

KIC 005383248

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})
005383248-01	OBS	0261.01	16.238472	138.542862	656.6	4.002	177.4	177.0	0.99	5683	2.85	60.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005383248-01	OBS	PC	1.00	0	0	0	0	CENT_SATURATED

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

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

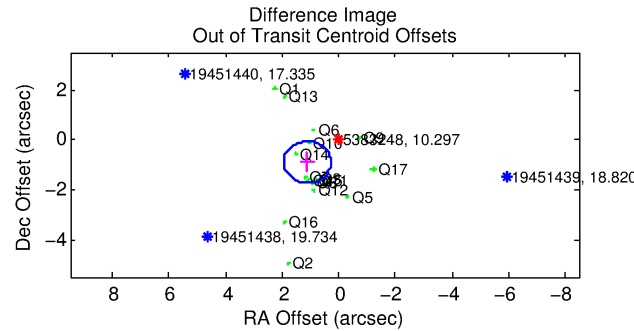
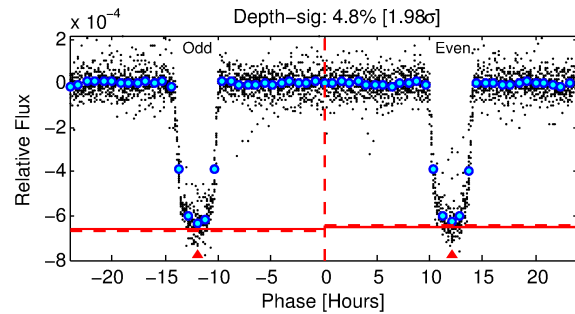
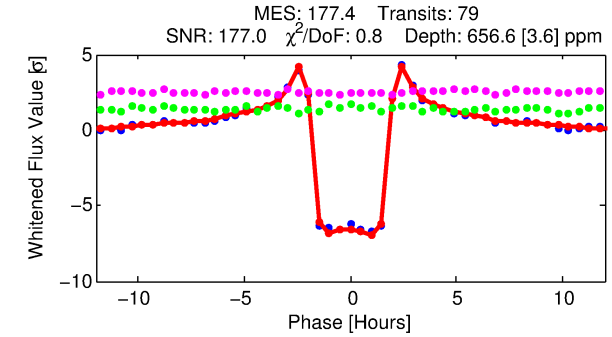
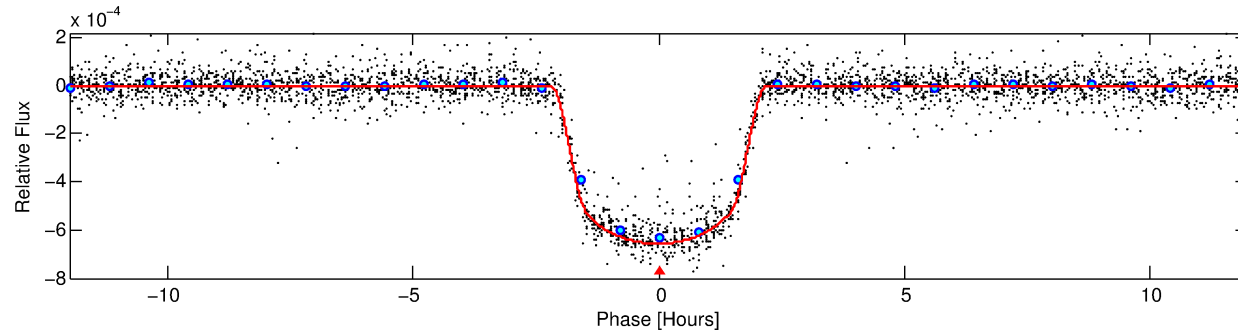
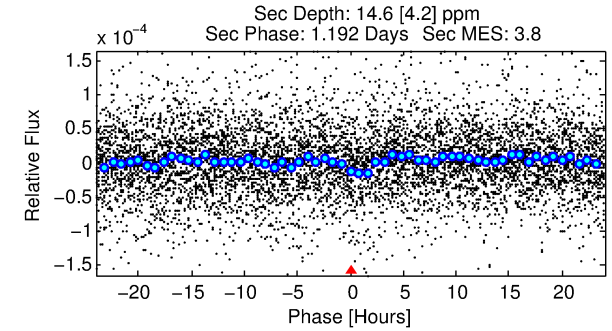
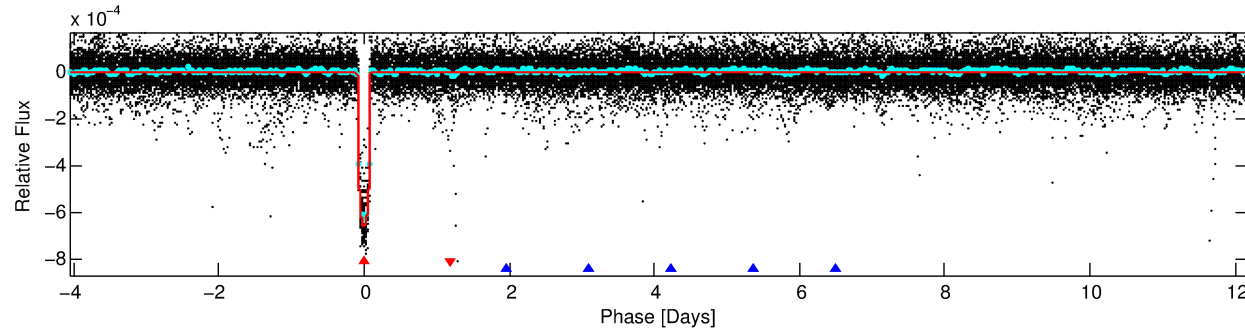
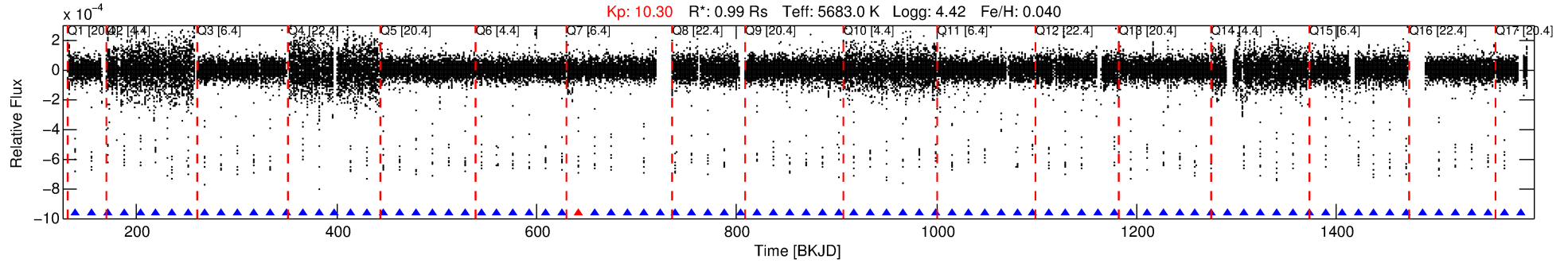
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005383248-01

No Significant Match Found

DV One-Page Summary

KIC: 5383248 Candidate: 1 of 2 Period: 16.238 d
KOI: K00261.01 Name: Kepler-96b Corr: 0.977



DV Fit Results:

Period = 16.23847 [0.00001] d
Epoch = 138.5429 [0.0003] BKJD
 $R_p/R^* = 0.0263$ [0.0004]
 $a/R^* = 19.37$ [1.35]
 $b = 0.81$ [0.03]
 $\text{Seff} = 60.50$ [13.15]
 $T_{\text{eq}} = 711$ [39] K
 $R_p = 2.85$ [0.43] R_e
 $a = 0.1234$ [0.0165] AU
 $A_g = 15.00$ [5.31] [2.63 σ]
 $T_{\text{eff}} = 2164$ [163] K [8.66 σ]

