

TIC 198153540 STATISTICAL VALIDATION REPORT

This document is created by the SHERLOCK statistical validation report generator (<https://github.com/franpoz/SHERLOCK>) and focuses on the target star TIC 198153540.

RA (deg)	Dec (deg)	V (mag)	J (mag)	H (mag)	K (mag)
14:04:22.59	46:31:09.84	11.36	9.8	9.36	9.24

Table 1: The proposed target parameters.

T0 (d)	Period (d)	Duration (h)	Depth (ppt)
1747.0102	19.1234	2.23	0.415

Table 2: The candidate parameters.

TIC 198153540 Folded Curve with P=19.12d and T0=1747.01. SNR=12.75

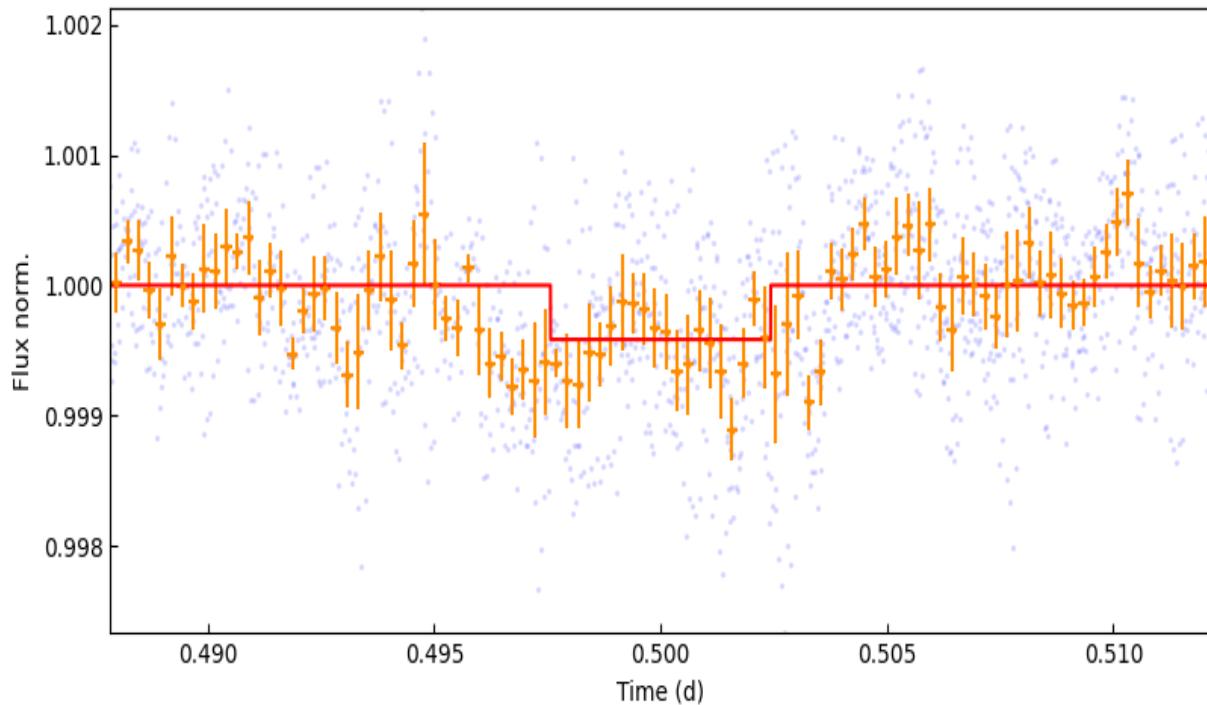


Figure 1: Folded curve of the found candidate.

