

KIC 006310627

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})
006310627-01	OBS	No	419.245199	167.151209	357.6	18.118	7.7	6.2	5.04	6599	10.93	22.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006310627-01	OBS	FP	0.08	1	0	0	0	MOD_NONUNIQ_ALT—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.

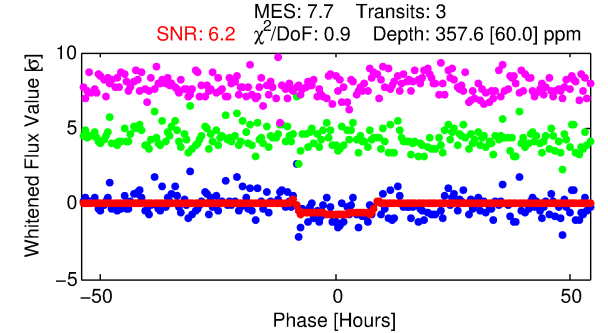
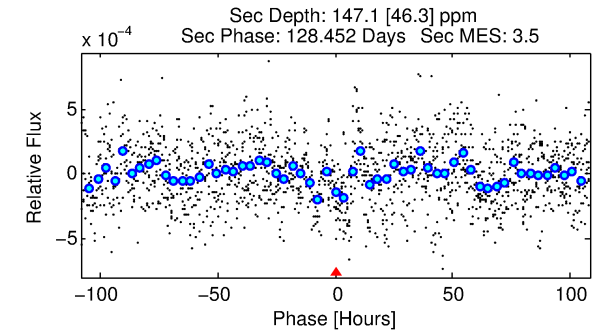
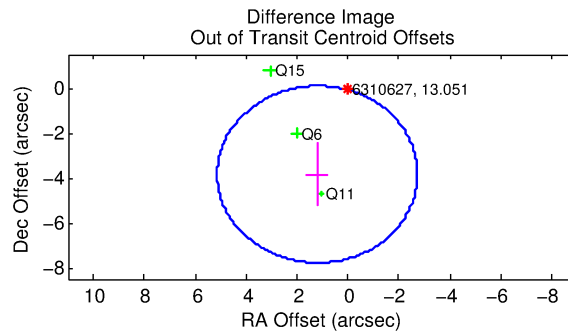
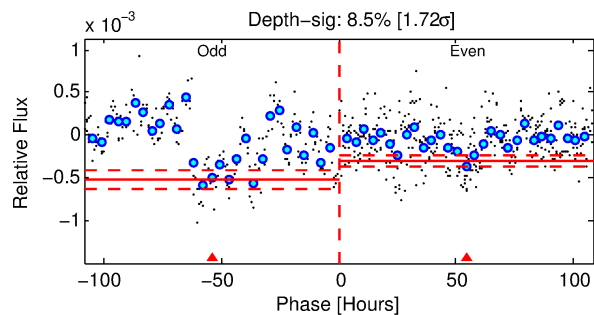
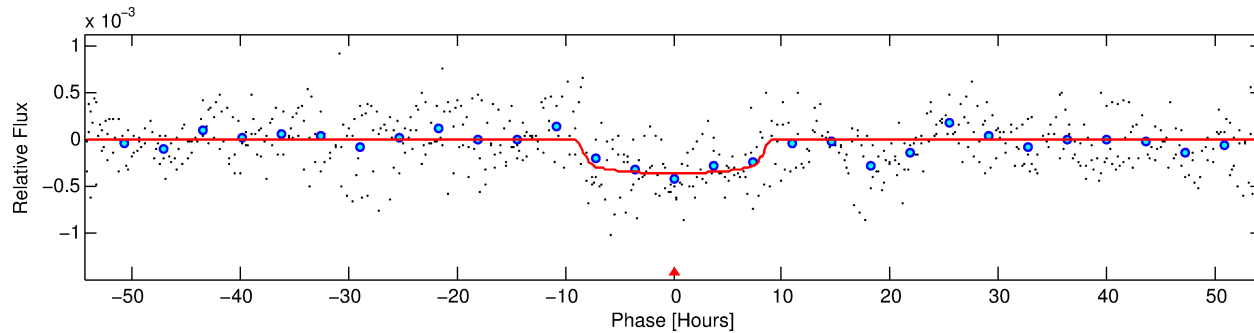
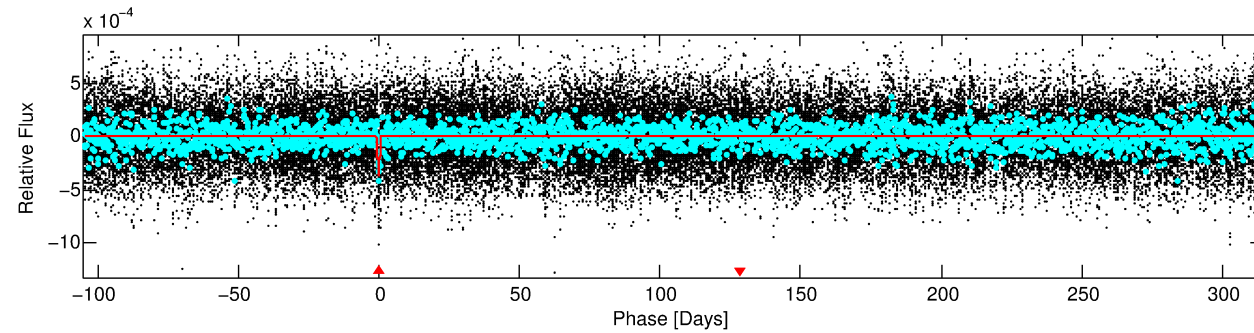
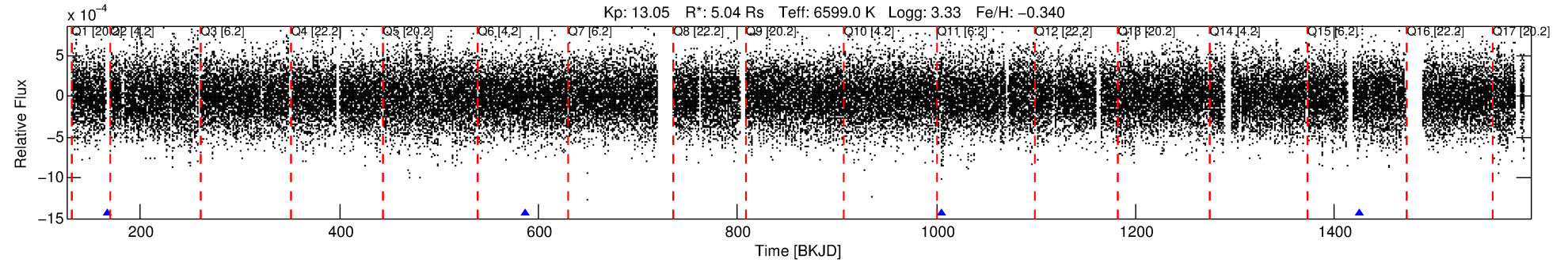
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006310627-01

No Significant Match Found

DV One-Page Summary

KIC: 6310627 Candidate: 1 of 1 Period: 419.245 d



DV Fit Results:

Period = 419.24520 [0.01747] d
Epoch = 167.1512 [0.0371] BKJD
Rp/R* = 0.0199 [0.0022]
a/R* = 92.29 [34.68]
b = 0.88 [0.10]
Seff = 22.94 [14.82]
Teq = 558 [90] K
Rp = 10.93 [4.58] Re
a = 1.3722 [0.5408] AU
Ag = 1276.48 [945.68] [1.35σ]
Teffp = 5157 [517] K [8.76σ]