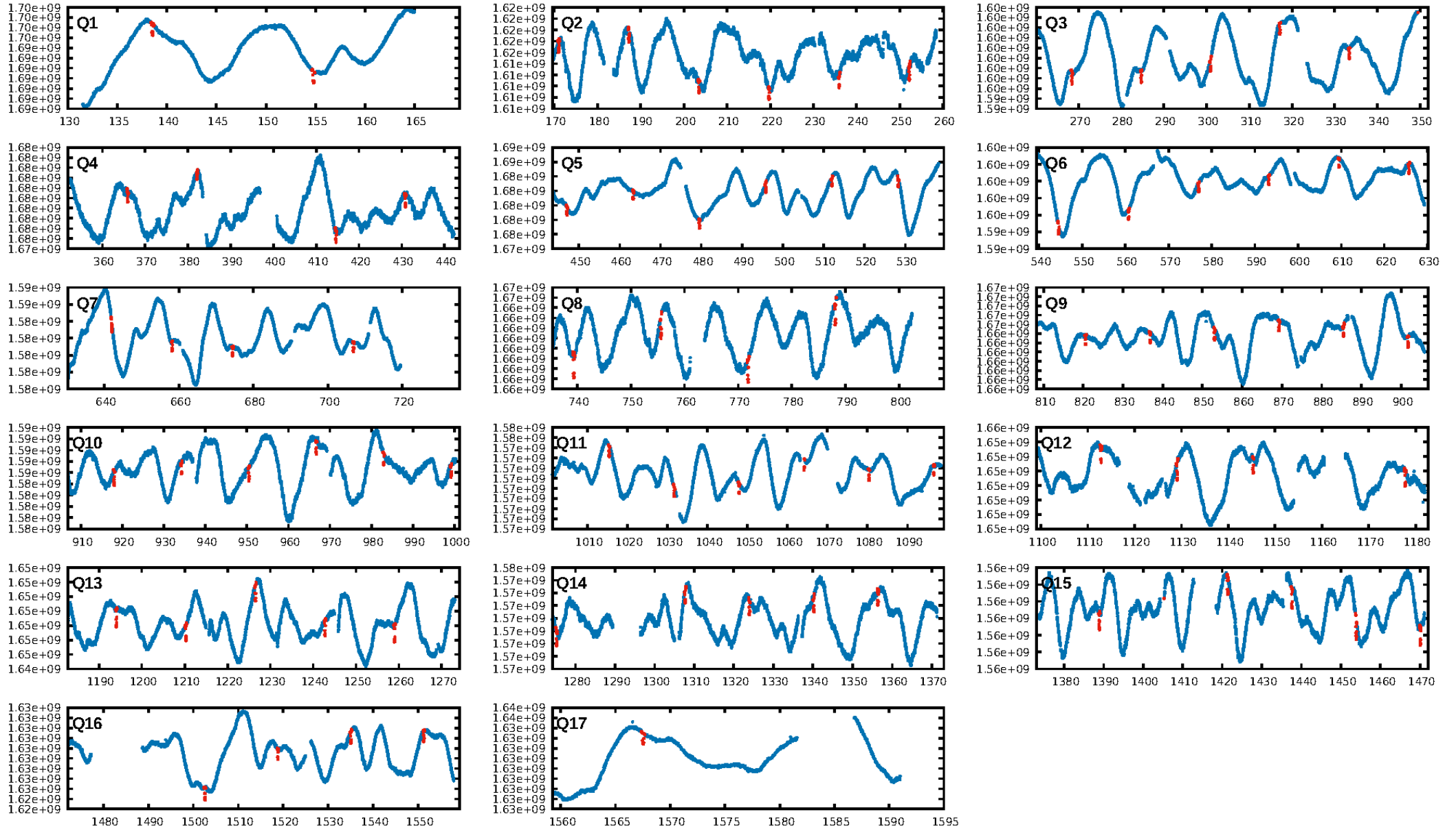
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [914.24 σ]
ModelChiSquare2-sig: 94.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.99 [75/76]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 1.209 arcsec [19.14 σ]
OotOffset-rm: 1.438 arcsec [5.15 σ]
KicOffset-rm: 2.736 arcsec [7.01 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 1.00 [17/17]

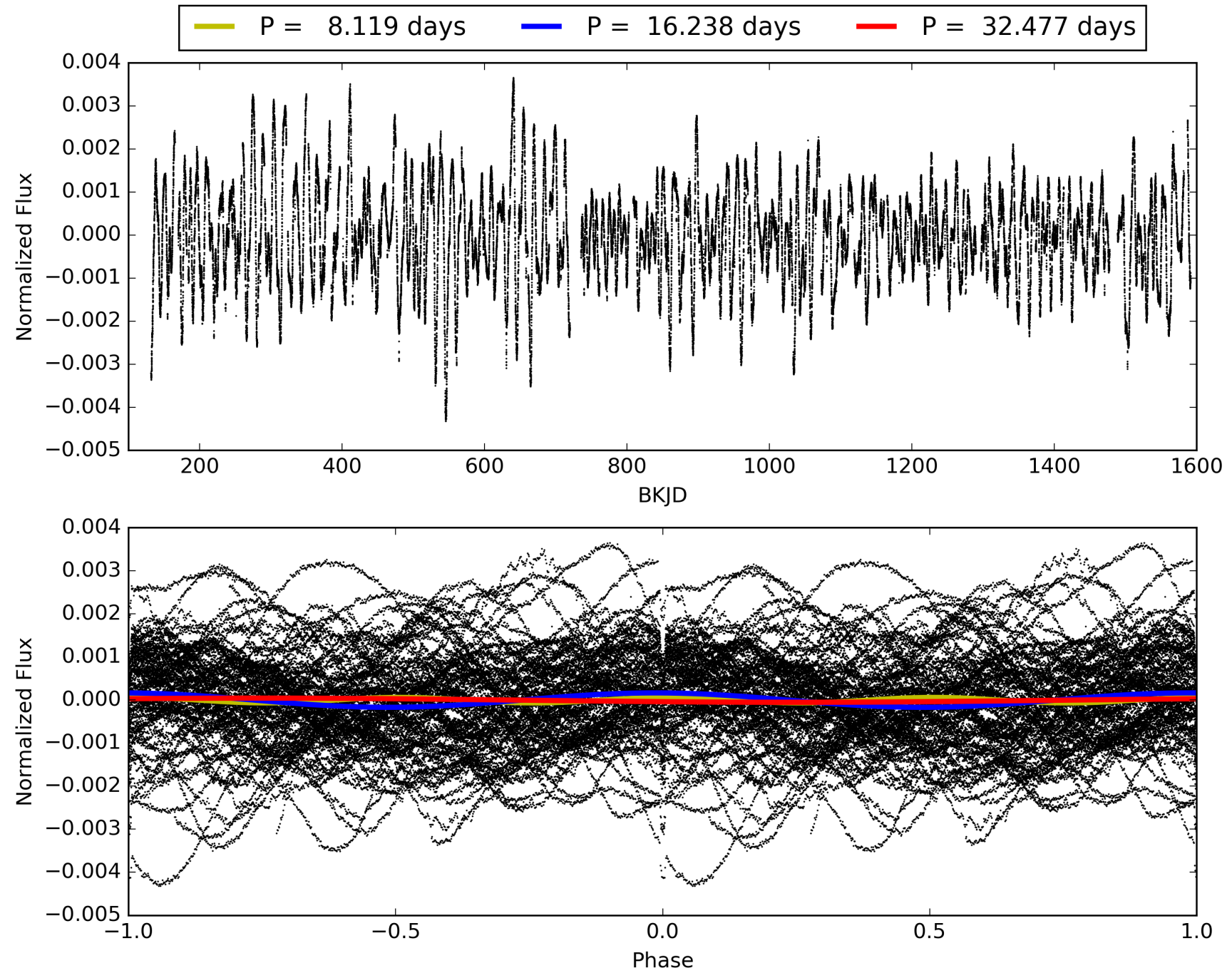
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:02:07 Z

