

KIC 005305072

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})
005305072-01	OBS	No	396.954798	437.147337	730.7	6.728	7.1	4.3	1.00	5780	2.85	0.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005305072-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—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.

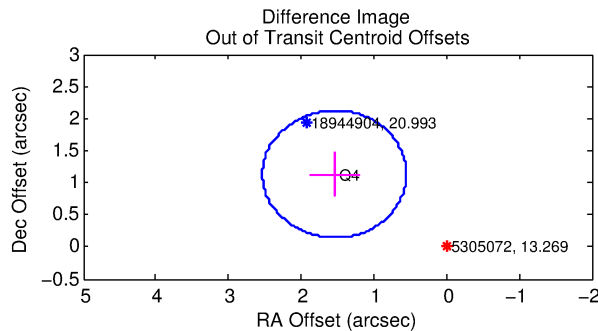
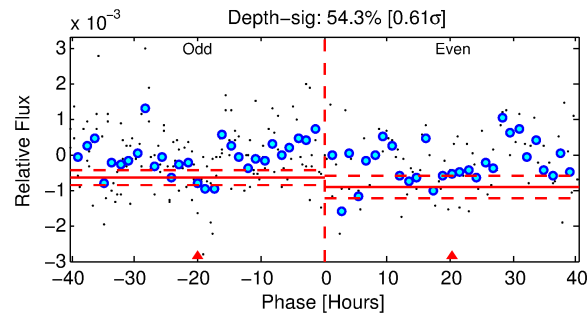
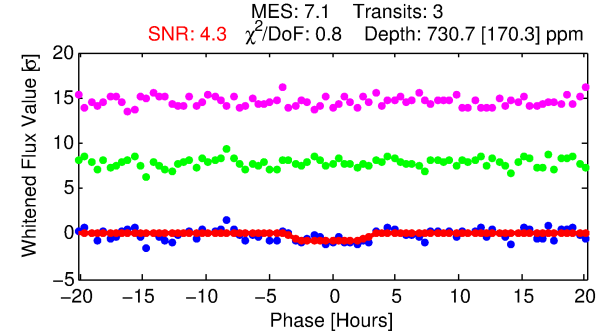
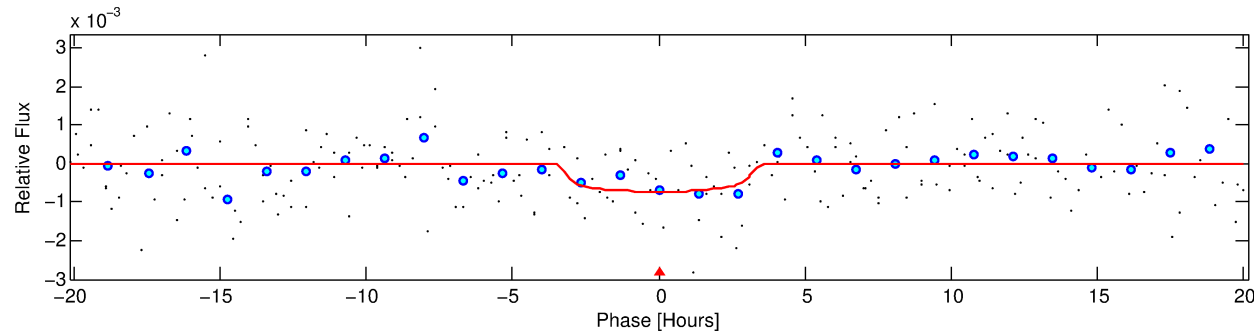
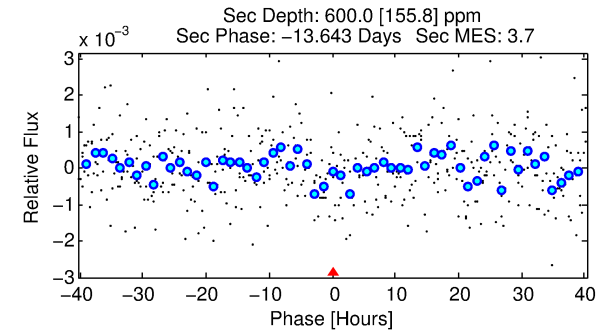
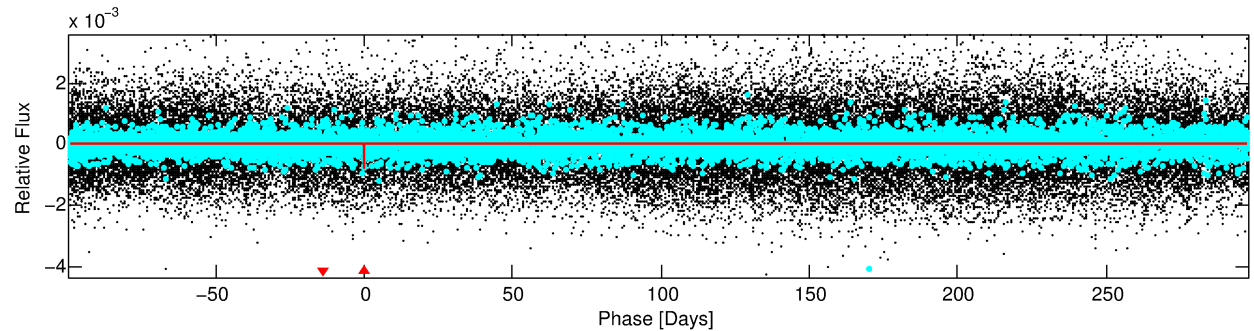
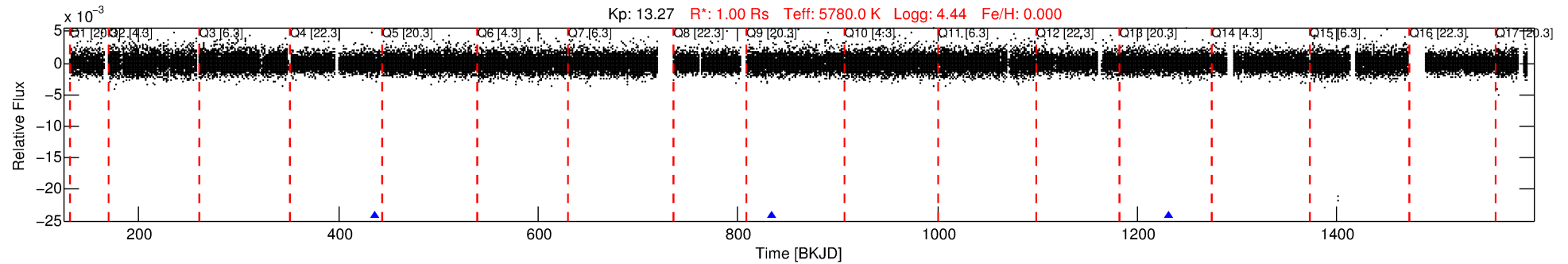
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005305072-01

