05Dec2012

Far-field measurment at 30ID

Energy = 9 keV

Mono = Diamond monochromator

CCD = coolsnap HQ2

1392 X 1040, 6.45 μm pixel,

objective = 10X Zeiss objective lens

CCD placed ~ 7m from the monochromator

With 10X the total field of view 0.89X 0.67 mm

Jung Ho is tweaking the energy and right now it is 9.1315 keV

Beam size

Horizontal X Vertical = 2 X 1.1 mm

Pico motor focussing = Right -206.95

Left -206.85

We took first image, saved as

J:\shashi_data\30ID_5Dec2012\

File name = 5Dec12_firstimage1 , Exp: 18m

For the above image we approximately had 3 beryl windows. Mary is taking out one of them.

PRINTER LOGFILE at Wed Dec 05 10:37:51 2012 from ixs

	secx	secy
	secx	secy
User		
High	-1054.4700	-993.2000
Current	-4.5000	115.2350
Low	944.5300	1004.8000
Dial		
High	999.8750	999.0000
Current	-50.0950	-109.4350
Low	-999.1250	-999.0000

Motor position of CCD for the first measurement

center position on the monochromator

PRINTER LOGFILE at Wed Dec 05 10:44:57 2012 from ixs

	secx	secy
	secx	secy
User		
High	-1054.4700	-993.2000
Current	-4.5000	115.1850
Low	944.5300	1004.8000
Dial		
High	999.8750	999.0000
Current	-50.0950	-109.3850
Low	-999.1250	-999.0000

We have take out the beryllium window ~~or~~ which was upstream from the scintillor, about 5" ~~each~~

We are trying to fine focus the scintillo

current position of pico = -206.55

we moved the scintillator in 0.1 steps there is much change

we moved the scintillator in 0.05 steps ~~but~~ and found the focussing at -206.6000

(1) The center position image ~~width~~ ~~exposure~~

Exp : 18 msec

File :- 5Dec12_center ~~4-6~~, files 4-6.

Exp = 18 msec

(2) Vertical motion → Camera image - left

5Dec12 - left, files 7-9

Exp : 18 msec

(3)

```
PRINTER LOGFILE at Wed Dec 05 11:03:35 2012 from ixs

6647.MERIX> wm secx secy bim1

                 secx        secy      BIM1_X
                 secx        secy        bim1
User
 High       -1054.4700  -993.2000   -22.5282
 Current       -4.5000   115.1850    -0.0000
 Low          944.5300  1004.8000   121.9718
Dial
 High         999.8750   999.0000   144.6813
 Current      -50.0950  -109.3850   122.1531
 Low         -999.1250  -999.0000     0.1812


6648.MERIX> comment '5Dec12_center 4-6; exposure 0.018 s';

Wed Dec 05 11:06:59 2012.  5Dec12_center 4-6; exposure 0.018 s.

Wed Dec 05 11:06:59 2012.  5Dec12_center 4-6; exposure 0.018 s.
#C Wed Dec 05 11:06:59 2012.  5Dec12_center 4-6; exposure 0.018 s.


6649.MERIX> comment 'No Be after MME tank'

Wed Dec 05 11:07:11 2012.  No Be after MME tank.

Wed Dec 05 11:07:11 2012.  No Be after MME tank.
#C Wed Dec 05 11:07:11 2012.  No Be after MME tank.


6650.MERIX> poff
```

exit window

```
PRINTER LOGFILE at Wed Dec 05 11:10:58 2012 from ixs
                 secx        secy      BIM1_X
                 secx        secy        bim1
User
 High       -1054.4700  -993.2000   -22.5282
 Current       -4.5000   115.0850    -0.0000
 Low          944.5300  1004.8000   121.9718
Dial
 High         999.8750   999.0000   144.6813
 Current      -50.0950  -109.2850   122.1531
 Low         -999.1250  -999.0000     0.1812

Wed Dec 05 11:10:58 2012.  5Dec12_left 7-9.

Wed Dec 05 11:10:58 2012.  5Dec12_left 7-9.
#C Wed Dec 05 11:10:58 2012.  5Dec12_left 7-9.
```