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

TCE 005383248-01, PDC Light Curves

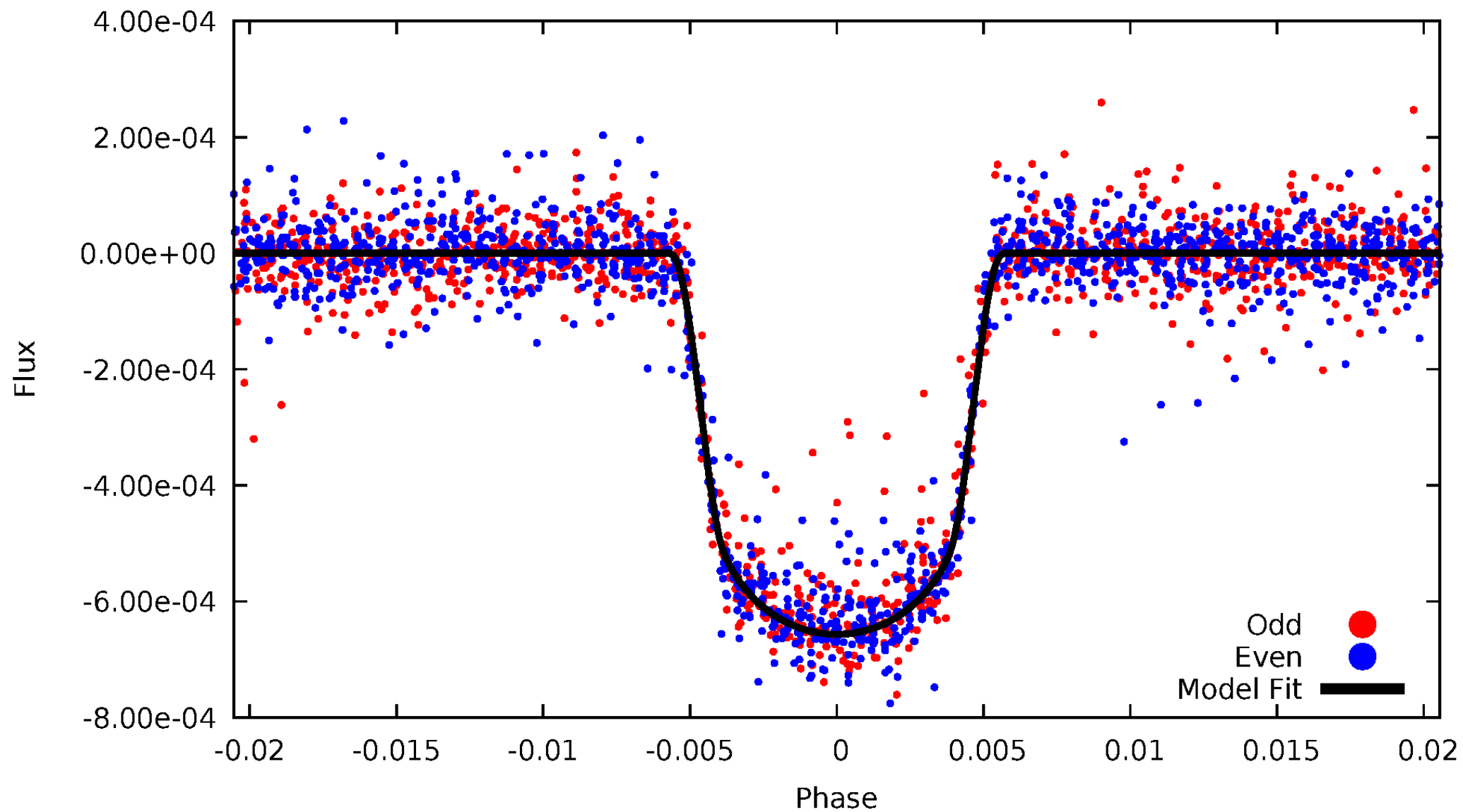


TCE 005383248-01



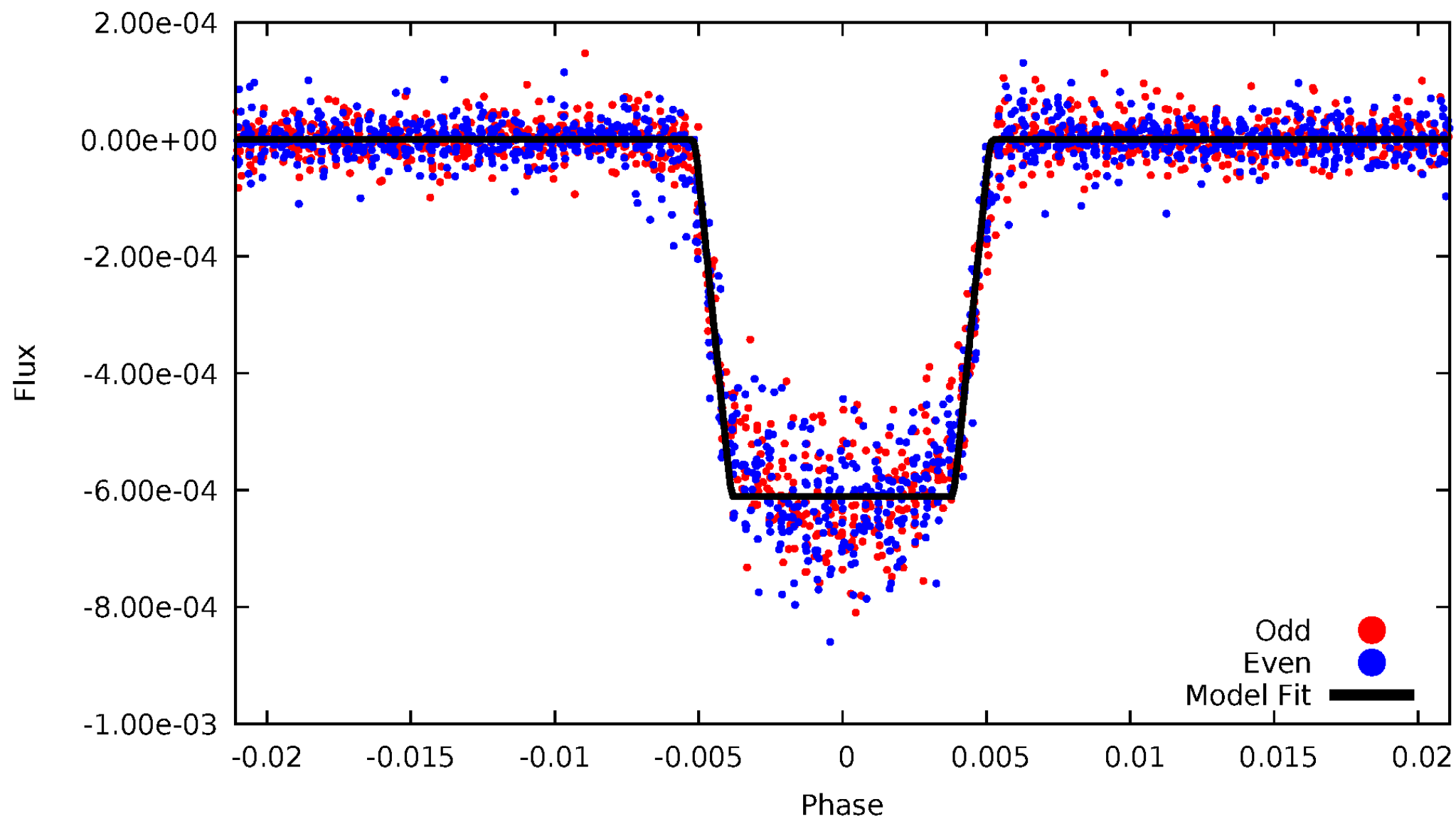
DV Odd/Even

TCE 005383248-01

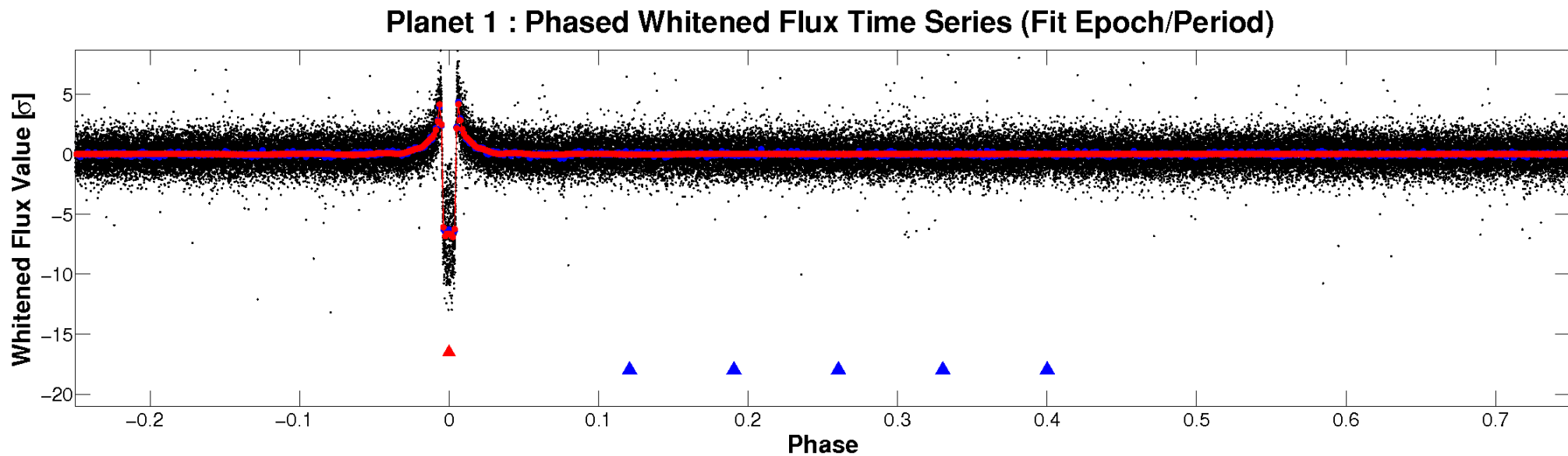
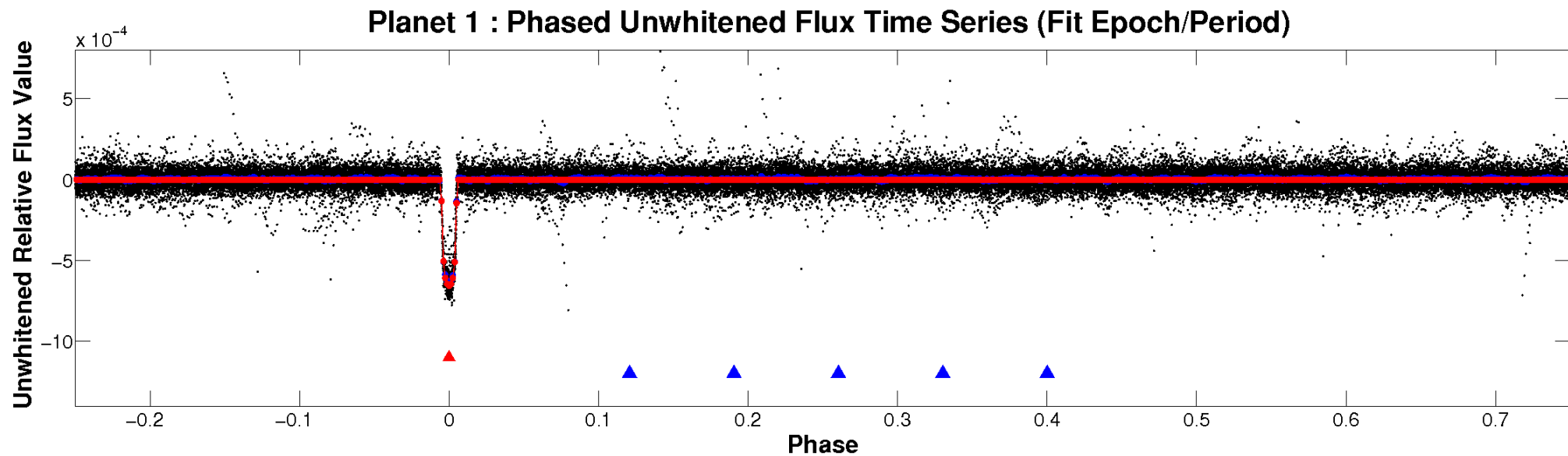


