

KIC 008352420

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})
008352420-01	OBS	No	1.334648	131.855869	66.8	4.636	12.8	12.8	1.30	7160	1.24	6166.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008352420-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

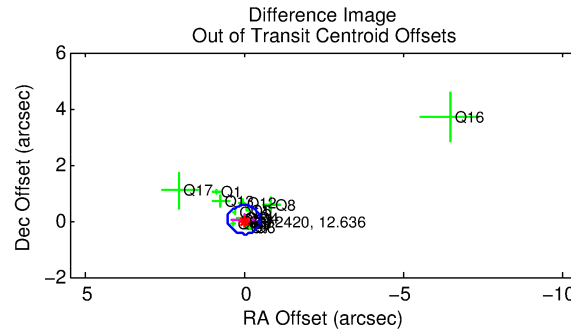
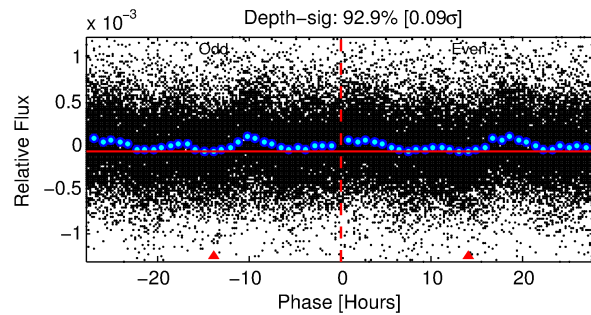
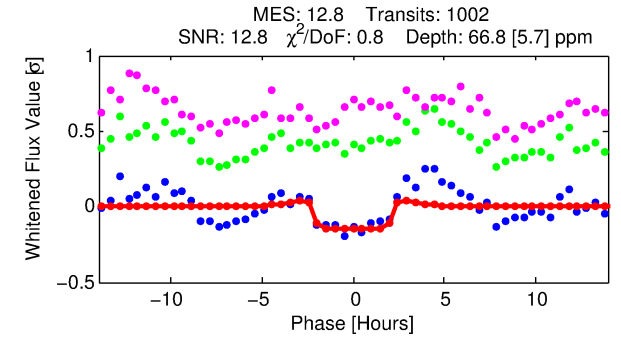
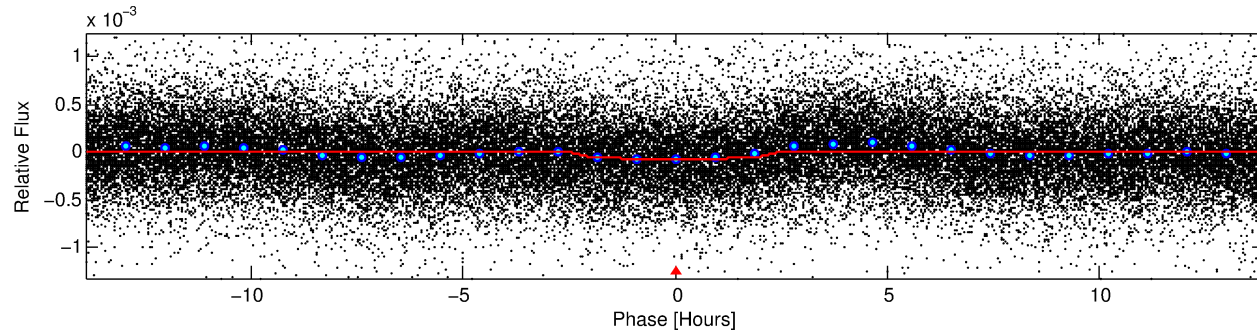
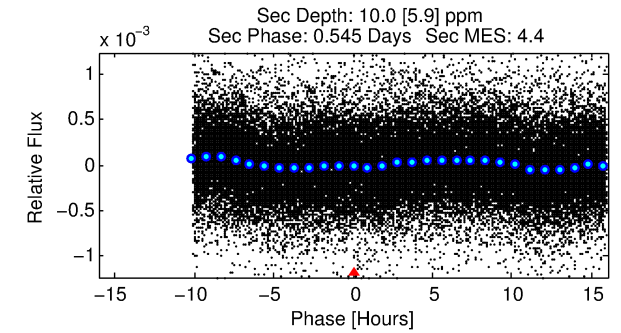
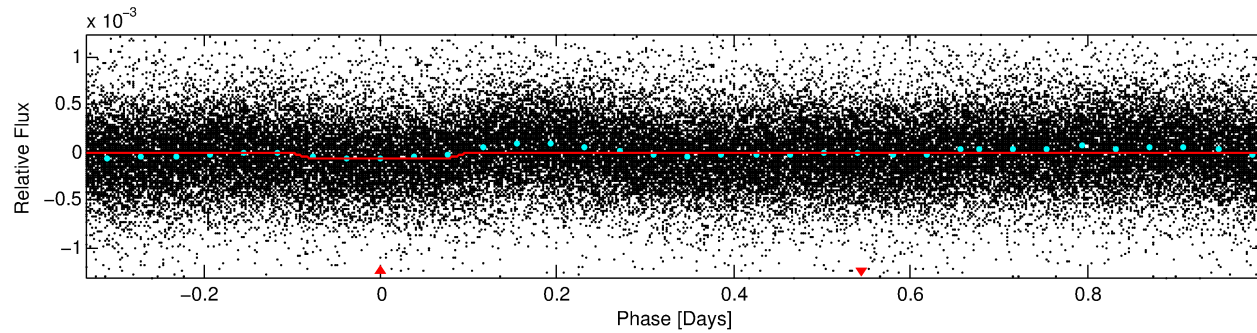
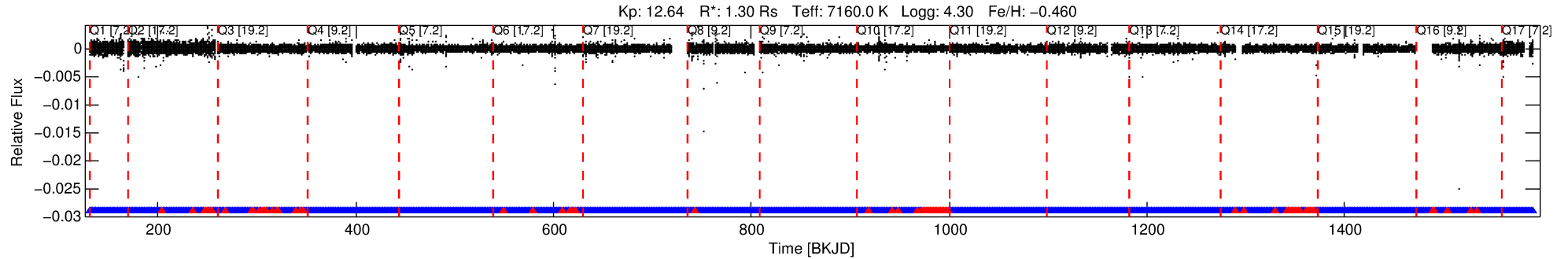
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008352420-01

No Significant Match Found

DV One-Page Summary

KIC: 8352420 Candidate: 1 of 1 Period: 1.335 d



DV Fit Results:

Period = 1.33465 [0.00001] d
Epoch = 131.8559 [0.0027] BKJD
Rp/R* = 0.0087 [0.0017]
a/R* = 1.37 [0.78]
b = 0.90 [0.26]
Seff = 6166.24 [2343.64]
Teq = 2260 [215] K
Rp = 1.24 [0.46] Re
a = 0.0255 [0.0065] AU
Ag = 2.34 [1.85] [0.72σ]
Teff = 4321 [775] K [2.56σ]

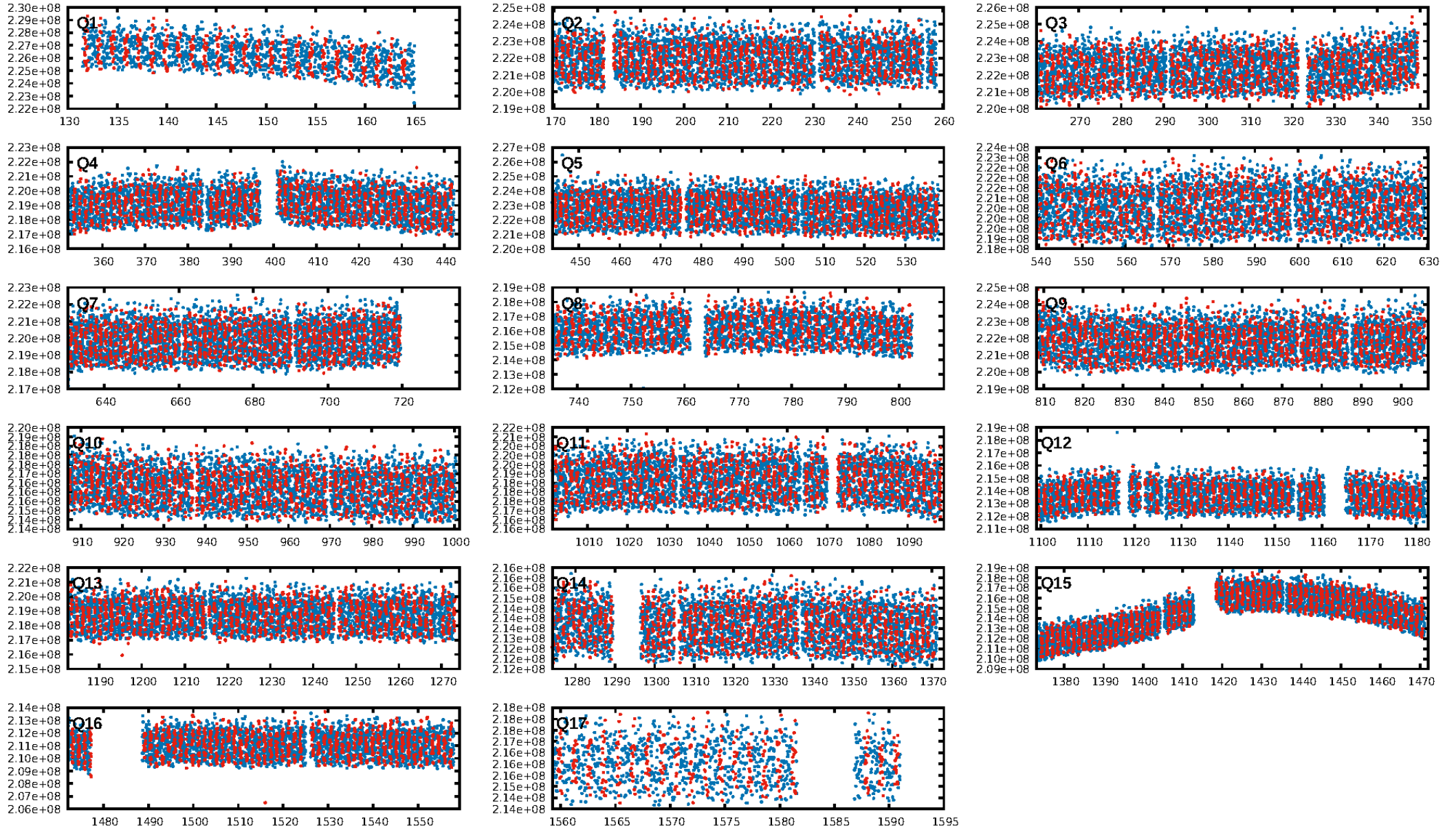
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.27e-29
RollingBand-fgt: 0.91 [875/957]
GhostDiagnostic-chr: 1.195
Centroid-sig: 0.1%
Centroid-so: 0.332 arcsec [1.84σ]
OotOffset-rm: 0.048 arcsec [0.28σ]
KicOffset-rm: 0.051 arcsec [0.20σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.81 [13/16]
DiffImageOverlap-fno: 1.00 [17/17]

