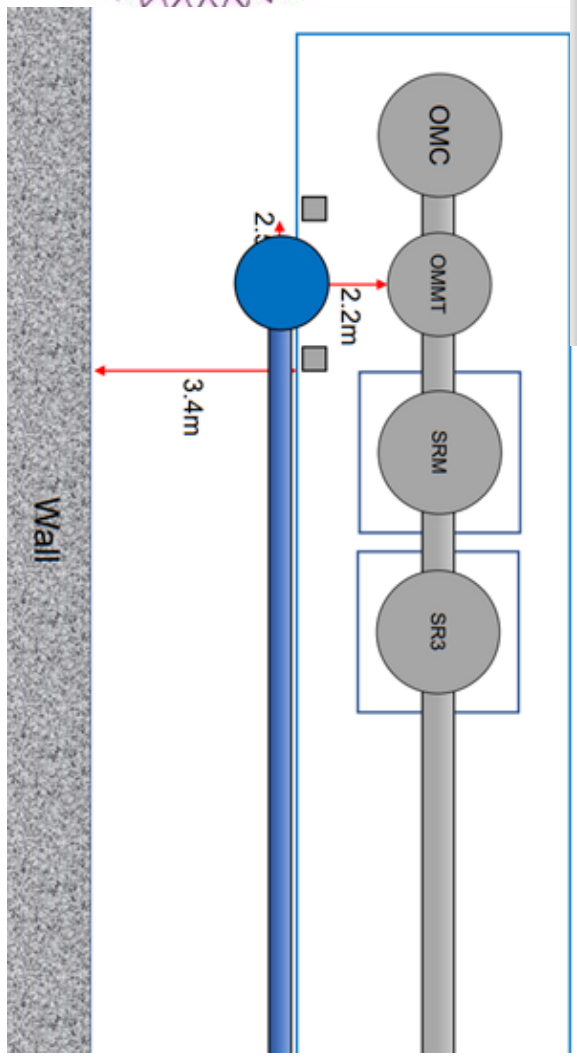
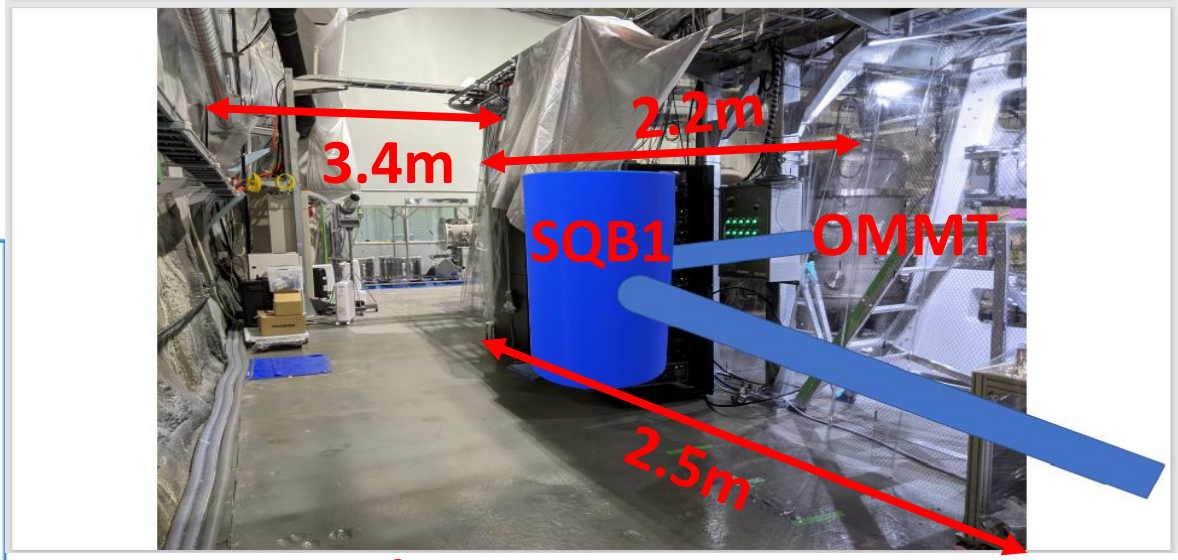
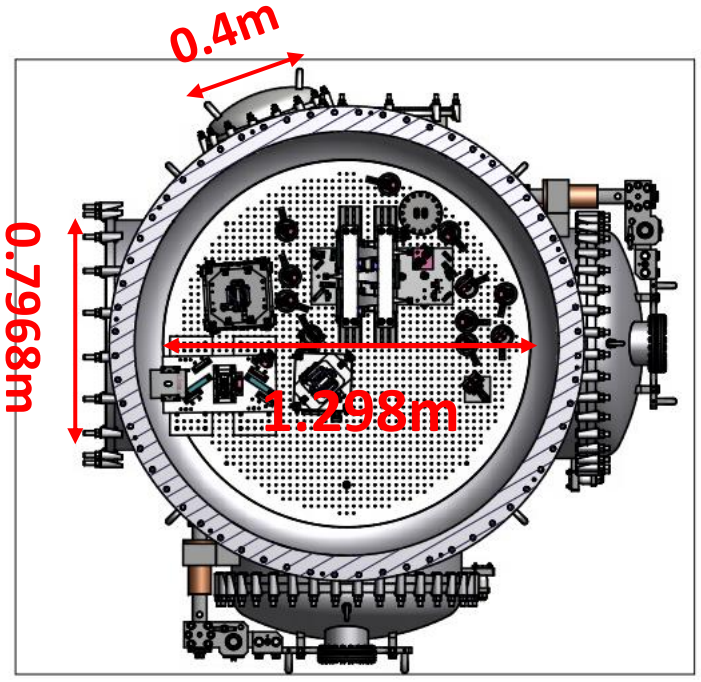
