

KIC 008766897

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})
008766897-01	OBS	No	659.984174	254.204461	42.9	0.524	43.5	2.9	149.38	3296	125.25	970.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008766897-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

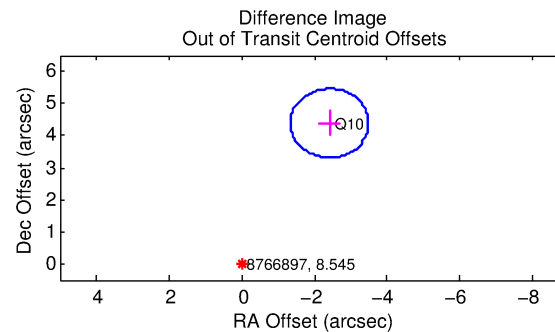
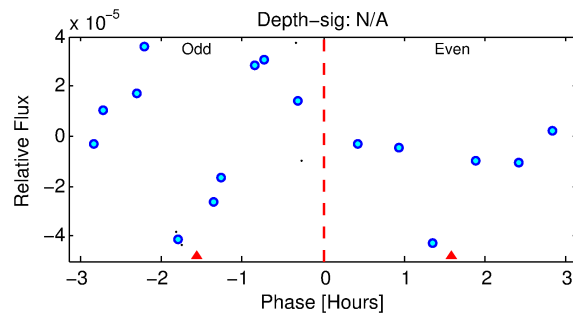
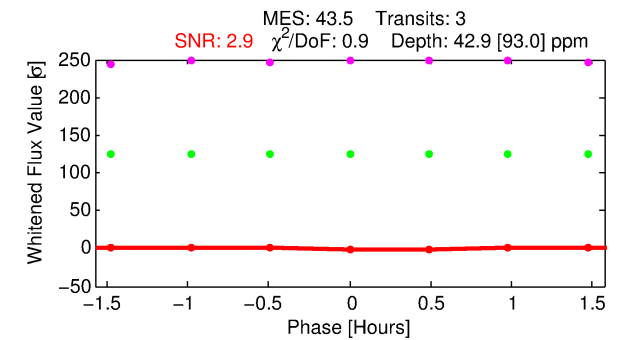
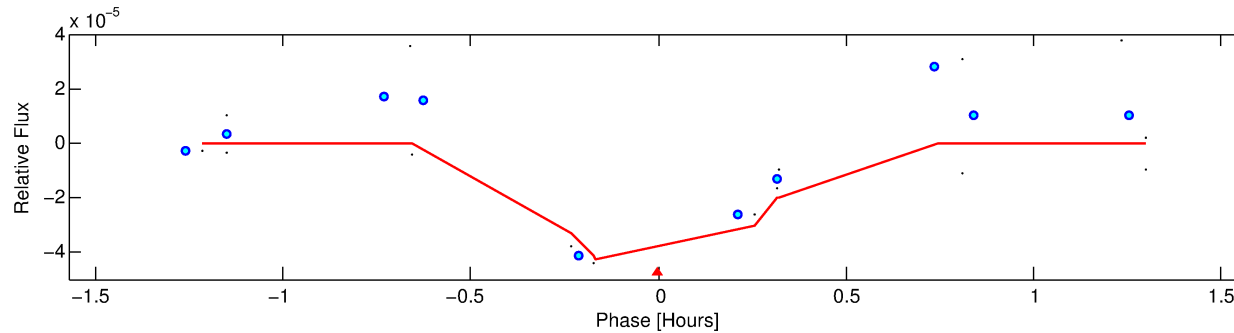
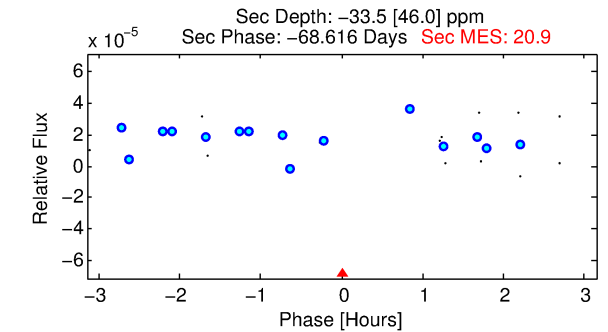
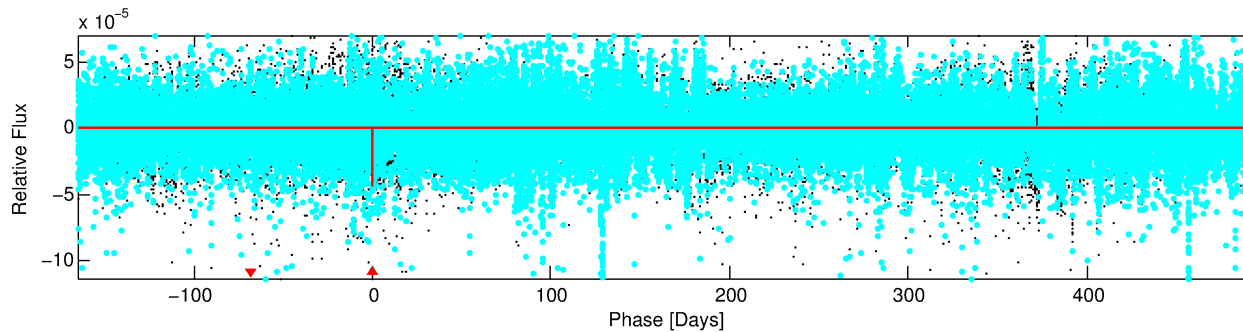
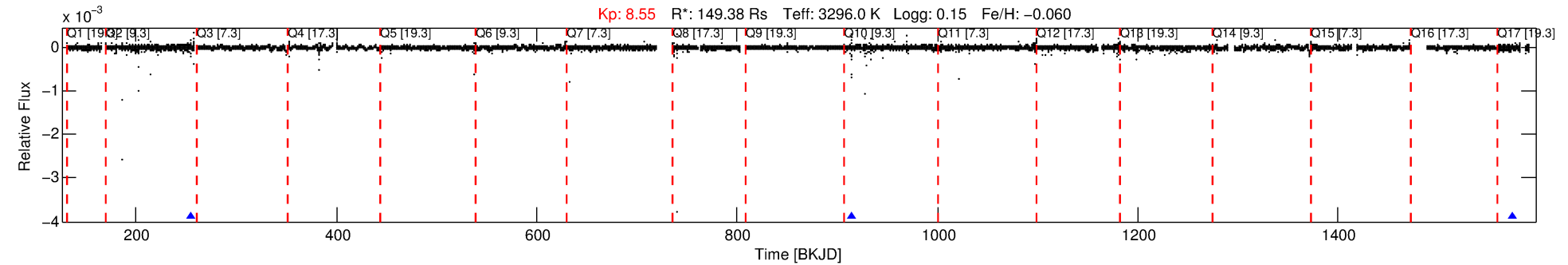
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008766897-01

No Significant Match Found

DV One-Page Summary

KIC: 8766897 Candidate: 1 of 1 Period: 659.984 d



DV Fit Results:

Period = 659.98417 [0.00260] d
Epoch = 254.2045 [0.0051] BKJD
Rp/R* = 0.0077 [0.0112]
a/R* = 8393.47 [30240.69]
b = 0.50 [5.06]
Seff = 970.51 [357.91]
Teq = 1423 [131] K
Rp = 125.25 [183.92] Re
a = 1.5593 [0.3207] AU
Ag = N/A
Teffp = N/A

