

KIC 007971937

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})
007971937-01	OBS	No	366.622401	238.740934	640.3	9.791	7.9	8.4	0.96	5926	2.60	0.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007971937-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

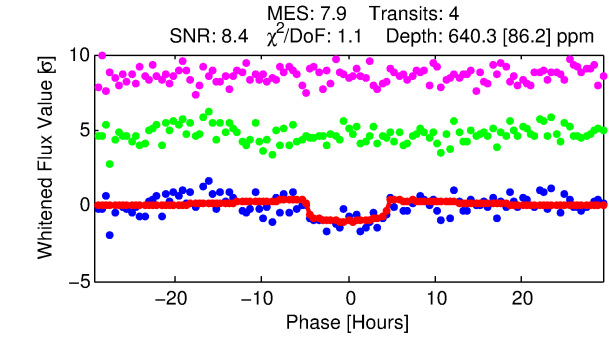
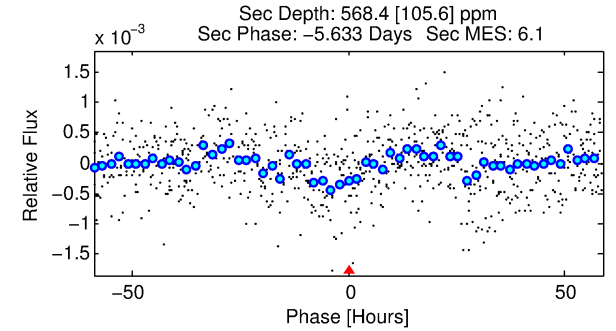
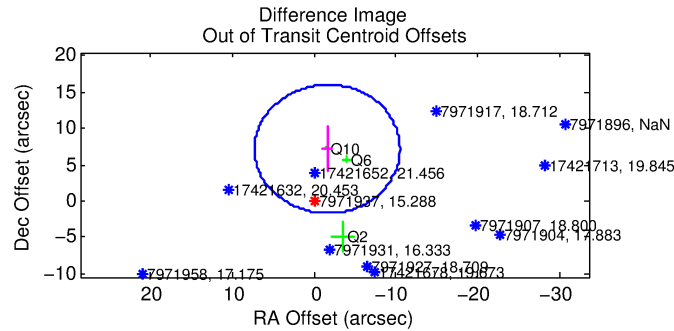
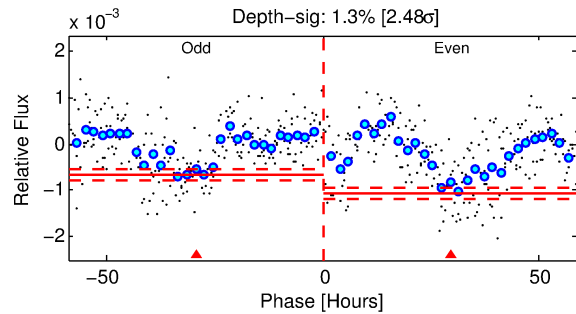
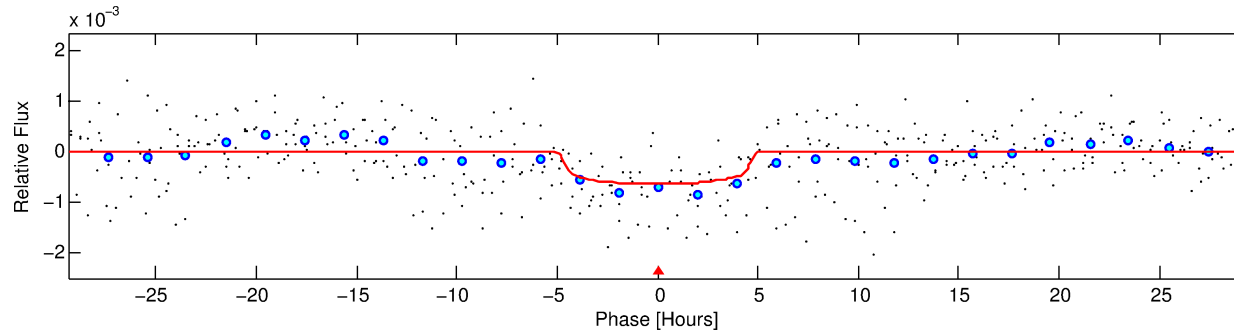
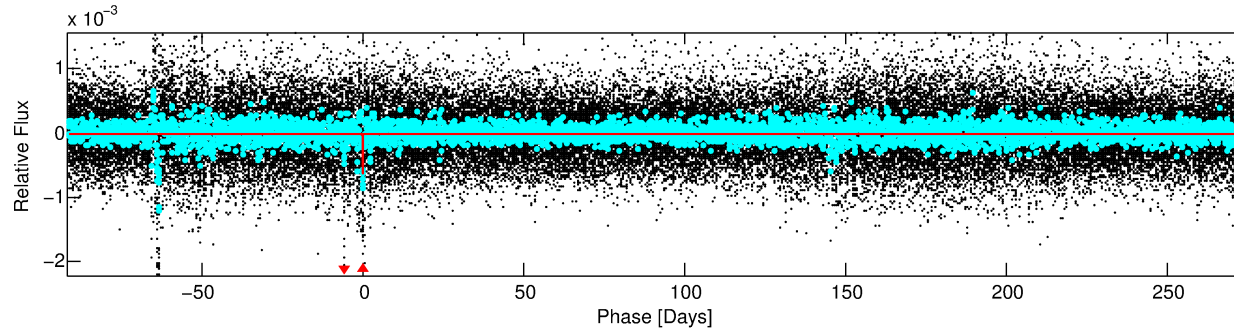
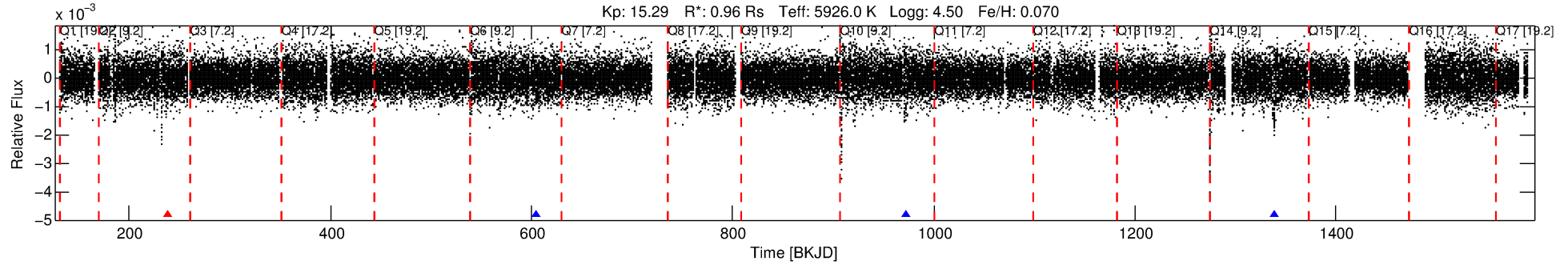
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007971937-01

No Significant Match Found

DV One-Page Summary

KIC: 7971937 Candidate: 1 of 1 Period: 366.622 d



DV Fit Results:

Period = 366.62240 [0.00881] d
Epoch = 238.7409 [0.0147] BKJD
Rp/R* = 0.0247 [0.0122]
a/R* = 214.74 [471.47]
b = 0.70 [1.63]
Seff = 0.97 [0.40]
Teq = 253 [26] K
Rp = 2.60 [1.51] Re
a = 1.0263 [0.2696] AU
Ag = 48716.88 [52265.92] [0.93 σ]
Teffp = 5817 [1469] K [3.79 σ]

