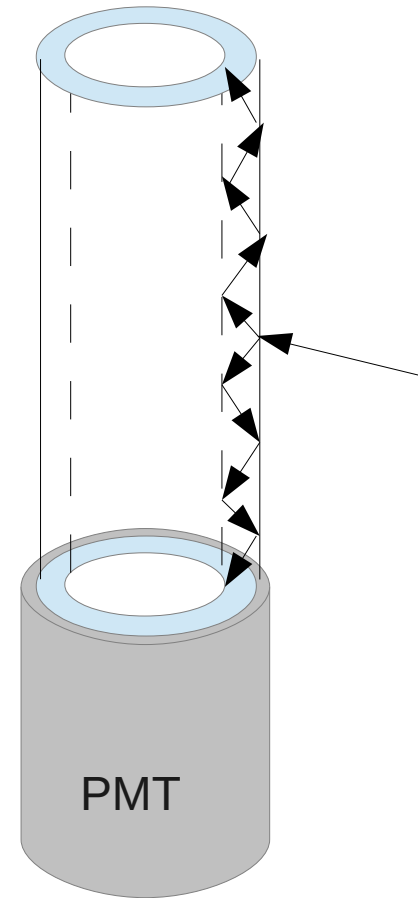
Status of the Surround Background Tagger

Heiko Lacker, HU Berlin

07.10.2015



Mini-WOM
(Wavelength-shifting
Optical Module)



- 1) Not much news on R&D side since July meeting
- 2) Tentative R&D time schedule for present design
- 3) Test beam measurements in 2016 and manpower issues

Tentative R&D time schedule for present design

1/16 2/16 3/16 4/16 1/17 2/17 3/17 4/17 1/18 2/18

1) Development of 30 x 8 cm² WOM including an adiabatic light guide viewed by a small area PMT (HUB)

x x x x

2) Study alternative photosensor, e.g. a large-area PMT (MEPhi, HUB)

x x x x

3) Tests of WOMs and alternatives in a small-scale LS testbox (HUB, MEPHI)

x x x

4) Production of high-quality LS for small- & large-scale test structures (MEPhi)

x x x x

5) Construction of a BG tagger section with an internal reflection paint and N₂ flushing (MEPhi, HUB)

x x x x x x x

6) Optimisation: LS section, WOM placement

x x x x x x

7) Development of the FE/readout electronics suite (MEPhi)

x x x x x x x x

8) Conceptual and technical design of the LS filling and oxygen purging infrastructure (MEPhi)

x x x x x

9) Cosmic muons test of BG tagger section (all)

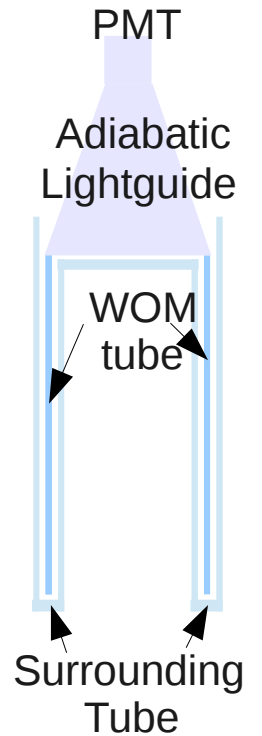
x x x

10) Tests with SPS test beams (all)

x x x

11) TDR (all)

x x x



Test beam measurements 2016 and manpower issues

* Testbeam measurements with small LS testbox with large WOM + adiabatic lightguide and alternative large area PMT might be useful versus end of 2016

IF there is sufficient manpower for

a) preparing and performing the testbeam measurement

b) analysing the data

c) developing a corresponding MC simulation

* HU Berlin: Currently, no new bachelor/master students
Since Oct. 2015: one student (40 hours per month contract)

* Will know only by beginning of 2016 whether DFG application for generic LS+WOM R&D will be successful and amount of funding in case of success

* R&D manpower for Surround BG Tagger urgently needed in all areas!