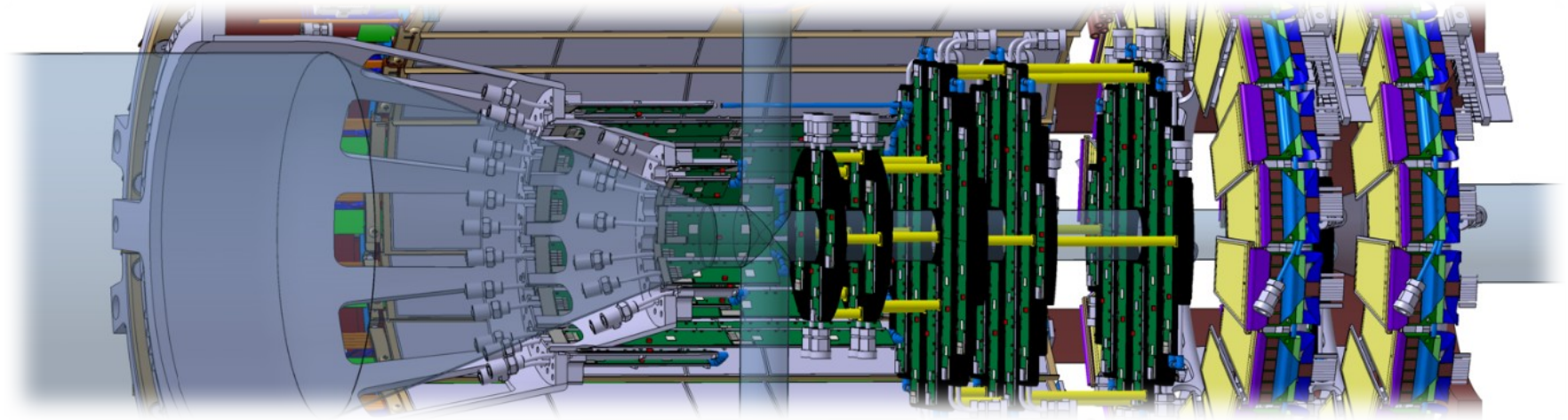