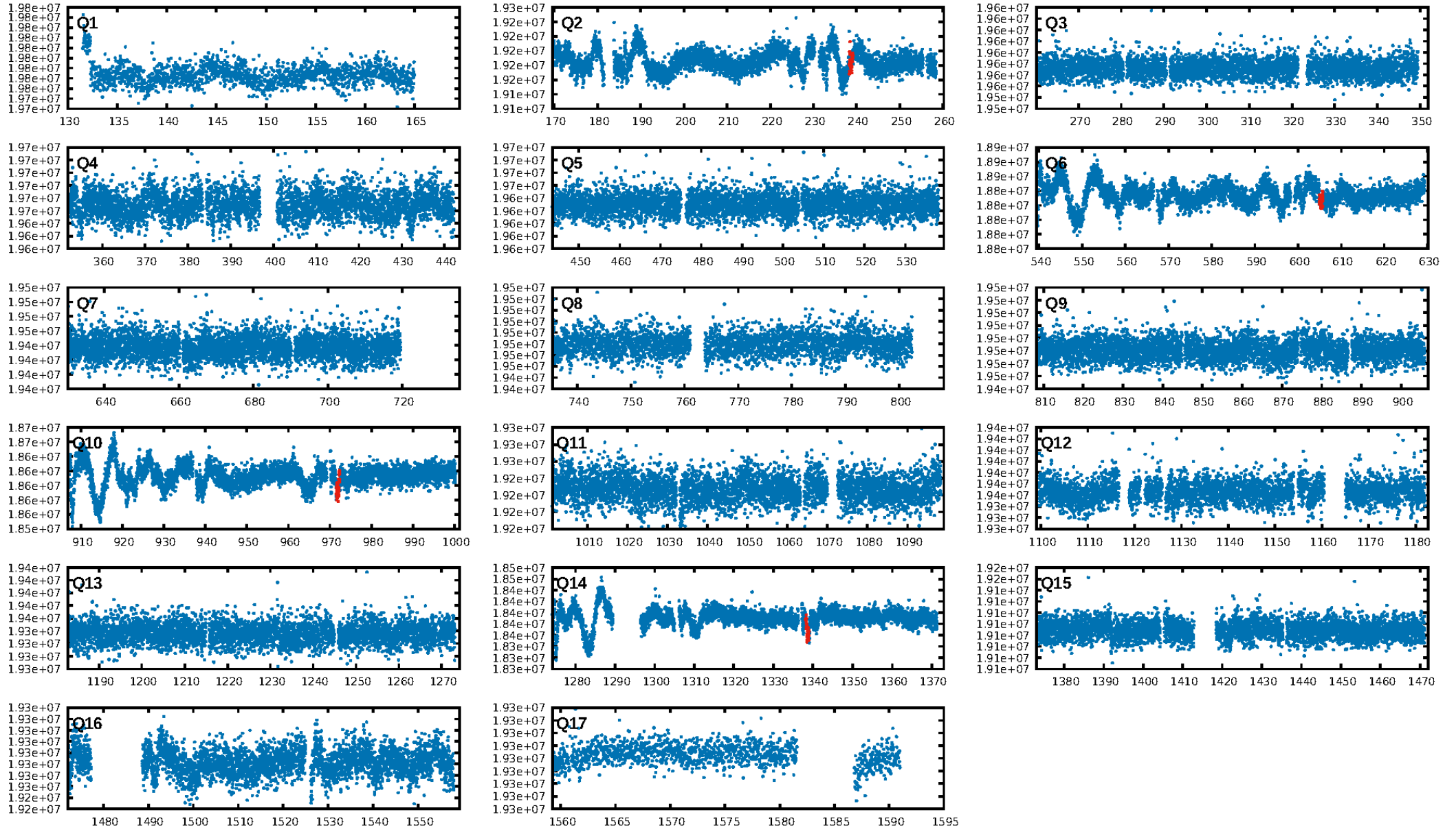
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 13.4%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 6.50e-10
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 4.446
Centroid-sig: 26.2%
Centroid-so: 2.989 arcsec [1.54 σ]
OotOffset-rm: 7.339 arcsec [2.48 σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-rm: 6.844 arcsec [2.55 σ]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

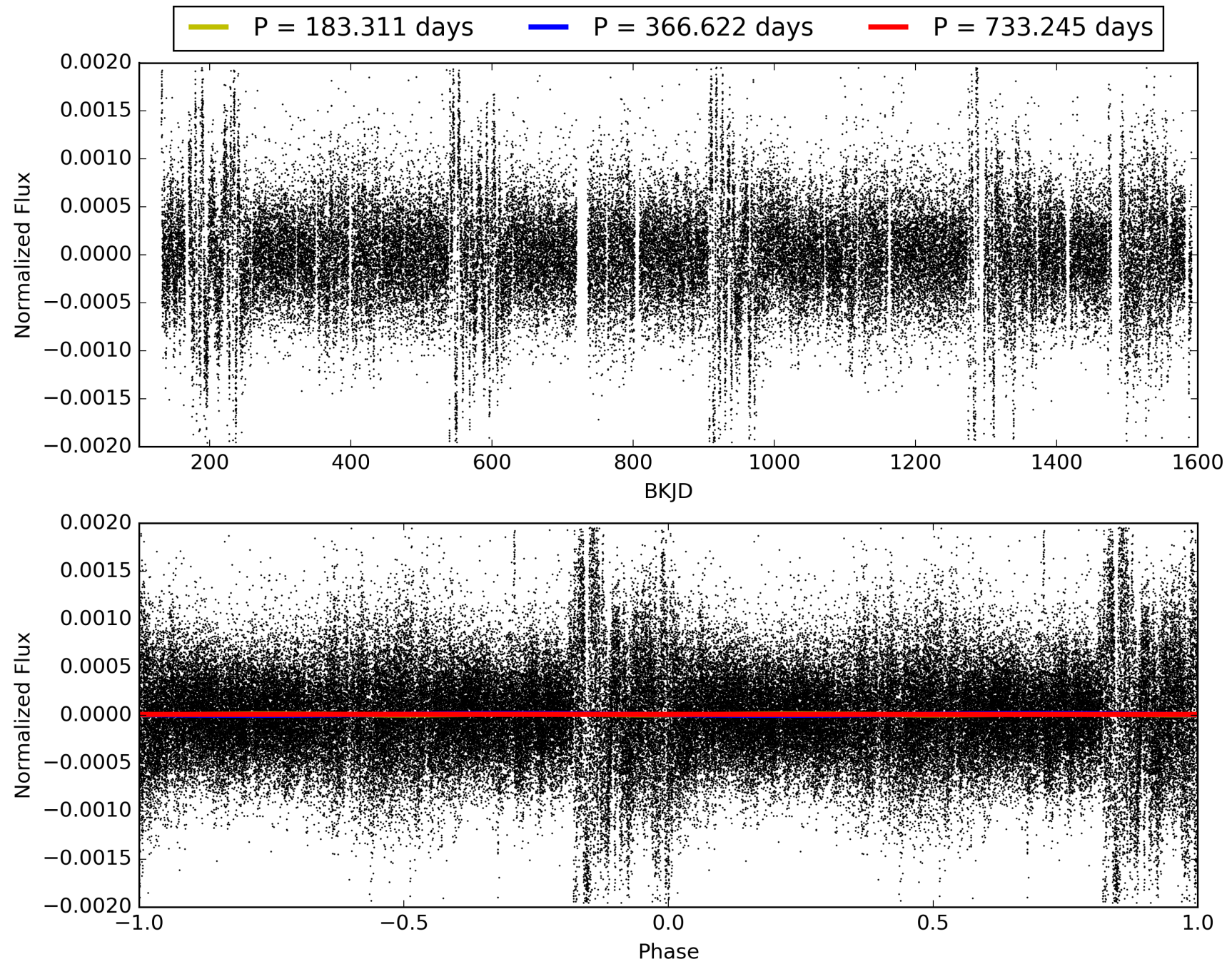
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 03:12:36 Z

