

PAUL SCHERRER INSTITUT

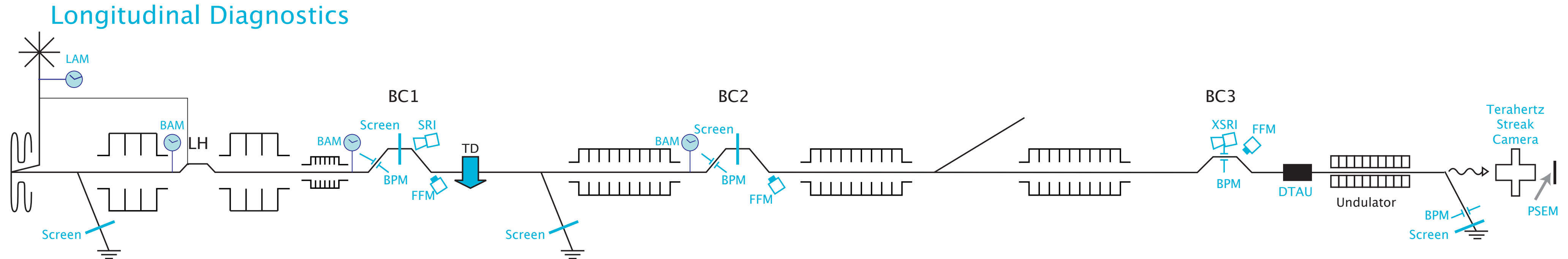


WIR SCHAFFEN WISSEN – HEUTE FÜR MORGEN

Rasmus Ischebeck

# SwissFEL: Status of Longitudinal Instrumentation

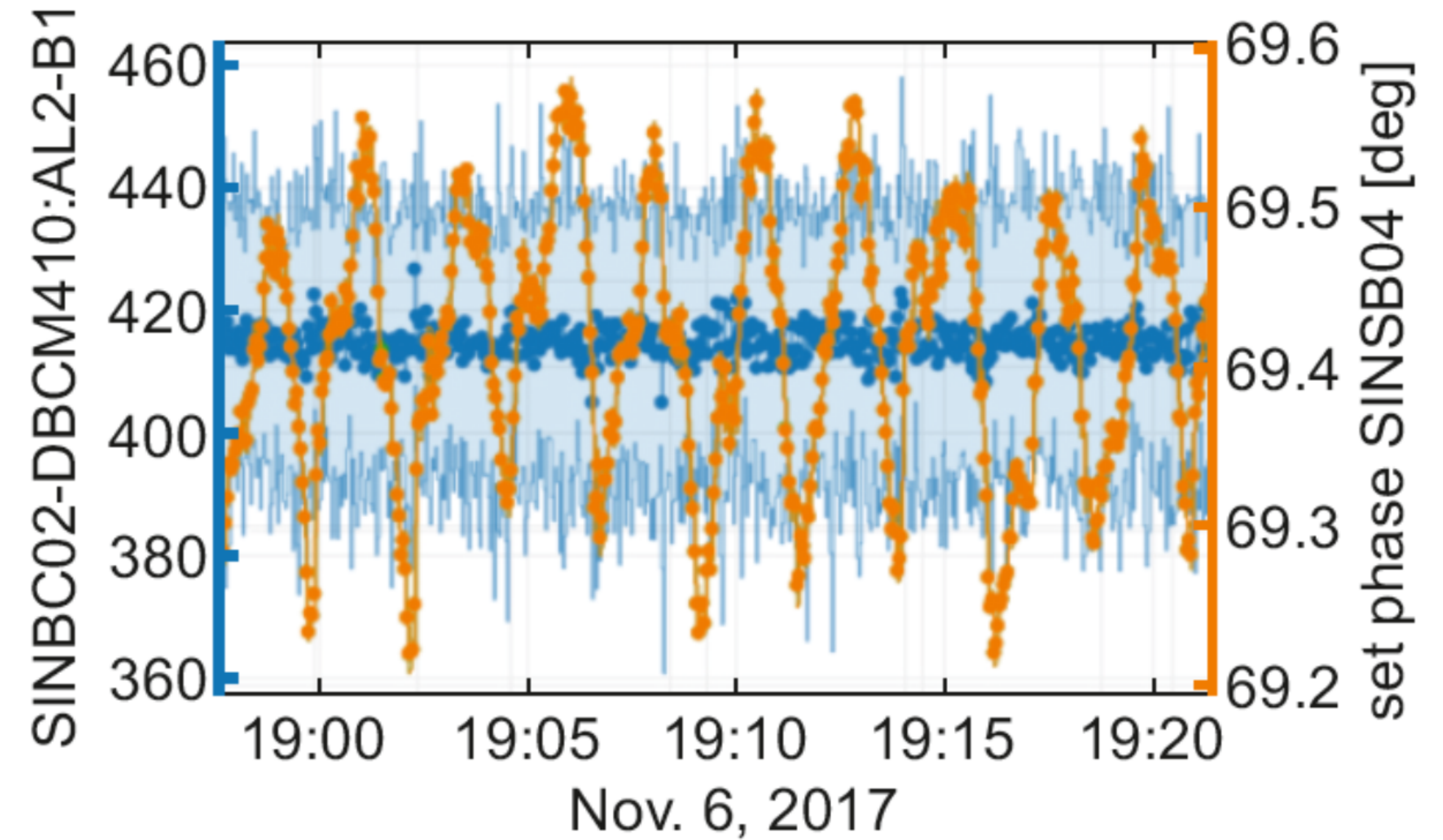
# Longitudinal Instrumentation for SwissFEL (Instrumentation for the Longitudinal Phase Space of the Electrons)



