

KIC 007548479

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})
007548479-01	OBS	No	0.646293	131.573419	18.9	1.097	9.5	10.8	2.35	7466	1.22	49361.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007548479-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

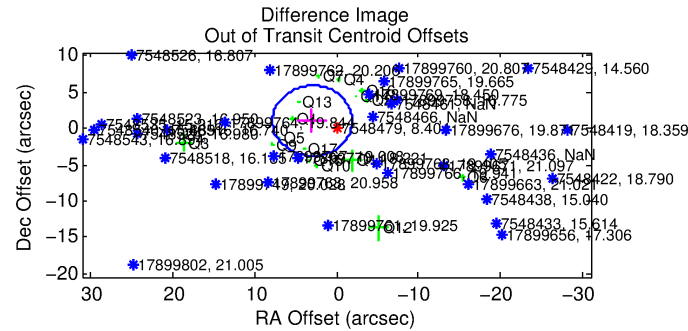
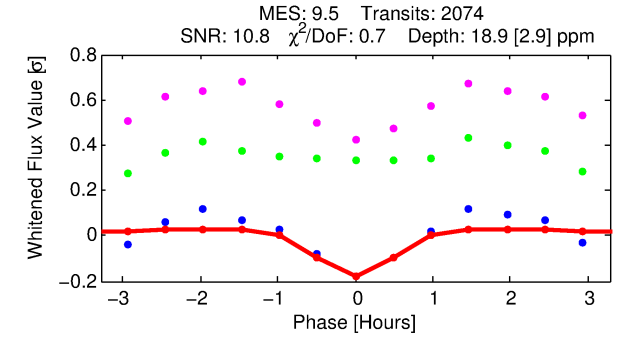
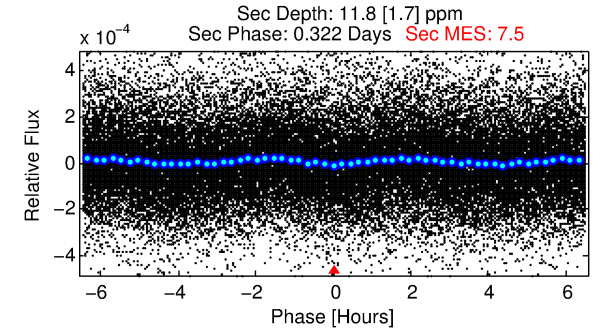
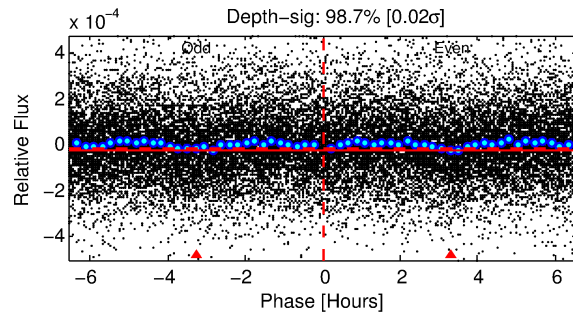
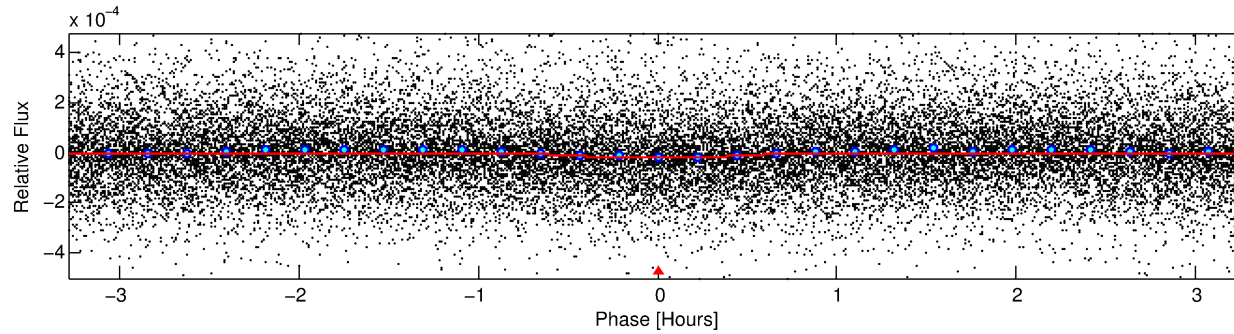
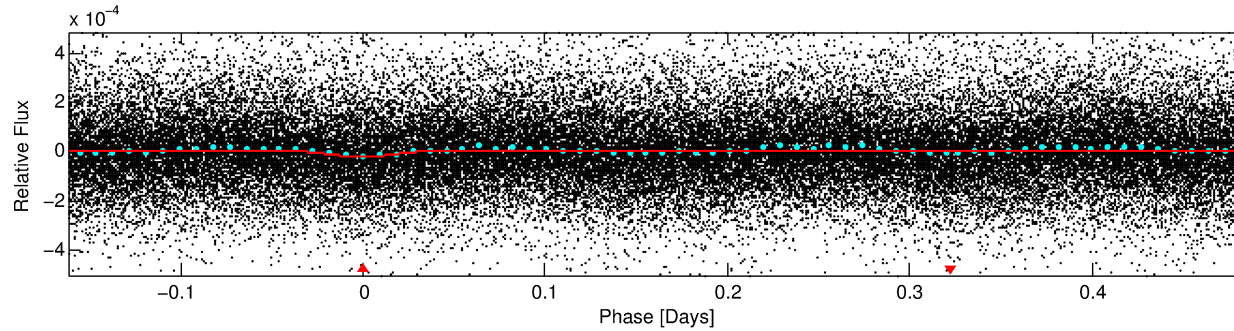
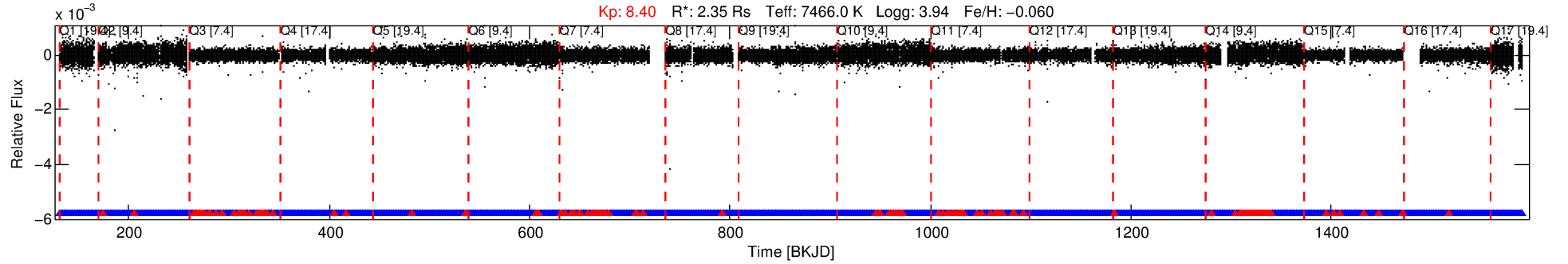
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007548479-01

No Significant Match Found

DV One-Page Summary

KIC: 7548479 Candidate: 1 of 1 Period: 0.646 d



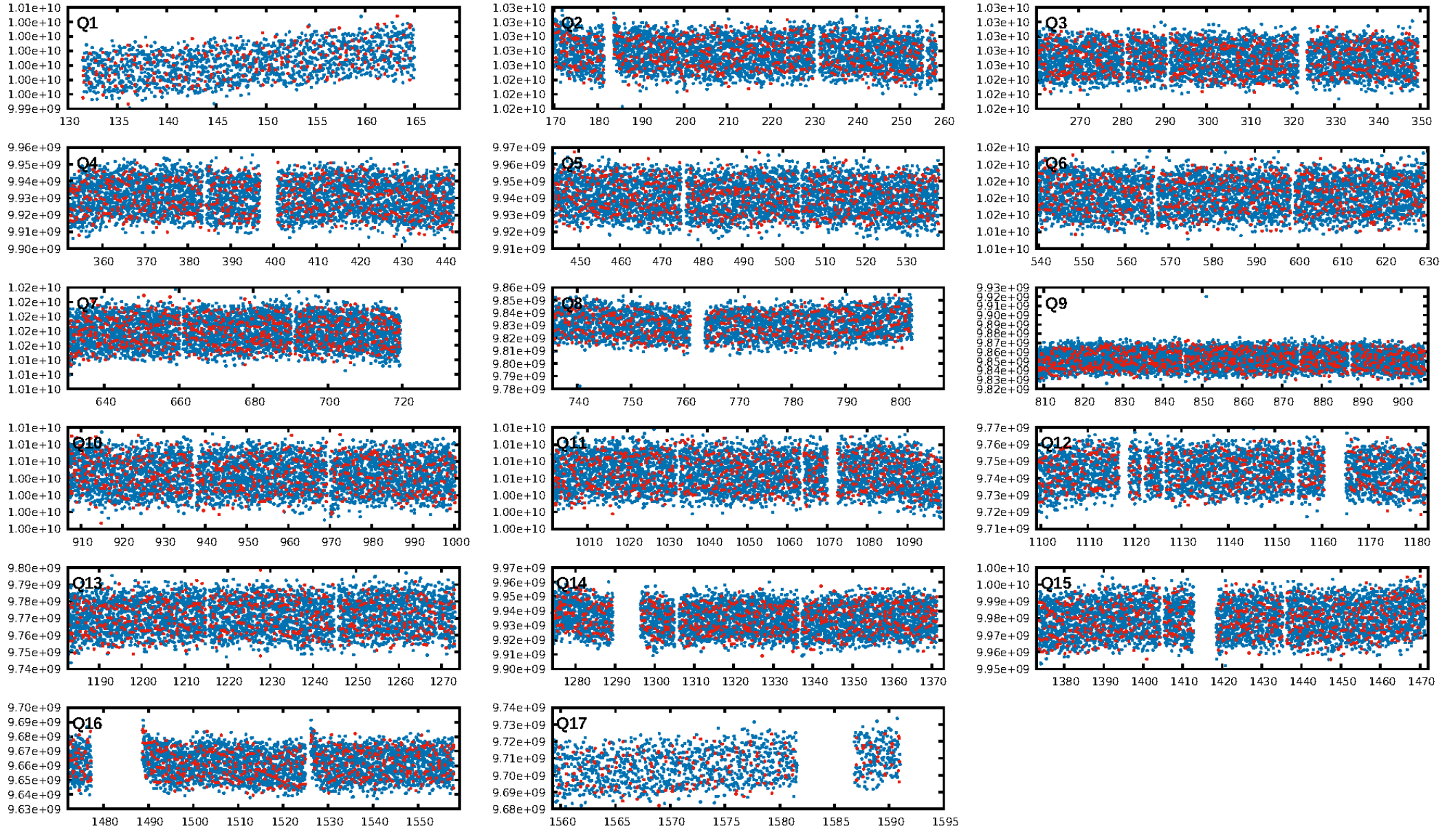
DV Fit Results:

