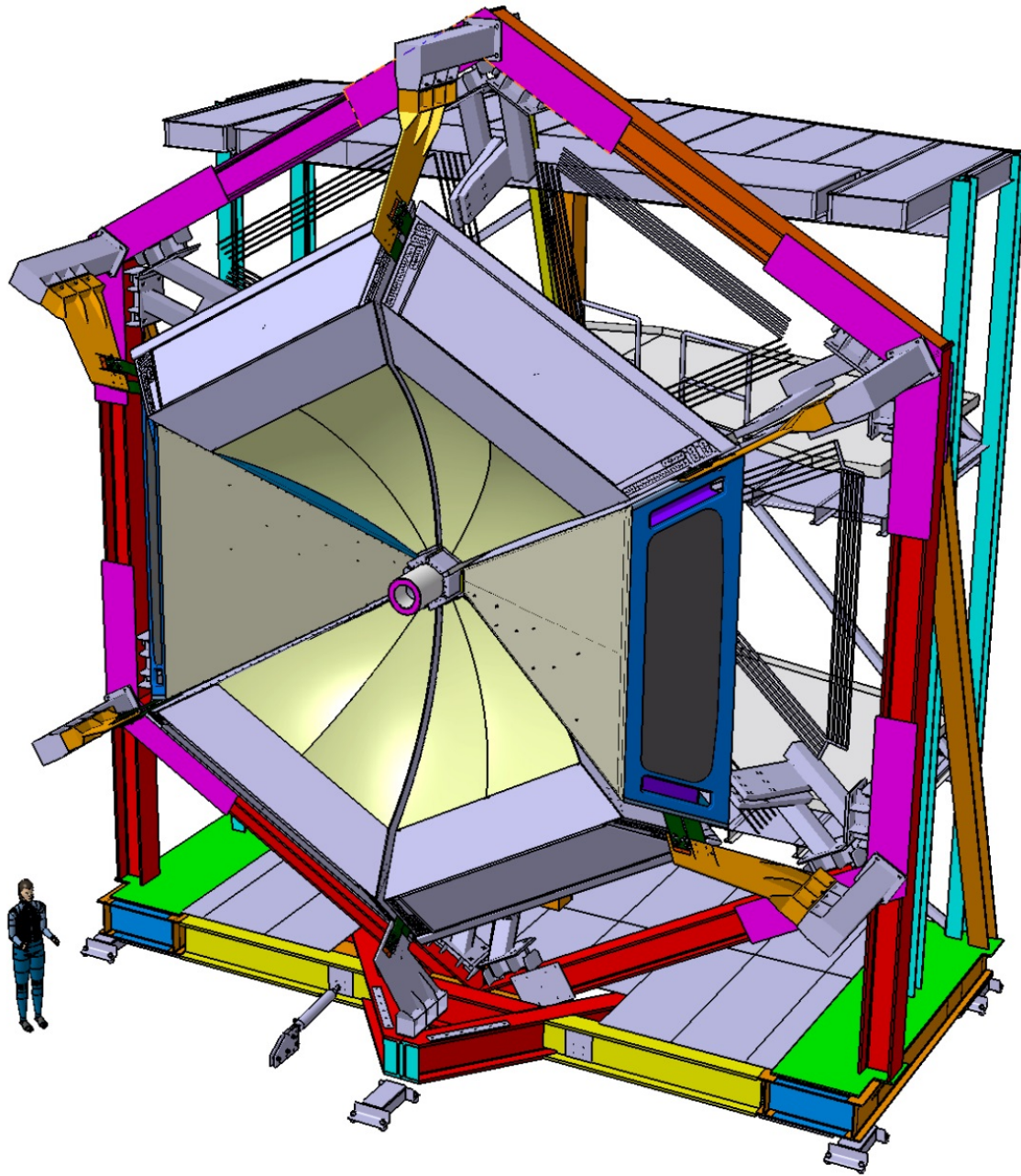


CLAS12-RICH Status-Report

May 23rd 2014



Board designs ready:

- Genova: 2 and 3 PMT adapter boards
- Ferrara: 2 and 3 MAROC3 chip boards
- JLab: FPGA board

To do list before production:

- * Final check interconnections and dimensions
- * Check possible interferences on cable routing
- * Define prototype board numbers

First two CMA Spherical mirror demo delivered at JLab

- Inspect material before payment
- Any characterization available at JLab ?
- Temporary export to Italy for optical and mechanical characterization

Spherical mirror test production at Riba:

- 2 small supremax samples for practice
- Marcon mandrel for three demos (various resins)

Aerogel

The Manufacture Engineering Phase by the Russian vendors at Novosibirsk to improve and stabilize large tiles production yield has been completed:

- large tiles yield acceptable for mass production has been achieved
- new tiles with optical improved surface delivered for test
- visit of the manufactures from Novosibirsk in Ferrara: March 17-23, 2014

Work in progress....

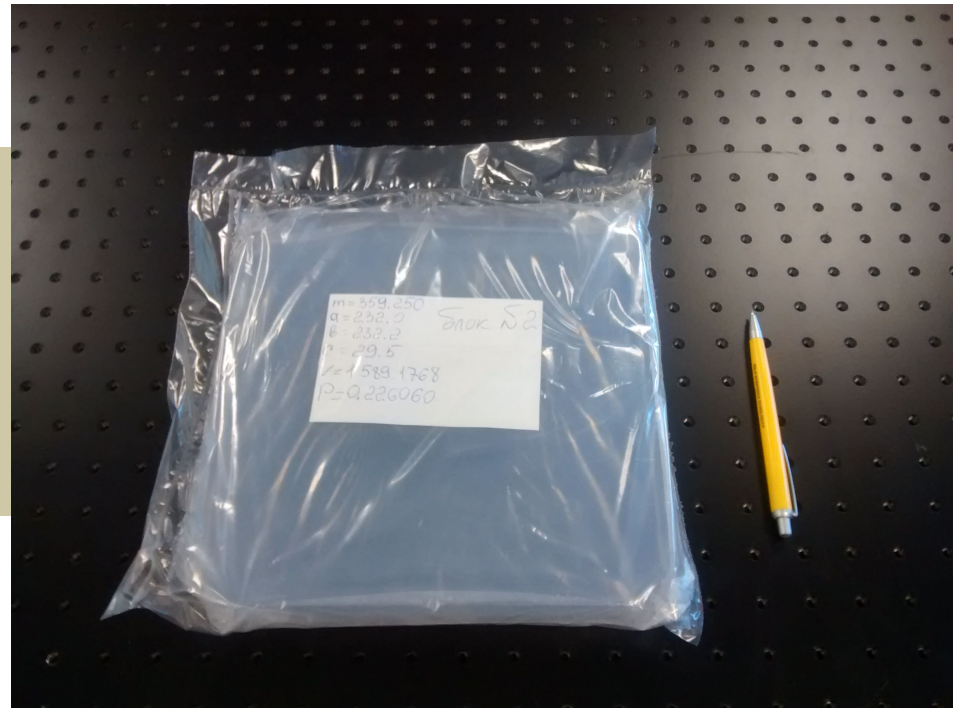
Aerogel Radiator

Refractive index: 1.05

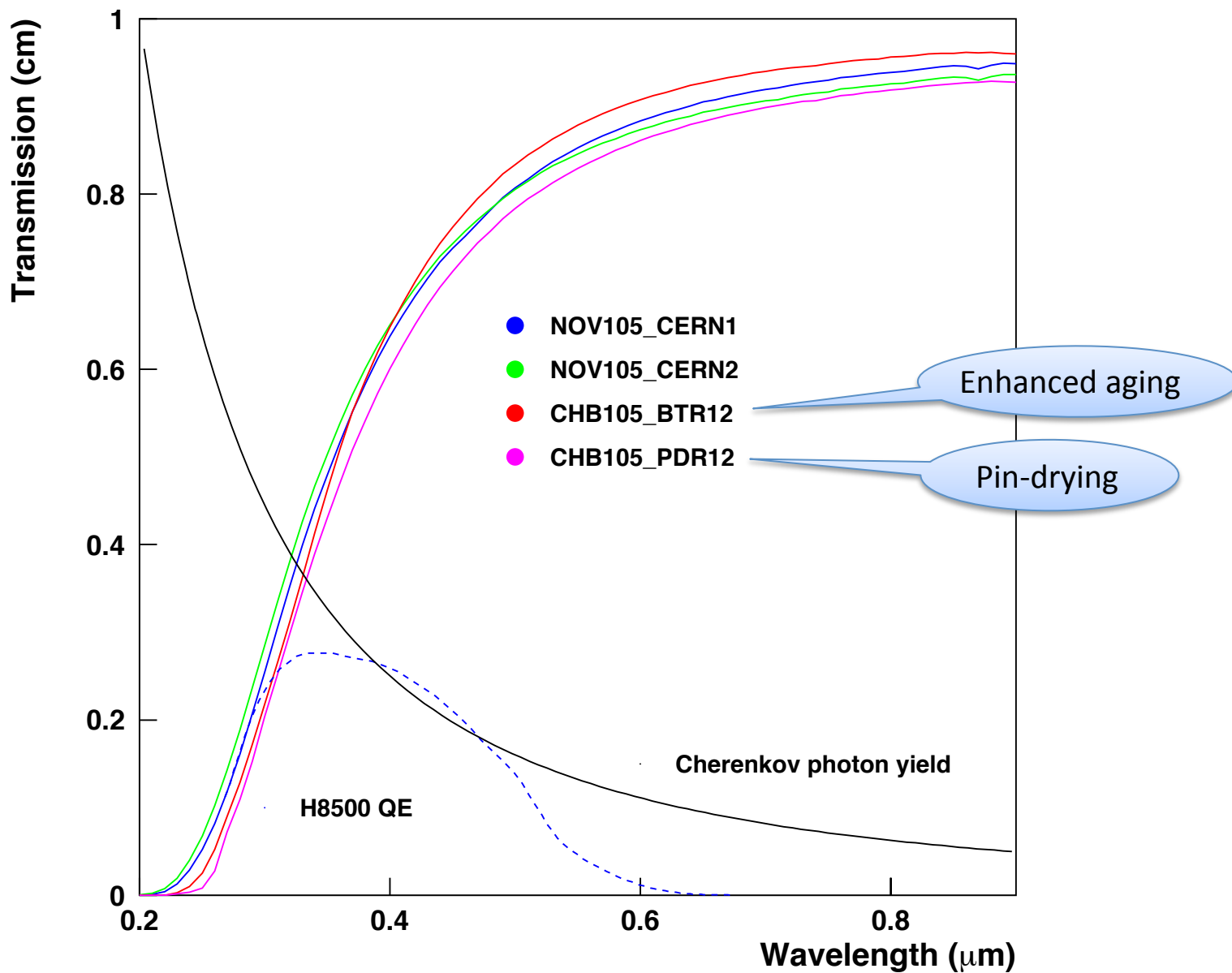
Area: 20x20 cm²

Thickness: 3 cm

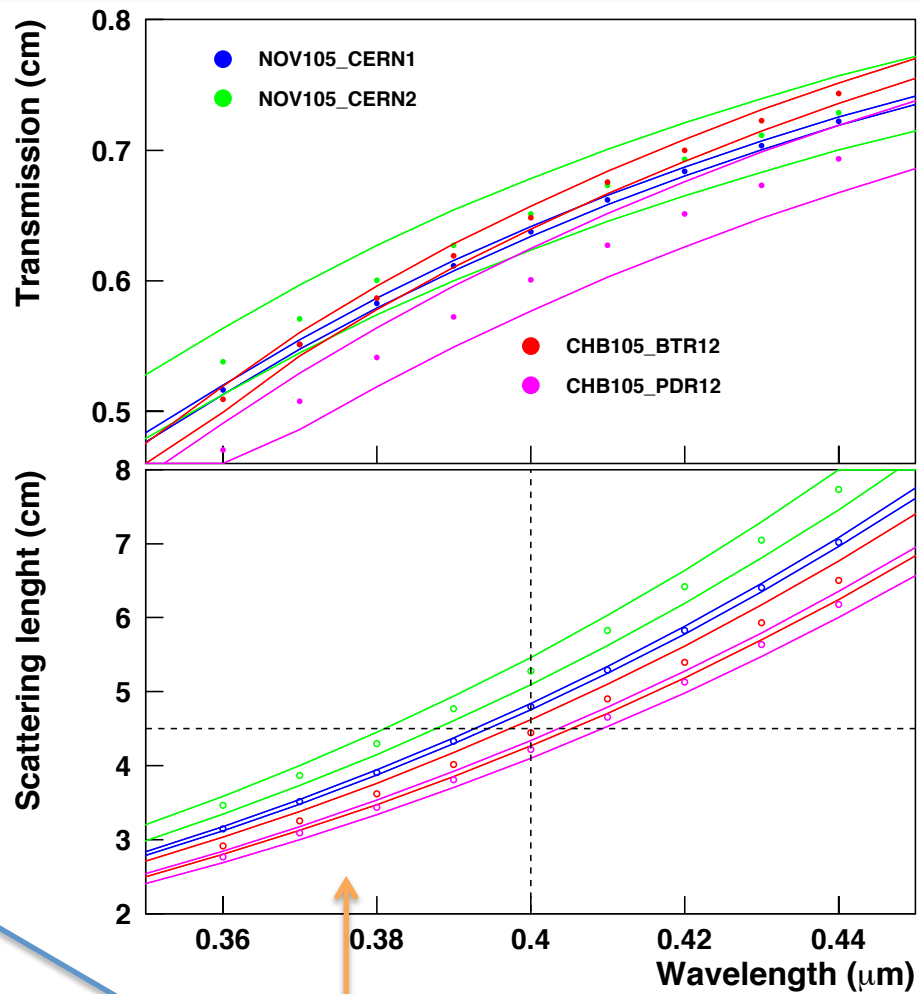
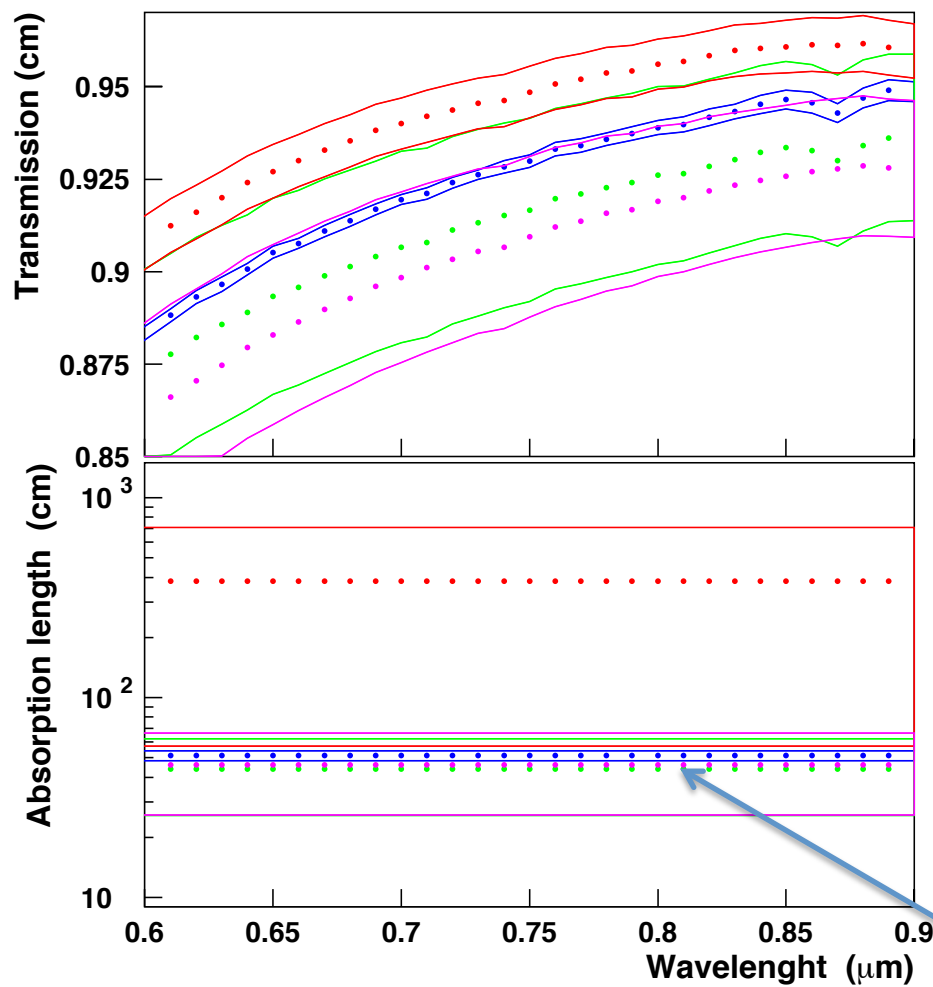
Scattering Length: greater than 50 mm



