

KIC 005513833

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})
005513833-01	OBS	6591.01	0.755047	131.854814	26.3	6.134	9.5	5.3	0.21	3256	0.10	50.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005513833-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_FEW_DIFFS—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 005513833-01

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
005513833-01	5513833	005513893-01	5513893	1:1	124.4	-11	29	13.01	15.24	1.38	Direct-PRF	1	4.55	1.73

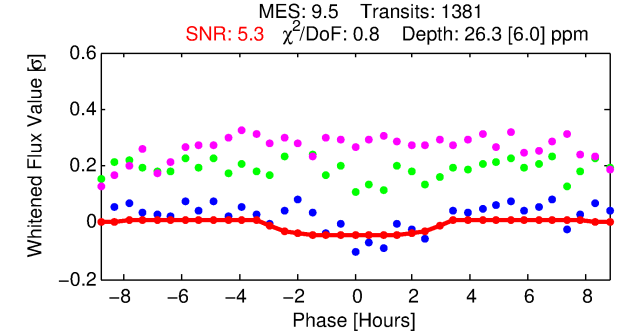
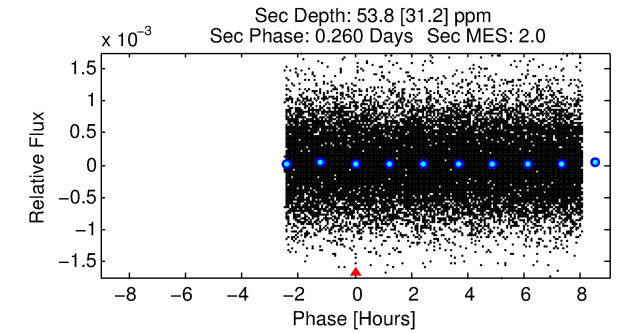
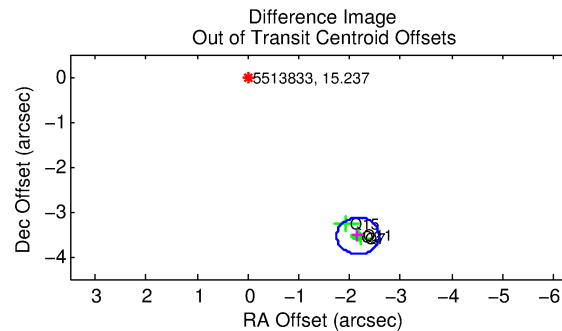
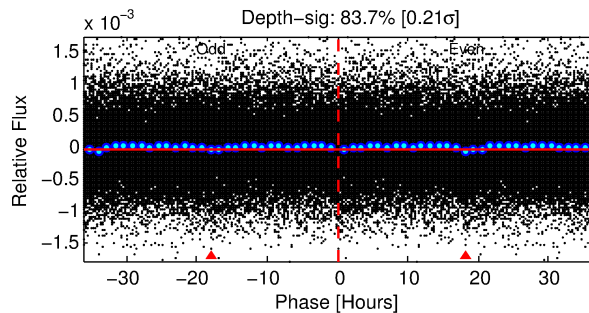
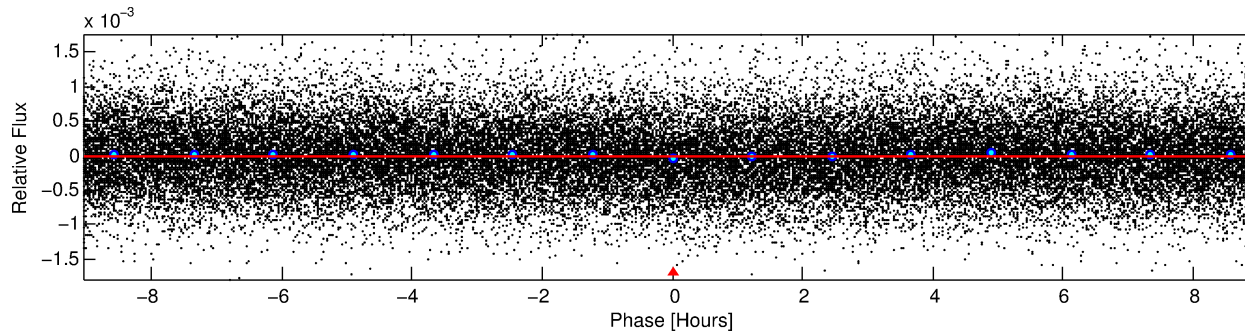
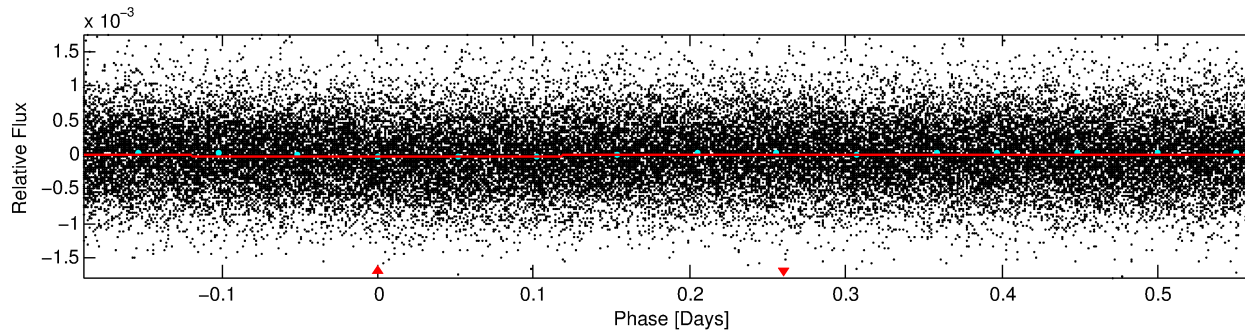
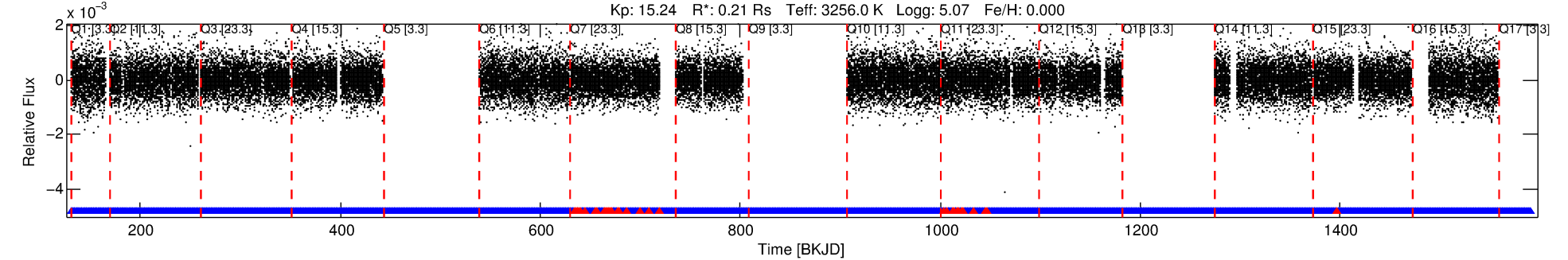
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match 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: 5513833 Candidate: 1 of 1 Period: 0.755 d

KOI: K06591 Corr: No Ephemeris Match

Kp: 15.24 R*: 0.21 Rs Teff: 3256.0 K Logg: 5.07 Fe/H: 0.000



DV Fit Results:

Period = 0.75505 [0.00002] d
Epoch = 131.8548 [0.0119] BKJD
Rp/R* = 0.0046 [0.0241]
a/R* = 1.15 [6.22]
b = 0.13 [170.68]
Seff = 50.62 [6.69]
Teq = 680 [22] K
Rp = 0.10 [0.54] Re
a = 0.0092 [0.0010] AU
Ag = 229.59 [2385.10] [0.10σ]
Teffp = 4093 [10630] K [0.32σ]

