

KIC 004667807

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})
004667807-01	OBS	No	524.141380	333.022581	394.2	7.947	7.7	7.8	1.09	5948	2.45	0.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004667807-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

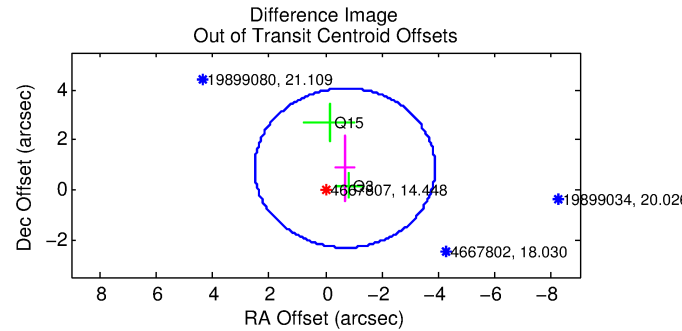
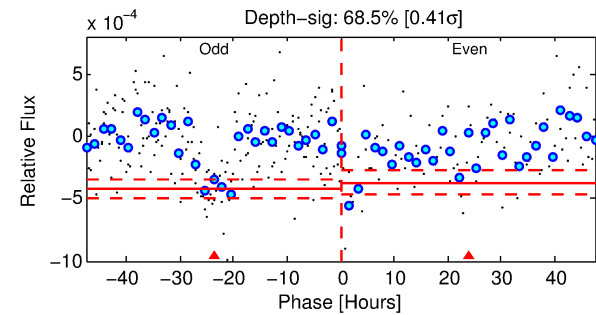
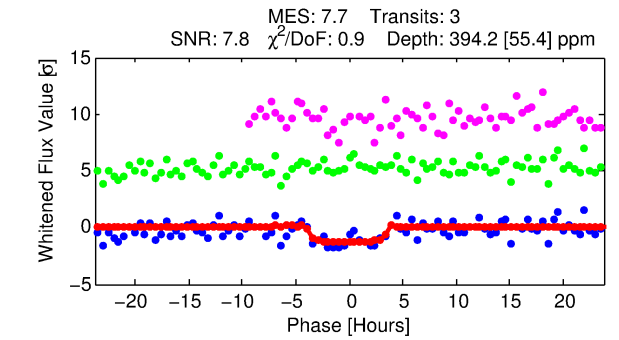
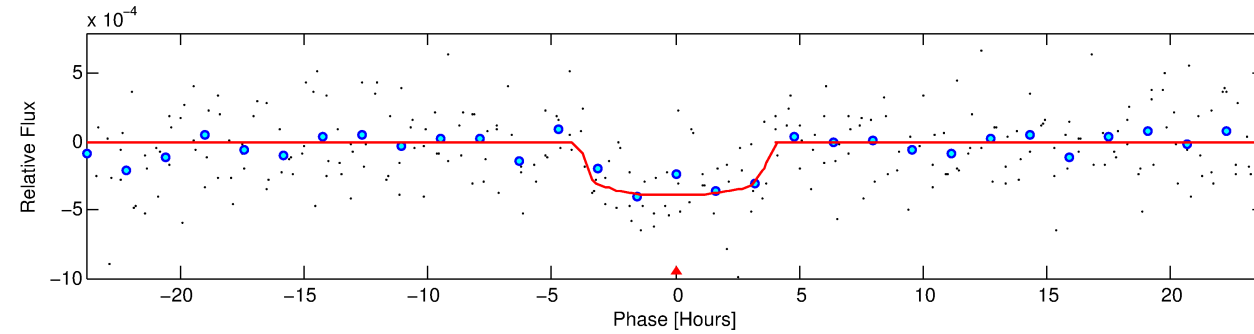
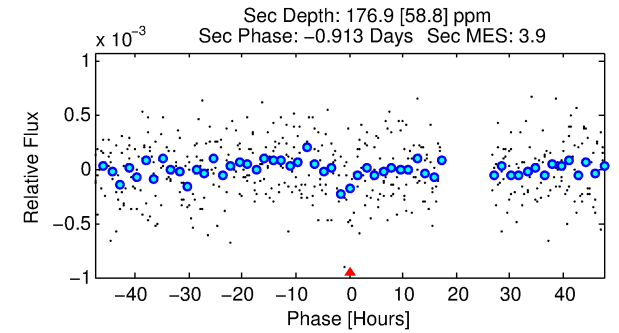
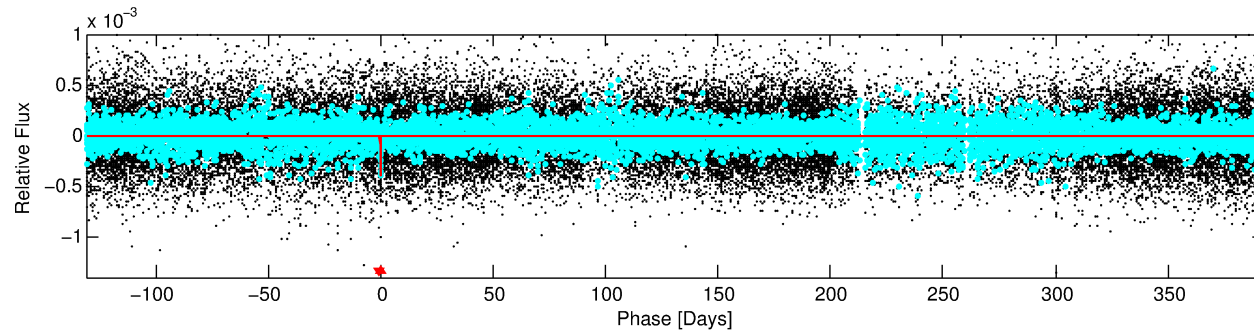
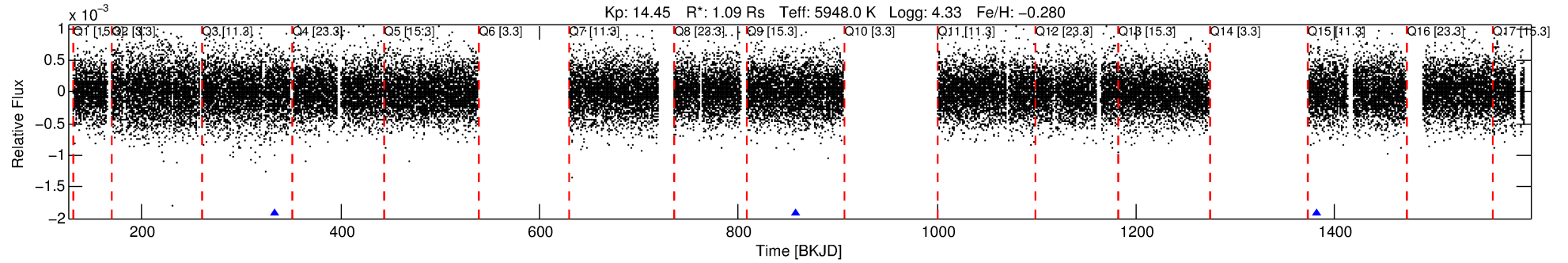
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004667807-01

No Significant Match Found

DV One-Page Summary

KIC: 4667807 Candidate: 1 of 1 Period: 524.141 d



DV Fit Results:

Period = 524.14138 [0.01145] d
Epoch = 333.0226 [0.0173] BKJD
Rp/R* = 0.0206 [0.0074]
a/R* = 286.87 [500.40]
b = 0.85 [0.59]
Seff = 0.87 [0.31]
Teff = 246 [22] K
Rp = 2.45 [1.13] Re
a = 1.2381 [0.2939] AU
Ag = 24850.86 [21324.65] [1.17 σ]
Teffp = 4775 [953] K [4.75 σ]

