

KIC 007504328

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})
007504328-01	OBS	0458.01	53.717971	154.362492	3166.5	4.130	93.4	97.9	21.45	4959	154.88	1365.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007504328-01	OBS	PC	0.93	0	0	0	0	NO_COMMENT

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.

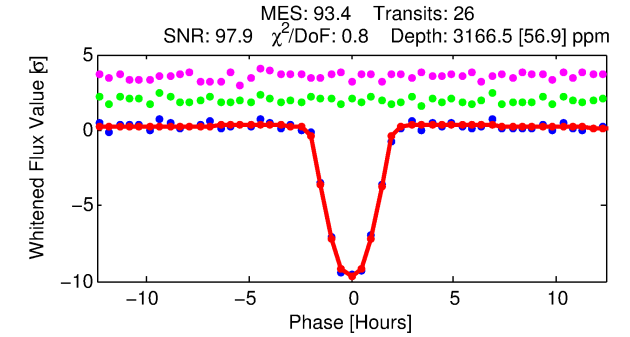
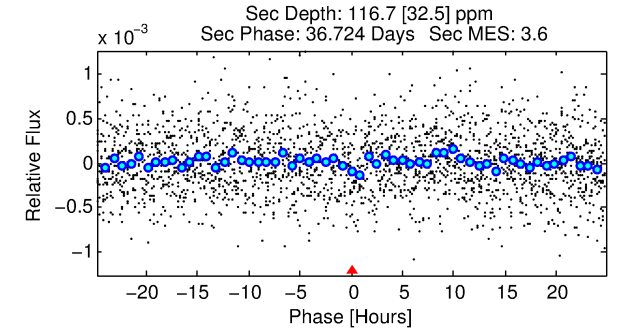
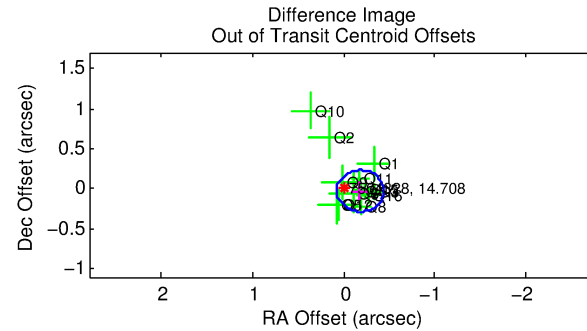
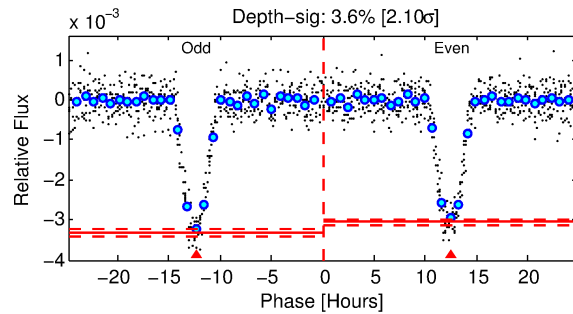
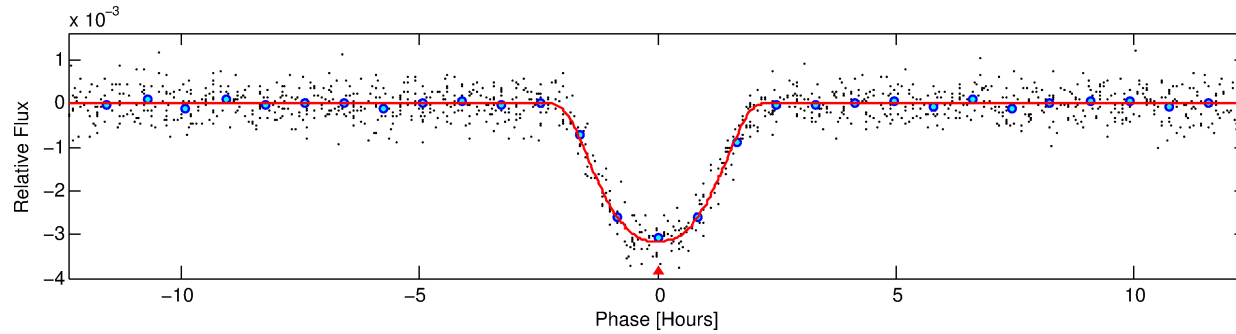
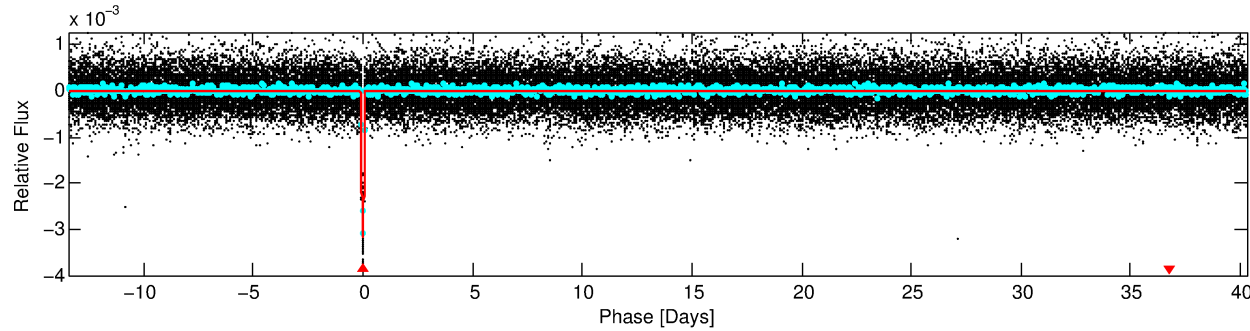
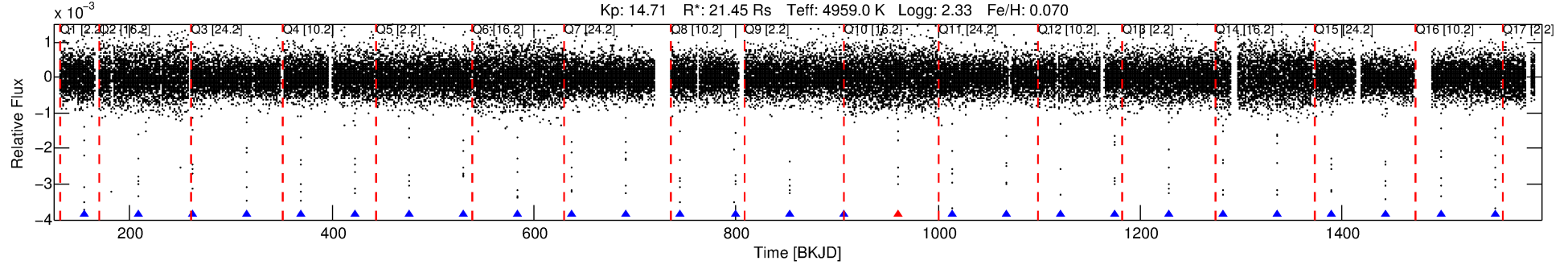
Ephemeris Match Information For 007504328-01

No Significant Match Found

DV One-Page Summary

KIC: 7504328 Candidate: 1 of 1 Period: 53.718 d
KOI: K00458.01 Corr: 0.995

Kp: 14.71 R*: 21.45 Rs Teff: 4959.0 K Logg: 2.33 Fe/H: 0.070



DV Fit Results:

Period = 53.71797 [0.00006] d
Epoch = 154.3625 [0.0010] BKJD
Rp/R* = 0.0662 [0.0012]
a/R* = 51.69 [1.28]
b = 0.93 [0.00]
Seff = 1365.37 [405.99]
Teff = 1550 [115] K
Rp = 154.88 [31.39] Re
a = 0.4273 [0.0781] AU
Ag = 0.49 [0.19] [-2.63σ]
Teffp = 2004 [149] K [2.41σ]

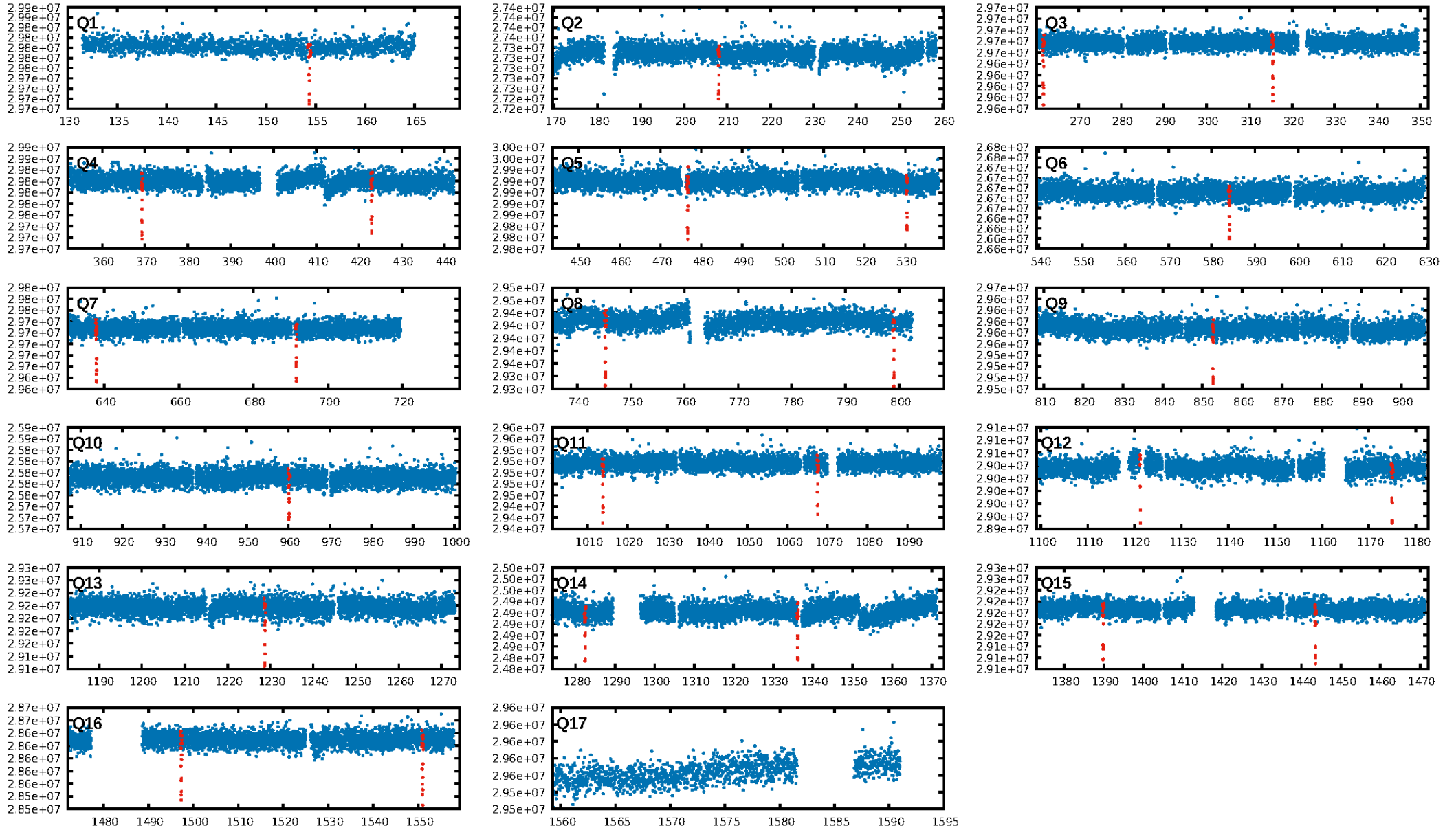
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.96 [24/25]
GhostDiagnostic-chr: 4.866
Centroid-sig: 0.2%
Centroid-so: 0.406 arcsec [2.70σ]
OotOffset-rm: 0.183 arcsec [2.13σ]
KicOffset-rm: 0.113 arcsec [1.35σ]
OotOffset-st: 3/4/4/3 [14]
KicOffset-st: 3/4/4/3 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

