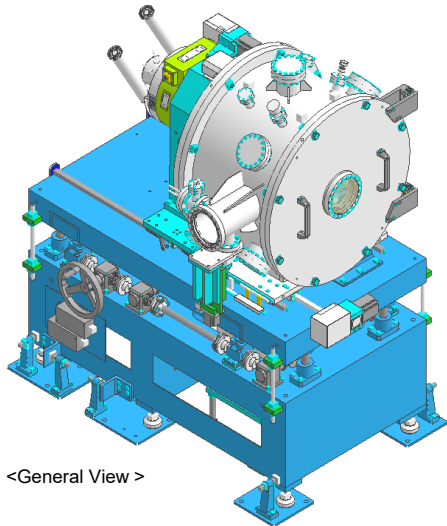


Calculated Type Double Crystal and Multilayer Monochromator

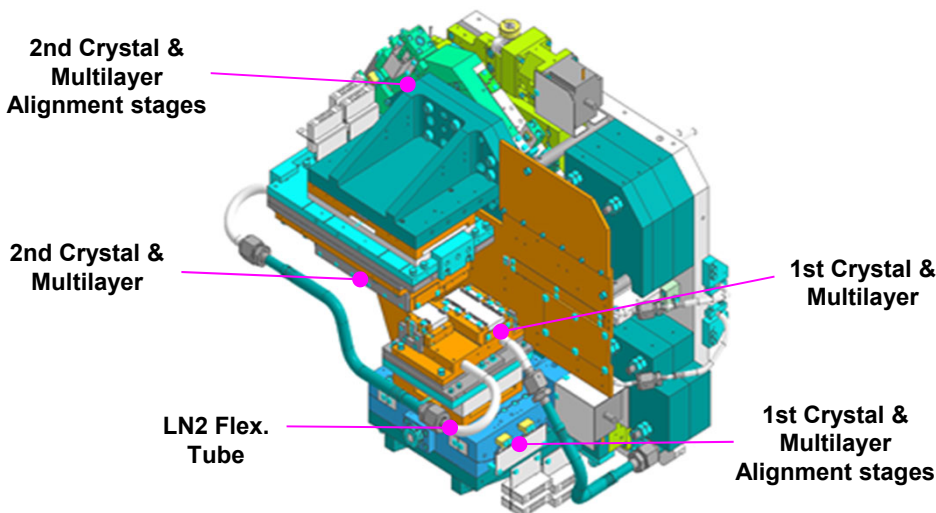
<PHV-30>



<General View >



< Crystal holder with Si and multilayer >



Specifications

Model	PHV-30
Main θ Height	1400 mm
Beam Offset	Si: 25 mm upward, Multilayer: 4 mm upward
Bragg Angle Range	Si: 4.5 – 60 deg, Multilayer: 0.5 – 3.0 deg
Main θ Rotation Center	Center of the 1 st crystal and multilayer 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)	40 x 30 x 20, 170 x 30 x 20 (L x W x T : mm)
Multilayer Size : Ru/B4C	85 x 30 x 20, 220 x 30 x 20 (L x W x T : mm)
Dimension	1100 x 1550 x 1850 (L x W x H : mm)

Features

◆ Calculated type DCMM with crystal & multilayer.

◆ Pairs of crystal and multilayer are placed in **parallel** on perpendicular to X-ray beam.

◆ Crystal or multilayer can be changed by whole chamber translation.

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

◆ Consists of :

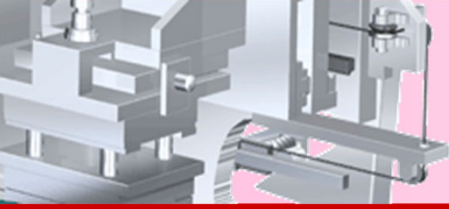
1. Crystal cooling system
2. 1st. & 2nd. crystal alignment stages
3. Main axis goniometer
4. Direct beam stopper
5. Supporting structure with chamber translations
6. Vacuum chamber
7. Controllers for motors

◆ LN2 both crystal & multilayer cooling

◆ The first crystal alignment stages
Z1 : +0.5 ~ -10 mm
 χ 1 : \pm 1 degree

◆ The second crystal alignment stages
Z2 : +13 ~ -4.5 mm
 θ 2 : \pm 1 degree (Coarse)
: 0 ~ 23 arcsec
(Fine motion by PZT)

