

KIC 007009548

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})
007009548-01	OBS	5341.01	15.185765	144.638774	219.5	0.728	11.6	18.0	1.34	6311	2.08	170.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007009548-01	OBS	PC	0.93	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 007009548-01

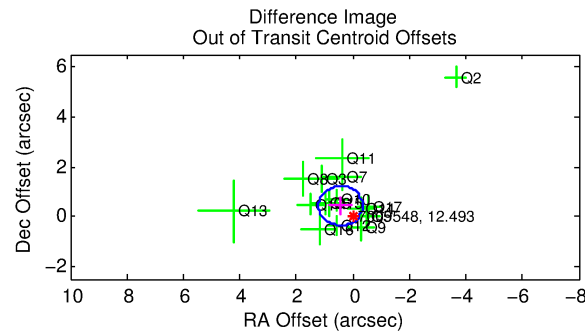
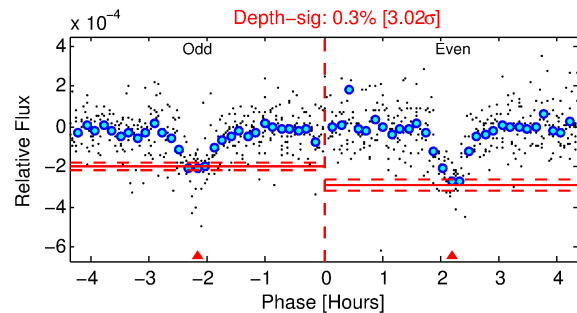
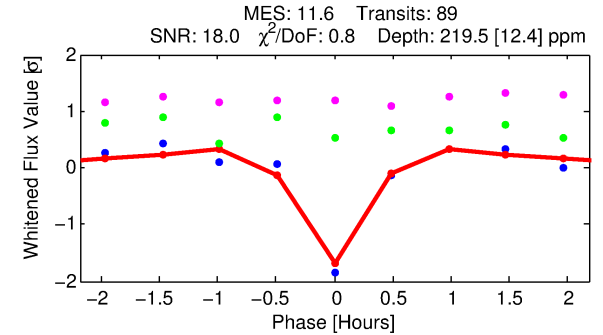
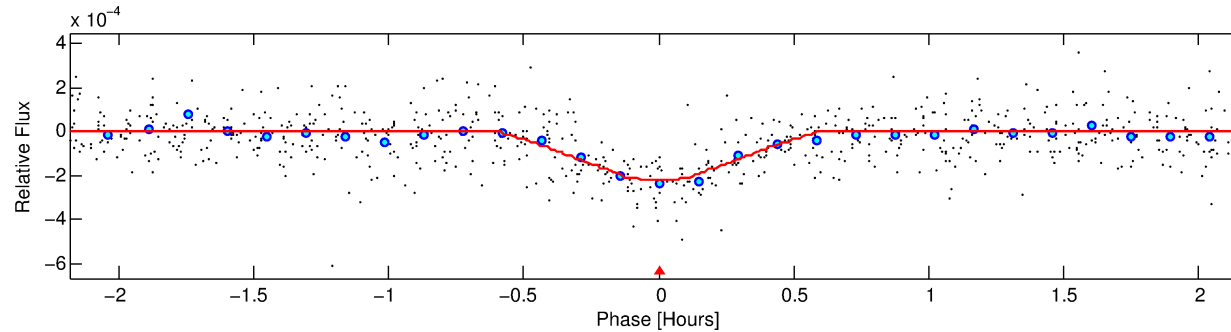
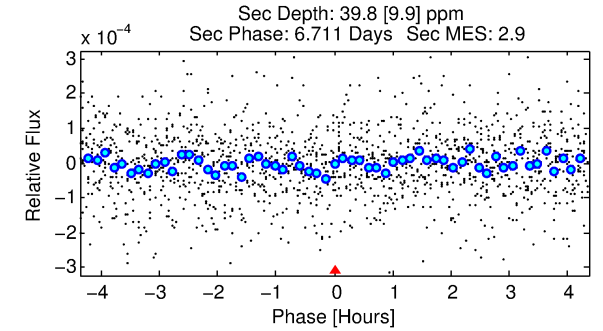
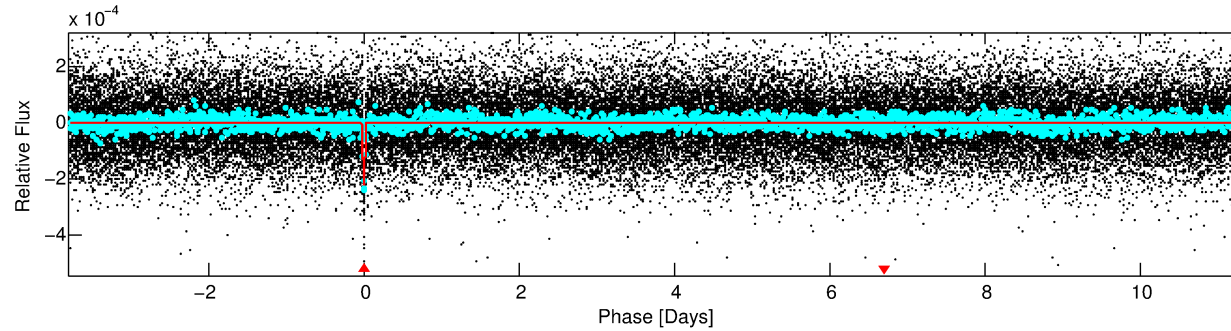
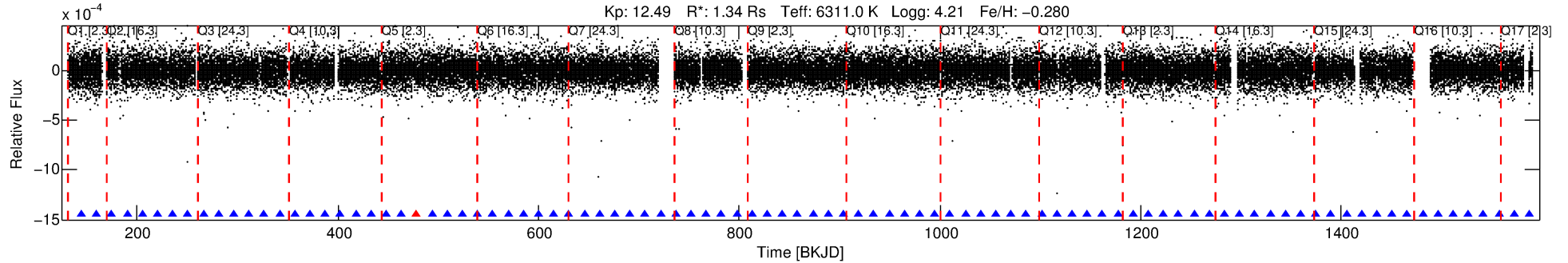
No Significant Match Found

DV One-Page Summary

KIC: 7009548 Candidate: 1 of 1 Period: 15.186 d

KOI: K05341 Corr: No Ephemeris Match

Kp: 12.49 R*: 1.34 Rs Teff: 6311.0 K Logg: 4.21 Fe/H: -0.280



DV Fit Results:

Period = 15.18577 [0.00002] d
Epoch = 144.6388 [0.0012] BKJD
Rp/R* = 0.0142 [0.0046]
a/R* = 140.60 [236.79]
b = 0.50 [2.54]
Seff = 170.83 [68.46]
Teq = 922 [92] K
Rp = 2.08 [0.90] Re
a = 0.1221 [0.0312] AU
Ag = 75.50 [59.38] [1.25σ]
Teffp = 4201 [732] K [4.44σ]