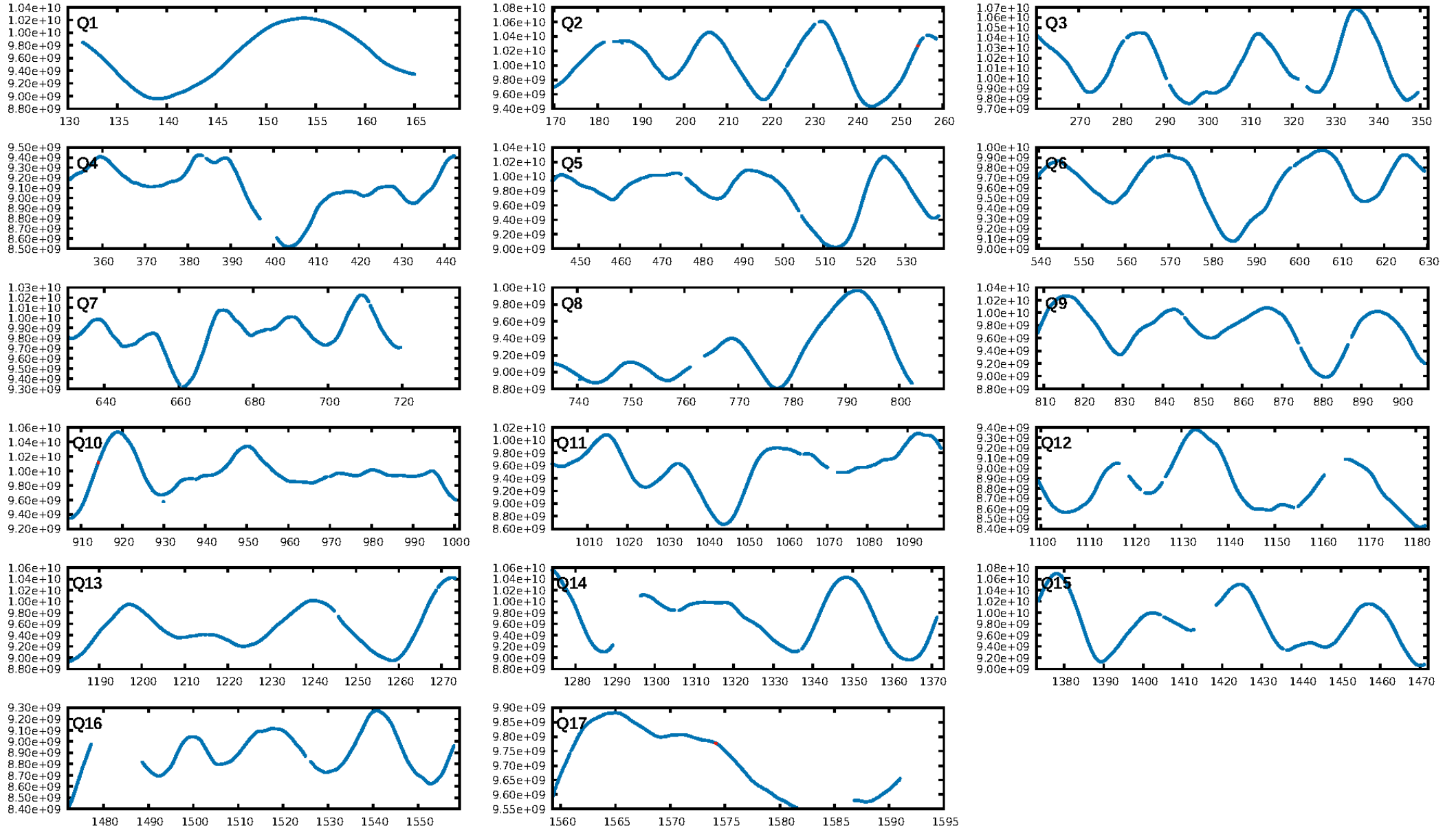
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 54.7%
ModelChiSquareGof-sig: 92.7%
Bootstrap-pfa: 1.60e-10
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.7%
Centroid-so: 52.424 arcsec [1.43σ]
OotOffset-rm: 5.002 arcsec [13.95σ]
KicOffset-rm: 4.886 arcsec [13.19σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

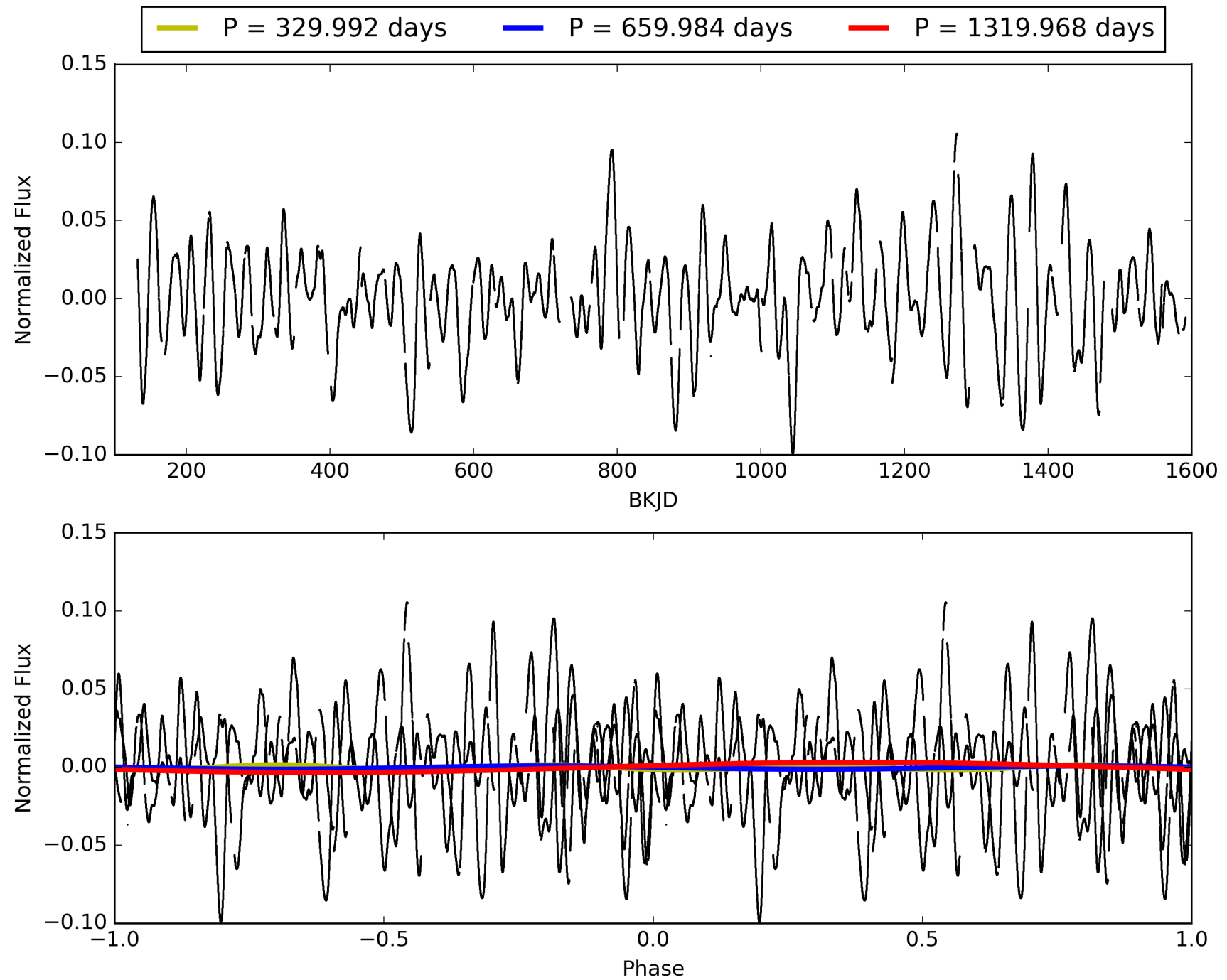
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:04:36 Z