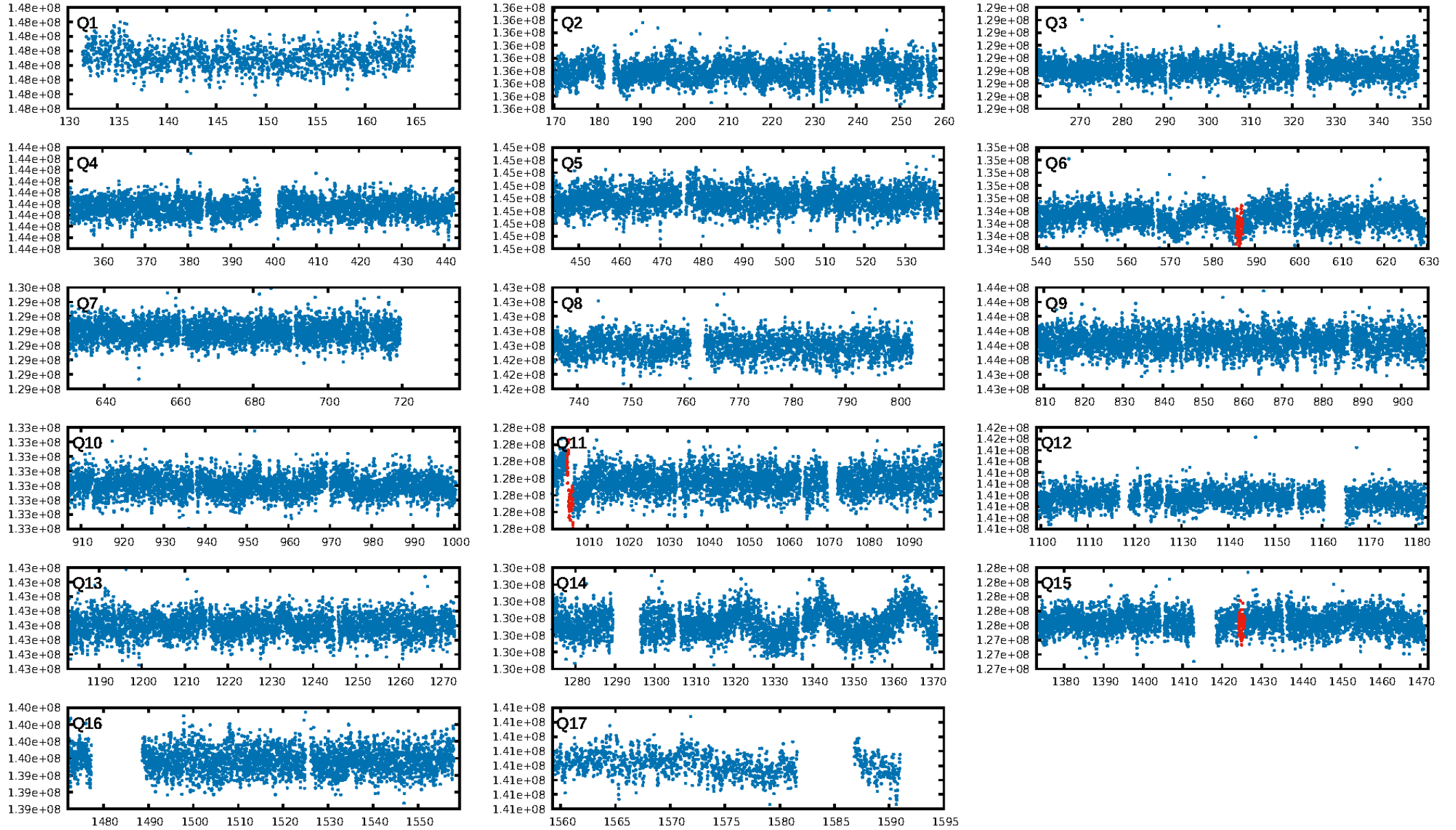
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 34.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.89e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.45
Centroid-sig: 1.9%
Centroid-so: 1.192 arcsec [1.39σ]
OotOffset-rm: 4.026 arcsec [3.07σ]
KicOffset-rm: 3.997 arcsec [3.06σ]
OotOffset-st: 1/2/0/0 [3]
KicOffset-st: 1/2/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

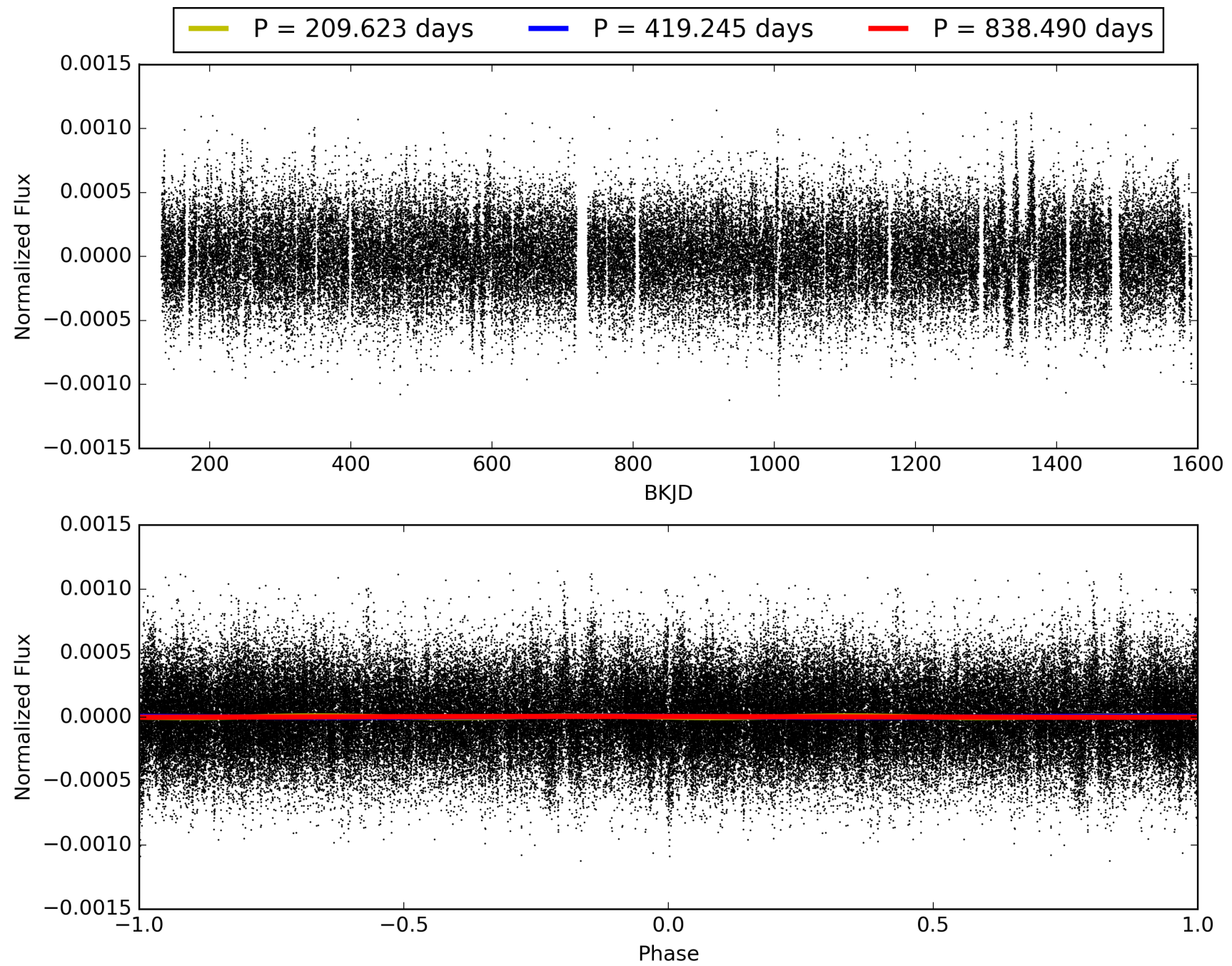
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:16:27 Z

