

KIC 004349067

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})
004349067-01	OBS	No	407.564629	372.954304	40.7	25.430	7.7	5.9	1.72	5884	1.18	2.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004349067-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—MOD_POS_DV—CENT_SATURATED—HALO_GHOST

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

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

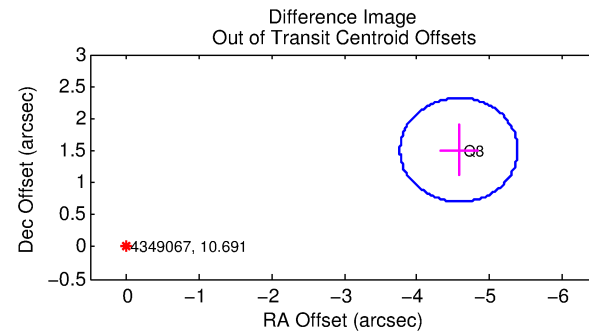
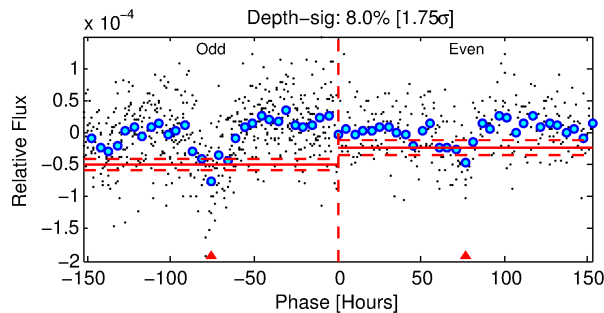
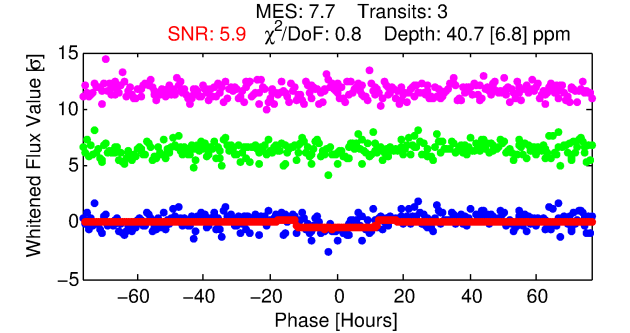
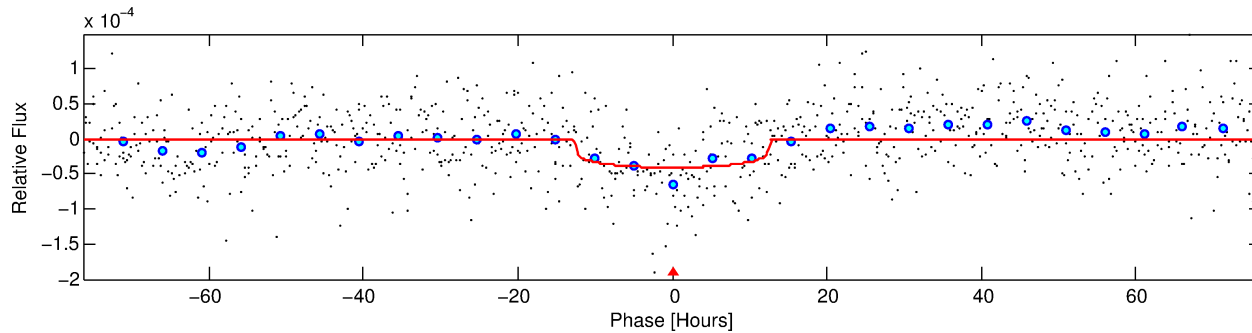
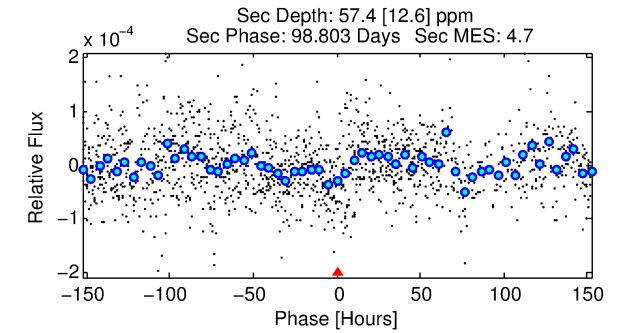
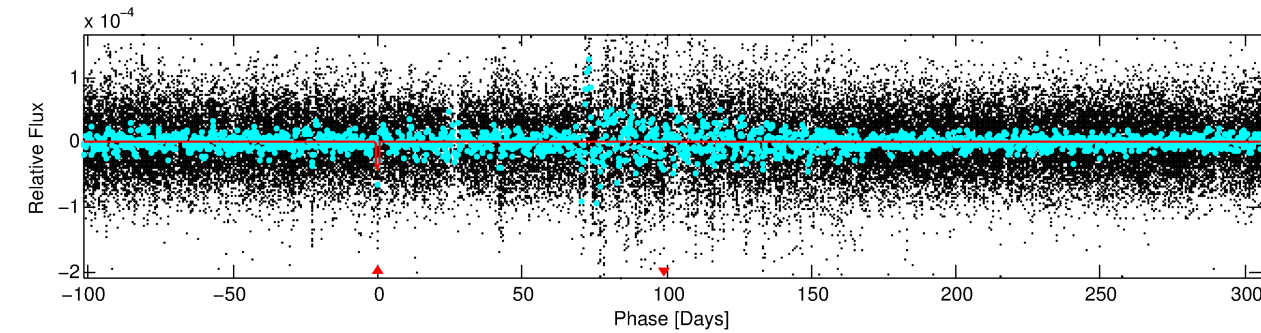
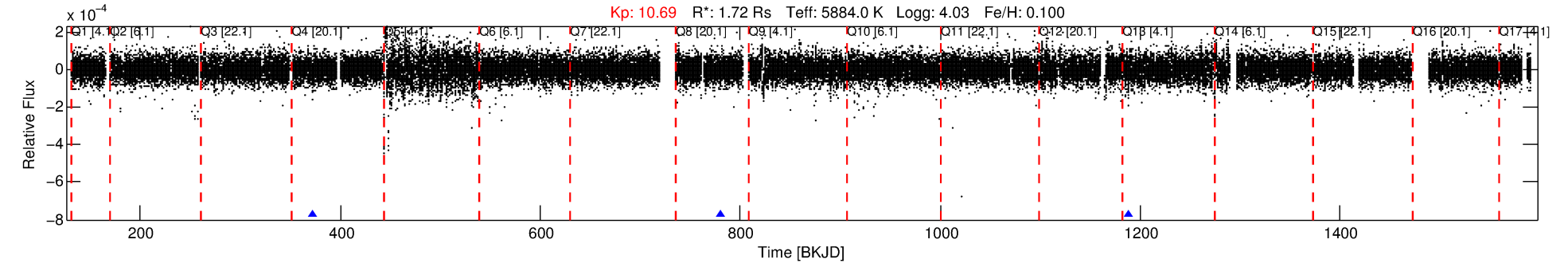
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004349067-01

