Installation and Alignment of Main Ring Magnets

March 6, 1998

R. Sugahara

Installation and Alignment

March 6, 1998

1. Survey of the beam level

Oct.-Nov. 1995	Beam level markers were installed referring to the level of TRISTAN Q-magnets.
Jan.-May 1996	First survey of level markers
July 1996	Second survey of level markers
Sep. 1997	Third survey of level markers
Feb. 1998	Forth survey of level markers

2. Survey of monuments

* Monuments are the center of TRISTAN Q-magnets.

Apr.-Jul. 1996	Survey of monuments by the laser tracker: N → N → W → E → S → N → 4 IR's

3. Installation of magnets

Aug. - Nov. 1996	The magnet position was marked by the laser tracker: position for both ends of B-magnets in the arc section, and that for all magnets in the straight section.
Nov. 1996	Marking the base plate position was started.
Dec. 1996	Installation of base plates was started.
Jan.16, 1996	A set of magnet carrier was delivered.
Feb. 1997	Installation of magnets for the outer ring in the west and the south arc was started.

4. Alignment of magnets

Oct. 1998	First alignment for LER in the north arc.
Nov. 1998	First alignment for LER in the west arc.
Jan.26-Feb.18, '98	Circumference was measured by the mekometer.
Feb. 1998	Circumference and the coordinate for monuments were examined.
Feb.27, 98	**The Laser Tracker got in trouble !** We are struggling to get another Laser Tracker.
Mar. 1998	The second alignment for LER and the first alignment for HER in the west arc will be started. Also the alignment for Fuji straight section will be started using a stretched wire technique.

N	TL	QA6L ~QA•†	QA5L †QA~	QA4L ~QA•†	QA3L †QA~	QA2L ~QA•†	QA1L ≠~Qrf‡	(Cb)	Q[illegible] ≠‡	BL5L.2 *Blc	QB3L •Qrf‡	BL5L.1 *Blc	QB2L •Qrf‡	BL2L.4 *Blc(1000A)	QB1L ‡Qrf•	SL0TL.2 Sc	BL2L.3 *Blc(1000A)	BL3L.6 *Blc	[illegible]L.2 [illegible]‡	BL3L.5 *Blc	BL3L.4 *Blc	QL1L †Qrf•						
	〃	BL3L.3 *Blc	BL3L.2 *Blc	QL2L.1 •Qrf‡	BL3L.1 *Blc	BL2L.2 *Blc(1000A)	SL0TL.1 Sc	QC5L •Qrf‡	BL[illegible] *Blc(1000A)	QKDL Qk	QKCL Qk	QC4L ‡•Qrf~	BL1L Blc	BC3L StVW	QKBL Qk	QKAL Qk	QC3L ≠Qrf•	BC2L StVW	‡~	BC1L StVW	QC2LPH QC2	QCSL QCS	(IR)						
E	TR	QCSR QCS	QC2RPH QC2	~‡	QKAR Qk	QKBR Qk	QC3R ‡Qrf•~	QKCR Qk	QKDR Qk	BLWR BS	BL1R Blc	QC4R ≠Qrf•‡	BL2R.4 *Blc	QC5R ‡Qrf•	SL0TR.2 Sc	BL2R.3 *Blc	BL3R.6 *Blc	QL2R.2 •Qrf‡	BL3R.5 *Blc	BL3R.4 *Blc	QL1R ‡Qrf•	BL3R.3 *Blc	BL3R.2 *Blc	QL2R.1 •Qrf‡					
	〃	BL3R.1 *Blc	BL2R.2 *Blc	SL0TR.1 Sc	QB1R •Qrf‡	BL2R.1 *Blc	QB2R •Qrf‡	BL5R.2 *Blc	QB3R •Qrf‡	BL5R.1 *Blc	QB4R ‡•Qrf~	(Cb)	QA1R ~Qrf•‡	QA2R †•QA~	QA3R ~QA†	QA4R †•QA~	QA5R ~QA†	QA6R †•QA~											
		BS2TR B		B2.107 B	QSATR †QA~	QSBTR ~~QA†	QS2TR †~QA•	SF2TR.2 -Sf	QEA.48 †•QA~	QD5.48 ~~QA†	B2.106 *B		QF6.24 •QA†		B2.105 *B	QD5.47 †QA~	QEA.47 ~QA•†	SF2TR.1 Sf-	QF4.40 •QA~†	QD3.40 ~†QA•	SD3TR.2 -Sd	B2.104 B	QF2.48 ~QA•†	QD1.24 †QA~					
			QF2.47 †•QA~	B2.103 B	SD3TR.1 Sd-	QD3.39 •QA†~	QF4.39 †~QA•	SF4TR.2 -Sf	QEA.46 †•QA~	QD5.46 ~~QA†	B2.102 *B		QF6.23 •QA†		B2.101 *B	QD5.45 †QA~	QEA.45 ~QA•†	SF4TR.1 Sf-	QF4.38 •QA~†	QD3.38 ~†QA•	SD5TR.2 -Sd	B2.100 B	QF2.46 ~QA•†	QD1.23 †QA~					
			QF2.45 †•QA~	B2.99 B	SD5TR.1 Sd-	QD3.37 •QA†~	QF4.37 †~QA•	SF6TR.2 -Sf	QEA.44 †•QA~	QD5.44 ~~QA†	B2.98 *B		QF6.22 •QA†		B2.97 *B	QD5.43 †QA~	QEA.43 ~QA•†	SF6TR.1 Sf-	QF4.36 •QA~†	QD3.36 ~†QA•	SD7TR.2 -Sd	B2.96 B	QF2.44 ~QA•†	QD1.22 †QA~					
			QF2.43 †•QA~	B2.95 B	SD7TR.1 Sd-	QT1OT.2 •QA†~	QT2OT.2 †~QA•	SF8OT.2 -Sf	QTAOT.2 †•QA~	QT3OT.2 ~~QA†	B2.94 B	QT4OT.2 ~QA•†	QT5OT ~~QA†	QT4OT.1 †•QA~	B2.93 B	QT3OT.1 †QA~	QTAOT.1 ~QA•†	SF8OT.1 Sf-	QT2OT.1 •QA~†	QT1OT.1 ~†QA•	SD7OL.2 -Sd	B2.92 B	QF2.42 ~QA•†	QD1.21 †QA~					
			QF2.41 †•QA~	B2.91 B	SD7OL.1 Sd-	QD3.35 •QA†~	QF4.35 †~QA•	SF6OL.2 -Sf	QEA.42 †•QA~	QD5.42 ~~QA†	B2.90 *B		QF6.21 •QA†		B2.89 *B	QD5.41 †QA~	QEA.41 ~QA•†	SF6OL.1 Sf-	QF4.34 •QA~†	QD3.34 ~†QA•	SD5OL.2 -Sd	B2.88 B	QF2.40 ~QA•†	QD1.20 †QA~					
			QF2.39 †•QA~	B2.87 B	SD5OL.1 Sd-	QD3.33 •QA†~	QF4.33 †~QA•	SF4OL.2 -Sf	QEA.40 †•QA~	QD5.40 ~~QA†	B2.86 *B		QF6.20 •QA†		B2.85 *B	QD5.39 †QA~	QEA.39 ~QA•†	SF4OL.1 Sf-	QF4.32 •QA~†	QD3.32 ~†QA•	SD3OL.2 -Sd	B2.84 B	QF2.38 ~QA•†	QD1.19 †QA~					
			QF2.37 †•QA~	B2.83 B	SD3OL.1 Sd-	QD3.31 •QA†~	QF4.31 †~QA•	SF2OL.2 -Sf	QEA.38 †•QA~	QD5.38 ~~QA†	B2.82 *B		QF6.19 •QA†		B2.81 *B	QD5.37 †QA~	QEA.37 ~QA•†	SF2OL.1 Sf-	QS2O.2 •QA~†	QSBO.2 ~†QA•	QS1O.2 ~~QA†	BS2O.4 B(600A)		BS2O.3 B(600A)					
	OL	QW8O.2 ~QA•†	QW7O.2 †QA~	QW6O.2 ~QA•†	BP1O.8 B(1000A)	BP1O.7 B(1000A)	BP1O.6 B(1000A)	BP1O.5 B(1000A)	QW5O.2 †QA~	QW4O.2 ~QA•†	BW1OL. 1-6	QW3O.2 †QA~	BW1OL. 7-12	QW2O.2 ~QA•†	BW1OL. 13-18	QDWO.6 †QA~	BW1OL. 19-24	QFWO.5 ~QA•†	BW1OL. 25-30	QDWO.5 †QA~	BW1OL. 31-36	QFWO.4 ~QA•†	BW1OL. 37-42	QDWO.4 †QA~	BW1OL. 43-48	QFWO.3 ~QA•†				
S	OR	BW1OR. 43-48	QDWO.3 †QA~	BW1OR 37-42	QFWO.2 ~QA•†	BW1OR 31-36	QDWO.2 †QA~	BW1OR. 25-30	QFWO.1 ~QA•†	BW1OR 19-24	QDWO.1 †QA~	BW1OR. 13-18	QW2O.1 ~QA•†	BW1OR. 7-12	QW3O.1 †QA~	BW1OR. 1-6	QW4O.1 ~QA•†	QW5O.1 ~~QA†	BP1O.4 B(1000A)	BP1O.3 B(1000A)	BP1O.2 B(1000A)	BP1O.1 B(1000A)	QW6O.1 †•QA~	QW7O.1 ~~QA†	QW8O.1 †•QA~					
		BS2O.2 B(600A)		BS2O.1 B(600A)	QS1O.1 †QA~	QSBO.1 ~~QA†	QS2O.1 †~QA•	SF2OR.2 -Sf	QEA.36 †•QA~	QD5.36 ~~QA†	B2.80 *B		QF6.18 •QA†		B2.79 *B	QD5.35 †QA~	QEA.35 ~QA•†	SF2OR.1 Sf-	QF4.30 •QA~†	QD3.30 ~†QA•	SD3OR.2 -Sd	B2.78 B	QF2.36 ~QA•†	QD1.18 †QA~					
			QF2.35 †•QA~	B2.77 B	SD3OR.1 Sd-	QD3.29 •QA†~	QF4.29 †~QA•	SF4OR.2 -Sf	QEA.34 †•QA~	QD5.34 ~~QA†	B2.76 *B		QF6.17 •QA†		B2.75 *B	QD5.33 †QA~	QEA.33 ~QA•†	SF4OR.1 Sf-	QF4.28 •QA~†	QD3.28 ~†QA•	SD5OR.2 -Sd	B2.74 B	QF2.34 ~QA•†	QD1.17 †QA~					
