

KIC 007841938

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})
007841938-01	OBS	No	639.521439	282.360503	840.1	15.226	16.6	14.2	1.12	6194	3.29	0.71

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007841938-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

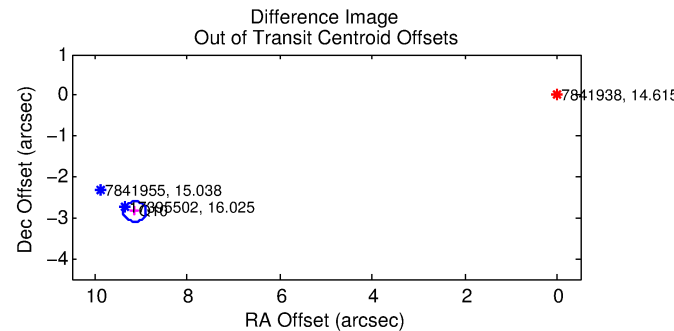
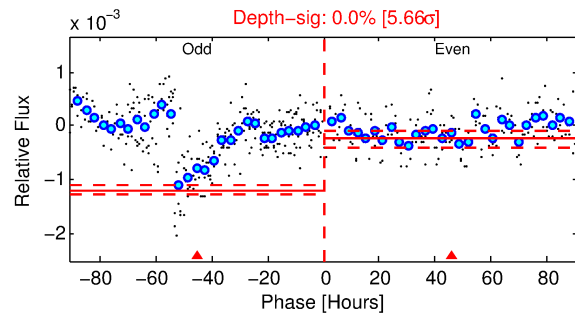
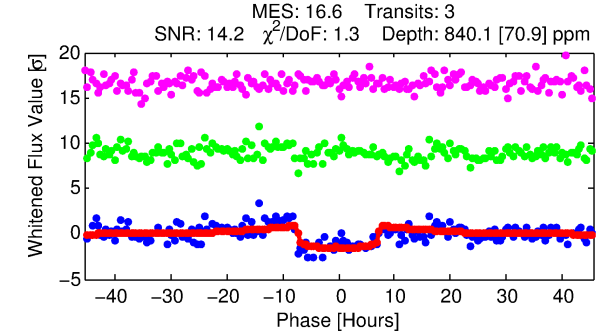
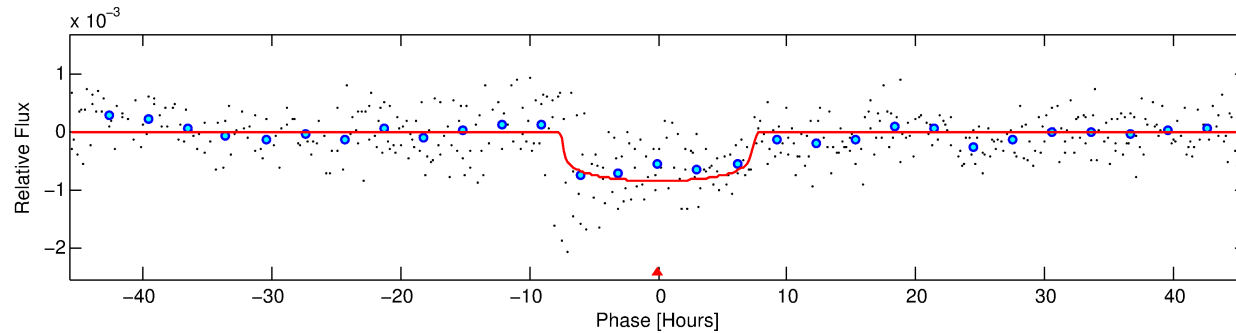
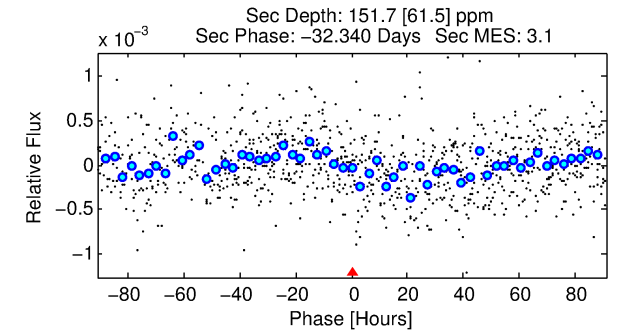
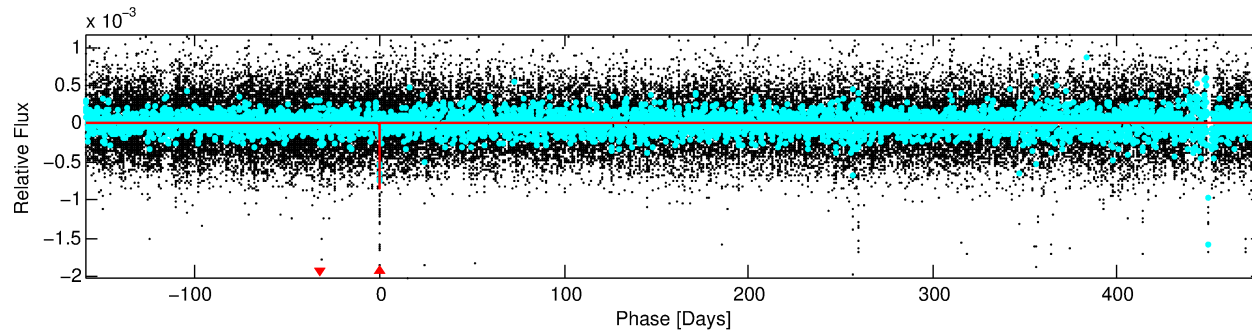
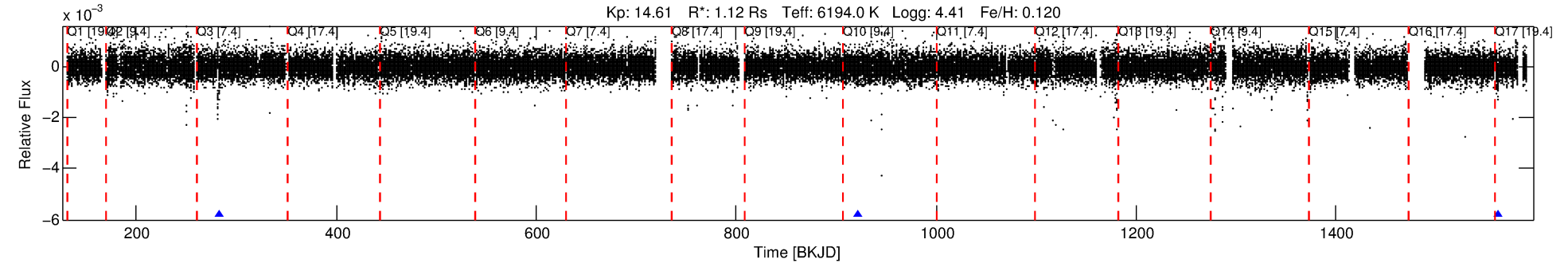
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007841938-01

No Significant Match Found

DV One-Page Summary

KIC: 7841938 Candidate: 1 of 1 Period: 639.521 d



DV Fit Results:

Period = 639.52144 [0.00893] d
Epoch = 282.3605 [0.0108] BKJD
Rp/R* = 0.0269 [0.0080]
a/R* = 308.41 [432.55]
b = 0.36 [3.39]
Seff = 0.71 [0.29]
Teq = 234 [24] K
Rp = 3.29 [1.45] Re
a = 1.5329 [0.4084] AU
Ag = 18082.30 [14694.03] [1.23σ]
Teff = 4193 [772] K [5.13σ]

