Gated Imager Orientation at NIF October_2019

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Assumptions/ definitions

- Positioner view: the observer is looking at the phosphor screen, from the back of the positioner
- Assuming pinhole (array) imaging
- Pinhole imaging inverts the image of the object (*ie* negative magnification)

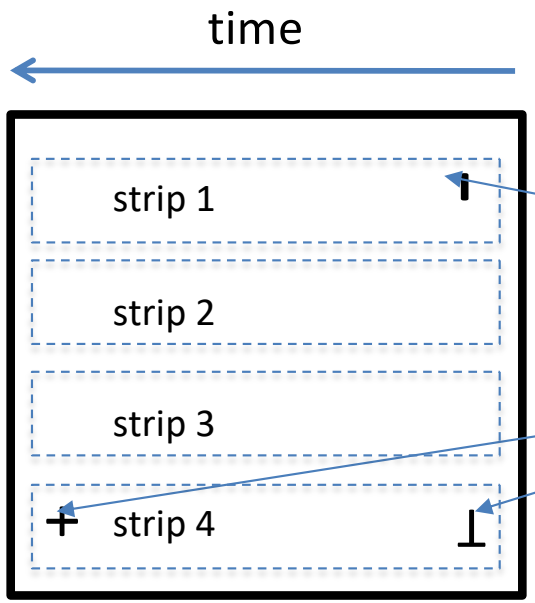
BUT

- The “image” of the pinhole array is a “point” projection (*ie* no inversion)

- For HGXD/RGXD, the DLP is rotated 90° Counter Clock Wise (when looking toward TCC), relative to GXD

