

KIC 006350031

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})
006350031-01	OBS	5267.01	5.177995	135.732533	118.0	5.596	7.7	7.5	2.59	5921	3.35	1696.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006350031-01	OBS	FP	0.06	1	0	0	0	LPP_DV—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.

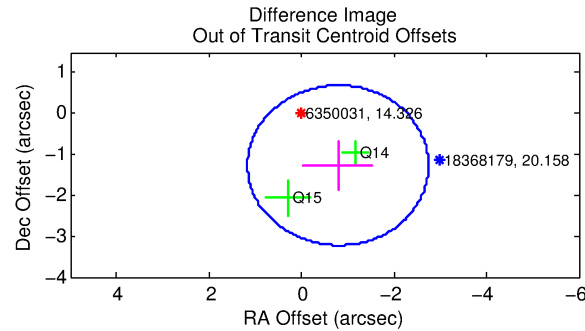
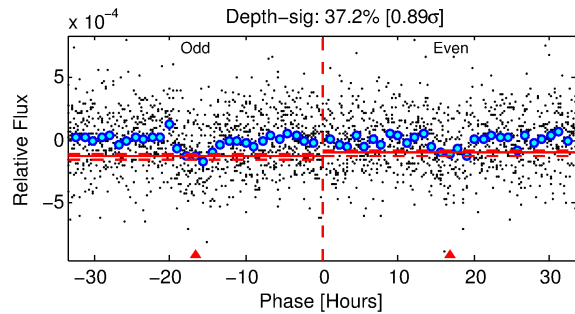
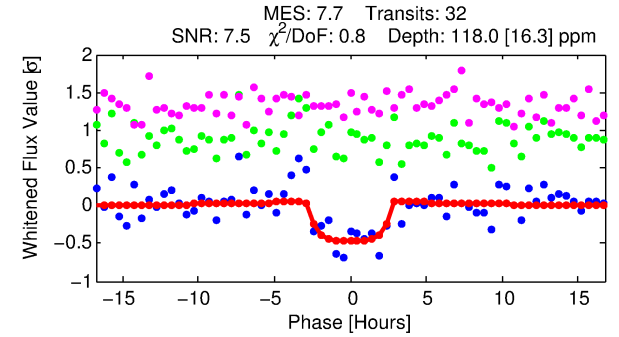
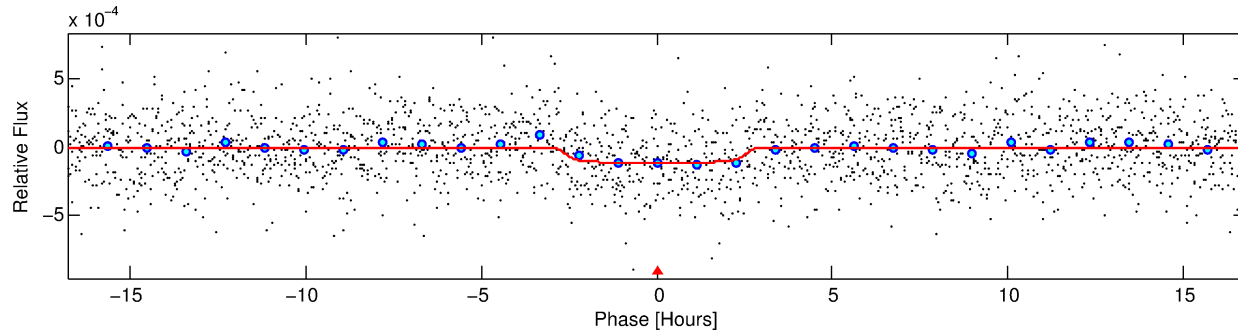
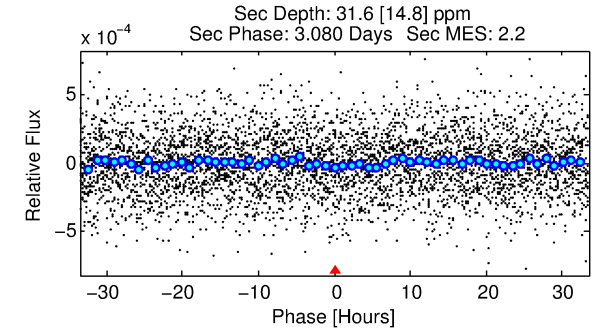
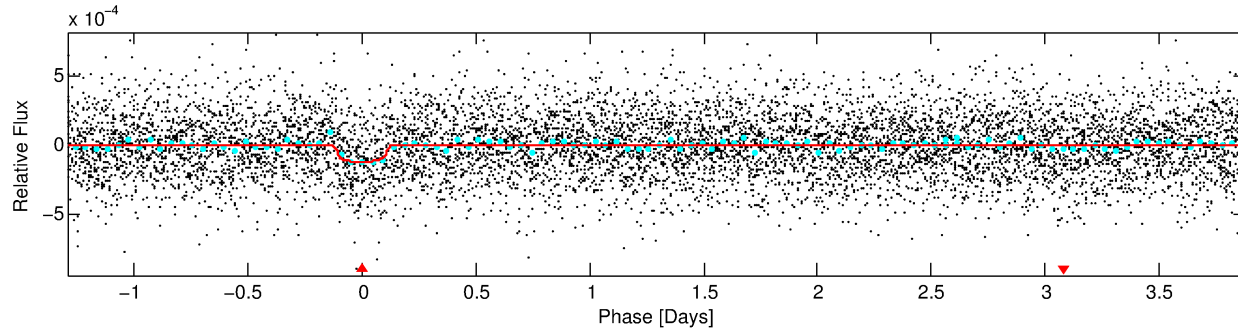
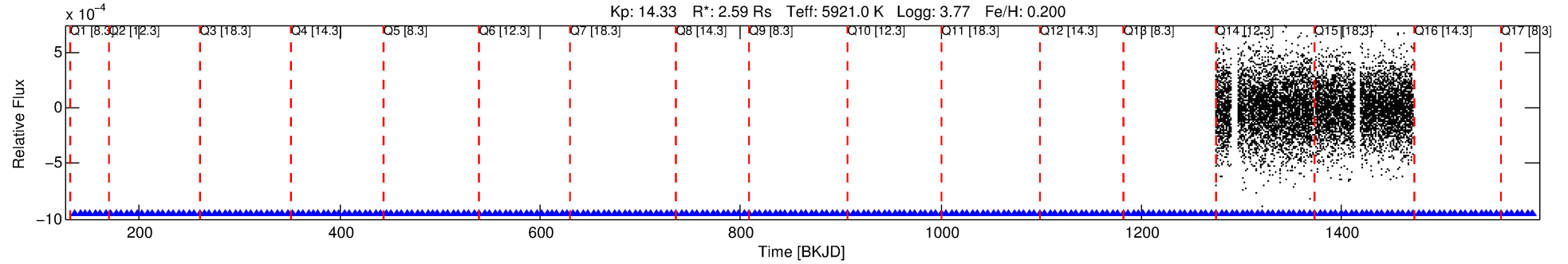
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006350031-01

No Significant Match Found

DV One-Page Summary

KIC: 6350031 Candidate: 1 of 1 Period: 5.178 d
KOI: K05267.01 Corr: 0.918



DV Fit Results:

Period = 5.17799 [0.00006] d
Epoch = 135.7325 [0.0112] BKJD
Rp/R* = 0.0118 [0.0054]
a/R* = 3.34 [6.88]
b = 0.90 [0.46]
Seff = 1696.99 [707.65]
Teq = 1637 [171] K
Rp = 3.35 [1.80] Re
a = 0.0660 [0.0175] AU
Ag = 6.76 [7.45] [0.77σ]
Teffp = 4080 [1045] K [2.31σ]

