

KIC 003427847

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})
003427847-01	OBS	No	259.445535	356.516548	259.3	12.319	59.5	1.2	0.81	5234	1.34	0.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003427847-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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.

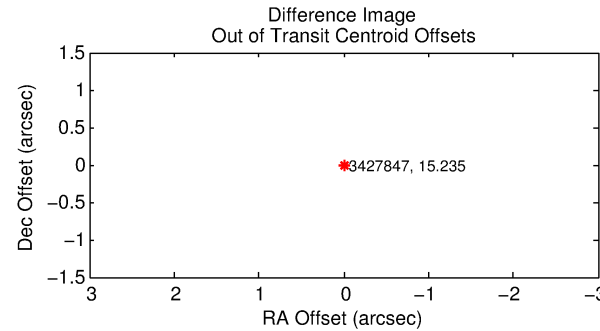
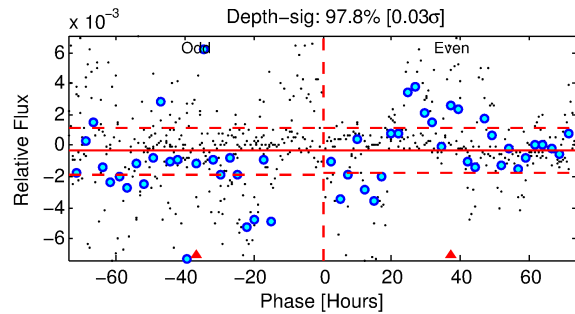
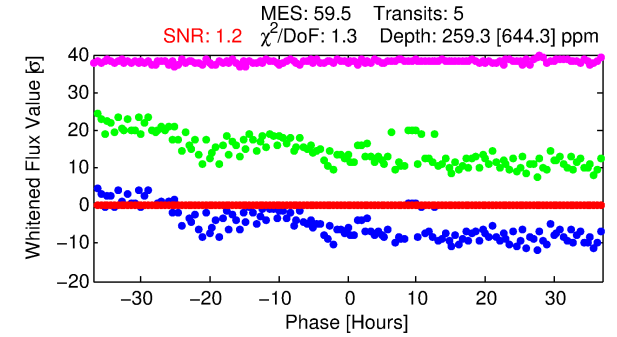
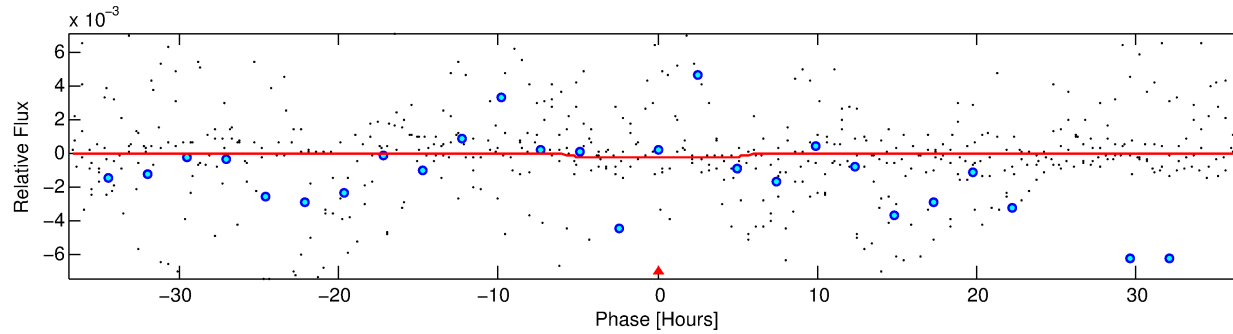
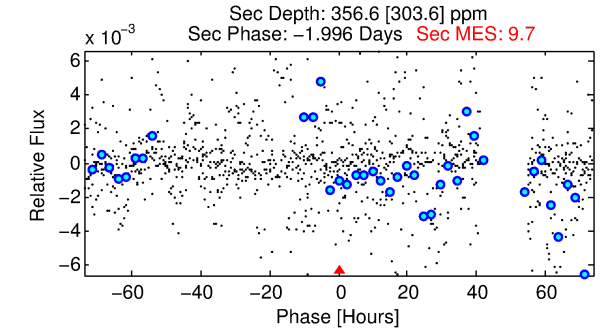
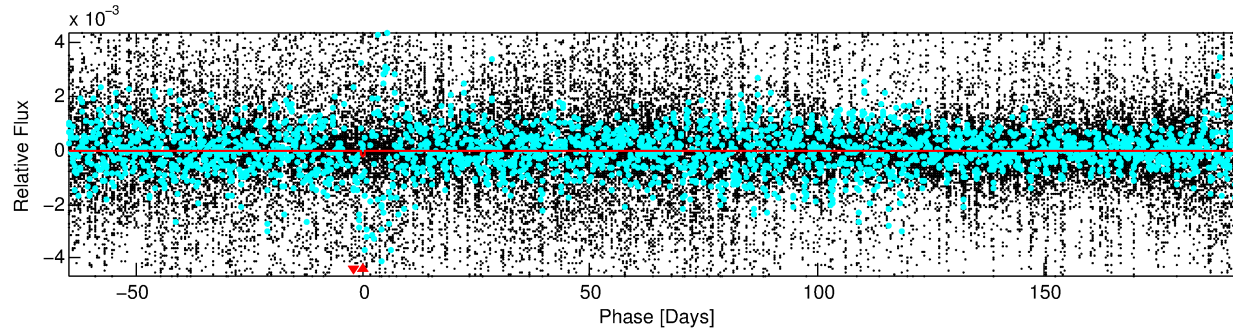
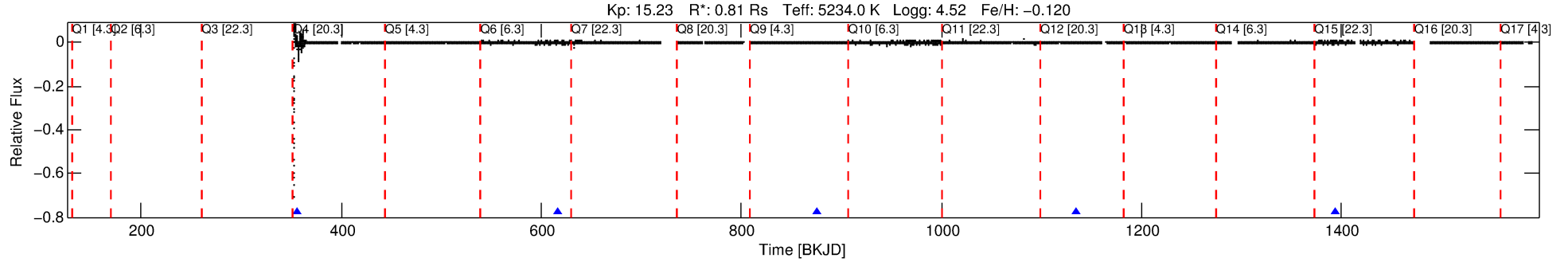
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003427847-01

No Significant Match Found

DV One-Page Summary

KIC: 3427847 Candidate: 1 of 1 Period: 259.446 d



DV Fit Results:

Period = 259.44554 [0.11692] d
Epoch = 356.5165 [0.2885] BKJD
Rp/R* = 0.0153 [0.1768]
a/R* = 132.13 [5787.81]
b = 0.60 [47.83]
Seff = 0.81 [0.17]
Teq = 242 [13] K
Rp = 1.34 [15.55] Re
a = 0.7361 [0.0844] AU
Ag = 59028.22 [1368805.89] [0.04 σ]
Teffp = 5823 [33756] K [0.17 σ]

