

KIC 008382339

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})
008382339-01	OBS	7031.01	5.405982	131.616097	306.6	3.054	15.1	16.4	15.36	4840	33.09	14925.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008382339-01	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 008382339-01

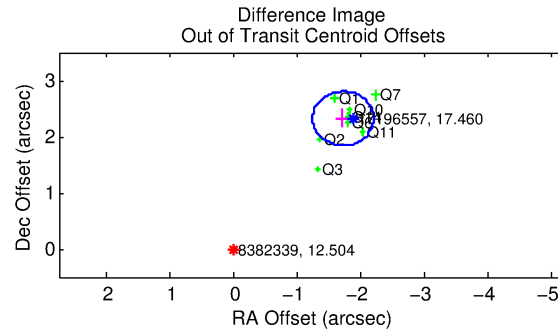
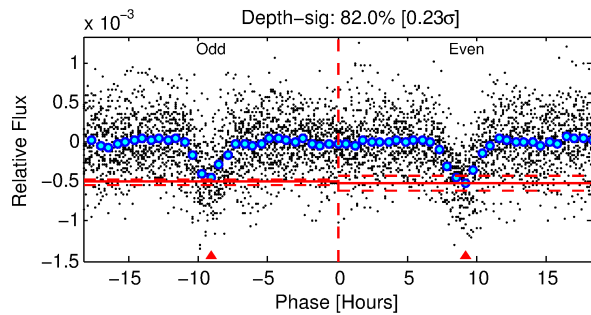
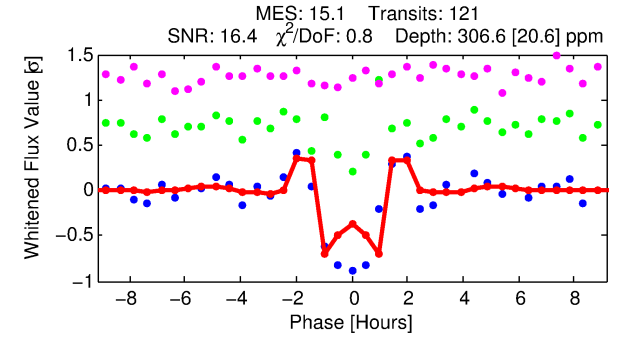
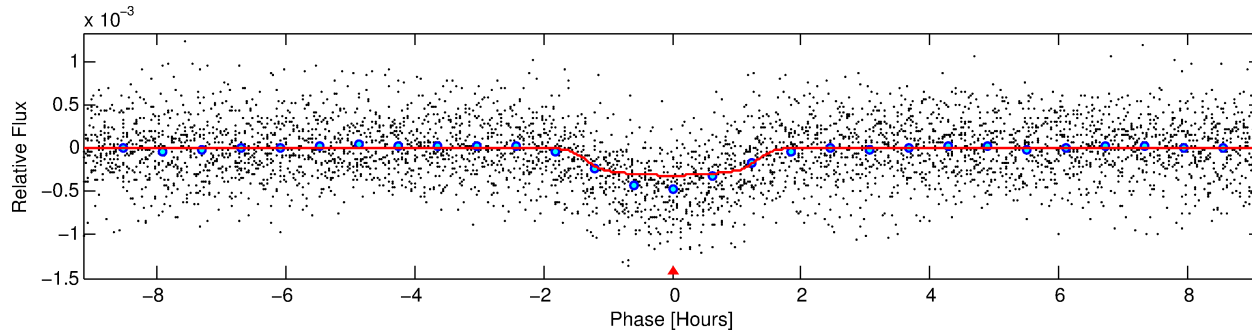
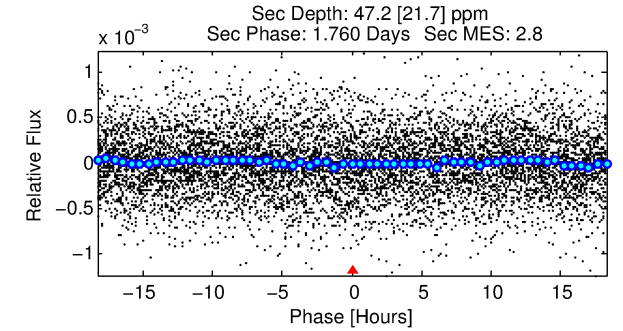
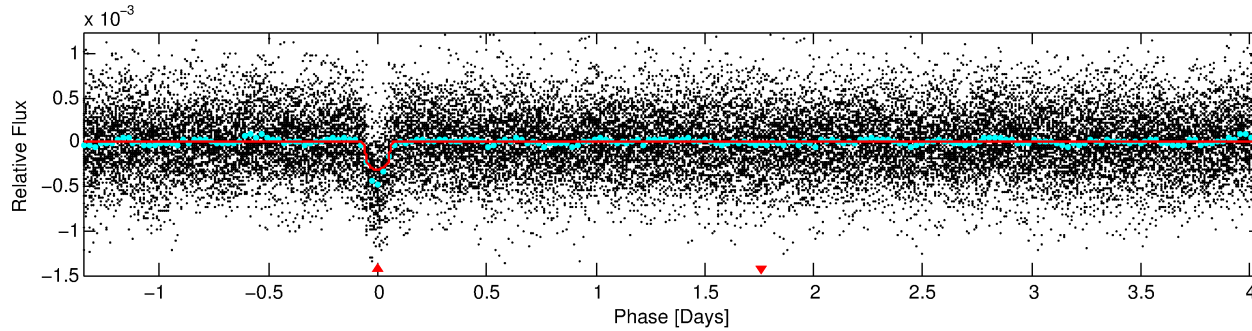
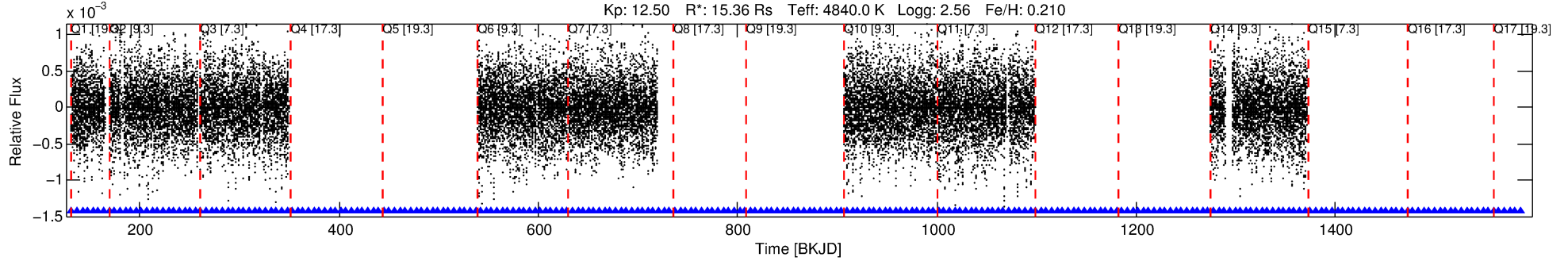
No Significant Match Found

DV One-Page Summary

KIC: 8382339 Candidate: 1 of 1 Period: 5.406 d

KOI: K07031.01 Corr: 0.935

Kp: 12.50 R*: 15.36 Rs Teff: 4840.0 K Logg: 2.56 Fe/H: 0.210



DV Fit Results:

Period = 5.40598 [0.00001] d
Epoch = 131.6161 [0.0011] BKJD
Rp/R* = 0.0197 [0.0021]
a/R* = 6.47 [2.27]
b = 0.90 [0.07]
Seff = 14925.98 [2904.78]
Teq = 2818 [137] K
Rp = 33.09 [8.72] Re
a = 0.0881 [0.0143] AU
Ag = 0.18 [0.10] [-8.30σ]
Teffp = 2855 [368] K [0.09σ]

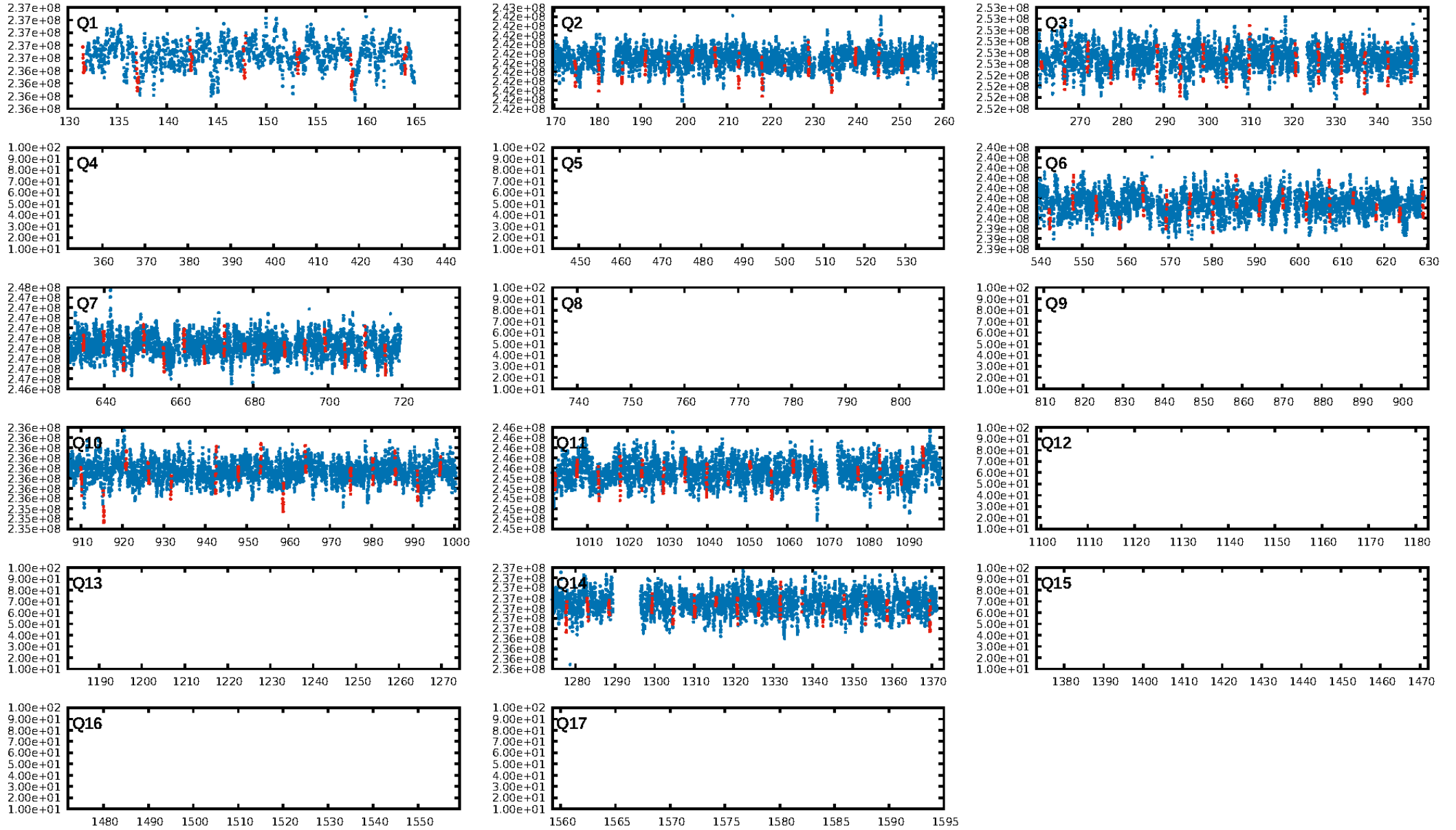
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.40e-43
RollingBand-fgt: 1.00 [114/114]
GhostDiagnostic-chr: 0.9365
Centroid-sig: 0.0%
Centroid-so: 4.461 arcsec [29.73σ]
OotOffset-rm: 2.888 arcsec [18.04σ]
KicOffset-rm: 3.024 arcsec [18.86σ]
OotOffset-st: 4/3/0/1 [8]
KicOffset-st: 4/3/0/1 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

