

KIC 006022556

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})
006022556-01	OBS	0844.01	3.709867	134.889671	1920.5	3.159	88.4	101.8	0.98	5727	4.63	415.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006022556-01	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.

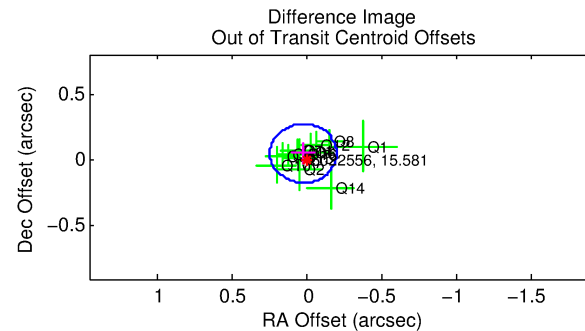
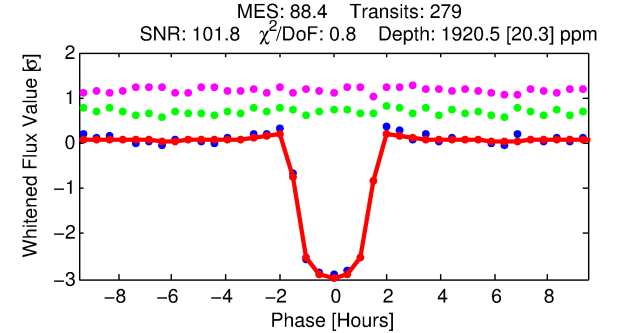
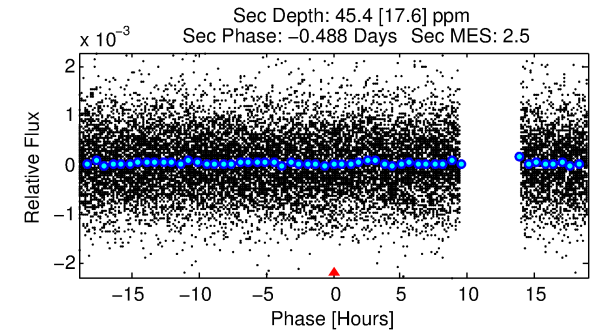
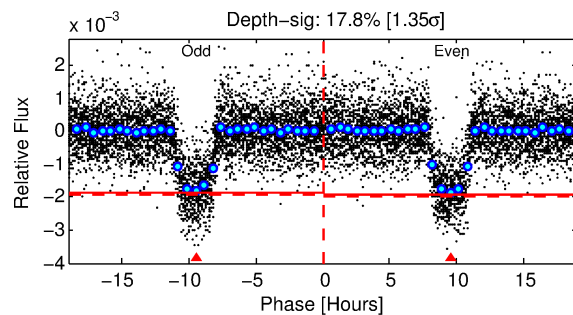
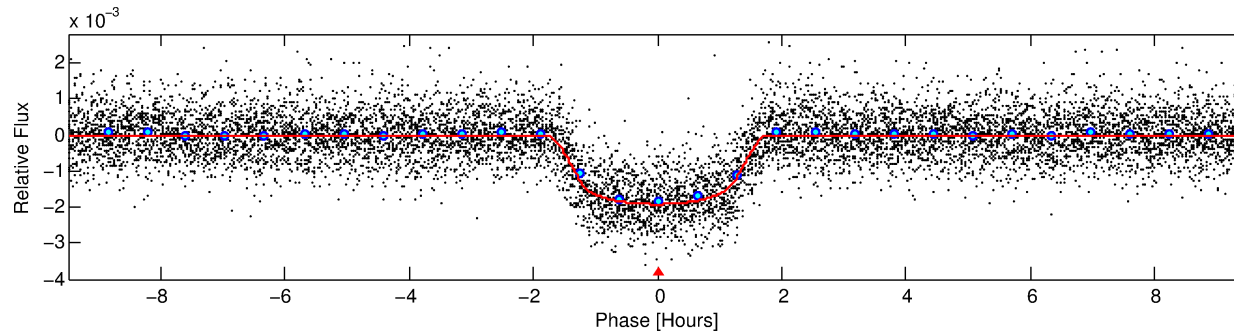
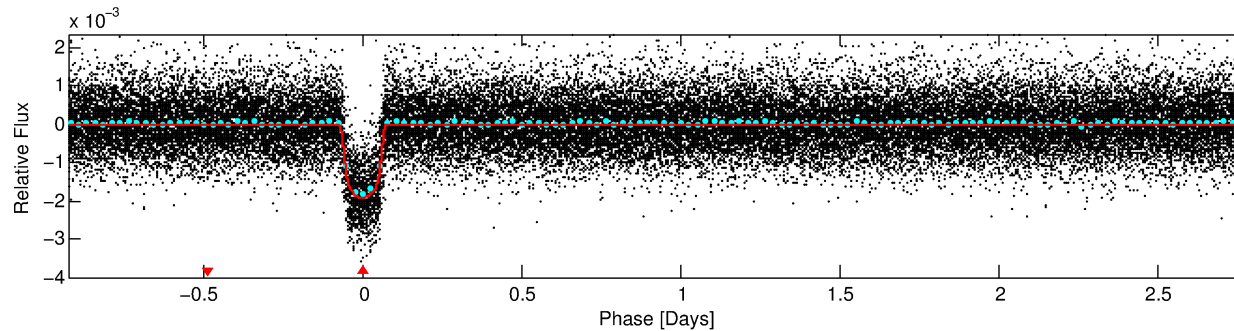
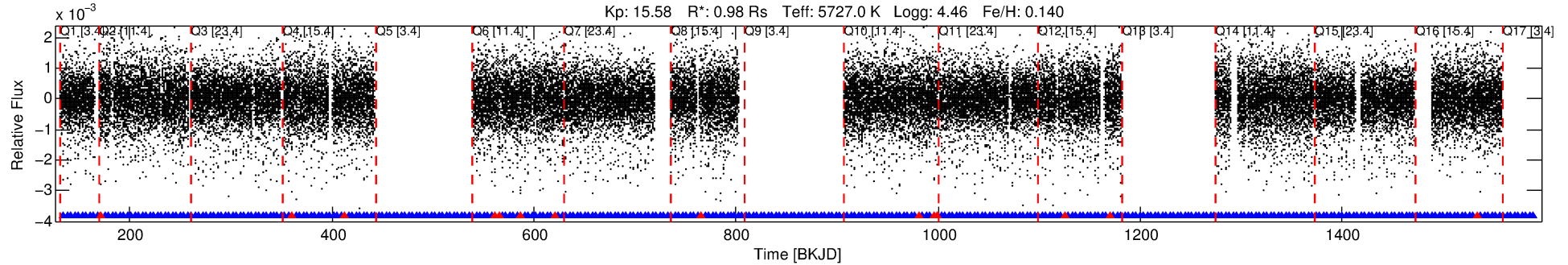
Ephemeris Match Information For 006022556-01

No Significant Match Found

DV One-Page Summary

KIC: 6022556 Candidate: 1 of 1 Period: 3.710 d
KOI: K00844.01 Corr: 0.990

Kp: 15.58 R*: 0.98 Rs Teff: 5727.0 K Logg: 4.46 Fe/H: 0.140



DV Fit Results:

Period = 3.70987 [0.00000] d
Epoch = 134.8897 [0.0005] BKJD
Rp/R* = 0.0434 [0.0026]
a/R* = 6.72 [1.65]
b = 0.73 [0.16]
Seff = 415.29 [90.38]
Teq = 1151 [63] K
Rp = 4.63 [0.75] Re
a = 0.0471 [0.0064] AU
Ag = 2.58 [1.18] [1.34σ]
Teffp = 2257 [232] K [4.60σ]