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

TCE 006310627-01, PDC Light Curves

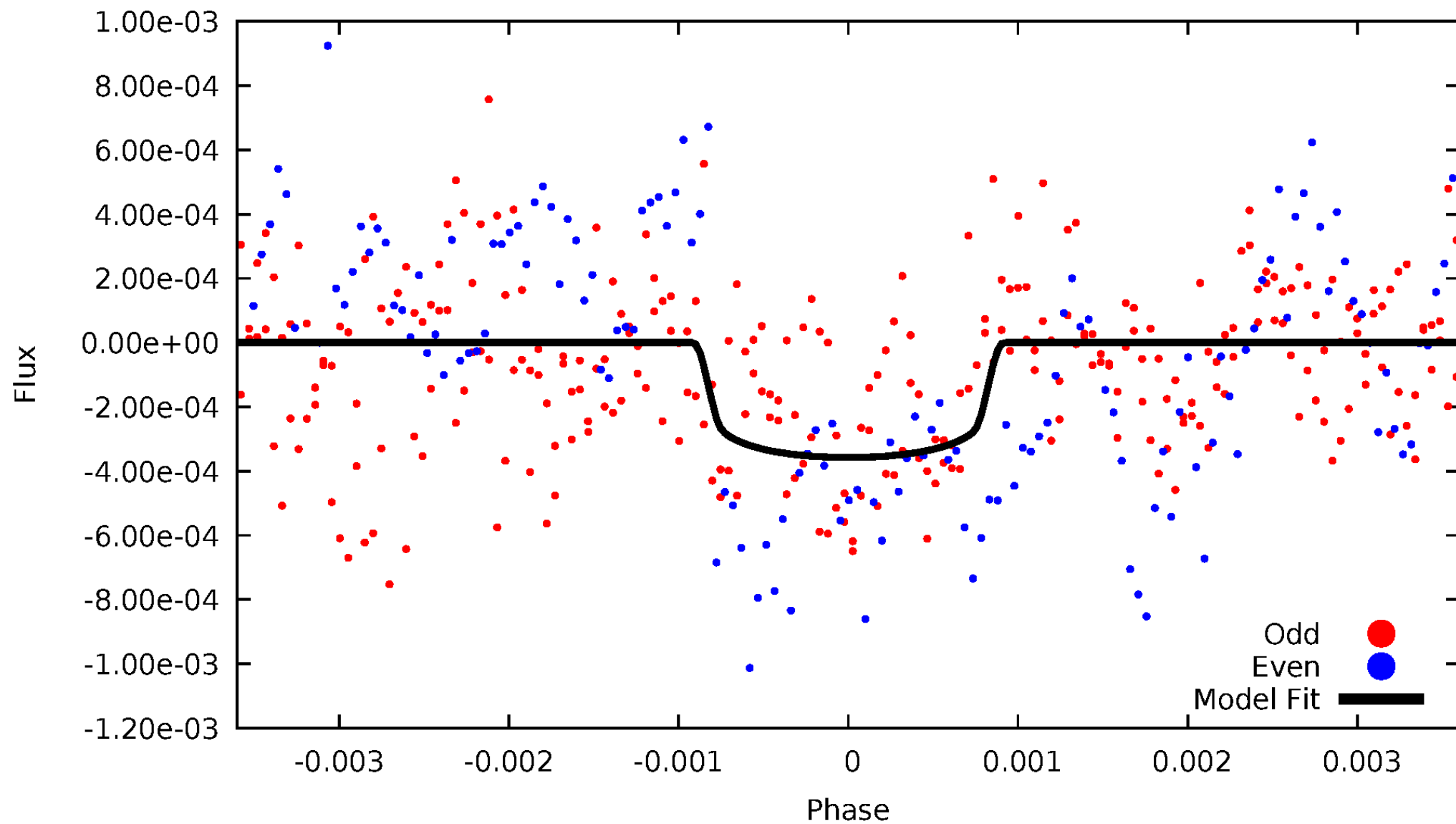


TCE 006310627-01



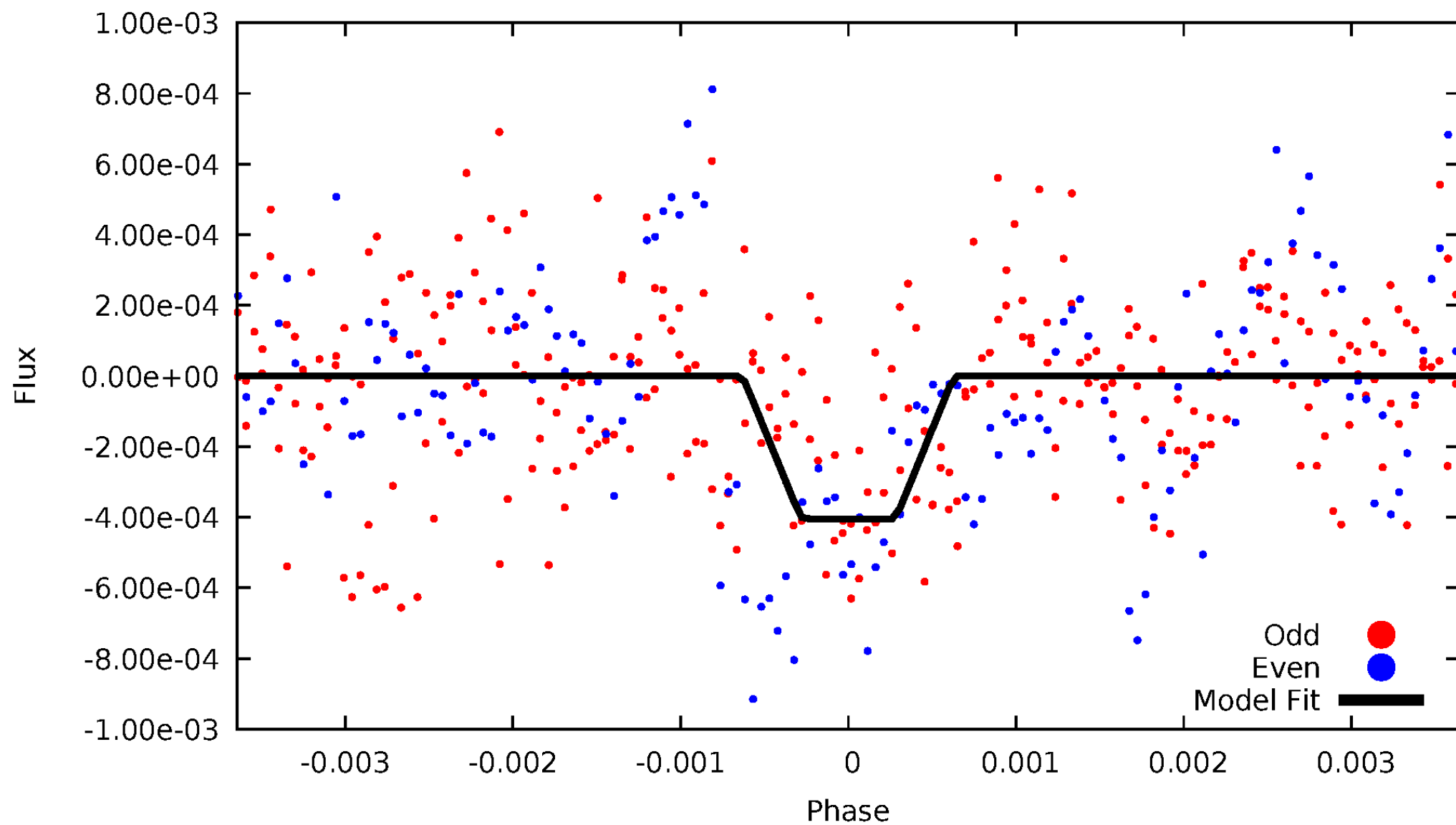
DV Odd/Even

TCE 006310627-01



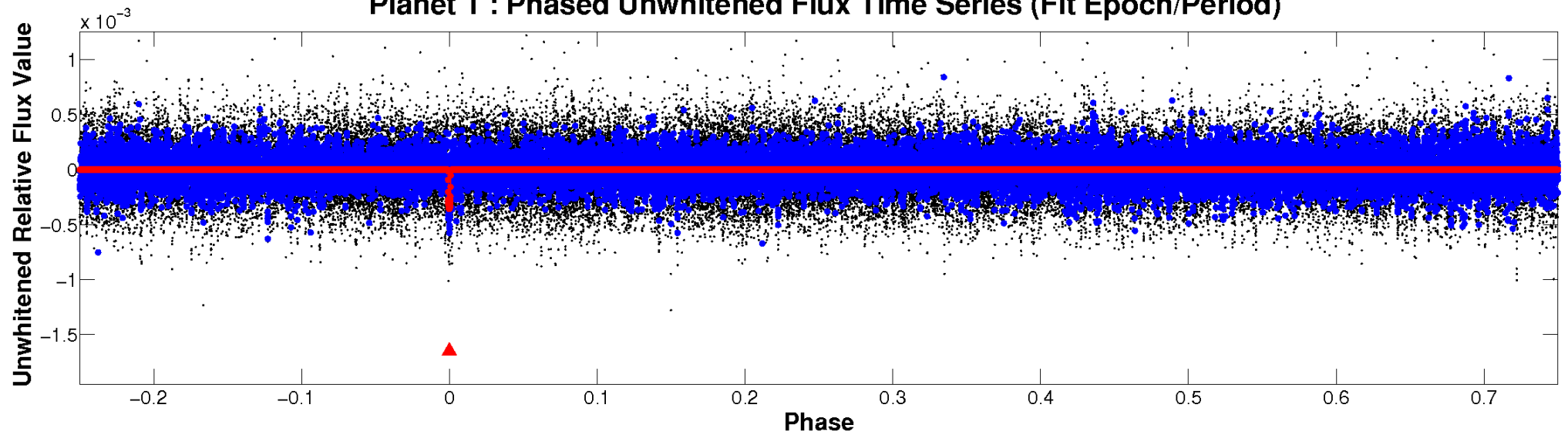
ALT Odd/Even

TCE 006310627-01

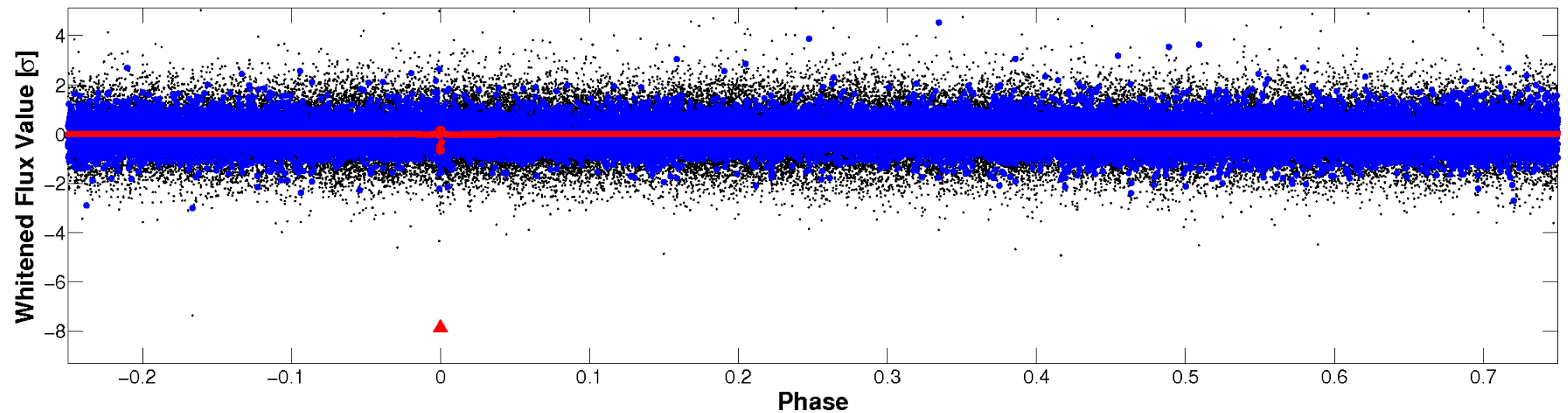


