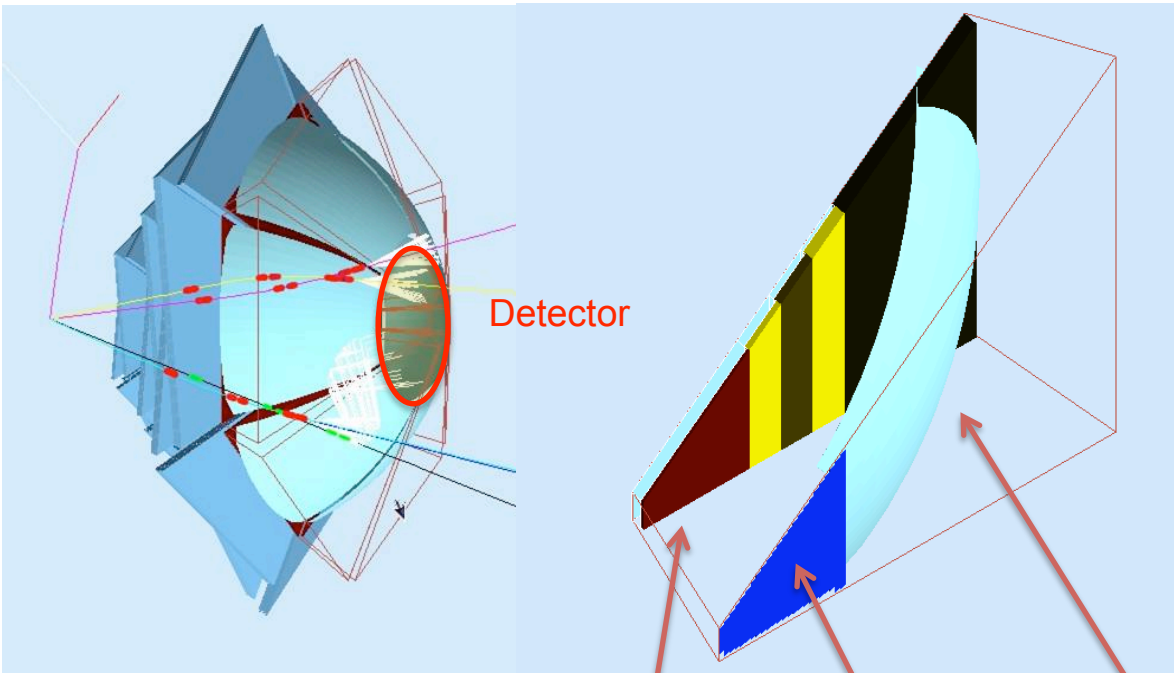


RICH GEMC GEOMETRY

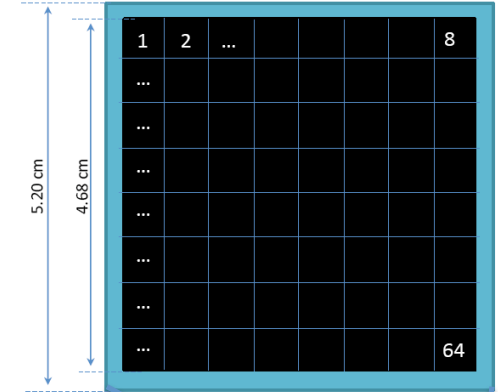
Contalbrigo Marco & Luciano Pappalardo
INFN Ferrara

