

KIC 009166700

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})
009166700-01	OBS	5632.01	264.463721	134.976906	497.6	6.686	29.0	29.4	1.24	6551	3.05	3.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009166700-01	OBS	PC	0.93	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 009166700-01

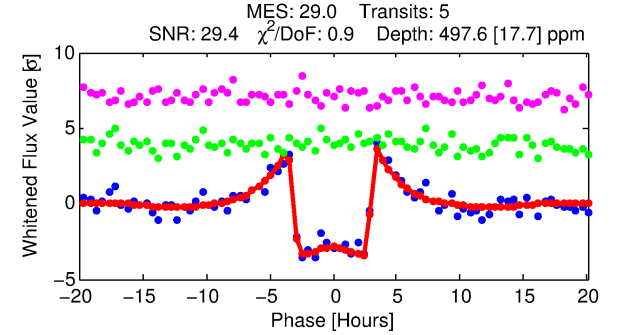
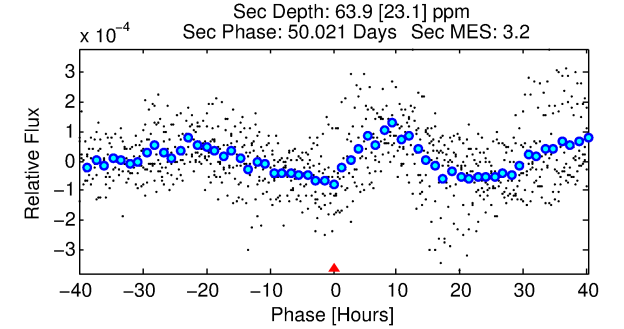
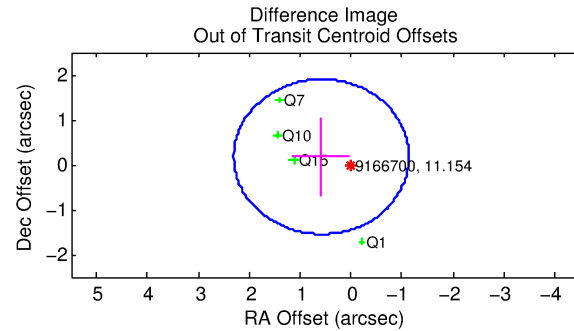
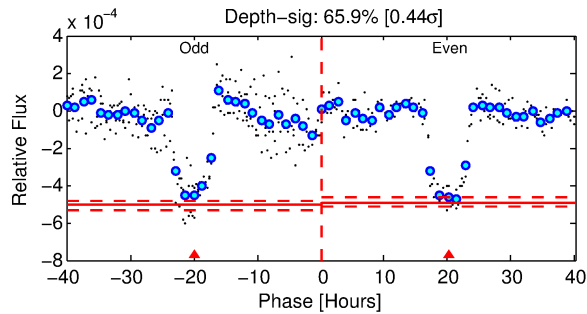
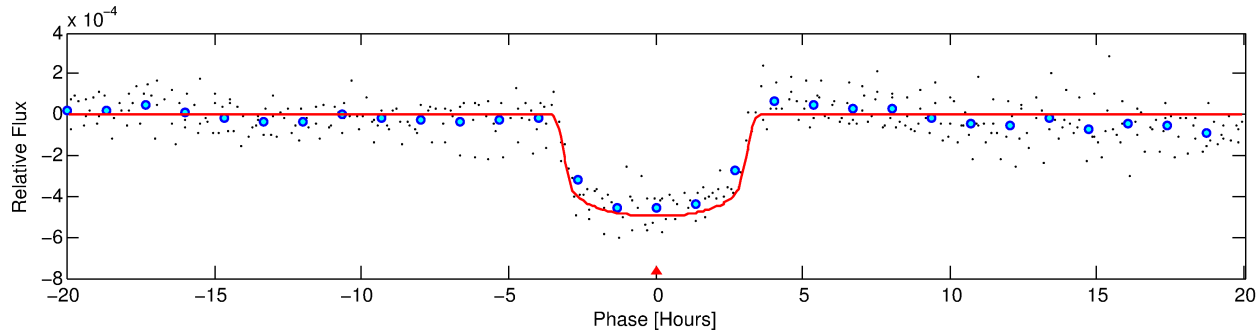
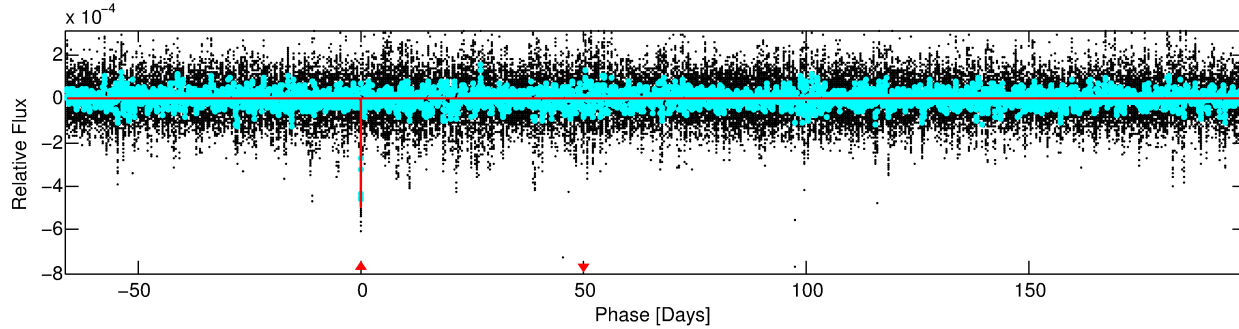
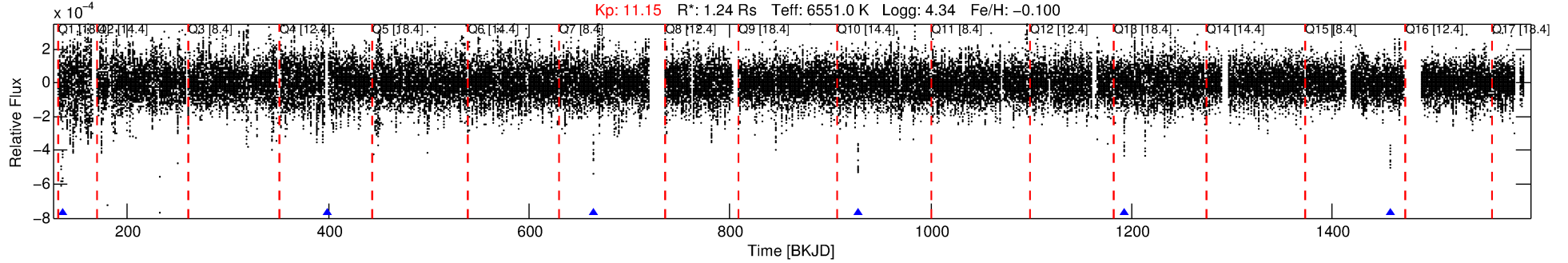
No Significant Match Found

DV One-Page Summary

KIC: 9166700 Candidate: 1 of 1 Period: 264.464 d

KOI: K05632.01 Corr: 0.978

Kp: 11.15 R*: 1.24 Rs Teff: 6551.0 K Logg: 4.34 Fe/H: -0.100



DV Fit Results:

Period = 264.46372 [0.00059] d
Epoch = 134.9769 [0.0021] BKJD
Rp/R* = 0.0226 [0.0013]
a/R* = 192.17 [52.14]
b = 0.80 [0.12]
Seff = 3.41 [1.00]
Teq = 347 [25] K
Rp = 3.05 [0.69] Re
a = 0.8596 [0.1587] AU
Ag = 2801.38 [1298.57] [2.16σ]
Teffp = 3898 [386] K [9.19σ]

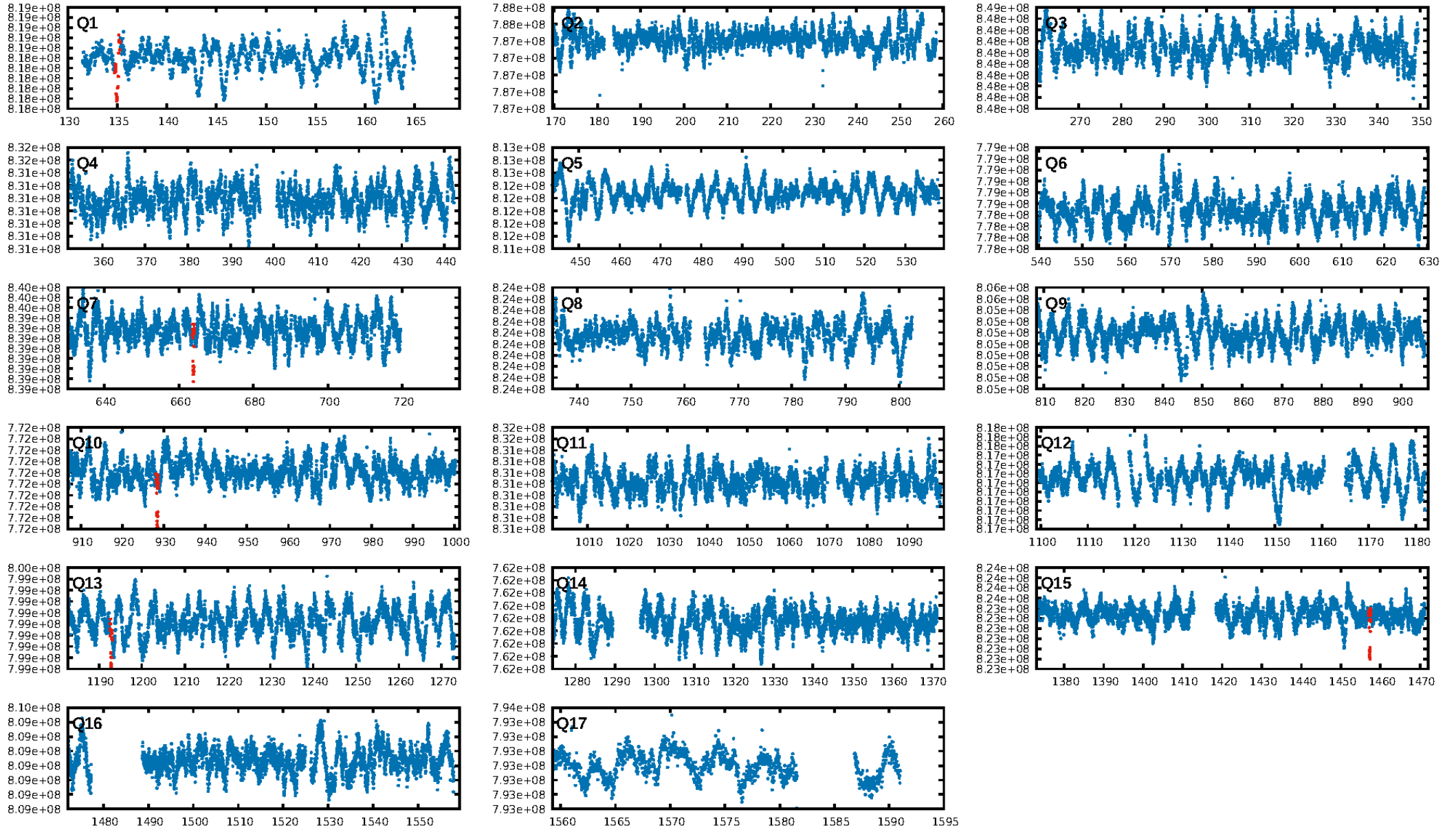
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.14e-101
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 7.575
Centroid-sig: 70.1%
Centroid-so: 0.154 arcsec [0.46σ]
OotOffset-rm: 0.609 arcsec [1.06σ]
KicOffset-rm: 0.724 arcsec [1.02σ]
OotOffset-st: 1/2/0/1 [4]
KicOffset-st: 1/2/0/1 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

