

34-ID-C

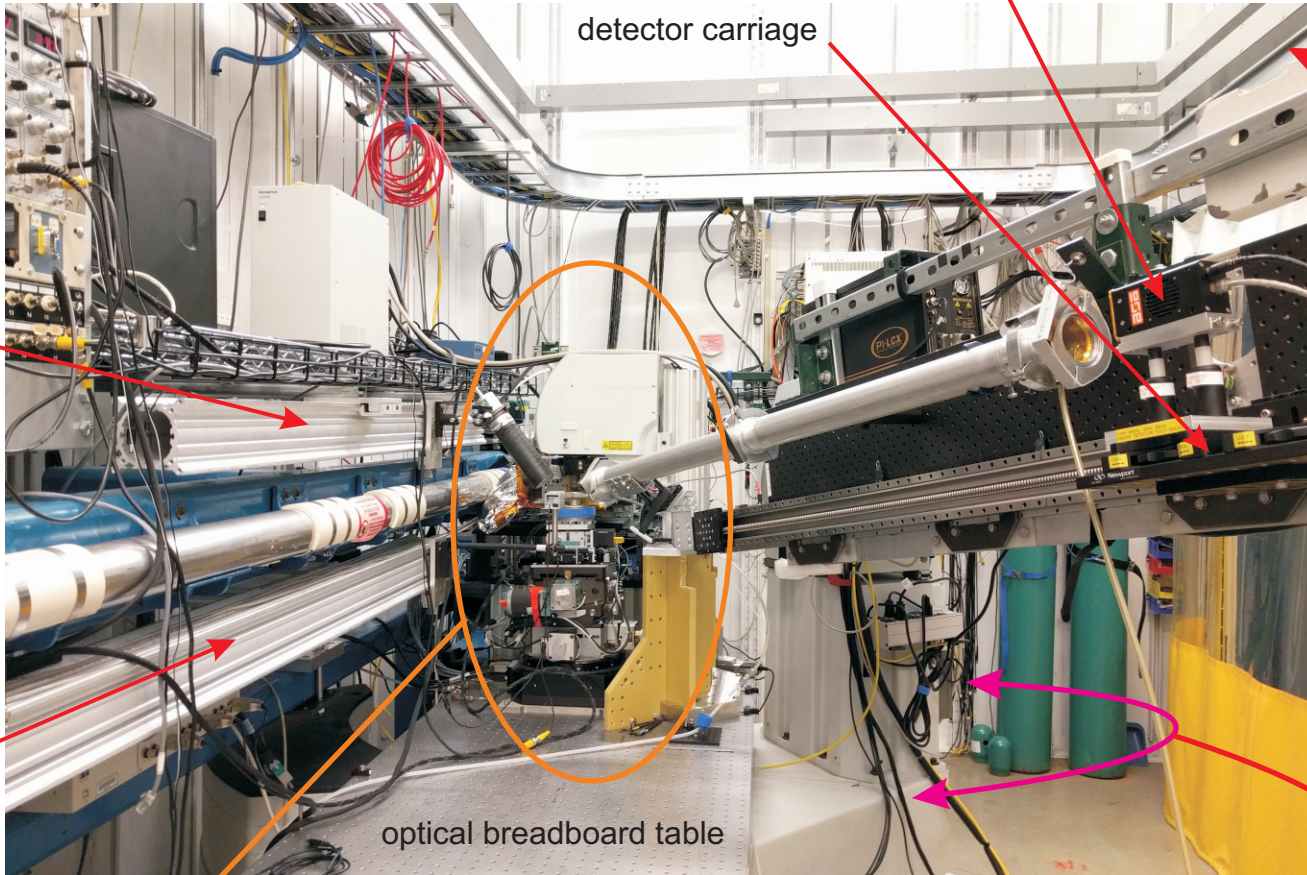
Looking upstream towards the source

detector
(Timepix shown)