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

TCE 007971937-01, PDC Light Curves

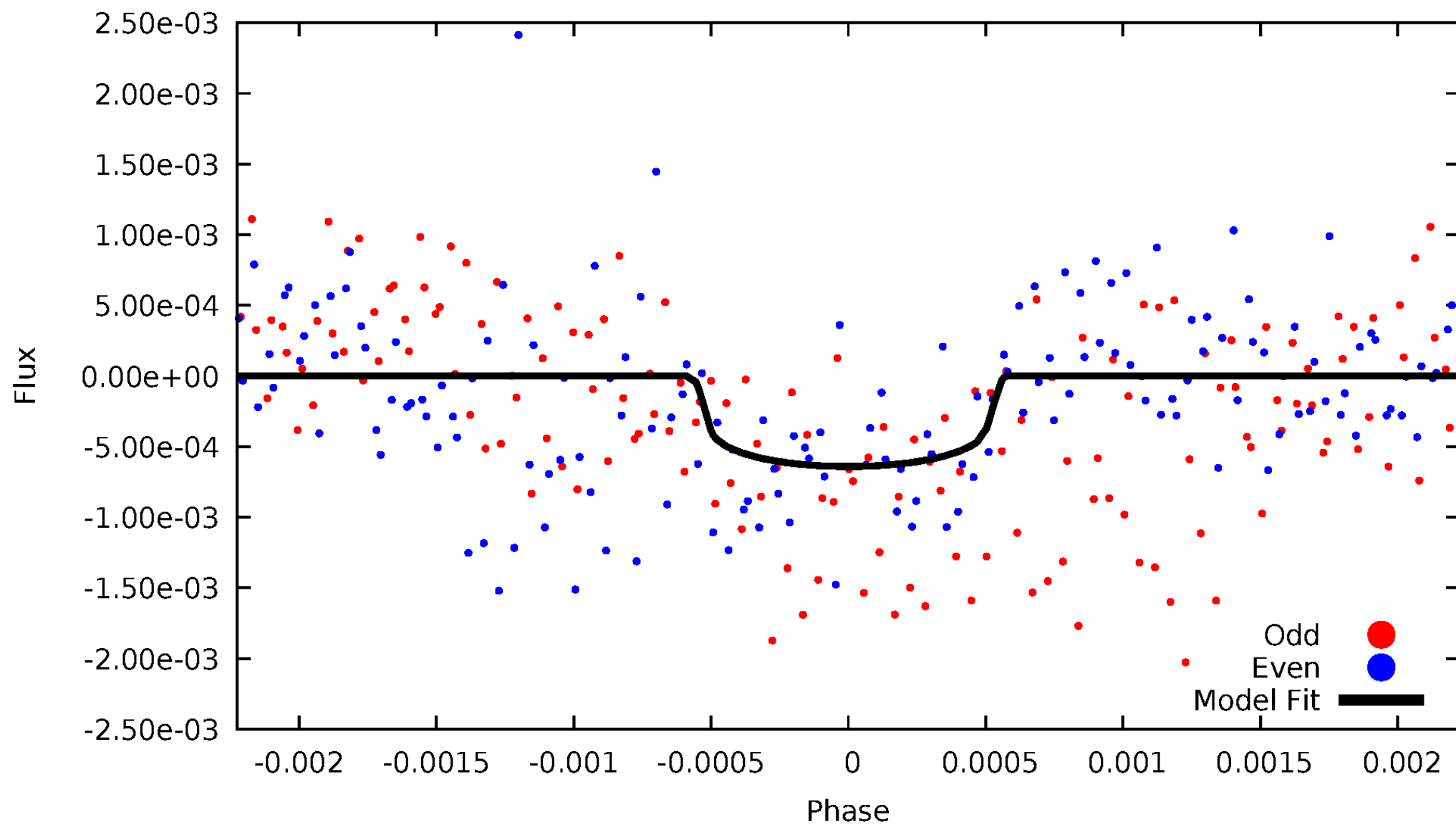


TCE 007971937-01



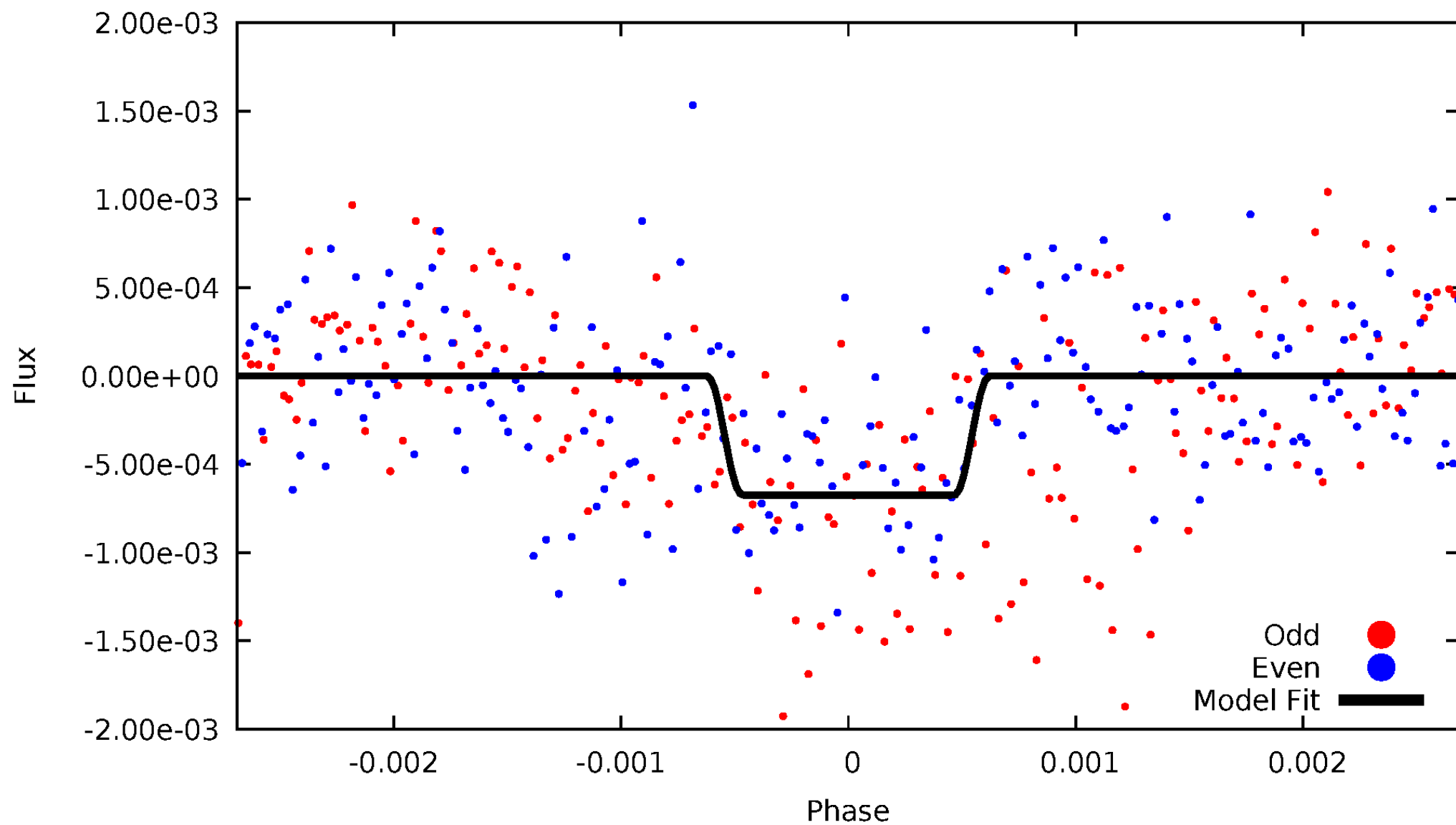
DV Odd/Even

TCE 007971937-01



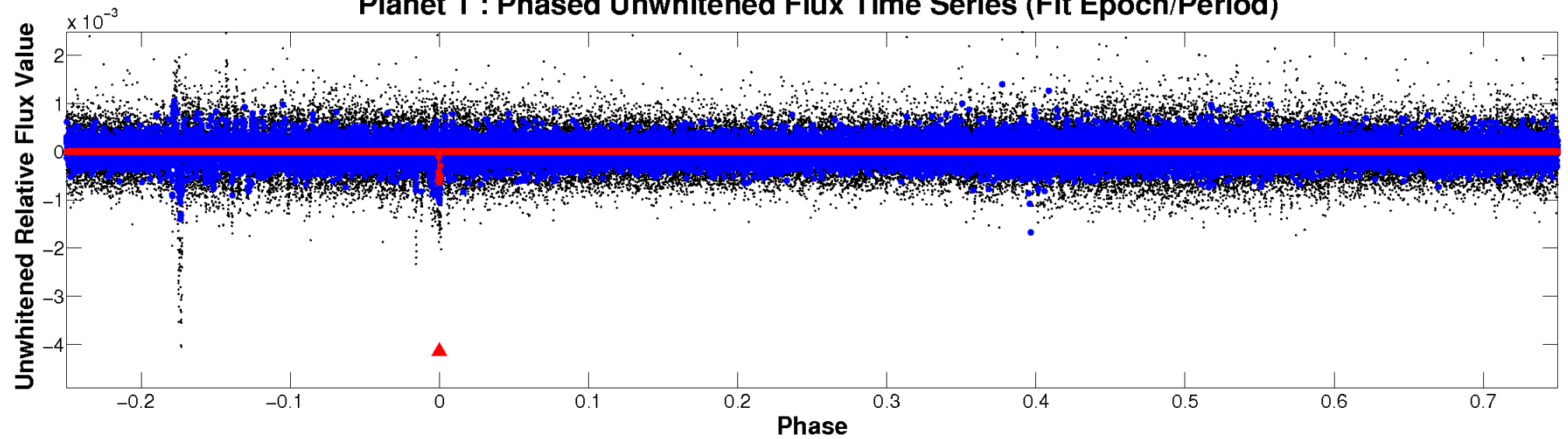
ALT Odd/Even

TCE 007971937-01

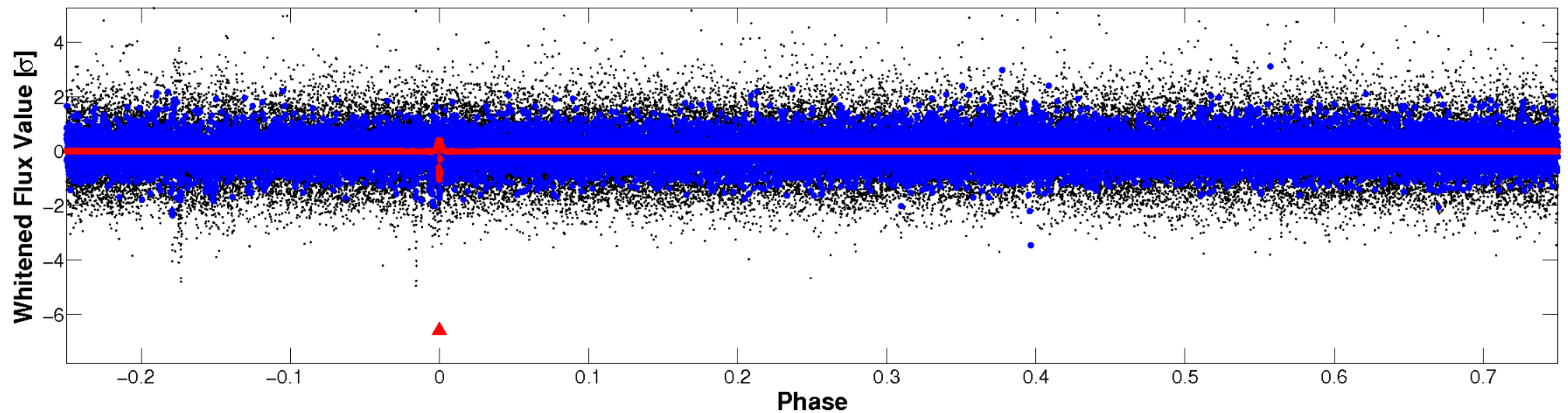


