

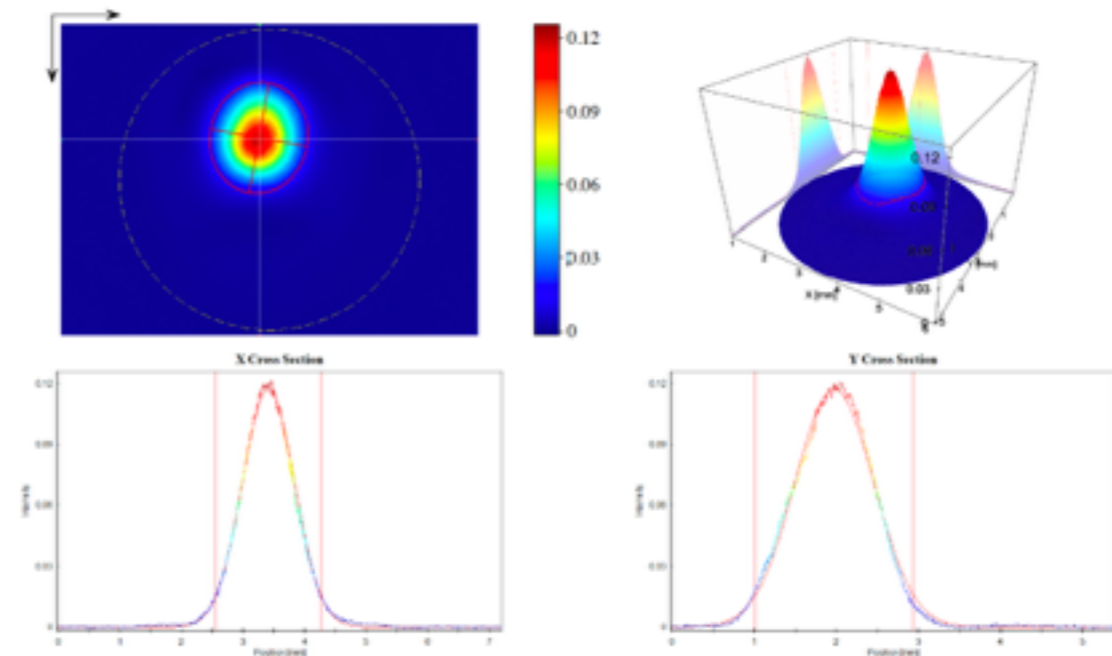
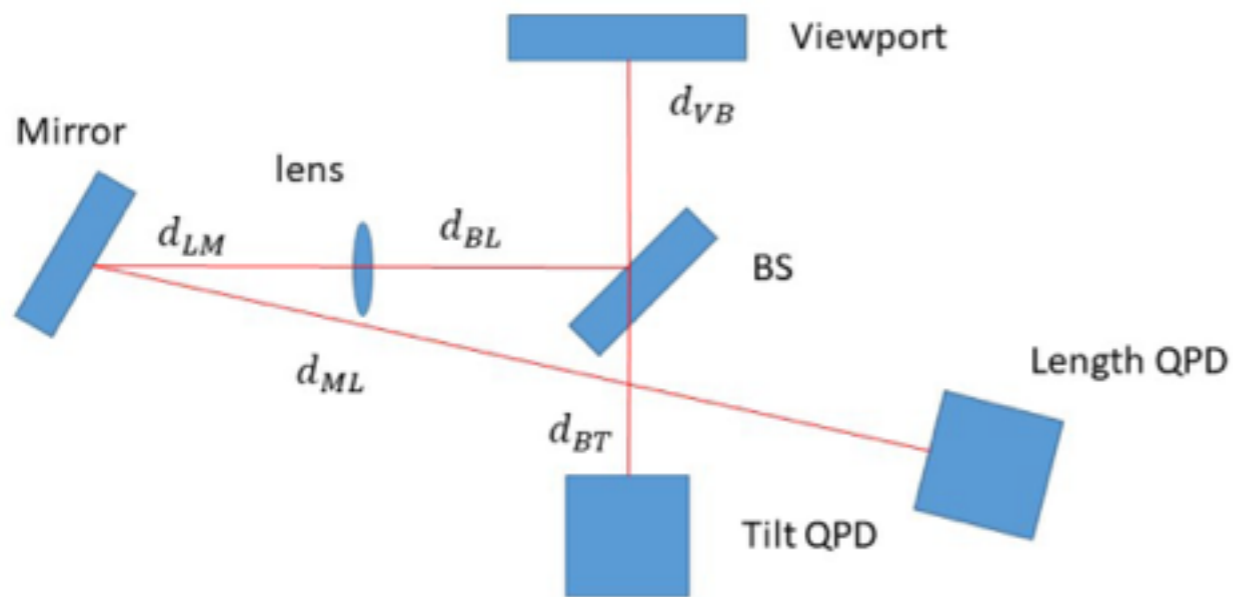