detector carriage

upper
accessory rail

lower
accessory rail
calibrated alignment to
focused beam



optical breadboard table

Sample Goniometer and other
close proximity components

“Diffractometer”
detector positioning

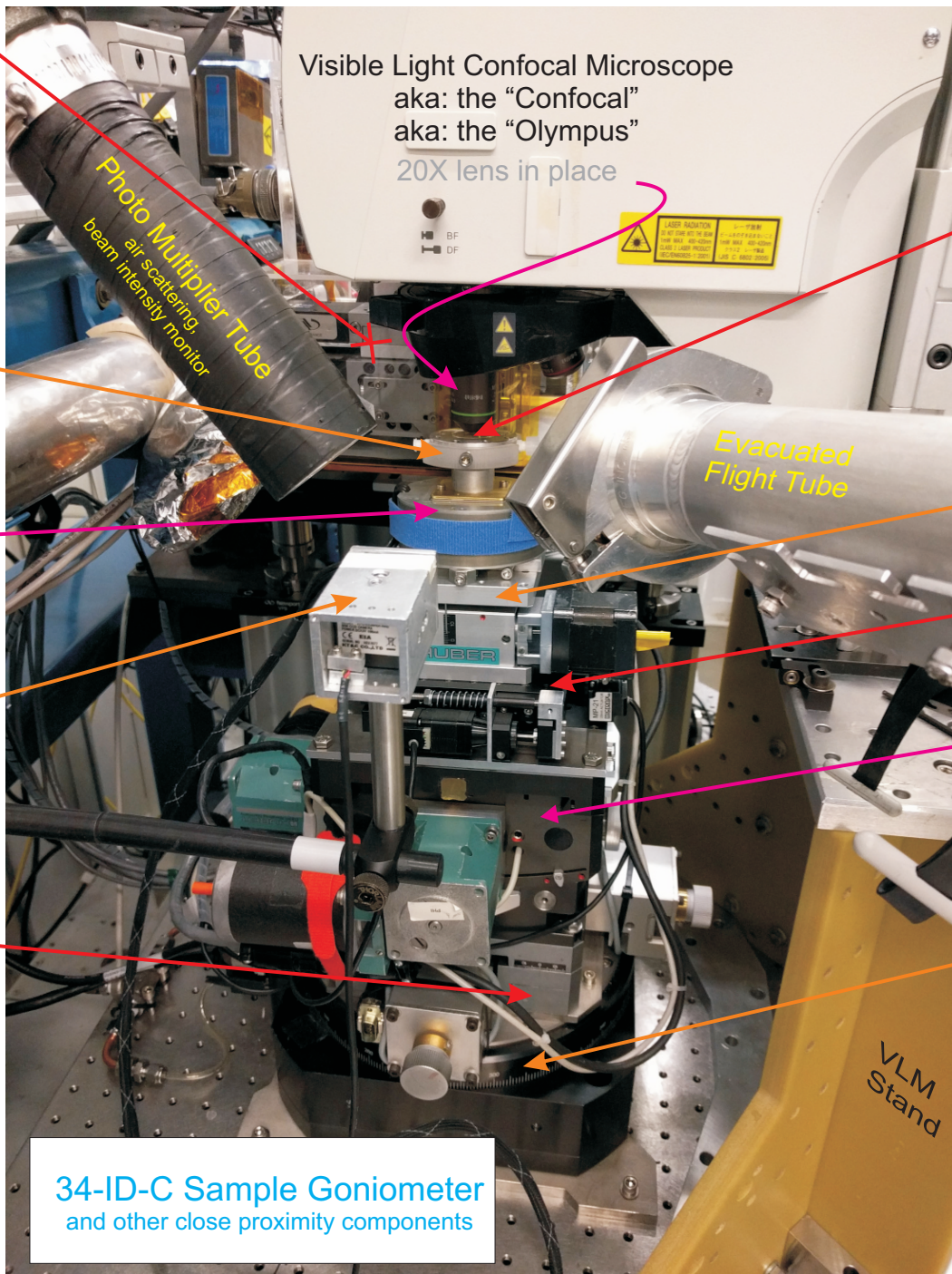
Kirkpatrick-Baez
beam focusing
mirror set

Flow Cell
(one of many possible
sample environments)

Piezo X, Y, Z stage
(100um, 100um, 25um
total motion)