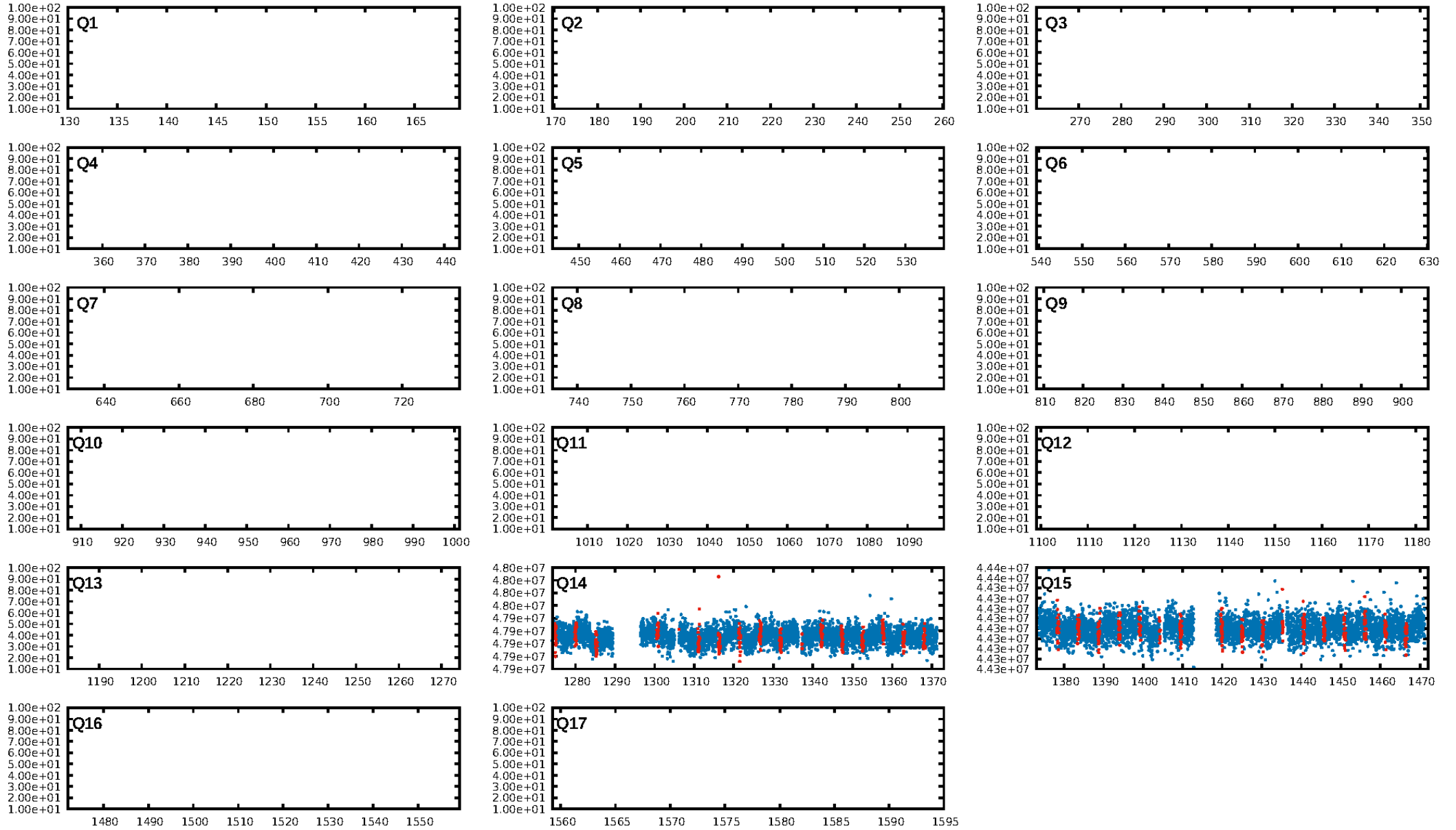
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.31e-14
RollingBand-fgt: 1.00 [32/32]
GhostDiagnostic-chr: -21.99
Centroid-sig: 31.6%
Centroid-so: 1.519 arcsec [1.23σ]
OotOffset-rm: 1.494 arcsec [2.29σ]
KicOffset-rm: 1.423 arcsec [1.97σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

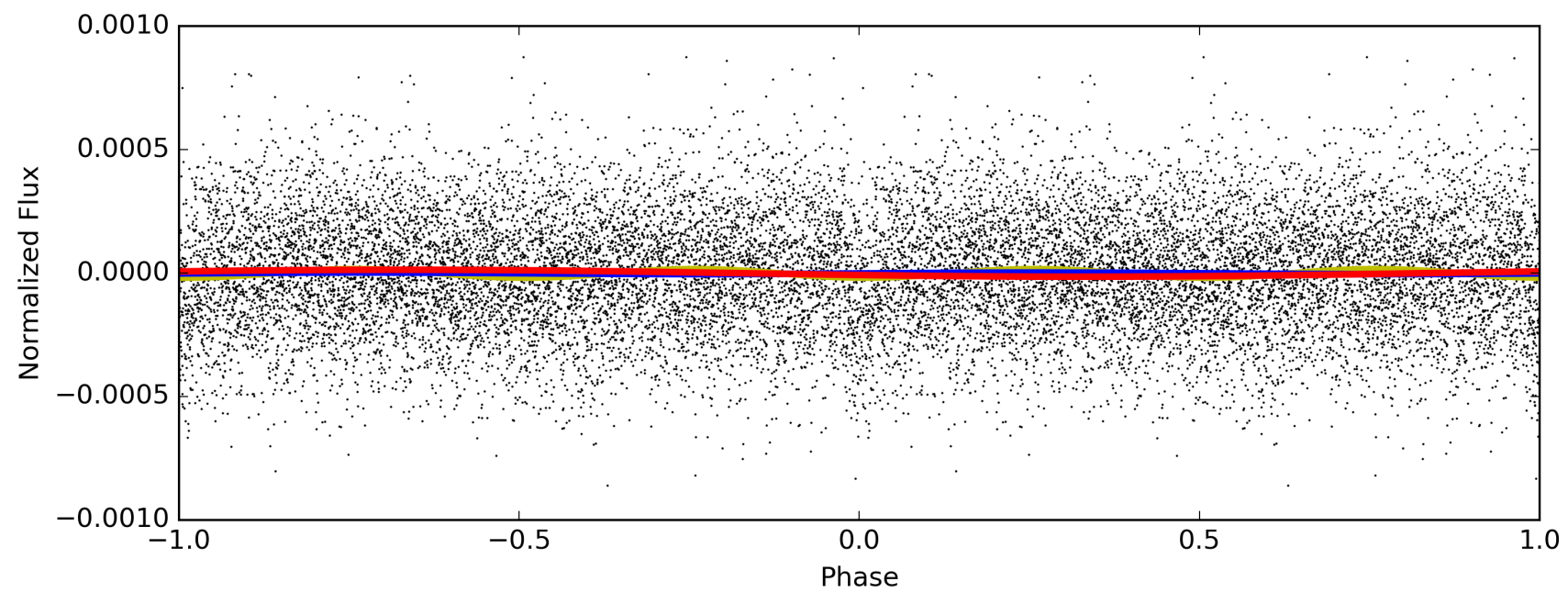
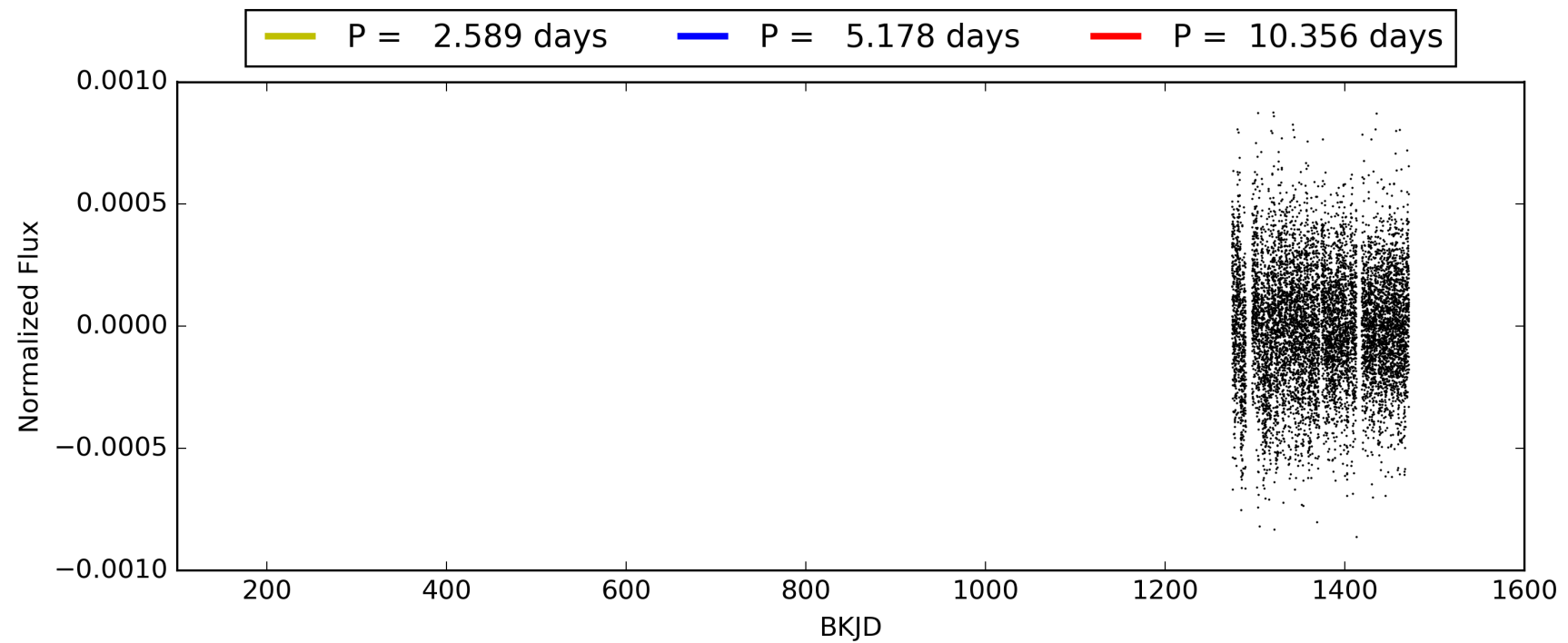
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:08:33 Z