3rd position

```
PRINTER LOGFILE at Wed Dec 05 11:15:43 2012 from ixs
                    secx        secy      BIM1_X
                    secx        secy        bim1
User
 High          -1054.4700  -993.2000    -22.5282
 Current          -4.5000   115.2850     -0.0000
 Low             944.5300  1004.8000    121.9718
Dial
 High            999.8750   999.0000    144.6813
 Current         -50.0950  -109.4850    122.1531
 Low            -999.1250  -999.0000      0.1812

Wed Dec 05 11:15:43 2012.  5Dec12_right 10-12.

Wed Dec 05 11:15:43 2012.  5Dec12_right 10-12.
#C Wed Dec 05 11:15:43 2012.  5Dec12_right 10-12.
```

10

4th position Move the image on the cam

we need 3 position to map whole imag

```
PRINTER LOGFILE at Wed Dec 05 11:20:59 2012 from ixs
                    secx        secy
                    secx        secy
User
 High          -1054.4700  -993.2000
 Current          -4.7000   115.1850
 Low             944.5300  1004.8000
Dial
 High            999.8750   999.0000
 Current         -49.8950  -109.3850
 Low            -999.1250  -999.0000

Wed Dec 05 11:20:59 2012.  5Dec12_down1 13-15.

Wed Dec 05 11:20:59 2012.  5Dec12_down1 13-15.
#C Wed Dec 05 11:20:59 2012.  5Dec12_down1 13-15.
```

12-14

5th position : down 2

```
PRINTER LOGFILE at Wed Dec 05 11:21:49 2012 from ixs
                 secx        secy
                 secx        secy
User
 High       -1054.4700  -993.2000
 Current       -4.9000   115.1850
 Low          944.5300  1004.8000
Dial
 High         999.8750   999.0000
 Current      -49.6950  -109.3850
 Low         -999.1250  -999.0000

Wed Dec 05 11:21:49 2012.  5Dec12_down2 16-18.

Wed Dec 05 11:21:49 2012.  5Dec12_down2 16-18.
#C Wed Dec 05 11:21:49 2012.  5Dec12_down2 16-18.
```

15-17

6th position down 3

```
PRINTER LOGFILE at Wed Dec 05 11:22:05 2012 from ixs
                 secx        secy
                 secx        secy
User
 High       -1054.4700  -993.2000
 Current       -5.1000   115.1850
 Low          944.5300  1004.8000
Dial
 High         999.8750   999.0000
 Current      -49.4950  -109.3850
 Low         -999.1250  -999.0000

Wed Dec 05 11:22:05 2012.  5Dec12_down3 19-21.

Wed Dec 05 11:22:05 2012.  5Dec12_down3 19-21.
#C Wed Dec 05 11:22:05 2012.  5Dec12_down3 19-21.
```

19-20

7th position

```
PRINTER LOGFILE at Wed Dec 05 11:27:42 2012 from ixs
                  secx       secy
                  secx       secy
User
 High      -1054.4700  -993.2000
 Current      -4.5000   115.2850
 Low         944.5300  1004.8000
Dial
 High         999.8750   999.0000
 Current      -50.0950  -109.4850
 Low         -999.1250  -999.0000

Wed Dec 05 11:27:42 2012.  5Dec12_right_retake 21-23.

Wed Dec 05 11:27:42 2012.  5Dec12_right_retake 21-23.
#C Wed Dec 05 11:27:42 2012.  5Dec12_right_retake 21-23.
```

recds 3rd pos
pg 114 top

32-34

8th

```
PRINTER LOGFILE at Wed Dec 05 11:32:02 2012 from ixs
                  secx       secy
                  secx       secy
User
 High      -1054.4700  -993.2000
 Current      -4.3000   115.1850
 Low         944.5300  1004.8000
Dial
 High         999.8750   999.0000
 Current      -50.2950  -109.3850
 Low         -999.1250  -999.0000

Wed Dec 05 11:32:02 2012.  5Dec12_up1_ 35-37.

Wed Dec 05 11:32:02 2012.  5Dec12_up1_ 35-37.
#C Wed Dec 05 11:32:02 2012.  5Dec12_up1_ 35-37.
```

9th

```
PRINTER LOGFILE at Wed Dec 05 11:32:32 2012 from ixs
                  secx       secy
                  secx       secy
User
 High      -1054.4700  -993.2000
 Current      -4.1000   115.1850
 Low         944.5300  1004.8000
Dial
 High         999.8750   999.0000
 Current      -50.4950  -109.3850
 Low         -999.1250  -999.0000

Wed Dec 05 11:32:32 2012.  5Dec12_up2_ 38-40.

Wed Dec 05 11:32:32 2012.  5Dec12_up2_ 38-40.
#C Wed Dec 05 11:32:32 2012.  5Dec12_up2_ 38-40.
```