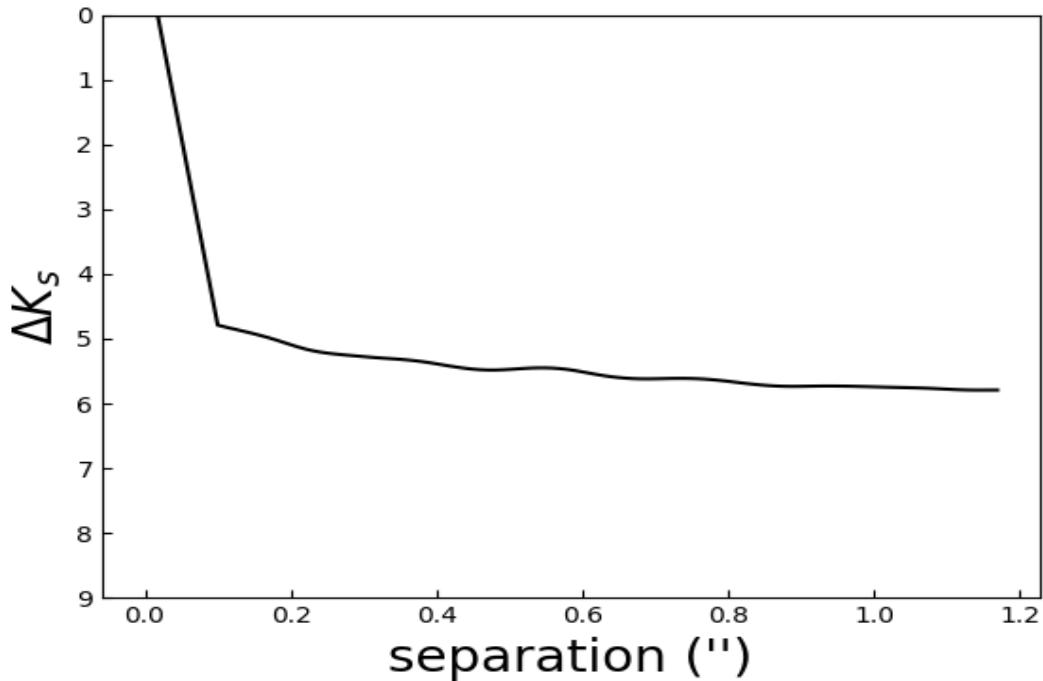


Figure 2: Contrast curve for target.

