

KIC 007509789

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
007509789-01	OBS	No	465.693141	178.283483	102.7	8.153	7.2	3.7	1.94	6315	2.27	3.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007509789-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

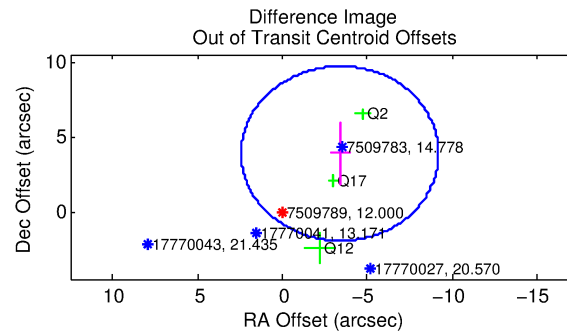
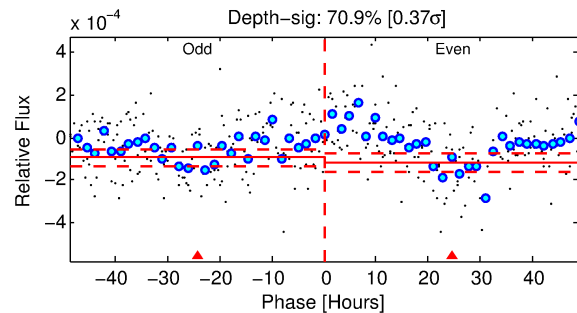
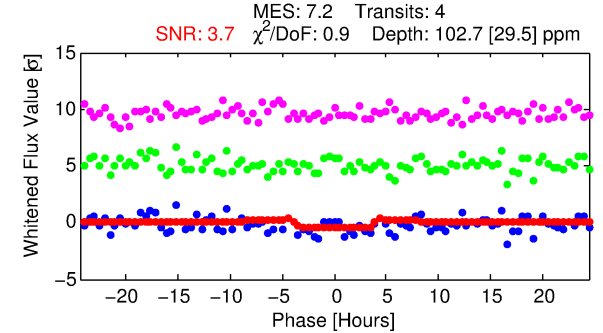
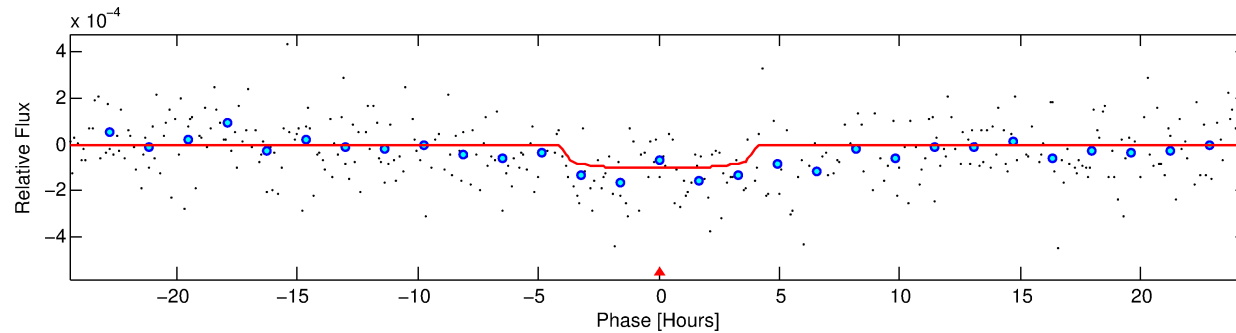
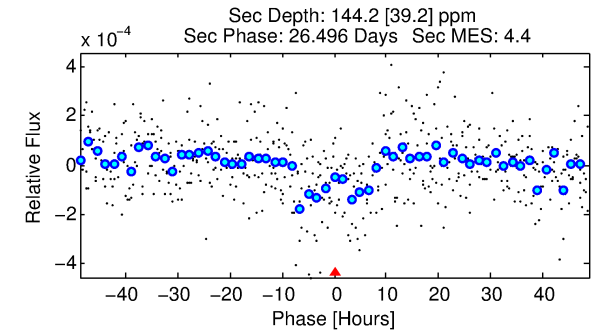
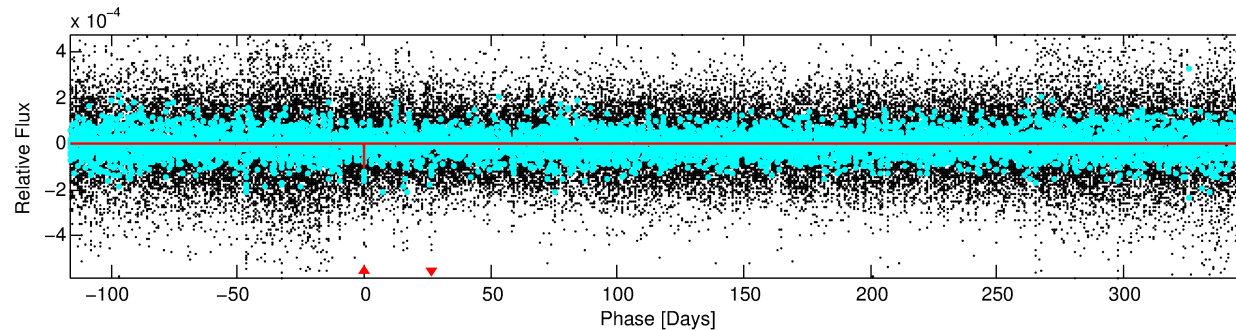
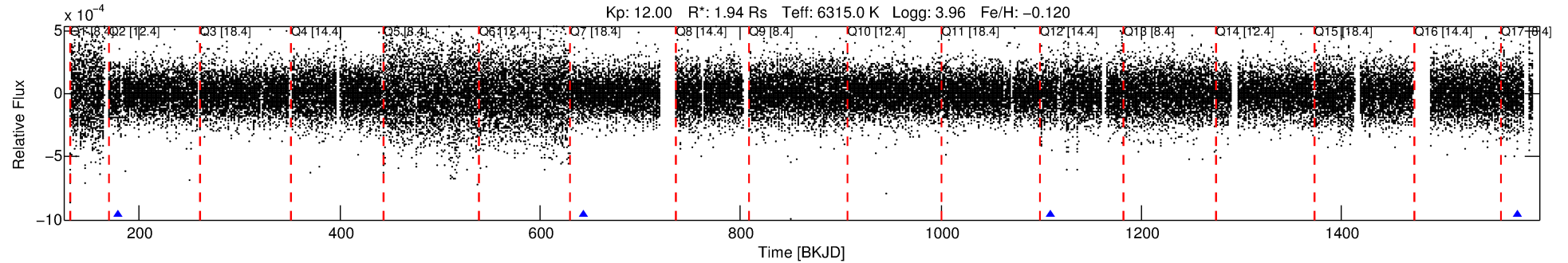
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007509789-01

No Significant Match Found

DV One-Page Summary

KIC: 7509789 Candidate: 1 of 1 Period: 465.693 d



DV Fit Results:

Period = 465.69314 [0.01198] d
Epoch = 178.2835 [0.0202] BKJD
Rp/R* = 0.0107 [0.0053]
a/R* = 214.30 [544.50]
b = 0.88 [0.64]
Seff = 3.34 [2.22]
Teq = 345 [57] K
Rp = 2.27 [1.45] Re
a = 1.2634 [0.5034] AU
Ag = 24646.65 [29913.24] [0.82σ]
Teffp = 6679 [1736] K [3.65σ]