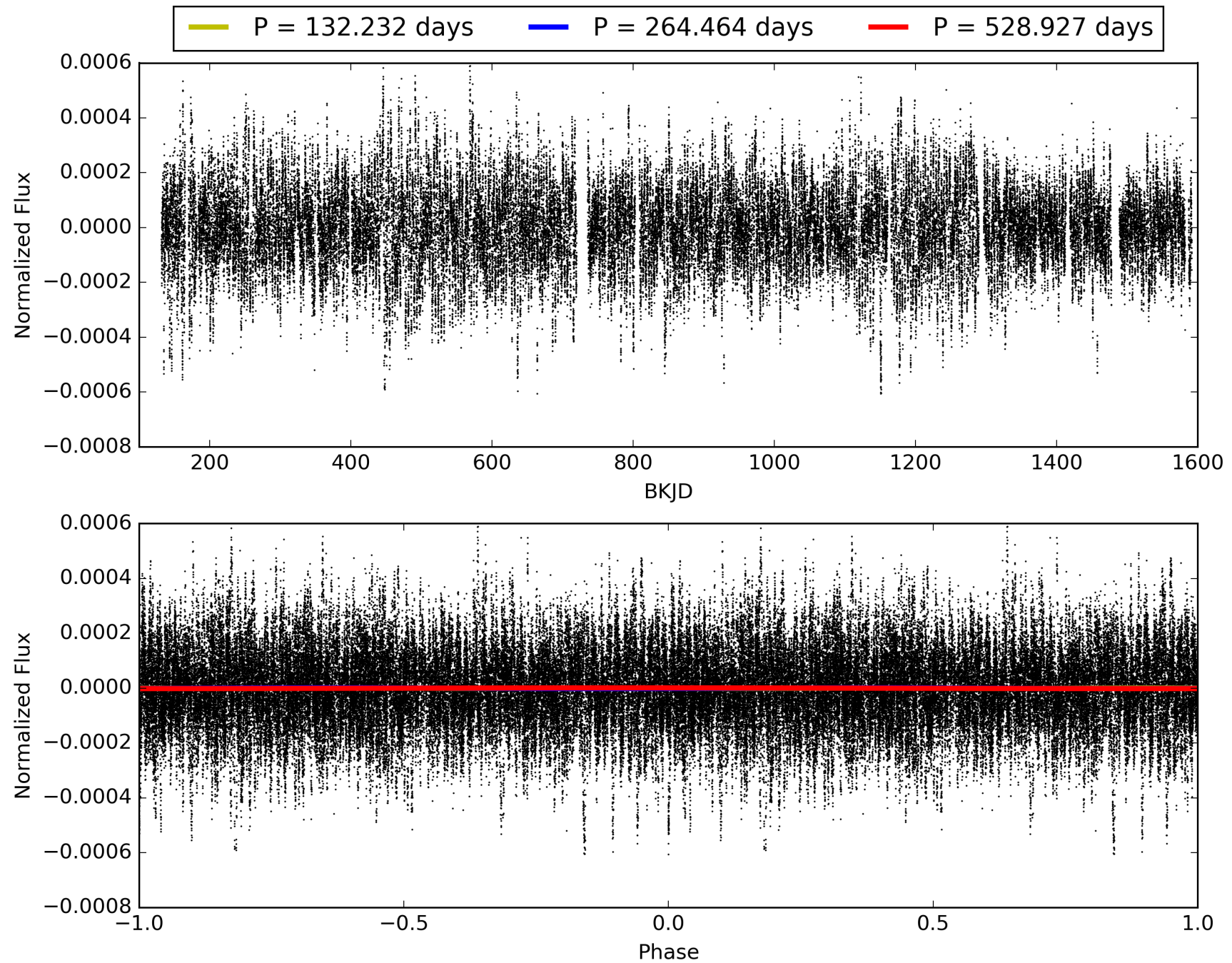
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:43:46 Z

