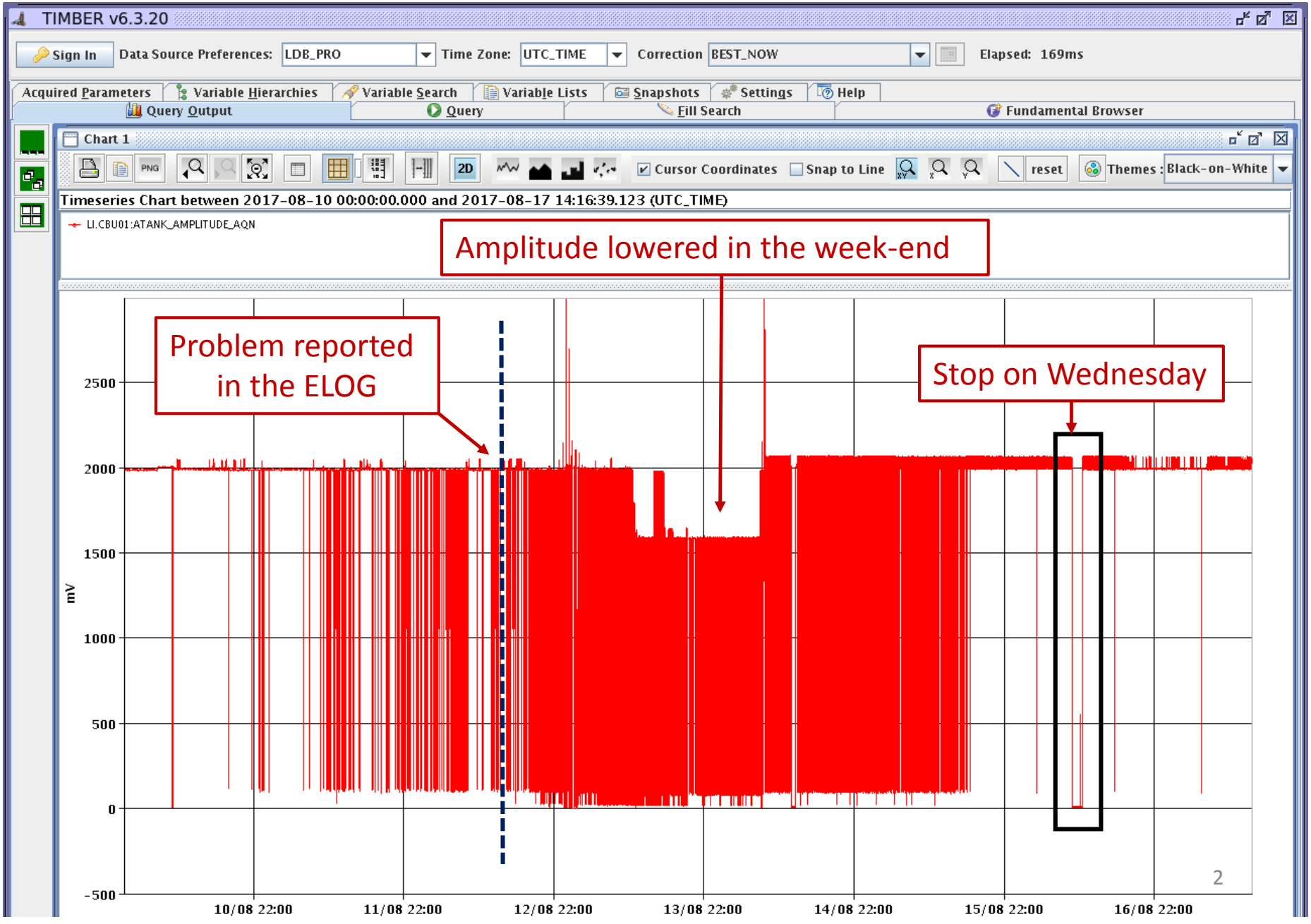
PSB Operation: Status

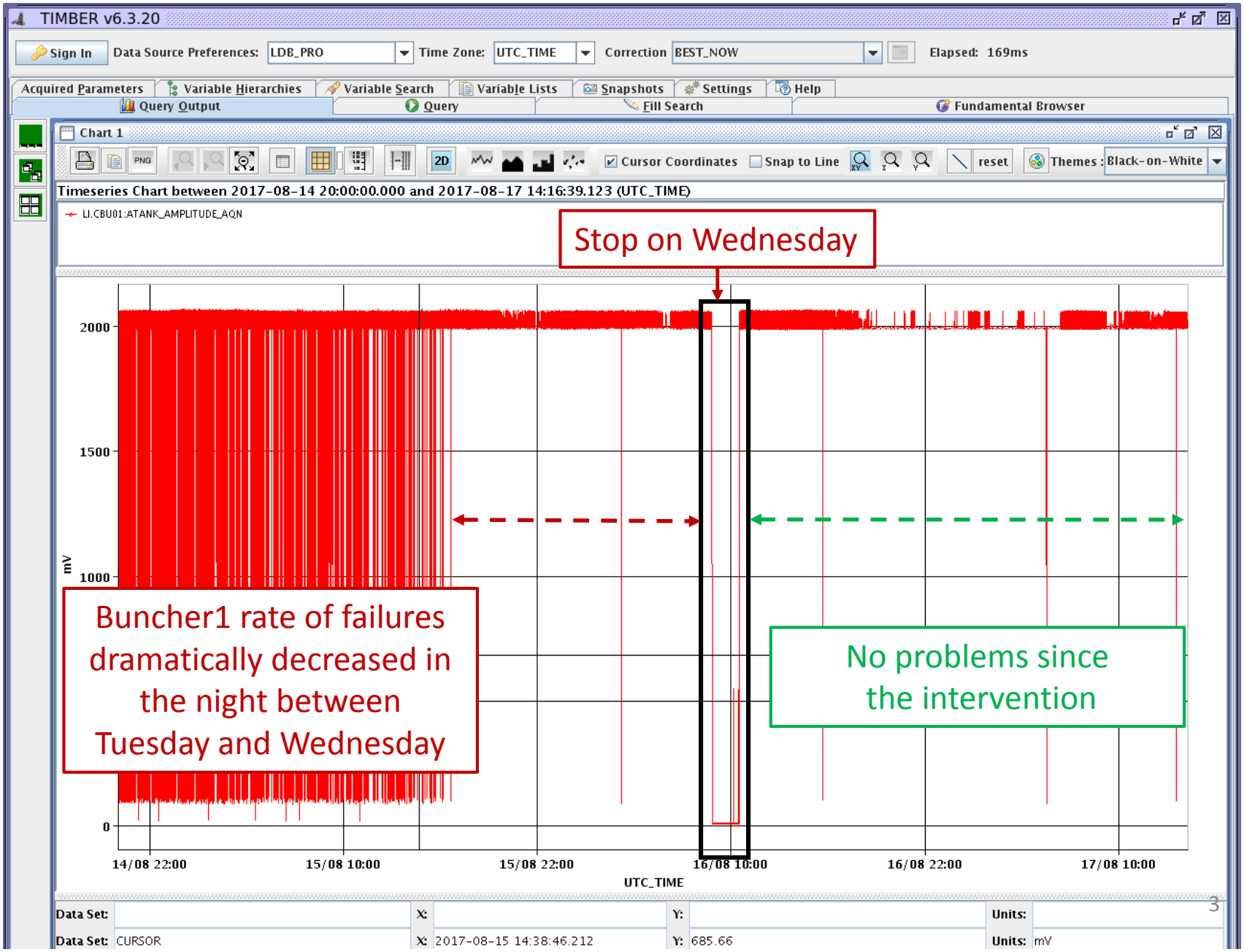
Operation:

- **All operational beams available and within the requested specifications.**
- Since the 12/08 frequent losses of intensity were observed along the injection line due from the amplitude of the buncher1, **LI.CBU01**, being unstable:
  - Linac2 RF team diagnosed **two problems during the losses of intensity:**
    - **Amplitude of forward power and cavity voltage jumping.**
    - **RF pulse fully reflected.**
  - Several modules exchanged without finding the culprit.
  - Additional **diagnostic** installed on Monday and the data analysis showed that the **amplifier generated the correct frequency** (202.56 MHz).
  - The problem seemed coming by bad/damaged connection.
  - On Wednesday during a two-hours access:
    - **Directional coupler exchanged and cable cleaned.**
    - **Amplifier output coupler replaced and RF contacts cleaned.**
    - **Capacitors of RF anode voltage rejection filter replaced.**
  - After the intervention, **rare occurrences of the problem and improved response of the fwd power.**
  - Linac2 RF planning extra actions for the next TS, e.g. connecting the amplifier to a dummy load for further investigations.

