

KIC 005620329

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})
005620329-01	OBS	No	436.300129	359.228641	616.5	3.975	7.2	7.1	0.70	4910	2.10	0.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005620329-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—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.

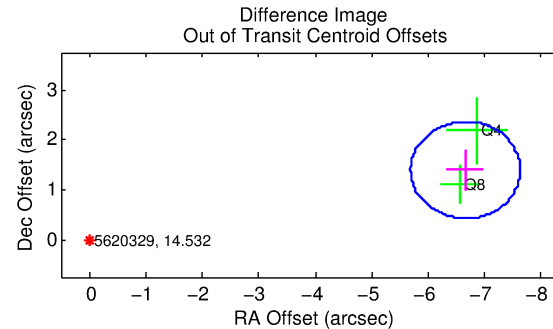
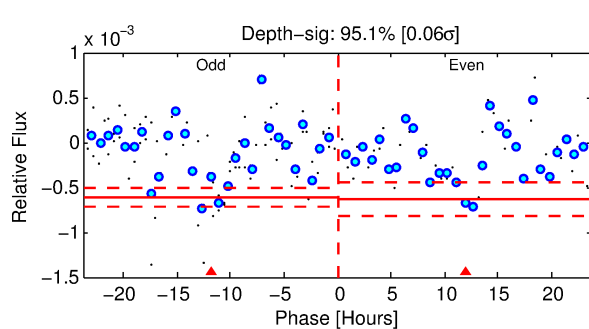
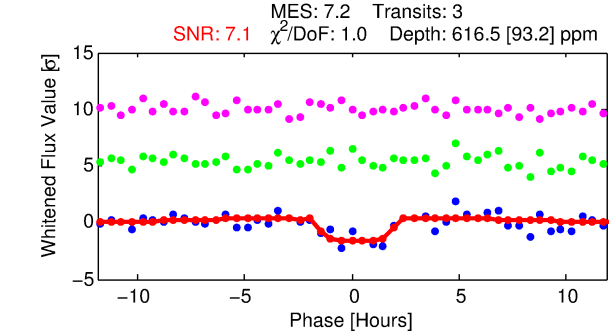
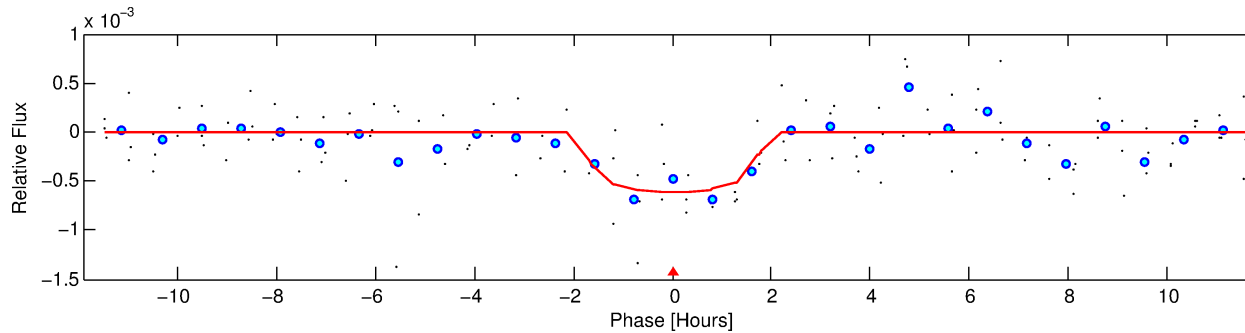
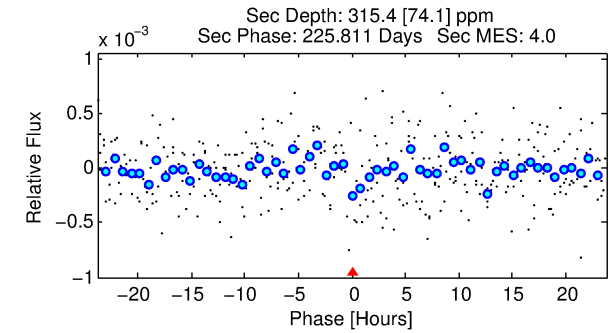
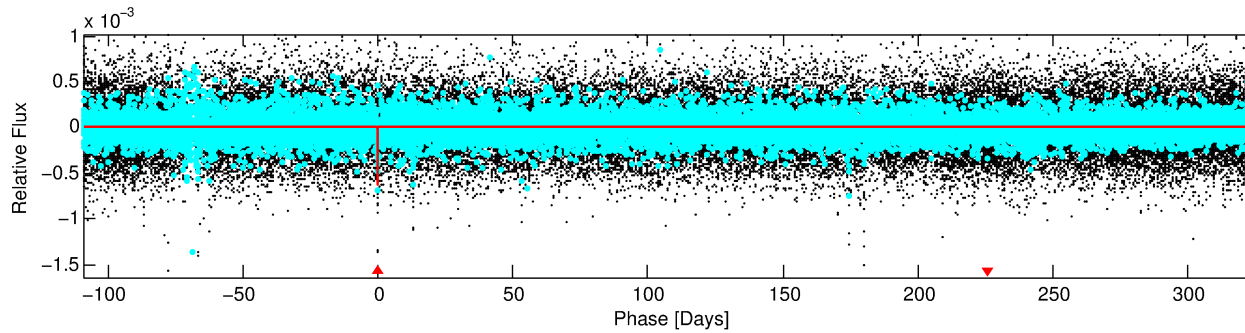
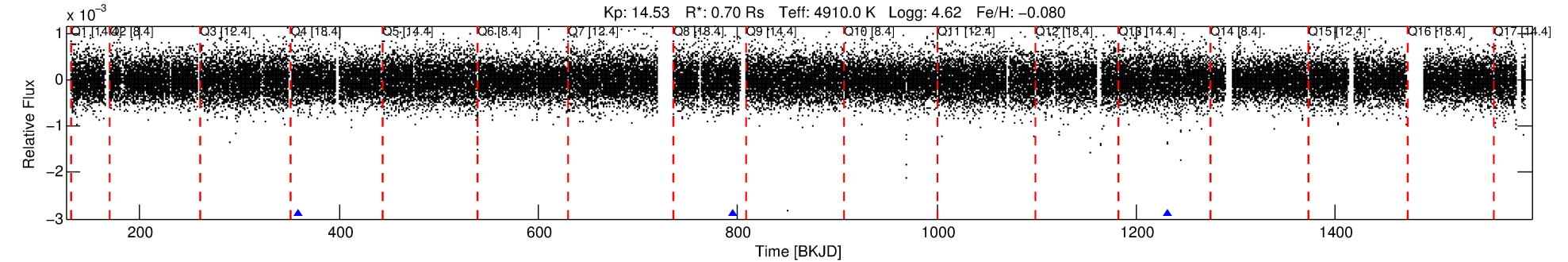
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005620329-01

No Significant Match Found

DV One-Page Summary

KIC: 5620329 Candidate: 1 of 1 Period: 436.300 d



DV Fit Results:

Period = 436.30013 [0.00812] d
Epoch = 359.2286 [0.0091] BKJD
Rp/R* = 0.0272 [0.0313]
a/R* = 443.26 [1971.81]
b = 0.88 [1.16]
Seff = 0.24 [0.03]
Teq = 179 [5] K
Rp = 2.09 [2.41] Re
a = 1.0296 [0.0565] AU
Ag = 41911.17 [96884.72] [0.43σ]
Teffp = 3965 [2291] K [1.65σ]

