

KIC 008394475

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})
008394475-01	OBS	7032.01	3.640504	134.966298	37.1	1.345	7.8	8.9	0.94	5745	0.65	393.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008394475-01	OBS	PC	0.91	0	0	0	0	CENT_KIC_POS

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

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

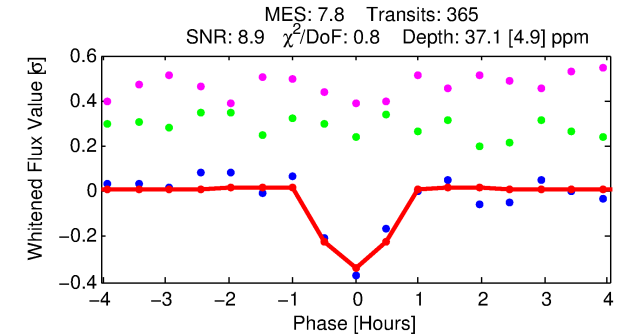
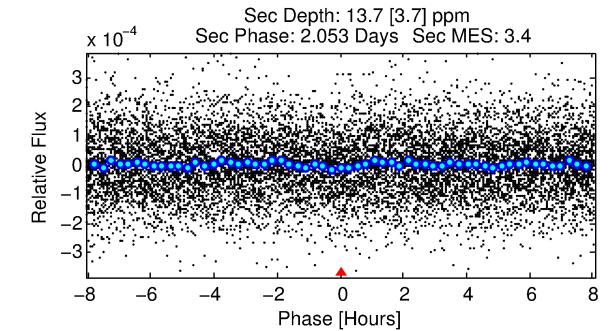
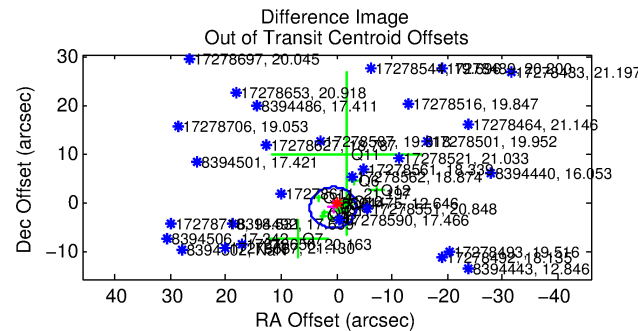
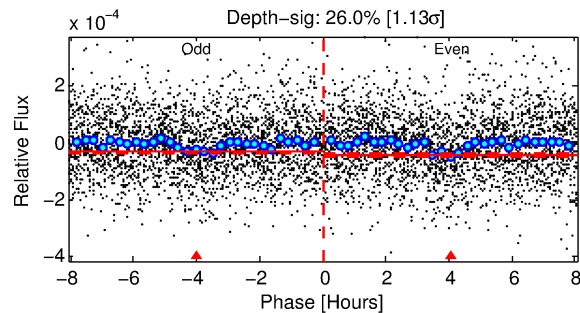
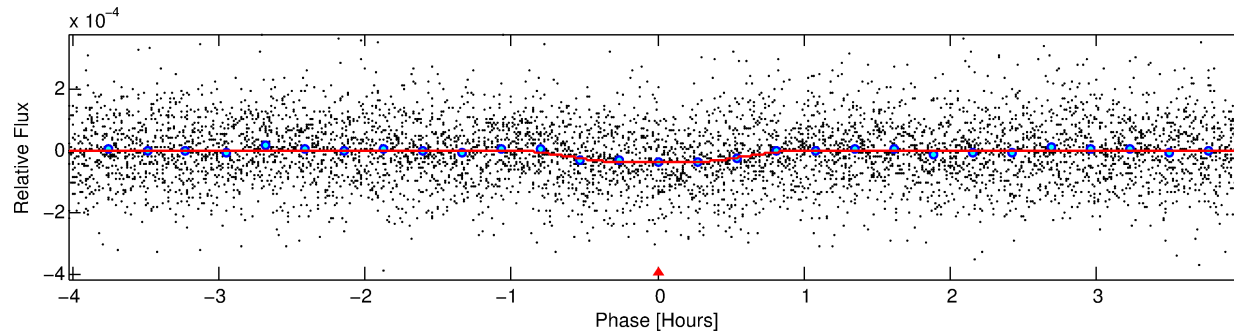
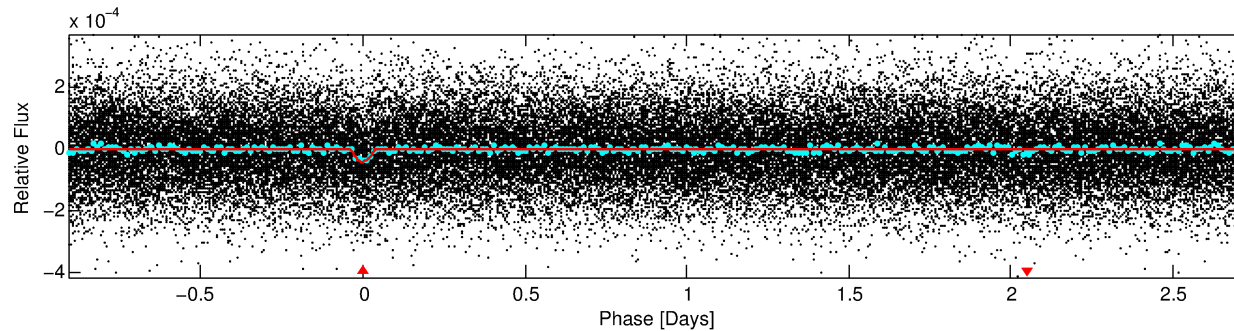
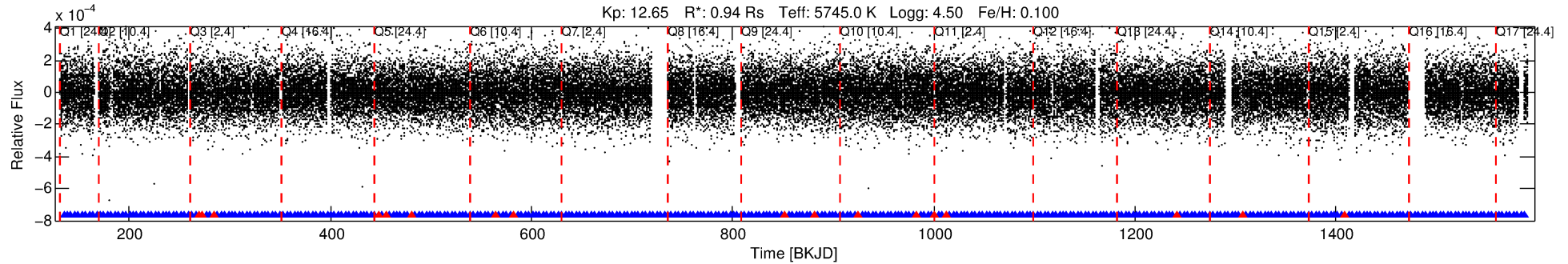
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008394475-01

No Significant Match Found

DV One-Page Summary

KIC: 8394475 Candidate: 1 of 1 Period: 3.641 d
KOI: K07032.01 Corr: 0.919



DV Fit Results:

Period = 3.64050 [0.00002] d
Epoch = 134.9663 [0.0029] BKJD
Rp/R* = 0.0063 [0.0022]
a/R* = 11.68 [17.66]
b = 0.83 [0.57]
Seff = 393.87 [86.20]
Teq = 1136 [62] K
Rp = 0.65 [0.24] Re
a = 0.0466 [0.0064] AU
Ag = 38.98 [29.95] [1.27σ]
Teff = 4388 [813] K [3.99σ]