No Significant Match Found

DV One-Page Summary

KIC: 4349067 Candidate: 1 of 1 Period: 407.565 d



DV Fit Results:

Period = 407.56463 [0.02283] d
Epoch = 372.9543 [0.0302] BKJD
Rp/R* = 0.0063 [0.0019]
a/R* = 83.43 [108.53]
b = 0.74 [0.80]
Seff = 2.50 [1.51]
Teq = 321 [48] K
Rp = 1.18 [0.59] Re
a = 1.1238 [0.4208] AU
Ag = 28460.27 [24716.24] [1.15σ]
Teffp = 6440 [1046] K [5.84σ]

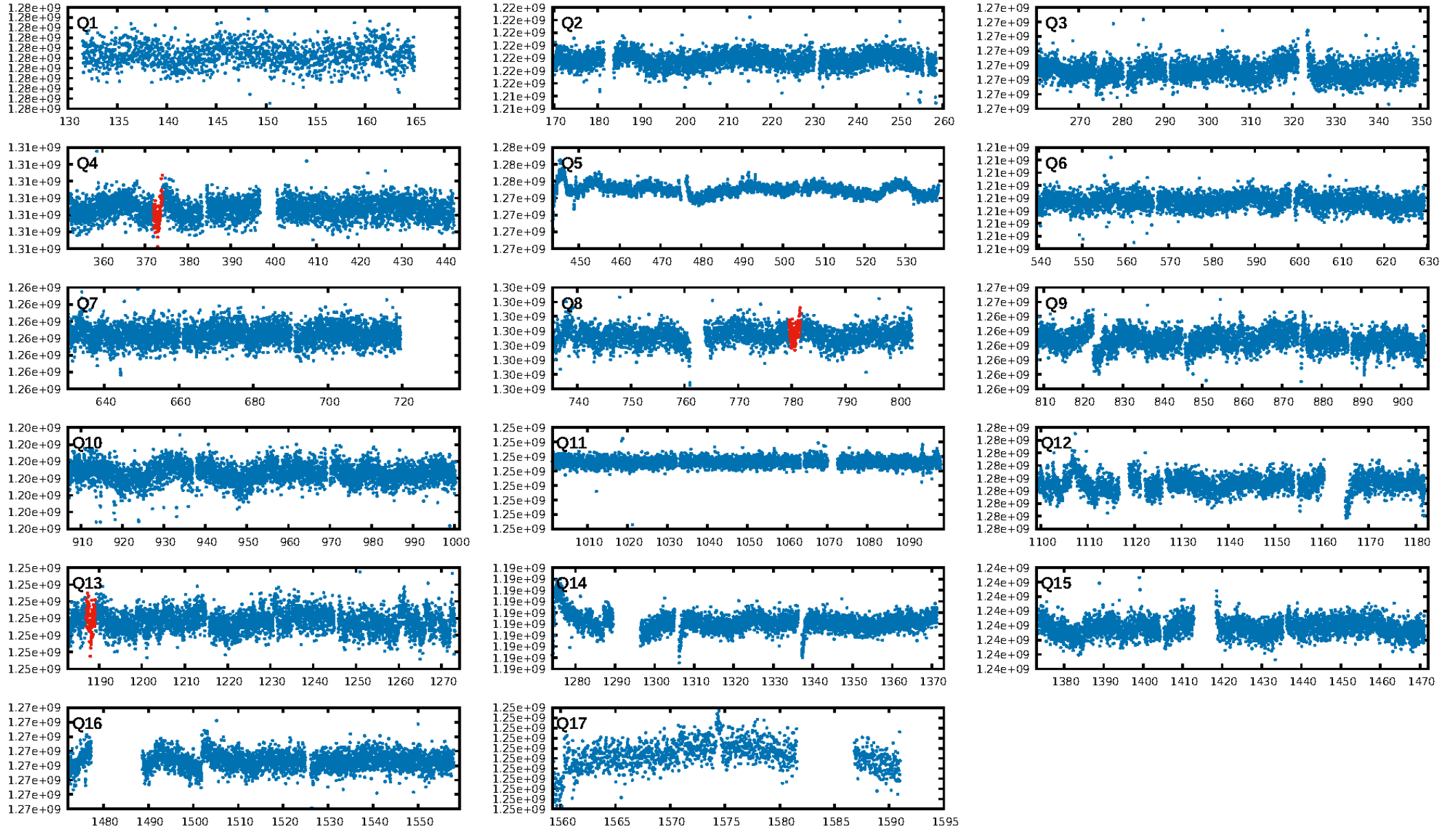
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 26.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.66e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.07106
Centroid-sig: 1.0%
Centroid-so: 4.679 arcsec [1.60σ]
OotOffset-rm: 4.821 arcsec [17.88σ]
KicOffset-rm: 4.172 arcsec [14.11σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [1/1]