Non-Whitened Vs. Whitened Light Curve

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

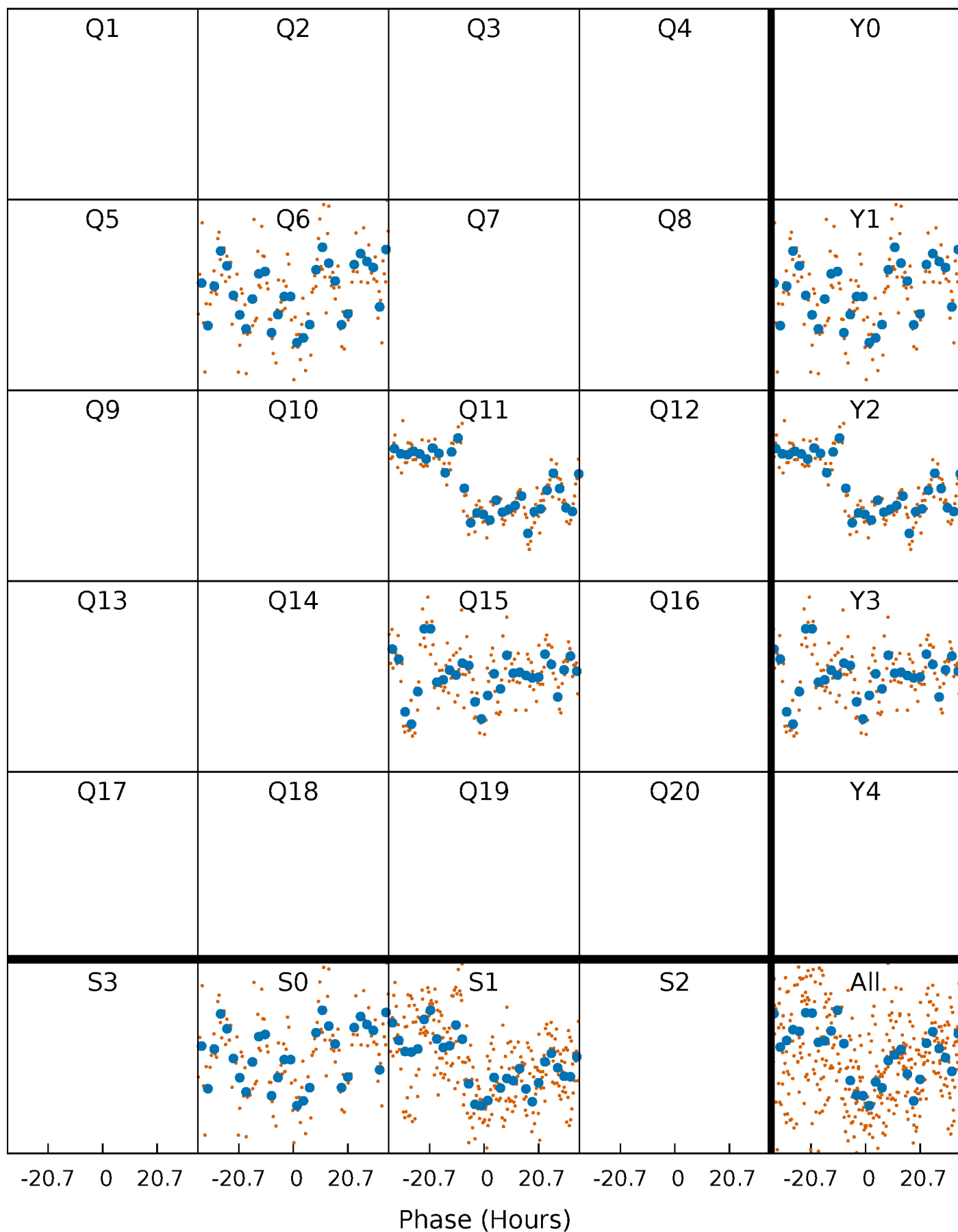


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



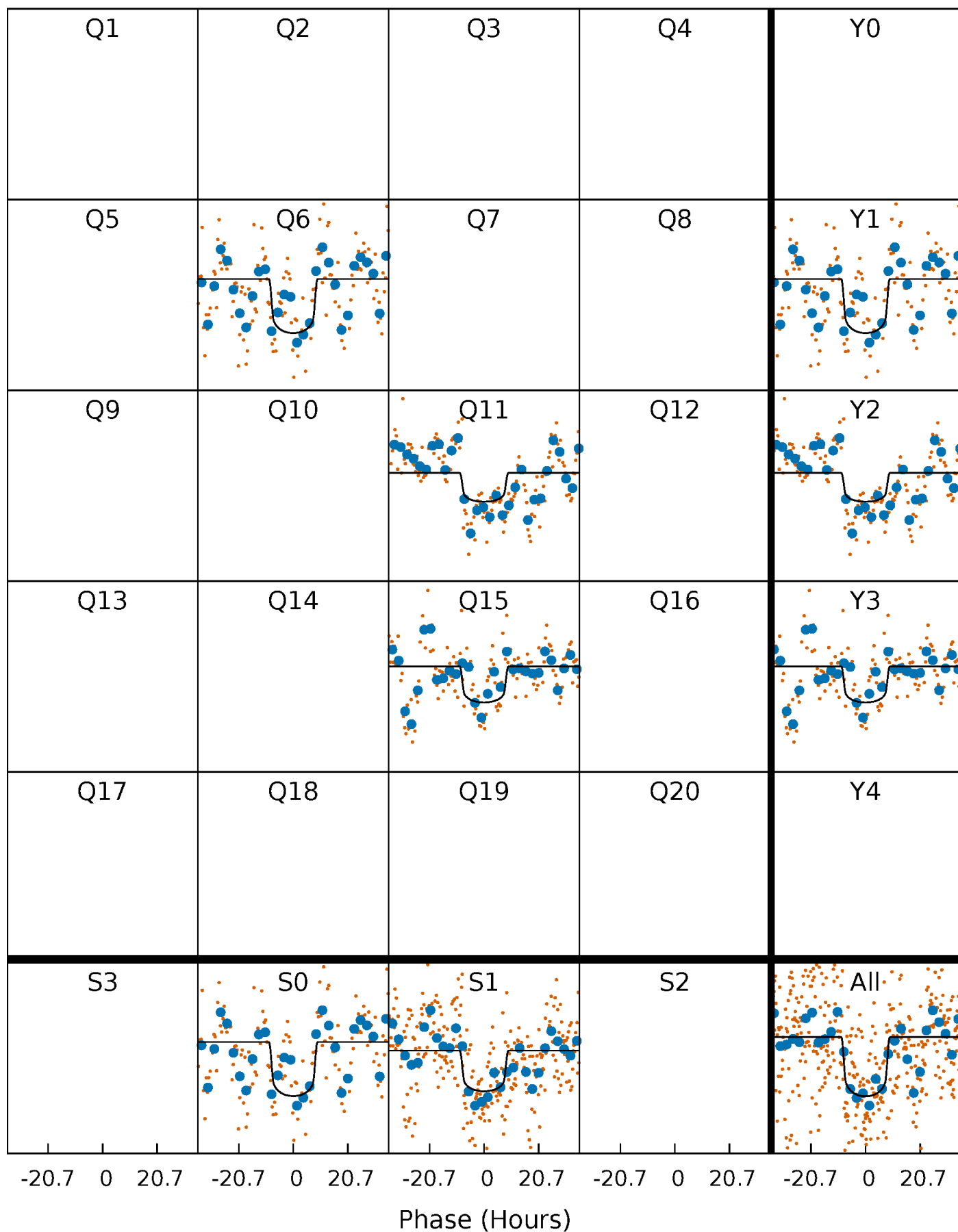
PDC Quarter-Phased Transit Curves

TCE 006310627-01 P=419.245199 Days $T_0=167.151209$ (BKJD)



