+ $\mathcal{F}_0$ is the simpliest choice
+ O_4 is in $(O_3, \underline{x}_3, \underline{z}_3)$ plane

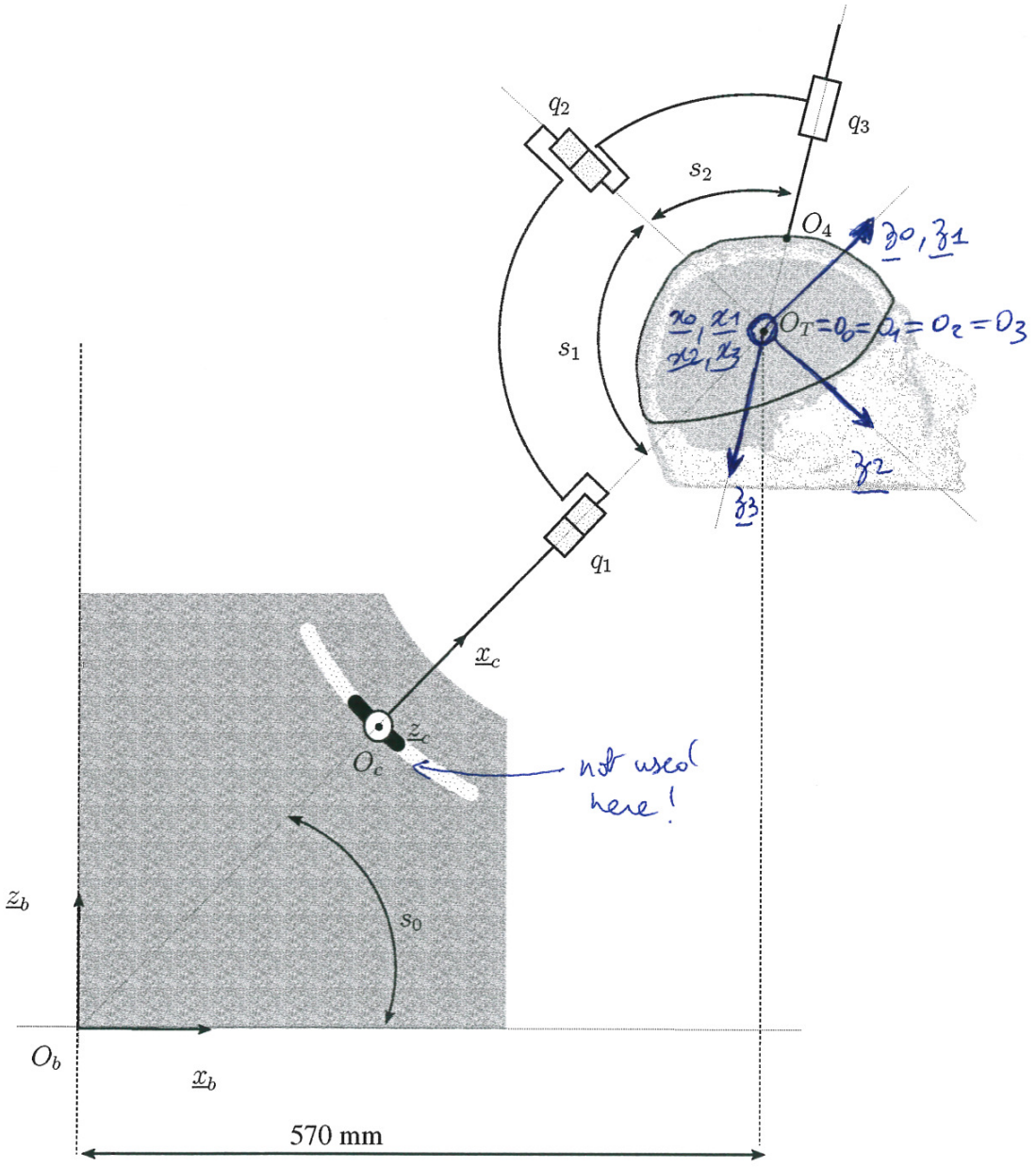

Figure 6: Supporting structure in planar sagittal configuration for parameterization.

3)

DH PARAMETERS \ i	1	2	3
$\alpha_{i-1} = (\underline{z}_{i-1}, \underline{z}_i)/\underline{x}_{i-1}$	0	$-s_1$	$-s_2$
$a_{i-1} = (O_{i-1} - O_{i-1})/\underline{x}_{i-1}$	0	0	0
$\theta_i = (\underline{x}_{i-1}, \underline{x}_i)/\underline{z}_i$	q_1	q_2	0
$r_i = (O_{i-1}, O_i)/\underline{z}_i$	0	0	q_3

$$T_{0,1} = \left(\begin{array}{ccc|c} c_1 & -s_1 & 0 & 0 \\ s_1 & c_1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ \hline 0 & 0 & 0 & 1 \end{array}\right)$$

where $c_i = \cos(q_i)$

$s_i = \sin(q_i)$

$$T_{1,2} = \left(\begin{array}{ccc|c} c_2 & -s_2 & 0 & 0 \\ c_{s_1} s_2 & c_{s_1} c_2 & s_{s_1} & 0 \\ -s_{s_1} s_2 & -s_{s_1} c_2 & c_{s_1} & 0 \\ \hline 0 & 0 & 0 & 1 \end{array}\right)$$

where $c_{s_1} = \cos(s_1)$

$s_{s_1} = \sin(s_1)$

$$T_{2,3} = \left(\begin{array}{ccc|c} 1 & 0 & 0 & 0 \\ 0 & c_{s_2} & s_{s_2} & q_3 s_{s_2} \\ 0 & -s_{s_2} & c_{s_2} & q_3 c_{s_2} \\ \hline 0 & 0 & 0 & 1 \end{array}\right)$$