

KIC 004949524

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})
004949524-01	OBS	3852.01	1.233070	132.501772	608.4	1.581	27.6	42.3	0.82	5602	2.52	1240.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004949524-01	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 004949524-01

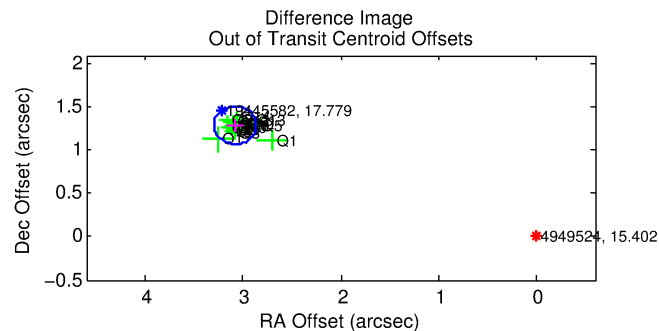
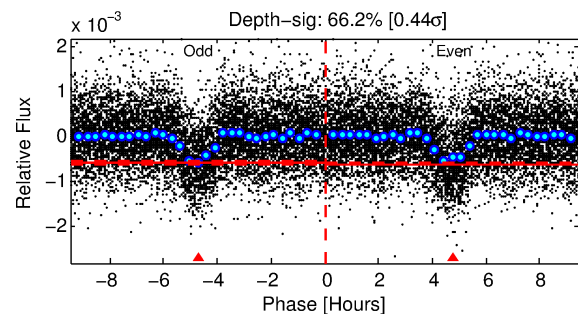
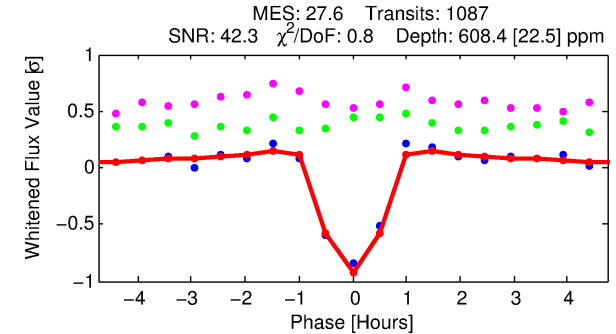
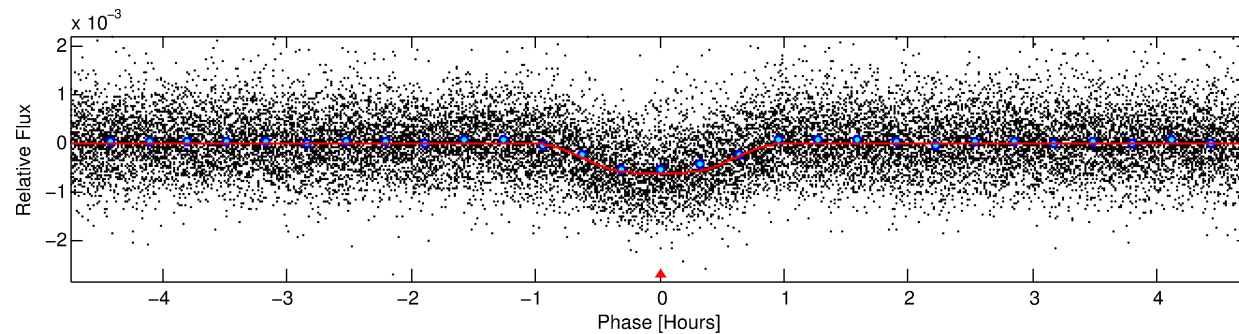
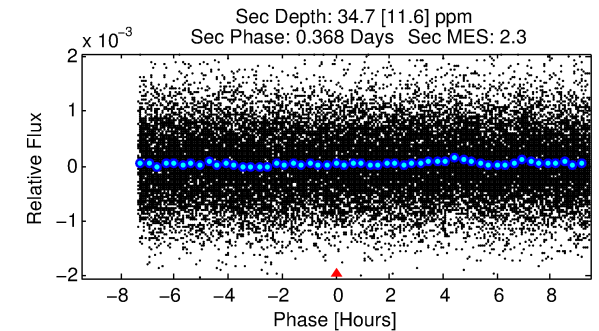
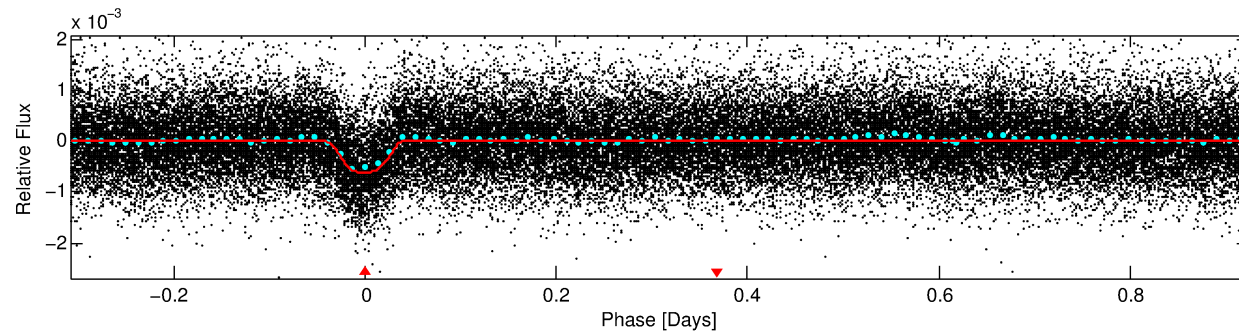
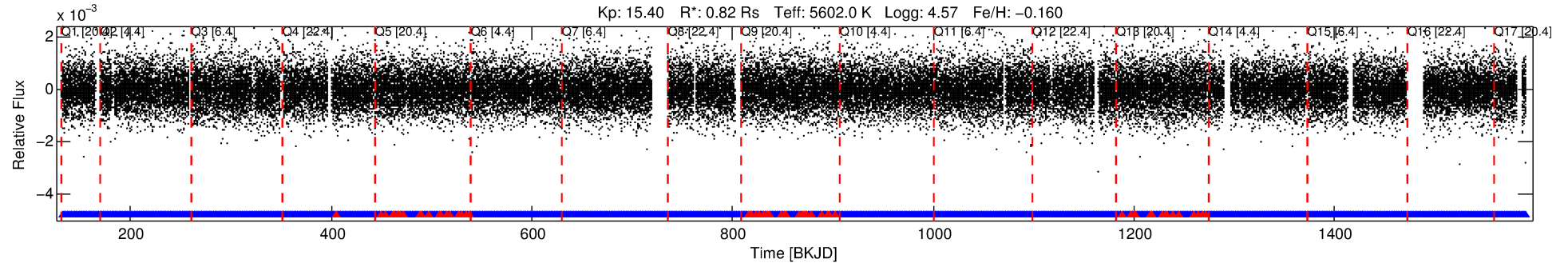
No Significant Match Found

DV One-Page Summary

KIC: 4949524 Candidate: 1 of 1 Period: 1.233 d

KOI: K03852.01 Corr: 0.940

Kp: 15.40 R*: 0.82 Rs Teff: 5602.0 K Logg: 4.57 Fe/H: -0.160



DV Fit Results:

Period = 1.23307 [0.00000] d
Epoch = 132.5018 [0.0005] BKJD
Rp/R* = 0.0283 [0.0018]
a/R* = 2.73 [0.64]
b = 0.93 [0.04]
Seff = 1240.98 [345.74]
Teq = 1513 [105] K
Rp = 2.52 [0.57] Re
a = 0.0218 [0.0039] AU
Ag = 1.43 [0.63] [0.68 σ]
Teff = 2557 [242] K [3.96 σ]

