

KIC 007938762

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})
007938762-01	OBS	No	520.151358	294.007793	148.3	15.651	11.0	7.5	1.08	5899	1.39	0.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007938762-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED

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

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

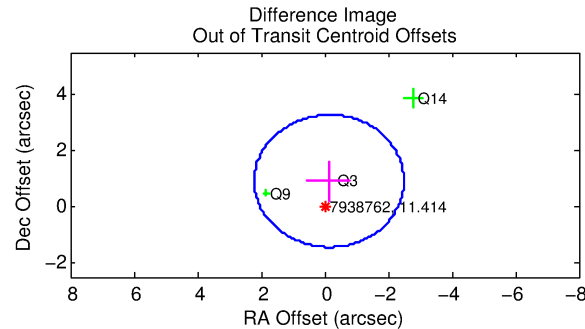
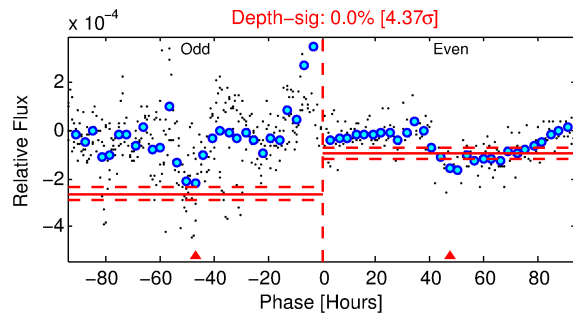
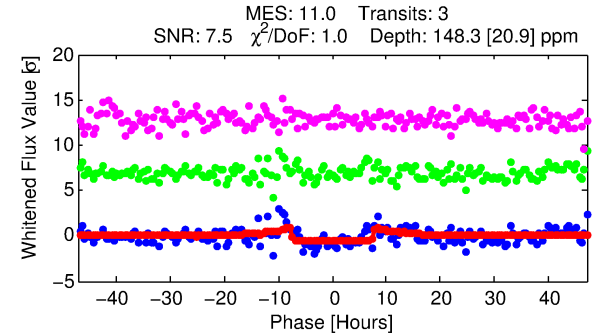
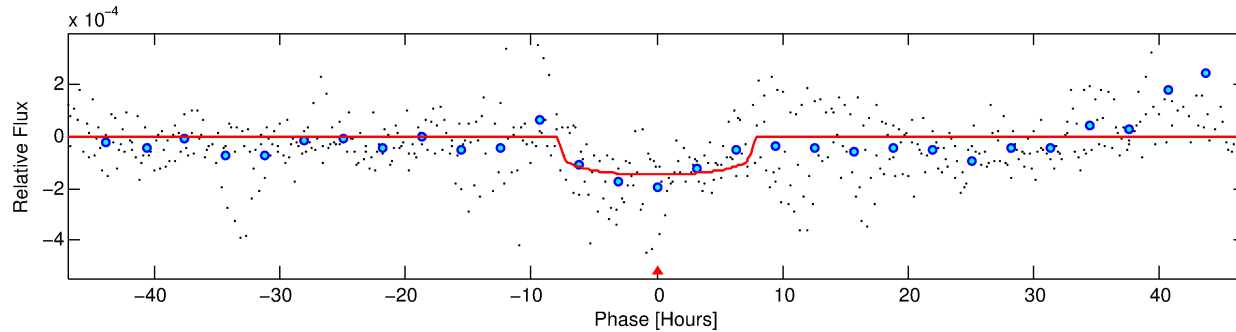
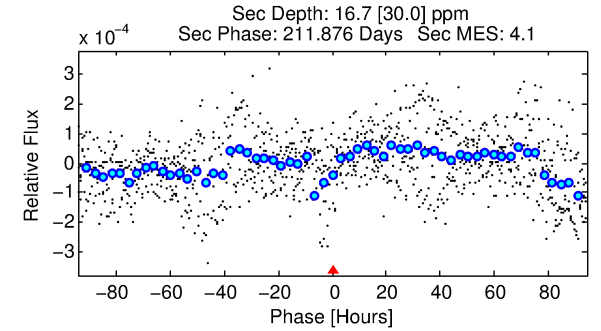
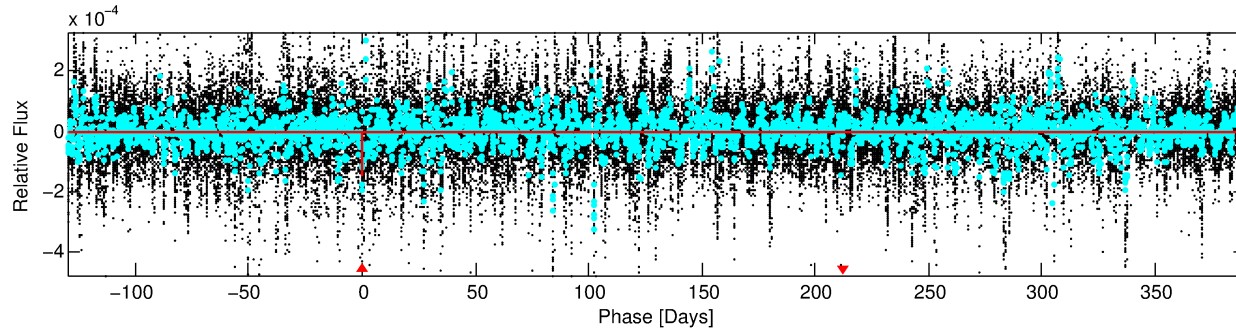
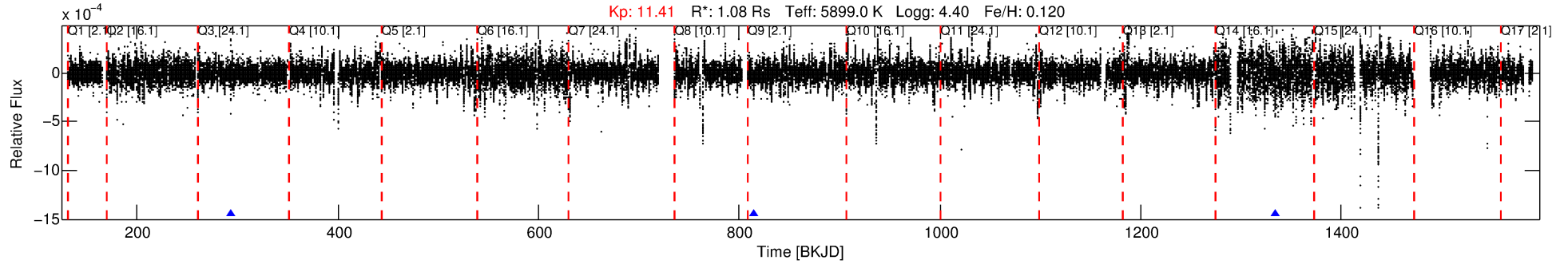
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007938762-01

No Significant Match Found

DV One-Page Summary

KIC: 7938762 Candidate: 1 of 1 Period: 520.151 d



DV Fit Results:

Period = 520.15136 [0.00826] d
Epoch = 294.0078 [0.0094] BKJD
Rp/R* = 0.0118 [0.0048]
a/R* = 191.06 [338.90]
b = 0.68 [1.43]
Seff = 0.76 [0.30]
Teq = 238 [24] K
Rp = 1.39 [0.70] Re
a = 1.2906 [0.3312] AU
Ag = 7887.23 [15801.29] [0.50σ]
Teffp = 3467 [1711] K [1.89σ]

