

KIC 005437348

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})
005437348-01	OBS	No	329.316645	247.897181	363.5	3.201	7.8	7.9	3.73	6587	8.63	18.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005437348-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT

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.

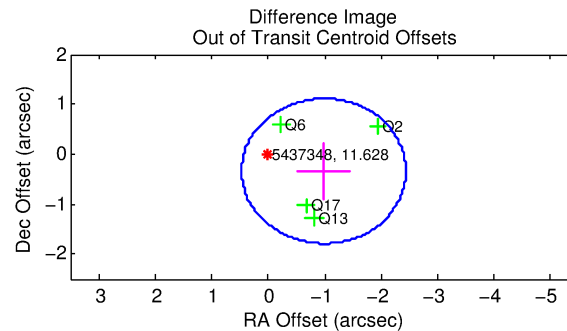
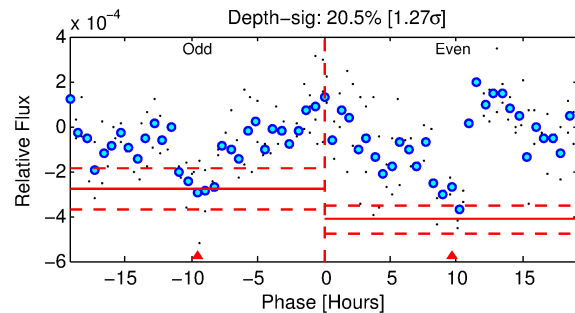
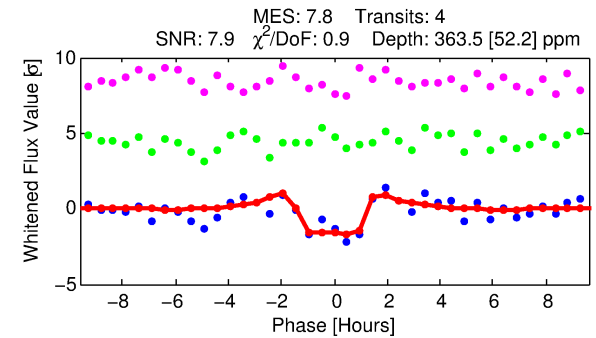
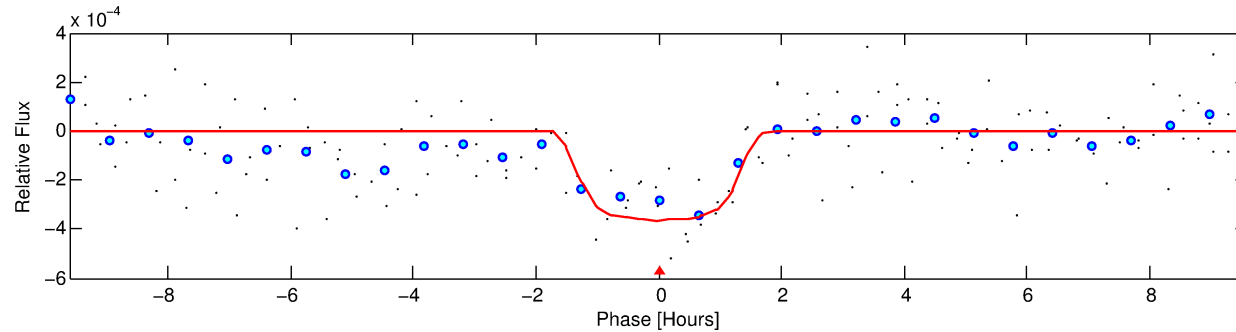
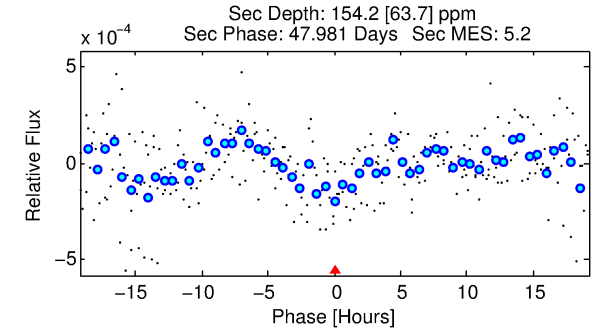
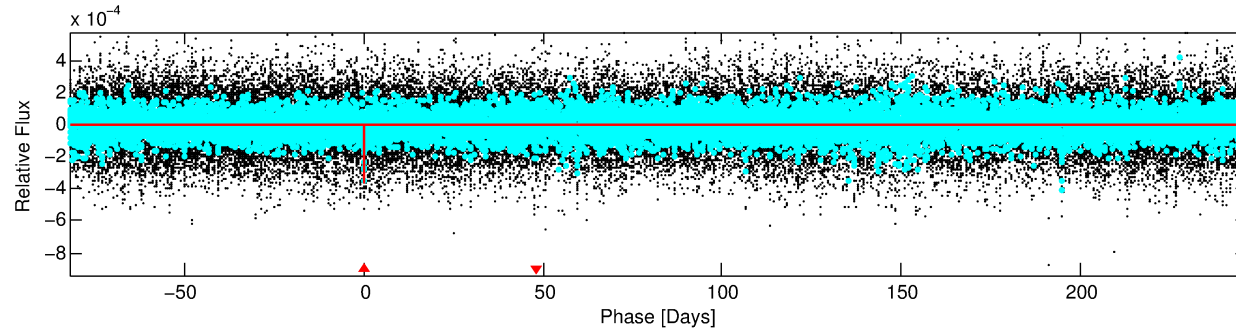
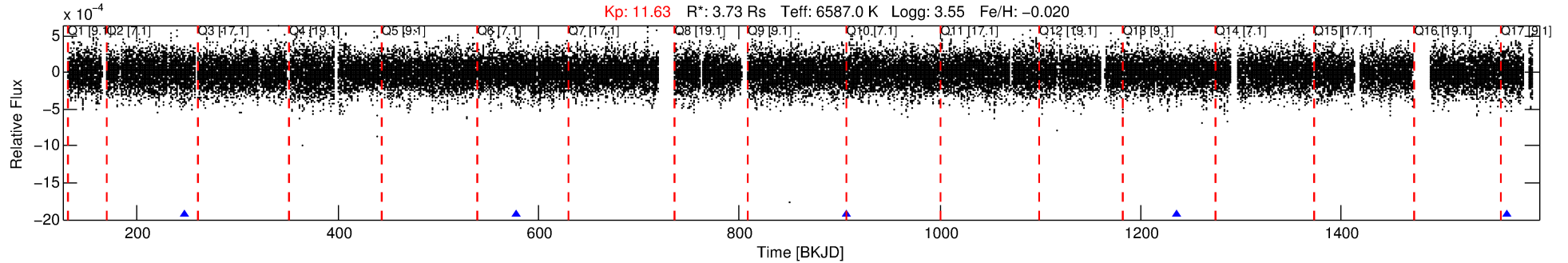
Ephemeris Match Information For 005437348-01

No Significant Match Found

DV One-Page Summary

KIC: 5437348 Candidate: 1 of 1 Period: 329.317 d
KOI: K04448 Corr: No Ephemeris Match

Kp: 11.63 R*: 3.73 Rs Teff: 6587.0 K Logg: 3.55 Fe/H: -0.020



DV Fit Results:

Period = 329.31664 [0.00184] d
Epoch = 247.8972 [0.0045] BKJD
Rp/R* = 0.0212 [0.0028]
a/R* = 317.57 [167.32]
b = 0.94 [0.07]
Seff = 18.24 [10.44]
Teq = 527 [75] K
Rp = 8.64 [3.44] Re
a = 1.1356 [0.4033] AU
Ag = 1466.99 [1092.93] [1.34 sigma]
Teffp = 5042 [631] K [7.11 sigma]

