

KIC 009284989

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})
009284989-01	OBS	No	387.725068	262.716978	138.3	9.693	7.3	6.6	1.12	6305	1.53	1.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009284989-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—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.

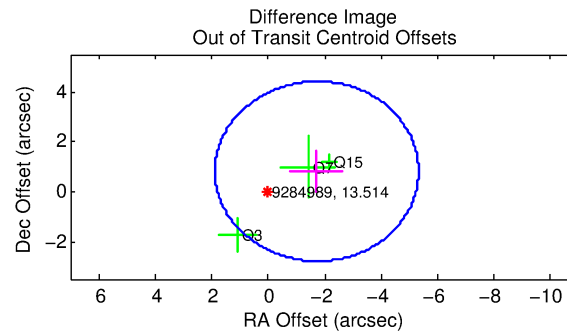
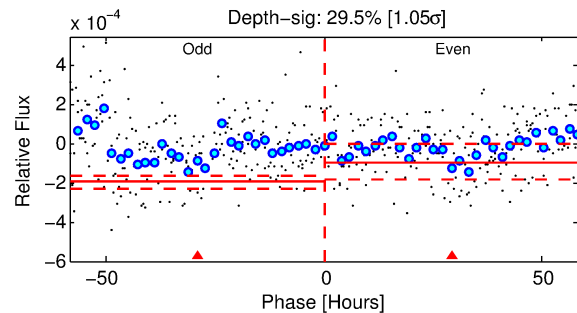
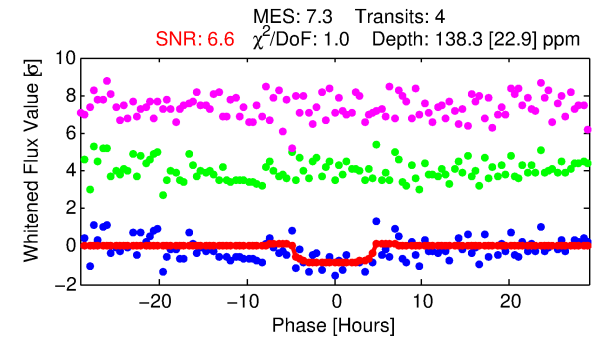
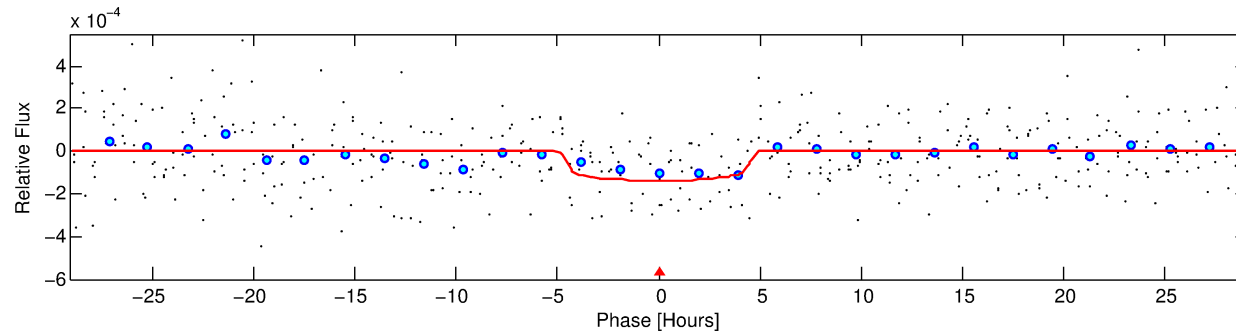
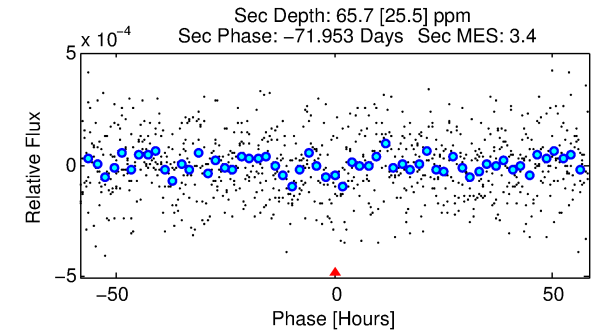
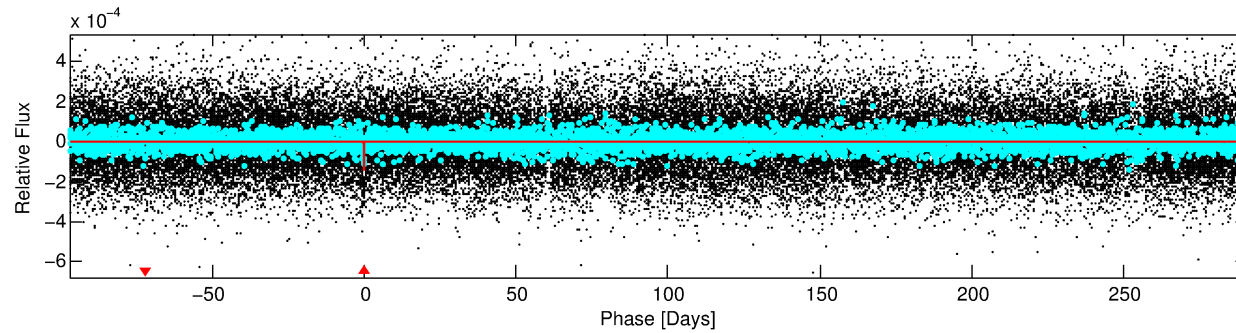
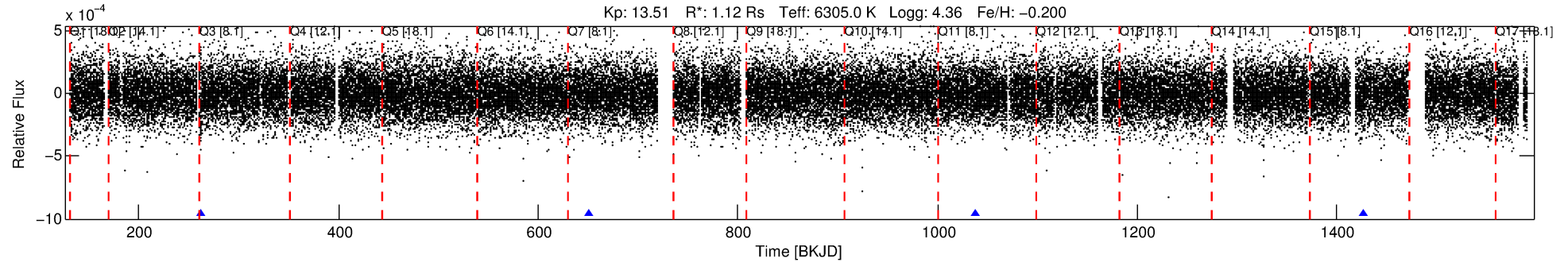
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009284989-01

No Significant Match Found

DV One-Page Summary

KIC: 9284989 Candidate: 1 of 1 Period: 387.725 d



DV Fit Results:

Period = 387.72507 [0.01188] d
Epoch = 262.7170 [0.0218] BKJD
Rp/R* = 0.0125 [0.0036]
a/R* = 147.17 [221.53]
b = 0.89 [0.35]
Seff = 1.60 [0.62]
Teq = 287 [28] K
Rp = 1.53 [0.65] Re
a = 1.0542 [0.2721] AU
Ag = 17171.71 [13404.53] [1.28σ]
Teffp = 5072 [890] K [5.38σ]