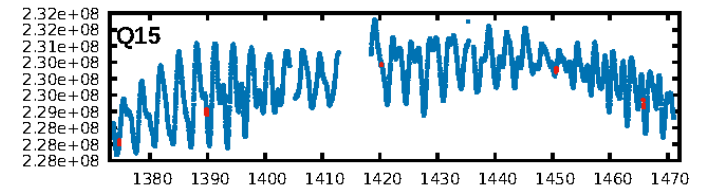
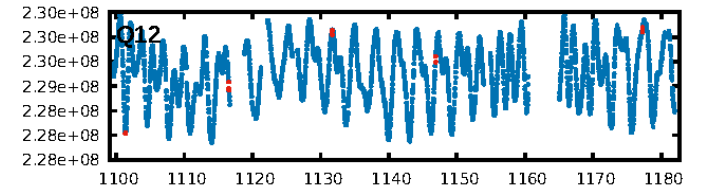
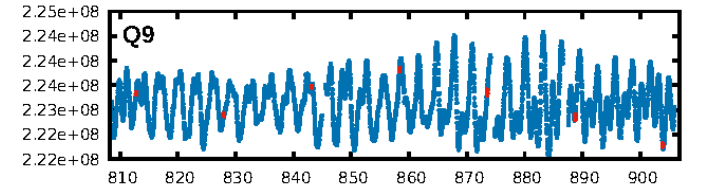
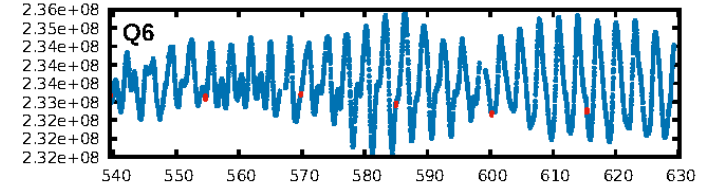
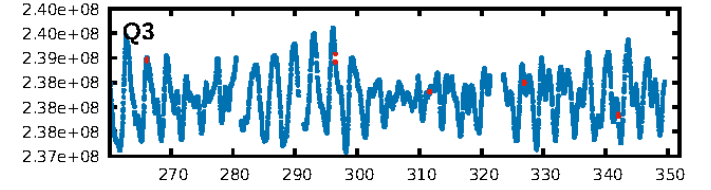
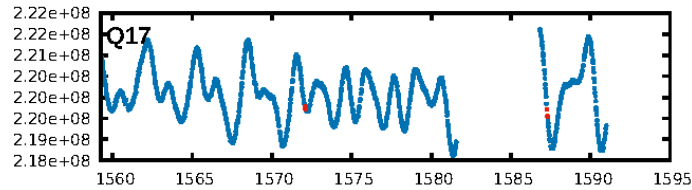
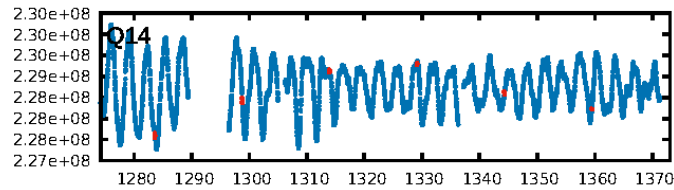
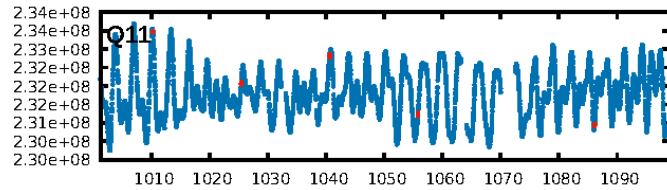
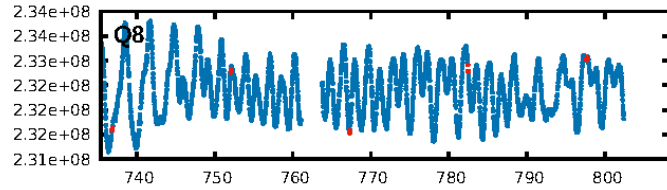
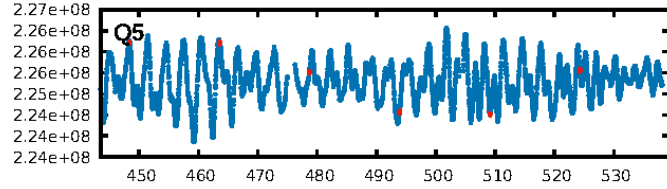
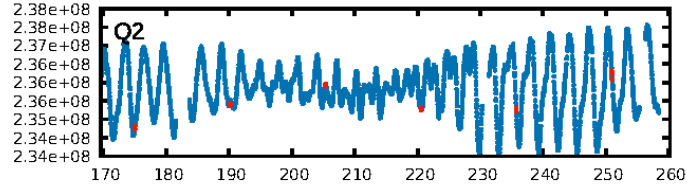
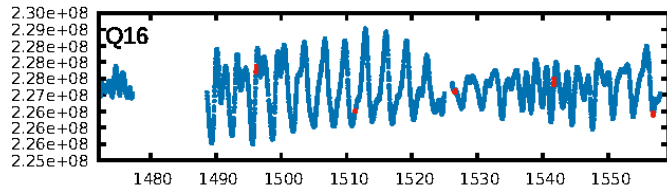
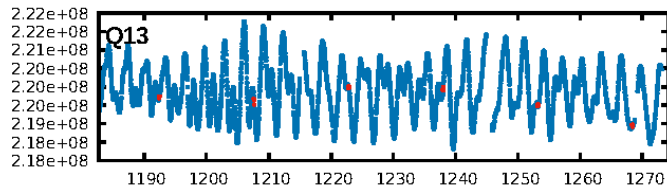
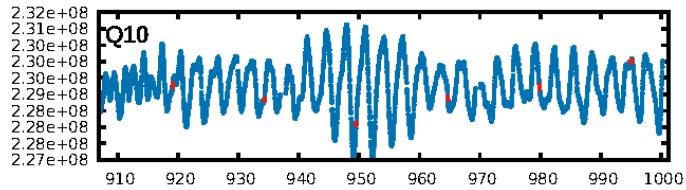
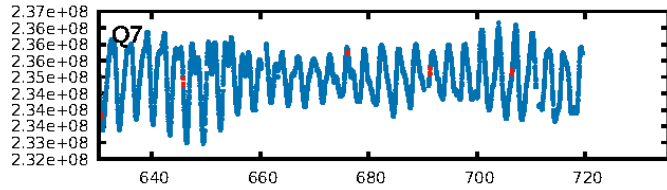
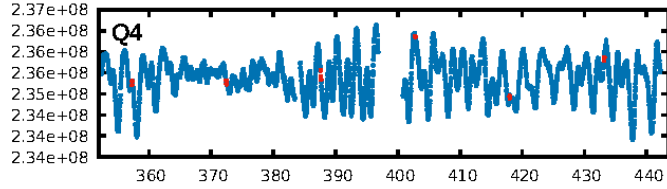
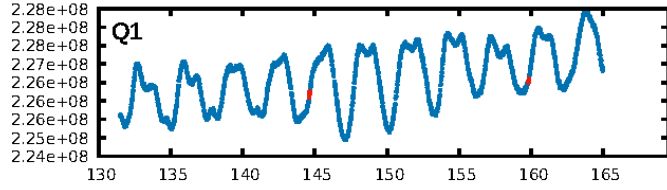
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.77e-28
RollingBand-fgt: 0.99 [84/85]
GhostDiagnostic-chr: 1.164
Centroid-sig: 0.8%
Centroid-so: 1.155 arcsec [2.08σ]
OotOffset-rm: 0.616 arcsec [2.35σ]
KicOffset-rm: 0.755 arcsec [3.09σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.88 [14/16]
DiffImageOverlap-fno: 1.00 [17/17]

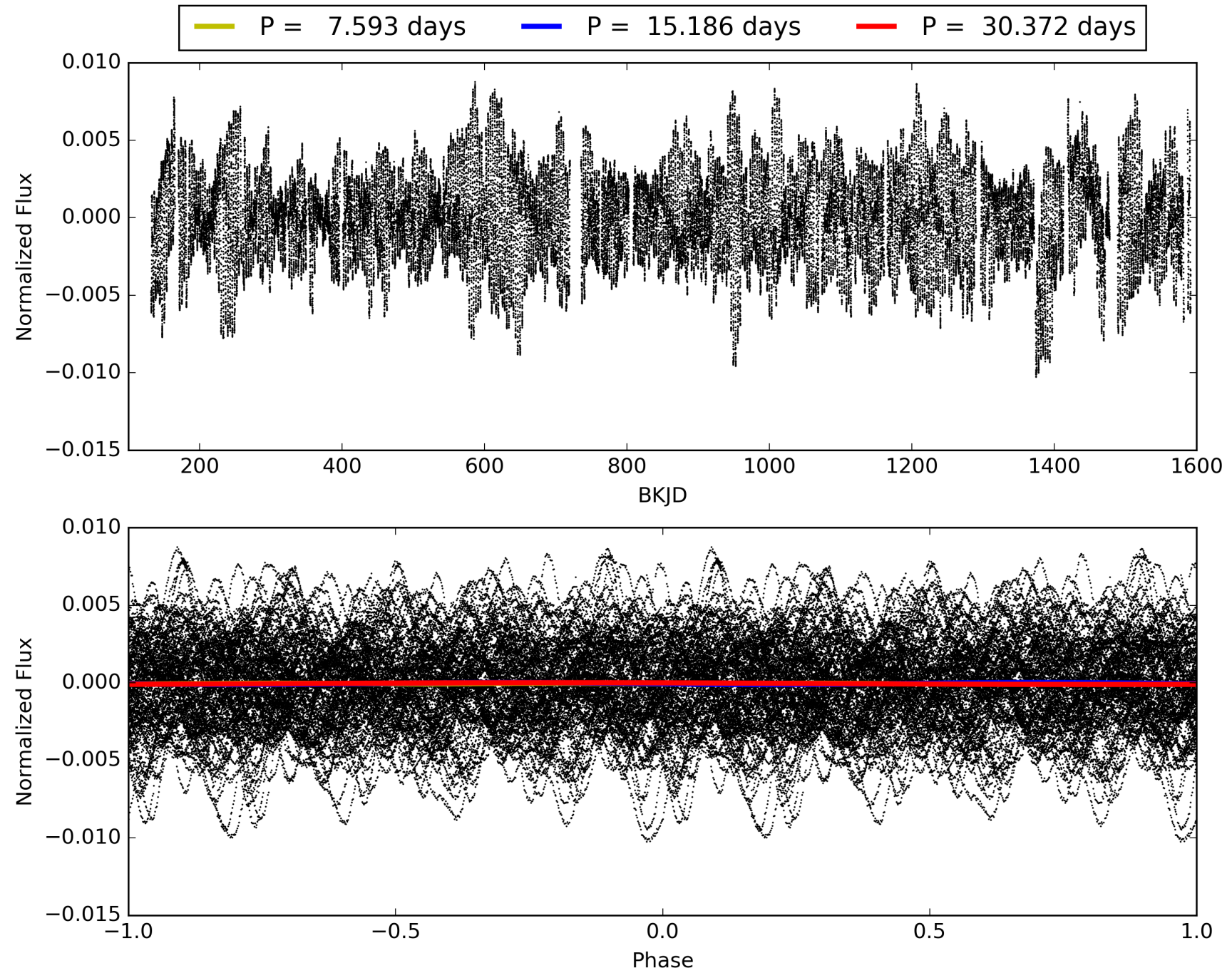
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:51:51 Z