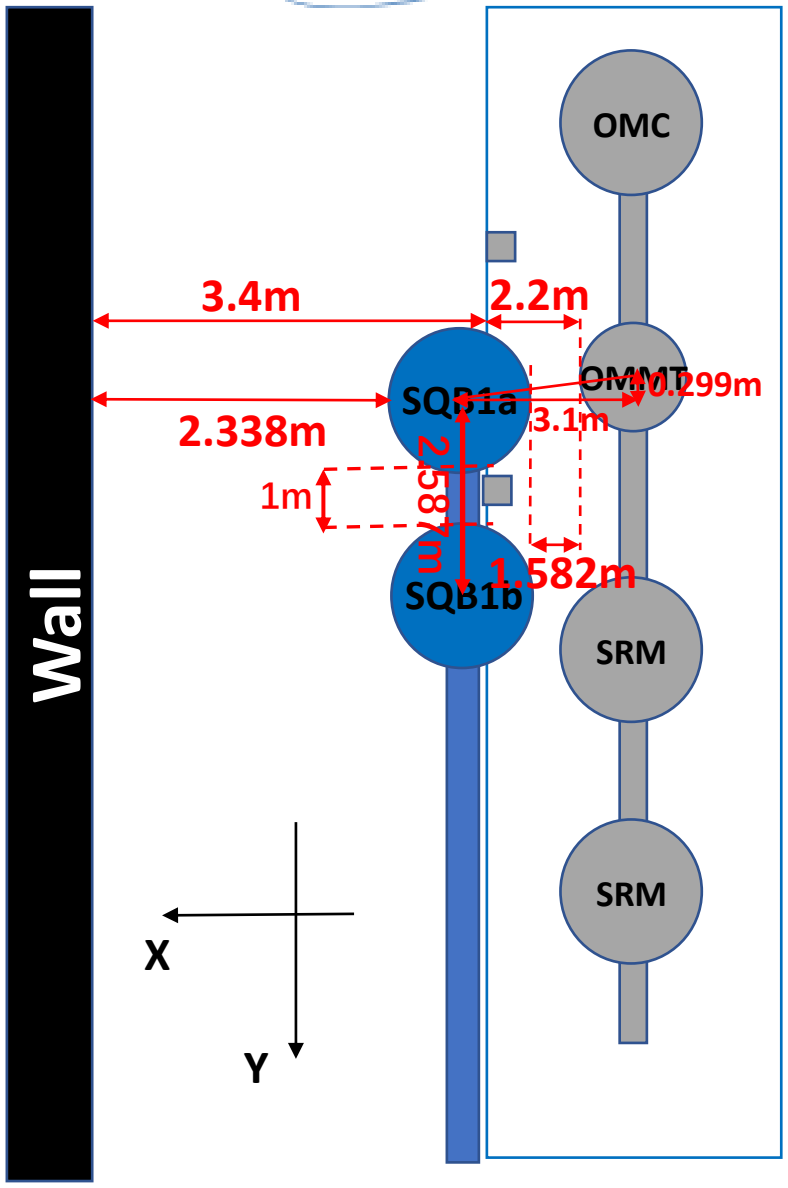
Interface Optics Part
SQB1
Third version

