

KIC 003542167

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})
003542167-01	OBS	No	4.512617	132.737074	12.2	22.708	8.0	5.8	1.77	7128	0.70	1978.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003542167-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

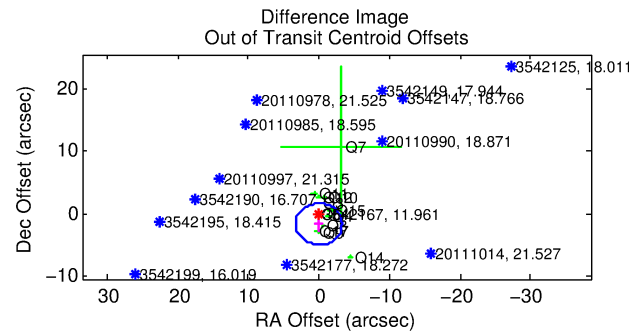
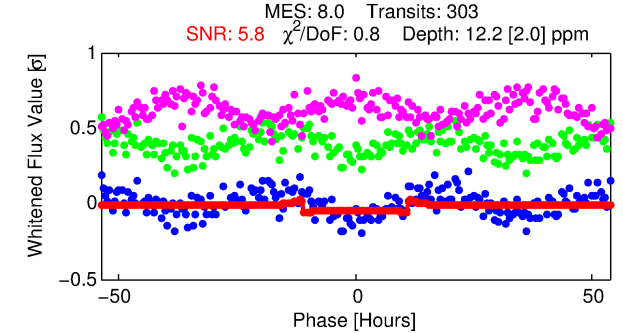
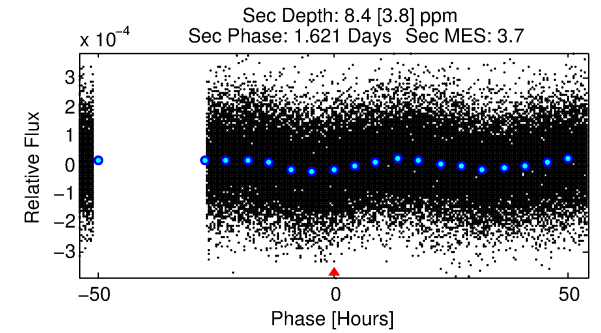
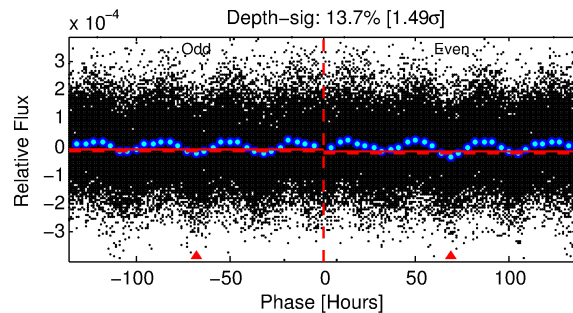
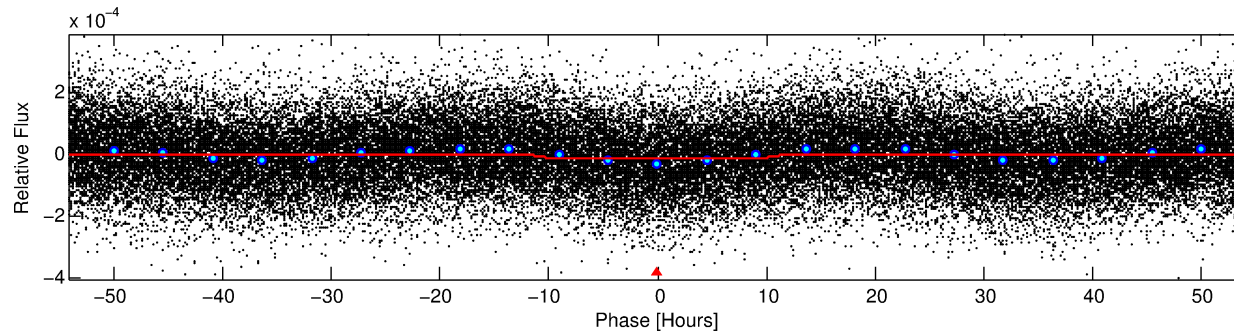
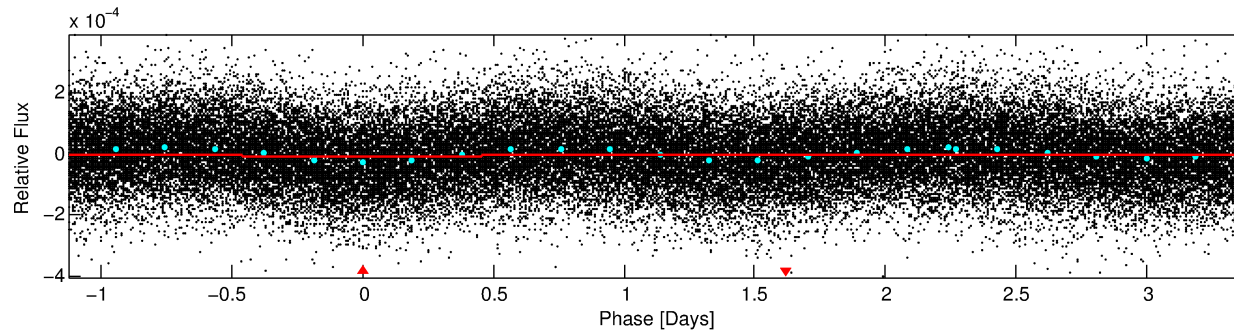
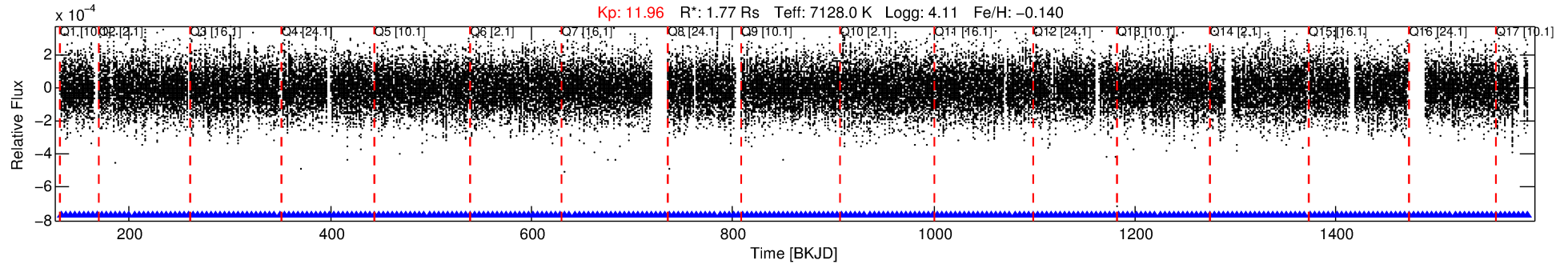
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003542167-01

No Significant Match Found

DV One-Page Summary

KIC: 3542167 Candidate: 1 of 1 Period: 4.513 d



DV Fit Results:

Period = 4.51262 [0.00009] d
Epoch = 132.7371 [0.0135] BKJD
 $R_p/R^* = 0.0036$ [0.0005]
 $a/R^* = 1.19$ [0.27]
 $b = 0.87$ [0.21]
 $Seff = 1978.45$ [597.65]
 $Teq = 1701$ [128] K
 $R_p = 0.70$ [0.19] R_e
 $a = 0.0607$ [0.0111] AU
 $Ag = 34.18$ [20.77] [1.60 σ]
 $Teff = 6358$ [898] K [5.13 σ]

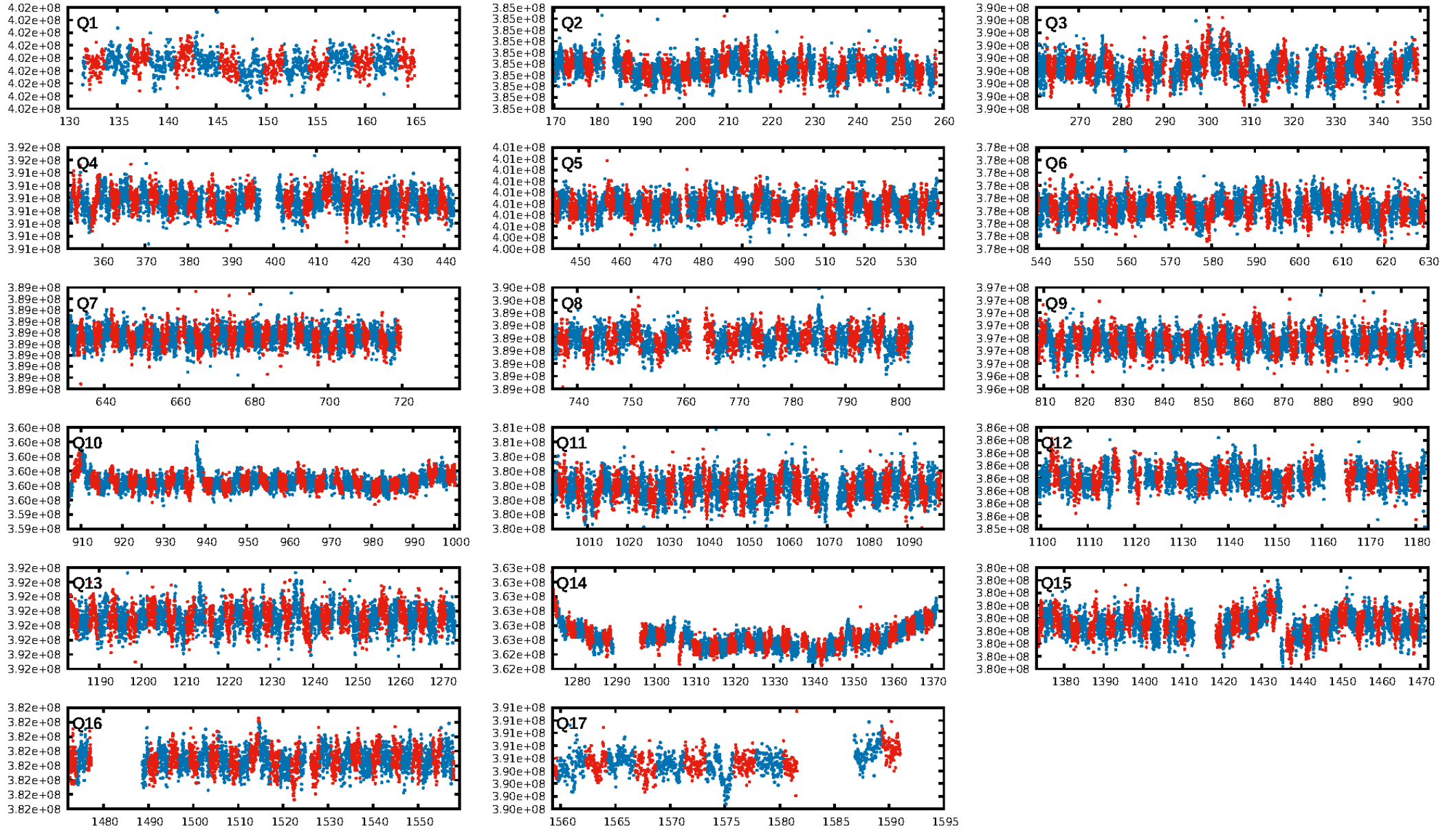
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.29e-14
RollingBand-fgt: 1.00 [289/289]
GhostDiagnostic-chr: 1.936
Centroid-sig: 2.3%
Centroid-so: 1.759 arcsec [1.55 σ]
OotOffset-rm: 1.721 arcsec [1.56 σ]
KicOffset-rm: 1.619 arcsec [1.45 σ]
OotOffset-st: 3/4/3/2 [12]
KicOffset-st: 3/4/3/2 [12]
DiffImageQuality-fgm: 0.58 [7/12]
DiffImageOverlap-fno: 1.00 [17/17]

