

KIC 005866029

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})
005866029-01	OBS	No	225.138435	278.845182	189.0	3.369	16.3	12.7	109.56	3544	180.96	2277.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005866029-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—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.

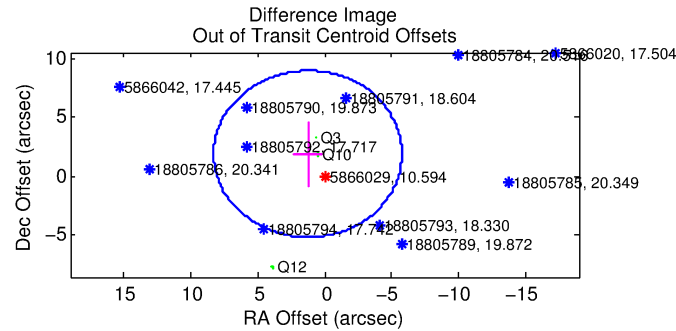
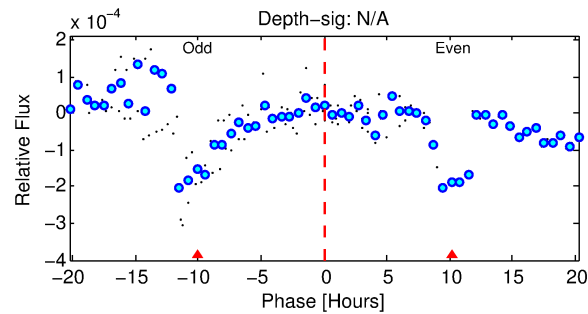
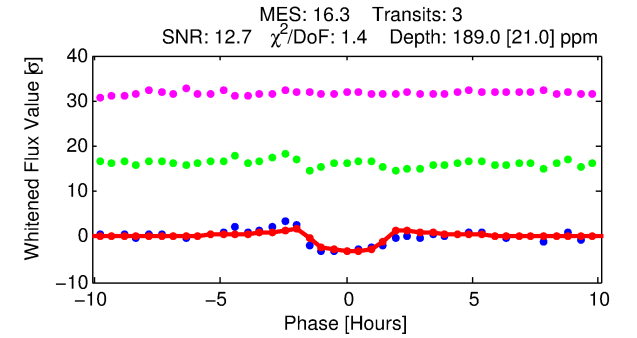
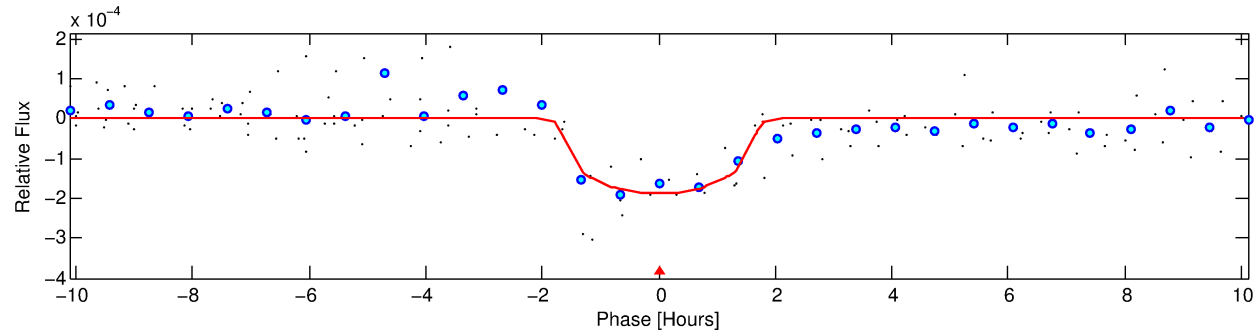
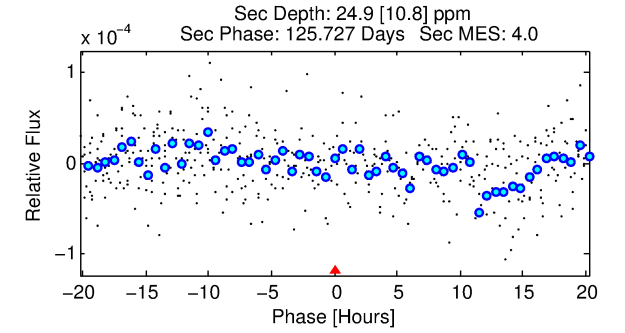
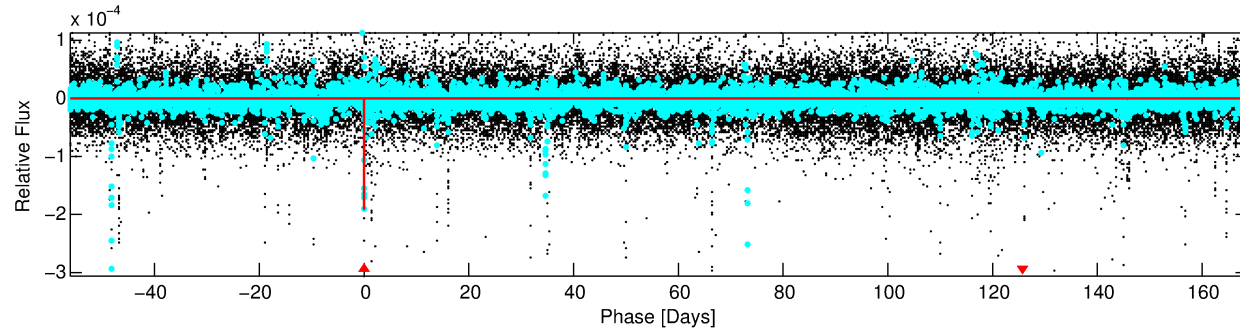
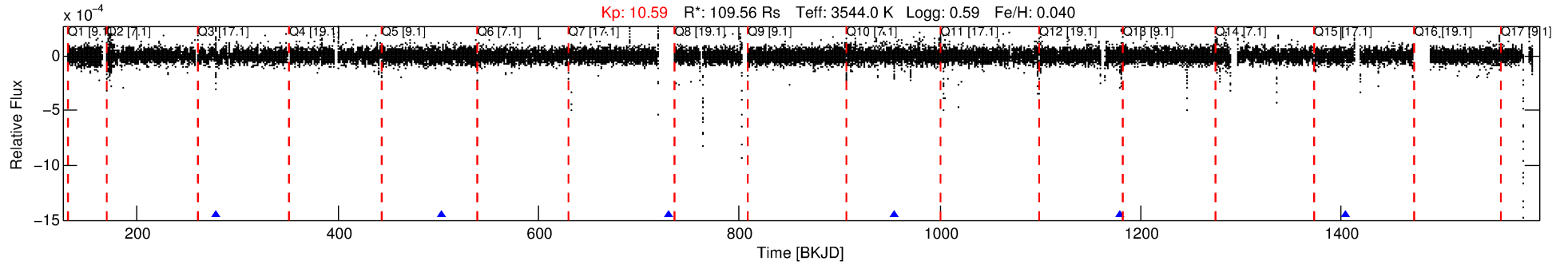
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005866029-01

No Significant Match Found

DV One-Page Summary

KIC: 5866029 Candidate: 1 of 1 Period: 225.138 d



DV Fit Results:

Period = 225.13844 [0.00197] d
Epoch = 278.8452 [0.0055] BKJD
Rp/R* = 0.0151 [0.0094]
a/R* = 285.57 [510.67]
b = 0.85 [0.62]
Seff = 2277.06 [380.17]
Teq = 1761 [74] K
Rp = 180.95 [116.95] Re
a = 0.8632 [0.1032] AU
Ag = 0.31 [0.41] [-1.67 σ]
Teffp = 2034 [672] K [0.40 σ]

