

KIC 008361905

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})
008361905-01	OBS	0689.01	15.873610	134.783565	412.9	3.823	33.0	35.6	0.74	5656	1.77	37.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008361905-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

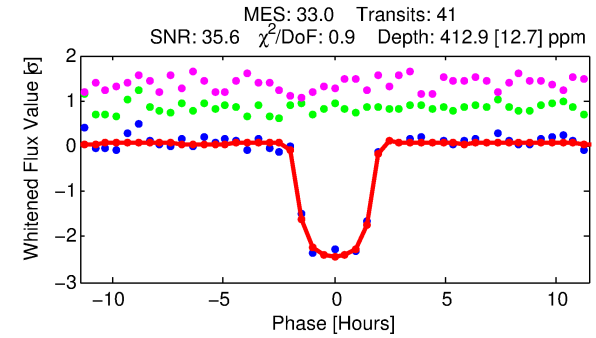
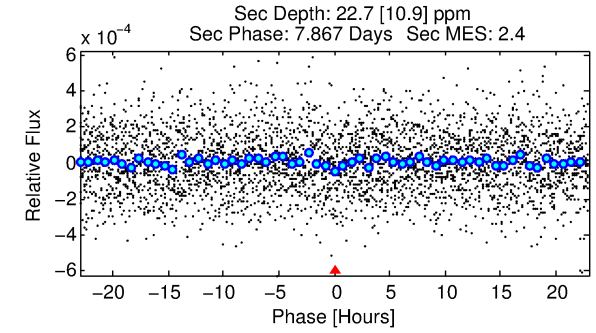
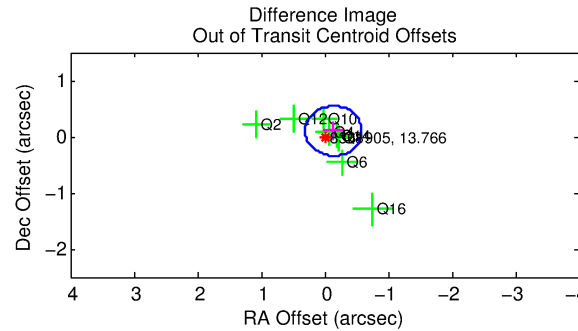
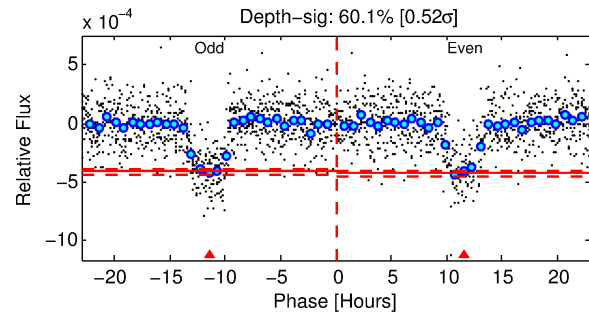
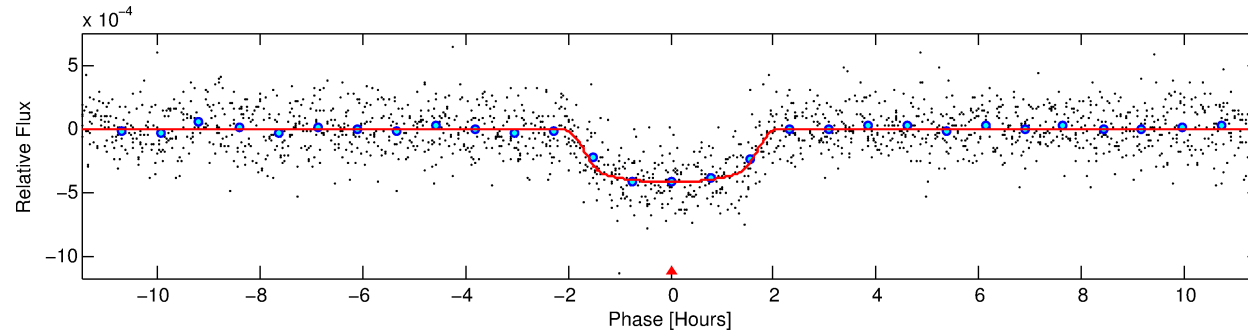
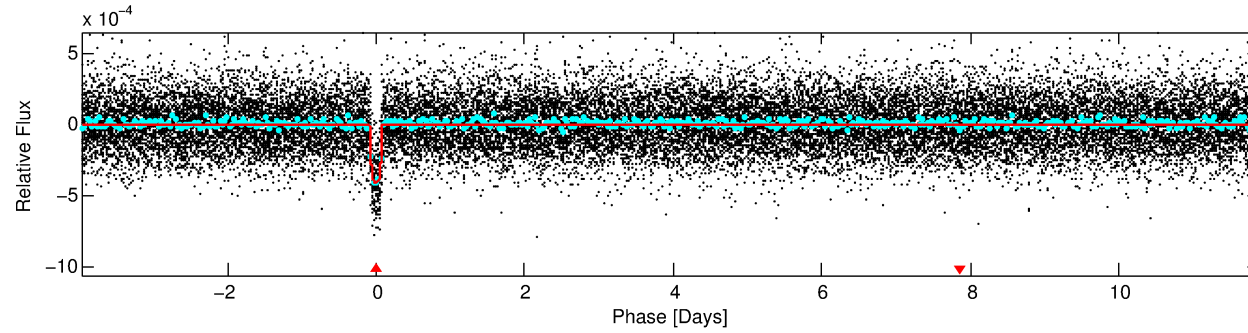
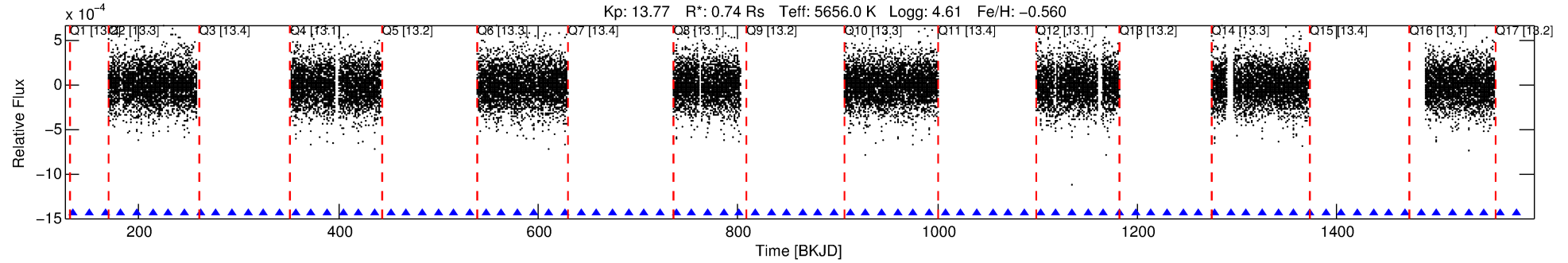
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008361905-01

No Significant Match Found

DV One-Page Summary

KIC: 8361905 Candidate: 1 of 1 Period: 15.874 d
KOI: K00689.01 Corr: 0.972



DV Fit Results:

Period = 15.87361 [0.00005] d
Epoch = 134.7836 [0.0026] BKJD
Rp/R* = 0.0220 [0.0018]
a/R* = 15.51 [5.81]
b = 0.90 [0.08]
Seff = 37.76 [10.81]
Teq = 632 [45] K
Rp = 1.77 [0.41] Re
a = 0.1148 [0.0206] AU
Ag = 52.72 [29.74] [1.74 σ]
Teffp = 2633 [343] K [5.79 σ]

