

KIC 002698074

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})
002698074-01	OBS	No	377.081369	415.059865	72.4	11.984	34.9	1.0	1.61	5847	1.55	2.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002698074-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS

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

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

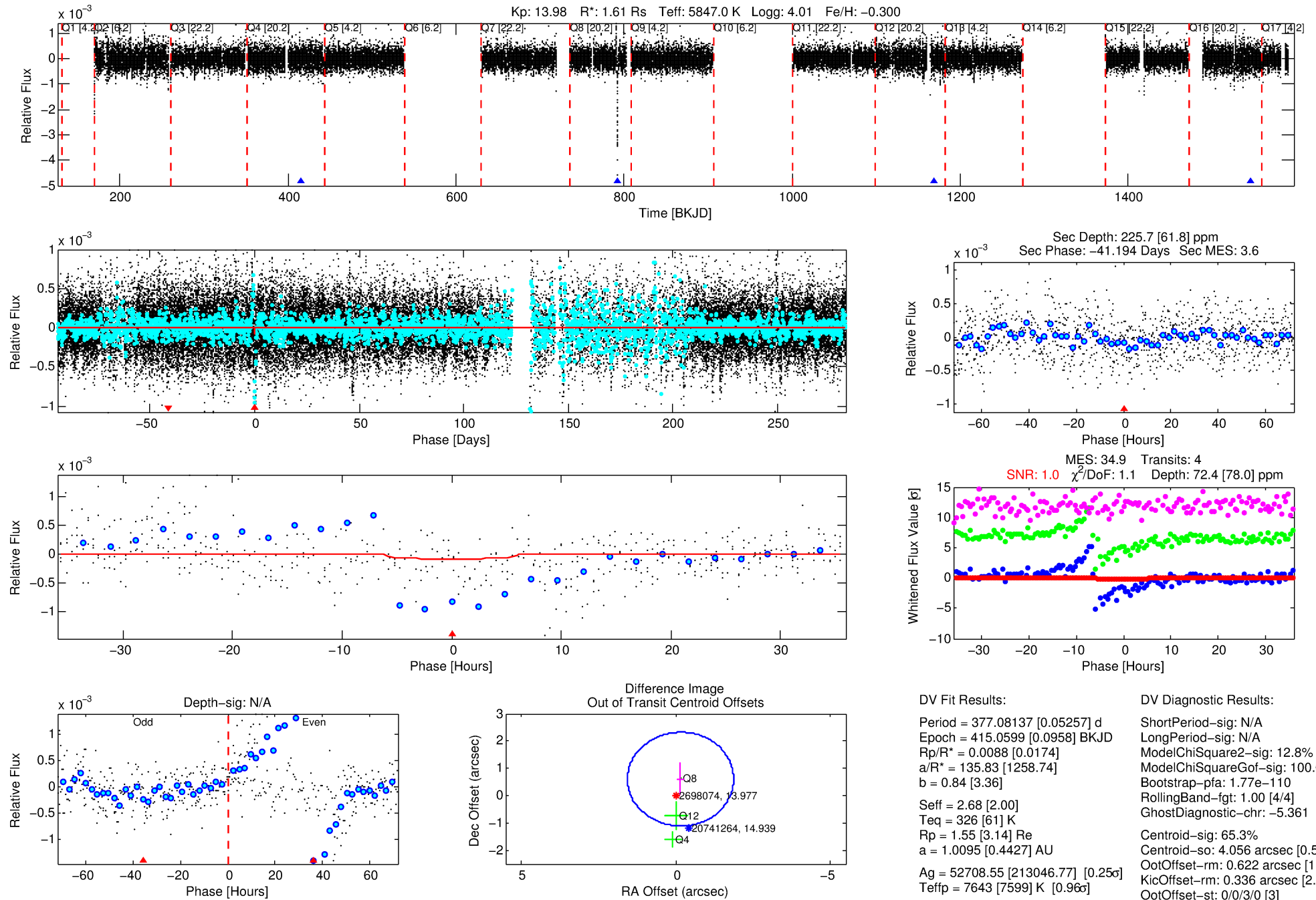
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002698074-01

No Significant Match Found

DV One-Page Summary

KIC: 2698074 Candidate: 1 of 1 Period: 377.081 d



DV Fit Results:

Period = 377.08137 [0.05257] d
Epoch = 415.0599 [0.0958] BKJD
Rp/R* = 0.0088 [0.0174]
a/R* = 135.83 [1258.74]
b = 0.84 [3.36]
Seff = 2.68 [2.00]
Teq = 326 [61] K
Rp = 1.55 [3.14] Re
a = 1.0095 [0.4427] AU
Ag = 52708.55 [213046.77] [0.25σ]
Teffp = 7643 [7599] K [0.96σ]

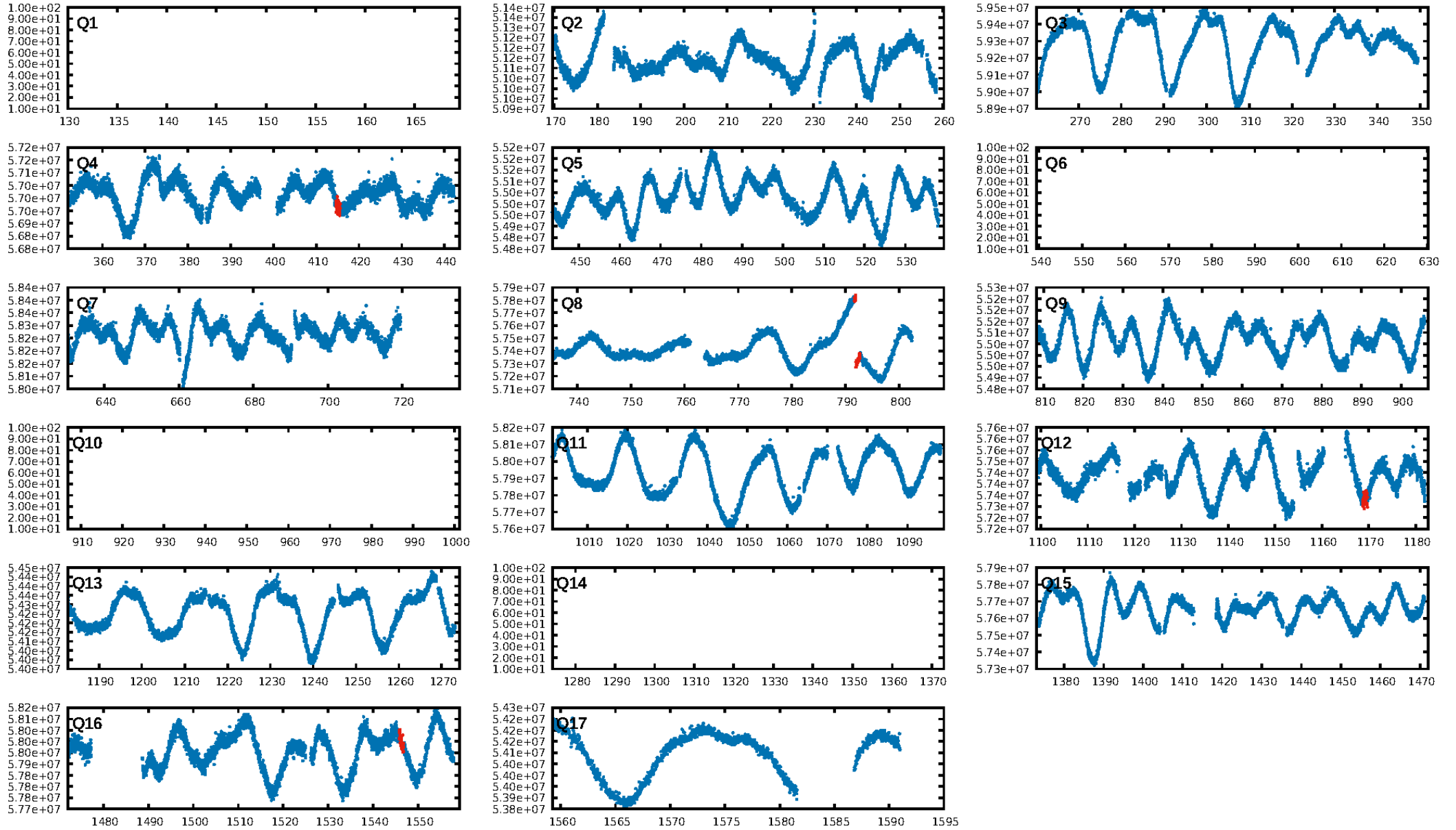
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 12.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.77e-110
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -5.361
Centroid-sig: 65.3%
Centroid-so: 4.056 arcsec [0.50σ]
OotOffset-rm: 0.622 arcsec [1.09σ]
OotOffset-st: 0/0/3/0 [3]
KicOffset-rm: 0.336 arcsec [2.00σ]
KicOffset-st: 0/0/3/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

