

**Test Date: 15/09/2020, 16/09/2020 and 21/10/2020**

**Center: Nepean Cancer Care Centre**

**Linac: LA3 (Elekta Versa HD™ (S/N 109033; Integrity 4.0.4), XVI 5.0.4, 6XFFF plans)**

**Physicists: Daniel Mason, Jianjie Luo**

**Phantom: Phantom with 3 implanted fiducial markers in the liver + Robot**

**Static Localisation Test (Criteria: <1 mm mean error and <2 mm std of error)**

Shifts (mm)			Mean (mm) Req. (<1 mm)			Std. (mm) Req. (<2 mm)			Comments
LR	SI	AP	LR	SI	AP	LR	SI	AP	
0	0	0	0	0.1	0.0	0.0	0.0	0.0	PASSED
0	-5	0	-0.6	0.2	0.1	0.2	0.6	0.6	PASSED
0	+5	0	-0.7	0.0	0.1	0.1	0.4	0.4	PASSED
+4	0	0	0.3	-0.3	-0.1	0.1	0.4	0.3	PASSED
0	0	-5	-0.6	0.1	-0.2	0.1	0.3	0.4	PASSED
0	0	+3	0.6	0.3	0.4	0.1	0.5	0.3	PASSED

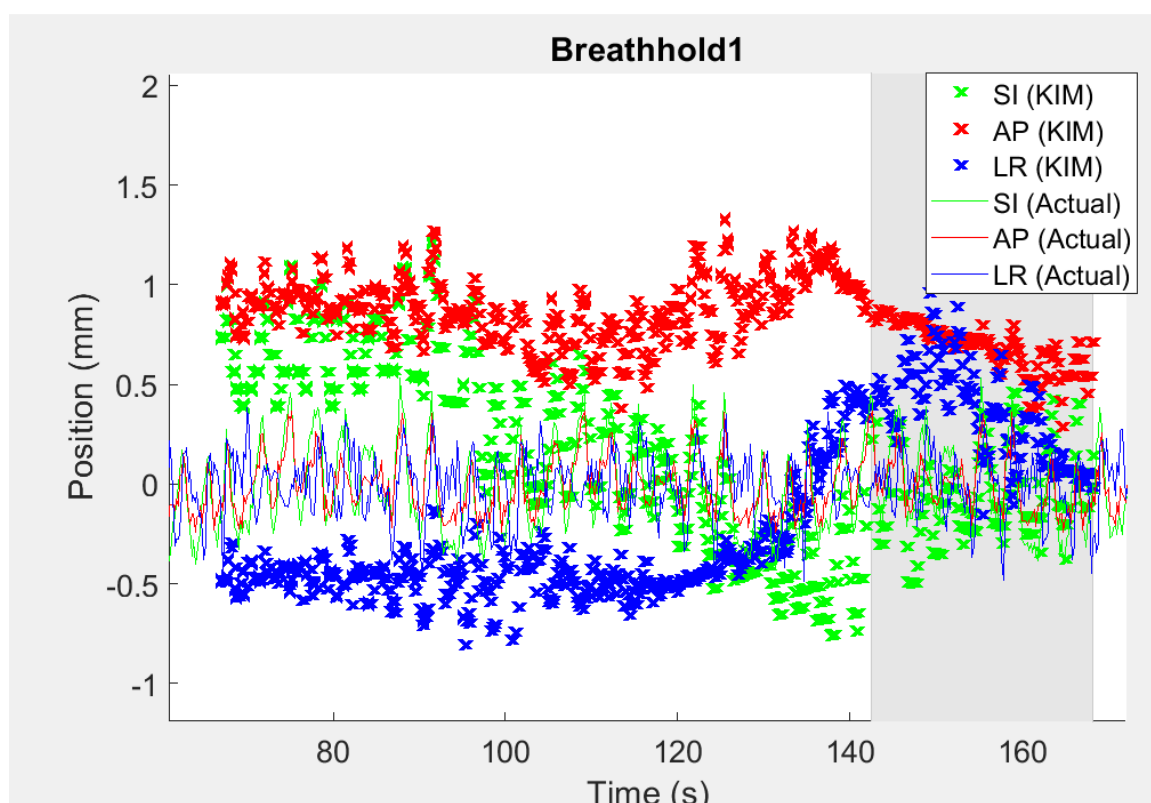
## Dynamic Localisation Test (Criteria: <1mm mean error and <2 mm std of error)