X-Ray "eye"
CdWO₂ scintillator camera
("Tischler cam")

manual X,Y
(for center calibration only)



Visible Light Confocal Microscope
aka: the "Confocal"
aka: the "Olympus"
20X lens in place

Sample

Evacuated
Flight Tube

"Z" stage
14mm total motion

coarse motion X, Y stage
25mm, 25mm total motion

Phi/Chi
circle segment
stage +/-17deg

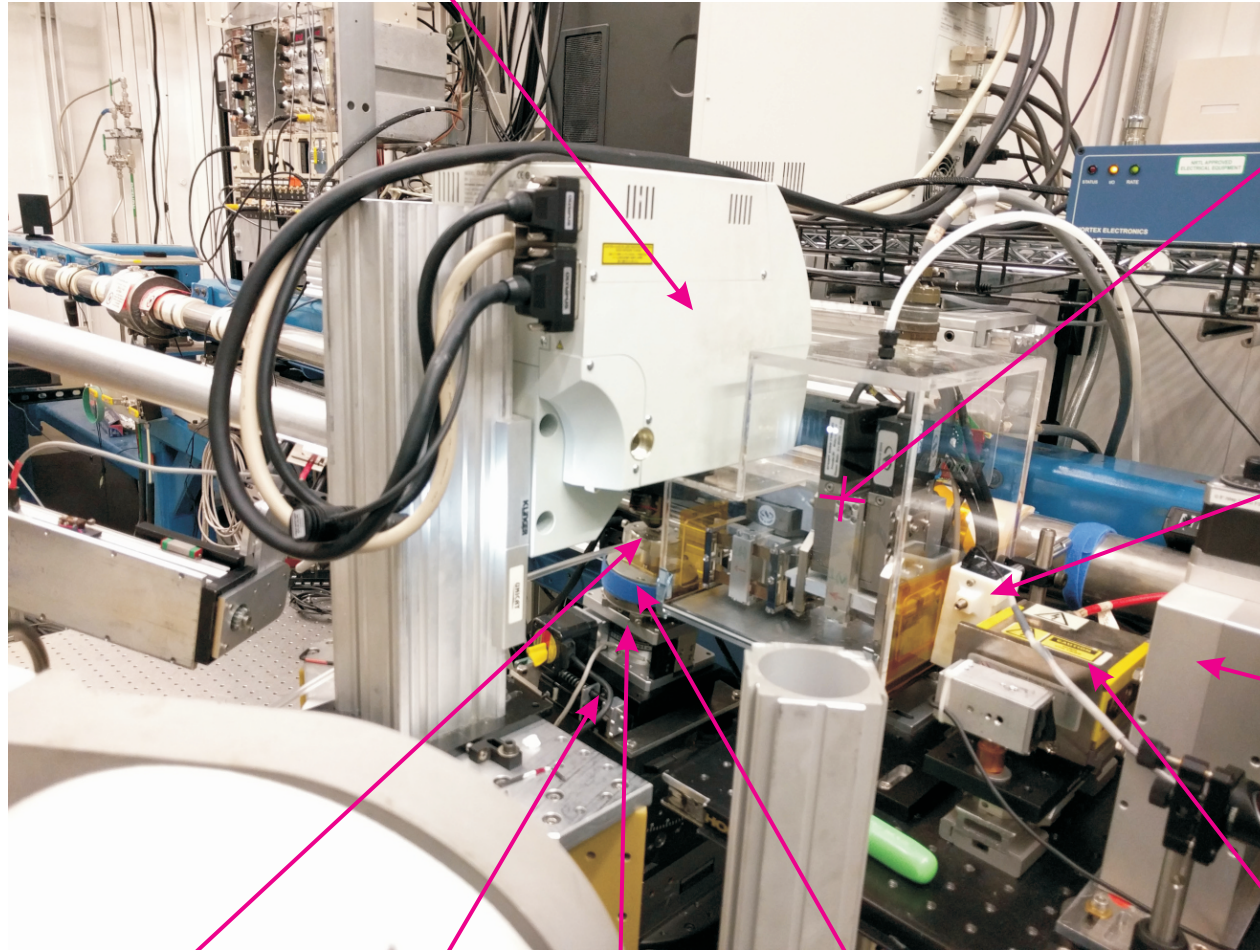
Theta
air bearing
rotation stage
+/- 180deg