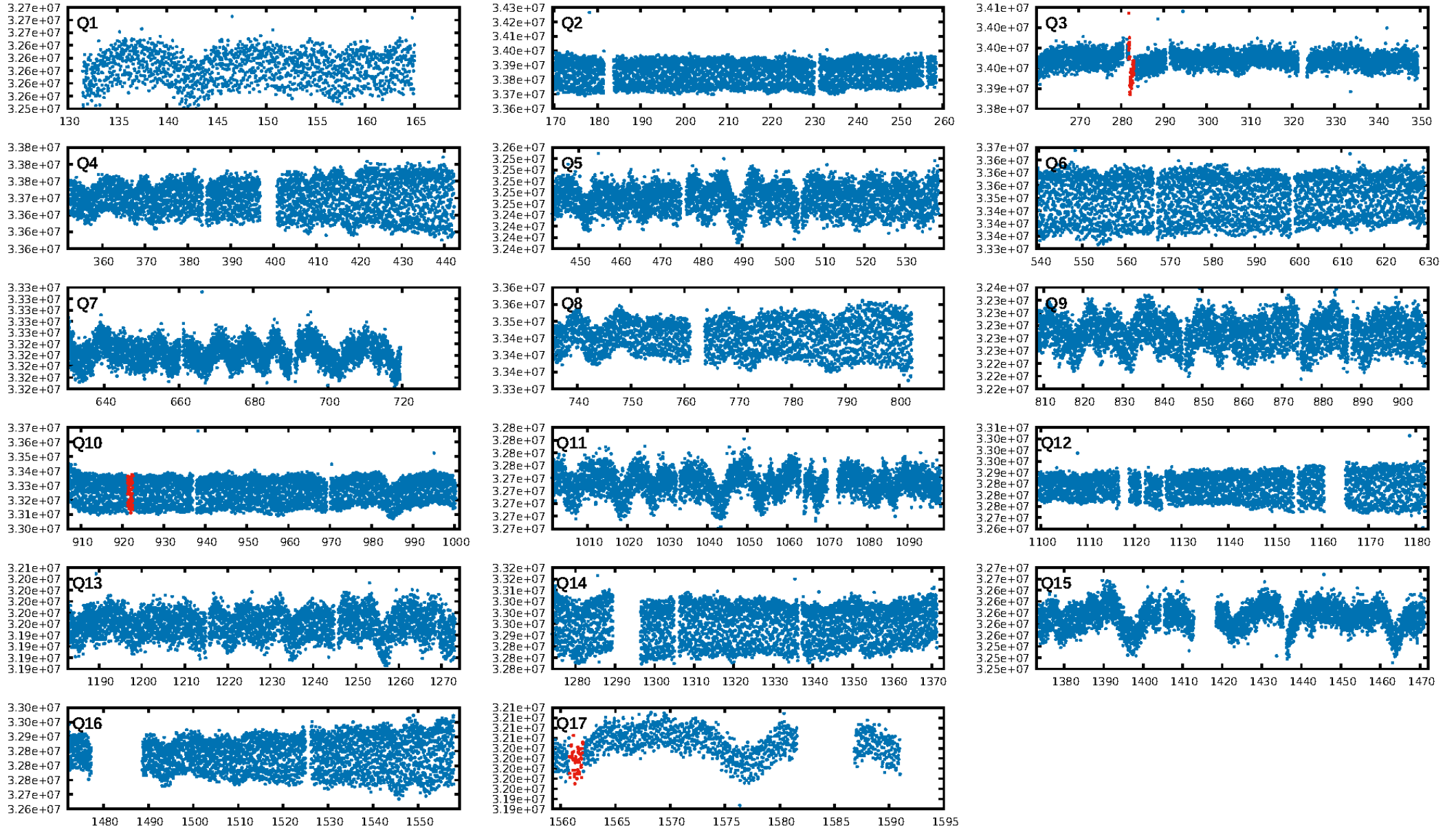
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 59.6%
Bootstrap-pfa: 7.08e-39
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.03386
Centroid-sig: 11.0%
Centroid-so: 1.922 arcsec [0.98σ]
OotOffset-rm: 9.566 arcsec [118.31σ]
KicOffset-rm: 9.902 arcsec [122.59σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

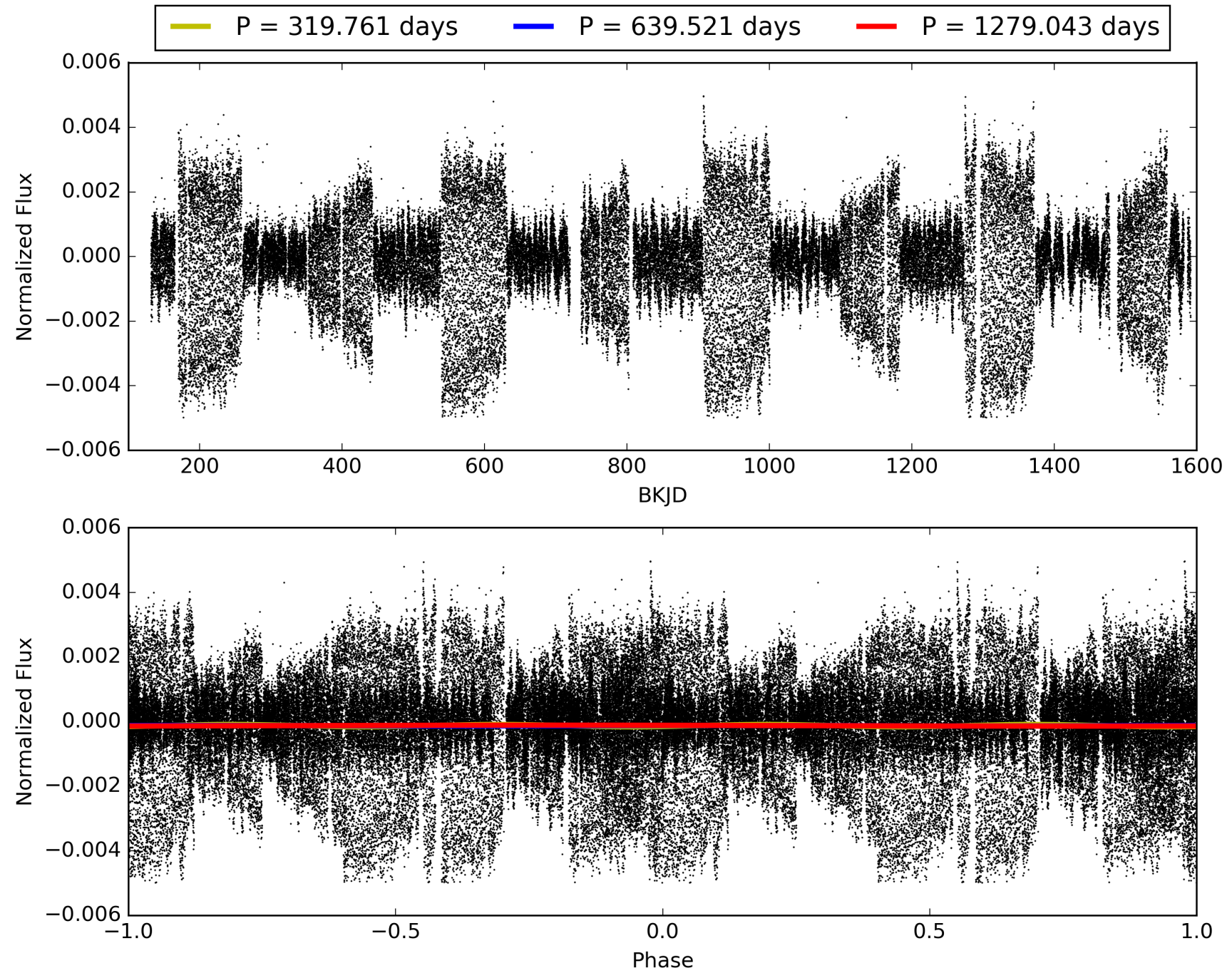
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:15:43 Z

