

ARICH biweekly meeting (009)

Leonid Burmistrov

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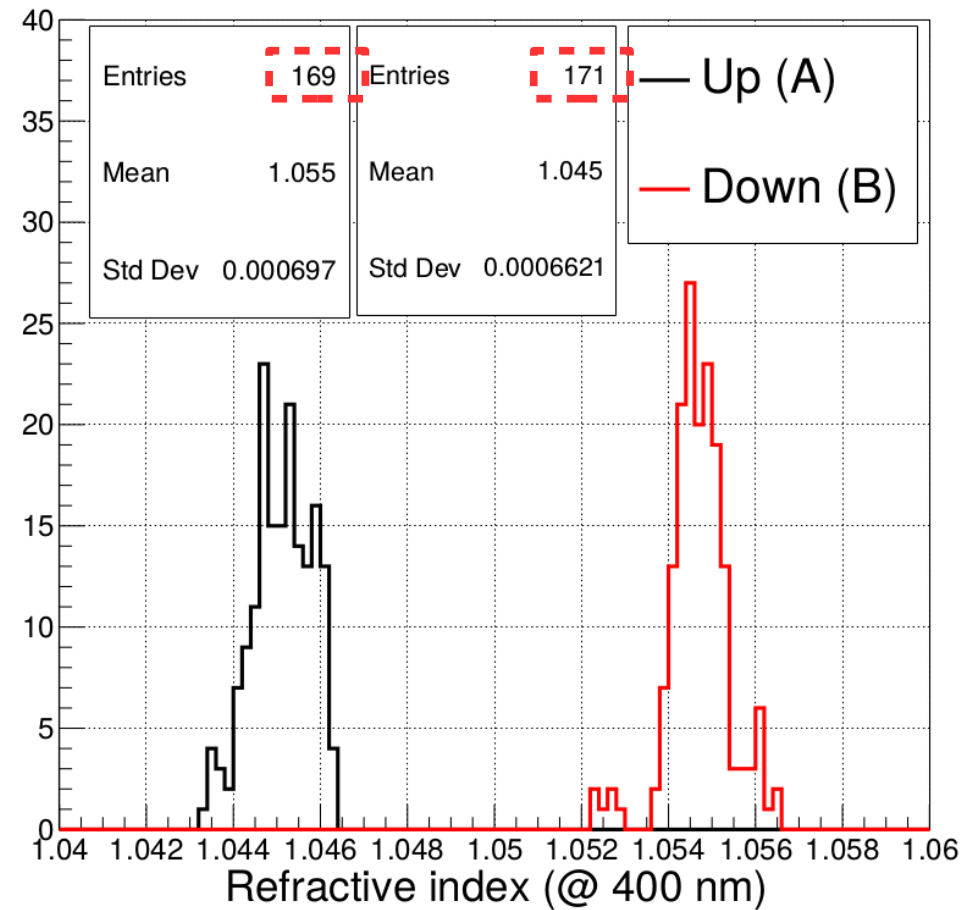
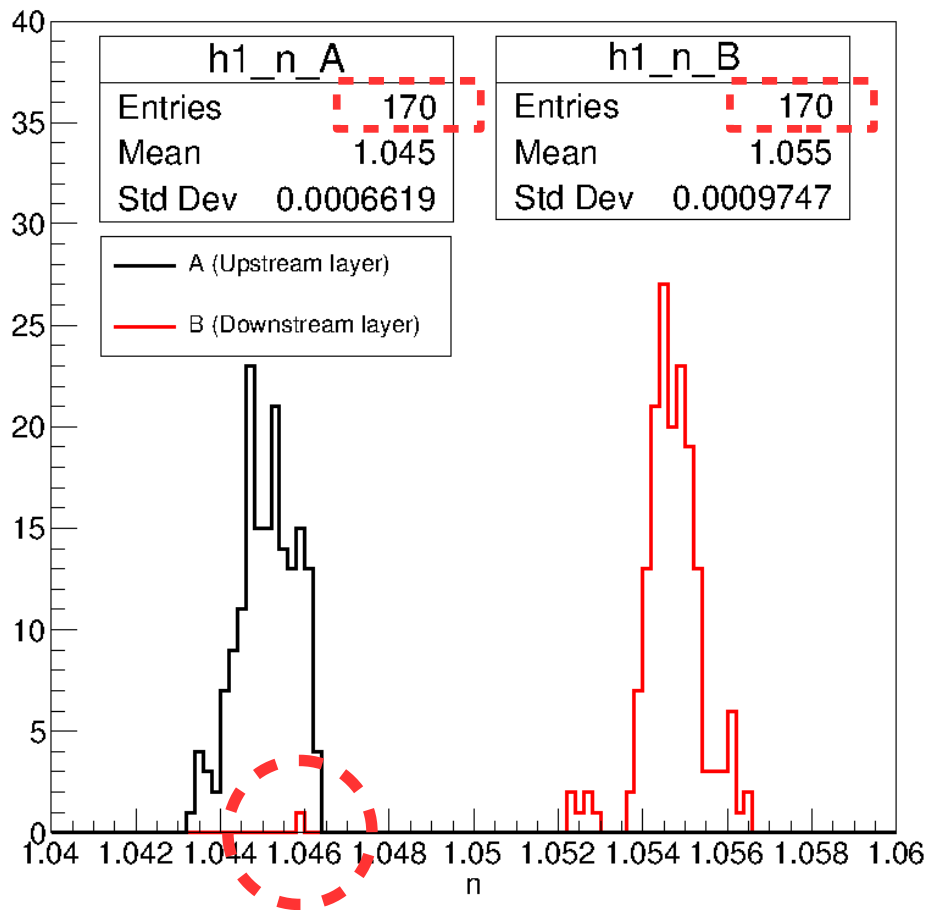
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Outline:

- ➔ Some open question from last presentation during B2GM (Oct.-2017).
- ➔ **ARICHAerogelHist**
- ➔ ARICH software warnings within BASF2
- ➔ Cables

Strange aerogel tile from “upstream”



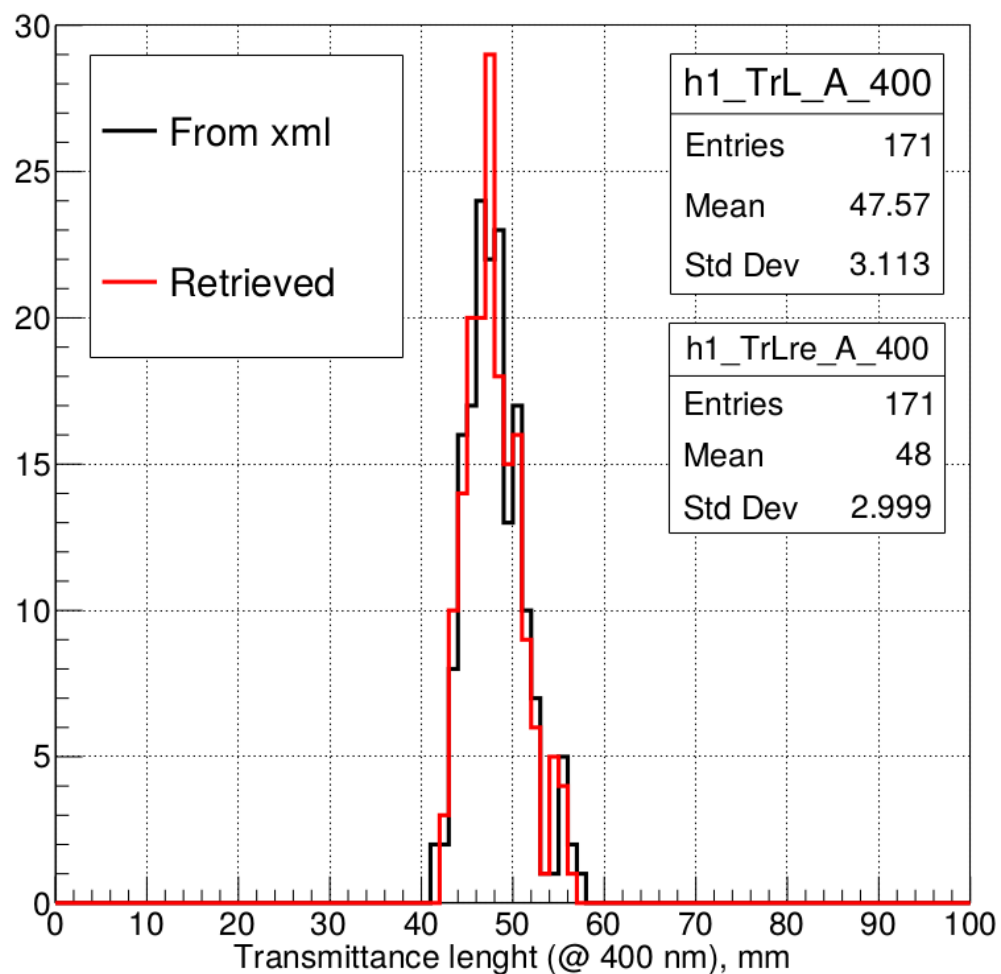
While searching for an error I have found this missing information :

In data base there is missing information form one tile :

