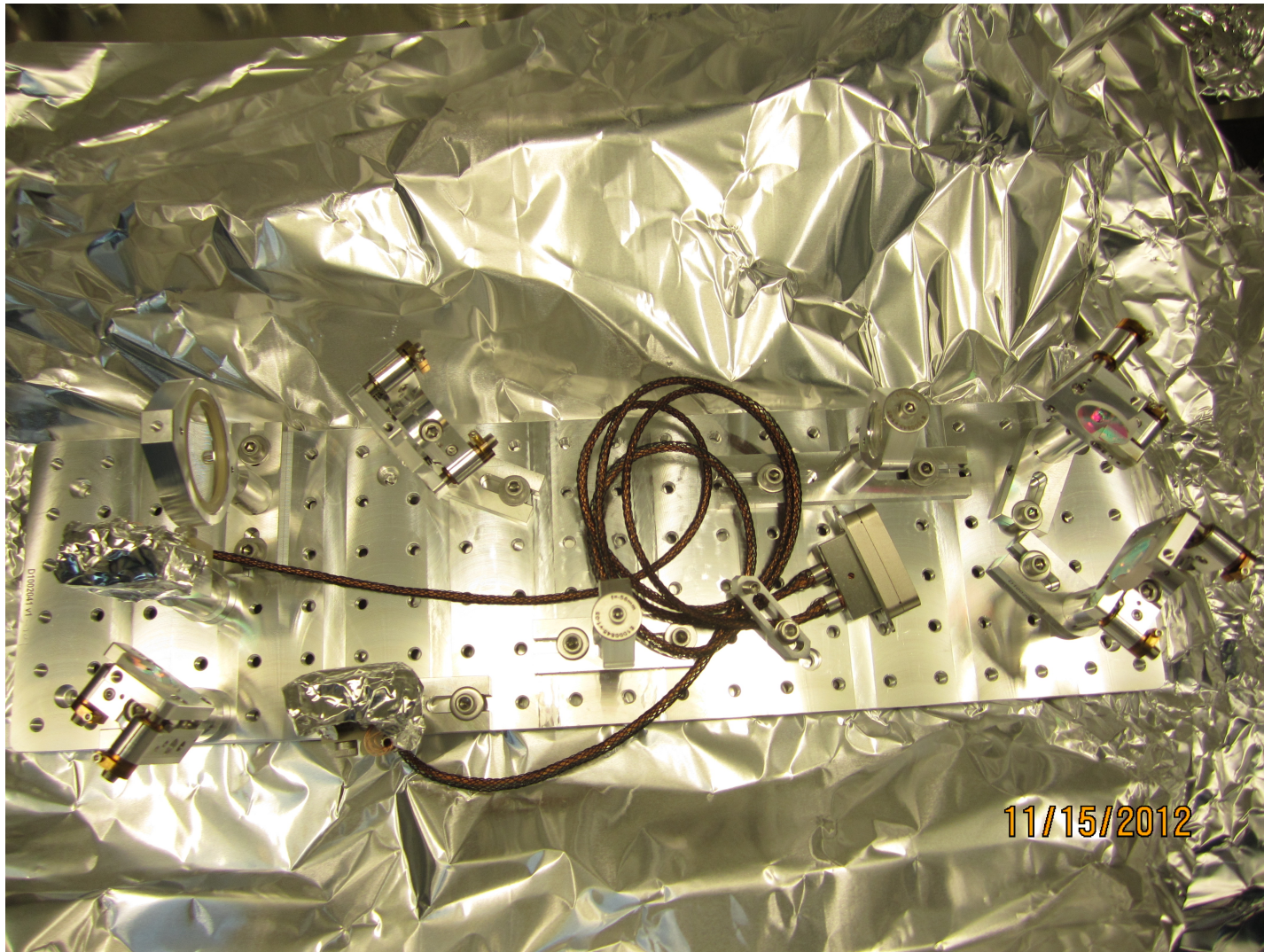


As Built L1 Transmon GRN QPD Sleds