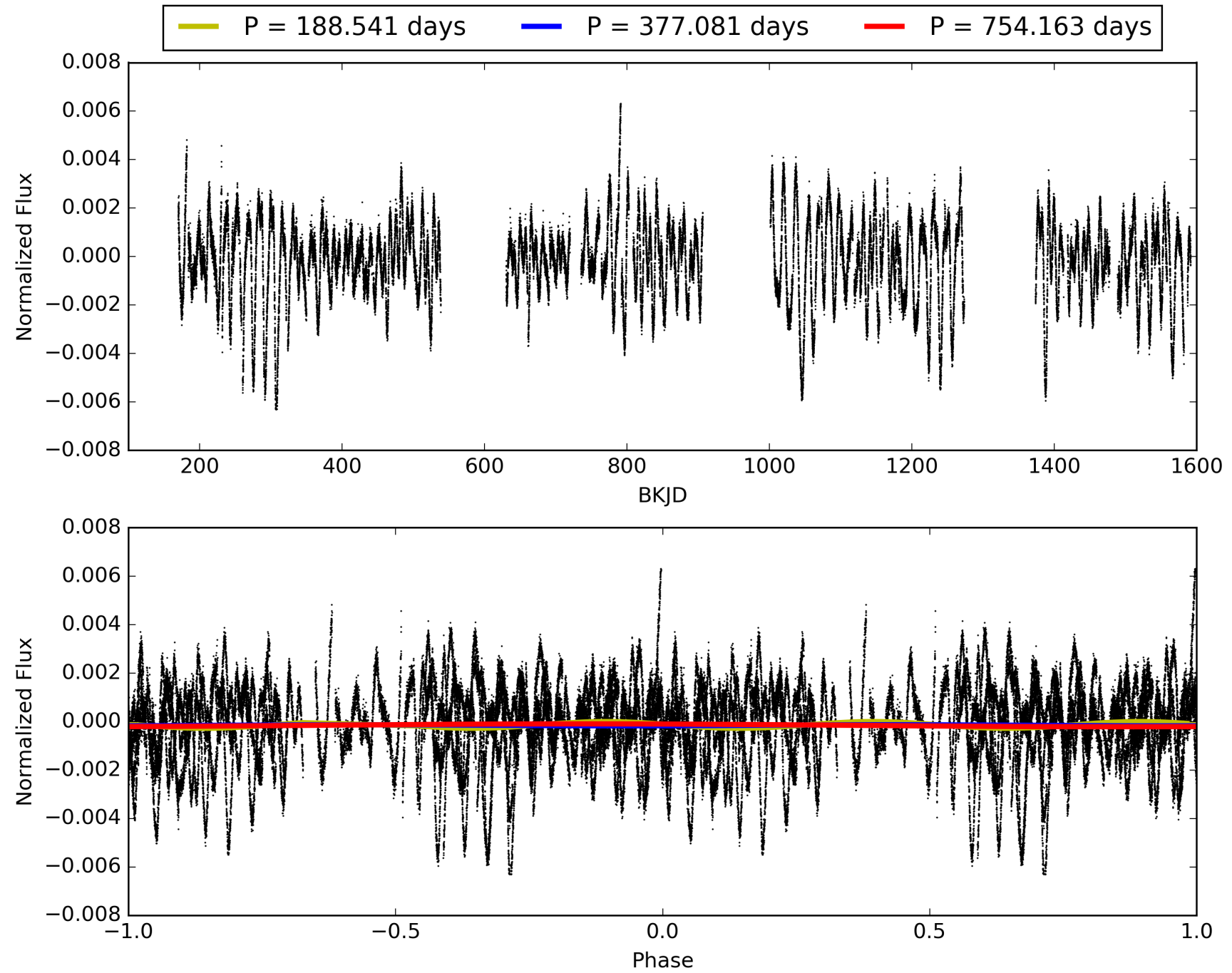
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:59:31 Z

