

KIC 007533340

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})
007533340-01	OBS	No	423.775397	140.079221	598.4	34.837	30.7	7.9	1.14	6418	2.82	1.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007533340-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— 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.

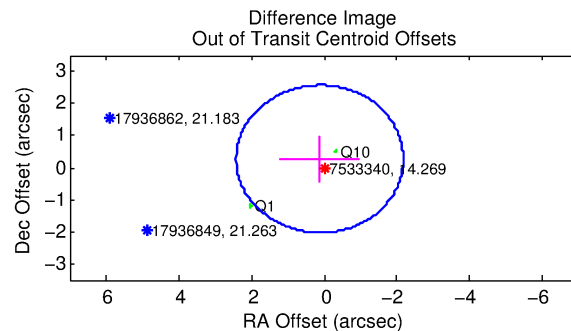
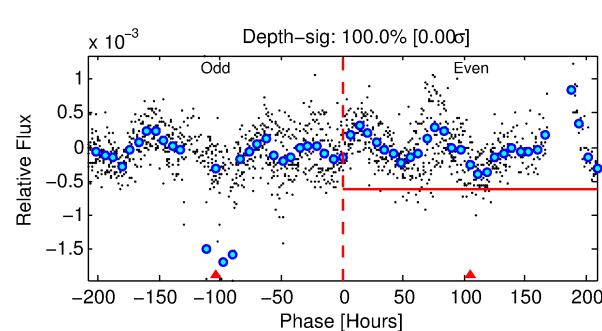
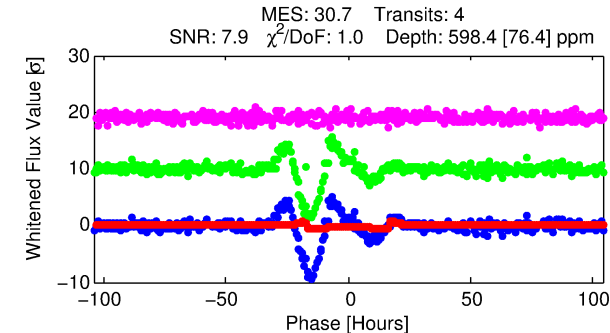
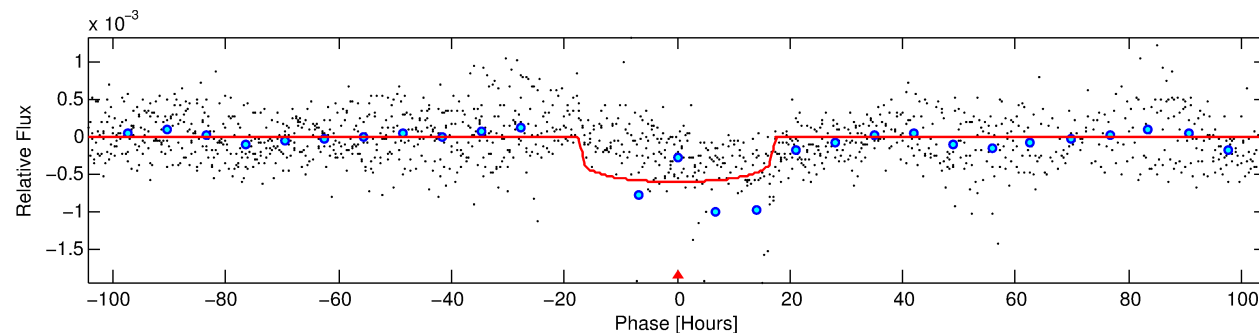
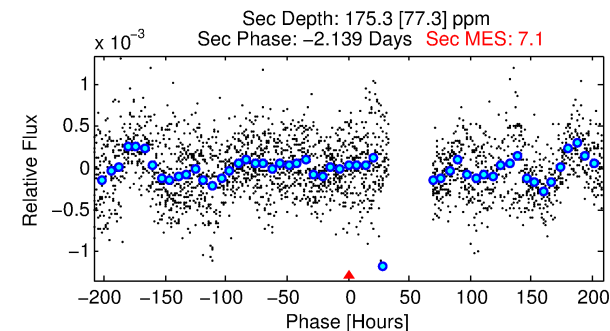
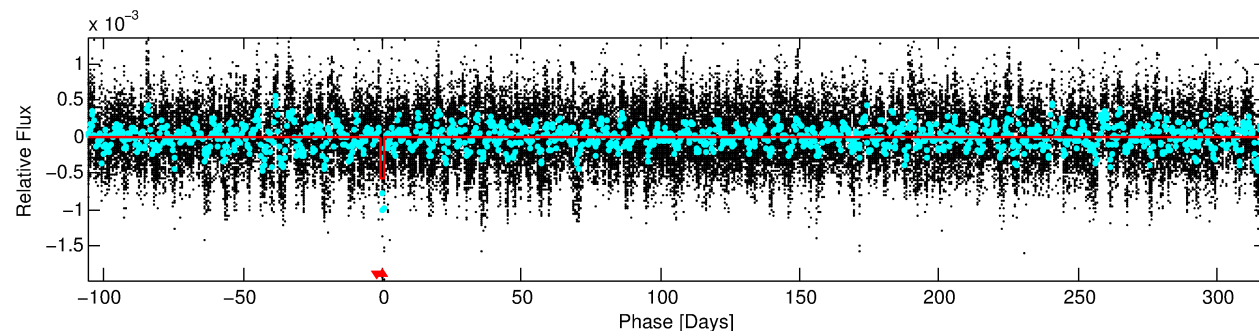
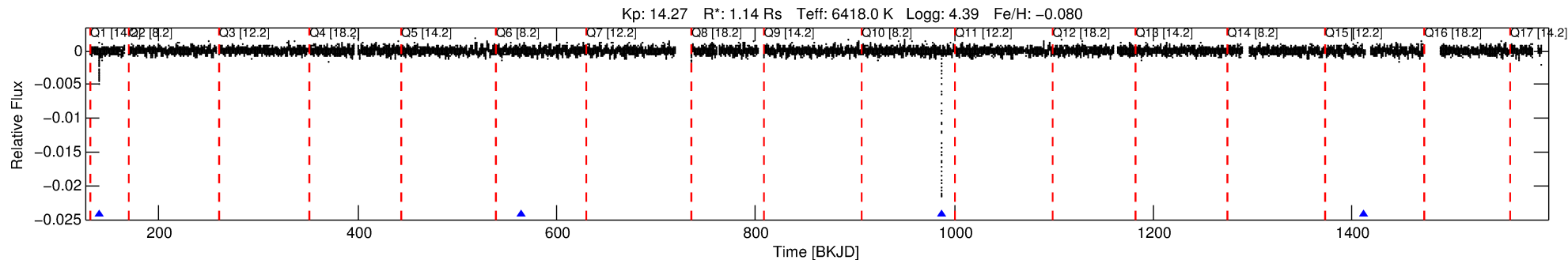
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007533340-01

No Significant Match Found

DV One-Page Summary

KIC: 7533340 Candidate: 1 of 1 Period: 423.775 d



DV Fit Results:

Period = 423.77540 [0.00687] d
Epoch = 140.0792 [0.0133] BKJD
Rp/R* = 0.0227 [0.0036]
a/R* = 90.34 [65.47]
b = 0.32 [2.05]
Seff = 1.45 [0.59]
Teq = 280 [29] K
Rp = 2.82 [1.06] Re
a = 1.1645 [0.3213] AU
Ag = 16404.97 [10915.64] [1.50σ]
Teff = 4900 [683] K [6.76σ]