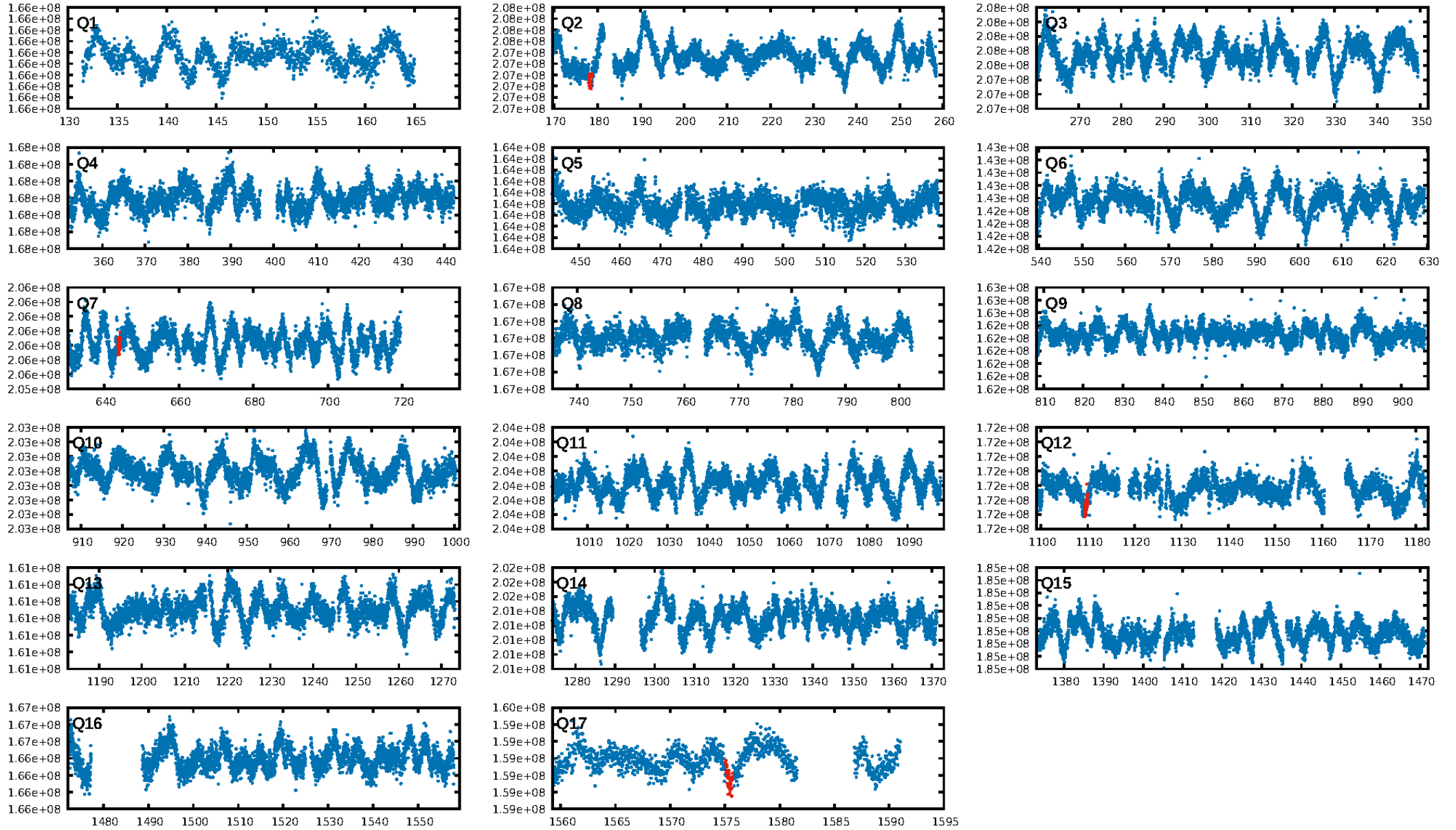
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 29.4%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 1.78e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.9234
Centroid-sig: 75.0%
Centroid-so: 2.234 arcsec [1.06σ]
OotOffset-rm: 5.156 arcsec [2.66σ]
KicOffset-rm: 3.197 arcsec [1.12σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

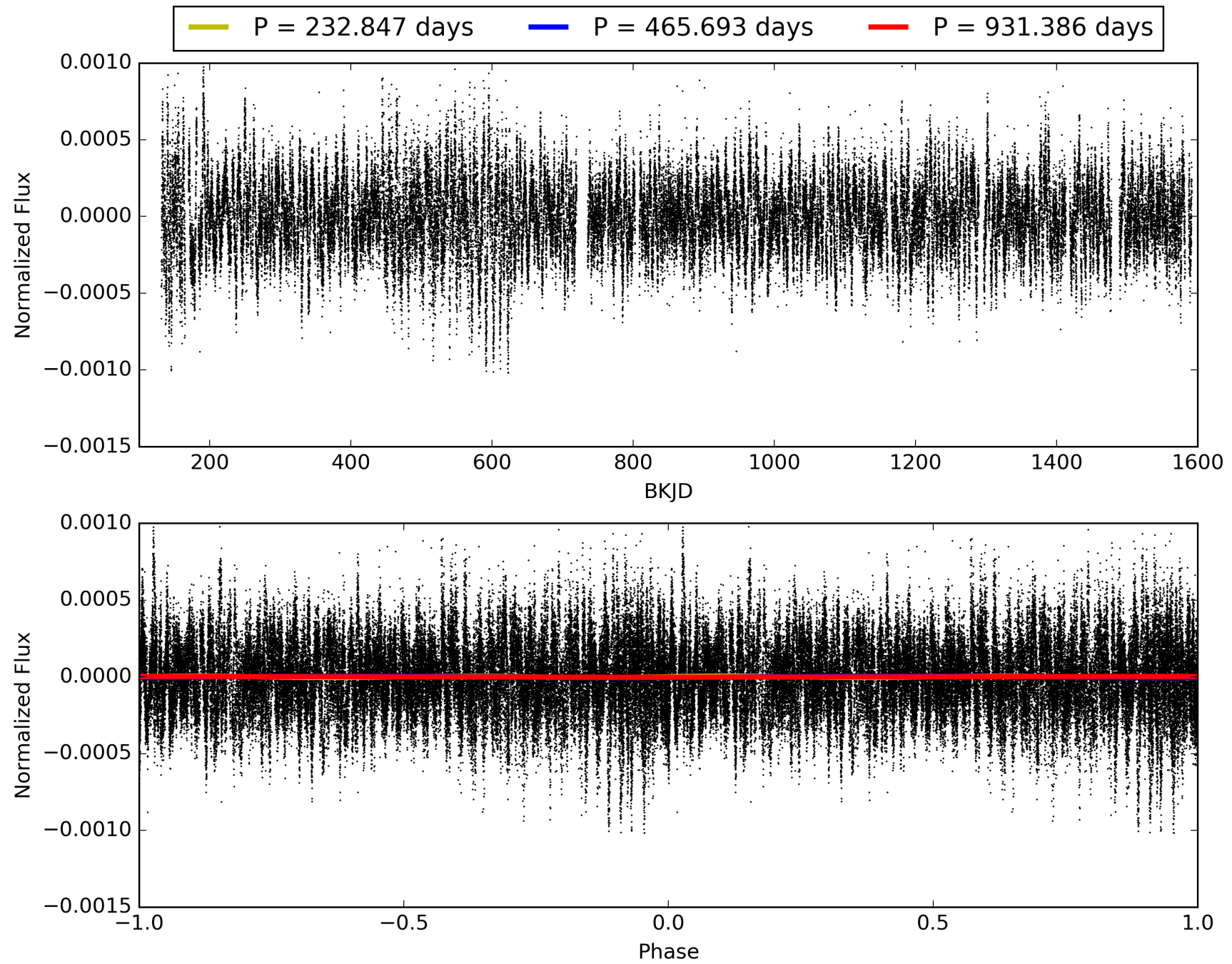
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:21:01 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007509789-01, PDC Light Curves