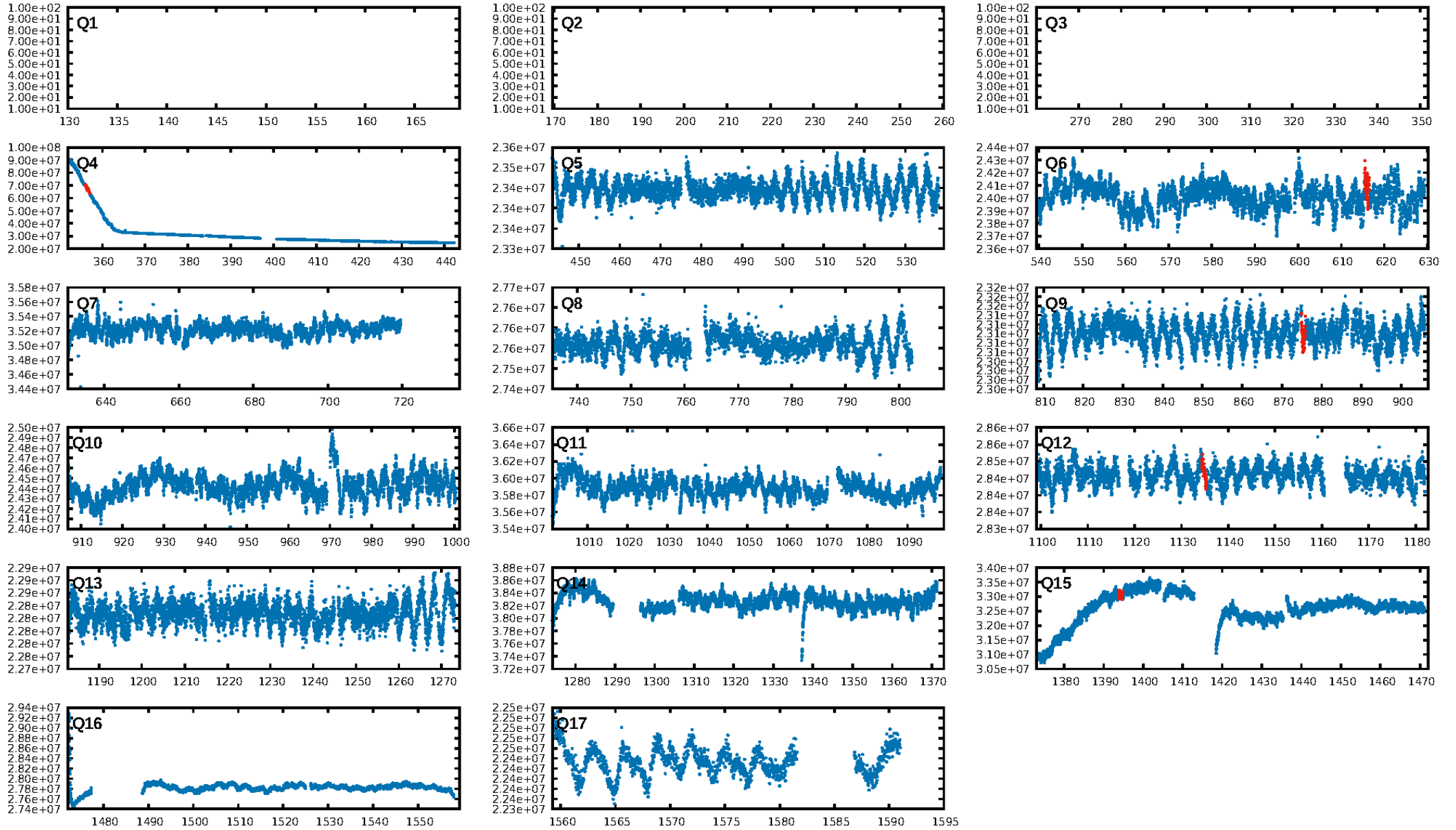
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 50.1%
ModelChiSquareGof-sig: 83.8%
Bootstrap-pfa: 7.88e-231
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.5509
Centroid-sig: 65.6%
Centroid-so: 1.580 arcsec [0.44 σ]
OotOffset-rm: N/A
KicOffset-rm: 3.325 arcsec [24.11 σ]
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

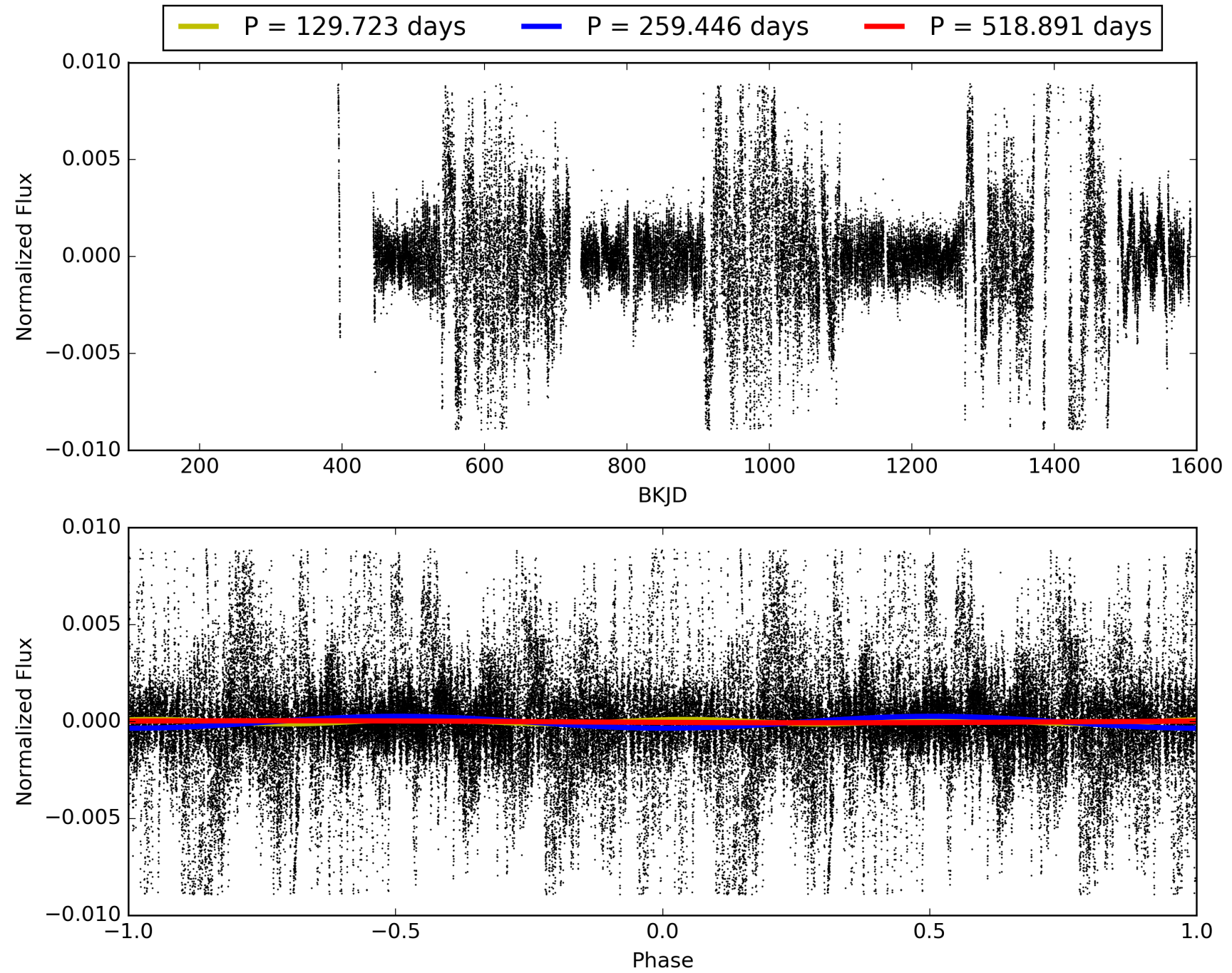
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:40:35 Z