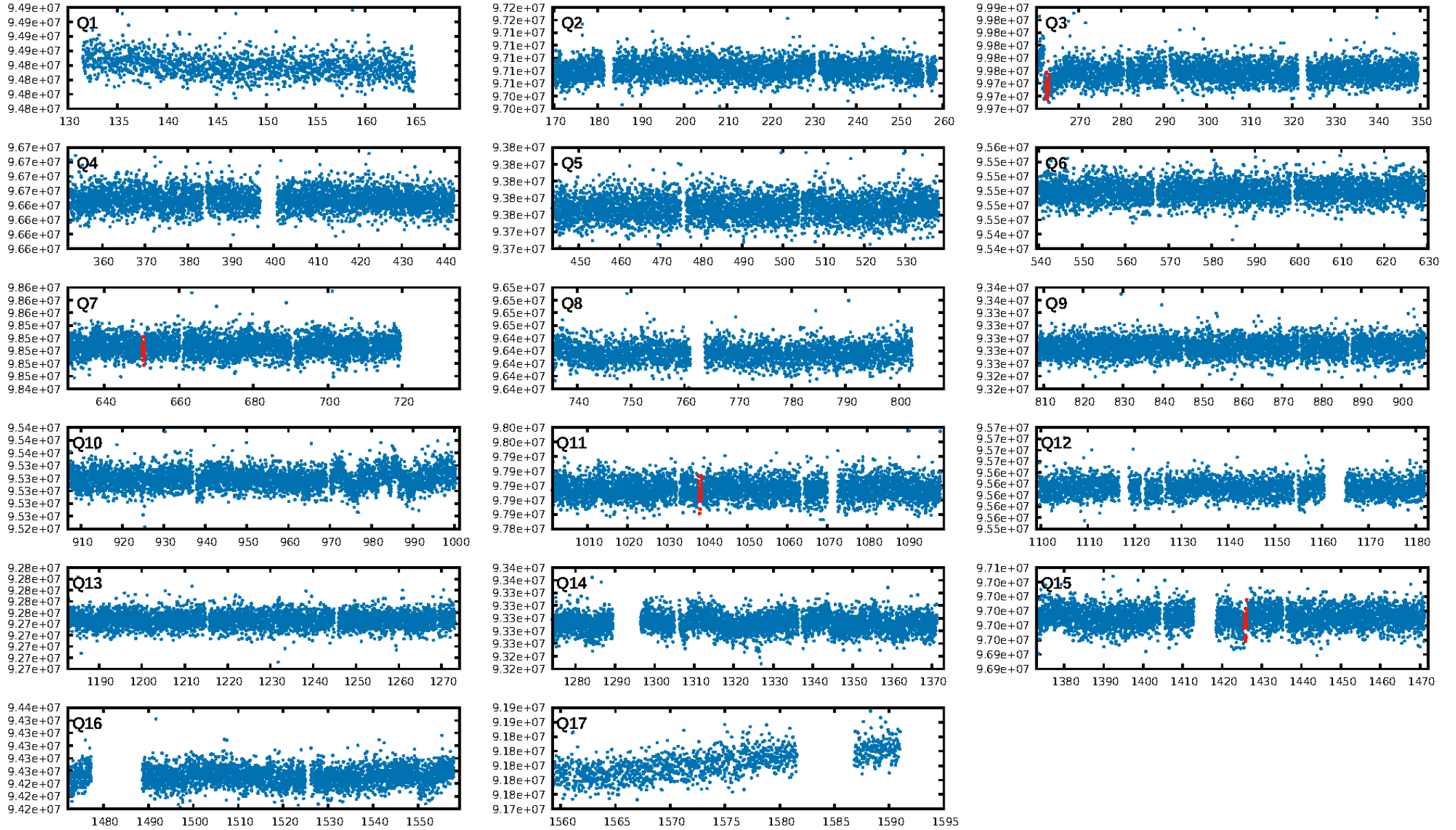
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 9.6%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 8.54e-15
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.5554
Centroid-sig: 47.5%
Centroid-so: 1.477 arcsec [0.91σ]
OotOffset-rm: 1.904 arcsec [1.59σ]
OotOffset-st: 0/3/0/0 [3]
KicOffset-rm: 2.065 arcsec [1.71σ]
KicOffset-st: 0/3/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

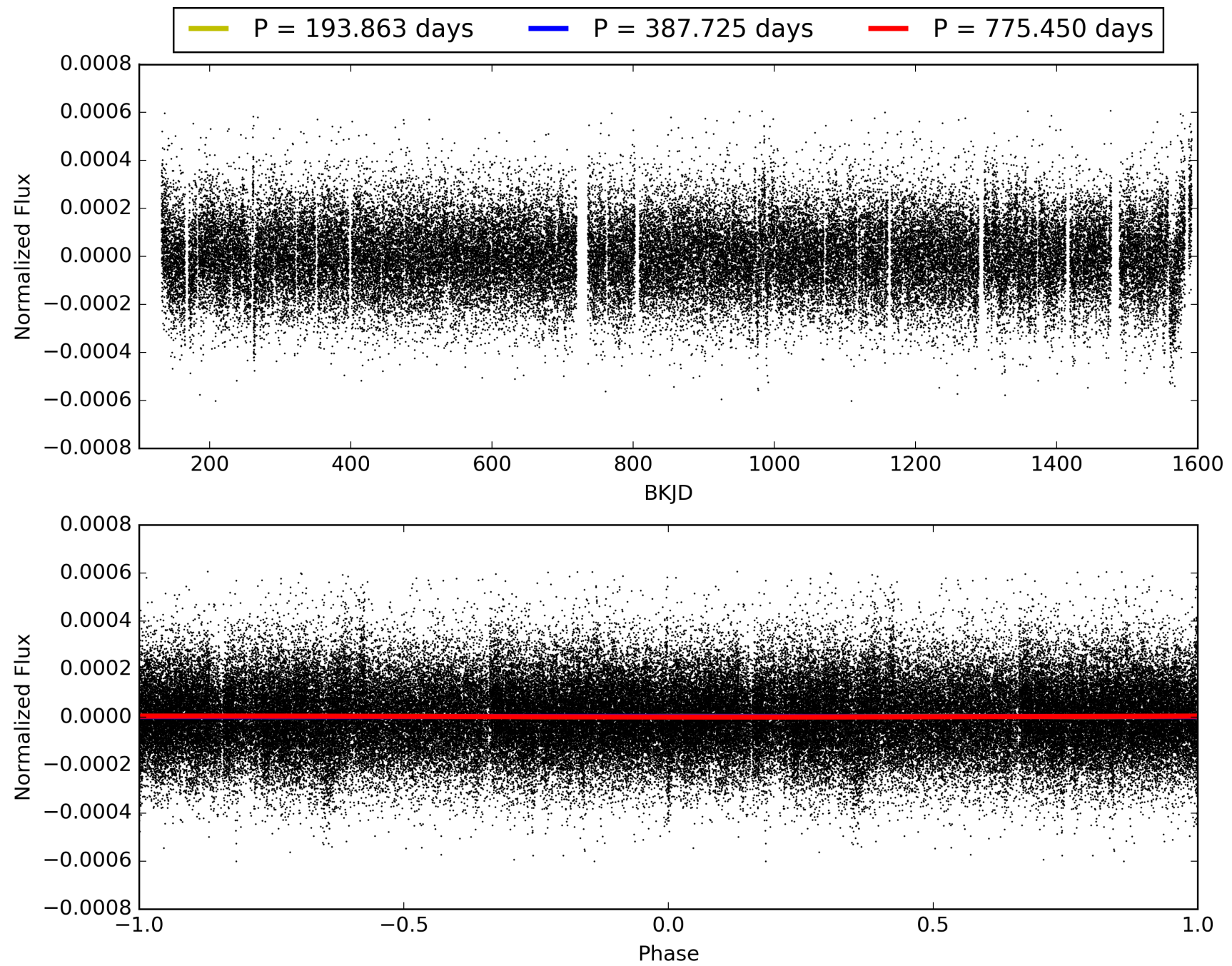
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:24:42 Z