Questions? Contact trosseille1/holder4

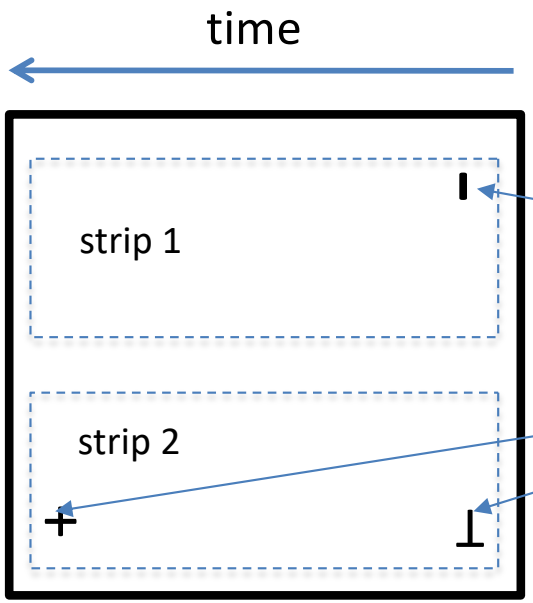
Fiducials



4 strip cameras: GXD1, 3, 4 – HGXD 2, 6

1 Fidu on strip 1 (at early time side)

2 Fidus on strip 4

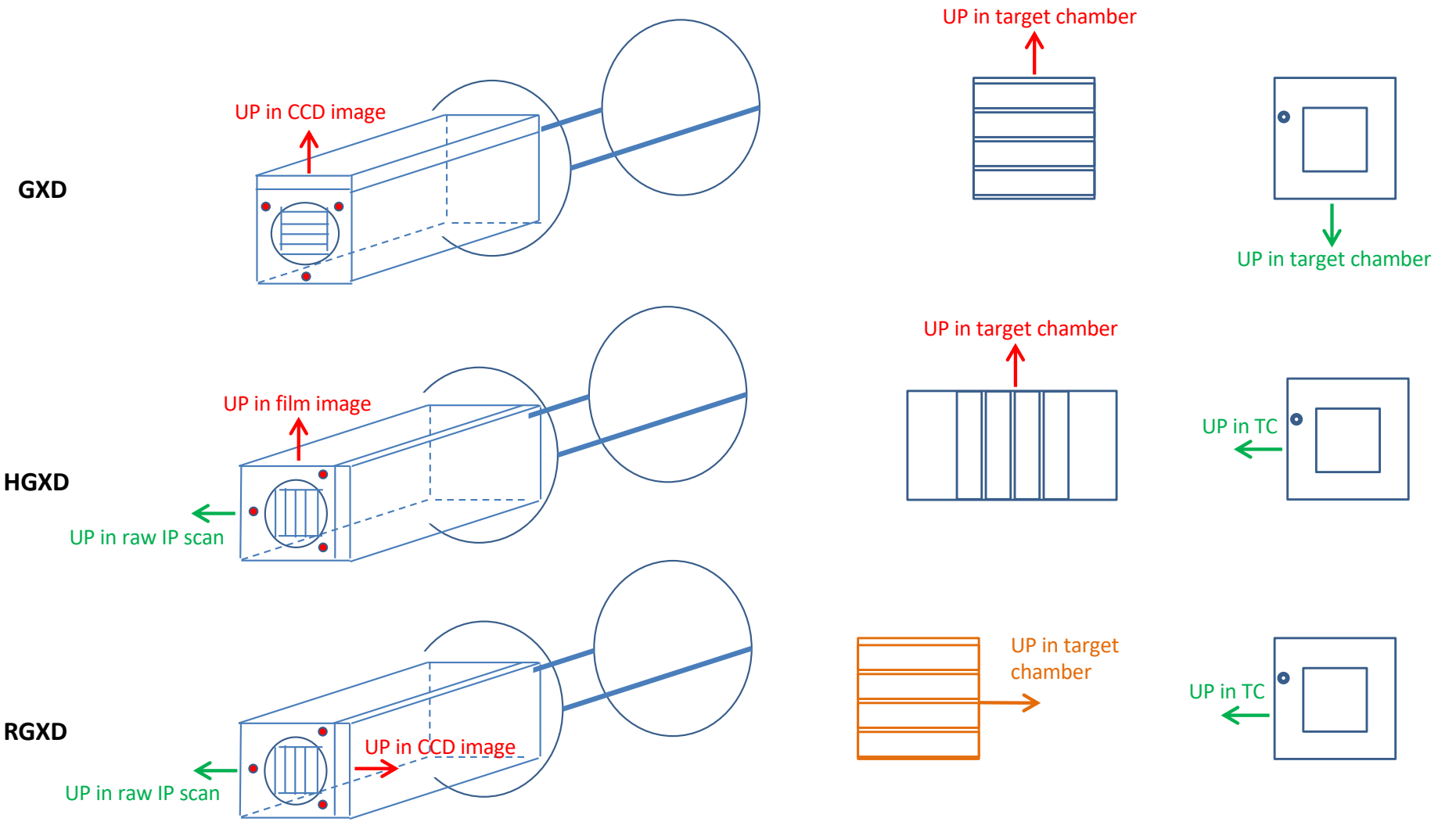


