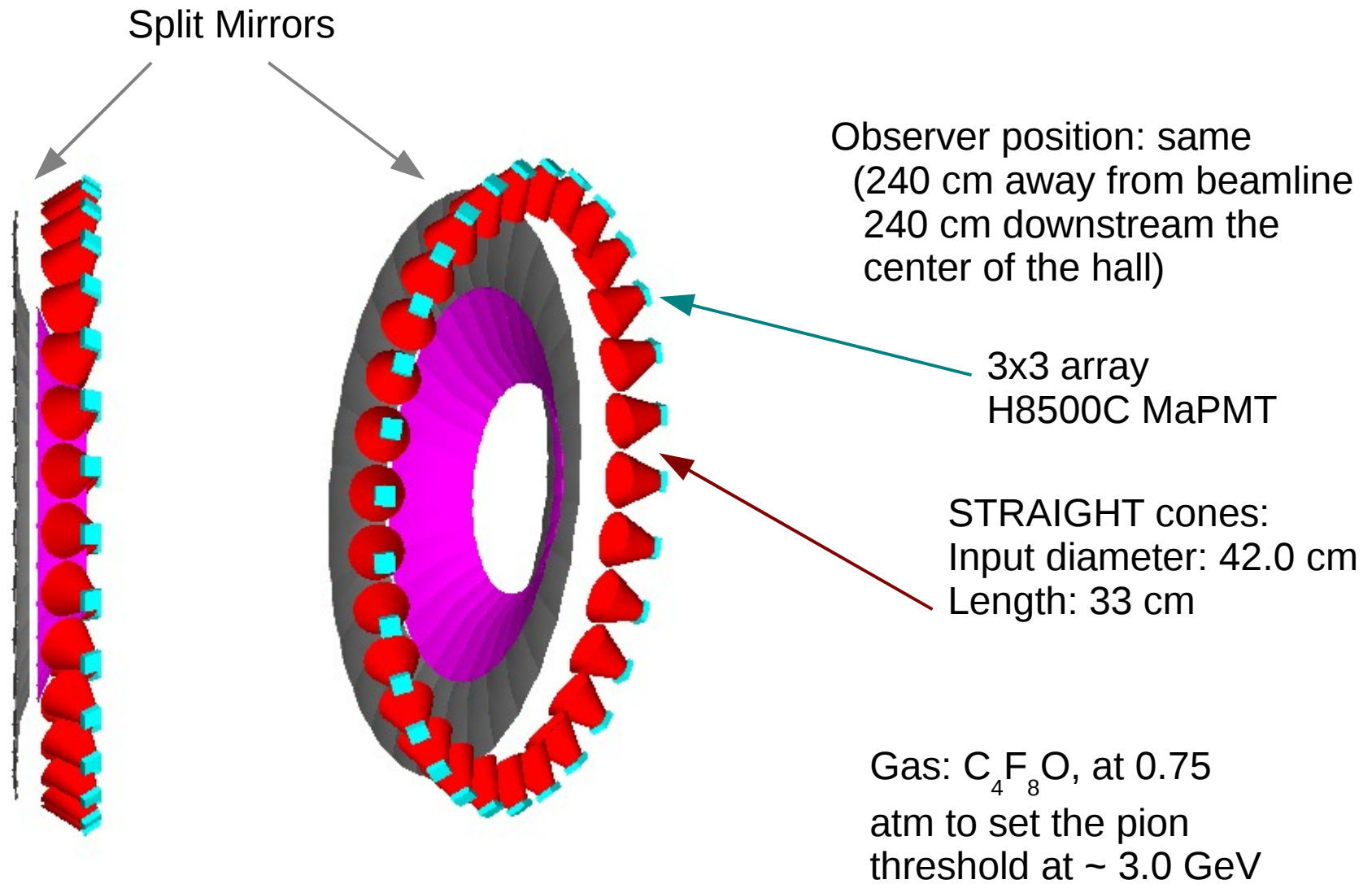

Update of PVDIS Cerenkov: PMT option

January, 18, 2012

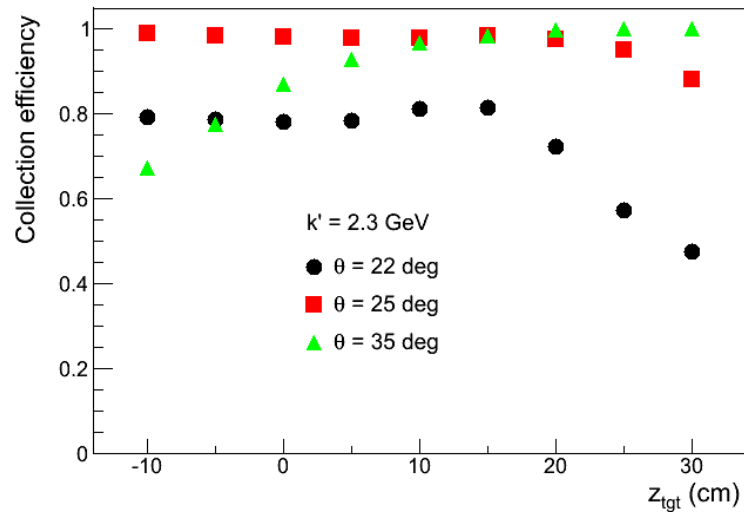