			QF2.33 †•QA~	B2.73 B	SD5OR.1 Sd-	QD3.27 •QA†~	QF4.27 †~QA•	SF6OR.2 -Sf	QEA.32 †•QA~	QD5.32 ~~QA†	B2.72 *B		QF6.16 •QA†		B2.71 *B	QD5.31 †QA~	QEA.31 ~QA•†	SF6OR.1 Sf-	QF4.26 •QA~†	QD3.26 ~†QA•	SD7OR.2 -Sd	B2.70 B	QF2.32 ~QA•†	QD1.16 †QA~					
			QF2.31 †•QA~	B2.69 B	SD7OR.1 Sd-	QT1FO.2 •QA†~	QT2FO.2 †~QA•	SF8FO.2 -Sf	QTAFO.2 †•QA~	QT3FO.2 ~~QA†	B2.68 B	QT4FO.2 ~QA•†	QT5FO ~~QA†	QT4FO.1 †•QA~	B2.67 B	QT3FO.1 †QA~	QTAFO.1 ~QA•†	SF8FO.1 Sf-	QT2FO.1 •QA~†	QT1FO.1 ~†QA•	SD7FL.2 -Sd	B2.66 B	QF2.30 ~QA•†	QD1.15 †QA~					
			QF2.29 †•QA~	B2.65 B	SD7FL.1 Sd-	QD3.25 •QA†~	QF4.25 †~QA•	SF6FL.2 -Sf	QEA.30 †•QA~	QD5.30 ~~QA†	B2.64 *B		QF6.15 •QA†		B2.63 *B	QD5.29 †QA~	QEA.29 ~QA•†	SF6FL.1 Sf-	QF4.24 •QA~†	QD3.24 ~†QA•	SD5FL.2 -Sd	B2.62 B	QF2.28 ~QA•†	QD1.14 †QA~					
			QF2.27 †•QA~	B2.61 B	SD5FL.1 Sd-	QD3.23 •QA†~	QF4.23 †~QA•	SF4FL.2 -Sf	QEA.28 †•QA~	QD5.28 ~~QA†	B2.60 *B		QF6.14 •QA†		B2.59 *B	QD5.27 †QA~	QEA.27 ~QA•†	SF4FL.1 Sf-	QF4.22 •QA~†	QD3.22 ~†QA•	SD3FL.2 -Sd	B2.58 B	QF2.26 ~QA•†	QD1.13 †QA~					
			QF2.25 †•QA~	B2.57 B	SD3FL.1 Sd-	QD3.21 •QA†~	QF4.21 †~QA•	SF2FL.2 -Sf	QEA.26 †•QA~	QD5.26 ~~QA†	B2.56 *B		QF6.13 •QA†		B2.55 *B	QD5.25 †QA~	QEA.25 ~QA•†	SF2FL.1 Sf-	QS2FL •QA~†	QSBFL ~†QA•	QS1FL ~~QA†	B2.54 B		BSWFL BS					
	FL	QI8 †•QA~	QI7 †QA~	QI6 ‡~Qrf‡	QI5 †QA~	QI4 QA~•†	QI3 ‡Qrf•≠	(C5)	QI2 ≠Qrf•‡	(C4)	QDR.4 ‡Qrf•≠	(C3)	QFR.3 ≠Qrf•‡	(C2)	QDR.3 ‡Qrf•≠	(C1)	QV4.2 ≠Qrf•‡	QV3.2 †QA~	QV2.2 †•QA~	QV1.2 •QA†	BV1.4 BV	BV1.3 BV							
	FR	BV1.2 BV	BV1.1 BV	QV1.1 †QA•	QV2.1 ~QA•†	QV3.1 ~~QA†	QV4.1 ‡•Qrf~	(C1)	QDR.2 ≠~Qrf‡	(C2)	QFR.2 ‡•Qrf~	(C3)	QDR.1 ≠~Qrf‡	(C4)	QFR.1 ‡•Qrf~	(C5)	QR1 ≠~Qrf‡	(C6)	QR2 ‡•Qrf~		QR3 ≠~Qrf‡	QR4 ‡•QA~	QR5 ~~QA†	QR6 †QA~					
W		BSWFR BS		B2.53 B	QS1FR †QA~	QSBFR ~QA†	QS2FR †QA~	SF2FR.2 -Sf	QEA.24 †•QA~	QD5.24 ~~QA†	B2.52 *B		QF6.12 •QA†		B2.51 *B	QD5.23 †QA~	QEA.23 ~QA•†	SF2FR.1 Sf-	QF4.20 •QA~†	QD3.20 ~†QA•	SD3FR.2 -Sd	B2.50 B	QF2.24 ~QA•†	QD1.12 †QA~					
			QF2.23	B2.49 B	SD3FR.1 Sd-	QD3.19 •QA†~	QF4.19 †~QA•	SF4FR.2 -Sf	QEA.22 †•QA~	QD5.22 ~~QA†	B2.48 *B		QF6.11 •QA†		B2.47 *B	QD5.21 †QA~	QEA.21 ~QA•†	SF4FR.1 Sf-	QF4.18 •QA~†	QD3.18 ~†QA•	SD5FR.2 -Sd	B2.46 B	QF2.22 ~QA•†	QD1.11 †QA~					
			QF2.21	B2.45 B	SD5FR.1 Sd-	QD3.17 •QA†~	QF4.17 †~QA•	SF6FR.2 -Sf	QEA.20 †•QA~	QD5.20 ~~QA†	B2.44 *B		QF6.10 •QA†		B2.43 *B	QD5.19 †QA~	QEA.19 ~QA•†	SF6FR.1 Sf-	QF4.16 •QA~†	QD3.16 ~†QA•	SD7FR.2 -Sd	B2.42 B	QF2.20 ~QA•†	QD1.10 †QA~					
			QF2.19	B2.41 B	SD7FR.1 Sd-	QT1NF.2 •QA†~	QT2NF.2 †~QA•	SF8NF.2 -Sf	QTANF.2 †•QA~	QT3NF.2 ~~QA†	B2.40 *B	QT4NF.2 ~QA•†	QT5NF ~~QA†	QT4NF.1 †•QA~	B2.39 *B	QT3NF.1 †QA~	QTANF.1 ~QA•†	SF8NF.1 Sf-	QT2NF.1 •QA~†	QT1NF.1 ~†QA•	SD7NL.2 -Sd	B2.38 B	QF2.18 ~QA•†	QD1.9 †QA~					
			QF2.17	B2.37 B	SD7NL.1 Sd-	QD3.15 •QA†~	QF4.15 †~QA•	SF6NL.2 -Sf	QEA.18 †•QA~	QD5.18 ~~QA†	B2.36 *B		QF6.9 •QA†		B2.35 *B	QD5.17 †QA~	QEA.17 ~QA•†	SF6NL.1 Sf-	QF4.14 •QA~†	QD3.14 ~†QA•	SD5NL.2 -Sd	B2.34 B	QF2.16 ~QA•†	QD1.8 †QA~					
			QF2.15	B2.33 B	SD5NL.1 Sd-	QD3.13 •QA†~	QF4.13 †~QA•	SF4NL.2 -Sf	QEA.16 †•QA~	QD5.16 ~~QA†	B2.32 *B		QF6.8 •QA†		B2.31 *B	QD5.15 †QA~	QEA.15 ~QA•†	SF4NL.1 Sf-	QF4.12 •QA~†	QD3.12 ~†QA•	SD3NL.2 -Sd	B2.30 B	QF2.14 ~QA•†	QD1.7 †QA~					
			QF2.13	B2.29 B	SD3NL.1 Sd-	QD3.11 •QA†~	QF4.11 †~QA•	SF2NL.2 -Sf	QEA.14 †•QA~	QD5.14 ~~QA†	B2.28 *B		QF6.7 •QA†		B2.27 *B	QD5.13 †QA~	QEA.13 ~QA•†	SF2NL.1 Sf-	QS2N.2 •QA~†	QSBN.2 ~†QA•	QS1N.2 ~~QA†	BS2N.4 B		BS2N.3 B					
	NL	QW8N.2 ~QA•†	QW7N.2 †QA~	QW6N.2 ~QA•†	BP1N.8 B(1000A)	BP1N.7 B(1000A)	BP1N.6 B(1000A)	BP1N.5 B(1000A)	QW5N.2 †QA~	QW4N.2 †•QA~	BW1NL. <1-6>	QW3N.2 ~~QA†	BW1NL. <7-12>	QW2N.2 †•QA~	BW1NL. <13-18>	QDWN.6 ~~QA†	BW1NL. <19-24>	QFWN.5 †•QA~	BW1NL. <25-30>	QDWN.5 ~~QA†	BW1NL. <31-36>	QFWN.4 †•QA~	BW1NL. 37-42	QDWN.4 ~~QA†	BW1NL. 43-48	QFWN.3 †•QA~				
N	NR	BW1NR. 43-48	QDWN.3 ~~QA†	BW1NR 37-42	QFWN.2 †•QA~	BW1NR <31-36>	QDWN.2 ~~QA†	BW1NR. <25-30>	QFWN.1 †•QA~	BW1NR. <19-24>	QDWN.1 ~~QA†	BW1NR. <13-18>	QW2N.1 †•QA~	BW1NR. <7-12>	QW3N.1 ~~QA†	BW1NR. <1-6>	QW4N.1 †•QA~	QW5N.1 ~~QA†	BP1N.4 B(1000A)	BP1N.3 B(1000A)	BP1N.2 B(1000A)	BP1N.1 B(1000A)	QW6N.1 †•QA~	QW7N.1 ~~QA†	QW8N.1 ‡•QA~					
		BS2N.2 B		BS2N.1 B	QS1N.1 B	QSBN.1 B	QS2N.1 B	SF2NR.2 -Sf	QEA.12 †•QA~	QD5.12 ~~QA†	B2.26 *B		QF6.6 •QA†		B2.25 *B	QD5.11 †QA~	QEA.11 ~QA•†	SF2NR.1 Sf-	QF4.10 •QA~†	QD3.10 ~†QA•	SD3NR.2 -Sd	B2.24 B	QF2.12 ~QA•†	QD1.6 †QA~					
			QF2.11	B2.23 B	SD3NR.1 Sd-	QD3.9 •QA†~	QF4.9 †~QA•	SF4NR.2 -Sf	QEA.10 †•QA~	QD5.10 ~~QA†	B2.22 *B		QF6.5 •QA†		B2.21 *B	QD5.9 †QA~	QEA.9 ~QA•†	SF4NR.1 Sf-	QF4.8 •QA~†	QD3.8 ~†QA•	SD5NR.2 -Sd	B2.20 B	QF2.10 ~QA•†	QD1.5 †QA~					
			QF2.9	B2.19 B	SD5NR.1 Sd-	QD3.7 •QA†~	QF4.7 †~QA•	SF6NR.2 -Sf	QEA.8 †•QA~	QD5.8 ~~QA†	B2.18 *B		QF6.4 •QA†		B2.17 *B	QD5.7 †QA~	QEA.7 ~QA•†	SF6NR.1 Sf-	QF4.6 •QA~†	QD3.6 ~†QA•	SD7NR.2 -Sd	B2.16 B	QF2.8 ~QA•†	QD1.4 †QA~					
			QF2.7	B2.15 B	SD7NR.1 Sd-	QT1TN.2 •QA†~	QT2TN.2 †~QA•	SF8TN.2 -Sf	QTATN.2 †•QA~	QT3TN.2 ~~QA†	B2.14 *B	QT4TN.2 ~QA•†	QT5TN ~~QA†	QT4TN.1 †•QA~	B2.13 *B	QT3TN.1 †QA~	QTATN.1 ~QA•†	SF8TN.1 Sf-	QT2TN.1 •QA~†	QT1TN.1 ~†QA•	SD7TL.2 -Sd	B2.12 B	QF2.6 ~QA•†	QD1.3 †QA~					
			QF2.5	B2.11 B	SD7TL.1 Sd-	QD3.5 •QA†~	QF4.5 †~QA•	SF6TL.2 -Sf	QEA.6 †•QA~	QD5.6 ~~QA†	B2.10 *B		QF6.3 •QA†		B2.9 *B	QD5.5 †QA~	QEA.5 ~QA•†	SF6TL.1 Sf-	QF4.4 •QA~†	QD3.4 ~†QA•	SD5TL.2 -Sd	B2.8 B	QF2.4 ~QA•†	QD1.2 †QA~					
			QF2.3	B2.7 B	SD5TL.1 Sd-	QD3.3 •QA†~	QF4.3 †~QA•	SF4TL.2 -Sf	QEA.4 †•QA~	QD5.4 ~~QA†	B2.6 *B		QF6.2 •QA†		B2.5 *B	QD5.3 †QA~	QEA.3 ~QA•†	SF4TL.1 Sf-	QF4.2 •QA~†	QD3.2 ~†QA•	SD3TL.2 -Sd	B2.4 B	QF2.2 ~QA•†	QD1.1 †QA~					
			QF2.1	B2.3 B	SD3TL.1 Sd-	QD3.1 •QA†~	QF4.1 †~QA•	SF2TL.2 -Sf	QEA.2 †•QA~	QD5.2 ~~QA†	B2.2 *B		QF6.1 •QA†		B2.1 *B	QD5.1 †QA~	QEA.1 ~QA•†	SF2TL.1 Sf-	QS2TL •QA~†	QSBTL ~†QA•	QSATL †~•QA	BS2TL B		BSWTL B					