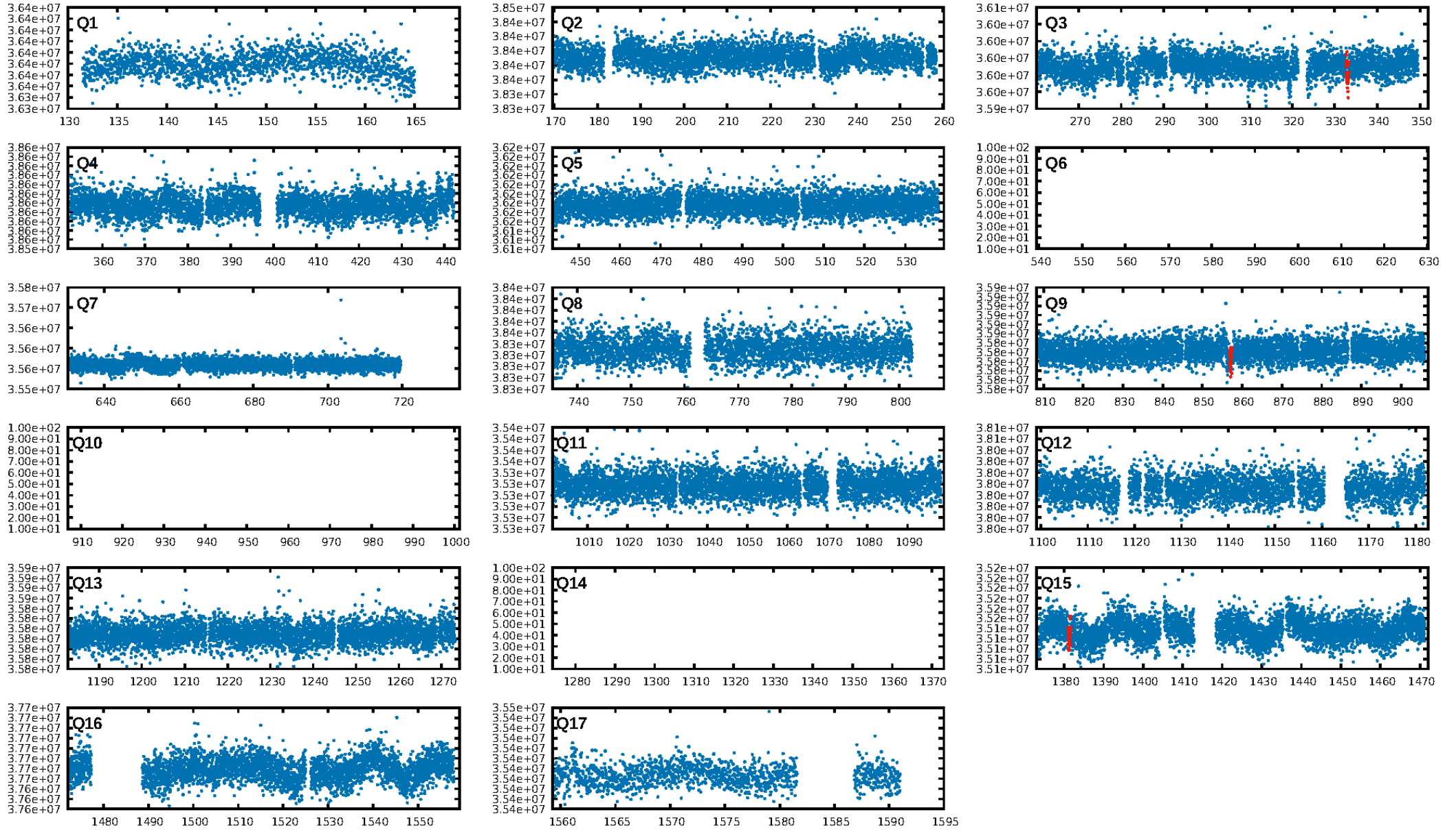
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.7%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 2.53e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.215
Centroid-sig: 53.0%
Centroid-so: 1.310 arcsec [0.71 σ]
OotOffset-rm: 1.108 arcsec [1.04 σ]
KicOffset-rm: 1.124 arcsec [1.15 σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

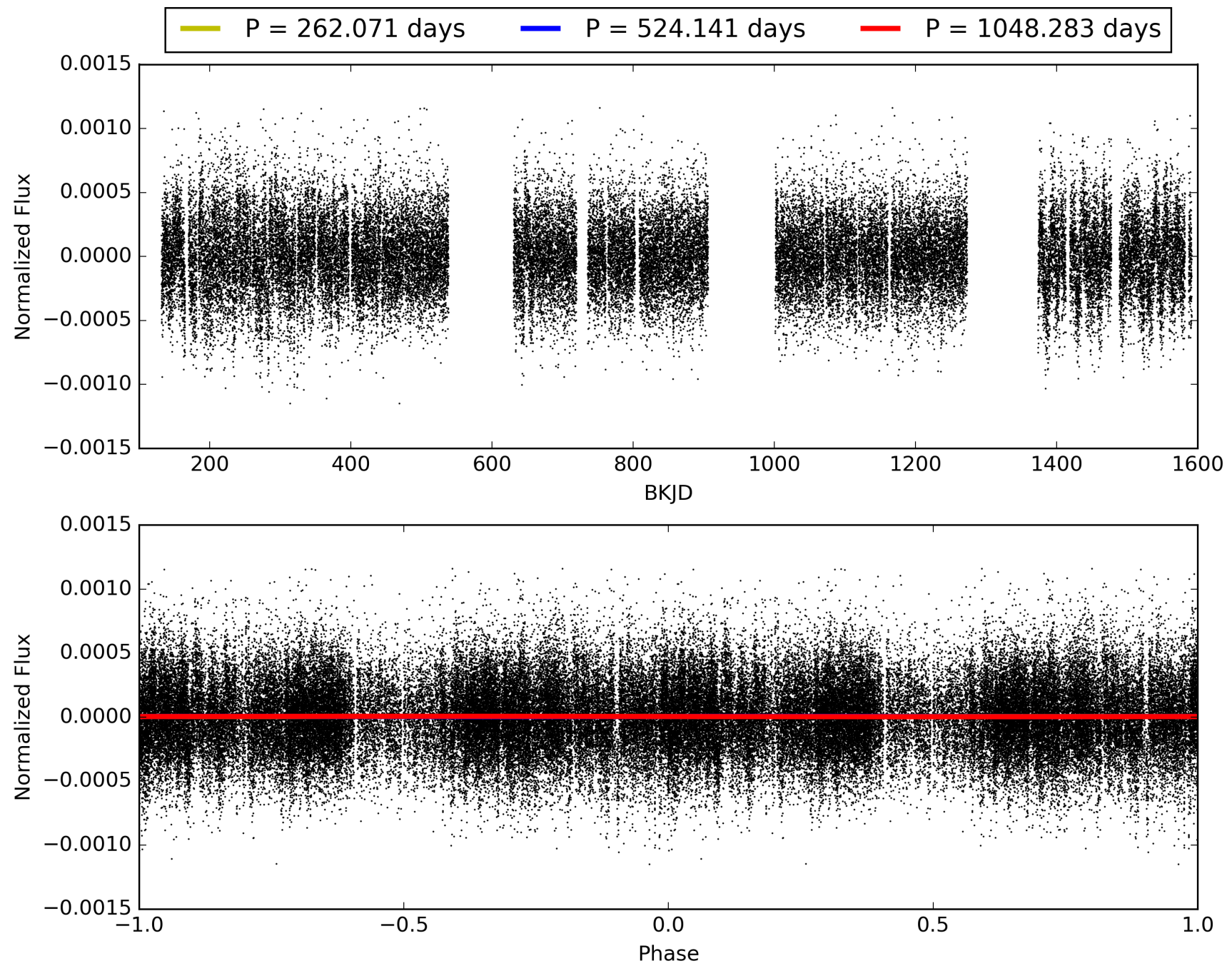
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:12:50 Z

