

KIC 003755522

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})
003755522-01	OBS	5005.01	251.952167	367.396294	207.2	5.408	11.9	11.5	0.98	5870	1.68	1.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003755522-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_OFFSET

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 003755522-01

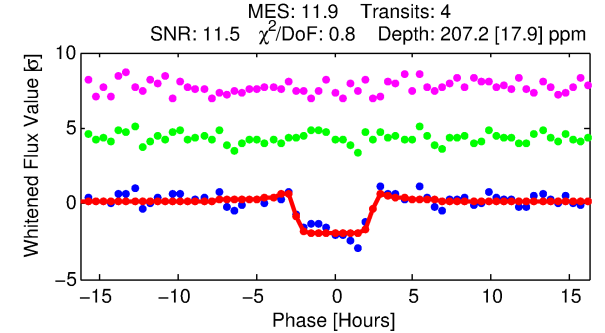
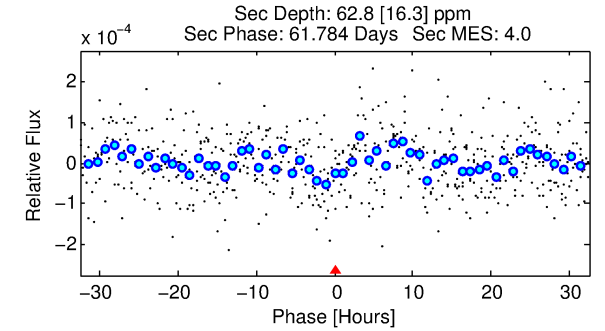
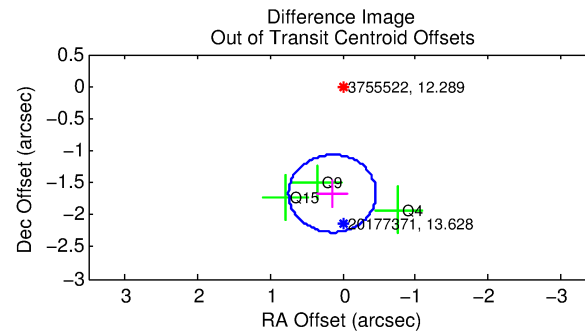
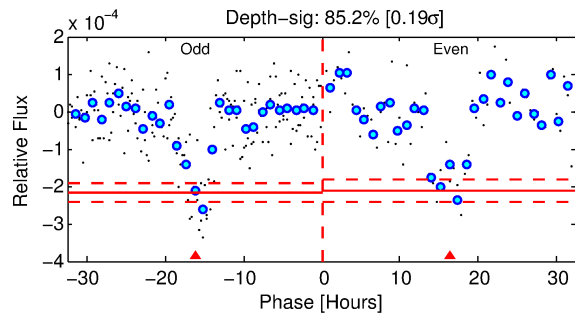
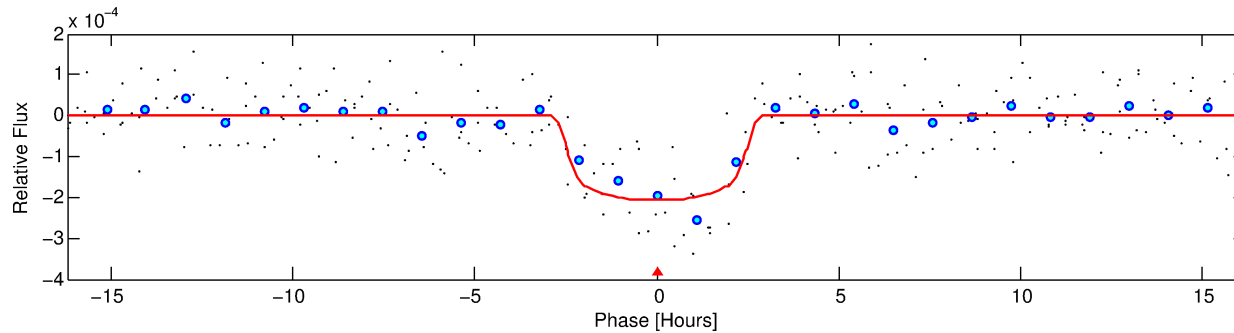
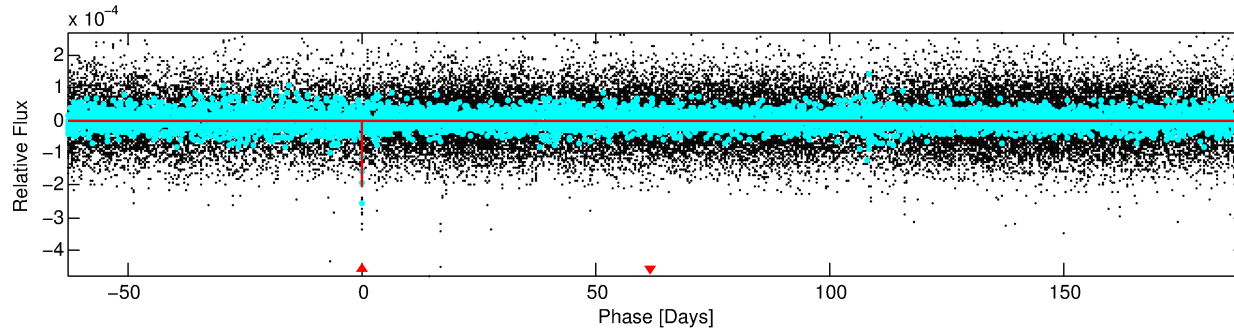
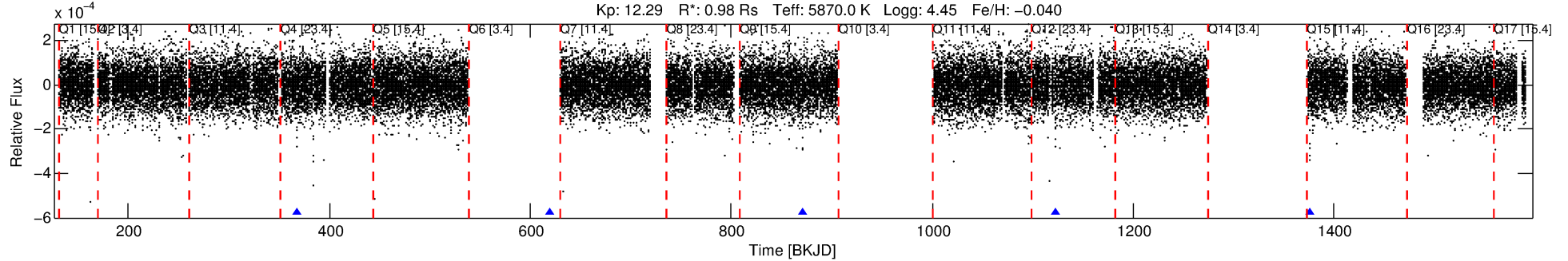
No Significant Match Found

DV One-Page Summary

KIC: 3755522 Candidate: 1 of 1 Period: 251.952 d

KOI: K05005.01 Corr: 0.925

Kp: 12.29 R*: 0.98 Rs Teff: 5870.0 K Logg: 4.45 Fe/H: -0.040



DV Fit Results:

Period = 251.95217 [0.00234] d
Epoch = 367.3963 [0.0067] BKJD
Rp/R* = 0.0156 [0.0030]
a/R* = 168.90 [154.86]
b = 0.90 [0.20]
Seff = 1.70 [0.36]
Teq = 291 [16] K
Rp = 1.68 [0.41] Re
a = 0.7796 [0.1037] AU
Ag = 7471.60 [3815.45] [1.96σ]
Teff = 4184 [492] K [7.91σ]

