

KIC 008030474

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})
008030474-01	OBS	No	564.540527	215.313614	602.3	3.650	7.4	7.7	1.03	6341	2.76	0.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008030474-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS

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

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

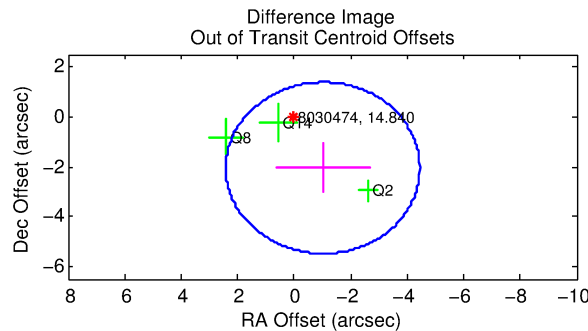
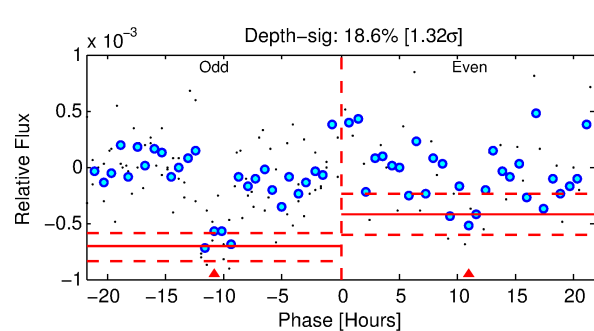
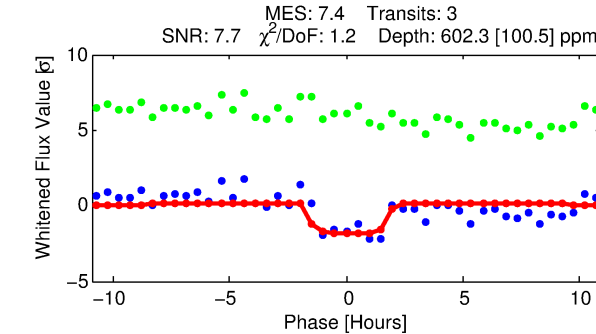
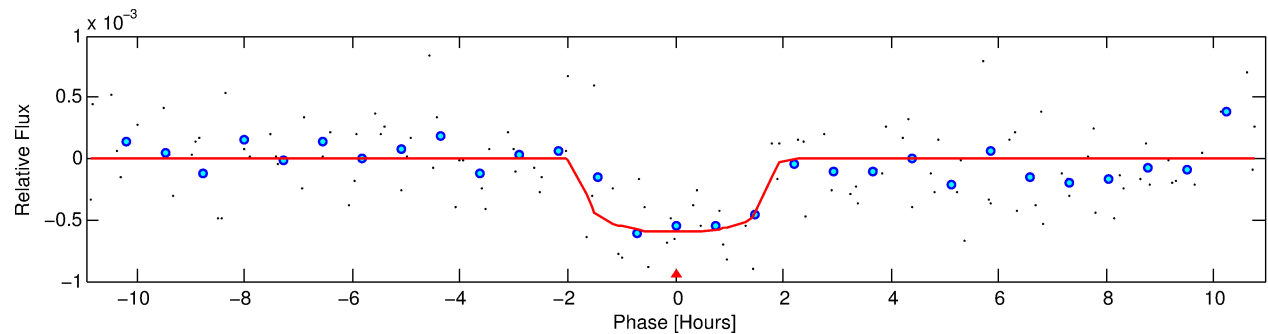
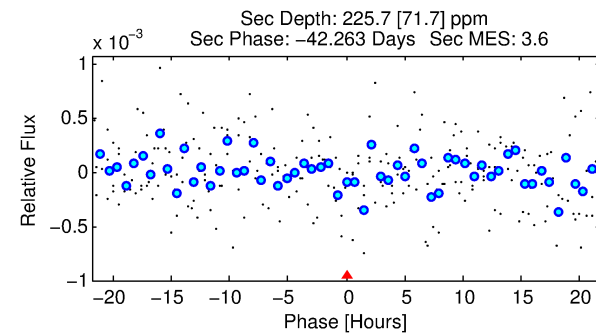
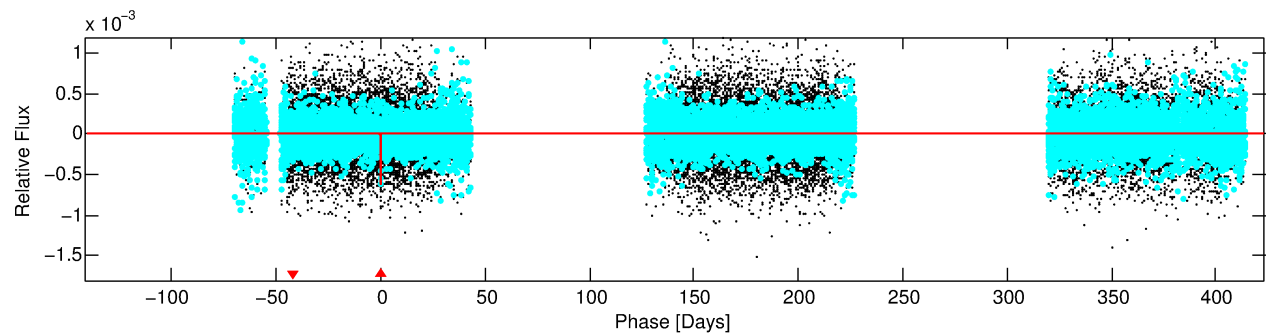
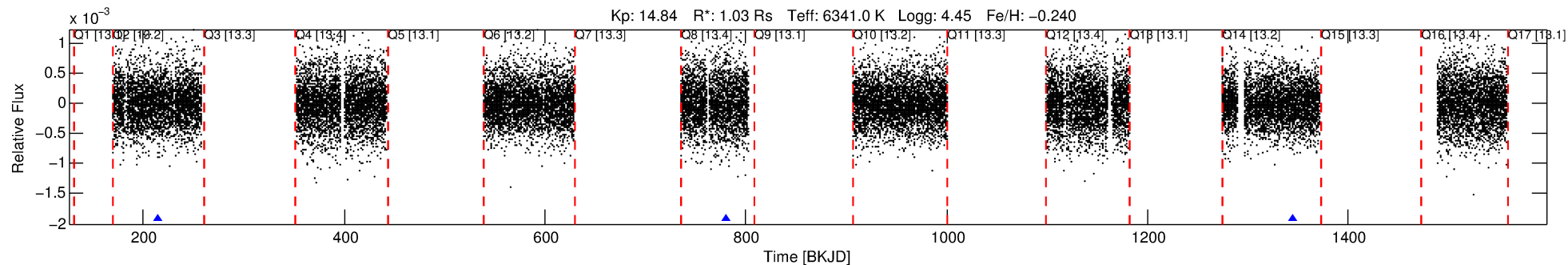
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008030474-01