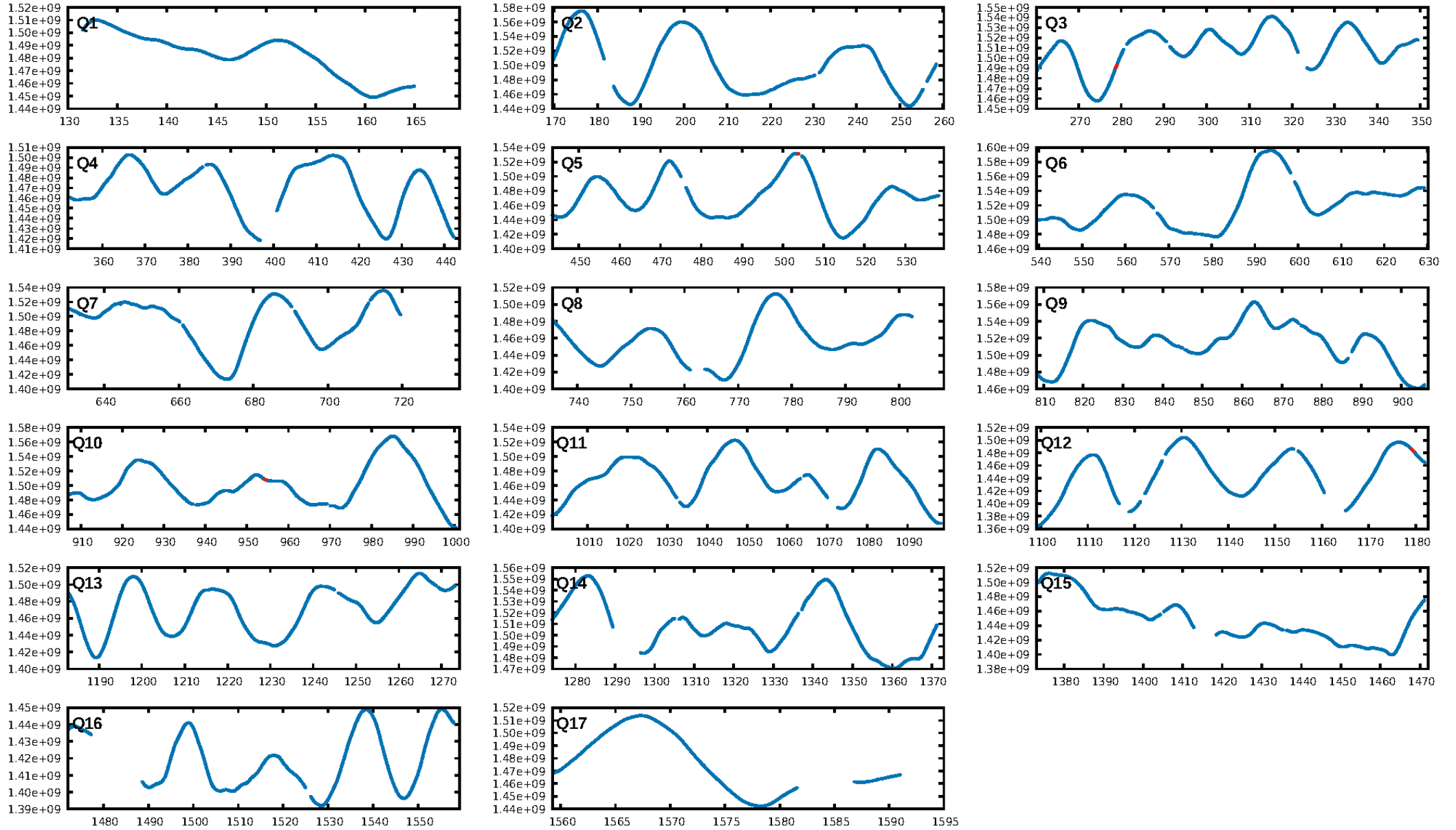
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 65.5%
Bootstrap-pfa: 8.04e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.6638
Centroid-sig: 24.3%
Centroid-so: 1.810 arcsec [0.90 σ]
OotOffset-rm: 2.284 arcsec [0.97 σ]
KicOffset-rm: 2.385 arcsec [1.20 σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

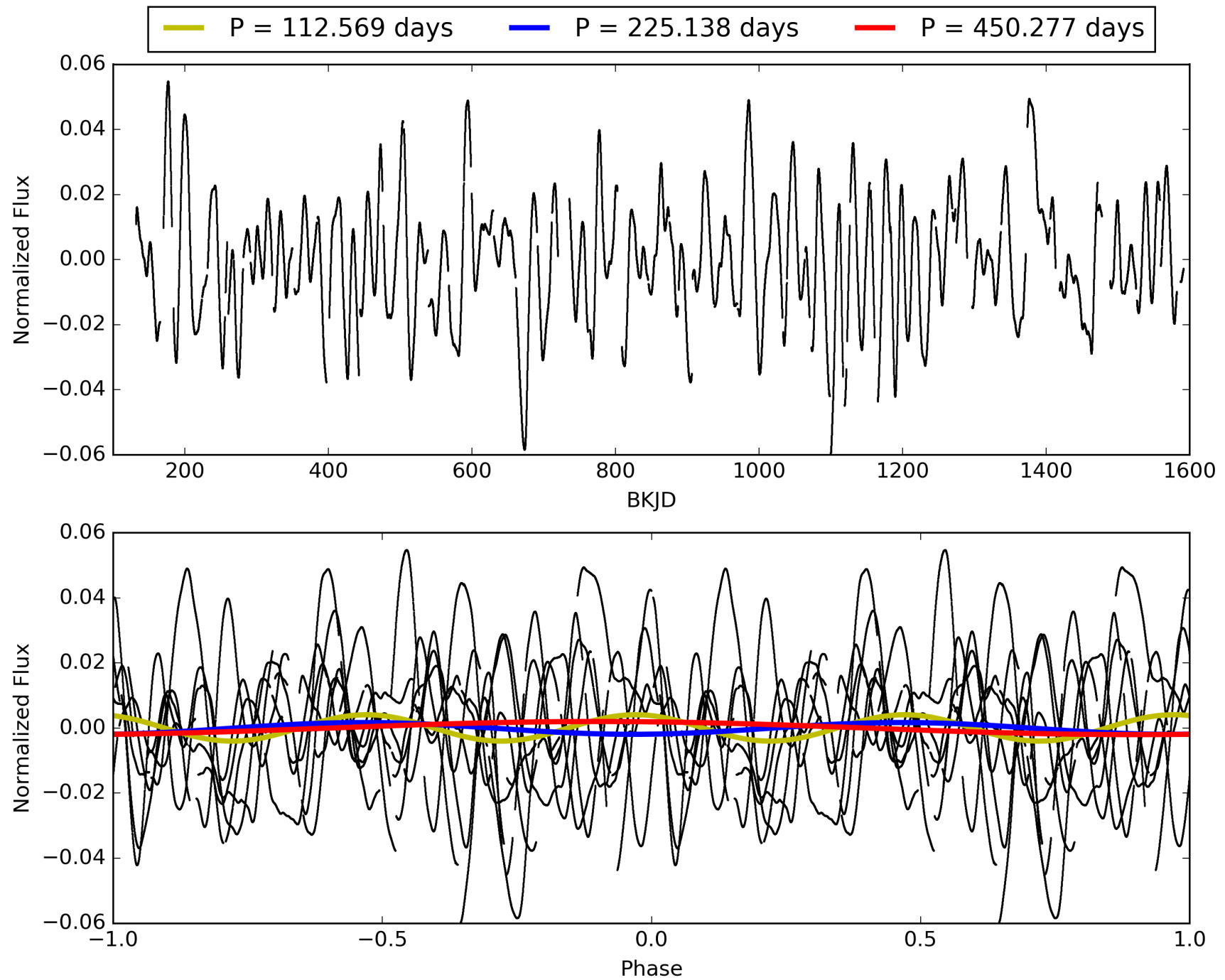
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:00:06 Z