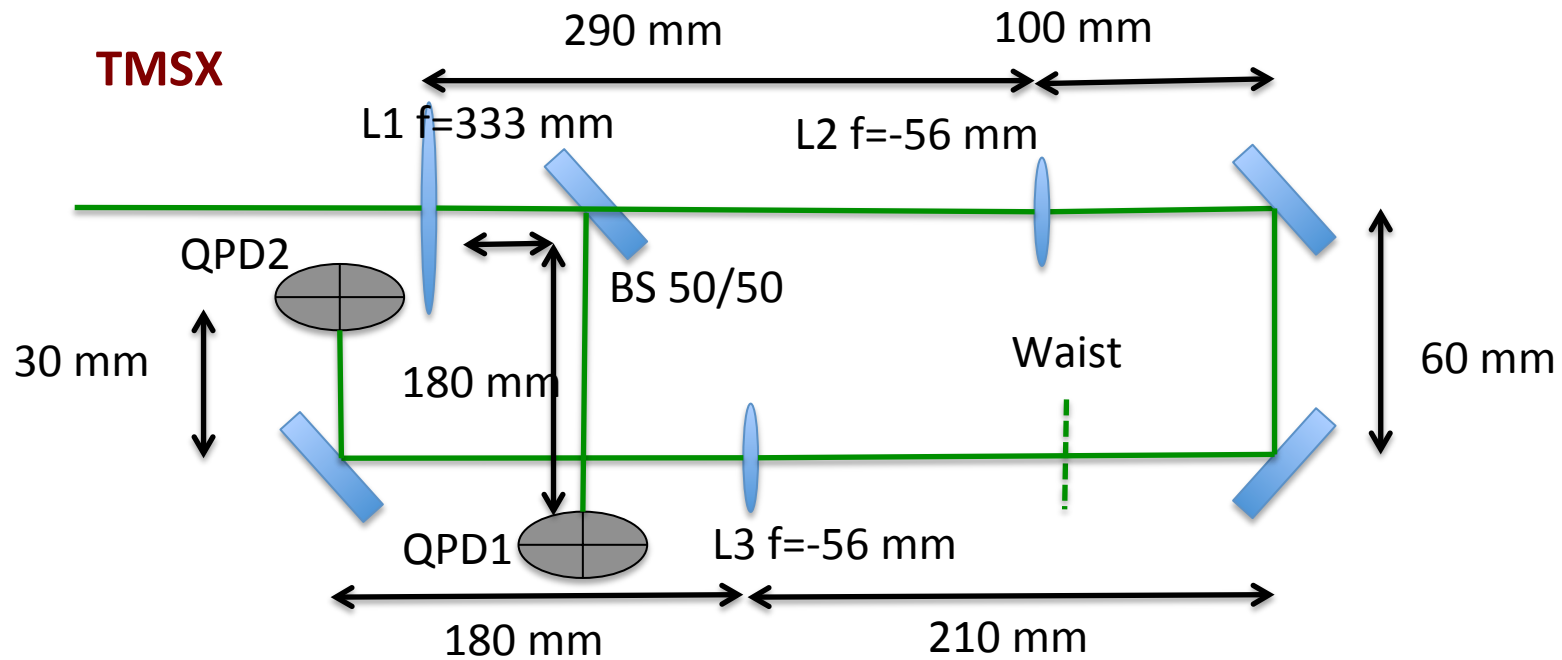
Valera Frolov, Adam Mullavey, Chris Guido