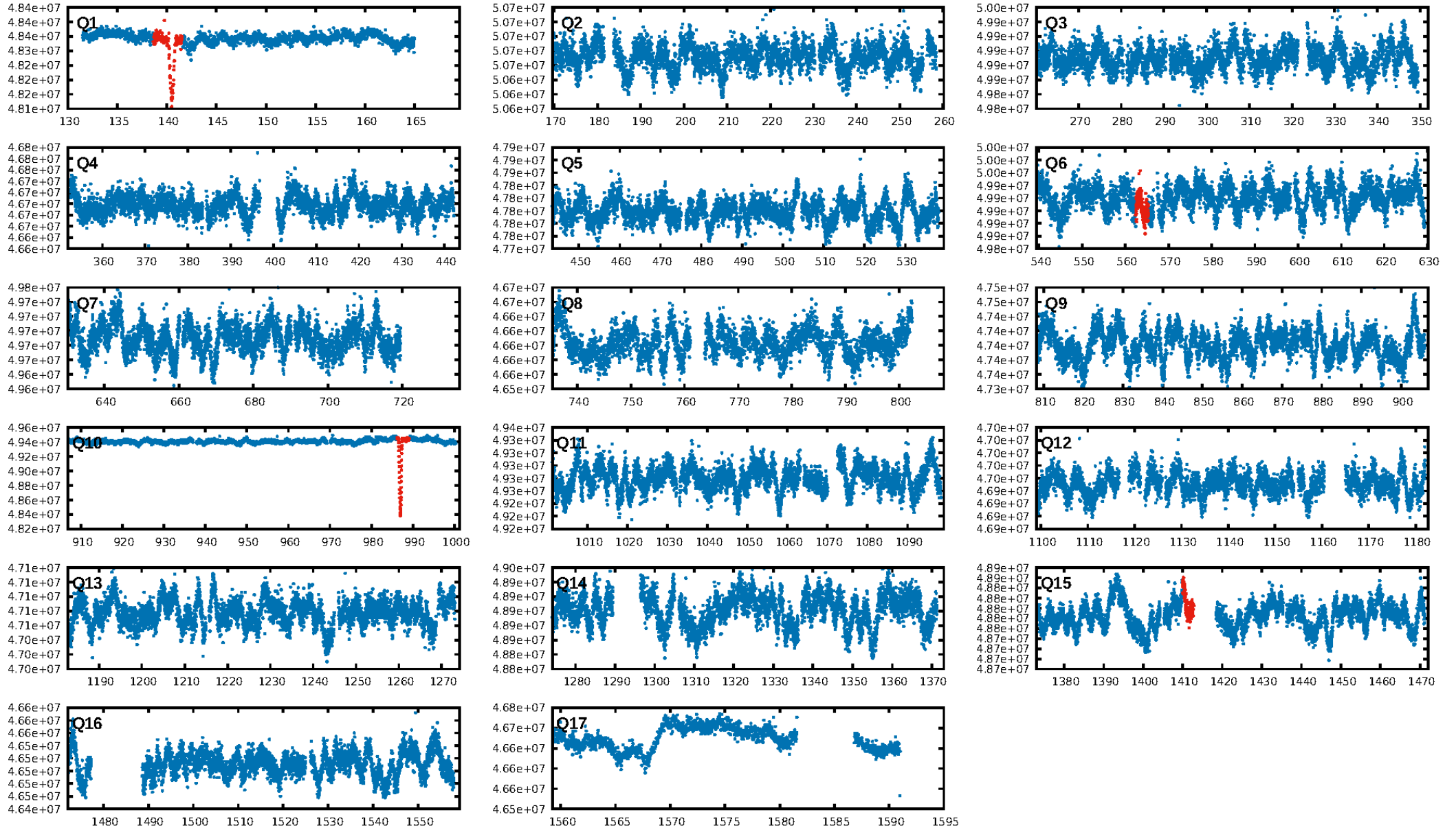
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.74e-197
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 9.334
Centroid-sig: 0.4%
Centroid-so: 0.667 arcsec [1.67σ]
OotOffset-rm: 0.296 arcsec [0.39σ]
KicOffset-rm: 0.321 arcsec [0.37σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

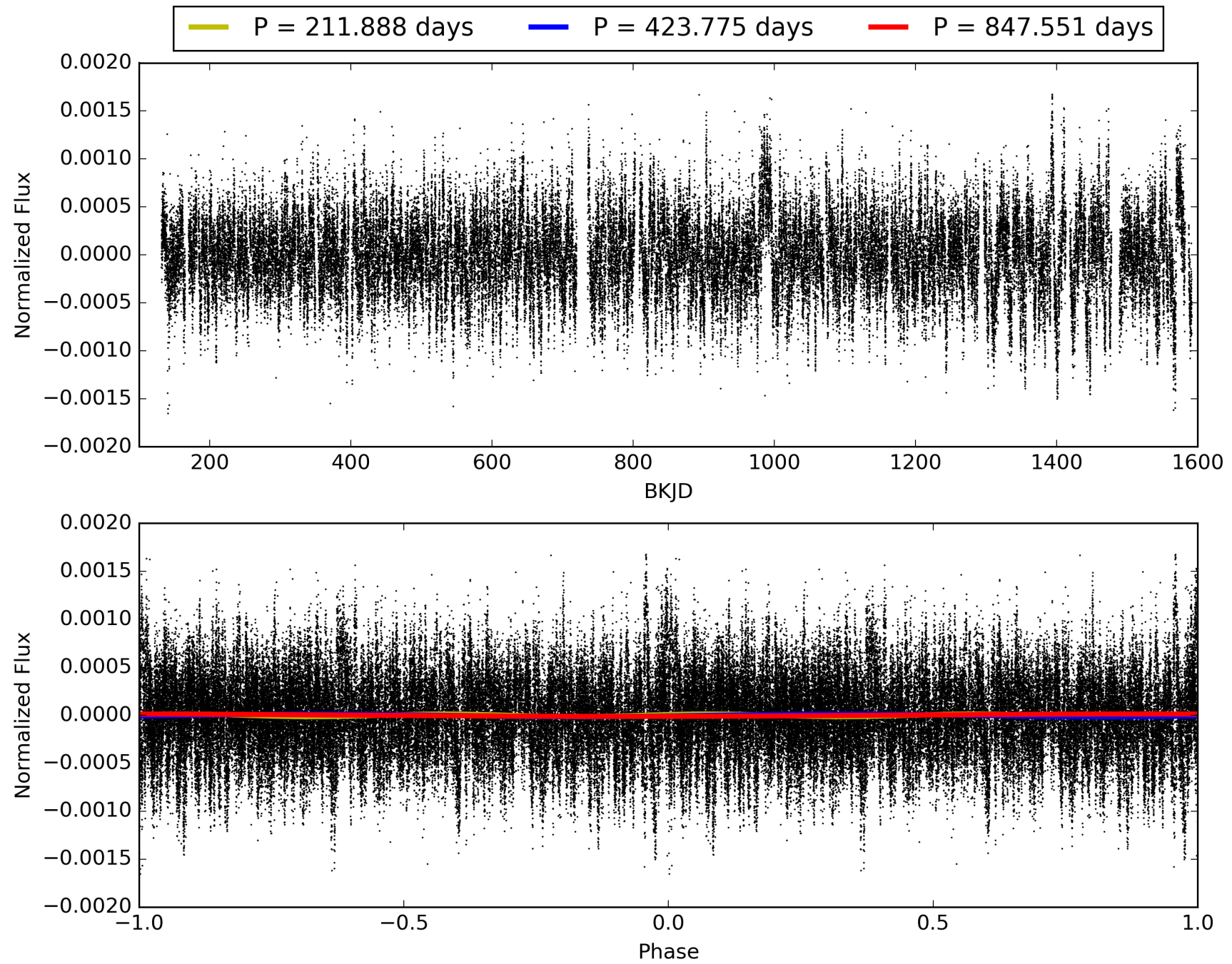
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:51:56 Z