- Compression monitors
  - Coherent synchrotron radiation
  - Coherent diffraction radiation
- Profile monitors in dispersive sections
  - Synchrotron radiation monitors
  - Screen monitors
- Bunch arrival monitors
- Transverse deflecting cavities

# Compression Monitors

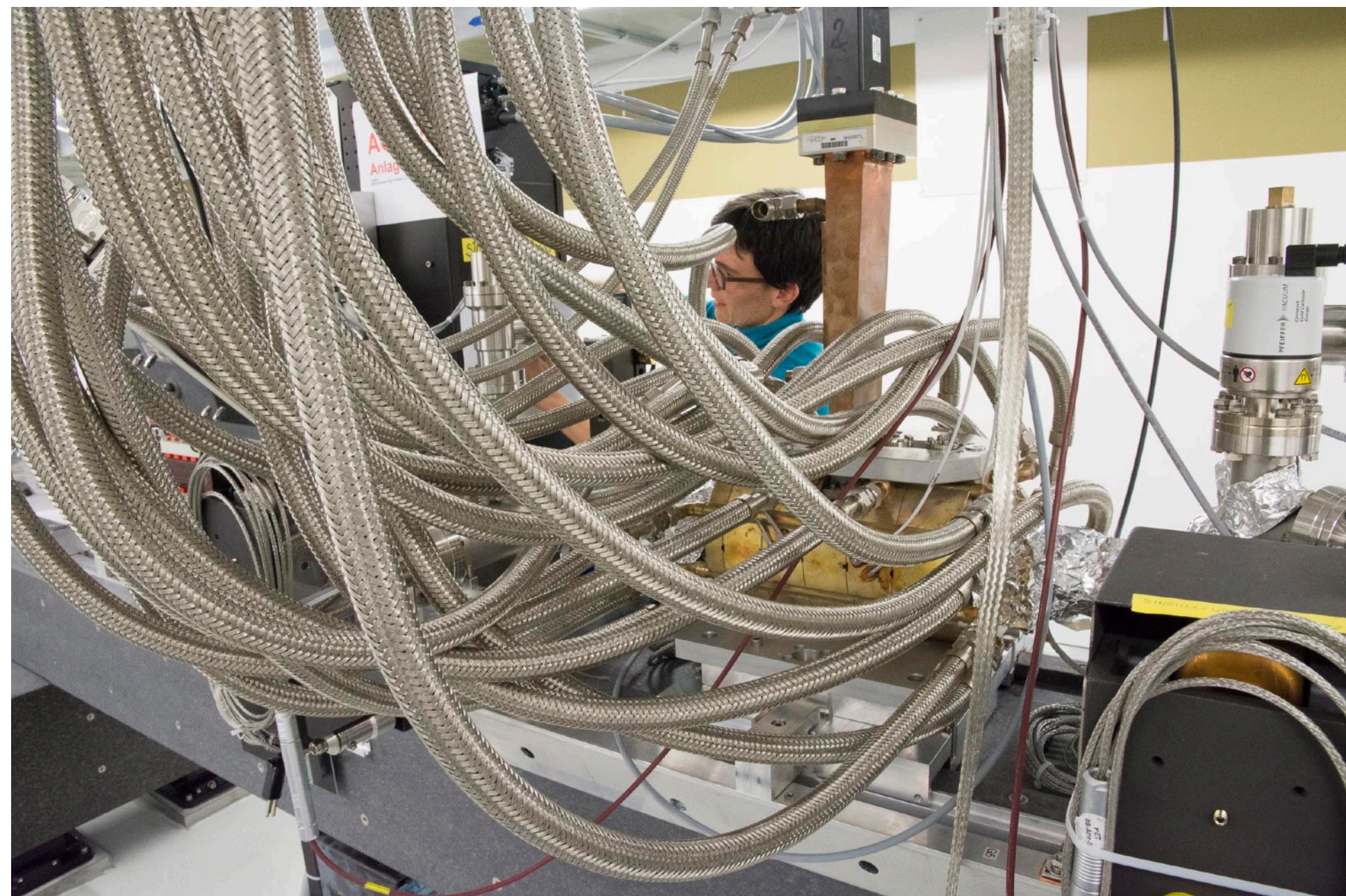
- BC1: BCM (Coherent edge / synchrotron radiation)
  - In operation, used for feedbacks
  - Used to find temperature variations in LLRF racks
  - To do: study dependency on BC1 beam orbit
- BC1: CDR (Coherent diffraction radiation)
  - Signals observed