PSB Operation: Status (II)



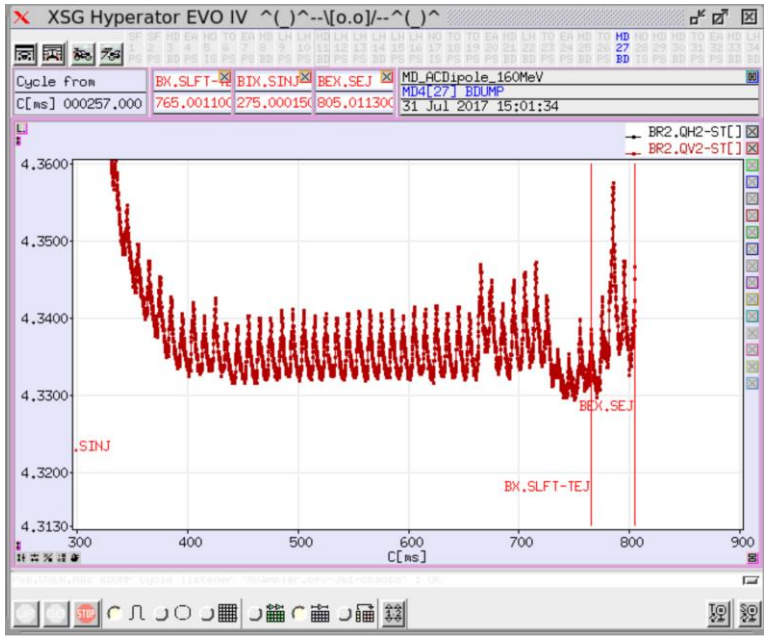
PSB Operation: Status (III)



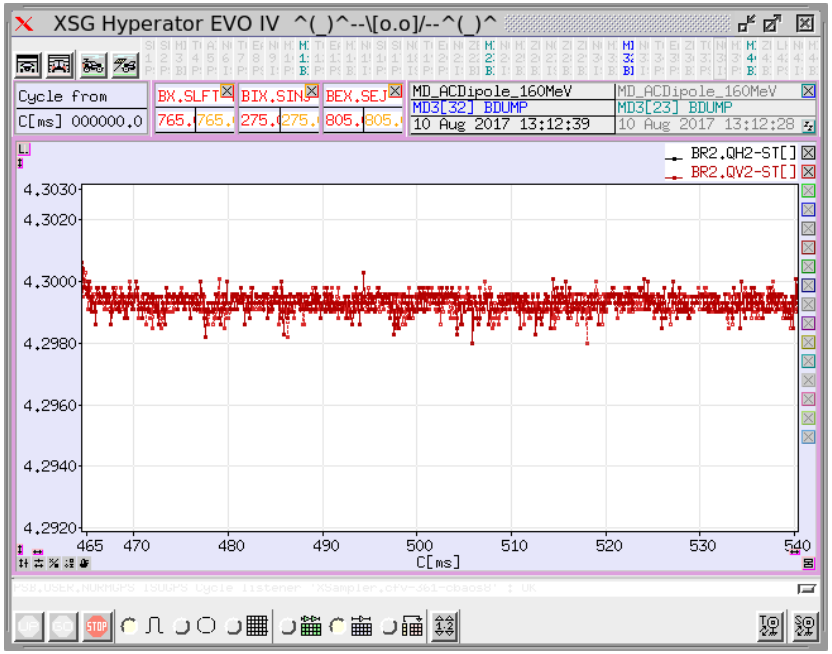
PSB Operation: Status (IV)

- Beam stop Thursday 10/08 ~3 hours to replace QDE supply and investigate required switch spare parts, ripple removed after intervention.

