

KIC 006351285

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})
006351285-01	OBS	No	427.765546	315.280213	461.9	4.381	10.0	9.7	1.48	5780	4.14	1.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006351285-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS

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

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

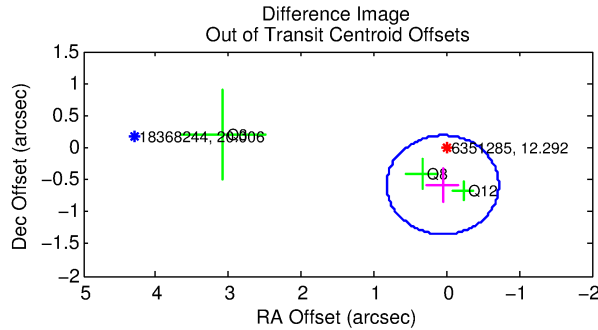
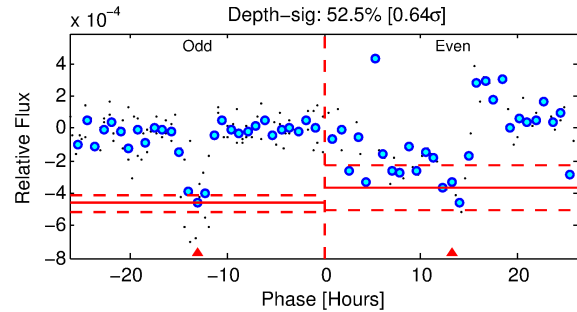
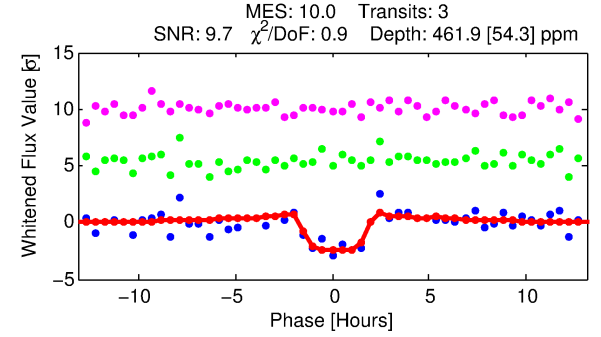
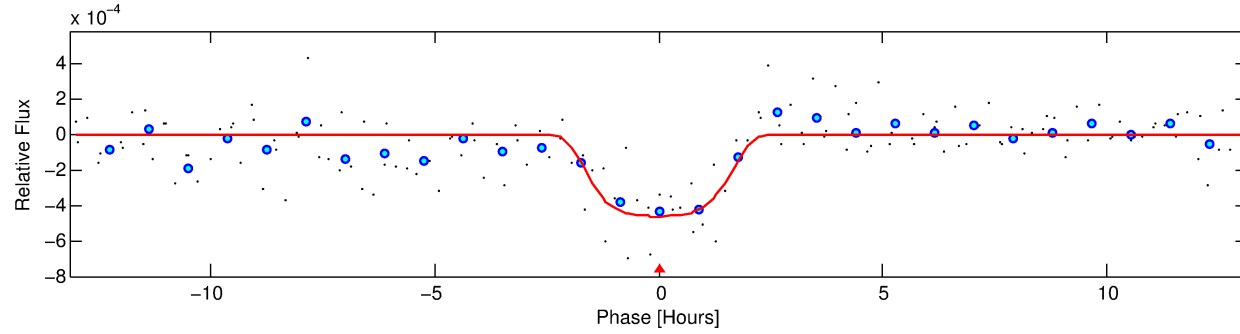
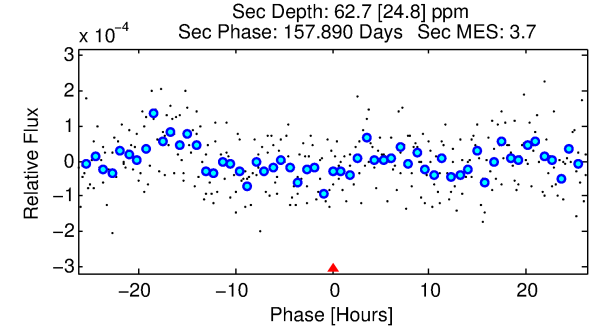
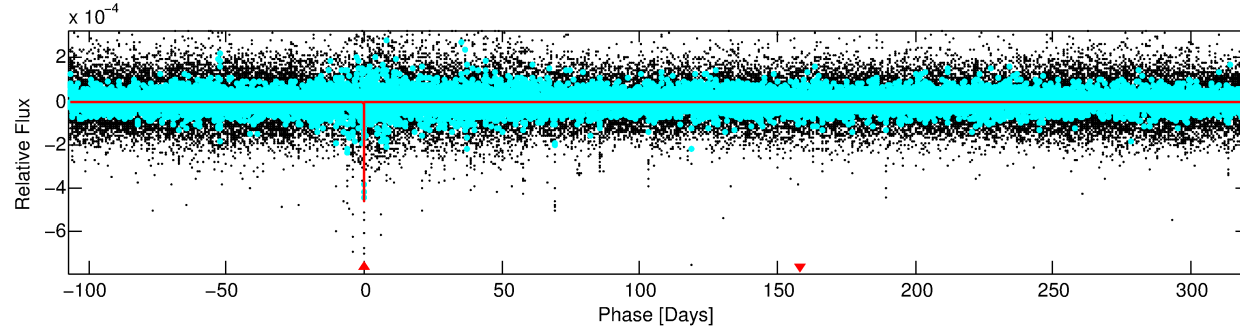
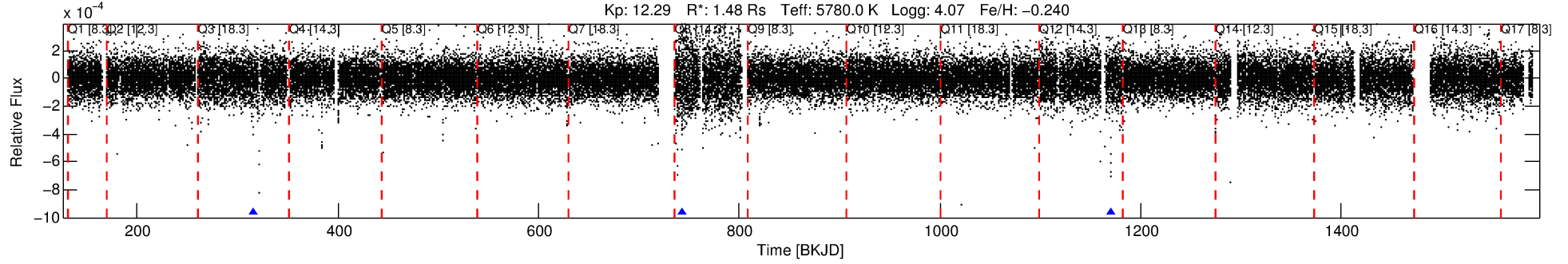
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006351285-01

No Significant Match Found

DV One-Page Summary

KIC: 6351285 Candidate: 1 of 1 Period: 427.766 d



DV Fit Results:

Period = 427.76555 [0.00560] d
Epoch = 315.2802 [0.0057] BKJD
Rp/R* = 0.0256 [0.0020]
a/R* = 263.73 [48.40]
b = 0.96 [0.01]
Seff = 1.86 [1.25]
Teff = 298 [50] K
Rp = 4.14 [1.64] Re
a = 1.0862 [0.4315] AU
Ag = 2372.47 [1852.16] [1.28σ]
Teffp = 3215 [357] K [8.09σ]

