

KIC 008884690

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})
008884690-01	OBS	No	375.314535	137.768509	878.1	71.373	9.9	21.8	1.00	6125	5.68	1.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008884690-01	OBS	FP	0.00	1	0	1	1	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST—EPHEM_MATCH

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.

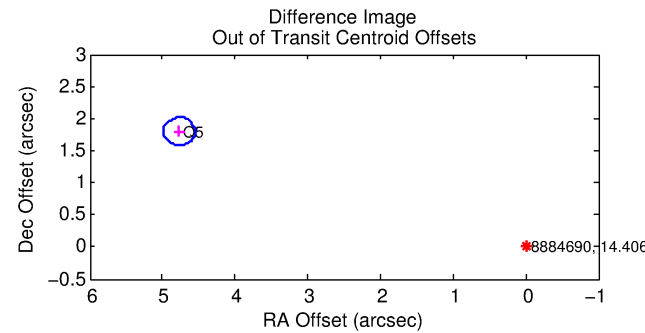
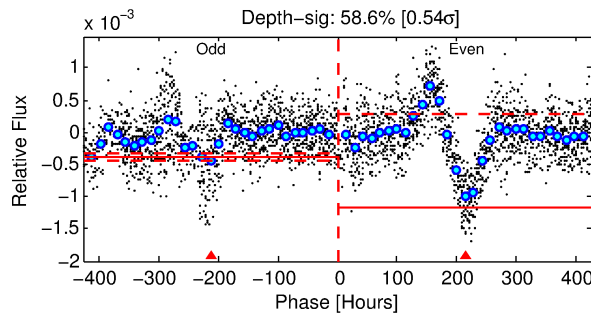
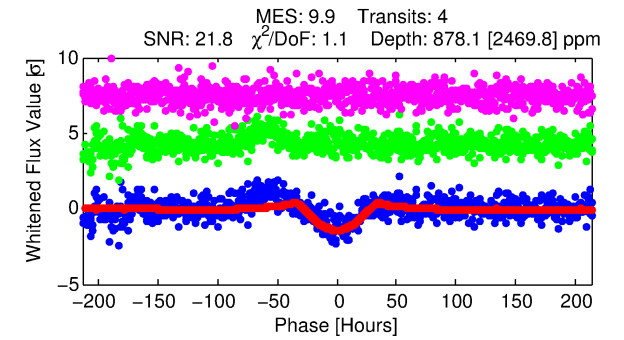
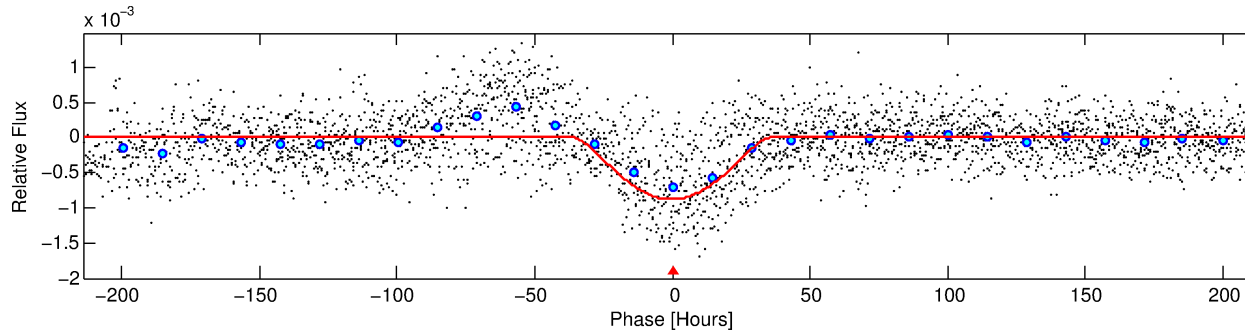
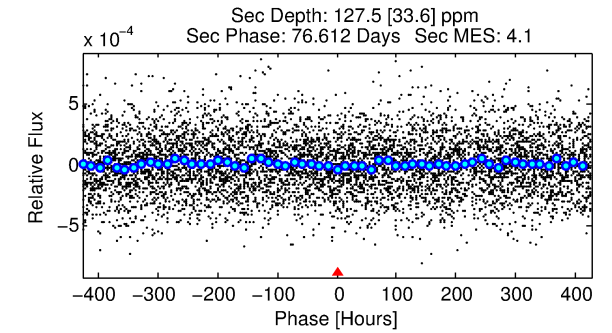
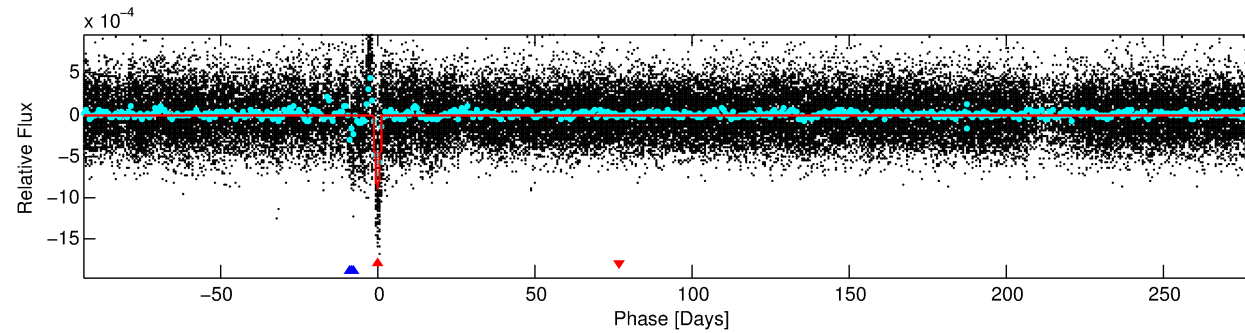
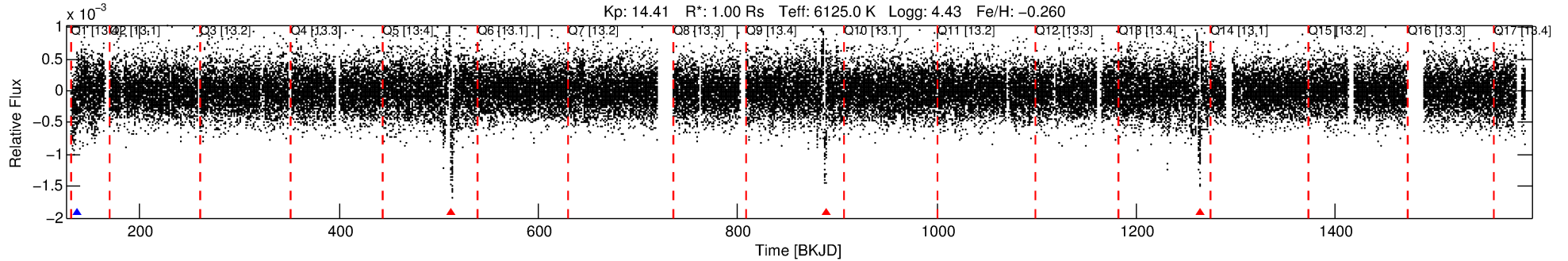
Ephemeris Match Information For 008884690-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist (\prime)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008884690-01	8884690	008952695-01	8952695	1:1	712.4	179	4	14.51	14.41	1.05	Col-Anomaly	1	0.15	1.28

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 8884690 Candidate: 1 of 2 Period: 375.315 d



DV Fit Results:

Period = 375.31453 [0.03461] d
Epoch = 137.7685 [0.0677] BKJD
Rp/R* = 0.0520 [0.0641]
a/R* = 13.16 [3.87]
b = 1.00 [0.19]
Seff = 1.22 [0.49]
Teq = 268 [27] K
Rp = 5.68 [7.22] Re
a = 1.0168 [0.2647] AU
Ag = 2246.44 [5633.16] [0.40σ]
Teffp = 2854 [1771] K [1.46σ]

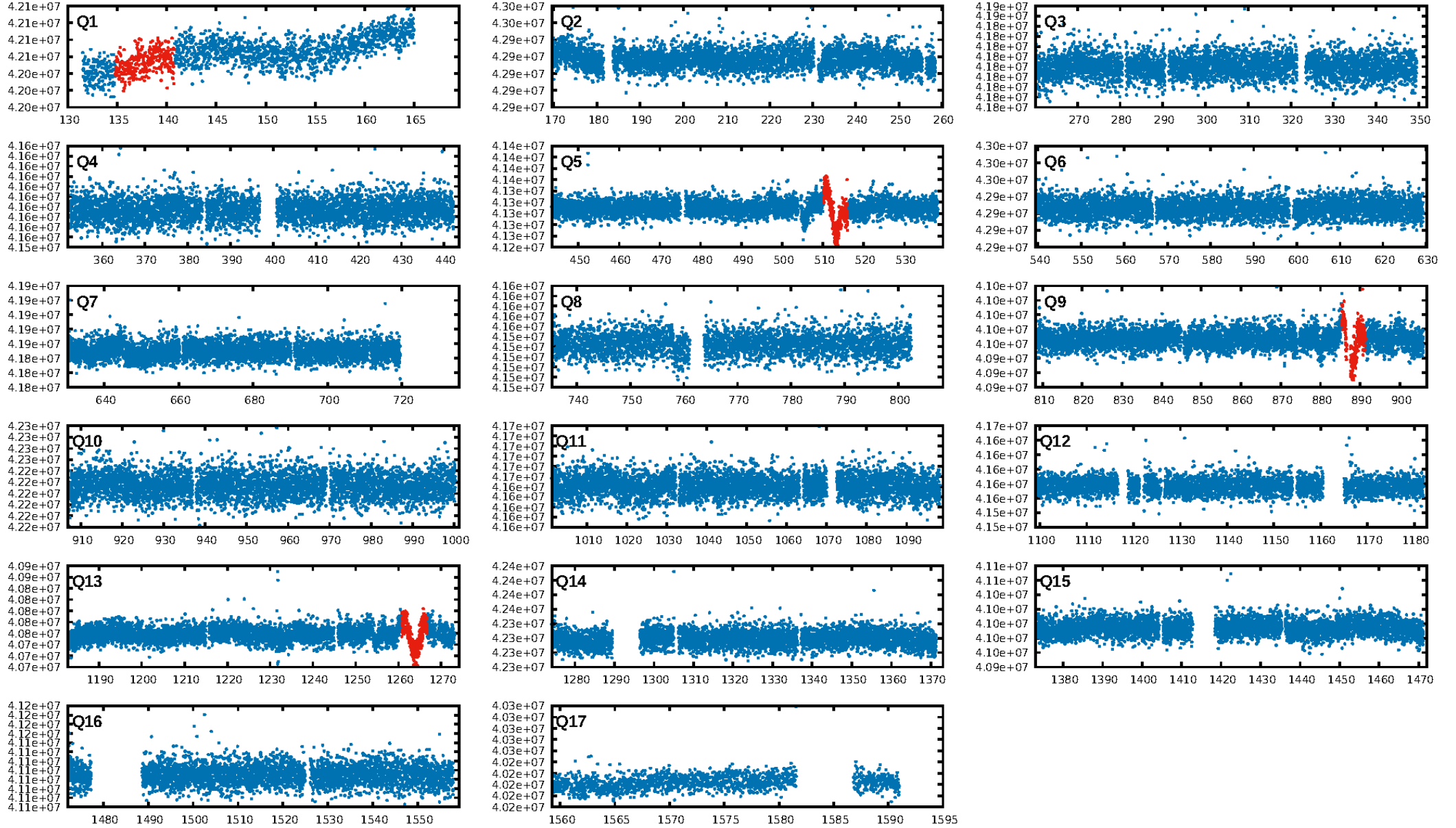
DV Diagnostic Results:

ShortPeriod-sig: 18.3% [0.23σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.07e-22
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: -0.06432
Centroid-sig: 62.8%
Centroid-so: 0.458 arcsec [0.89σ]
OotOffset-rm: 5.096 arcsec [70.86σ]
KicOffset-rm: 4.883 arcsec [67.90σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

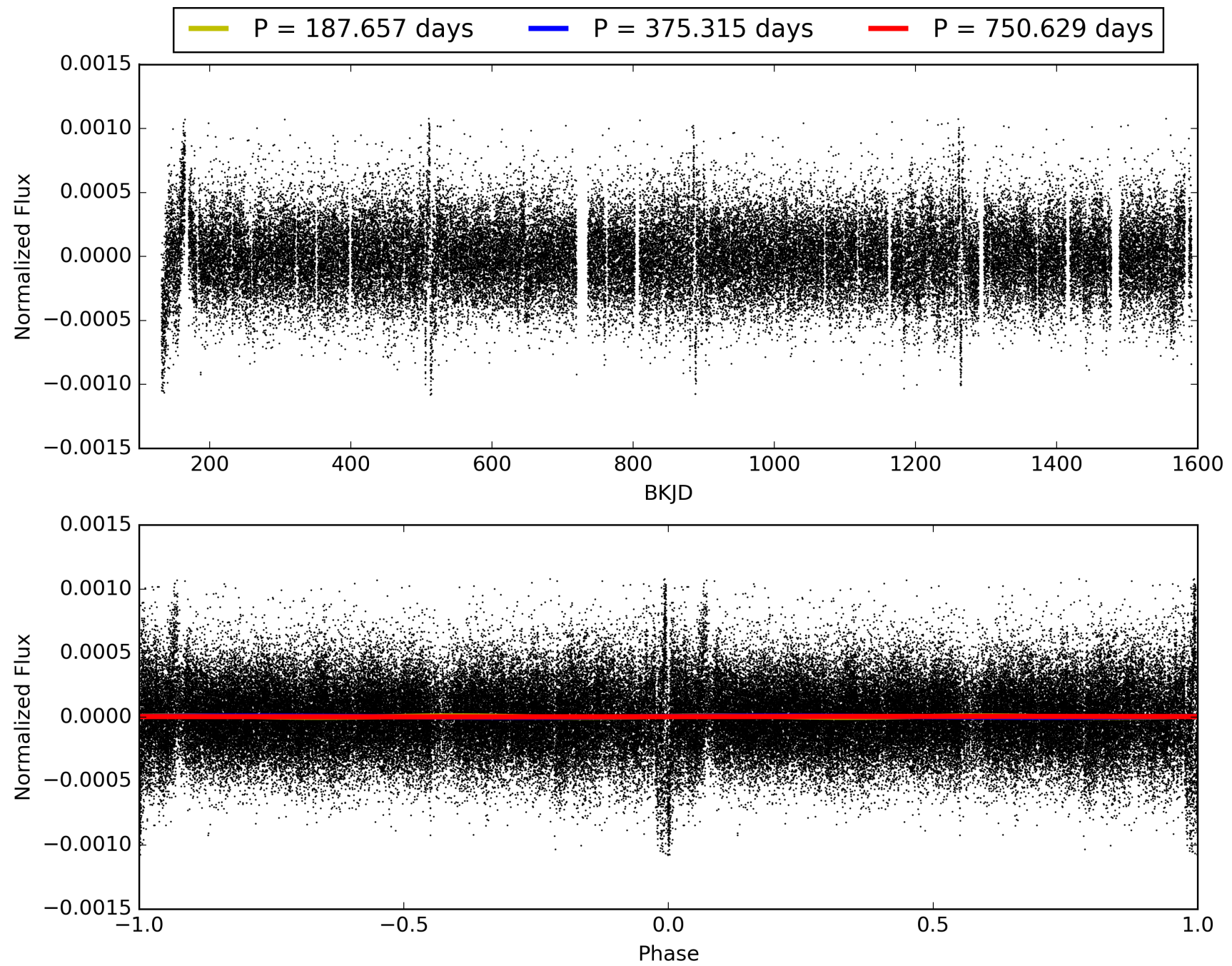
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:06:18 Z