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

TCE 006350031-01, PDC Light Curves

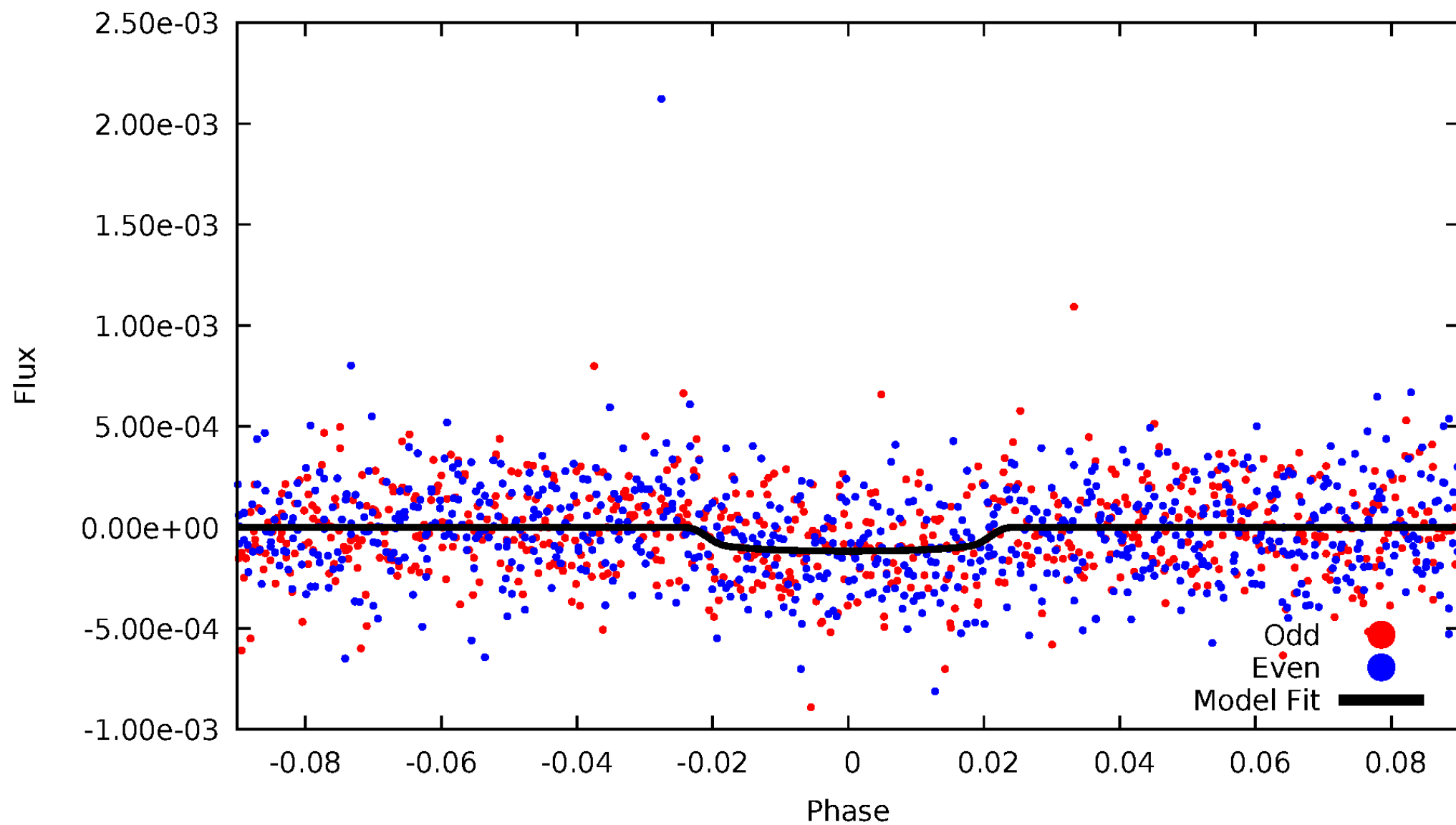


TCE 006350031-01



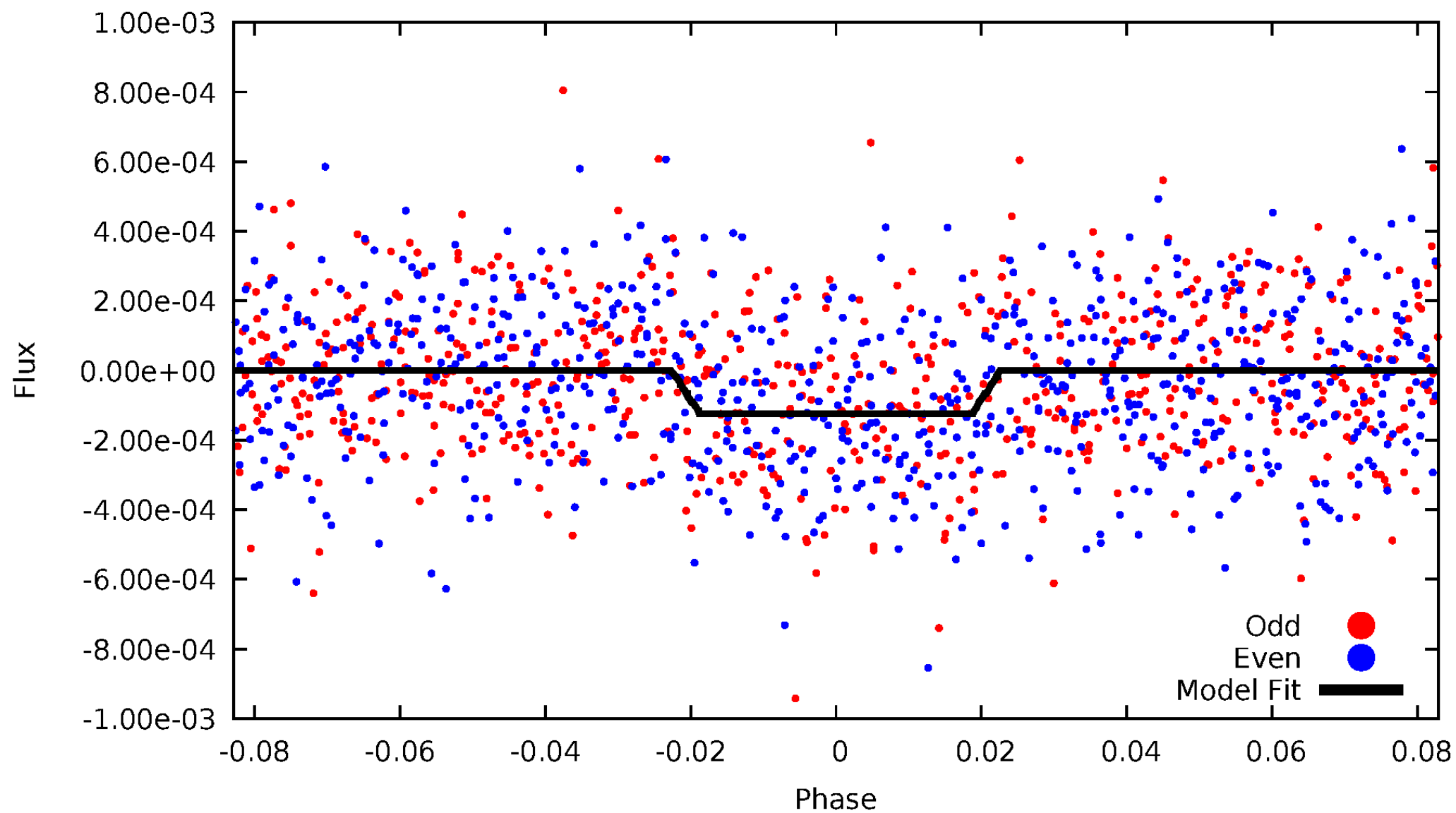
DV Odd/Even

TCE 006350031-01



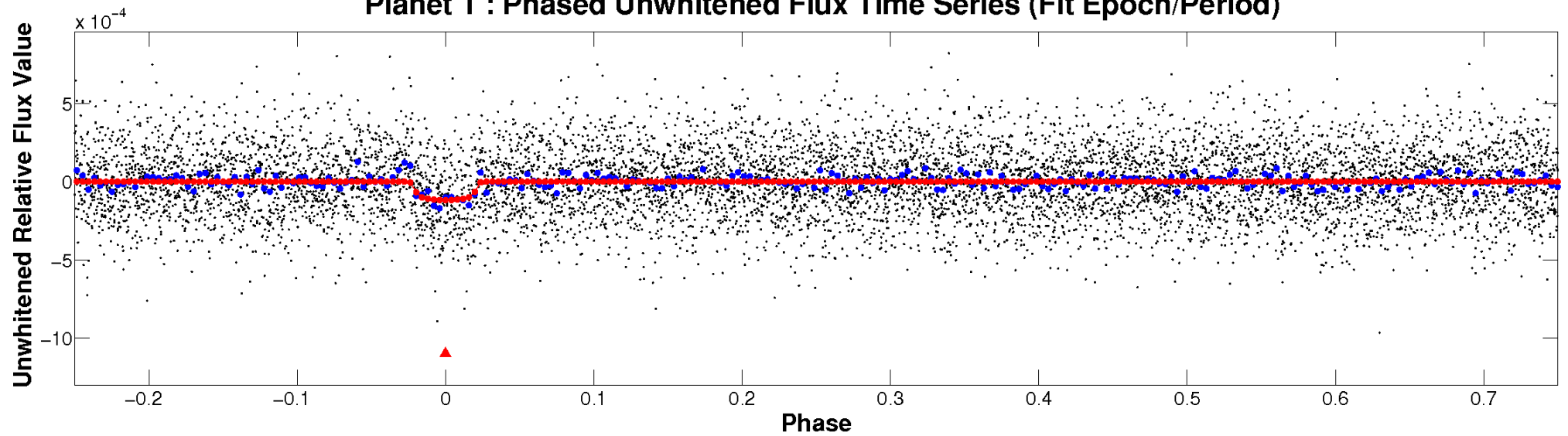
ALT Odd/Even

TCE 006350031-01