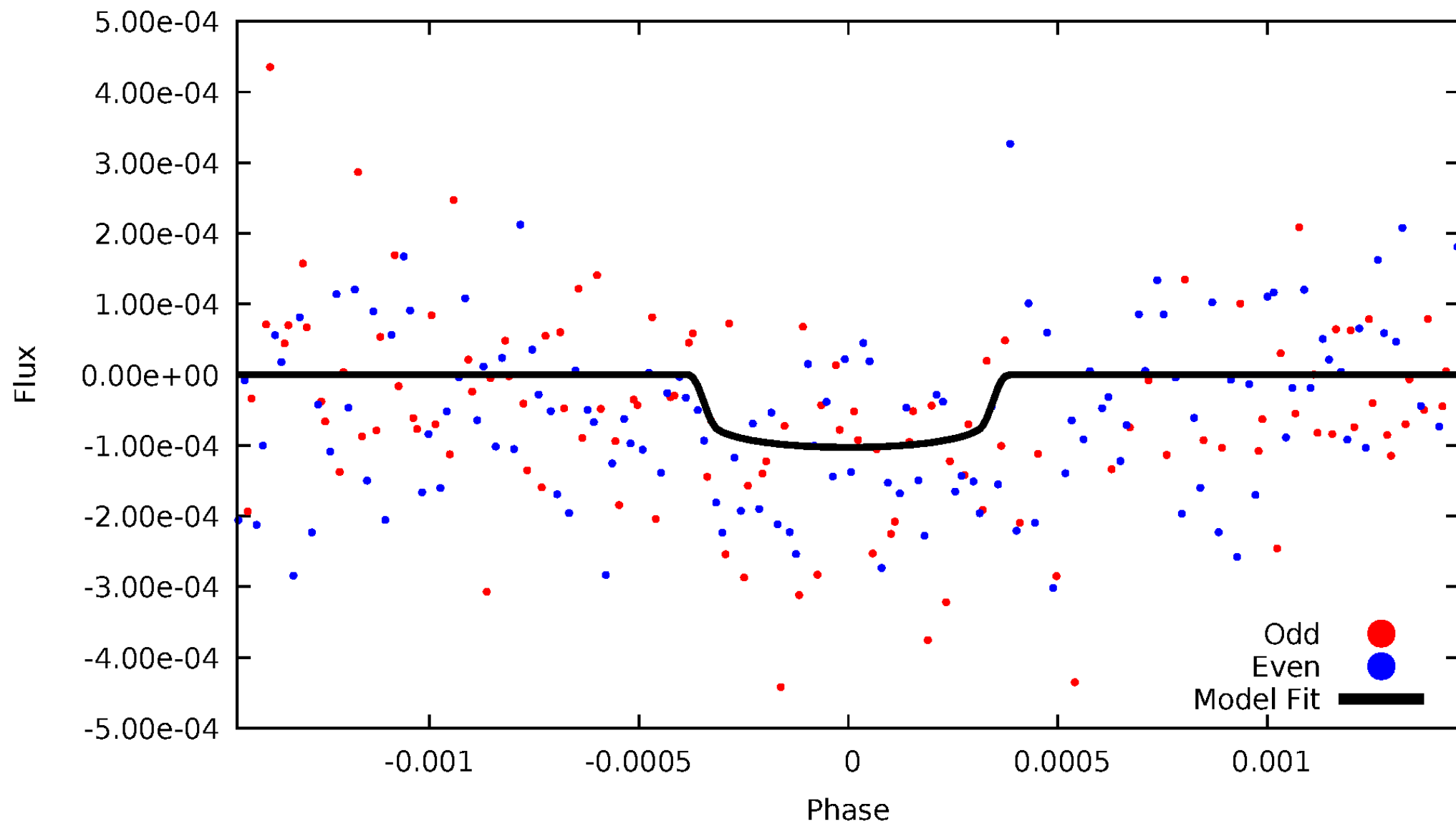


TCE 007509789-01



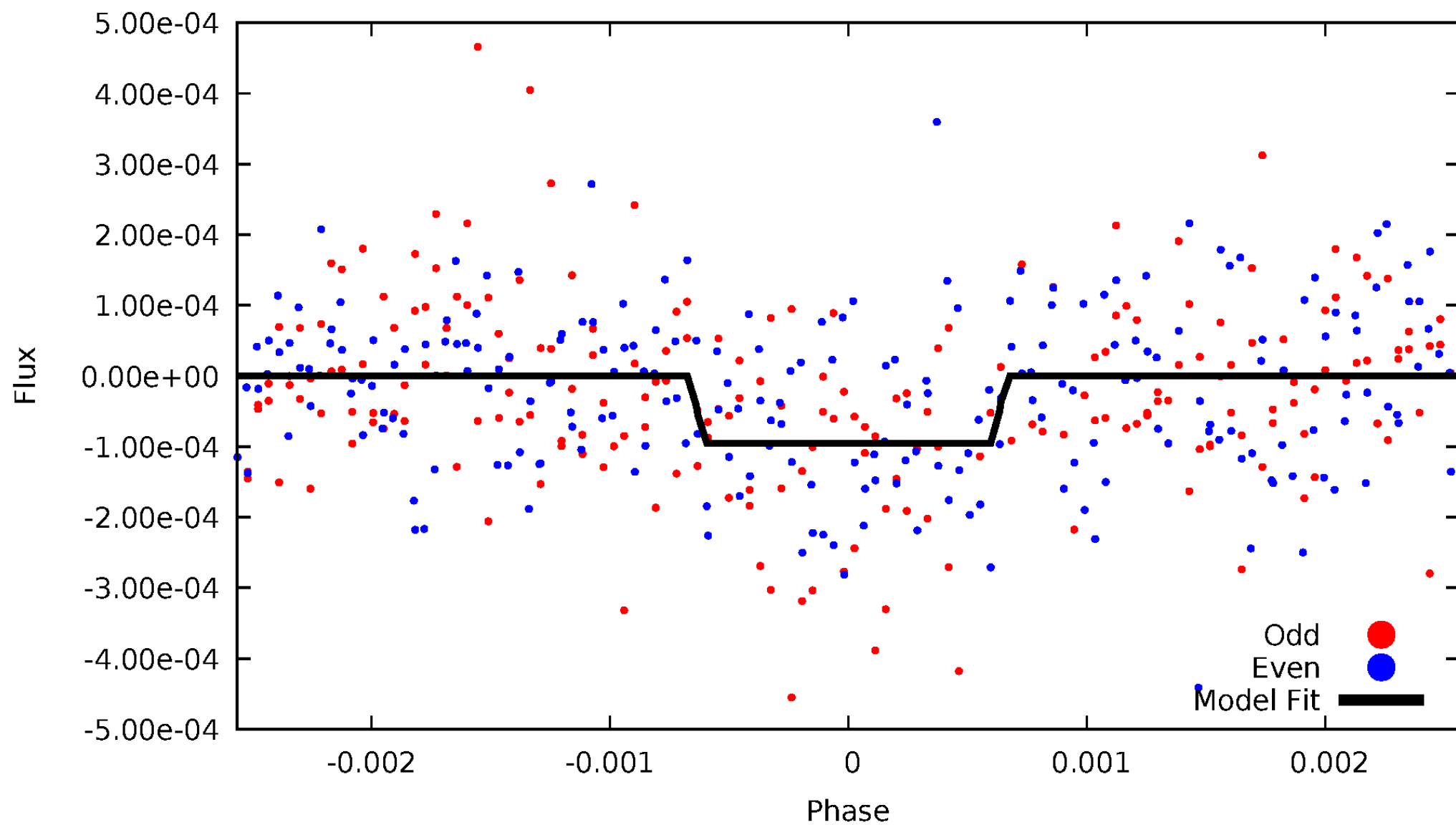