Rich Meeting, December 16 2011

The RICH

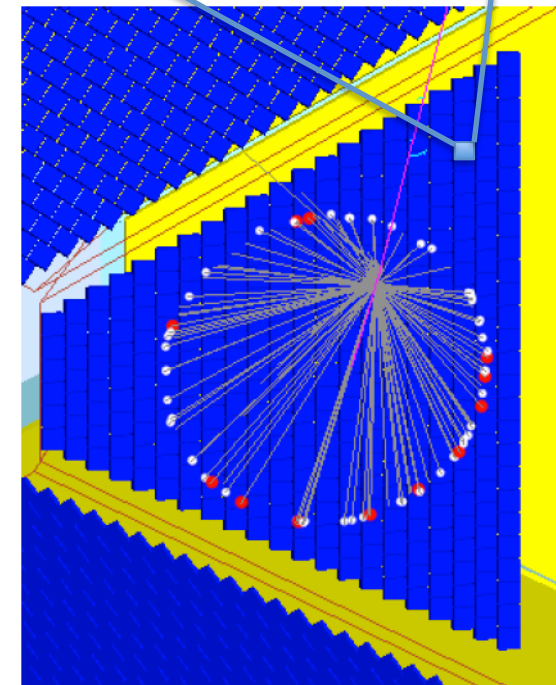
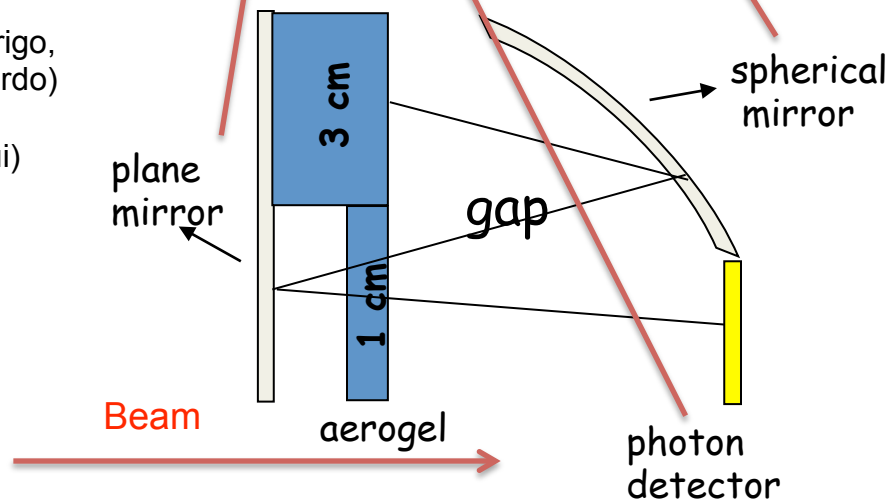


Pixelization + Q.E.