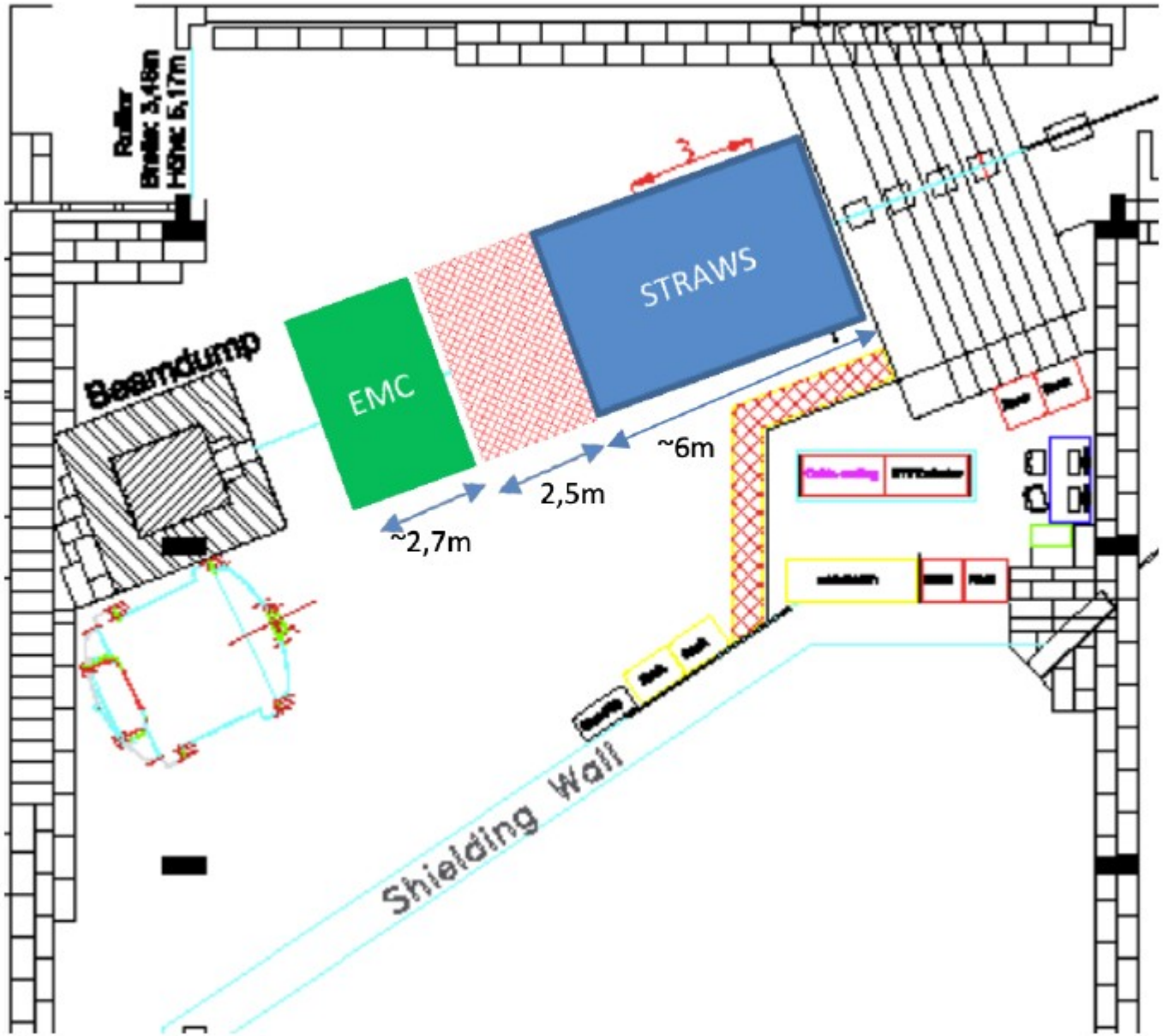
Beamtime Preparations for COSY23 Test