10th

```
PRINTER LOGFILE at Wed Dec 05 11:33:22 2012 from ixs
                  secx        secy
                  secx        secy
User
 High        -1054.4700  -993.2000
 Current        -3.9000   115.1850
 Low           944.5300  1004.8000
Dial
 High          999.8750   999.0000
 Current       -50.6950  -109.3850
 Low          -999.1250  -999.0000

Wed Dec 05 11:33:22 2012.  5Dec12_up3_ 41-43.

Wed Dec 05 11:33:22 2012.  5Dec12_up3_ 41-43.
#C Wed Dec 05 11:33:22 2012.  5Dec12_up3_ 41-43.
```

11th

```
PRINTER LOGFILE at Wed Dec 05 11:34:47 2012 from ixs
                  secx        secy
                  secx        secy
User
 High        -1054.4700  -993.2000
 Current        -3.7000   115.1850
 Low           944.5300  1004.8000
Dial
 High          999.8750   999.0000
 Current       -50.8950  -109.3850
 Low          -999.1250  -999.0000

Wed Dec 05 11:34:47 2012.  5Dec12_up4_ 44-46.

Wed Dec 05 11:34:47 2012.  5Dec12_up4_ 44-46.
#C Wed Dec 05 11:34:47 2012.  5Dec12_up4_ 44-46.
```

Now we are going to change the diamond Cry. (Monochromator) and see

```
PRINTER LOGFILE at Wed Dec 05 11:36:07 2012 from ixs

6705.MERIX> comment ' initial (best) crystal positions'

Wed Dec 05 11:36:14 2012.   initial (best) crystal positions.

Wed Dec 05 11:36:14 2012.   initial (best) crystal positions.
#C Wed Dec 05 11:36:14 2012.   initial (best) crystal positions.


6706.MERIX> wm hhlmy1 hhlmz2

              HHLM_Y1     HHLM_Z2
               hhlmy1      hhlmz2
User
 High        -13.5635      8.1461
 Current     -13.1651     38.1181
 Low          -7.4635    131.6461
Dial
 High          5.3238    -23.3300
 Current       4.9254    -53.3020
 Low          -0.7762   -146.8300
```

old crystal position

```
6707.MERIX> umvr hhlmz2 1

   HHLM_Z2
   39.1181


6708.MERIX> comment 'second position on crystal'

Wed Dec 05 11:36:33 2012.  second position on crystal.

Wed Dec 05 11:36:33 2012.  second position on crystal.
#C Wed Dec 05 11:36:33 2012.  second position on crystal.


6709.MERIX> wm hhlmy1 hhlmz2

              HHLM_Y1     HHLM_Z2
               hhlmy1      hhlmz2
User
 High        -13.5635      8.1461
 Current     -13.1651     39.1181
 Low          -7.4635    131.6461
Dial
 High          5.3238    -23.3300
 Current       4.9254    -54.3020
 Low          -0.7762   -146.8300
```

New crystal position.

