



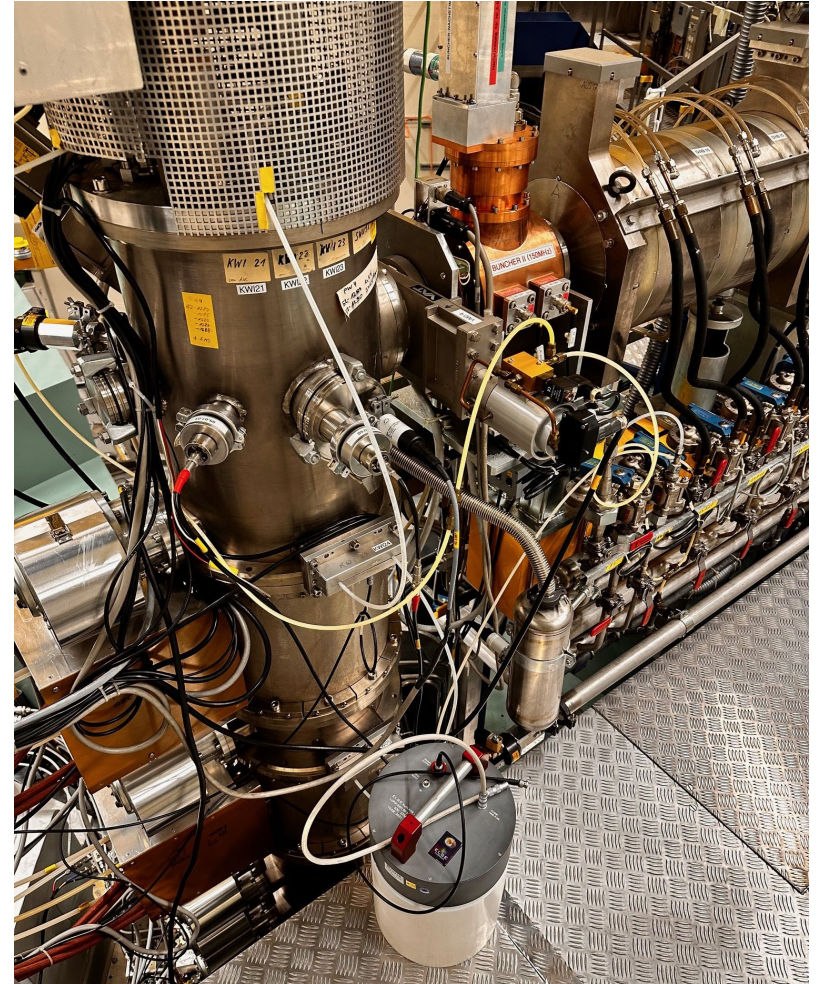
Mariusz Sapinski :: Paul Scherrer Institute

# RRL Strahlentwicklung results

PSI, September 24<sup>th</sup>, 2023, Strahlentwicklung Nachbesprechung

## Measurement of neutron radiation along the 870 keV injection line

- Measurement with SU:  
Eike, Mike, Albert
- Motivation: check feasibility of  
replacing Ling Profile Monitors with  
camera-based systems
- Two measurement sessions with 5(2)  
detectors along the beamline
- Analysis ongoing



# Wagon B (I)

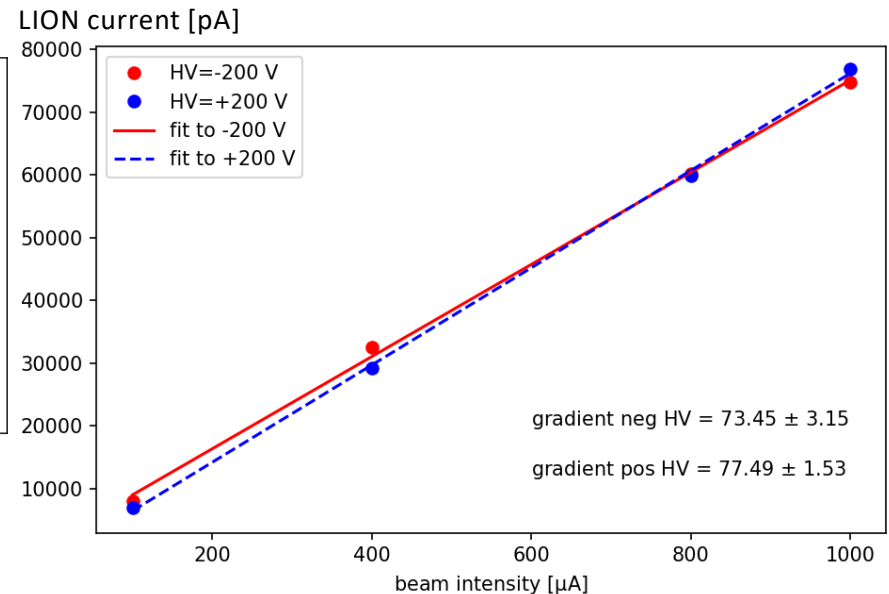
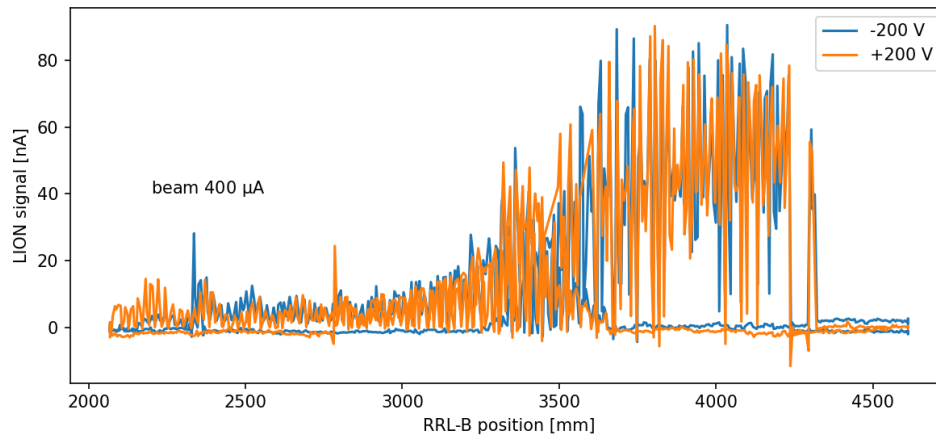
- Testing limits of the U-shaped target
- 10-20 times more material than wagon A (carbon fibers)