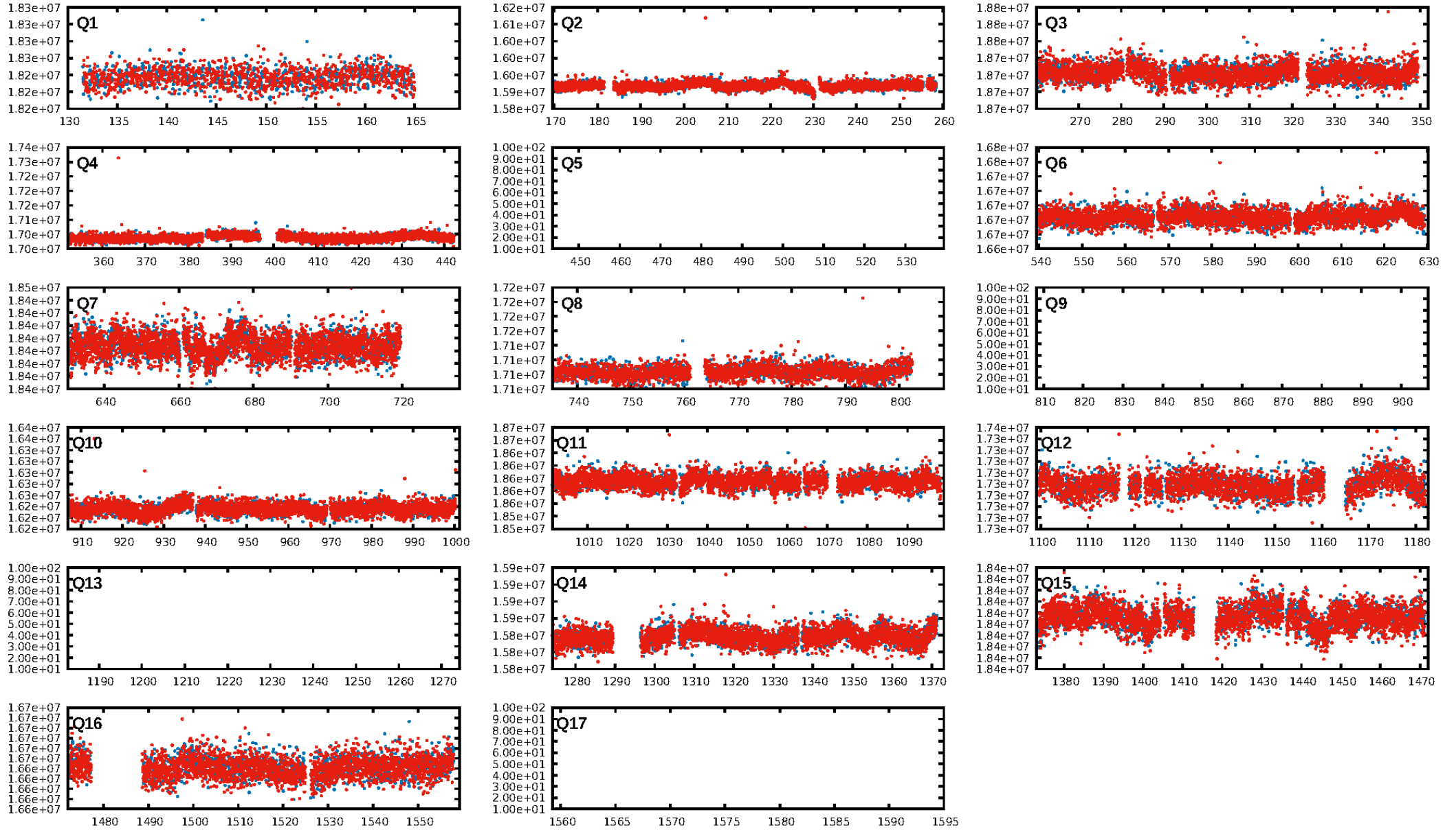
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.97 [1298/1336]
GhostDiagnostic-chr: -0.2396
Centroid-sig: 0.0%
Centroid-so: 7.644 arcsec [2.83σ]
OotOffset-rm: 4.147 arcsec [30.06σ]
KicOffset-rm: 3.448 arcsec [23.93σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 0.00 [0/4]
DiffImageOverlap-fno: 1.00 [13/13]

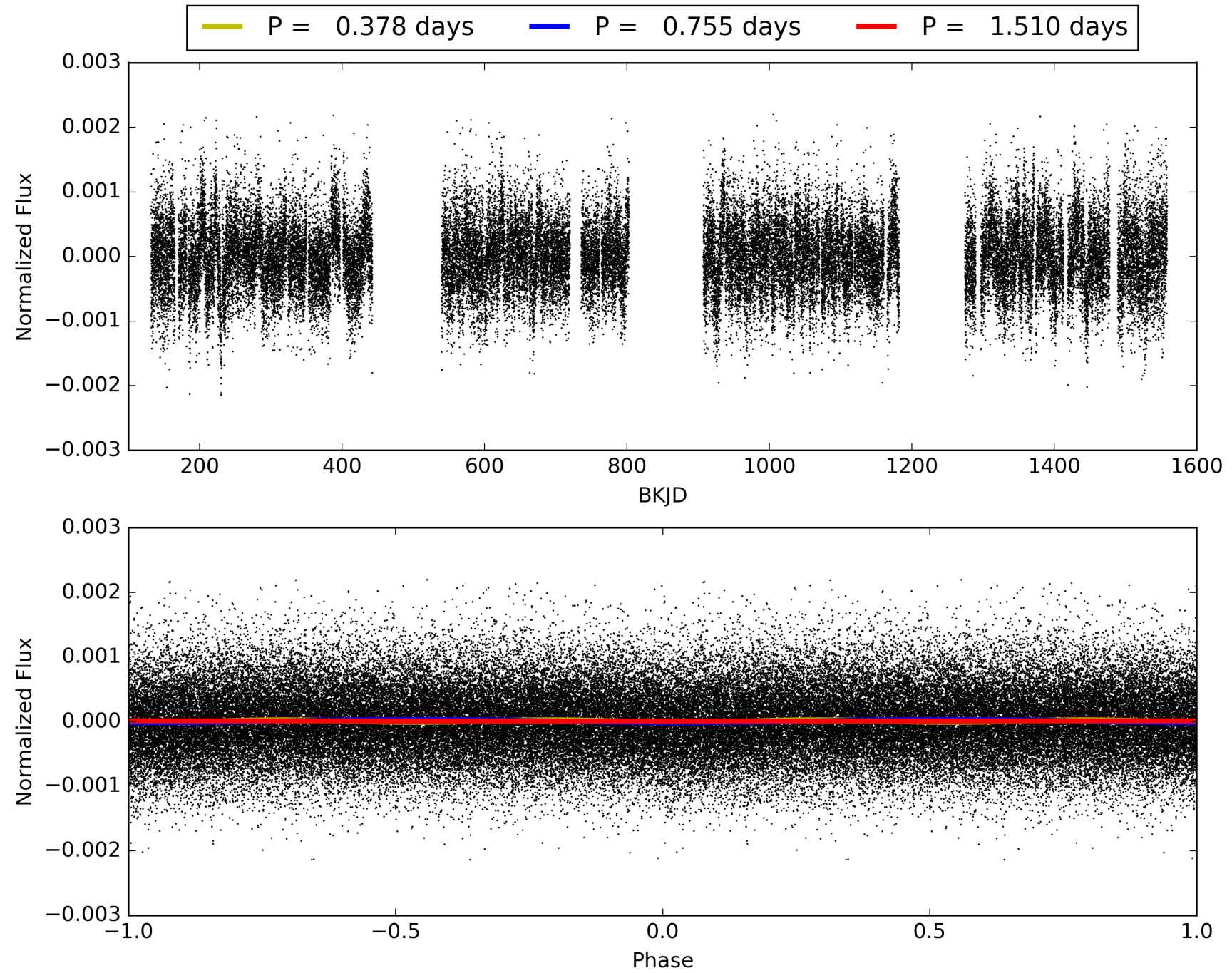
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 03:59:09 Z

