

KIC 007385387

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})
007385387-01	OBS	6874.01	1.655463	133.130846	100.0	3.551	10.6	9.6	0.82	5438	0.98	742.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007385387-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH

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 007385387-01

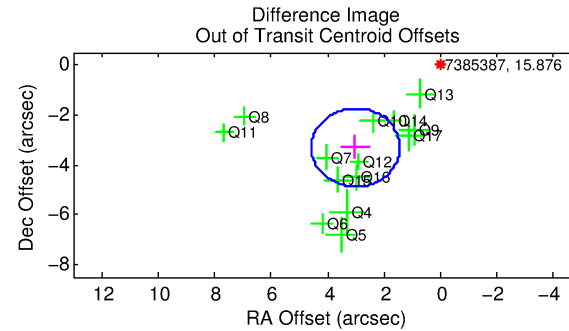
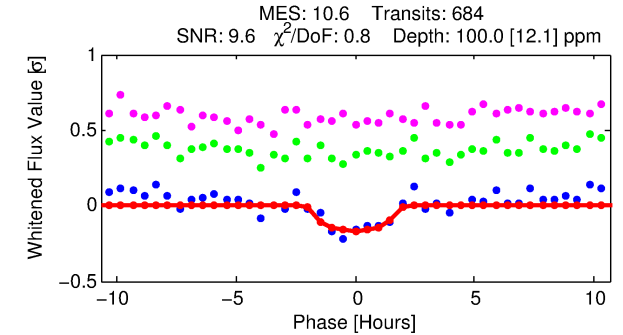
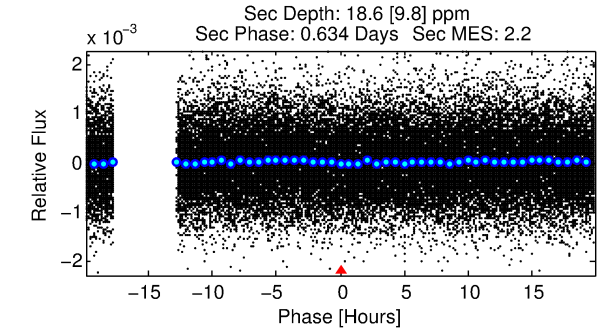
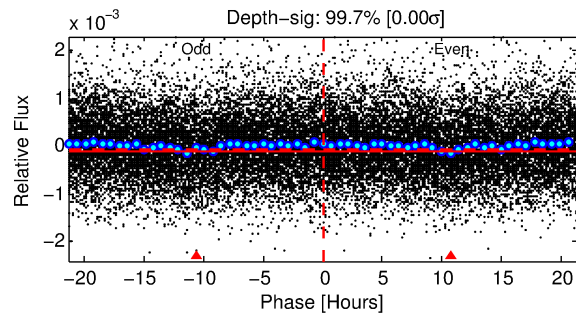
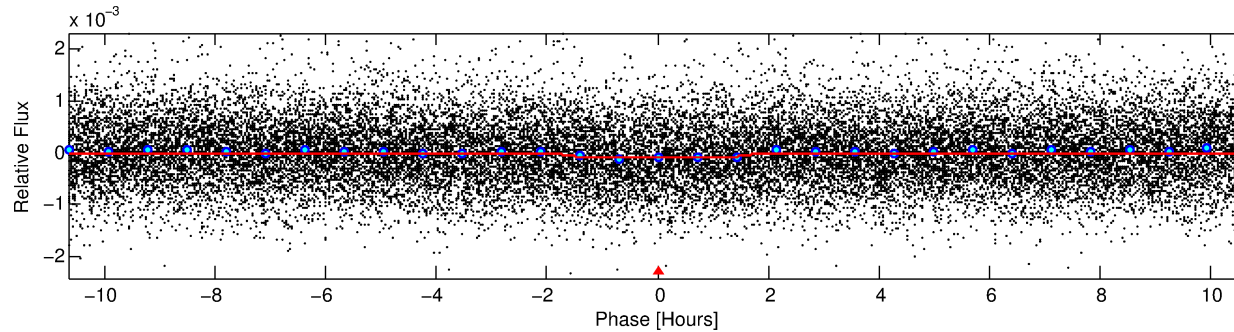
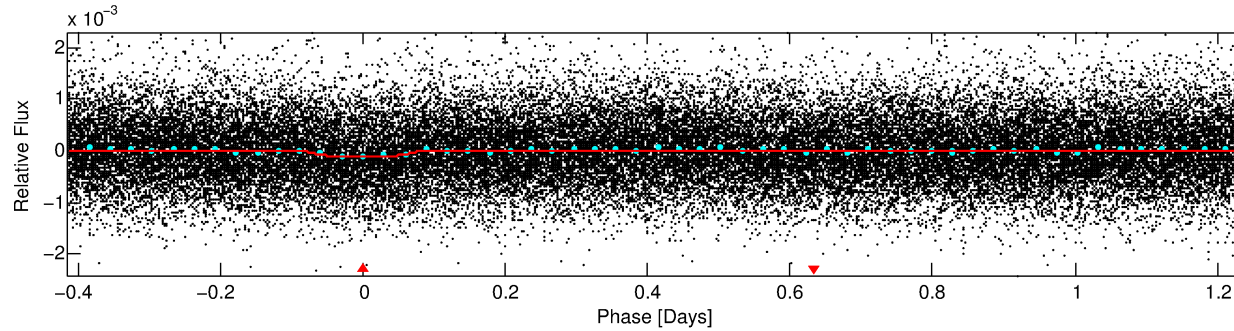
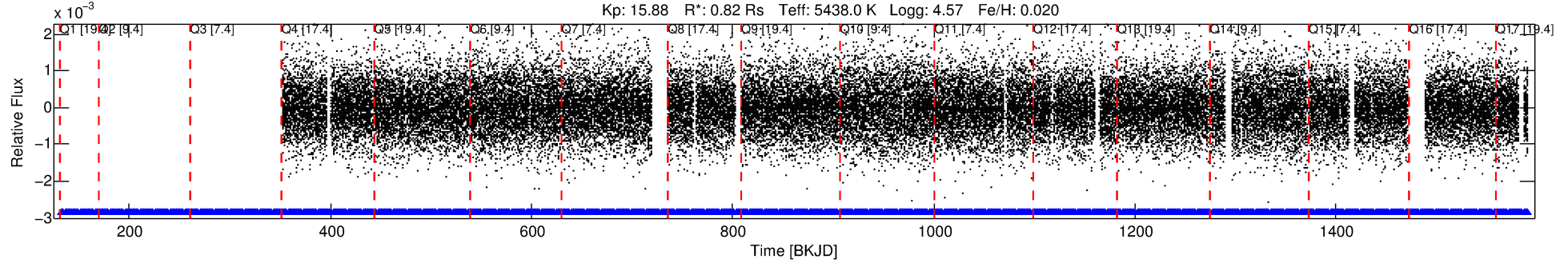
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007385387-01	7385387	007385478-pri	7385478	1:1	66.0	16	2	11.47	15.87	1901.00	Direct-PRF	0	0.66	0.47

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7385387 Candidate: 1 of 1 Period: 1.655 d
KOI: K06874.01 Corr: 0.976

Kp: 15.88 R*: 0.82 Rs Teff: 5438.0 K Logg: 4.57 Fe/H: 0.020



DV Fit Results:

Period = 1.65546 [0.00002] d
Epoch = 133.1308 [0.0052] BKJD
Rp/R* = 0.0110 [0.0085]
a/R* = 1.91 [4.81]
b = 0.90 [0.78]
Seff = 742.39 [229.71]
Teff = 1331 [103] K
Rp = 0.98 [0.79] Re
a = 0.0266 [0.0050] AU
Ag = 7.53 [12.57] [0.52σ]
Teffp = 3409 [1408] K [1.47σ]