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

TCE 003427847-01, PDC Light Curves

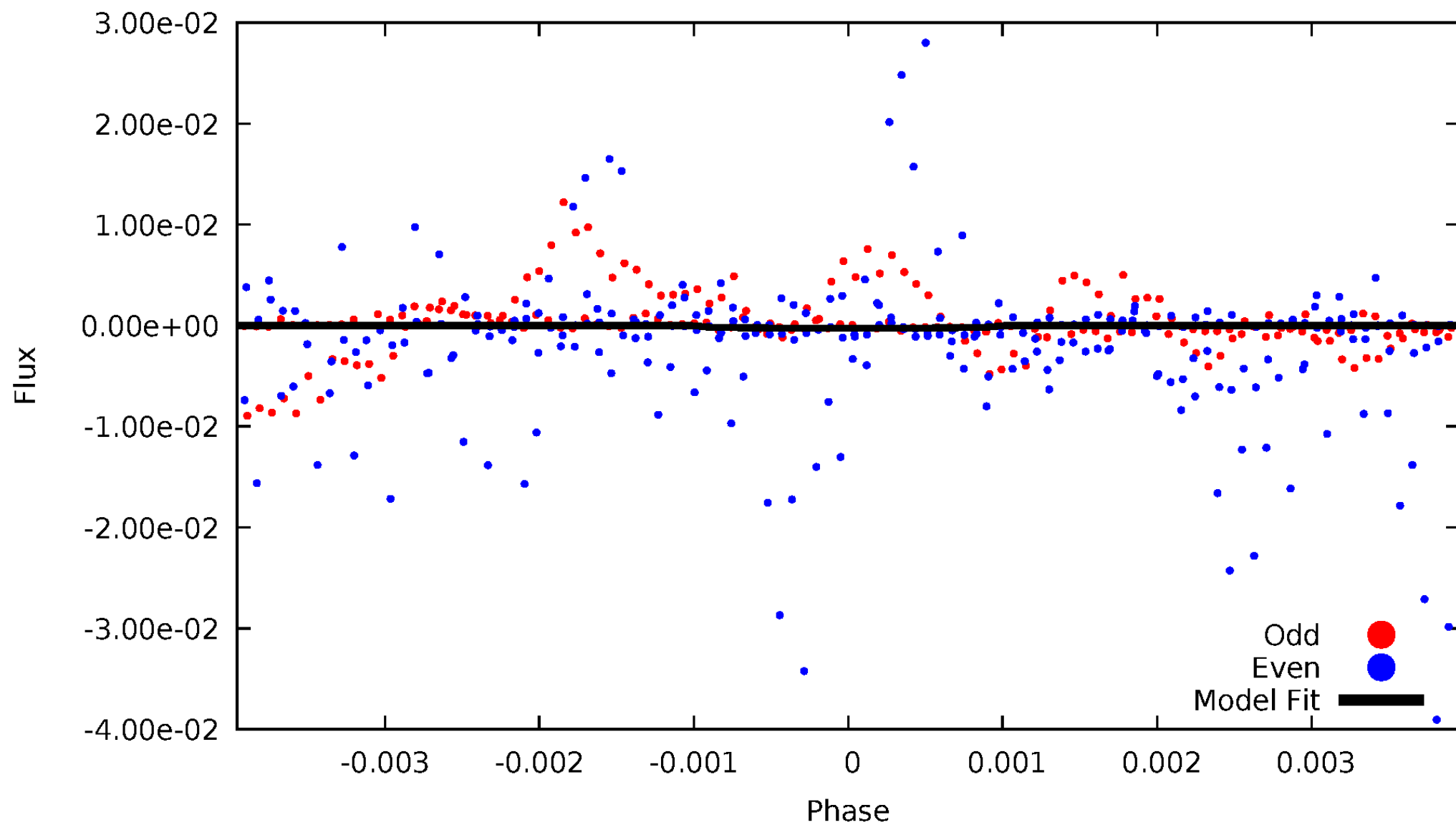


TCE 003427847-01



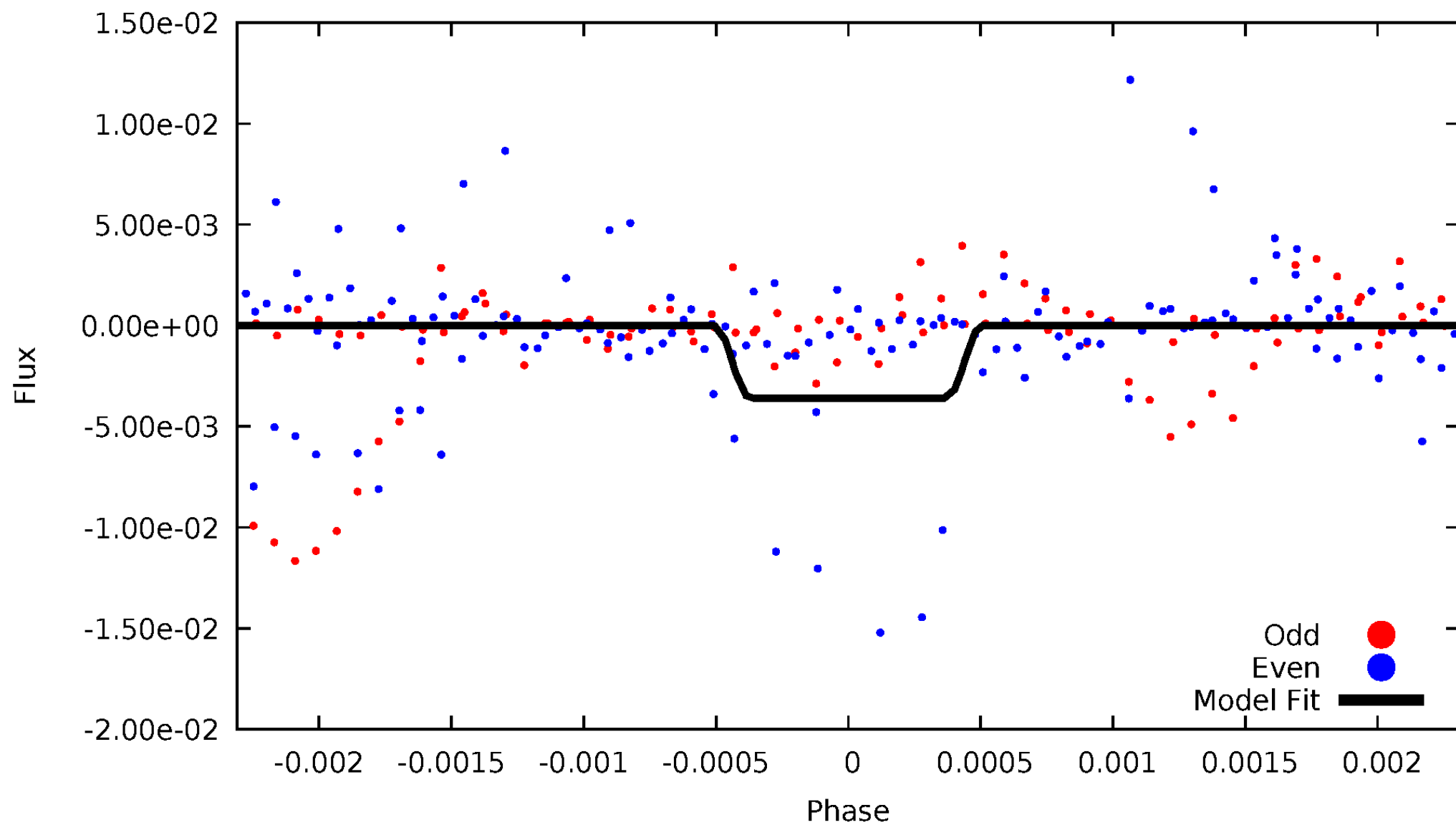
DV Odd/Even

TCE 003427847-01



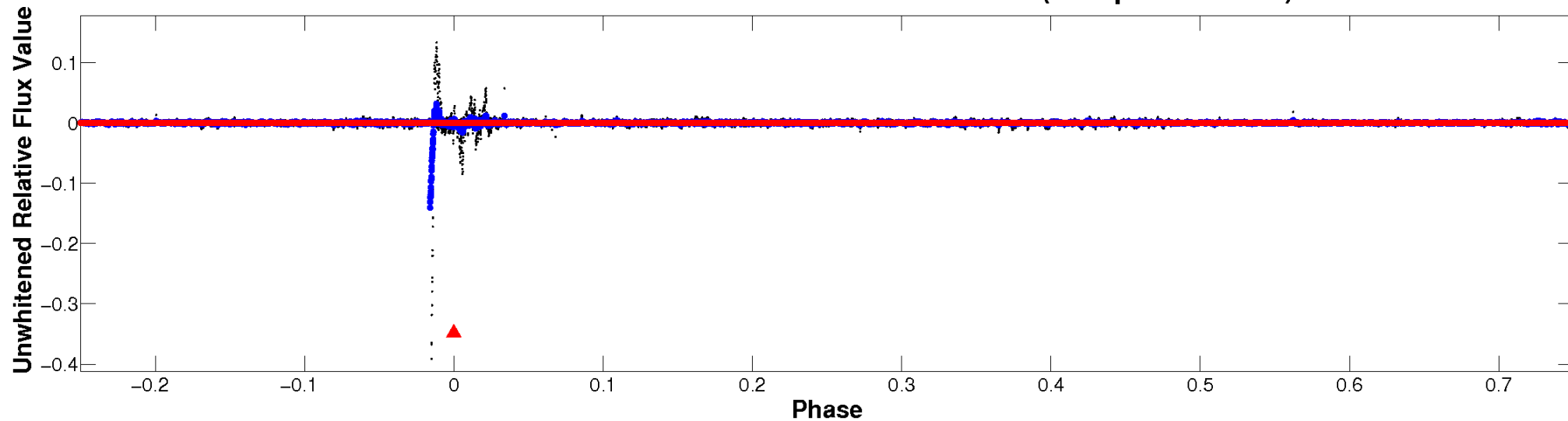
ALT Odd/Even

TCE 003427847-01

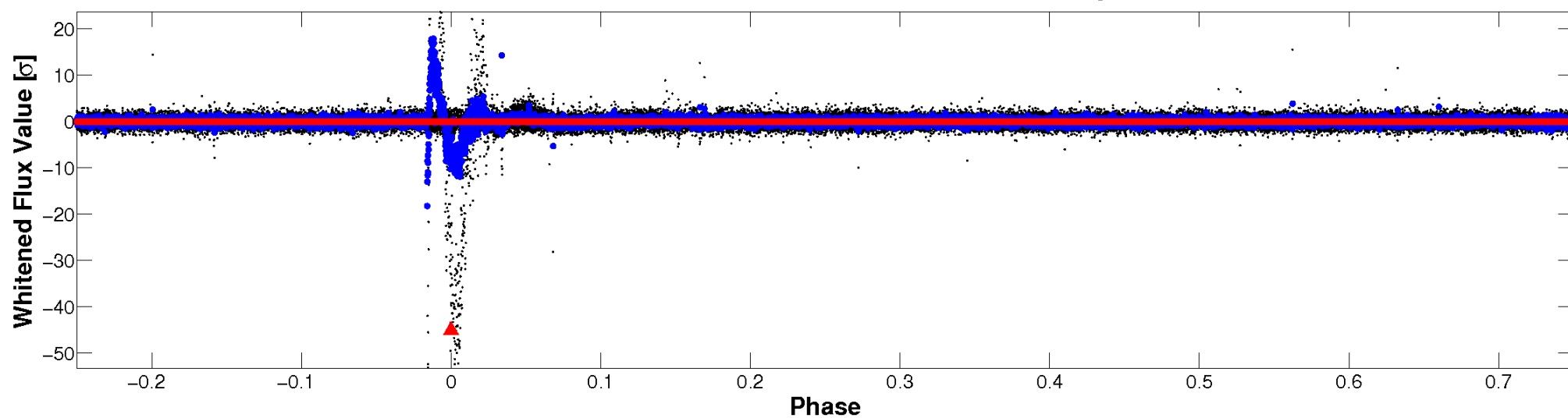