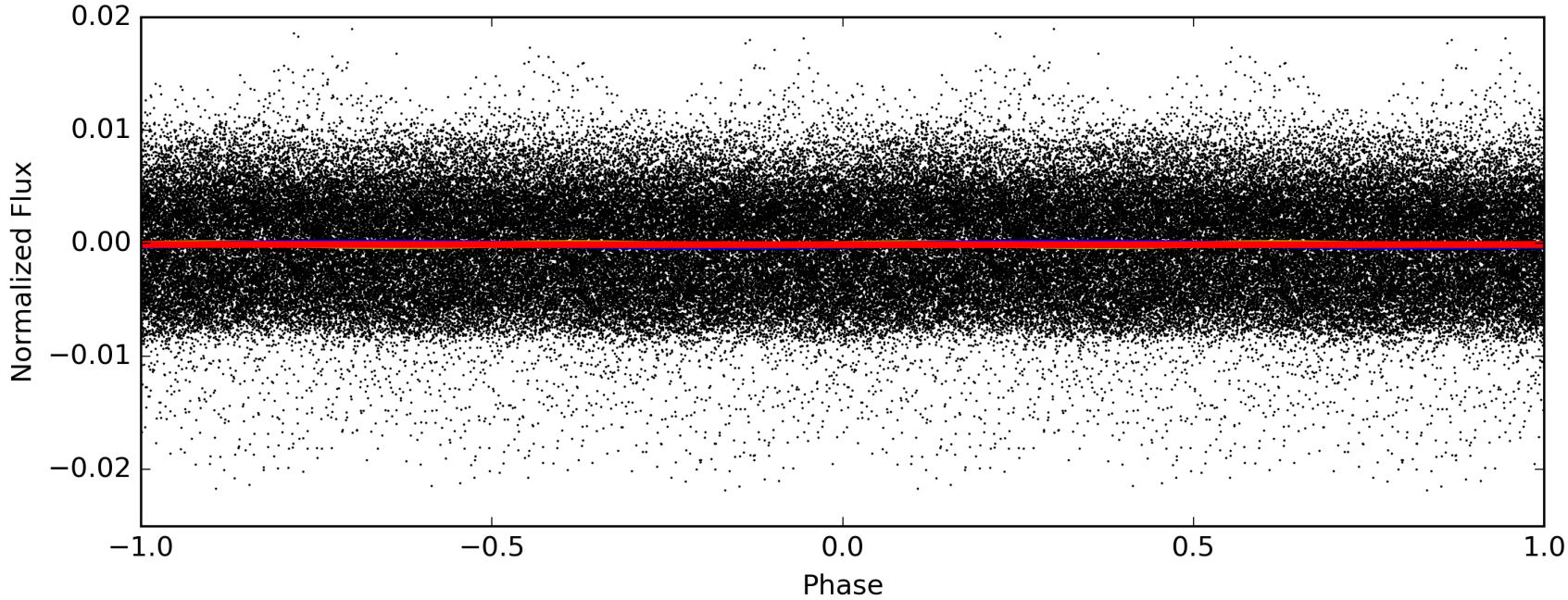
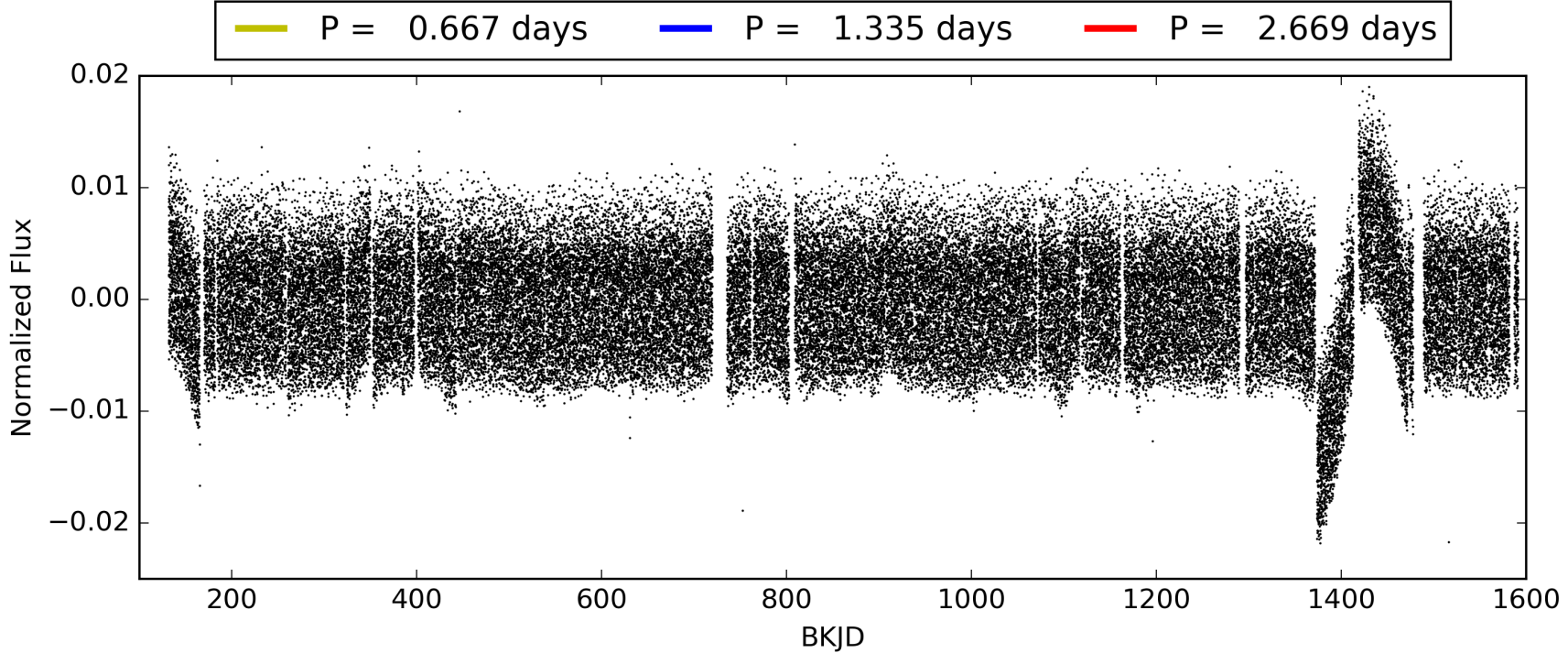
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:32:28 Z

