

KIC 007257363

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})
007257363-01	OBS	2292.01	5.233439	133.142532	254.2	5.321	12.5	13.5	0.74	5266	2.22	124.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007257363-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH

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.

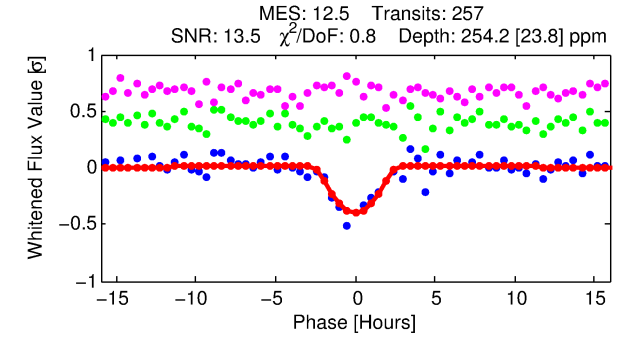
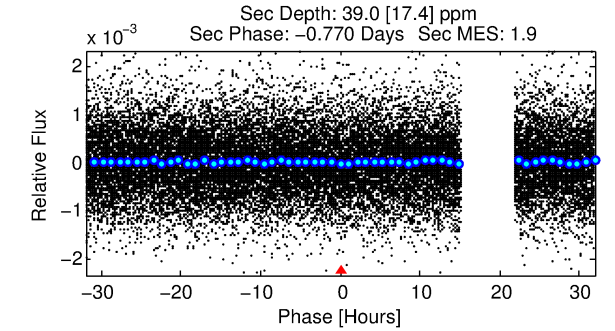
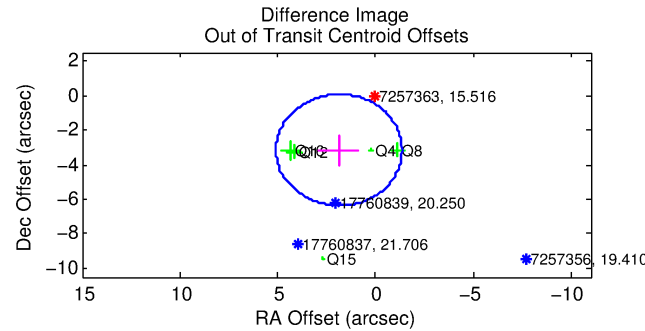
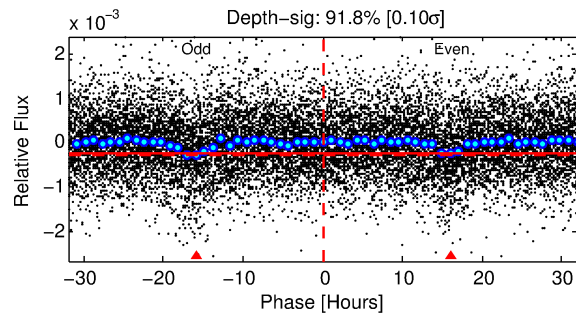
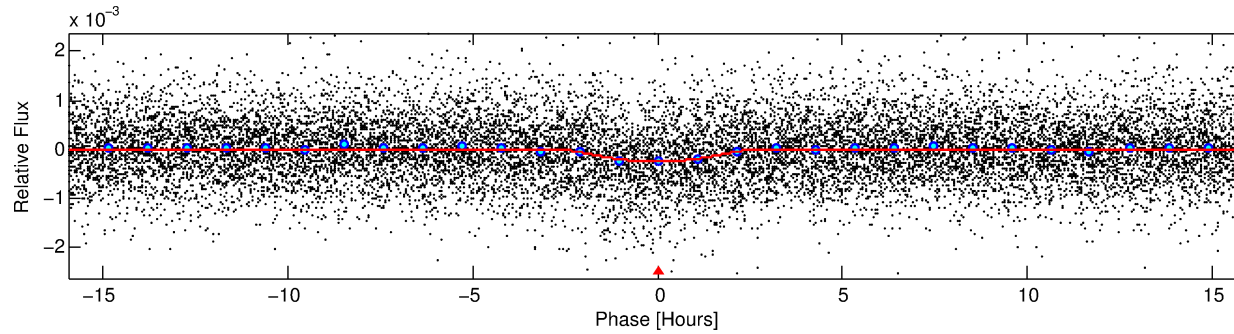
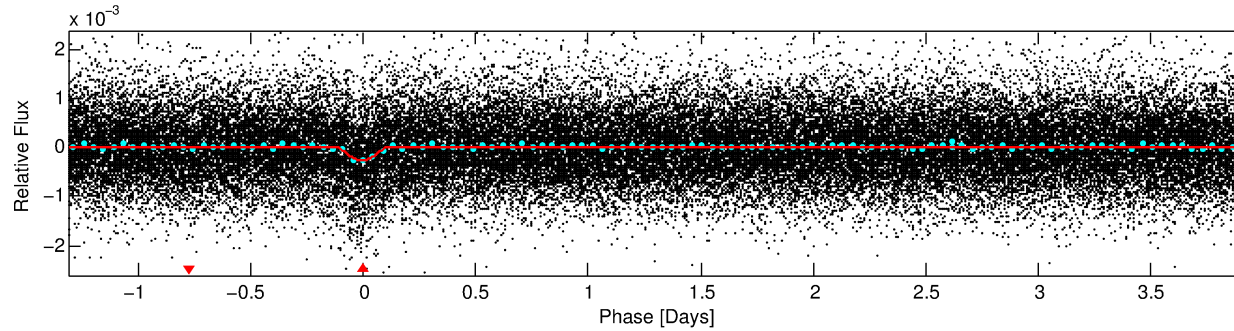
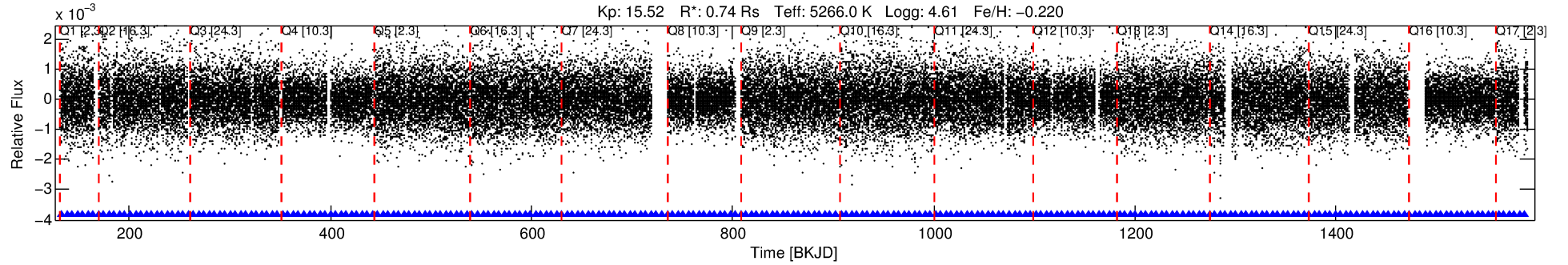
Ephemeris Match Information For 007257363-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007257363-01	7257363	007257373-01	7257373	1:1	24.9	1	6	13.42	15.51	1798.50	Direct-PRF	0	0.55	0.96

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7257363 Candidate: 1 of 1 Period: 5.233 d
KOI: K02292.01 Corr: 0.883



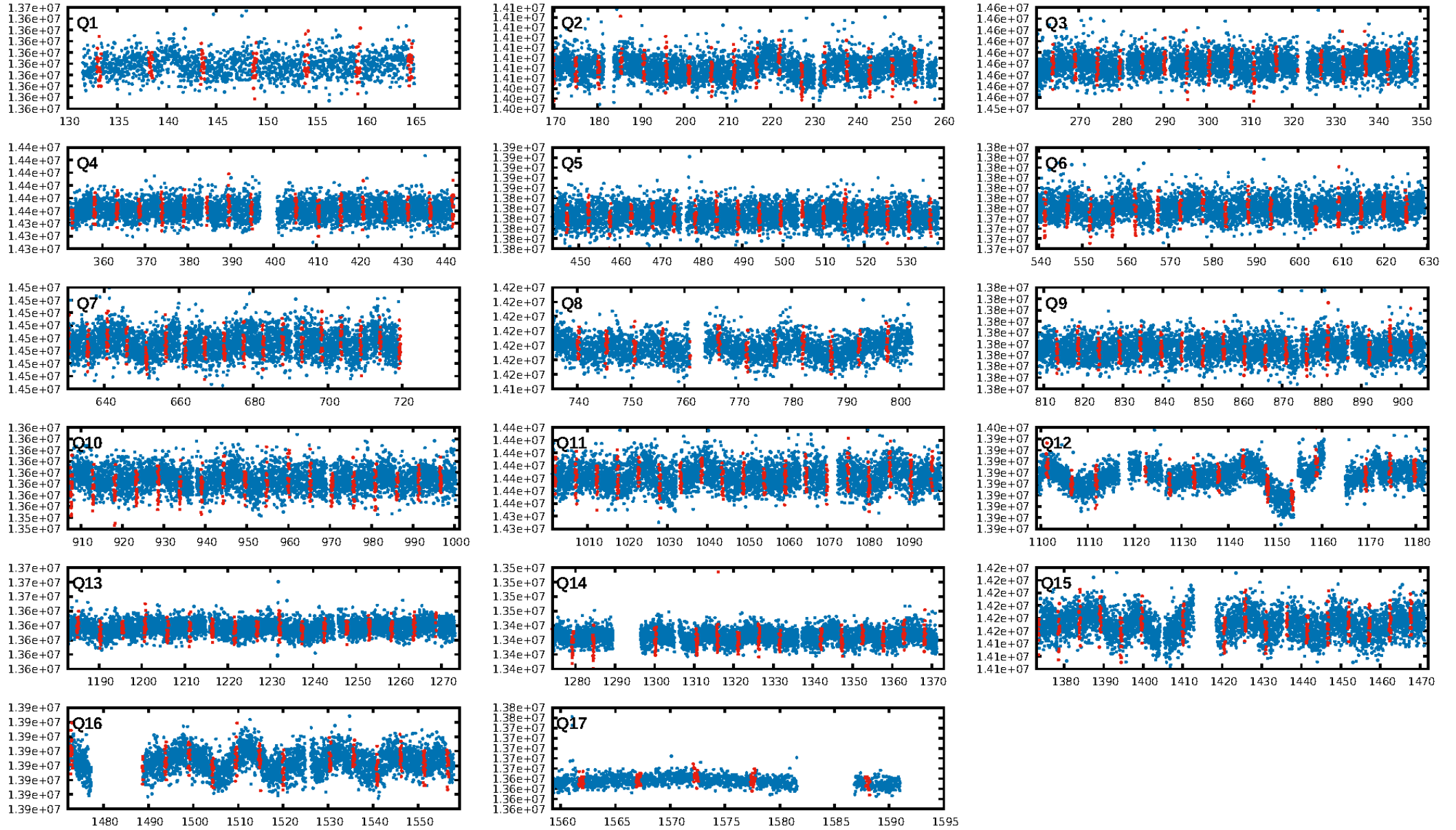
DV Fit Results:

Period = 5.23344 [0.00006] d
Epoch = 133.1425 [0.0090] BKJD
Rp/R* = 0.0275 [0.0542]
a/R* = 2.17 [1.00]
b = 1.00 [0.09]
Seff = 124.25 [23.85]
Teq = 851 [41] K
Rp = 2.22 [4.39] Re
a = 0.0552 [0.0062] AU
Ag = 13.24 [52.58] [0.23 σ]
Teffp = 2511 [2492] K [0.67 σ]

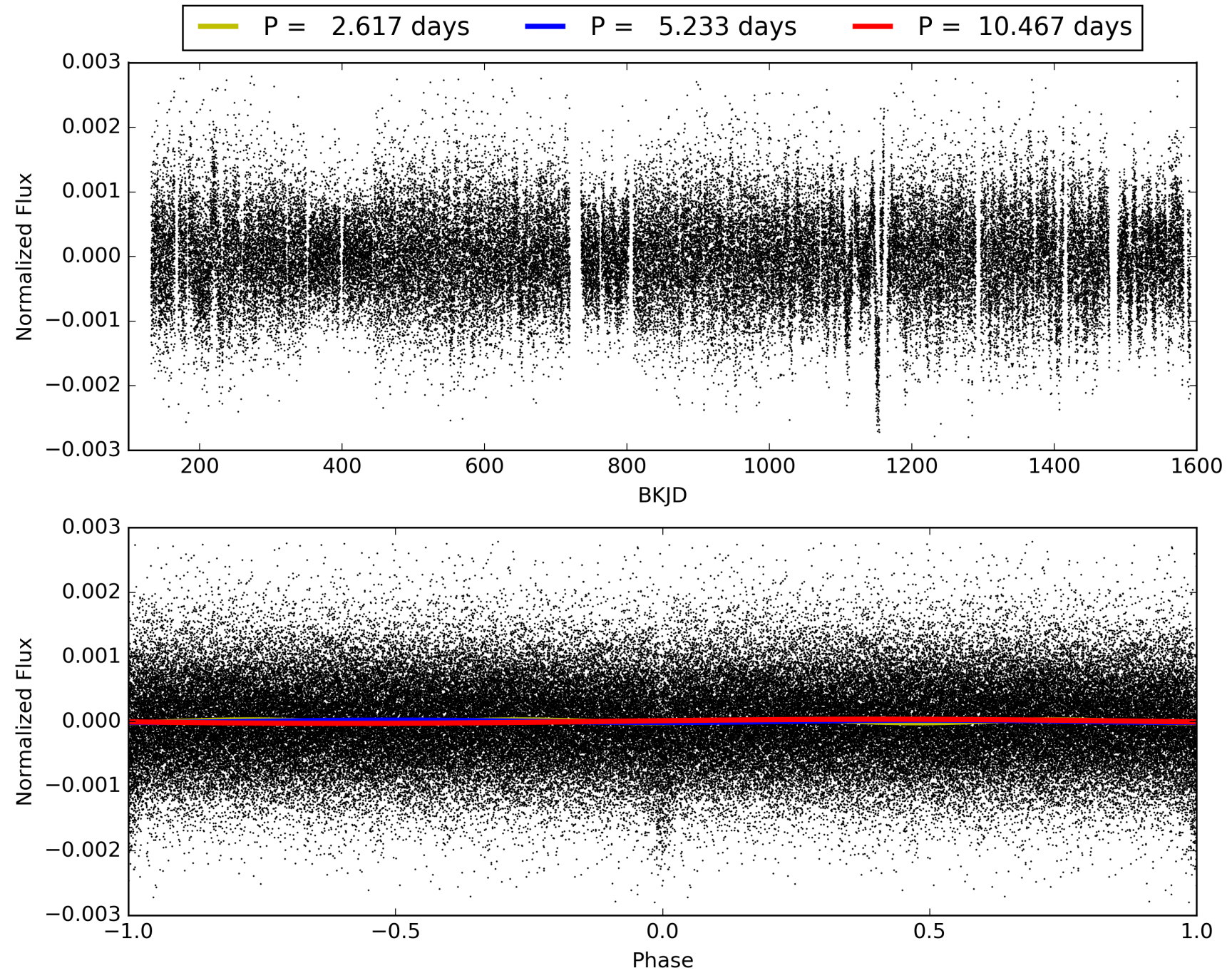
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.18e-35
RollingBand-fgt: 1.00 [245/245]
GhostDiagnostic-chr: -0.01804
Centroid-sig: 0.0%
Centroid-so: 7.835 arcsec [7.36 σ]
OotOffset-rm: 3.665 arcsec [3.41 σ]
KicOffset-rm: 3.589 arcsec [2.83 σ]
OotOffset-st: 0/1/4/0 [5]
KicOffset-st: 0/1/4/0 [5]
DiffImageQuality-fgm: 0.20 [1/5]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007257363-01, PDC Light Curves