34-ID-C Sample Goniometer
and other close proximity components

VLM
Stand

Visible Light Confocal Microscope
aka: the "Confocal"
aka: the "Olympus"

looking inboard/downstream



Kirkpatrick-Baez
beam focusing
mirror set
K-B mirrors

Vertical
CdWO₂ scintillator camera
(ahead of focusing optics
and after ion chamber
used for instrument set-up)

Beam Defining Aperture
"JJ-Slits"

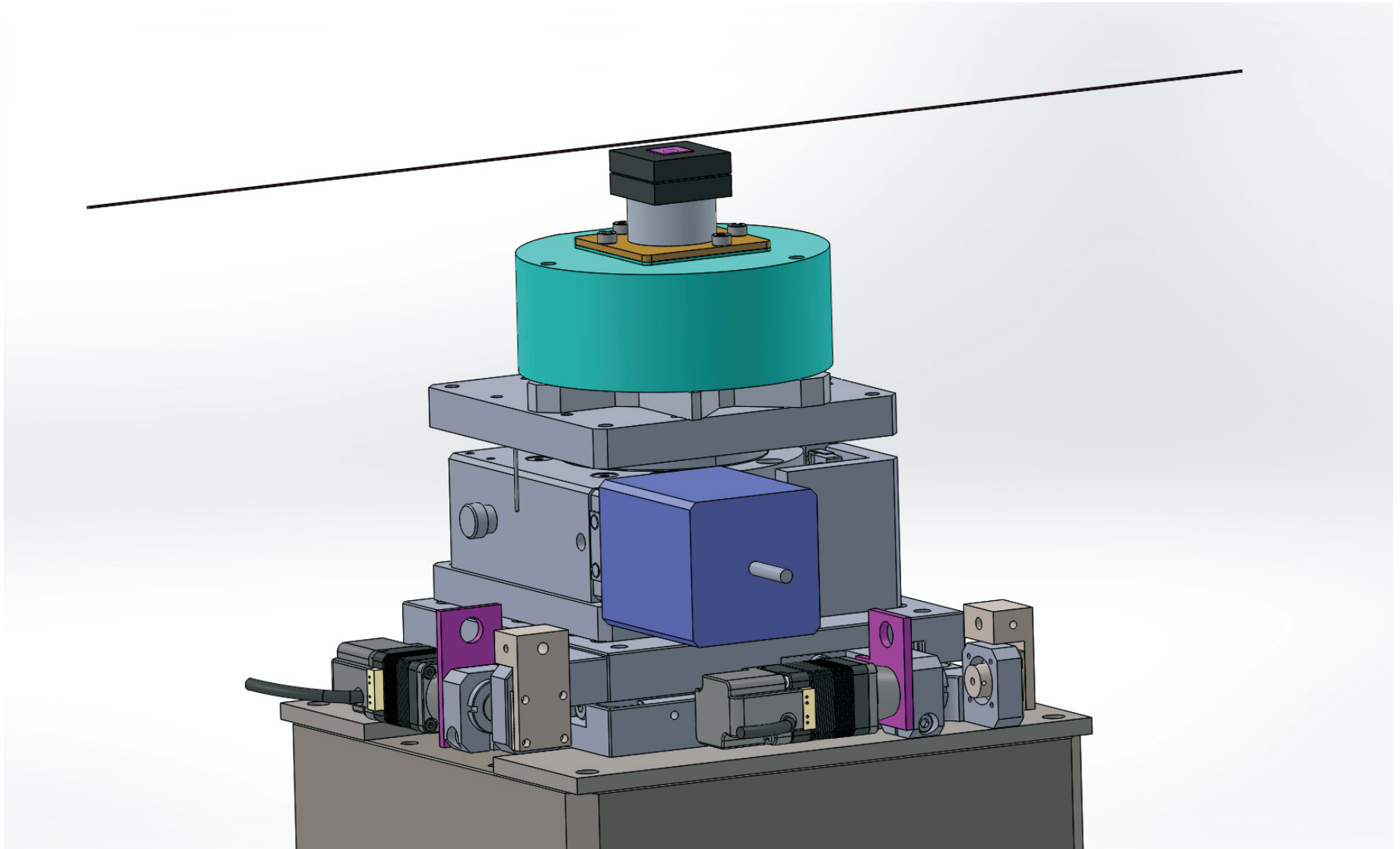
Ionization Chamber
beam intensity monitor
"ion chamber"