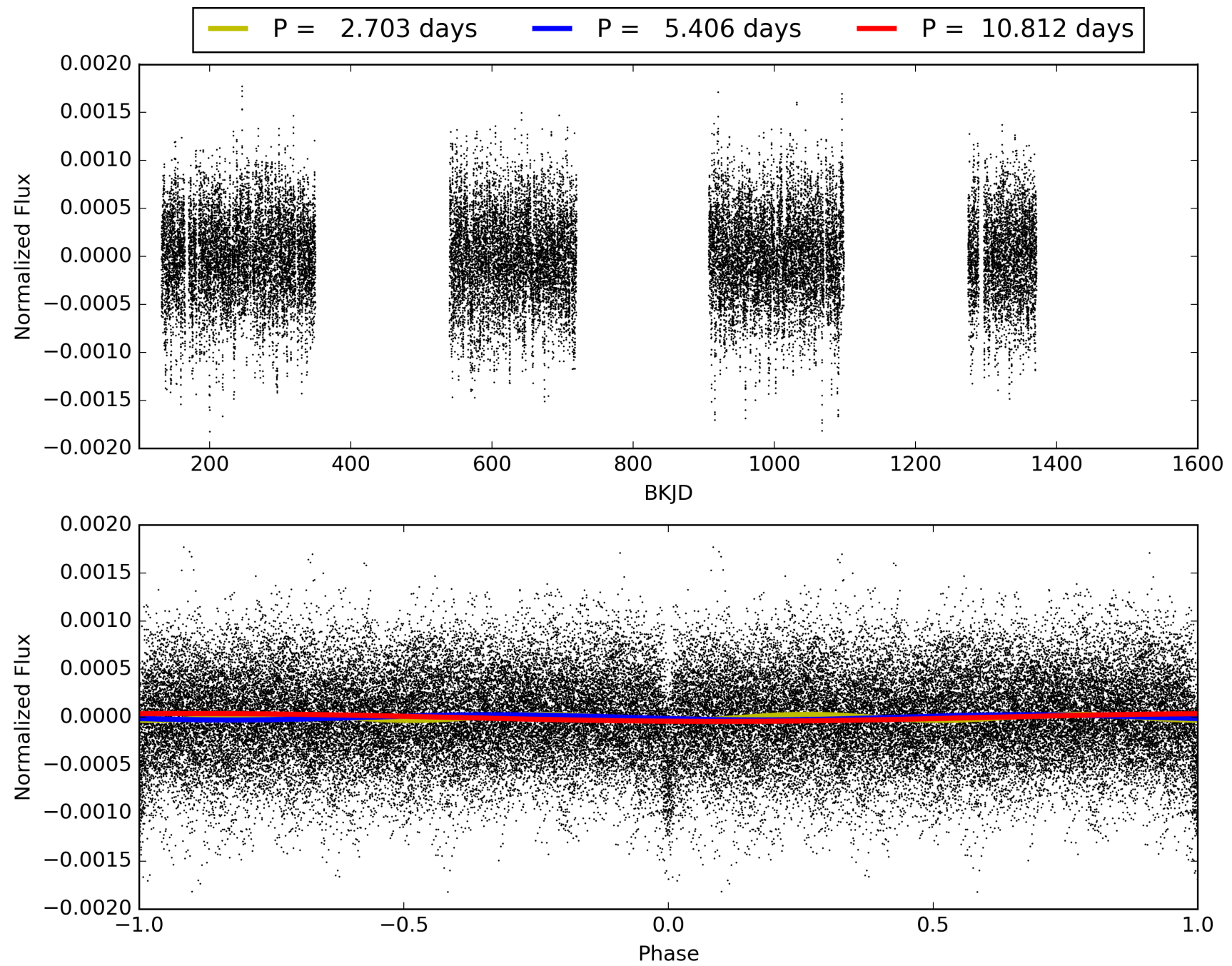
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:38:33 Z