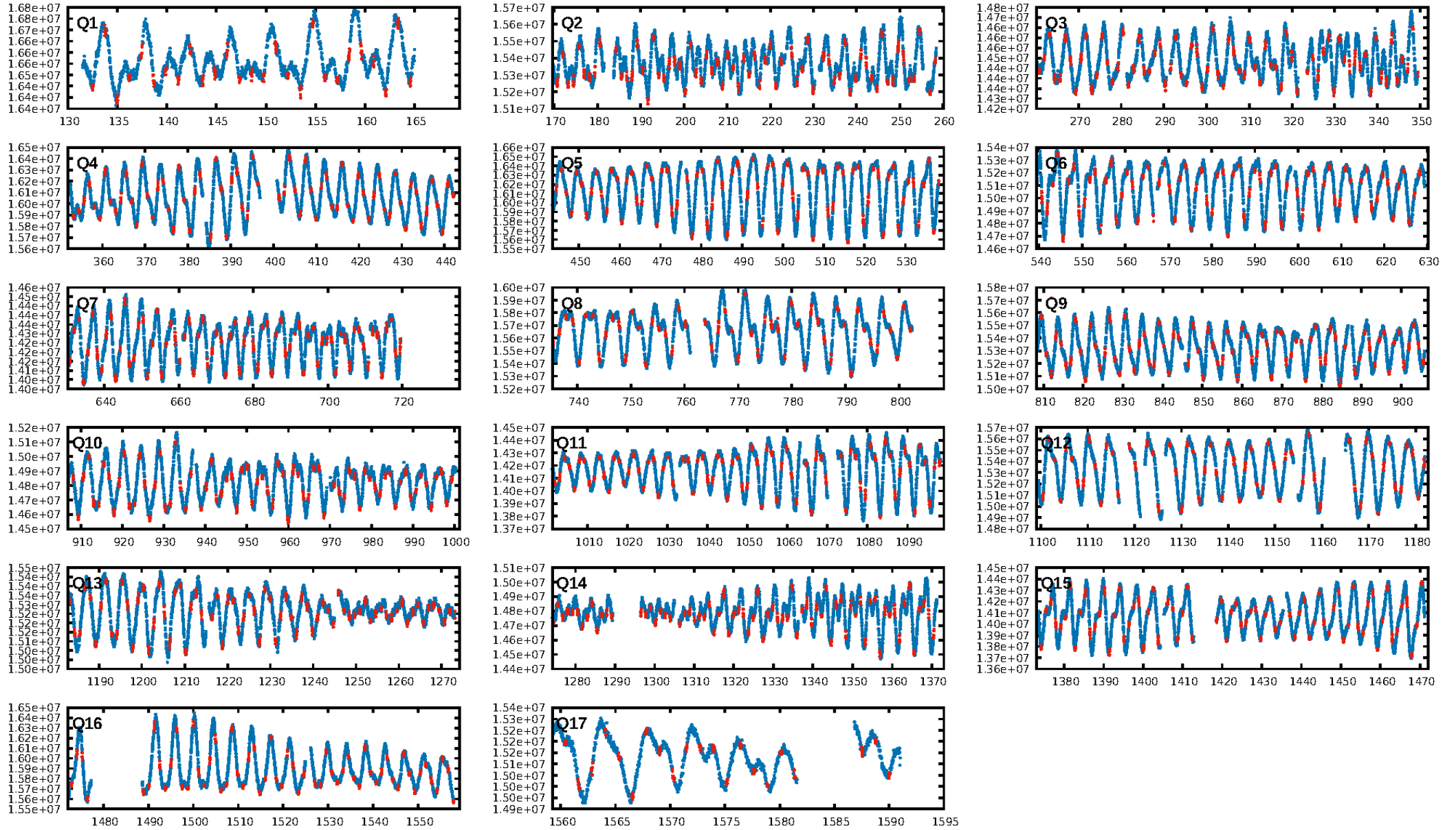
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.64e-160
RollingBand-fgt: 0.94 [981/1039]
GhostDiagnostic-chr: 0.5116
Centroid-sig: 0.0%
Centroid-so: 4.125 arcsec [16.60 σ]
OotOffset-rm: 3.341 arcsec [46.12 σ]
KicOffset-rm: 3.474 arcsec [47.66 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

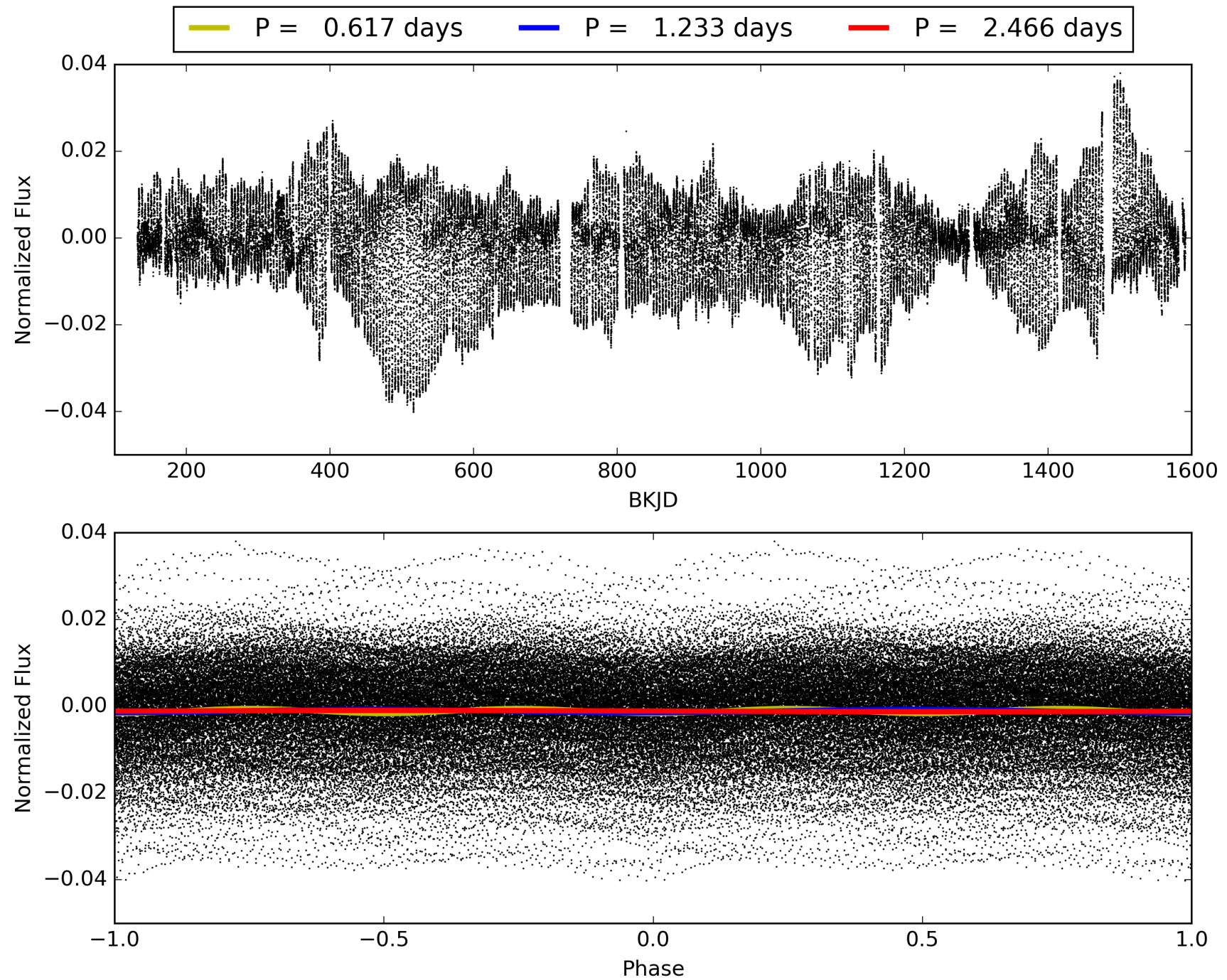
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:41:33 Z

