

KIC 006067545

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})
006067545-01	OBS	5236.01	550.856697	307.686408	343.3	14.927	12.1	12.3	1.11	5912	2.14	0.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006067545-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—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 006067545-01

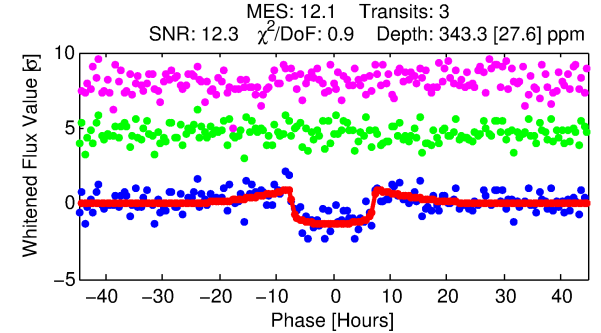
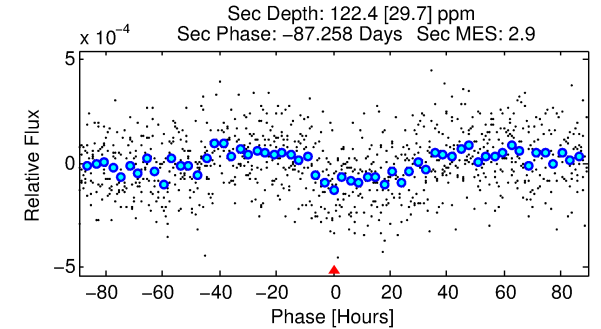
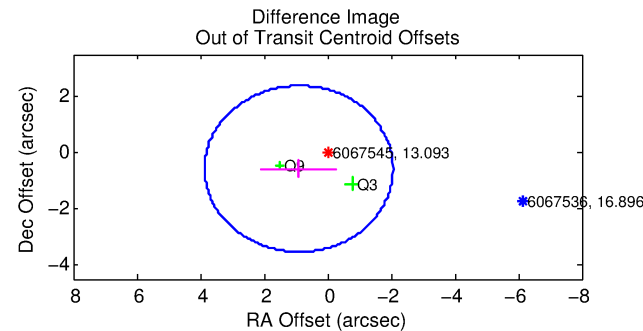
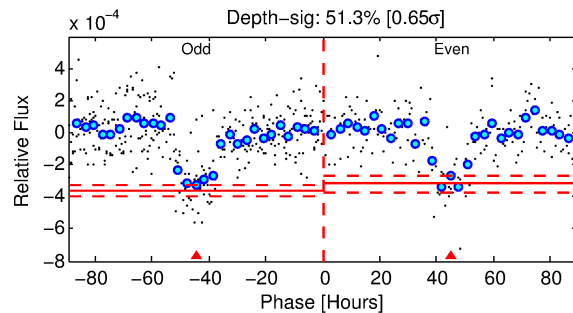
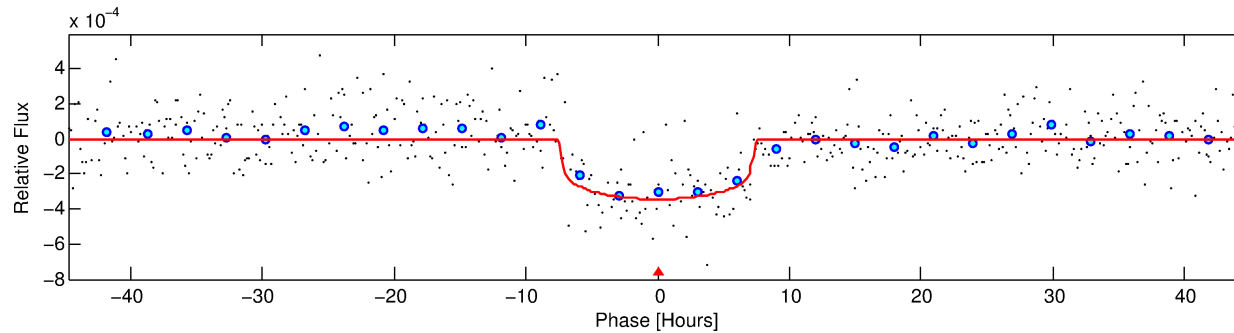
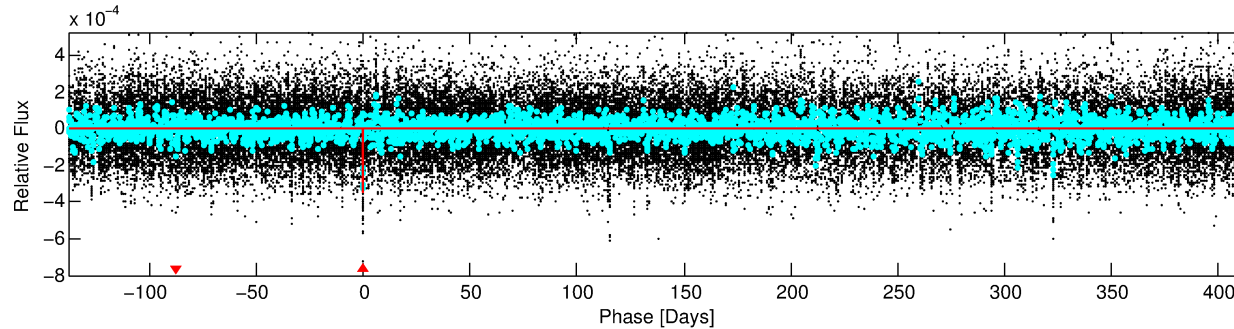
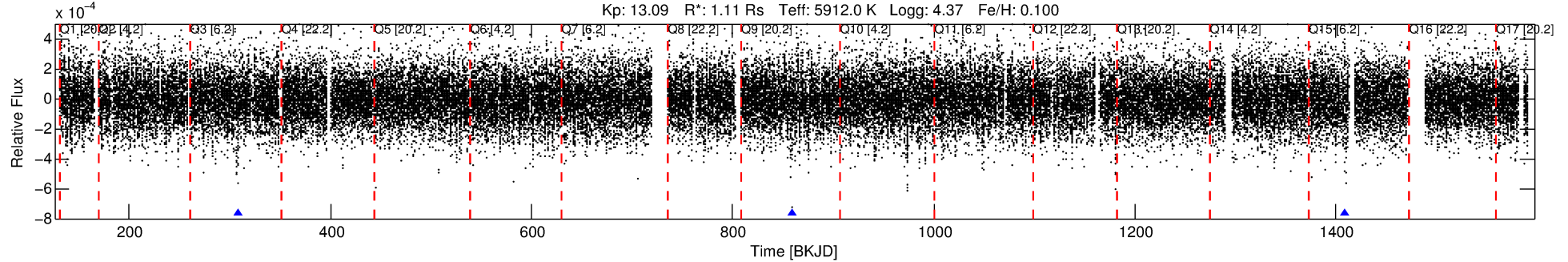
No Significant Match Found

DV One-Page Summary

KIC: 6067545 Candidate: 1 of 1 Period: 550.857 d

KOI: K05236.01 Corr: 0.988

Kp: 13.09 R*: 1.11 Rs Teff: 5912.0 K Logg: 4.37 Fe/H: 0.100



DV Fit Results:

Period = 550.85670 [0.00739] d
Epoch = 307.6864 [0.0094] BKJD
Rp/R* = 0.0176 [0.0052]
a/R* = 235.70 [306.06]
b = 0.58 [1.50]
Seff = 0.76 [0.17]
Teq = 238 [13] K
Rp = 2.14 [0.72] Re
a = 1.3394 [0.1903] AU
Ag = 26314.28 [17630.98] [1.49σ]
Teffp = 4686 [747] K [5.96σ]

