

KIC 007960440

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})
007960440-01	OBS	No	462.536017	139.794813	167.9	11.026	8.5	7.3	1.30	5877	1.88	1.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007960440-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

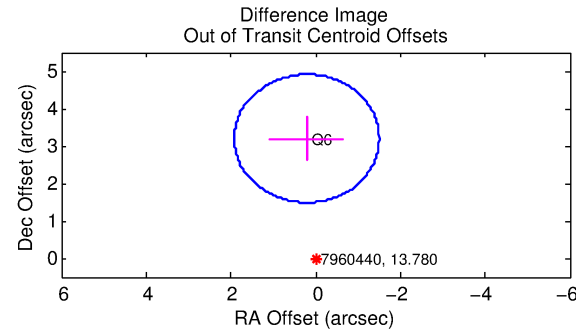
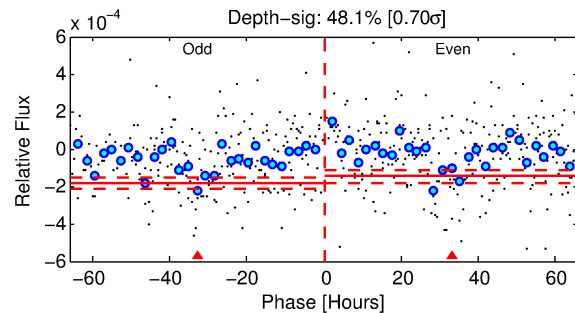
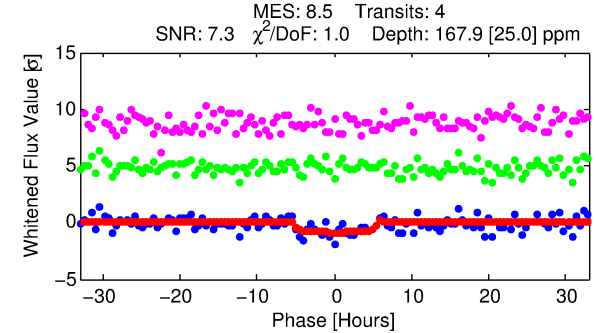
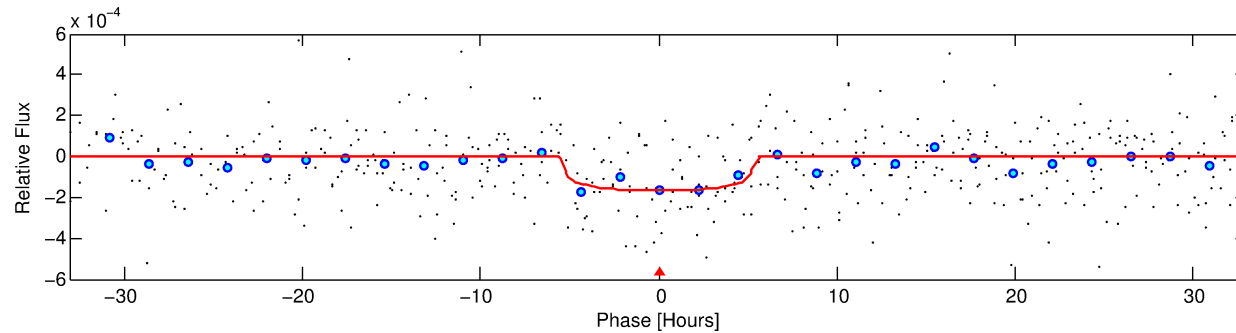
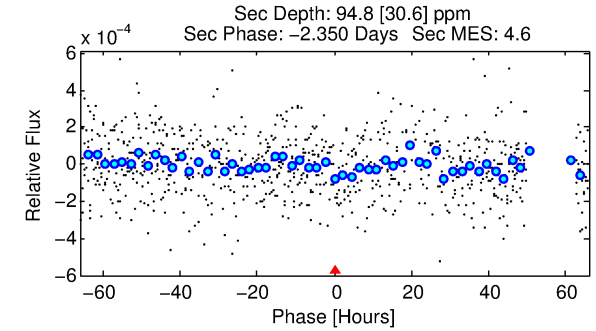
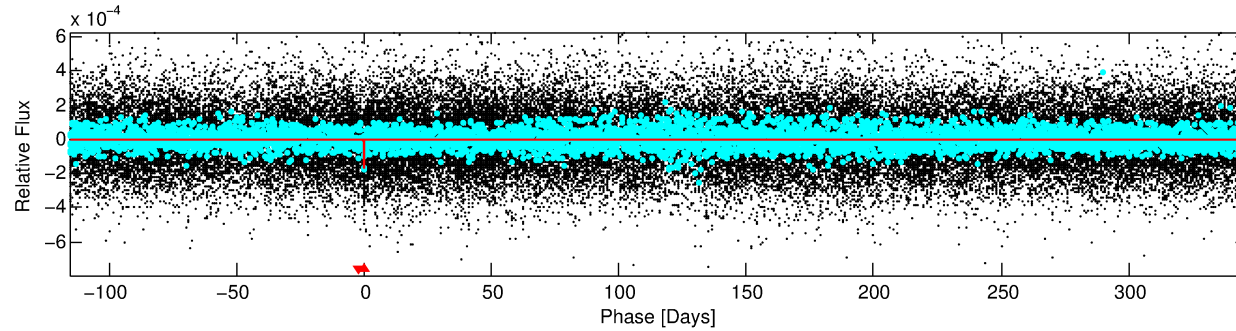
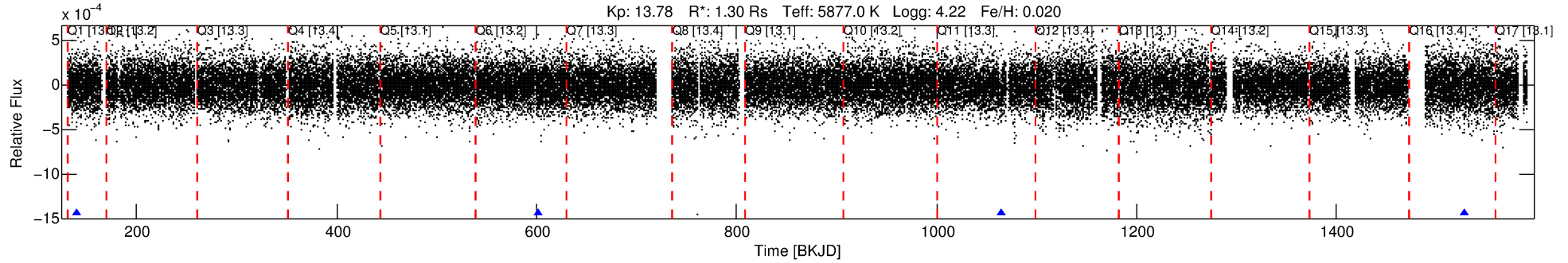
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007960440-01

No Significant Match Found

DV One-Page Summary

KIC: 7960440 Candidate: 1 of 1 Period: 462.536 d



DV Fit Results:

Period = 462.53602 [0.01185] d
Epoch = 139.7948 [0.0203] BKJD
Rp/R* = 0.0132 [0.0057]
a/R* = 195.27 [397.03]
b = 0.81 [0.87]
Seff = 1.30 [0.53]
Teff = 272 [28] K
Rp = 1.88 [0.96] Re
a = 1.1800 [0.2936] AU
Ag = 20552.55 [20557.88] [1.00σ]
Teffp = 5042 [1178] K [4.05σ]