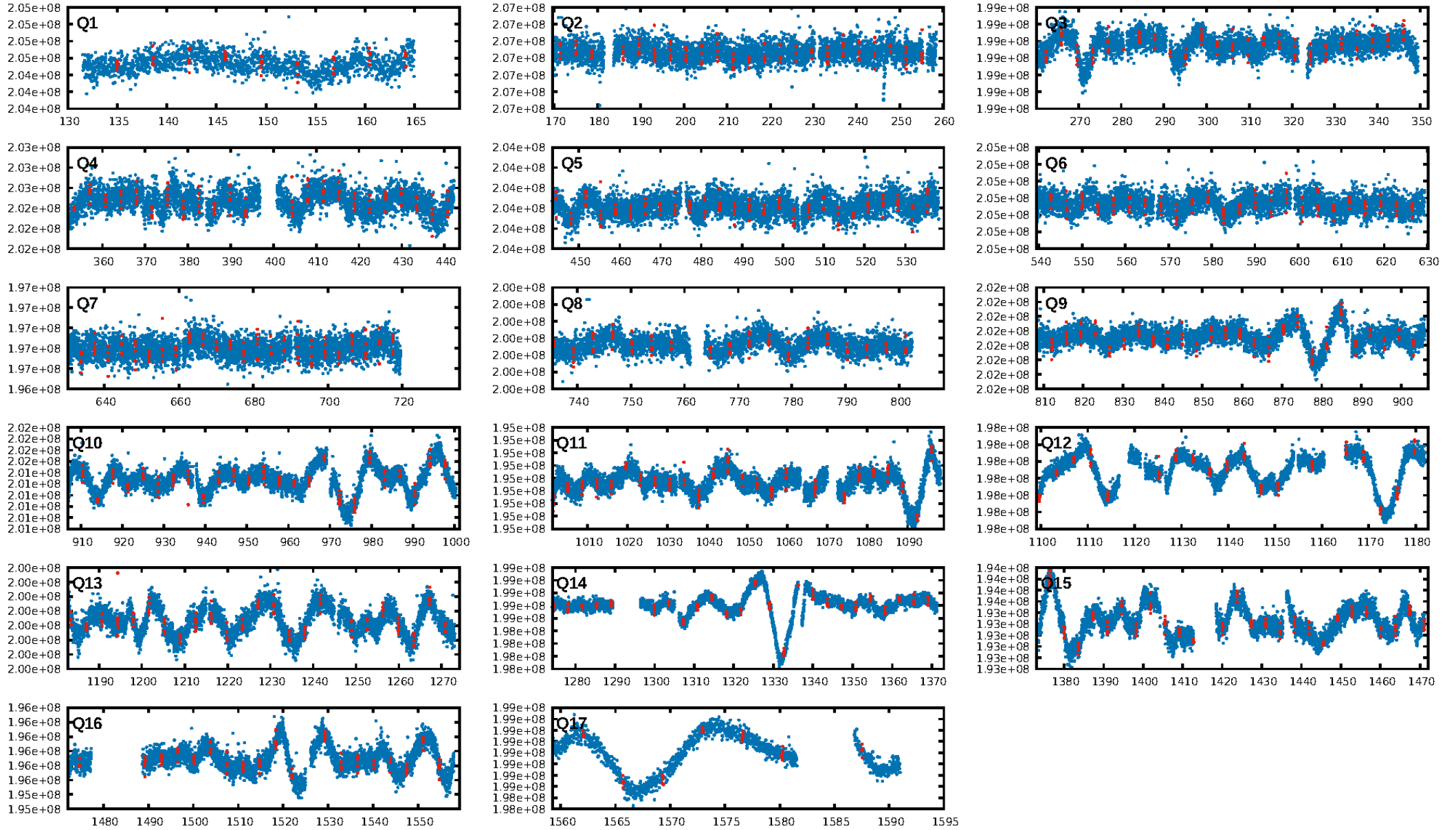
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.02e-14
RollingBand-fgt: 0.95 [332/349]
GhostDiagnostic-chr: 1.732
Centroid-sig: 91.2%
Centroid-so: 0.815 arcsec [0.48σ]
OotOffset-rm: 1.076 arcsec [0.77σ]
KicOffset-rm: 1.443 arcsec [1.11σ]
OotOffset-st: 4/3/3/3 [13]
KicOffset-st: 4/3/3/3 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [17/17]

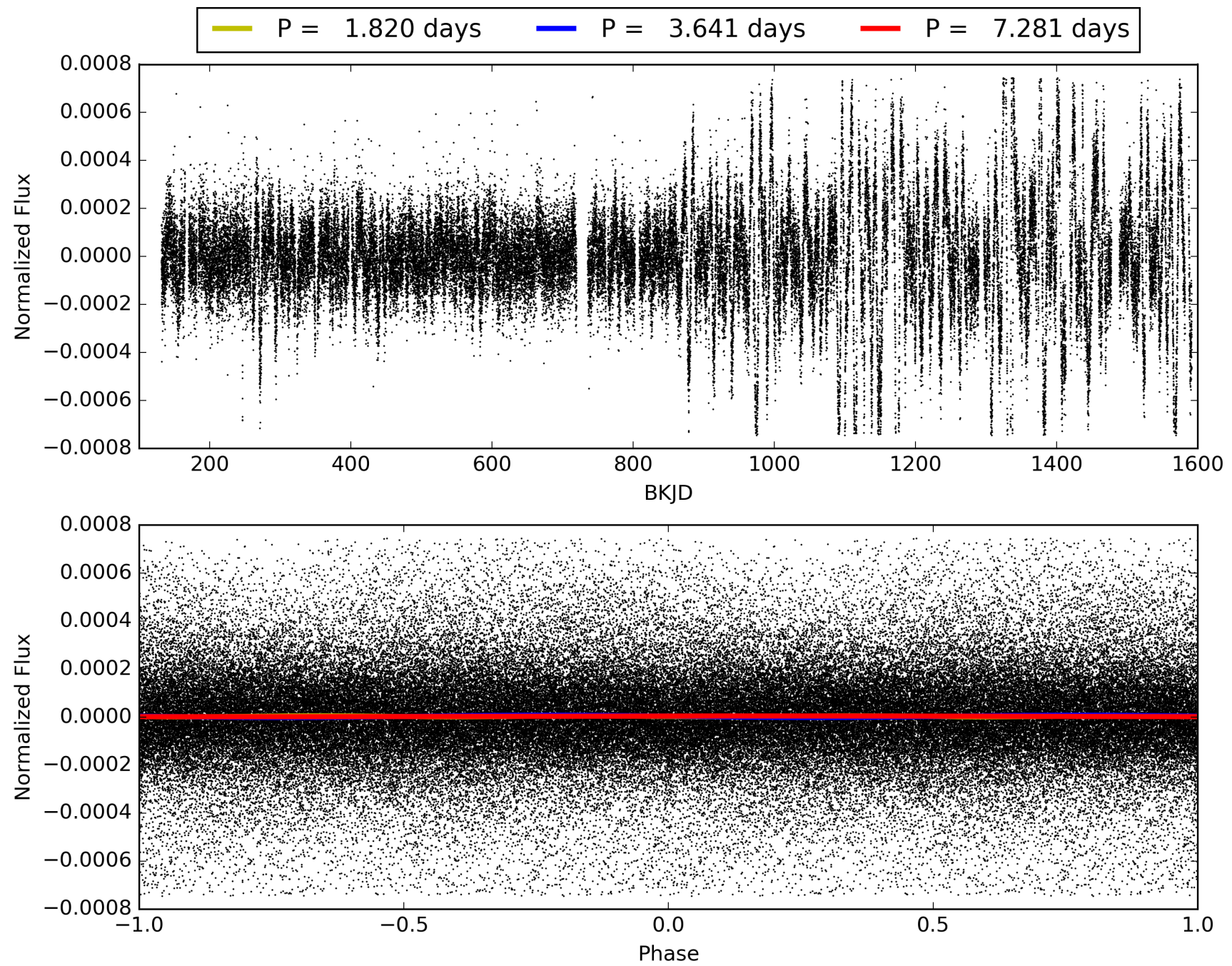
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:40:07 Z