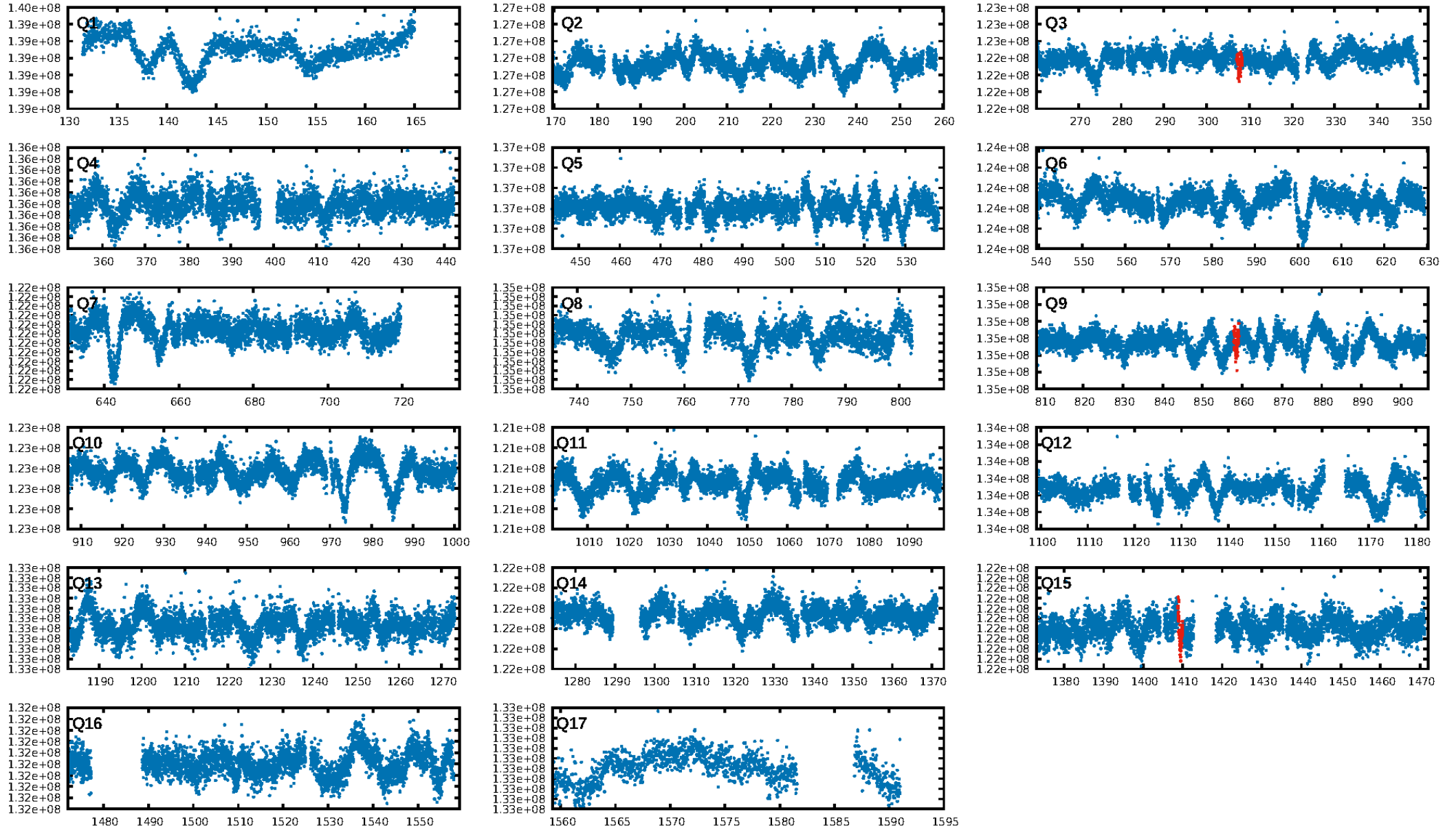
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 79.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.76e-23
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.341
Centroid-sig: 96.1%
Centroid-so: 0.181 arcsec [0.22σ]
OotOffset-rm: 1.072 arcsec [1.09σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-rm: 1.115 arcsec [0.99σ]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

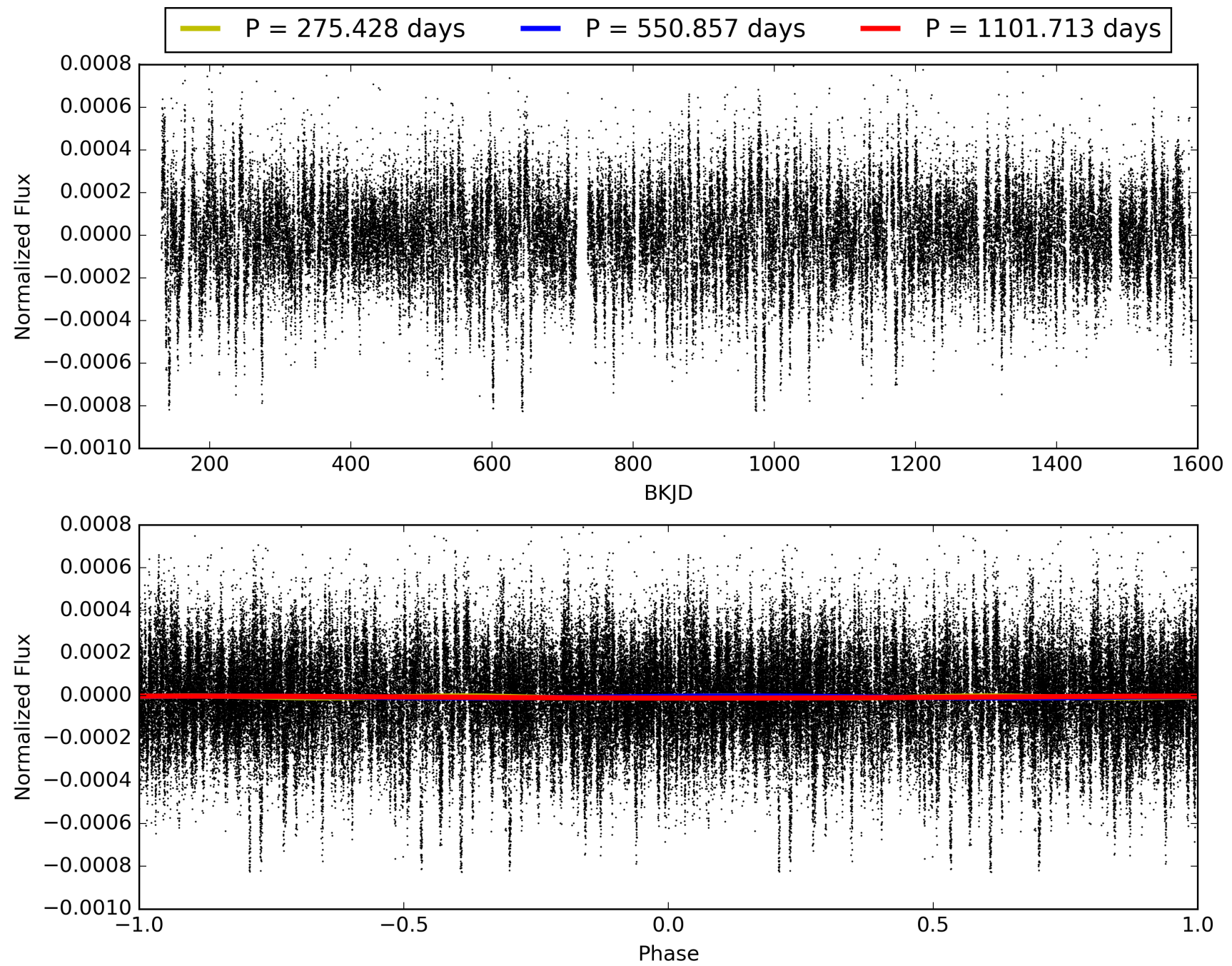
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:32:18 Z