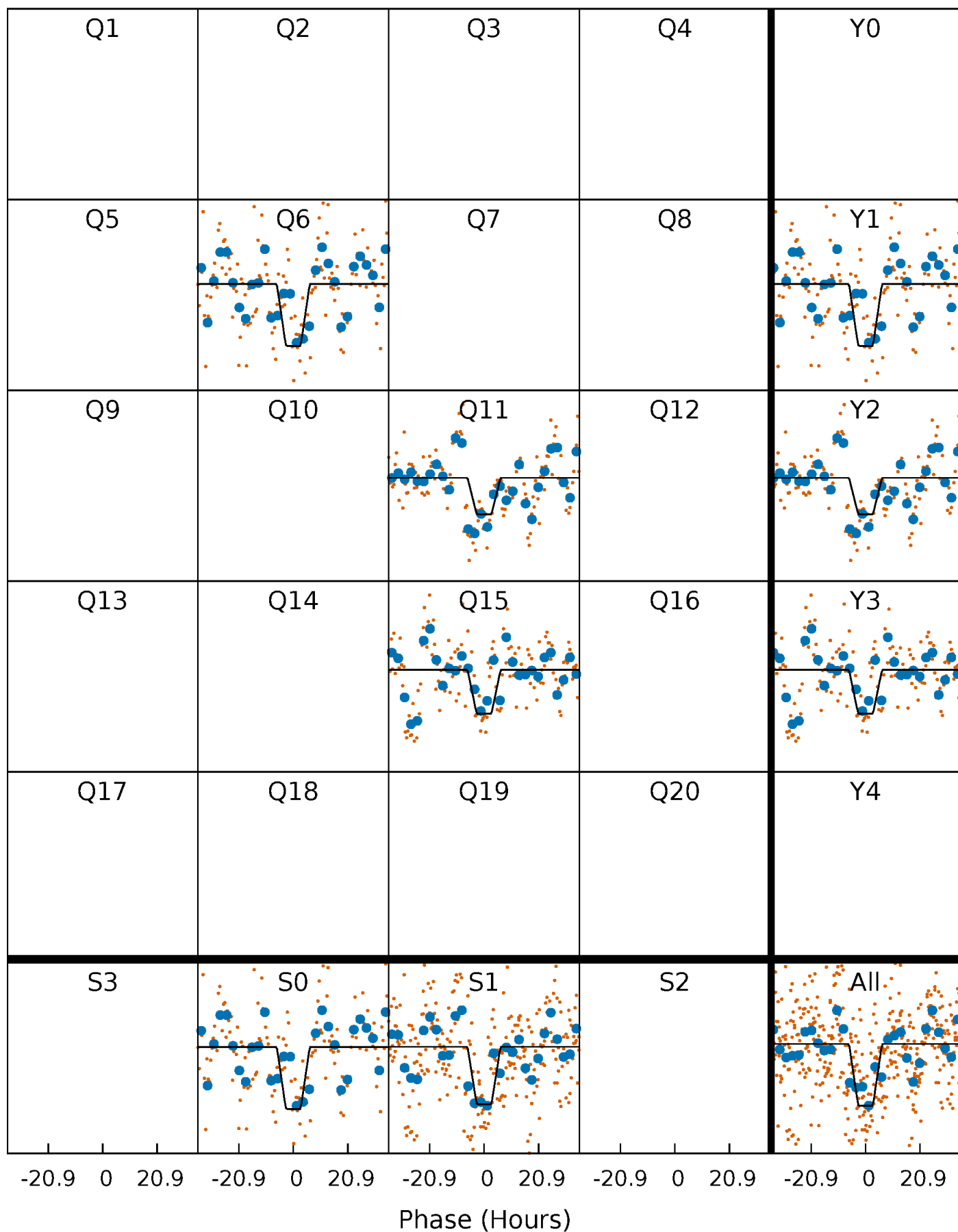
DV Quarter-Phased Transit Curves

TCE 006310627-01 P=419.245199 Days $T_0=167.151209$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

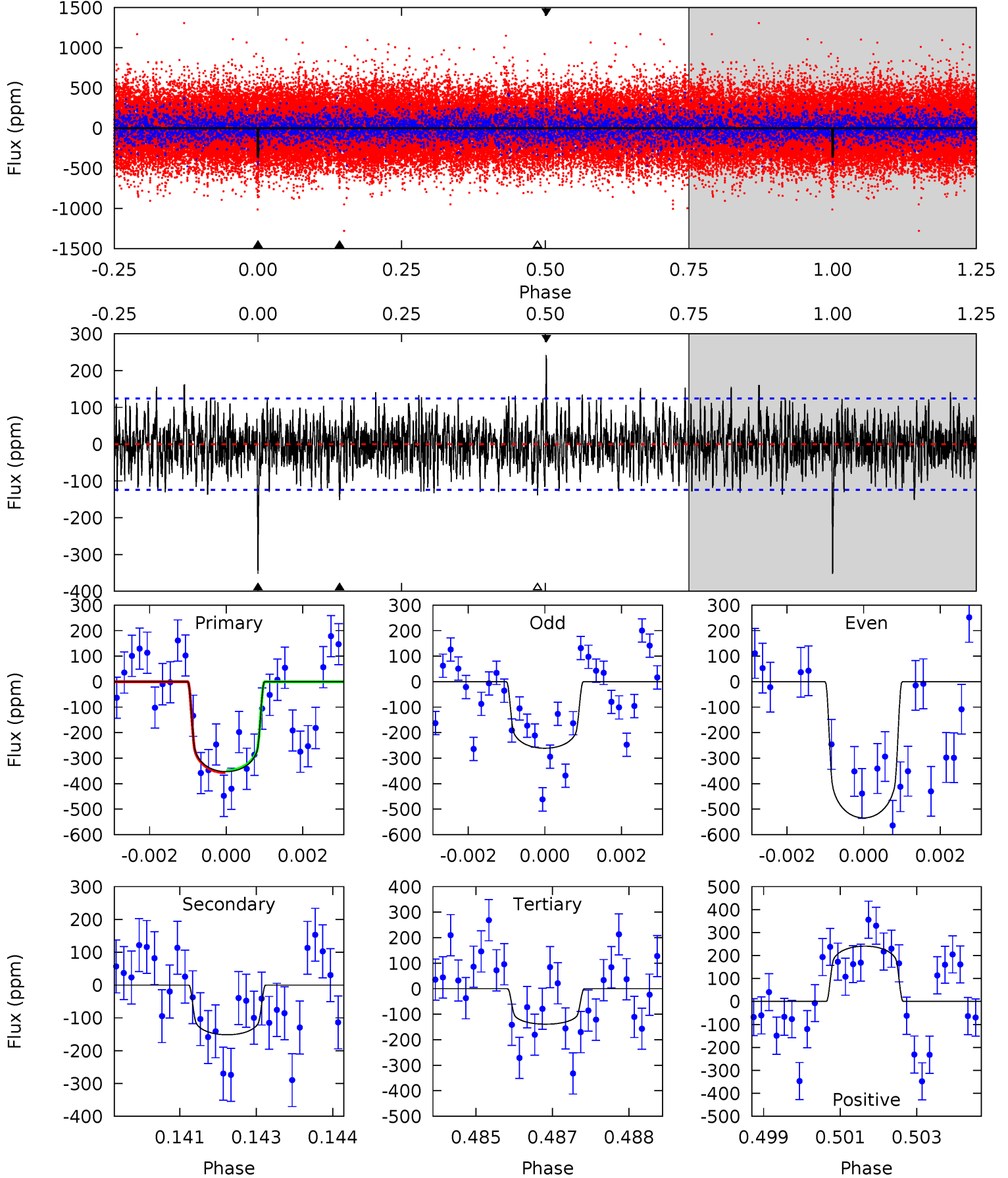
TCE 006310627-01 P=419.235350 Days $T_0=167.164995$ (BKJD)



DV Model-Shift Uniqueness Test

006310627-01, P = 419.245199 Days, E = 167.151209 Days

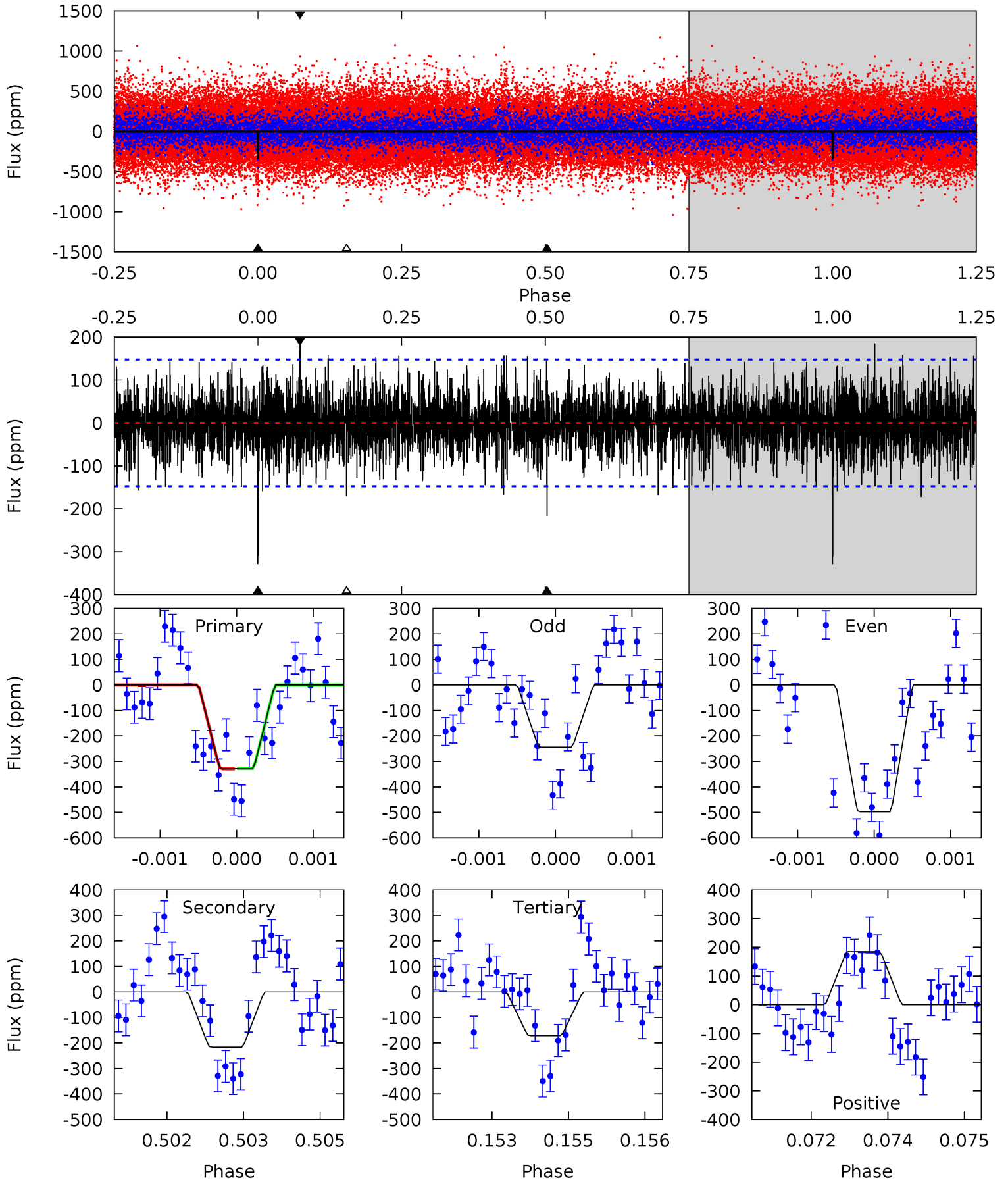
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	6.52	5.98	10.4	5.34	3.12	2.10	9.19	4.81	0.54	-3.84	5.54	1.24	0.41	0.18