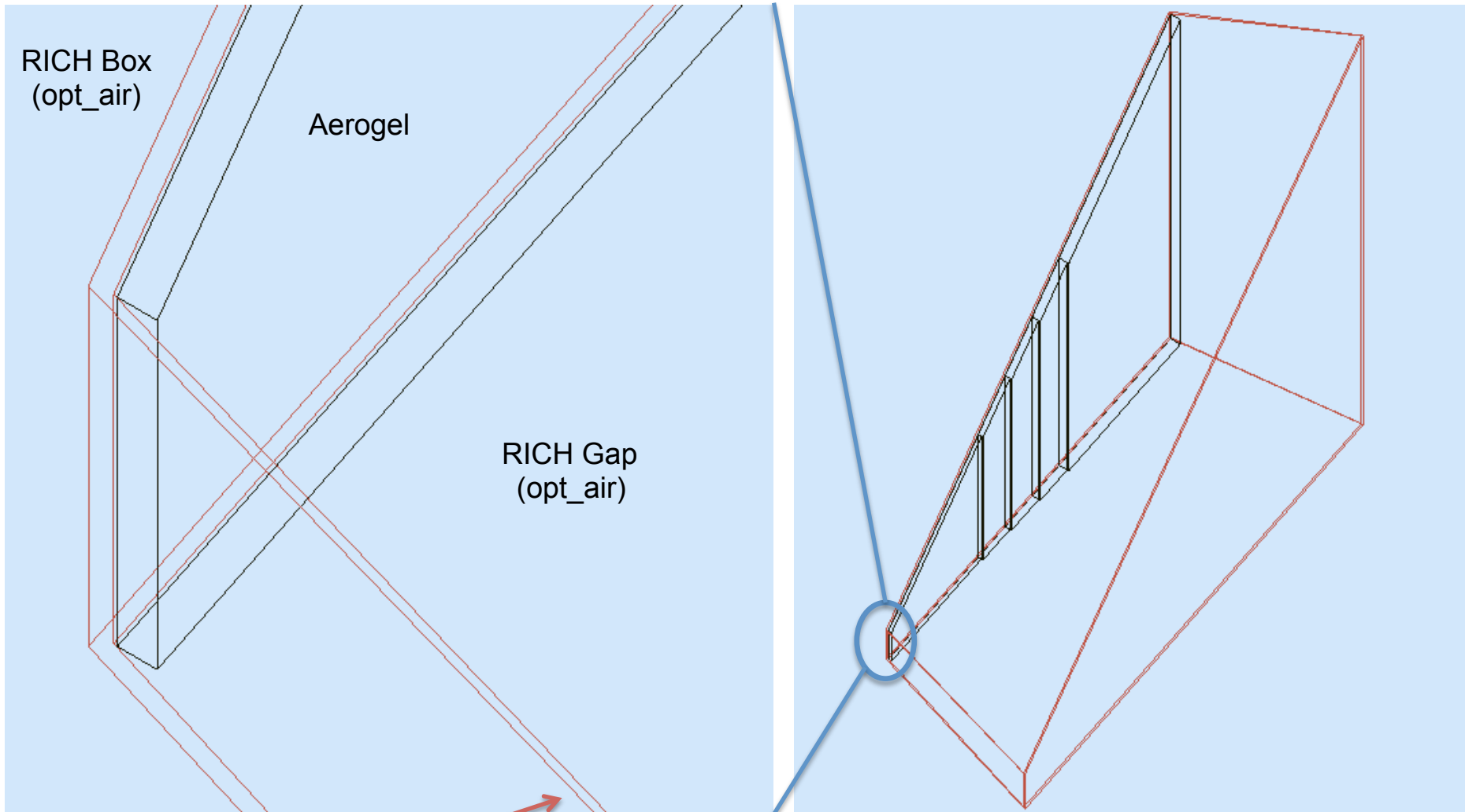


Pool: INFN Fe (M. Contalbrigo,
L. Pappalardo)
Argonne (N. Baltzell,
A. El Alaoui)

- Design: 50%
- Material: 80%
- Geometry: 50%
- Pixelization: 50%
- V(t): 0%
- Inefficiency: 0%