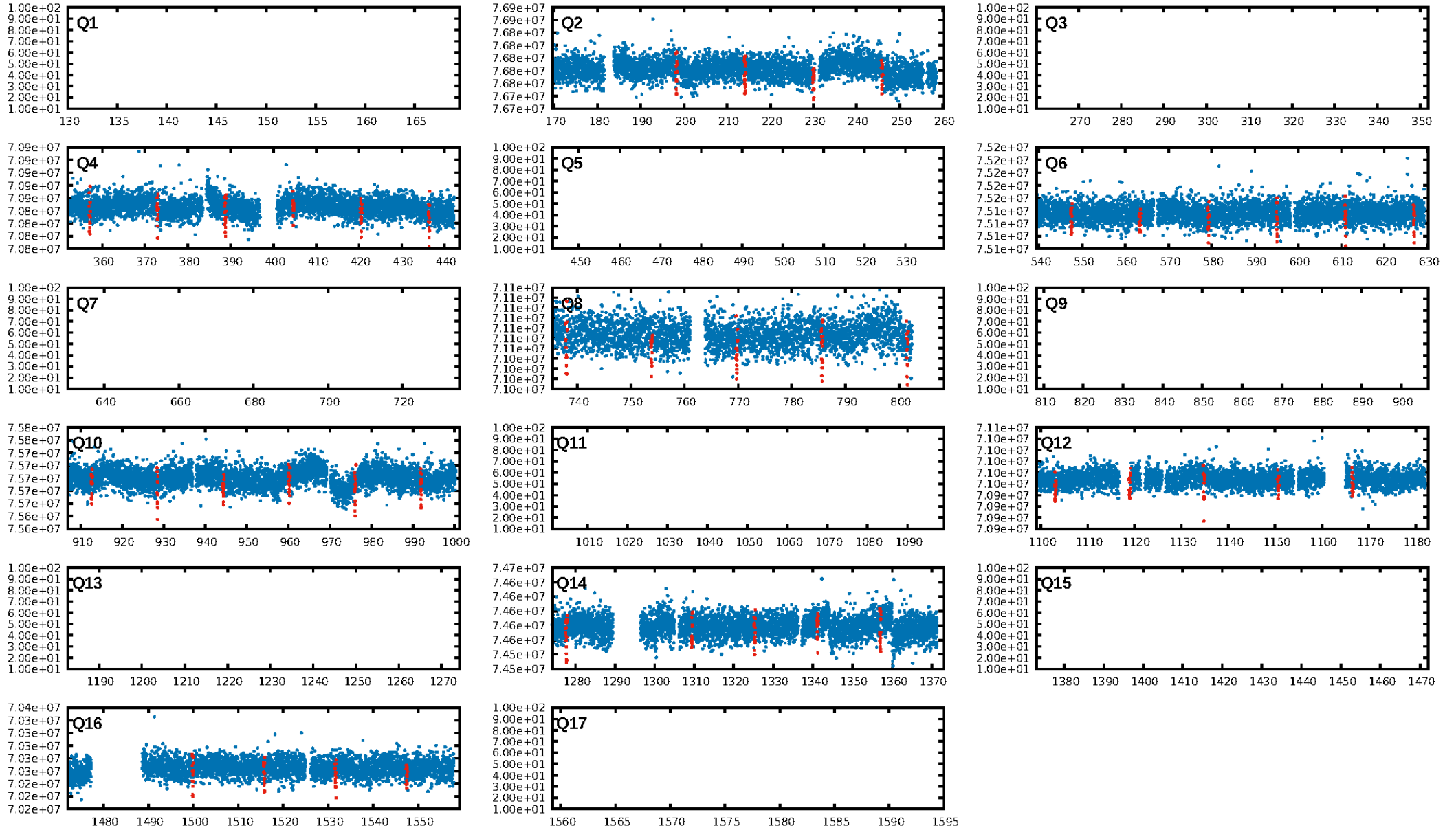
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 92.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.27e-214
RollingBand-fgt: 1.00 [41/41]
GhostDiagnostic-chr: 7.579
Centroid-sig: 58.9%
Centroid-so: 0.540 arcsec [1.23 σ]
OotOffset-rm: 0.167 arcsec [1.13 σ]
OotOffset-st: 4/0/4/0 [8]
KicOffset-rm: 0.338 arcsec [1.42 σ]
KicOffset-st: 4/0/4/0 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

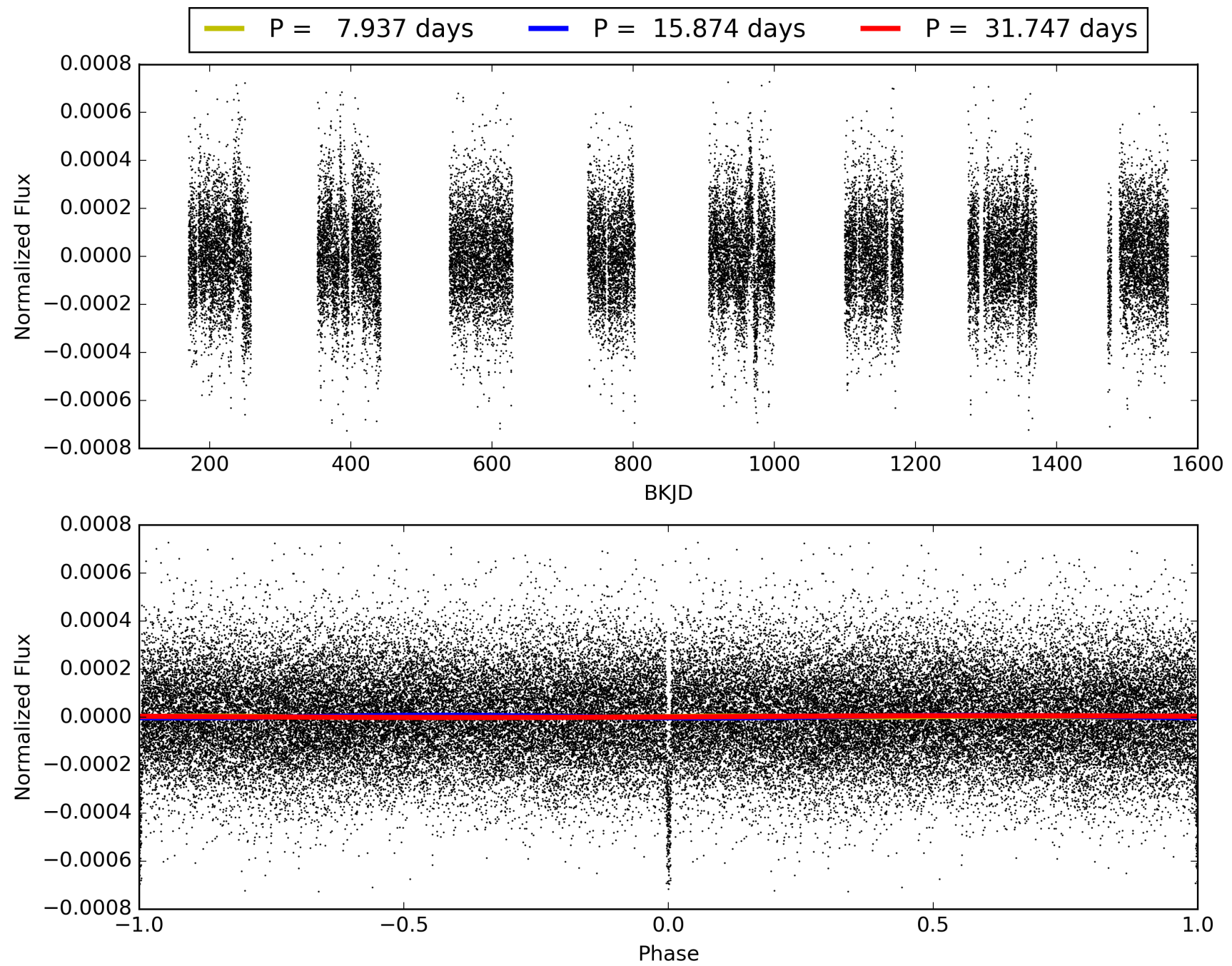
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:50:22 Z

