Solution Rankings for the 8^{th} Global Trajectory Optimisation Competition

– VLBI Mapping of Radio Sources –

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Rank	Team #	Team Name	J (km)	Number of Sources
1	14	ACT-ISAS	146332116.9	17
2	3	Tsinghua	128286317.0	22
3	22	PolitoUniromaTAS	111533739.2	18
4	10	StateKeyLab	105402381.0	14
5	24	AMA-LaRC	82012271.5 ^{p}	13
6	2	CU	76301536.2	16
7	15	DLR	74973406.1	11
8	18	AerospaceCorp	61032221.5 ^{p}	26
9	13	GlasgowJena+	59682715.4	27
10	8	CAS	49272713.8 ^{p,j}	11
11	29	PolimiUPM	35441068.2 ^{v}	46
12	6	Nanjing	23129442.8 ^{p}	16
13	28	Olympio	11913597.4 ^{p,V}	42
14	11	BeijingACC	1927847.8 ^{V,J}	20
15	31	RPI	302220.8	28
16	23	WVU	255469.4 $^{+}$	21
17	4	Brazil	82056.8 ^{v}	15
Incomplete submissions, not ranked				
-	16	CalPoly	683.7	39

^{p} *Minor corrections to the P weights.*

^{v} *Minor violations of dynamics and constraints.*

^{V} *Moderate violations of dynamics and constraints.*

^{j} *Moderate downward revision of J.*

^{J} *Significant downward revision of J. Smallest side used instead of smallest altitude.*

$^{+}$ *J revised upwards — reported h values were too low.*

The values shown in the tables were computed during verification based on the data in the teams' submission files and any required corrections or adjustments, as noted above. Surprisingly, the sometimes large corrections to the cost function, J, did not result in a change in the relative ranks of the teams. There was no need to invoke the secondary objective, namely the number of unique sources observed.

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Rank	Team #	J (km)	Num Obs[a]	Num Src[a]	NSp1[b]	NSp11	NSp13	NSp111	NSp113	NSp131	NSp136
1	14	146332116.9	45	17	3	0	0	0	0	0	14
2	3	128286317.0	50	22	6	1	3	0	0	0	12
3	22	111533739.2	54	18	0	0	0	0	0	0	18
4	10	105402381.0	36	14	2	0	2	0	2	0	8
5	24	82012271.5	36	13	1	1	0	2	1	1	7
6	2	76301536.2	32	16	6	0	4	0	0	0	6
7	15	74973406.1	31	11	0	1	1	0	0	0	9
8	18	61032221.5	48	26	12	0	6	0	1	1	6
9	13	59682715.4	40	27	14	0	13	0	0	0	0
10	8	49272713.8	29	11	0	0	4	0	3	0	4
11	29	35441068.2	50	46	42	0	4	0	0	0	0
12	6	23129442.8	31	16	8	0	1	2	0	3	2
13	28	11913597.4	52	42	34	3	3	1	1	0	0
14	11	1927847.8	22	20	18	1	1	0	0	0	0
15	31	302220.8	62	28	7	8	0	13	0	0	0
16	23	255469.4	21	21	21	0	0	0	0	0	0
17	4	82056.8	27	15	8	2	0	5	0	0	0
Incomplete submissions, not ranked											
-	16	1.0	68	39	21	7	0	11	0	0	0

[a] *Number of valid observations made and number of unique sources observed.*

[b] *NSp1 = number of sources validly observed exactly once (so P =1).*

NSp11 = number of sources validly observed exactly twice with $P = 1$ both times.

NSp13 = number of sources validly observed exactly twice, first with $P = 1$ followed by $P = 3$.

NSp111 = number of sources validly observed exactly thrice with $P = 1$ all three times.

NSp113 = number of sources validly observed exactly thrice, first with $P = 1$, then 1 again, then 3.

NSp131 = number of sources validly observed exactly thrice, first with $P = 1$, then 3, then 1.

NSp136 = number of sources validly observed exactly thrice, first with $P = 1$, then 3, then 6.