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

TCE 004667807-01, PDC Light Curves

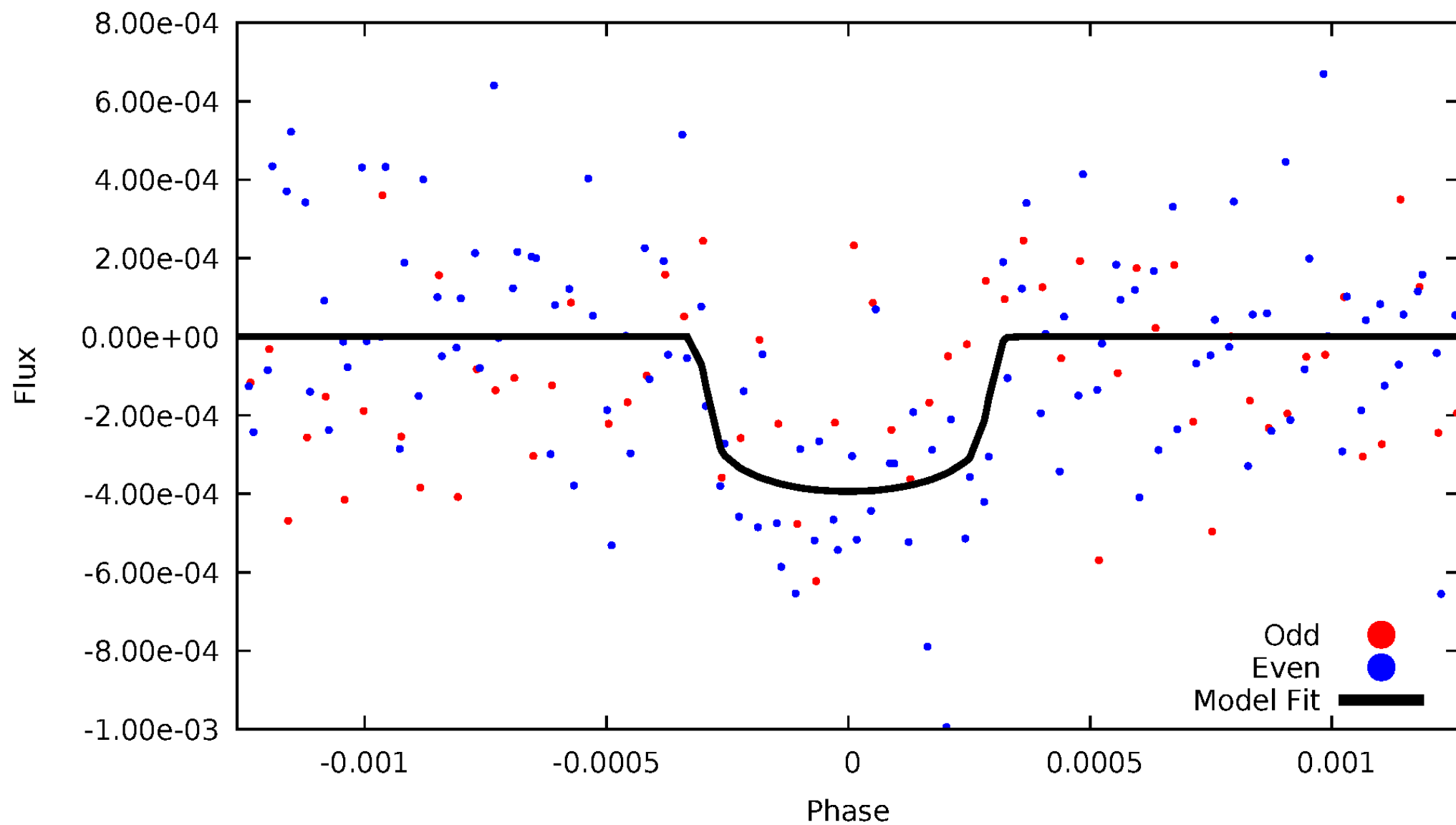


TCE 004667807-01



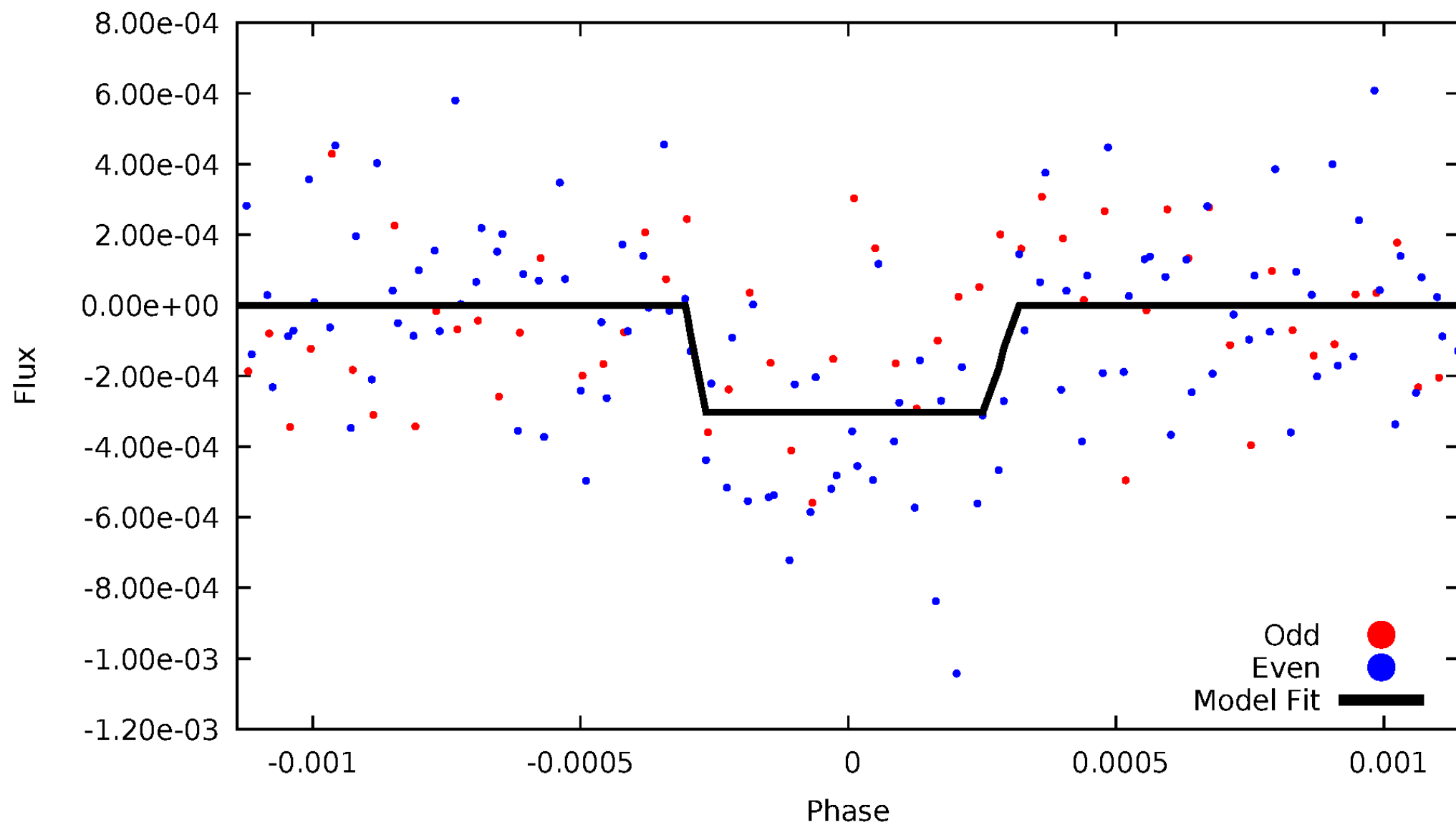
DV Odd/Even

TCE 004667807-01



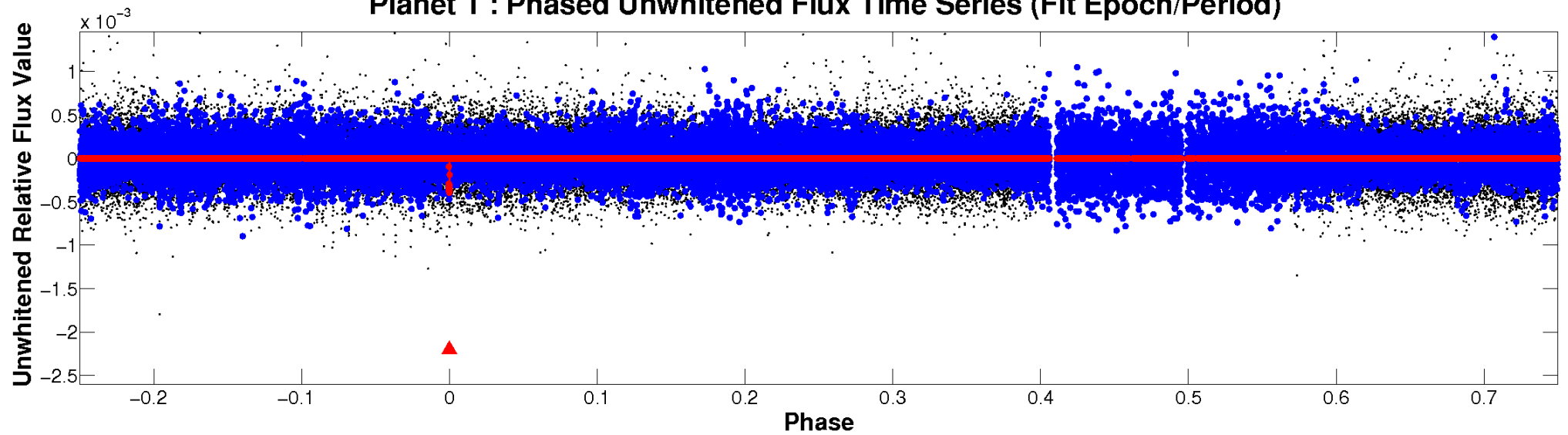
ALT Odd/Even

TCE 004667807-01