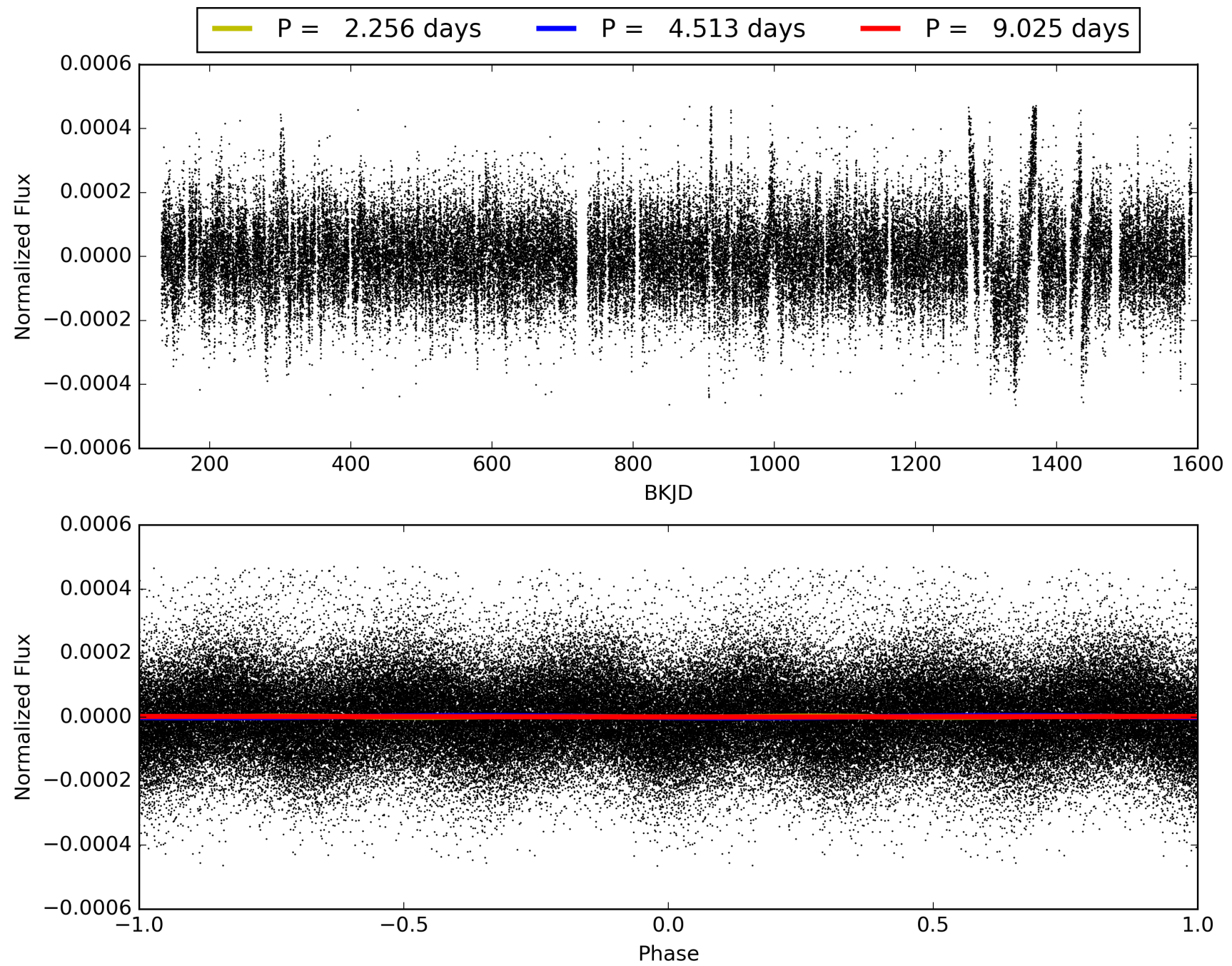
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:12:44 Z