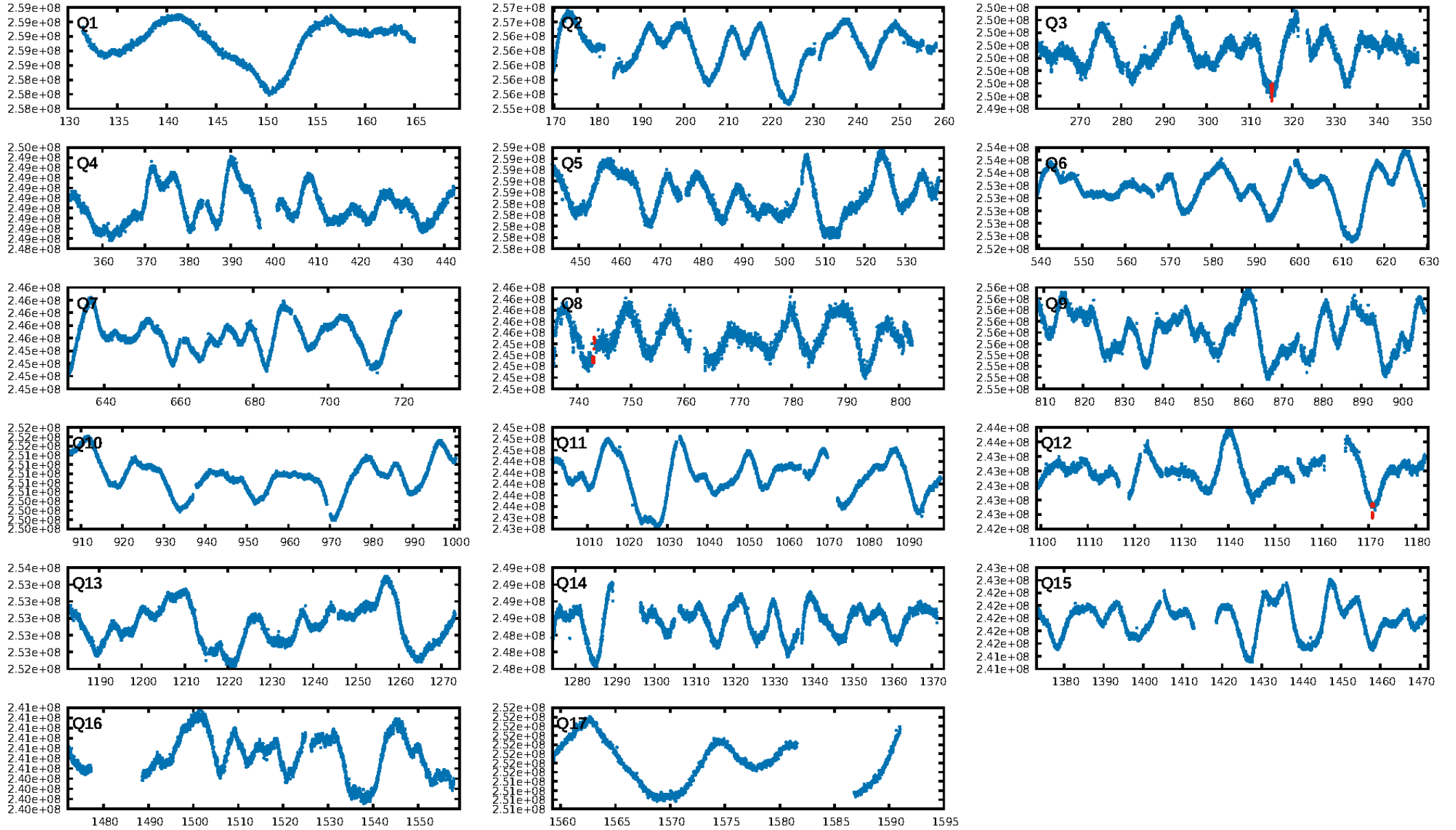
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.8%
ModelChiSquareGof-sig: 93.5%
Bootstrap-pfa: 7.35e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.31
Centroid-sig: 7.6%
Centroid-so: 0.922 arcsec [1.48σ]
OotOffset-rm: 0.584 arcsec [2.27σ]
KicOffset-rm: 0.645 arcsec [2.51σ]
OotOffset-st: 0/1/2/0 [3]
KicOffset-st: 0/1/2/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

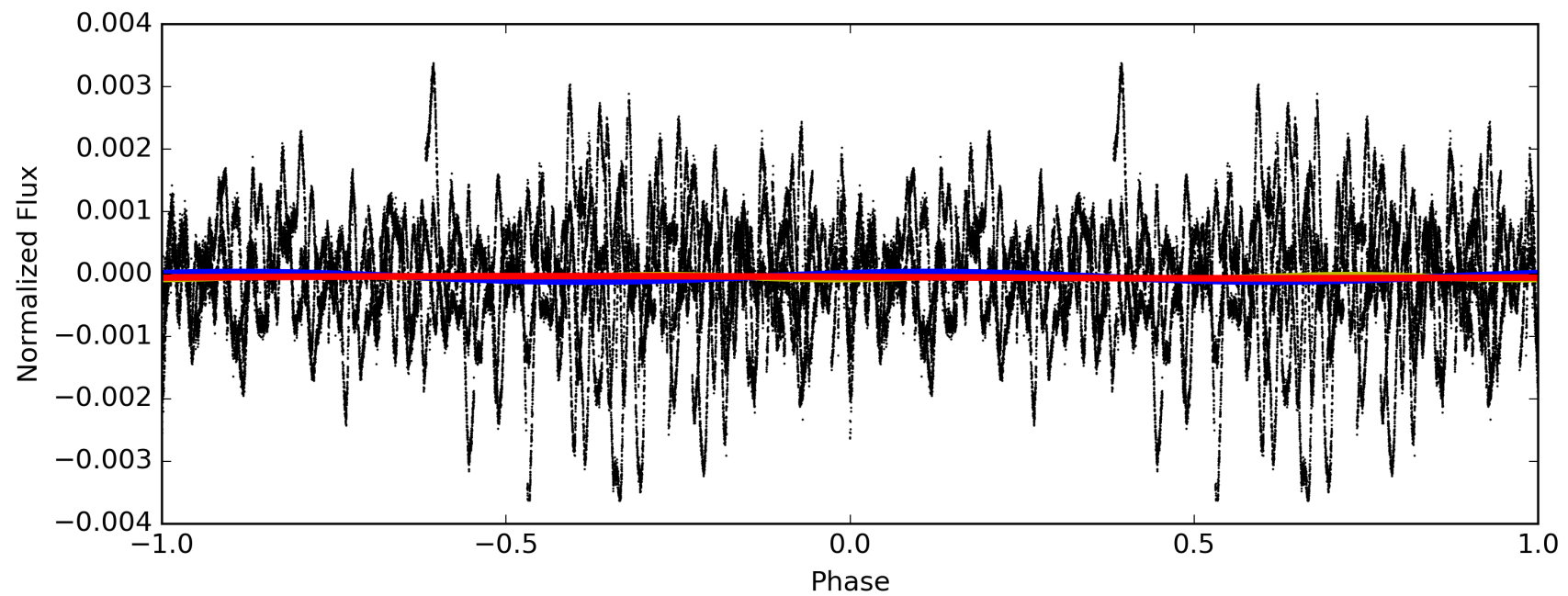
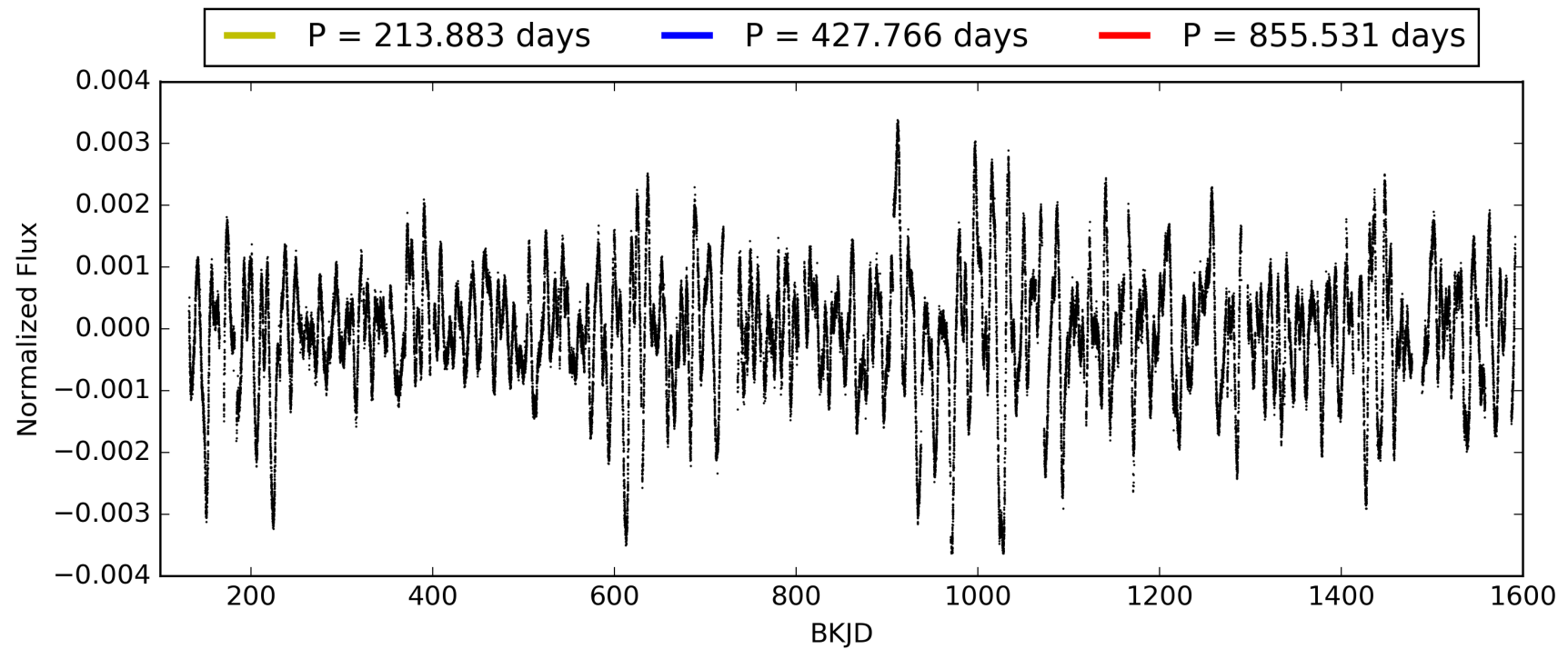
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:14:53 Z