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

TCE 008766897-01, PDC Light Curves

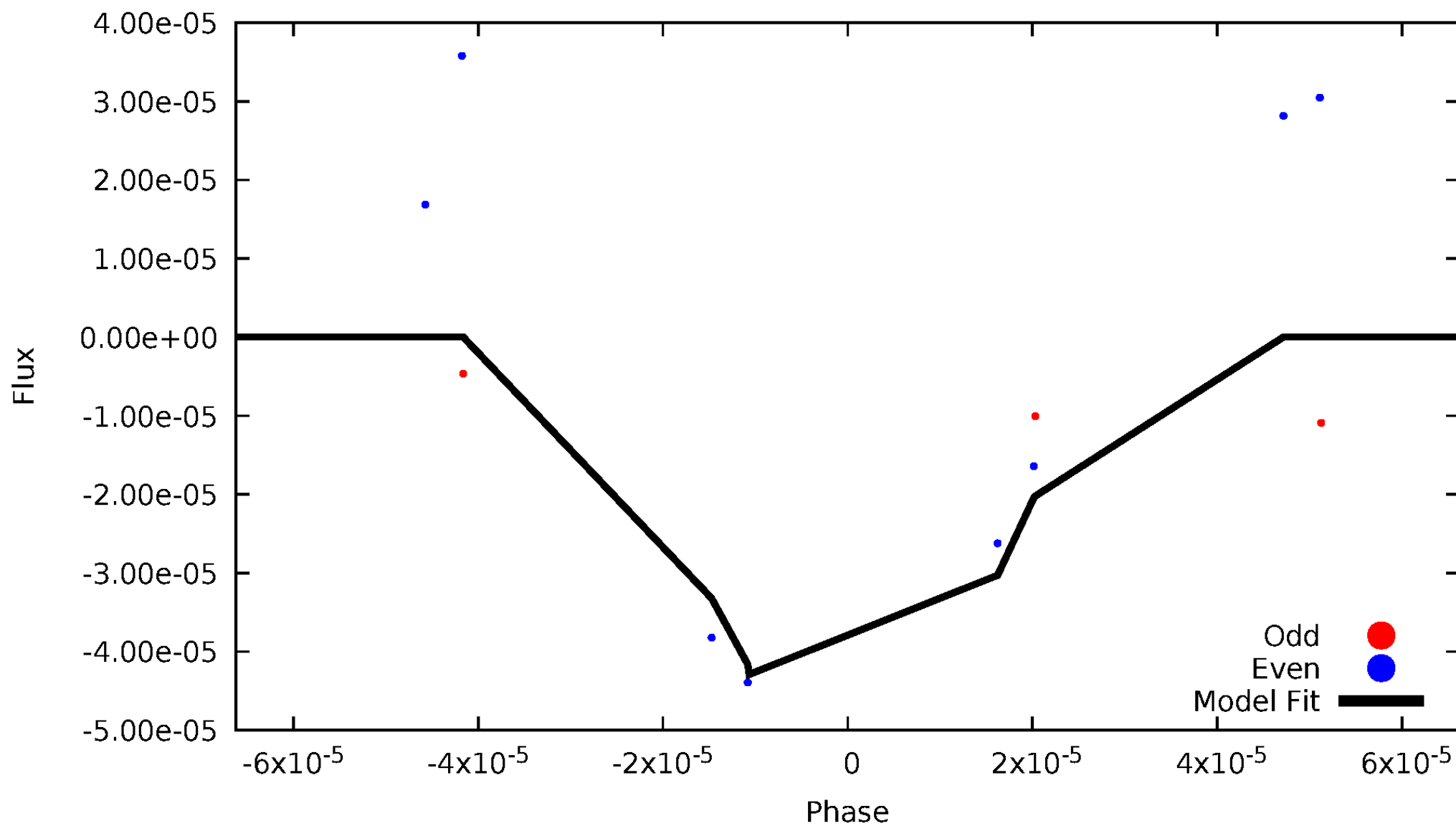


TCE 008766897-01



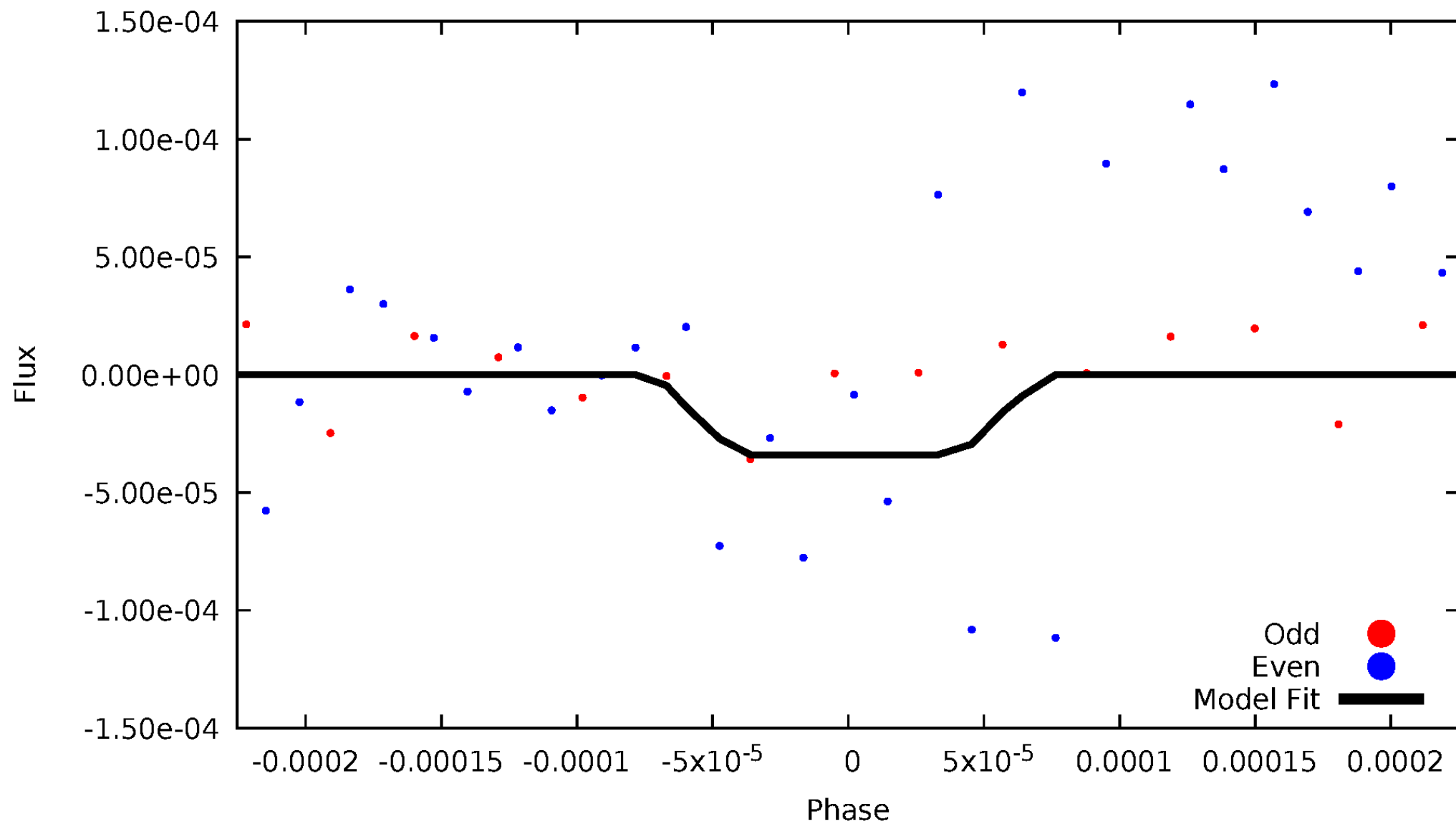
DV Odd/Even

TCE 008766897-01



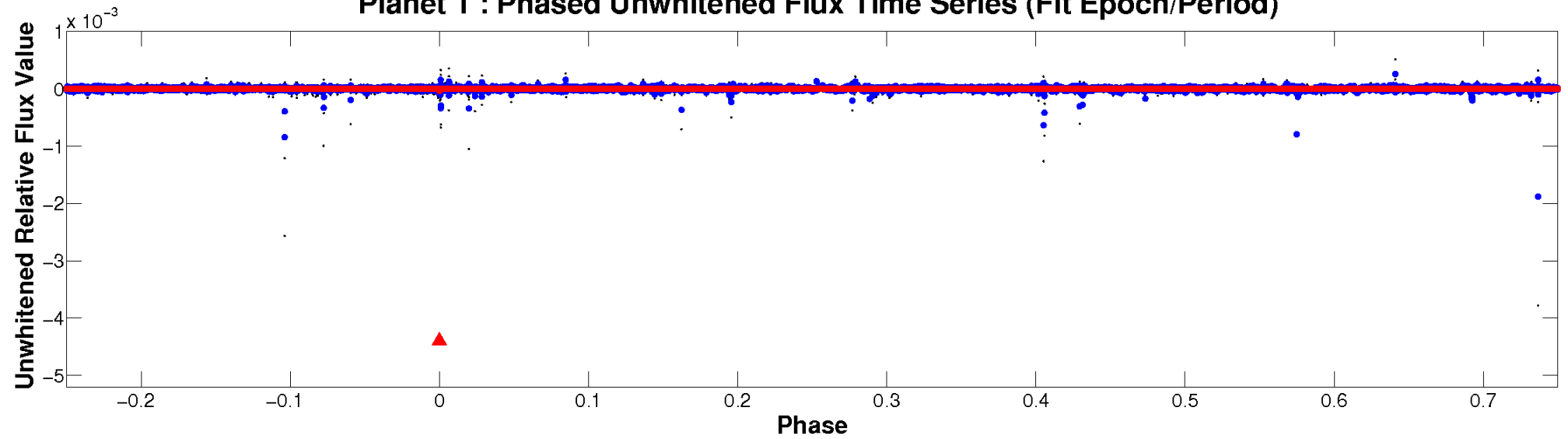
ALT Odd/Even

TCE 008766897-01