2 strip cameras: HGXD 1,3,5

1 Fidu on strip 1 (at early time side)

2 Fidus on strip 2

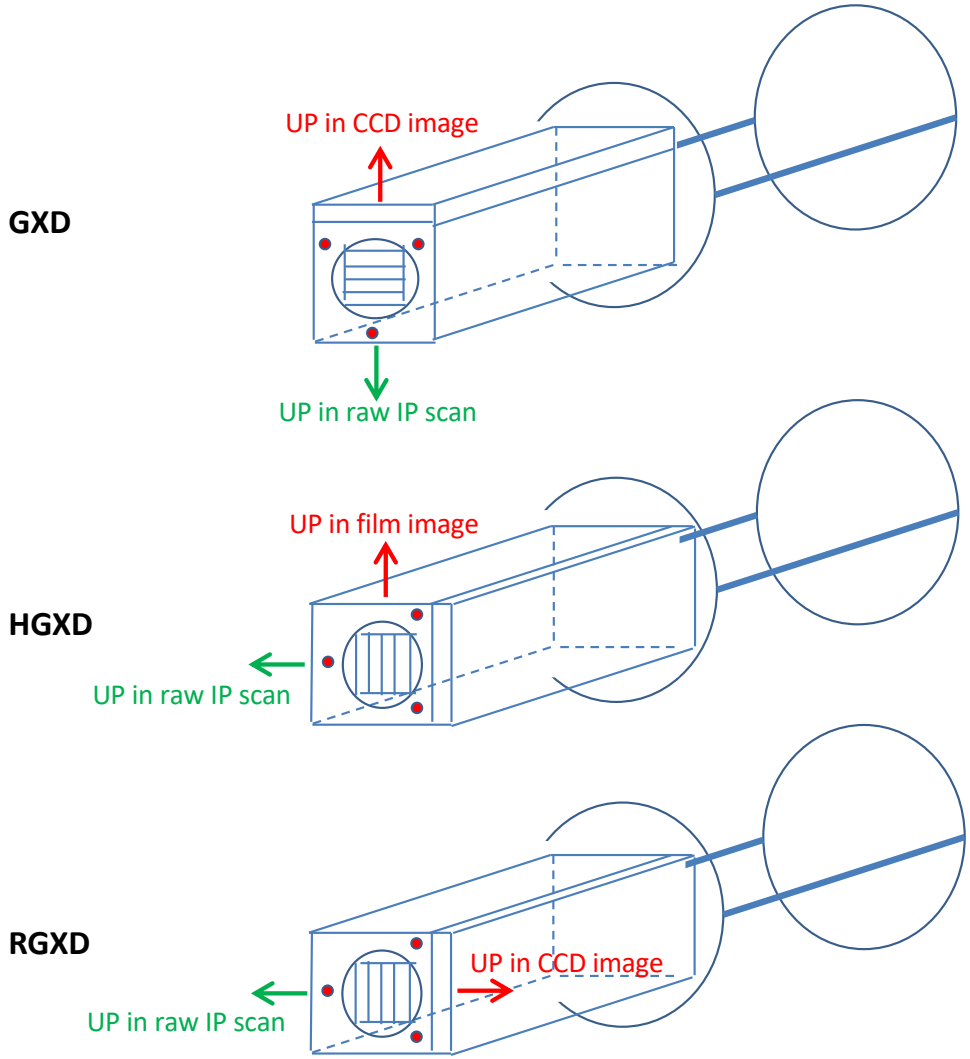
Horizontal DIM – Positioner view

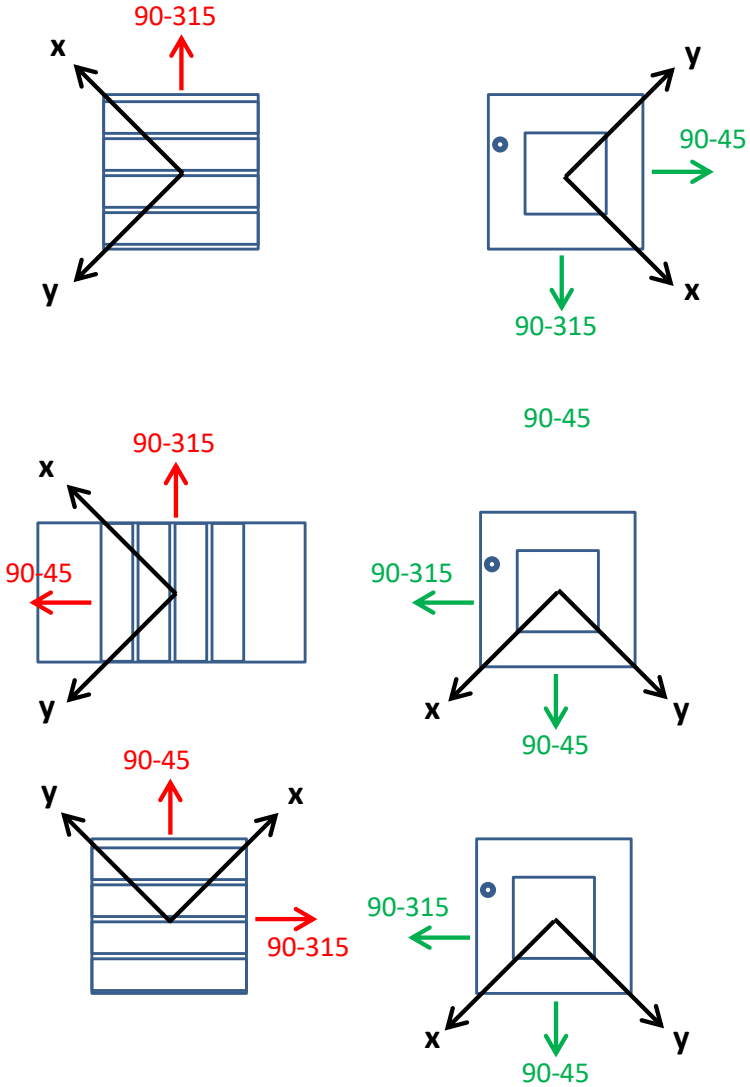


Data orientation, MCP (SAVI view)