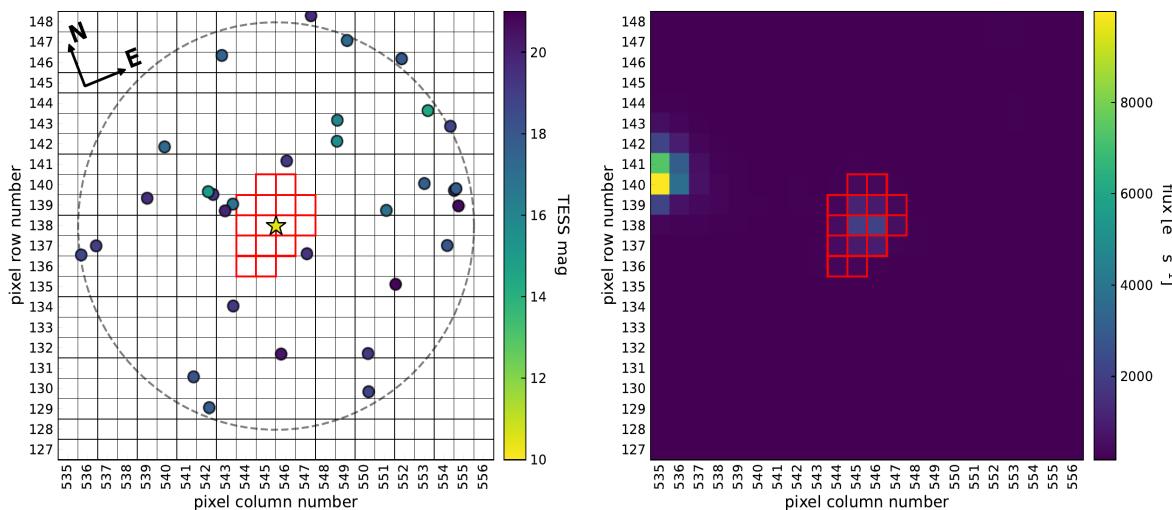


Figure 3: Nearby stars for target and its aperture

ID	scenario	M_s	R_s	P_orb	inc	b	ecc	w	R_p	M_EB	R_EB	prob
198153540	TP	0.87	0.78	19.12	89.02	0.25	0.61	126.16	1.89	0.0	0.0	0.875281
198153540	EB	0.87	0.78	19.12	69.41	1.76	0.4	68.28	0.0	0.78	0.77	3e-06
198153540	EBx2P	0.87	0.78	38.25	88.92	0.64	0.77	182.7	0.0	0.86	0.78	2.4e-05
198153540	PTP	0.87	0.78	19.12	88.95	0.25	0.64	127.28	2.12	0.0	0.0	0.050077
198153540	PEB	0.87	0.78	19.12	76.46	1.87	0.24	102.34	0.0	0.77	0.78	0.0
198153540	PEBx2P	0.87	0.78	38.25	89.05	0.29	0.85	171.17	0.0	0.86	0.78	4e-06
198153540	STP	0.87	0.78	19.12	89.28	0.34	0.25	207.1	2.69	0.0	0.0	0.001399
198153540	SEB	0.2	0.22	19.12	89.57	0.17	0.81	174.86	0.0	0.04	0.1	0.000107
198153540	SEBx2P	0.24	0.26	38.25	89.56	0.37	0.77	169.26	0.0	0.24	0.26	5.7e-05
198153540	DTP	0.87	0.78	19.12	89.03	0.29	0.54	124.68	1.92	0.0	0.0	0.068234



SHERLOCK Statistical Validation Report: TIC 198153540

Mon, 23 January 2023, 09:09:14

198153540	DEB	0.87	0.78	19.12	64.02	1.84	0.43	73.22	0.0	0.77	0.77	0.0
198153540	DEBx2P	0.87	0.78	38.25	88.86	0.76	0.73	183.55	0.0	0.84	0.78	1e-06
198153540	BTP	0.94	0.89	19.12	89.61	0.19	0.17	90.62	11.36	0.0	0.0	9.3e-05
198153540	BEB	1.09	1.82	19.12	86.27	0.45	0.63	160.12	0.0	0.25	0.27	0.00323
198153540	BEBx2P	0.98	1.26	38.25	86.64	0.65	0.72	111.11	0.0	0.96	1.0	0.001362
198153084	NTP	0.59	0.6	19.12	89.83	0.11	0.26	152.6	19.76	0.0	0.0	0.0
198153080	NTP	0.34	0.36	19.12	89.79	0.18	0.41	180.38	19.14	0.0	0.0	1e-06
198153084	NEB	0.59	0.6	19.12	89.97	0.01	0.6	190.37	0.0	0.52	0.52	6e-06
198153080	NEB	0.34	0.36	19.12	89.96	0.03	0.59	174.49	0.0	0.19	0.22	4.7e-05
198153084	NEBx2P	0.59	0.6	38.25	89.99	0.01	0.42	204.21	0.0	0.56	0.57	7e-06
198153080	NEBx2P	0.34	0.36	38.25	89.54	0.09	0.87	138.88	0.0	0.33	0.35	6.7e-05

Table 3: Scenarios attributes and probabilities.

Scenario	FPP	NFPP	FPP2	FPP3+
0	0.00643	0.000126	0.000259	0.000129
1	0.006283	0.000123	0.000253	0.000126
2	0.006233	0.000129	0.000251	0.000125
3	0.006683	0.000129	0.000269	0.000135
4	0.006411	0.000129	0.000258	0.000129
MEAN	0.006408	0.000127	0.000258	0.000129

Table 4: Validation results.