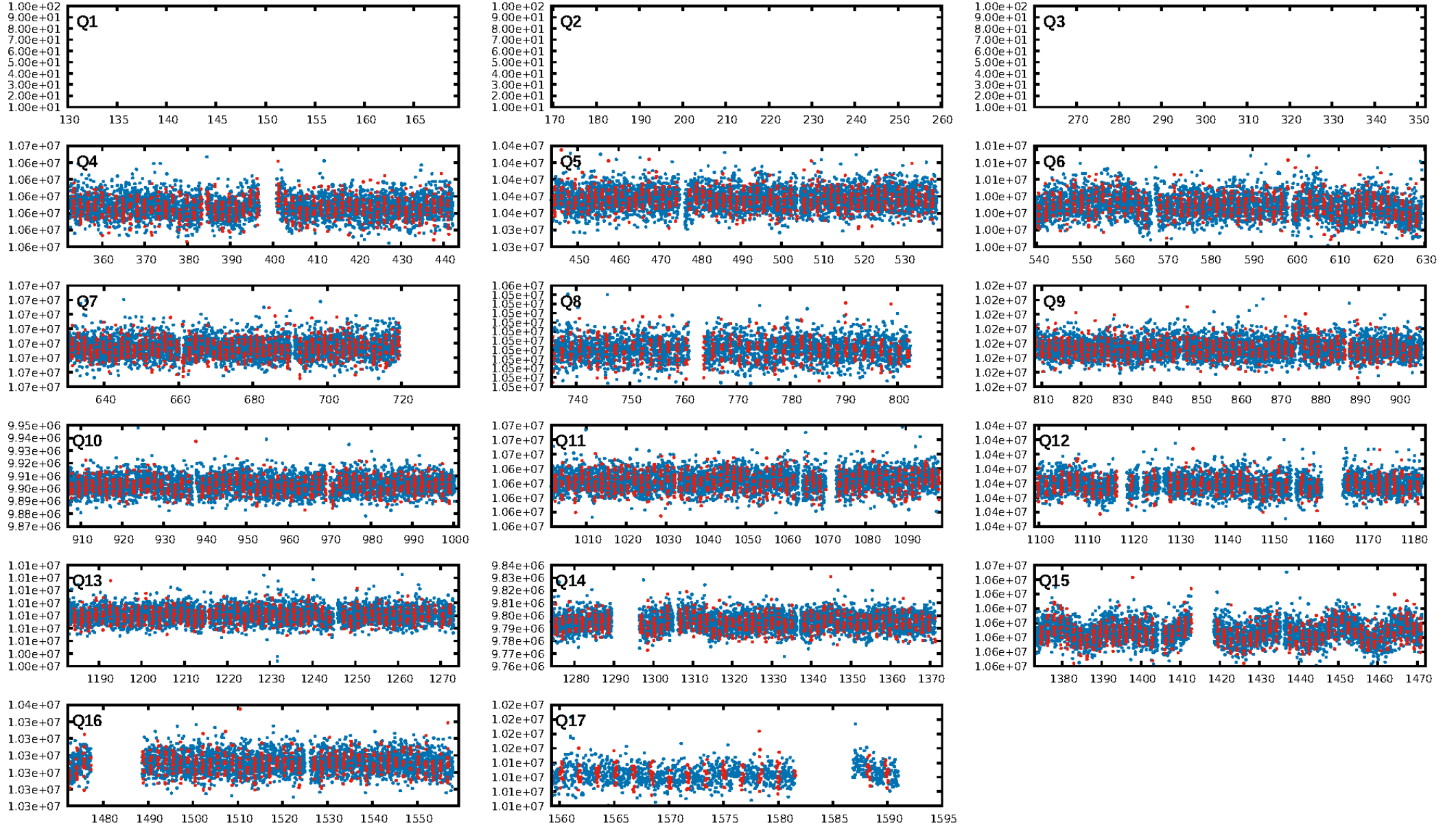
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.20e-25
RollingBand-fgt: 1.00 [668/668]
GhostDiagnostic-chr: 0.1053
Centroid-sig: 0.0%
Centroid-so: 8.005 arcsec [5.60σ]
OotOffset-rm: 4.481 arcsec [8.59σ]
KicOffset-rm: 4.398 arcsec [8.24σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.00 [0/14]
DiffImageOverlap-fno: 1.00 [14/14]

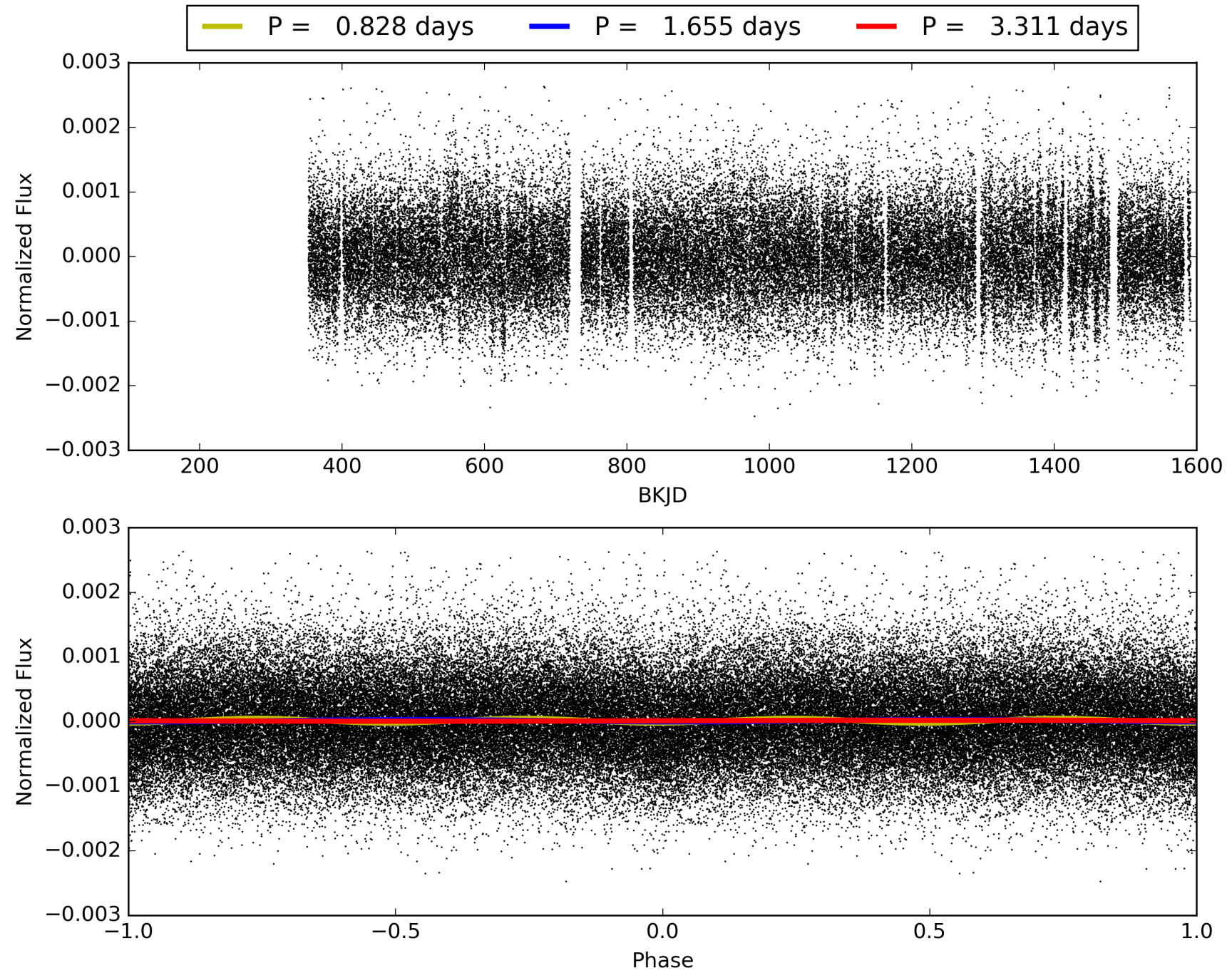
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:29:44 Z