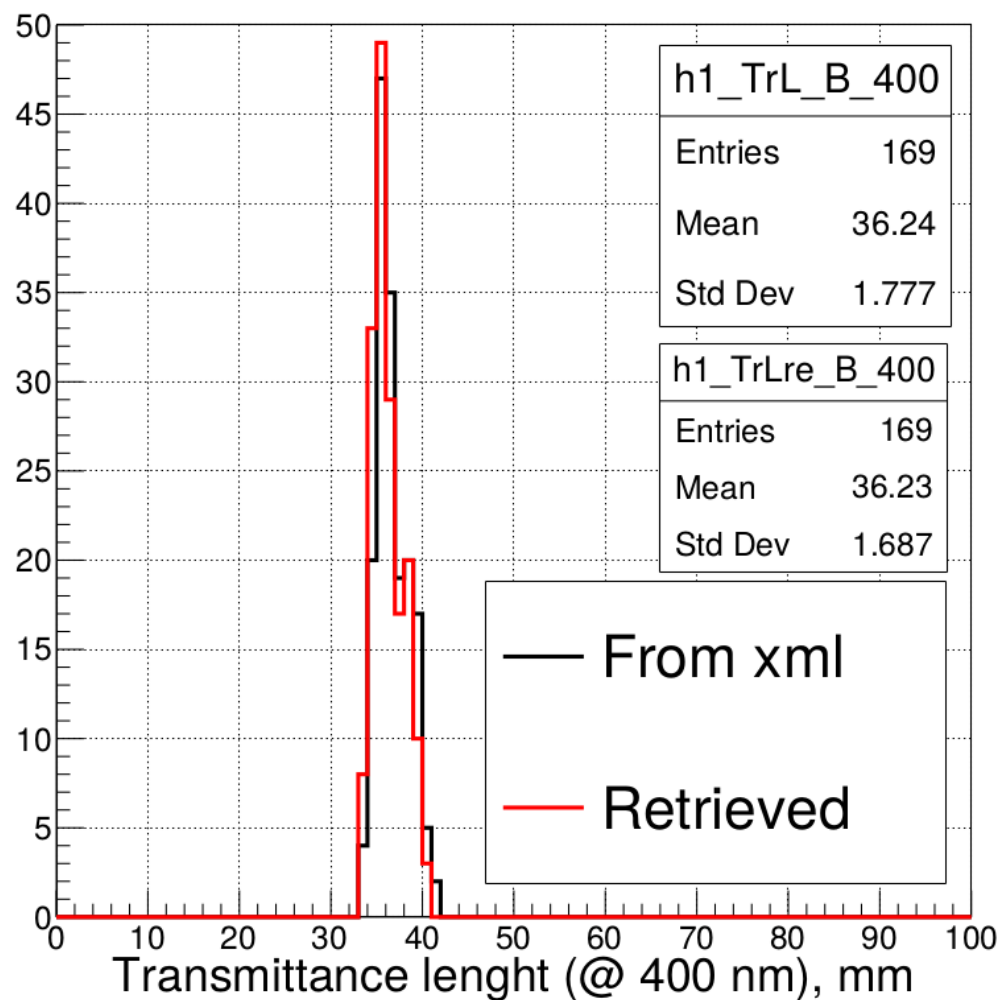
```
<version>3.0</version>
<serial>B180</serial>
<id>CAd12-28</id>
<index>1.0550</index>
<translength>33.2</translength>
<thick>19.6</thick>
```

Retrieved transmittance length vs transmittance length from xml file (@ 400 nm)

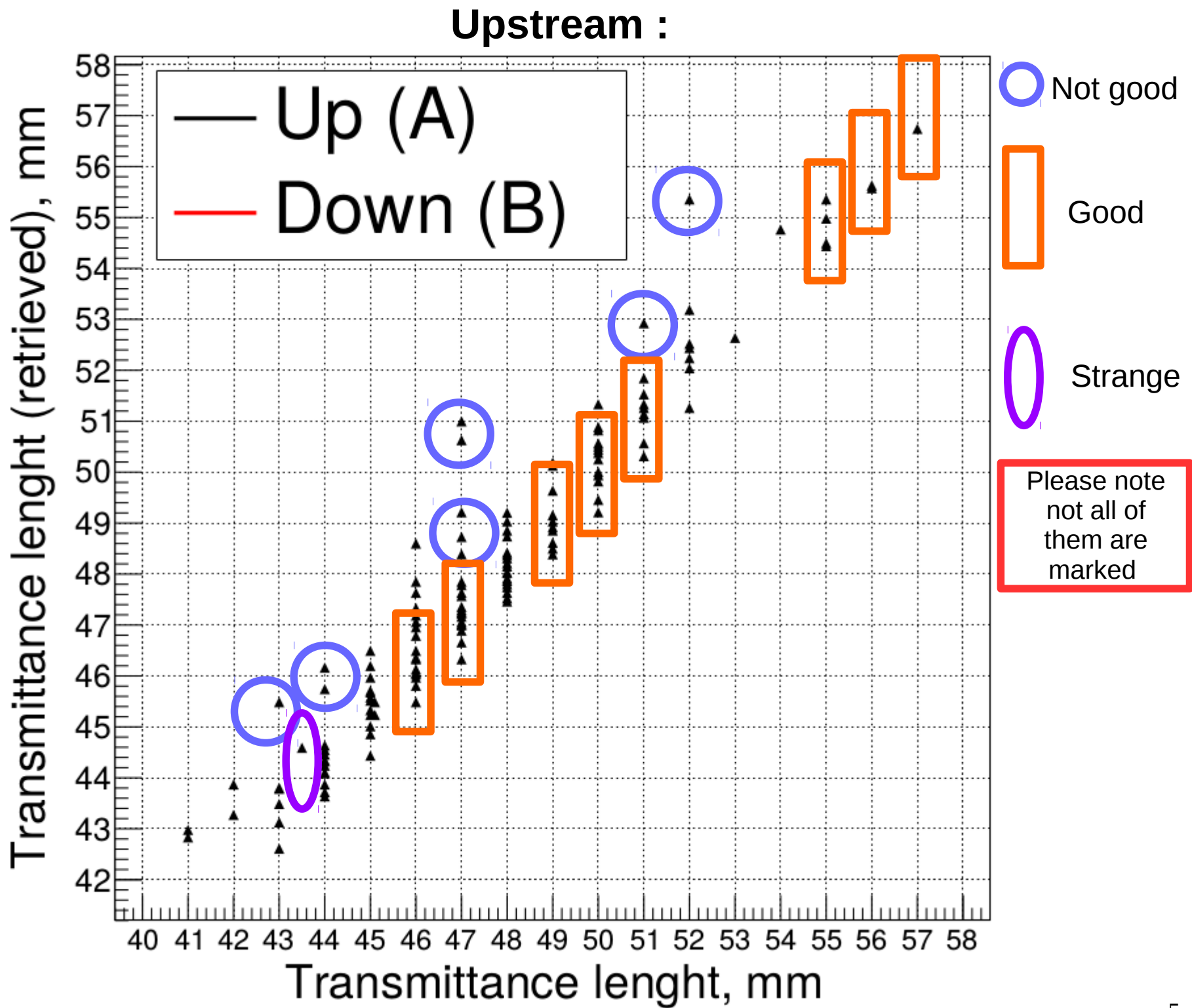
Upstream :



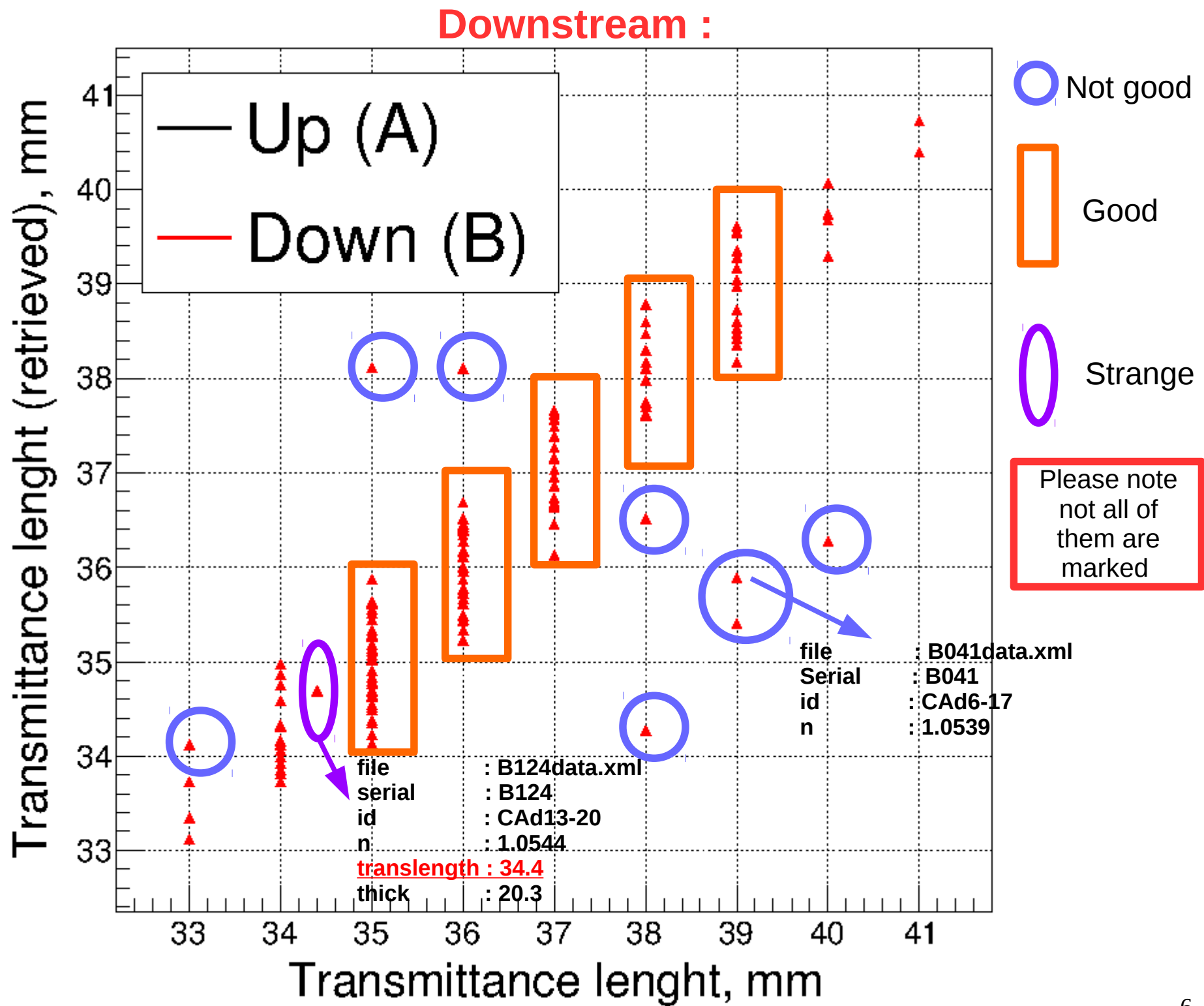
Downstream :



