

KIC 007046650

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})
007046650-01	OBS	No	258.112832	340.560783	505.5	5.945	7.8	7.3	1.05	6174	2.63	2.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007046650-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—MOD_NONUNIQ_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.

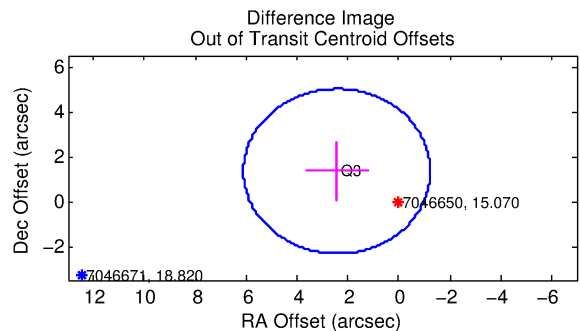
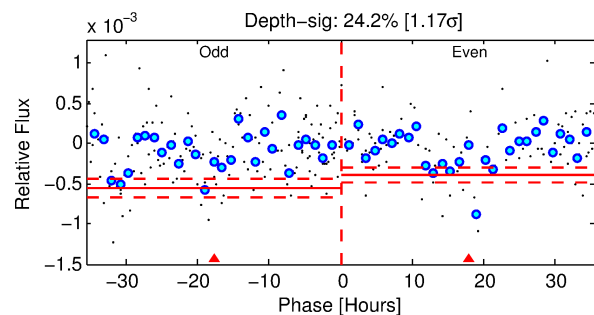
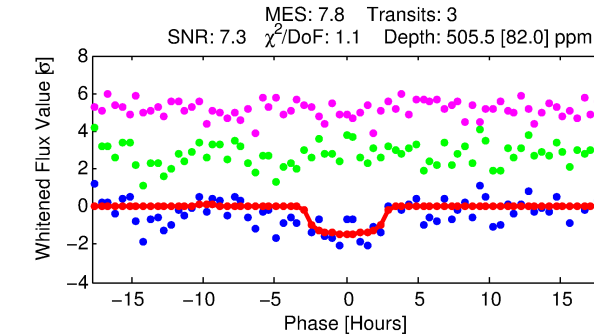
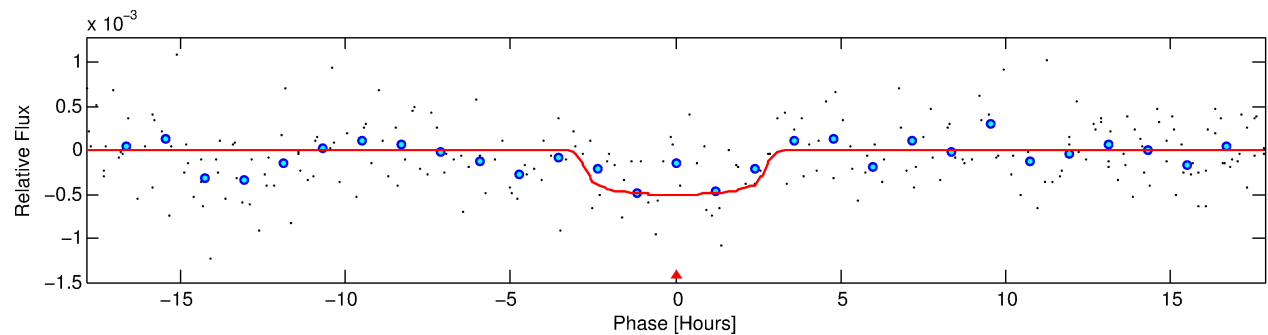
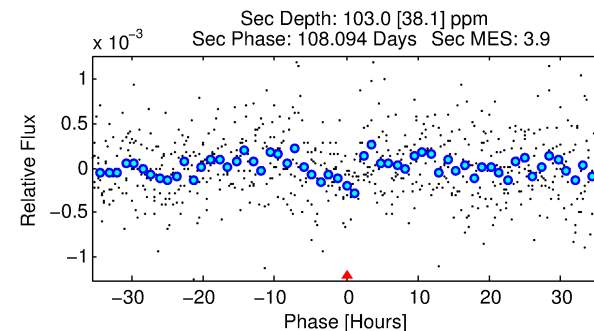
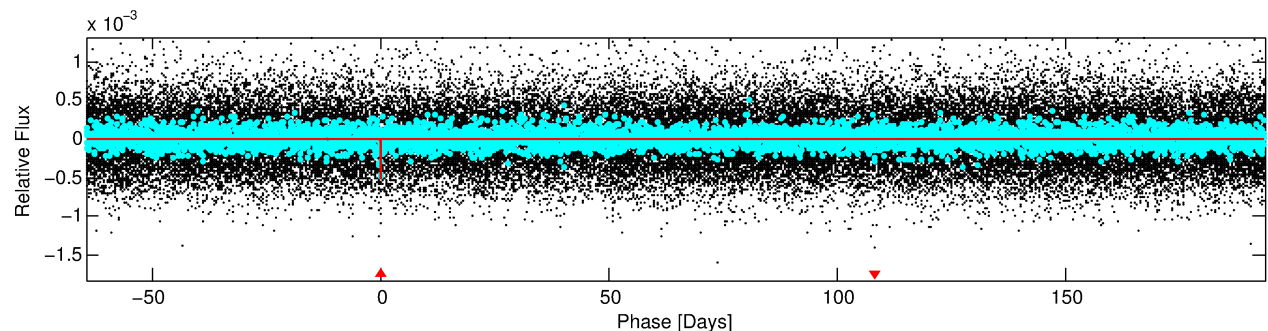
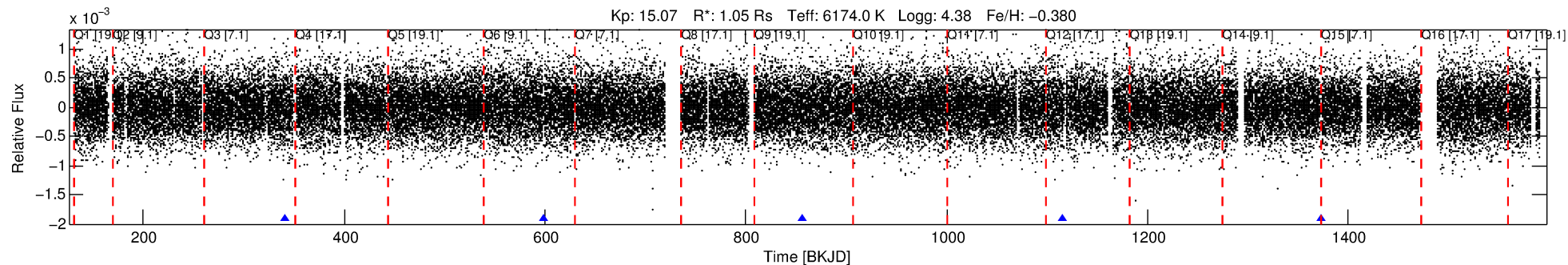
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007046650-01