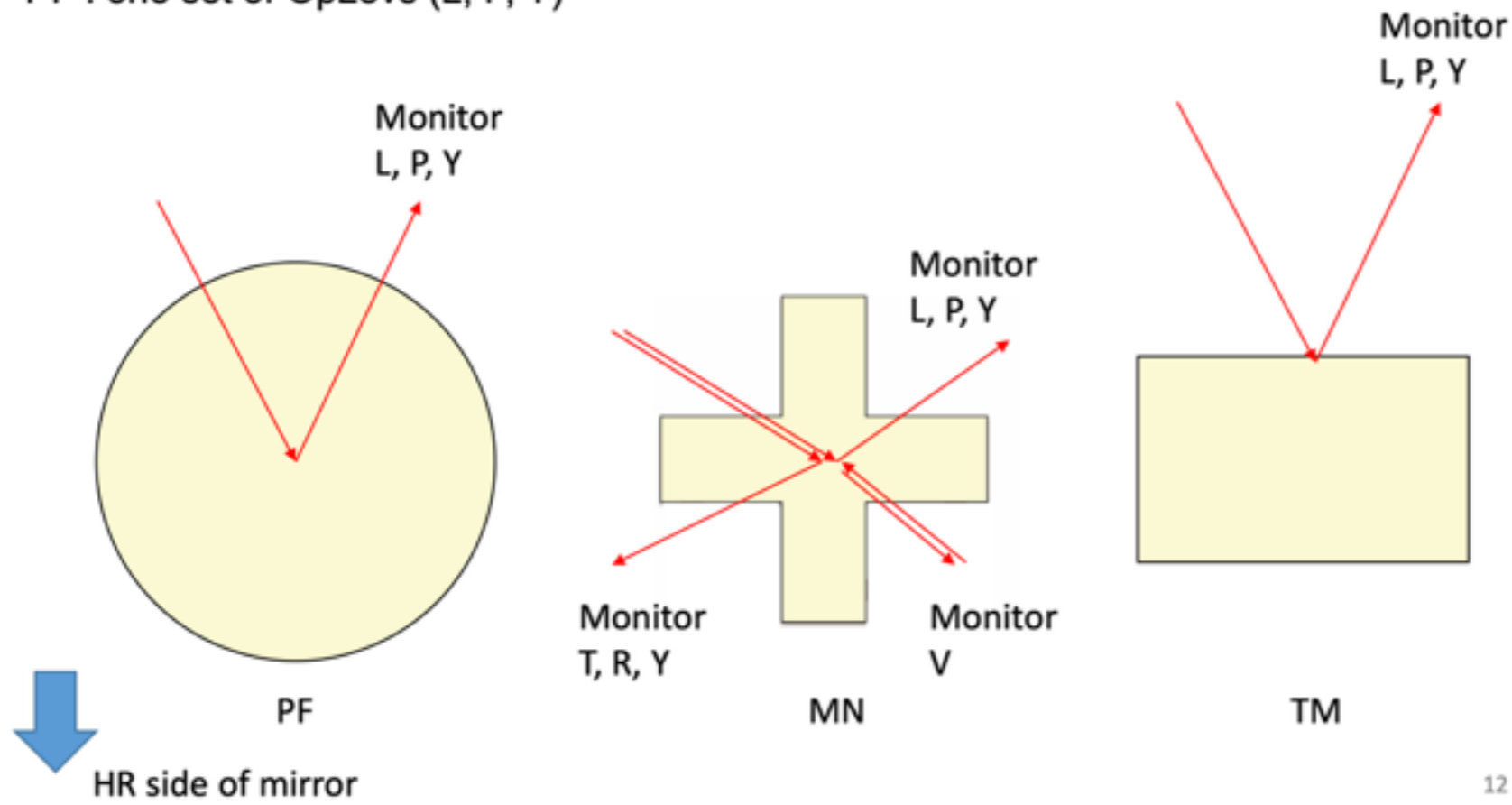
IX, EX oplev summary