### Liver Trajectory: LiverTraj\_BreathHold1

Processing time per image (Online): 0.19 seconds

Mean (mm)			Std (mm)			Percentile(5,95) (mm)			
LR	SI	AP	LR	SI	AP	LR	SI	AP	
Online	-0.2	0.1	0.8	0.4	0.4	0.2	(-0.1, 0.7)	(-0.4, 0.3)	(0.47, 0.91)

**QA result: KIM PASSED** in Dynamic test with trajectory LiverTraj\_BreathHold1.

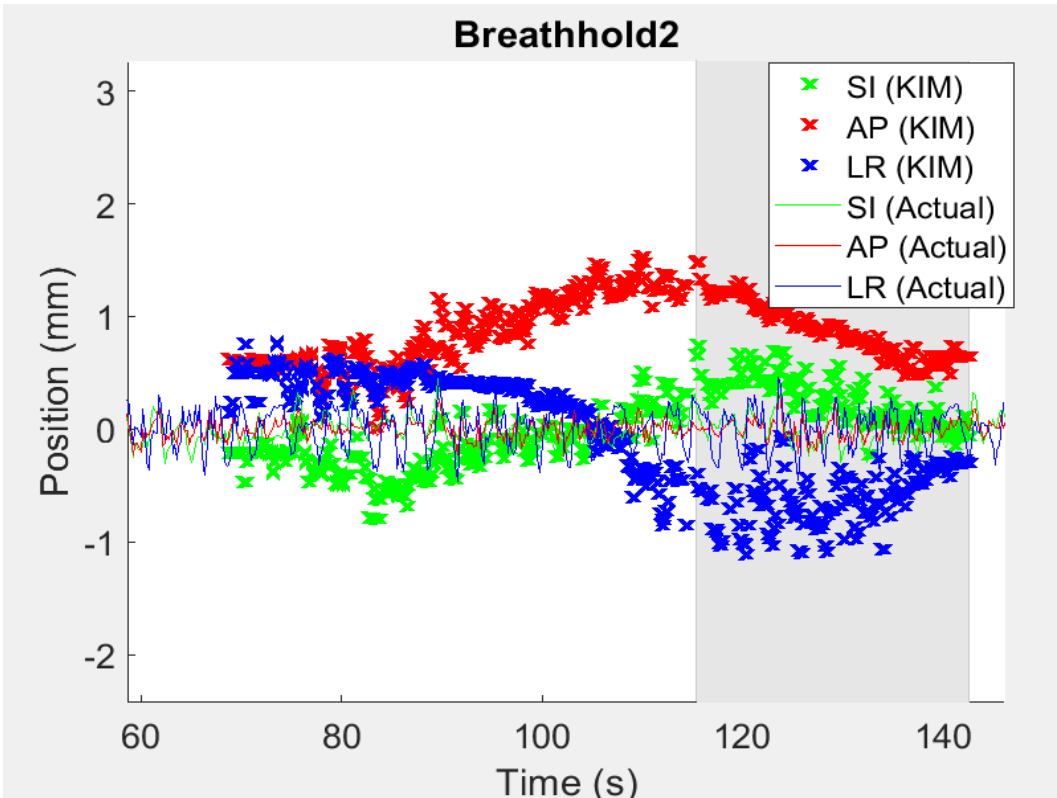


**Liver Trajectory: LiverTraj\_BreathHold2**

Processing time per image (Online): 0.19 seconds

Mean (mm)			Std (mm)			Percentile(5,95) (mm)			
LR	SI	AP	LR	SI	AP	LR	SI	AP	
Online	-0.1	-0.0	0.9	0.5	0.3	0.3	(-0.9, -0.2)	(0.0, 0.5)	(0.5, 1.3)