No Significant Match Found

DV One-Page Summary

KIC: 7046650 Candidate: 1 of 1 Period: 258.113 d



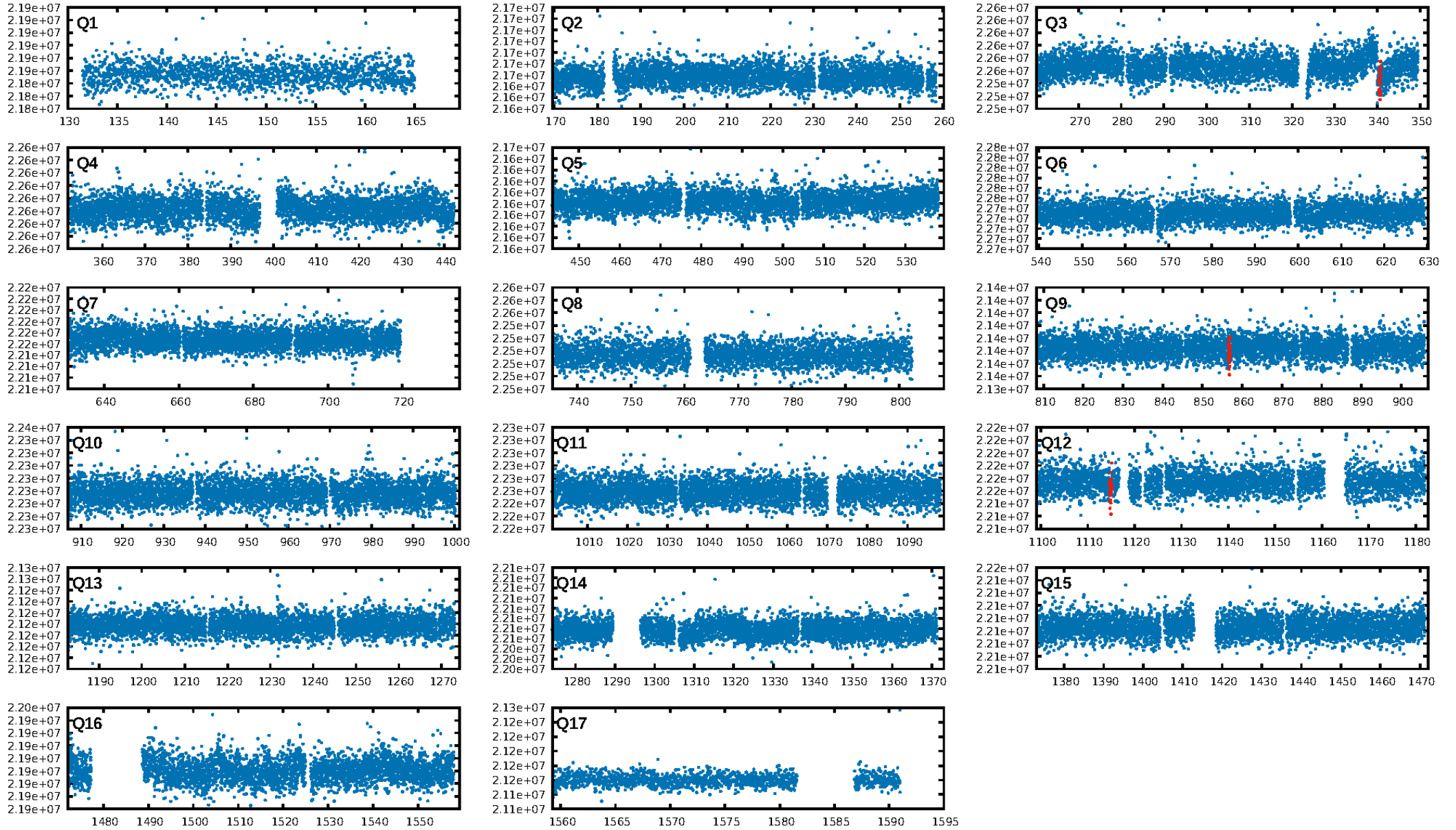
DV Fit Results:

Period = 258.11283 [0.00822] d
Epoch = 340.5608 [0.0158] BKJD
Rp/R* = 0.0230 [0.0117]
a/R* = 201.33 [536.20]
b = 0.82 [1.05]
Seff = 2.34 [0.92]
Teff = 315 [31] K
Rp = 2.63 [1.55] Re
a = 0.7809 [0.1977] AU
Ag = 5006.03 [5730.17] [0.87σ]
Teffp = 4100 [1120] K [3.38σ]

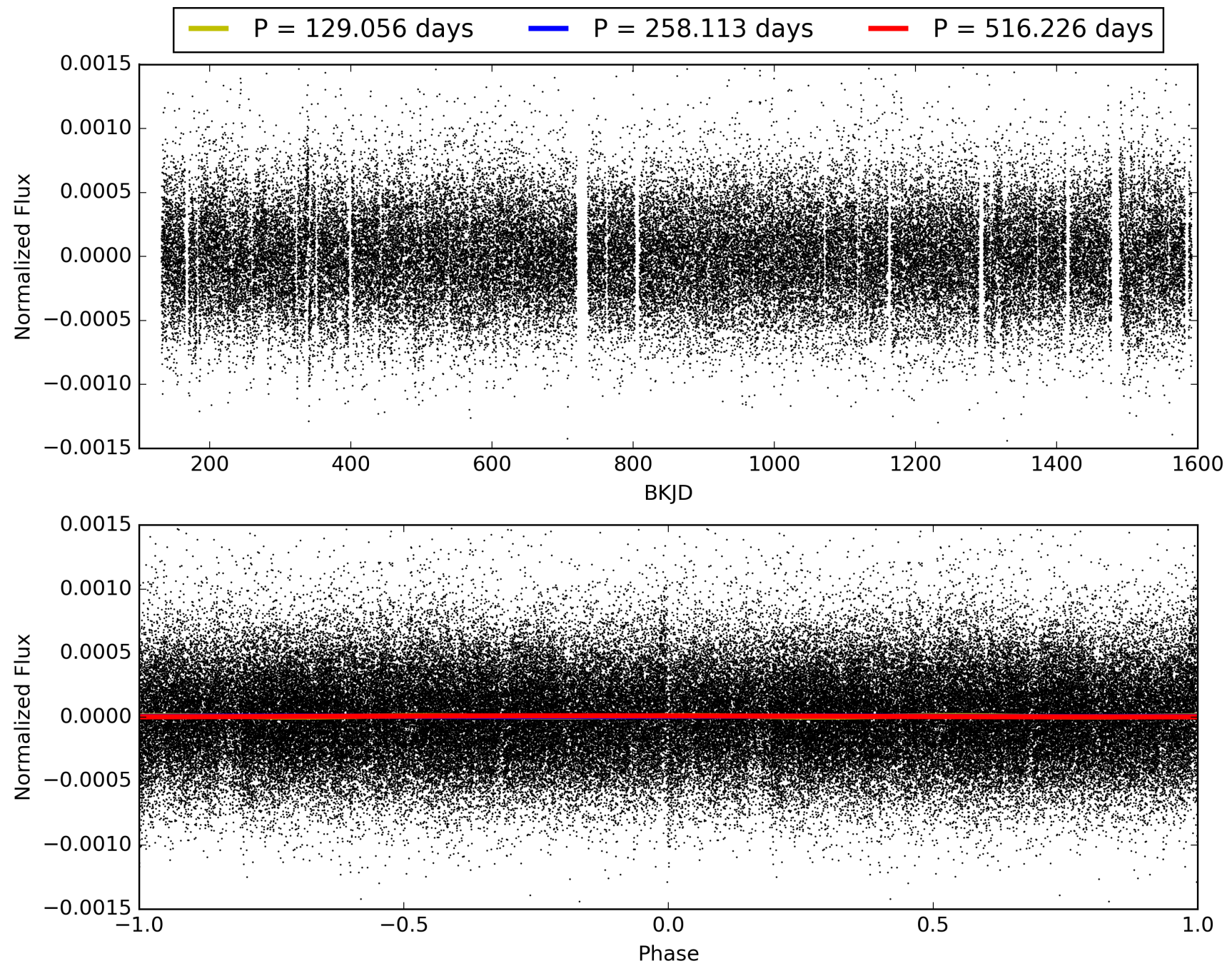
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 19.5%
ModelChiSquareGof-sig: 91.2%
Bootstrap-pfa: 3.06e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.269
Centroid-sig: 18.5%
Centroid-so: 2.577 arcsec [1.20σ]
OotOffset-rm: 2.777 arcsec [2.27σ]
KicOffset-rm: 2.604 arcsec [2.13σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 007046650-01, PDC Light Curves