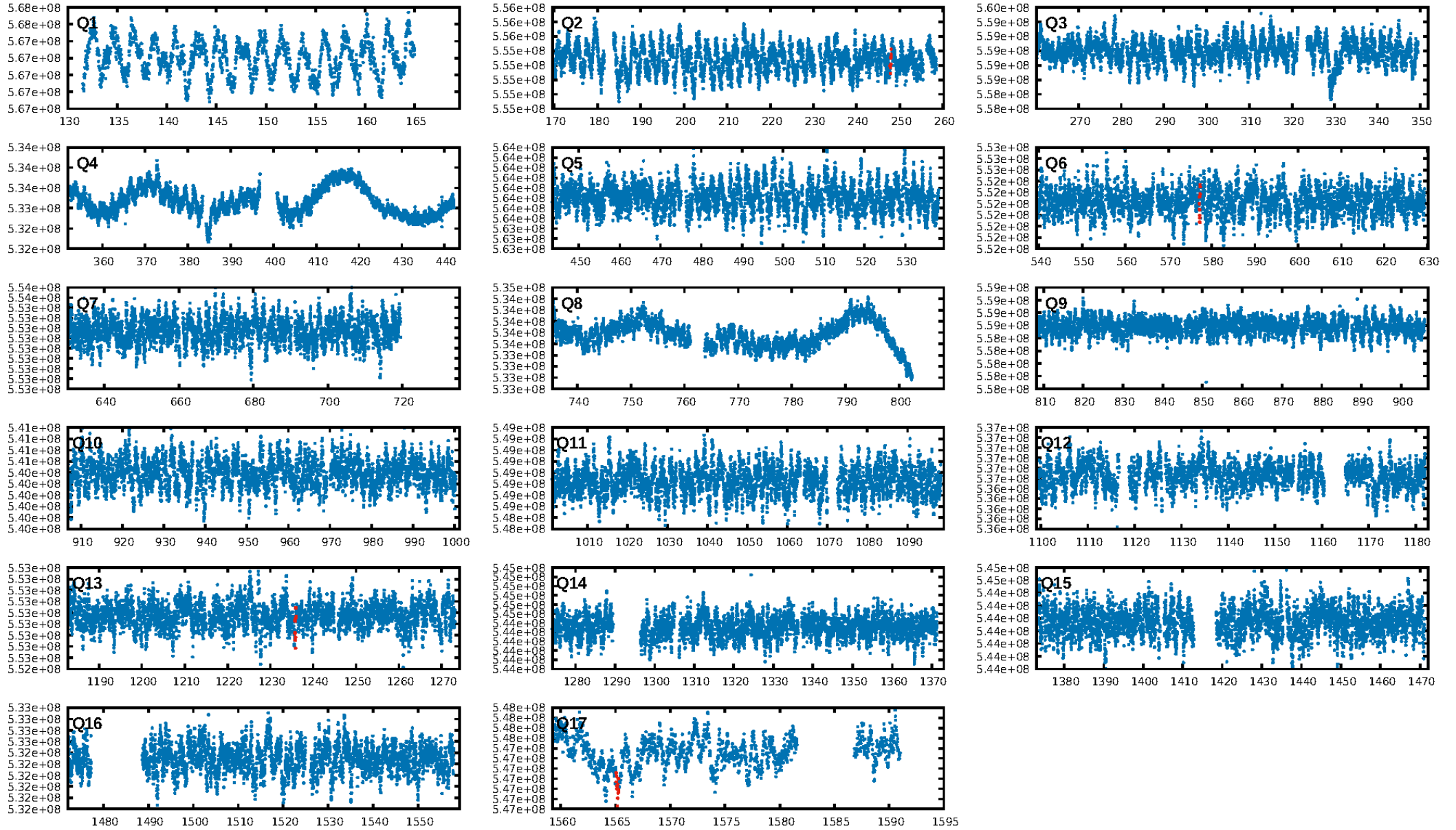
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 83.3%
ModelChiSquareGof-sig: 96.3%
Bootstrap-pfa: 5.36e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.514
Centroid-sig: N/A
Centroid-so: 0.331 arcsec [0.55 sigma]
OotOffset-rm: 1.041 arcsec [2.15 sigma]
KicOffset-rm: 0.912 arcsec [1.89 sigma]
OotOffset-st: 2/0/0/2 [4]
KicOffset-st: 2/0/0/2 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

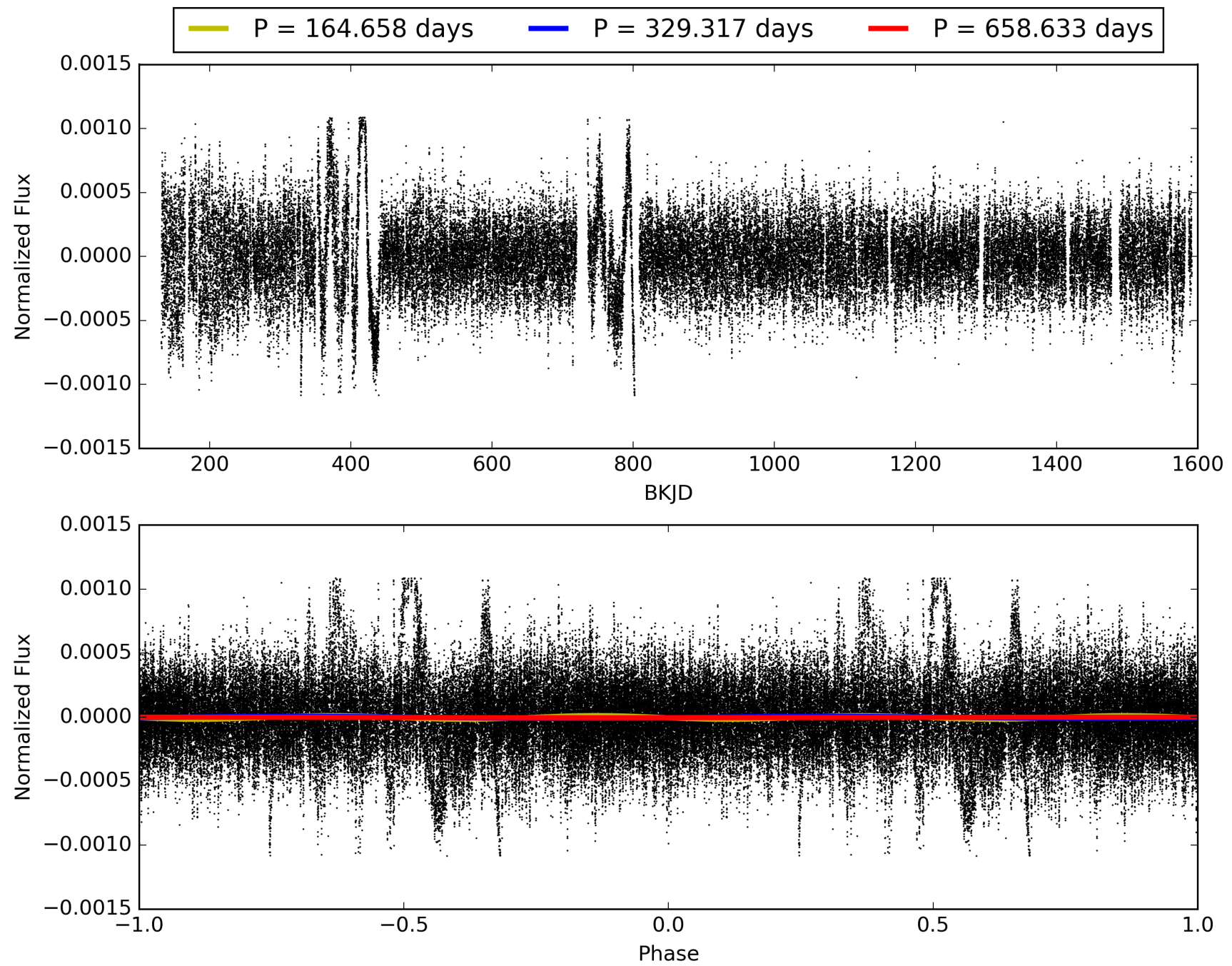
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:22:06 Z