**QA result: KIM PASSED in Dynamic test with trajectory LiverTraj\_BreathHold2.**

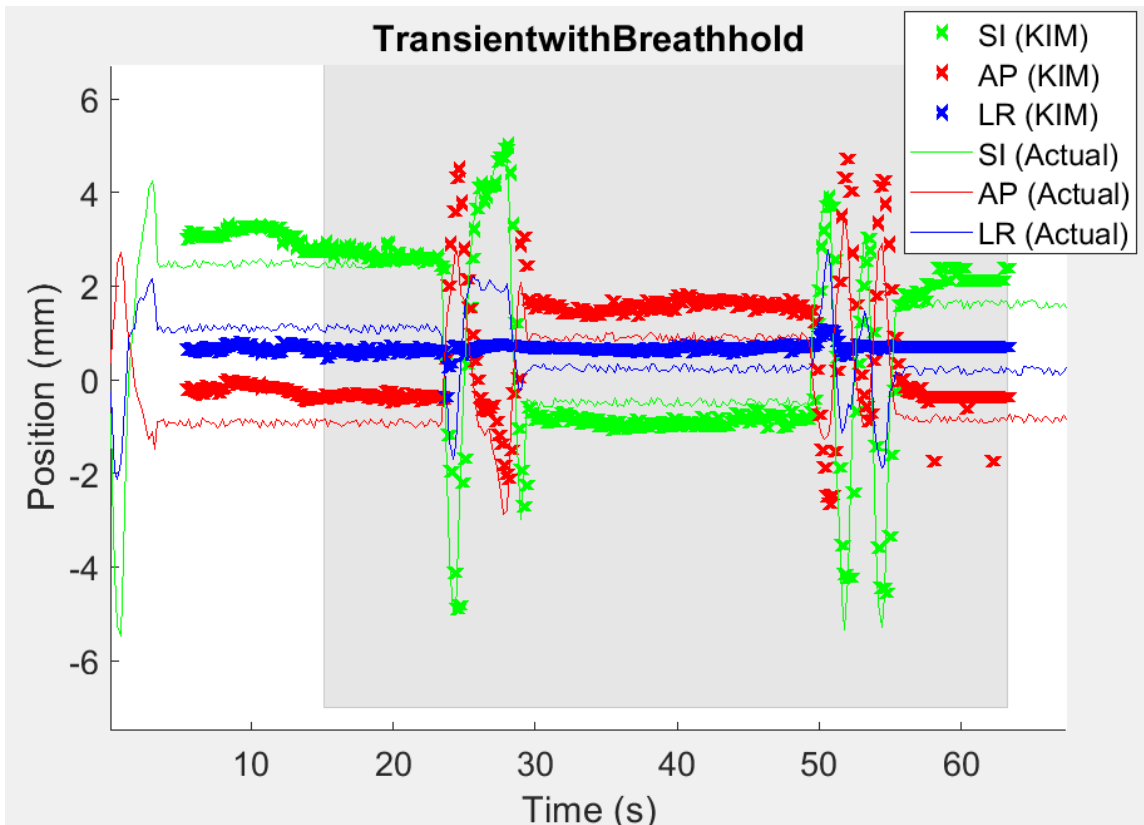


**Liver Trajectory: LiverTraj\_Transient Breathhold**

Processing time per image (Online): 0.18 seconds

Mean (mm)			Std (mm)			Percentile(5,95) (mm)			
LR	SI	AP	LR	SI	AP	LR	SI	AP	
Online	0.1	0.1	0.6	0.7	0.7	0.5	(-1.2, 1.2)	(-1.0, 1.5)	(-0.4, 1.4)

