

KIC 012352655

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})
012352655-01	OBS	No	292.690212	185.704525	151.9	3.211	7.2	7.4	1.61	6261	2.33	4.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012352655-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

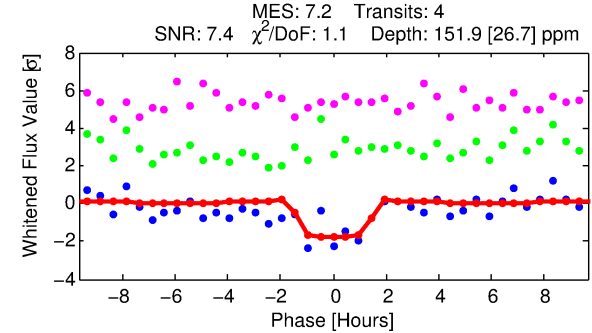
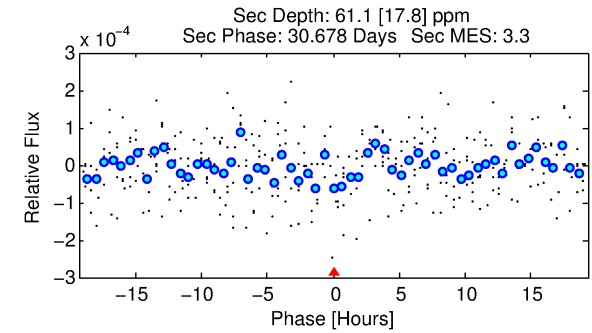
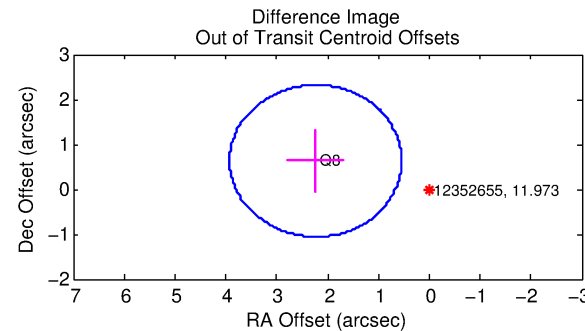
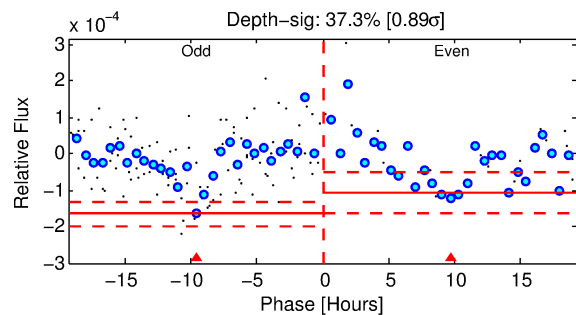
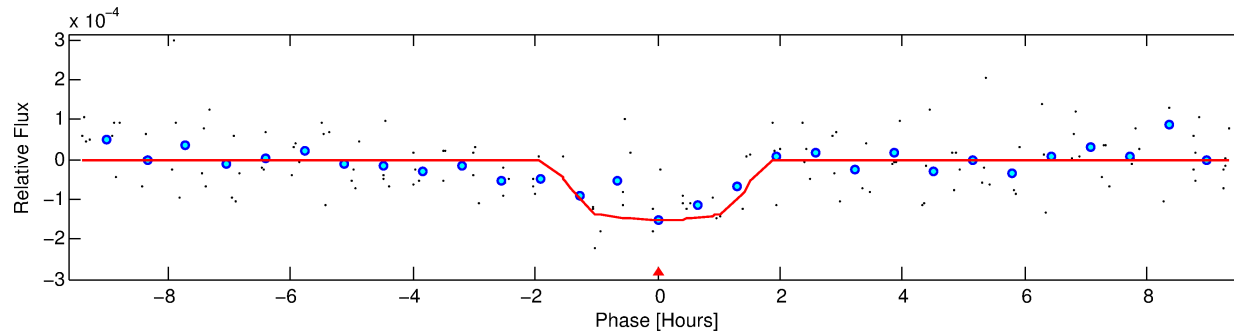
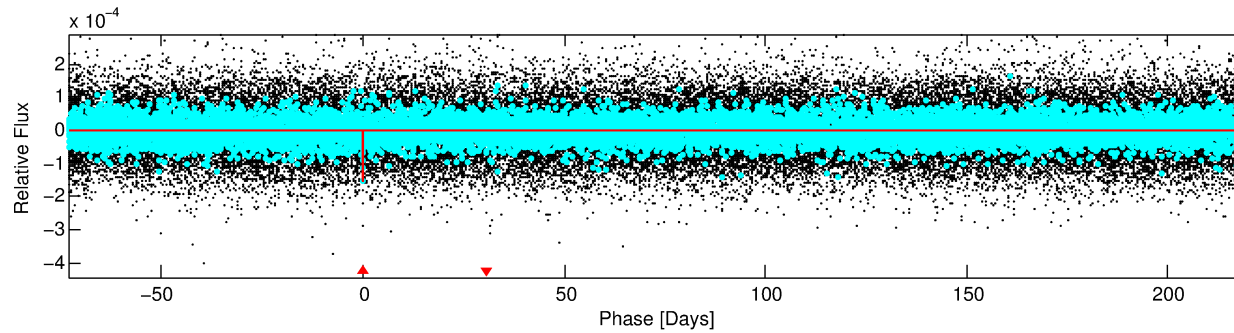
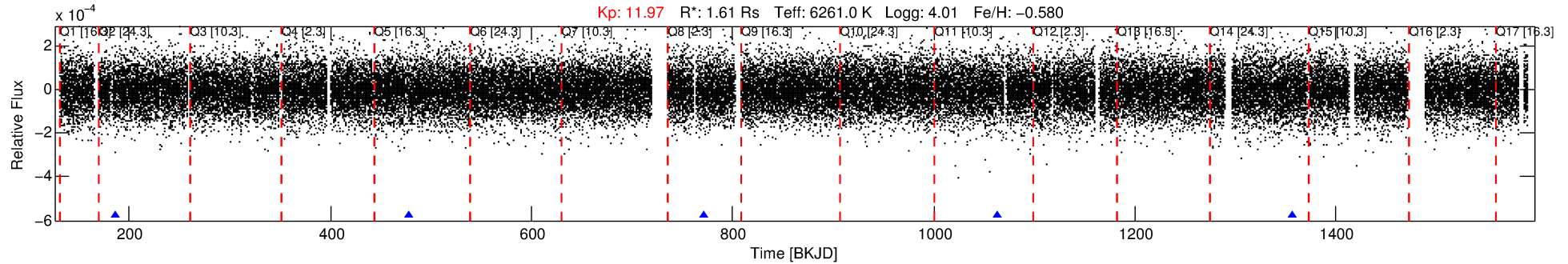
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012352655-01

No Significant Match Found

DV One-Page Summary

KIC: 12352655 Candidate: 1 of 1 Period: 292.690 d



DV Fit Results:

Period = 292.69021 [0.00380] d
Epoch = 185.7045 [0.0076] BKJD
Rp/R* = 0.0133 [0.0251]
a/R* = 318.02 [3479.11]
b = 0.90 [2.23]
Seff = 4.86 [2.40]
Teq = 379 [47] K
Rp = 2.33 [4.45] Re
a = 0.8560 [0.2501] AU
Ag = 4552.18 [17404.95] [0.26σ]
Teffp = 4808 [4561] K [0.97σ]

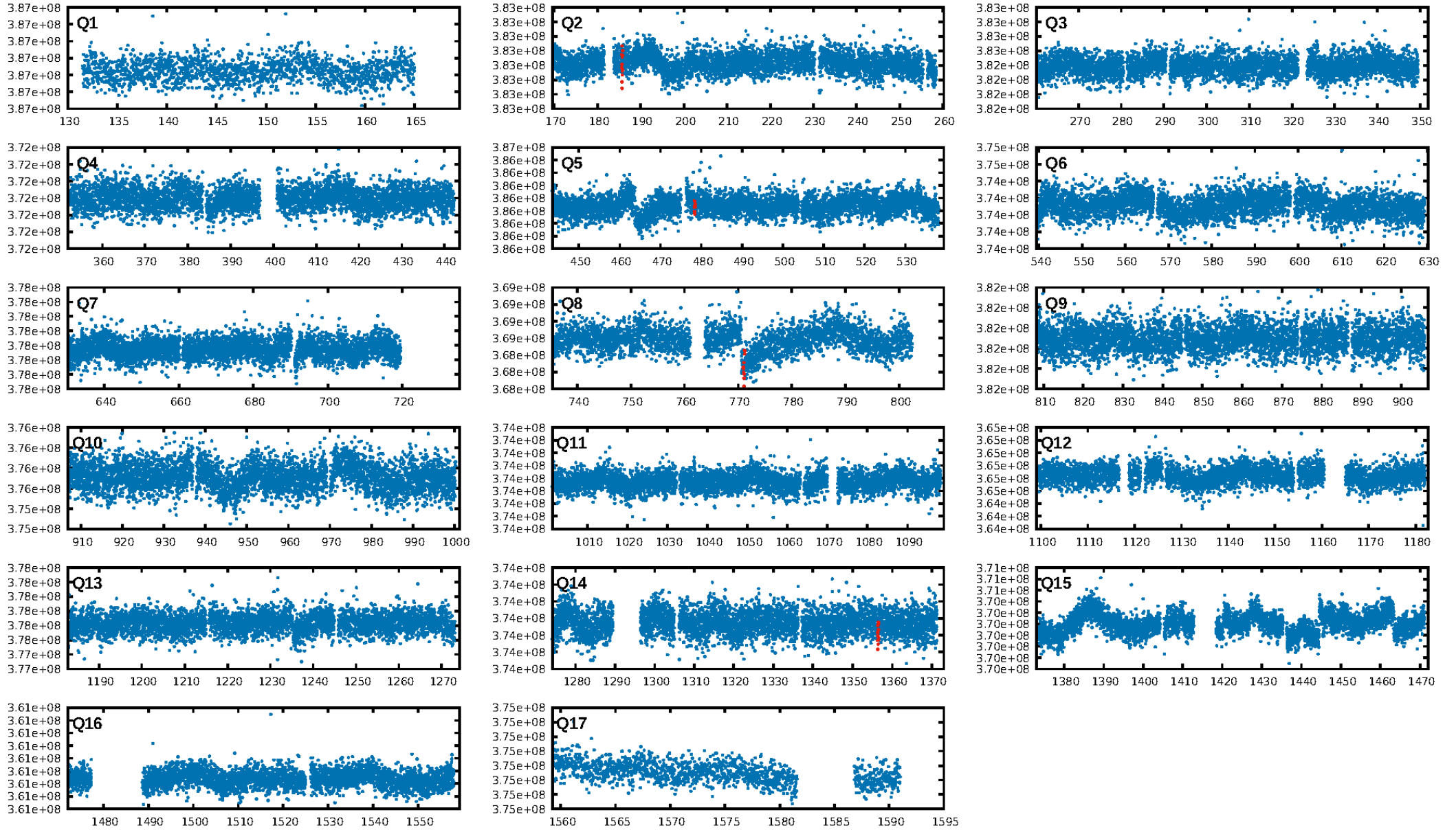
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 27.2%
ModelChiSquareGof-sig: 96.4%
Bootstrap-pfa: 1.54e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -4.399
Centroid-sig: 50.4%
Centroid-so: 1.975 arcsec [1.03σ]
OotOffset-rm: 2.318 arcsec [4.11σ]
KicOffset-rm: 2.399 arcsec [4.25σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [4/4]