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

TCE 008382339-01, PDC Light Curves

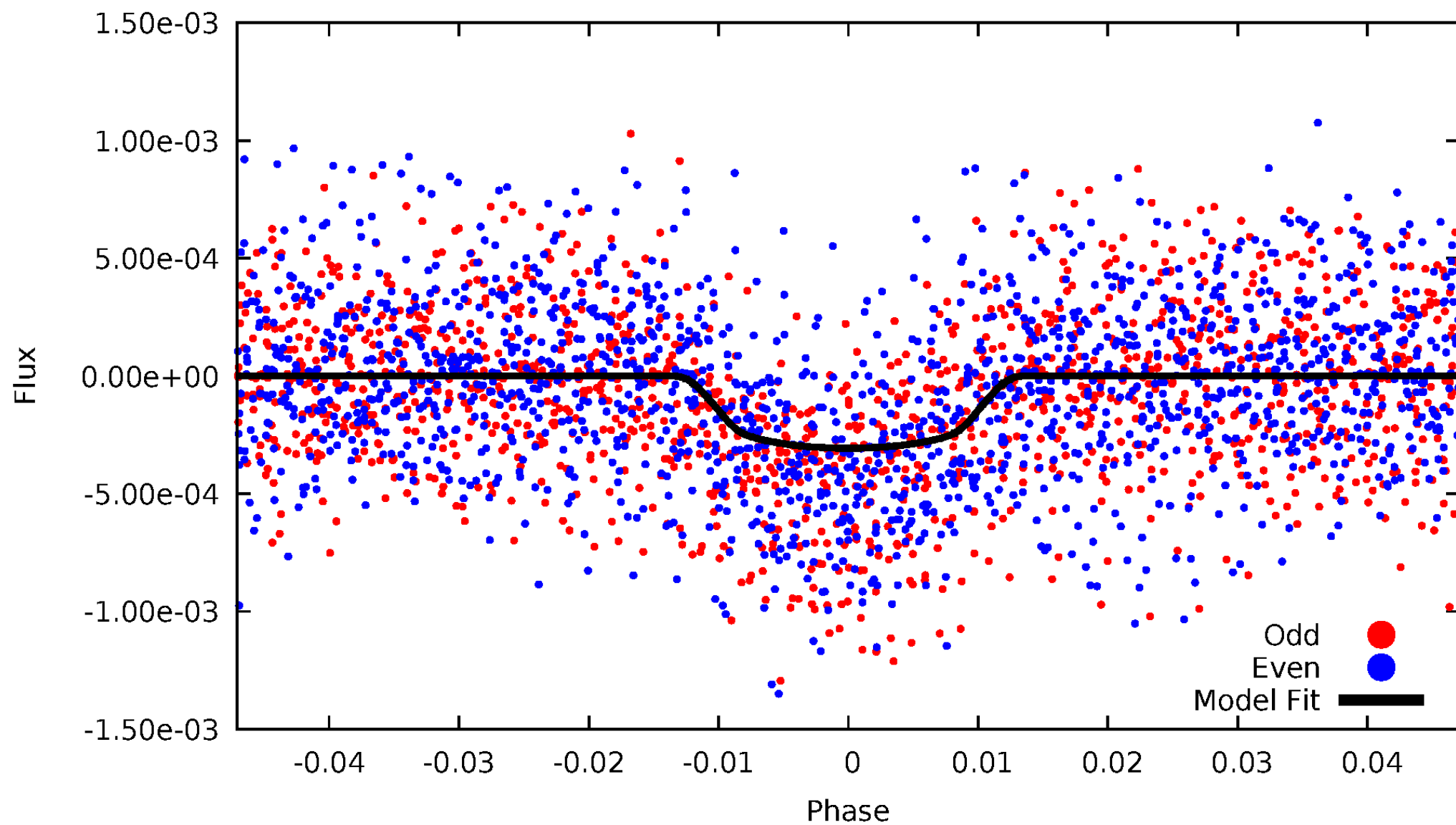


TCE 008382339-01



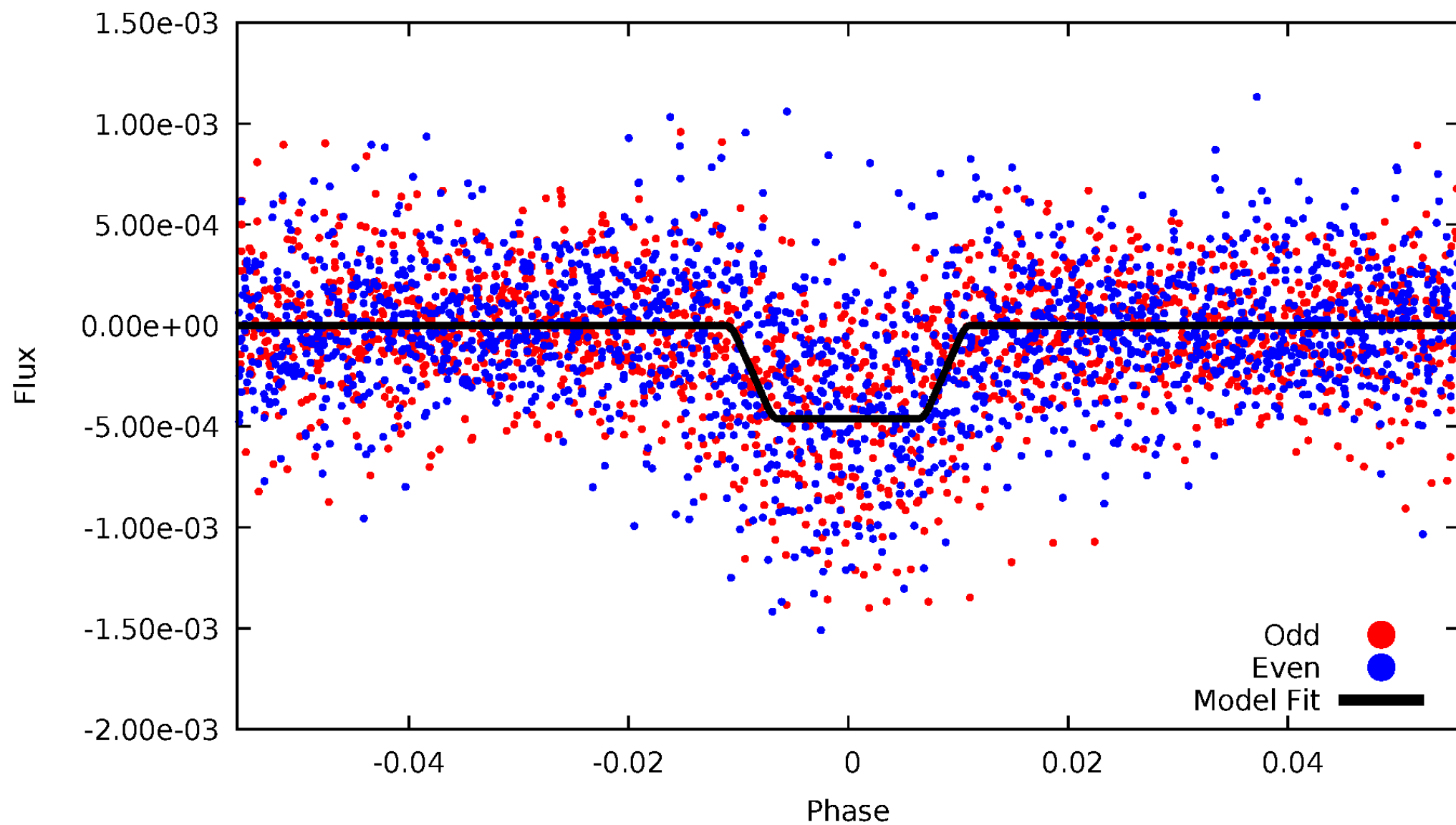
DV Odd/Even

TCE 008382339-01

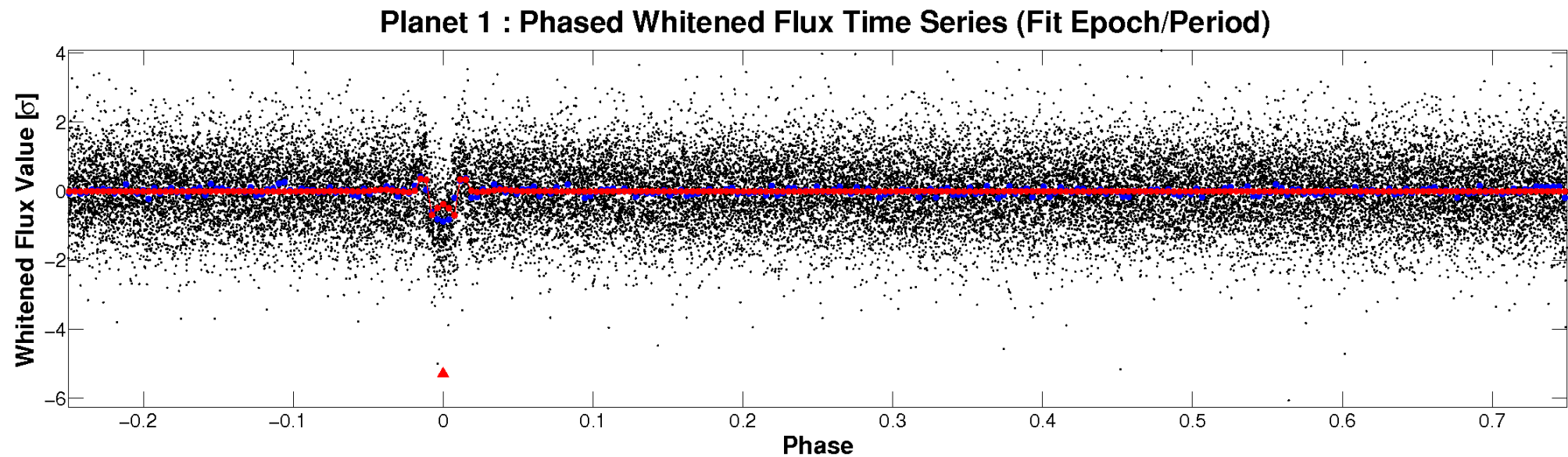
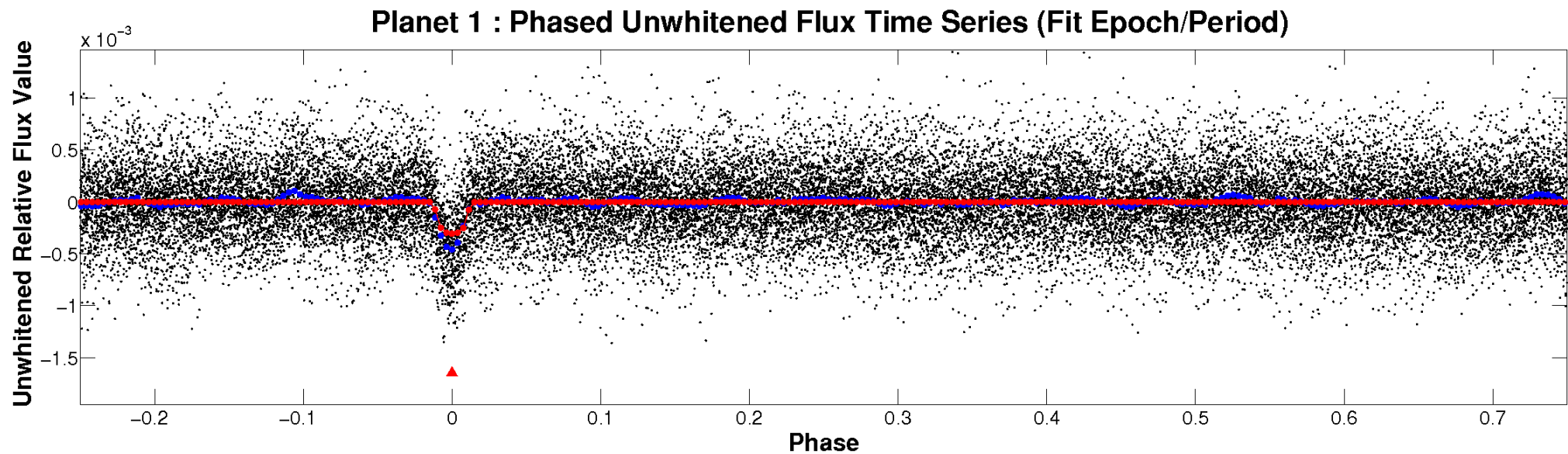


