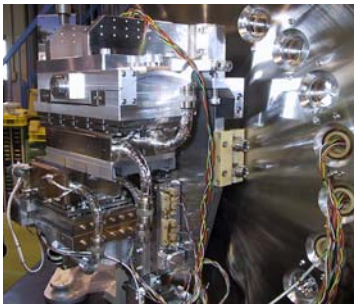
KOHZU

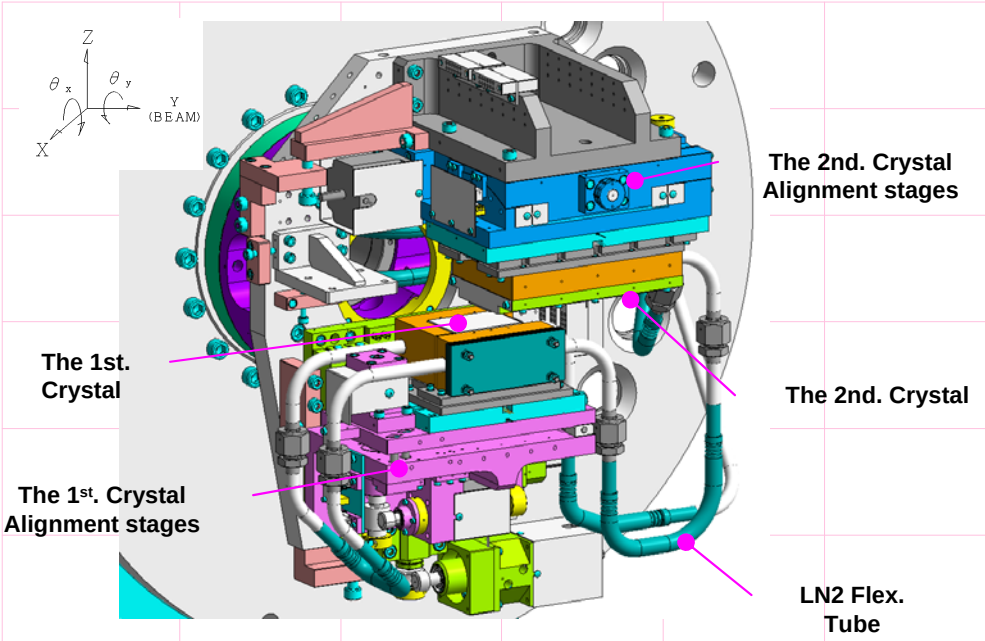
Pioneering the door to the future
with commitment to technology

Calculated type DCM <KHL-3L,R>

<Prototype KHL-3C at KEK >



<Prototype KHL-3C Inside View >



Specifications

Model	KHL-3L
Main θ Height	1212.5 mm
Beam Offset	25 mm Upward
Bragg Angle Range	5.6 – 29.7 degree (-2.0 – +32 degree mechanically)
Energy Range : Si(111)	4.0 – 20.0 KeV
Main θ Rotation Center	Placed the intersection which corresponds with the normal through the center of the 1st crystal and the extension of the 2nd 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)	70 x 50 x 50, 180 x 50 x 20 (L x W x T : mm) *1
Dimension	1320 x 1140 x 1600 (L x W x H : mm)

*1 The crystal is not abailable

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. Beam Mask
6. Supporting structure
7. Vacuum chamber
8. Crystal Alignment Jig.
9. Controller for motors

◆LN2 crystal cooling

◆The first crystal alignment stages
D1 : +3 ～ -10 mm
⊿θ1 : ±2 degree (Coarse)
: ±16.5 arcsec (Fine)