DV Odd/Even

TCE 007509789-01

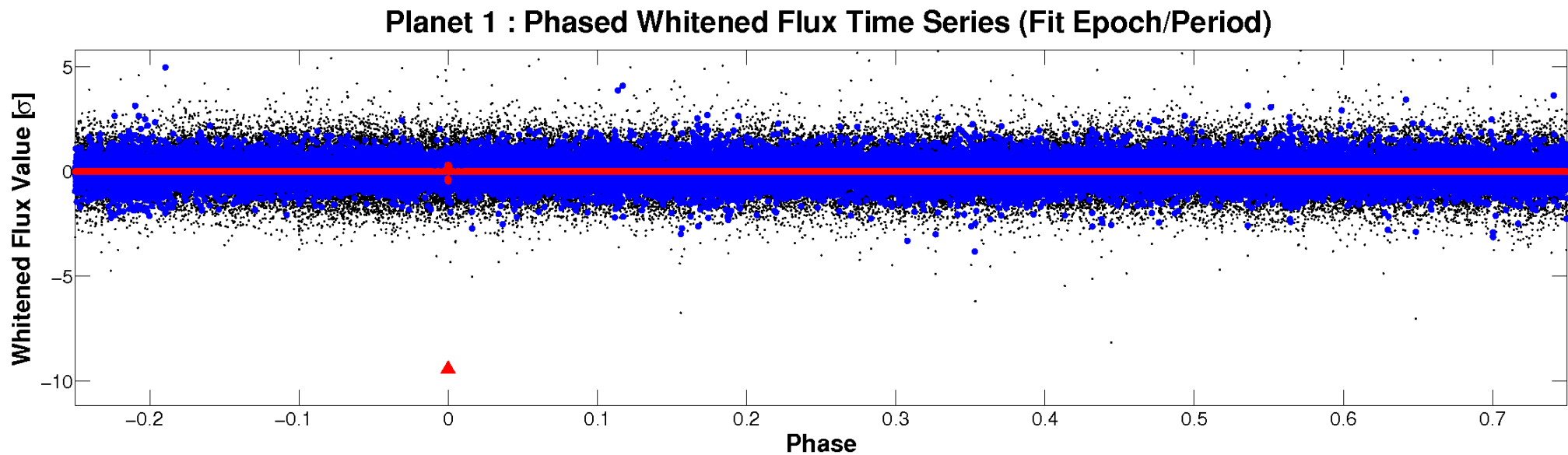
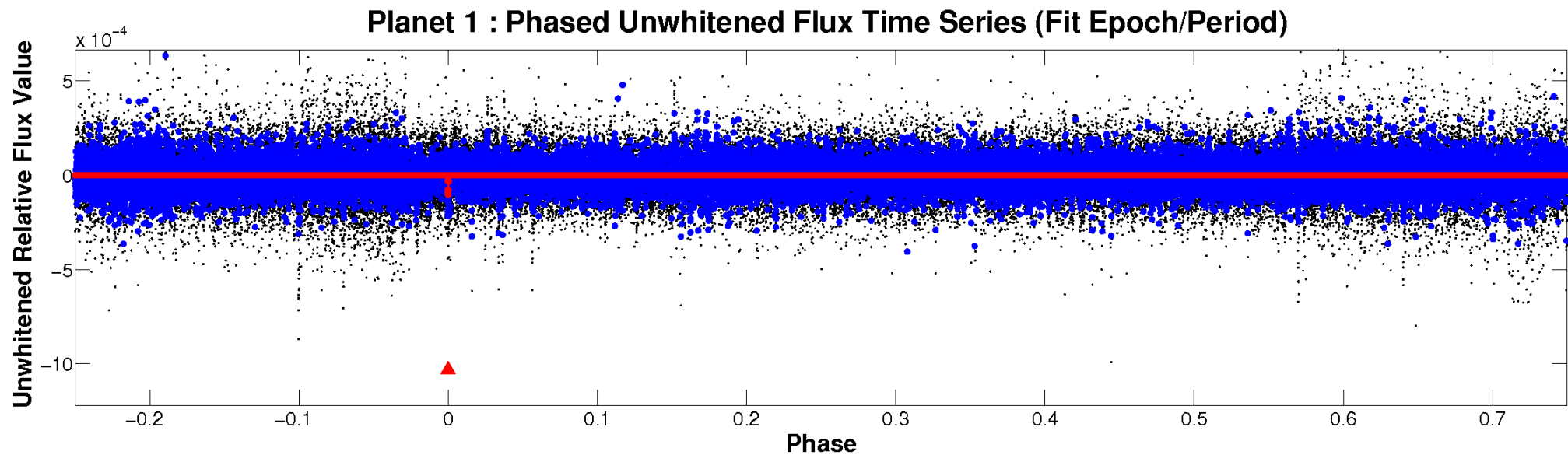