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

TCE 002698074-01, PDC Light Curves

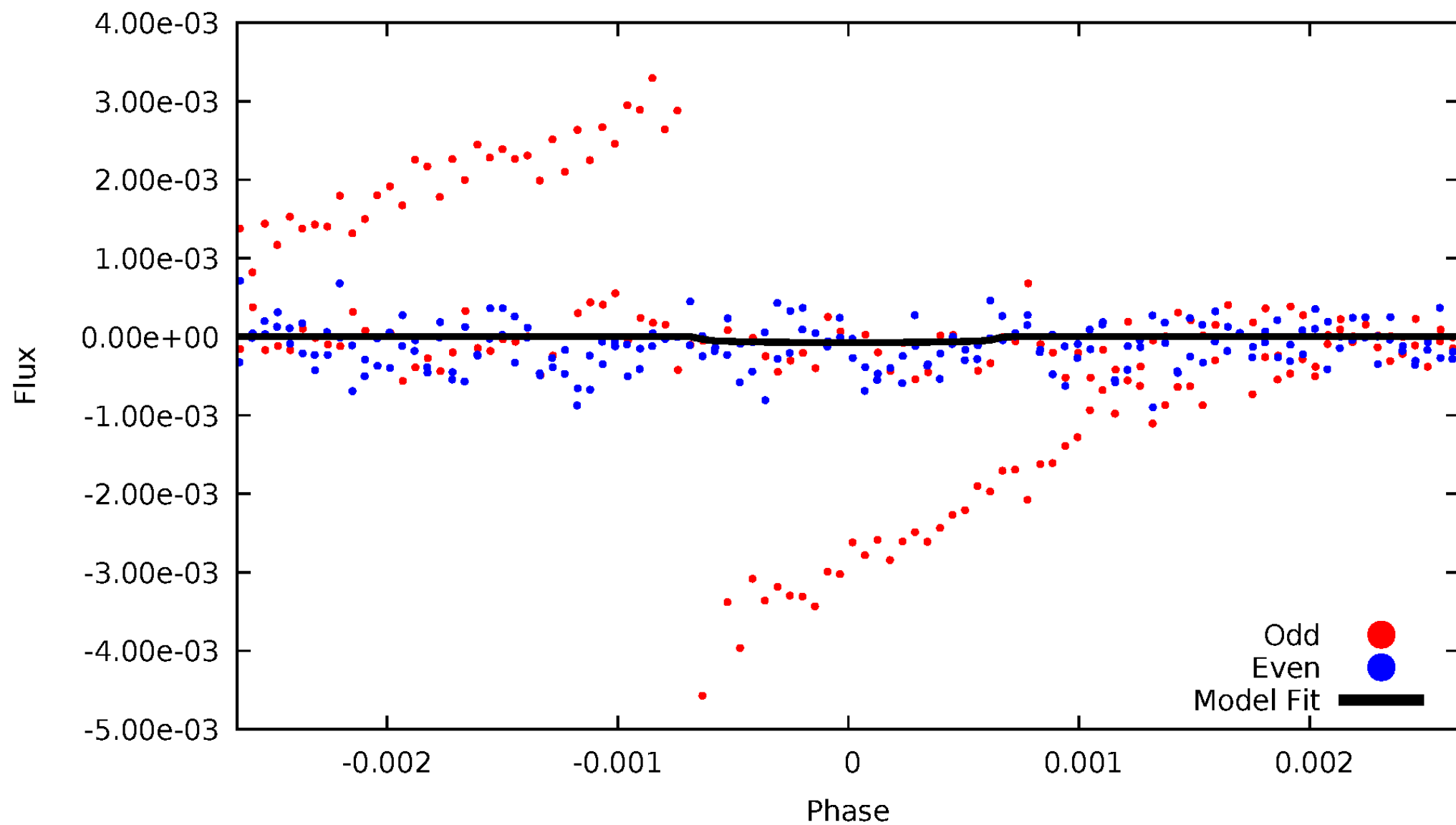


TCE 002698074-01



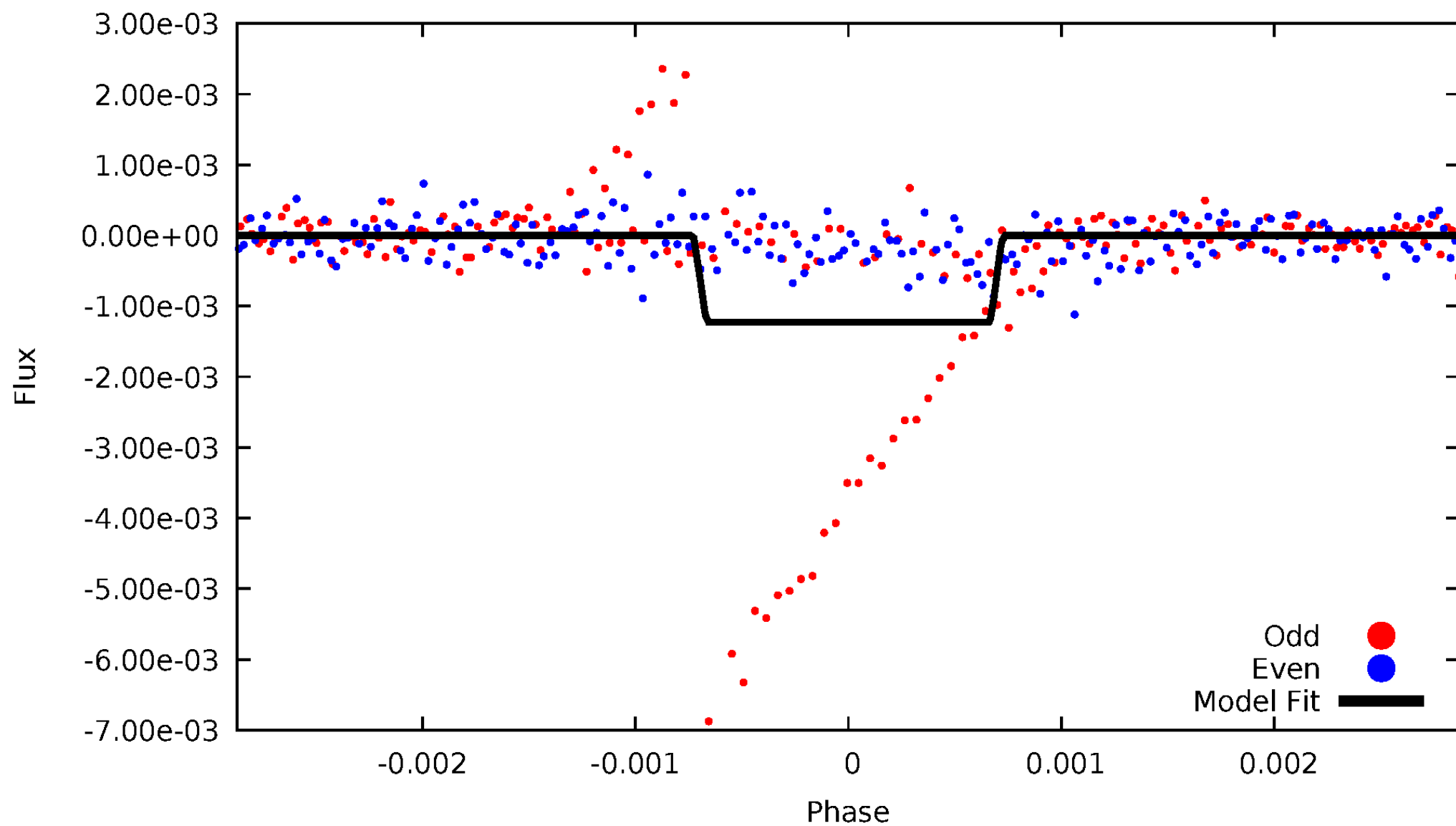
DV Odd/Even

TCE 002698074-01



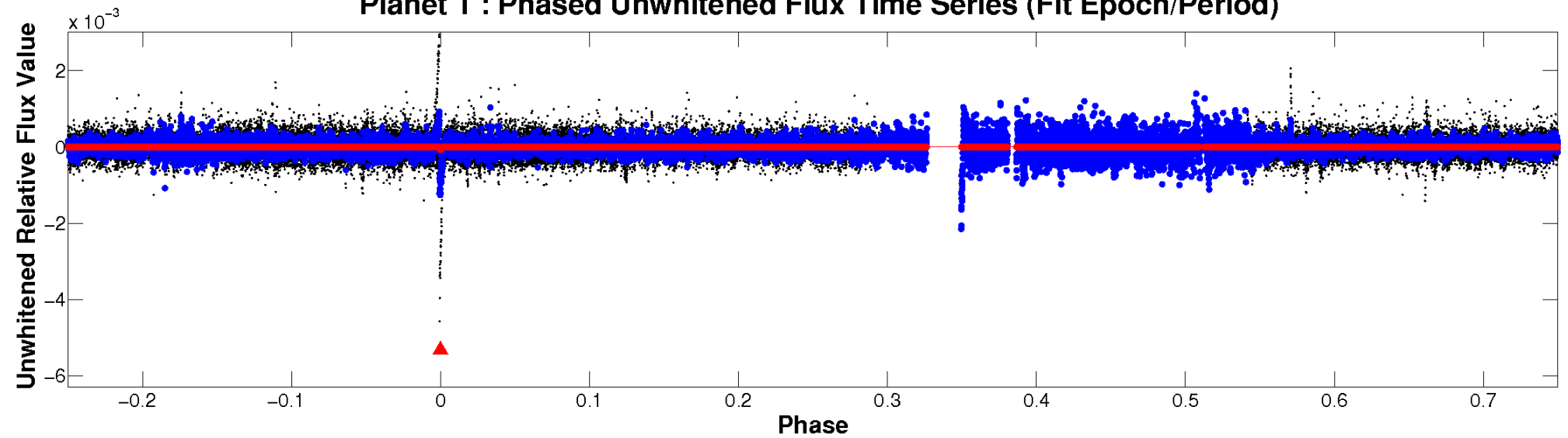