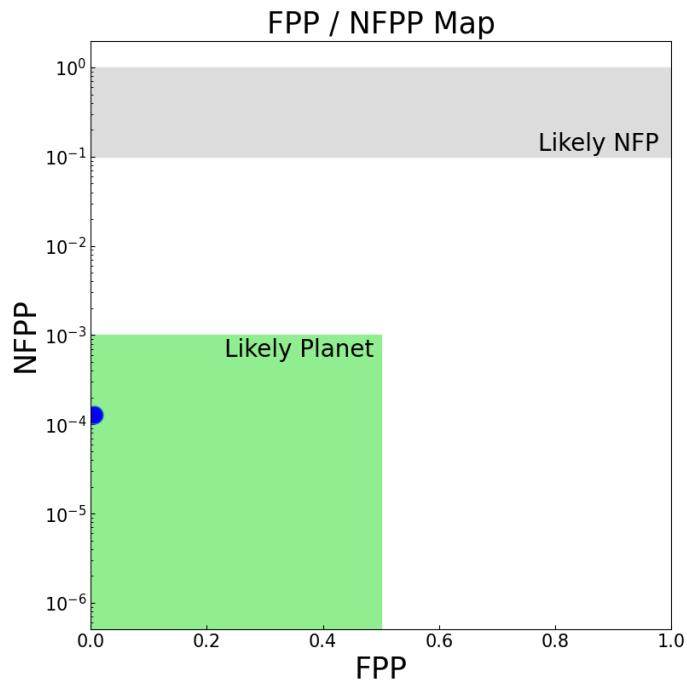


Figure 4: Validation map for the mean scenario.