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

TCE 006067545-01, PDC Light Curves

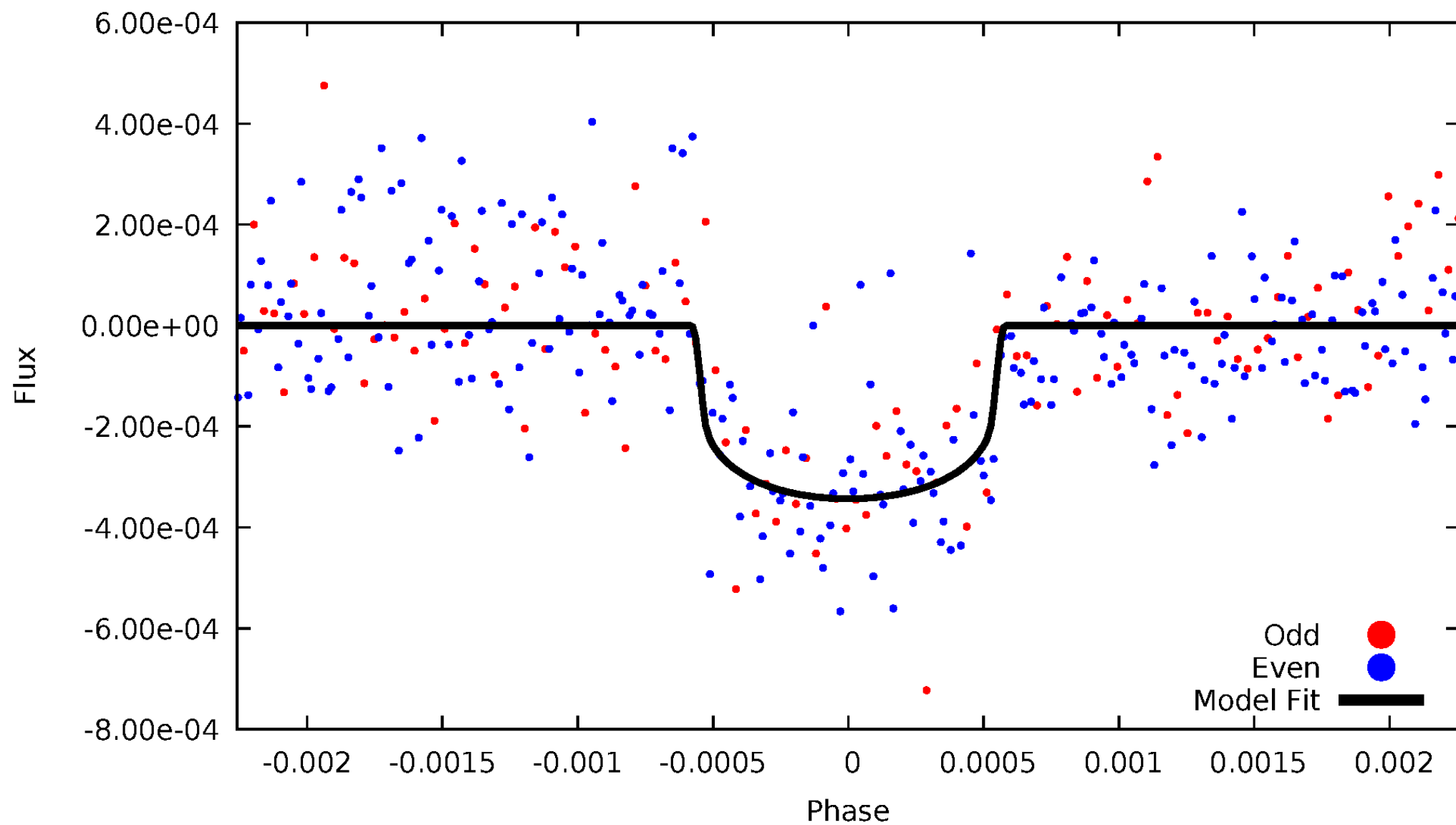


TCE 006067545-01