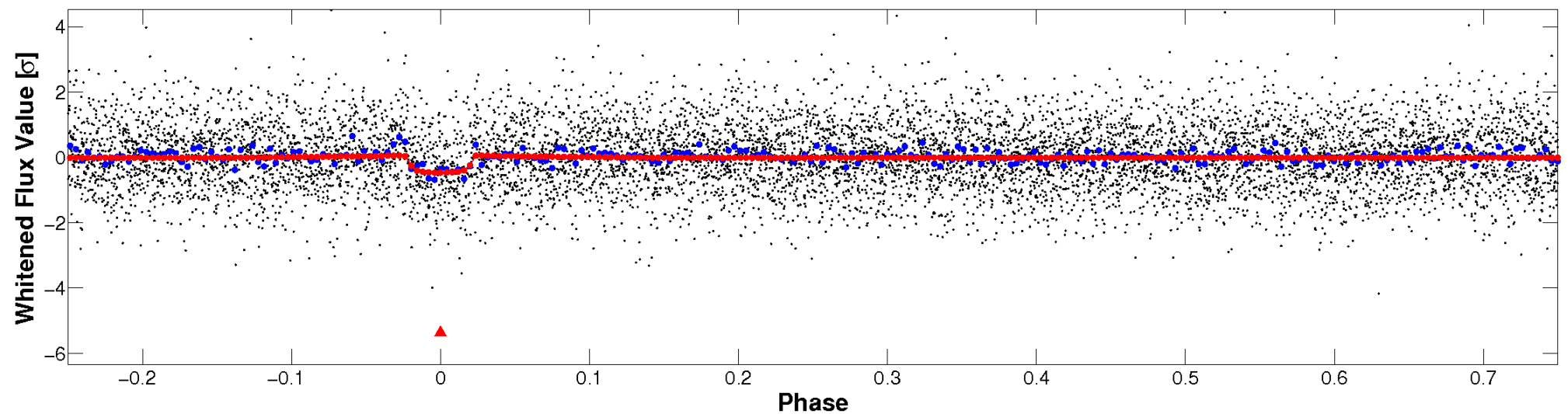


Non-Whitened Vs. Whitened Light Curve

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



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



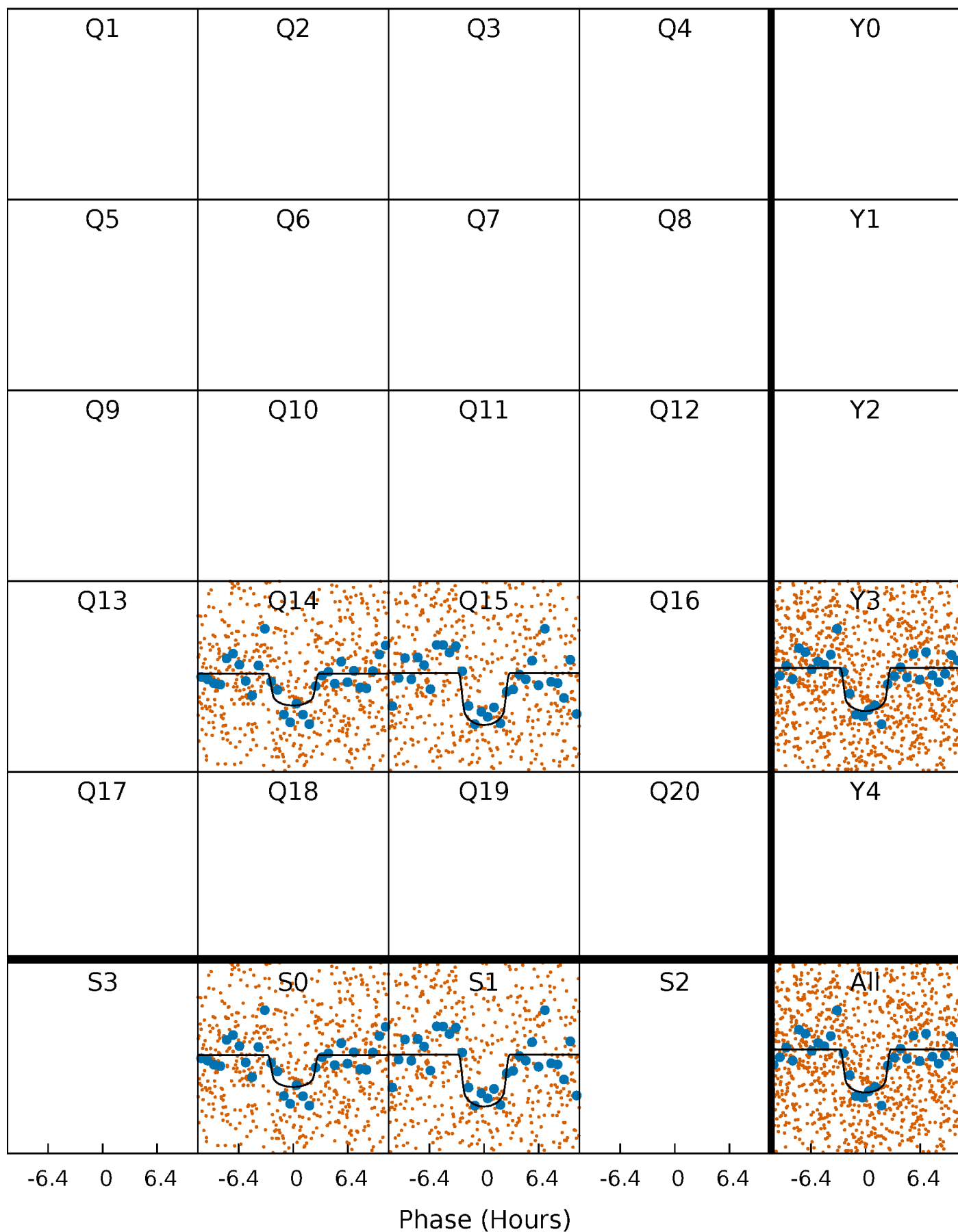
PDC Quarter-Phased Transit Curves

TCE 006350031-01 P= 5.177995 Days $T_0=135.732533$ (BKJD)