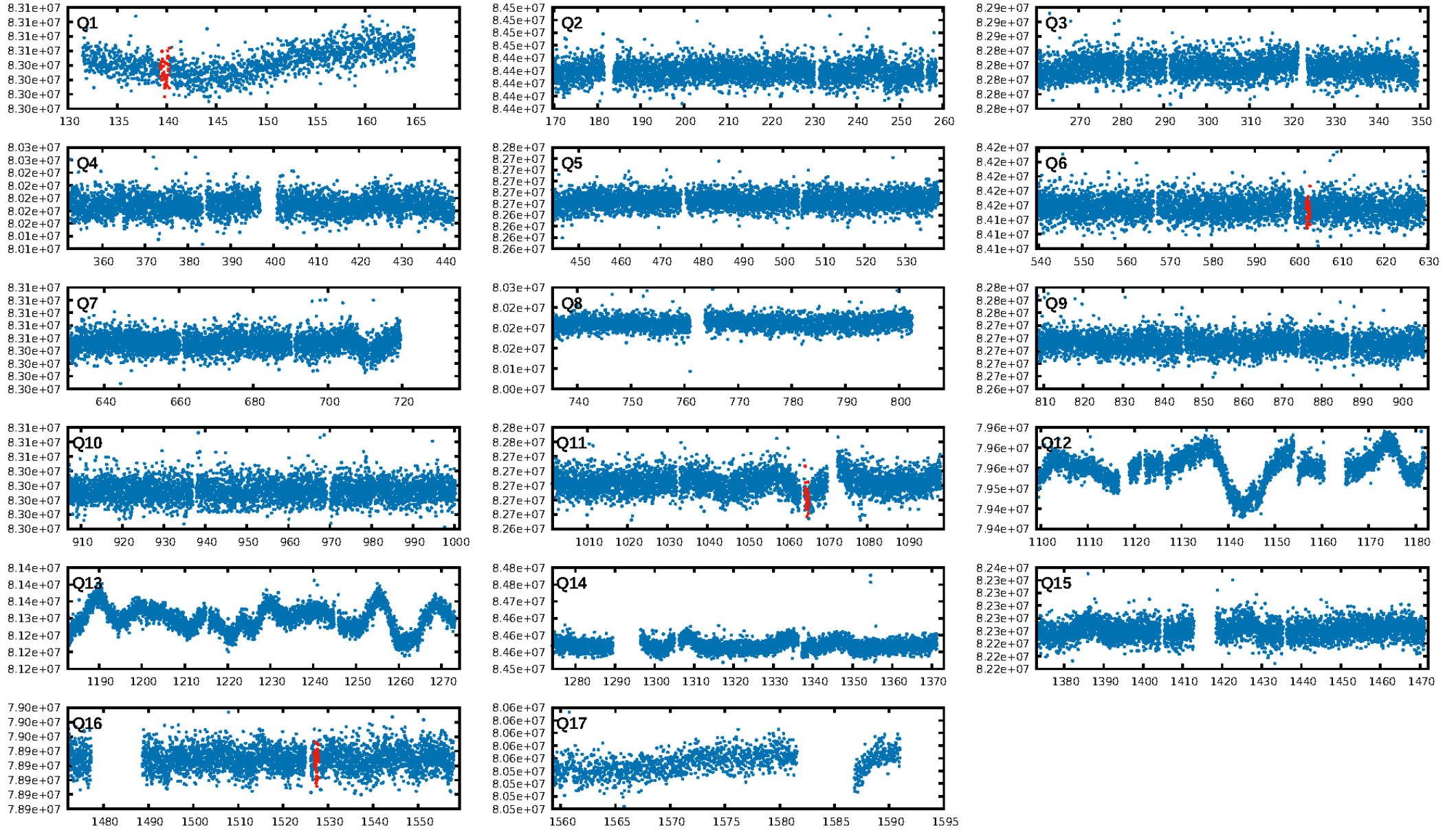
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 17.3%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 7.96e-18
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.672
Centroid-sig: 5.0%
Centroid-so: 2.286 arcsec [1.29σ]
OotOffset-rm: 3.206 arcsec [5.62σ]
KicOffset-rm: 3.423 arcsec [5.99σ]
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]

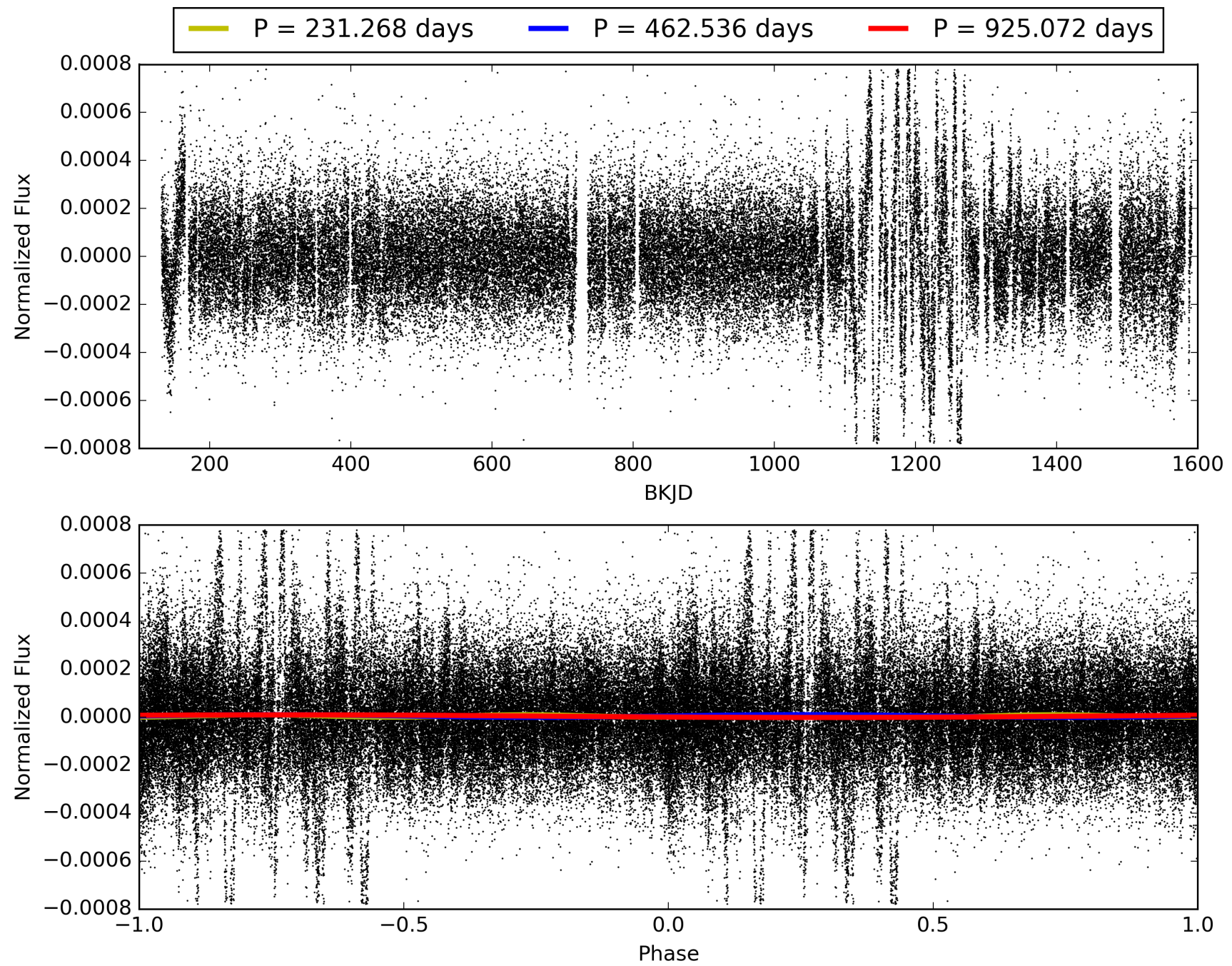
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:54:42 Z