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

TCE 008884690-01, PDC Light Curves

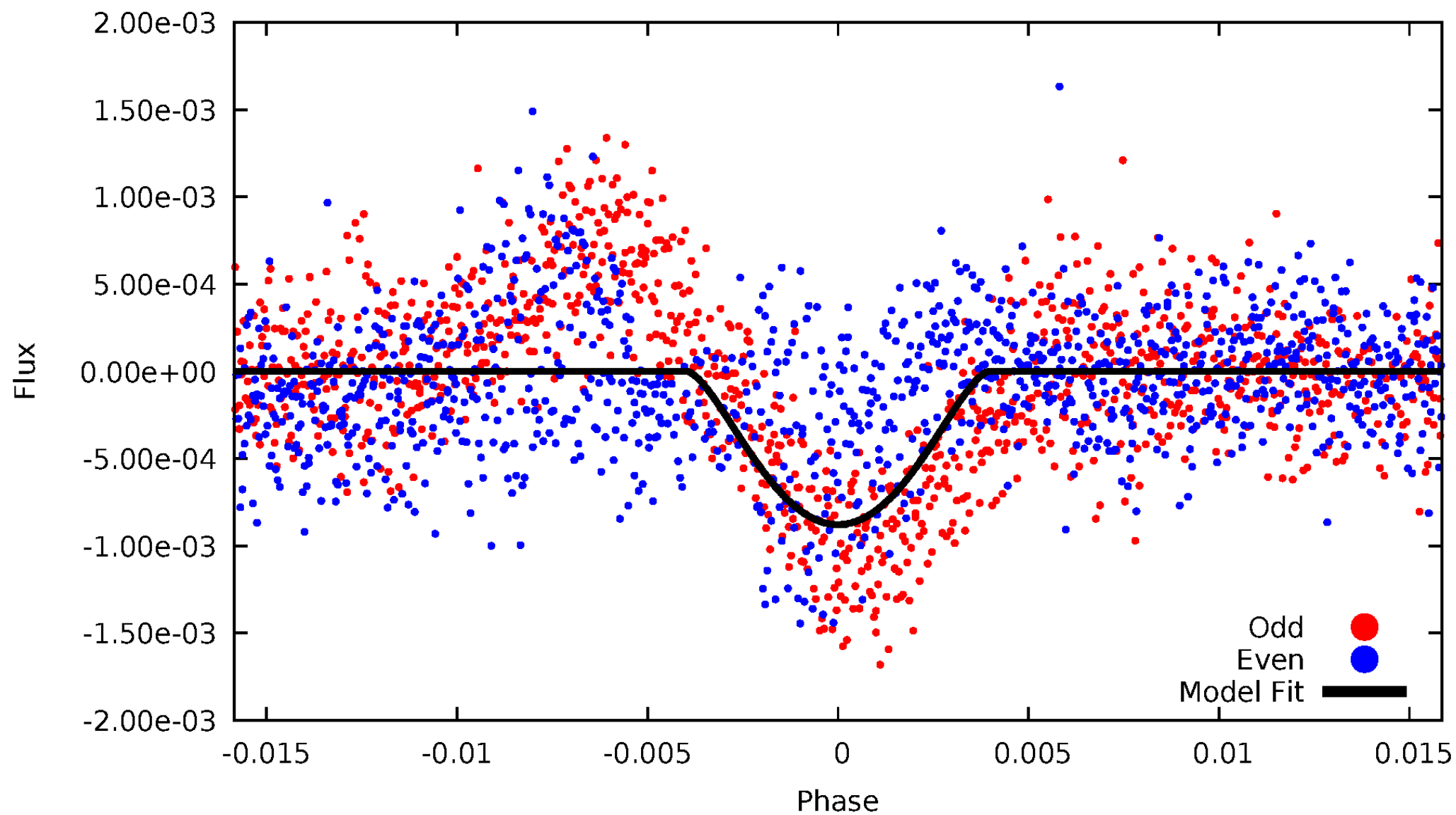


TCE 008884690-01



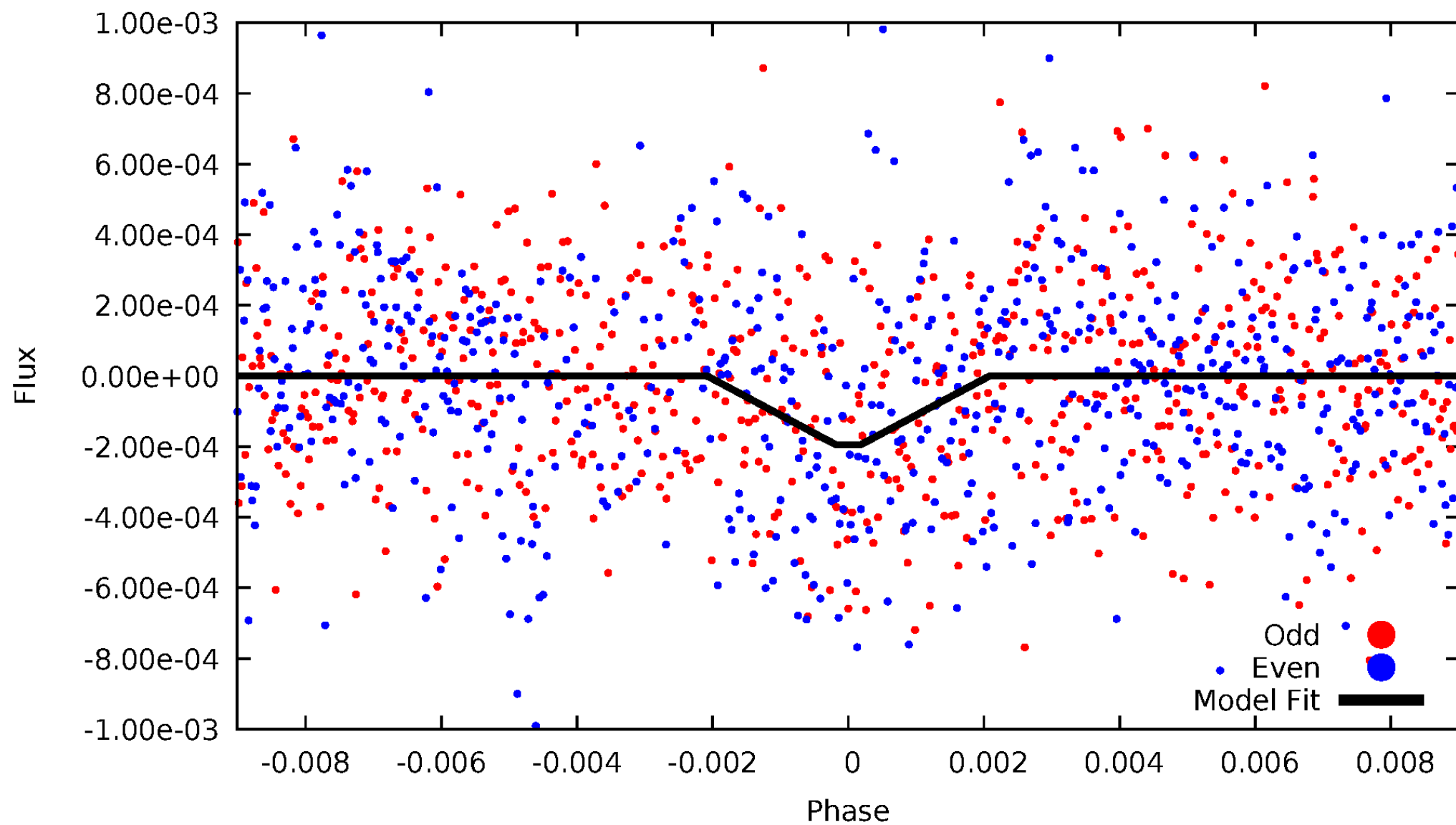
DV Odd/Even

TCE 008884690-01



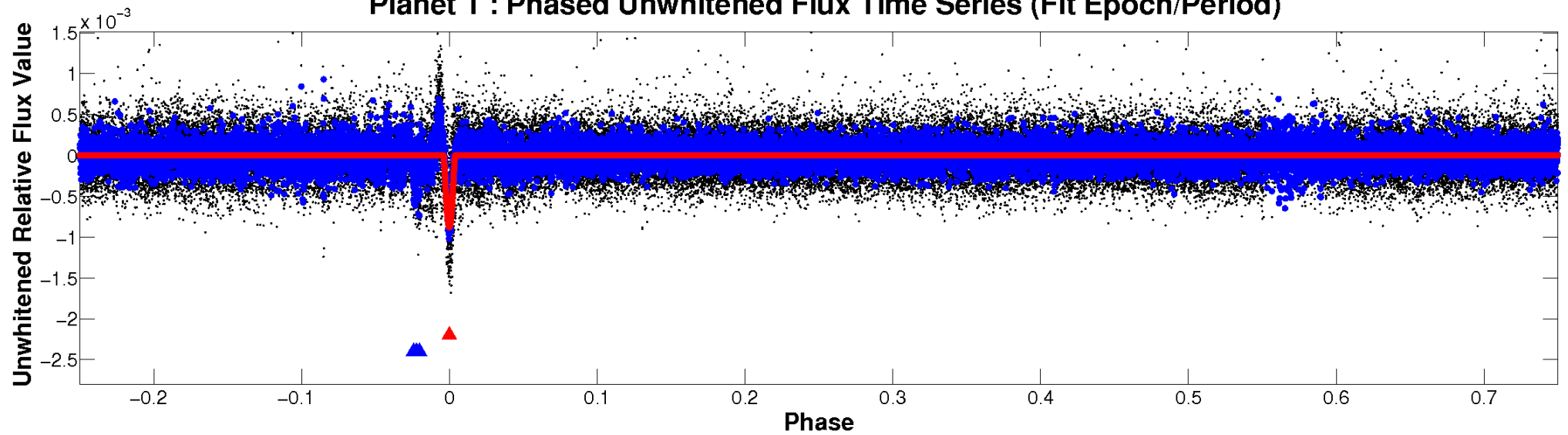