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

TCE 005437348-01, PDC Light Curves

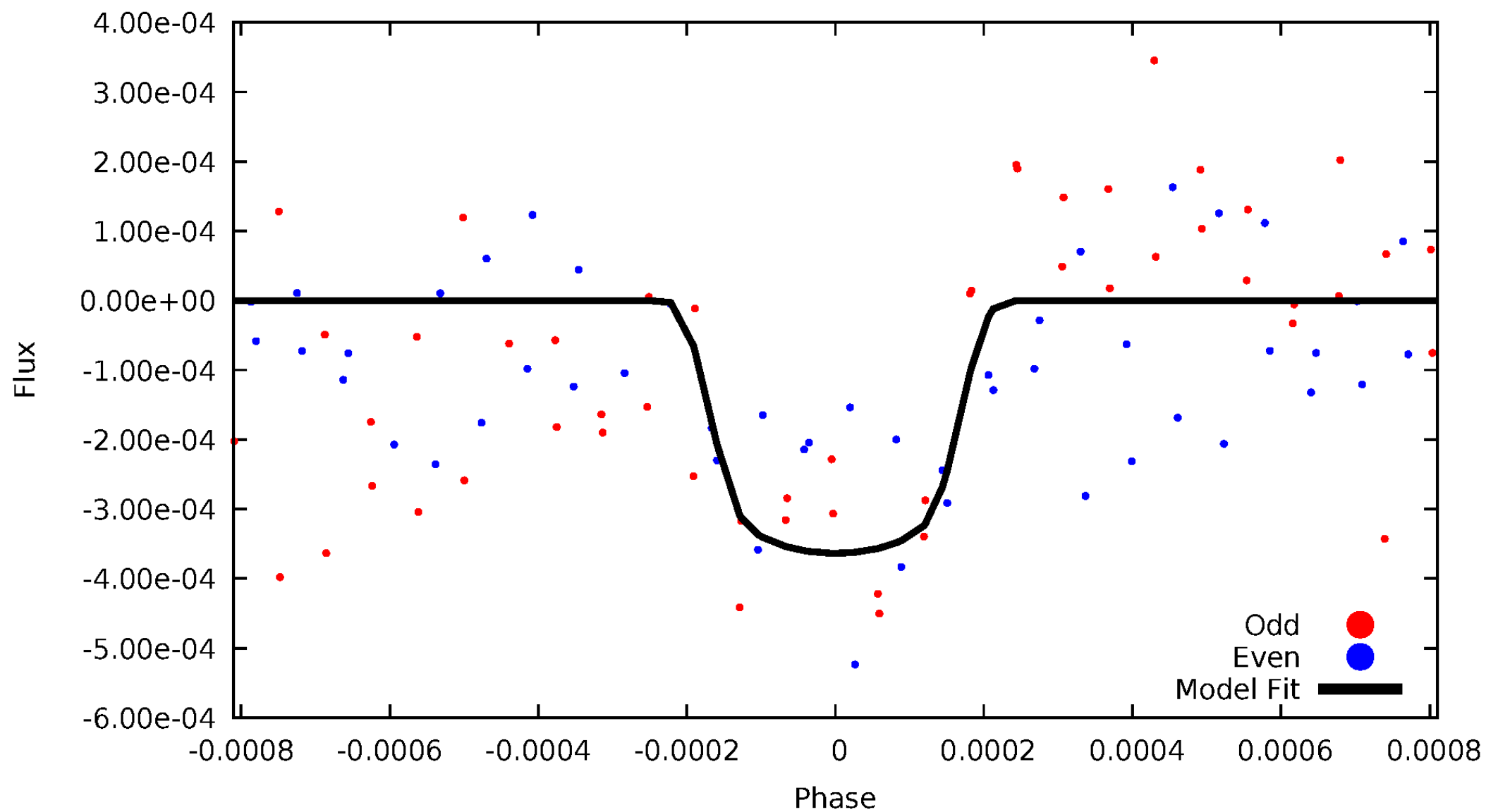


TCE 005437348-01



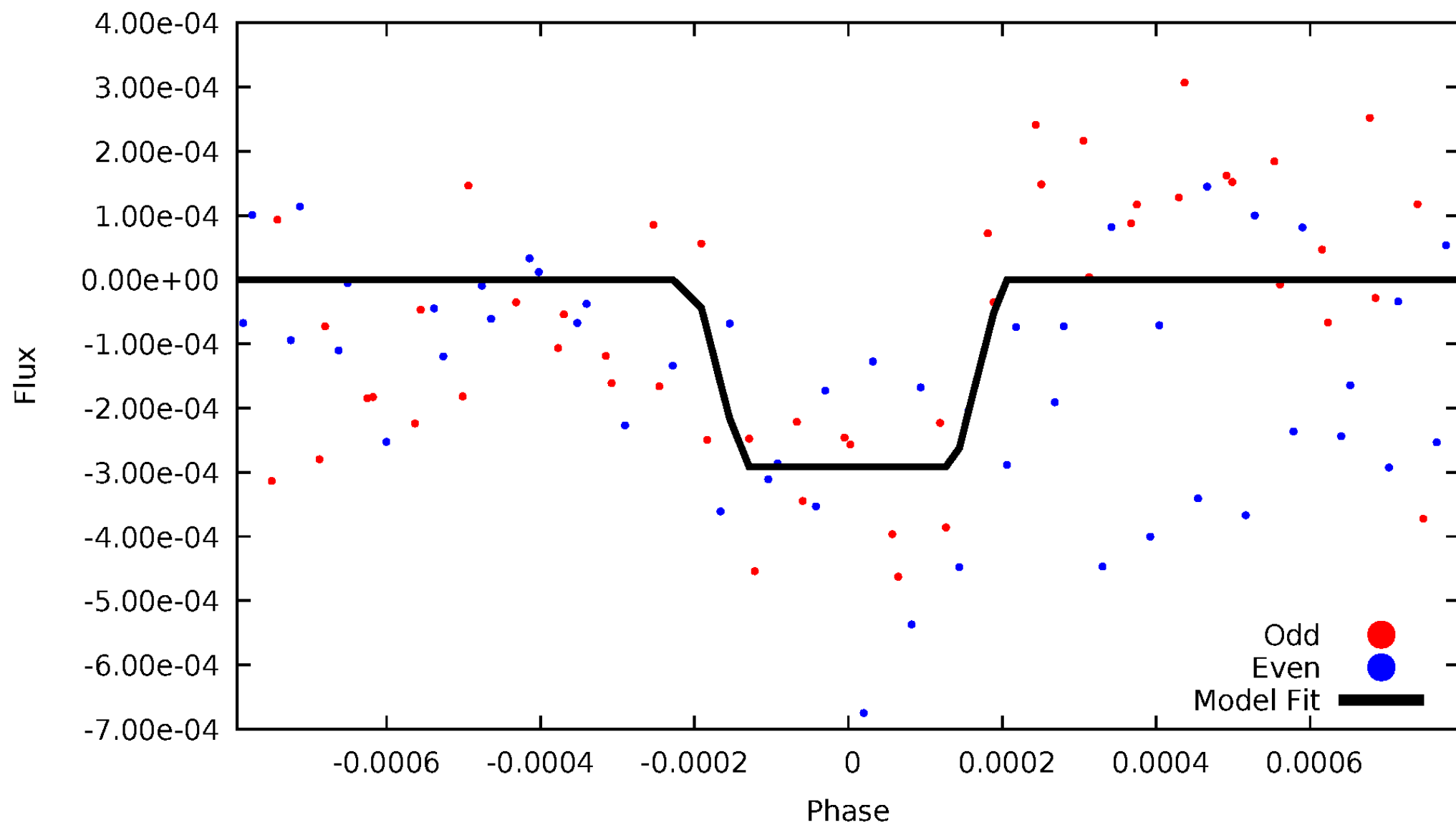
DV Odd/Even

TCE 005437348-01

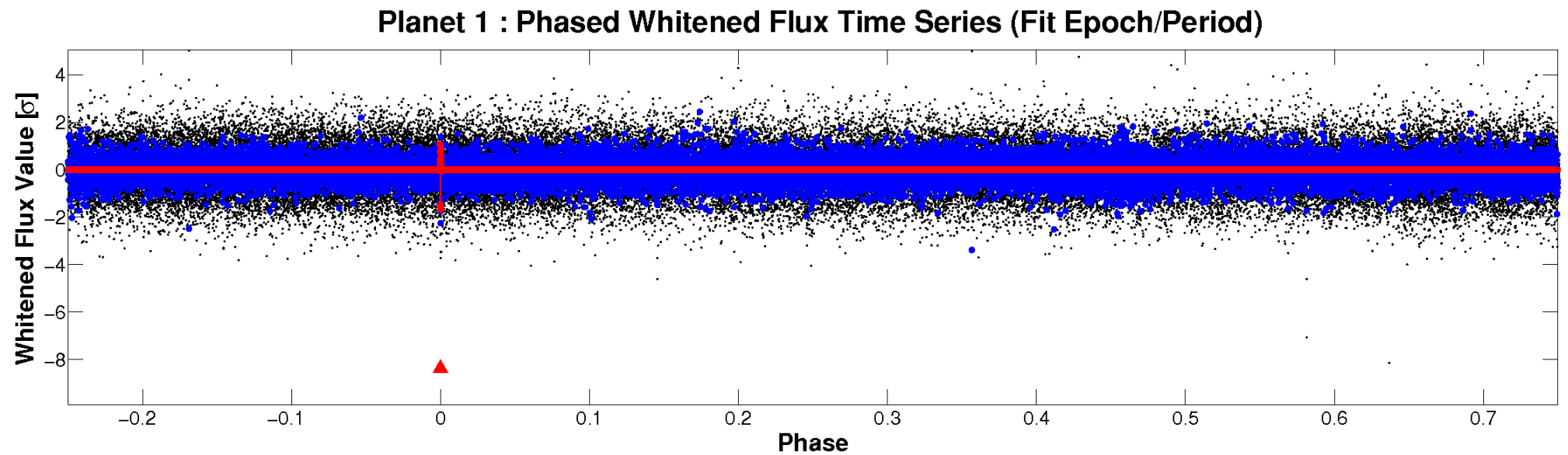
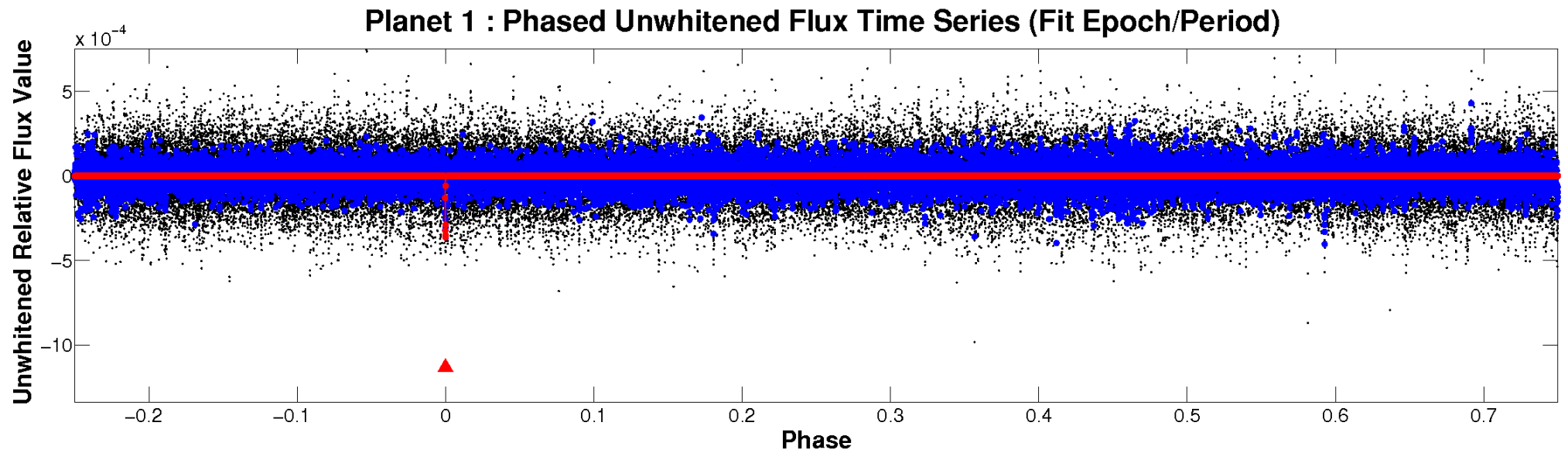