Data orientation, IP (SAVI view)

POLAR DIM – Positioner view

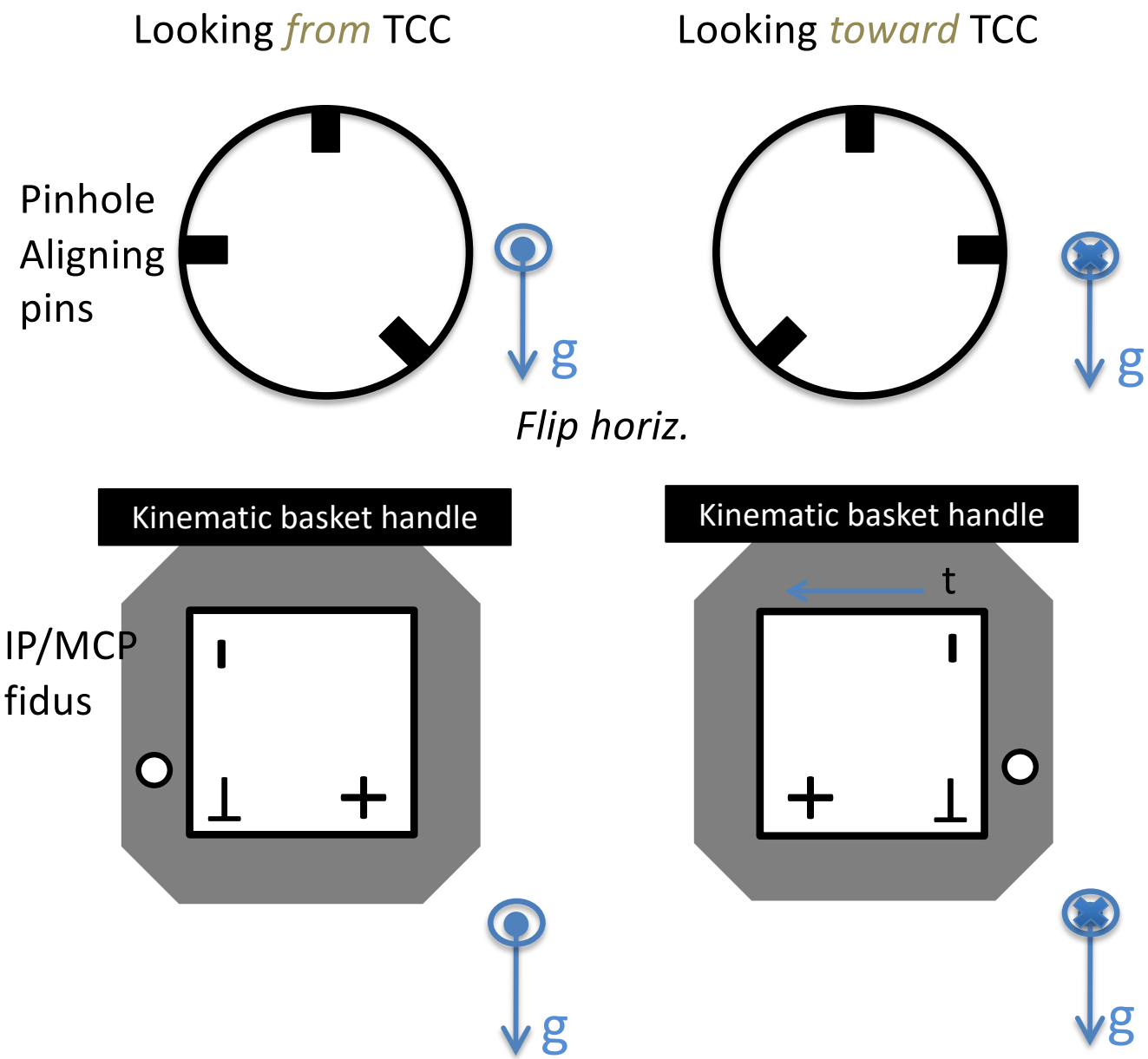




Data orientation, MCP (SAVI view)

