

KIC 006842345

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})
006842345-01	OBS	6774.01	17.381623	142.406764	59128.2	2.758	1371.8	1187.9	1.02	6116	26.73	77.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006842345-01	OBS	PC	0.95	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.

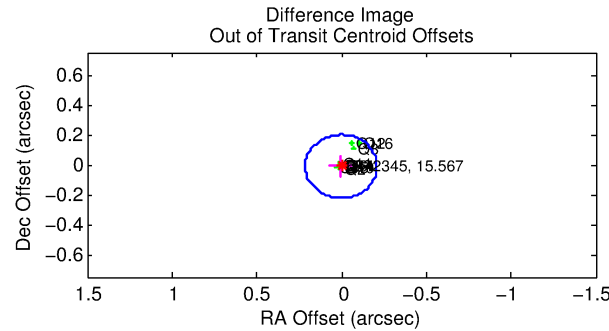
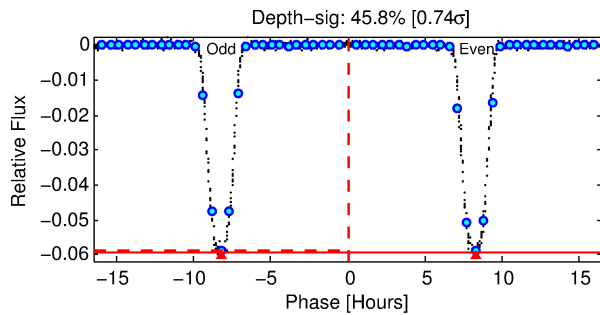
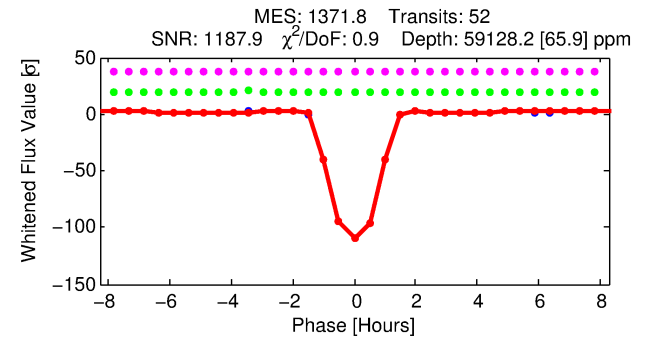
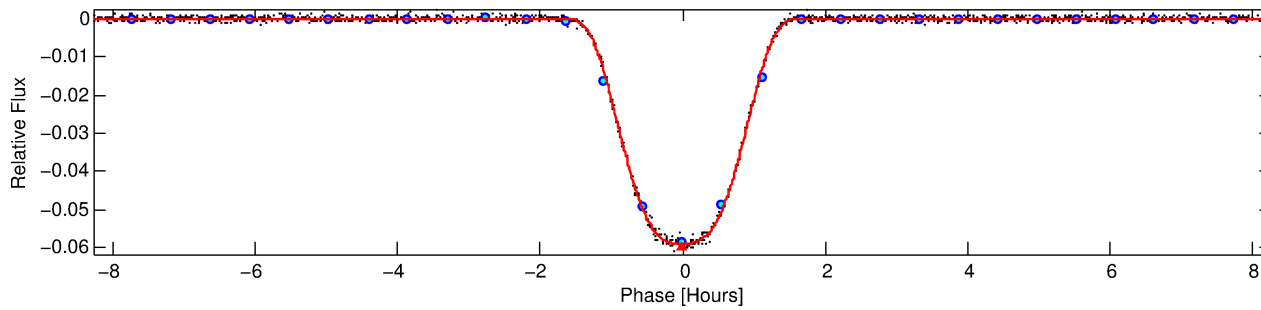
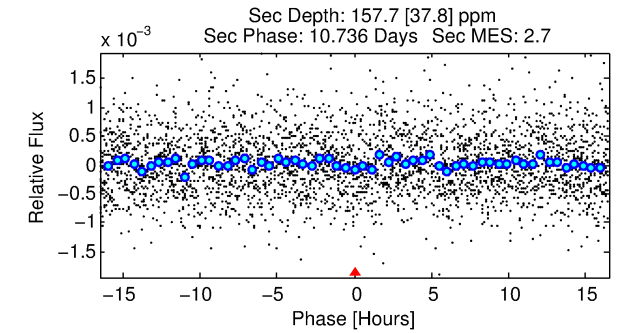
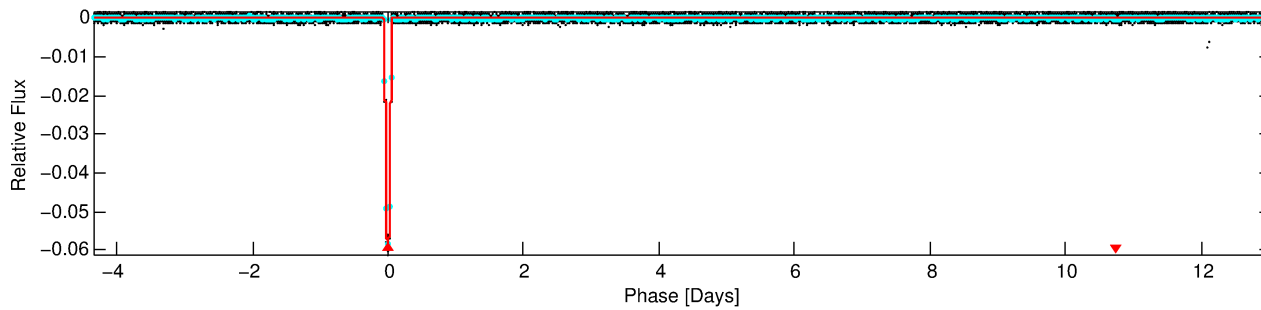
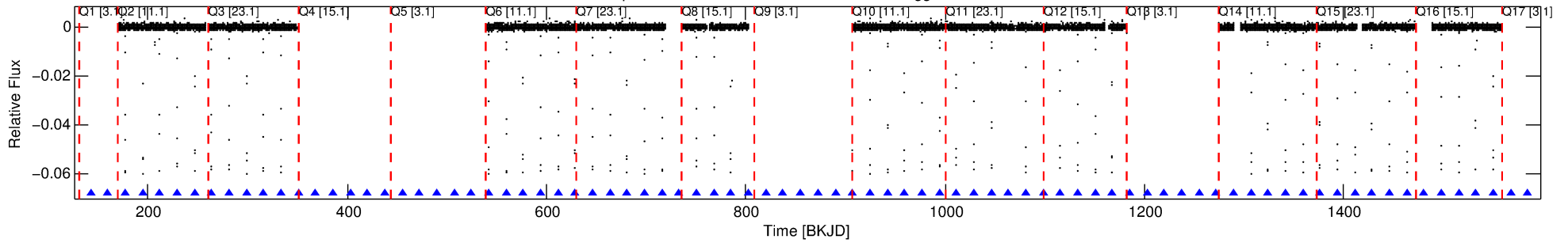
Ephemeris Match Information For 006842345-01

No Significant Match Found

DV One-Page Summary

KIC: 6842345 Candidate: 1 of 1 Period: 17.382 d
KOI: K06774.01 Corr: 0.997

Kp: 15.57 R*: 1.02 Rs Teff: 6116.0 K Logg: 4.41 Fe/H: -0.300



DV Fit Results:

Period = 17.38162 [0.00000] d
Epoch = 142.4068 [0.0001] BKJD
Rp/R* = 0.2401 [0.0003]
a/R* = 49.85 [0.12]
b = 0.68 [0.00]
Seff = 77.22 [29.33]
Teff = 756 [72] K
Rp = 26.73 [7.76] Re
a = 0.1300 [0.0318] AU
Ag = 2.05 [0.88] [1.19σ]
Teffp = 1399 [96] K [5.38σ]