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

TCE 007385387-01, PDC Light Curves

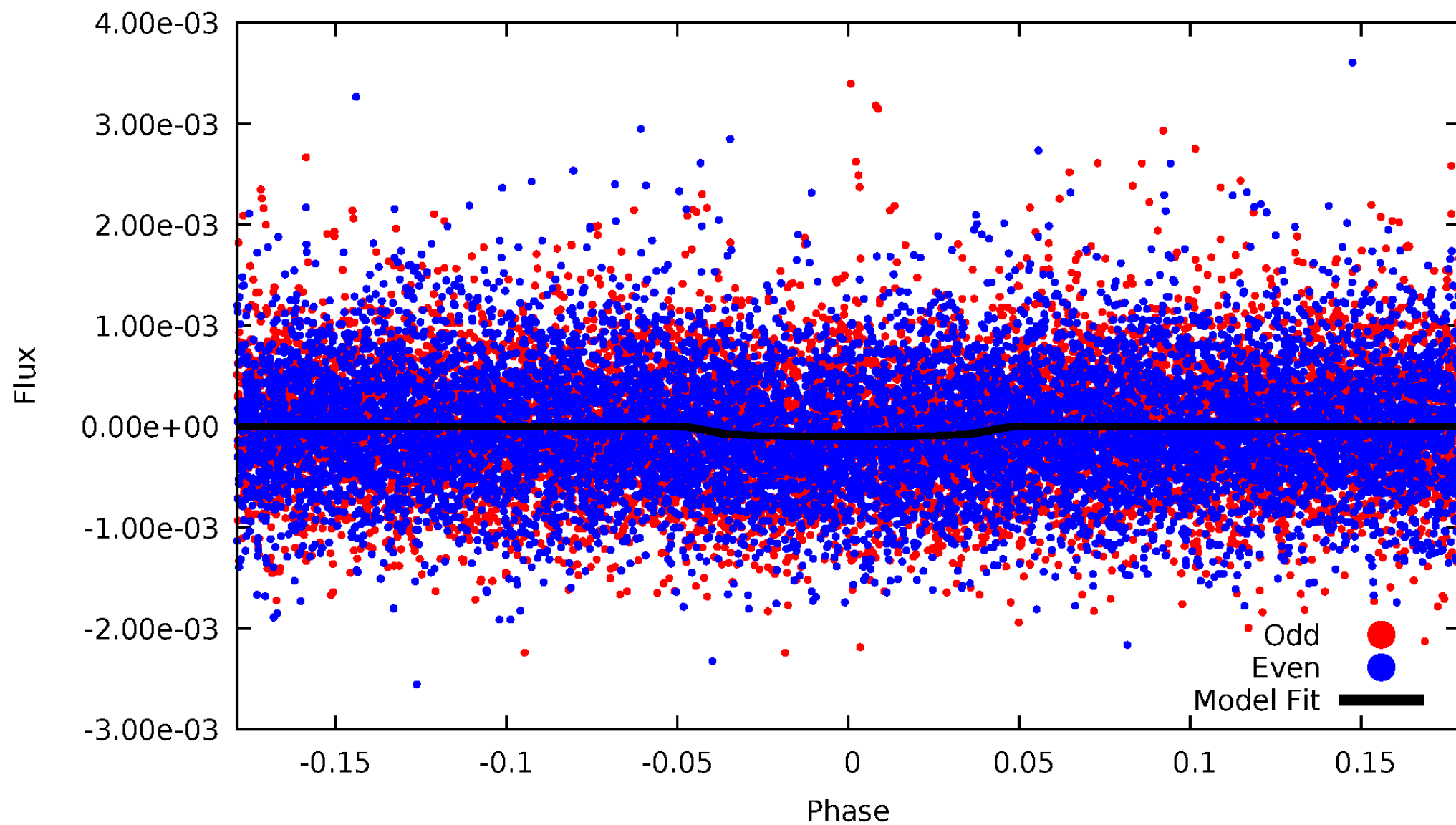


TCE 007385387-01



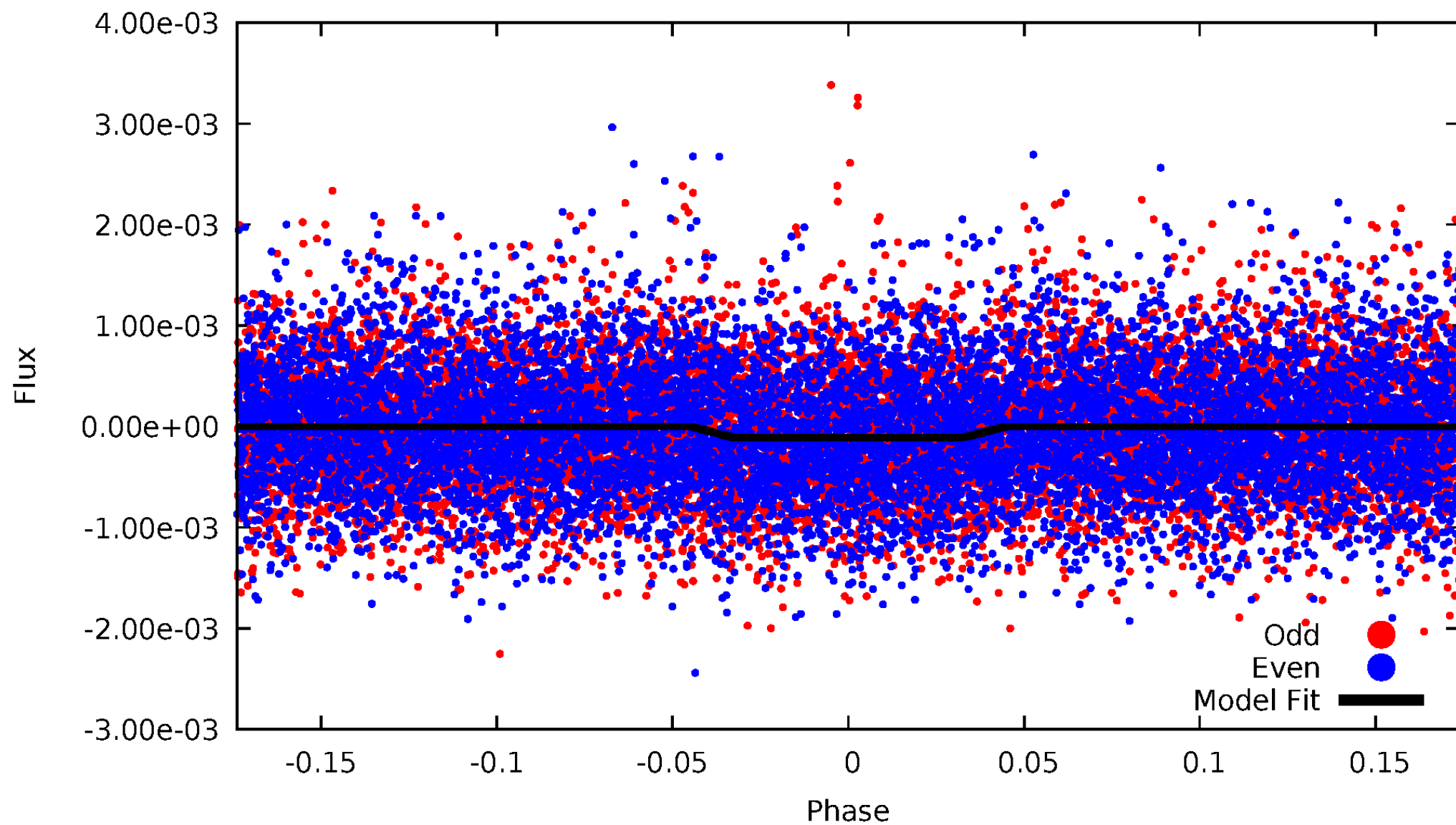
DV Odd/Even

TCE 007385387-01



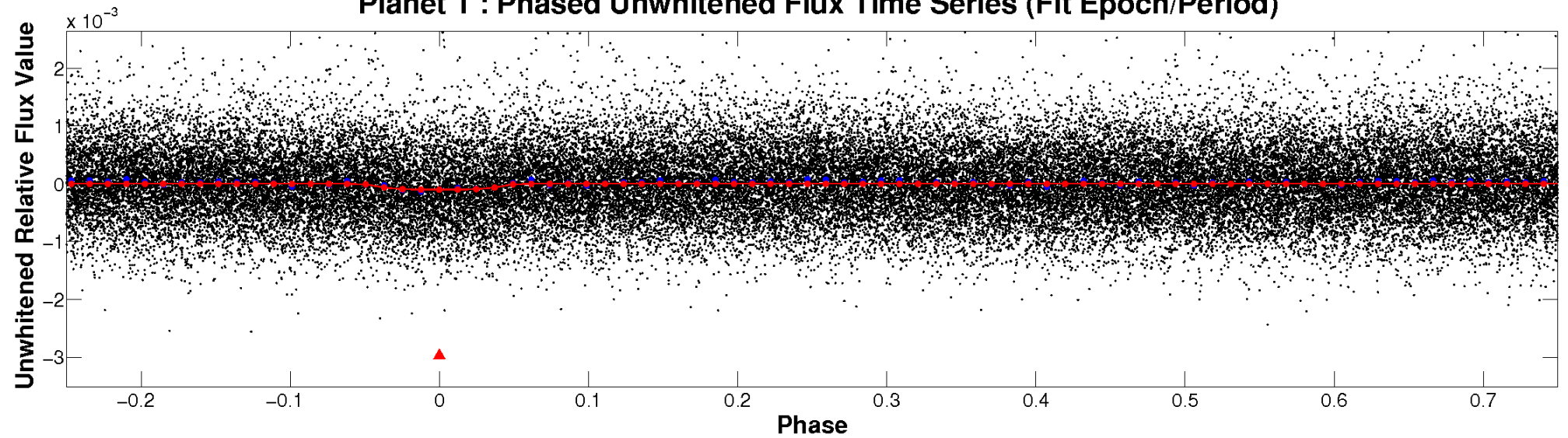
ALT Odd/Even

TCE 007385387-01

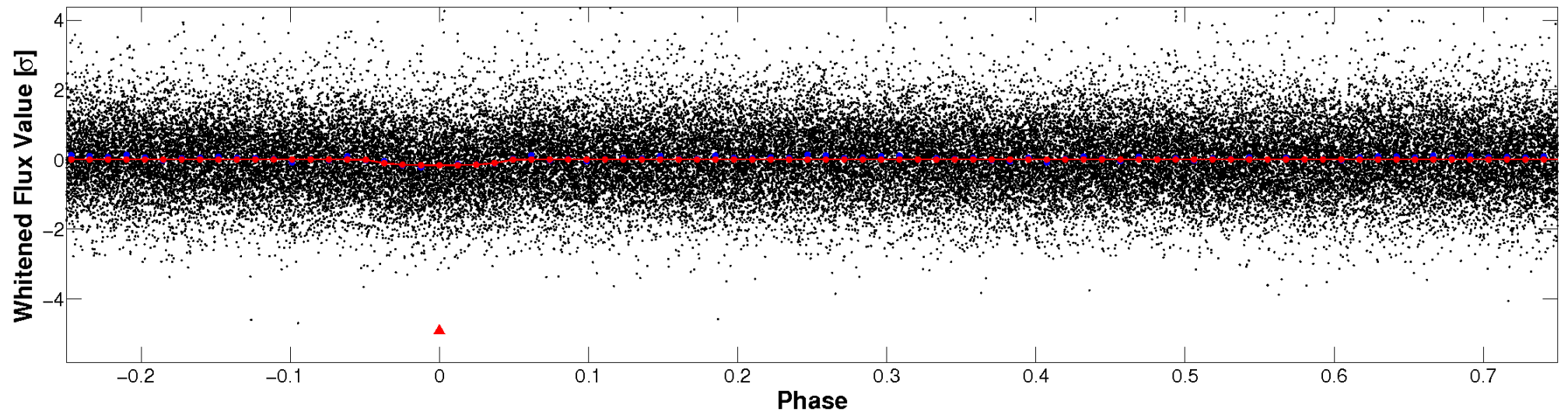