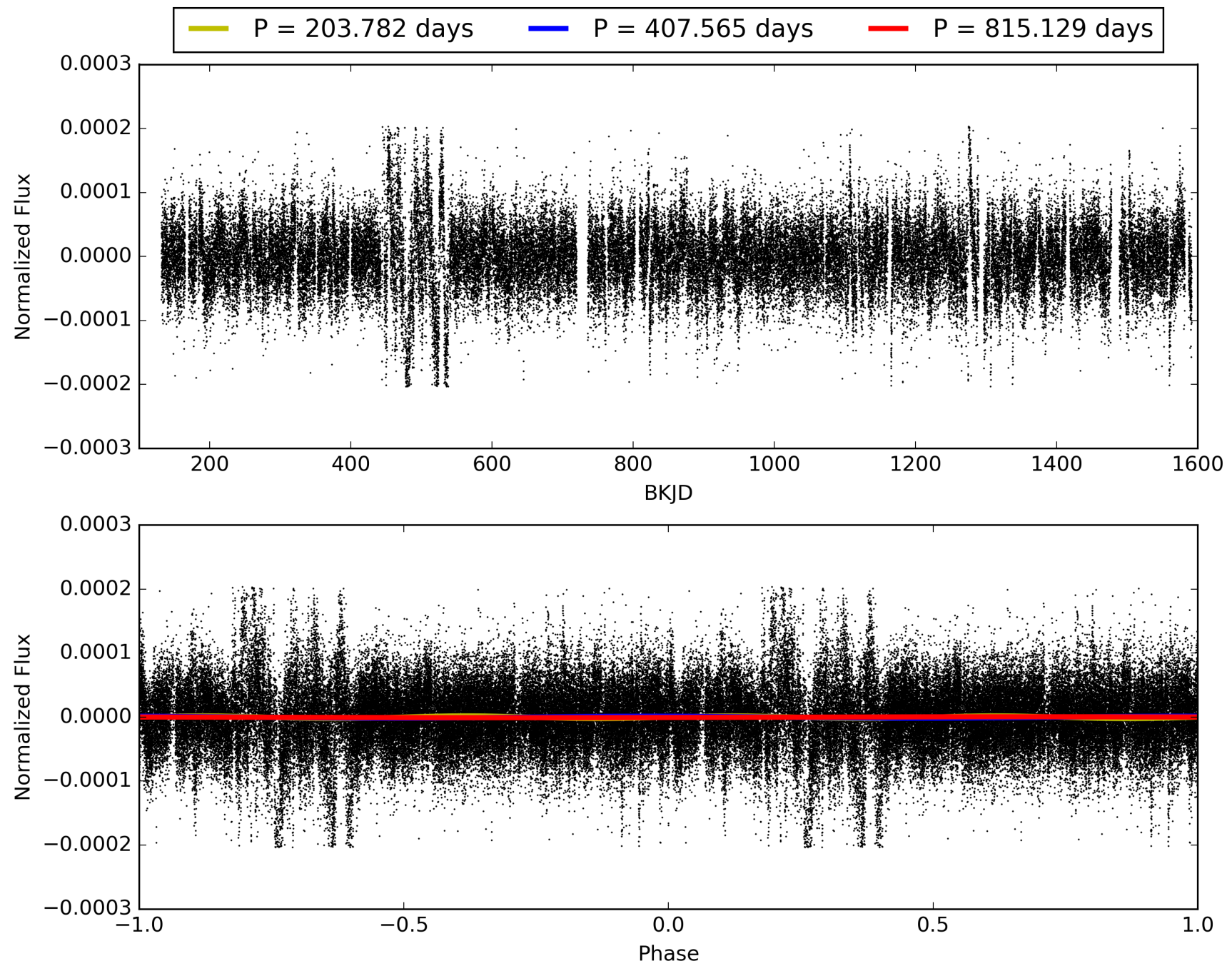
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:10:32 Z