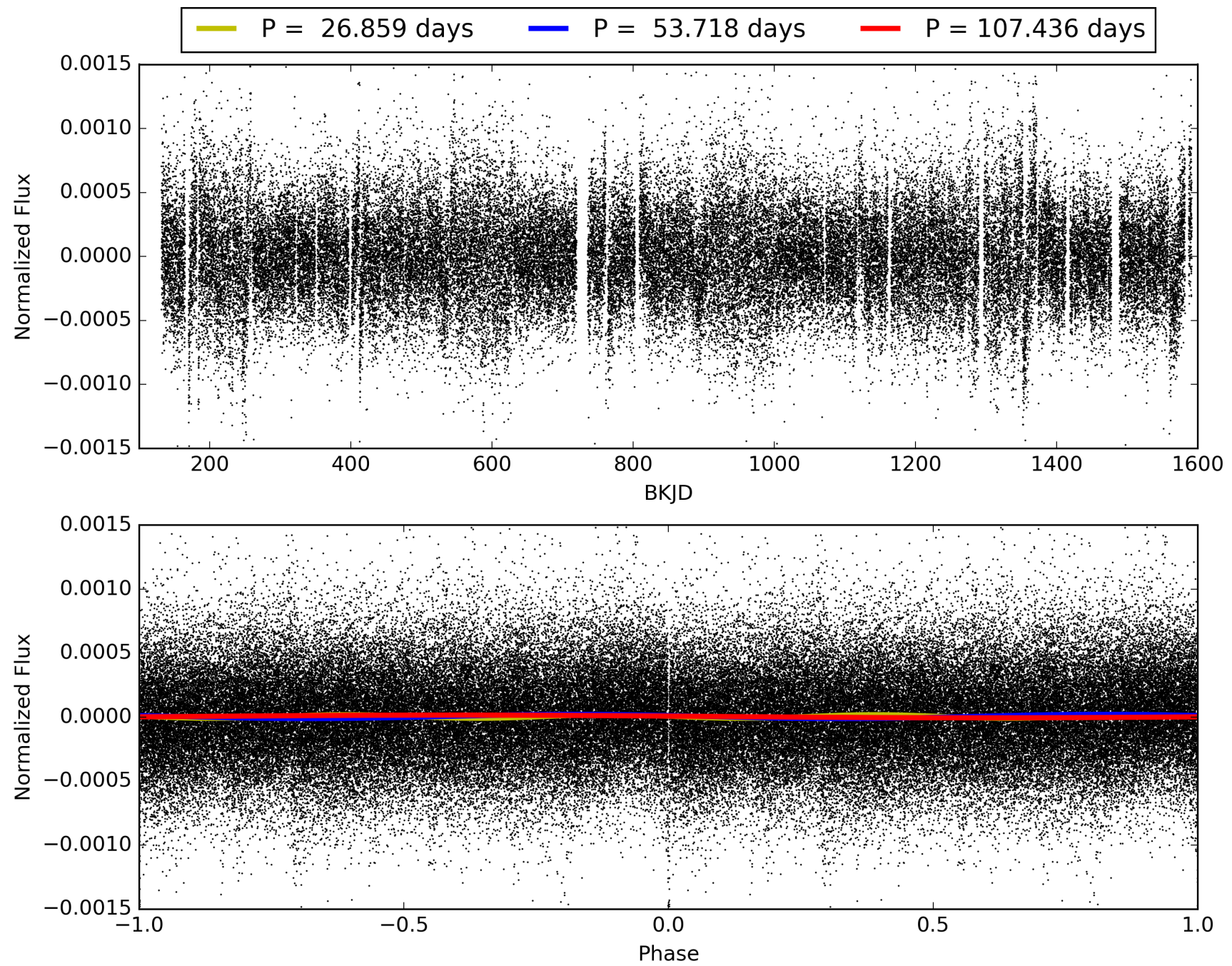
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:08:05 Z