Non-Whitened Vs. Whitened Light Curve

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

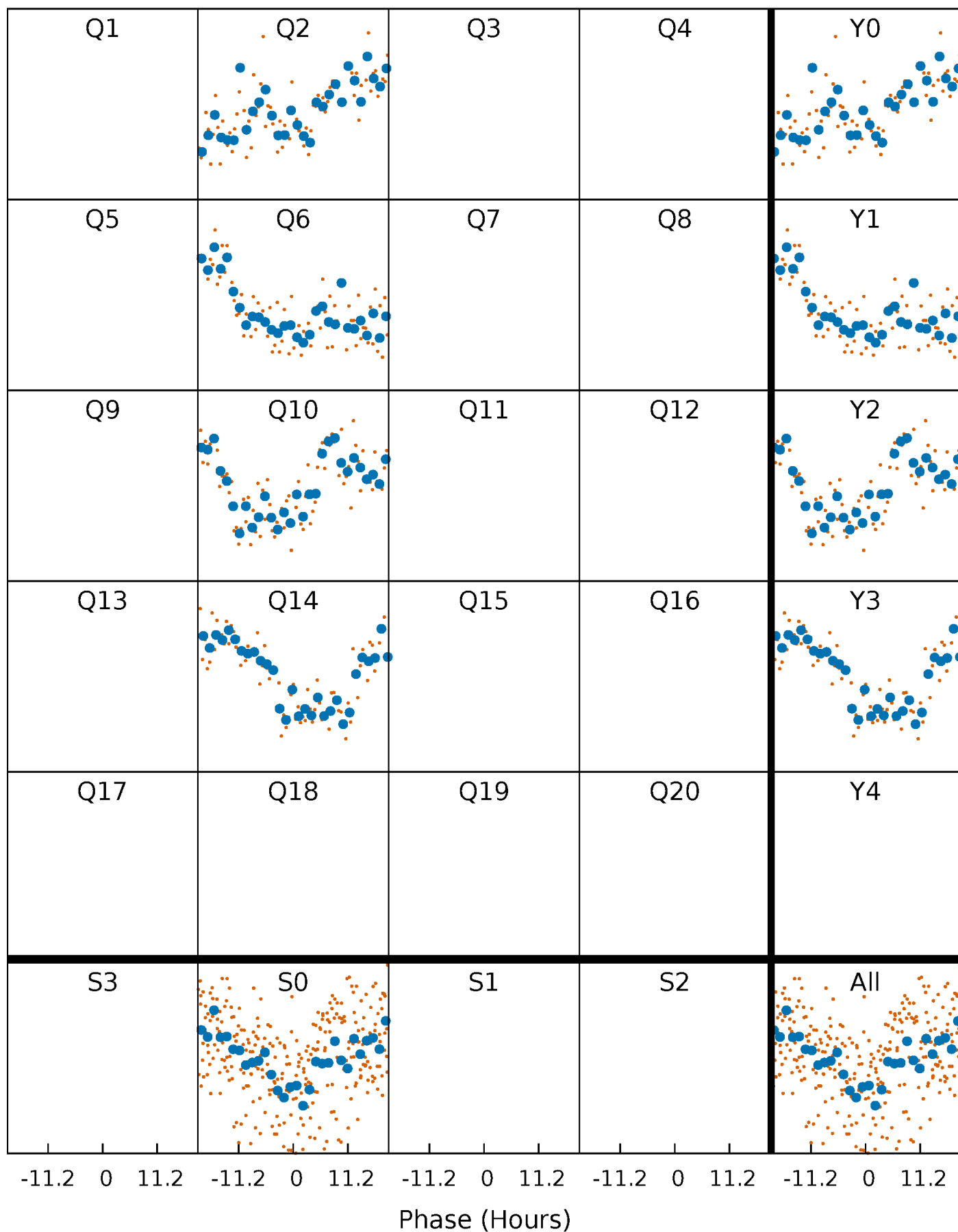


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



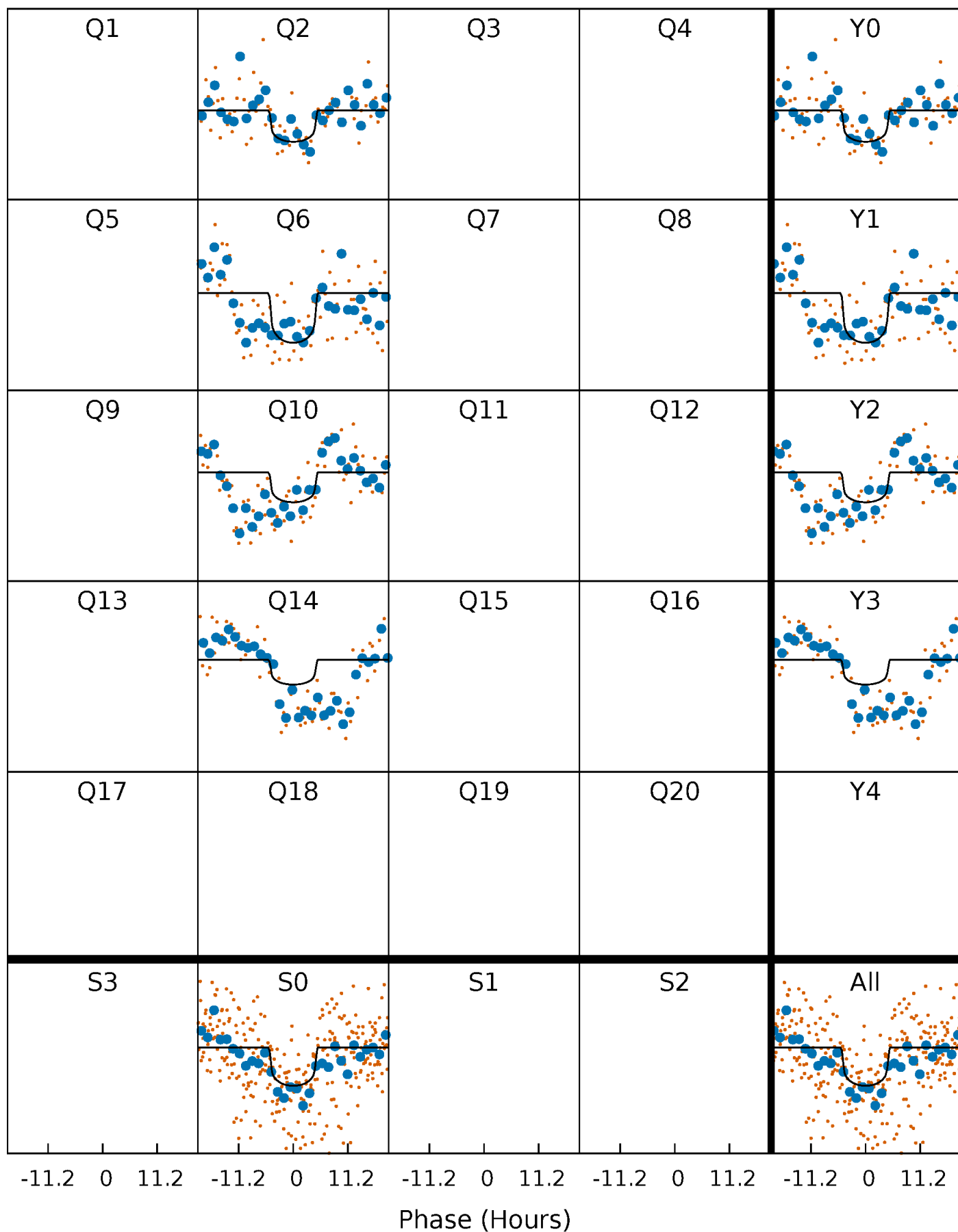
PDC Quarter-Phased Transit Curves

TCE 007971937-01 P=366.622401 Days $T_0=238.740934$ (BKJD)