11/15/2012

As Built TMX GRN QPD sled



As Built Layout of L1 TMX GRN QPD sled



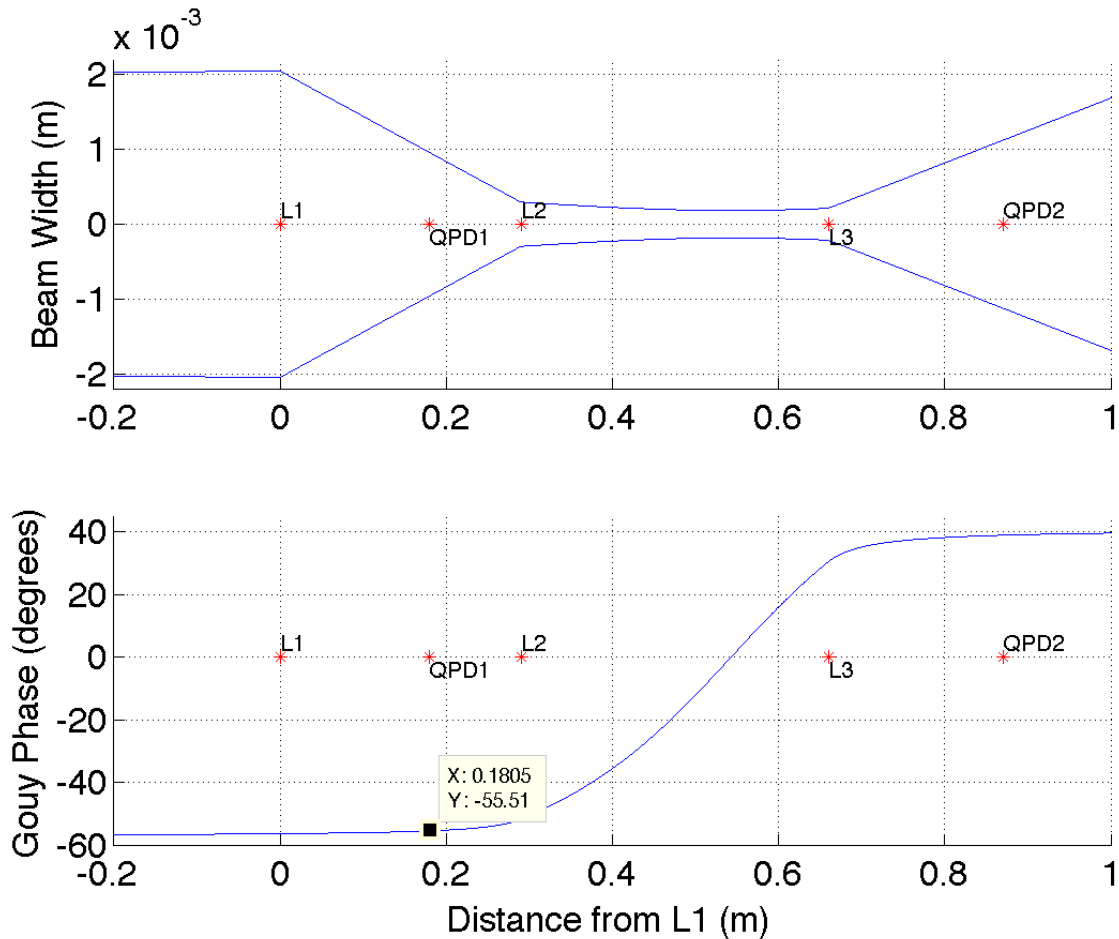
Input mode

	Alignment laser setup	Nominal
Z_o wrt to L1 (m)	2.1	-
w_o (mm)	2.2	2.2
Z_R (m)	28	28

Mode Between L1 and L2

	Alignment laser setup	Expected
Z_o wrt to L2 (mm)	253	-
w_o (mm)	0.184	0.180
Z_R (mm)	200	191

