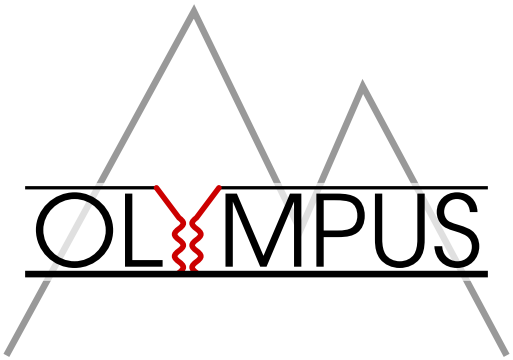
Target Gas System and Vacuum

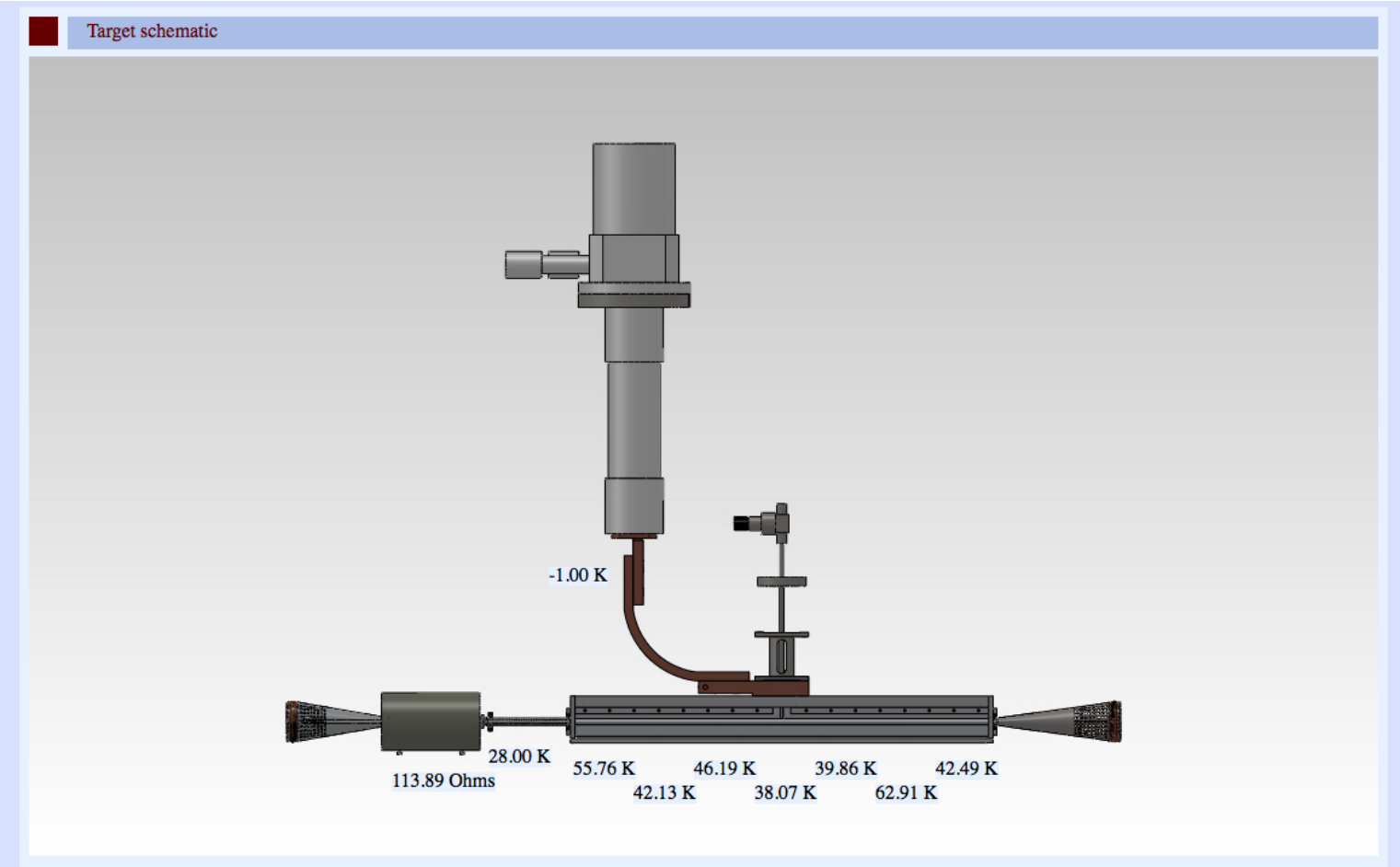
Jan C. Bernauer



Collaboration Meeting September 2011

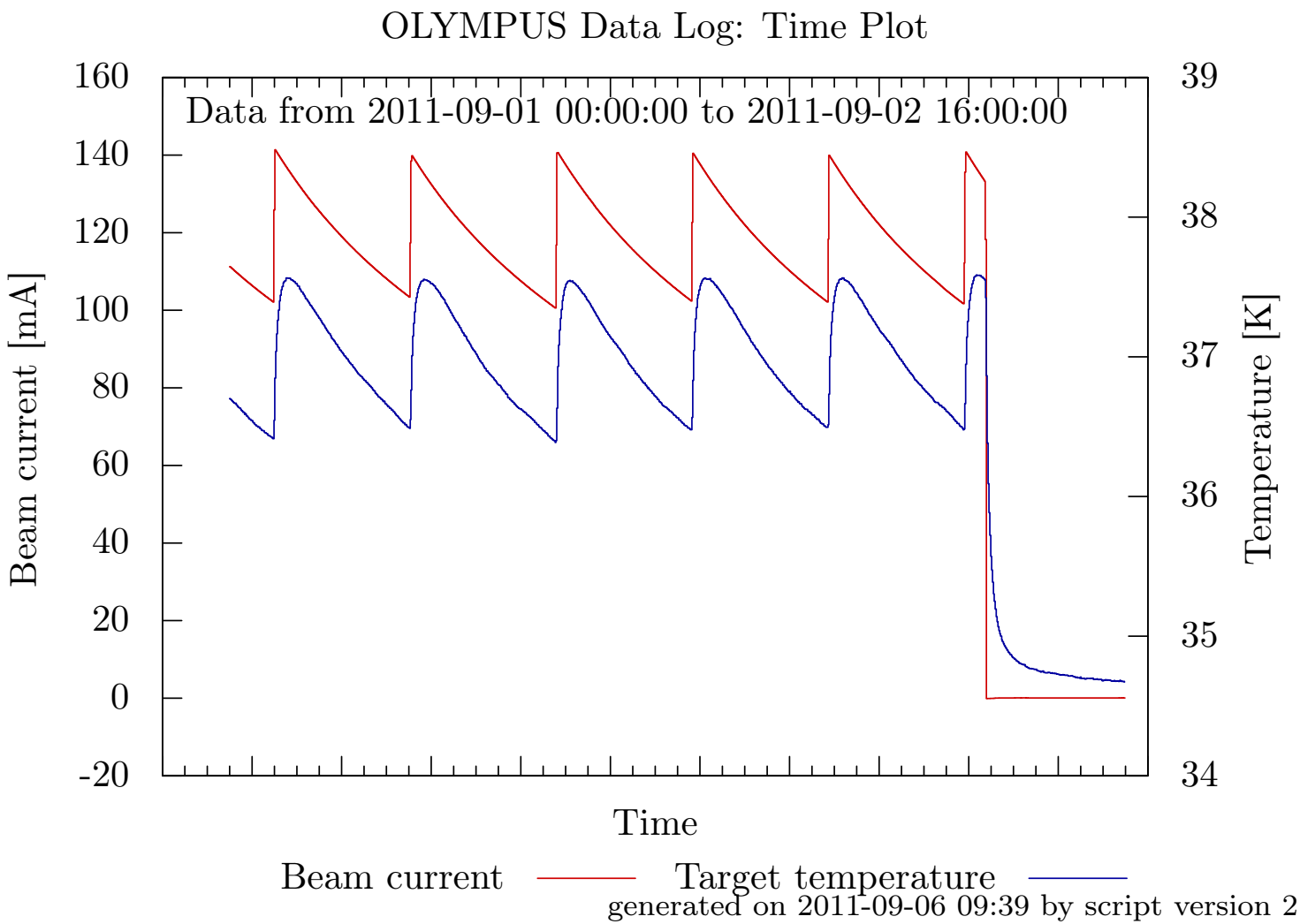
Massachusetts Institute of Technology

Target temperature sensors



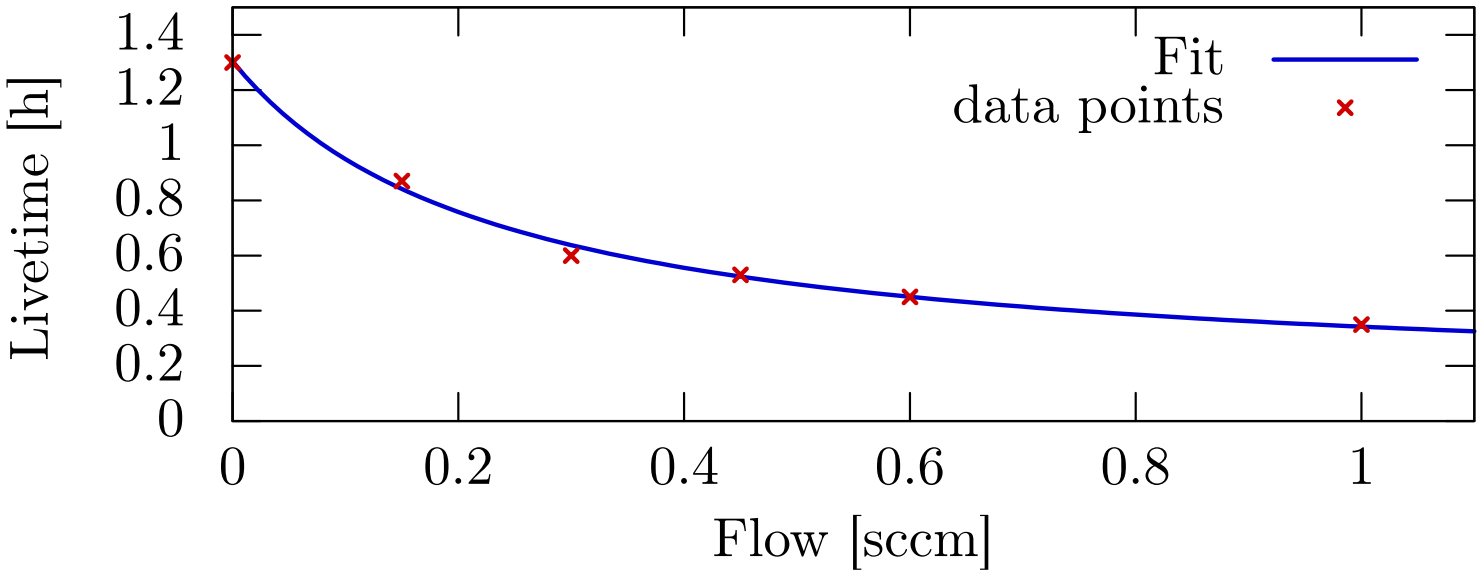
From `http://olympus.desy.de/`

Target temperatures with beam



This is with 4.5GeV, 140 mA beam. No problem!

Lifetime



Assume:

$$1/T = 1/T_{Ring} + 1/T_{Target}, \quad T_{Target} \sim 1/flow$$

But need offset: $T = (T_{Ring}^{-1} + T_{Target}^{-1})^{-1} + offset$

For this test: Offset=0.12h, $T_{\mathrm{Ring}} = 1.19h$,

$$T_{Target} = \frac{0.28}{flow} h\,sccm$$

Things to address

- Replacement for roughing gauge $\longrightarrow$ ordered.
- Integrate Pump / Roughing line valve into interlock $\longrightarrow$ When gauge is here.
- Repair temperature sensors $\longrightarrow$ in case we open the target again.