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

TCE 006351285-01, PDC Light Curves

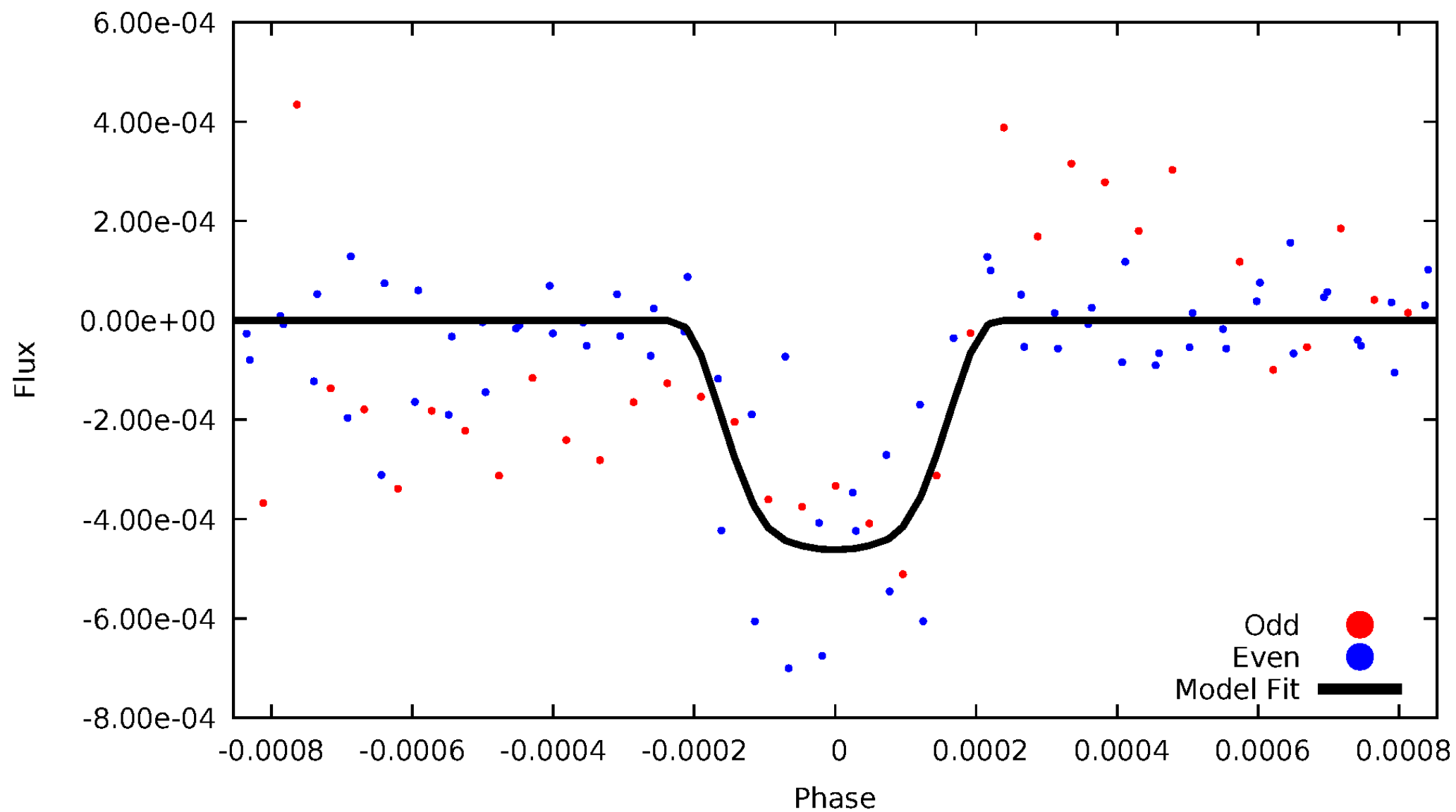


TCE 006351285-01



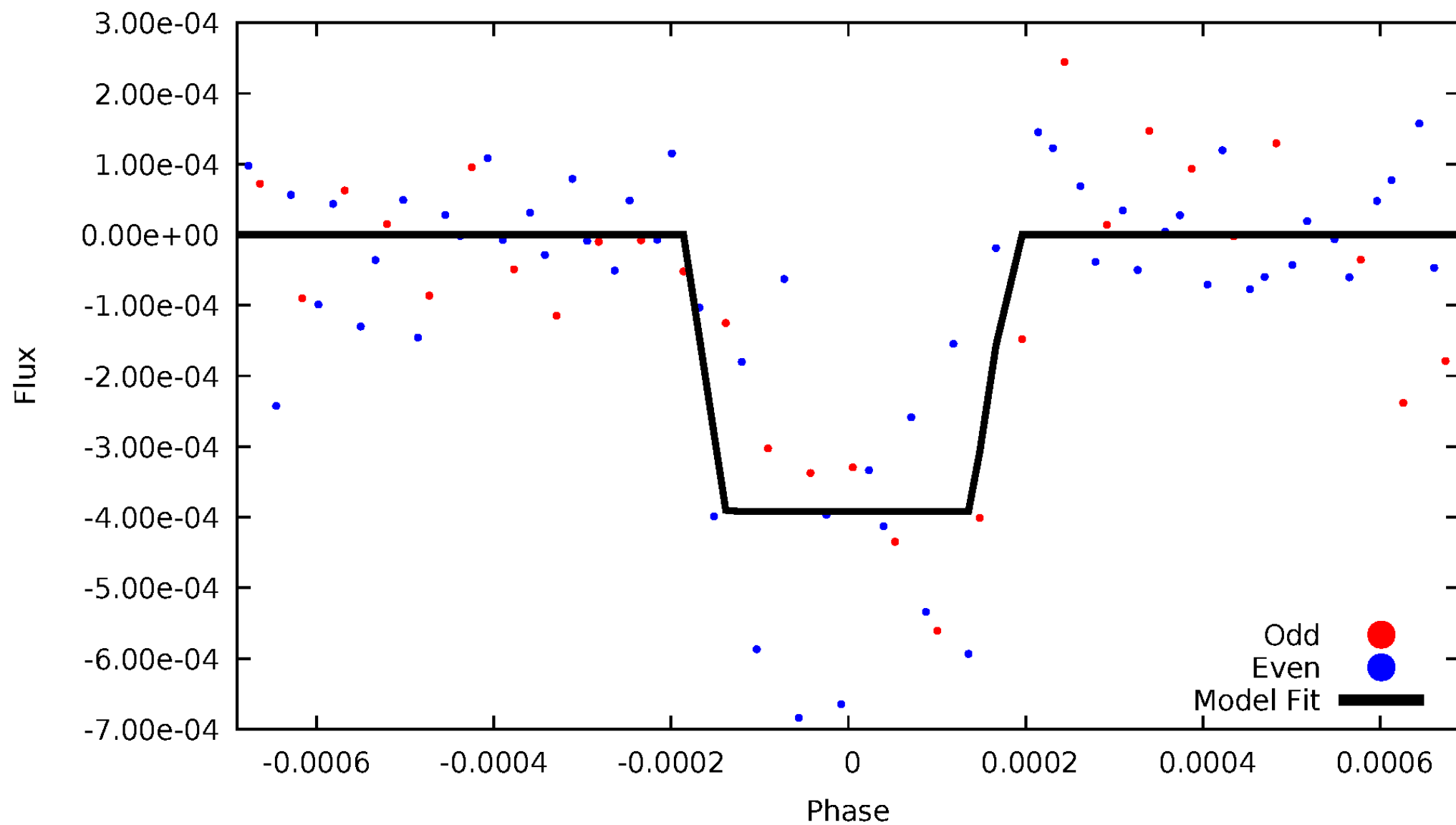
DV Odd/Even

TCE 006351285-01



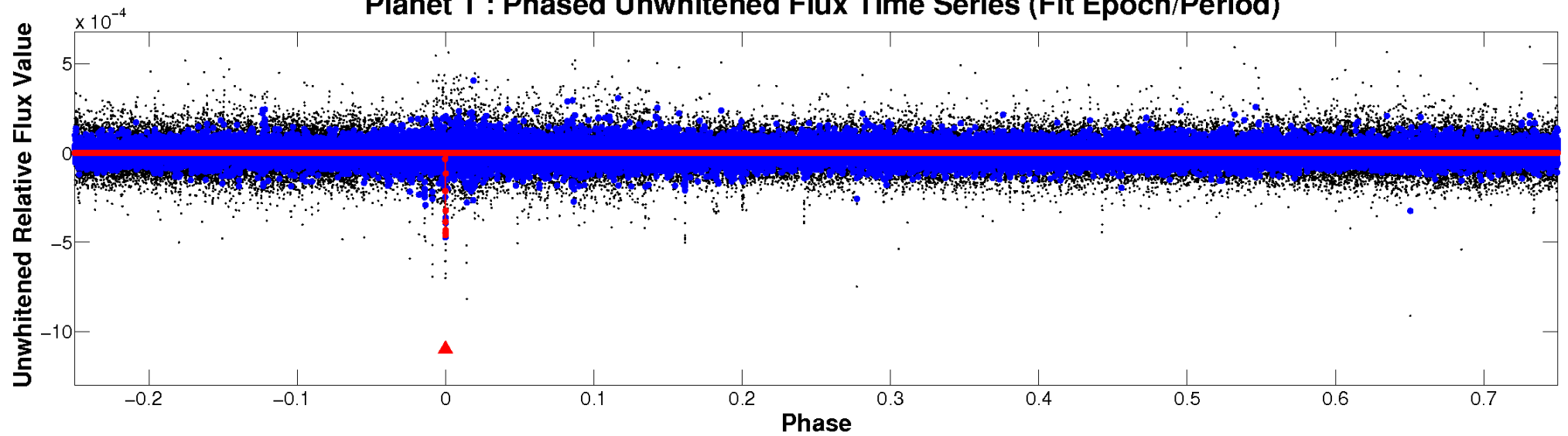
ALT Odd/Even