Flow Cell
(one of many possible
sample environments)

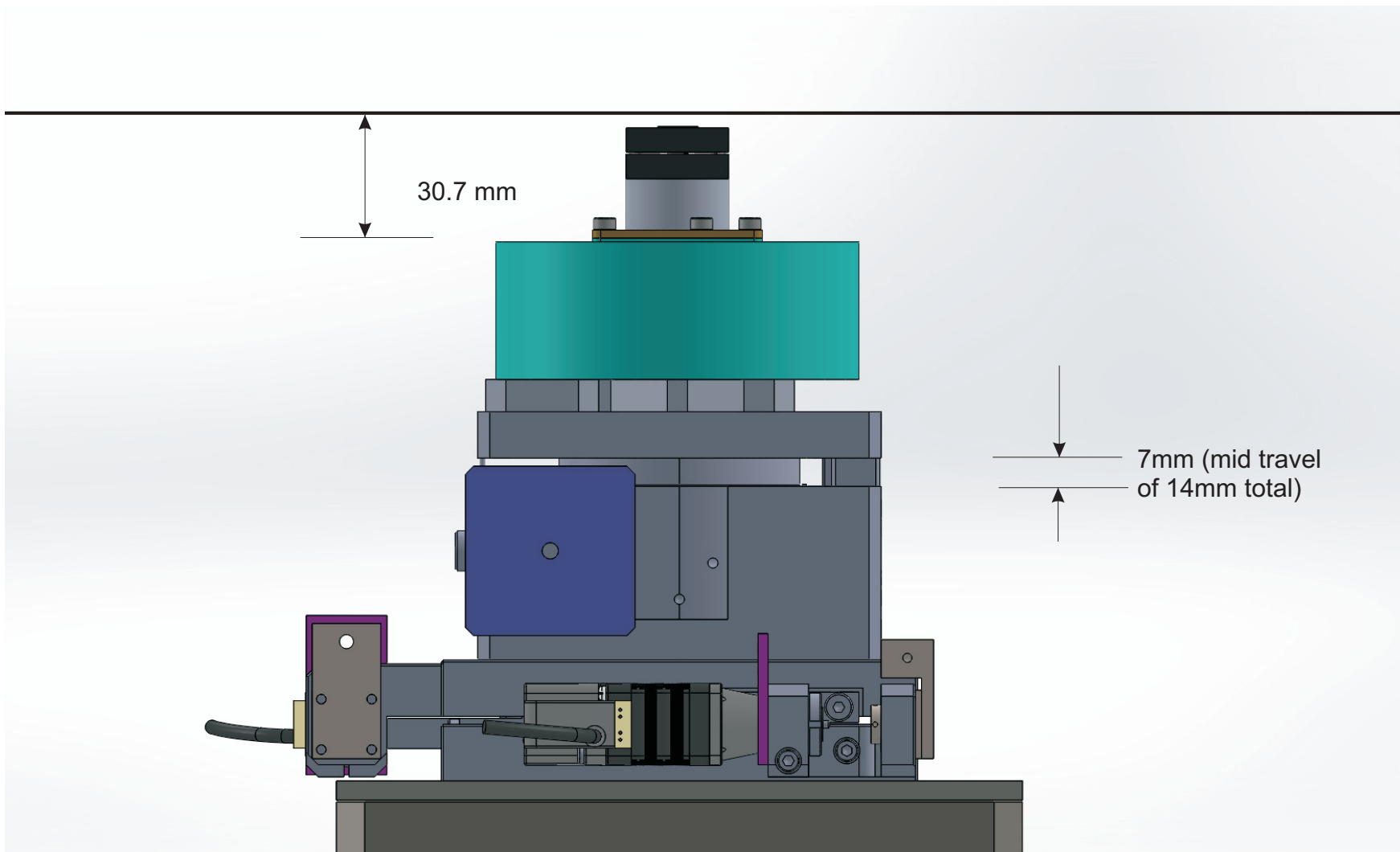
coarse motion X, Y stage
25mm, 25mm total motion