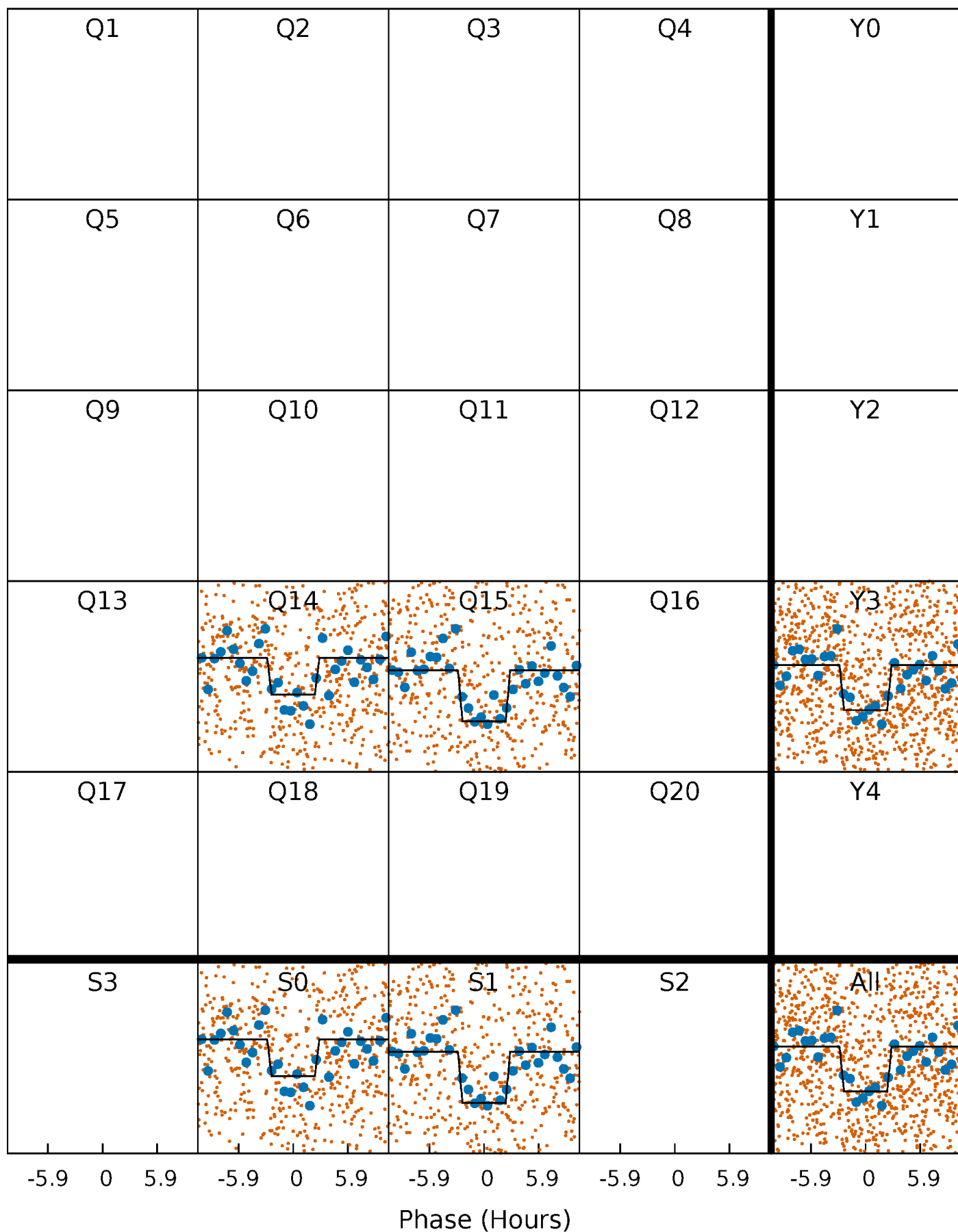
DV Quarter-Phased Transit Curves

TCE 006350031-01 P= 5.177995 Days $T_0=135.732533$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

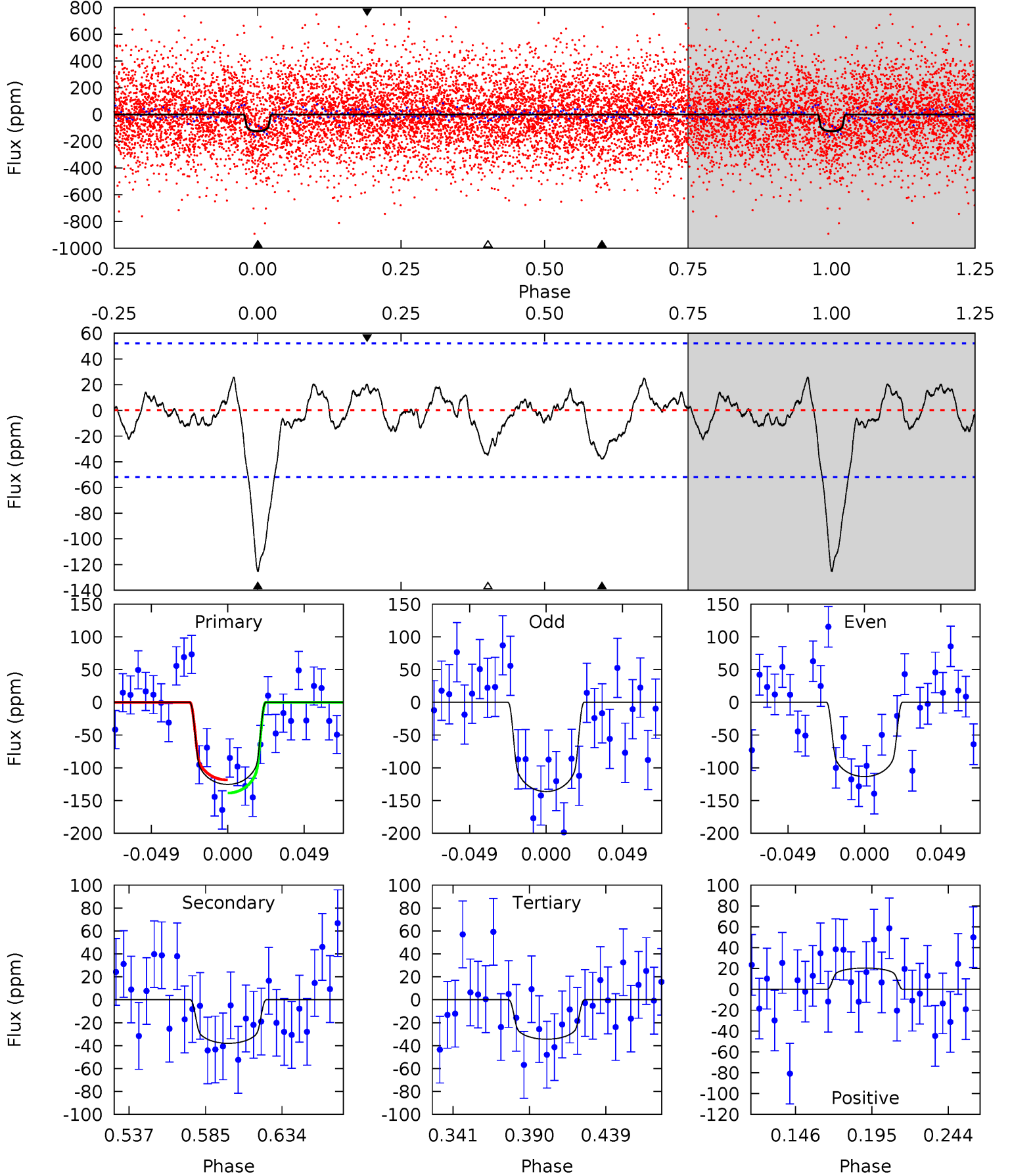
TCE 006350031-01 P= 5.178001 Days $T_0=135.731618$ (BKJD)