No Significant Match Found

DV One-Page Summary

KIC: 8030474 Candidate: 1 of 1 Period: 564.541 d



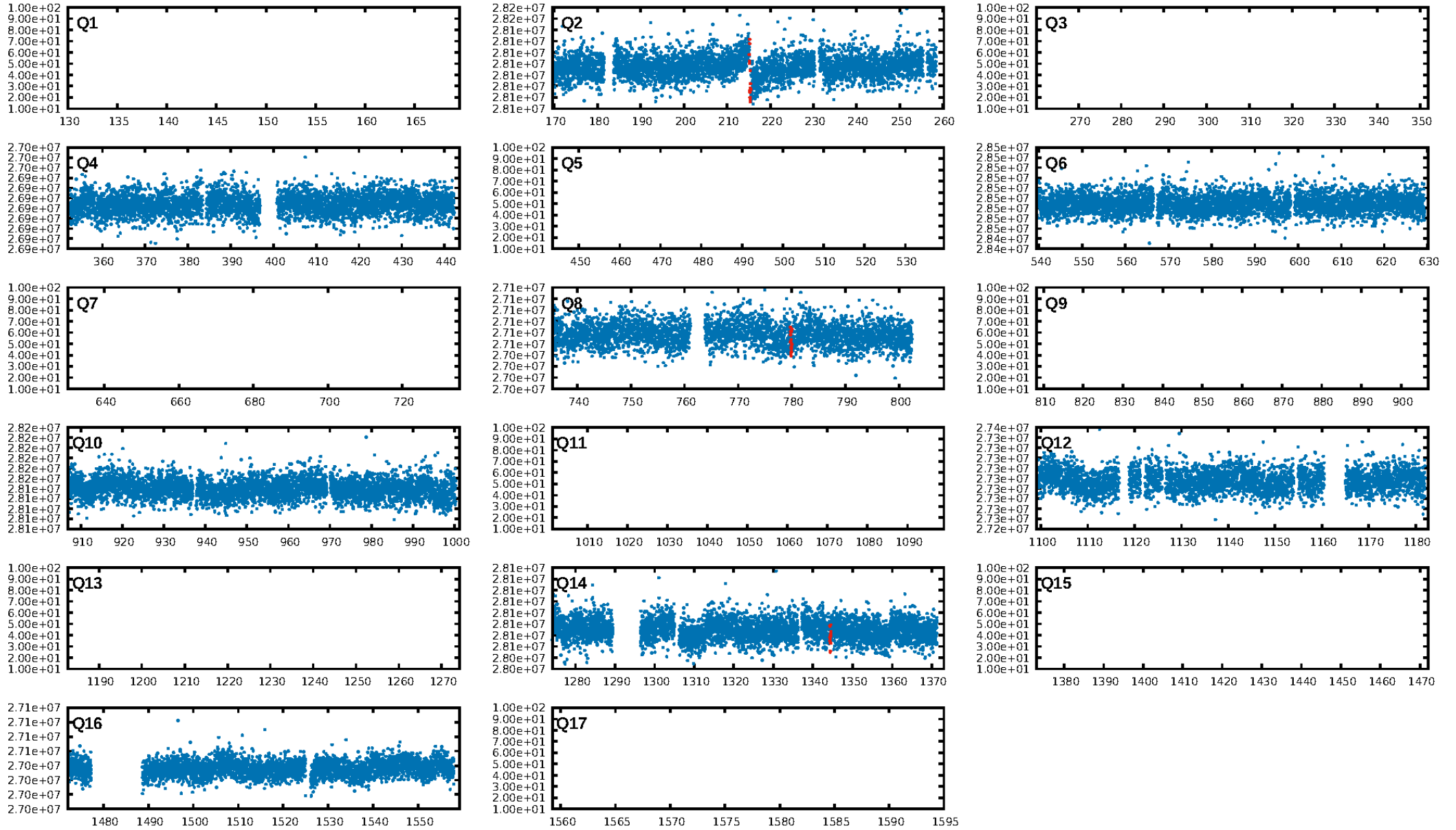
DV Fit Results:

Period = 564.54053 [0.00830] d
Epoch = 215.3136 [0.0119] BKJD
Rp/R* = 0.0245 [0.0245]
a/R* = 816.17 [4320.34]
b = 0.76 [3.02]
Seff = 0.82 [0.34]
Teff = 242 [25] K
Rp = 2.76 [2.90] Re
a = 1.3748 [0.3700] AU
Ag = 30841.68 [63596.53] [0.48 σ]
Teffp = 4968 [2523] K [1.87 σ]

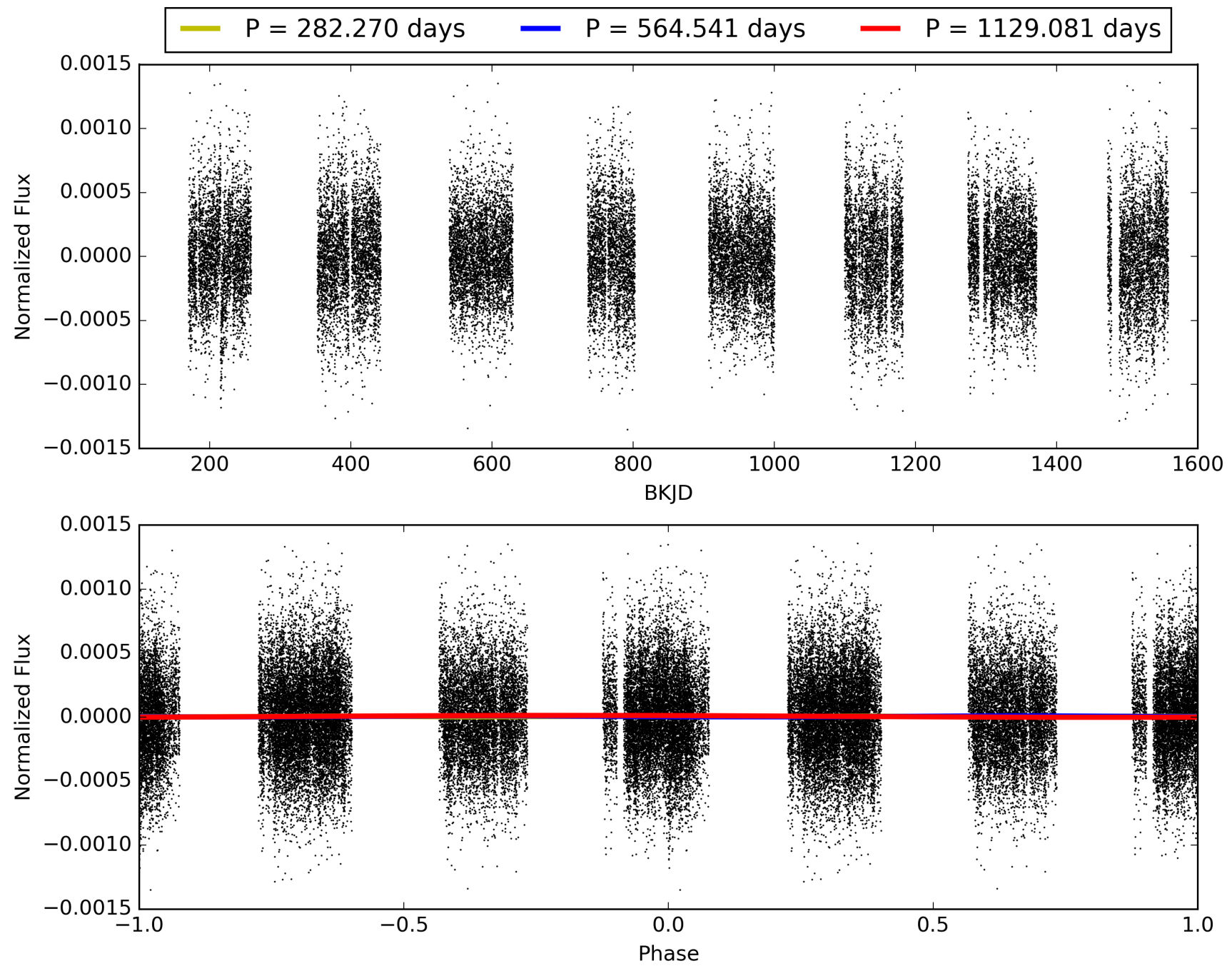
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.3%
ModelChiSquareGof-sig: 96.1%
Bootstrap-pfa: 3.15e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -5.932
Centroid-sig: 3.7%
Centroid-so: 2.874 arcsec [1.59 σ]
OotOffset-rm: 2.290 arcsec [2.00 σ]
KicOffset-rm: 2.264 arcsec [1.98 σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 008030474-01, PDC Light Curves