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

TCE 007841938-01, PDC Light Curves

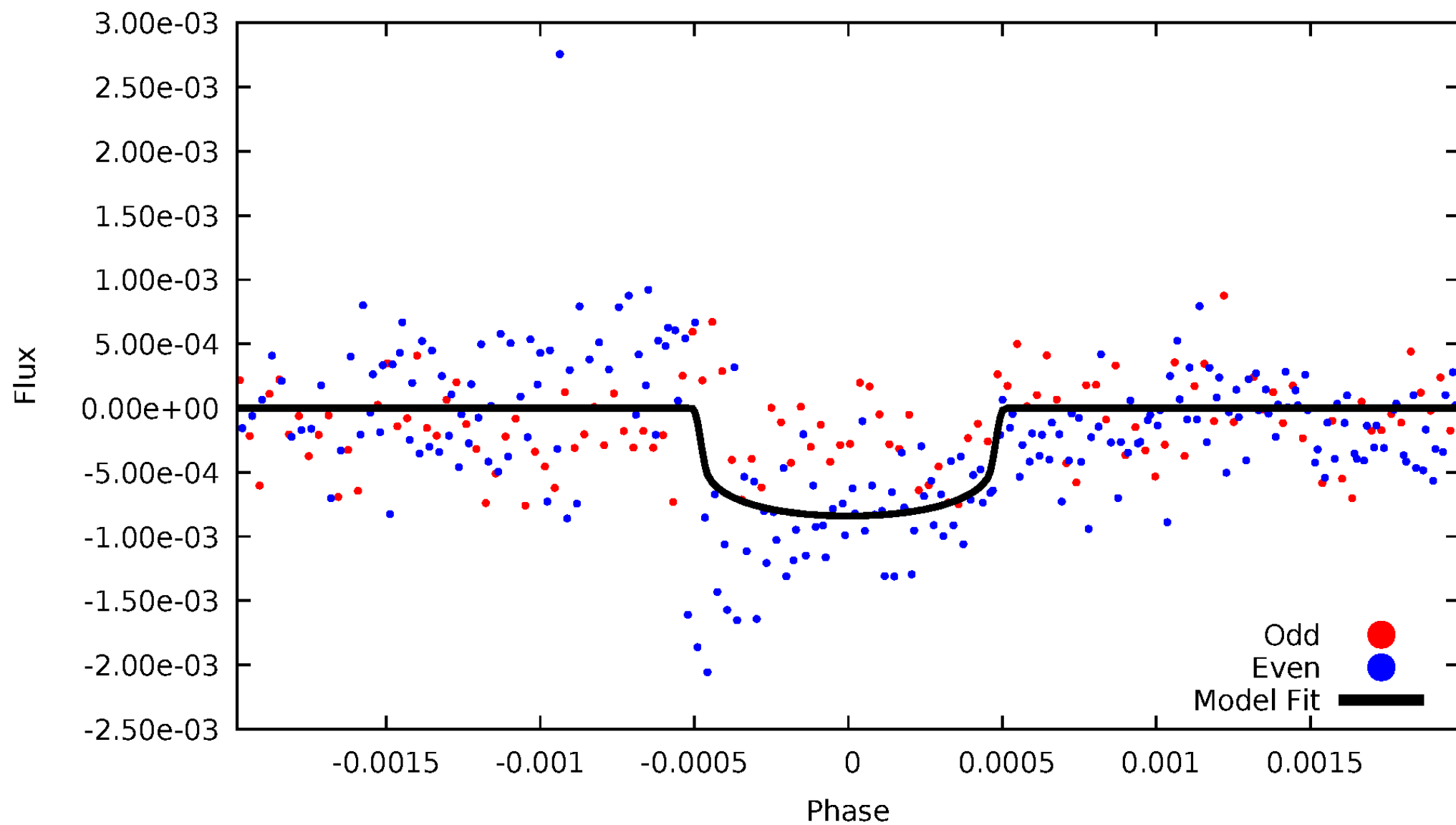


TCE 007841938-01



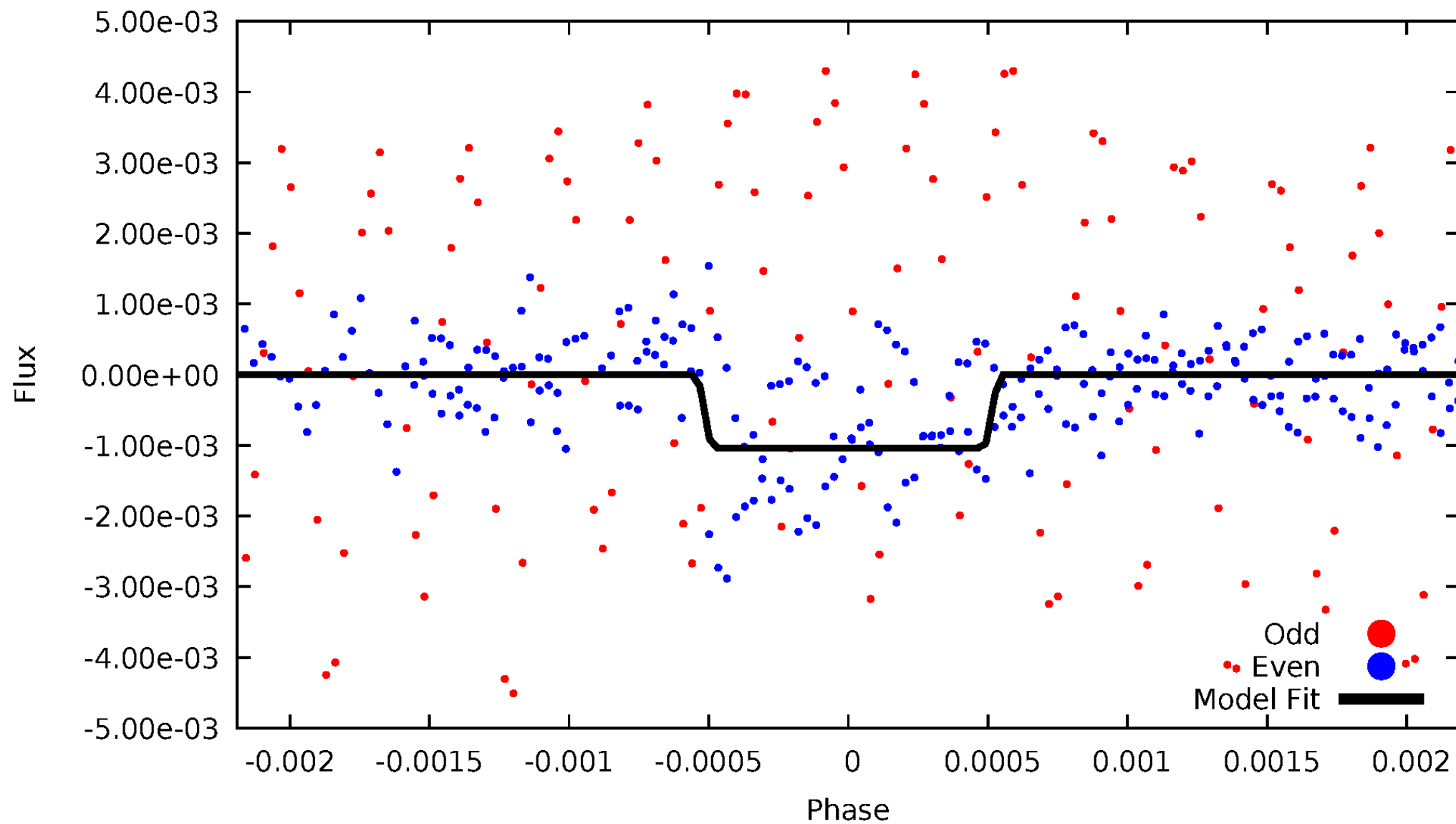
DV Odd/Even

TCE 007841938-01



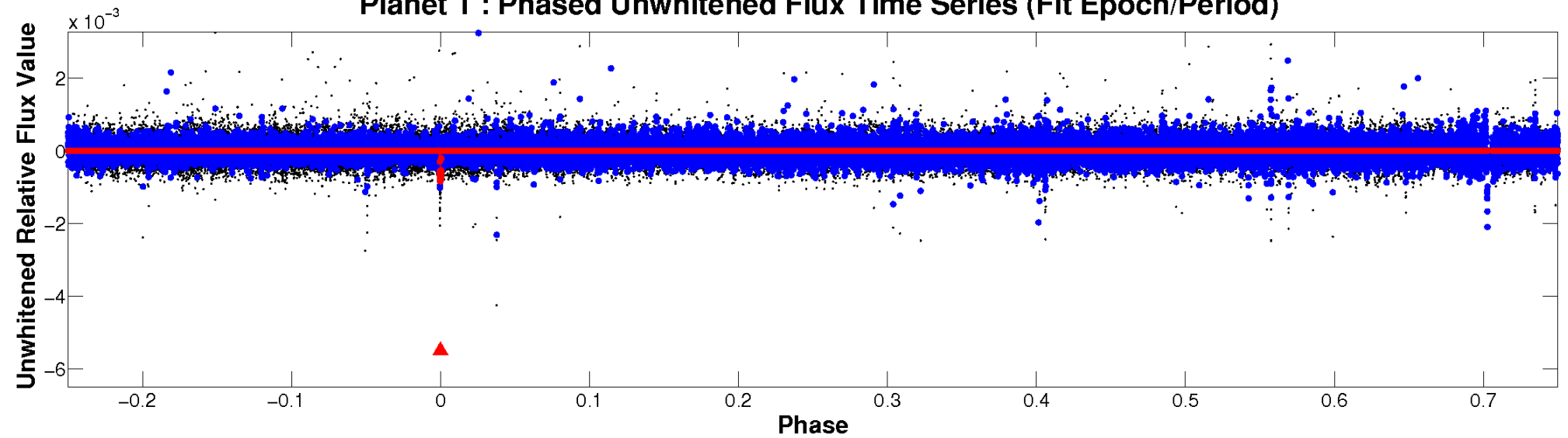
ALT Odd/Even

TCE 007841938-01