No Significant Match Found

DV One-Page Summary

KIC: 5305072 Candidate: 1 of 1 Period: 396.955 d



DV Fit Results:

Period = 396.95480 [0.01768] d
Epoch = 437.1473 [0.0228] BKJD
Rp/R* = 0.0261 [0.0654]
a/R* = 358.38 [3938.03]
b = 0.65 [9.94]
Seff = 0.89 [0.00]
Teq = 248 [0] K
Rp = 2.84 [7.14] Re
a = 1.0573 [0.0000] AU
Ag = 45599.71 [229167.45] [0.20 σ]
Teffp = 5603 [7040] K [0.76 σ]

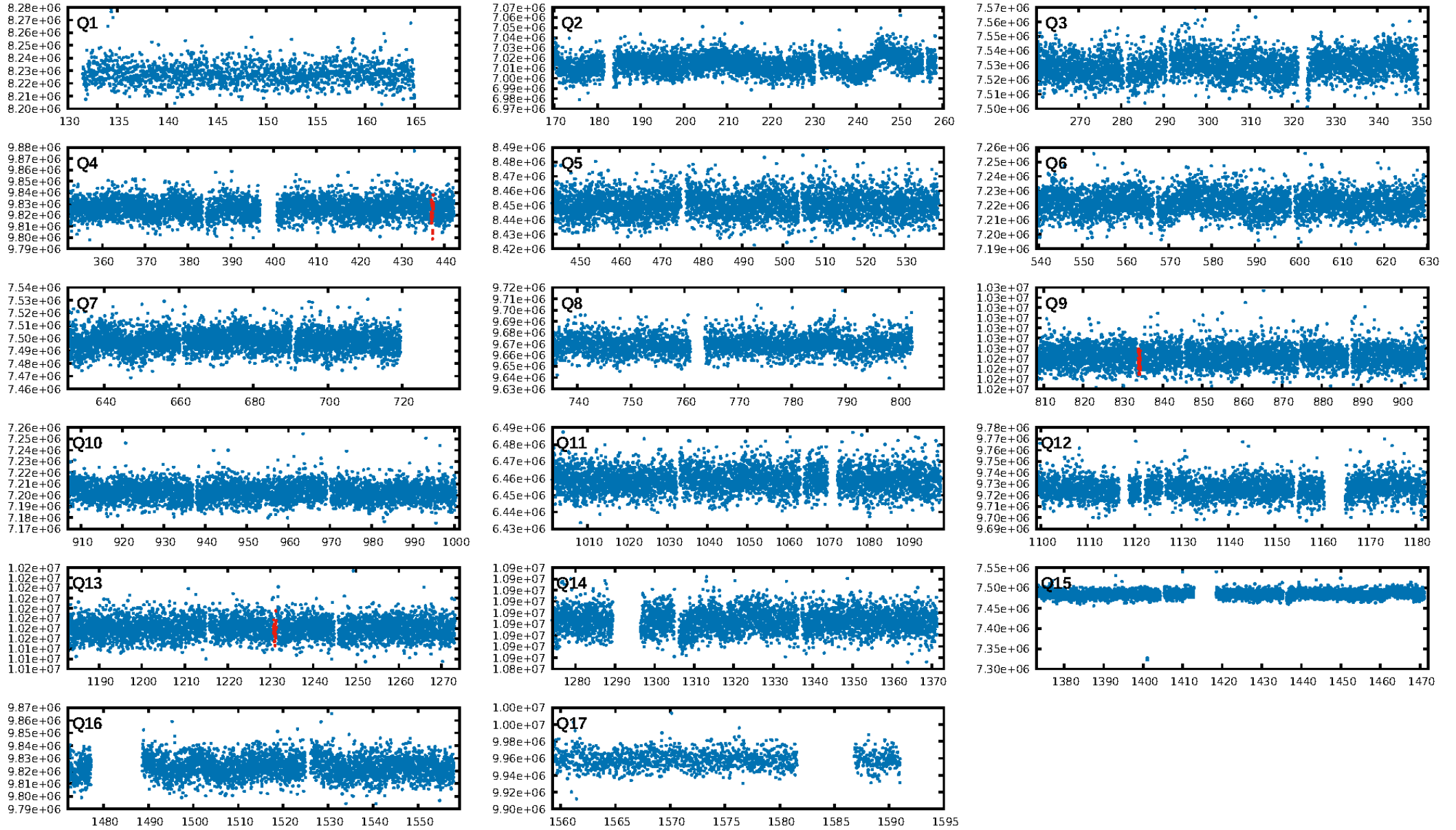
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 69.6%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 5.45e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.3378
Centroid-sig: 1.6%
Centroid-so: 4.015 arcsec [2.78 σ]
OotOffset-rm: 1.915 arcsec [5.80 σ]
KicOffset-rm: 5.909 arcsec [1.35 σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