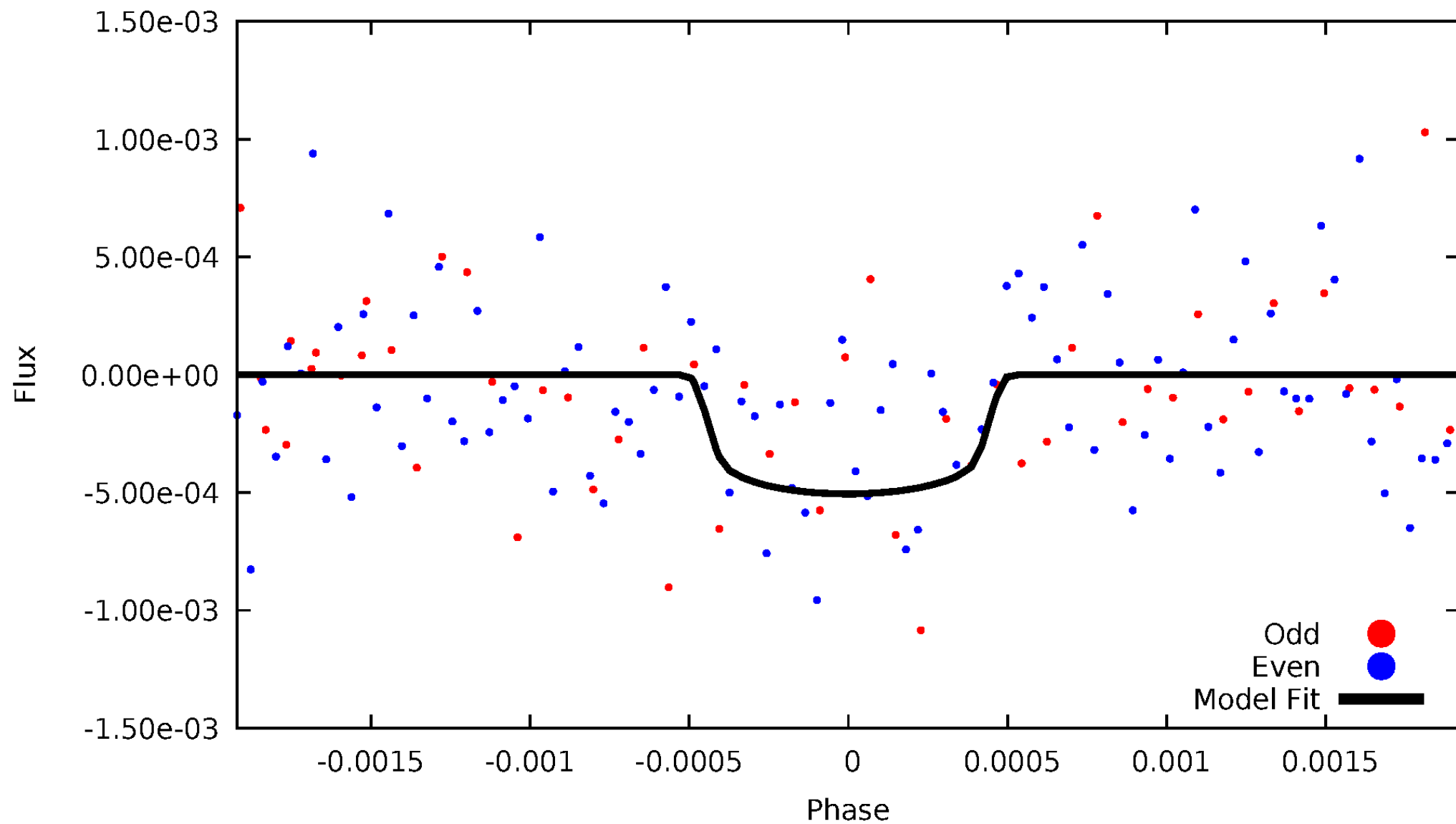


TCE 007046650-01



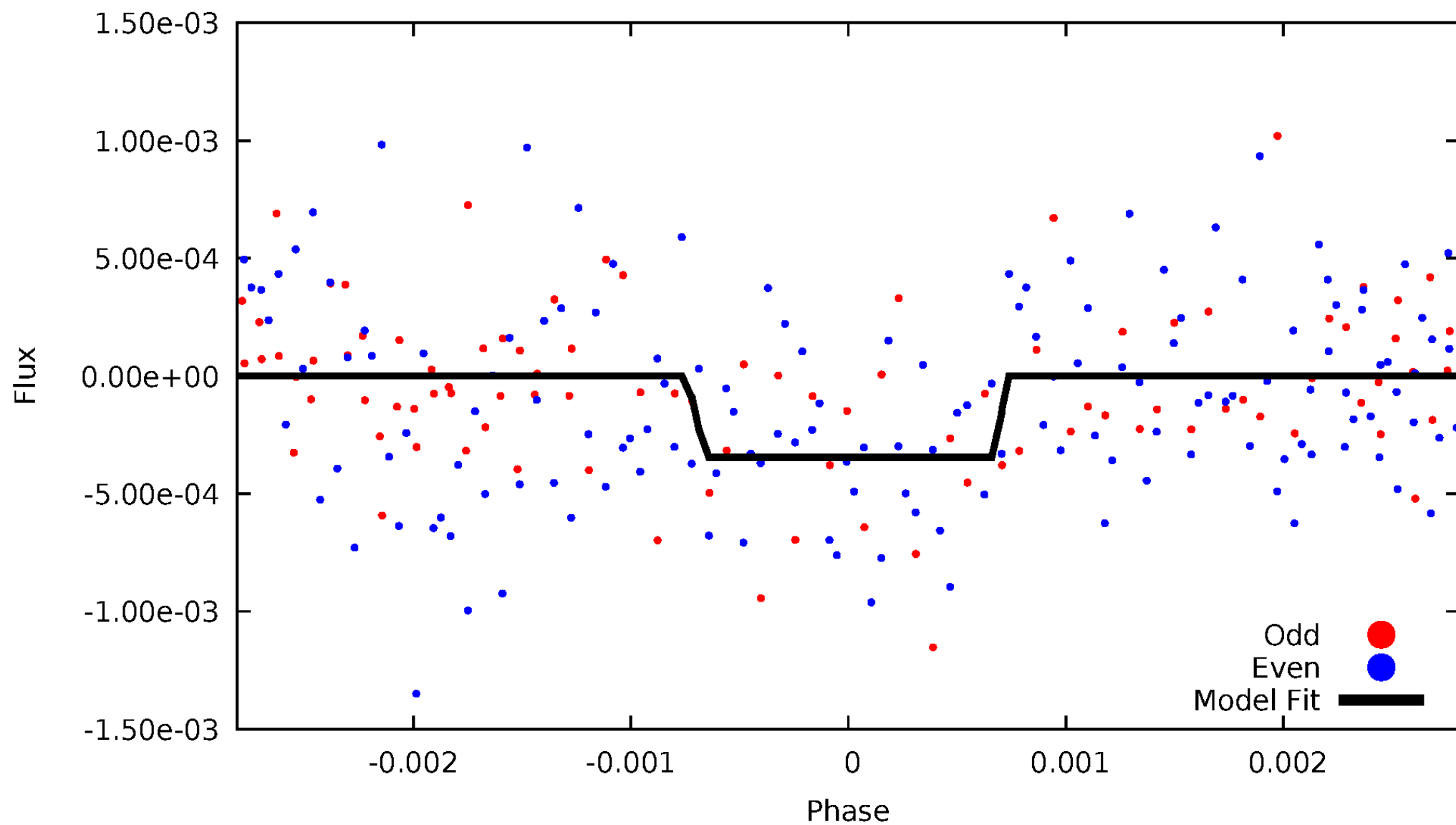
DV Odd/Even

TCE 007046650-01



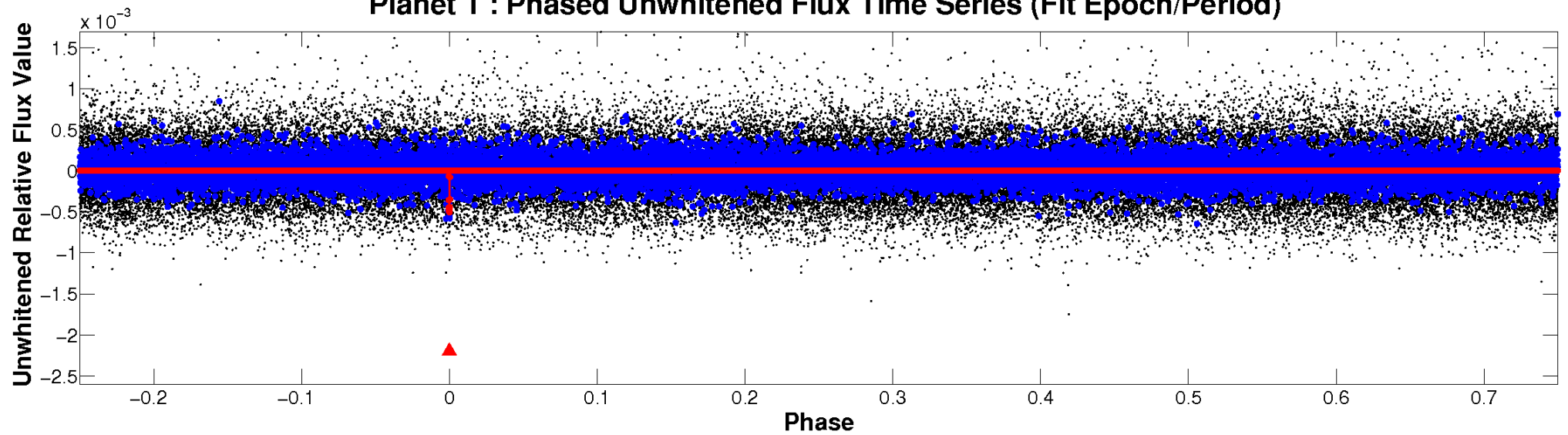
ALT Odd/Even

TCE 007046650-01

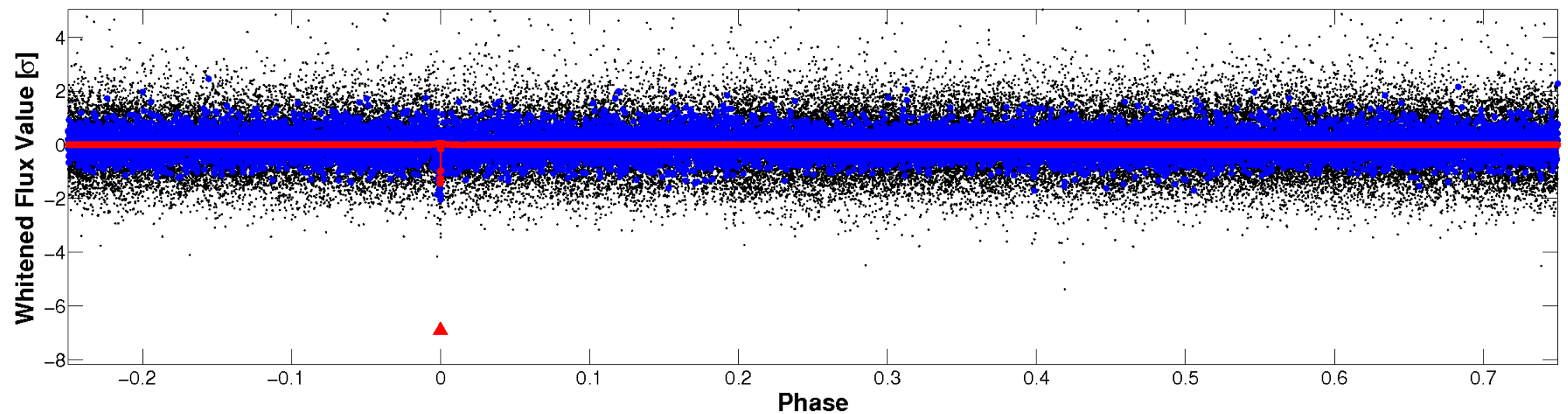