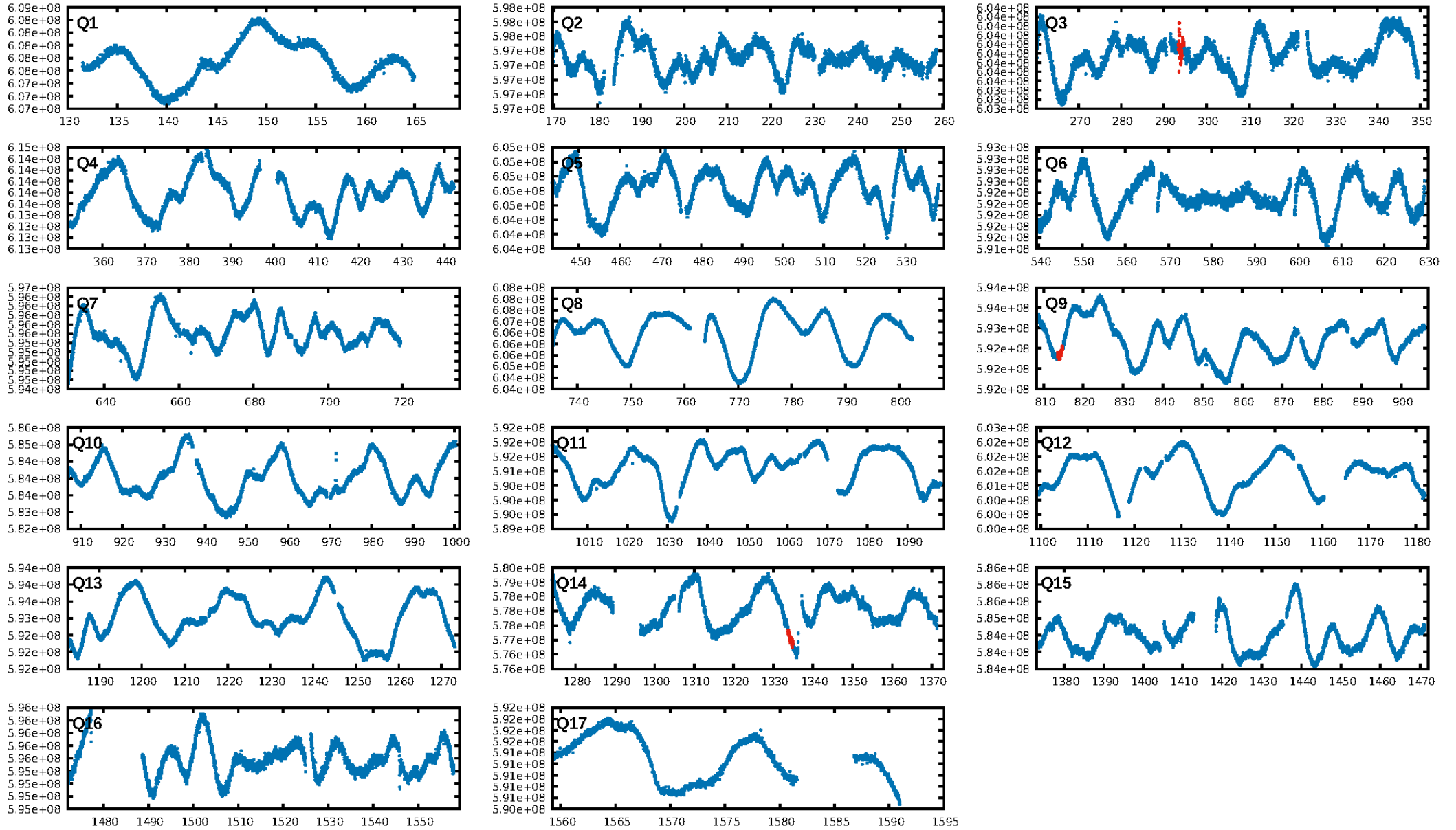
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 19.3%
ModelChiSquareGof-sig: 96.9%
Bootstrap-pfa: 8.69e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.3464
Centroid-sig: 90.1%
Centroid-so: 0.539 arcsec [0.46σ]
OotOffset-rm: 0.928 arcsec [1.18σ]
KicOffset-rm: 1.023 arcsec [1.81σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

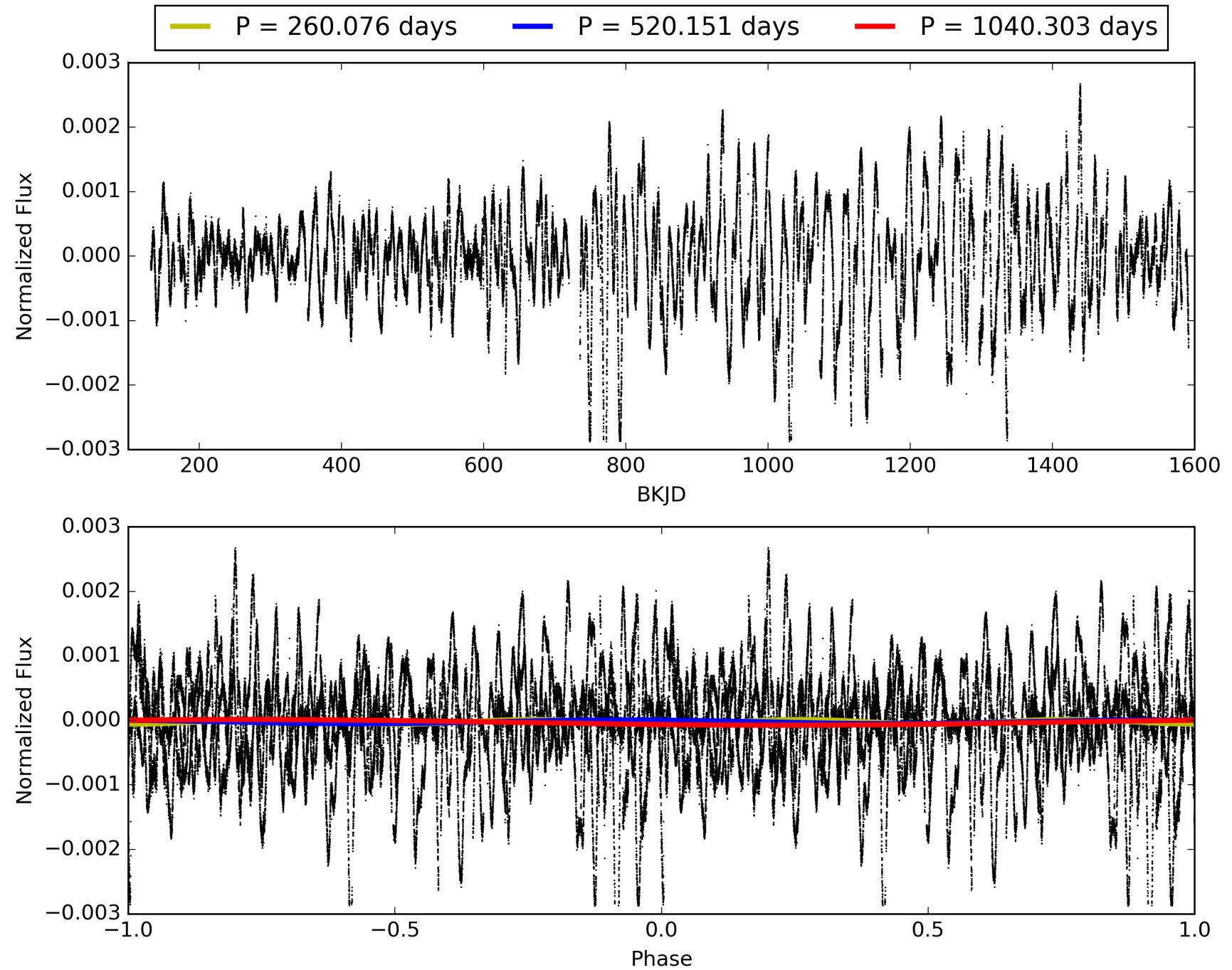
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:54:13 Z