Retried transmittance length vs
transmittance length at 400 nm



Retried transmittance length vs transmittance length at 400 nm

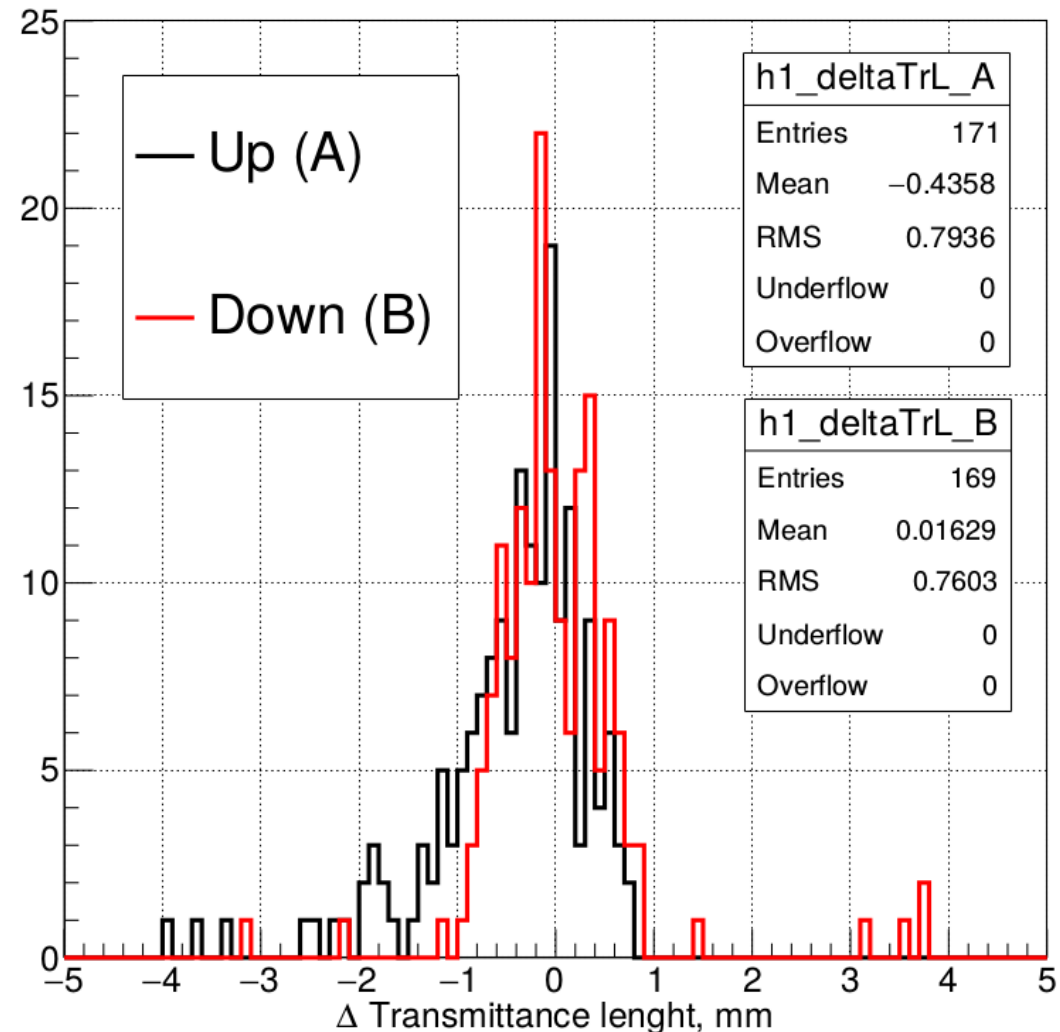
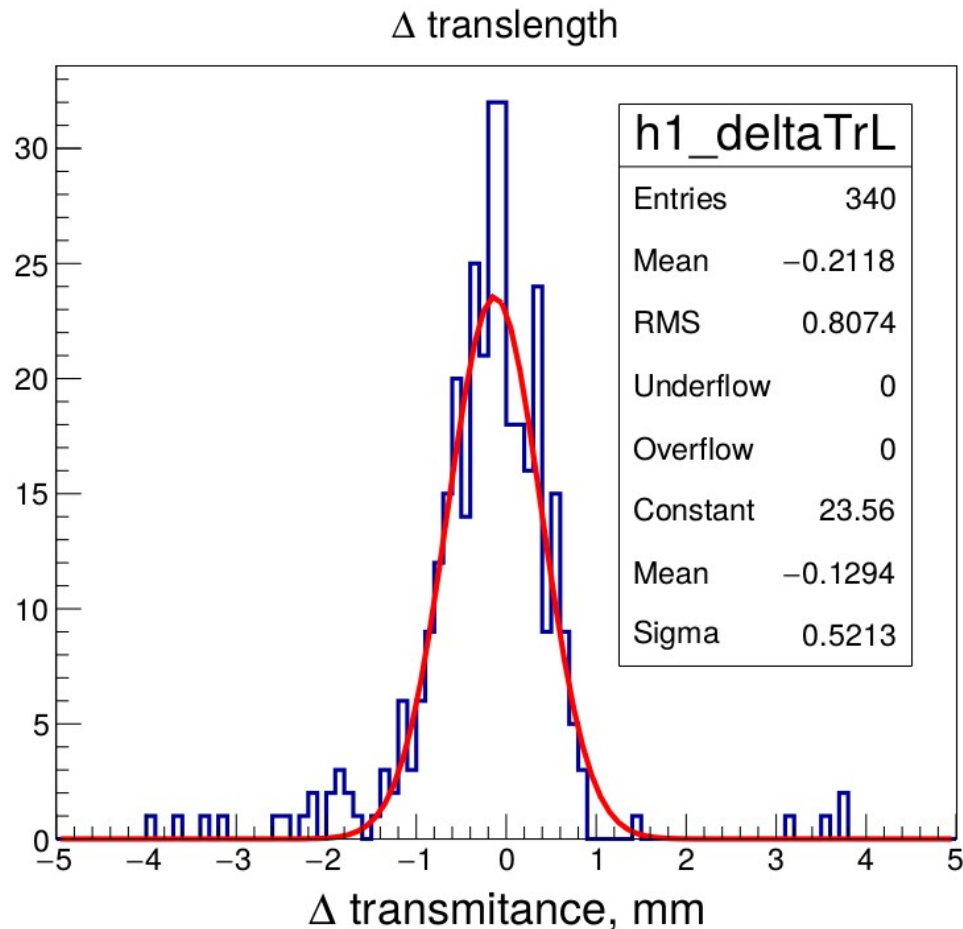


We have found some discrepancies :

Mainly difference due to rounding the data (given in mm) ... In version 3 of the aerogel DB we will go to sub millimeter precision.

But we have numbers which disagree by more then mm.

Large (< 5 mm) variations coming from the estimation method (more information from Tabata-san.)