Non-Whitened Vs. Whitened Light Curve

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

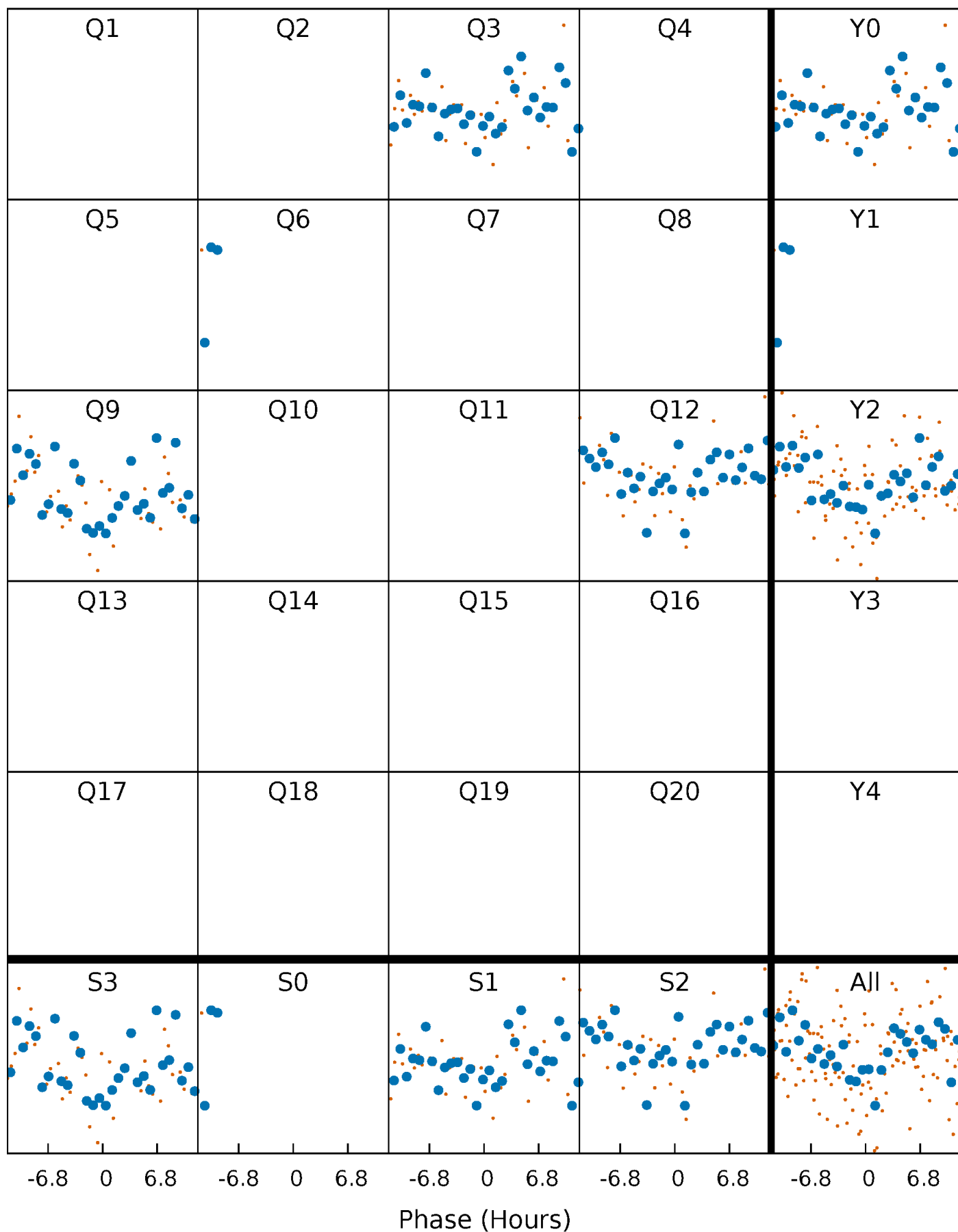


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



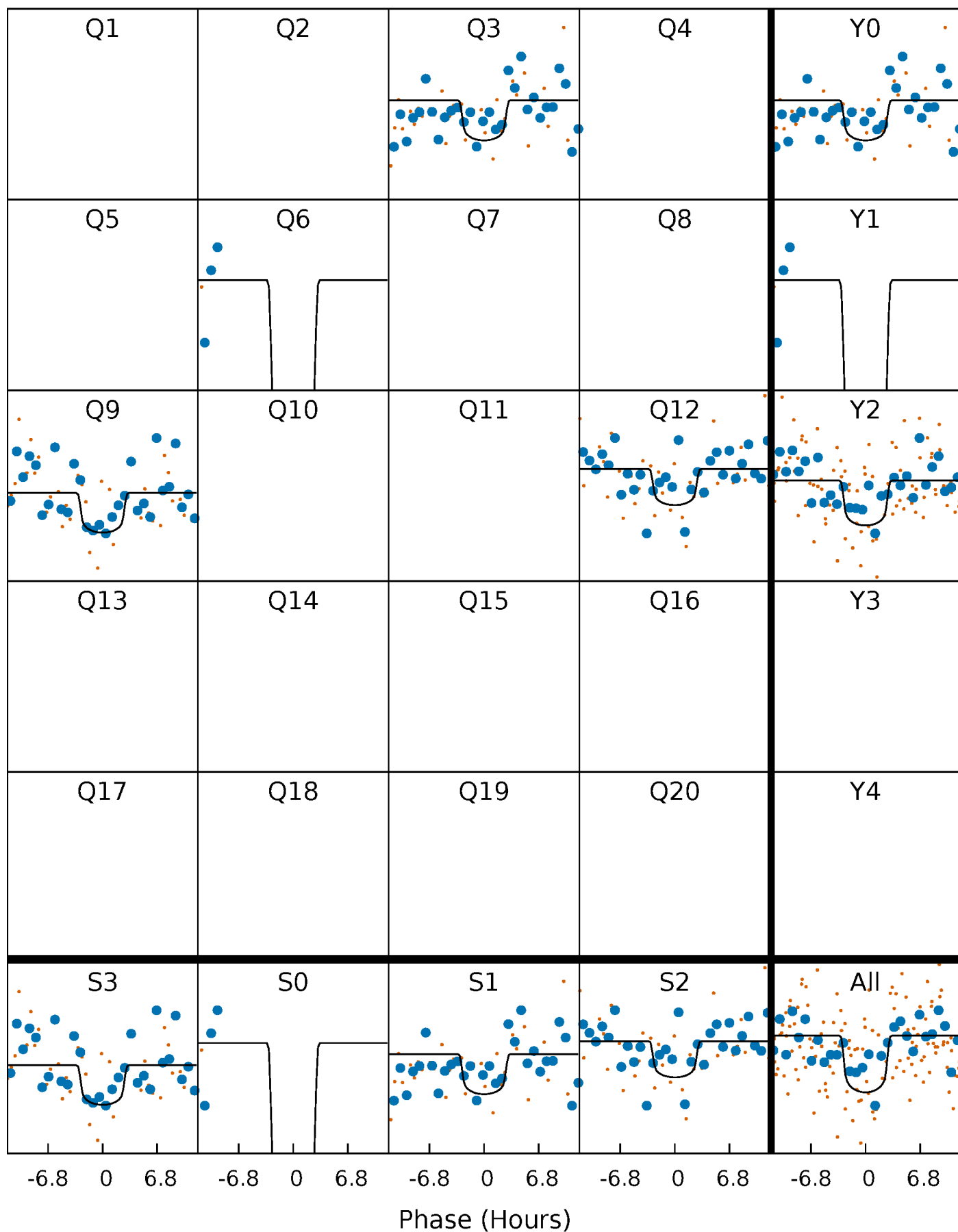
PDC Quarter-Phased Transit Curves

