
Particle detection configuration

Update

Access July 12

- All 1300 m of cables in place
- All detectors in position
- Confirmed that system triggers on real trigger signal.
- Rack cleaned up

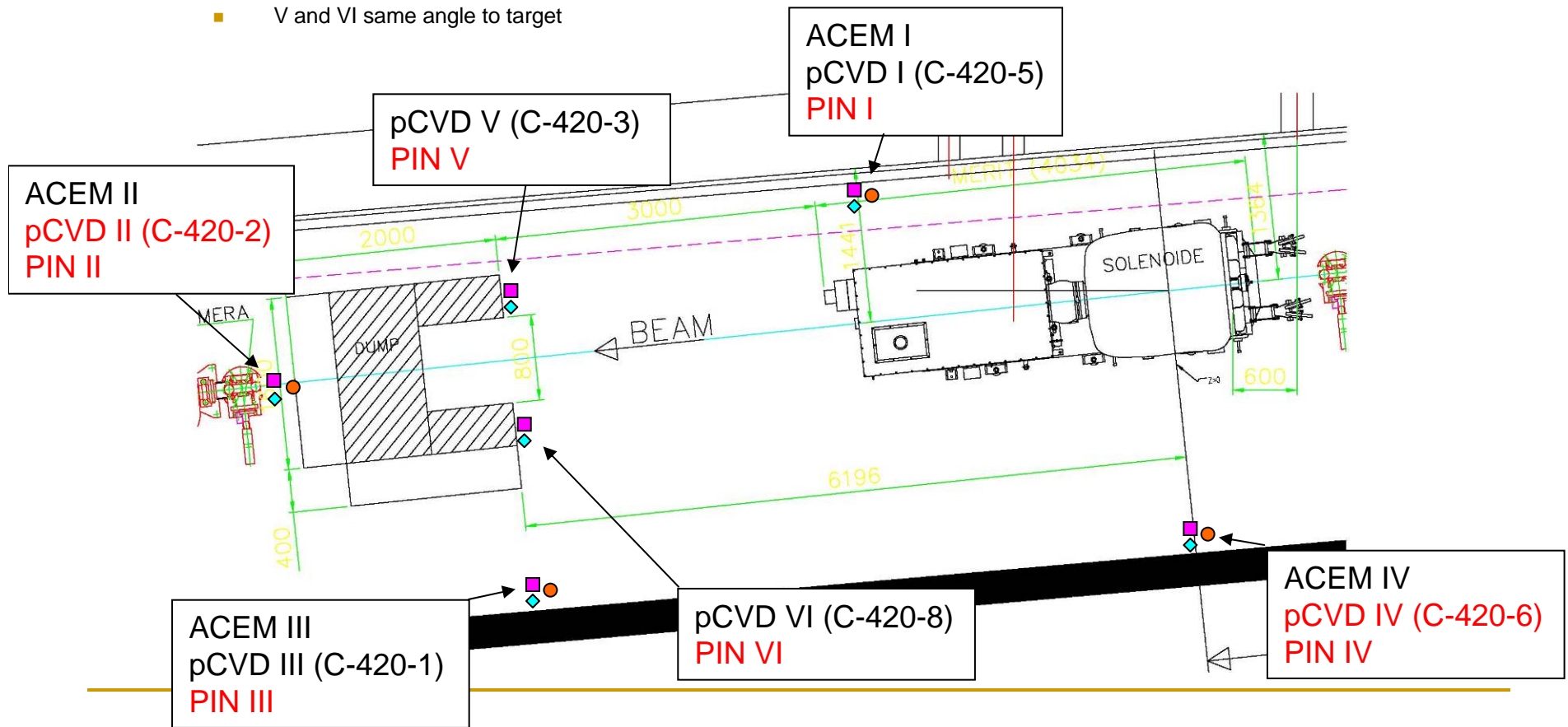


Detector positions

- 8 active detectors
- 6 positions
 - Measure symmetry in secondary particle flux:
 - I and III same angle to target
 - V and VI same angle to target

- ACEM: 4/4
- pCVD: 4/6
- ◆ PIN: 0/6

Connected
Not Connected



Signal estimation for pCVD [Striganov]

Position	Flux [MIPs/det] (for $2.5 \cdot 10^{12}$ protons, full Hg-target at 15 T)	I_{peak} [A] ^(**)	Attenuation [dB]
I	$1.9 \cdot 10^7$	0.93	30
II	$9.6 \cdot 10^7$	3.8	45
III	$1.6 \cdot 10^7$	0.79	30
IV	$1.6 \cdot 10^6$	0.082	10
V	$1.1 \cdot 10^8$ (*)	4.2	45
VI	$1.6 \cdot 10^8$ (*)	5.3	45

- (*) Simulated detector positions are at level with proton beam, whereas installation positions are ~1 m above. Thus lower flux than given expected.
- (**) Simulation of preliminary diamond model in MatLab

Present channel configuration

Detector	Osc. Channel	Sampling Speed [MS/s]	Power Supply CH	Voltage [V]	Attenuation [dB] (no Hg)
pCVD I	LeCroy, CH1	2500	PS3, CH1	500	20
pCVD II	-	-	-	-	-
pCVD III	LeCroy, CH2	2500	PS3, CH2	500	20
pCVD IV	-	-	-	-	-
pCVD V	LeCroy, CH3	2500	PS3, CH3	500	30
pCVD VI	LeCroy, CH4	2500	PS3, CH4	500	30
ACEM I	TEK, CH1	500	PS2, CH1	?	0
ACEM II	TEK, CH2	500	PS2, CH2	?	0
ACEM III	TEK, CH3 ^(*)	500	PS2, CH3	?	0
ACEM IV	TEK, CH4	500	PS2, CH4	?	0
PIN <i>	-	-	-	60	-

- (*) Malfunctioning of the Tektronix restricts the voltage resolution on this channel to be at least 300 mV/div.