Huali Chen

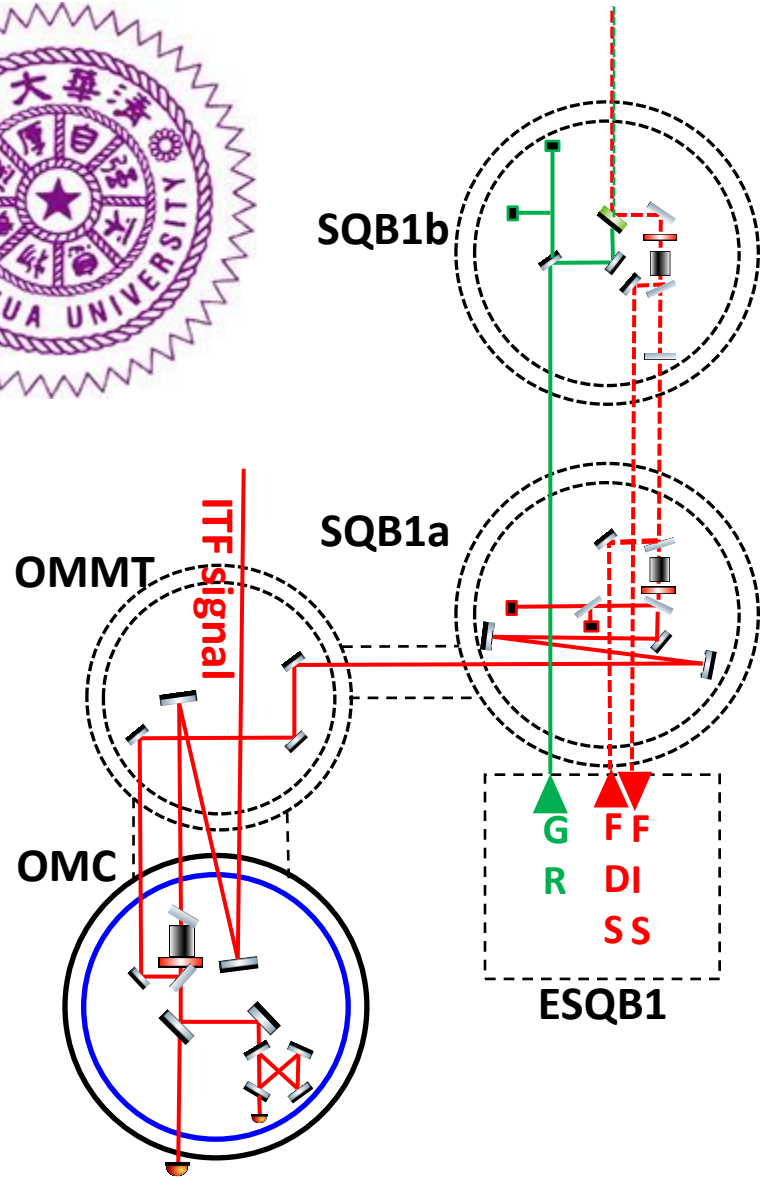

OMC
OMMT
SRM
SR3
2.2m
3.4m
Wall

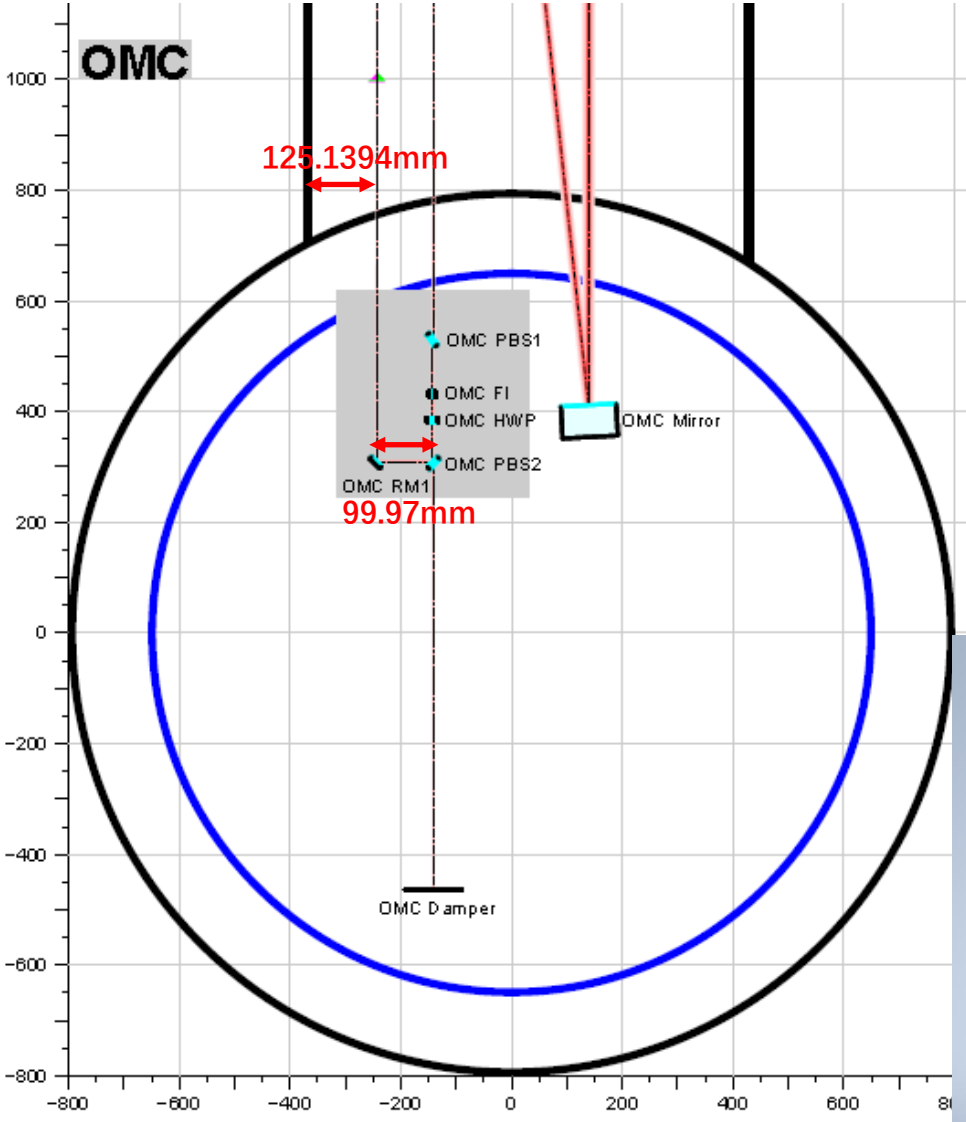

3.4m
2.2m
SQB1
OMMT
2.5m

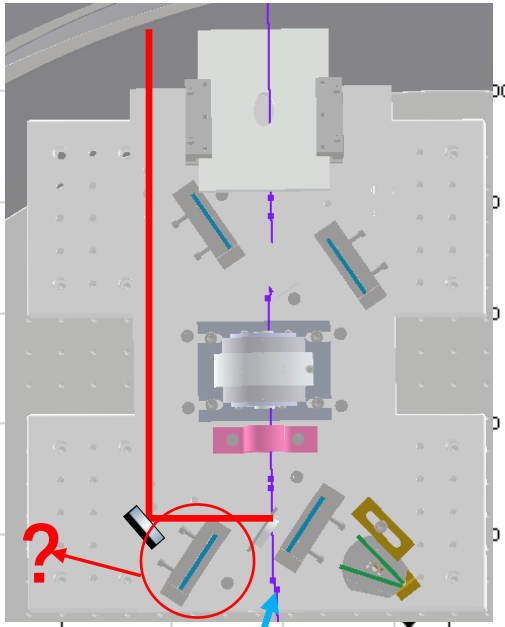

0.4m
0.7968m
1.298m

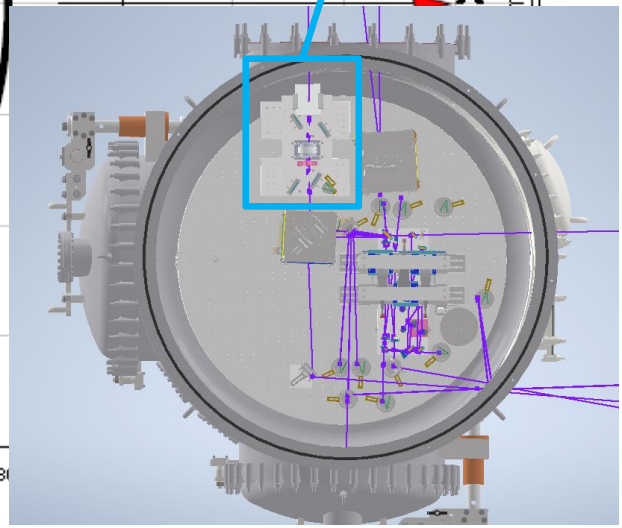

OMC
3.4m
2.2m
SQB1a
OMMT
0.299m
2.338m
3.1m
1m
2.518m
1.582m
SQB1b
SRM
SRM
Wall