Period = 0.64629 [0.00001] d
Epoch = 131.5734 [0.0018] BKJD
 $R_p/R^* = 0.0048$ [0.0010]
 $a/R^* = 1.92$ [1.80]
 $b = 0.93$ [0.18]
 $\text{Seff} = 49361.18$ [13644.57]
 $T_{\text{eq}} = 3801$ [263] K
 $R_p = 1.22$ [0.35] R_e
 $a = 0.0176$ [0.0031] AU
 $A_g = 1.35$ [0.69] [0.51 σ]
 $T_{\text{eff}} = 6331$ [699] K [3.39 σ]

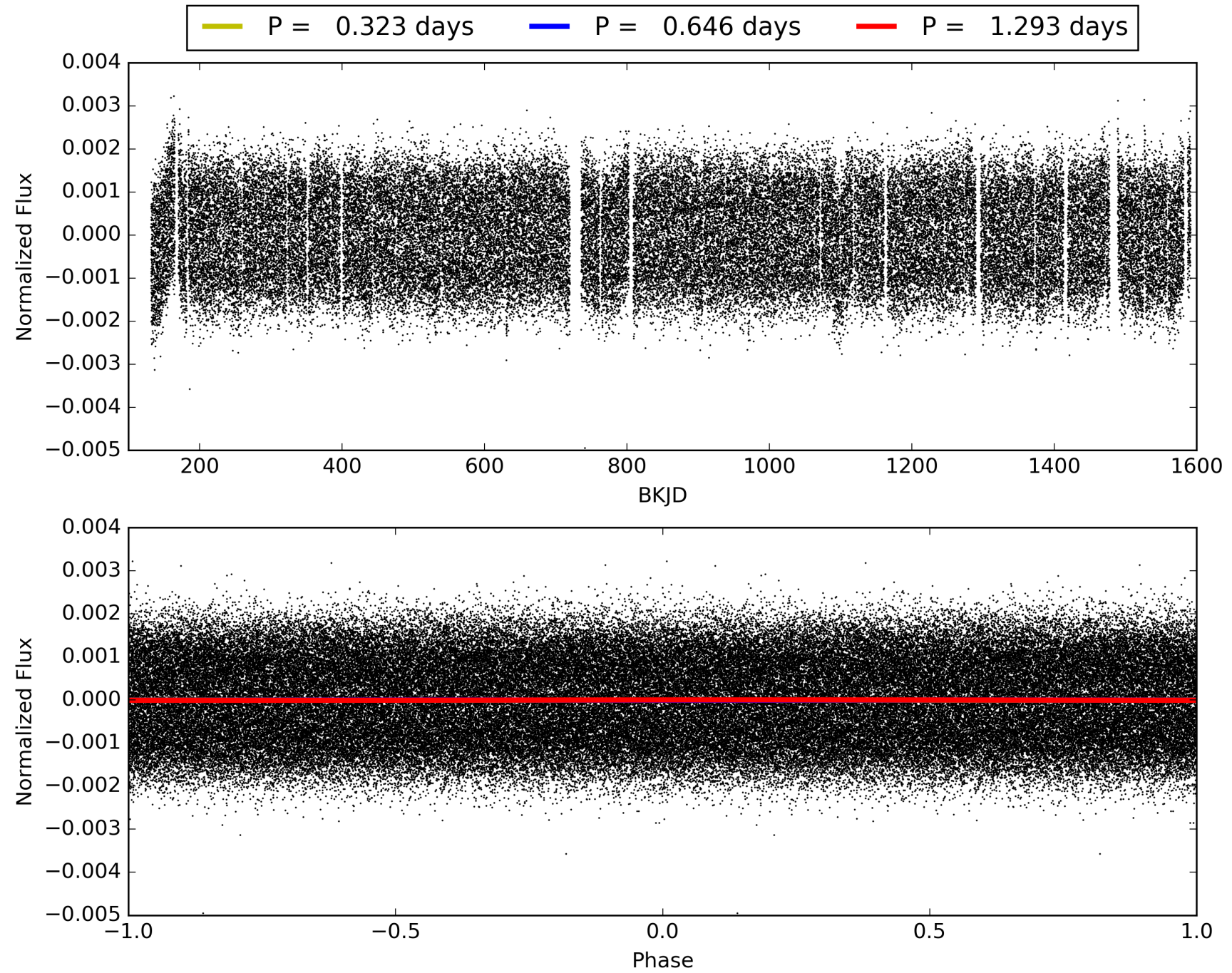
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.17e-25
RollingBand-fgt: 0.93 [1836/1980]
GhostDiagnostic-chr: N/A
Centroid-sig: 40.7%
Centroid-so: 3.431 arcsec [2.80 σ]
OotOffset-rm: 3.144 arcsec [1.94 σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-rm: 4.350 arcsec [2.25 σ]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.00 [0/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007548479-01, PDC Light Curves