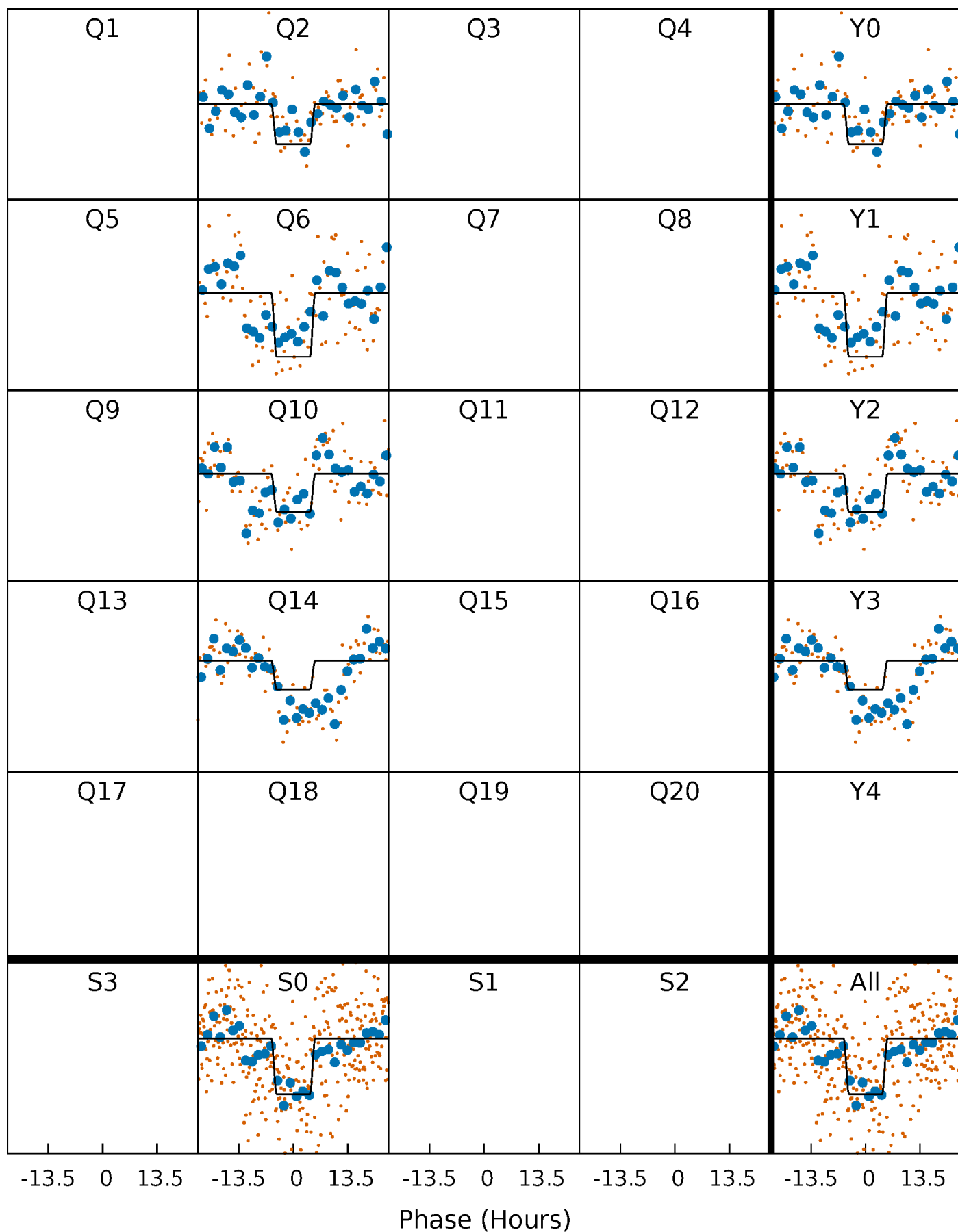
DV Quarter-Phased Transit Curves

TCE 007971937-01 P=366.622401 Days $T_0=238.740934$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

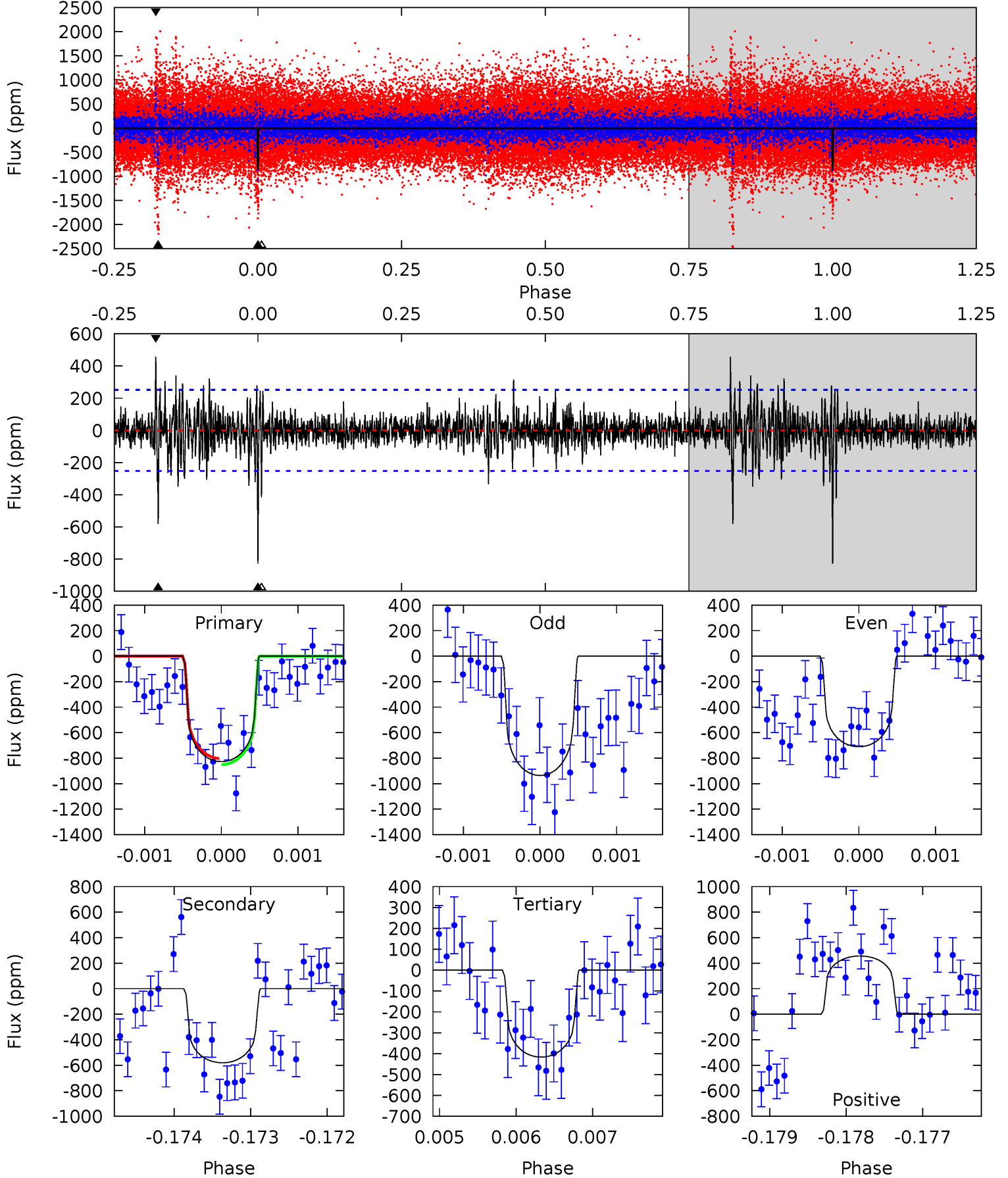
TCE 007971937-01 P=366.625745 Days $T_0=238.734699$ (BKJD)



DV Model-Shift Uniqueness Test

007971937-01, P = 366.622401 Days, E = 238.740934 Days

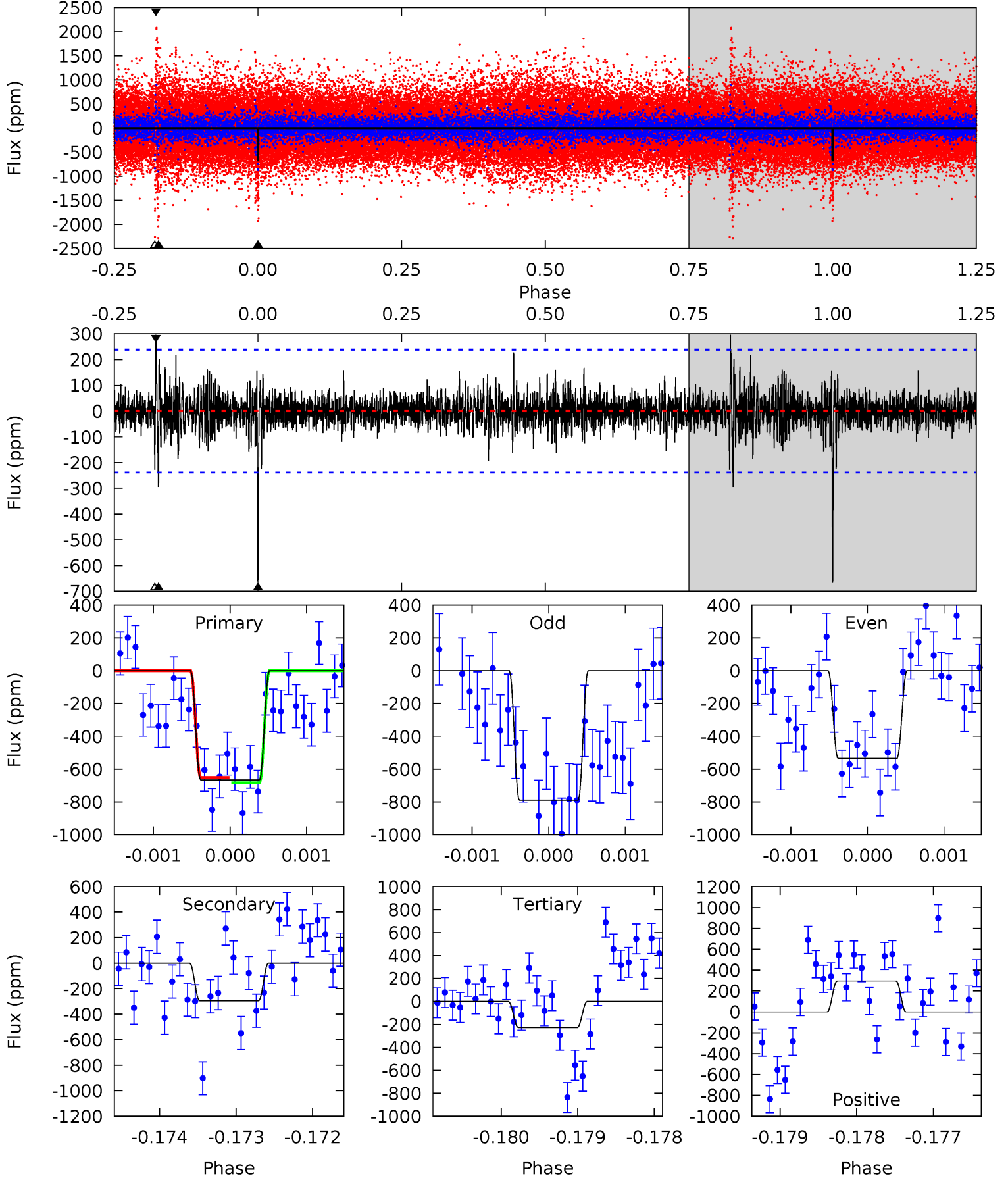
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	12.5	8.96	9.83	5.42	3.25	1.64	8.84	7.98	3.53	2.67	2.42	1.16	0.36	0.51