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

TCE 007938762-01, PDC Light Curves

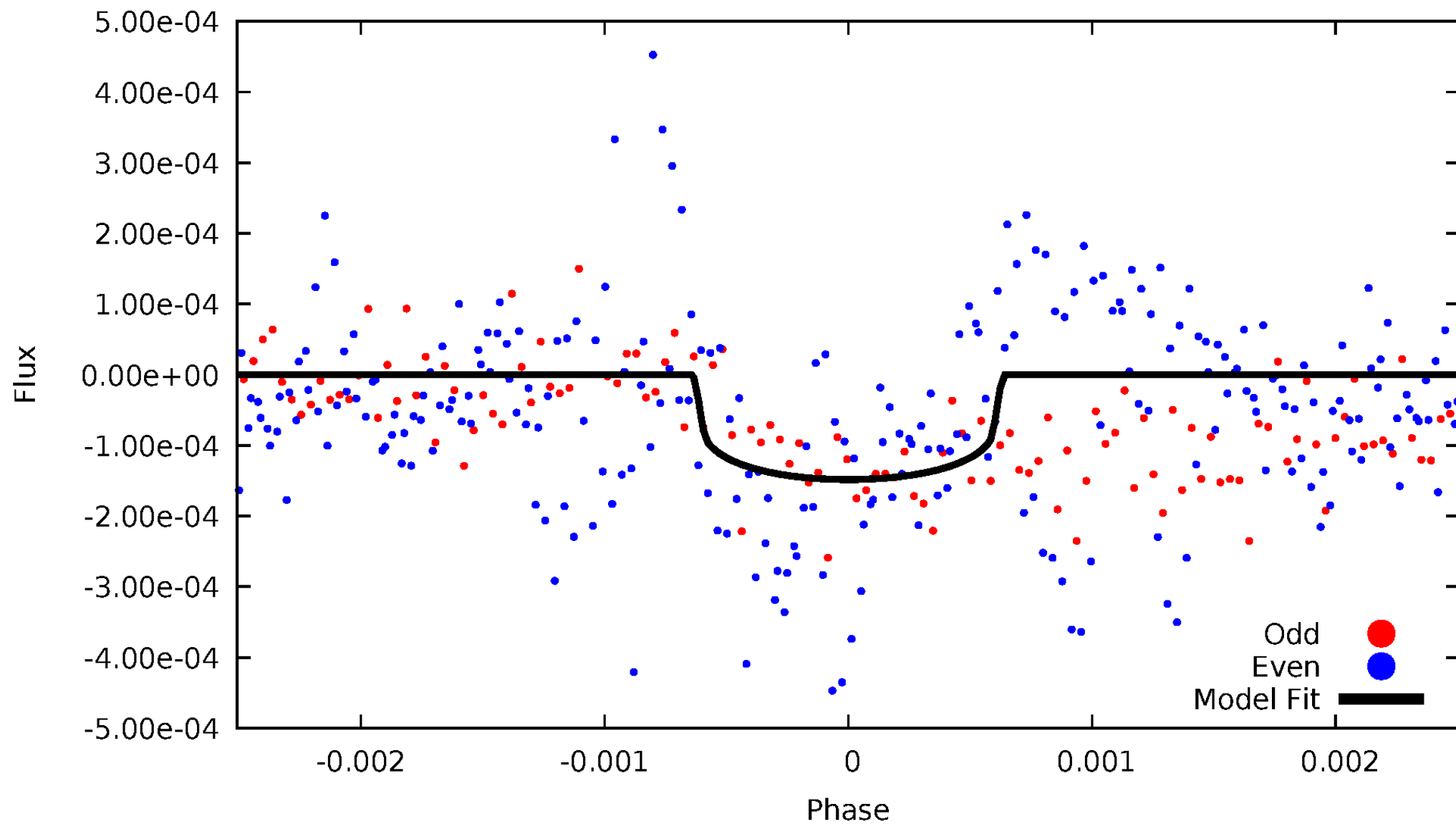


TCE 007938762-01



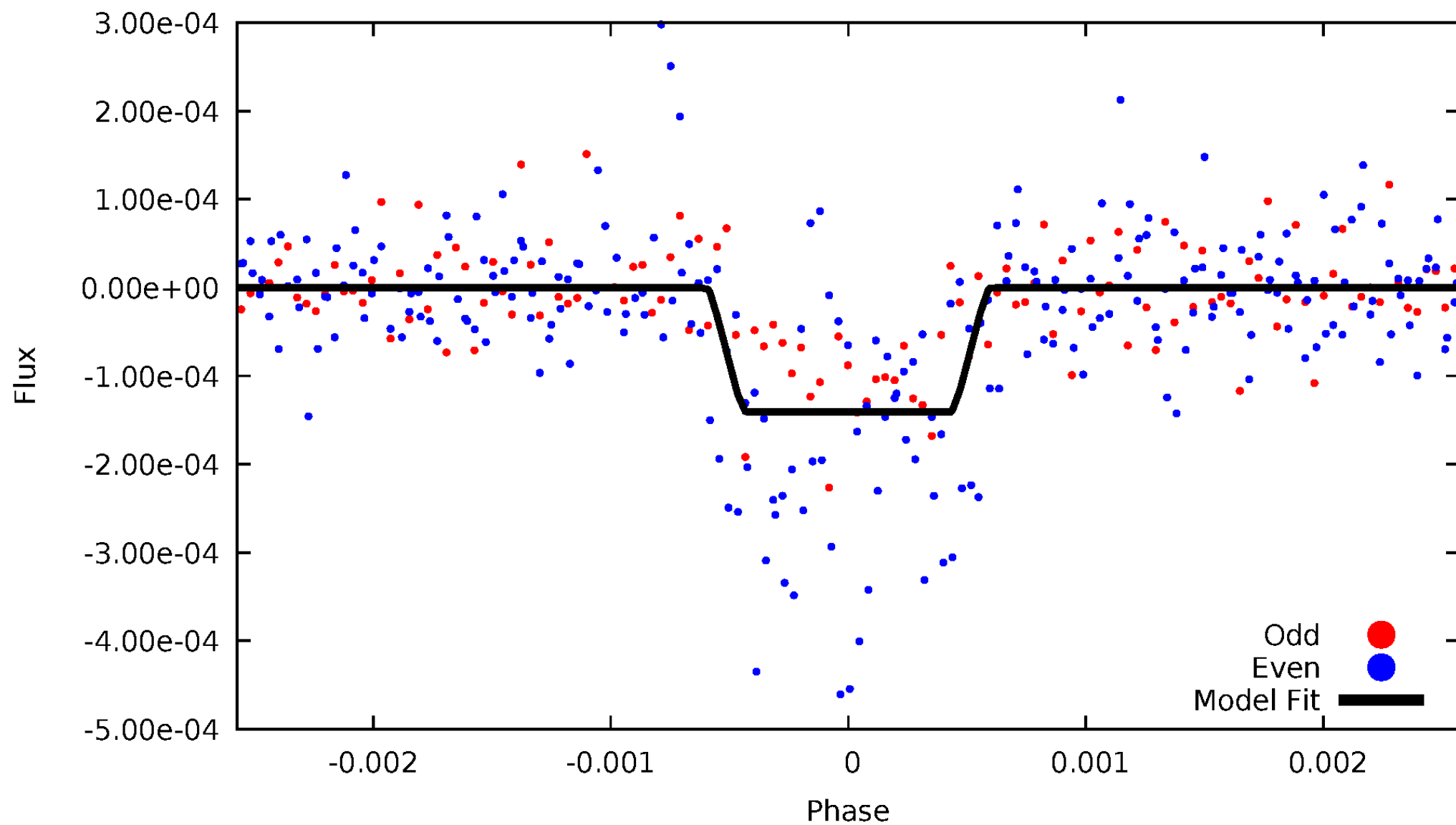
DV Odd/Even

TCE 007938762-01



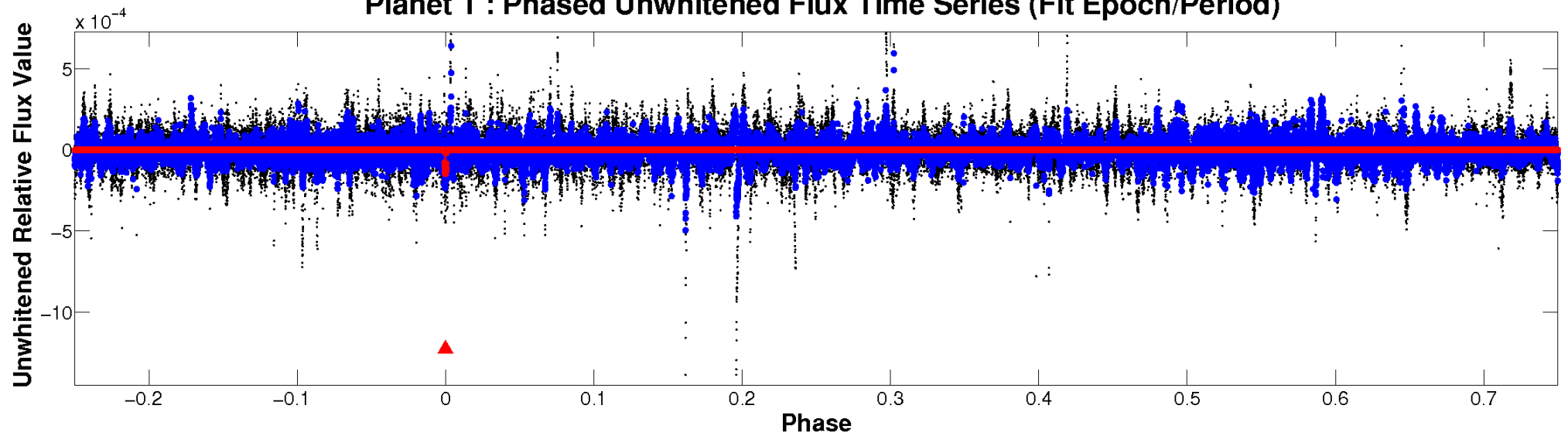
ALT Odd/Even

TCE 007938762-01