ALT Odd/Even

TCE 005437348-01

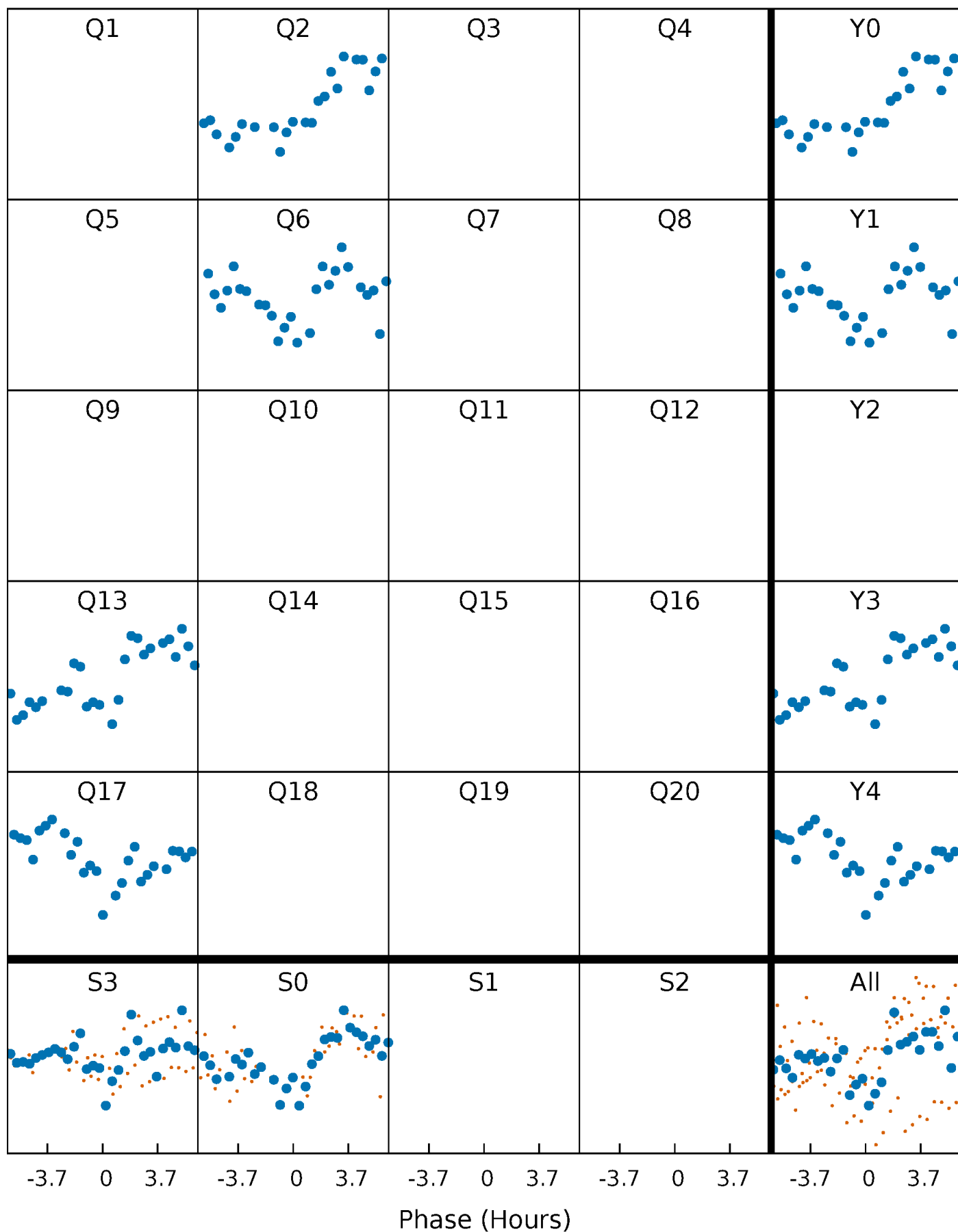


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 005437348-01 P=329.316645 Days $T_0=247.897181$ (BKJD)



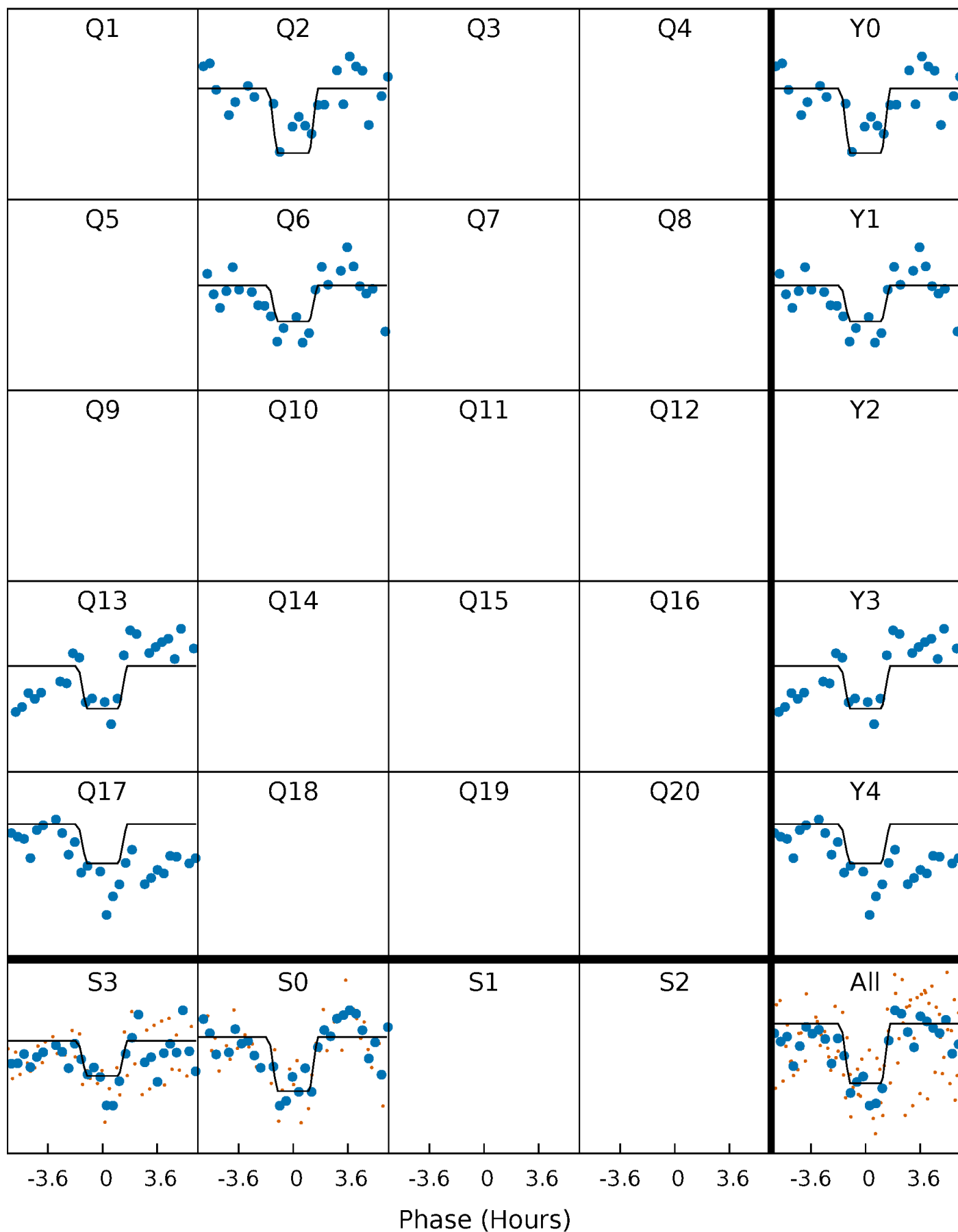
DV Quarter-Phased Transit Curves

TCE 005437348-01 P=329.316645 Days $T_0=247.897181$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