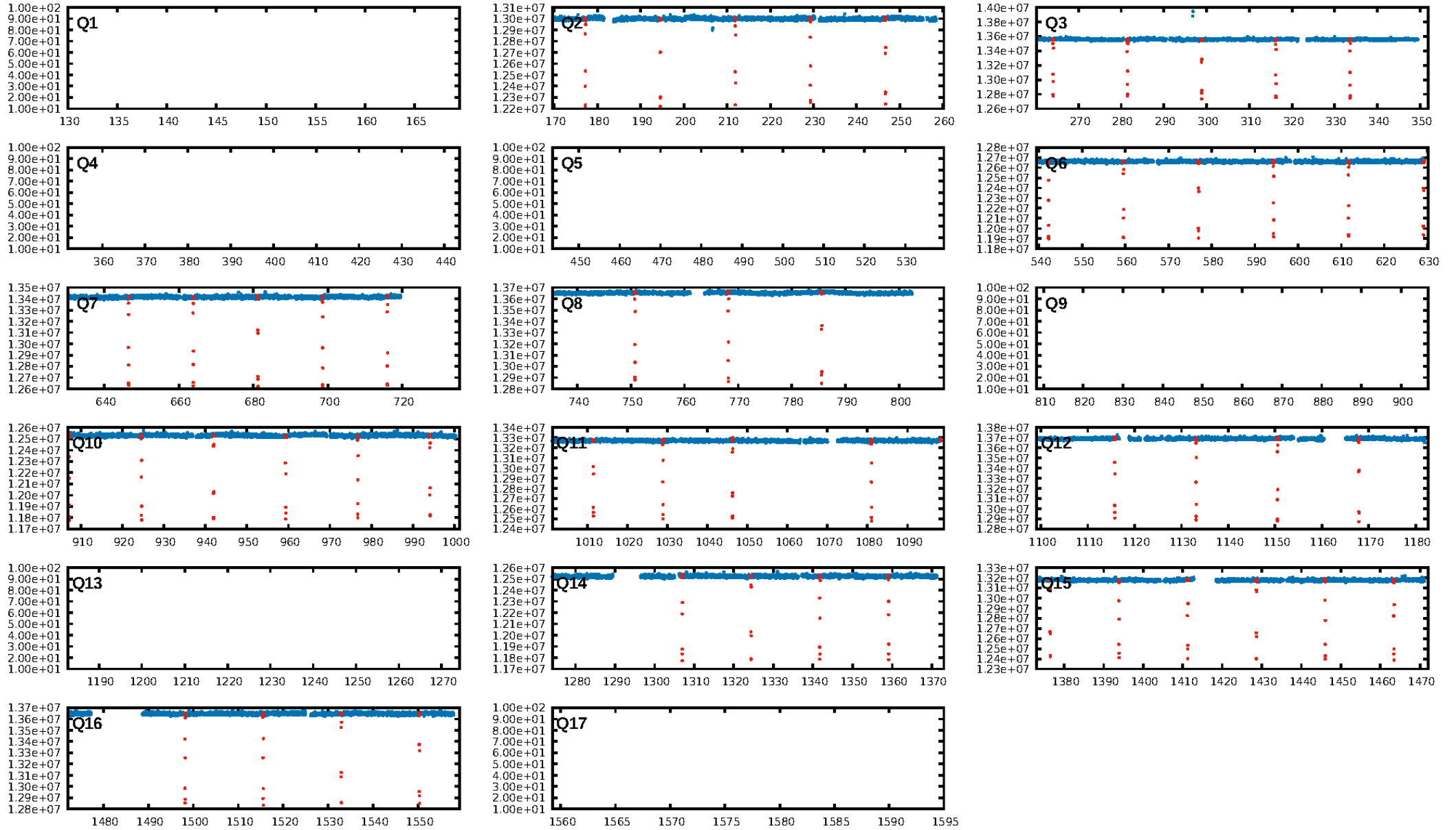
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [52/52]
GhostDiagnostic-chr: 4.064
Centroid-sig: 0.0%
Centroid-so: 0.248 arcsec [22.08σ]
OotOffset-rm: 0.012 arcsec [0.17σ]
KicOffset-rm: 0.048 arcsec [0.68σ]
OotOffset-st: 4/4/3/0 [11]
KicOffset-st: 4/4/3/0 [11]
DiffImageQuality-fgm: 1.00 [11/11]
DiffImageOverlap-fno: 1.00 [11/11]

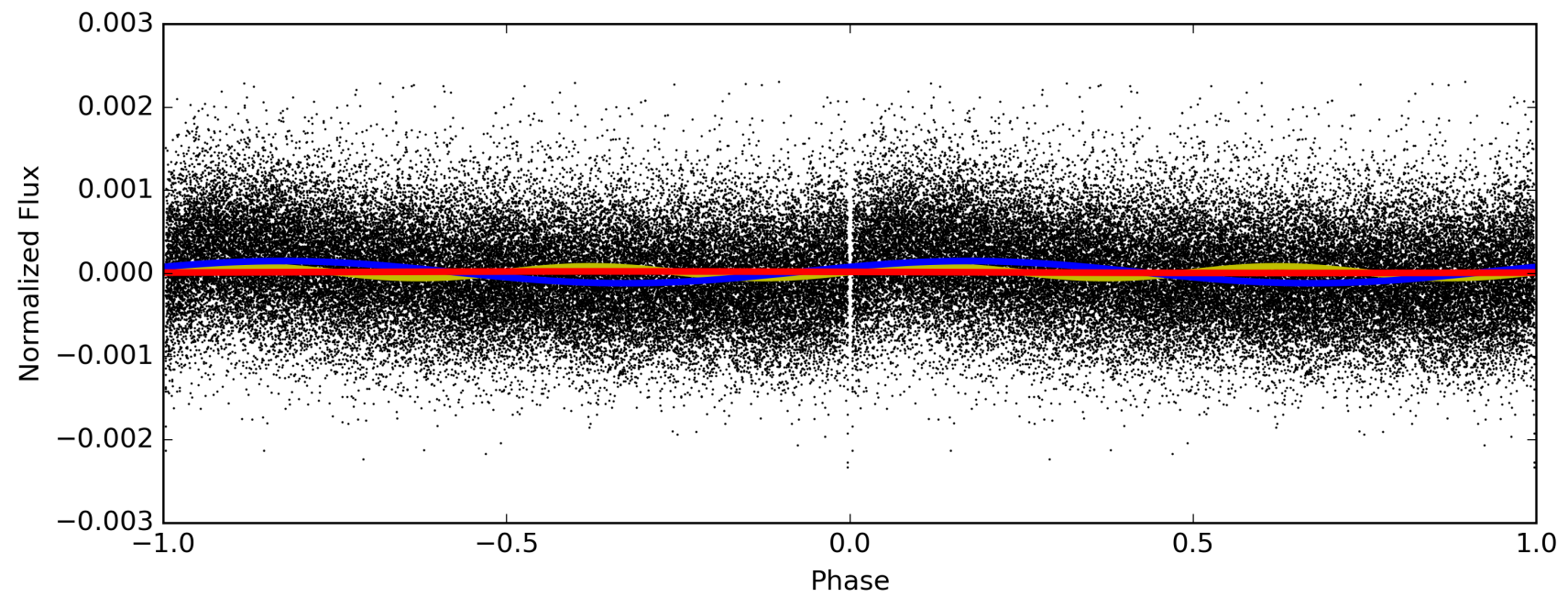
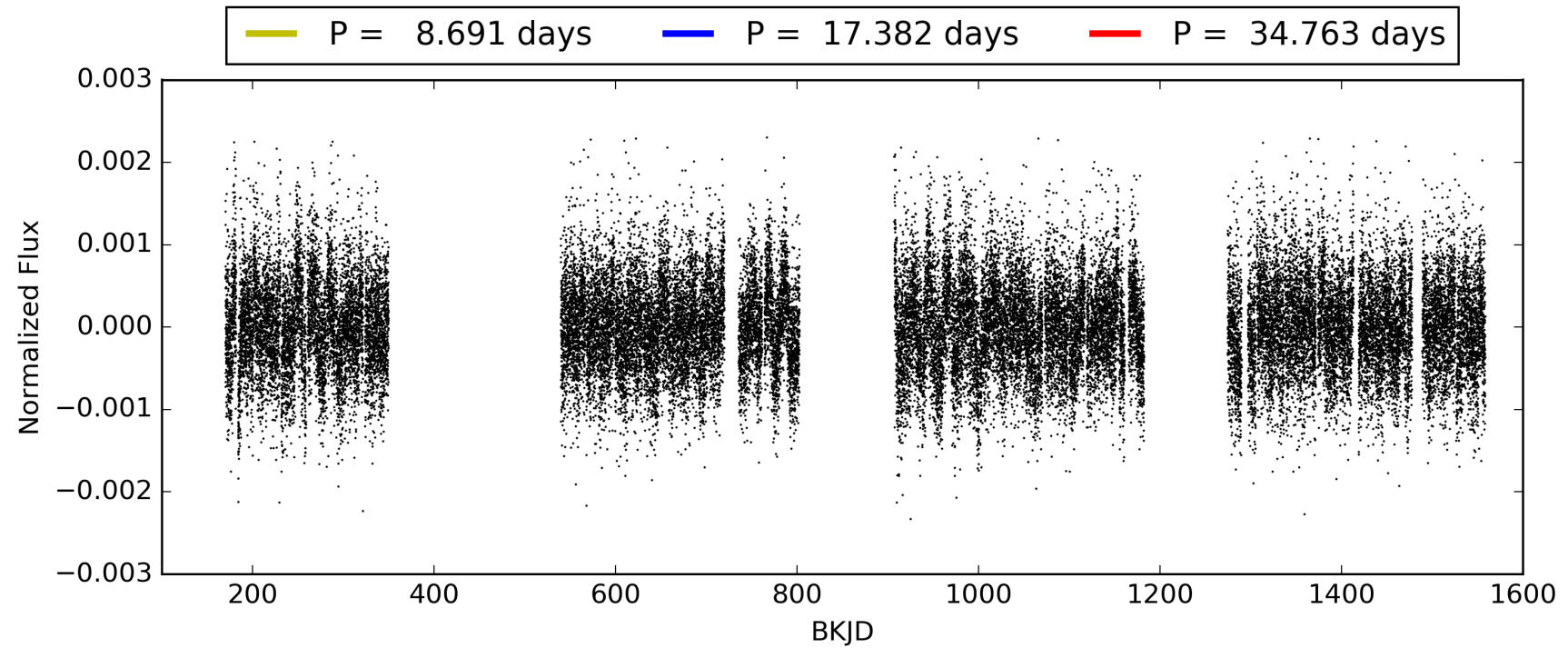
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:19:00 Z

