

The Performance and Observation of Mobile System TROS-I in China

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The TROS-I (Transportable Ranging Observation System) is the new generation mobile SLR (Satellite Laser Ranging) system in China. The TROS-I was set up and began to track satellite in 2000. Since its outset of test operation, a lot of field observations were made successfully in Urumqi and Lhasa, western China and the observations filled up gap of SLR tracking in Asia. . . A series of field experiments has showed that the single shot precision of the system is about 1 to 3cm and about 10mm for the normal point. The largest ranging distance is 20,000km. The mobile system has achieved outstanding performance and extended remarkably the coverage of the existing SLR network from the eastern China to the western part. The ongoing and incoming observations by TROS-I will enhance greatly the ability of SLR in crustal movement monitoring in China. and contribute to precise orbit determination of scientific satellite missions. For instance, the Chinese satellites and other low orbit satellite such as GRACE and Champ.



The summary of satellites and passes for four sites



Satellite	Beijing 7343 51 days	Urumqi 73558401 44 days	Lhasa 7356 150day	Urumqi 73558402 173 days	Total Passes
LAGEOS-1,2	42	44	120	138	344
GPS35,36	-	-	-	6	6
GRACE-A,B	-	-	-	48	48
ENVISAT	-	-	-	55	55
GLONASS	44	2	14	27	87
ETALON	13	1	9	20	43
ERS-2	17	16	2	74	109
GFO	15	3	5	75	98
CHAMP	8	1	0	15	24
TOPEX,JASO	53	10	27	233	323
BE-C	43	2	10	82	137
AJISAI	60	0	32	133	225
STARLETT	22	0	7	107	136
STELLA	23	3	14	6	46
WESTPAC	4	3	0	-	7
Passes	344	85	244	1019	1688

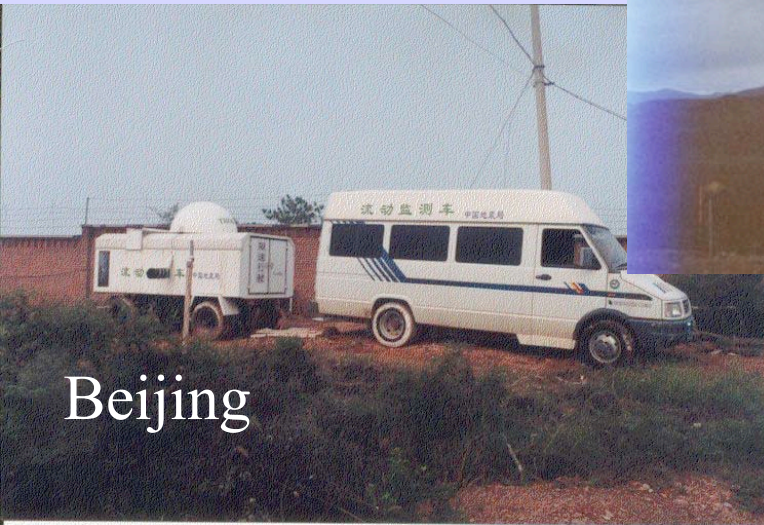
The Observation of TROS-I



Jiufeng



Urumqi



Beijing



Lhasa