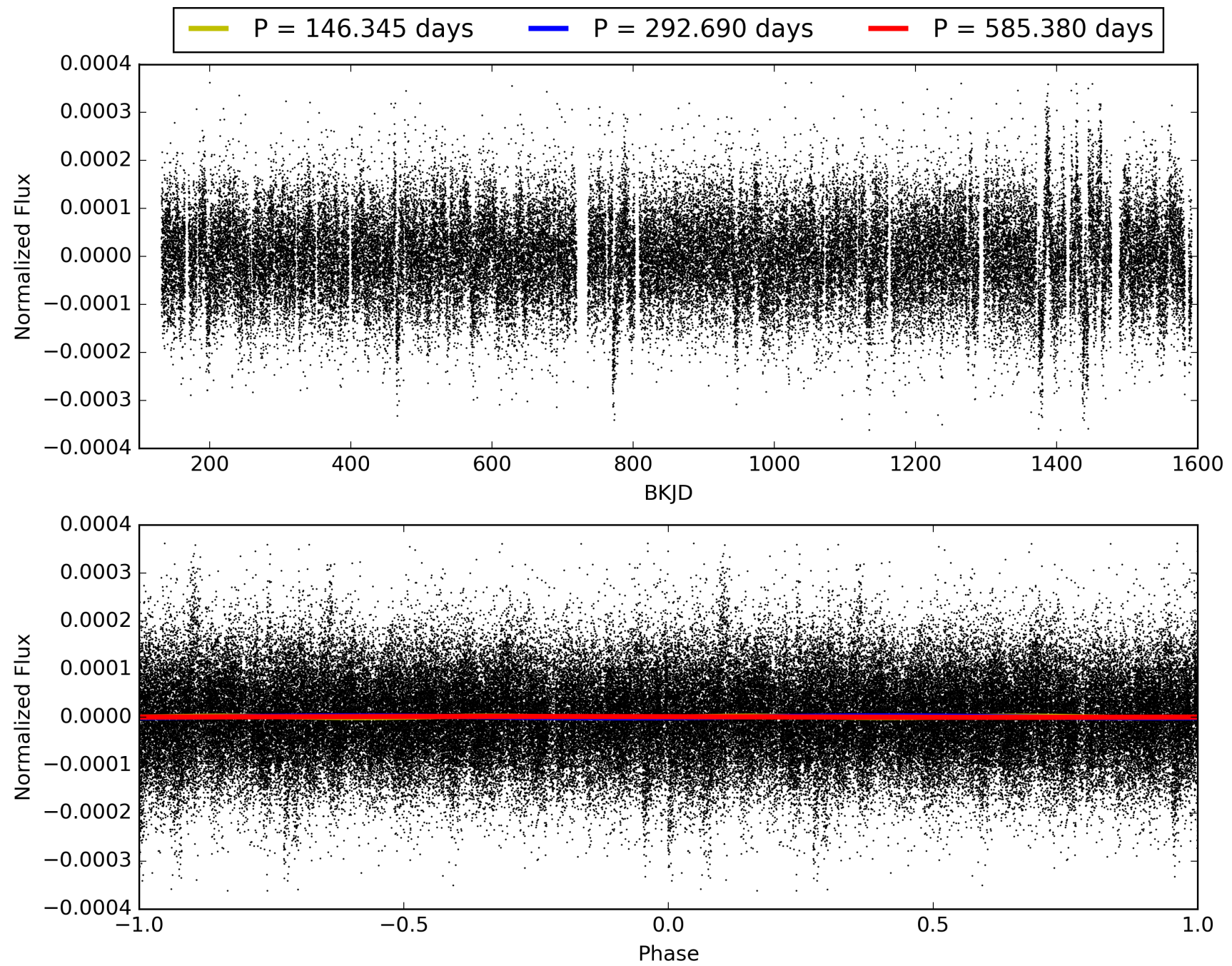
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:20:00 Z