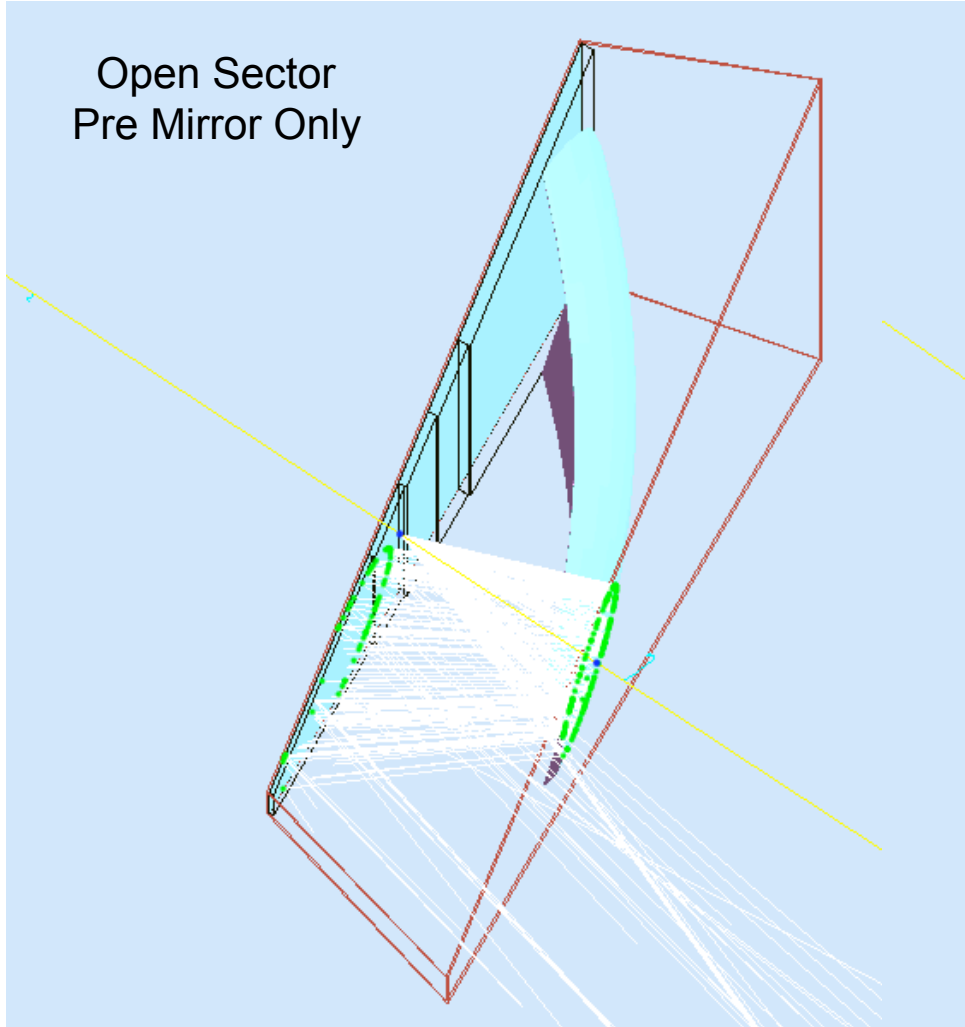
The RICH Basic Structure



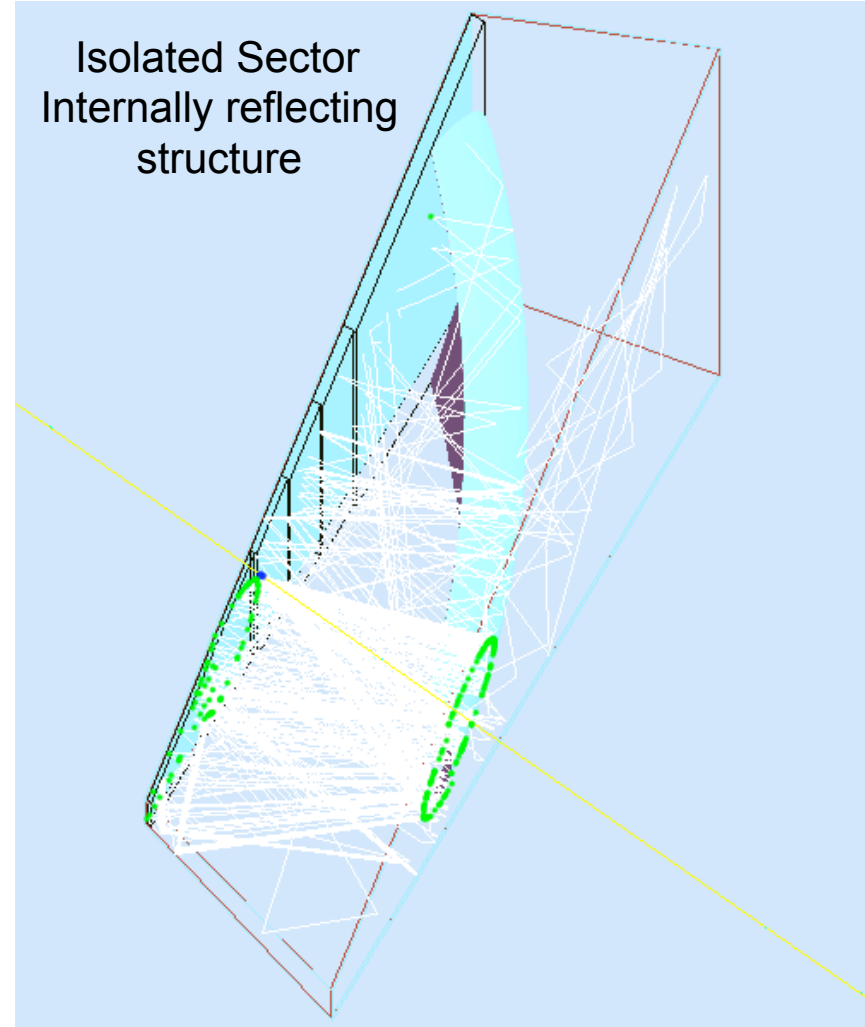
RICH structure: can be upgraded to a mirror and used to isolate the sector