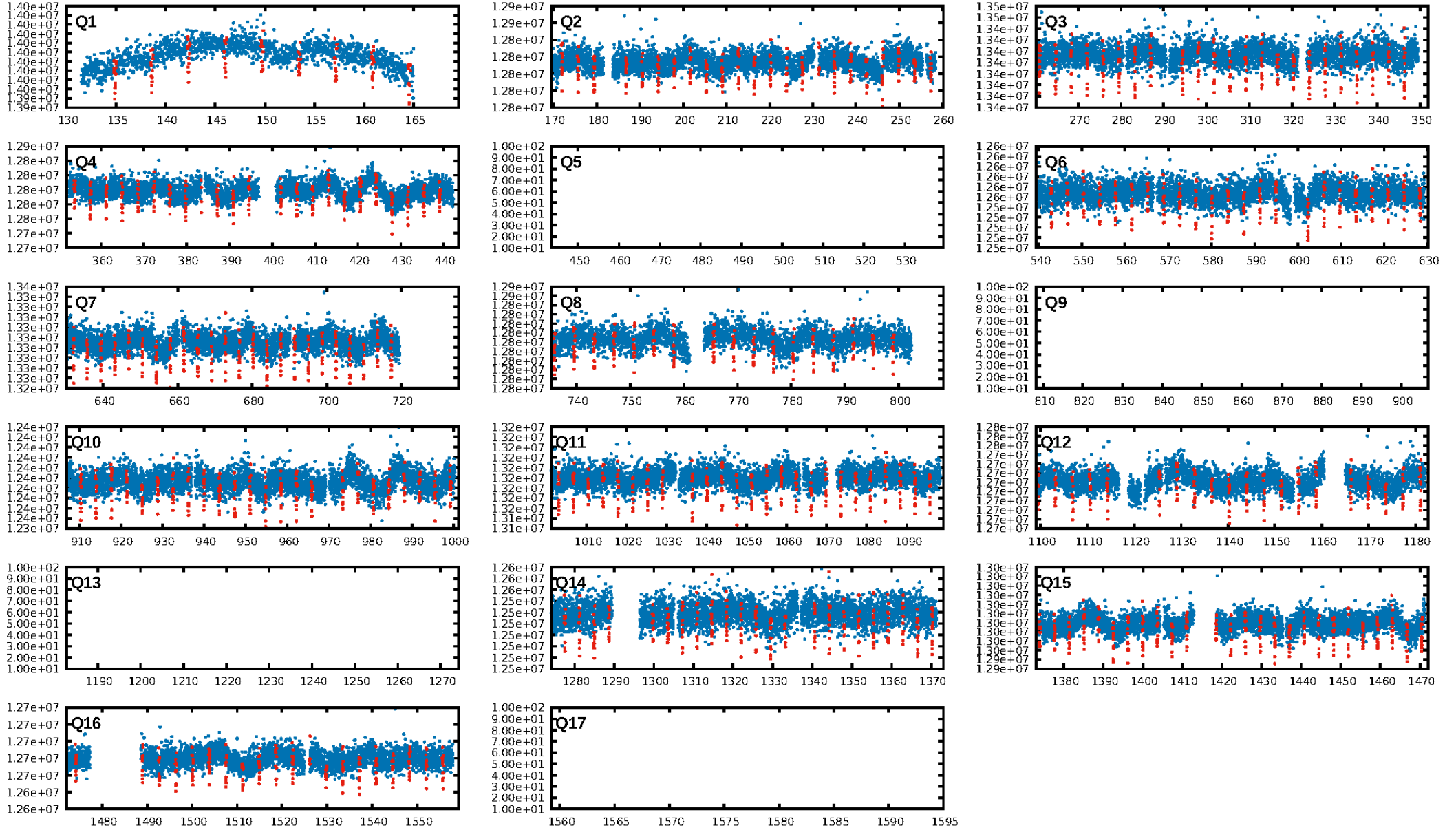
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.95 [256/270]
GhostDiagnostic-chr: 3.265
Centroid-sig: 41.6%
Centroid-so: 0.198 arcsec [1.38σ]
OotOffset-rm: 0.054 arcsec [0.72σ]
KicOffset-rm: 0.139 arcsec [1.87σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

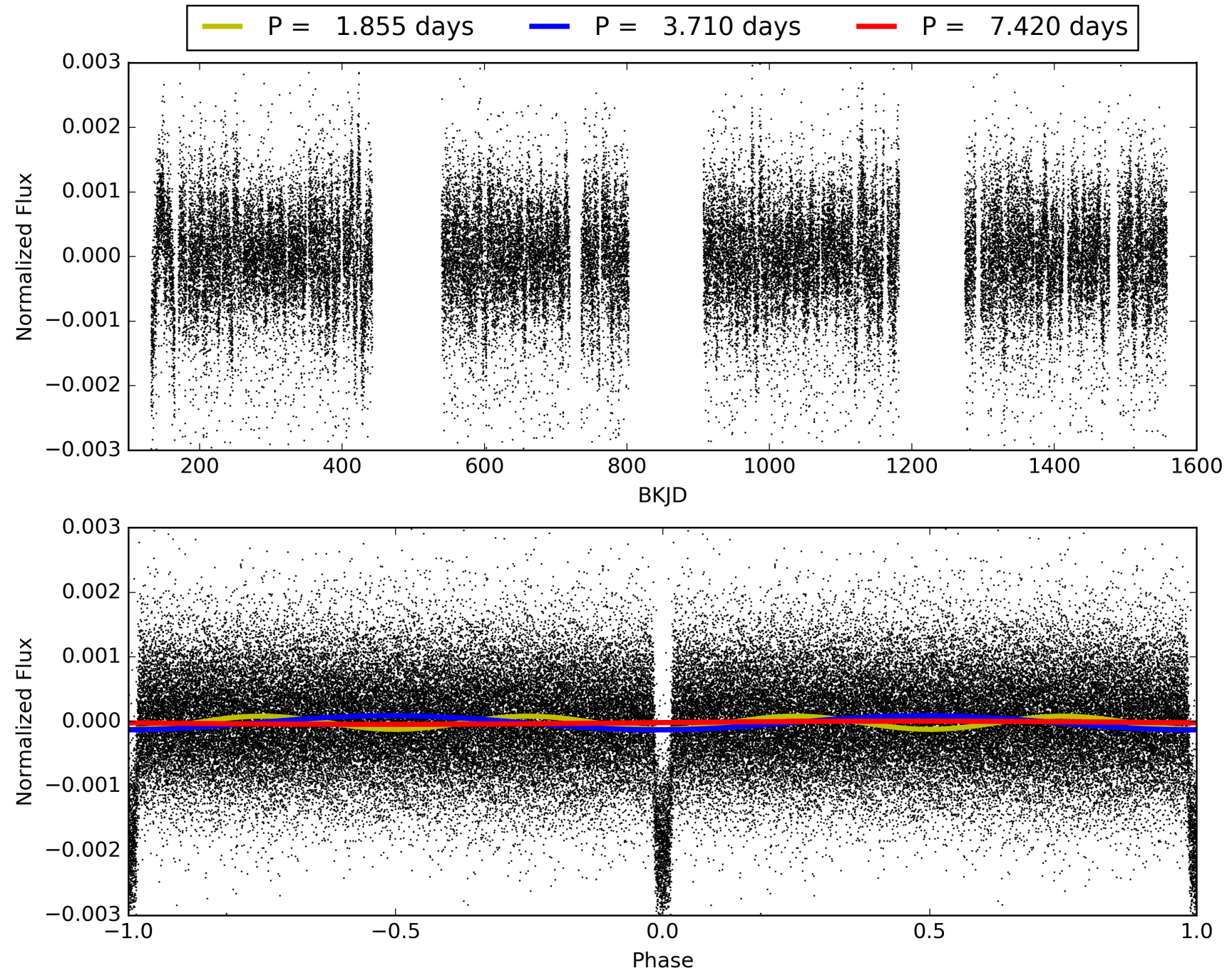
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:27:27 Z