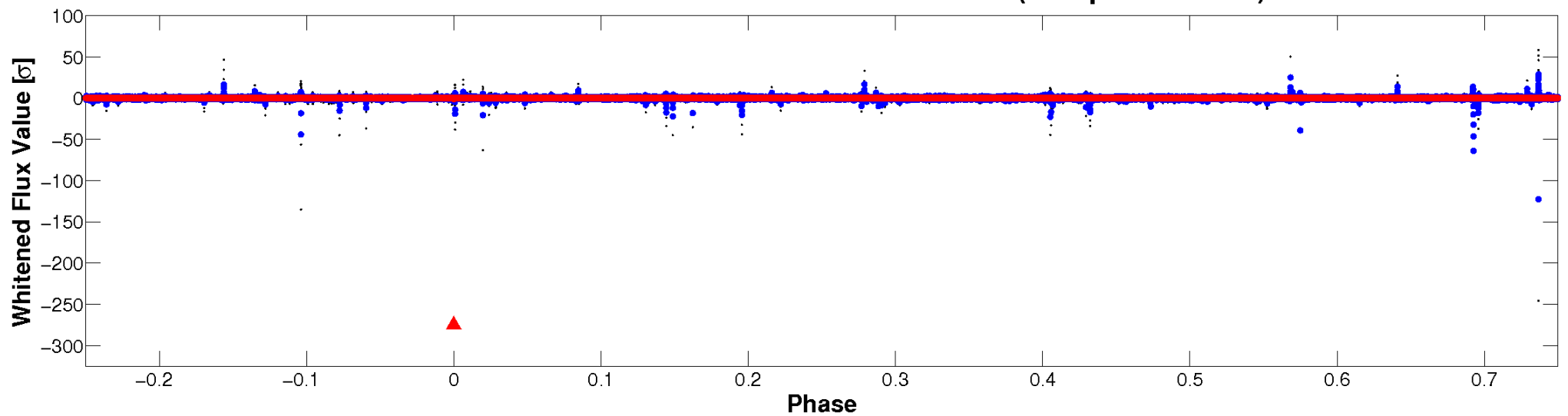


Non-Whitened Vs. Whitened Light Curve

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

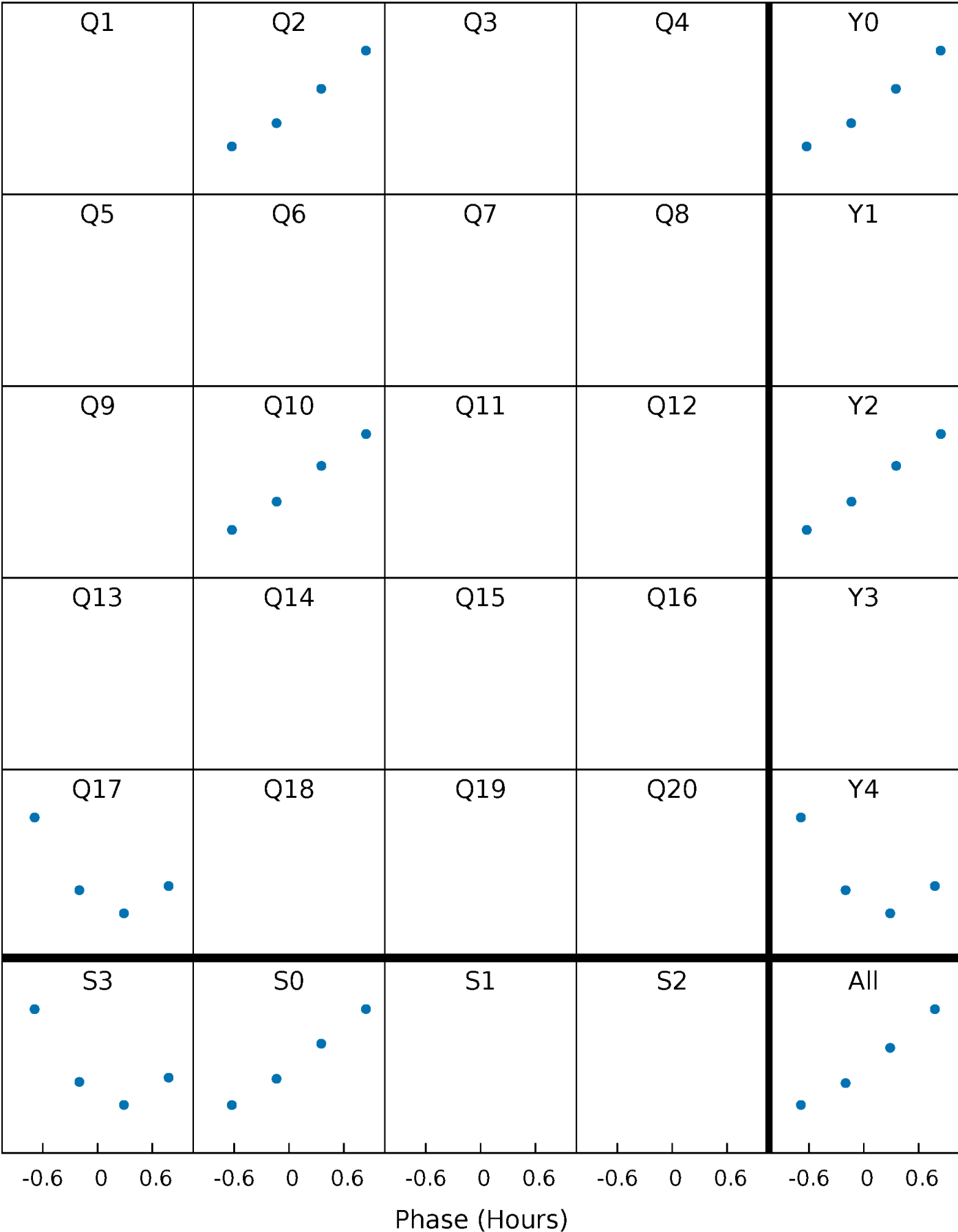


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



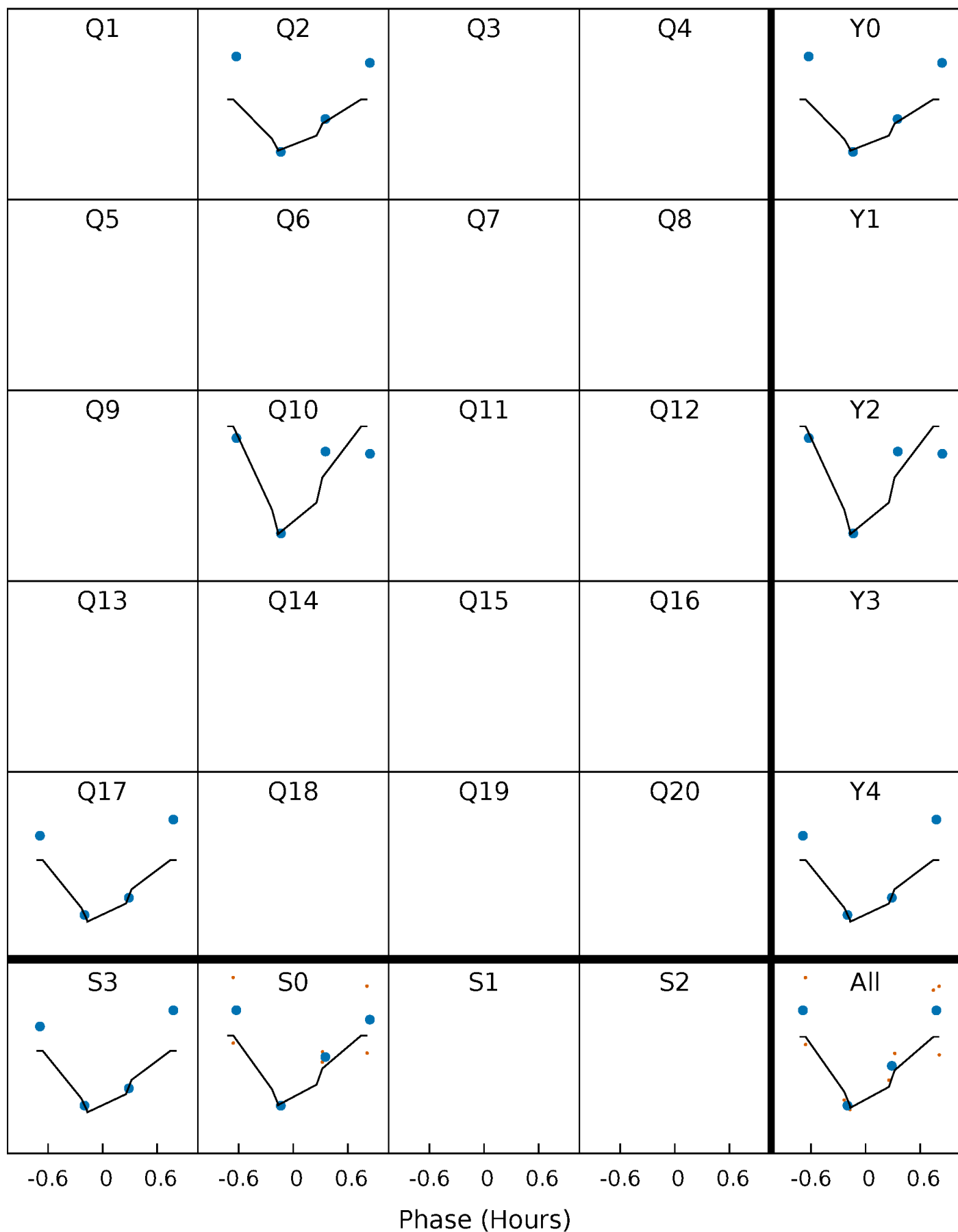
PDC Quarter-Phased Transit Curves

