## Eneg Dielseptember- 3$]^{9} \mathrm{Night}$

SPS
is logged.
FILTER: Piquets
$\square$


at roughly 23.15 the TAL was moved out of 3 mm and then back to the
original position 63.2 mm . A clear shifting of the signal was visible on
the medipix.
Created by spsop from cwo-ccc-allc
Strating Crystal 1 scan in opposite direction (from -1000mrad)
Created by spsop from cwo-ccc-a01c
Intensity: 2.5 10^10
Created by spsop from cwo-ccc-a 11c
Good channeling at -1800 mrad
Very nice signal on GEM
Created by spsop from cwo-ccc-a01c
starting fast angular scan (crystall) from -1000 to -2200 mrad
starting angular scan in oppostote direction (from-2200mrad)
Created by spsop from cwo-ccc-a01c
medipix 34.4 mm
new angular scan
Created by spsop from cwo-ccc-a 11c
angular scans back and forward from -2000 to +2000 urad. The main channeling peak is visible at about -1700 urad. At least two more side channeling peaks are observed.

Created by spsop from cwo-ccc-allc
Stop in the main channeling peak and taking a measurement with the medipix.
Created by spsop from cwo-ccc-allc
going toward the edge of the beam with the medipix - steps of 100 um starting from 34.4 up to 35.4 .

Created by spsop from cwo-ccc-a 11c
tal out of 5 mm . Changes at the medipix
Created by spsop from cwo-ccc-allc
medipix out.
Created by spsop from cwo-ccc-allc
at about 12:00
2 collimator scans @ $25 \mathrm{um} / \mathrm{sec}$ starting from -2.8 um to -16.4 um 560 steps

Created by spsop from cwo-ccc-allc
$1701: 26$
at about 12:43 begin cherenkov scan
Created by spsop from cwo-ccc-a11c

| 18 | 01:56 | cherenkov tests finished we go to medipix single frame for calibration. <br> Created by spsop from cwo-ccc-a1lc |
| :---: | :---: | :---: |
| 19 | 01:58 | beam intensity $15010^{\wedge} 8 \mathrm{p} \quad$ Created by spsop from cwo-ccc-allc |
| 20 | 02:00 | going with the medipix to 33 and then in smaller steps Created by spsop from cwo-ccc-allc |
| 21 | 02:21 | medipix at 33.5 mm , angle -1714urad we stay here and we do the single frame acquisition (50 usec) <br> done 400 frames, 50usec each |
| 22 | 02:22 | inserting the medipix 1 mm further in $\quad$ Created by spsop from cwo-ccc-allc |
| 23 | 02:26 | ```inserting the crystal 1 mm more in (up to 35.5mm) we see a clear signal on BLM8 and BLM6 We try to get measurements for 2 min``` <br> Created by spsop from cwo-ccc-a1lc |
| 24 | 02:29 | go back with the medipix at 34.5. Stay there and do the angular scan from 4700 urad. waiting a nice movie from emanuele. 8 steps/sec. |
| 25 | 02:40 | ```-3550urad start angular scan, channeling peaks at: -1800urad (most intense) +500 urad +1400 urad +3500 urad``` <br> final position +4000 urad. |
|  |  | Created by spsop from cwo-ccc-allc |
| 26 | 02:52 | ```crystal 1 in amorphous position Slow collimator scan from alignment position to retracted position 25 um/sec from -2.8 to -16.8 (560 steps)``` |
|  |  | ( Created by spsop from cwo-ccc-allc |
| 27 | 03:05 | crystal 1 out, collimator right jaw at -2.8 mm . We start alignment of crystal 2 <br> Created by spsop from cwo-ccc-a1lc |
| 28 | 03: 12 | TAL aligned at 65mm, $\quad$ Created by spsop from cwo-ccc-allc |
| 29 | 03:17 | Left jaw set at 3.6 mm , Right jaw -2.72. <br> TAL at 62 mm then new alignment at 66.7 mm (then 3 mm out) <br> Created by spsop from cwo-ccc-a1lc |
| 30 | 03:30 | Alignment Crystal 2. Final position 78.4 mm . ${ }^{\text {a }}$ (reated by spsop from cwo-ccc-allc |


| 31 | 03:43 | Alignment RP 1. Final position 36.128 mm |
| :---: | :---: | :---: |
|  |  | Created by spsop from cwo-ccc-allc |
| 32 | 04:02 | open collimator $\quad$ Created by spsop from cwo-ccc-allc |
| 33 | 04:03 | open crystal and medipix $\quad$ Created by spsop from cwo-ccc-allc |
| 34 | 04:03 | ```align medipix with TAL medipix position 35.4 mm re-insert the right collimator jaw at the alignment position (2.72mm) re-align the crystal->78 mm \\ Created by spsop from cwo-ccc-a1lc``` |
| 35 | 04:12 | angular scan of crystal 2 with medipix at TAL aperture. Collimator out. Created by spsop from cwo-ccc-allc |
| 36 | 04:23 | channeling position at -1362 urad. Collimator scan. <br> Created by spsop from cwo-ccc-a1lc |
| 37 | 04:49 | waiting for new beam: high intensity 4 batches of $10^{\wedge} 12$ <br> Created by spsop from cwo-ccc-allc |
| 38 | 05:54 | We didn't manage to have the foreseen intensity, we go with two batches of 10^12 protons each <br> Created by spsop from cwo-ccc-a1lc |
| 39 | 06:03 | emittance measurement: $3.18 \mathrm{E}-8 \mathrm{~m} \mathrm{rad}$, ${ }^{\text {created by spsop from cwo-ccc-allc }}$ |
| 40 | 06:04 | Wire scan <br> 20090923060438.png <br> Created by spsop from CWO-CCC-A0LF |

> Collimator beam based alignment:
> left jaw at 5.9 mm
> right jaw at -5.05 mm
> corresponding to 6 sigma
> closed orbit $=425 \mathrm{um}$

Created by spsop from cwo-ccc-a1lc

| TAL alignment 62.4 mm (we retract the TAL by 1sigma $=$1.7 mm ) <br> Created by spsop from cwo-ccc-allc |  |
| :--- | :--- |
| Crystal 2 alignment: 75.294 mm | Created by spsop from cwo-ccc-allc |
| angular scan of the crystal 2 <br> Stop in VR position, collimator scan. |  |

## FAULTS

| \# Group | Fault | Element | Description | Begin | End |
| :---: | :---: | :---: | :---: | :---: | :---: |