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

TCE 005866029-01, PDC Light Curves

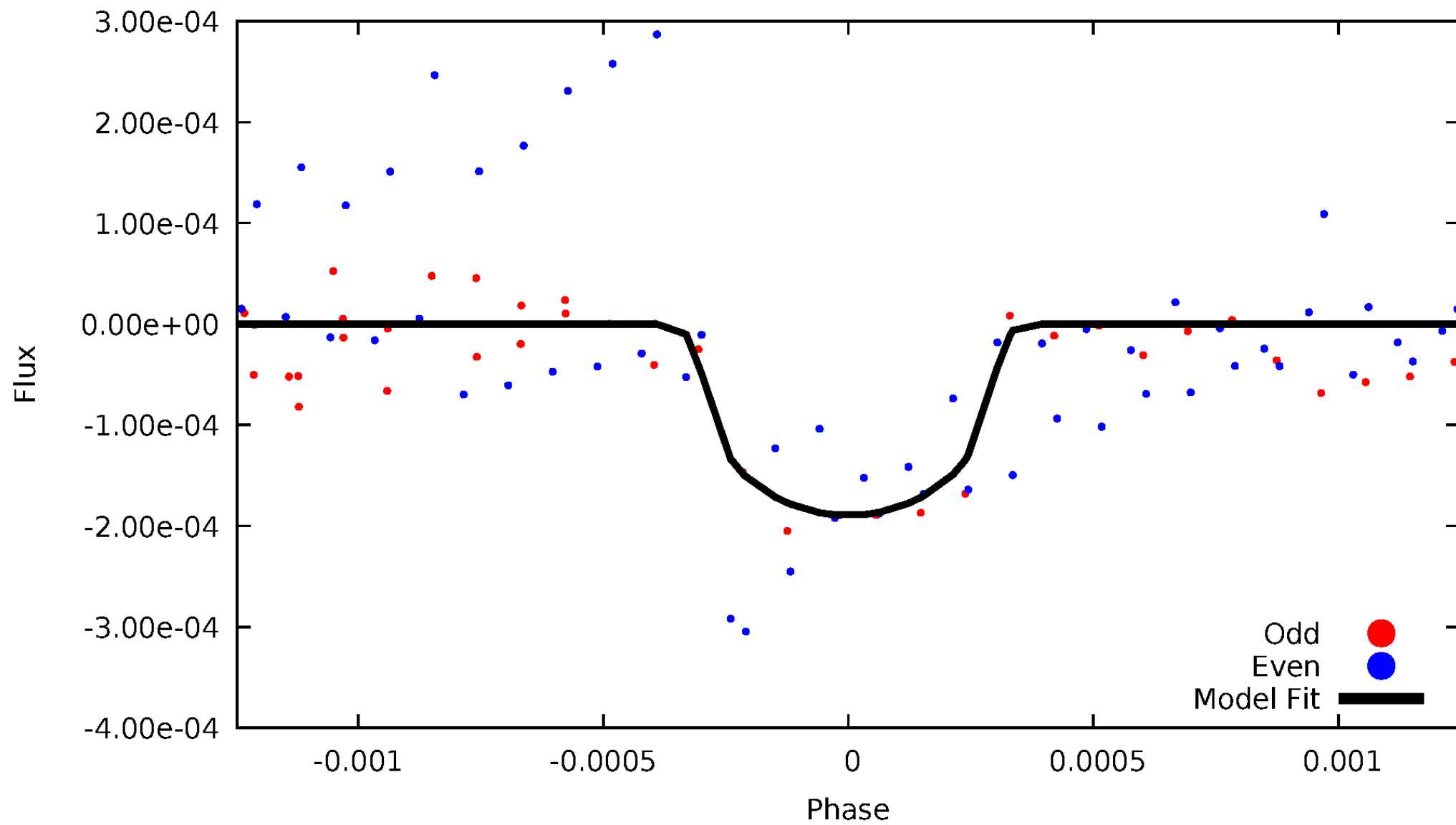


TCE 005866029-01



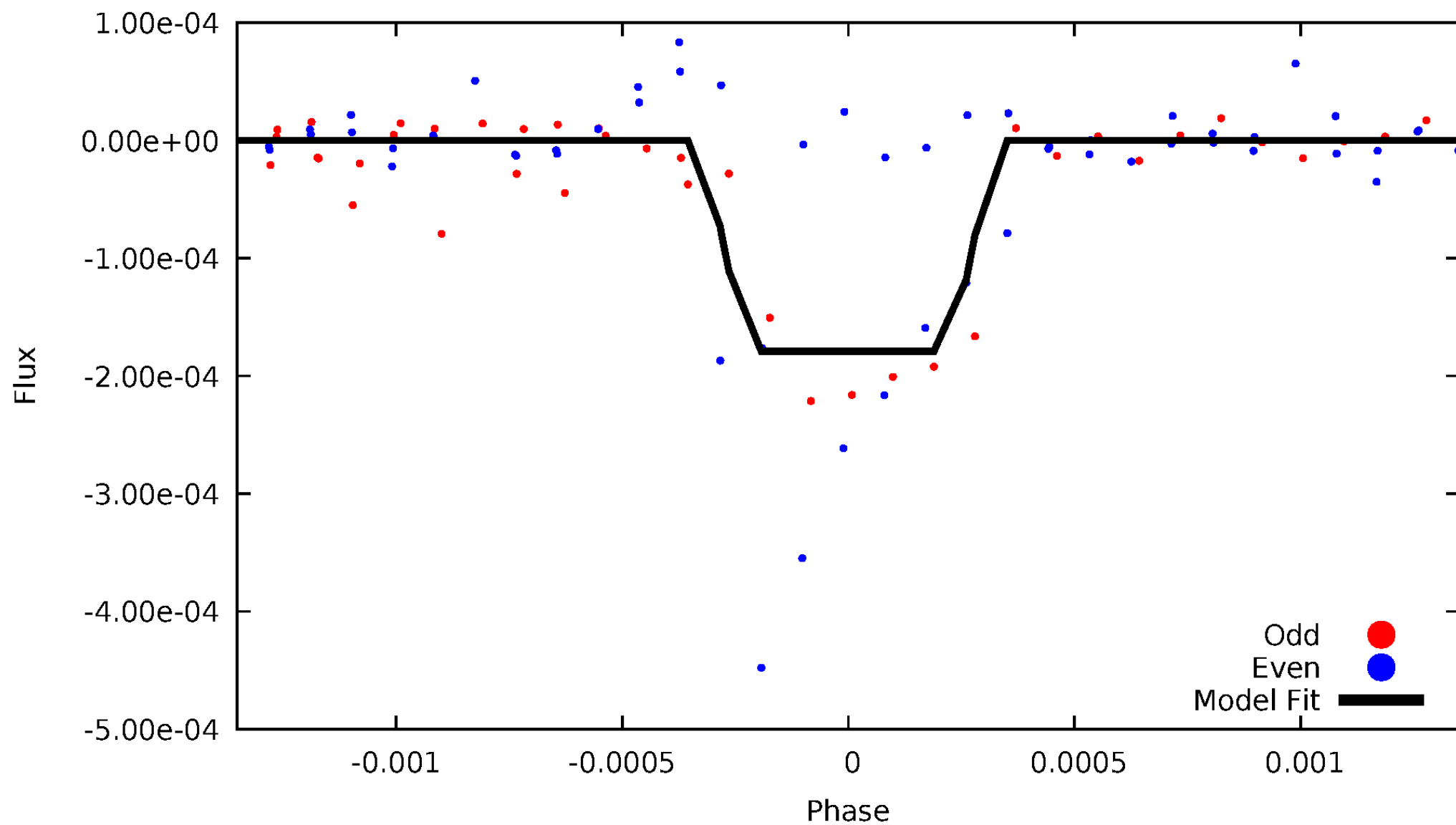
DV Odd/Even

TCE 005866029-01



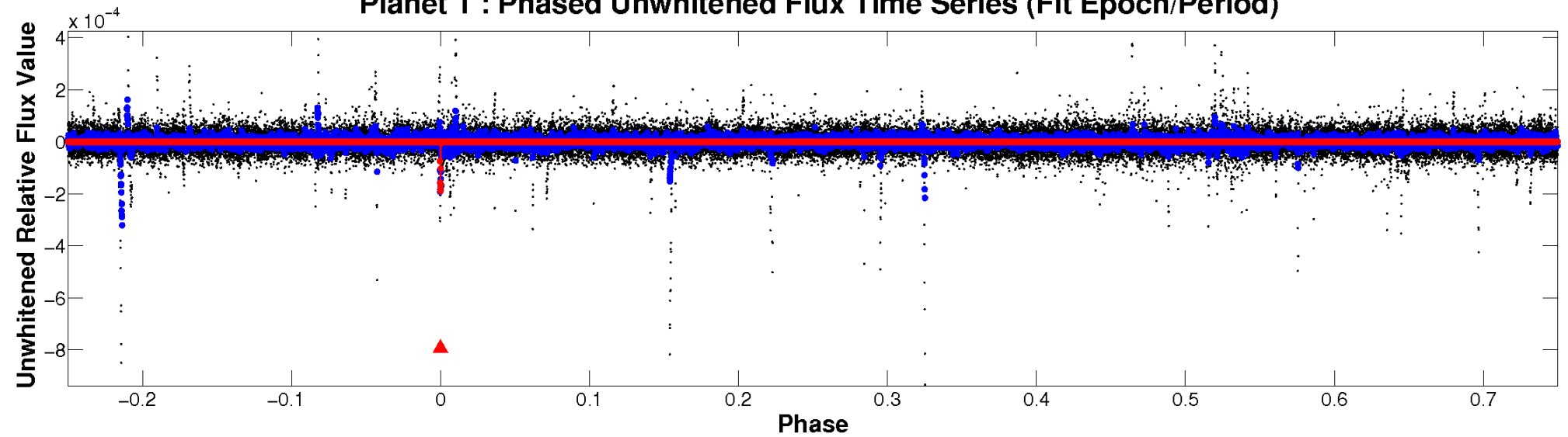
ALT Odd/Even