◆The second crystal alignment stages
⊿φ2 : ±2 degree

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

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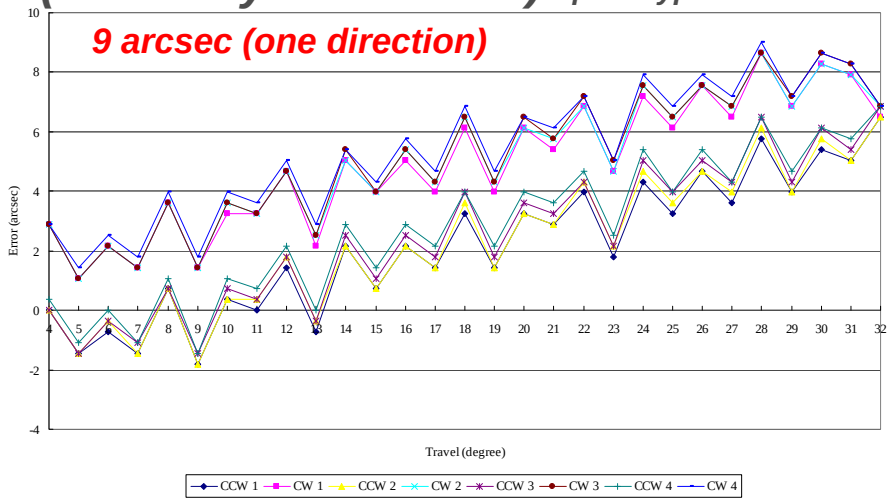
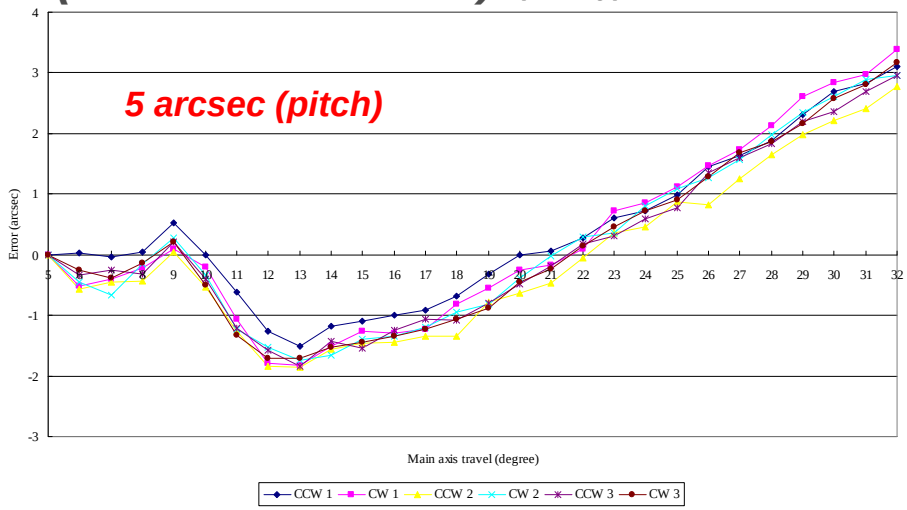
ALL MEASUREMENT is NOT FEEDBACK

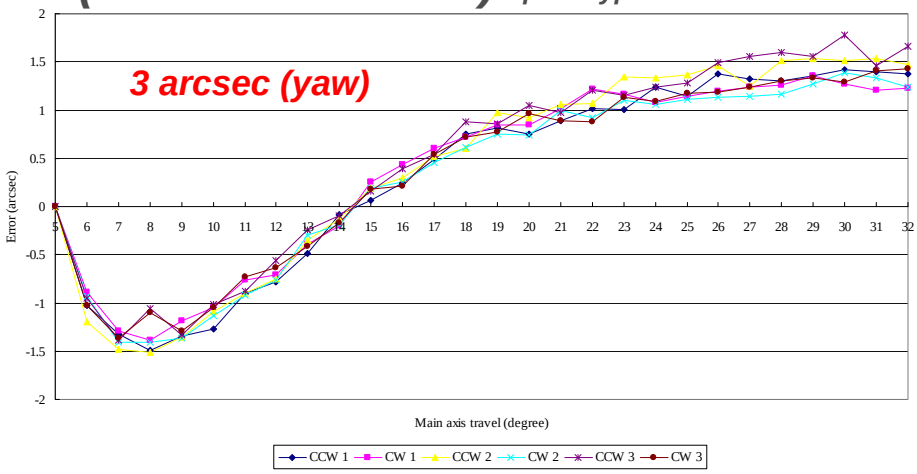
Data (Accuracy for main θ) *<prototype KHL-3C>*



Data (Parallelism : Pitch) *<prototype KHL-3C>*



Data (Parallelism : Yaw) *<prototype KHL-3C>*



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