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

TCE 009284989-01, PDC Light Curves

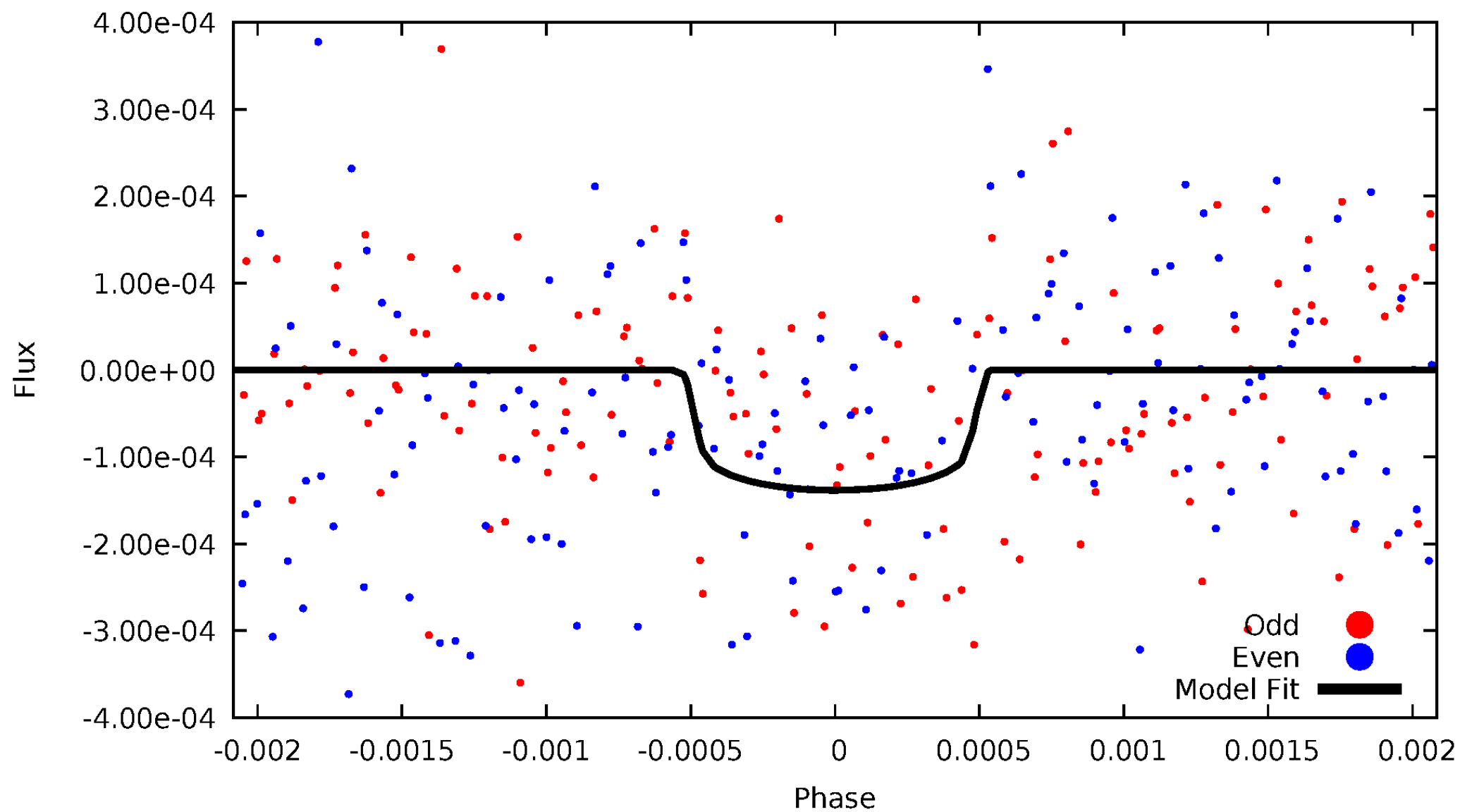


TCE 009284989-01



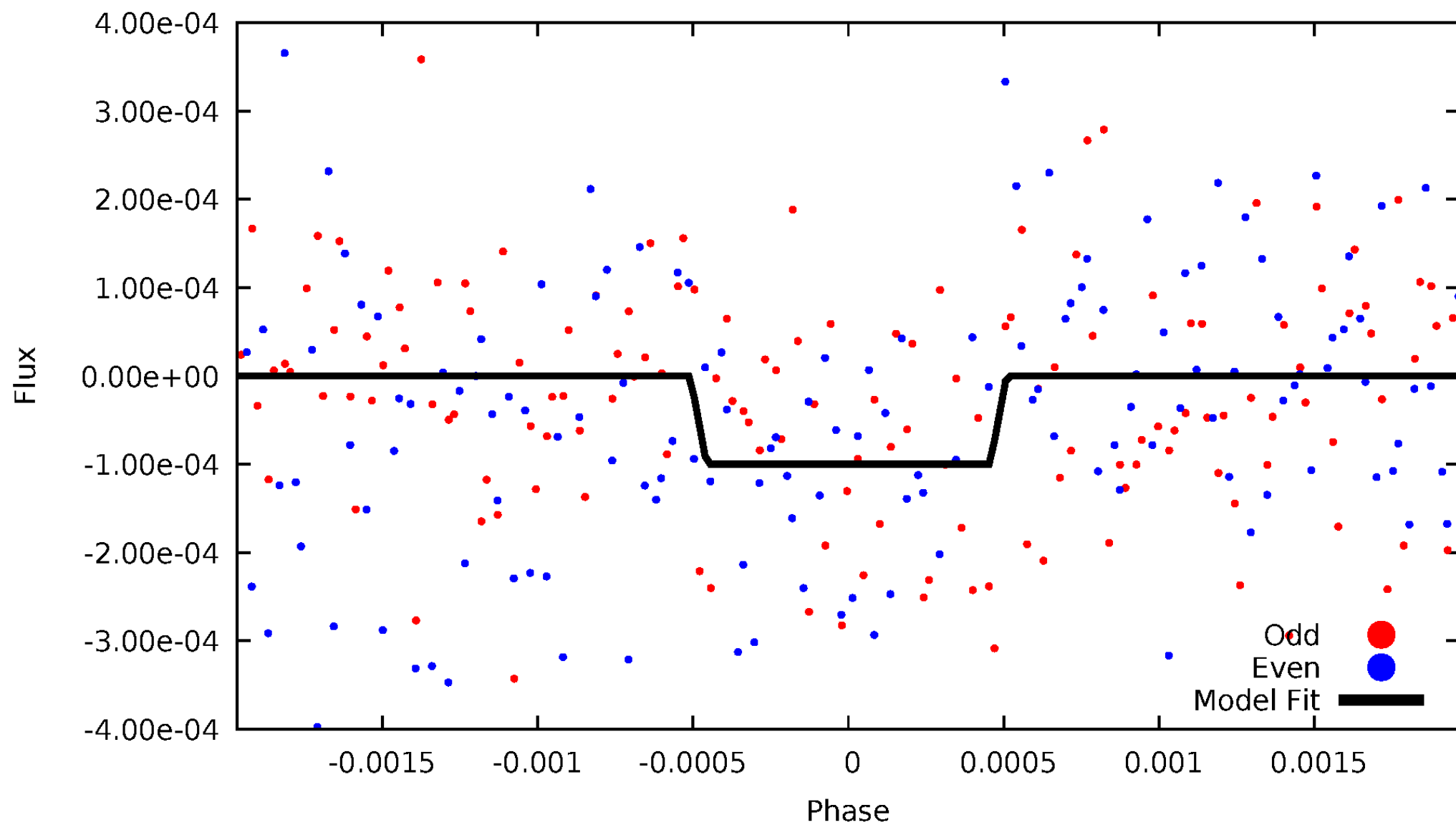
DV Odd/Even

TCE 009284989-01

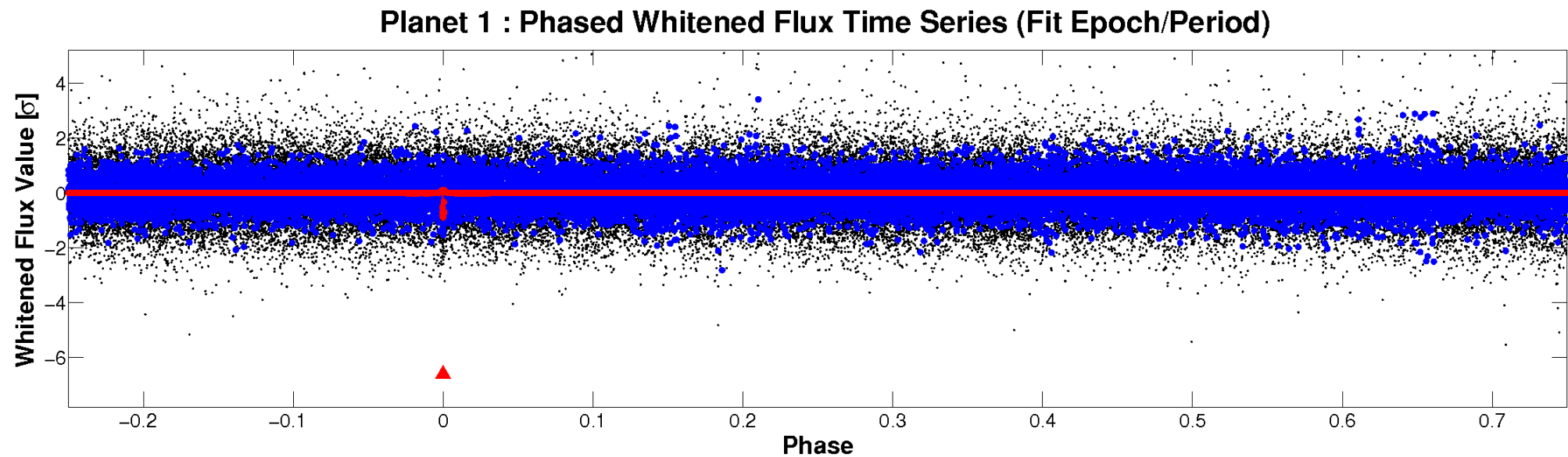
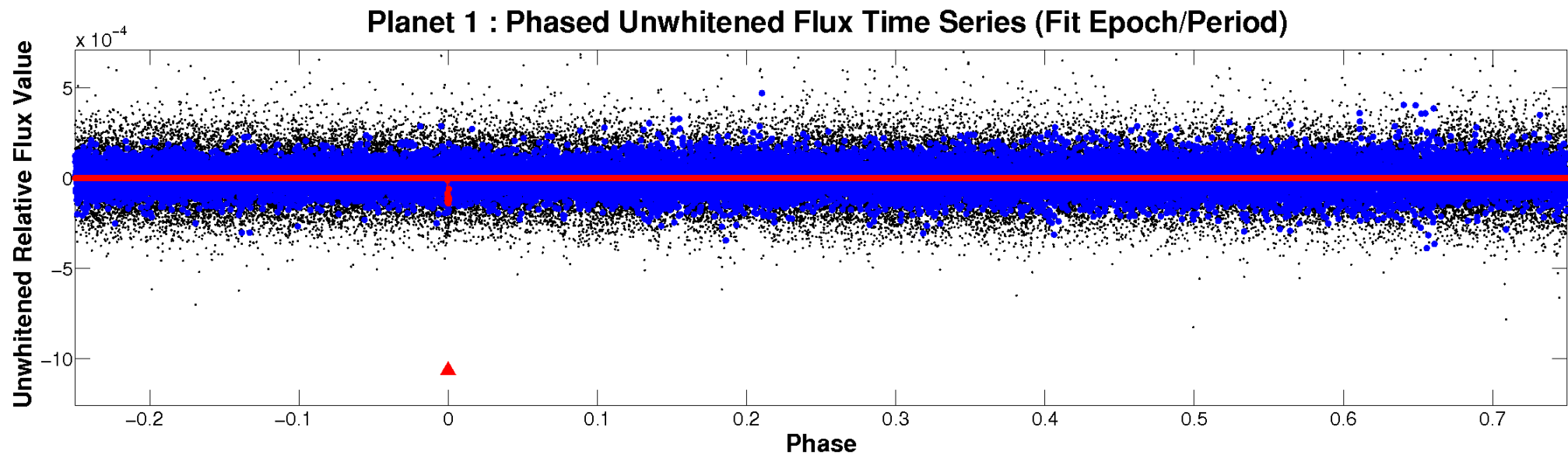