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

TCE 012352655-01, PDC Light Curves

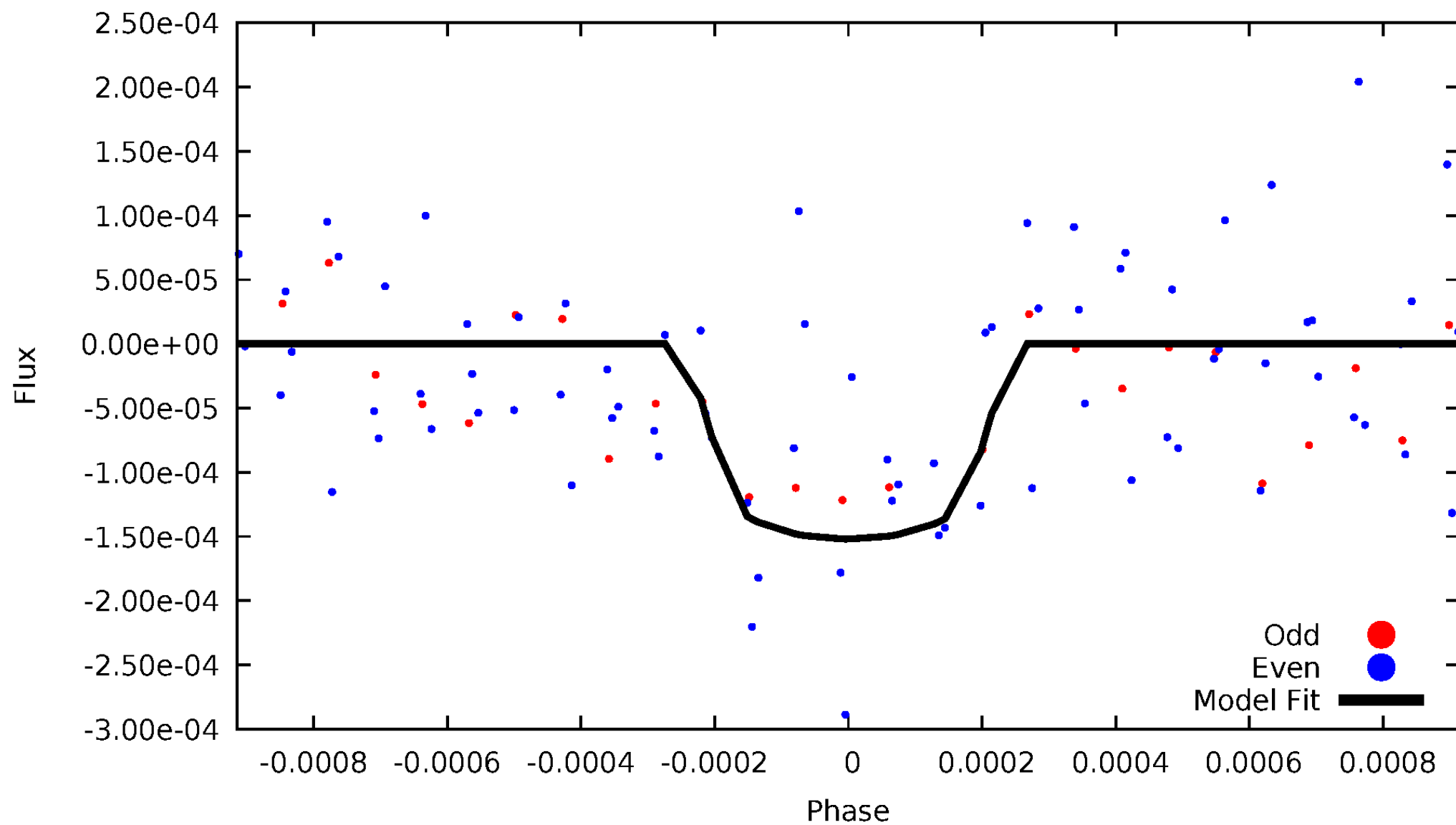


TCE 012352655-01



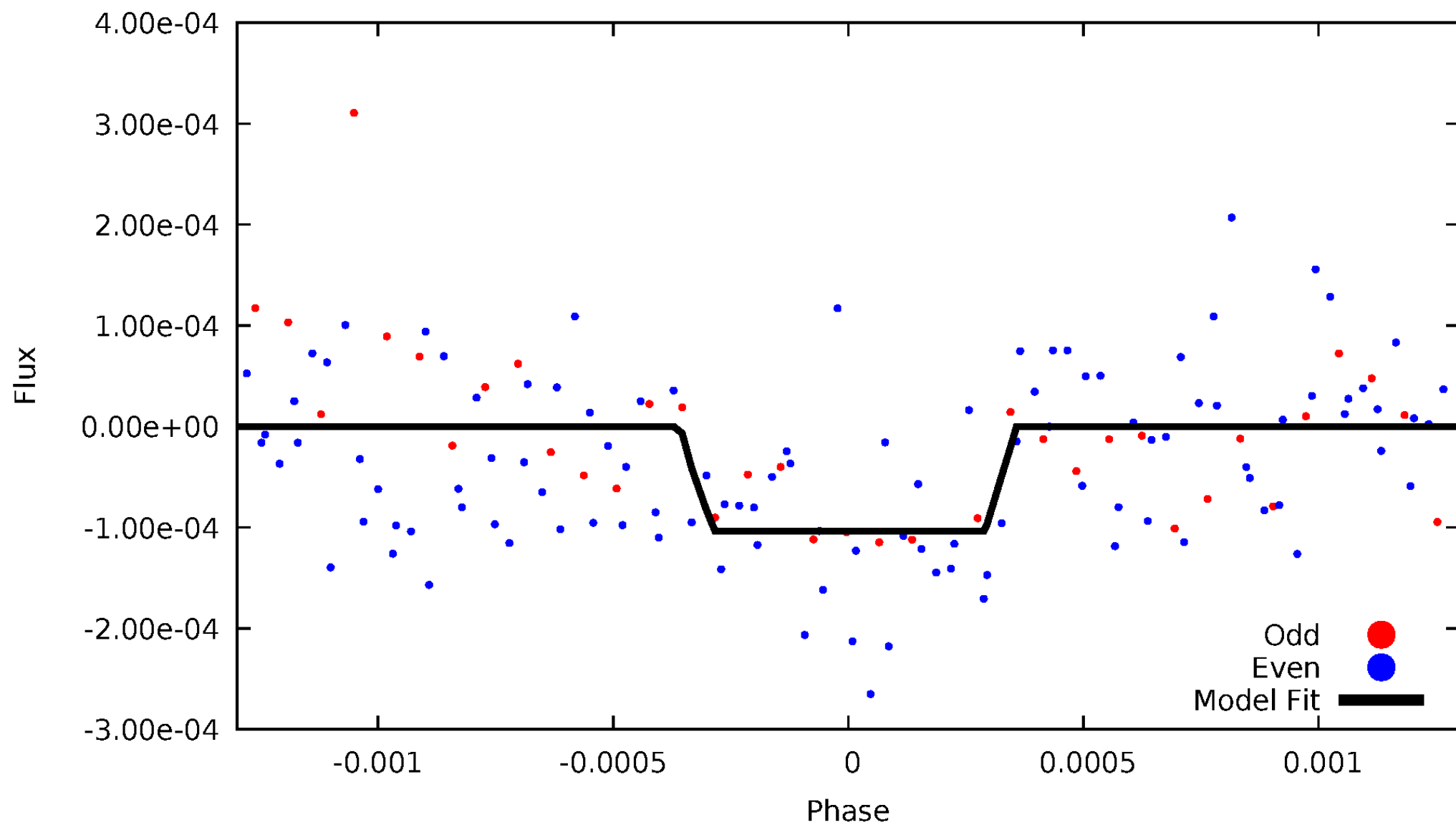
DV Odd/Even

TCE 012352655-01



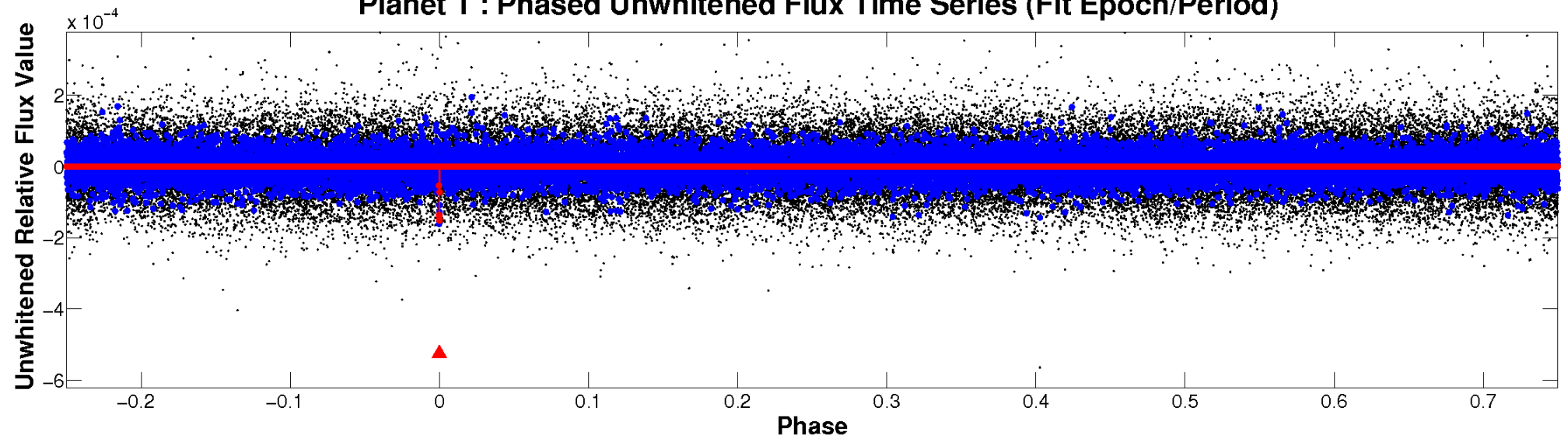
ALT Odd/Even

TCE 012352655-01

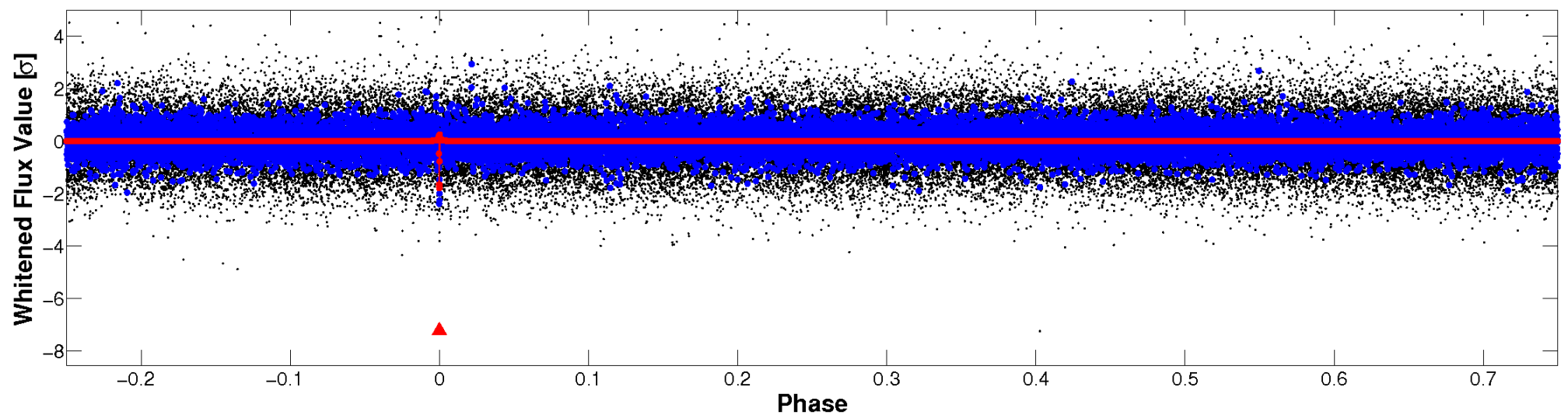


Non-Whitened Vs. Whitened Light Curve

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