"Z" stage
14mm total motion

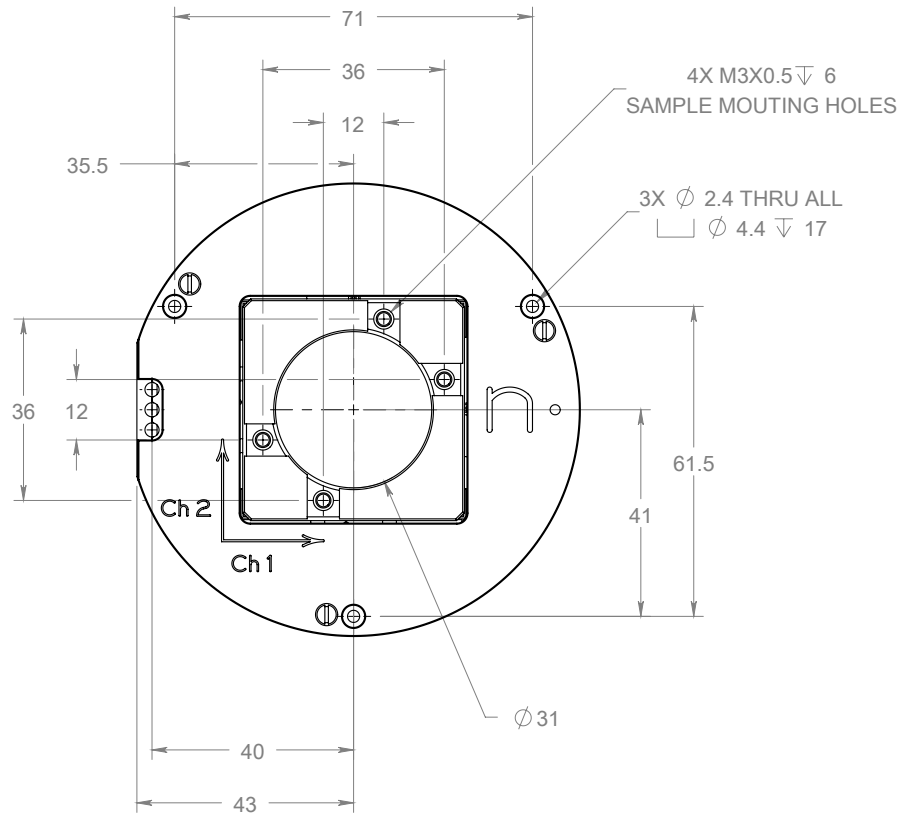
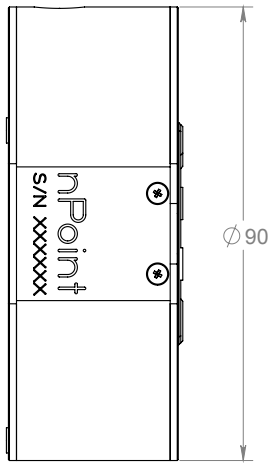
Piezo X, Y, Z stage
(100um, 100um, 25um
total motion)



Shown is a basic, room temperature, ambient environment
sample mounting scenario with beam simulation.
here the sample is below the beam for clarity



A side view looking inboard (towards the synchrotron). The total motion of the Z stage is 14mm and shown here in mid travel. The mounting plane (top) of the piezo stage is 30.7mm from the beam at mid travel. There should always be a minimum 1mm travel in any device design to ensure proper alignment of the sample (and preferably more).