【凡例】

無印：第一期製作分のQA(283台)

QA：第二期製作分のQA(130台)

B(nA)：特別な励磁電流値のB

Magnet is installed.

Beam pipe is installed, and first alignment is done.

STATUS for Magnet Installation : === LER === 98.2.19

綿かけは電気端子板がリング内側; <Wg> 其通製台目

‡段差; • BPM(2重; † StV; ~ SdH; ‡ StVW; ≠ SdHW; *B Back leg col

N	TL	QA7L ↑QB← --	QA6L –QB·↑	QA5L ↑QB← --	QA4L –QB·↑	QA3L ↑QB← --	QA2L –QB·↑	(Cb)	BH5L StHW	BH4L StHW	QKFL Qk	QC5L –QB·↑	QKEL Qk	QC4L ‡Qrf·	BH3L StHW	QKDL Qk	QKCL Qk	QC3L ‡Qrf·←	BH2L StHW	BH1L StHW	BC3L StVW	QKBL Qk2	QKAL Qk2	BC2L –StVW	QC2LEH QC2	QC1LEH QC1	QC5L QC5	(IR)
	TR	QC5R QC5	QC1REH QC1	QC2REH QC2	BC1R StVW	BC2R StVW←	QKAR Qk2	QKBR Qk2	BC3R StVW	BH2R B	QKCR Qk2	QC3R ‡Qrf·←	QKDR Qk2	BH3R B	QC4R –Qrf·‡	QKER Qk2	BH4R B	QC5R –·QB↑	QKFR Qk	(Cb)	QA2R –Qrf·‡	QA3R –·QB↑	QA4R ↑QB–	QA5R –·QB↑	QA6R ↑–QB←	QA7R –·QB↑			
E		BSWTR BS1	QS2TR ↑QS<(600A)	B2.112 *B<30T>	QSATR QA·↑	QSBTR –·QA↑	QS4TR ↑–QA<(600A)	SF2TR.2 -Sf	QEA.48 –QA·↑	QD5.48 –↑QA·	B2.111 *B		QF6.24 ↑QS·		B2.110 *B	QD5.47 ·QA↑–	QEA.47 ↑·QA–	SF2TR.1 Sf-	QF4.40 -QB–↑	QD3.40 –↑QA·	SD3TR.2 -Sd	B2.109 B	QF2.48 QS–·↑	QD1.24 ↑QB–·				
		QF2.47 ↑–·QS	B2.108 B	SD3TR.1 Sd-	QD3.39 ·QA↑–	QF4.39 ↑–QB·	SF4TR.2 -Sf	QEA.46 –QA·↑	QD5.46 –↑QA·	B2.107 *B			QF6.23 ↑QS·		B2.106 *B	QD5.45 -QA↑–	QEA.45 ↑·QA–	SF4TR.1 Sf-	QF4.38 -QB–↑	QD3.38 –↑QA·	SD5TR.2 -Sd	B2.105 B	QF2.46 QS–·↑	QD1.23 ↑QB–·				
		QF2.45 ↑–·QS	B2.104 B	SD5TR.1 Sd-	QD3.37 ·QA↑–	QF4.37 ↑–QB·	SF6TR.2 -Sf	QEA.44 –QA·↑	QD5.44 –↑QA·	B2.103 *B			QF6.22 ↑QS·		B2.102 *B	QD5.43 ·QA↑–	QEA.43 ↑·QA–	SF6TR.1 Sf-	QF4.36 -QB–↑	QD3.36 –↑QA·	SD7TR.2 -Sd	B2.101 B	QF2.44 QS–·↑	QD1.22 ↑QB–·				
		QF2.43 ↑–·QS	B2.100 B	SD7TR.1 Sd-	QT1OT.2 ·QA↑–	QT2OT.2 ↑–QB·	SF8OT.2 -Sf	QTAOT.2 –QA·↑	QT3OT.2 –↑QA·	B2.99 B	QT4OT.2 -QA–↑	QT5OT ↑QA–·	QT4OT.1 ↑–QA·	B2.98 B	QT3OT.1 ·QA↑–	QTAOT.1 ↑·QA–	SF8OT.1 Sf-	QT2OT.1 -QB–↑	QT1OT.1 –↑QA·	SD7OL.2 -Sd	B2.97 B	QF2.42 QS–·↑	QD1.21 ↑QB–·				
		QF2.41 ↑–·QS	B2.96 B	SD7OL.1 Sd-	QD3.35 ·QA↑–	QF4.35 ↑–QB·	SF6OL.2 -Sf	QEA.42 –QA·↑	QD5.42 –↑QA·	B2.95 *B			QF6.21 ↑QS·		B2.94 *B	QD5.41 ·QA↑–	QEA.41 ↑·QA–	SF6OL.1 Sf-	QF4.34 -QB–↑	QD3.34 –↑QA·	SD5OL.2 -Sd	B2.93 B	QF2.40 QS–·↑	QD1.20 ↑QB–·				
		QF2.39 ↑–·QS	B2.92 B	SD5OL.1 Sd-	QD3.33 ·QA↑–	QF4.33 ↑–QB·	SF4OL.2 -Sf	QEA.40 –QA·↑	QD5.40 –↑QA·	B2.91 *B			QF6.20 ↑QS·		B2.90 *B	QD5.39 ·QA↑–	QEA.39 ↑·QA–	SF4OL.1 Sf-	QF4.32 -QB–↑	QD3.32 –↑QA·	SD3OL.2 -Sd	B2.89 B	QF2.38 QS–·↑	QD1.19 ↑QB–·				
		QF2.37 ↑–·QS	B2.88 B	SD3OL.1 Sd-	QD3.31 ·QA↑–	QF4.31 ↑–QB·	SF2OL.2 -Sf	QEA.38 –QA·↑	QD5.38 –↑QA·	B2.87 *B			QF6.19 ↑QS·		B2.86 *B	QD5.37 ·QA↑–	QEA.37 ↑·QA–	SF2OL.1 Sf-	QS4O.2 -QA–↑(600A)	QSBO.2 ↑QA–·	QS3O.2 ↑·QX	B2.85 *B<30T>	QS2O.2 ↑QS<(600A)	BSWOL BS1				
	OL	QR7O.2 -QA↑–(600A)	QR6O.2 –QB·↑	QR5O.2 ‡Qrf·←	(C5)	QR4O.2 –Qrf·‡	(C4)	QR3O.2 ‡Qrf·←	(C3)	QR2O.2 –Qrf·‡		QDRO.6 ‡Qrf·←		QFRO.5 –Qrf·‡	(C1)	QDRO.5 ‡Qrf·←		QFRO.4 –Qrf·‡	QDRO.4 ‡Qrf·←	QFRO.3 –Qrf·‡								
S	OR	QDRO.3 ‡Qrf·←	QFRO.2 –Qrf·‡		QDRO.2 ‡Qrf·←	(C1)	QFRO.1 –Qrf·‡	(C2)	QDRO.1 ‡Qrf·←		QR2O.1 –Qrf·‡	(C3)	QR3O.1 ‡Qrf·←	(C4)	QR4O.1 –Qrf·‡	(C5)	QR5O.1 ‡Qrf·←	QR6O.1 ↑·QB–	QR7O.1 –↑QA<(600A)									
		BSWOR BS1	QS2O.1 ↑QS<(600A)	B2.84 *B<30T>	QS3O.1 QX·↑	QSBO.1 –·QA↑	QS4O.1 ↑–QA<(600A)	SF2OR.2 -Sf	QEA.36 –QA·↑	QD5.36 –↑QA·	B2.83 *B		QF6.18 ↑QS·		B2.82 *B	QD5.35 ·QA↑–	QEA.35 ↑·QA–	SF2OR.1 Sf-	QF4.30 -QB–↑	QD3.30 –↑QA·	SD3OR.2 -Sd	B2.81 B	QF2.36 QS–·↑	QD1.18 ↑QB–·				
		QF2.35 ↑–·QS	B2.80 B	SD3OR.1 Sd-	QD3.29 ·QA↑–	QF4.29 ↑–QB·	SF4OR.2 -Sf	QEA.34 –QA·↑	QD5.34 –↑QA·	B2.79 *B			QF6.17 ↑QS·		B2.78 *B	QD5.33 ·QA↑–	QEA.33 ↑·QA–	SF4OR.1 Sf-	QF4.28 -QB–↑	QD3.28 –↑QA·	SD5OR.2 -Sd	B2.77 B	QF2.34 QS–·↑	QD1.17 ↑QB–·				
		QF2.33 ↑–·QS	B2.76 B	SD5OR.1 Sd-	QD3.27 ·QA↑–	QF4.27 ↑–QB·	SF6OR.2 -Sf	QEA.32 –QA·↑	QD5.32 –↑QA·	B2.75 *B			QF6.16 ↑QS·		B2.74 *B	QD5.31 ·QA↑–	QEA.31 ↑·QA–	SF6OR.1 Sf-	QF4.26 -QB–↑	QD3.26 –↑QA·	SD7OR.2 -Sd	B2.73 B	QF2.32 QS–·↑	QD1.16 ↑QB–·				
		QF2.31 ↑–·QS	B2.72 B	SD7OR.1 Sd-	QT1FO.2 ·QA↑–	QT2FO.2 ↑–QB·	SF8FO.2 -Sf	QTAFO.2 –QA·↑	QT3FO.2 –↑QA·	B2.71 B	QT4FO.2 -QA–↑	QT5FO ↑QA–·	QT4FO.1 ↑–QA·	B2.70 B	QT3FO.1 ·QA↑–	QTAFO.1 ↑·QA–	SF8FO.1 Sf-	QT2FO.1 -QB–↑	QT1FO.1 –↑QA·	SD7FL.2 -Sd	B2.69 B	QF2.30 QS–·↑	QD1.15 ↑QB–·				
		QF2.29 ↑–·QS	B2.68 B	SD7FL.1 Sd-	QD3.25 ·QA↑–	QF4.25 ↑–QB·	SF6FL.2 -Sf	QEA.30 –QA·↑	QD5.30 –↑QA·	B2.67 *B			QF6.15 ↑QS·		B2.66 *B	QD5.29 ·QA↑–	QEA.29 ↑·QA–	SF6FL.1 Sf-	QF4.24 -QB–↑	QD3.24 –↑QA·	SD5FL.2 -Sd	B2.65 B	QF2.28 QS–·↑	QD1.14 ↑QB–·				
		QF2.27 ↑–·QS	B2.64 B	SD5FL.1 Sd-	QD3.23 ·QA↑–	QF4.23 ↑–QB·	SF4FL.2 -Sf	QEA.28 –QA·↑	QD5.28 –↑QA·	B2.63 *B			QF6.14 ↑QS·		B2.62 *B	QD5.27 ·QA↑–	QEA.27 ↑·QA–	SF4FL.1 Sf-	QF4.22 -QB–↑	QD3.22 –↑QA·	SD3FL.2 -Sd	B2.61 B	QF2.26 QS–·↑	QD1.13 ↑QB–·				
		QF2.25 ↑–·QS	B2.60 B	SD3FL.1 Sd-	QD3.21 ·QA↑–	QF4.21 ↑–QB·	SF2FL.2 -Sf	QEA.26 –QA·↑	QD5.26 –↑QA·	B2.59 *B			QF6.13 ↑QS·		B2.58 *B	QD5.25 ·QA↑–	QEA.25 ↑·QA–	SF2FL.1 Sf-	QS4FL -QA–↑(600A)	QSBFL ↑QA–·	QS3FL ↑·QA	B2.57 *B<30T>	QS2FL ↑QS<(600A)	BSWFL *BS3				
	FL	QM7 ↑QB← --	QM6 –QB·↑	QM5 ↑QB–·	QM4 –QB·↑	QM3 ↑QB–·	QM2 –QB·↑	QX7.2 ↑QB–·	QX6.2 –QB·↑	QX5.2 ↑QB–·	QX4.2 ↑–QB·	BX1.2 B	QX3.2 –↑QB·	QX2.2 –QX·↑														
W	FR	QX2.1 ↑·QX–	QX3.1 ·QB↑–	BX1.1 B	QX4.1 -QB–↑	QX5.1 –·QB↑	QX6.1 ↑·QB–	QX7.1 –QB↑	QI2 ↑·QB–	QI3 –·QB↑	QI4 °QA–↑	QI5 –·QB↑	QI6 –QB·↑	QI7 –↑·QB														
		BSWFR *BS2	QS2FR ↑QS<(600A)	B2.56 *B<30T>	QS3FR QA·↑	QSBFR –·QA↑	QS4FR ↑–QA<(600A)	SF2FR.2 -Sf	QEA.24 –QA·↑	QD5.24 –↑QA·	B2.55 *B		QF6.12 ↑QS·		B2.54 *B	QD5.23 ·QA↑–	QEA.23 ↑·QA–	SF2FR.1 Sf-	QF4.20 -QB–↑	QD3.20 –↑QA·	SD3FR.2 -Sd	B2.53 B<30T>	QF2.24 QS–·↑	QD1.12 –·QB↑				
		QF2.23 ↑–·QS	B2.52 B	SD3FR.1 Sd-	QD3.19 ·QA↑–	QF4.19 ↑–QB·	SF4FR.2 -Sf	QEA.22 –QA·↑	QD5.22 –↑QA·	B2.51 *B			QF6.11 ↑QS·		B2.50 *B	QD5.21 ·QA↑–	QEA.21 ↑·QA–	SF4FR.1 Sf-	QF4.18 -QB–↑	QD3.18 –↑QA·	SD5FR.2 -Sd	B2.49 B	QF2.22 QS–·↑	QD1.11 –·QB↑				
		QF2.21 ↑–·QS	B2.48 B	SD5FR.1 Sd-	QD3.17 ·QA↑–	QF4.17 ↑–QB·	SF6FR.2 -Sf	QEA.20 –QA·↑	QD5.20 –↑QA·	B2.47 *B			QF6.10 ↑QS·		B2.46 *B	QD5.19 ·QA↑–	QEA.19 ↑·QA–	SF6FR.1 Sf-	QF4.16 -QB–↑	QD3.16 –↑QA·	SD7FR.2 -Sd	B2.45 B	QF2.20 QS–·↑	QD1.10 –·QB↑				
		QF2.19 ↑–·QS	B2.44 B	SD7FR.1 Sd-	QT1NF.2 ·QA↑–	QT2NF.2 ↑–QB·	SF8NF.2 -Sf	QTANF.2 –QA·↑	QT3NF.2 –↑QA·	B2.43 B	QT4NF.2 -QA–↑	QT5NF ↑QA–·	QT4NF.1 ↑–QA·	B2.42 B	QT3NF.1 ·QA↑–	QTANF.1 ↑·QA–	SF8NF.1 Sf-	QT2NF.1 -QB–↑	QT1NF.1 –↑QA·	SD7NL.2 -Sd	B2.41 B	QF2.18 QS–·↑	QD1.9 –·QB↑				
		QF2.17 ↑–·QS	B2.40 B	SD7NL.1 Sd-	QD3.15 ·QA↑–	QF4.15 ↑–QB·	SF6NL.2 -Sf	QEA.18 –QA·↑	QD5.18 –↑QA·	B2.39 *B			QF6.9 ↑QS·		B2.38 *B	QD5.17 ·QA↑–	QEA.17 ↑·QA–	SF6NL.1 Sf-	QF4.14 -QB–↑	QD3.14 –↑QA·	SD5NL.2 -Sd	B2.37 B	QF2.16 QS–·↑	QD1.8 –·QB↑				
		QF2.15 ↑–·QS	B2.36 B	SD5NL.1 Sd-	QD3.13 ·QA↑–	QF4.13 ↑–QB·	SF4NL.2 -Sf	QEA.16 –QA·↑	QD5.16 –↑QA·	B2.35 *B			QF6.8 ↑QS·		B2.34 *B	QD5.15 ·QA↑–	QEA.15 ↑·QA–	SF4NL.1 Sf-	QF4.12 -QB–↑	QD3.12 –↑QA·	SD3NL.2 -Sd	B2.33 B	QF2.14 QS–·↑	QD1.7 –·QB↑				
		QF2.13 ↑–·QS	B2.32 B<30T>	SD3NL.1 Sd-	QD3.11 ·QA↑–	QF4.11 ↑–QB·	SF2NL.2 -Sf	QEA.14 –QA·↑	QD5.14 –↑QA·	B2.31 *B			QF6.7 ↑QS·		B2.30 *B	QD5.13 ·QA↑–	QEA.13 ↑·QA–	SF2NL.1 Sf-	QS4N.2 -QA–↑(600A)	QSBN.2 ↑QA–·	QS3N.2 ↑·QA	B2.29 *B<30T>	QS2N.2 ↑QS<(600A)	BSWNL BS1				
	NL	QR7N.2 -QA↑–(600A)	QR6N.2 –QB·↑	QR5N.2 –·Qrf‡	(C6)	QR4N.2 ‡·Qrf–	(C5)	QR3N.2 –·Qrf‡	(C4)	QR2N.2 ‡·Qrf–	(C3)	QDRN.6 –·Qrf‡	(C2)	QFRN.5 ‡·Qrf–	(C1)	QDRN.5 –·Qrf‡		QFRN.4 ‡·Qrf–	QDRN.4 –·Qrf‡	QFRN.3 ‡·Qrf–								
N	NR	QDRN.3 –·Qrf‡	QFRN.2 ‡·Qrf–		QDRN.2 –·Qrf‡	(C1)	QFRN.1 ‡·Qrf–	(C2)	QDRN.1 –·Qrf‡	(C3)	QR2N.1 ‡·Qrf–	(C4)	QR3N.1 –·Qrf‡	(C5)	QR4N.1 ‡·Qrf–	(C6)	QR5N.1 –·Qrf‡	QR6N.1 ↑·QB–	QR7N.1 –↑QA<(600A)									
		BSWNR BS1	QS2N.1 ↑QS<(600A)	B2.28 *B<30T>	QS3N.1 QA·↑	QSBN.1 –·QA↑	QS4N.1 ↑–QA<(600A)	SF2NR.2 -Sf	QEA.12 –QA·↑	QD5.12 –↑QA·	B2.27 *B		QF6.6 ↑QS·		B2.26 *B	QD5.11 ·QA↑–	QEA.11 ↑·QA–	SF2NR.1 Sf-	QF4.10 -QB–↑	QD3.10 –↑QA·	SD3NR.2 -Sd	B2.25 B<30T>	QF2.12 QS–·↑	QD1.6 –·QB↑				
		QF2.11 ↑–·QS	B2.24 B	SD3NR.1 Sd-	QD3.9 ·QA↑–	QF4.9 ↑–QB·	SF4NR.2 -Sf	QEA.10 –QA·↑	QD5.10 –↑QA·	B2.23 *B			QF6.5 ↑QS·		B2.22 *B	QD5.9 ·QA↑–	QEA.9 ↑·QA–	SF4NR.1 Sf-	QF4.8 -QB–↑	QD3.8 –↑QA·	SD5NR.2 -Sd	B2.21 B	QF2.10 QS–·↑	QD1.5 –·QB↑				
		QF2.9 ↑–·QS	B2.20 B	SD5NR.1 Sd-	QD3.7 ·QA↑–	QF4.7 ↑–QB·	SF6NR.2 -Sf	QEA.8 –QA·↑	QD5.8 –↑QA·	B2.19 *B			QF6.4 ↑QS·		B2.18 *B	QD5.7 ·QA↑–	QEA.7 ↑·QA–	SF6NR.1 Sf-	QF4.6 -QB–↑	QD3.6 –↑QA·	SD7NR.2 -Sd	B2.17 B	QF2.8 QS–·↑	QD1.4 –·QB↑				
		QF2.7 ↑–·QS	B2.16 B	SD7NR.1 Sd-	QT1TN.2 ·QA↑–	QT2TN.2 ↑–QB·	SF8TN.2 -Sf	QTATN.2 –QA·↑	QT3TN.2 –↑QA·	B2.15 B	QT4TN.2 -QA–↑	QT5TN ↑QA–·	QT4TN.1 ↑–QA·	B2.14 B	QT3TN.1 ·QA↑–	QTATN.1 ↑·QA–	SF8TN.1 Sf-	QT2TN.1 -QB–↑	QT1TN.1 –↑QA·	SD7TL.2 -Sd	B2.13 B	QF2.6 QS–·↑	QD1.3 –·QB↑				
		QF2.5 ↑–·QS	B2.12 B	SD7TL.1 Sd-	QD3.5 ·QA↑–	QF4.5 ↑–QB·	SF6TL.2 -Sf	QEA.6 –QA·↑	QD5.6 –↑QA·	B2.11 *B			QF6.3 ↑QS·		B2.10 *B	QD5.5 ·QA↑–	QEA.5 ↑·QA–	SF6TL.1 Sf-	QF4.4 -QB–↑	QD3.4 –↑QA·	SD5TL.2 -Sd	B2.9 B	QF2.4 QS–·↑	QD1.2 –·QB↑				
		QF2.3 ↑–·QS	B2.8 B	SD5TL.1 Sd-	QD3.3 ·QA↑–	QF4.3 ↑–QB·	SF4TL.2 -Sf	QEA.4 –QA·↑	QD5.4 –↑QA·	B2.7 *B			QF6.2 ↑QS·		B2.6 *B	QD5.3 ·QA↑–	QEA.3 ↑·QA–	SF4TL.1 Sf-	QF4.2 -QB–↑	QD3.2 –↑QA·	SD3TL.2 -Sd	B2.5 B	QF2.2 QS–·↑	QD1.1 –·QB↑				
		QF2.1 ↑–·QS	B2.4 B<30T>	SD3TL.1 Sd-	QD3.1 ·QA↑–	QF4.1 ↑–QB·	SF2TL.2 -Sf	QEA.2 –QA·↑	QD5.2 –↑QA·	B2.3 *B			QF6.1 ↑QS·		B2.2 *B	QD5.1 ·QA↑–	QEA.1 ↑·QA–	SF2TL.1 Sf-	QS4TL -QA–↑(600A)	QSBTL ↑QA–·	QSATL ↑·QA	B2.1 *B<30T>	QS2TL ↑QS<(600A)	BSWTL BS1				