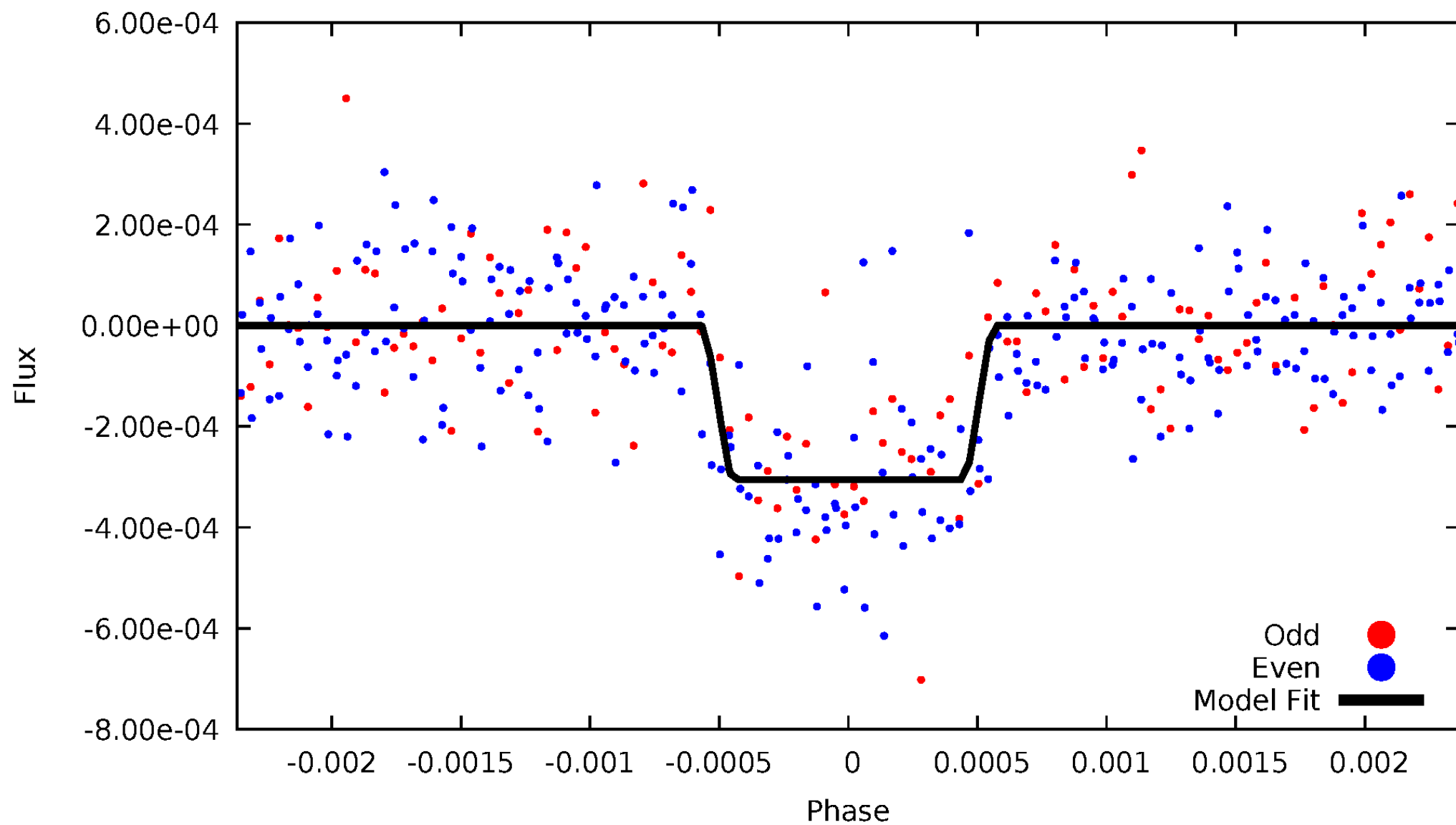
DV Odd/Even

TCE 006067545-01

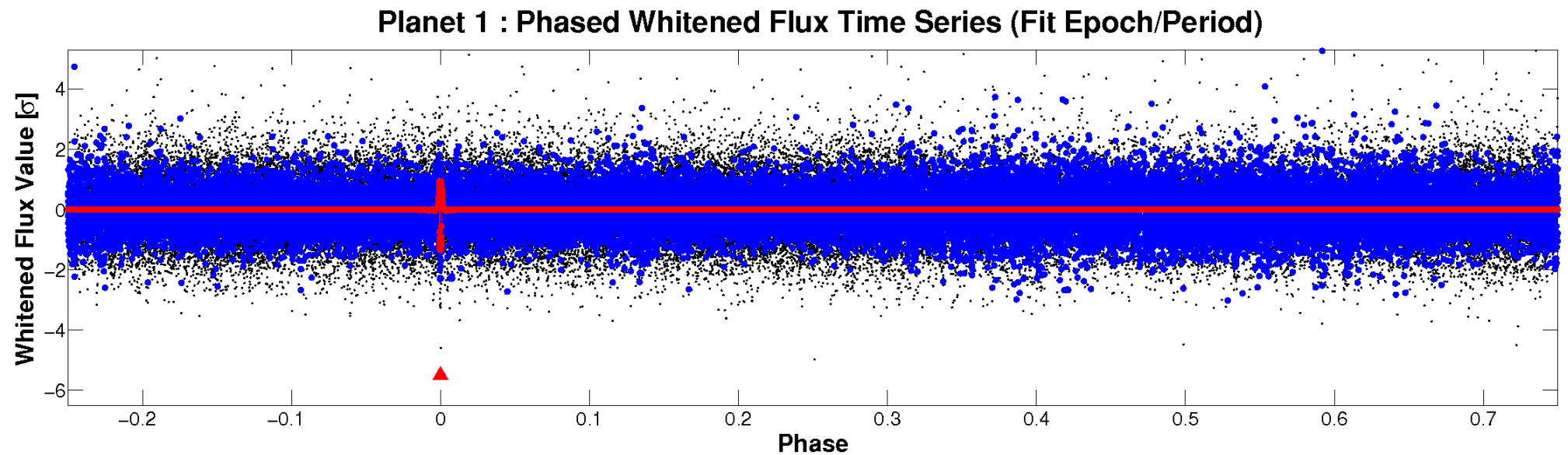
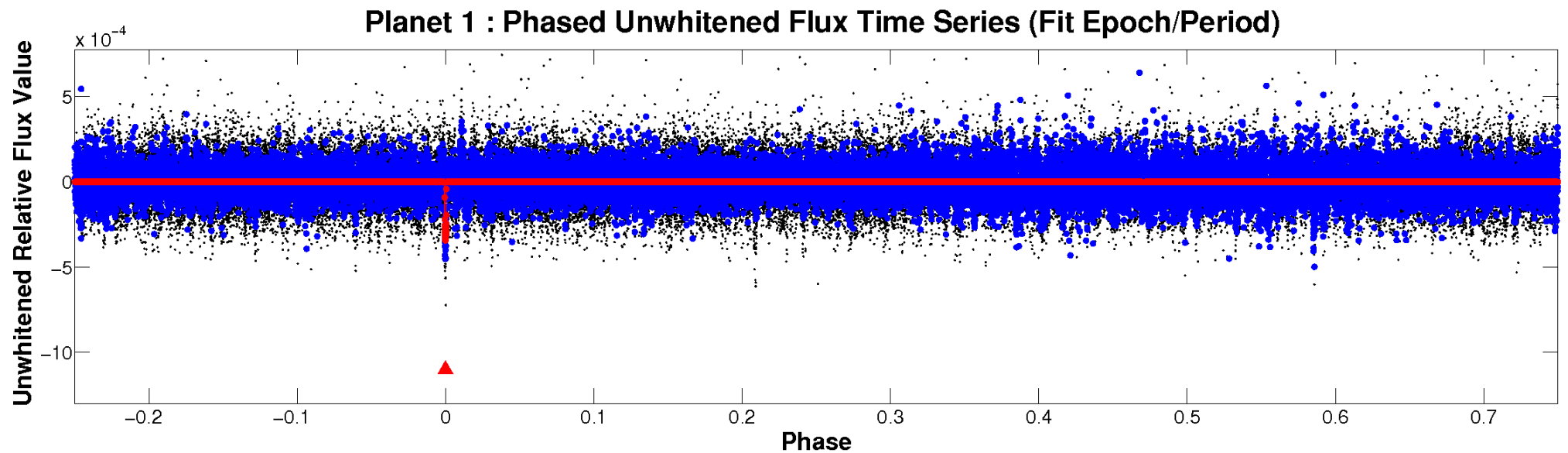