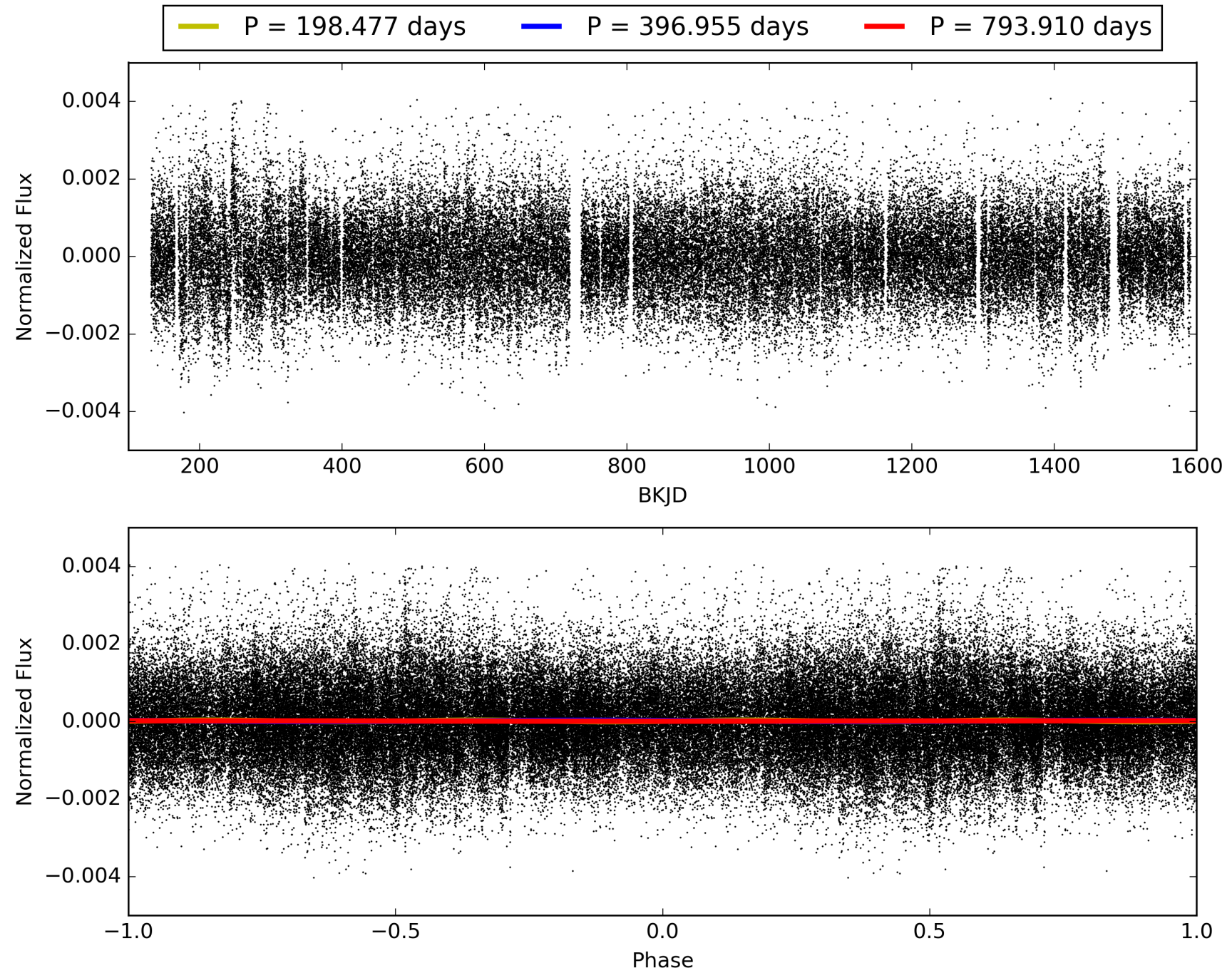
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:41:47 Z