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

TCE 006022556-01, PDC Light Curves

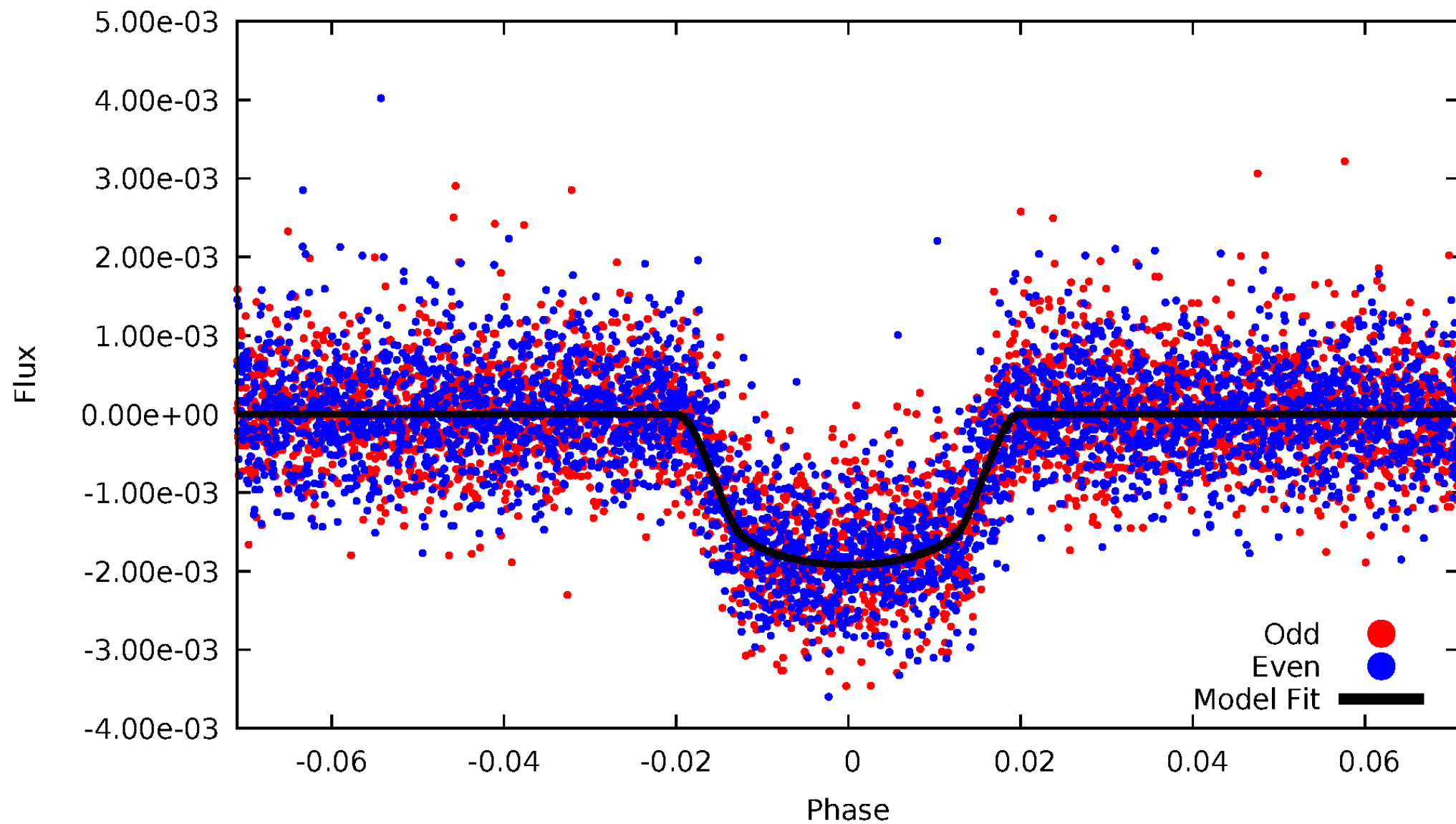


TCE 006022556-01



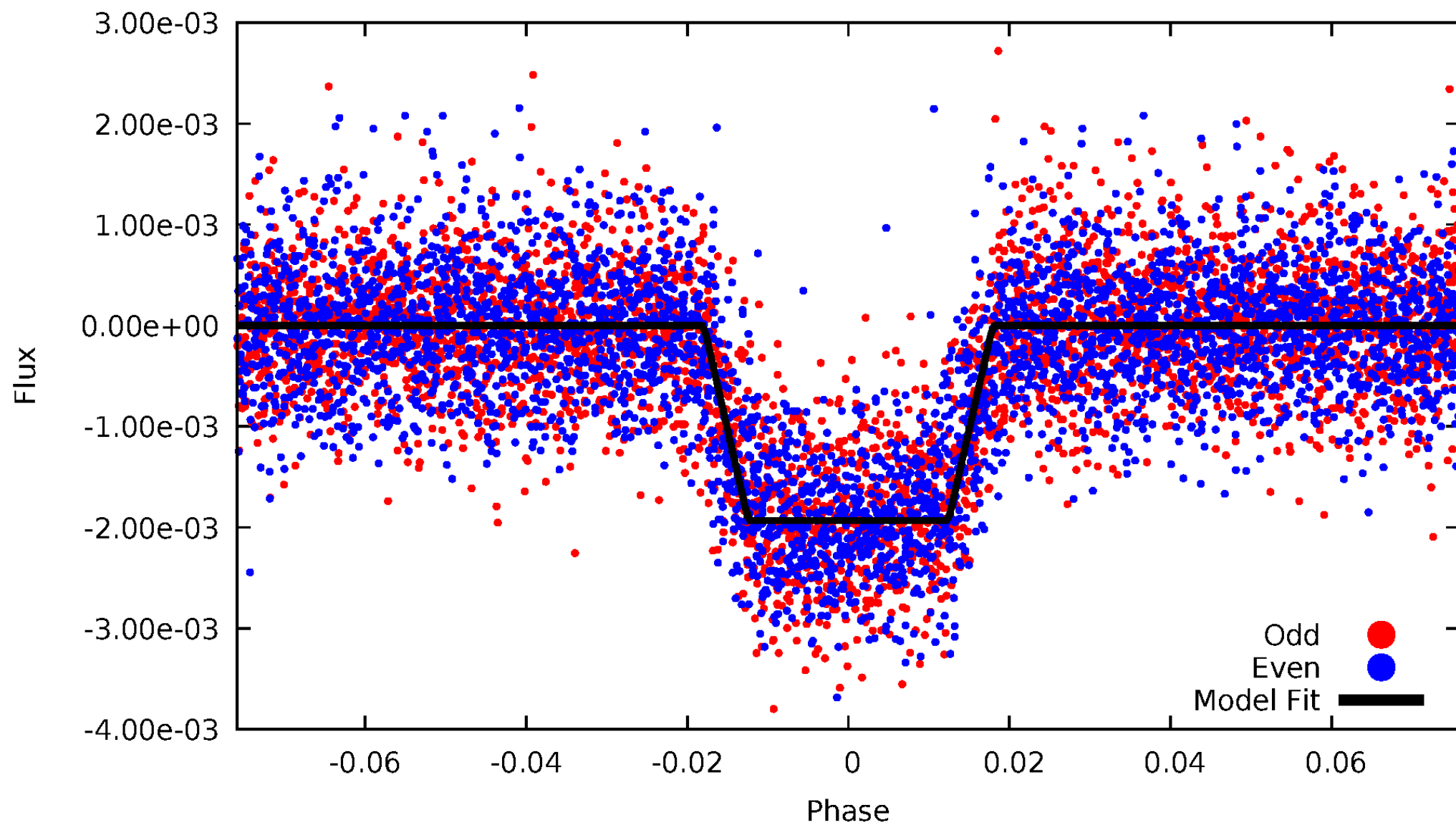
DV Odd/Even

TCE 006022556-01

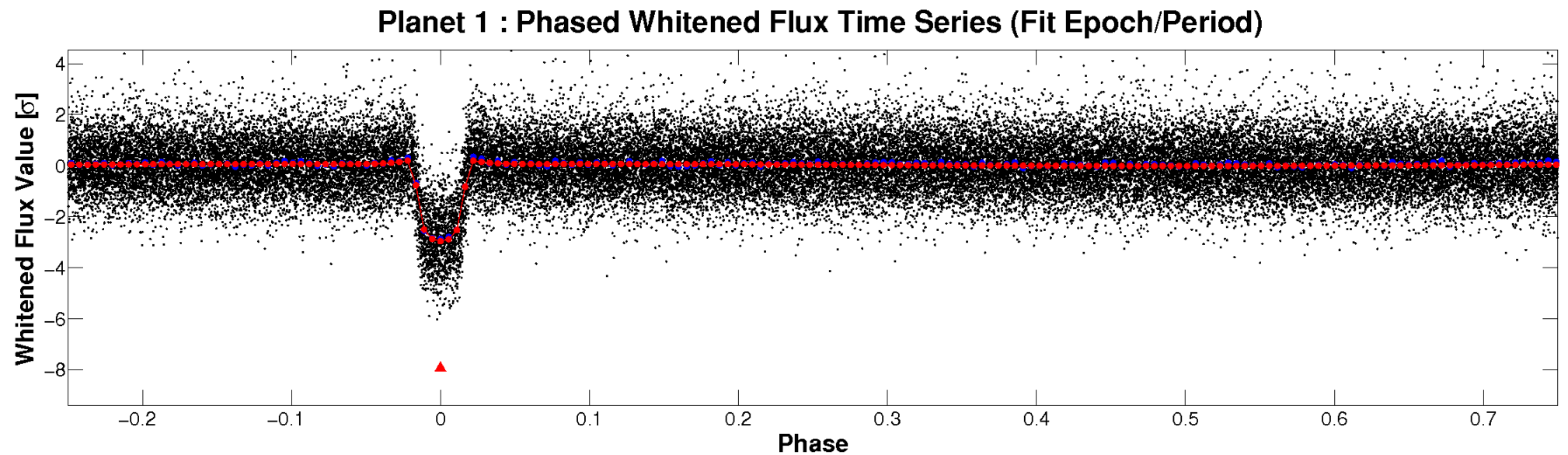
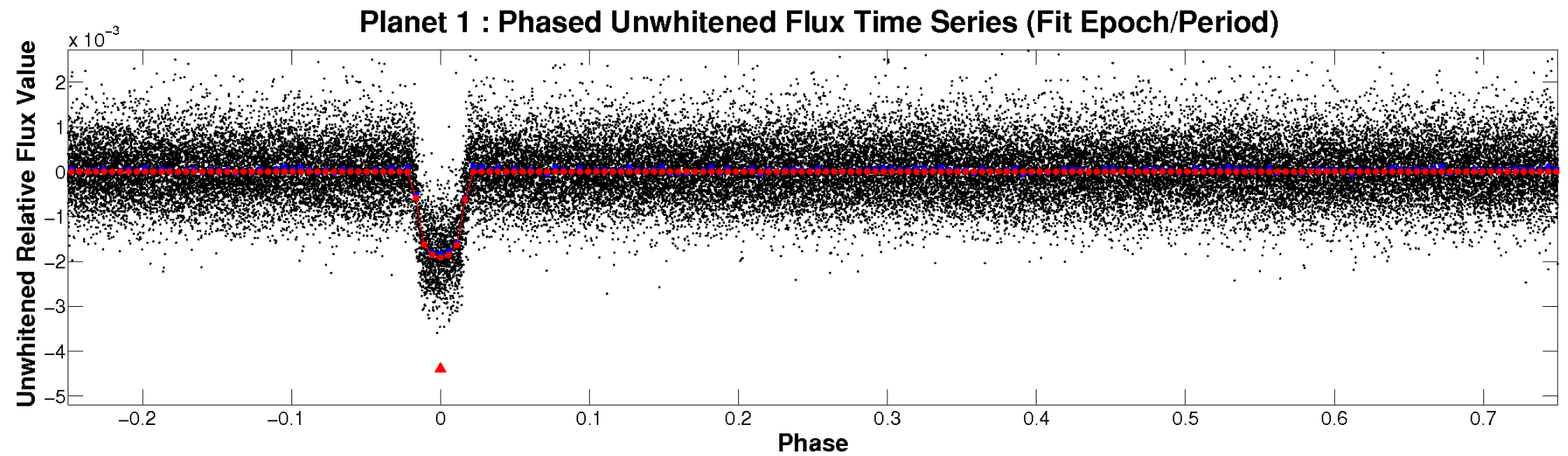