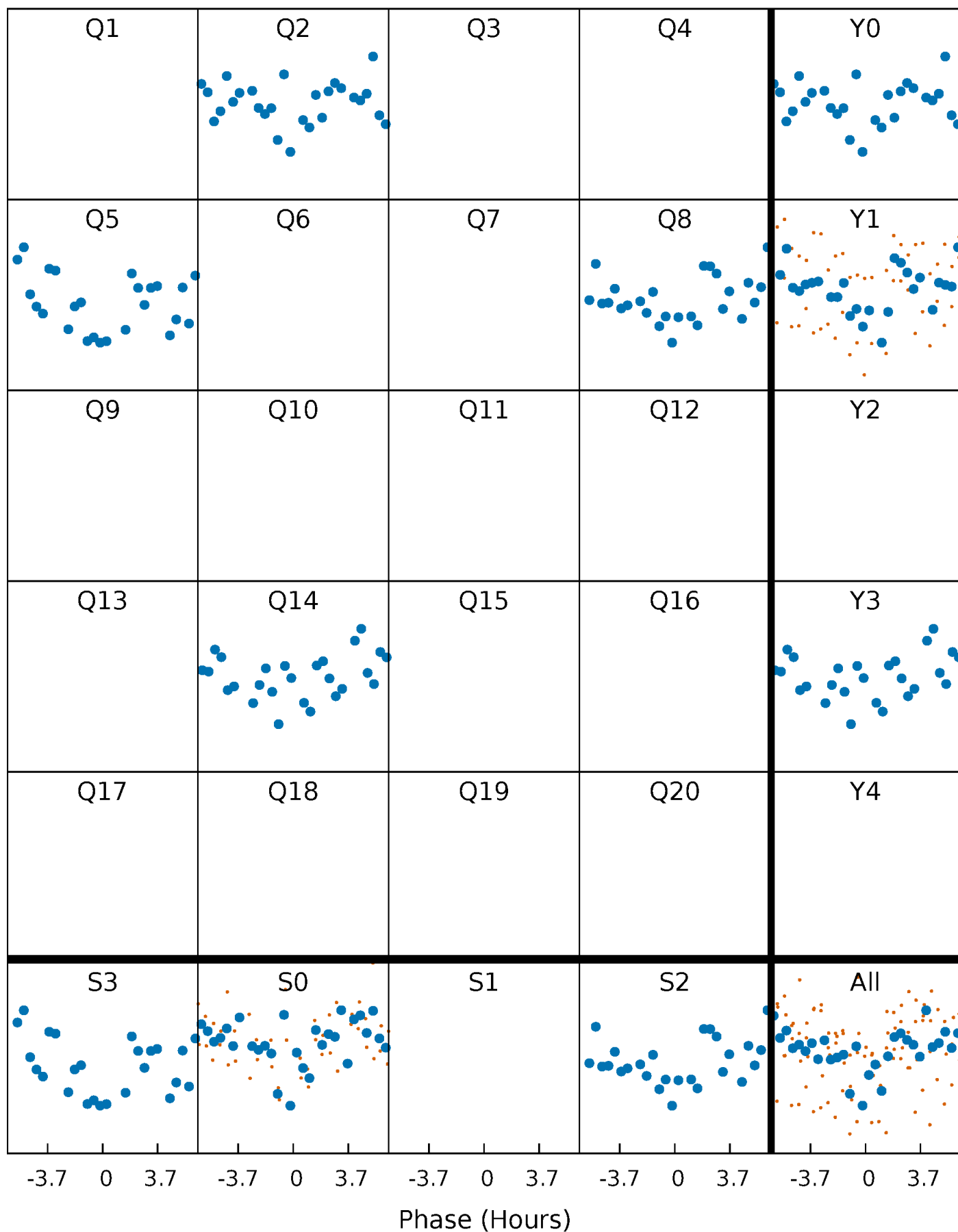


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



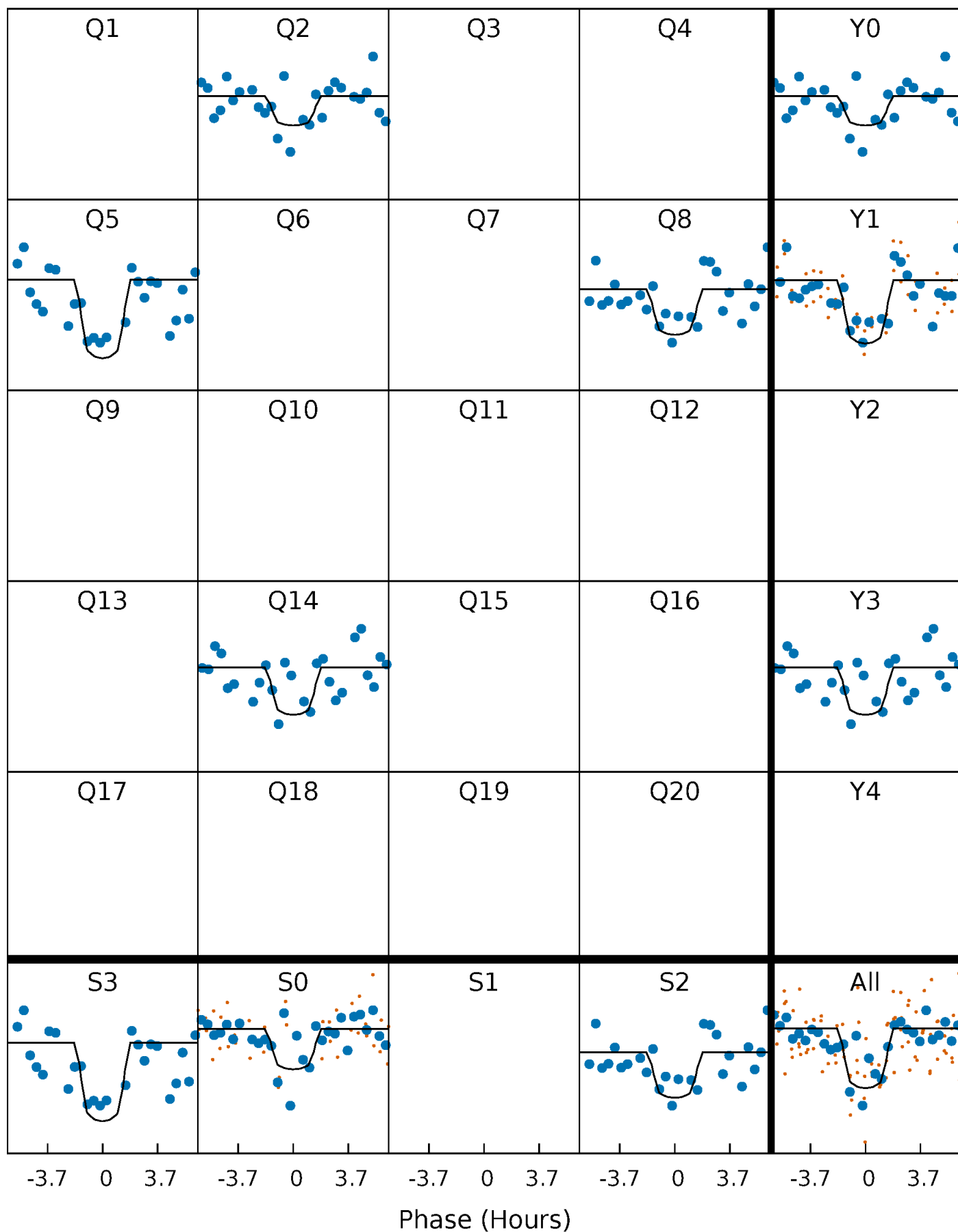
PDC Quarter-Phased Transit Curves

TCE 012352655-01 P=292.690212 Days $T_0=185.704525$ (BKJD)



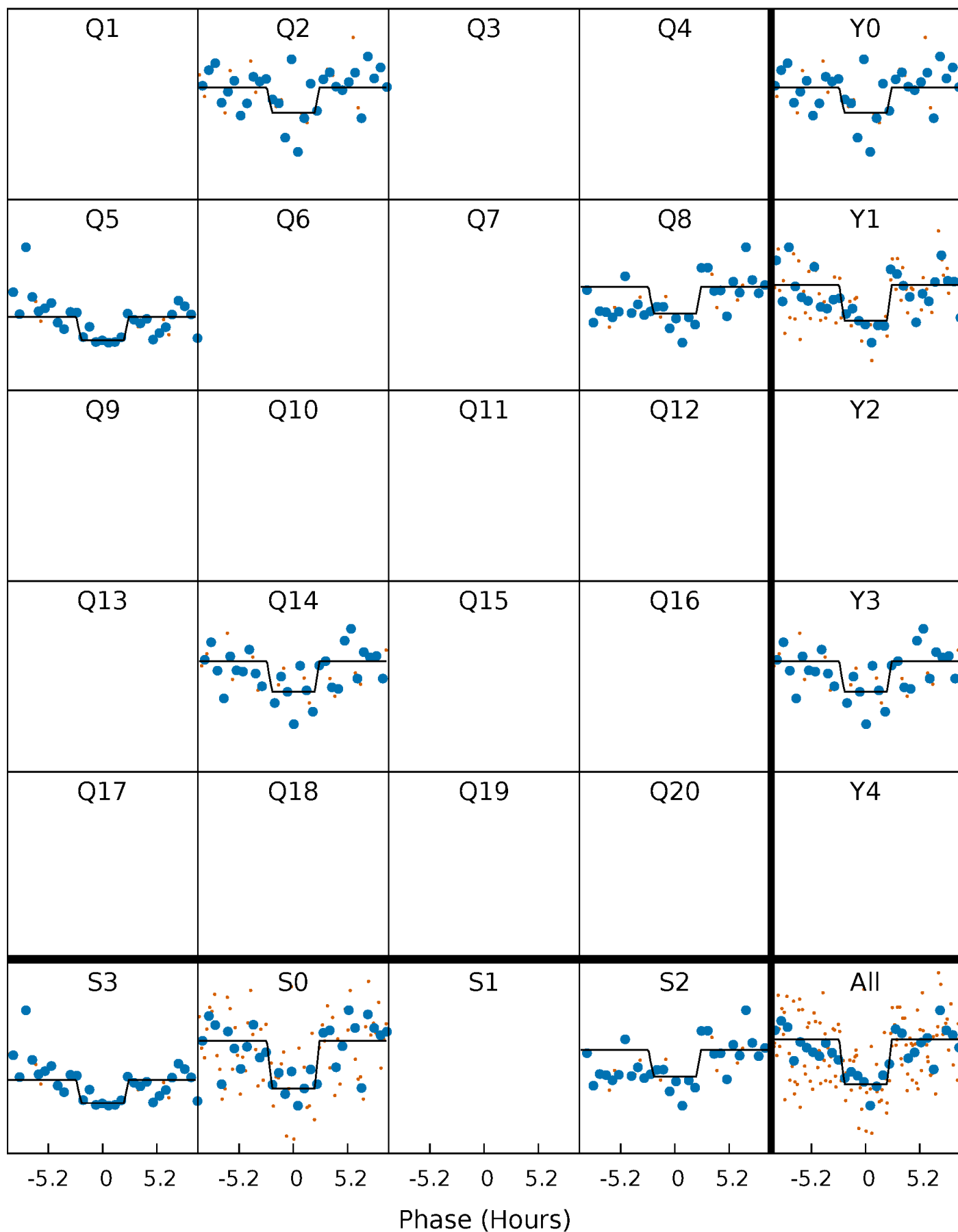
DV Quarter-Phased Transit Curves

TCE 012352655-01 P=292.690212 Days $T_0=185.704525$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