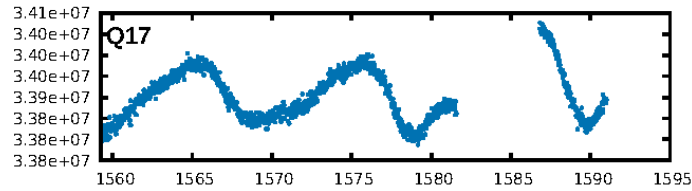
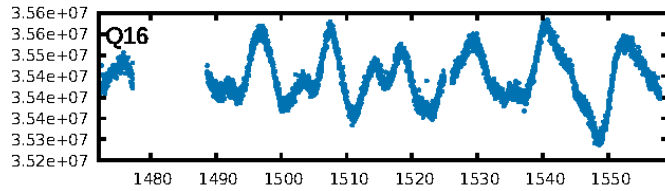
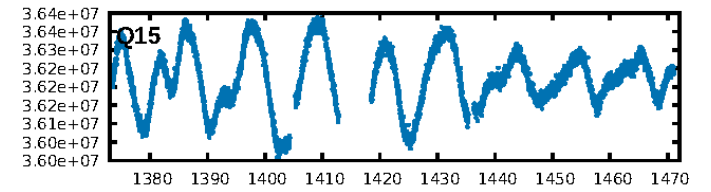
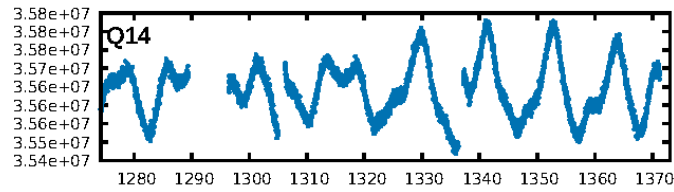
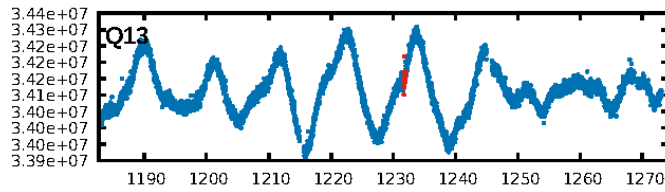
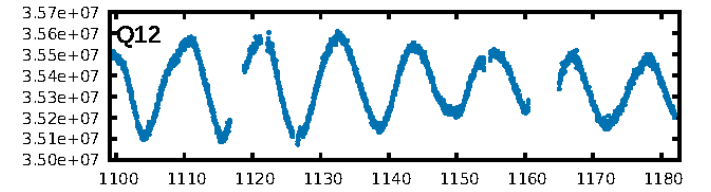
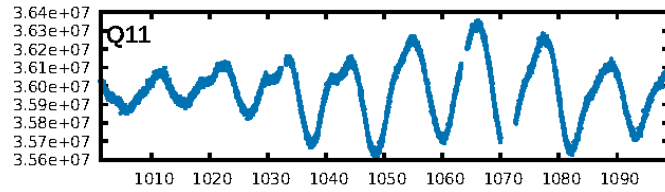
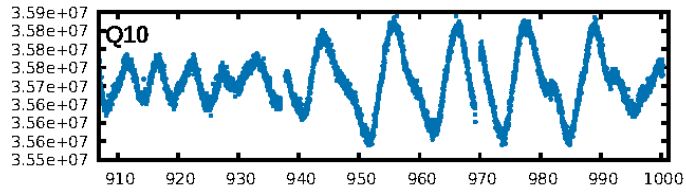
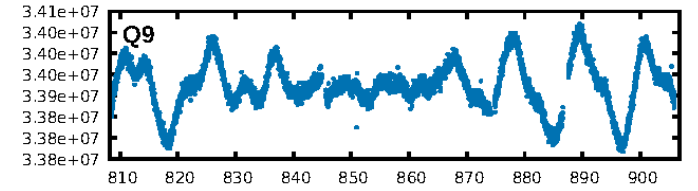
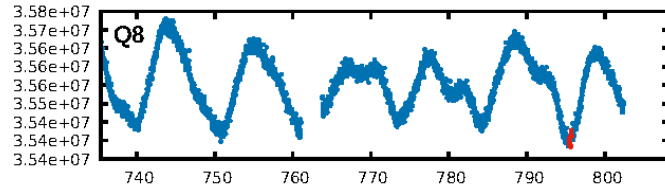
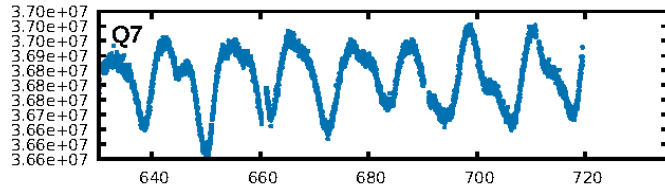
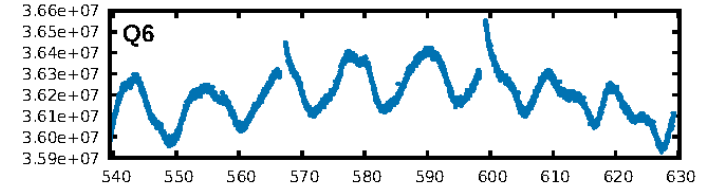
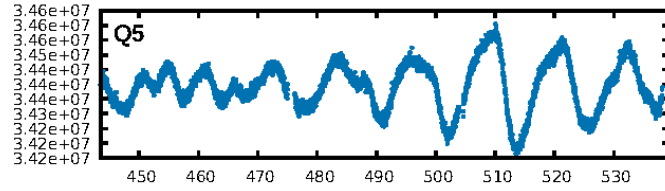
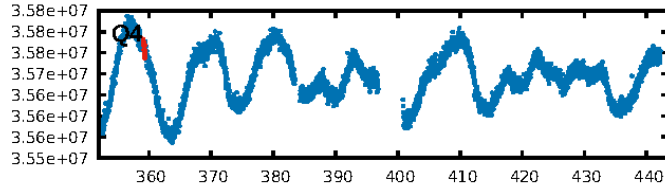
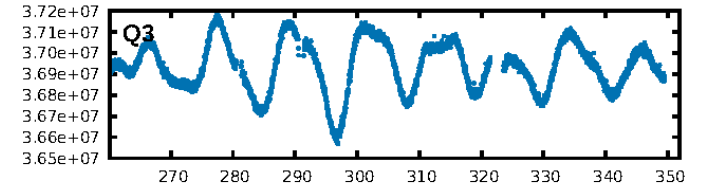
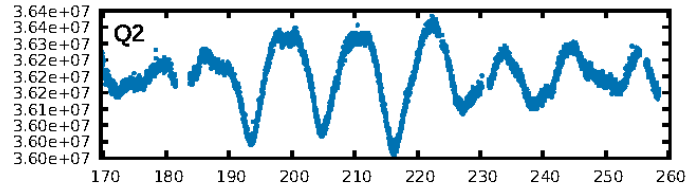
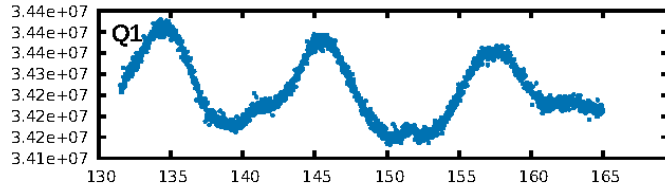
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 22.7%
ModelChiSquareGof-sig: 93.7%
Bootstrap-pfa: 7.54e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.3357
Centroid-sig: 59.9%
Centroid-so: 1.923 arcsec [0.77σ]
OotOffset-rm: 6.800 arcsec [21.04σ]
KicOffset-rm: 6.747 arcsec [20.86σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

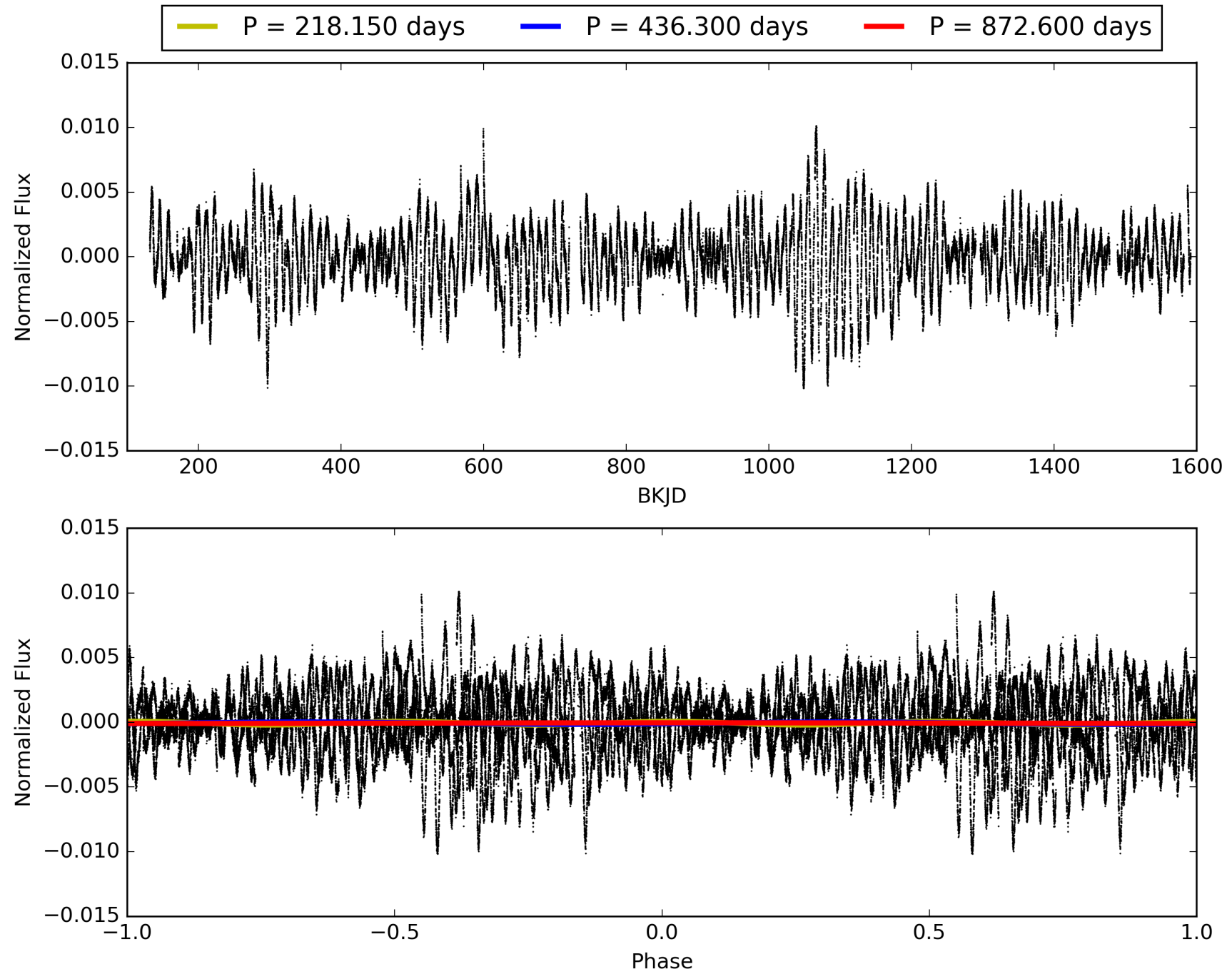
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:54:48 Z