【凡例】

QA&QB：Tristan-QF

無印 QA&QB：Tristan-QD

B&Q (nA)：特別な励磁電流値のB&Q

B <nT>：特別な補正コイルターン数のB

STATUS for Magnet Installation

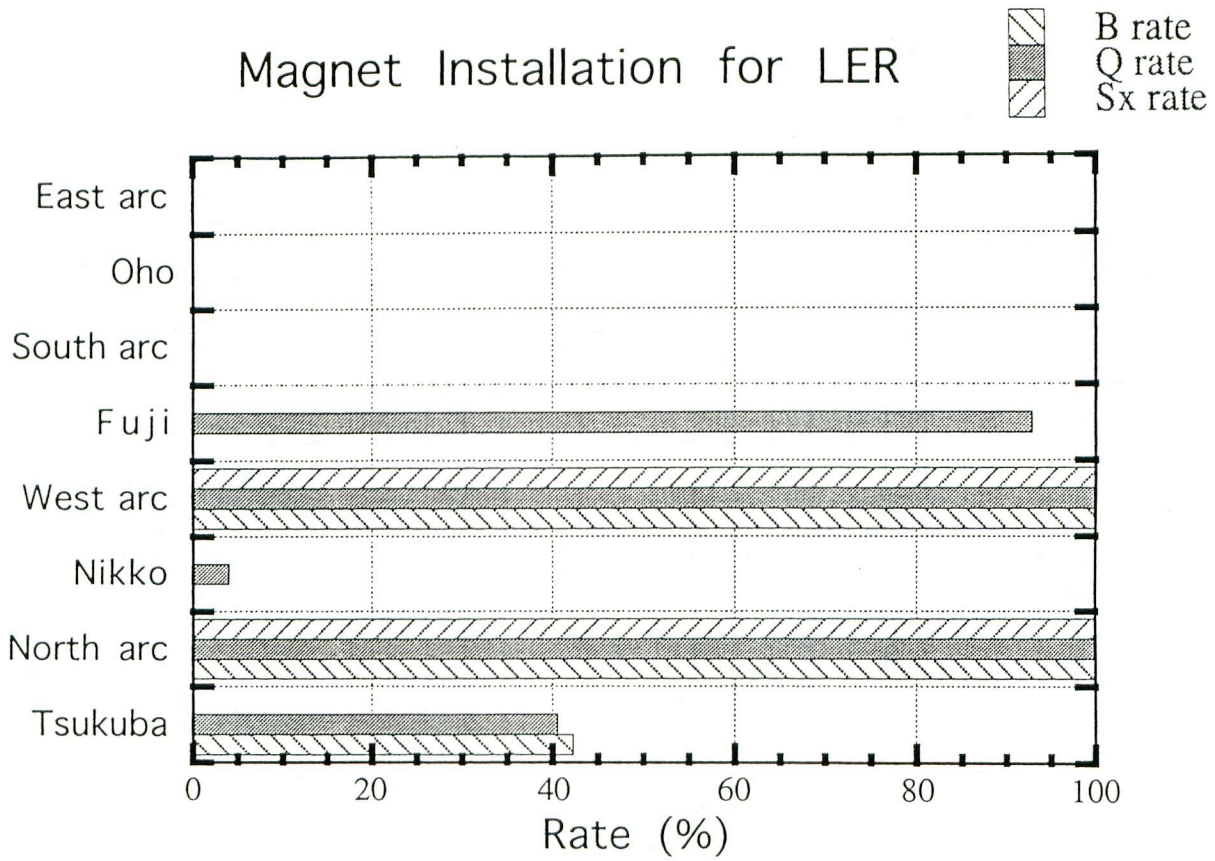
Magnet is installed.

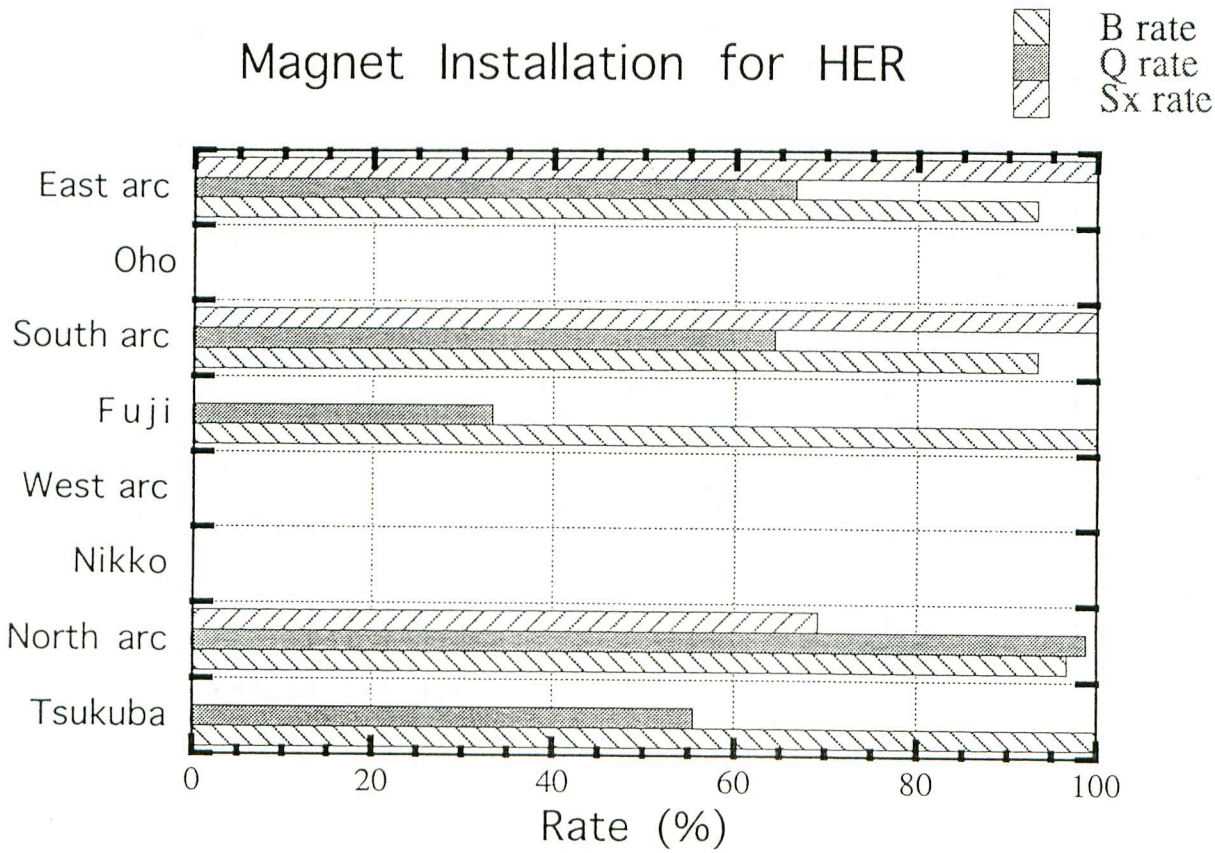
Beam pipe is installed, and first allignment is done.