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

TCE 008352420-01, PDC Light Curves

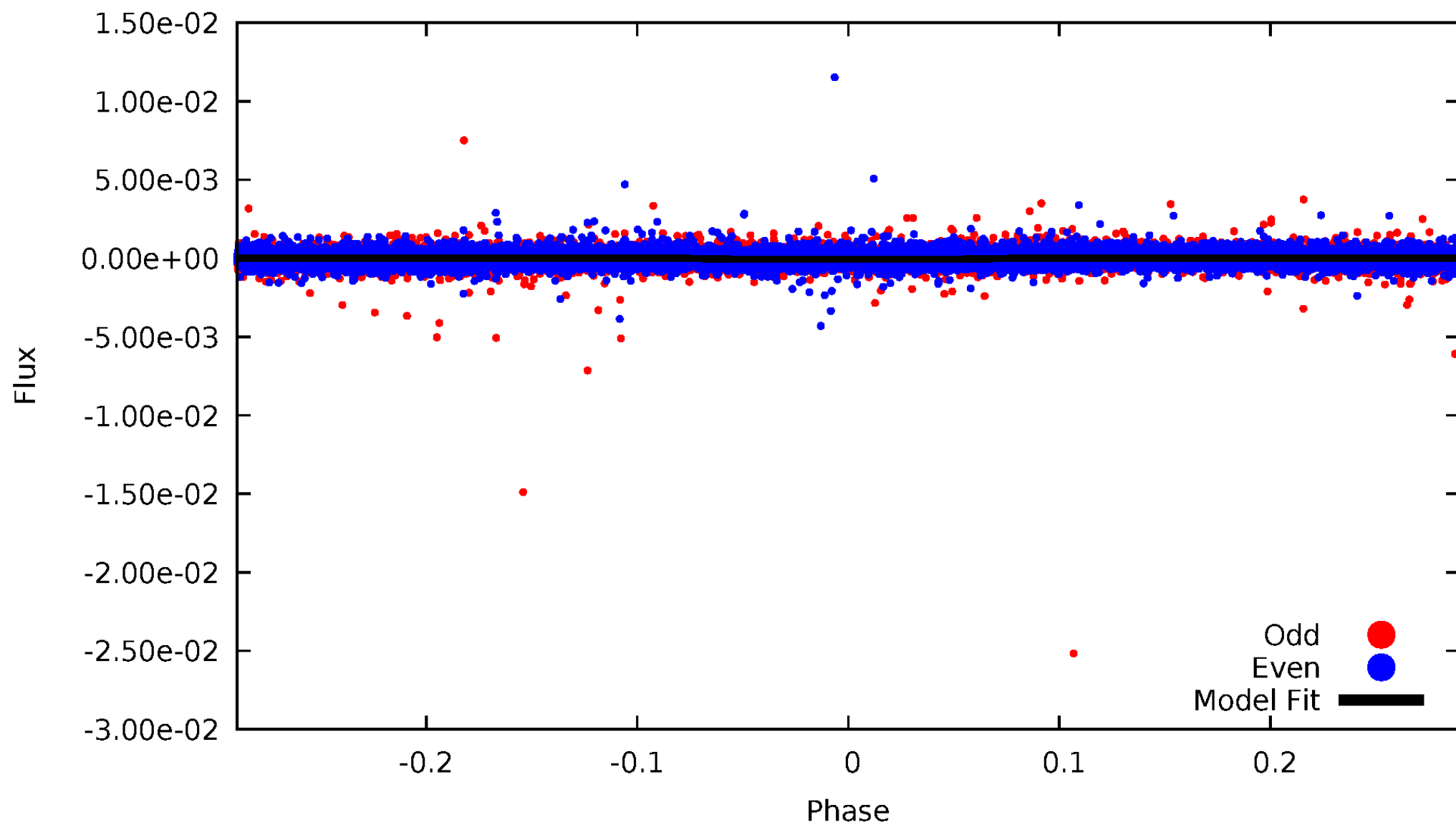


TCE 008352420-01



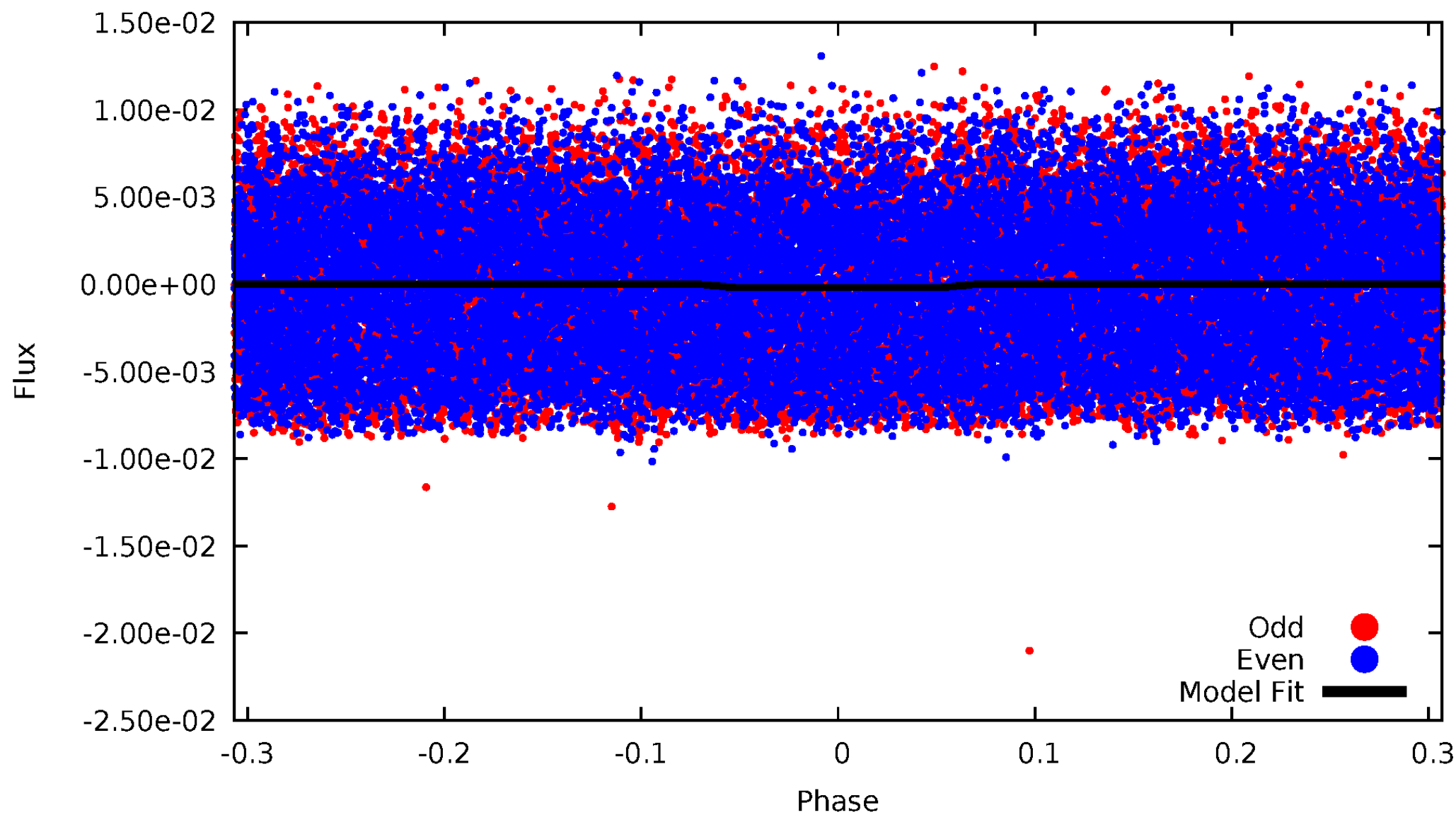
DV Odd/Even

TCE 008352420-01



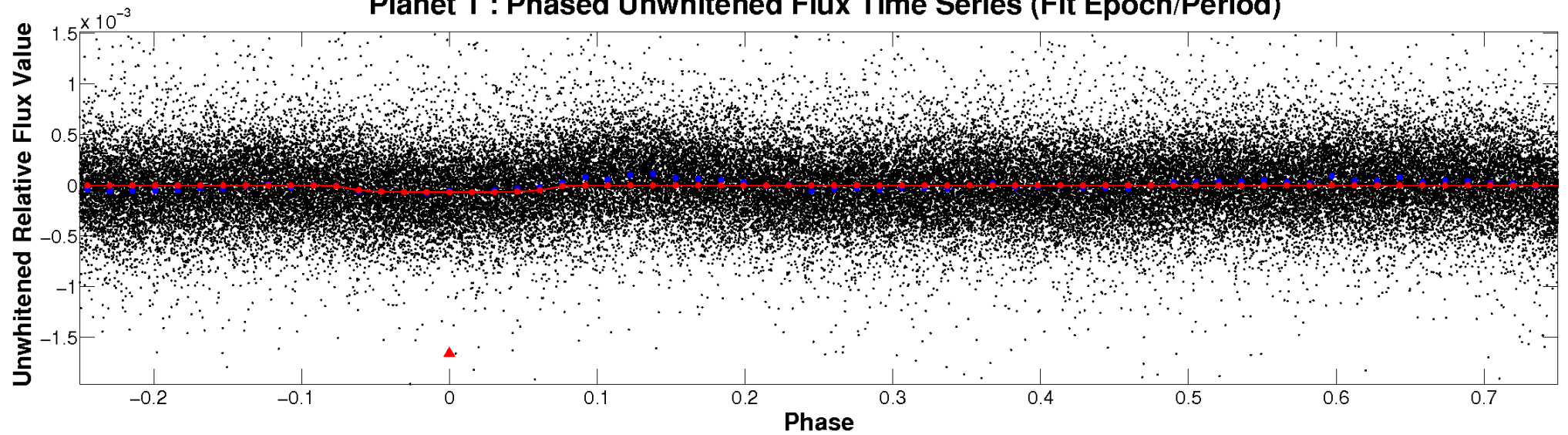
ALT Odd/Even

TCE 008352420-01

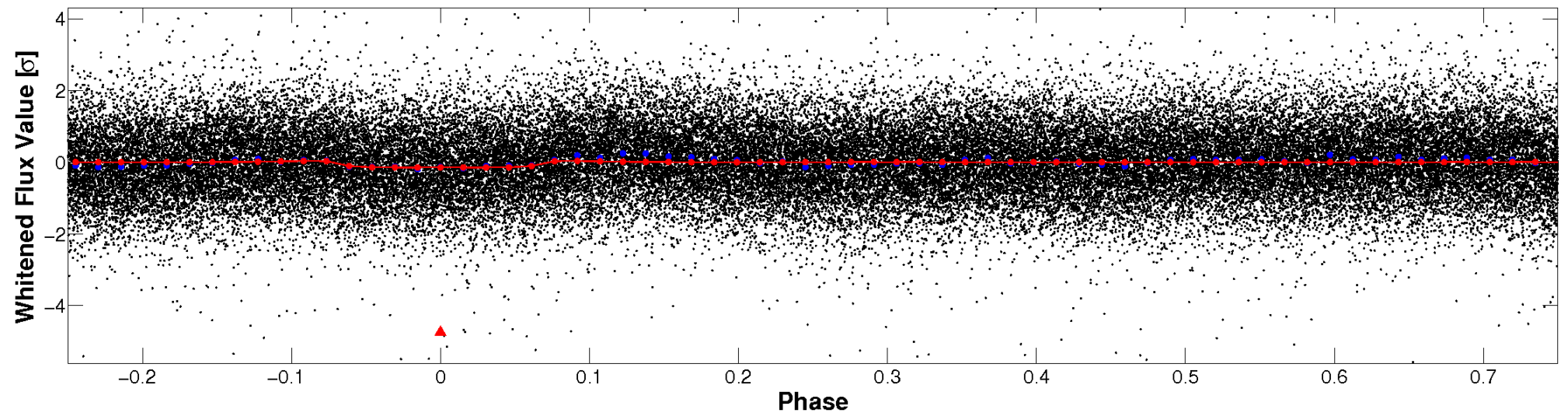


