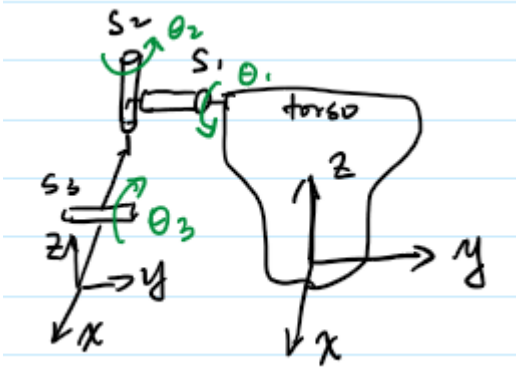
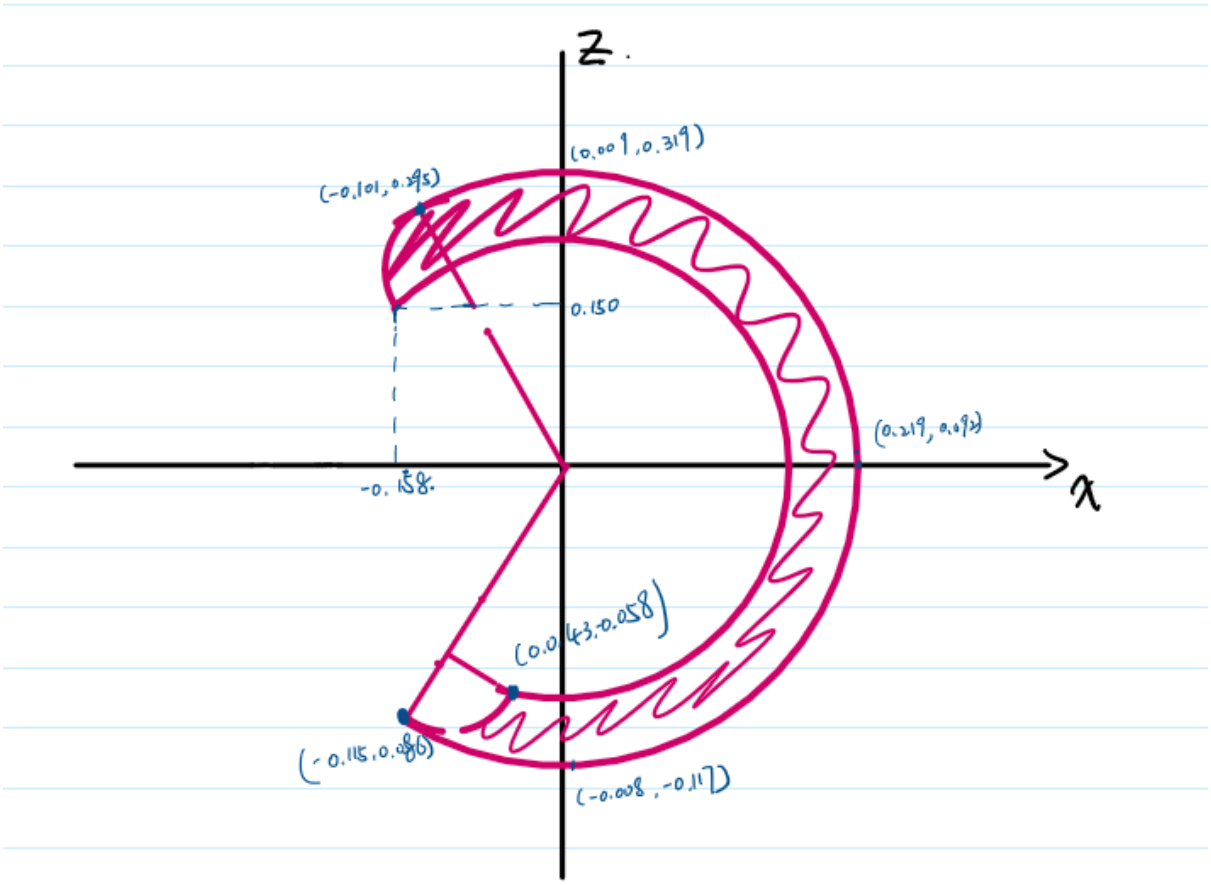
1. Diagram for axes;