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

TCE 003542167-01, PDC Light Curves

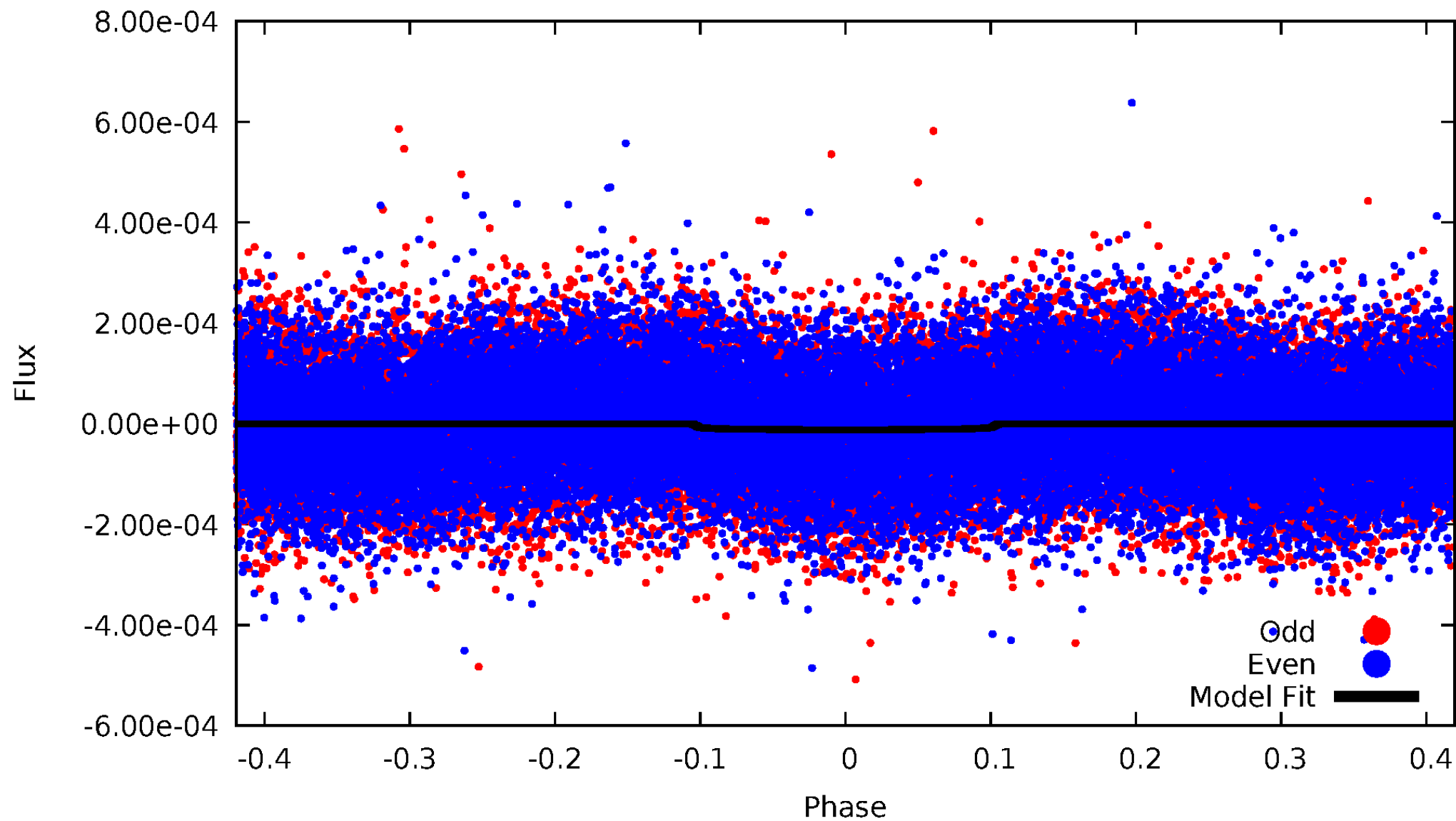


TCE 003542167-01



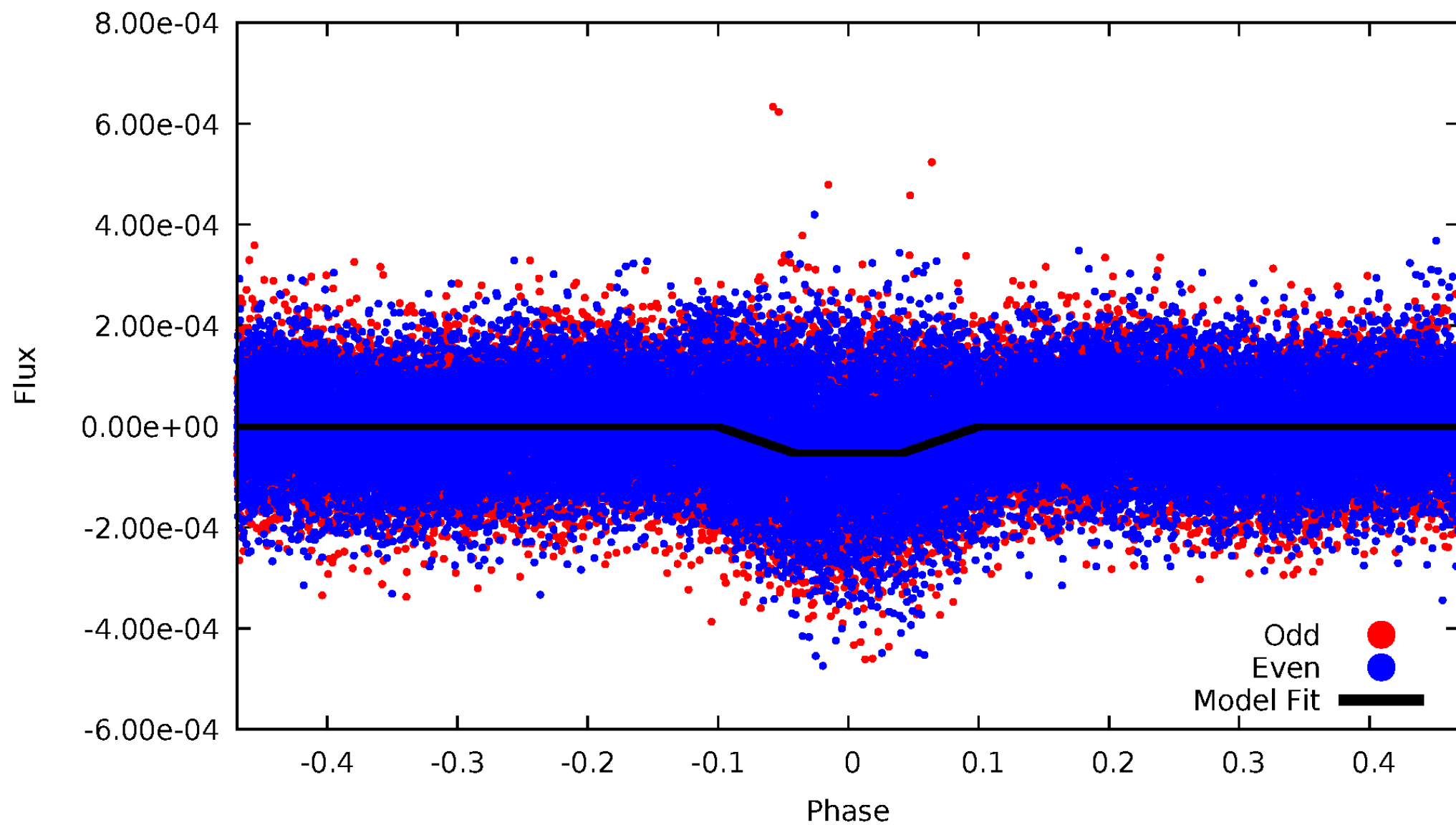
DV Odd/Even

TCE 003542167-01

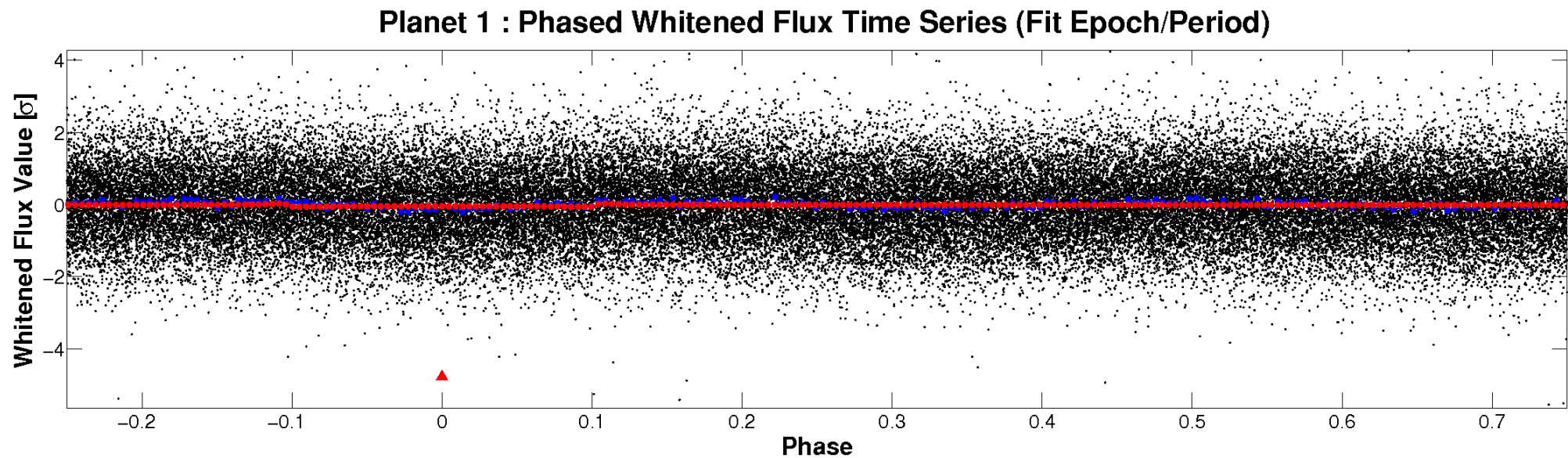
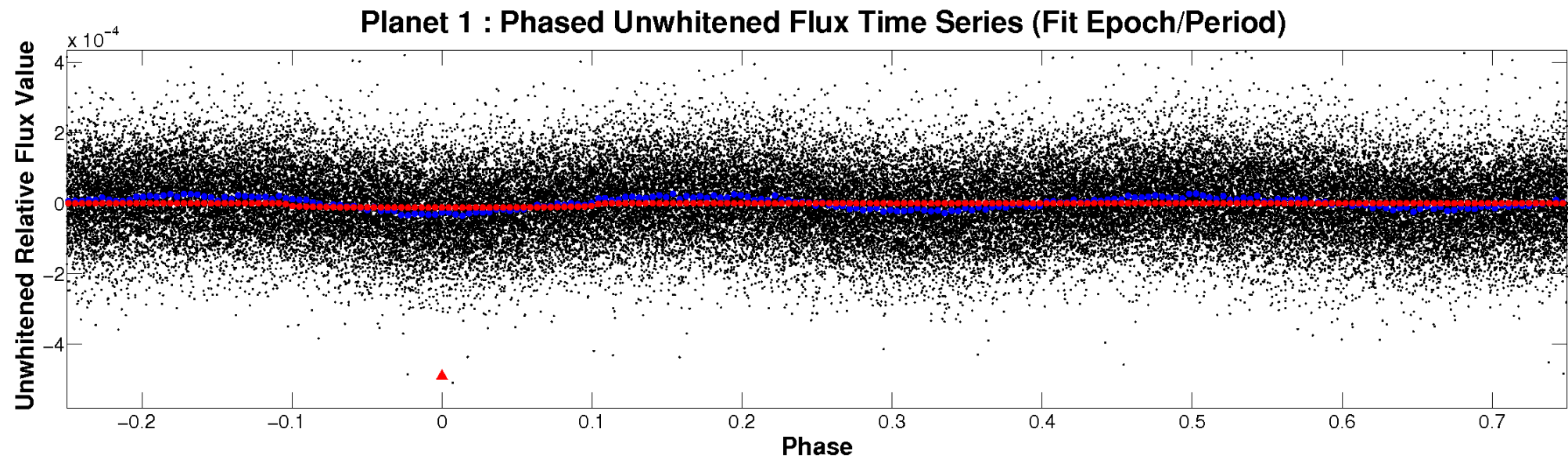