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

TCE 008361905-01, PDC Light Curves

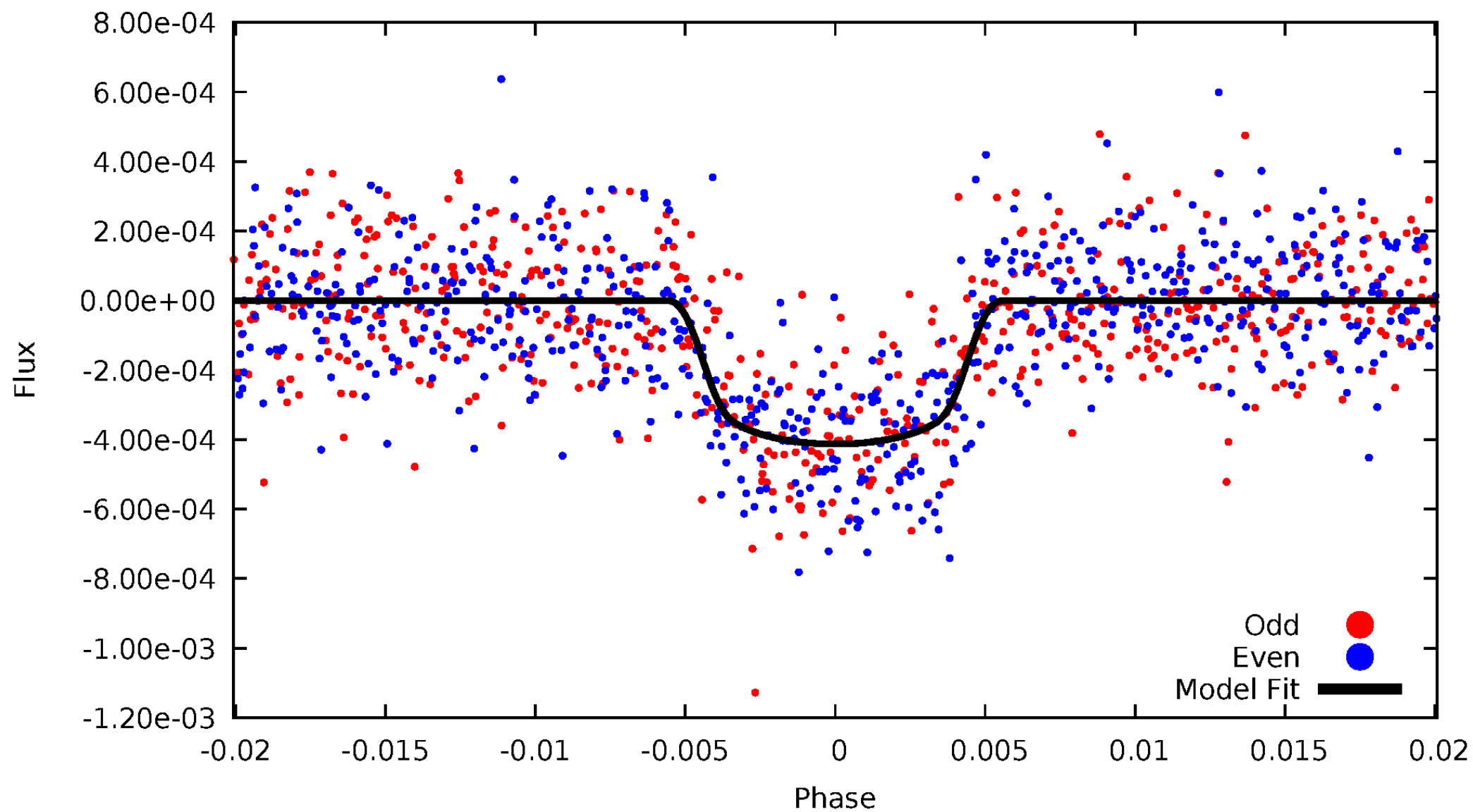


TCE 008361905-01



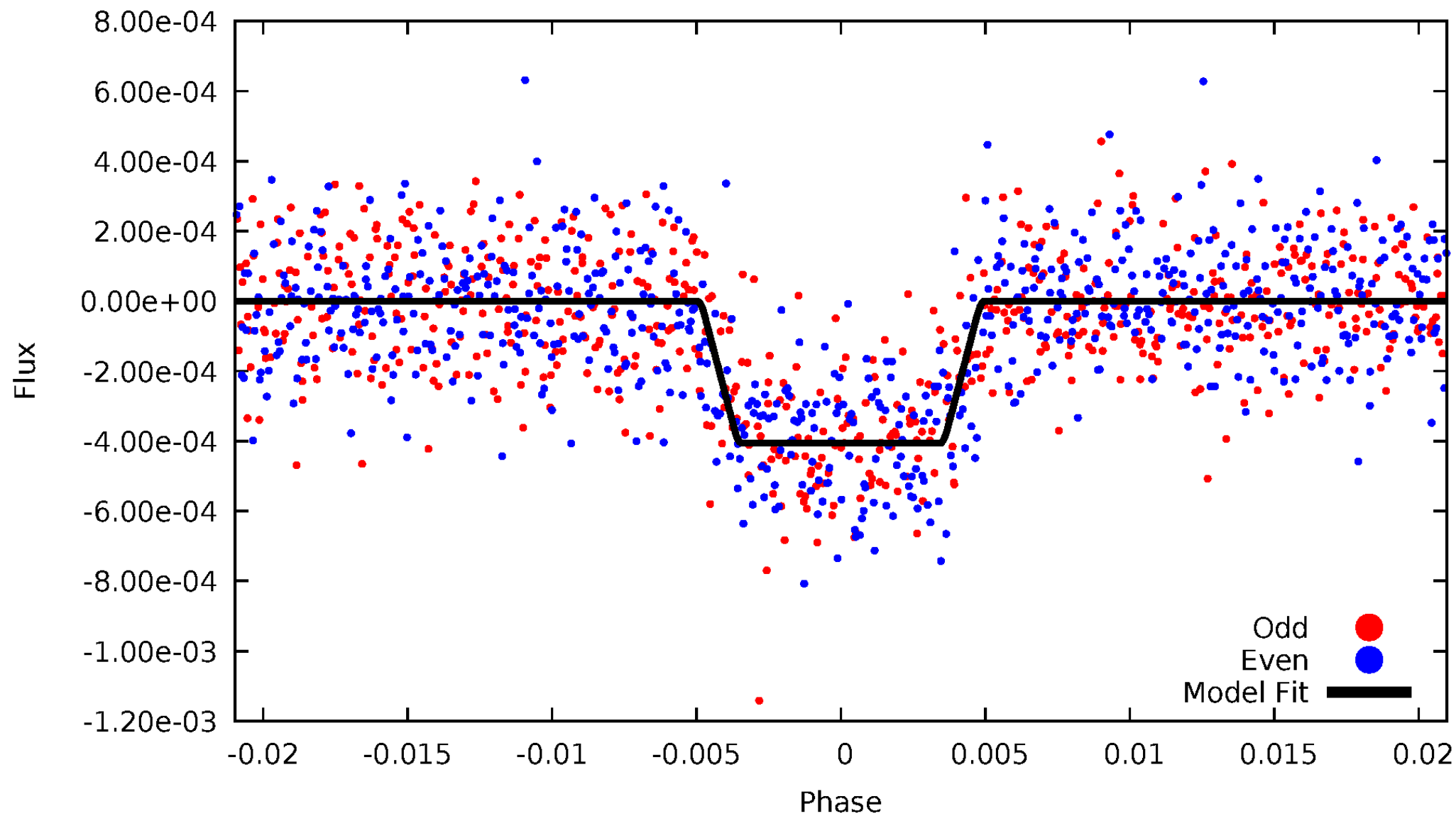
DV Odd/Even

TCE 008361905-01

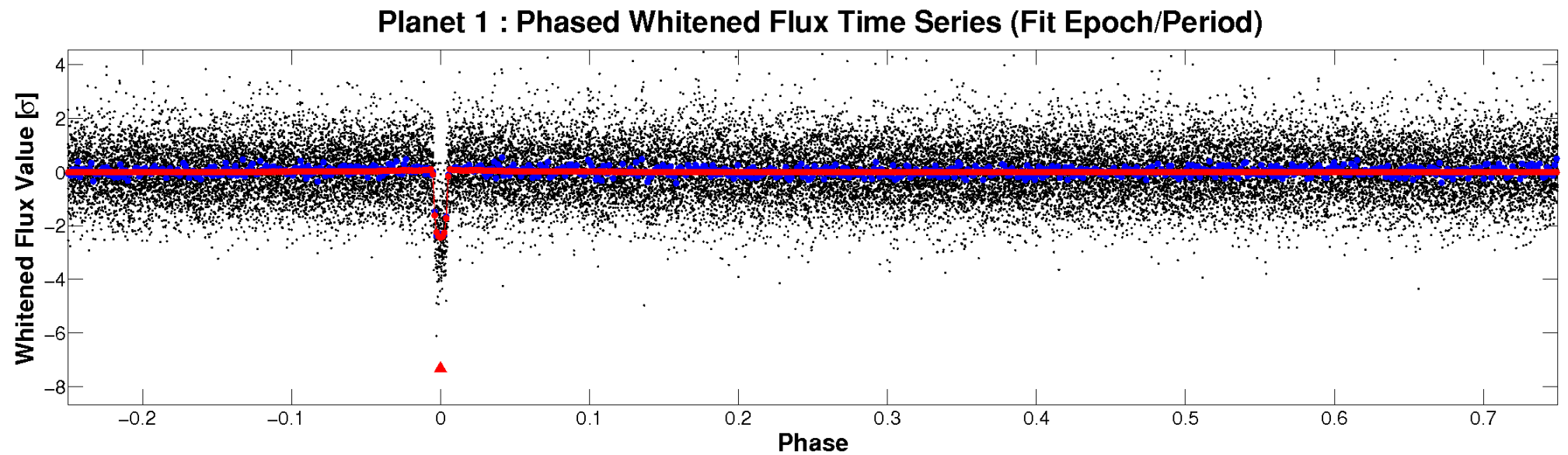
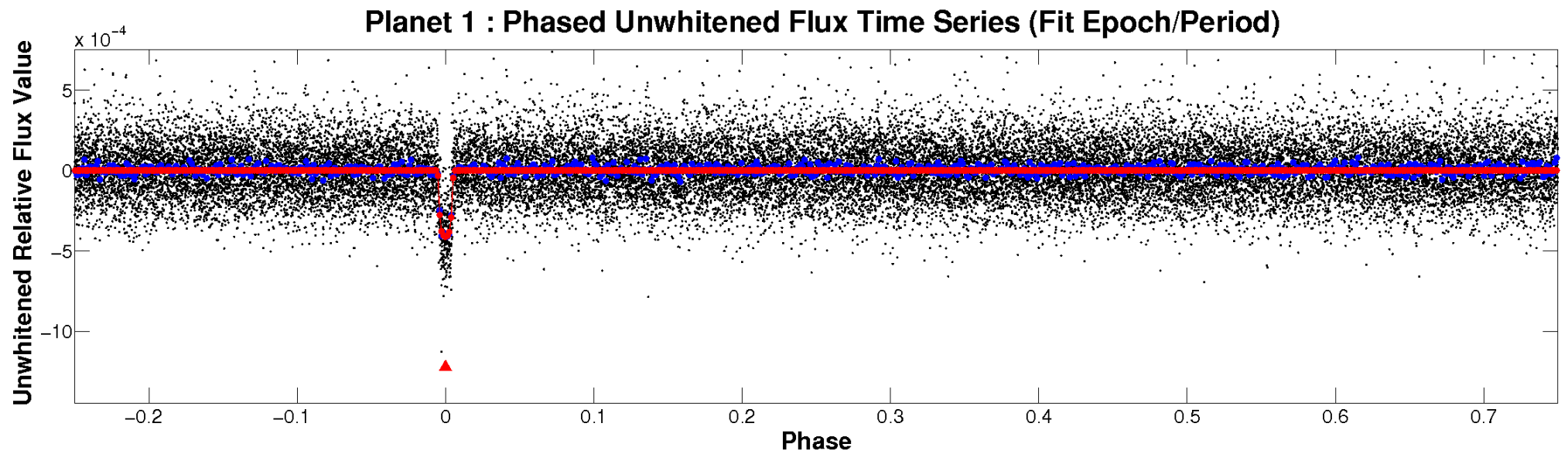


