BSRA

Calibration issues and plans

BSR SKETCH

D3

Ondulator

BSRA

PMT

LDM

BSRT

AGM'S ELECTRONICS

Filter wheel

PMT

Amplifier

Analog Integration,
A/D Conversion,
Accumulation
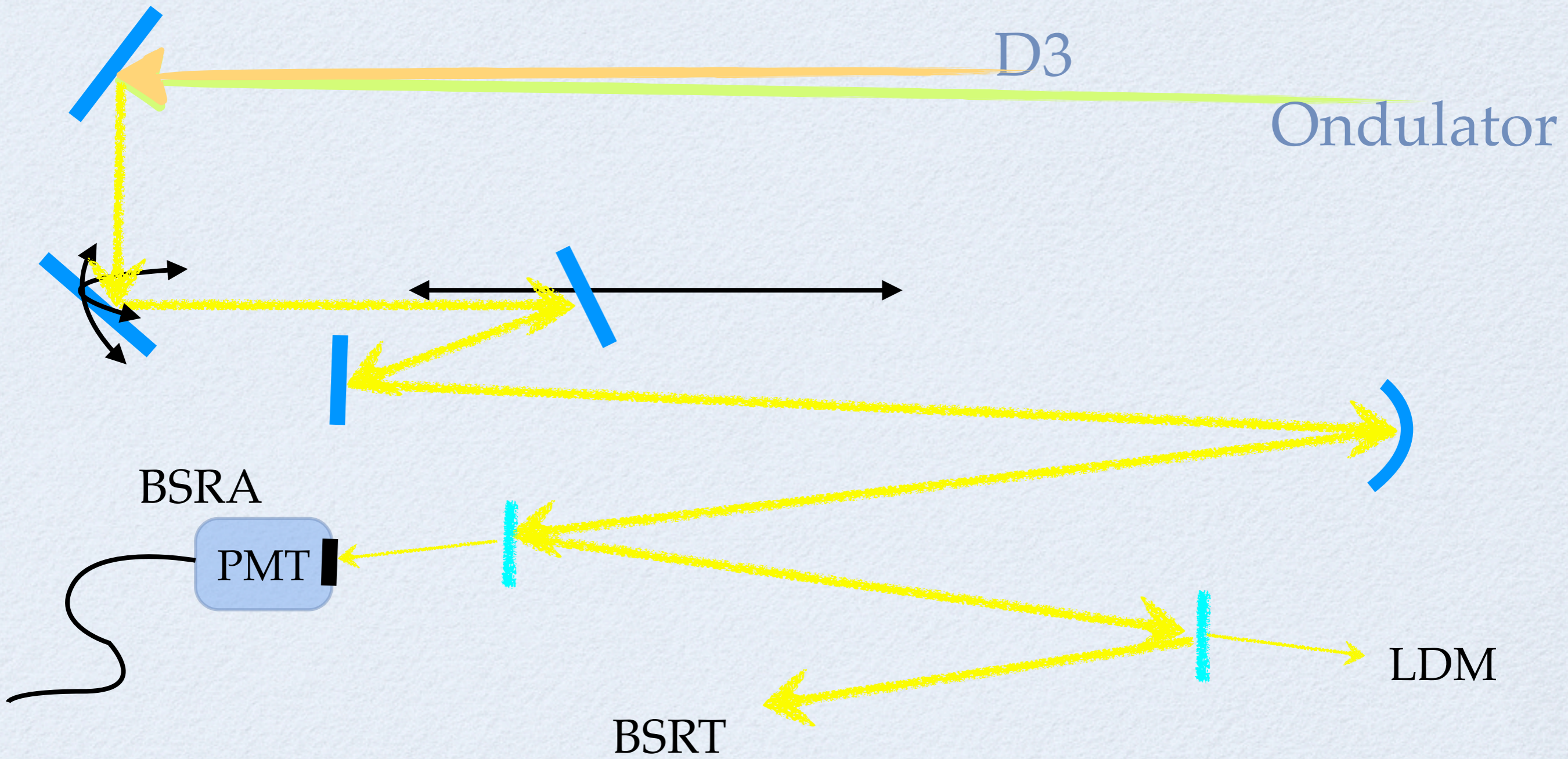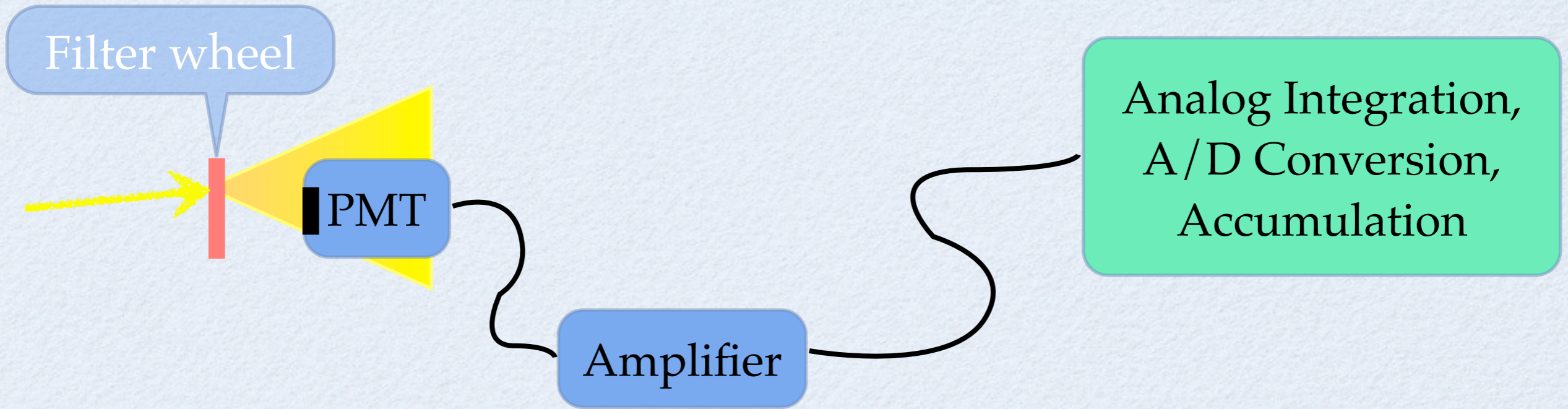
- Emission (Energy)
- Spectral acceptance
- Alignment (coupling of the light into the system)
- Photocathode efficiency
- Photo-multiplication 'gain' Vs. Voltage