crystal moved posit B

```
PRINTER LOGFILE at Wed Dec 05 11:46:18 2012 from ixs
                 secx        secy     HHLM_Z2
                 secx        secy      hhlmz2
User
 High      -1054.4700  -993.2000      8.1461
 Current      -4.5000   115.1850     39.1181
 Low         944.5300  1004.8000    131.6461
Dial
 High        999.8750   999.0000    -23.3300
 Current     -50.0950  -109.3850    -54.3020
 Low        -999.1250  -999.0000   -146.8300

Wed Dec 05 11:46:18 2012.  5Dec12centerB 47-49.

Wed Dec 05 11:46:18 2012.  5Dec12centerB 47-49.
#C Wed Dec 05 11:46:18 2012.  5Dec12centerB 47-49.
```

```
PRINTER LOGFILE at Wed Dec 05 11:47:28 2012 from ixs
                 secx        secy     HHLM_Z2
                 secx        secy      hhlmz2
User
 High      -1054.4700  -993.2000      8.1461
 Current      -4.5000   115.0850     39.1181
 Low         944.5300  1004.8000    131.6461
Dial
 High        999.8750   999.0000    -23.3300
 Current     -50.0950  -109.2850    -54.3020
 Low        -999.1250  -999.0000   -146.8300

Wed Dec 05 11:47:28 2012.  5Dec12leftB_ 50-52.

Wed Dec 05 11:47:28 2012.  5Dec12leftB_ 50-52.
#C Wed Dec 05 11:47:28 2012.  5Dec12leftB_ 50-52.
```

```
PRINTER LOGFILE at Wed Dec 05 11:48:05 2012 from ixs
                 secx        secy     HHLM_Z2
                 secx        secy      hhlmz2
User
 High      -1054.4700  -993.2000      8.1461
 Current      -4.5000   115.2850     39.1181
 Low         944.5300  1004.8000    131.6461
Dial
 High        999.8750   999.0000    -23.3300
 Current     -50.0950  -109.4850    -54.3020
 Low        -999.1250  -999.0000   -146.8300

Wed Dec 05 11:48:05 2012.  5Dec12rightB_ 53-55.

Wed Dec 05 11:48:05 2012.  5Dec12rightB_ 53-55.
#C Wed Dec 05 11:48:05 2012.  5Dec12rightB_ 53-55.
```

```
PRINTER LOGFILE at Wed Dec 05 11:49:04 2012 from ixs
                 secx        secy     HHLM_Z2
                 secx        secy      hhlmz2

User
 High      -1054.4700  -993.2000      8.1461
 Current      -4.7000   115.1850     39.1181
 Low         944.5300  1004.8000    131.6461
Dial
 High        999.8750   999.0000    -23.3300
 Current     -49.8950  -109.3850    -54.3020
 Low        -999.1250  -999.0000   -146.8300

Wed Dec 05 11:49:04 2012.  5Dec12downB_1_. 56-58

Wed Dec 05 11:49:04 2012.  5Dec12downB_1_.
#C Wed Dec 05 11:49:04 2012.  5Dec12downB_1_.
```

```
PRINTER LOGFILE at Wed Dec 05 11:49:35 2012 from ixs
                 secx        secy     HHLM_Z2
                 secx        secy      hhlmz2
User
 High      -1054.4700  -993.2000      8.1461
 Current      -4.9000   115.1850     39.1181
 Low         944.5300  1004.8000    131.6461
Dial
 High        999.8750   999.0000    -23.3300
 Current     -49.6950  -109.3850    -54.3020
 Low        -999.1250  -999.0000  -146.8300

Wed Dec 05 11:49:35 2012.  5Dec12downB_2_. 59-61

Wed Dec 05 11:49:35 2012.  5Dec12downB_2_.
#C Wed Dec 05 11:49:35 2012.  5Dec12downB_2_.
```

```
PRINTER LOGFILE at Wed Dec 05 11:50:14 2012 from ixs
                 secx        secy     HHLM_Z2
                 secx        secy      hhlmz2
User
 High      -1054.4700  -993.2000      8.1461
 Current      -5.1000   115.1850     39.1181
 Low         944.5300  1004.8000    131.6461
Dial
 High        999.8750   999.0000    -23.3300
 Current     -49.4950  -109.3850    -54.3020
 Low        -999.1250  -999.0000  -146.8300

Wed Dec 05 11:50:14 2012.  5Dec12downB_3_ 62-64.

Wed Dec 05 11:50:14 2012.  5Dec12downB_3_ 62-64.
#C Wed Dec 05 11:50:14 2012.  5Dec12downB_3_ 62-64.
```

```
PRINTER LOGFILE at Wed Dec 05 11:51:43 2012 from ixs
                  secx        secy     HHLM_Z2
                  secx        secy      hhlmz2
User
 High      -1054.4700  -993.2000      8.1461
 Current      -4.3000   115.1850     39.1181
 Low         944.5300  1004.8000    131.6461
Dial
 High        999.8750   999.0000    -23.3300
 Current     -50.2950  -109.3850    -54.3020
 Low        -999.1250  -999.0000   -146.8300

Wed Dec 05 11:51:43 2012.  5Dec12upB_1_ 65-67.

Wed Dec 05 11:51:43 2012.  5Dec12upB_1_ 65-67.
#C Wed Dec 05 11:51:43 2012.  5Dec12upB_1_ 65-67.
```

