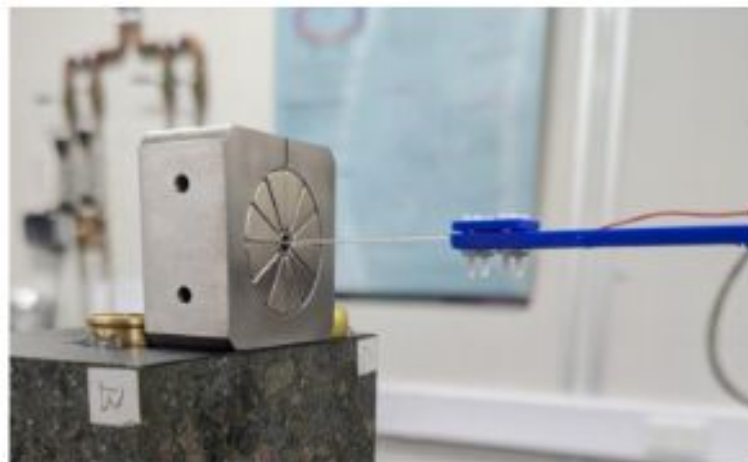
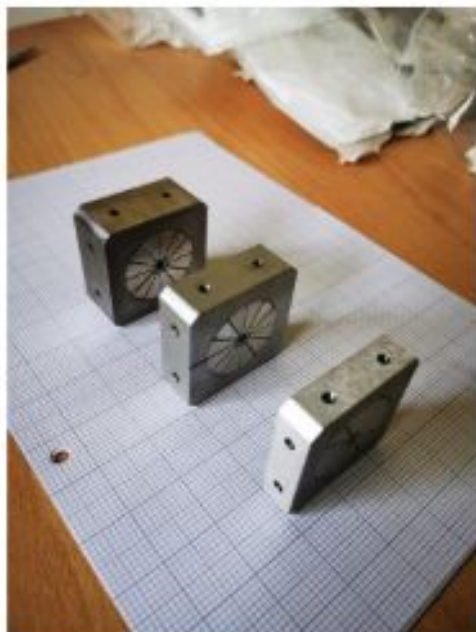


PoPLaR

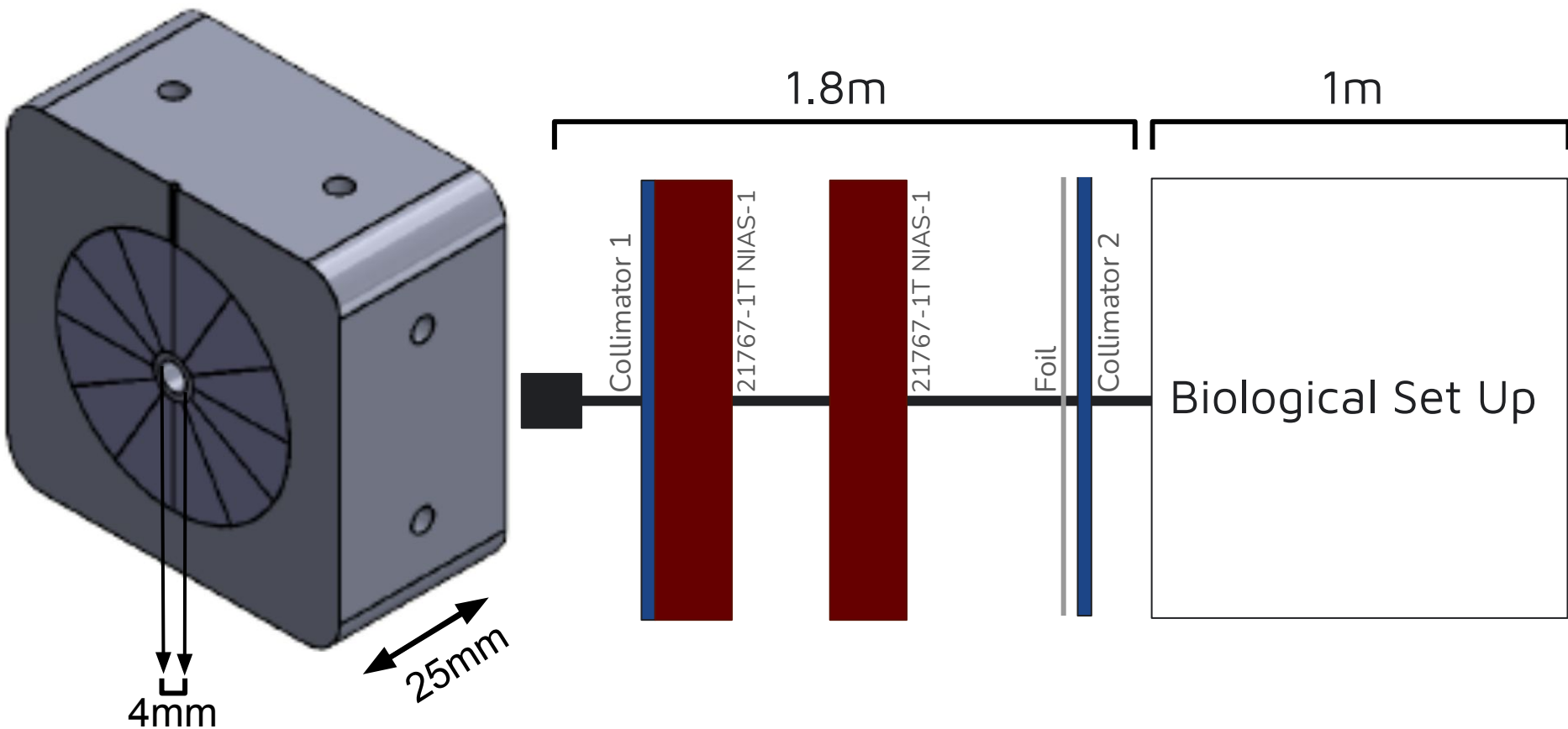
Proof of Principle LhARA Radiobiology experiment