TCE 007046650-01 P=258.112832 Days $T_0=340.560783$ (BKJD)



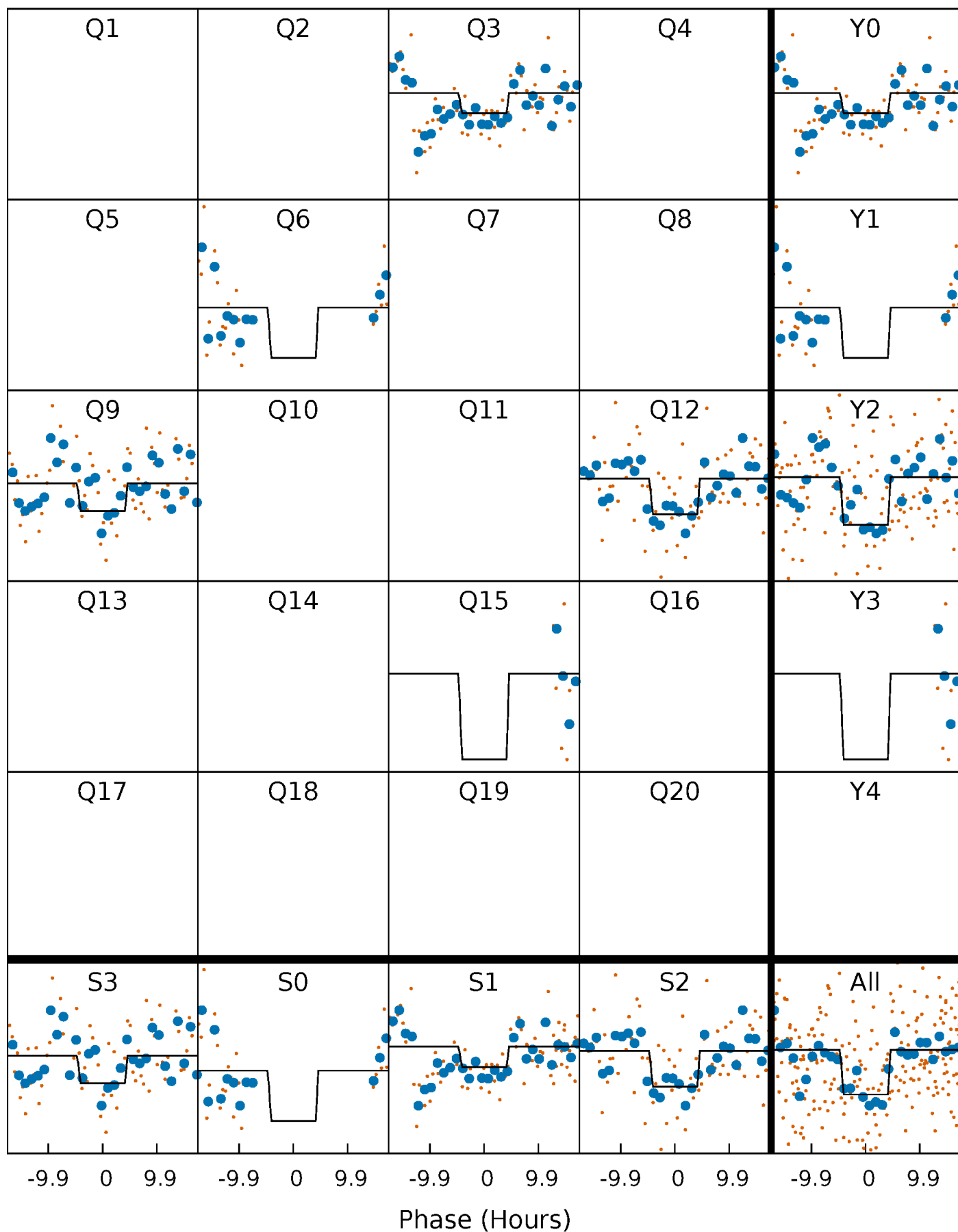
DV Quarter-Phased Transit Curves

TCE 007046650-01 P=258.112832 Days $T_0=340.560783$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