TCE 006351285-01

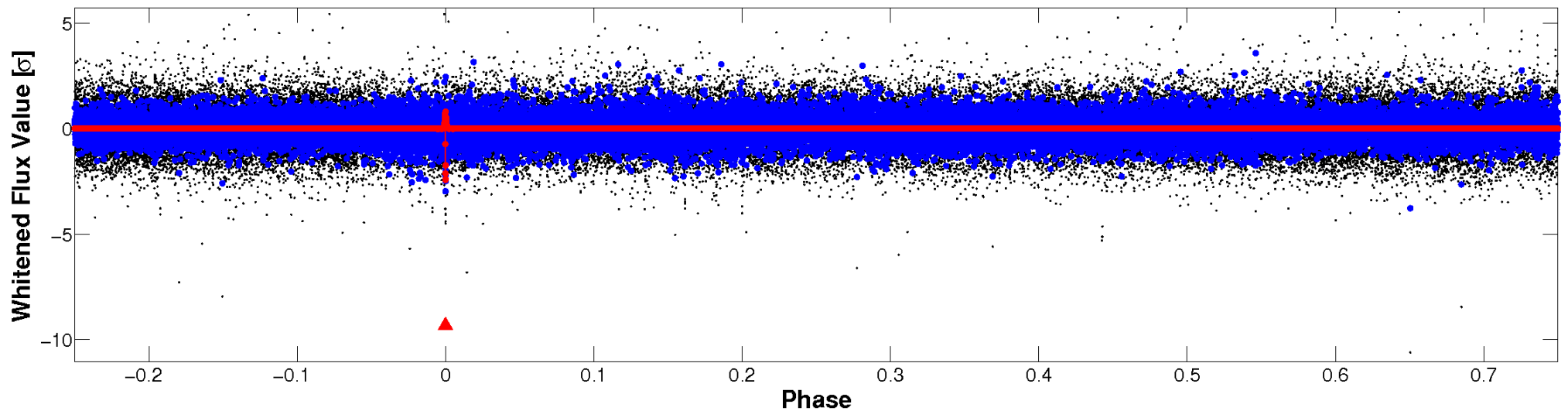


Non-Whitened Vs. Whitened Light Curve

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

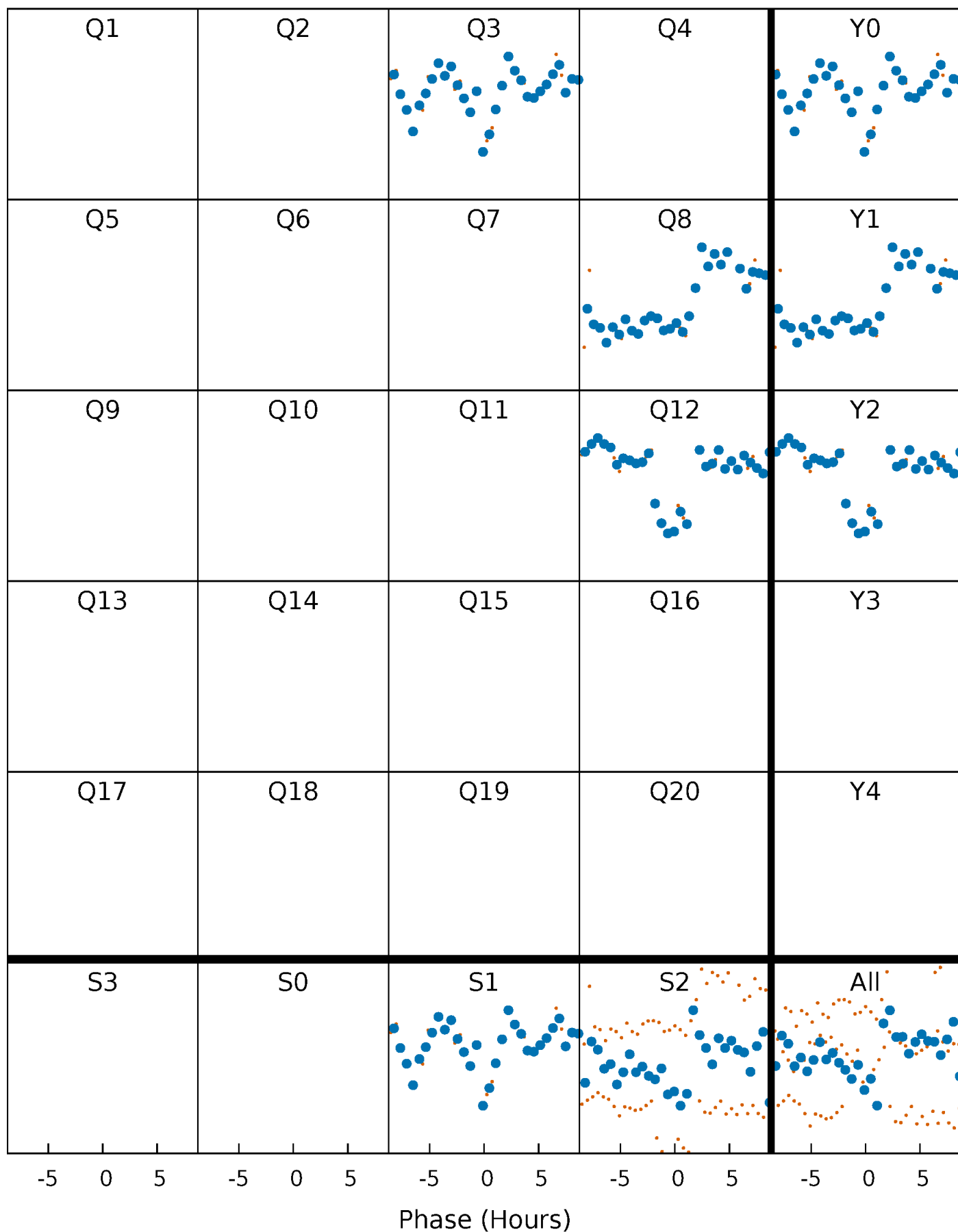


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



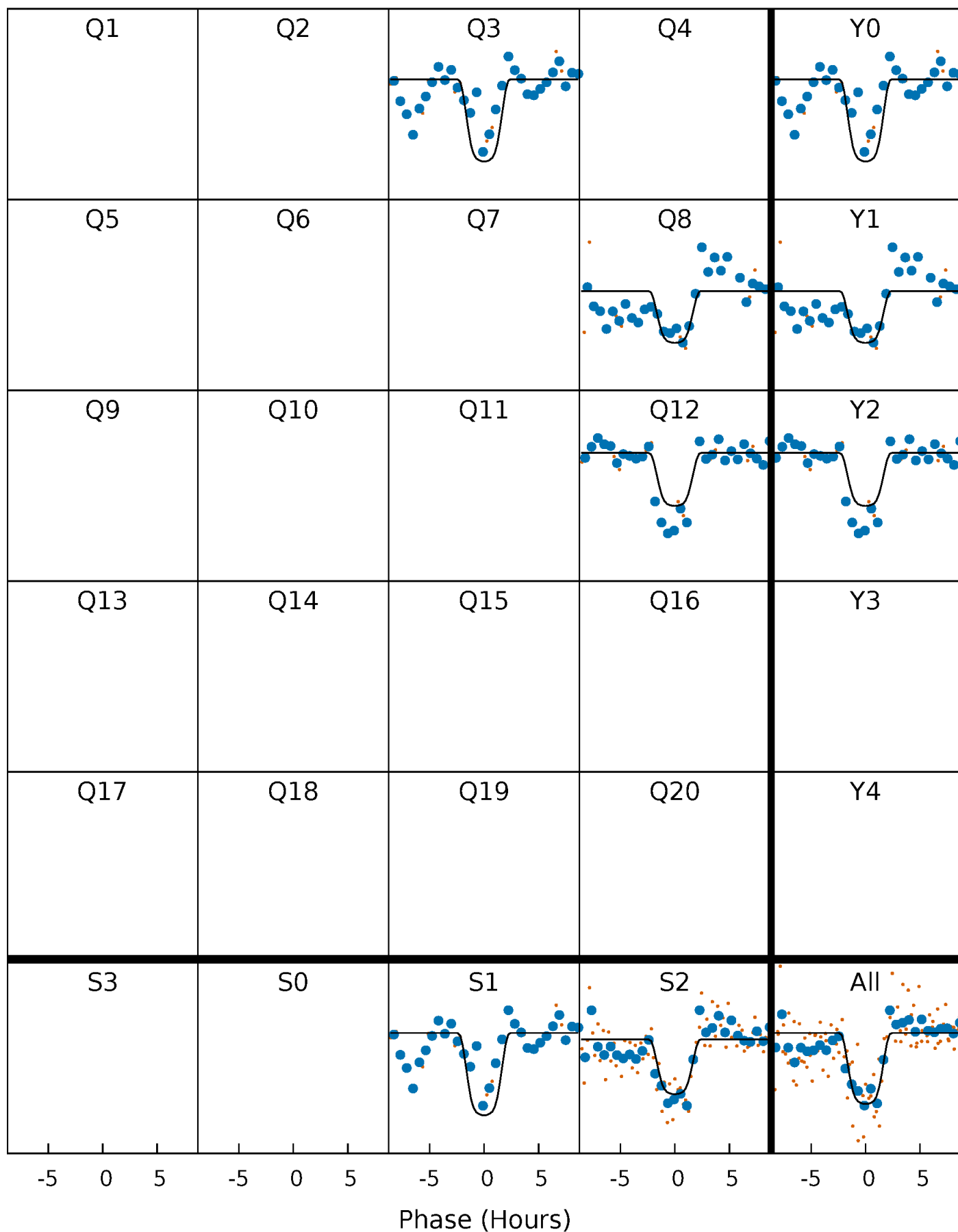