Non-Whitened Vs. Whitened Light Curve

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

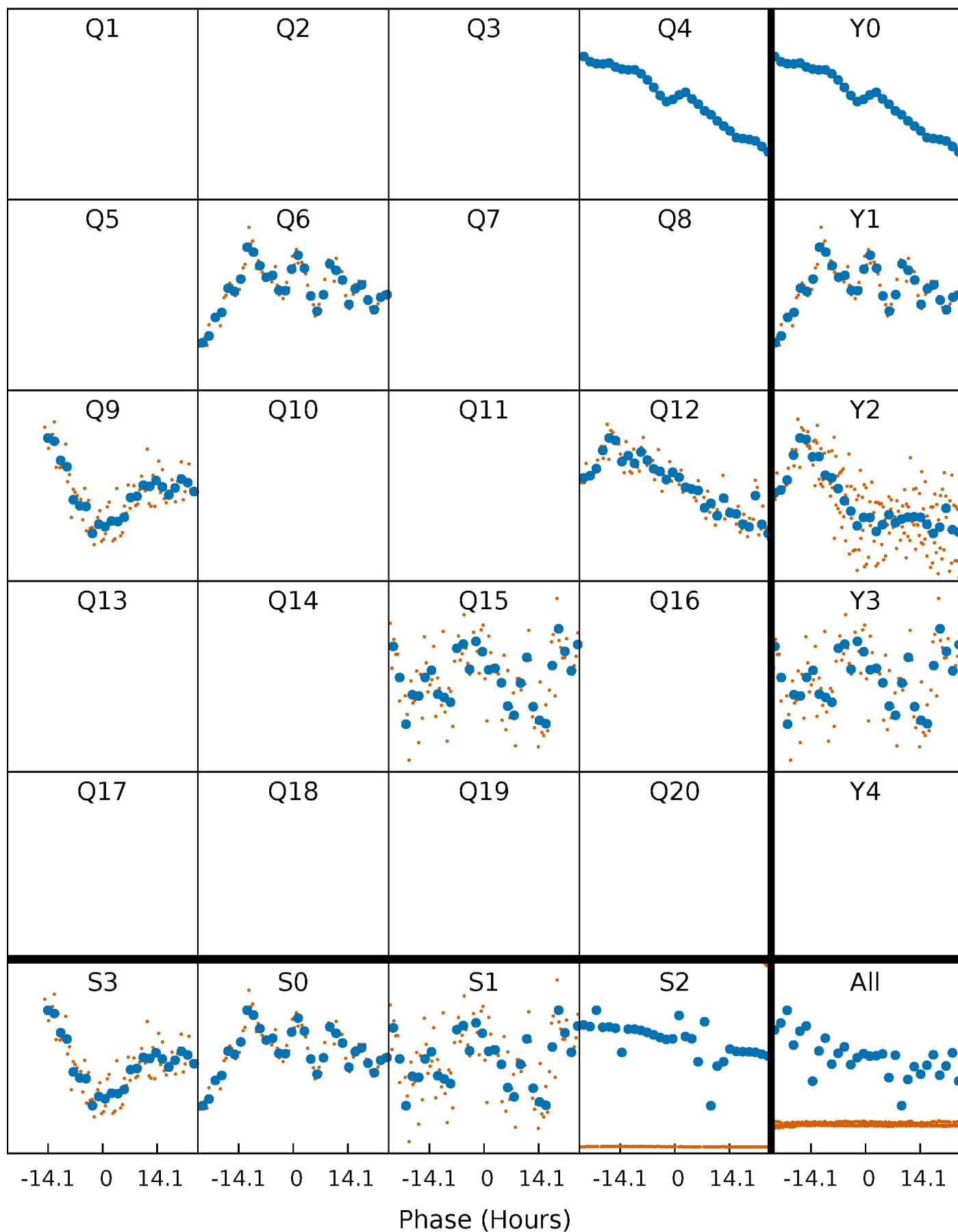


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



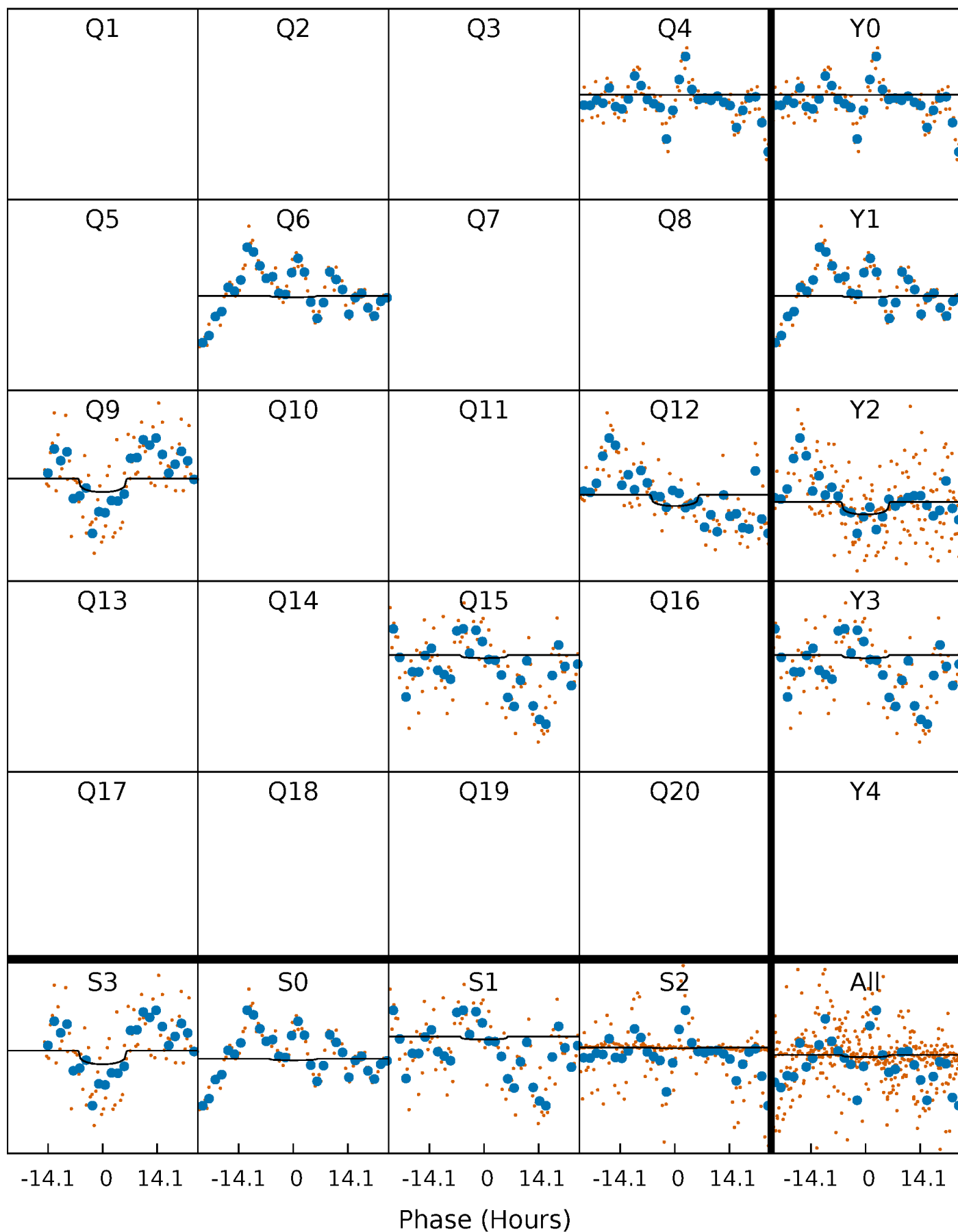
PDC Quarter-Phased Transit Curves

TCE 003427847-01 $P=259.445535$ Days $T_0=356.516548$ (BKJD)