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

TCE 007504328-01, PDC Light Curves

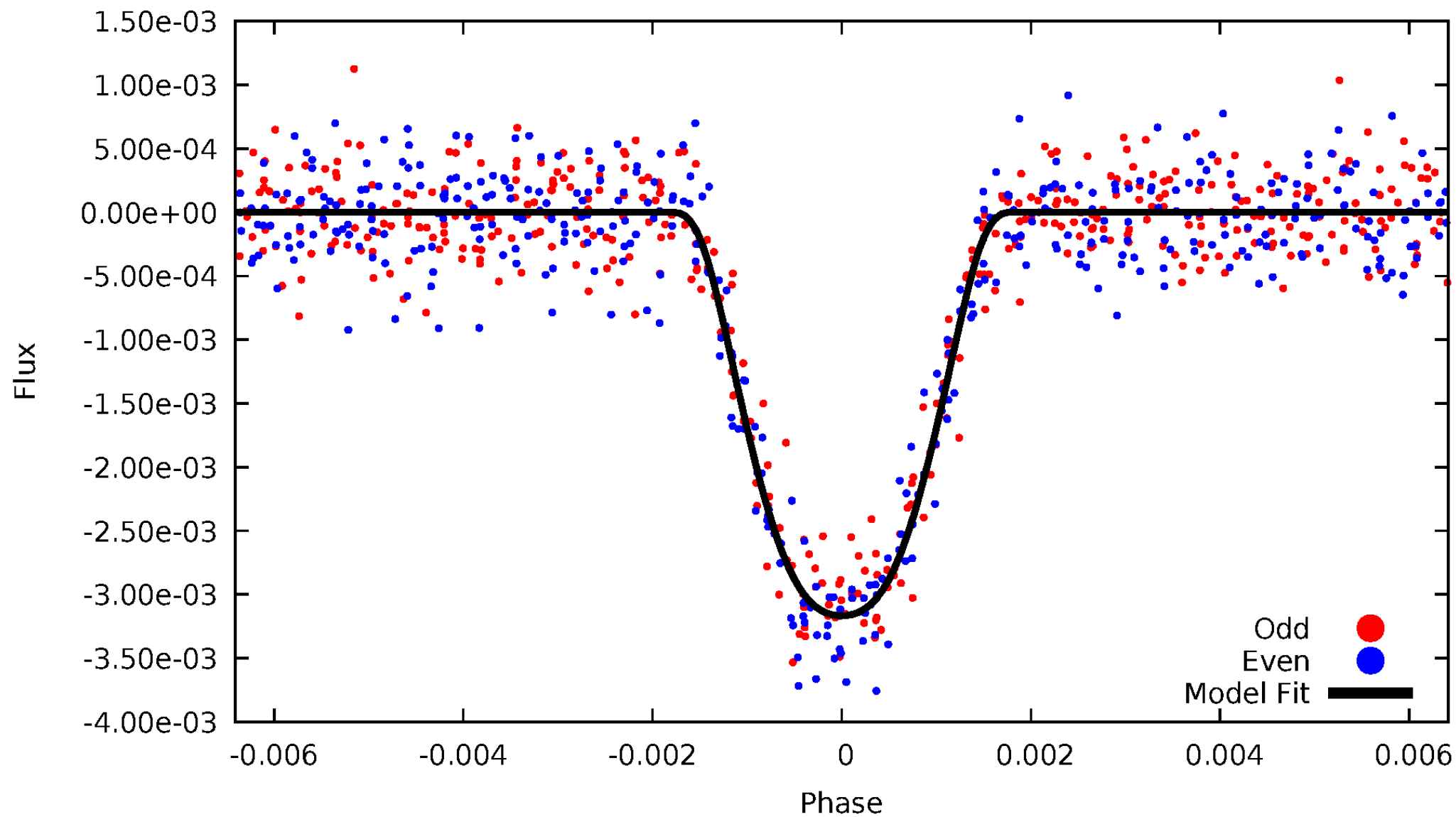


TCE 007504328-01



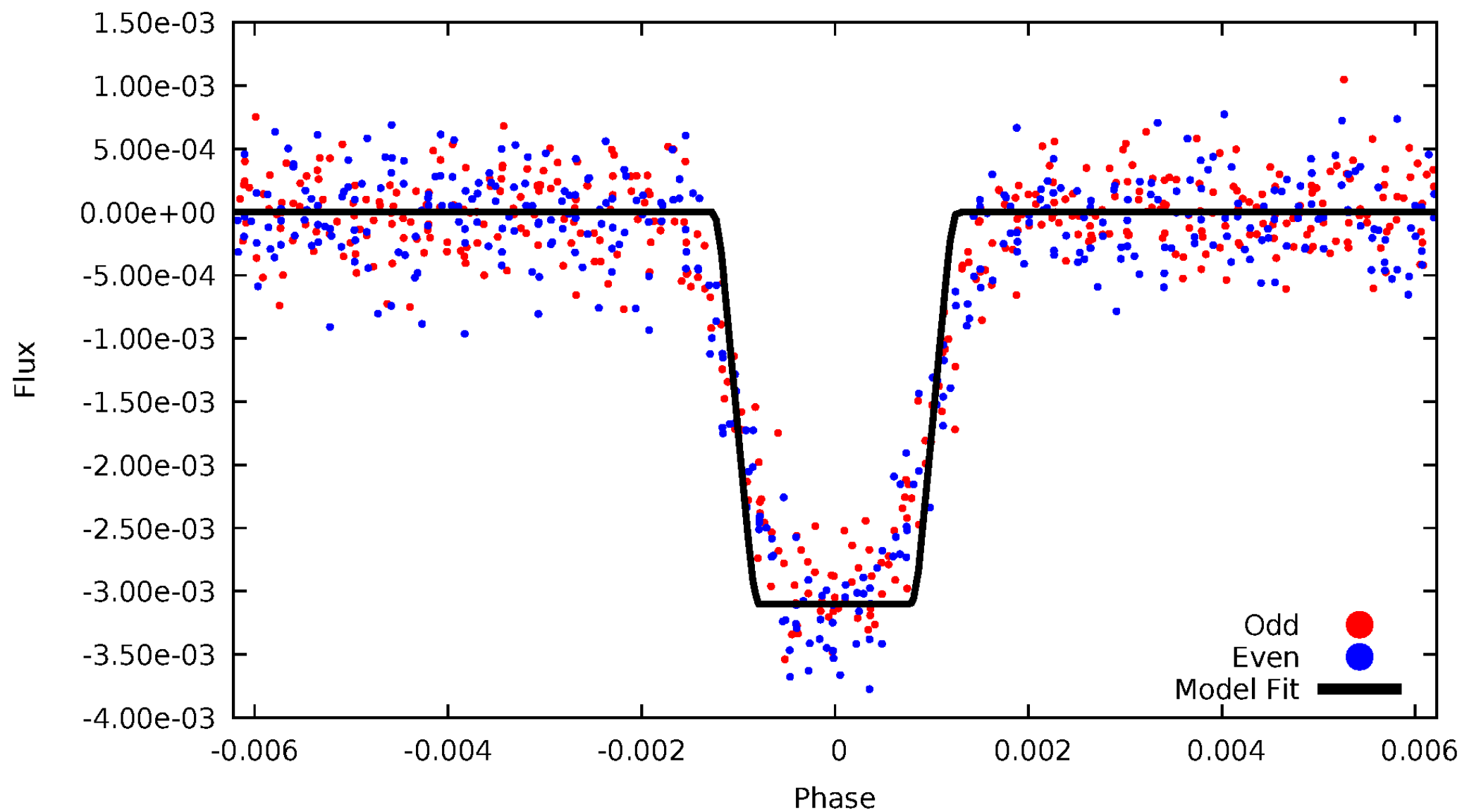
DV Odd/Even

TCE 007504328-01



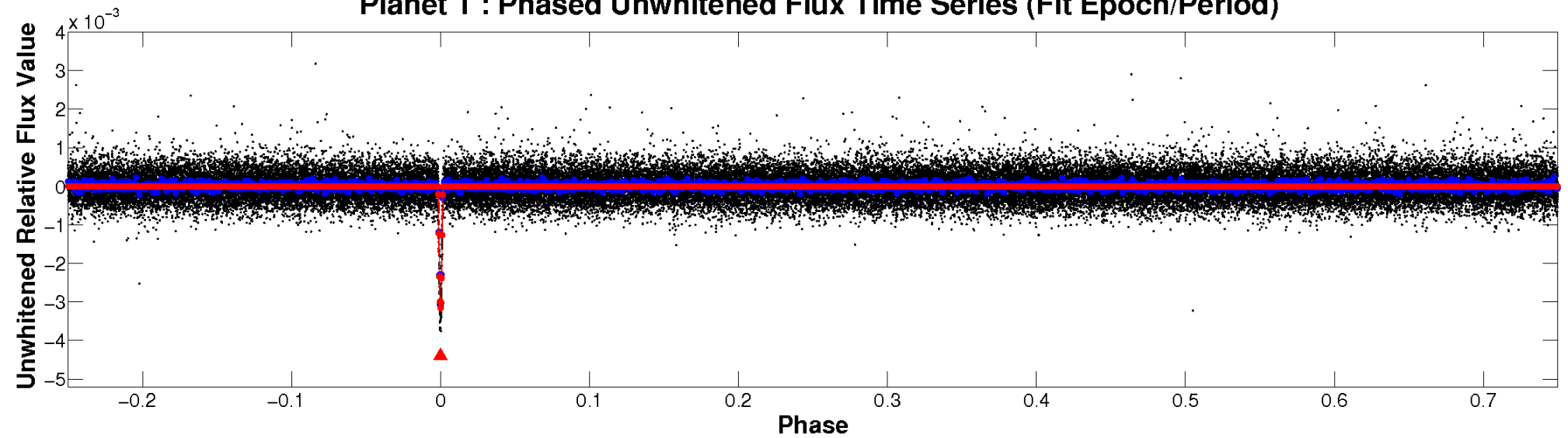
ALT Odd/Even

TCE 007504328-01

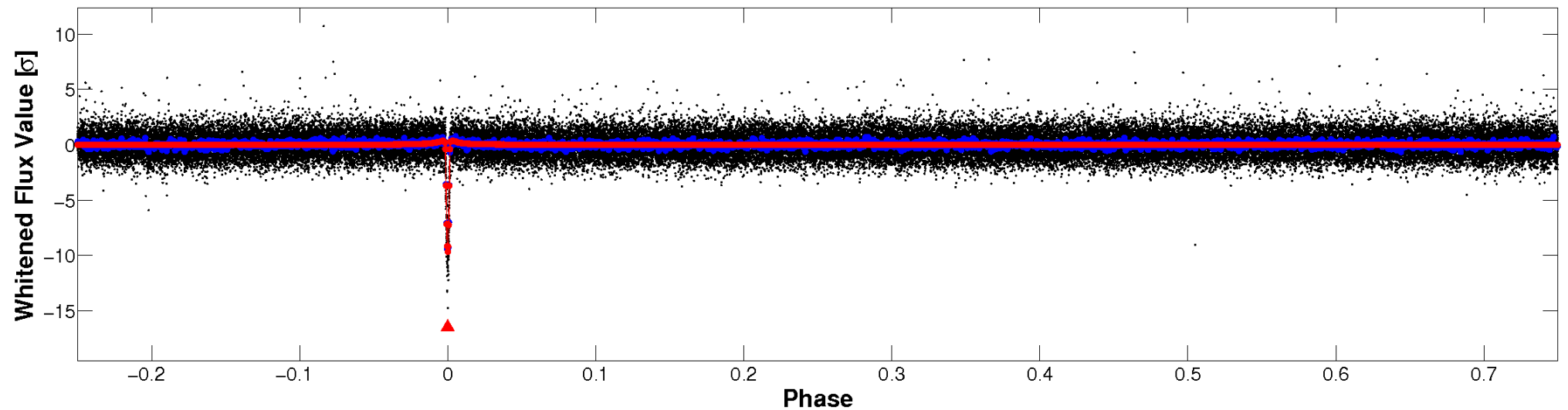


Non-Whitened Vs. Whitened Light Curve

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

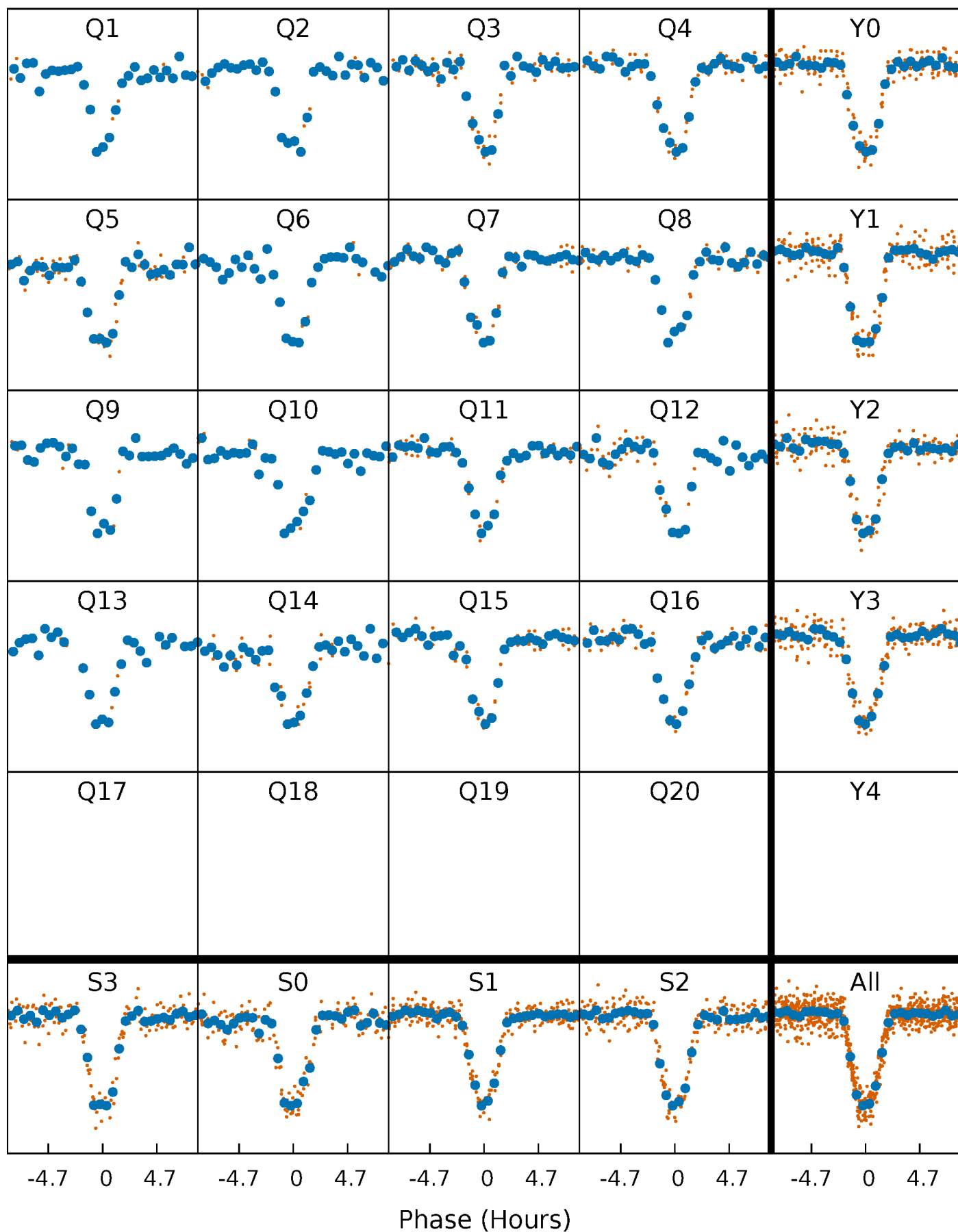