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

TCE 004349067-01, PDC Light Curves

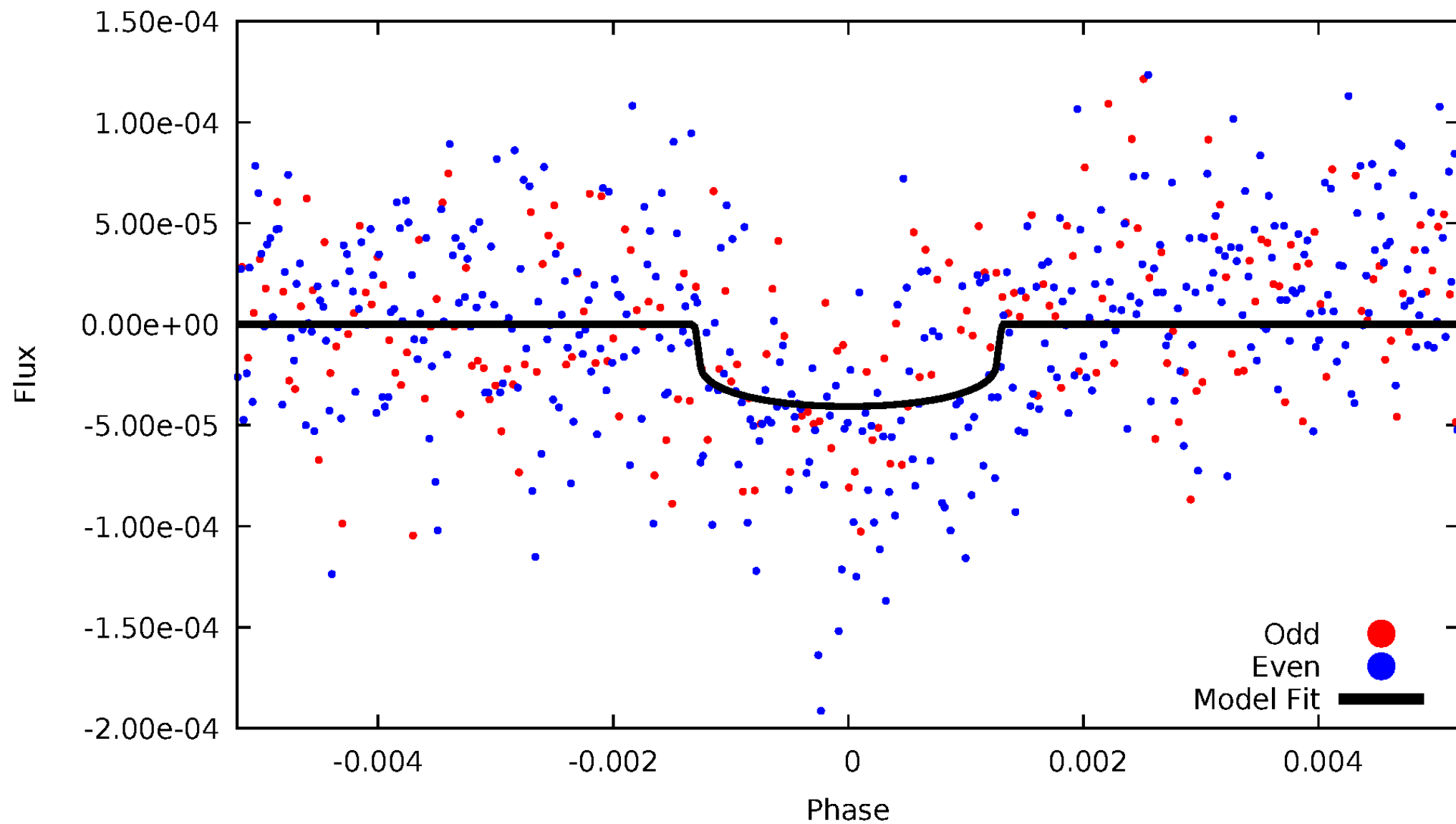


TCE 004349067-01



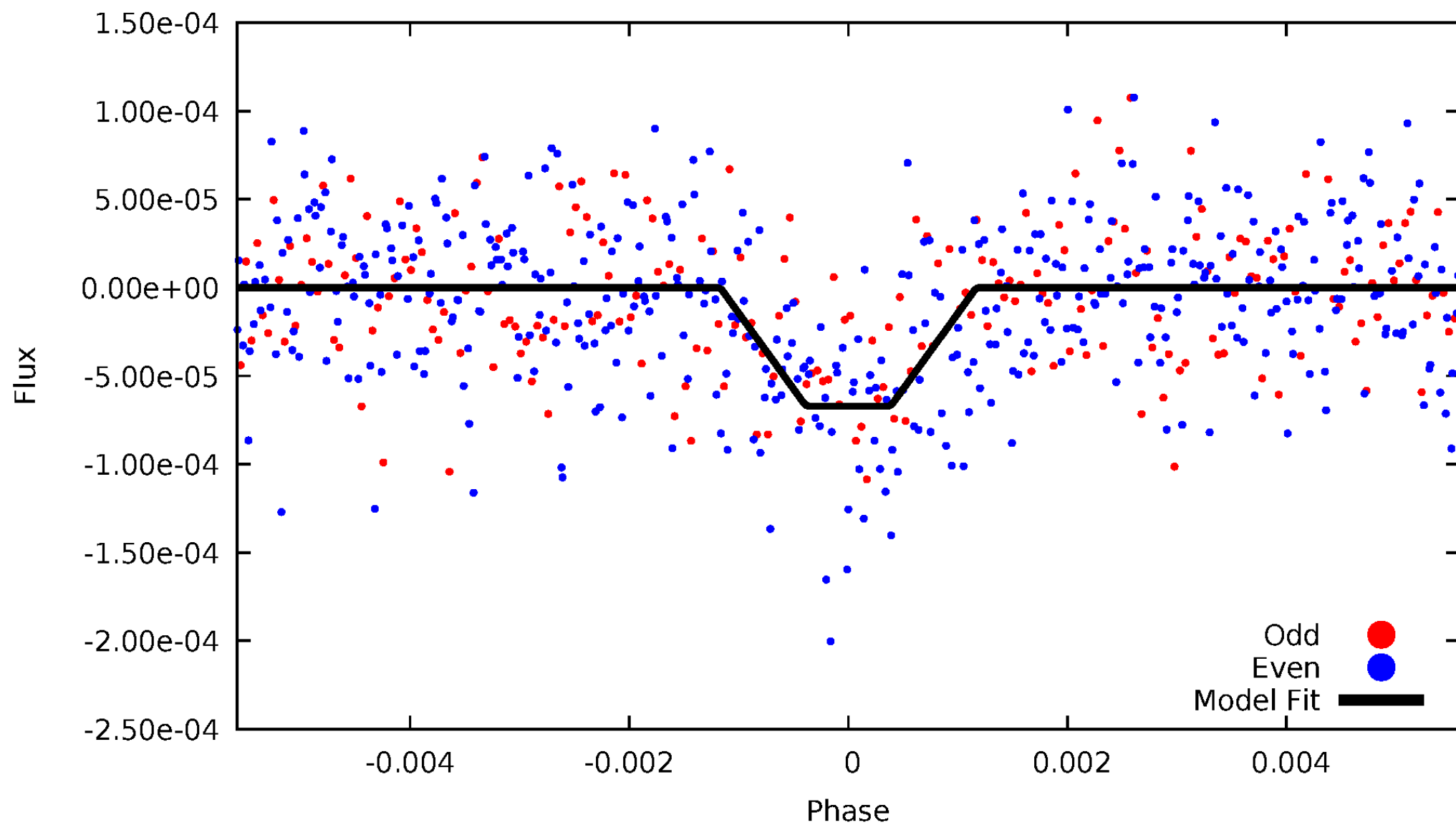
DV Odd/Even

TCE 004349067-01



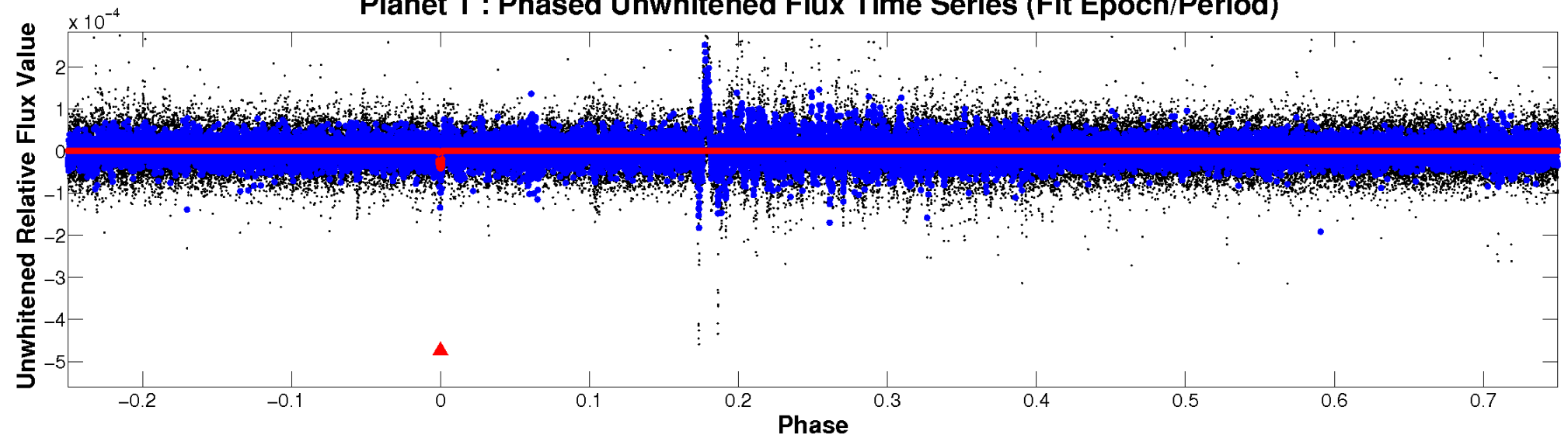
ALT Odd/Even

TCE 004349067-01