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

TCE 005305072-01, PDC Light Curves

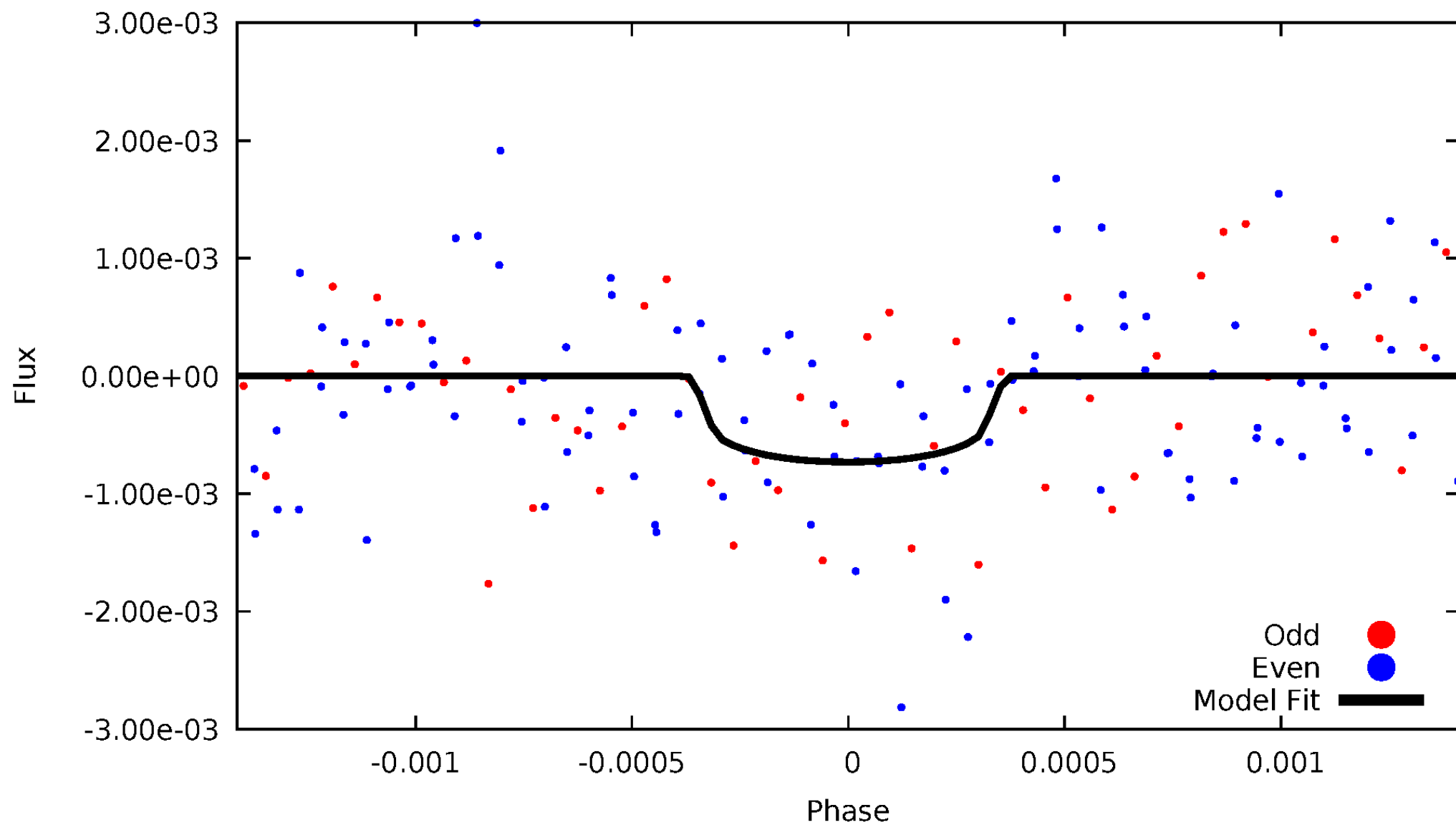


TCE 005305072-01



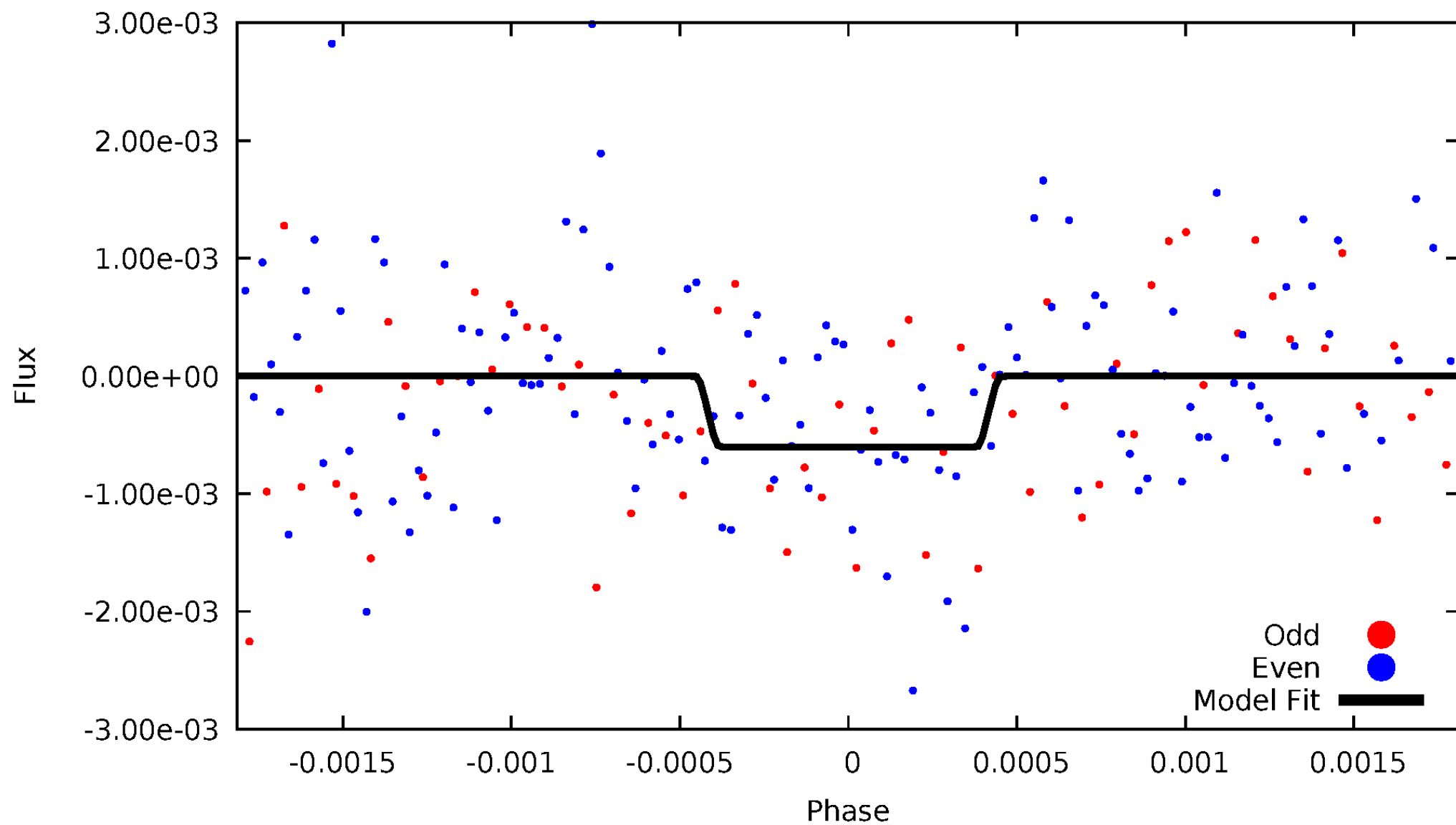
DV Odd/Even

TCE 005305072-01