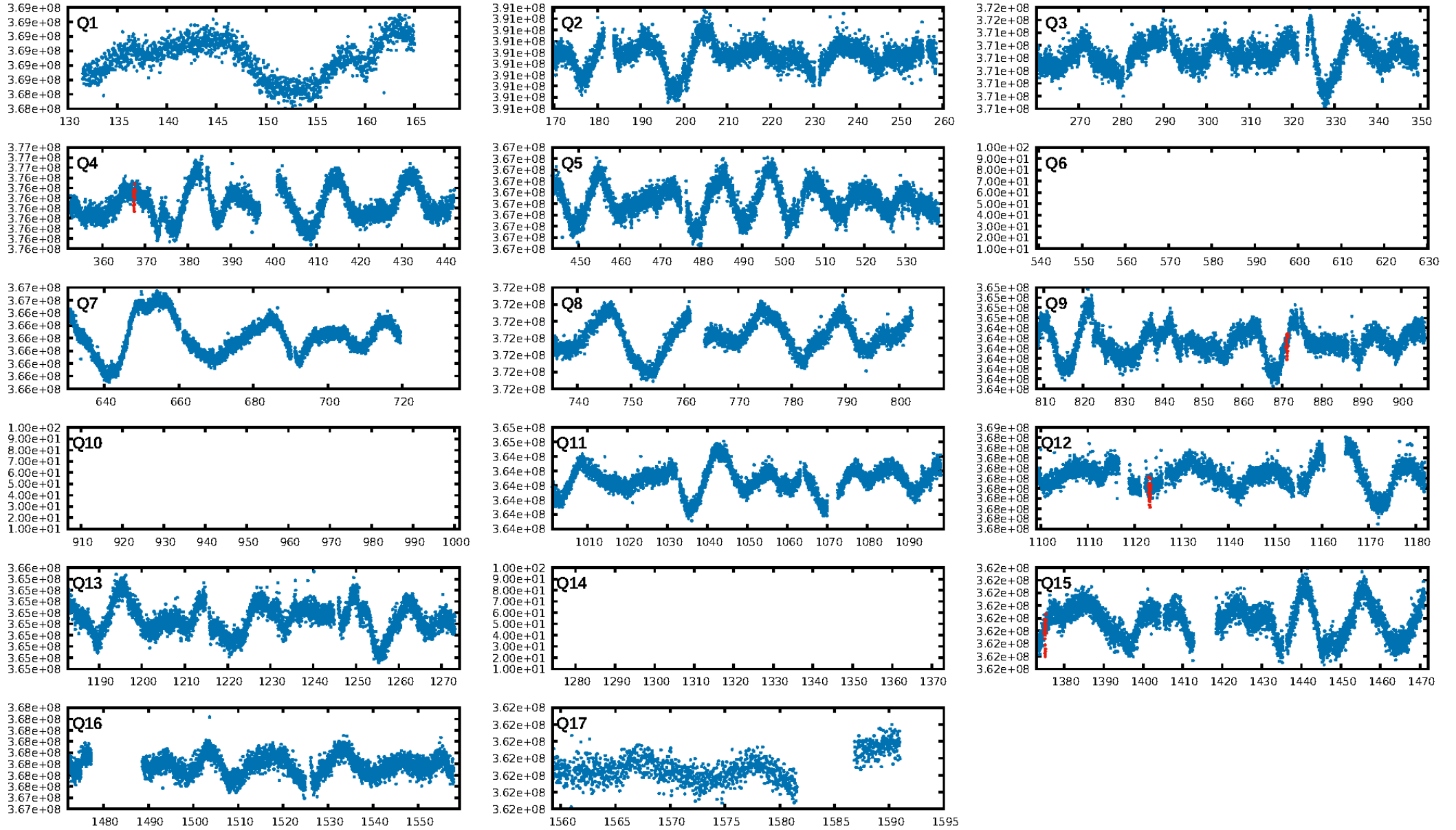
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 90.1%
ModelChiSquareGof-sig: 94.3%
Bootstrap-pfa: 3.90e-23
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.661
Centroid-sig: 1.3%
Centroid-so: 2.106 arcsec [2.07σ]
OotOffset-rm: 1.676 arcsec [8.32σ]
KicOffset-rm: 2.184 arcsec [10.86σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

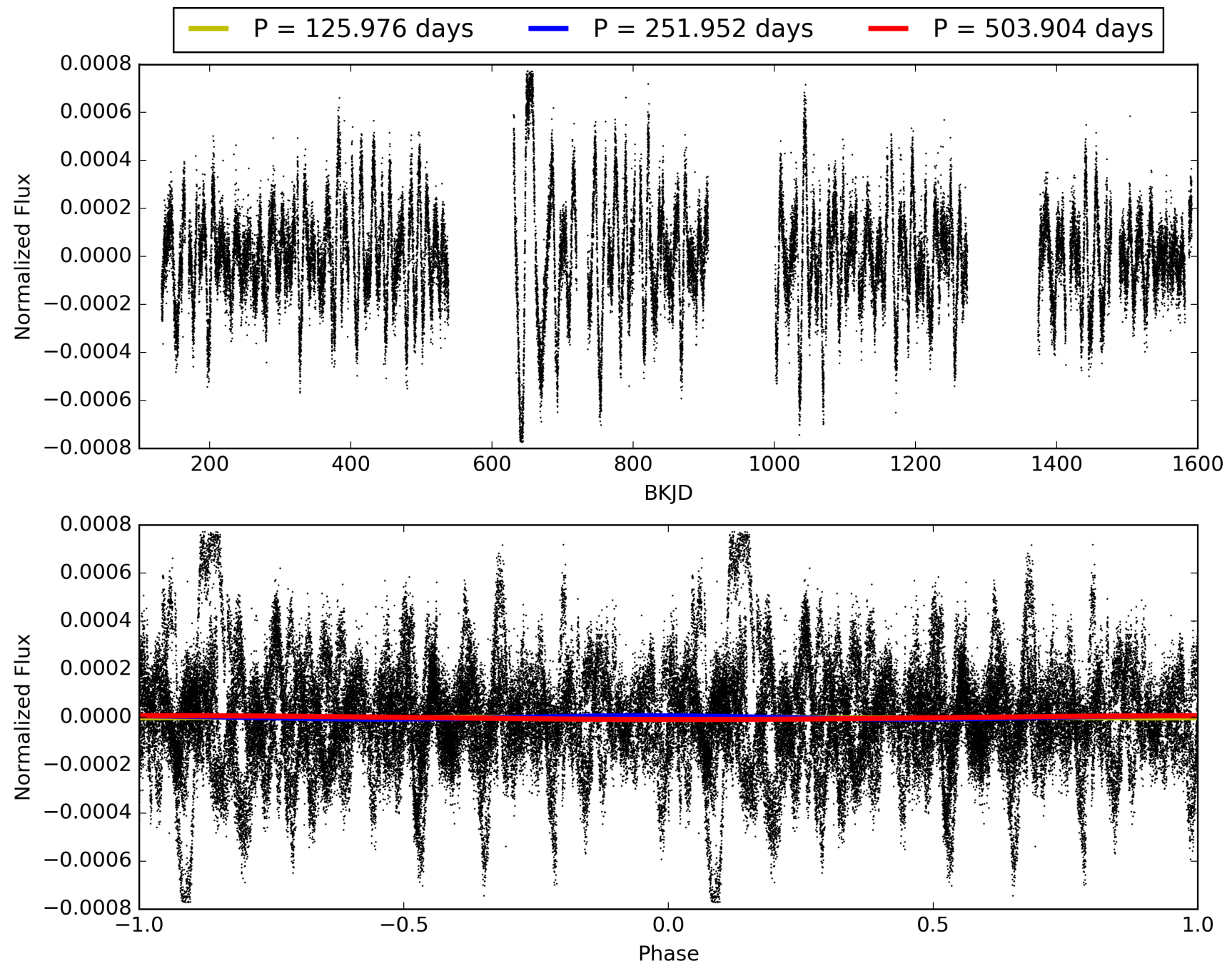
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:22:51 Z