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

TCE 005620329-01, PDC Light Curves

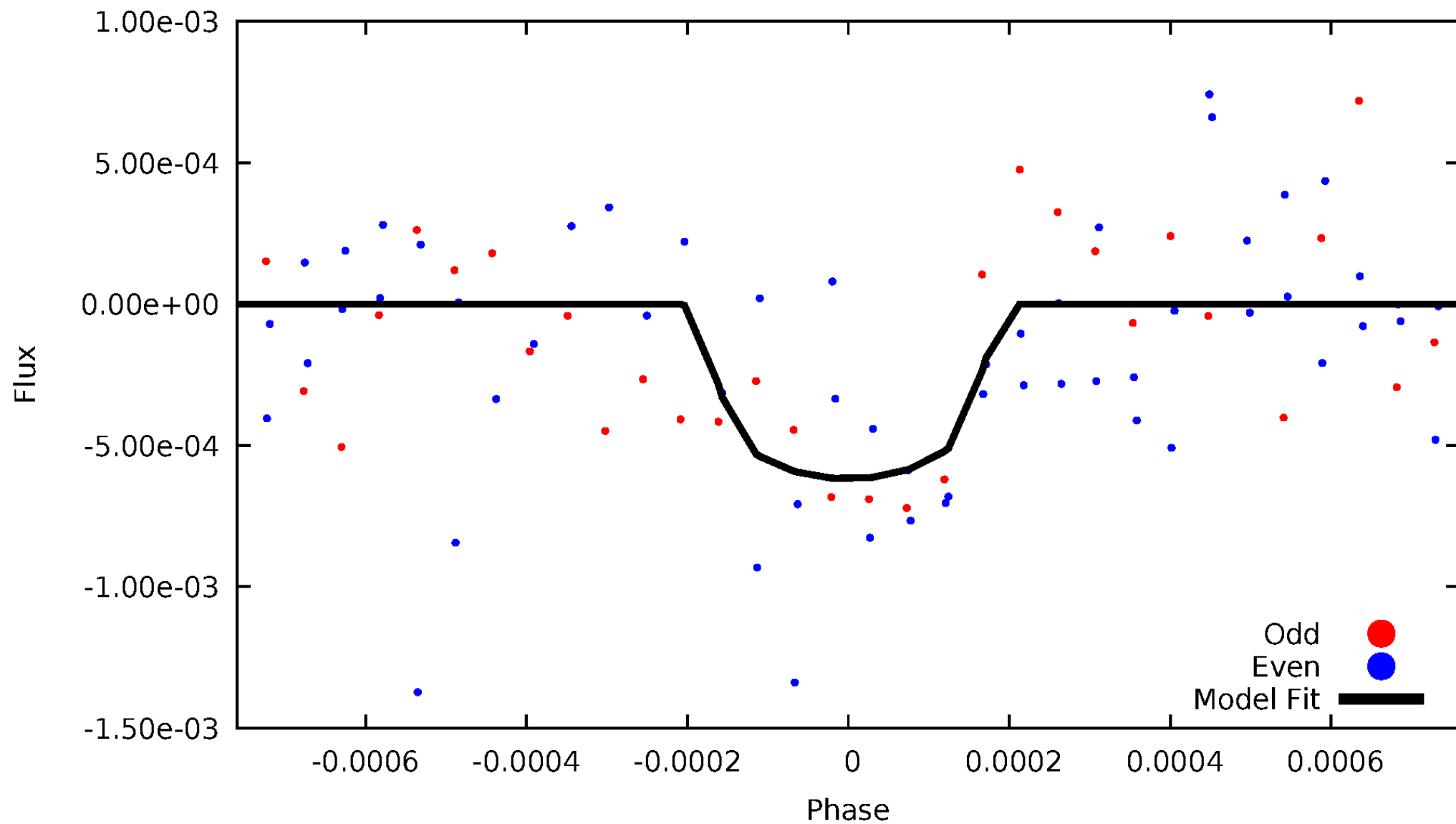


TCE 005620329-01



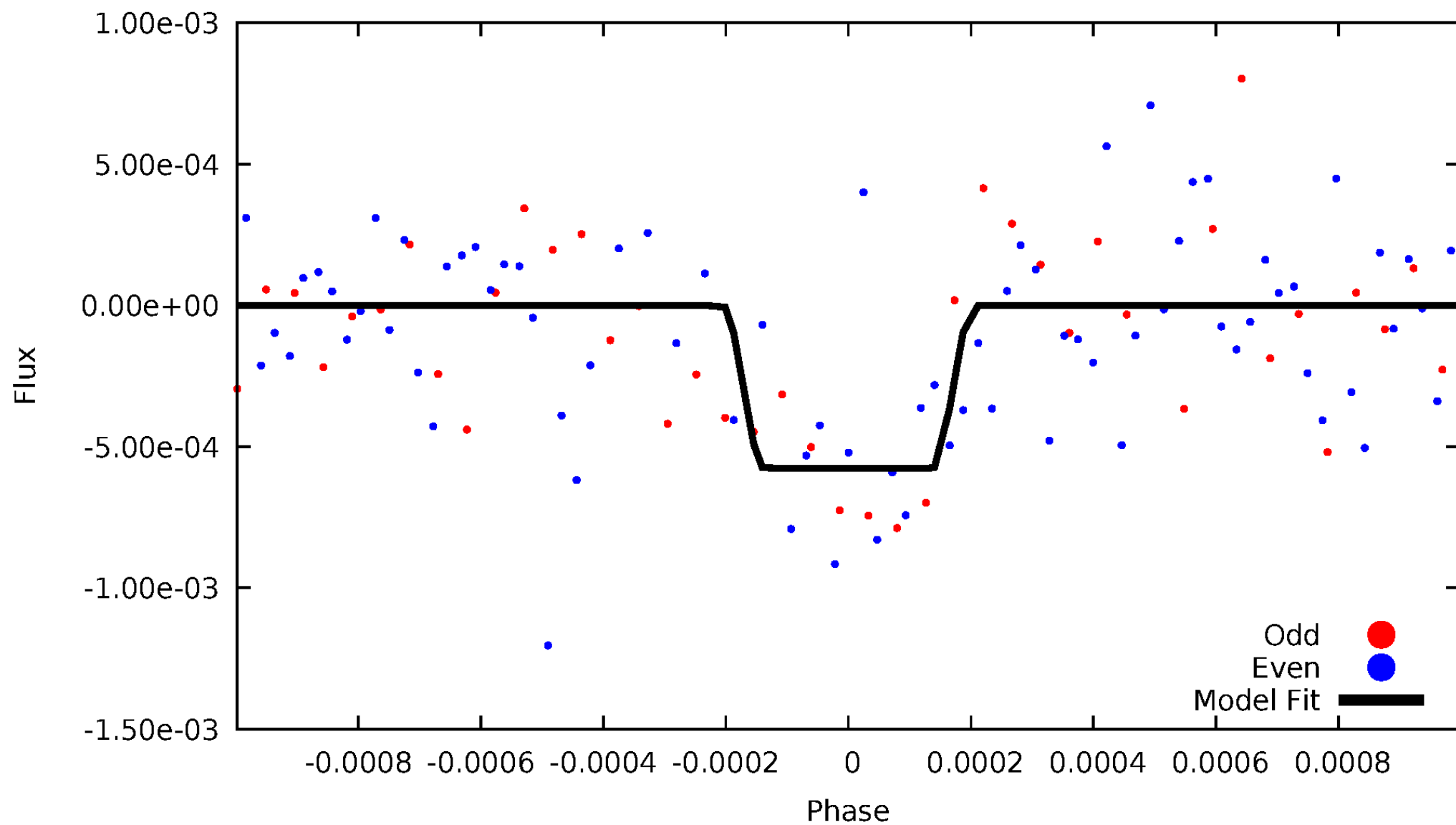
DV Odd/Even

TCE 005620329-01



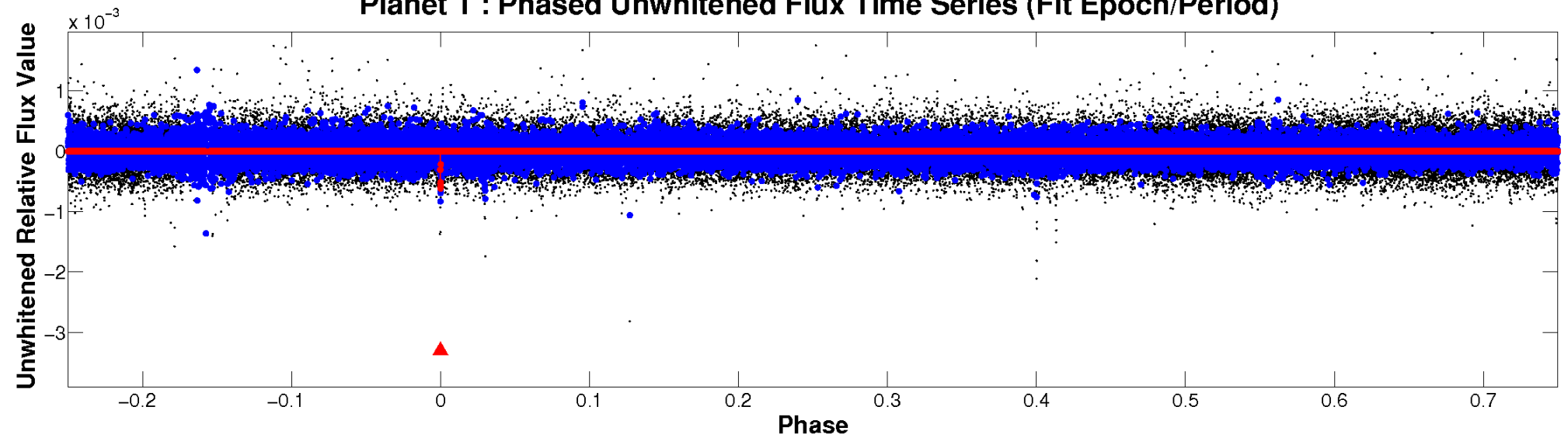
ALT Odd/Even