TCE 005866029-01

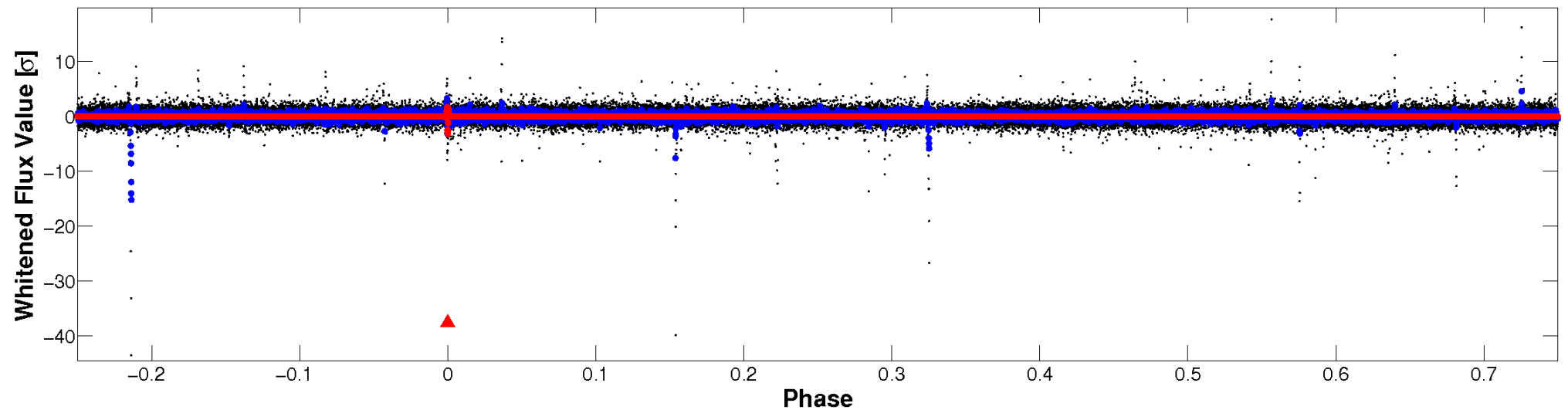


Non-Whitened Vs. Whitened Light Curve

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

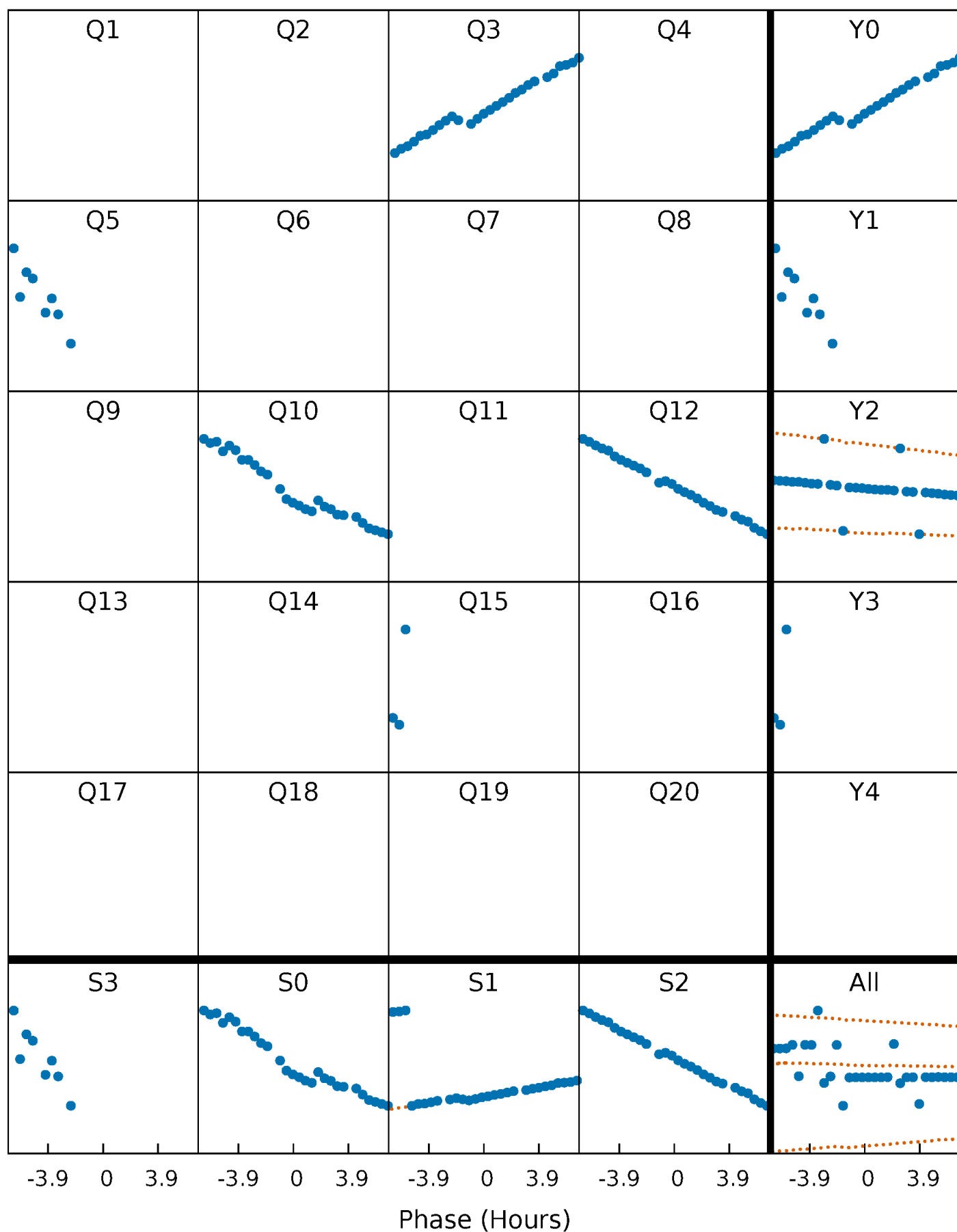


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



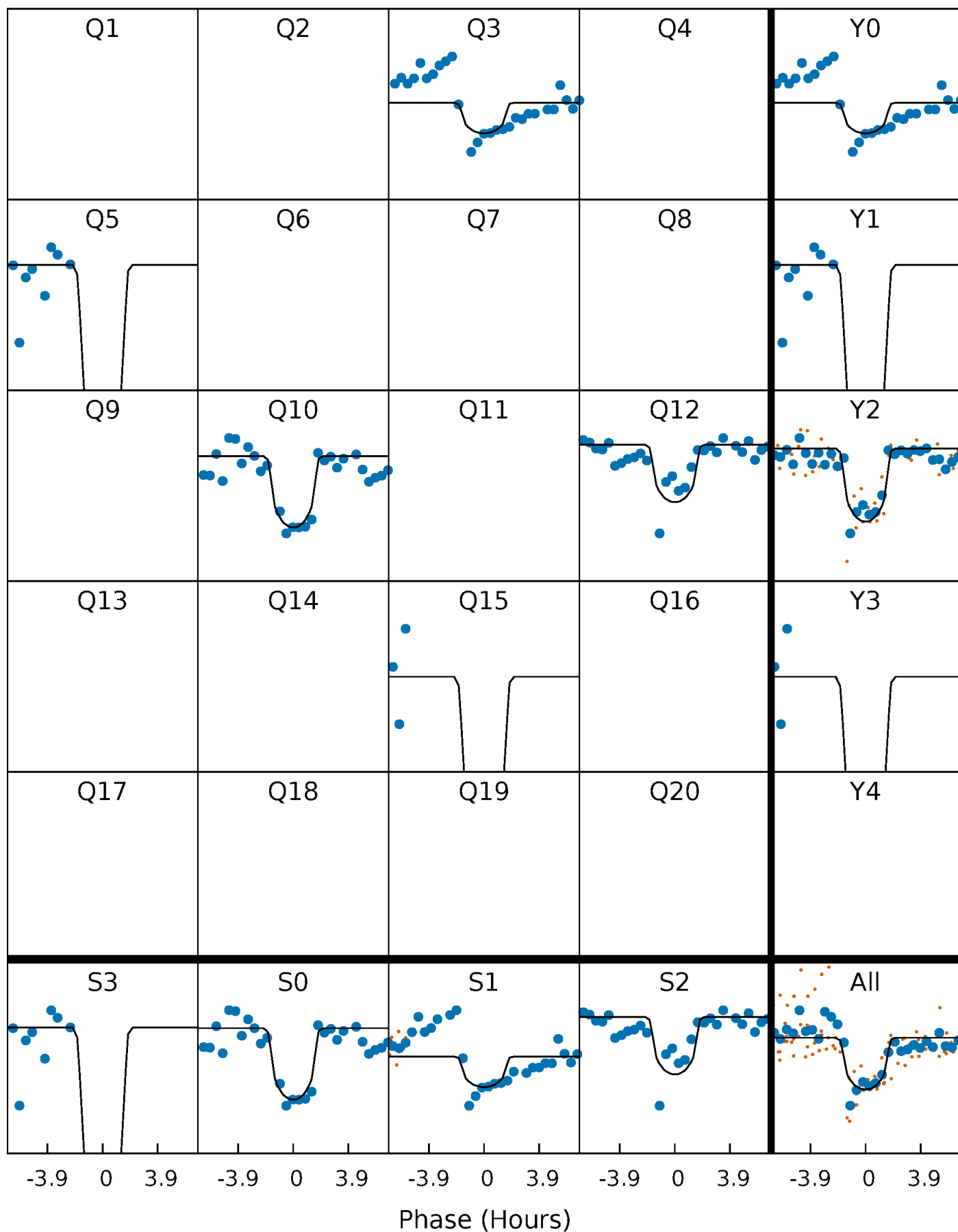