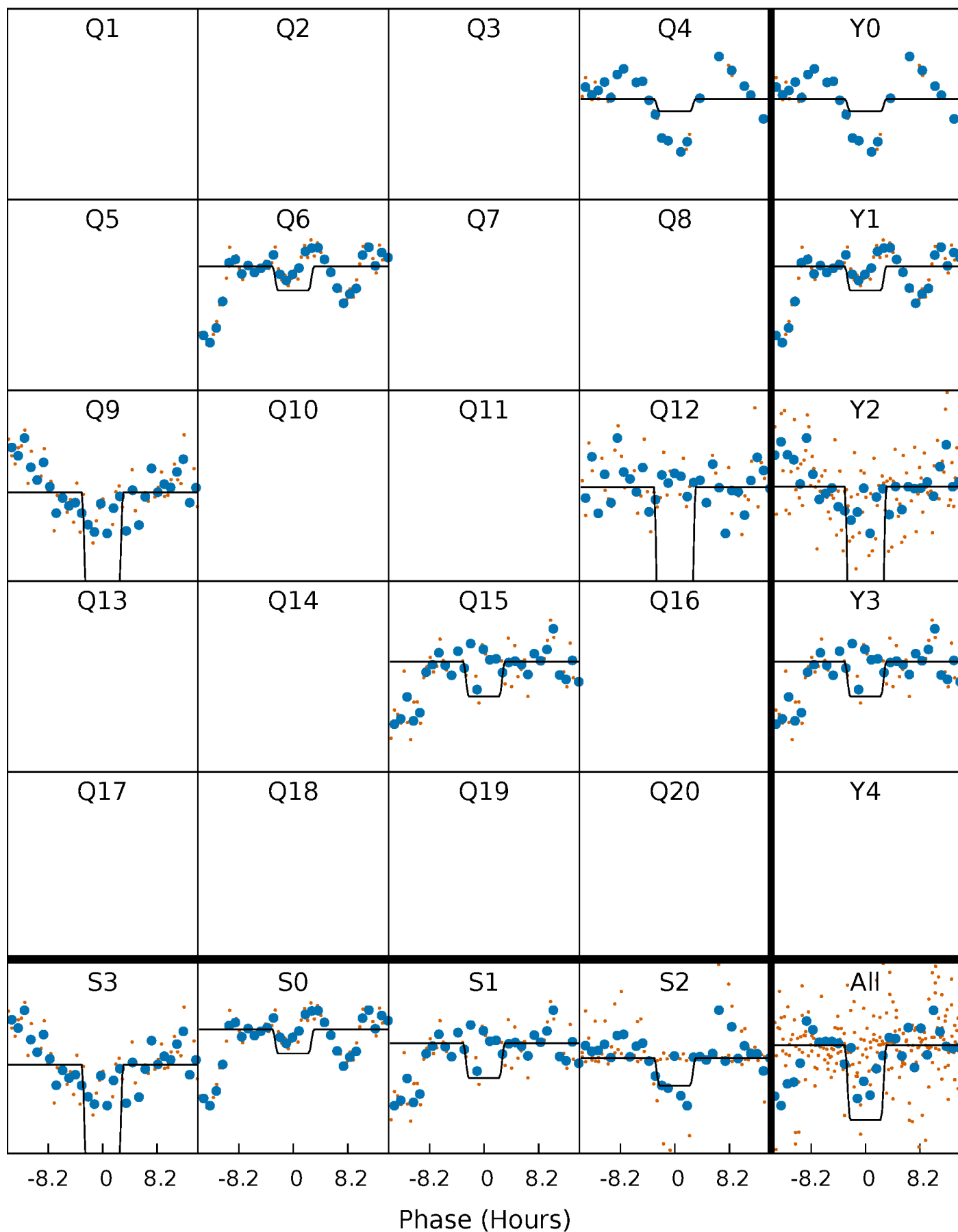
DV Quarter-Phased Transit Curves

TCE 003427847-01 P=259.445535 Days $T_0=356.516548$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

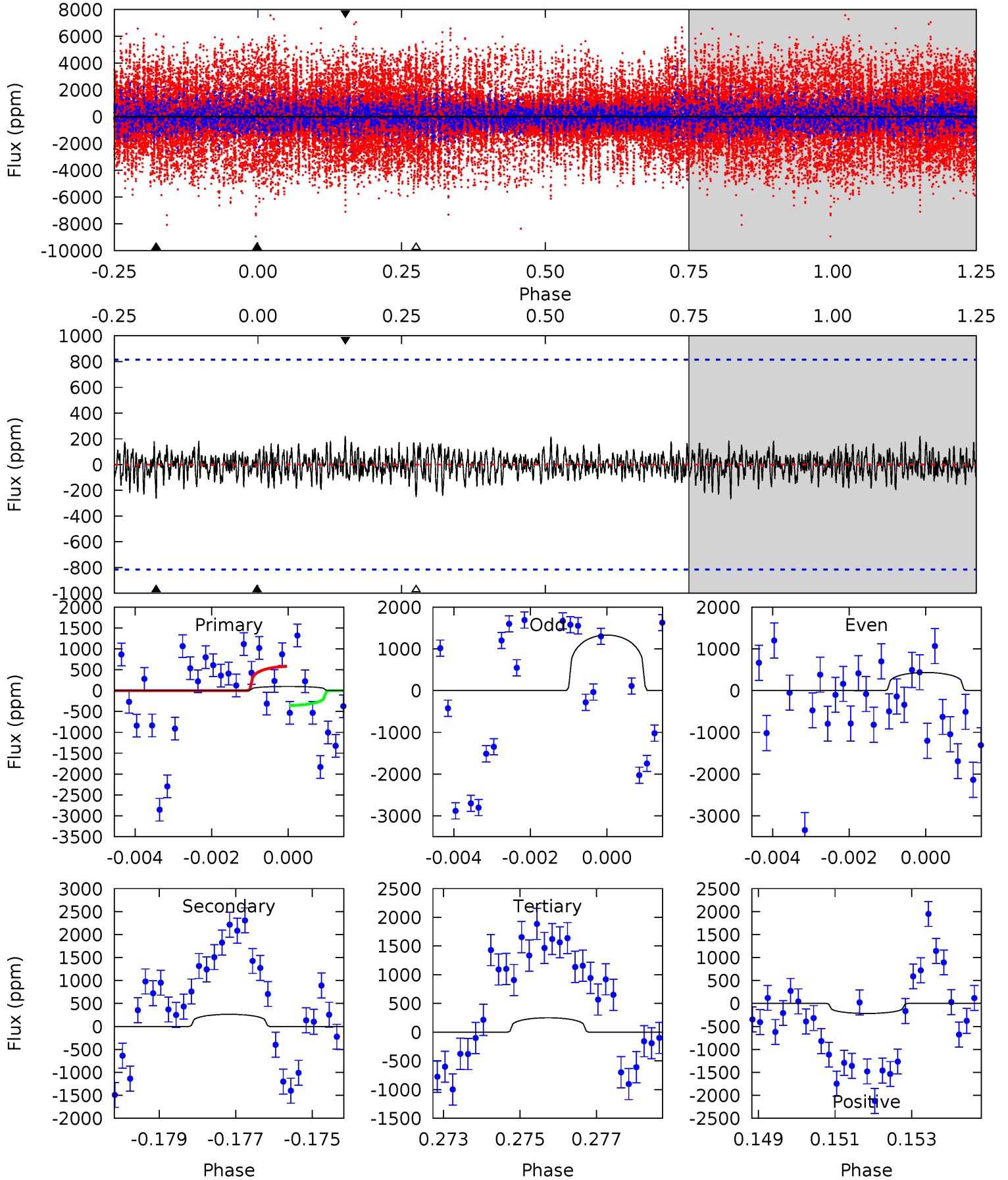
TCE 003427847-01 P=259.492590 Days $T_0=356.390563$ (BKJD)