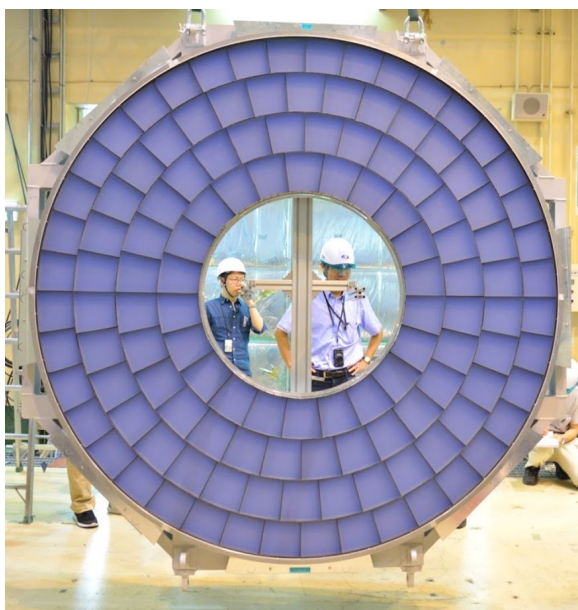
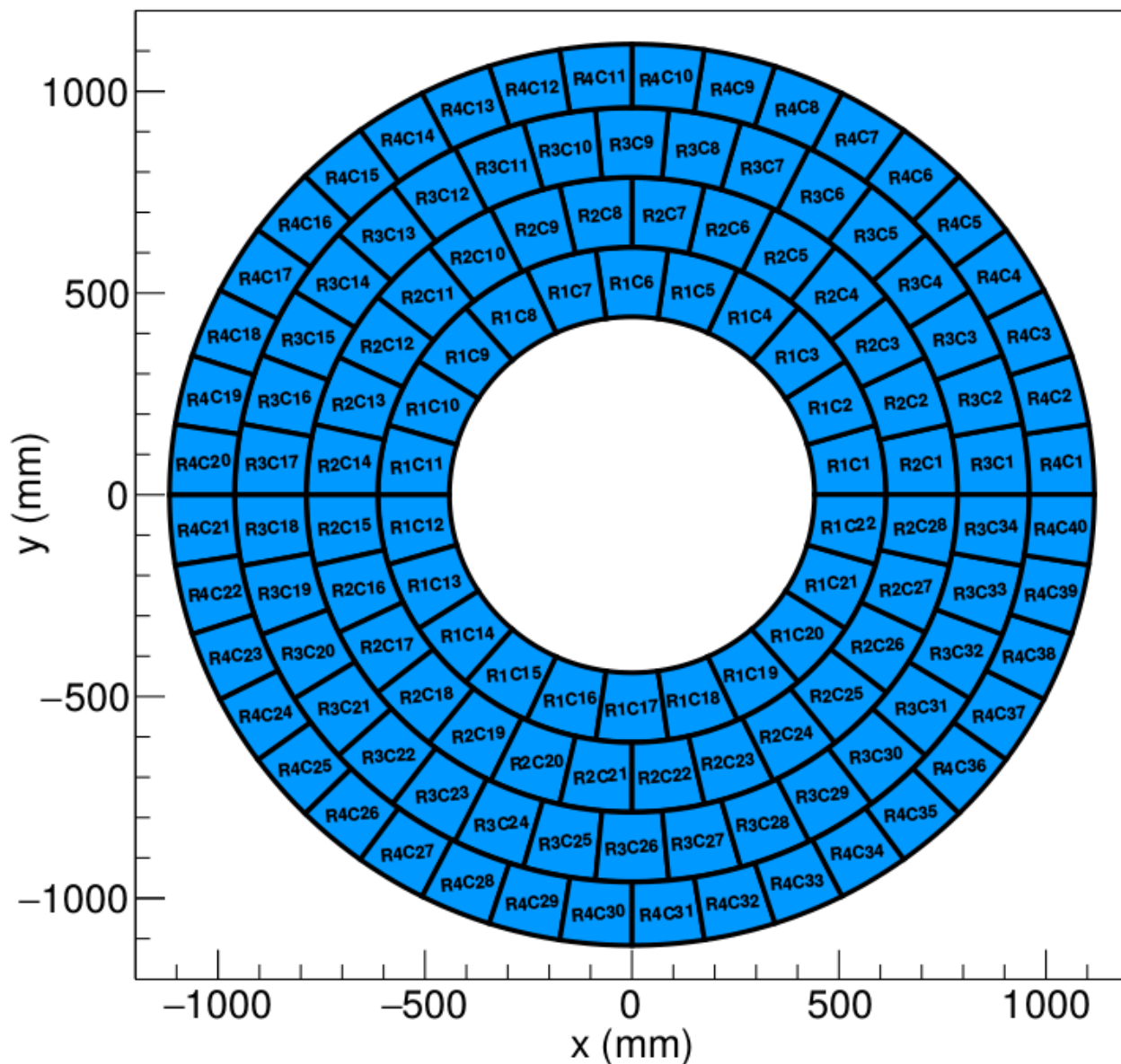
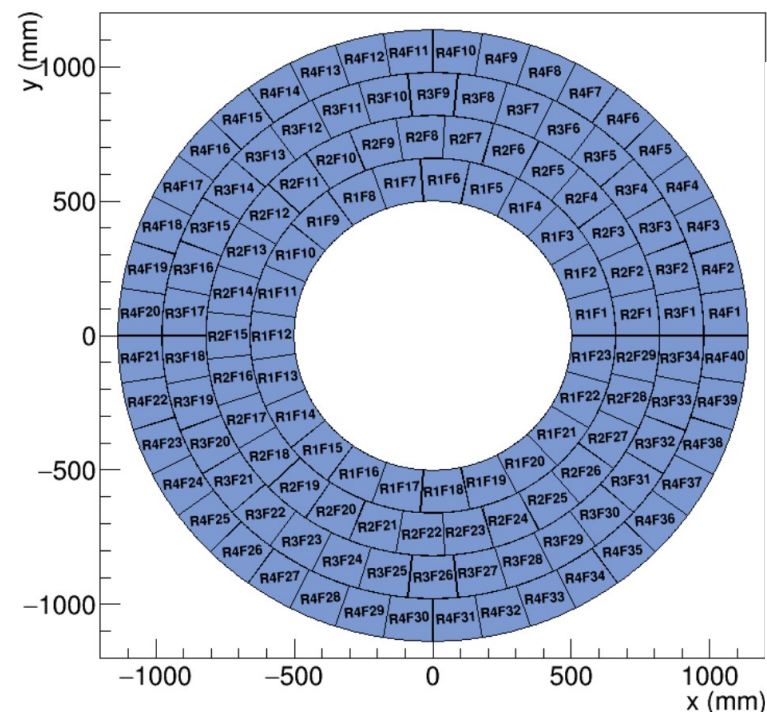
ARICH tile numbering (01) :

New script available here :

<ssh://git@stash.desy.de:7999/xmlar/xmlarichdata.git>

Old picture from : <https://confluence.desy.de/plugins/servlet/mobile#content/view/34029175>

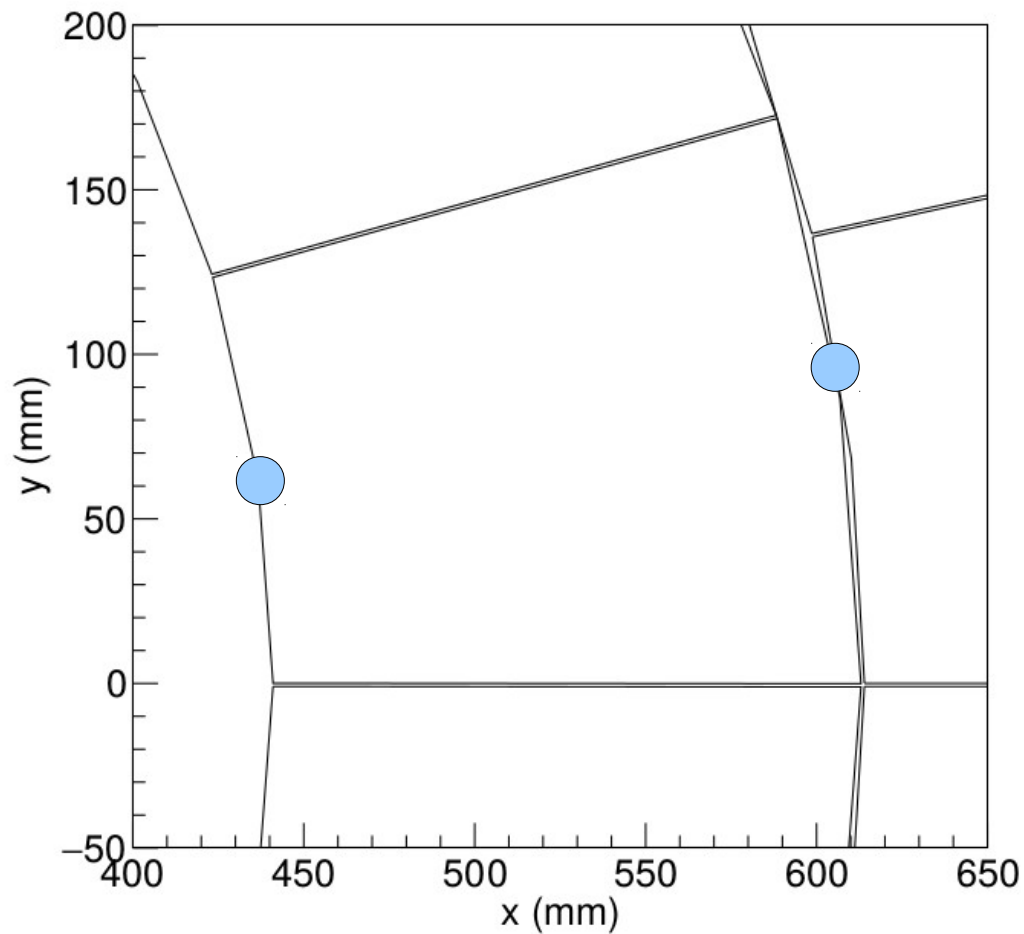
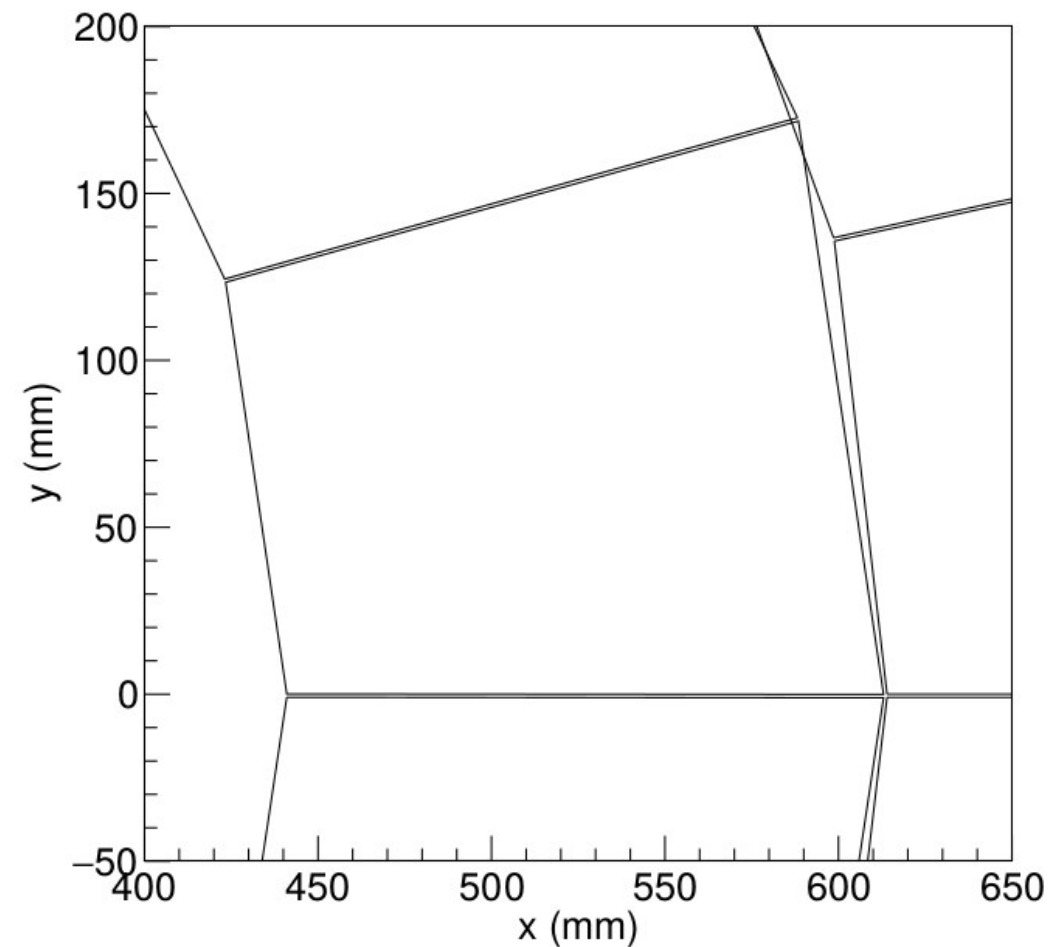
aerogelTileNumbering.C