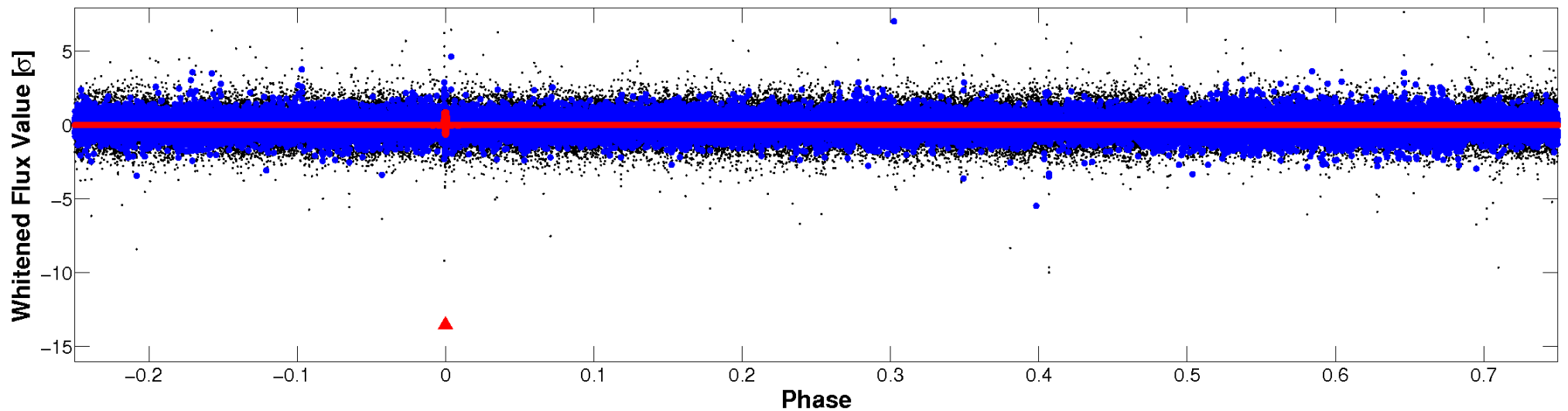


Non-Whitened Vs. Whitened Light Curve

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

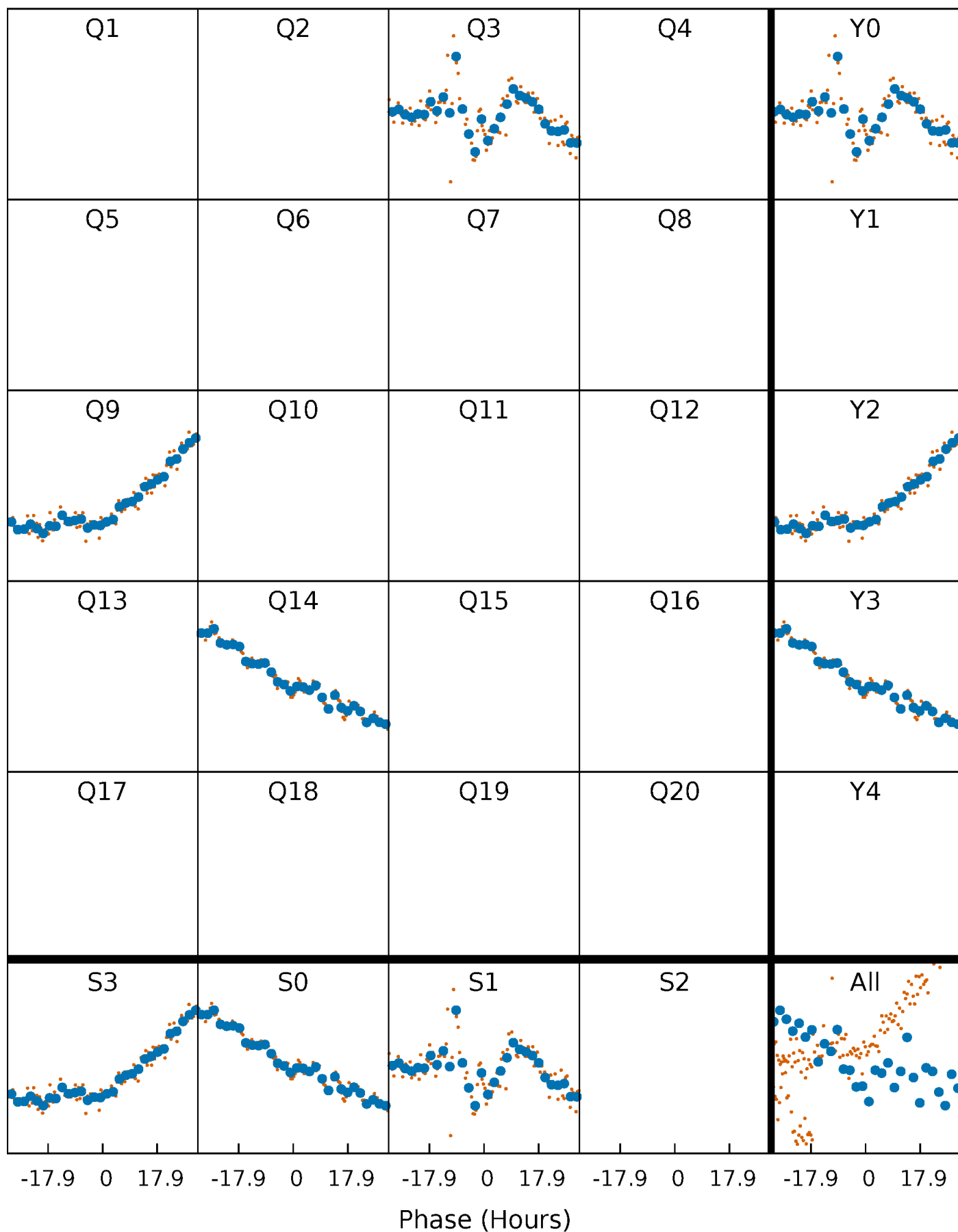


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



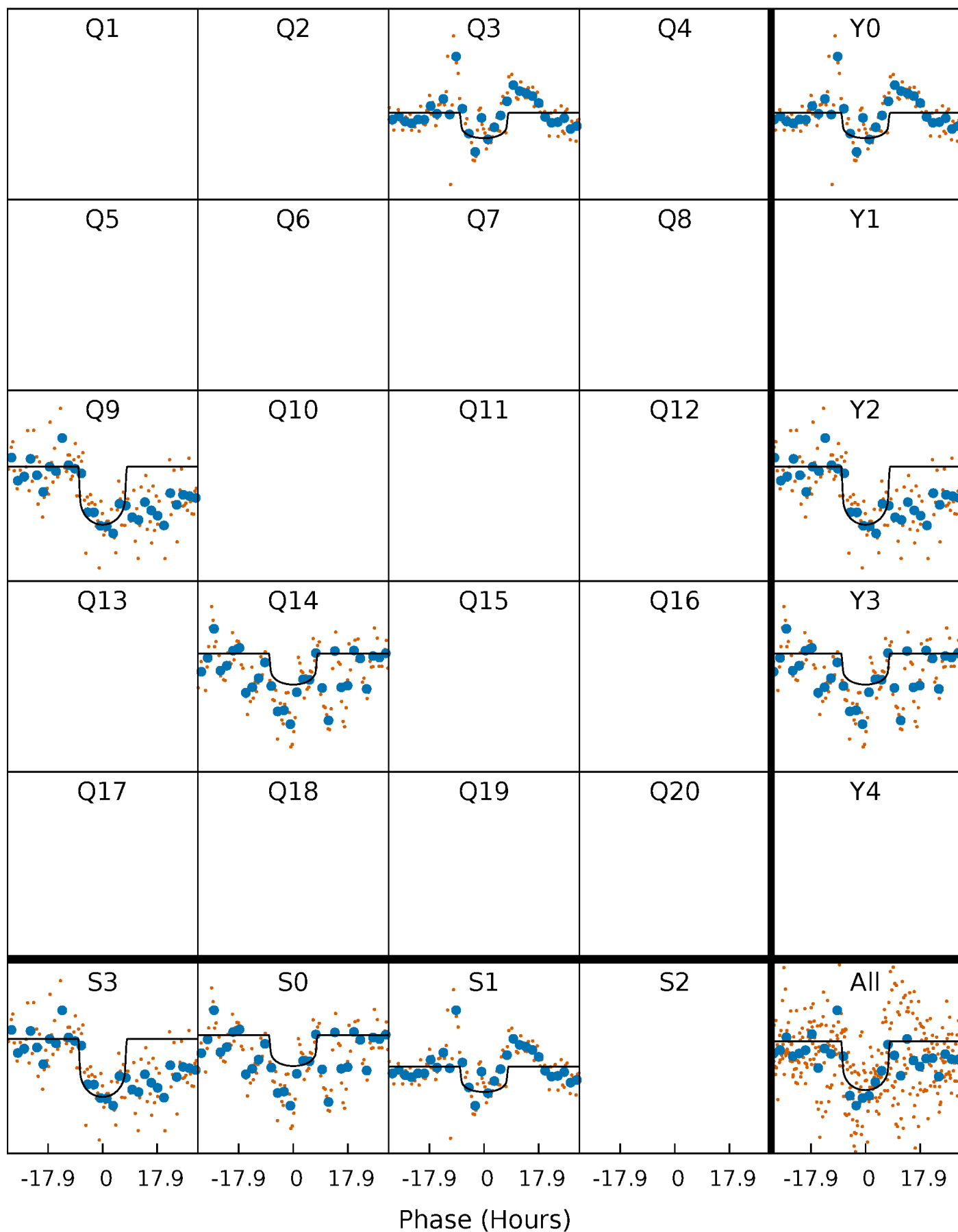
PDC Quarter-Phased Transit Curves