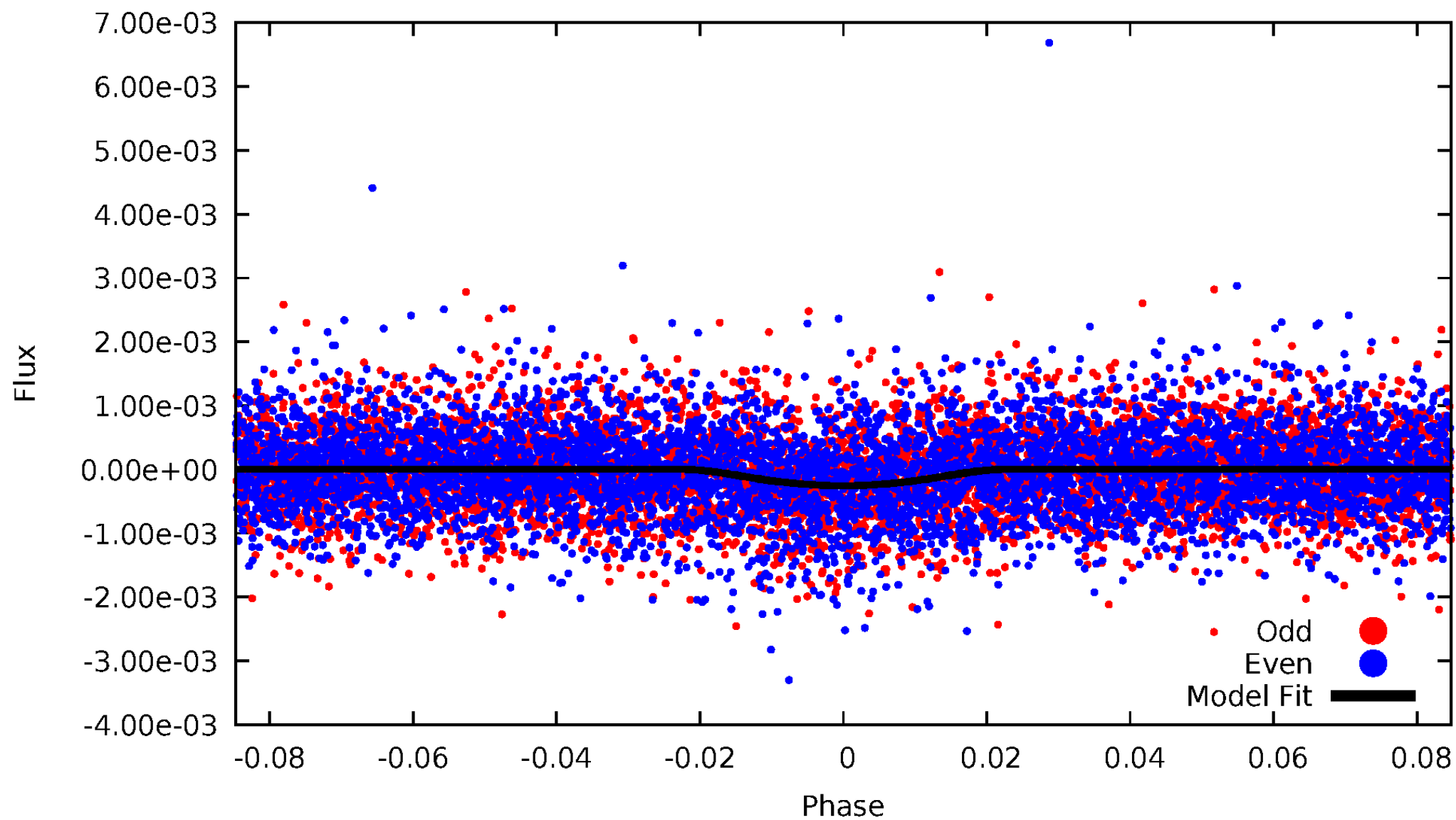


TCE 007257363-01



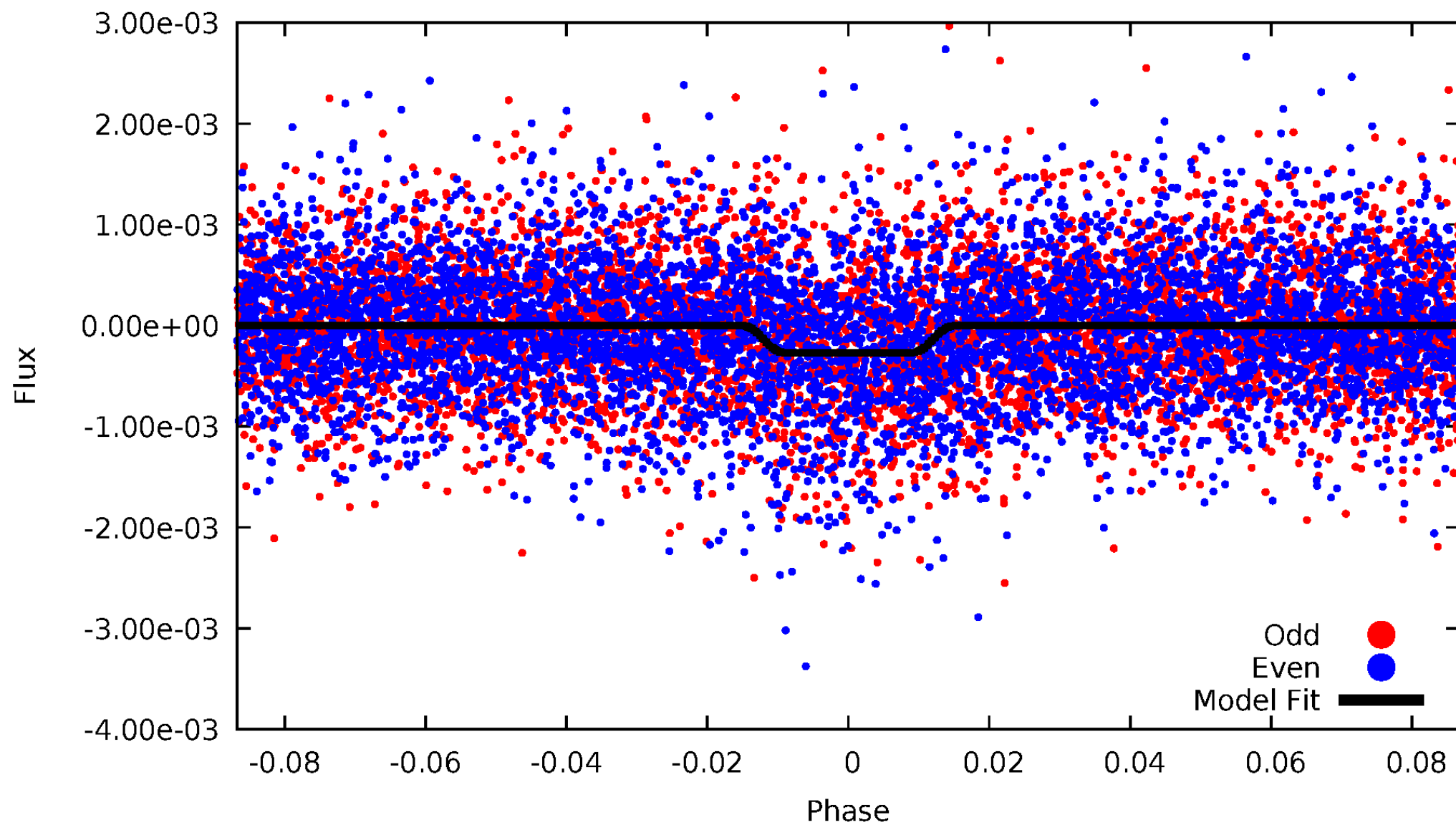
DV Odd/Even

TCE 007257363-01

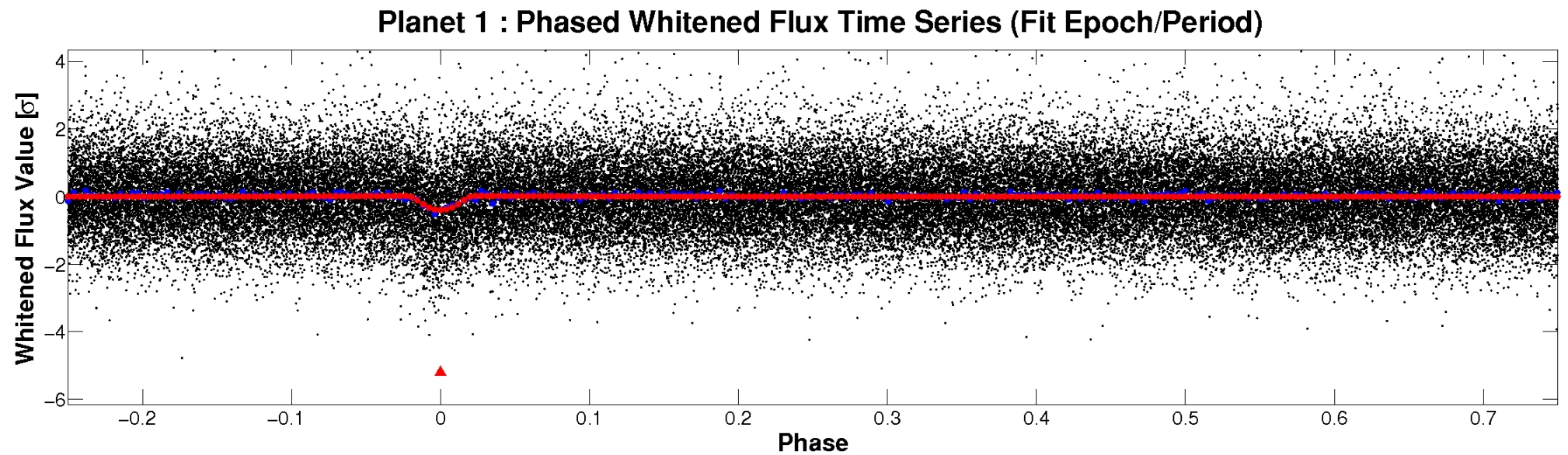
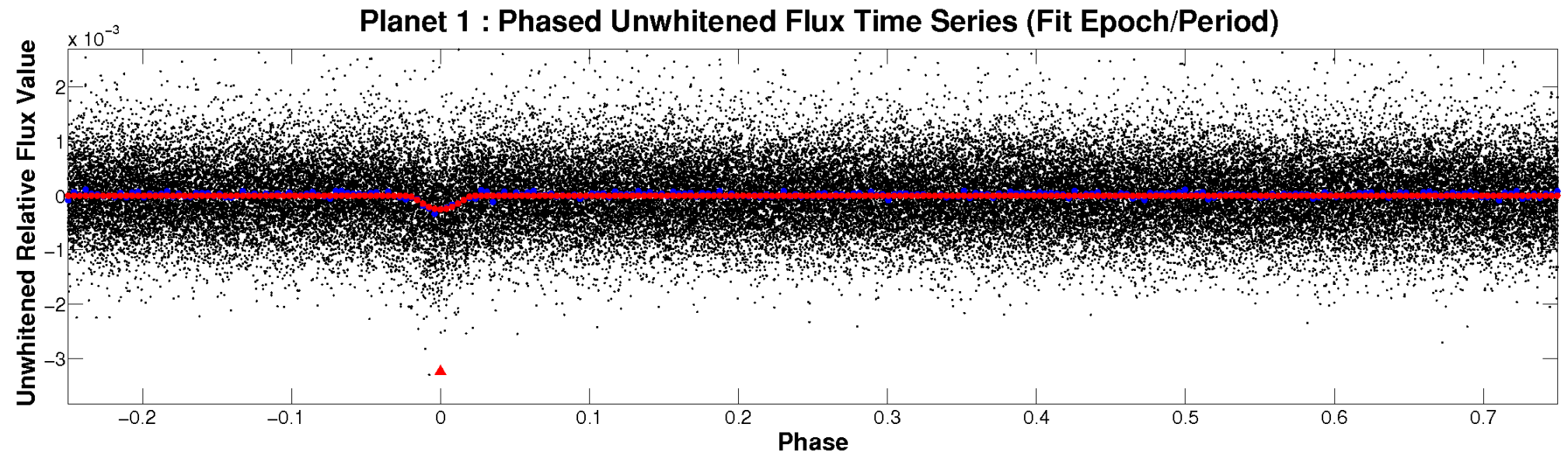