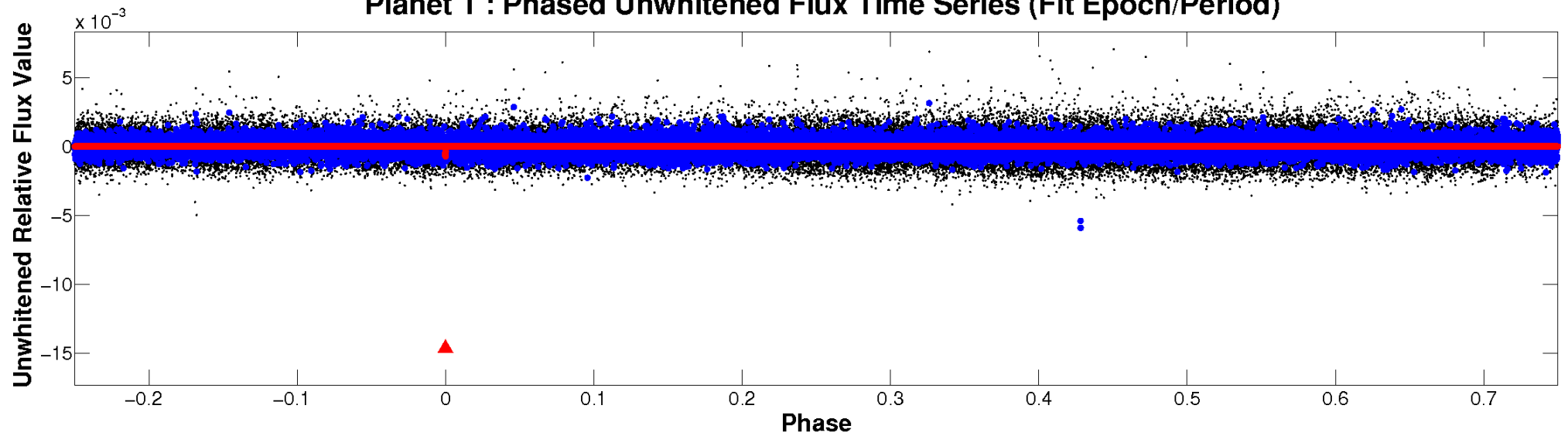
ALT Odd/Even

TCE 005305072-01

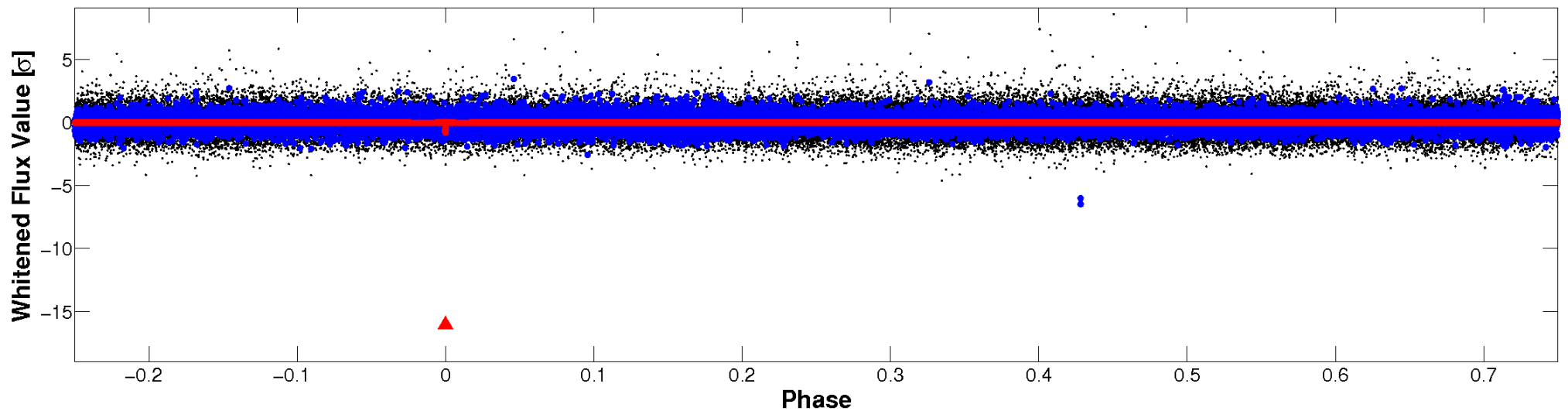


Non-Whitened Vs. Whitened Light Curve

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