PDC Quarter-Phased Transit Curves

TCE 005866029-01 P=225.138435 Days $T_0=278.845182$ (BKJD)



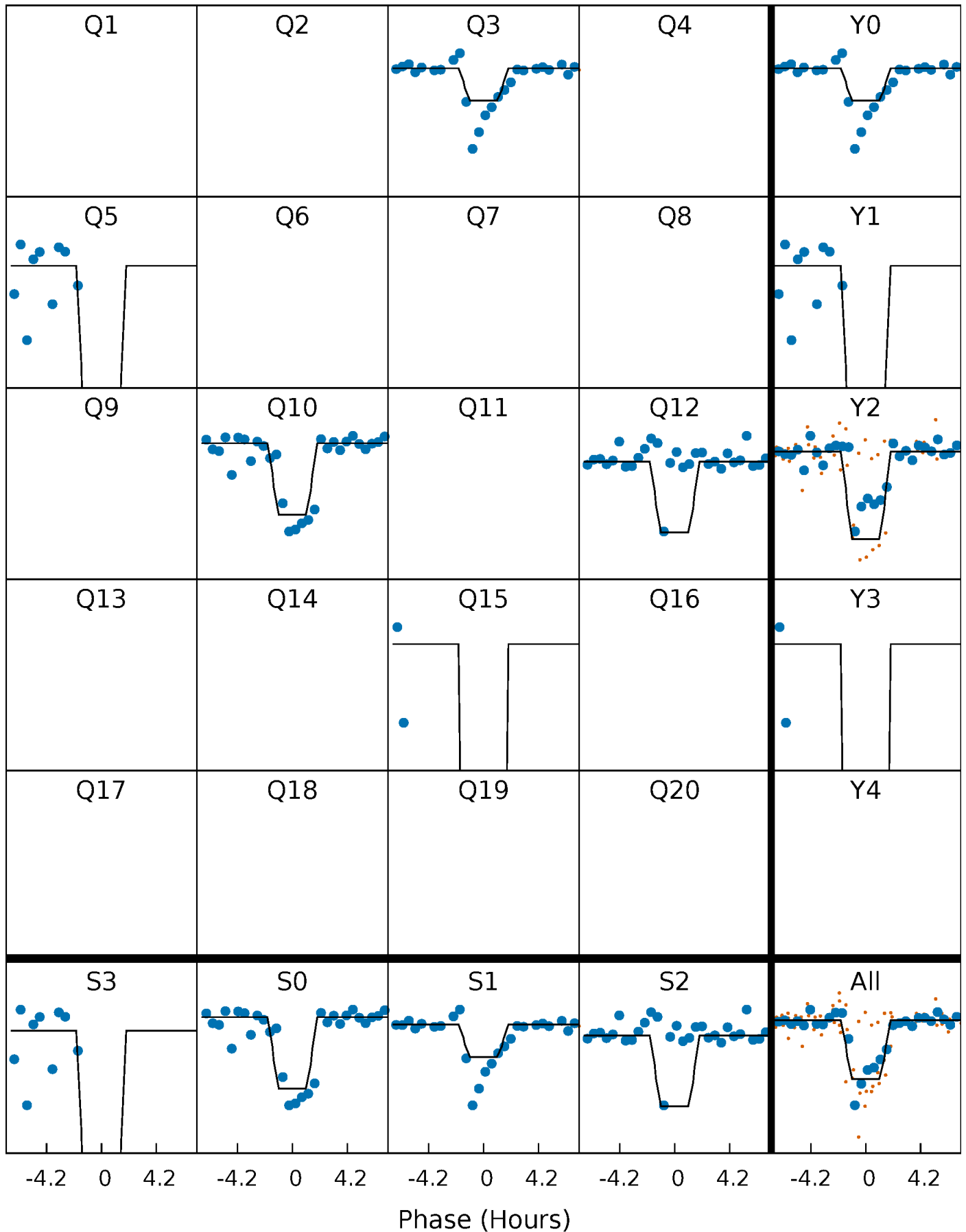
DV Quarter-Phased Transit Curves

TCE 005866029-01 P=225.138435 Days $T_0=278.845182$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