X
Y

OMC FI: Wt= 841.870*10^-3 mm
Ws= 839.896*10^-3 mm
OMC RM1: Plane mirror, Diameter=1 inch
Incident angle:45°









q-parameter: -1+i*0.53 [m]
Wt=Ws=0.9047mm Rc=1.2809*10^3 mm
0mm (OMC PBS1)
Waist: Wt=Ws=0.42mm 1m (OMC PBS1)

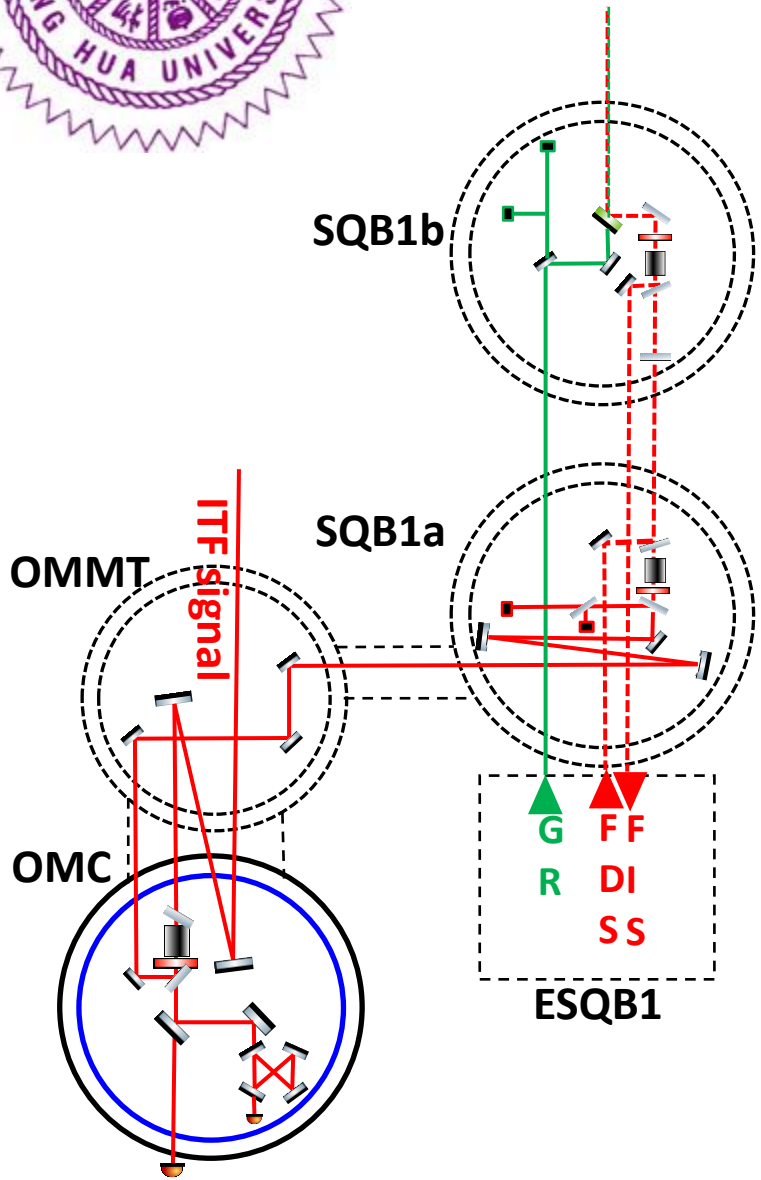
OMMT RM1, OMMT RM2, OMMT RM2 are all Plane mirror, Diameter 2 inch