The SHERLOCK
PIPEline

SHERLOCK Statistical Validation Report: TIC 198153540

Mon, 23 January 2023, 09:09:14

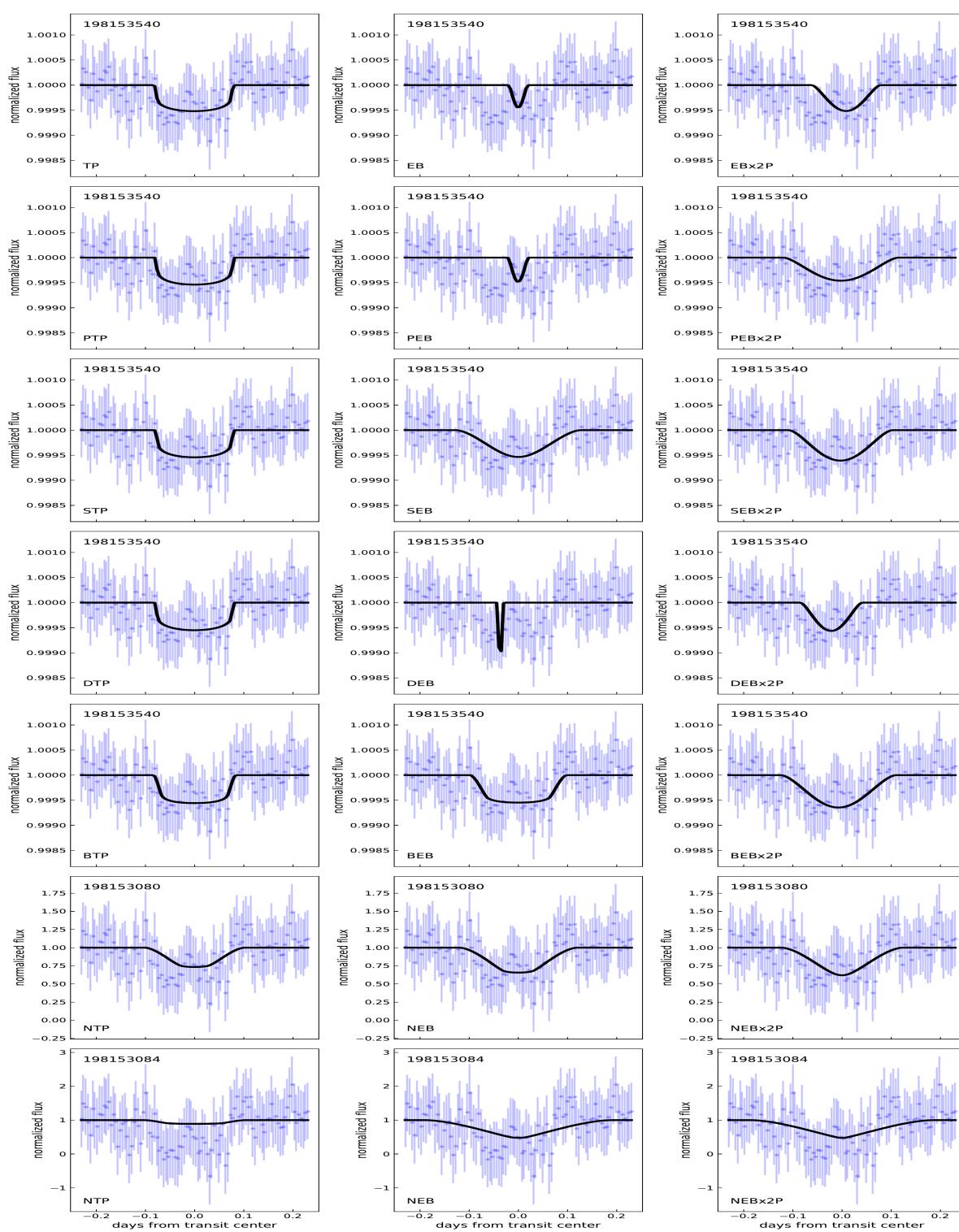


Figure 5: Best fits for scenario no. .0