ALT Odd/Even

TCE 007257363-01

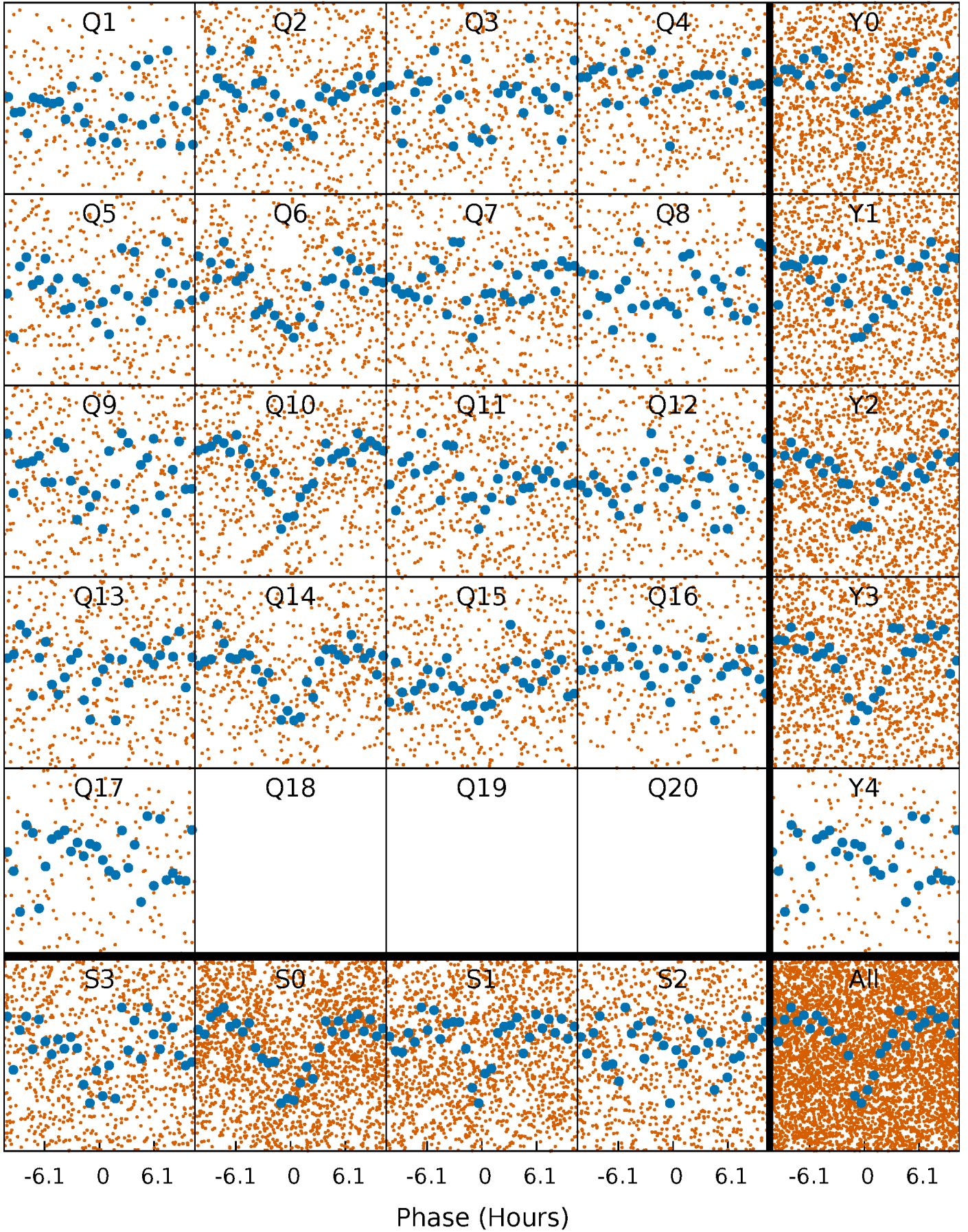


Non-Whitened Vs. Whitened Light Curve



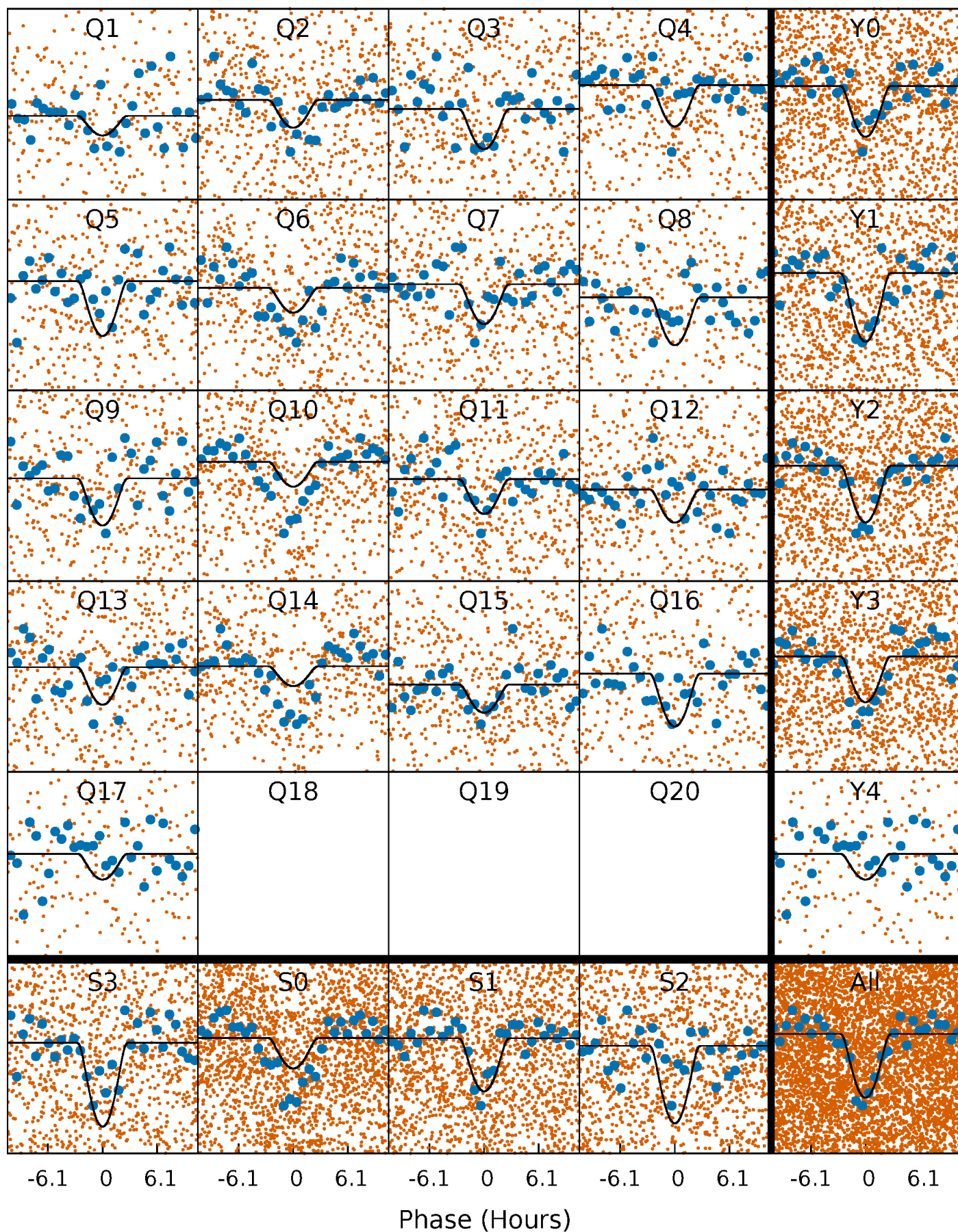
PDC Quarter-Phased Transit Curves

TCE 007257363-01 P= 5.233439 Days $T_0=133.142532$ (BKJD)



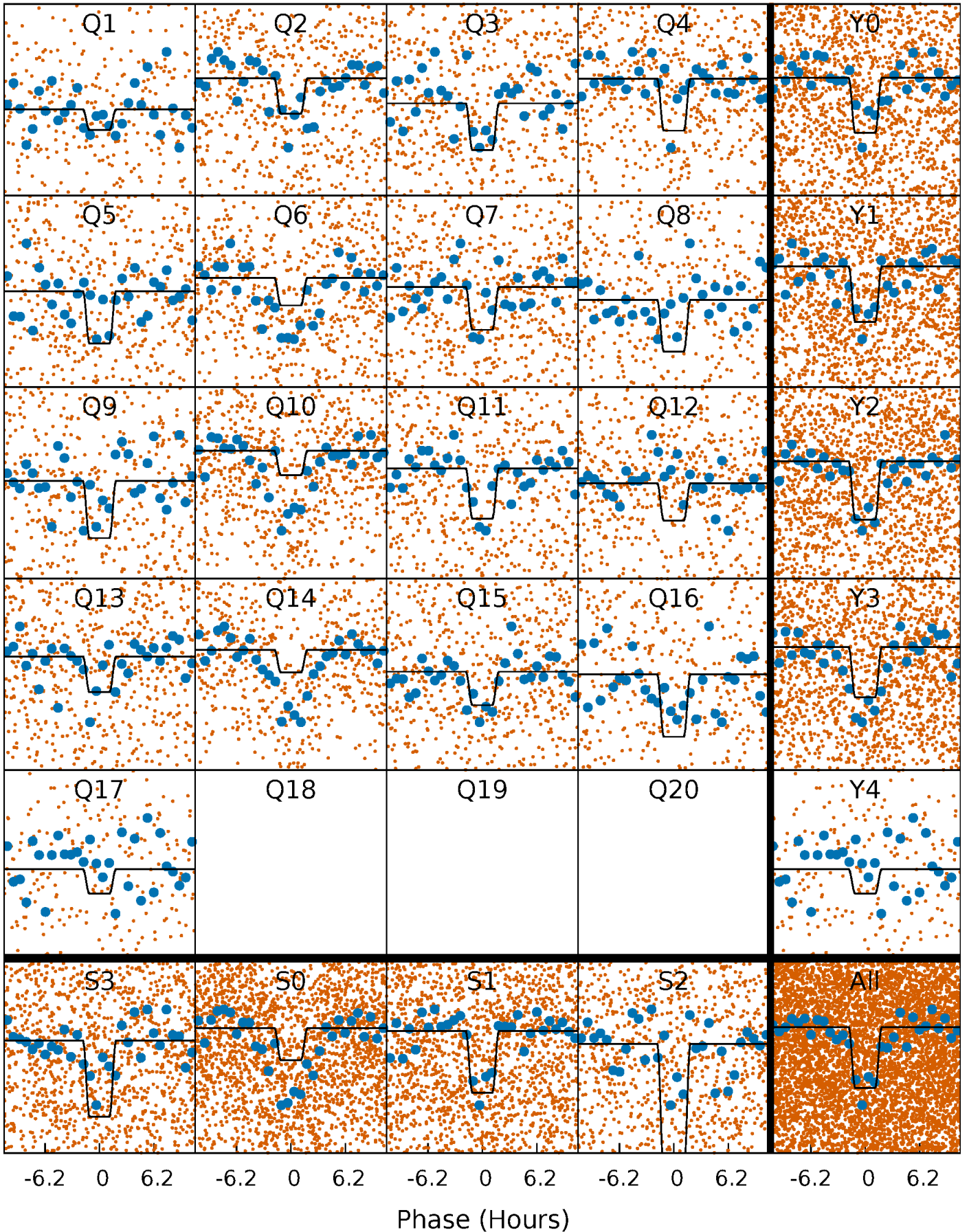
DV Quarter-Phased Transit Curves

TCE 007257363-01 P= 5.233439 Days $T_0=133.142532$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