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

TCE 005513833-01, PDC Light Curves

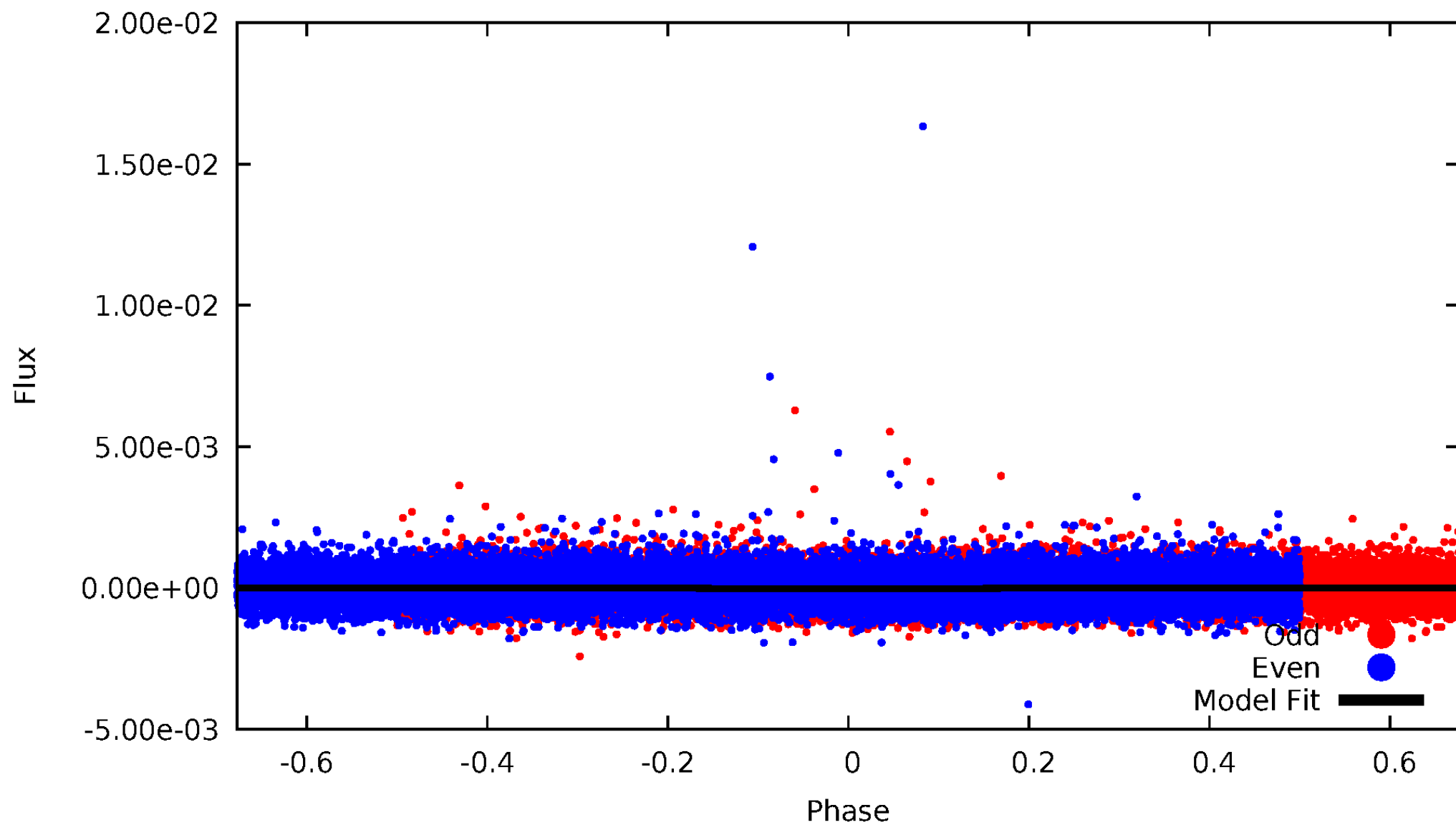


TCE 005513833-01



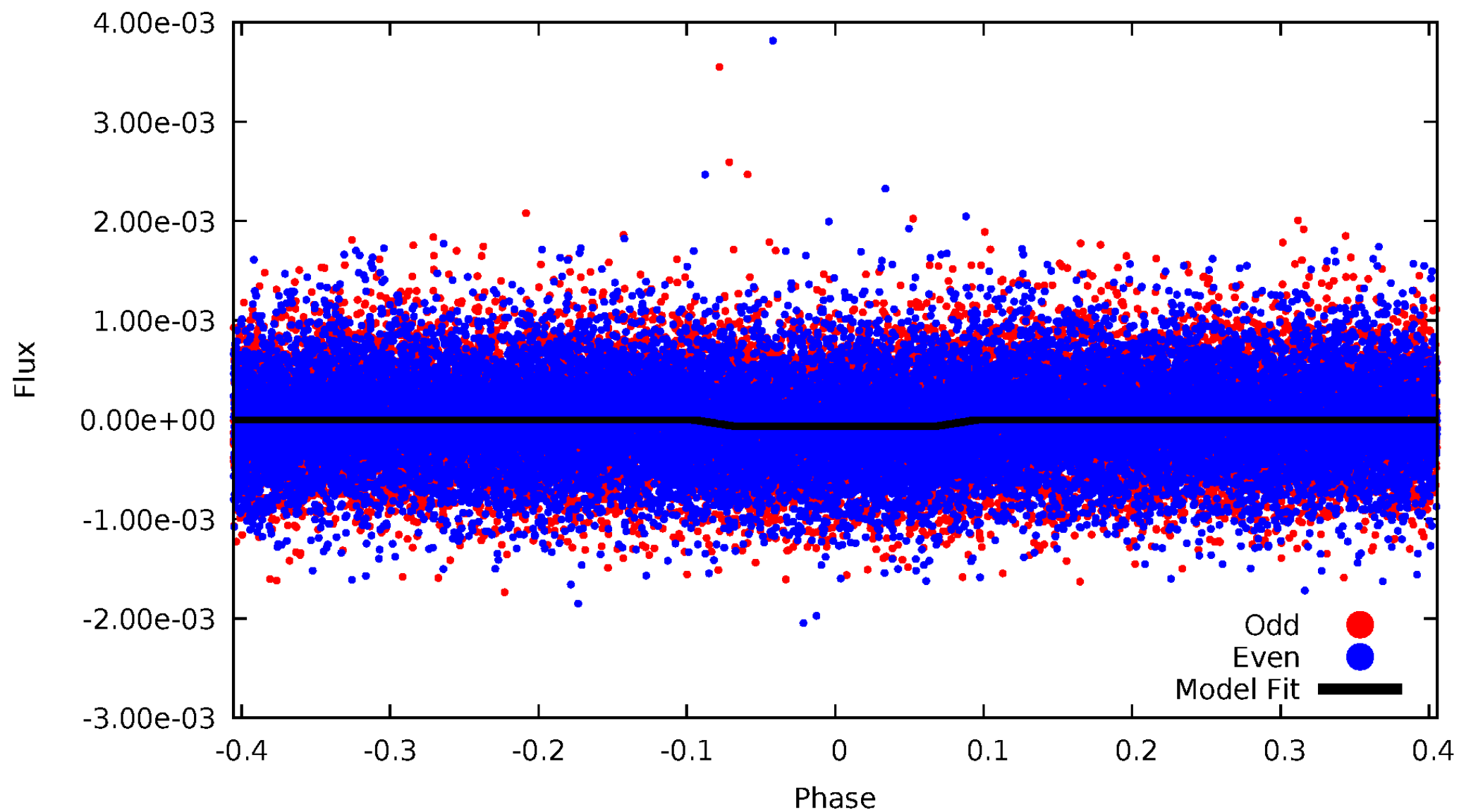
DV Odd/Even

TCE 005513833-01



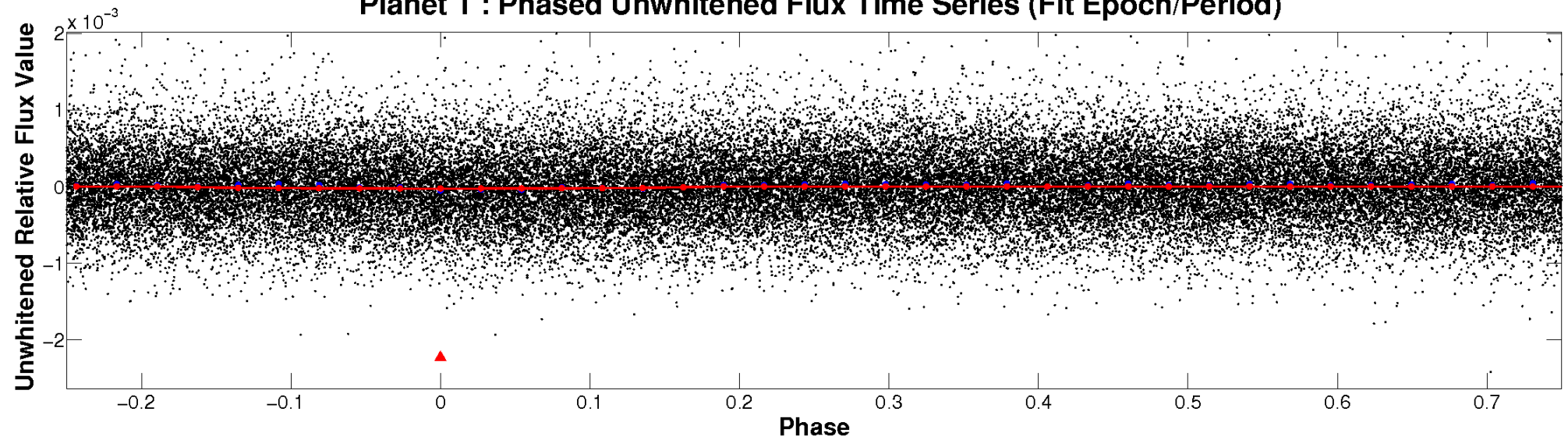
ALT Odd/Even

TCE 005513833-01

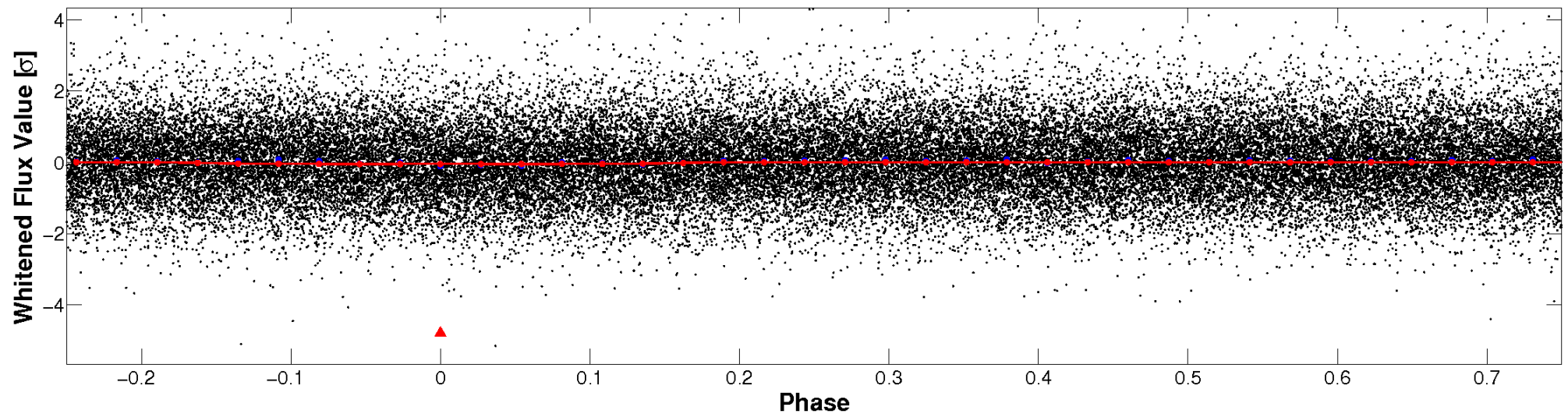