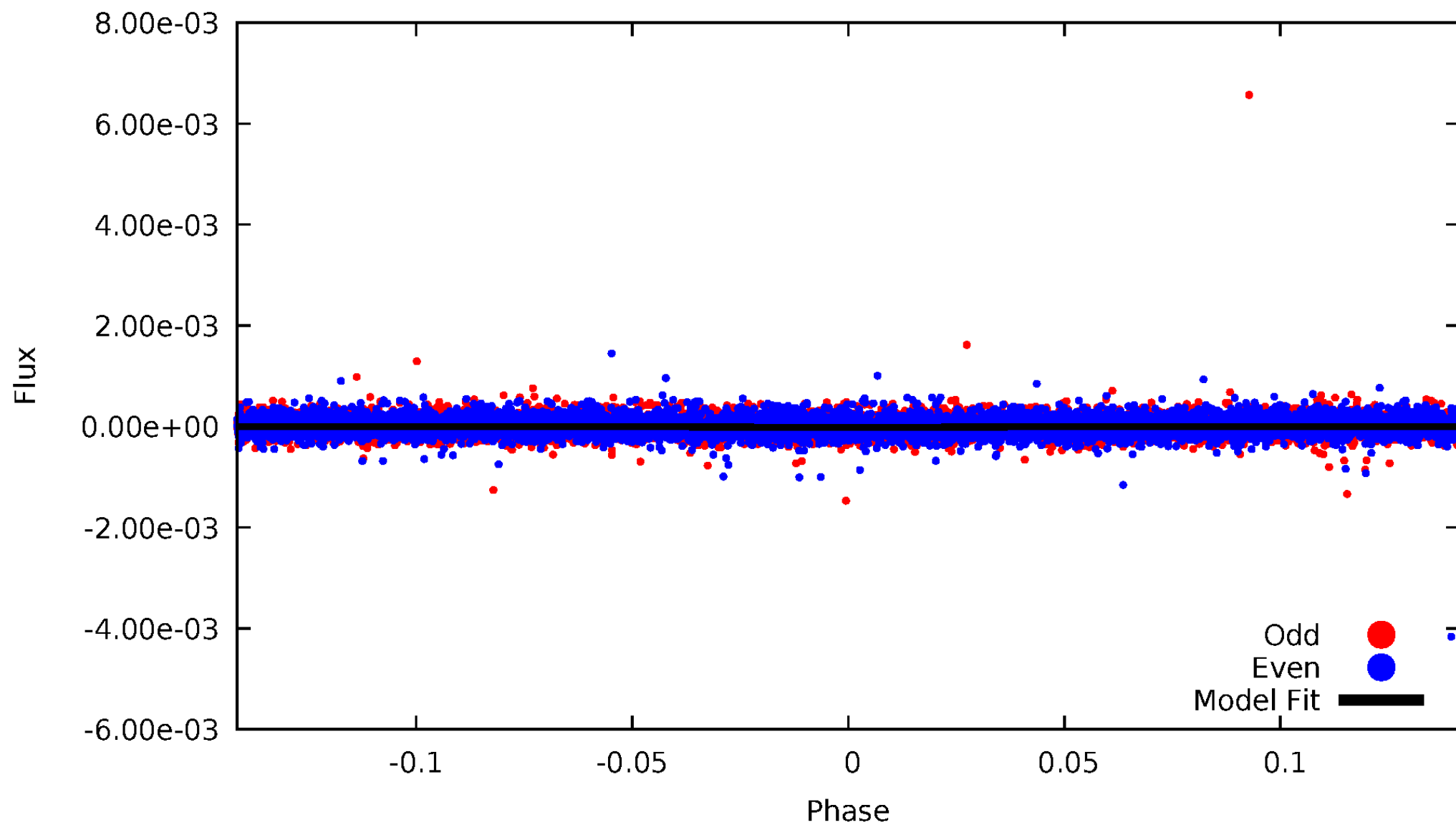


TCE 007548479-01



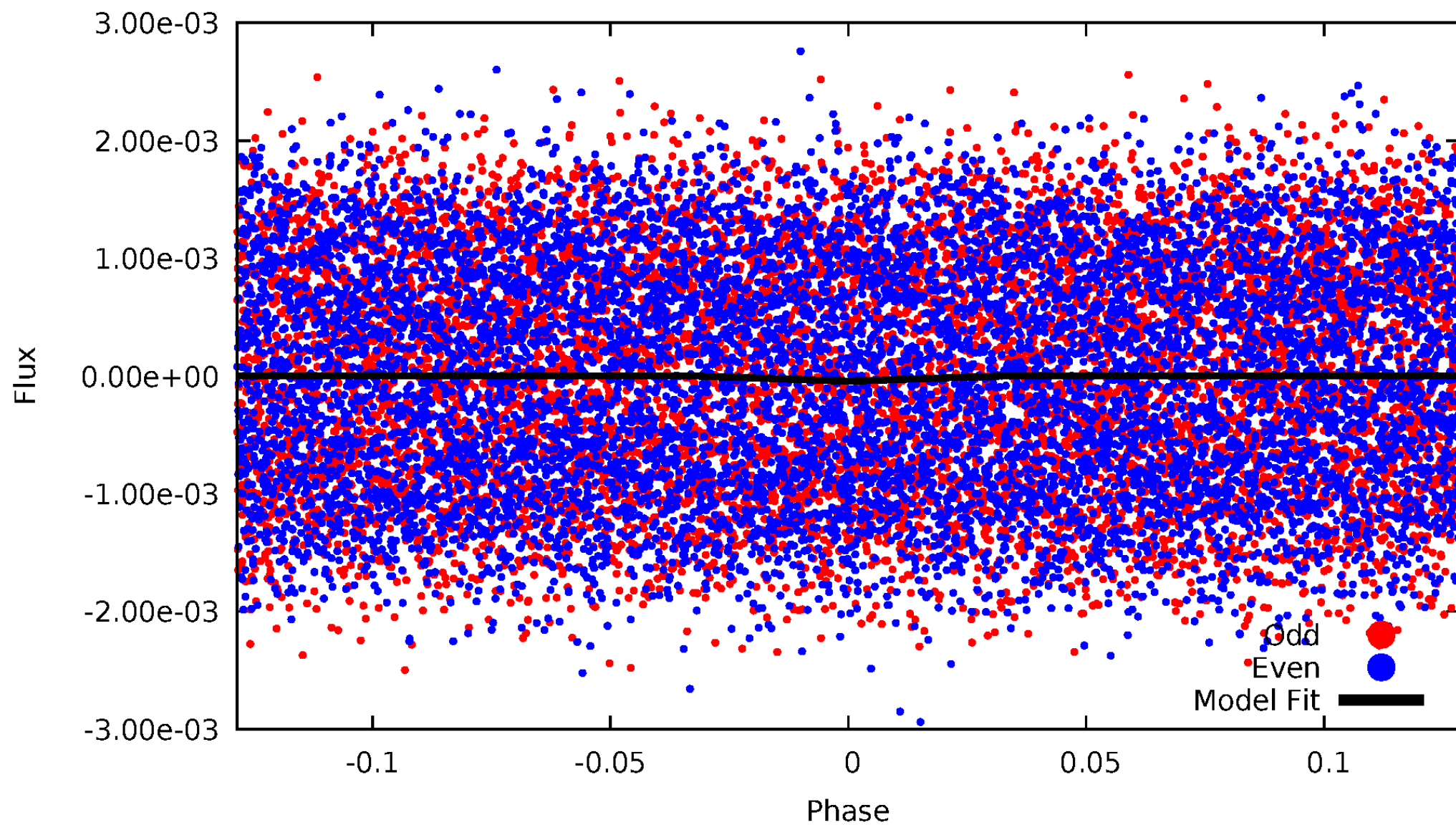
DV Odd/Even

TCE 007548479-01



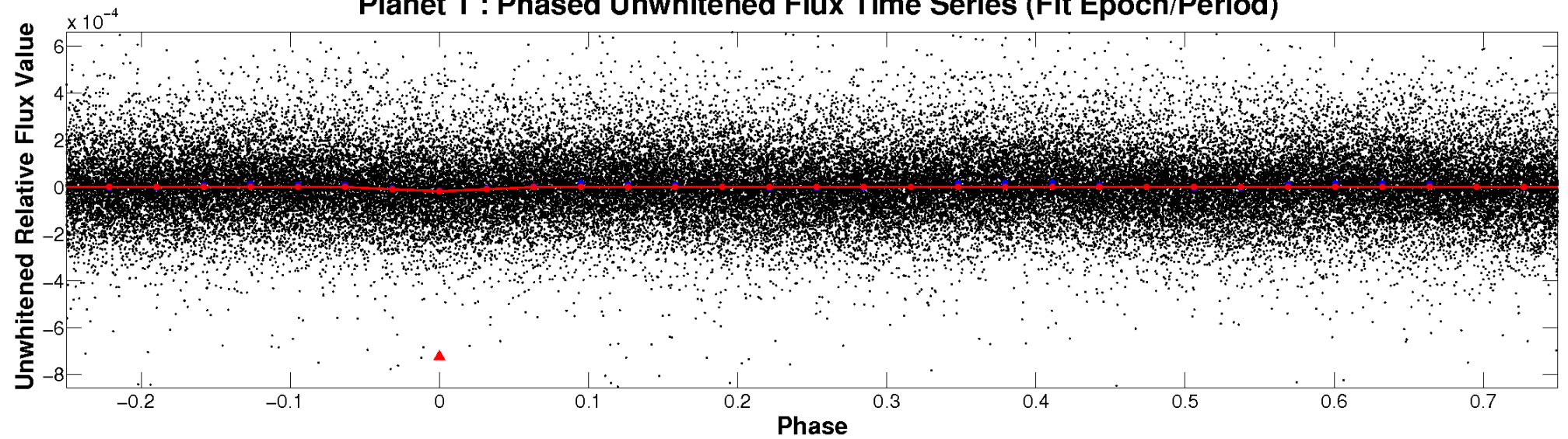
ALT Odd/Even

TCE 007548479-01

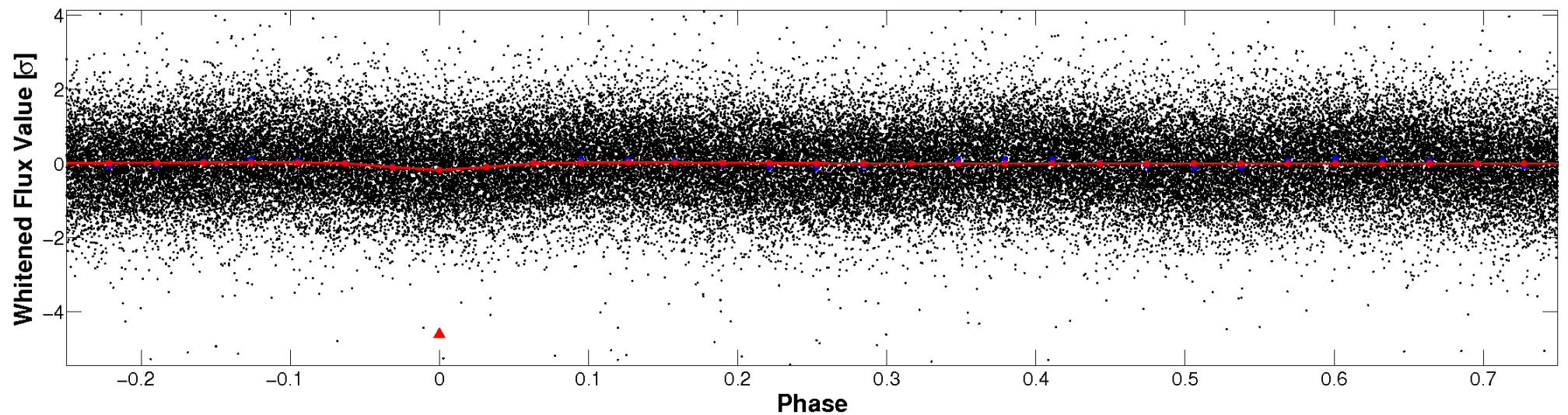


Non-Whitened Vs. Whitened Light Curve