SHERLOCK Statistical Validation Report: TIC 198153540

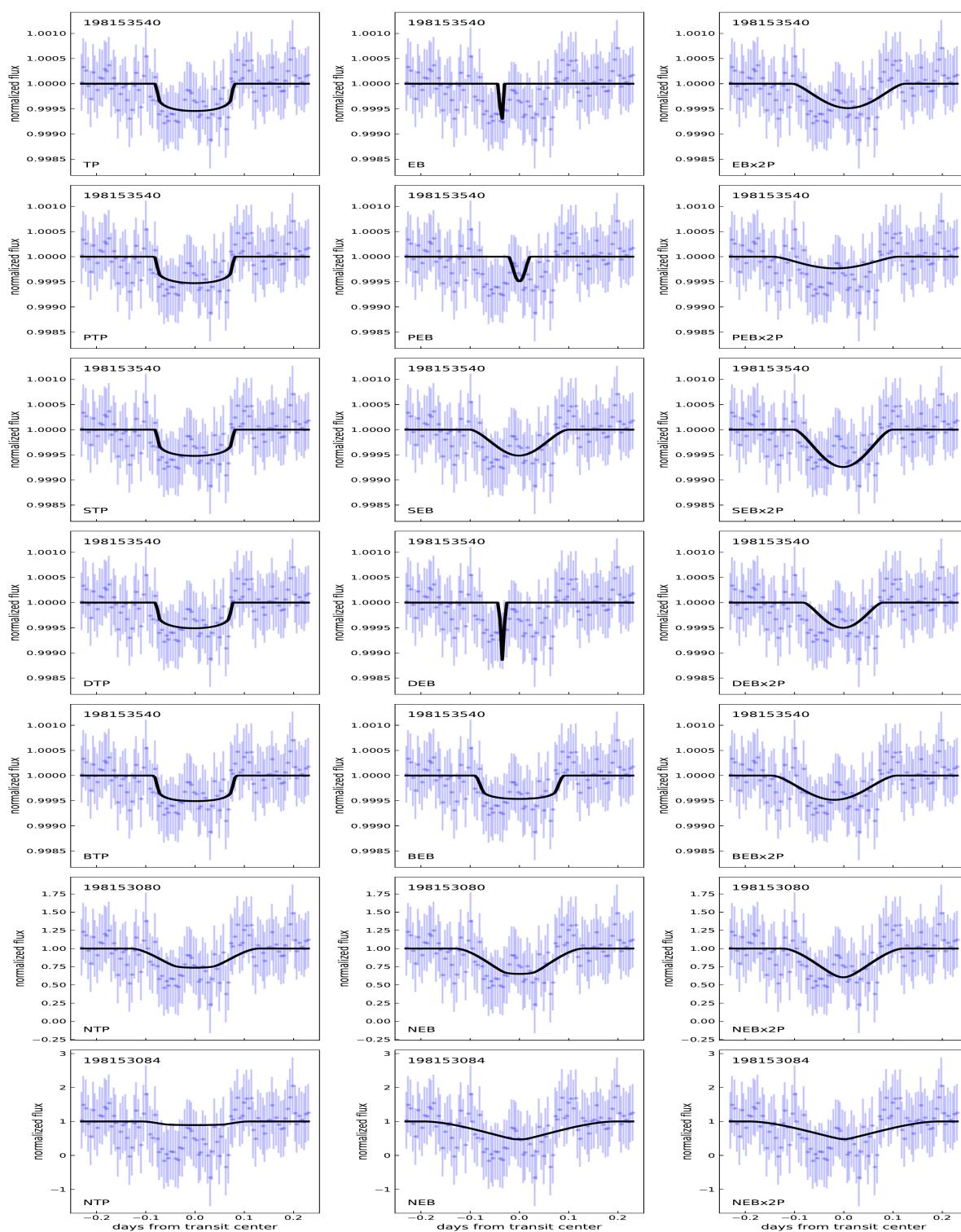
The SHERLOCK
PIPEline

Figure 6: Best fits for scenario no. .1



SHERLOCK Statistical Validation Report: TIC 198153540