ALT Odd/Even

TCE 006067545-01

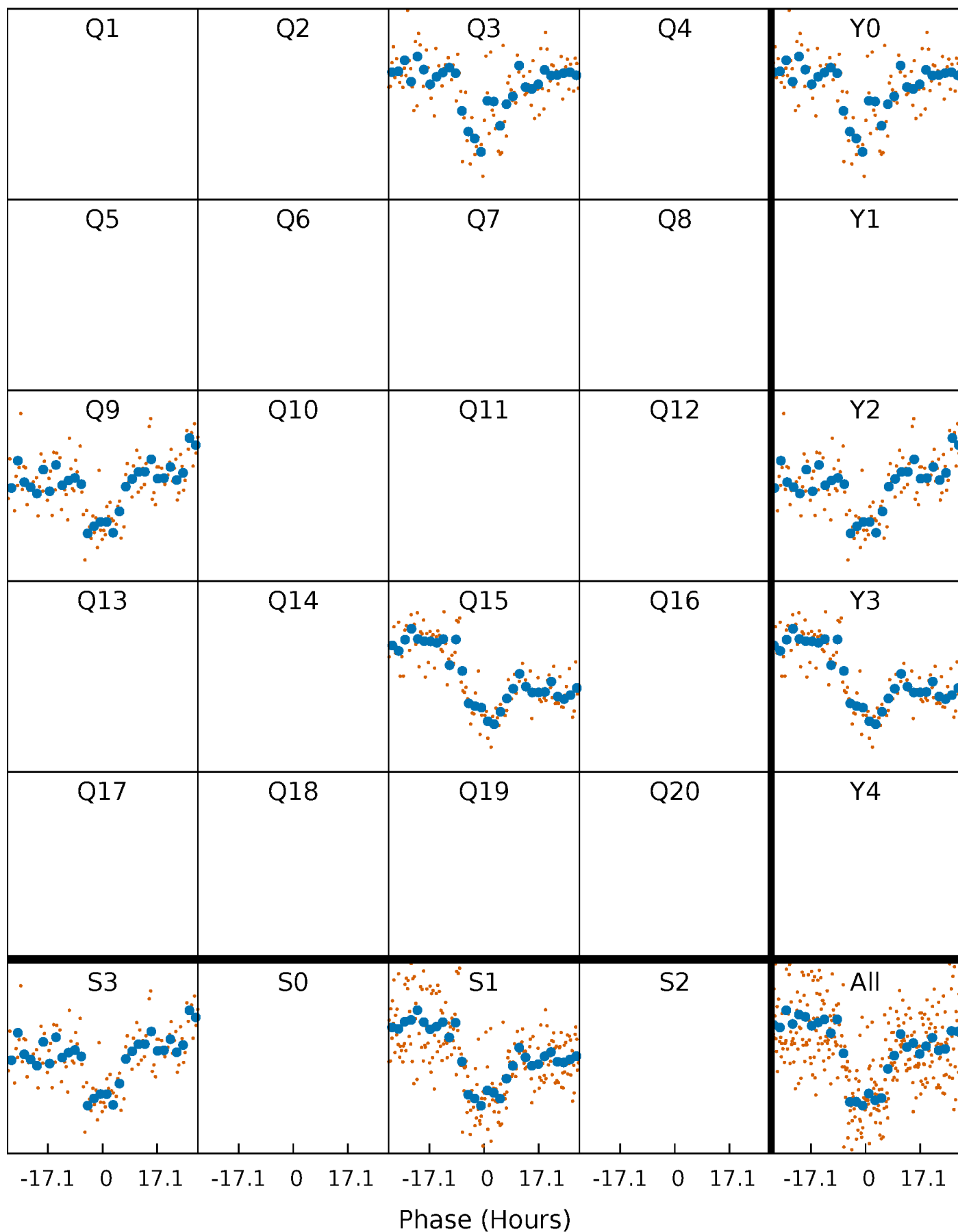


Non-Whitened Vs. Whitened Light Curve



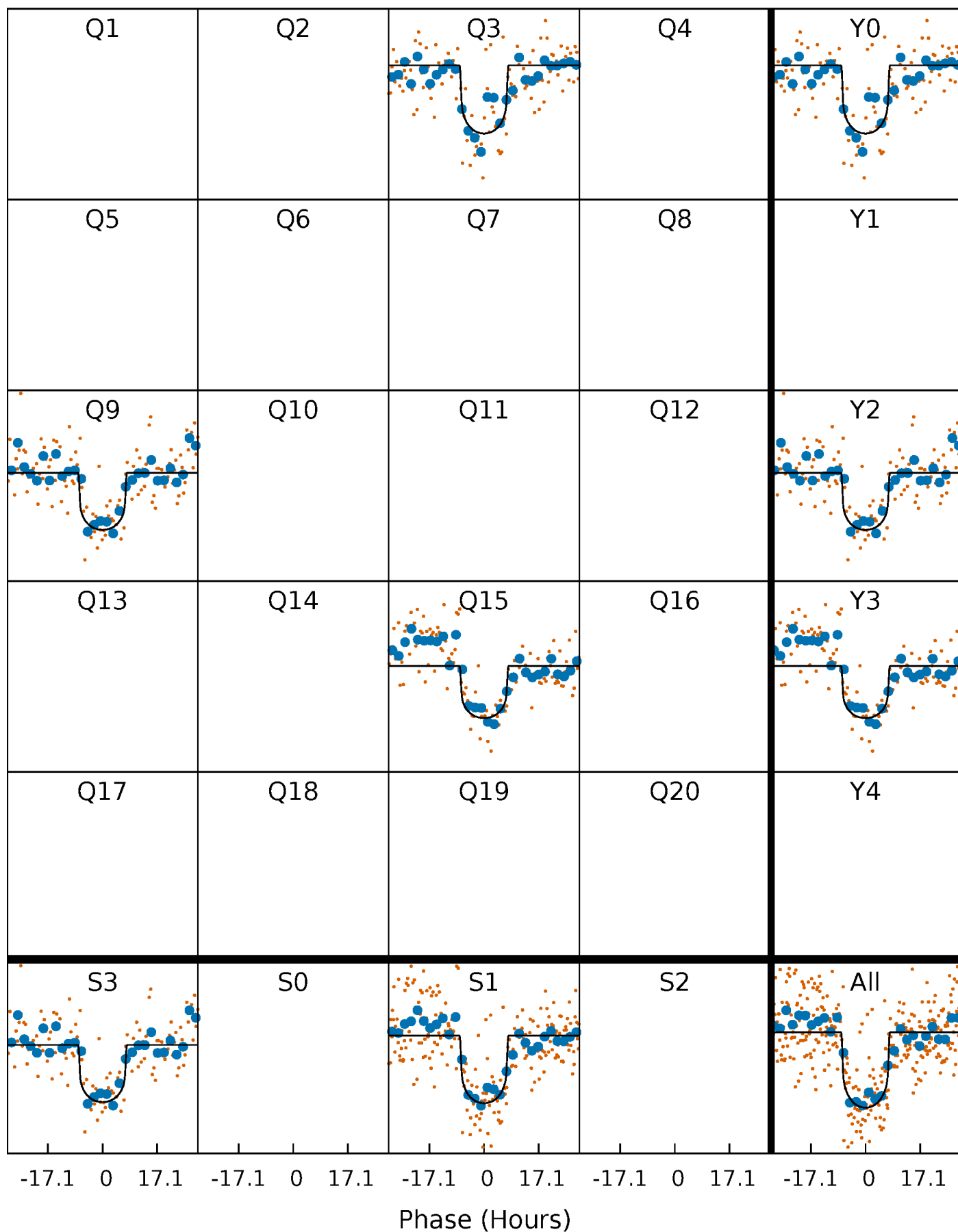
PDC Quarter-Phased Transit Curves

TCE 006067545-01 P=550.856697 Days $T_0=307.686409$ (BKJD)