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



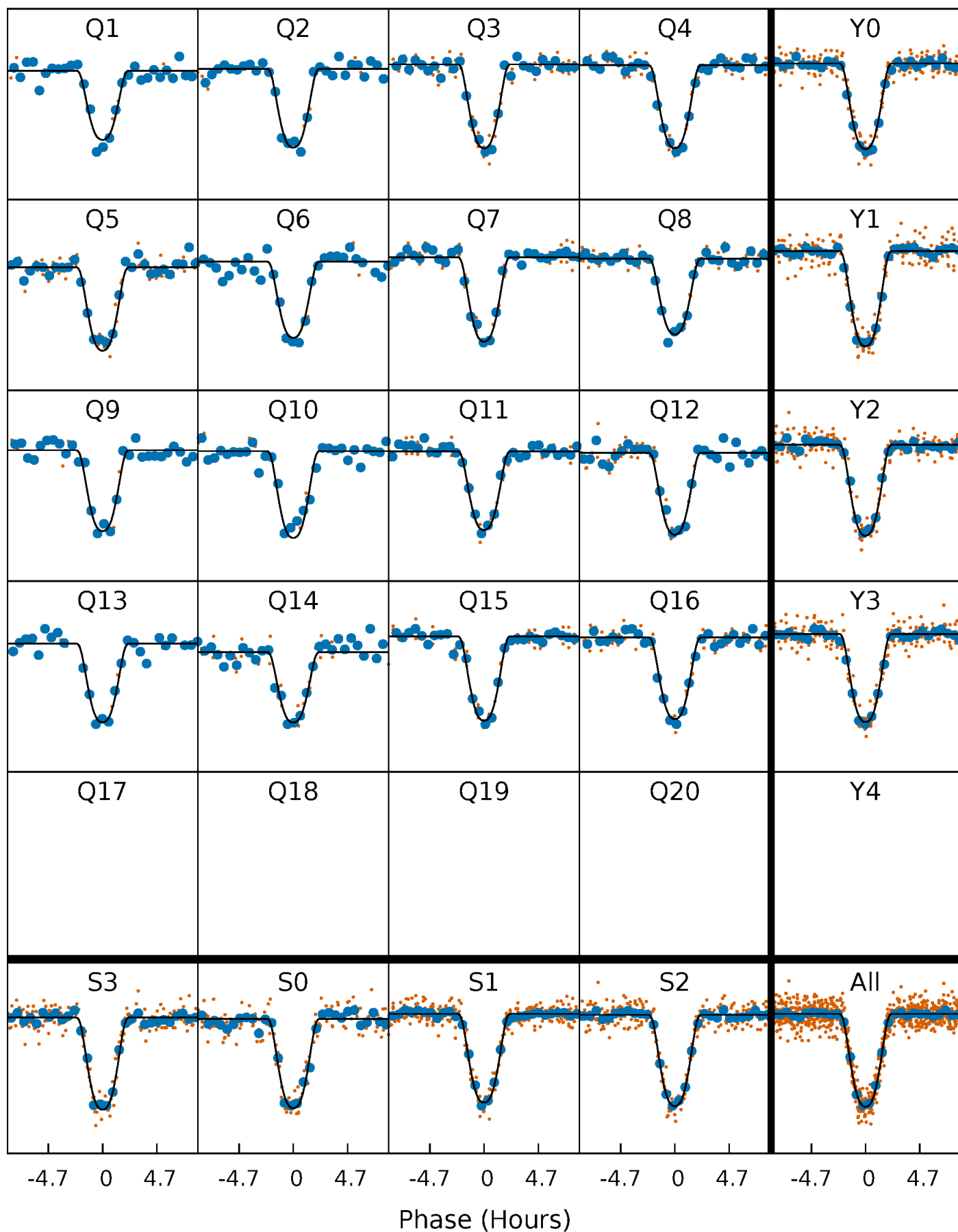
PDC Quarter-Phased Transit Curves

TCE 007504328-01 P= 53.717971 Days $T_0=154.362492$ (BKJD)



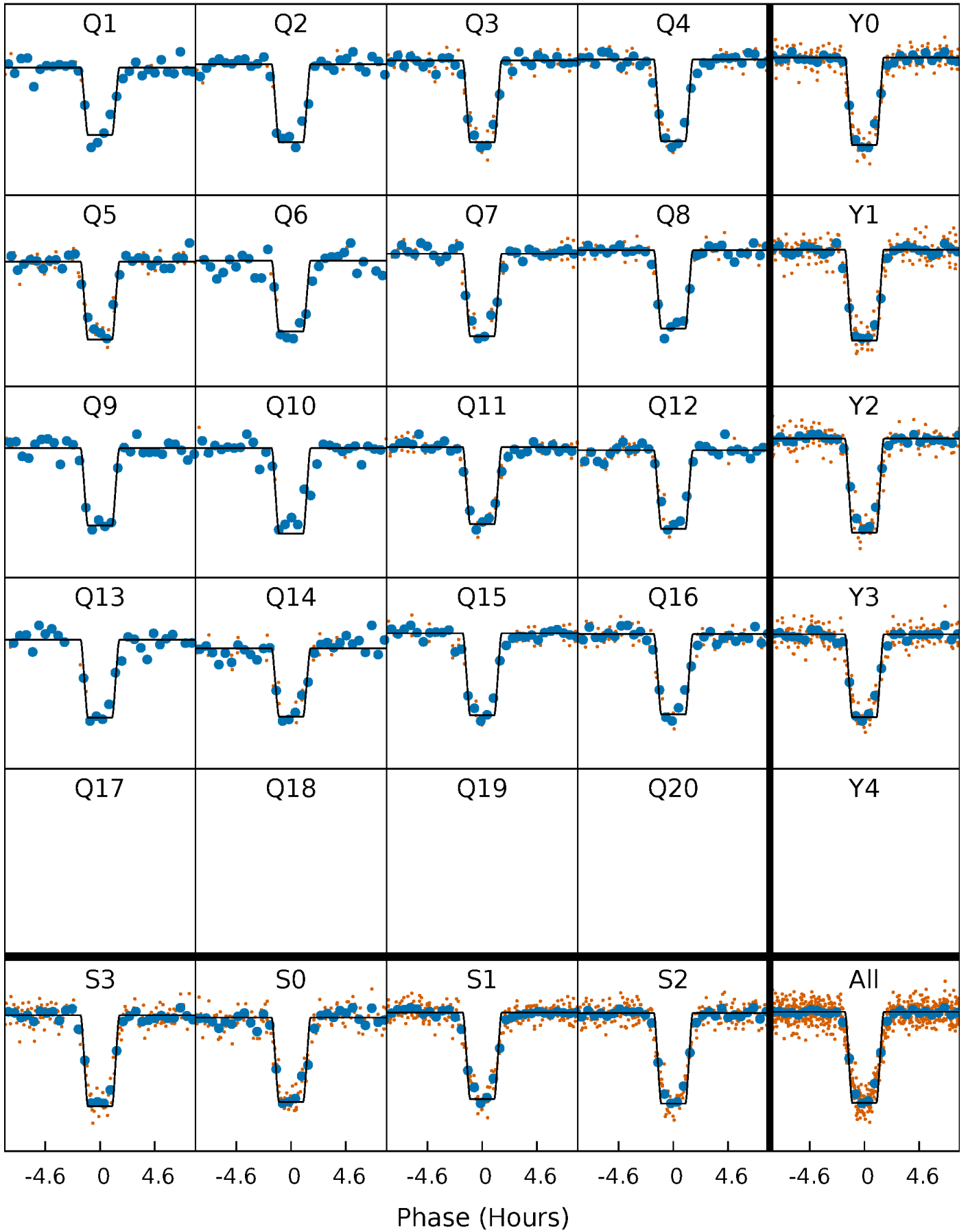
DV Quarter-Phased Transit Curves

TCE 007504328-01 P= 53.717971 Days $T_0=154.362492$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

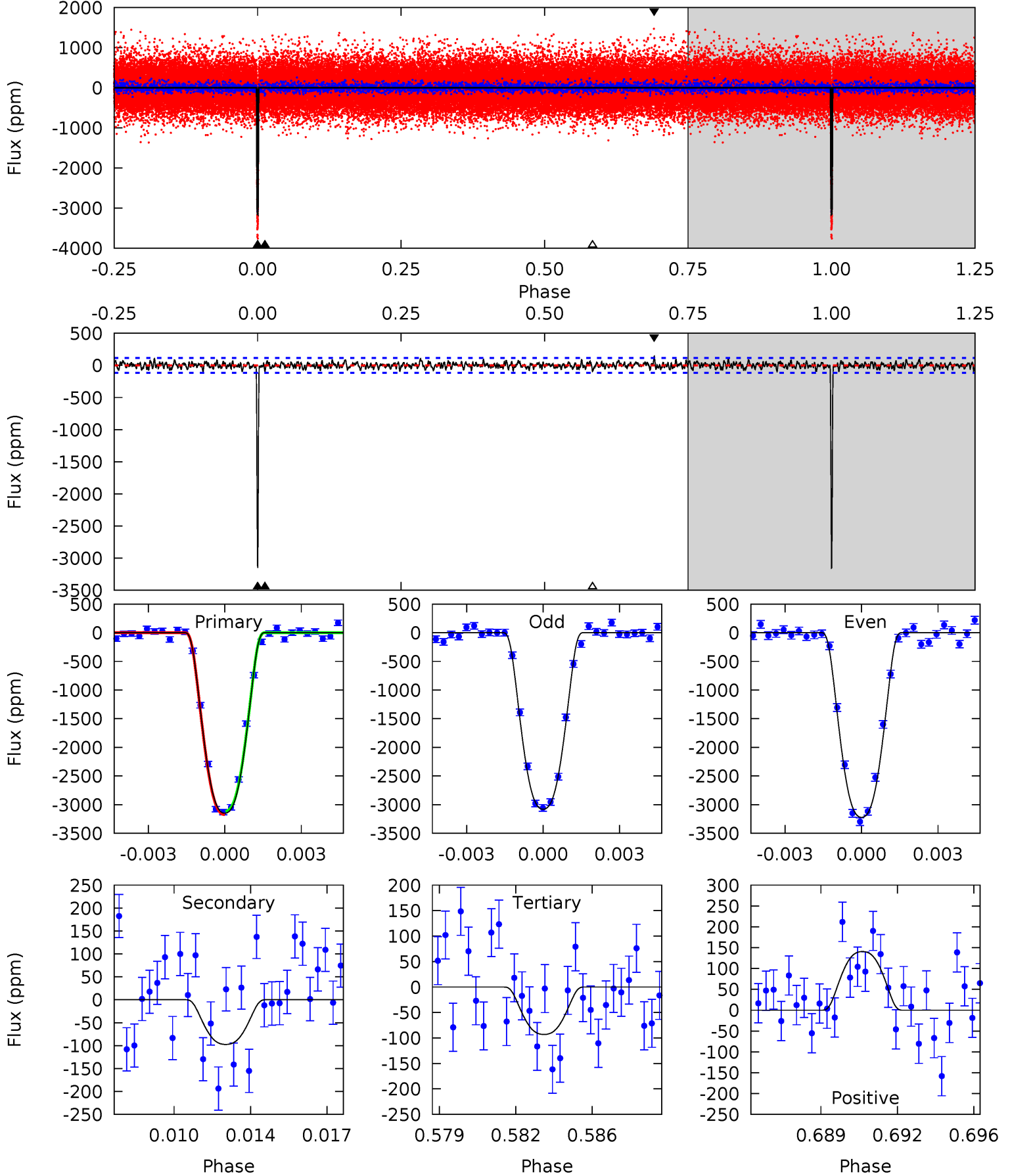
TCE 007504328-01 P= 53.717946 Days $T_0=154.362935$ (BKJD)