DV Model-Shift Uniqueness Test

003427847-01, $P = 259.445535$ Days, $E = 97.071013$ Days

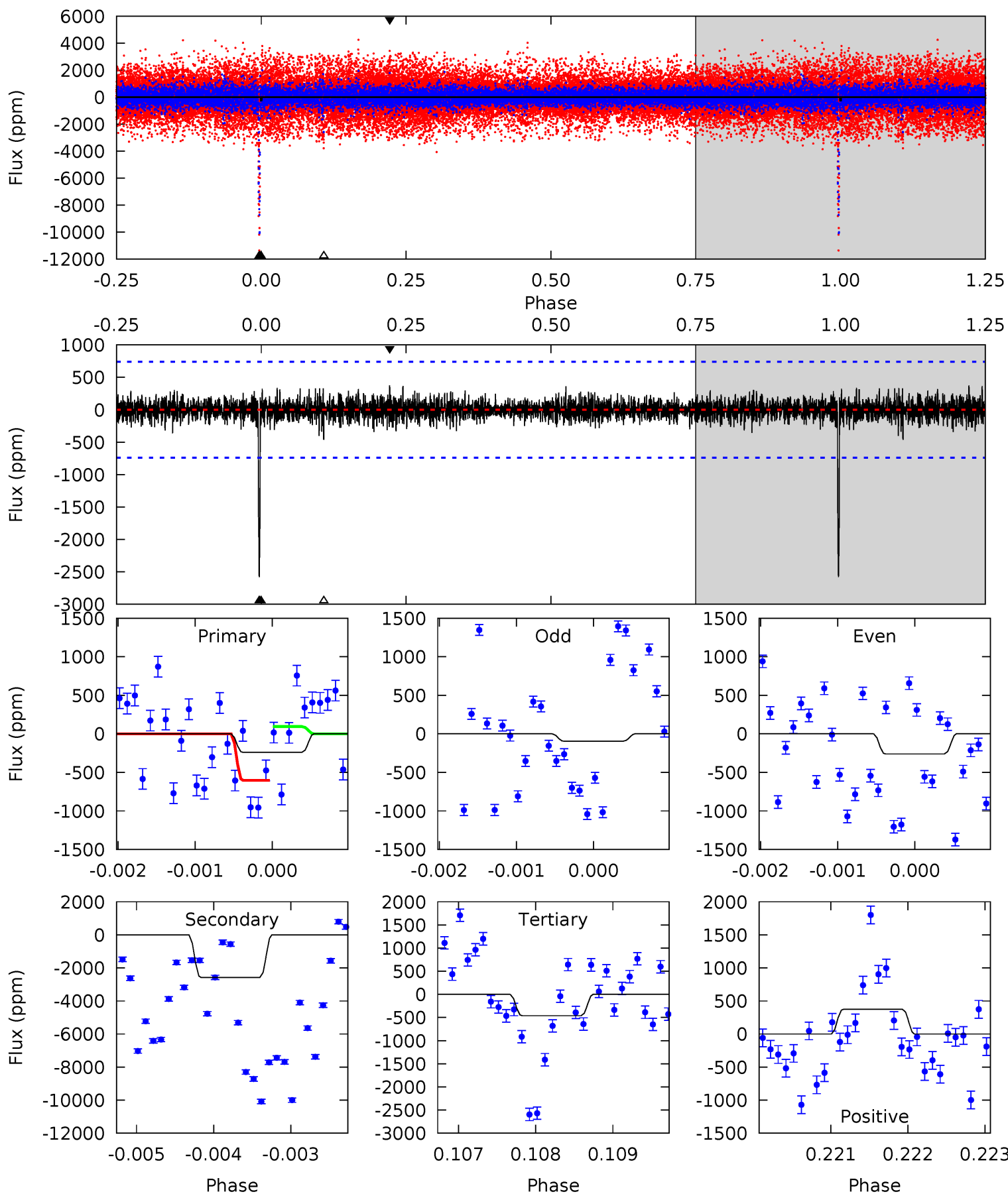
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.64	1.72	1.64	1.42	5.33	3.09	0.47	-0.99	-0.78	0.08	0.30	2.77	0.43	0.45	0



Alt Model-Shift Uniqueness Test

003427847-01, P = 259.492590 Days, E = 96.897973 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.77	19.0	3.41	2.76	5.46	3.31	0.81	-1.64	-0.99	15.6	16.2	0.61	25.8	0.13	1.89



Stellar Parameters For KIC 003427847

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5234^{+184}_{-184}	$4.523^{+0.072}_{-0.088}$	$-0.120^{+0.300}_{-0.300}$	$0.806^{+0.112}_{-0.084}$	$0.790^{+0.103}_{-0.069}$	$2.128^{+0.666}_{-0.605}$
	+4%/-4%	+2%/-2%	+250%/-250%	+14%/-10%	+13%/-9%	+31%/-28%
Source	KIC0	KIC0	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 003427847-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-263 ± 153	$10.98^{+12.53}_{-7.60}$	338^{+16}_{-16}	2597^{+1107}_{-482}	548^{+5809}_{-460}
Alt.	-2579 ± 136	$12.70^{+12.14}_{-8.52}$	339^{+16}_{-14}	3545^{+1921}_{-647}	4851^{+40321}_{-3629}

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 $A_{obs} \gg 1.0$

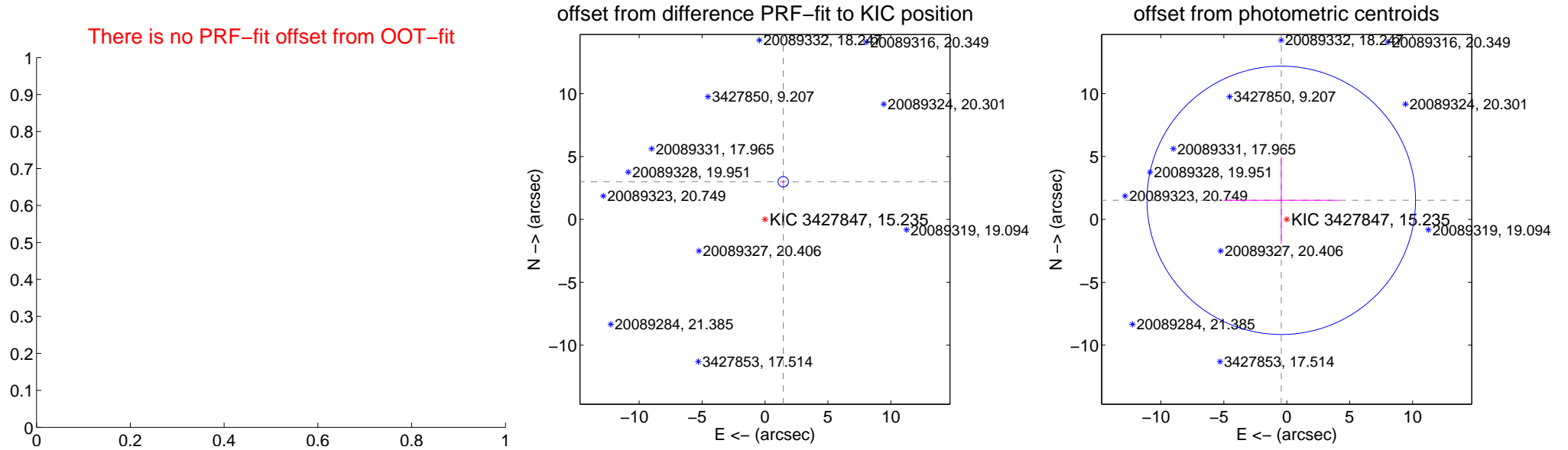
DV Centroid Data

Supplemental centroid analysis for 003427847-01. Kepler magnitude: 15.23. Transit SNR 1.18