Item No	Part Number	Description	Qty	Price each
1.	21767-1T-NIAS-1	Halbach Assembly 50x50x25 with 4mm ID	1	£2000
2.	21767-1T-NIAS-2	Halbach Assembly 50x50x18 with 4mm ID	1	£1820
3.	21767-1T-NIAS-3	Halbach Assembly 50x50x13 with 4mm ID	1	£1775



Effective gradient slightly higher than specification

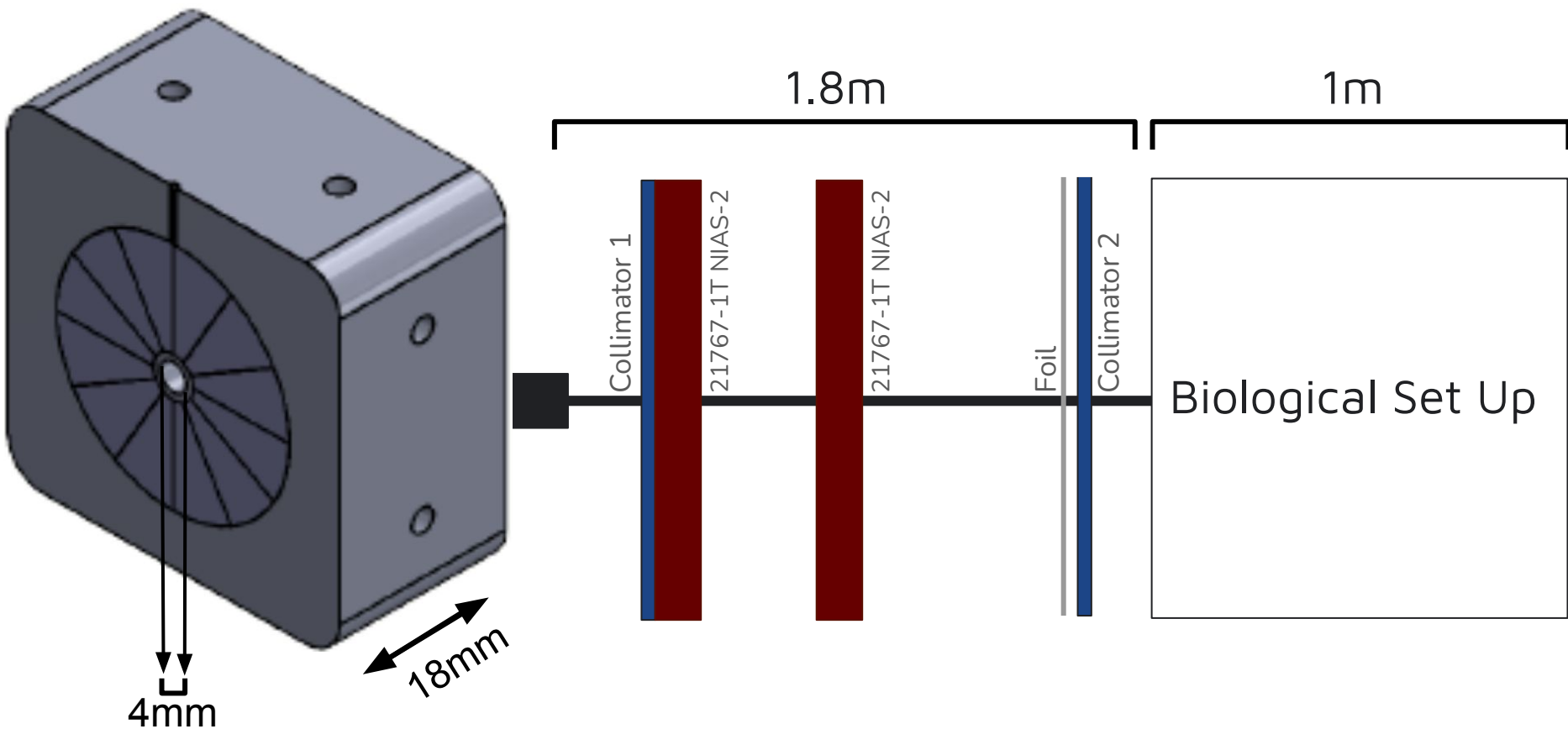
2 x 21767-1T NIAS-1 Quads at 500T/m



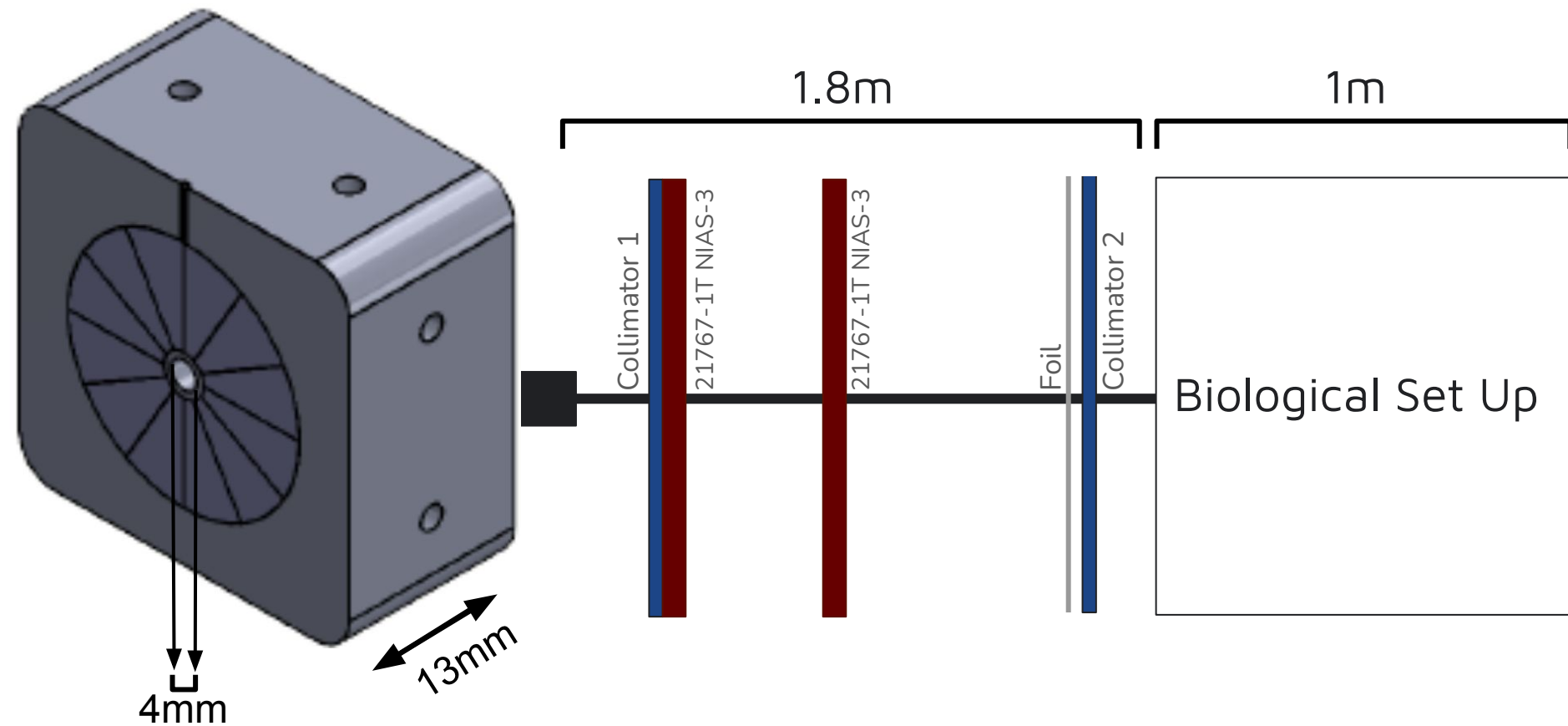
2 x 21767-1T NIAS-1 Quads at 500T/m

Energy (MeV)	Focusing quad position (m)	Drift between quads (m)
5	0.001	0.001
7.5	0.008	0.008
10	0.01	0.02
12.5	0.02	0.01
15	0.02	0.02