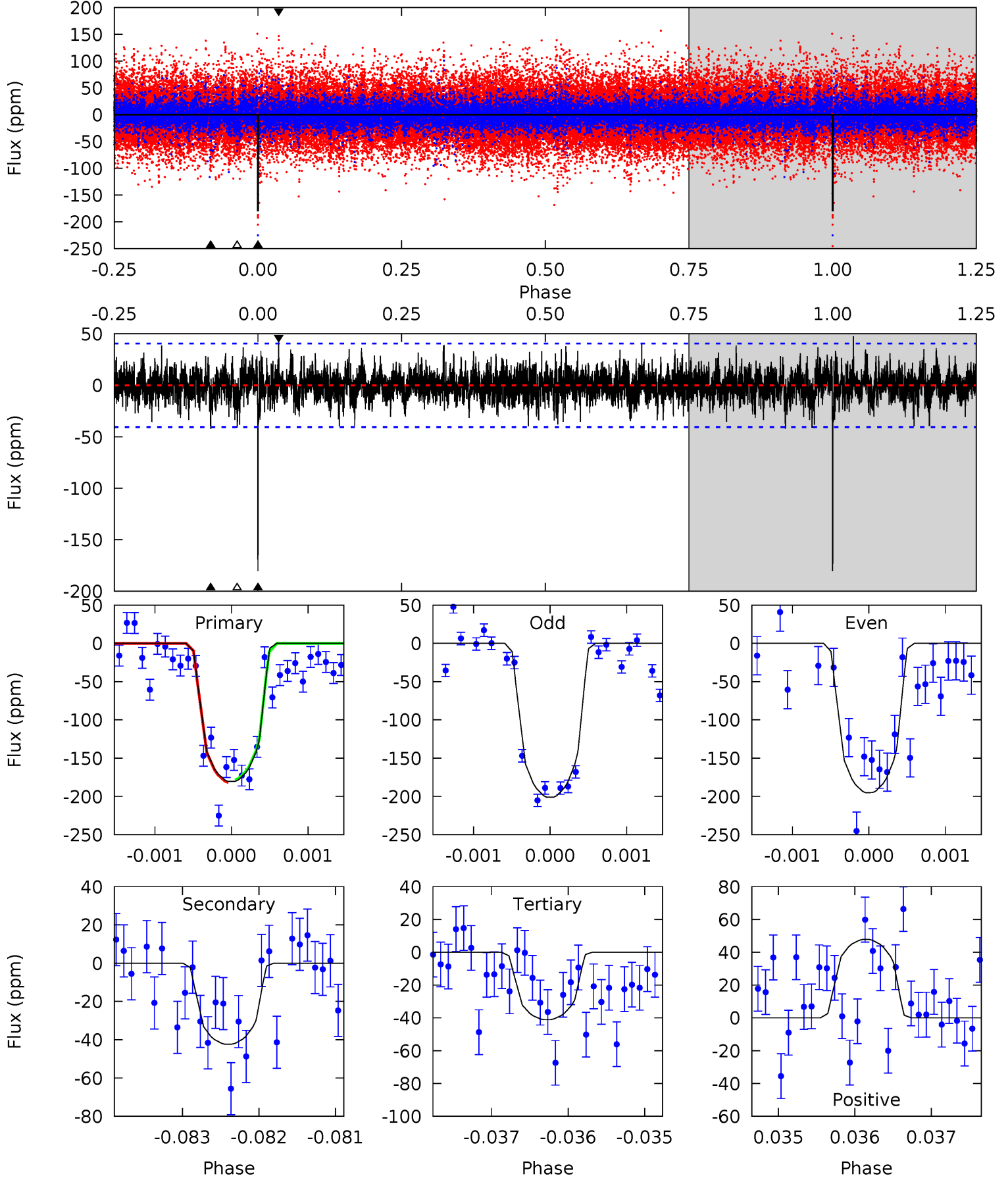
TCE 005866029-01 P=225.136547 Days $T_0=278.841530$ (BKJD)



DV Model-Shift Uniqueness Test

005866029-01, $P = 225.138435$ Days, $E = 53.706747$ Days

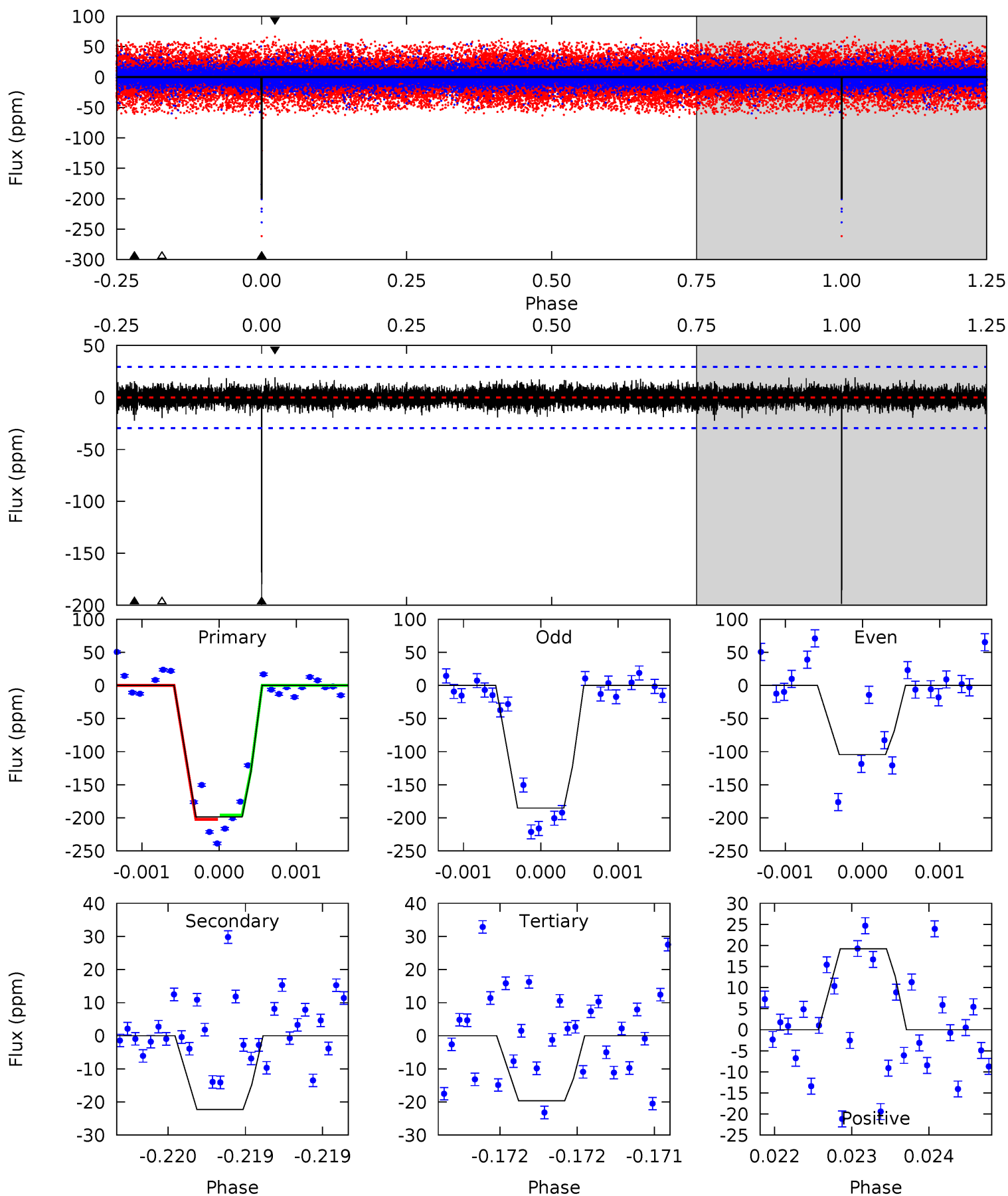
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.6	5.76	5.60	6.50	5.52	3.40	1.40	19.0	18.1	0.17	-0.74	0.40	0.98	0.21	0.22



Alt Model-Shift Uniqueness Test

005866029-01, P = 225.136547 Days, E = 53.704983 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.3	4.18	3.68	3.61	5.53	3.42	0.86	33.6	33.7	0.50	0.58	8.77	0.87	0.09	0



Stellar Parameters For KIC 005866029

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3544^{+79}_{-97}	$0.587^{+0.030}_{-0.030}$	$0.040^{+0.200}_{-0.250}$	$109.561^{+3.616}_{-19.283}$	$1.688^{+0.064}_{-0.545}$	$0.000^{+0.000}_{-0.000}$
	+2%/-3%	+5%/-5%	+500%/-625%	+3%/-18%	+4%/-32%	+25%/-8%
Source	PHO54	AST54	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 005866029-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-42 ± 7	$184.07^{+114.68}_{-100.96}$	2460^{+67}_{-74}	2456^{+941}_{-4740}	$0.502^{+2.012}_{-0.311}$
Alt.	-22 ± 5	$173.14^{+104.09}_{-96.40}$	2457^{+65}_{-74}	-1579^{+4706}_{-848}	$0.297^{+1.231}_{-0.193}$