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

TCE 007009548-01, PDC Light Curves

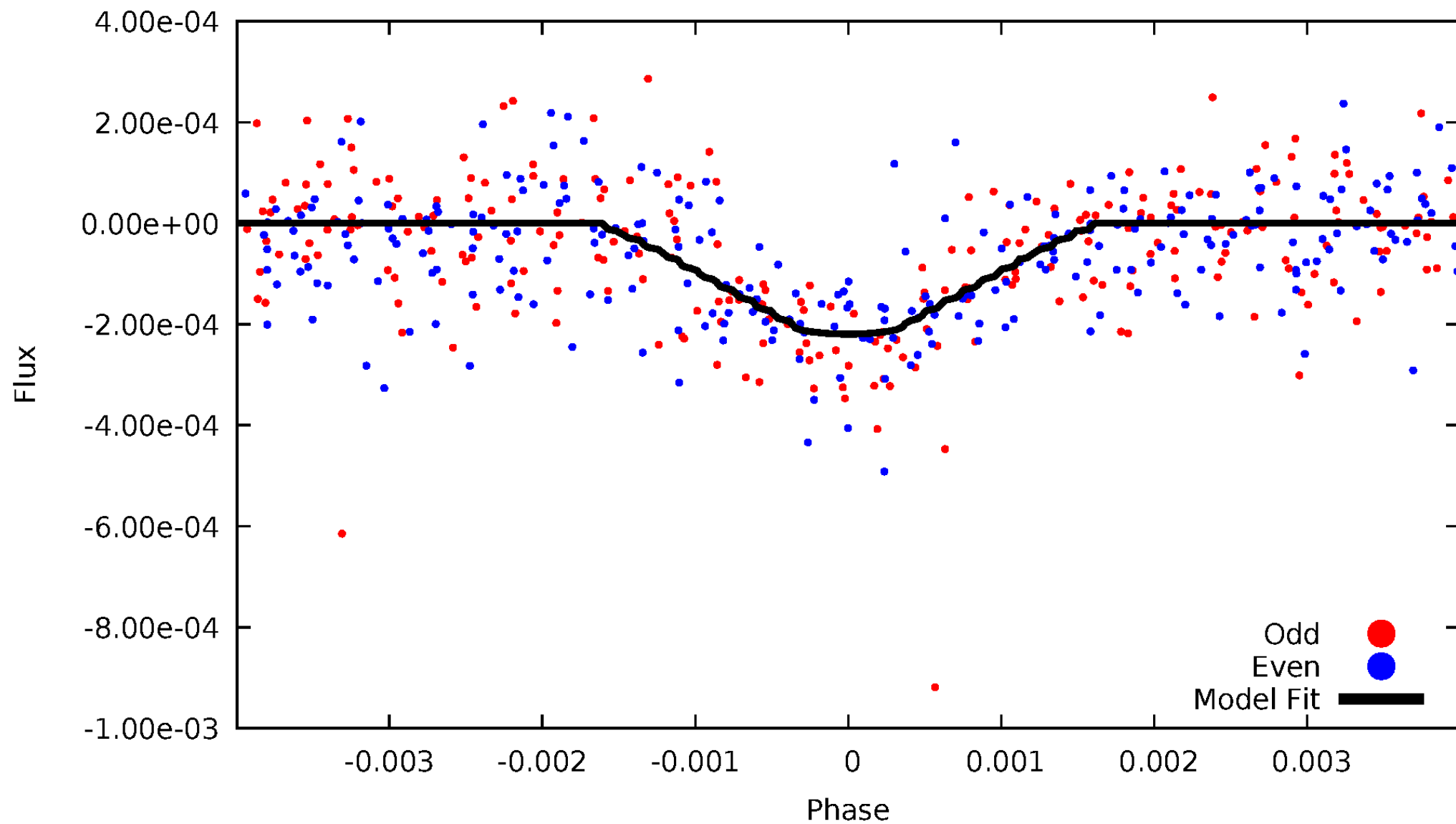


TCE 007009548-01



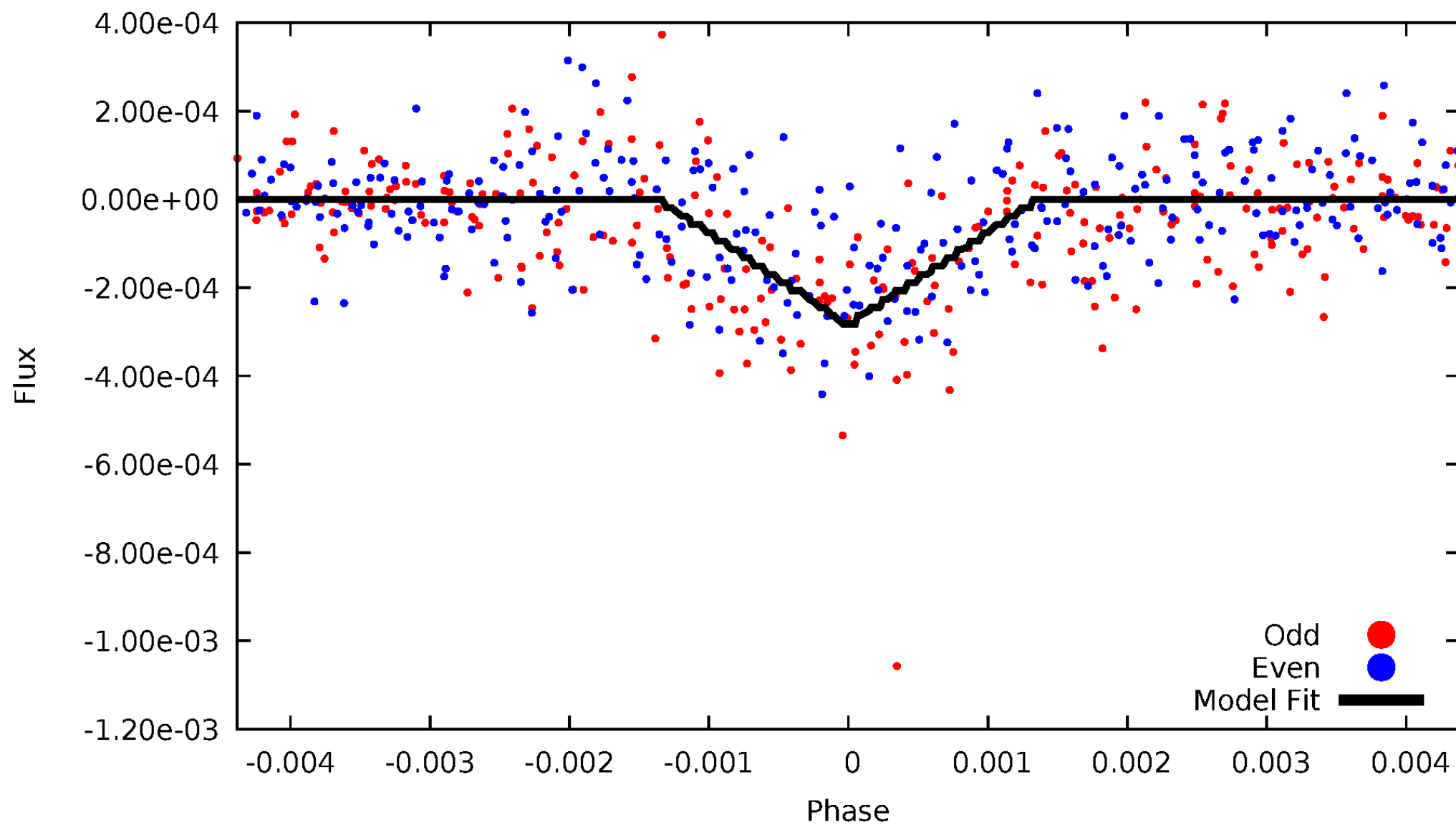
DV Odd/Even

TCE 007009548-01



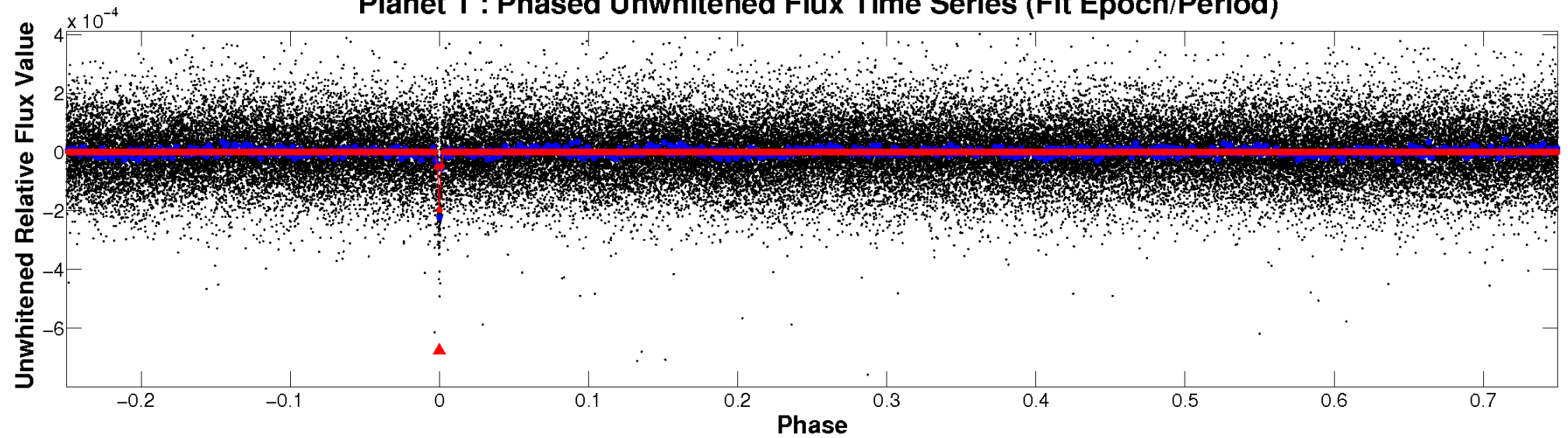
ALT Odd/Even

TCE 007009548-01

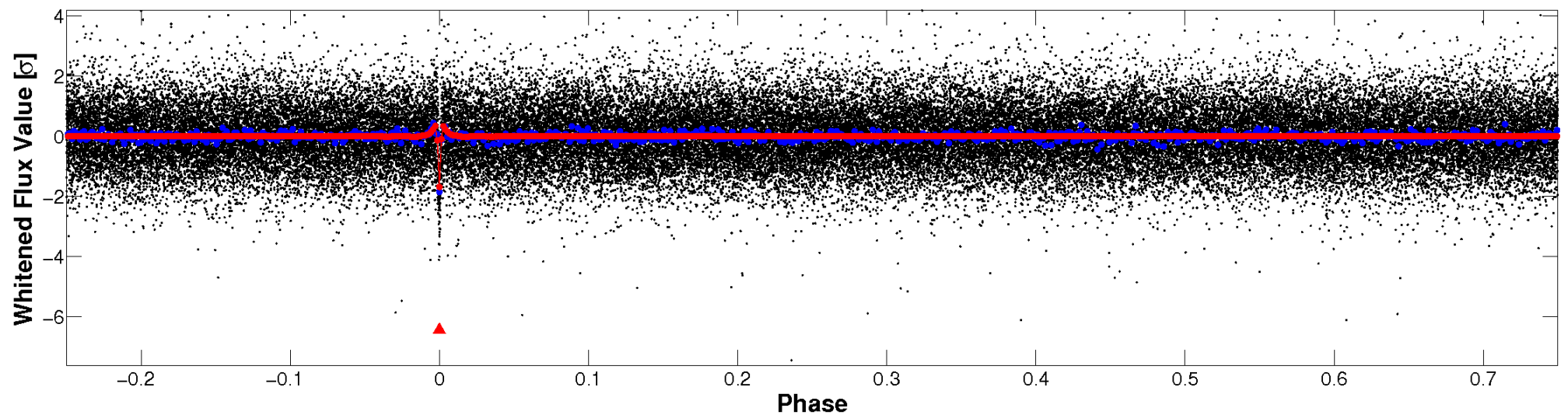