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

TCE 007533340-01, PDC Light Curves

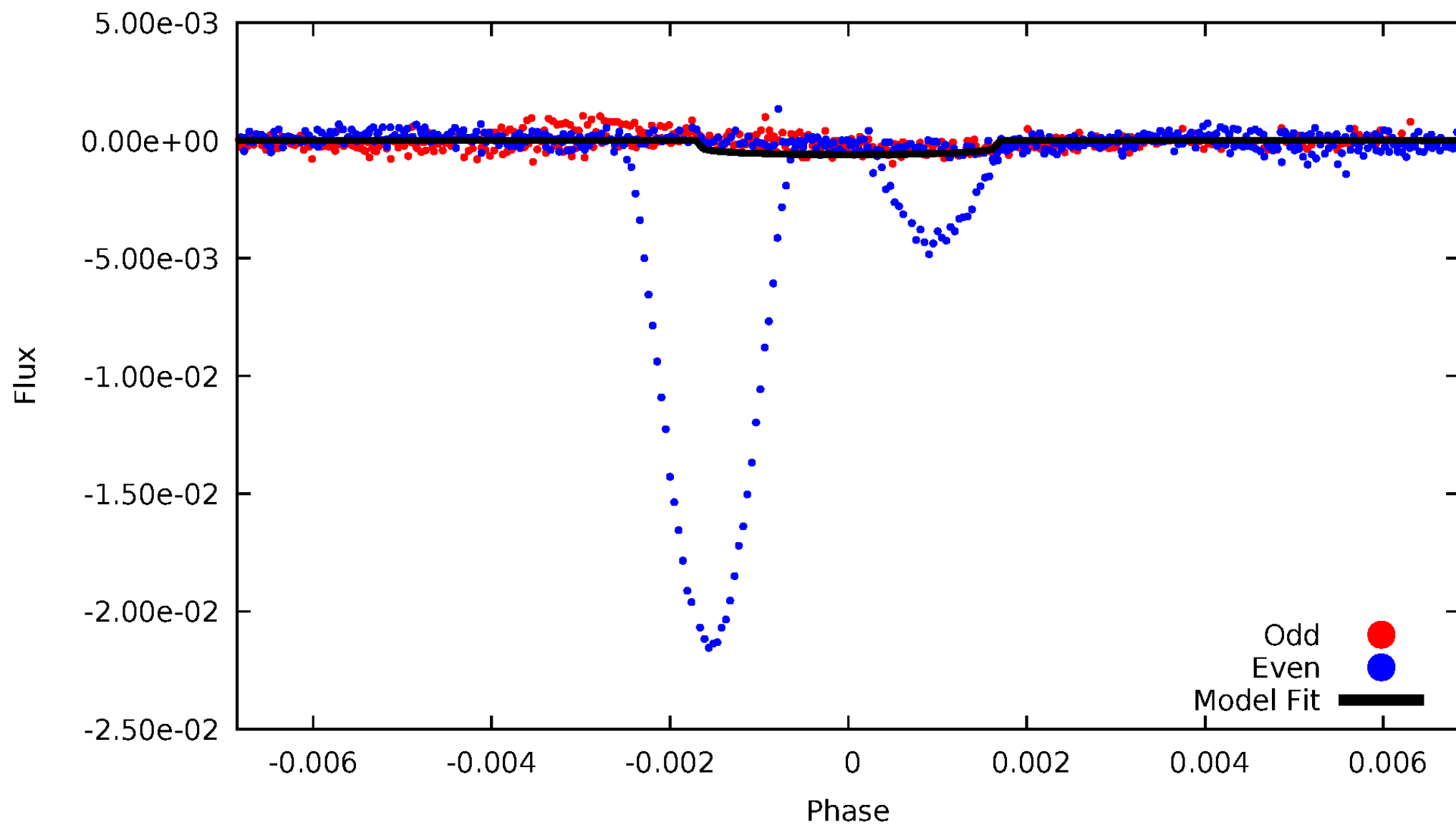


TCE 007533340-01



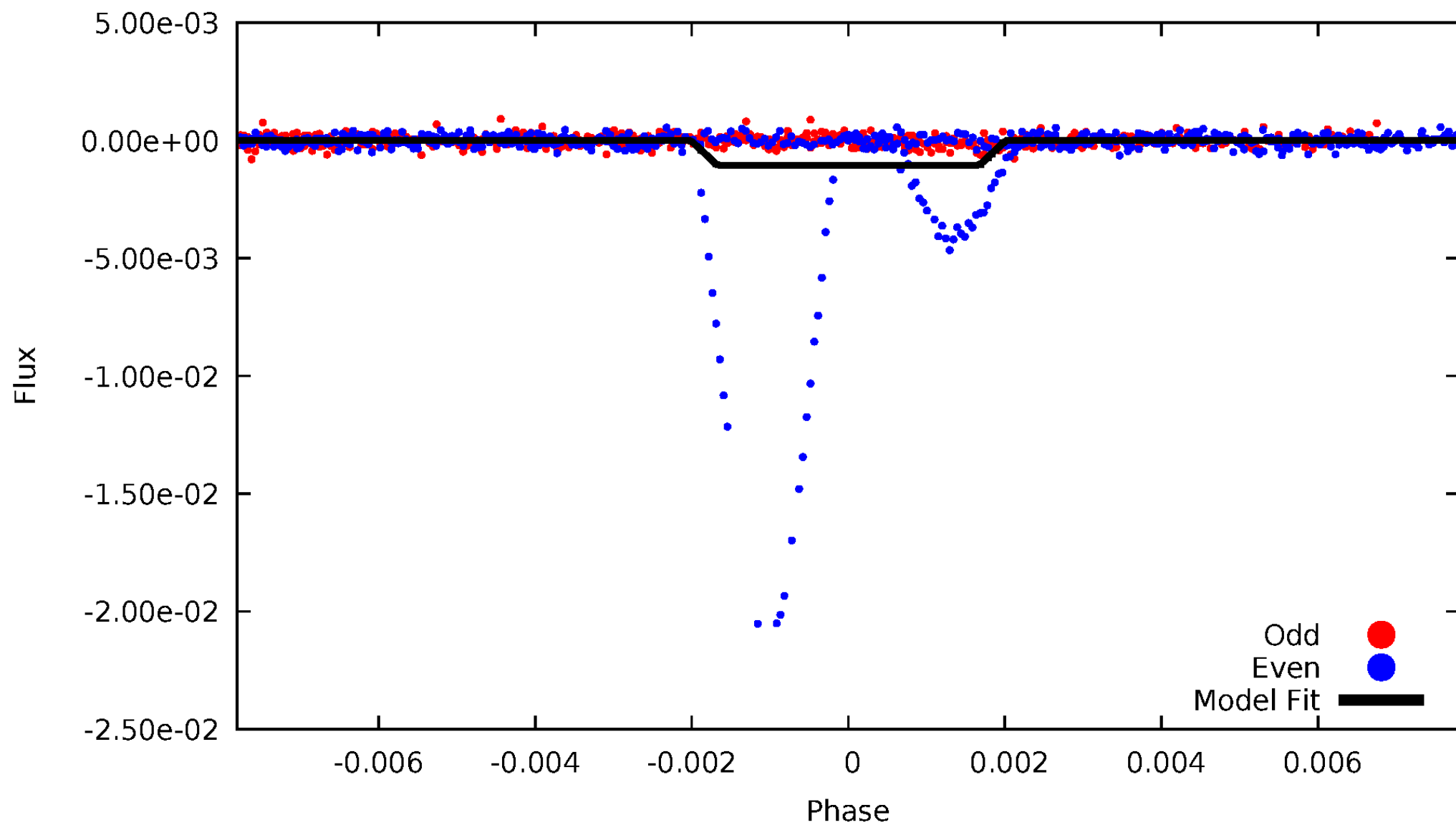
DV Odd/Even

TCE 007533340-01

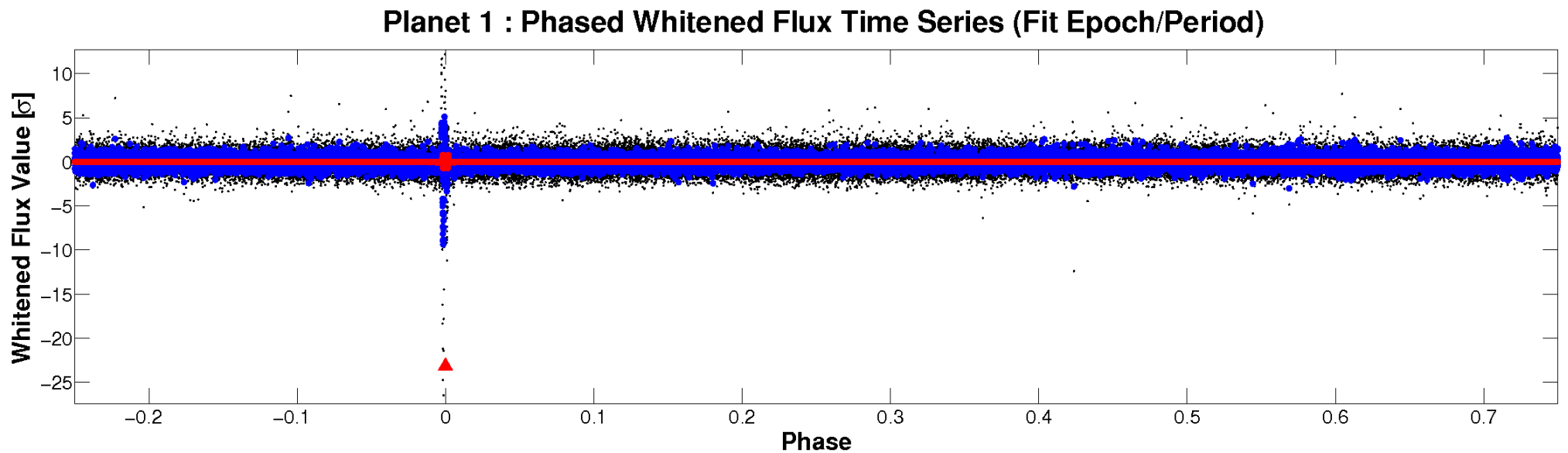
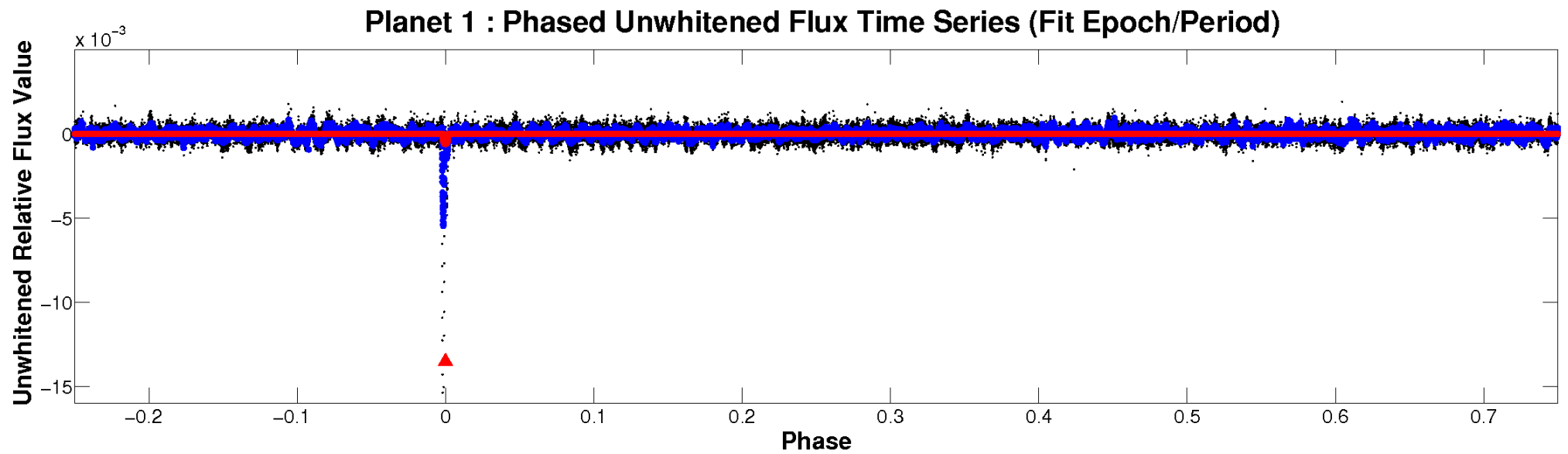