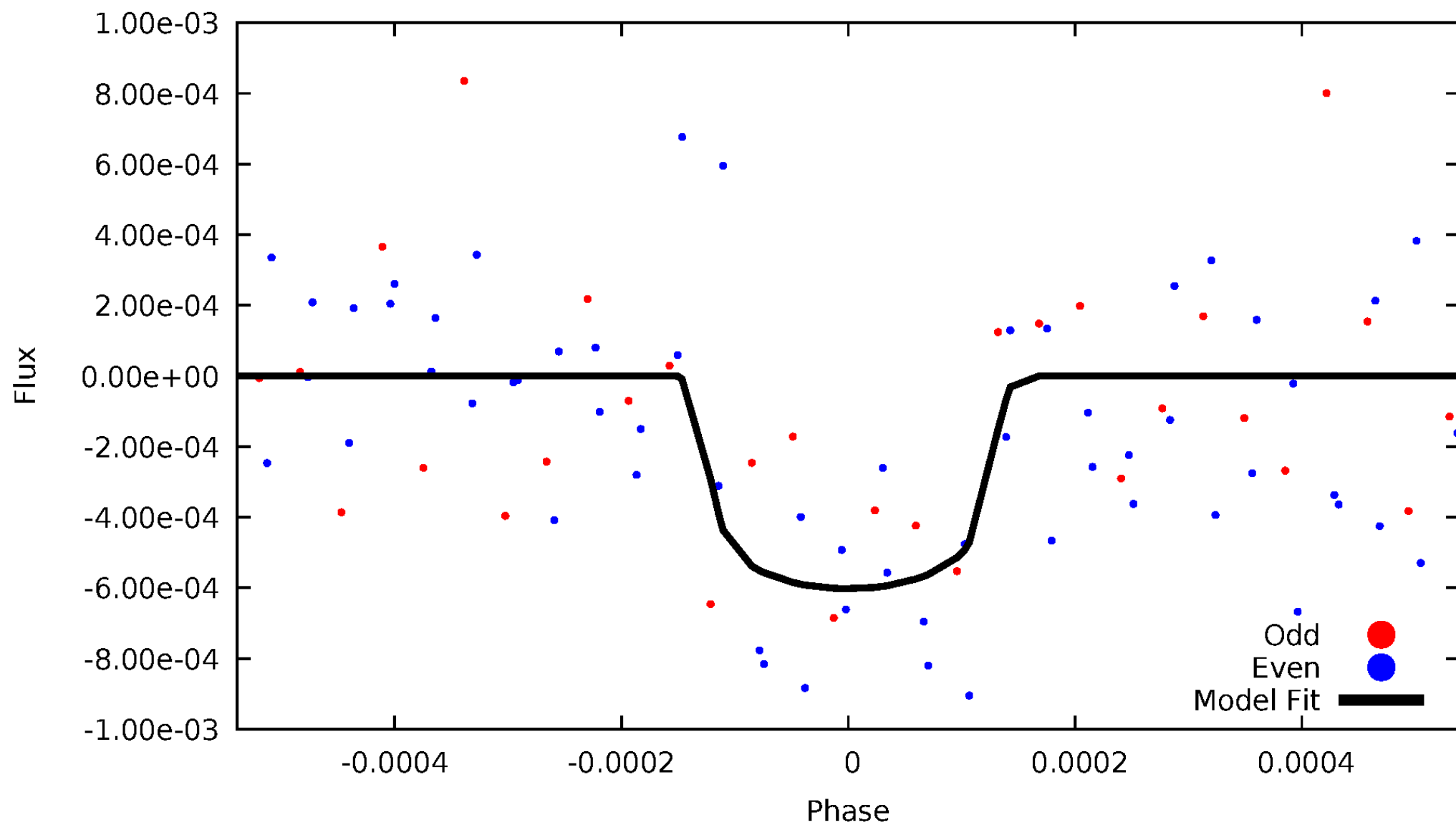


TCE 008030474-01



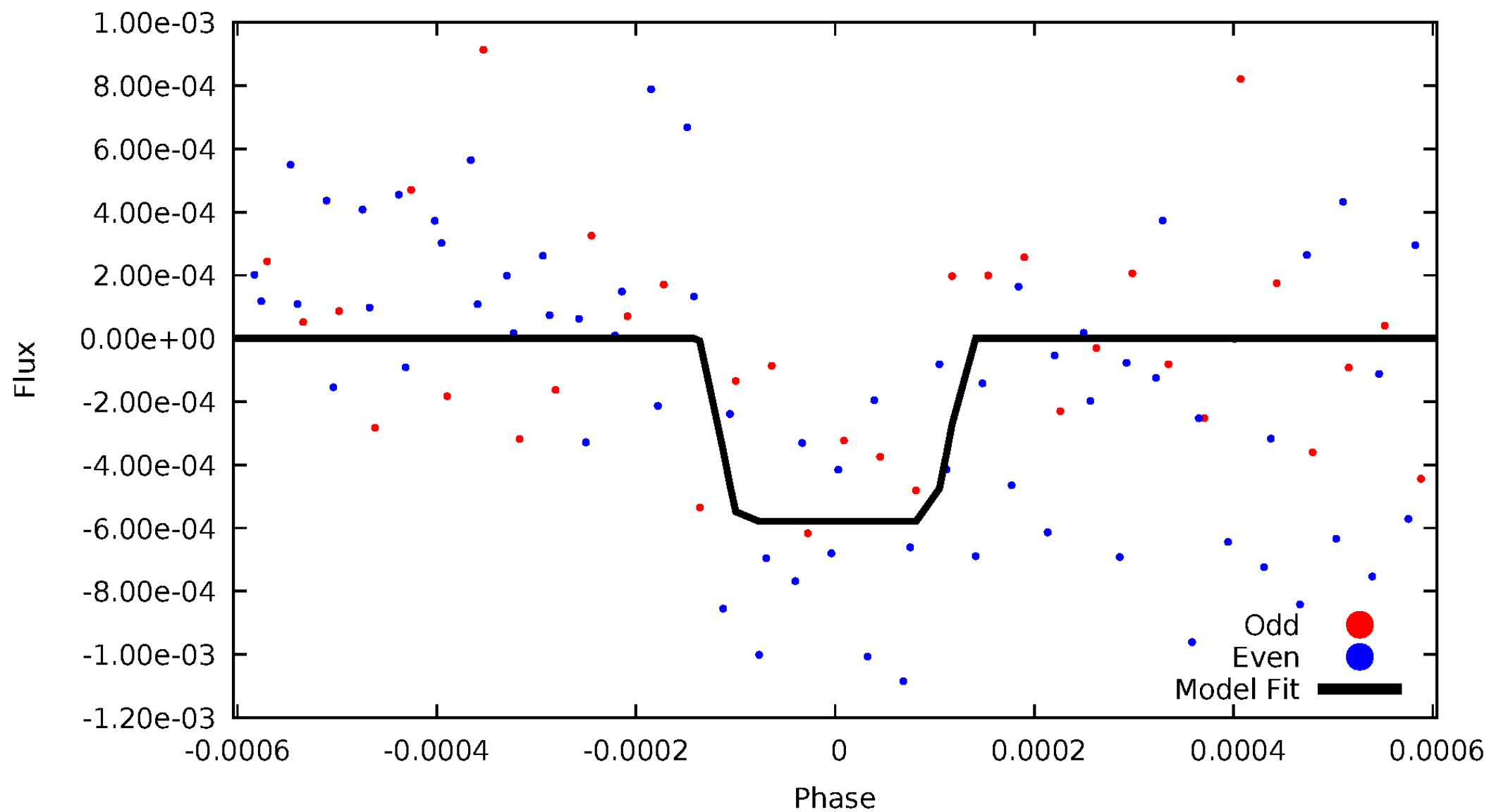