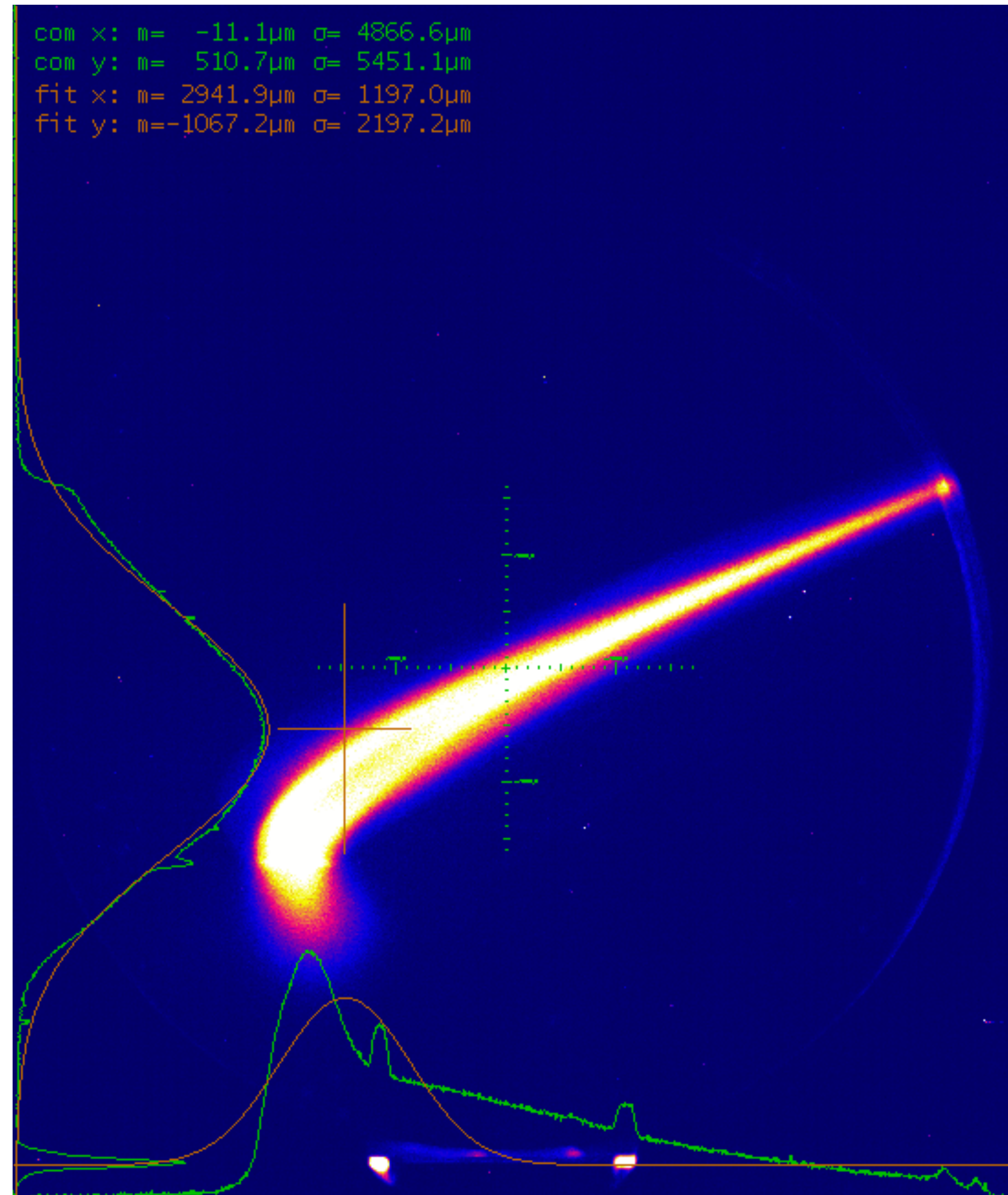
See Franziska's presentation!