ALT Odd/Even

TCE 008382339-01

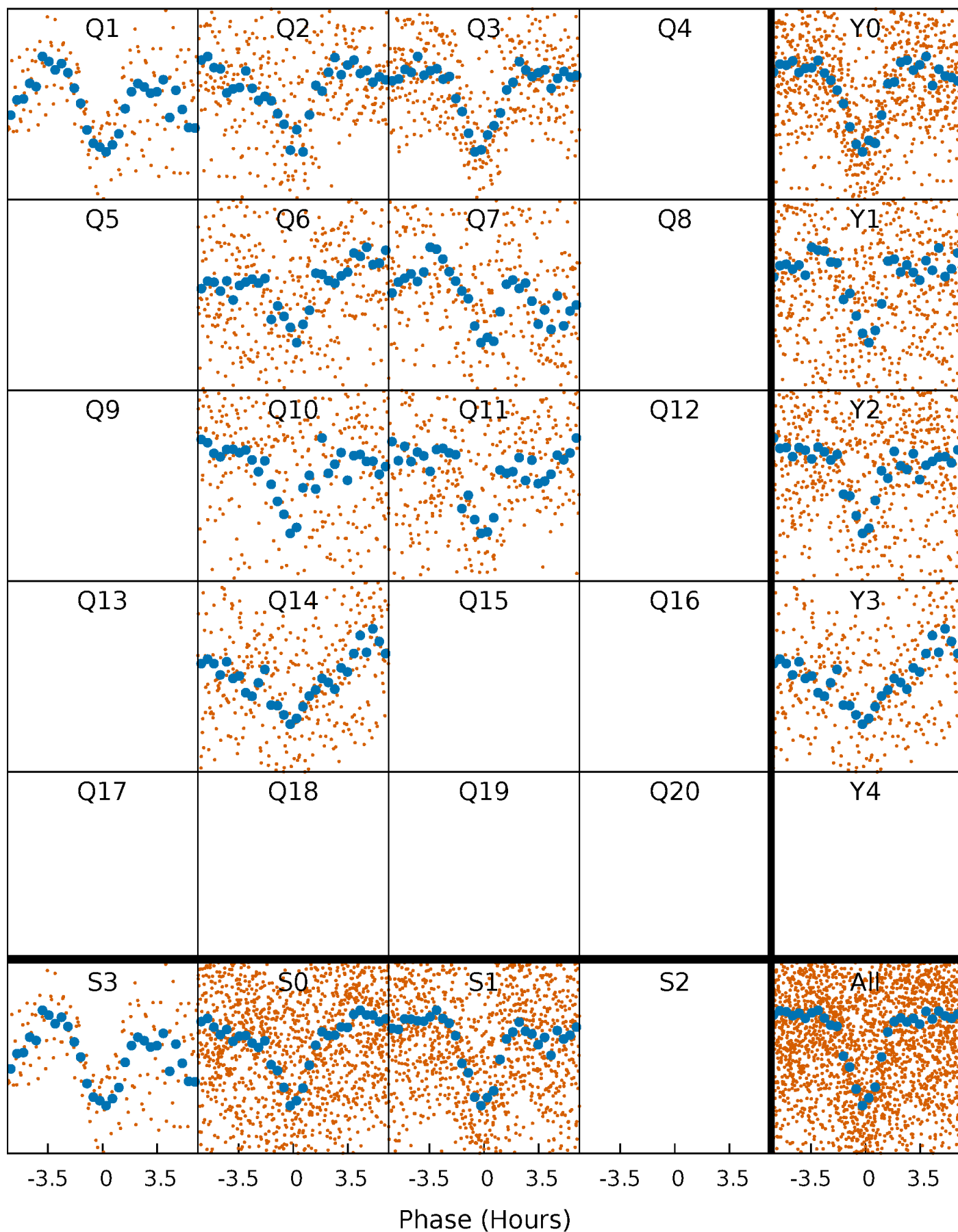


Non-Whitened Vs. Whitened Light Curve



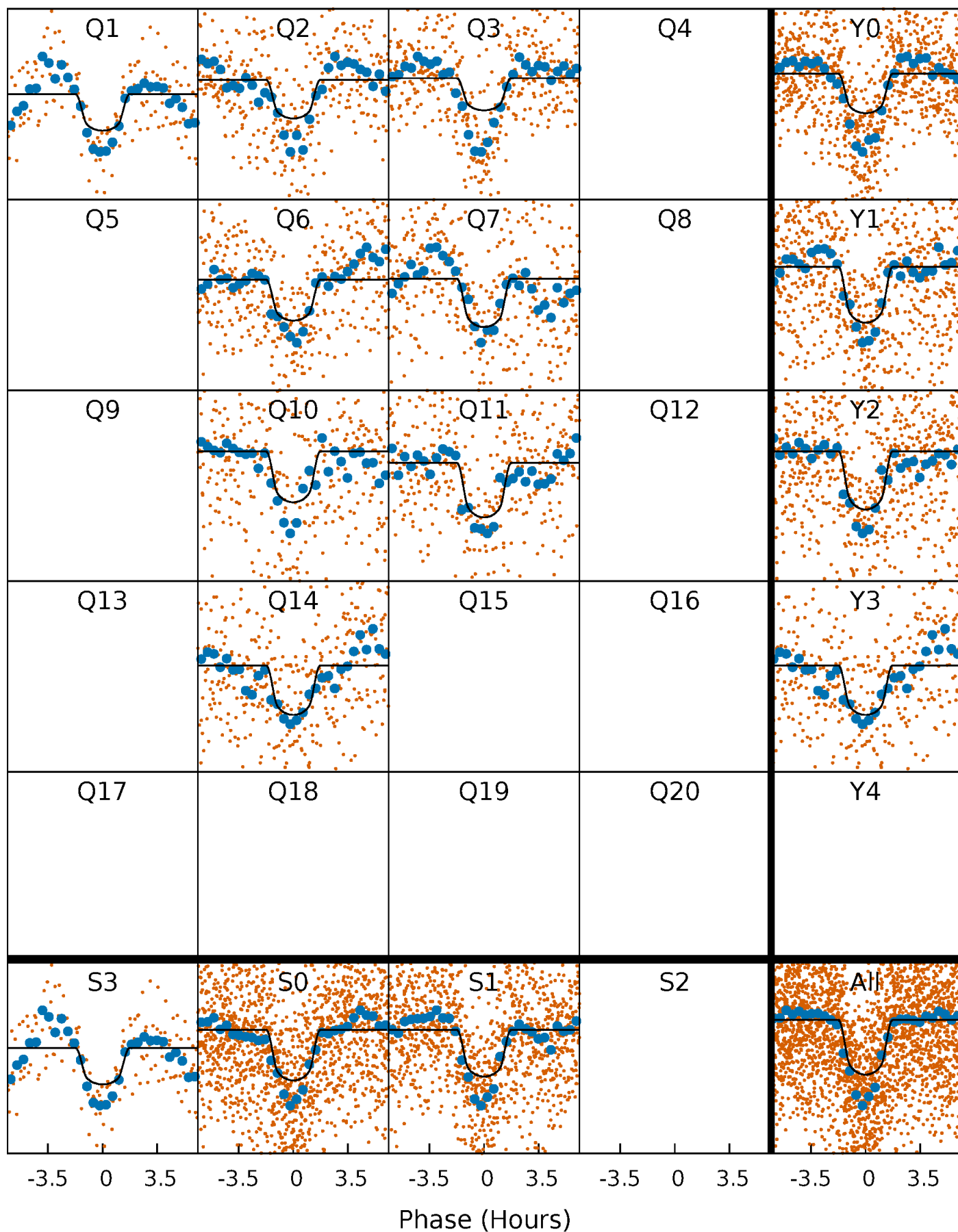
PDC Quarter-Phased Transit Curves

TCE 008382339-01 P= 5.405982 Days $T_0=131.616097$ (BKJD)



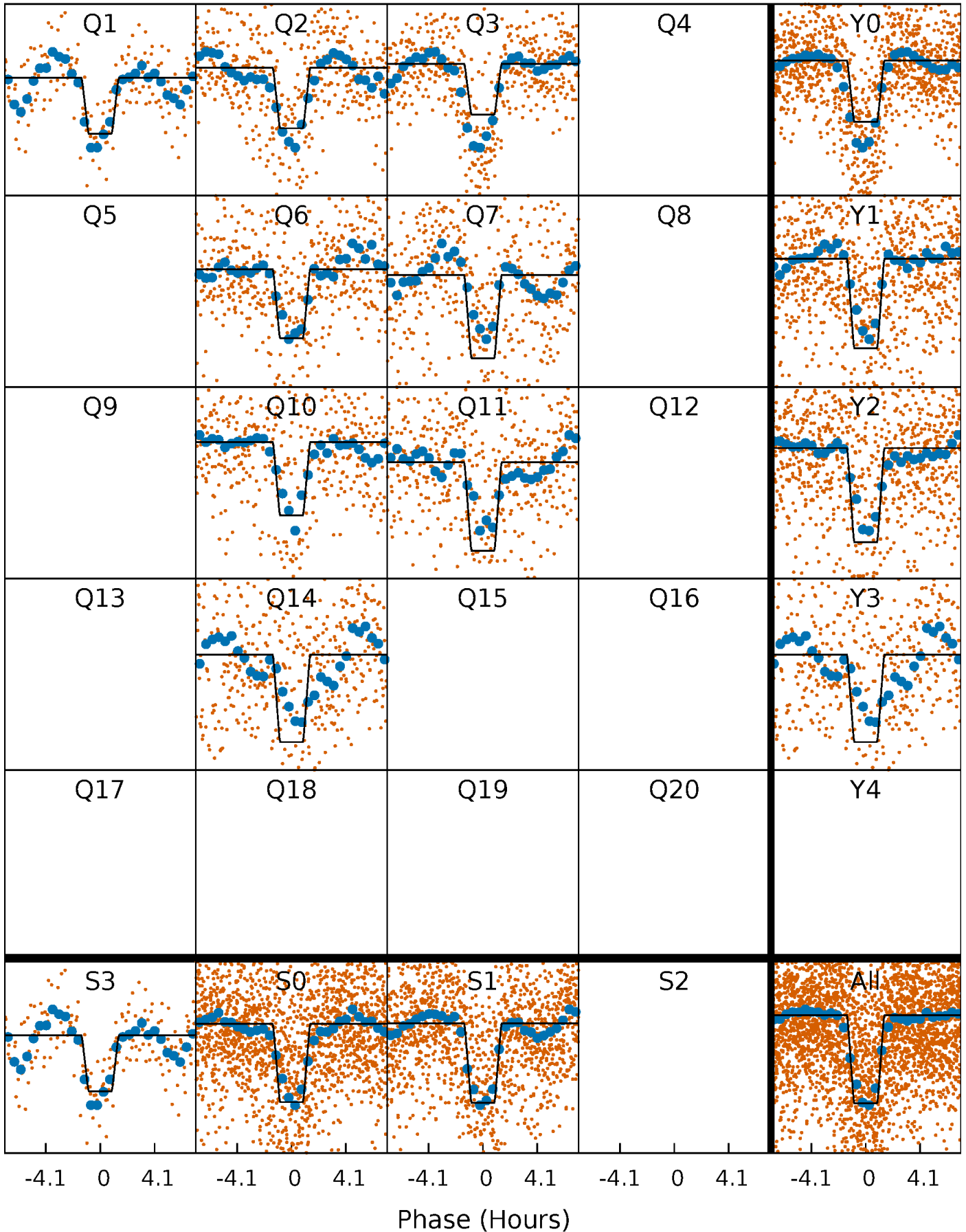
DV Quarter-Phased Transit Curves

TCE 008382339-01 P= 5.405982 Days $T_0=131.616097$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