TCE 007938762-01 P=520.151358 Days $T_0=294.007793$ (BKJD)



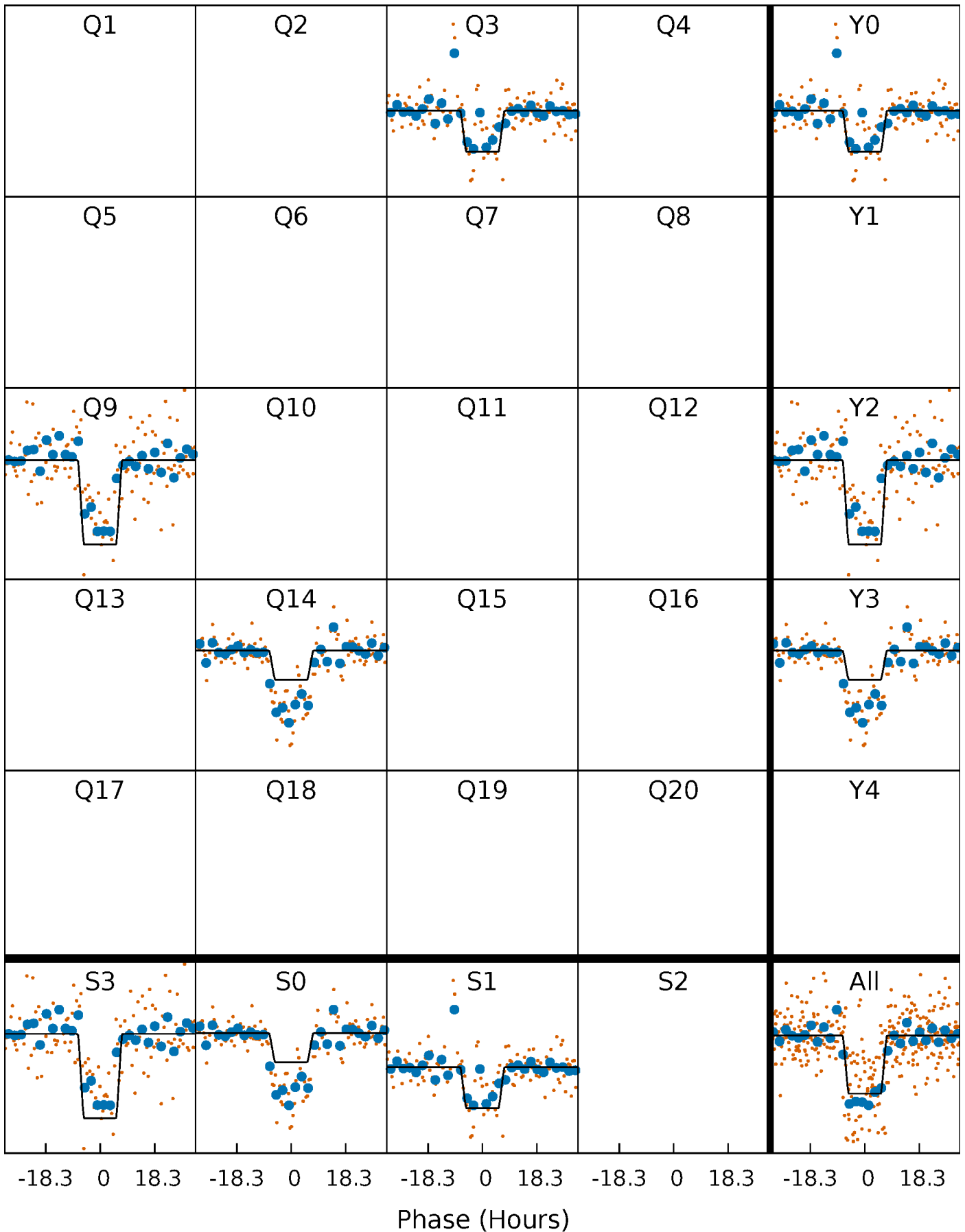
DV Quarter-Phased Transit Curves

TCE 007938762-01 P=520.151358 Days $T_0=294.007793$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

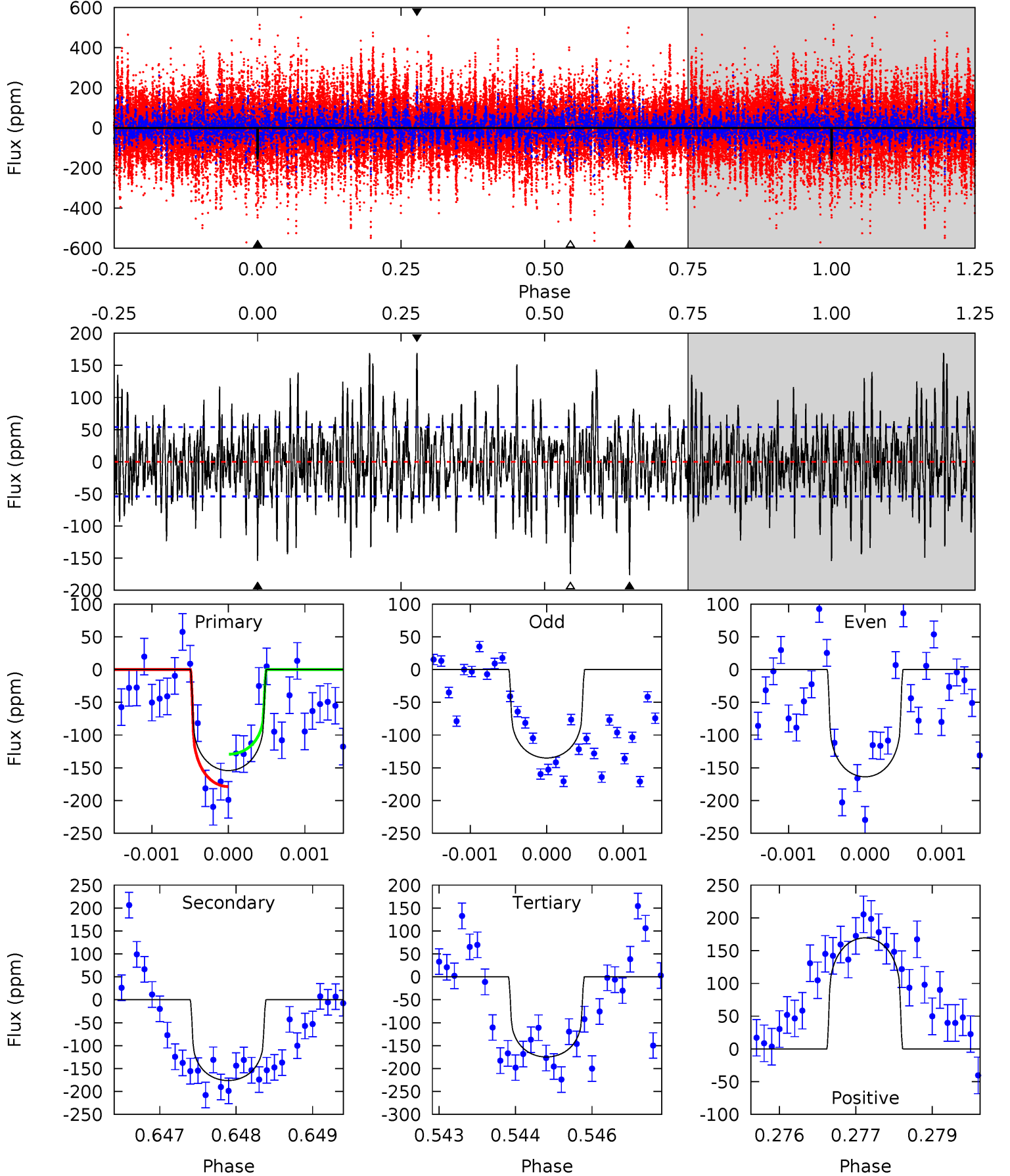
TCE 007938762-01 P=520.136270 Days $T_0=294.021069$ (BKJD)