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

TCE 003755522-01, PDC Light Curves

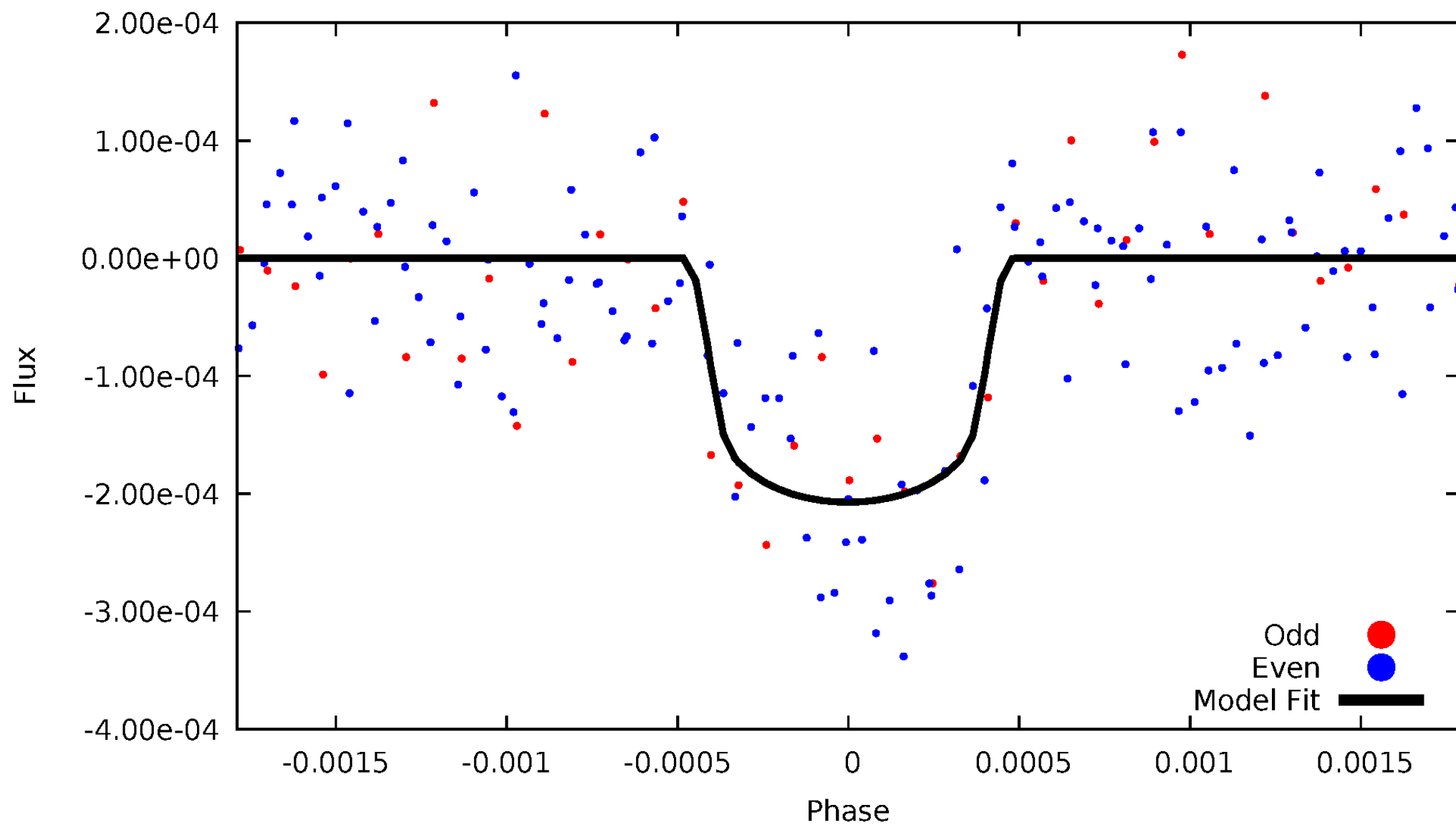


TCE 003755522-01



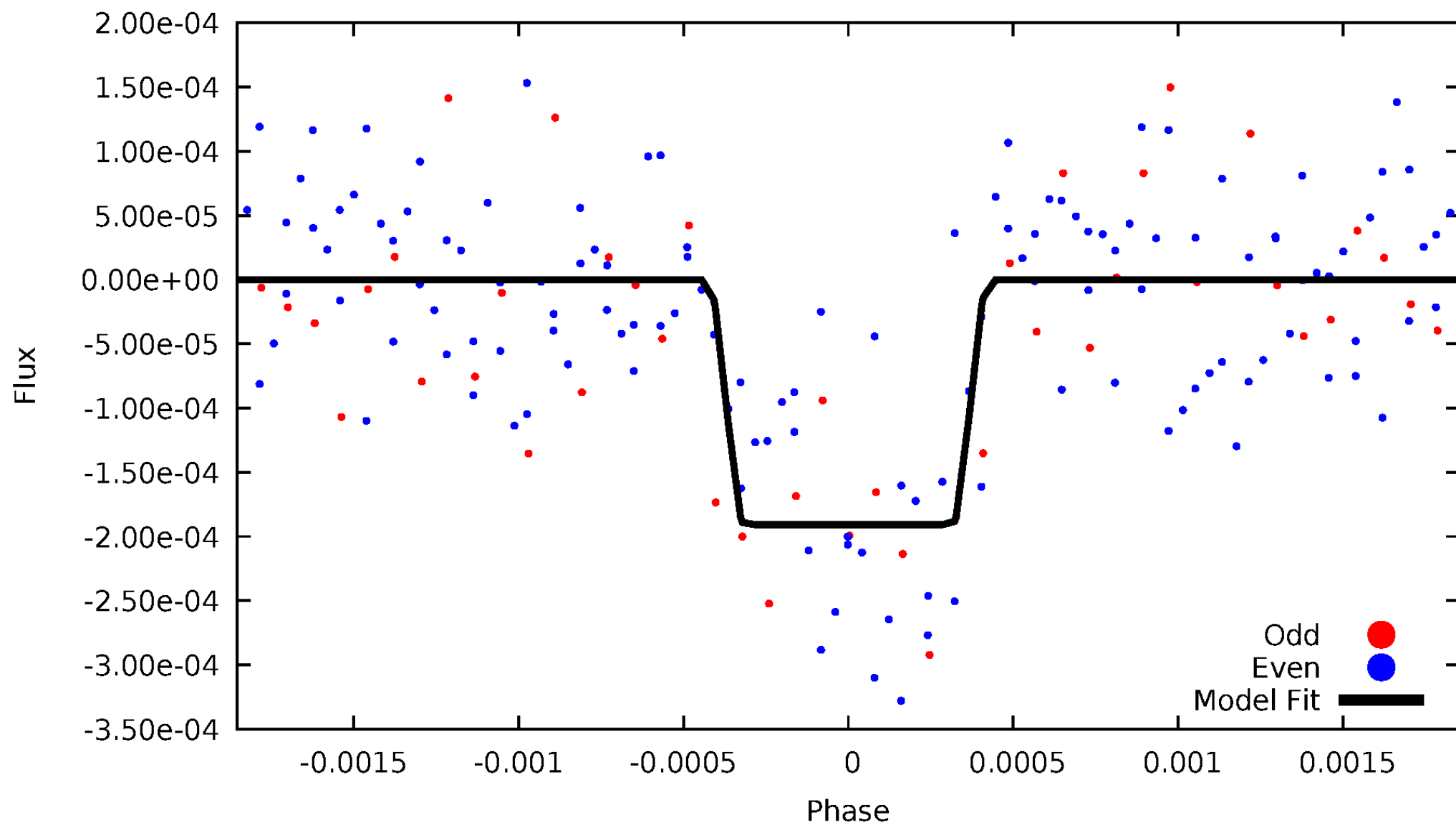
DV Odd/Even

TCE 003755522-01

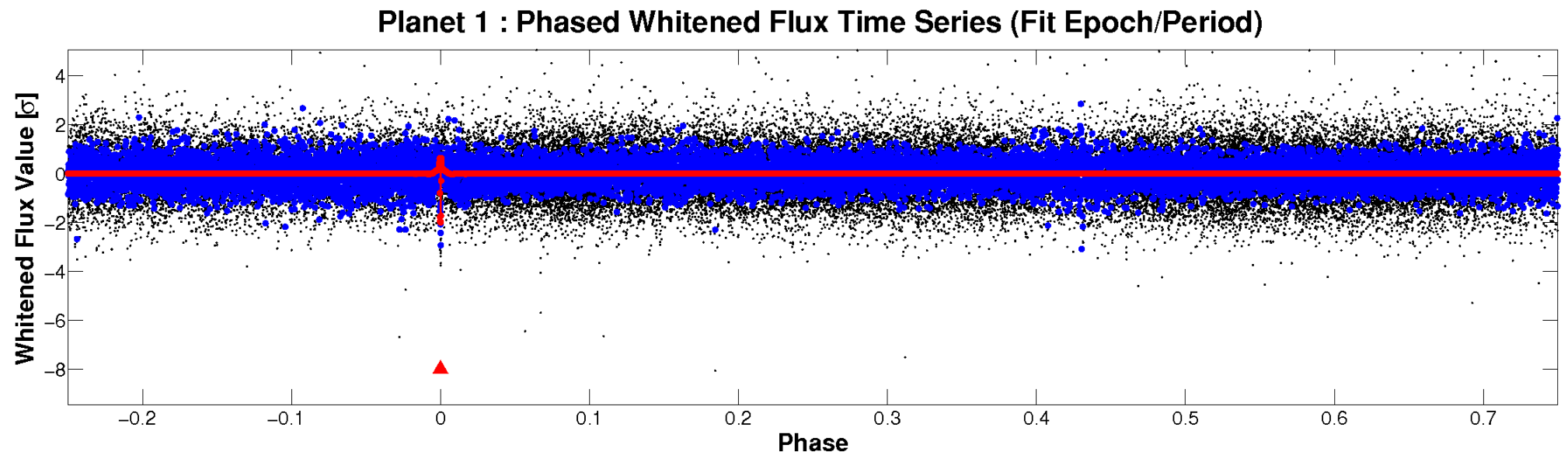
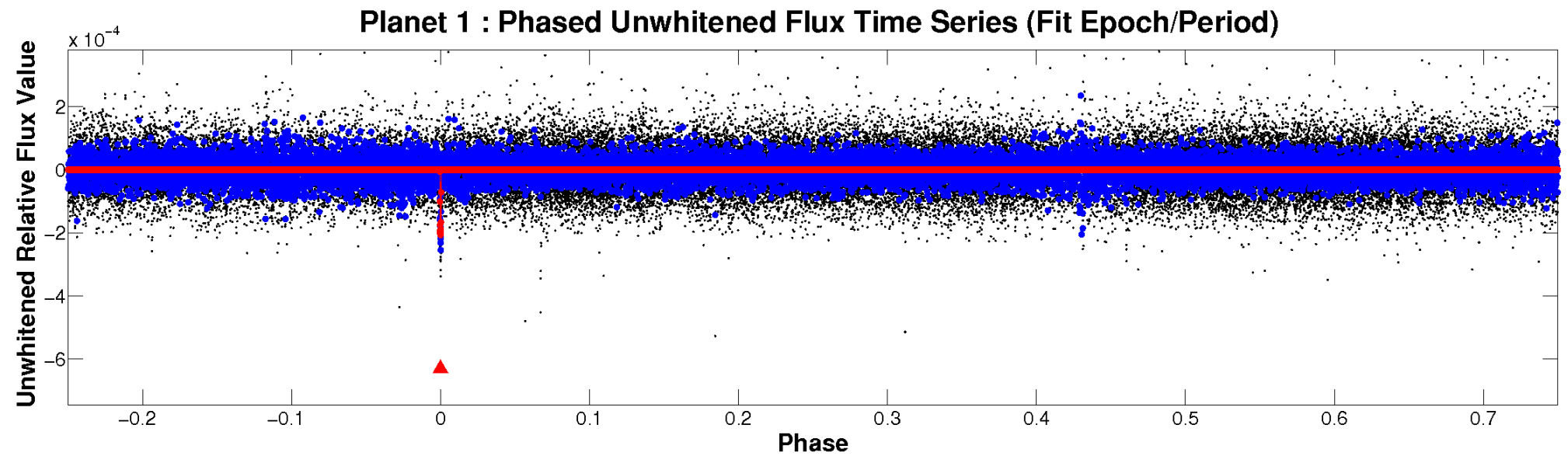