Non-Whitened Vs. Whitened Light Curve

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

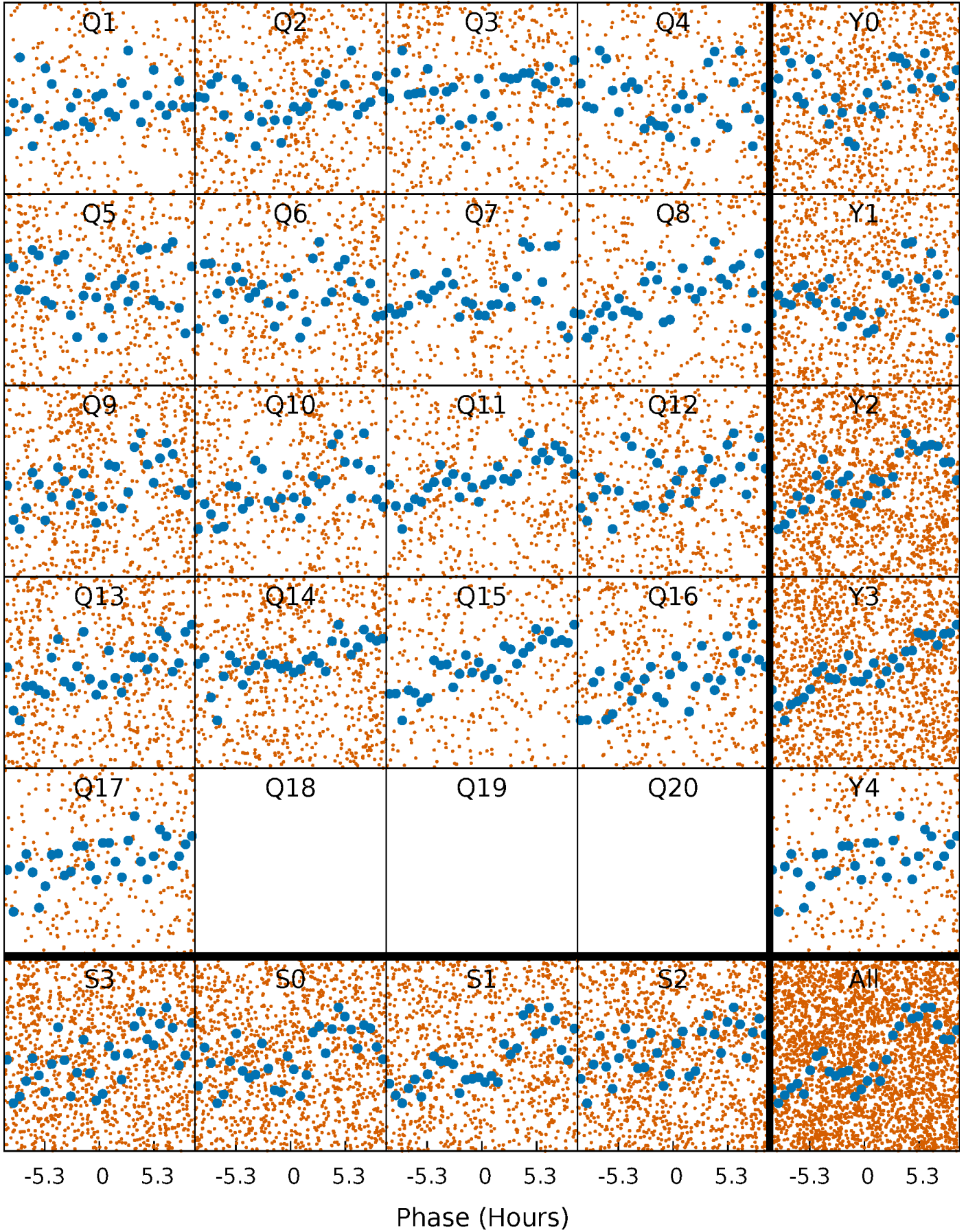


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



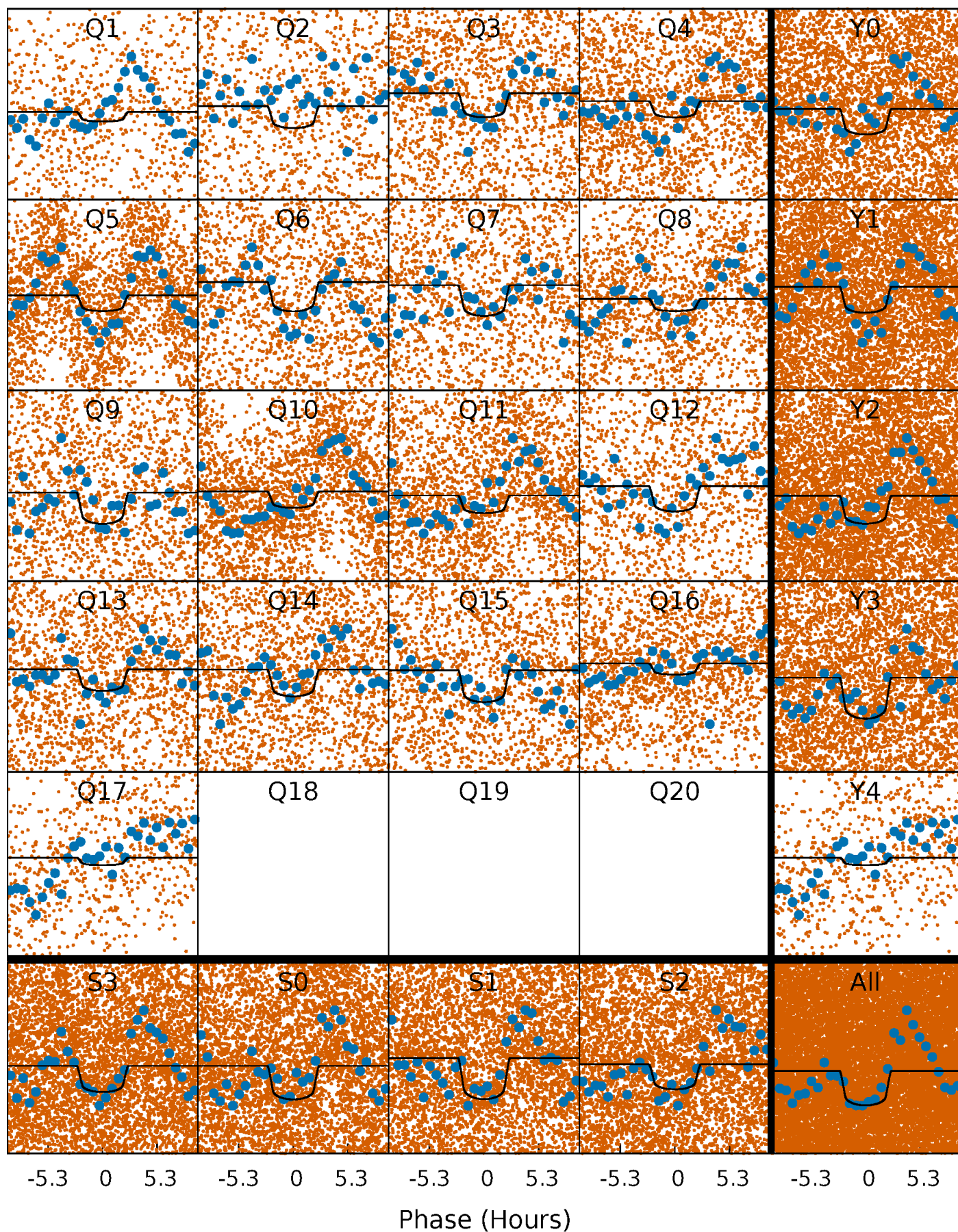
PDC Quarter-Phased Transit Curves

TCE 008352420-01 P= 1.334648 Days $T_0=131.855870$ (BKJD)