PDC Quarter-Phased Transit Curves

TCE 006351285-01 P=427.765546 Days $T_0=315.280213$ (BKJD)



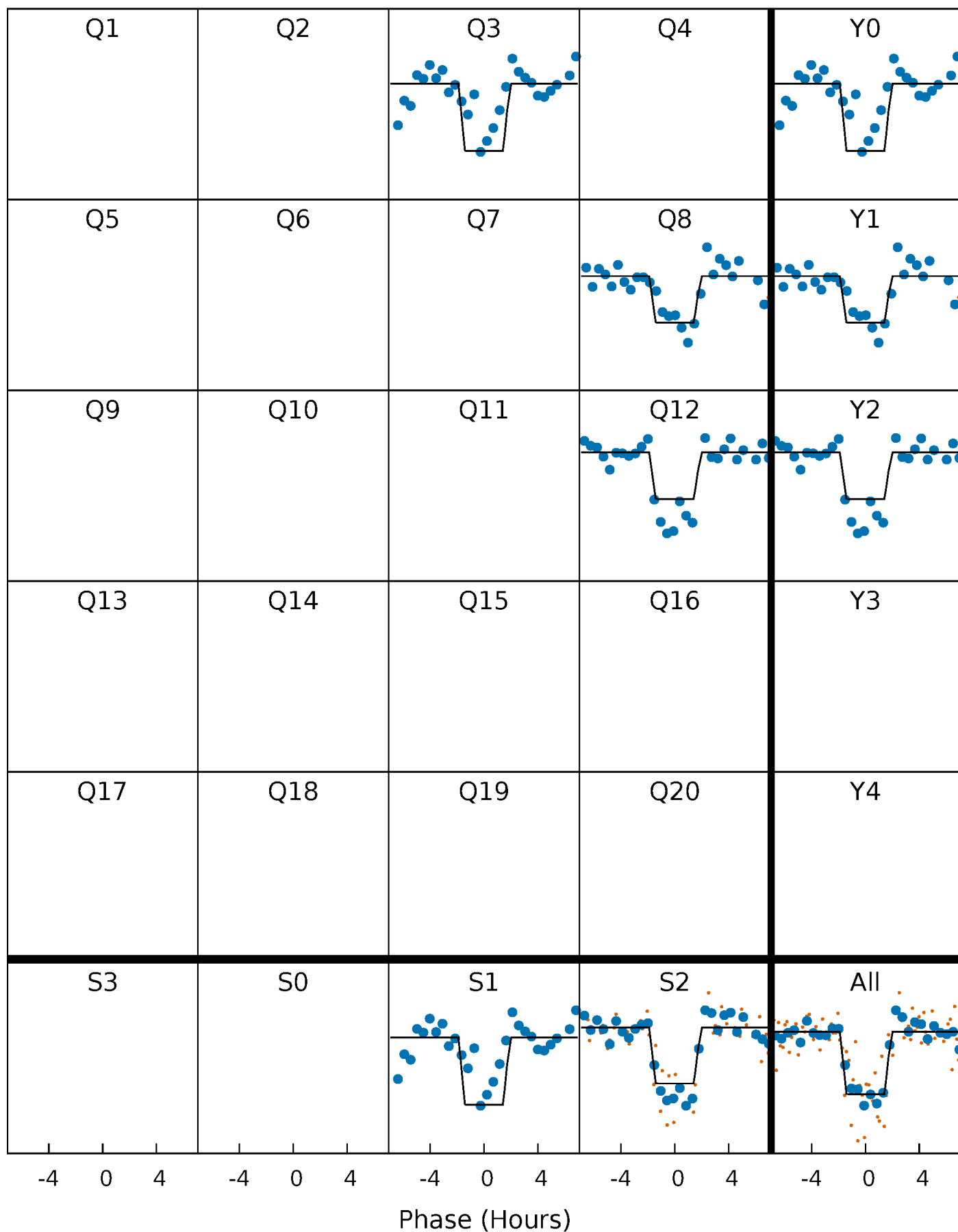
DV Quarter-Phased Transit Curves

TCE 006351285-01 P=427.765546 Days $T_0=315.280213$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