DV Model-Shift Uniqueness Test

007938762-01, P = 520.151358 Days, E = 294.007793 Days

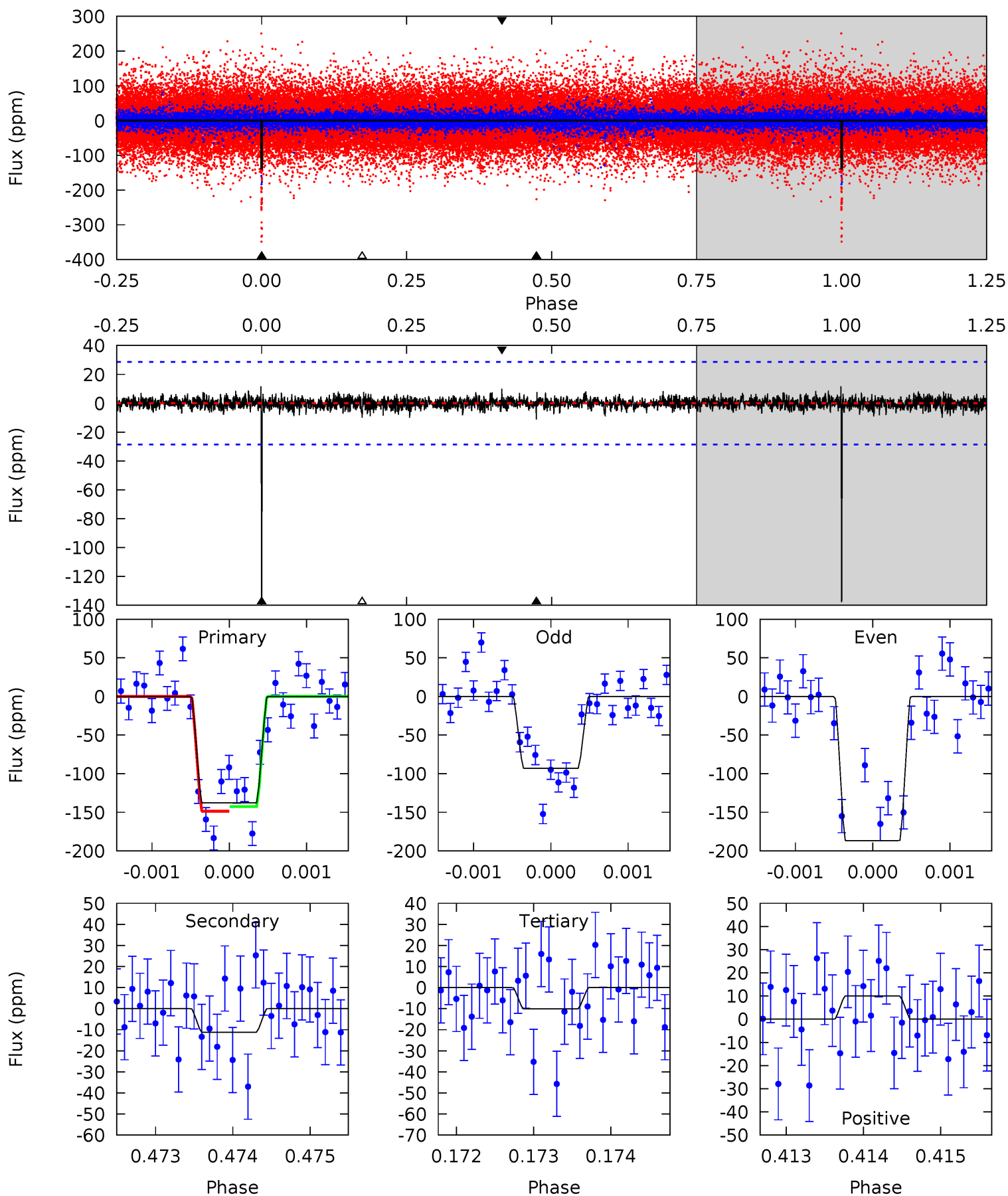
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	17.6	17.5	17.0	5.40	3.22	4.46	-2.06	-1.52	0.14	0.68	1.33	1.14	0.49	2.49



Alt Model-Shift Uniqueness Test

007938762-01, P = 520.136270 Days, E = 294.021069 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.1	2.12	1.91	1.89	5.42	3.23	0.45	24.2	24.2	0.21	0.23	8.68	1.65	0.08	0.56



Stellar Parameters For KIC 007938762

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5899^{+182}_{-223}	$4.397^{+0.101}_{-0.203}$	$0.120^{+0.200}_{-0.300}$	$1.079^{+0.330}_{-0.165}$	$1.059^{+0.136}_{-0.136}$	$1.187^{+0.531}_{-0.620}$
	+3%/-4%	+2%/-5%	+167%/-250%	+31%/-15%	+13%/-13%	+45%/-52%
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 007938762-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-176 ± 10	$1.44^{+0.67}_{-0.56}$	335^{+25}_{-20}	6147^{+1976}_{-870}	$76755^{+125865}_{-40253}$
Alt.	-11 ± 5	$1.46^{+0.65}_{-0.58}$	336^{+26}_{-21}	3517^{+741}_{-504}	4370^{+9234}_{-2890}

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 $A_{obs} \gg 1.0$

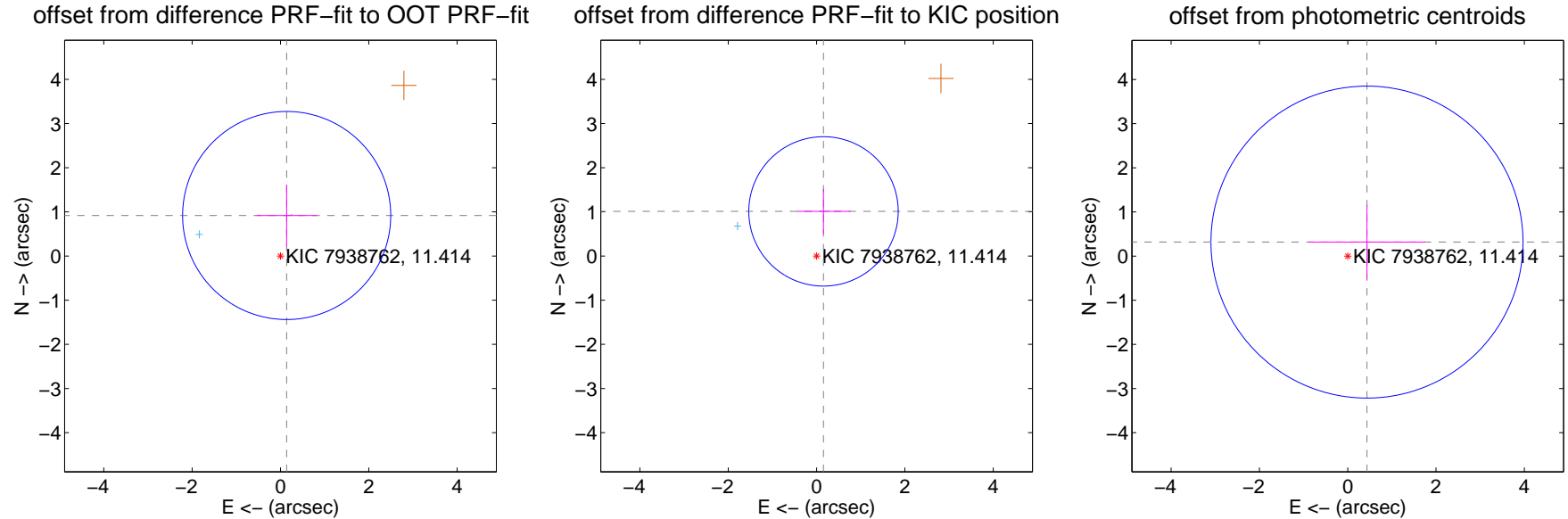
DV Centroid Data

Supplemental centroid analysis for 007938762-01. **Kepler magnitude: 11.41.** Transit SNR 7.46