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

TCE 008394475-01, PDC Light Curves

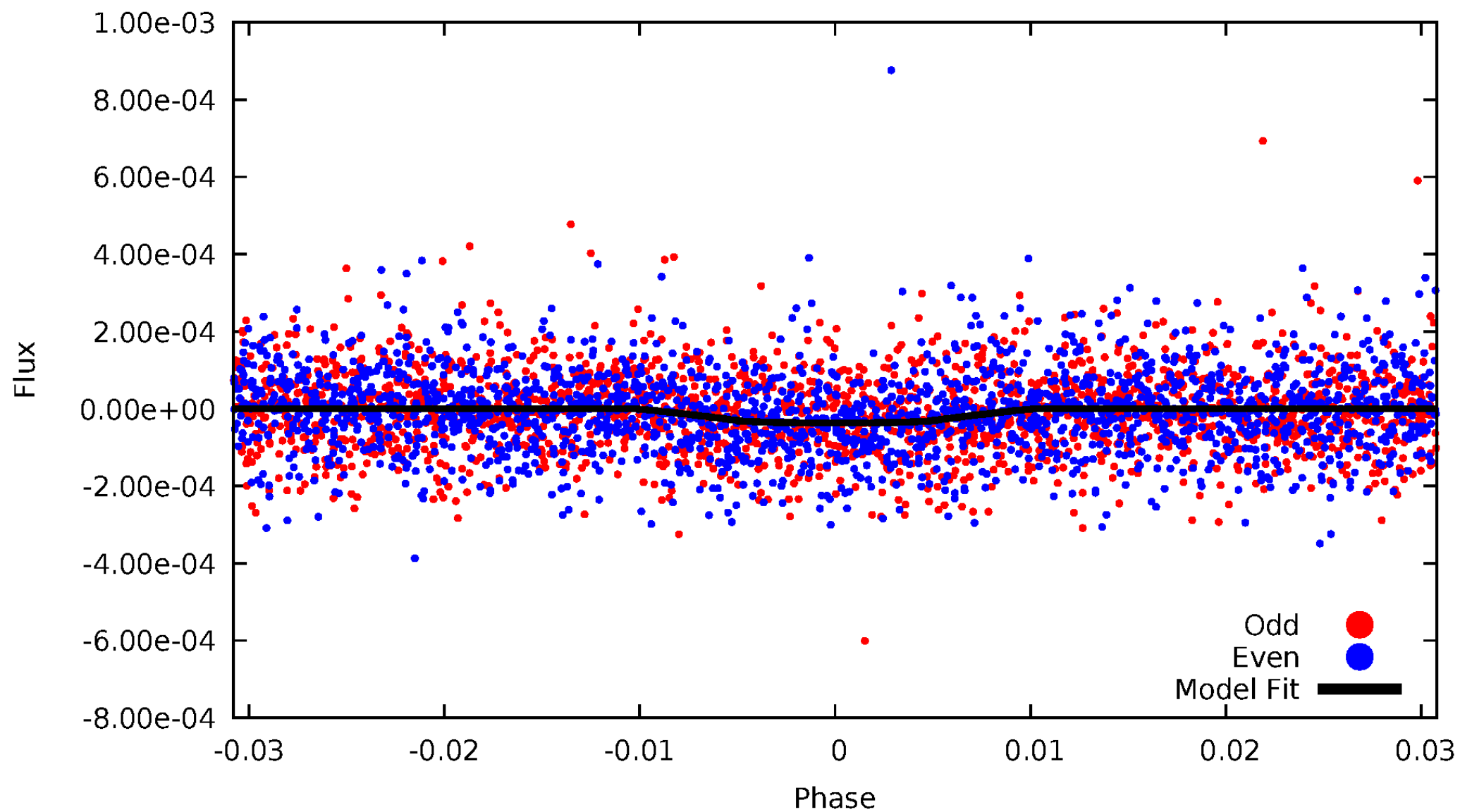


TCE 008394475-01



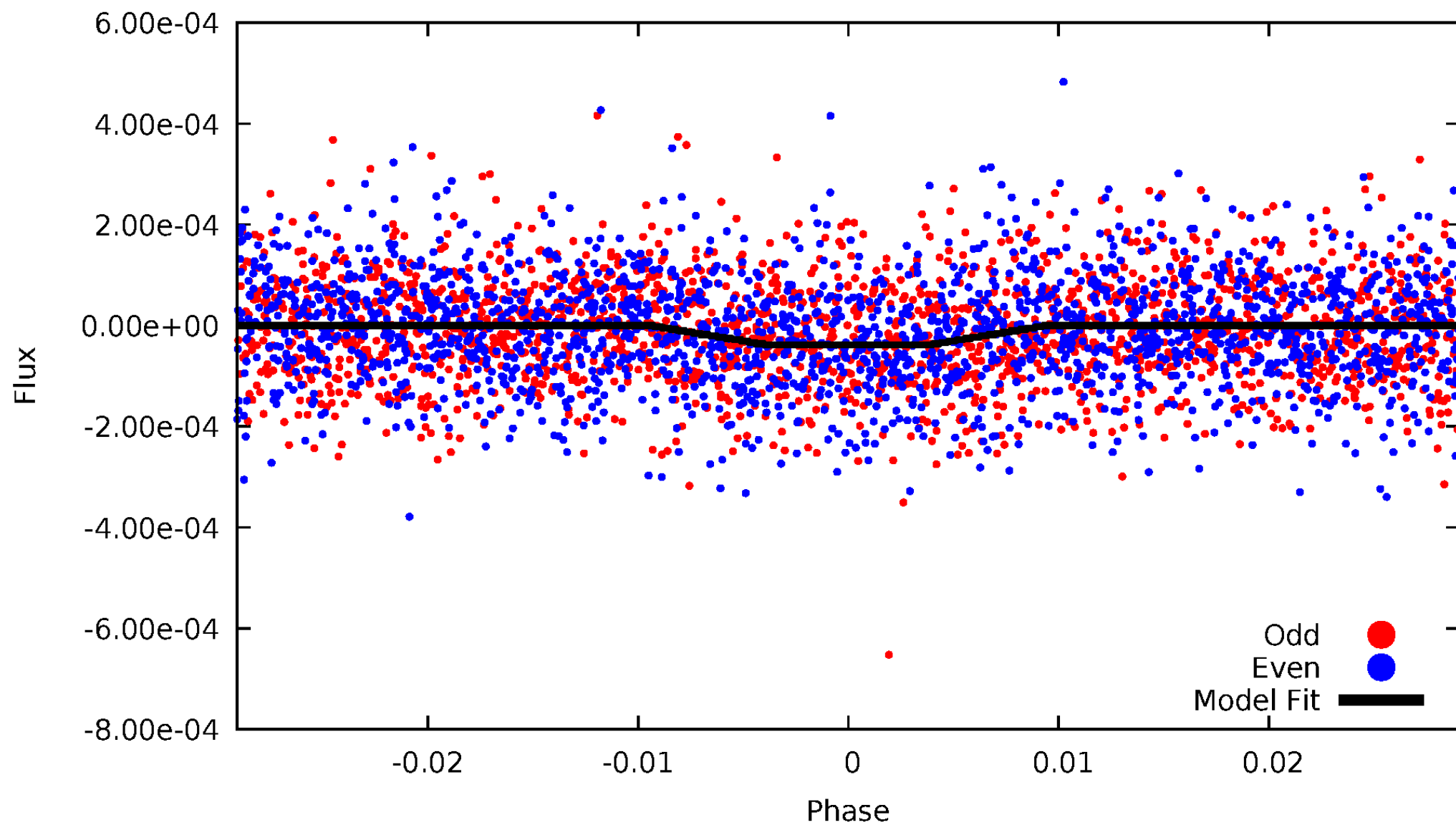
DV Odd/Even

TCE 008394475-01



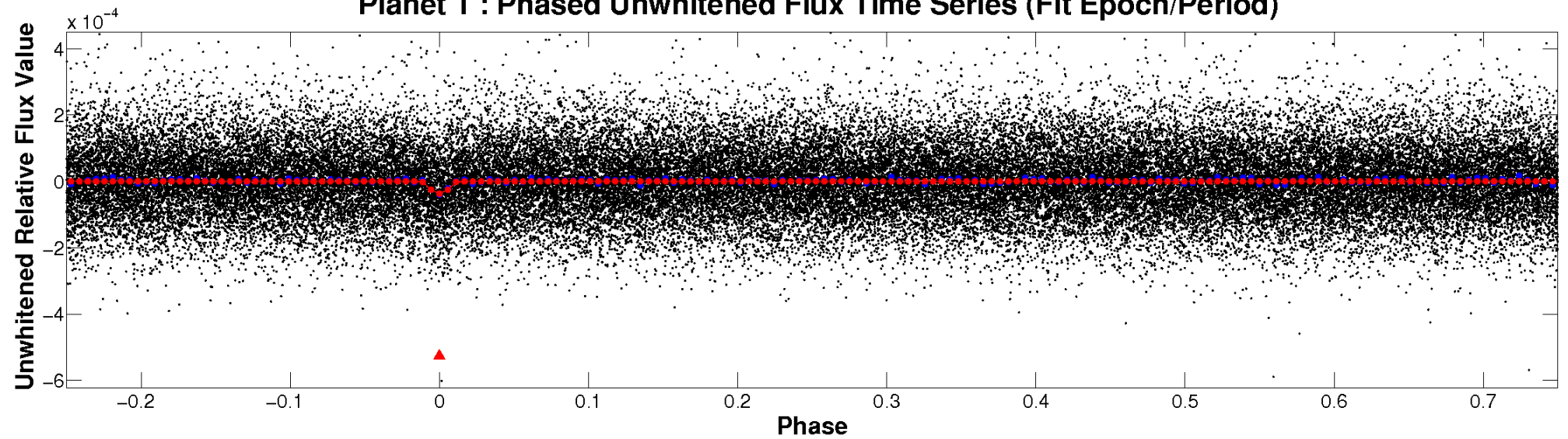
ALT Odd/Even

TCE 008394475-01

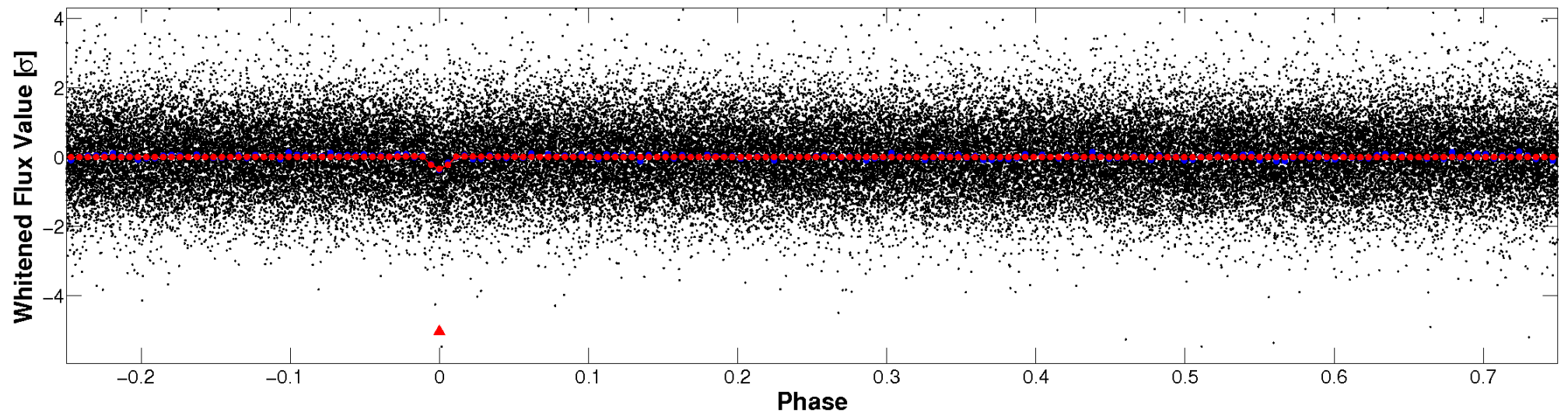


Non-Whitened Vs. Whitened Light Curve

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