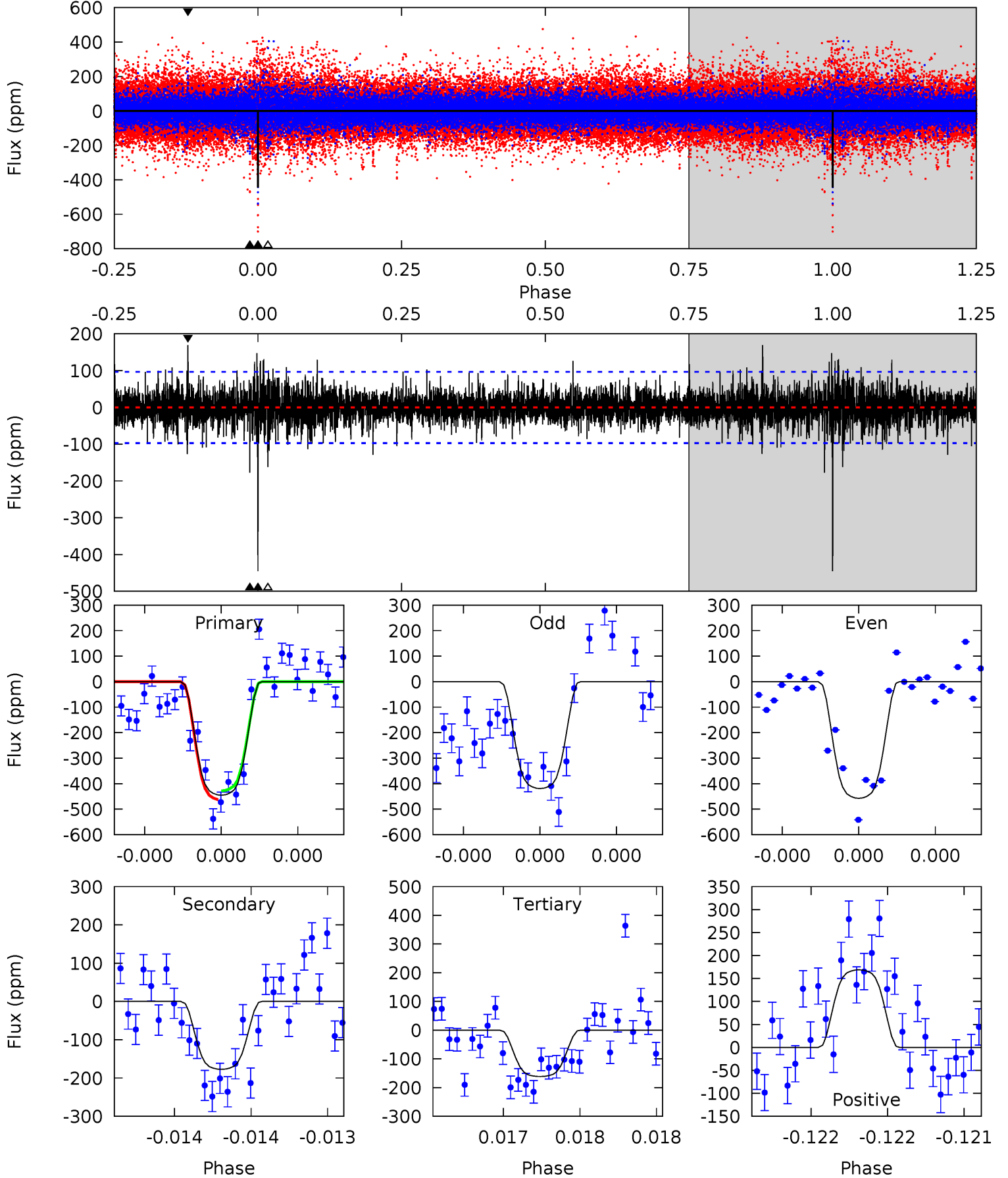
TCE 006351285-01 P=427.762956 Days $T_0=315.280934$ (BKJD)



DV Model-Shift Uniqueness Test

006351285-01, P = 427.765546 Days, E = 315.280213 Days

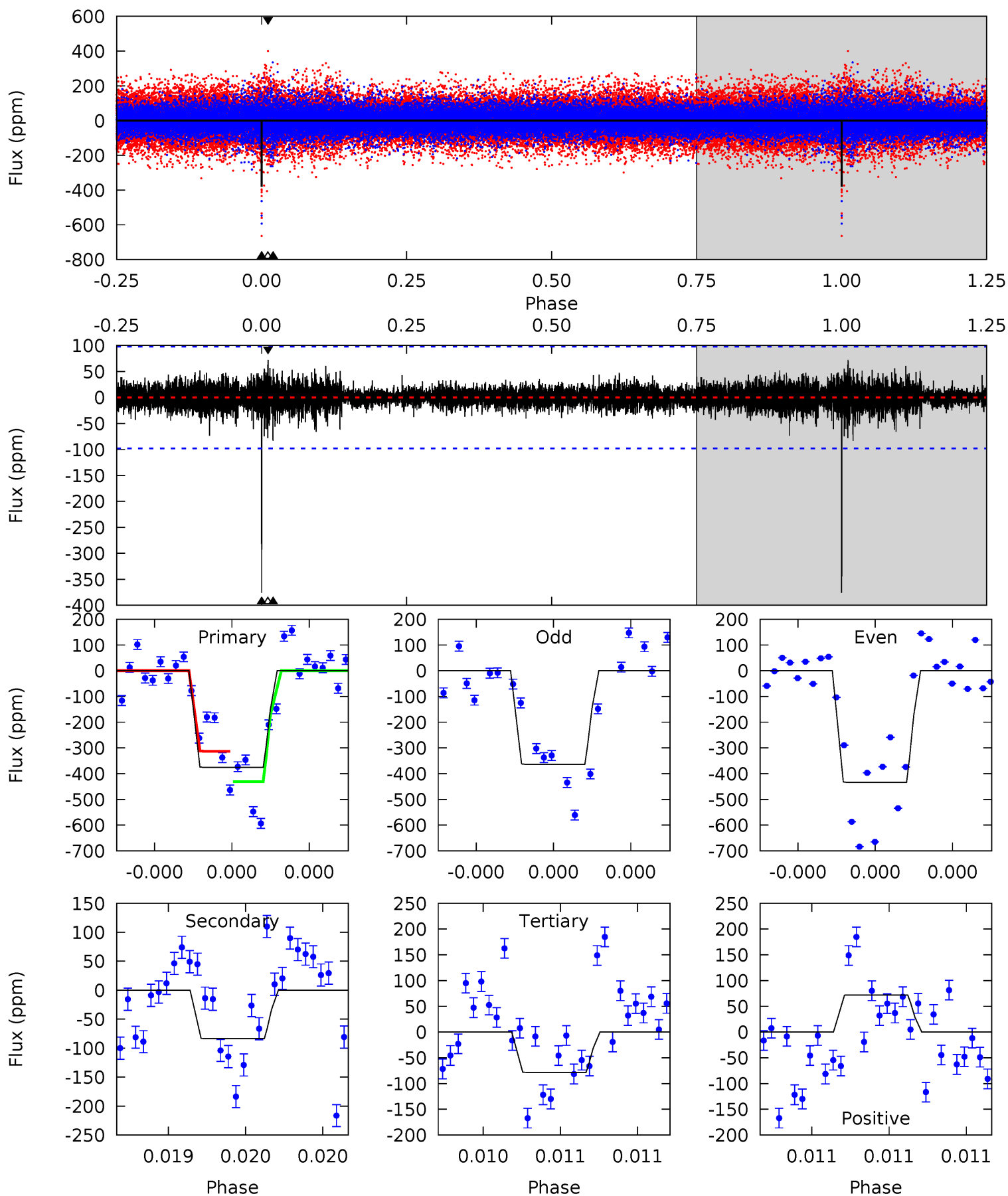
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.7	10.2	9.33	9.75	5.59	3.51	1.67	16.4	16.0	0.91	0.48	1.04	1.07	0.28	1.00



Alt Model-Shift Uniqueness Test

006351285-01, P = 427.762956 Days, E = 315.280934 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.6	4.81	4.51	4.14	5.64	3.59	0.74	17.1	17.5	0.29	0.66	2.02	1.07	0.16	3.39



Stellar Parameters For KIC 006351285

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5780^{+189}_{-172}	$4.066^{+0.392}_{-0.168}$	$-0.240^{+0.300}_{-0.250}$	$1.483^{+0.385}_{-0.577}$	$0.935^{+0.130}_{-0.106}$	$0.404^{+1.191}_{-0.175}$
	+3%/-3%	+10%/-4%	+125%/-104%	+26%/-39%	+14%/-11%	+295%/-43%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006351285-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-177 ± 17	$4.08^{+0.73}_{-0.88}$	415^{+32}_{-48}	4370^{+220}_{-172}	7094^{+4530}_{-2145}
Alt.	-84 ± 17	$3.07^{+0.63}_{-0.64}$	410^{+33}_{-45}	4181^{+262}_{-228}	5703^{+3338}_{-1967}