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

TCE 006842345-01, PDC Light Curves

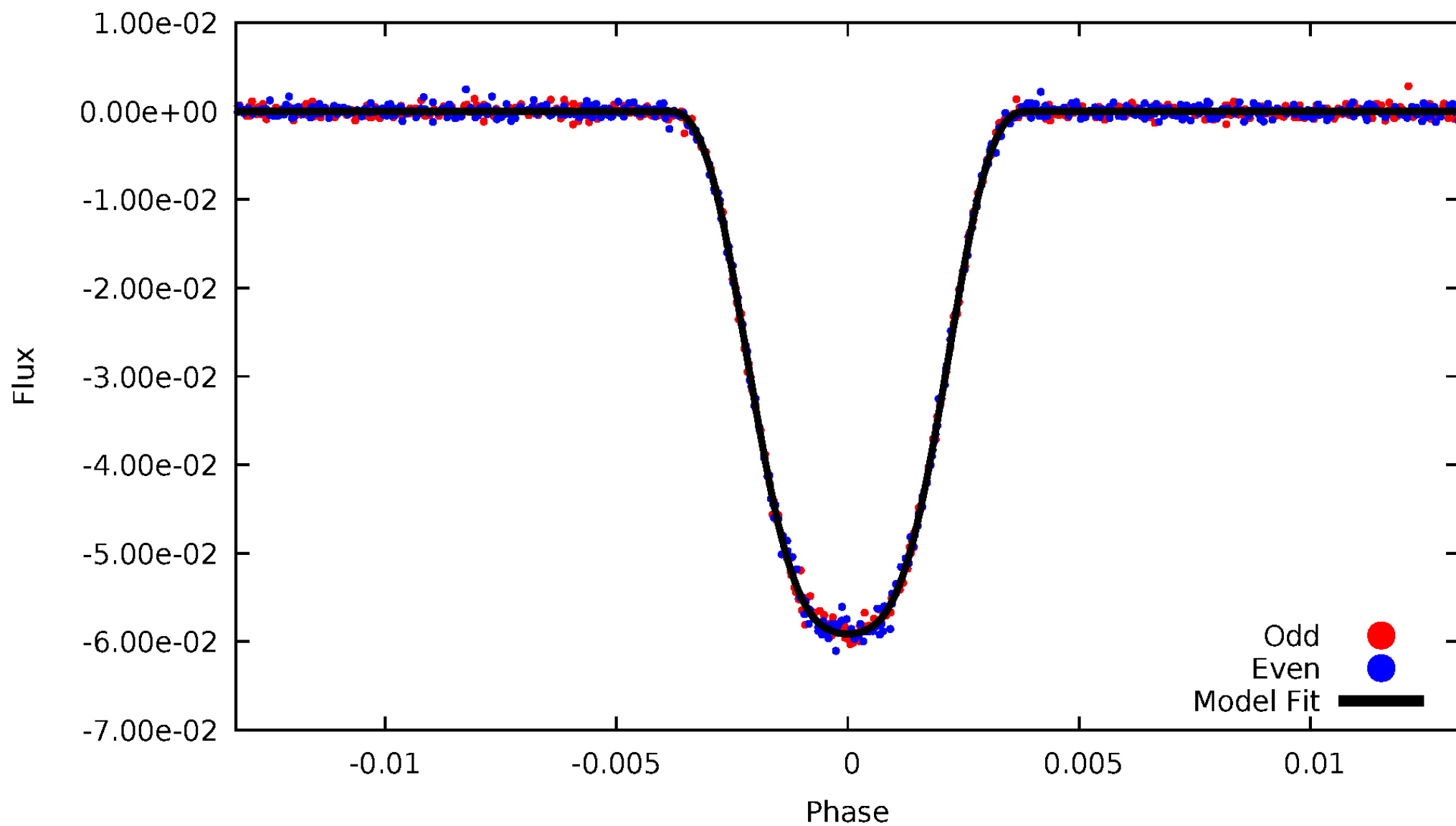


TCE 006842345-01



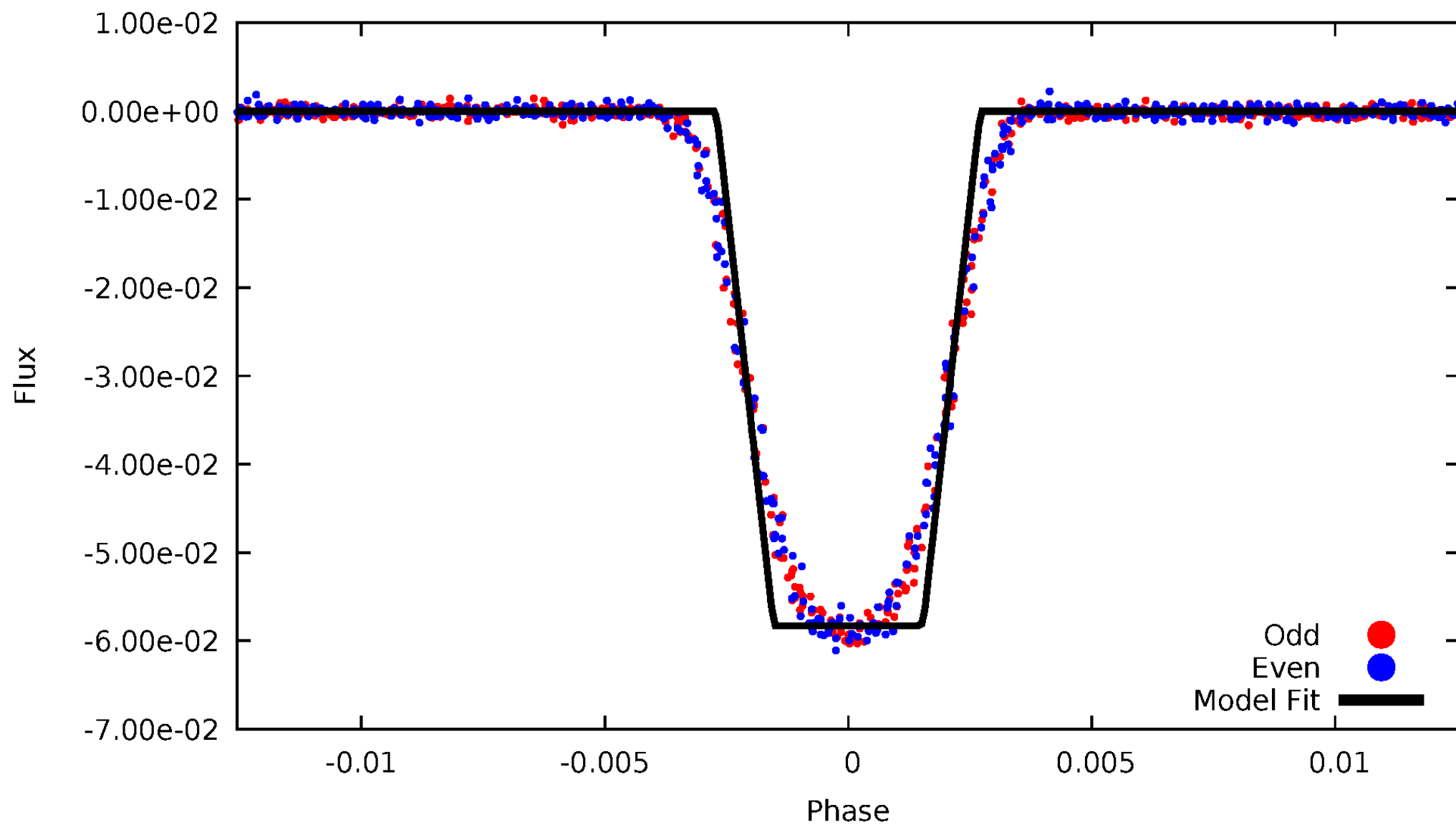
DV Odd/Even

TCE 006842345-01



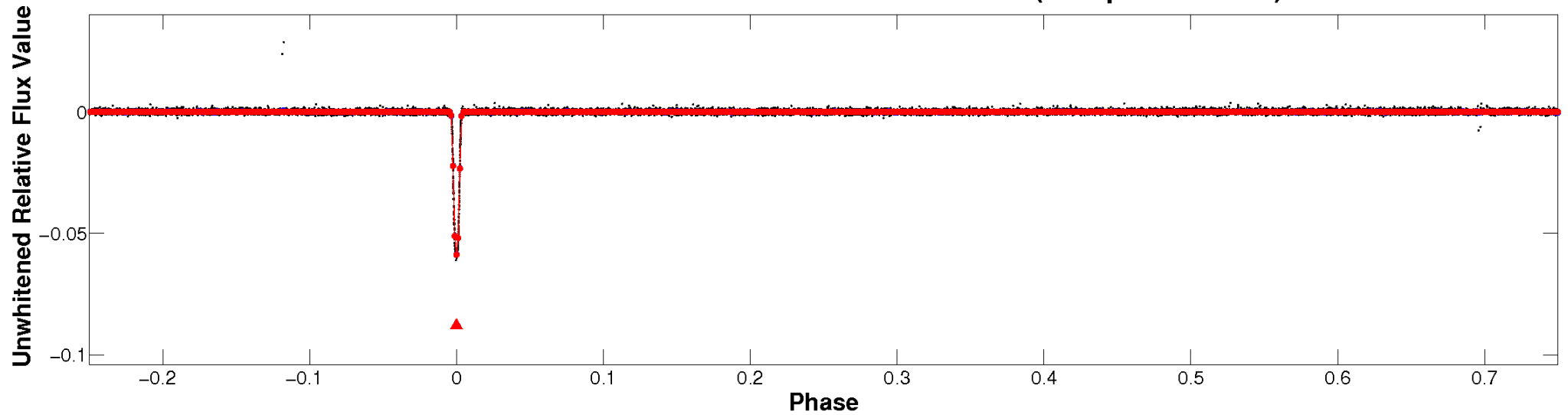
ALT Odd/Even

TCE 006842345-01