ALT Odd/Even

TCE 002698074-01

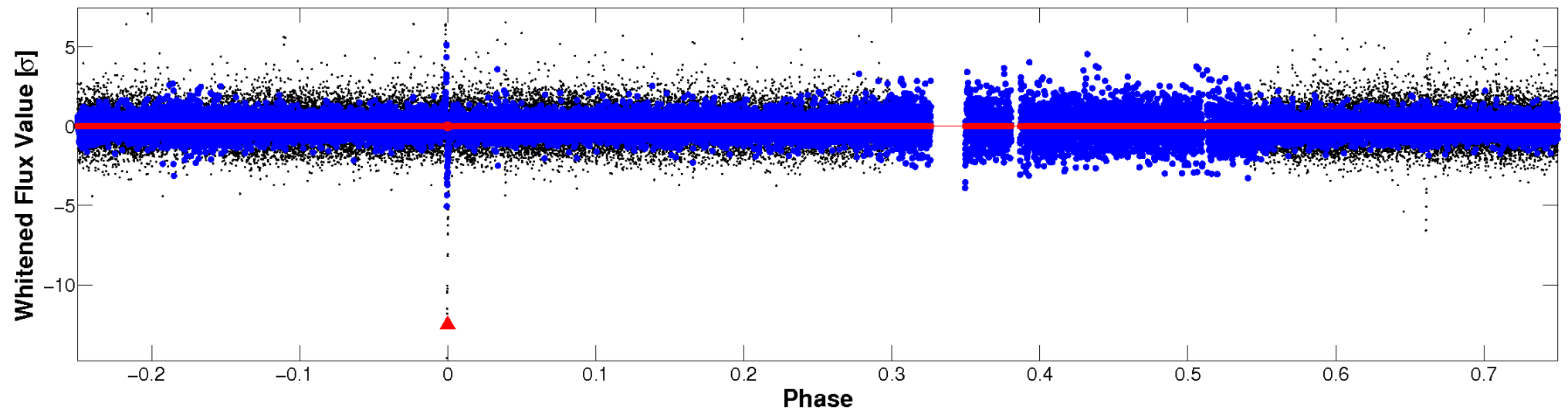


Non-Whitened Vs. Whitened Light Curve

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

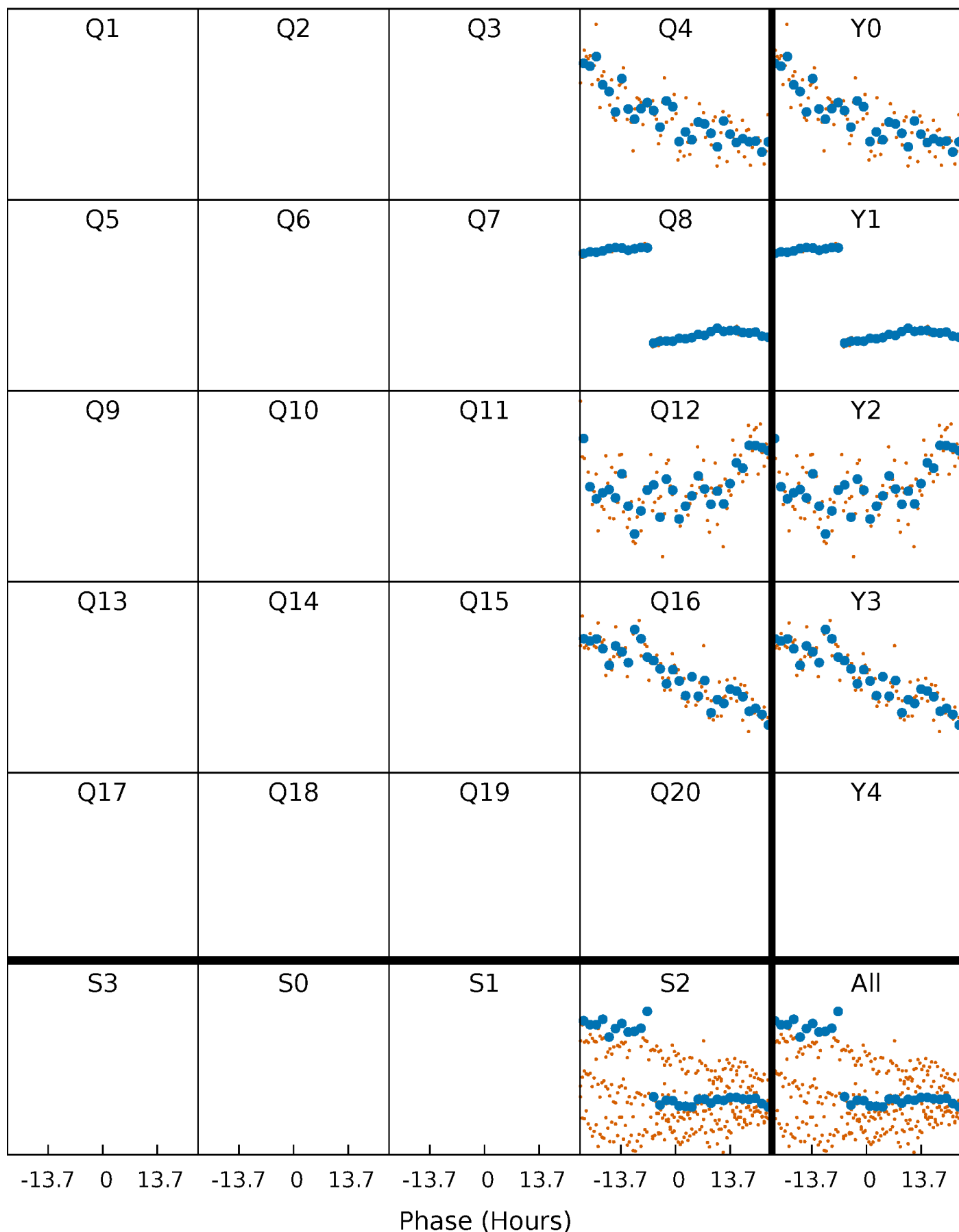