ALT Odd/Even

TCE 009284989-01

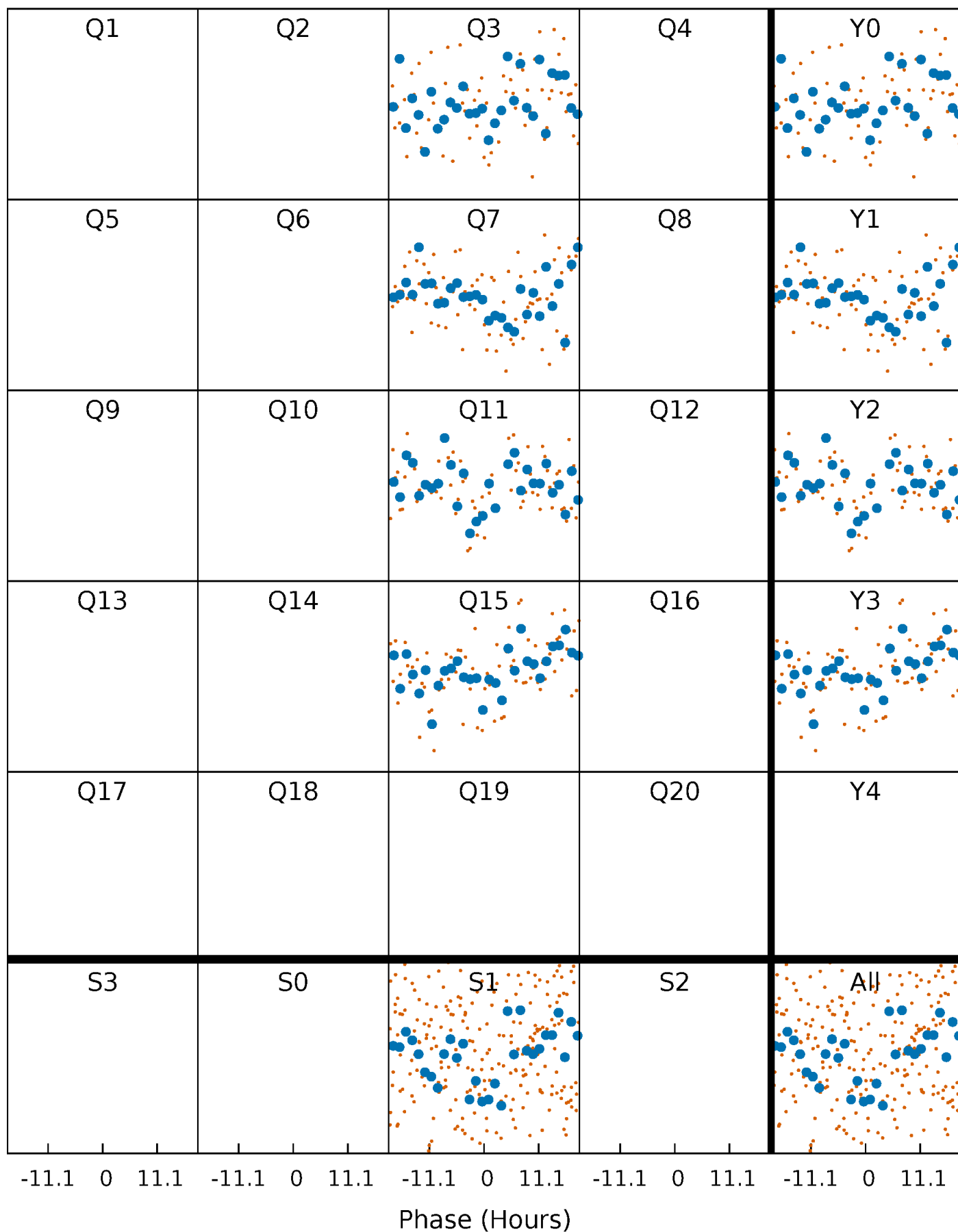


Non-Whitened Vs. Whitened Light Curve



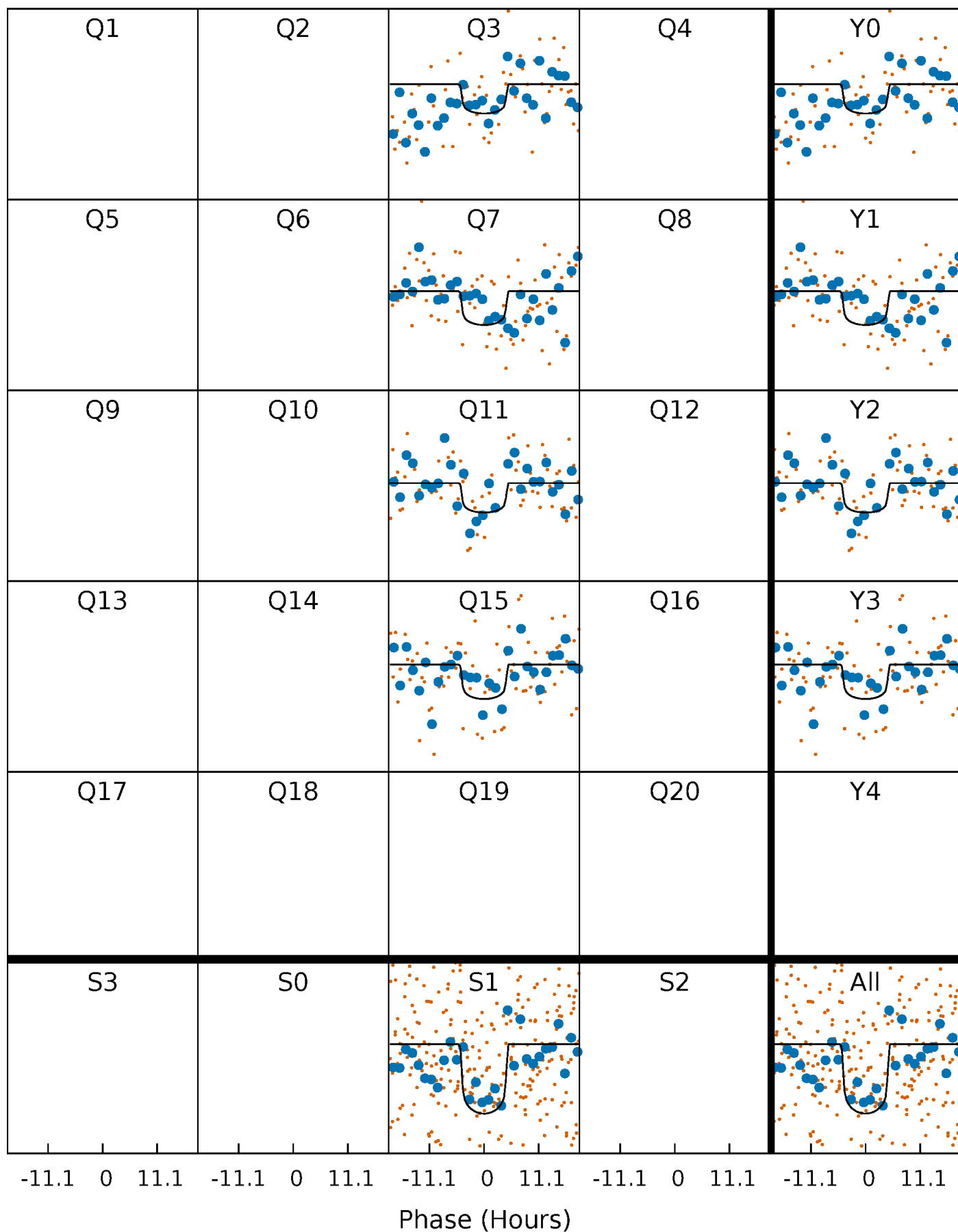
PDC Quarter-Phased Transit Curves

TCE 009284989-01 P=387.725068 Days $T_0=262.716978$ (BKJD)



