optic dof osem	timeframe	p2l	y2l	p2p	y2y	L eul2osem ur	P eul2osem ur	Y eul2osem ur		alpha, pitch	alpha, yaw		beam dist, 2013 proc.	beam dist, 2017 proc.
mc1 p ur	Dec 2013	-0.900		1	1	0.25	5.2382	5.2382		-0.043			1.6	1.8
mc1 y ur	Dec 2013		0.600	1	1	0.25	5.2382	5.2382			0.029		1.1	1.2
mc2 p ur	Dec 2013	-1.300		1	1	0.25	5.2382	5.2382		-0.062			2.3	2.6
mc2 y ur	Dec 2013		-1.000	1	1	0.25	5.2382	5.2382			-0.048		-1.8	-2.0
mc3 p ur	Dec 2013	0.850		1	1	0.25	5.2382	5.2382		0.041			-1.5	-1.7
mc3 y ur	Dec 2013		-1.100	1	1	0.25	5.2382	5.2382			-0.052		-2.0	-2.2

sign convention for ur osem, pitch		+(-)alpha			-(+)beam dist
sign convention for ur osem, yaw			+(-)alpha		+(-)beam dist

alpha (2013) = (L eul2osem/P(Y) eul2osem) * p2l(y2l)

alpha (2017) = (p2l(y2l) * L eul2osem) / (p2p(y2y) * P eul2osem(Y eul2osem)), and *given that p2p and y2y are equal to 1 in al optics, this alpha calculation matches the 2013 calculation*

beam dist. from center (2013) = alpha * **37.5**

beam dist. from center (2017) = alpha * **42.2**

relevent alogs:
alog 8943, and comment alog 35095
alog 31402, and reference alogs, alog 14788 and alog 13765
alog 34973