Alt Model-Shift Uniqueness Test

006310627-01, P = 419.235350 Days, E = 167.164995 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	7.91	6.25	6.79	5.41	3.22	1.83	5.77	5.23	1.65	1.11	4.34	1.33	0.36	0.01



Stellar Parameters For KIC 006310627

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6599^{+200}_{-200}	$3.325^{+0.374}_{-0.066}$	$-0.340^{+0.400}_{-0.300}$	$5.042^{+0.360}_{-2.042}$	$1.961^{+0.143}_{-0.401}$	$0.022^{+0.069}_{-0.005}$
	+3%/-3%	+11%/-2%	+118%/-88%	+7%/-40%	+7%/-20%	+319%/-21%
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 006310627-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-152 ± 23	$10.31^{+1.74}_{-2.23}$	766^{+37}_{-79}	5244^{+393}_{-327}	1482^{+890}_{-423}
Alt.	-216 ± 27	$10.61^{+1.64}_{-2.19}$	765^{+40}_{-70}	5619^{+372}_{-324}	1977^{+1074}_{-513}

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

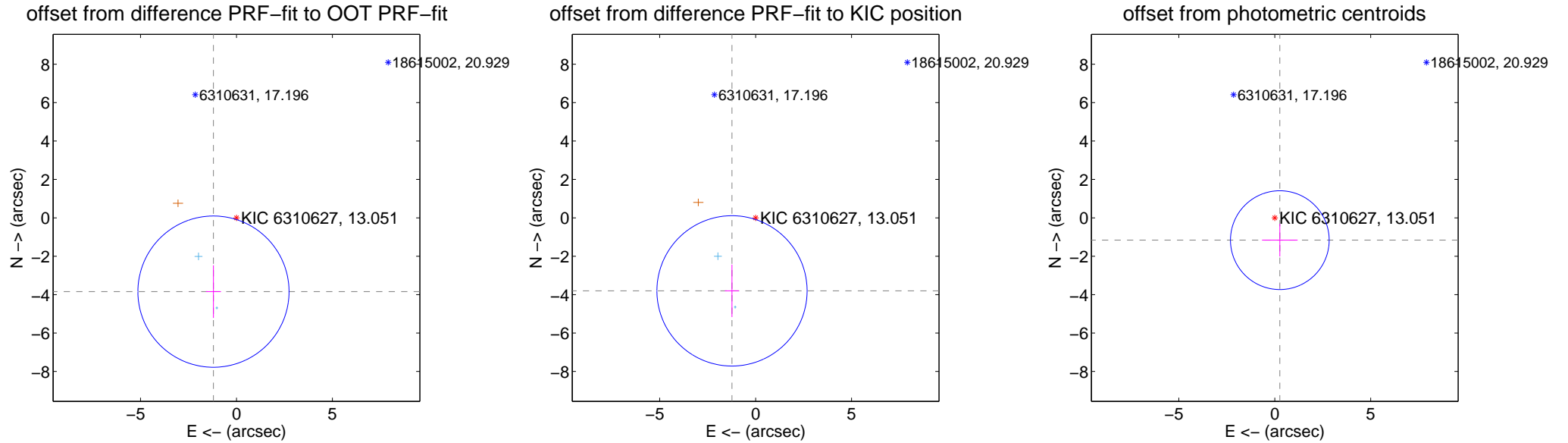
DV Centroid Data

Supplemental centroid analysis for 006310627-01. Kepler magnitude: 13.05. Transit SNR 6.21

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.026 ± 1.313	3.07	1.199 ± 0.391	-3.843 ± 1.370
PRF-fit source offset from KIC position	3.997 ± 1.305	3.06	1.230 ± 0.371	-3.803 ± 1.366
photometric centroid source offset	1.19 ± 0.86	1.39	-0.26 ± 0.93	-1.16 ± 0.85

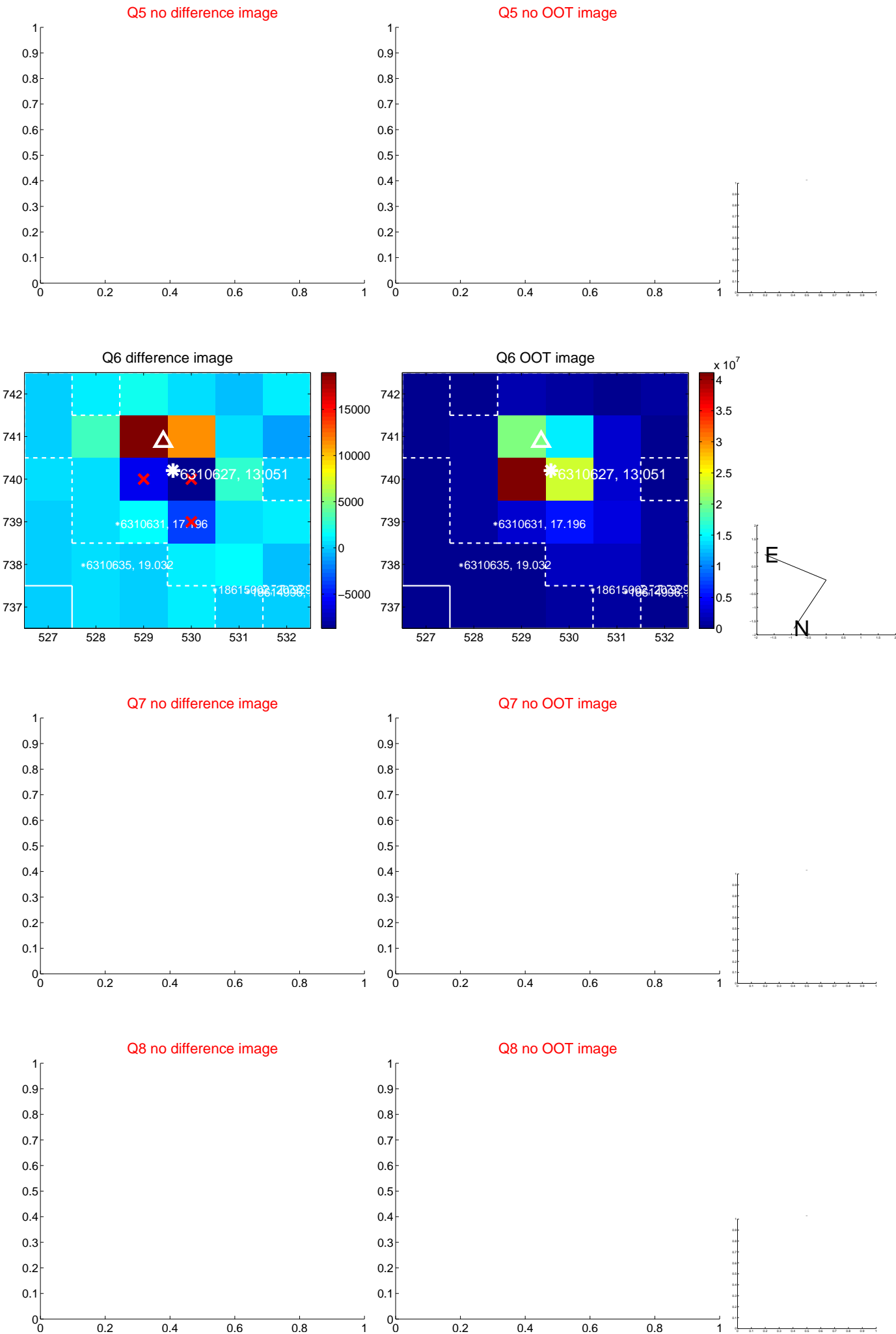


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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.