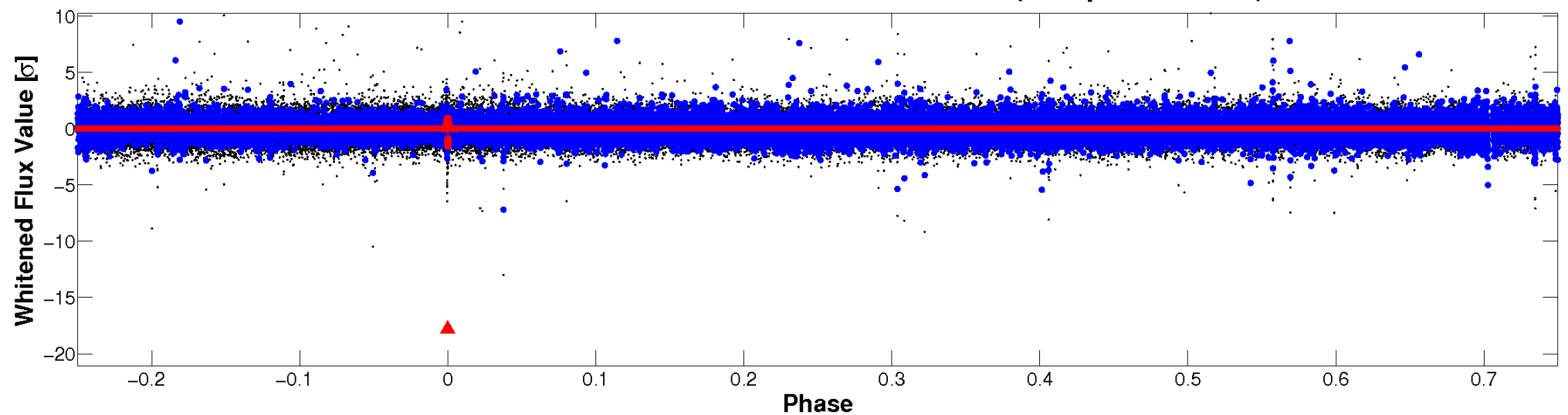


Non-Whitened Vs. Whitened Light Curve

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



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



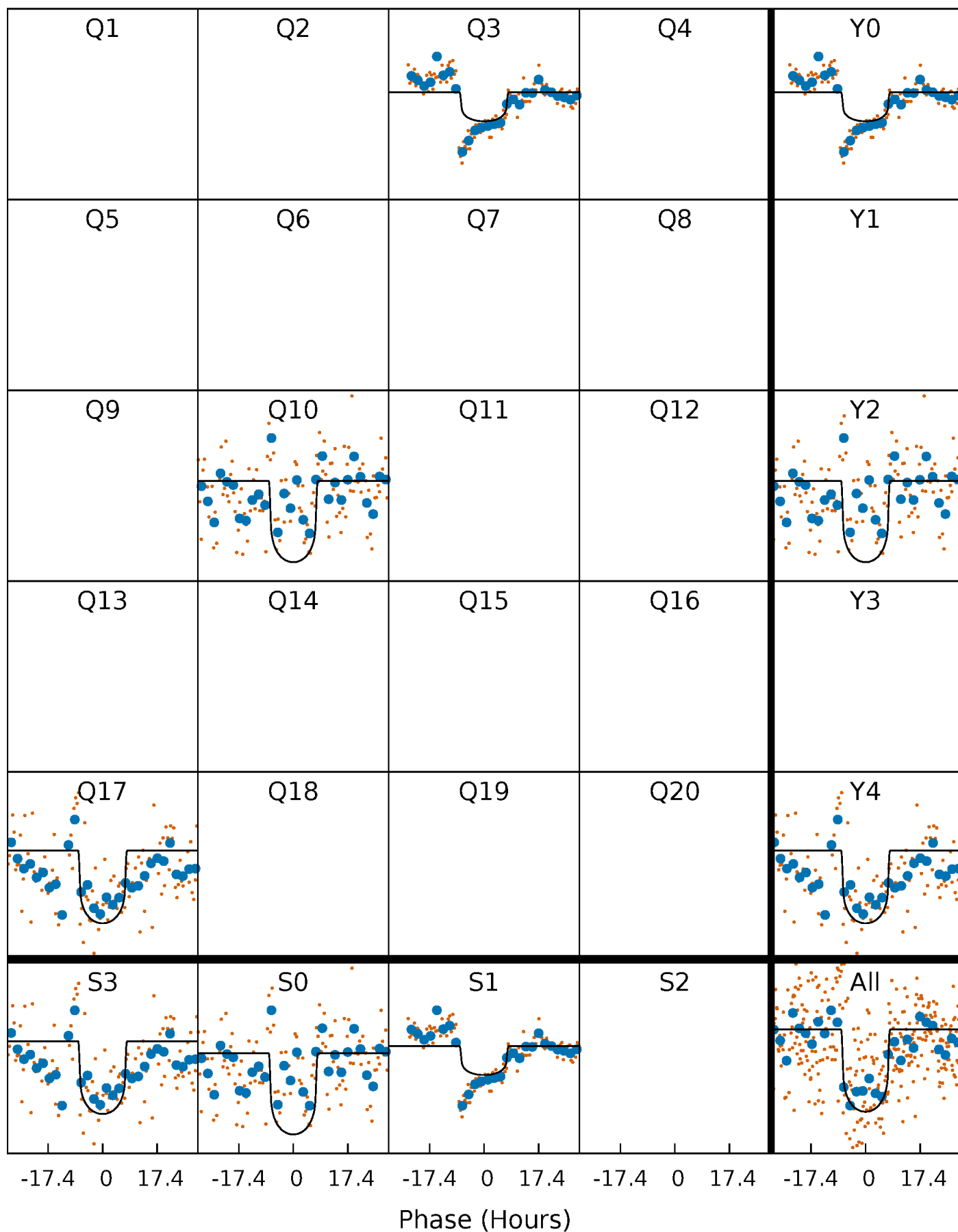
PDC Quarter-Phased Transit Curves

TCE 007841938-01 P=639.521439 Days $T_0=282.360503$ (BKJD)