Mon, 23 January 2023, 09:09:15

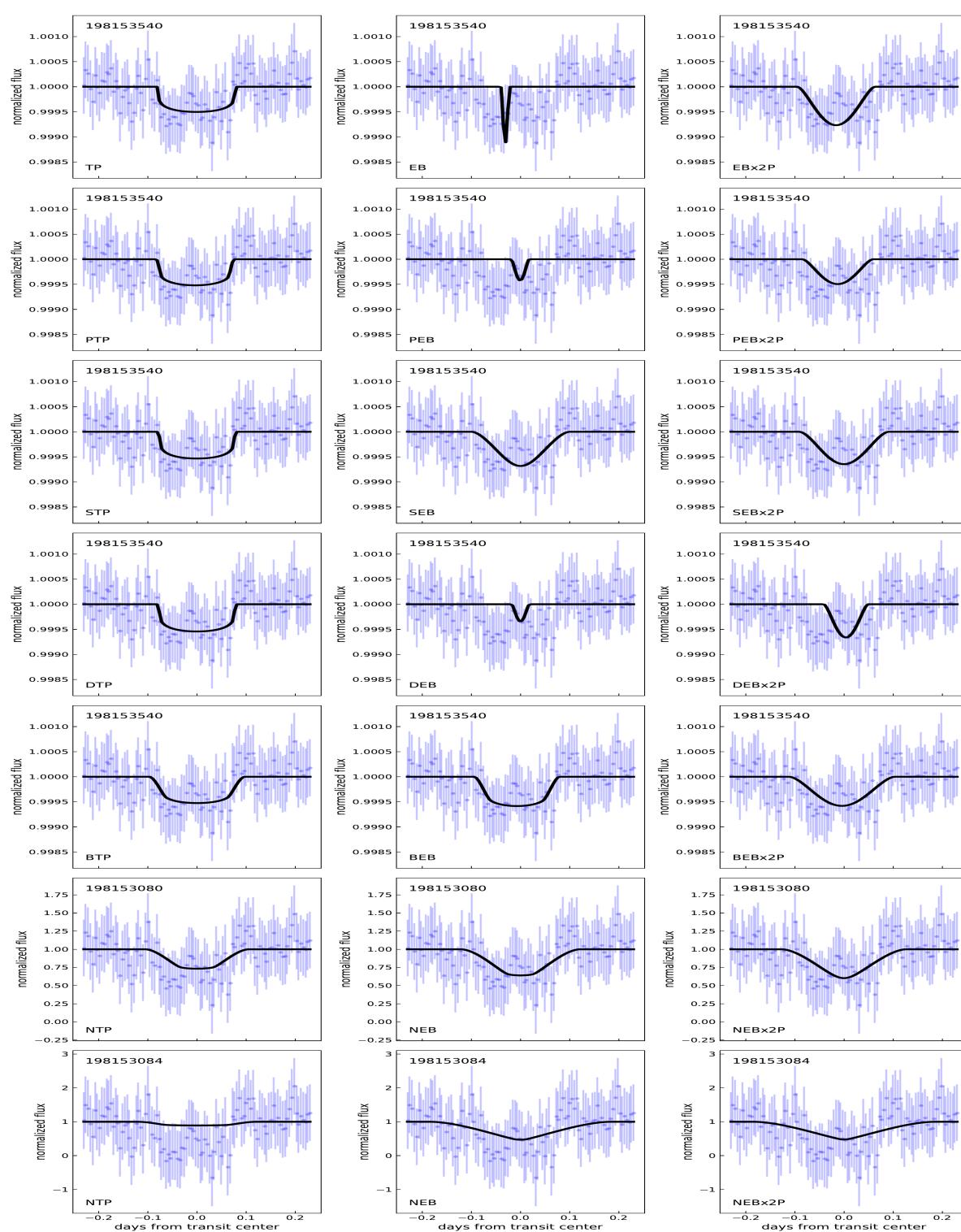


Figure 7: Best fits for scenario no. .2



SHERLOCK Statistical Validation Report: TIC 198153540