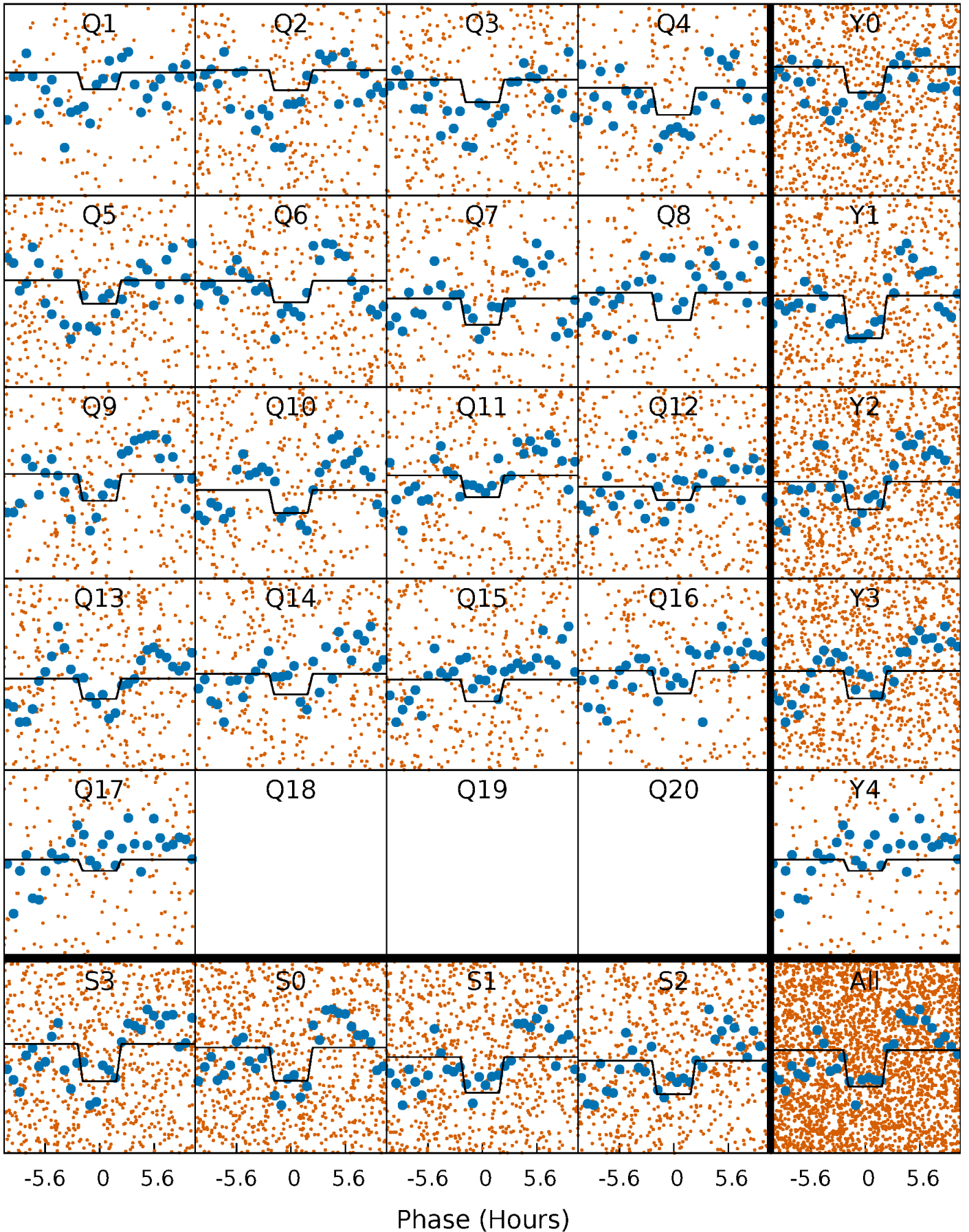
DV Quarter-Phased Transit Curves

TCE 008352420-01 P= 1.334648 Days $T_0=131.855870$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

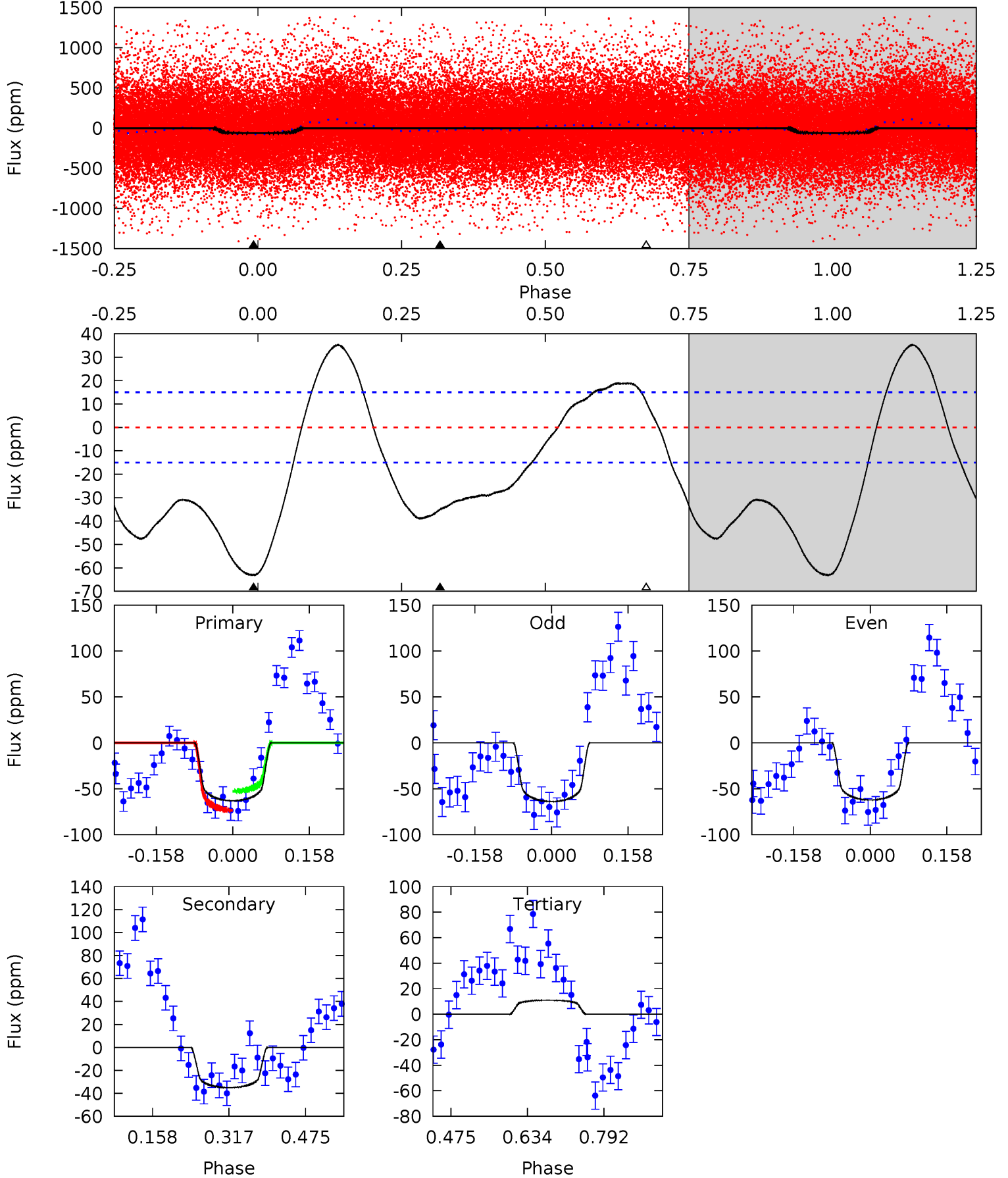
TCE 008352420-01 P= 1.334661 Days $T_0=131.855905$ (BKJD)



DV Model-Shift Uniqueness Test

008352420-01, P = 1.334648 Days, E = 130.521222 Days

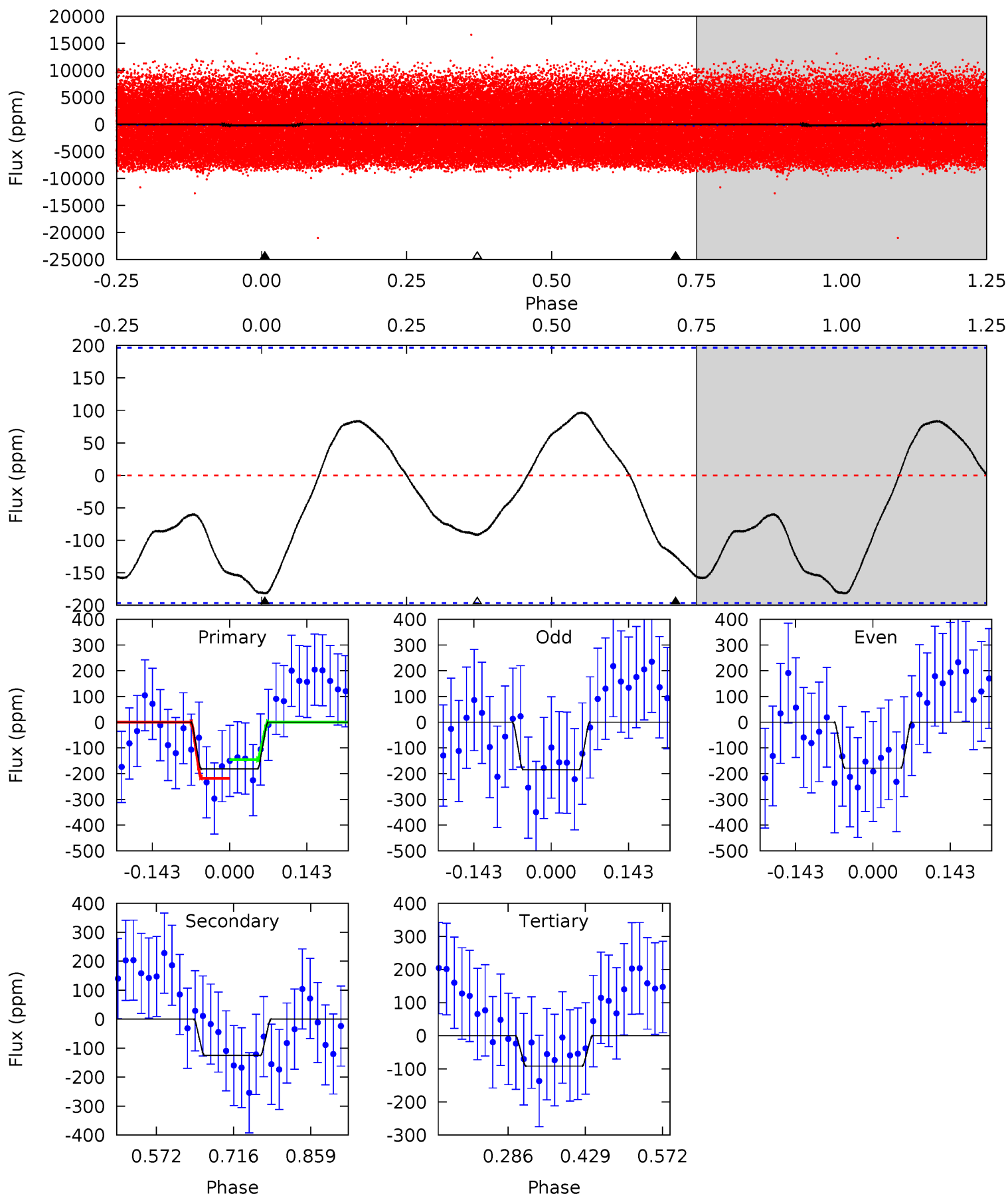
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.7	10.4	-3.25	0	4.47	1.41	7.06	22.0	18.7	13.7	10.4	0.25	0.97	0.36	3.06



Alt Model-Shift Uniqueness Test

008352420-01, P = 1.334661 Days, E = 130.521244 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.15	2.85	2.09	0	4.49	1.46	1.49	2.05	4.15	0.76	2.85	0.08	1.01	0.35	0.82