ALT Odd/Even

TCE 007533340-01

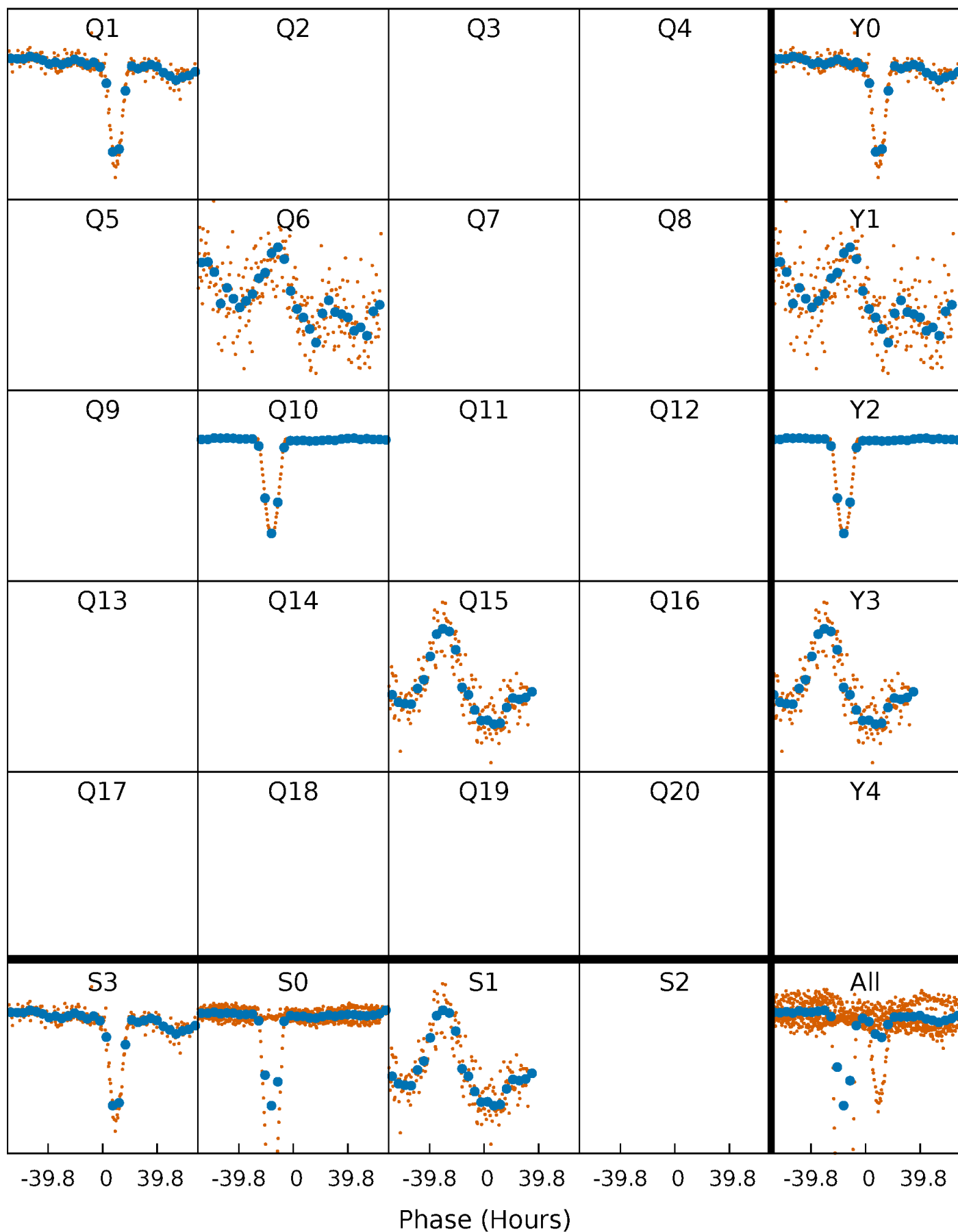


Non-Whitened Vs. Whitened Light Curve



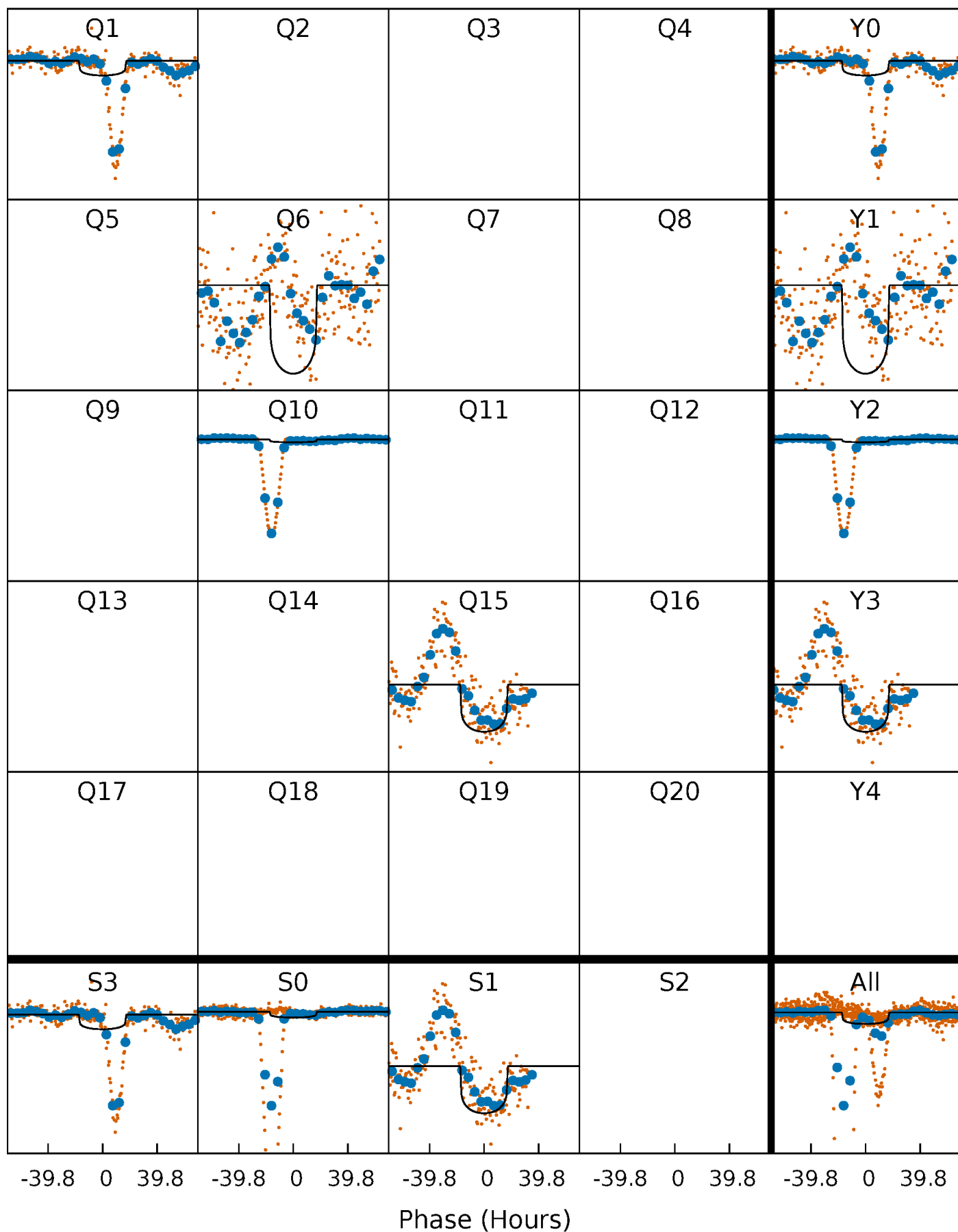
PDC Quarter-Phased Transit Curves

TCE 007533340-01 P=423.775397 Days $T_0=140.079221$ (BKJD)