Non-Whitened Vs. Whitened Light Curve

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

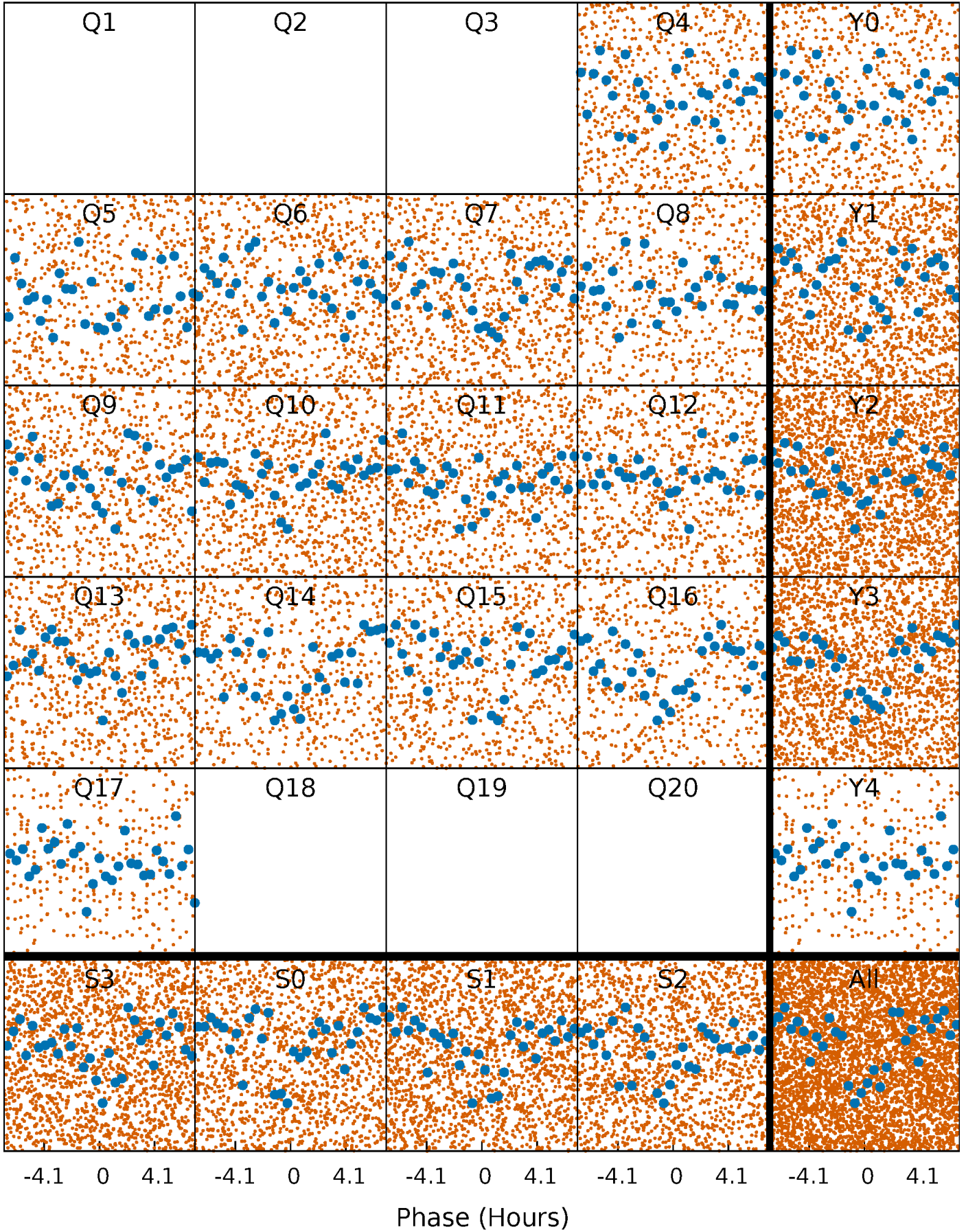


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



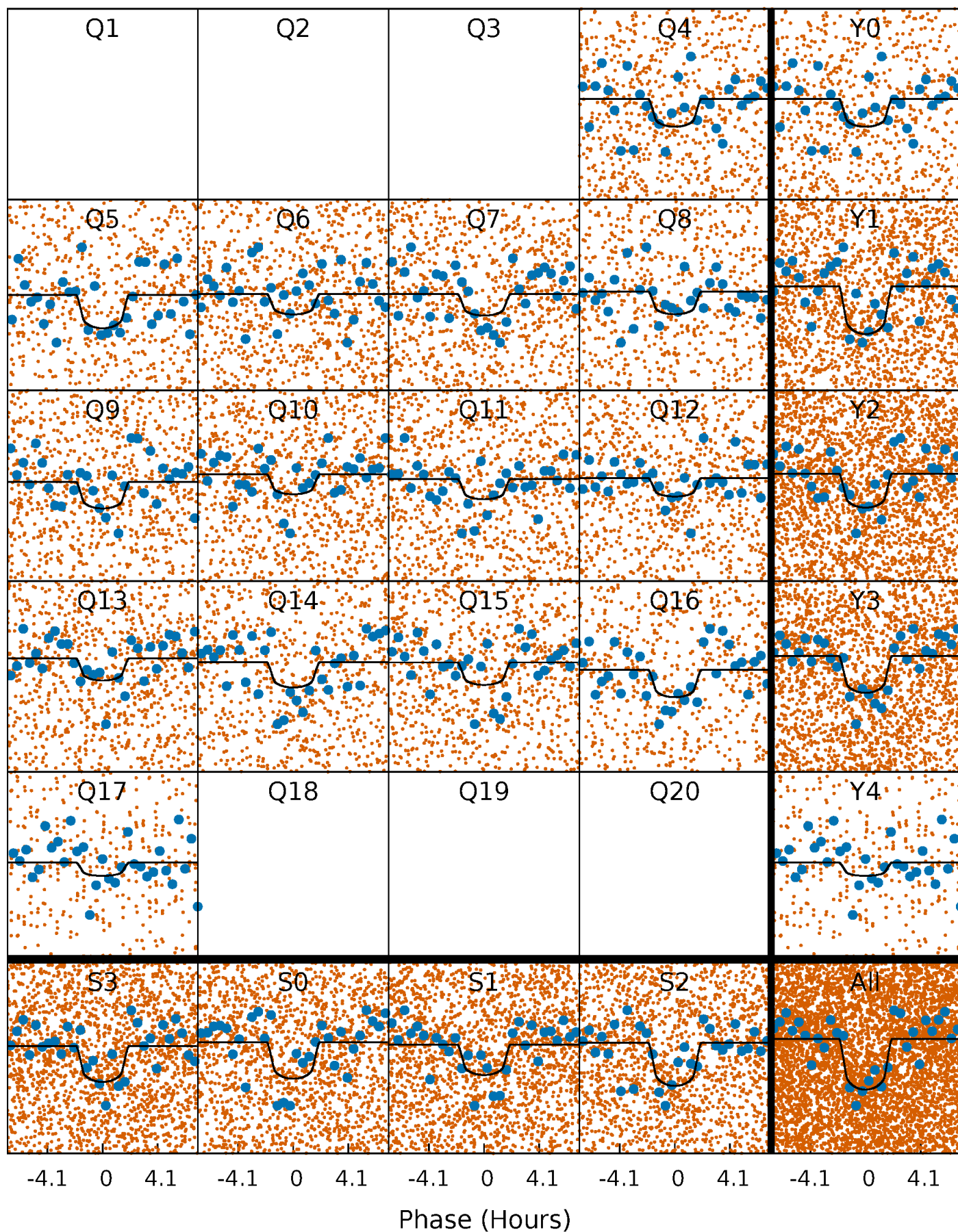
PDC Quarter-Phased Transit Curves

TCE 007385387-01 P= 1.655463 Days $T_0=133.130846$ (BKJD)