Non-Whitened Vs. Whitened Light Curve

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

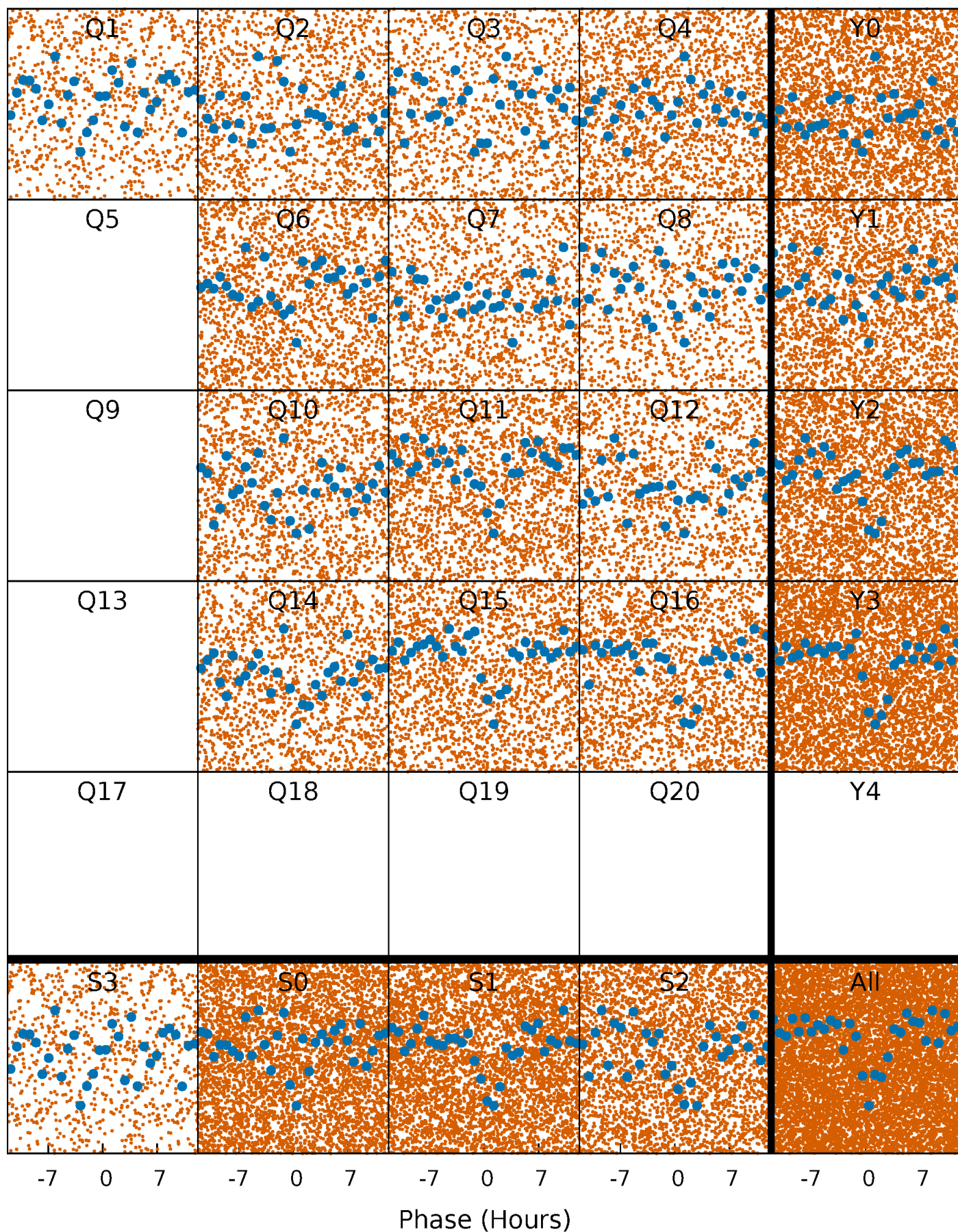


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



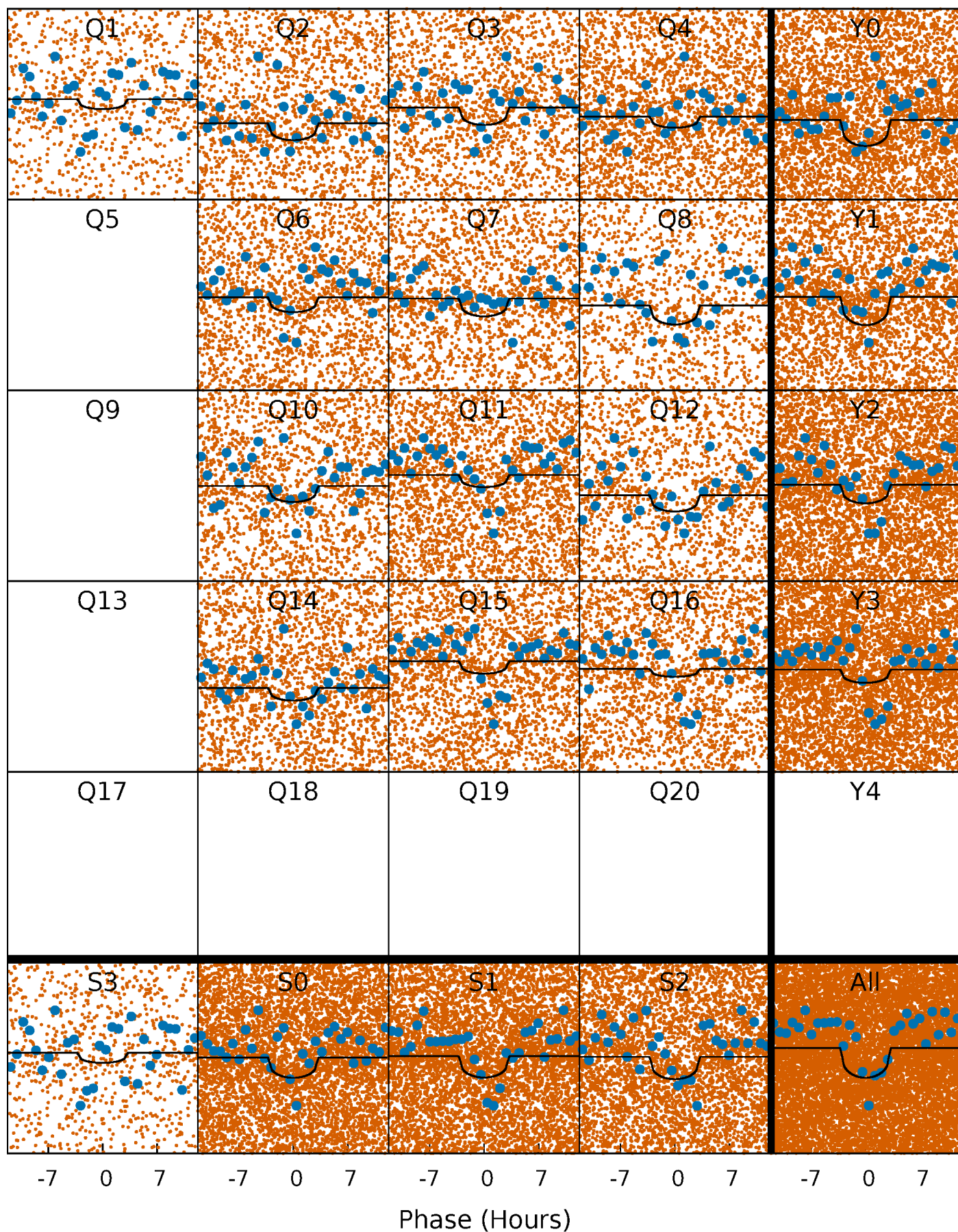
PDC Quarter-Phased Transit Curves

TCE 005513833-01 P= 0.755047 Days $T_0=131.854814$ (BKJD)