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

TCE 009166700-01, PDC Light Curves

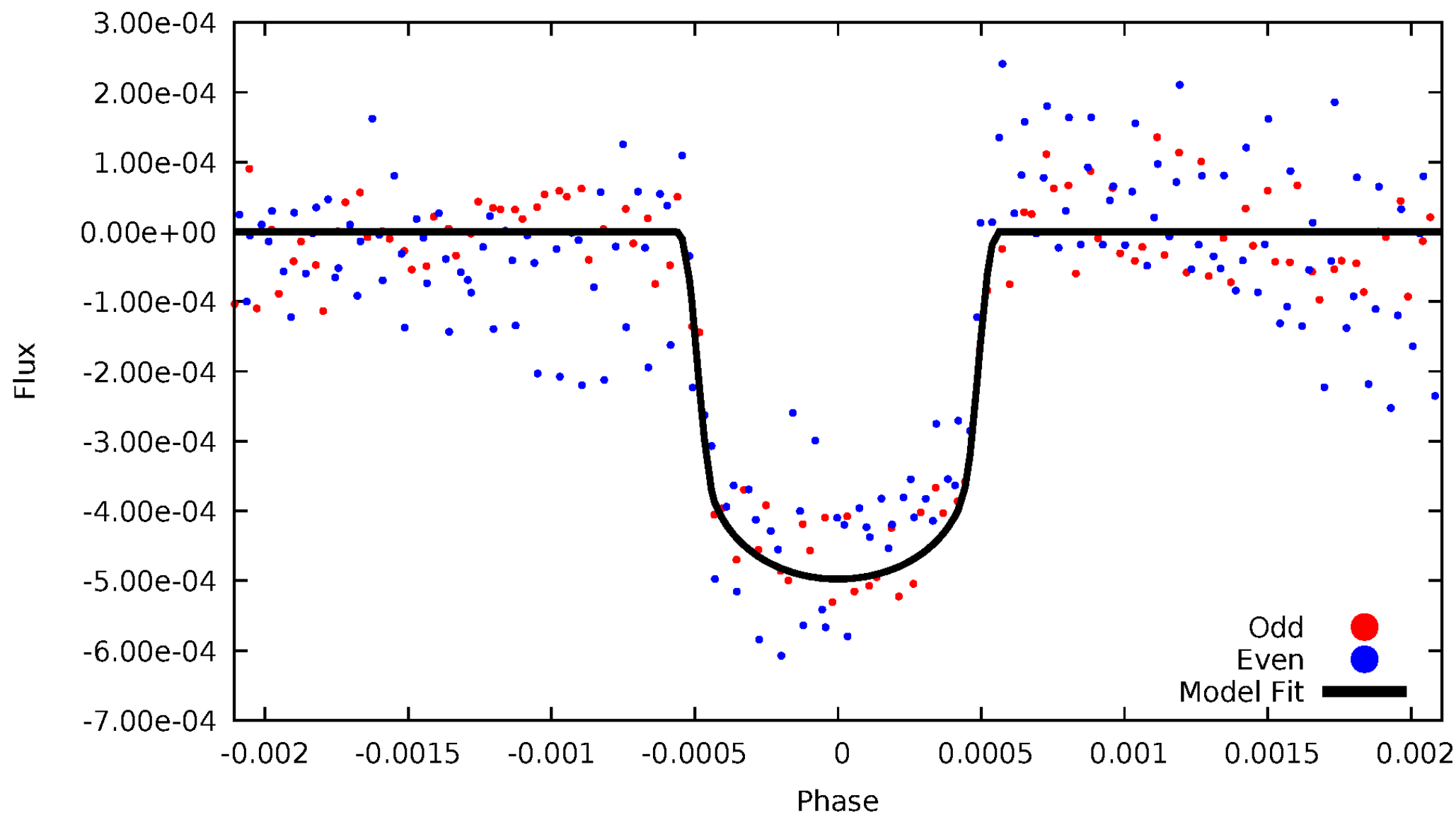


TCE 009166700-01



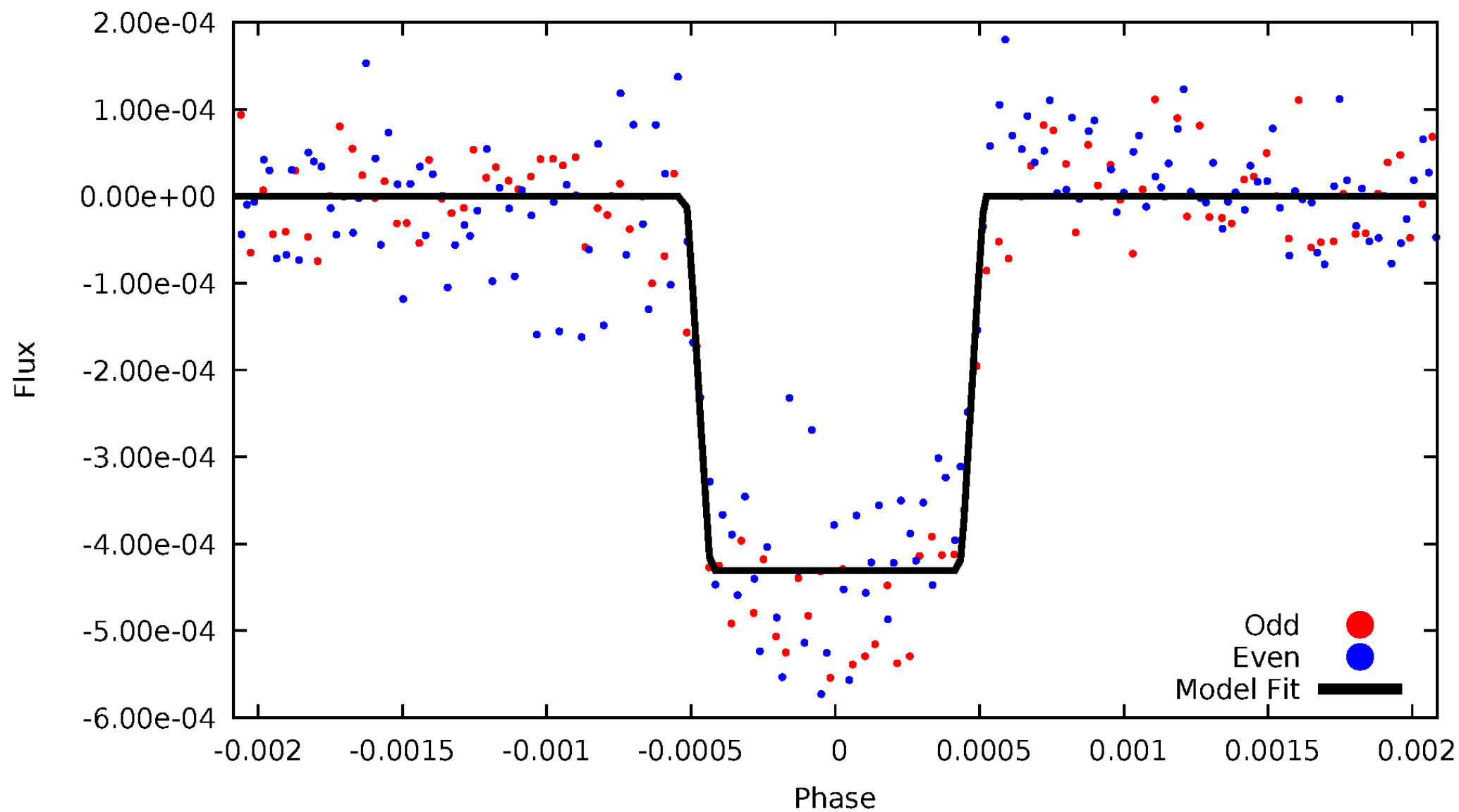
DV Odd/Even

TCE 009166700-01

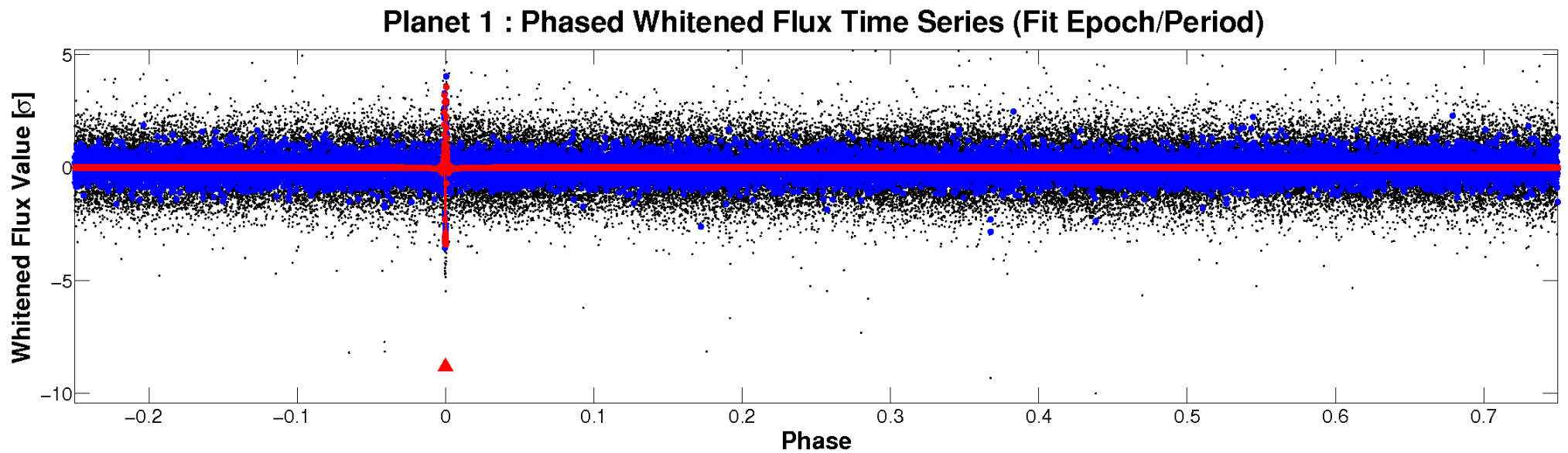
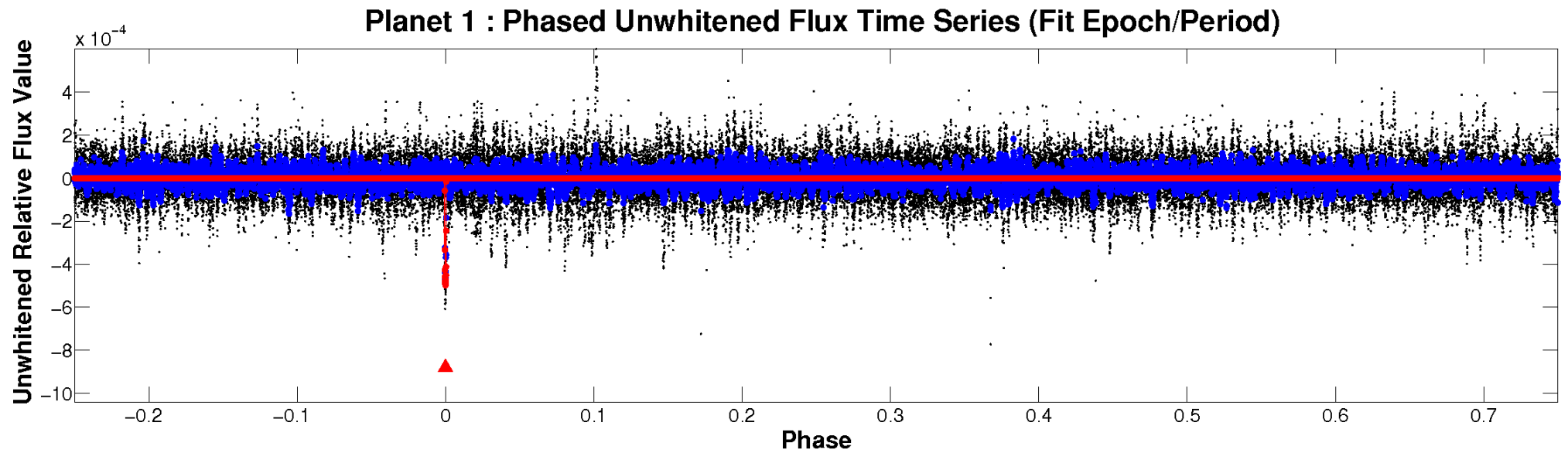