TCE 005620329-01

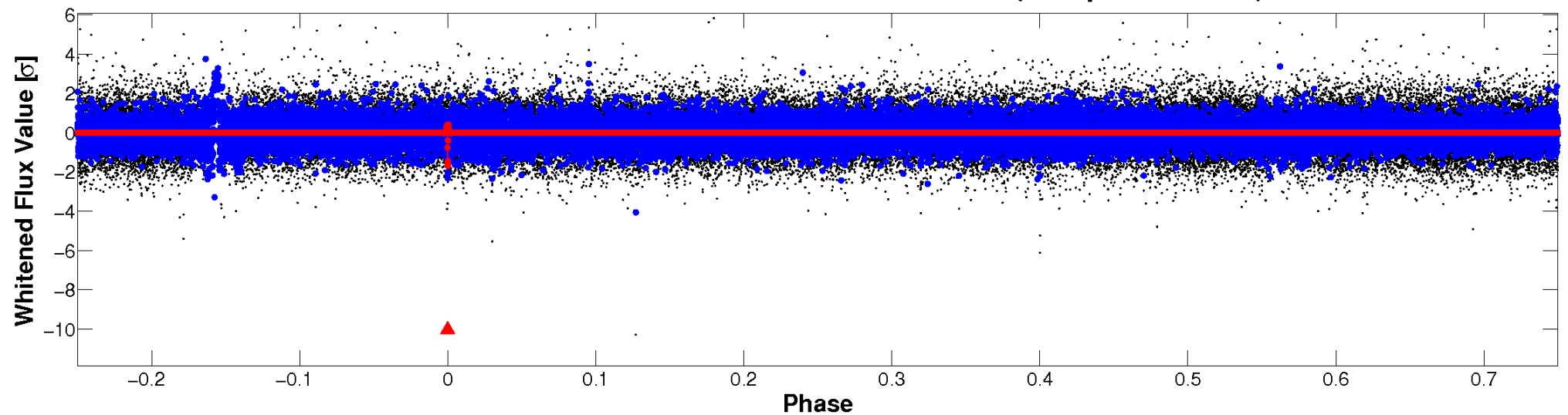


Non-Whitened Vs. Whitened Light Curve

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

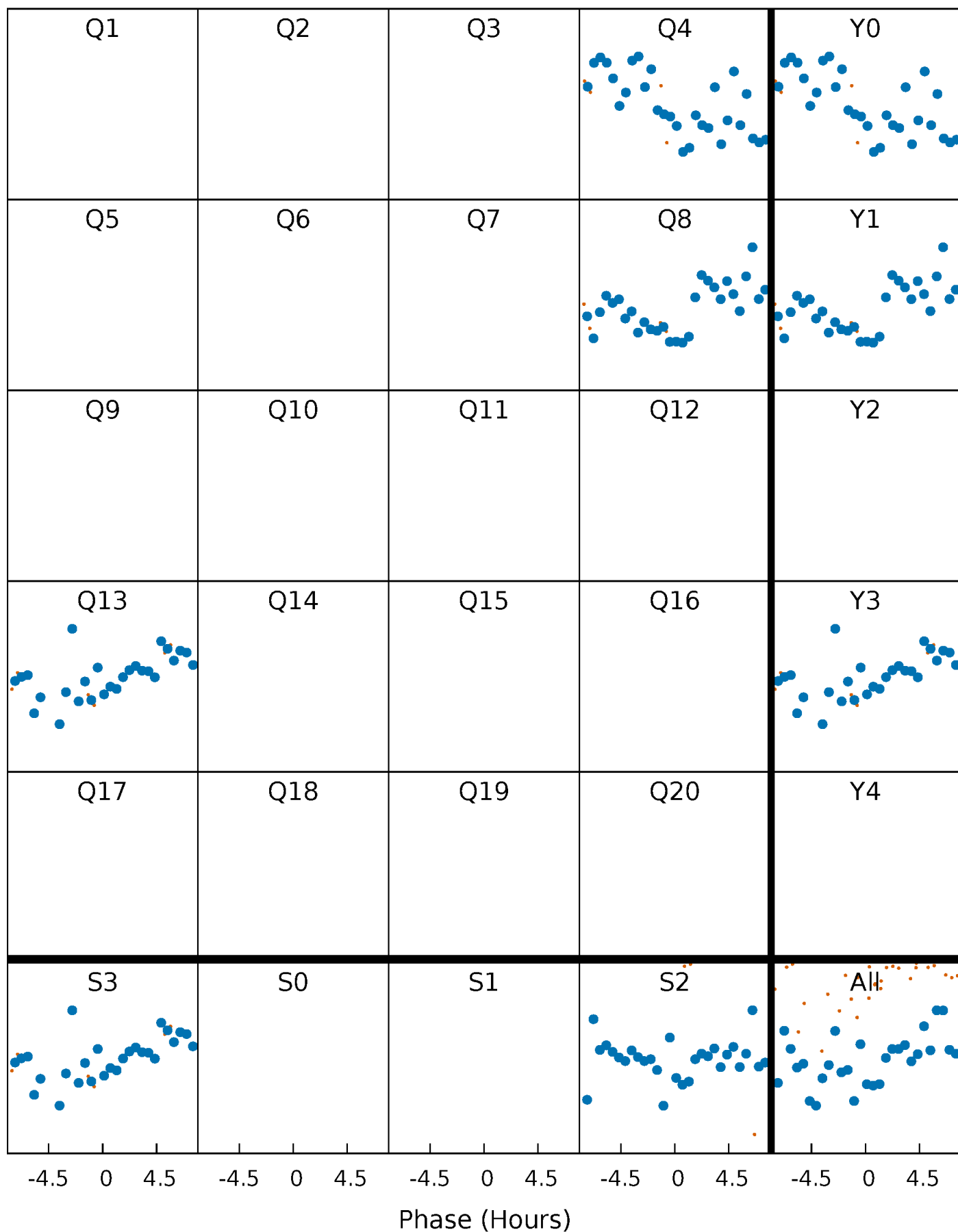


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



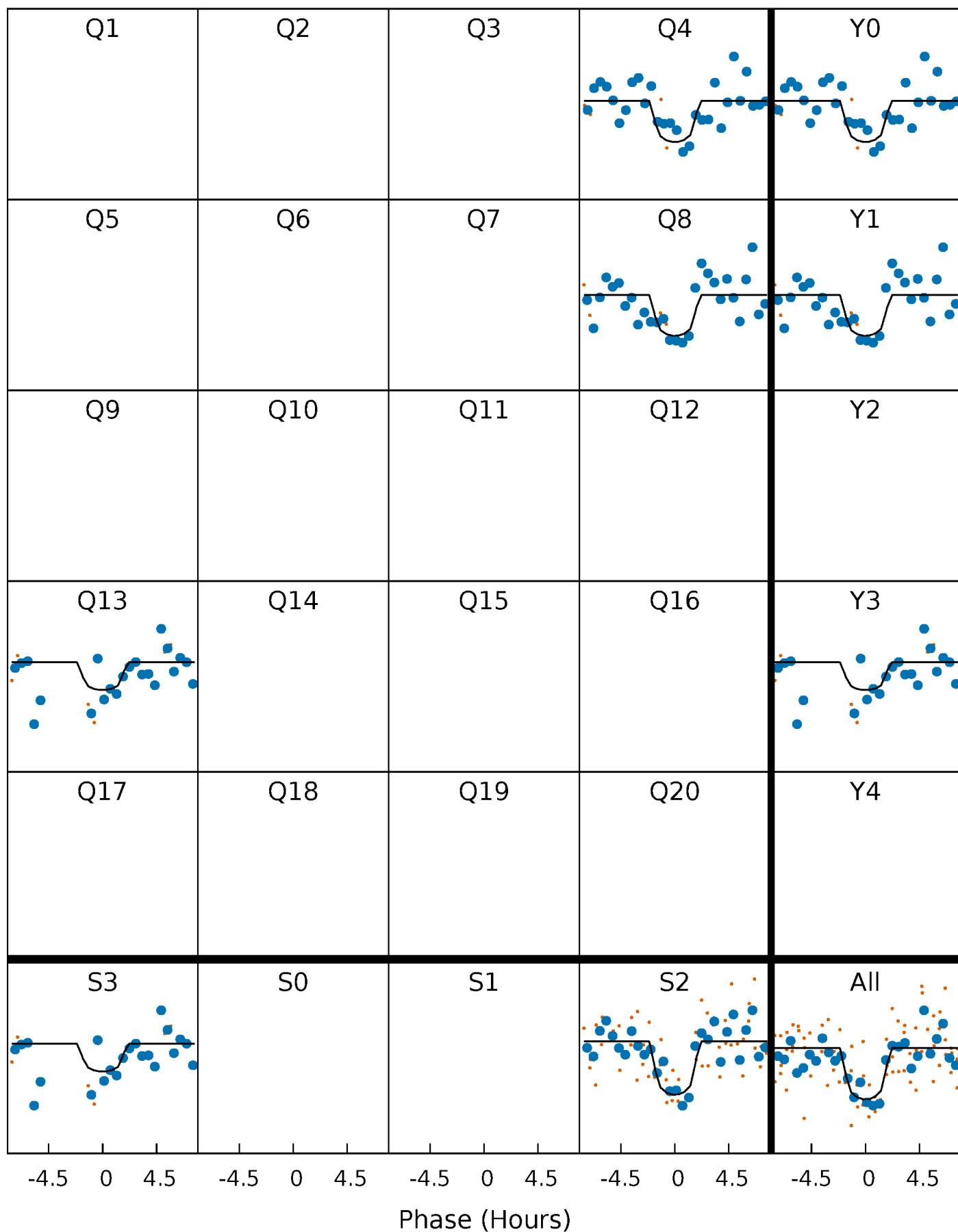