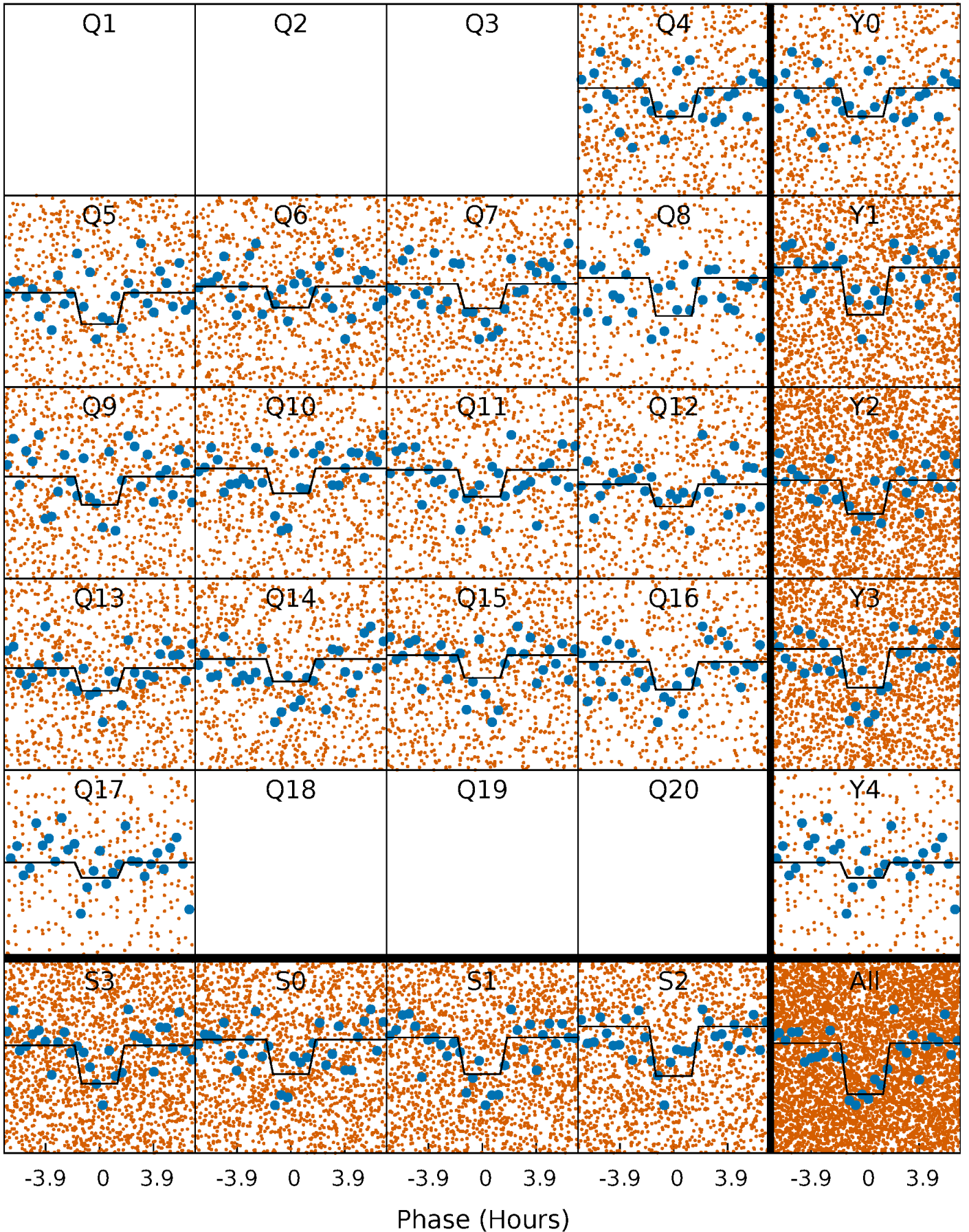
DV Quarter-Phased Transit Curves

TCE 007385387-01 P= 1.655463 Days $T_0=133.130846$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

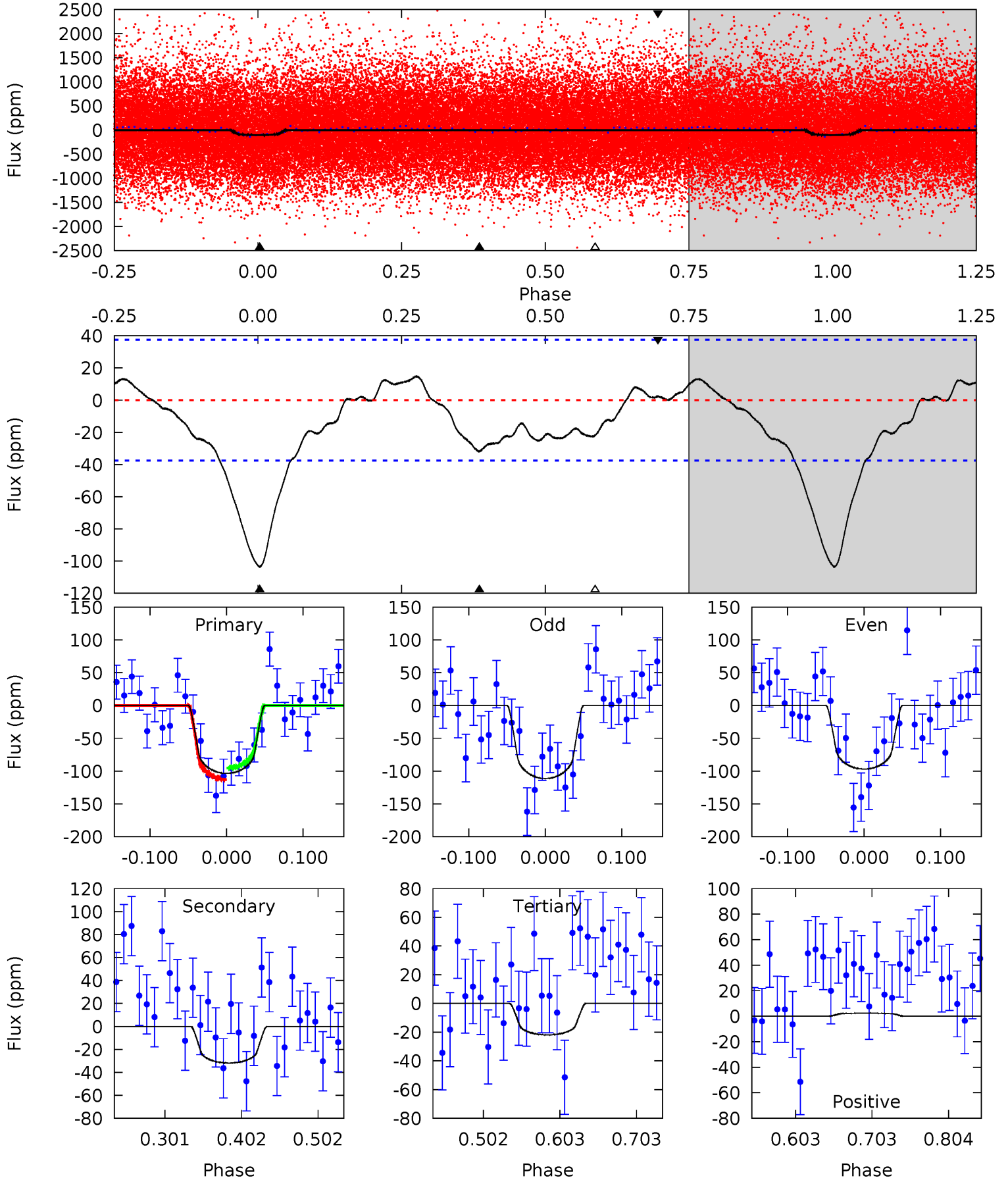
TCE 007385387-01 P= 1.655477 Days $T_0=133.129997$ (BKJD)