ARICHAerogelHist

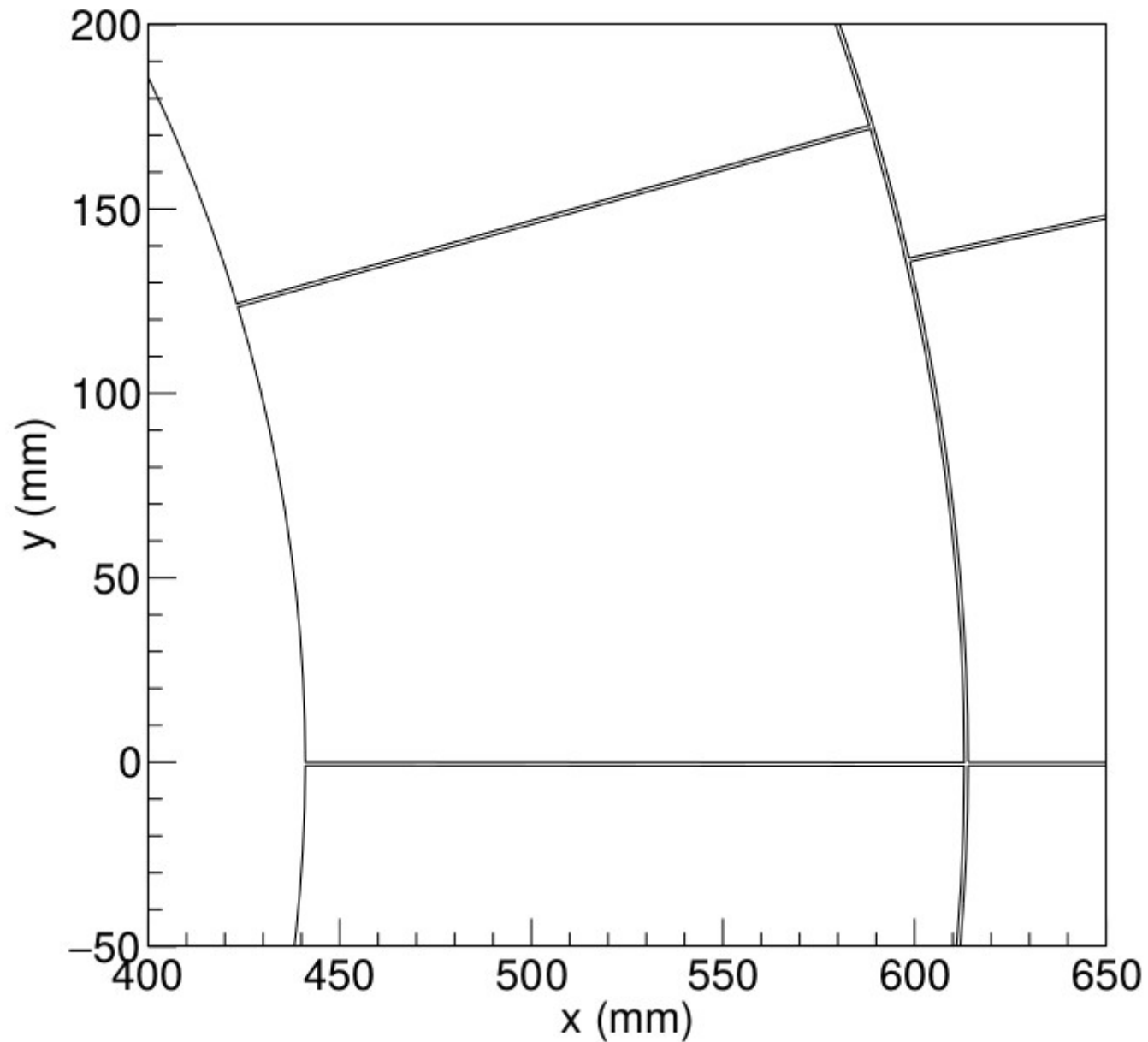
Simple plotter does not permit put more information about the aerogel tiles and have wrong size of the tiles.