PDC Quarter-Phased Transit Curves

TCE 005620329-01 P=436.300129 Days $T_0=359.228641$ (BKJD)



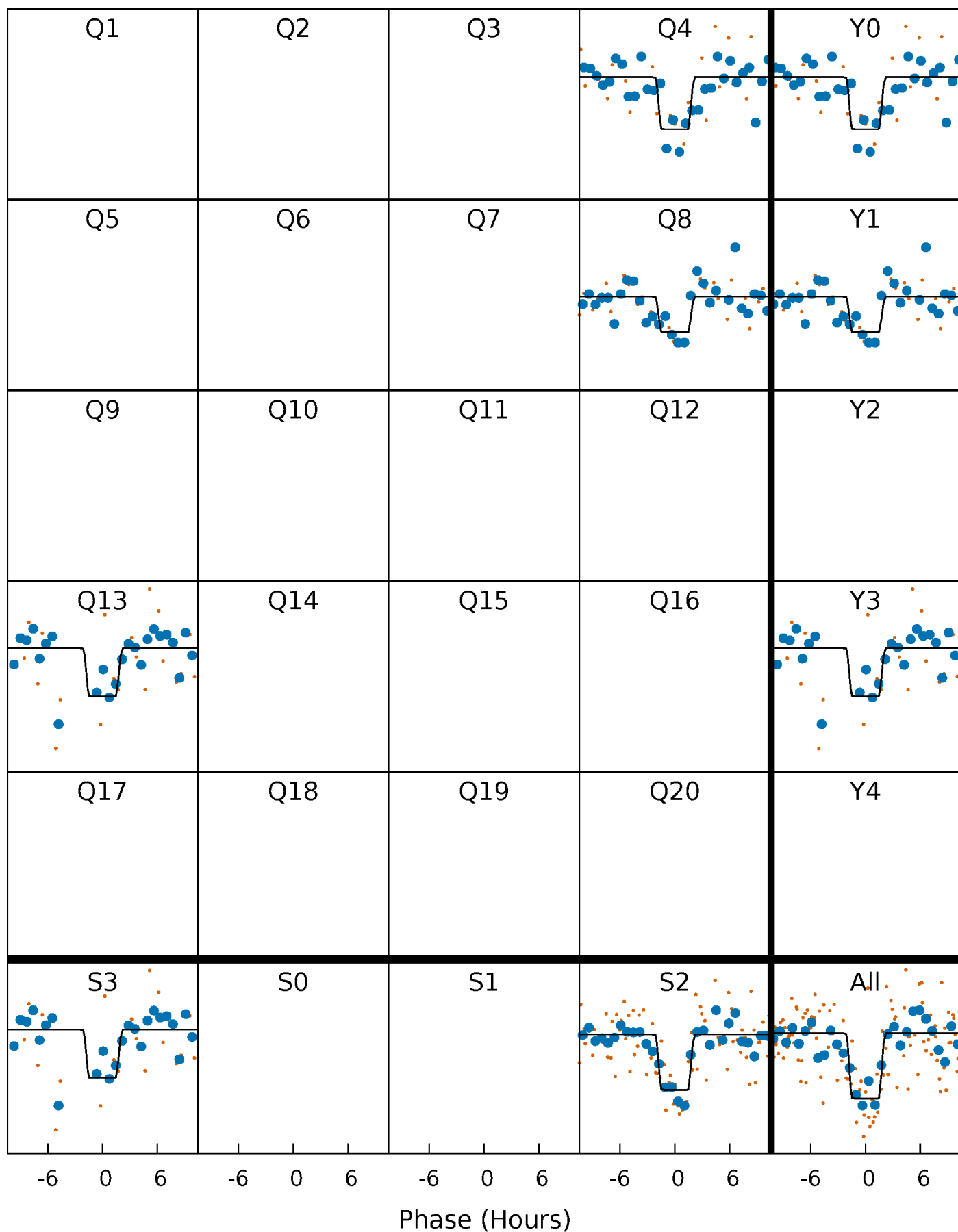
DV Quarter-Phased Transit Curves

TCE 005620329-01 P=436.300129 Days $T_0=359.228641$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