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

TCE 007960440-01, PDC Light Curves

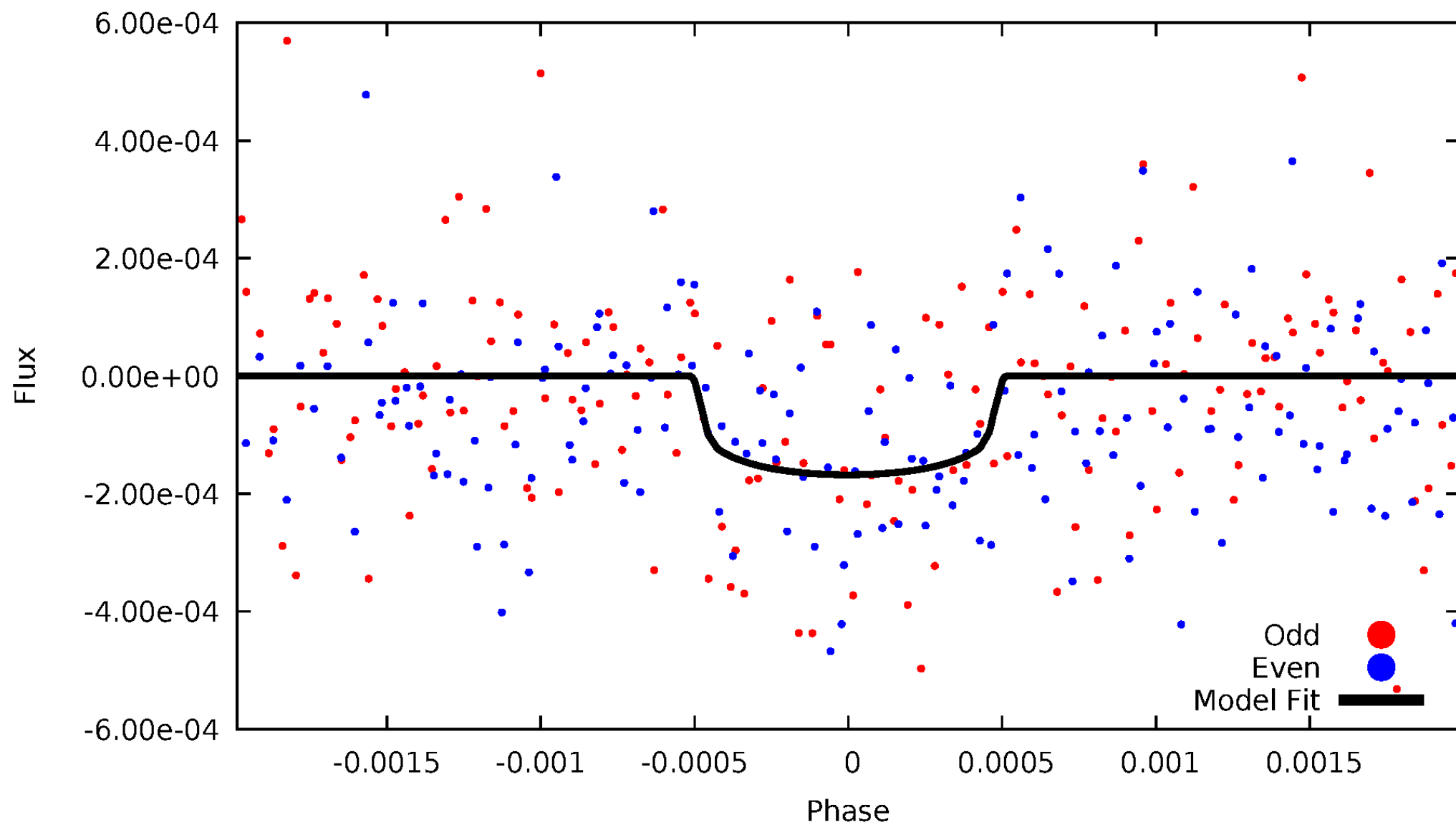


TCE 007960440-01



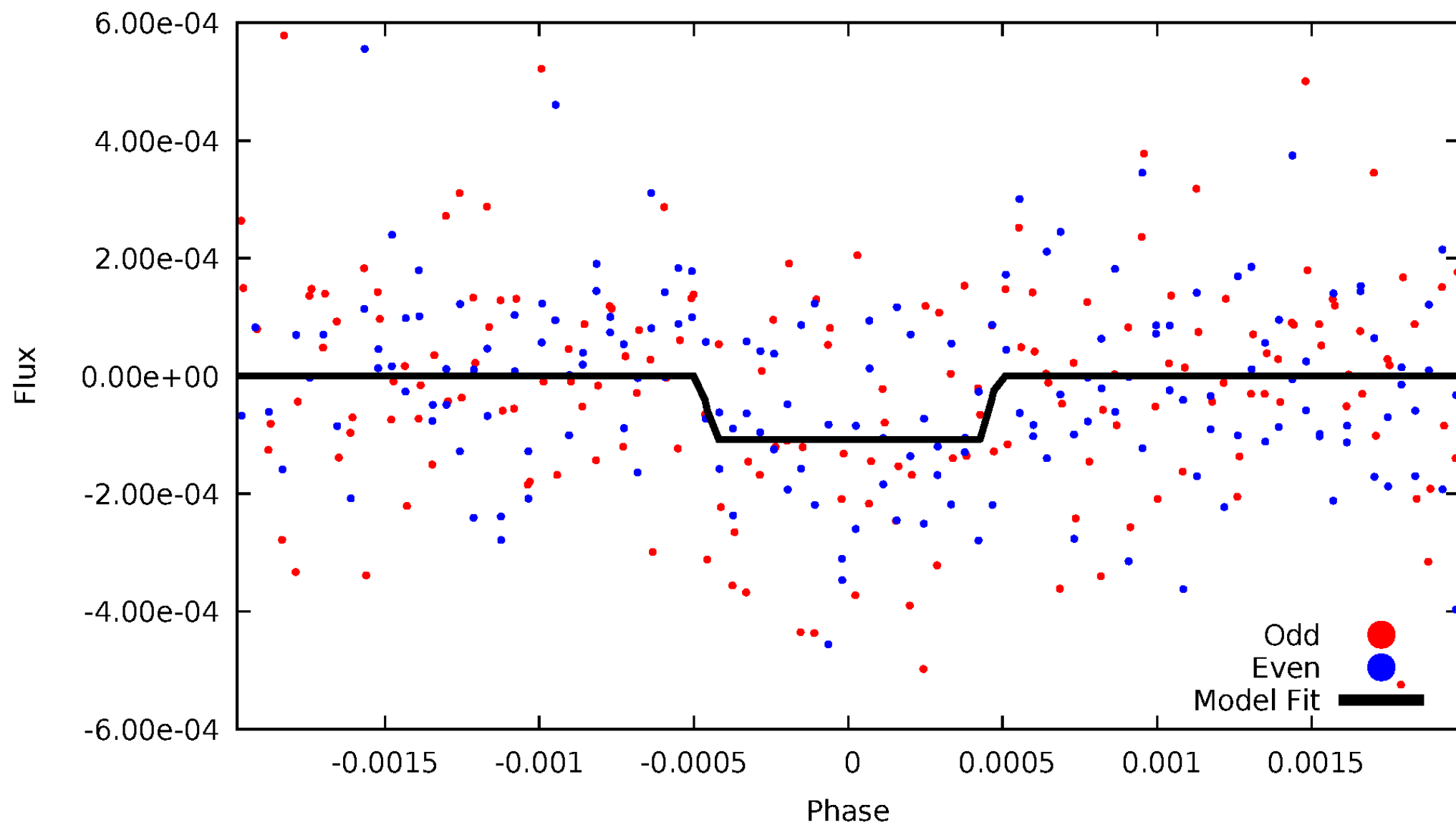
DV Odd/Even

TCE 007960440-01

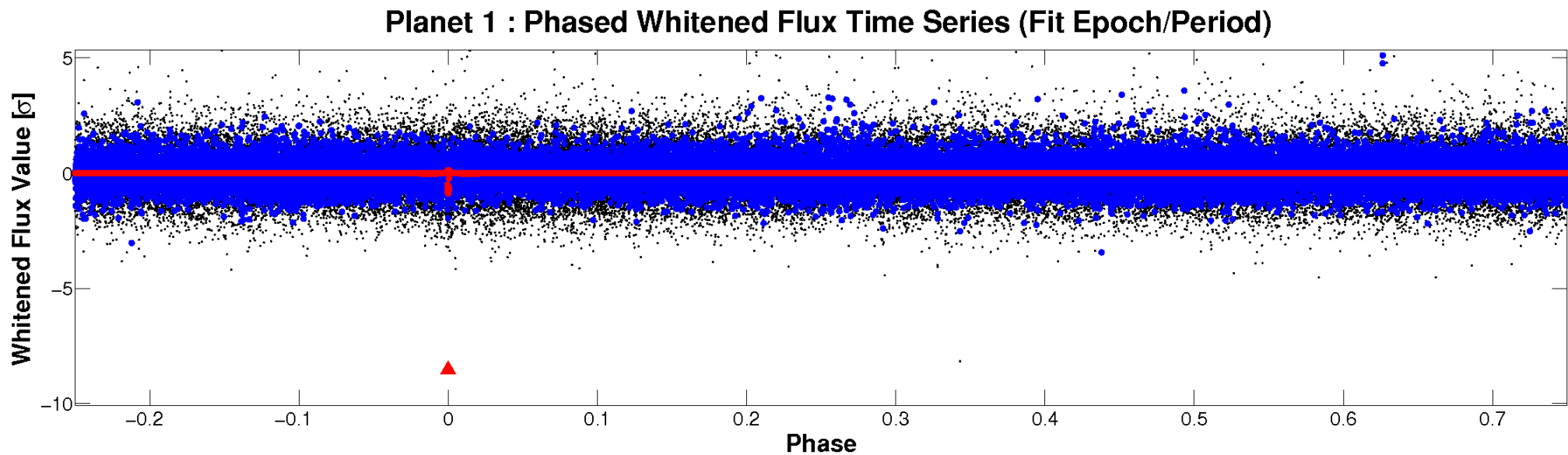
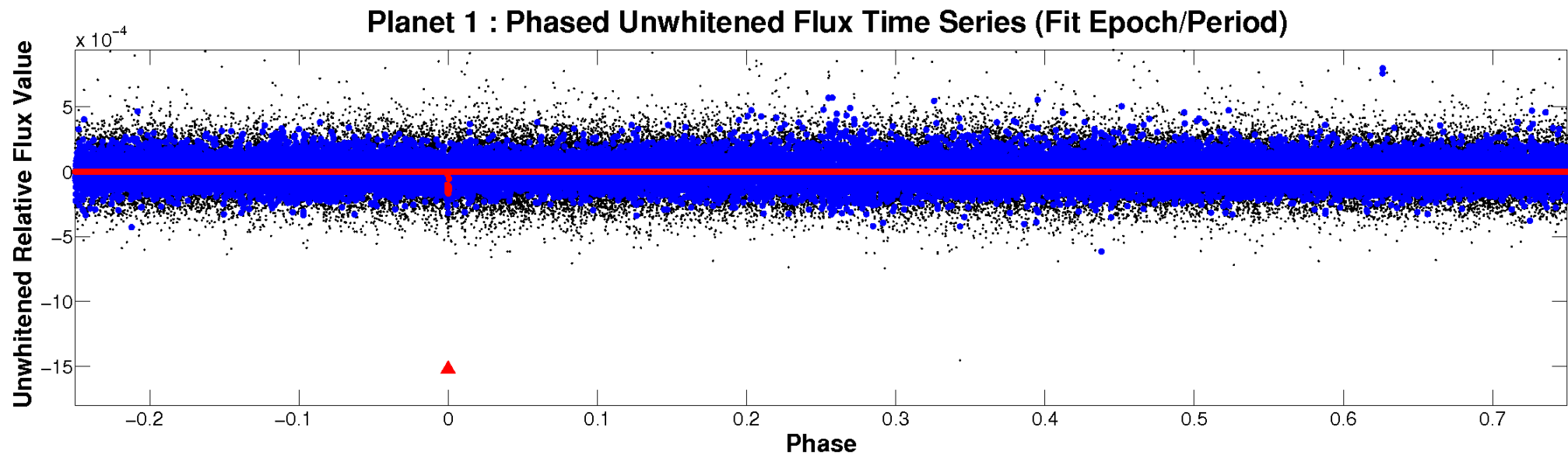