ALT Odd/Even

TCE 009166700-01

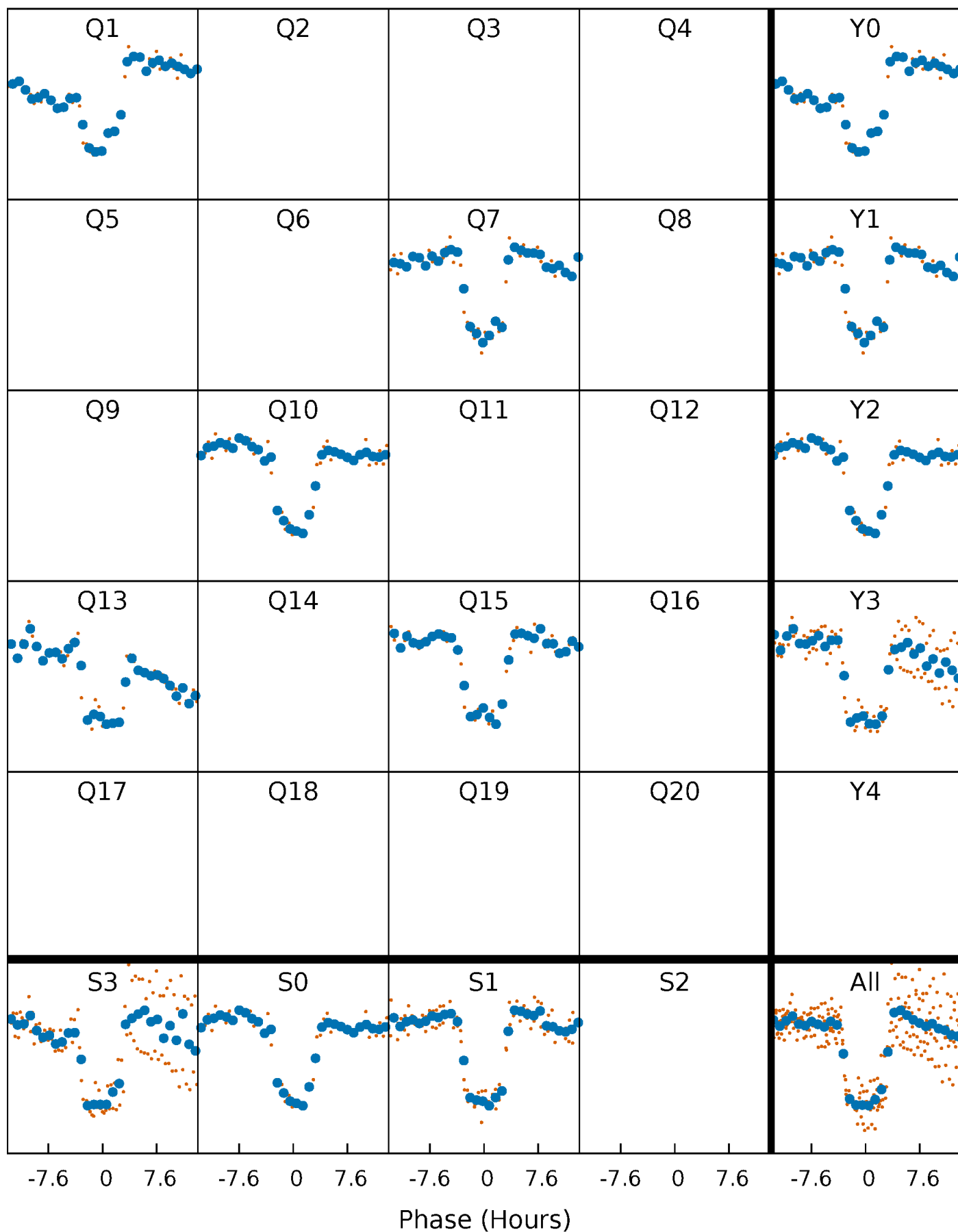


Non-Whitened Vs. Whitened Light Curve



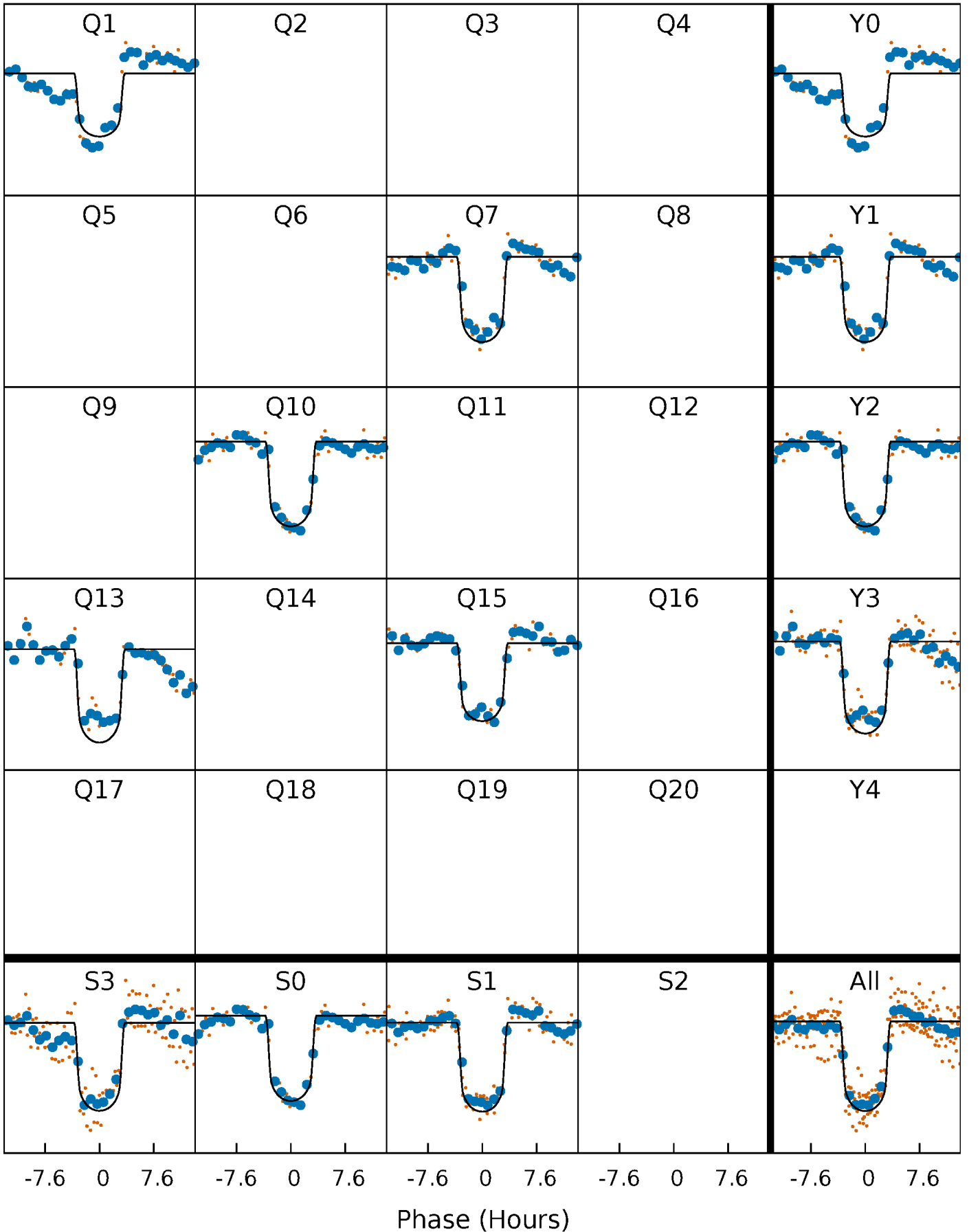
PDC Quarter-Phased Transit Curves

TCE 009166700-01 P=264.463721 Days $T_0=134.976906$ (BKJD)



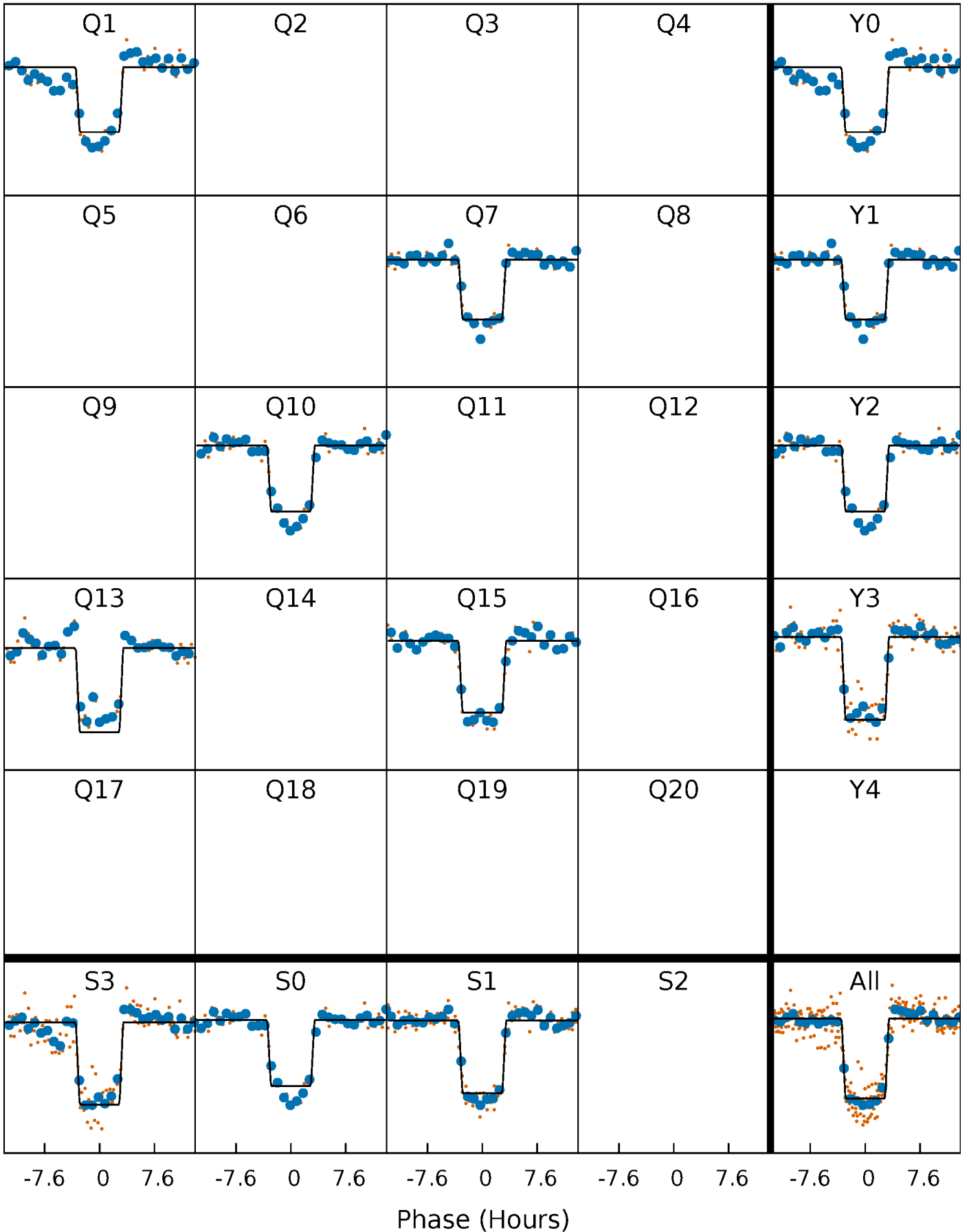
DV Quarter-Phased Transit Curves

TCE 009166700-01 $P=264.463721$ Days $T_0=134.976906$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