Alt Model-Shift Uniqueness Test

007971937-01, P = 366.625745 Days, E = 238.734699 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	6.68	5.17	6.73	5.42	3.24	1.09	9.97	8.42	1.51	-0.05	2.88	1.24	0.31	0.38



Stellar Parameters For KIC 007971937

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5926^{+164}_{-205}	$4.501^{+0.050}_{-0.213}$	$0.070^{+0.250}_{-0.350}$	$0.963^{+0.297}_{-0.099}$	$1.072^{+0.115}_{-0.140}$	$1.691^{+0.356}_{-0.907}$
	+3%/-3%	+1%/-5%	+357%/-500%	+31%/-10%	+11%/-13%	+21%/-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 007971937-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-581 ± 46	$2.80^{+1.46}_{-1.36}$	360^{+25}_{-16}	5759^{+2535}_{-938}	$42206^{+116528}_{-23839}$
Alt.	-294 ± 44	$2.88^{+1.49}_{-1.33}$	362^{+27}_{-18}	4883^{+1772}_{-726}	20020^{+49463}_{-11558}

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 $A_{obs} \gg 1.0$

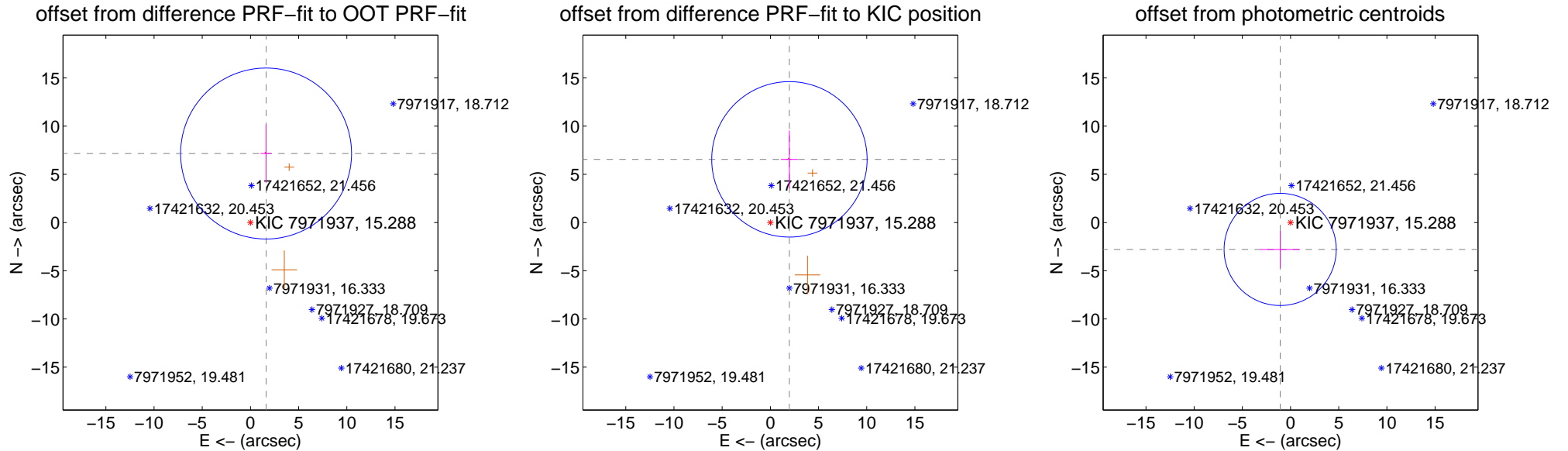
DV Centroid Data

Supplemental centroid analysis for 007971937-01. Kepler magnitude: 15.29. Transit SNR 8.38

There are 0 quarters with good PRF difference image offsets

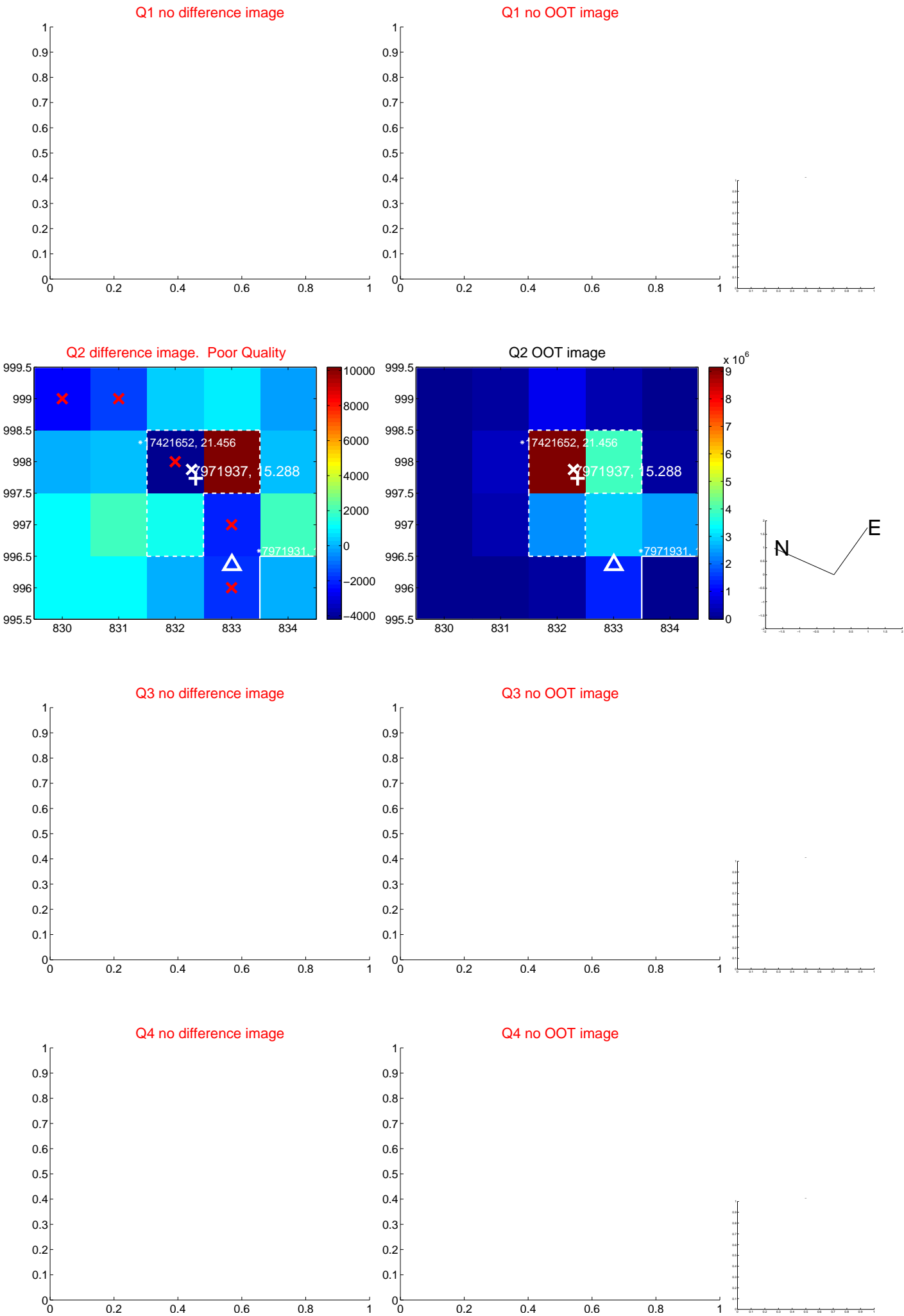
The direct PRF centroid is offset from the target star catalog position by about 0.70 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.339 ± 2.955	2.48	-1.621 ± 0.584	7.158 ± 3.029
PRF-fit source offset from KIC position	6.844 ± 2.687	2.55	-1.977 ± 0.884	6.553 ± 2.986
photometric centroid source offset	2.99 ± 1.94	1.54	1.08 ± 2.05	-2.79 ± 1.92