ALT Odd/Even

TCE 007960440-01

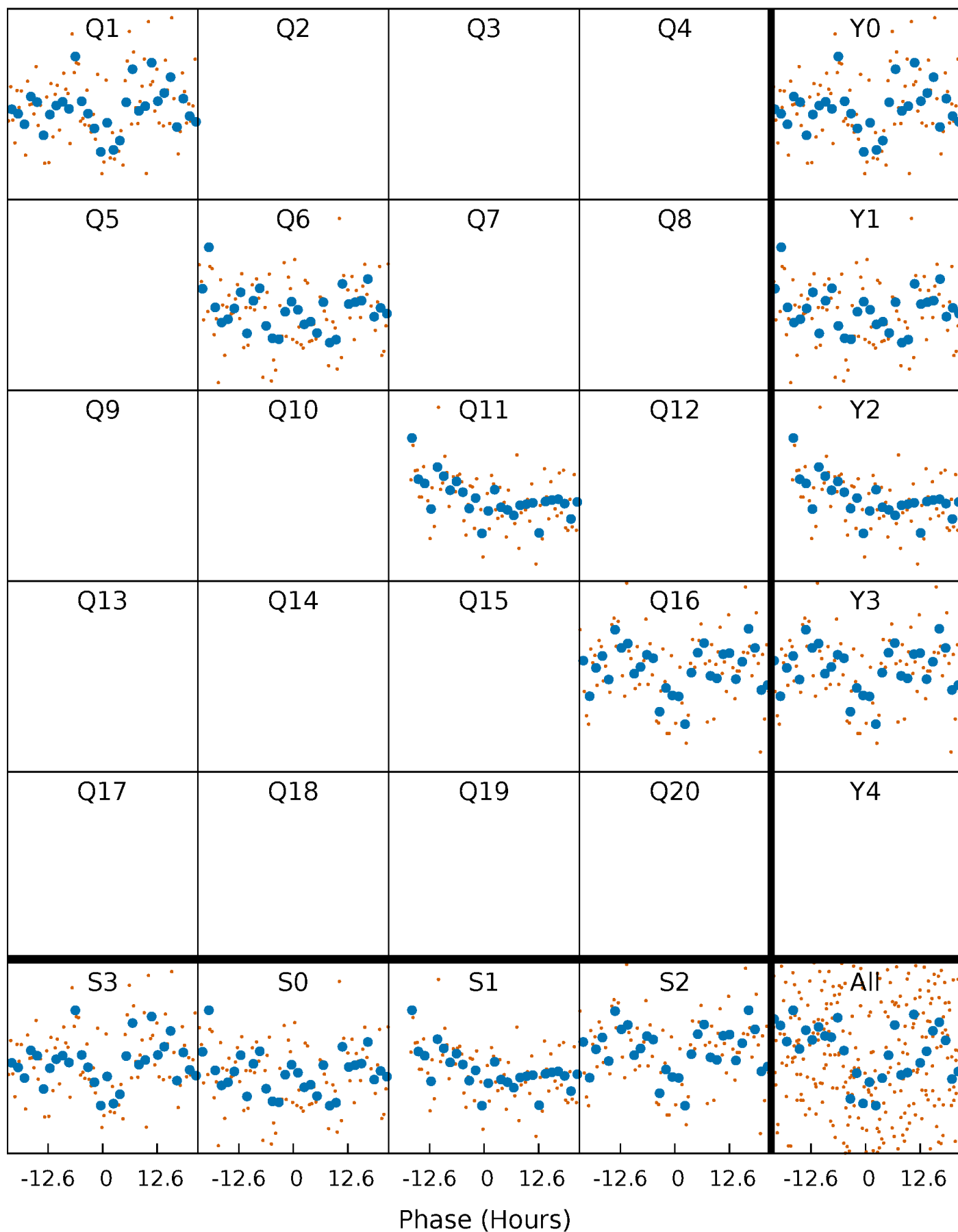


Non-Whitened Vs. Whitened Light Curve



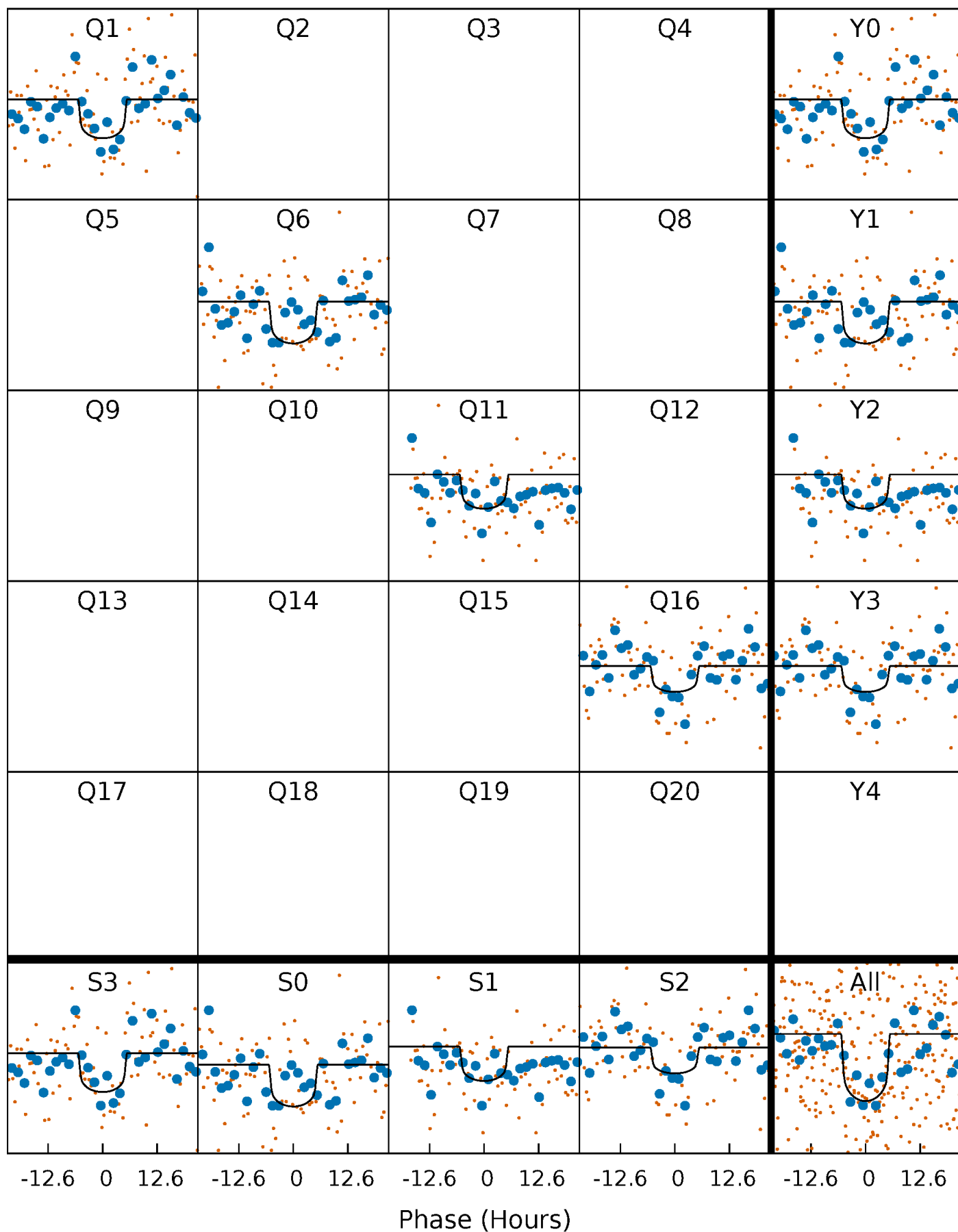
PDC Quarter-Phased Transit Curves

TCE 007960440-01 P=462.536017 Days $T_0=139.794813$ (BKJD)