DV Model-Shift Uniqueness Test

006350031-01, P = 5.177995 Days, E = 135.732533 Days

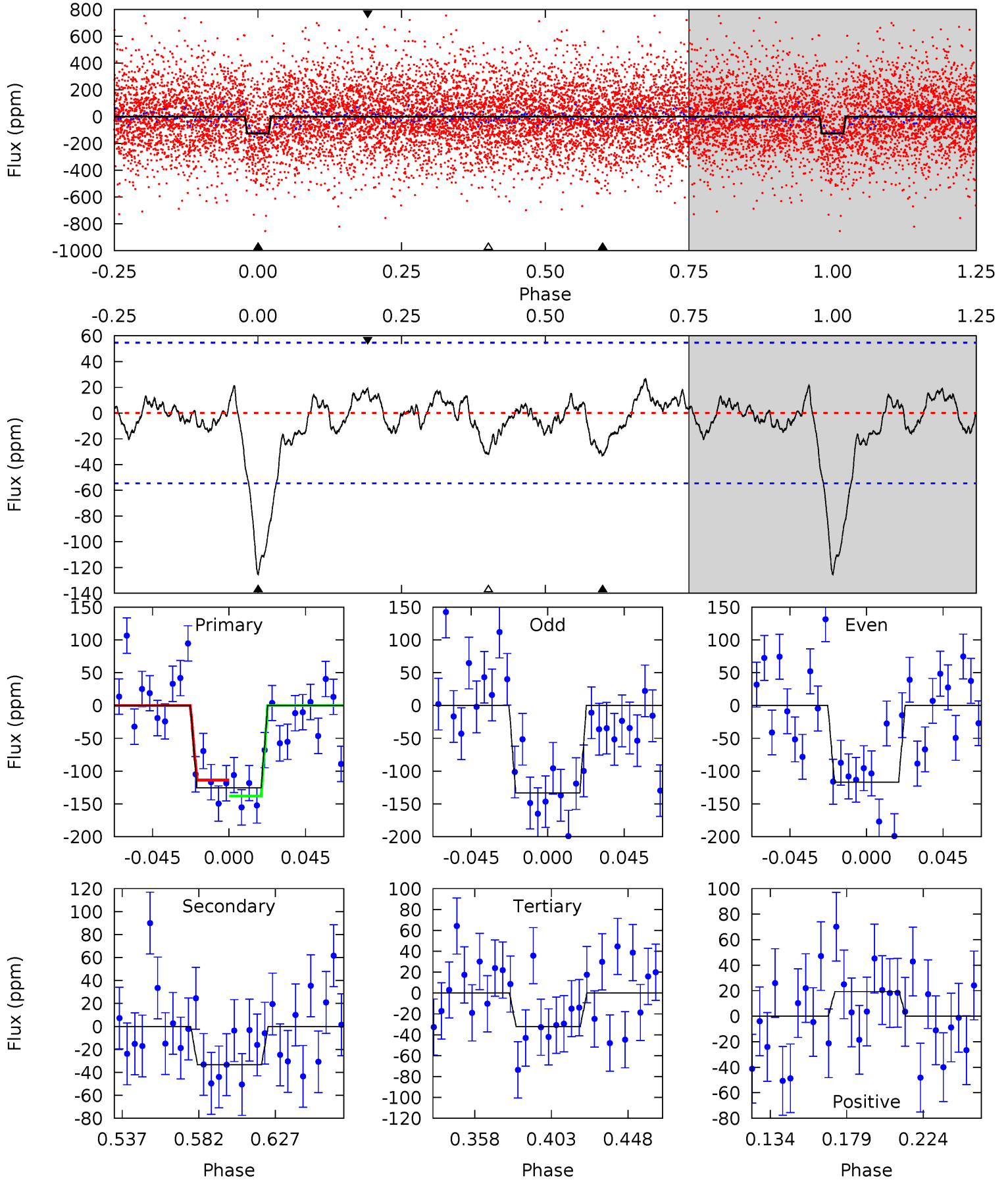
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	3.44	3.12	1.85	4.71	1.97	1.02	8.24	9.51	0.32	1.59	1.03	0.91	0.17	0.90



Alt Model-Shift Uniqueness Test

006350031-01, P = 5.178001 Days, E = 135.731618 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	2.88	2.78	1.67	4.73	2.01	0.96	8.09	9.20	0.10	1.21	0.70	0.97	0.17	1.05



Stellar Parameters For KIC 006350031

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5921^{+89}_{-71}	$3.766^{+0.238}_{-0.102}$	$0.200^{+0.150}_{-0.150}$	$2.589^{+0.401}_{-0.745}$	$1.427^{+0.118}_{-0.219}$	$0.116^{+0.148}_{-0.037}$
	+2%/-1%	+6%/-3%	+75%/-75%	+15%/-29%	+8%/-15%	+128%/-32%
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 006350031-01 / KOI 5267.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-38 ± 11	$3.27^{+1.71}_{-1.46}$	2270^{+107}_{-156}	4361^{+1313}_{-600}	$8.341^{+20.233}_{-4.825}$
Alt.	-33 ± 12	$3.03^{+1.60}_{-1.49}$	2269^{+116}_{-169}	4390^{+1389}_{-679}	$8.606^{+24.004}_{-5.229}$

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

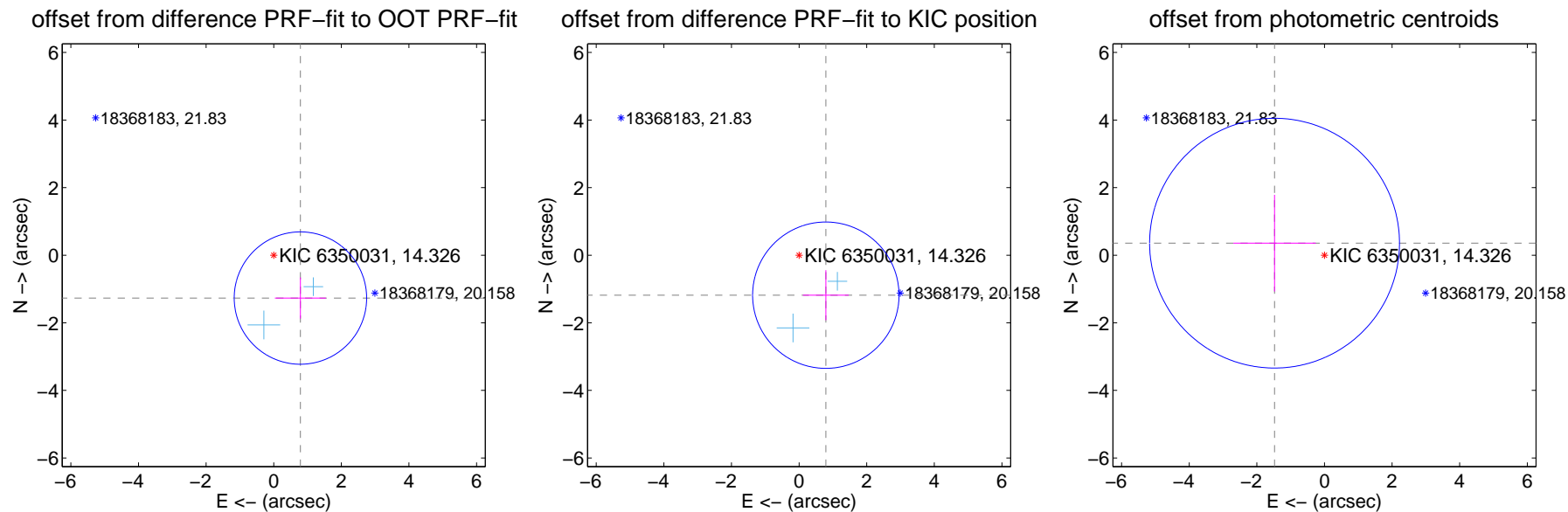
DV Centroid Data

Supplemental centroid analysis for 006350031-01. Kepler magnitude: 14.33. Transit SNR 7.49