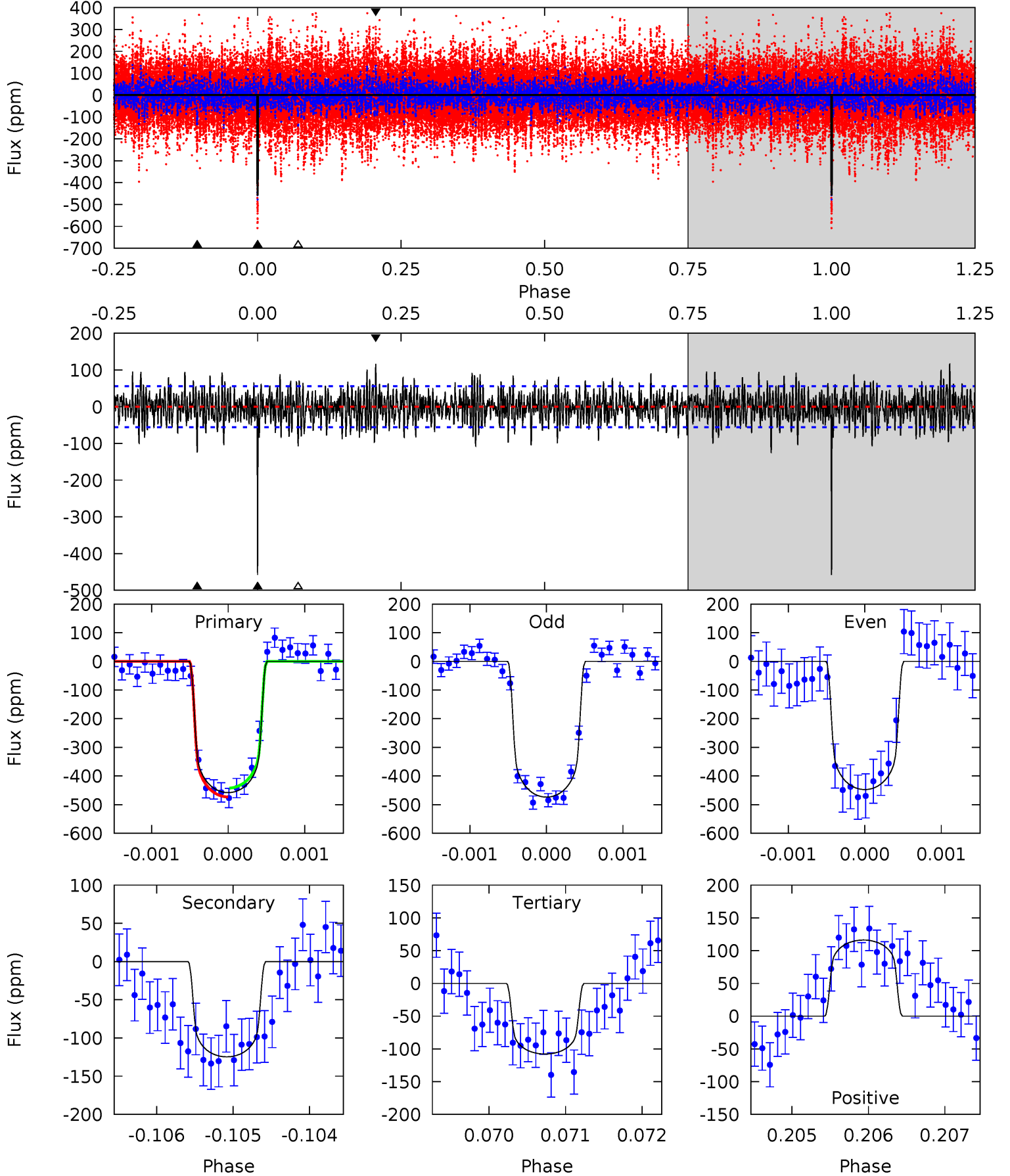
TCE 009166700-01 P=264.464756 Days $T_0=134.973109$ (BKJD)



DV Model-Shift Uniqueness Test

009166700-01, P = 264.463721 Days, E = 134.976906 Days

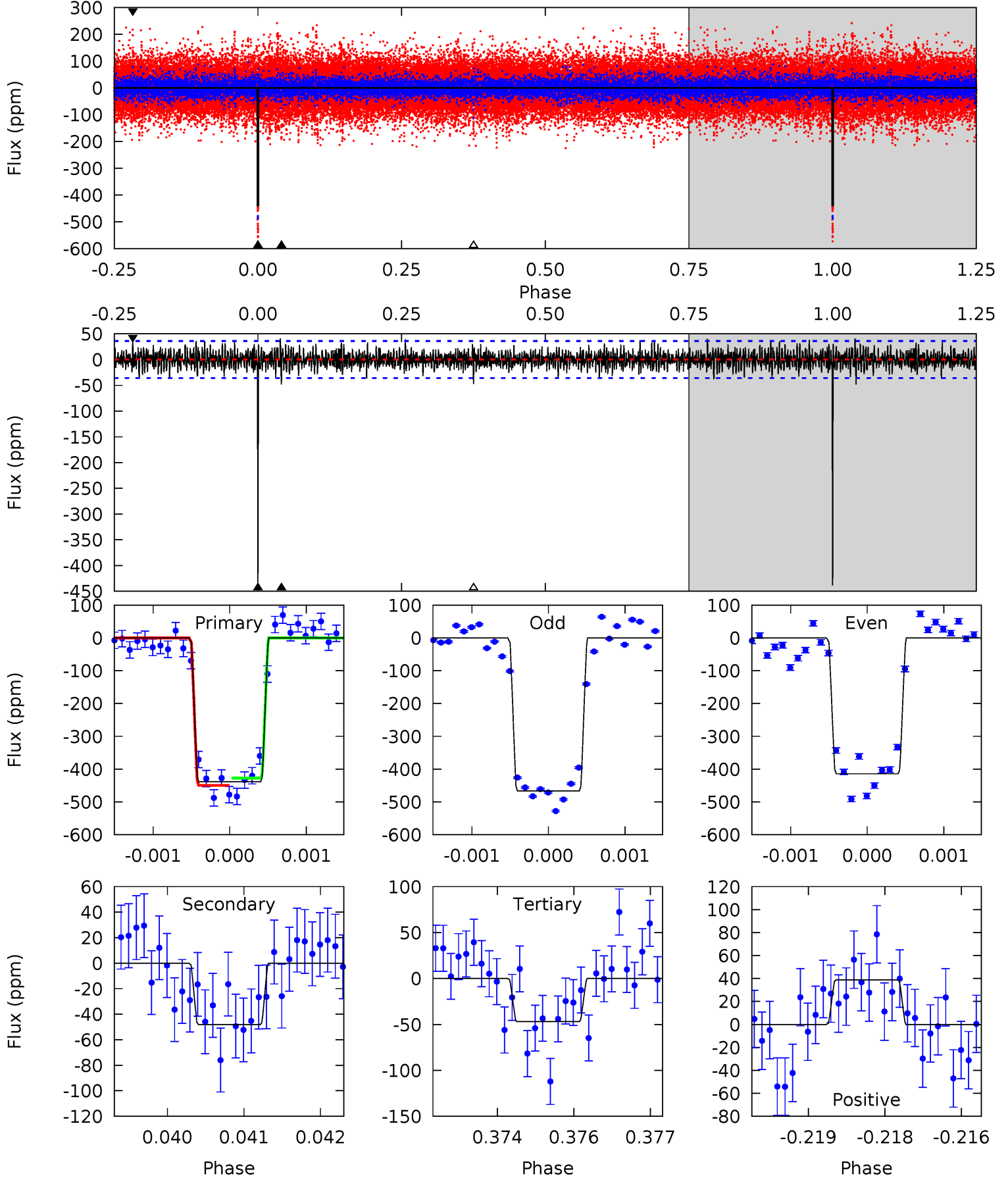
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.7	12.2	10.5	11.3	5.43	3.26	3.28	34.1	33.3	1.64	0.83	1.26	0.98	0.20	1.51



Alt Model-Shift Uniqueness Test

009166700-01, P = 264.464756 Days, E = 134.973109 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
66.4	7.28	7.11	5.88	5.45	3.28	1.72	59.3	60.6	0.16	1.40	3.93	0.95	0.09	1.68



Stellar Parameters For KIC 009166700

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6551^{+129}_{-194}	$4.337^{+0.073}_{-0.147}$	$-0.100^{+0.250}_{-0.300}$	$1.236^{+0.271}_{-0.146}$	$1.213^{+0.135}_{-0.165}$	$0.906^{+0.297}_{-0.371}$
	+2%/-3%	+2%/-3%	+250%/-300%	+22%/-12%	+11%/-14%	+33%/-41%
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 009166700-01 / KOI 5632.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-125 ± 10	$3.09^{+0.41}_{-0.29}$	489^{+27}_{-22}	4731^{+161}_{-159}	5202^{+1137}_{-1084}
Alt.	-48 ± 7	$2.84^{+0.36}_{-0.29}$	487^{+29}_{-21}	4065^{+152}_{-151}	2369^{+665}_{-575}