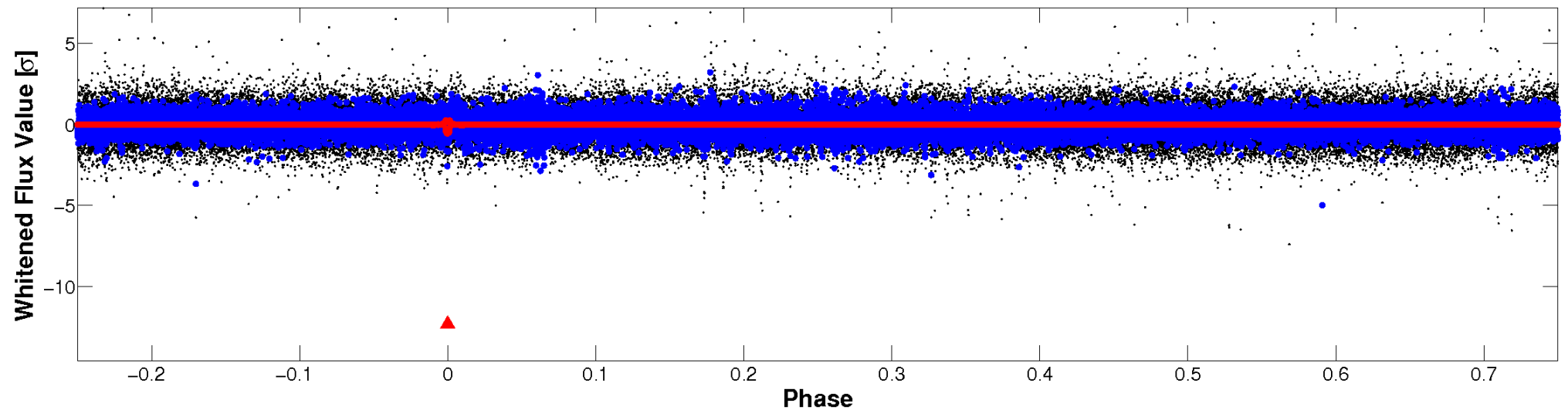


Non-Whitened Vs. Whitened Light Curve

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

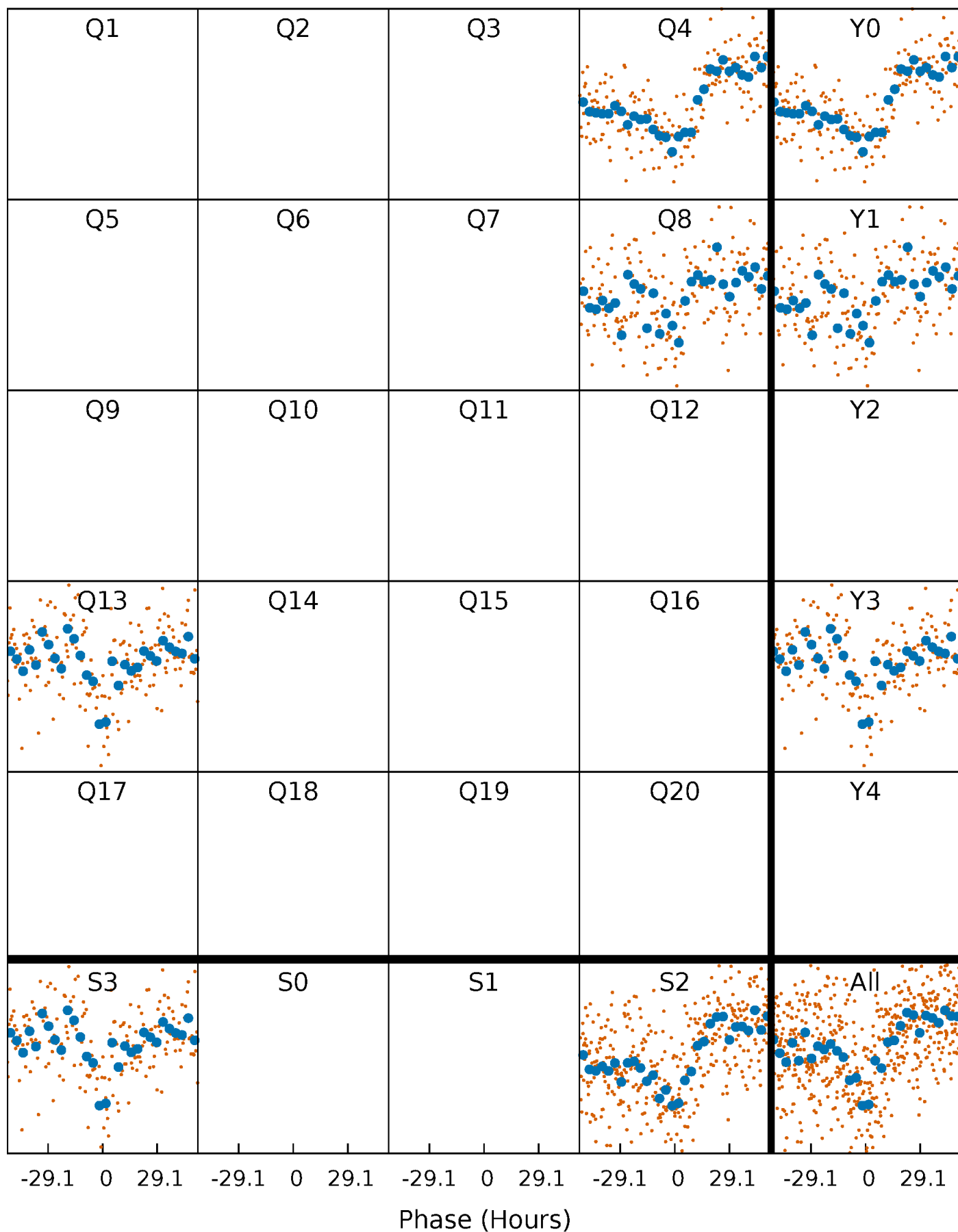


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



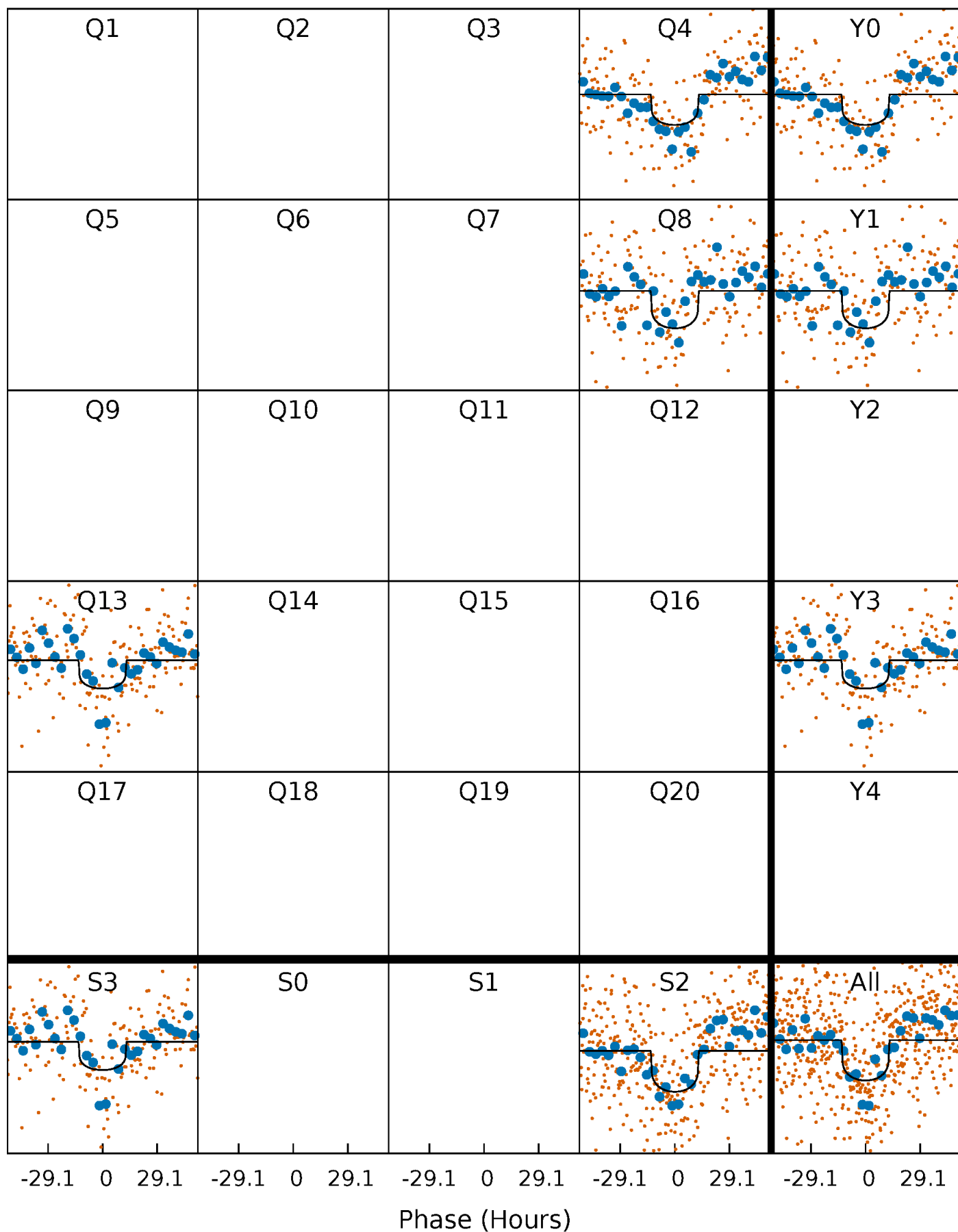
PDC Quarter-Phased Transit Curves