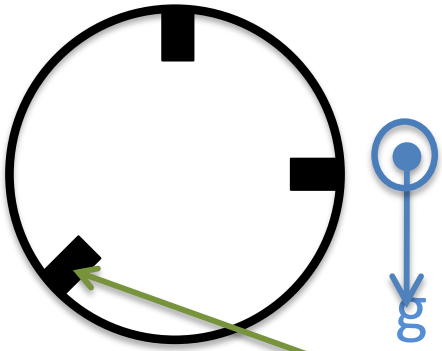
Data orientation, IP (SAVI view)

Pinhole array design – RVP - GXD



Pinhole array design – RVP - RGXD/HGXD

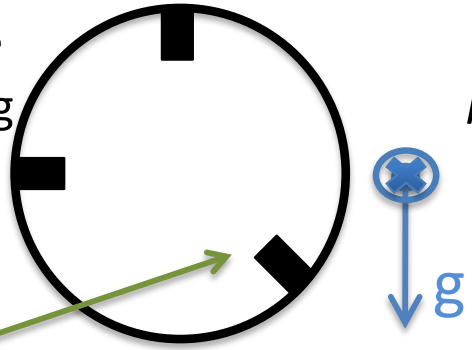
Looking *from* TCC.
(this is usually the orientation of pinhole array drawings)



This is the head or tail of an arrow pointing TO TCC

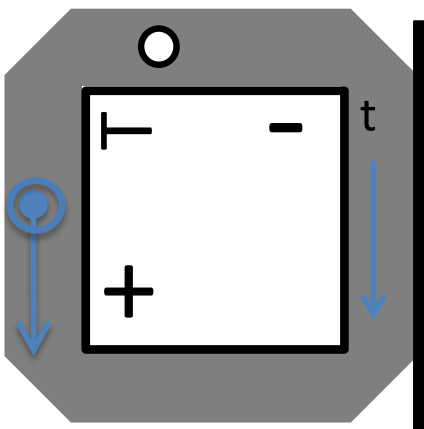
Looking *toward* TCC.

Pinhole Aligning pins

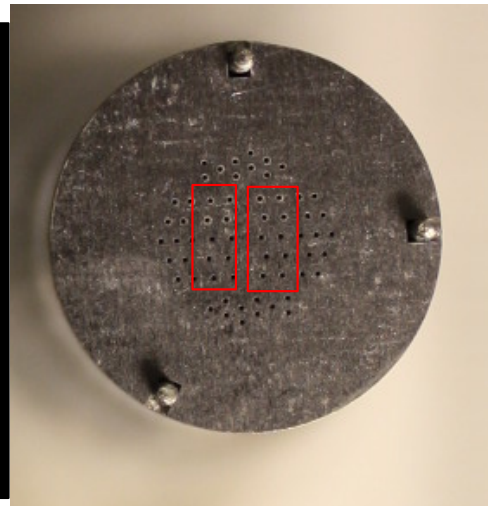


Flip horiz.

This pin is not at 45° ;
it is at 60/120.