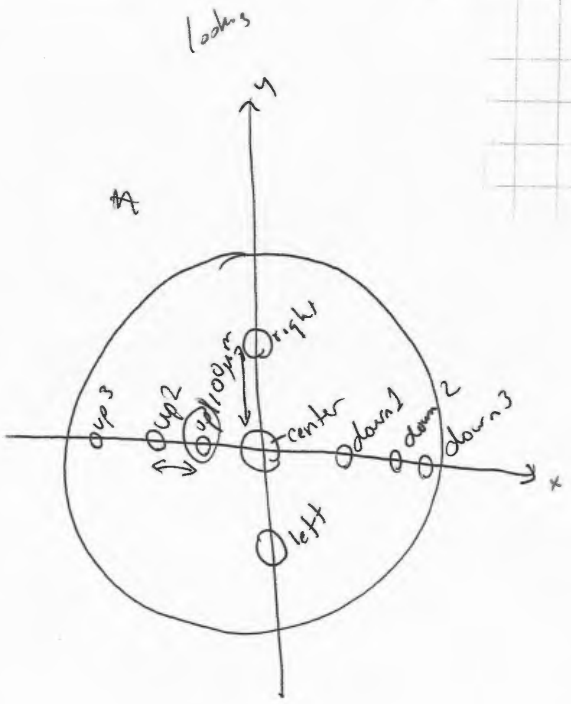
```
PRINTER LOGFILE at Wed Dec 05 11:52:13 2012 from ixs
                  secx        secy     HHLM_Z2
                  secx        secy      hhlmz2
User
 High      -1054.4700  -993.2000      8.1461
 Current      -4.1000   115.1850     39.1181
 Low         944.5300  1004.8000    131.6461
Dial
 High        999.8750   999.0000    -23.3300
 Current     -50.4950  -109.3850    -54.3020
 Low        -999.1250  -999.0000   -146.8300

Wed Dec 05 11:52:13 2012.  5Dec12upB_2_ 68-70.

Wed Dec 05 11:52:13 2012.  5Dec12upB_2_ 68-70.
#C Wed Dec 05 11:52:13 2012.  5Dec12upB_2_ 68-70.
```

```
PRINTER LOGFILE at Wed Dec 05 11:52:42 2012 from ixs
                  secx        secy     HHLM_Z2
                  secx        secy      hhlmz2
User
 High      -1054.4700  -993.2000      8.1461
 Current      -3.9000   115.1850     39.1181
 Low         944.5300  1004.8000    131.6461
Dial
 High        999.8750   999.0000    -23.3300
 Current     -50.6950  -109.3850    -54.3020
 Low        -999.1250  -999.0000   -146.8300

Wed Dec 05 11:52:42 2012.  5Dec12upB_3_ 71-73.

Wed Dec 05 11:52:42 2012.  5Dec12upB_3_ 71-73.
#C Wed Dec 05 11:52:42 2012.  5Dec12upB_3_ 71-73.
```

```
PRINTER LOGFILE at Wed Dec 05 11:53:14 2012 from ixs
                 secx        secy     HHLM_Z2
                 secx        secy      hhlmz2
User
 High      -1054.4700  -993.2000      8.1461
 Current      -3.7000   115.1850     39.1181
 Low         944.5300  1004.8000    131.6461
Dial
 High        999.8750   999.0000    -23.3300
 Current     -50.8950  -109.3850    -54.3020
 Low        -999.1250  -999.0000   -146.8300

Wed Dec 05 11:53:14 2012.  5Dec12upB_4_ 74-76.

Wed Dec 05 11:53:14 2012.  5Dec12upB_4_ 74-76.
#C Wed Dec 05 11:53:14 2012.  5Dec12upB_4_ 74-76.
```

```
PRINTER LOGFILE at Wed Dec 05 11:57:40 2012 from ixs
Wed Dec 05 11:57:40 2012.  move secx and secy to hard limits.

Wed Dec 05 11:57:40 2012.  move secx and secy to hard limits.
#C Wed Dec 05 11:57:40 2012.  move secx and secy to hard limits.

                 secx        secy
                 secx        secy
User
 High      -1054.4700  -993.2000
 Current     -77.6700     2.6550
 Low         944.5300  1004.8000
Dial
 High        999.8750   999.0000
 Current      23.0750     3.1450
 Low        -999.1250  -999.0000
```

Can reference ~~pa~~ camera positions to hard limits


looks
y
x
up 3
up 2
up 1
right
center
down 1
down 2
down 3
left