2021/08/17 Takaaki Yokozawa

TM : one set of OpLevs (L, P, Y)

MN : two sets of OpLevs and one vertical monitor with retro reflector (L, T, V, R, P, Y)

PF : one set of OpLevs (L, P, Y)



- IX

- IX TM YPL

- Characterization (klog17663, 17907)

wavelength [nm]	Power in	Power TILT	Power LEN
661	0.780	0.154	0.136
cnt :		4800	4200

- Beam profile[mm] 1/e gauss fit (klog17663)

	Major width	Minor width	X width	Y width
TILT	1.024	1.005	1.010	1.019
LEN	0.3187	0.2987	0.3094	0.3083

- Distance[mm], lens curvature[1/mm] (klog17588)

d_MV	alpha	d_VB	d_BT	d_BL	d_LM	d_ML	f
1276	31.7	320	140	40	240	120	295.1

- Calibration factor[cnt/mm] and [urad/cnt]

	TILT_VER	TILT_HOR	LEN_HOR
Measured	2.83	2.75	10.06
Calibrated	119.62	104.73	429.84

- IX MN YPL

- power and beam profile is different from EX's one, but they are actually difference ix: fiber collimator, ex: fiber+lens

- Characterization (klog17663, 17907)

wavelength [nm]	Power in	Power TILT	Power LEN
636	0.750	0.261	0.338
cnt :		8200	9350

- Beam profile[mm] 1/e gauss fit (klog17663)

	Major width	Minor width	X width	Y width
TILT	1.317	1.106	1.160	1.270
LEN	0.2500	0.2226	0.2466	0.2264

- Distance[mm], lens curvature[1/mm] (klog17588)

d_MV	alpha	d_VB	d_BT	d_BL	d_LM	d_ML	f
2029	60.8	60	130	90	60	275	290.4

- Calibration factor[cnt/mm] and [urad/cnt]

	TILT_VER	TILT_HOR	LEN_HOR
Measured	2.26	2.71	9.02
Calibrated	204.37	83.15	413.05

- IX MN YRT

- power and beam profile is different from EX's one, but they are actually difference ix: fiber collimator, ex: fiber+lens

- Characterization (klog17663, 17907)

wavelength [nm]	Power in	Power TILT	Power LEN
636.2	0.783	0.281	0.362
cnt :		8800	10300

- Beam profile[mm] 1/e gauss fit (klog17663)

	Major width	Minor width	X width	Y width
TILT	1.226	1.086	1.148	1.168
LEN	0.2236	0.1961	0.2122	0.2084

- Distance[mm], lens curvature[1/mm] (klog17588)

d_MV	alpha	d_VB	d_BT	d_BL	d_LM	d_ML	f
2017	30.5	50	175	145	45	300	298.5

- Calibration factor[cnt/mm] and [urad/cnt]

	TILT_VER	TILT_HOR	LEN_HOR
Measured	2.42	2.46	11.17
Calibrated	106.95	90.66	565.48

- IX MN V

- Characterization (klog17663, 17907)

wavelength [nm]	Power in	Power TILT	Power LEN
632	0.335	0.264	-
cnt		7730	-

- Beam profile[mm] 1/e gauss fit (klog17663)

	Major width	Minor width	X width	Y width
TILT	1.937	1.699	1.707	1.930
LEN	-	-	-	-

- Distance[mm], lens curvature[1/mm] (klog17588)

d_MV	d_VT
2018	230

- Calibration factor[cnt/mm] and [urad/cnt]

	TILT_VER	TILT_HOR	LEN_HOR
Measured			
Calibrated			

- IX PF YPL

- Lower power in?
- Check the distance information

- Characterization (klog17907)

wavelength [nm]	Power in	Power TILT	Power LEN
	0.371	0.109	0.192
cnt :		3580	5530

- Beam profile[mm] 1/e gauss fit (klog17916)

	Major width	Minor width	X width	Y width
TILT	0.8446	0.7845	0.8276	0.8024
LEN	0.4064	0.3636	0.3637	0.4063

- Distance[mm], lens curvature[1/mm]

d_MV	alpha	d_VB	d_BT	d_BL	d_LM	d_ML	f
1311	25.6						

- Calibration factor[cnt/mm] and [urad/cnt] (klog 17721)