ALT Odd/Even

TCE 007509789-01

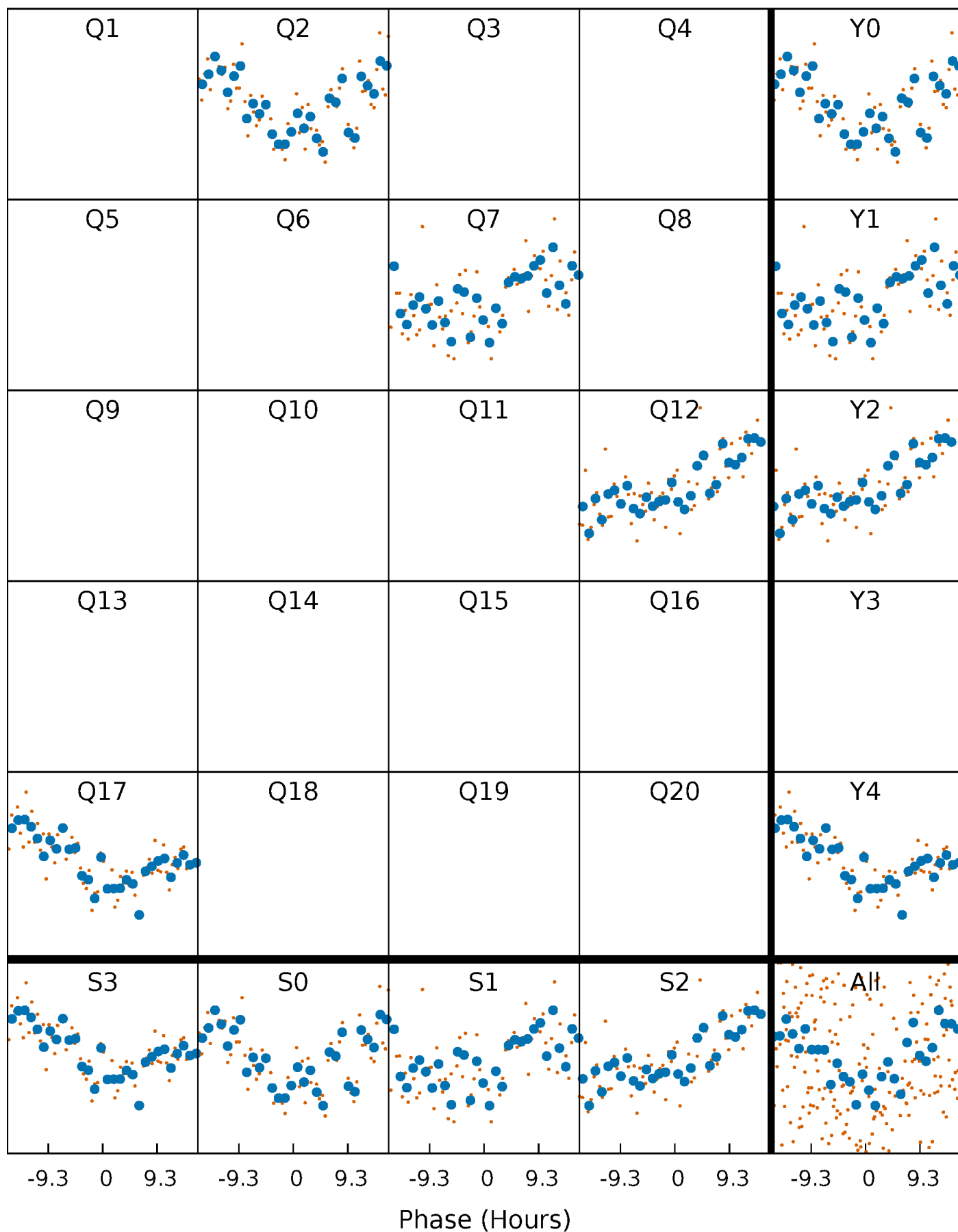


Non-Whitened Vs. Whitened Light Curve



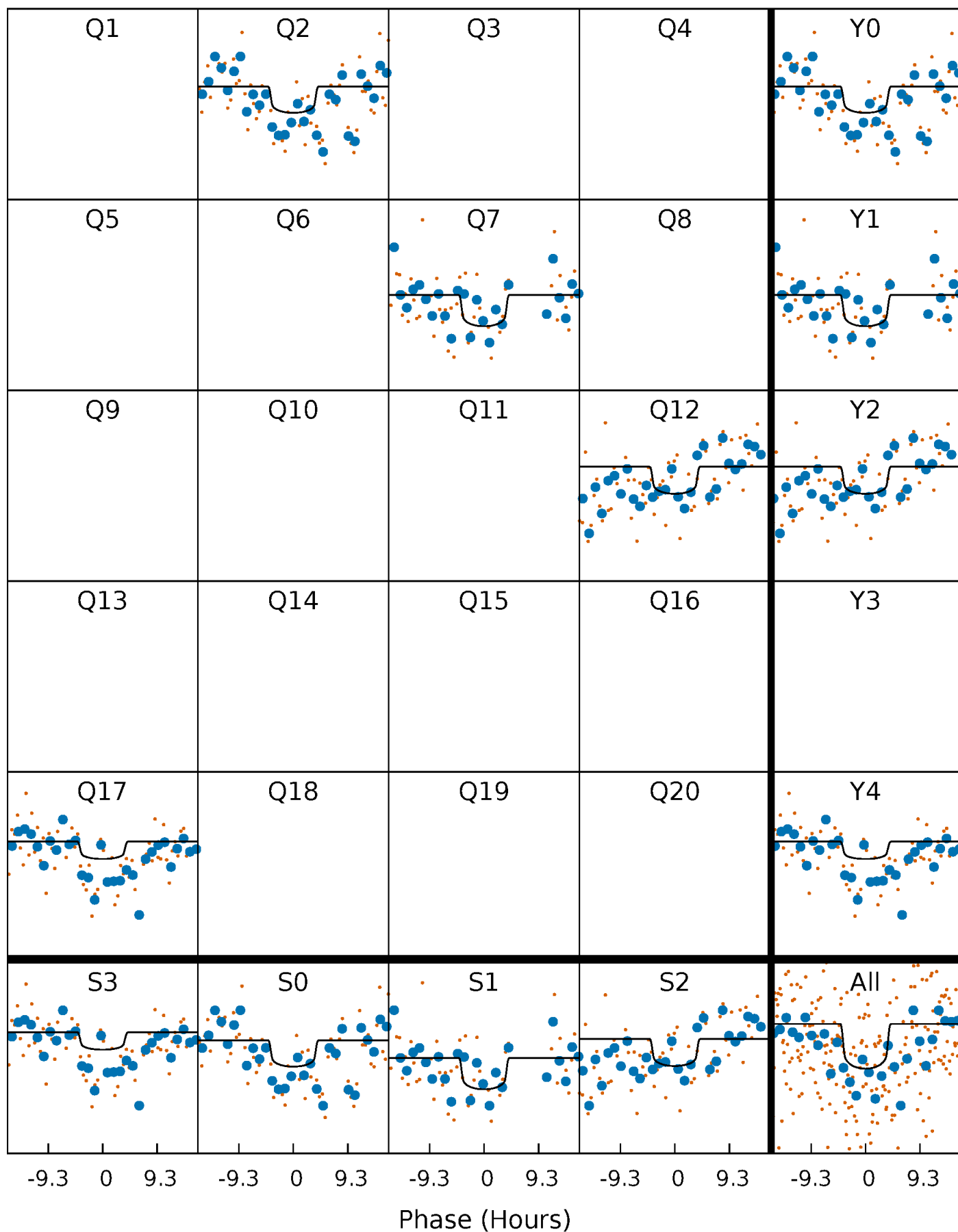
PDC Quarter-Phased Transit Curves

TCE 007509789-01 P=465.693141 Days $T_0=178.283483$ (BKJD)



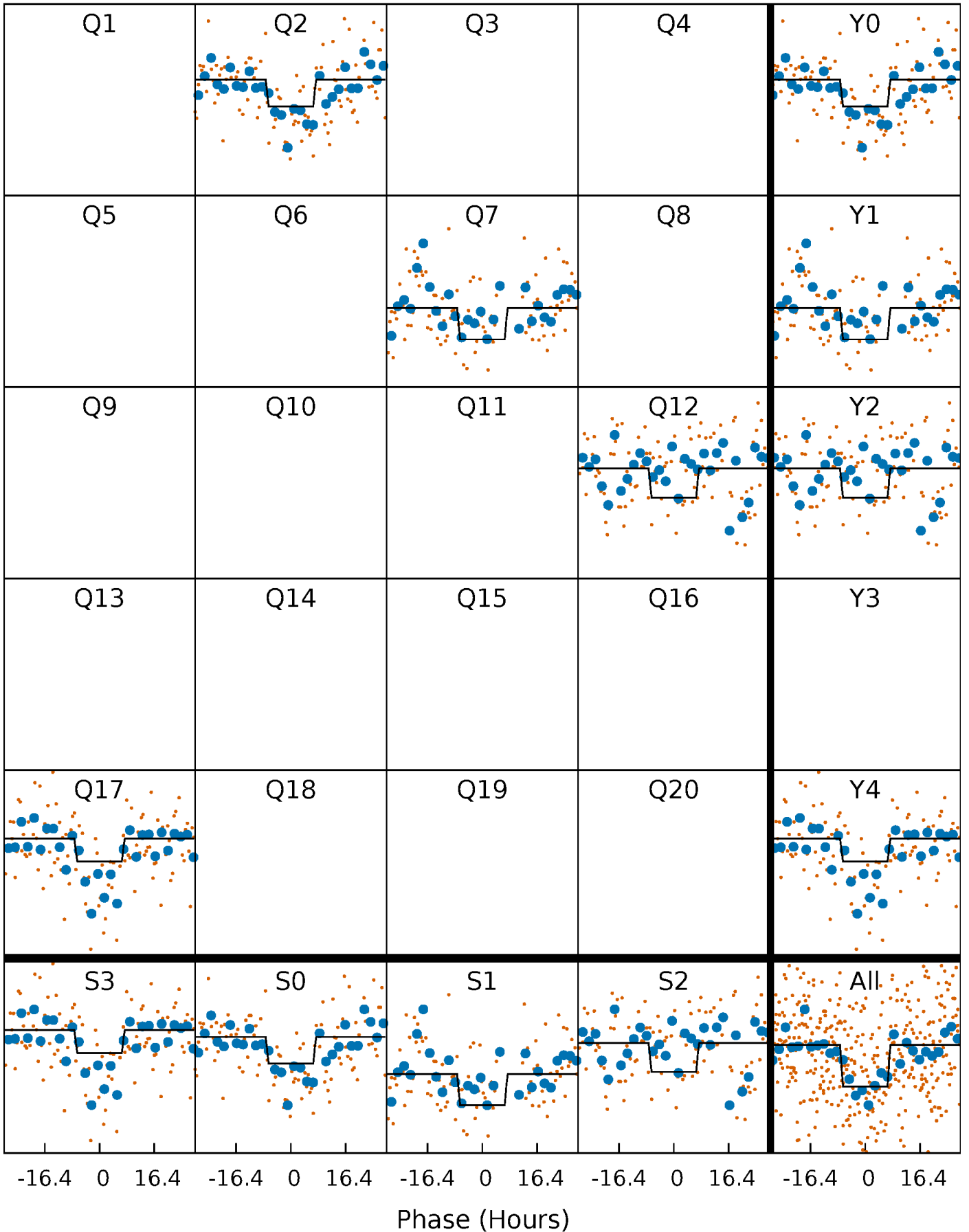
DV Quarter-Phased Transit Curves

TCE 007509789-01 P=465.693141 Days $T_0=178.283483$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