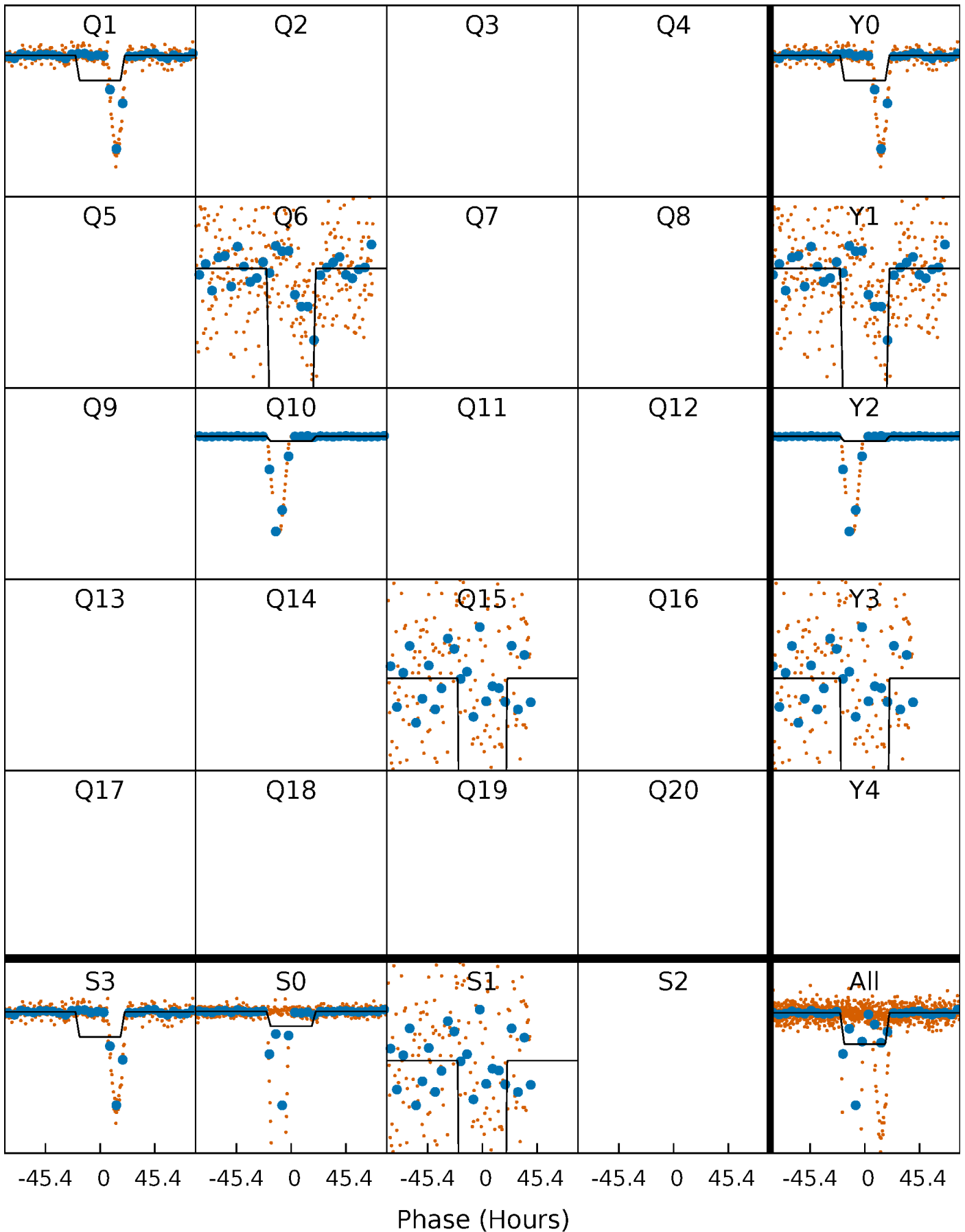
DV Quarter-Phased Transit Curves

TCE 007533340-01 P=423.775397 Days $T_0=140.079221$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

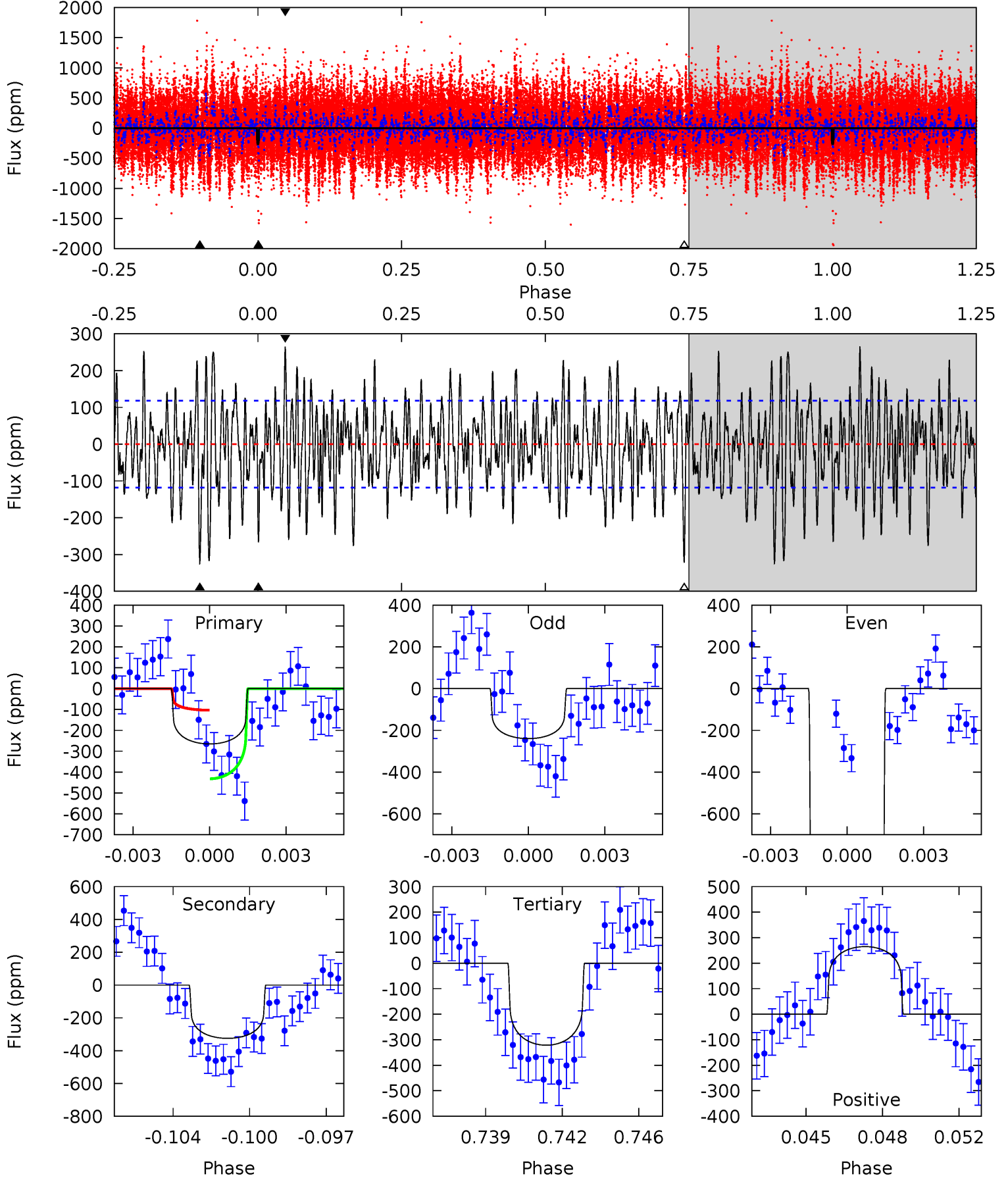
TCE 007533340-01 P=423.751167 Days $T_0=139.914077$ (BKJD)