DV Model-Shift Uniqueness Test

007385387-01, P = 1.655463 Days, E = 133.130846 Days

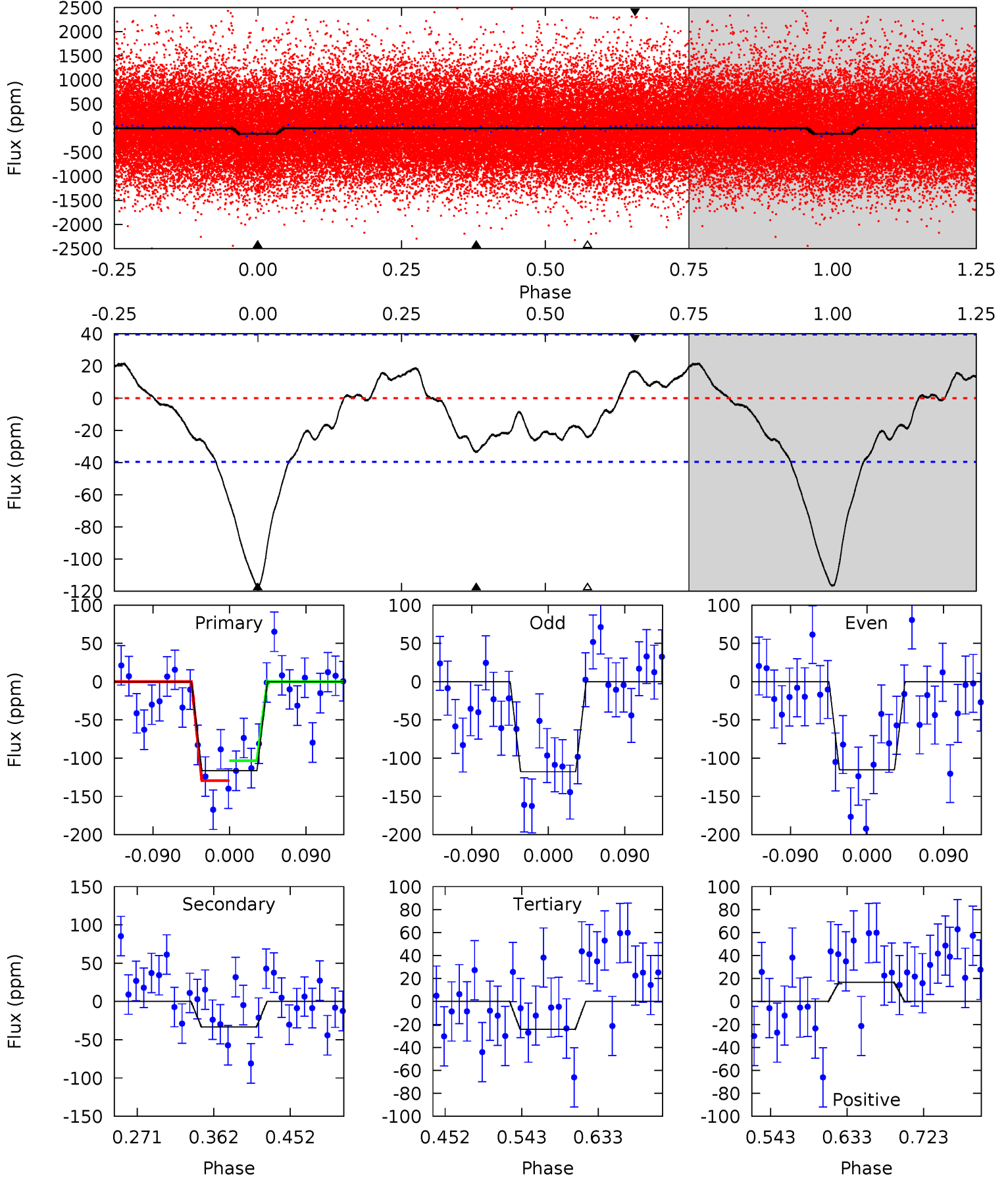
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	3.88	2.66	0.29	4.56	1.64	1.50	9.92	12.3	1.22	3.58	0.87	0.99	0.13	1.07



Alt Model-Shift Uniqueness Test

007385387-01, P = 1.655477 Days, E = 133.129997 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	3.87	2.81	1.94	4.59	1.69	1.78	10.7	11.6	1.05	1.92	0.15	1.01	0.16	1.52



Stellar Parameters For KIC 007385387

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5438^{+187}_{-187}	$4.574^{+0.027}_{-0.153}$	$0.020^{+0.250}_{-0.300}$	$0.820^{+0.181}_{-0.073}$	$0.920^{+0.072}_{-0.108}$	$2.346^{+0.435}_{-0.933}$
	+3%/-3%	+1%/-3%	+1250%/-1500%	+22%/-9%	+8%/-12%	+19%/-40%
Source	KIC0	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 007385387-01 / KOI 6874.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-32 ± 8	$1.15^{+0.74}_{-0.68}$	1903^{+110}_{-95}	3932^{+1785}_{-636}	$8.873^{+46.850}_{-5.528}$
Alt.	-33 ± 9	$1.09^{+0.73}_{-0.68}$	1901^{+106}_{-83}	4044^{+1900}_{-655}	10^{+57}_{-7}

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

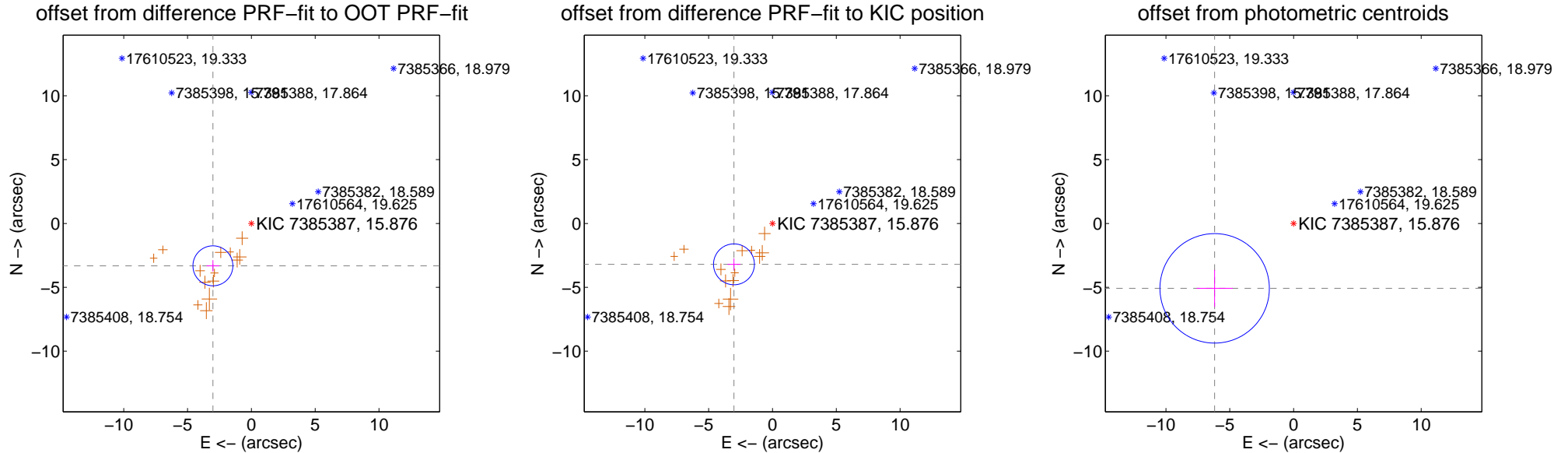
DV Centroid Data

Supplemental centroid analysis for 007385387-01. Kepler magnitude: 15.88. Transit SNR 9.55

There are 0 quarters with good PRF difference image offsets

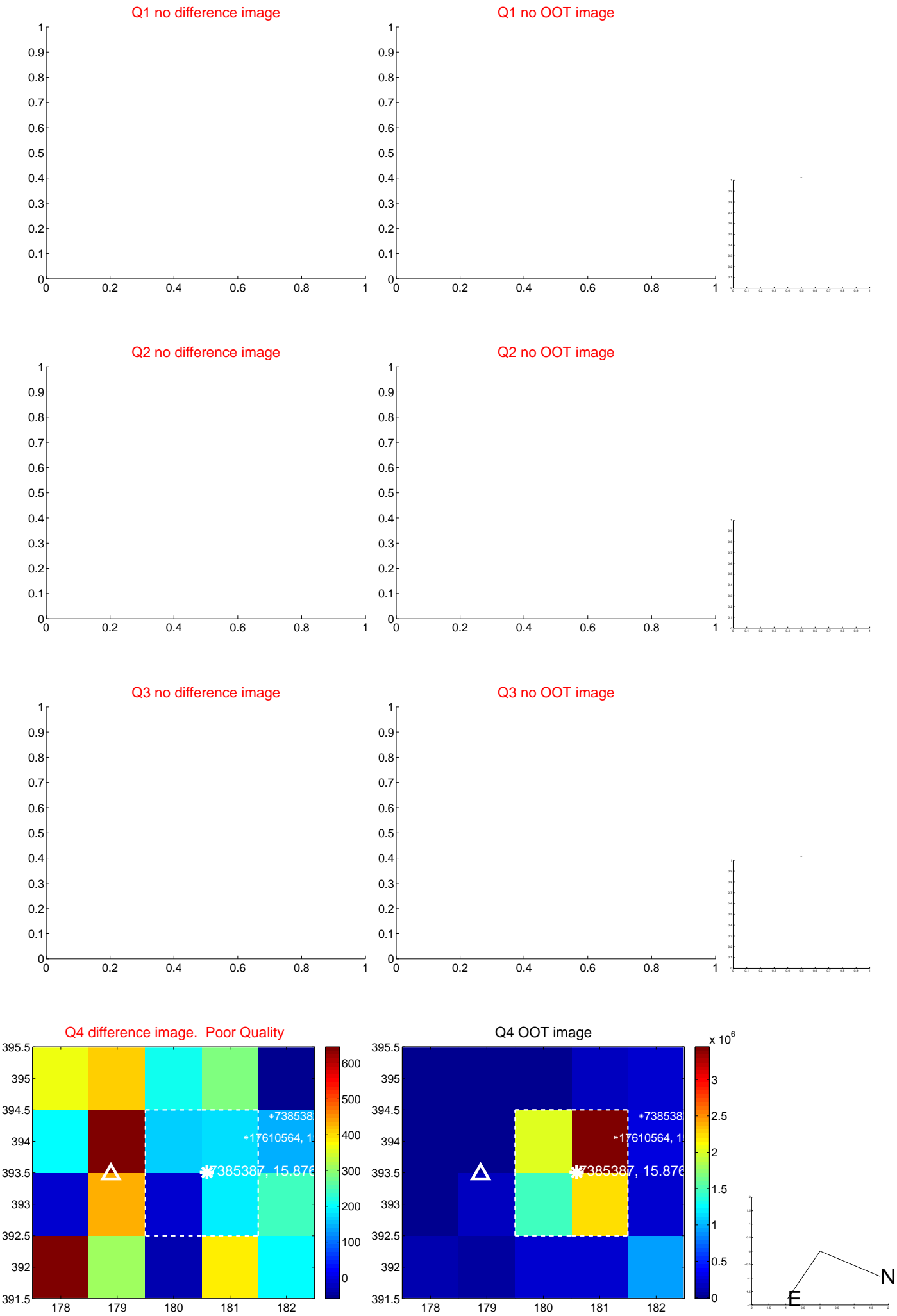
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.481 \pm 0.522	8.59	3.014 \pm 0.498	-3.316 \pm 0.445
PRF-fit source offset from KIC position	4.398 \pm 0.534	8.24	3.018 \pm 0.505	-3.200 \pm 0.461
photometric centroid source offset	8.01 \pm 1.43	5.60	6.19 \pm 1.42	-5.08 \pm 1.45