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 $A_{obs} \gg 1.0$

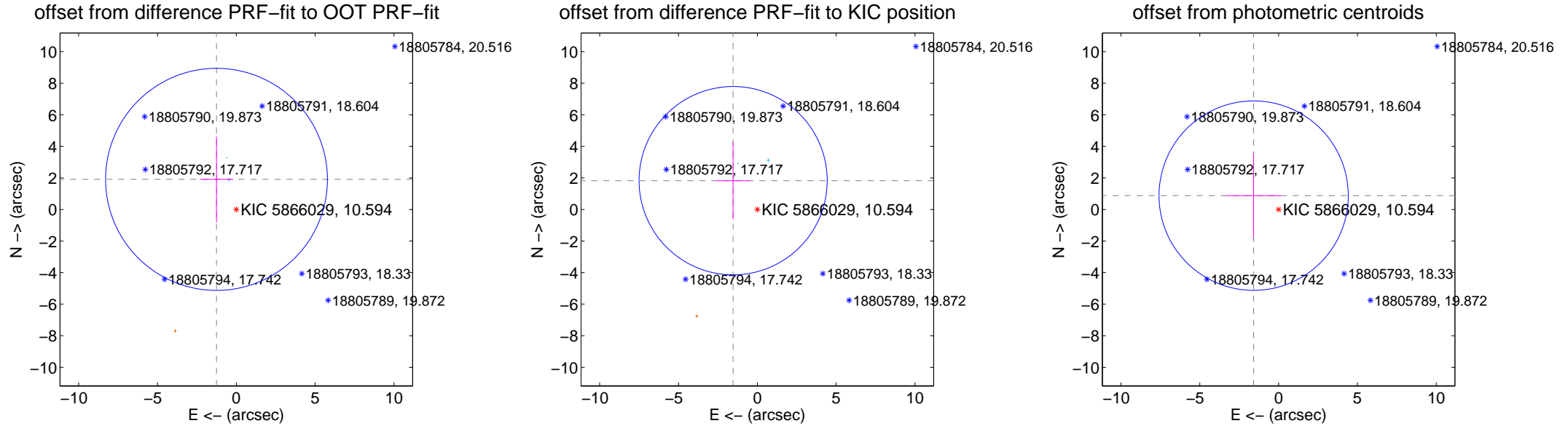
DV Centroid Data

Supplemental centroid analysis for 005866029-01. **Kepler magnitude: 10.59.** Transit SNR 12.66

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.94 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.284 ± 2.345	0.97	1.256 ± 1.055	1.907 ± 2.721
PRF-fit source offset from KIC position	2.385 ± 1.989	1.20	1.535 ± 1.068	1.825 ± 2.439
photometric centroid source offset	1.81 ± 2.00	0.90	1.58 ± 1.75	0.88 ± 2.65



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.