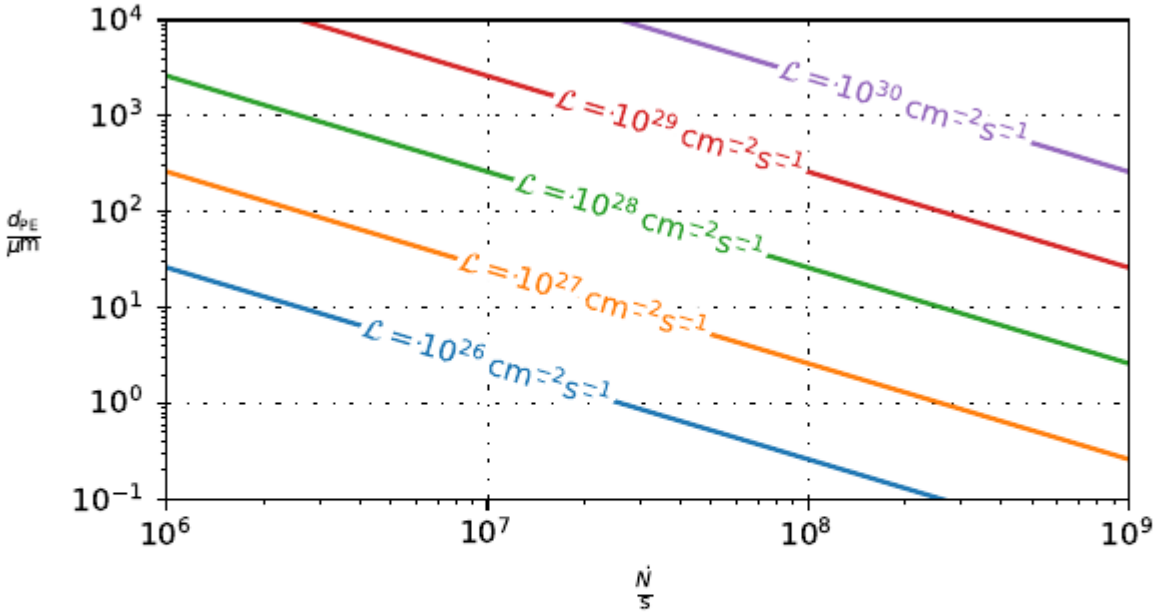


Hans-Georg Zaunick
for the
PANDA MVD group
June 12, 2023

COSY-TOF Experimental Area

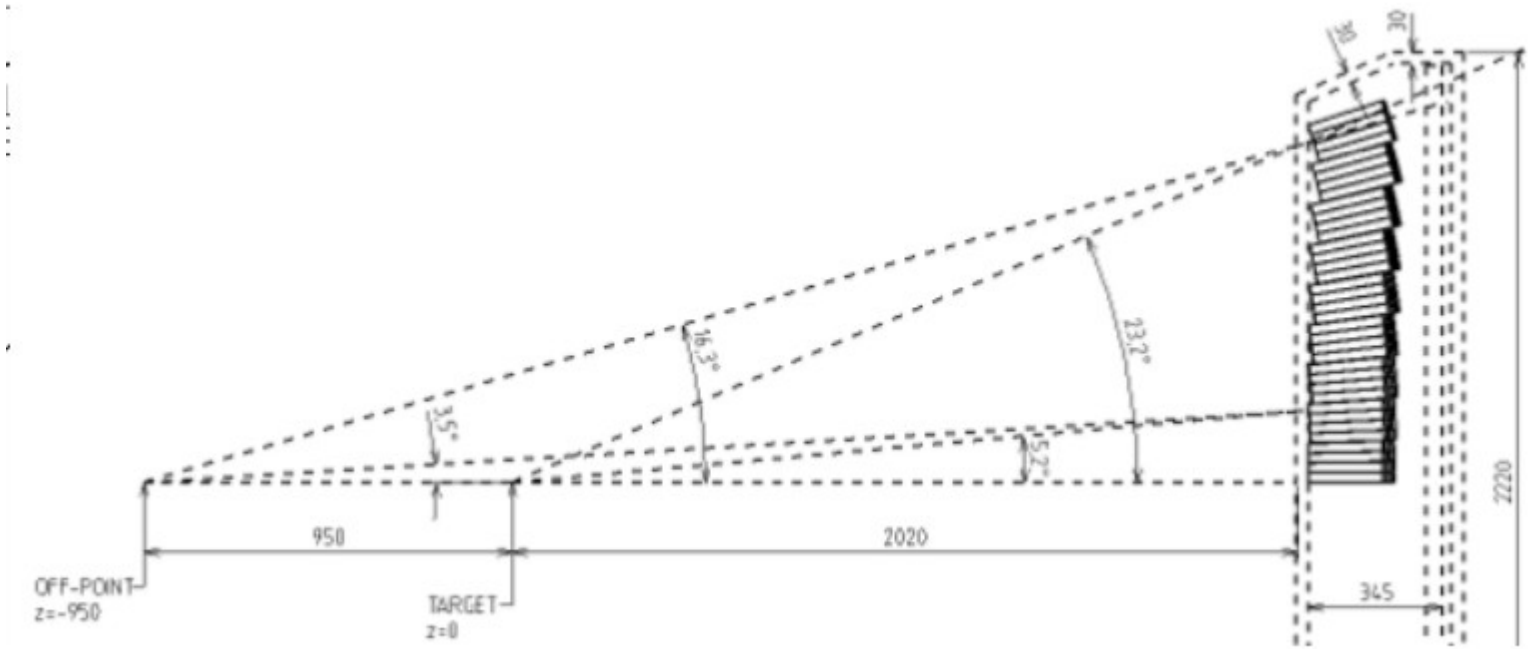


Proton Rate

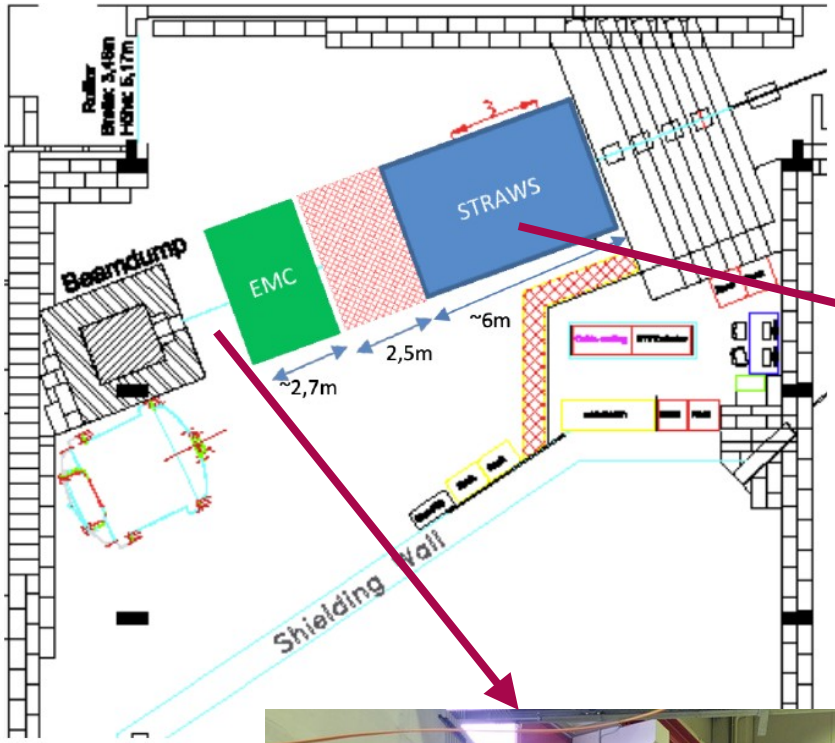