TCE 004349067-01 P=407.564629 Days $T_0=372.954304$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004349067-01 P=407.564629 Days $T_0=372.954304$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

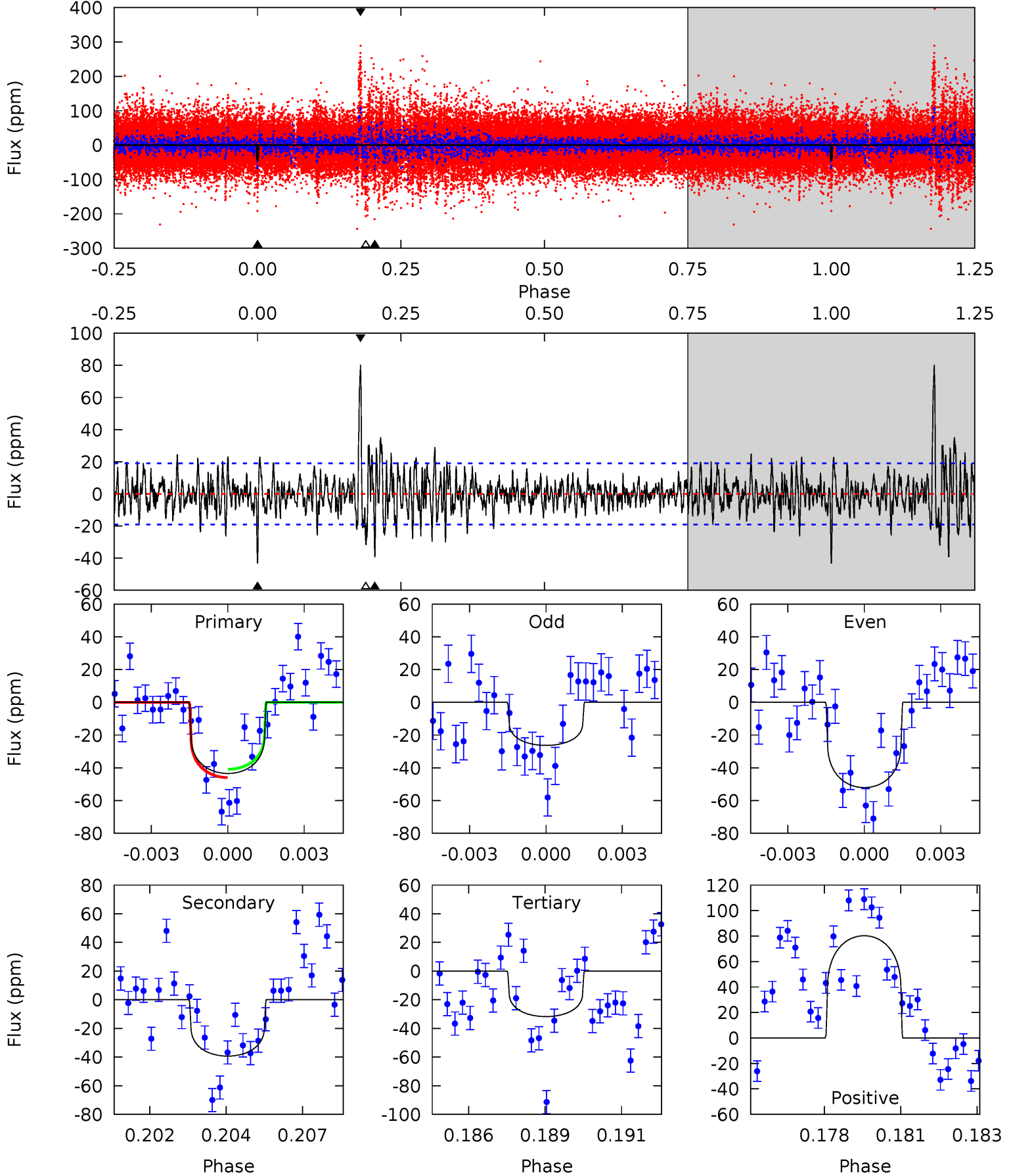
TCE 004349067-01 P=407.560977 Days $T_0=372.932331$ (BKJD)