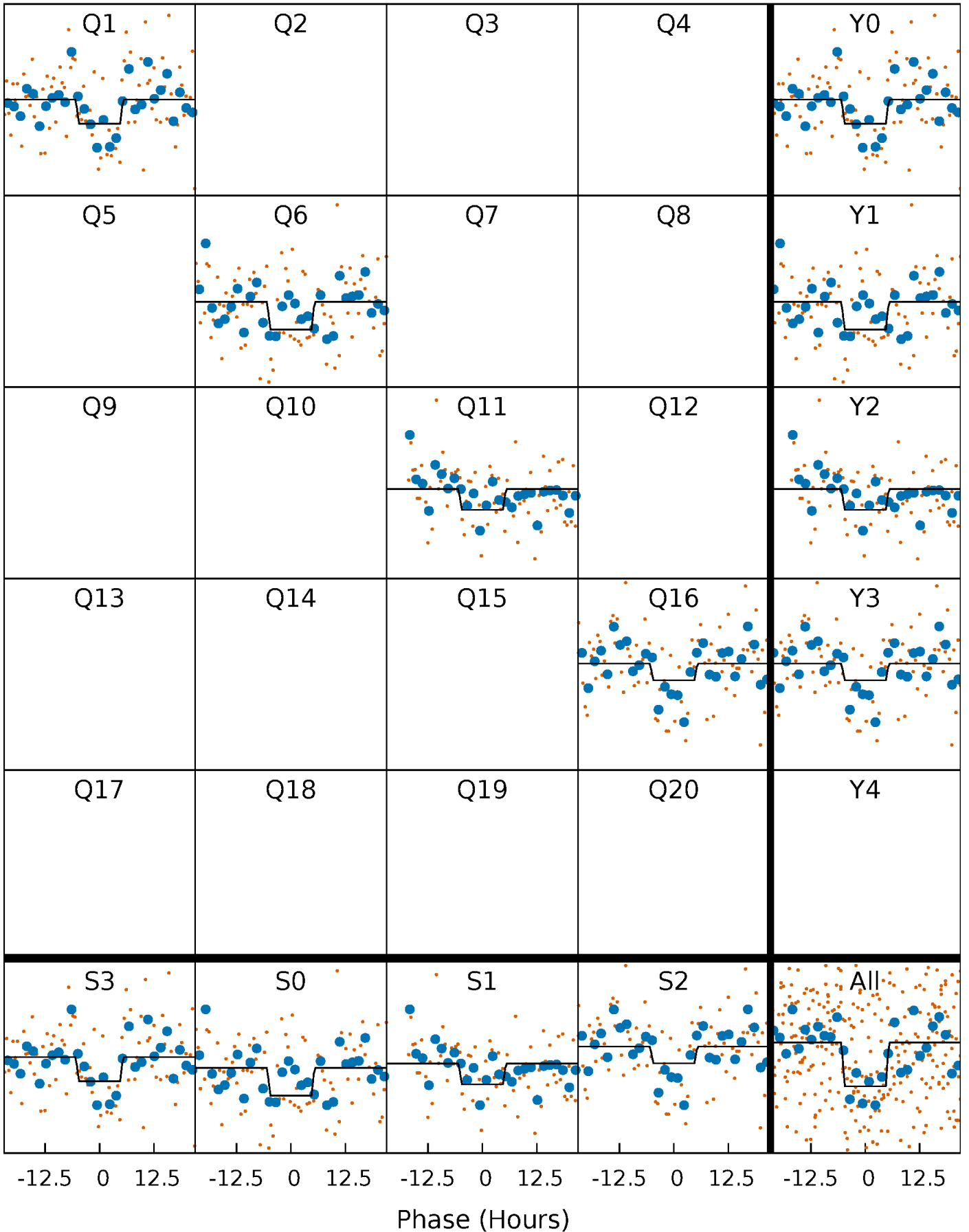
DV Quarter-Phased Transit Curves

TCE 007960440-01 P=462.536017 Days $T_0=139.794813$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

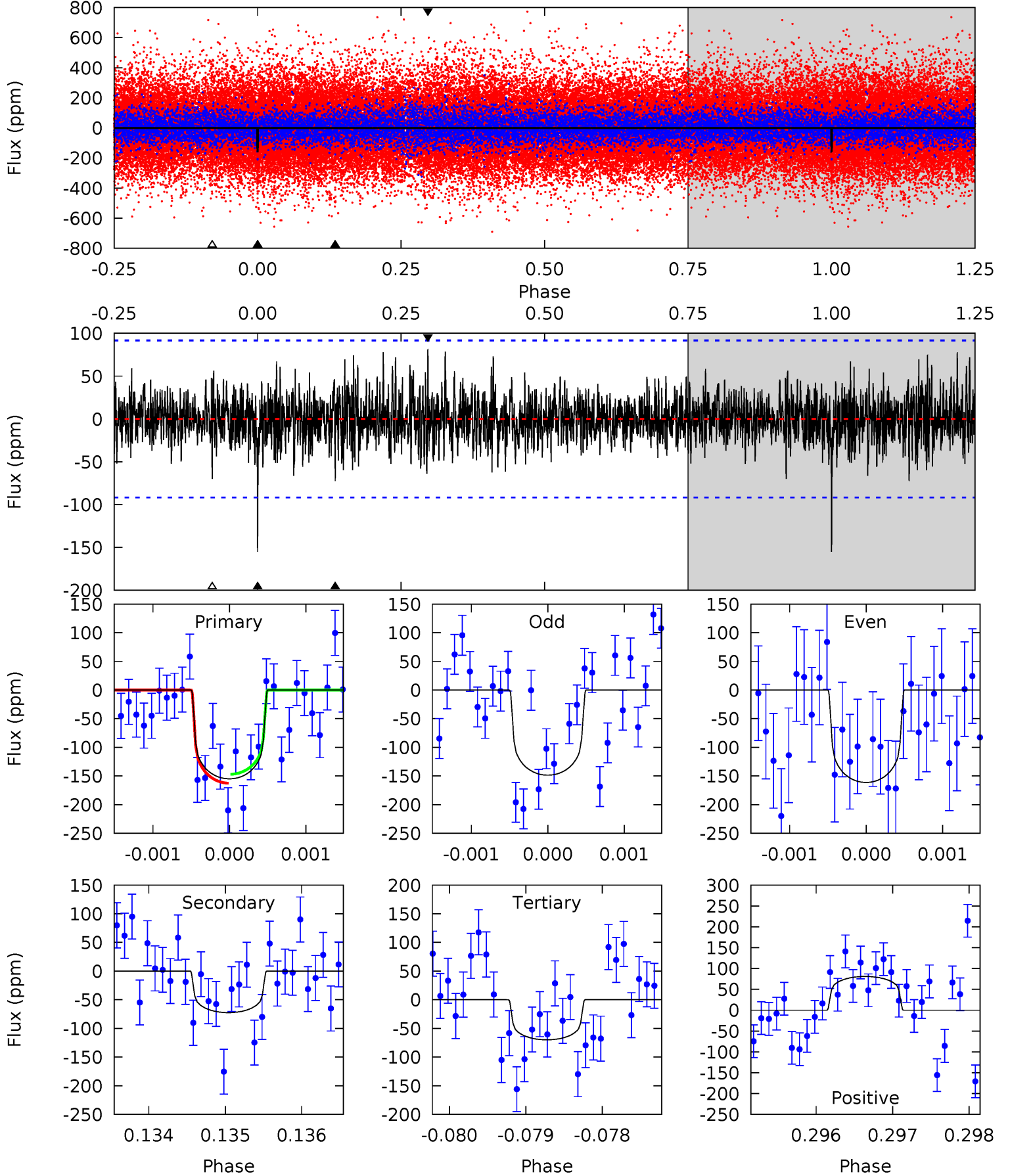
TCE 007960440-01 P=462.534064 Days $T_0=139.797651$ (BKJD)