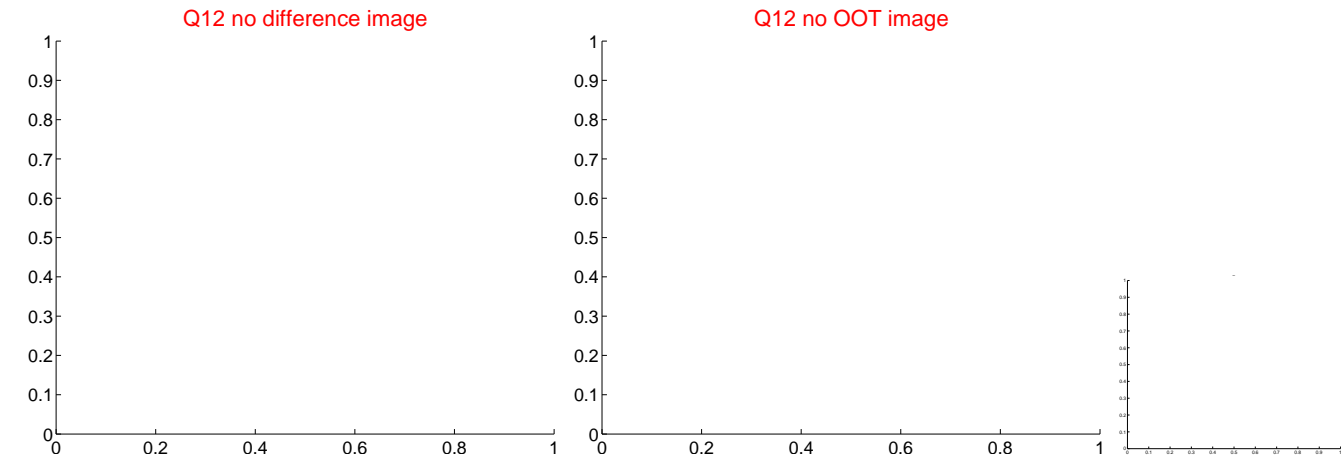
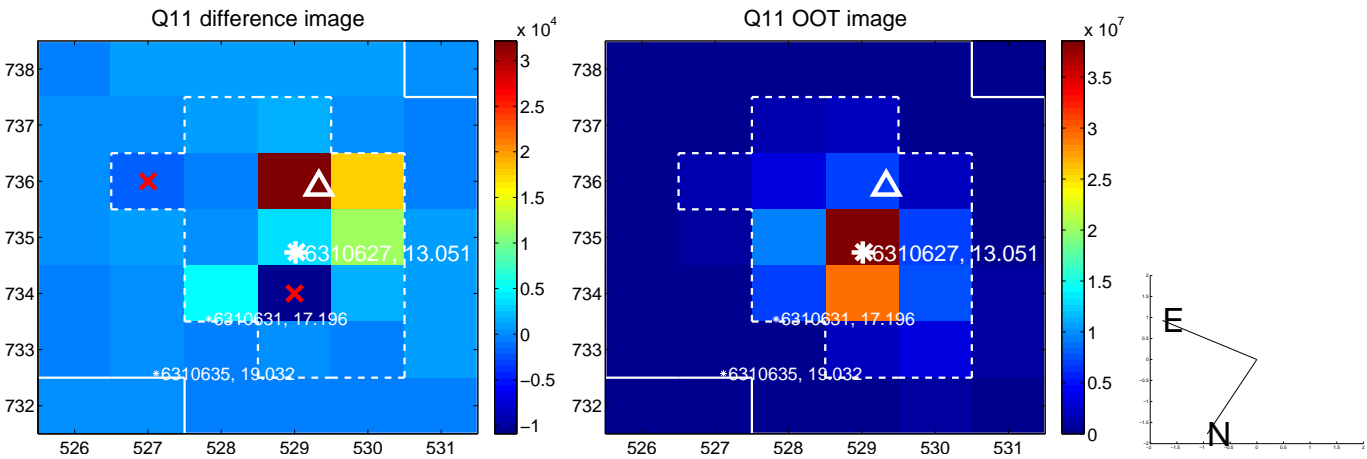
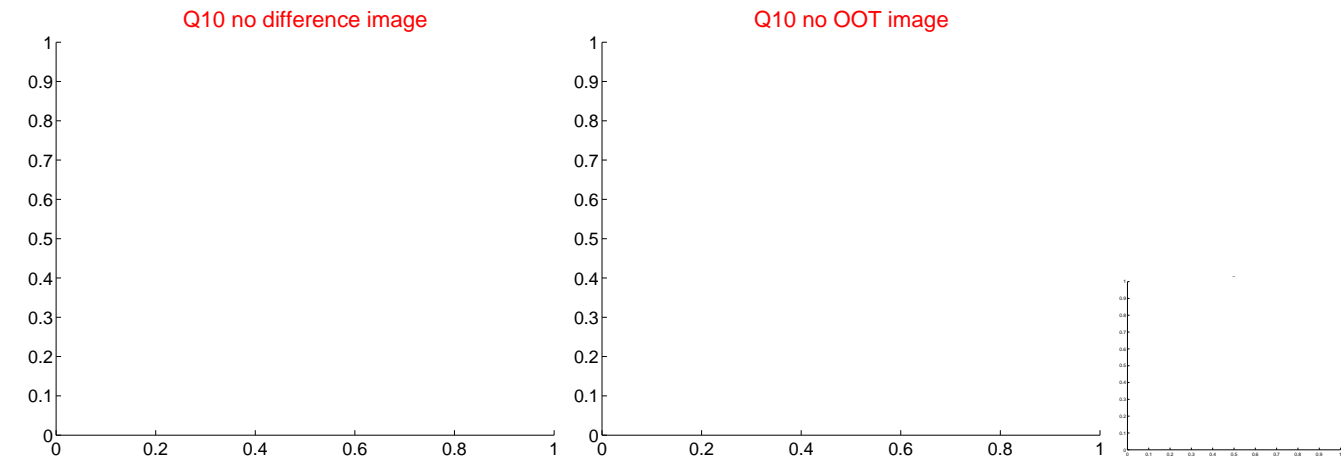
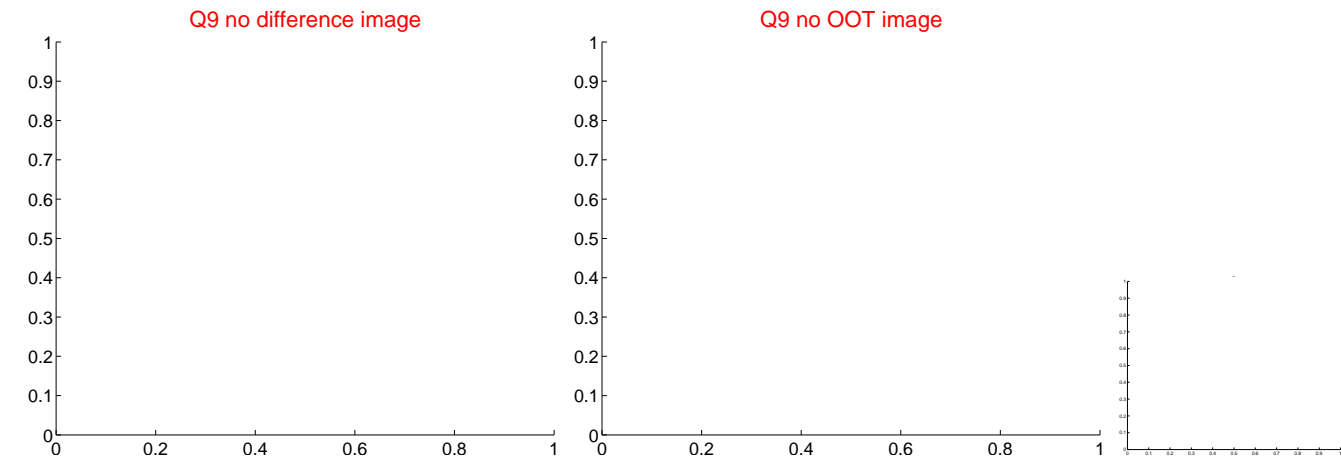
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