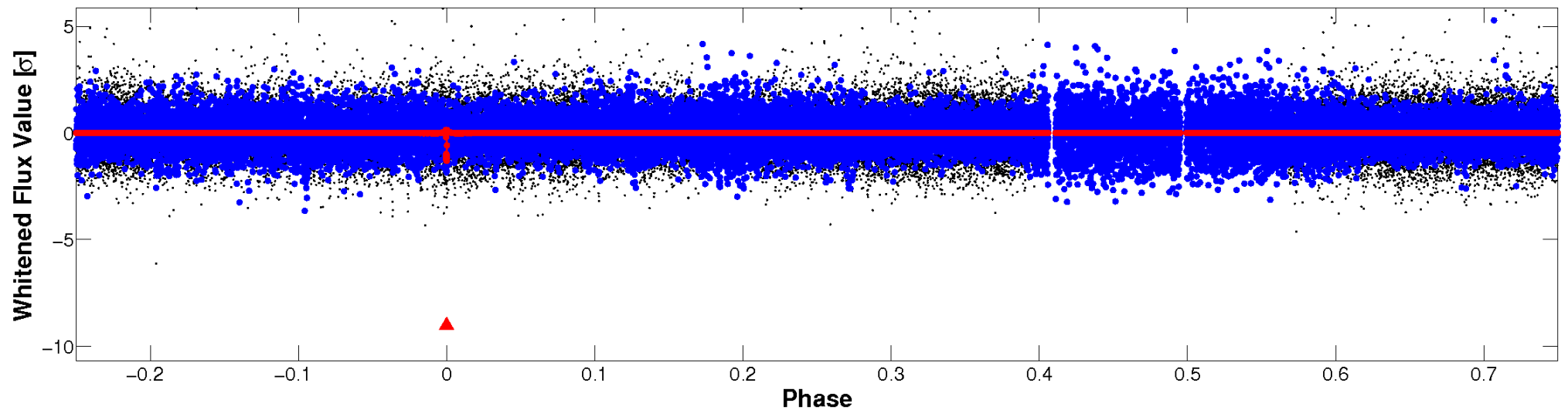


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

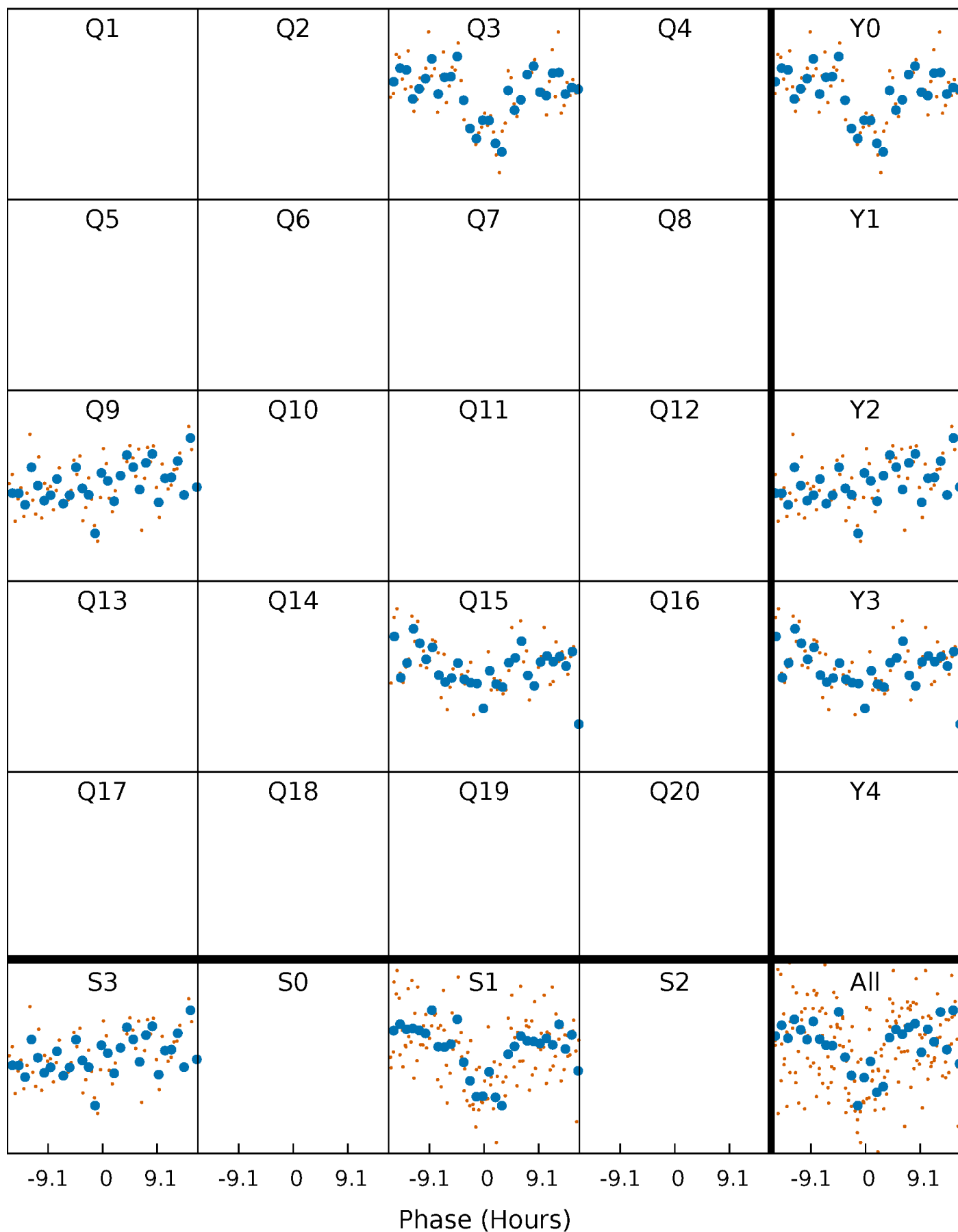


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



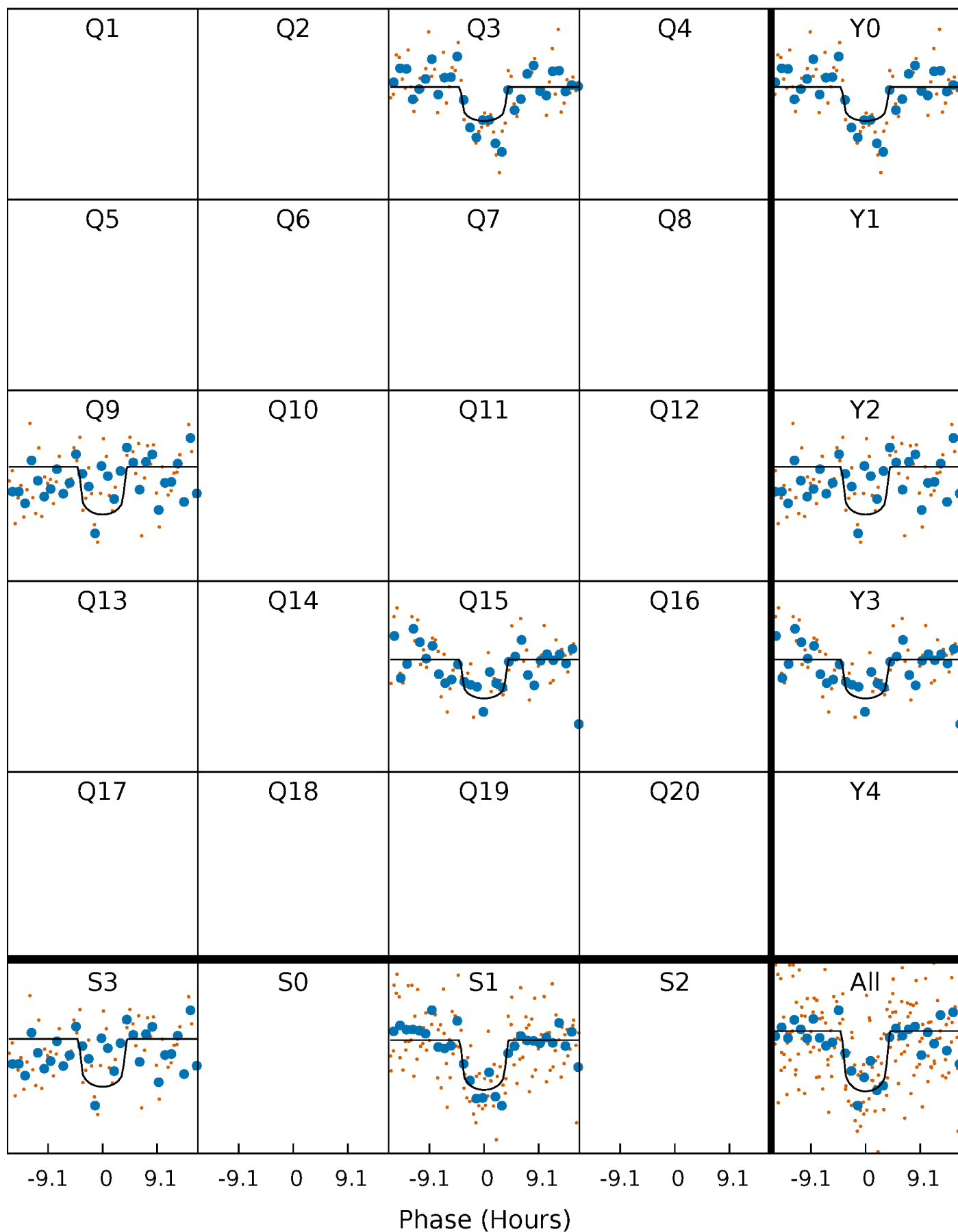
PDC Quarter-Phased Transit Curves

TCE 004667807-01 P=524.141380 Days $T_0=333.022581$ (BKJD)