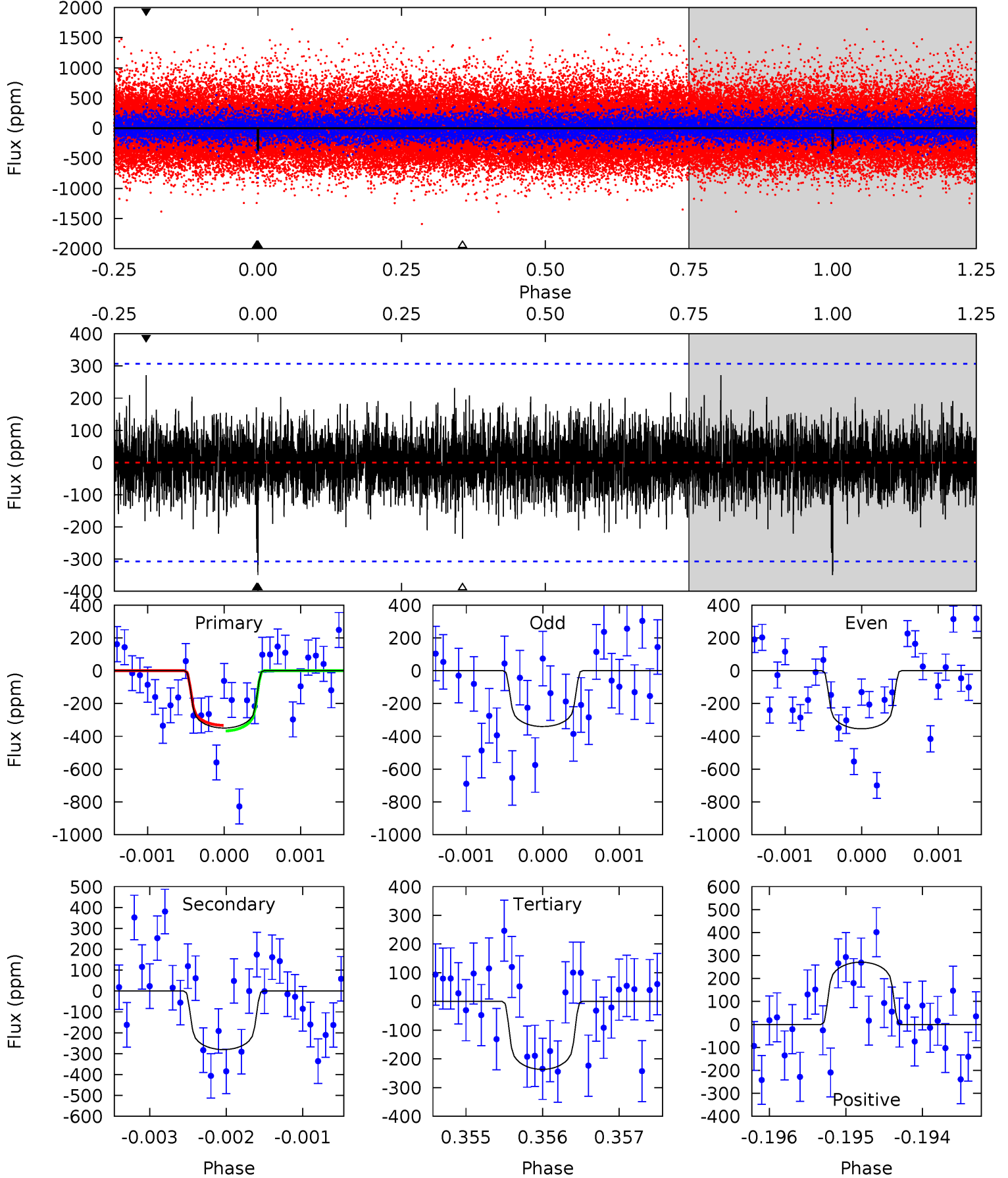
TCE 007046650-01 P=258.123541 Days $T_0=340.486827$ (BKJD)



DV Model-Shift Uniqueness Test

007046650-01, P = 258.112832 Days, E = 82.447951 Days

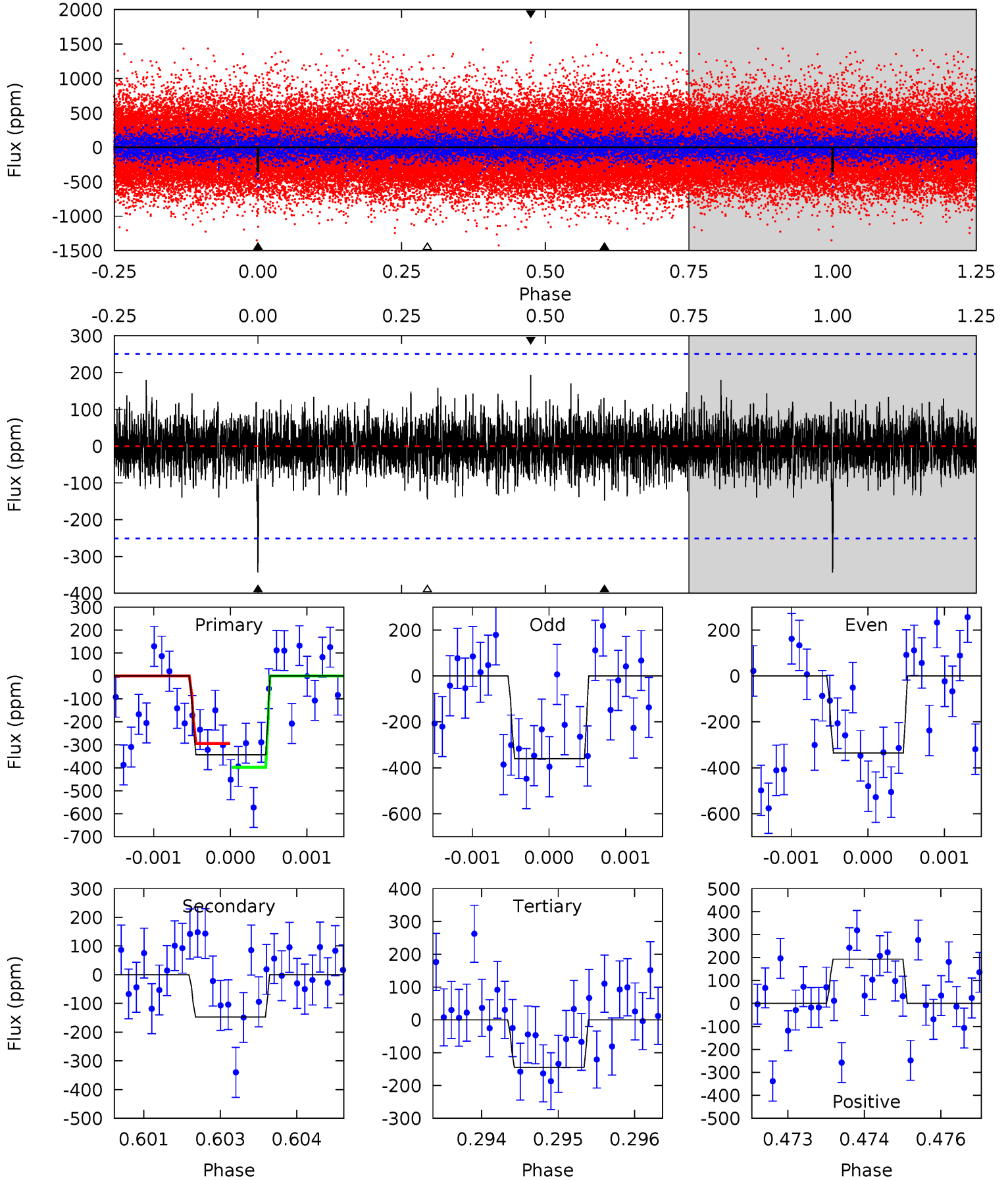
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.20	4.97	4.20	4.81	5.45	3.29	1.13	2.00	1.39	0.78	0.17	0.11	1.03	0.44	0.30