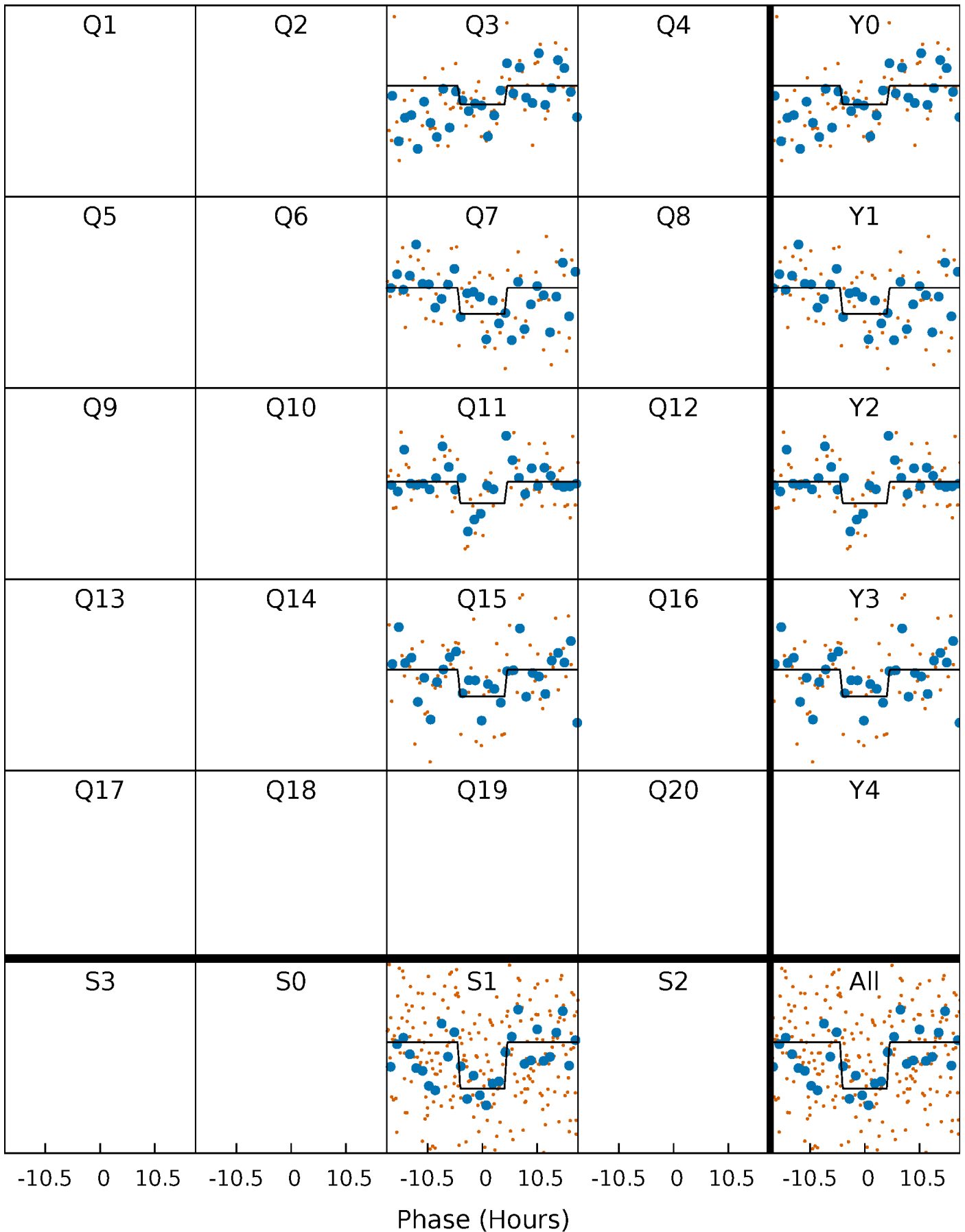
DV Quarter-Phased Transit Curves

TCE 009284989-01 P=387.725068 Days $T_0=262.716978$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

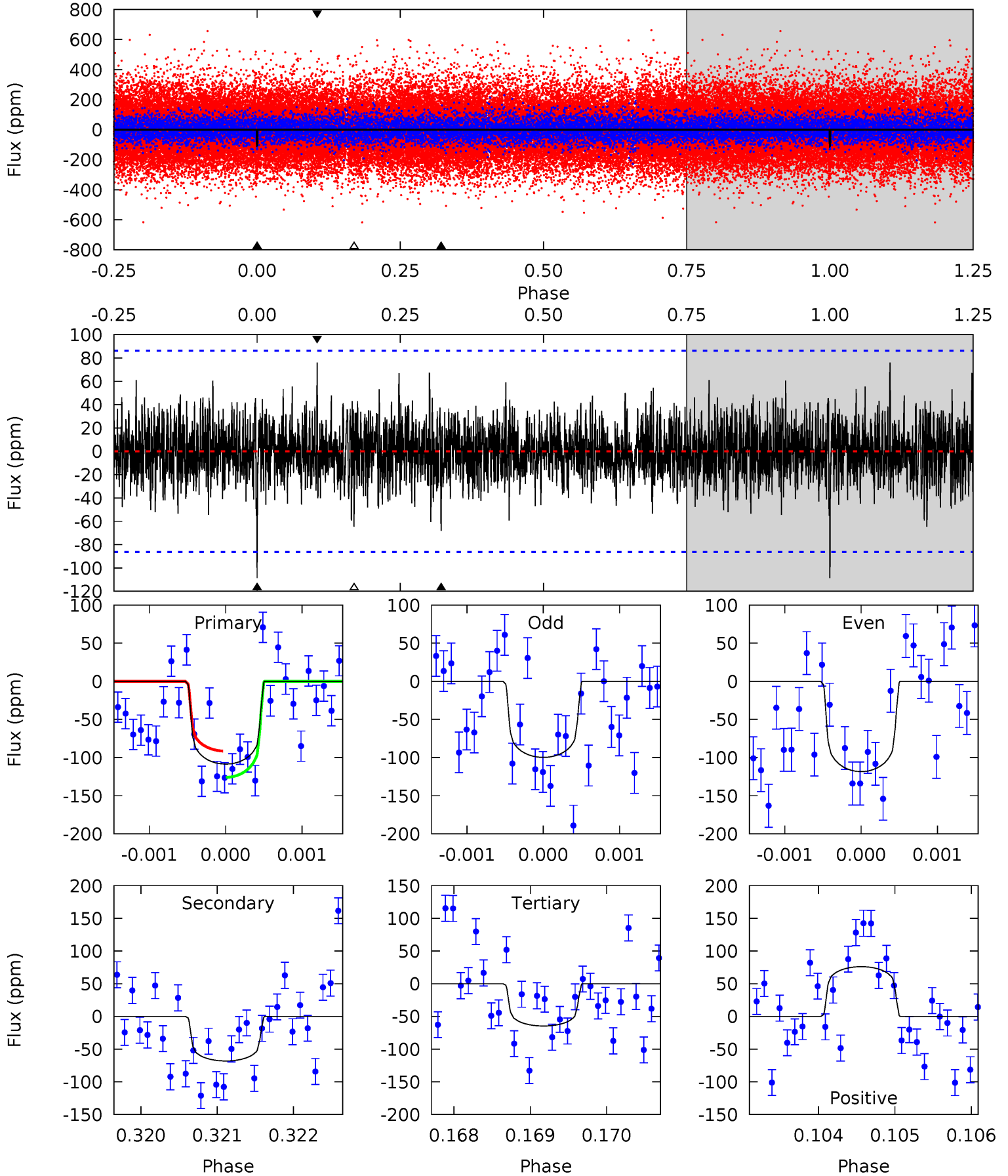
TCE 009284989-01 P=387.719990 Days $T_0=262.726397$ (BKJD)