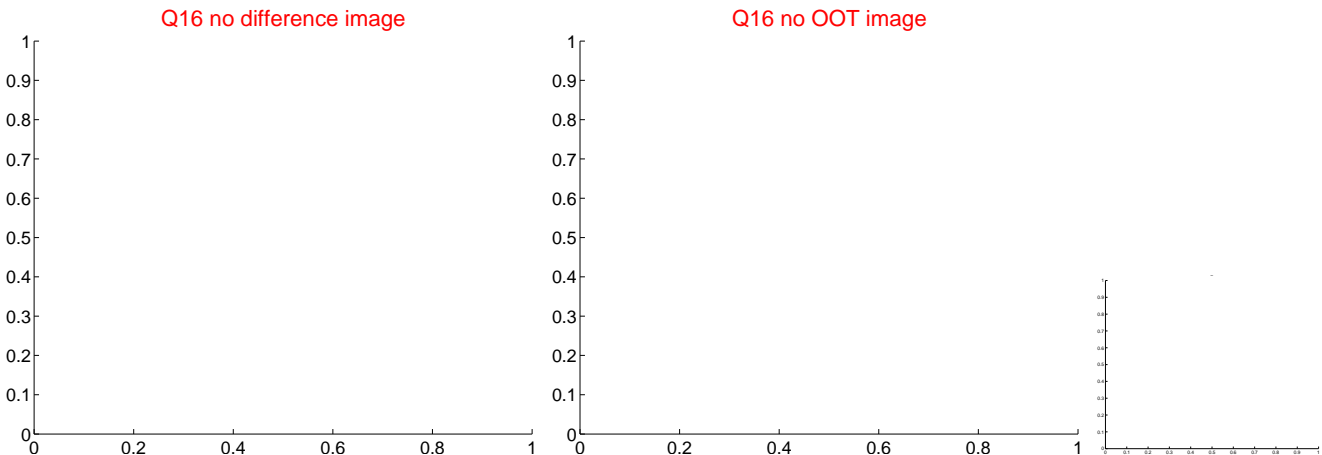
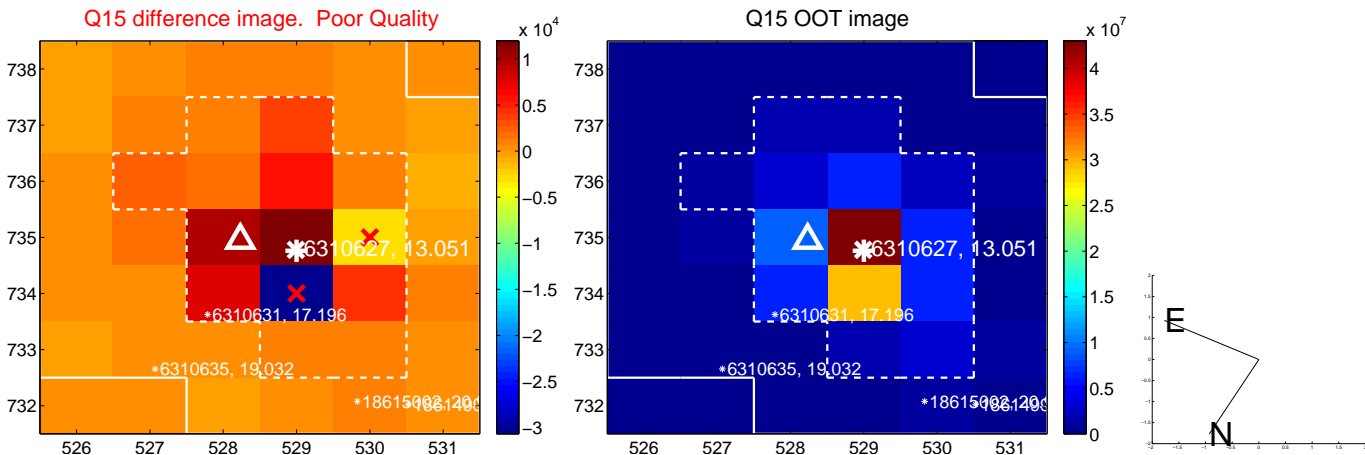
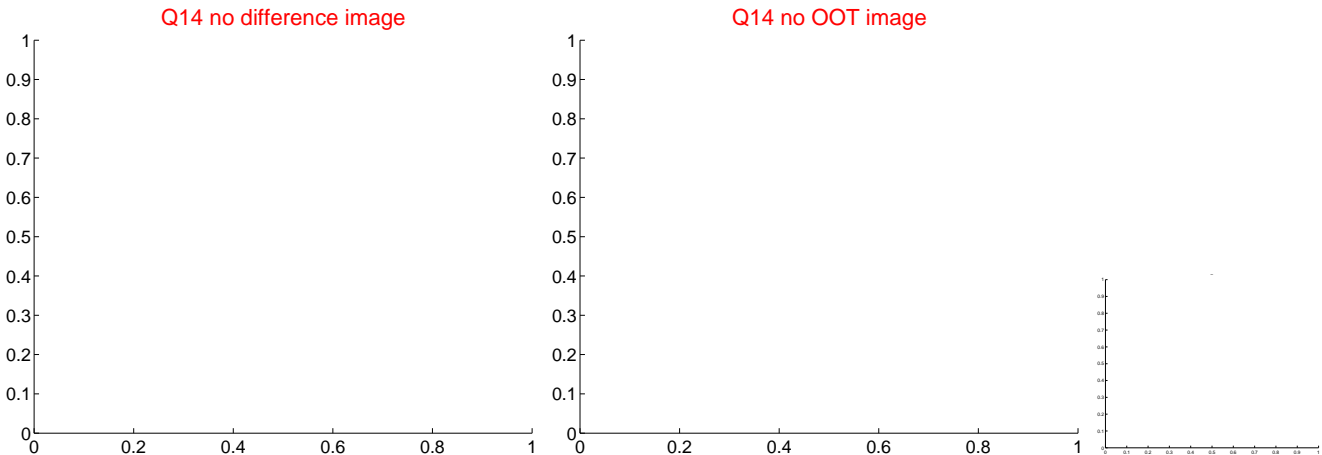
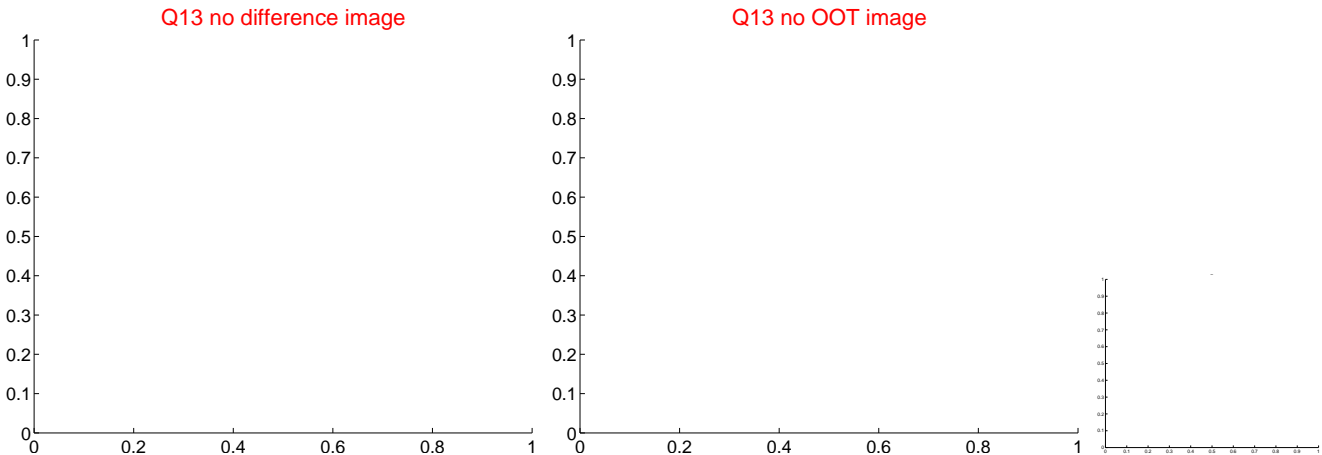
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



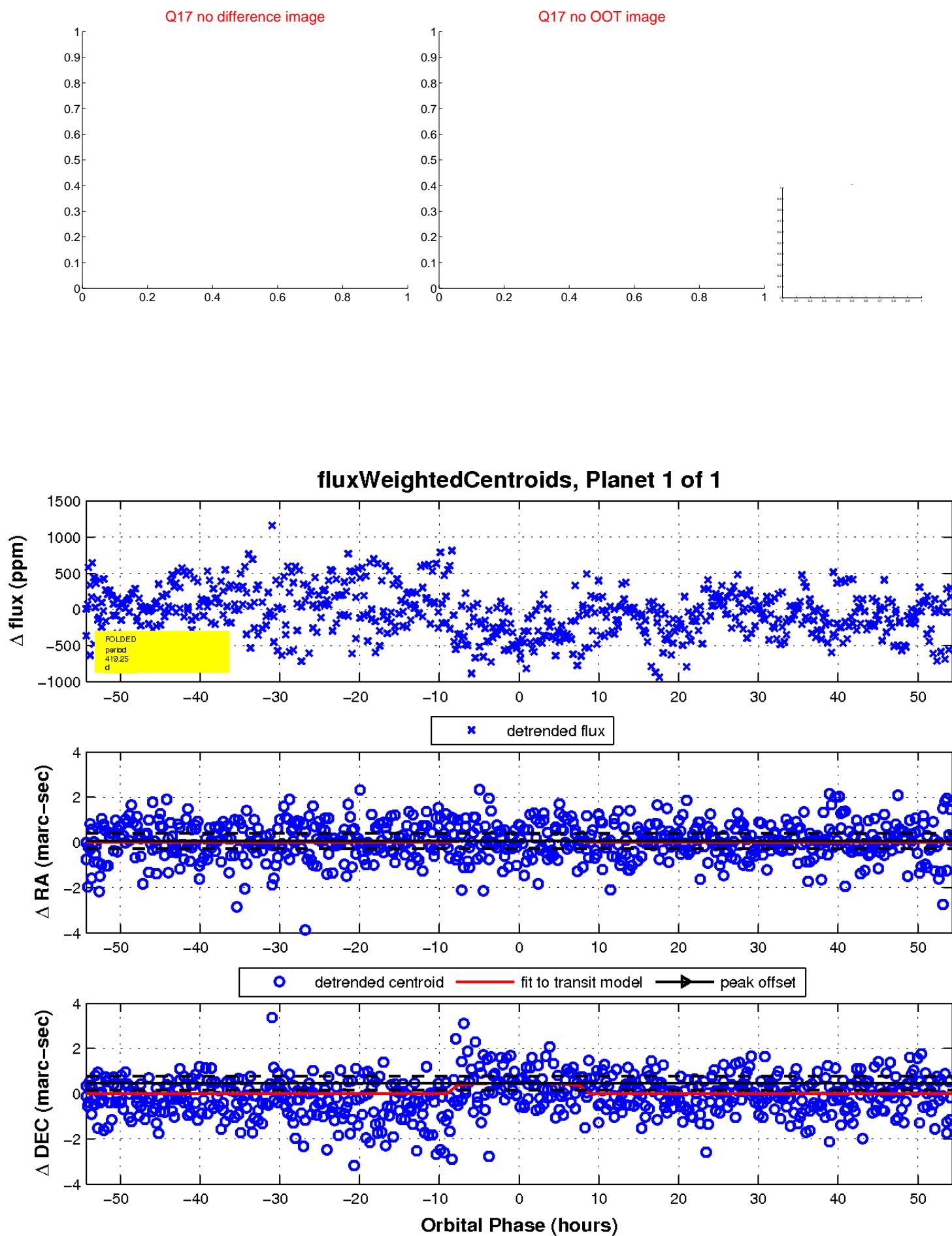
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