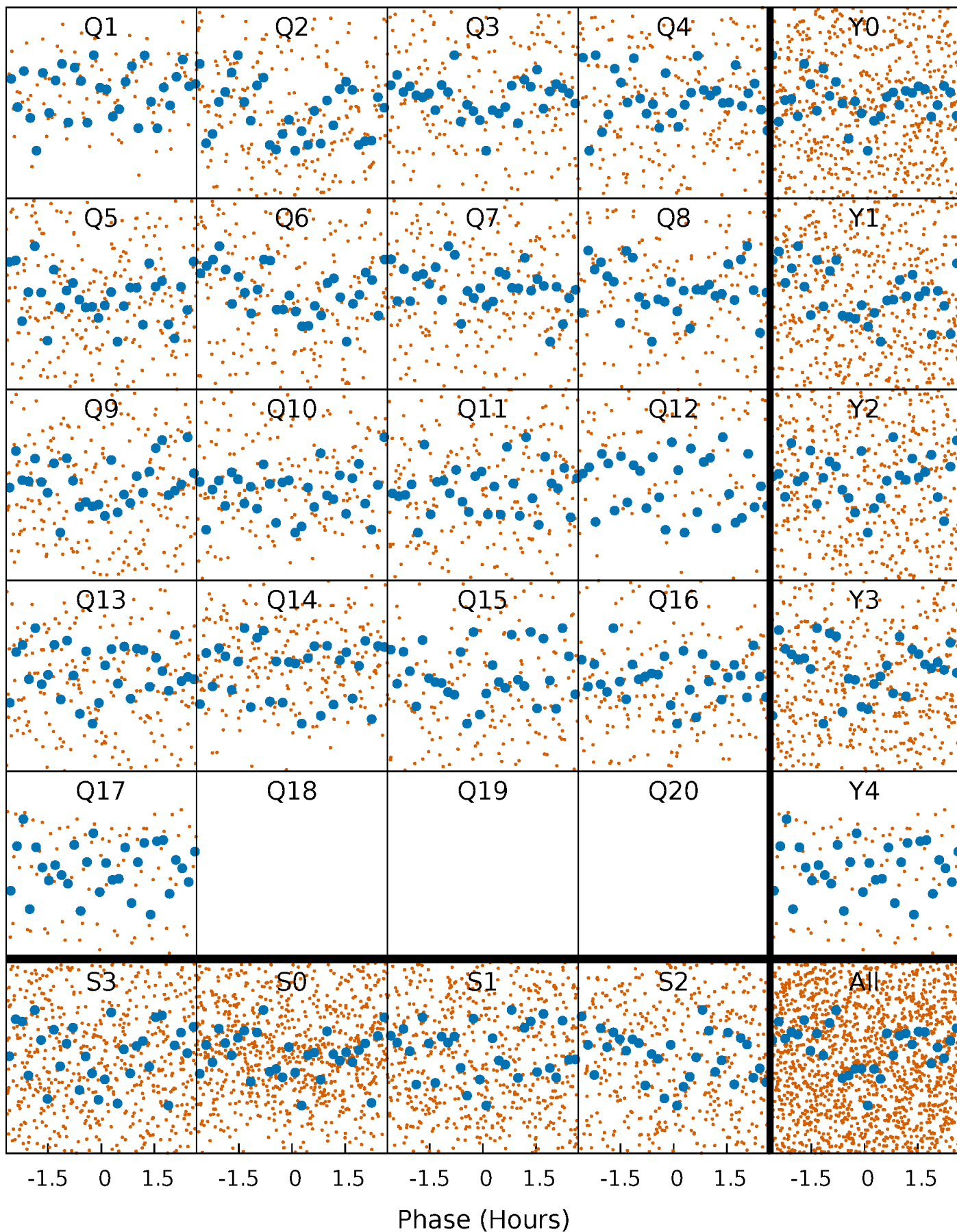


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



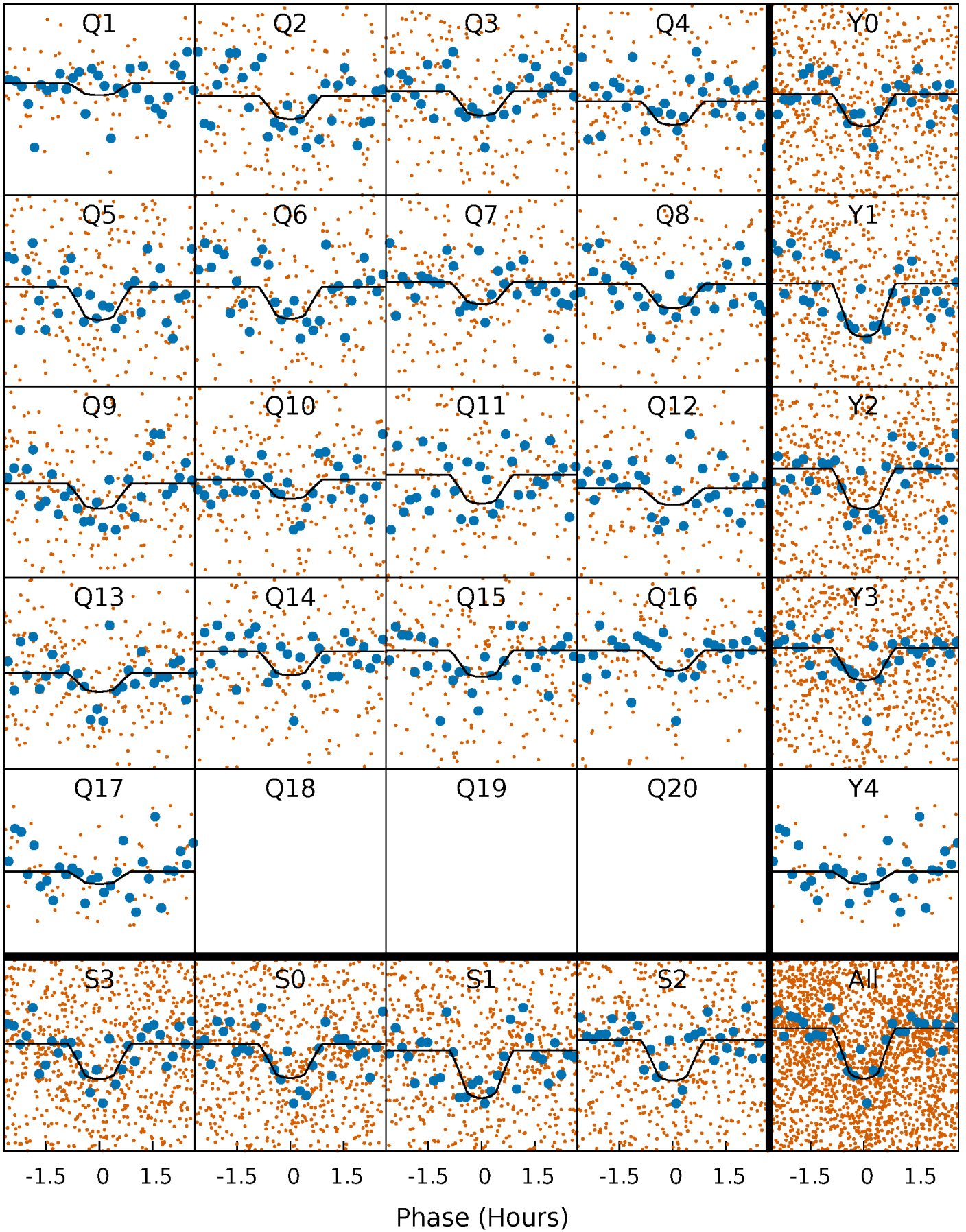
PDC Quarter-Phased Transit Curves

TCE 008394475-01 P= 3.640504 Days $T_0=134.966298$ (BKJD)



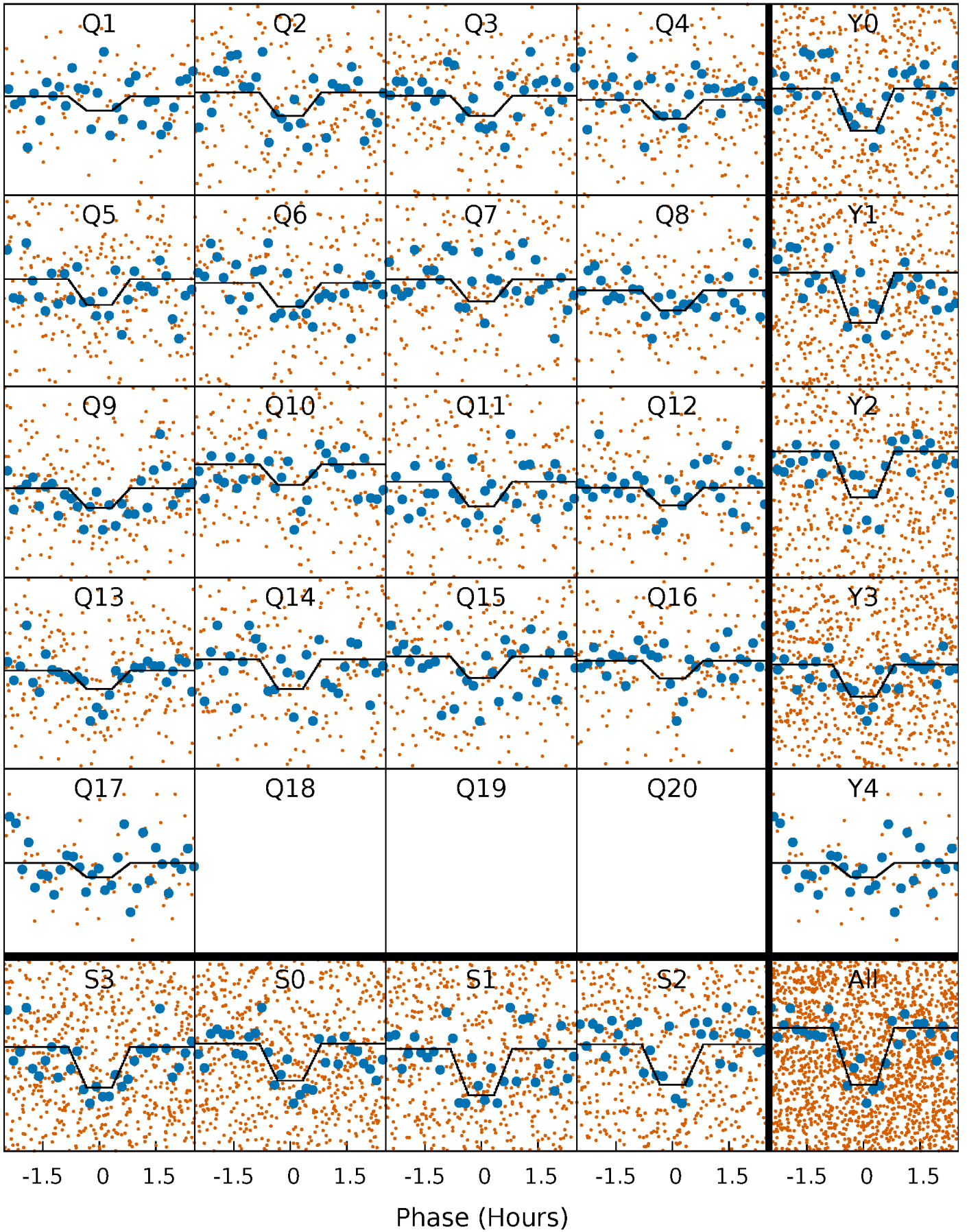
DV Quarter-Phased Transit Curves

TCE 008394475-01 $P = 3.640504$ Days $T_0 = 134.966298$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

