Cradle Stability testing

MDF spacers, 2 Linear Bearings
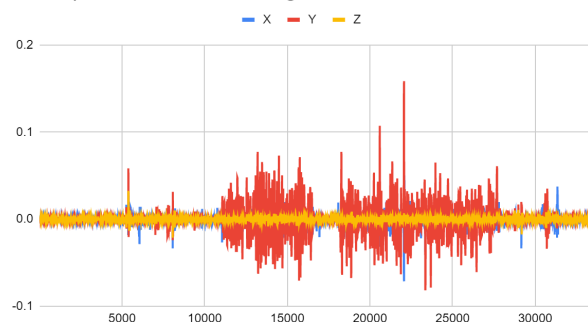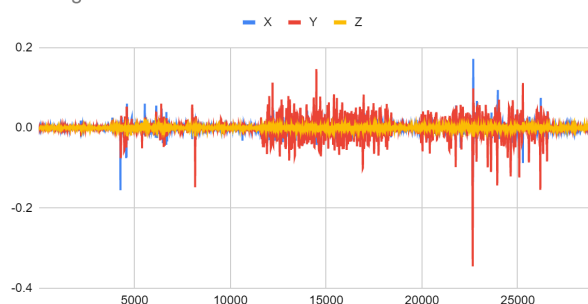

	Radians	Degrees
Mean Y	1.12E-05	0.0006391161378
Max Y	1.58E-01	9.078544912

Split rings, 4 linear bearings
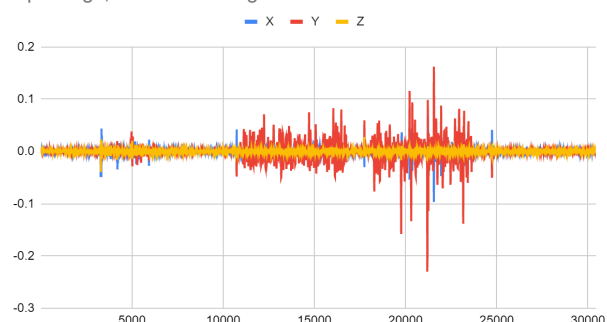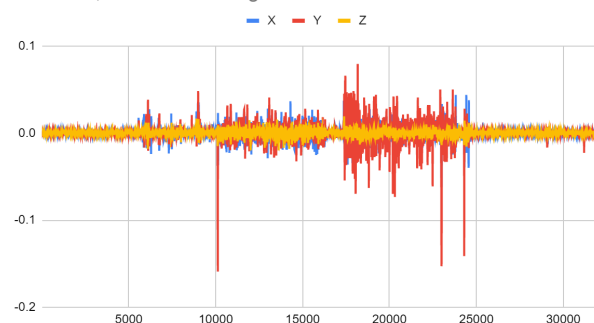

	Radians	Degrees
Mean Y	8.45E-05	0.004841776066
Max Y	1.62E-01	9.293165734

MDF spacer on 2 Linear Bearings, Split rings on 2 Linear Bearings

	Radians	Degrees
Mean Y	-5.80E-05	-0.003323452525
Max Y	1.46E-01	8.383934999

Washers, 4 Linear Bearings

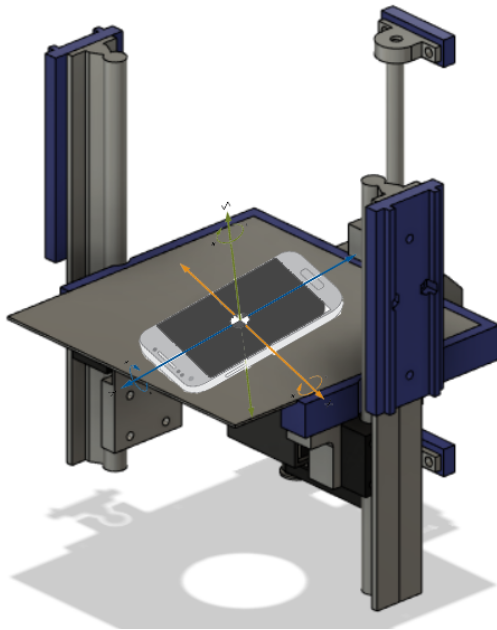|	Radians	Degrees
Mean Y	8.53E-05	0.004885246374
Max Y	7.93E-02	4.541670284

Test parameters

Measurement device : **Samsung Galaxy S8 mini**
Units : **Radians**
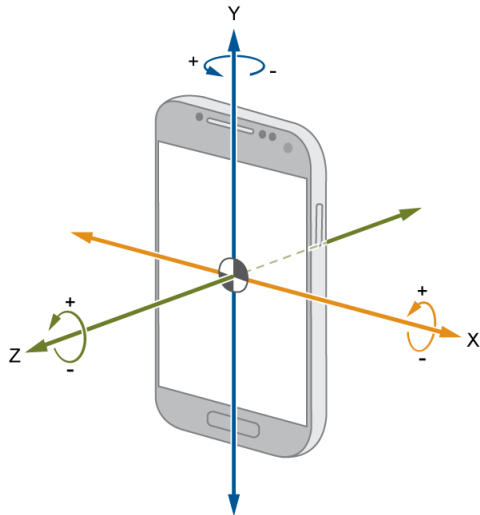
Phone orientation

Operating details

10 seconds delay
5 seconds up
5 seconds down

Driven by **Bosch Hand Drill** directly to shaft
Drill settings : 1 , drill state , 1

Findings

The lowest average was with 2 MDF spacers at 0.0006 Degrees

The lowest average with 4 total linear bearings, 2 MDF spacers , 2 Split rings at 0.003 Degrees

Using 4 linear bearings with just flat washers the smallest maximum angular deviation 4.54 Degrees

All test units reached equilibrium (approximately 0 degrees) at the end of the test

This indicated that the final resting point of the cradle is even and the wobble in transit doesn't effect the final position of the cradle