Stellar Parameters For KIC 008352420

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7160^{+172}_{-236}	$4.300^{+0.087}_{-0.188}$	$-0.460^{+0.250}_{-0.300}$	$1.303^{+0.409}_{-0.175}$	$1.240^{+0.176}_{-0.158}$	$0.789^{+0.350}_{-0.388}$
	+2%/-3%	+2%/-4%	+54%/-65%	+31%/-13%	+14%/-13%	+44%/-49%
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 008352420-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-35 ± 3	$1.26^{+0.30}_{-0.26}$	3191^{+219}_{-158}	5814^{+734}_{-523}	$7.846^{+4.867}_{-2.760}$
Alt.	-125 ± 44	$2.00^{+0.39}_{-0.32}$	3194^{+219}_{-184}	6365^{+777}_{-803}	11^{+7}_{-5}

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

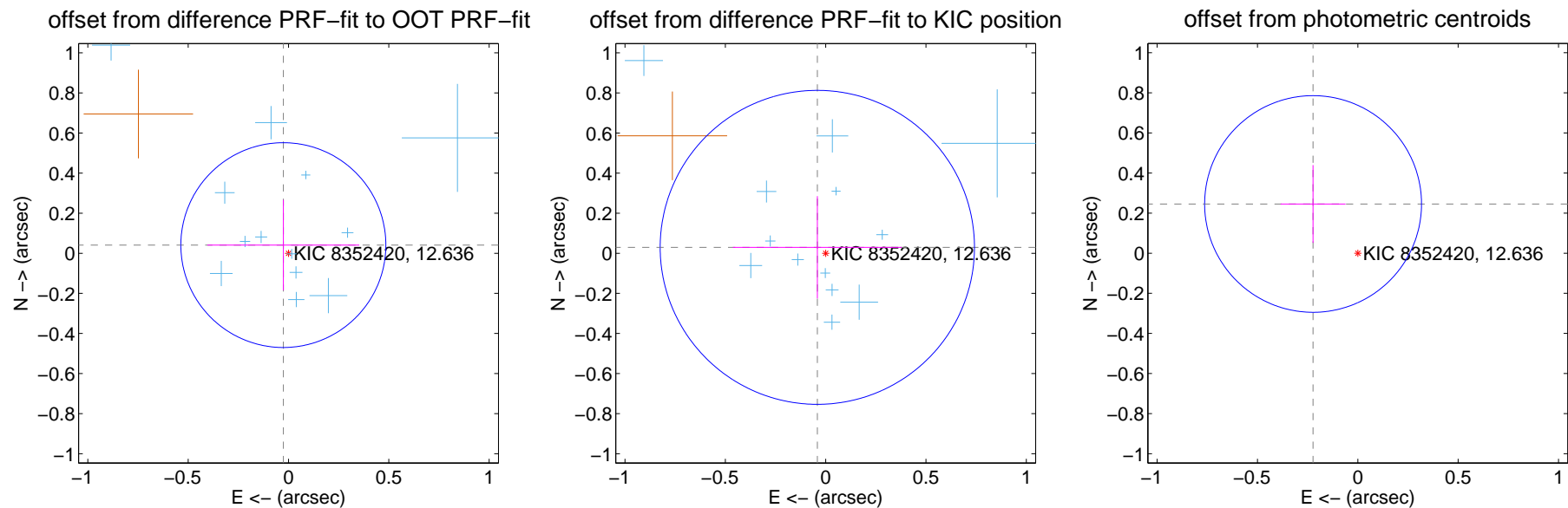
DV Centroid Data

Supplemental centroid analysis for 008352420-01. Kepler magnitude: 12.64. Transit SNR 12.79

There are 13 quarters with good PRF difference image offsets

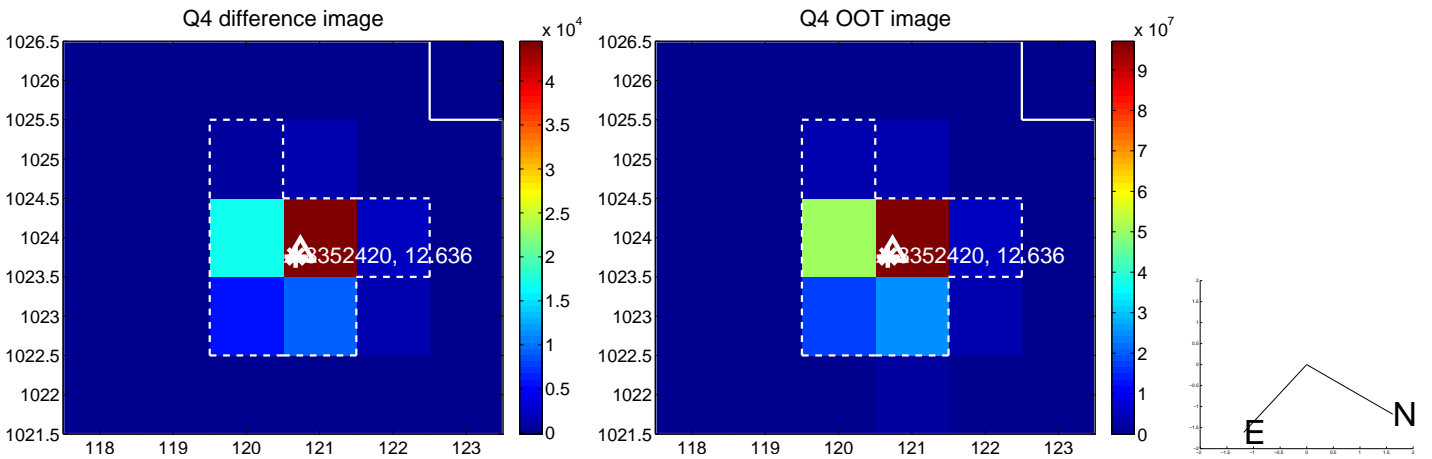
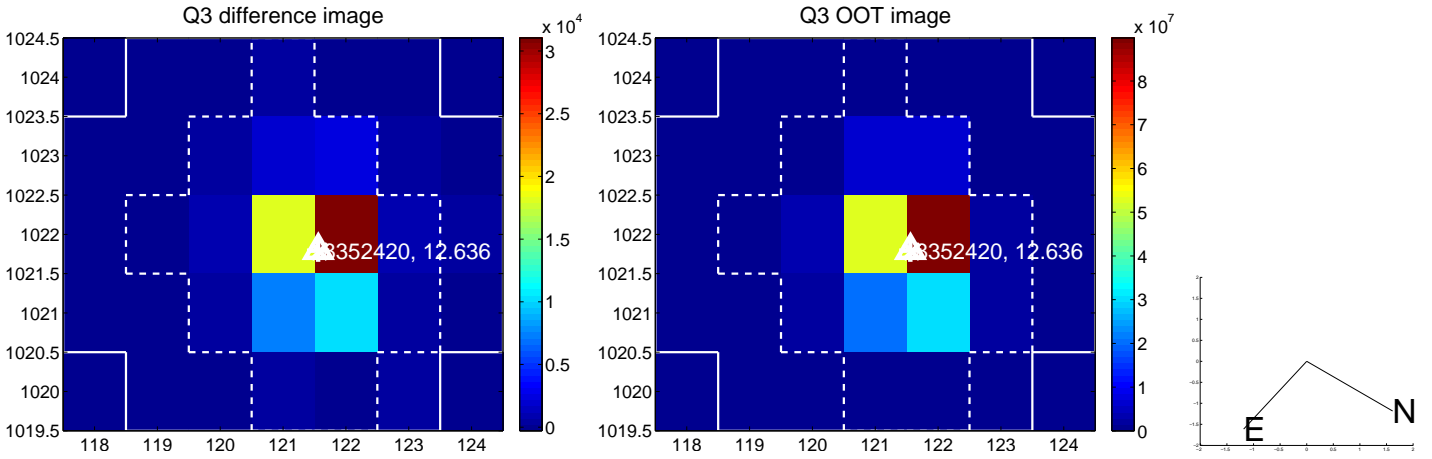
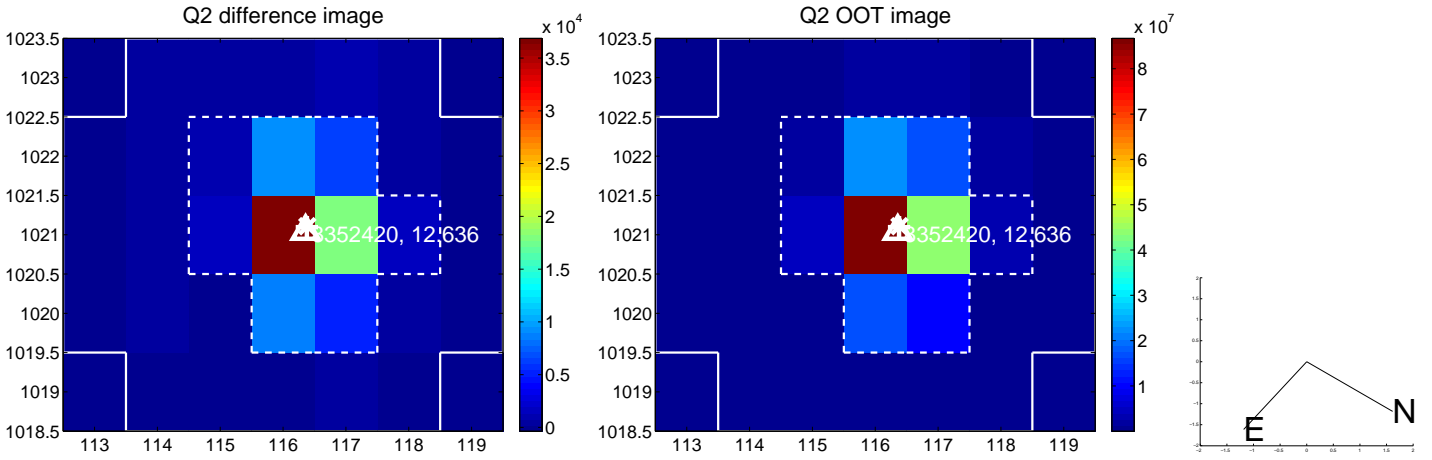
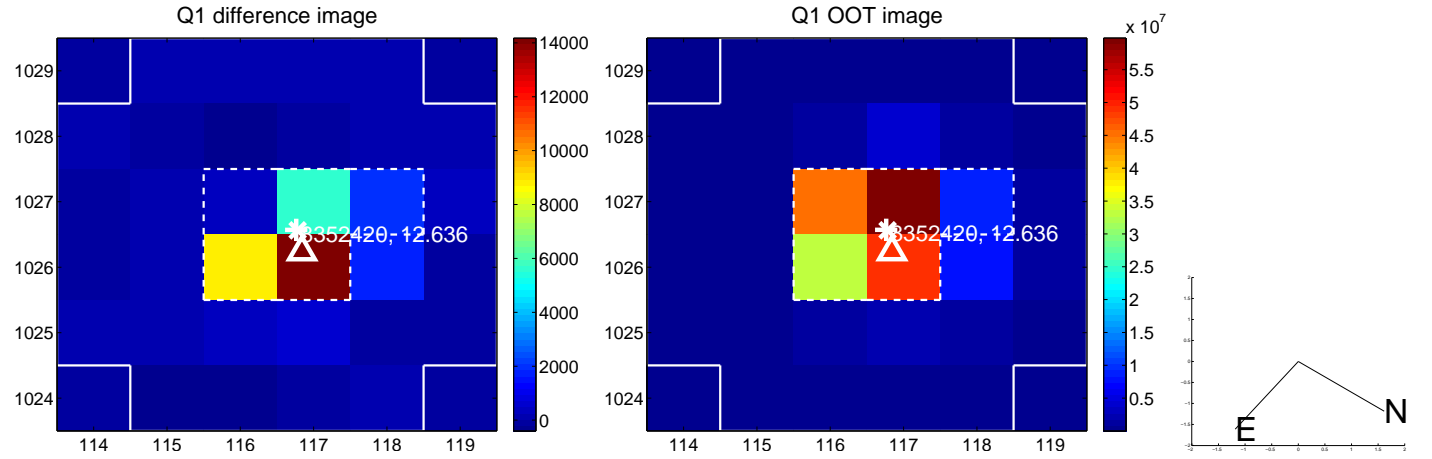
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.048 ± 0.170	0.28	0.026 ± 0.379	0.041 ± 0.225
PRF-fit source offset from KIC position	0.051 ± 0.261	0.20	0.042 ± 0.421	0.030 ± 0.255
photometric centroid source offset	0.33 ± 0.18	1.84	0.22 ± 0.16	0.25 ± 0.19