DV Model-Shift Uniqueness Test

009284989-01, P = 387.725068 Days, E = 262.716978 Days

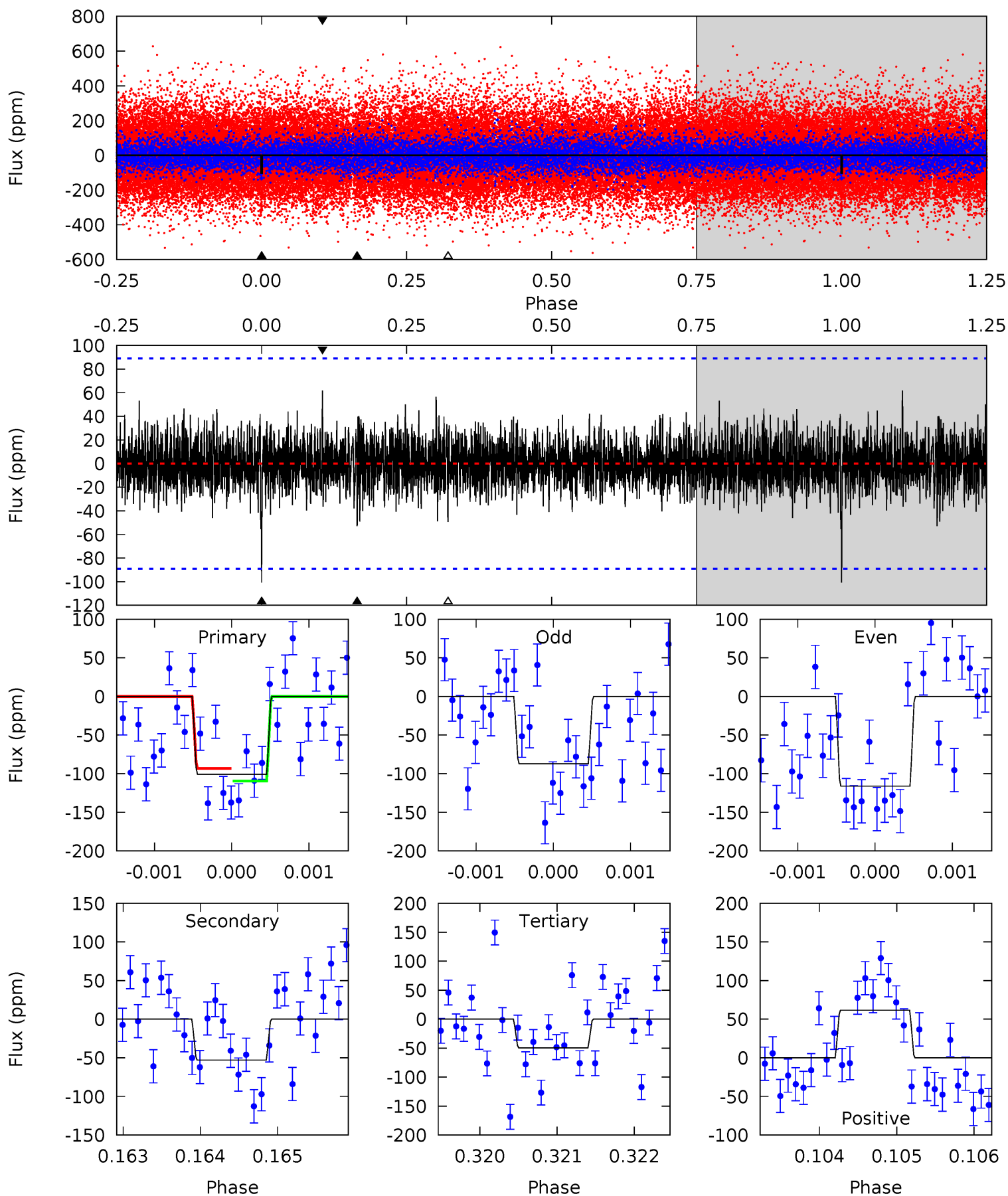
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.85	4.30	4.08	4.80	5.44	3.27	1.15	2.77	2.05	0.22	-0.50	0.59	0.95	0.41	1.09



Alt Model-Shift Uniqueness Test

009284989-01, $P = 387.719990$ Days, $E = 262.726397$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.17	3.24	3.03	3.78	5.45	3.29	0.89	3.15	2.39	0.21	-0.54	0.89	0.97	0.38	0.50



Stellar Parameters For KIC 009284989

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6305^{+156}_{-203}	$4.357^{+0.105}_{-0.195}$	$-0.200^{+0.250}_{-0.300}$	$1.119^{+0.353}_{-0.151}$	$1.036^{+0.173}_{-0.115}$	$1.041^{+0.467}_{-0.512}$
	+2%/-3%	+2%/-4%	+125%/-150%	+32%/-13%	+17%/-11%	+45%/-49%
Source	PHO1	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 009284989-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-68 ± 16	$1.56^{+0.51}_{-0.45}$	402^{+28}_{-20}	5135^{+889}_{-526}	17043^{+17040}_{-8055}
Alt.	-53 ± 16	$1.23^{+0.51}_{-0.46}$	402^{+31}_{-20}	5355^{+1429}_{-718}	20251^{+31470}_{-10658}

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

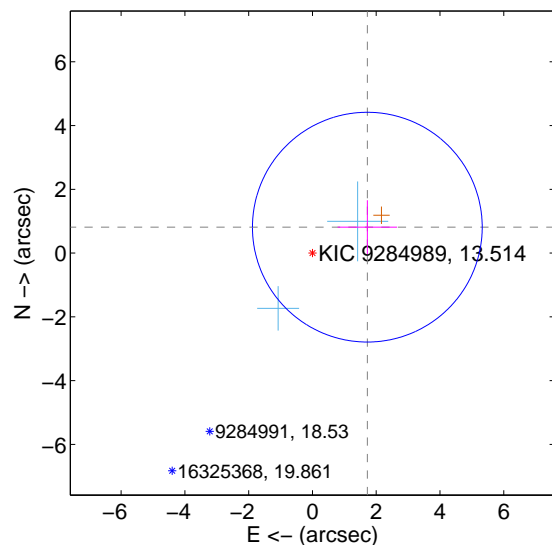
Supplemental centroid analysis for 009284989-01. Kepler magnitude: 13.51. Transit SNR 6.58

