

Method		Runtime [ms] mean	Position Errors [AU]					Log GT likelihood						Log GT Position likelihood						
			mean	25%	50%	75%	95%	99%	mean	1%	5%	25%	50%	75%	mean	1%	5%	25%	50%	75%
I	our STF, oracle a_k, b_k	0.1358	1.767	1.213	1.651	2.193	3.176	4.039	−5.378	−11.29	−9.101	−6.547	−5.119	−3.941	−1.243	−4.093	−2.878	−1.686	−1.106	−0.6410
II	our STF	0.2512	2.013	1.392	1.880	2.488	3.606	4.617	−6.045	−11.22	−9.540	−7.354	−5.934	−4.615	−1.923	−5.694	−4.050	−2.384	−1.671	−1.191
III	SSMKF-log-S Huang	1.938	2.060	1.435	1.930	2.544	3.662	4.661	−6.176	−13.71	−10.62	−7.439	−5.804	−4.504	−2.069	−7.119	−4.426	−2.450	−1.746	−1.284
IV	RKF Chang	0.1703	2.072	1.442	1.939	2.556	3.689	4.703	−6.194	−13.45	−10.28	−7.249	−5.783	−4.683	−2.266	−7.233	−4.508	−2.580	−1.931	−1.540
V	VBF Agamennoni	0.3000	3.022	1.496	2.014	2.656	3.850	5.001	−21.47	−16.71	−11.76	−7.827	−6.052	−4.769	$−4.04 \cdot 10^2$	−7.981	−4.757	−2.583	−1.861	−1.463
VI	gated Kalman Filter	0.06743	2.261	1.533	2.073	2.752	4.068	5.377	−6.990	−17.98	−12.53	−8.174	−6.282	−4.938	−3.213	−9.474	−5.430	−2.817	−1.995	−1.546
VII	ARKF Chang	0.3673	3.792	1.562	2.180	3.137	8.586	30.09	−13.72	−63.51	−18.12	−8.735	−6.582	−5.161	−15.24	−62.18	−9.862	−3.141	−2.179	−1.676
VIII	VBF Särkkä	0.3682	2.470	1.663	2.266	3.044	4.589	6.177	−7.013	−12.51	−10.28	−7.926	−6.728	−5.817	−4.073	−15.72	−8.634	−4.449	−3.232	−2.630
IX	STF Roth	0.09934	8.197	3.485	4.925	6.901	12.24	40.34	−21.37	−40.47	−35.21	−26.44	−20.70	−15.59	−3.512	−17.60	−10.84	−6.469	−3.400	−0.4240