The Open or Isolated Sector

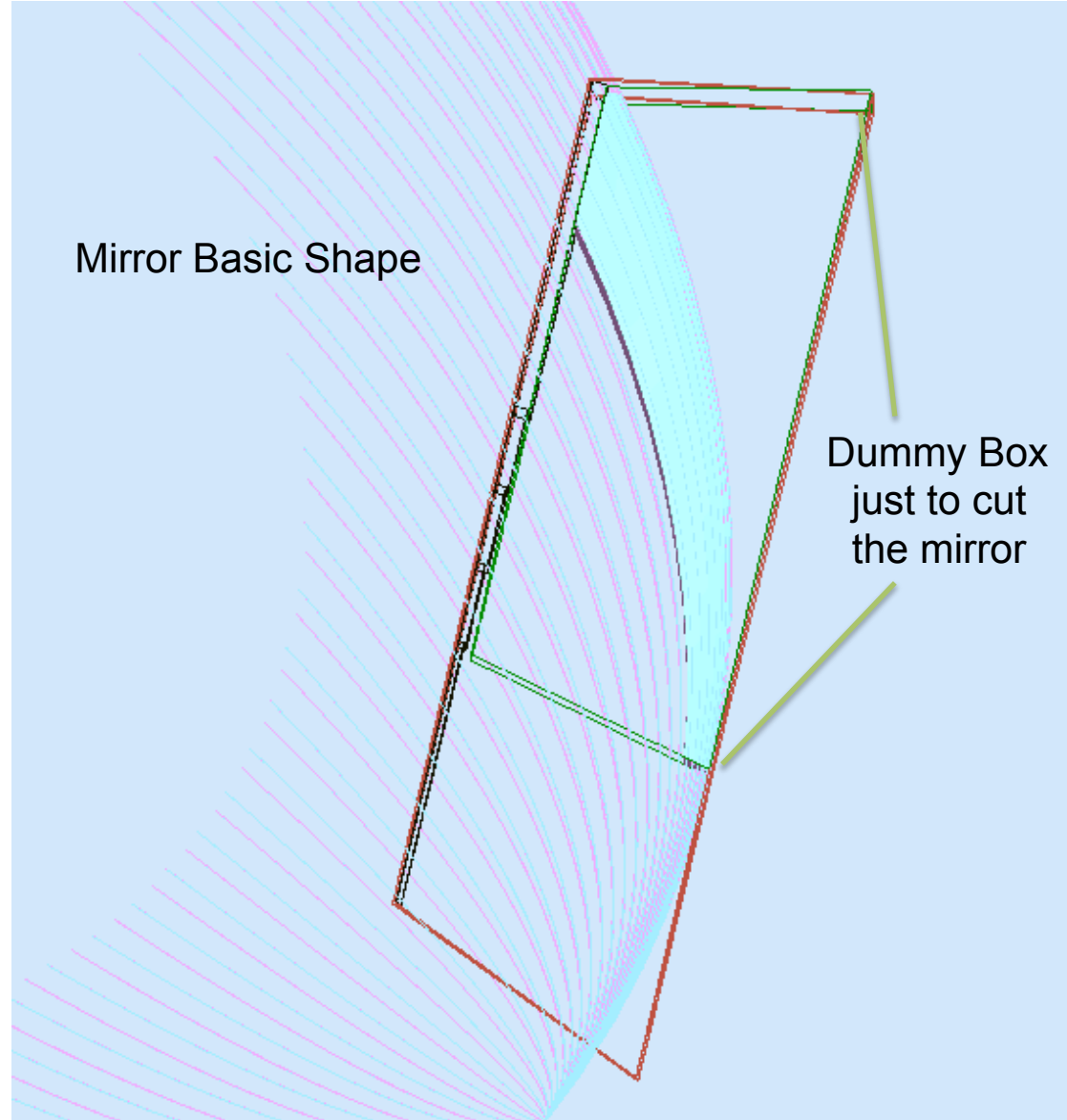
Open Sector
Pre Mirror Only



Isolated Sector
Internally reflecting structure

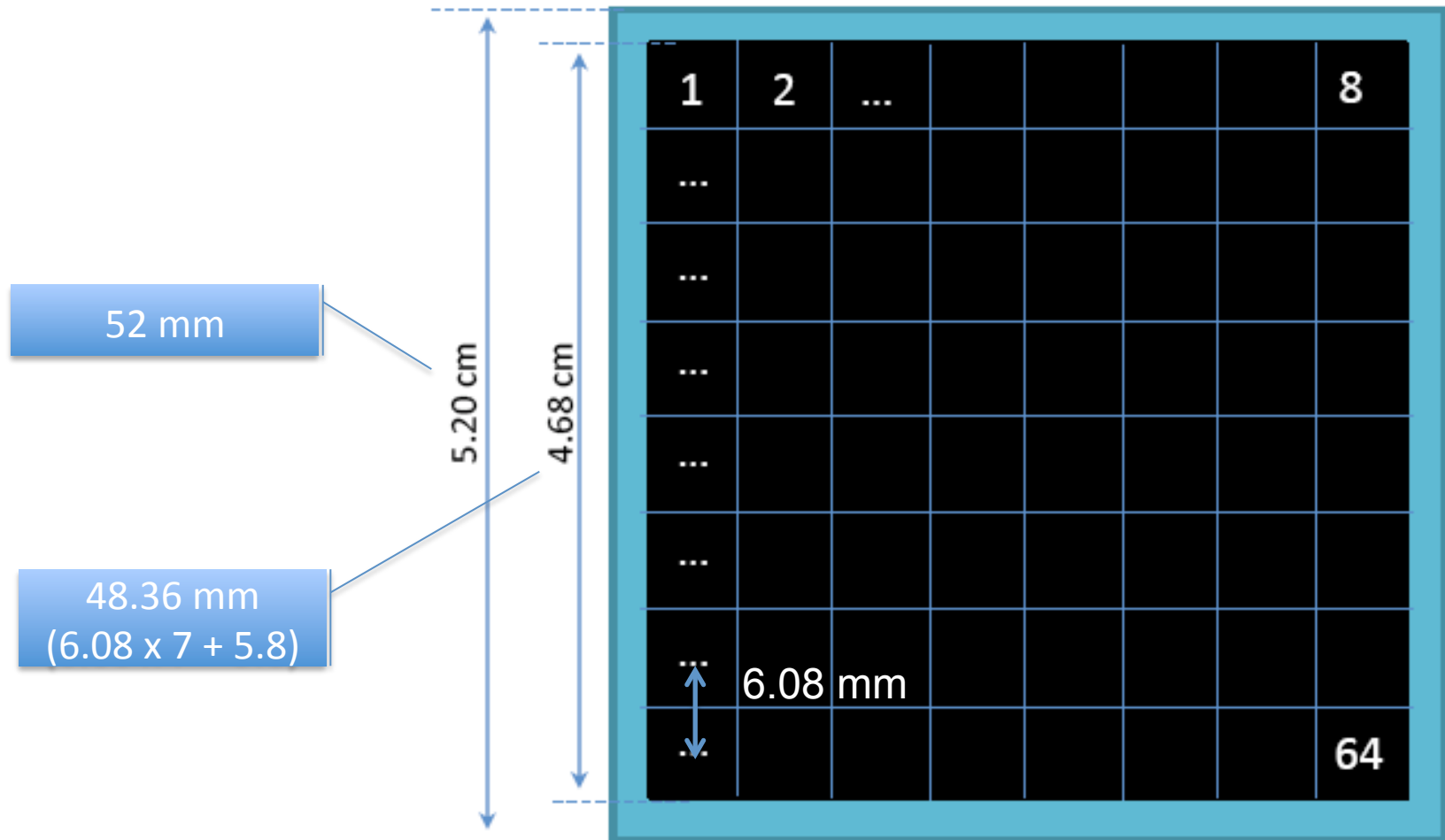


The Mirror Geometry

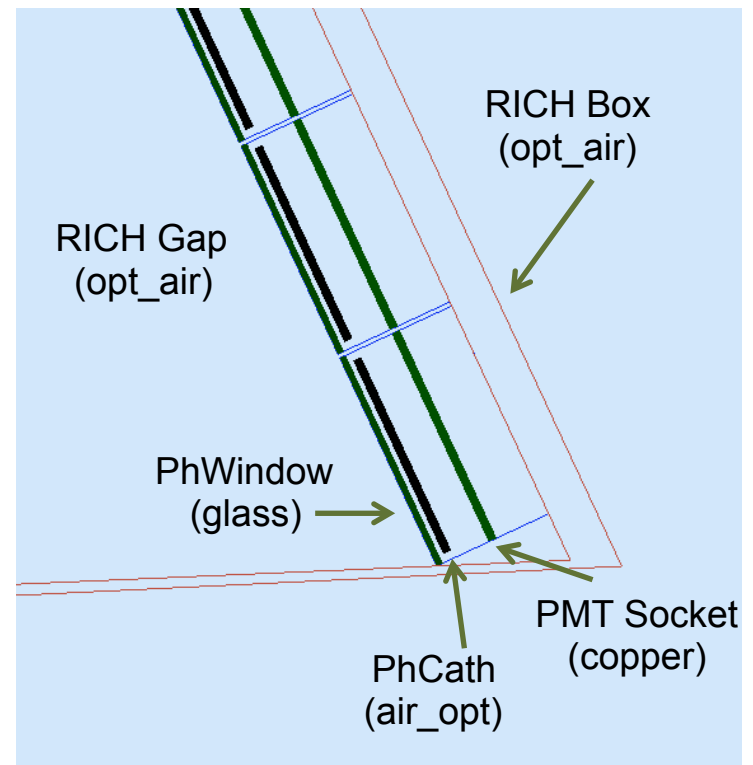
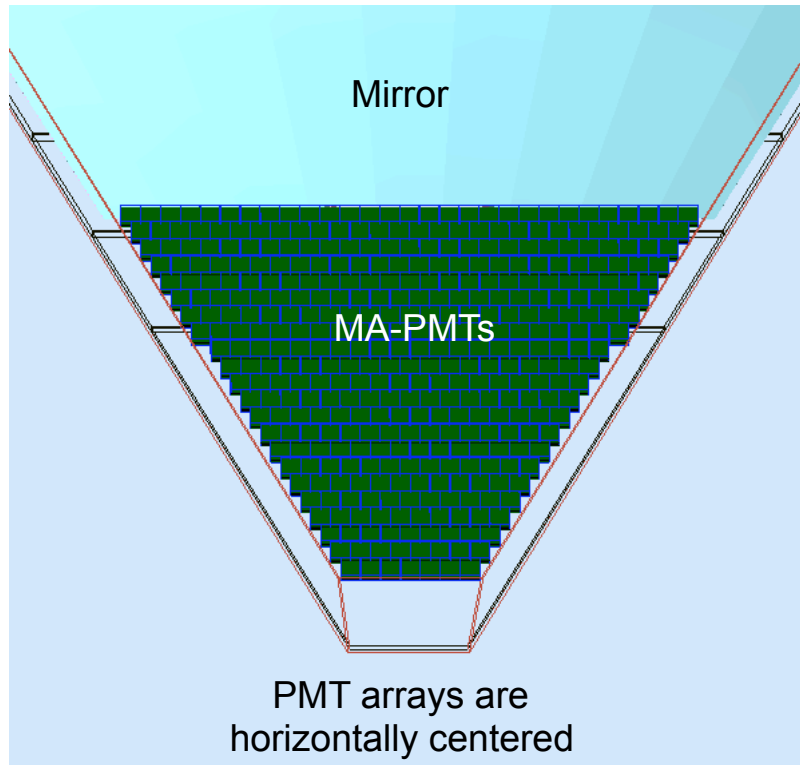


The H8500 MA-PMTs

Number of anode pixels: 64 (8x8 matrix)
Pixel size / Pitch at center: 5.8 x 5.8 / 6.08 mm
Effective area: 49 x 49 mm
Dimensional Outline: 52 x 52 x 28 mm
Packing density (Effective Area / Esternal Size) : 89 %



The MA-PMTs



Different types of
MA-PMTs in principle
Supported

(only H8500 completed)

```
my $type=0;  
my $MAPMT_TYPES = 4 ;  
my @MAPMT_name   = ('H8500', 'H8500_03', 'R8900', 'R8900_C');  
my @MAPMT_color  = ('0000ee', '0000ee', 'ff44ff', 'ee99ff');
```

```
2my @MAPMT_DX    = (52./2., 52./2., 25./2., 25./2.);  
my @MAPMT_DY    = (52./2., 52./2., 25./2., 25./2.);  
my @MAPMT_DZ    = (28./2., 28./2., 25./2., 25./2.);  
my @MAPMT_DXSPACE = (1.0/2., 0.0/2., 0.0/2., 0.0/2.);  
my @MAPMT_DYSPACE = (1.0/2., 0.0/2., 0.0/2., 0.0/2.);
```

Outlook

Clean text and uniform nomenclature

Put comments

Group relevant parameters

- Isolated Sector Flag
- MA-PMT type

Put on the repository