ALT Odd/Even

TCE 003542167-01

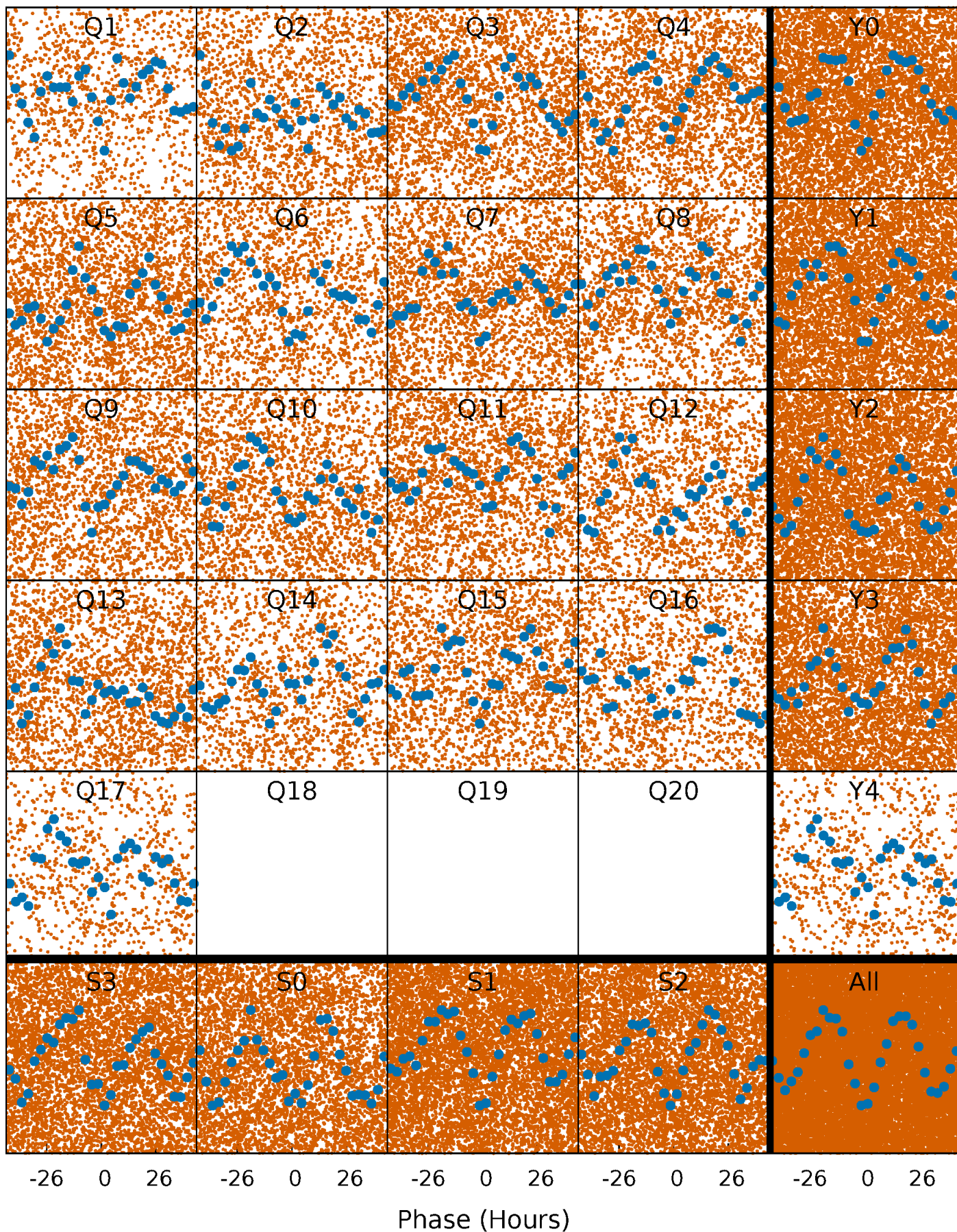


Non-Whitened Vs. Whitened Light Curve



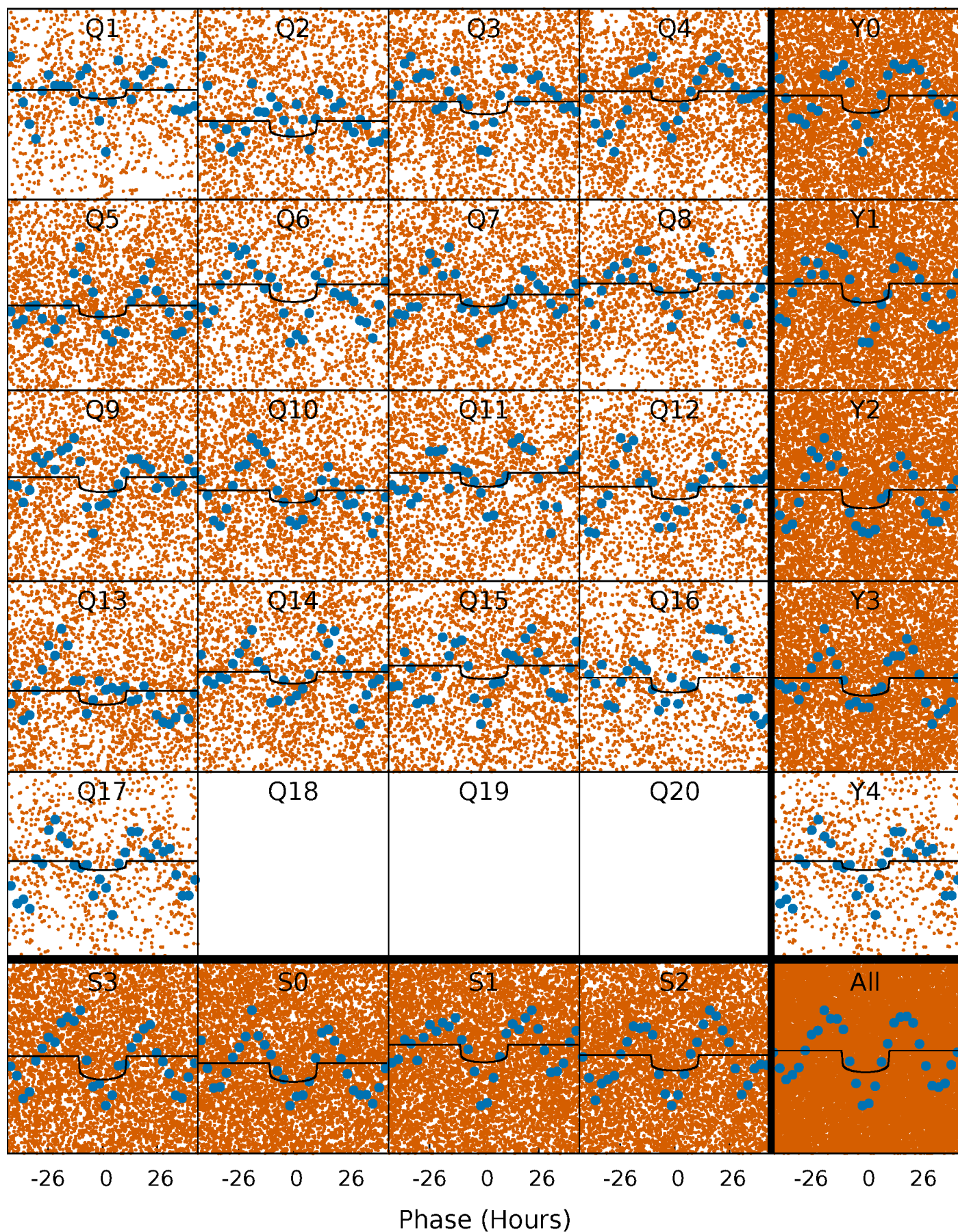
PDC Quarter-Phased Transit Curves

TCE 003542167-01 P= 4.512617 Days $T_0=132.737074$ (BKJD)



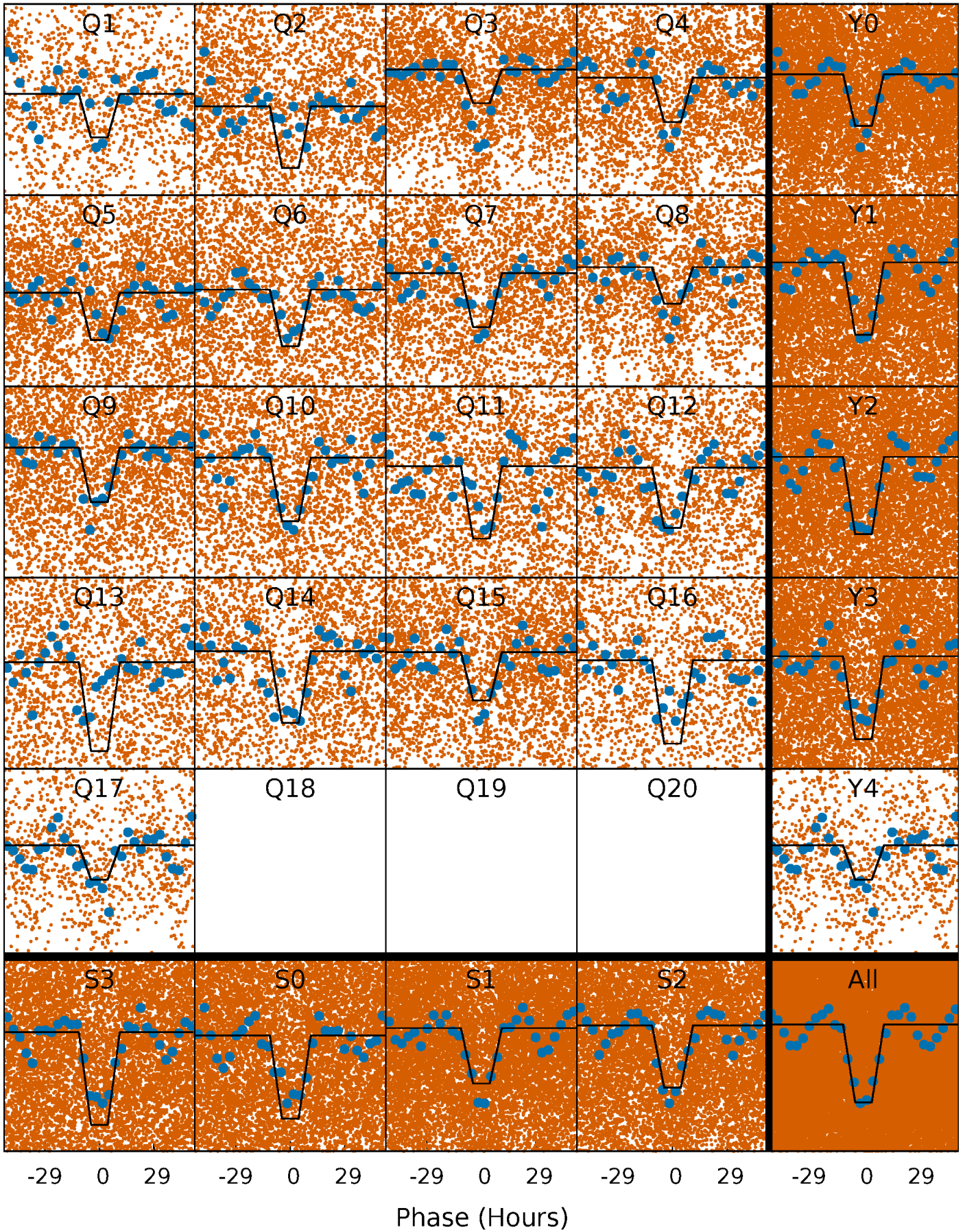
DV Quarter-Phased Transit Curves

TCE 003542167-01 P= 4.512617 Days $T_0=132.737074$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

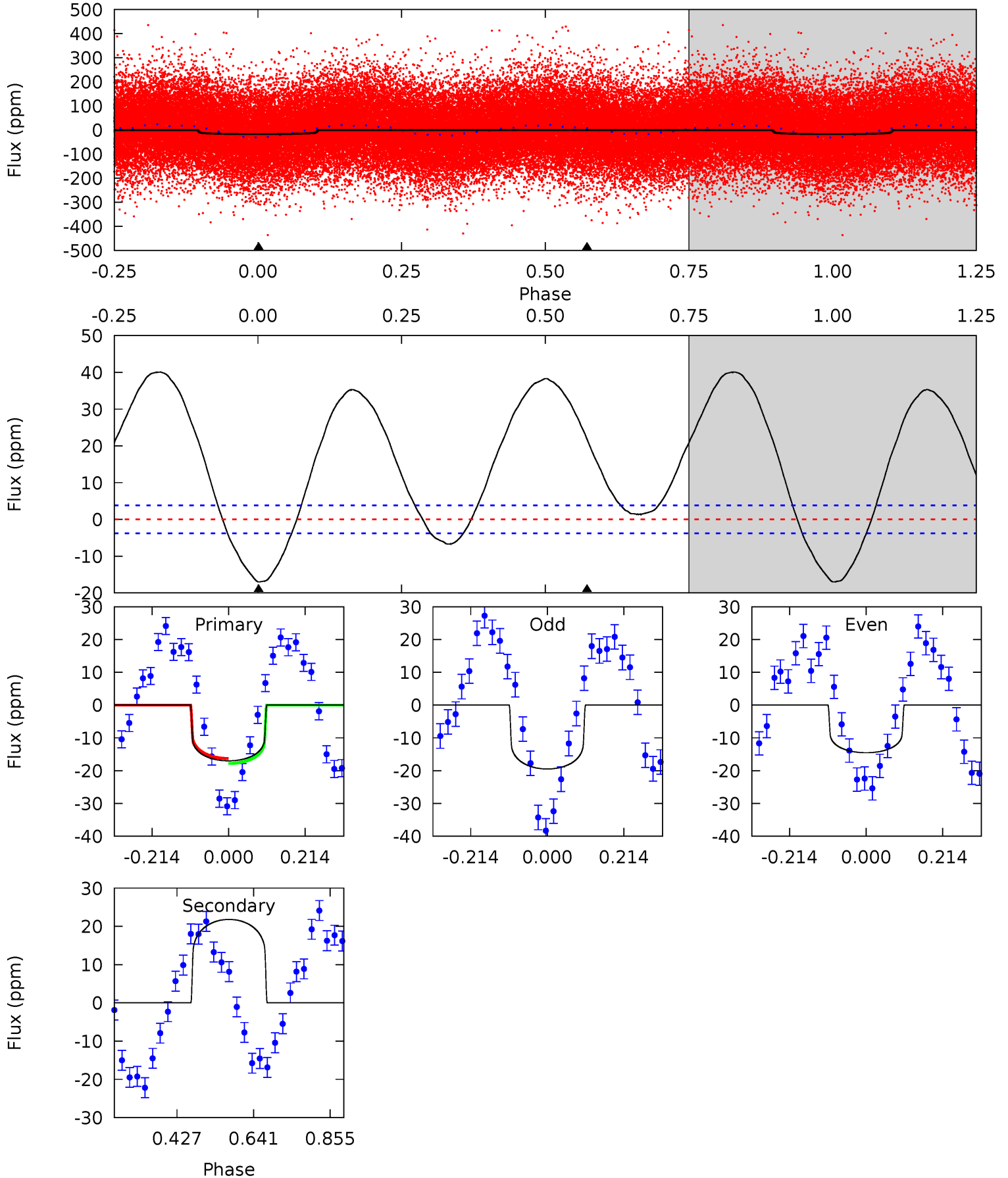
TCE 003542167-01 P= 4.512482 Days $T_0=132.764635$ (BKJD)