ALT Odd/Even

TCE 006022556-01

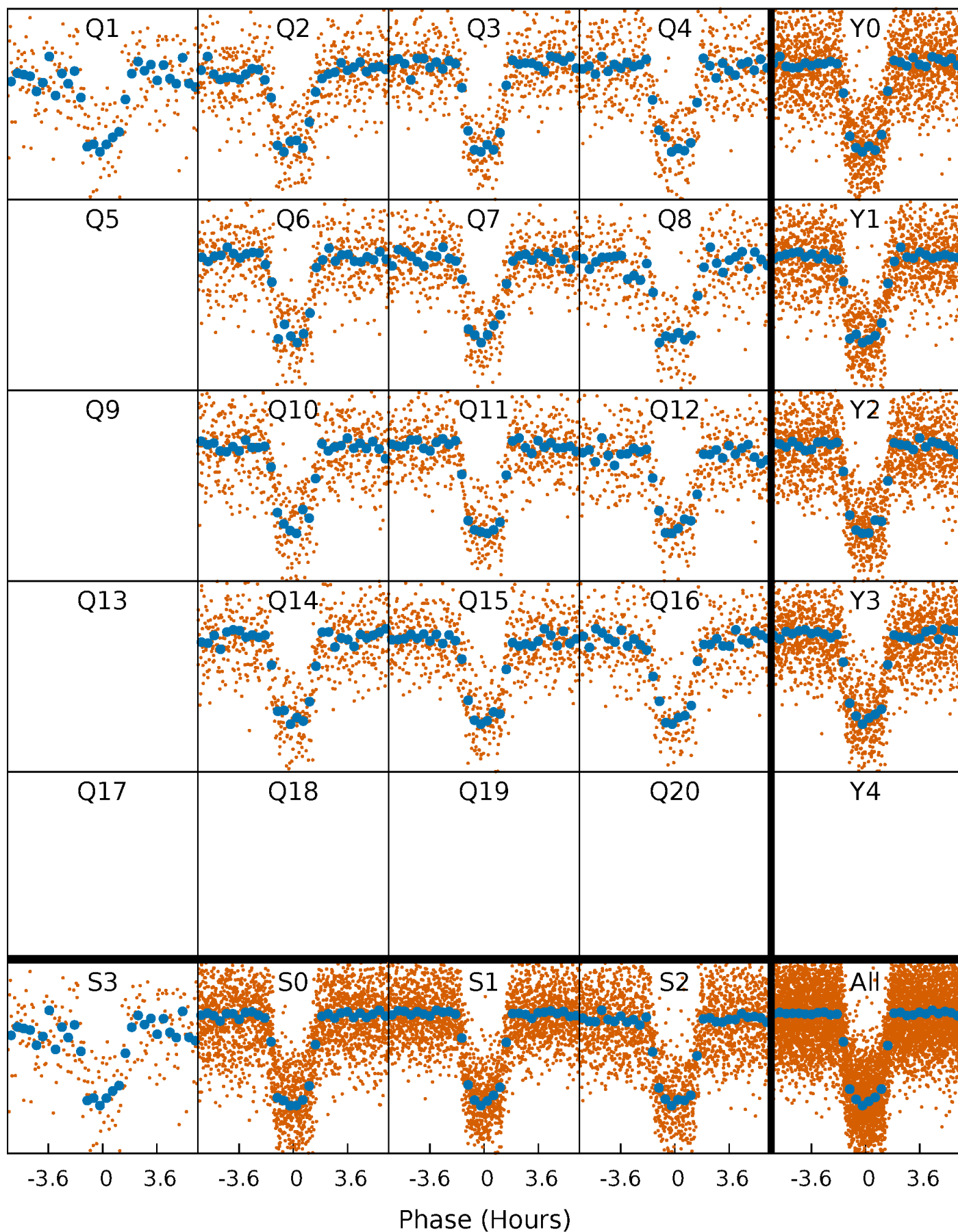


Non-Whitened Vs. Whitened Light Curve



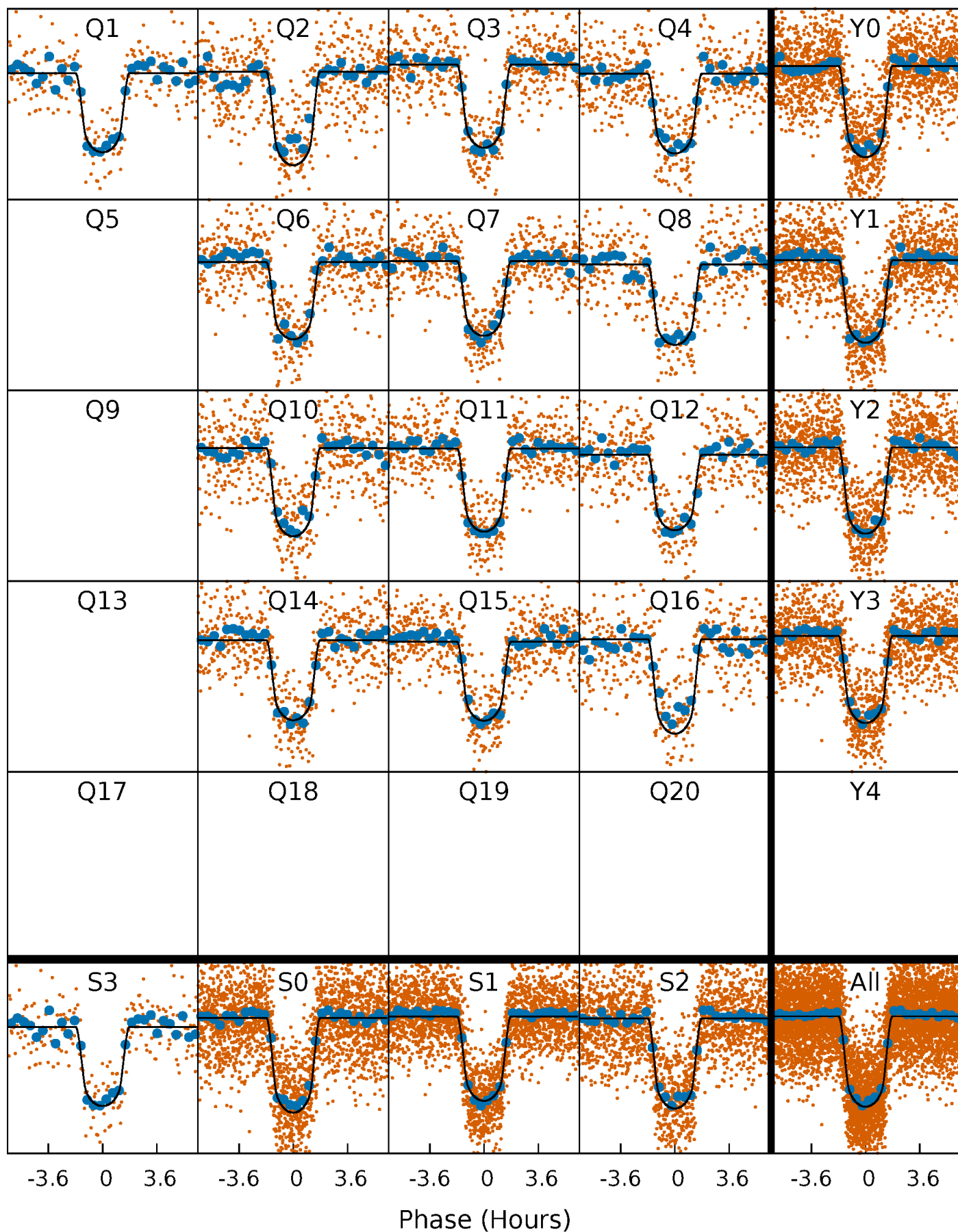
PDC Quarter-Phased Transit Curves

TCE 006022556-01 P= 3.709867 Days $T_0=134.889671$ (BKJD)