DV Model-Shift Uniqueness Test

007533340-01, P = 423.775397 Days, E = 140.079221 Days

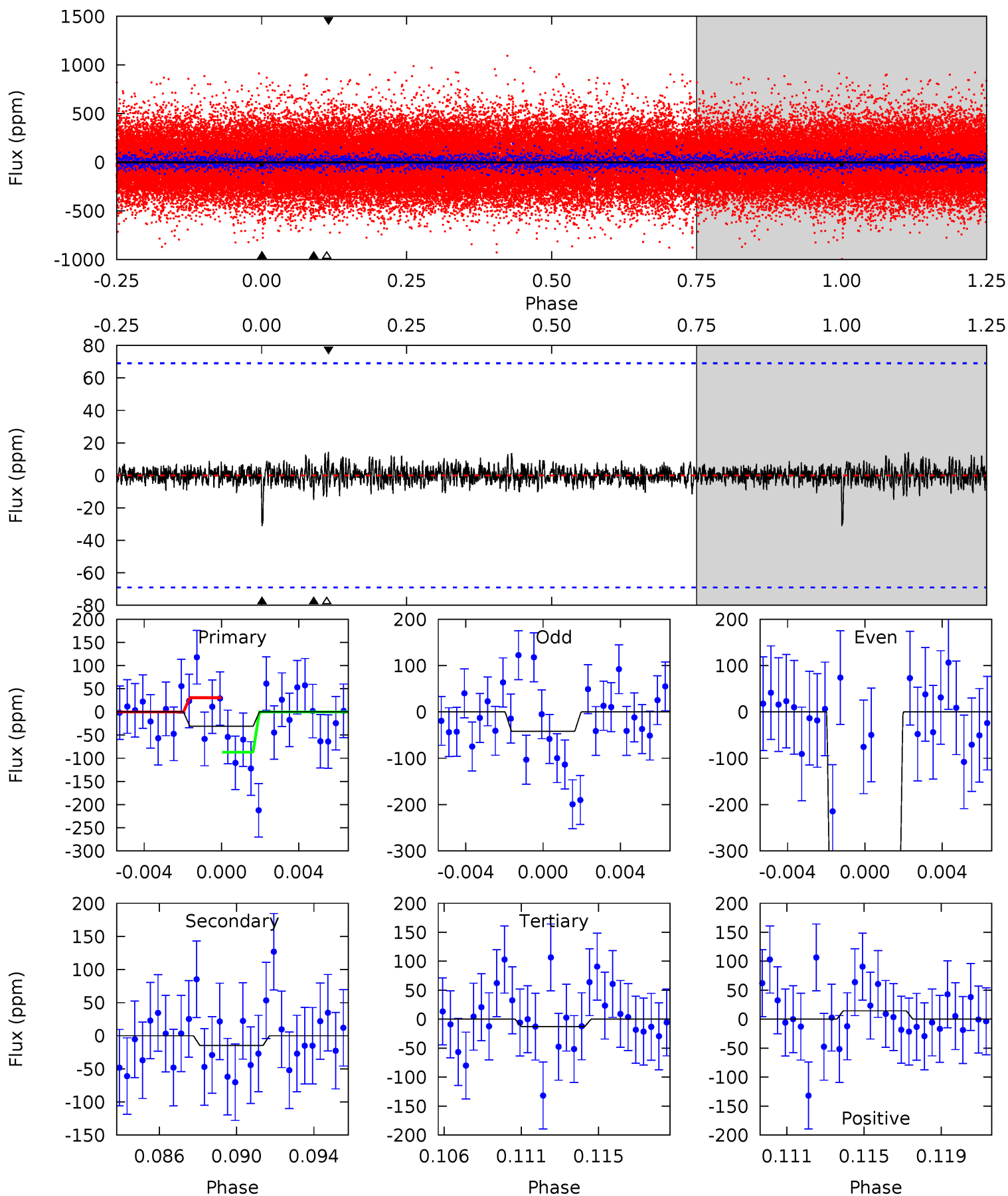
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	14.4	14.2	11.7	5.23	2.92	4.39	-2.49	0.01	0.15	2.65	53.6	1.78	0.45	7.27



Alt Model-Shift Uniqueness Test

007533340-01, P = 423.751167 Days, E = 139.914077 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.35	1.12	0.97	1.08	5.20	2.87	0.30	1.37	1.26	0.14	0.03	34.6	2.45	0.32	2.12



Stellar Parameters For KIC 007533340

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6418^{+153}_{-211}	$4.394^{+0.068}_{-0.203}$	$-0.080^{+0.250}_{-0.300}$	$1.139^{+0.389}_{-0.130}$	$1.172^{+0.169}_{-0.169}$	$1.117^{+0.332}_{-0.607}$
	+2%/-3%	+2%/-5%	+312%/-375%	+34%/-11%	+14%/-14%	+30%/-54%
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 007533340-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-325 ± 23	$2.91^{+0.61}_{-0.54}$	397^{+28}_{-20}	5702^{+517}_{-403}	28052^{+13587}_{-8819}
Alt.	-15 ± 13	$4.17^{+0.78}_{-0.61}$	397^{+32}_{-19}	2905^{+308}_{-729}	595^{+600}_{-538}

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

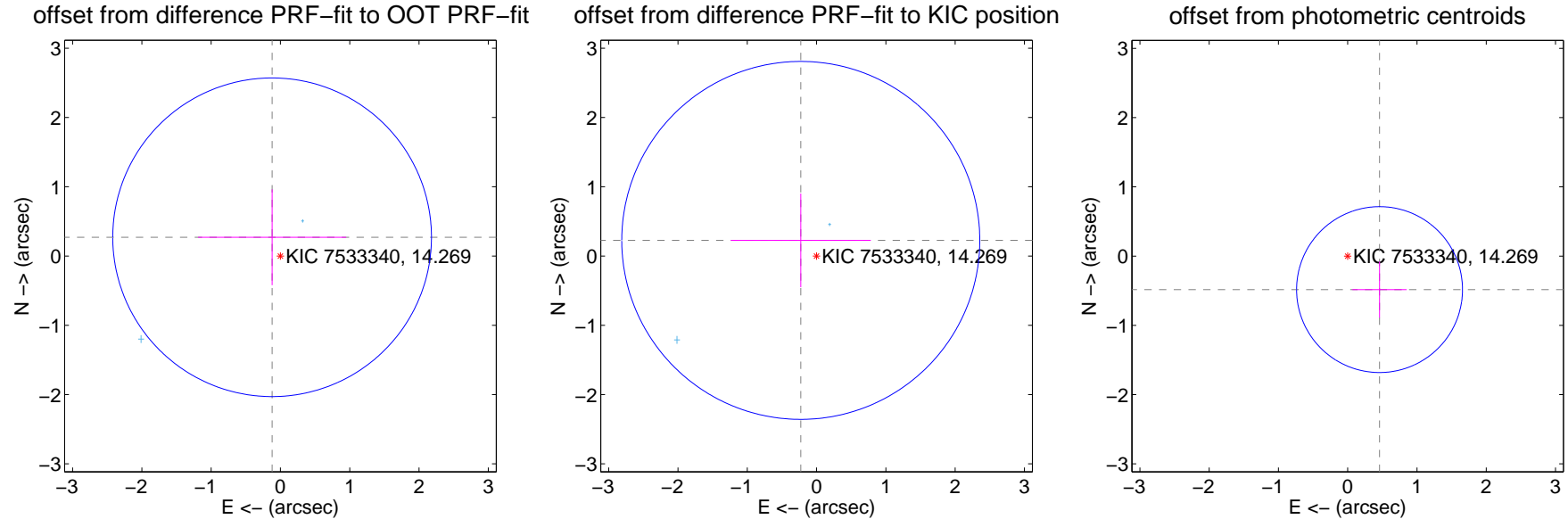
DV Centroid Data

Supplemental centroid analysis for 007533340-01. Kepler magnitude: 14.27. Transit SNR 7.92