DV Model-Shift Uniqueness Test

007960440-01, P = 462.536017 Days, E = 139.794813 Days

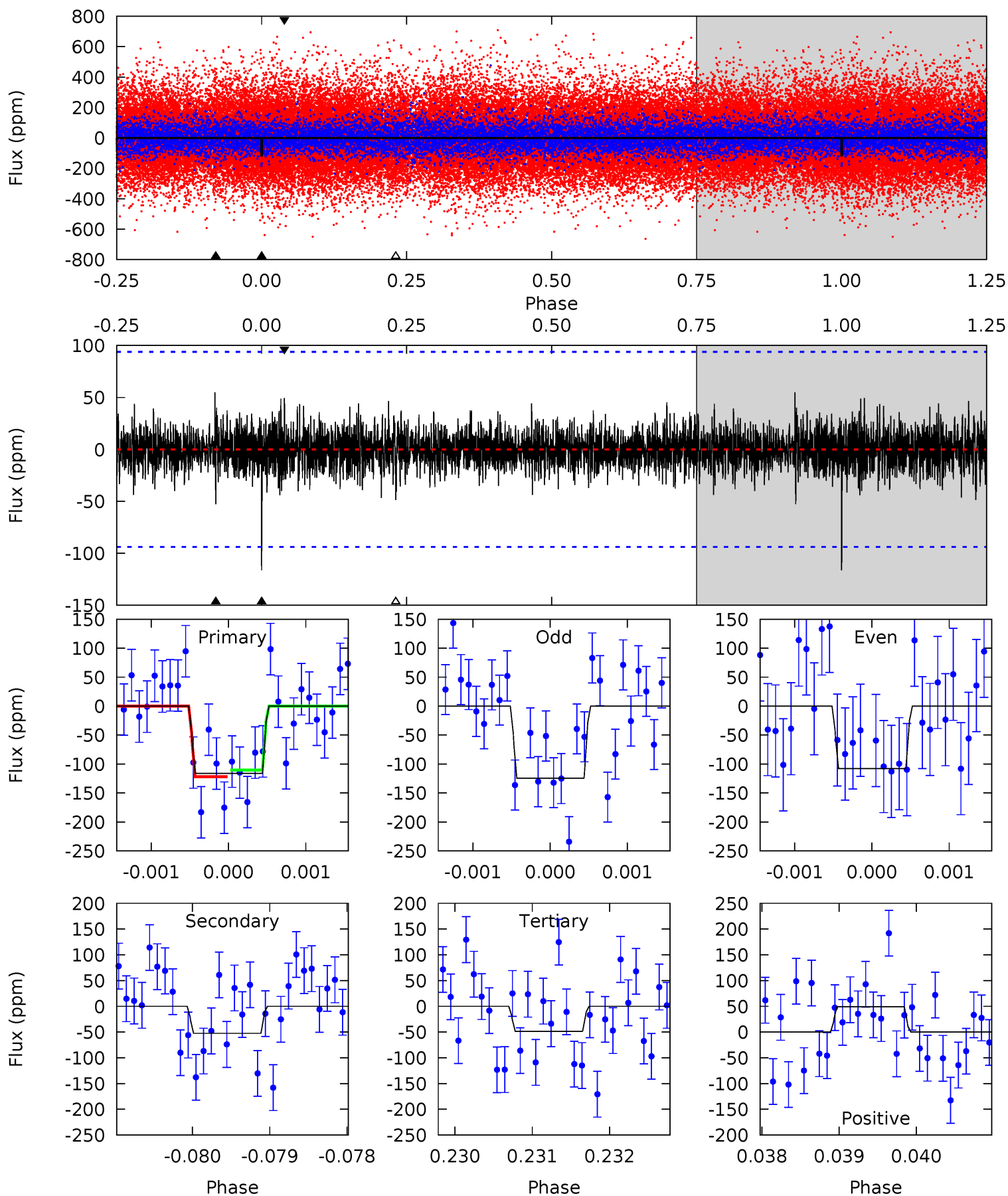
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.21	4.31	4.16	4.80	5.45	3.28	1.22	5.06	4.41	0.15	-0.50	0.38	0.96	0.34	0.46



Alt Model-Shift Uniqueness Test

007960440-01, P = 462.534064 Days, E = 139.797651 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.75	3.05	2.83	2.86	5.46	3.30	0.76	3.92	3.89	0.23	0.19	0.48	1.08	0.32	0.33



Stellar Parameters For KIC 007960440

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5877^{+176}_{-211}	$4.219^{+0.220}_{-0.180}$	$0.020^{+0.250}_{-0.300}$	$1.302^{+0.357}_{-0.321}$	$1.023^{+0.152}_{-0.124}$	$0.653^{+0.825}_{-0.324}$
	+3%/-4%	+5%/-4%	+1250%/-1500%	+27%/-25%	+15%/-12%	+126%/-50%
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 007960440-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-72 ± 17	$1.81^{+0.89}_{-0.78}$	379^{+29}_{-29}	4848^{+1460}_{-671}	16678^{+34264}_{-9287}
Alt.	-53 ± 17	$1.51^{+0.86}_{-0.82}$	382^{+27}_{-32}	4895^{+2223}_{-807}	17163^{+63516}_{-10783}

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

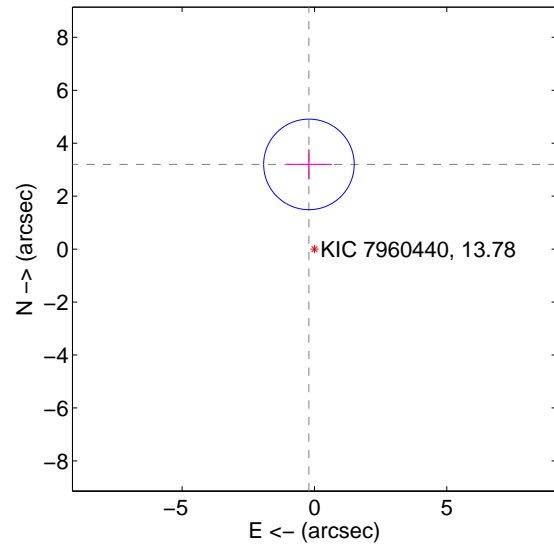
Supplemental centroid analysis for 007960440-01. Kepler magnitude: 13.78. Transit SNR 7.25

There are 0 quarters with good PRF difference image offsets

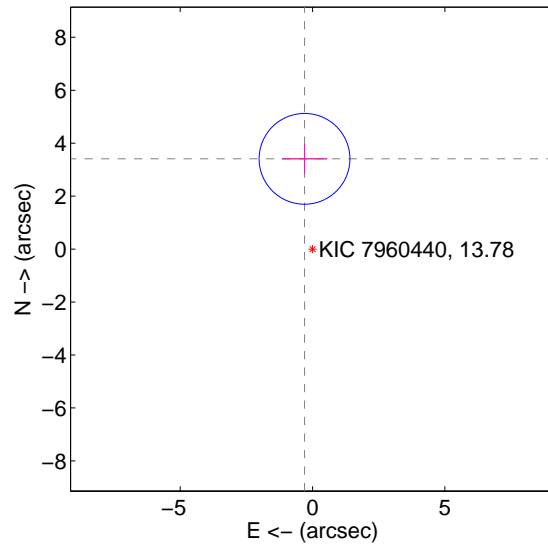
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.206 ± 0.570	5.62	0.208 ± 0.857	3.200 ± 0.569
PRF-fit source offset from KIC position	3.423 ± 0.571	5.99	0.302 ± 0.857	3.410 ± 0.569
photometric centroid source offset	2.29 ± 1.78	1.29	0.74 ± 1.77	2.16 ± 1.78

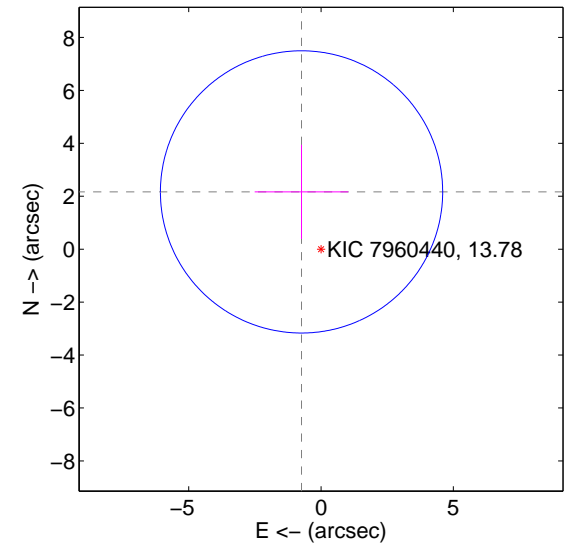
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