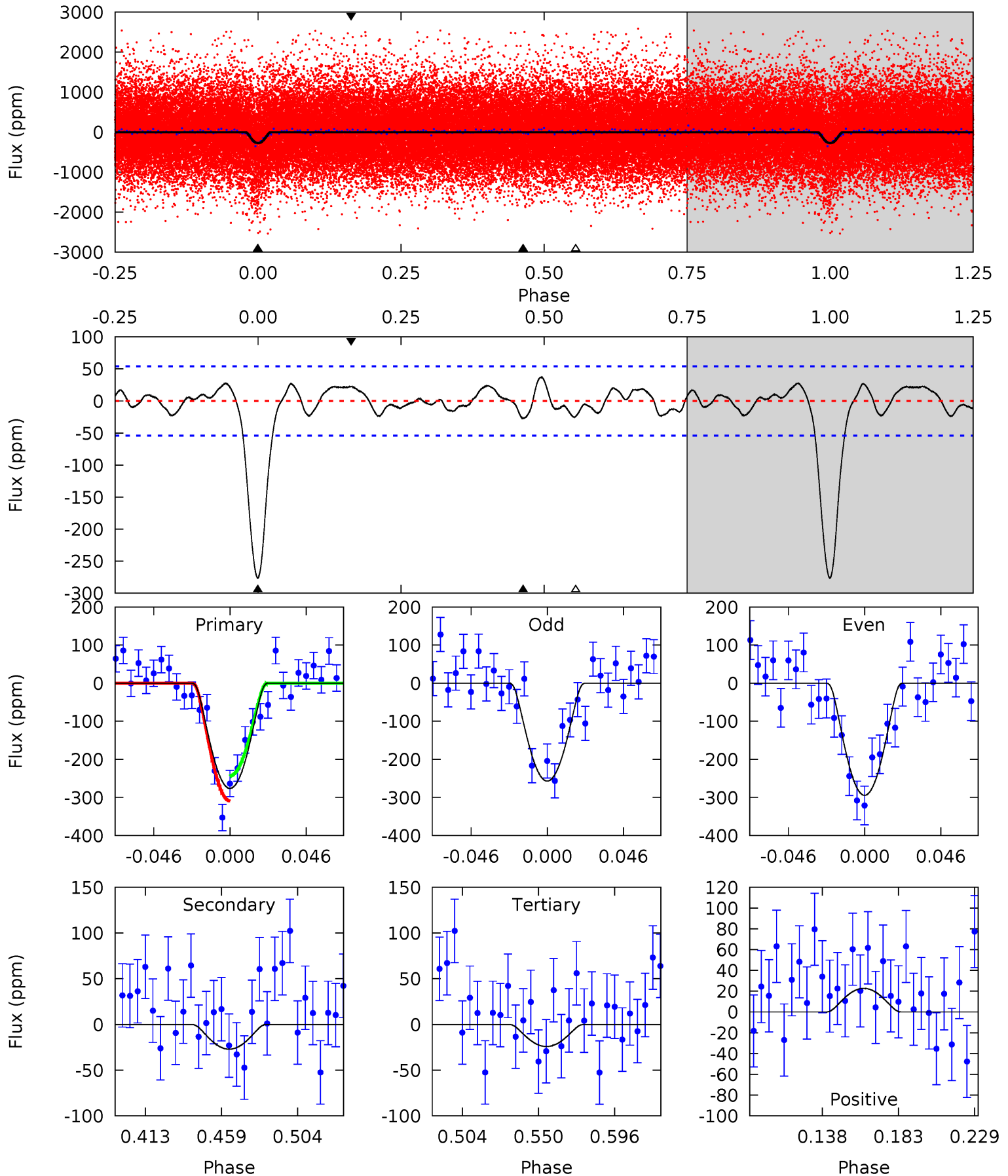
TCE 007257363-01 P= 5.233414 Days $T_0=133.139902$ (BKJD)



DV Model-Shift Uniqueness Test

007257363-01, P = 5.233439 Days, E = 127.909093 Days

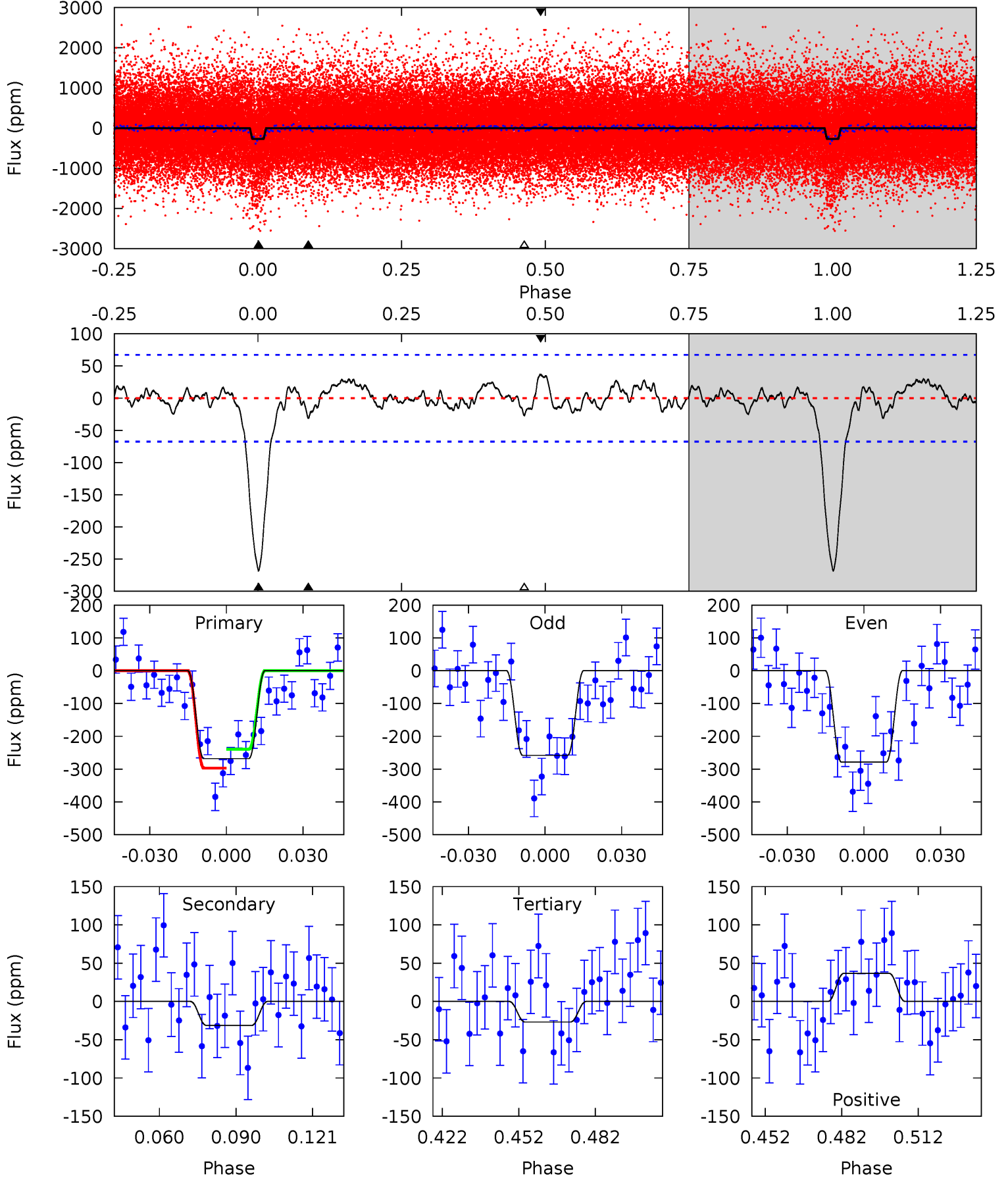
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.1	2.36	2.11	1.98	4.73	2.00	1.22	22.0	22.2	0.25	0.39	1.64	1.14	0.12	2.89



Alt Model-Shift Uniqueness Test

007257363-01, P = 5.233414 Days, E = 127.906488 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	2.24	1.92	2.63	4.81	2.17	0.96	17.2	16.5	0.31	-0.39	0.73	1.16	0.12	2.07



Stellar Parameters For KIC 007257363

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5266^{+142}_{-142}	$4.611^{+0.036}_{-0.084}$	$-0.220^{+0.300}_{-0.300}$	$0.741^{+0.103}_{-0.060}$	$0.830^{+0.069}_{-0.103}$	$2.868^{+0.453}_{-0.832}$
	+3%/-3%	+1%/-2%	+136%/-136%	+14%/-8%	+8%/-12%	+16%/-29%
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 007257363-01 / KOI 2292.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-27 ± 11	$4.09^{+3.60}_{-2.78}$	1202^{+41}_{-41}	2478^{+910}_{-471}	$2.593^{+22.375}_{-1.952}$
Alt.	-31 ± 14	$3.61^{+3.53}_{-2.59}$	1201^{+47}_{-44}	2629^{+1152}_{-549}	$3.913^{+39.311}_{-3.124}$