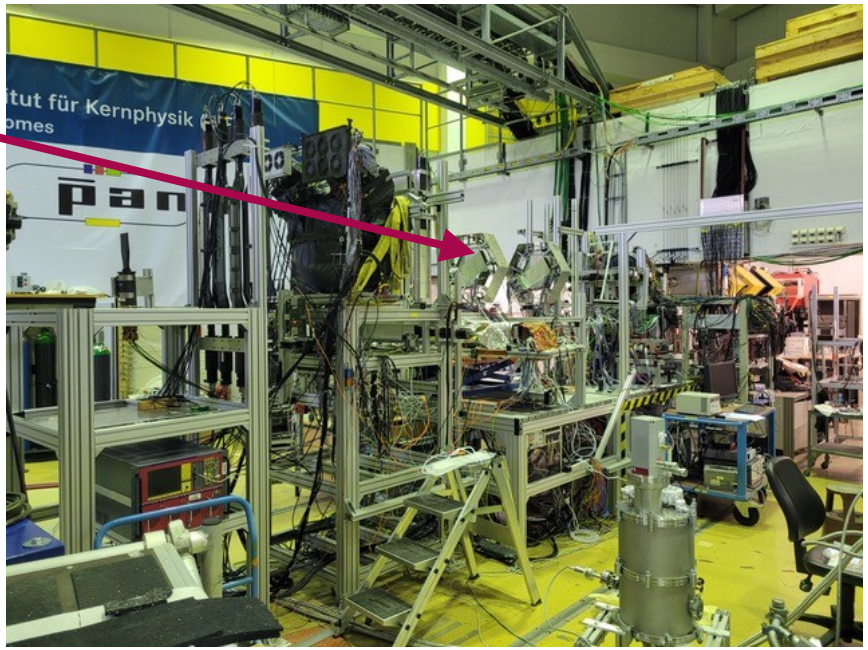
- Polyethylene foil as target: $\sigma_{PET} = 350$ mb (estimated using pp, pn cross sections)
- In order to produce the $1.3 \cdot 10^9$ events: L $=10^{28}$ cm^{-2}s^{-1}
- 200 µm foil: 10^7 protons per second