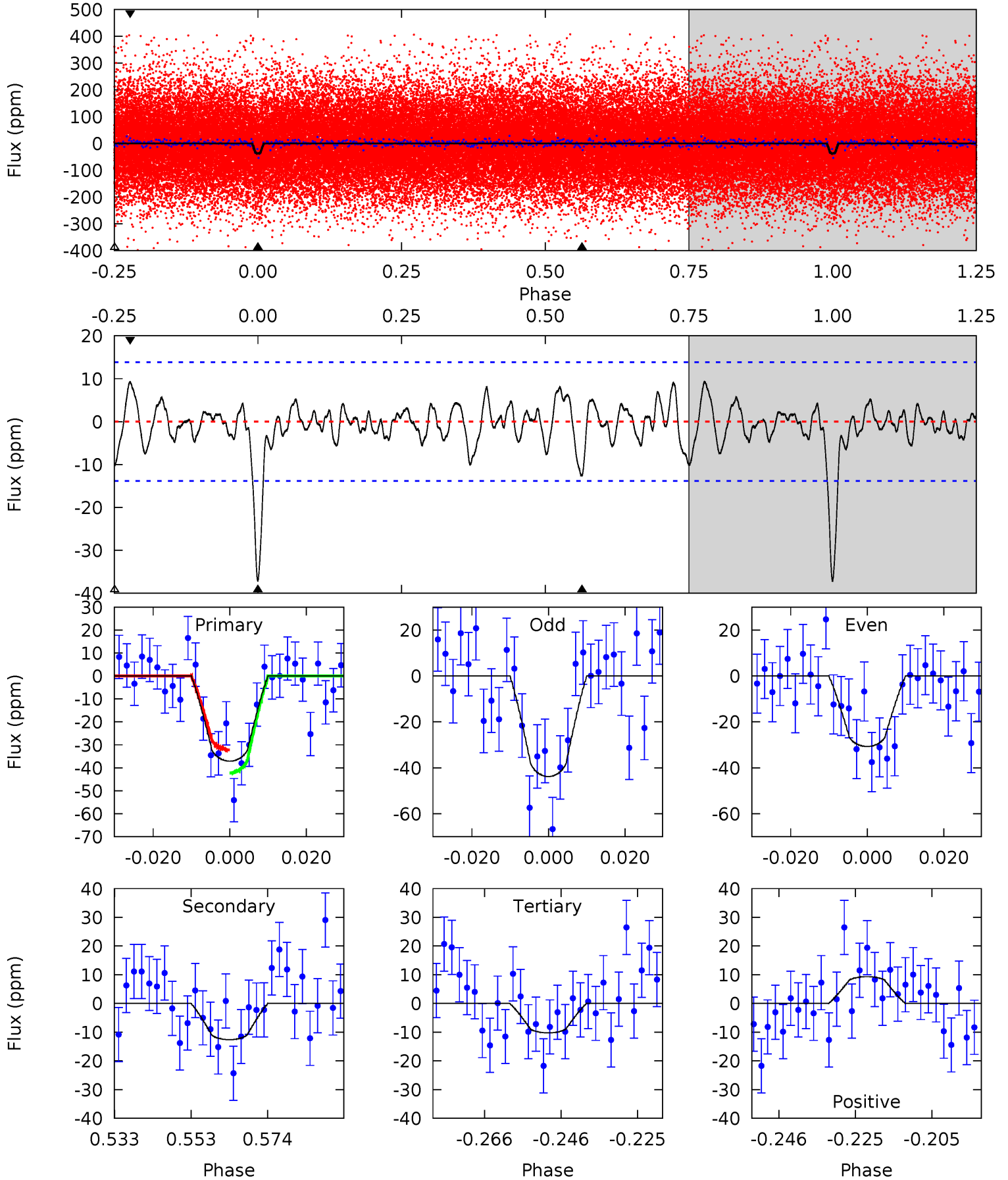
TCE 008394475-01 P= 3.640507 Days $T_0=134.963982$ (BKJD)



DV Model-Shift Uniqueness Test

008394475-01, P = 3.640504 Days, E = 131.325794 Days

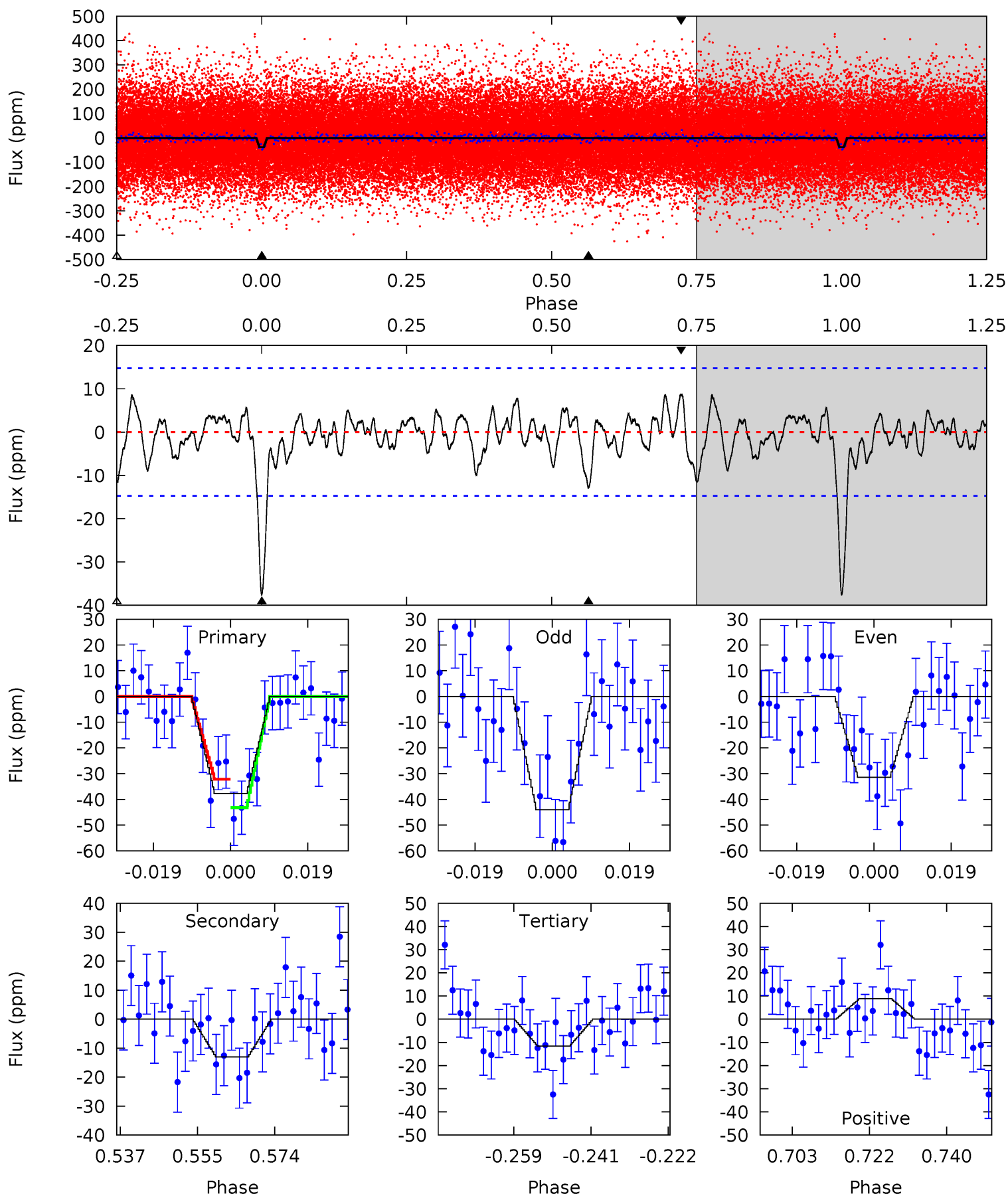
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	4.46	3.62	3.30	4.89	2.32	1.30	9.49	9.81	0.84	1.16	2.32	1.09	0.20	1.78



Alt Model-Shift Uniqueness Test

008394475-01, P = 3.640507 Days, E = 131.323475 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	4.34	3.86	2.94	4.91	2.36	1.25	8.69	9.62	0.48	1.40	2.10	1.14	0.19	1.84



Stellar Parameters For KIC 008394475

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5745^{+78}_{-86}	$4.503^{+0.030}_{-0.120}$	$0.100^{+0.150}_{-0.150}$	$0.936^{+0.143}_{-0.048}$	$1.017^{+0.050}_{-0.074}$	$1.745^{+0.204}_{-0.593}$
	+1%/-1%	+1%/-3%	+150%/-150%	+15%/-5%	+5%/-7%	+12%/-34%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 008394475-01 / KOI 7032.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-13 ± 3	$0.66^{+0.24}_{-0.22}$	1601^{+58}_{-38}	4497^{+838}_{-540}	35^{+46}_{-17}
Alt.	-13 ± 3	$0.63^{+0.25}_{-0.23}$	1605^{+60}_{-41}	4577^{+994}_{-575}	37^{+60}_{-18}