Alt Model-Shift Uniqueness Test

007046650-01, $P = 258.123541$ Days, $E = 82.363286$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.38	3.16	3.10	4.14	5.39	3.19	0.95	4.28	3.24	0.06	-0.98	0.24	0.95	0.36	1.12



Stellar Parameters For KIC 007046650

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6174^{+175}_{-219}	$4.378^{+0.108}_{-0.201}$	$-0.380^{+0.300}_{-0.300}$	$1.046^{+0.315}_{-0.170}$	$0.954^{+0.148}_{-0.111}$	$1.173^{+0.685}_{-0.591}$
	+3%/-4%	+2%/-5%	+79%/-79%	+30%/-16%	+16%/-12%	+58%/-50%
Source	PHO1	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 007046650-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-280 ± 56	$2.74^{+1.39}_{-1.27}$	445^{+33}_{-25}	5221^{+1987}_{-816}	12342^{+30507}_{-7327}
Alt.	-147 ± 47	$2.26^{+1.40}_{-1.19}$	444^{+33}_{-27}	4967^{+2253}_{-916}	9468^{+33515}_{-6182}

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

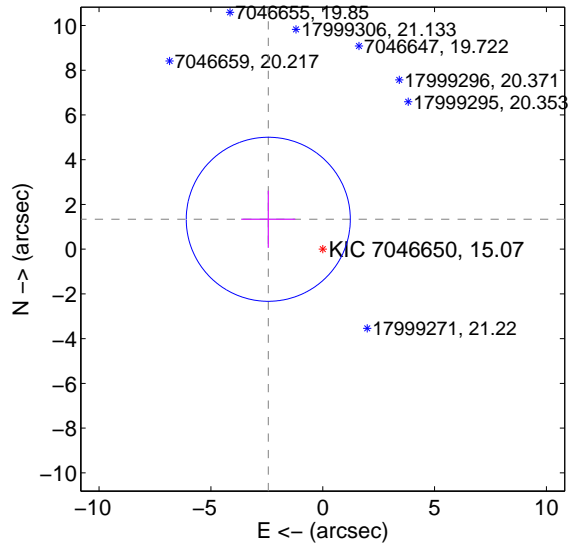
Supplemental centroid analysis for 007046650-01. Kepler magnitude: 15.07. Transit SNR 7.28

There are 1 quarters with good PRF difference image offsets

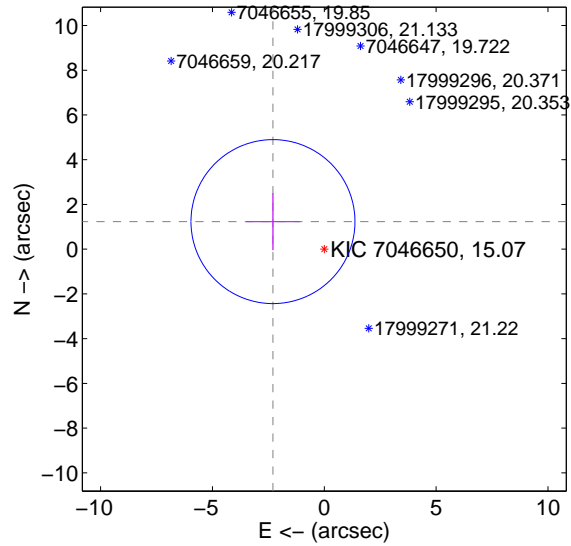
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.777 ± 1.222	2.27	2.435 ± 1.206	1.337 ± 1.275
PRF-fit source offset from KIC position	2.604 ± 1.222	2.13	2.294 ± 1.206	1.233 ± 1.275
photometric centroid source offset	2.58 ± 2.15	1.20	0.76 ± 1.96	-2.46 ± 2.16

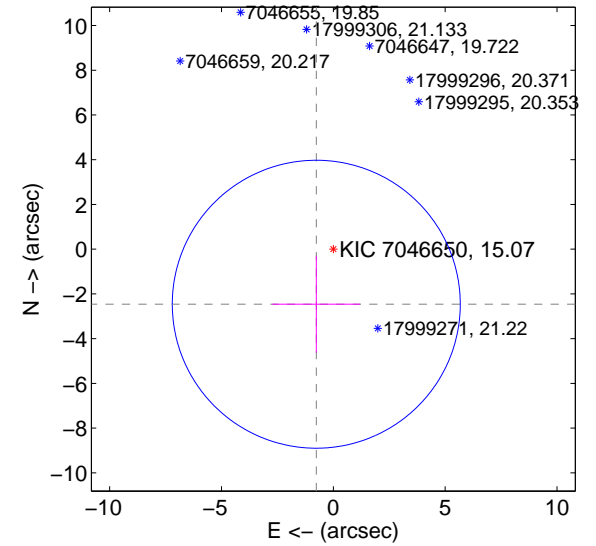
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