ALT Odd/Even

TCE 008361905-01

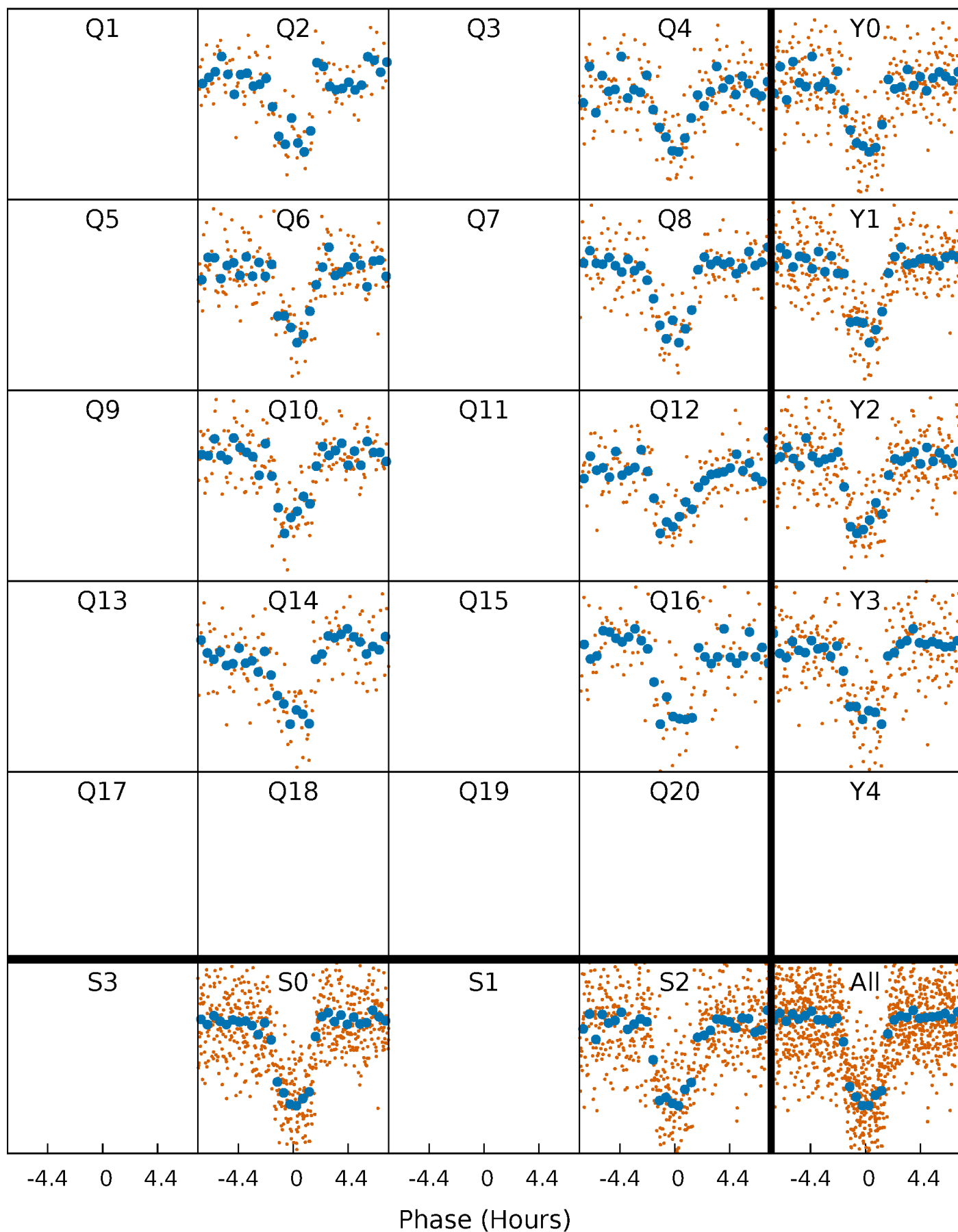


Non-Whitened Vs. Whitened Light Curve



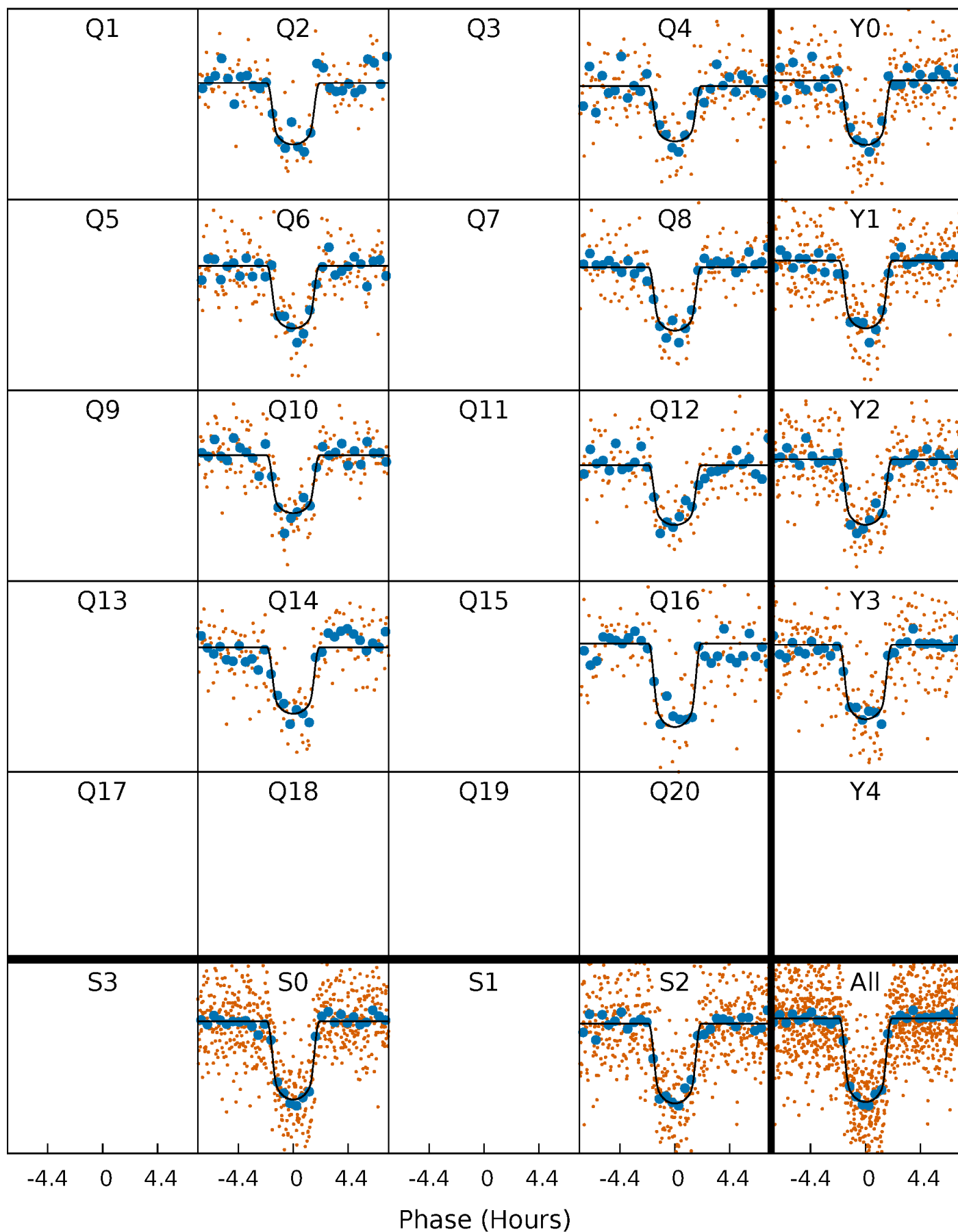
PDC Quarter-Phased Transit Curves

TCE 008361905-01 P= 15.873610 Days $T_0=134.783565$ (BKJD)