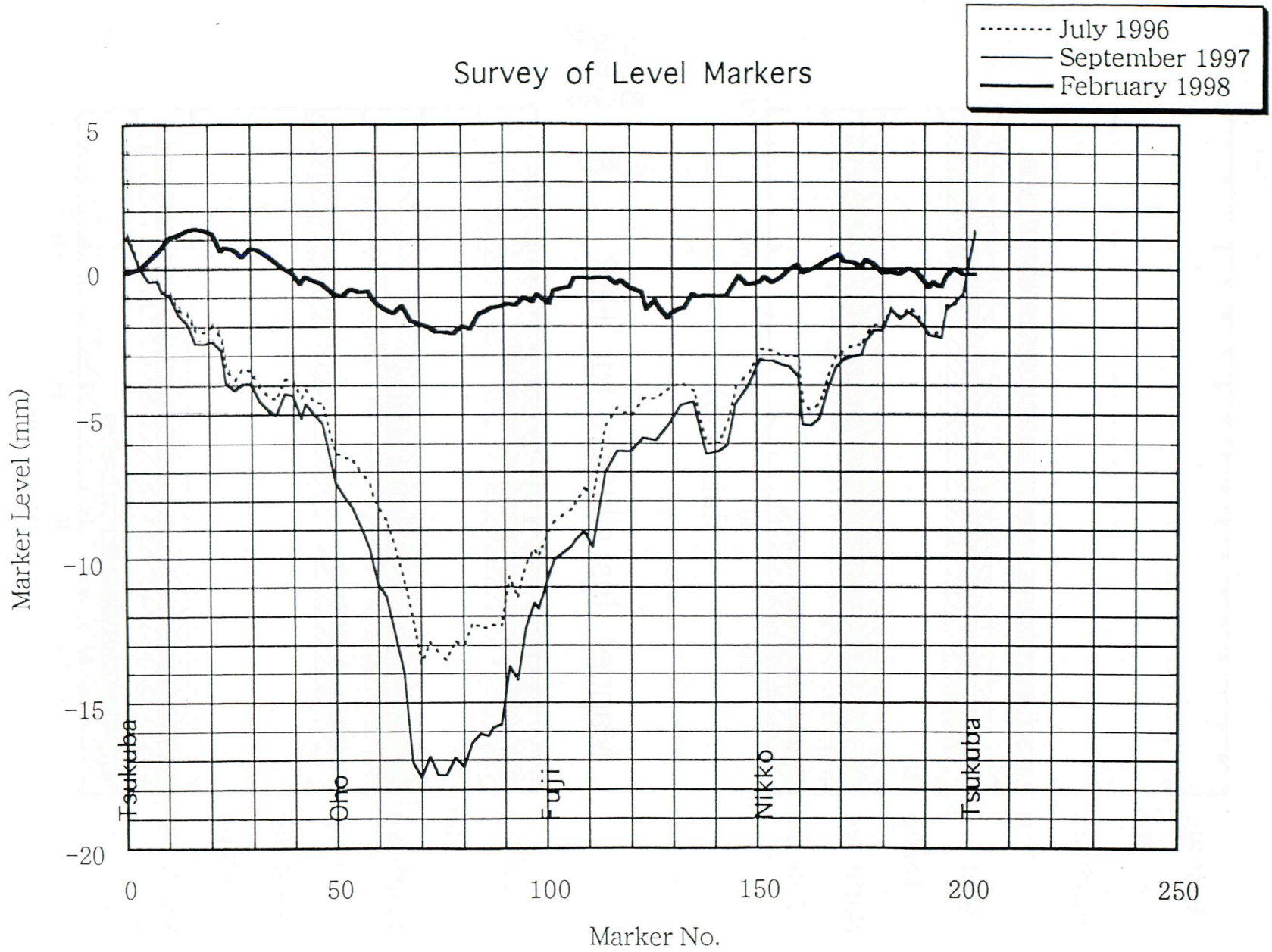
--- HER --- 98.2.19

明かりは電気素子数がリング内側；II 投差

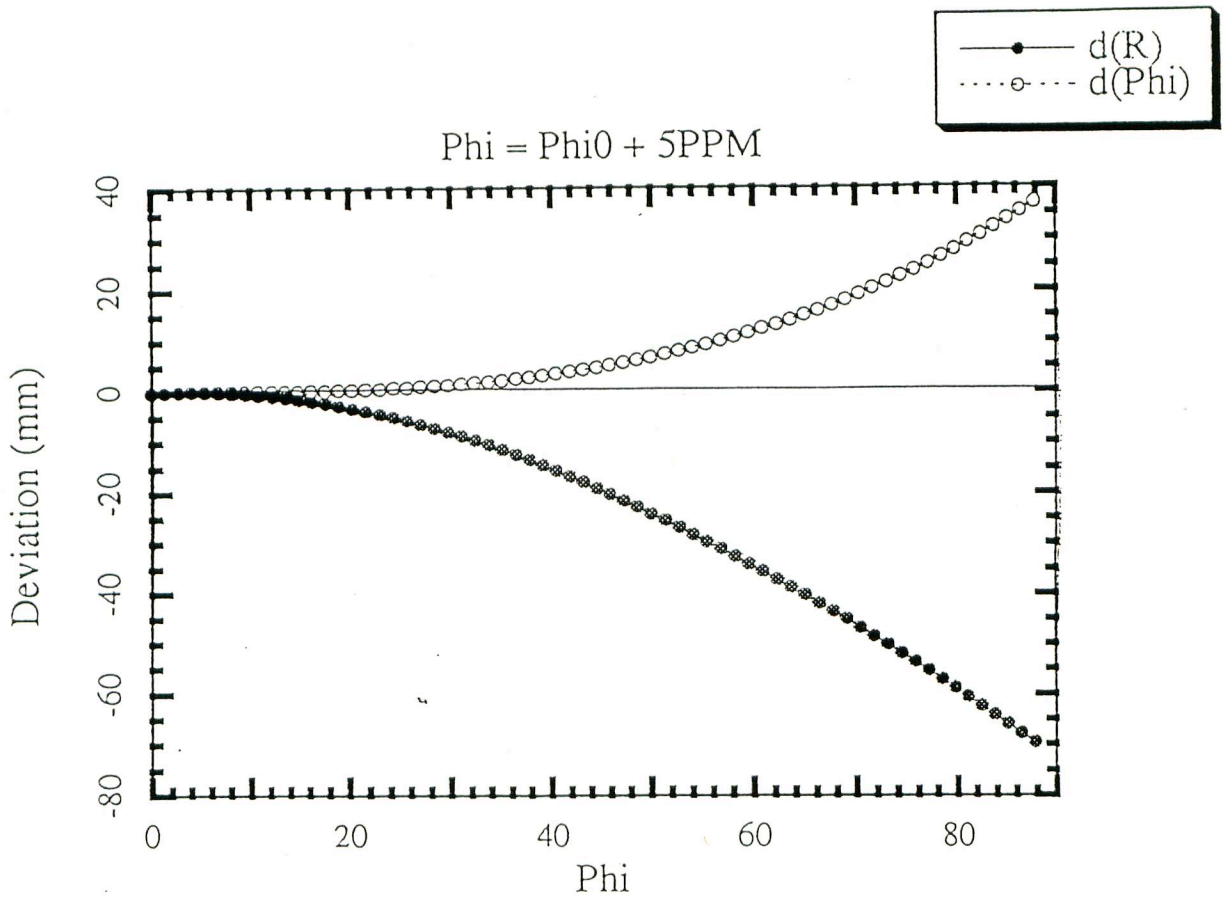
• BPM位置; ↑ StV; ← StH; ‡ StVW; ← StHW; *B Back leg coil

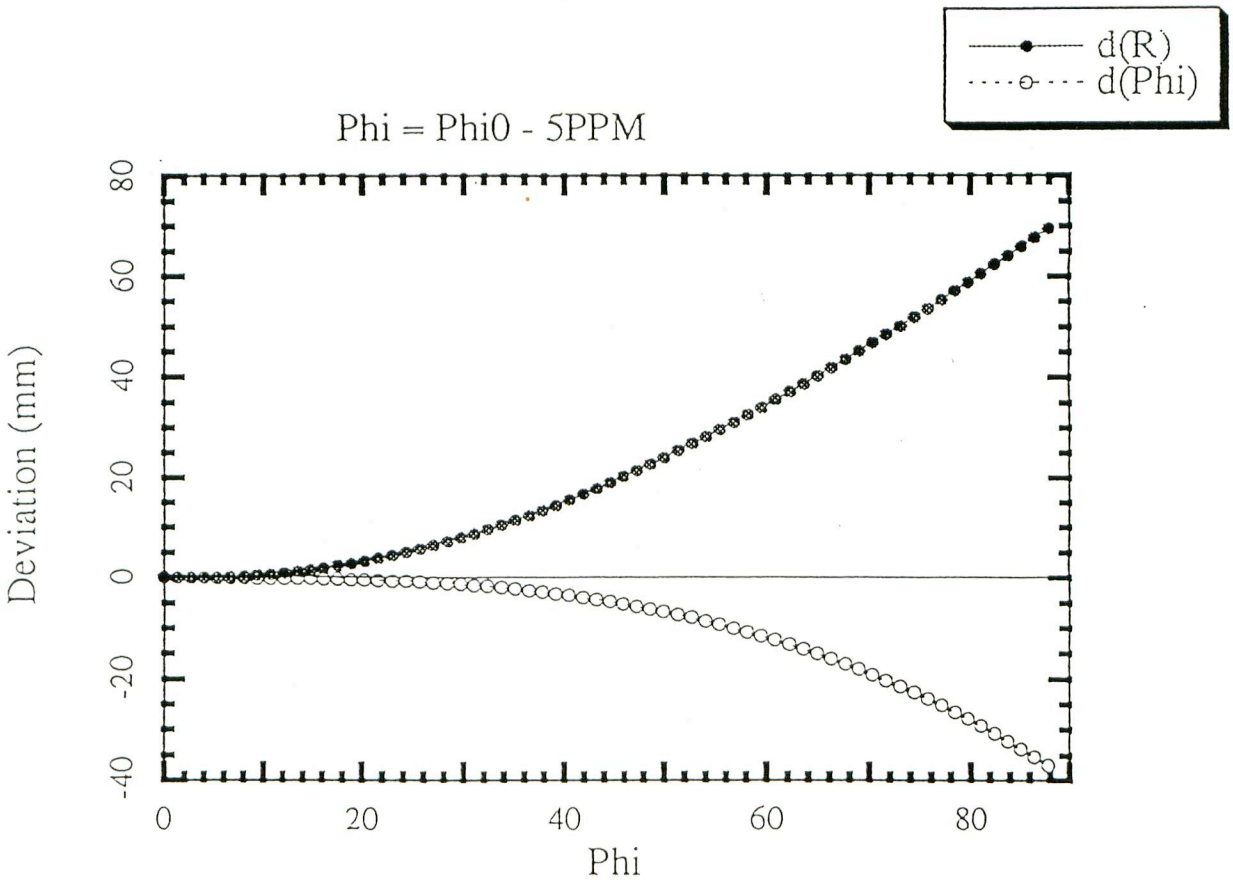

Magnet Installation for LER
B rate
Q rate
Sx rate
East arc
Oho
South arc
Fuji
West arc
Nikko
North arc
Tsukuba
0
20
40
60
80
100
Rate (%)

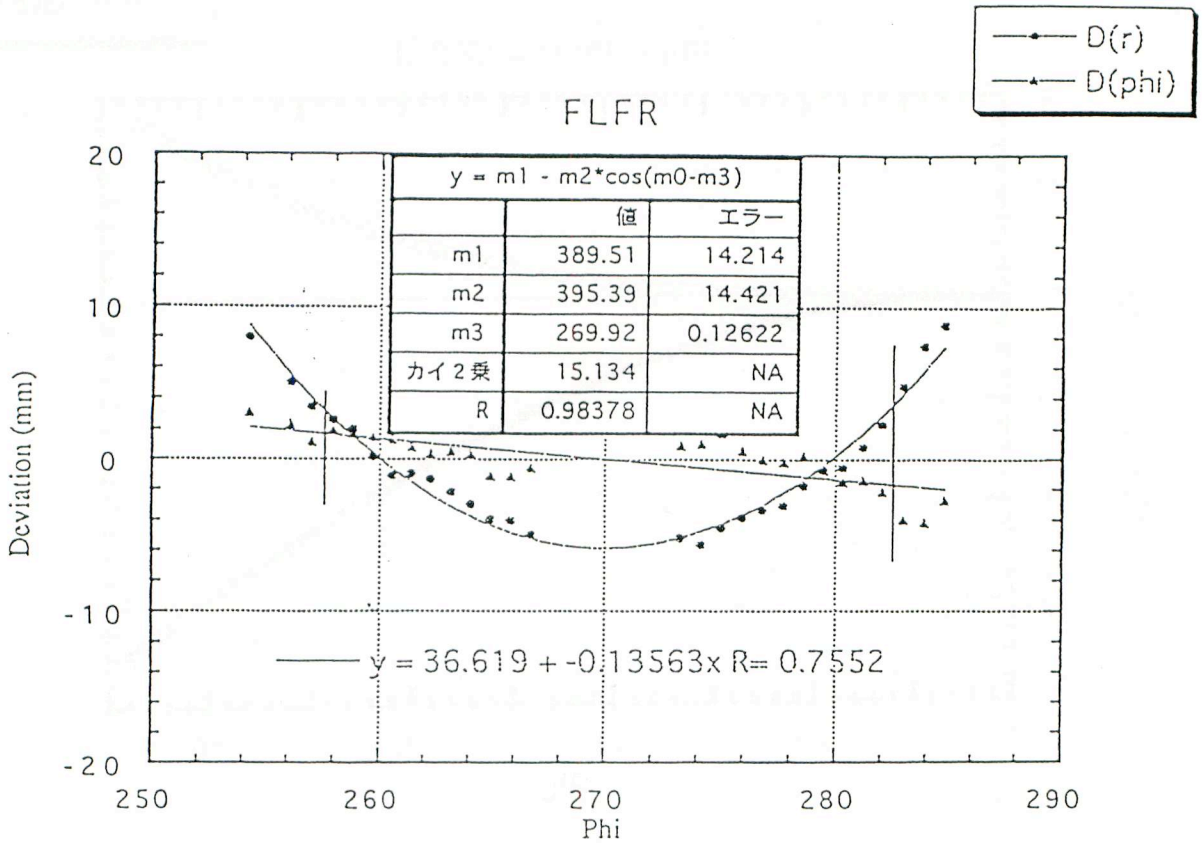

Magnet Installation for HER
B rate
Q rate
Sx rate
East arc
Oho
South arc
Fuji
West arc
Nikko
North arc
Tsukuba
0
20
40
60
80
100
Rate (%)


Survey of Level Markers
July 1996
September 1997
February 1998
Marker Level (mm)
5
0
-5
-10
-15
-20
0
50
100
150
200
250
Marker No.
Tsukuba
Oho
Fuji
Nikko
Tsukuba

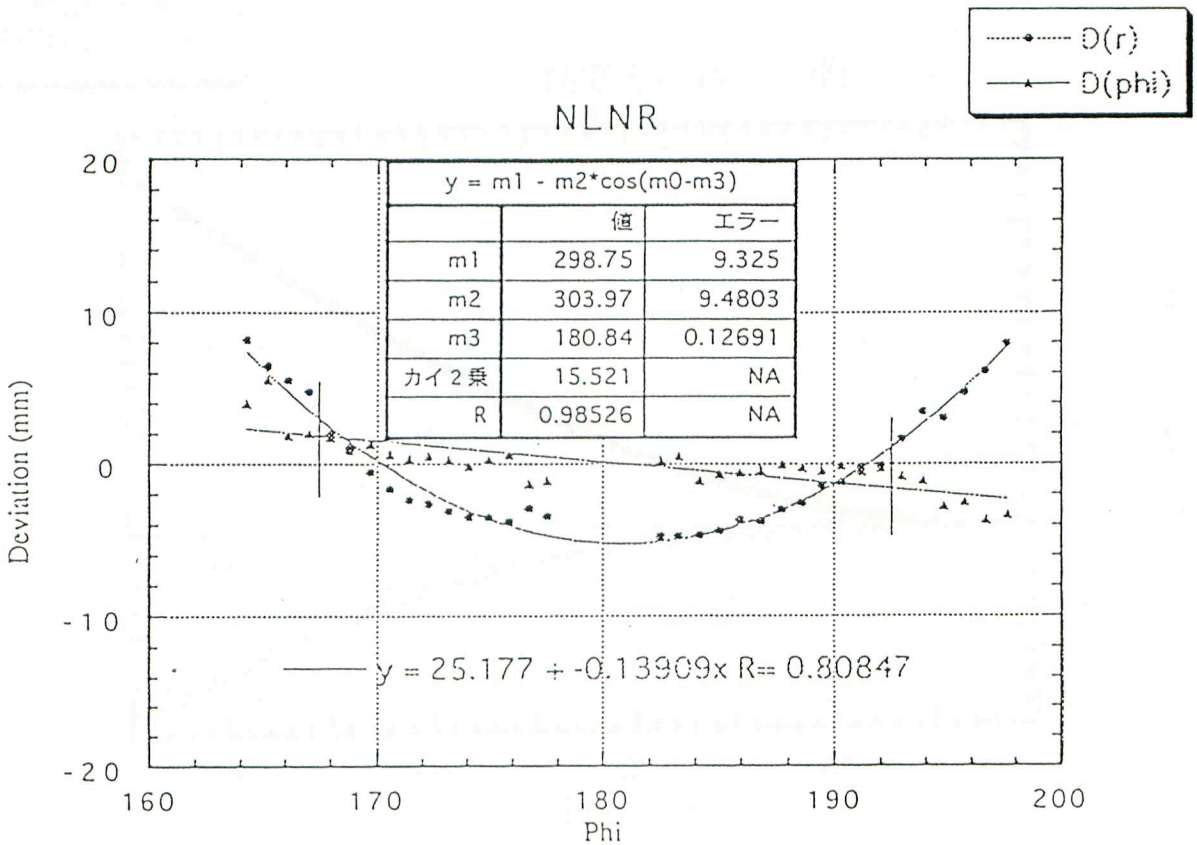
Kaleida.plt


d(R)
d(Phi)
Phi = Phi0 + 5PPM
Deviation (mm)
40
20
0
-20
-40
-60
-80
0
20
40
60
80
Phi