	TILT_VER	TILT_HOR	LEN_HOR
Measured	3.44	3.39	7.85
Calibrated			

- EX

- EX TM YPL

- Characterization (klog17873, 17907)

wavelength [nm]	Power in	Power TILT	Power LEN
670	1.019	0.159	0.189
cnt :		5010	5630

- Beam profile[mm] 1/e gauss fit (klog 17873)

	Major width	Minor width	X width	Y width
TILT	0.9396	0.9022	0.9176	0.9247
LEN	0.2891	0.2843	0.2859	0.2875

- Distance[mm], lens curvature[1/mm] (klog17860)

d_MV	alpha	d_VB	d_BT	d_BL	d_LM	d_ML	f
1276	31.7	305	135	80	215	160	305.9

- Calibration factor[cnt/mm] and [urad/cnt] (klog17874)

	TILT_VER	TILT_HOR	LEN_HOR
Measured	3.17	3.12	13.72
Calibrated	108.03	93.39	307.93

- EX MN YPL

- After calibration, we moved the optics. So if we have time, we will perform the length sensing DC QPD and calibration

- Characterization (klog17873, 17908)

wavelength [nm]	Power in	Power TILT	Power LEN
635.3	0.920	0.301	0.445
cnt :		9620	13820

- Beam profile[mm] 1/e gauss fit (klog 17873)

	Major width	Minor width	X width	Y width
TILT	1.999	1.878	1.952	1.927
LEN	0.1174	0.1140	0.1140	0.1174

- Distance[mm], lens curvature[1/mm] (klog17860)

d_MV	alpha	d_VB	d_BT	d_BL	d_LM	d_ML	f
2029	60.8	62.5	147.5	62.5	65	295	308.4

- Calibration factor[cnt/mm] and [urad/cnt] (klog17874)

	TILT_VER	TILT_HOR	LEN_HOR
Measured	1.47	1.45	13.72
Calibrated	311.39	154.01	249.79

- EX MN YRT

- Beam profile is large -> Need lens adjustment
- Beam power is lower -> Need to check the power

- Characterization (klog17873, 17908)

wavelength [nm]	Power in	Power TILT	Power LEN
635.8	0.378	0.115	0.167
cnt :		4120	5680

- Beam profile[mm] 1/e gauss fit (klog17909)

	Major width	Minor width	X width	Y width
TILT	2.238	1.885	1.930	2.199
LEN	0.1260	0.1010	0.1224	0.1053

- Distance[mm], lens curvature[1/mm] (klog 17860)

d_MV	alpha	d_VB	d_BT	d_BL	d_LM	d_ML	f
2017	30.5	50	160	125	65	295	309.2

- Calibration factor[cnt/mm] and [urad/cnt] (klog 17910)

	TILT_VER	TILT_HOR	LEN_HOR
Measured	1.08	1.22	10.76
Calibrated	241.27	184.03	557.48

- EX MN V

- Characterization (klog17873, 17907)

wavelength [nm]	Power in	Power TILT	Power LEN
635.1	0.450	0.368	-
cnt		11000	-

- Beam profile[mm] 1/e gauss fit (klog 17873)

	Major width	Minor width	X width	Y width
TILT	1.937	1.699	1.707	1.930
LEN	-	-	-	-

- Distance[mm], lens curvature[1/mm] (klog17860)

d_MV	d_VT
2018	215

- Calibration factor[cnt/mm] and [urad/cnt] (klog17874)

	TILT_VER	TILT_HOR	LEN_HOR
Measured	1.63	-	-
Calibrated			

- EX PF YPL

- Characterization (klog17873)

wavelength [nm]	Power in	Power TILT	Power LEN
636.1	0.820	0.308	0.379
cnt :		9100	11700

- Beam profile[mm] 1/e gauss fit (klog 17873)

	Major width	Minor width	X width	Y width
TILT	0.7861	0.7431	0.7432	0.7861
LEN	0.3812	0.3588	0.3775	0.3626

- Distance[mm], lens curvature[1/mm] (klog17860)

d_MV	alpha	d_VB	d_BT	d_BL	d_LM	d_ML	f
1311	25.6	50	147.5	62.5	90	280	293.7

- Calibration factor[cnt/mm] and [urad/cnt] (klog17874)

	TILT_VER	TILT_HOR	LEN_HOR
Measured	3.72	3.84	7.14
Calibrated	98.80	86.32	623.53