Transmittance



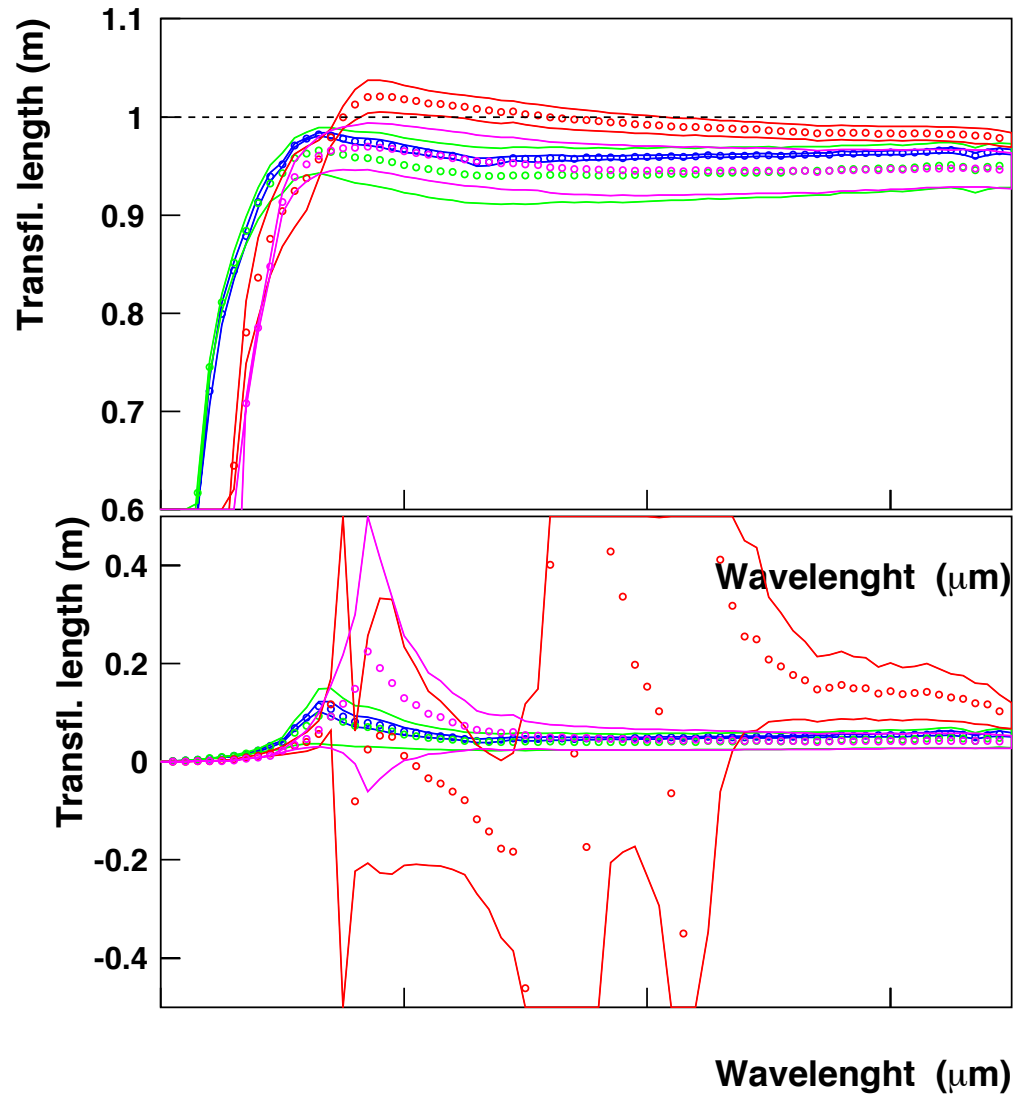
Hunt Analysis



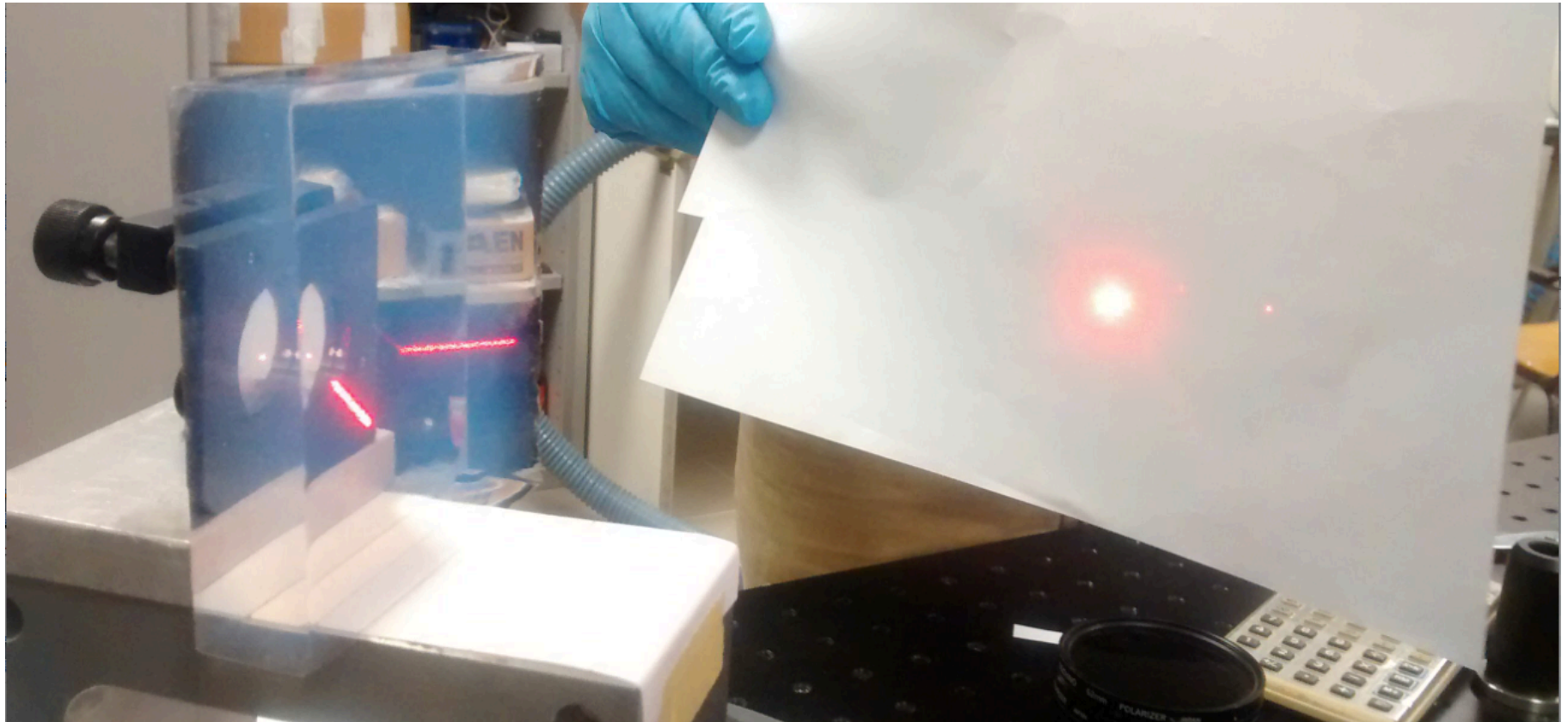