DV Model-Shift Uniqueness Test

003542167-01, P = 4.512617 Days, E = 128.224457 Days

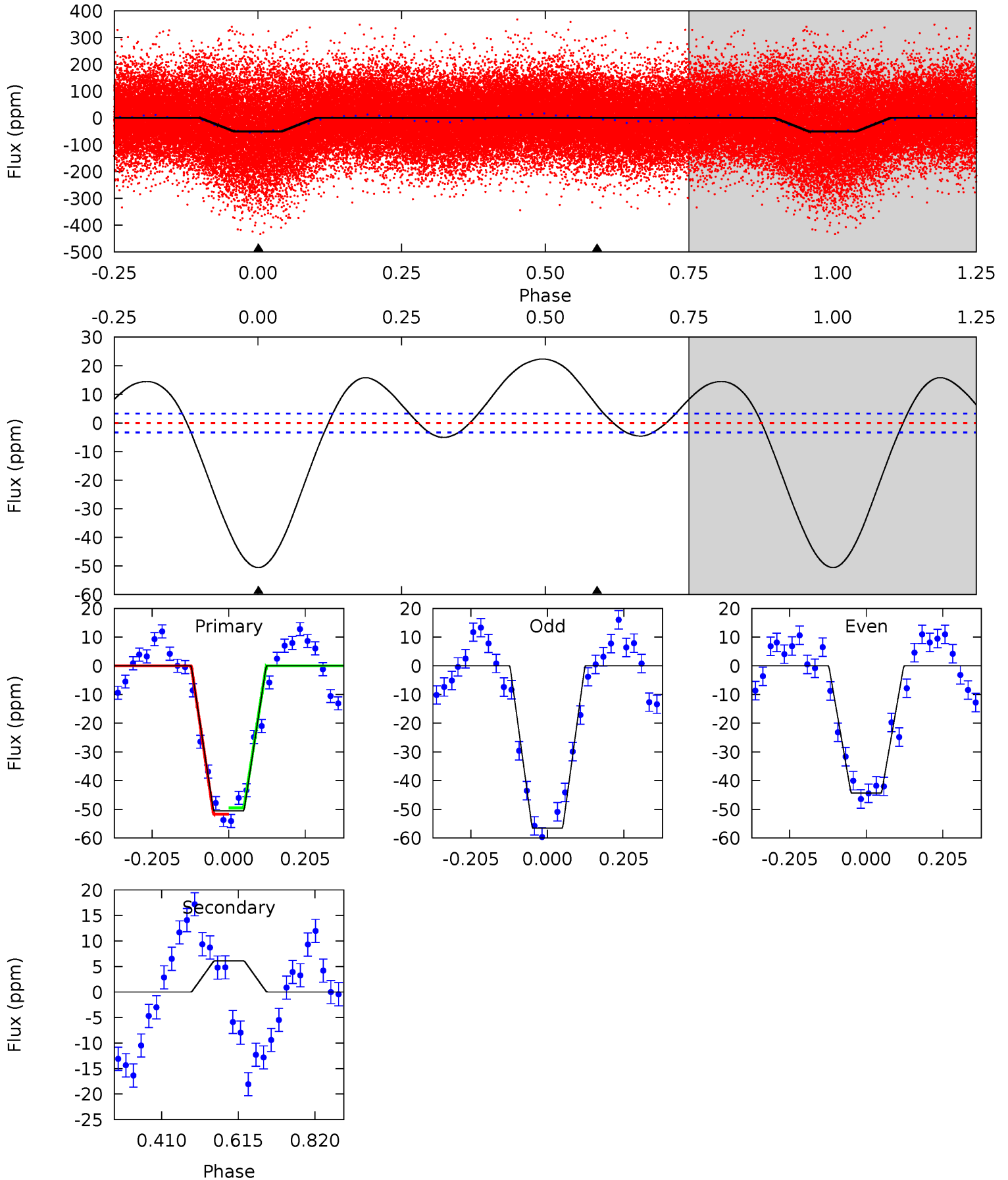
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.7	-25.3	0	0	4.40	1.24	12.2	19.7	19.7	-25.3	-25.3	2.88	1.20	0.70	0.90



Alt Model-Shift Uniqueness Test

003542167-01, P = 4.512482 Days, E = 128.252153 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
67.8	-8.15	0	0	4.41	1.27	8.21	67.8	67.8	-8.15	-8.15	8.16	0.99	0.31	1.48



Stellar Parameters For KIC 003542167

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7128^{+171}_{-257}	$4.105^{+0.145}_{-0.145}$	$-0.140^{+0.250}_{-0.350}$	$1.775^{+0.385}_{-0.385}$	$1.461^{+0.183}_{-0.223}$	$0.368^{+0.270}_{-0.157}$
	+2%/-4%	+4%/-4%	+179%/-250%	+22%/-22%	+13%/-15%	+73%/-43%
Source	PHO1	FLK73	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 003542167-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	22 ± 1	$0.71^{+0.15}_{-0.12}$	2372^{+158}_{-144}	-8234^{+714}_{-930}	$-87.796^{+26.349}_{-41.076}$
Alt.	6 ± 1	$1.42^{+0.21}_{-0.19}$	2368^{+147}_{-137}	-4368^{+184}_{-175}	$-6.123^{+1.669}_{-1.993}$

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

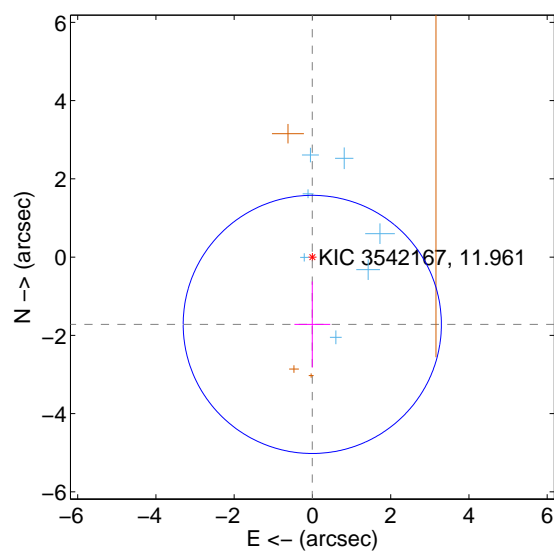
Supplemental centroid analysis for 003542167-01. **Kepler magnitude: 11.96.** Transit SNR 5.83

There are 7 quarters with good PRF difference image offsets

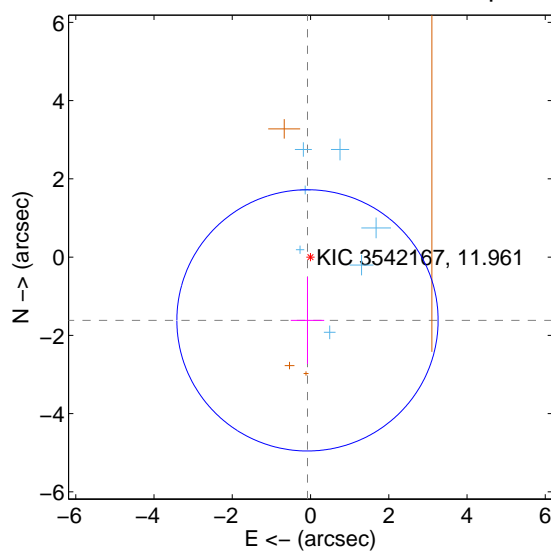
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.721 ± 1.100	1.56	0.004 ± 0.458	-1.721 ± 1.100
PRF-fit source offset from KIC position	1.619 ± 1.113	1.45	0.078 ± 0.428	-1.617 ± 1.112
photometric centroid source offset	1.76 ± 1.13	1.55	1.20 ± 0.92	1.29 ± 1.29

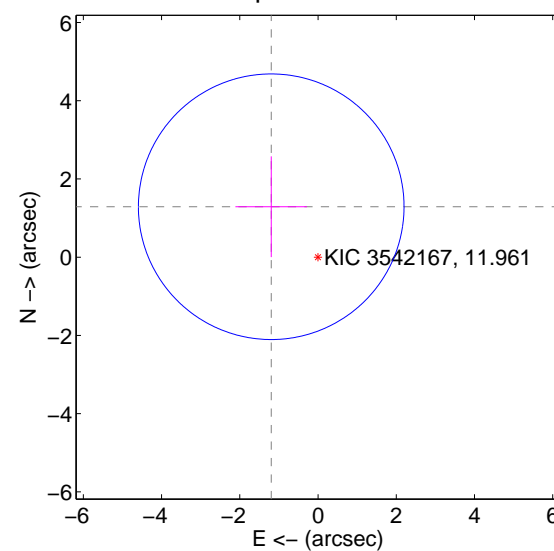
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