ALT Odd/Even

TCE 008884690-01

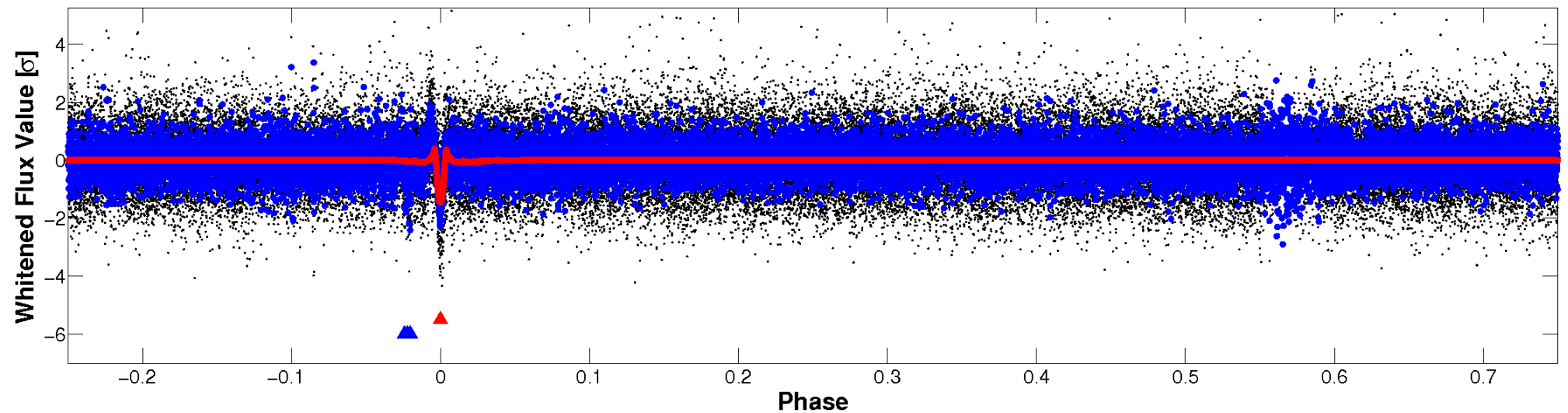


Non-Whitened Vs. Whitened Light Curve

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

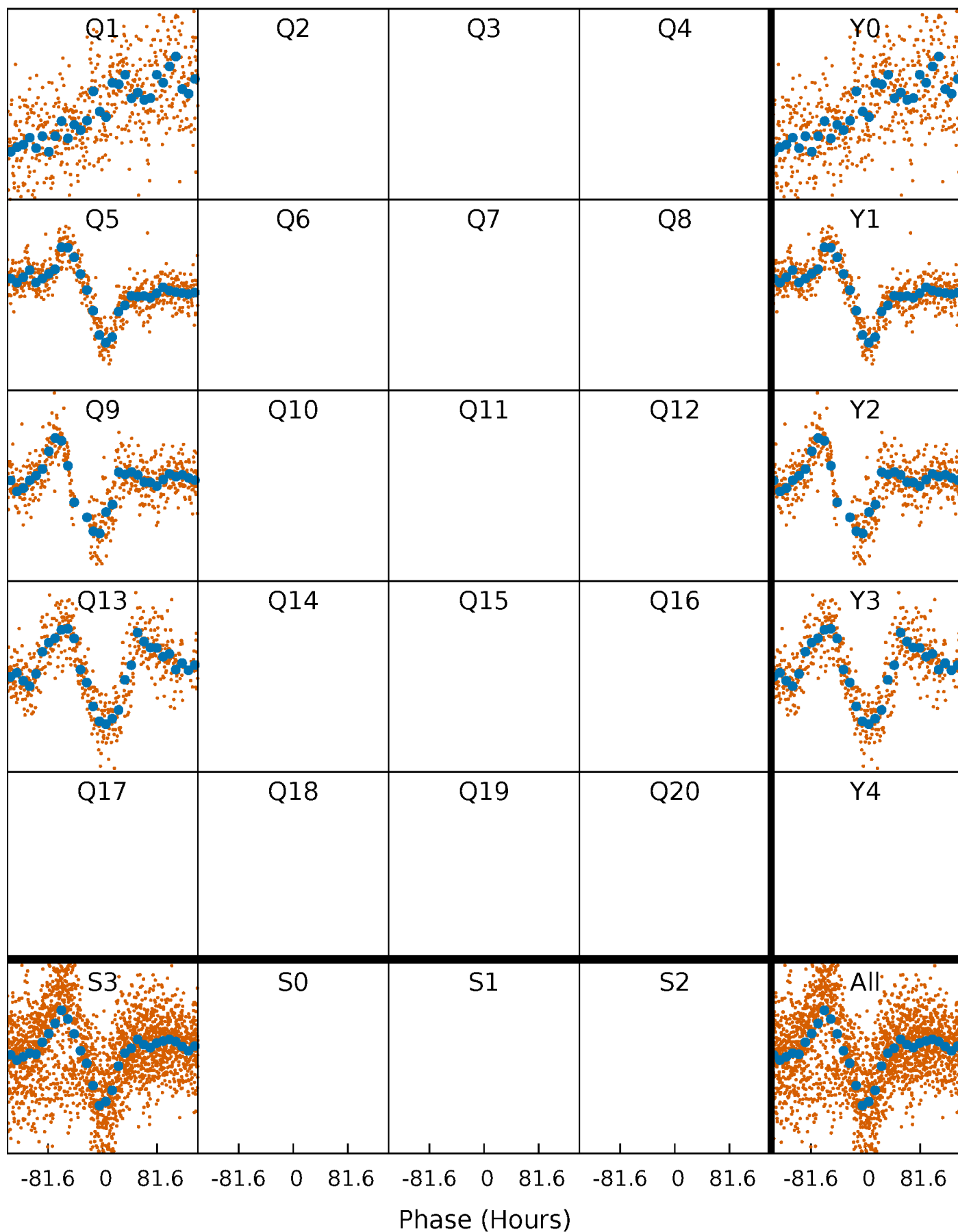


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