There are 2 quarters with good PRF difference image offsets

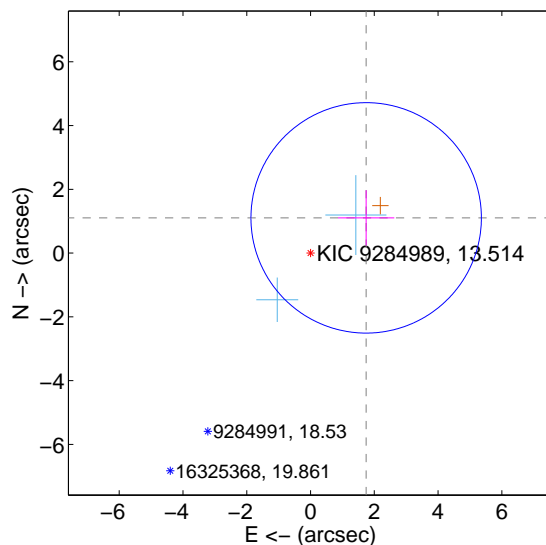
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.904 ± 1.201	1.59	-1.721 ± 0.932	0.813 ± 0.844
PRF-fit source offset from KIC position	2.065 ± 1.204	1.71	-1.745 ± 0.881	1.105 ± 0.866
photometric centroid source offset	1.48 ± 1.62	0.91	1.40 ± 1.60	0.47 ± 1.73

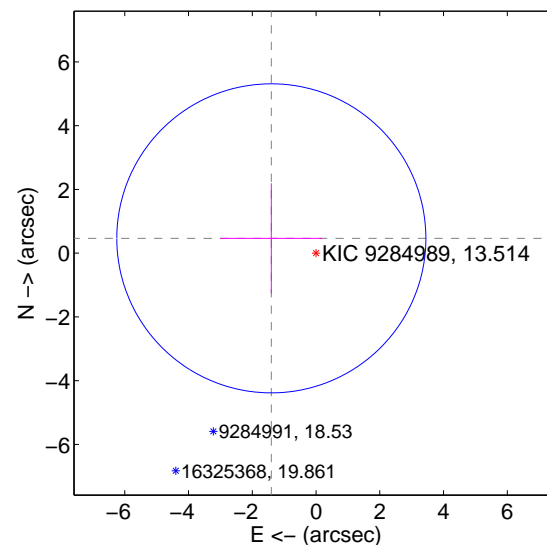
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



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 are from the UKIRT catalog.

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

Q1 no difference image



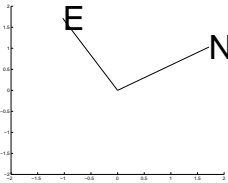
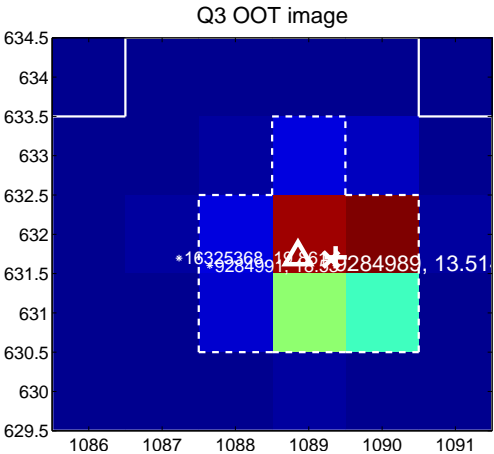
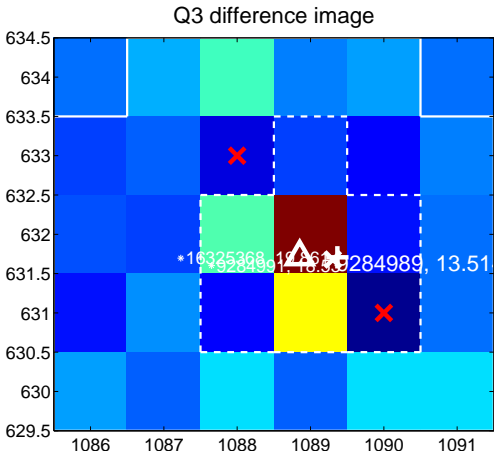
Q1 no OOT image