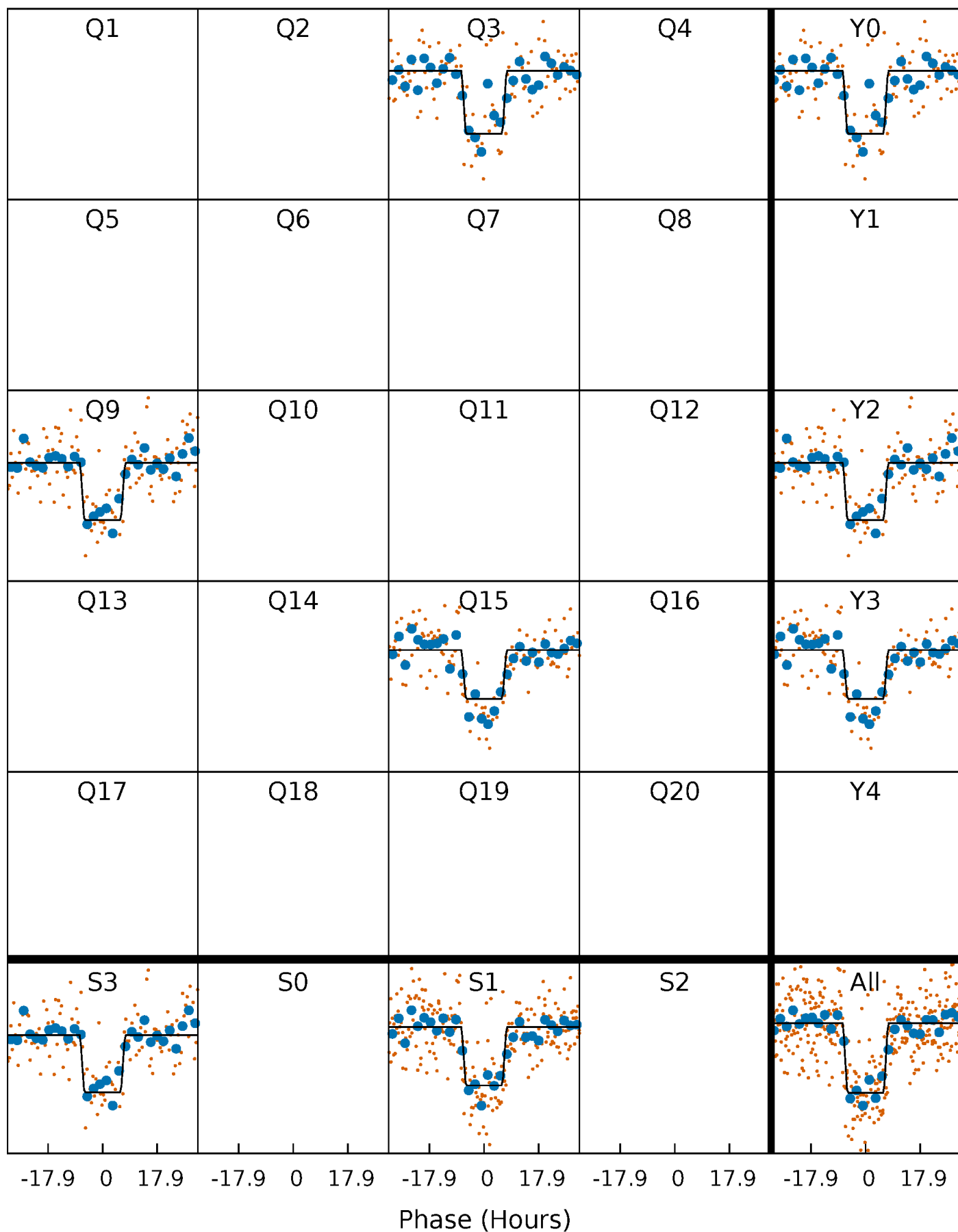
DV Quarter-Phased Transit Curves

TCE 006067545-01 P=550.856697 Days $T_0=307.686409$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

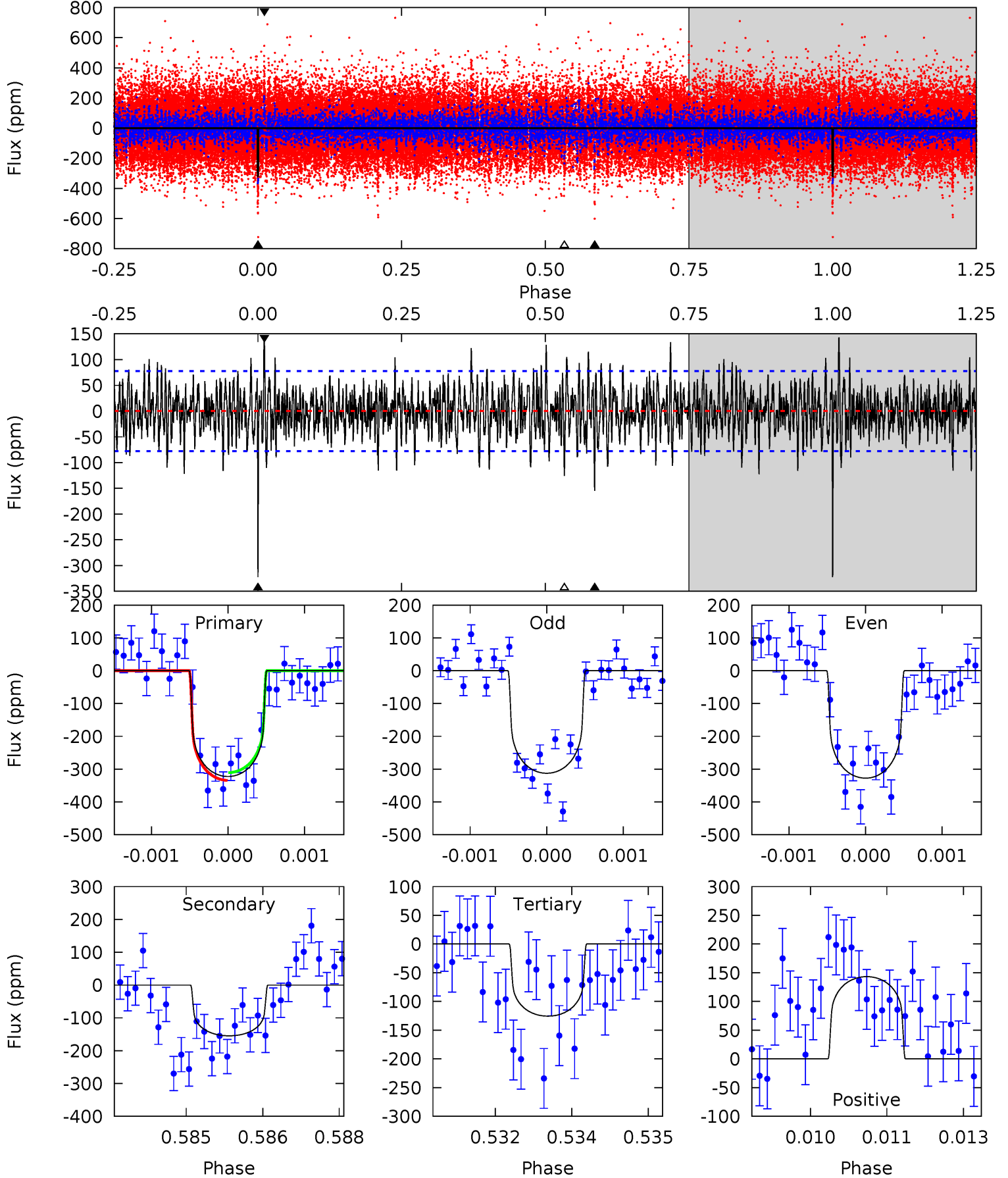
TCE 006067545-01 P=550.868344 Days $T_0=307.678664$ (BKJD)



DV Model-Shift Uniqueness Test

006067545-01, P = 550.856697 Days, E = 307.686409 Days

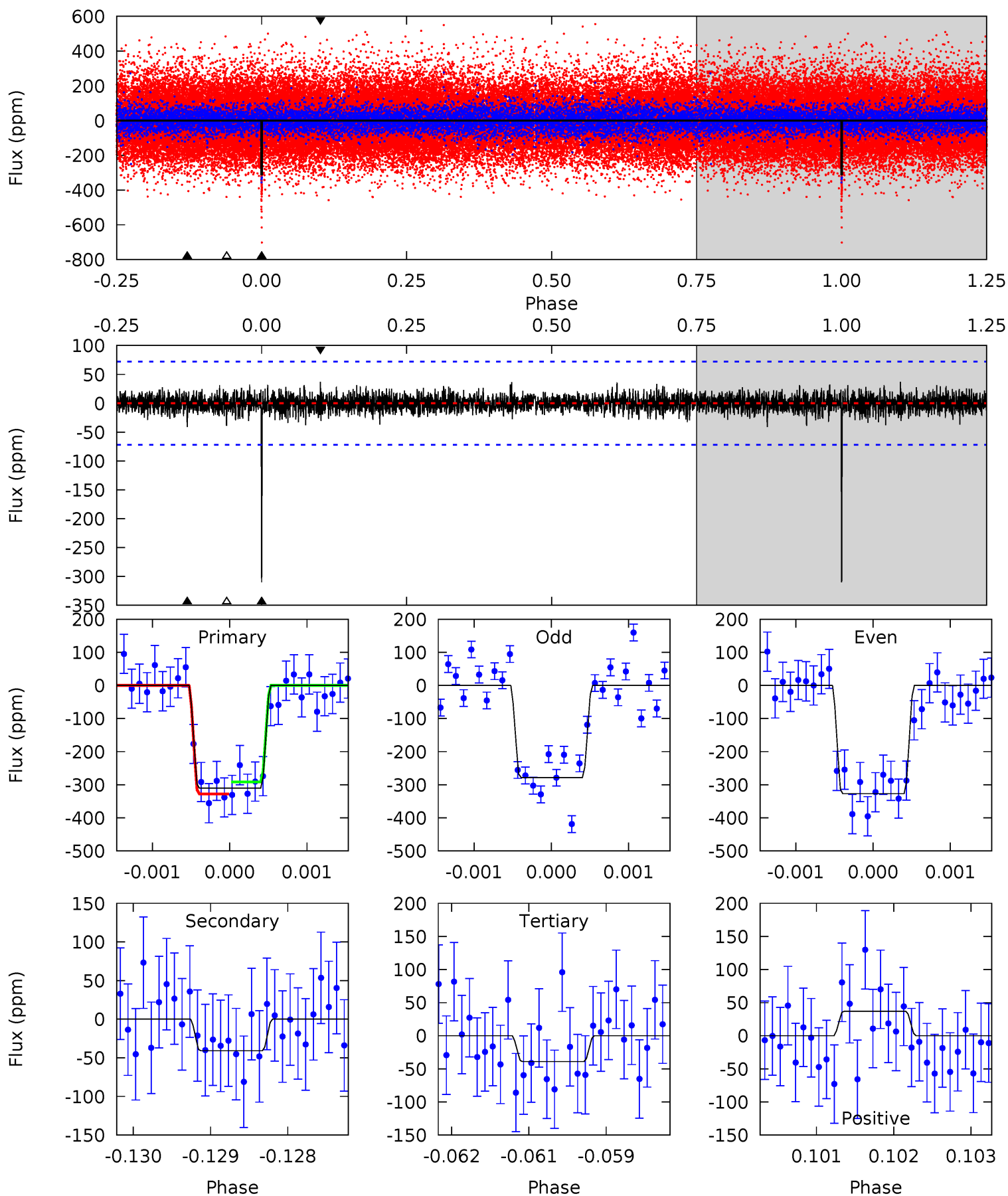
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.5	10.8	8.77	10.0	5.43	3.25	2.63	13.8	12.5	2.04	0.81	0.49	0.99	0.31	0.82