I decided to create **ARICHAerogelHist: public TH2Poly**



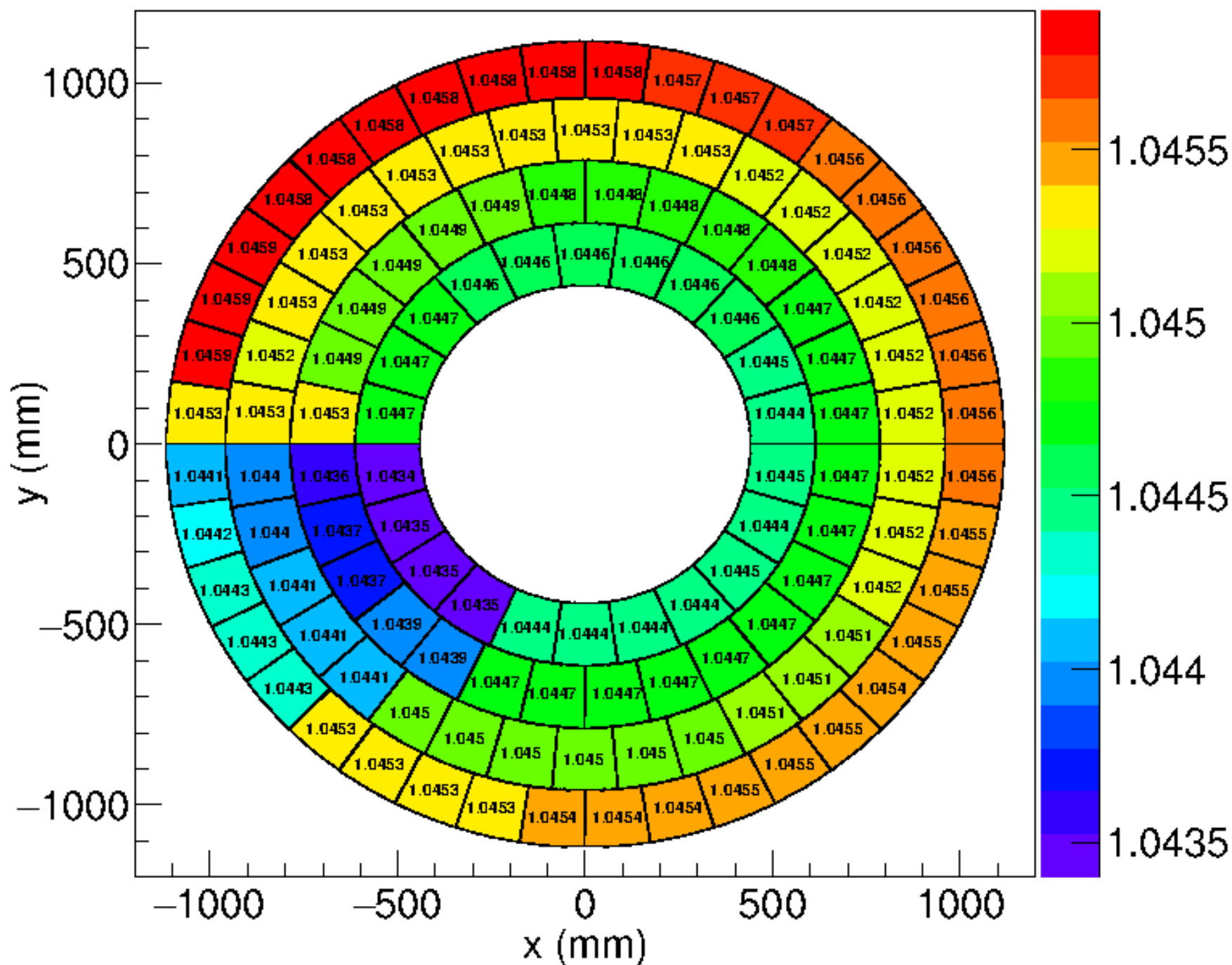
ARICHAerogelHist

By default there are 10 more points :

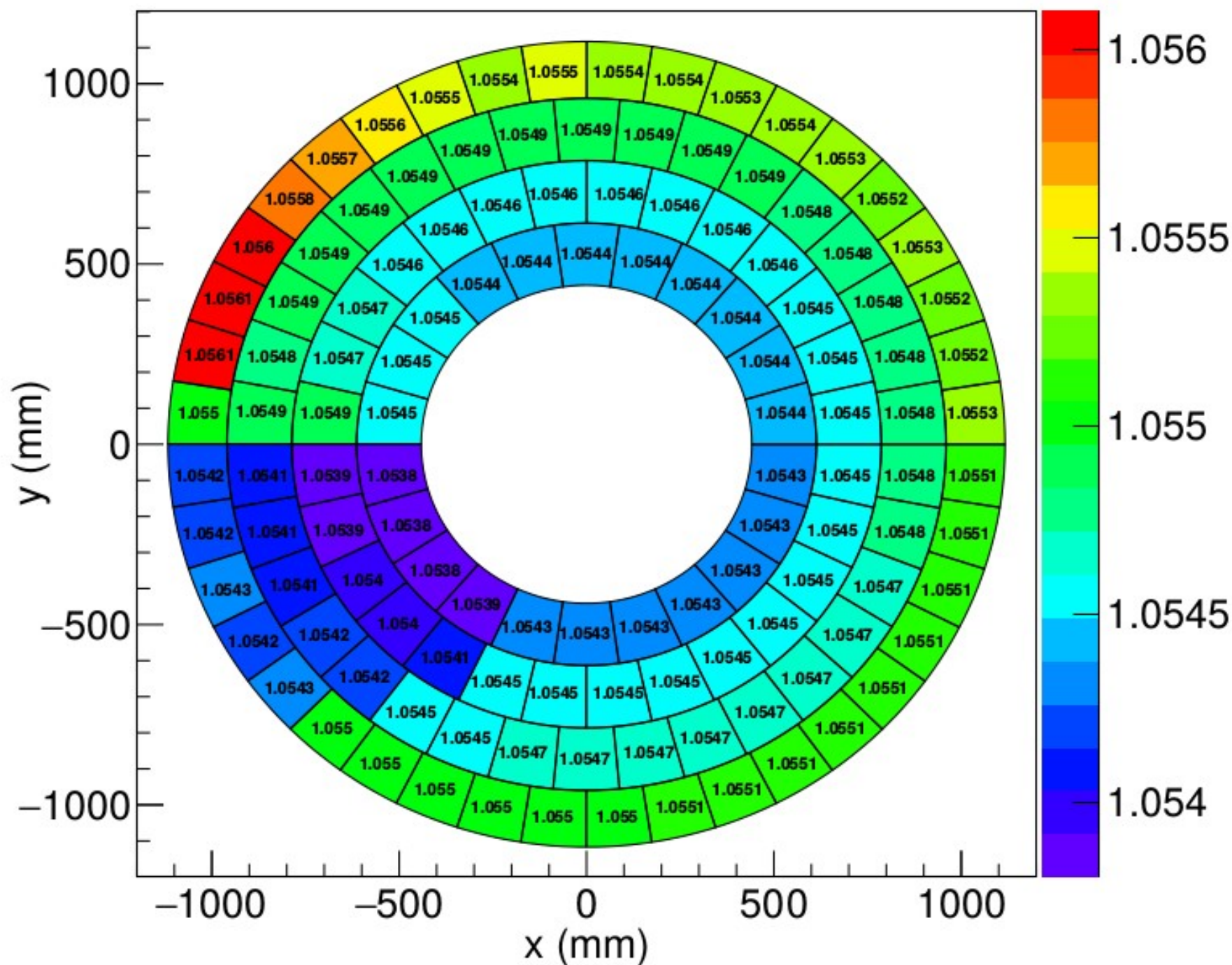


Will be implemented in BASF2

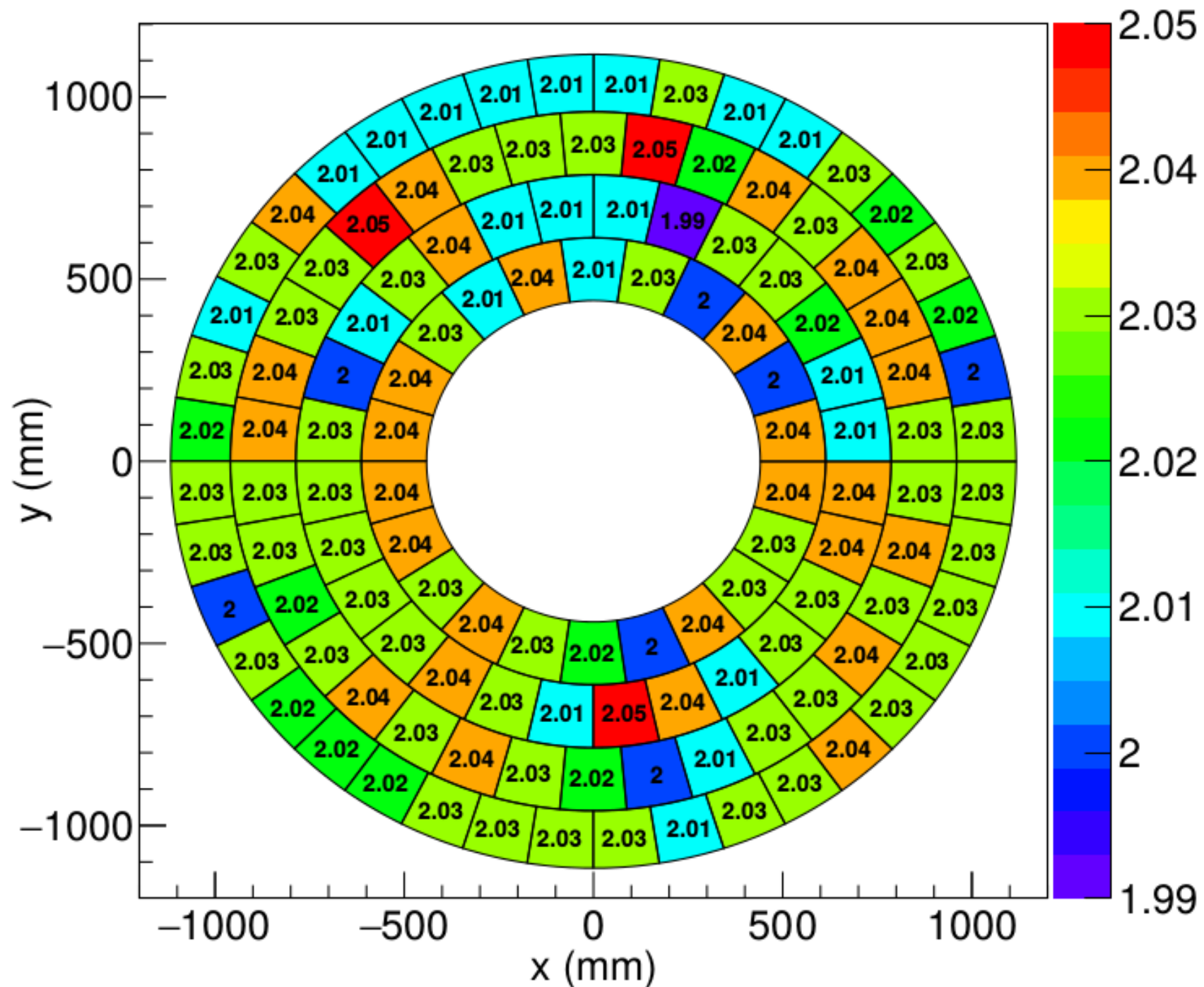
Aerodiel maps with ARICH AerodielHist : Refractive index (up stream)