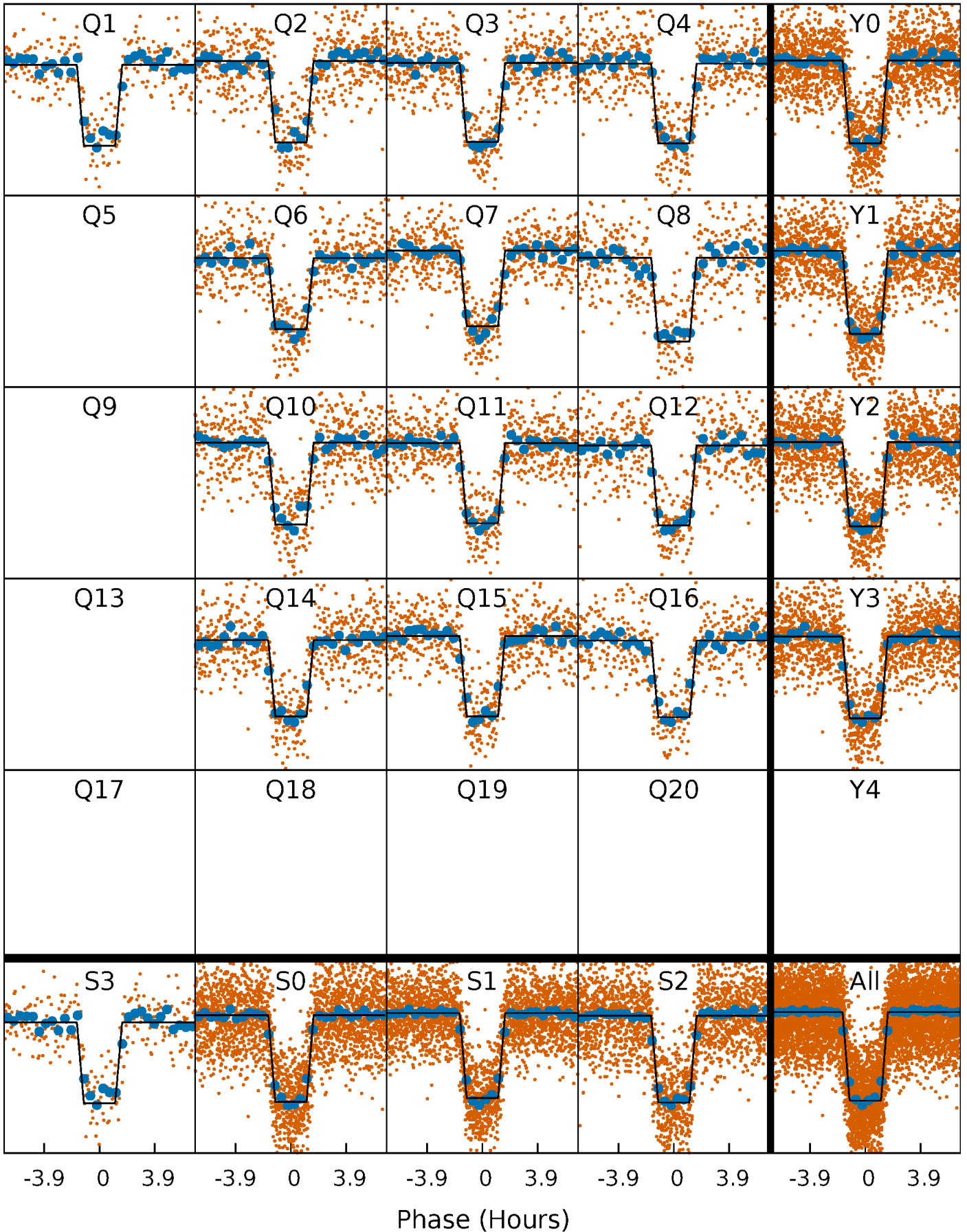
DV Quarter-Phased Transit Curves

TCE 006022556-01 P= 3.709867 Days $T_0=134.889671$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

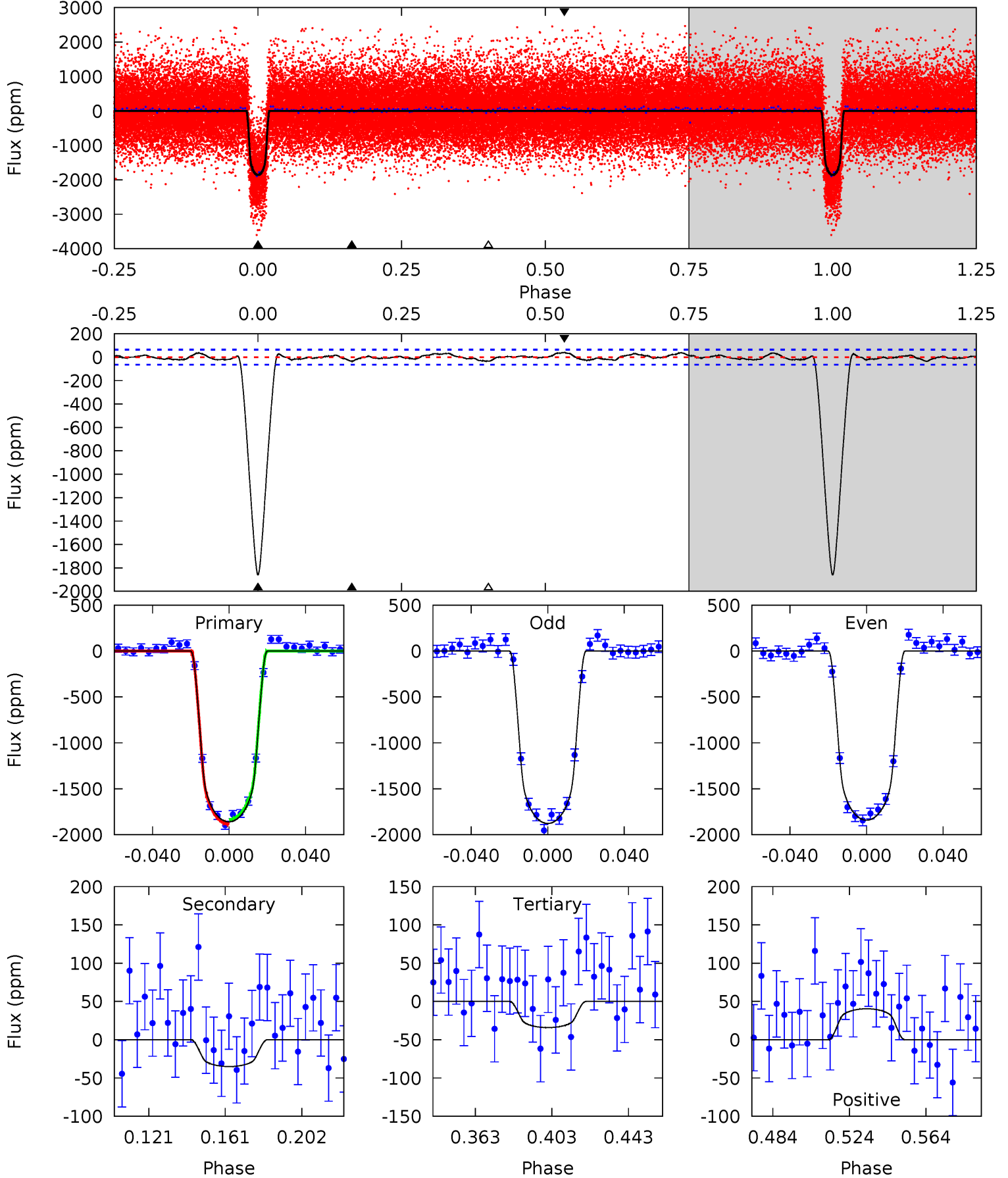
TCE 006022556-01 P= 3.709902 Days $T_0=134.883508$ (BKJD)