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 002698074-01 P=377.081369 Days $T_0=415.059865$ (BKJD)



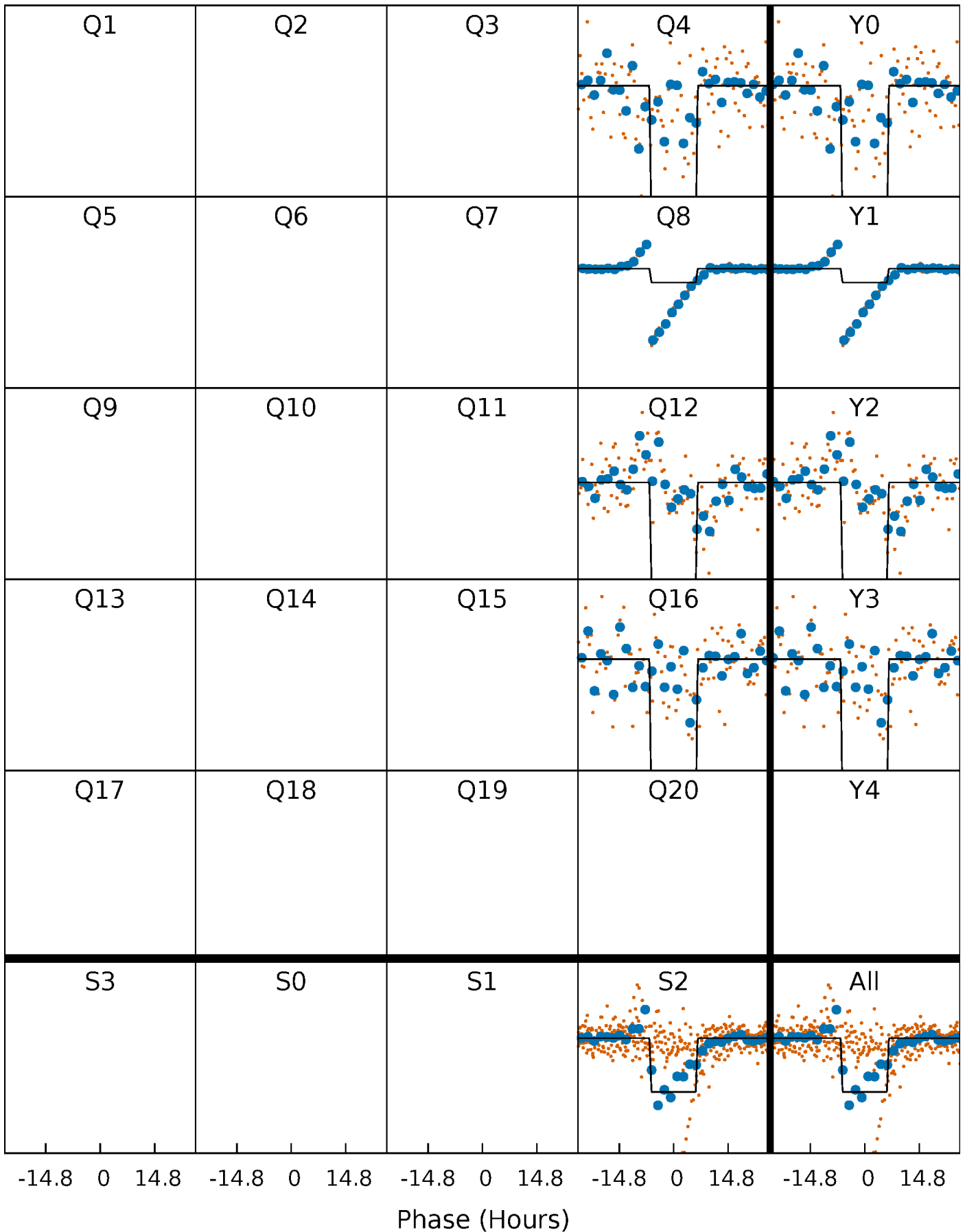
DV Quarter-Phased Transit Curves

TCE 002698074-01 P=377.081369 Days $T_0=415.059865$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