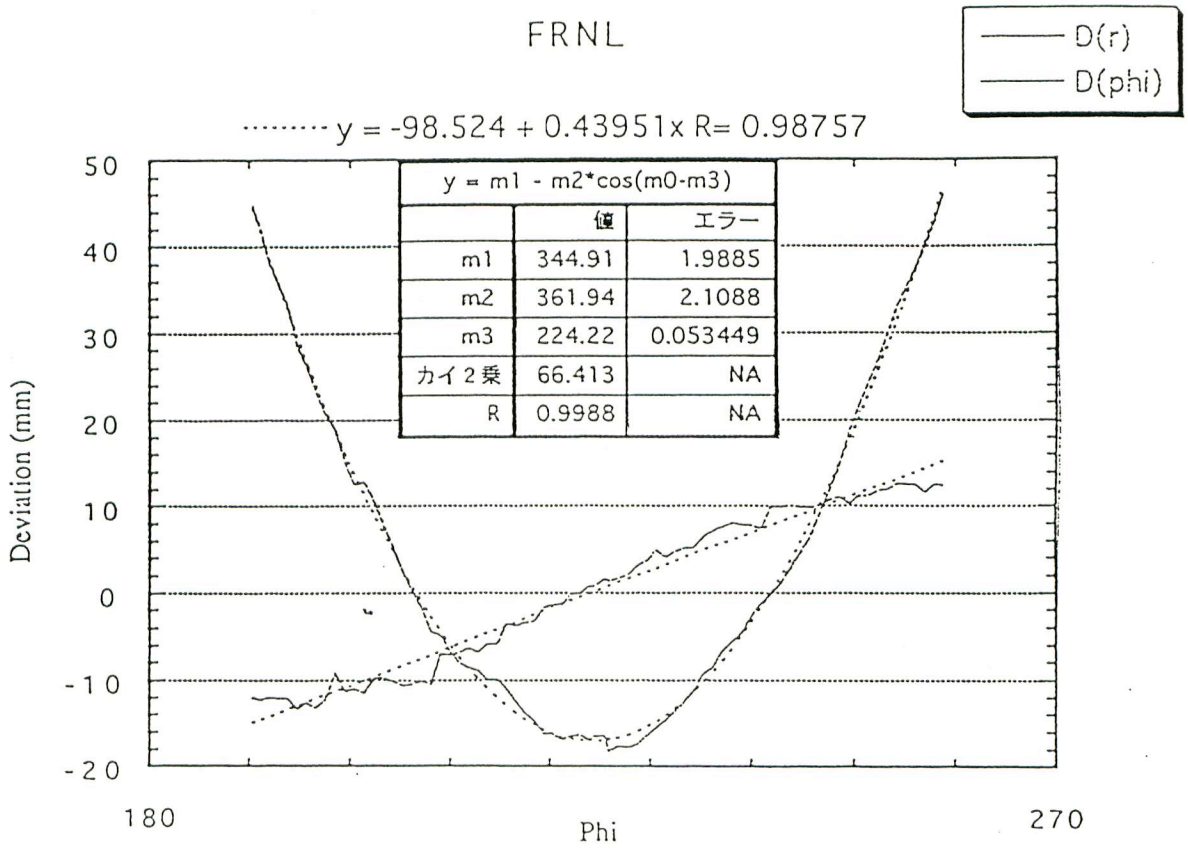

d(R)
d(Phi)
Phi = Phi0 - 5PPM
Deviation (mm)
80
60
40
20
0
-20
-40
0
20
40
60
80
Phi

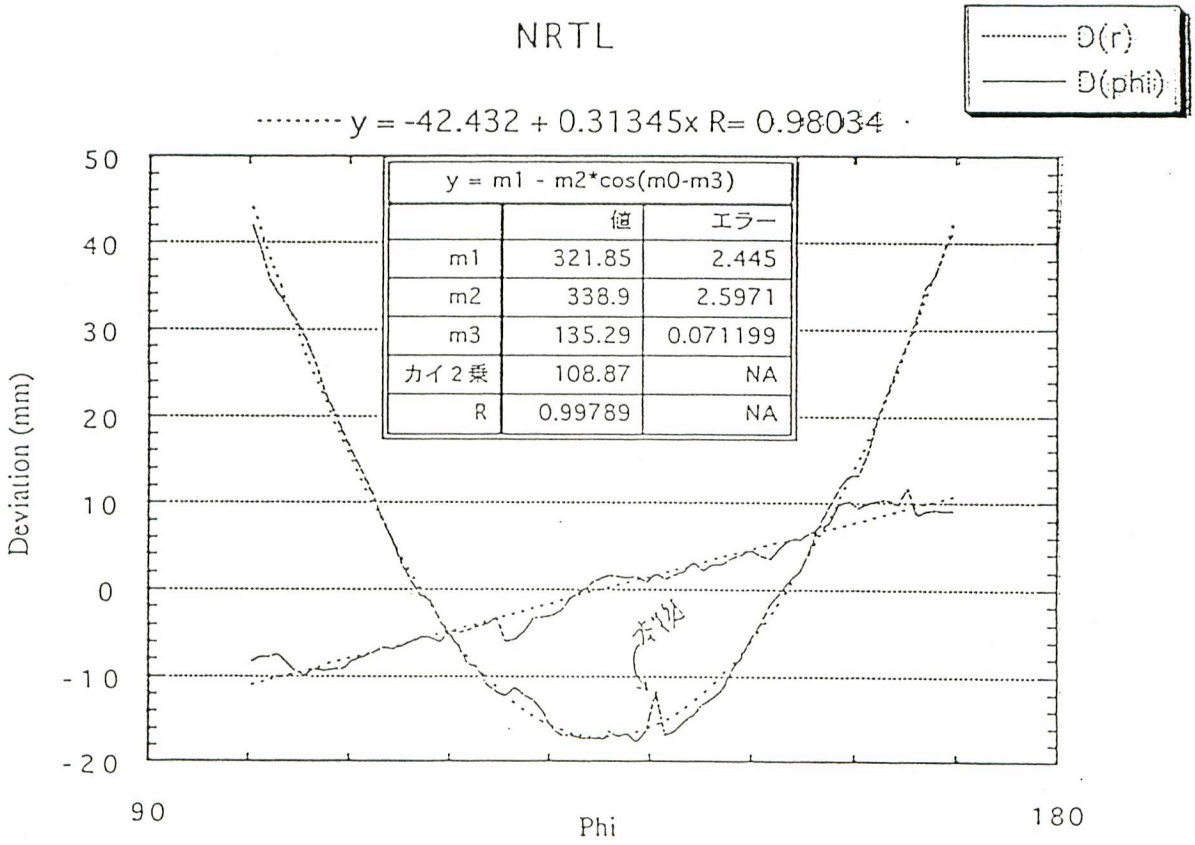


	値	エラー
m1	389.51	14.214
m2	395.39	14.421
m3	269.92	0.12622
カイ２乗	15.134	NA
R	0.98378	NA



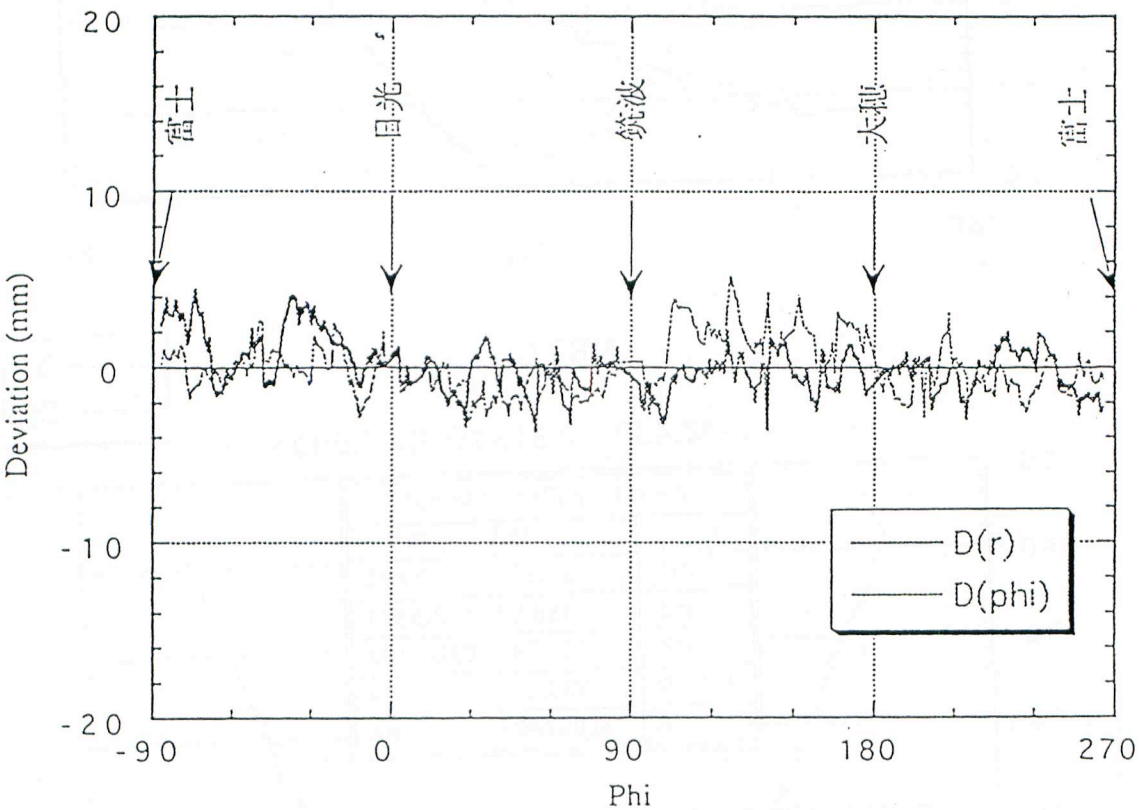
	値	エラー
m1	298.75	9.325
m2	303.97	9.4803
m3	180.84	0.12691
カイ２乗	15.521	NA
R	0.98526	NA

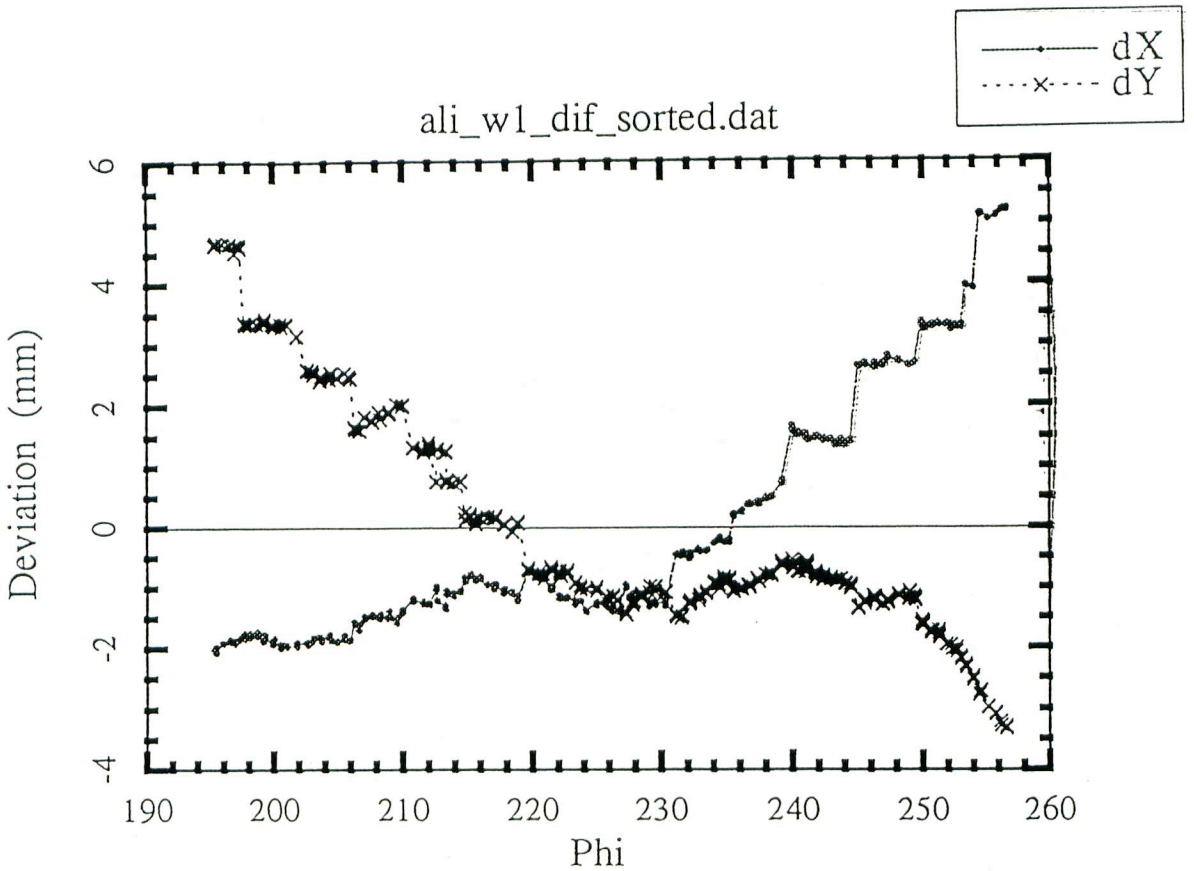

FRNL
D(r)
D(phi)
y = -98.524 + 0.43951x R= 0.98757
y = m1 - m2*cos(m0-m3)
値 エラー
m1 344.91 1.9885
m2 361.94 2.1088
m3 224.22 0.053449
カイ２乗 66.413 NA
R 0.9988 NA
Deviation (mm)
50
40
30
20
10
0
-10
-20
180
Phi
270