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

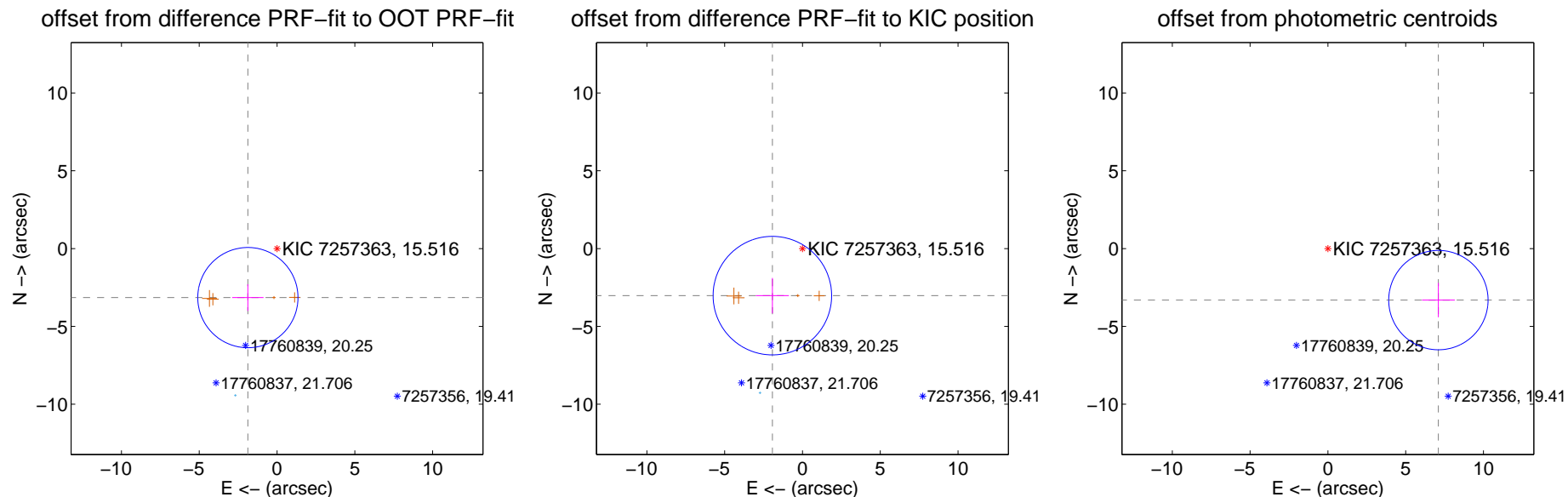
DV Centroid Data

Supplemental centroid analysis for 007257363-01. Kepler magnitude: 15.52. Transit SNR 13.50

There are 1 quarters with good PRF difference image offsets

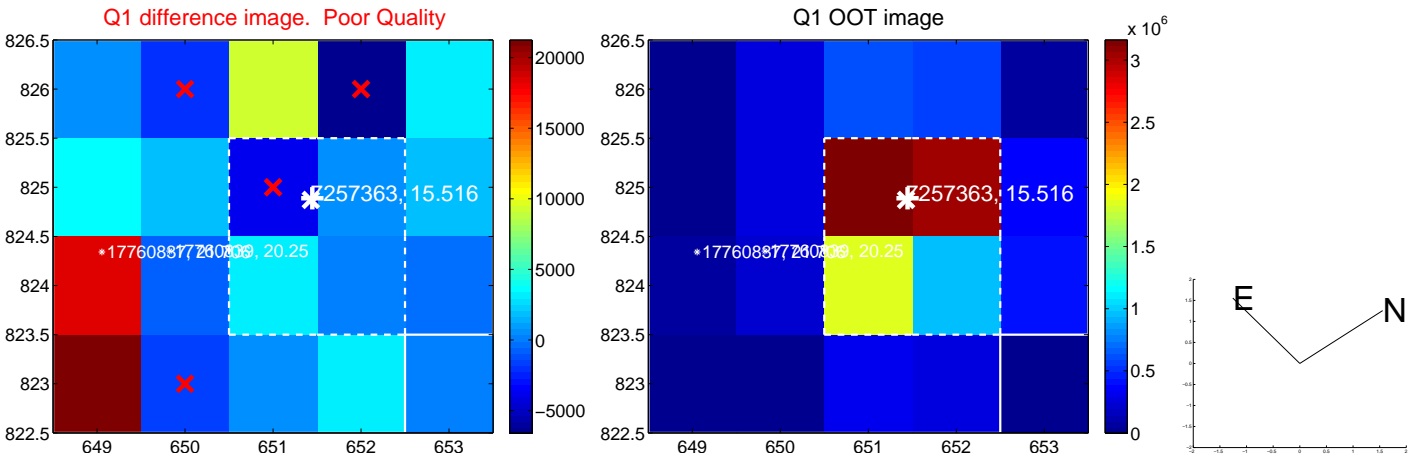
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.665 ± 1.073	3.41	1.874 ± 1.009	-3.150 ± 0.853
PRF-fit source offset from KIC position	3.589 ± 1.269	2.83	1.935 ± 1.061	-3.023 ± 1.136
photometric centroid source offset	7.83 ± 1.06	7.36	-7.10 ± 1.06	-3.31 ± 1.10

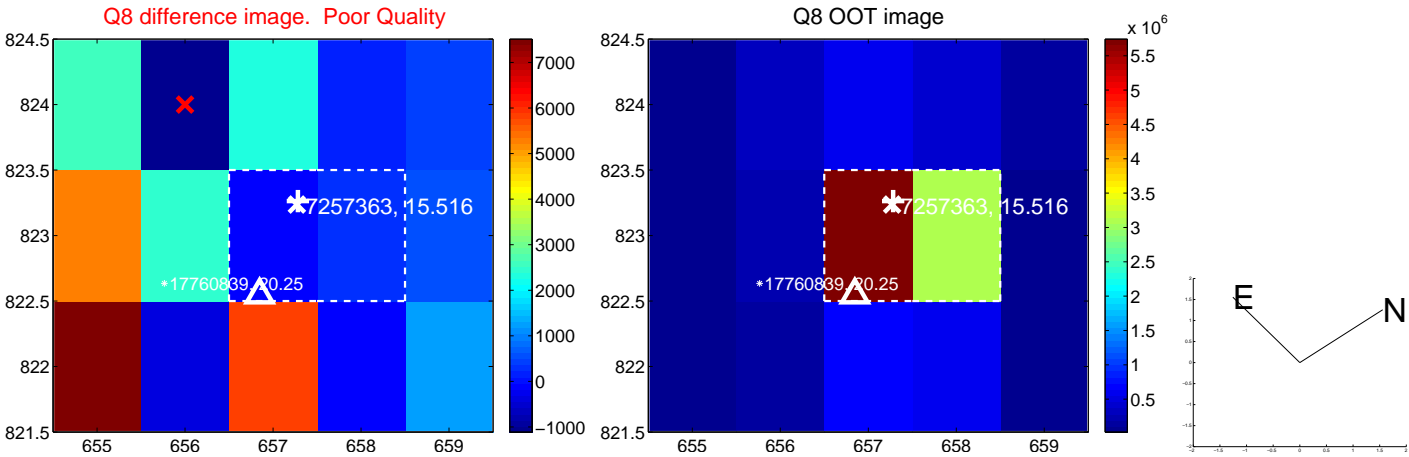
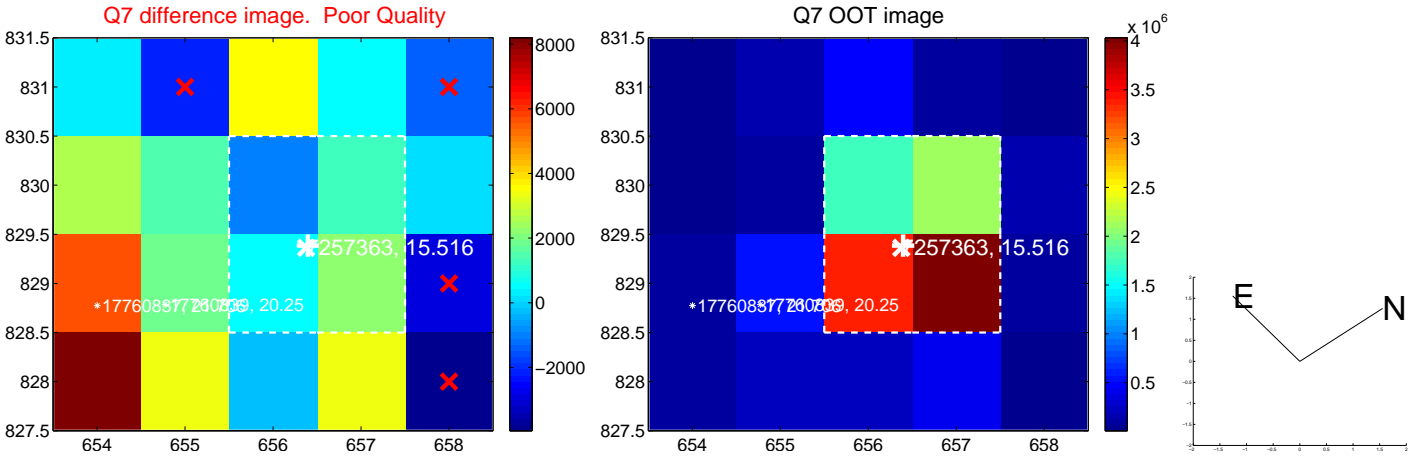
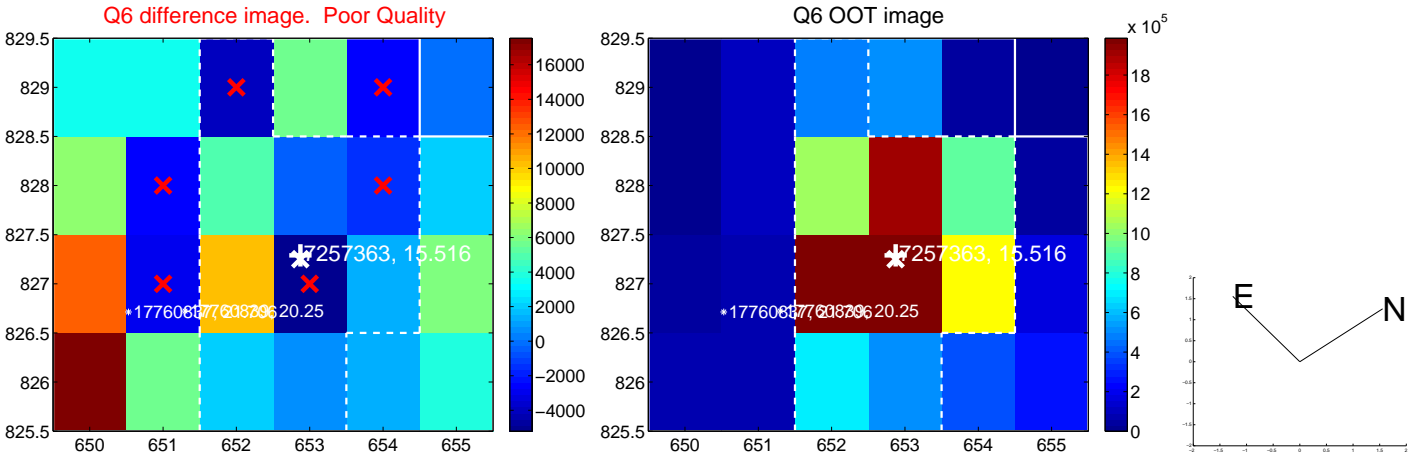
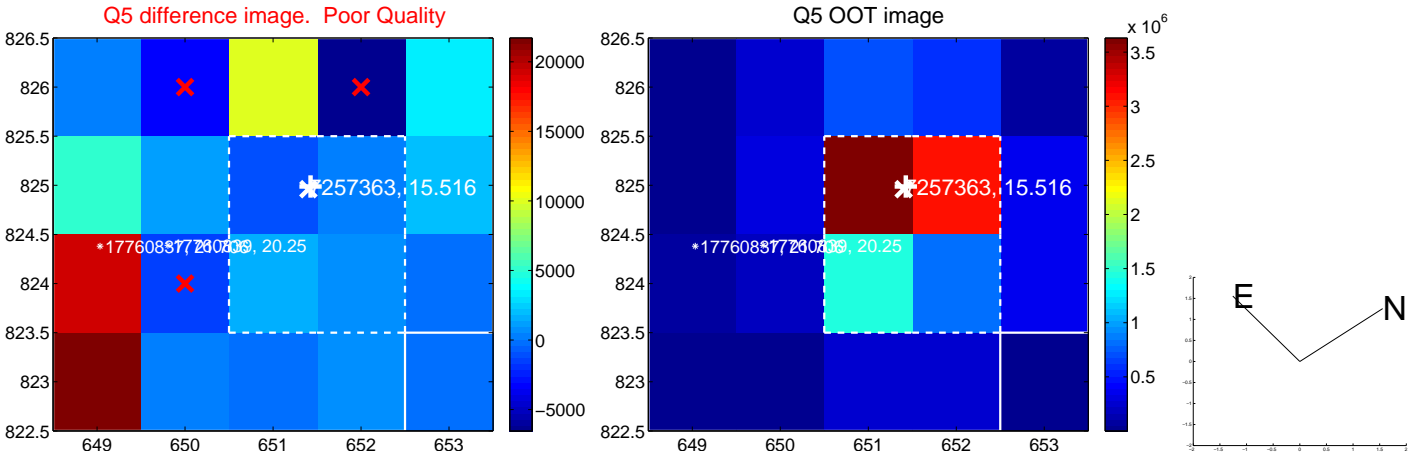