DV Odd/Even

TCE 008030474-01

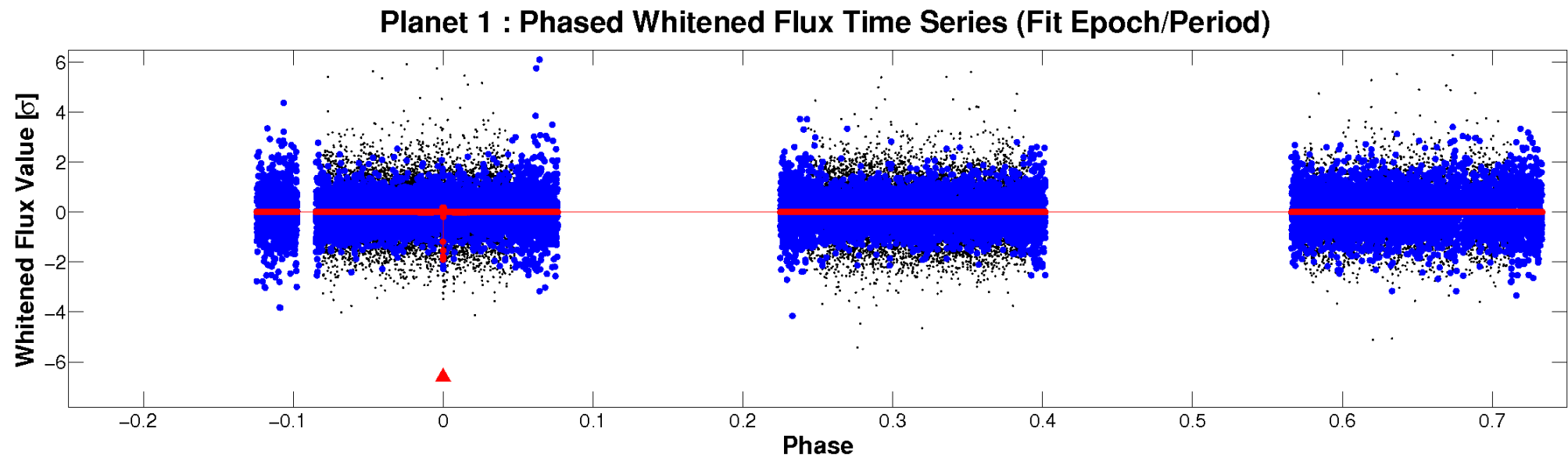
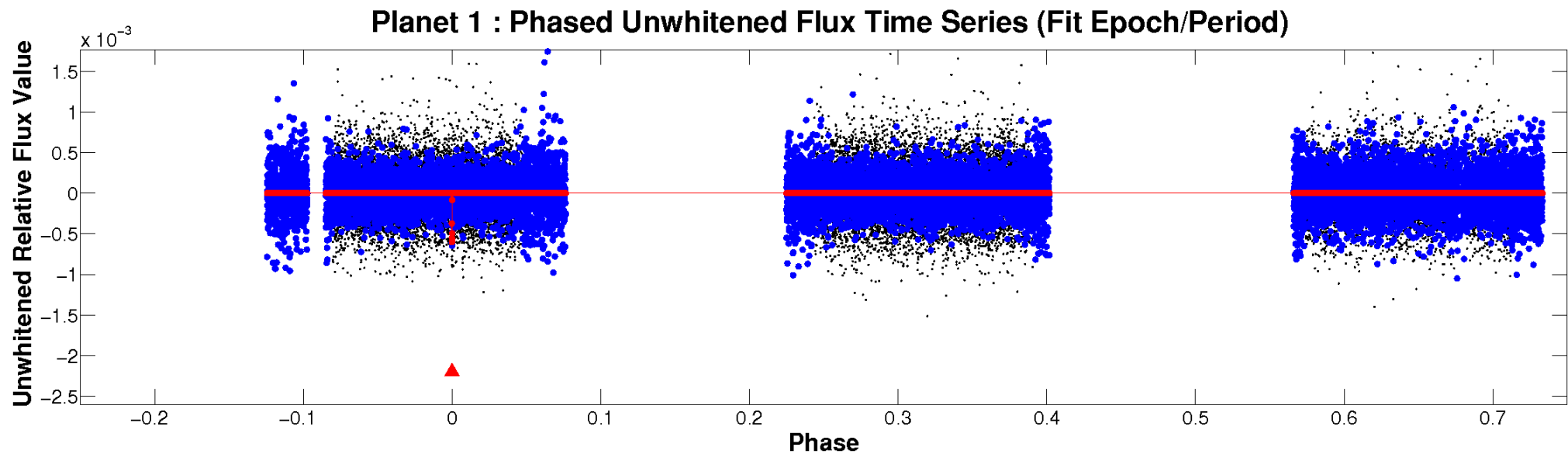