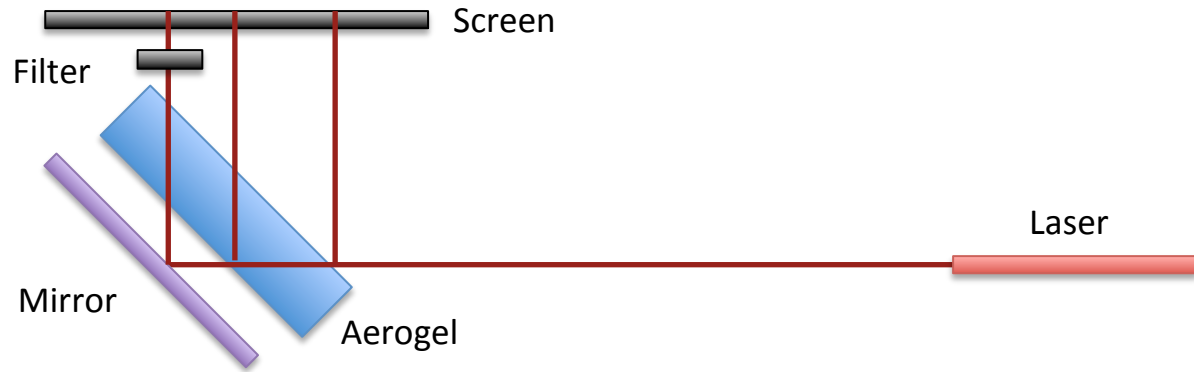
$$T_H(\lambda) = A \cdot e^{-\frac{Ct}{\lambda^2}} = e^{-\frac{t}{\Lambda_A}} \cdot e^{-\frac{t}{\Lambda_S}}$$