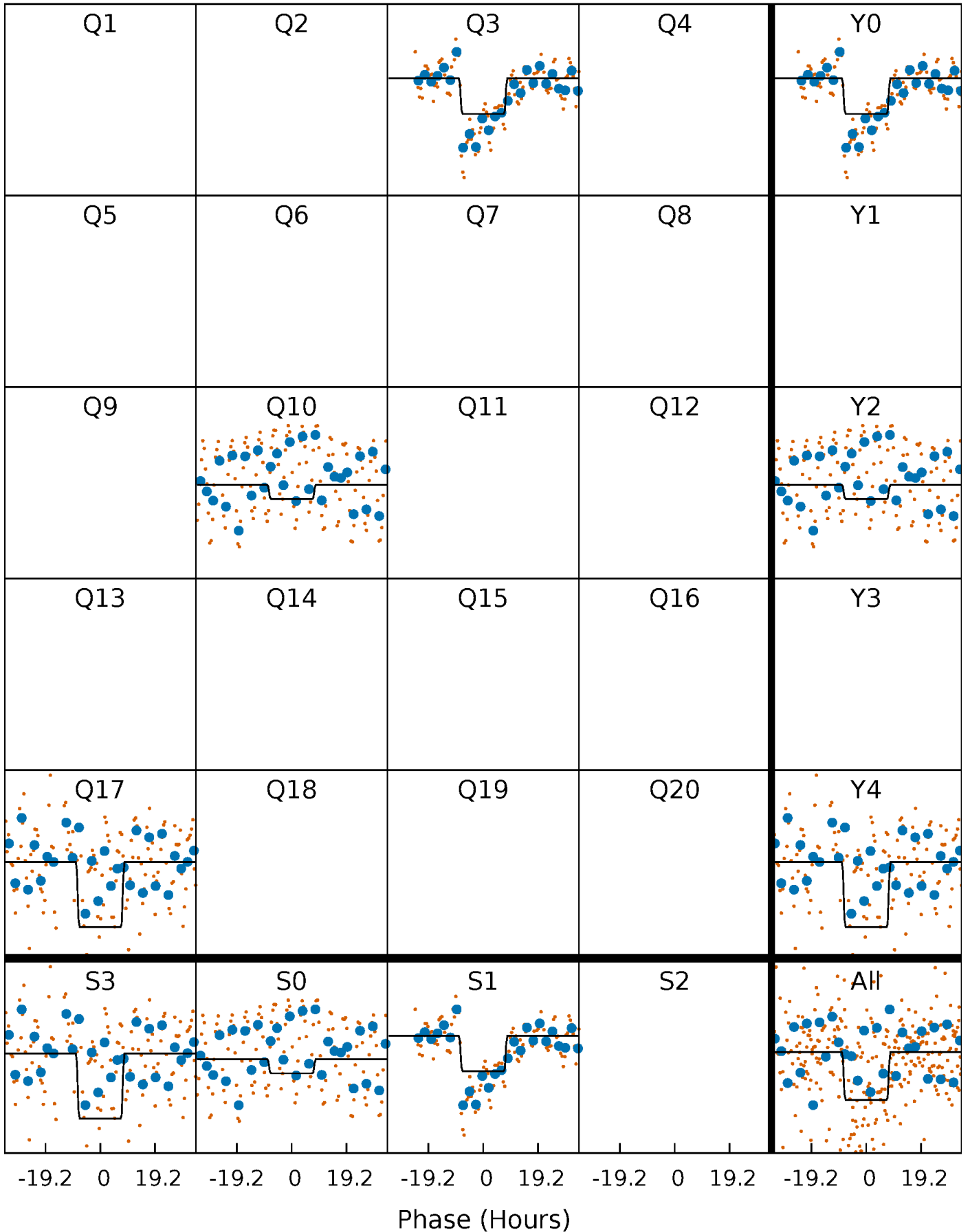
DV Quarter-Phased Transit Curves

TCE 007841938-01 $P=639.521439$ Days $T_0=282.360503$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

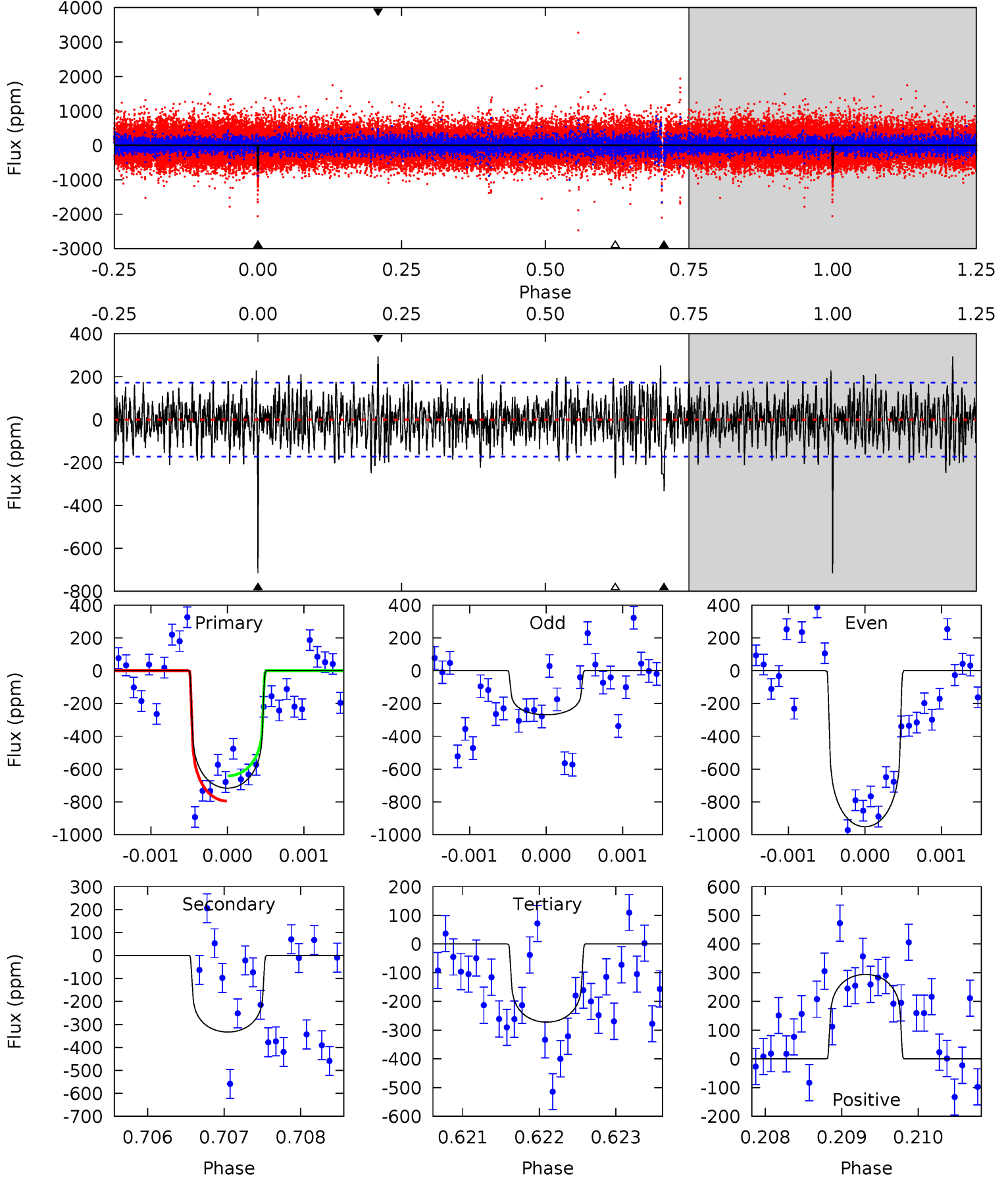
TCE 007841938-01 P=639.570428 Days $T_0=282.345841$ (BKJD)