Non-Whitened Vs. Whitened Light Curve

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

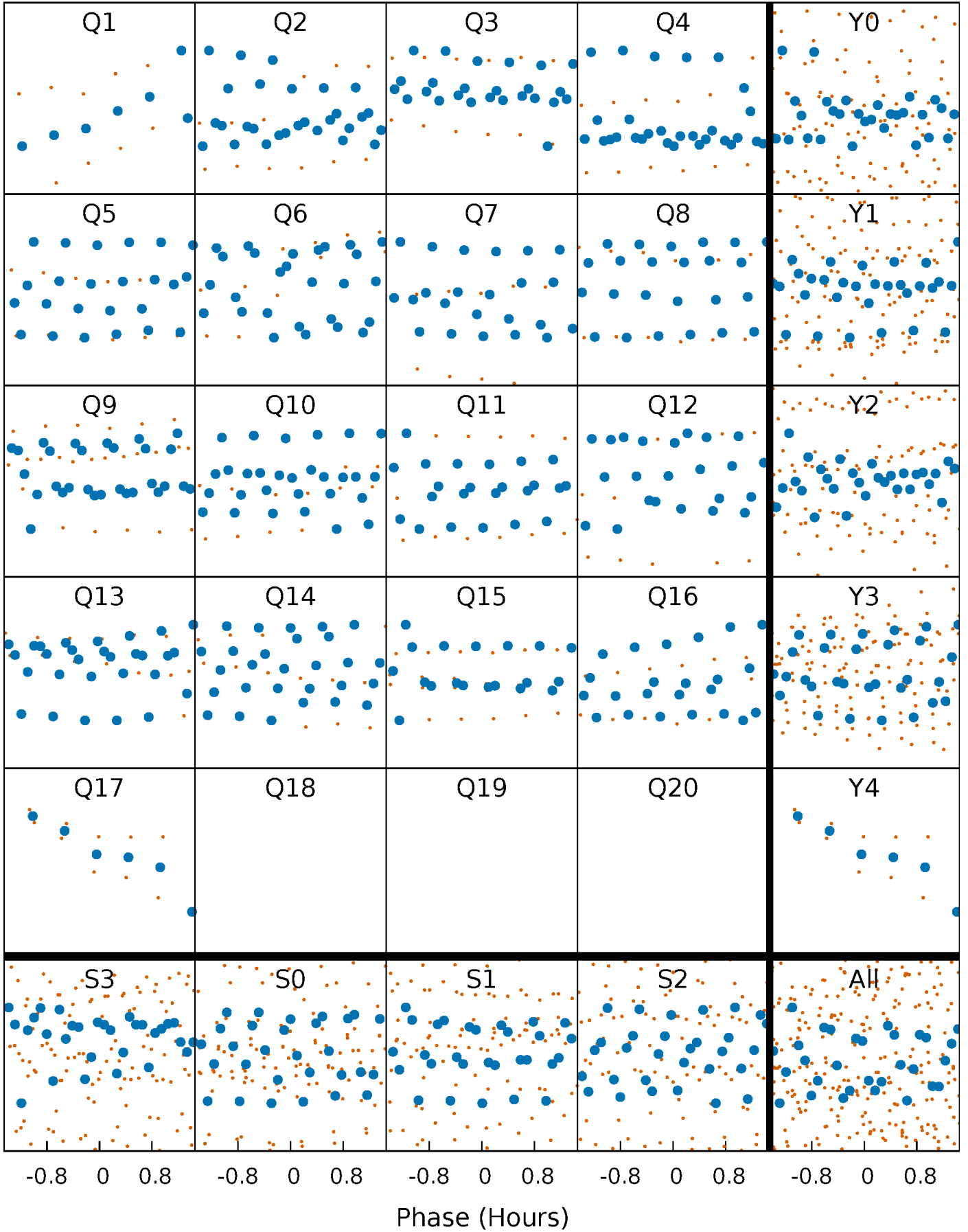


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



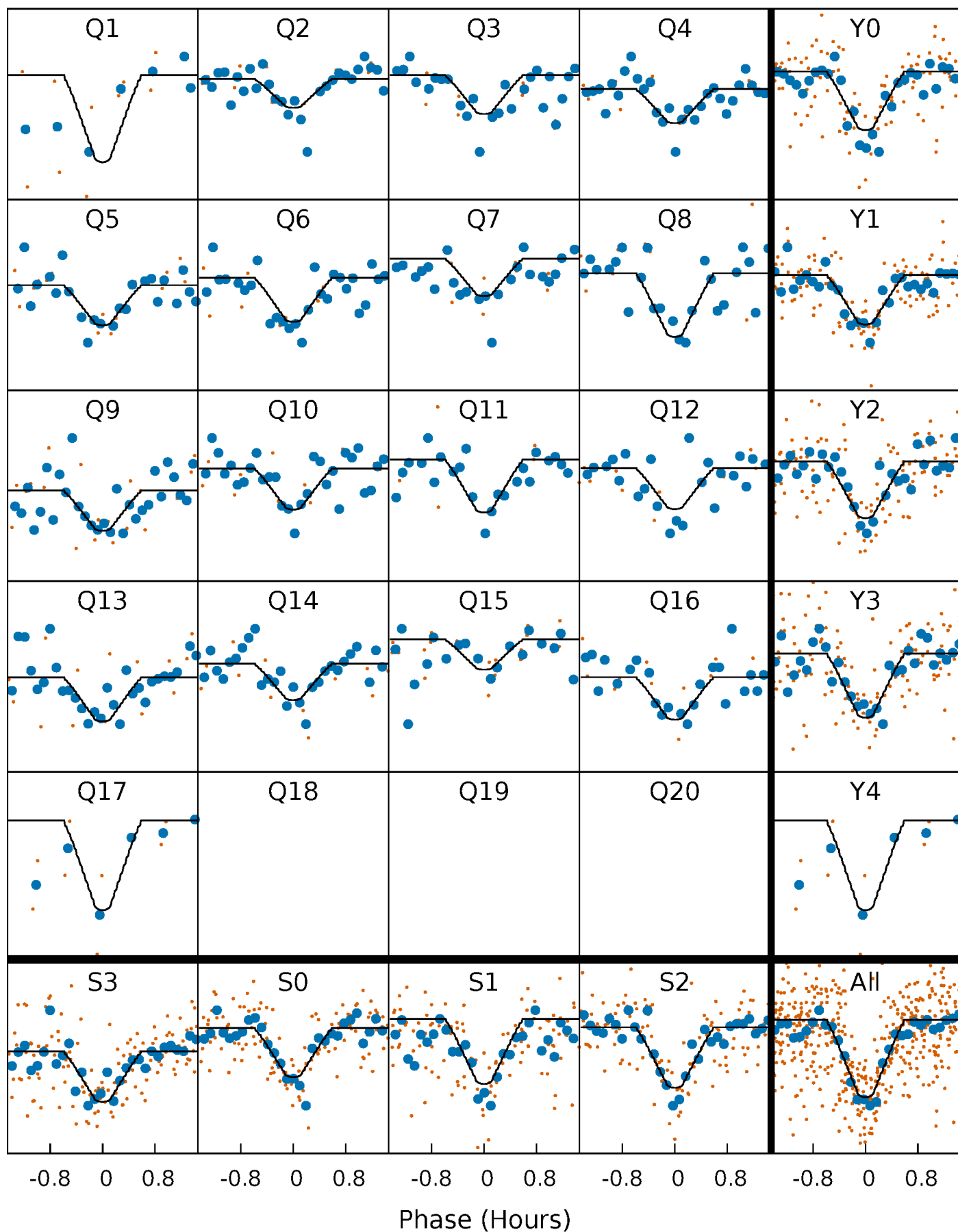
PDC Quarter-Phased Transit Curves

TCE 007009548-01 P= 15.185765 Days $T_0=144.638774$ (BKJD)