Transflectance

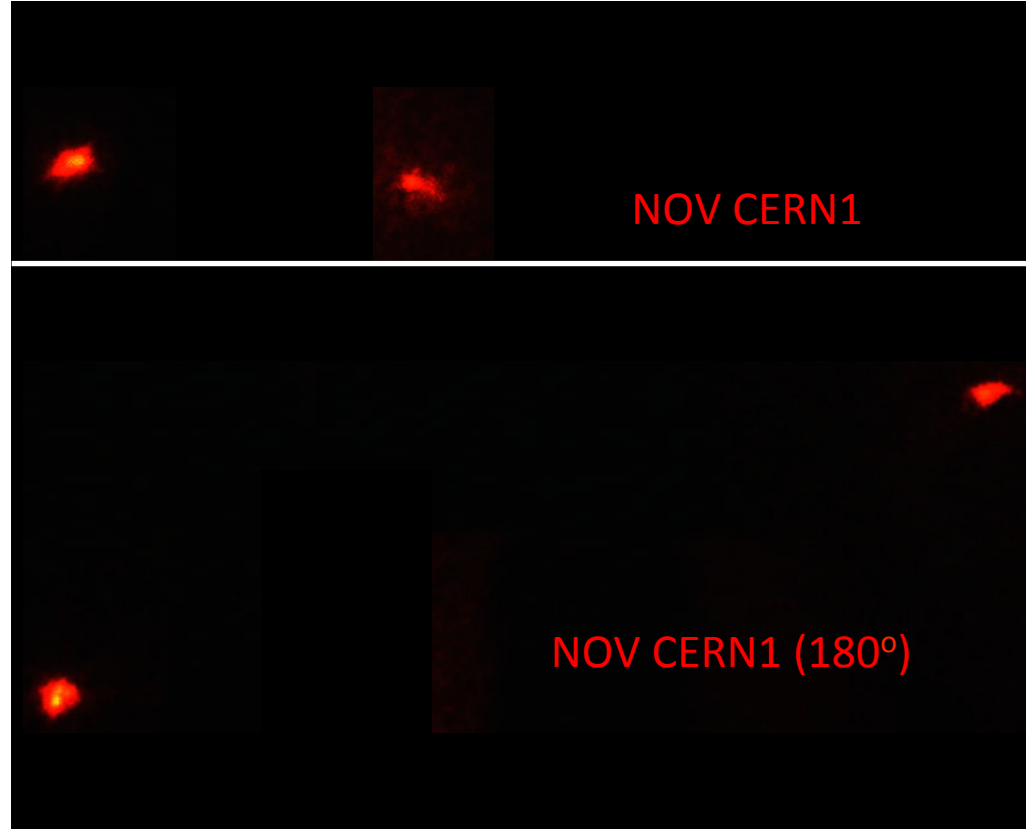
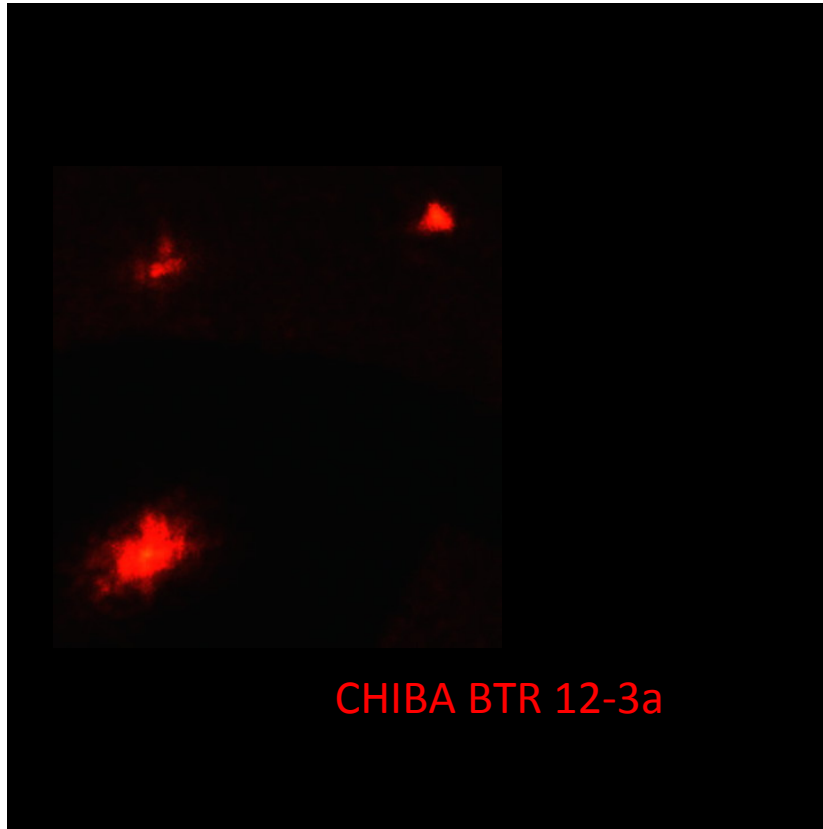