ALT Odd/Even

TCE 005383248-01

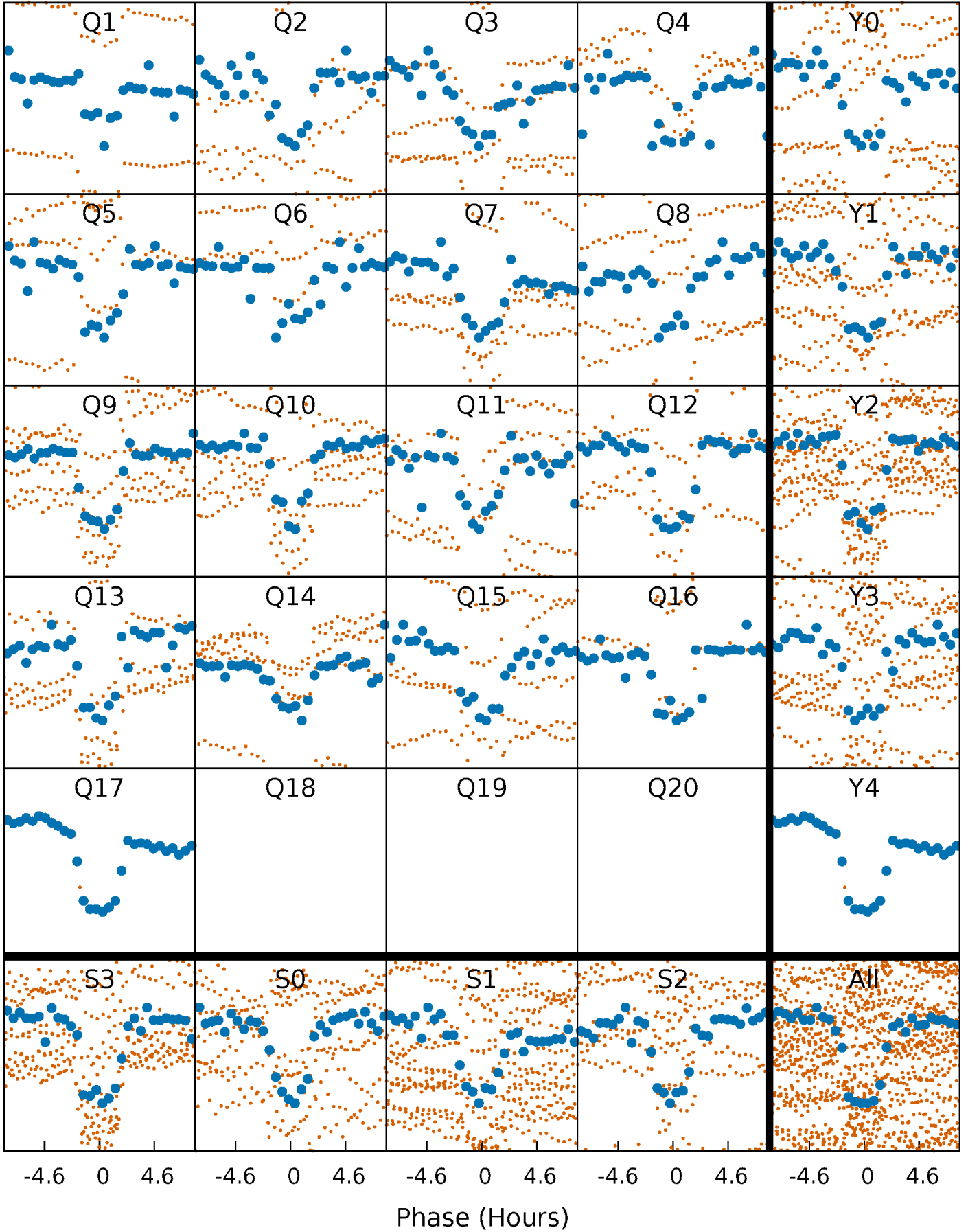


Non-Whitened Vs. Whitened Light Curve



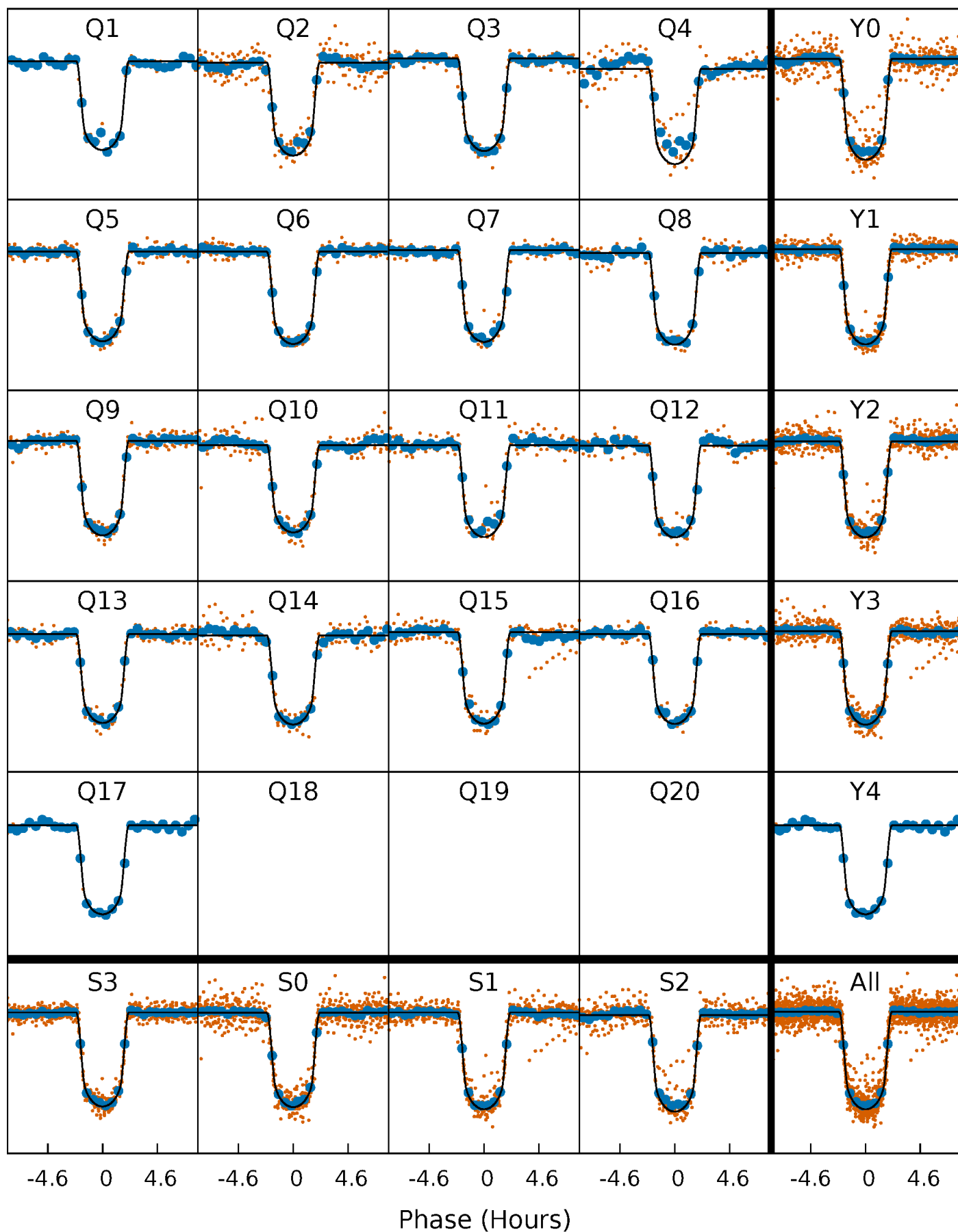
PDC Quarter-Phased Transit Curves

TCE 005383248-01 P= 16.238472 Days $T_0=138.542862$ (BKJD)