DV Model-Shift Uniqueness Test

007841938-01, P = 639.521439 Days, E = 282.360503 Days

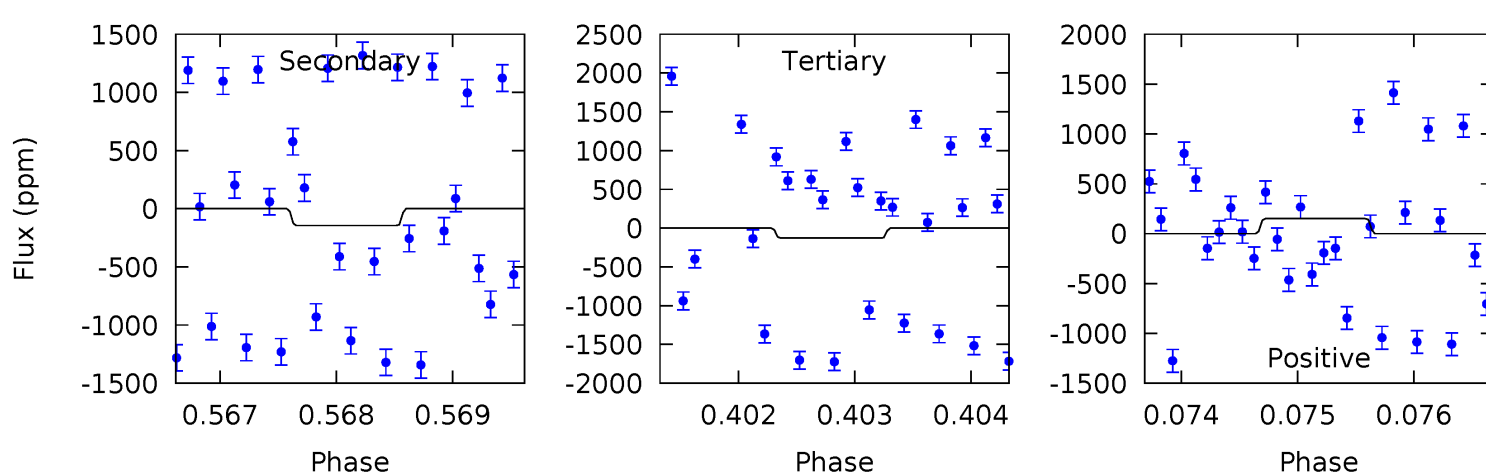
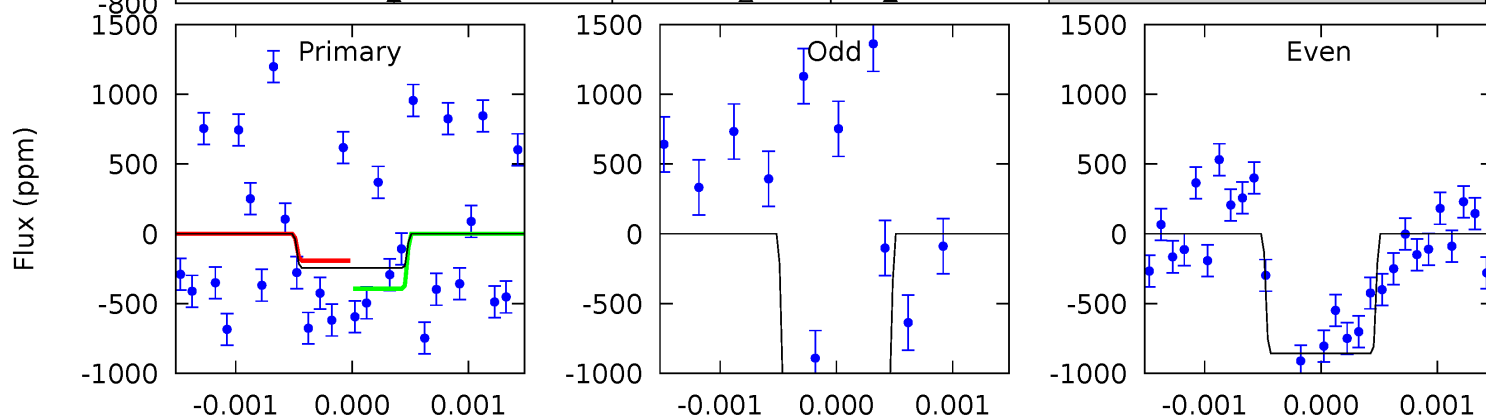
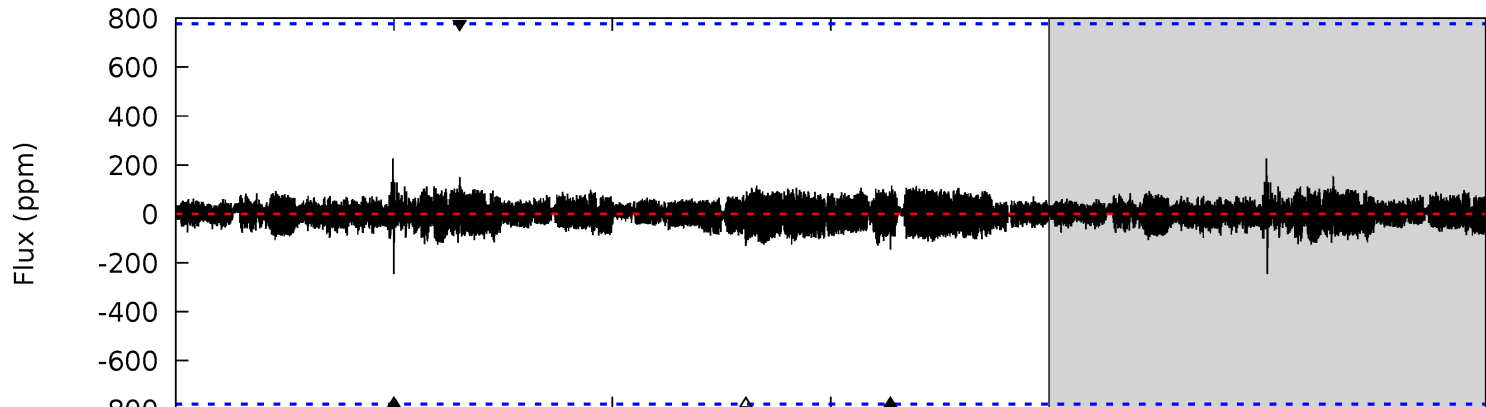
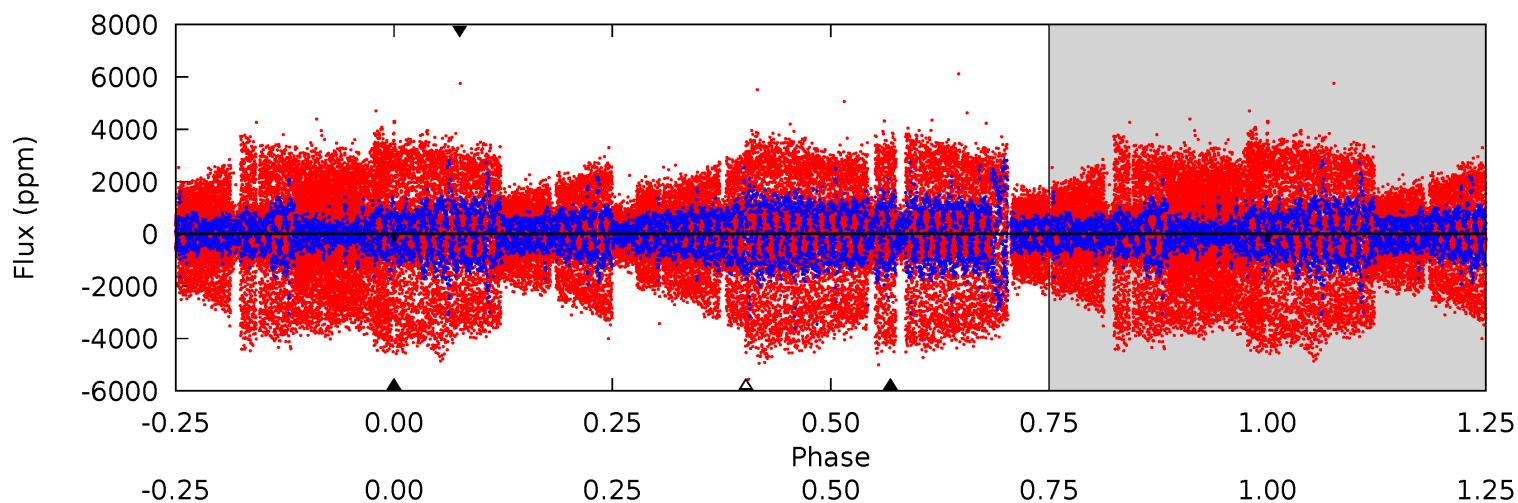
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.6	10.5	8.58	9.27	5.45	3.28	2.39	14.0	13.3	1.92	1.23	10.2	1.06	0.29	2.42



Alt Model-Shift Uniqueness Test

007841938-01, P = 639.570428 Days, E = 282.345841 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.71	1.01	0.91	1.05	5.44	3.27	0.26	0.81	0.66	0.11	-0.04	1.73	0.68	0.48	0.70