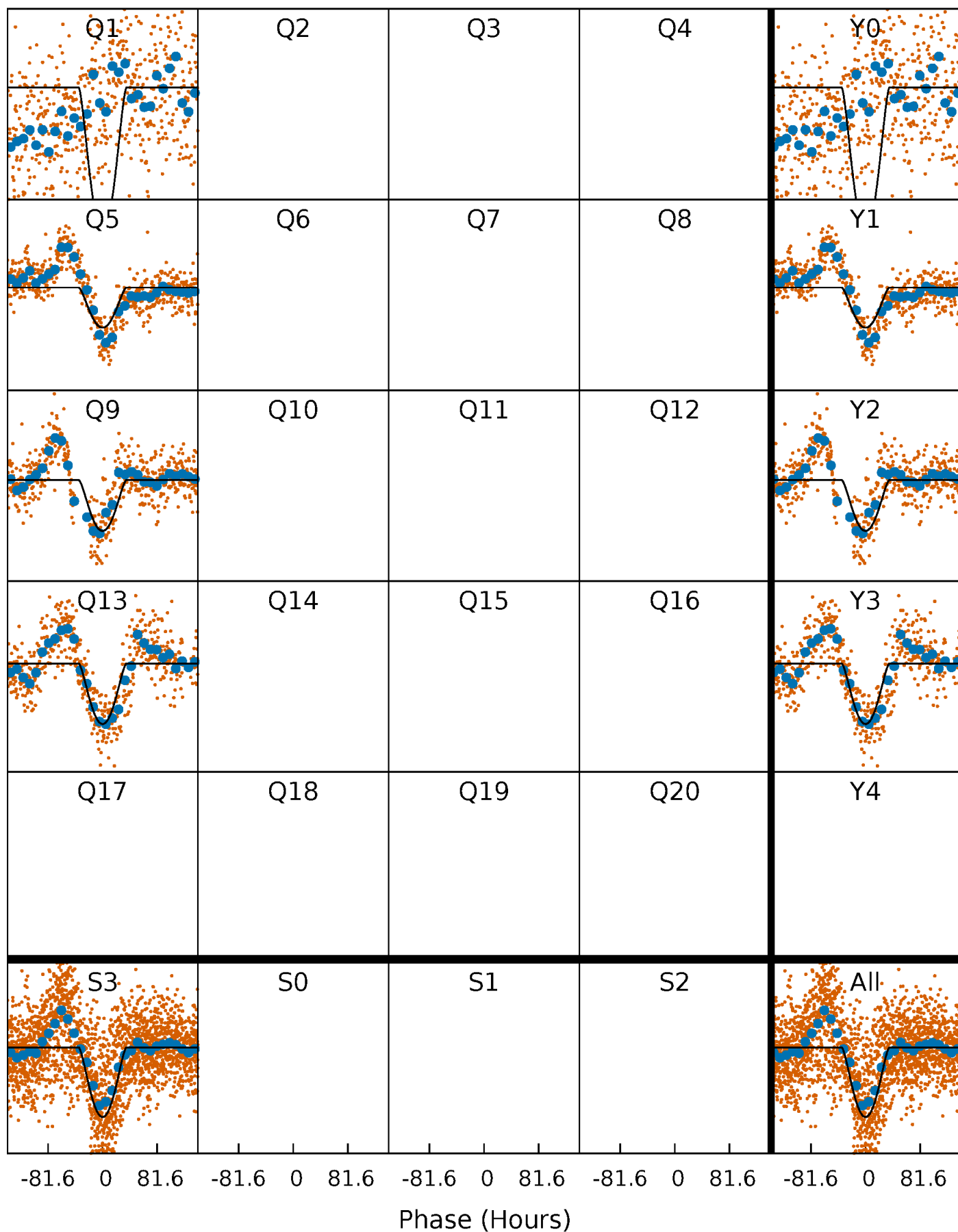
PDC Quarter-Phased Transit Curves

TCE 008884690-01 P=375.314535 Days $T_0=137.768509$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008884690-01 P=375.314535 Days $T_0=137.768509$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