WHY SO MANY TROUBLES WITH THE CALIBRATION?

- Excessive dependencies from the other elements of the telescope

- Local aging of the photocathode

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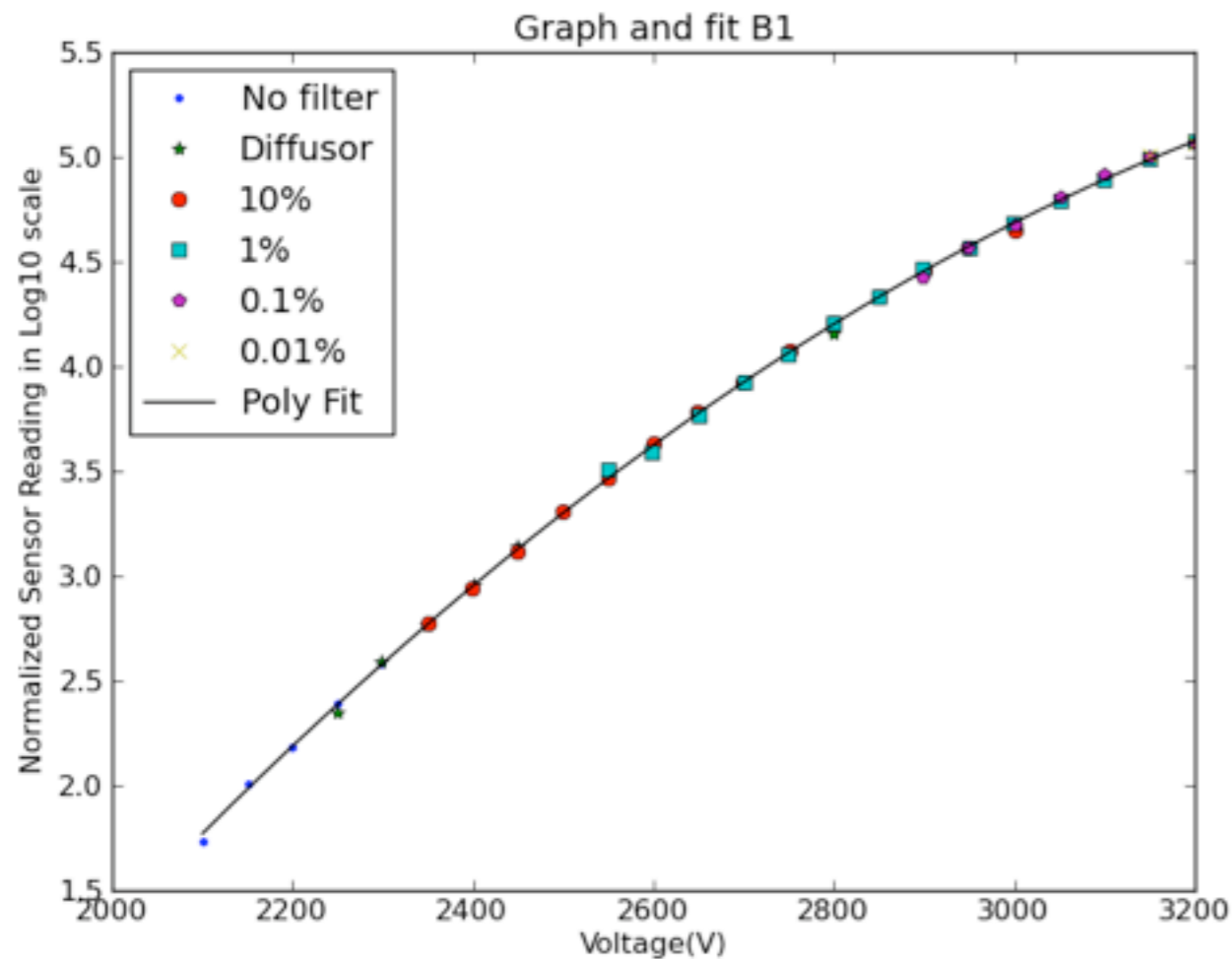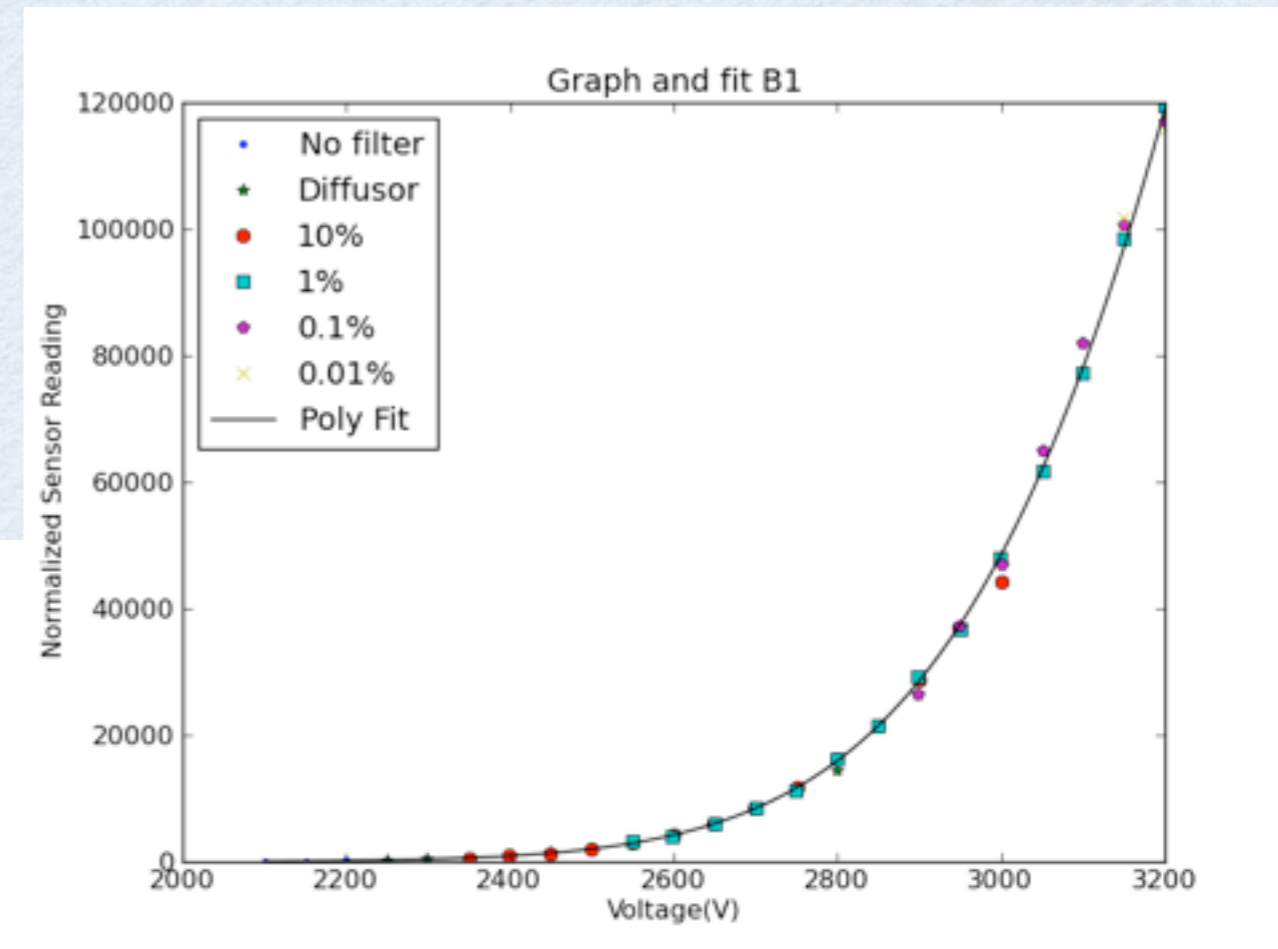
- Local aging of the photocathode