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- 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.

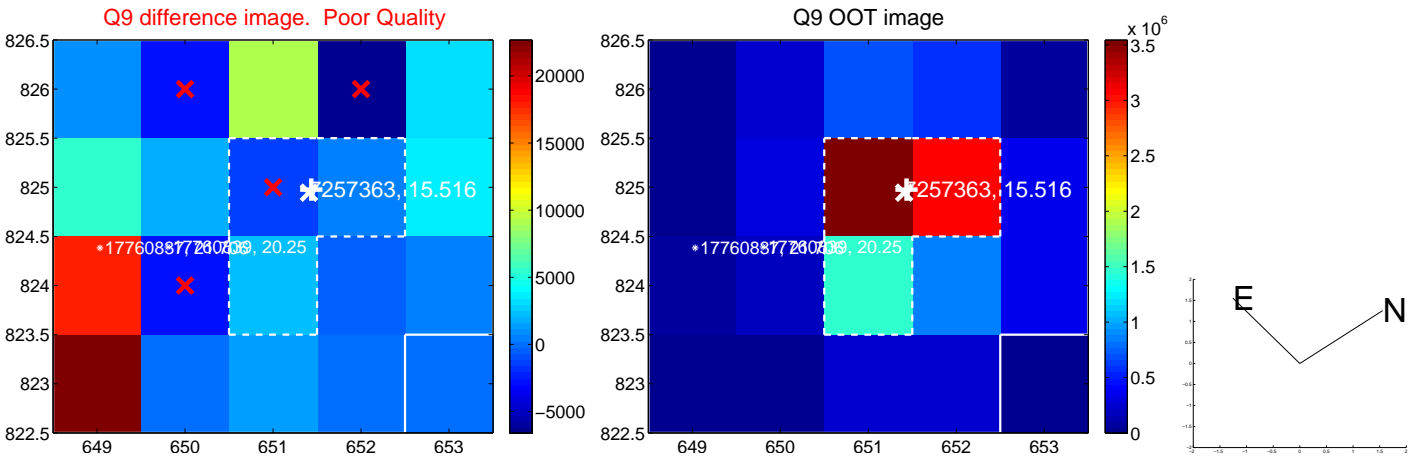
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



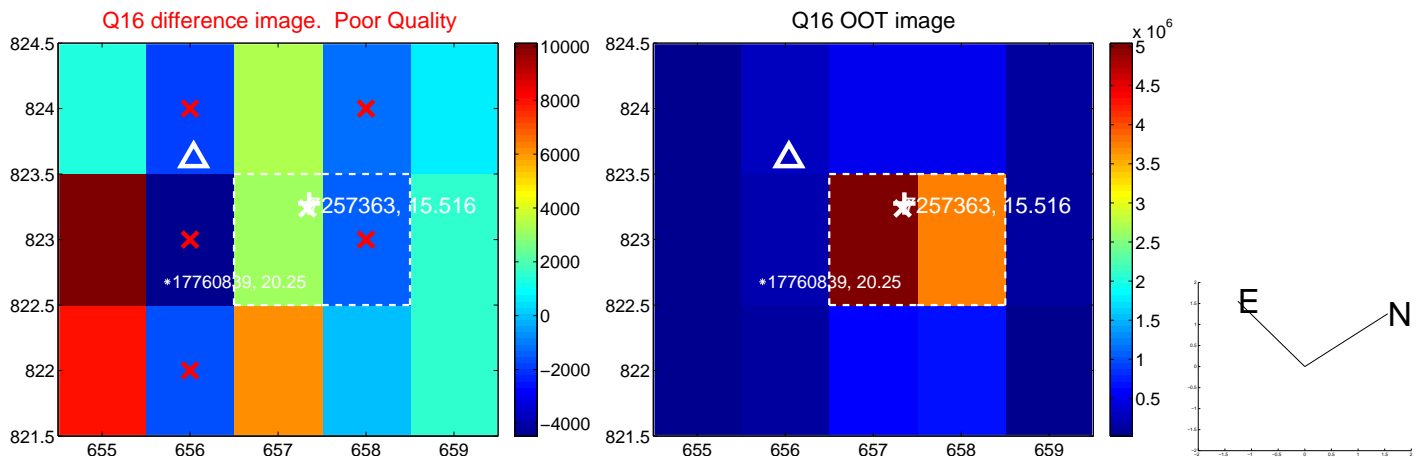
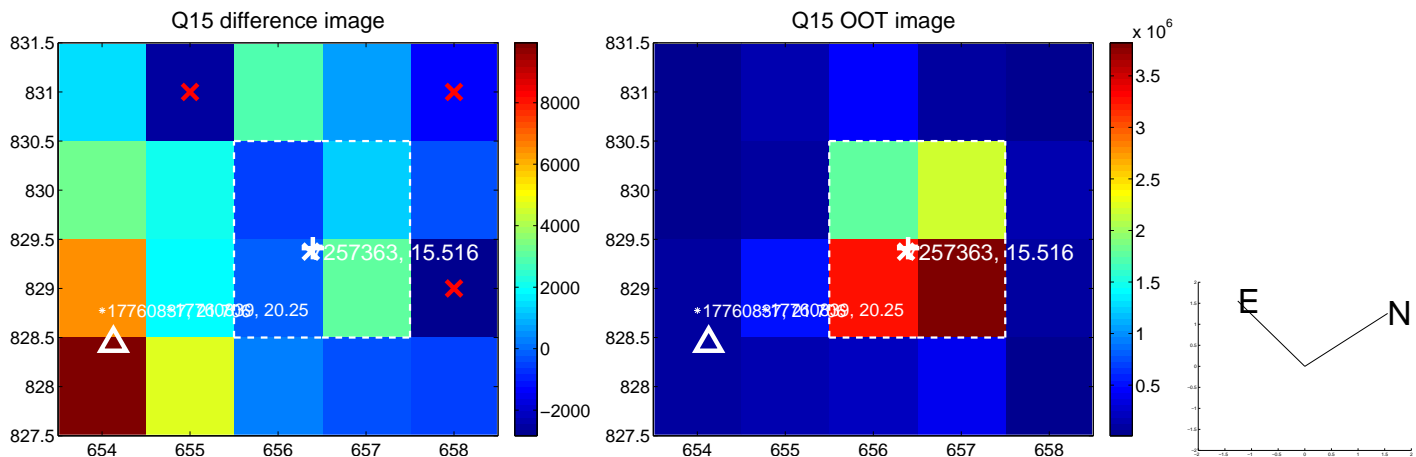
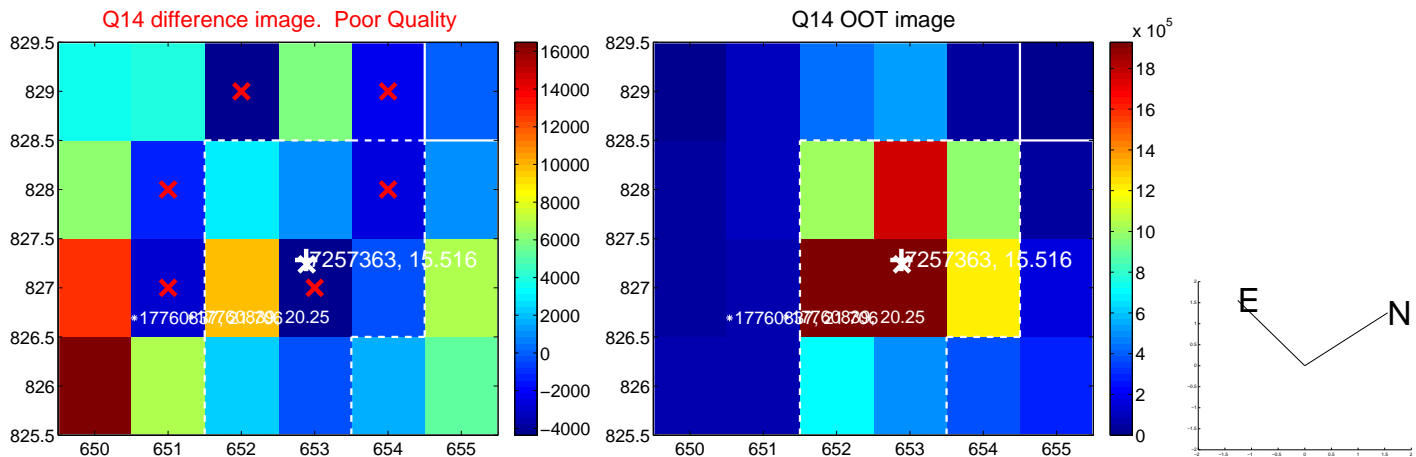
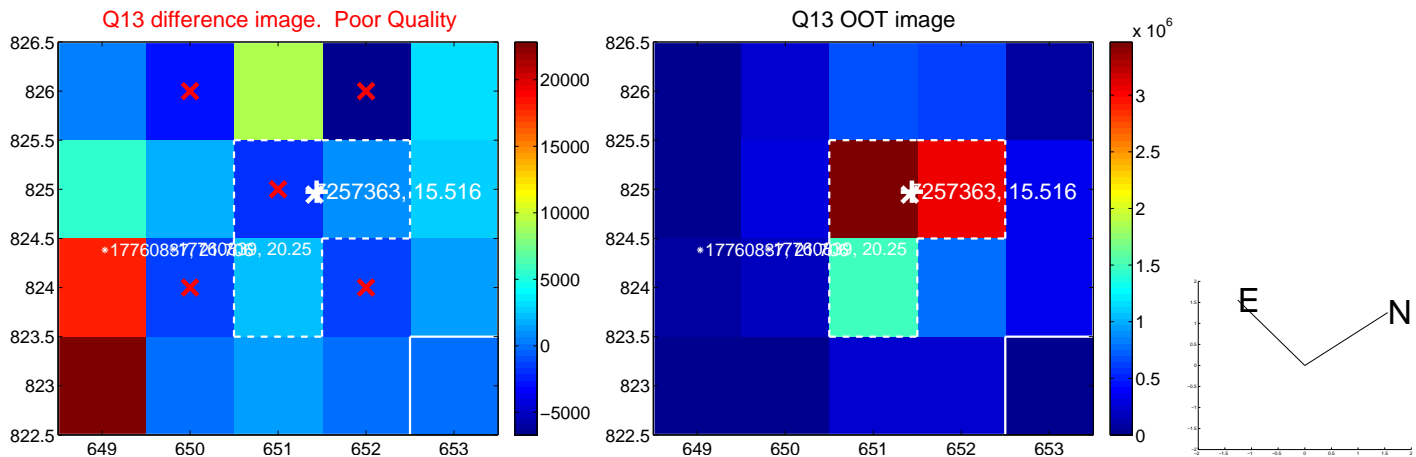
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