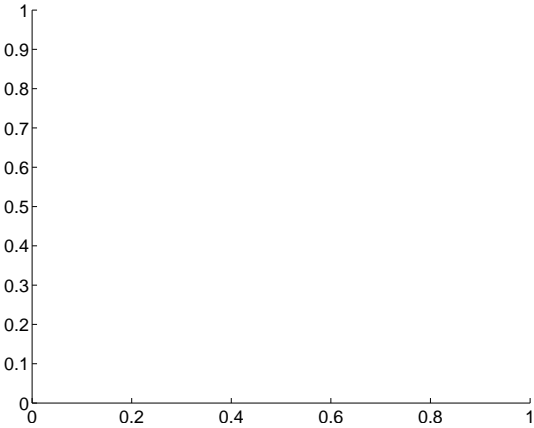
Q2 no difference image



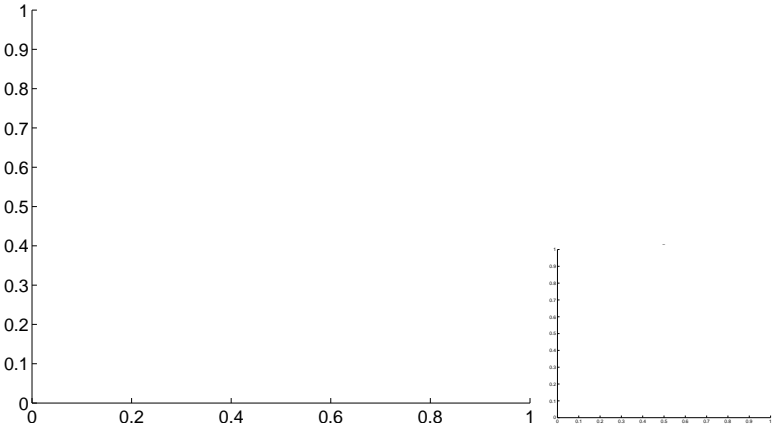
Q2 no OOT image



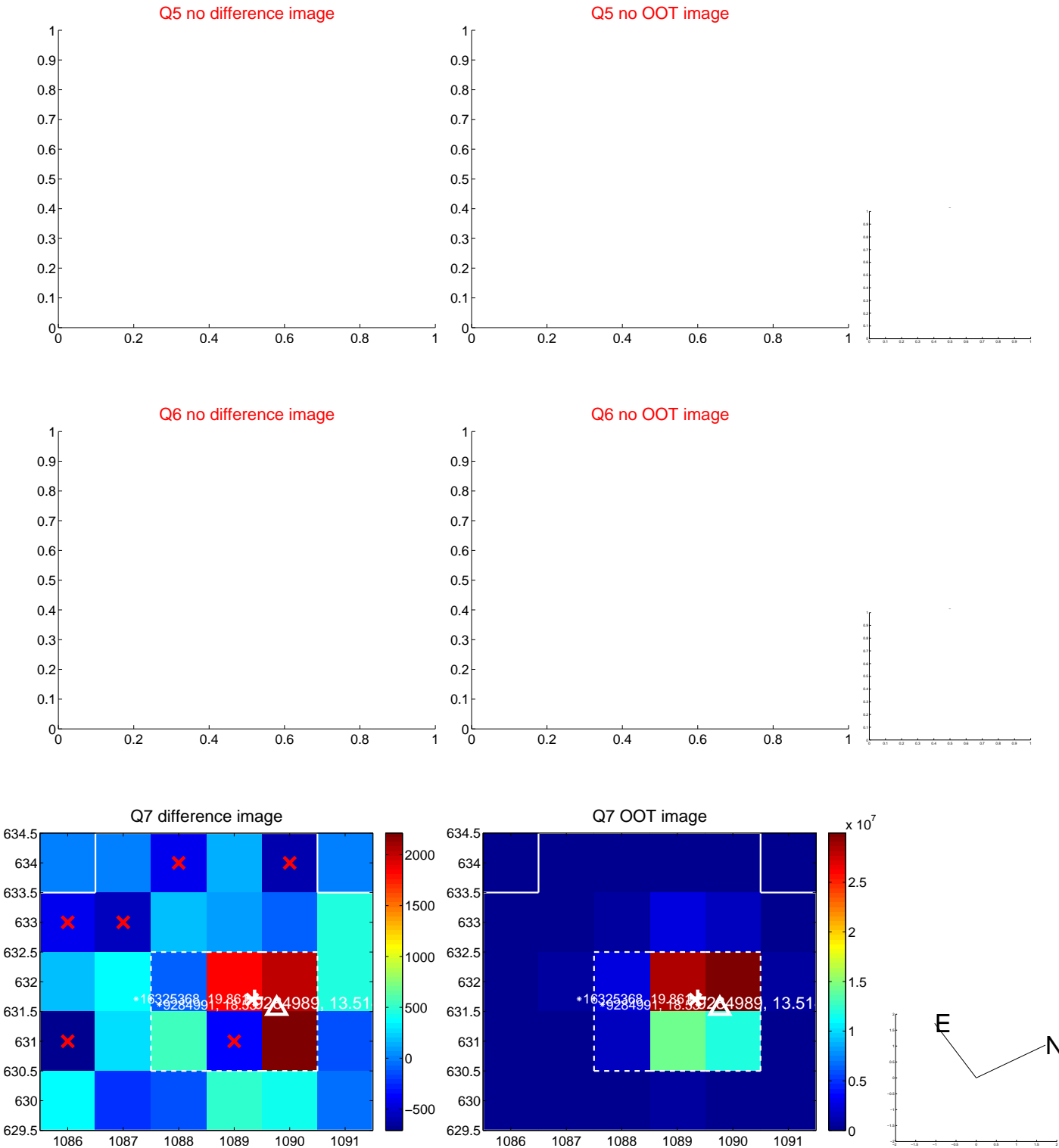
Q4 no difference image



Q4 no OOT image



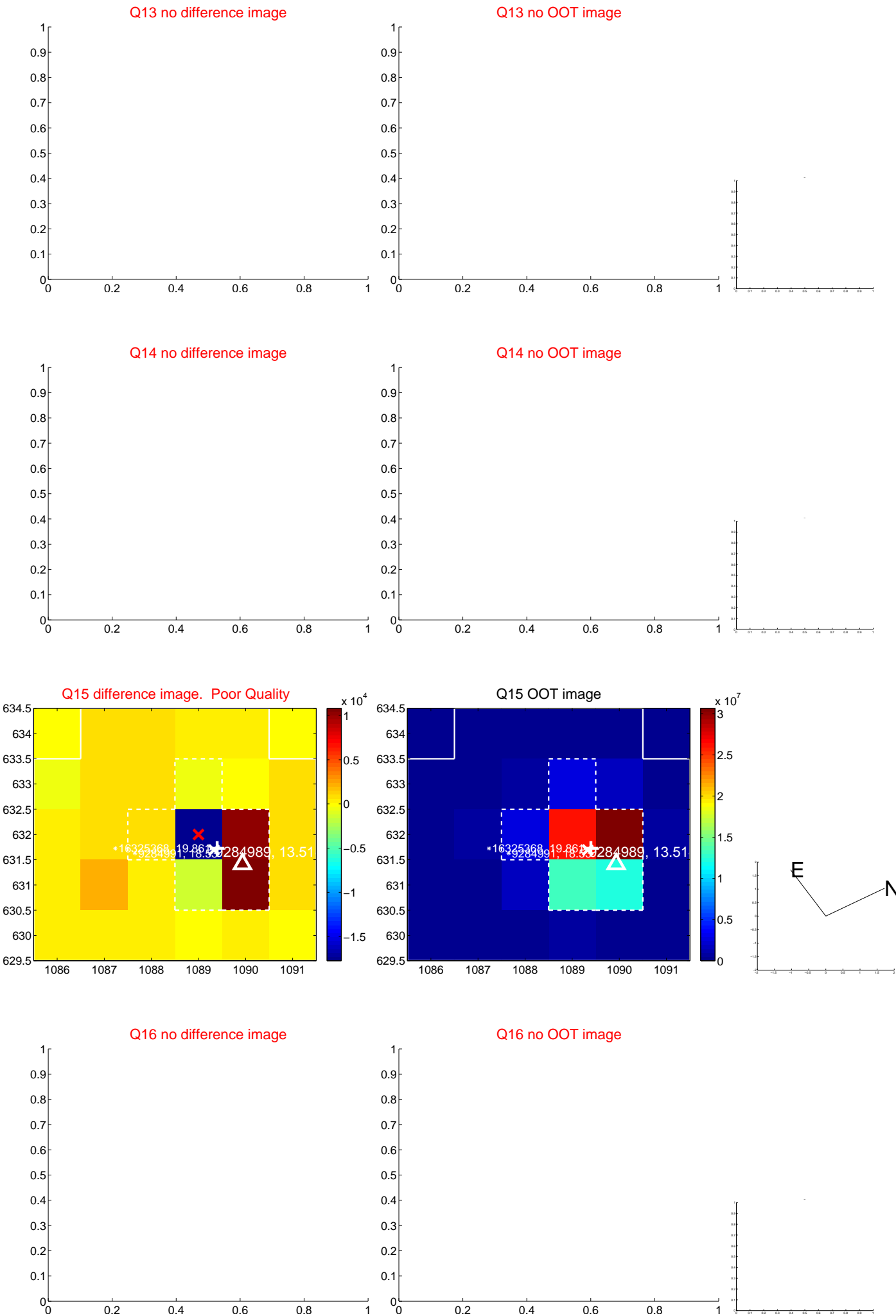
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



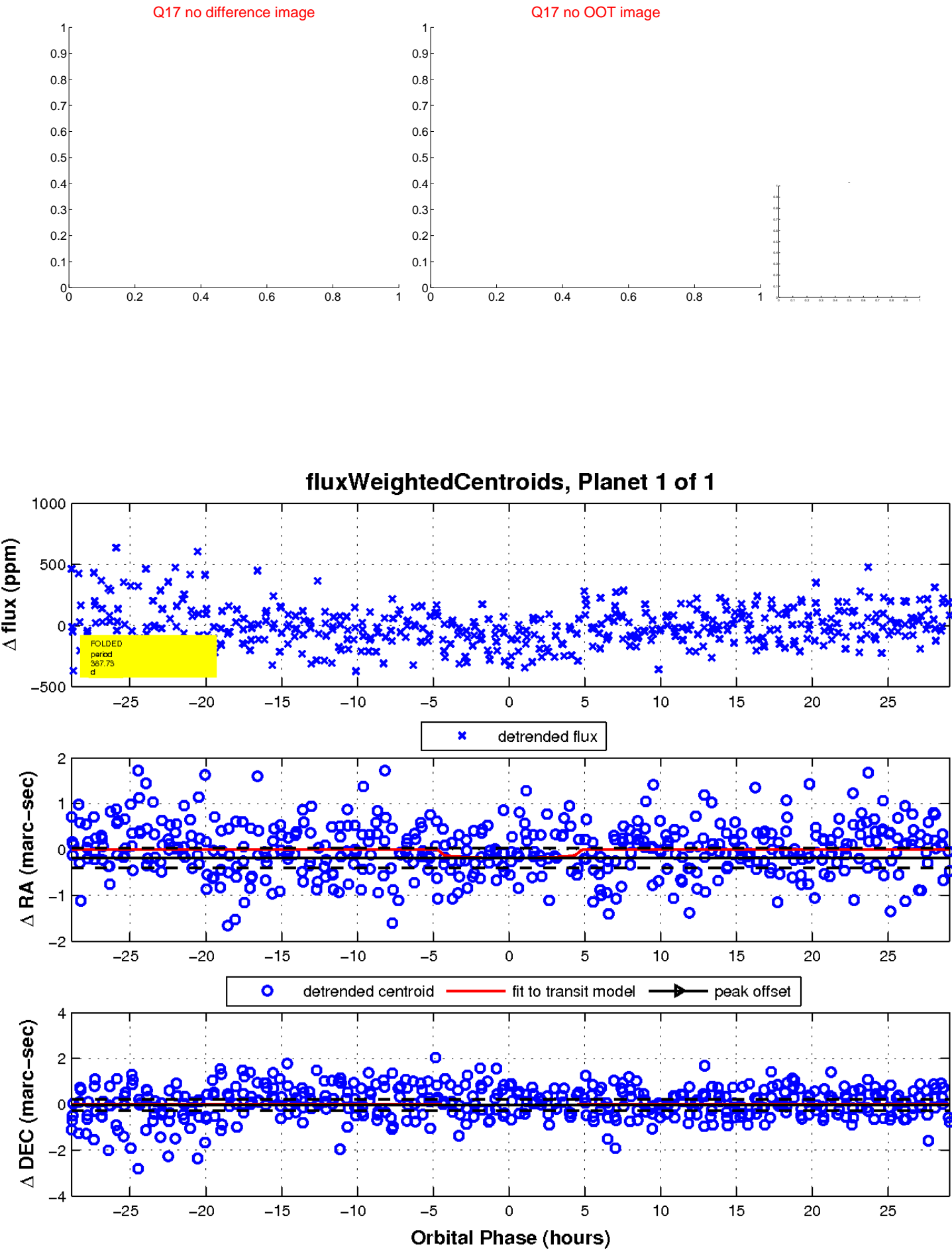
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