There are 0 quarters with good PRF difference image offsets

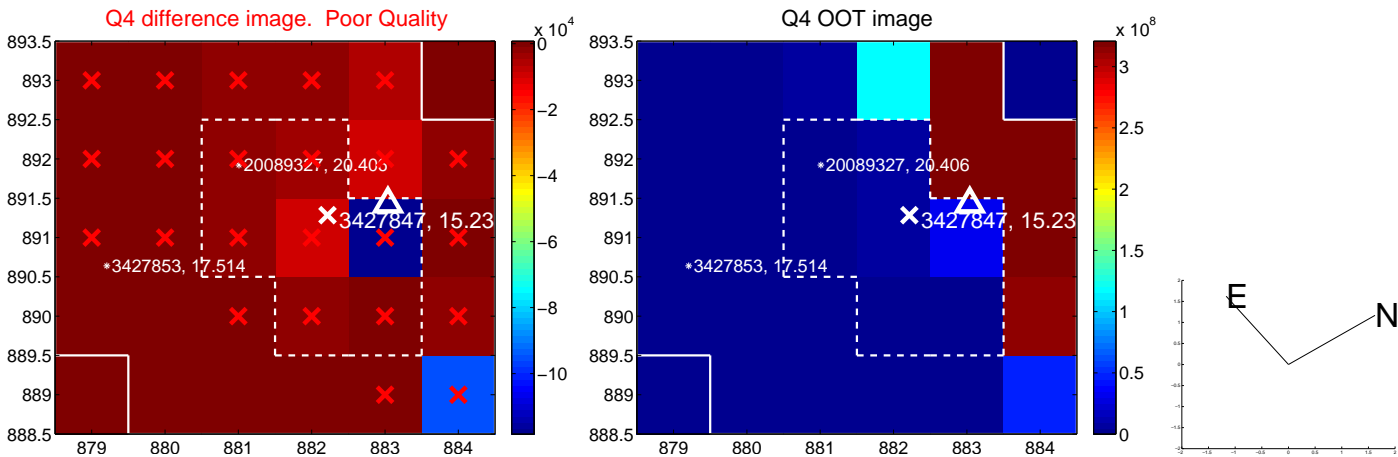
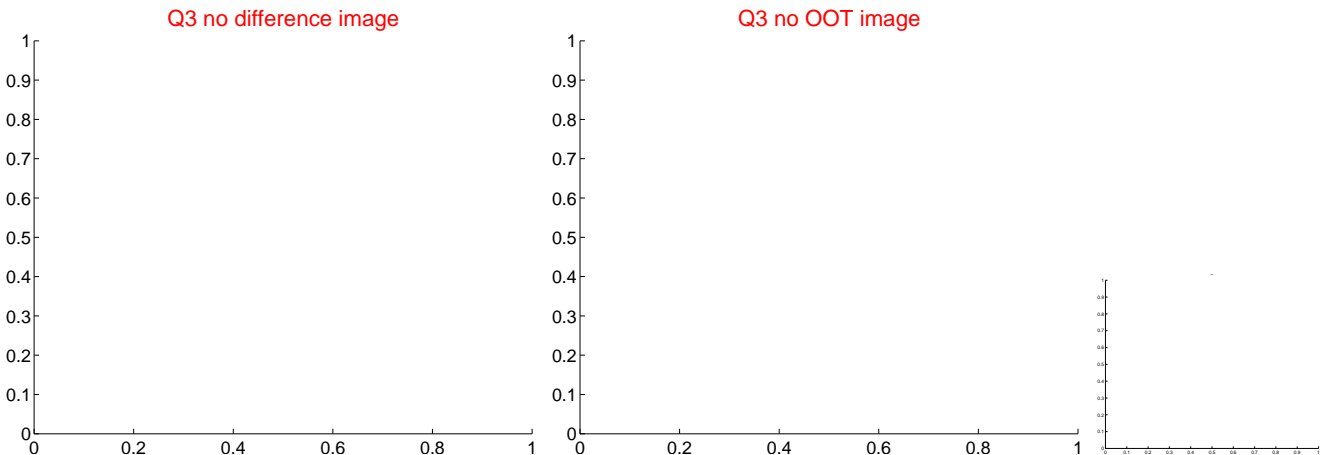
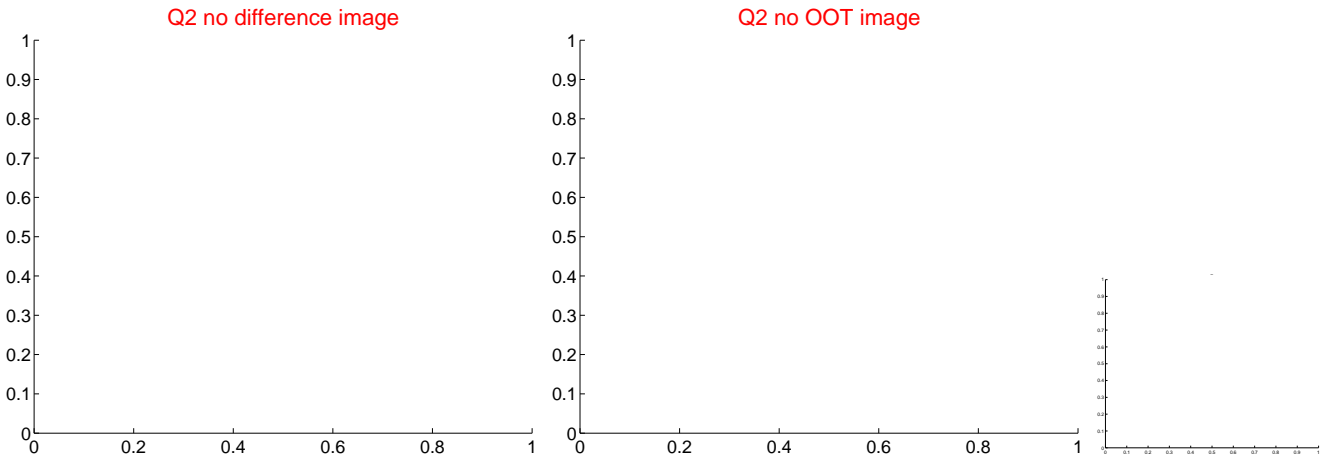
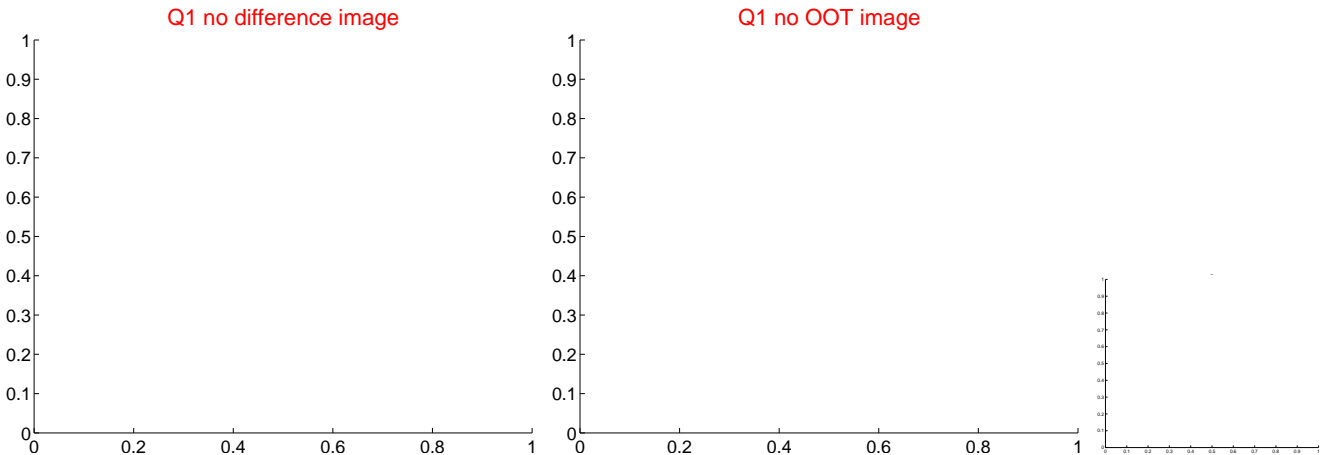
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	3.325 \pm 0.138	24.11	-1.449 \pm 0.112	2.992 \pm 0.143
photometric centroid source offset	1.58 \pm 3.56	0.44	0.44 \pm 4.61	1.52 \pm 3.46