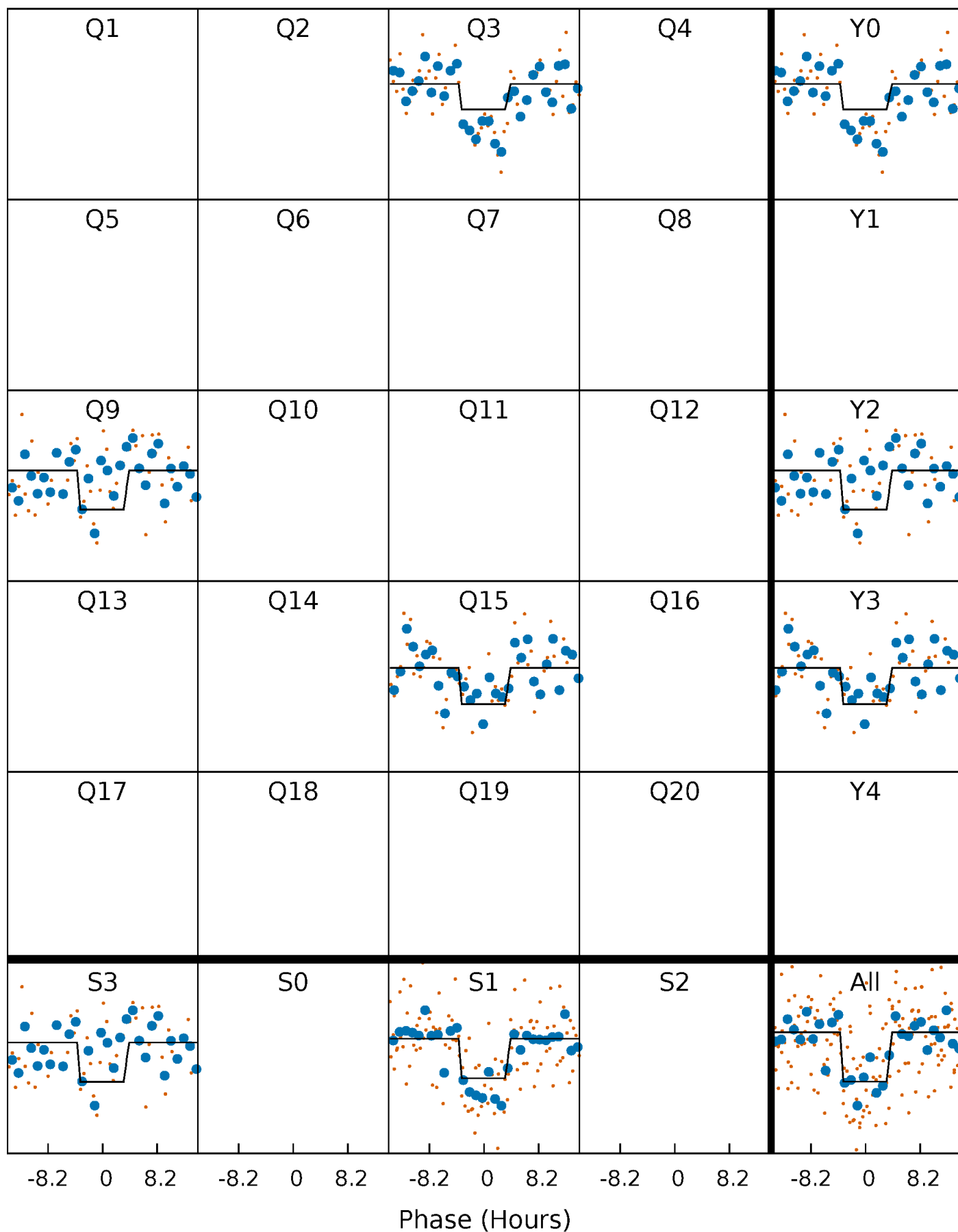
DV Quarter-Phased Transit Curves

TCE 004667807-01 P=524.141380 Days $T_0=333.022581$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

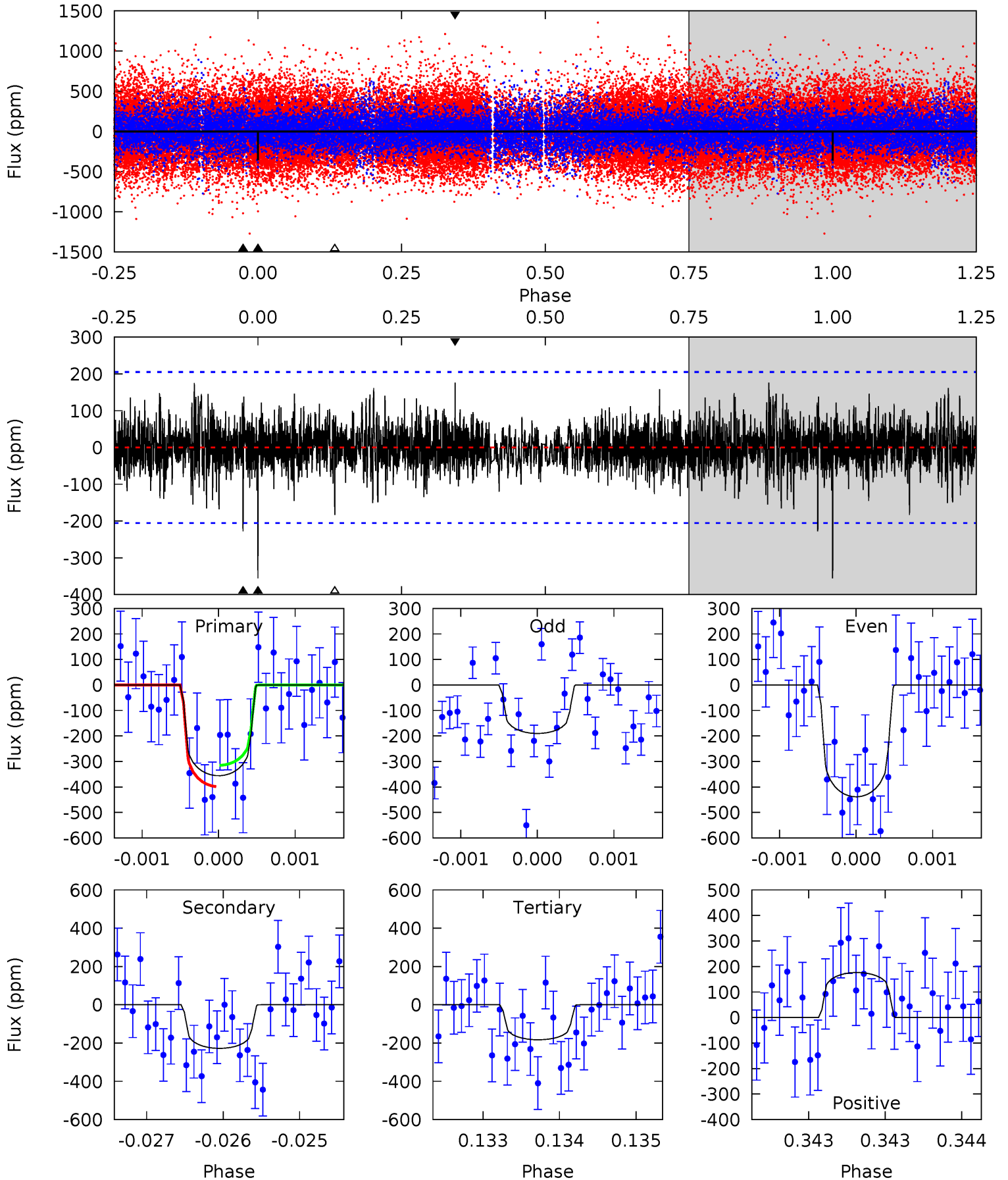
TCE 004667807-01 P=524.141247 Days $T_0=333.023013$ (BKJD)