Both those effects have been mitigated since the last TS with the introduction of a diffusor

In the next TS we will place it on a permanent stand

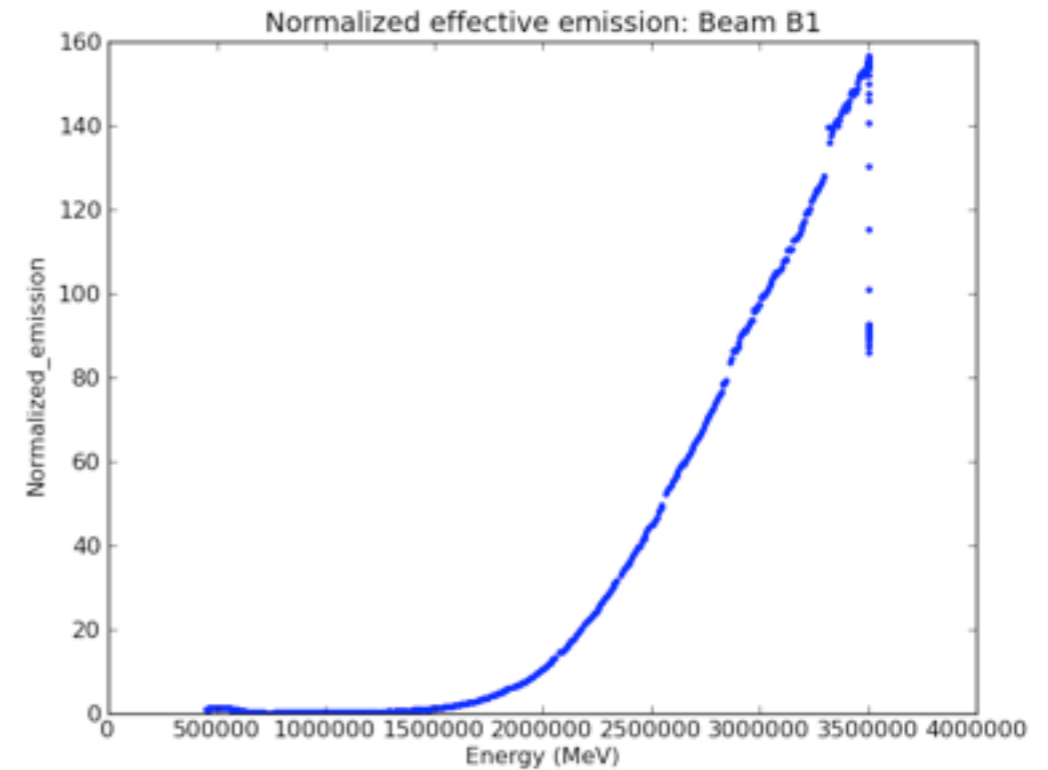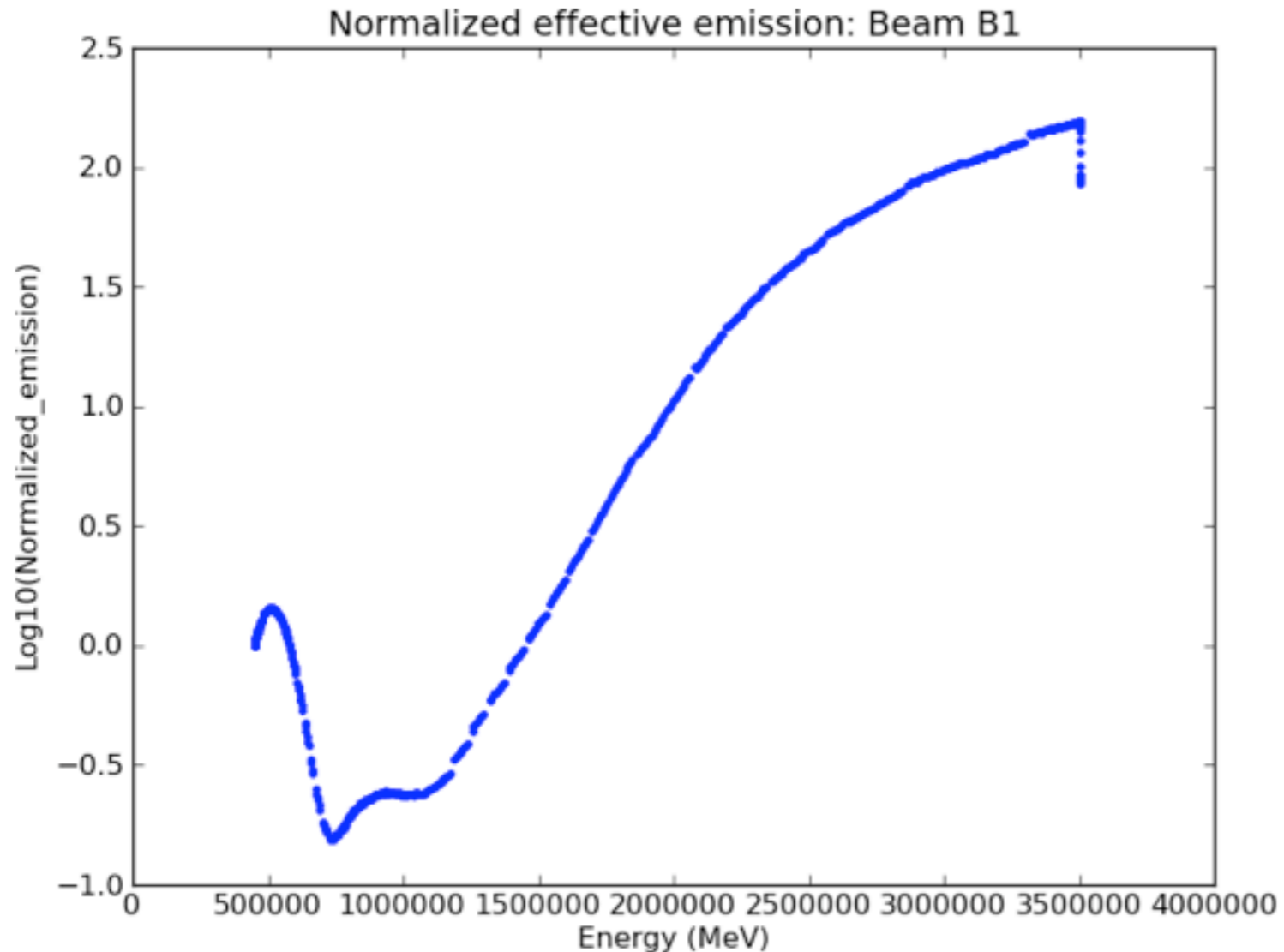# CALIBRATION DATA