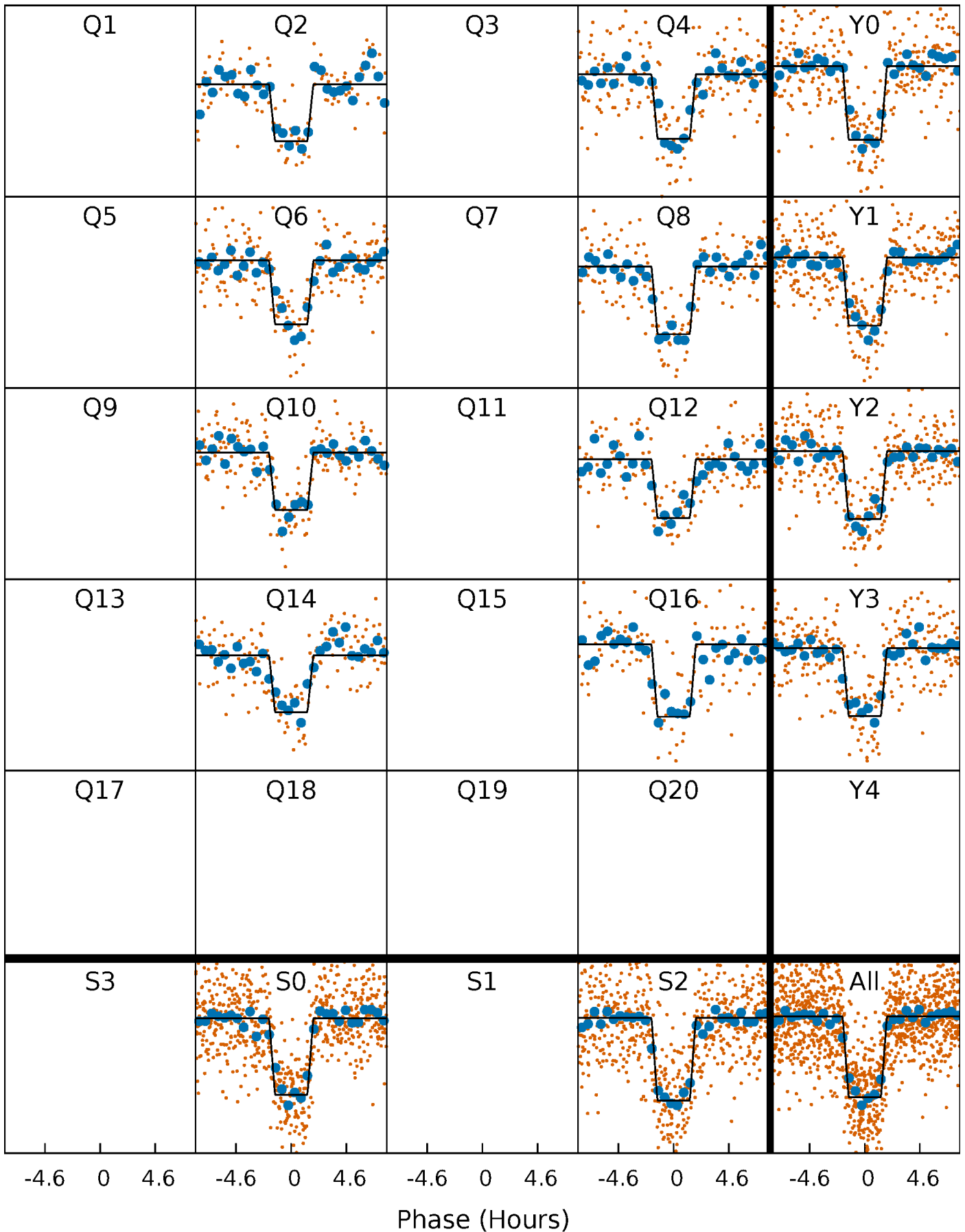
DV Quarter-Phased Transit Curves

TCE 008361905-01 P= 15.873610 Days $T_0=134.783565$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

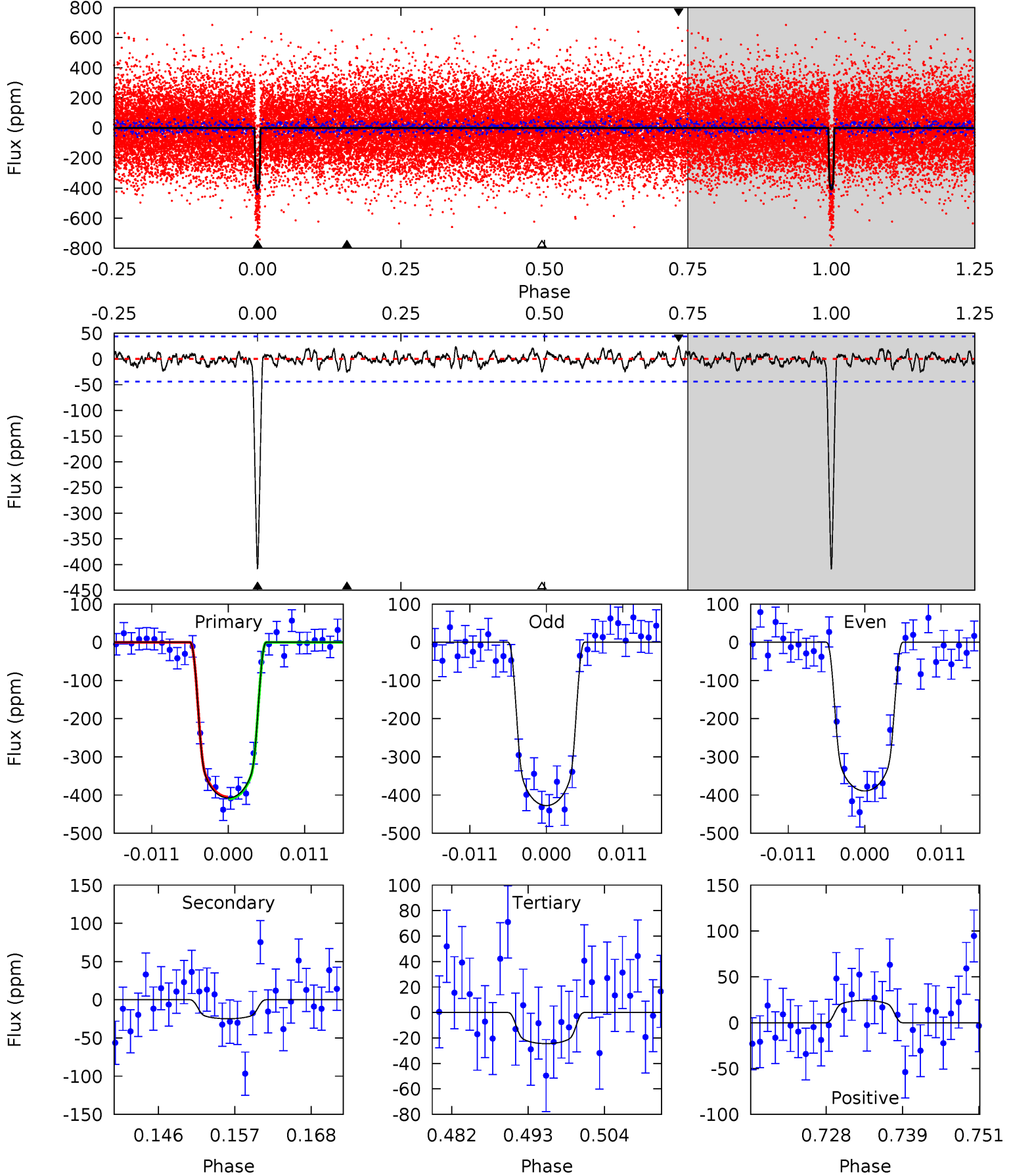
TCE 008361905-01 P= 15.873735 Days $T_0=134.778177$ (BKJD)