DV Model-Shift Uniqueness Test

004667807-01, P = 524.141380 Days, E = 333.022581 Days

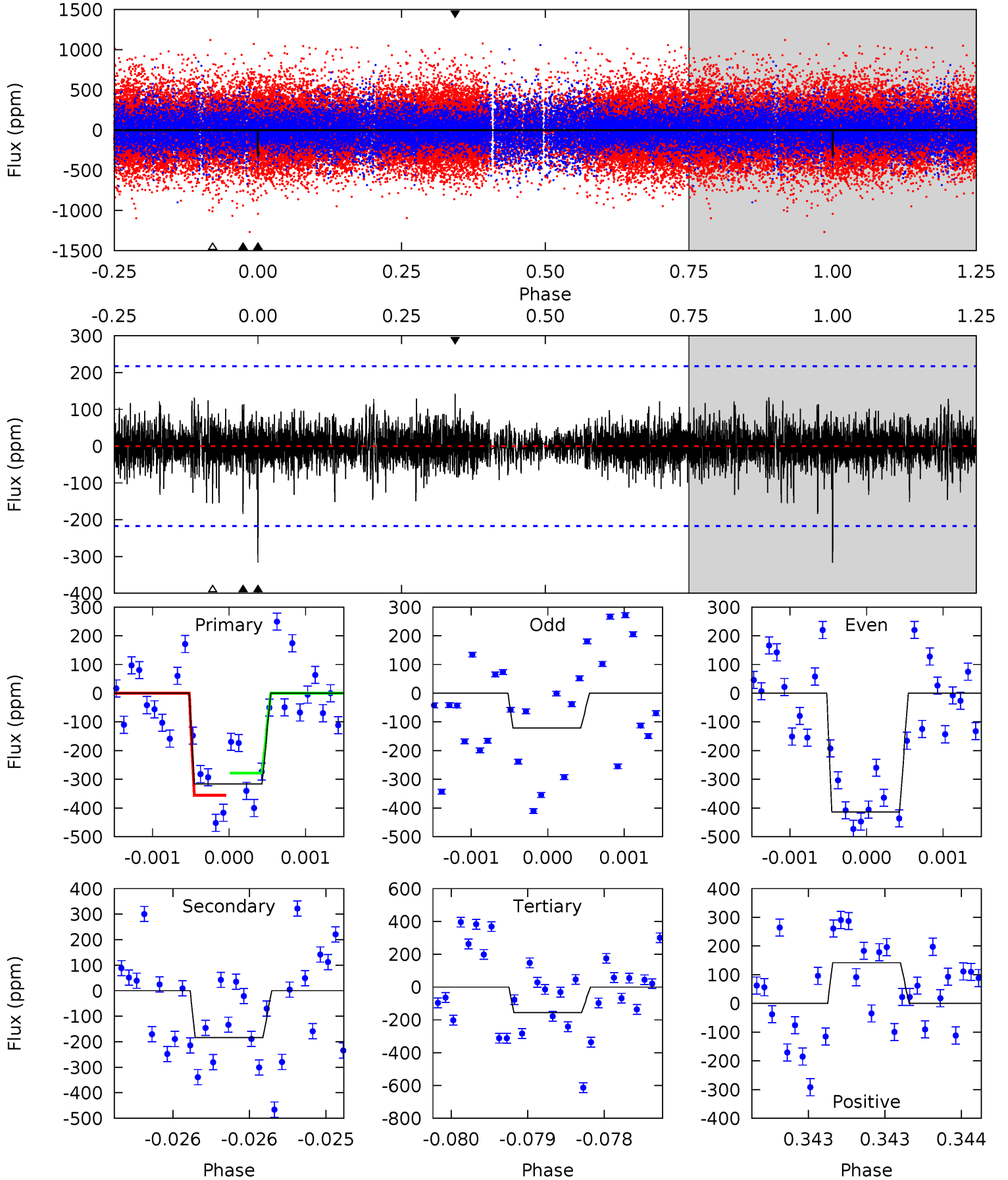
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.57	6.12	4.92	4.74	5.52	3.40	1.15	4.65	4.82	1.20	1.38	3.22	1.14	0.33	1.12



Alt Model-Shift Uniqueness Test

004667807-01, P = 524.141247 Days, E = 333.023013 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.08	4.69	3.97	3.62	5.55	3.44	0.89	4.11	4.46	0.72	1.07	3.60	1.31	0.31	0.98



Stellar Parameters For KIC 004667807

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5948^{+178}_{-178}	$4.329^{+0.180}_{-0.180}$	$-0.280^{+0.300}_{-0.300}$	$1.088^{+0.315}_{-0.210}$	$0.919^{+0.130}_{-0.095}$	$1.006^{+0.887}_{-0.504}$
	+3%/-3%	+4%/-4%	+107%/-107%	+29%/-19%	+14%/-10%	+88%/-50%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 004667807-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-228 ± 37	$2.39^{+1.07}_{-0.80}$	346^{+26}_{-24}	5172^{+1195}_{-691}	32814^{+43661}_{-17462}
Alt.	-184 ± 39	$2.08^{+0.95}_{-0.87}$	344^{+25}_{-22}	5280^{+1565}_{-734}	34968^{+72490}_{-18535}

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 $A_{\text{obs}} \gg 1.0$

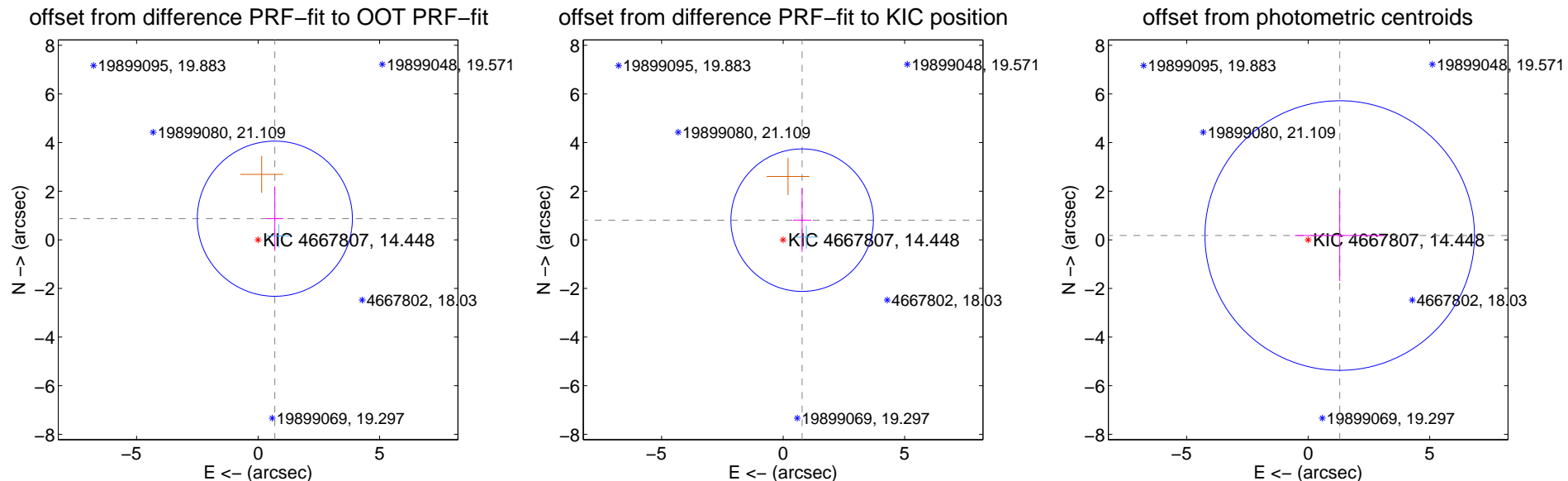
DV Centroid Data

Supplemental centroid analysis for 004667807-01. Kepler magnitude: 14.45. Transit SNR 7.79

There are 1 quarters with good PRF difference image offsets

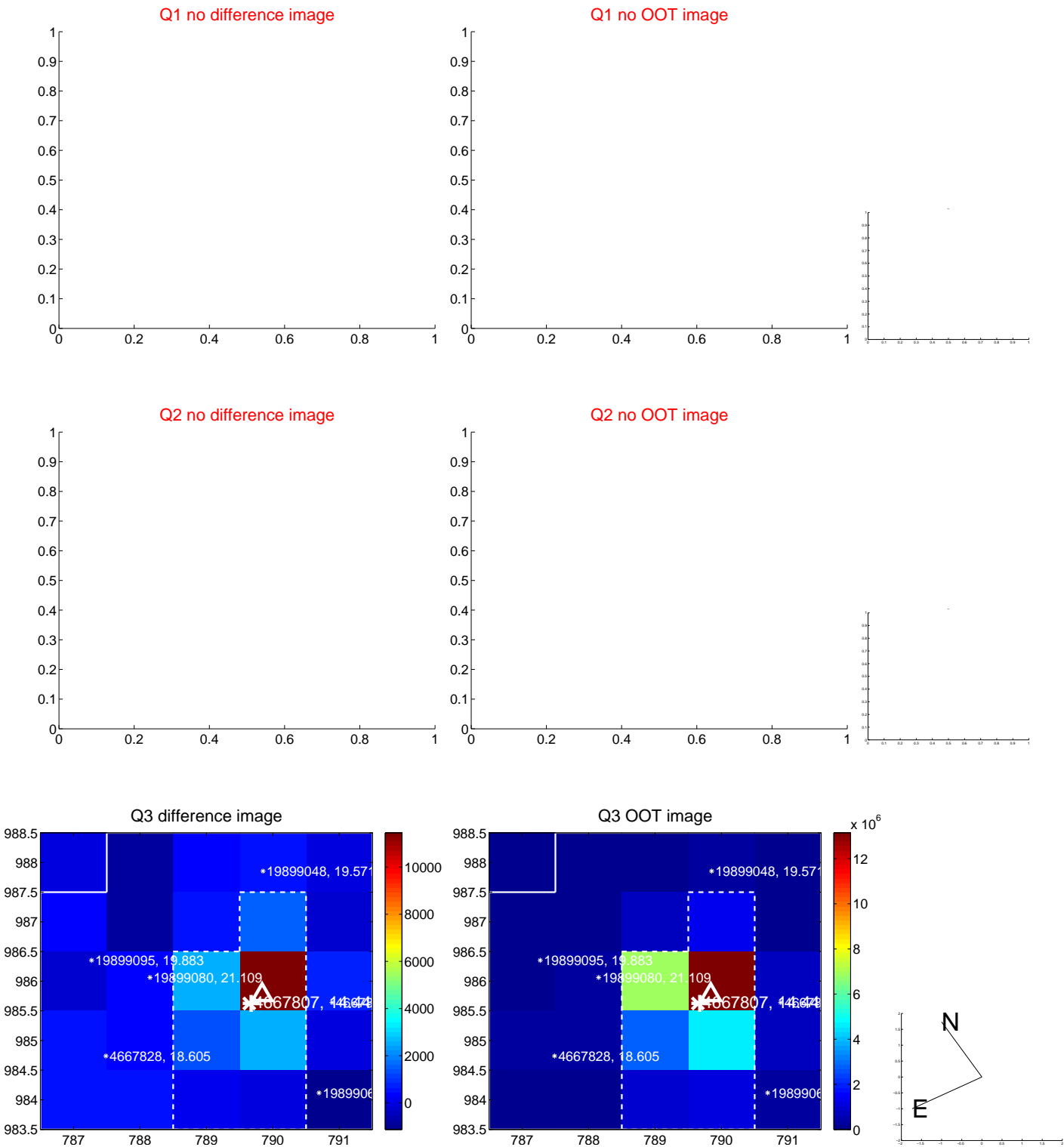
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.108 ± 1.064	1.04	-0.688 ± 0.351	0.869 ± 1.328
PRF-fit source offset from KIC position	1.124 ± 0.977	1.15	-0.781 ± 0.377	0.808 ± 1.308
photometric centroid source offset	1.31 ± 1.85	0.71	-1.30 ± 1.85	0.18 ± 1.87