Voltage Scan:
- Not energy dependent
- Takes about 30' with the automated scan

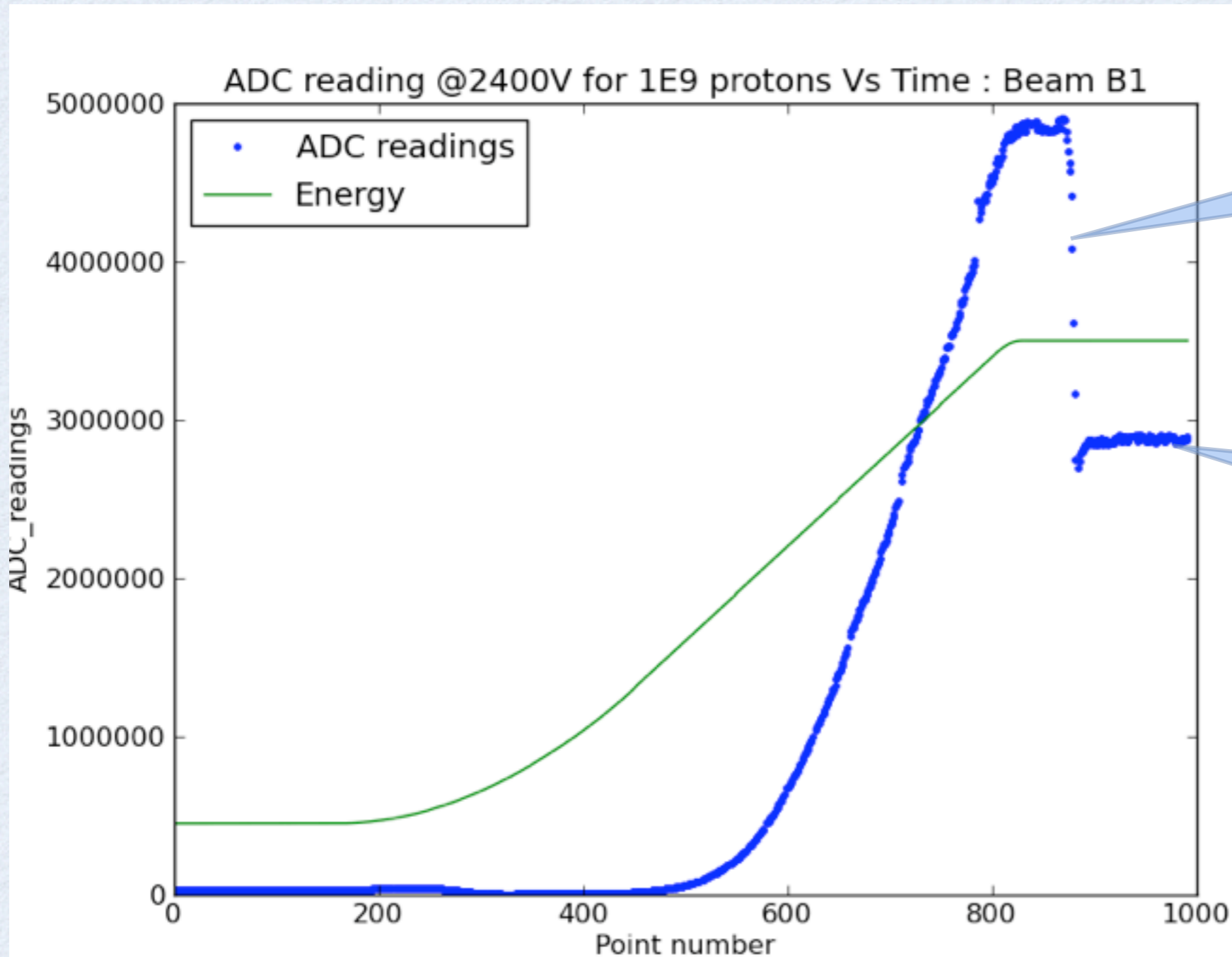Should be repeated from time to time to verify the aging

CALIBRATION DATA

Energy Scan:
- Alignment independent...

...only in theory: cut on some movable element.
To be repeated each re-alignment (TS)

CALIBRATION DATA

Effect of the little trombone

Residual auto steering effect after the introduction of the diffuser

CALIBRATION TABLE

CALIBRATION TABLE**

Energy	Voltage	Filter	Calibration Factor
450	2800	no filter	3.00E+07
480	2900	no filter	5.00E+08

⋮

Energy	Voltage	Filter	Calibration Factor
3400	2300	10%	2.00E+07
3500	2300	10%	1.00E+07

**Not real calibration numbers

Tuesday, June 14, 2011

PLANS FOR THE FUTURE

- From table based voltage setting to automated setting based on the signal level

- Only the Emission will be based on a table

- Global scaling factor

- Adjustment of the scaling factor based on the little trombone position