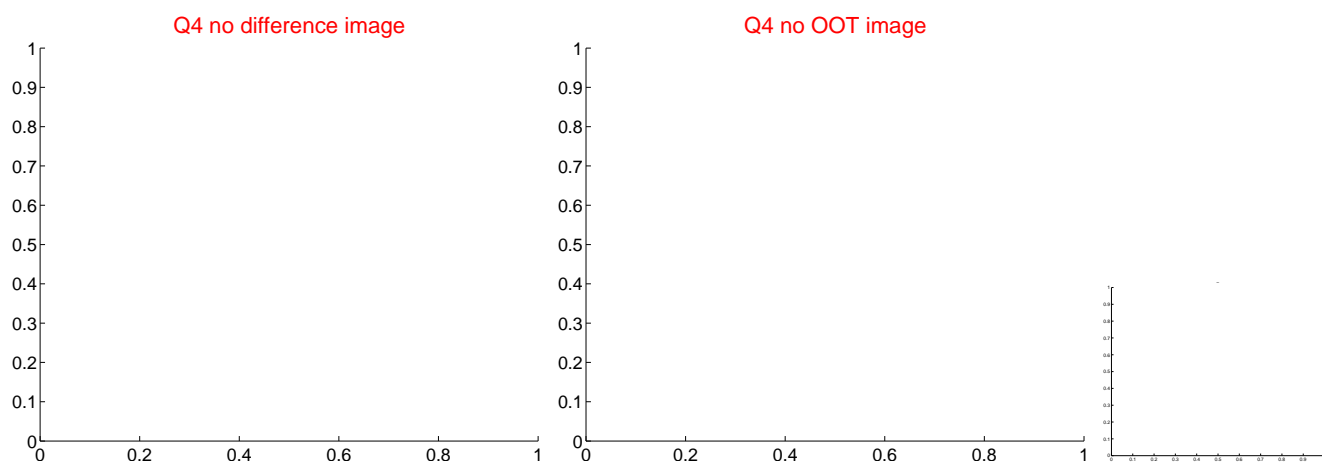
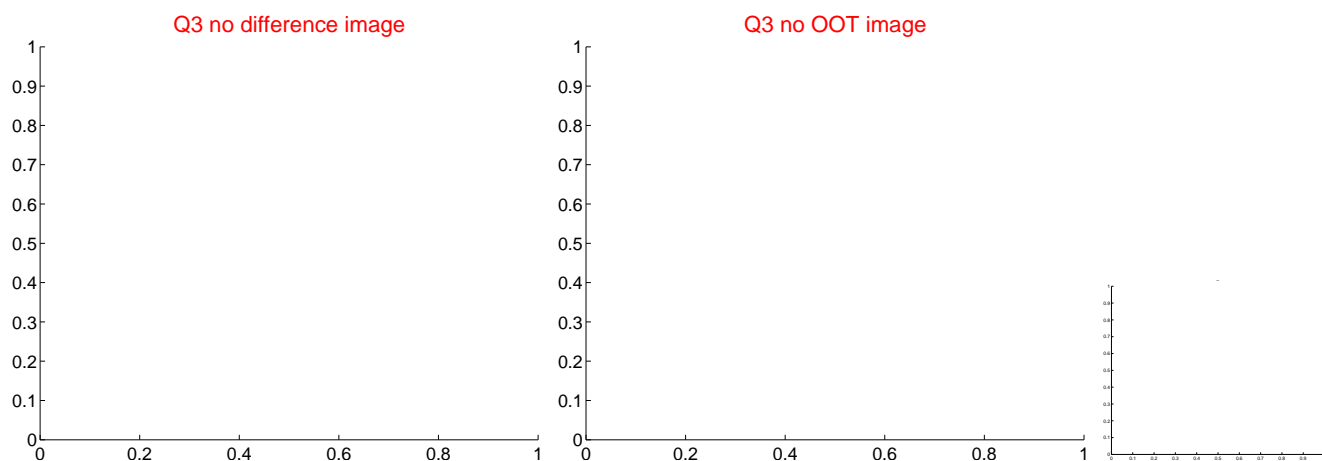
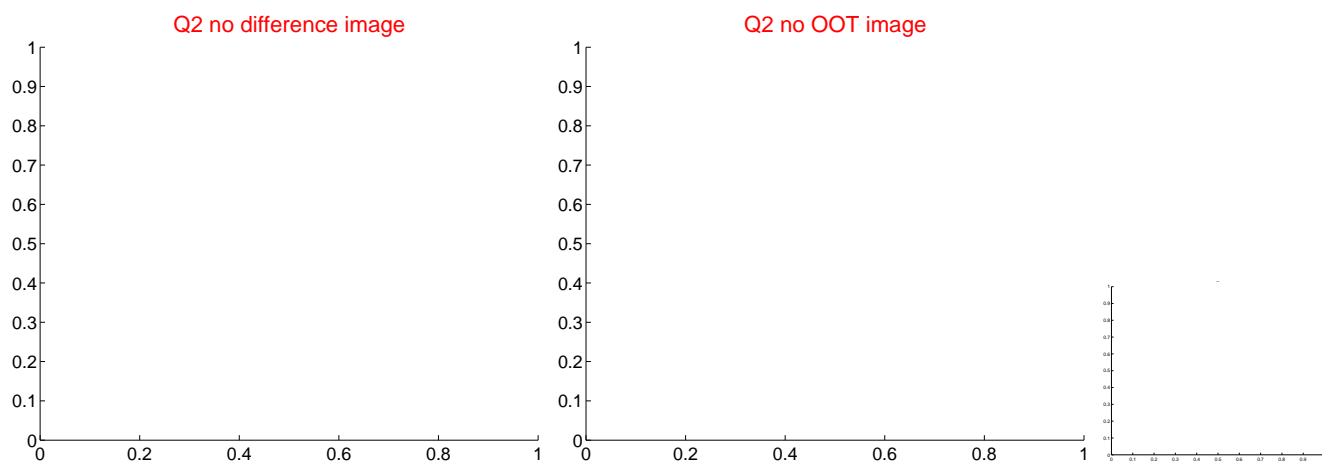
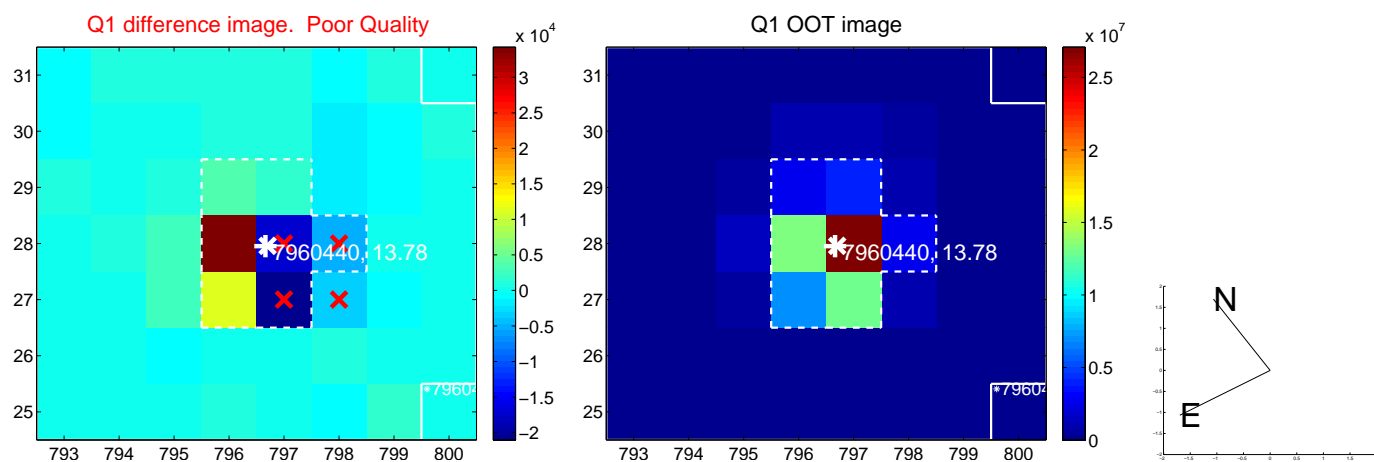