There are 2 quarters with good PRF difference image offsets

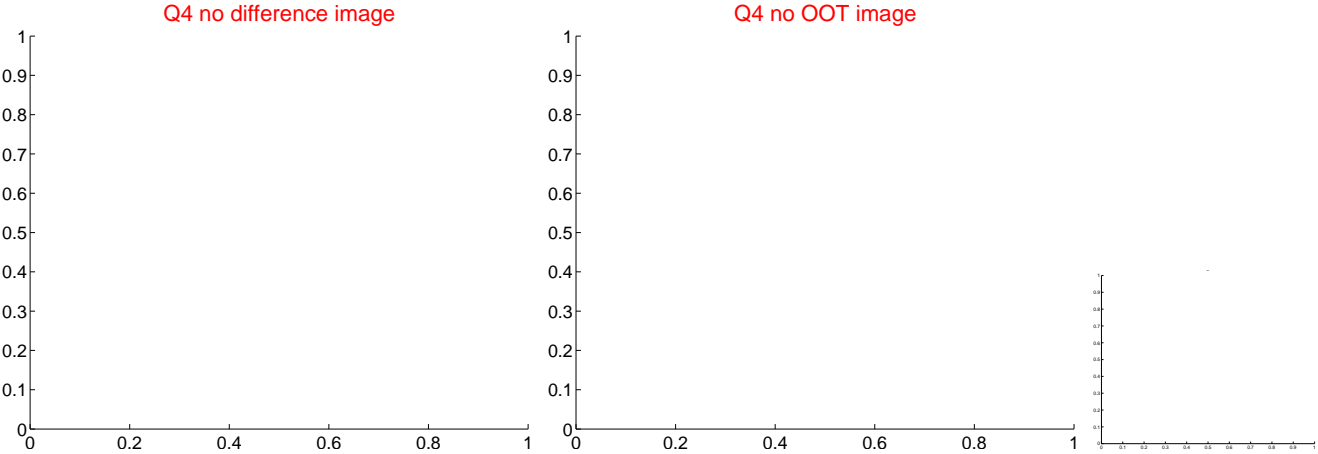
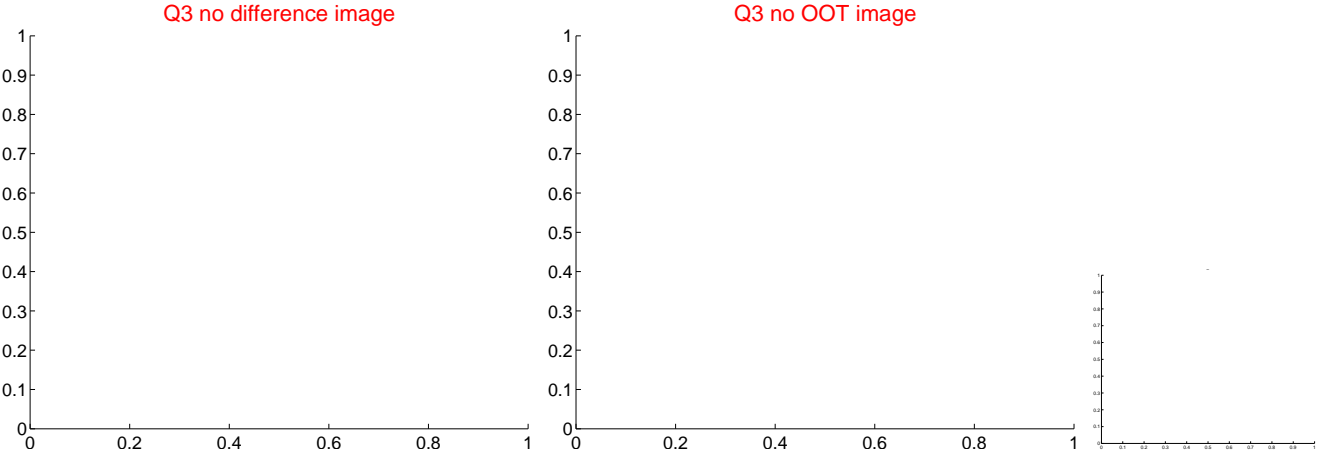
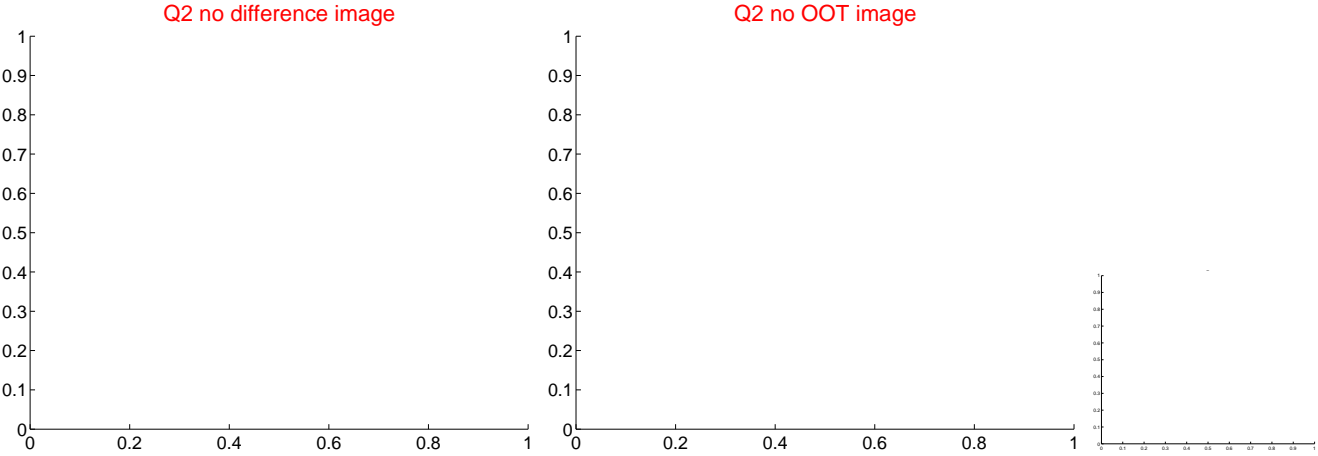
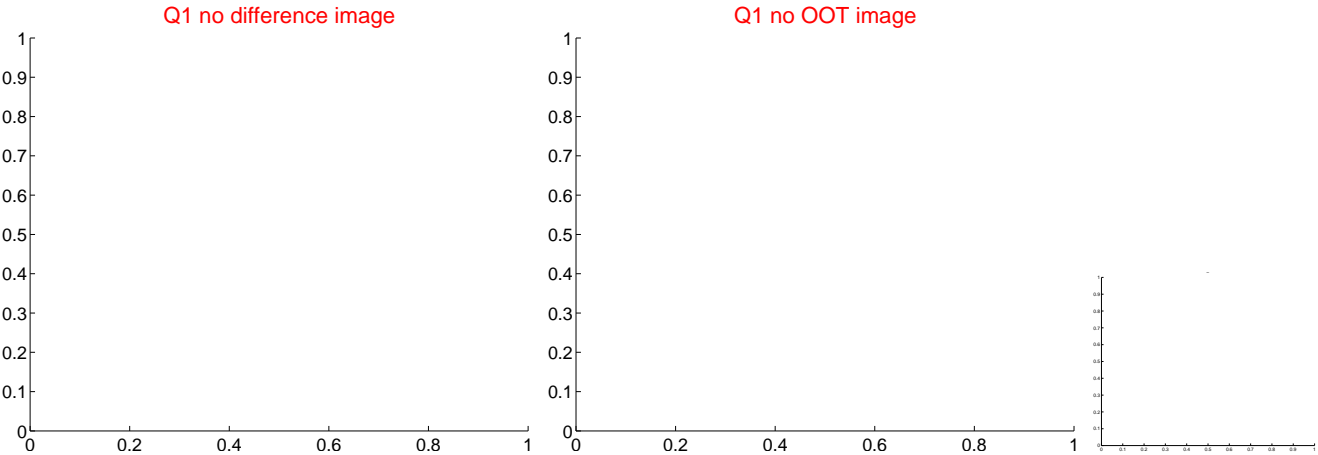
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.494 ± 0.653	2.29	-0.790 ± 0.755	-1.268 ± 0.609
PRF-fit source offset from KIC position	1.423 ± 0.722	1.97	-0.791 ± 0.677	-1.183 ± 0.741
photometric centroid source offset	1.52 ± 1.23	1.23	1.48 ± 1.22	0.36 ± 1.43



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.