Beam Profile for As Built L1 TMX GRN QPD sled



Waist Radius: 184um

Waist Position: 543mm

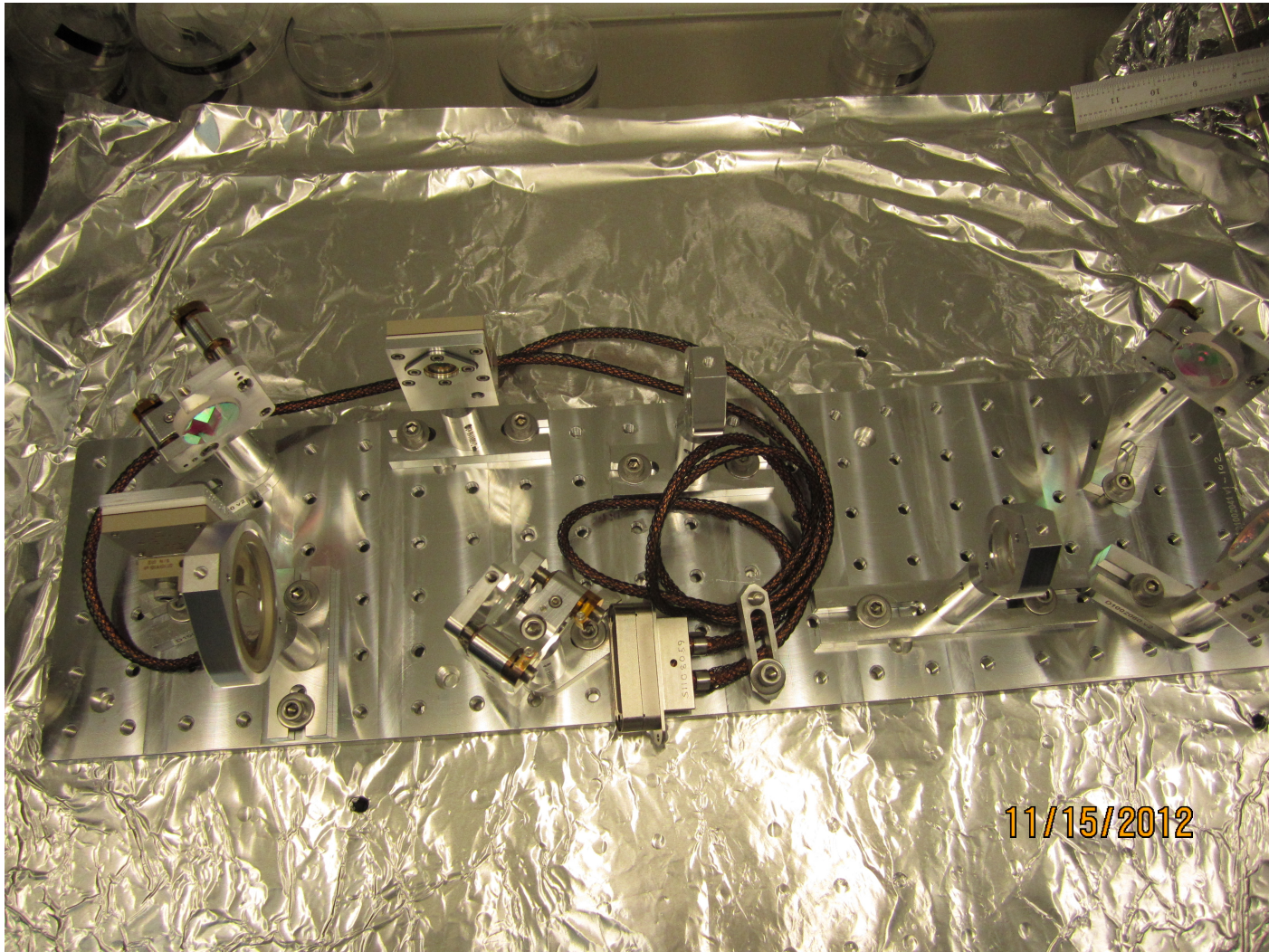
Beam Diameter at QPD1: 1.9mm

Beam Diameter at QPD2: 2.2mm

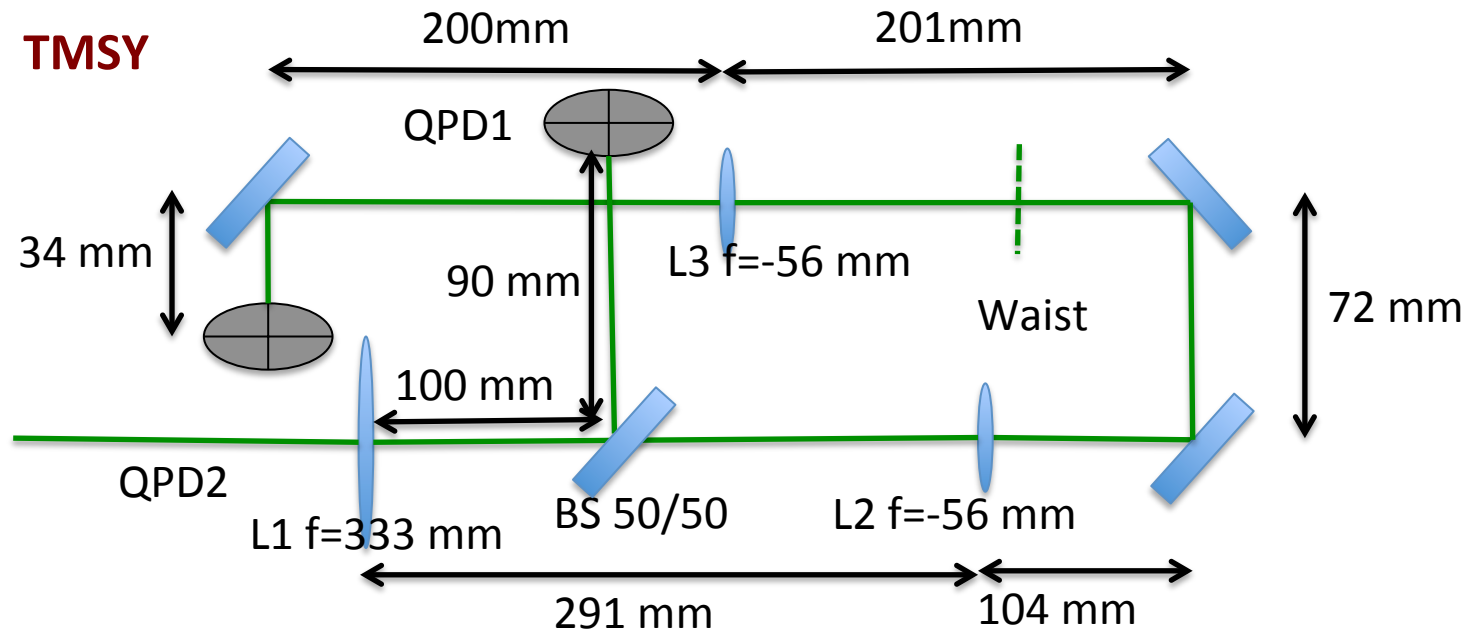
Gouy Phase QPD2-QPD1: 94.4 deg

The waist size and position, and distances between optical components were measured. These parameters were put into alamode to produce the above plot of the beam profile.