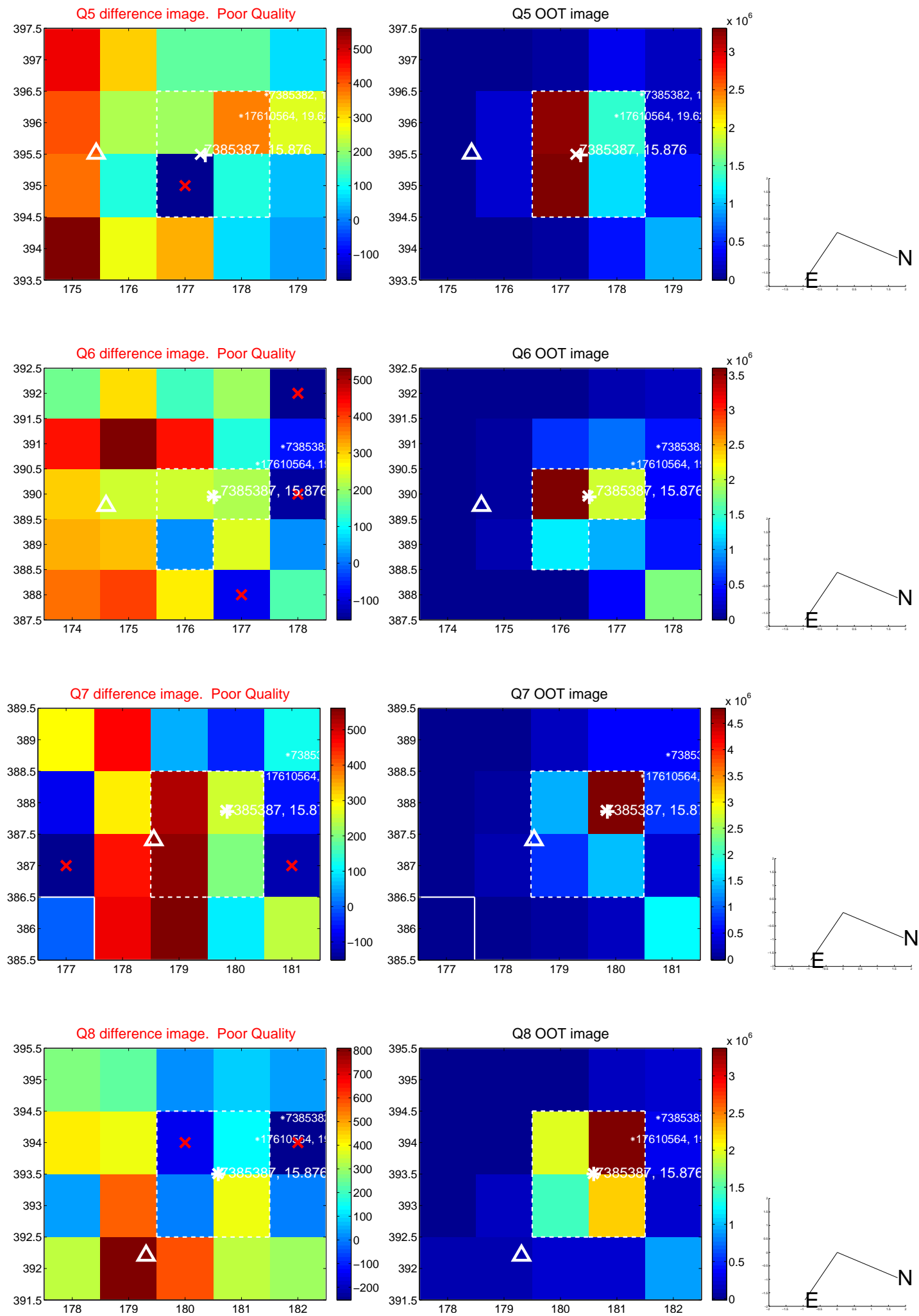


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

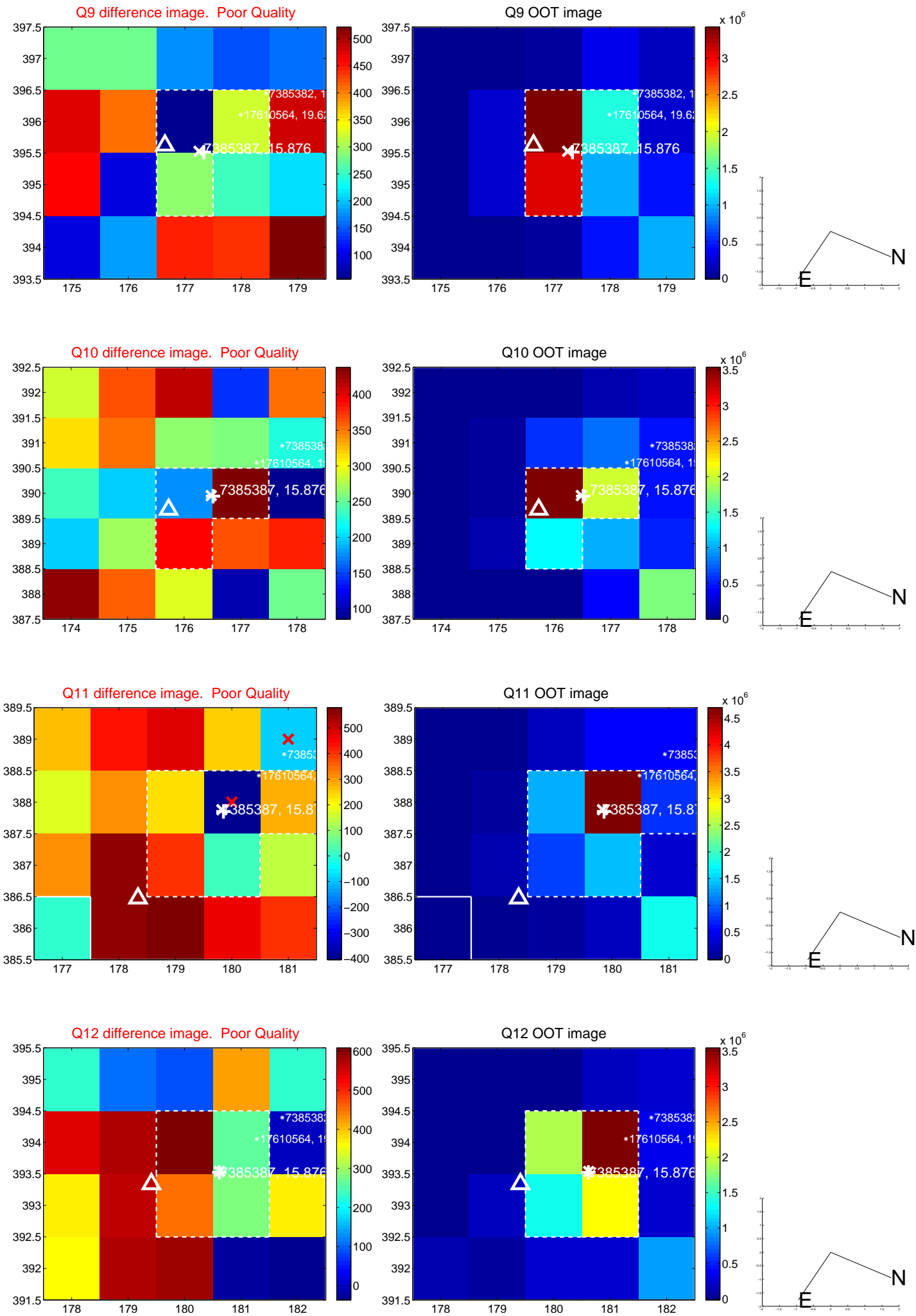
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