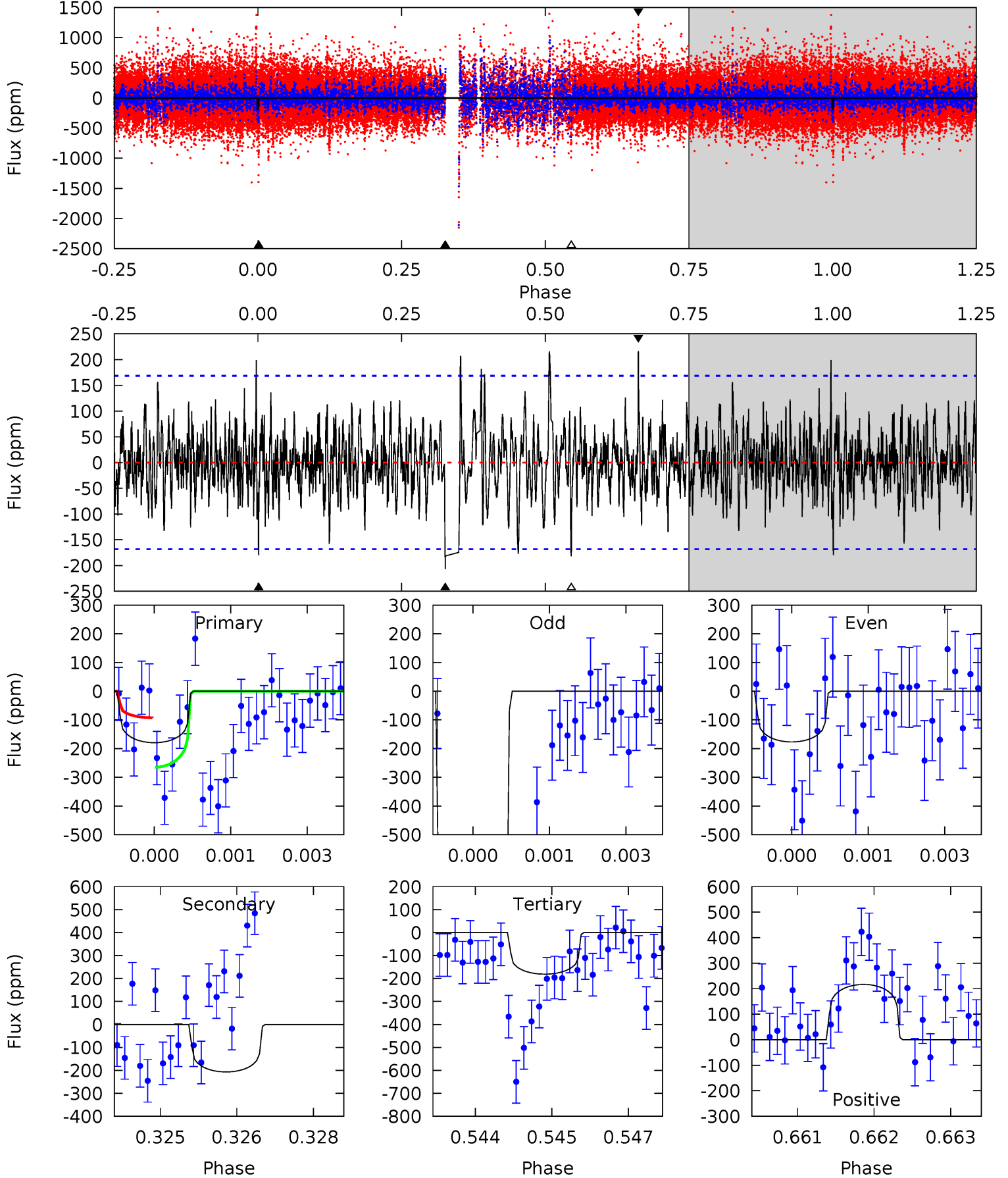
TCE 002698074-01 P=377.169462 Days $T_0=414.980561$ (BKJD)



DV Model-Shift Uniqueness Test

002698074-01, $P = 377.081369$ Days, $E = 37.978496$ Days

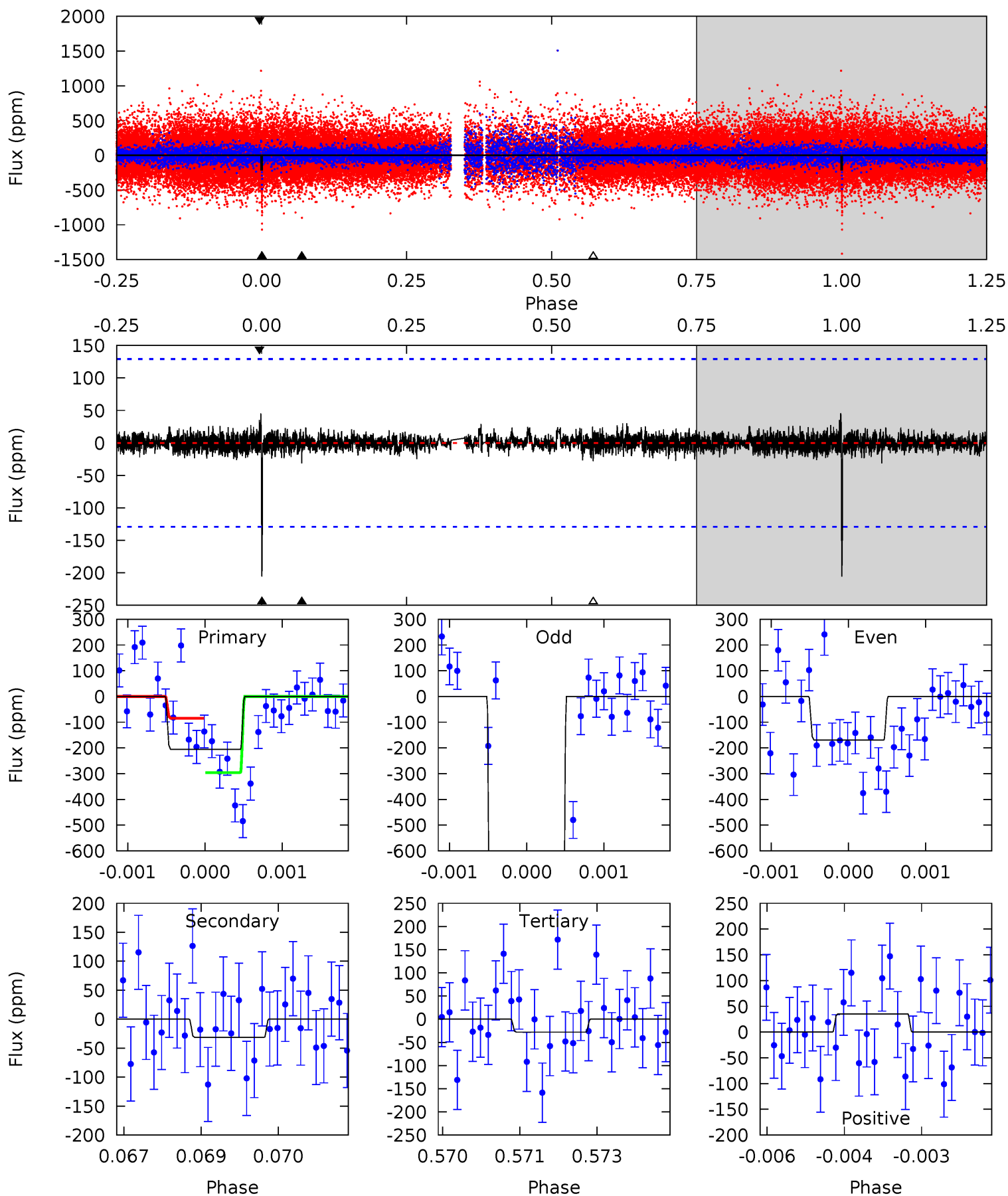
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.75	6.62	5.80	6.94	5.39	3.19	1.57	-0.05	-1.19	0.82	-0.32	25.9	4.67	0.51	2.76



Alt Model-Shift Uniqueness Test

002698074-01, P = 377.169462 Days, E = 37.811099 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.58	1.30	1.16	1.47	5.39	3.19	0.32	7.41	7.11	0.14	-0.17	35.5	5.50	0.18	0