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 $A_{obs} \gg 1.0$

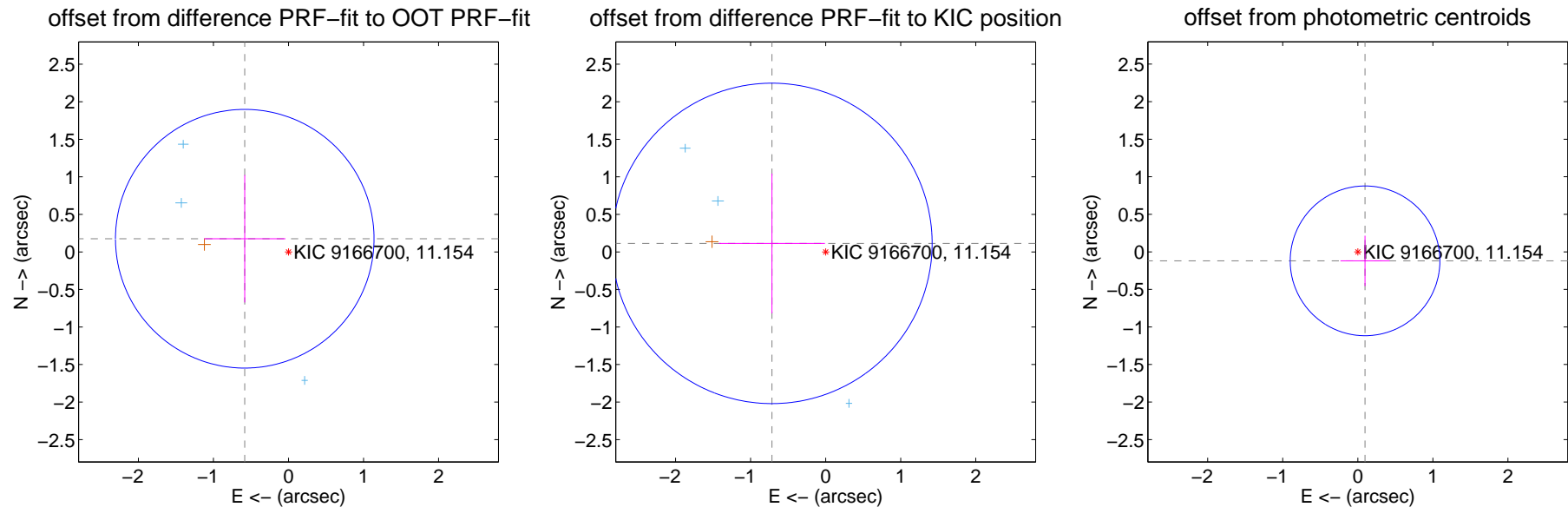
DV Centroid Data

Supplemental centroid analysis for 009166700-01. **Kepler magnitude: 11.15.** Transit SNR 29.39

There are 3 quarters with good PRF difference image offsets

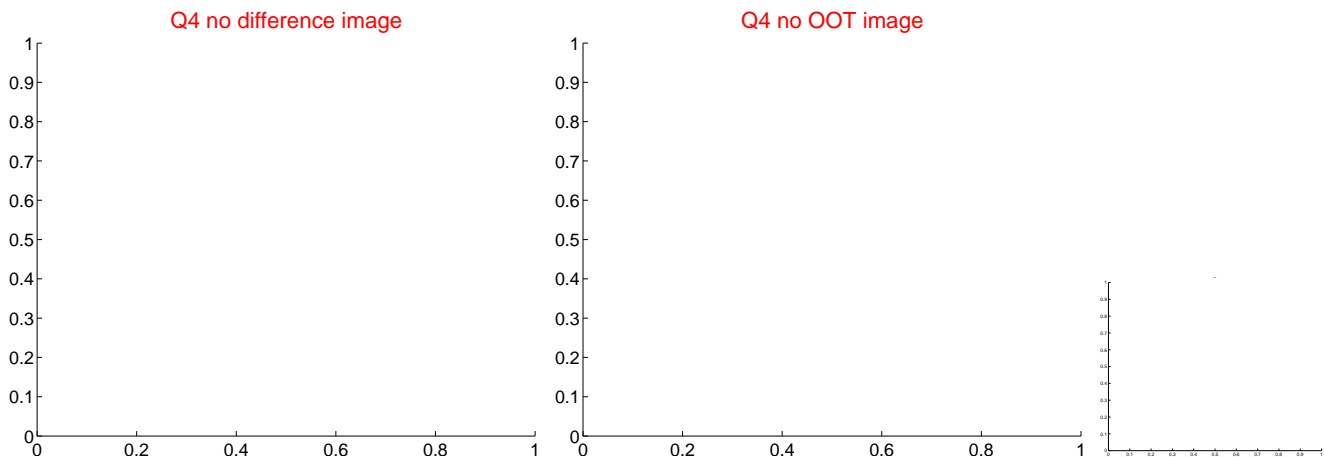
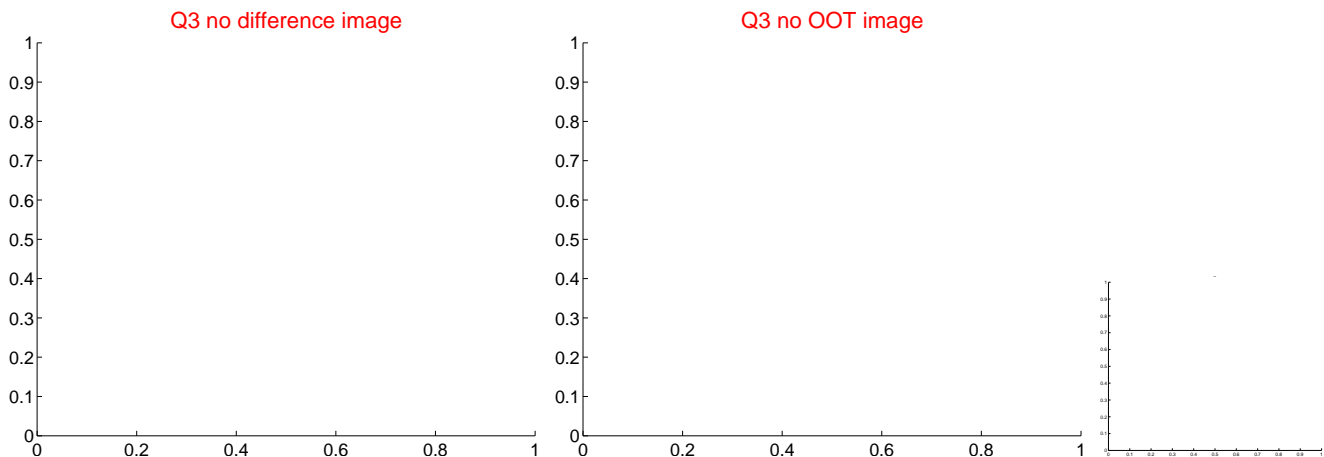
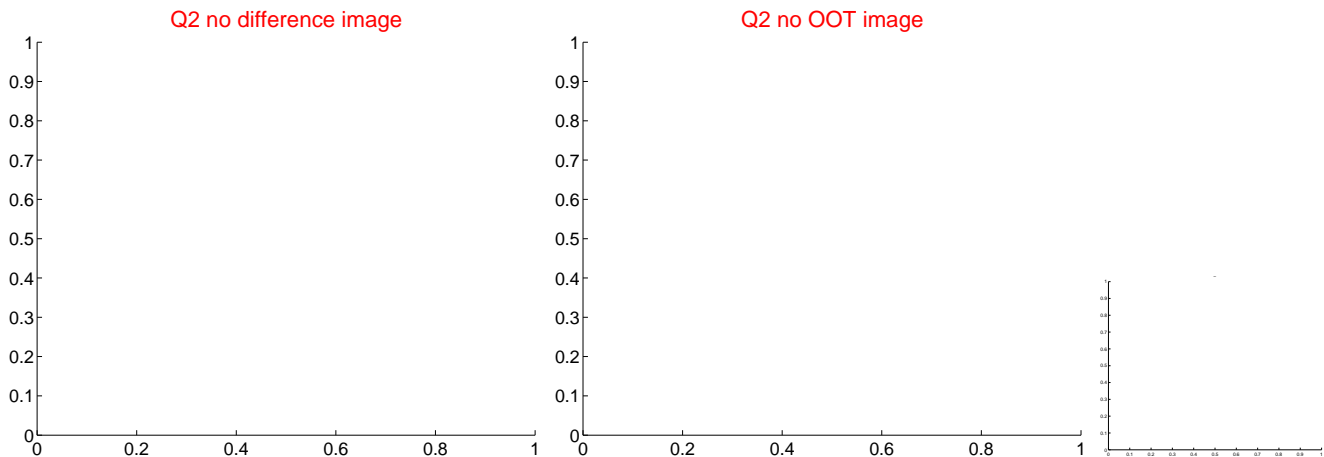
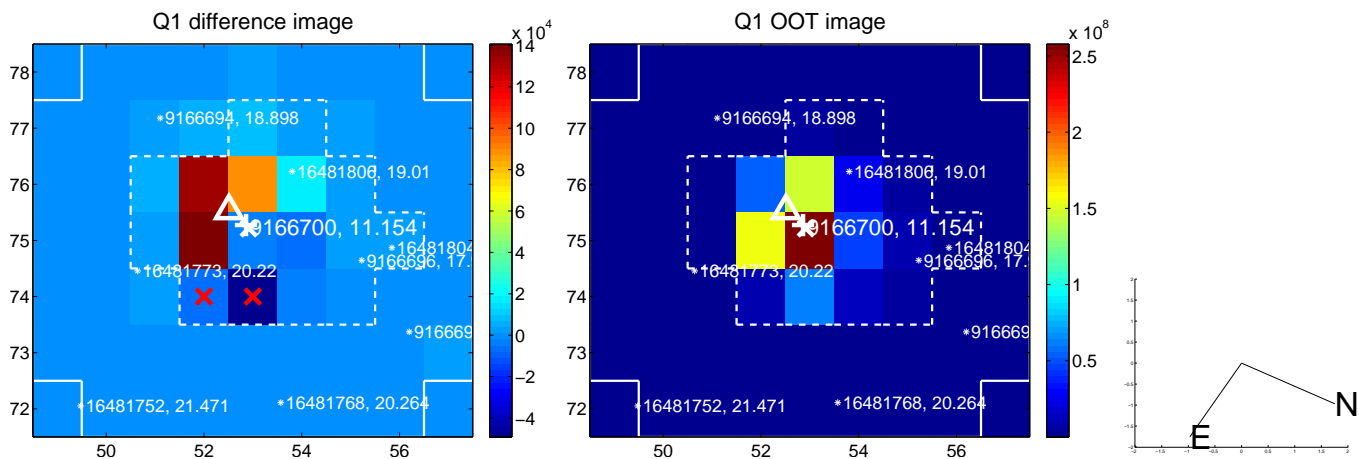
The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.609 ± 0.574	1.06	0.583 ± 0.543	0.176 ± 0.848
PRF-fit source offset from KIC position	0.724 ± 0.711	1.02	0.715 ± 0.705	0.113 ± 0.931
photometric centroid source offset	0.15 ± 0.33	0.46	-0.10 ± 0.33	-0.12 ± 0.34