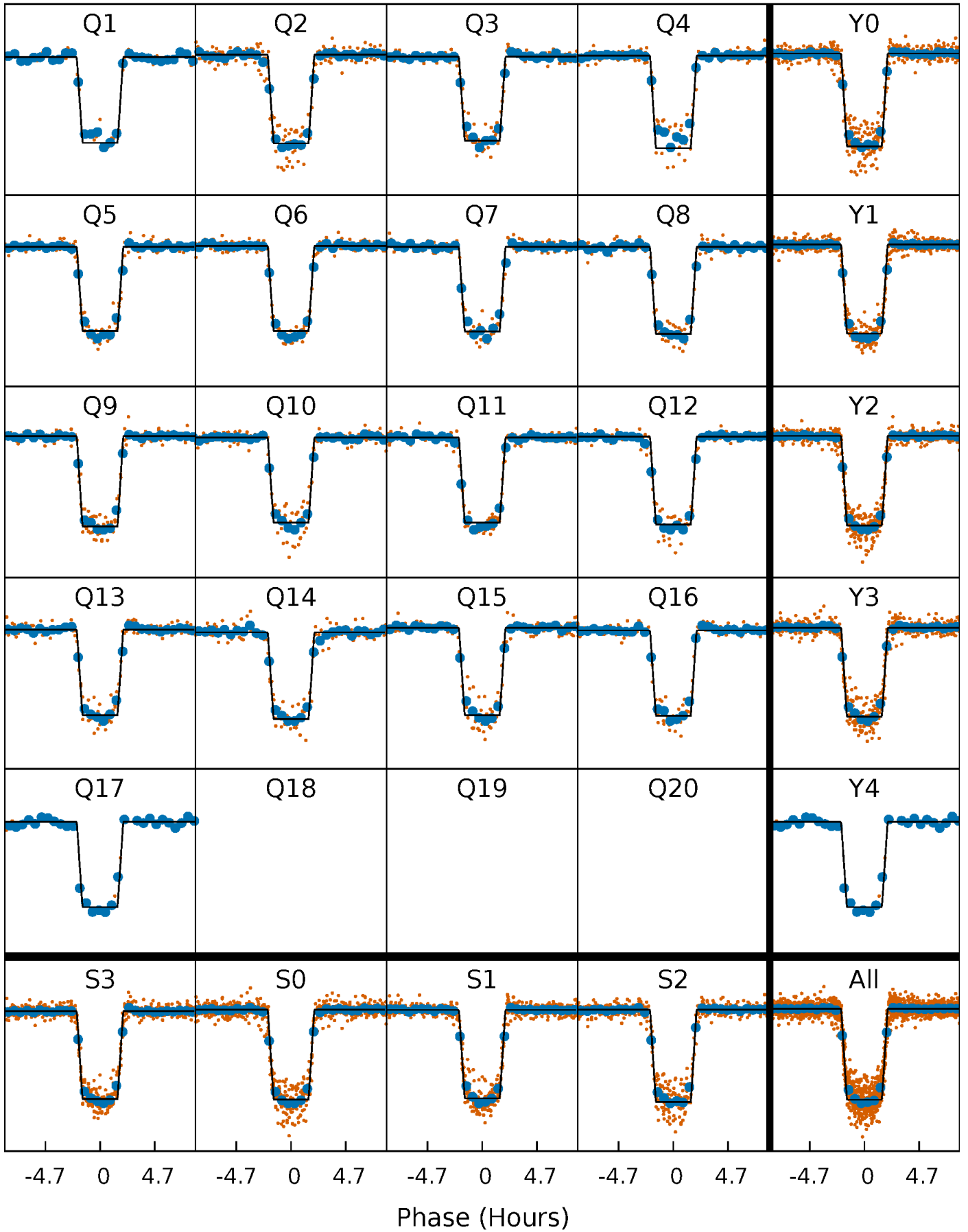
DV Quarter-Phased Transit Curves

TCE 005383248-01 P= 16.238472 Days $T_0=138.542862$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

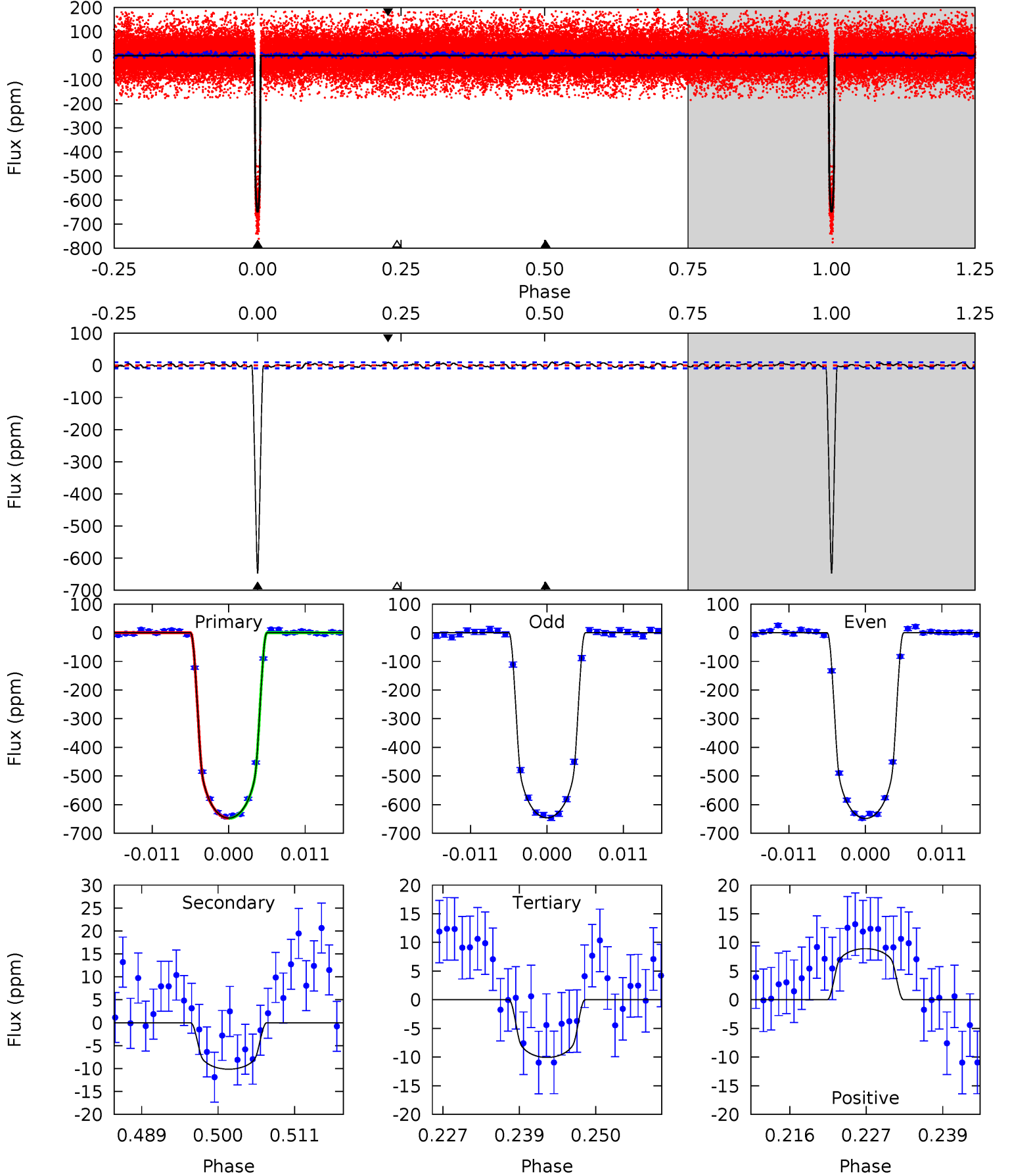
TCE 005383248-01 P= 16.238508 Days $T_0=138.541303$ (BKJD)



DV Model-Shift Uniqueness Test

005383248-01, P = 16.238472 Days, E = 122.304390 Days

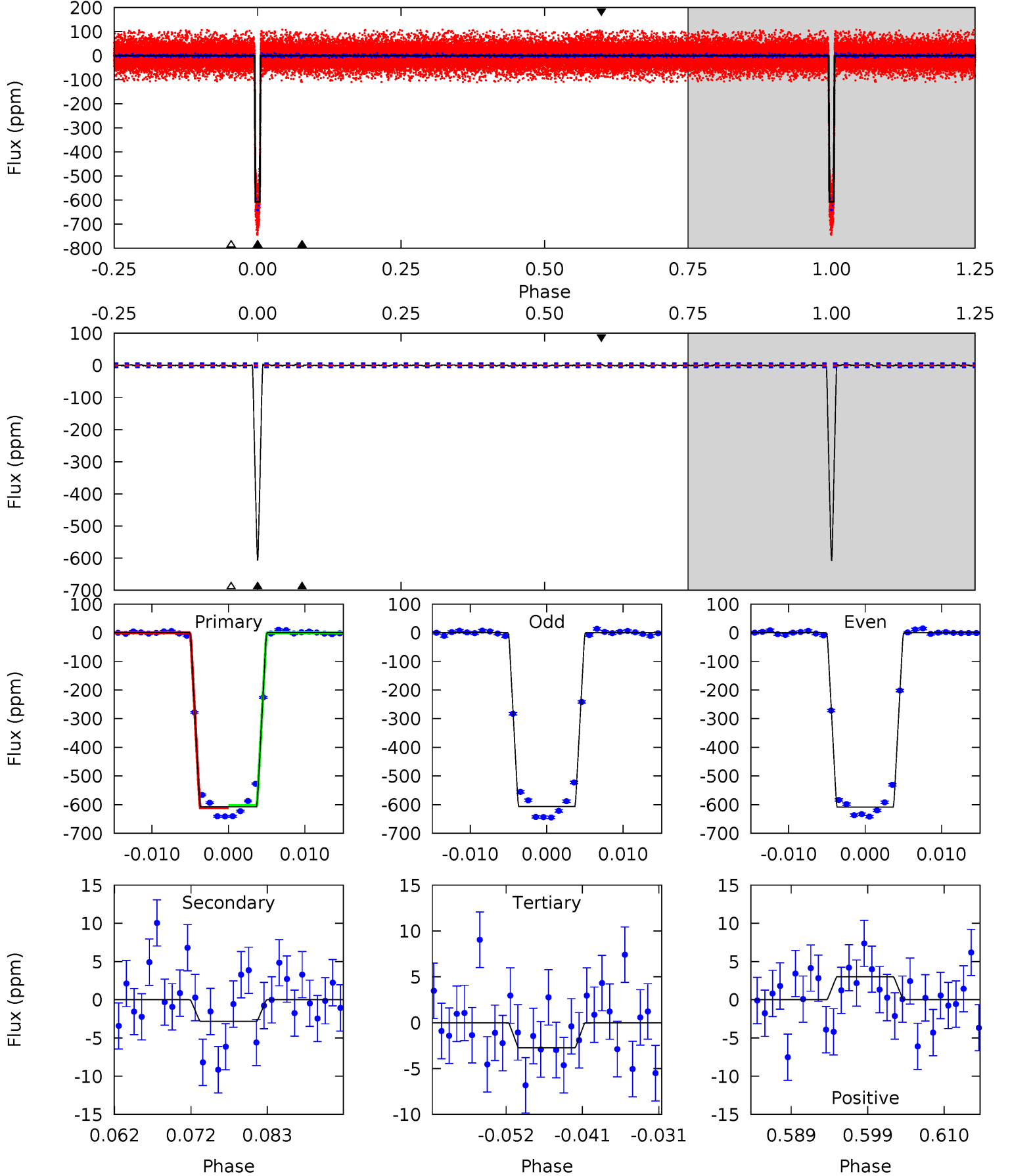
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
341.2	5.35	5.31	4.70	5.00	2.53	1.98	335.9	336.5	0.04	0.65	0.60	0.98	0.02	0.14