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.

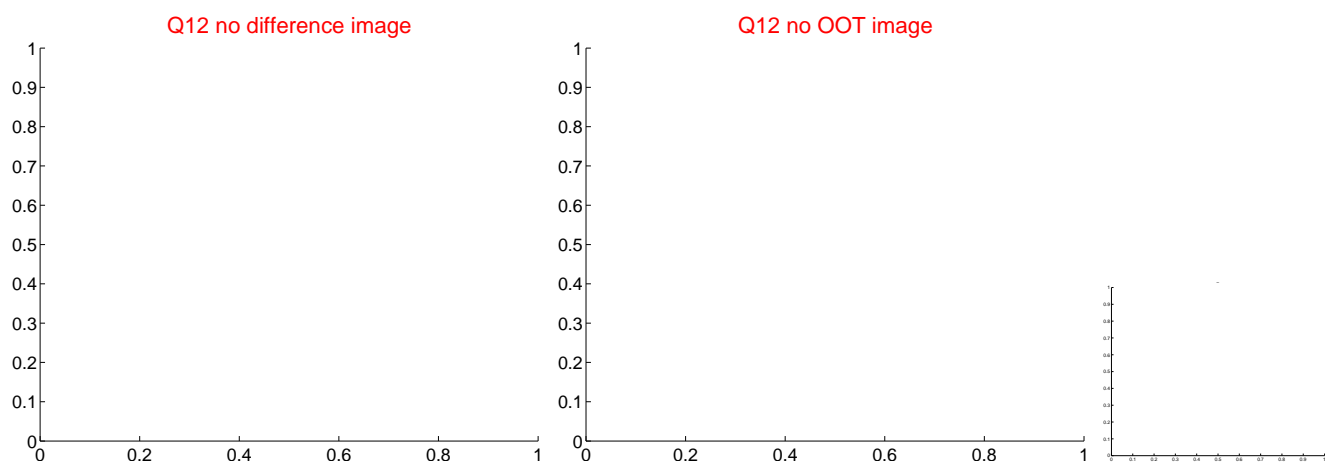
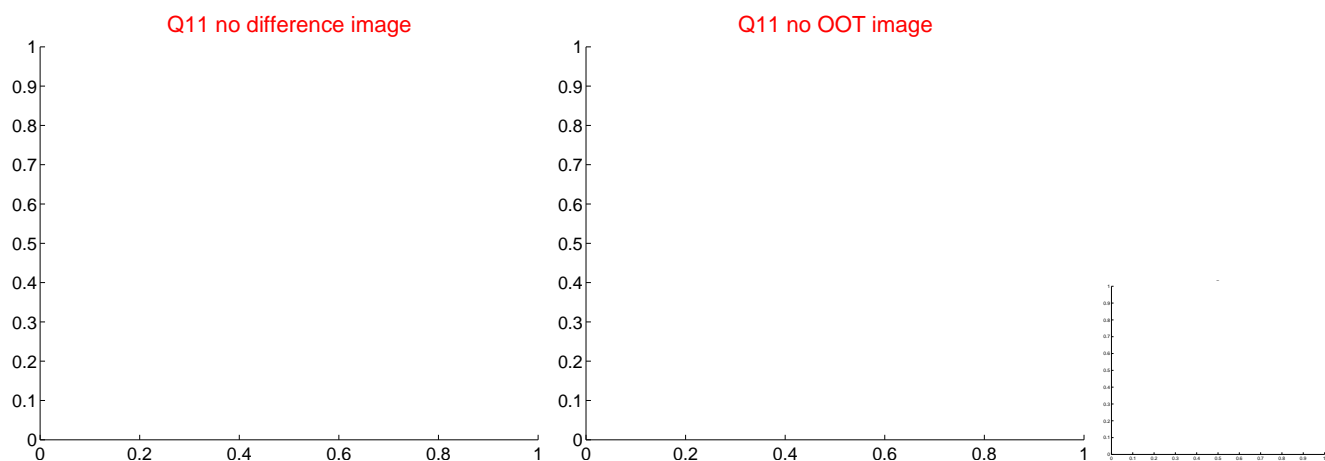
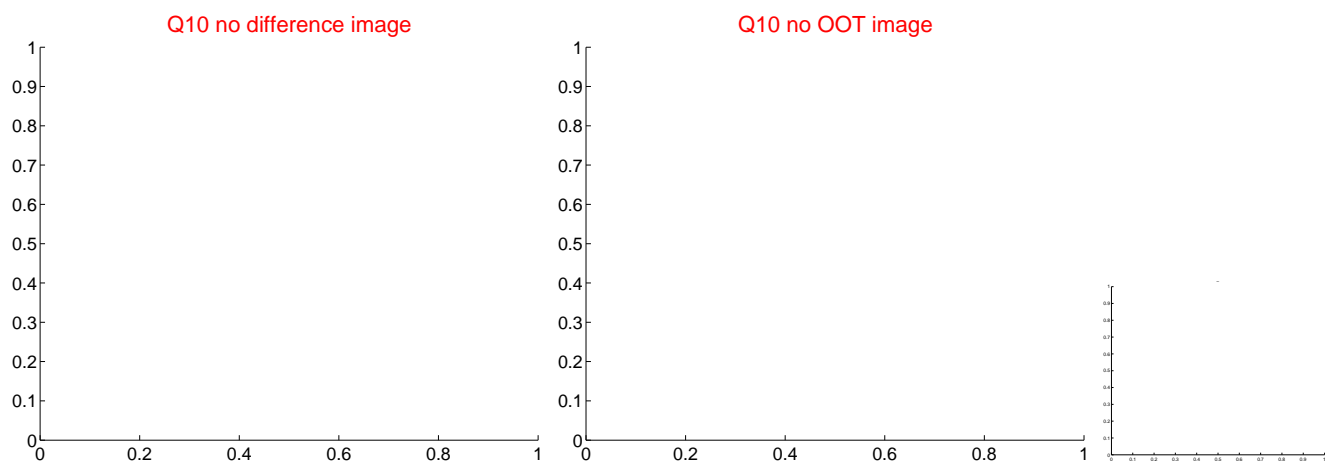
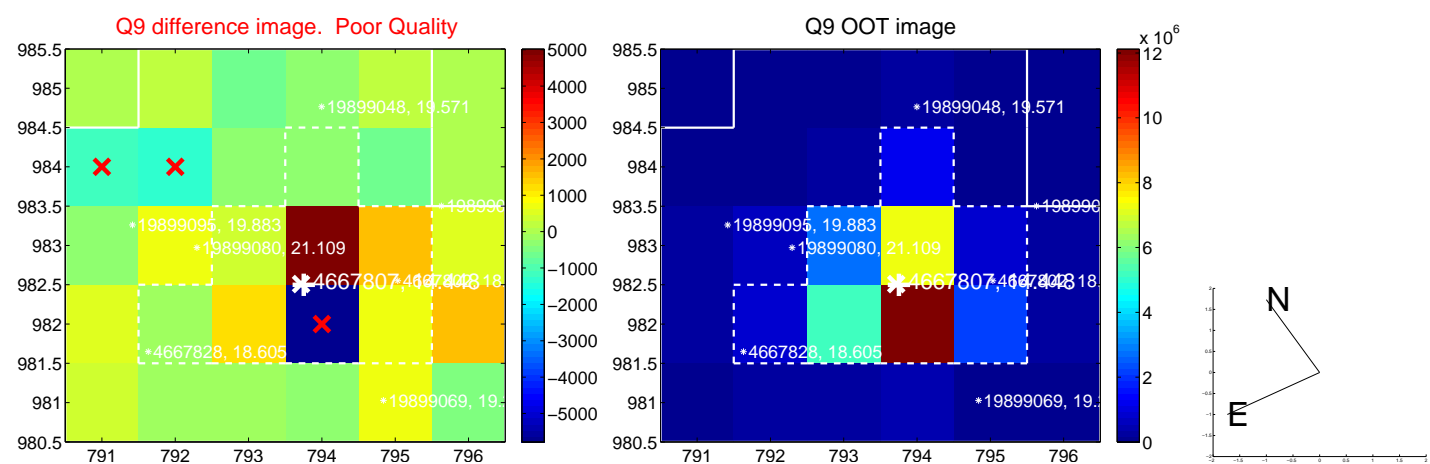
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