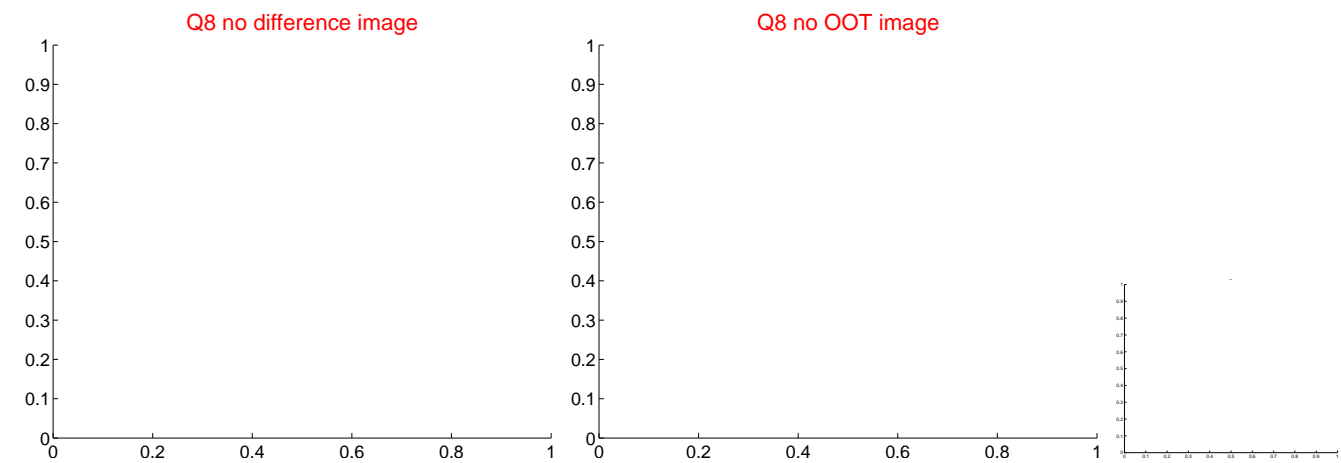
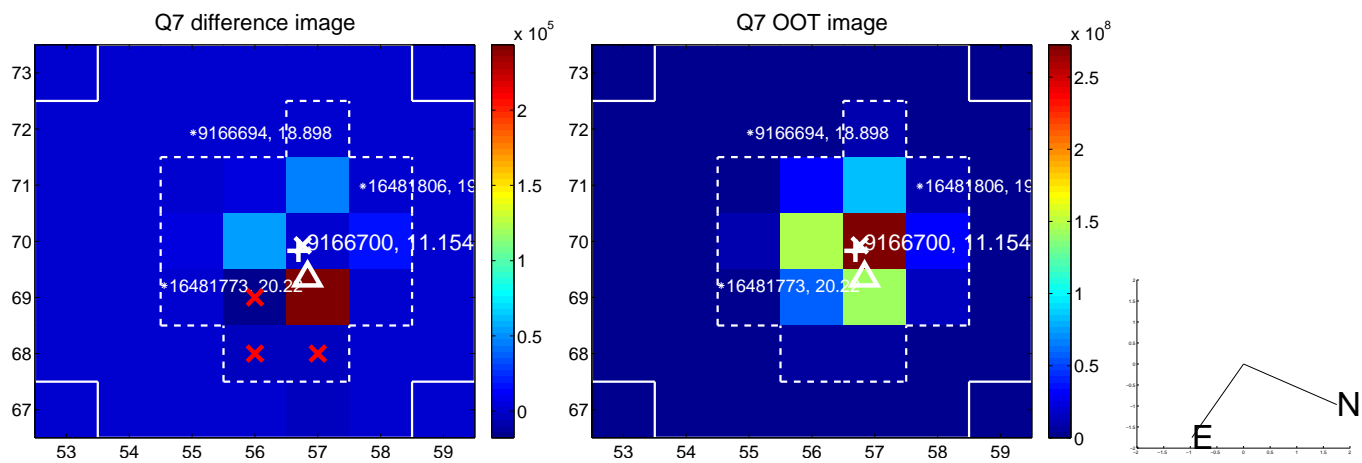
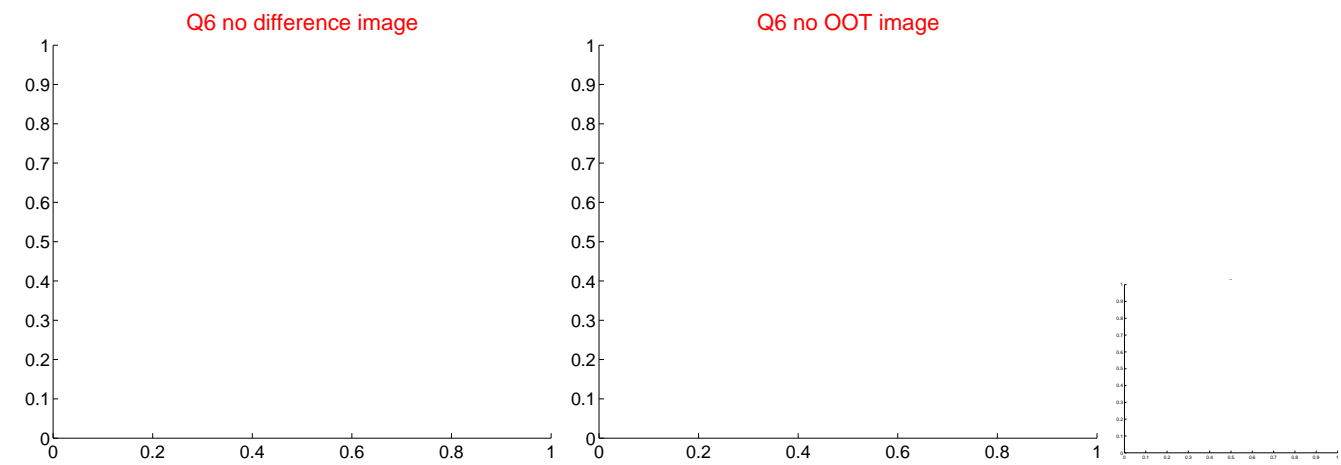
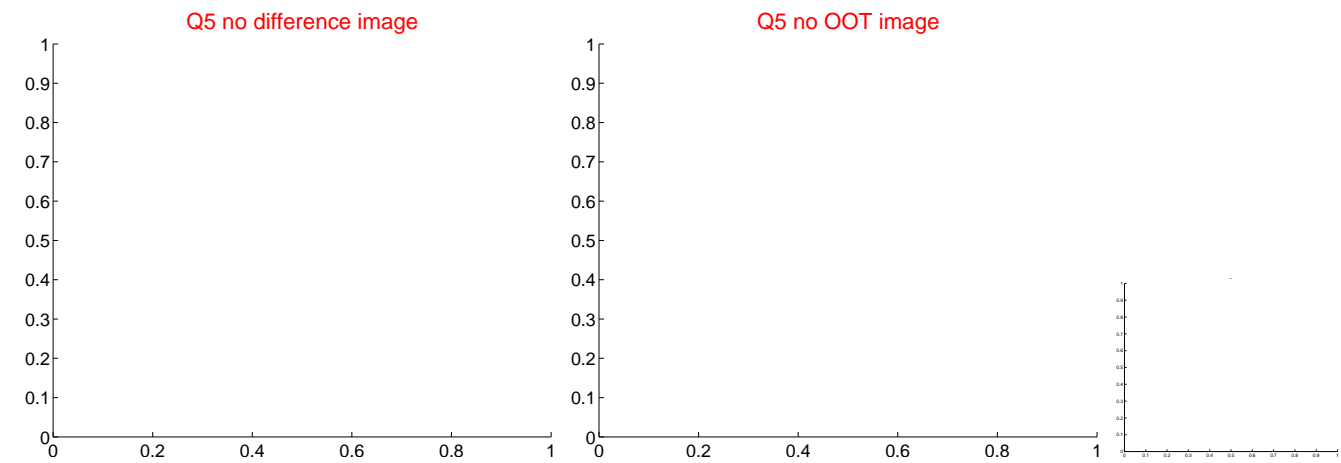