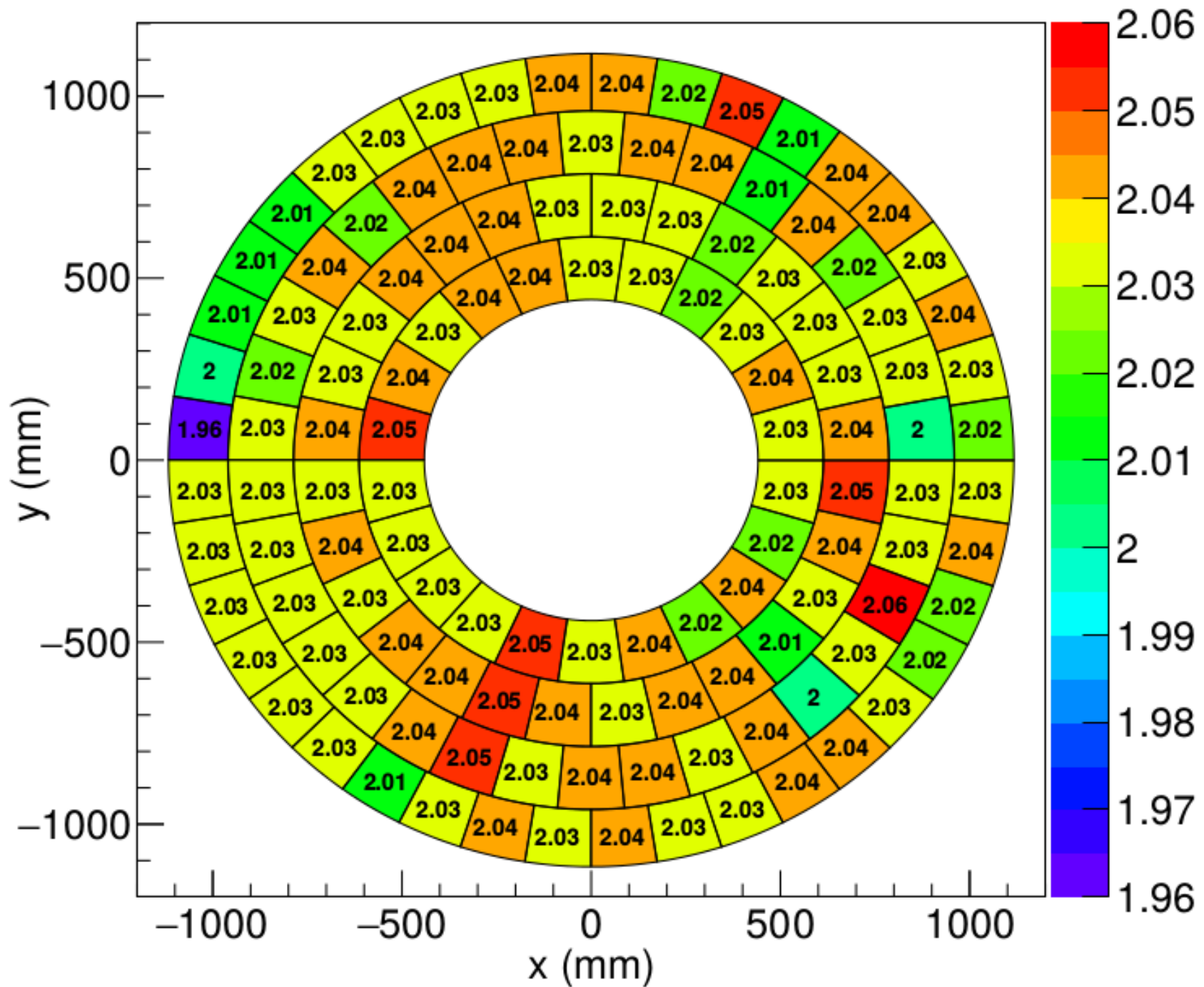
Aerogel maps with ARICH AerogelHist : Refractive index (down stream)



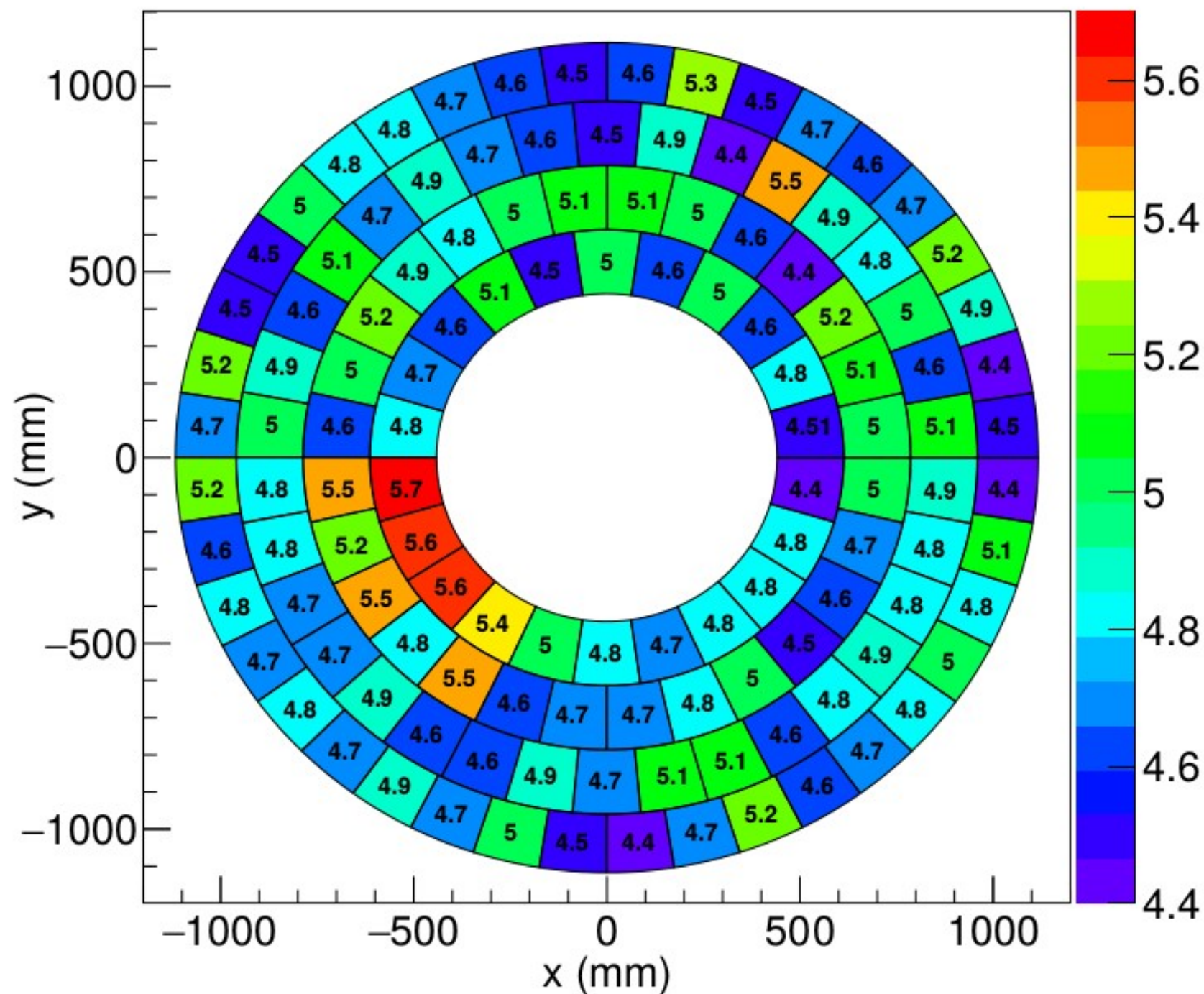
Aerogel maps with ARICH AerogelHist : thickness, cm (up stream)