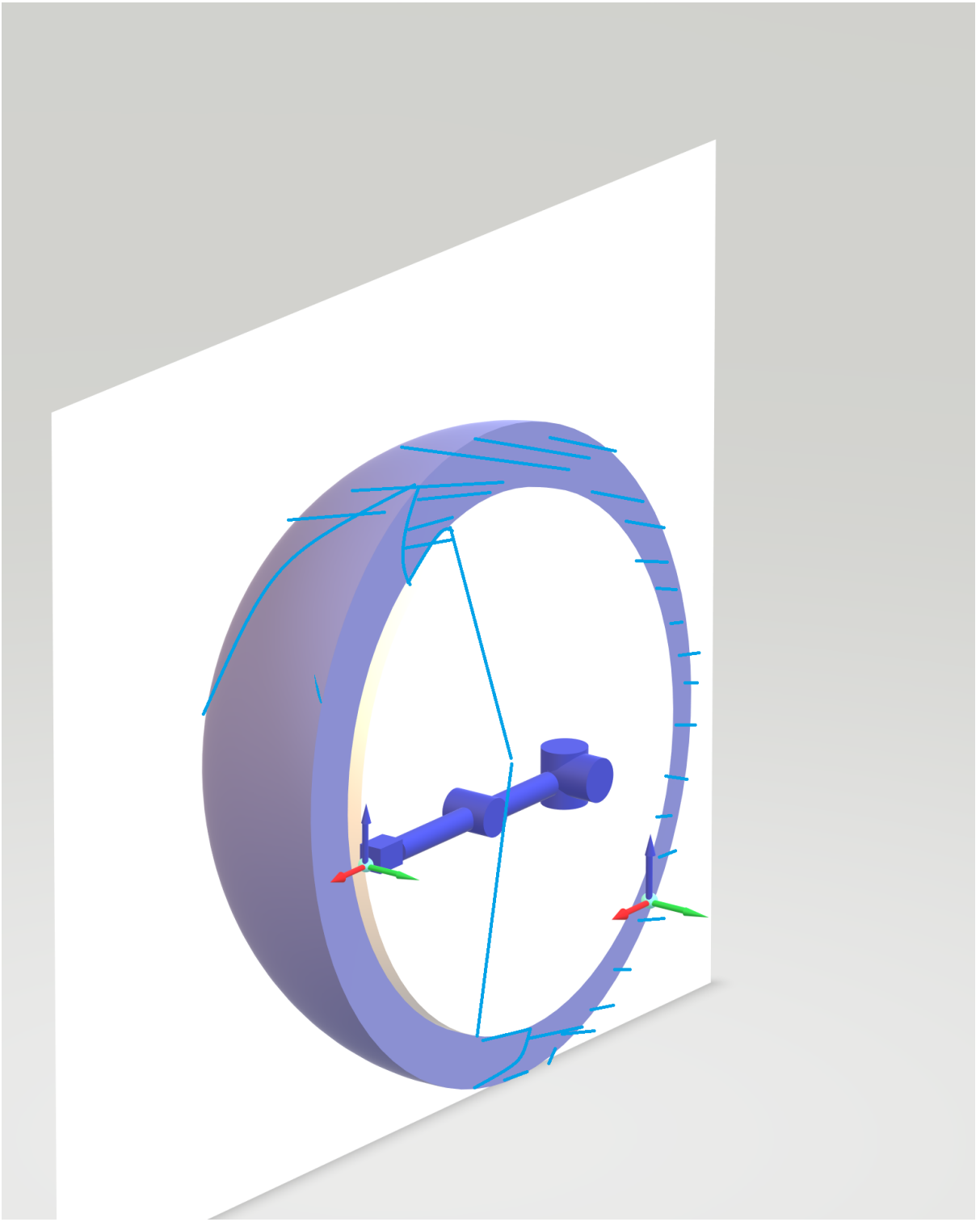
For DH:

i	α_{i-1}	a_{i-1}	d_i	ϕ_i
1	90°	0	100	θ_1
2	0	105	15	θ_2
3	-90°	37.75	12.31	0

2. 2D modeling, limits:



3. 3D modeling, limits:



4. Comparison:

The two results are pretty close. The following will be the element-wise relative difference betwee the results generated by our script and NAO. Notice that all the -100% term are not very accurate because the numbers are too small. Our scripts output will be zero but the NAO output will be a very small number close to zero (such as 1e-8), so we can treat them as almost equal. I also omitted the last row since every transfomation matrix will have the same value on the last row so it does not make much sense to compare that:

a) 2D: (0,2)

0.00%	-100.00%	0.00%	-0.91%
-100.00%	0.00%	-100.00%	0.00%
0.00%	-100.00%	0.00%	-0.08%

b) 2D: (-30,30)

0.00%	-100.00%	0.00%	-0.63%
-100.00%	0.00%	-100.00%	0.00%
0.00%	-100.00%	0.00%	-0.71%

c) 2D: (30,30)

0.00%	-100.00%	-100.00%	-0.98%
-100.00%	0.00%	-100.00%	0.00%
-100.00%	-100.00%	0.00%	0.00%

d) 2D: (-90,60)

0.08%	-100.00%	-0.22%	-1.76%
-100.00%	0.04%	-100.00%	-4.49%
-0.17%	-100.00%	0.11%	-0.22%

e) 3D: (0,10,2)

0.00%	0.00%	0.00%	-0.90%
0.00%	0.00%	0.00%	0.46%
0.00%	-100.00%	0.00%	-0.08%

f) 3D: (-30,-20,30)

0.00%	0.00%	0.00%	-0.64%
0.00%	0.00%	0.00%	-0.32%
0.00%	0.00%	0.00%	-0.71%

g) 3D: (30,-45,30)

0.00%	0.00%	0.00%	-1.10%
0.00%	0.00%	0.00%	-0.48%
0.00%	0.00%	0.00%	-0.36%

h) 3D: (-90.-60,60)

0.00%	-100.00%	0.00%	-1.88%
0.00%	0.00%	0.00%	-0.34%
0.00%	0.00%	0.00%	-0.29%