ALT Odd/Even

TCE 008030474-01

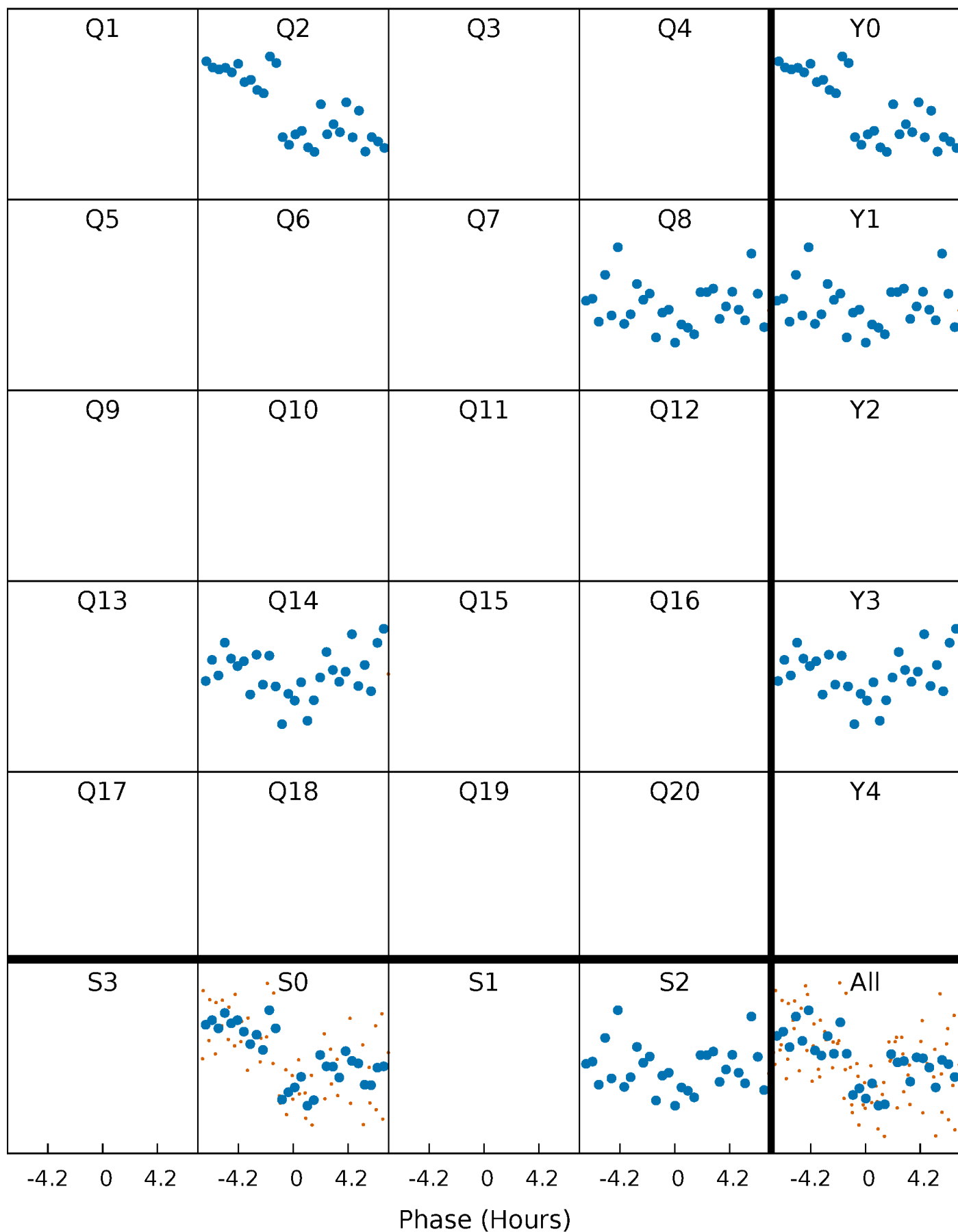


Non-Whitened Vs. Whitened Light Curve



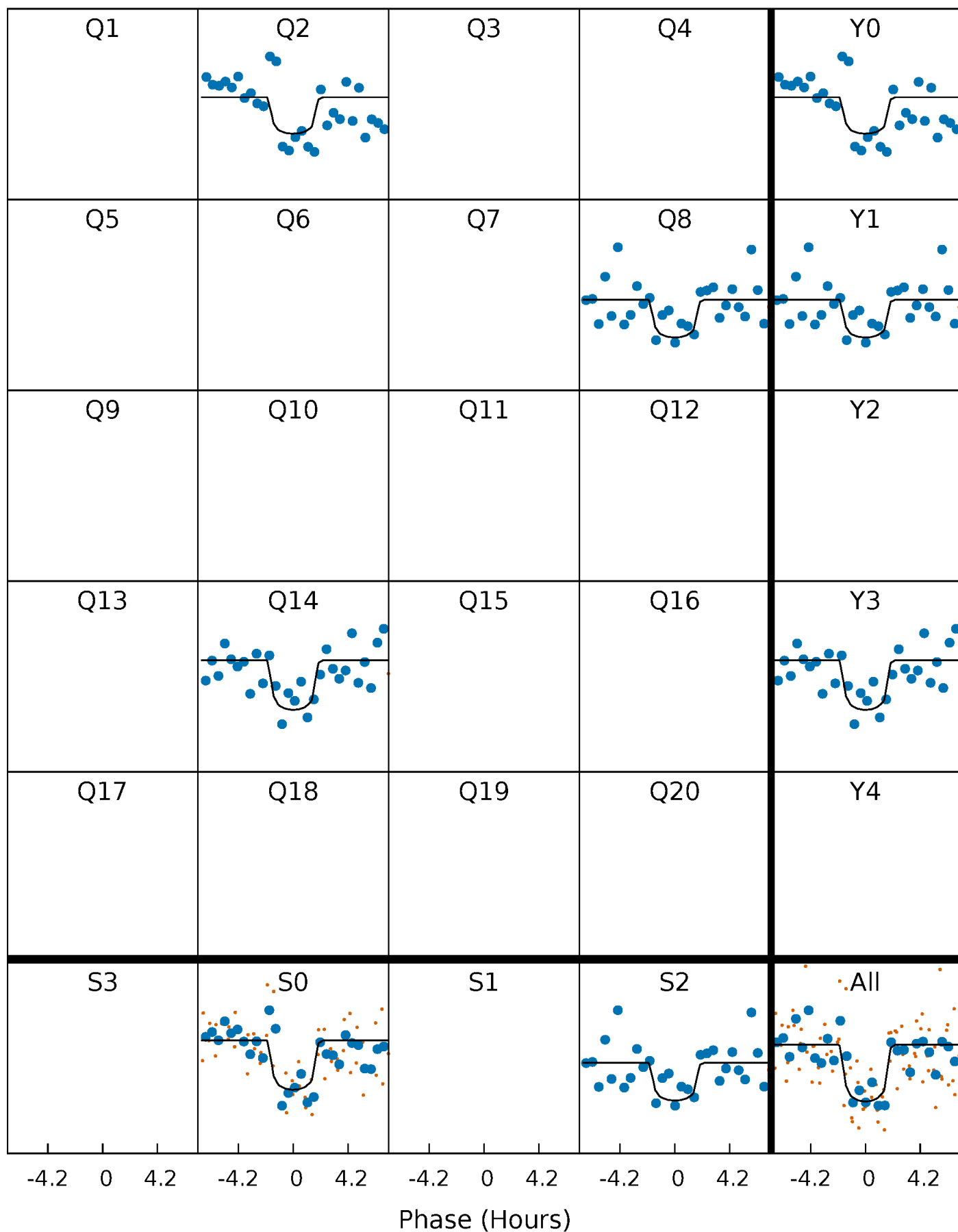
PDC Quarter-Phased Transit Curves

TCE 008030474-01 P=564.540527 Days $T_0=215.313614$ (BKJD)



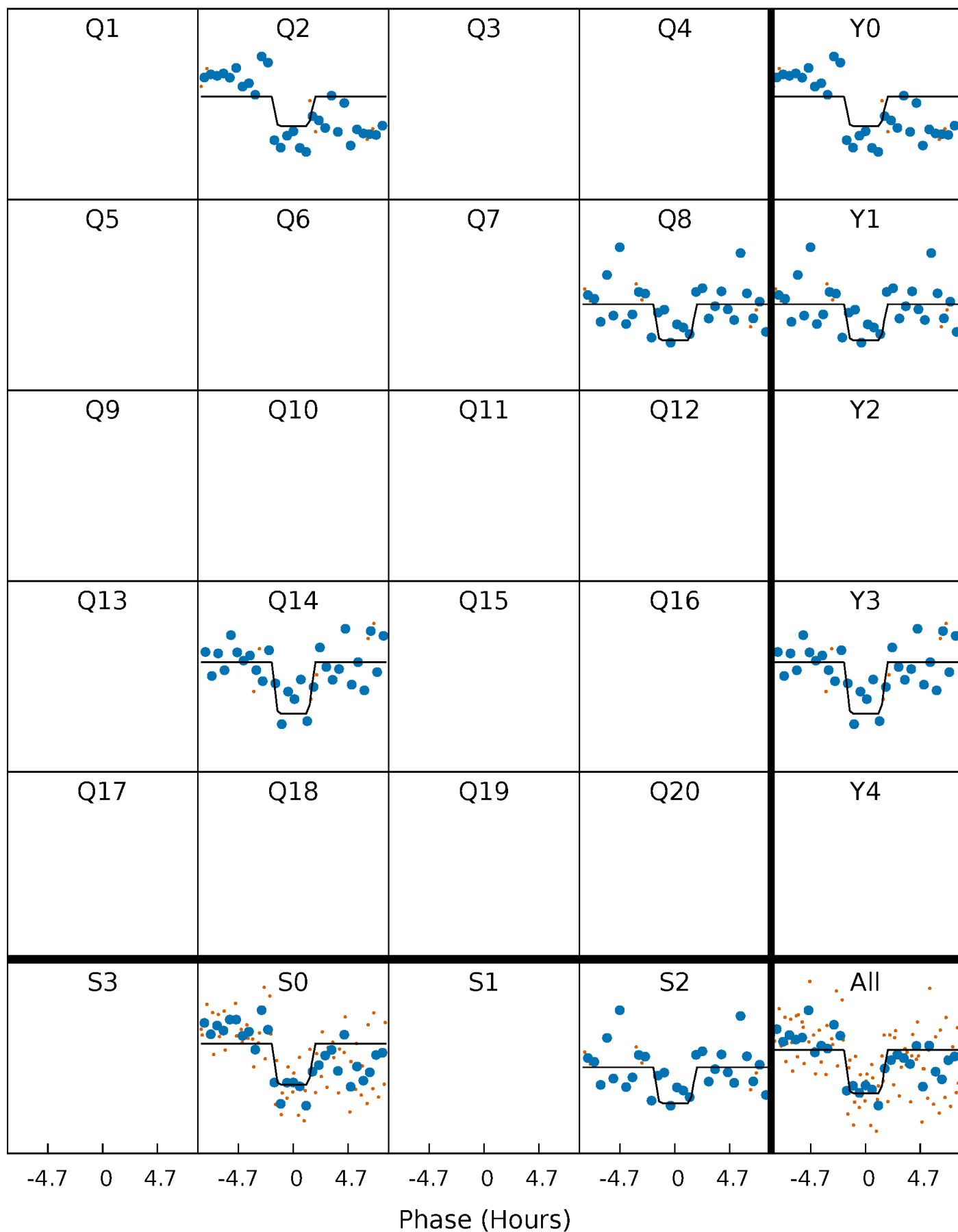
DV Quarter-Phased Transit Curves

TCE 008030474-01 P=564.540527 Days $T_0=215.313614$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