TCE 008766897-01 P=659.984174 Days T₀=254.204461 (BKJD)



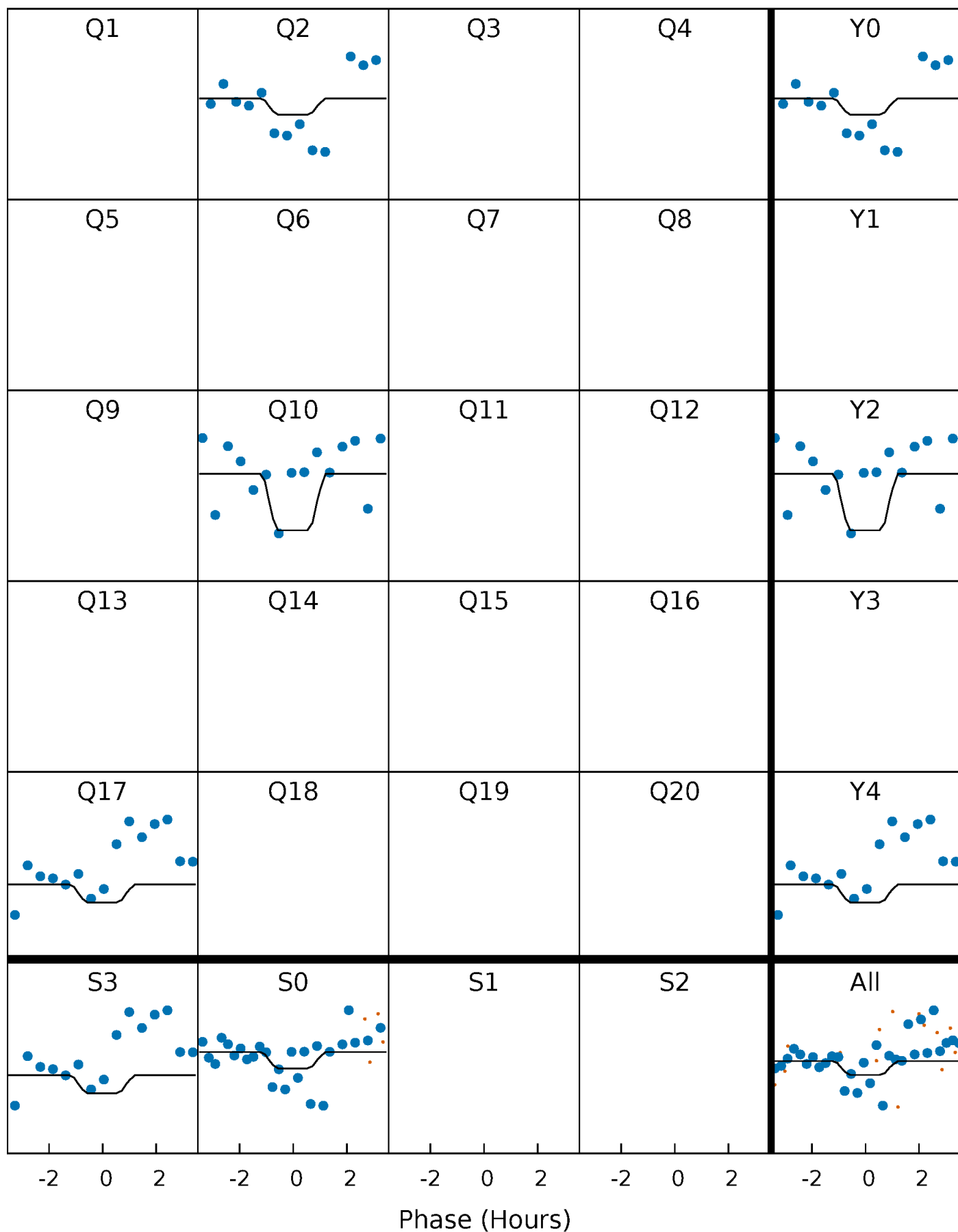
DV Quarter-Phased Transit Curves

TCE 008766897-01 P=659.984174 Days $T_0=254.204461$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

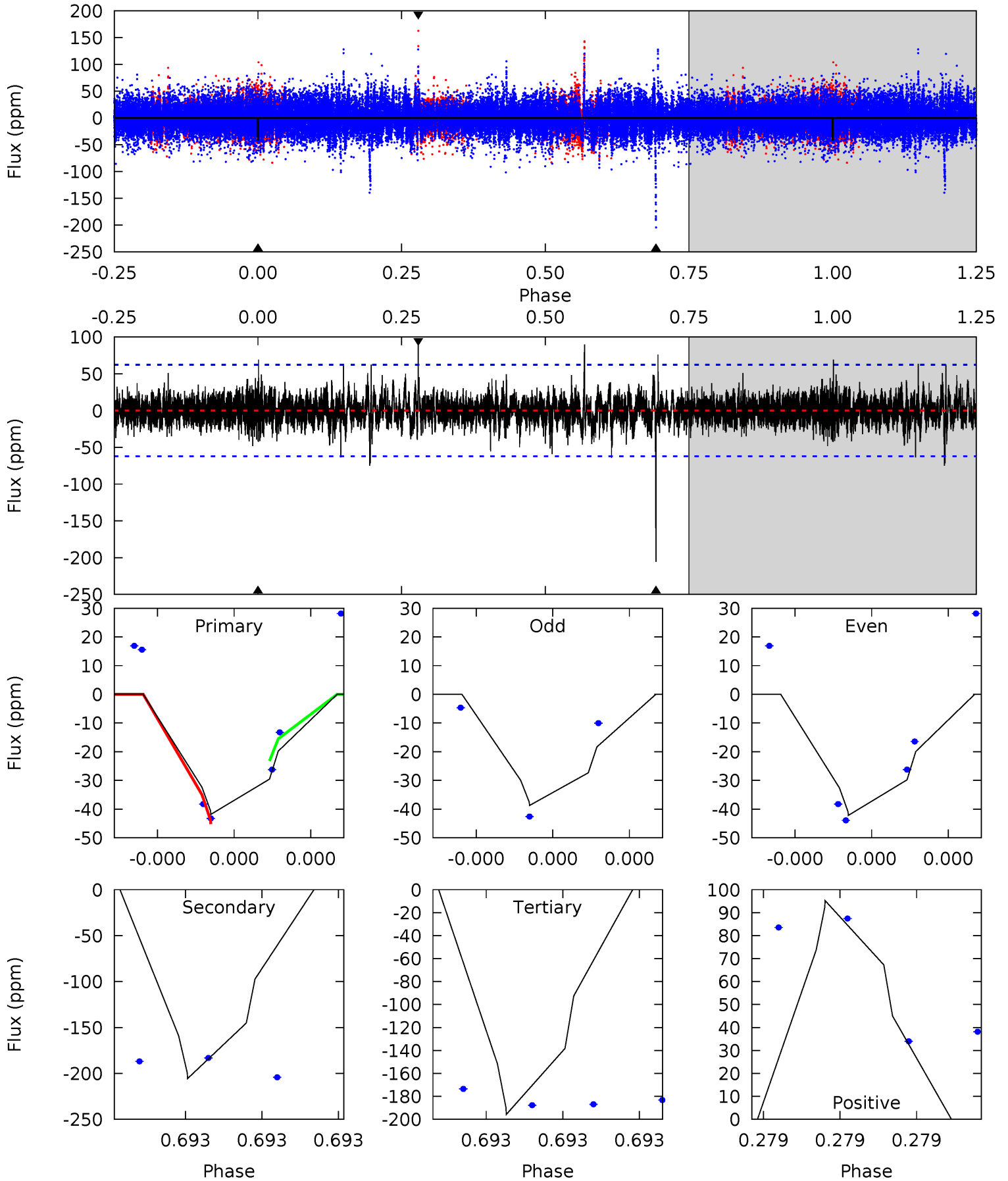
TCE 008766897-01 P=659.976743 Days $T_0=254.228632$ (BKJD)