Stellar Parameters For KIC 007841938

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6194^{+167}_{-242}	$4.407^{+0.067}_{-0.202}$	$0.120^{+0.200}_{-0.300}$	$1.123^{+0.365}_{-0.122}$	$1.178^{+0.142}_{-0.158}$	$1.172^{+0.339}_{-0.592}$
	+3%/-4%	+2%/-5%	+167%/-250%	+33%/-11%	+12%/-13%	+29%/-51%
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 007841938-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-333 ± 32	$3.49^{+1.17}_{-1.12}$	331^{+23}_{-16}	5118^{+883}_{-556}	34979^{+39180}_{-15332}
Alt.	-145 ± 143	$4.05^{+1.21}_{-1.03}$	332^{+25}_{-19}	4053^{+808}_{-2017}	10443^{+17531}_{-10389}

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

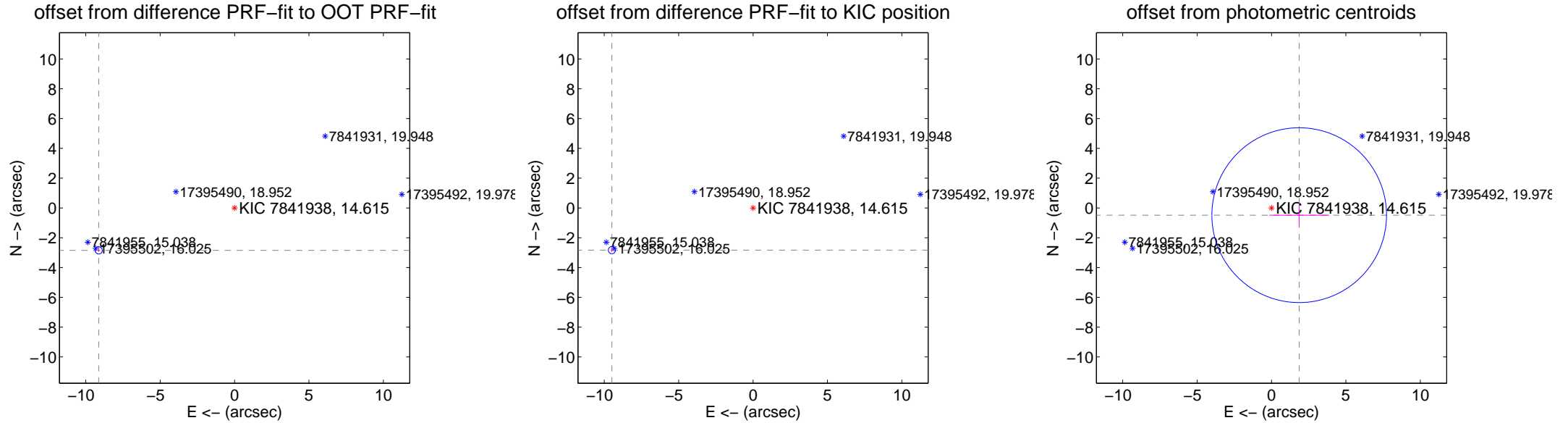
DV Centroid Data

Supplemental centroid analysis for 007841938-01. Kepler magnitude: 14.62. Transit SNR 14.18

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

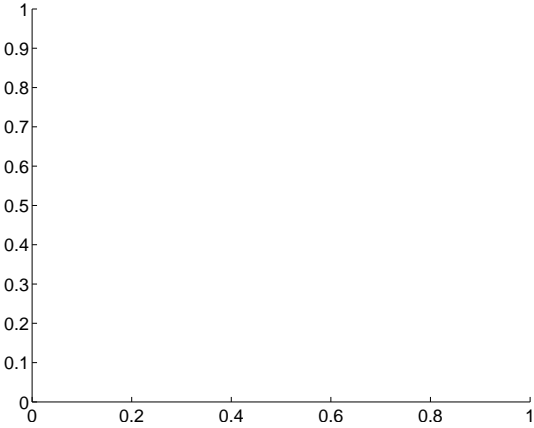
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.566 \pm 0.081	118.31	9.132 \pm 0.080	-2.849 \pm 0.091
PRF-fit source offset from KIC position	9.902 \pm 0.081	122.59	9.488 \pm 0.080	-2.832 \pm 0.091
photometric centroid source offset	1.92 \pm 1.96	0.98	-1.86 \pm 2.01	-0.48 \pm 0.75



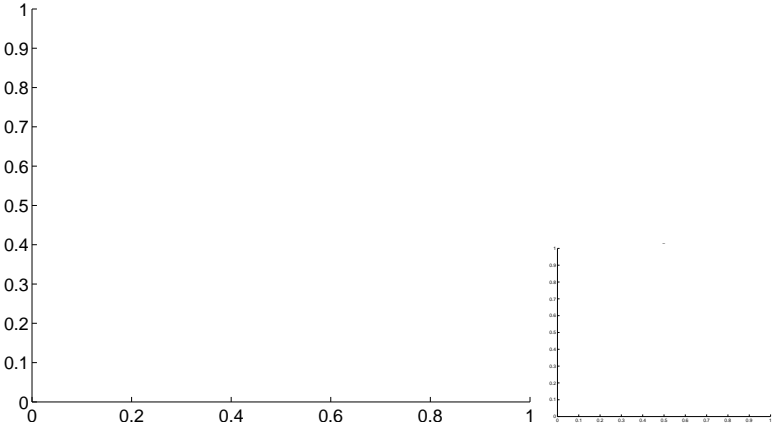
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

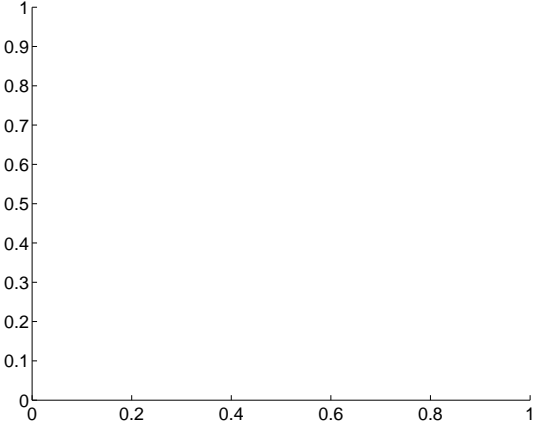
Q1 no difference image



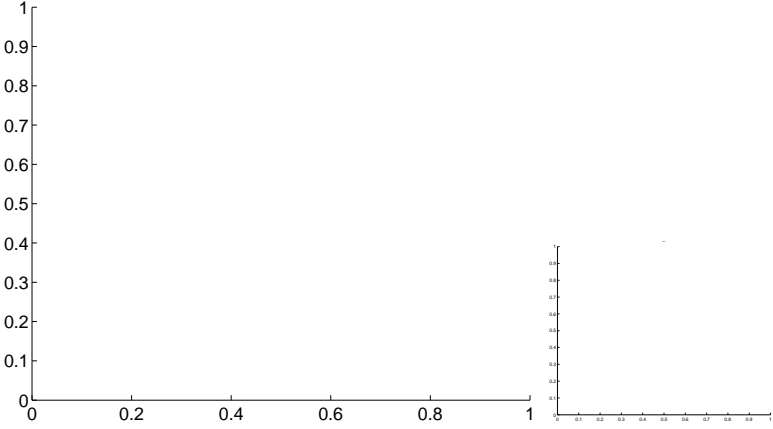
Q1 no OOT image



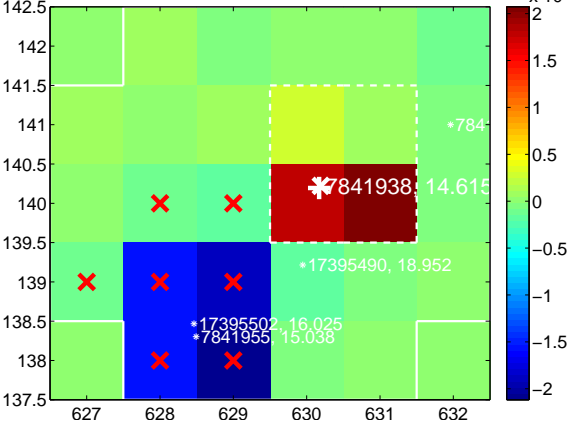
Q2 no difference image



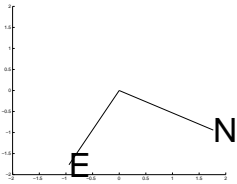
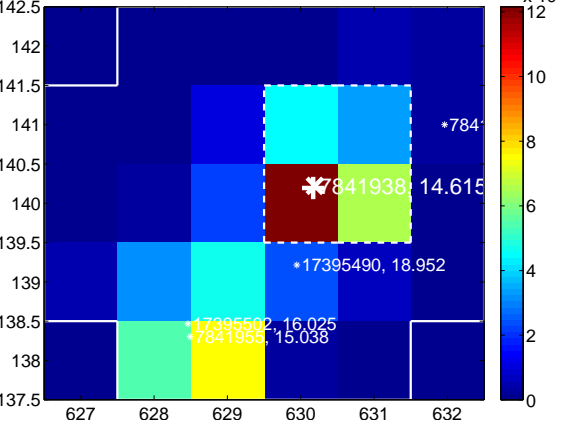
Q2 no OOT image