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

TCE 004949524-01, PDC Light Curves

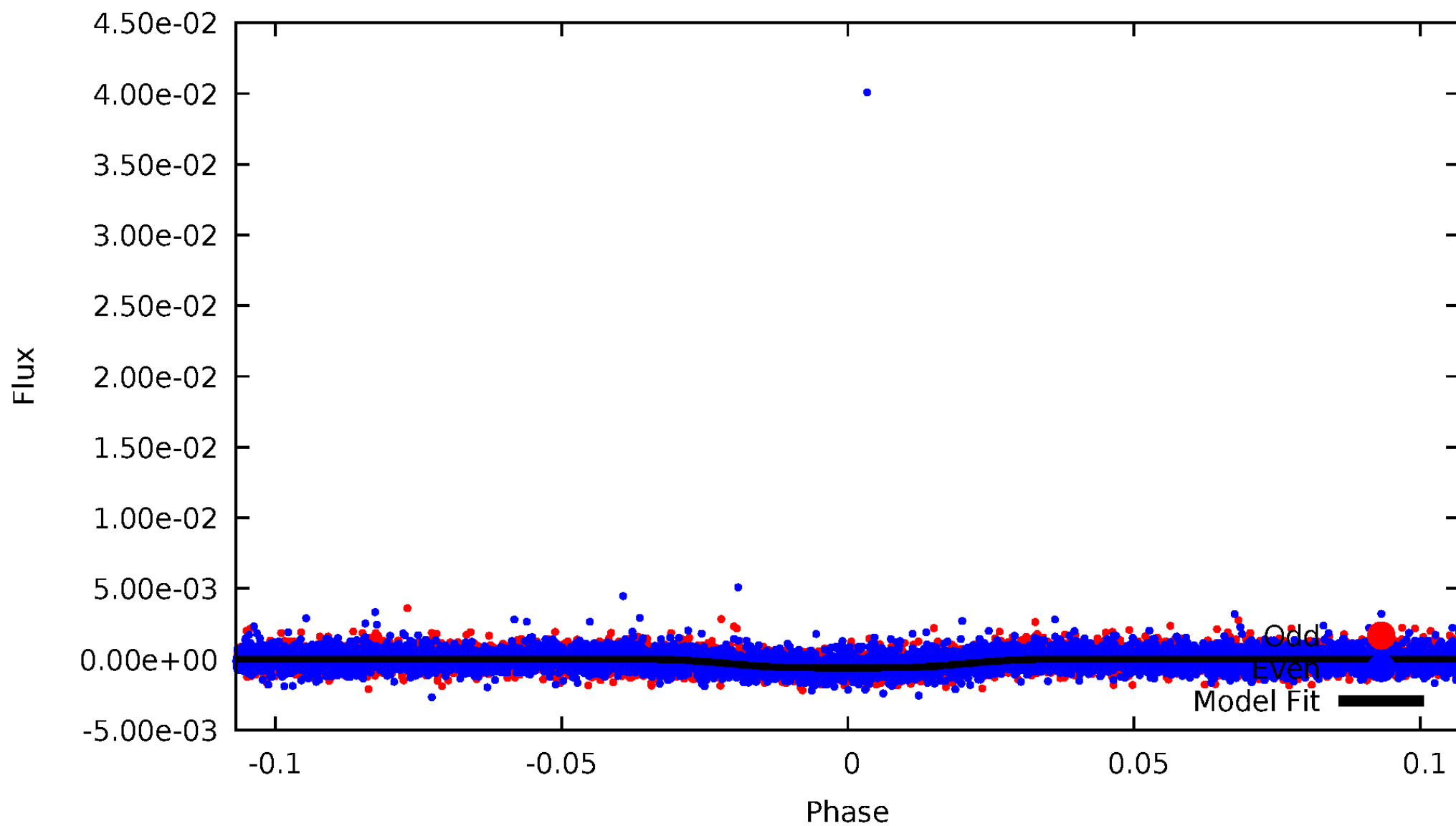


TCE 004949524-01



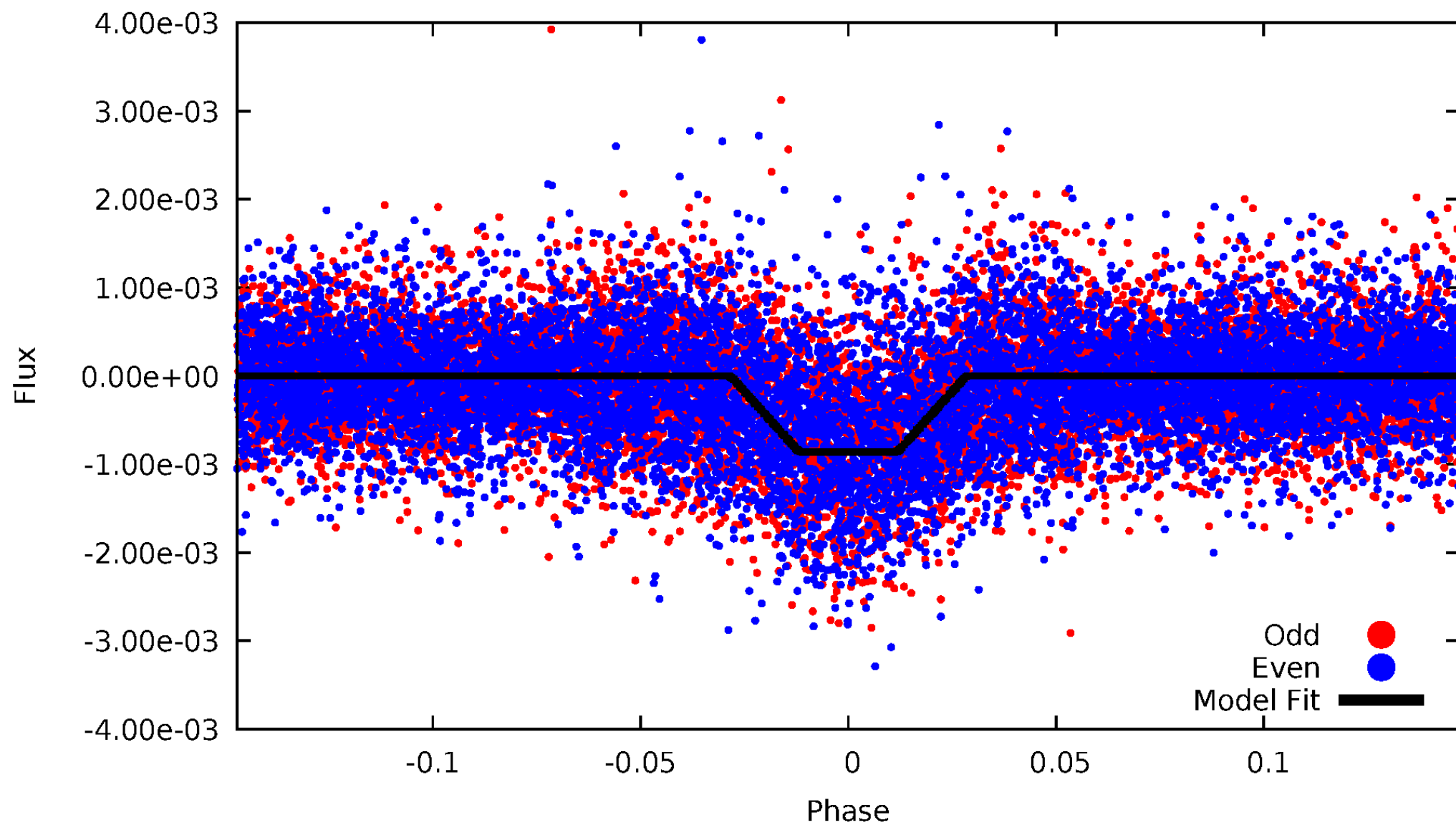
DV Odd/Even

TCE 004949524-01



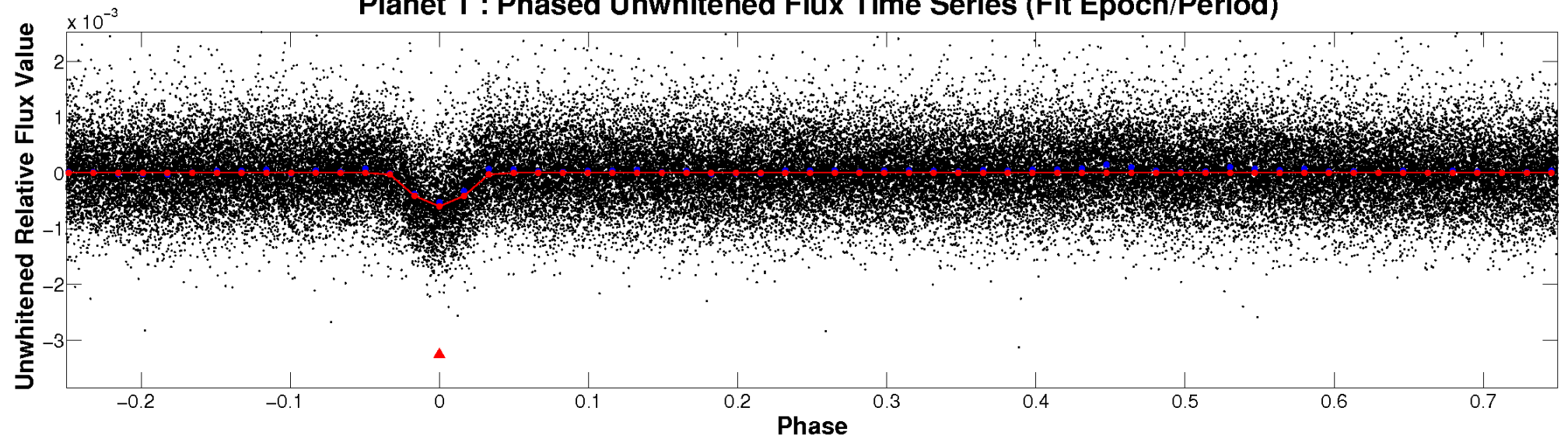
ALT Odd/Even

TCE 004949524-01

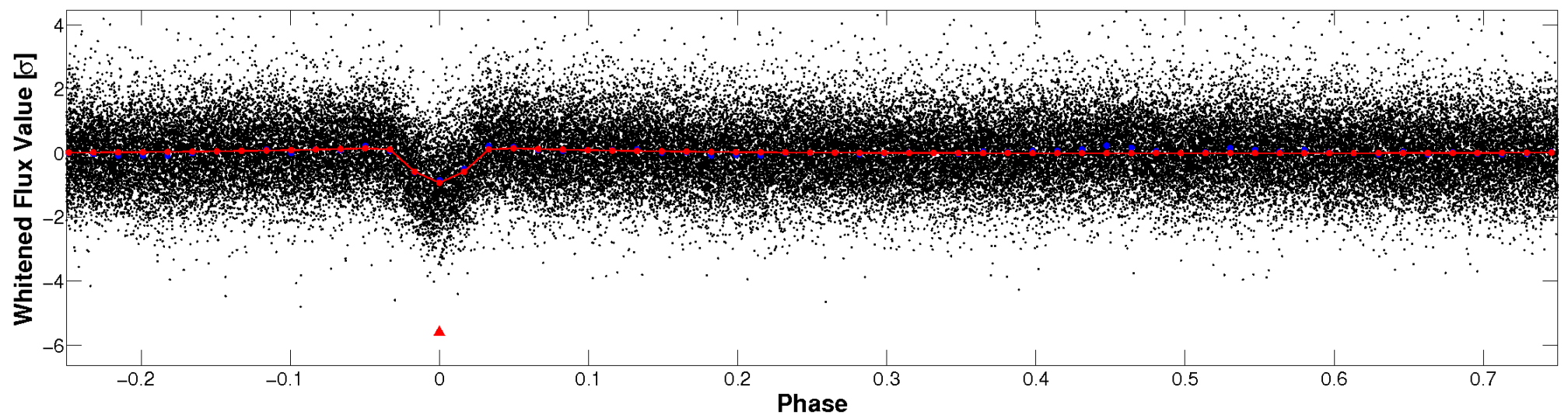


Non-Whitened Vs. Whitened Light Curve

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