DV Model-Shift Uniqueness Test

006022556-01, P = 3.709867 Days, E = 131.179804 Days

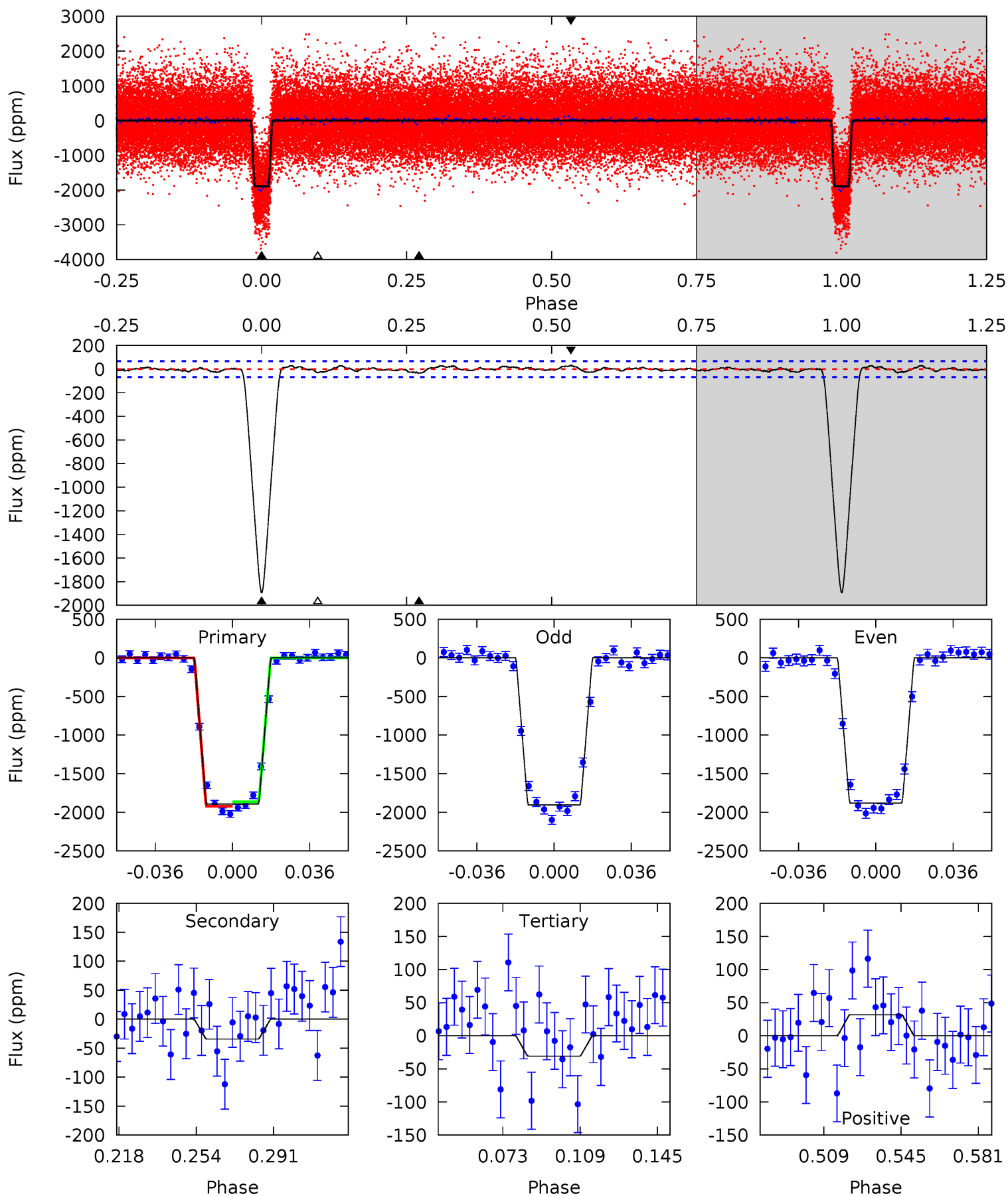
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
137.1	2.58	2.52	2.98	4.75	2.05	1.25	134.6	134.1	0.06	-0.40	1.32	1.00	0.02	1.72



Alt Model-Shift Uniqueness Test

006022556-01, P = 3.709902 Days, E = 131.173606 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
134.1	2.42	2.18	2.26	4.77	2.09	0.88	132.0	131.9	0.24	0.17	0.94	0.99	0.02	2.01



Stellar Parameters For KIC 006022556

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5727^{+77}_{-85}	$4.463^{+0.040}_{-0.120}$	$0.140^{+0.150}_{-0.150}$	$0.978^{+0.146}_{-0.062}$	$1.013^{+0.056}_{-0.062}$	$1.526^{+0.284}_{-0.500}$
	+1%/-1%	+1%/-3%	+107%/-107%	+15%/-6%	+6%/-6%	+19%/-33%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 006022556-01 / KOI 0844.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-35 ± 14	$4.72^{+0.44}_{-0.34}$	1624^{+60}_{-43}	2775^{+153}_{-249}	$1.876^{+0.842}_{-0.795}$
Alt.	-34 ± 14	$4.78^{+0.46}_{-0.37}$	1624^{+56}_{-42}	2753^{+165}_{-258}	$1.790^{+0.863}_{-0.793}$

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

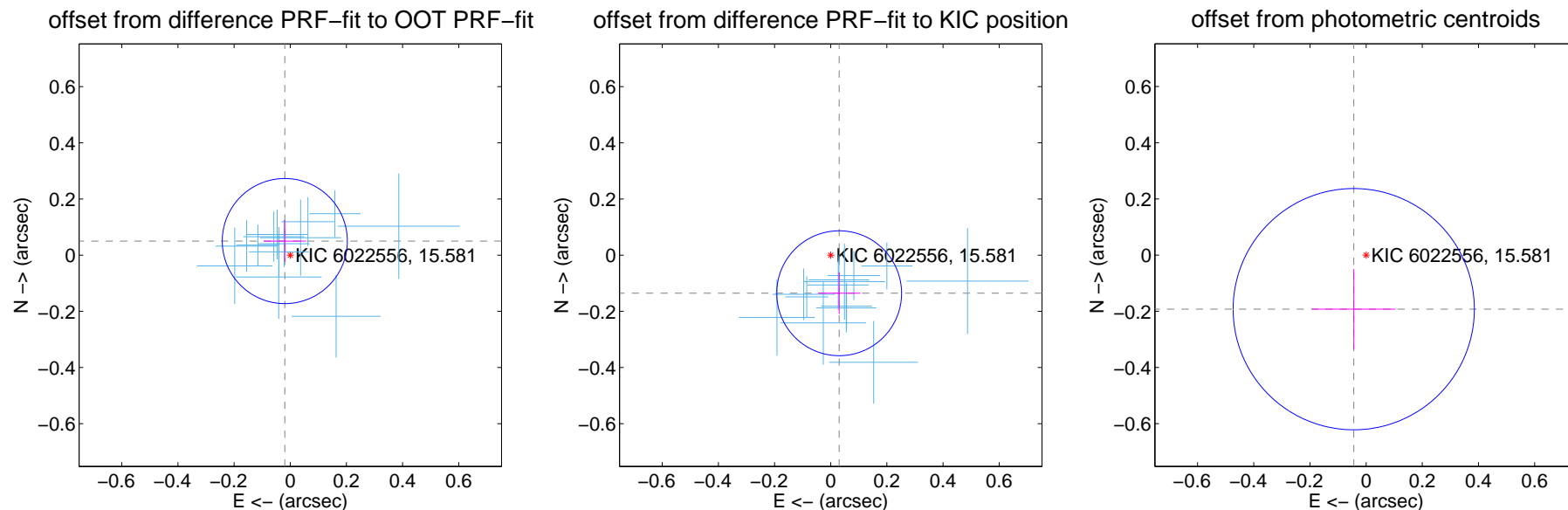
DV Centroid Data

Supplemental centroid analysis for 006022556-01. Kepler magnitude: 15.58. Transit SNR 101.76