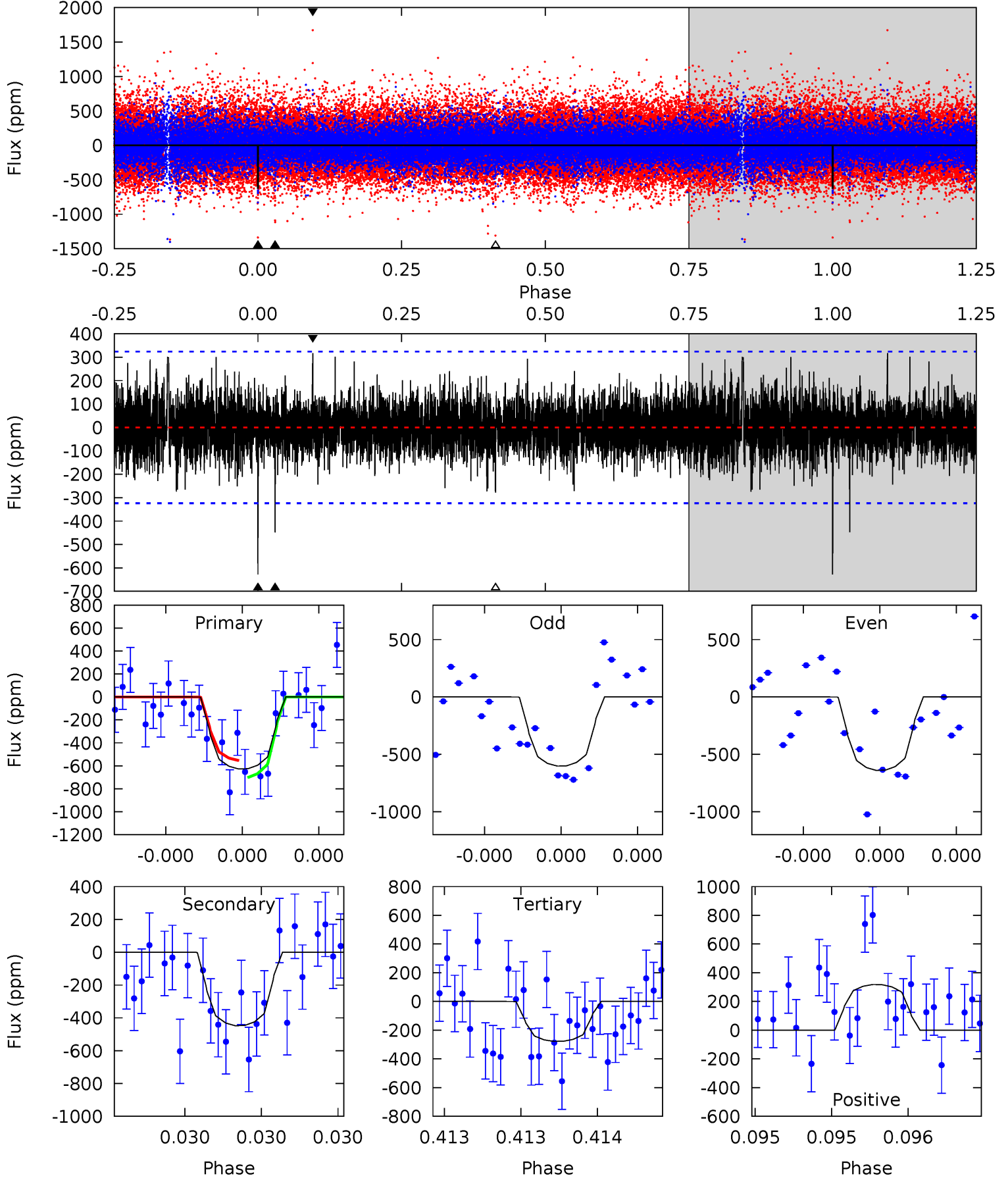
TCE 005620329-01 P=436.283751 Days $T_0=359.241896$ (BKJD)



DV Model-Shift Uniqueness Test

005620329-01, P = 436.300129 Days, E = 359.228641 Days

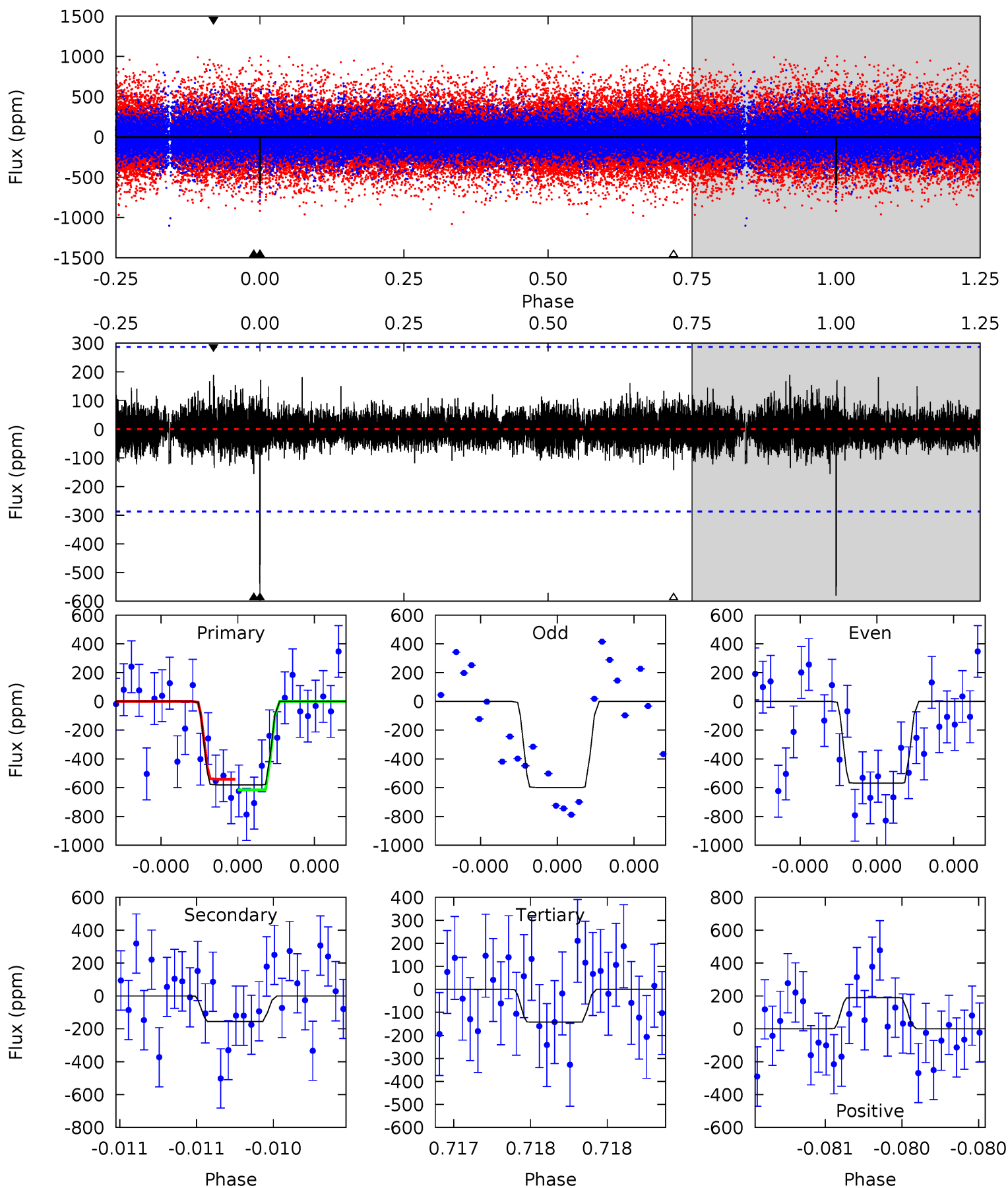
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	7.77	4.83	5.52	5.62	3.56	1.27	6.05	5.37	2.95	2.26	0.32	1.04	0.34	1.29



Alt Model-Shift Uniqueness Test

005620329-01, P = 436.283751 Days, E = 359.241896 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	3.05	2.79	3.70	5.62	3.55	0.67	8.57	7.65	0.27	-0.65	0.28	0.97	0.25	0.73



Stellar Parameters For KIC 005620329

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4910^{+73}_{-81}	$4.625^{+0.012}_{-0.048}$	$-0.080^{+0.150}_{-0.150}$	$0.705^{+0.043}_{-0.026}$	$0.788^{+0.028}_{-0.062}$	$3.166^{+0.206}_{-0.545}$
	+1%/-2%	+0%/-1%	+188%/-188%	+6%/-4%	+4%/-8%	+7%/-17%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005620329-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-448 ± 58	$2.71^{+2.20}_{-1.66}$	253^{+5}_{-5}	4065^{+1948}_{-749}	$36432^{+194977}_{-25872}$
Alt.	-156 ± 51	$2.50^{+2.08}_{-1.59}$	252^{+6}_{-5}	3486^{+1534}_{-615}	14497^{+90466}_{-10657}