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

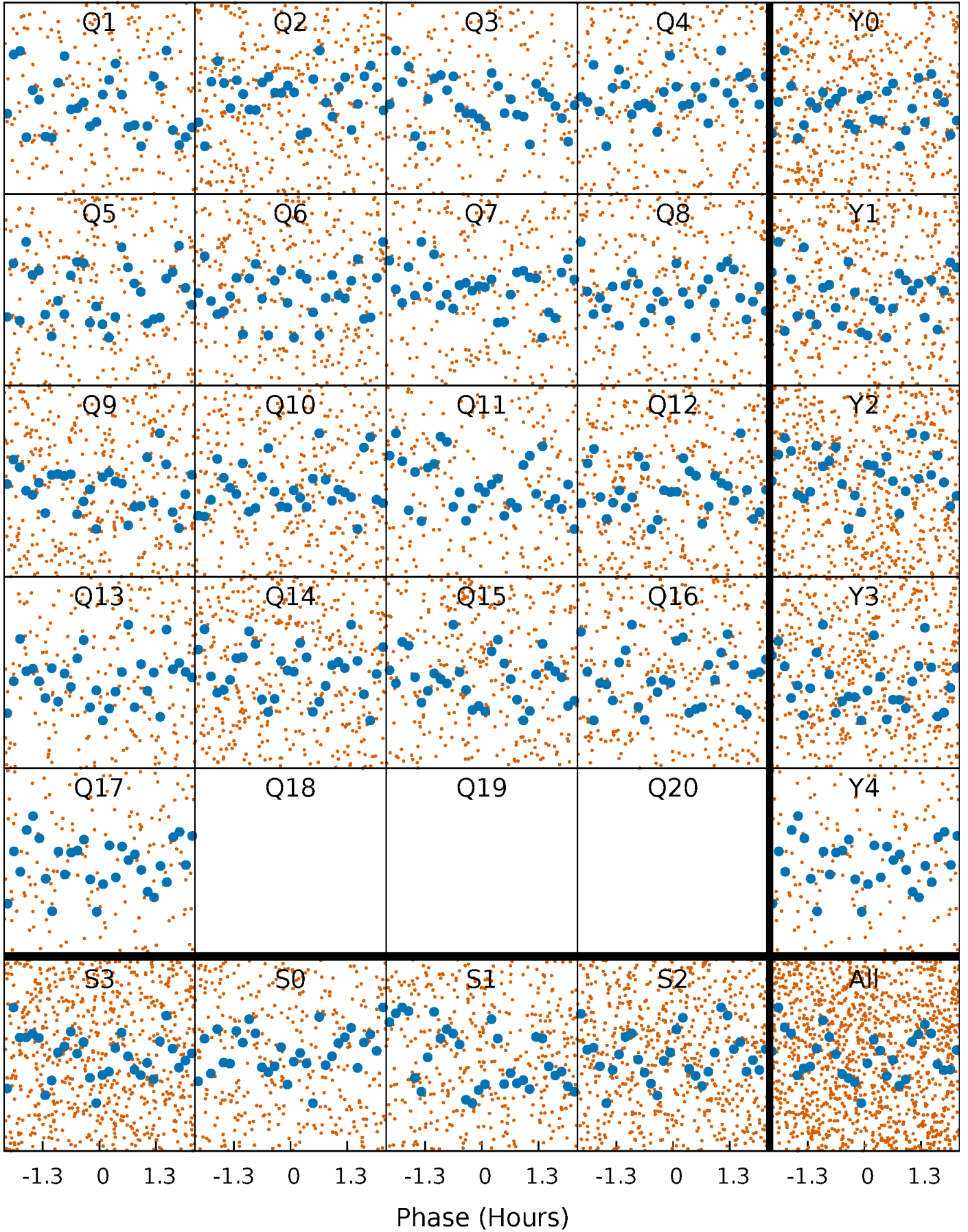


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



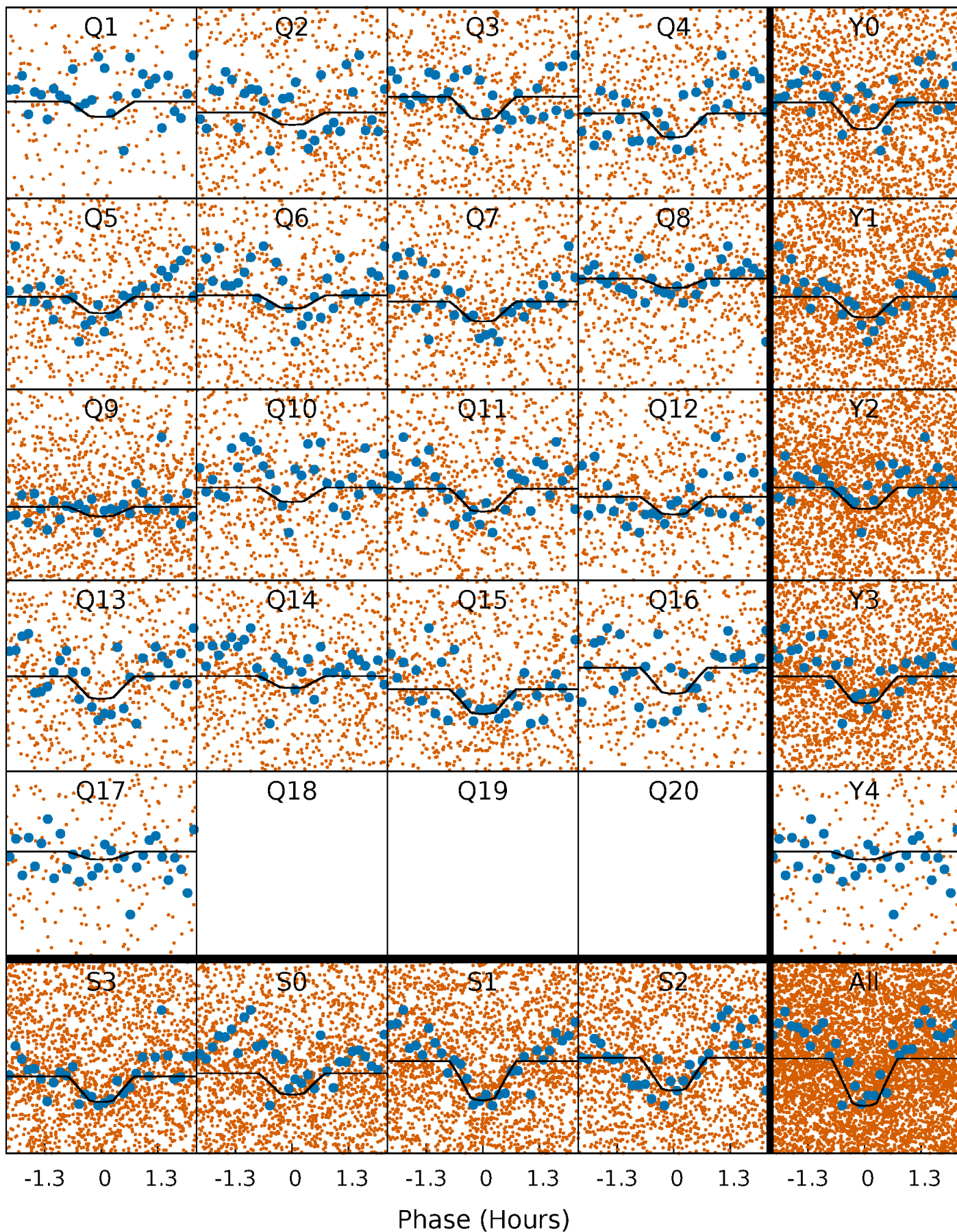
PDC Quarter-Phased Transit Curves

TCE 007548479-01 P= 0.646293 Days $T_0=131.573419$ (BKJD)



