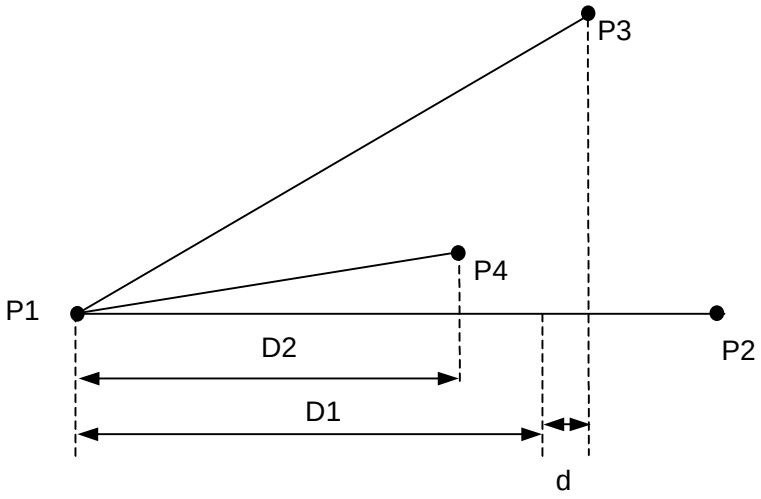
Amount of Correction of SLR Spider-Cal and Amount of Correction of Penta-prism



Unit : m

	Koganei	Kashima	Miura	Tateyama
P1	X= 5.8383 Y= -18.7922 H= 8.9869	X= -12.6580 Y= -12.7410 H= 4.4428	X= 20.3190 Y= -24.6154 H= 4.4454	X= -9.3497 Y= 0.3259 H= 4.4626
P2	X= 7.2568 Y= -19.1218 H= 9.1323	X= -11.4149 Y= -13.5113 H= 4.4034	X= 19.7641 Y= -25.9644 H= 4.4389	X= -9.8704 Y= 1.6937 H= 4.4387
P3	X= 6.9483 Y= -19.2161 H= 8.9785	X= -11.7549 Y= -13.4947 H= 4.2897	X= 19.7288 Y= -25.6335 H= 4.5697	X= -9.6198 Y= 1.4764 H= 4.5735
P4	X= 6.9160 Y= -18.8221 H= 8.8229	X= -11.6733 Y= -13.0959 H= 4.1462	X= 20.1178 Y= -25.6823 H= 4.1770	X= -9.9159 Y= 1.2144 H= 4.1761
d	0.0127	0.0127	0.0127	0.0127
D1	1.1578	1.1557	1.1528	1.1567
D2	1.0350	1.0316	1.0644	1.0363
※Observation date	1998.10.16	1998.11.02	1998.12.11	1998.12.09

1. Survey point

P1 ····· SLR telescope reference point (SLR-CP0)

P2 ····· Rear center ofSLR telescope secondary mirror

P3 ····· Rear center point of Spider-Cal

P4 ····· Center point of Penta-prism

Offset

d ····· Offset value of Spider-Cal

2. Equation for calculating the amount of correction of Spider-Cal (D)

$$D1 = \frac{(x_2 - x_1)(x_3 - x_1) + (y_2 - y_1)(y_3 - y_1) + (z_2 - z_1)(z_3 - z_1)}{\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2 + (z_2 - z_1)^2}} - d$$

Where

$$\begin{cases} P1(x_1, y_1, z_1) \\ P2(x_2, y_2, z_2) \\ P3(x_3, y_3, z_3) \end{cases}$$

$$D2 = \frac{(x_2 - x_1)(x_4 - x_1) + (y_2 - y_1)(y_4 - y_1) + (z_2 - z_1)(z_4 - z_1)}{\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2 + (z_2 - z_1)^2}}$$

$$\begin{cases} P1(x_1, y_1, z_1) \\ P2(x_2, y_2, z_2) \\ P4(x_4, y_4, z_4) \end{cases}$$