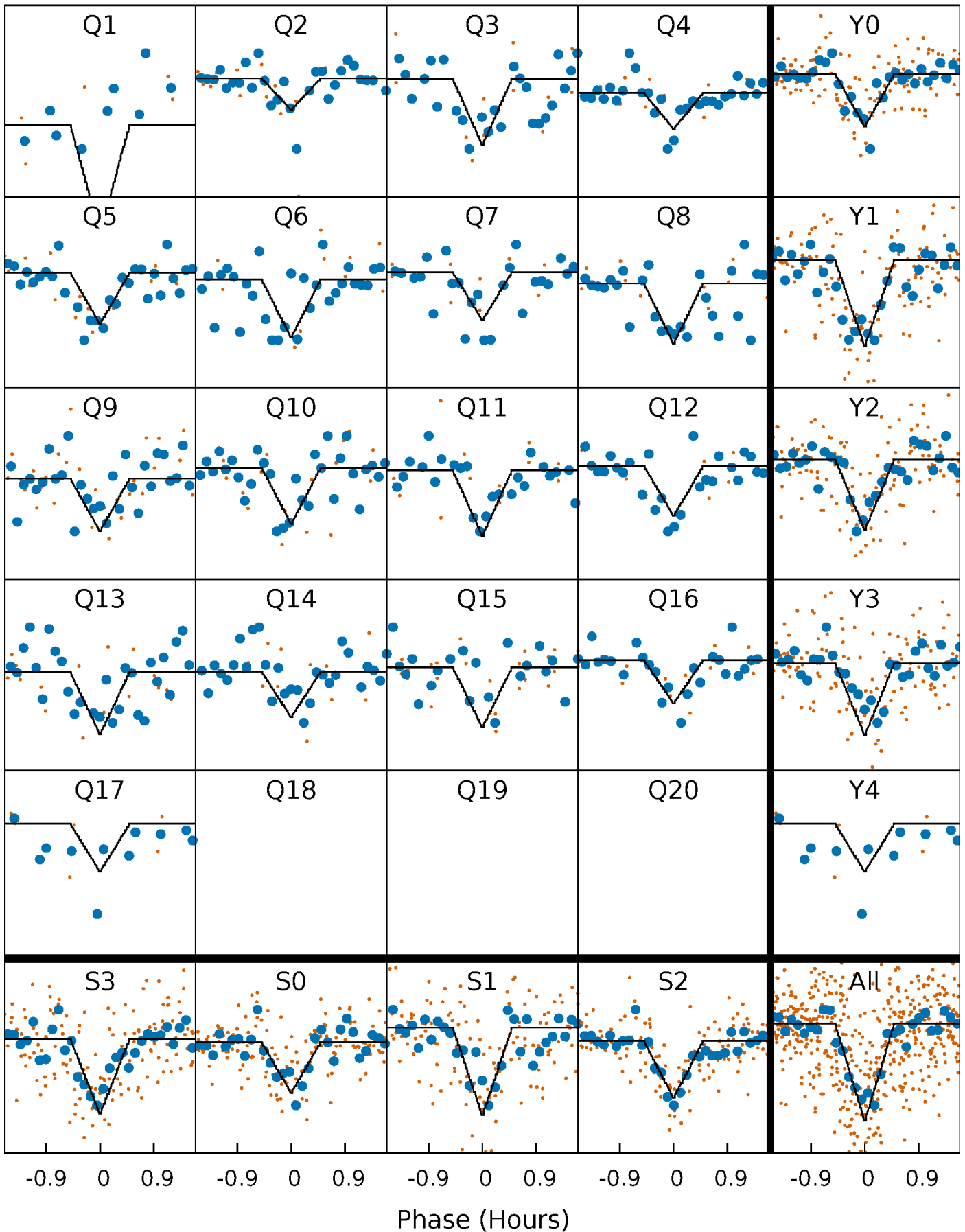
DV Quarter-Phased Transit Curves

TCE 007009548-01 P= 15.185765 Days $T_0=144.638774$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

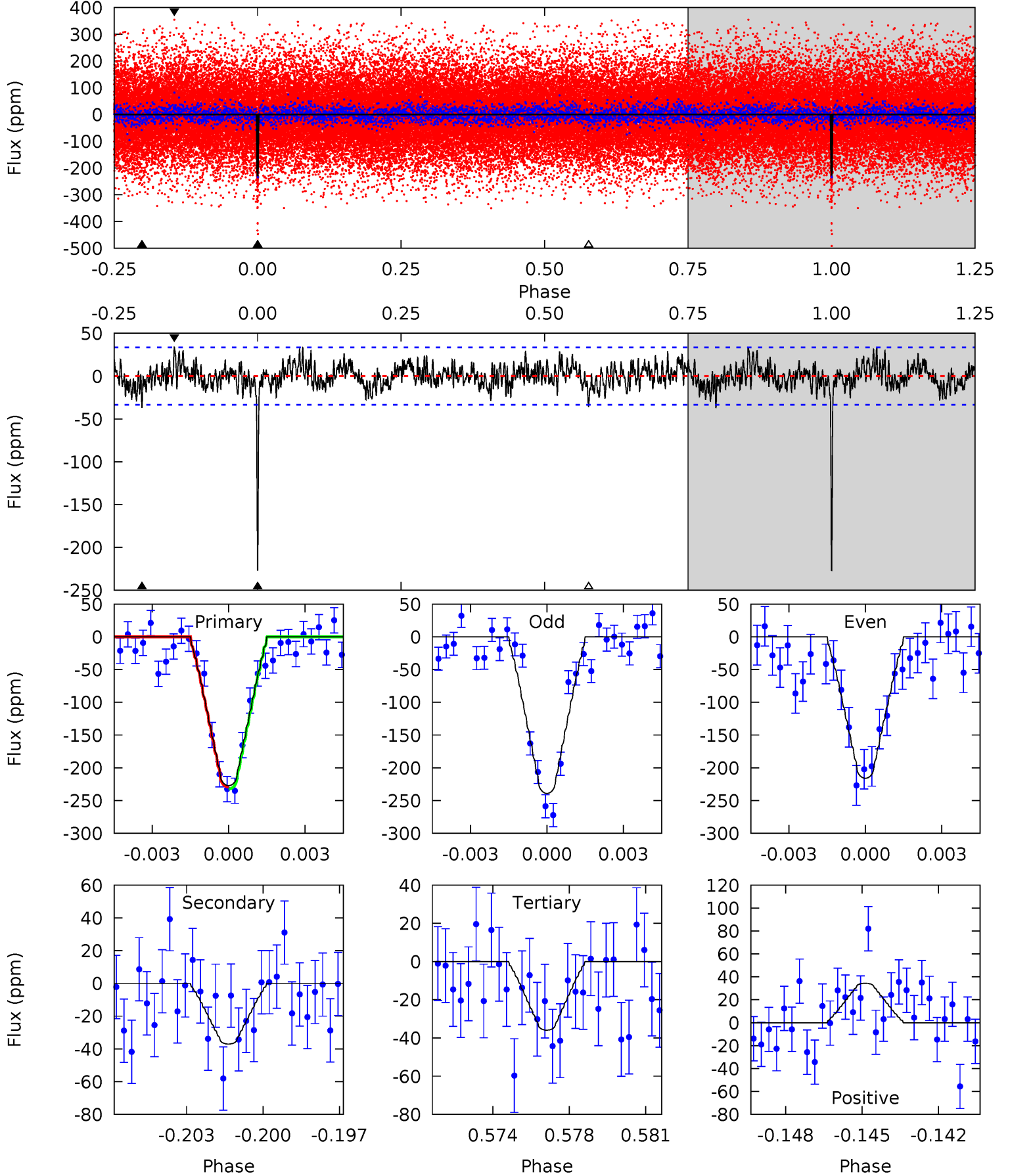
TCE 007009548-01 P= 15.185695 Days $T_0=144.642588$ (BKJD)



DV Model-Shift Uniqueness Test

007009548-01, P = 15.185765 Days, E = 129.453009 Days

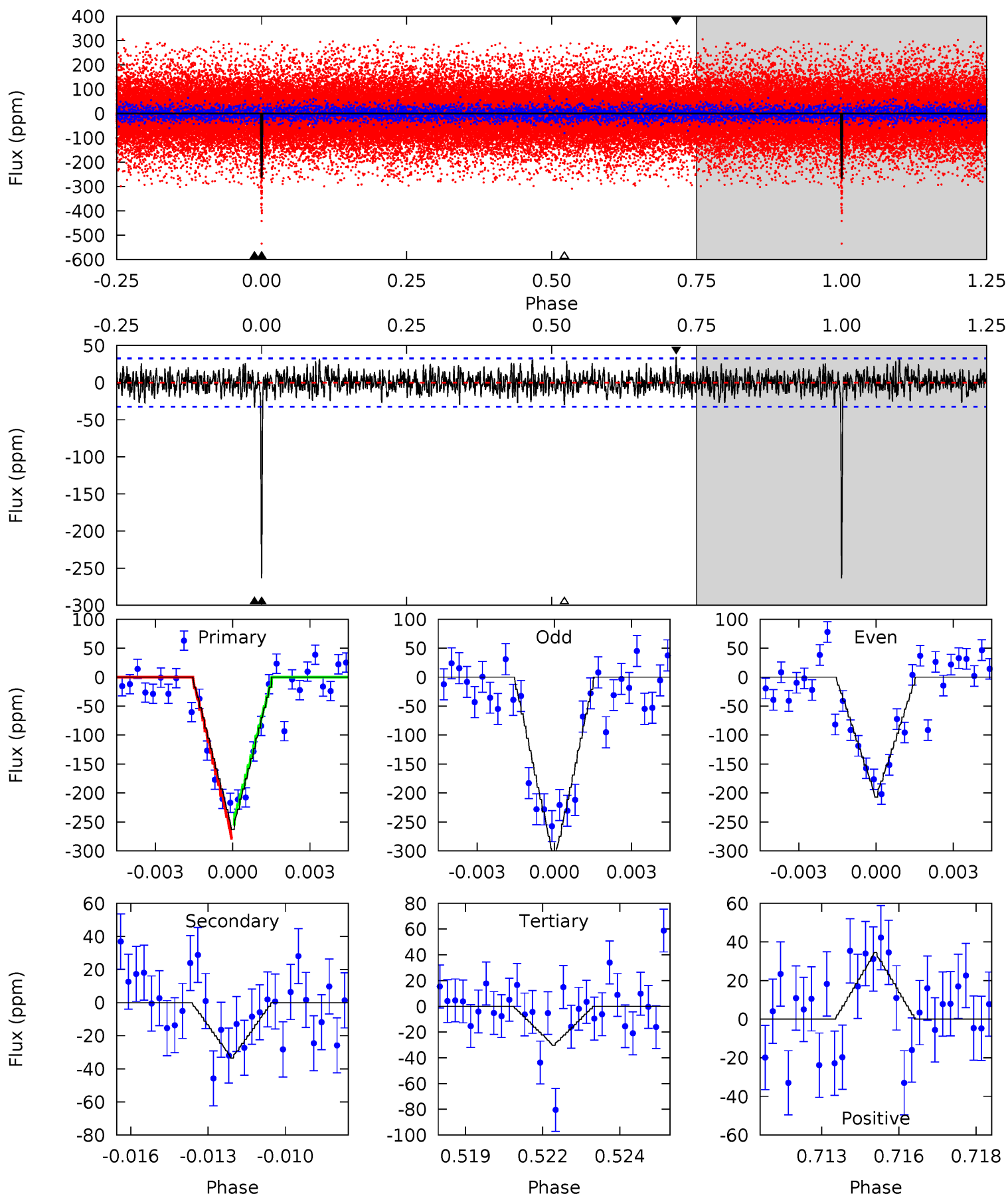
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.5	5.79	5.61	5.36	5.24	2.95	1.71	29.9	30.1	0.18	0.42	1.81	0.99	0.13	0.23