Alt Model-Shift Uniqueness Test

006067545-01, P = 550.868344 Days, E = 307.678664 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.4	3.08	2.95	2.79	5.44	3.27	0.76	20.5	20.6	0.14	0.29	1.76	1.10	0.11	1.36



Stellar Parameters For KIC 006067545

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5912^{+71}_{-82}	$4.367^{+0.080}_{-0.120}$	$0.100^{+0.150}_{-0.150}$	$1.115^{+0.181}_{-0.111}$	$1.056^{+0.075}_{-0.068}$	$1.071^{+0.356}_{-0.376}$
	+1%/-1%	+2%/-3%	+150%/-150%	+16%/-10%	+7%/-6%	+33%/-35%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 006067545-01 / KOI 5236.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-155 ± 14	$2.16^{+0.63}_{-0.67}$	333^{+15}_{-11}	5035^{+899}_{-503}	32027^{+34587}_{-12975}
Alt.	-41 ± 13	$2.20^{+0.65}_{-0.65}$	333^{+14}_{-11}	3856^{+575}_{-377}	7832^{+9653}_{-3599}

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

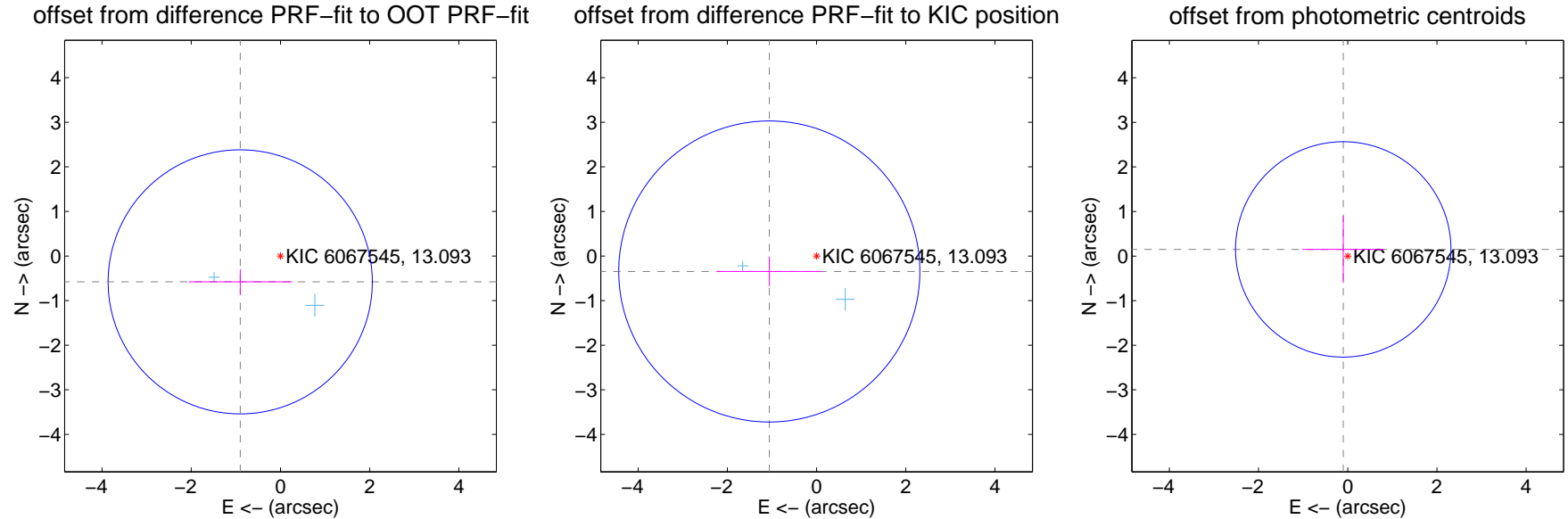
DV Centroid Data

Supplemental centroid analysis for 006067545-01. Kepler magnitude: 13.09. Transit SNR 12.34

There are 2 quarters with good PRF difference image offsets

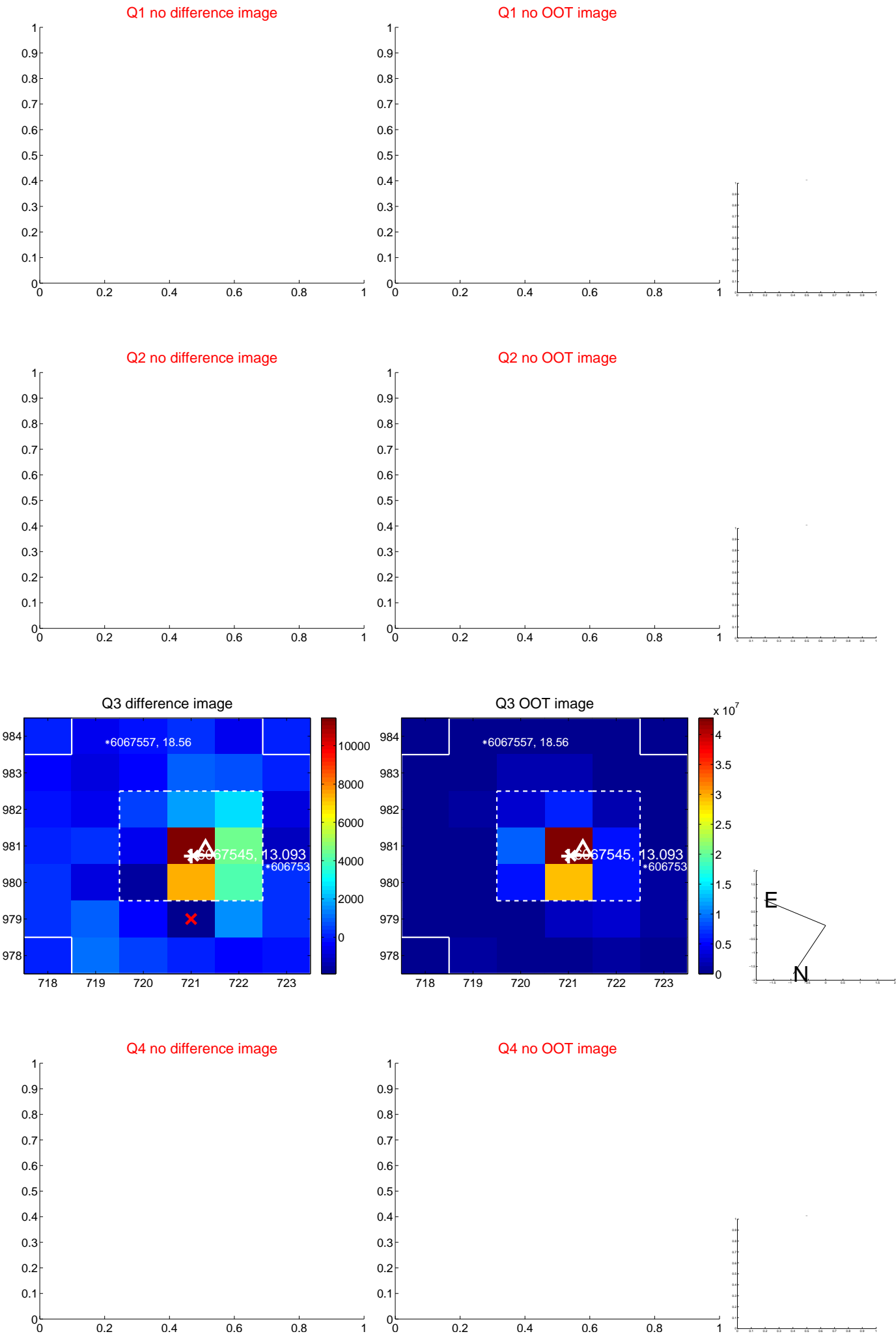
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.072 ± 0.987	1.09	0.902 ± 1.159	-0.579 ± 0.282
PRF-fit source offset from KIC position	1.115 ± 1.125	0.99	1.060 ± 1.179	-0.347 ± 0.333
photometric centroid source offset	0.18 ± 0.81	0.22	0.10 ± 0.92	0.15 ± 0.75