There are 2 quarters with good PRF difference image offsets

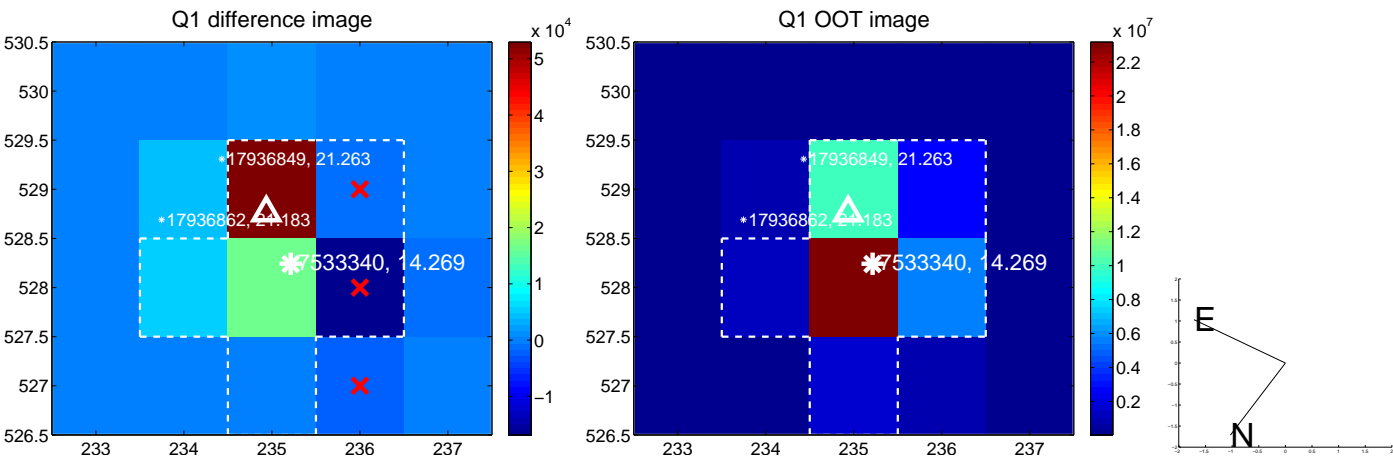
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.296 ± 0.767	0.39	0.121 ± 1.069	0.271 ± 0.691
PRF-fit source offset from KIC position	0.321 ± 0.861	0.37	0.228 ± 1.010	0.226 ± 0.675
photometric centroid source offset	0.67 ± 0.40	1.67	-0.46 ± 0.39	-0.48 ± 0.41

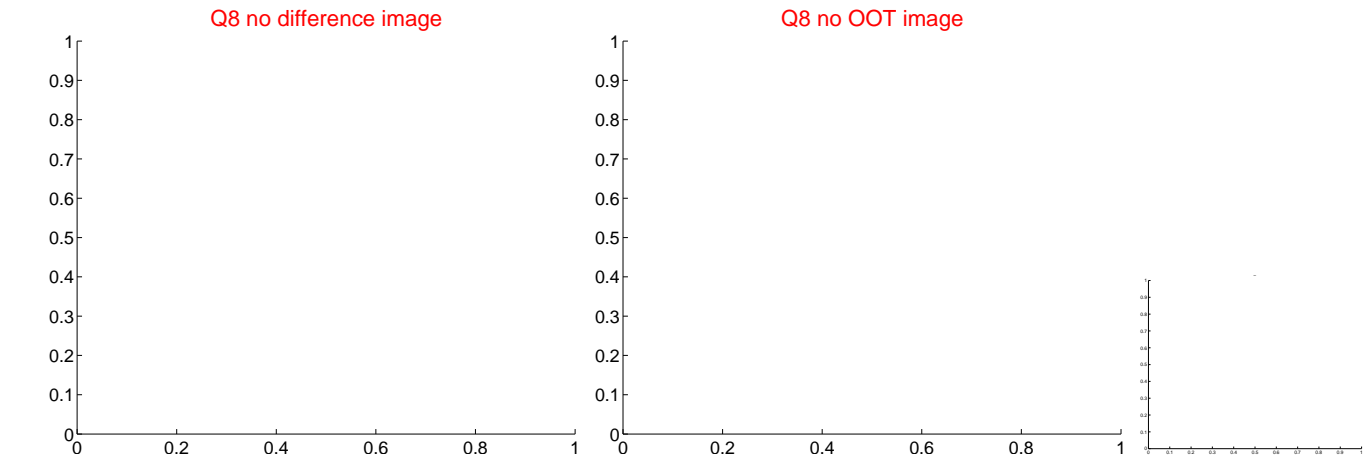
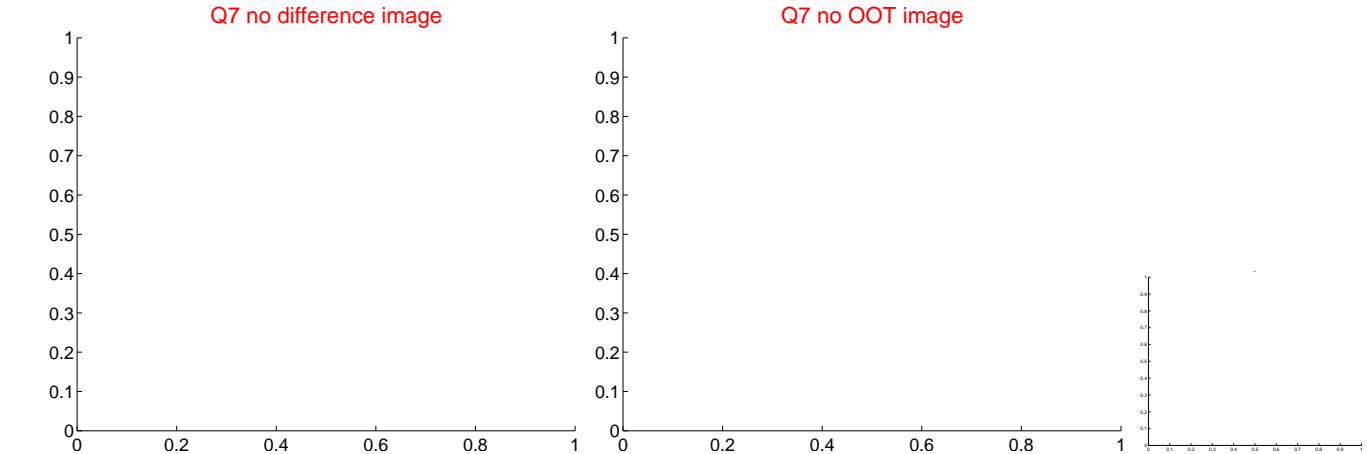
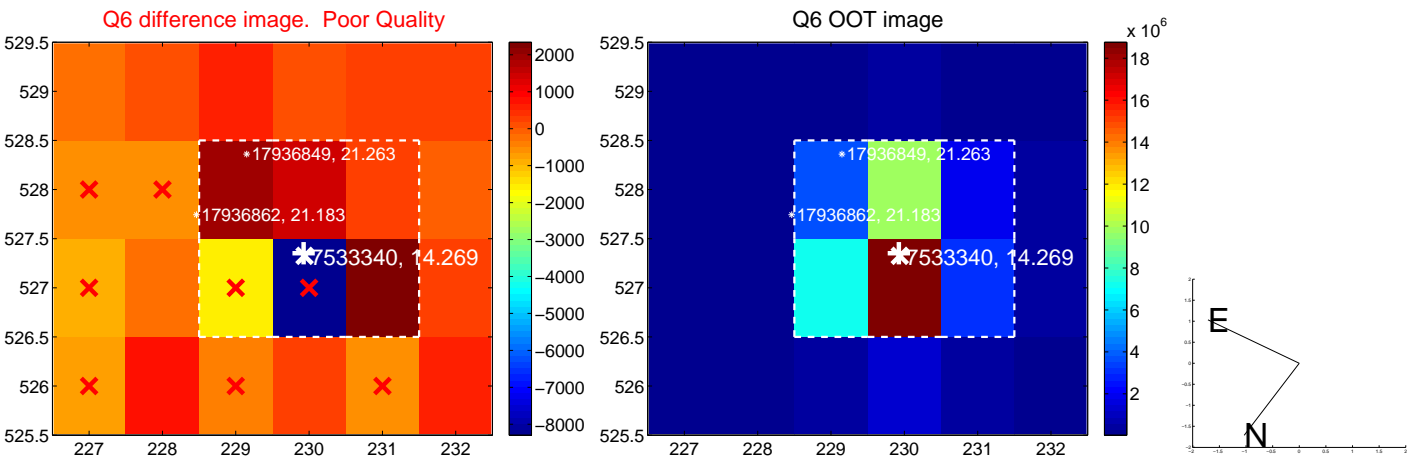
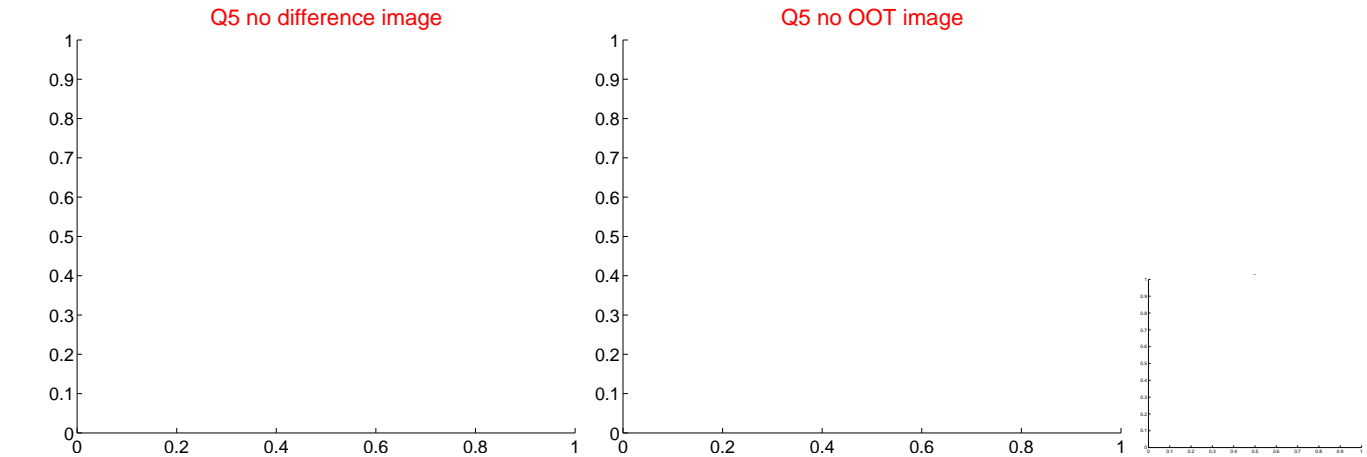


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs $> 15,000$ are from the UKIRT catalog.