ALT Odd/Even

TCE 003755522-01

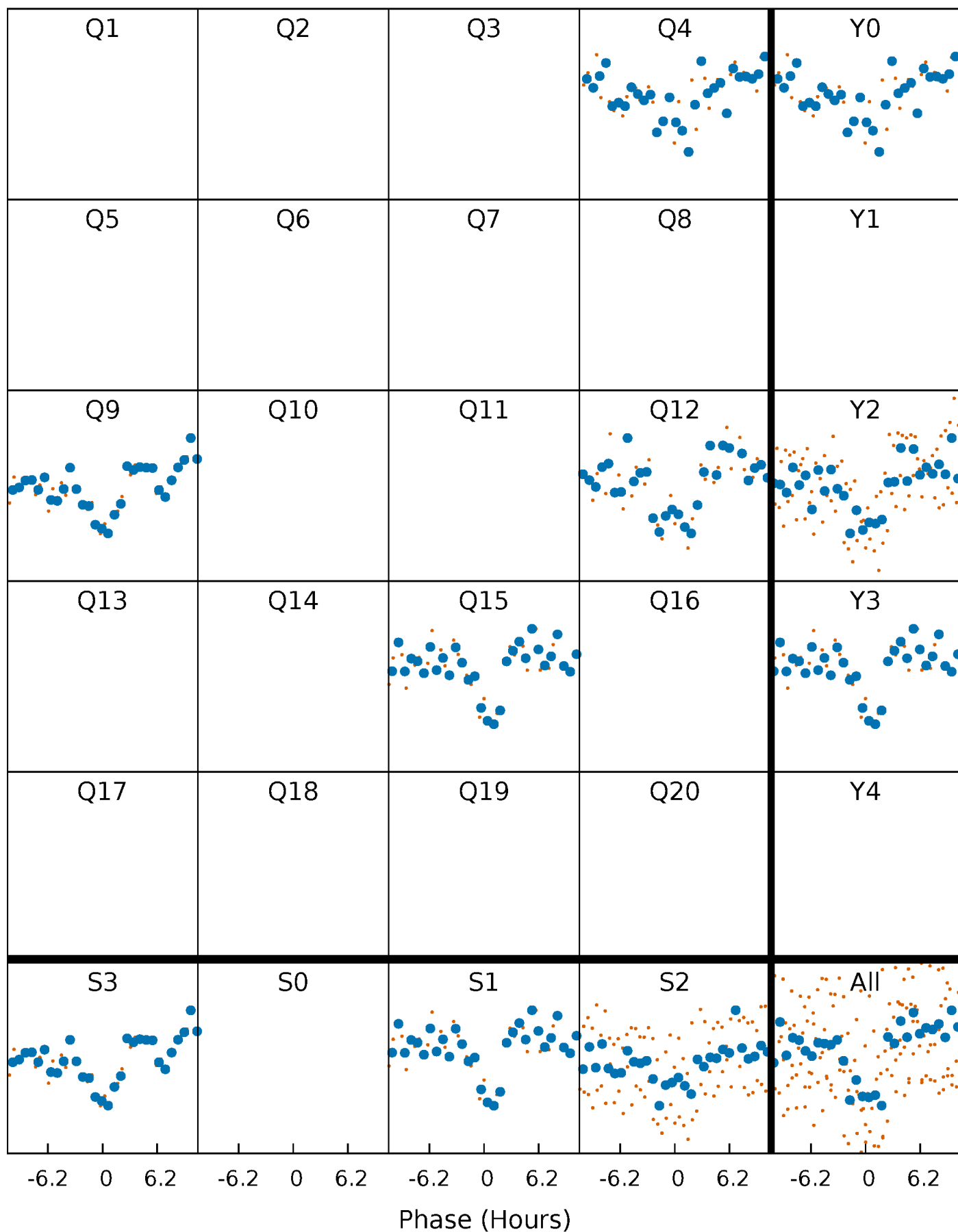


Non-Whitened Vs. Whitened Light Curve



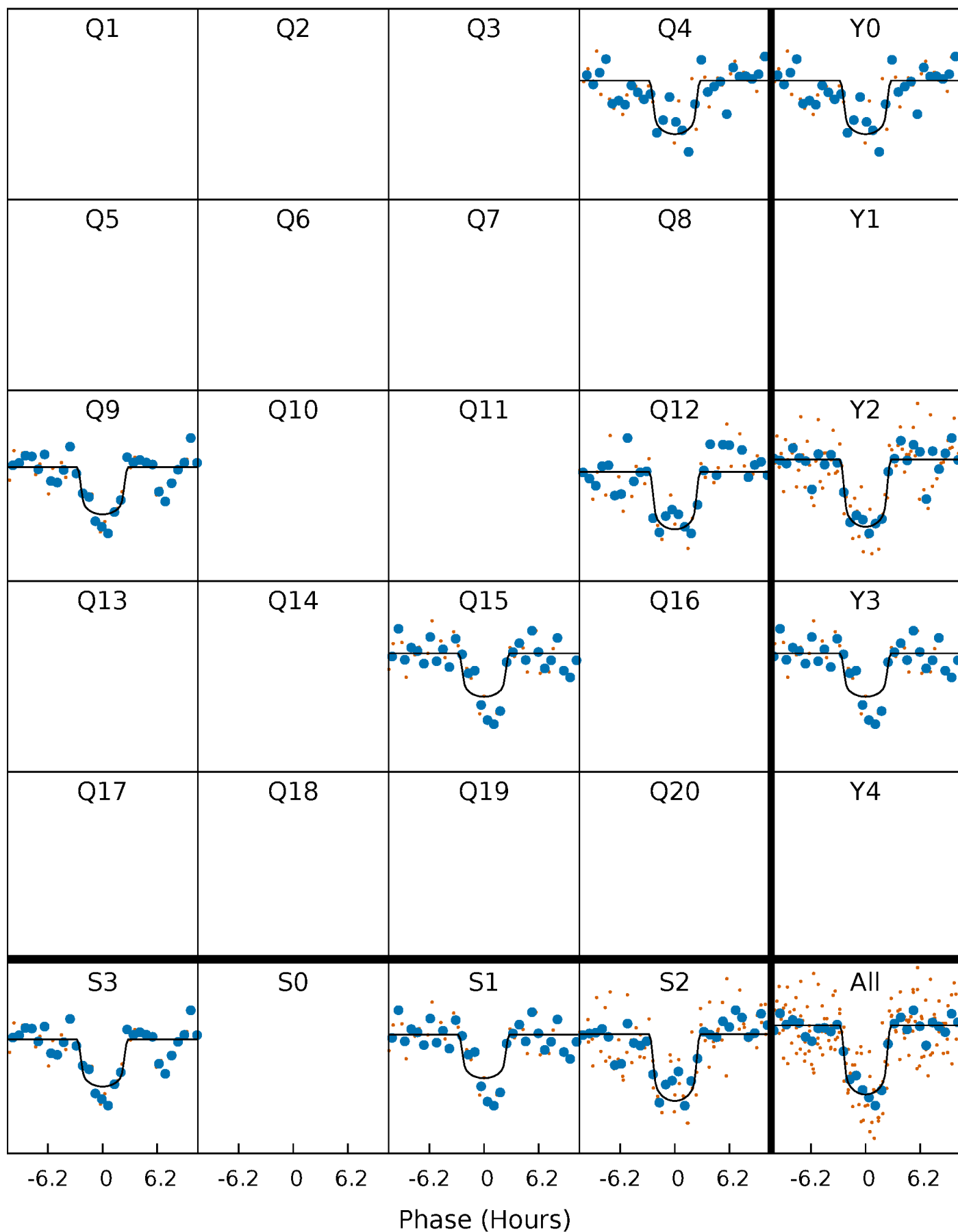
PDC Quarter-Phased Transit Curves

TCE 003755522-01 P=251.952167 Days $T_0=367.396294$ (BKJD)