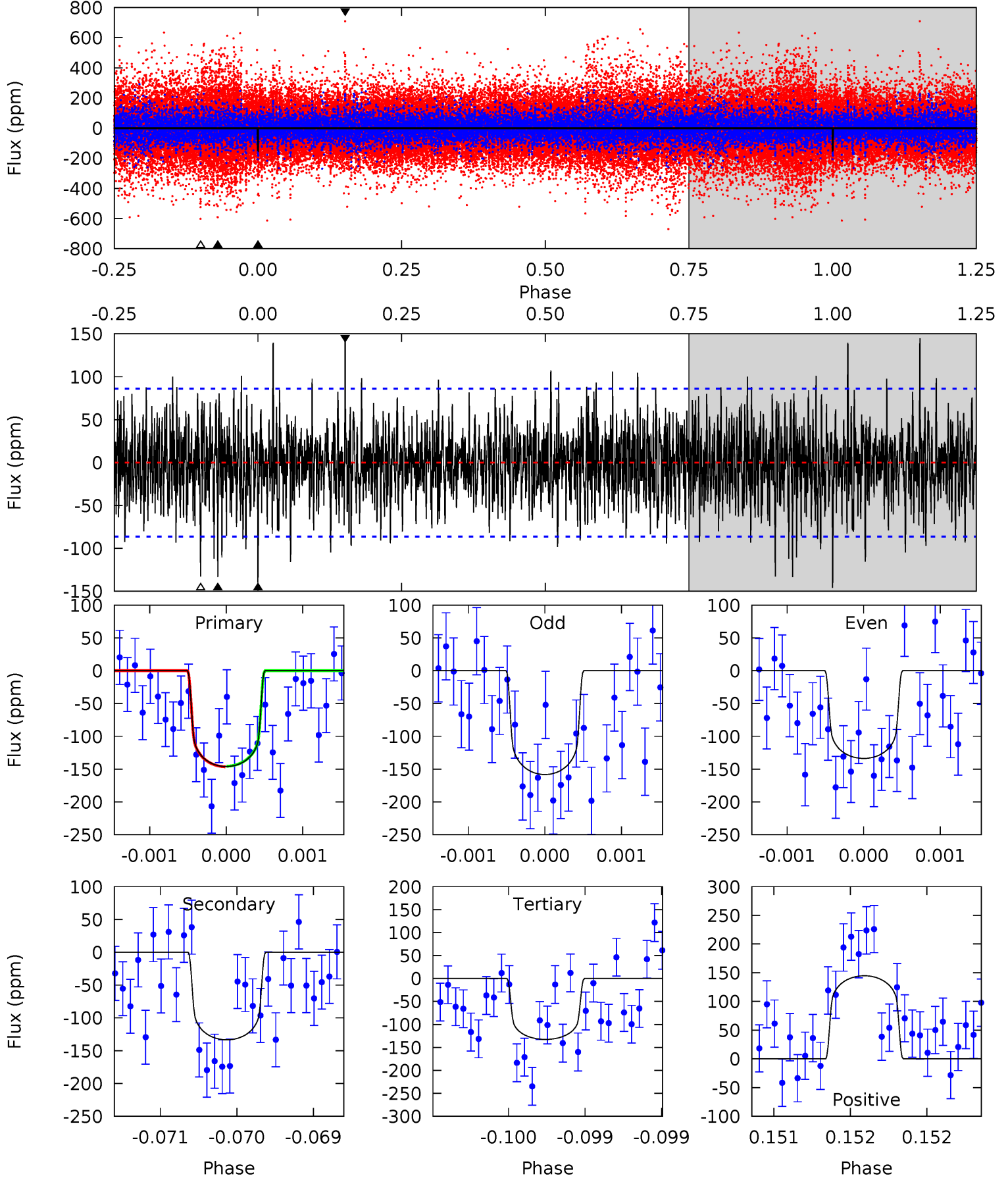
TCE 007509789-01 P=465.721699 Days $T_0=178.233401$ (BKJD)



DV Model-Shift Uniqueness Test

007509789-01, P = 465.693141 Days, E = 178.283483 Days

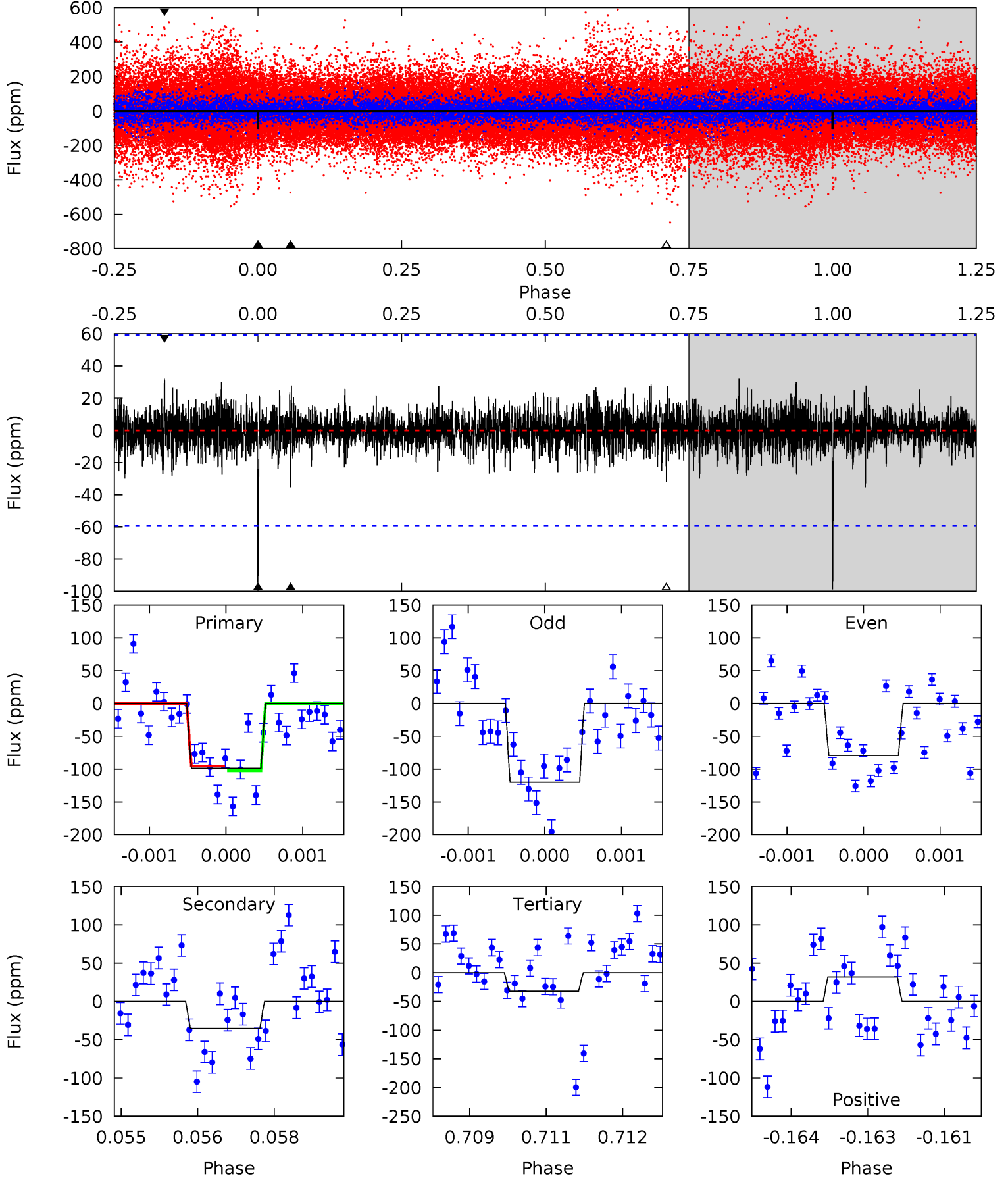
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.32	8.51	8.46	9.23	5.50	3.37	2.17	0.86	0.08	0.05	-0.72	0.78	1.09	0.50	0.03



Alt Model-Shift Uniqueness Test

007509789-01, P = 465.721699 Days, E = 178.233401 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.97	3.20	2.91	2.92	5.40	3.21	0.74	6.06	6.06	0.29	0.28	1.84	1.00	0.25	0.31



Stellar Parameters For KIC 007509789

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6315^{+181}_{-249}	$3.958^{+0.382}_{-0.153}$	$-0.120^{+0.250}_{-0.300}$	$1.935^{+0.522}_{-0.783}$	$1.238^{+0.195}_{-0.216}$	$0.241^{+0.695}_{-0.108}$
	+3%/-4%	+10%/-4%	+208%/-250%	+27%/-40%	+16%/-17%	+288%/-45%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007509789-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-133 ± 16	$2.18^{+1.21}_{-1.08}$	473^{+40}_{-51}	6499^{+2908}_{-1152}	25459^{+69238}_{-15395}
Alt.	-35 ± 11	$1.98^{+1.24}_{-0.93}$	475^{+42}_{-47}	4922^{+1802}_{-791}	7636^{+22246}_{-4843}