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



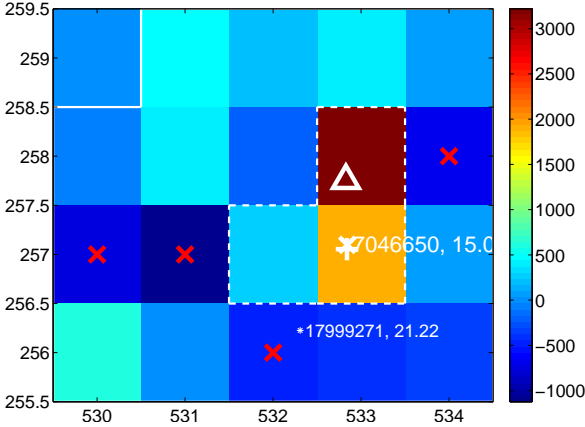
Q2 no difference image



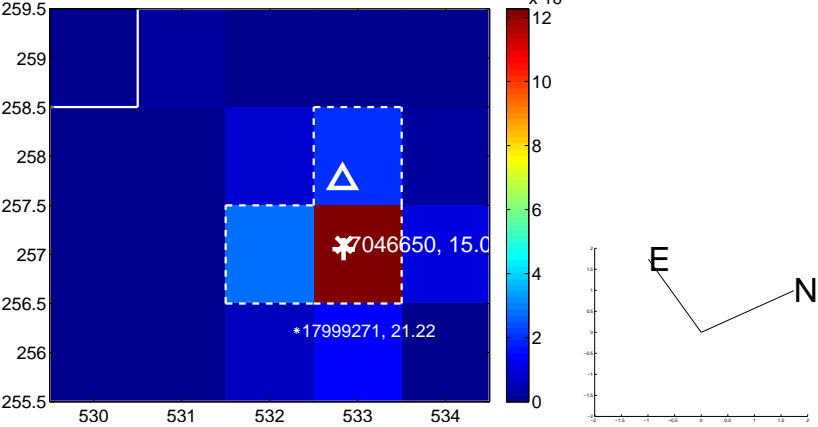
Q2 no OOT image



Q3 difference image



Q3 OOT image



Q4 no difference image



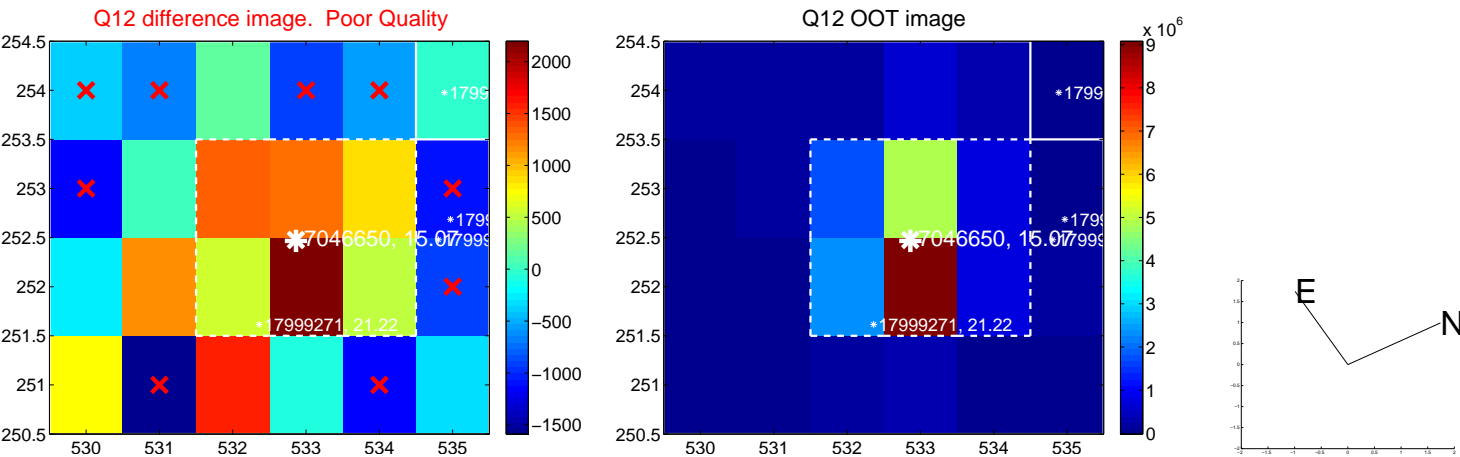
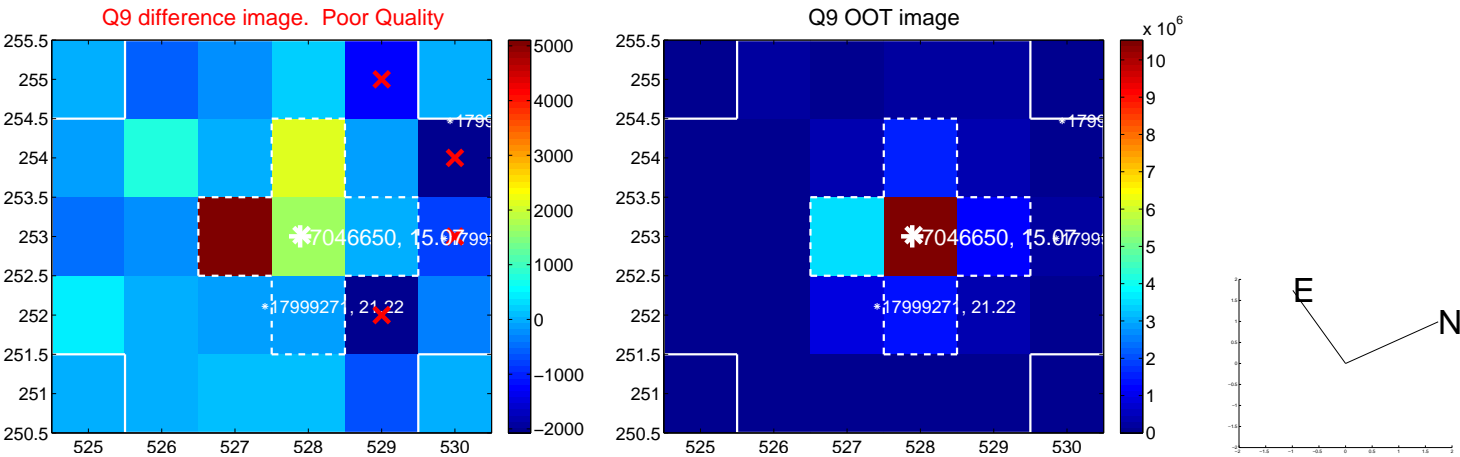
Q4 no OOT image



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



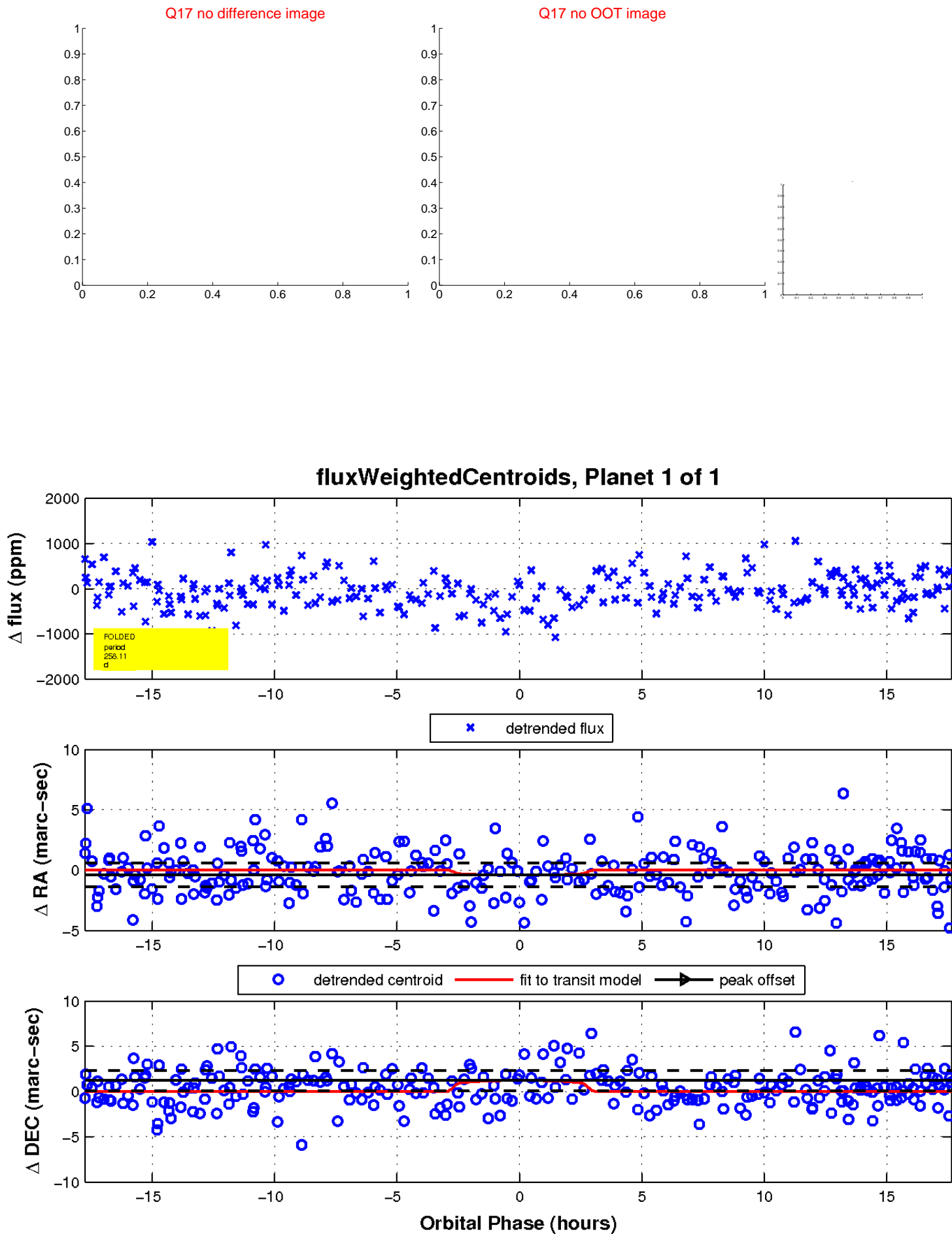
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



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



UKIRT Image

Declination