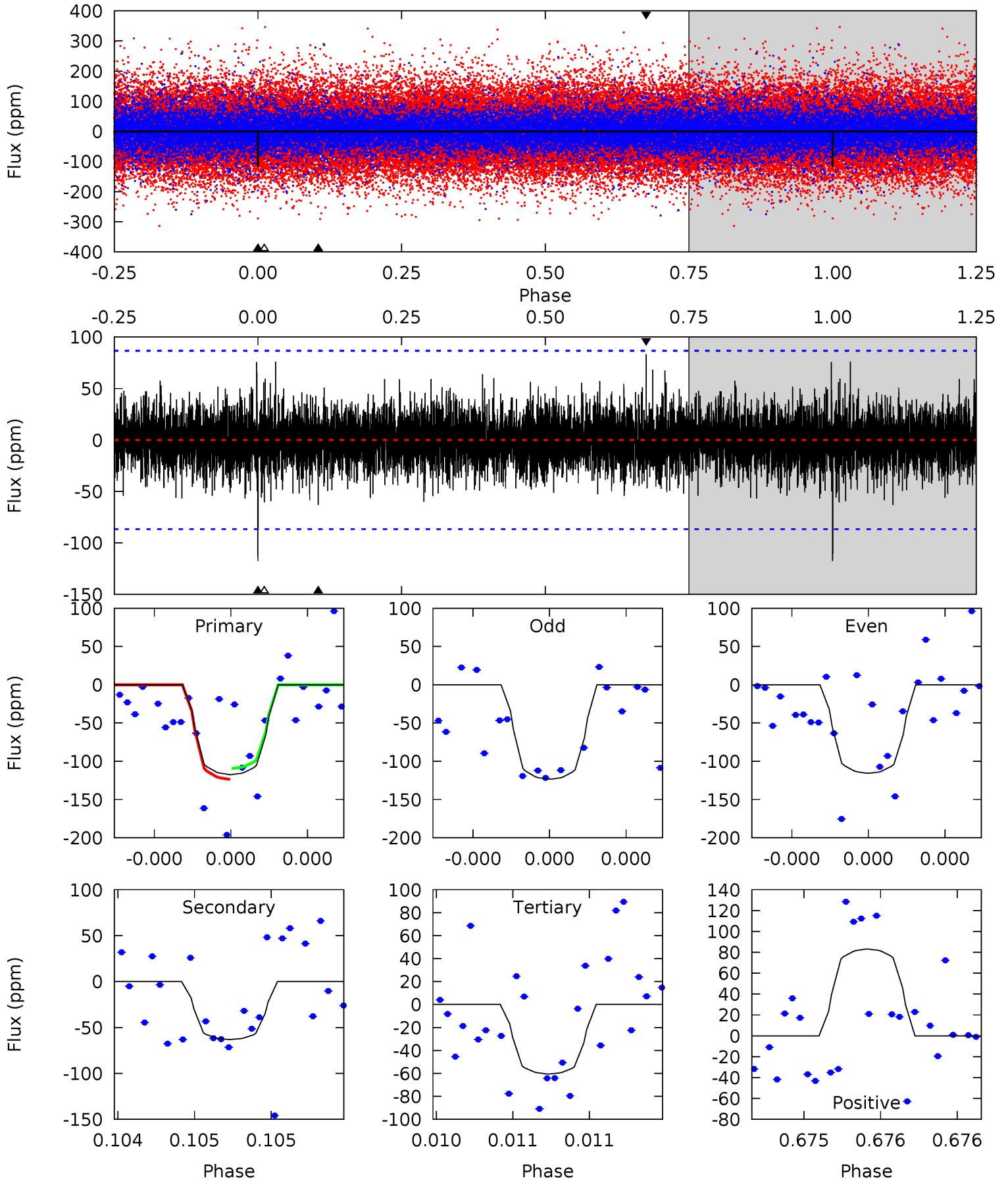
TCE 012352655-01 P=292.683502 Days $T_0=185.689430$ (BKJD)



DV Model-Shift Uniqueness Test

012352655-01, P = 292.690212 Days, E = 185.704525 Days

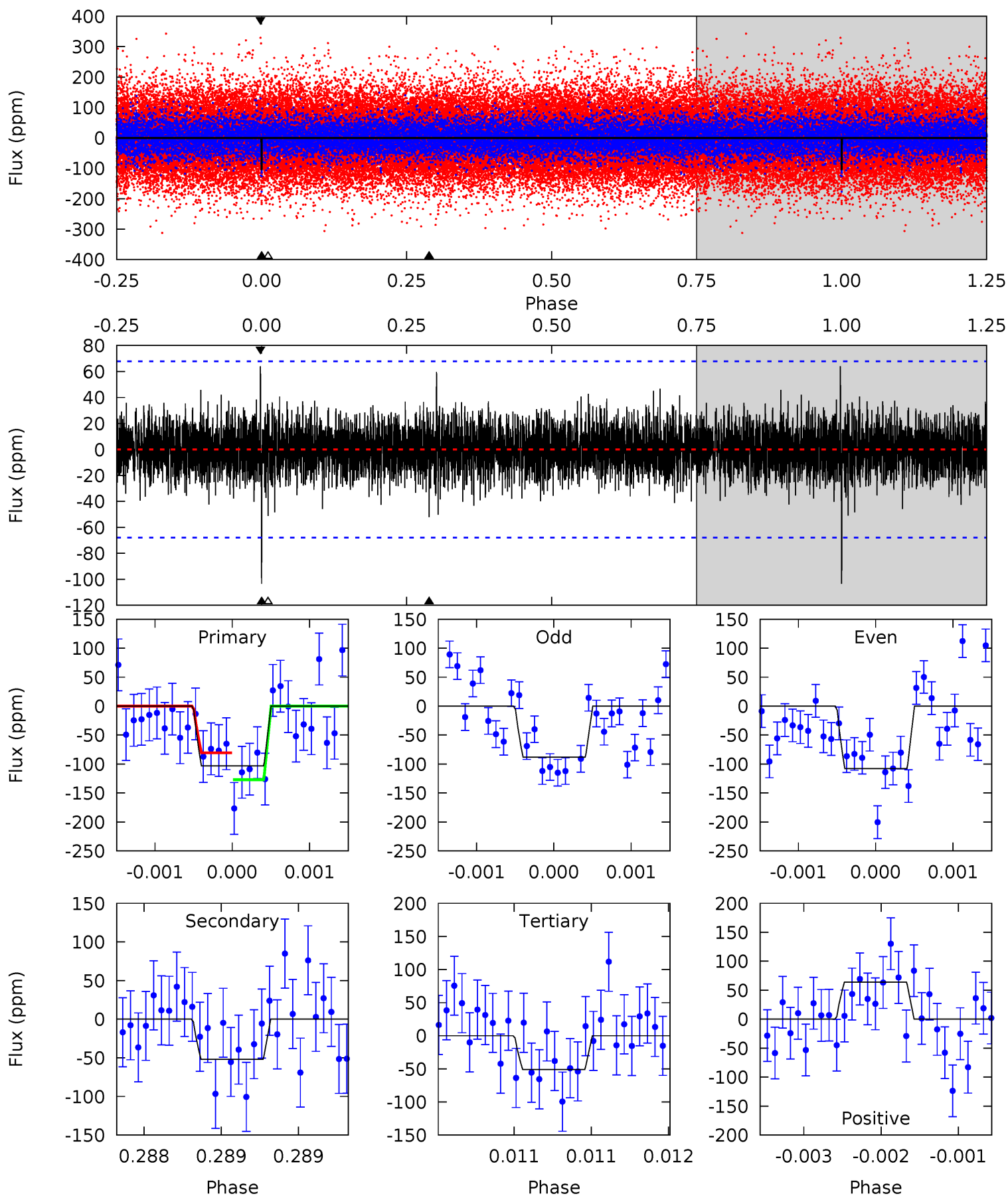
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.58	4.07	3.91	5.37	5.60	3.52	1.15	3.67	2.21	0.17	-1.29	0.21	0.95	0.41	0.46



Alt Model-Shift Uniqueness Test

012352655-01, P = 292.683502 Days, E = 185.689430 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.38	4.22	4.14	5.19	5.51	3.39	1.07	4.24	3.19	0.08	-0.97	0.68	1.05	0.38	1.89



Stellar Parameters For KIC 012352655

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6261^{+177}_{-161}	$4.015^{+0.287}_{-0.123}$	$-0.580^{+0.350}_{-0.250}$	$1.608^{+0.337}_{-0.463}$	$0.976^{+0.160}_{-0.120}$	$0.331^{+0.582}_{-0.115}$
	+3%/-3%	+7%/-3%	+60%/-43%	+21%/-29%	+16%/-12%	+176%/-35%
Source	PHO1	FLK73	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 012352655-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-63 ± 15	$3.86^{+3.75}_{-2.63}$	522^{+36}_{-46}	4006^{+2428}_{-781}	1632^{+14772}_{-1193}
Alt.	-52 ± 12	$3.65^{+3.62}_{-2.37}$	526^{+33}_{-45}	3916^{+2222}_{-732}	1543^{+11755}_{-1158}