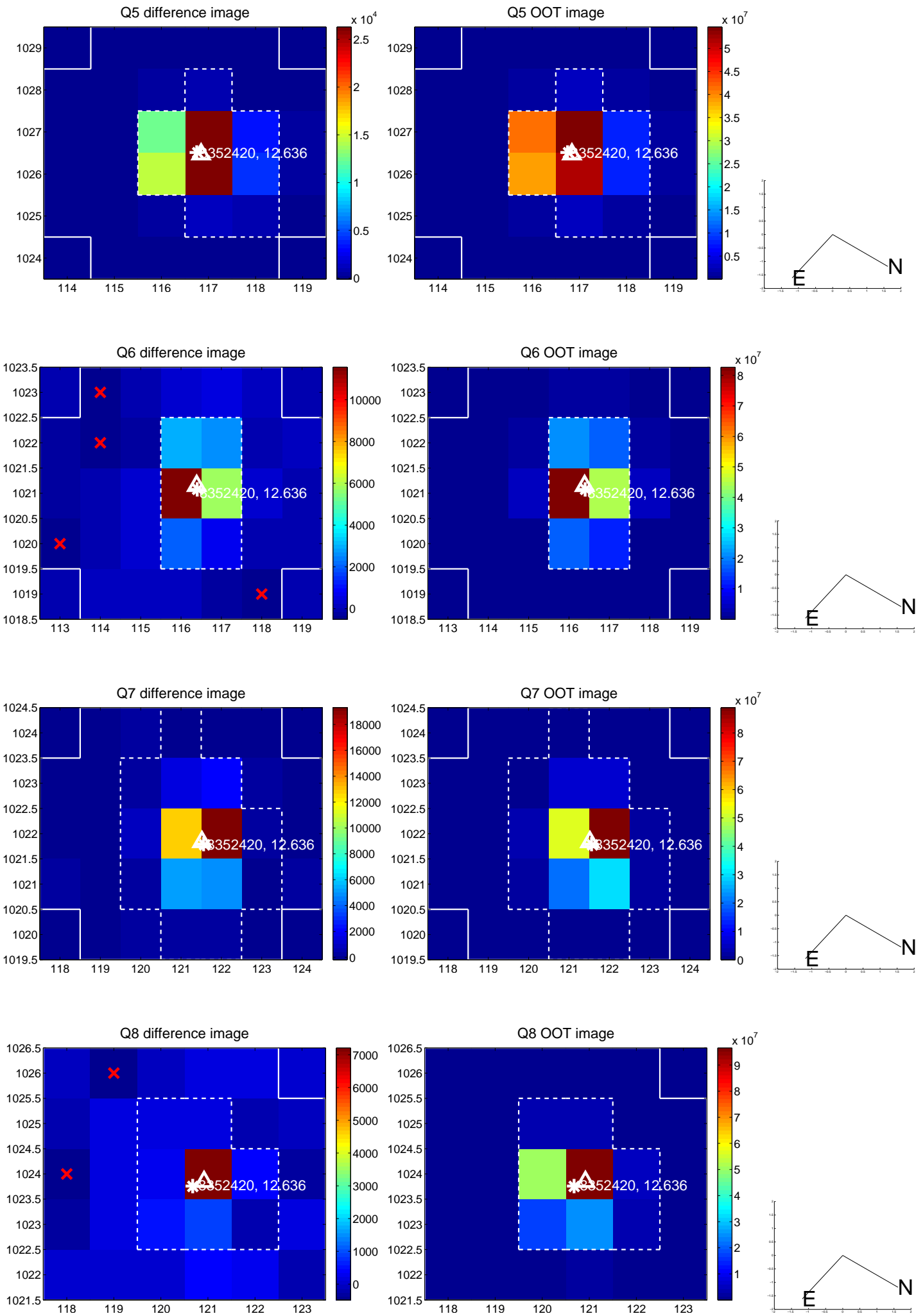


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

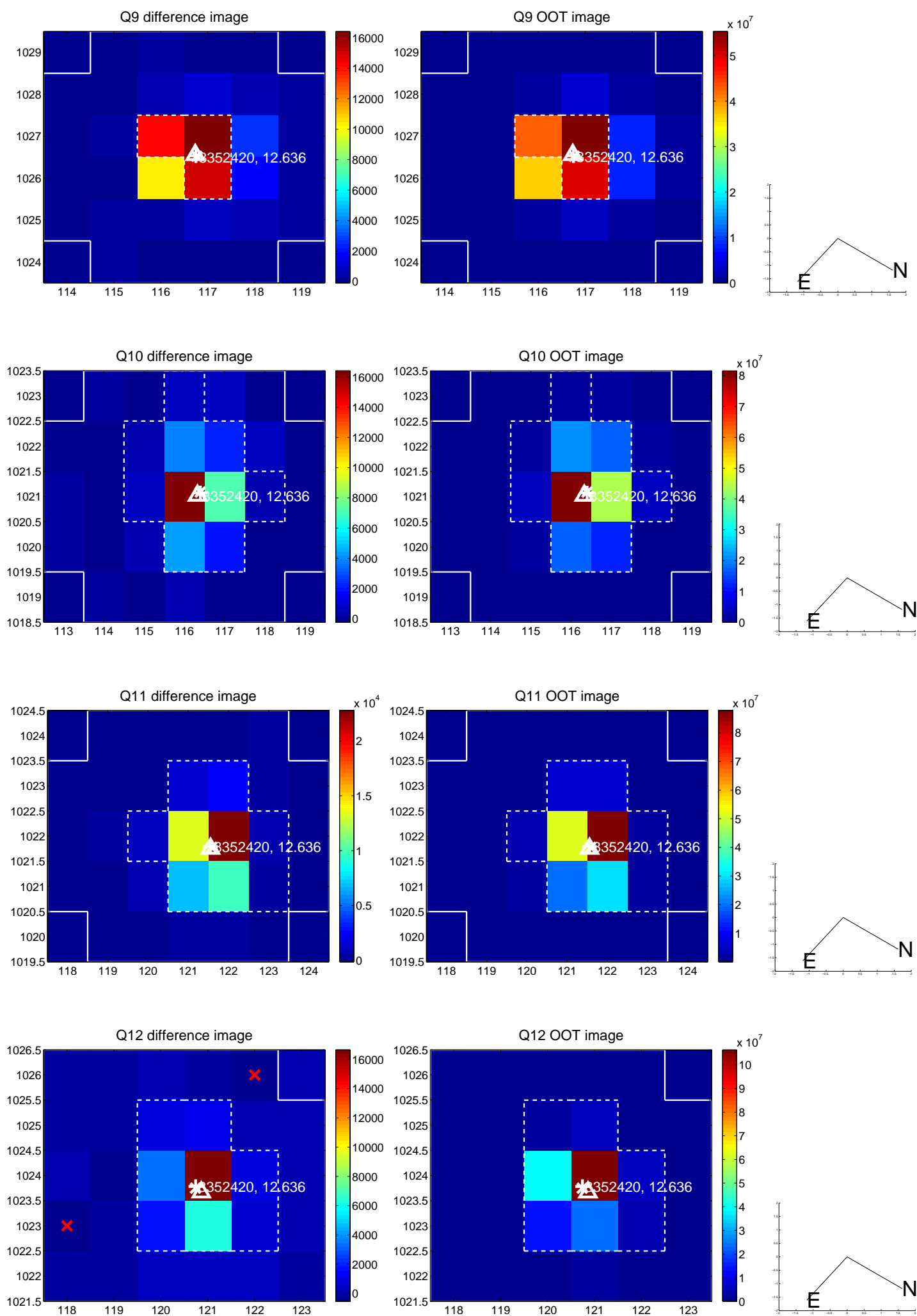
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