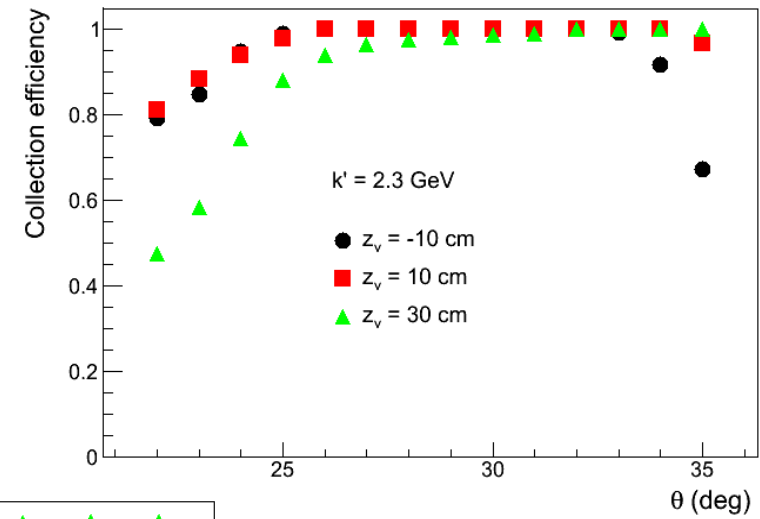
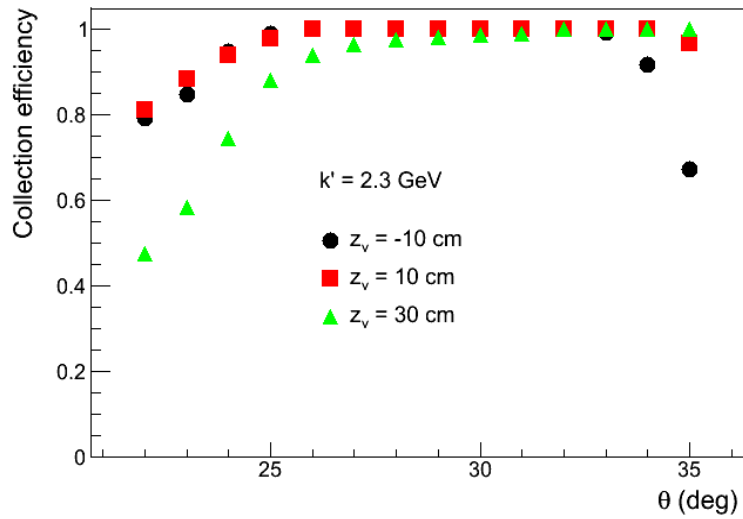
**Eric Fuchey
Temple University**