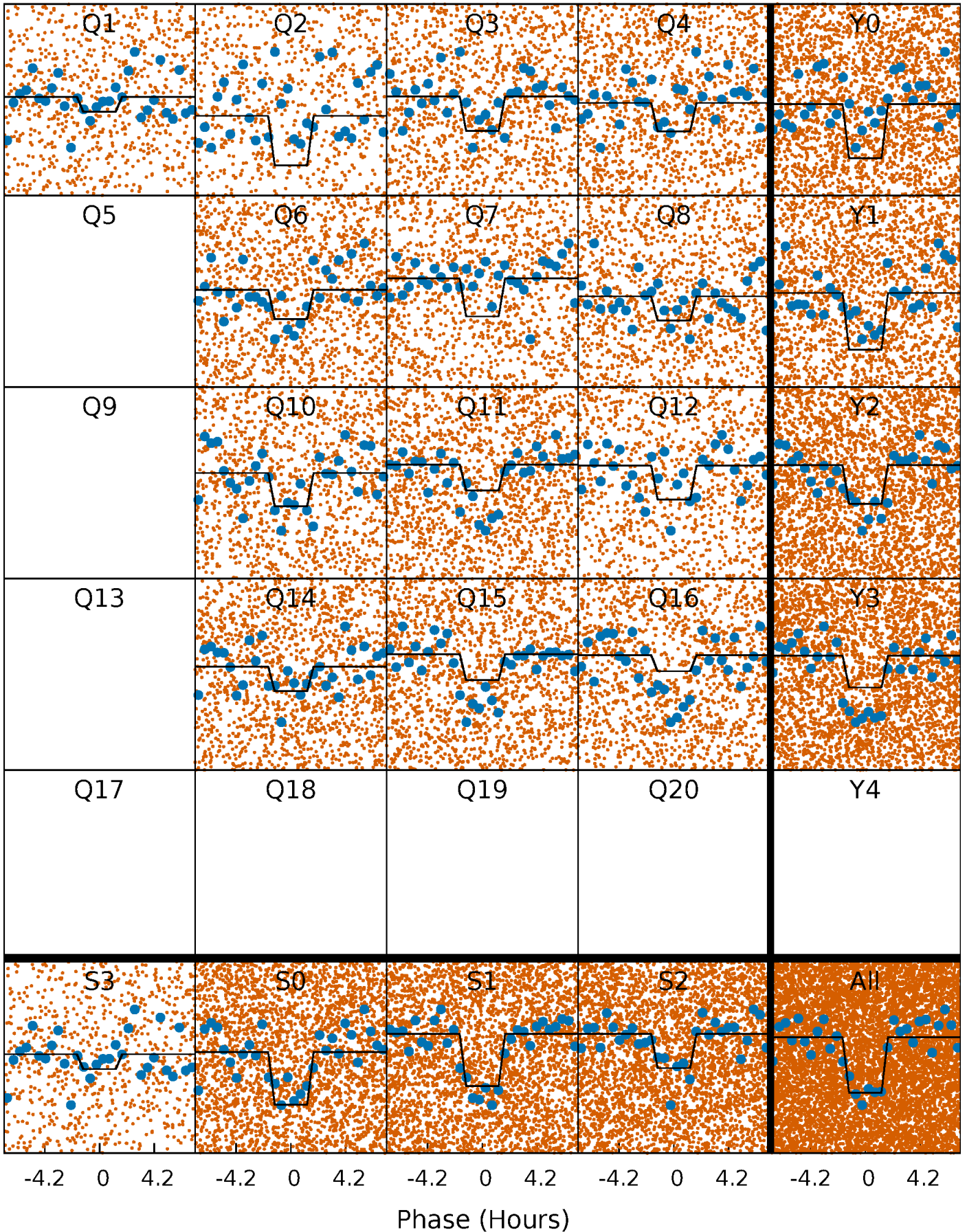
DV Quarter-Phased Transit Curves

TCE 005513833-01 P= 0.755047 Days $T_0=131.854814$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

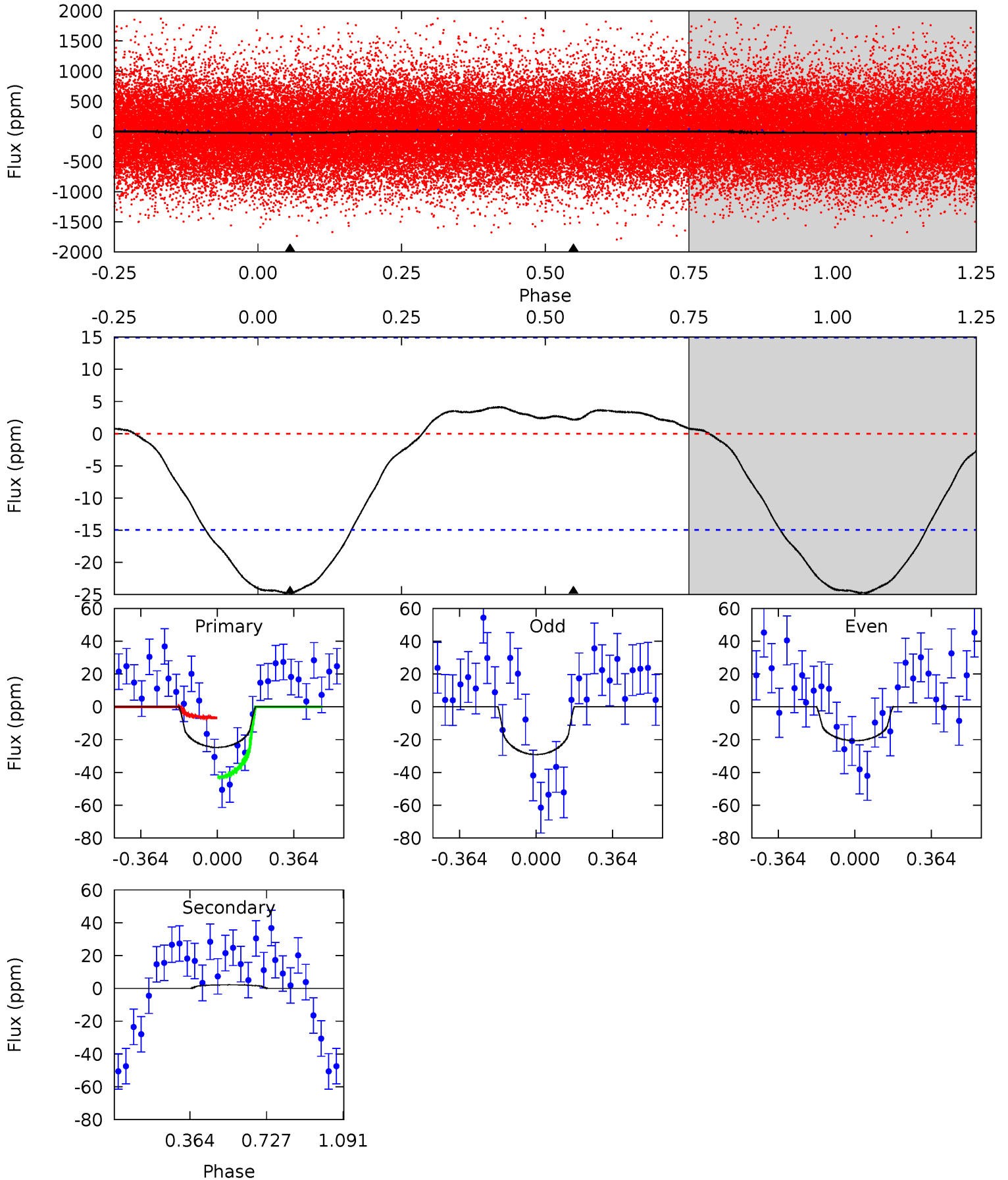
TCE 005513833-01 P= 0.755108 Days $T_0=131.816110$ (BKJD)



DV Model-Shift Uniqueness Test

005513833-01, P = 0.755047 Days, E = 131.099767 Days

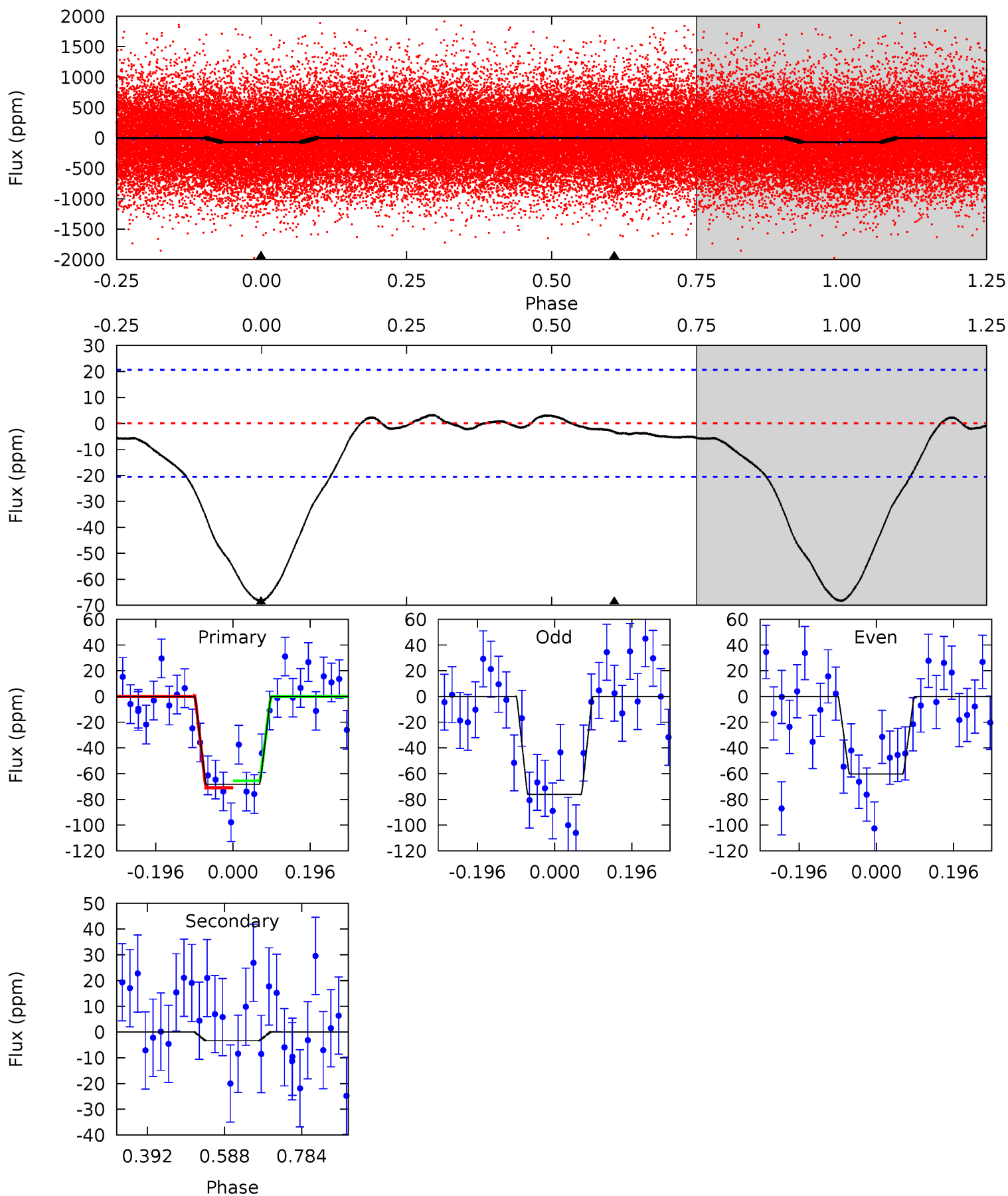
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.10	-0.62	0	0	4.29	0.91	0.51	7.10	7.10	-0.62	-0.62	1.22	0.75	0.14	5.25