**QA result: KIM PASSED in Dynamic test with trajectory LiverTraj\_Transient Breathhold.**

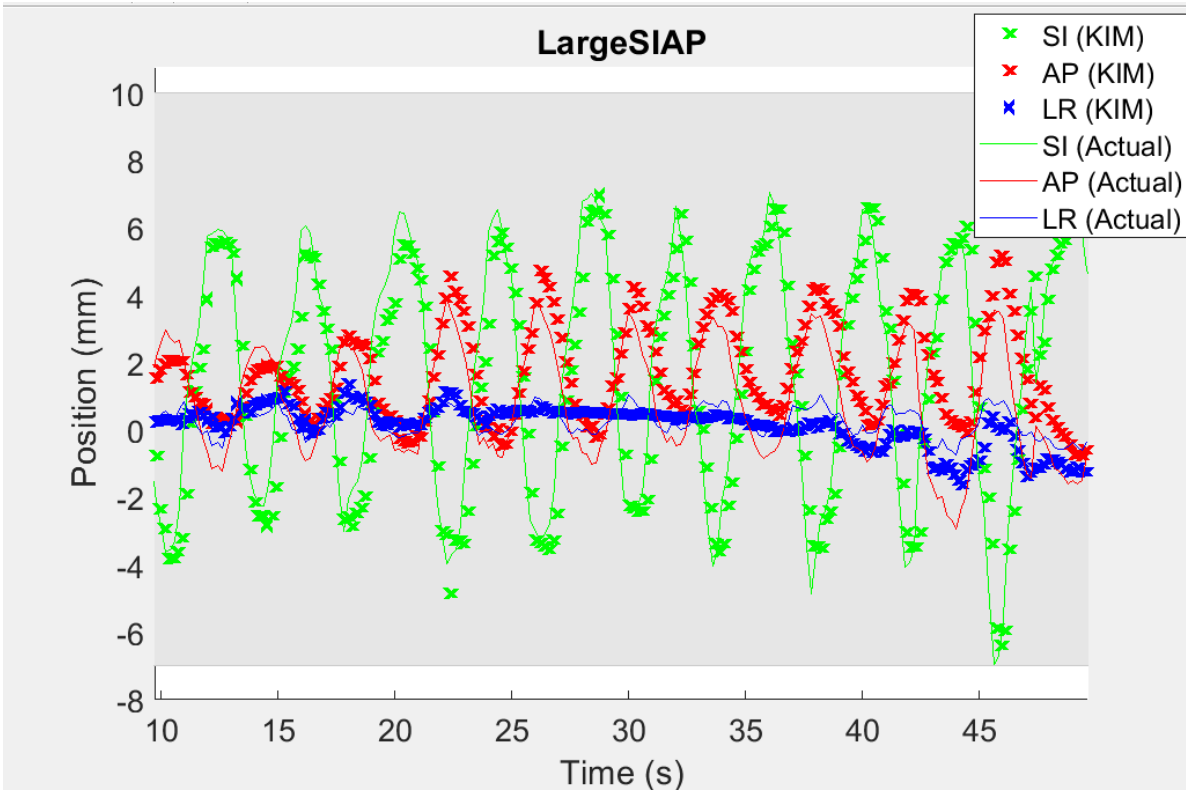


**Liver Trajectory: LiverTraj\_Large SI AP**

Processing time per image (Online): 0.19 seconds

Mean (mm)			Std (mm)			Percentile(5,95) (mm)			
LR	SI	AP	LR	SI	AP	LR	SI	AP	
Online	-0.1	-0.6	0.4	0.3	1.2	0.6	(-0.1, 0.4)	(-2.9, 1.1)	(-0.6, 1.2)