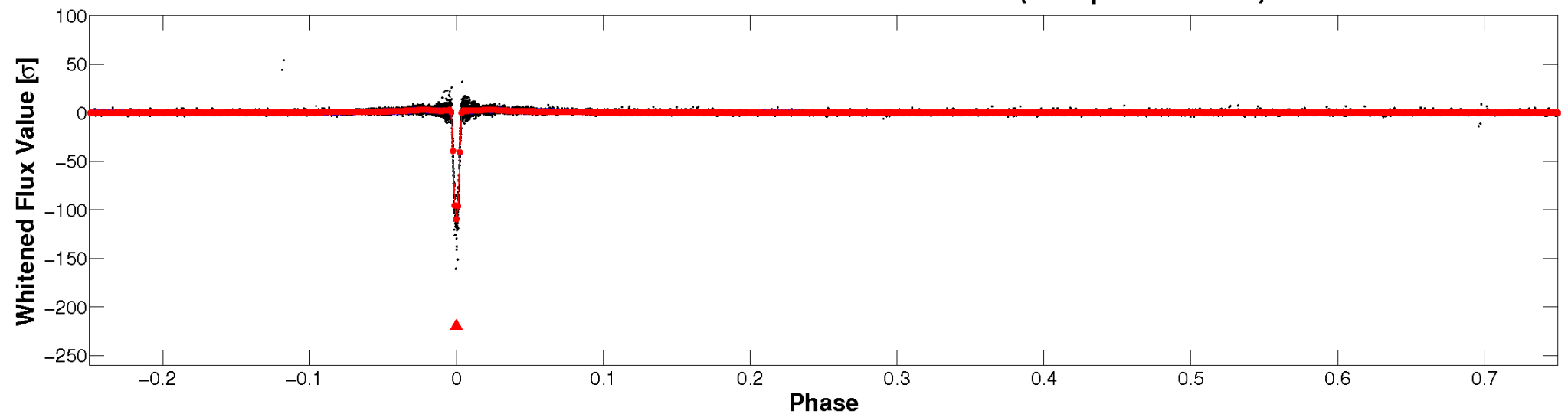


Non-Whitened Vs. Whitened Light Curve

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

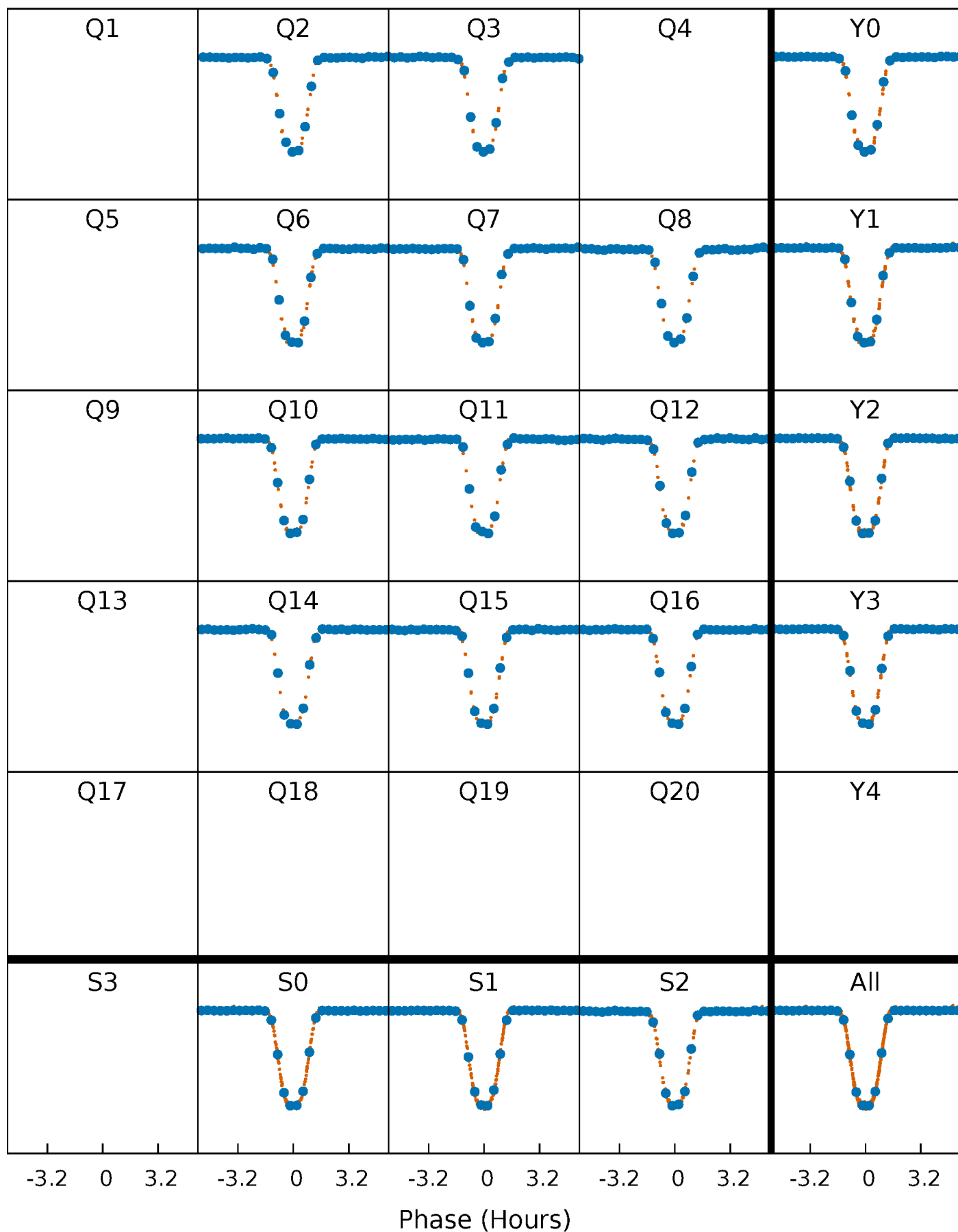


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



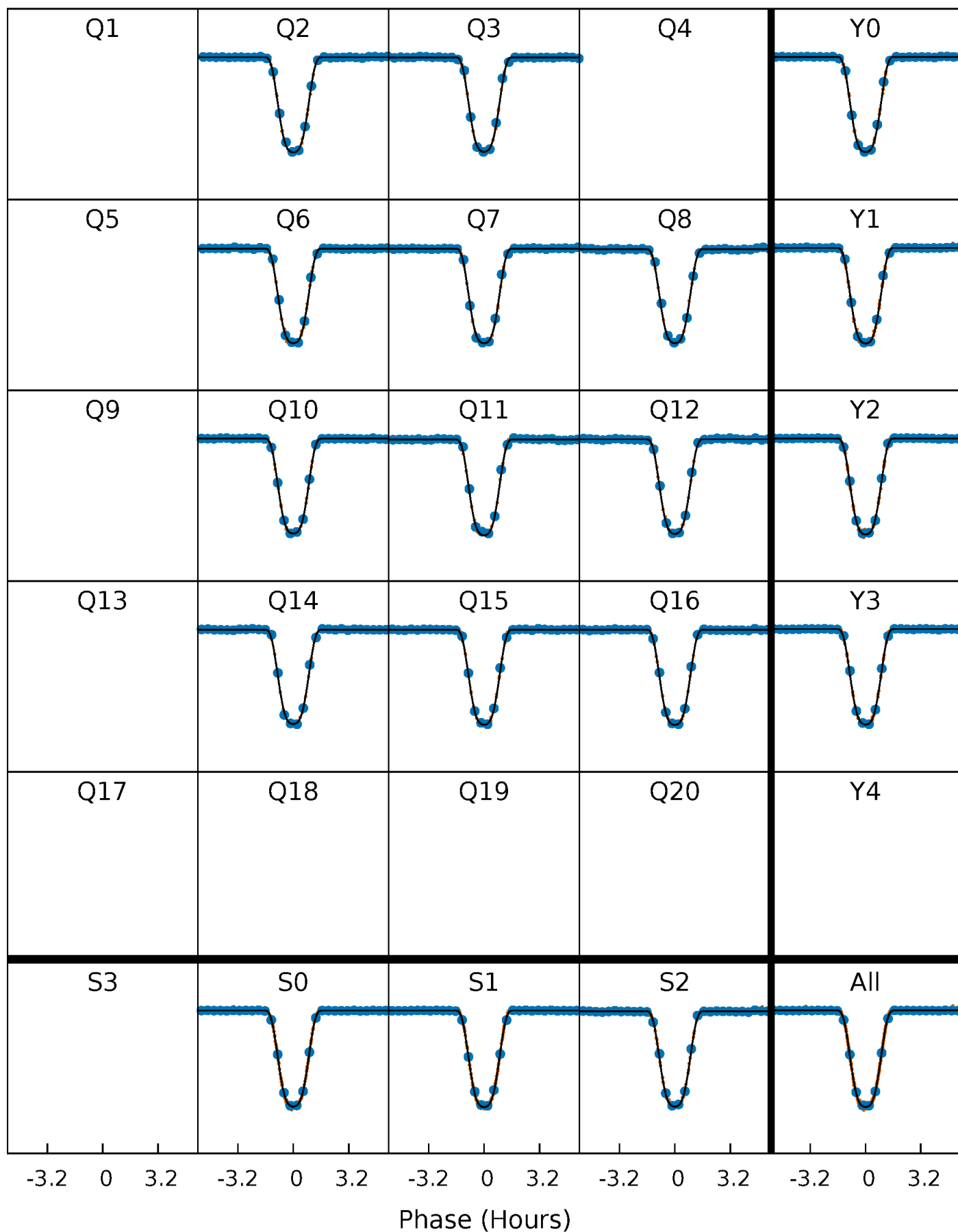
PDC Quarter-Phased Transit Curves