# Transverse deflecting structures

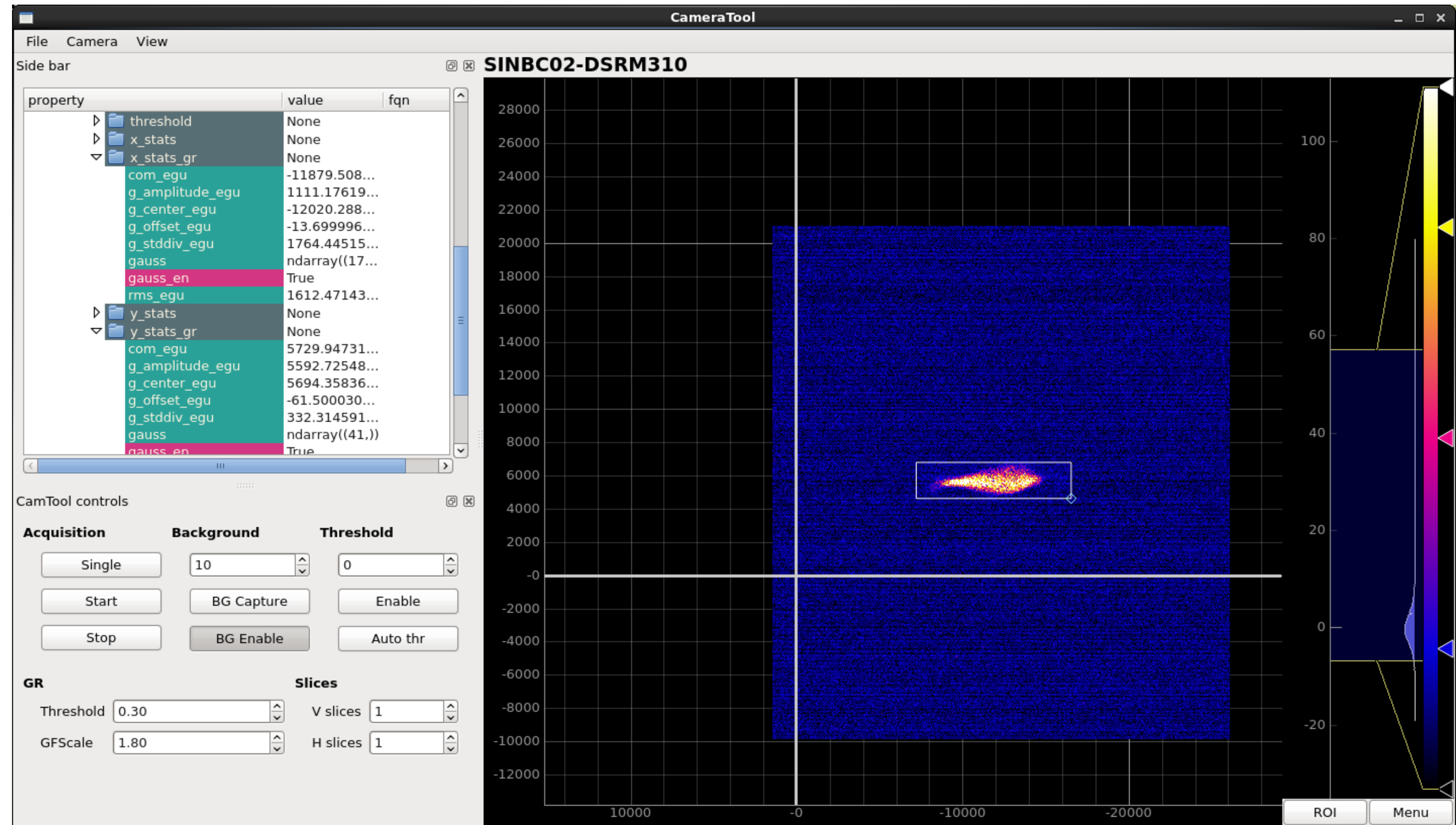
- TDS-1 (after BC1)
  - In routine operation
- TDS-2 (after BC2)
  - presently has lower priority than acceleration



See Paolo's presentation!