Alt Model-Shift Uniqueness Test

007009548-01, P = 15.185695 Days, E = 129.456893 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.7	5.43	4.92	5.60	5.28	3.01	1.60	37.8	37.1	0.51	-0.17	9.09	1.07	0.12	1.98



Stellar Parameters For KIC 007009548

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6311^{+150}_{-188}	$4.207^{+0.214}_{-0.175}$	$-0.280^{+0.250}_{-0.300}$	$1.339^{+0.394}_{-0.287}$	$1.050^{+0.172}_{-0.129}$	$0.616^{+0.648}_{-0.321}$
	+2%/-3%	+5%/-4%	+89%/-107%	+29%/-21%	+16%/-12%	+105%/-52%
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 007009548-01 / KOI 5341.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-37 ± 6	$2.02^{+0.72}_{-0.63}$	1278^{+91}_{-91}	4346^{+727}_{-418}	72^{+94}_{-32}
Alt.	-33 ± 6	$2.41^{+0.77}_{-0.73}$	1272^{+99}_{-82}	3997^{+560}_{-325}	47^{+52}_{-20}

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

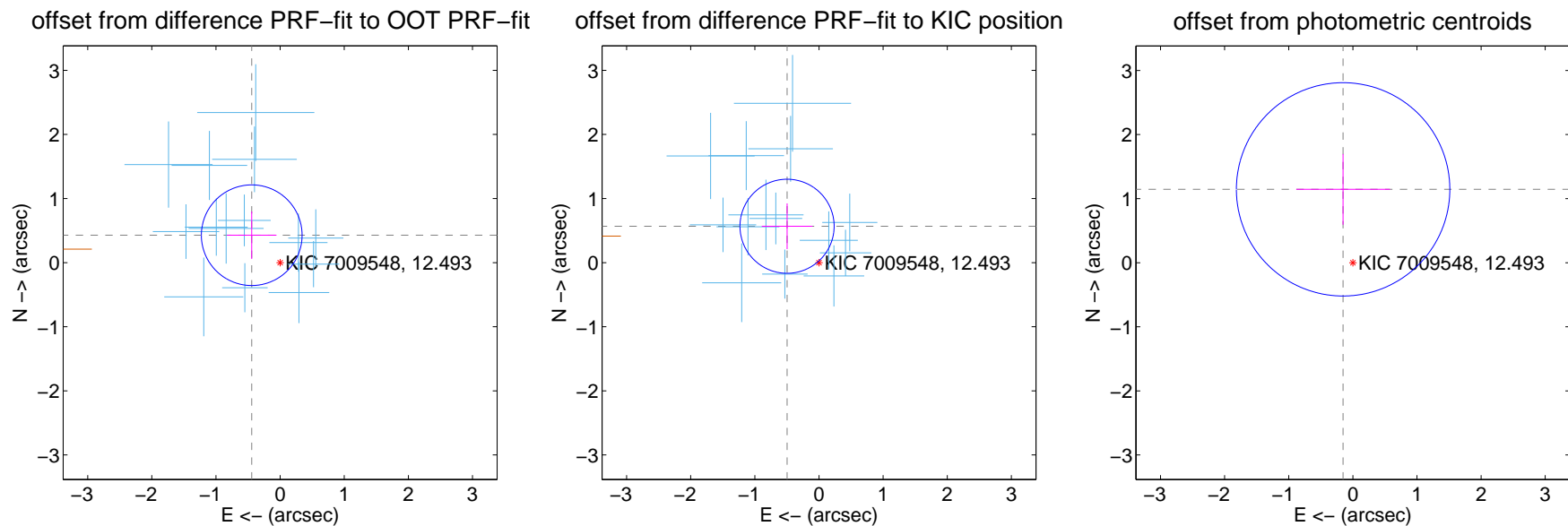
DV Centroid Data

Supplemental centroid analysis for 007009548-01. Kepler magnitude: 12.49. Transit SNR 18.02

There are 14 quarters with good PRF difference image offsets

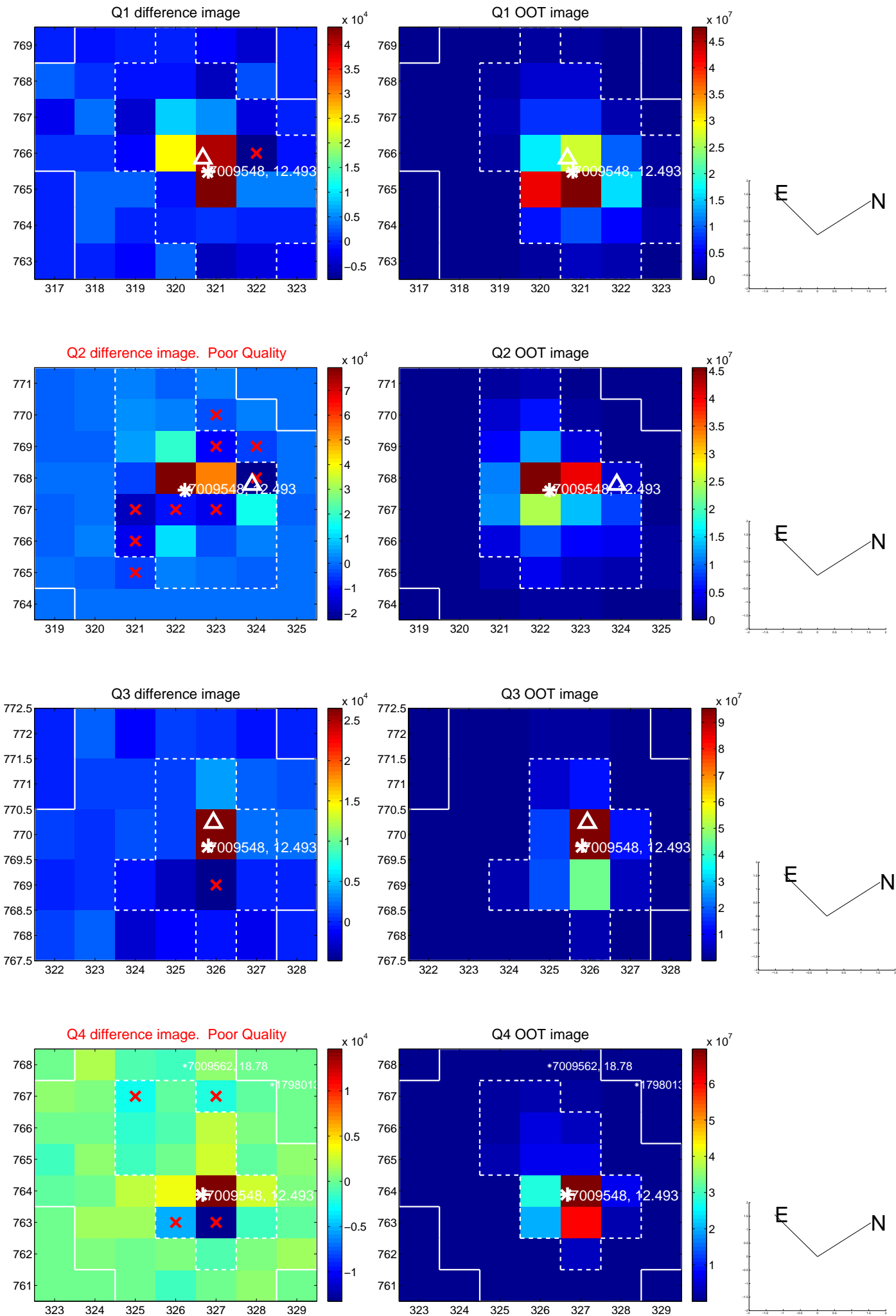
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.616 ± 0.262	2.35	0.442 ± 0.386	0.428 ± 0.371
PRF-fit source offset from KIC position	0.755 ± 0.245	3.09	0.498 ± 0.395	0.567 ± 0.358
photometric centroid source offset	1.15 ± 0.55	2.08	0.15 ± 0.73	1.14 ± 0.55