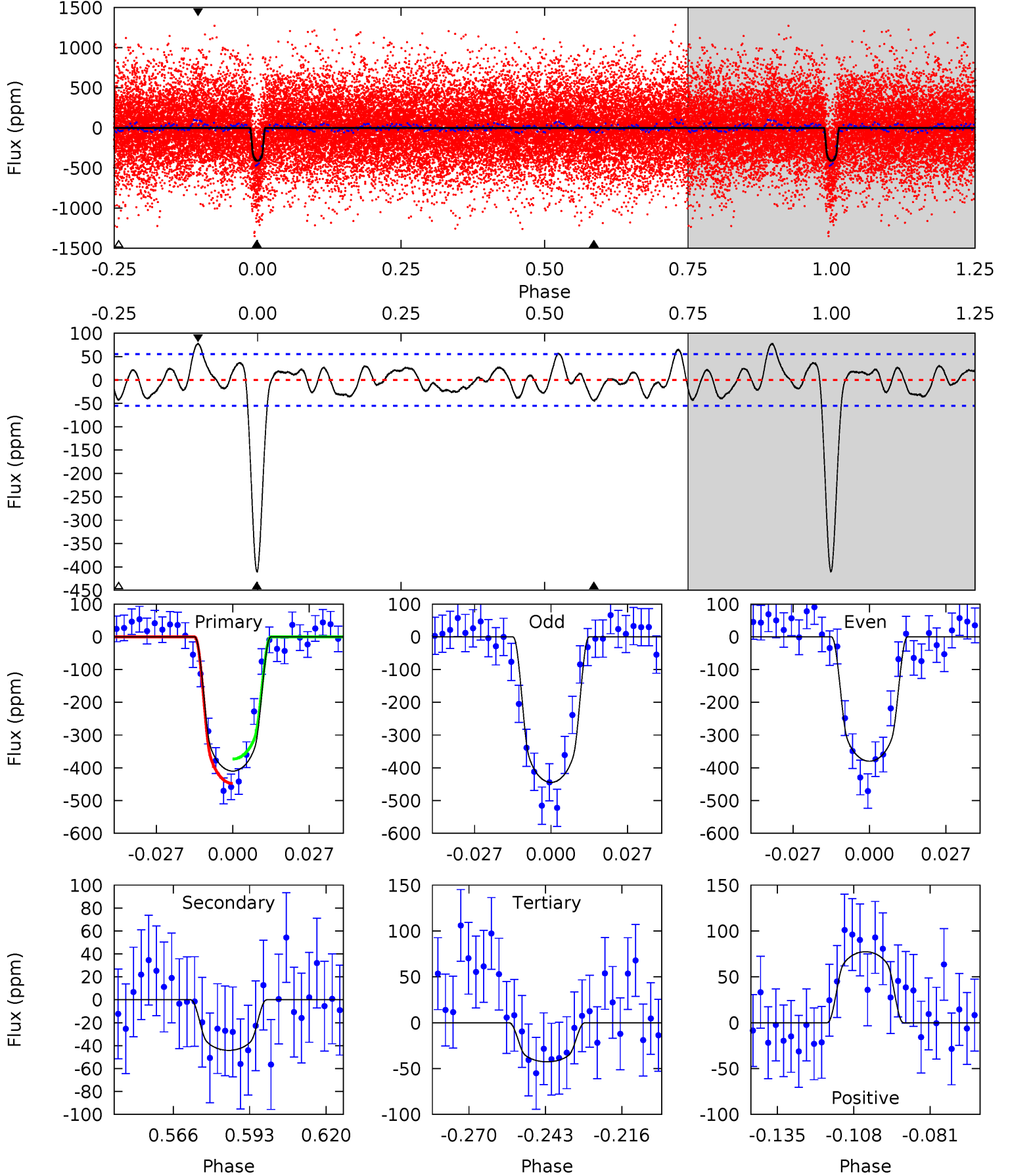
TCE 008382339-01 P= 5.405852 Days $T_0=131.621970$ (BKJD)



DV Model-Shift Uniqueness Test

008382339-01, P = 5.405982 Days, E = 126.210115 Days

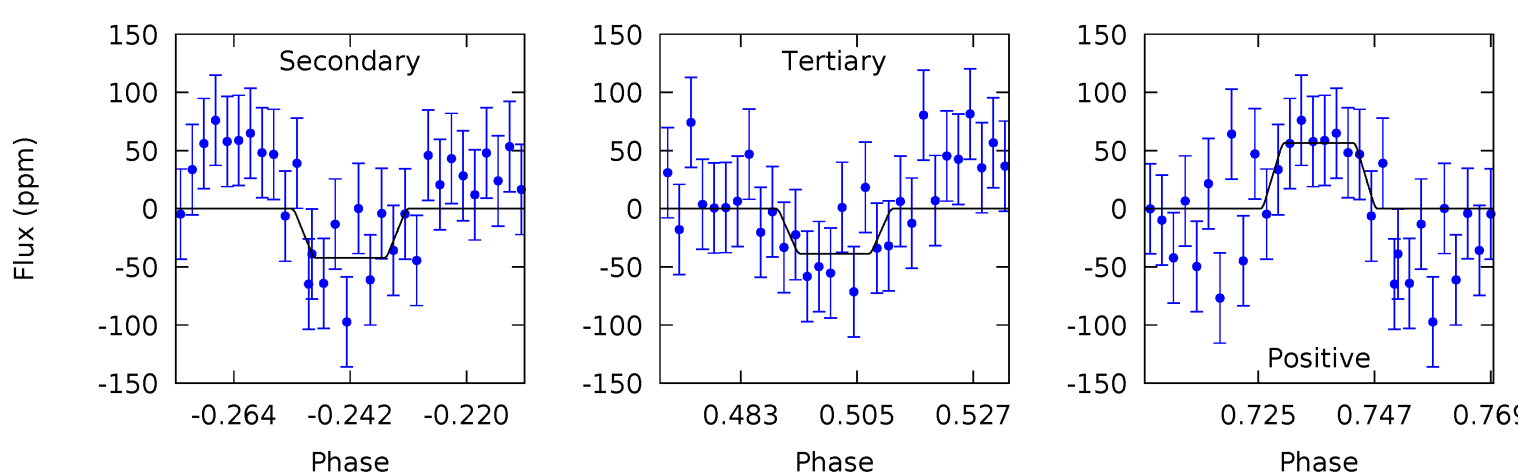
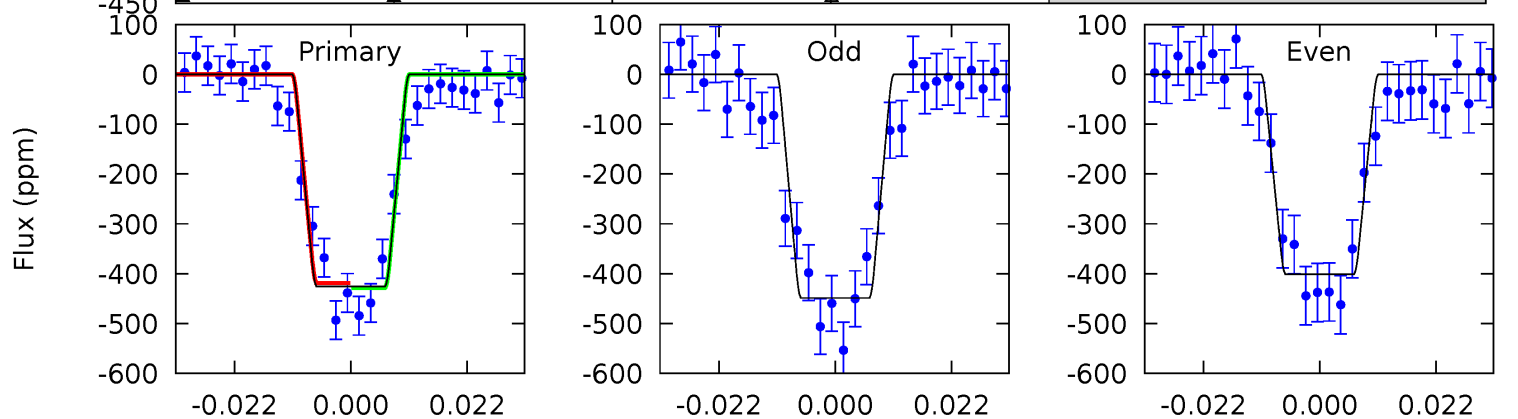
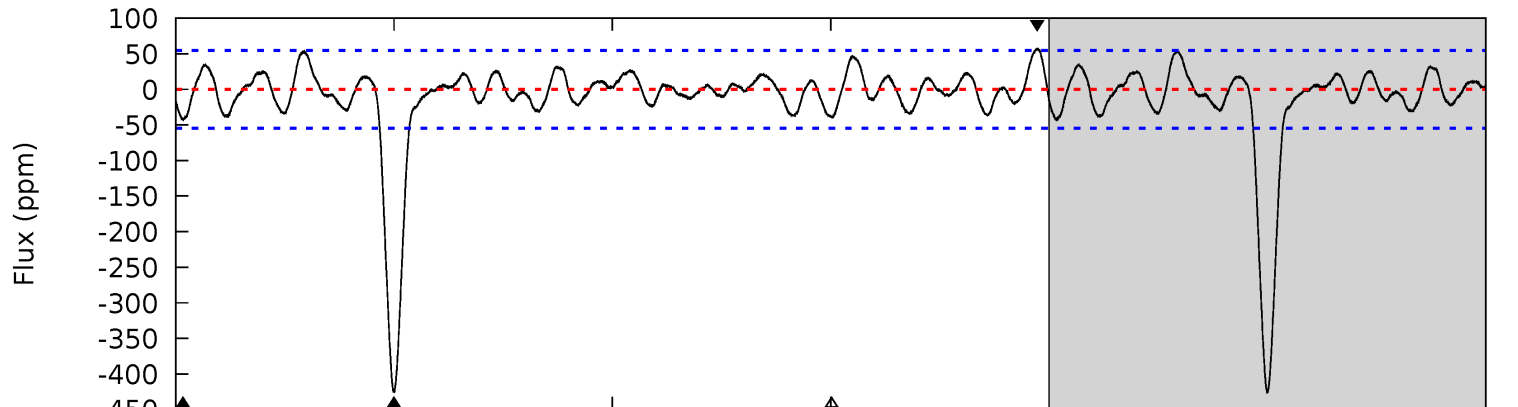
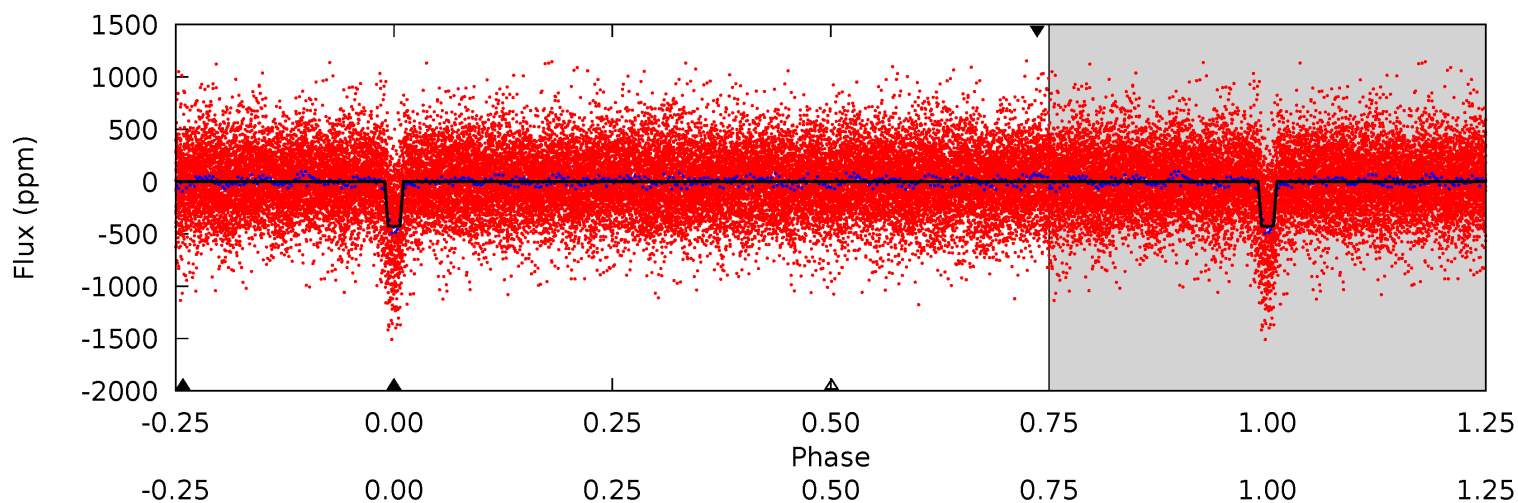
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.7	3.85	3.72	6.74	4.83	2.21	2.08	32.0	29.0	0.13	-2.89	2.82	1.04	0.16	3.25