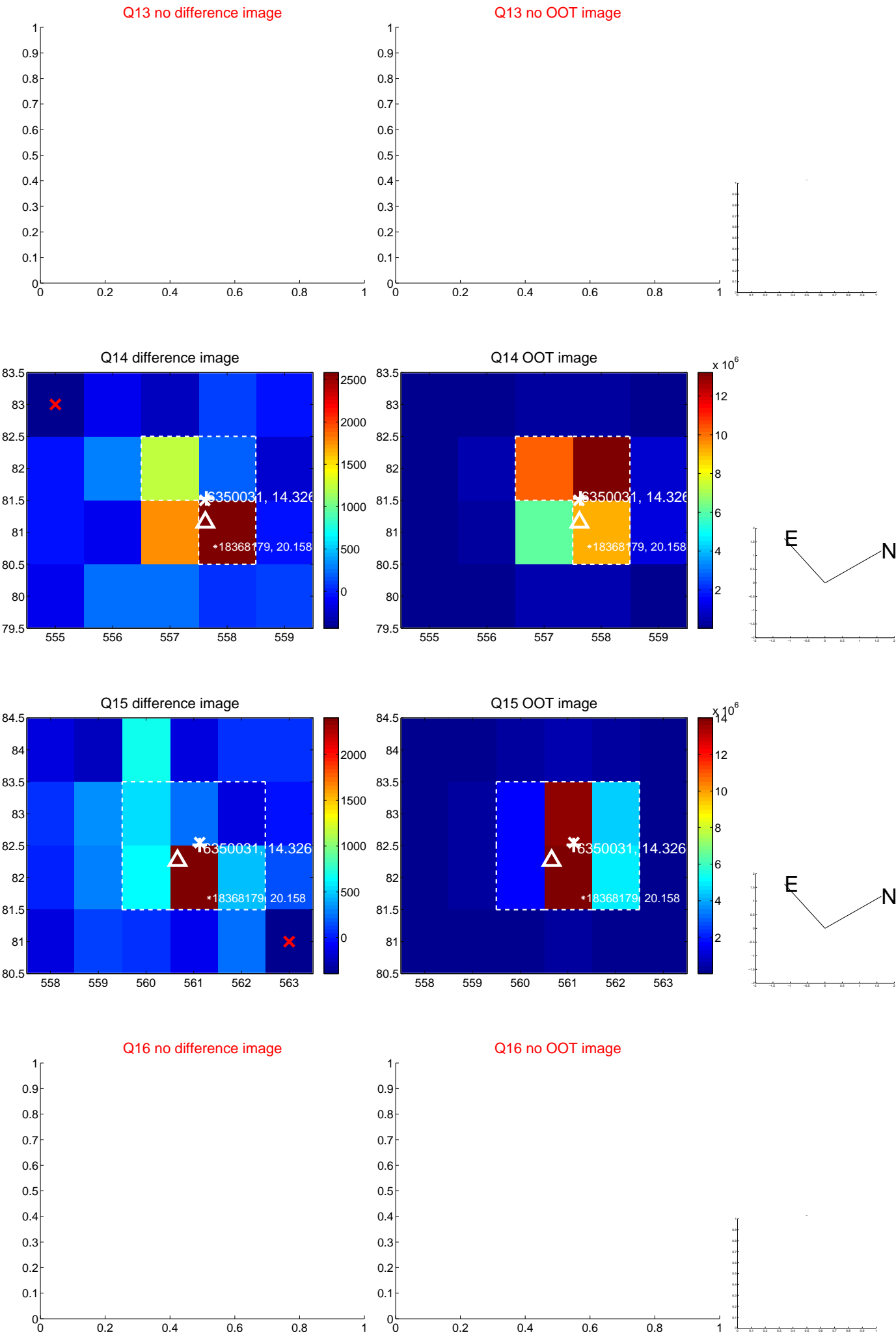
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



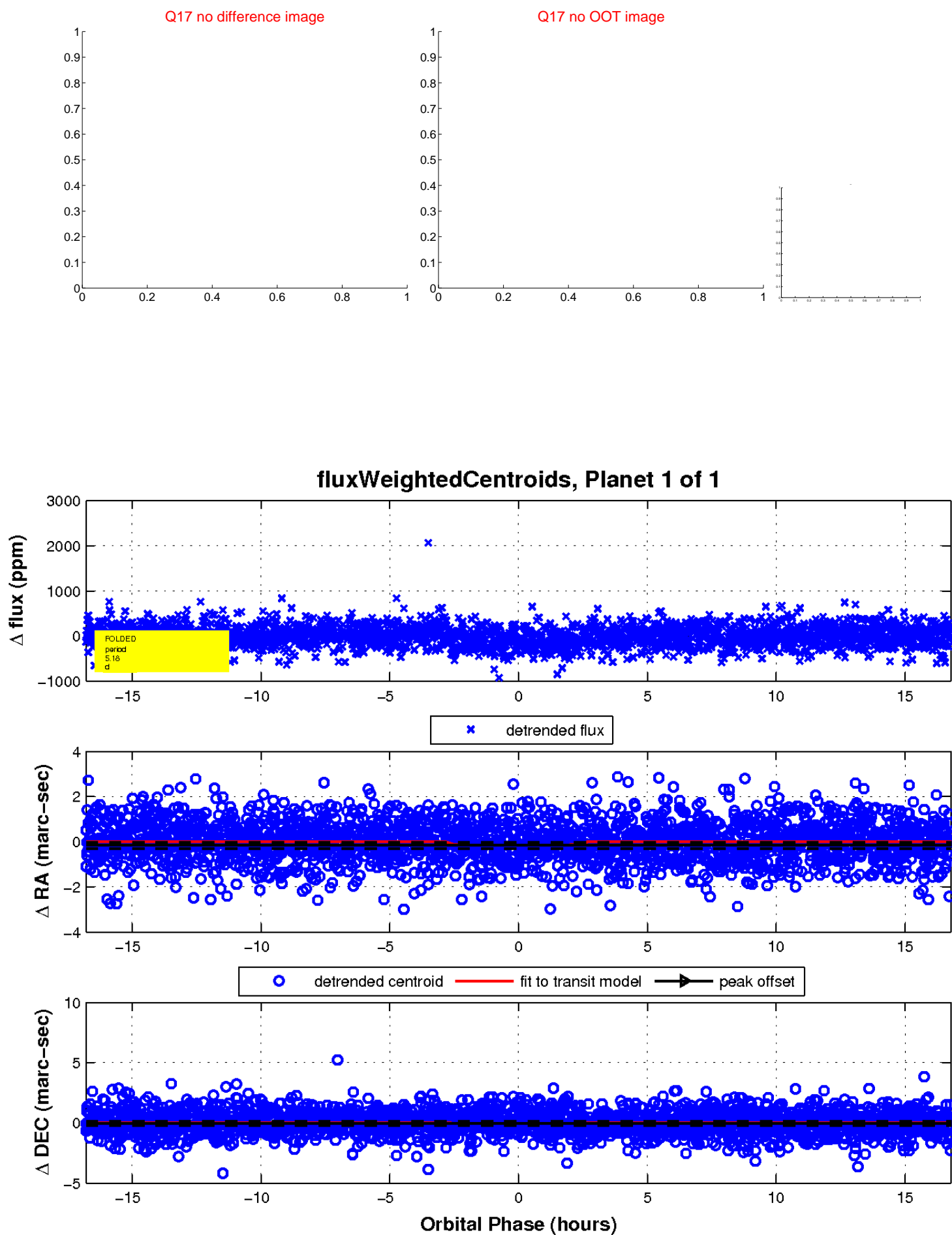
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