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 $A_{obs} \gg 1.0$

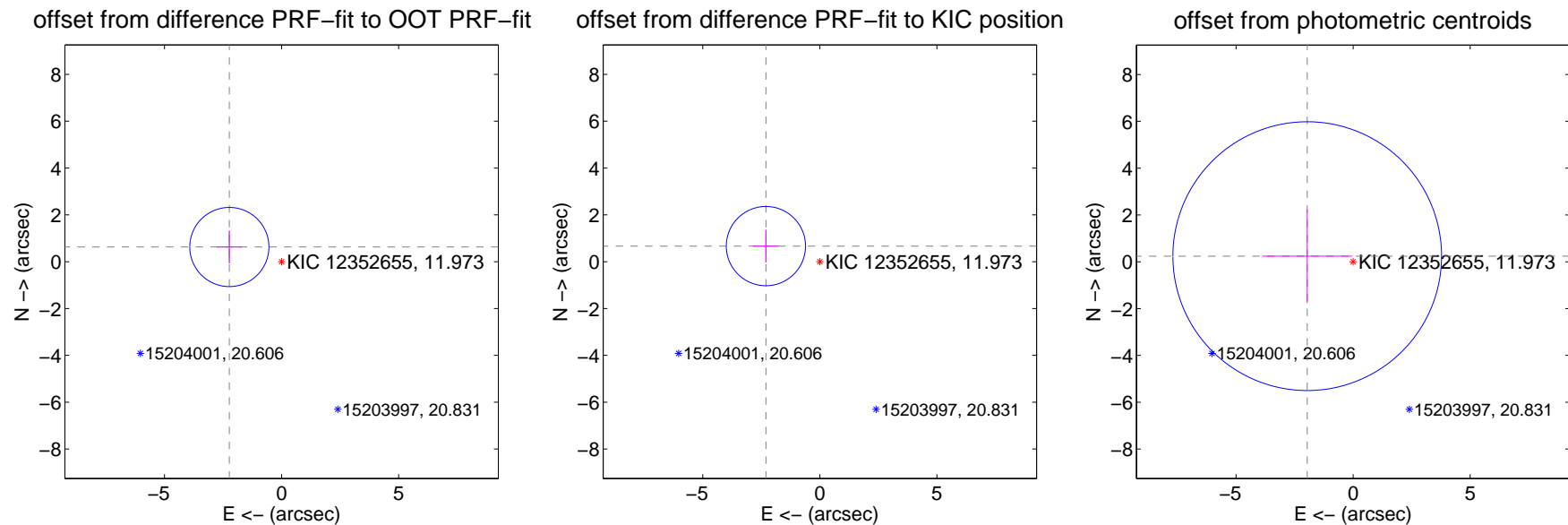
DV Centroid Data

Supplemental centroid analysis for 012352655-01. **Kepler magnitude: 11.97.** Transit SNR 7.43

There are 1 quarters with good PRF difference image offsets

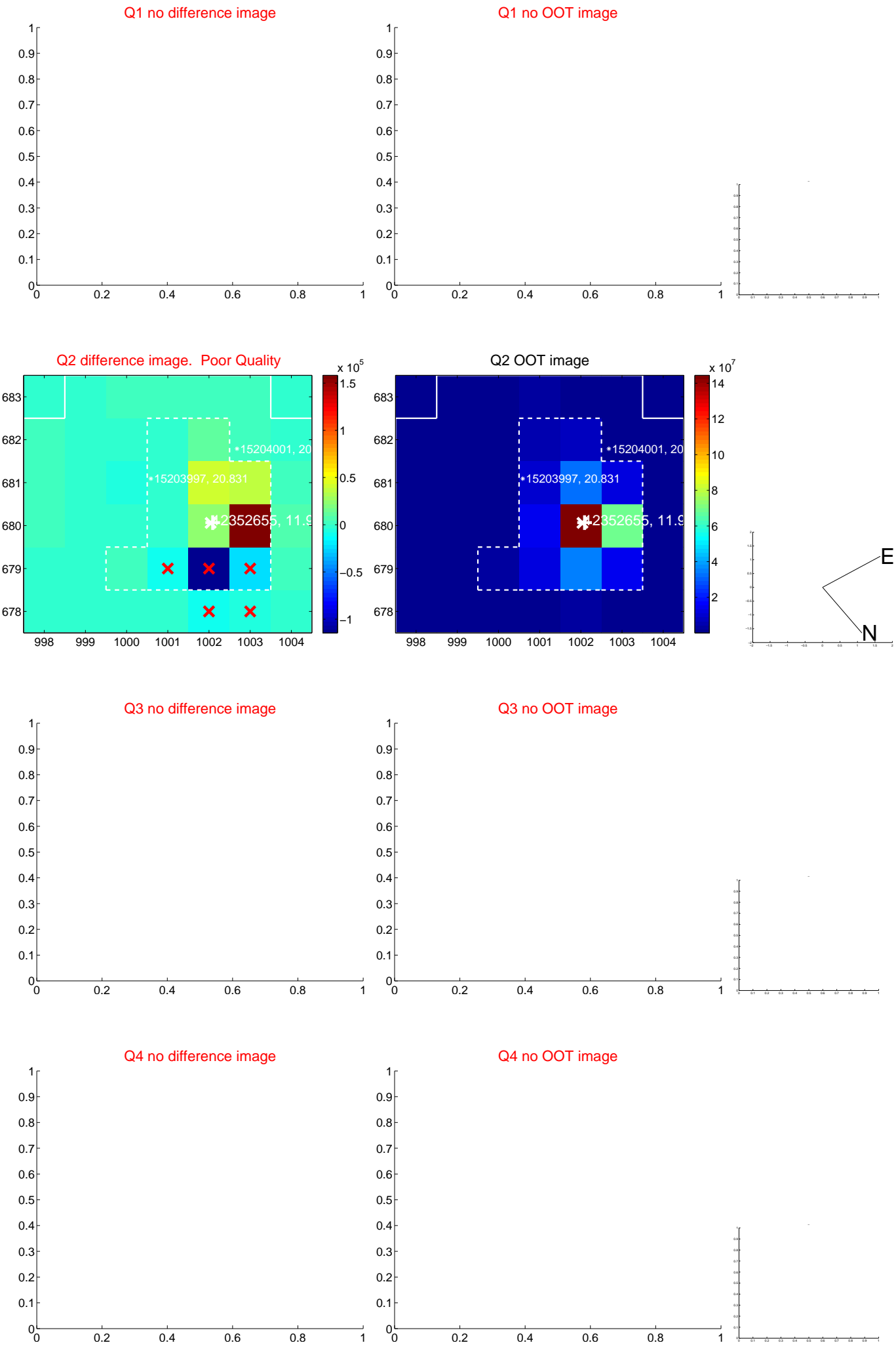
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.318 \pm 0.563	4.11	2.232 \pm 0.551	0.627 \pm 0.698
PRF-fit source offset from KIC position	2.399 \pm 0.564	4.25	2.304 \pm 0.551	0.666 \pm 0.698
photometric centroid source offset	1.97 \pm 1.91	1.03	1.96 \pm 1.91	0.24 \pm 2.00