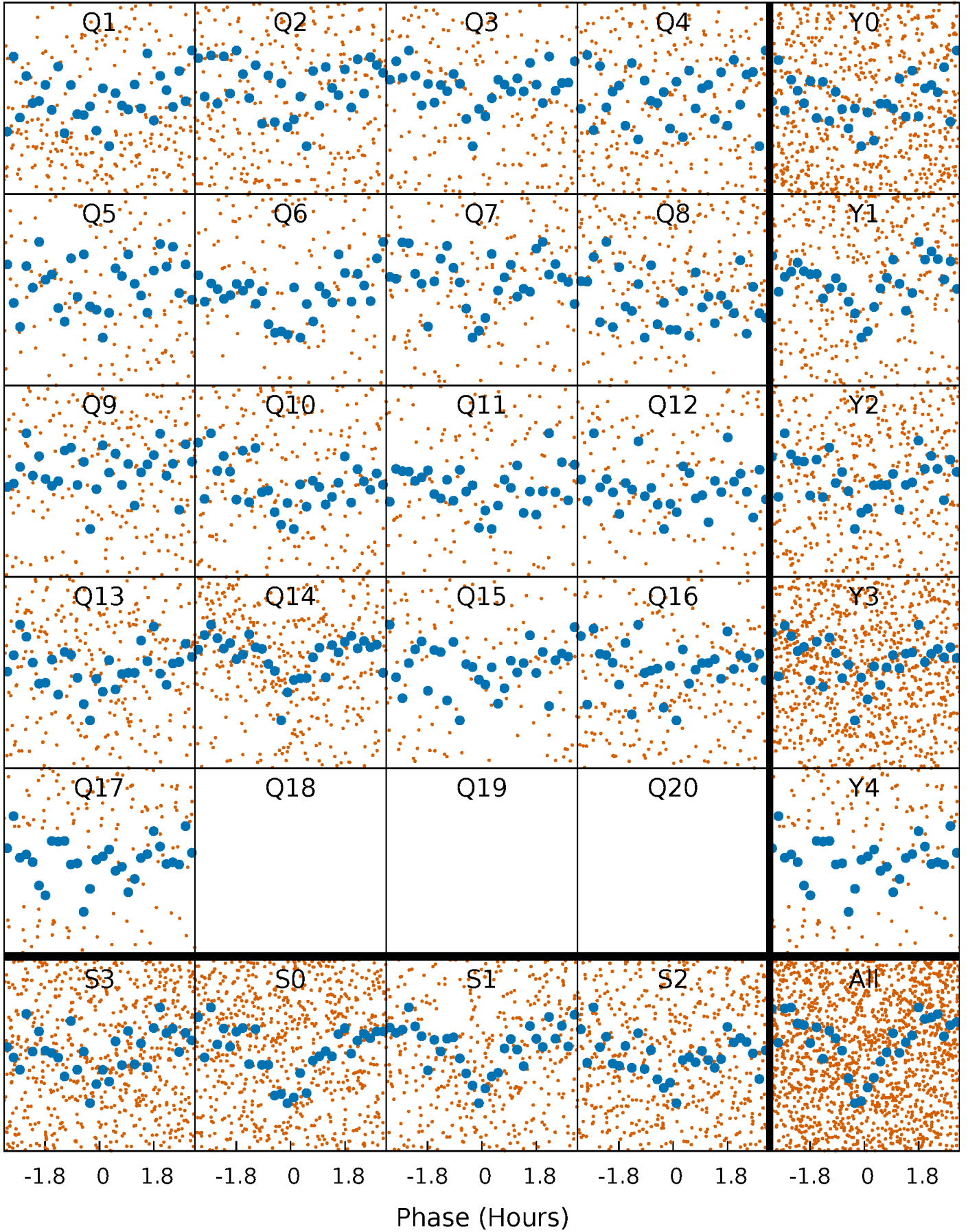


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



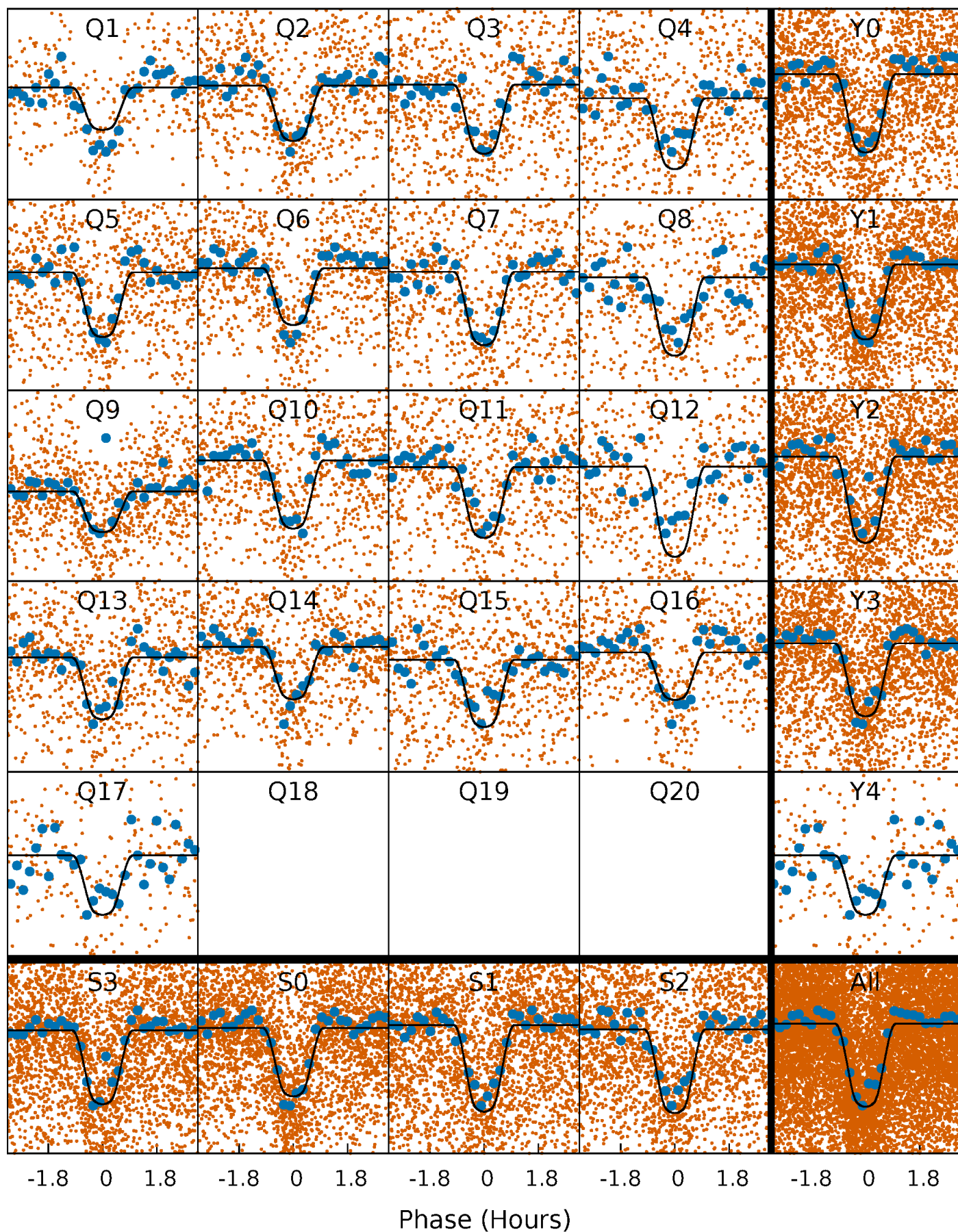
PDC Quarter-Phased Transit Curves

TCE 004949524-01 P= 1.233070 Days $T_0=132.501772$ (BKJD)



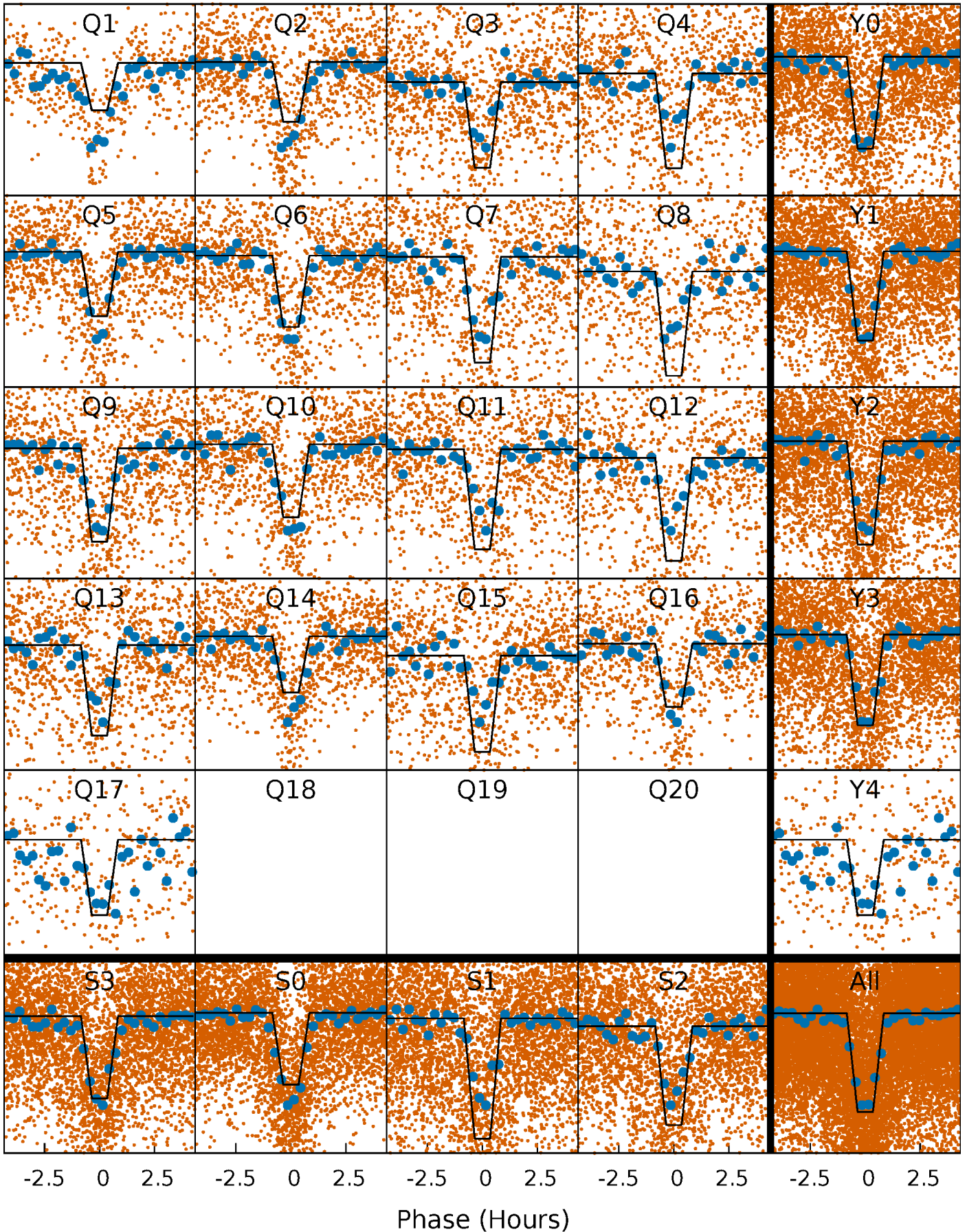
DV Quarter-Phased Transit Curves

TCE 004949524-01 P= 1.233070 Days $T_0=132.501772$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