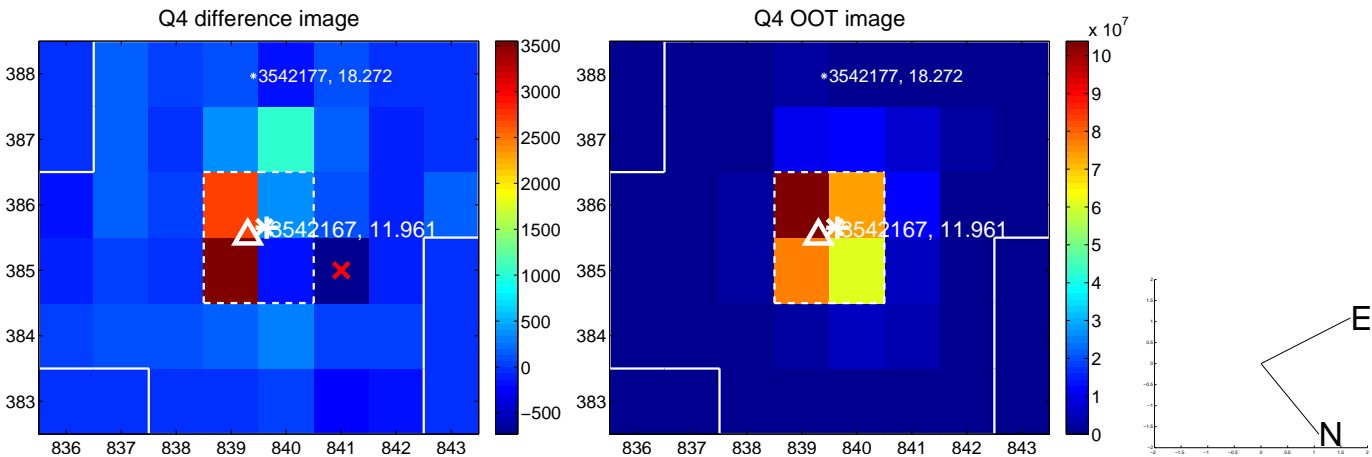
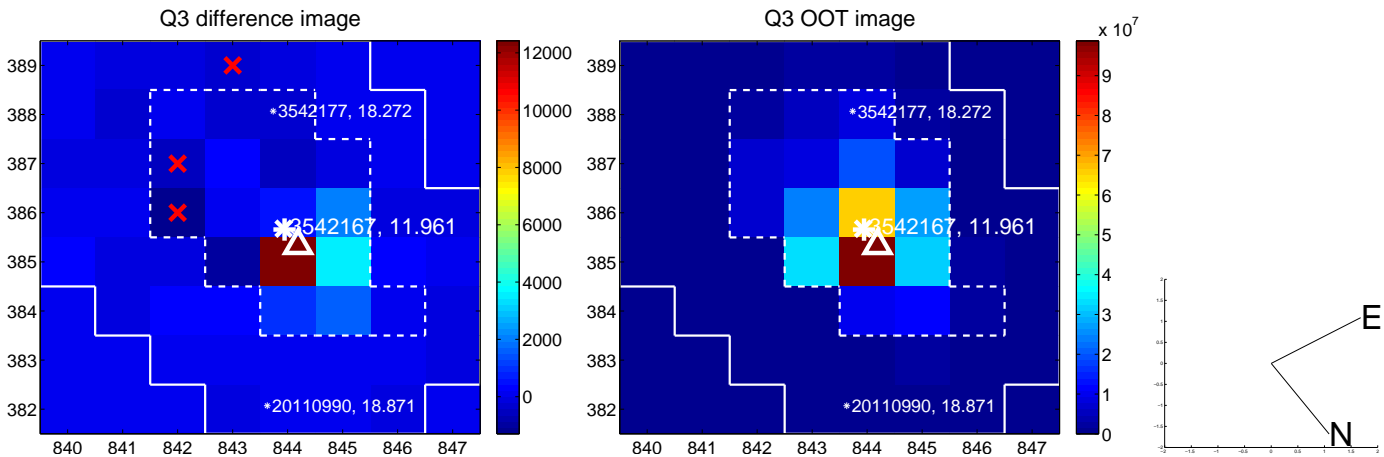
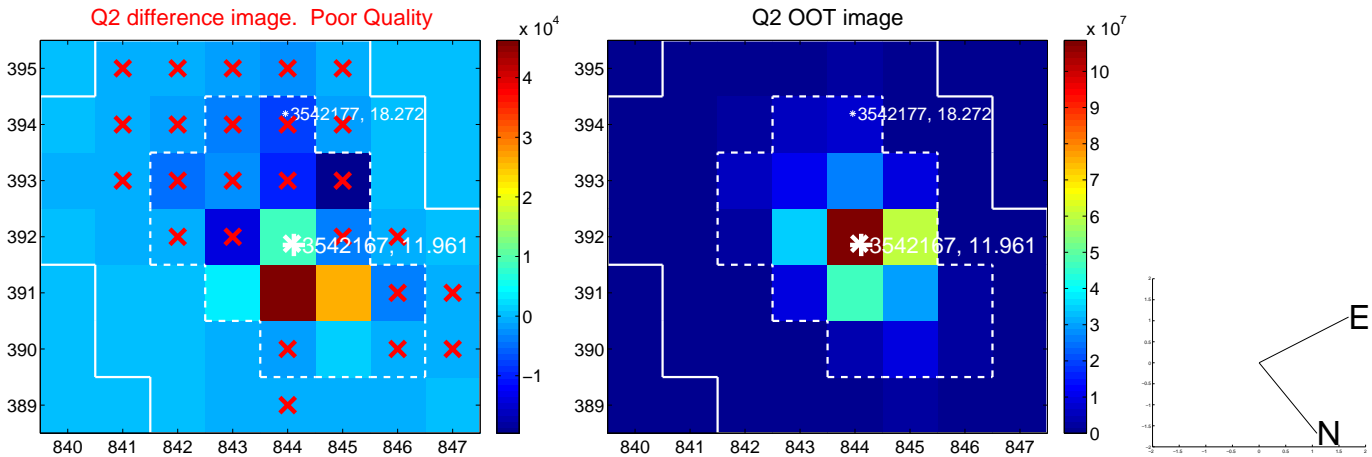
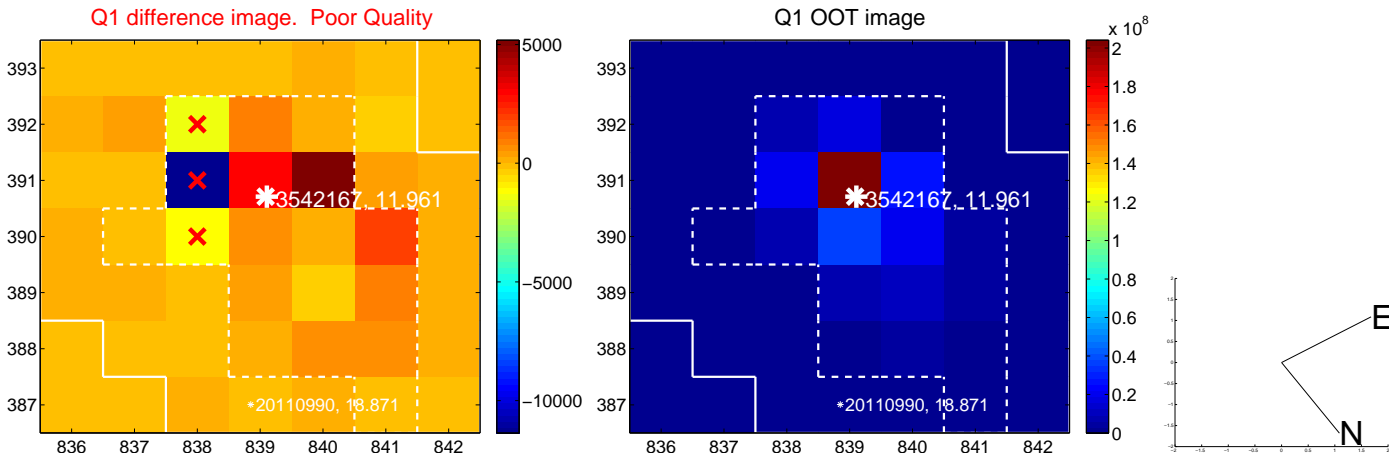