As Built TMY GRN QPD sled



As Built Layout of L1 TMY GRN QPD sled



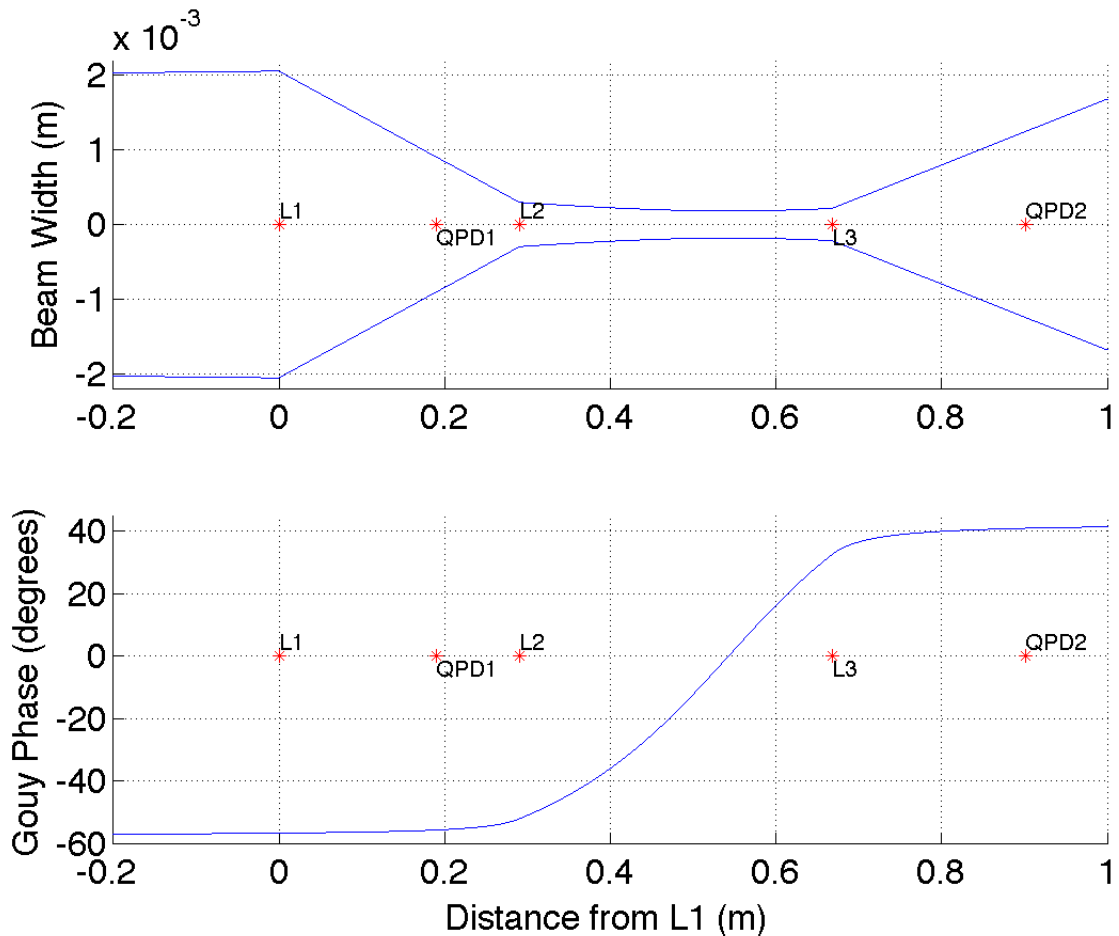
Input mode

	Alignment laser setup	Nominal
Z_o wrt to L1 (m)	2.1	-
w_o (mm)	2.2	2.2
Z_R (m)	28	28

Mode Between L1 and L2

	Alignment laser setup	Expected
Z_o wrt to L2 (mm)	252	-
w_o (mm)	0.182	0.180
Z_R (mm)	185	191

Beam Profile for As Built L1 TMY GRN QPD sled



Waist Radius: 182um

Waist Position: 543mm

Beam Diameter at QPD1: 1.8mm

Beam Diameter at QPD2: 2.5mm

Gouy Phase QPD2-QPD1: 96.7 deg

The waist size and position, and distances between optical components were measured. These parameters were put into ala mode to produce the above plot of the above beam profile.