TCE 006842345-01 P= 17.381623 Days $T_0=142.406764$ (BKJD)



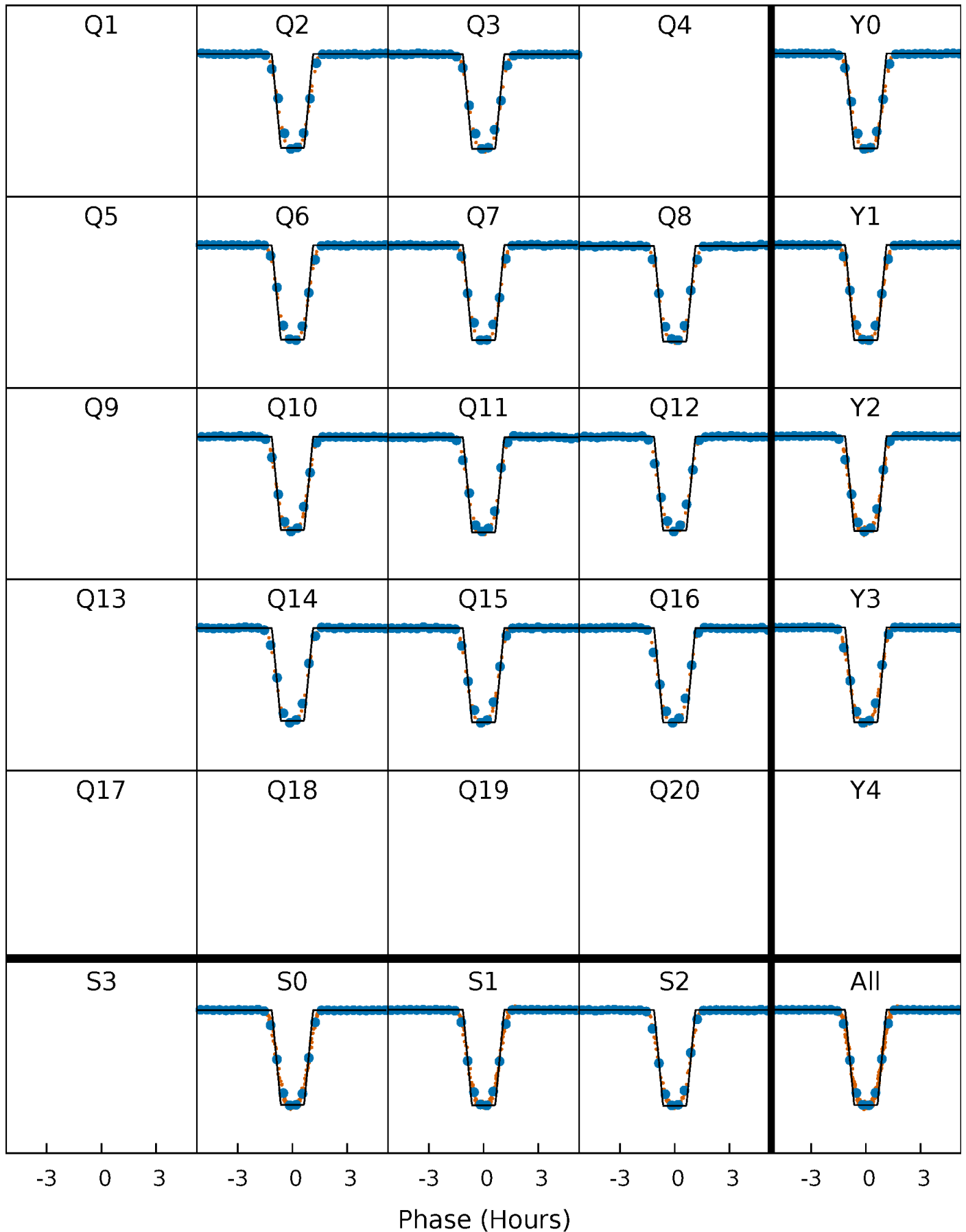
DV Quarter-Phased Transit Curves

TCE 006842345-01 P= 17.381623 Days $T_0=142.406764$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

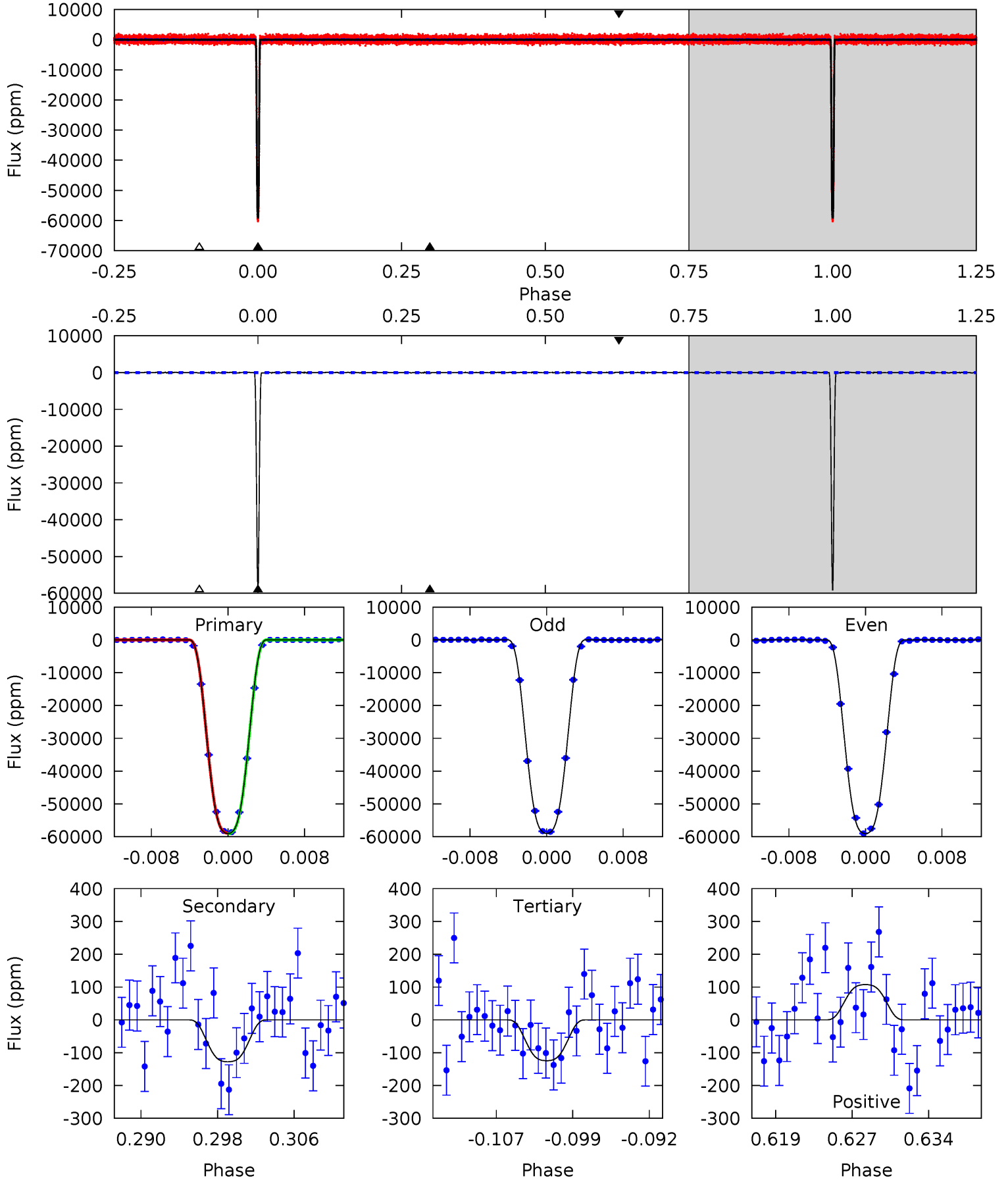
TCE 006842345-01 P= 17.381690 Days $T_0=142.403874$ (BKJD)