DV Model-Shift Uniqueness Test

008766897-01, P = 659.984174 Days, E = 254.204461 Days

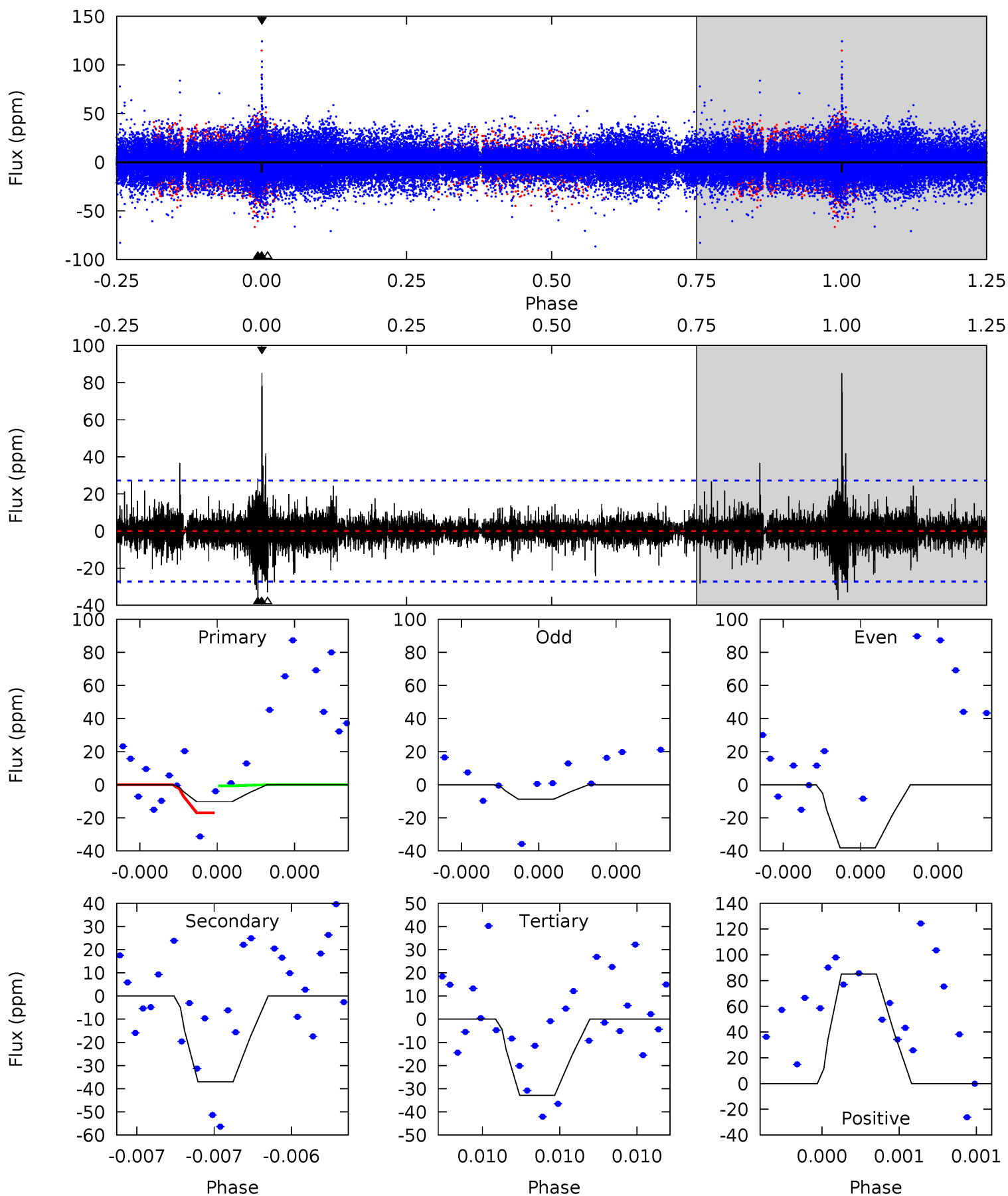
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.05	19.9	18.9	9.21	6.02	4.14	1.23	-14.9	-5.17	0.96	10.7	0.15	0.97	0.32	1.07



Alt Model-Shift Uniqueness Test

008766897-01, P = 659.976743 Days, E = 254.228632 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.19	7.87	6.98	18.1	5.80	3.81	0.86	-4.79	-15.9	0.89	-10.2	3.52	2.55	0.70	1.76



Stellar Parameters For KIC 008766897

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	3296^{+117}_{-78}	$0.154^{+0.204}_{-0.048}$	$-0.060^{+0.250}_{-0.150}$	$149.384^{+9.958}_{-29.874}$	$1.160^{+0.189}_{-0.155}$	$0.000^{+0.000}_{-0.000}$
	+4%/-2%	+132%/-31%	+417%/-250%	+7%/-20%	+16%/-13%	+98%/-16%
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 008766897-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-206 ± 10	$181.26^{+154.60}_{-117.40}$	1961^{+85}_{-104}	3549^{+1743}_{-664}	$8.674^{+59.260}_{-6.201}$
Alt.	-37 ± 5	$167.12^{+142.70}_{-115.31}$	1956^{+85}_{-104}	2748^{+1266}_{-550}	$1.848^{+16.419}_{-1.321}$

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 $A_{obs} \gg 1.0$

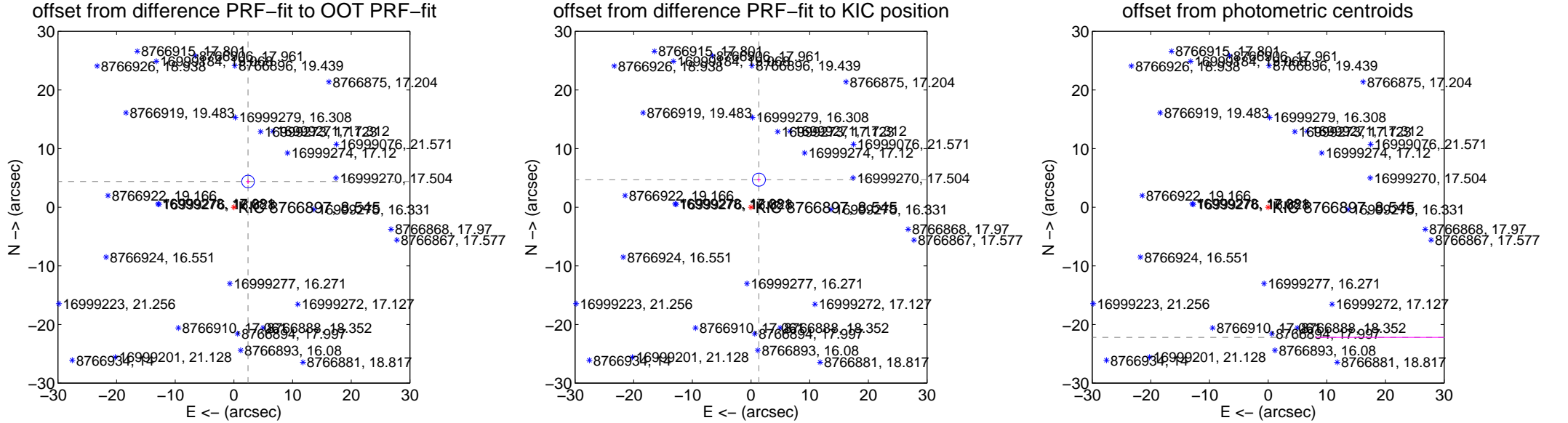
DV Centroid Data

Supplemental centroid analysis for 008766897-01. **Kepler magnitude: 8.54.** Transit SNR 2.90