There are 13 quarters with good PRF difference image offsets

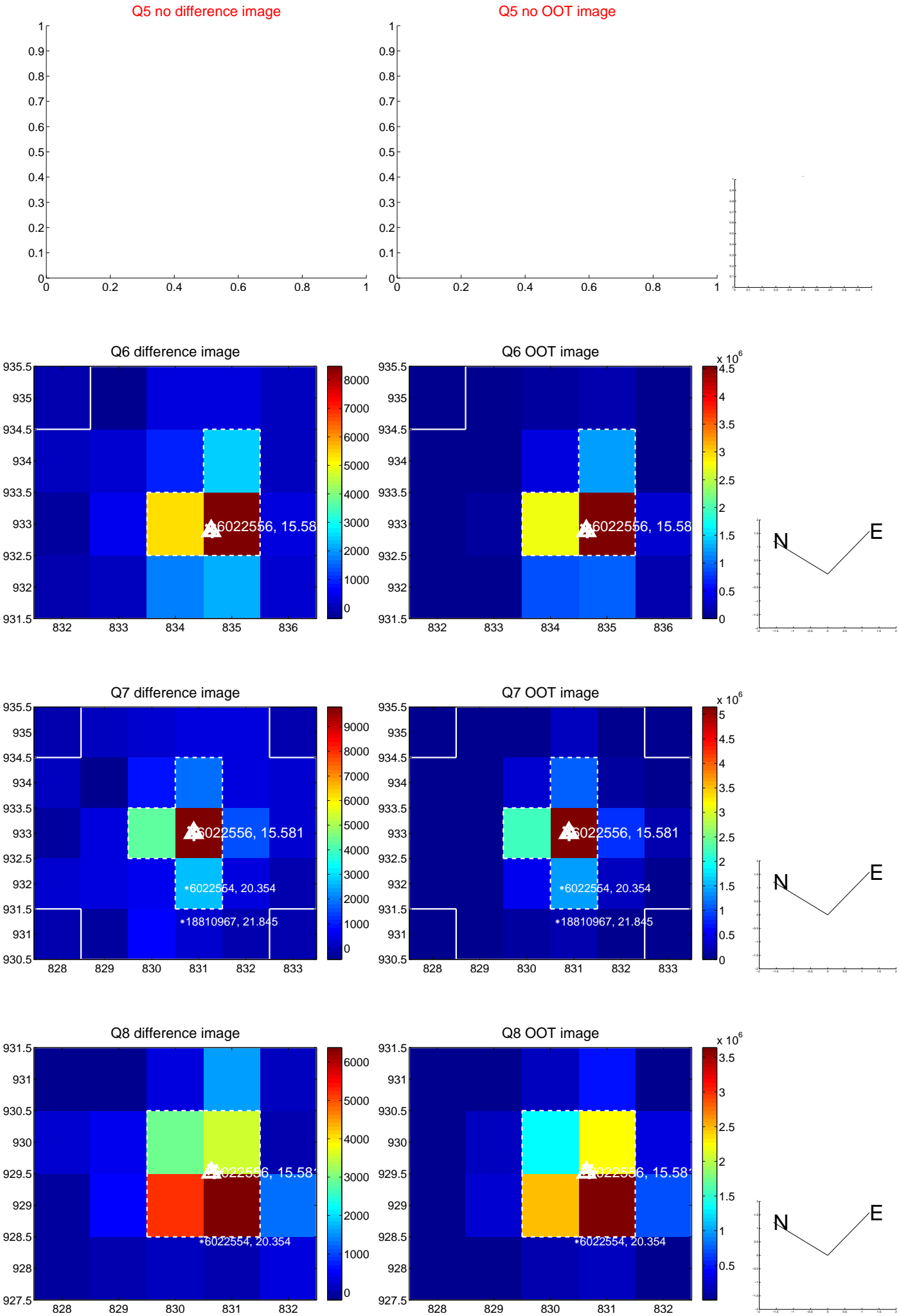
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.054 ± 0.074	0.72	0.019 ± 0.076	0.050 ± 0.074
PRF-fit source offset from KIC position	0.139 ± 0.074	1.87	-0.030 ± 0.076	-0.136 ± 0.074
photometric centroid source offset	0.20 ± 0.14	1.38	0.04 ± 0.15	-0.19 ± 0.14