Alt Model-Shift Uniqueness Test

008382339-01, P = 5.405852 Days, E = 126.216118 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.0	3.78	3.45	5.05	4.87	2.29	1.73	34.5	32.9	0.33	-1.27	2.11	1.02	0.12	0.43



Stellar Parameters For KIC 008382339

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4840^{+84}_{-120}	$2.560^{+0.030}_{-0.030}$	$0.210^{+0.150}_{-0.250}$	$15.355^{+0.654}_{-3.708}$	$3.121^{+0.073}_{-1.321}$	$0.001^{+0.000}_{-0.000}$
	+2%/-2%	+1%/-1%	+71%/-119%	+4%/-24%	+2%/-42%	+34%/-9%
Source	SPE74	AST9	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 008382339-01 / KOI 7031.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-44 ± 11	$33.12^{+3.96}_{-4.09}$	3944^{+92}_{-120}	-3162^{+324}_{-175}	$0.169^{+0.070}_{-0.052}$
Alt.	-42 ± 11	$36.14^{+3.42}_{-3.90}$	3940^{+90}_{-113}	-3264^{+186}_{-133}	$0.137^{+0.049}_{-0.040}$

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

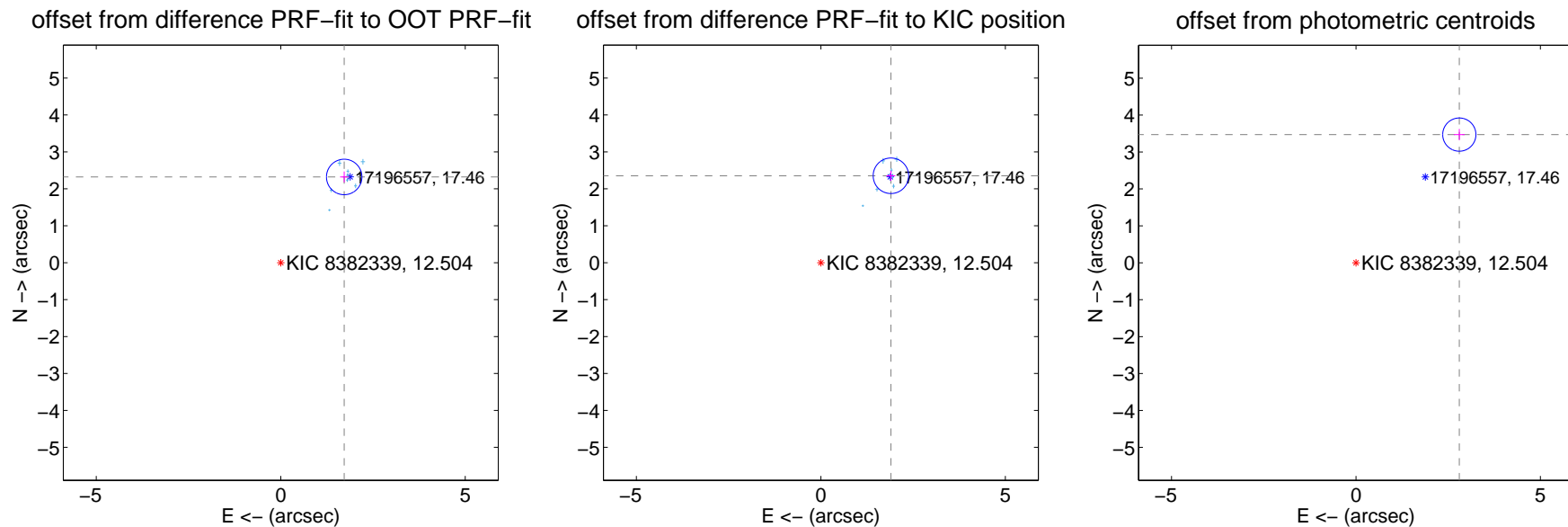
DV Centroid Data

Supplemental centroid analysis for 008382339-01. Kepler magnitude: 12.50. Transit SNR 16.40

