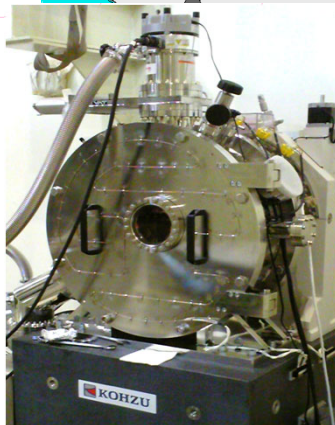
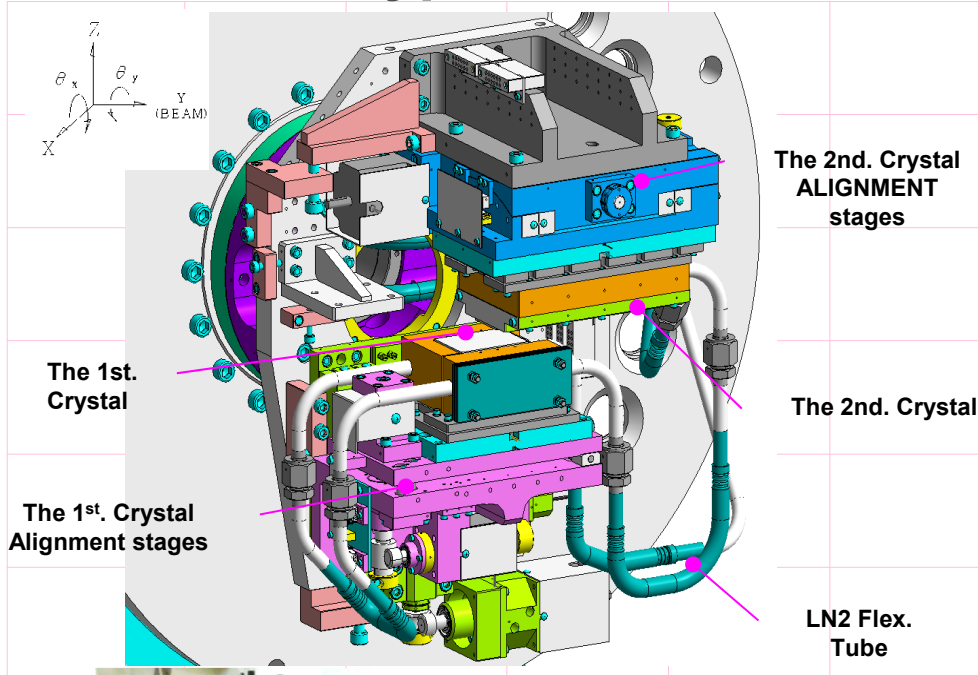
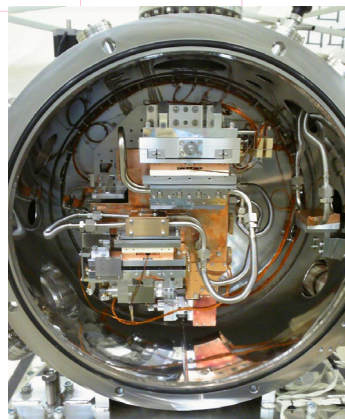


Calculated type DCM <KHL-6T>



<KHL-6T at NSRRC >



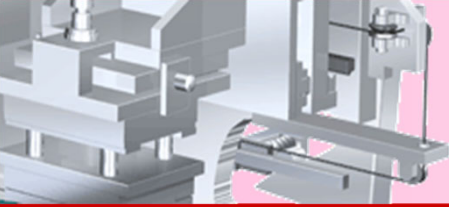
< KHL-6T Inside View >

Specifications

Model	KHL-6T
Main θ Height	1362.5 mm
Beam Offset	25 mm Upward
Bragg Angle Range	5 – 25 degree (-2 to +30 degree mechanically)
Energy Range : Si(111)	4.7 – 22.6 keV
Main θ Rotation Center	Placed the intersection which corresponds with the normal through the center of the 1 st crystal and the extension of the 2 nd crystal surface.
Crystal Parallelism	10 arcsec (for full stroke) 2 arcsec (at any 3 degree)
Vacuum Pressure	4.00 x 10E-5 Pa
Crystal Size : Si(111)	50 x 50 x 40, 160 x 50 x 30 (L x W x T : mm)
Dimension	1300 x 1080 x 1780 (L x W x H : mm)

Features

- ◆ The simplest calculated type DCM.
- ◆ Long 2nd crystal is mounted instead of using the translation stage to beam direction.
- ◆ Consists of :
 1. Crystal cooling system
 2. 1st. & 2nd. crystal alignment stages
 3. Main axis goniometer
 4. Direct beam stopper
 5. Supporting structure
 6. Vacuum chamber
 7. Controllers for motors
- ◆ LN2 crystal cooling
- ◆ Granite support table for better stability
- ◆ The first crystal alignment stages
 - D1 : +3 ~ -10 mm
 - $\theta 1$: ± 2 degree (Coarse)
 - : 0 ~ 33 arcsec (Fine motion by PZT)
- ◆ The second crystal alignment stages
 - $\phi 2$: ± 2 degree
- ◆ The main θ axis Accuracy:
 - 10 arcsec / full stroke
 - 5 arcsec / any 10 degree
- Repeatability: <1arcsec
- Backlash: < 5 arcsec
- Encoder: ERO785 (Heidenhain)