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 $A_{obs} \gg 1.0$

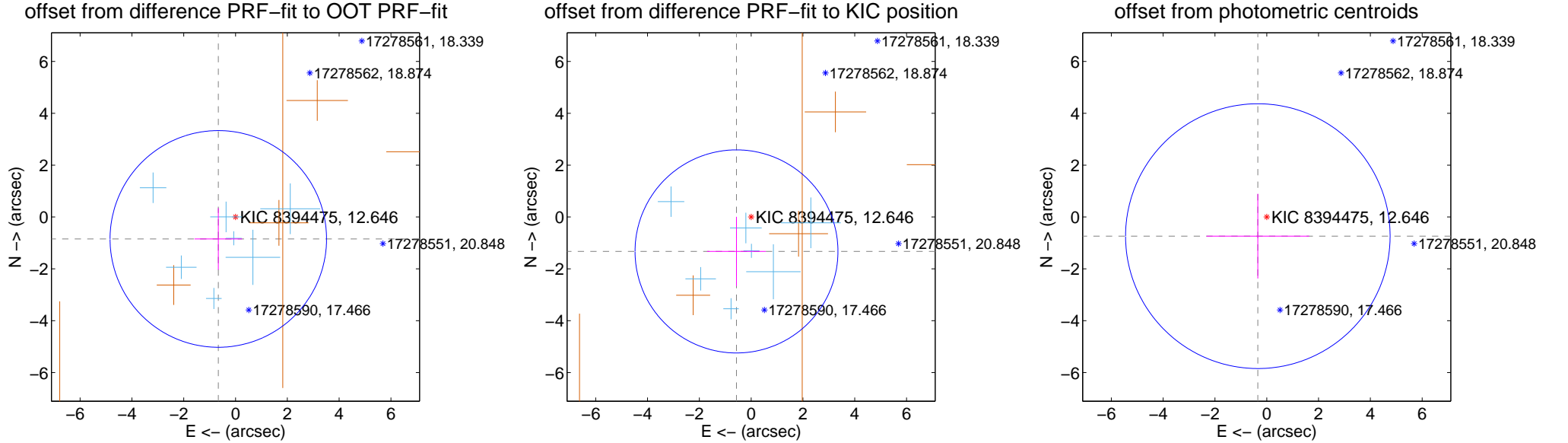
DV Centroid Data

Supplemental centroid analysis for 008394475-01. Kepler magnitude: 12.65. Transit SNR 8.87

There are 7 quarters with good PRF difference image offsets

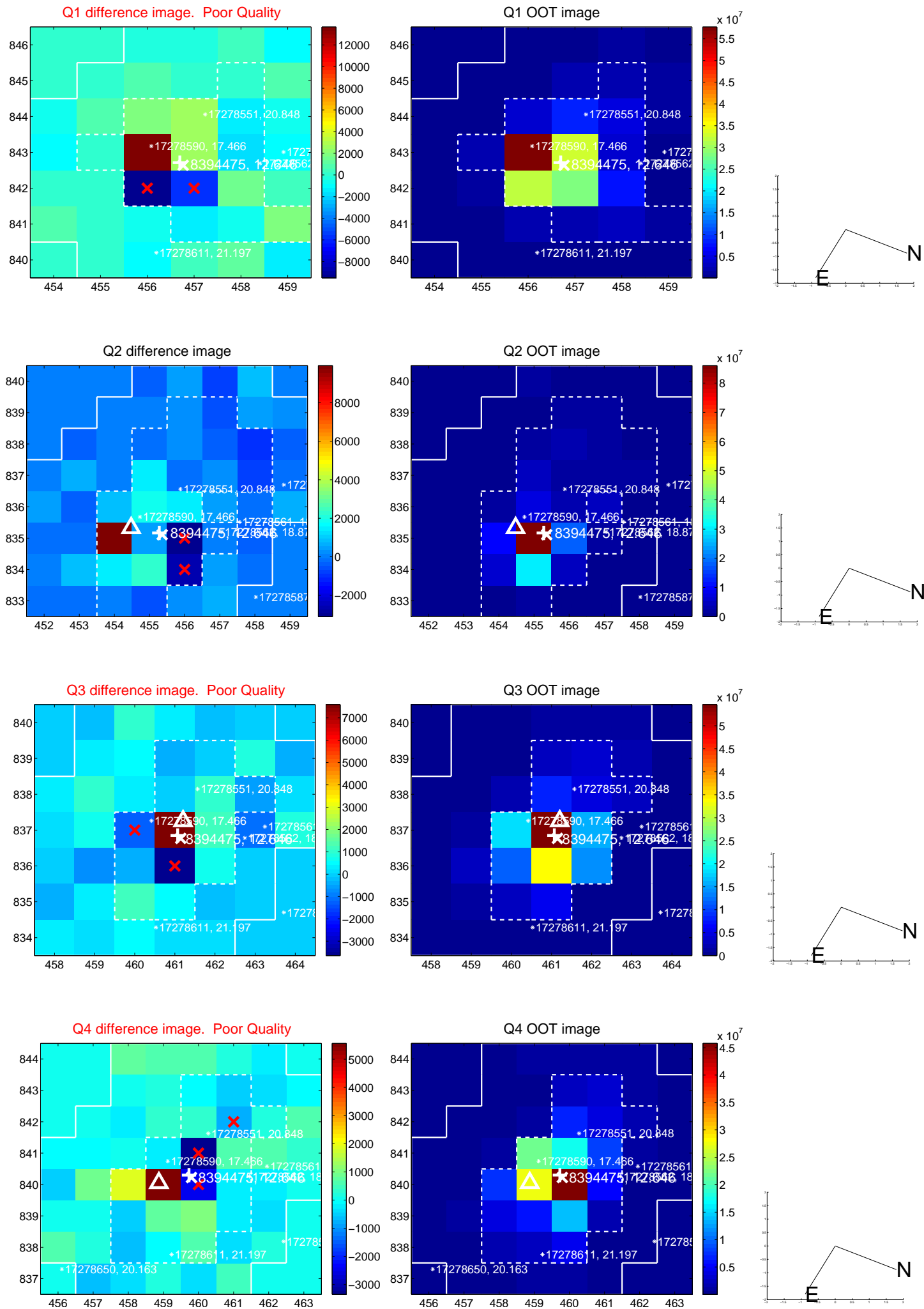
The direct PRF centroid is offset from the target star catalog position by about 0.59 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.076 ± 1.393	0.77	0.665 ± 0.919	-0.846 ± 1.186
PRF-fit source offset from KIC position	1.443 ± 1.305	1.11	0.565 ± 1.134	-1.327 ± 1.334
photometric centroid source offset	0.81 ± 1.70	0.48	0.34 ± 1.98	-0.74 ± 1.63