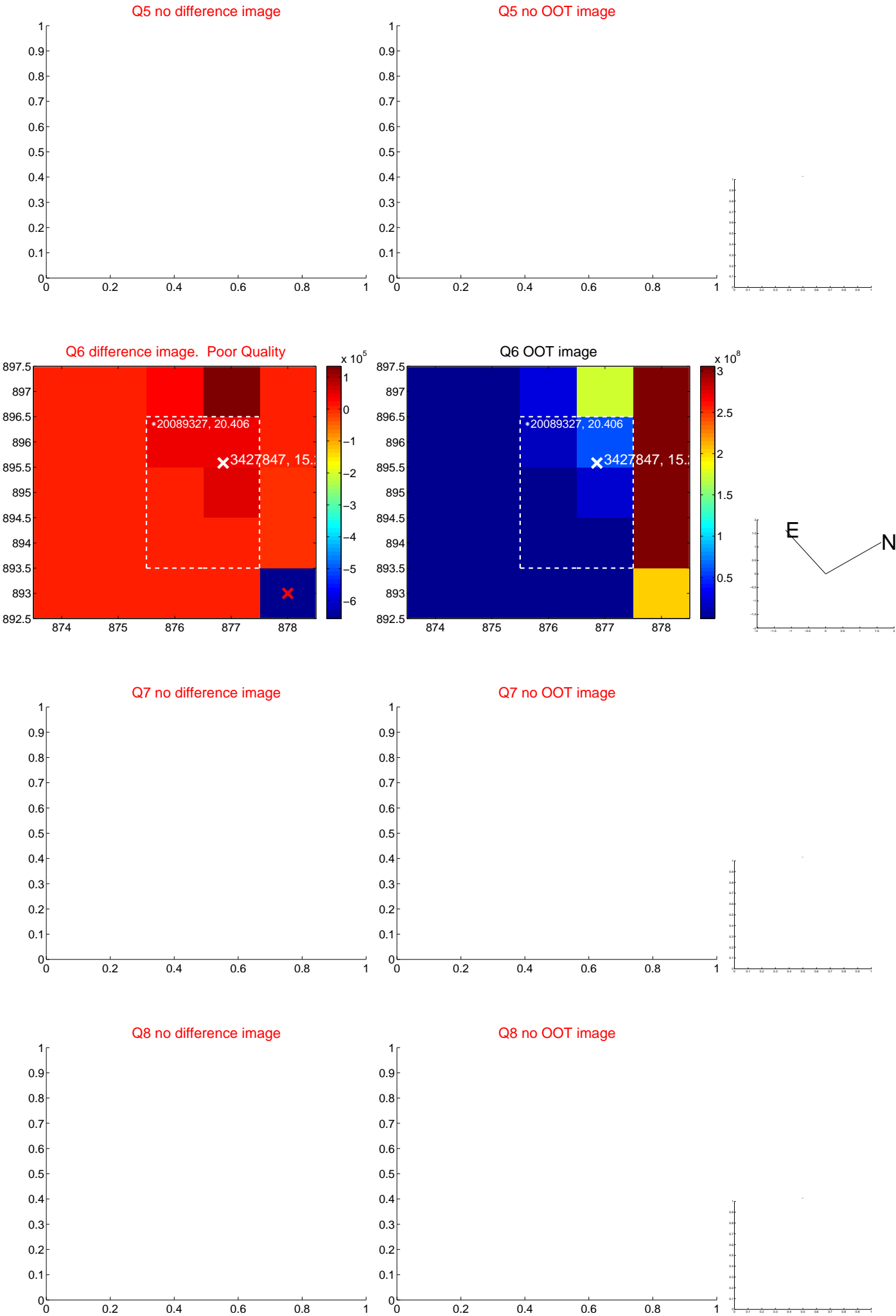


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



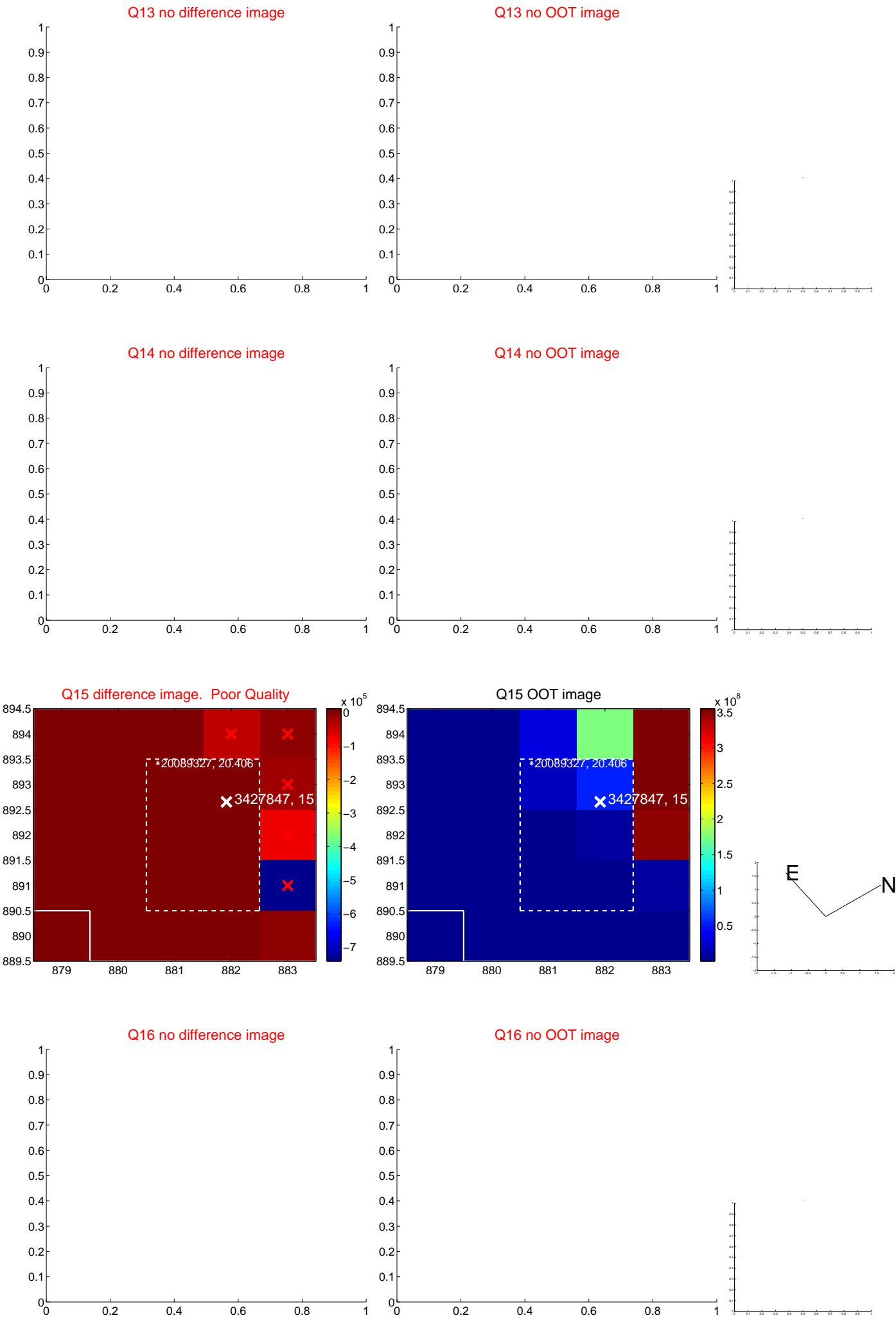
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



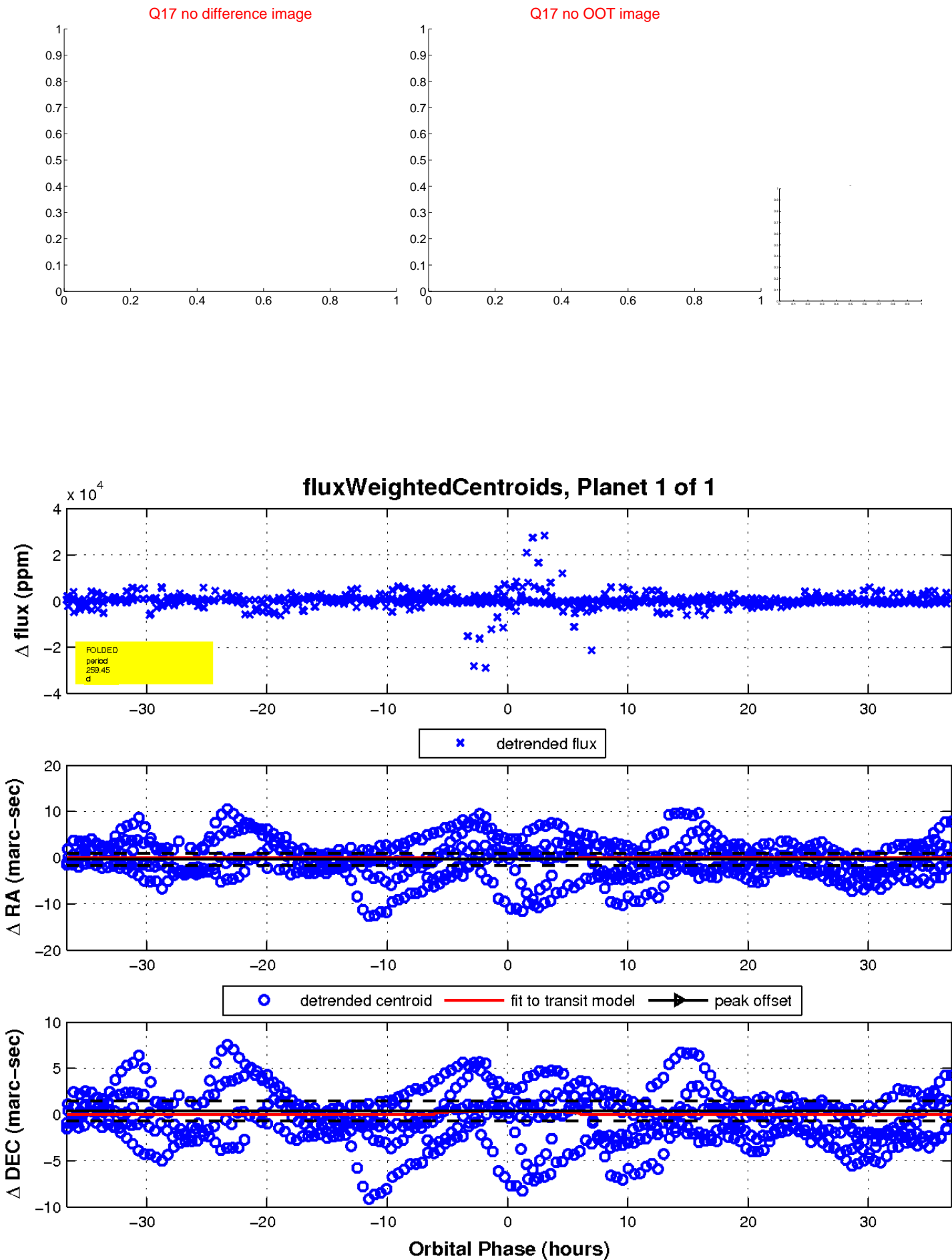
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