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 $A_{obs} \gg 1.0$

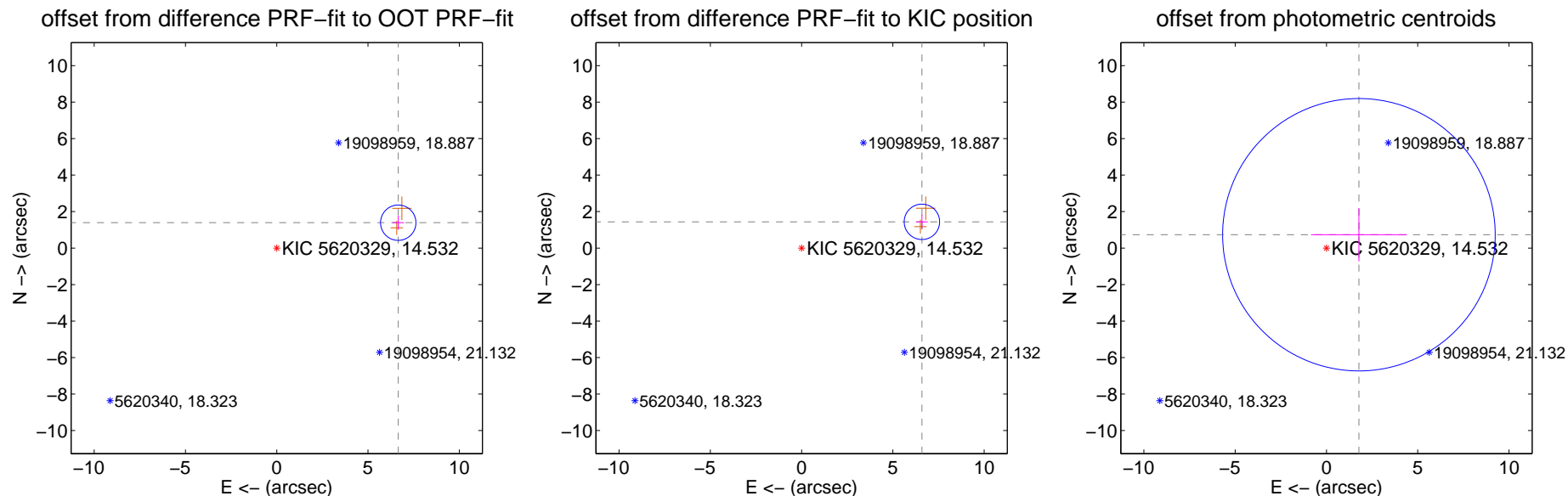
DV Centroid Data

Supplemental centroid analysis for 005620329-01. Kepler magnitude: 14.53. Transit SNR 7.08

There are 0 quarters with good PRF difference image offsets

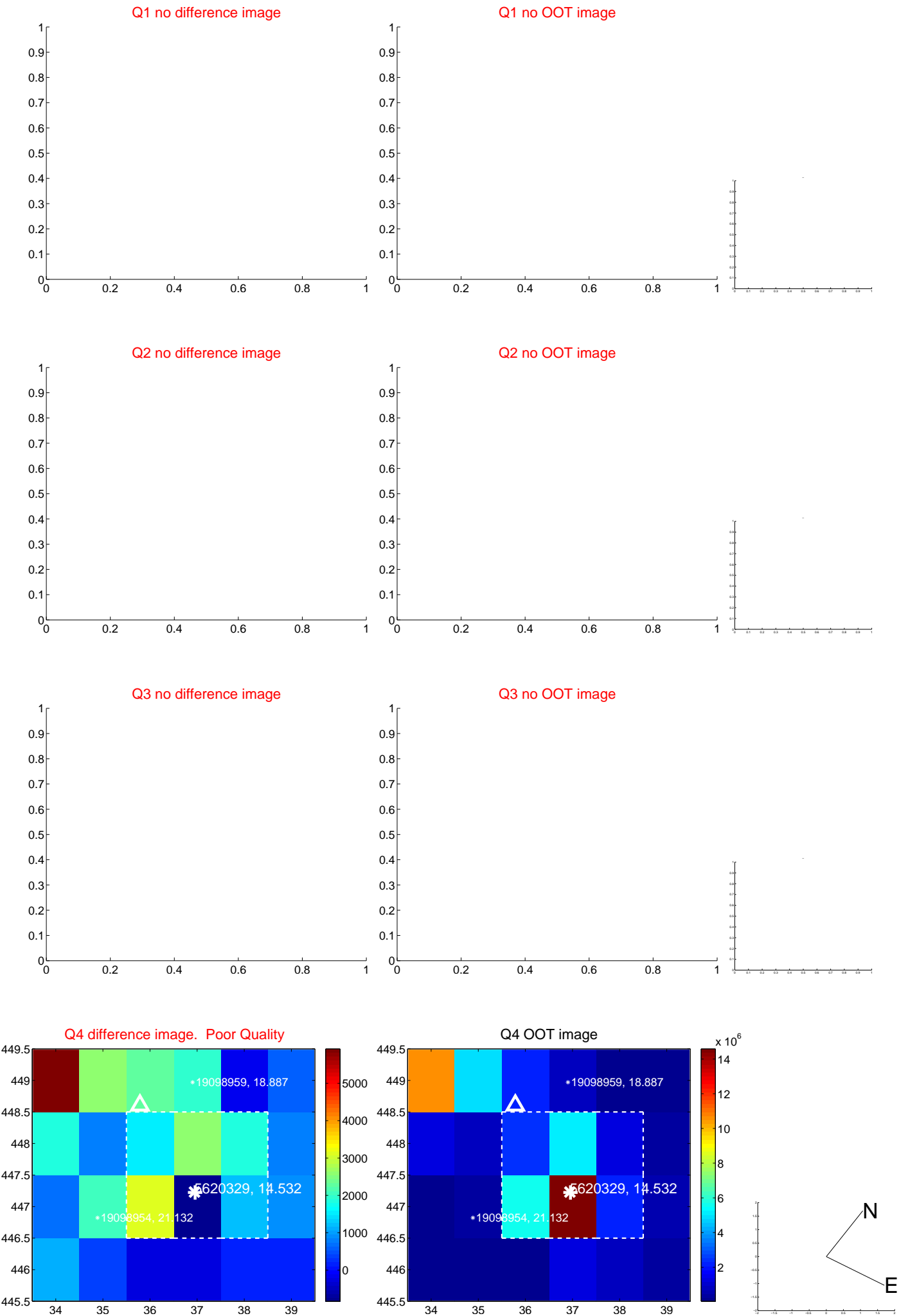
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.800 ± 0.323	21.04	-6.656 ± 0.320	1.392 ± 0.383
PRF-fit source offset from KIC position	6.747 ± 0.323	20.86	-6.592 ± 0.320	1.440 ± 0.383
photometric centroid source offset	1.92 ± 2.49	0.77	-1.78 ± 2.62	0.73 ± 1.46