There are 2 quarters with good PRF difference image offsets

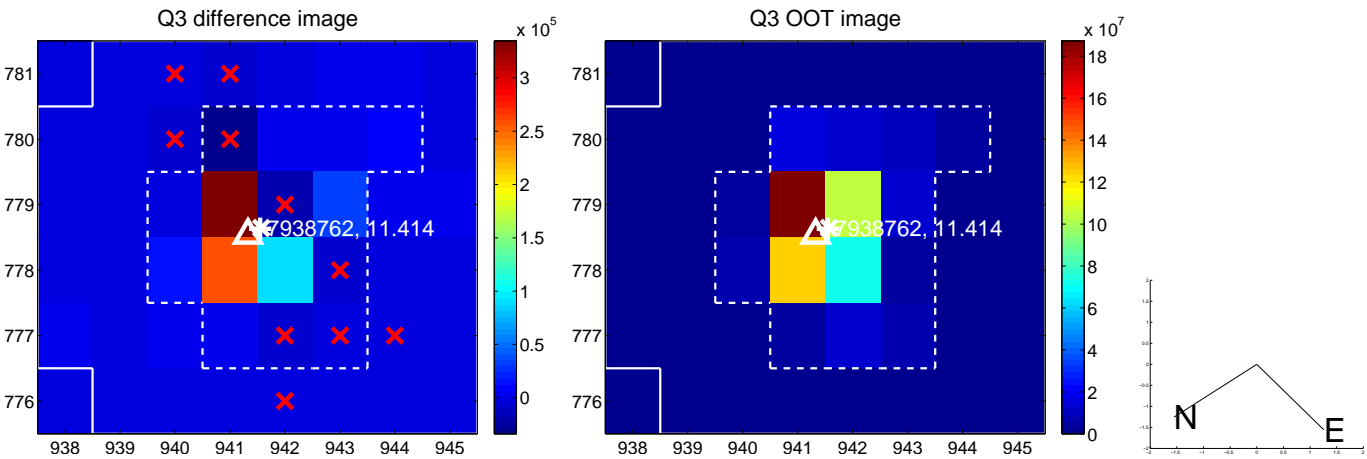
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.928 ± 0.785	1.18	-0.141 ± 0.677	0.918 ± 0.698
PRF-fit source offset from KIC position	1.023 ± 0.564	1.81	-0.157 ± 0.607	1.011 ± 0.510
photometric centroid source offset	0.54 ± 1.18	0.46	-0.44 ± 1.32	0.32 ± 0.85



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.

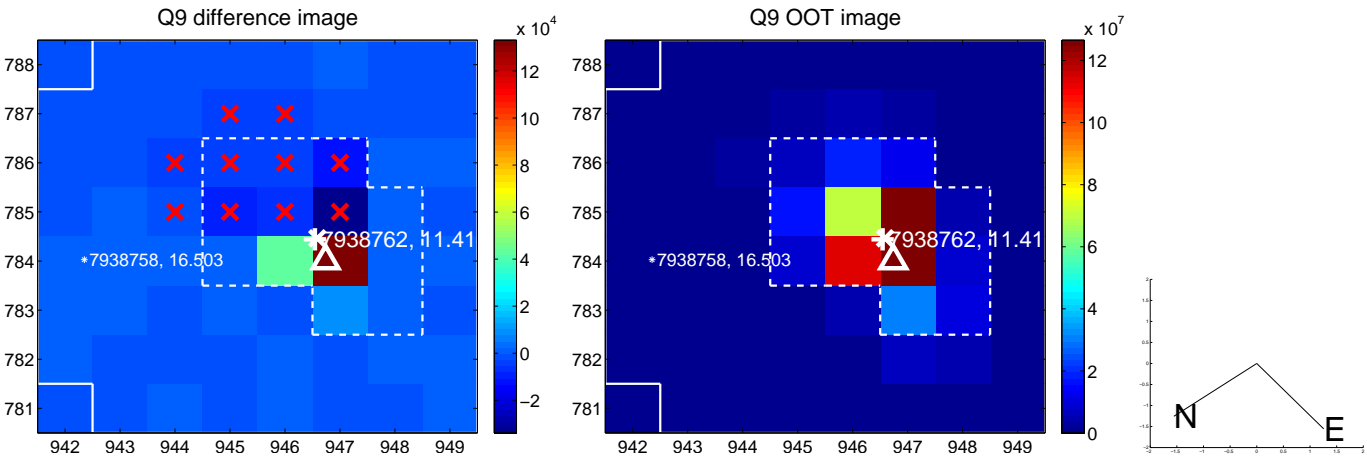
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