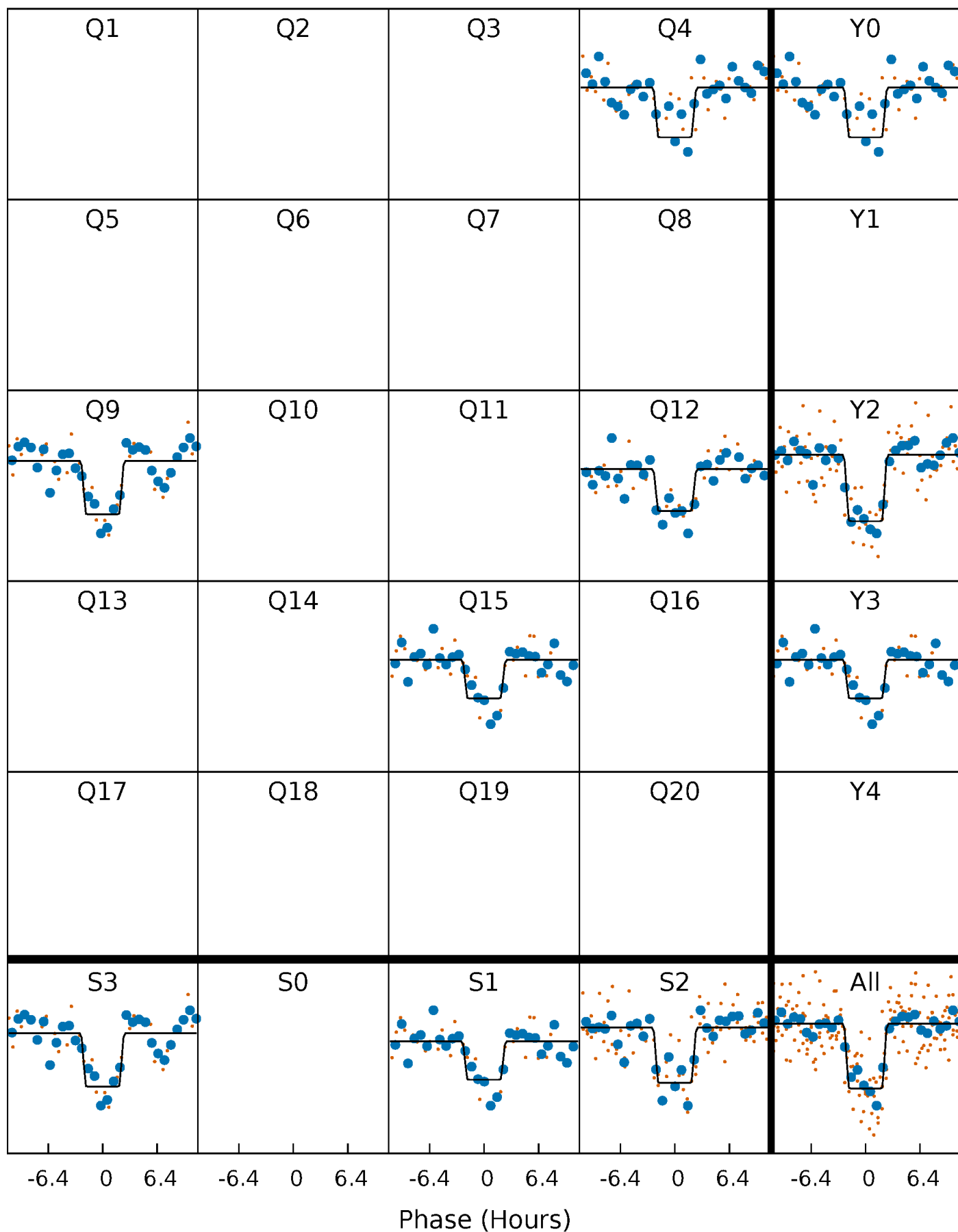
DV Quarter-Phased Transit Curves

TCE 003755522-01 $P=251.952167$ Days $T_0=367.396294$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

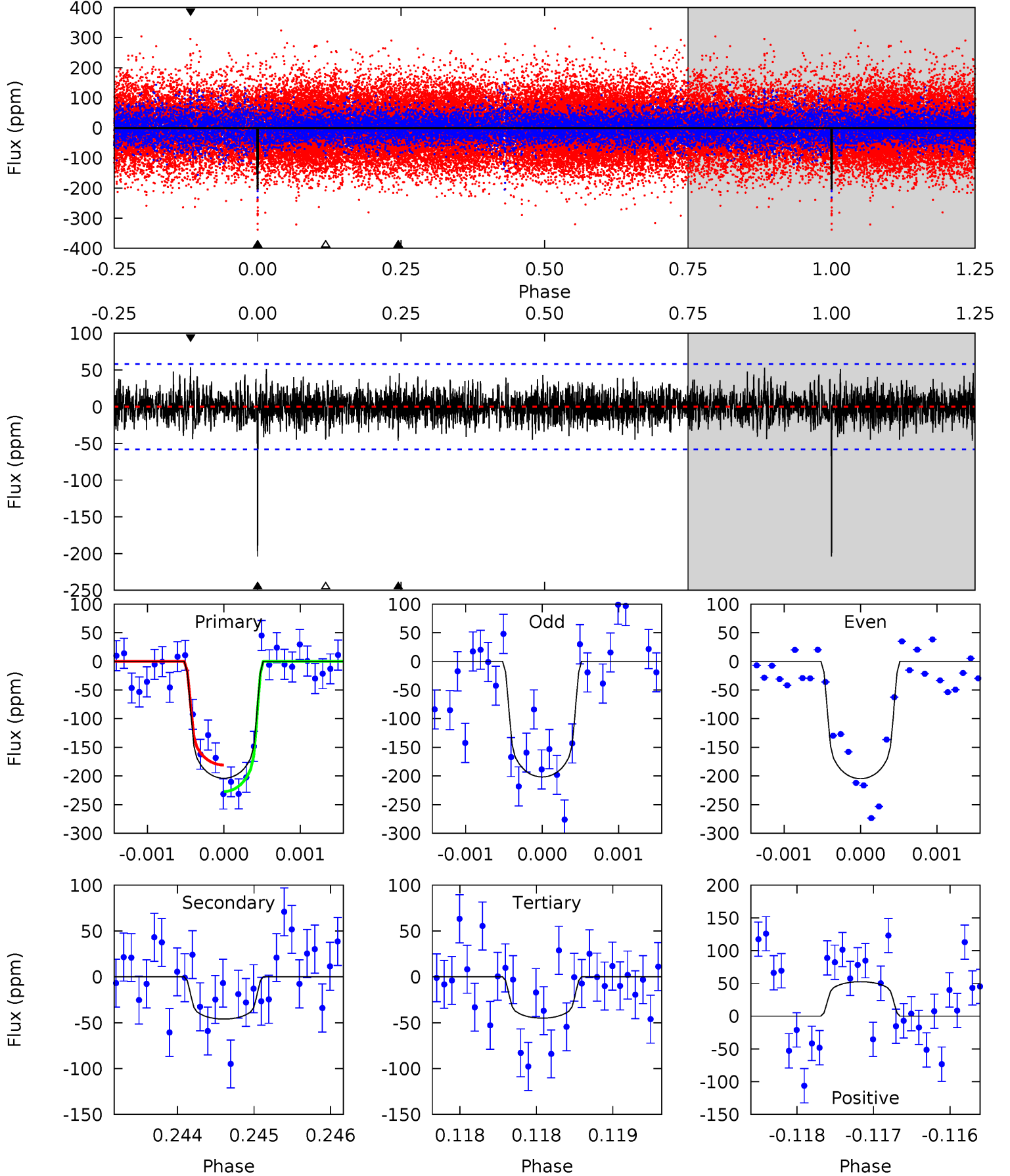
TCE 003755522-01 P=251.952606 Days $T_0=367.395041$ (BKJD)