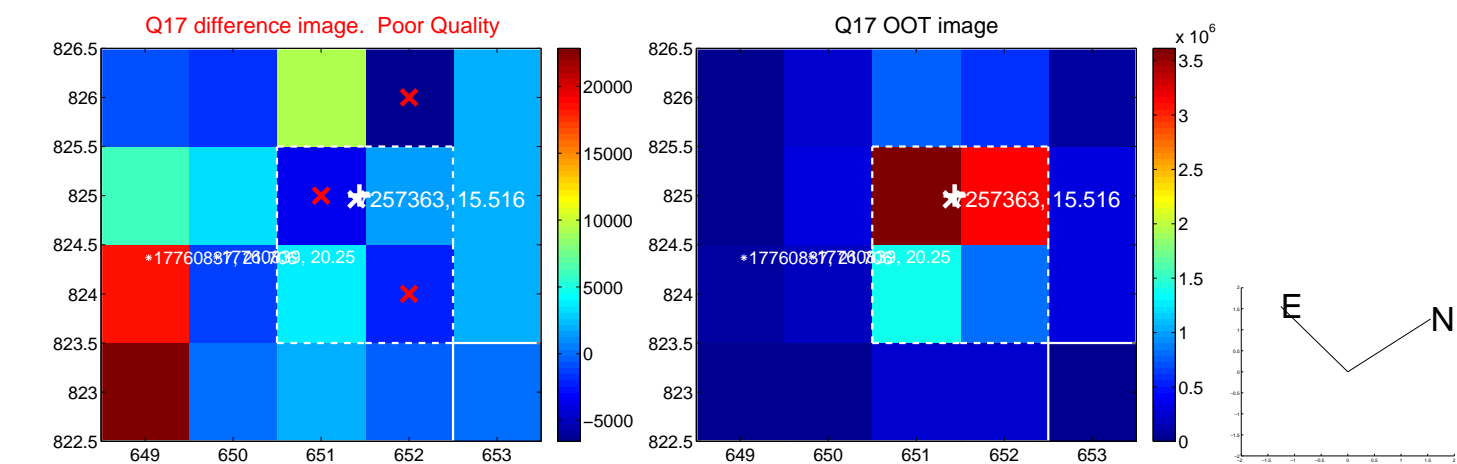
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



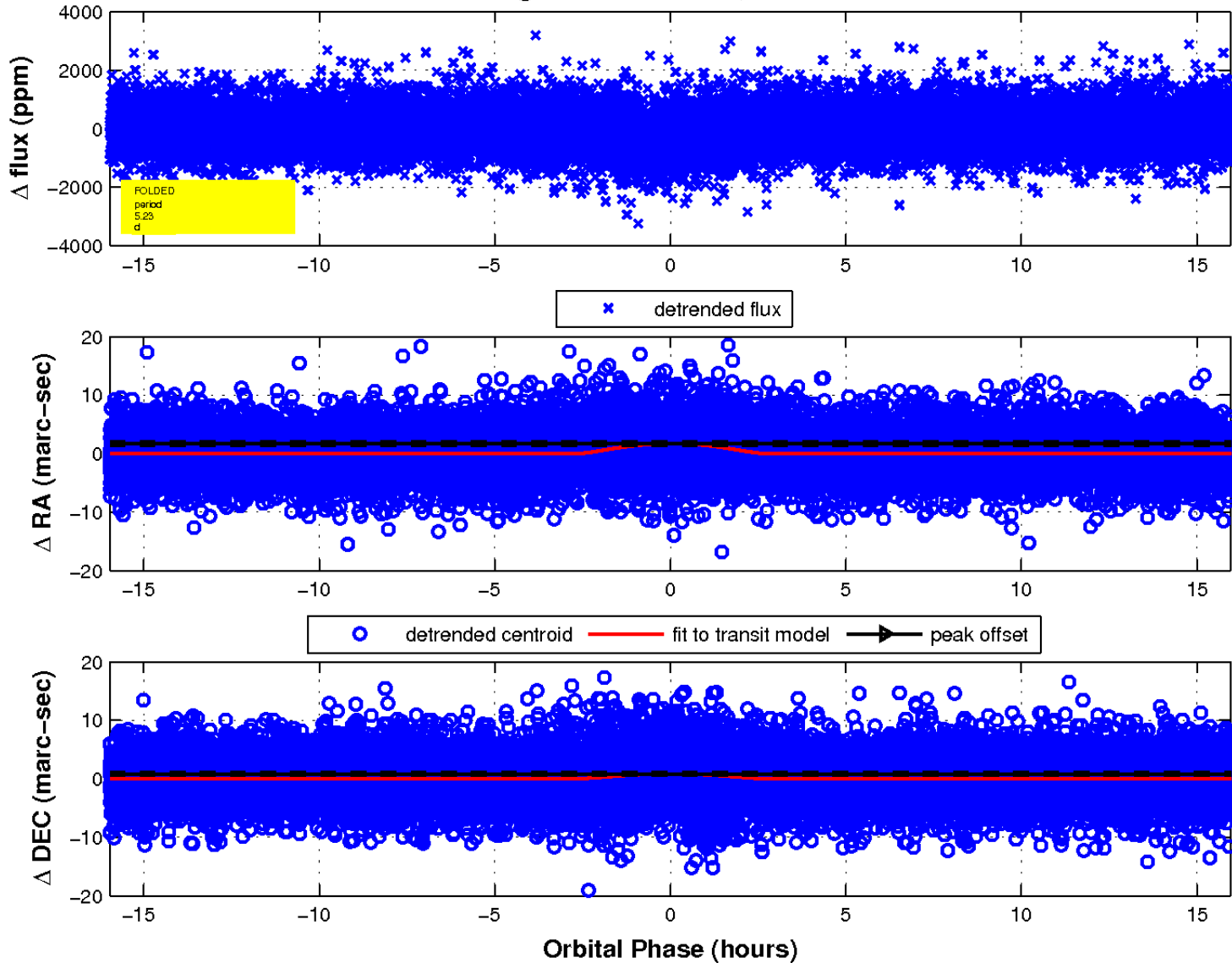
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