**QA result: KIM PASSED in Dynamic test with trajectory LiverTraj\_Large SIAP.**

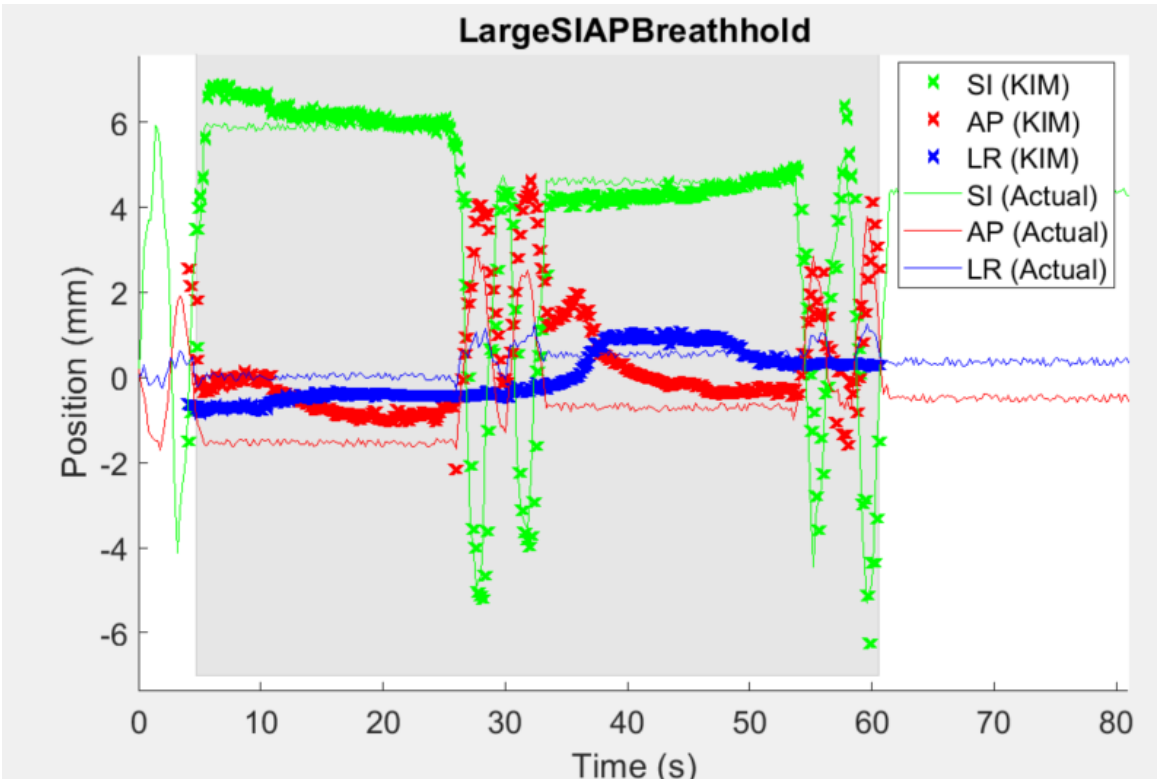


**Liver Trajectory: LiverTraj\_Large SI AP Breath-hold**

Processing time per image (Online): 0.19 seconds

Mean (mm)			Std (mm)			Percentile(5,95) (mm)			
LR	SI	AP	LR	SI	AP	LR	SI	AP	
Online	-0.4	-0.1	0.8	0.5	0.7	0.8	(-1.1, 0.4)	(-1.0, 1.5)	(-0.3, 2.2)