DV Model-Shift Uniqueness Test

007504328-01, P = 53.717971 Days, E = 100.644521 Days

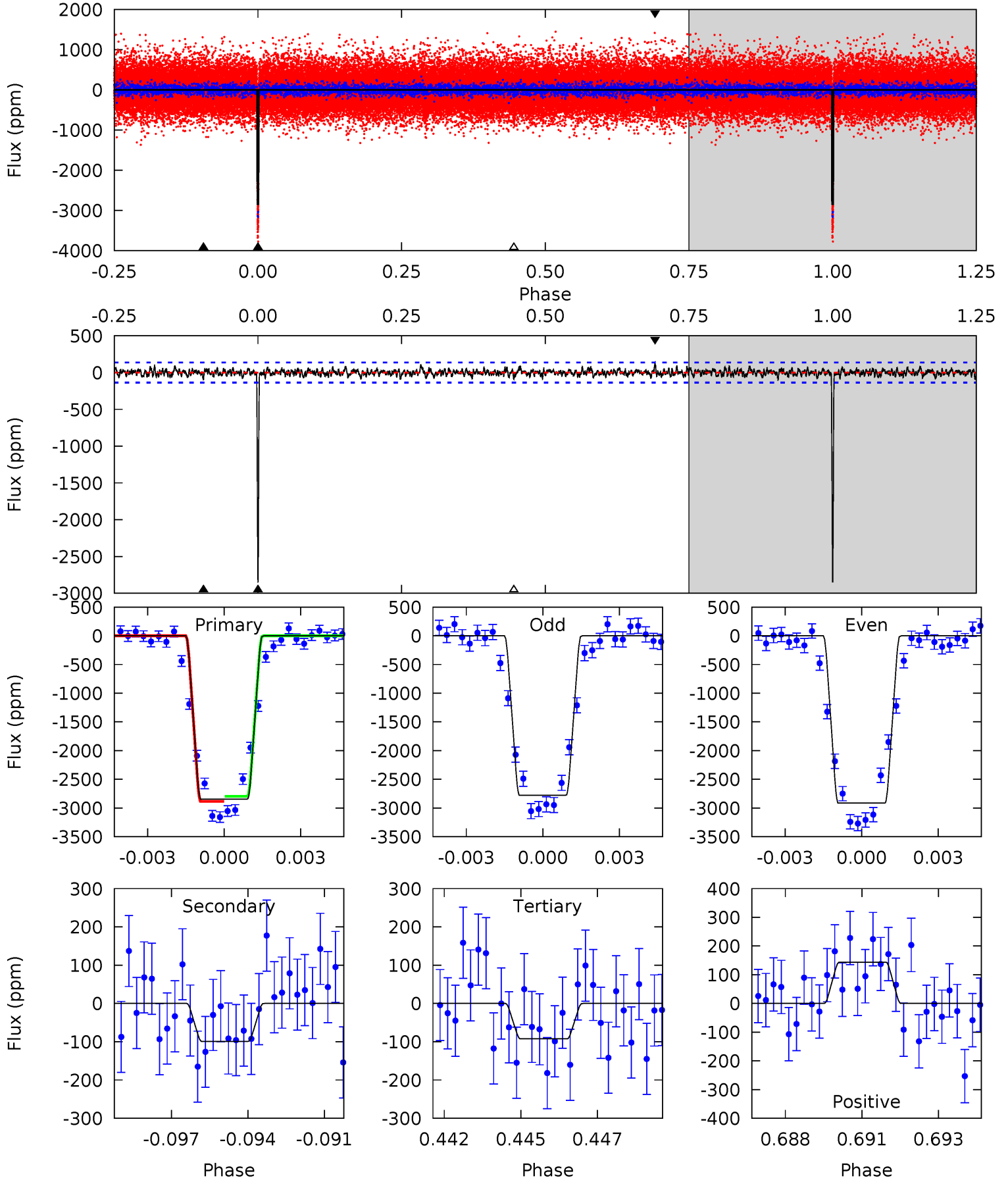
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
142.1	4.39	4.20	6.35	5.23	2.92	1.49	137.9	135.8	0.20	-1.95	3.20	0.99	0.04	1.26



Alt Model-Shift Uniqueness Test

007504328-01, $P = 53.717946$ Days, $E = 100.644989$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
110.0	3.82	3.58	5.55	5.28	3.02	1.17	106.4	104.4	0.24	-1.73	2.69	0.99	0.05	1.72



Stellar Parameters For KIC 007504328

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4959^{+52}_{-119}	$2.332^{+0.161}_{-0.038}$	$0.070^{+0.050}_{-0.350}$	$21.449^{+0.764}_{-4.331}$	$3.601^{+0.025}_{-0.403}$	$0.001^{+0.000}_{-0.000}$
	+1%/-2%	+7%/-2%	+71%/-500%	+4%/-20%	+1%/-11%	+82%/-10%
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 007504328-01 / KOI 0458.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-97 ± 22	$152.60^{+6.70}_{-16.67}$	2131^{+64}_{-97}	2299^{+174}_{-360}	$0.427^{+0.138}_{-0.103}$
Alt.	-99 ± 26	$127.62^{+6.72}_{-13.27}$	2130^{+69}_{-98}	2571^{+147}_{-232}	$0.624^{+0.218}_{-0.182}$

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 $A_{obs} \gg 1.0$

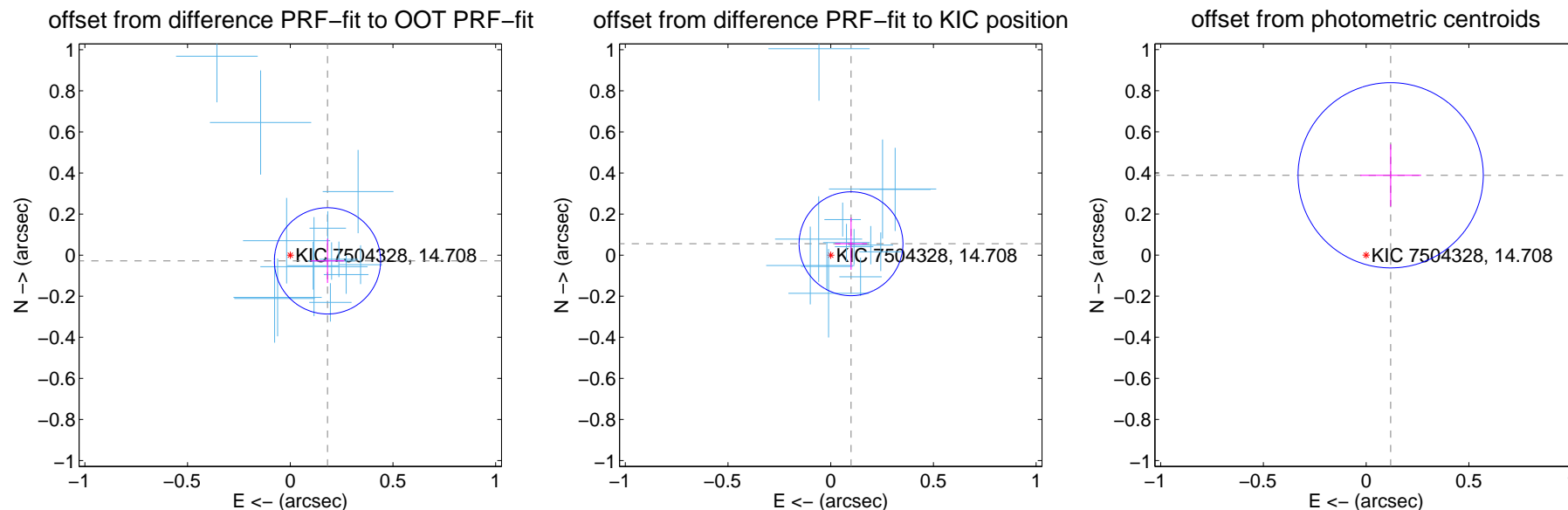
DV Centroid Data

Supplemental centroid analysis for 007504328-01. Kepler magnitude: 14.71. Transit SNR 97.88