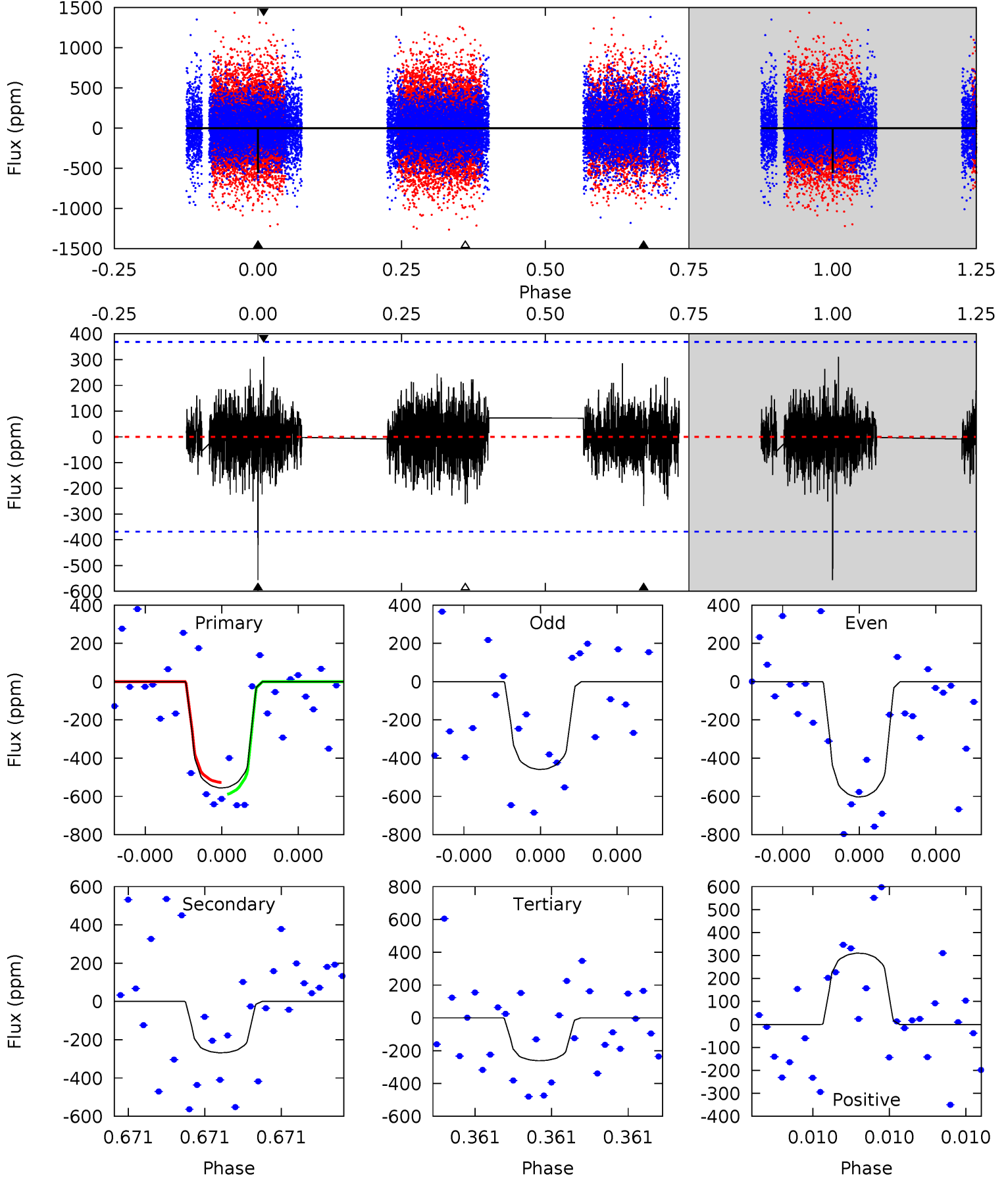
TCE 008030474-01 P=564.527288 Days $T_0=215.335073$ (BKJD)



DV Model-Shift Uniqueness Test

008030474-01, P = 564.540527 Days, E = 215.313614 Days

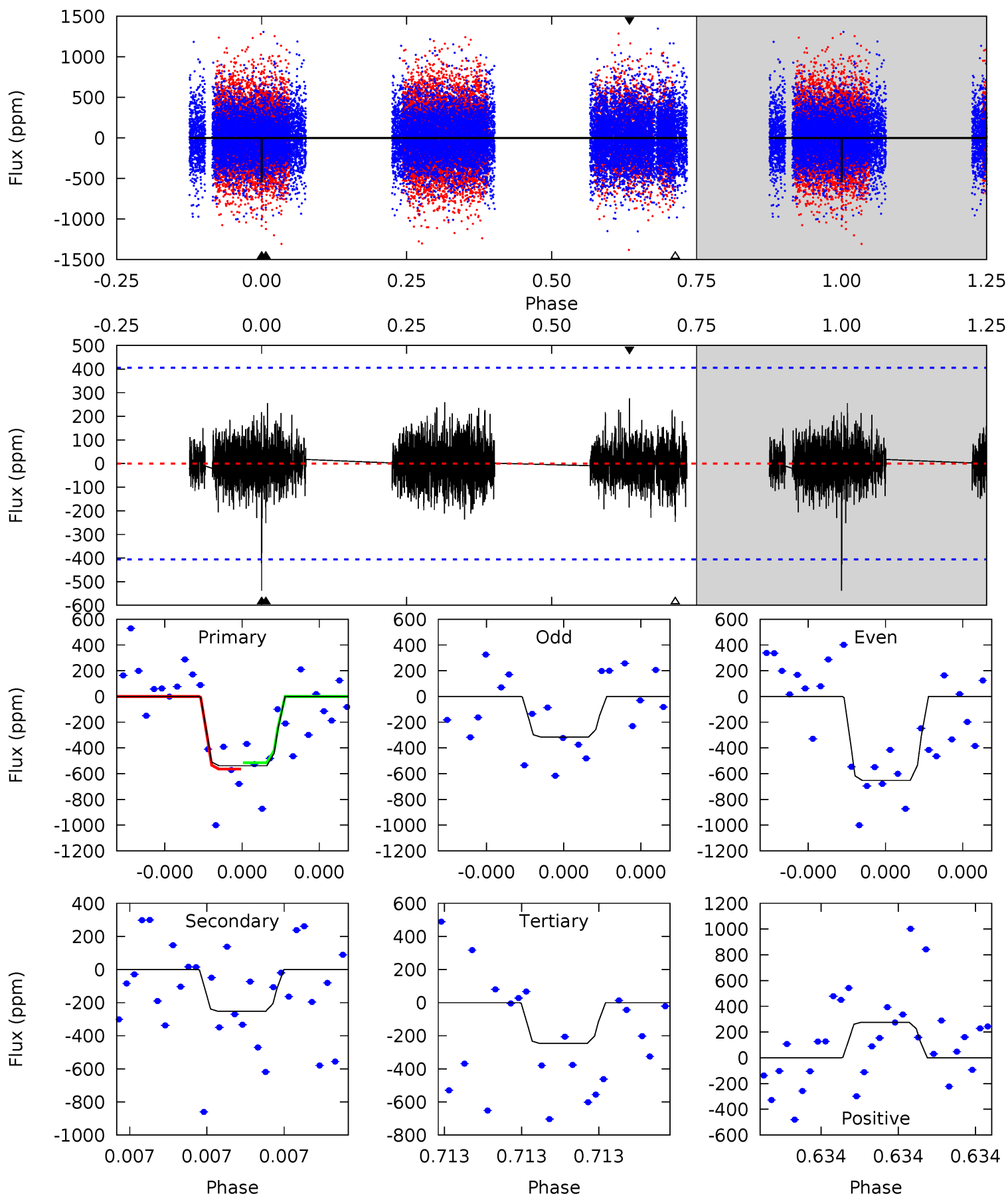
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.53	4.11	4.01	4.76	5.65	3.60	1.08	4.52	3.77	0.11	-0.65	1.07	1.03	0.36	0.48



Alt Model-Shift Uniqueness Test

008030474-01, P = 564.527288 Days, E = 215.335073 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.55	3.53	3.45	3.87	5.69	3.66	0.95	4.10	3.68	0.08	-0.34	2.21	1.18	0.34	0.35



Stellar Parameters For KIC 008030474

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6341^{+176}_{-242}	$4.446^{+0.070}_{-0.210}$	$-0.240^{+0.250}_{-0.300}$	$1.033^{+0.334}_{-0.111}$	$1.083^{+0.154}_{-0.154}$	$1.383^{+0.415}_{-0.759}$
	+3%/-4%	+2%/-5%	+104%/-125%	+32%/-11%	+14%/-14%	+30%/-55%
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 008030474-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-268 ± 65	$3.40^{+2.83}_{-2.14}$	345^{+27}_{-20}	4828^{+3089}_{-1010}	$23378^{+145813}_{-16850}$
Alt.	-252 ± 71	$3.48^{+2.61}_{-2.22}$	345^{+26}_{-20}	4744^{+3150}_{-897}	$20100^{+135278}_{-13542}$