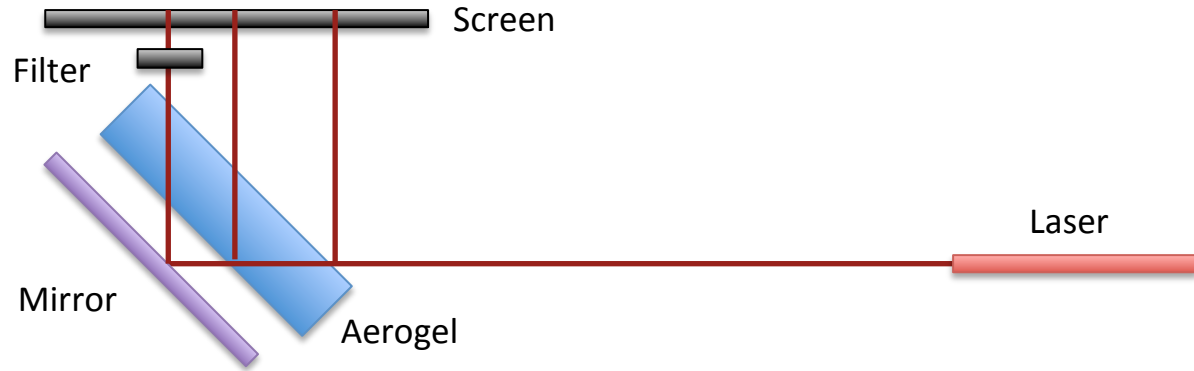
$$TF(\lambda) = T / T_H(\lambda)$$



GEMC Simulations



GEMC Simulations



GEMC Simulations