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.

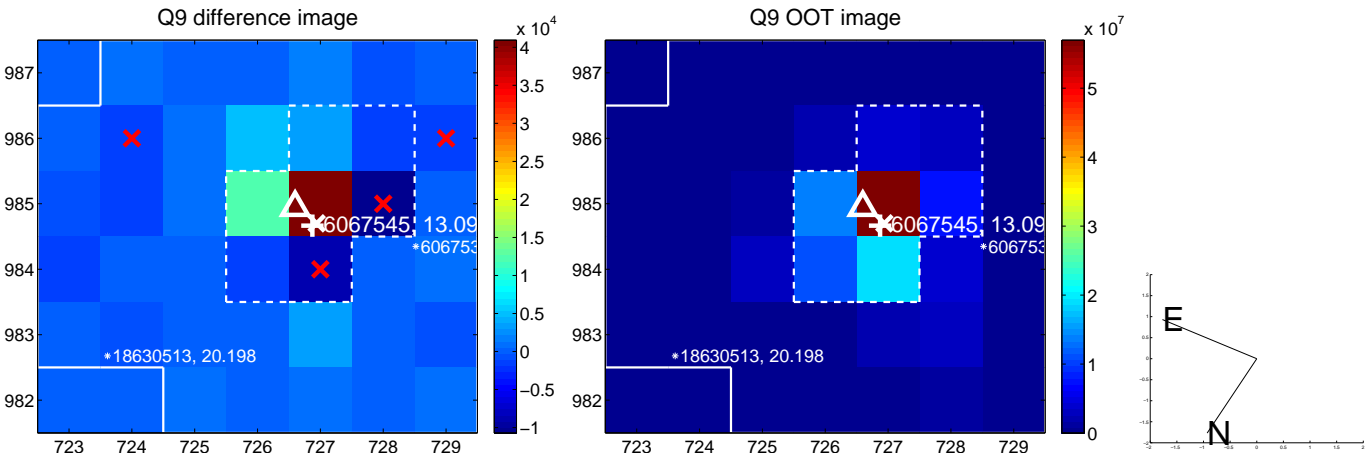
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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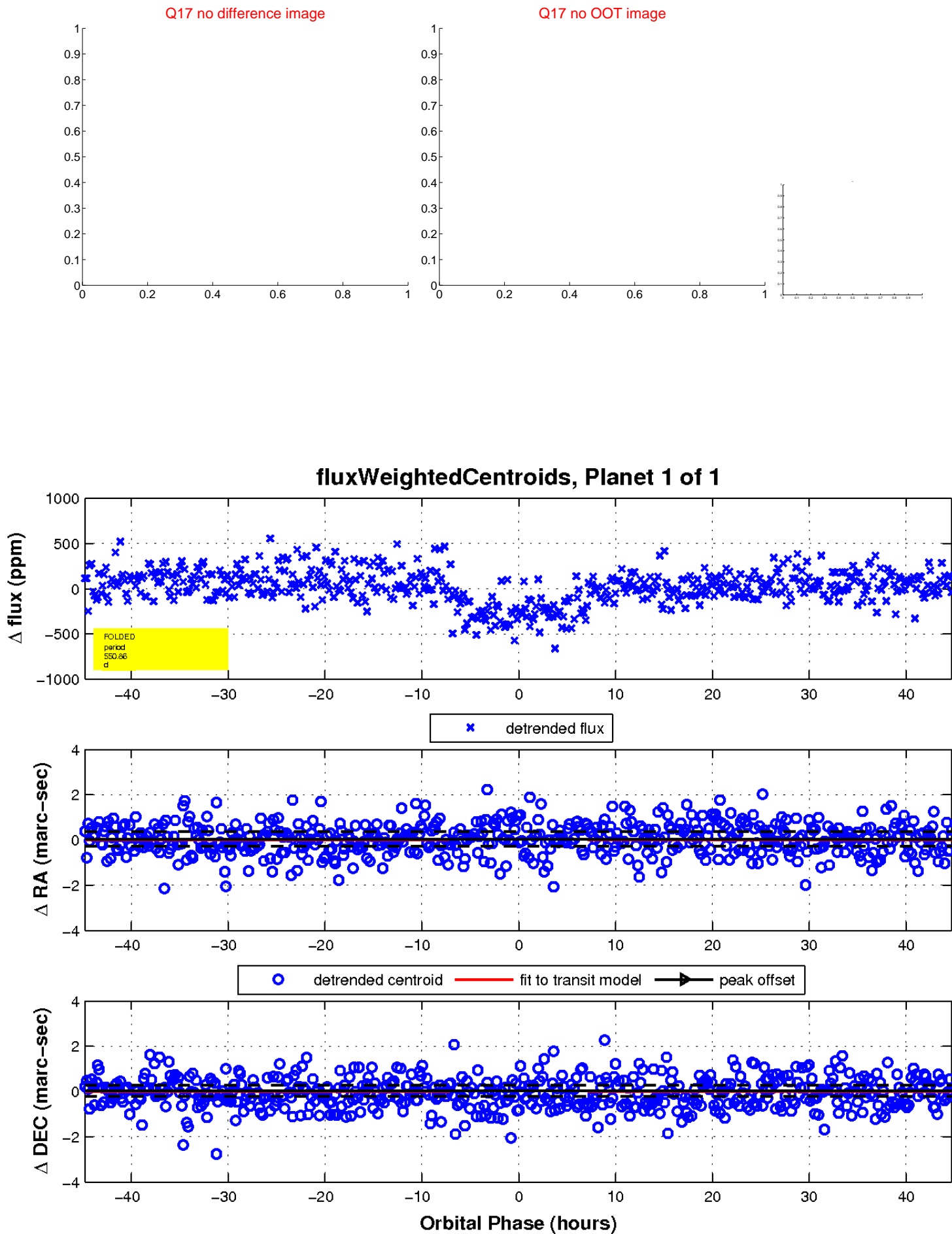
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