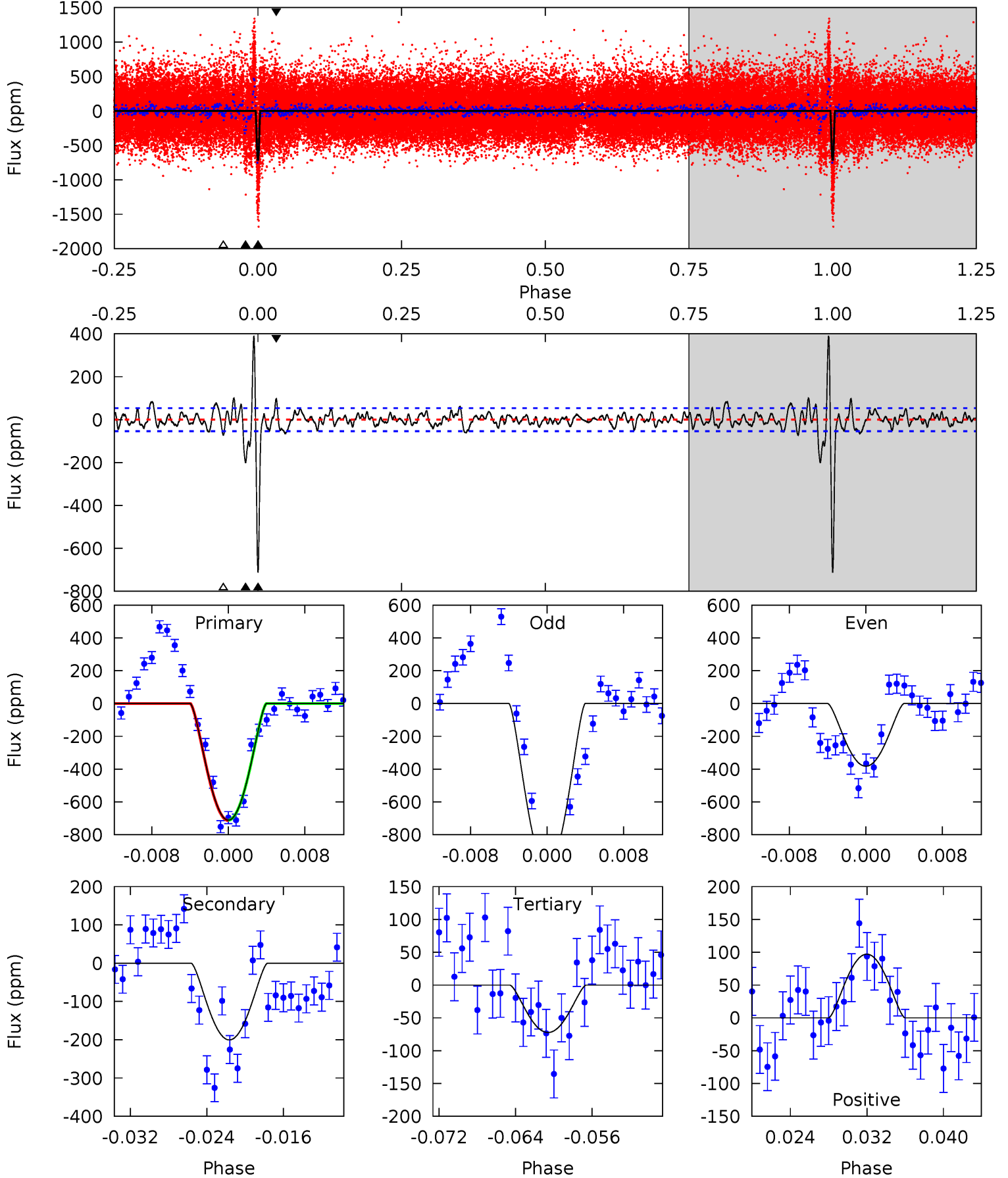
TCE 008884690-01 P=375.173784 Days $T_0=137.956223$ (BKJD)



DV Model-Shift Uniqueness Test

008884690-01, P = 375.314535 Days, E = 137.768509 Days

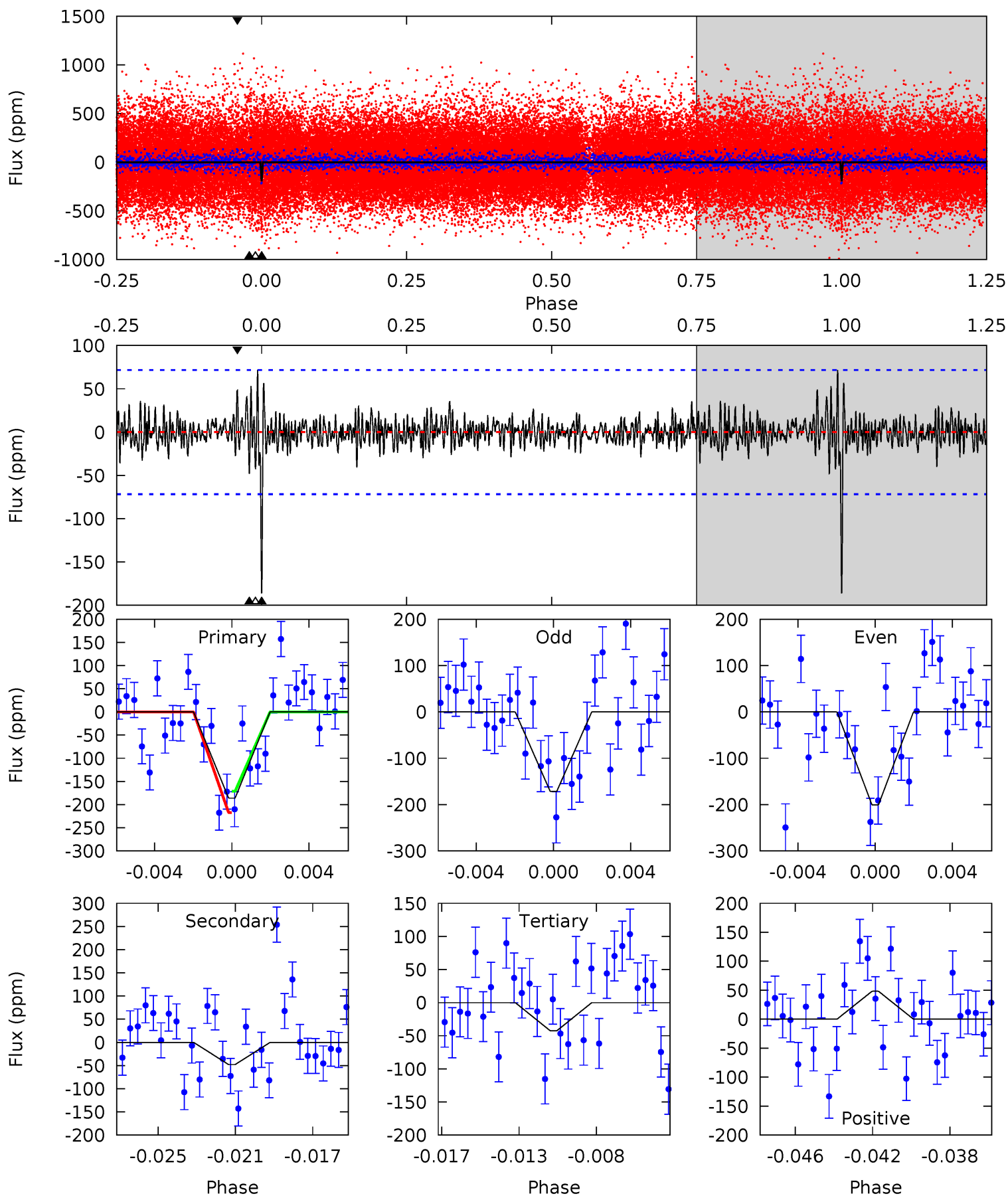
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
67.0	18.9	6.81	9.14	5.07	2.65	2.72	60.2	57.9	12.1	9.74	29.2	0.83	0.35	0.11



Alt Model-Shift Uniqueness Test

008884690-01, $P = 375.173784$ Days, $E = 137.956223$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	3.47	3.08	3.49	5.19	2.86	0.87	10.4	9.98	0.39	-0.02	1.05	0.93	0.28	1.65



Stellar Parameters For KIC 008884690

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6125^{+164}_{-200}	$4.435^{+0.070}_{-0.210}$	$-0.260^{+0.300}_{-0.300}$	$1.001^{+0.307}_{-0.131}$	$0.994^{+0.141}_{-0.116}$	$1.395^{+0.526}_{-0.736}$
	+3%/-3%	+2%/-5%	+115%/-115%	+31%/-13%	+14%/-12%	+38%/-53%
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 008884690-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-201 ± 11	$7.76^{+6.25}_{-5.13}$	382^{+28}_{-19}	3341^{+1550}_{-527}	1836^{+13660}_{-1251}
Alt.	-48 ± 14	$5.57^{+5.66}_{-3.94}$	381^{+27}_{-20}	2977^{+1485}_{-505}	861^{+9088}_{-667}