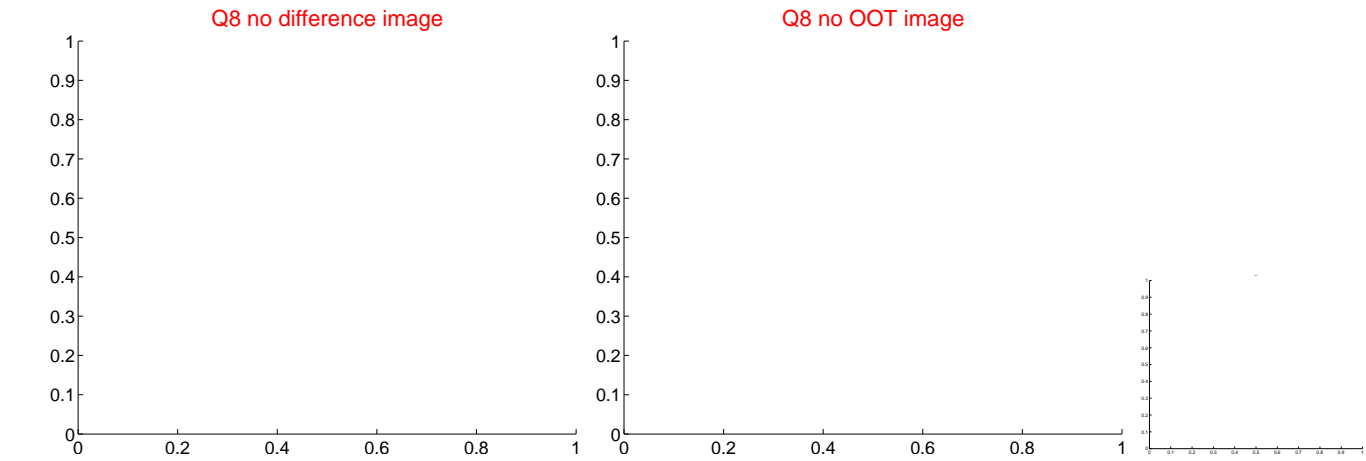
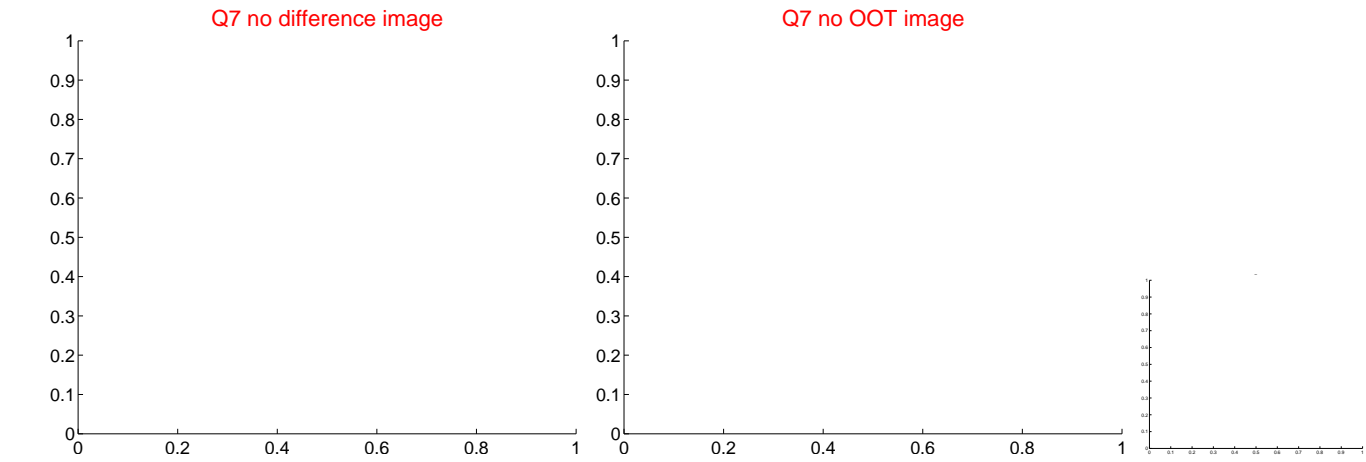
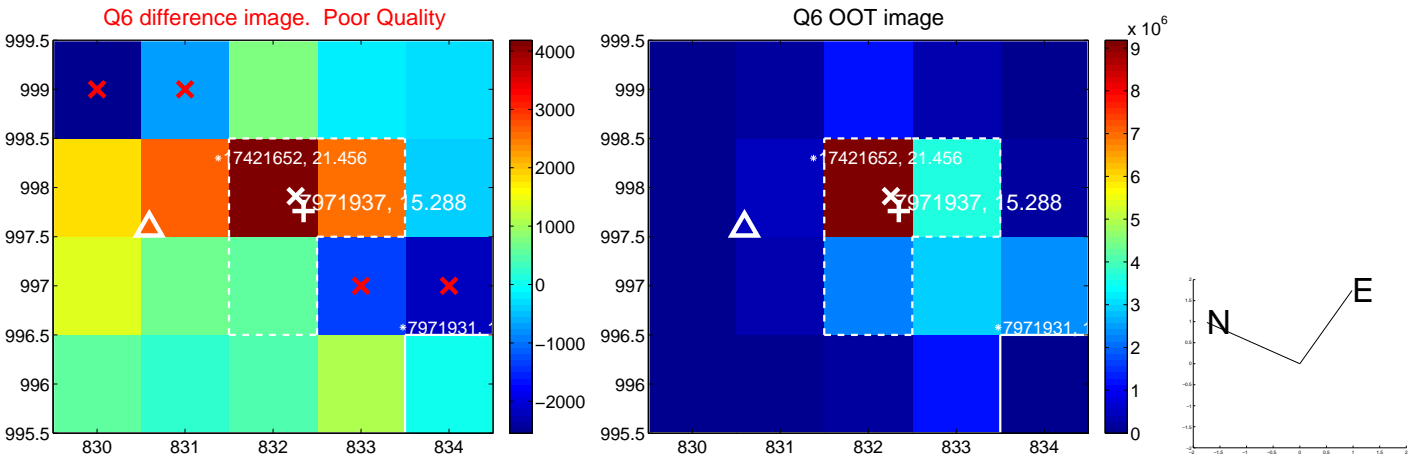
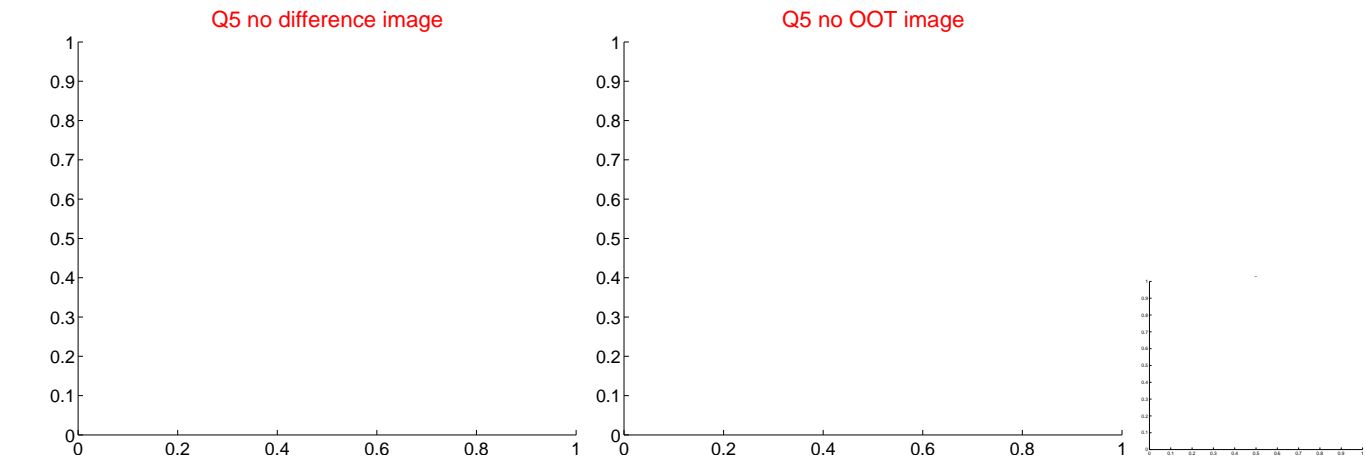