<http://www.npoint.com/products/nanopositioning-stages/item/npxy100z25-219/>



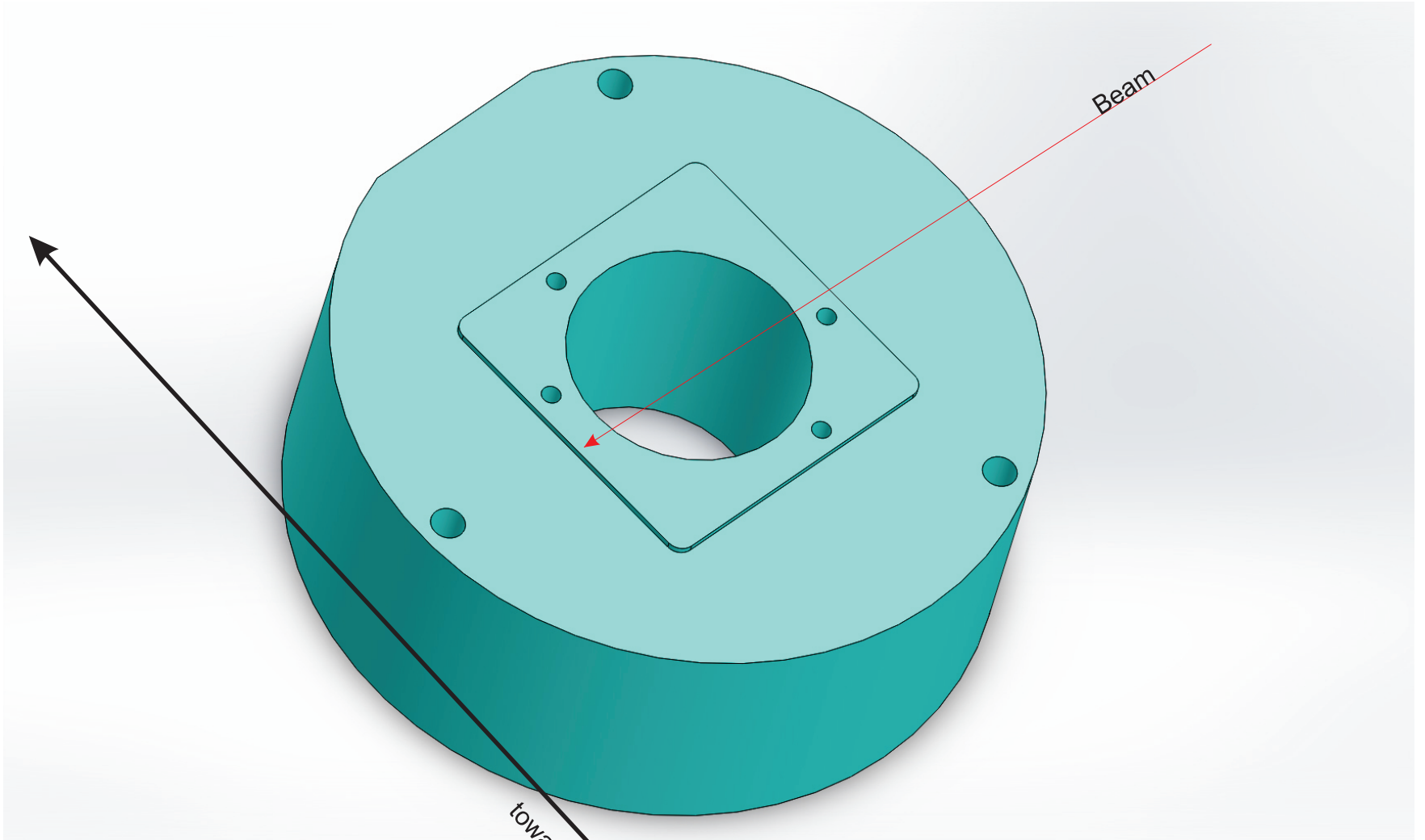
UNLESS OTHERWISE NOTED, ALL UNITS ARE IN MILLIMETERS

THIRD ANGLE PROJECTION



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DESCRIPTION NPXY100Z25-219 3-AXIS SCANNER, NON-MAGNETIC 100um XY / 25um Z		
NUMBER 3715219	REV. A	SHEET 1 OF 1



Beam

towards synchrotron