DV Model-Shift Uniqueness Test

006842345-01, P = 17.381623 Days, E = 142.406764 Days

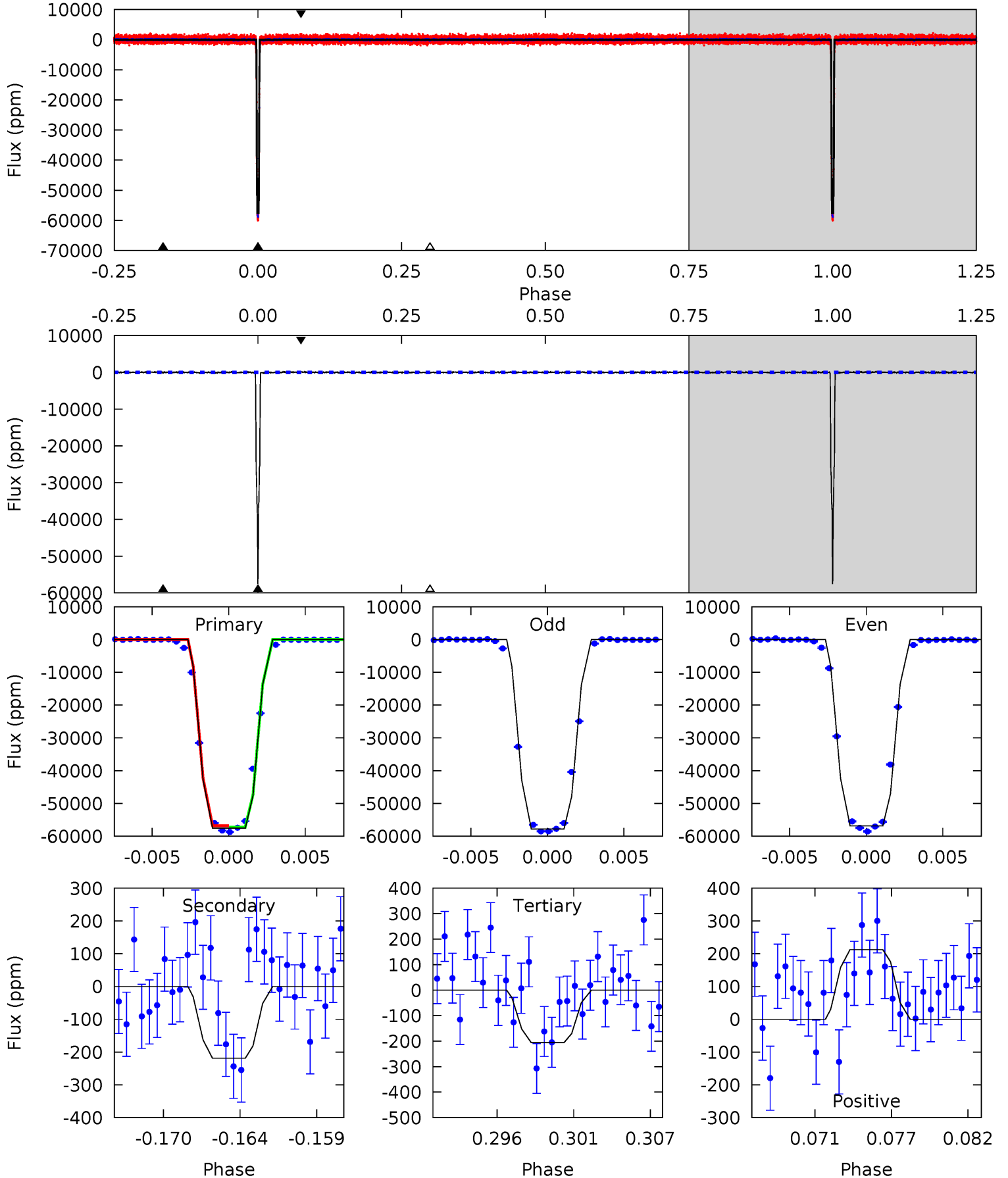
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2138	4.63	4.51	3.89	5.08	2.67	1.45	2133	2134	0.12	0.74	0.98	1.00	0.00	3.50



Alt Model-Shift Uniqueness Test

006842345-01, P = 17.381690 Days, E = 142.403874 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1224	4.65	4.38	4.51	5.14	2.78	1.19	1219	1219	0.28	0.14	9.44	1.00	0.00	4.38



Stellar Parameters For KIC 006842345

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6116^{+183}_{-201}	$4.407^{+0.090}_{-0.195}$	$-0.300^{+0.300}_{-0.300}$	$1.020^{+0.296}_{-0.159}$	$0.969^{+0.141}_{-0.115}$	$1.285^{+0.592}_{-0.643}$
	+3%/-3%	+2%/-4%	+100%/-100%	+29%/-16%	+15%/-12%	+46%/-50%
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 006842345-01 / KOI 6774.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-128 ± 28	$27.54^{+4.22}_{-2.60}$	1071^{+80}_{-55}	2199^{+75}_{-81}	$1.498^{+0.511}_{-0.441}$
Alt.	-219 ± 47	$27.45^{+4.24}_{-2.31}$	1071^{+73}_{-58}	2361^{+75}_{-83}	$2.566^{+0.804}_{-0.726}$

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 $A_{obs} \gg 1.0$

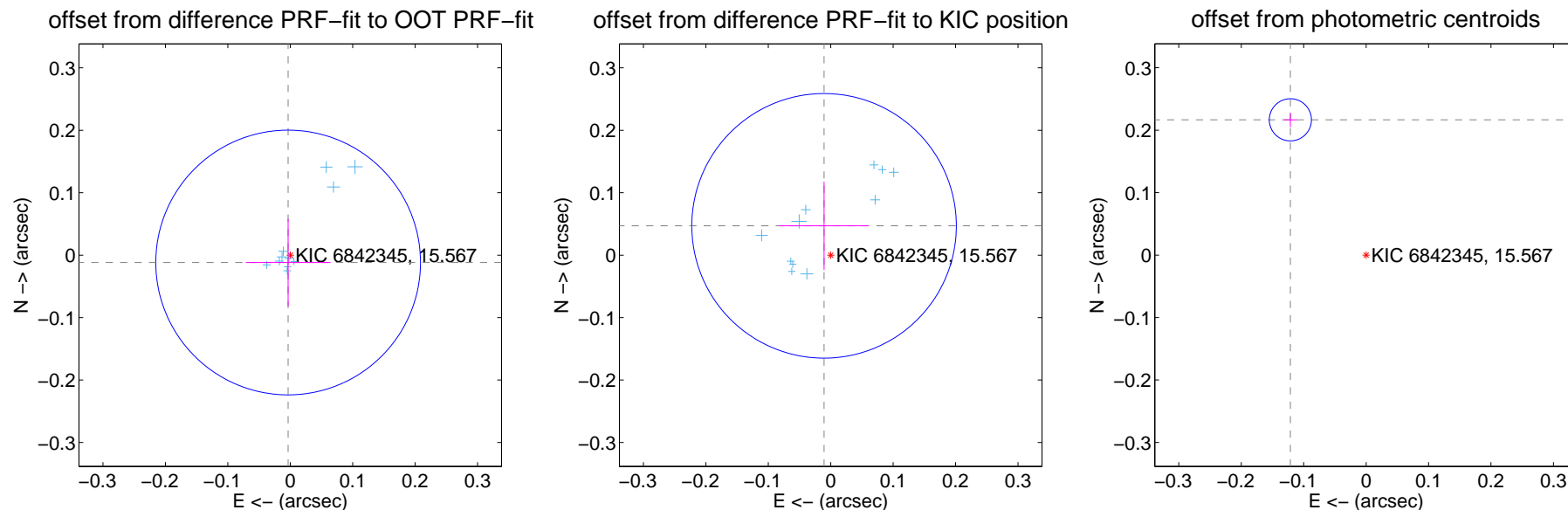
DV Centroid Data

Supplemental centroid analysis for 006842345-01. Kepler magnitude: 15.57. Transit SNR 1187.90