DV Model-Shift Uniqueness Test

004349067-01, P = 407.564629 Days, E = 372.954304 Days

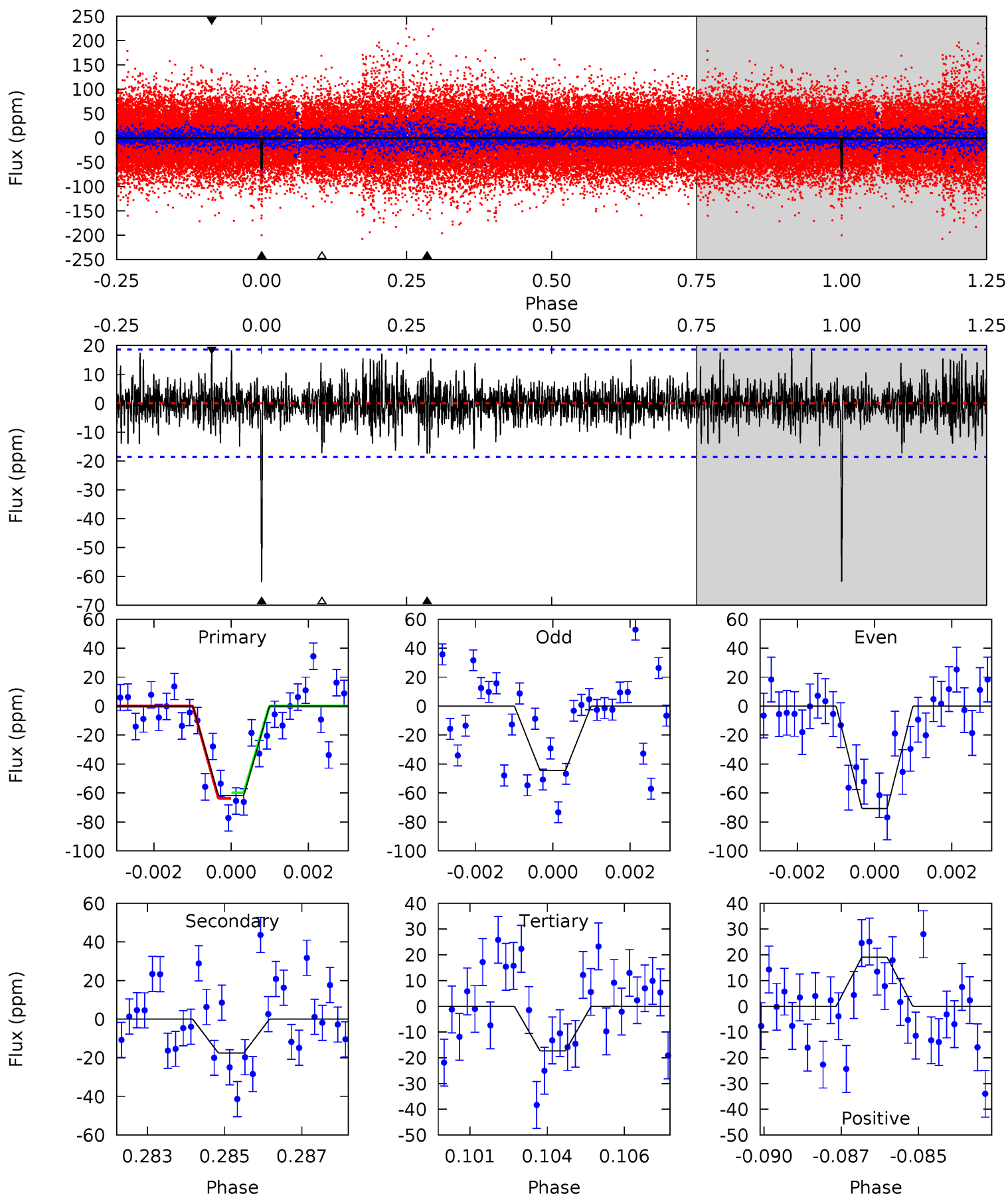
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	10.9	8.79	22.2	5.28	3.01	2.59	3.25	-10.2	2.10	-11.3	3.42	0.95	0.65	0.70



Alt Model-Shift Uniqueness Test

004349067-01, P = 407.560977 Days, E = 372.932331 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	4.98	4.91	5.41	5.30	3.04	1.32	12.6	12.1	0.07	-0.43	3.58	0.91	0.24	0.53



Stellar Parameters For KIC 004349067

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5884^{+187}_{-187}	$4.026^{+0.343}_{-0.123}$	$0.100^{+0.250}_{-0.300}$	$1.715^{+0.421}_{-0.685}$	$1.137^{+0.155}_{-0.173}$	$0.318^{+0.897}_{-0.131}$
	+3%/-3%	+9%/-3%	+250%/-300%	+25%/-40%	+14%/-15%	+282%/-41%
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 004349067-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-39 ± 4	$1.11^{+0.39}_{-0.39}$	440^{+31}_{-41}	5874^{+1158}_{-674}	21895^{+28960}_{-10040}
Alt.	-18 ± 4	$1.44^{+0.43}_{-0.39}$	439^{+33}_{-46}	4391^{+516}_{-377}	5915^{+5488}_{-2678}

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 $A_{obs} \gg 1.0$

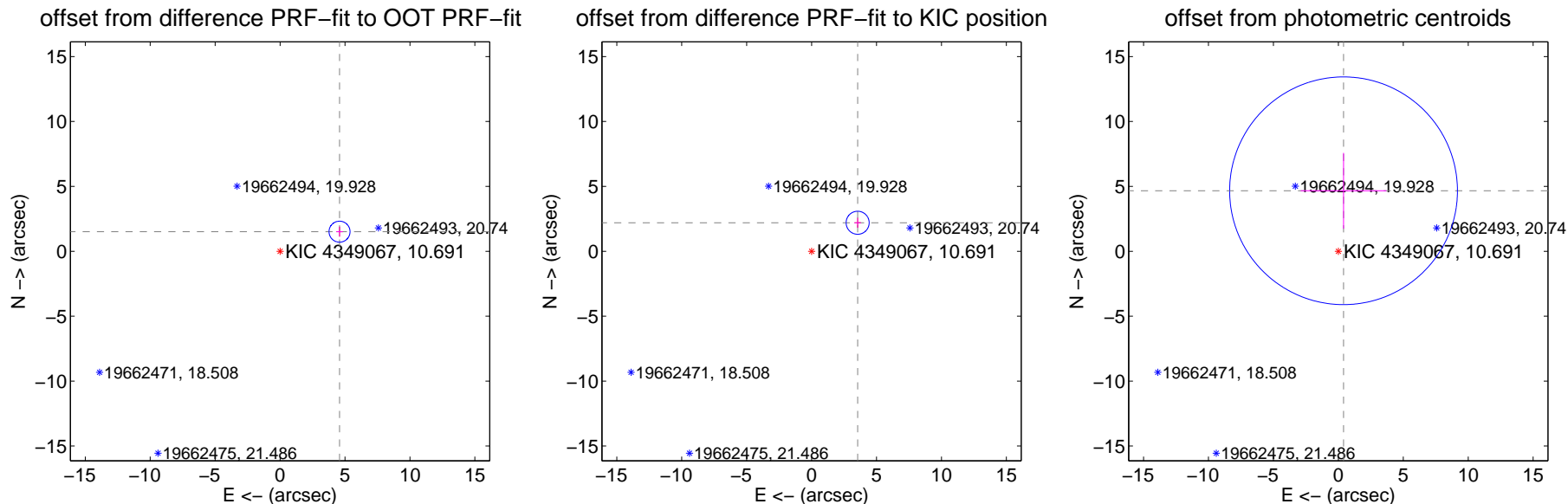
DV Centroid Data

Supplemental centroid analysis for 004349067-01. **Kepler magnitude: 10.69.** Transit SNR 5.89