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 $A_{obs} \gg 1.0$

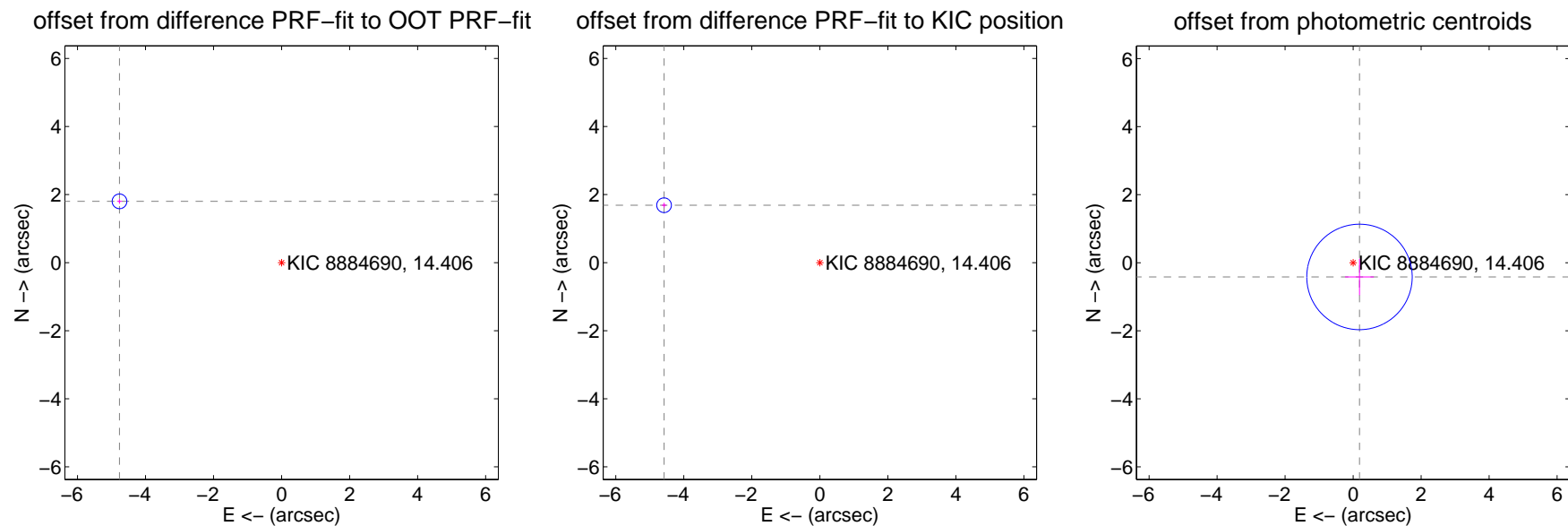
DV Centroid Data

Supplemental centroid analysis for 008884690-01. Kepler magnitude: 14.41. Transit SNR 21.81

There are 0 quarters with good PRF difference image offsets

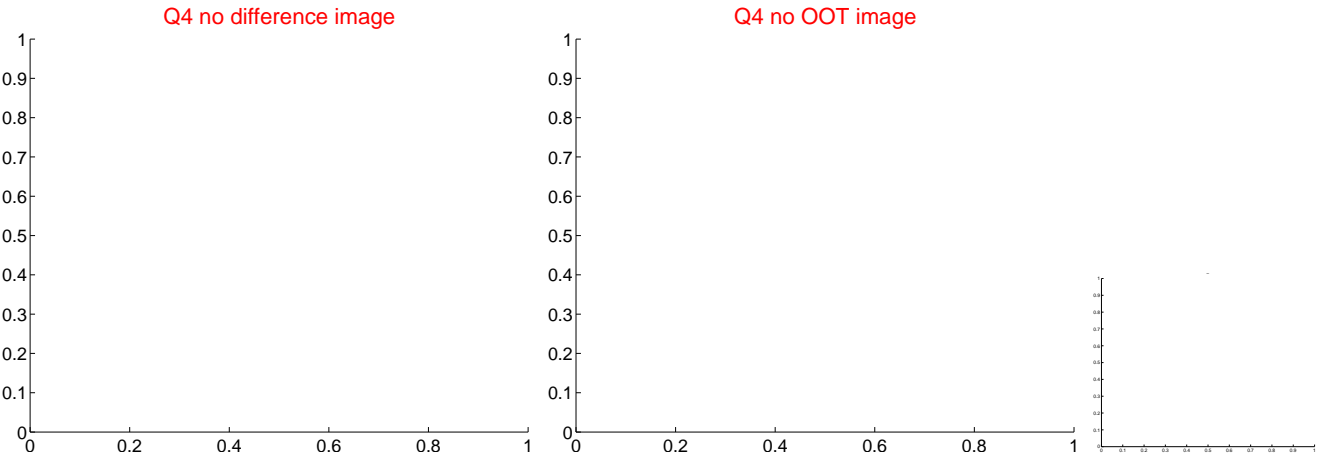
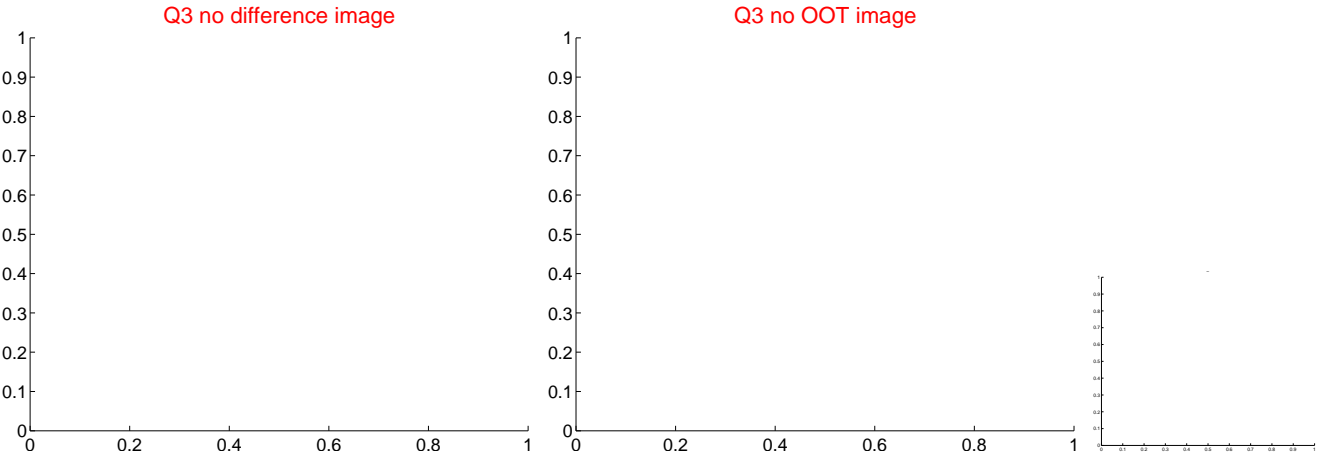
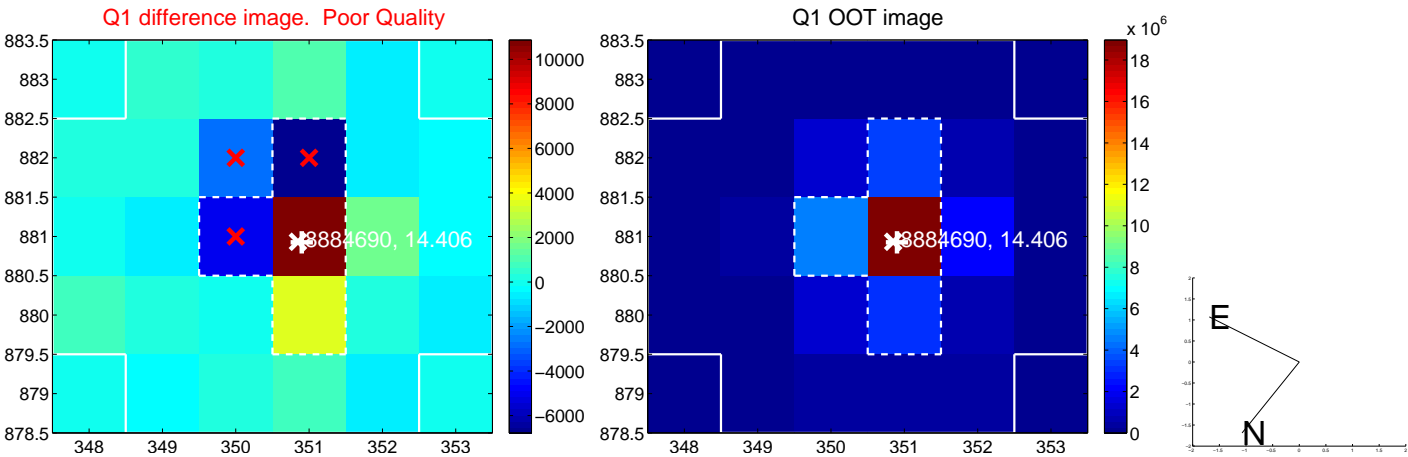
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.096 ± 0.072	70.86	4.767 ± 0.072	1.802 ± 0.073
PRF-fit source offset from KIC position	4.883 ± 0.072	67.90	4.582 ± 0.072	1.688 ± 0.073
photometric centroid source offset	0.46 ± 0.52	0.89	-0.19 ± 0.42	-0.42 ± 0.53