DV Model-Shift Uniqueness Test

003755522-01, P = 251.952167 Days, E = 115.444127 Days

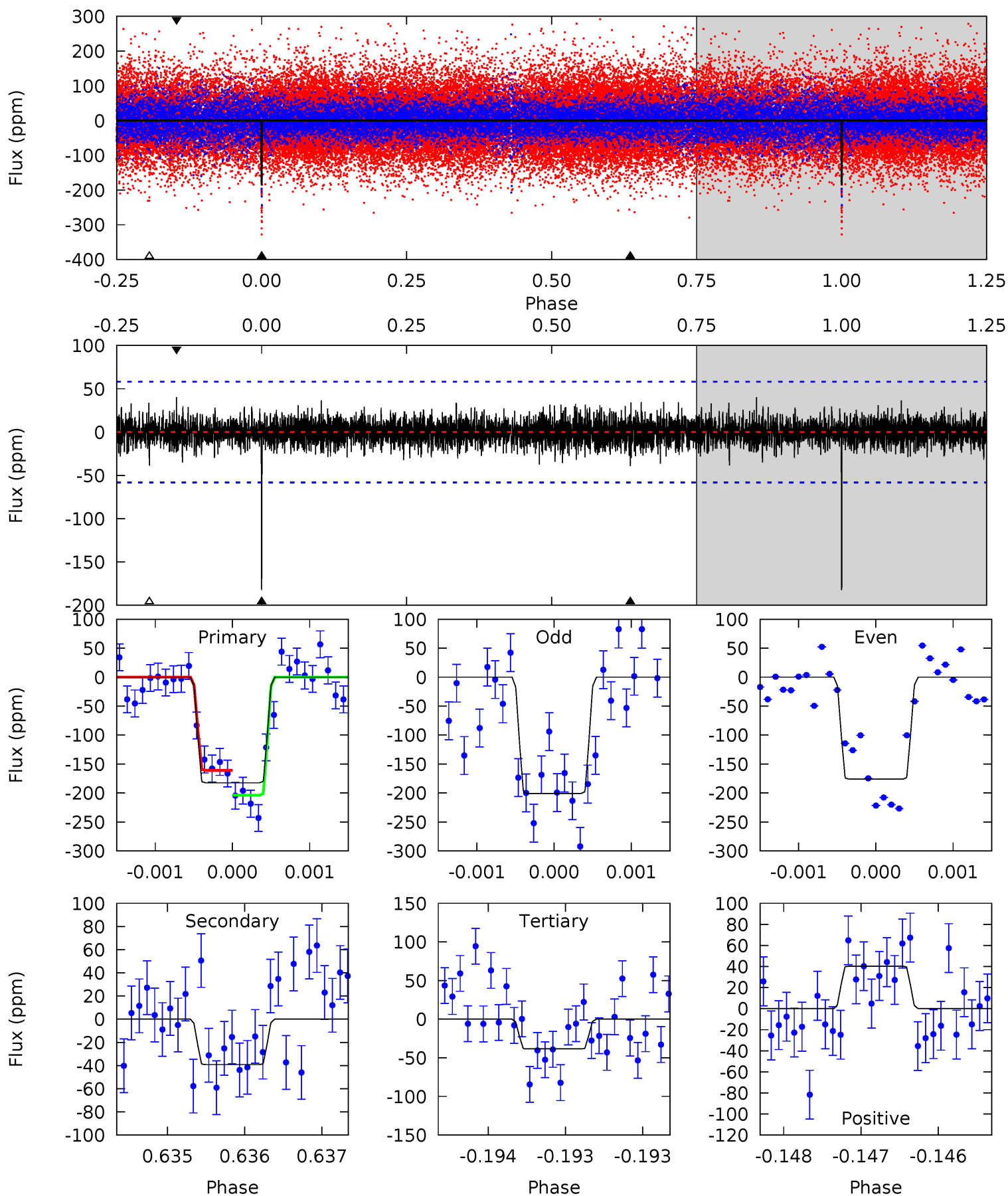
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	4.34	4.24	4.95	5.46	3.31	1.34	15.0	14.3	0.10	-0.61	0.12	0.98	0.20	2.18



Alt Model-Shift Uniqueness Test

003755522-01, P = 251.952606 Days, E = 115.442435 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	3.69	3.63	3.80	5.49	3.35	0.97	13.6	13.4	0.06	-0.11	1.01	0.94	0.18	2.02



Stellar Parameters For KIC 003755522

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5870^{+70}_{-79}	$4.449^{+0.051}_{-0.119}$	$-0.040^{+0.150}_{-0.150}$	$0.985^{+0.143}_{-0.077}$	$0.994^{+0.060}_{-0.066}$	$1.465^{+0.292}_{-0.508}$
	+1%/-1%	+1%/-3%	+375%/-375%	+15%/-8%	+6%/-7%	+20%/-35%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 003755522-01 / KOI 5005.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-46 ± 11	$1.71^{+0.34}_{-0.33}$	409^{+15}_{-10}	4138^{+372}_{-301}	5208^{+2965}_{-1865}
Alt.	-39 ± 11	$1.53^{+0.34}_{-0.33}$	410^{+17}_{-11}	4190^{+474}_{-354}	5584^{+3982}_{-2301}

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

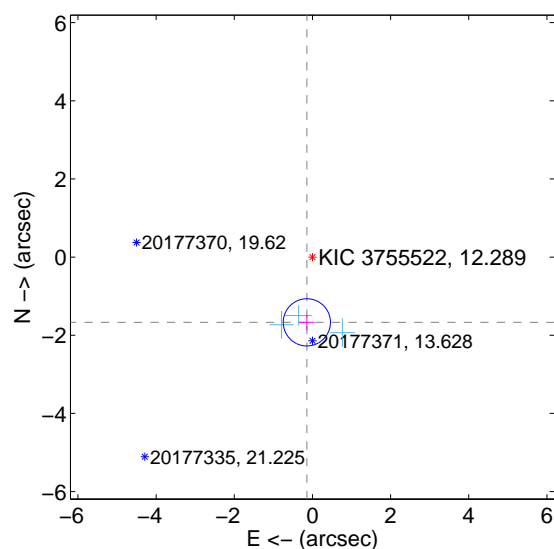
Supplemental centroid analysis for 003755522-01. Kepler magnitude: 12.29. Transit SNR 11.51

There are 3 quarters with good PRF difference image offsets

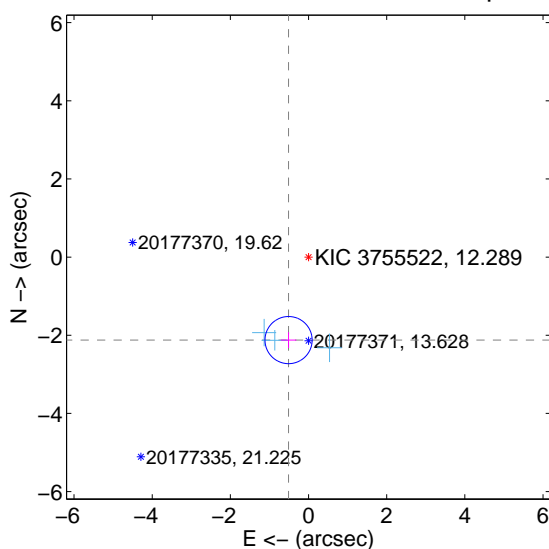
The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.676 ± 0.201	8.32	0.143 ± 0.197	-1.669 ± 0.201
PRF-fit source offset from KIC position	2.184 ± 0.201	10.86	0.511 ± 0.197	-2.124 ± 0.201
photometric centroid source offset	2.11 ± 1.02	2.07	0.44 ± 0.91	-2.06 ± 1.02

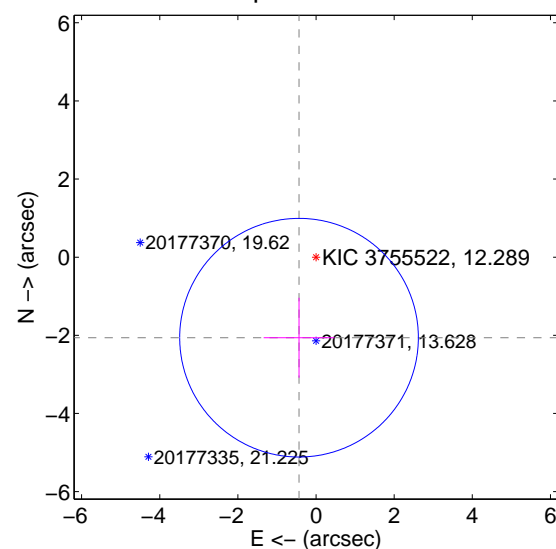
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