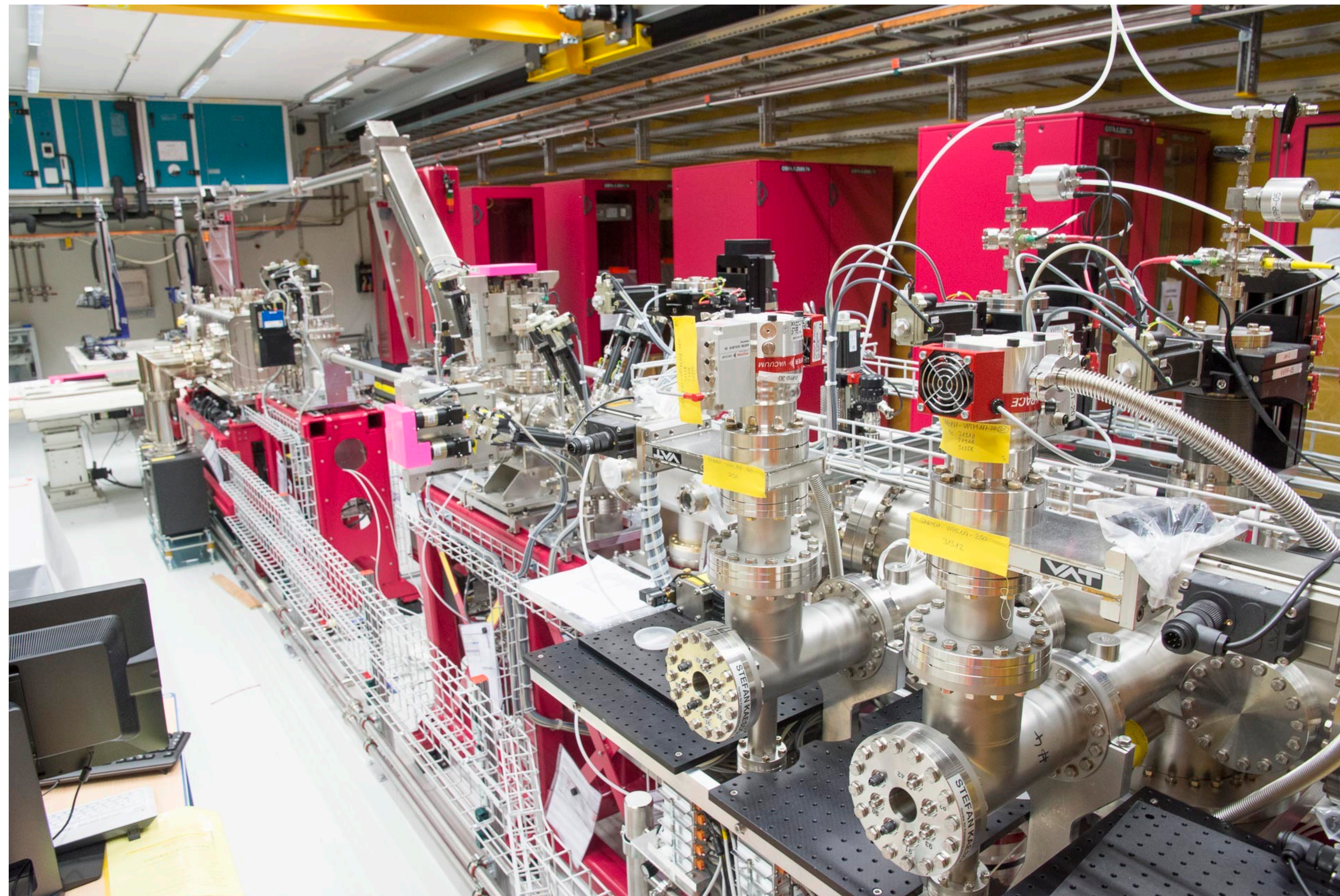


- SRM-BC1: operational
- SRM-BC2: needs beam time for commissioning



See Gian Luca's presentation!

- THz streak camera
- Reflectivity change with spectral encoding



See Pavle's presentation!