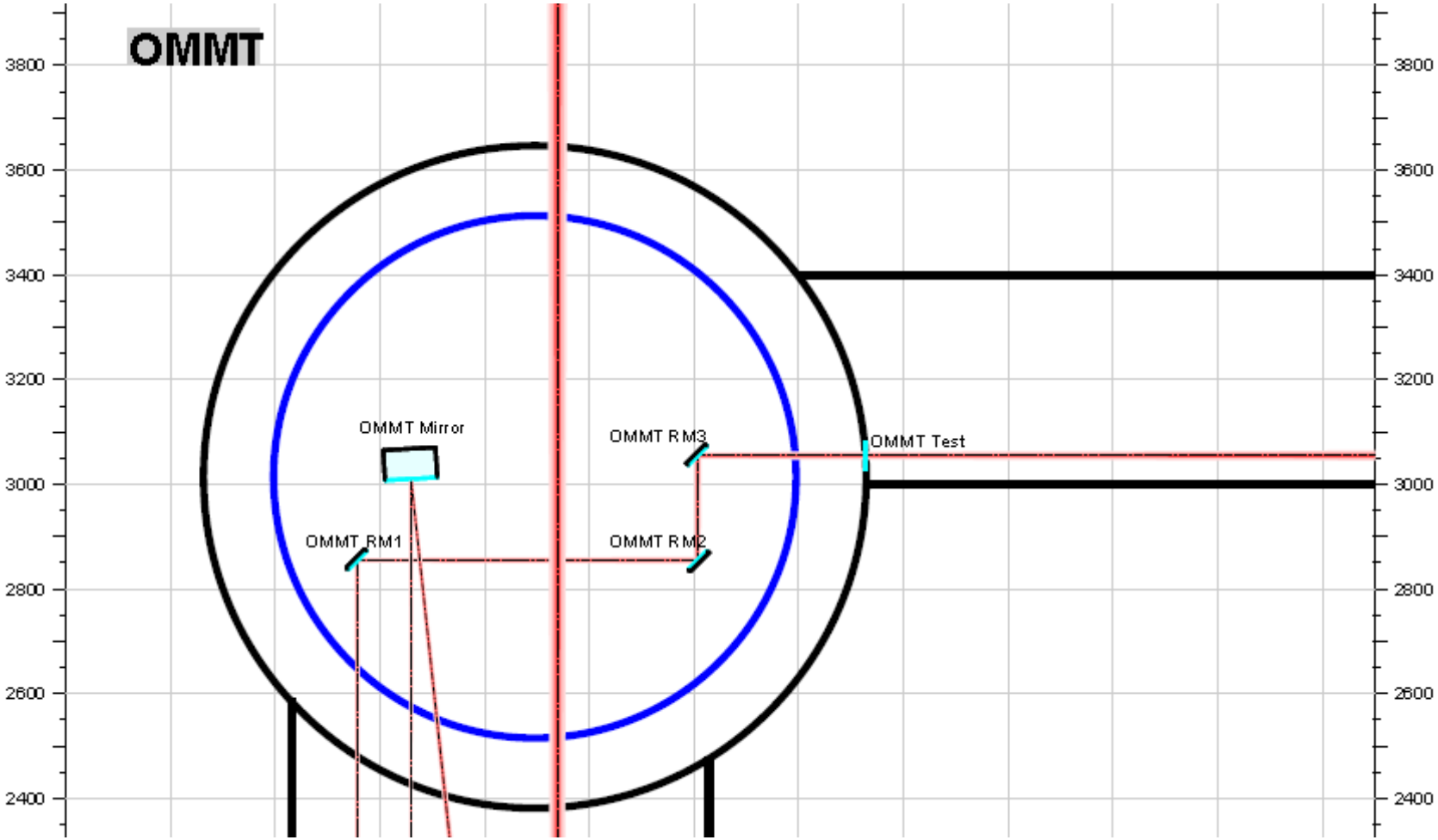
OMMT Test: Wt= 2.45570mm （OMM RM3 320.0mm）