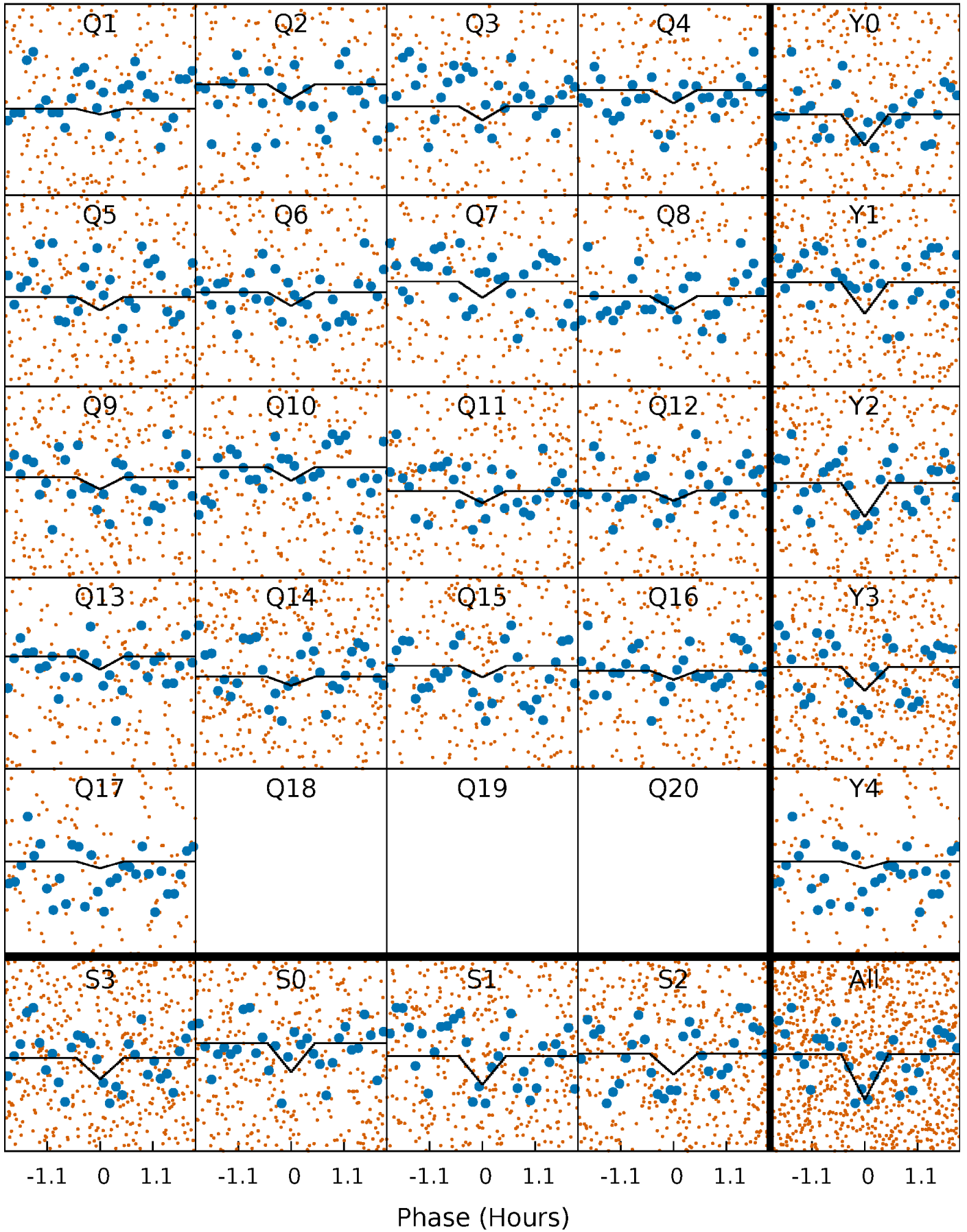
DV Quarter-Phased Transit Curves

TCE 007548479-01 P= 0.646293 Days $T_0=131.573419$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

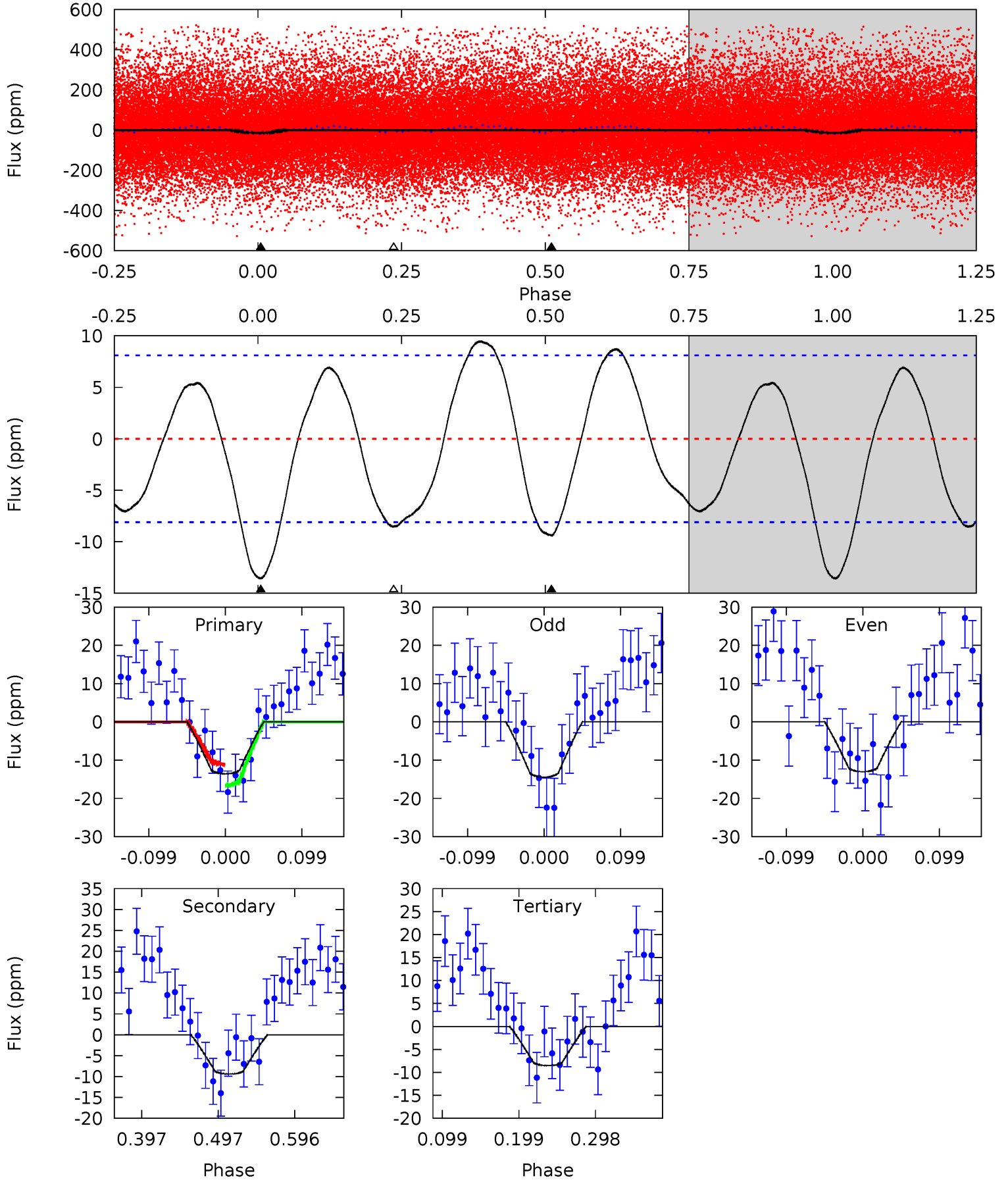
TCE 007548479-01 P= 0.646299 Days $T_0=131.555550$ (BKJD)



DV Model-Shift Uniqueness Test

007548479-01, P = 0.646293 Days, E = 130.927126 Days

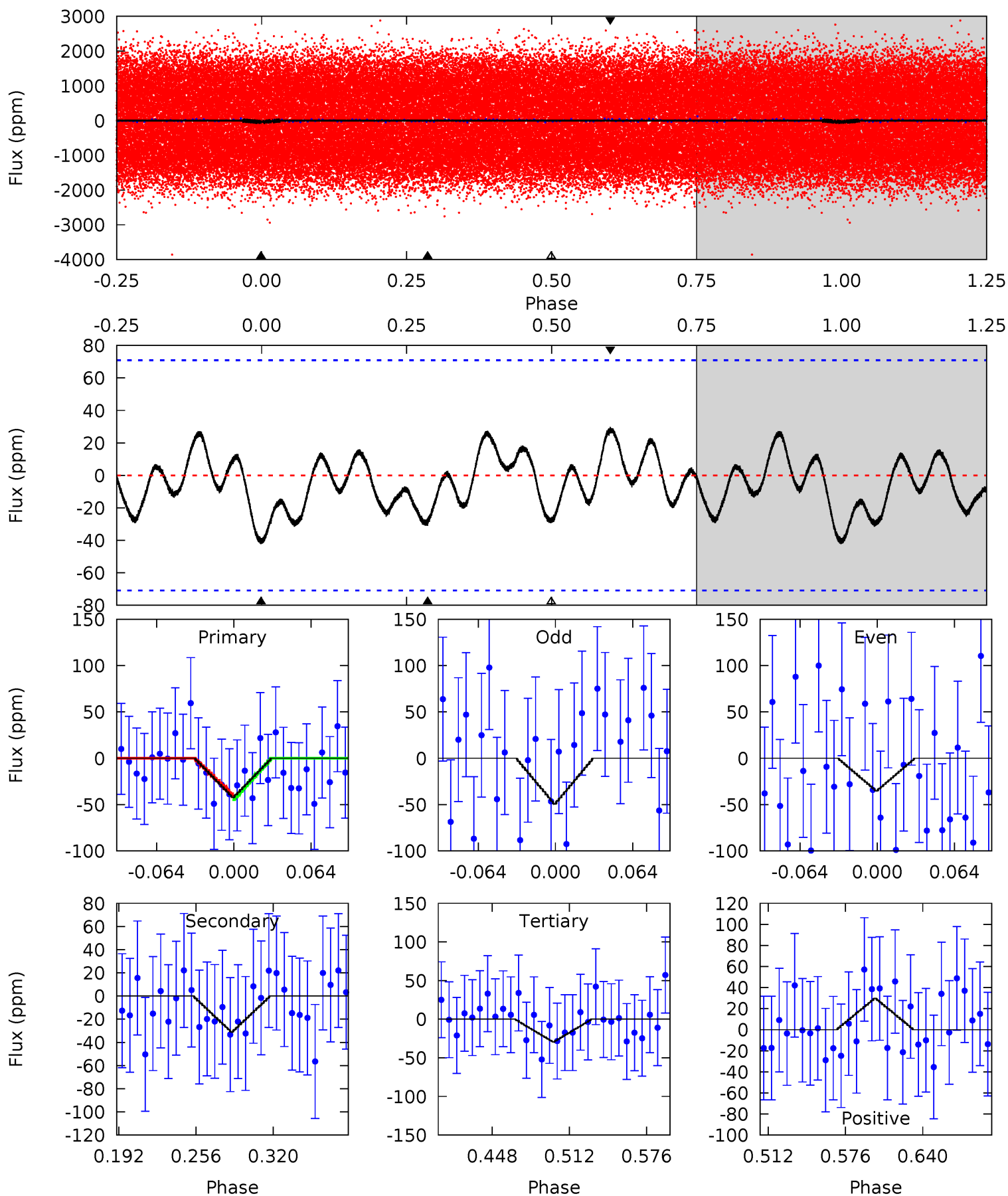
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.66	5.30	4.81	0	4.57	1.65	3.31	2.84	7.66	0.49	5.30	0.40	0.88	0.41	1.56