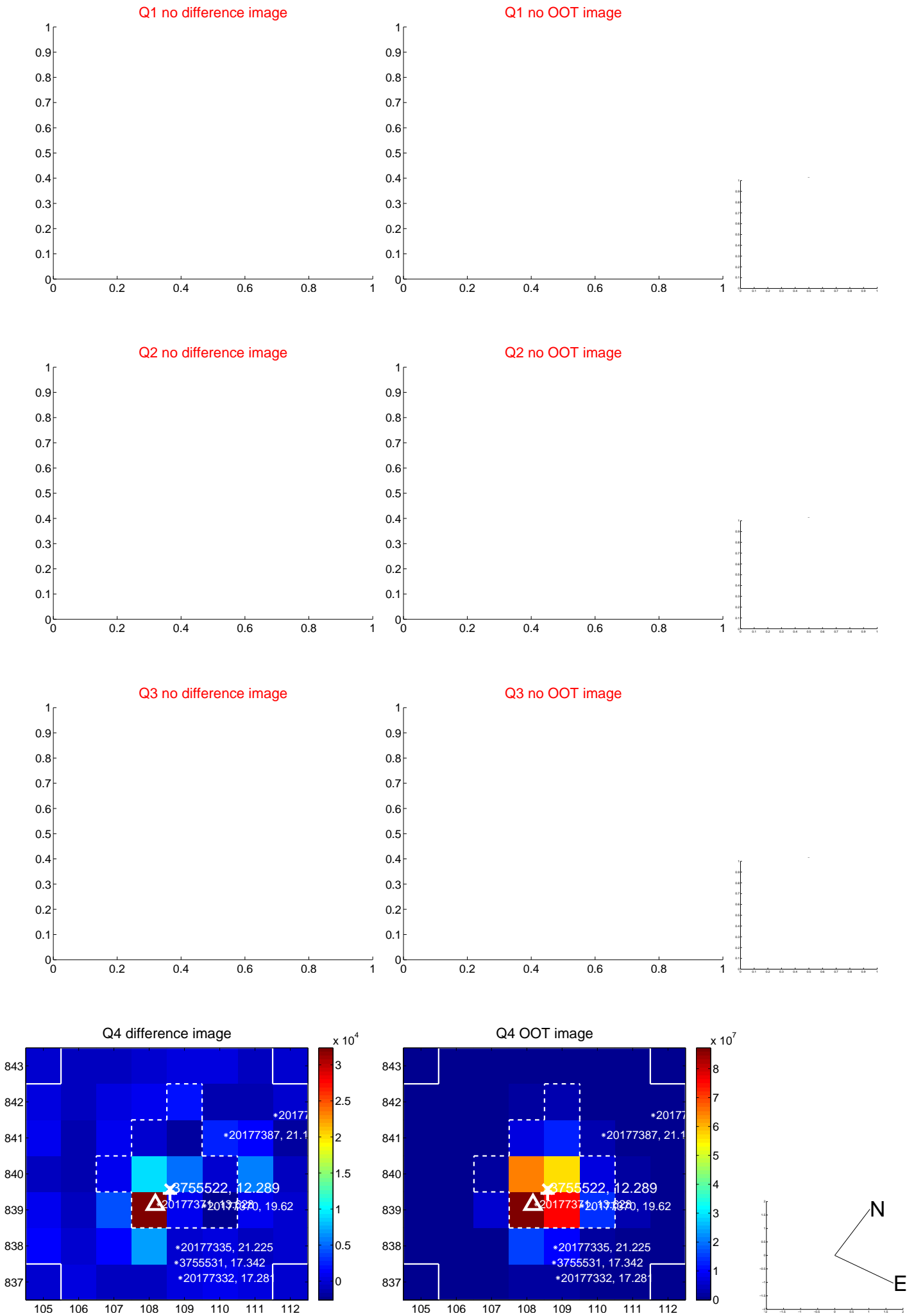


offset from photometric centroids



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.

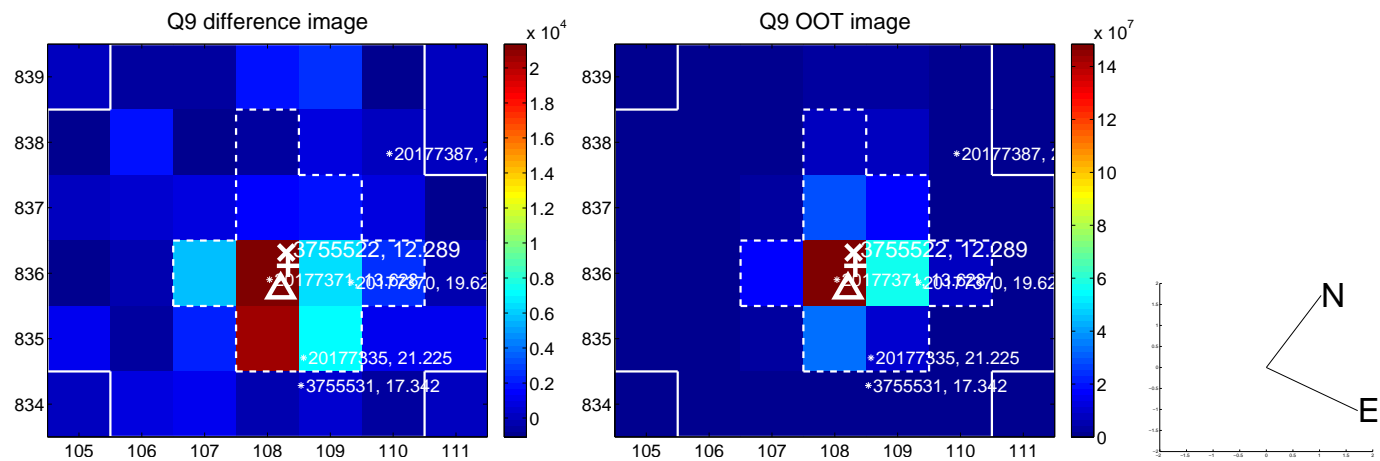
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