There are 14 quarters with good PRF difference image offsets

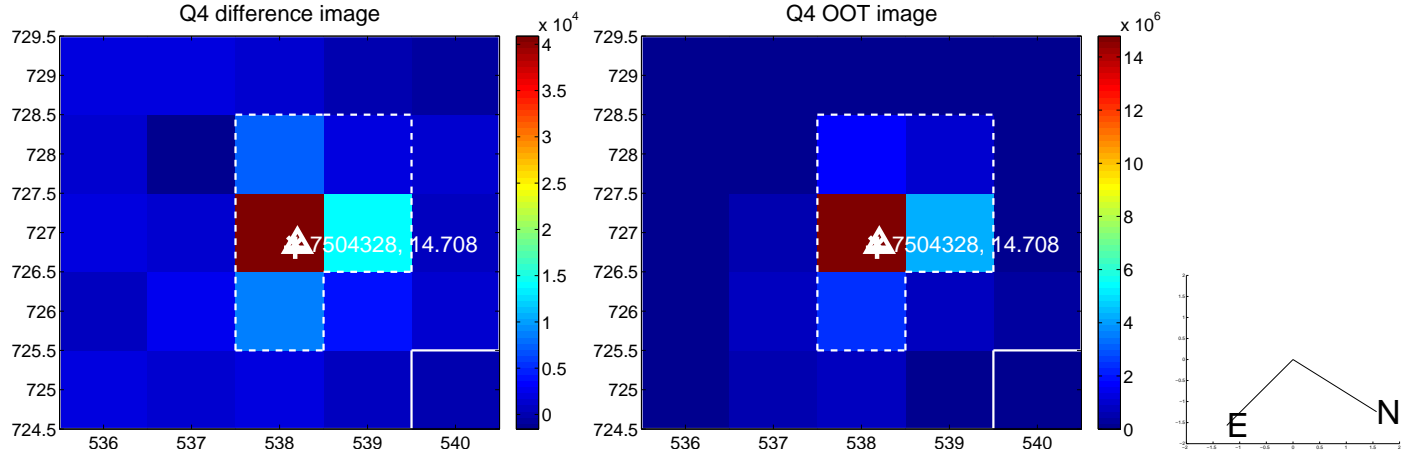
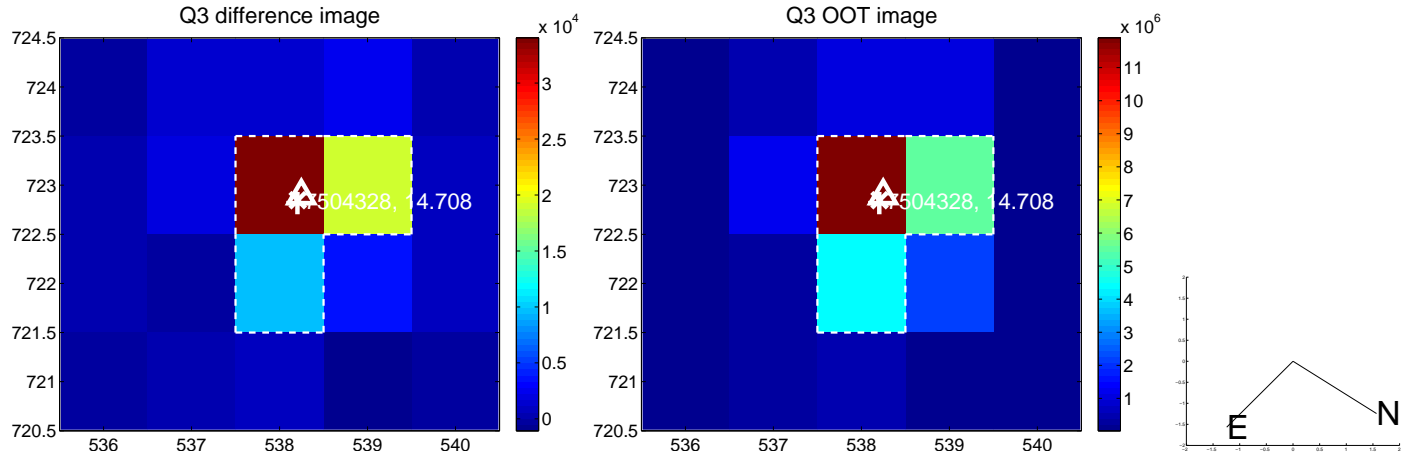
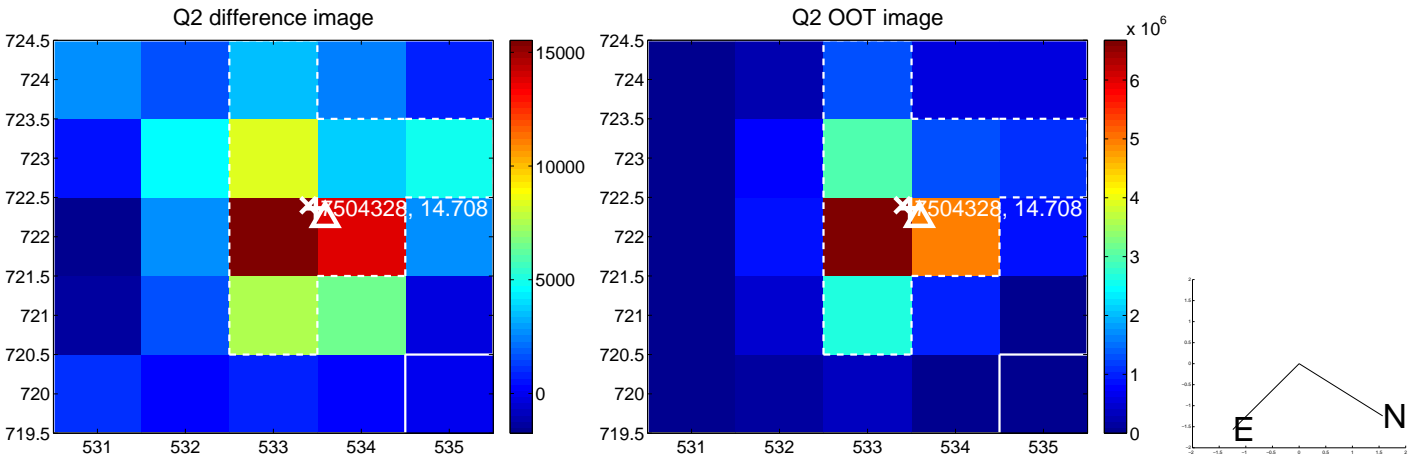
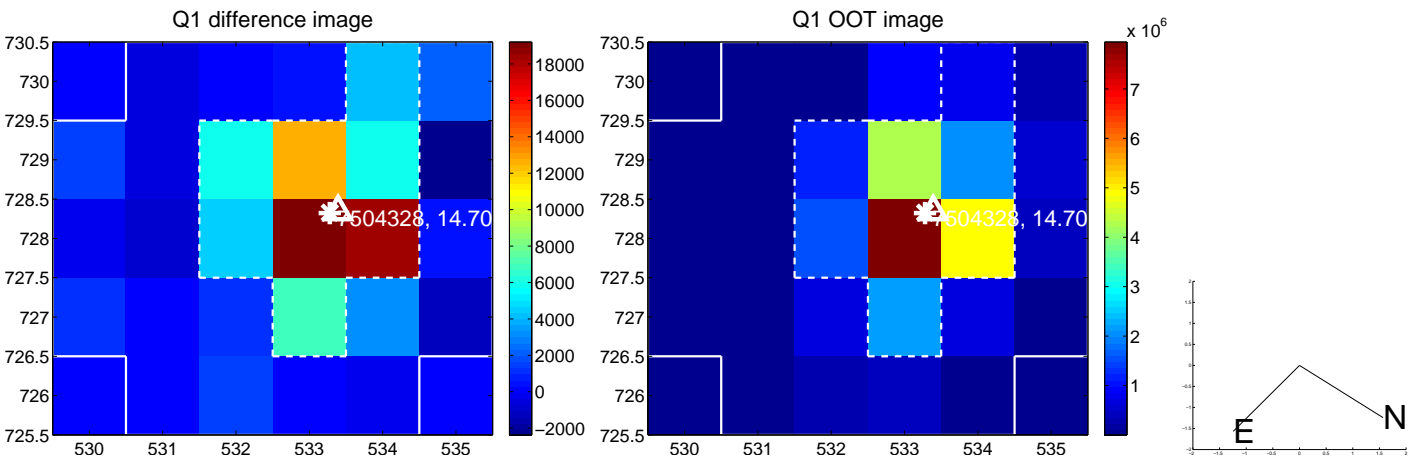
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.183 ± 0.086	2.13	-0.181 ± 0.082	-0.028 ± 0.108
PRF-fit source offset from KIC position	0.113 ± 0.084	1.35	-0.099 ± 0.078	0.055 ± 0.127
photometric centroid source offset	0.41 ± 0.15	2.70	-0.12 ± 0.15	0.39 ± 0.15