Ws= 2.45795mm

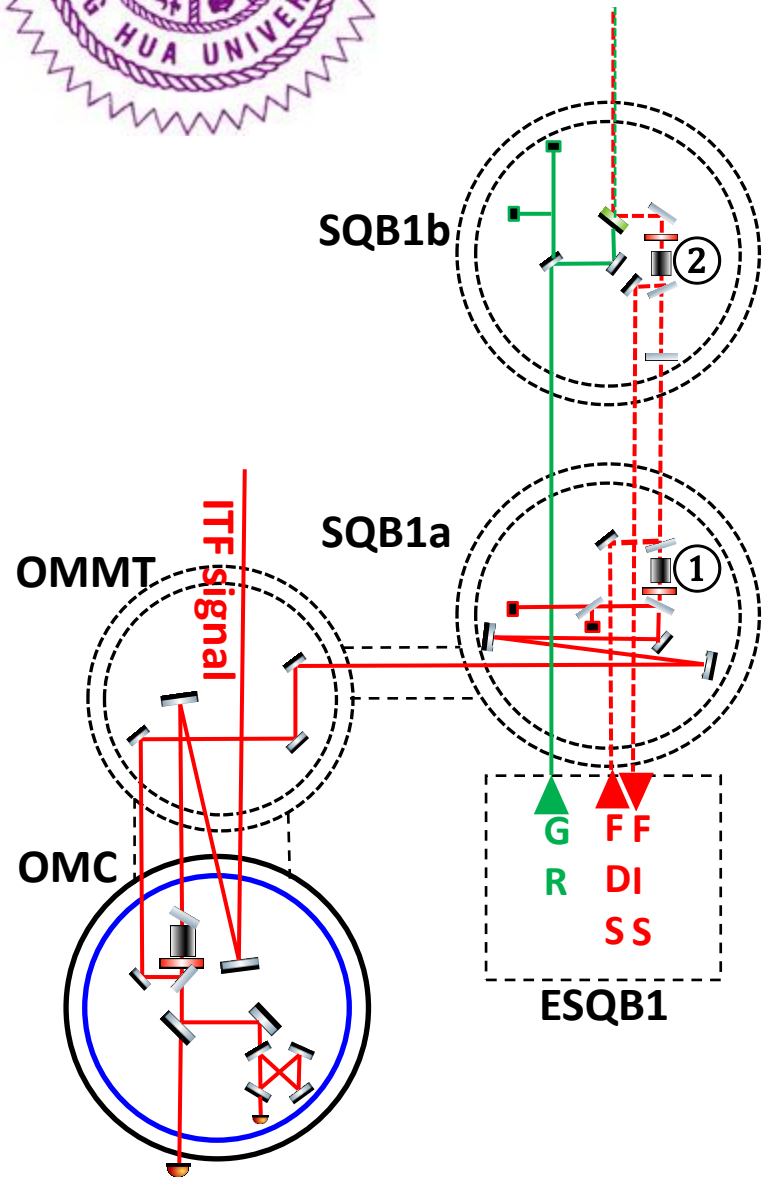
Incident angle:45°

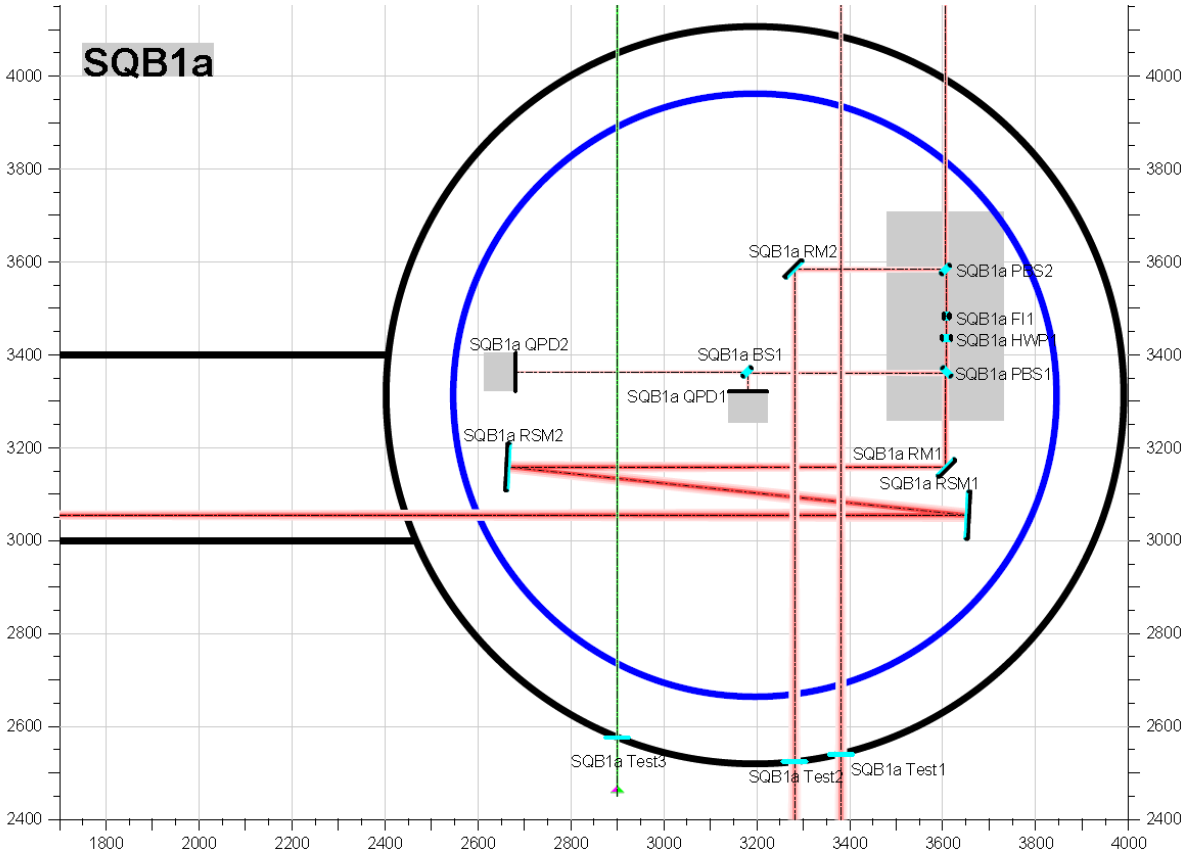
The beam size should be smaller than mirror ‘s radius by factor ~5