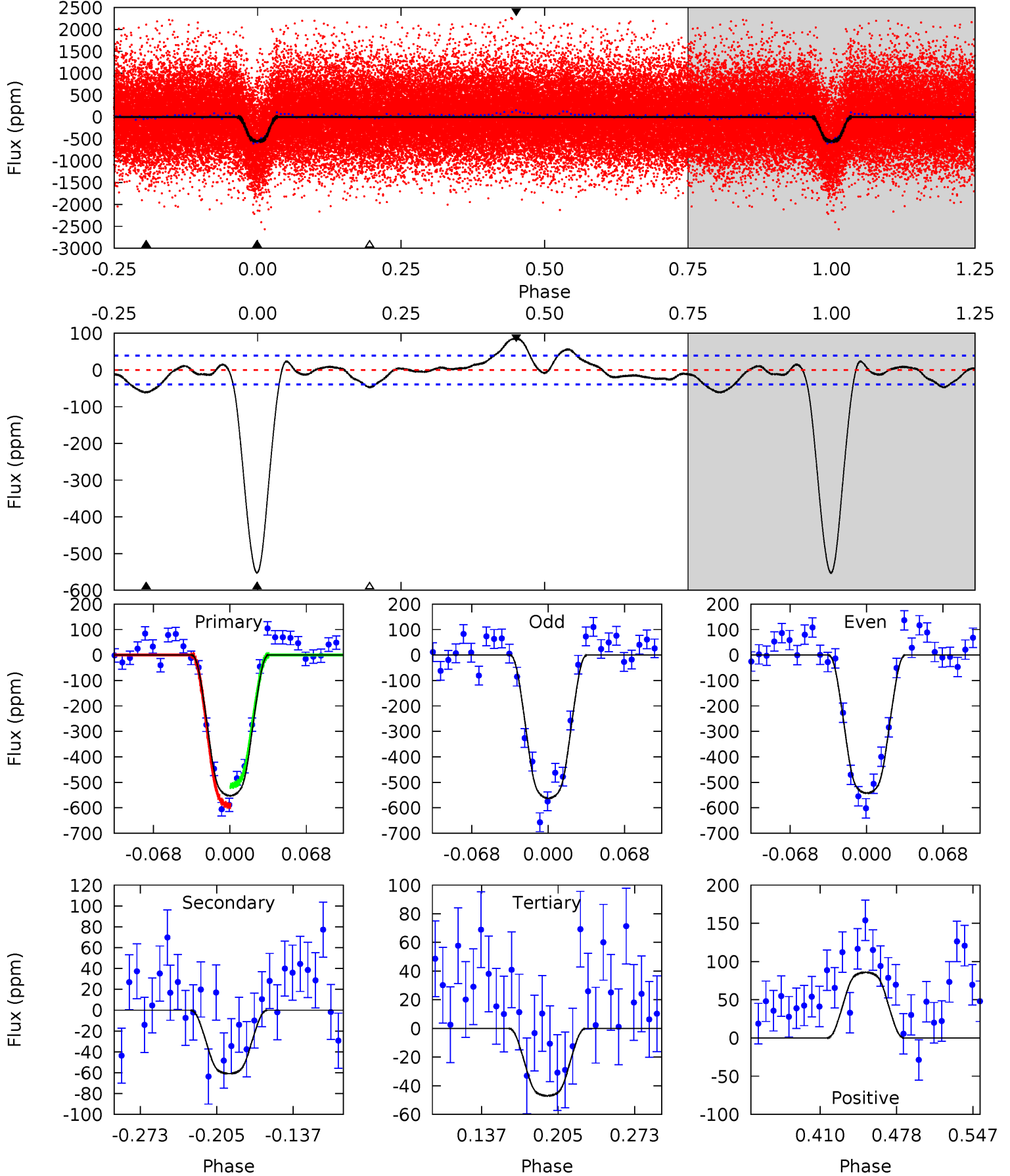
TCE 004949524-01 P= 1.233062 Days $T_0=132.504436$ (BKJD)



DV Model-Shift Uniqueness Test

004949524-01, P = 1.233070 Days, E = 131.268702 Days

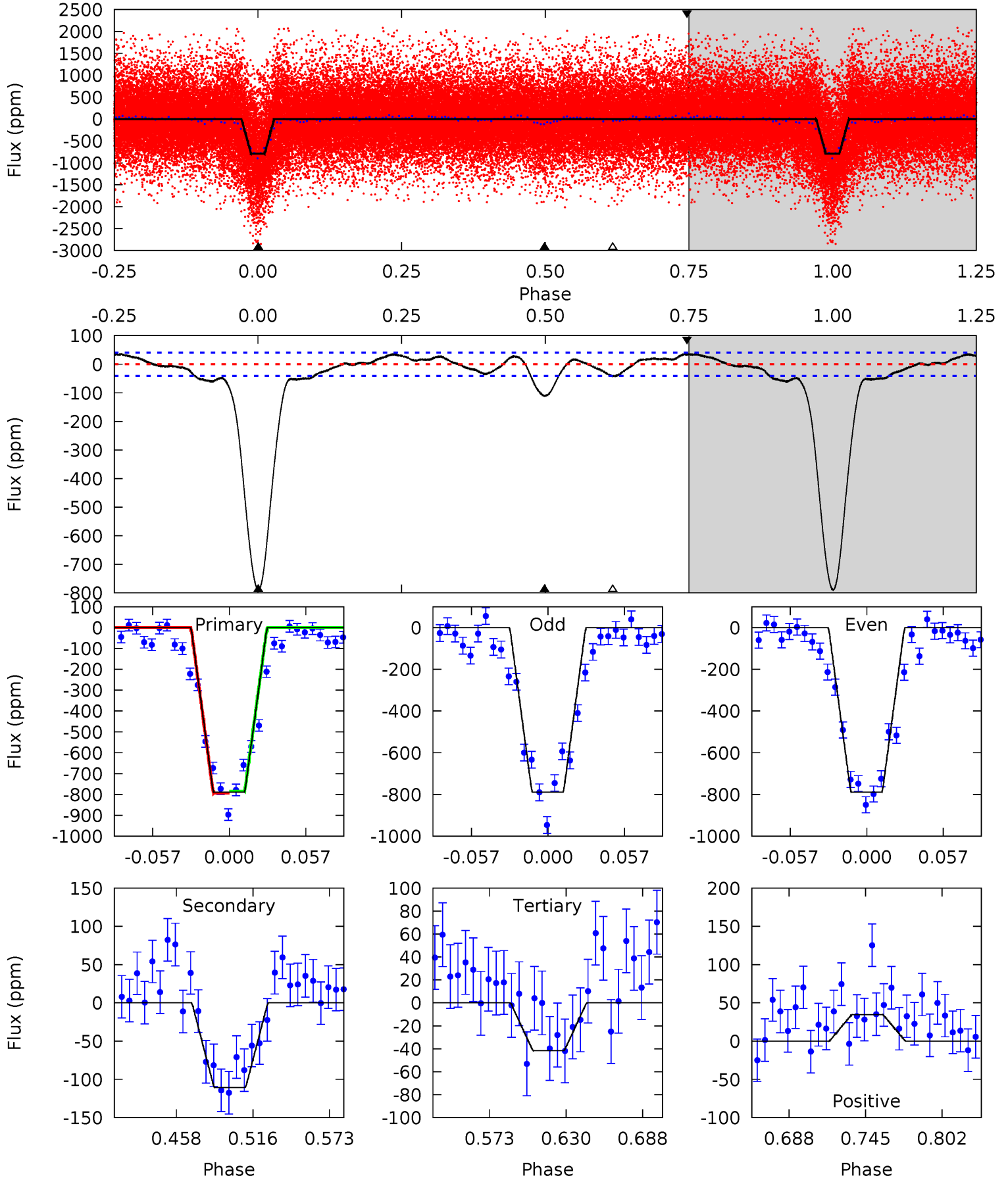
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
65.5	7.21	5.57	10.2	4.64	1.82	3.28	59.9	55.3	1.64	-2.95	1.18	0.96	0.13	4.67



Alt Model-Shift Uniqueness Test

004949524-01, P = 1.233062 Days, E = 131.271374 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
90.8	12.7	4.78	3.98	4.68	1.90	3.01	86.0	86.8	7.94	8.74	0.01	0.97	0.04	0.59



Stellar Parameters For KIC 004949524

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5602^{+149}_{-166}	$4.571^{+0.036}_{-0.135}$	$-0.160^{+0.300}_{-0.300}$	$0.817^{+0.176}_{-0.070}$	$0.913^{+0.083}_{-0.111}$	$2.362^{+0.448}_{-0.960}$
	+3%/-3%	+1%/-3%	+188%/-188%	+22%/-9%	+9%/-12%	+19%/-41%
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 004949524-01 / KOI 3852.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-61 ± 8	$2.58^{+0.29}_{-0.24}$	2146^{+111}_{-85}	3366^{+146}_{-137}	$2.334^{+0.604}_{-0.527}$
Alt.	-111 ± 9	$2.68^{+0.32}_{-0.24}$	2145^{+104}_{-80}	3690^{+130}_{-122}	$3.906^{+0.848}_{-0.703}$