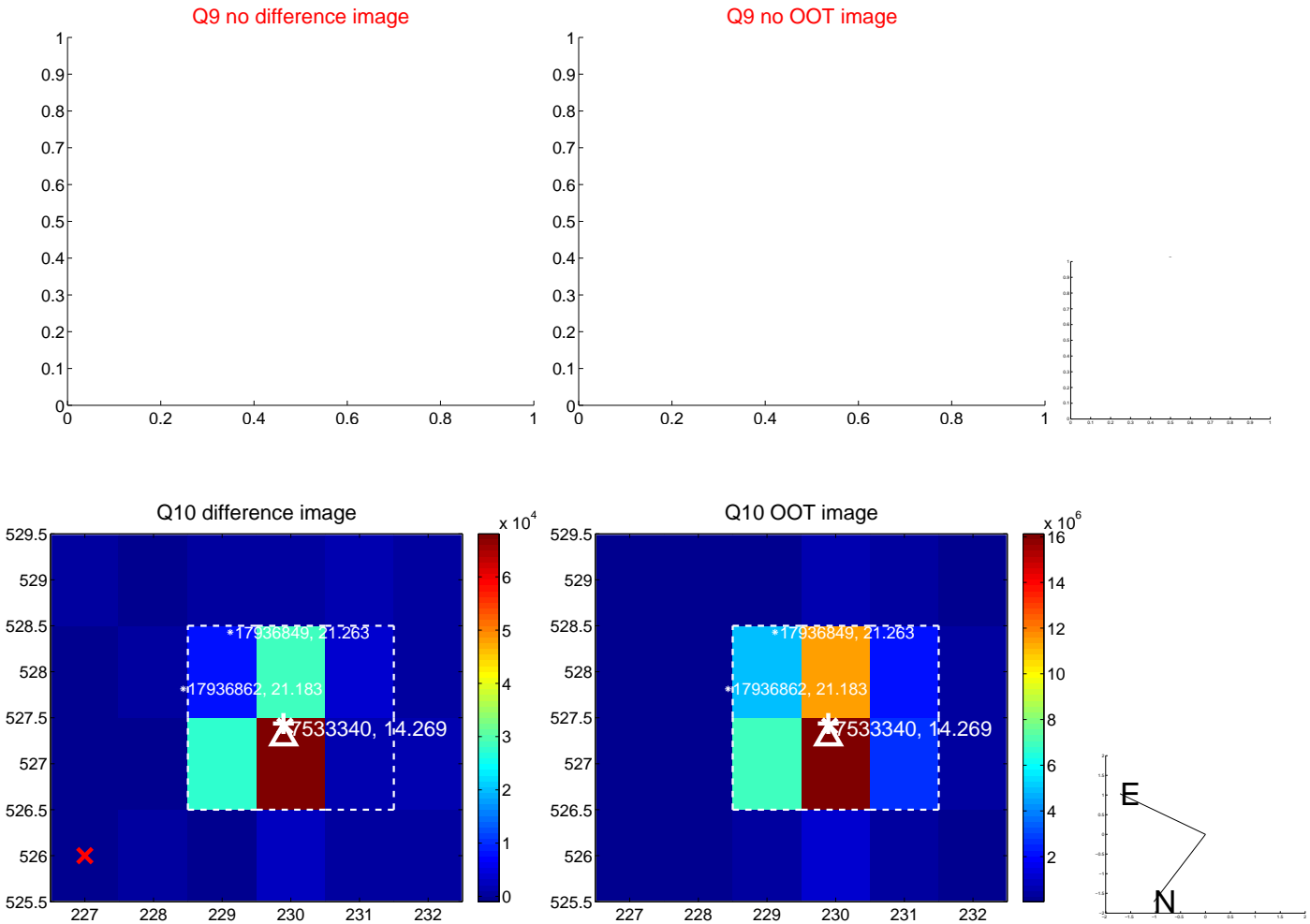
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



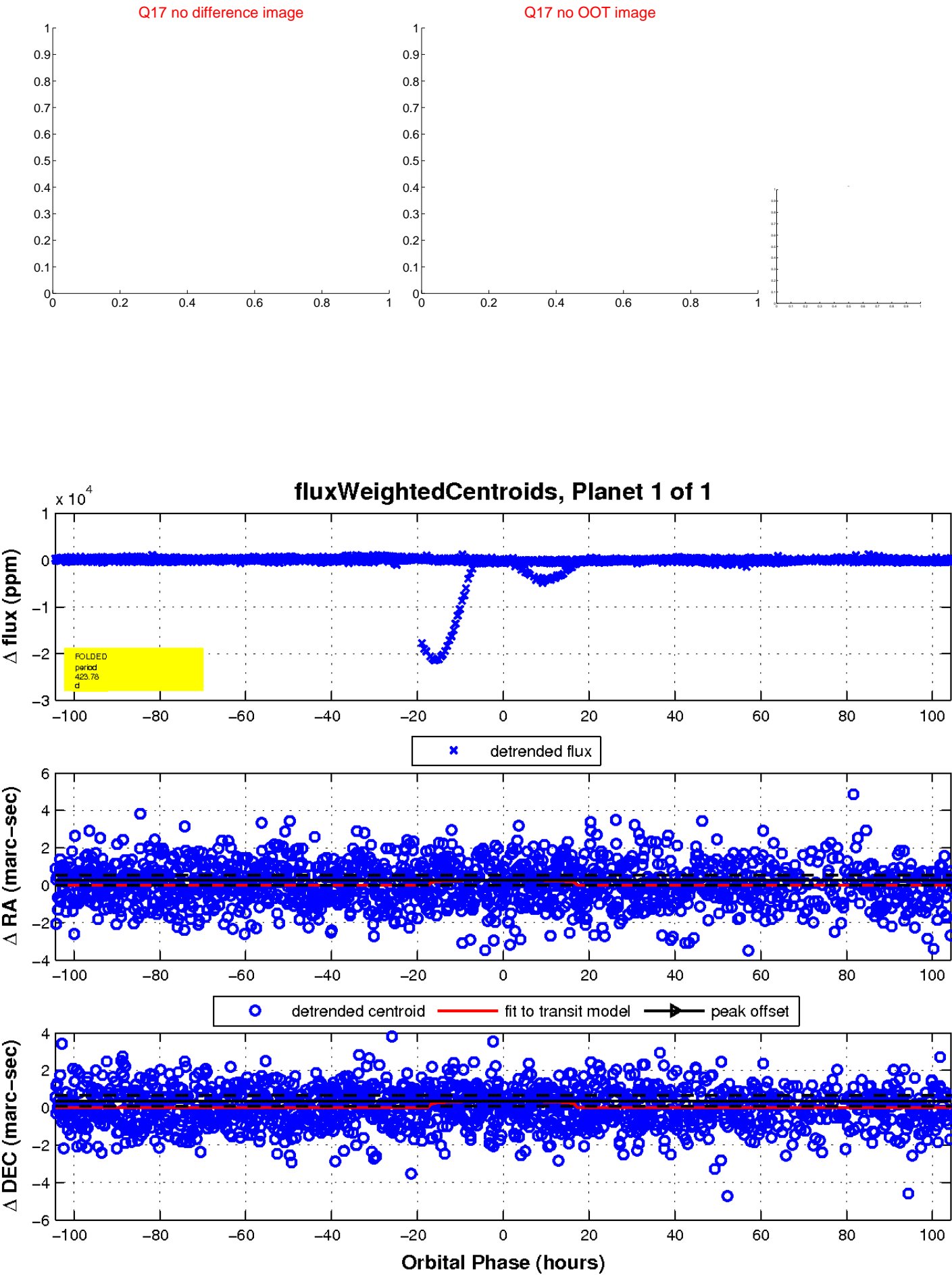
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