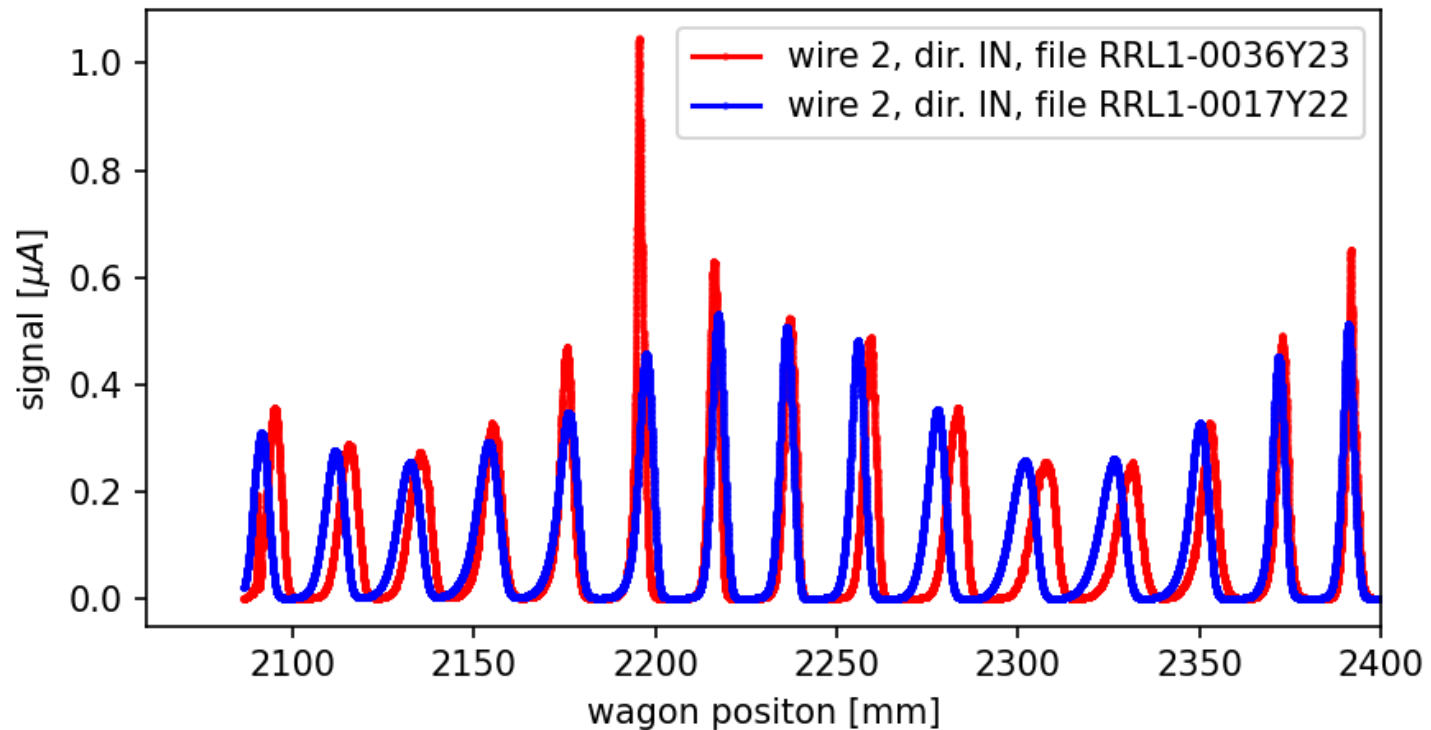
# Wagon B (II)

- Long Ionization Chamber is now EPICS channel
- Target tested up to 1.2 mA, and survived
- Two polarities of LION tested
- Interlocks due high losses  
(Antonio said more time needed to bridge them)
- Good linearity of the measured signal
- No clear difference between opposite polarities



# Wagon A

- Wire 2 – OK, wires 1,3 – dead very fast
- Comparison of 2022 and 2023 data (500 uA beam):



- Vertical beam position is different?

# Plans for Strahlentwicklung on November 9 and/or 20

- Wagon A:  
scans at 1500  $\mu\text{A}$  and, if possible, test bias voltages again
- Wagon B:  
scans with LION acquisition at 1 kHz
- November 23<sup>rd</sup>: more tests with exchanged wires and modifications to attachment system