There are 8 quarters with good PRF difference image offsets

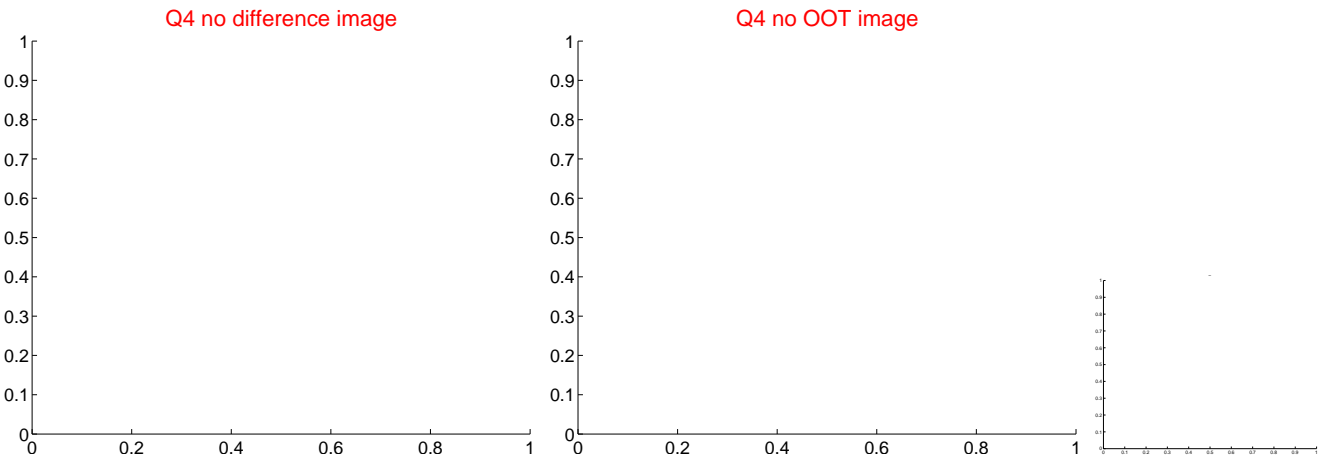
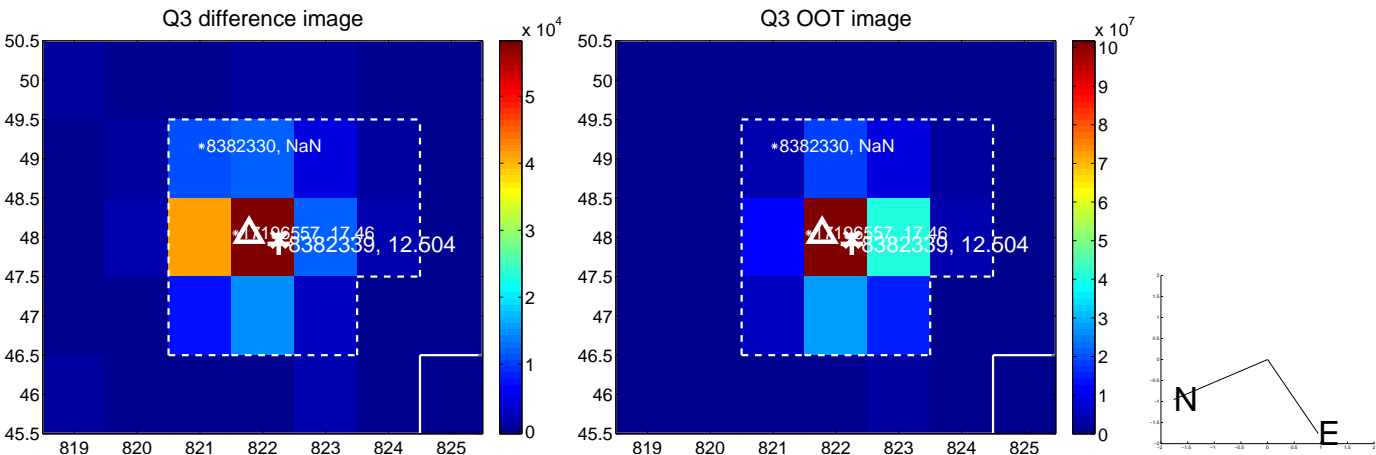
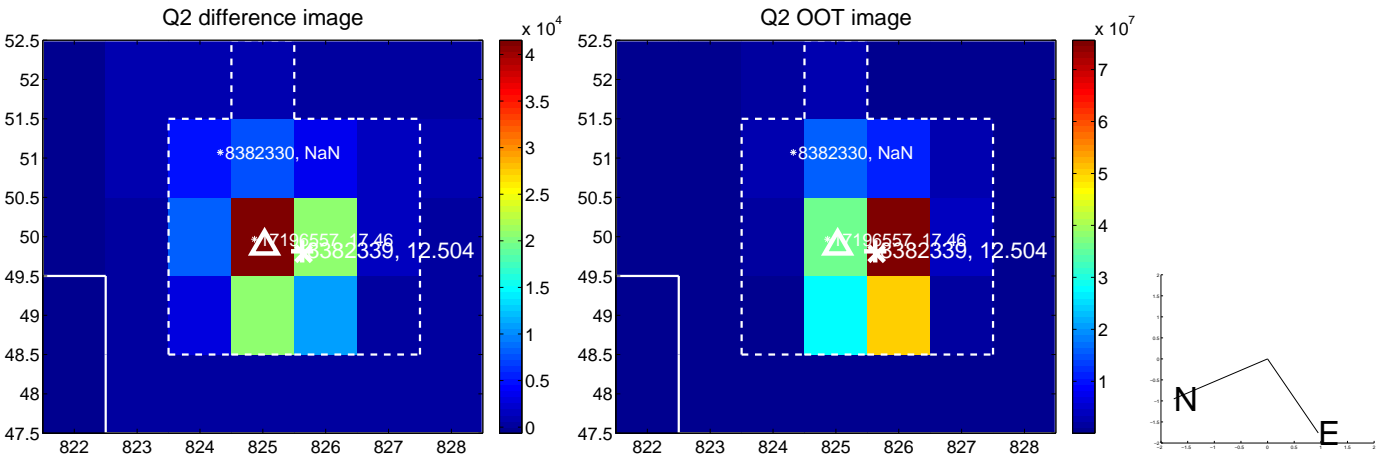
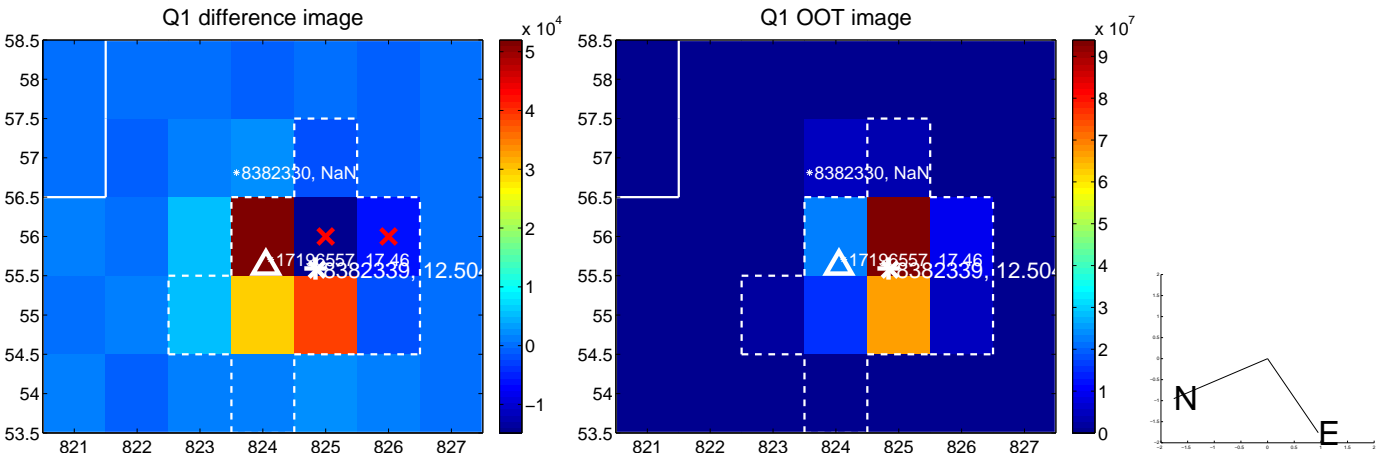
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.888 ± 0.160	18.04	-1.719 ± 0.111	2.321 ± 0.148
PRF-fit source offset from KIC position	3.024 ± 0.160	18.86	-1.898 ± 0.120	2.354 ± 0.138
photometric centroid source offset	4.46 ± 0.15	29.73	-2.80 ± 0.15	3.47 ± 0.15