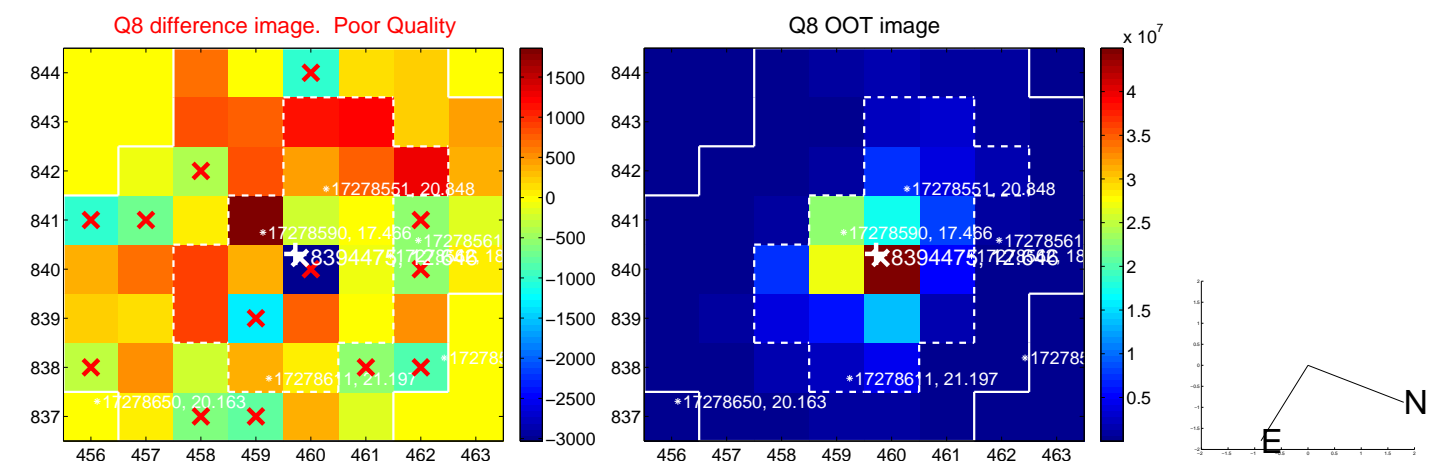
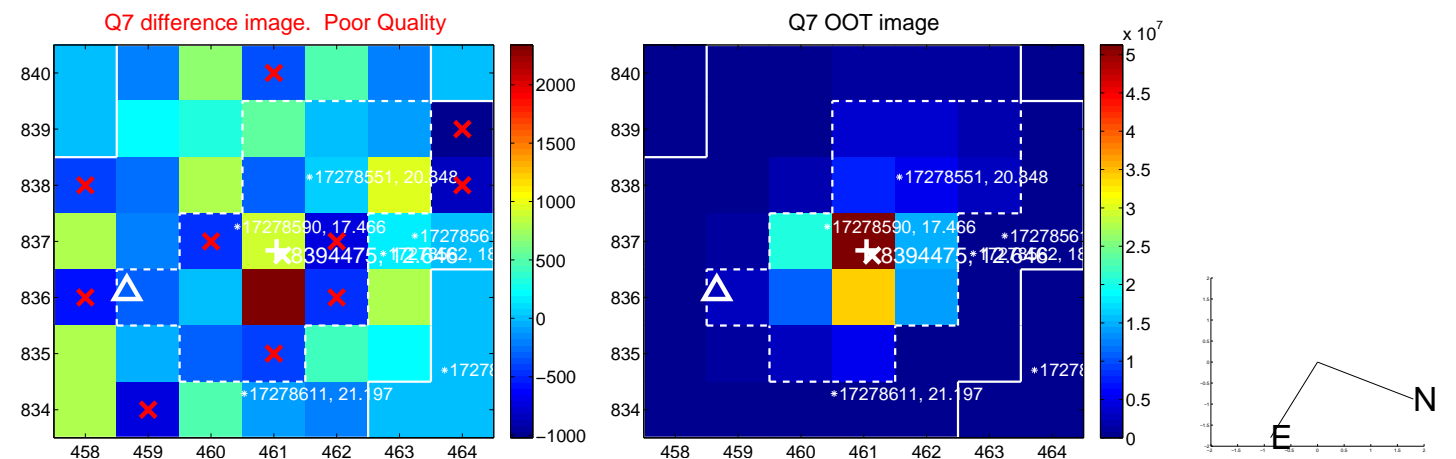
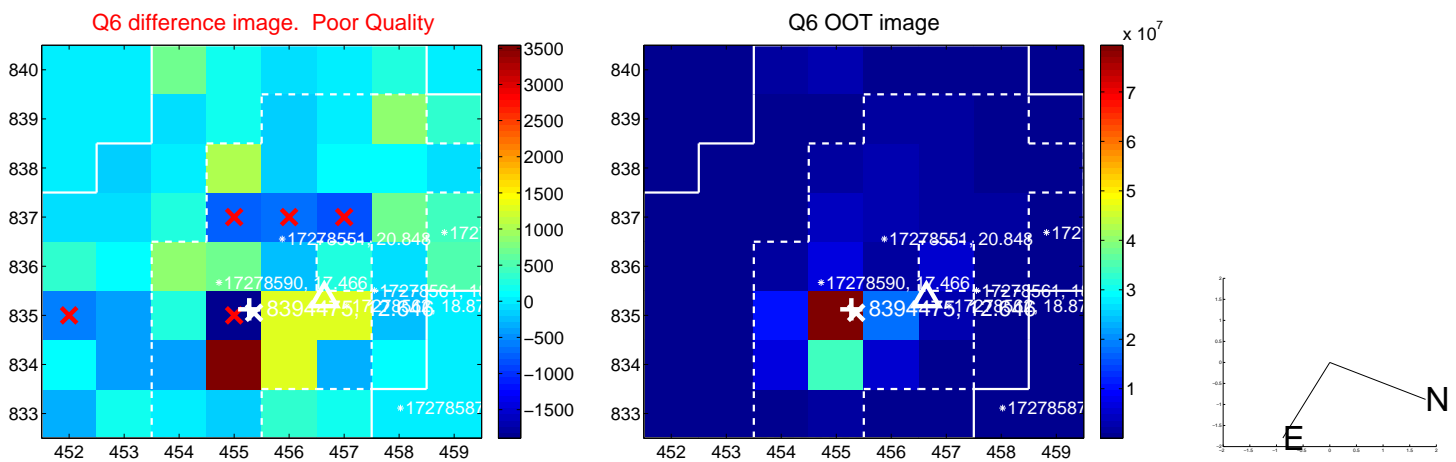
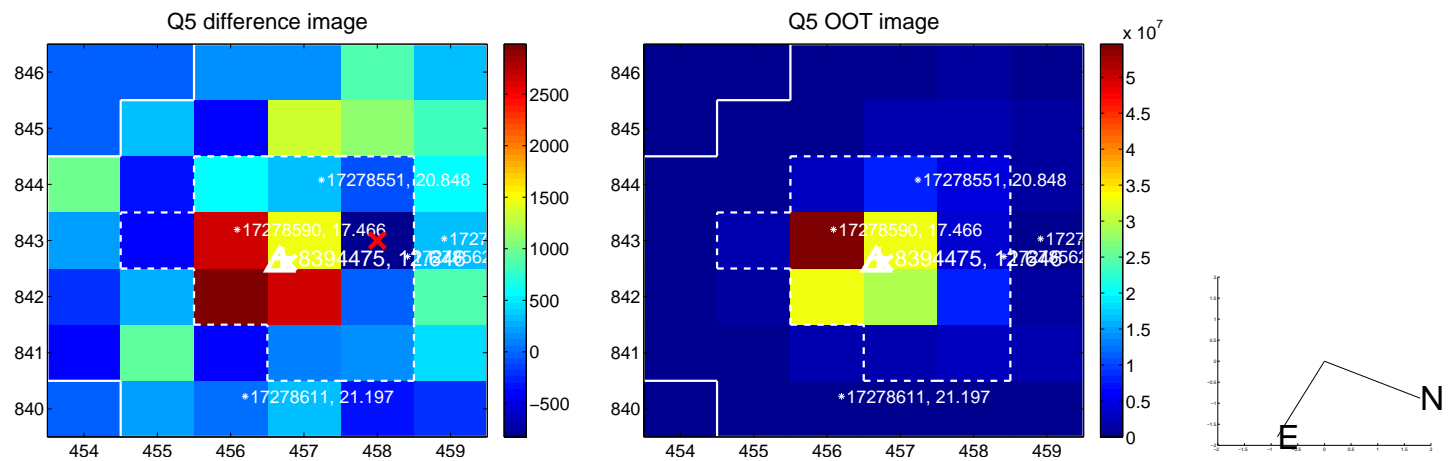


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

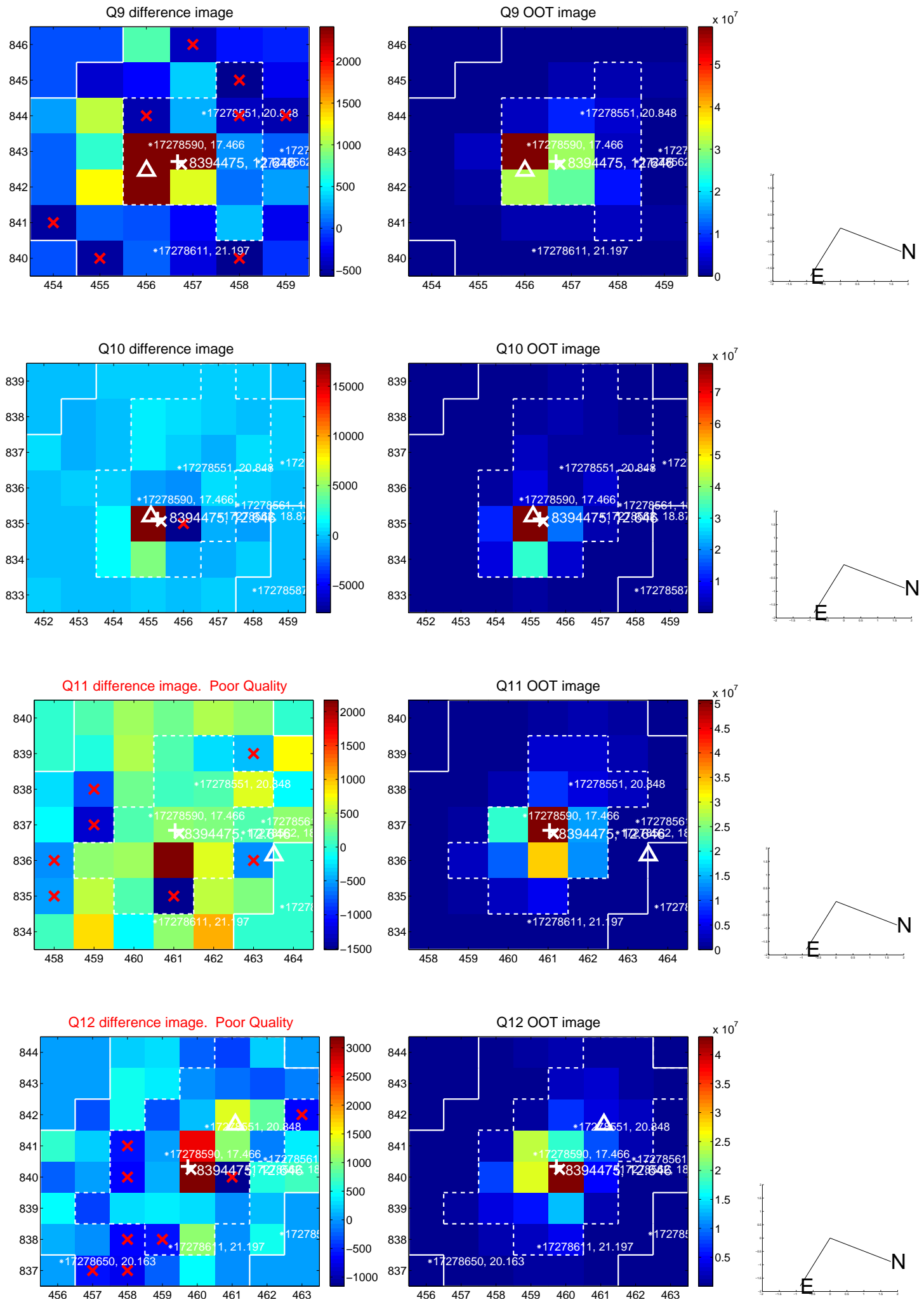
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