Alt Model-Shift Uniqueness Test

005383248-01, P = 16.238508 Days, E = 122.302795 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
499.6	2.33	2.25	2.47	5.02	2.56	0.70	497.3	497.1	0.08	-0.14	0.70	0.99	0.00	2.95



Stellar Parameters For KIC 005383248

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5683^{+114}_{-114}	$4.422^{+0.085}_{-0.114}$	$0.040^{+0.150}_{-0.150}$	$0.993^{+0.150}_{-0.087}$	$0.951^{+0.067}_{-0.061}$	$1.366^{+0.415}_{-0.447}$
	+2%/-2%	+2%/-3%	+375%/-375%	+15%/-9%	+7%/-6%	+30%/-33%
Source	SPE61	SPE61	SPE61	DSEP		

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

Secondary Eclipse Parameters for KIC 005383248-01 / KOI 0261.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10 ± 2	$2.88^{+0.25}_{-0.17}$	997^{+45}_{-36}	2730^{+68}_{-82}	10^{+3}_{-2}
Alt.	-3 ± 1	$2.69^{+0.23}_{-0.17}$	999^{+44}_{-39}	2350^{+112}_{-179}	$3.174^{+1.377}_{-1.459}$

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 $A_{obs} \gg 1.0$

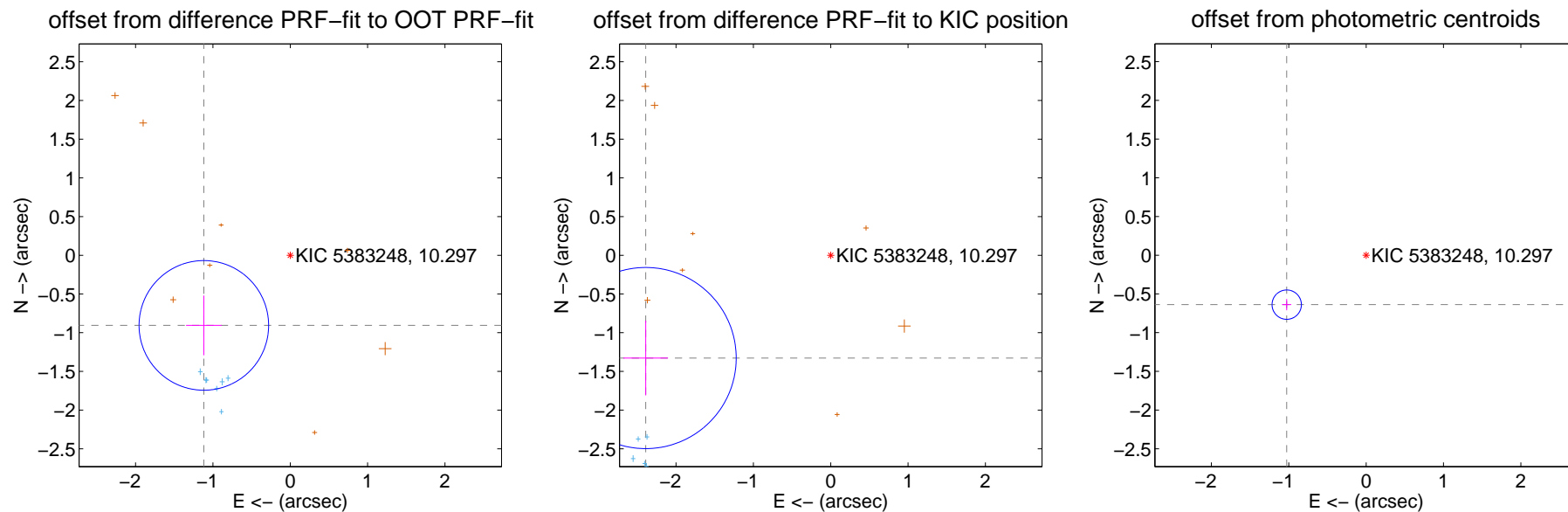
DV Centroid Data

Supplemental centroid analysis for 005383248-01. **Kepler magnitude: 10.30.** Transit SNR 176.97

There are 9 quarters with good PRF difference image offsets

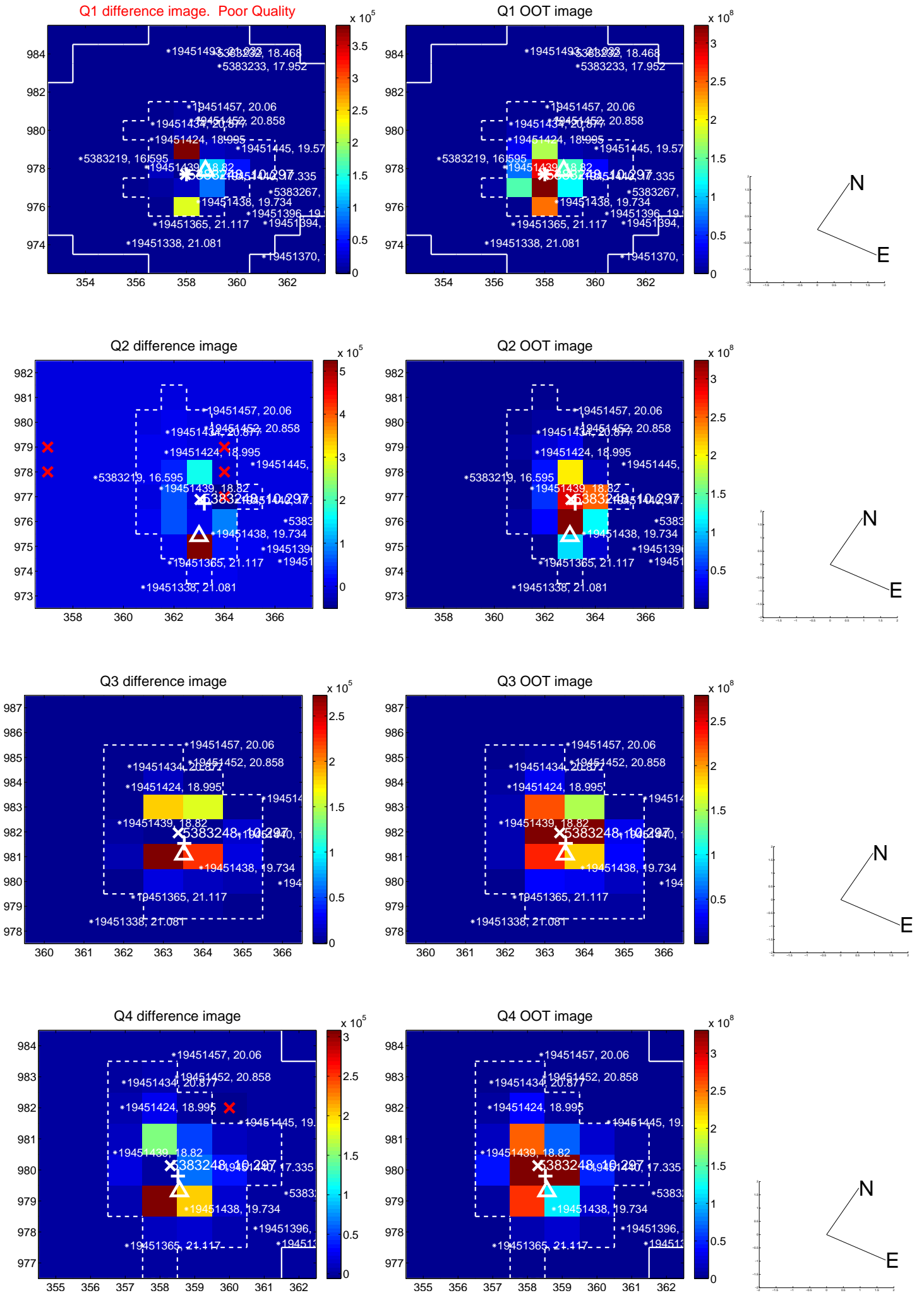
The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.438 ± 0.279	5.15	1.117 ± 0.230	-0.906 ± 0.386
PRF-fit source offset from KIC position	2.736 ± 0.390	7.01	2.392 ± 0.289	-1.328 ± 0.483
photometric centroid source offset	1.21 ± 0.06	19.14	1.03 ± 0.06	-0.64 ± 0.07