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

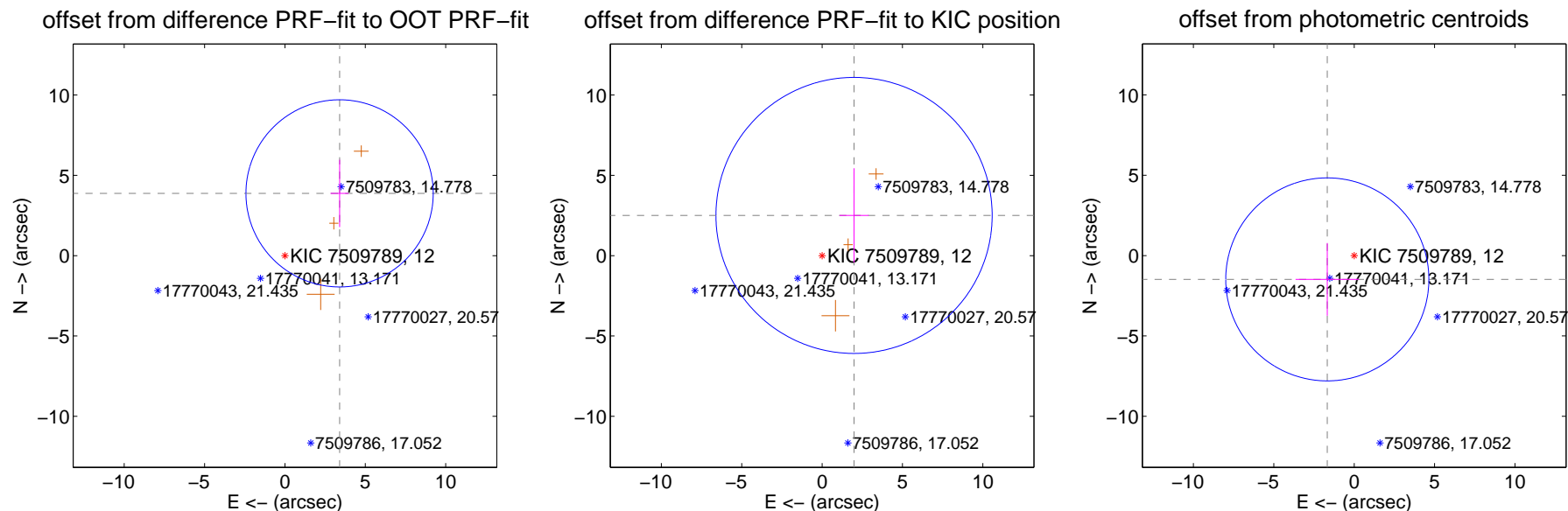
DV Centroid Data

Supplemental centroid analysis for 007509789-01. Kepler magnitude: 12.00. Transit SNR 3.72

There are 0 quarters with good PRF difference image offsets

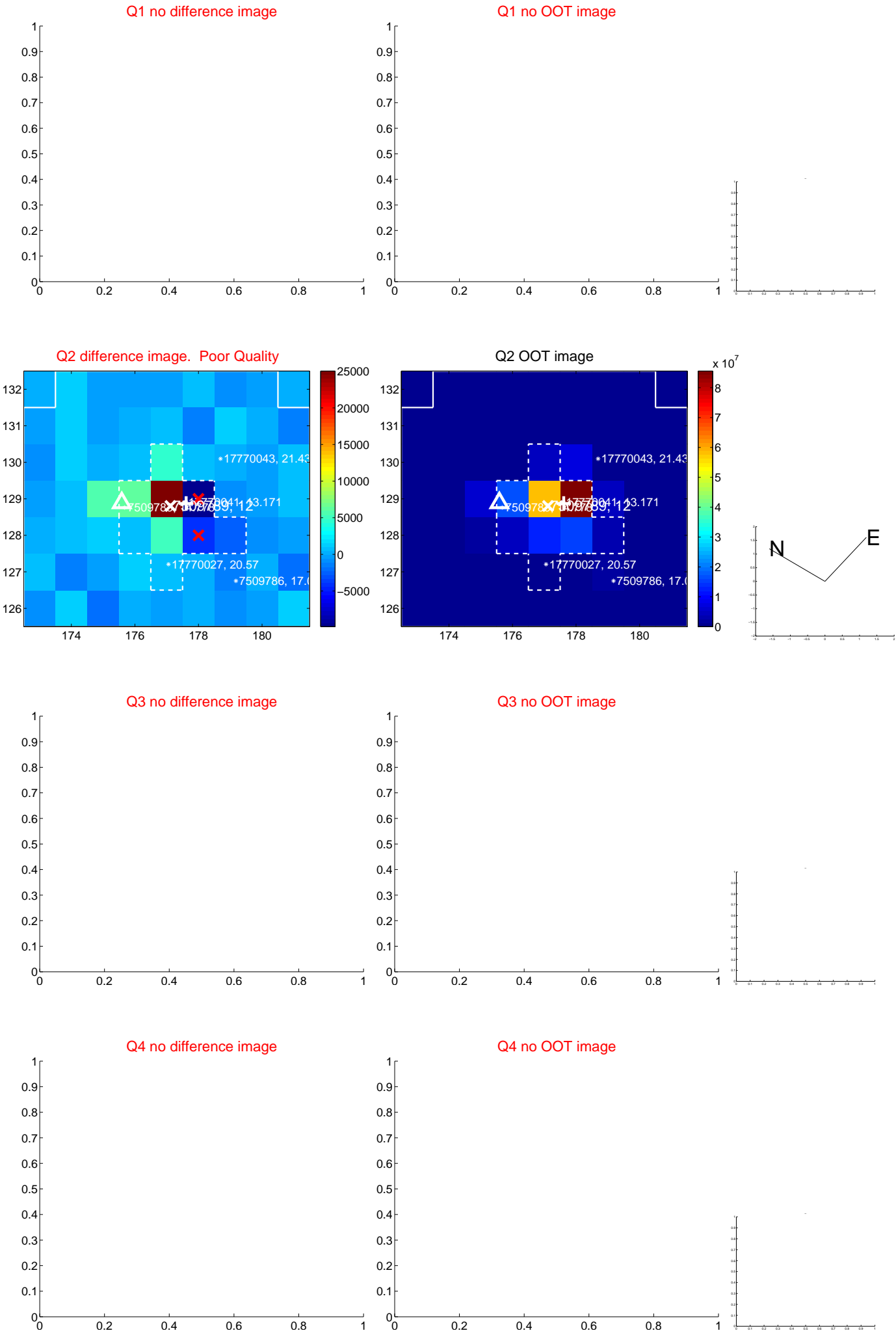
The direct PRF centroid is offset from the target star catalog position by about 1.95 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.156 ± 1.942	2.66	-3.399 ± 0.565	3.877 ± 2.097
PRF-fit source offset from KIC position	3.197 ± 2.864	1.12	-1.988 ± 0.909	2.504 ± 2.940
photometric centroid source offset	2.23 ± 2.11	1.06	1.67 ± 1.97	-1.48 ± 2.26