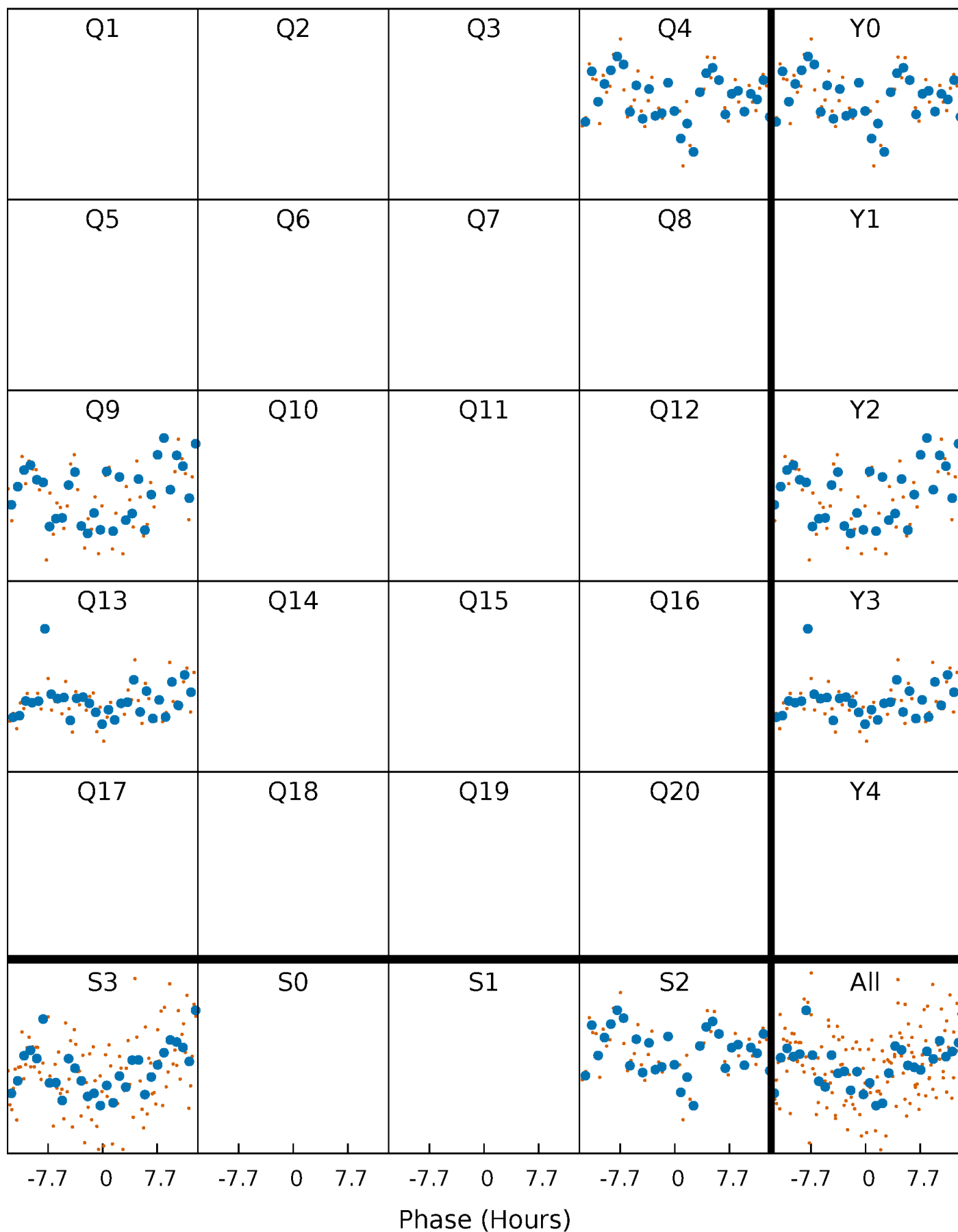


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



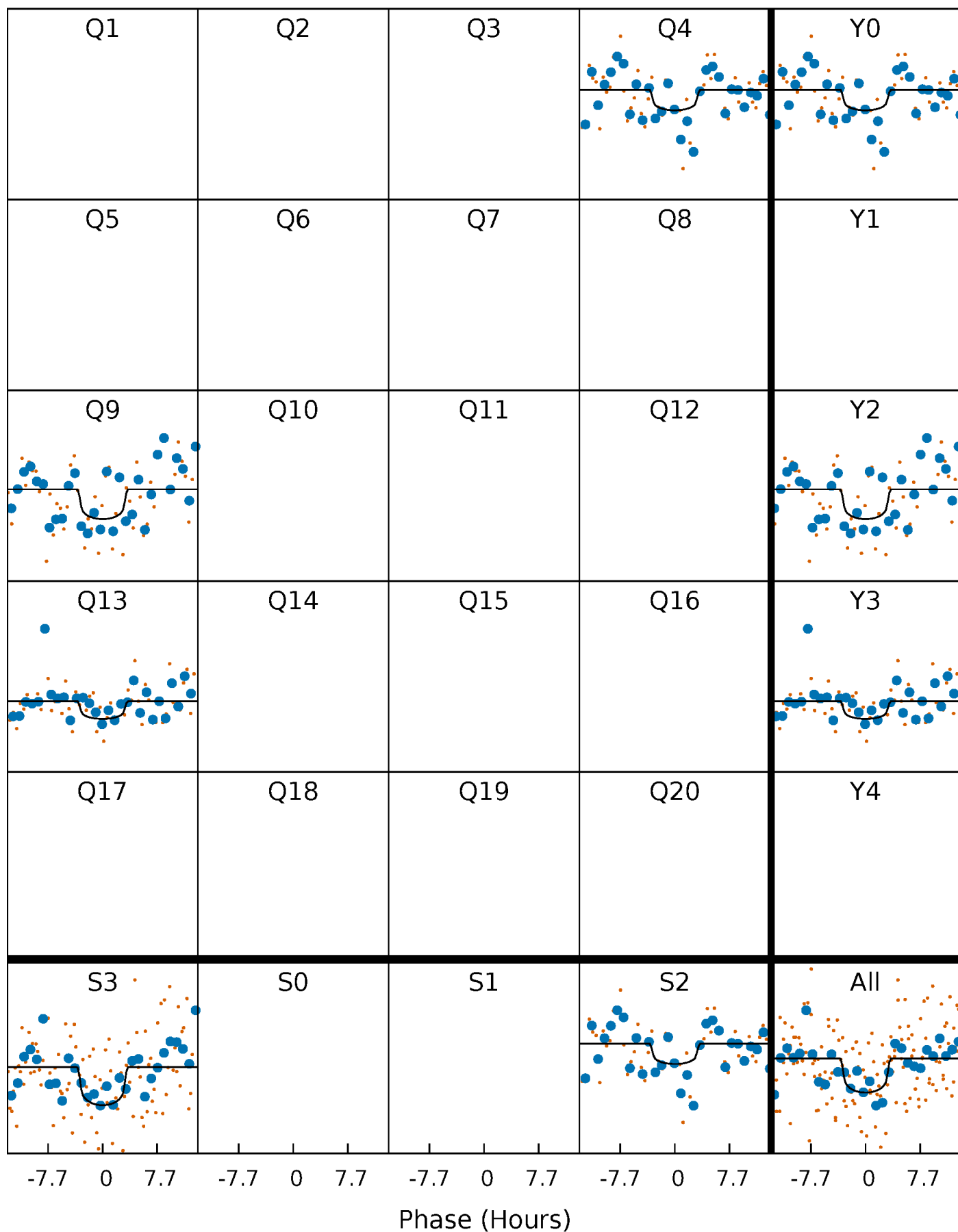
PDC Quarter-Phased Transit Curves

TCE 005305072-01 P=396.954798 Days $T_0=437.147337$ (BKJD)