There are 11 quarters with good PRF difference image offsets

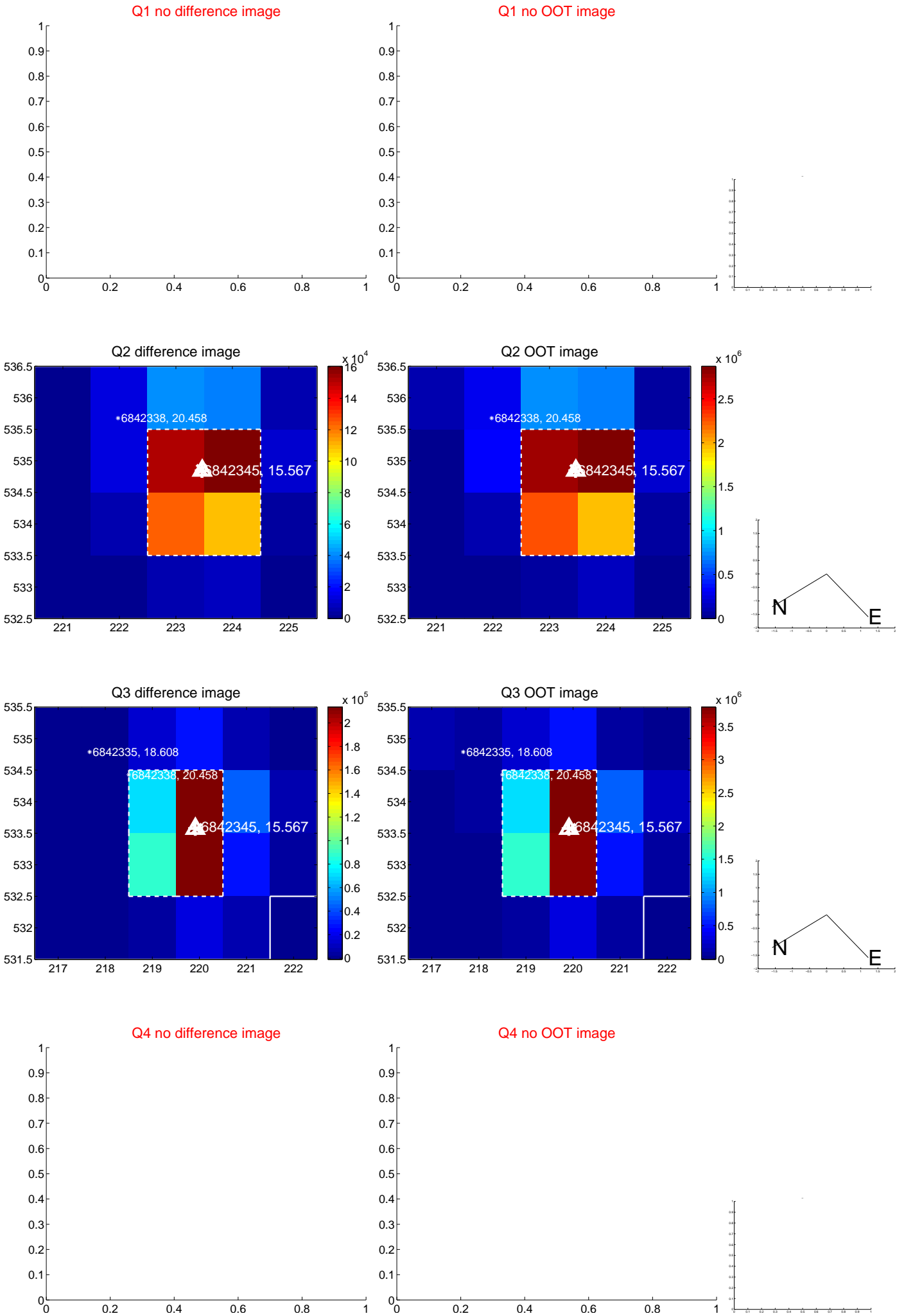
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.012 ± 0.071	0.17	0.003 ± 0.068	-0.012 ± 0.070
PRF-fit source offset from KIC position	0.048 ± 0.071	0.68	0.011 ± 0.071	0.047 ± 0.071
photometric centroid source offset	0.25 ± 0.01	22.08	0.12 ± 0.01	0.22 ± 0.01

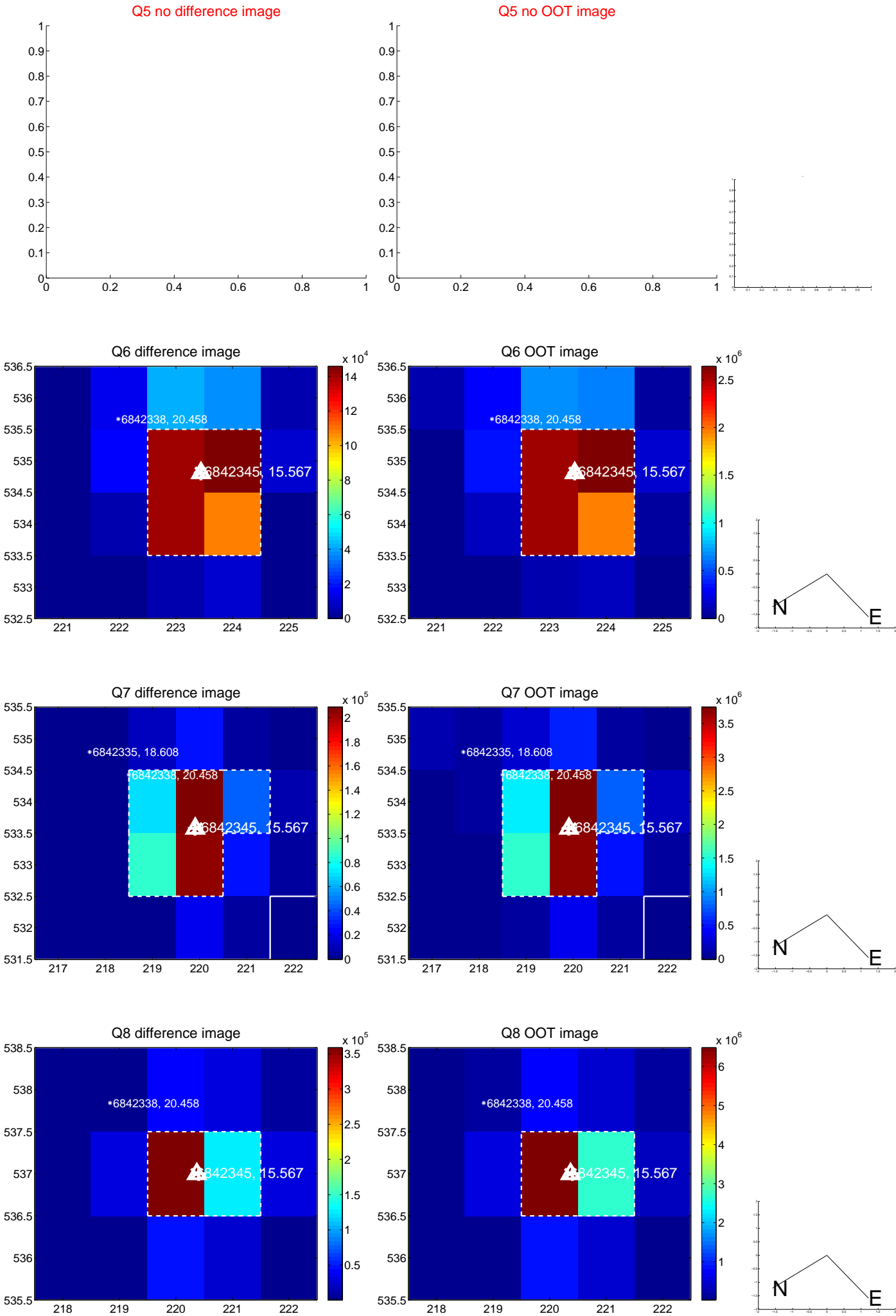


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

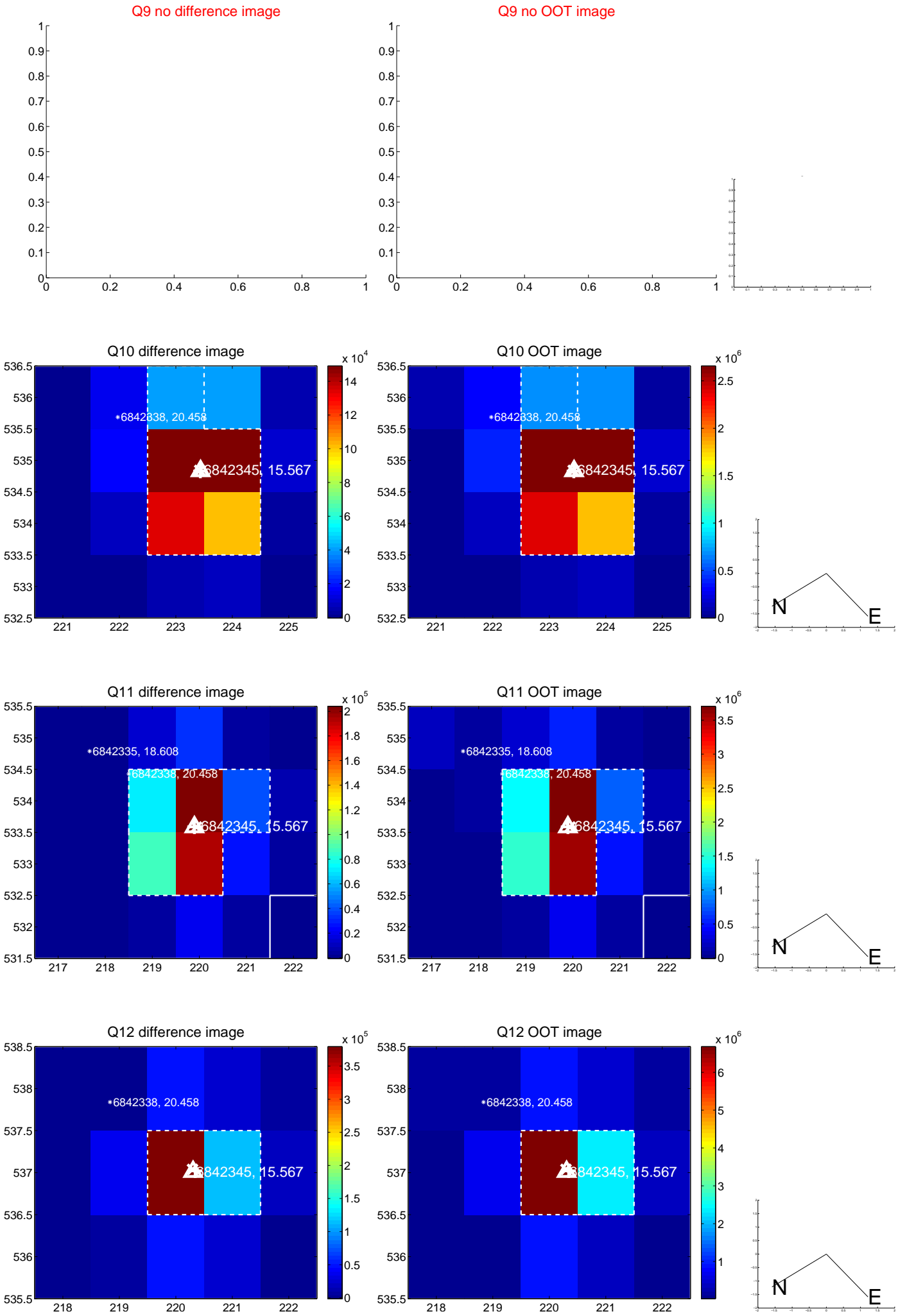
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



