Table A6. Complete results from Rung 0-lower is better (except column labeled f where higher is better).
Preprocessing: 1) Christiano-Fitzgerald filter, Trend-(CF-Trend); 2) Christiano-Fitzgerald filter, Cycle-(CF-Cycle); 3) Christiano-Fitzgerald filter (CF-Trend/Cycle), combines two components: Trend-(CF-Trend) and Cycle-(CF-Cycle); 4) Differencing; 5) Simple Net Return (SNR); 6) Wavelet Denoising (WD); 7) Raw Data (preprocessing technique was not applied). Time delay estimation methods from COSMOGRAIL: a) D3 Curve Shifting (D3CS); b) Free-Knot Spline Fit (SPL); c) Spline Difference (SDI). Time delay estimation methods employed in this research: I) Dispersion Spectra (DS_1^2); II) Discrete Correlation Function (DCF); III) Locally Normalized Discrete Correlation Function (LNDCF); IV) Interpolated Cross-Correlation Function (ICCF). Selection techniques for Cross-correlation methods: A) Mean (proposed alternative); B) Max, typical selection procedure of estimation.

Methods	Preprocessing	f	χ^2	P	A	MAD	MSE	$RMSE$	$MAPE$	uncertainty	average search length
D3CS		0.819	0.46	0.32	0.11	2.76	31.00	5.57	11.42	6.95	
SDI		0.778	1.00	0.11	0.07	1.52	10.27	3.21	6.82	2.48	
SPL		0.807	1.01	**0.09**	**0.04**	**1.21**	15.15	3.89	**4.34**	1.88	
DS_1^2	CF-Trend	1.0	3.24	0.37	0.14	2.67	12.22	3.50	13.47	8.67	29.61
DS_1^2	CF-Cycle	1.0	5.41	0.28	0.11	2.21	10.11	3.18	10.57	5.91	20.53
DS_1^2	CF-Trend/Cycle	1.0	1.38	0.32	0.09	1.84	6.09	2.47	8.60	7.29	25.07
DS_1^2	Differencing	1.0	4.42	0.34	0.11	2.32	10.34	3.22	10.43	7.75	20.98
DS_1^2	SNR	1.0	4.98	0.31	0.10	2.21	9.75	3.12	10.26	6.46	21.47
DS_1^2	WD	1.0	4.73	0.30	0.12	2.41	10.79	3.29	11.93	6.63	30.27
DS_1^2	Raw Data	1.0	4.46	0.32	0.10	2.21	9.49	3.08	10.06	6.97	29.30
DCF-Max	Differencing	0.989	1.40	0.41	0.17	4.32	30.42	5.52	17.49	12.60	52.11
DCF-Mean	Differencing	0.989	1.33	0.41	0.13	2.71	12.83	3.58	12.77	12.60	43.70
DCF-Max	Raw Data	0.995	1.14	0.49	0.21	5.12	37.00	6.08	20.97	14.25	52.36
DCF-Mean	Raw Data	0.995	1.02	0.49	0.13	2.66	11.43	3.38	12.66	14.25	47.52
DCF-Max	WD	0.995	1.83	0.48	0.24	5.50	40.58	6.37	24.11	14.34	51.97
DCF-Mean	WD	0.995	1.67	0.48	0.15	2.96	13.52	3.68	15.19	14.34	42.55
DCF-Max	SNR	0.997	2.10	0.46	0.23	4.98	35.27	5.94	22.58	13.73	52.63
DCF-Mean	SNR	0.997	1.98	0.46	0.15	2.86	12.91	3.59	15.10	13.73	41.13
DCF-Max	CF-Trend	0.994	1.74	0.49	0.23	5.51	40.88	6.39	23.36	14.55	52.64
DCF-Mean	CF-Trend	0.994	1.60	0.49	0.15	2.94	13.36	3.65	14.88	14.55	42.65
DCF-Max	CF-Cycle	0.996	1.51	0.46	0.22	4.85	34.32	5.86	21.59	13.43	51.87
DCF-Mean	CF-Cycle	0.996	1.39	0.46	0.14	2.86	12.79	3.58	14.32	13.43	40.50
DCF-Max	CF-Trend/Cycle	0.999	0.60	0.47	0.17	3.63	20.21	4.50	17.03	13.93	52.22
DCF-Mean	CF-Trend/Cycle	0.999	0.53	0.47	0.12	2.21	7.69	2.77	11.96	13.93	41.54
LNDCF-Max	Differencing	0.979	0.62	0.27	0.09	2.17	12.77	3.57	9.44	8.60	53.23
LNDCF-Mean	Differencing	0.979	0.57	0.27	0.07	1.48	5.40	2.32	6.63	8.60	52.04
LNDCF-Max	Raw Data	0.997	0.99	0.32	0.12	2.48	14.22	3.77	11.87	10.04	57.04
LNDCF-Mean	Raw Data	0.997	0.91	0.32	0.08	1.57	5.49	2.34	8.13	10.04	58.26
ICCF-Max	Differencing	0.996	7.95	0.24	0.24	5.39	39.16	6.26	23.74	6.95	52.61
ICCF-Mean	Differencing	0.996	7.79	0.24	0.20	4.33	26.27	5.13	19.98	6.95	39.31
ICCF-Max	Raw Data	0.994	4.20	0.30	0.29	6.95	55.70	7.46	29.33	7.83	75.52
ICCF-Mean	Raw Data	0.994	3.70	0.30	0.17	3.88	18.96	4.35	17.08	7.83	47.49
MIX-DS_1^2 with CF-Trend/Cycle and LNDCF-Mean with Differencing		1.0	**0.17**	0.30	0.059	1.30	**3.60**	**1.90**	5.89	7.95	38.18