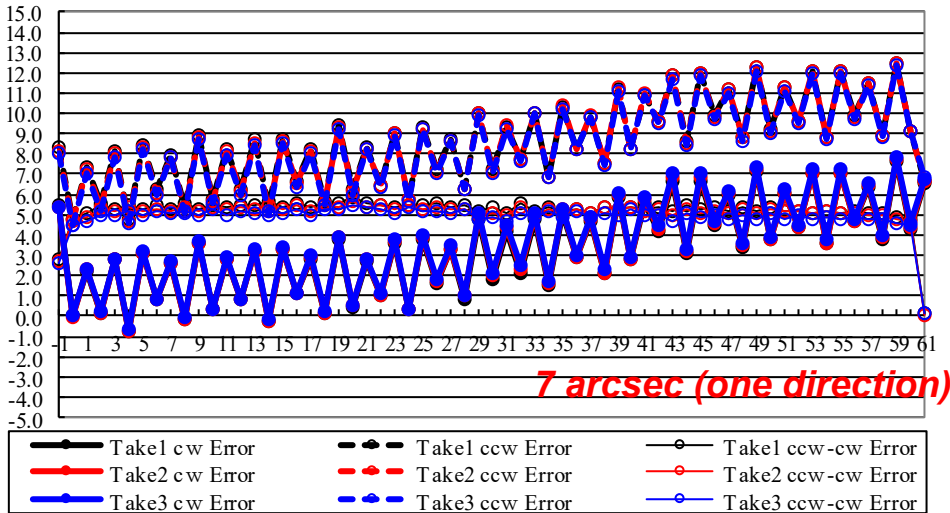
◆ Support structure translations
Xt : \pm 30 mm
Zt : \pm 50 mm



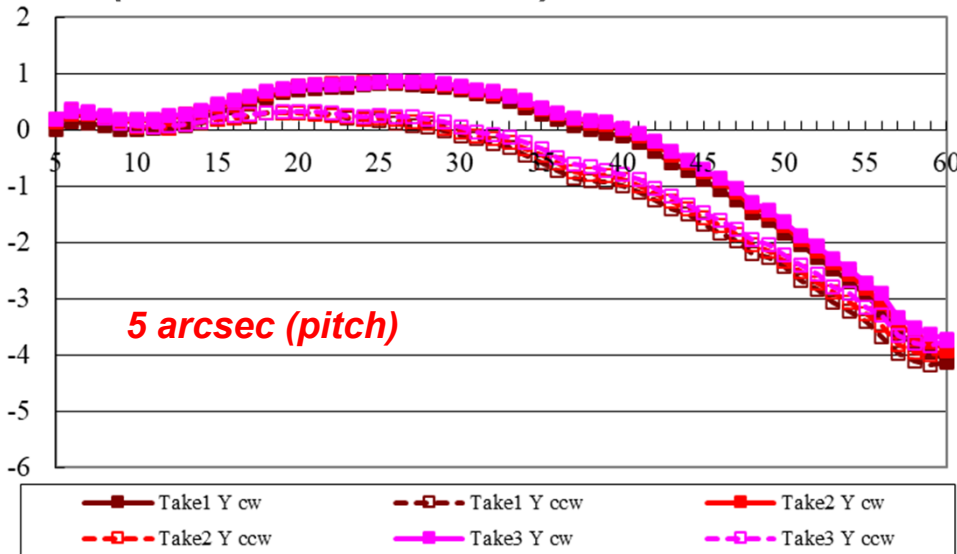
Calculated type DCMM <PHV-30>

ALL MEASUREMENT is NOT with FEEDBACK

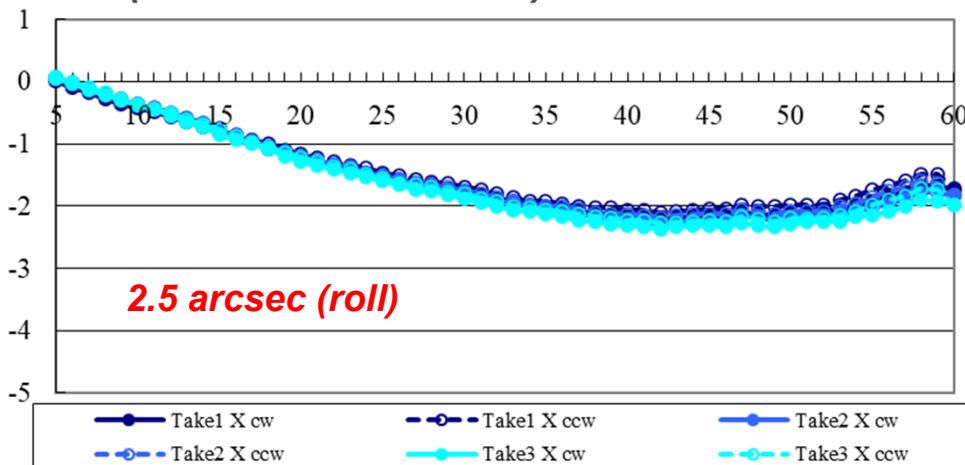
Data (Accuracy for main θ) <PHV-30>



Data (Parallelism : Pitch) <PHV-30>



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



Features

- ◆ Calculated type DCMM with crystal & multilayer.
- ◆ Pairs of crystal and multilayer are placed in parallel on perpendicular to X-ray beam.
- ◆ Crystal or multilayer can be changed by whole chamber translation.
- ◆ Long 2nd crystal & multilayer are 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 with chamber translations
 6. Vacuum chamber
 7. Controllers for motors

- ◆ LN2 both crystal & multilayer cooling

- ◆ The first crystal alignment stages
Z1 : +0.5 ~ -10 mm
 χ 1 : \pm 1 degree

- ◆ The second crystal alignment stages
Z2 : +13 ~ -4.5 mm
 θ 2 : \pm 1 degree (Coarse)
: 0 ~ 23 arcsec (Fine motion by PZT)

- ◆ Support structure translations
Xt : \pm 30 mm
Zt : \pm 50 mm

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