Q1 no difference image



Q1 no OOT image



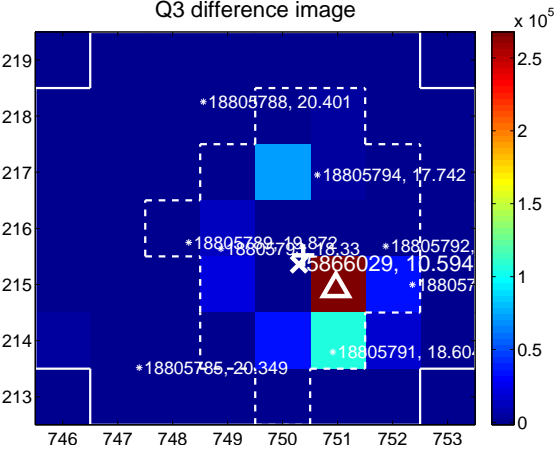
Q2 no difference image



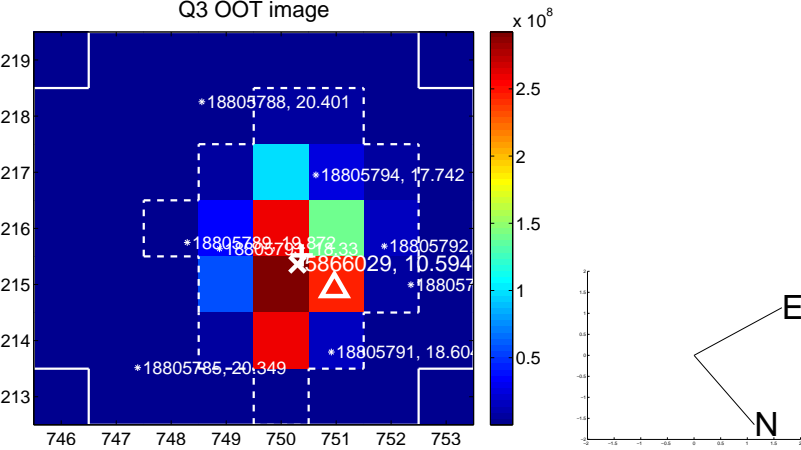
Q2 no OOT image



Q3 difference image



Q3 OOT image



Q4 no difference image



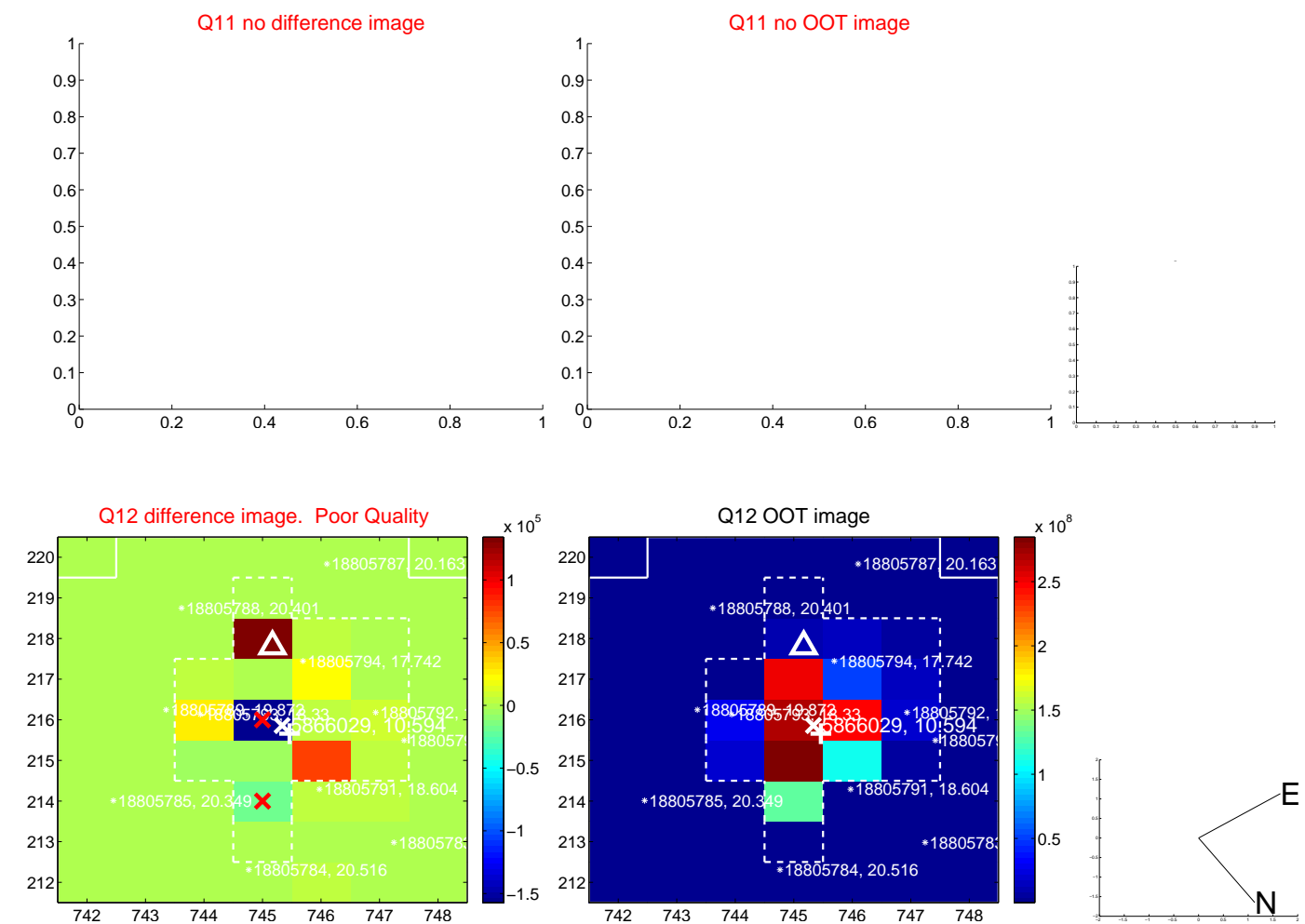
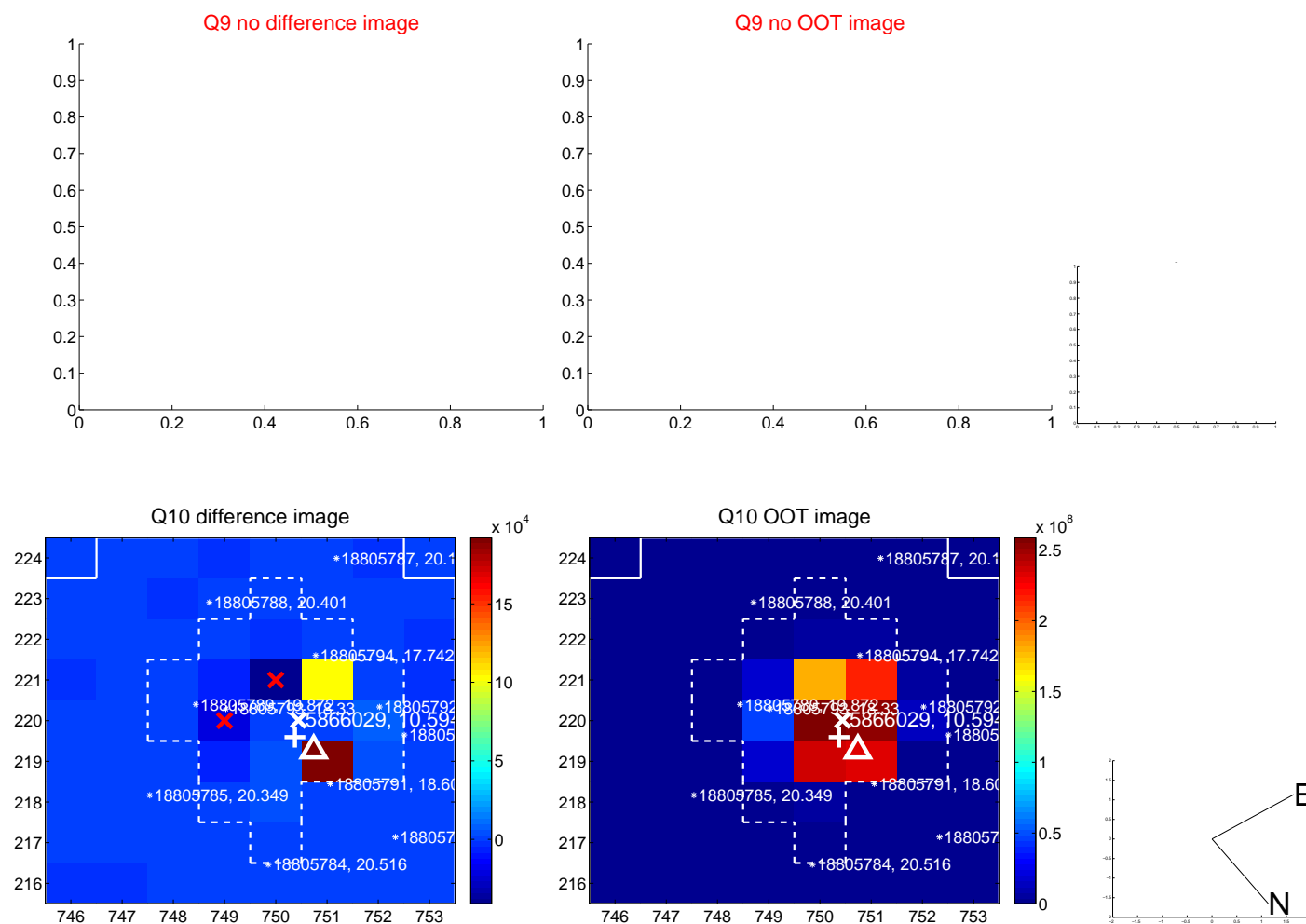
Q4 no OOT image



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



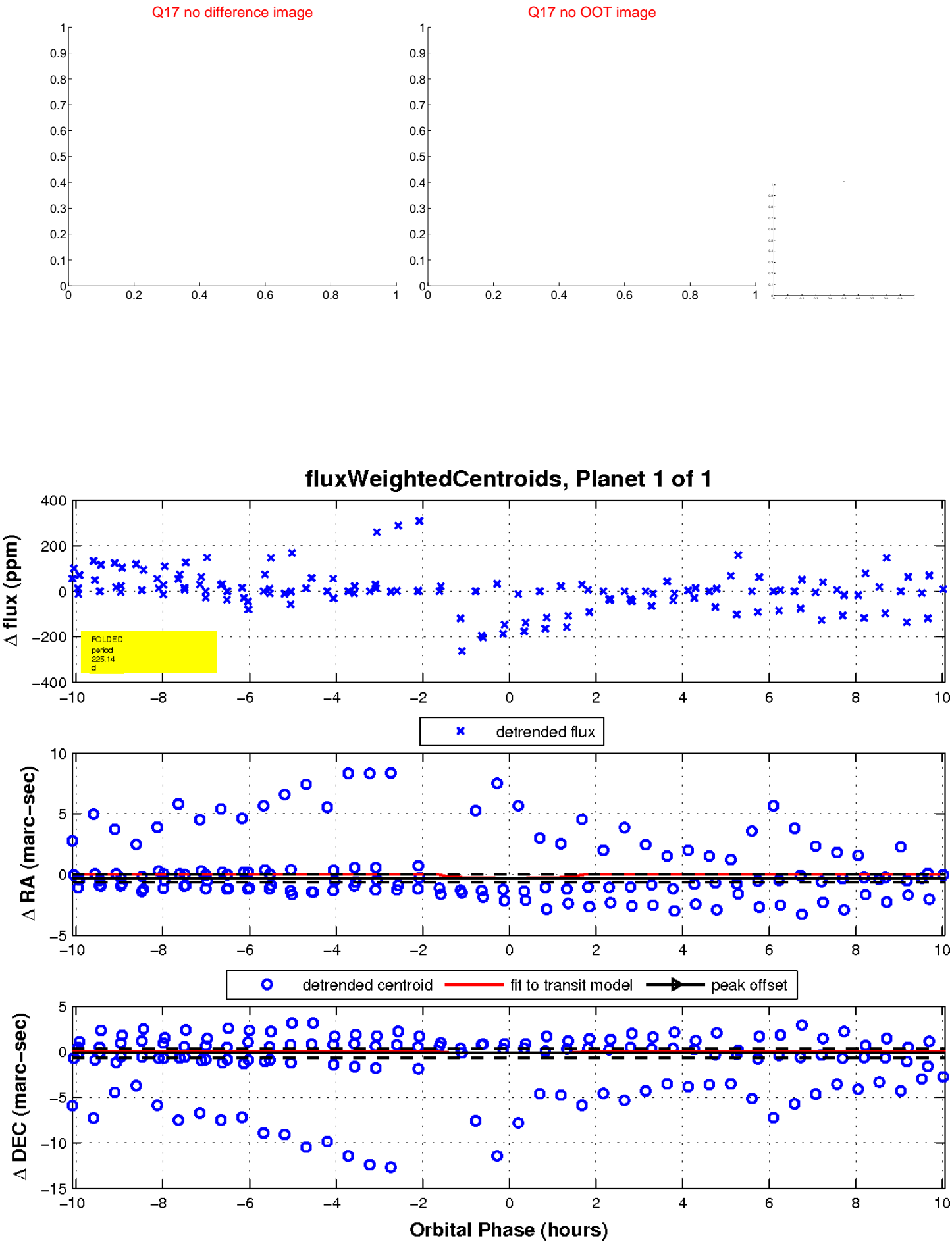
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