Alt Model-Shift Uniqueness Test

007548479-01, P = 0.646299 Days, E = 130.909251 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.77	2.04	1.92	1.96	4.66	1.85	0.93	0.85	0.81	0.12	0.08	0.46	0.80	0.41	0.16



Stellar Parameters For KIC 007548479

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7466^{+148}_{-148}	$3.940^{+0.150}_{-0.112}$	$-0.060^{+0.200}_{-0.100}$	$2.350^{+0.461}_{-0.419}$	$1.751^{+0.192}_{-0.157}$	$0.190^{+0.142}_{-0.065}$
	+2%/-2%	+4%/-3%	+333%/-167%	+20%/-18%	+11%/-9%	+75%/-34%
Source	SPE4	SPE4	SPE4	DSEP		

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

Secondary Eclipse Parameters for KIC 007548479-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-9 ± 2	$1.22^{+0.28}_{-0.27}$	5283^{+249}_{-253}	5452^{+879}_{-728}	$1.073^{+0.772}_{-0.382}$
Alt.	-31 ± 15	$1.68^{+0.31}_{-0.30}$	5280^{+265}_{-272}	6474^{+1053}_{-1247}	$1.867^{+1.286}_{-0.920}$

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 $A_{obs} \gg 1.0$

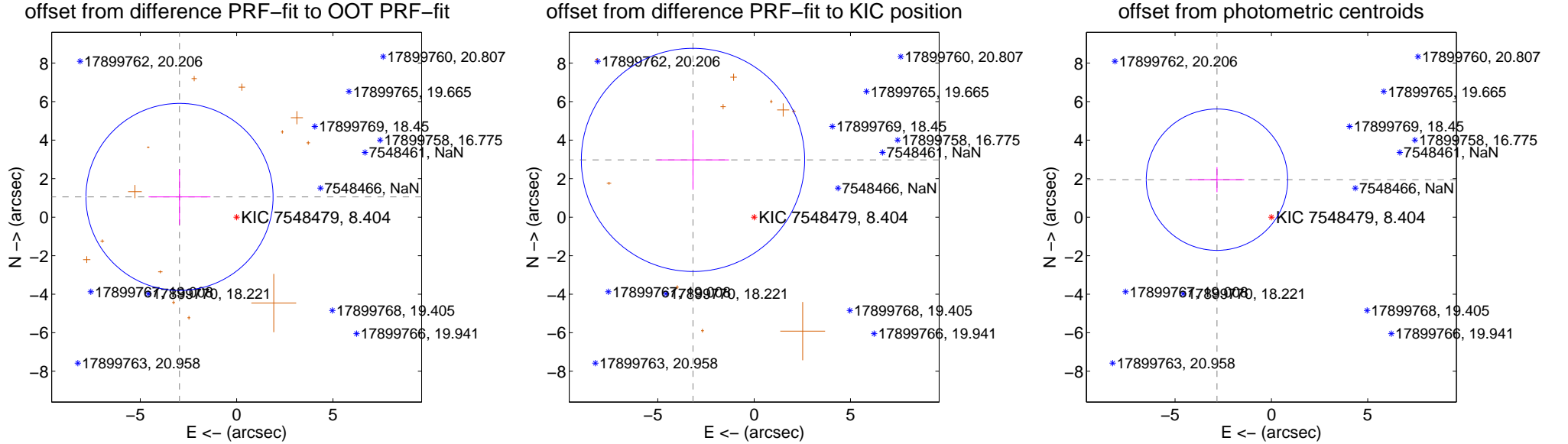
DV Centroid Data

Supplemental centroid analysis for 007548479-01. **Kepler magnitude: 8.40.** Transit SNR 10.83

There are 0 quarters with good PRF difference image offsets

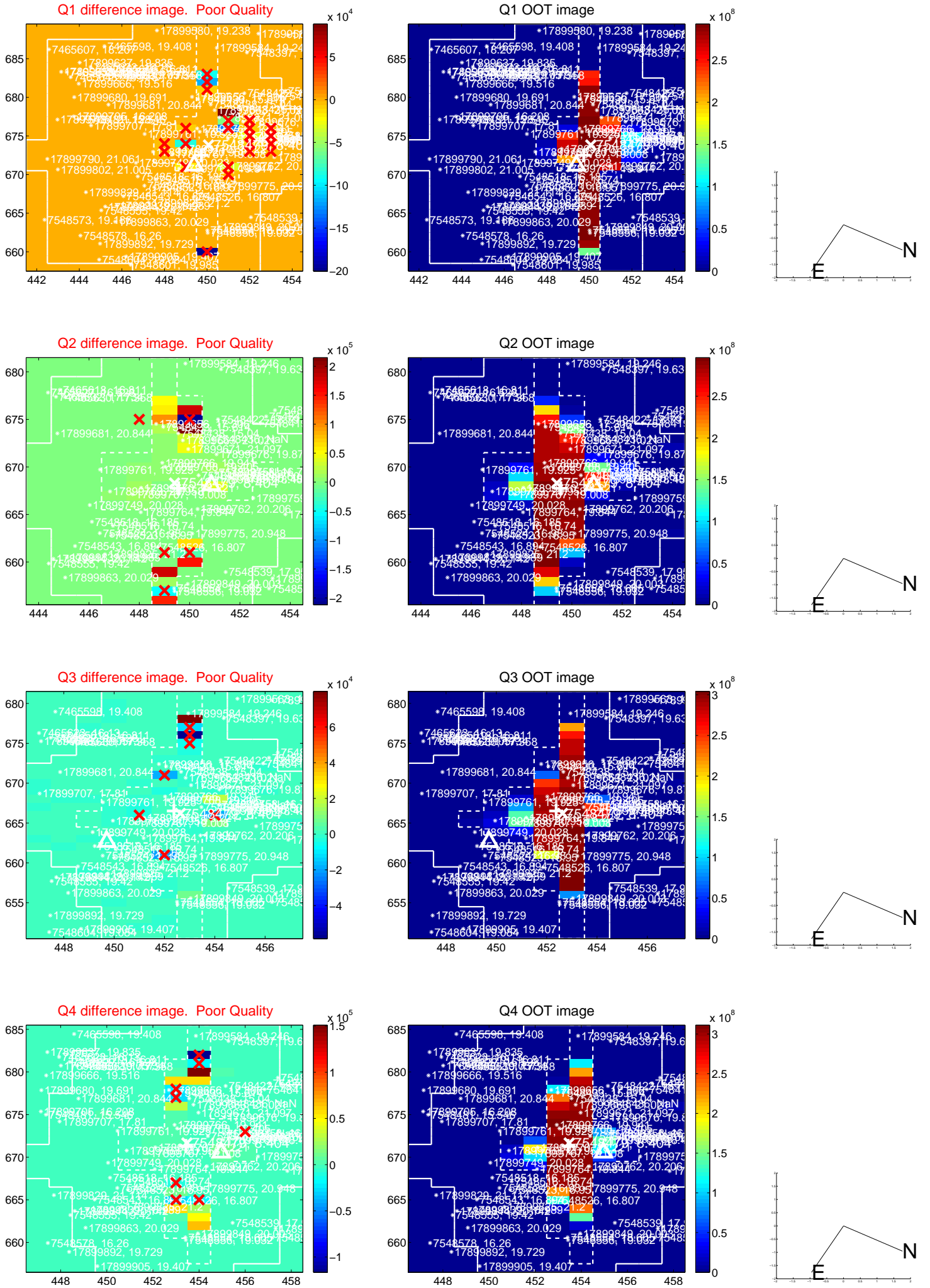
The OOT PRF centroid is offset from the target star catalog position by about 5.83 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.144 ± 1.619	1.94	2.963 ± 1.607	1.052 ± 1.443
PRF-fit source offset from KIC position	4.350 ± 1.932	2.25	3.175 ± 1.866	2.974 ± 1.548
photometric centroid source offset	3.43 ± 1.22	2.80	2.83 ± 1.42	1.95 ± 0.65