DV Model-Shift Uniqueness Test

008361905-01, $P = 15.873610$ Days, $E = 134.783565$ Days

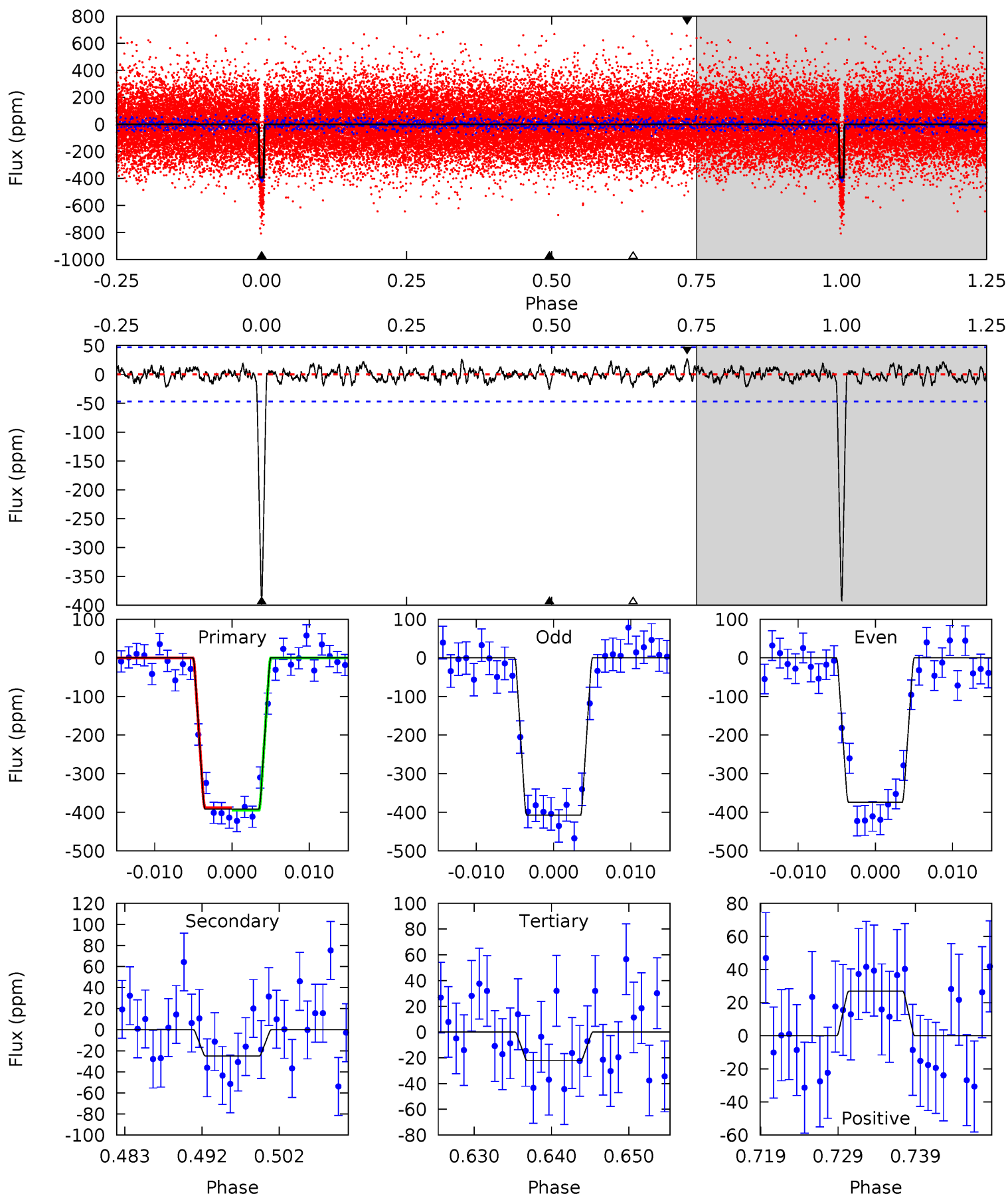
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.4	2.83	2.78	2.75	5.00	2.54	0.96	43.6	43.6	0.04	0.08	2.18	1.00	0.06	0.28



Alt Model-Shift Uniqueness Test

008361905-01, $P = 15.873735$ Days, $E = 134.778177$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.8	2.66	2.35	2.88	5.03	2.58	0.89	39.4	38.9	0.31	-0.22	1.80	0.99	0.06	0.32



Stellar Parameters For KIC 008361905

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5656^{+187}_{-187}	$4.607^{+0.036}_{-0.135}$	$-0.560^{+0.300}_{-0.300}$	$0.737^{+0.162}_{-0.058}$	$0.801^{+0.088}_{-0.080}$	$2.818^{+0.534}_{-1.145}$
	+3%/-3%	+1%/-3%	+54%/-54%	+22%/-8%	+11%/-10%	+19%/-41%
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 008361905-01 / KOI 0689.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-25 ± 9	$1.82^{+0.22}_{-0.19}$	898^{+46}_{-38}	3263^{+191}_{-210}	54^{+25}_{-20}
Alt.	-25 ± 9	$1.66^{+0.21}_{-0.17}$	898^{+46}_{-40}	3343^{+210}_{-242}	63^{+29}_{-24}

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 $A_{obs} \gg 1.0$

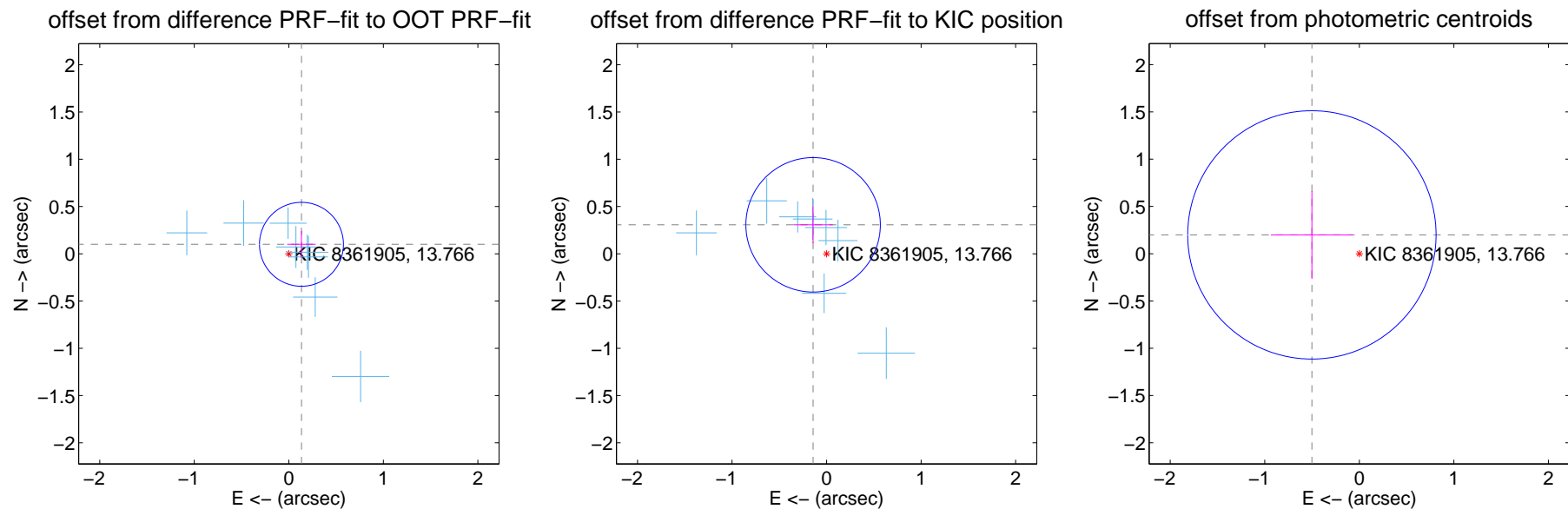
DV Centroid Data

Supplemental centroid analysis for 008361905-01. Kepler magnitude: 13.77. Transit SNR 35.57