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 $A_{\text{obs}} \gg 1.0$

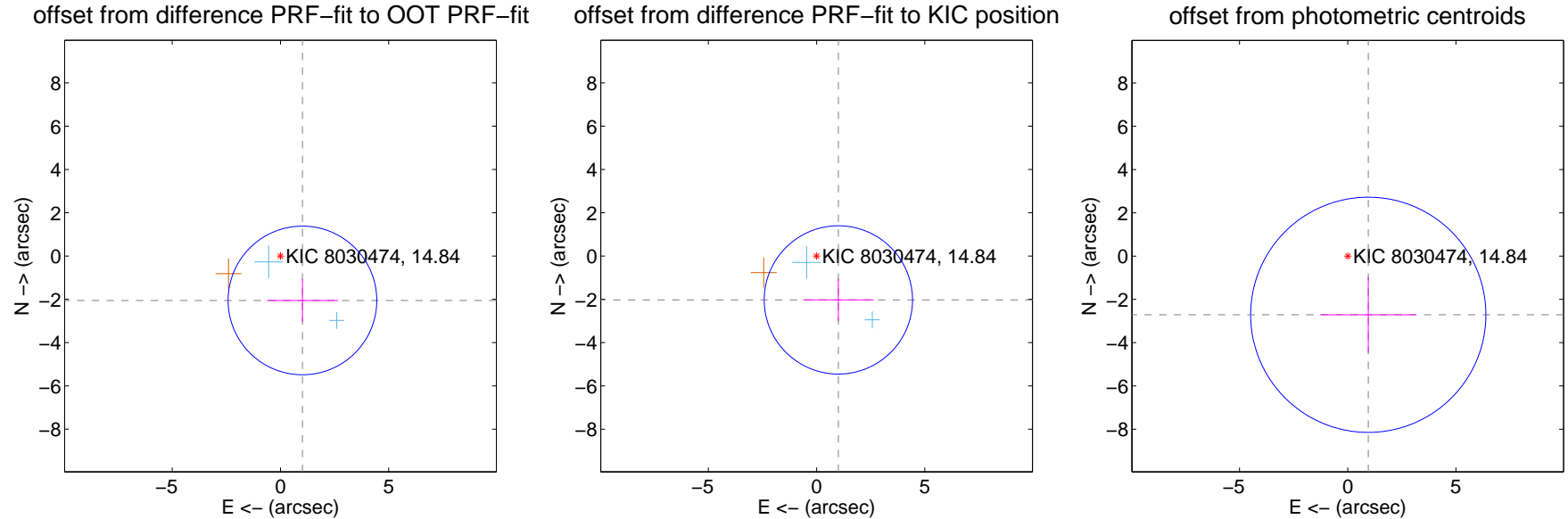
DV Centroid Data

Supplemental centroid analysis for 008030474-01. Kepler magnitude: 14.84. Transit SNR 7.66

There are 2 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.290 ± 1.144	2.00	-1.016 ± 1.643	-2.053 ± 0.985
PRF-fit source offset from KIC position	2.264 ± 1.142	1.98	-1.006 ± 1.628	-2.028 ± 0.986
photometric centroid source offset	2.87 ± 1.81	1.59	-0.95 ± 2.22	-2.71 ± 1.75



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.

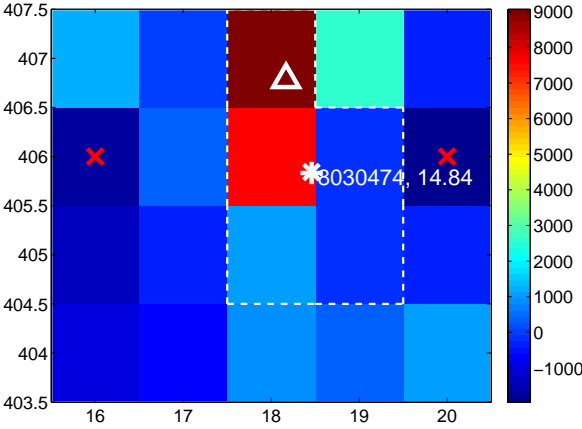
Q1 no difference image



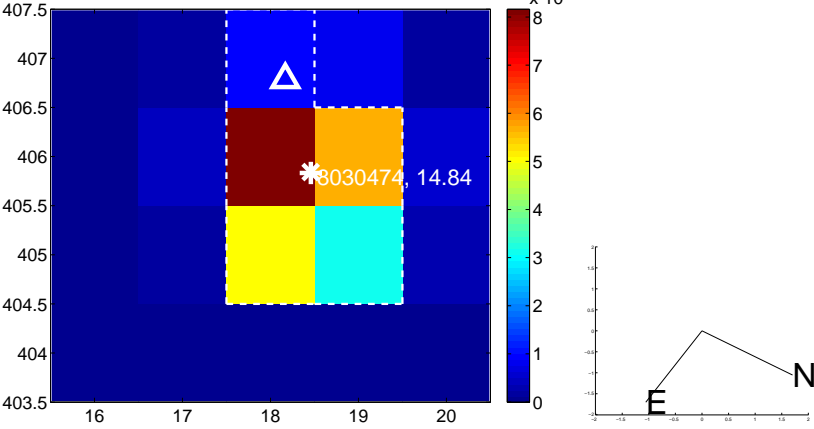
Q1 no OOT image



Q2 difference image



Q2 OOT image



Q3 no difference image



Q3 no OOT image



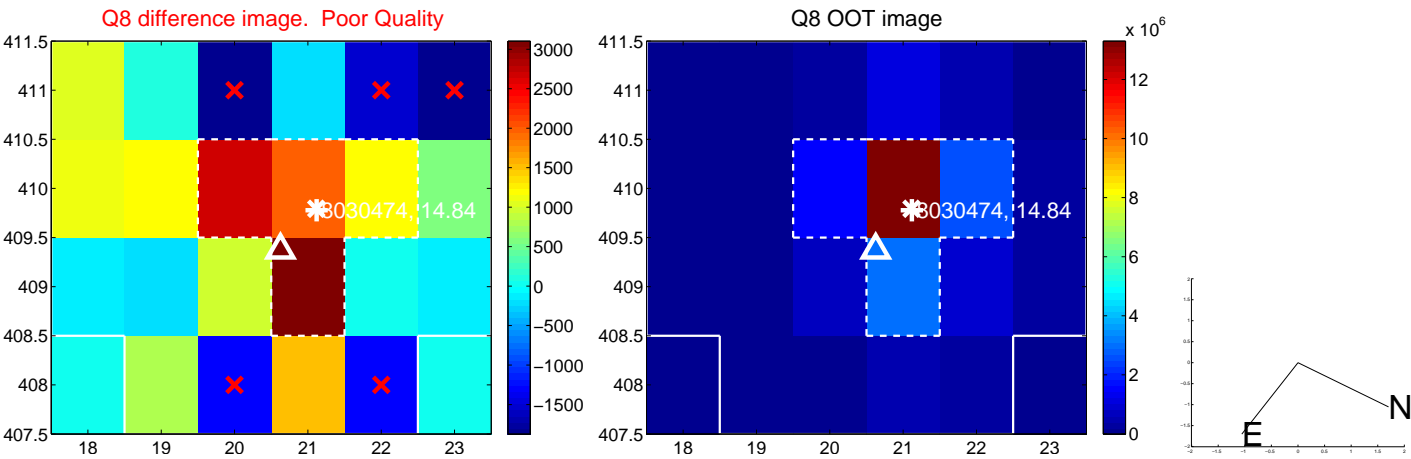
Q4 no difference image



Q4 no OOT image



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.