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

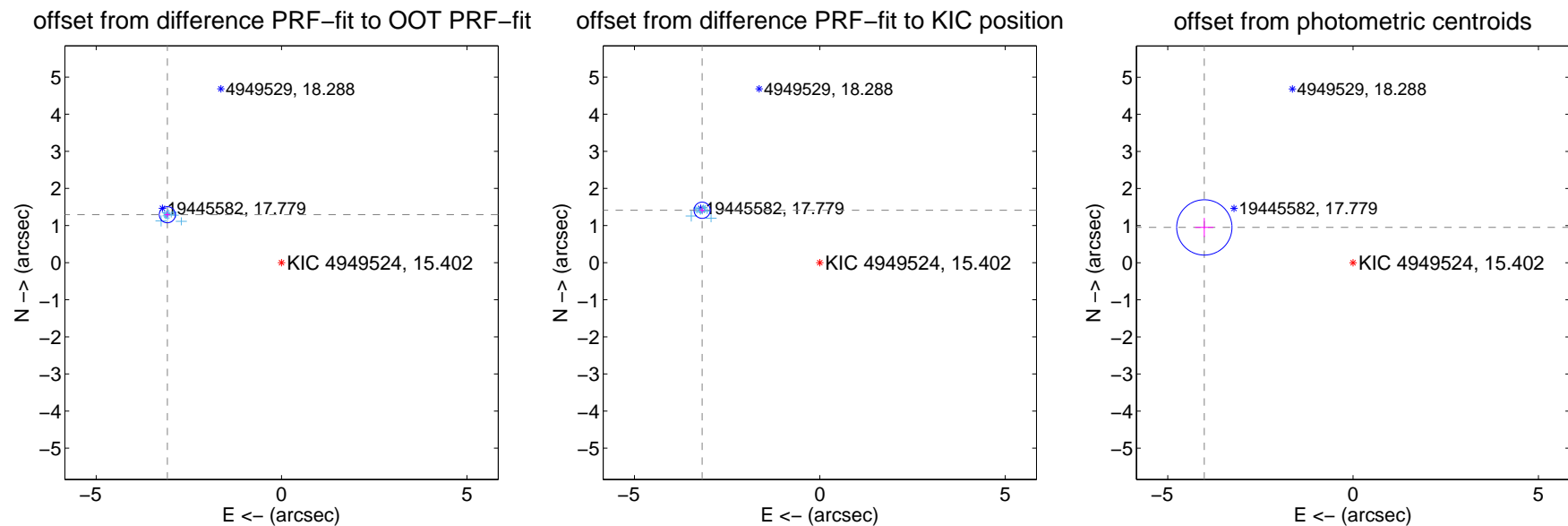
DV Centroid Data

Supplemental centroid analysis for 004949524-01. Kepler magnitude: 15.40. Transit SNR 42.26

There are 17 quarters with good PRF difference image offsets

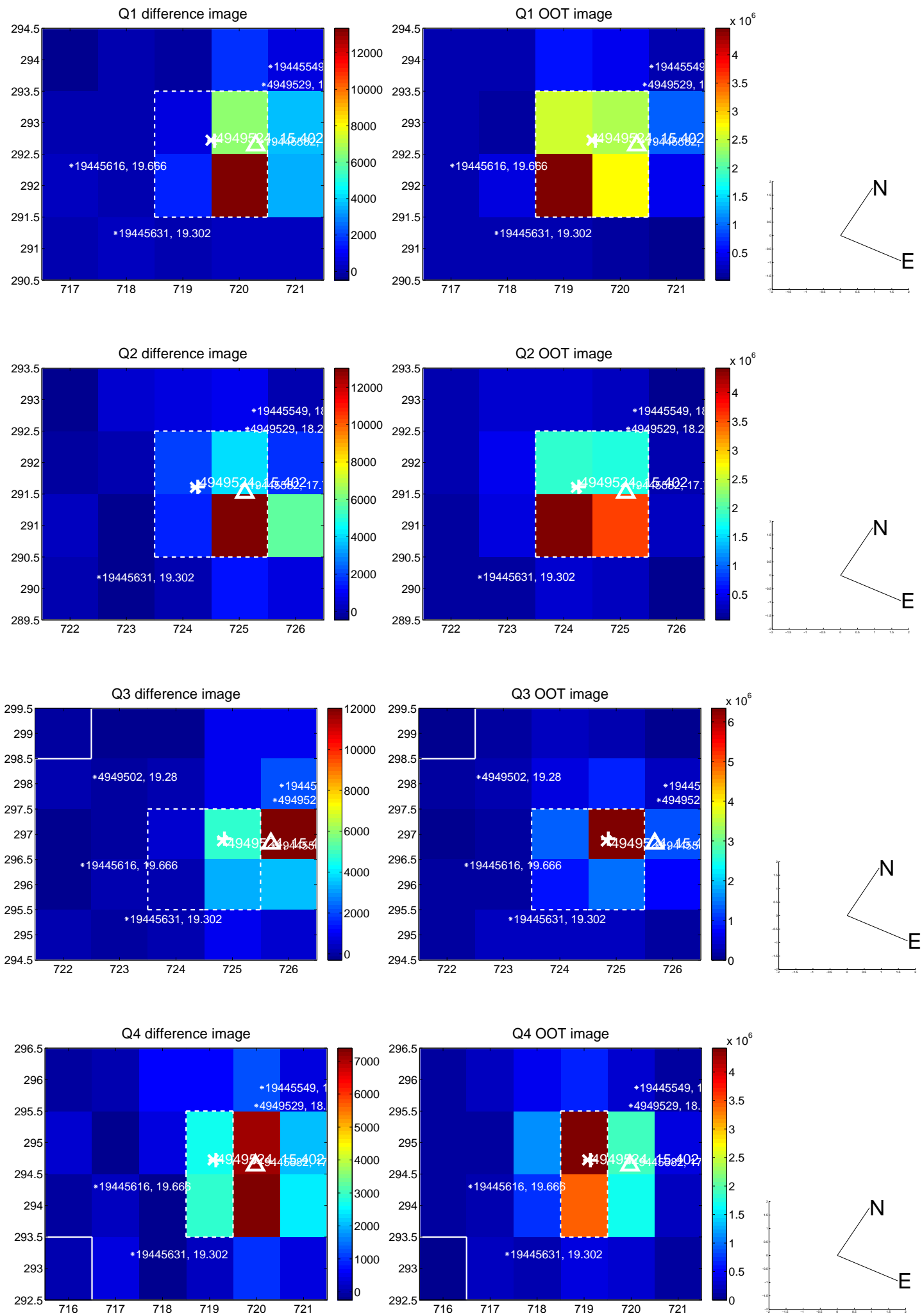
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.341 ± 0.072	46.12	3.081 ± 0.072	1.292 ± 0.069
PRF-fit source offset from KIC position	3.474 ± 0.073	47.66	3.174 ± 0.074	1.412 ± 0.069
photometric centroid source offset	4.12 ± 0.25	16.60	4.01 ± 0.25	0.95 ± 0.26