Stellar Parameters For KIC 002698074

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5847^{+192}_{-174}	$4.006^{+0.443}_{-0.148}$	$-0.300^{+0.300}_{-0.250}$	$1.615^{+0.448}_{-0.671}$	$0.965^{+0.128}_{-0.128}$	$0.323^{+1.318}_{-0.135}$
	+3%/-3%	+11%/-4%	+100%/-83%	+28%/-42%	+13%/-13%	+408%/-42%
Source	PHO54	PHO54	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 002698074-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-207 ± 31	$2.57^{+2.64}_{-1.72}$	445^{+38}_{-52}	5693^{+4709}_{-1463}	$18597^{+143495}_{-14254}$
Alt.	-31 ± 24	$5.49^{+3.26}_{-2.64}$	446^{+40}_{-50}	2961^{+651}_{-525}	498^{+1574}_{-391}

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 $A_{obs} \gg 1.0$

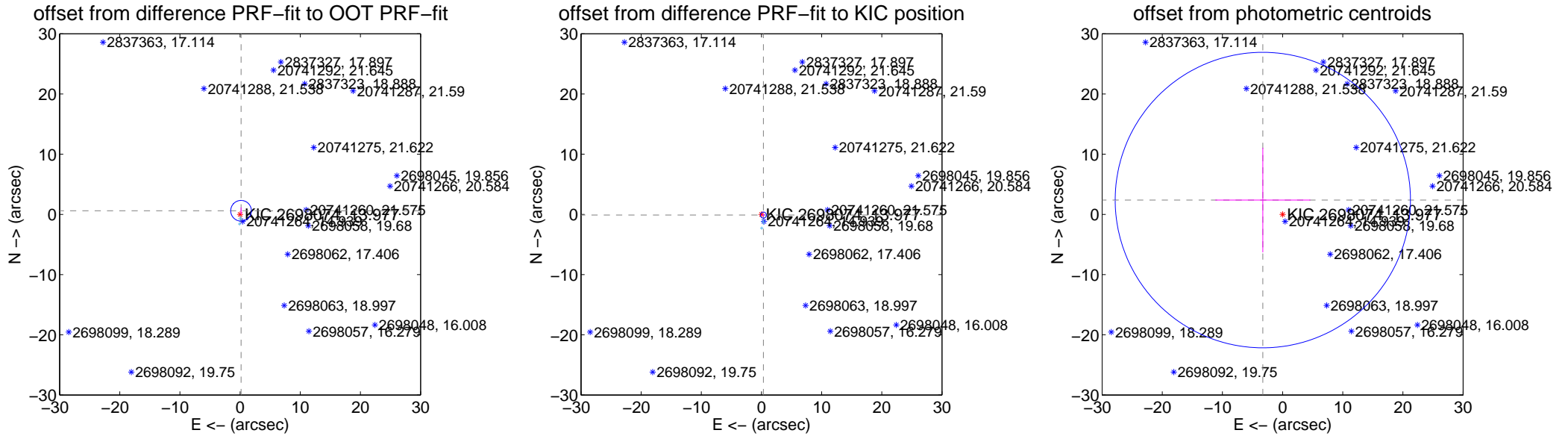
DV Centroid Data

Supplemental centroid analysis for 002698074-01. Kepler magnitude: 13.98. Transit SNR 1.00

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.58 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.622 ± 0.572	1.09	-0.157 ± 0.093	0.602 ± 0.575
PRF-fit source offset from KIC position	0.336 ± 0.167	2.00	-0.316 ± 0.163	-0.113 ± 0.199
photometric centroid source offset	4.06 ± 8.18	0.50	3.28 ± 7.90	2.38 ± 8.68



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



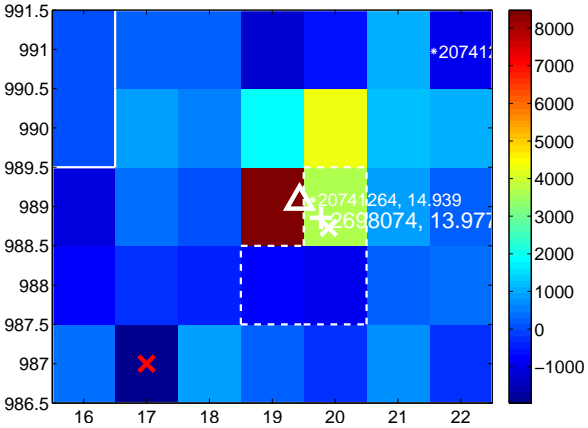
Q3 no difference image



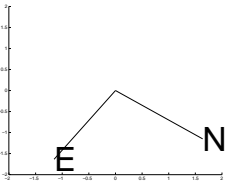
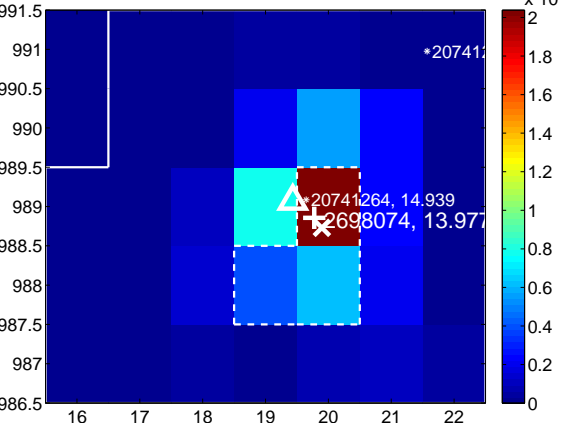
Q3 no OOT image



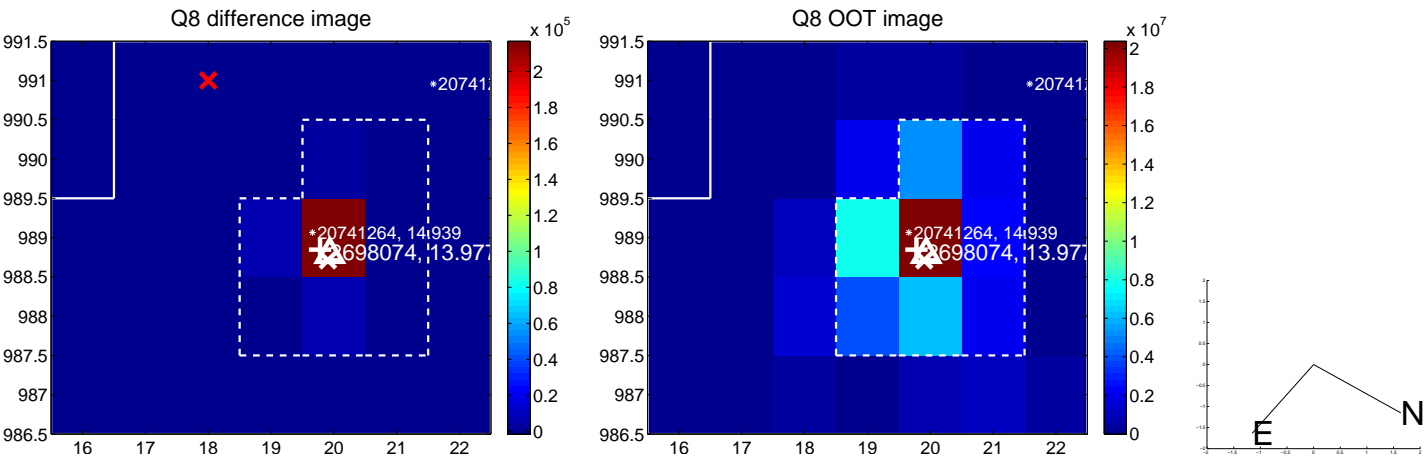
Q4 difference image



Q4 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.