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.002 ± 0.358	13.95	-2.413 ± 0.293	4.381 ± 0.376
PRF-fit source offset from KIC position	4.886 ± 0.371	13.19	-1.344 ± 0.293	4.697 ± 0.376
photometric centroid source offset	52.43 ± 36.64	1.43	-47.50 ± 39.48	-22.19 ± 18.76



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

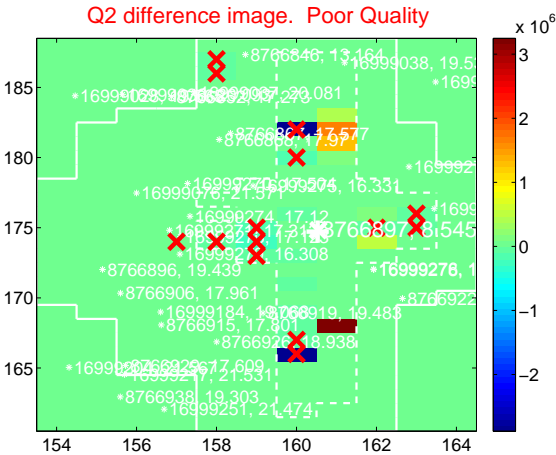
Q1 no difference image



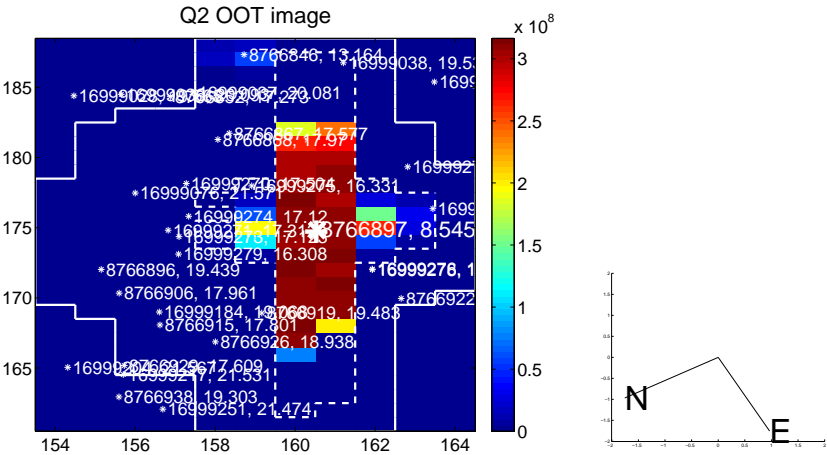
Q1 no OOT image



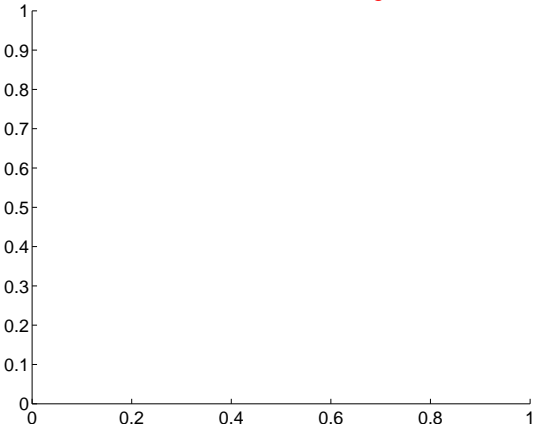
Q2 difference image. Poor Quality