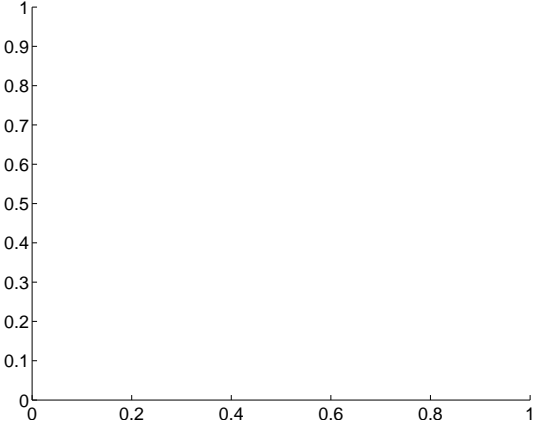
Q3 difference image. Poor Quality



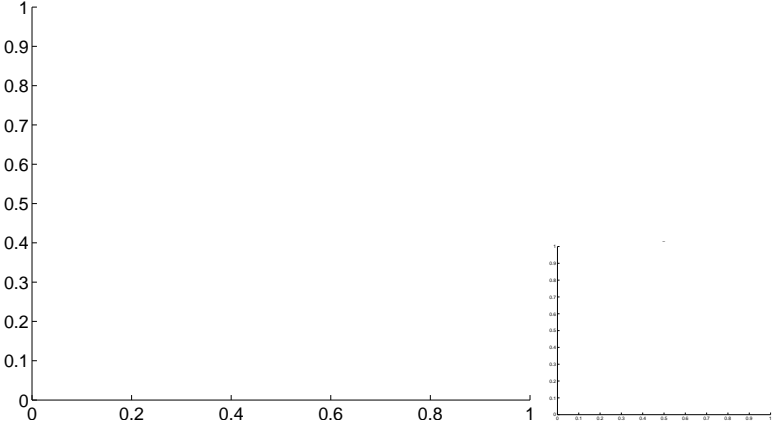
Q3 OOT image



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

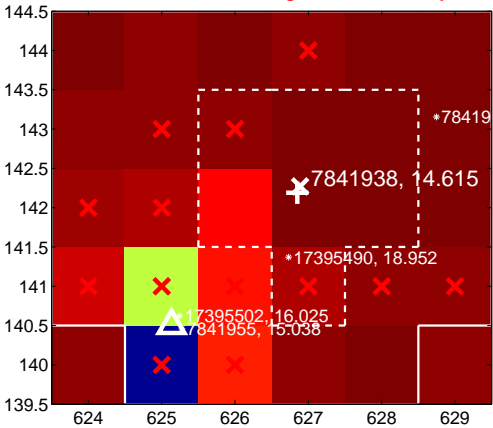
Q9 no difference image



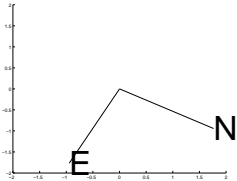
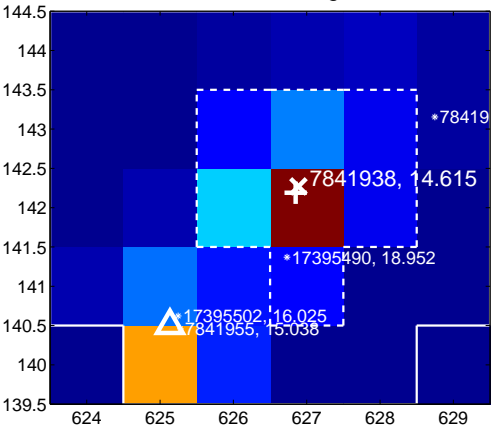
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



Q11 no difference image



Q11 no OOT image



Q12 no difference image



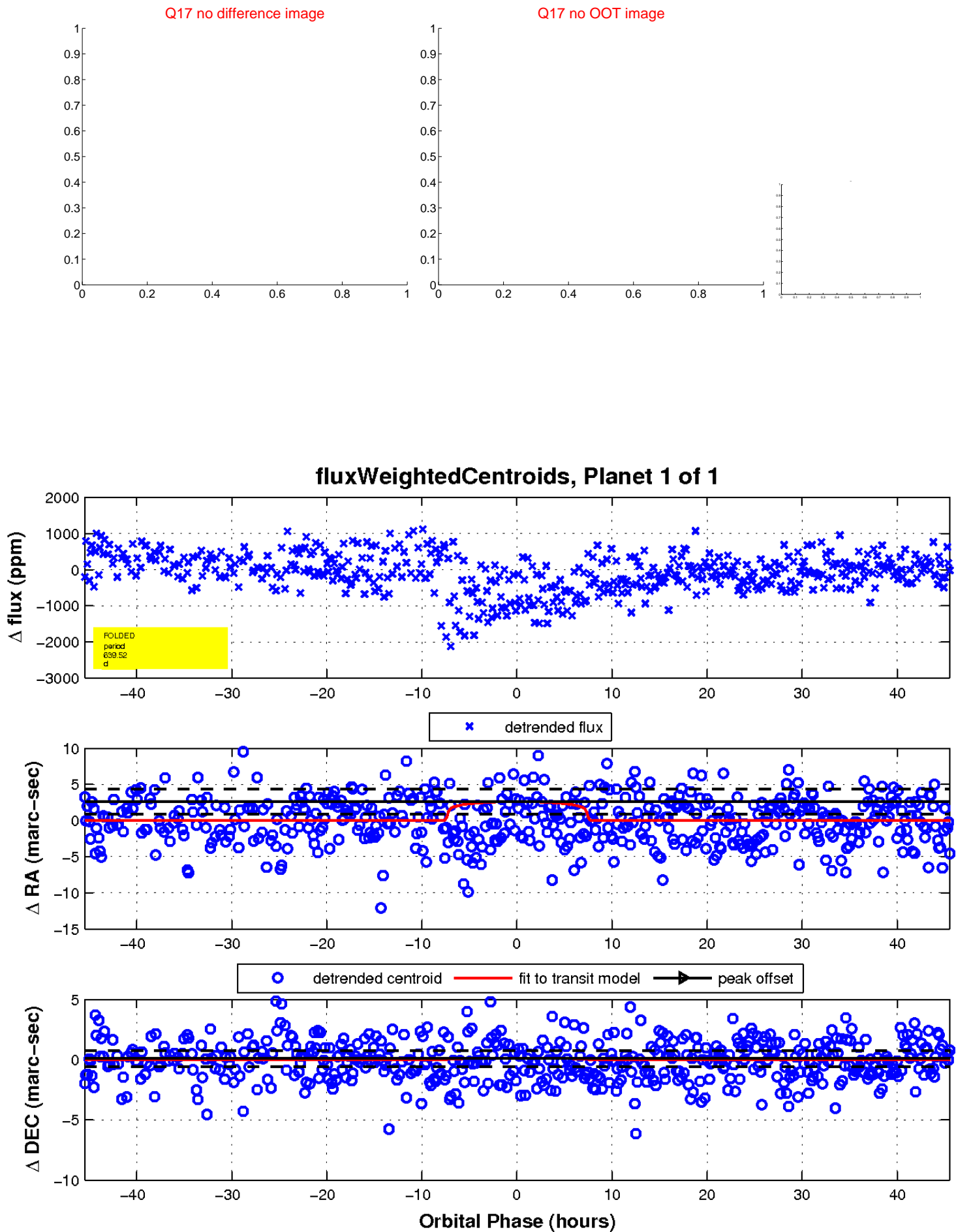
Q12 no OOT image



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.



UKIRT Image

Declination