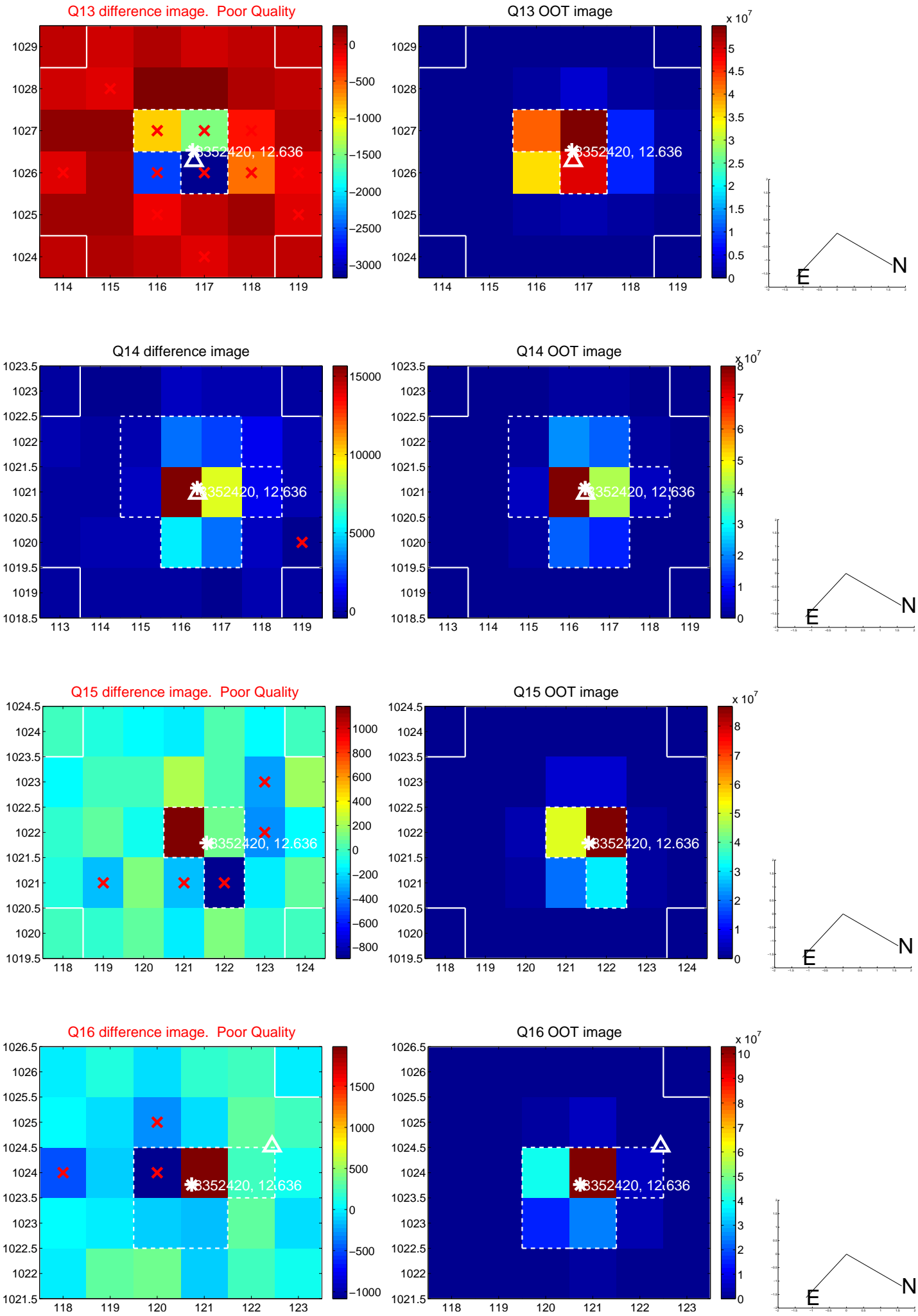
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



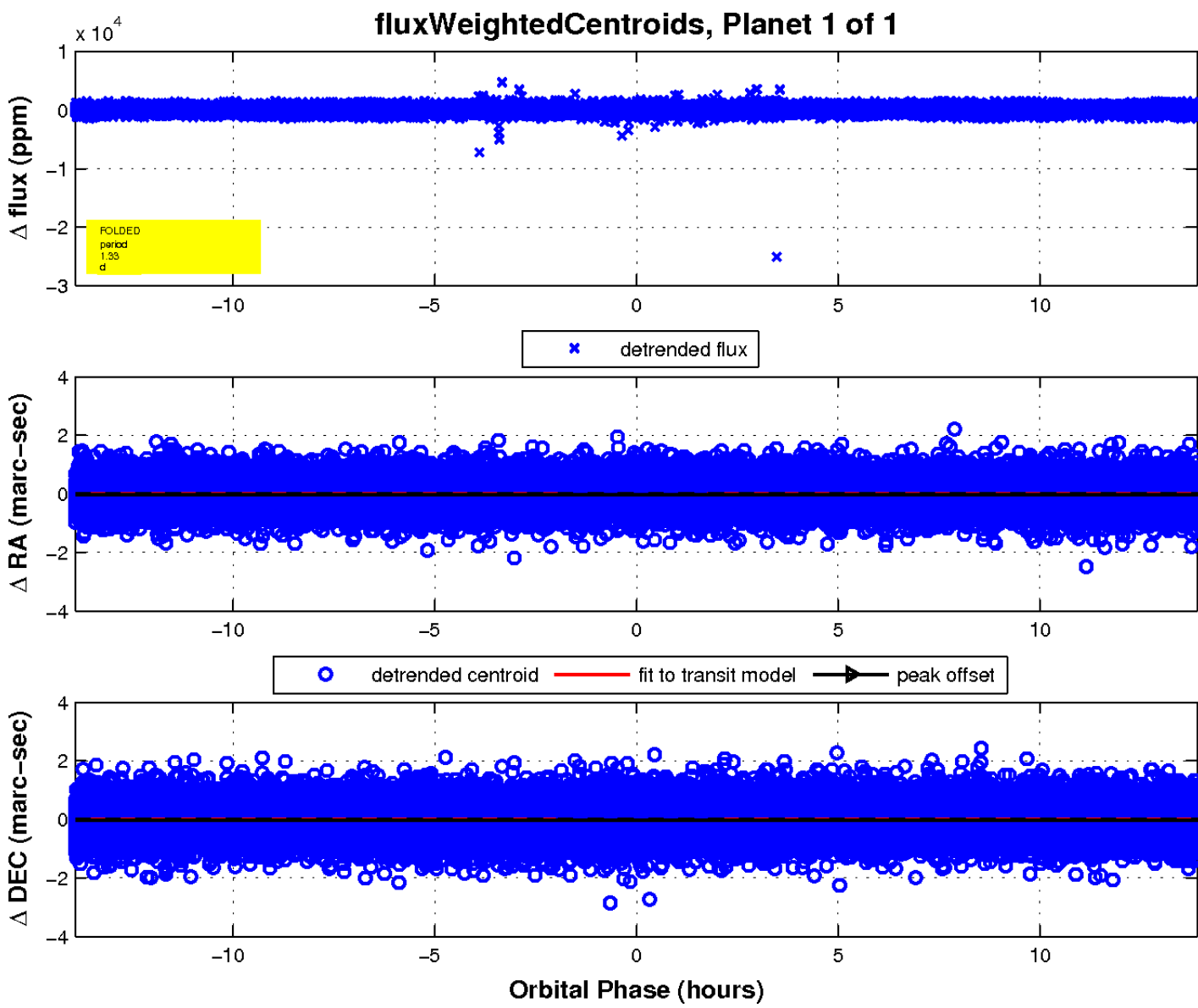
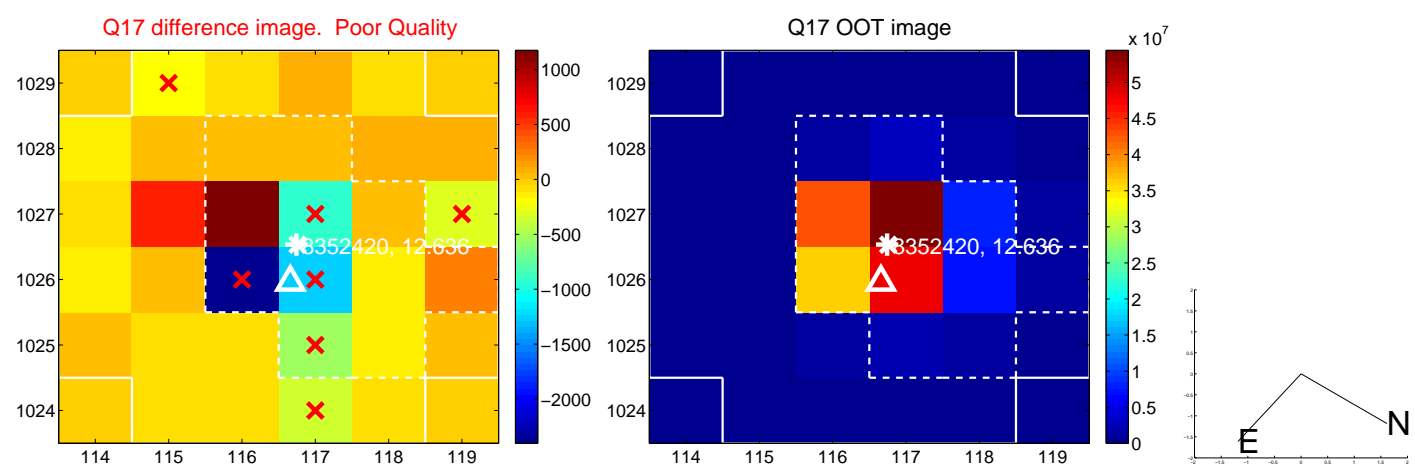
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