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.821 \pm 0.270	17.88	-4.578 \pm 0.254	1.510 \pm 0.383
PRF-fit source offset from KIC position	4.172 \pm 0.296	14.11	-3.546 \pm 0.254	2.198 \pm 0.383
photometric centroid source offset	4.68 \pm 2.92	1.60	-0.40 \pm 3.30	4.66 \pm 2.92



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 no difference image



Q6 no OOT image



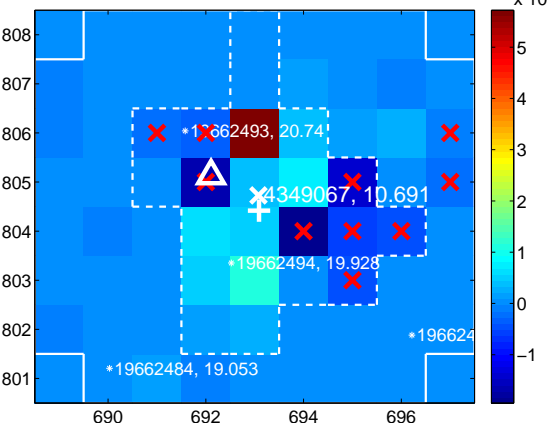
Q7 no difference image



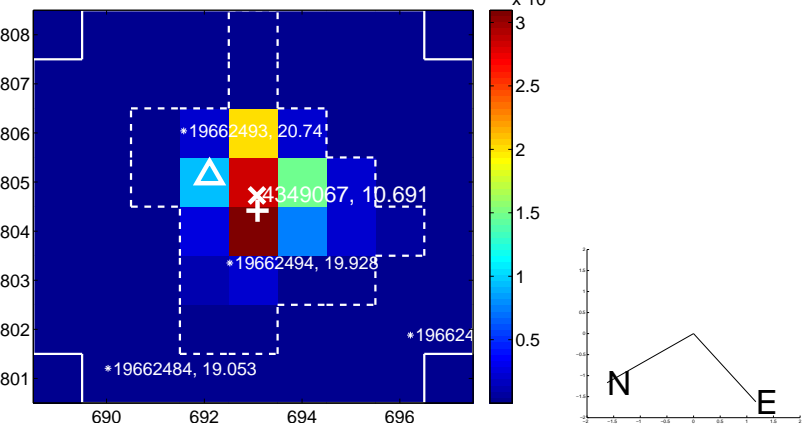
Q7 no OOT image



Q8 difference image. Poor Quality



Q8 OOT image



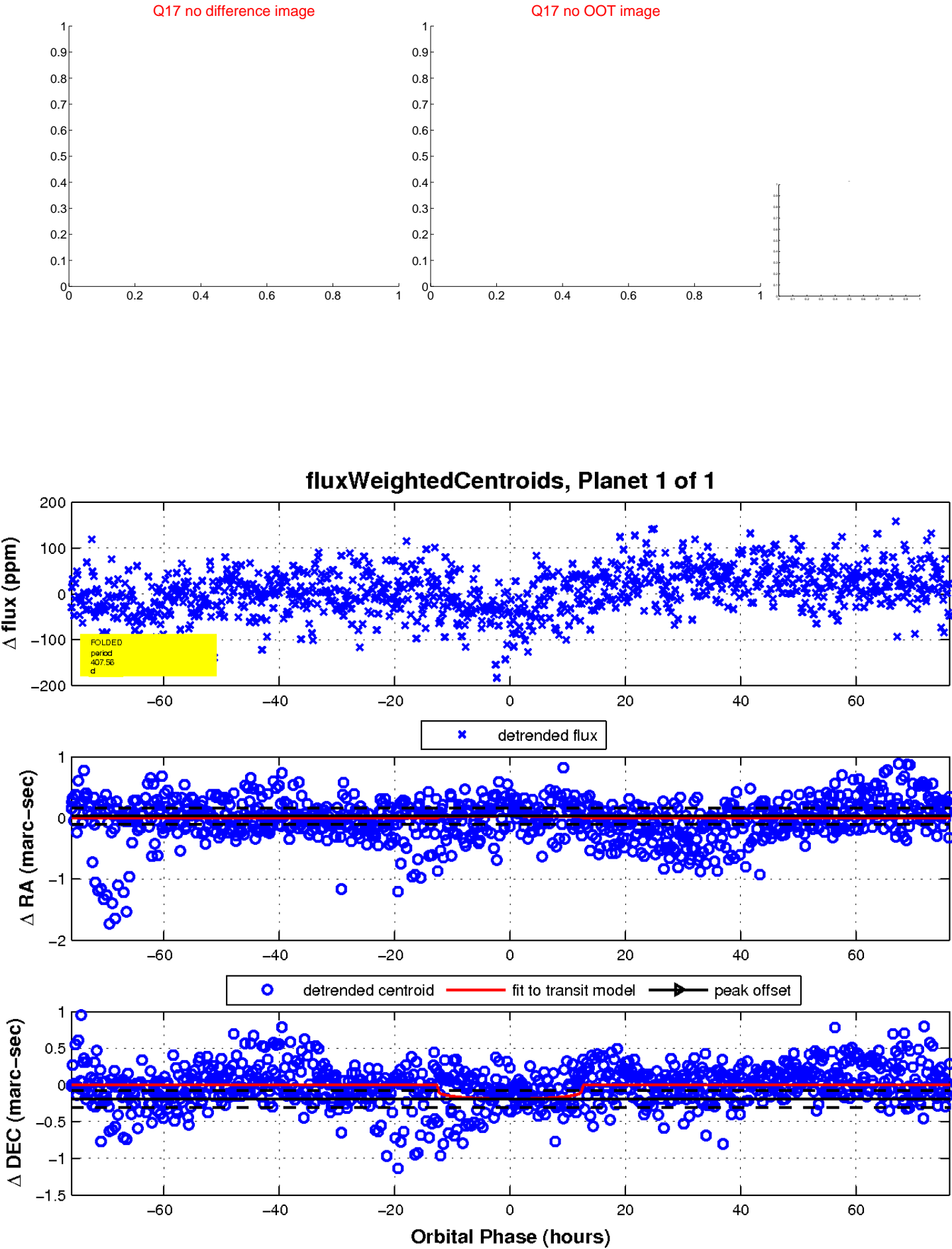
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