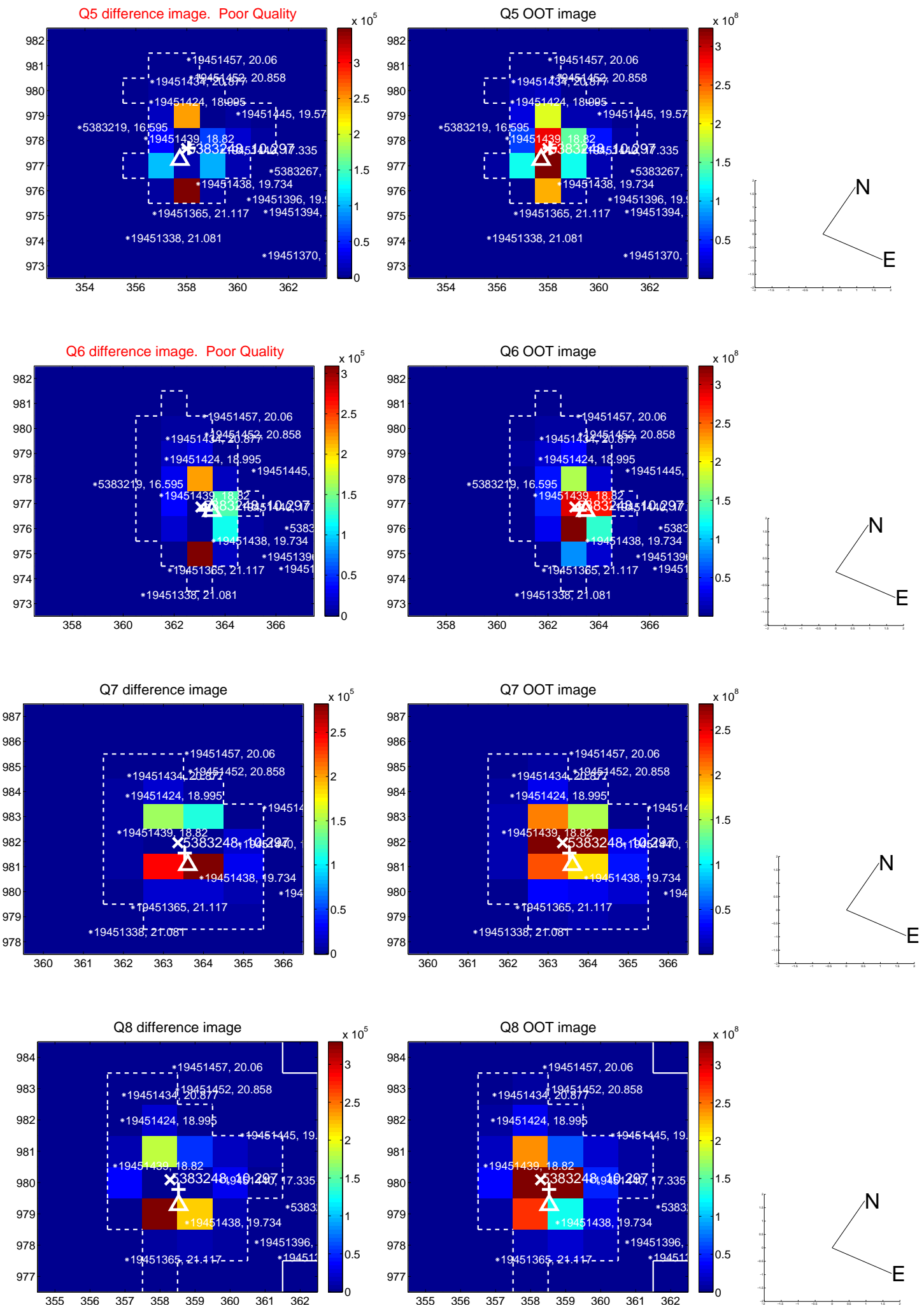


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

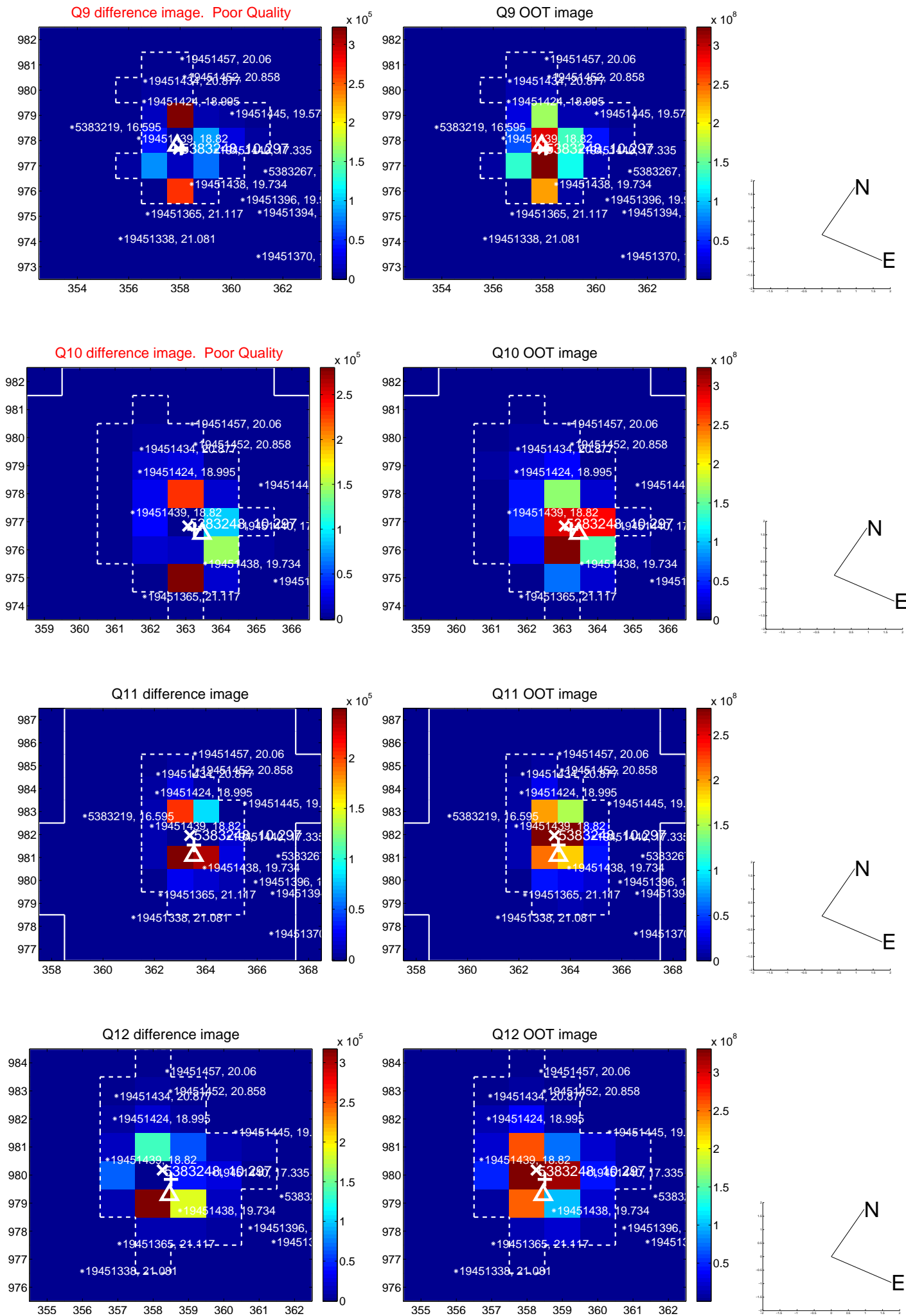
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