Alt Model-Shift Uniqueness Test

005513833-01, P = 0.755108 Days, E = 131.061002 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	0.71	0	0	4.42	1.29	0.33	14.7	14.7	0.71	0.71	1.70	1.00	0.04	0.59



Stellar Parameters For KIC 005513833

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3256^{+39}_{-29}	$5.071^{+0.044}_{-0.044}$	$0.000^{+0.100}_{-0.100}$	$0.207^{+0.032}_{-0.023}$	$0.184^{+0.036}_{-0.024}$	$29.290^{+7.081}_{-6.256}$
	+1%/-1%	+1%/-1%	+inf%/-inf%	+15%/-11%	+20%/-13%	+24%/-21%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 005513833-01 / KOI 6591.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	2 ± 3	$0.41^{+0.42}_{-0.30}$	952^{+22}_{-21}	-1823^{+3181}_{-470}	$-0.374^{+0.696}_{-5.727}$
Alt.	-3 ± 5	$0.45^{+0.44}_{-0.30}$	950^{+22}_{-20}	1668^{+645}_{-3433}	$0.551^{+6.035}_{-0.724}$

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 $A_{obs} \gg 1.0$

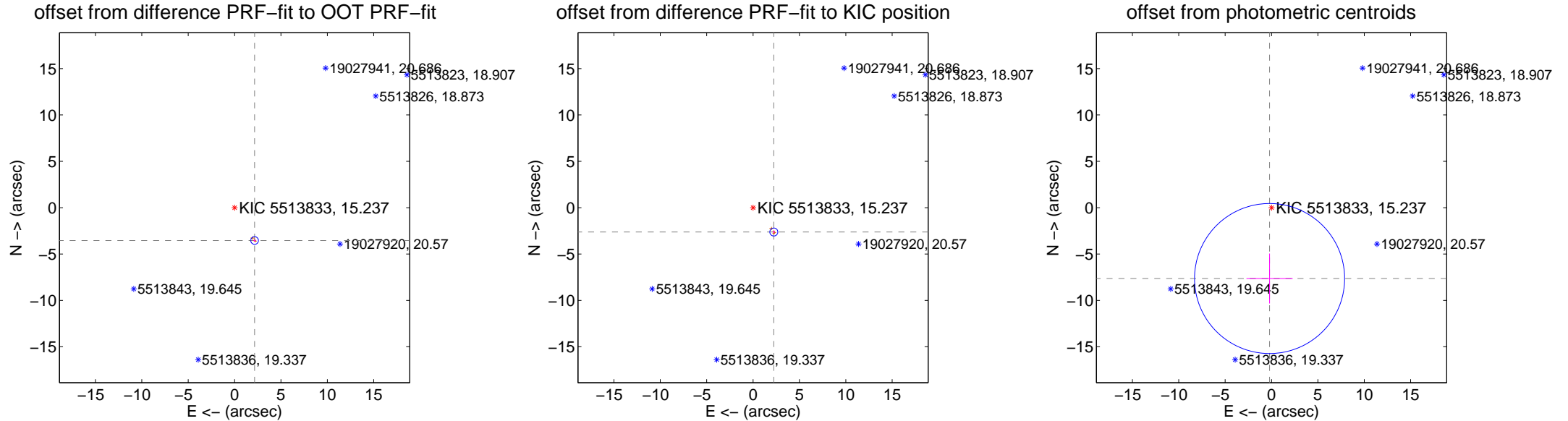
DV Centroid Data

Supplemental centroid analysis for 005513833-01. Kepler magnitude: 15.24. Transit SNR 5.29

There are 0 quarters with good PRF difference image offsets

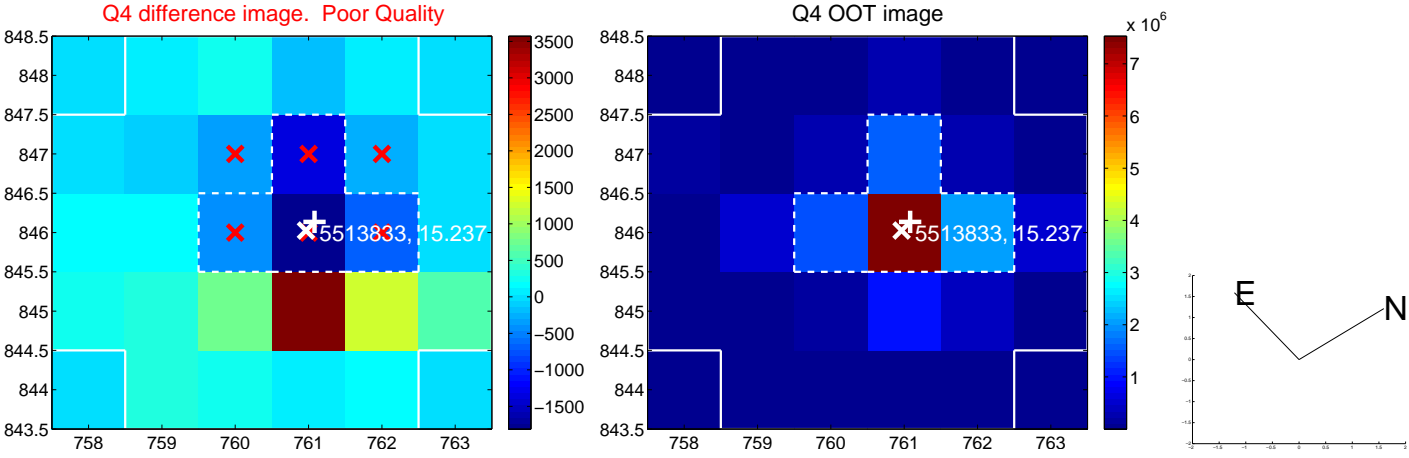
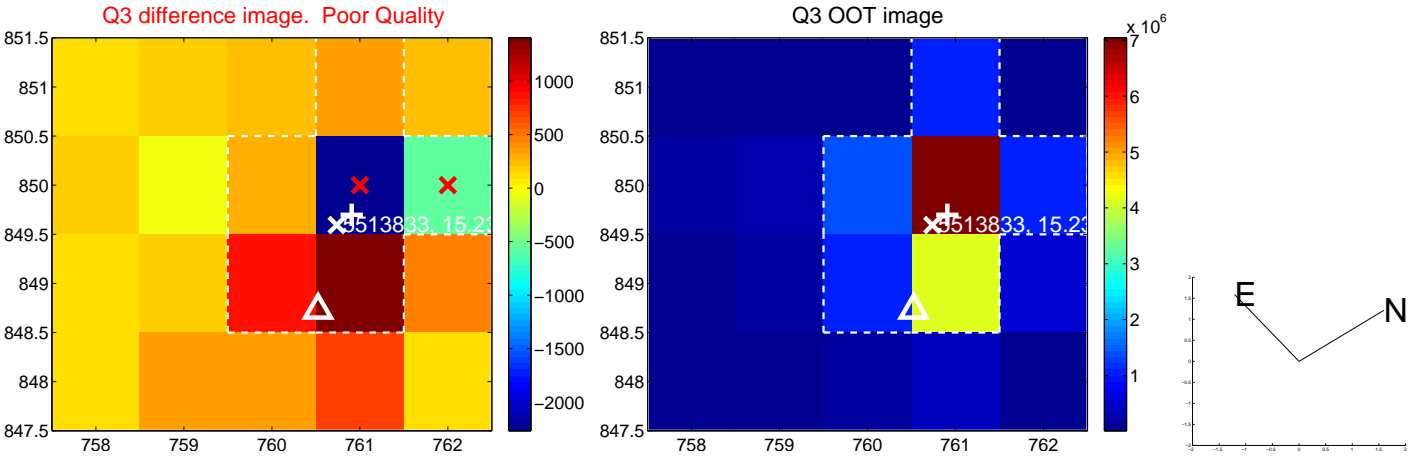
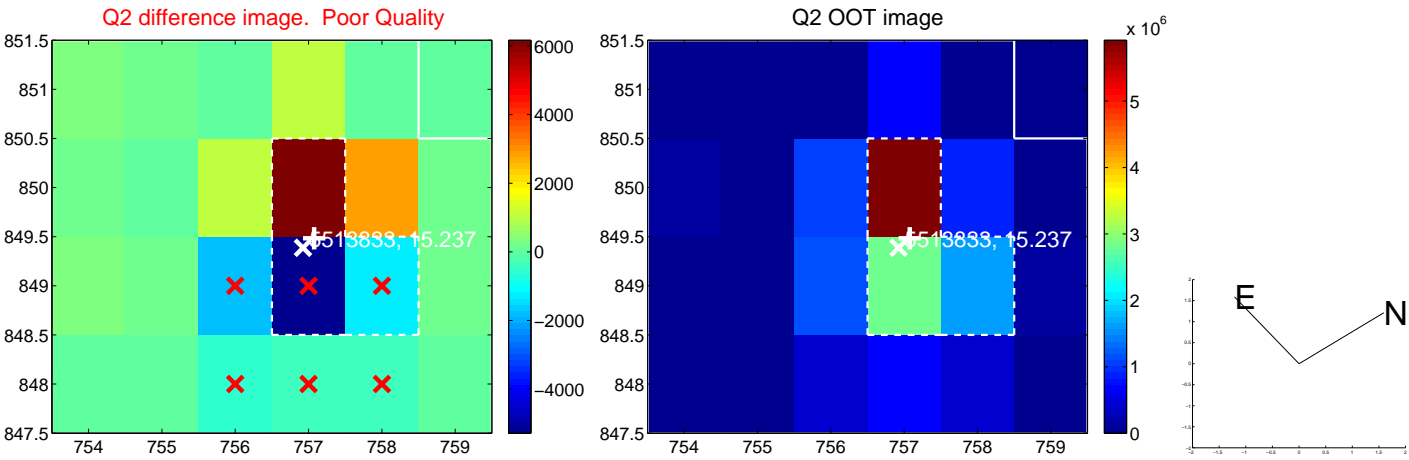
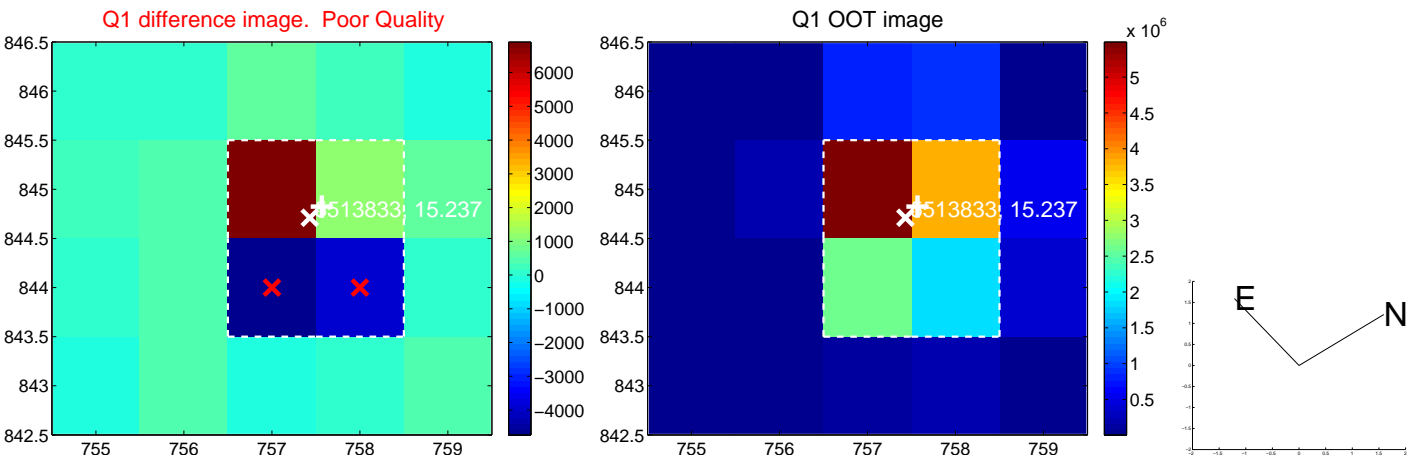
The direct PRF centroid is offset from the target star catalog position by about 1.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.147 ± 0.138	30.06	-2.158 ± 0.106	-3.541 ± 0.113
PRF-fit source offset from KIC position	3.448 ± 0.144	23.93	-2.238 ± 0.099	-2.623 ± 0.126
photometric centroid source offset	7.64 ± 2.70	2.83	0.21 ± 2.49	-7.64 ± 2.70