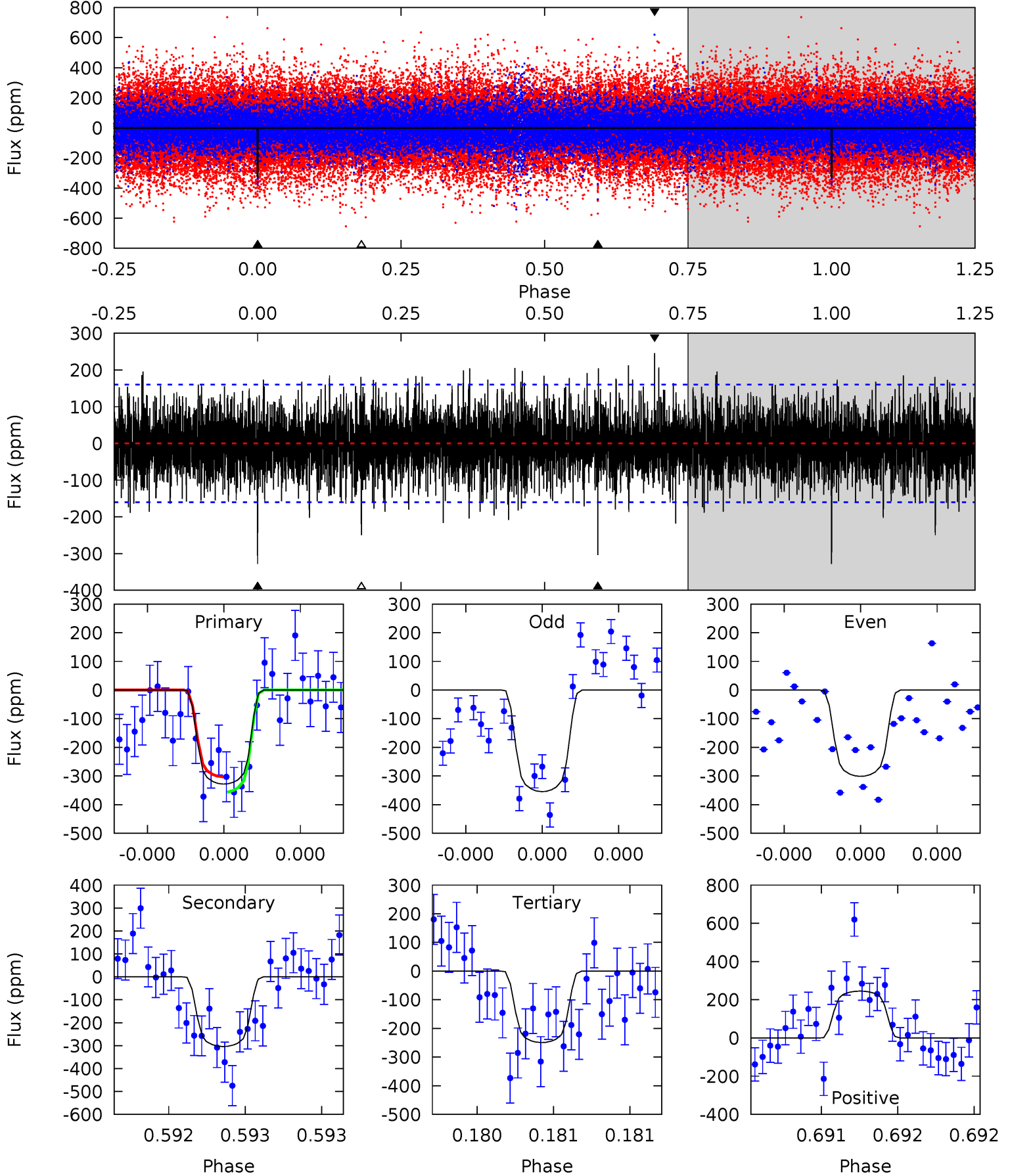
TCE 005437348-01 P=329.318178 Days $T_0=247.893177$ (BKJD)



DV Model-Shift Uniqueness Test

005437348-01, P = 329.316645 Days, E = 247.897181 Days

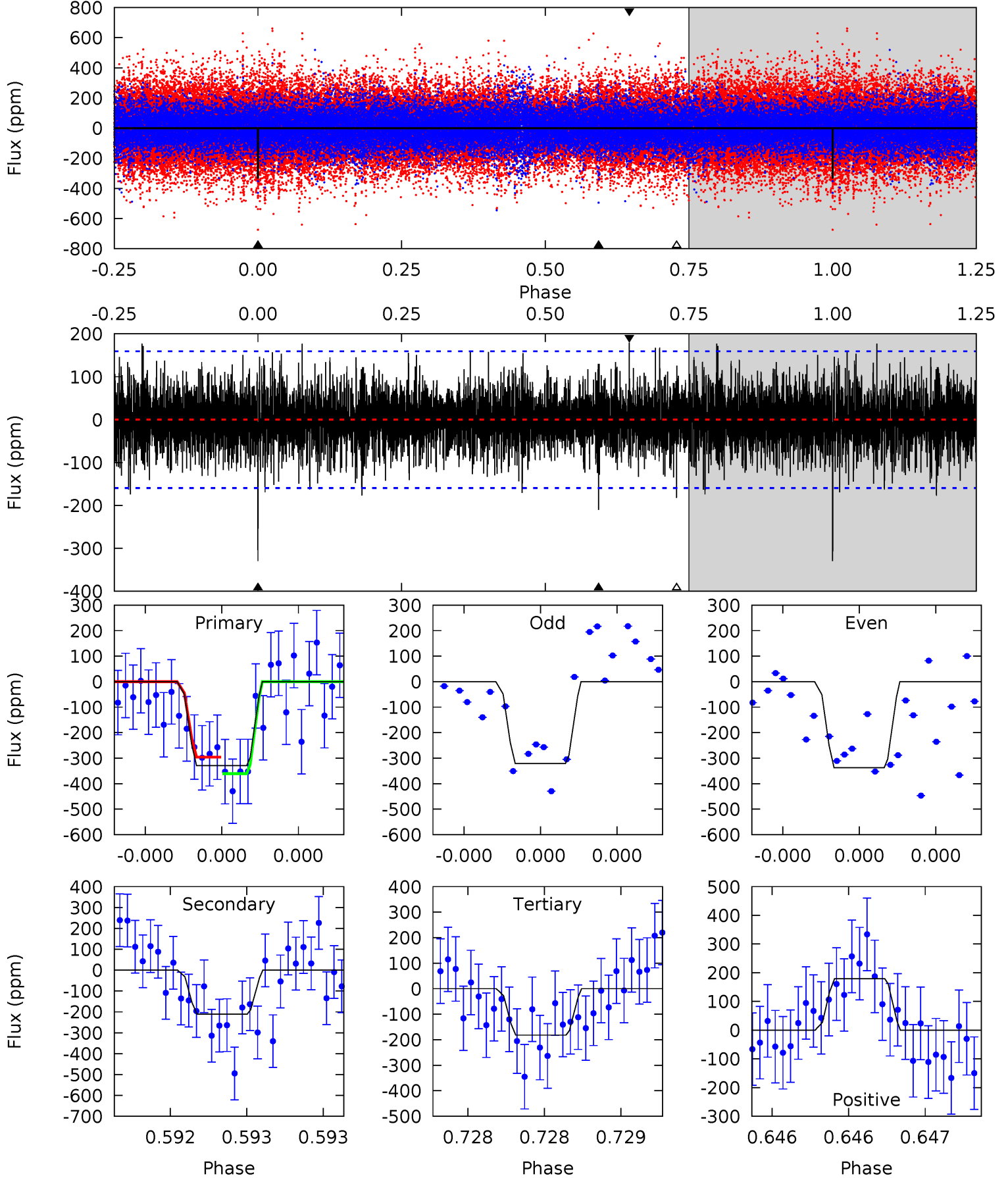
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	10.6	8.69	8.56	5.59	3.50	2.15	2.75	2.89	1.91	2.04	0.93	0.95	0.43	0.93