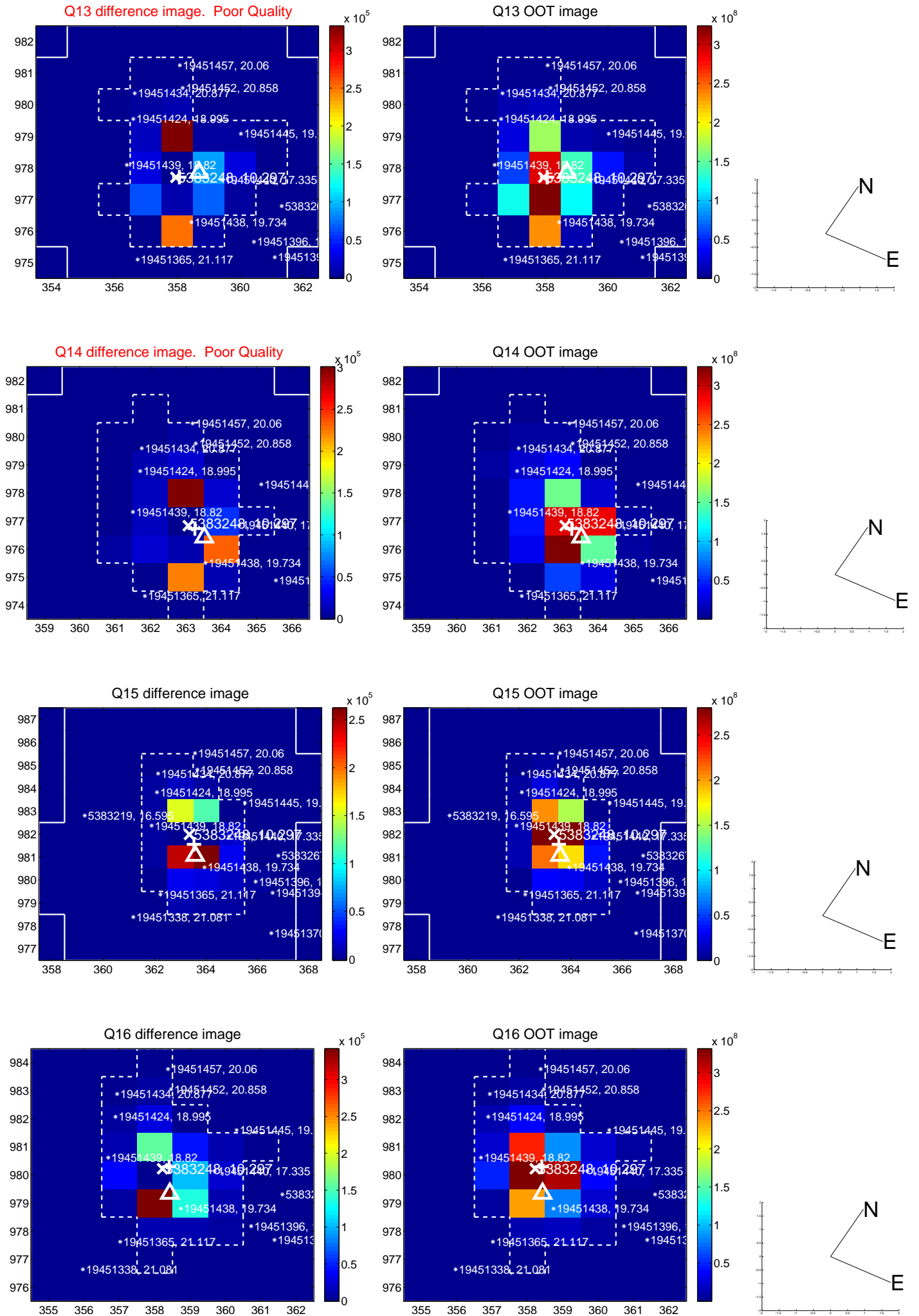
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



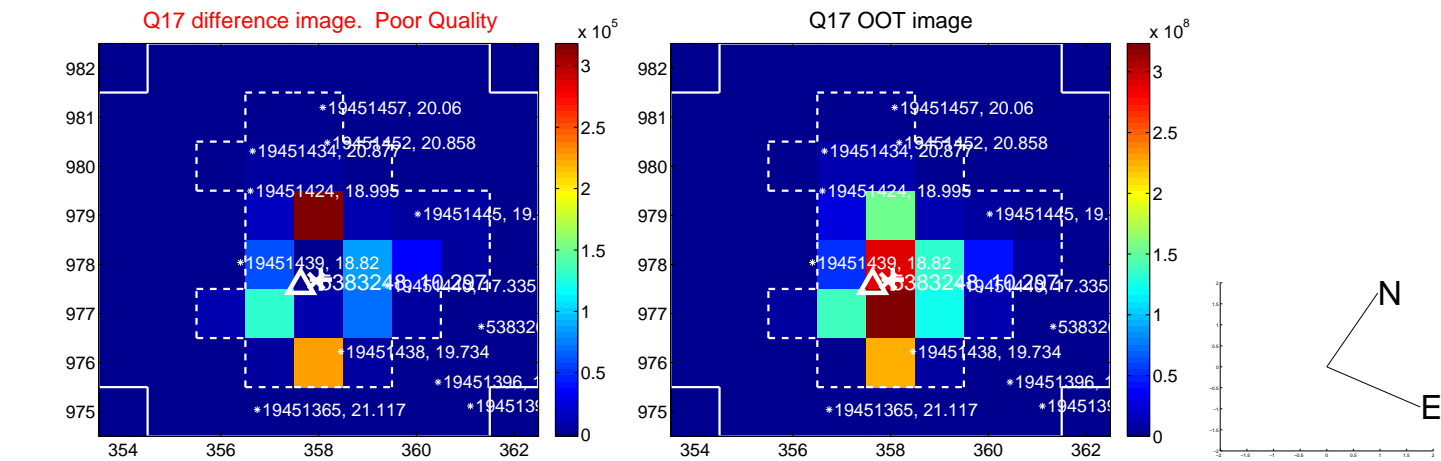
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



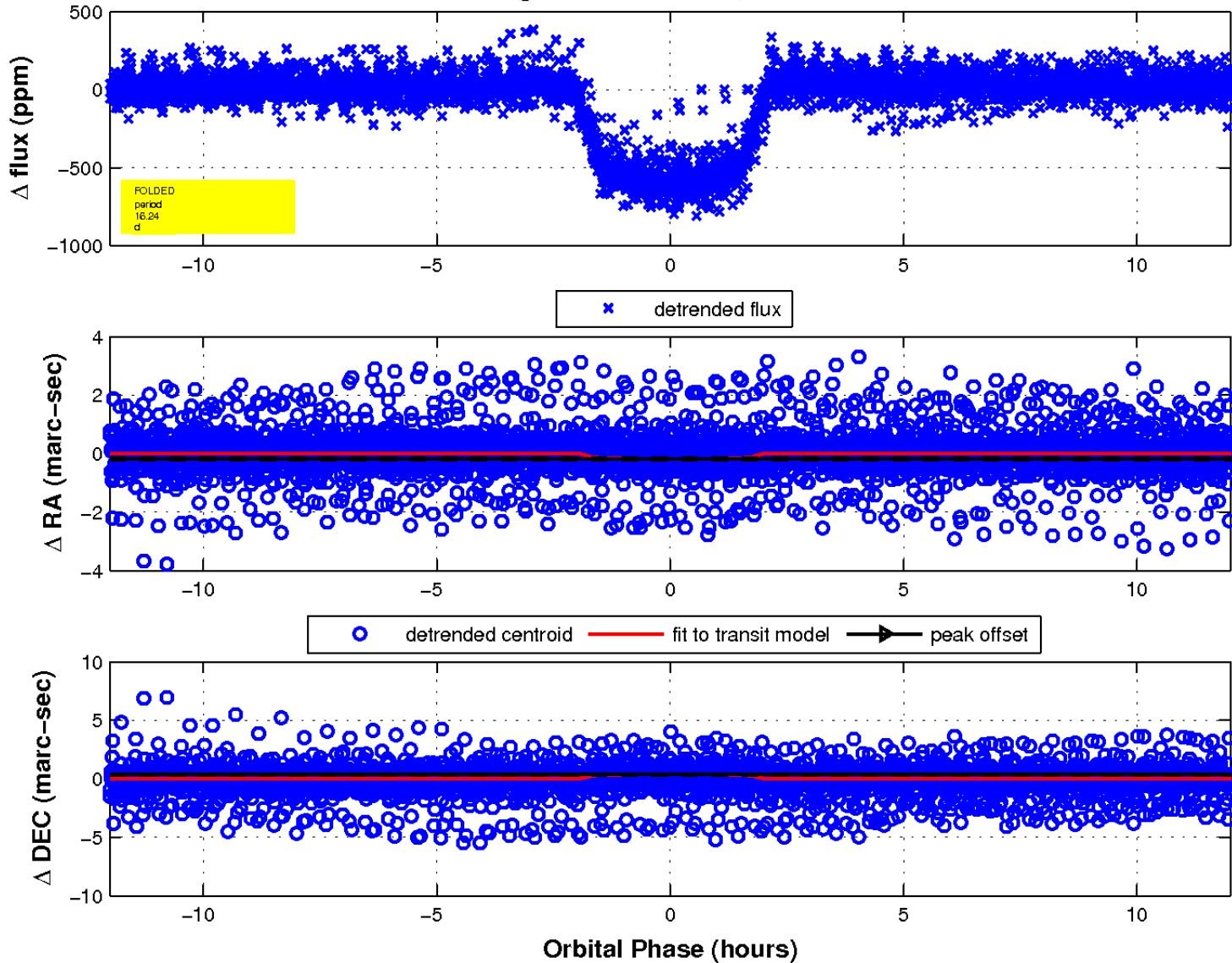
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