offset from photometric centroids

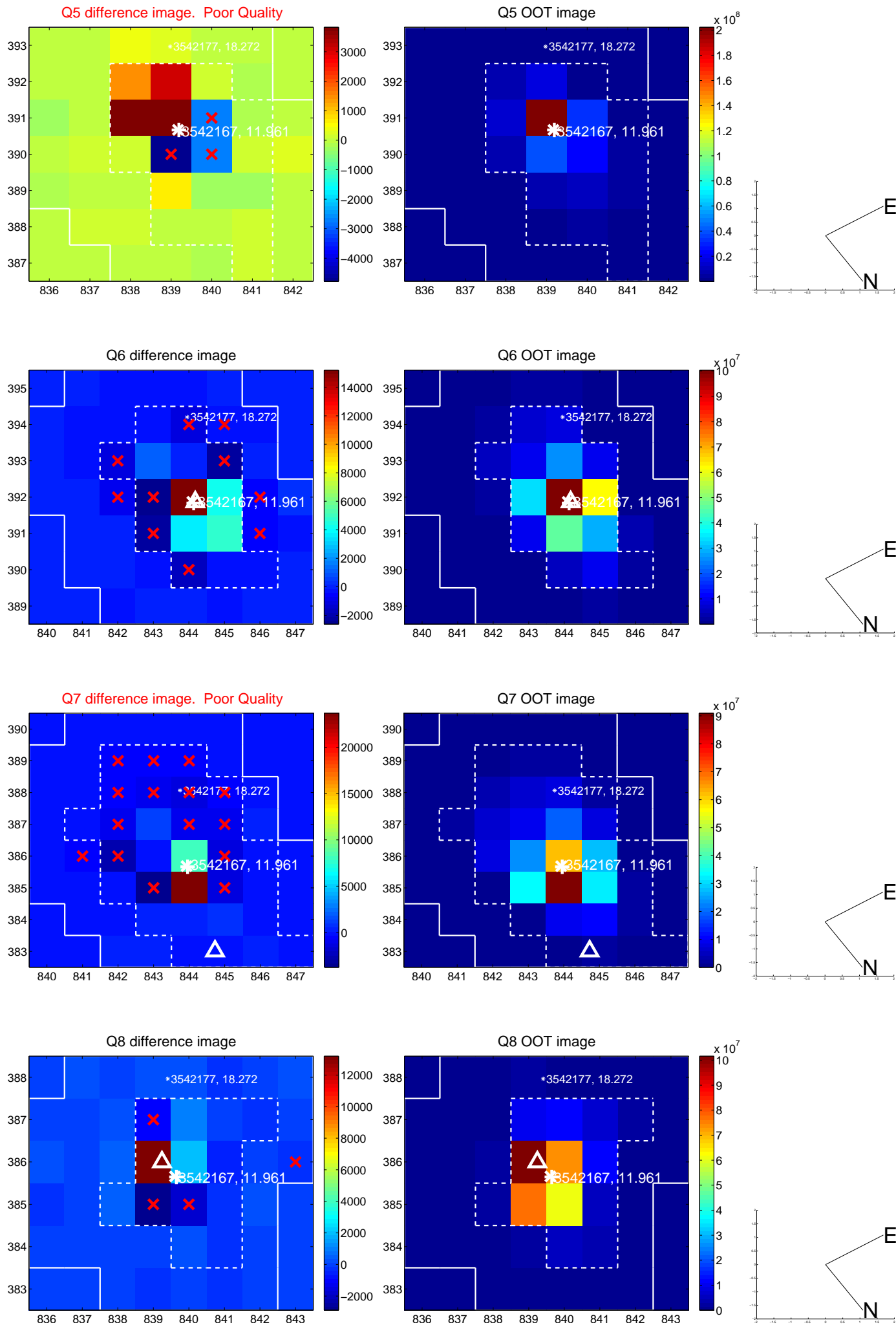


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

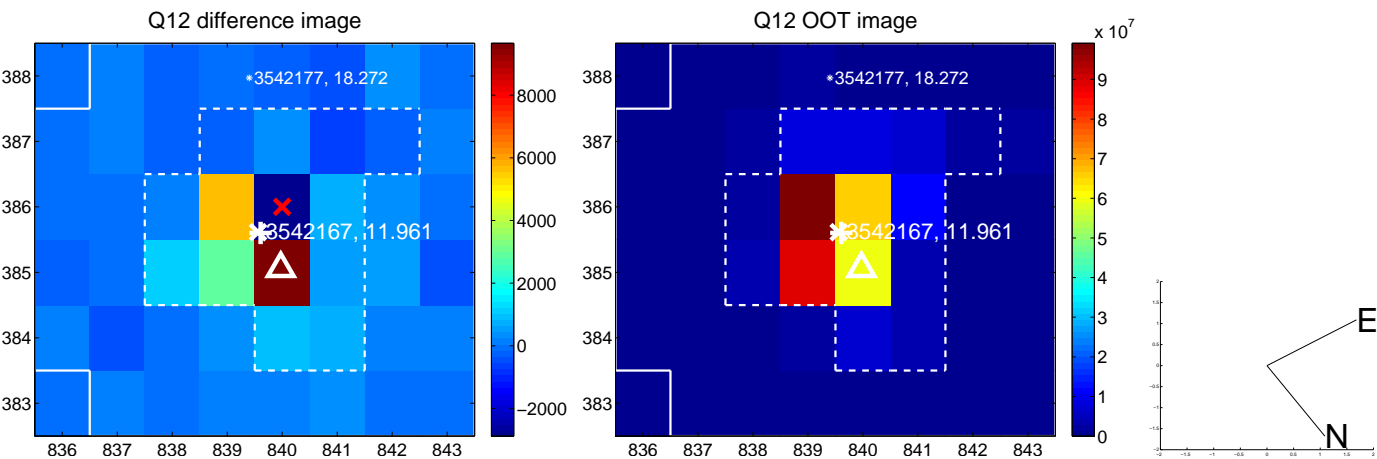
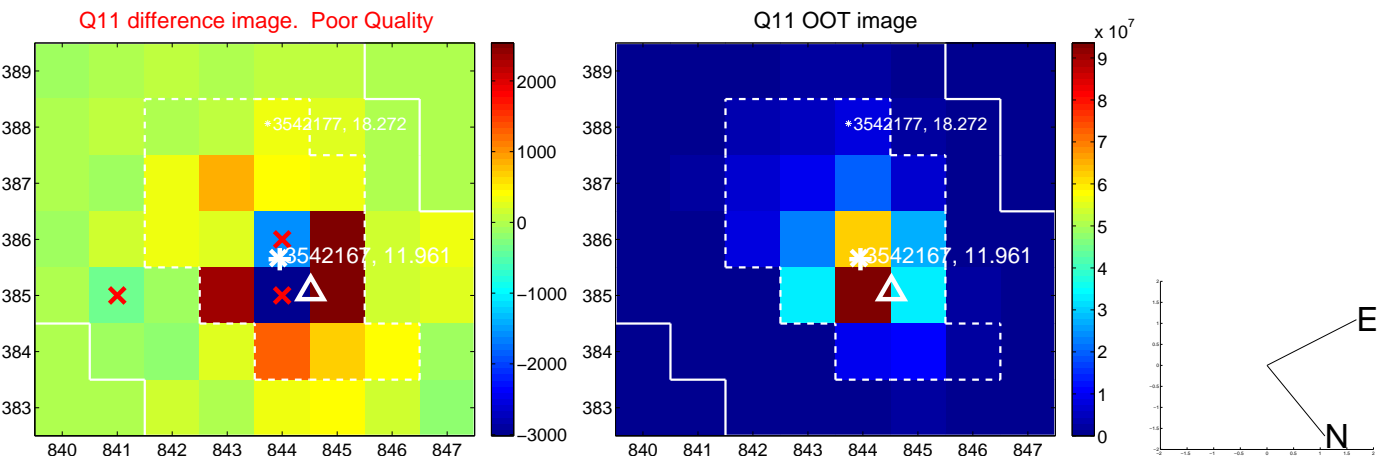
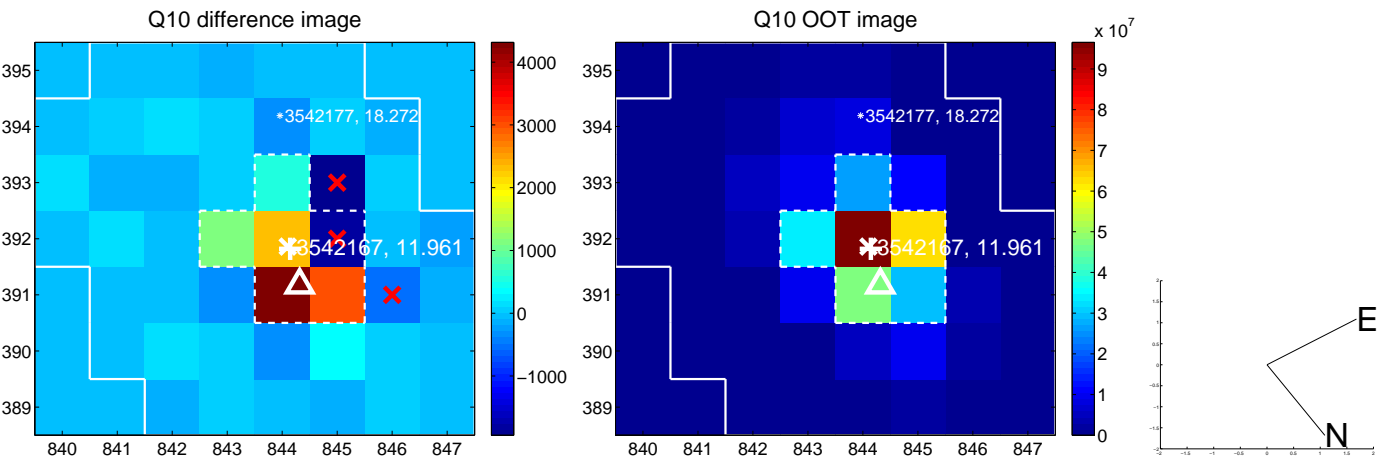
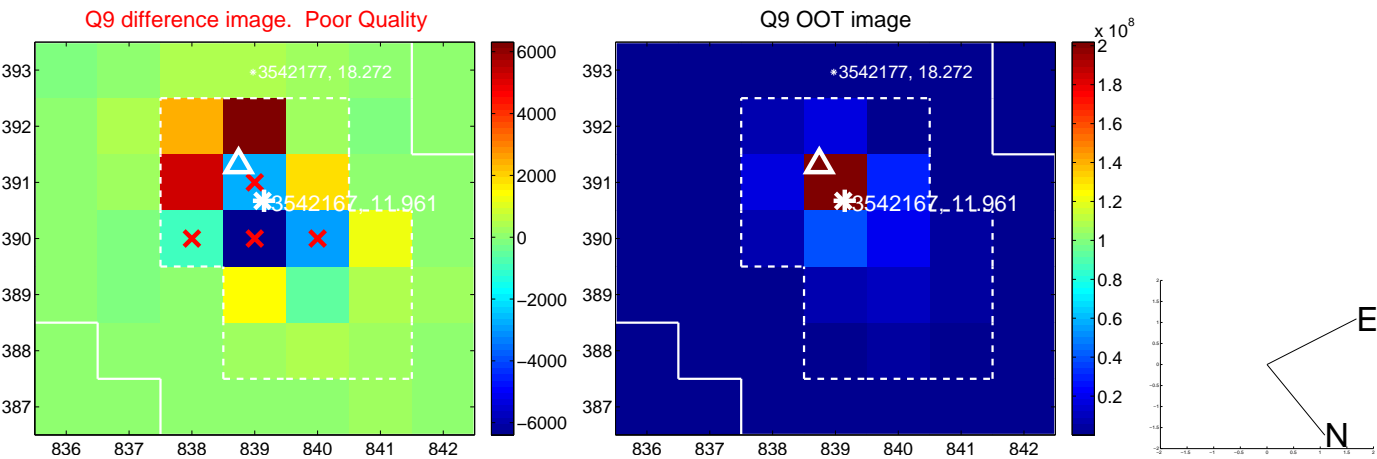
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