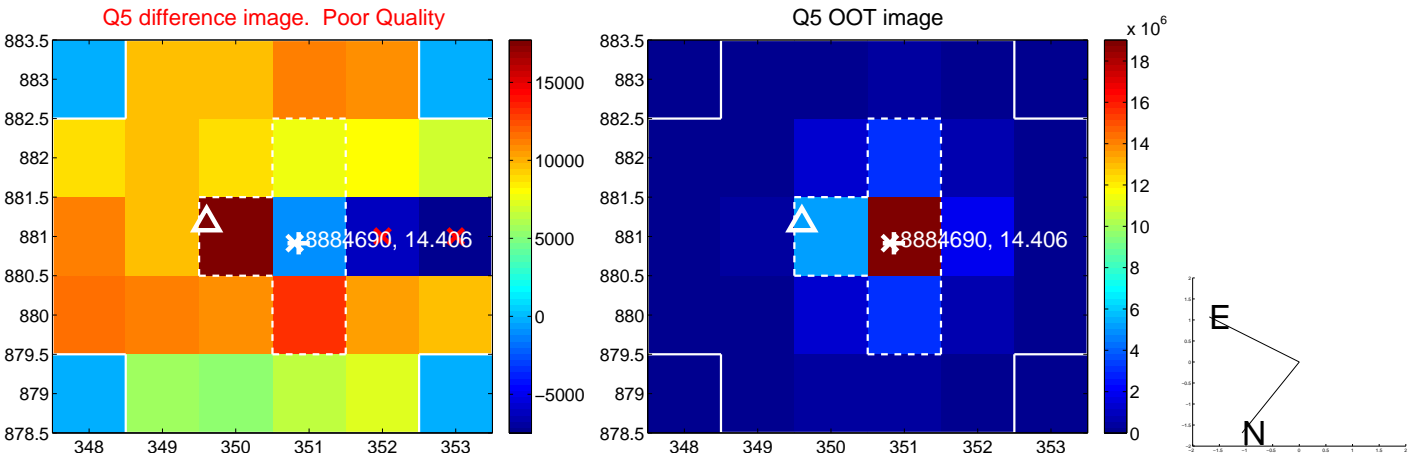


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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.



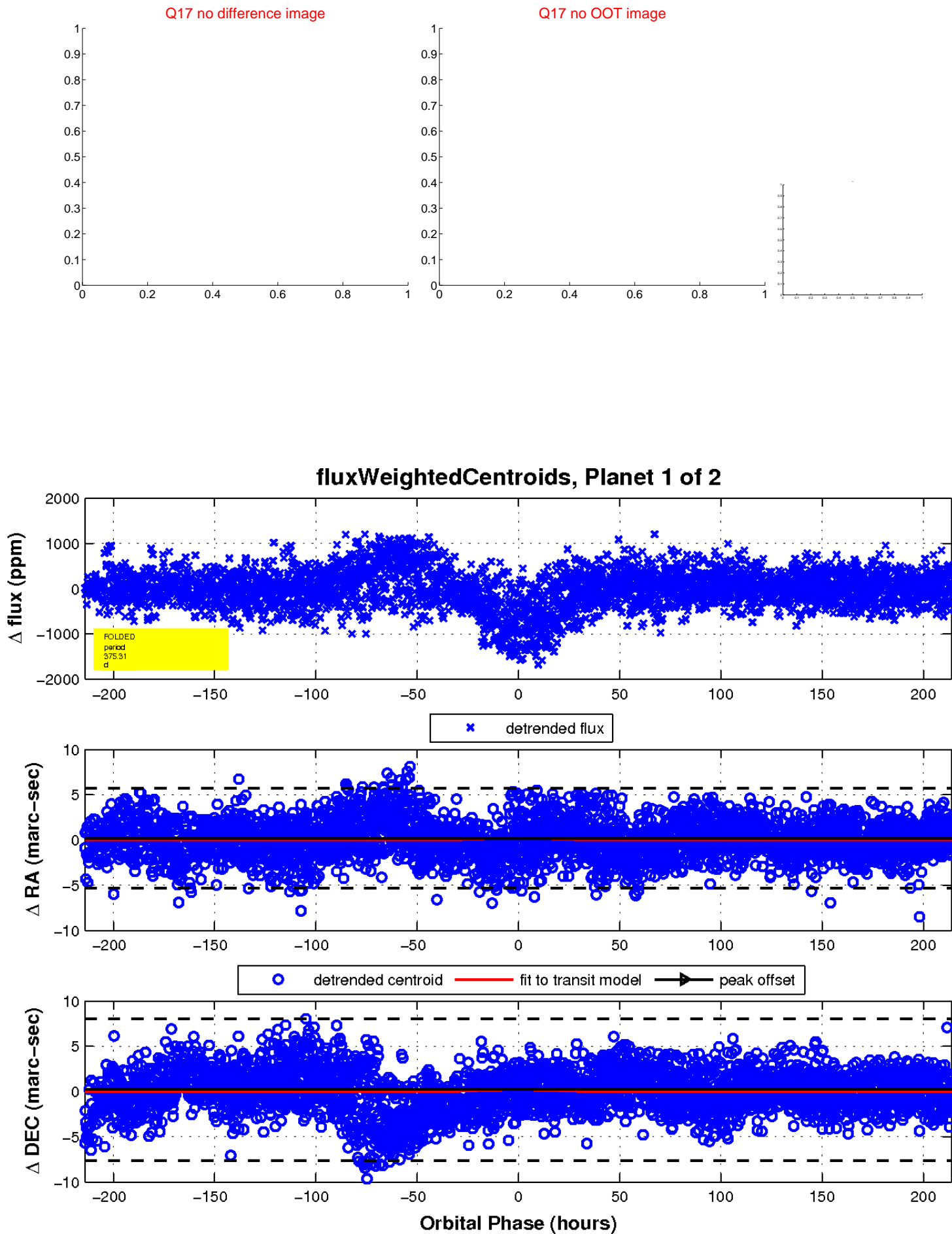
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