**QA result: KIM PASSED in Dynamic test with trajectory LiverTraj\_Large SIAPBreathhold.**

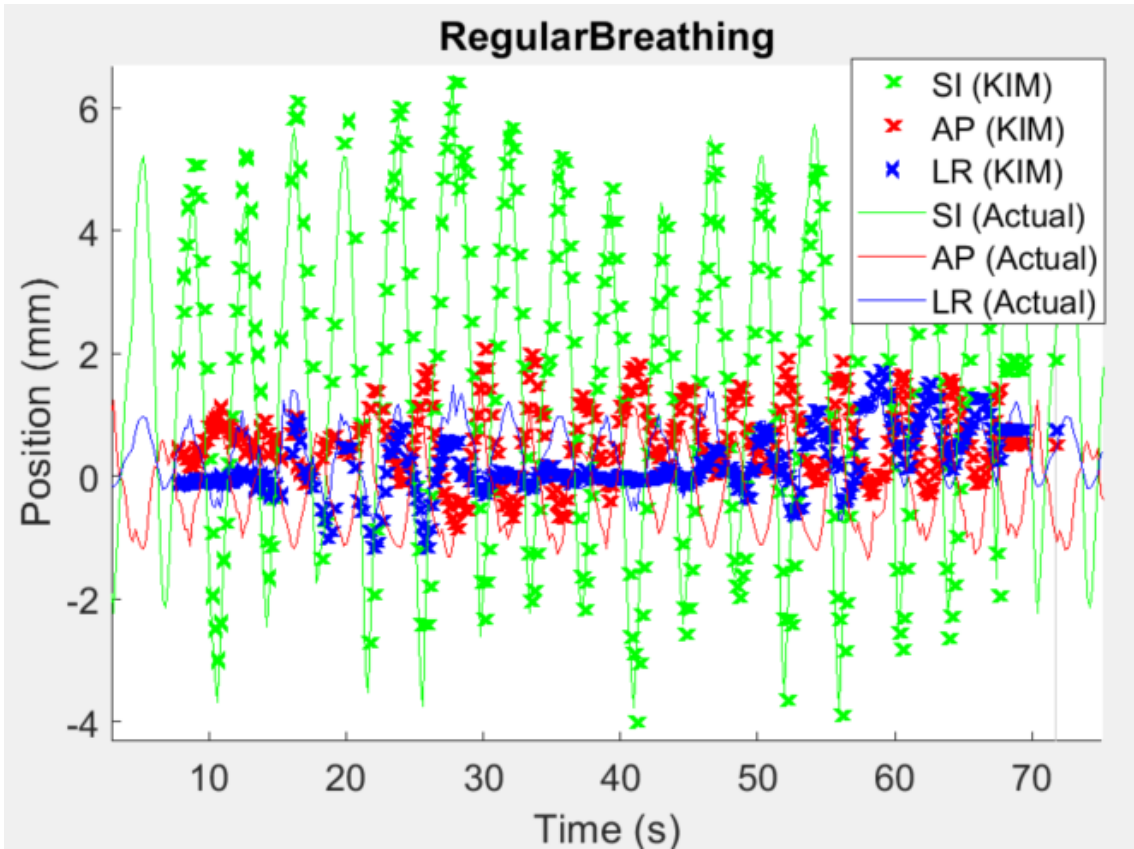


**Liver Trajectory: LiverTraj\_Regular Breathing**

Processing time per image (Online): 0.19 seconds

Mean (mm)			Std (mm)			Percentile(5,95) (mm)			
LR	SI	AP	LR	SI	AP	LR	SI	AP	
Online	-0.2	-0.1	0.8	0.4	1.1	0.5	(-0.9, 0.5)	(-1.6, 1.5)	(0.0, 1.5)

**QA result: KIM PASSED in Dynamic test with trajectory LiverTraj\_Regular Breathing.**

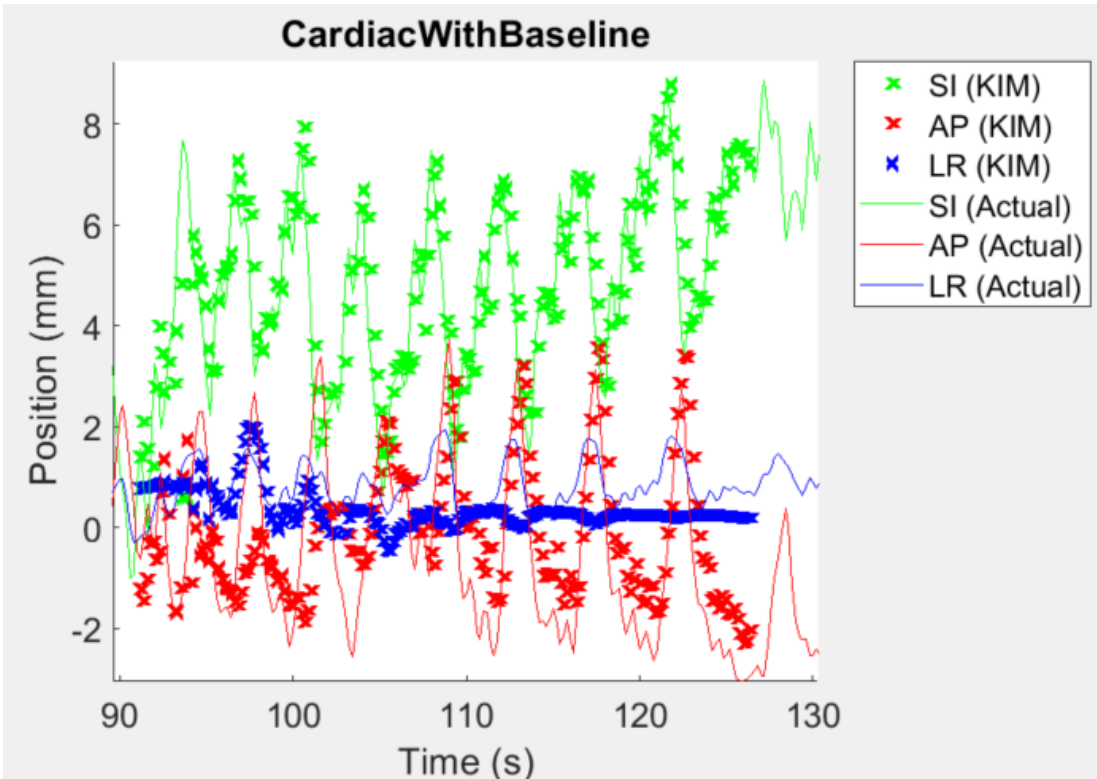


**Liver Trajectory: LiverTraj\_Cardiac Baseline**

Processing time per image (Online): 0.19 seconds

Mean (mm)			Std (mm)			Percentile(5,95) (mm)			
LR	SI	AP	LR	SI	AP	LR	SI	AP	
Online	-0.1	0.1	0.3	0.7	1.8	1.0	(-1.4, 1.3)	(-5.3, 1.7)	(-1.6, 1.6)