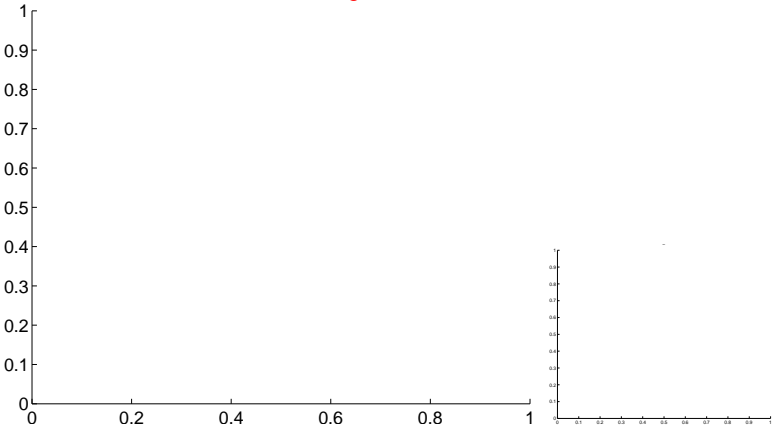
Q2 OOT image



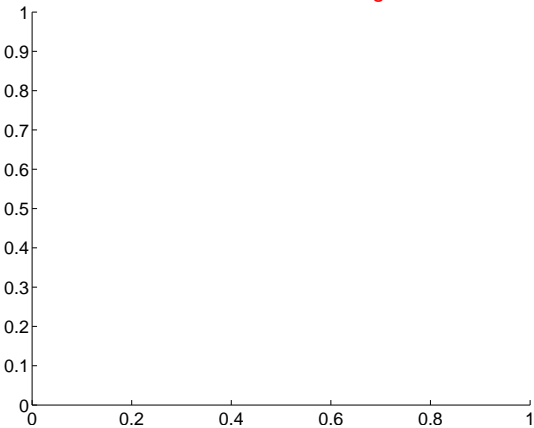
Q3 no difference image



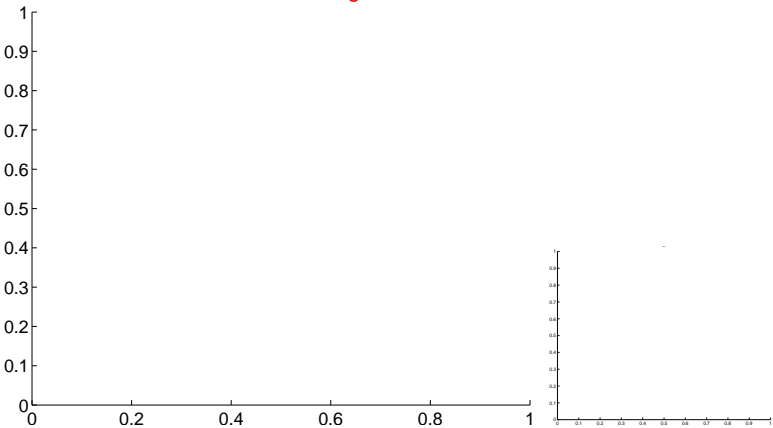
Q3 no OOT image



Q4 no difference image



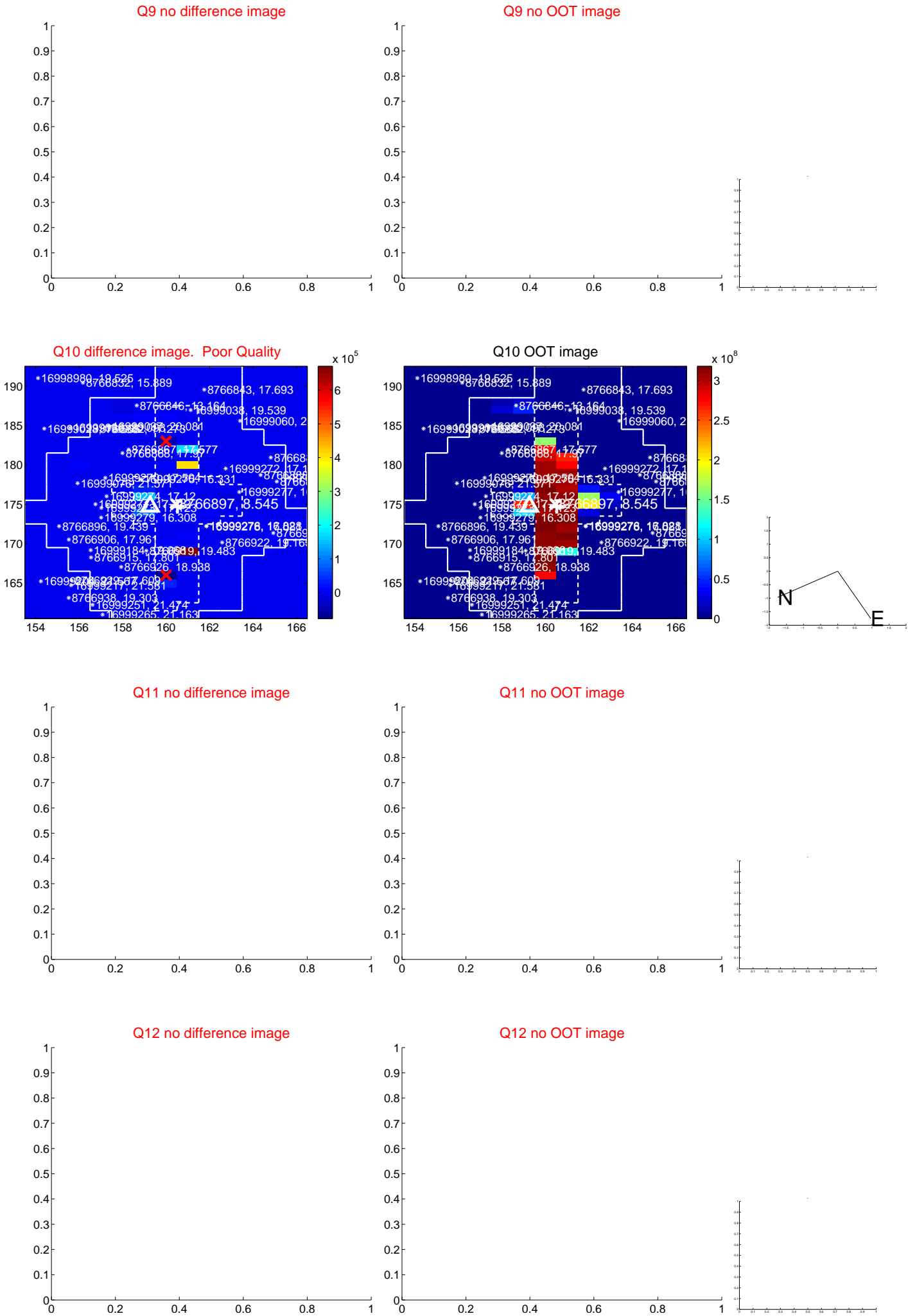
Q4 no OOT image



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



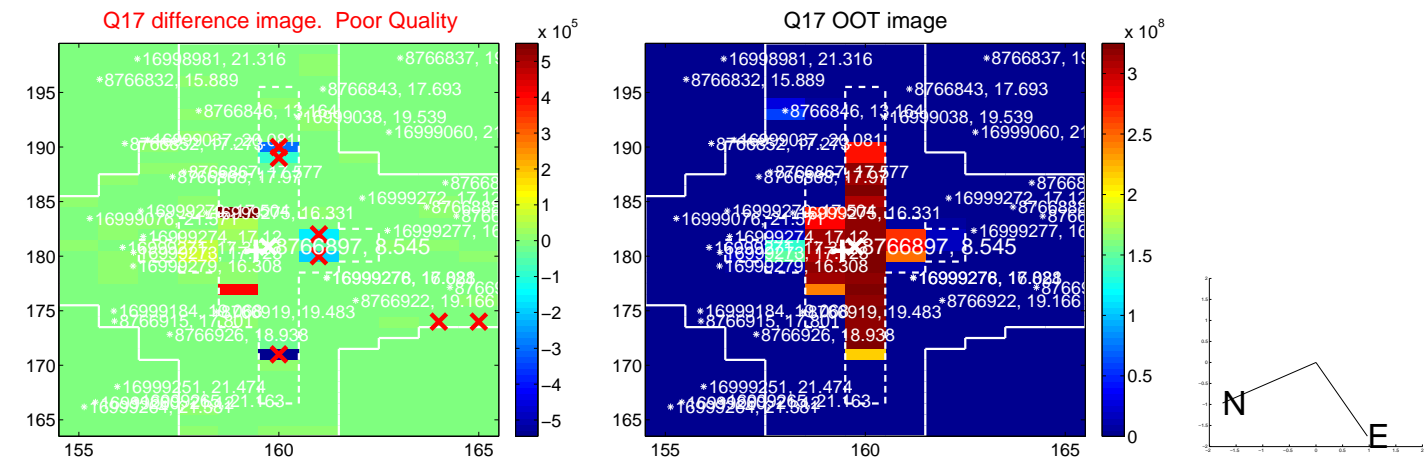
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



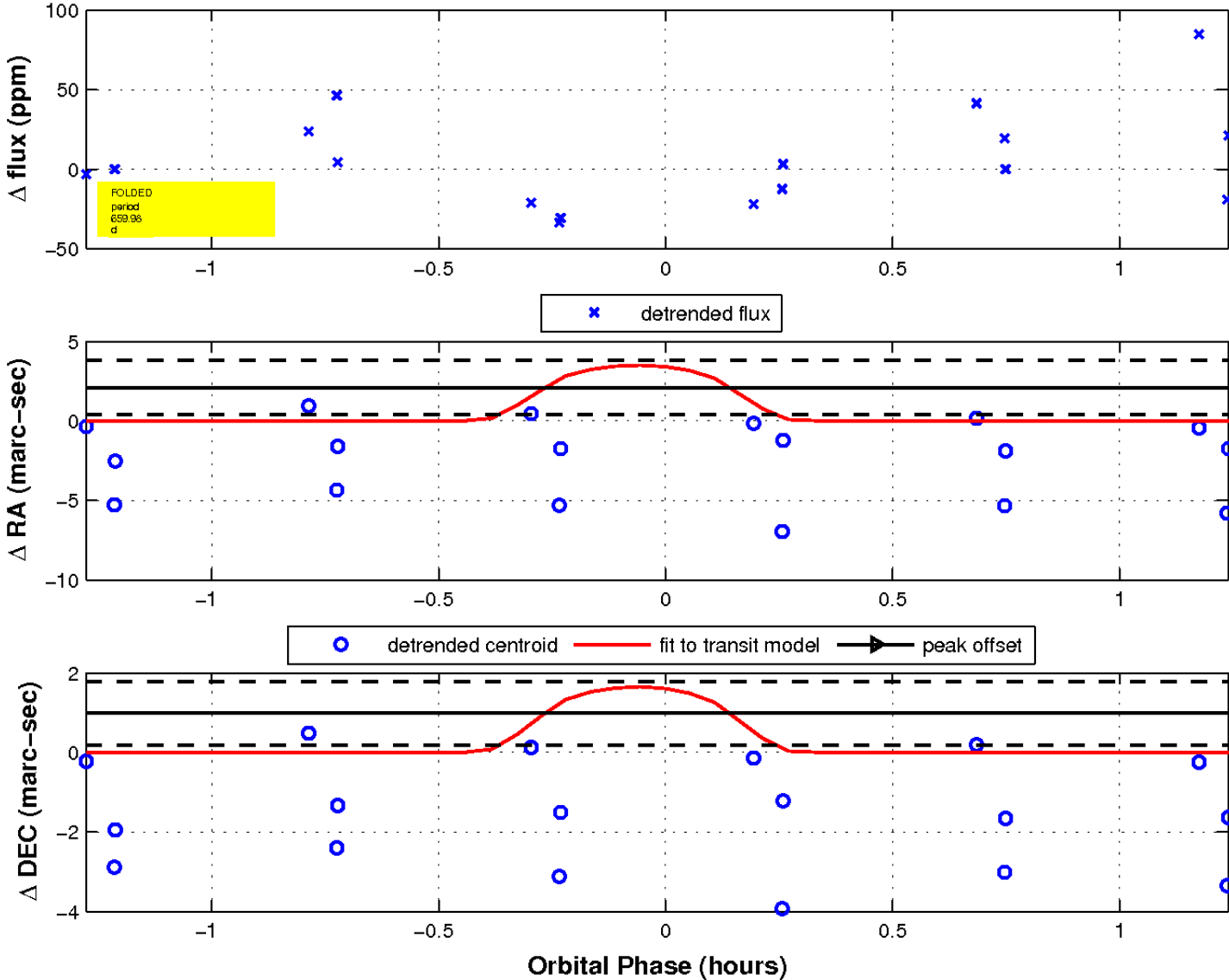
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