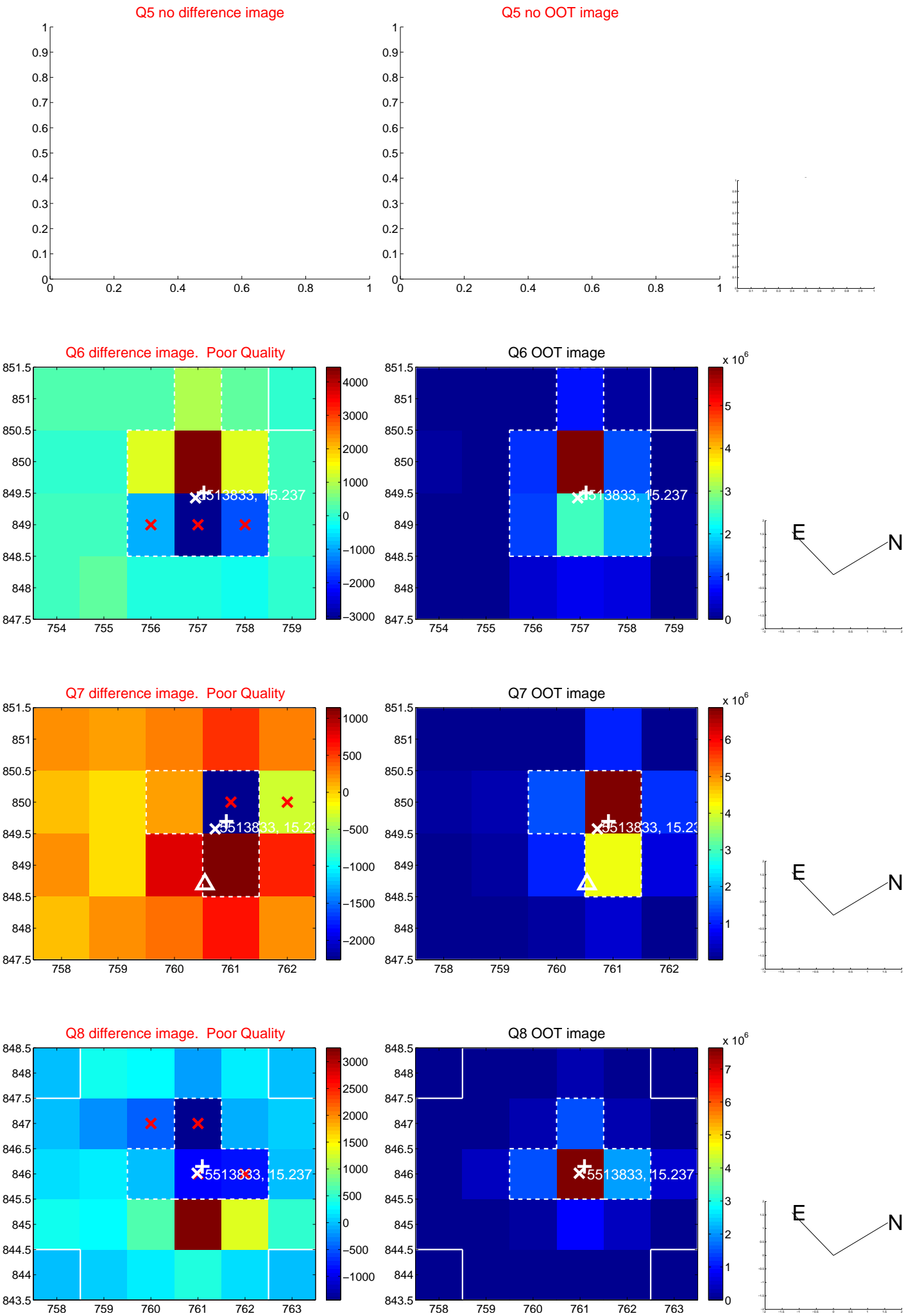


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

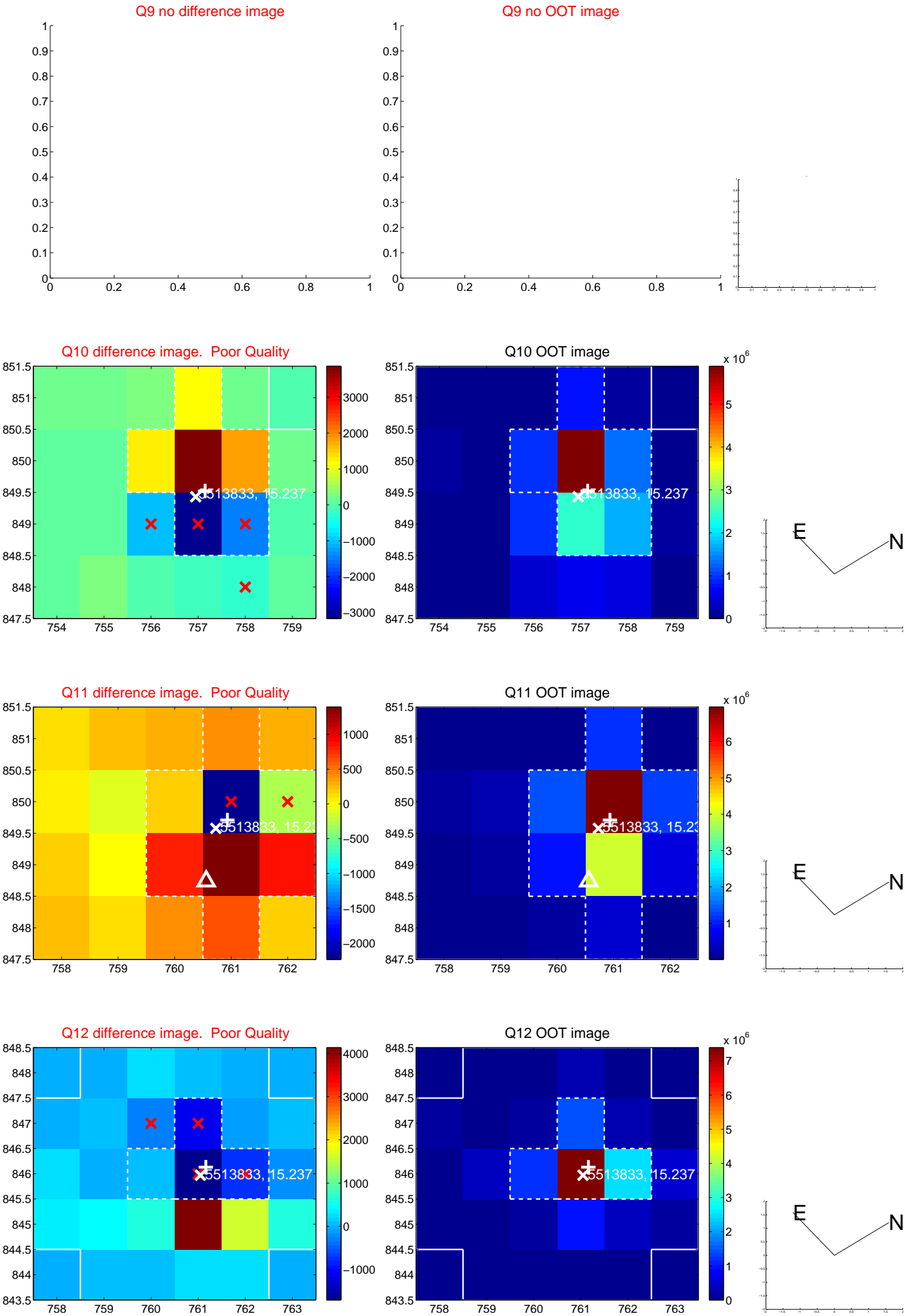
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