Alt Model-Shift Uniqueness Test

005437348-01, P = 329.318178 Days, E = 247.893177 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	7.41	6.41	6.32	5.62	3.55	1.73	5.19	5.28	1.00	1.10	0.28	1.02	0.35	1.14



Stellar Parameters For KIC 005437348

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6587^{+158}_{-178}	$3.549^{+0.328}_{-0.082}$	$-0.020^{+0.300}_{-0.250}$	$3.734^{+0.351}_{-1.403}$	$1.800^{+0.150}_{-0.351}$	$0.049^{+0.110}_{-0.009}$
	+2%/-3%	+9%/-2%	+1500%/-1250%	+9%/-38%	+8%/-19%	+226%/-19%
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 005437348-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-304 ± 29	$8.24^{+1.57}_{-1.60}$	725^{+34}_{-65}	5949^{+456}_{-402}	3186^{+1595}_{-972}
Alt.	-210 ± 28	$6.57^{+1.44}_{-1.57}$	727^{+35}_{-62}	6057^{+629}_{-484}	3388^{+2150}_{-1108}

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 $A_{obs} \gg 1.0$

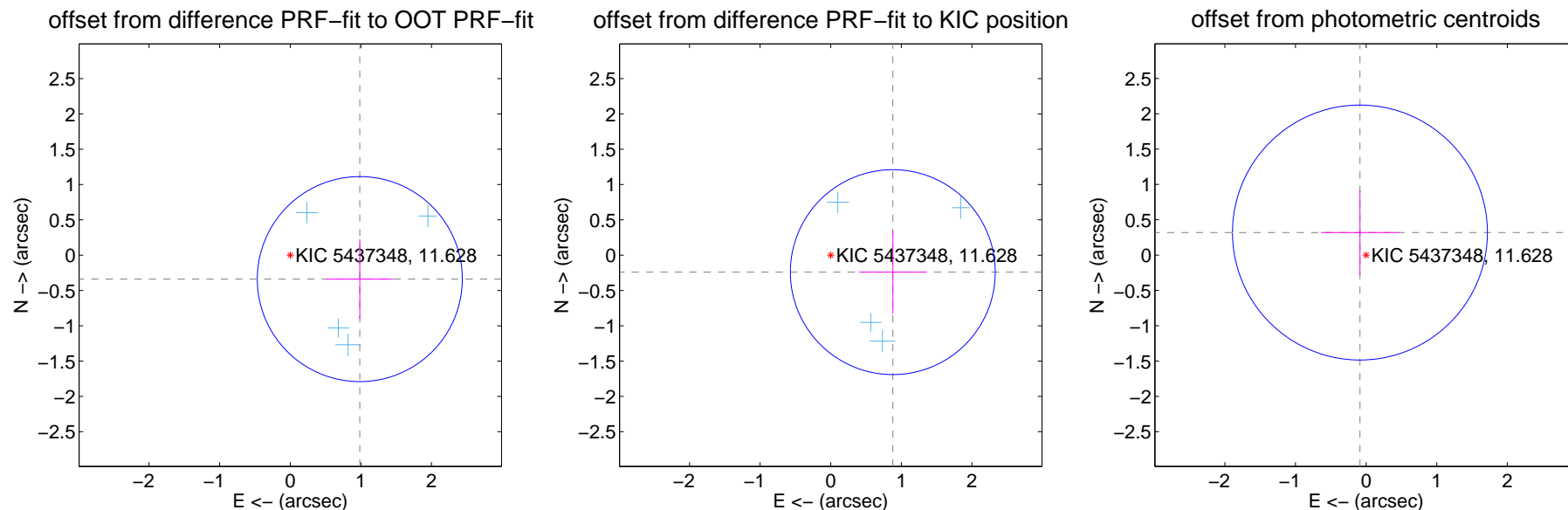
DV Centroid Data

Supplemental centroid analysis for 005437348-01. **Kepler magnitude: 11.63.** Transit SNR 7.94

There are 4 quarters with good PRF difference image offsets

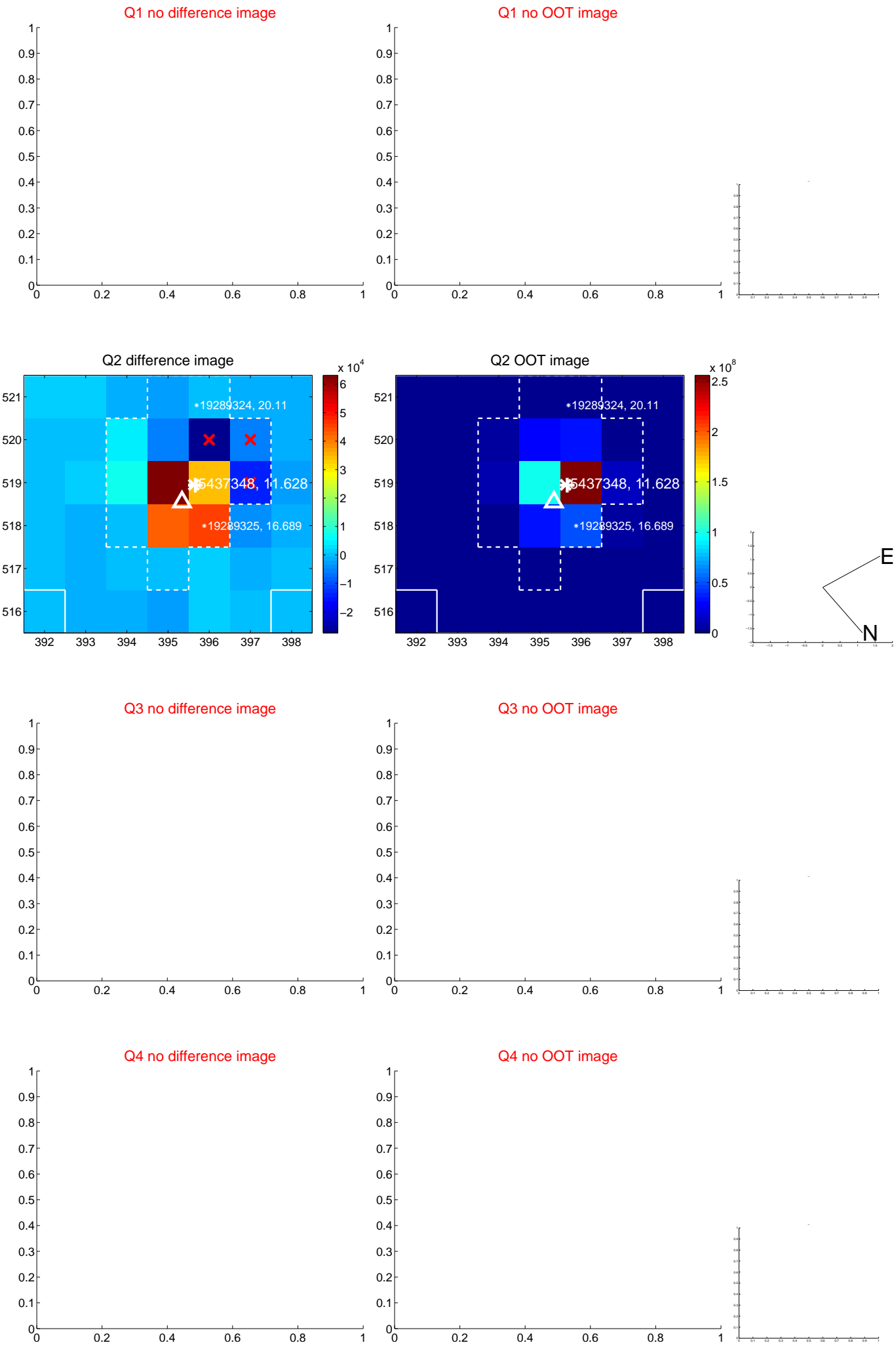
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.041 ± 0.484	2.15	-0.985 ± 0.473	-0.339 ± 0.564
PRF-fit source offset from KIC position	0.912 ± 0.484	1.89	-0.879 ± 0.475	-0.240 ± 0.587
photometric centroid source offset	0.33 ± 0.60	0.55	0.09 ± 0.55	0.32 ± 0.61



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.