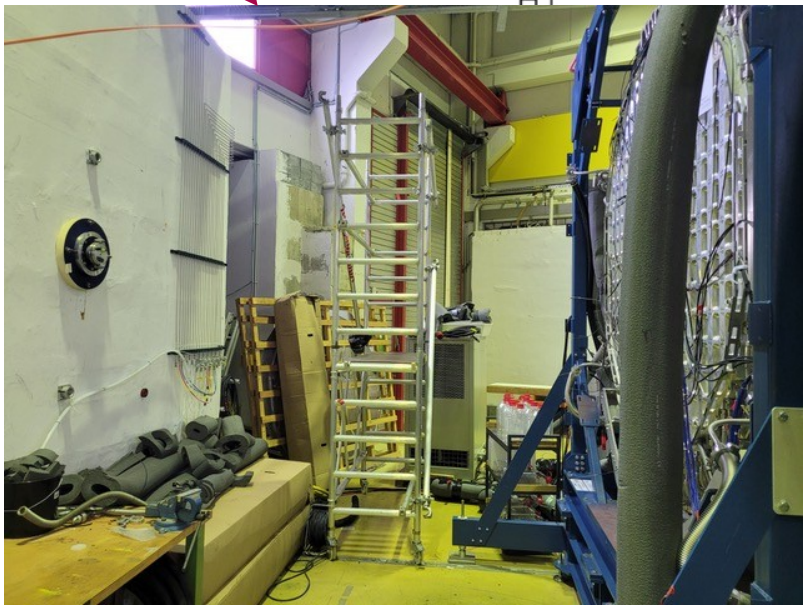
COSY-TOF Experimental Area



COSY-TOF Experimental Area







ToASt Test Setup

Robust tripod, extendable to 2m

Mounting frame for TOAST boards

Mounting plate (interface btw tripod and frame) in preparation at workshop in Giessen

Schedule

March							
KW 9	27.02.	28.02.	01.03.	02.03.	03.03.	04.03.	05.03.
KW 10	**Reestablish mains power**					11.03.	12.03.
KW 11	**Dry Run (systems to be tested one by one at moderate power levels, avoid high peak power consumption)**					18.03.	19.03.
KW 12	**Dry Run (systems to be tested one by one at moderate power levels, avoid high peak power consumption)**					25.03.	26.03.
KW 13	27.03.	28.03.	29.03.	30.03.	31.03.	01.04.	02.04.
April							
KW 14	03.04.	04.04.	05.04.	06.04.	Karfreitag	08.04.	09.04.
KW 15	Ostermontag	11.04.	12.04.	13.04.	14.04.	15.04.	16.04.
KW 16	17.04.	18.04.	19.04.	20.04.	21.04.	22.04.	23.04.
KW 17	**Engineering run HBS A013.4 / Hardware preparation for RF KO Extraction A021**					29.04.	30.04.
May							
KW 18	Tag der Arbeit	**SiPM D012.2 / Injection Studies A014.5**				06.05.	07.05.
KW 19	MD for Ayy with unpol. p, JePo testing					13.05.	14.05.
KW 20	**HBS 2 A013.4 NESP**			Christi Himmelfahrt		20.05.	21.05.
KW 21	**RF KO Extraction A021 + CBM /HADES D004.11 NEMP** unpolarized protons					27.05.	28.05.
June							
KW 22	Pfingstmontag	**MD Ayy D013.2**		**Ayy D013.2 TOF pol. p**		03.05.	04.05.
KW 23	**HBS 3 A013.4 NESP**			Fronleichnam		10.06.	11.06.
KW 24	MD JEDI					17.06.	18.06.
KW 25	**JEDI E005.8** unpolarized protons					24.06.	25.06.
KW 26	**JEDI E005.8** unpolarized protons					01.07.	02.07.
July							
KW 27	MD CBM / R3B/SFRS / PANDA FWE A021 / D015. 1/ D020.1 NEMP / TOF (PANDA FWE first test)					08.07.	09.07.
KW 28	**RF KO Extraction A021 + CBM /HADES D004.11 NEMP** unpolarized protons					15.07.	16.07.
KW 29	**R3B/SFRS D015.1 TOF** unpolarized protons (+ LUMI Det / Panda MVD / Hi-MAPS?)					22.07.	23.07.
KW 30	**HBS 4 A013.4 NESP**					29.07.	30.07.
August							
KW 31	**HBS 5 A013.4 NESP**					05.08.	06.08.
KW 32	**PANDA forward endcap calorimeter D020.1** unpolarized protons (+ LUMI Det / Panda MVD / Hi-MAPS?)					12.08.	13.08.
KW 33	MD PANDA CJT D009.7	Mariä Himmelfahrt	MD PANDA CJT D009.7			19.08.	20.08.
KW 34	**PANDA CJT D009.7 COSY Ring**					26.08.	27.08.
KW 35	**HBS 6 A013.4 NESP**					02.09.	03.09.
September							
KW 36	**MD JULIC**					09.09.	10.09.
KW 37	**He3+ JULIC**					16.09.	17.09.
KW 38	18.09.	19.09.	20.09.	21.09.	22.09.	23.09.	24.09.

MVD

ToDo List

- Participant list for CW 29 and 32 → Registration for visitor badges
- Mechanical setup → JLU
- Work out testing program (which parameters, scans etc?)
- Preparation of KIT DAQ for r/o of two TOASTs
- Lab test of DAQ/control software