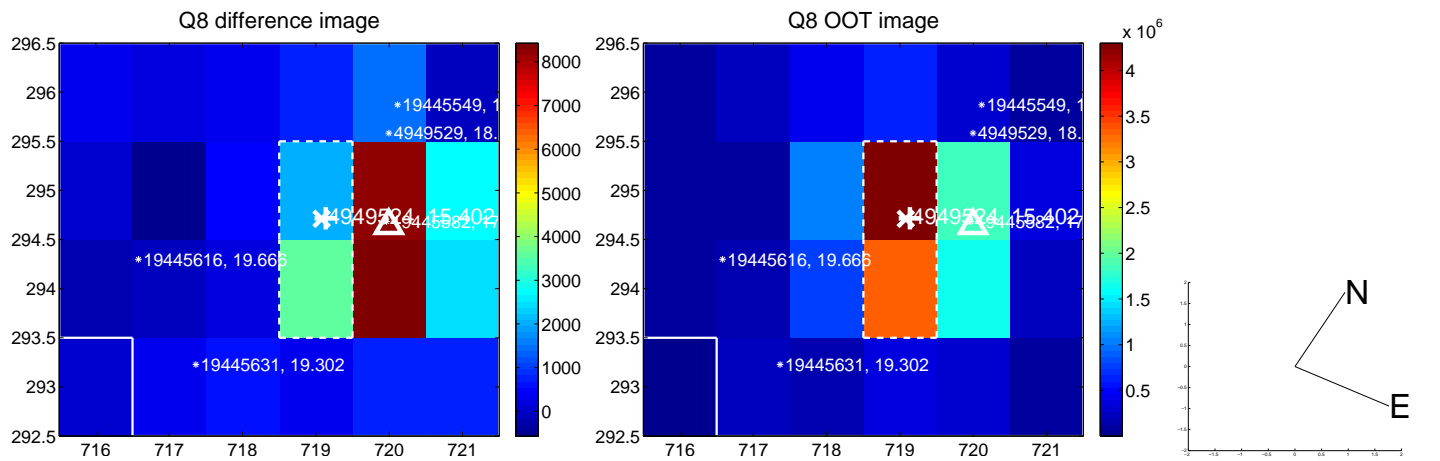
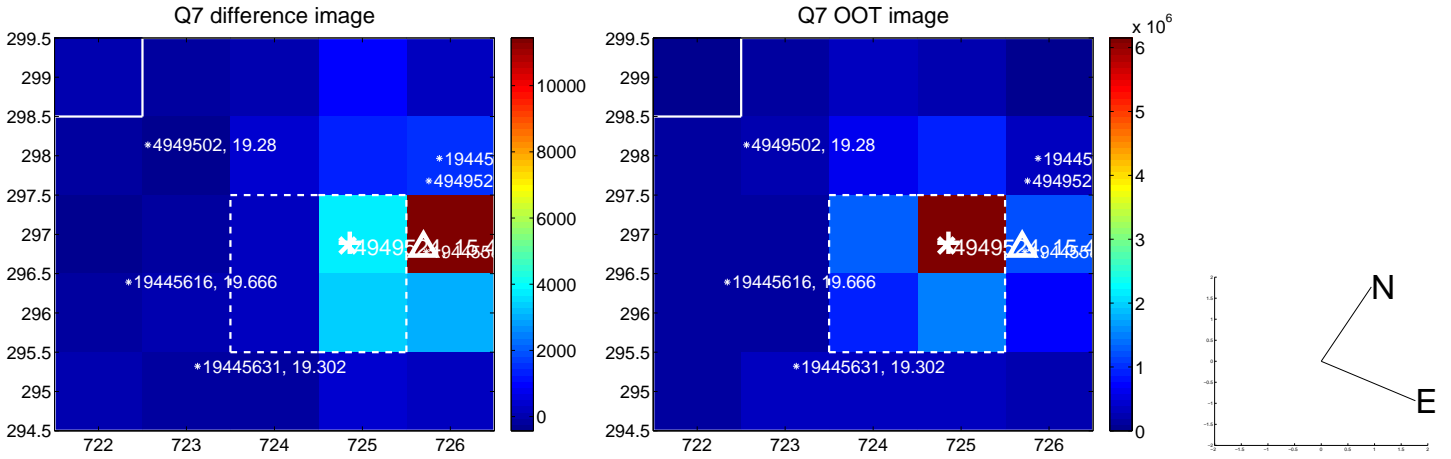
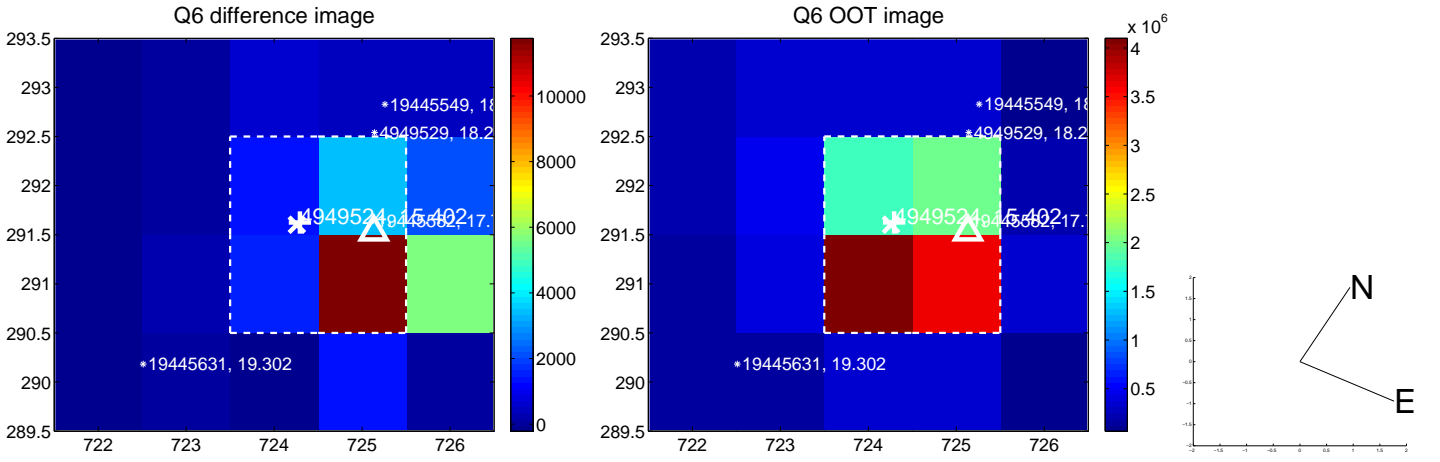
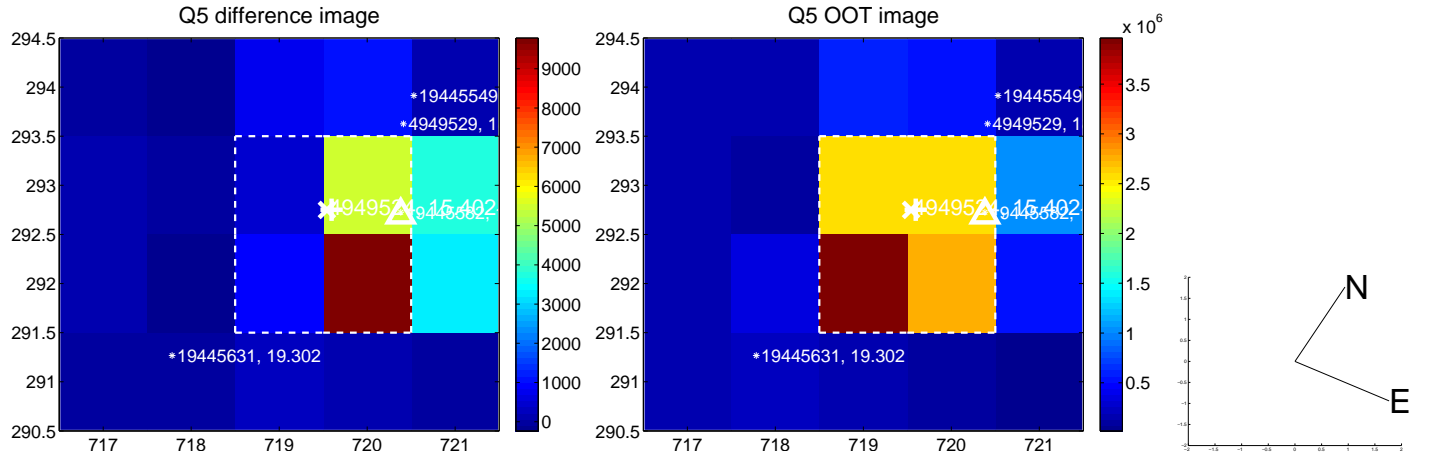


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

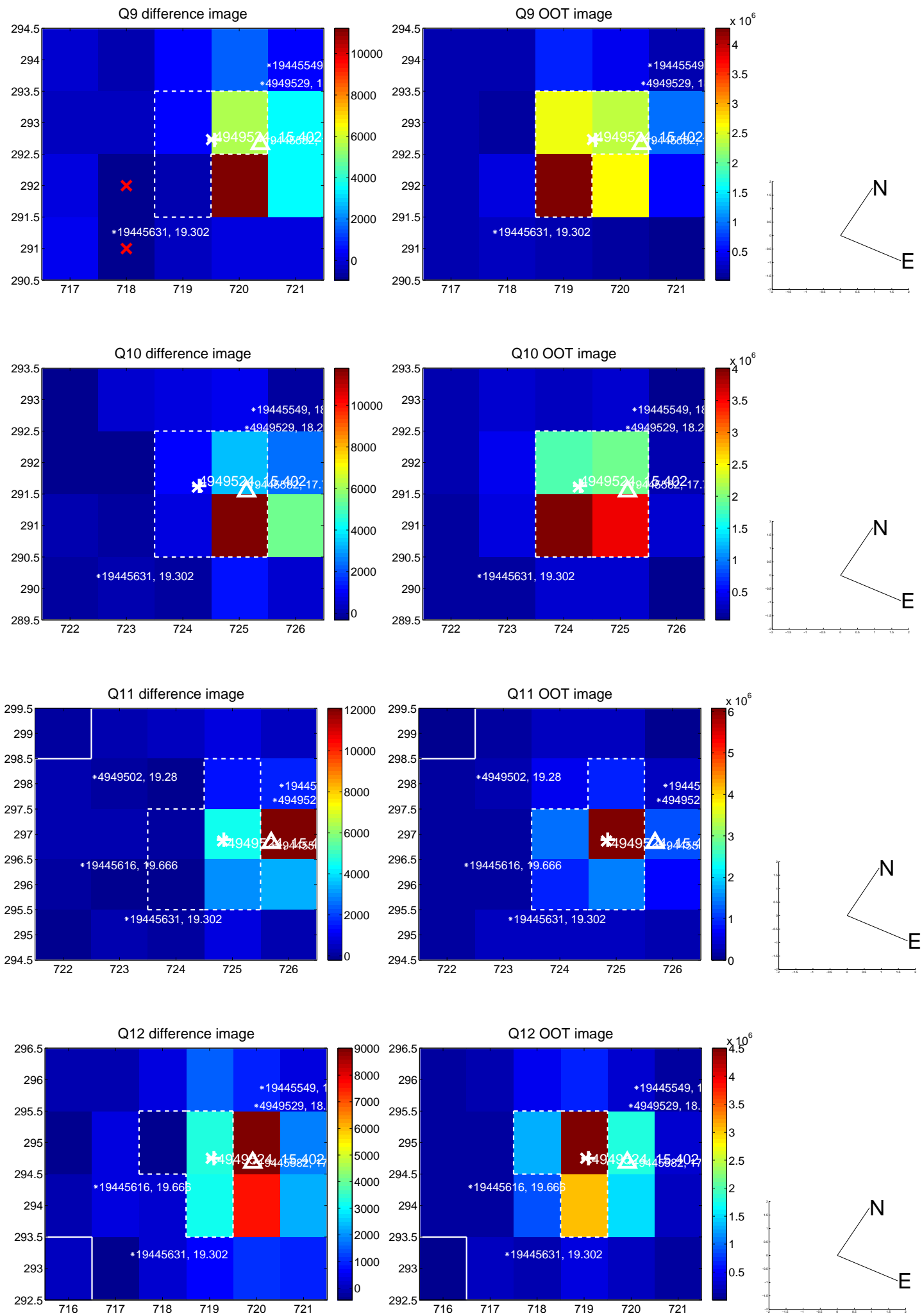
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