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

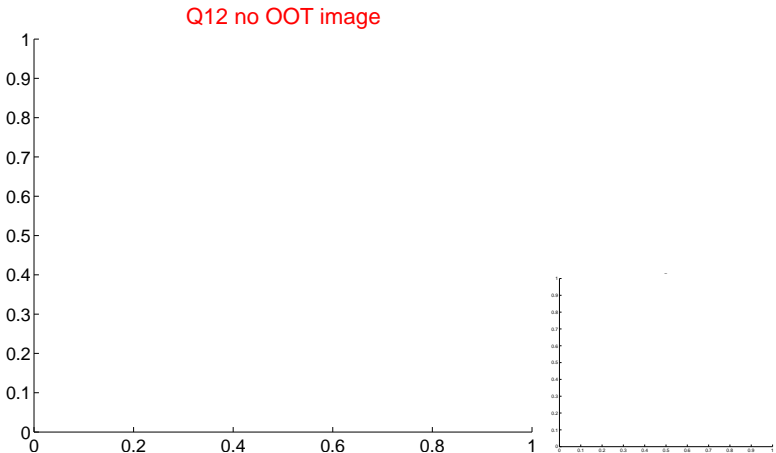
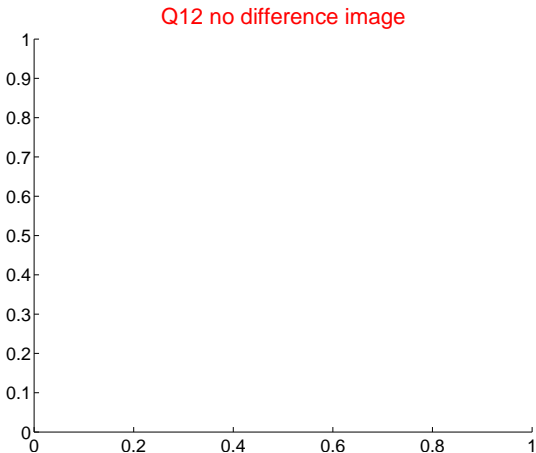
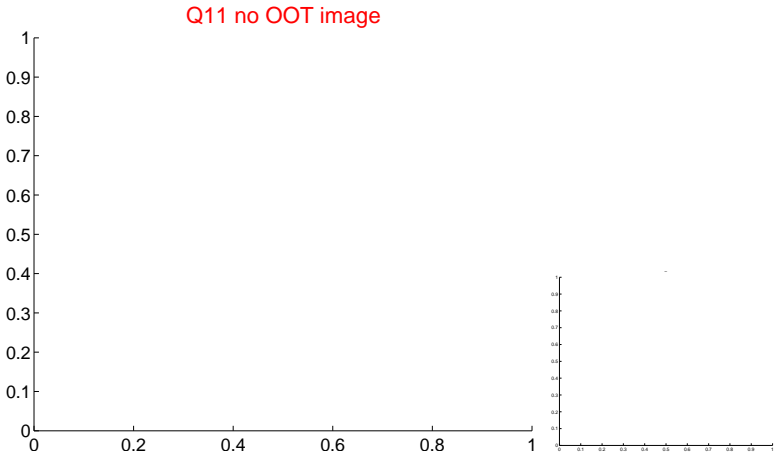
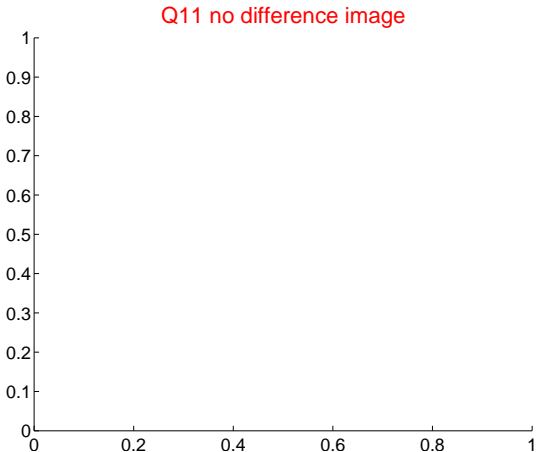
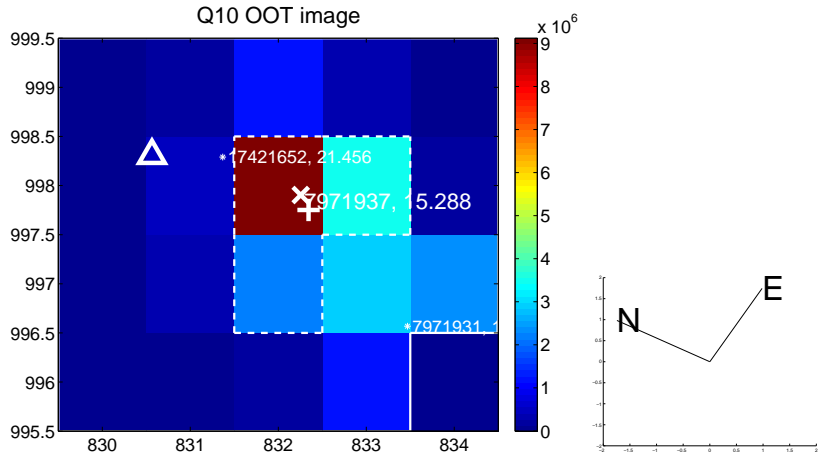
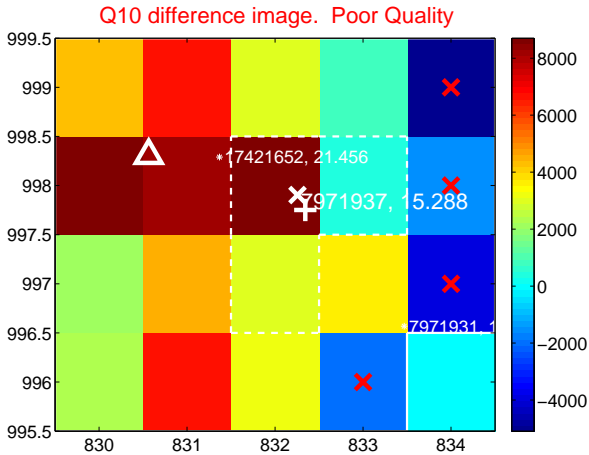
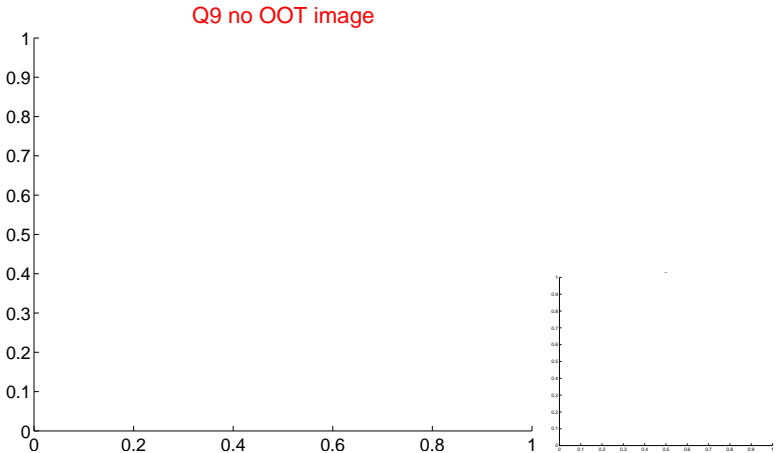
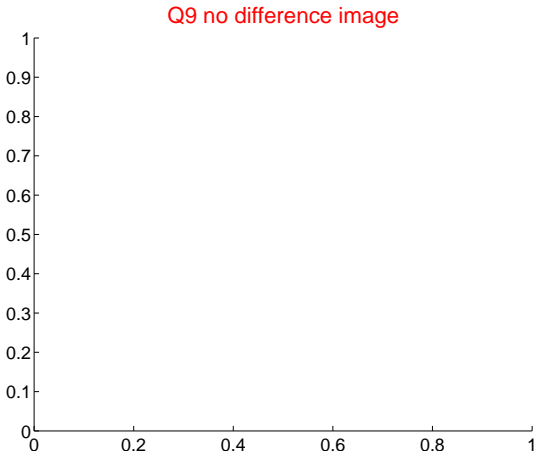
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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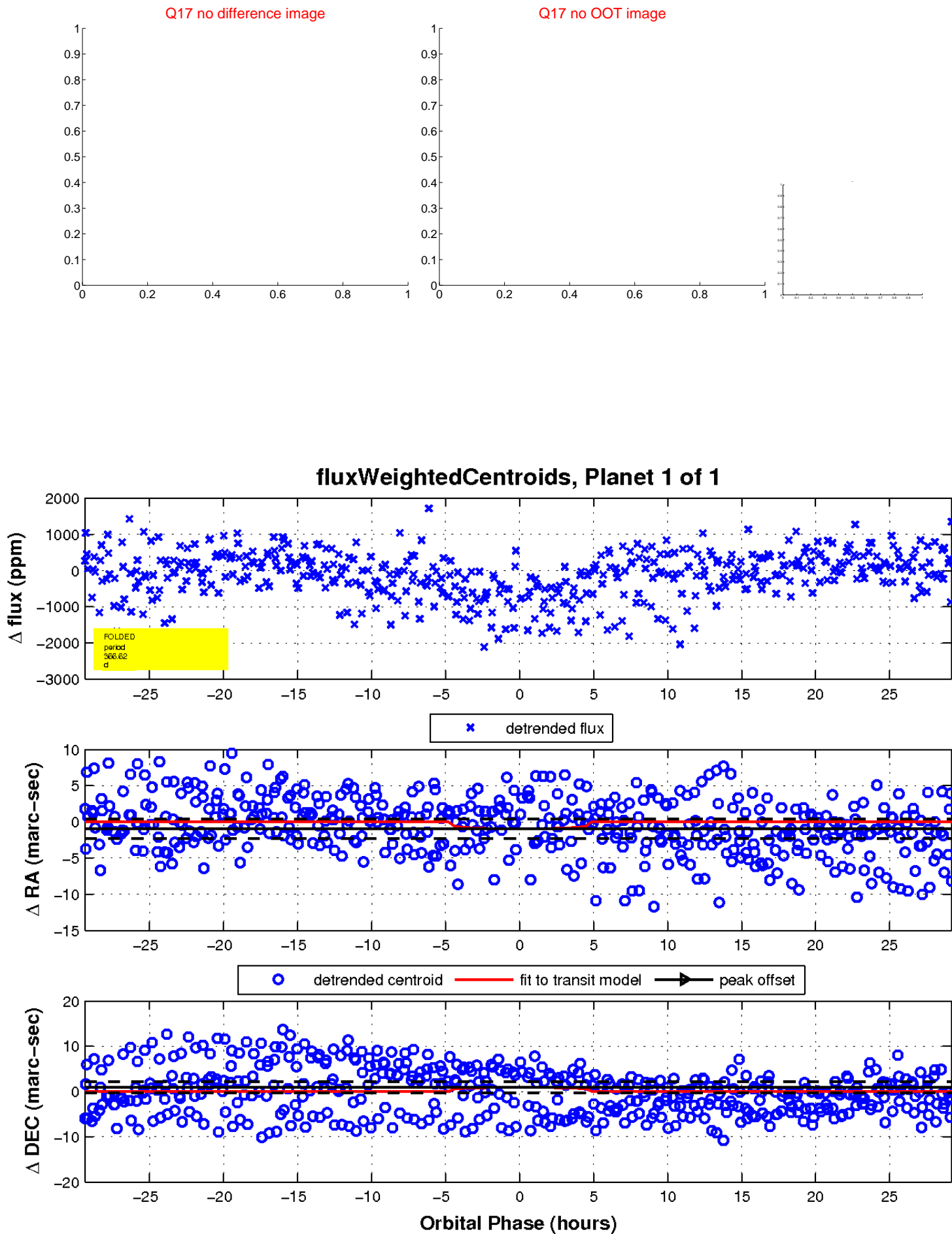
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UKIRT Image

Declination