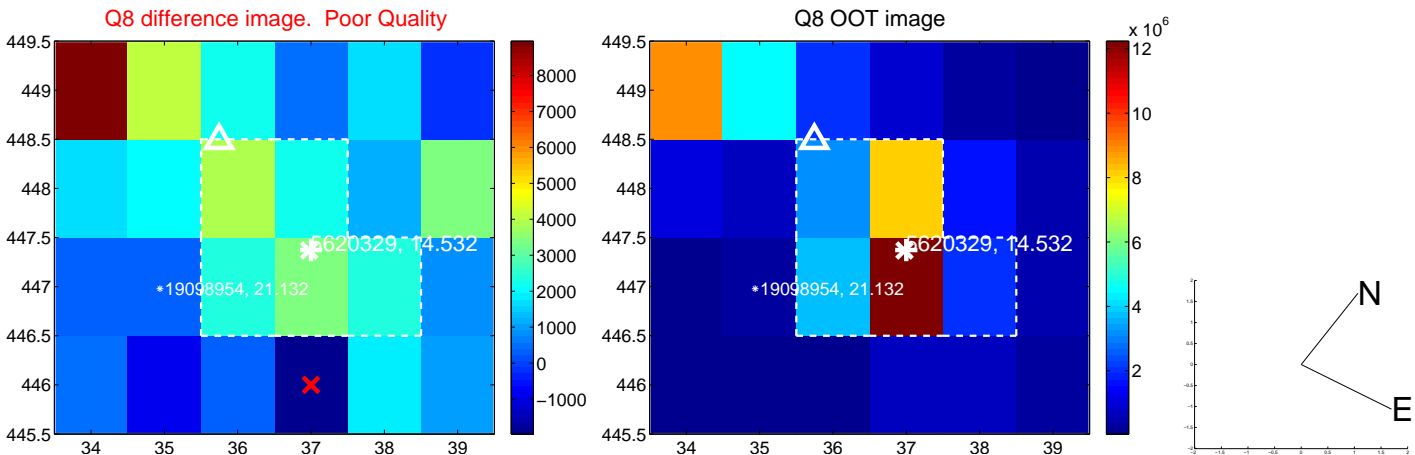
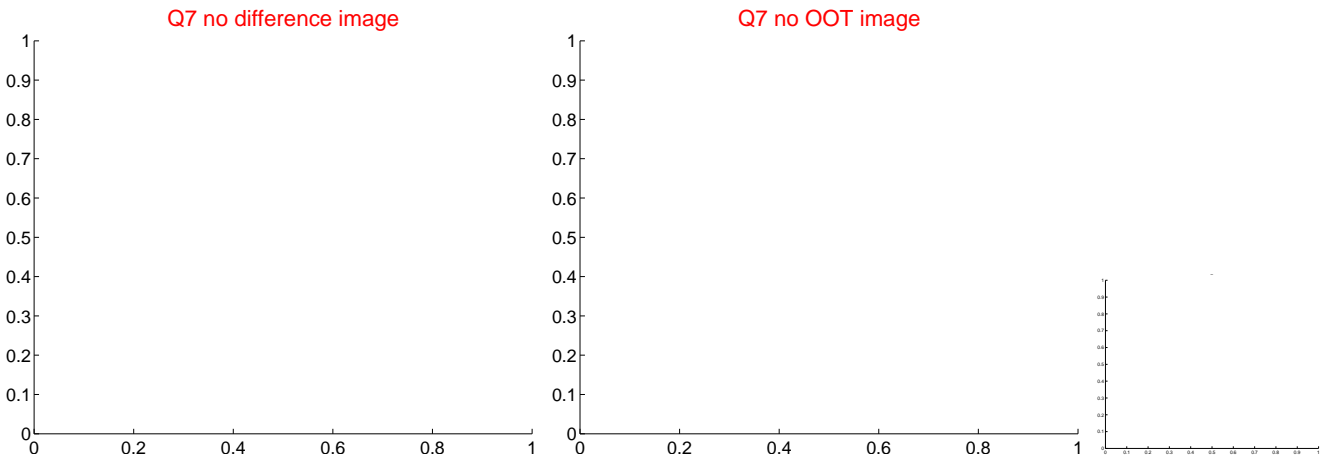
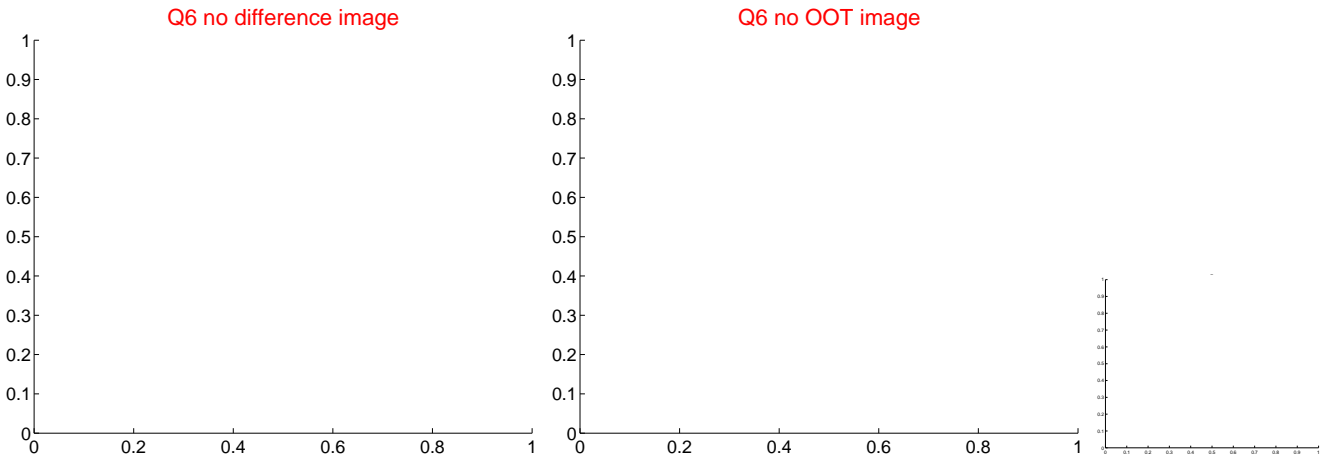
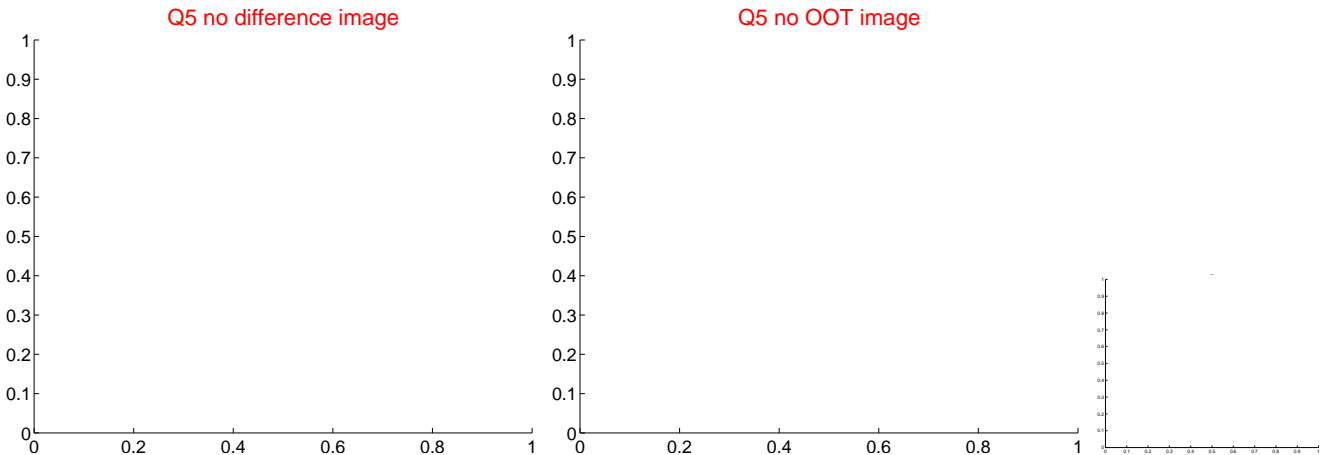


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



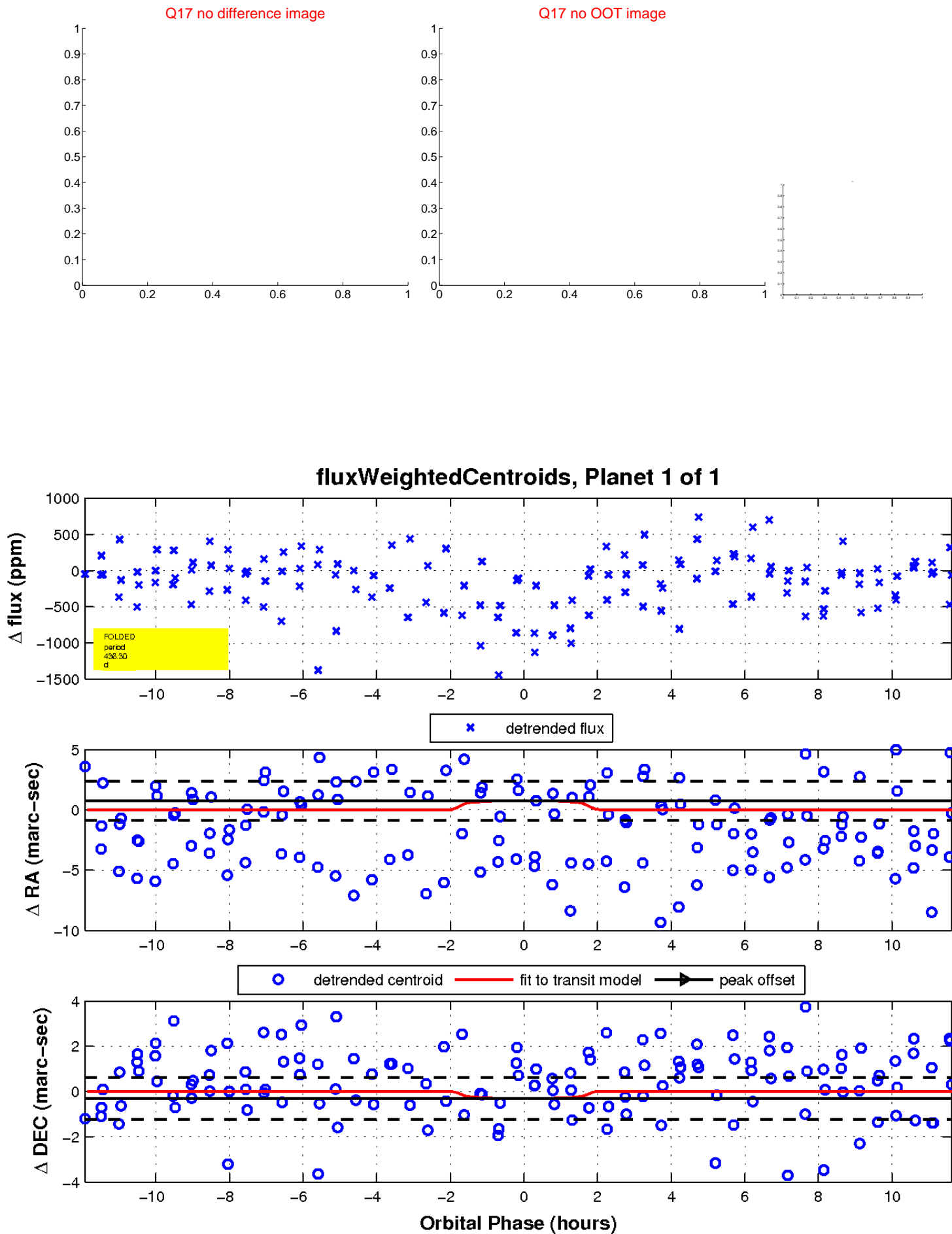
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