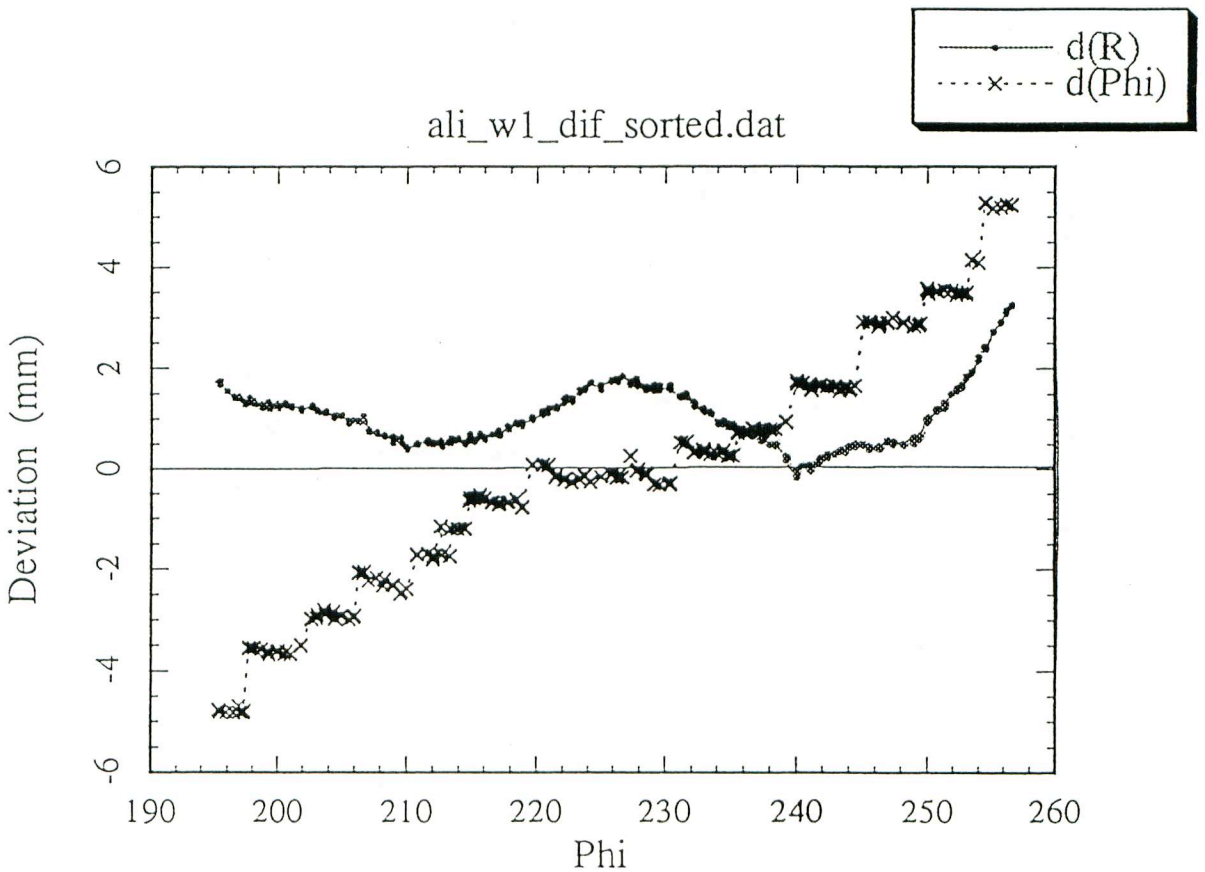

NRTL
D(r)
D(phi)
y = -42.432 + 0.31345x R= 0.98034
y = m1 - m2*cos(m0-m3)
値 エラー
m1 321.85 2.445
m2 338.9 2.5971
m3 135.29 0.071199
カイ２乗 108.87 NA
R 0.99789 NA
Deviation (mm)
50
40
30
20
10
0
-10
-20
90
Phi
180

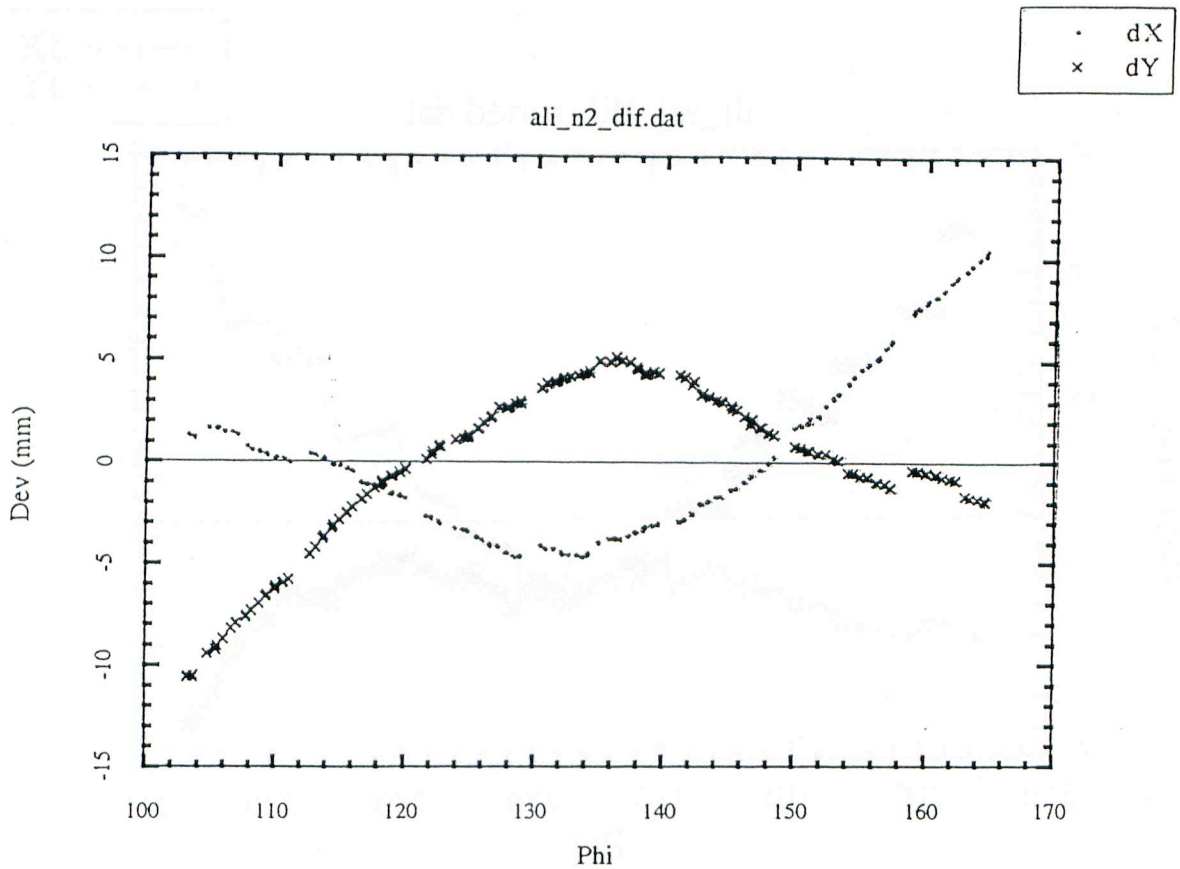
Coord. for TRISTAN-Q Monument

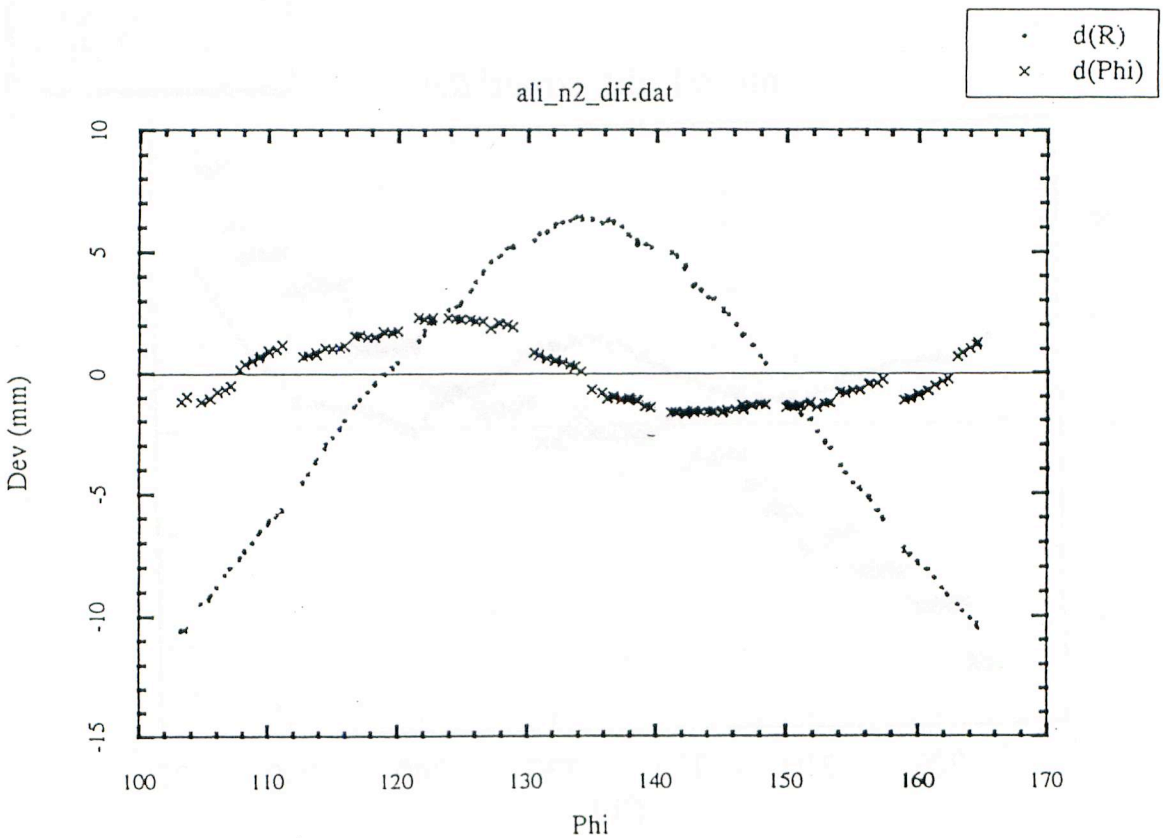
Difference : Measurement - Lattice Coord.




dX
dY
ali_w1_dif_sorted.dat
Deviation (mm)
6
4
2
0
-2
-4
190
200
210
220
230
240
250
260
Phi


d(R)
d(Phi)
ali_w1_dif_sorted.dat
Deviation (mm)
6
4
2
0
-2
-4
-6
190
200
210
220
230
240
250
260
Phi


dX
dY
ali_n2_dif.dat
Dev (mm)
15
10
5
0
-5
-10
-15
100
110
120
130
140
150
160
170
Phi

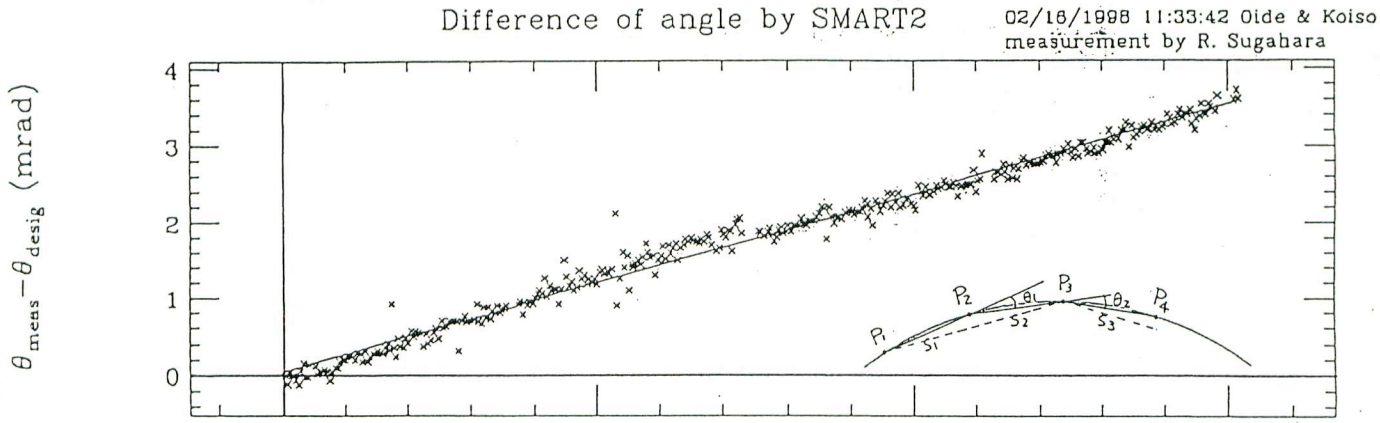

d(R)
d(Phi)
ali_n2_dif.dat
Dev (mm)
10
5
0
-5
-10
-15
100
110
120
130
140
150
160
170
Phi

Analysis of Measuring Results for Monuments

by K. Oide and H. Koiso

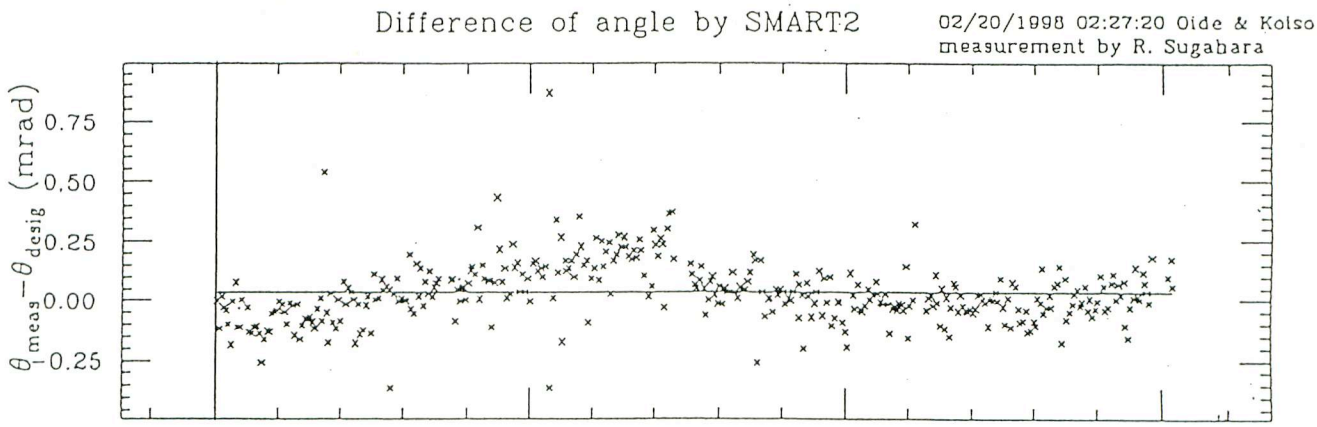
Function =(b+(3.3057036715957E−4 a x)) ChiSquare = 5.79821 Goodness = .49022