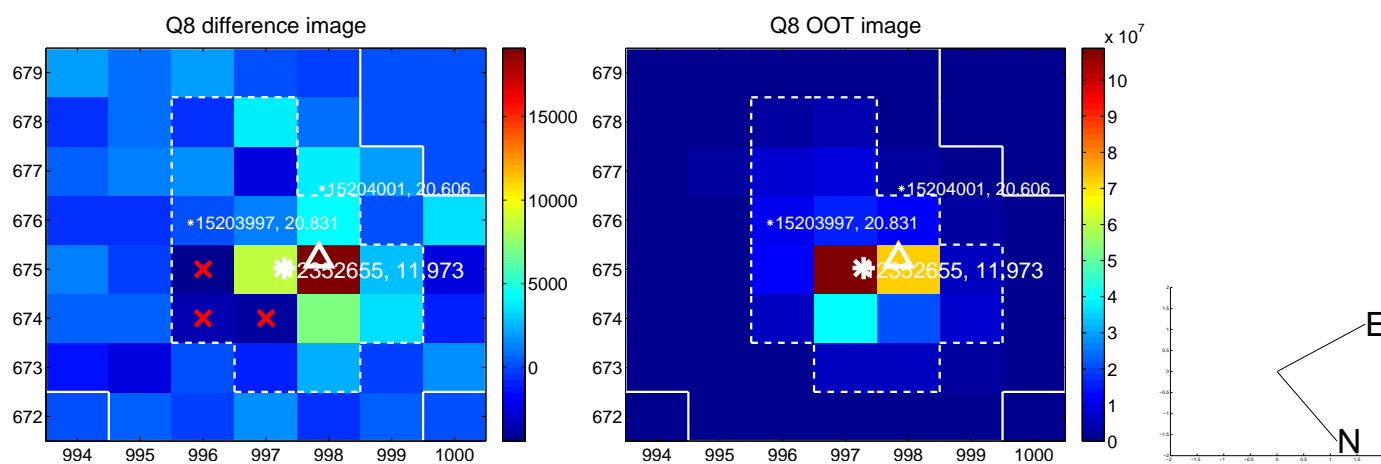
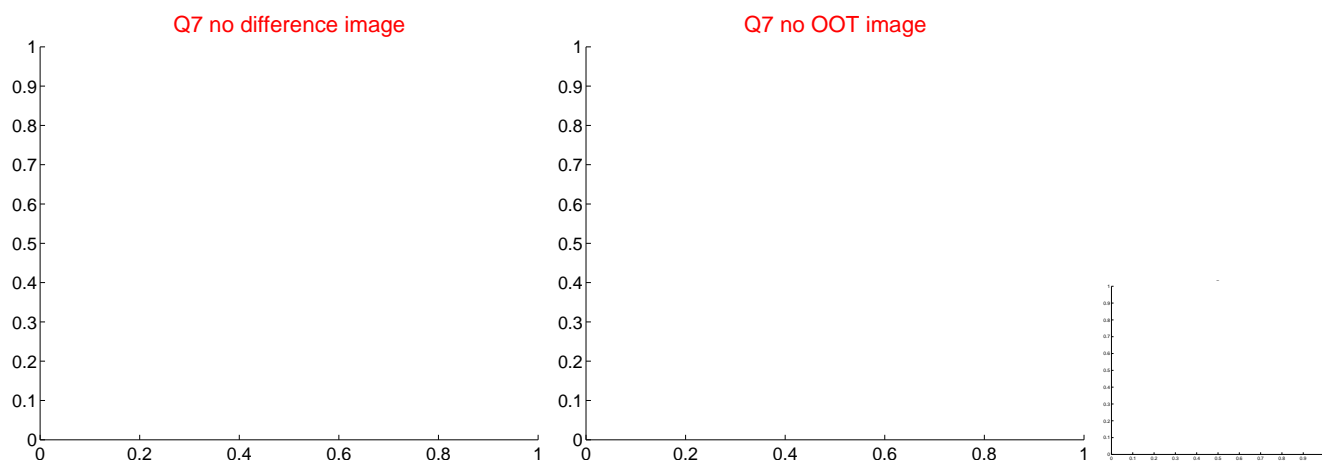
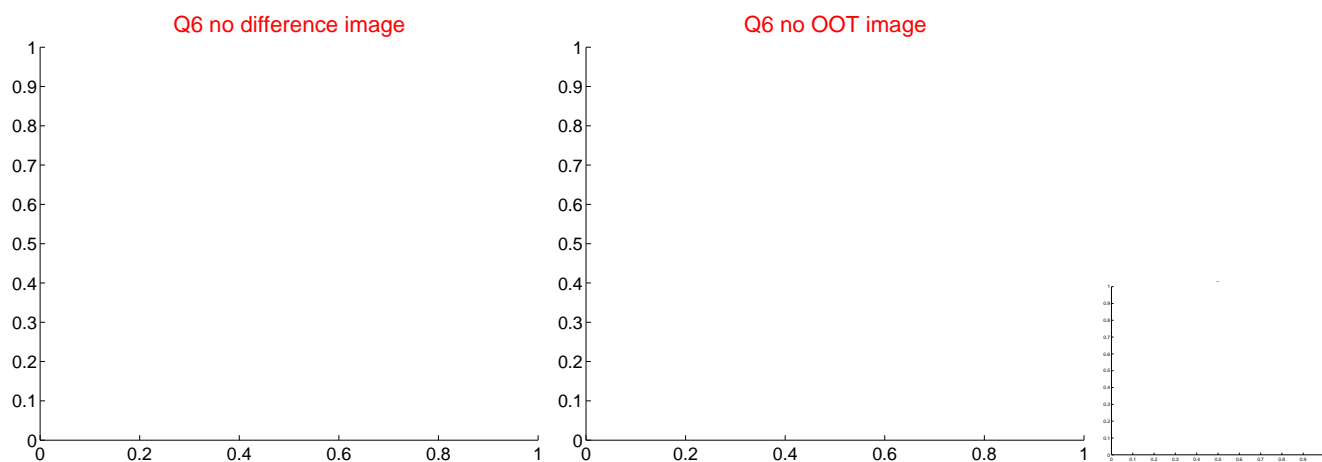
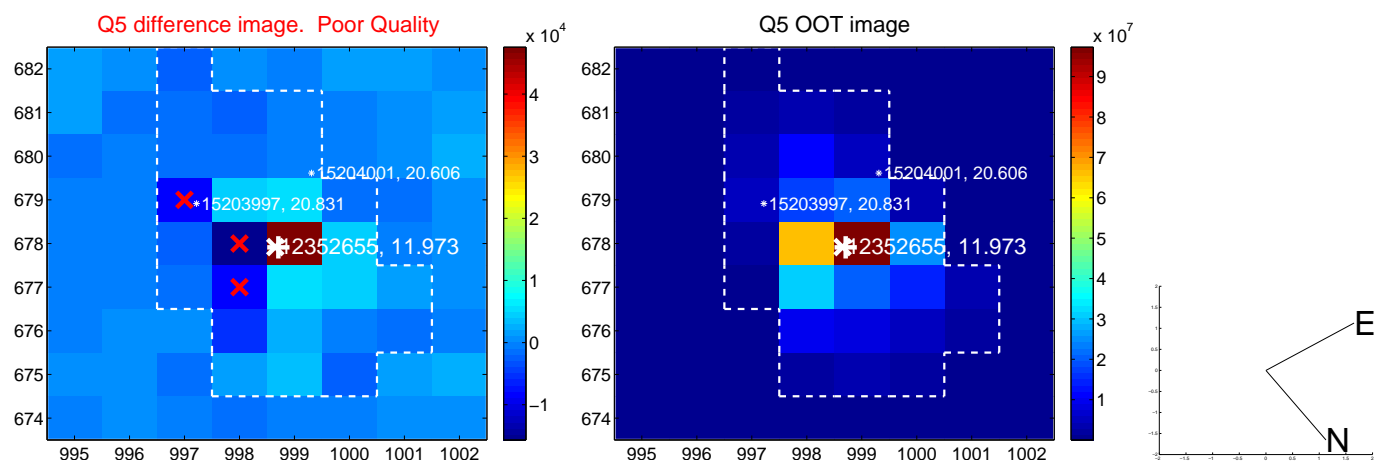


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

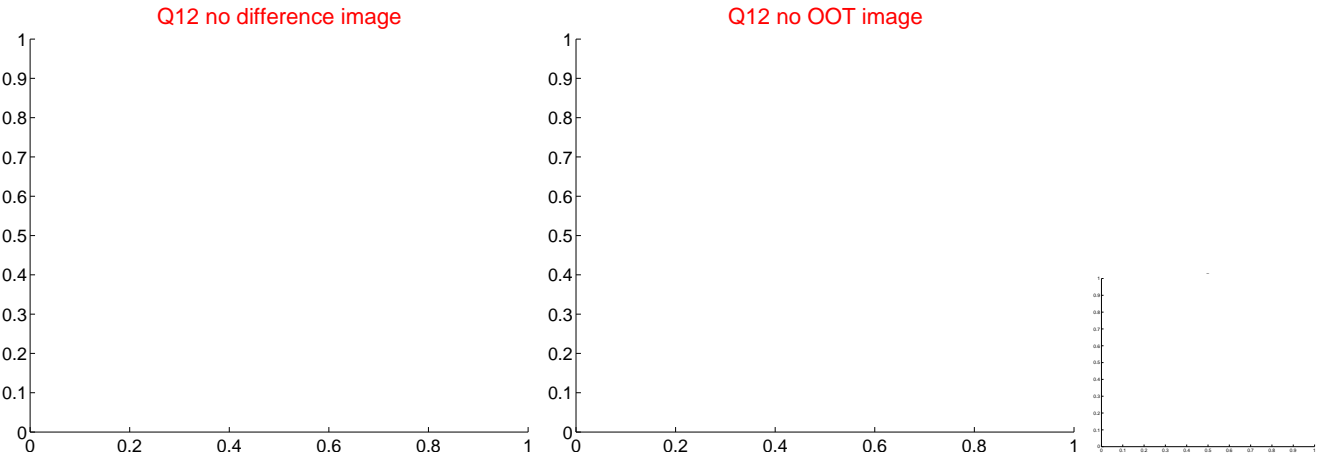
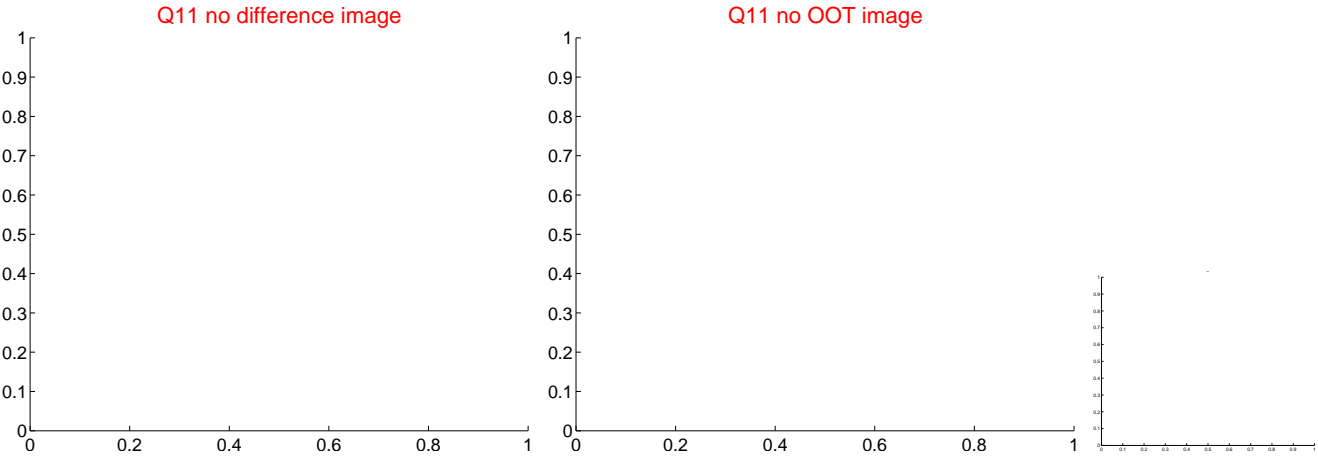
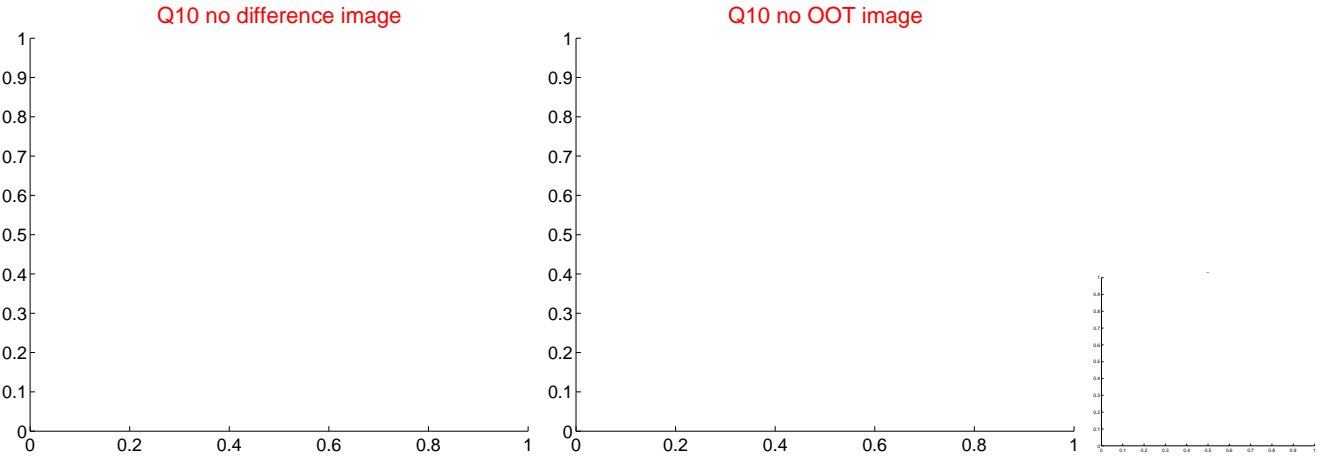
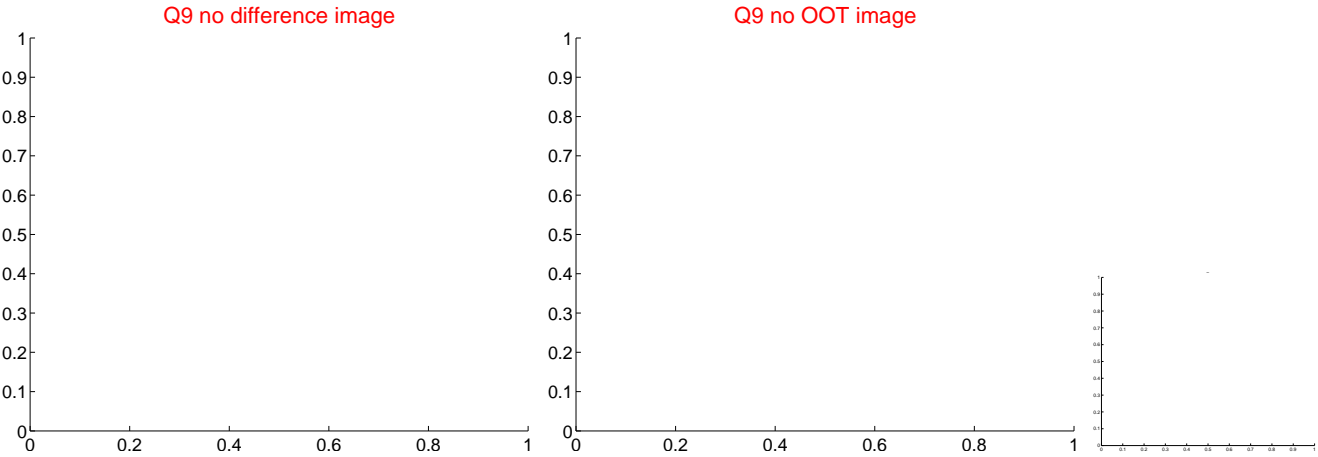
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