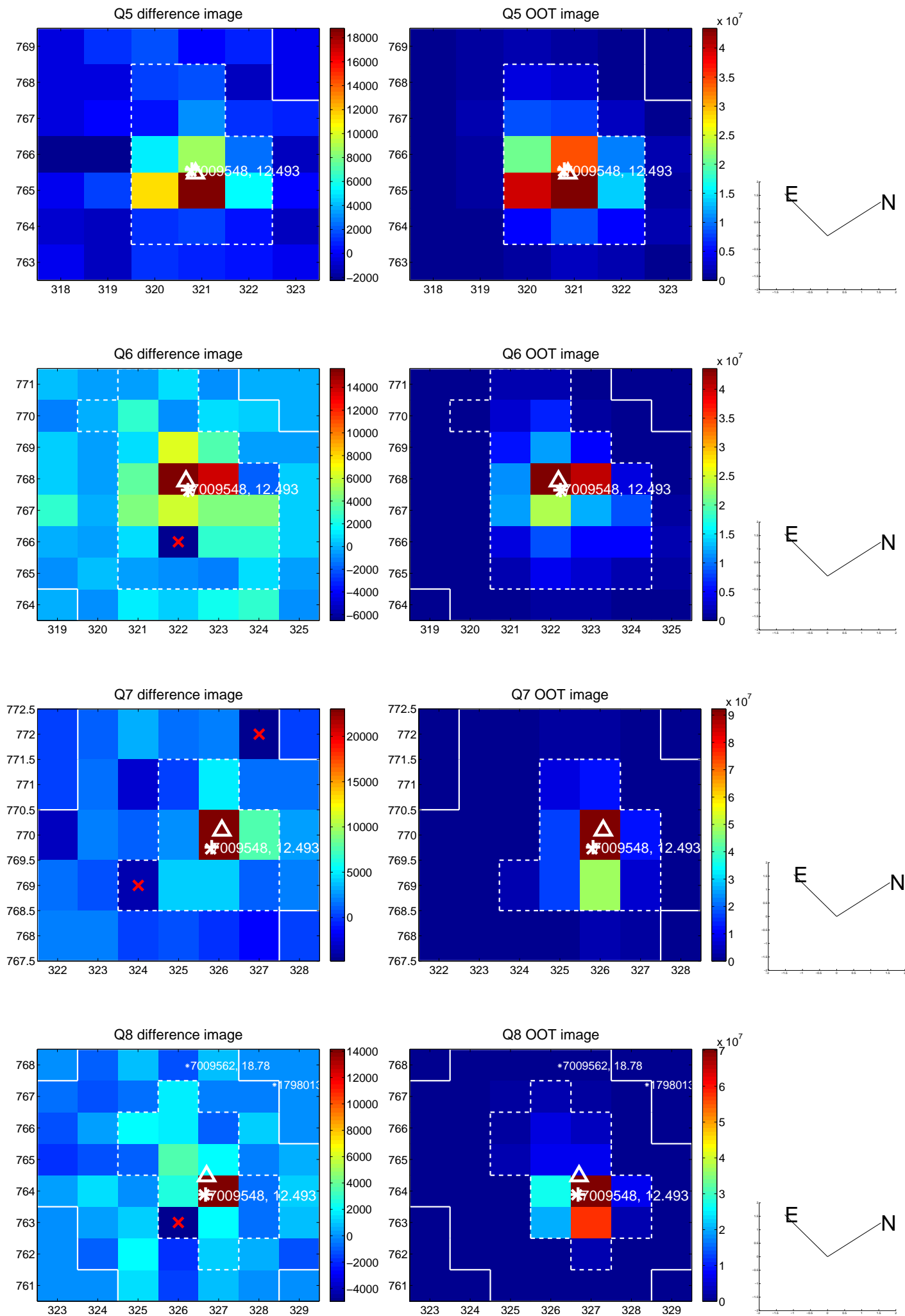


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

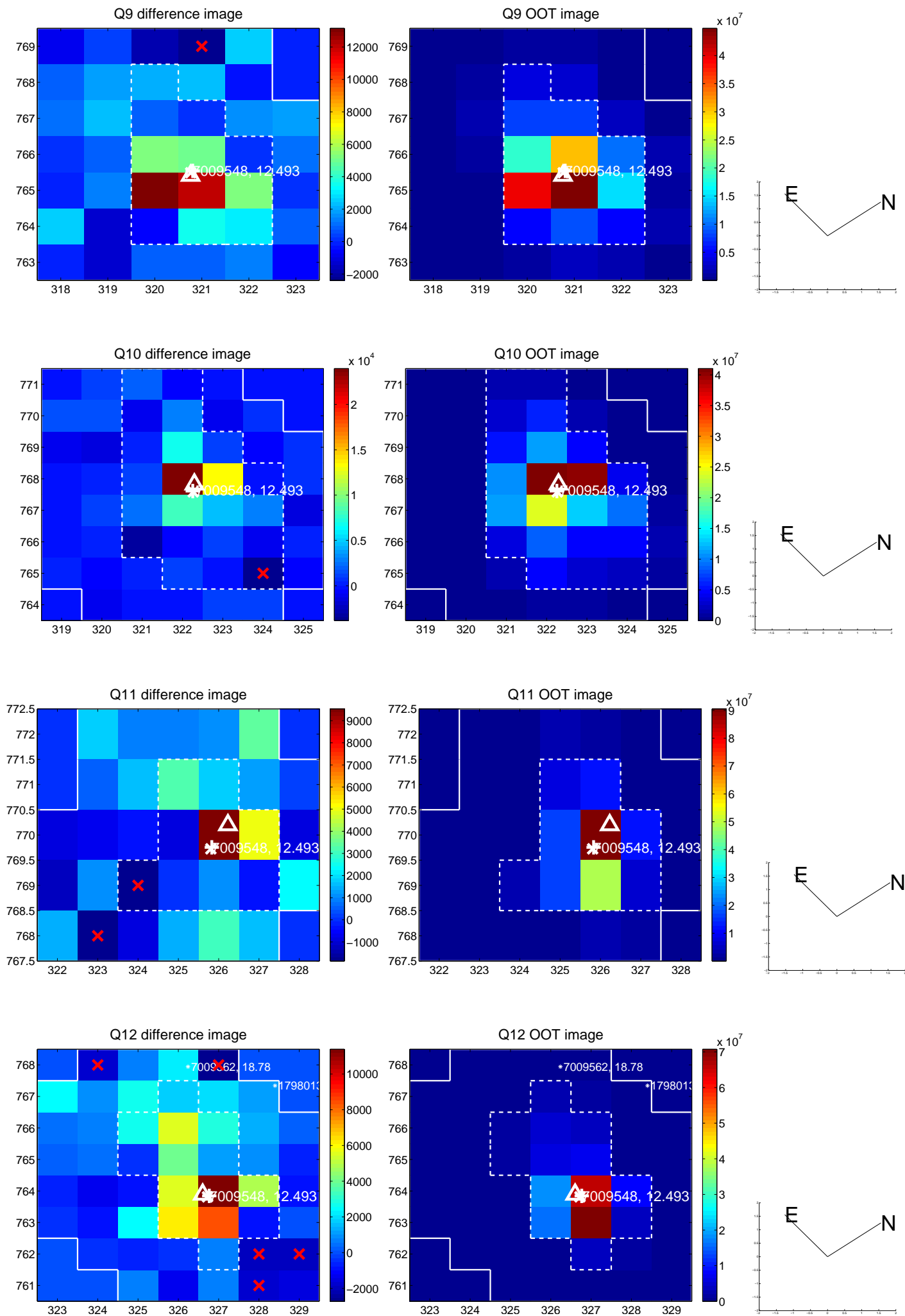
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



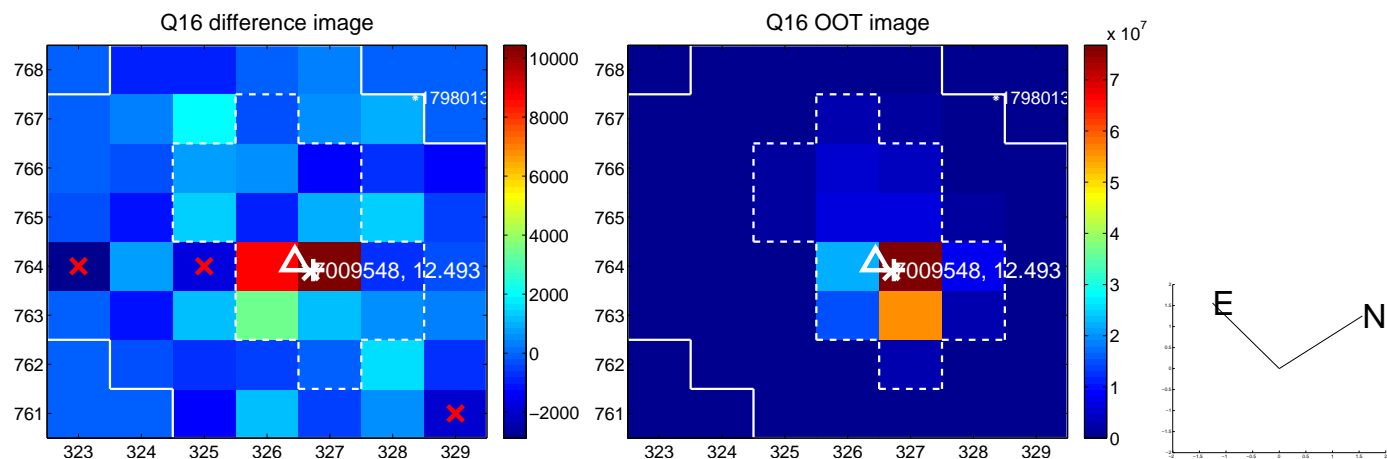
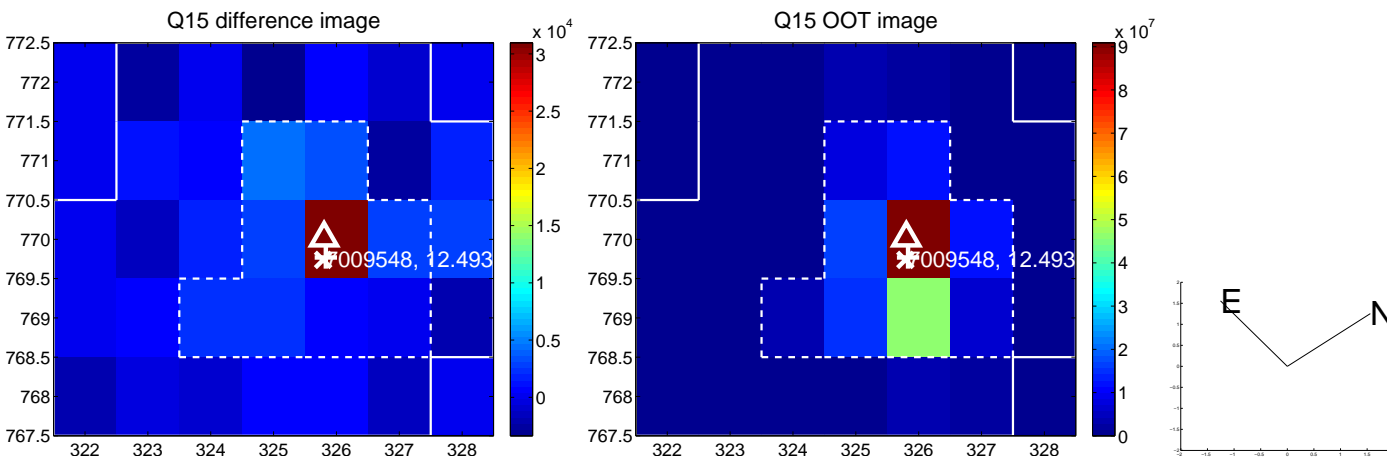
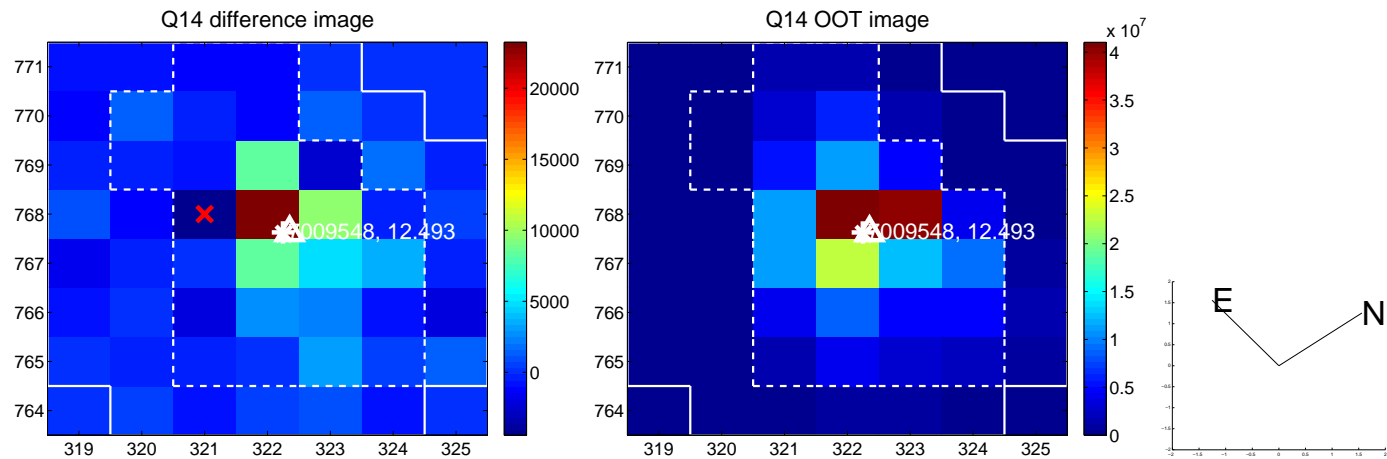
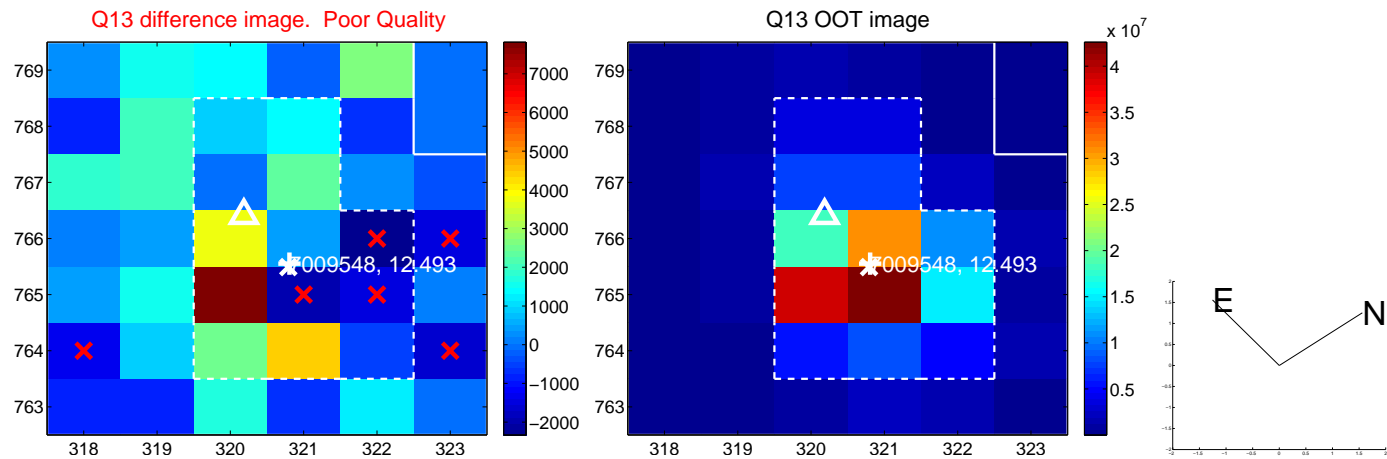
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