Detector status



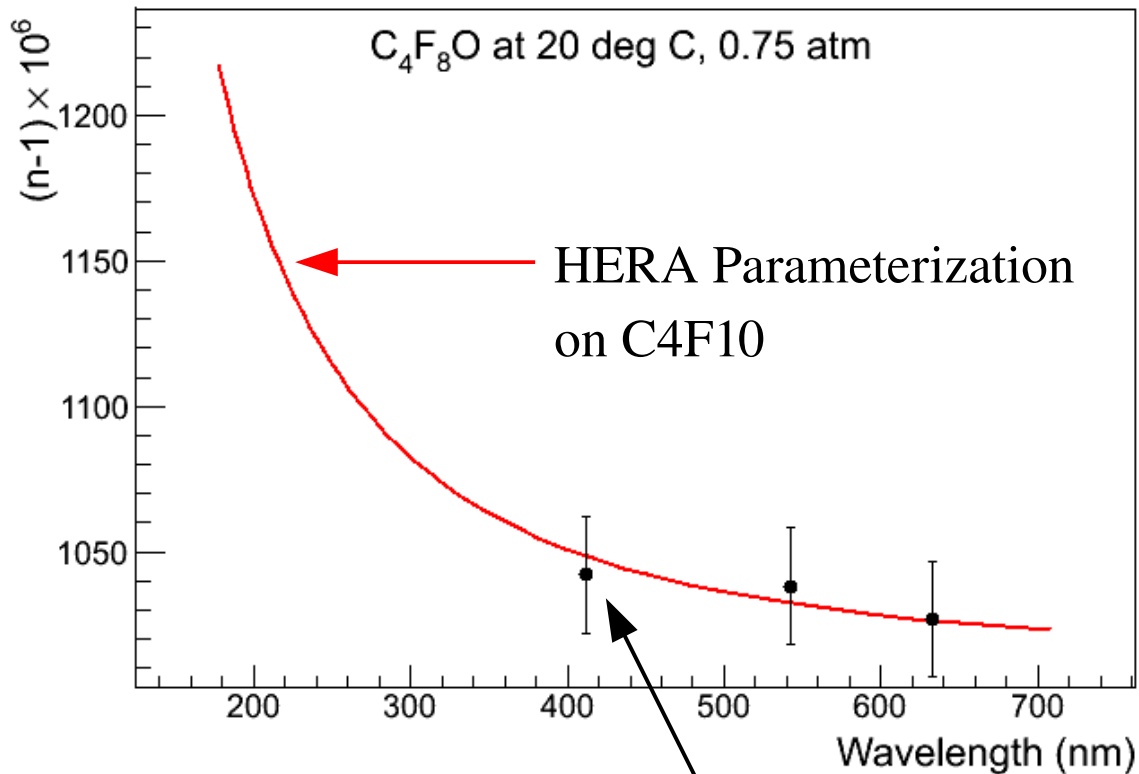
Results

Efficiency with straight cones similar to what we had with Winston cones

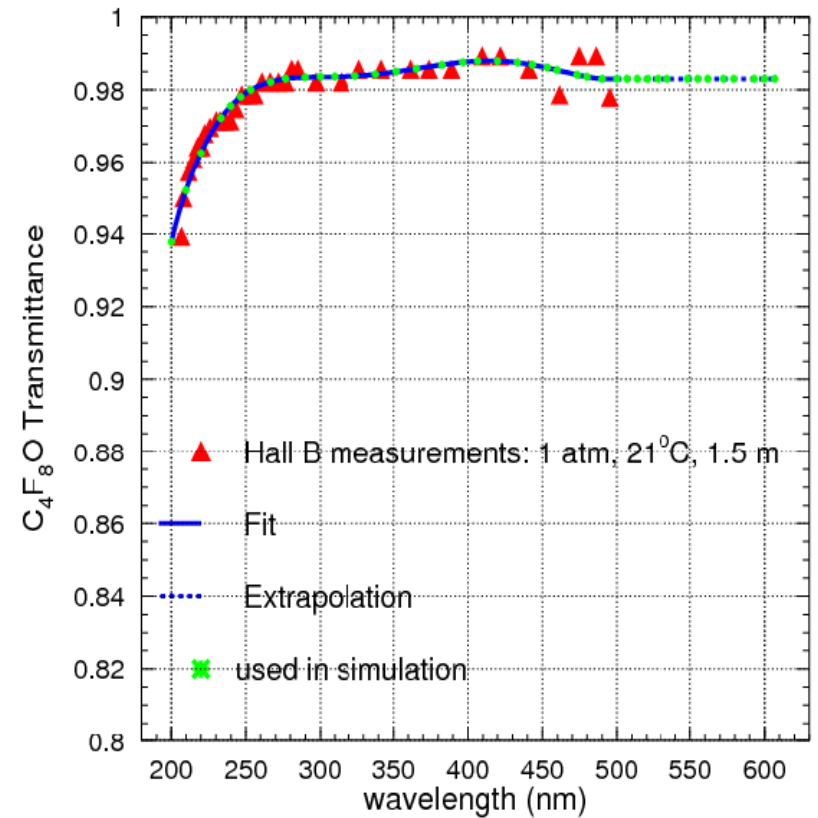


Results

C₄F₈O, at 0.75 atm:
Index of refraction

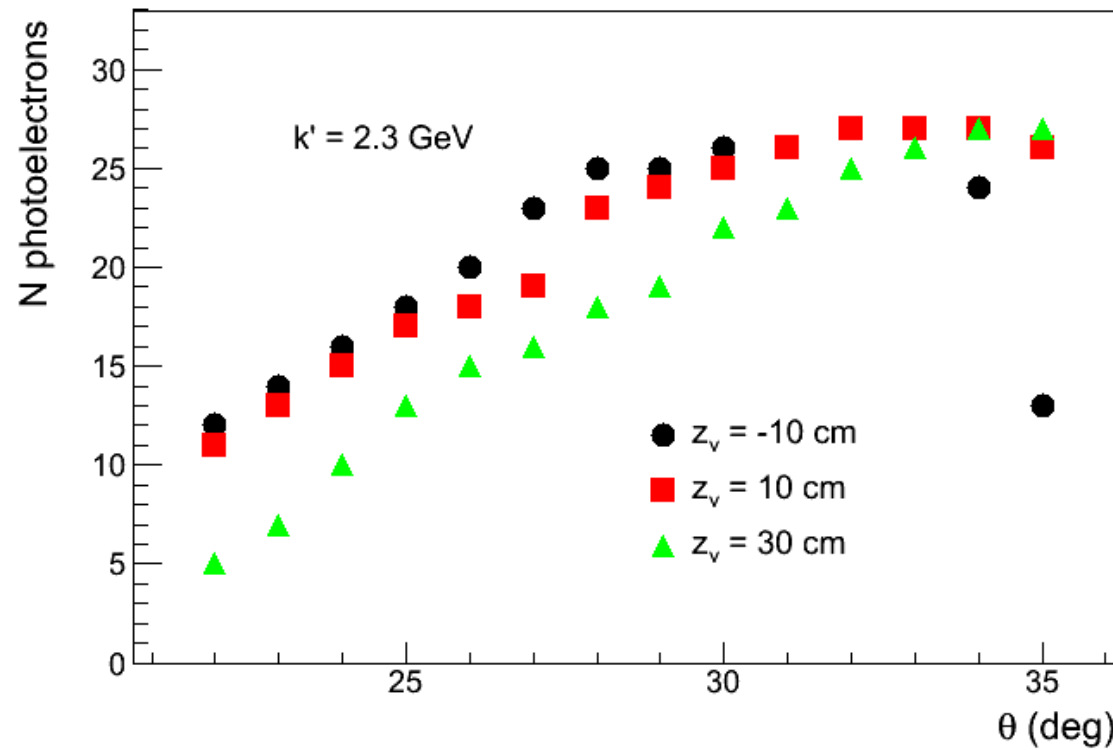


gas transmission



Results

Number of p.e.: number of photoelectrons given by the simulation x 0.5
(in addition to QE, mirror reflectivities, gas transparency, etc...)



Summary

- Finally moved to straight cones, and C4F8O;
- Similar performances compared to Winston cones, C4F10;
- TODO:
 - > Systematic study of the C4F8O index of refraction;
 - > FOM;
 - > Systematic study of the tolerance of mirrors/cones dimensions/position...

Light collection

22 degrees

30 degrees

35 degrees