**QA result: KIM PASSED in Dynamic test with trajectory LiverTraj\_Cardiac Baseline.**



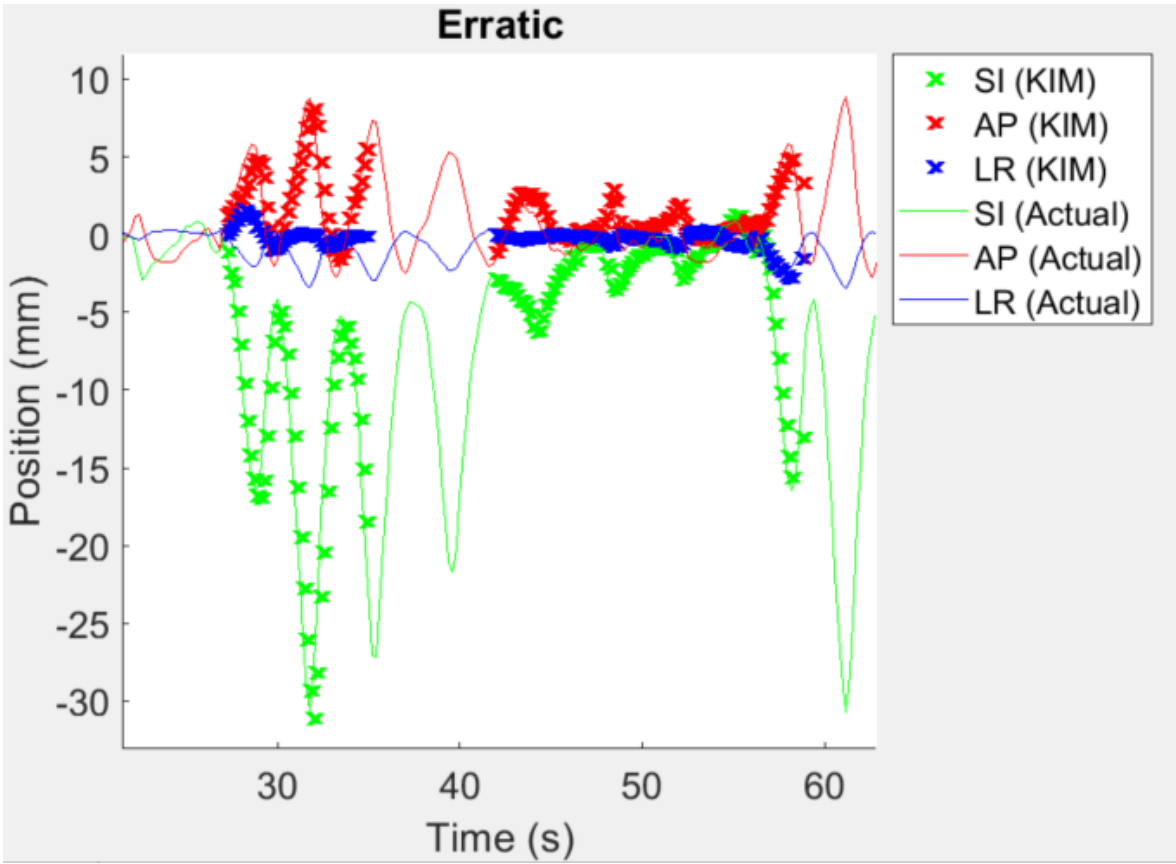


**Liver Trajectory: LiverTraj\_Erratic**

Processing time per image (Online): 0.19 seconds

Mean (mm)			Std (mm)			Percentile(5,95) (mm)			
LR	SI	AP	LR	SI	AP	LR	SI	AP	
Online	0.4	-0.2	0.9	0.9	1.6	1.6	(-0.8, 2.4)	(-3.6, 3.3)	(-0.0, 5.7)