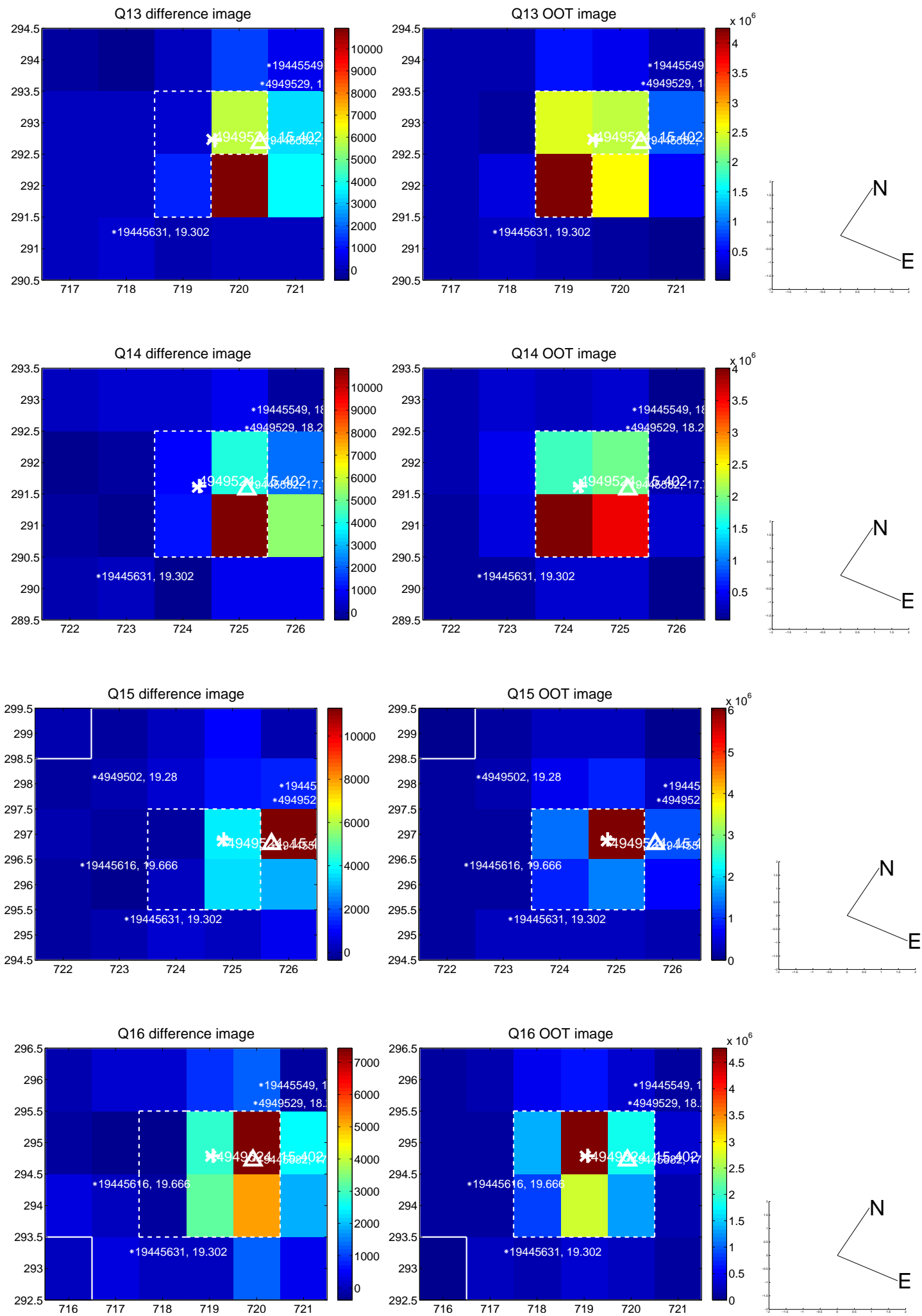
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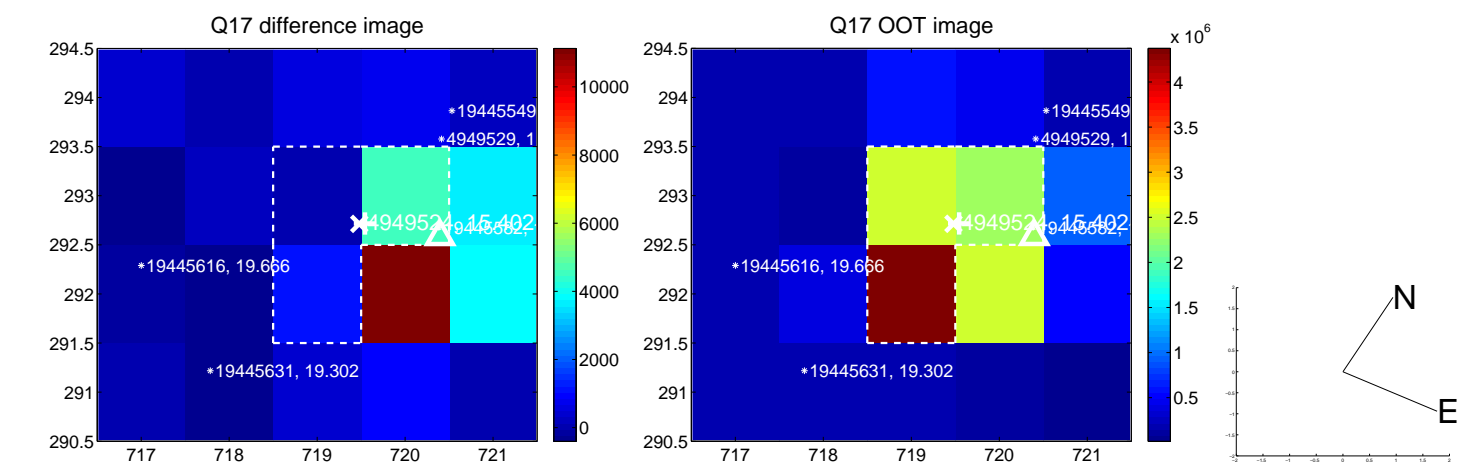
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



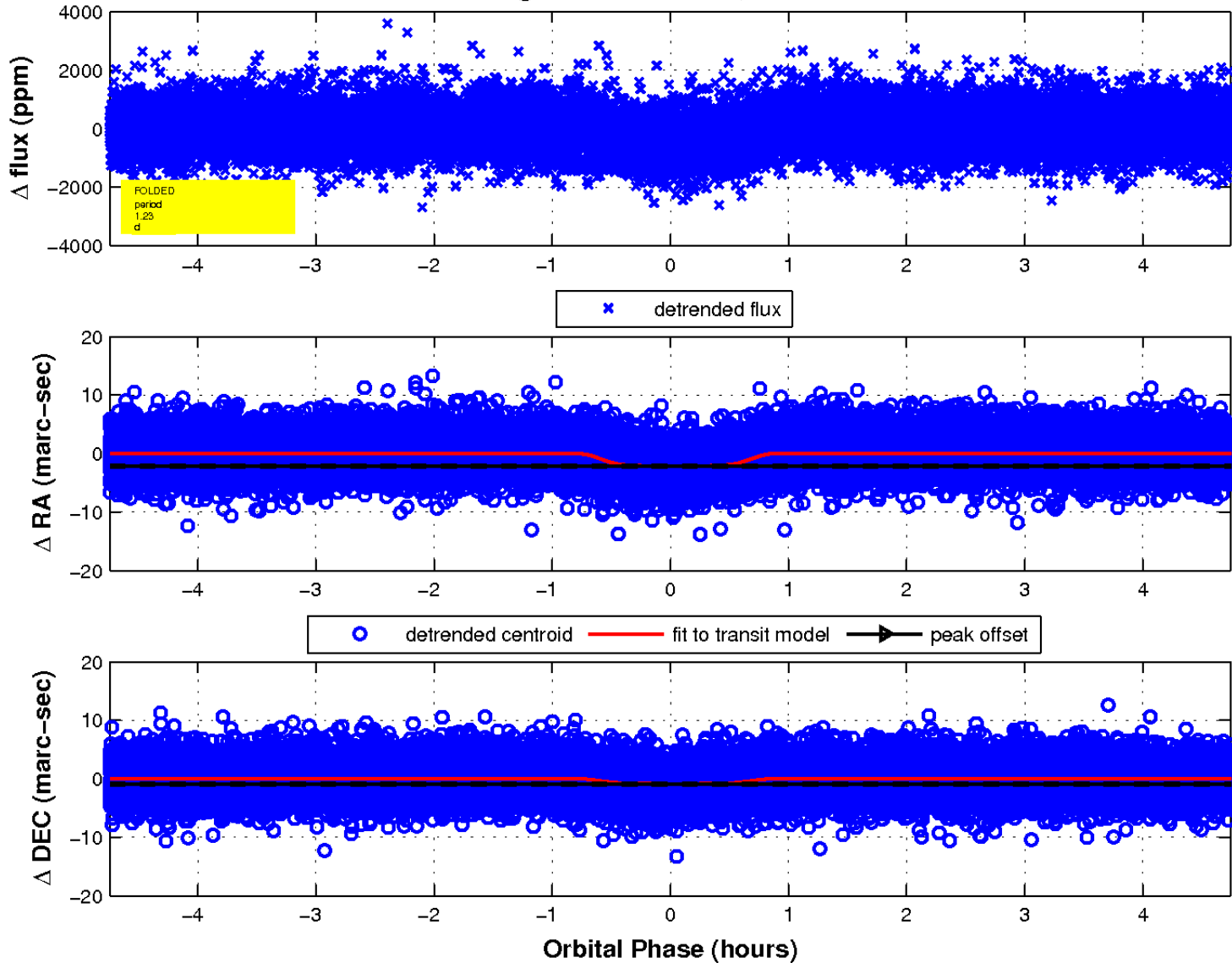
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