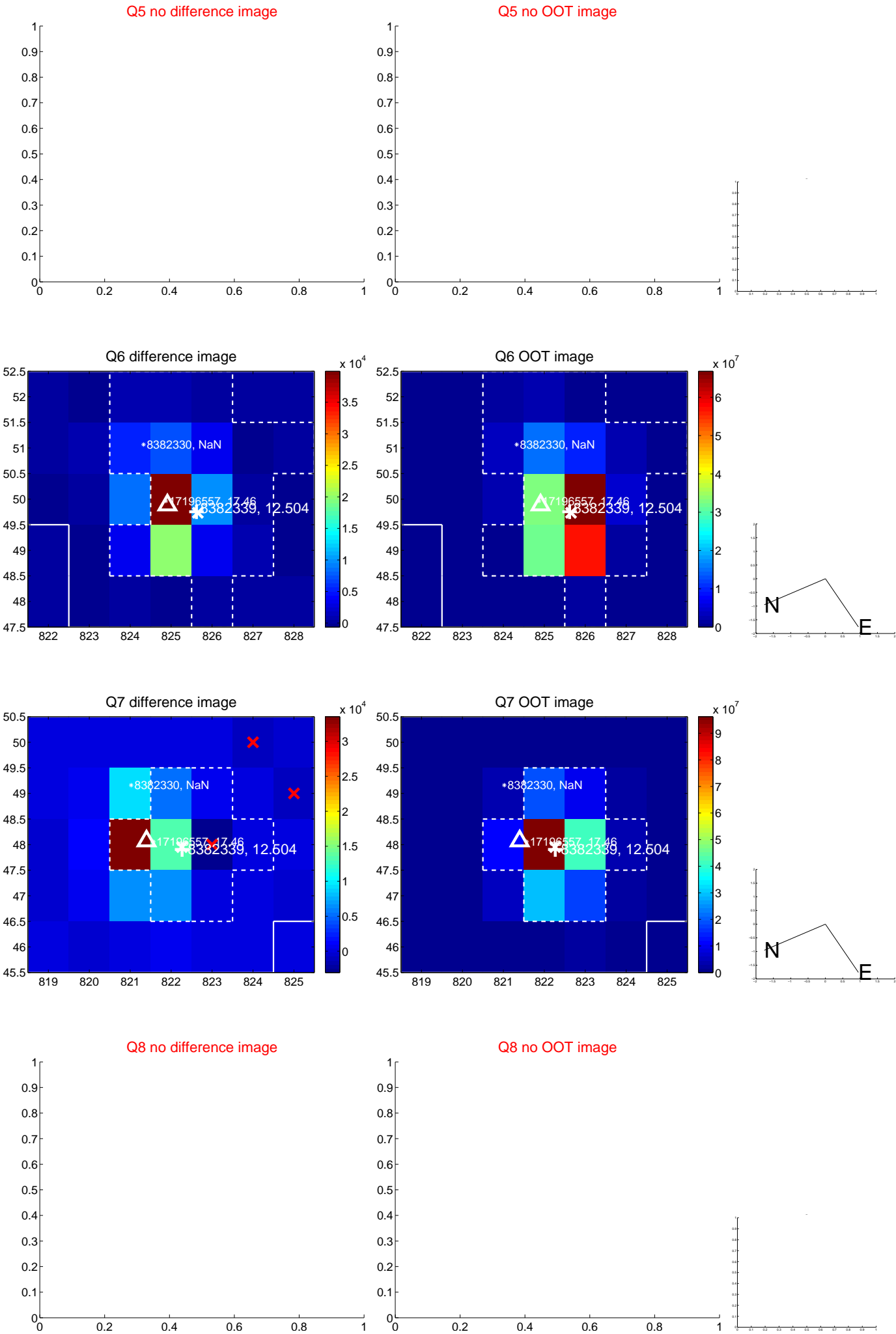


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

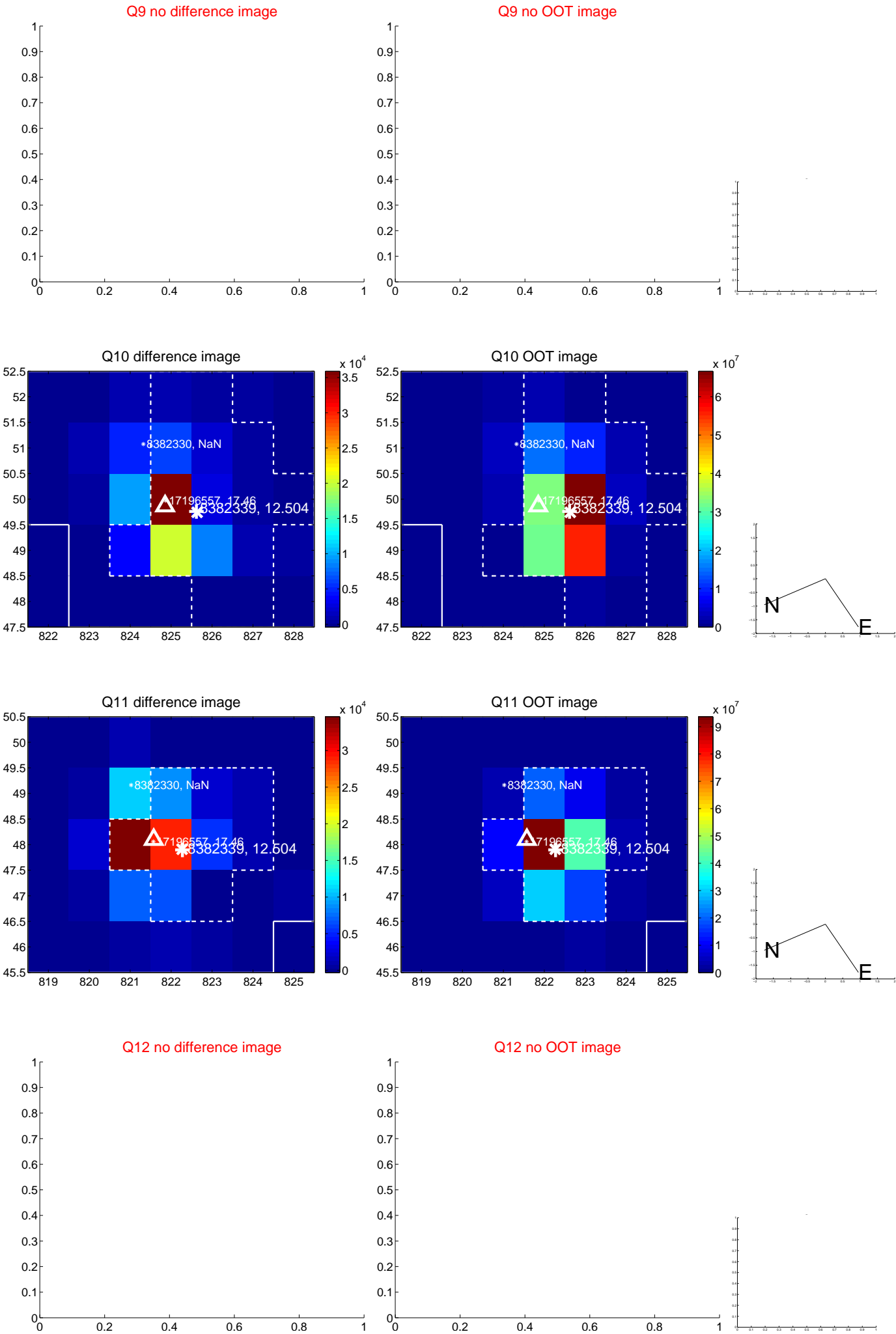
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



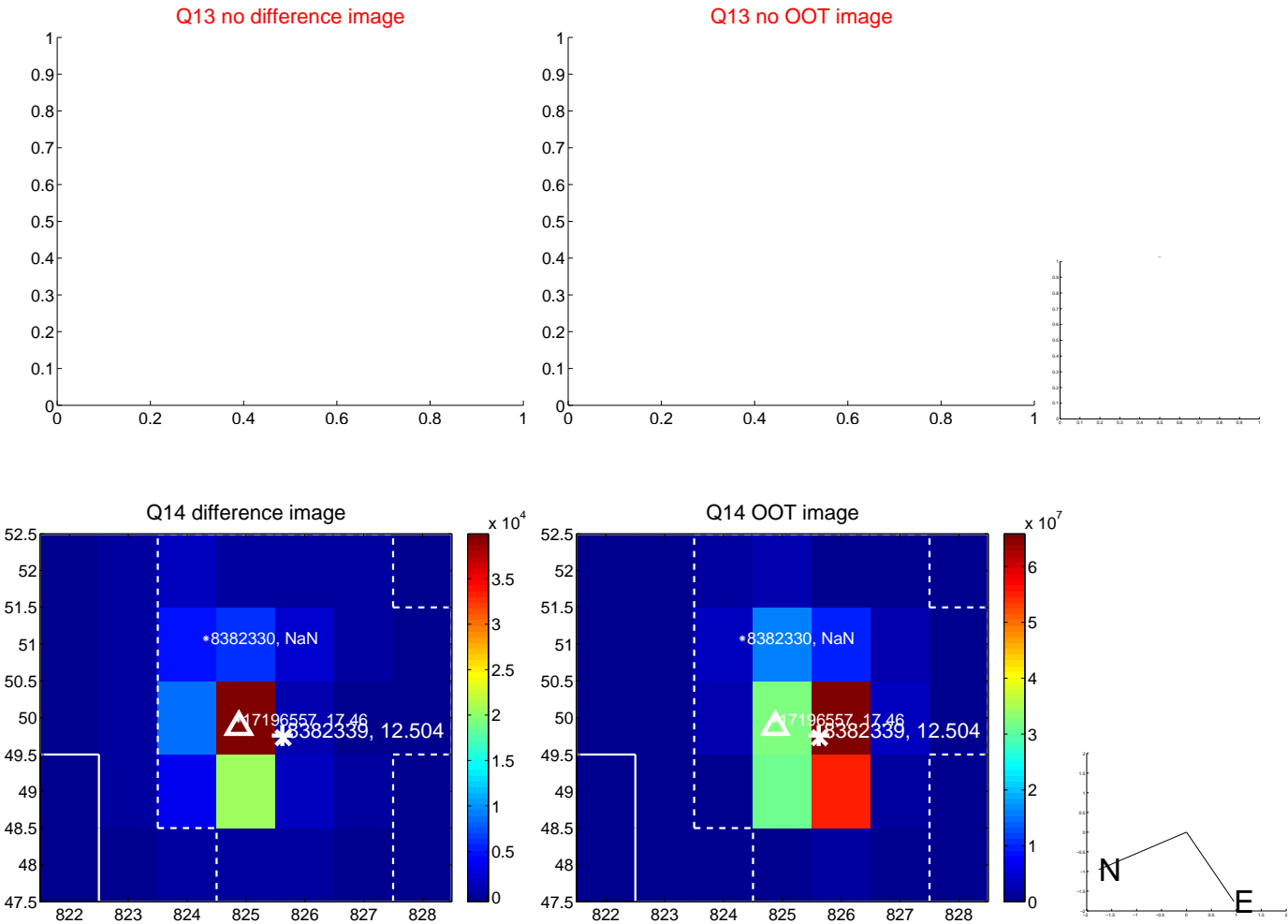
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



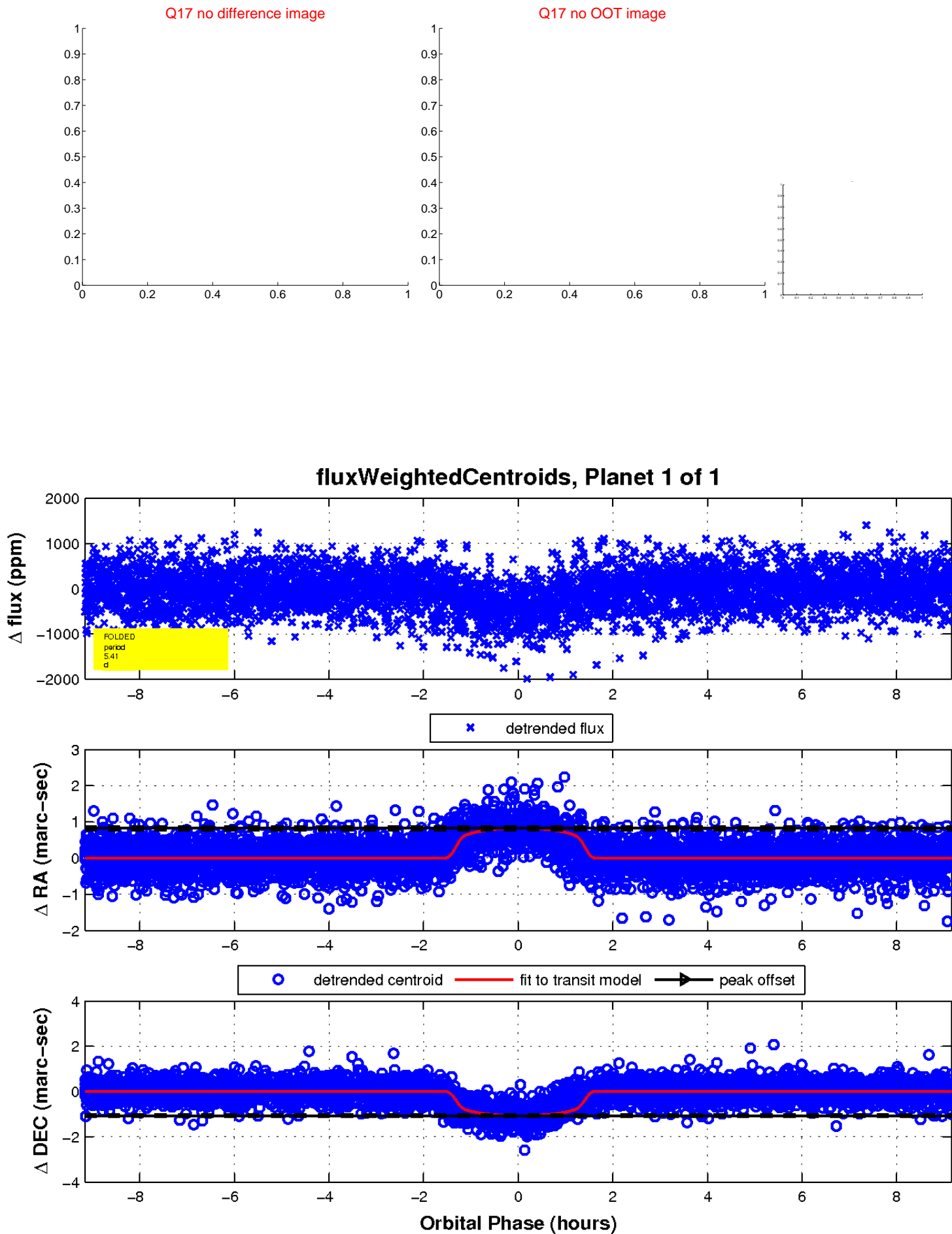
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