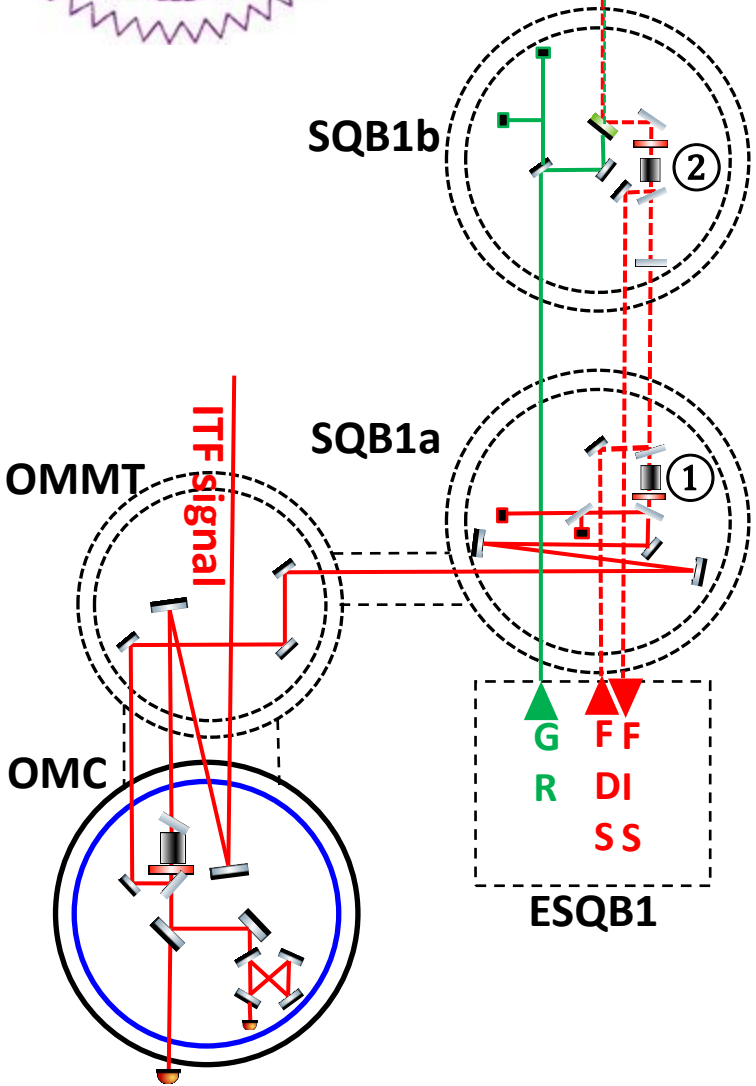


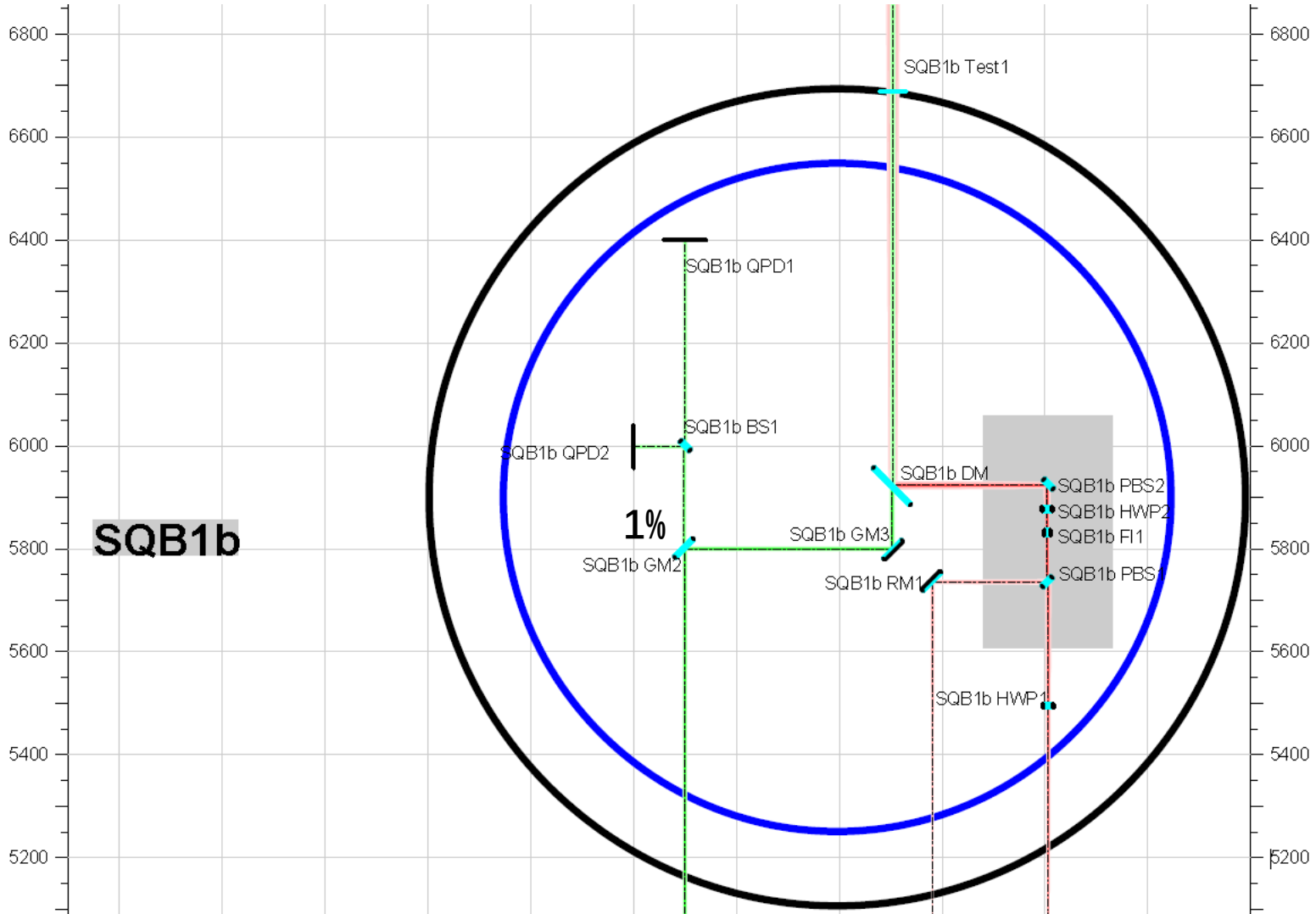
SQB1a RSM1: Rc=-7.1*10^3mm Diameter=2inch
SQB1a RSM2: Rc=-7.1*10^3mm Diameter=2inch
SQB1a RM1: Plane mirror Diameter=2inch
SQB1a Test1(FIS): Wt= 4.08920 mm Ws=4.09013 mm (SQB1b RM1 3196mm)
SQB1a Test2(FDS): Wt= 4.28279 mm Ws= 4.28614 mm (SQB1a RM2 1059mm)
SQB1a FI 1(①): Wt= 2.04711 mm Ws= 2.05545 mm
SQB1a RM2: Plane mirror Diameter=2inch
Plane mirror's Incident angle:45°
Curved mirror's Incident angle:3°
SQB1a Test3(GR): Wt= 1.00078 mm Ws= 1.00078 mm (waist:1mm, 126mm)