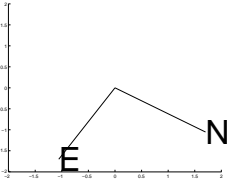
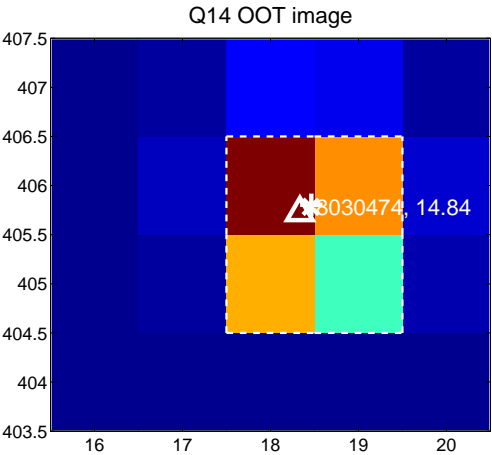
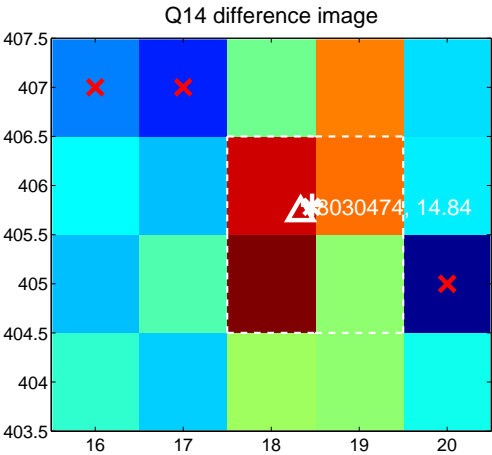


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

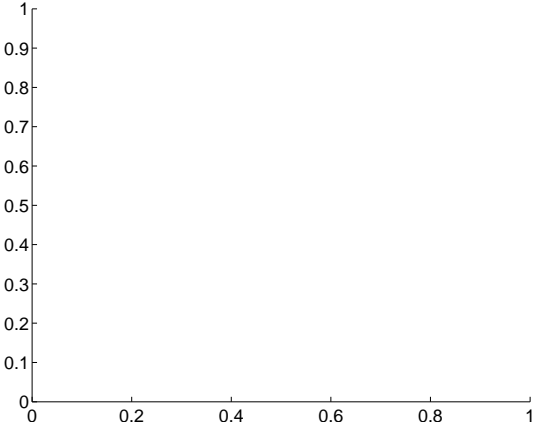
Q13 no difference image



Q13 no OOT image



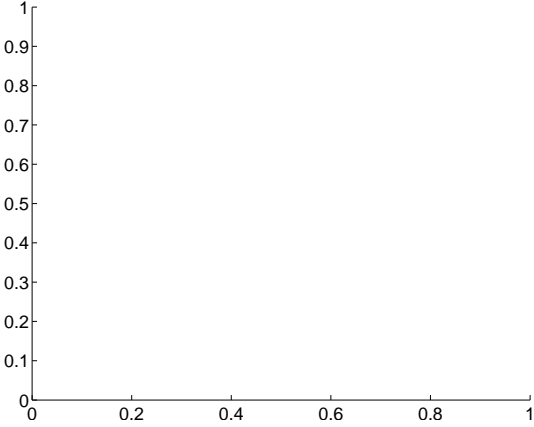
Q15 no difference image



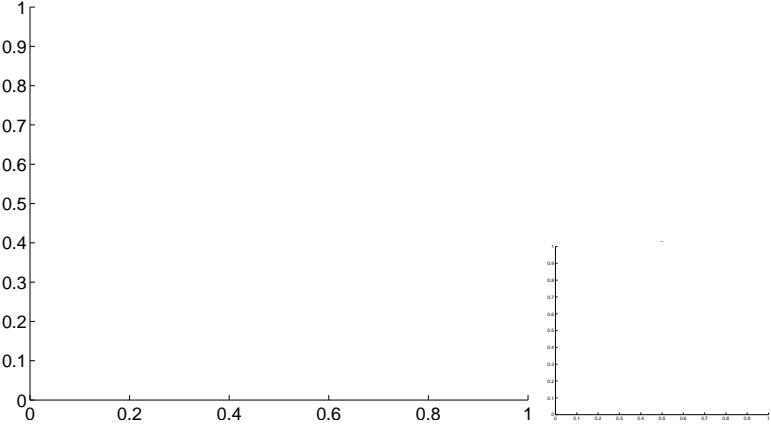
Q15 no OOT image



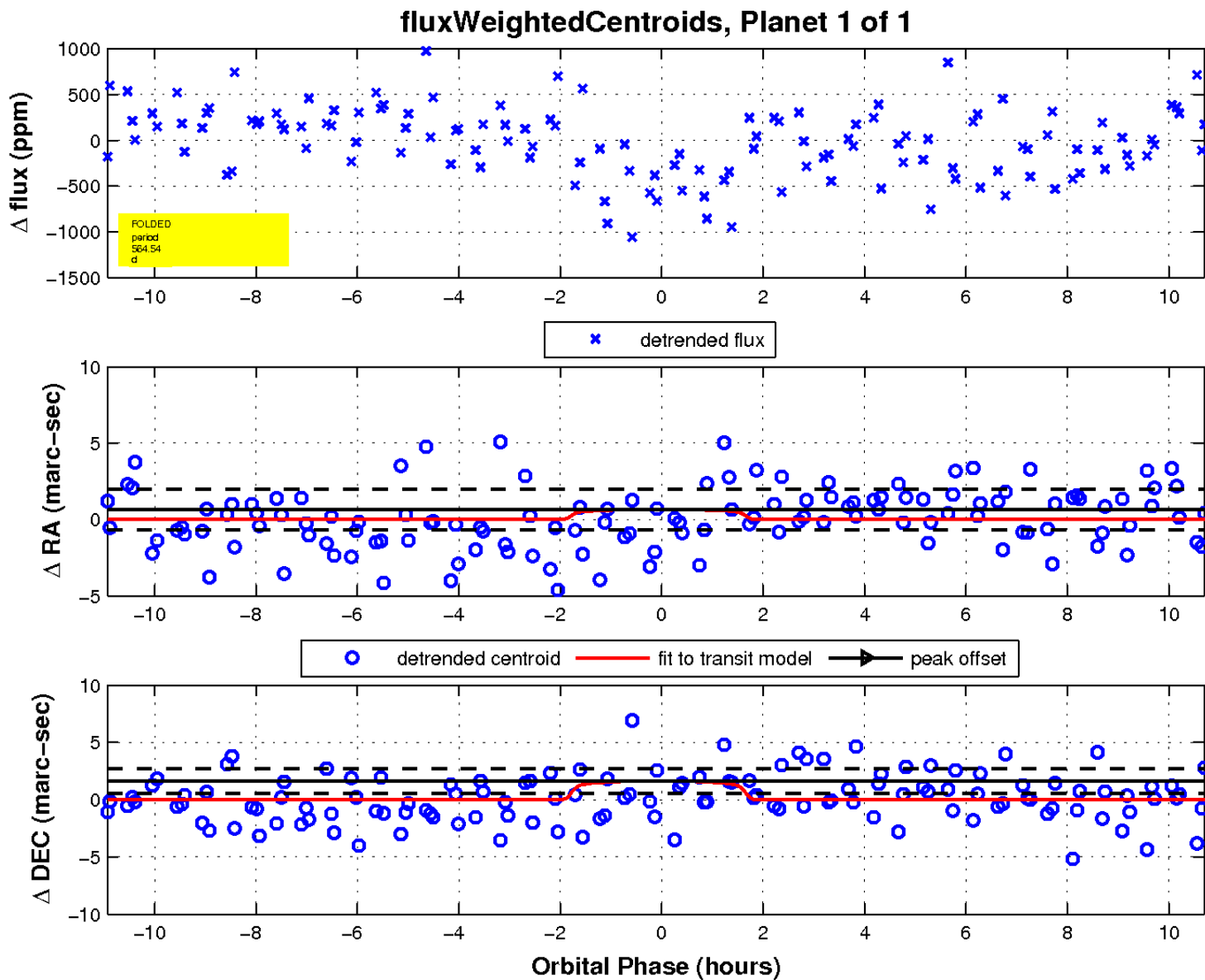
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