offset from photometric centroids

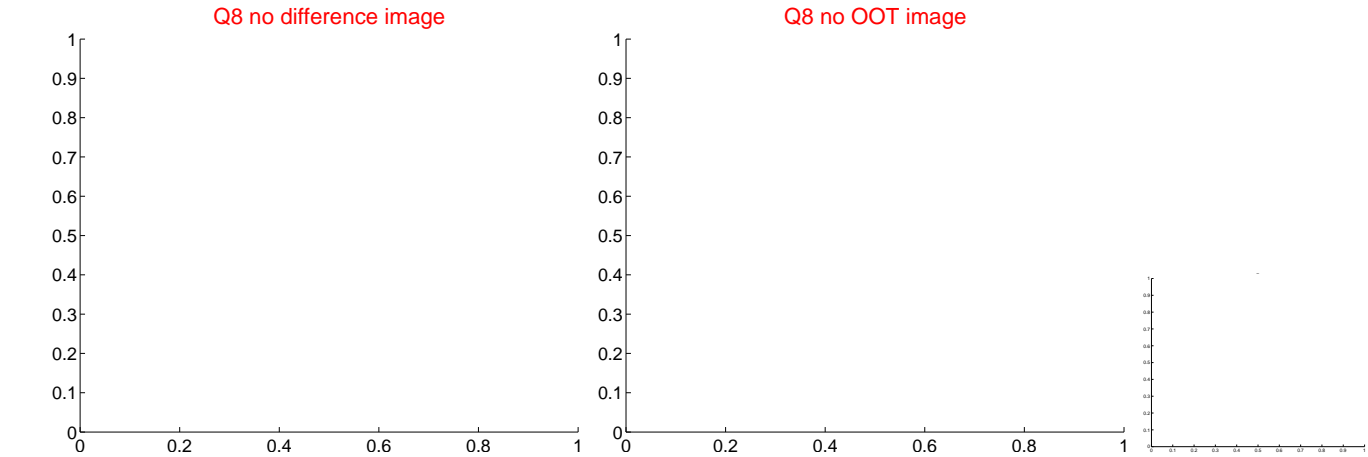
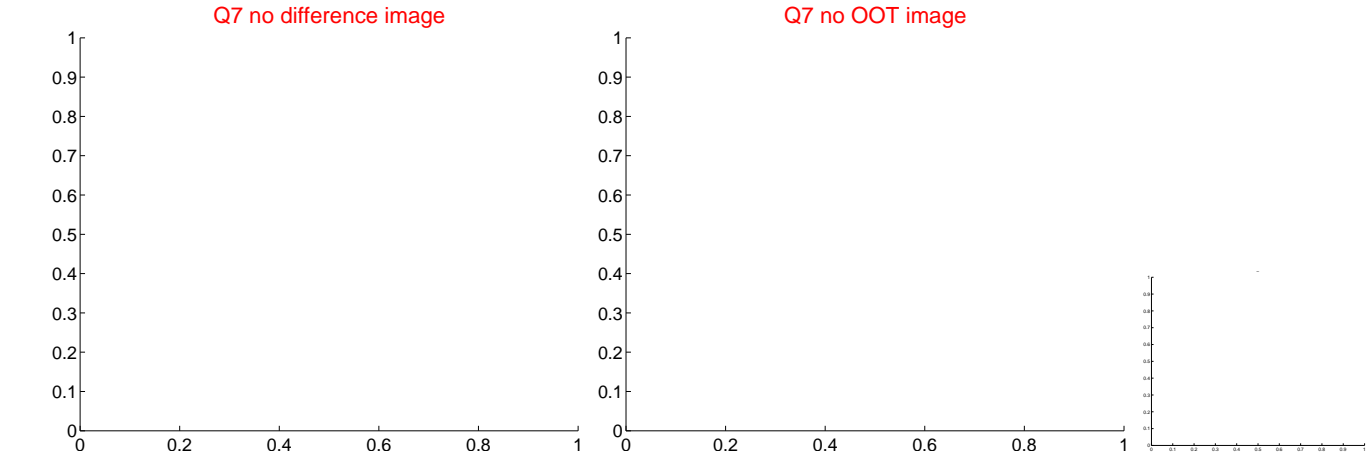
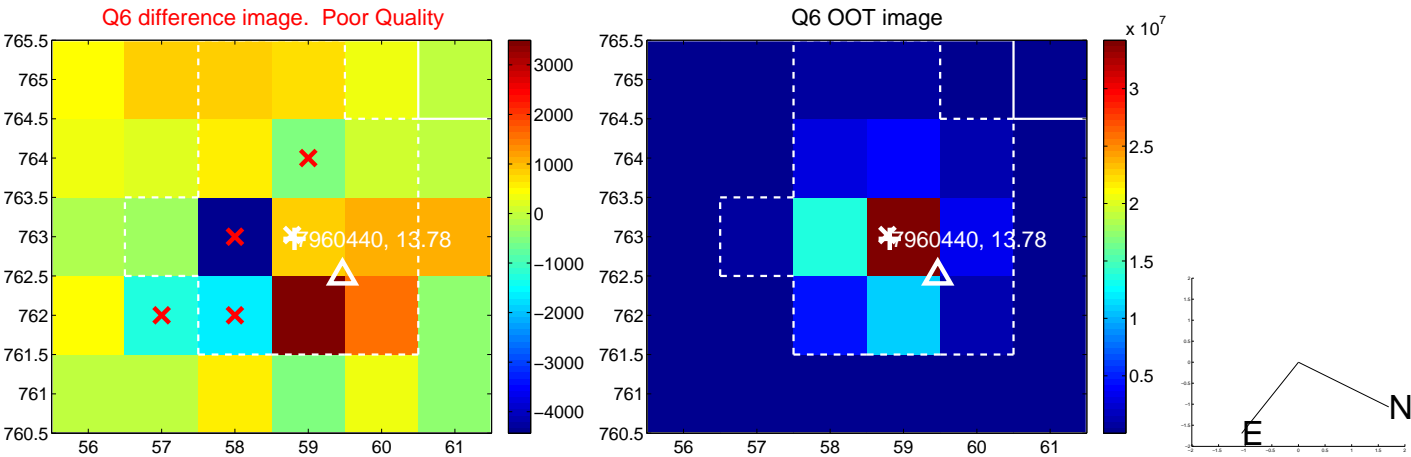
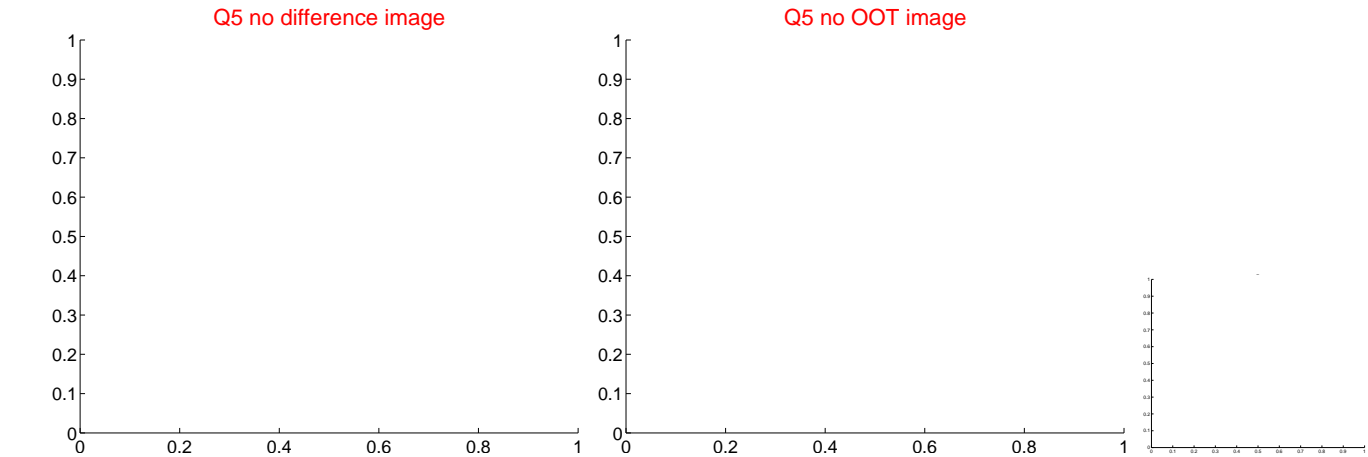


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



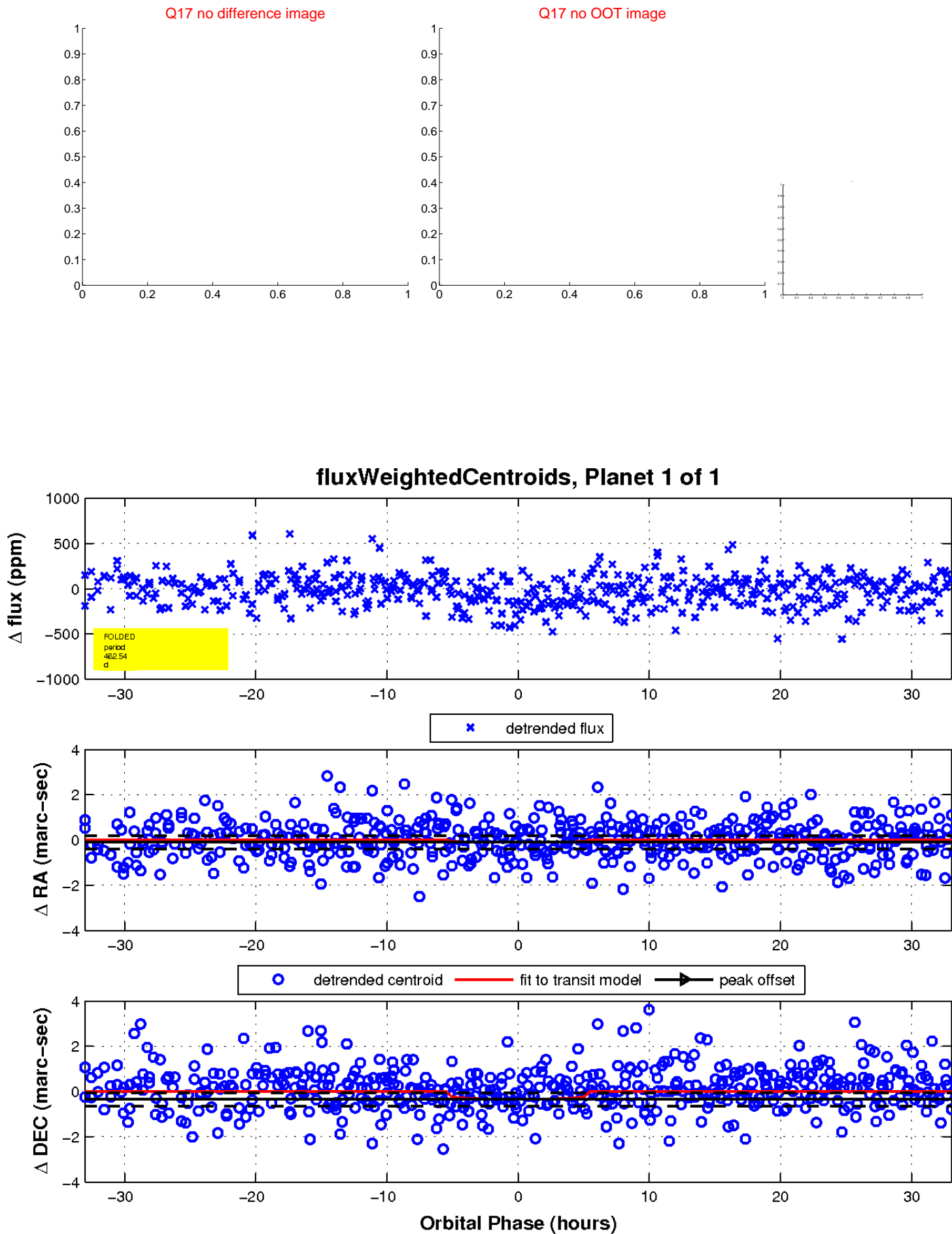
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