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 $A_{obs} \gg 1.0$

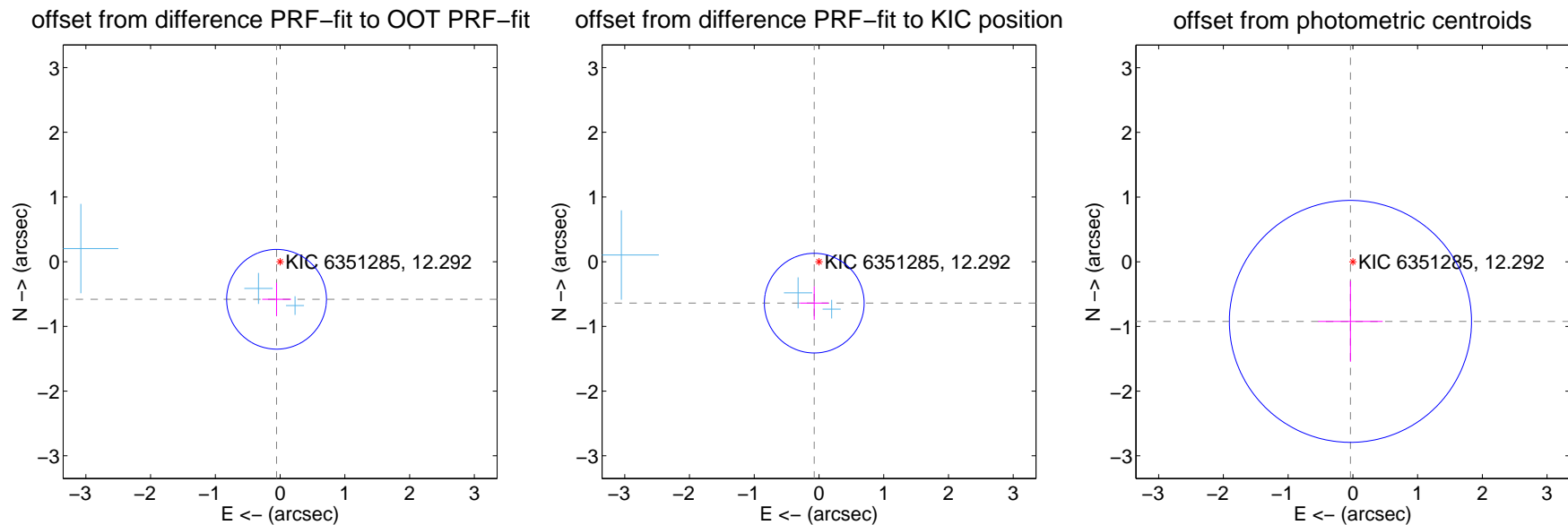
DV Centroid Data

Supplemental centroid analysis for 006351285-01. Kepler magnitude: 12.29. Transit SNR 9.70

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.584 ± 0.257	2.27	0.055 ± 0.222	-0.581 ± 0.257
PRF-fit source offset from KIC position	0.645 ± 0.257	2.51	0.073 ± 0.222	-0.641 ± 0.257
photometric centroid source offset	0.92 ± 0.62	1.48	0.04 ± 0.50	-0.92 ± 0.62



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermilion 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.