From Bettina's report 04/08



Zoom-in after intervention

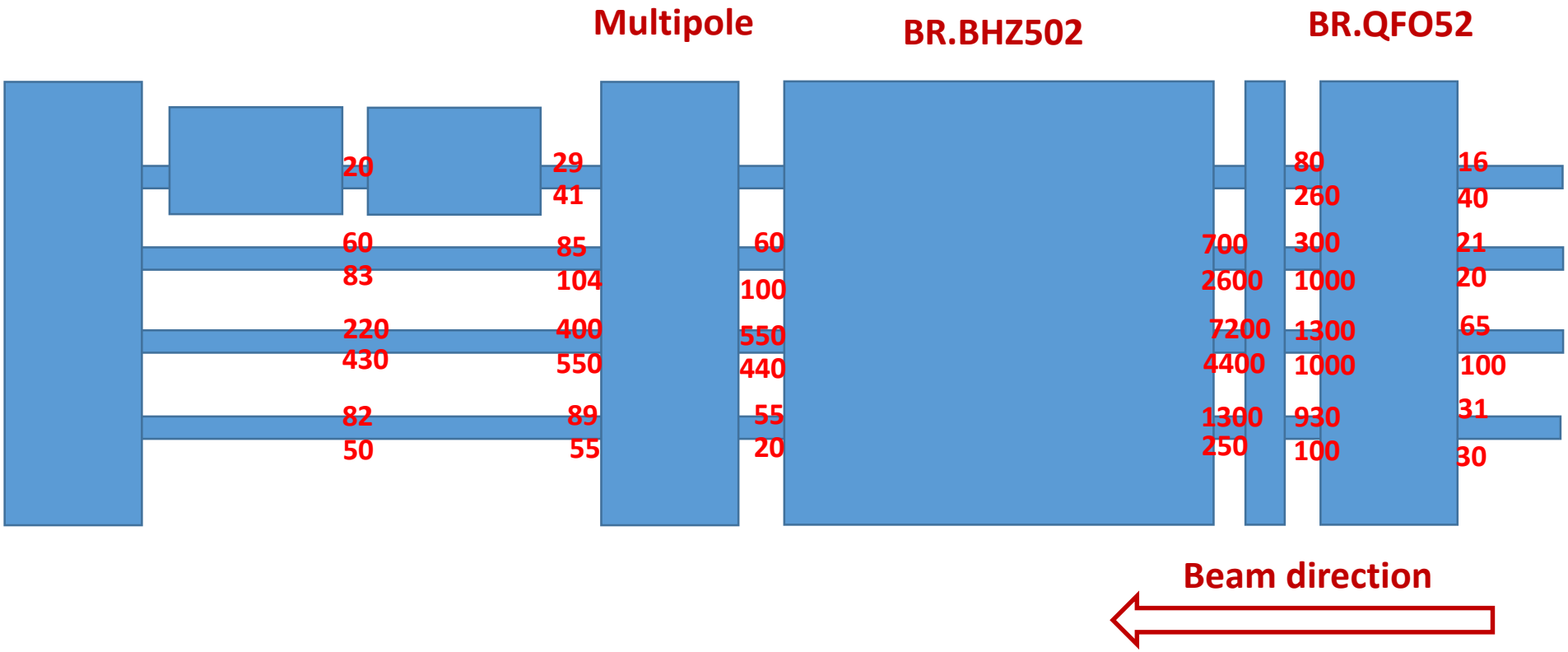


- In shadow of above, access to reset R2 V wirescanner, which is now working normally.

- Also access to measure radiation hotspot around BHZ52. This shows majority of losses appear to be generated in R2, so studies will continue (next slide).

PSB Operation: Status (V)

Mesures réalisées le 10/08/2017 entre 9h40 et 10h05 sur le BHZ52 du Booster. Débit de dose au niveau de la chambre à vide (entre 1 et 5 cm) en µSv/h.