Q9 no difference image



Q9 no OOT image



Q10 no difference image



Q10 no OOT image



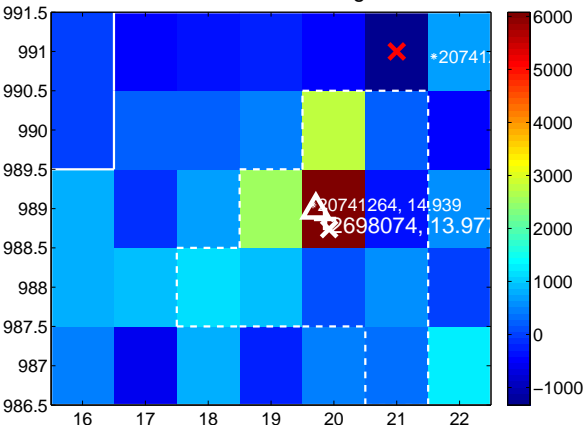
Q11 no difference image



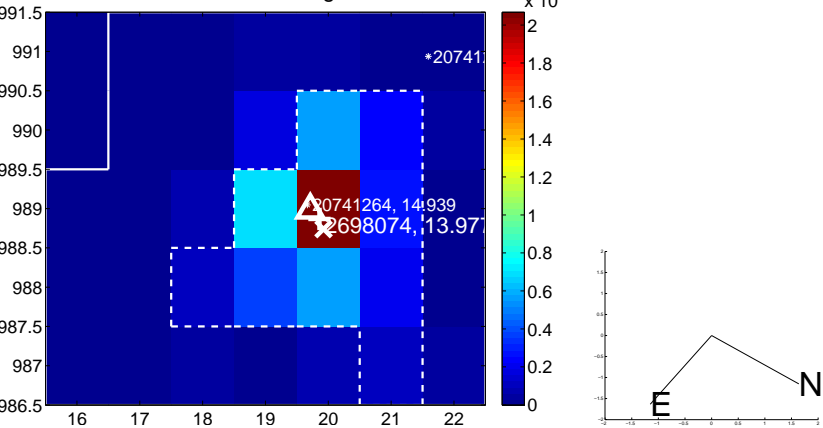
Q11 no OOT image



Q12 difference image



Q12 OOT image



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



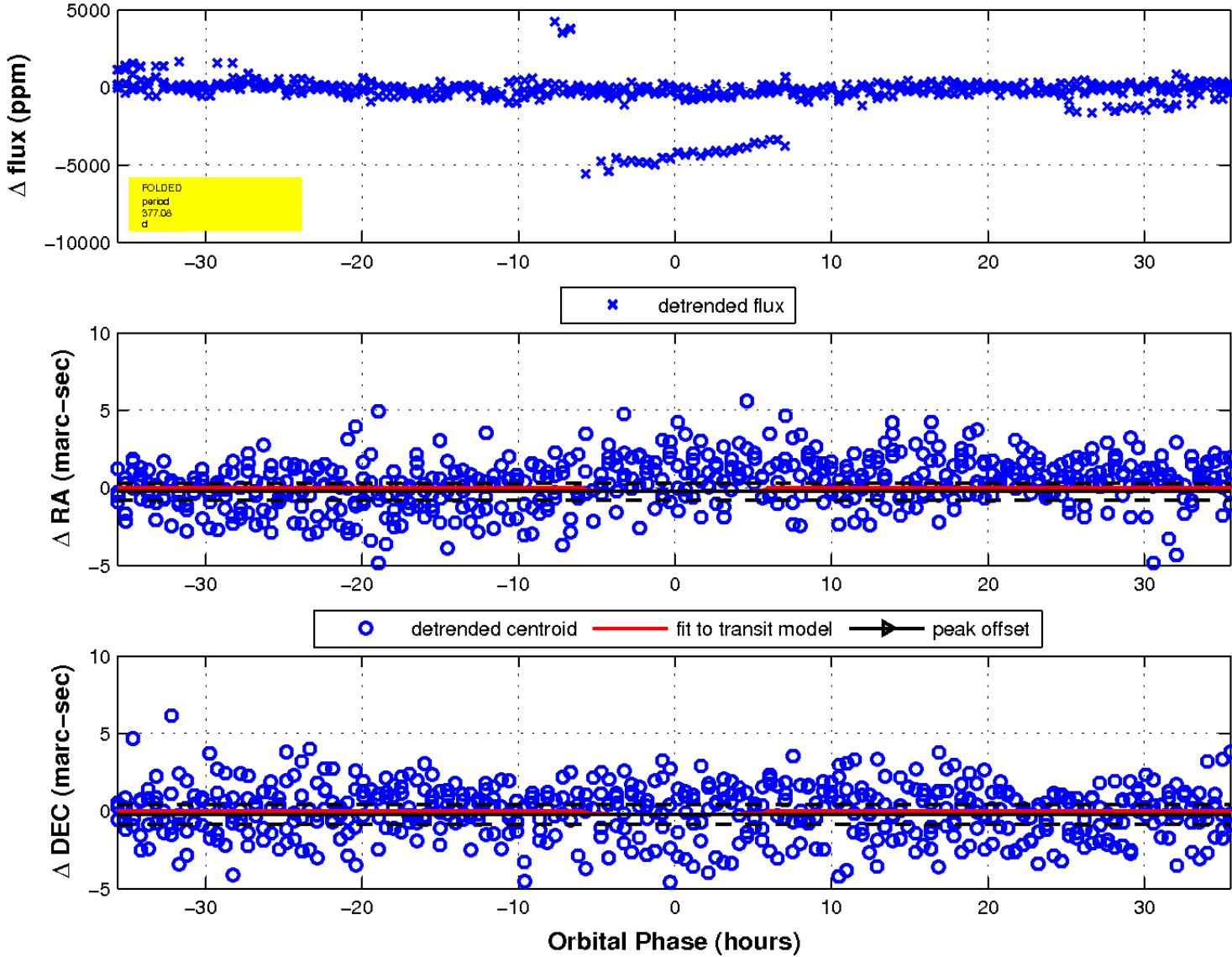
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