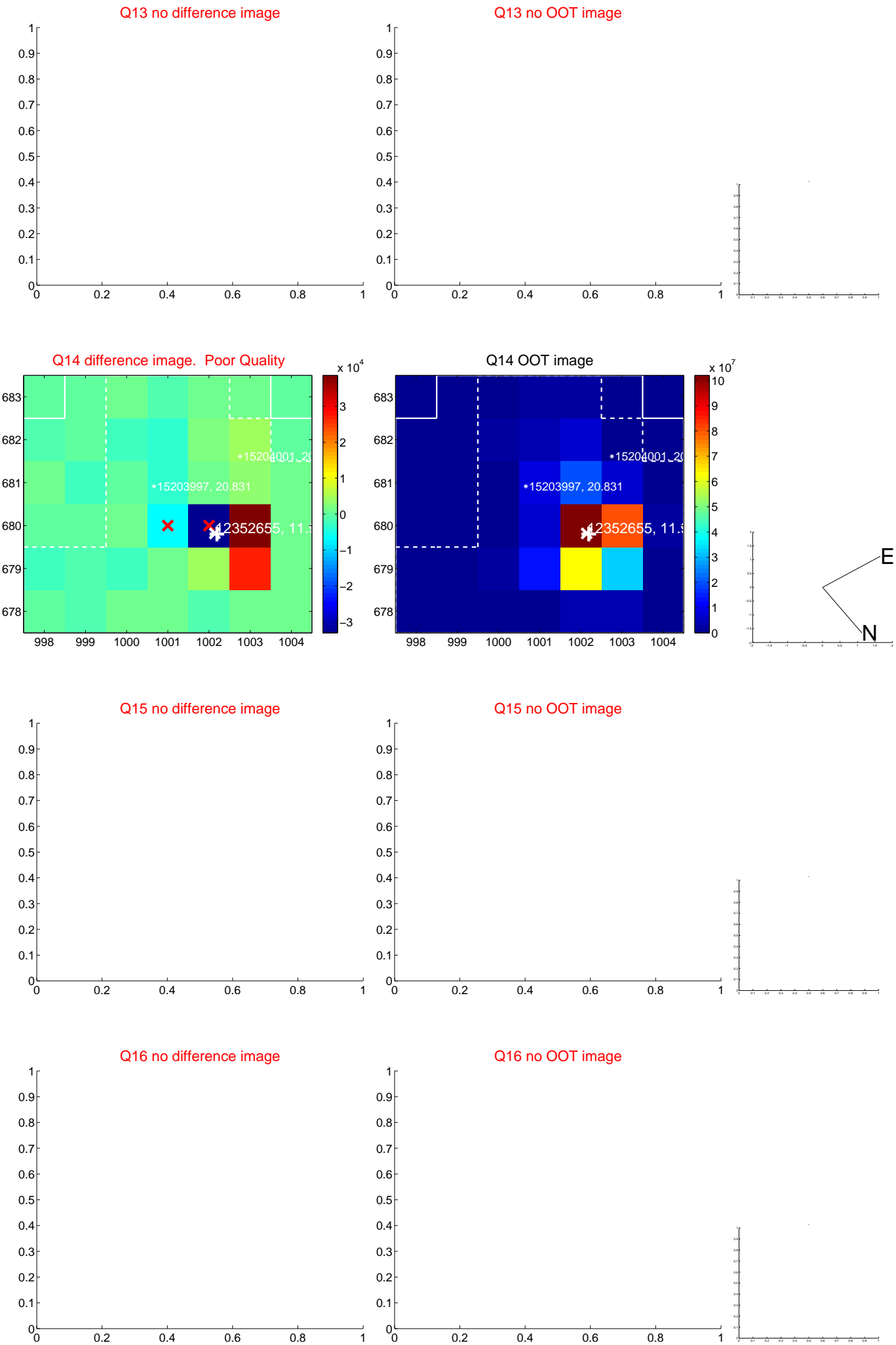
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



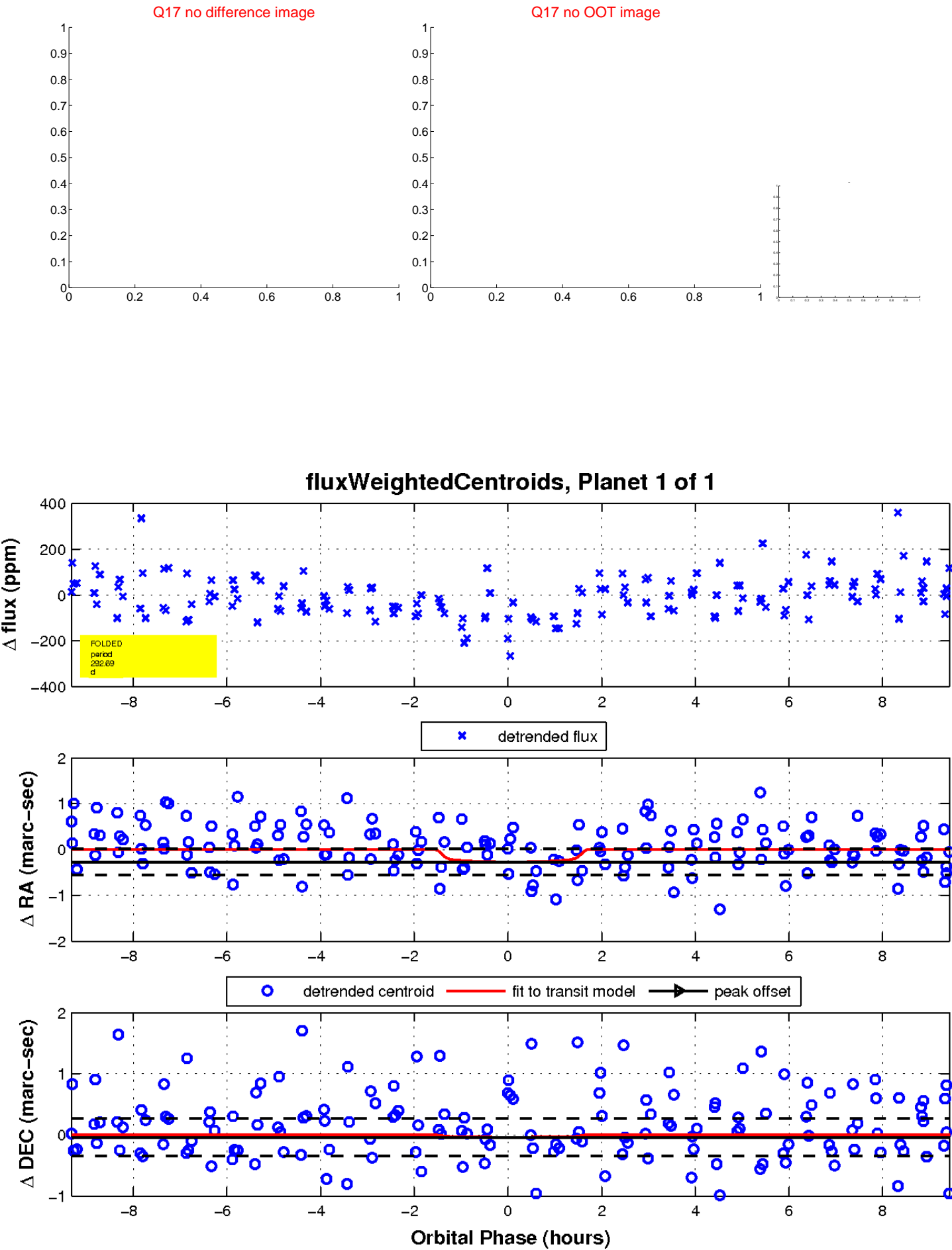
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