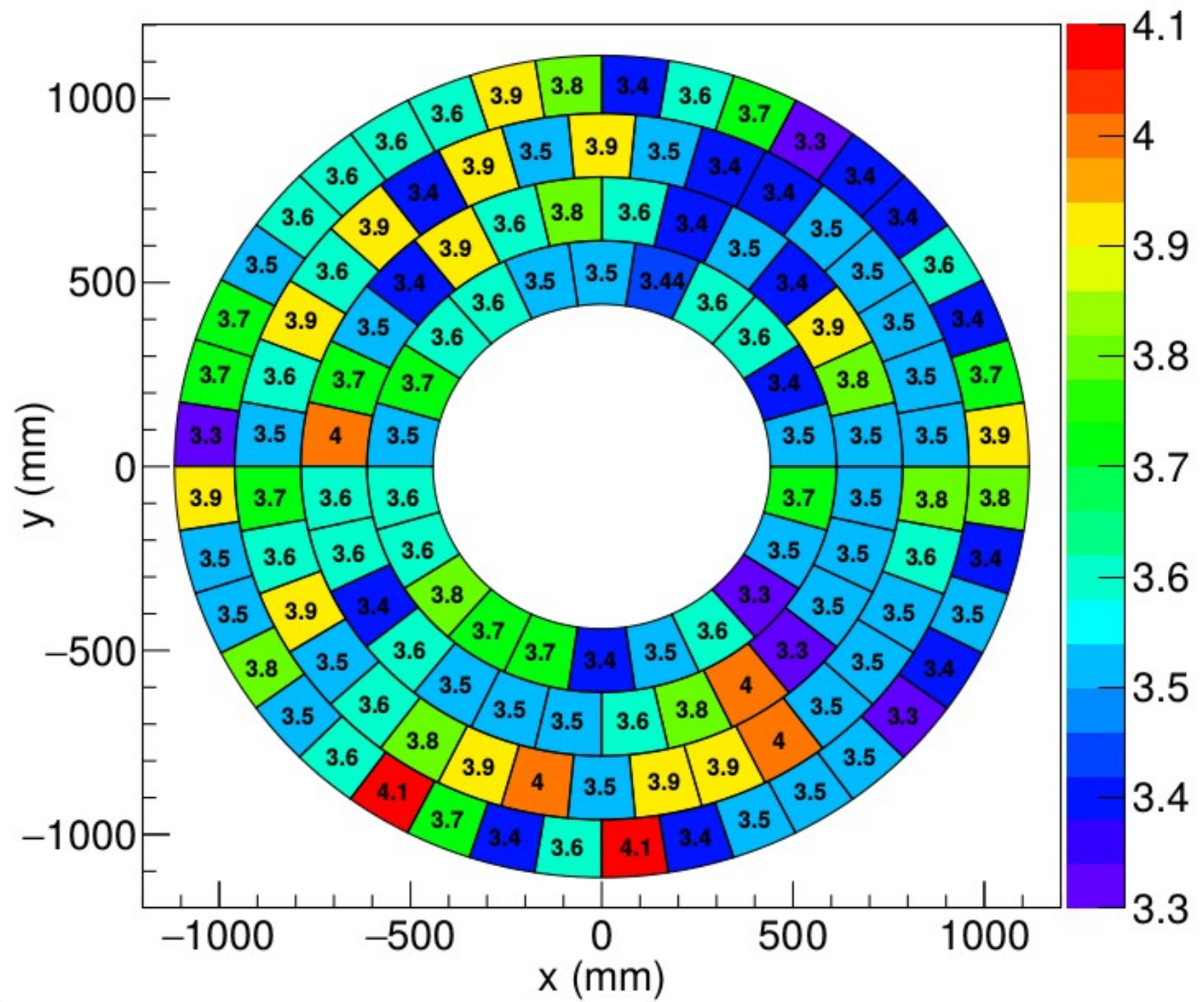
Aerogel maps with ARICH AerogelHist : thickness, cm (down stream)



Aerogel maps with ARICHAerogelHist : transmittance length @ 400 nm , cm (up stream)

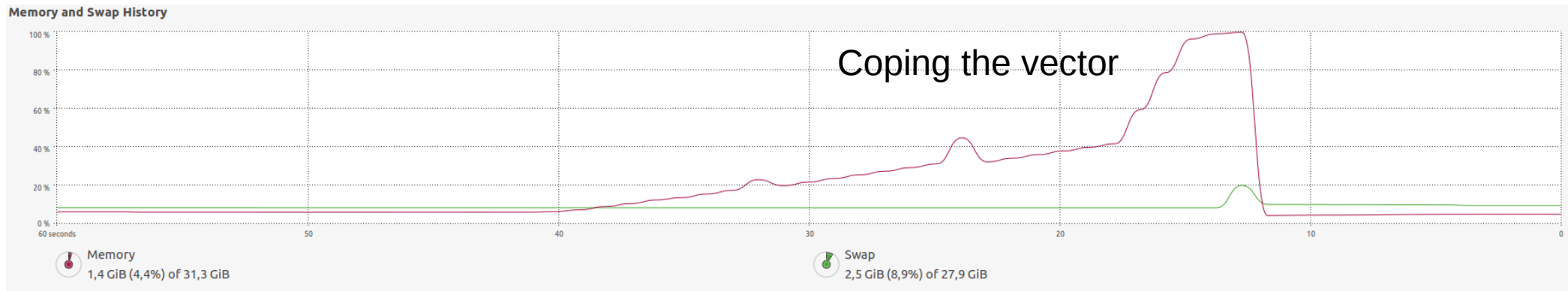


Aerogel maps with ARICHAerogelHist : transmittance length @ 400 nm , cm (down stream)

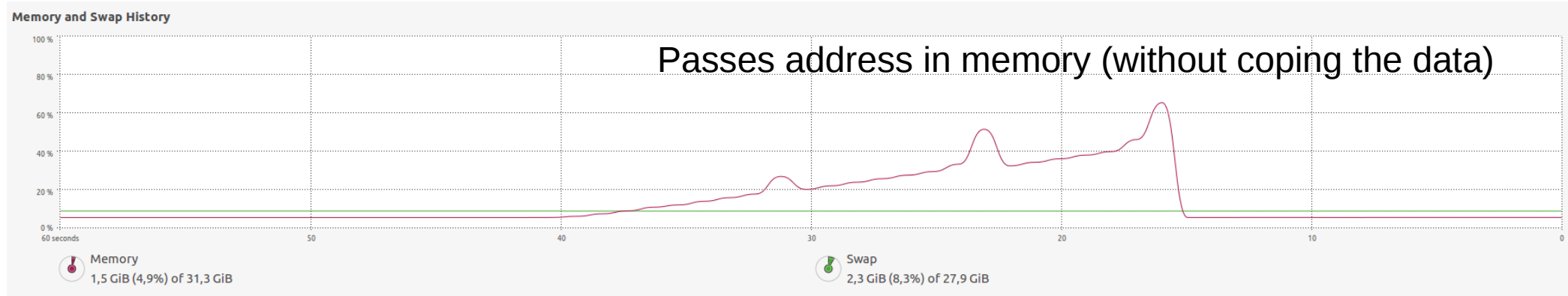


ARICH software warnings within BASF2

```
void setDeadChannels(std::vector<int> deadChannels);
```



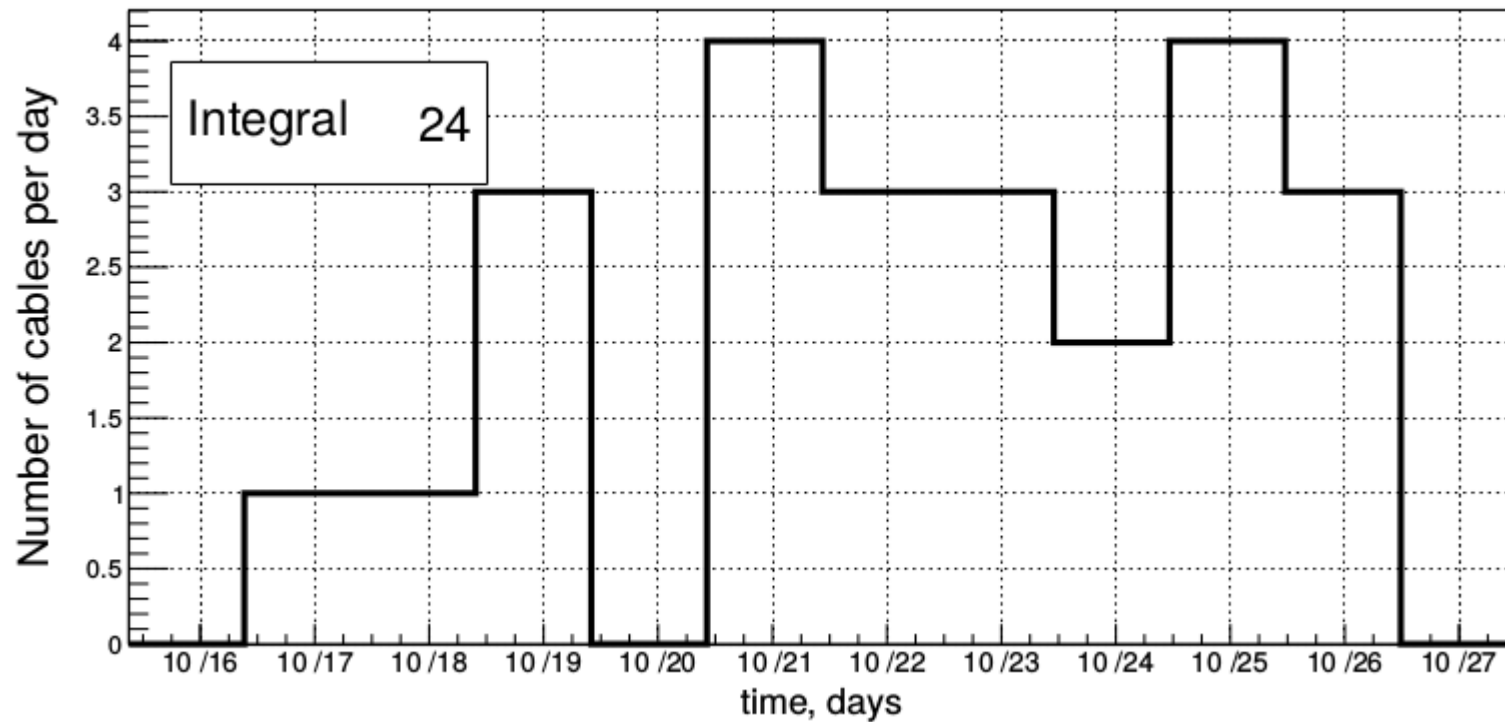
```
void setDeadChannels(const std::vector<int> &deadChannels);
```



To make this test I artificially increase amount of the data to transfer.

In our case this effect practically not seen.

Long low voltage cables from ARICH to e-hut



Many peoples have been working on this task. I decide to put some statistics.