**QA result: KIM PASSED in Dynamic test with trajectory LiverTraj\_Erratic.**



## Treatment Interruption Test (Criteria: <1mm mean error and <2 mm sd of error)

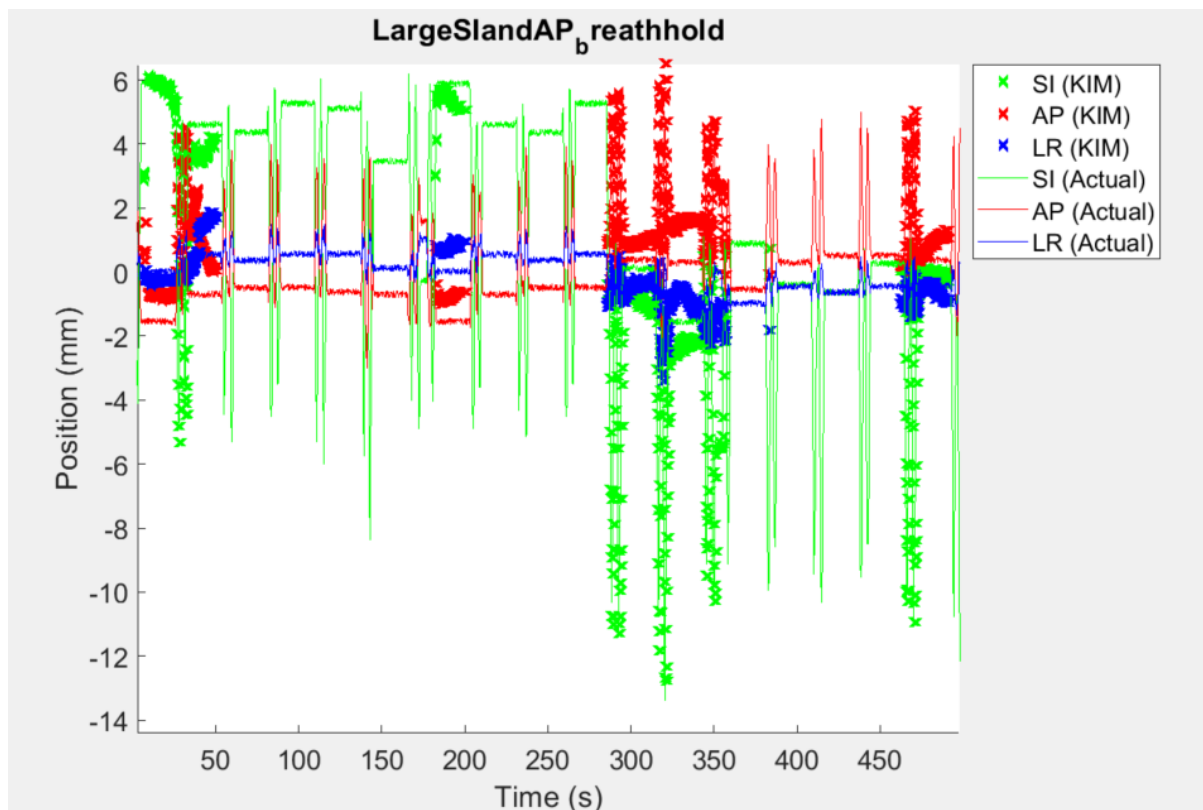
### Liver Trajectory: Large SI AP with Breath-hold

No. of couch shifts: 1

Processing time per image (Online): 0.19 sec

Mean (mm)			Std (mm)			Percentile (5,95) (mm)		
LR	SI	AP	LR	SI	AP	LR	SI	AP
-0.2	-0.6	0.8	0.6	1.2	0.8	(-1.2, 0.9)	(-2.6, 1.7)	(-0.3, 2.4)

**QA result: KIM PASSED in Treatment Interruption test with trajectory Large SI AP with Breath-hold.**



## Liver Trajectory: Transient Breath-hold

No. of couch shifts: 2

Processing time per image (Online): 0.19 sec

Mean (mm)			Std (mm)			Percentile (5,95) (mm)		
LR	SI	AP	LR	SI	AP	LR	SI	AP
-0.1	0.1	0.6	0.6	1.3	0.7	(-1.6, 0.9)	(-2.8, 1.2)	(-0.4, 2.5)

**QA result: KIM PASSED in Treatment Interruption test with trajectory Transient Breath-hold.**