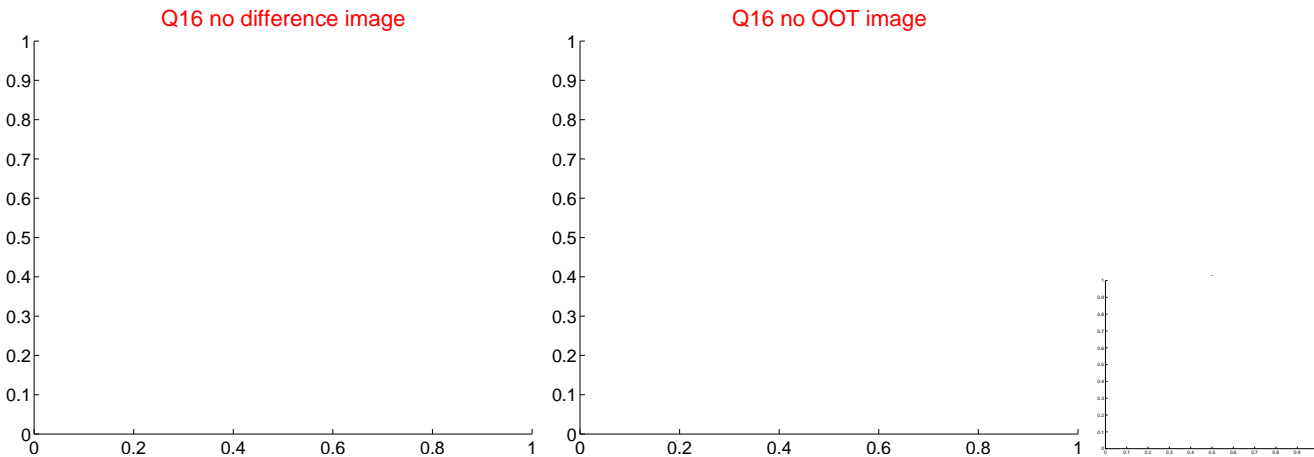
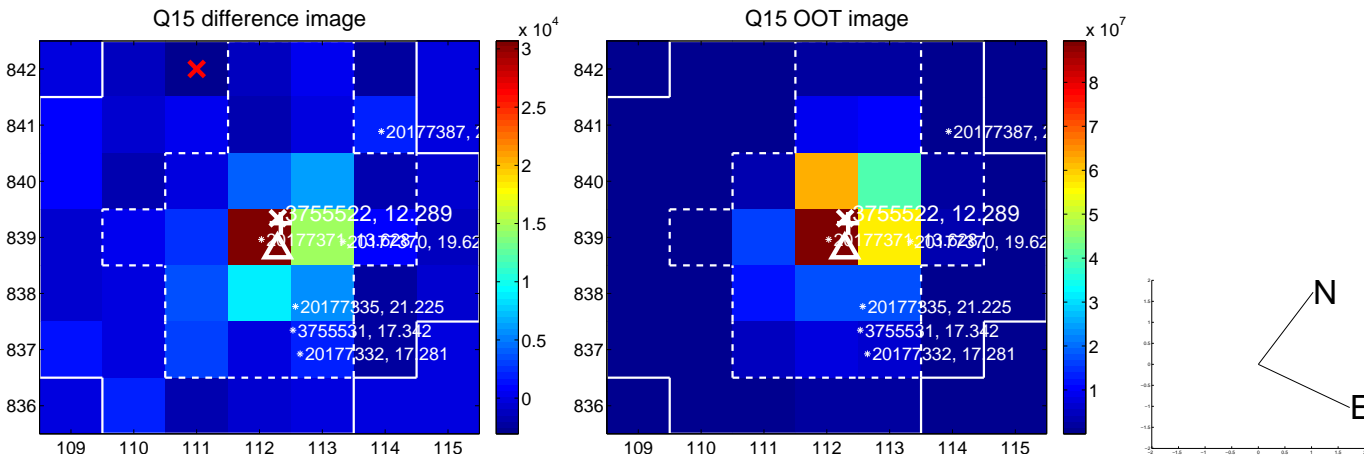
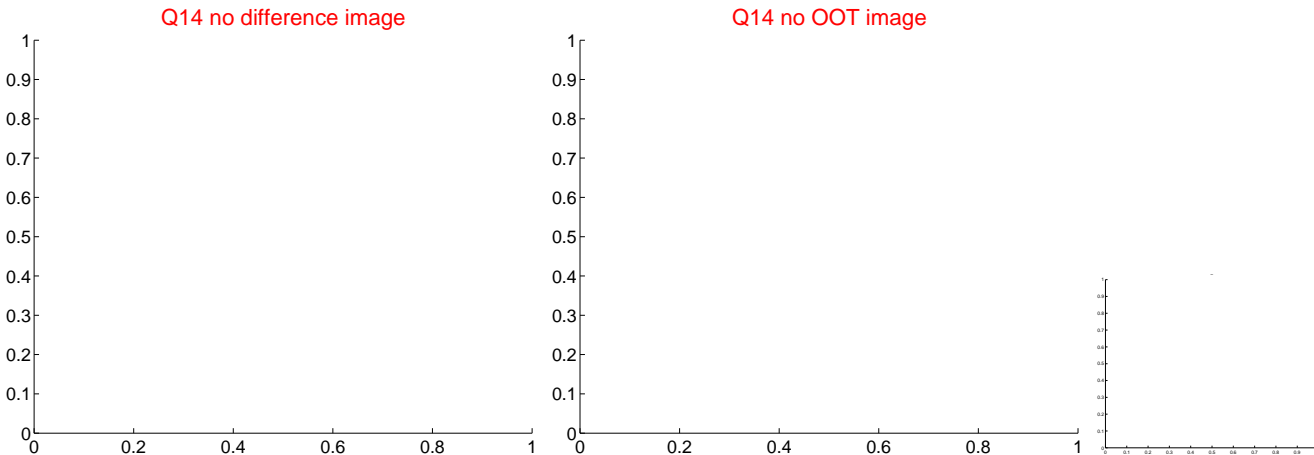
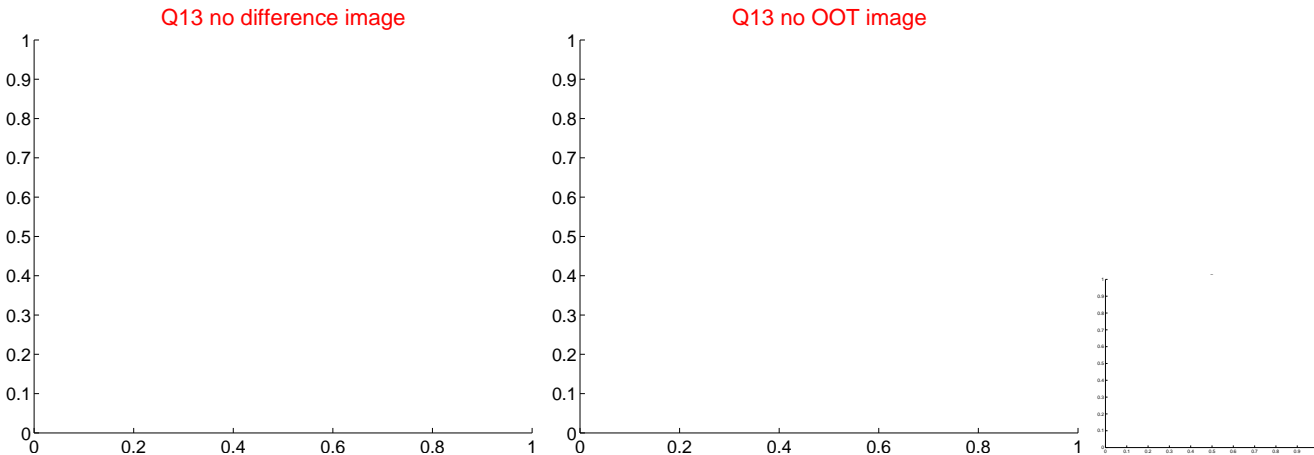
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



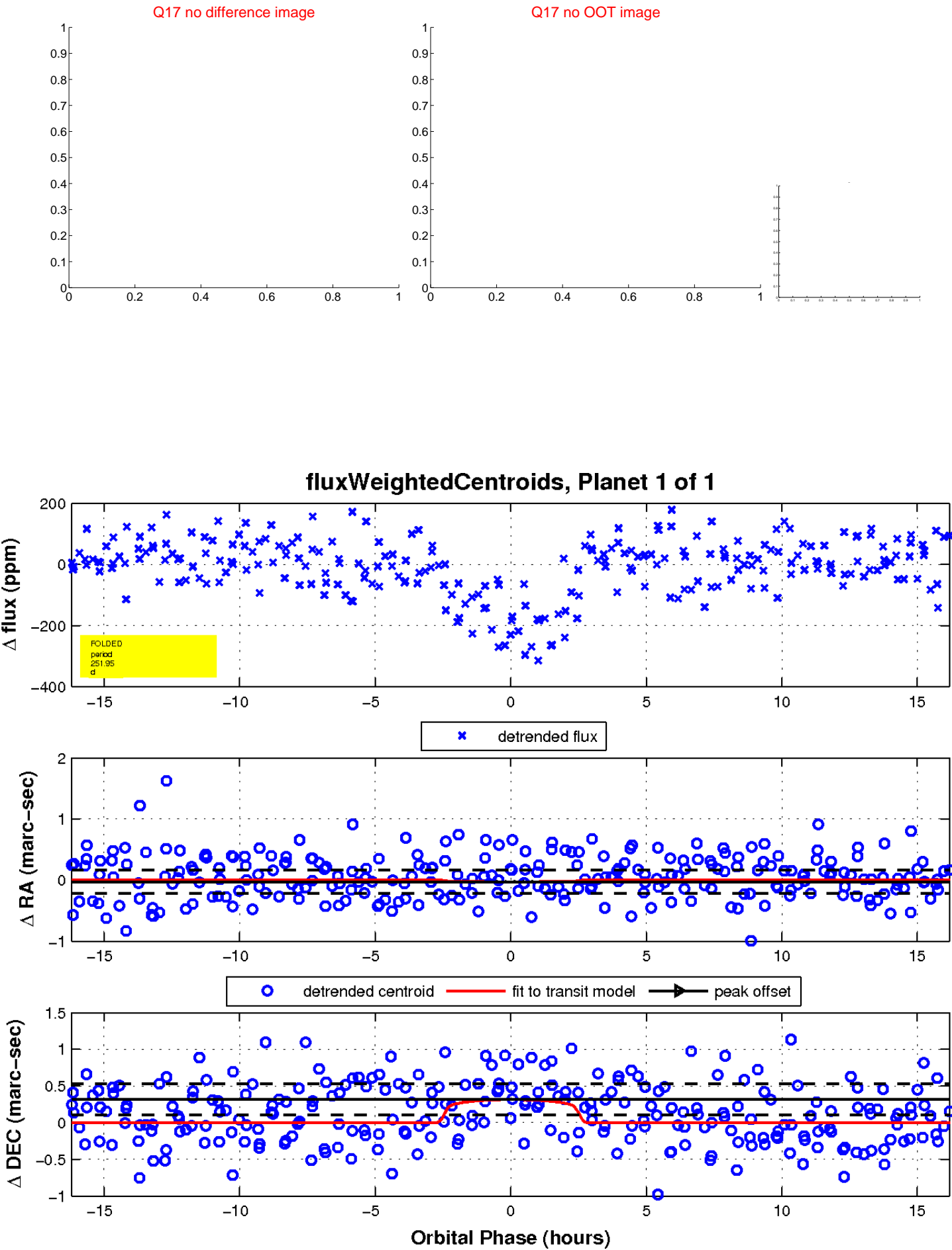
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