There are 8 quarters with good PRF difference image offsets

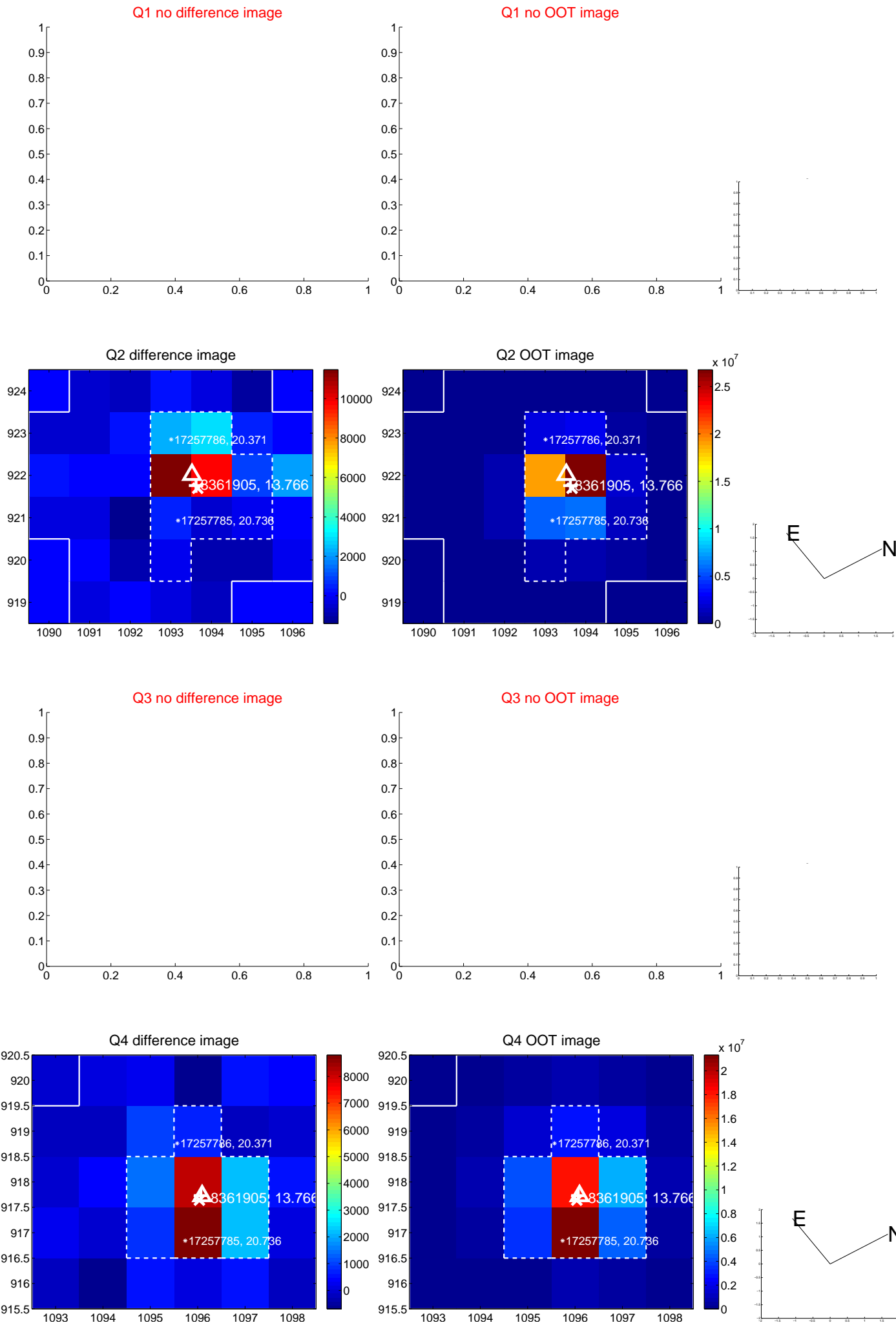
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.167 ± 0.148	1.13	-0.134 ± 0.151	0.100 ± 0.142
PRF-fit source offset from KIC position	0.338 ± 0.237	1.42	0.142 ± 0.208	0.306 ± 0.195
photometric centroid source offset	0.54 ± 0.44	1.23	0.50 ± 0.43	0.20 ± 0.47

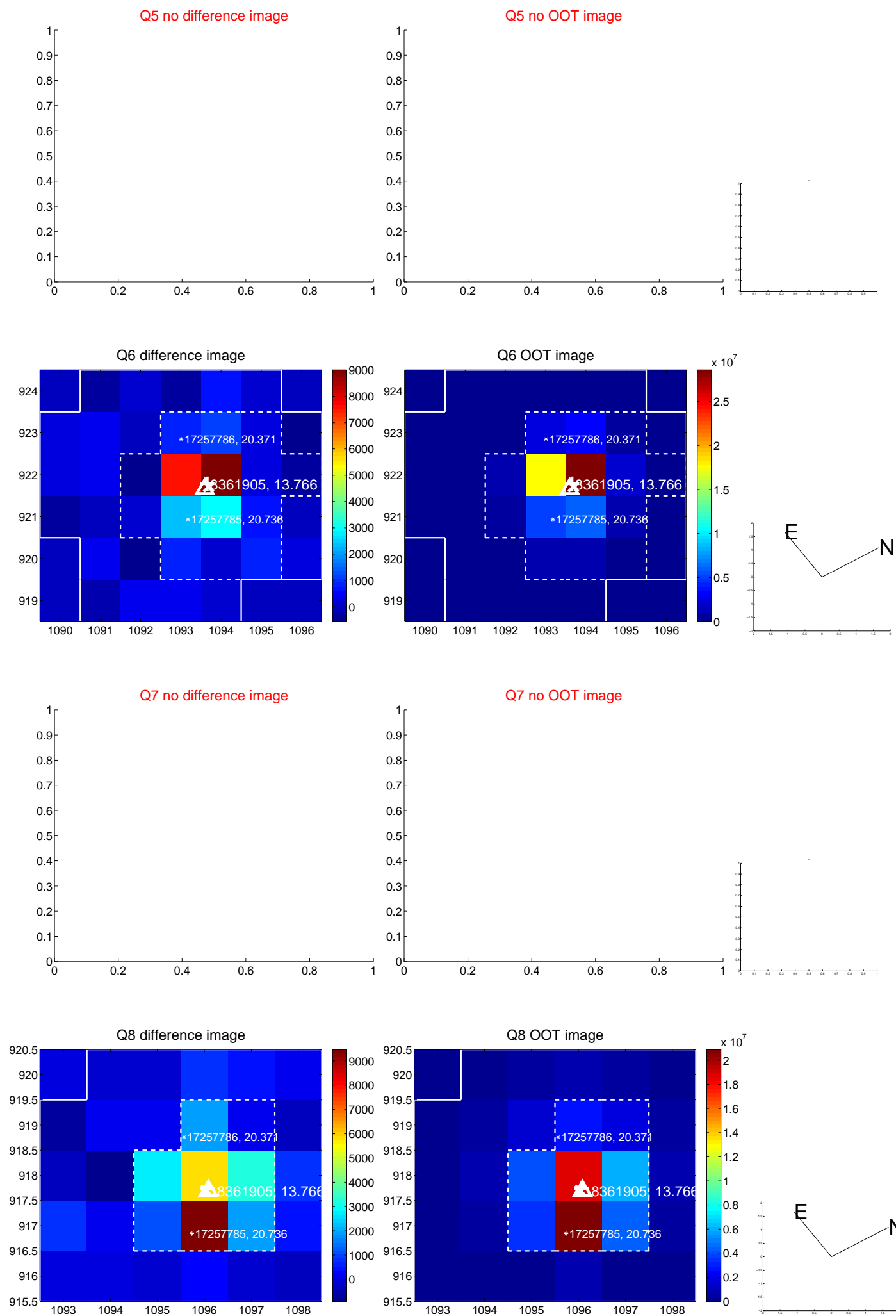


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

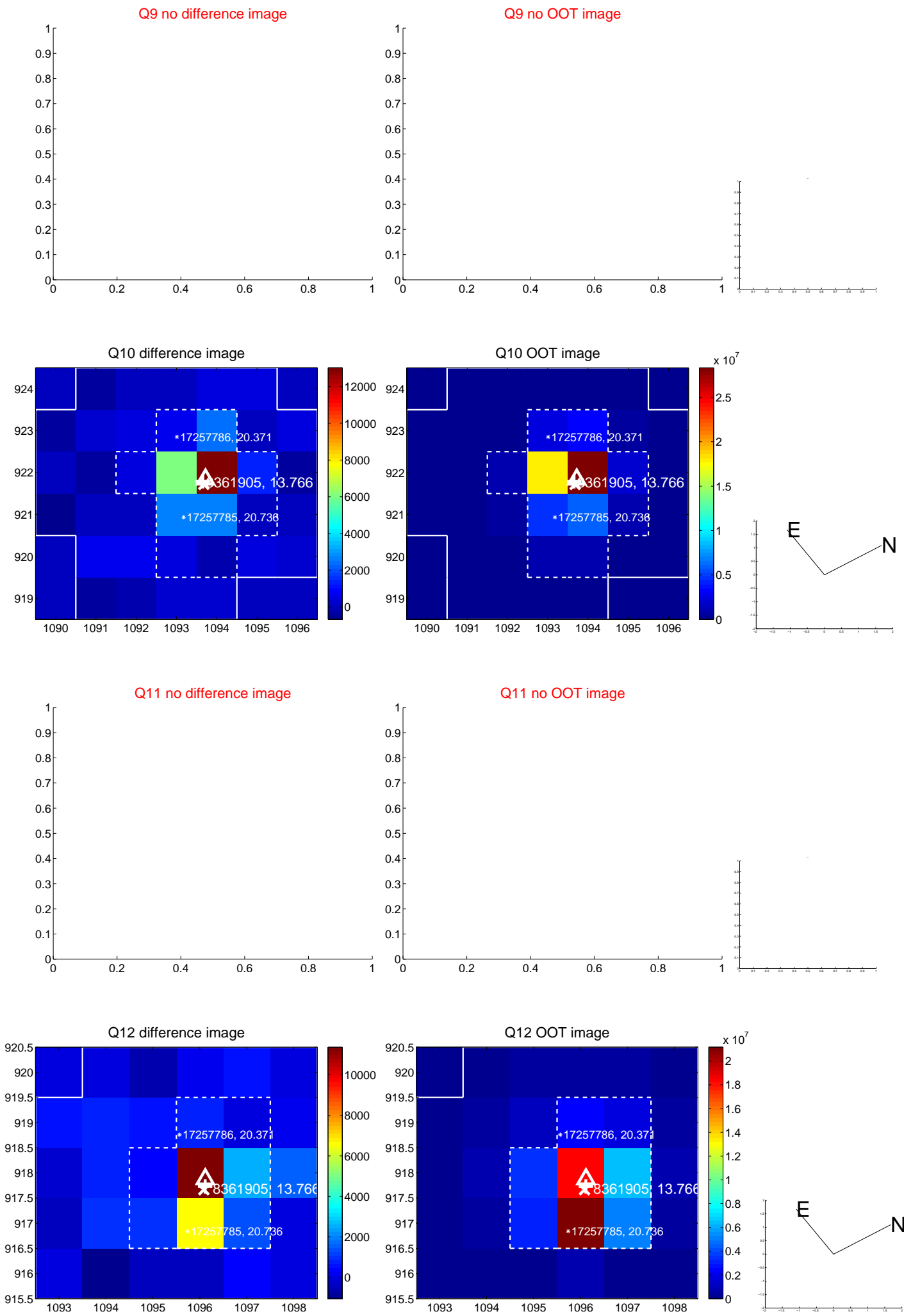
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