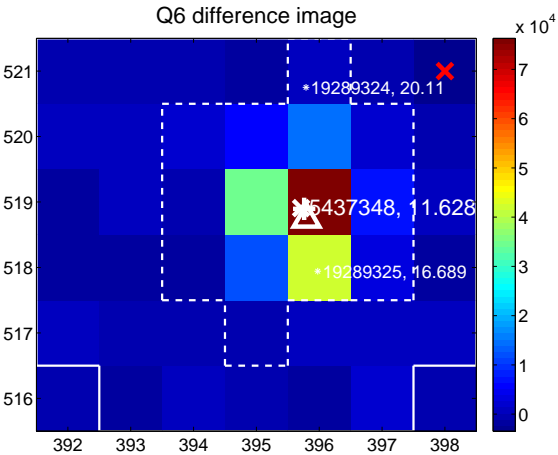
Q5 no difference image



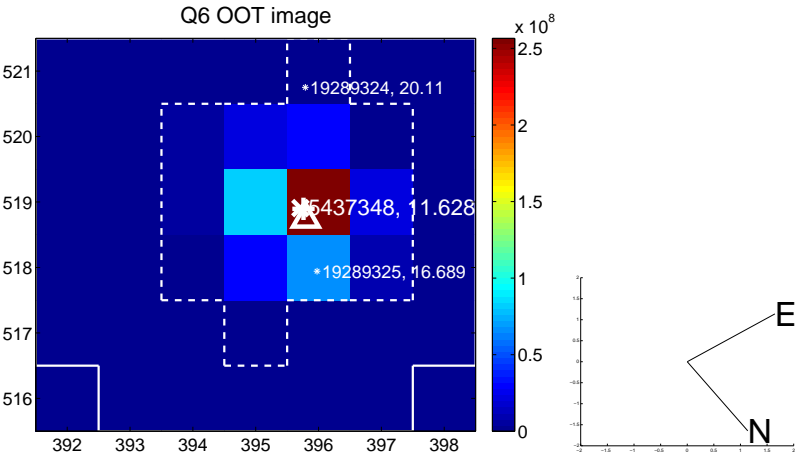
Q5 no OOT image



Q6 difference image



Q6 OOT image



Q7 no difference image



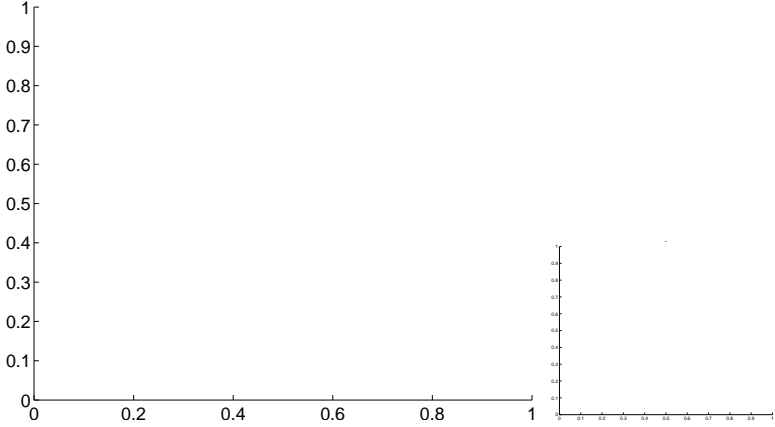
Q7 no OOT image



Q8 no difference image



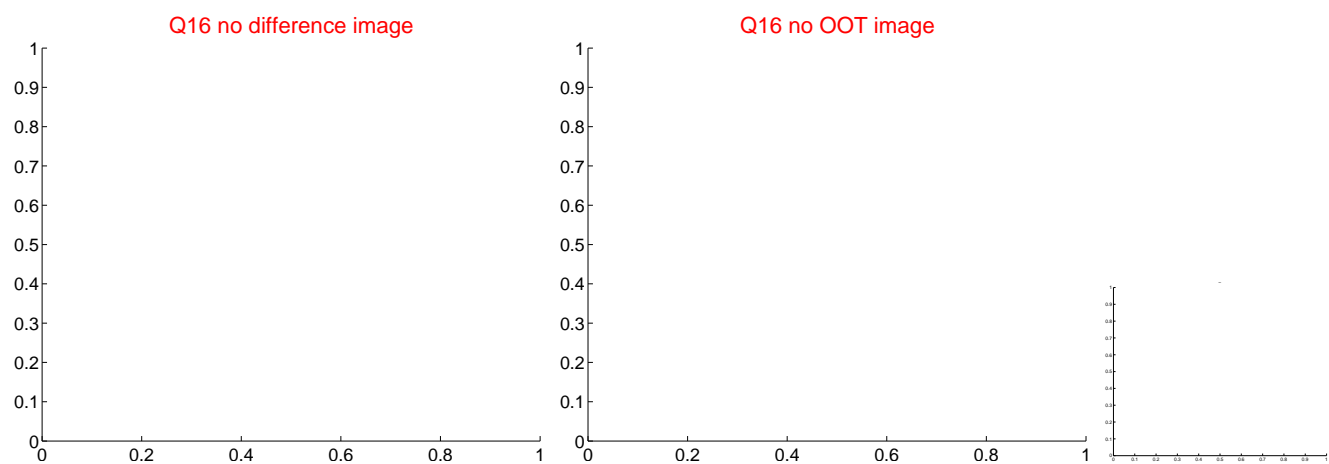
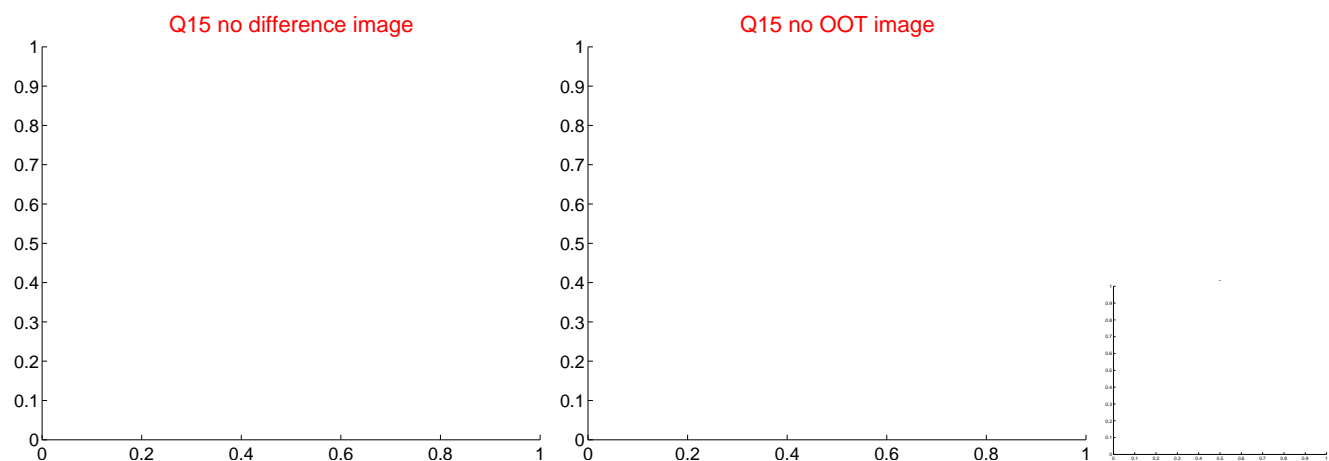
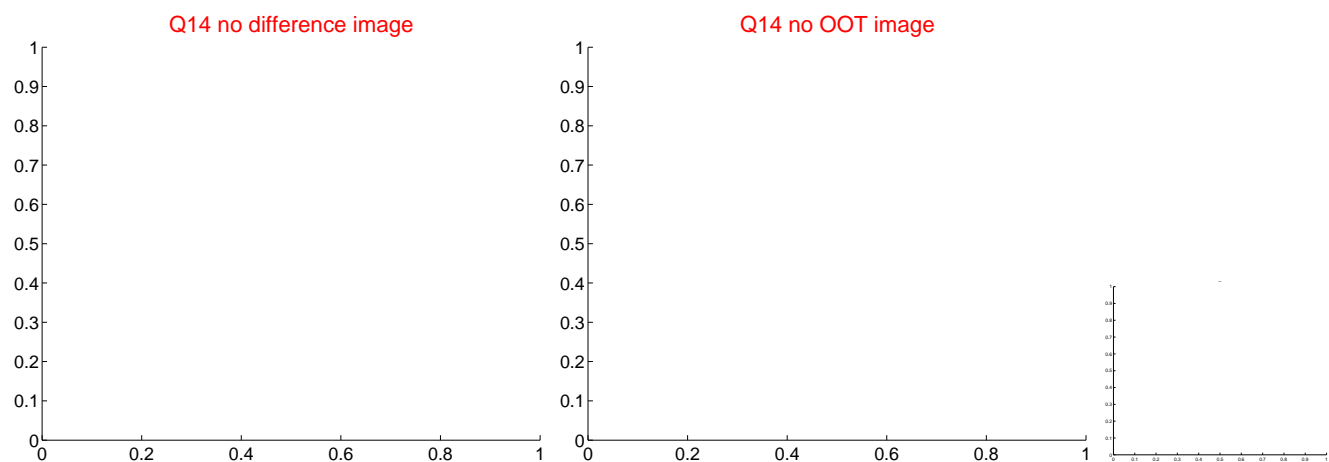
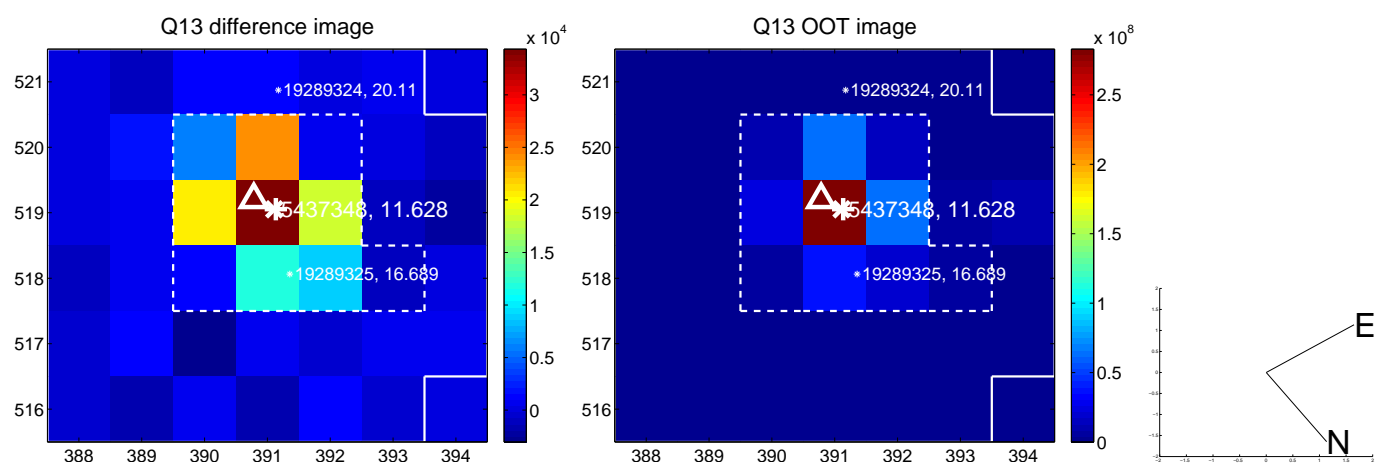
Q8 no OOT image