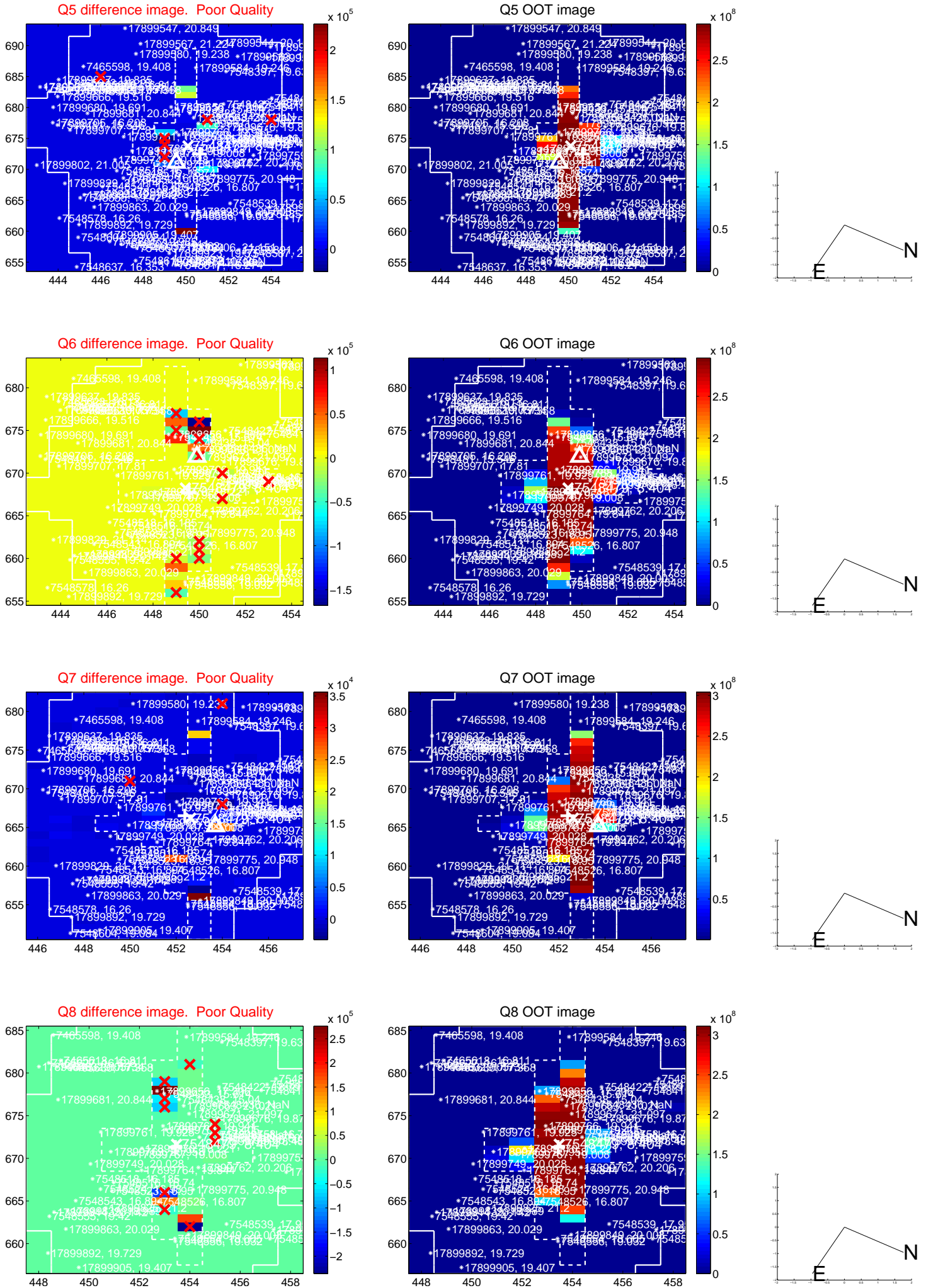


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15, 000, are from the UKIRT catalog.

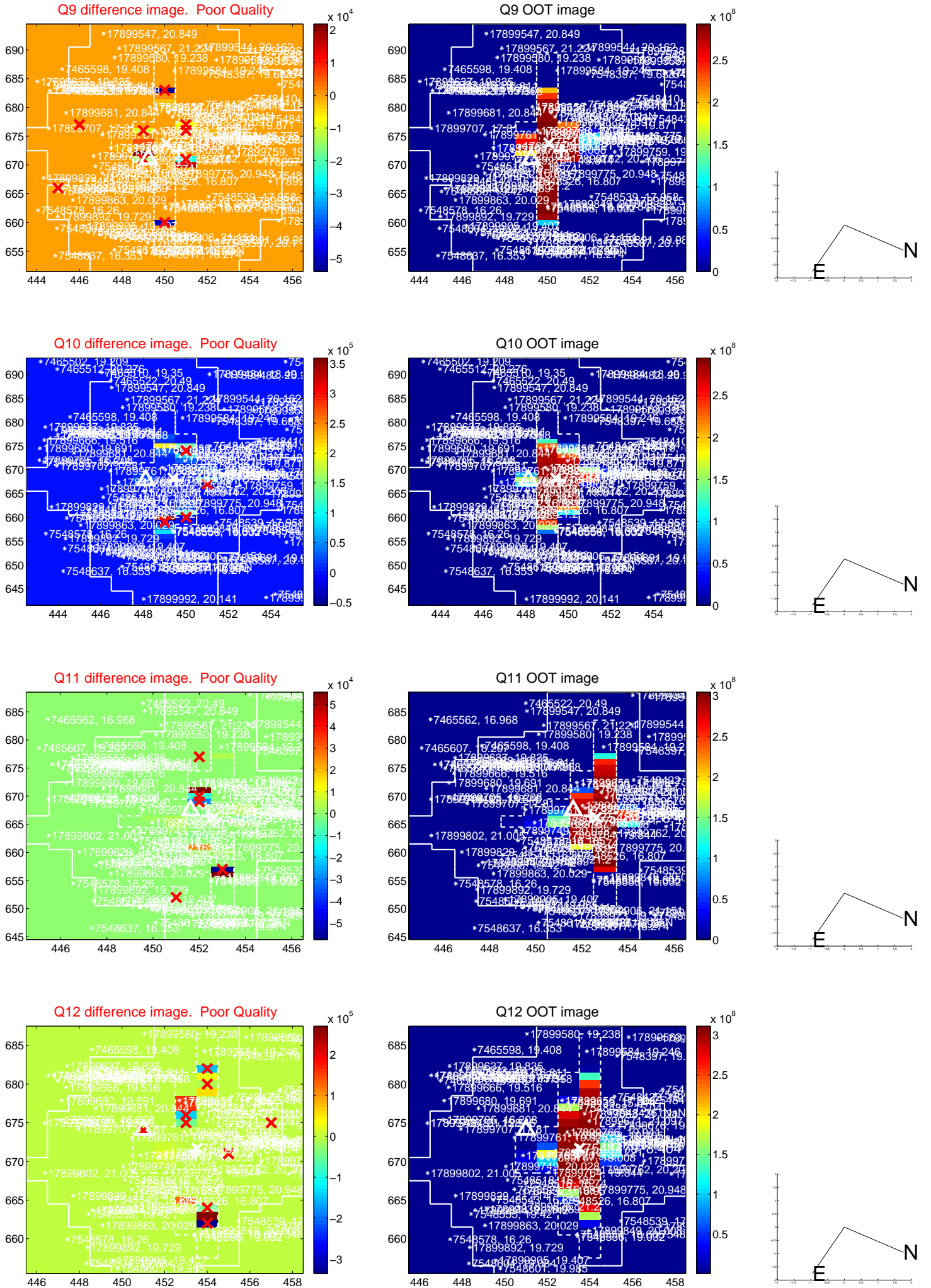
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