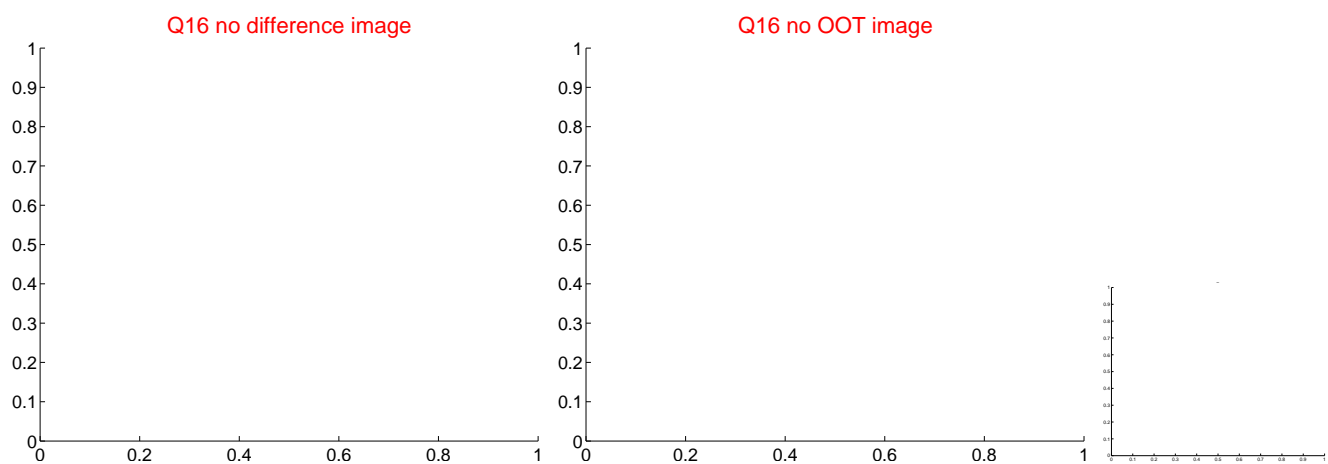
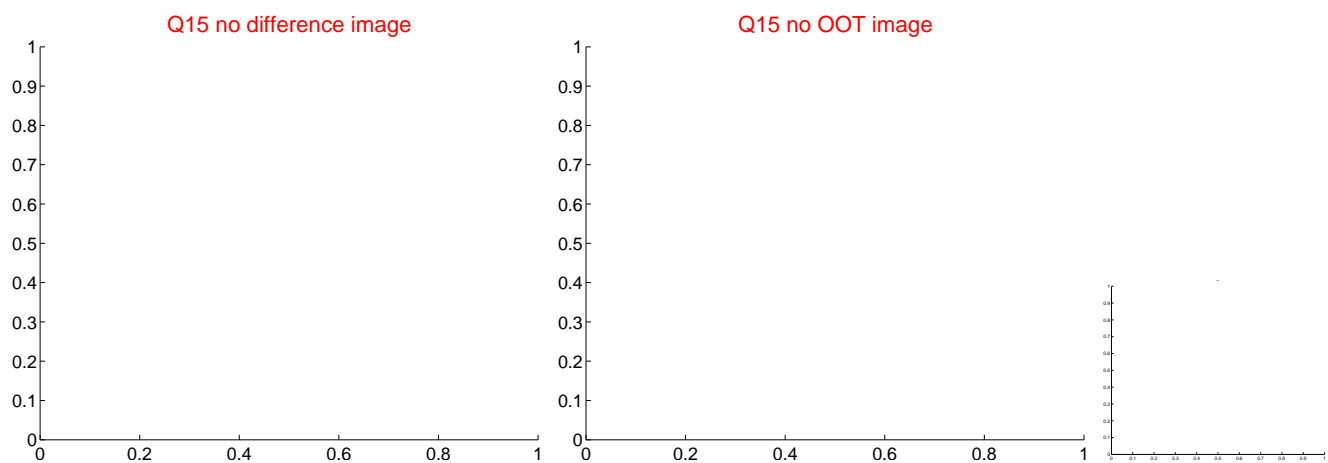
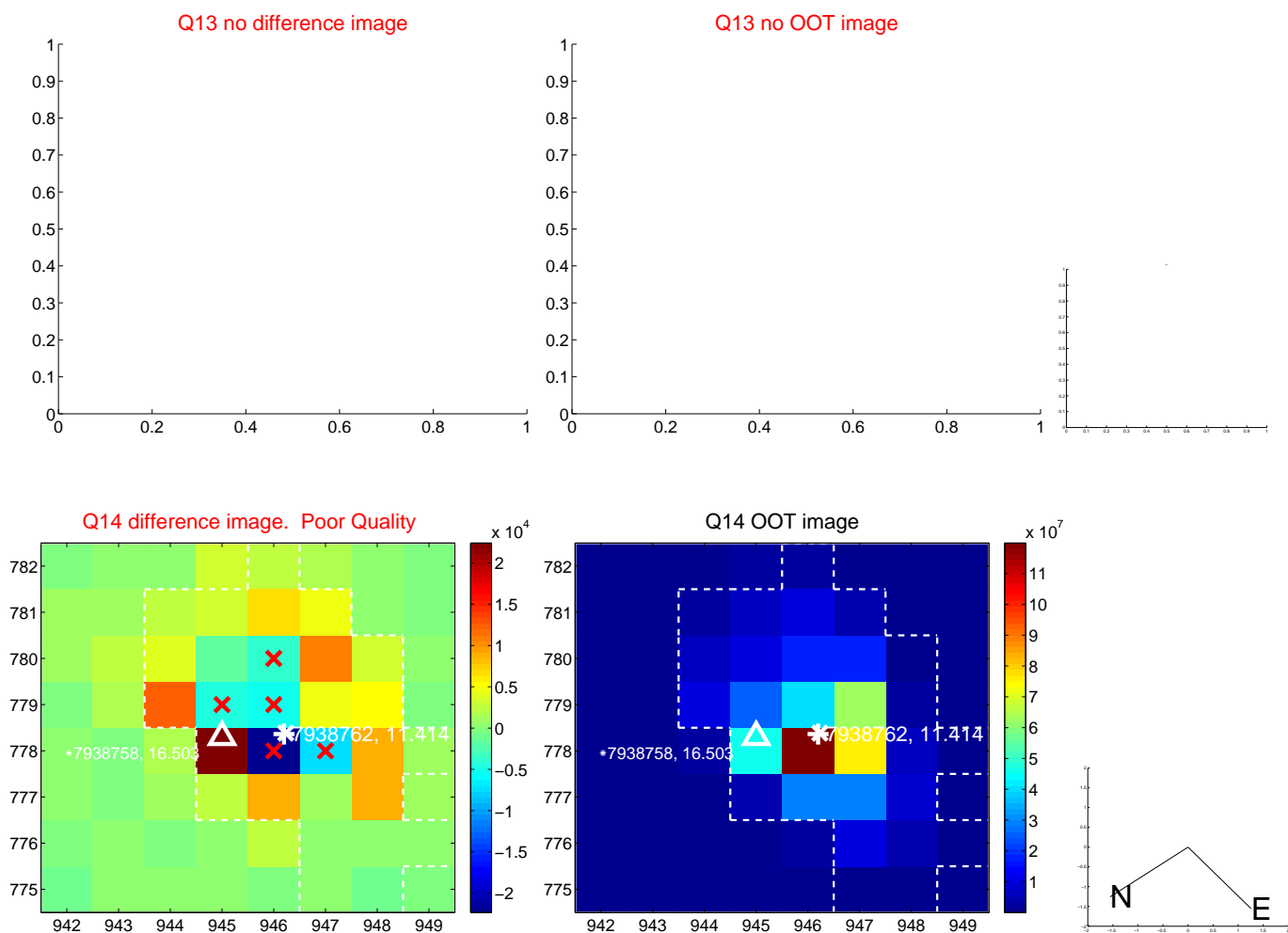
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



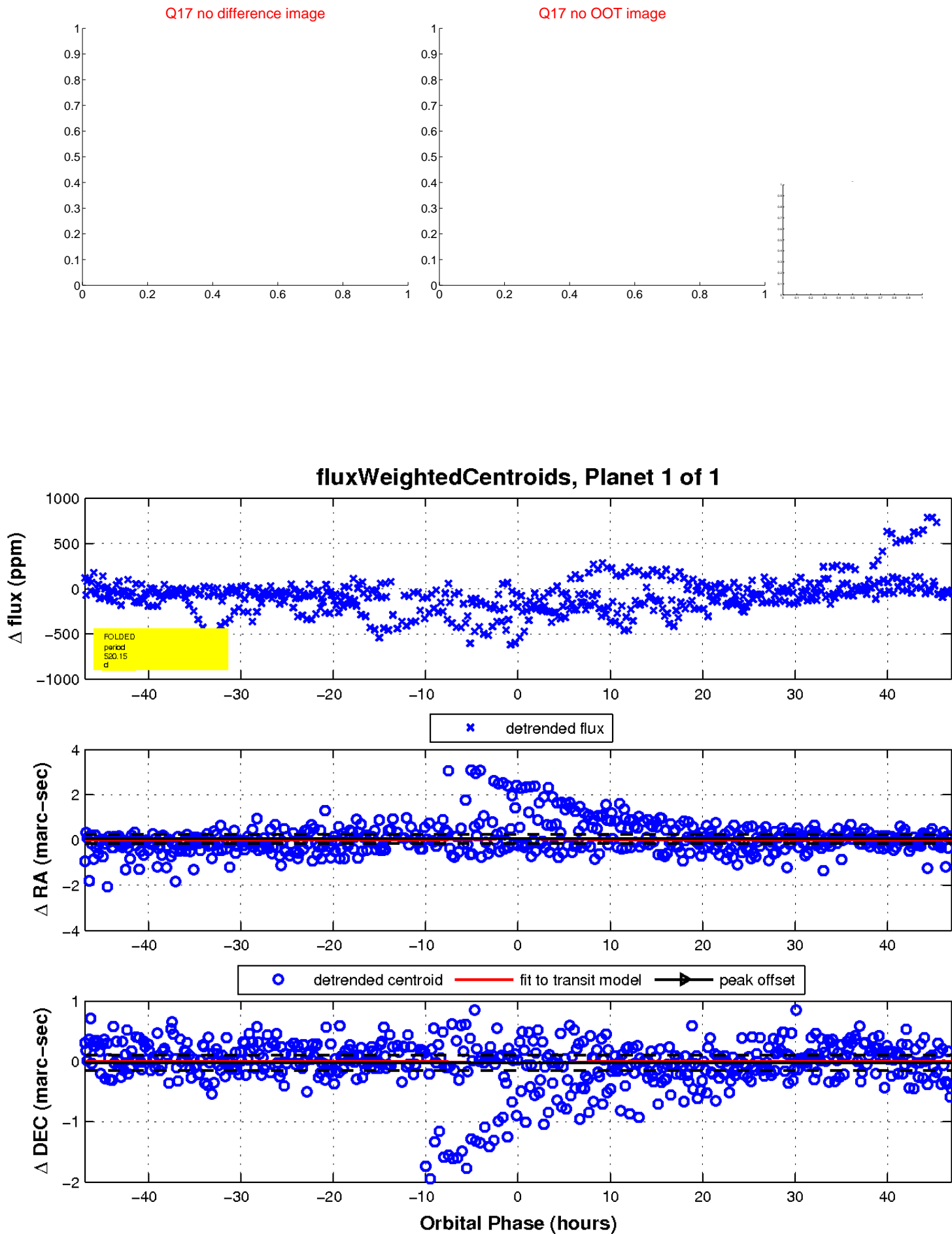
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