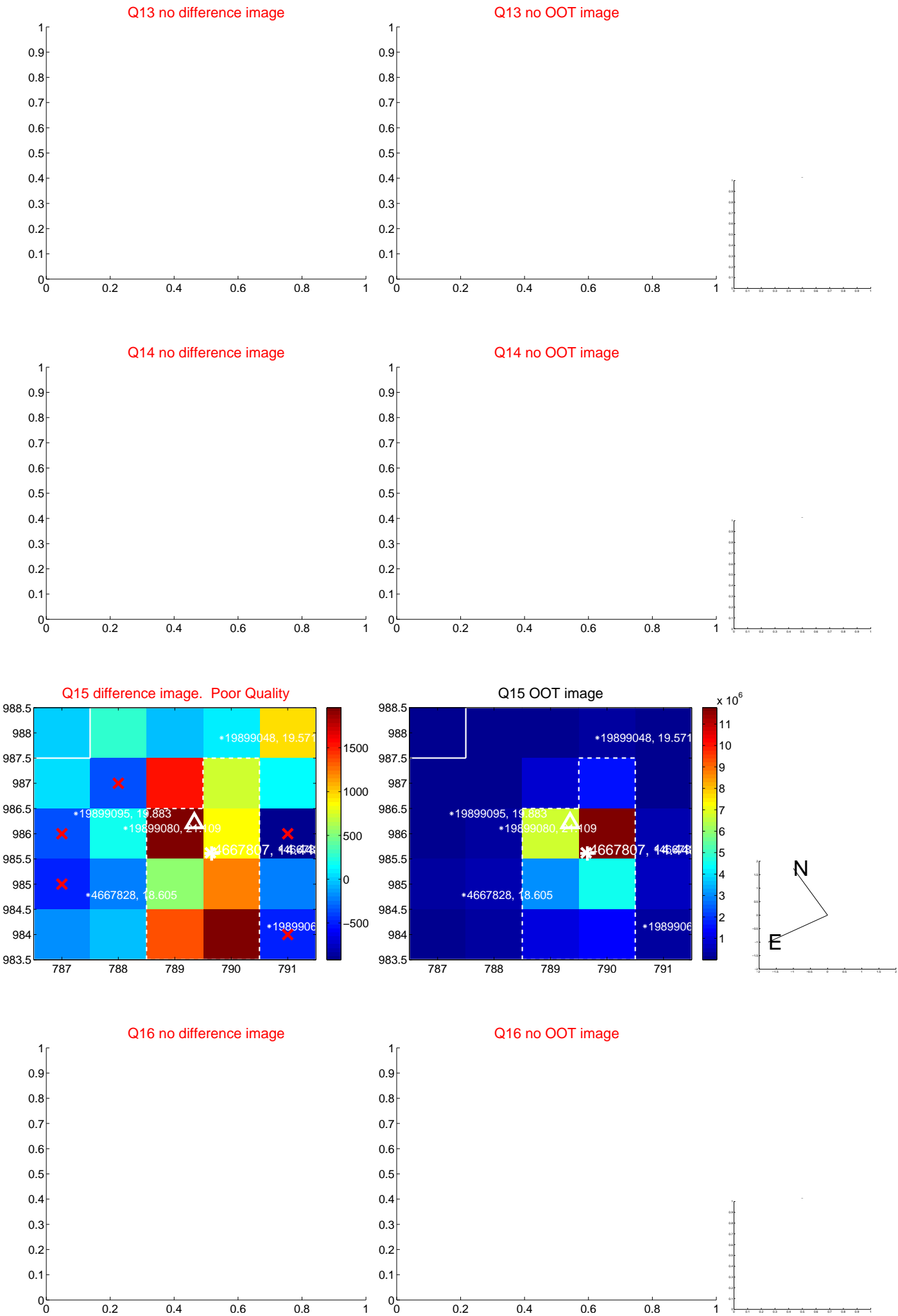
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



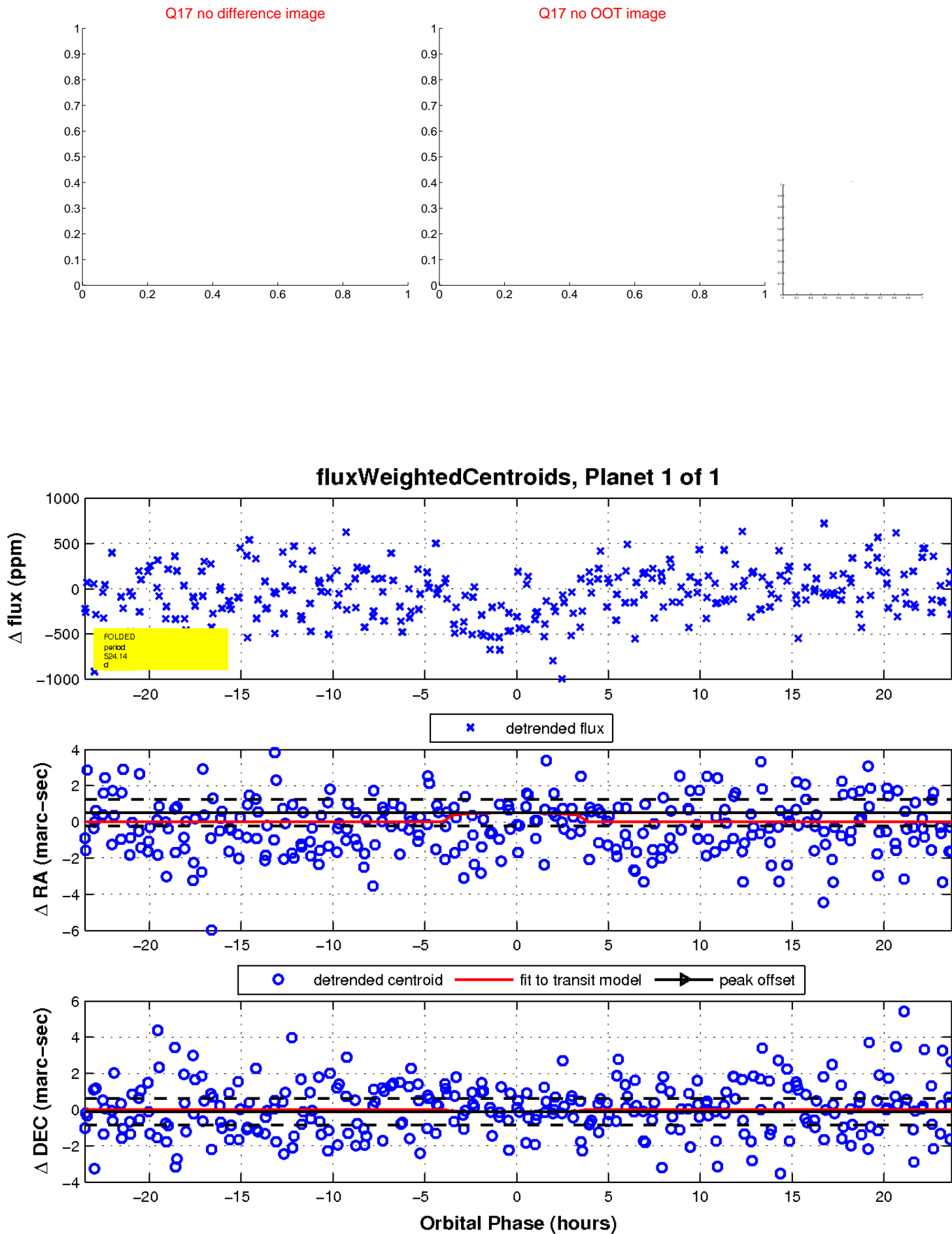
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