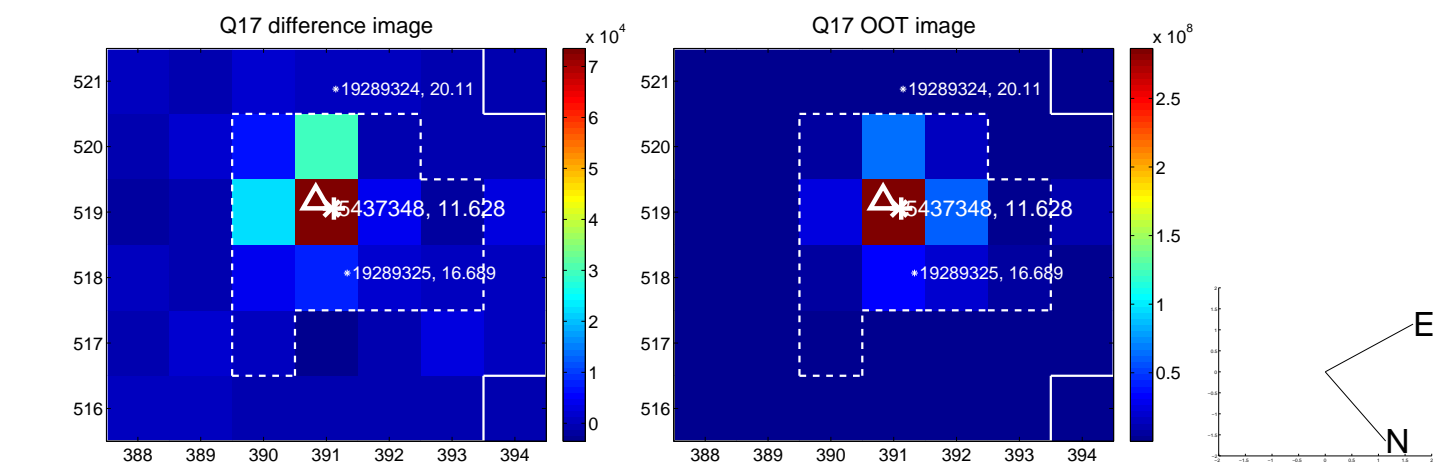
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



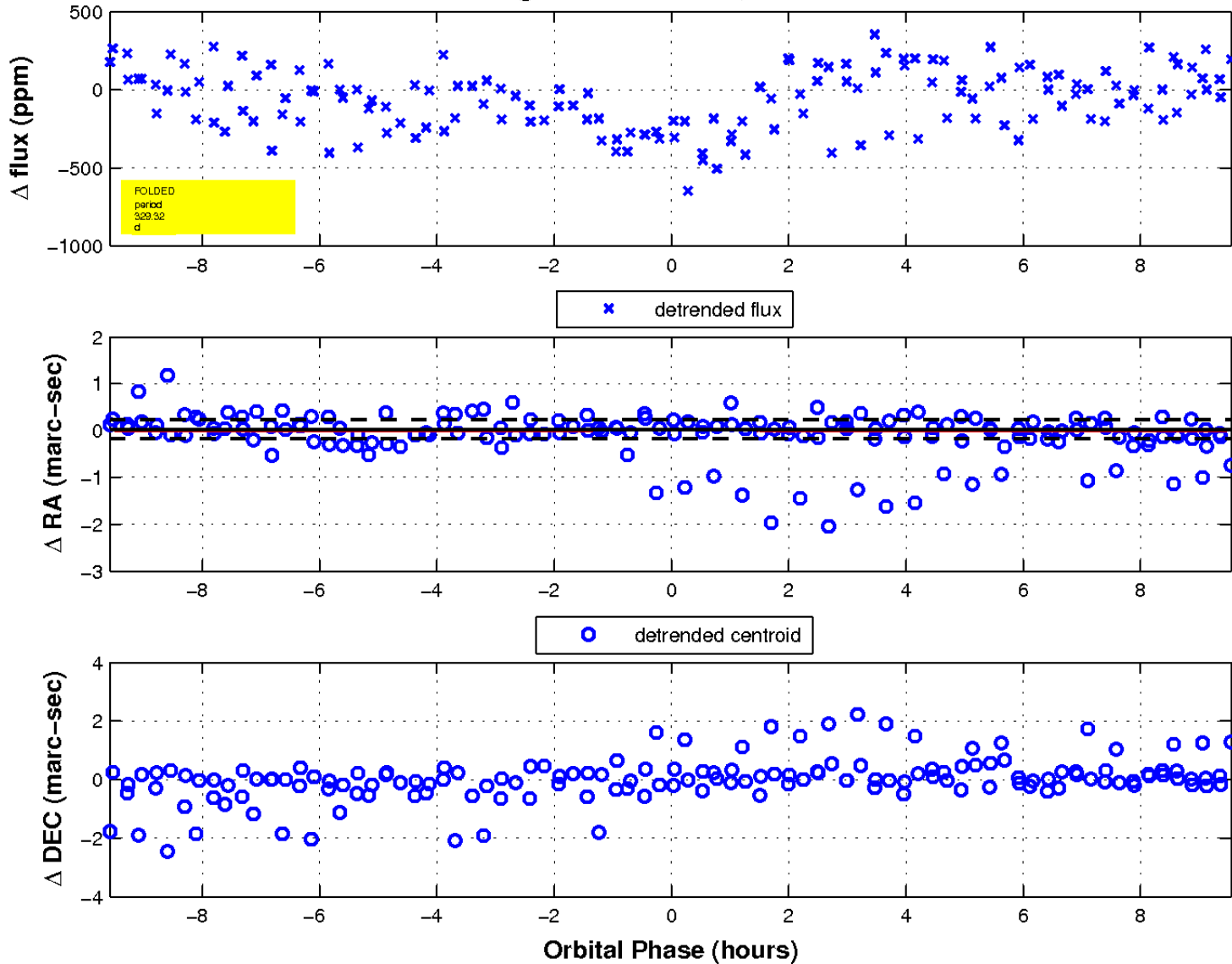
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