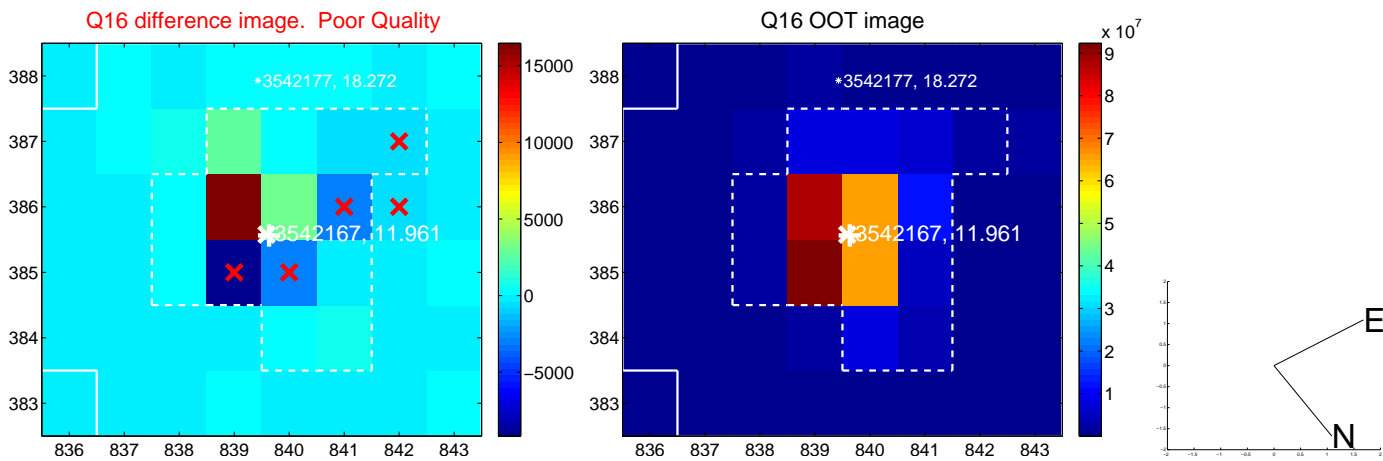
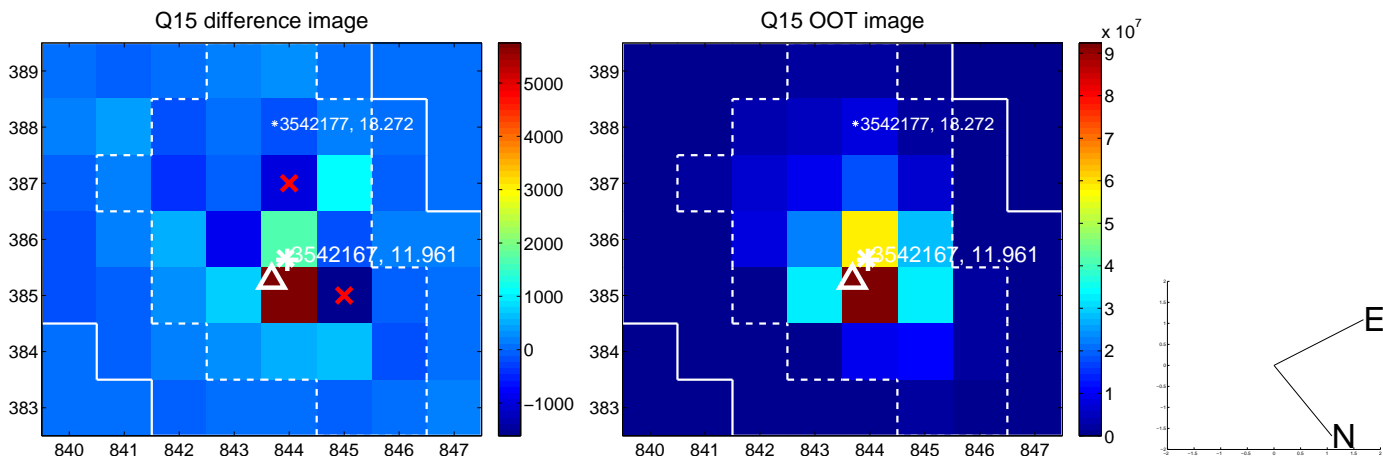
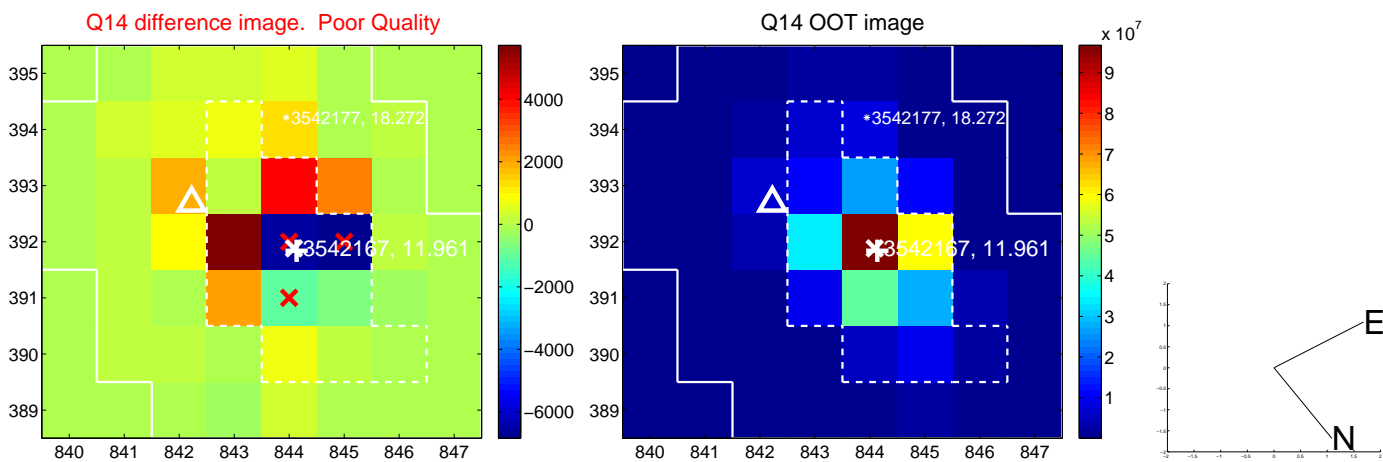
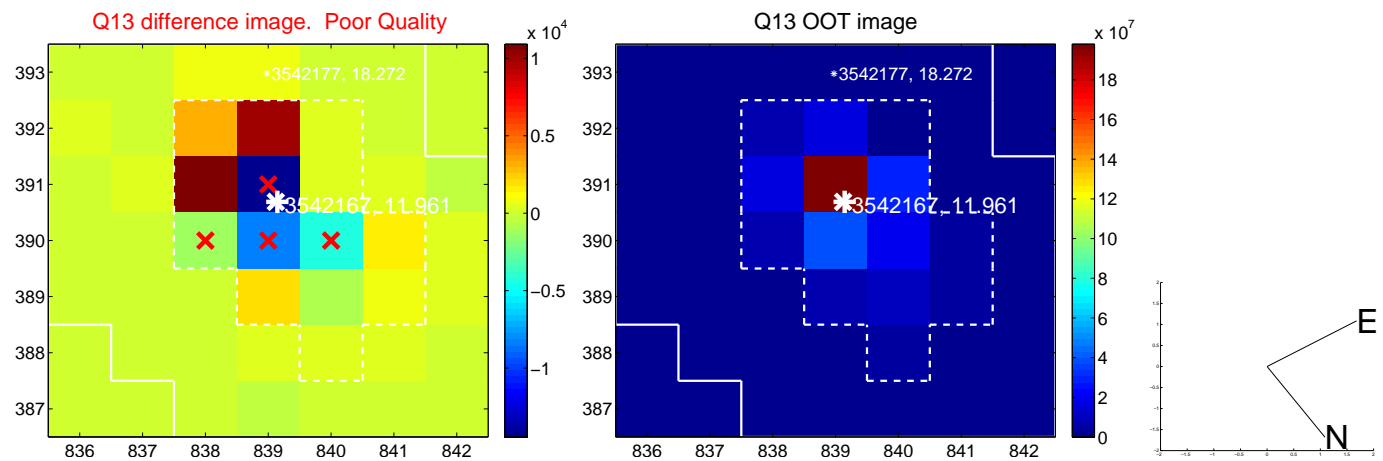
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



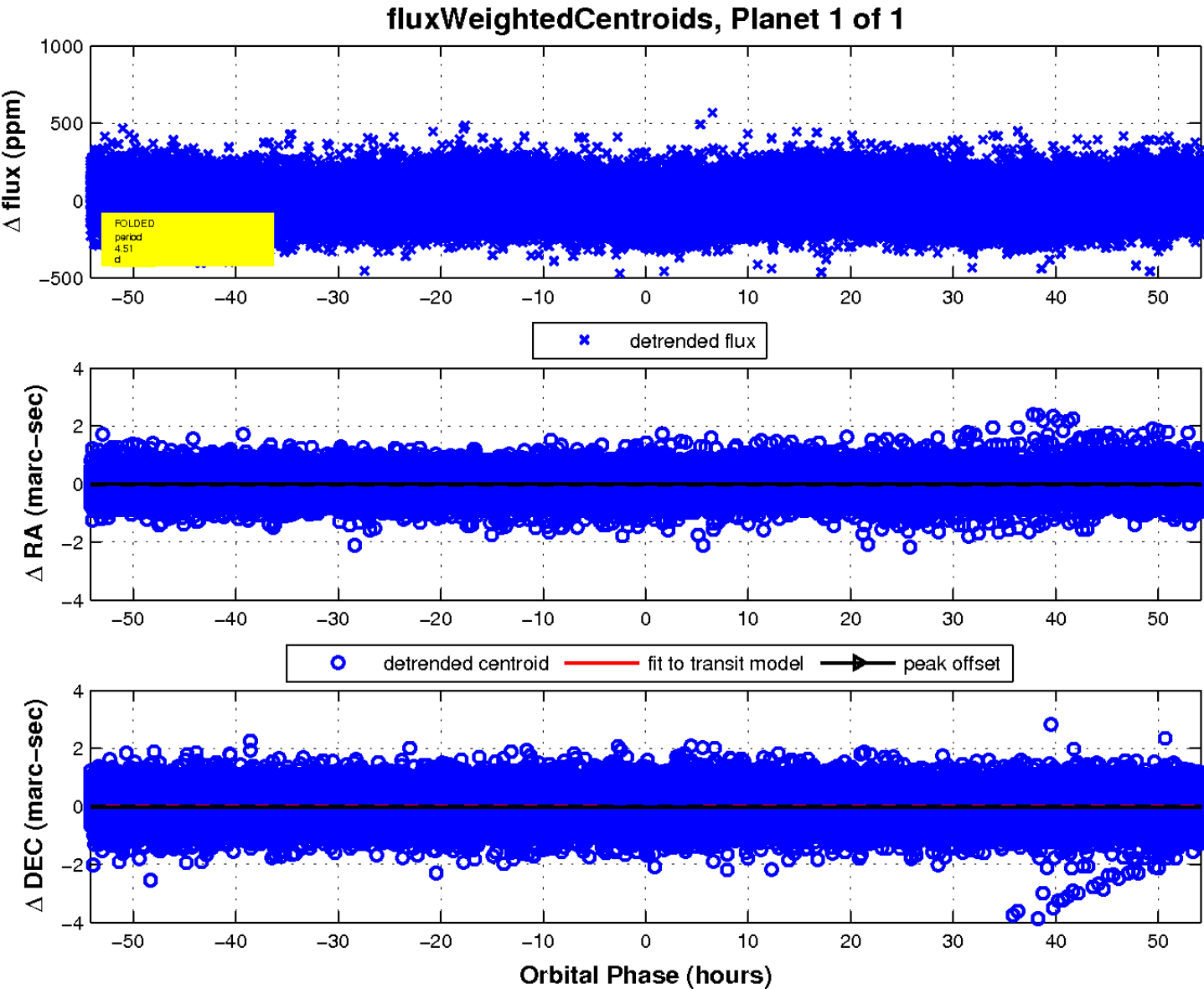
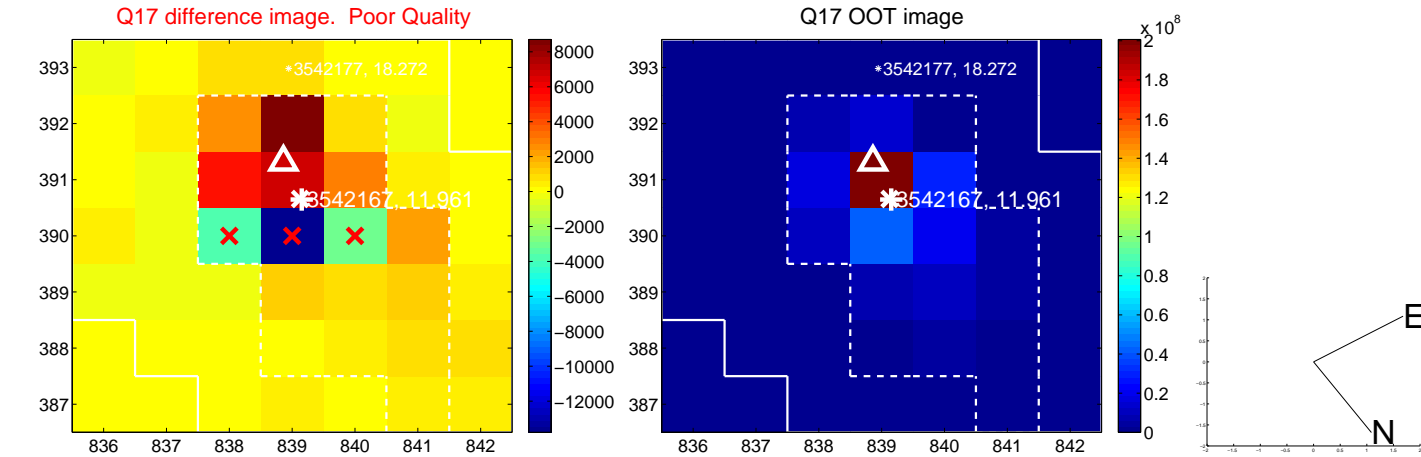
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UKIRT Image

Declination