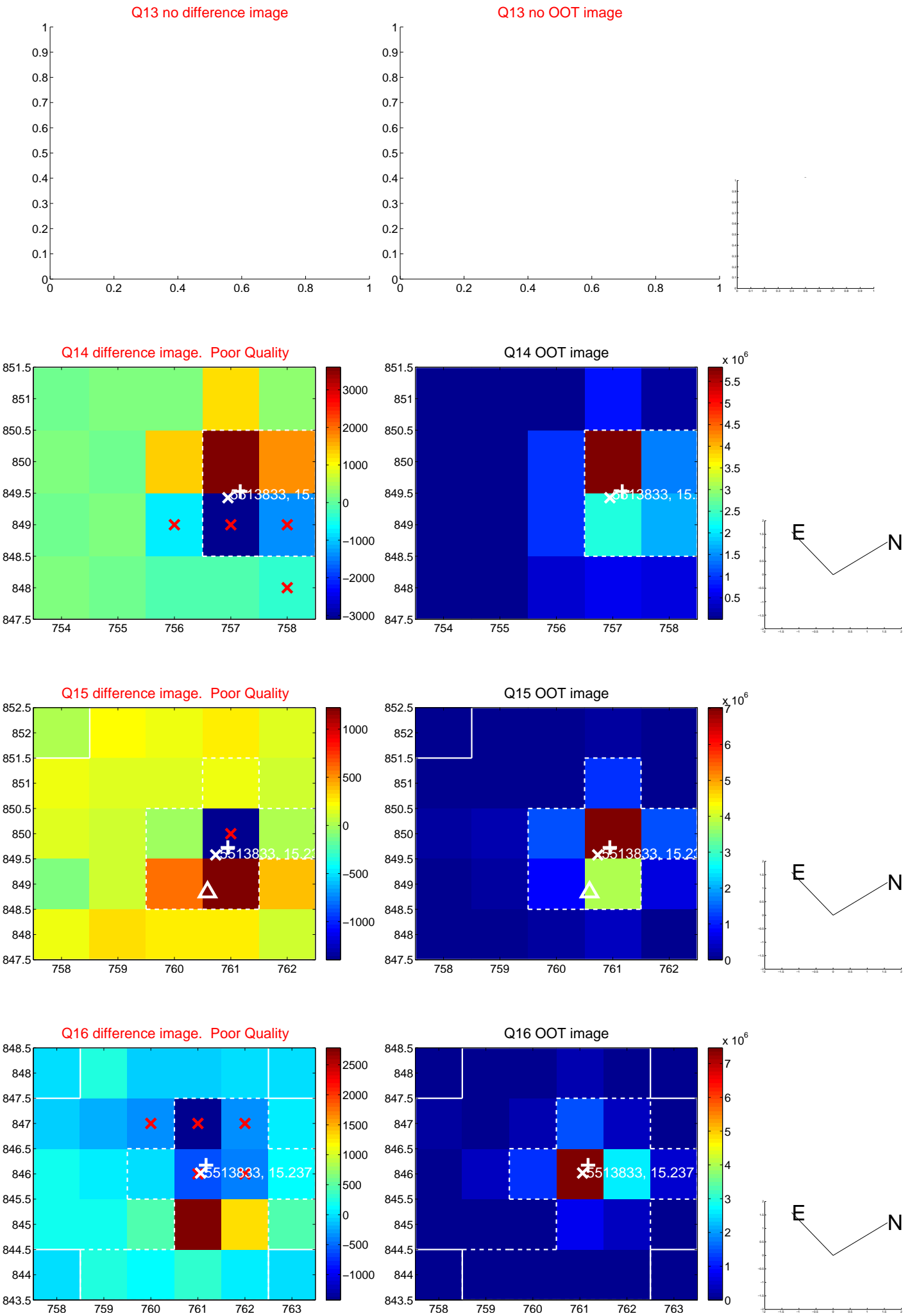
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



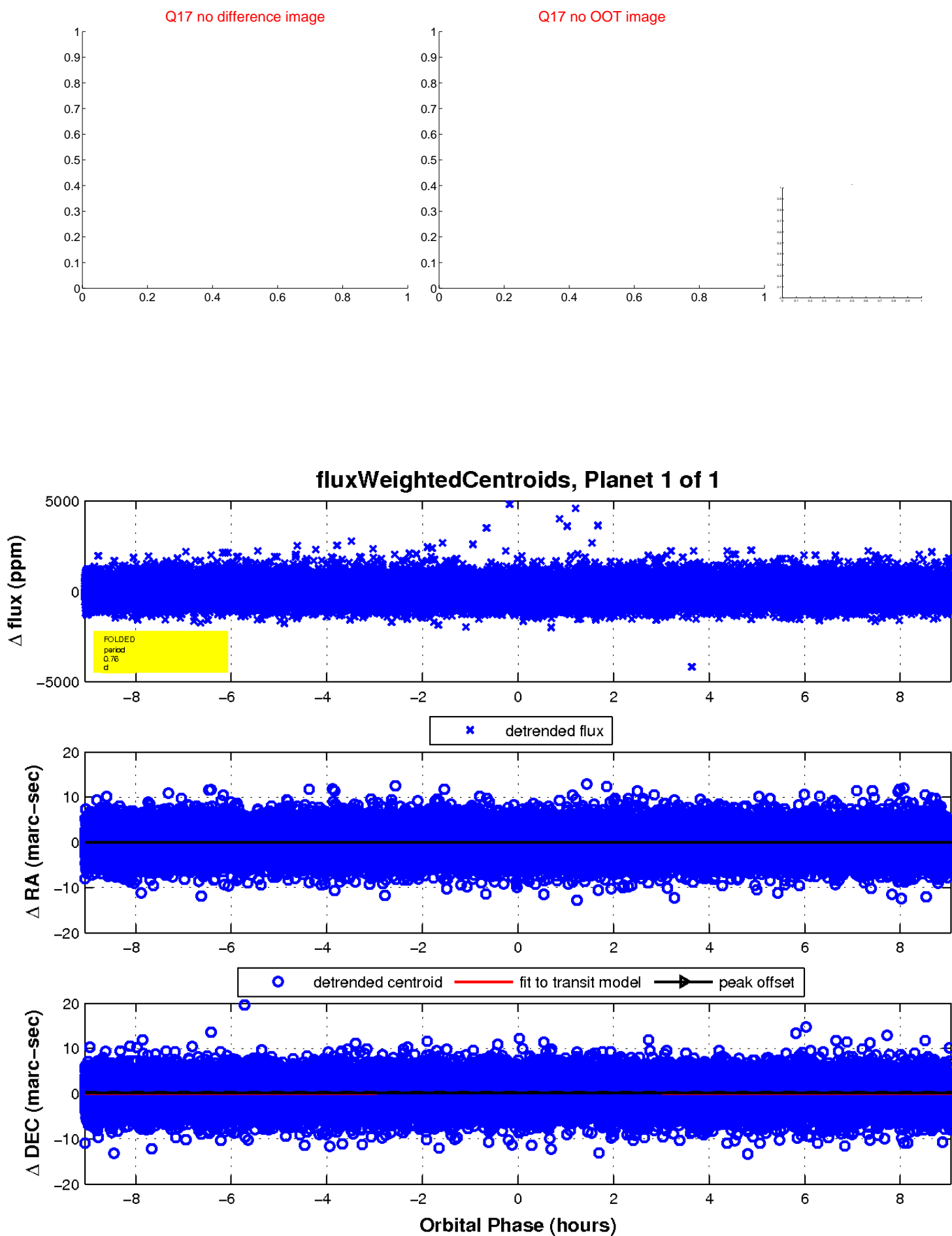
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