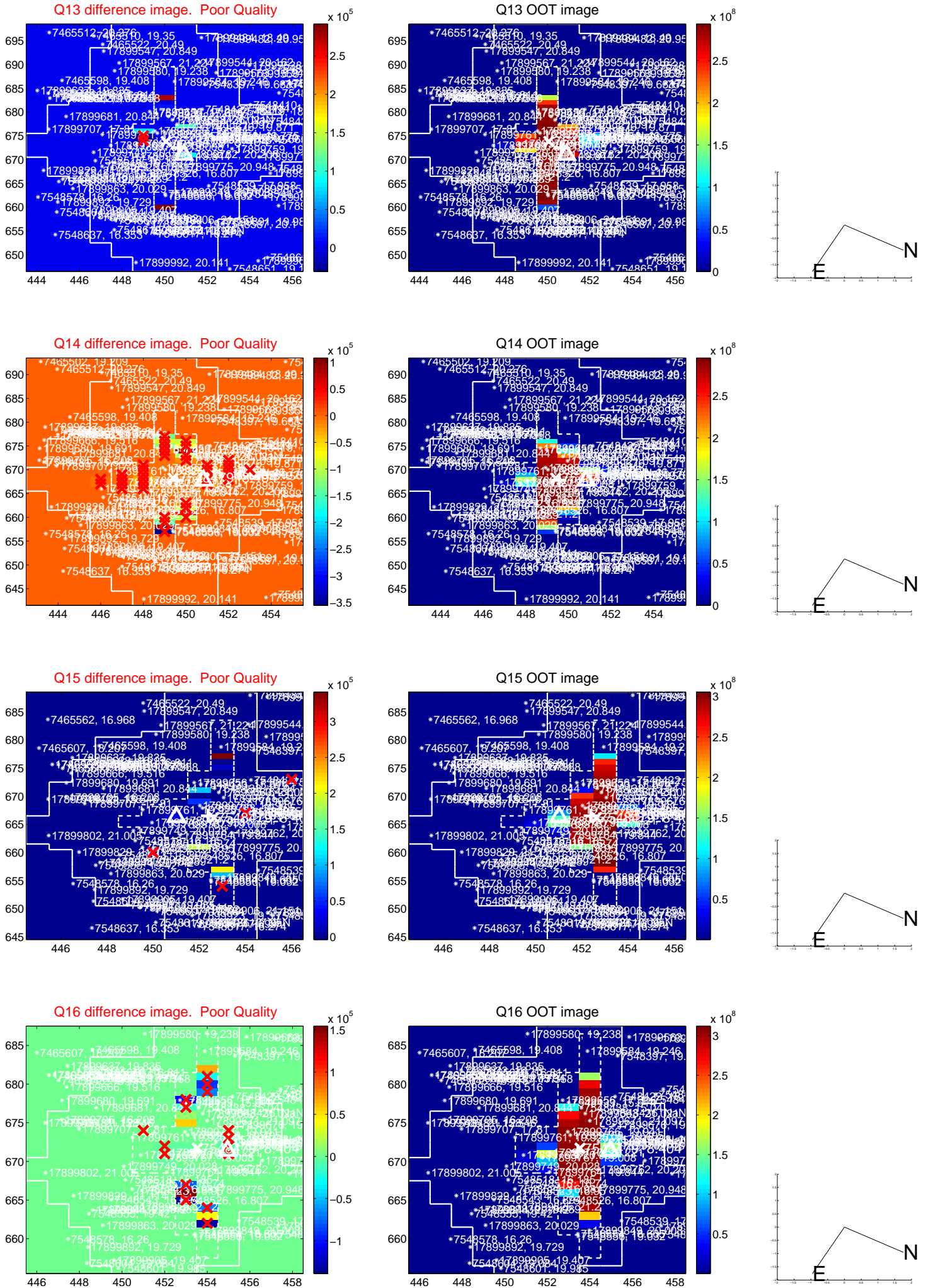
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



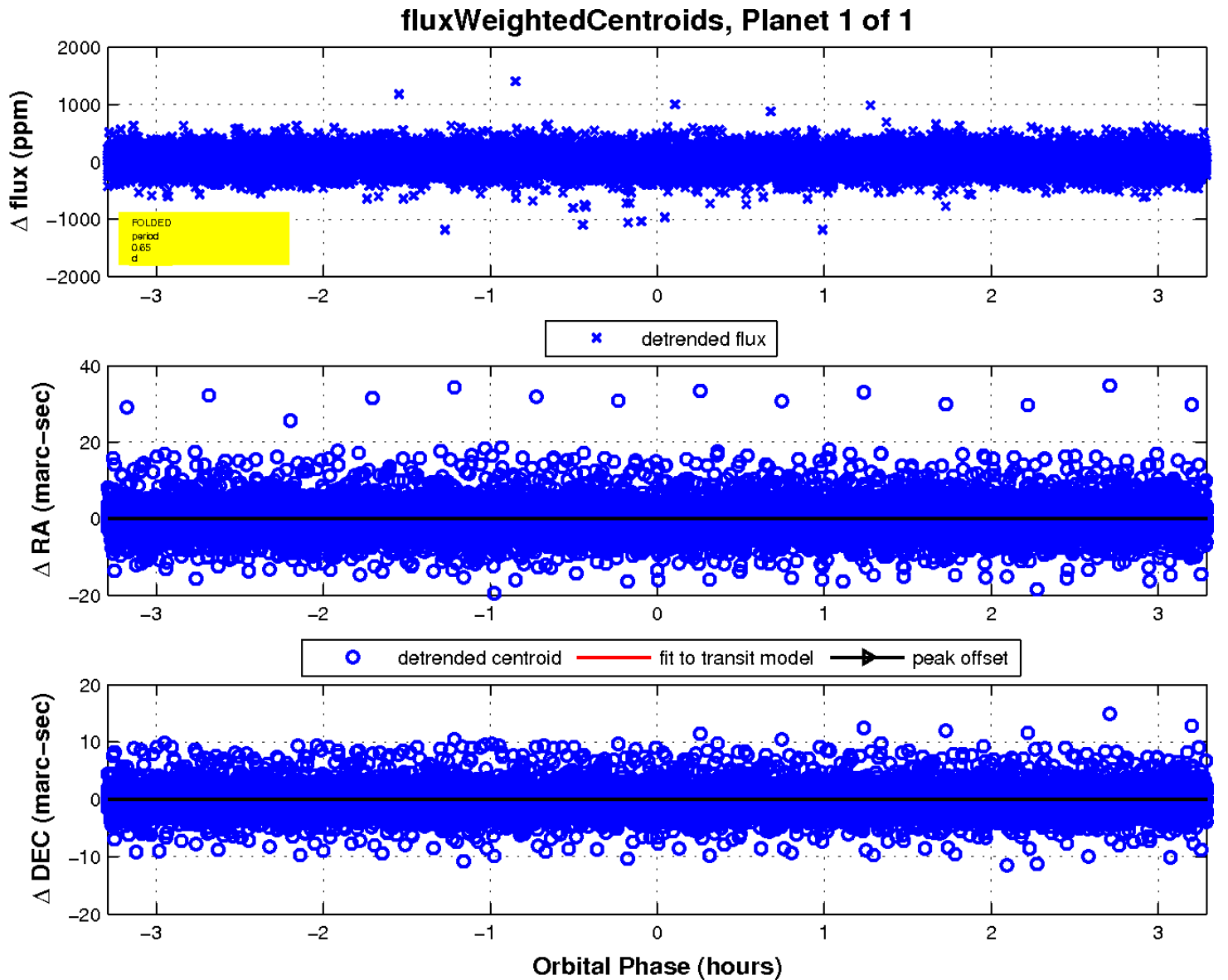
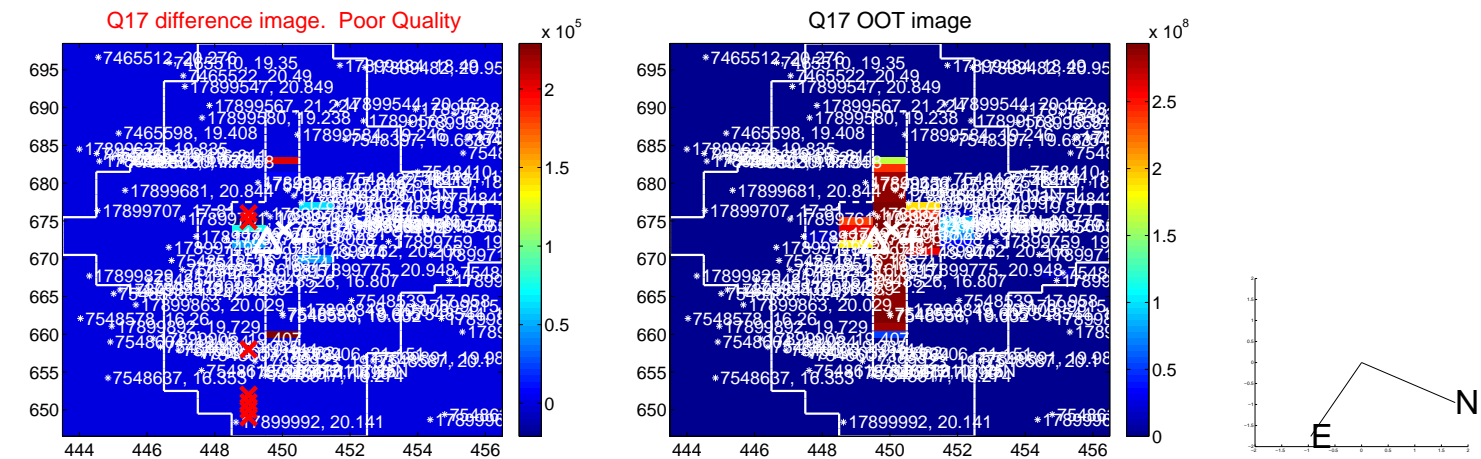
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UKIRT Image