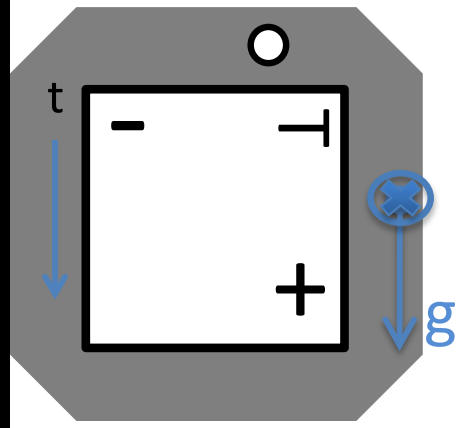


Kinematic basket handle



IP/MCP fidus

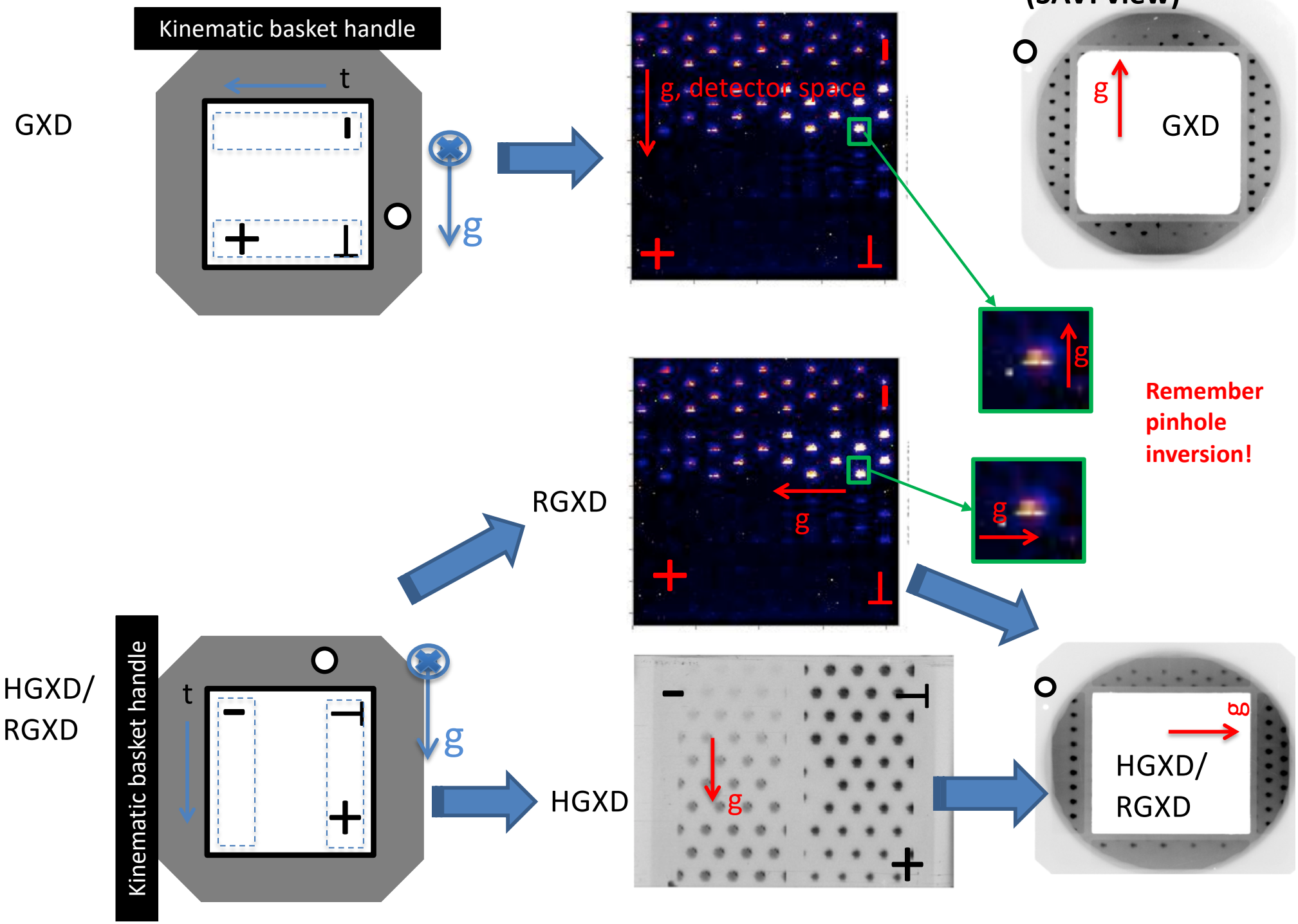
Kinematic basket handle

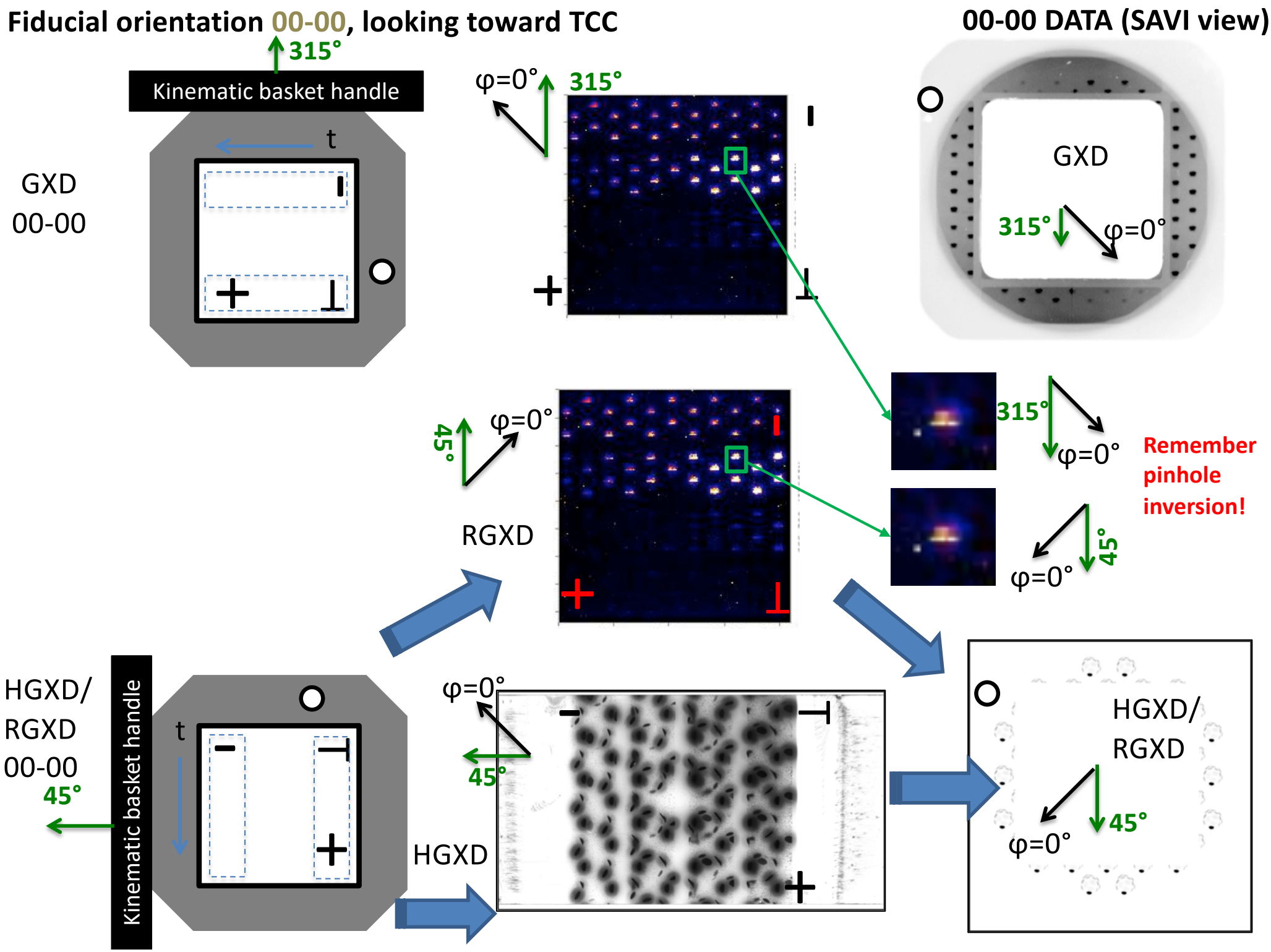


DLP rotated 90° CCW (looking toward TCC), relative to GXD

Fiducial orientation, any equatorial positioner, looking toward TCC

equatorial IP DATA (SAVI view)




Fiducial orientation 00-00, looking toward TCC
00-00 DATA (SAVI view)
315°
Kinematic basket handle
t
GXD
00-00
φ=0°
315°
GXD
315°
φ=0°
φ=0°
45°
RGXD
315°
φ=0°
φ=0°
45°
Remember pinhole inversion!
HGXD/
RGXD
00-00
45°
Kinematic basket handle
t
φ=0°
45°
HGXD
HGXD/
RGXD
φ=0°
45°