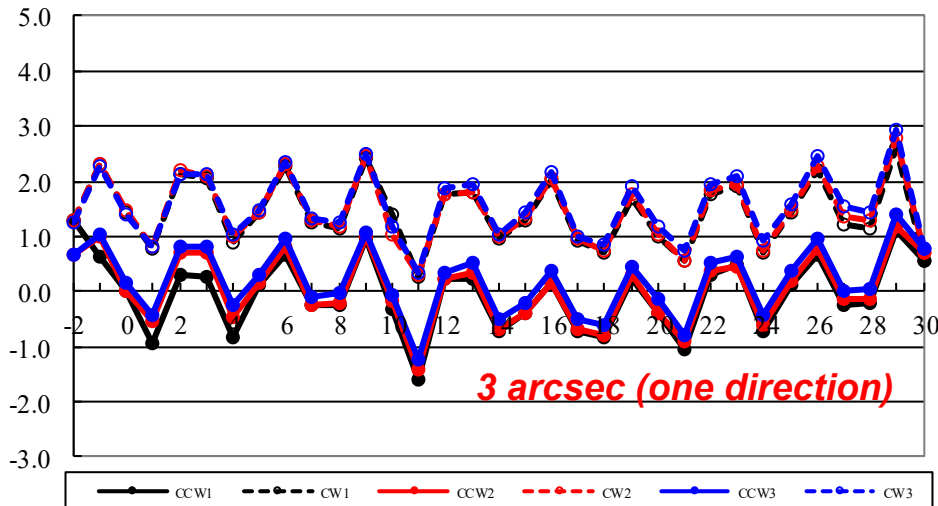


Calculated type DCM <KHL-6T>

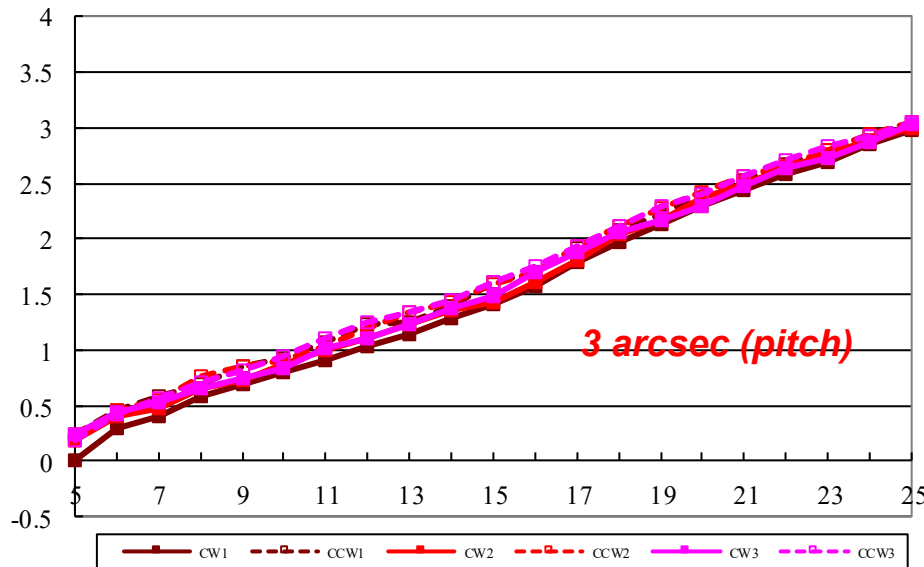
ALL MEASUREMENT is NOT with FEEDBACK

Features

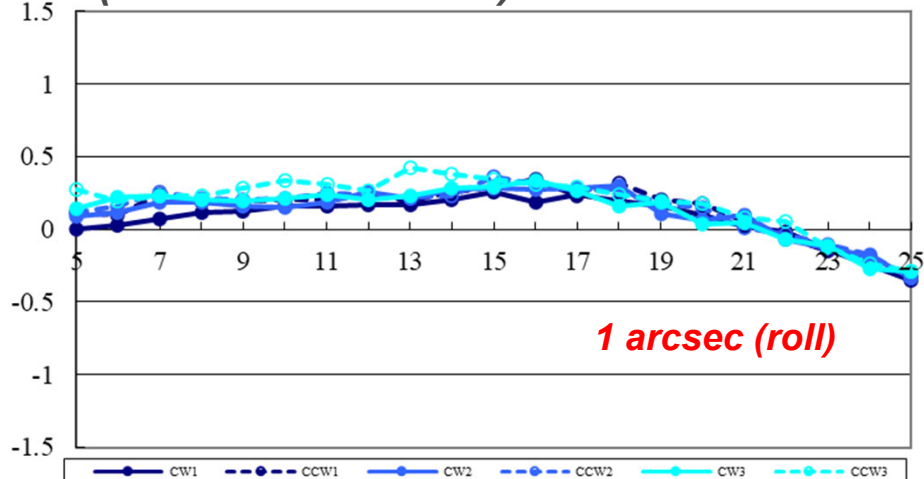
Data (Accuracy for main θ) <KHL-6T>



Data (Parallelism : Pitch) <KHL-6T>



Data (Parallelism : Roll) <KHL-6T>



◆ The simplest calculated type DCM.

◆ Long 2nd crystal is mounted instead of using the translation stage to beam direction.

- ◆ Consists of :
1. Crystal cooling system
 2. 1st. & 2nd. crystal alignment stages
 3. Main axis goniometer
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◆ LN2 crystal cooling

◆ Granite support table for better stability

◆ The first crystal alignment stages
 D1 : +3 ~ -10 mm
 $\theta 1$: ± 2 degree (Coarse)
 : 0 ~ 33 arcsec
 (Fine motion by PZT)

◆ The second crystal alignment stages
 $\phi 2$: ± 2 degree

◆ The main θ axis
 Accuracy:
 10 arcsec / full stroke
 5 arcsec / any 10 degree
 Repeatability:
 <1arcsec
 Backlash:
 < 5 arcsec
 Encoder:
 ERO785 (Heidenhain)

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