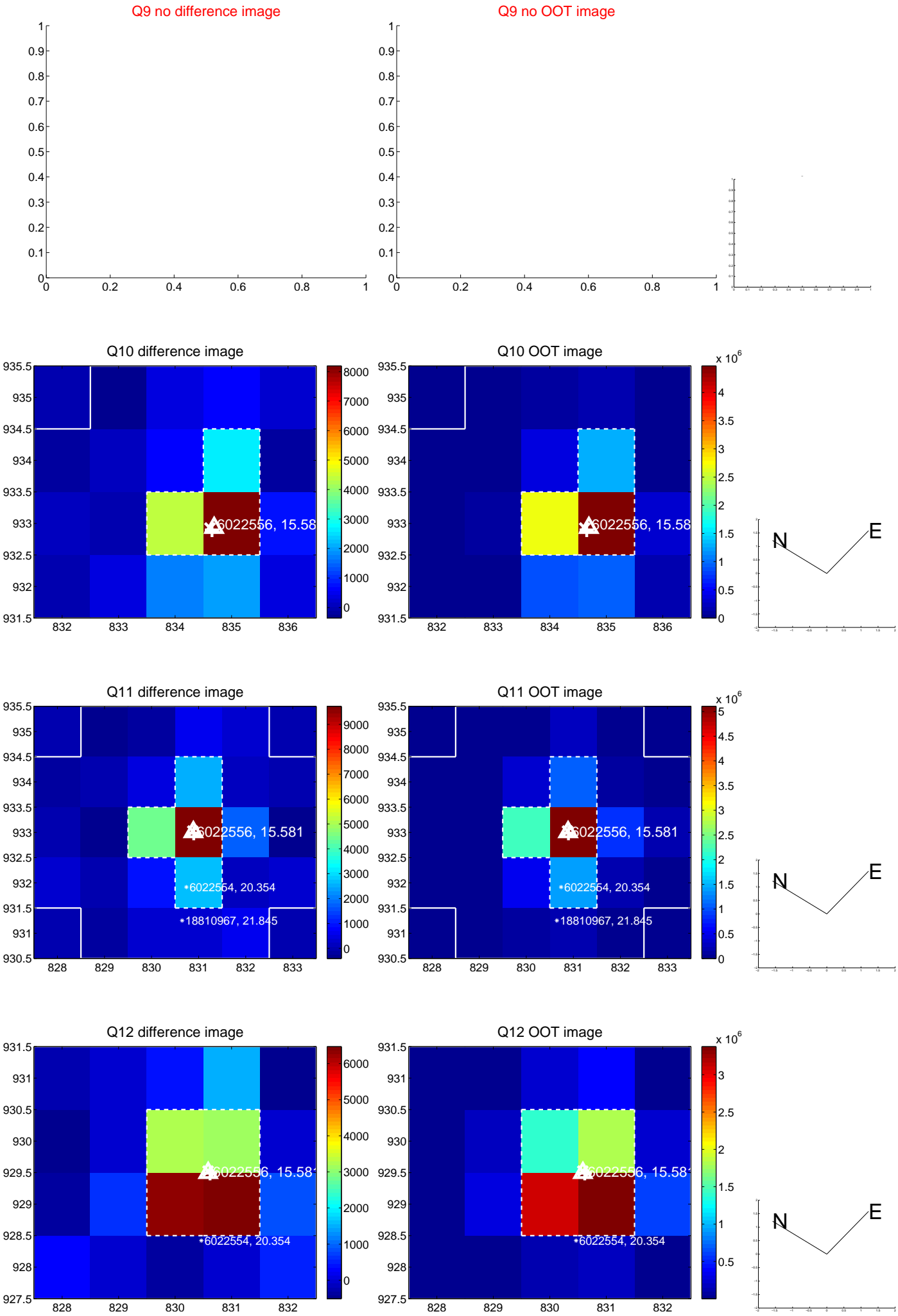


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

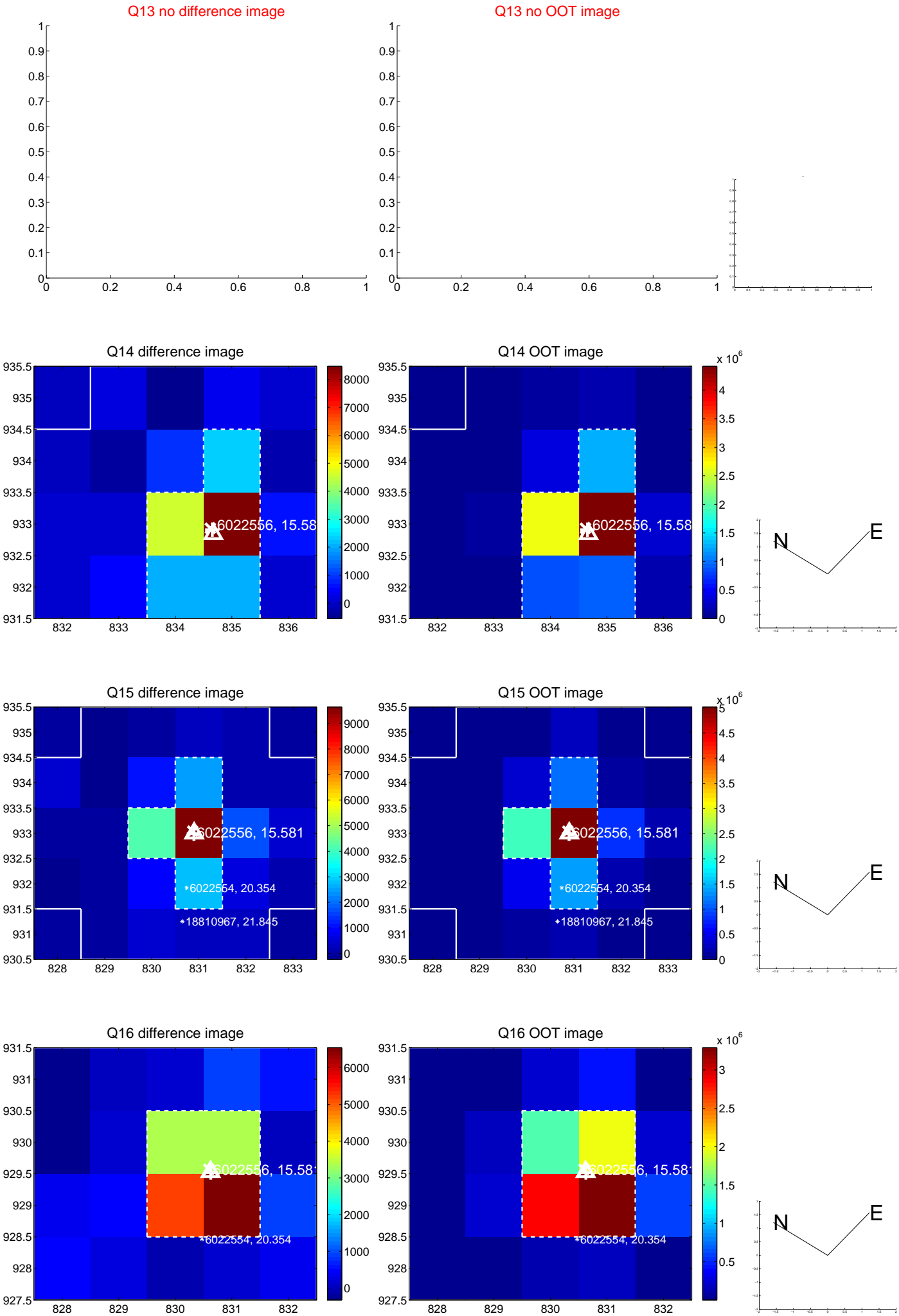
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



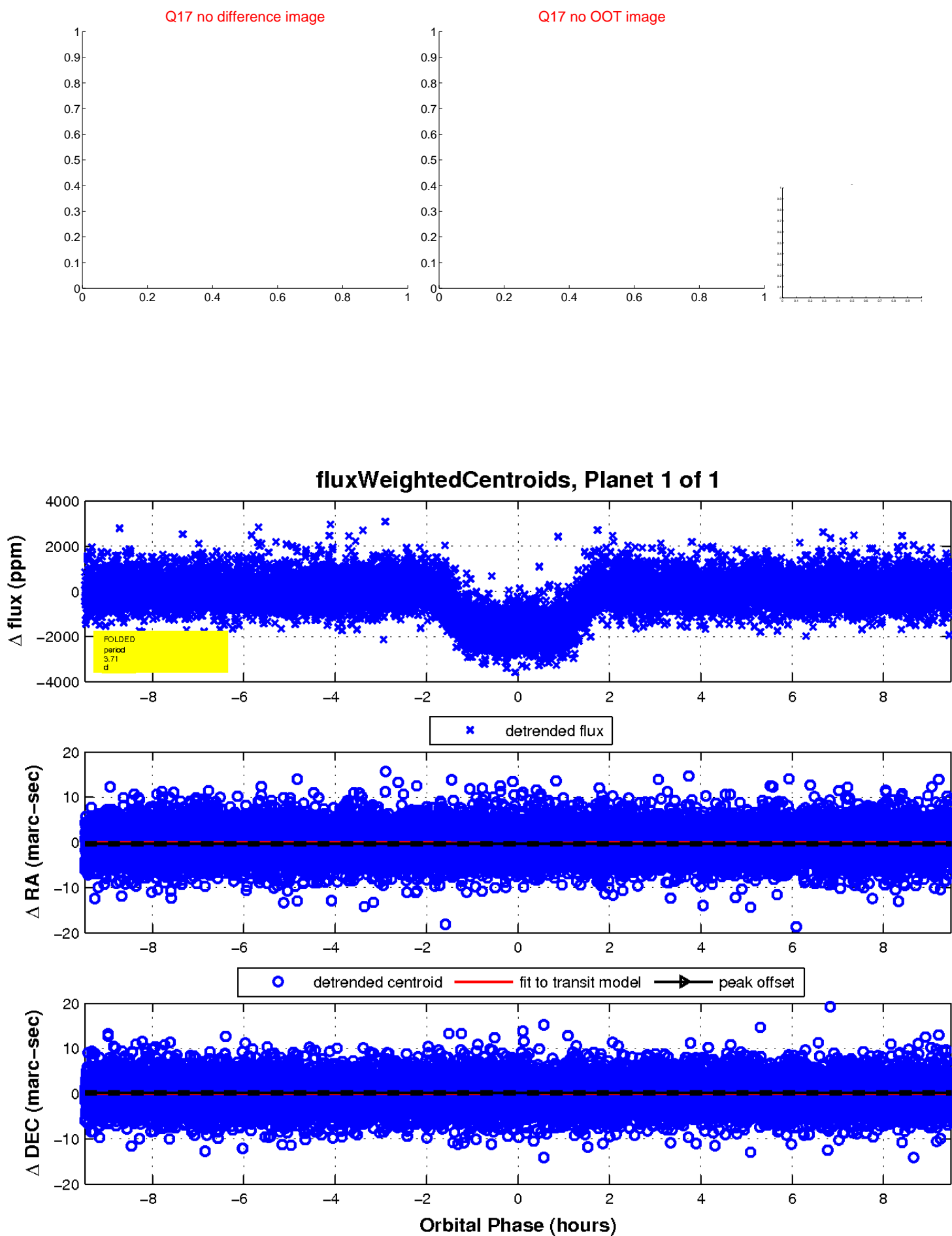
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