SQB1b FI 1(②): Wt= 2.04302 mm Ws= 2.02955 mm (SQB1 FI1 2.373m)
SQB1b DM is Dichroic mirror and Diameter=4 inch
SQB1b RM1: Plane mirror Diameter=2inch
SQB1b Test1: Wt= 4.05410 mm Ws= 4.03498 mm Wt= 1.85977mm Ws= 1.86016mm (DM 765.2 mm)
SQB1b GRM2, SQB1b GRM3 : Plane mirror Diameter=2inch

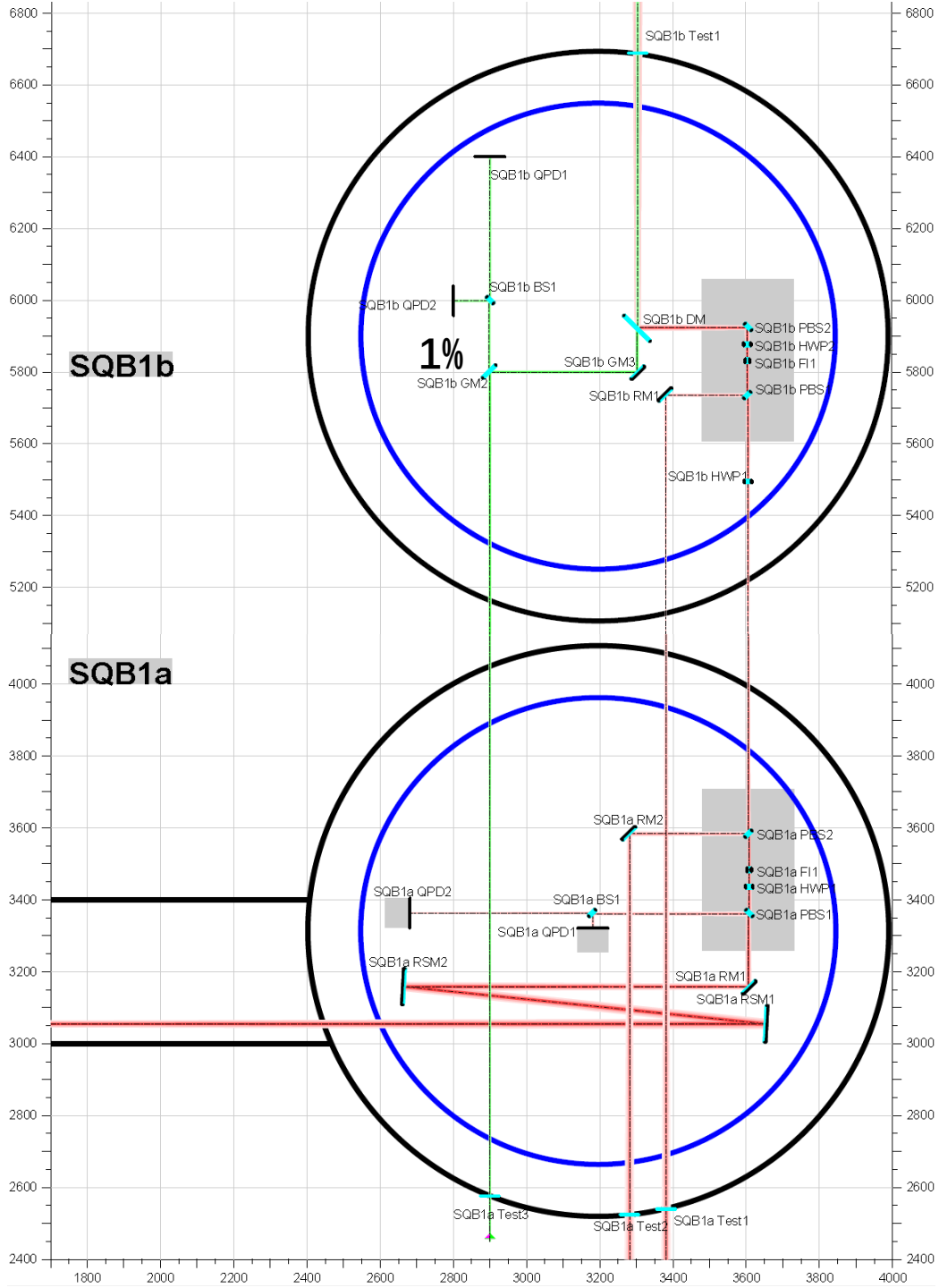




Optical component List

Item	Quantity	Description
OMC RM1	1	Plane mirror, 1 inch, 1064 coating
OMMT RM1, OMMT RM2, OMMT RM2, SQB1a RM1, SQB1a RM2, SQB1b RM1	6	Plane mirror, 2 inch, 1064 coating
SQB1a RSM1 SQB1a RSM2	2	Curved mirror, 4 inch, 1064 coating
SQB1b DM	1	Dichroic mirror,4 inch
SQB1b GRM2, SQB1b GRM3	2	Plane mirror, 2 inch, 532 coating
QPD	?	?

Next work:

1、Control system: How to design the control system for red beam and green beam

For example: QPD: position? Beam size? QPD: position? Beam size?