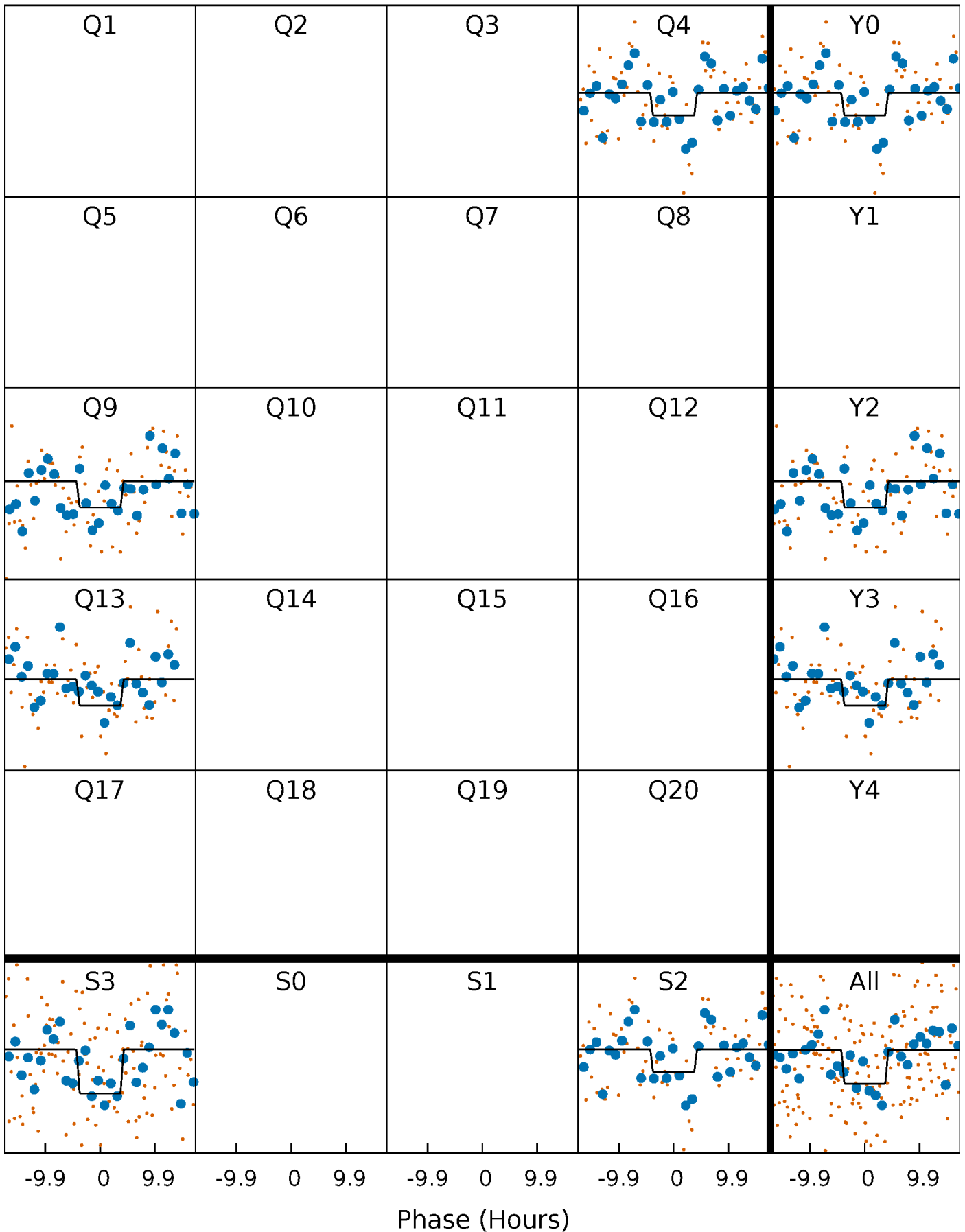
DV Quarter-Phased Transit Curves

TCE 005305072-01 $P=396.954798$ Days $T_0=437.147337$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

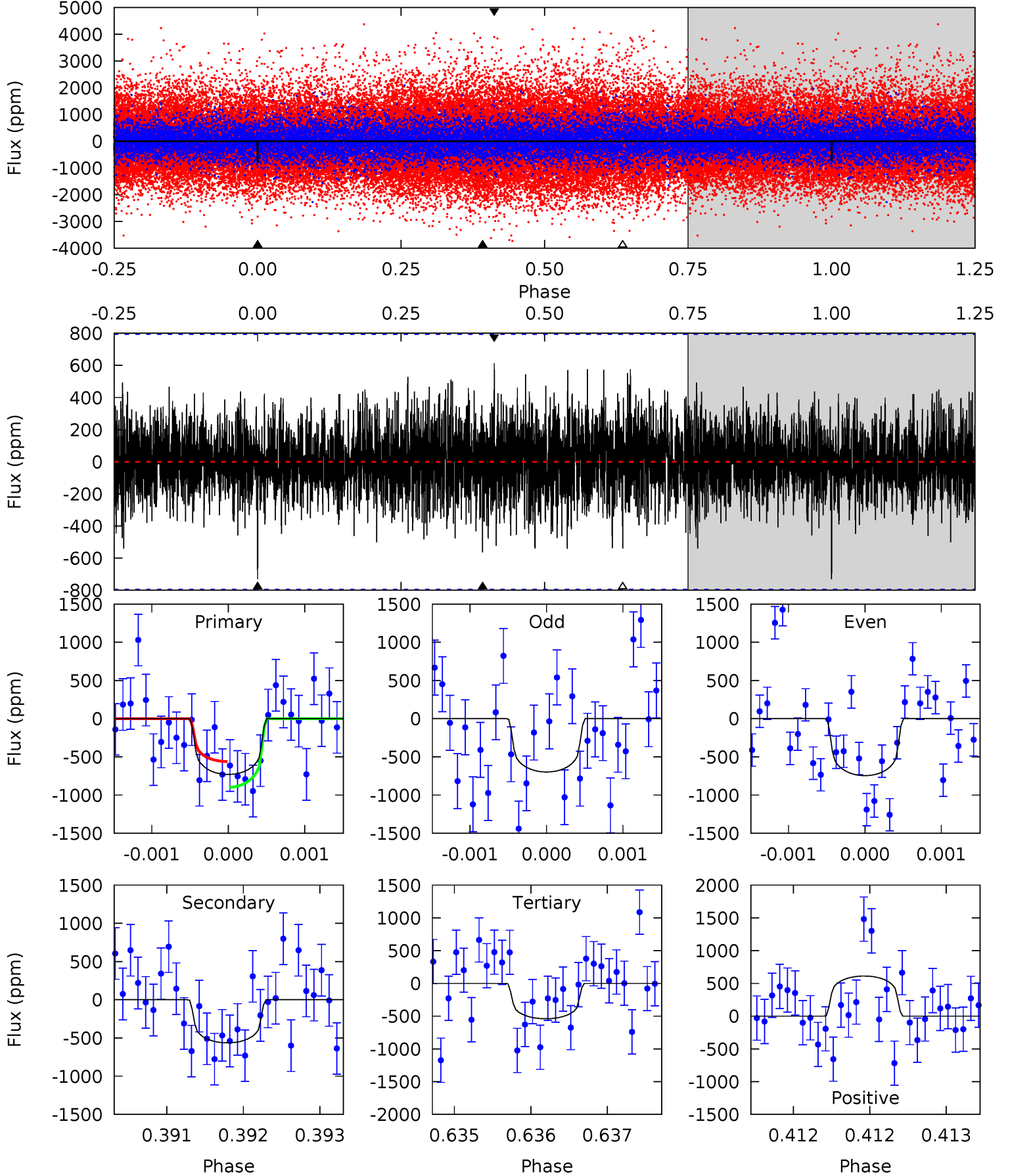
TCE 005305072-01 P=396.949148 Days $T_0=437.119722$ (BKJD)