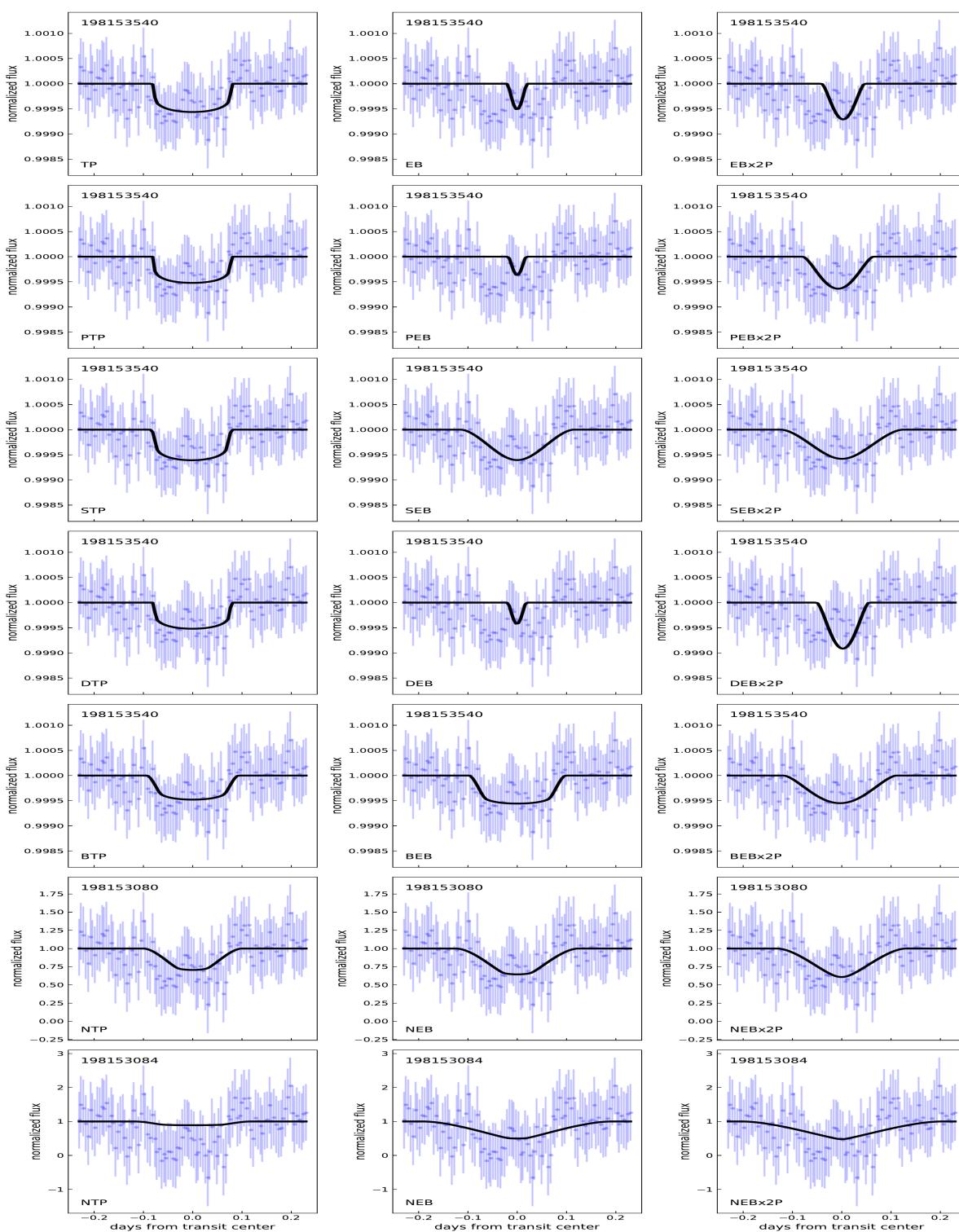


Figure 8: Best fits for scenario no. .3



SHERLOCK Statistical Validation Report: TIC 198153540

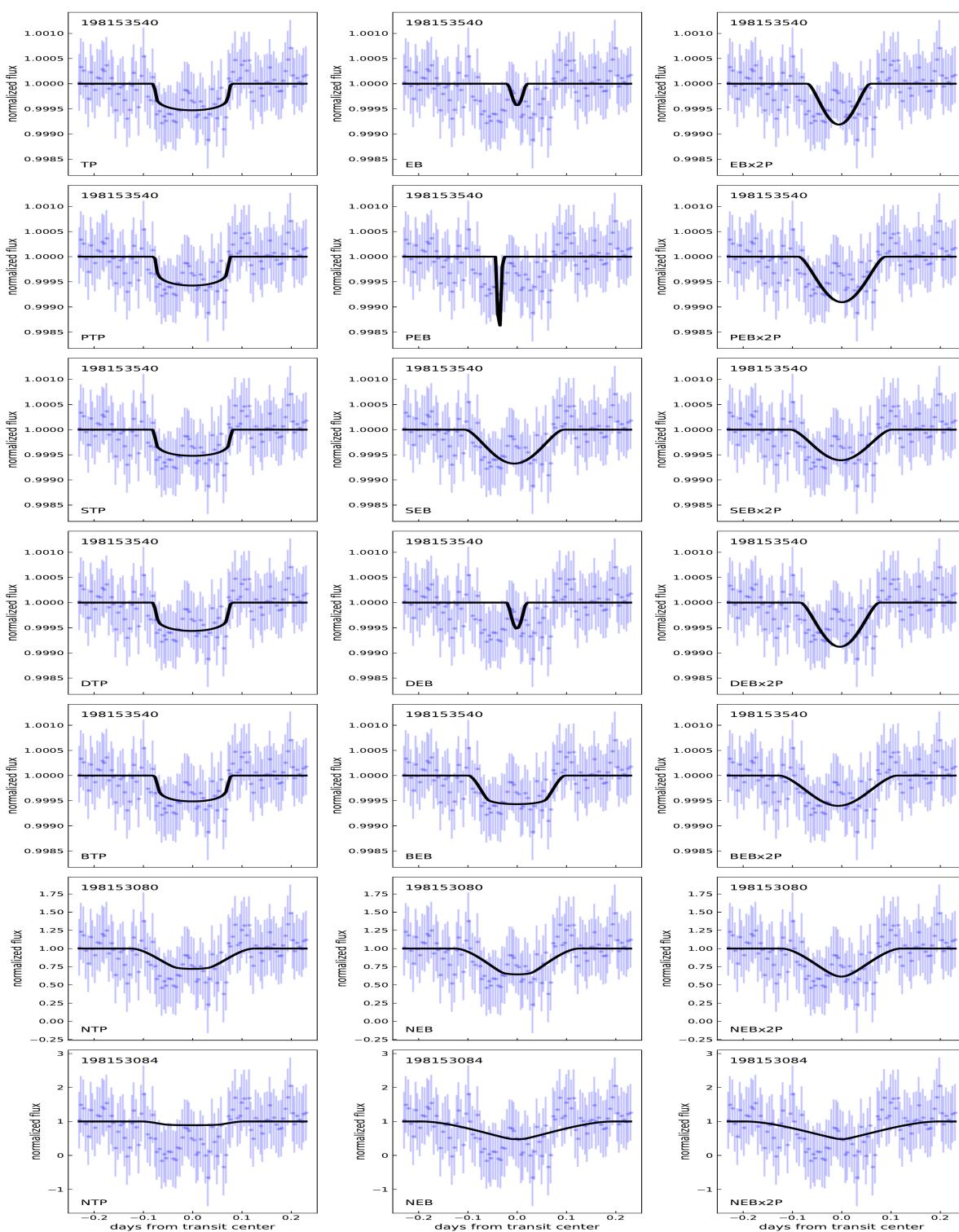


Figure 9: Best fits for scenario no. .4