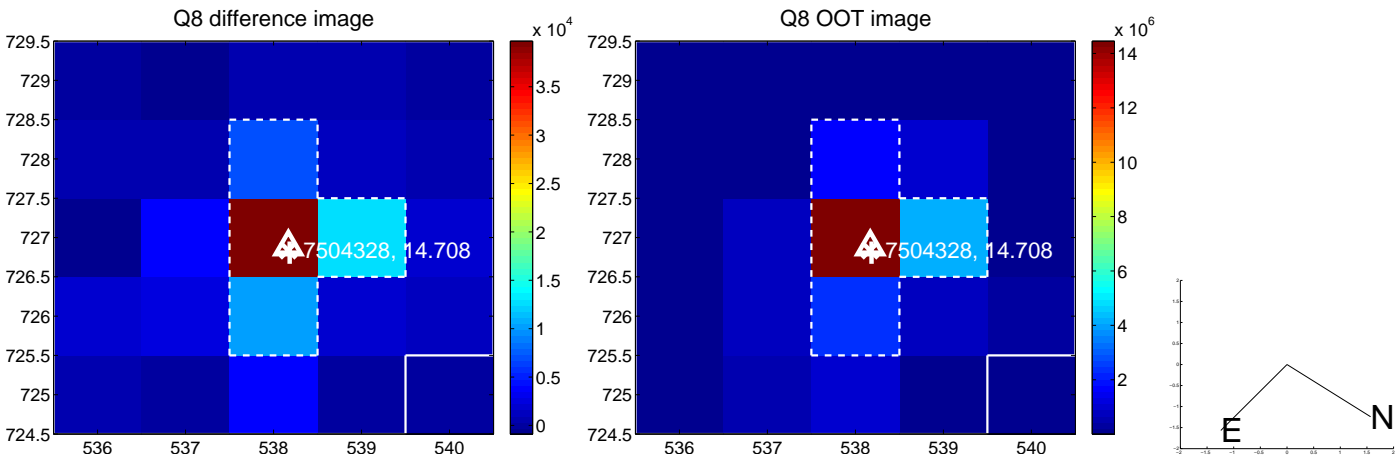
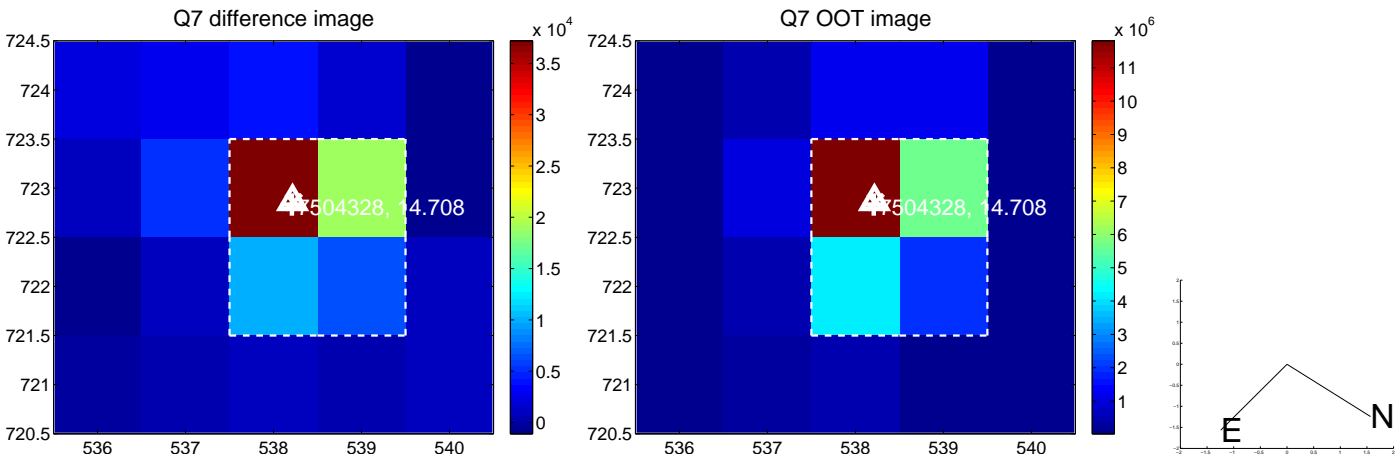
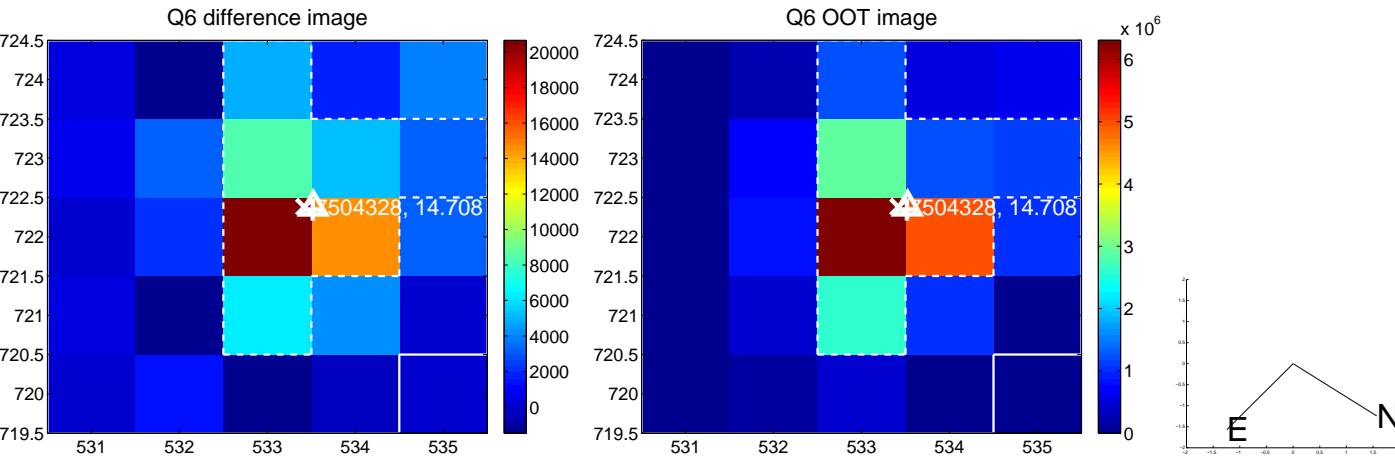
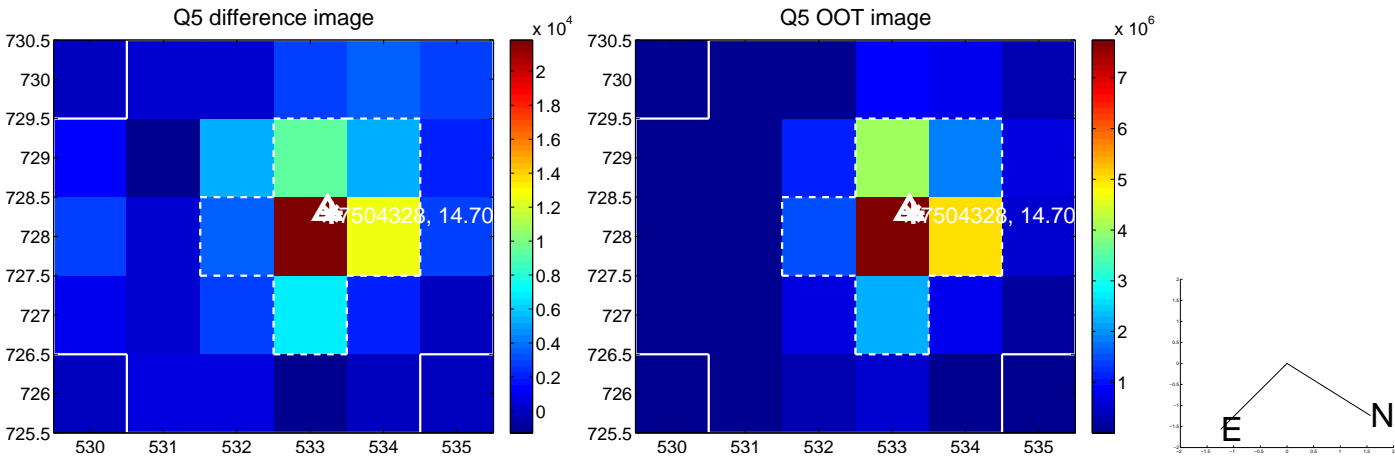


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

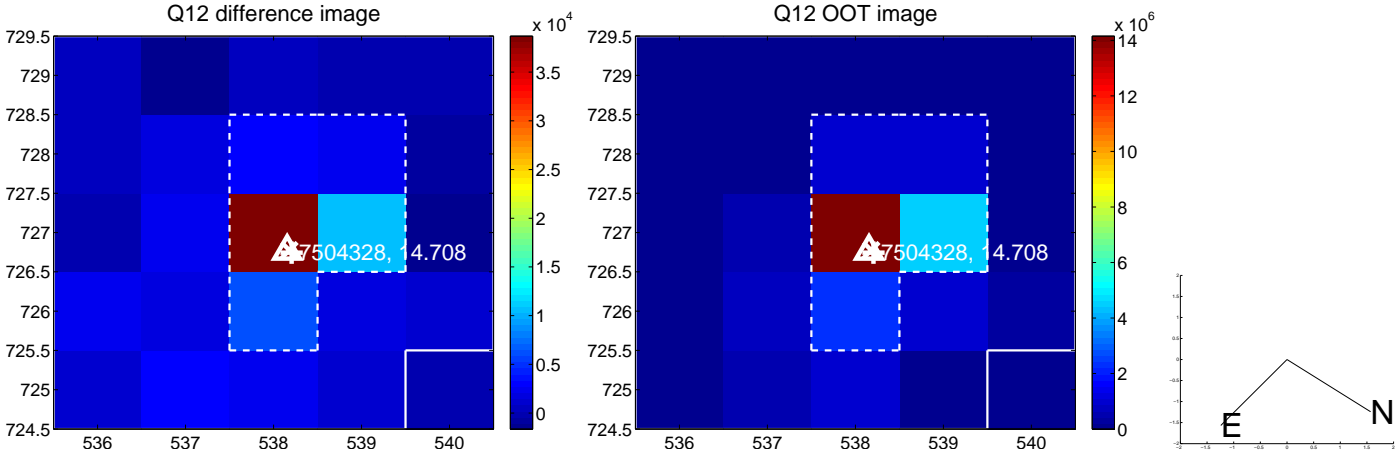
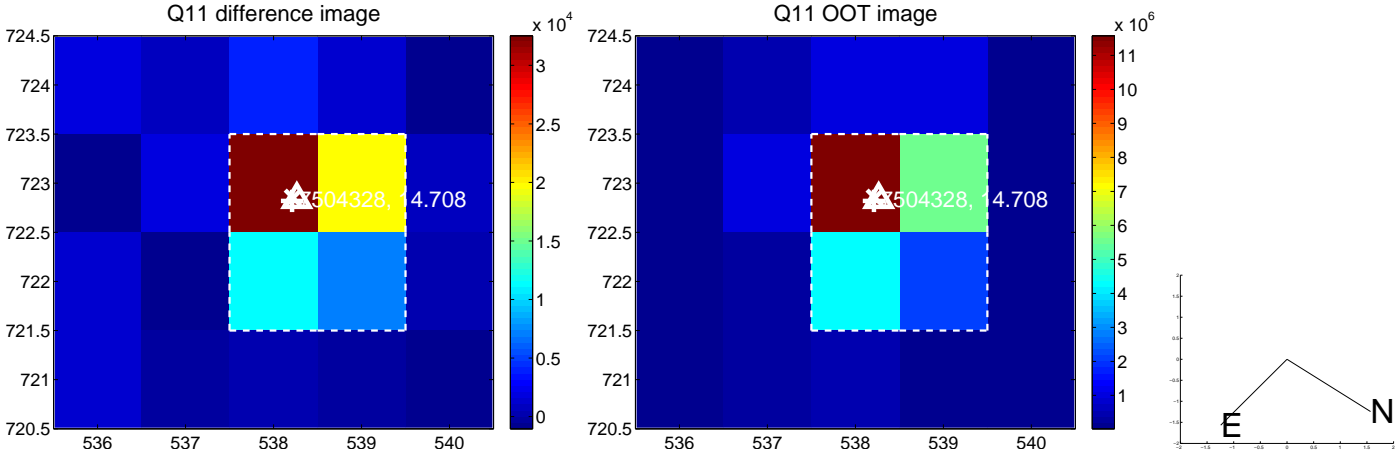
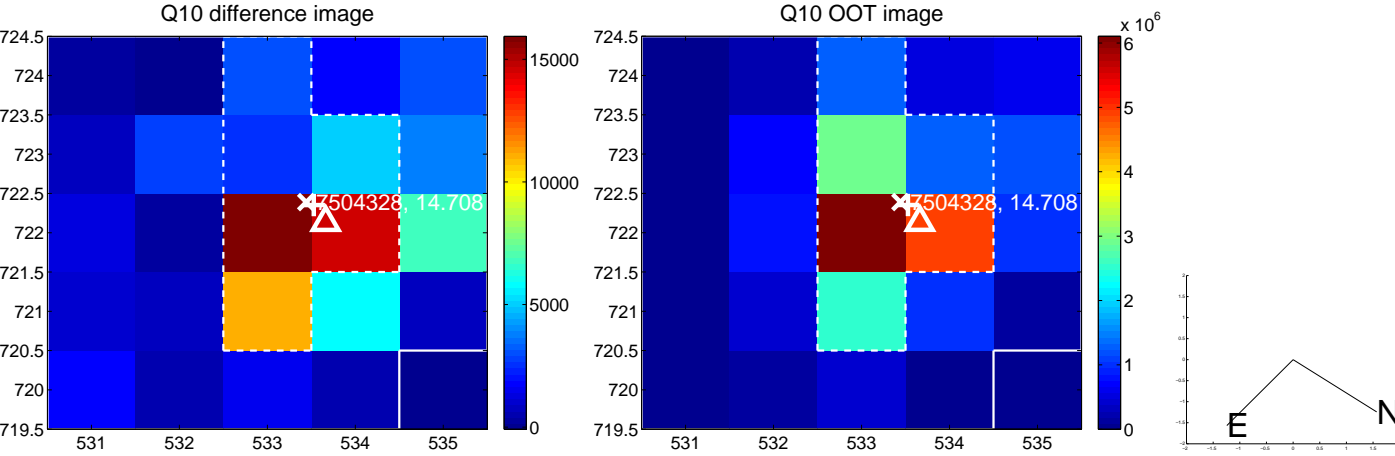
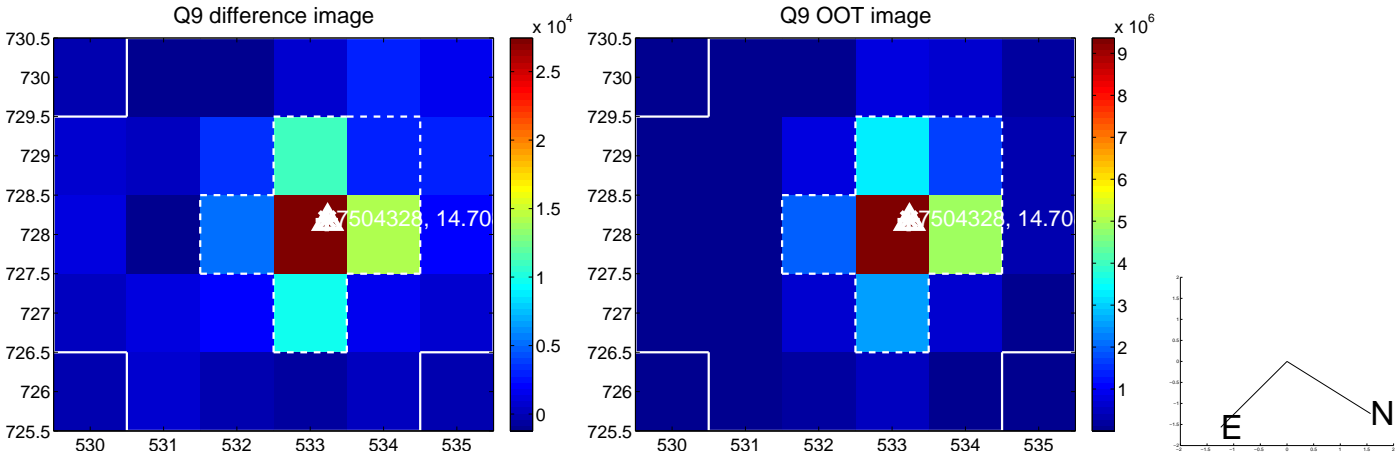
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