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

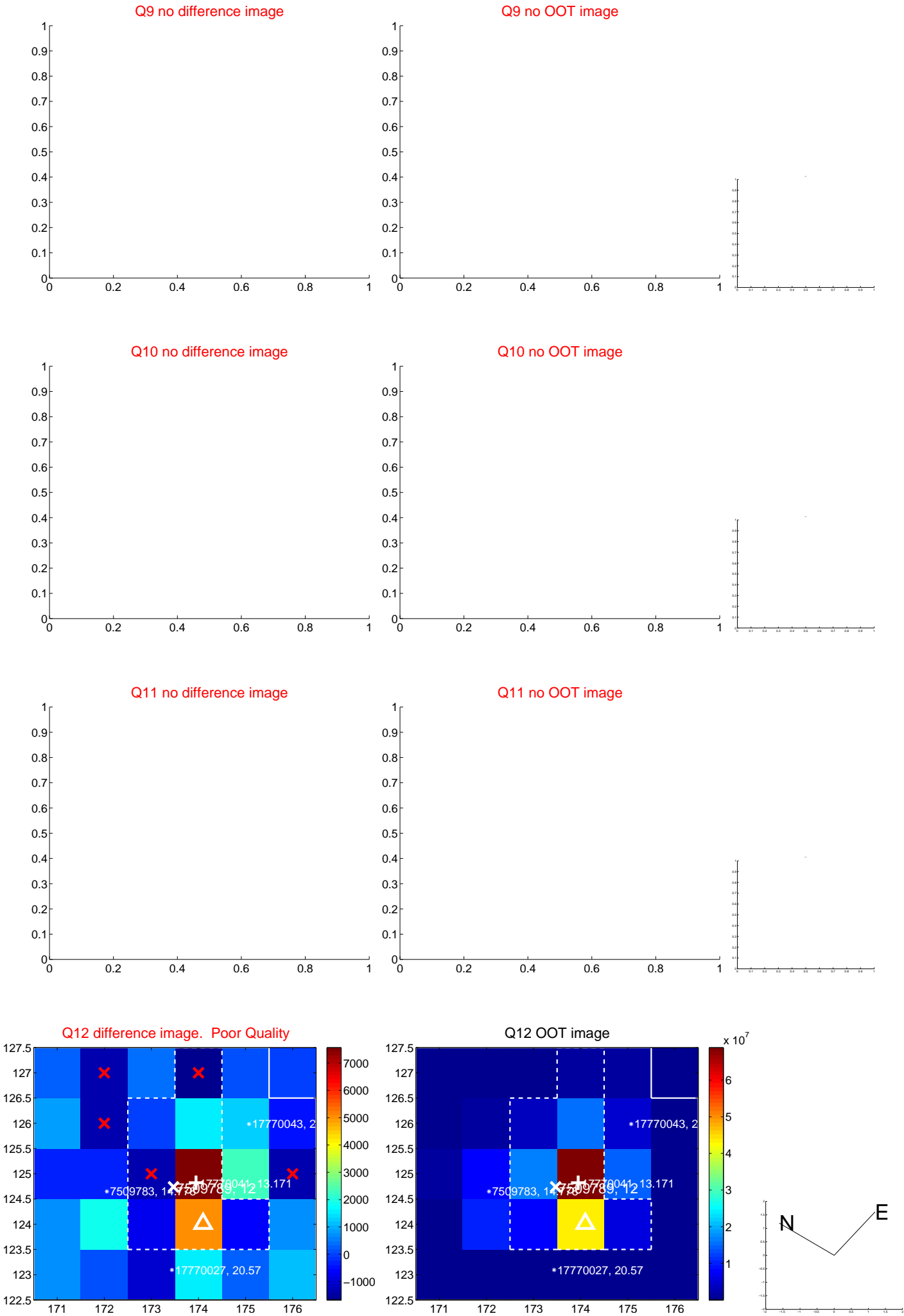
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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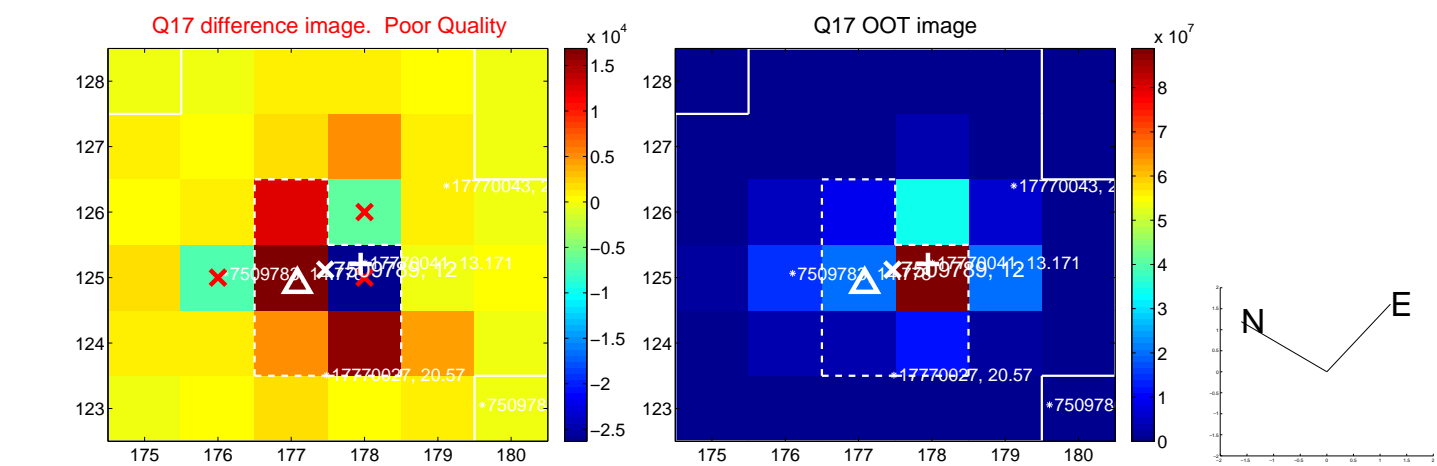
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



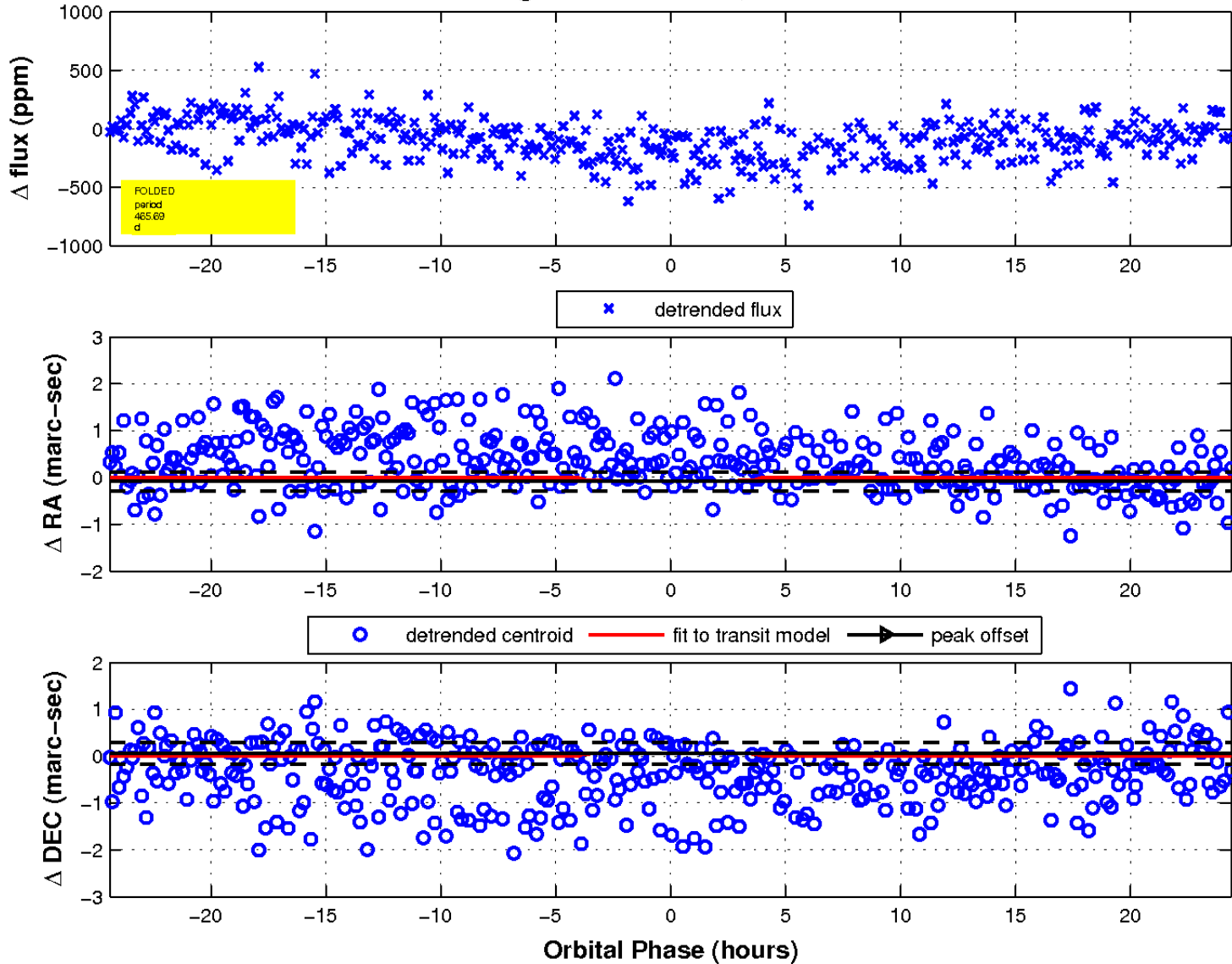
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