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

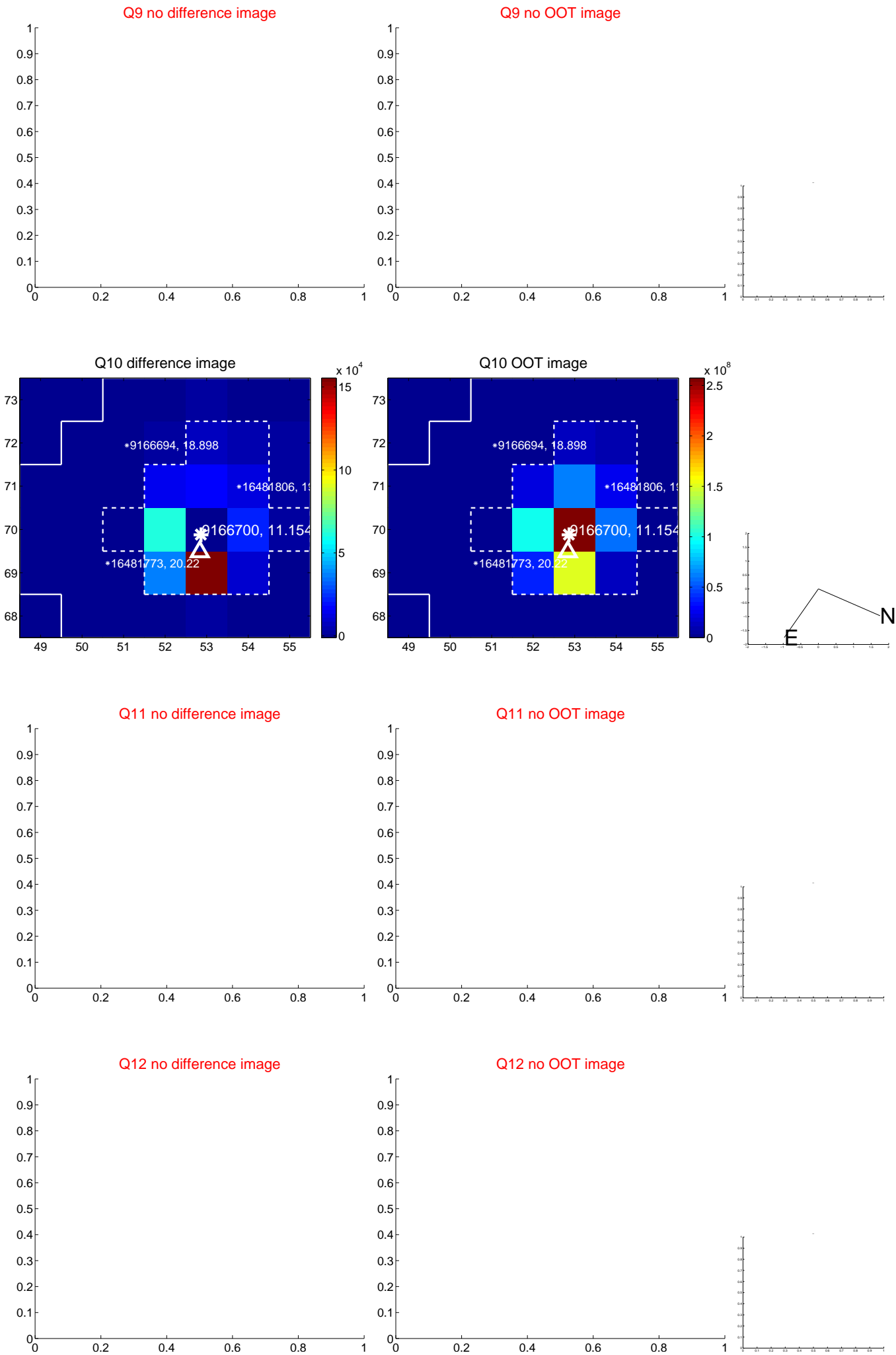
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



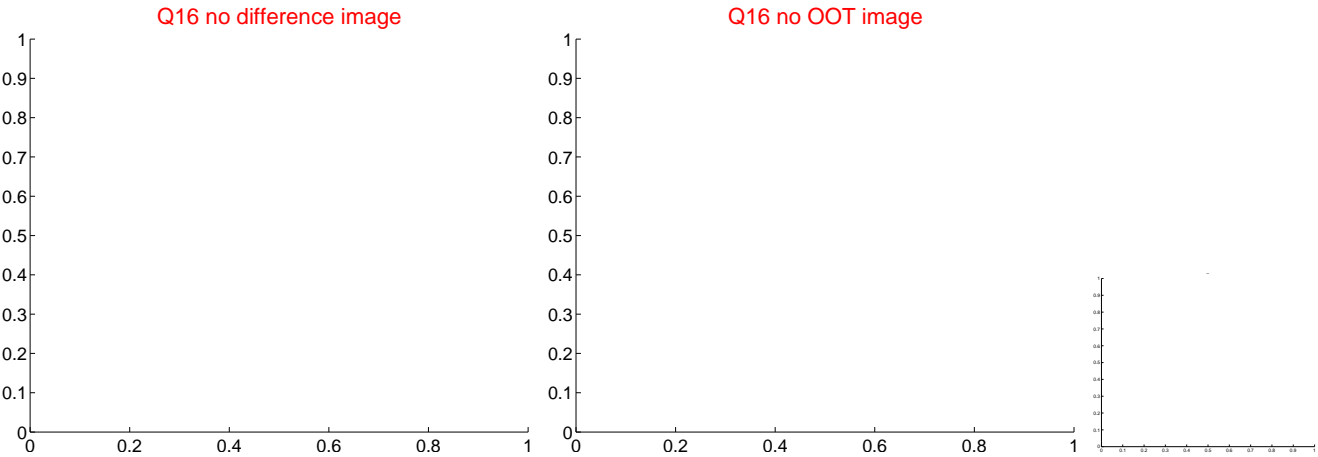
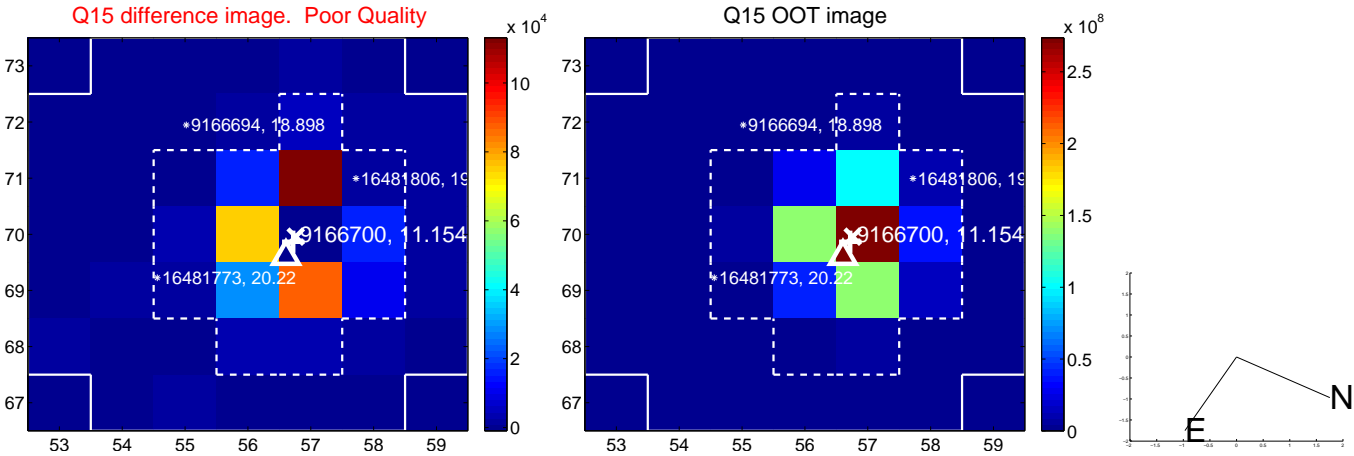
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



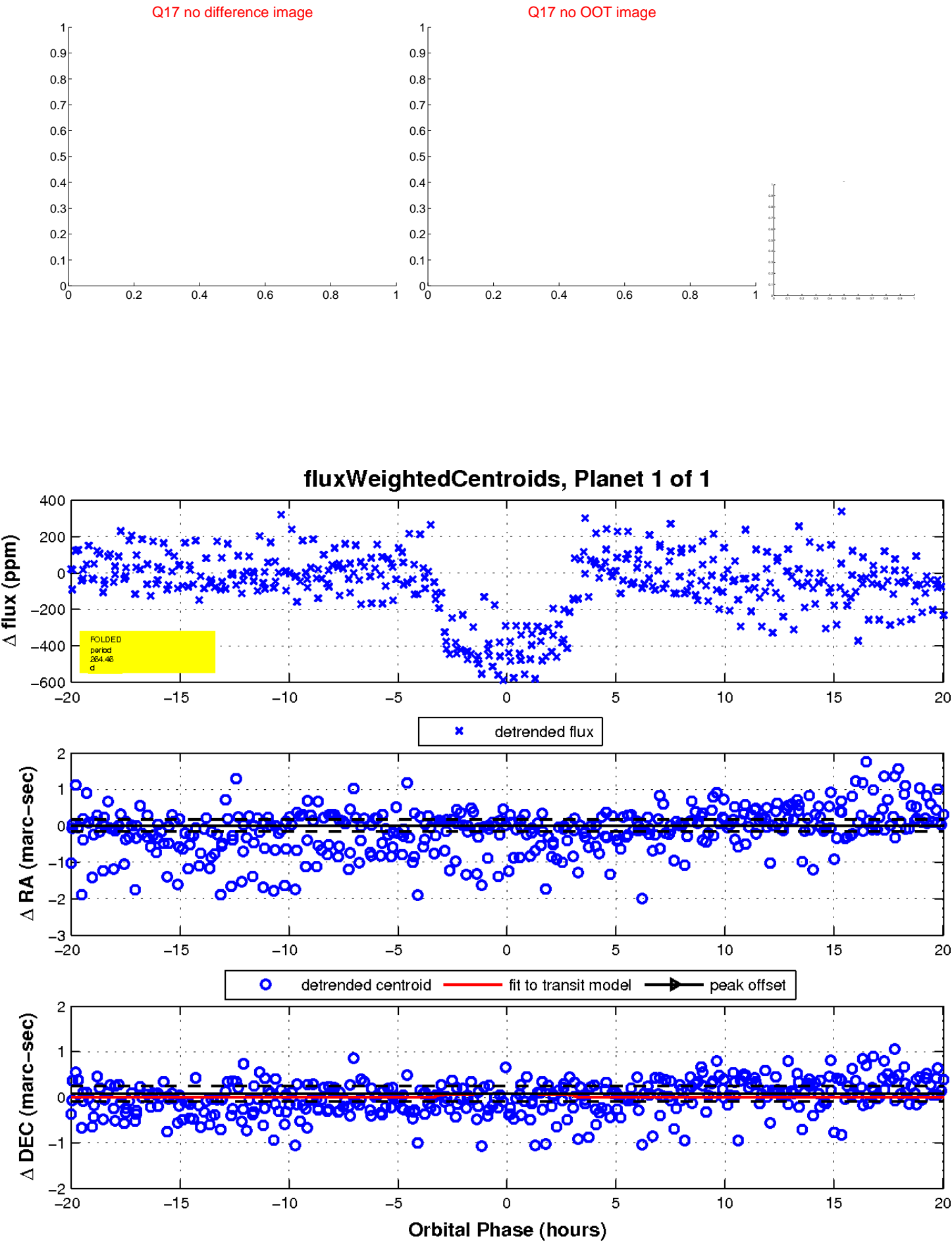
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