2 x 21767-1T NIAS-2 Quads at 500T/m



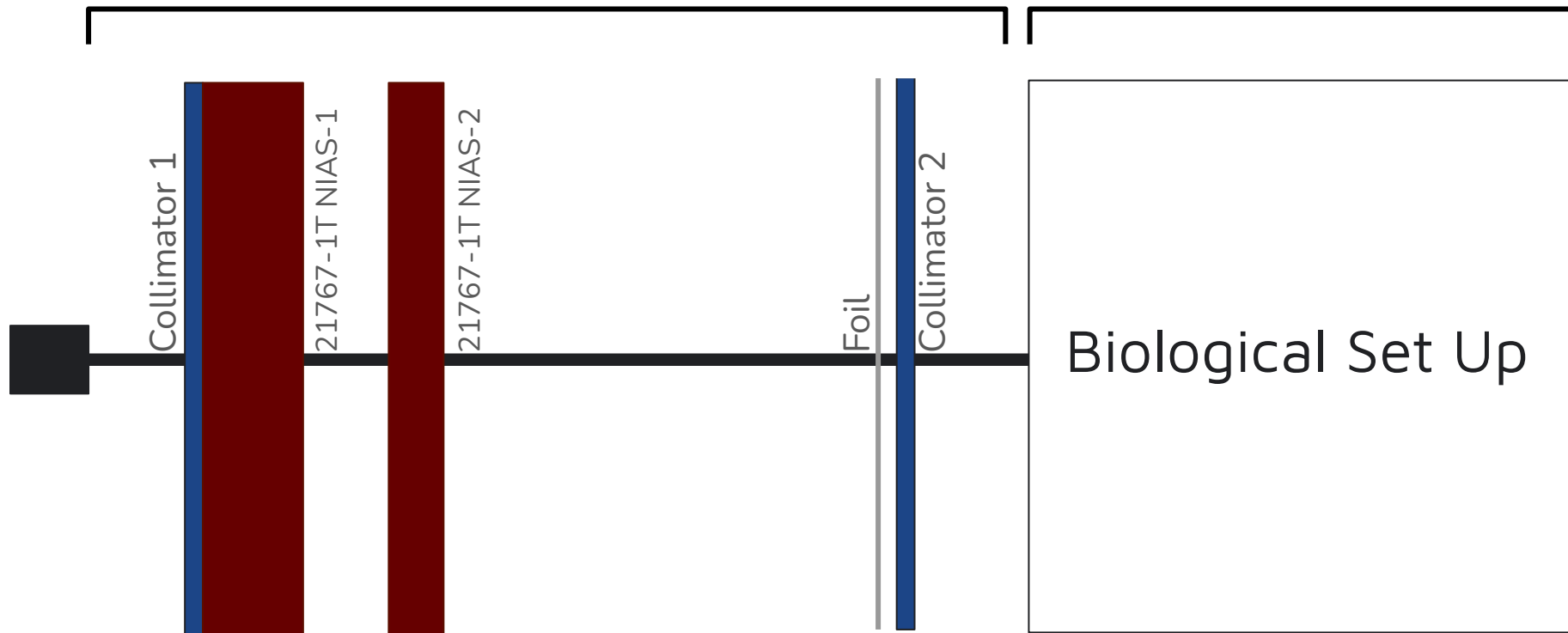
2 x 21767-1T NIAS-3 Quads at 500T/m



21767-1T NIAS-1 then 21767-1T NIAS-2 Quads at 500T/m

1.8m

1m



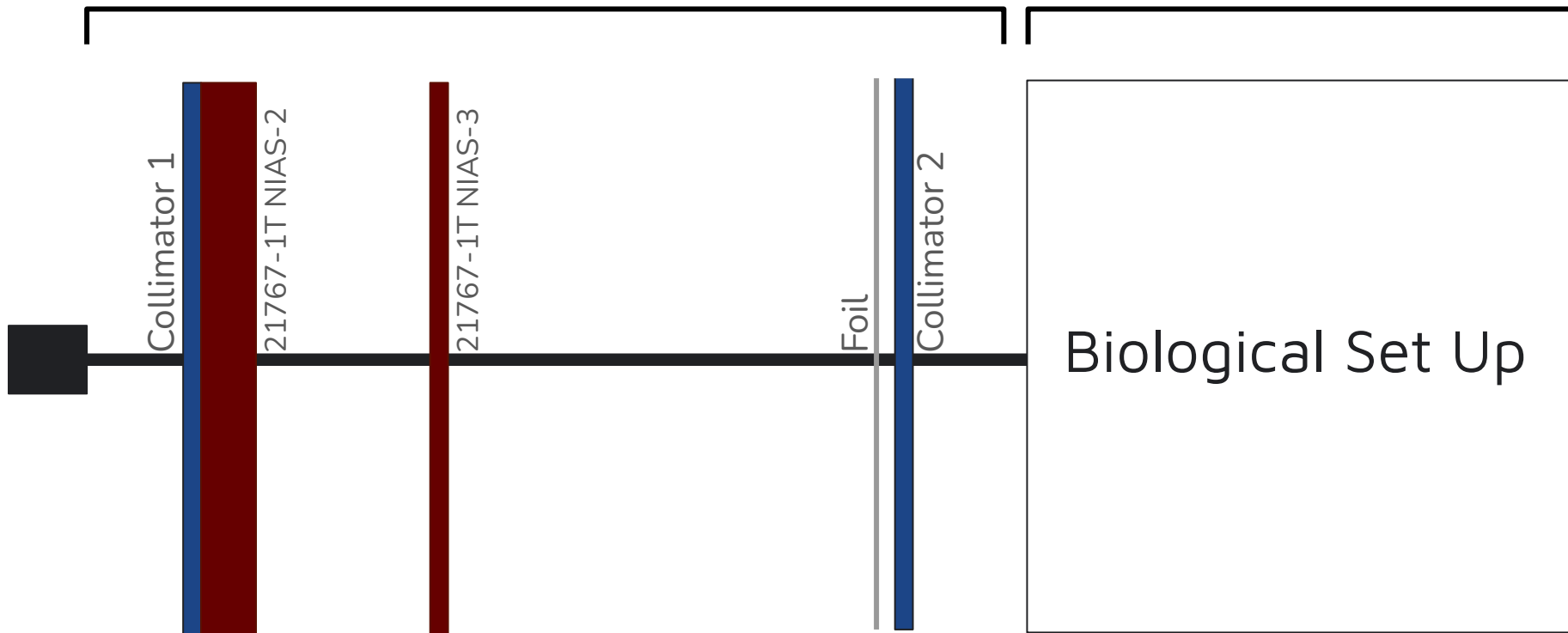
21767-1T NIAS-1 then 21767-1T NIAS-2 Quads at 500T/m

Energy (MeV)	Focusing quad position (m)	Drift between quads (m)
5	0.005	0.008
7.5	0.01	0.01
10	0.012	0.022
12.5	0.015	0.025
15	0.017	0.03

21767-1T NIAS-2 then 21767-1T NIAS-3 Quads at 500T/m

1.8m

1m



Collimator 1

21767-1T NIAS-2

21767-1T NIAS-3

Foil

Collimator 2

Biological Set Up