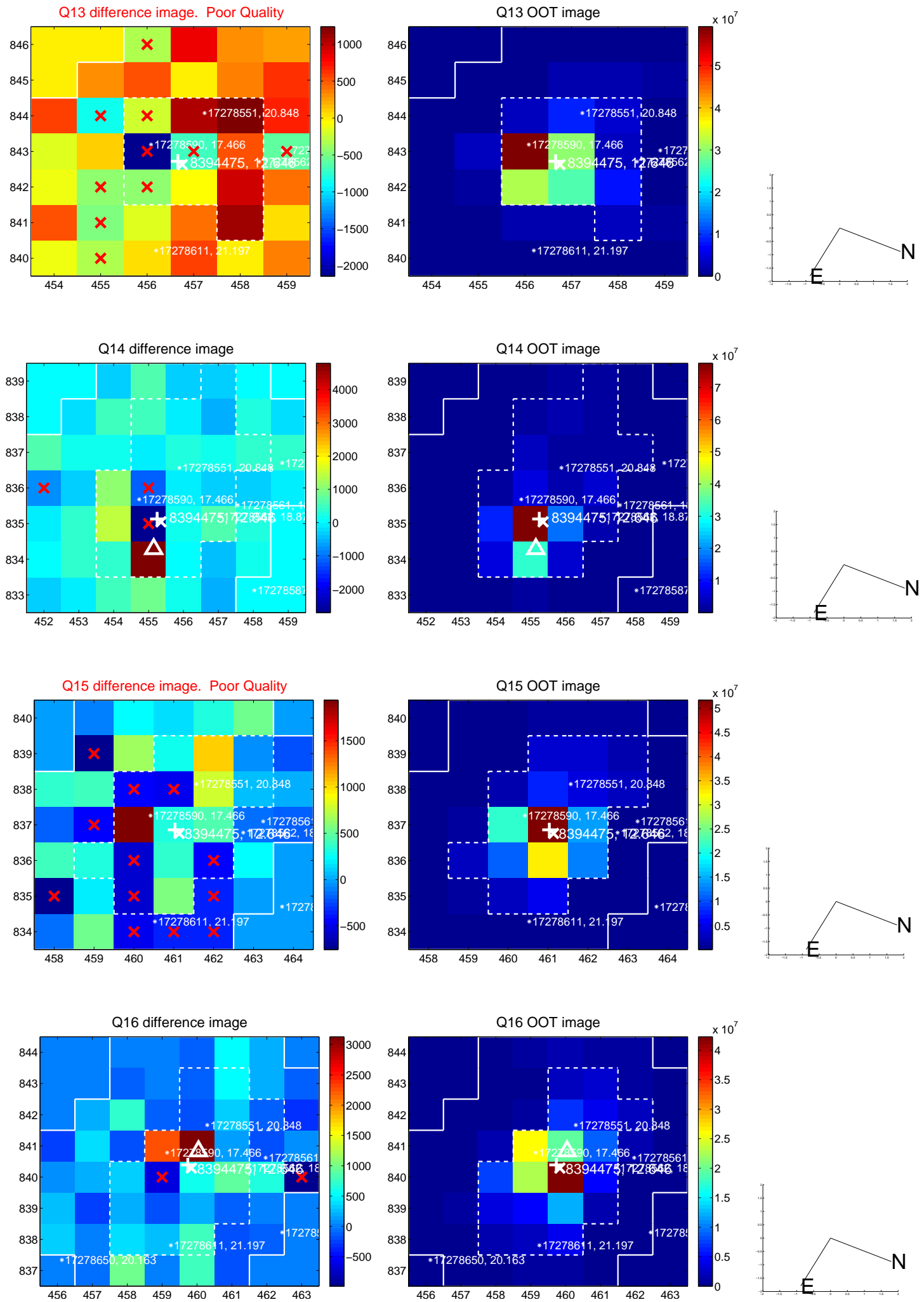
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



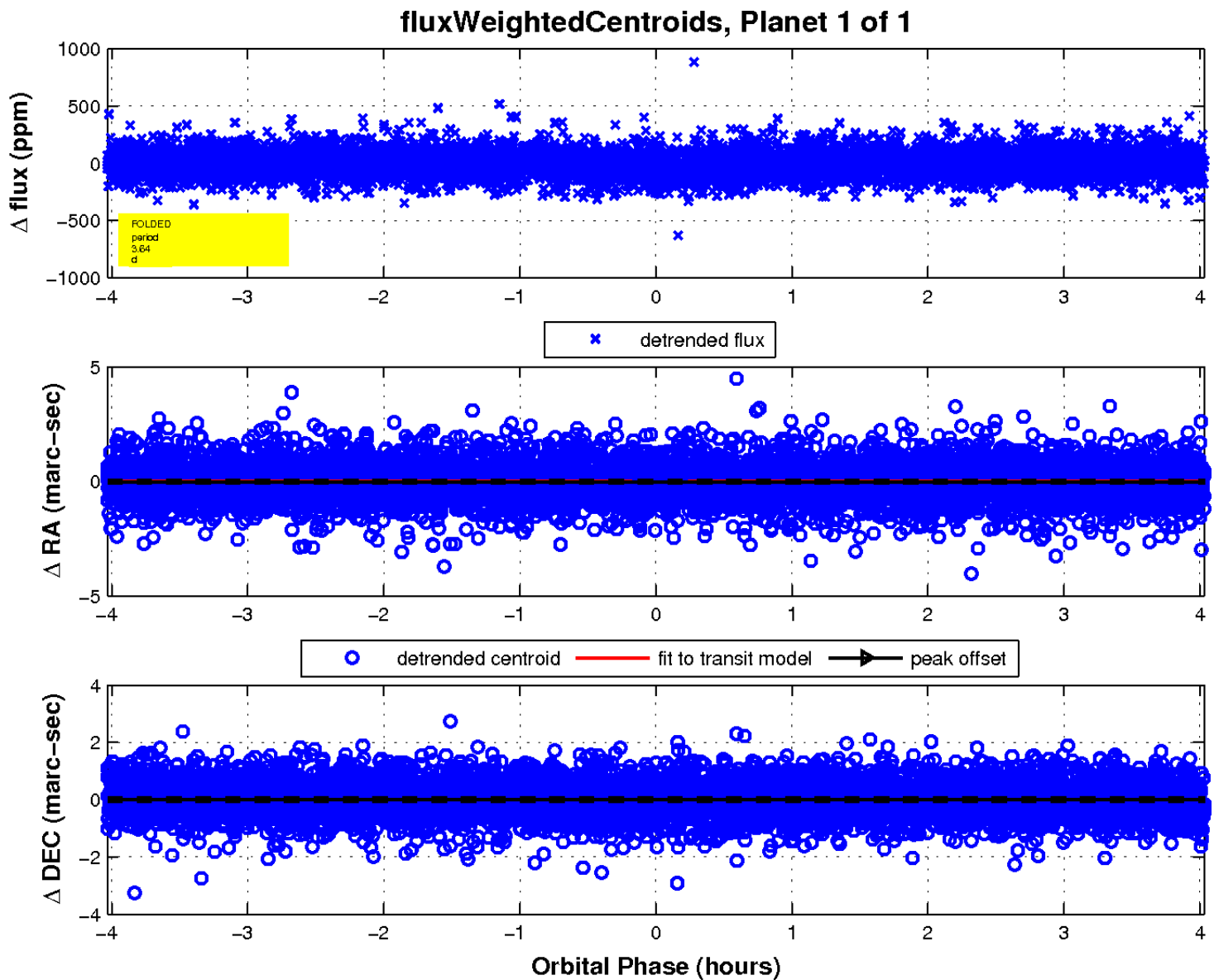
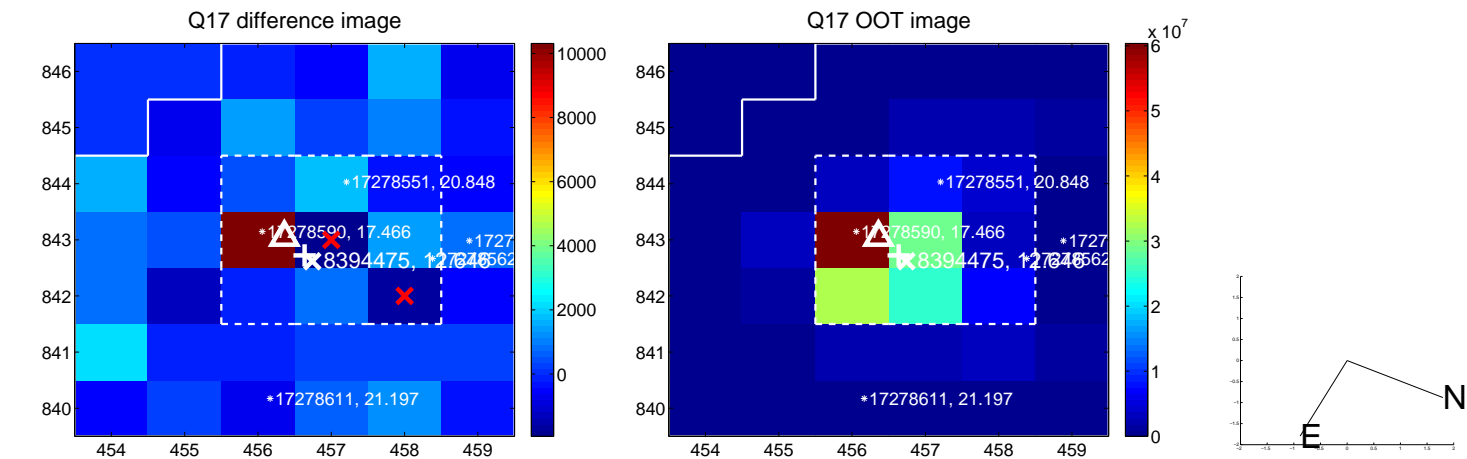
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