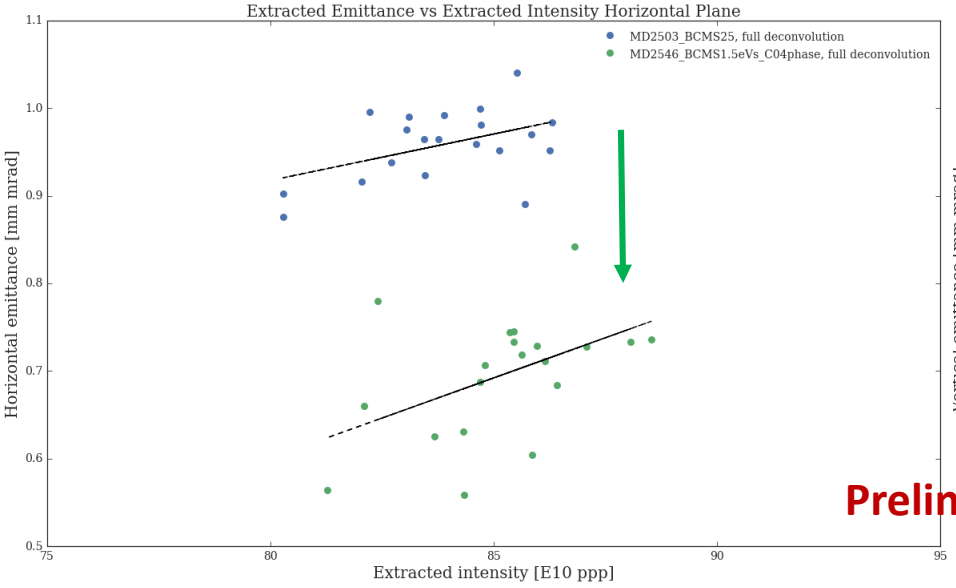
Courtesy of J-F. Gruber

PSB Operation: Status (VI)

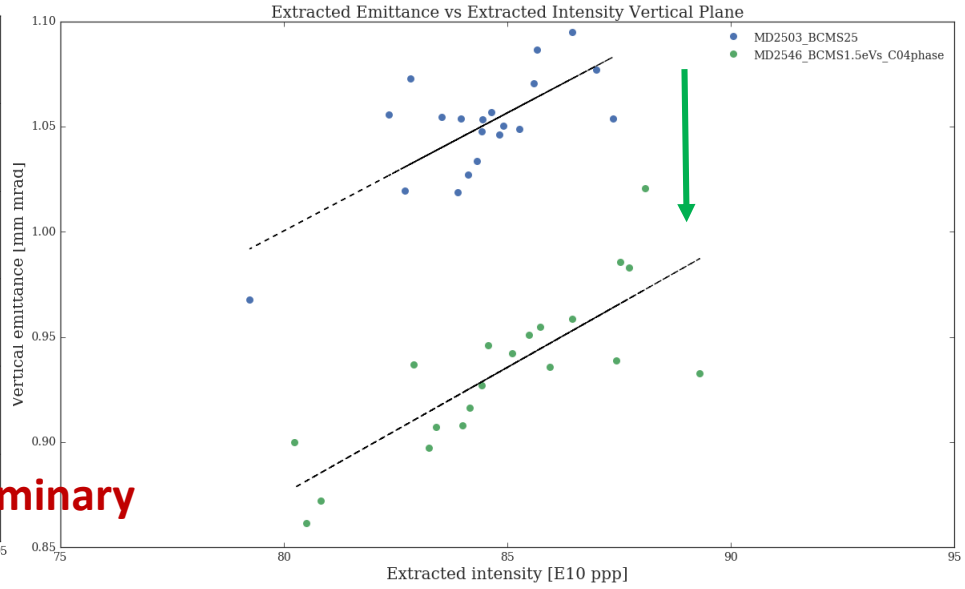
From last MSWG minutes: *"For the BCMS 1.5 eVs beam it was pointed out that the beam should start on the 1.3 eVs brightness curve before the blow-up is applied. S. Albright explained that in fact the blow-up is applied on a clone of the operational BCMS beam at around C600 with a different C16 function. G. Rumolo suggested, as a next step, that the beam is created from the LHC25 standard cycle instead to have the expected improvement in brightness."*

Simon prepared a new version for ring3 only with encouraging results!

Horizontal Plane: **Full Deconvolution**



Vertical Plane



Preliminary