Q1 no difference image



Q1 no OOT image



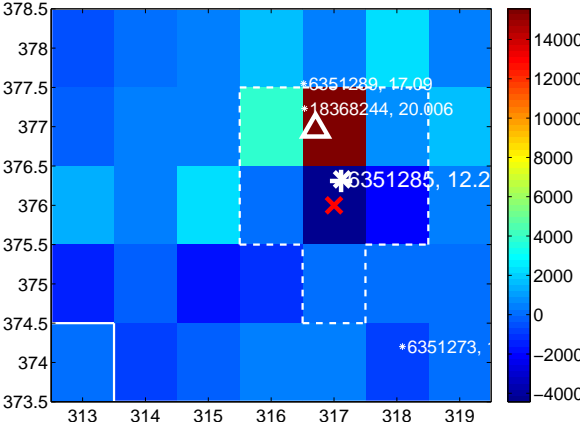
Q2 no difference image



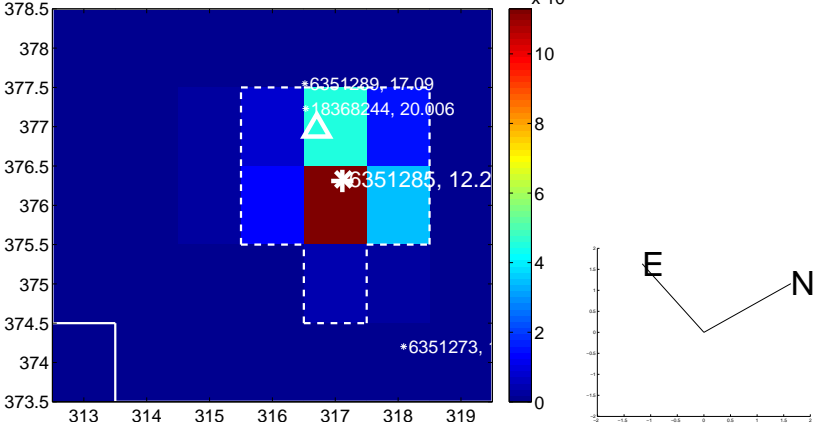
Q2 no OOT image



Q3 difference image



Q3 OOT image



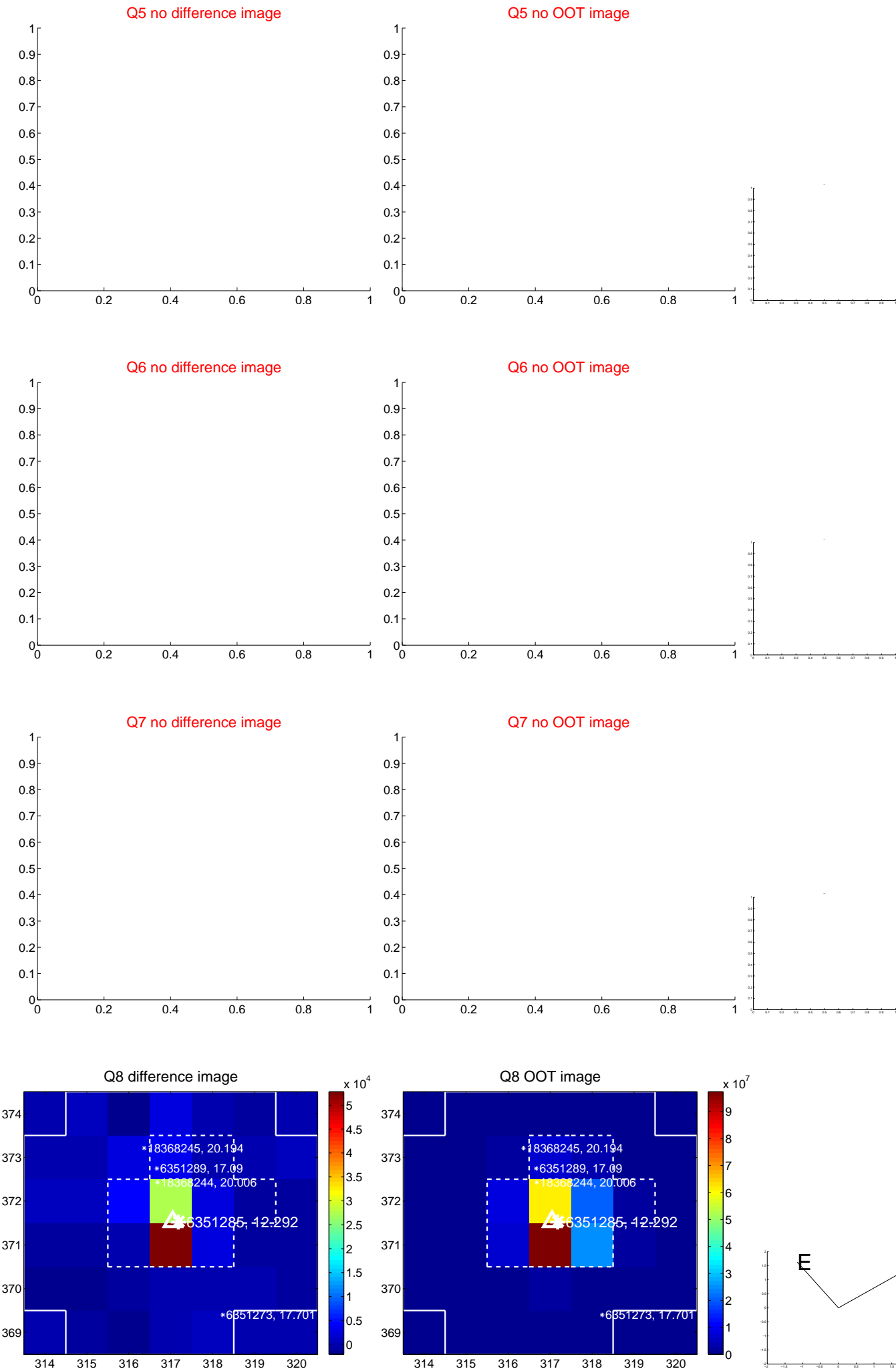
Q4 no difference image



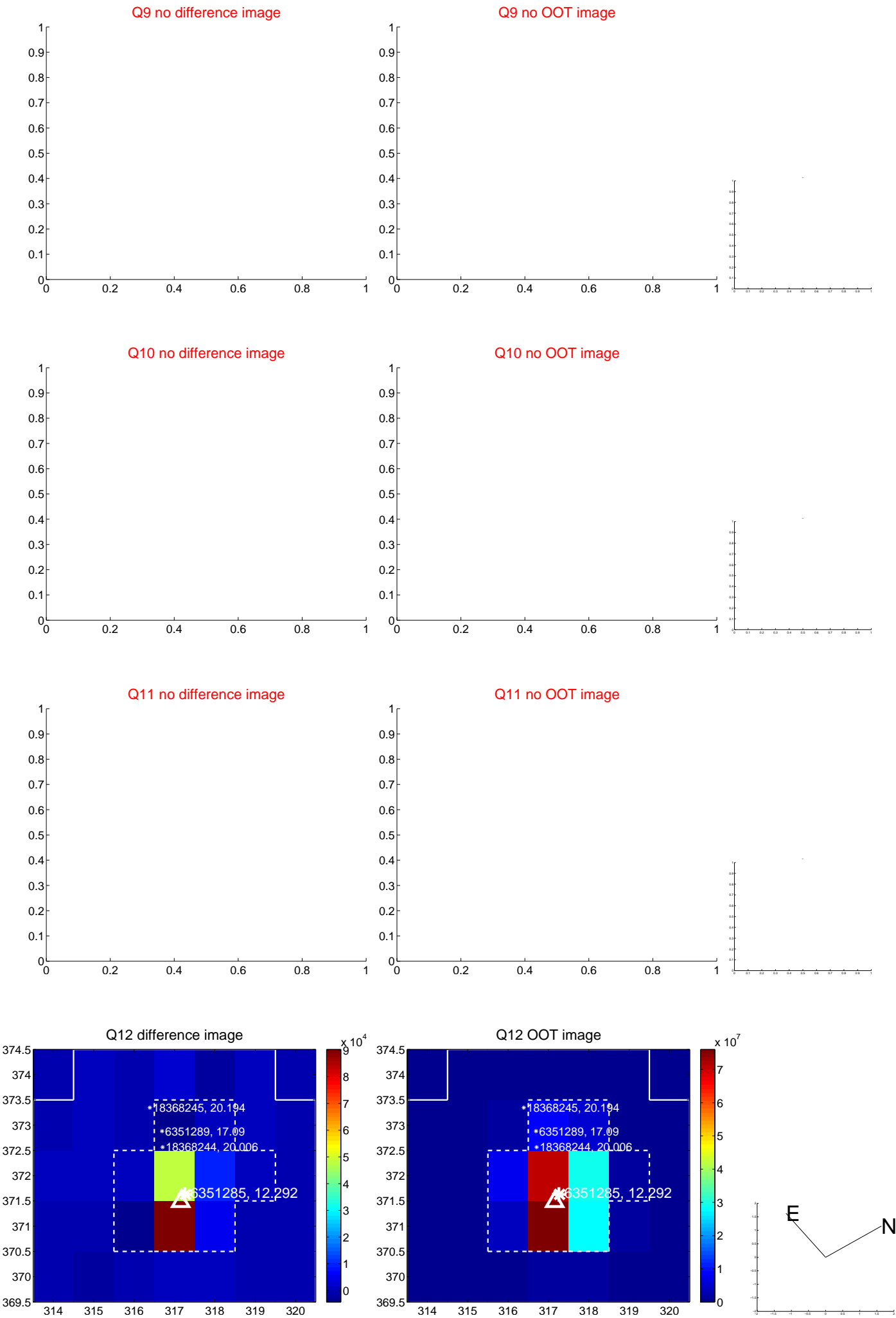
Q4 no OOT image



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



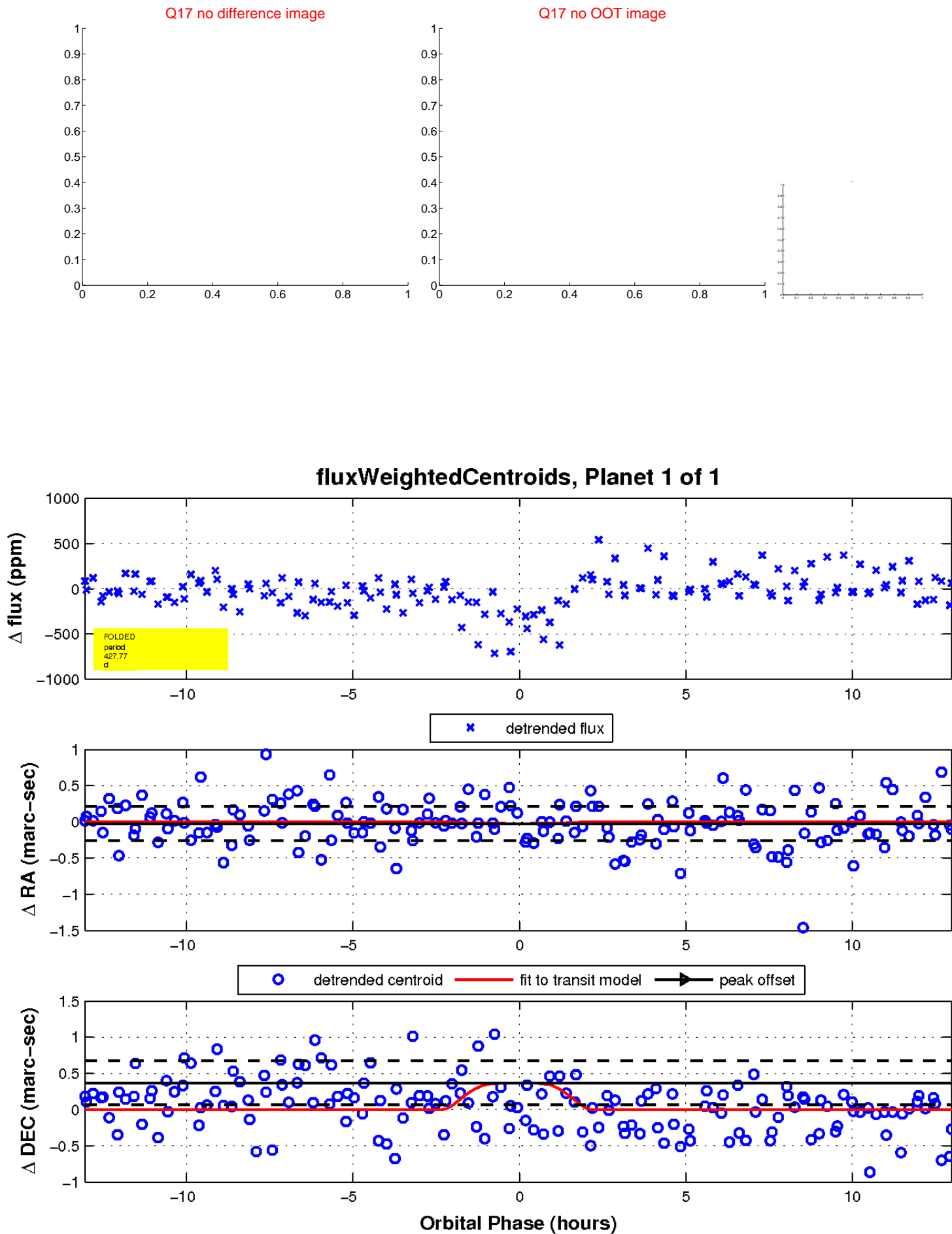
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