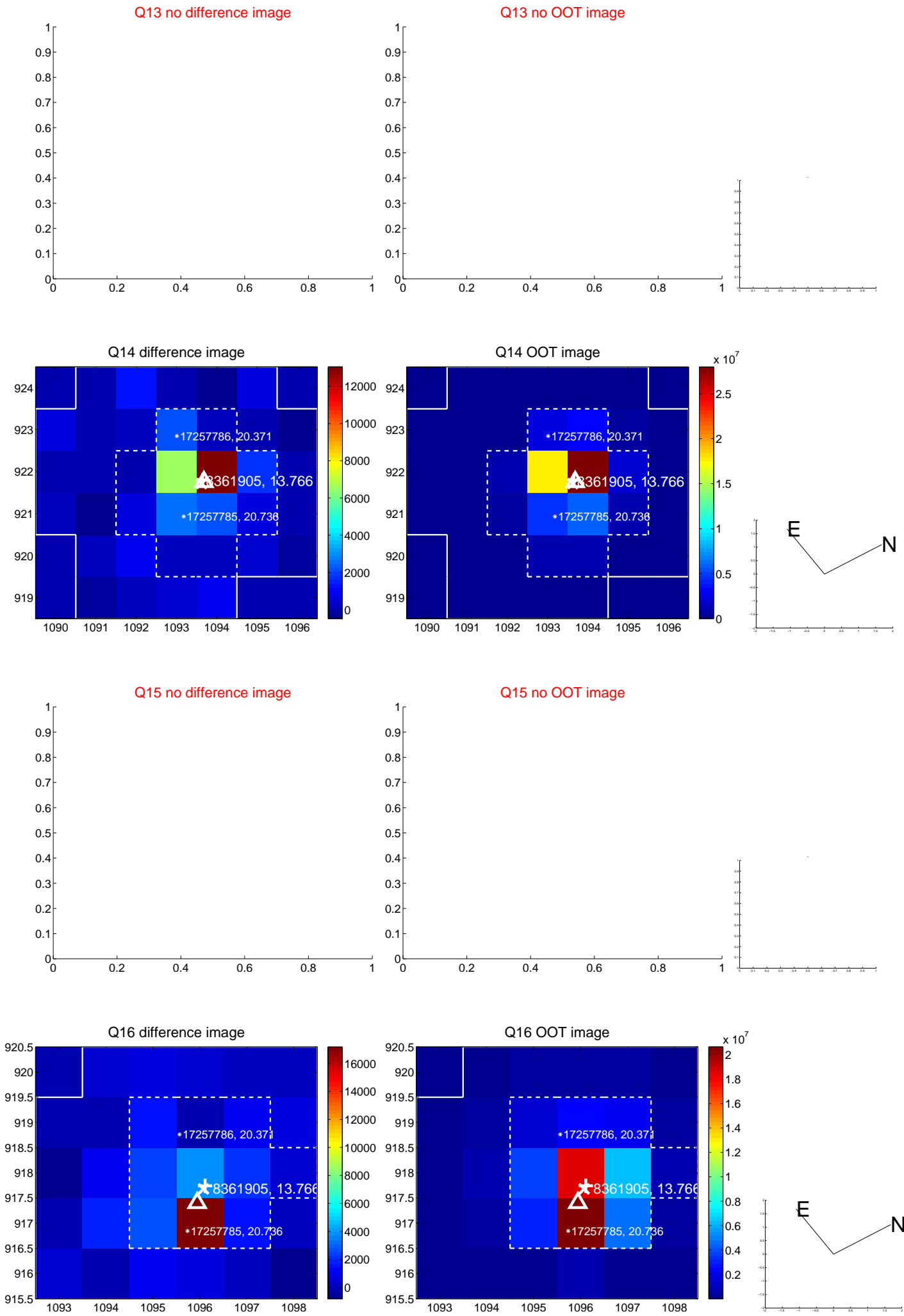
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



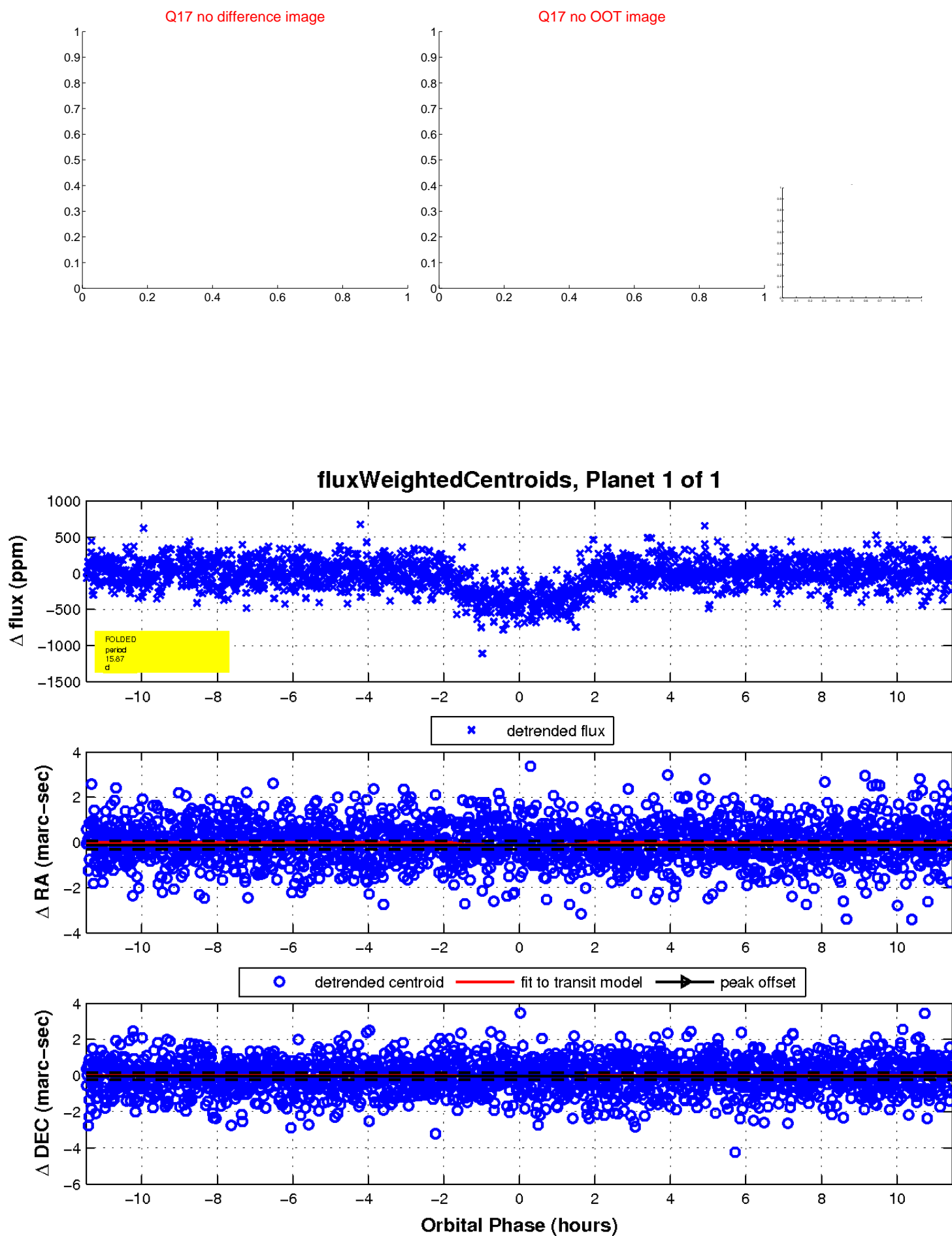
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