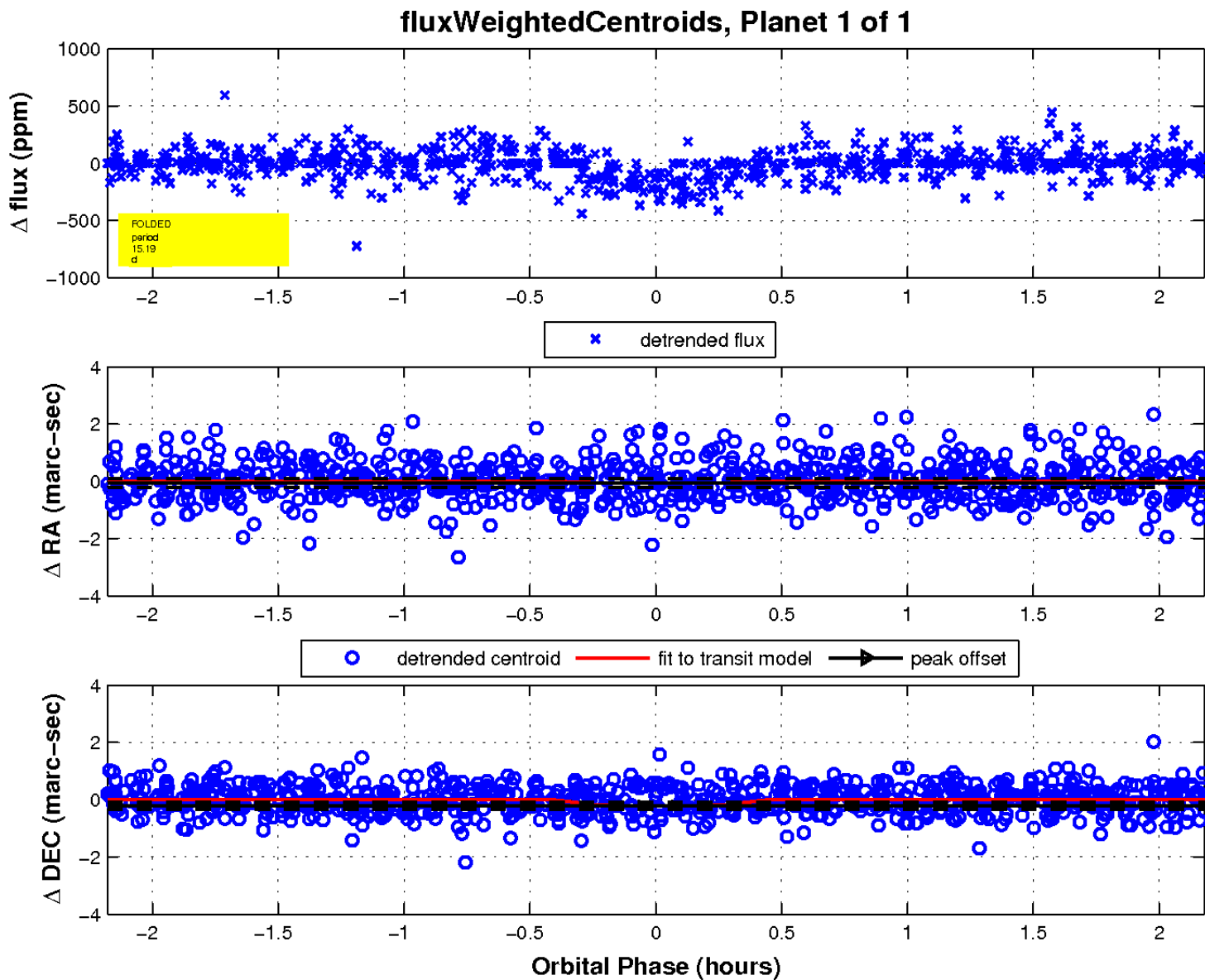
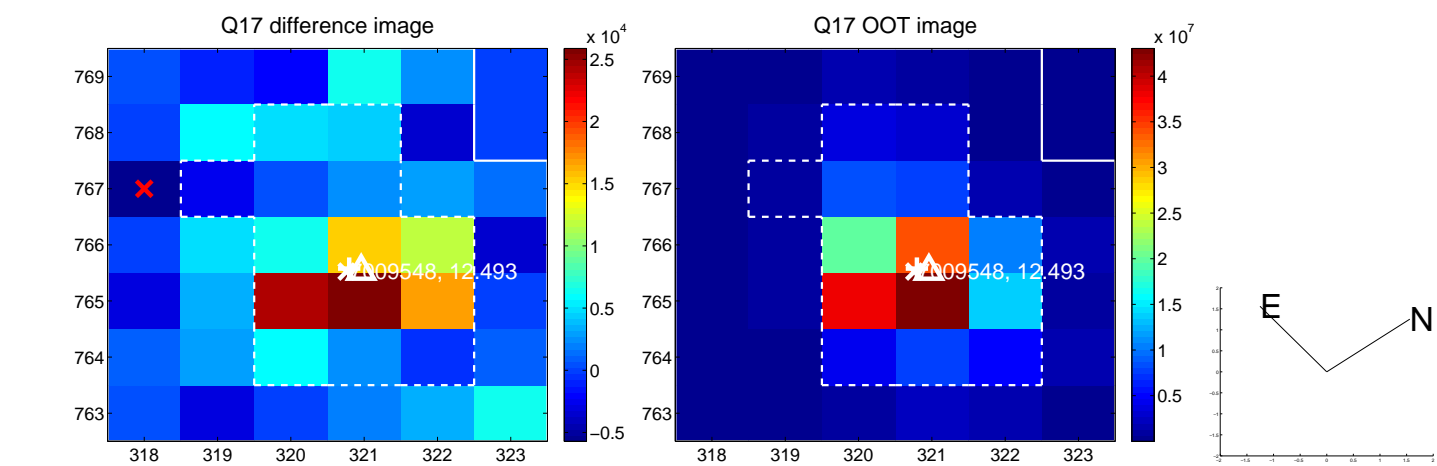
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