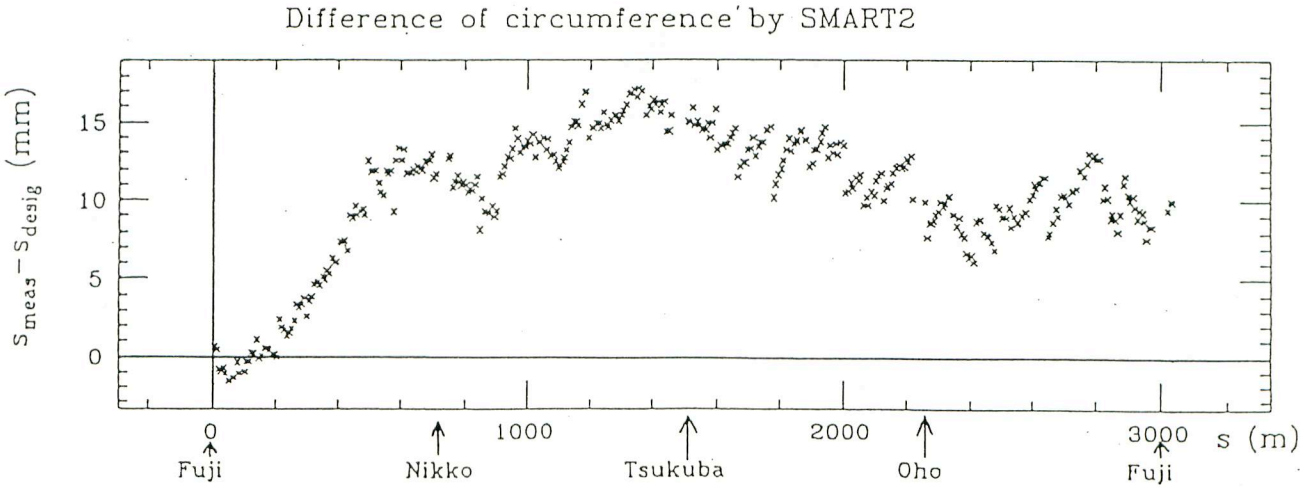
a = 3.52942 +/− .02251 b = .04263 +/− .01293

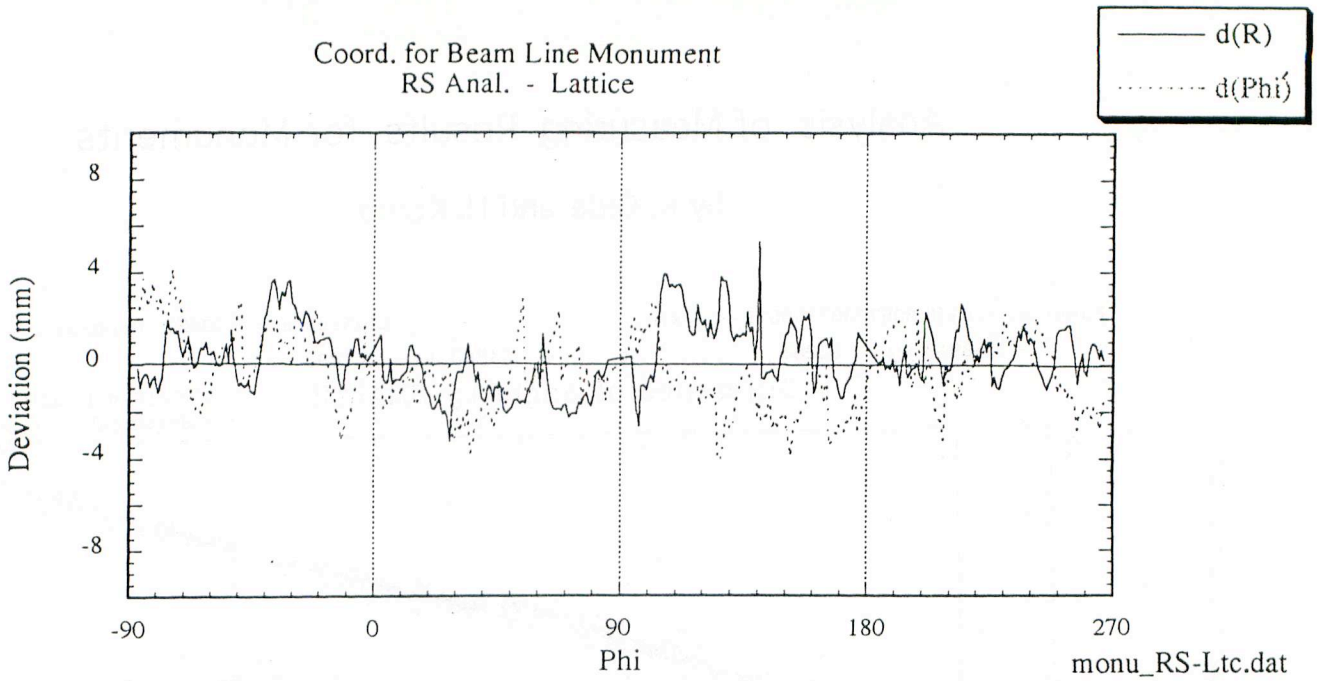


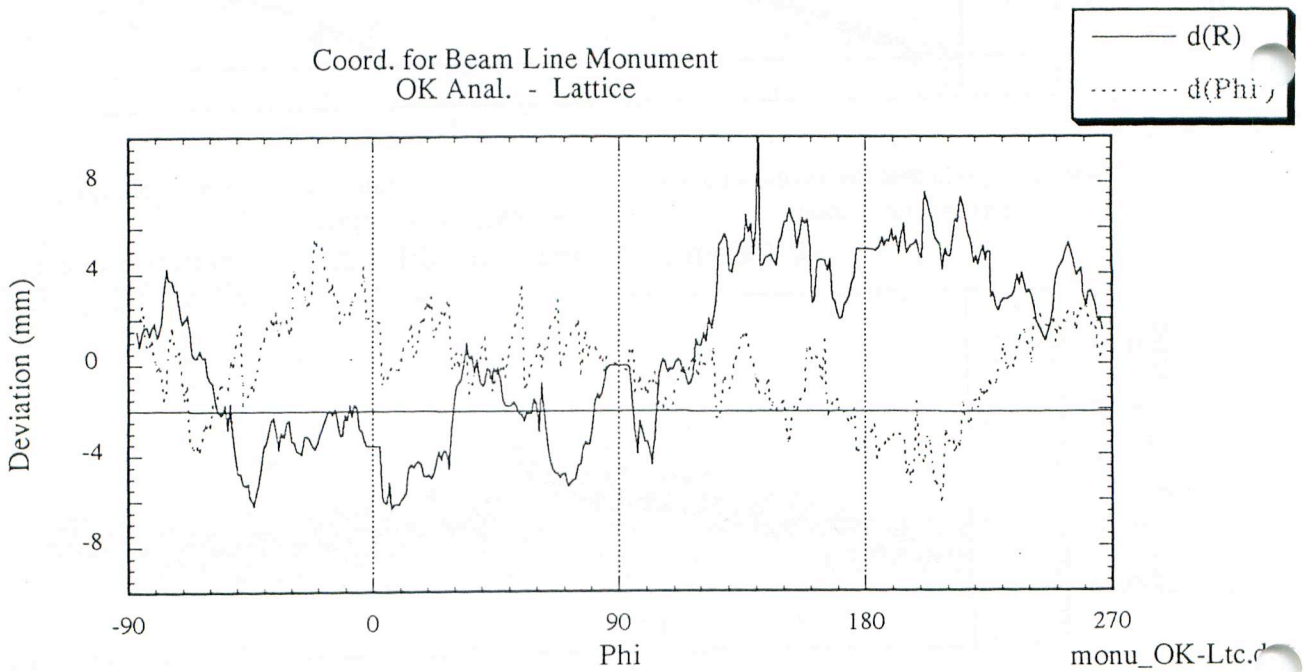
Function =(b+(3.3057036705794E−4 a x)) ChiSquare = 5.84927 Goodness = .49022

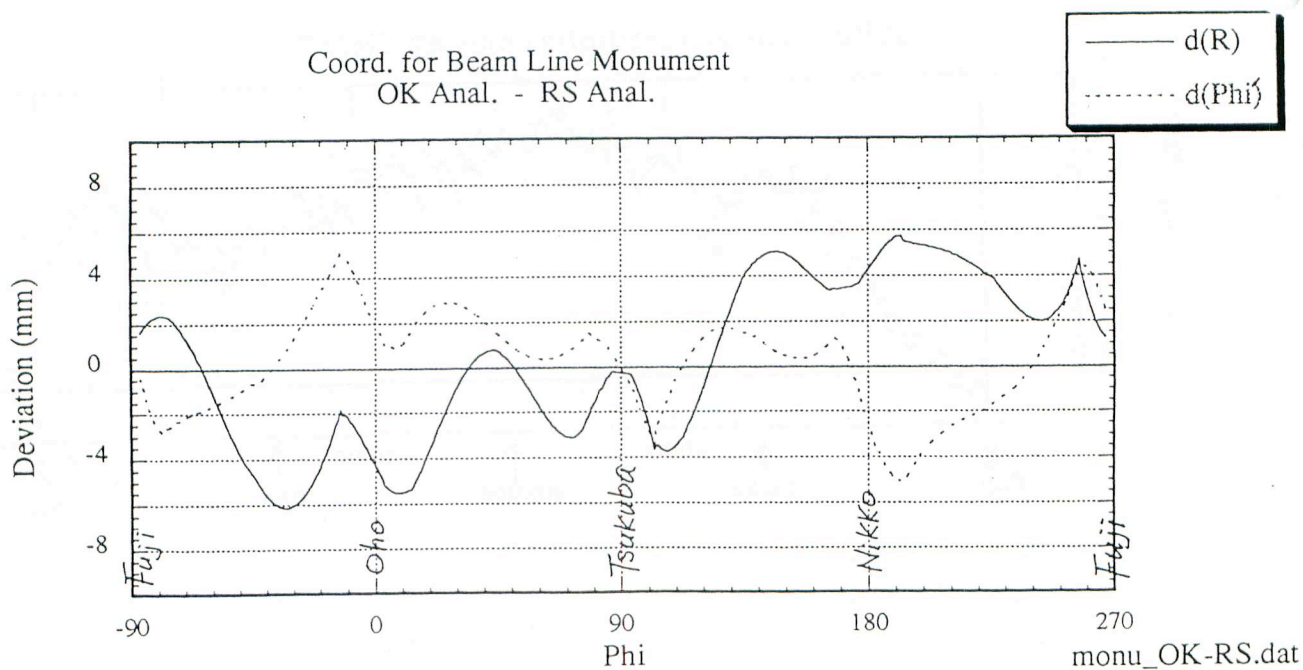
a = 7.14E−5 +/− .02261 b = .03314 +/− .01299

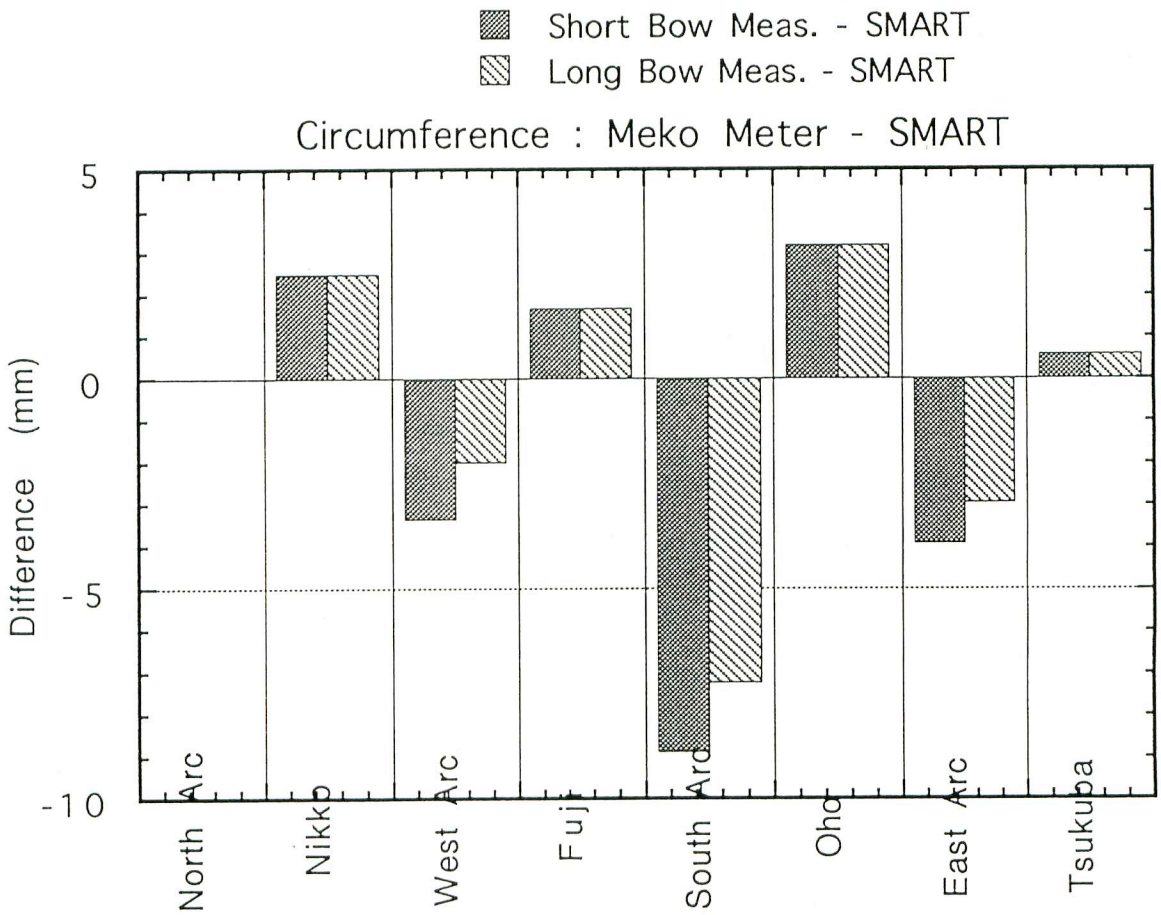





Coord. for Beam Line Monument
RS Anal. - Lattice
d(R)
d(Phi)
Deviation (mm)
8
4
0
-4
-8
-90
0
90
180
270
Phi
monu_RS-Ltc.dat


Coord. for Beam Line Monument
OK Anal. - Lattice
d(R)
d(Phi)
Deviation (mm)
8
4
0
-4
-8
-90
0
90
180
270
Phi
monu_OK-Ltc.d


Coord. for Beam Line Monument
OK Anal. - RS Anal.
d(R)
d(Phi)
Deviation (mm)
8
4
0
-4
-8
Fuji
Oho
Tsukuba
Nikko
Fuji
-90
0
90
180
270
Phi
monu_OK-RS.dat


Short Bow Meas. - SMART
Long Bow Meas. - SMART
Circumference : Meko Meter - SMART
Difference (mm)
5
0
-5
-10
North Arc
Nikko
West Arc
Fuji
South Arc
Oho
East Arc
Tsukuba