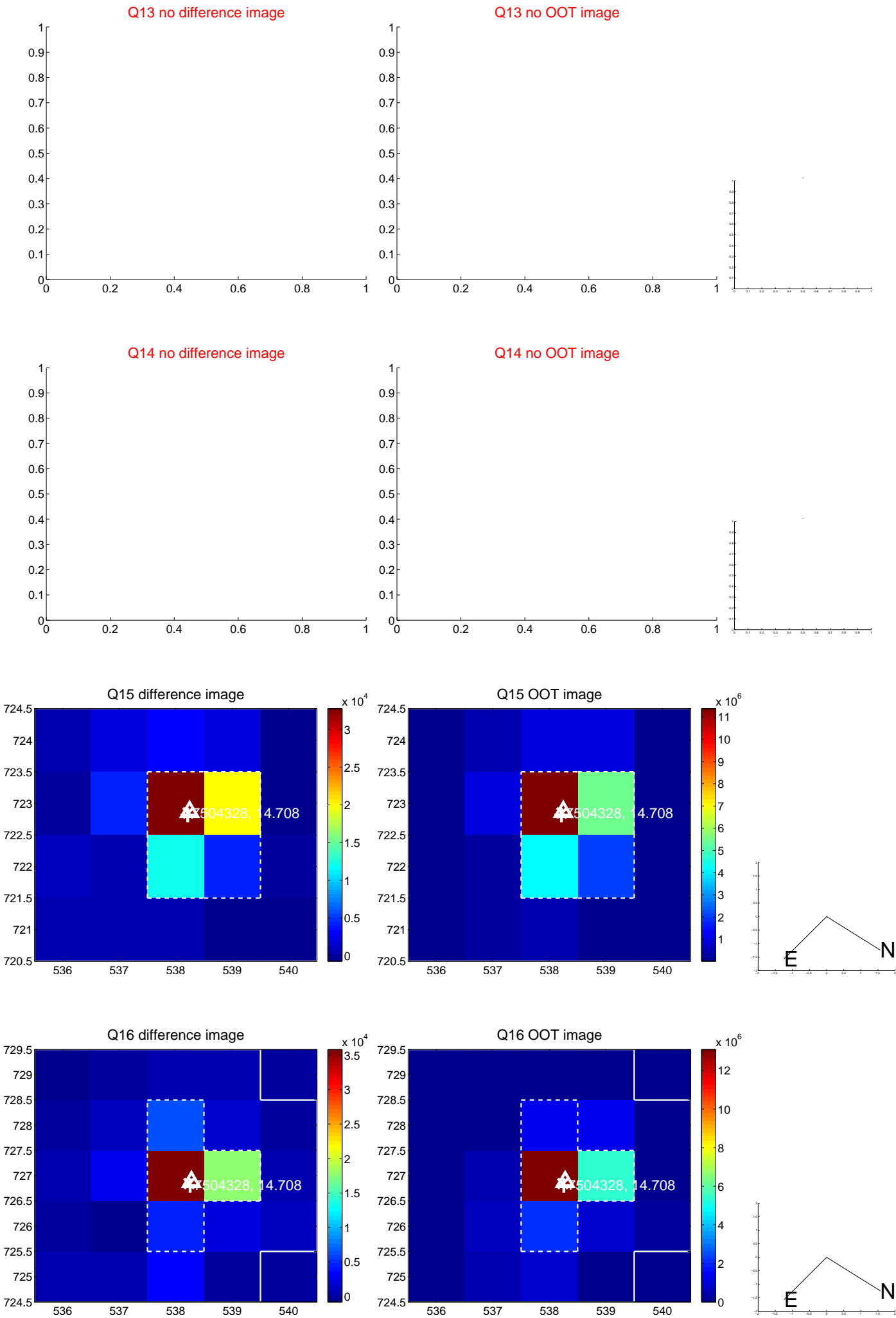
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



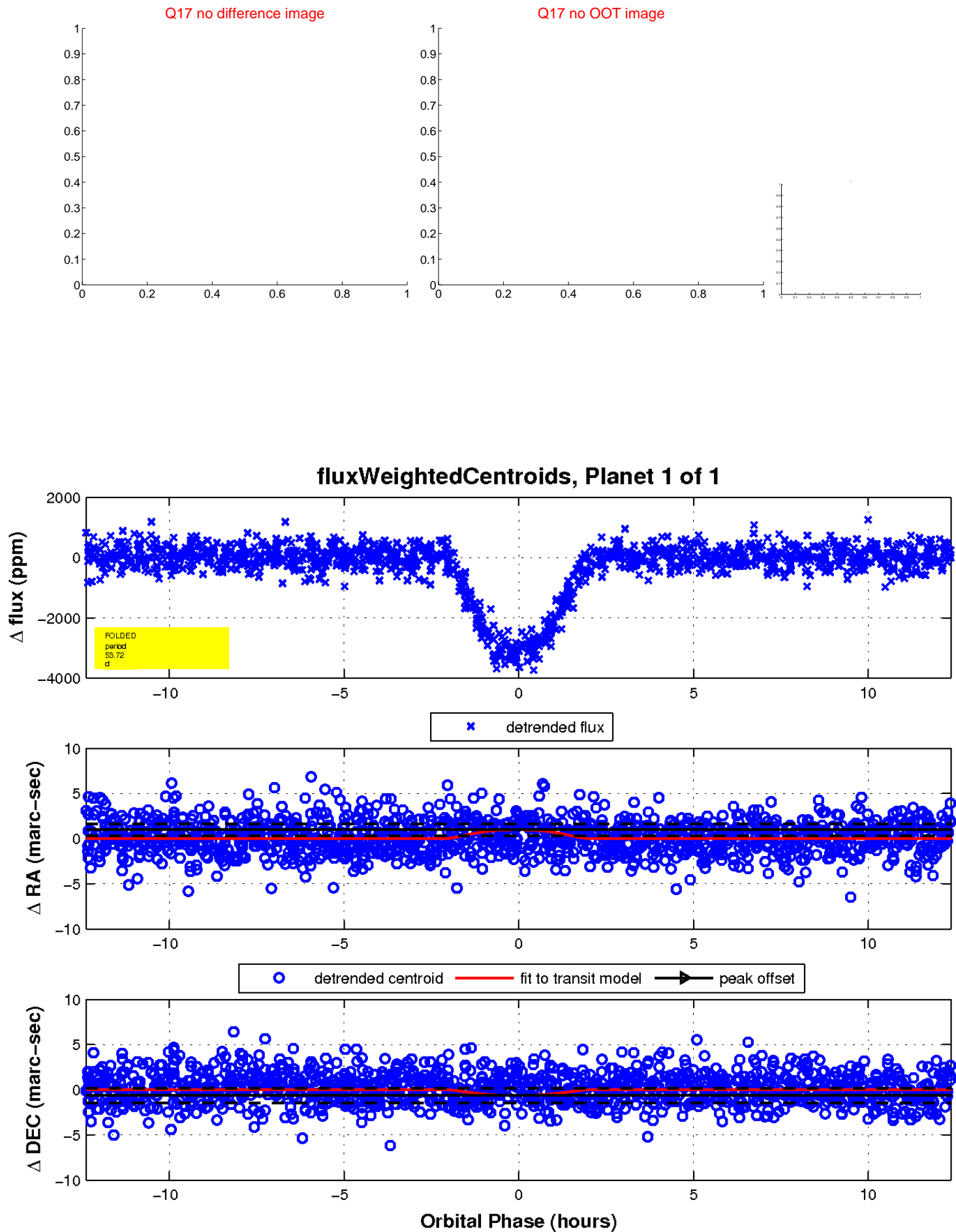
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UKIRT Image

Declination