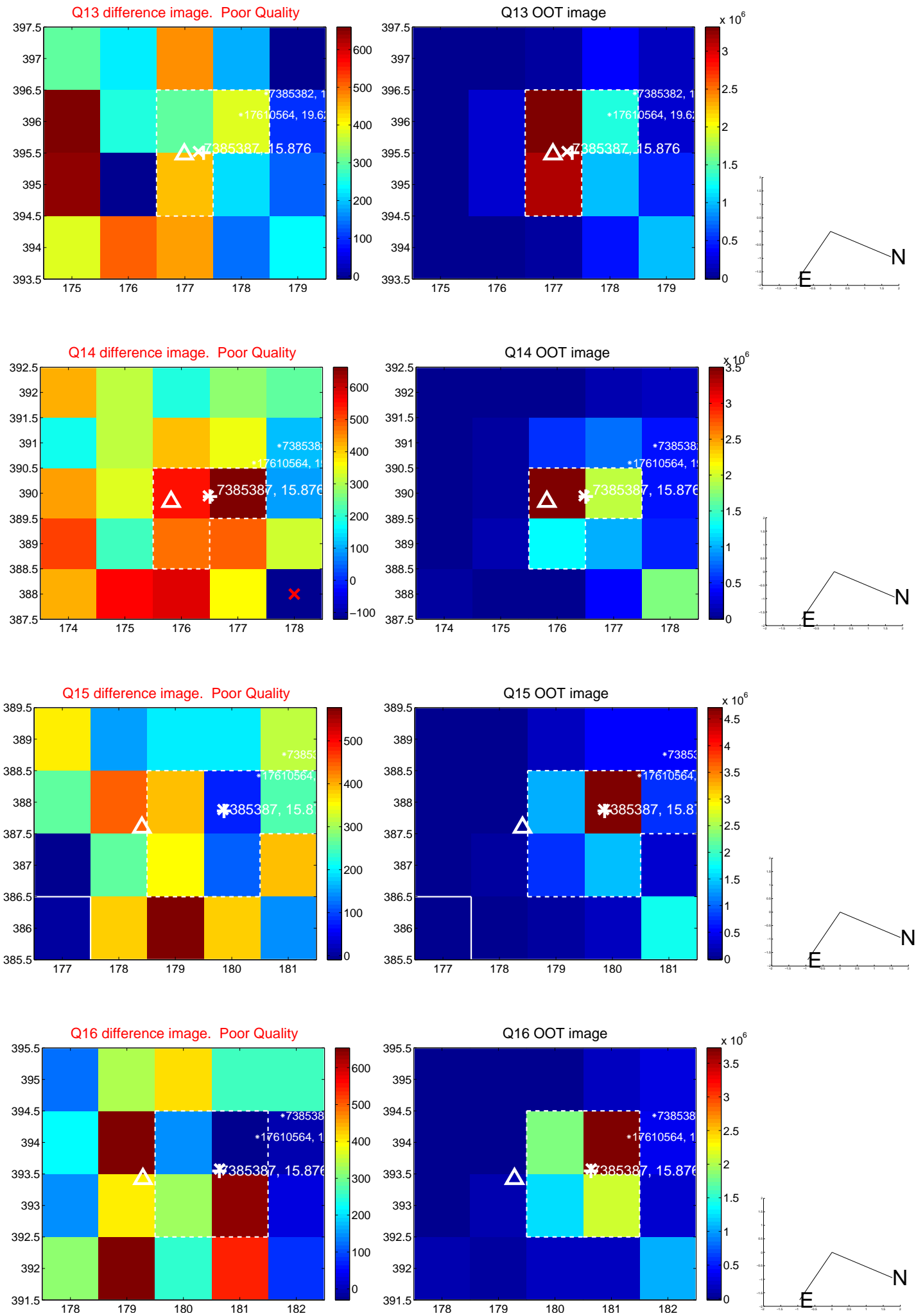
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



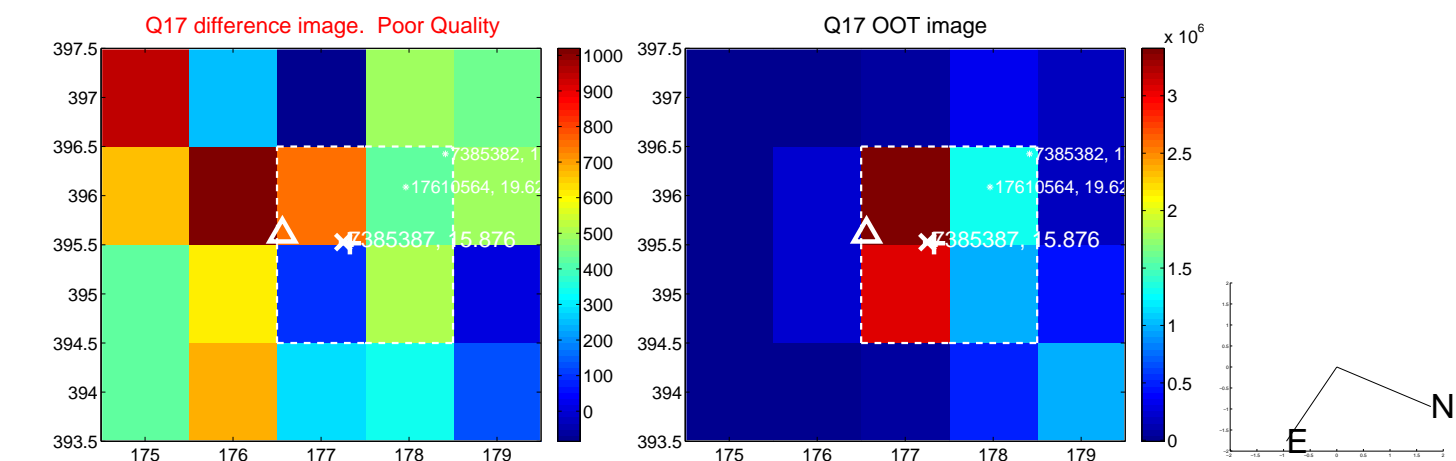
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



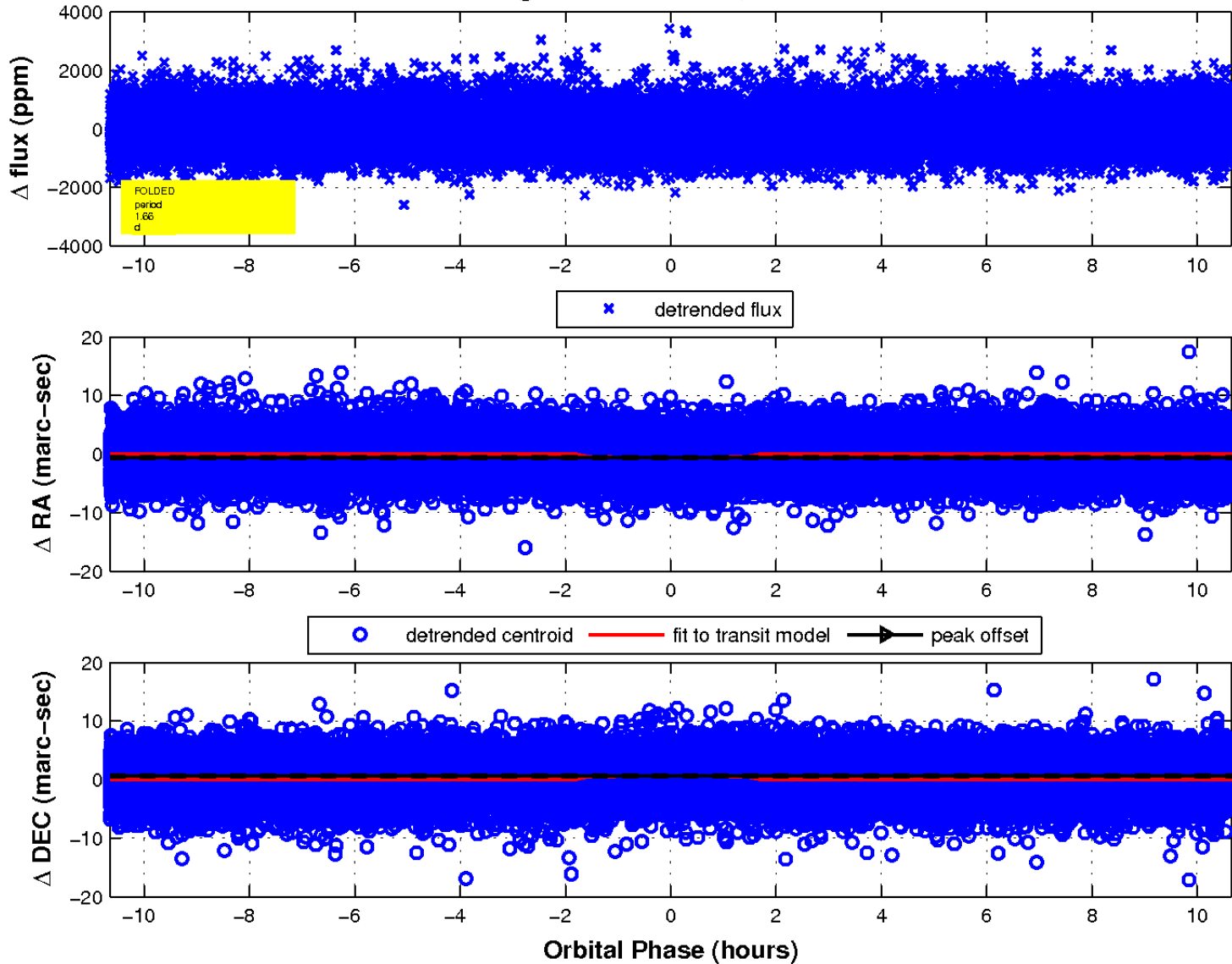
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