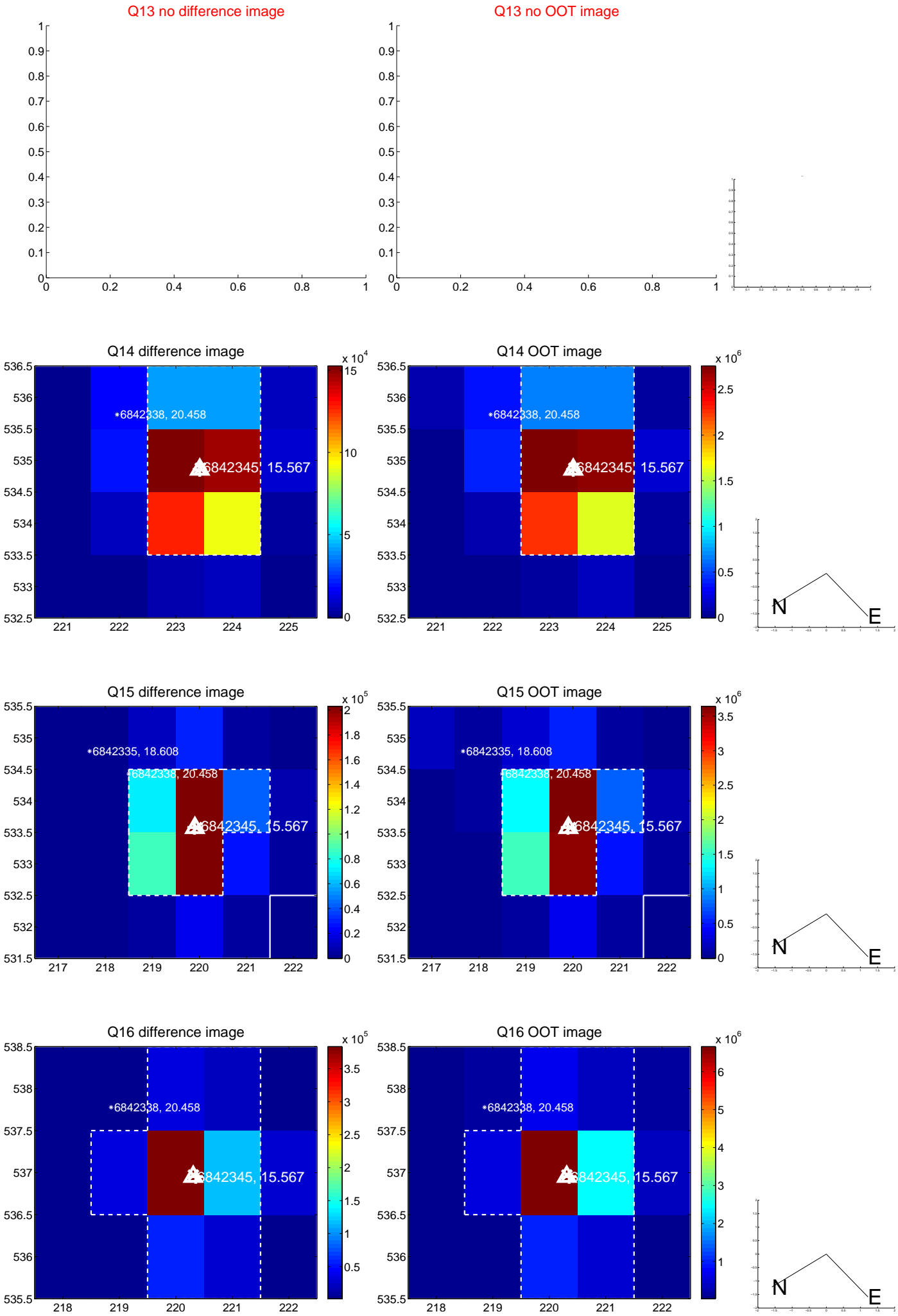
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



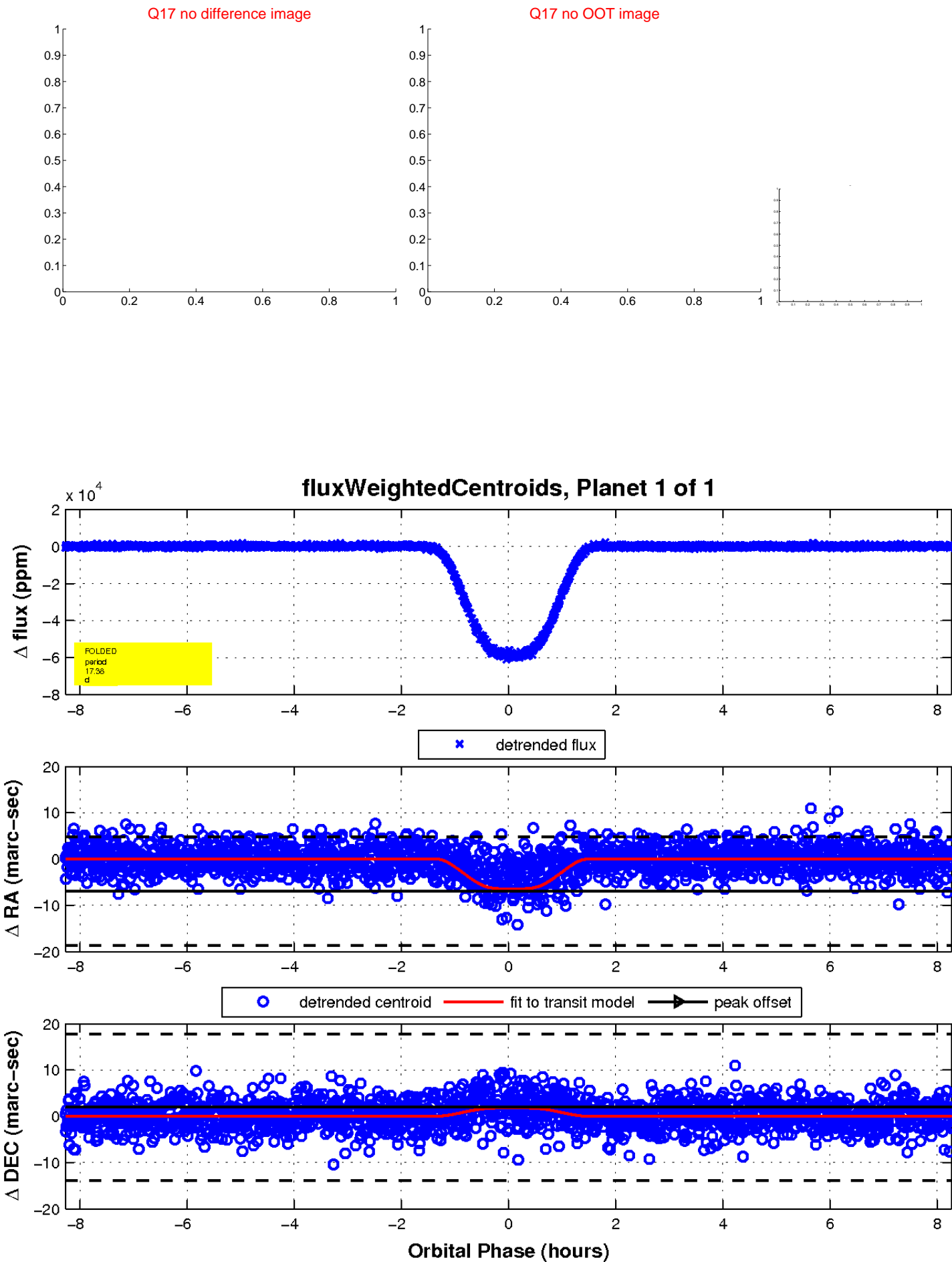
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