DV Model-Shift Uniqueness Test

005305072-01, $P = 396.954798$ Days, $E = 40.192539$ Days

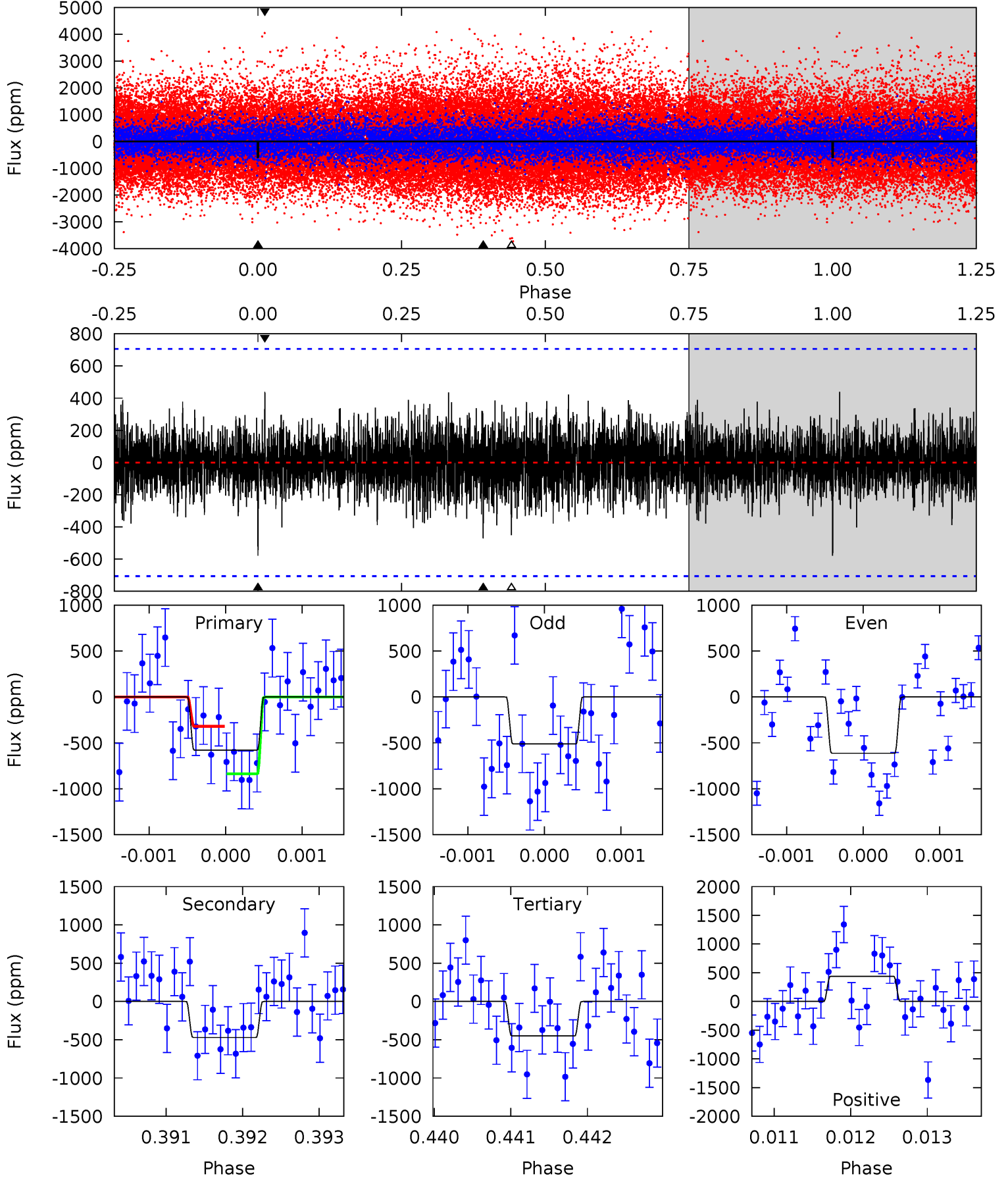
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.04	3.90	3.73	4.23	5.50	3.37	1.15	1.31	0.81	0.17	-0.33	0.15	1.05	0.46	1.16



Alt Model-Shift Uniqueness Test

005305072-01, P = 396.949148 Days, E = 40.170574 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.49	3.64	3.49	3.40	5.47	3.32	0.96	1.00	1.09	0.16	0.25	0.37	1.13	0.43	2.00



Stellar Parameters For KIC 005305072

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005305072-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-564 ± 145	$5.84^{+6.58}_{-3.83}$	346^{+17}_{-16}	4051^{+2493}_{-856}	9654^{+79421}_{-7483}
Alt.	-470 ± 129	$6.12^{+5.97}_{-4.39}$	347^{+18}_{-17}	3911^{+2663}_{-766}	7601^{+87470}_{-5734}

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

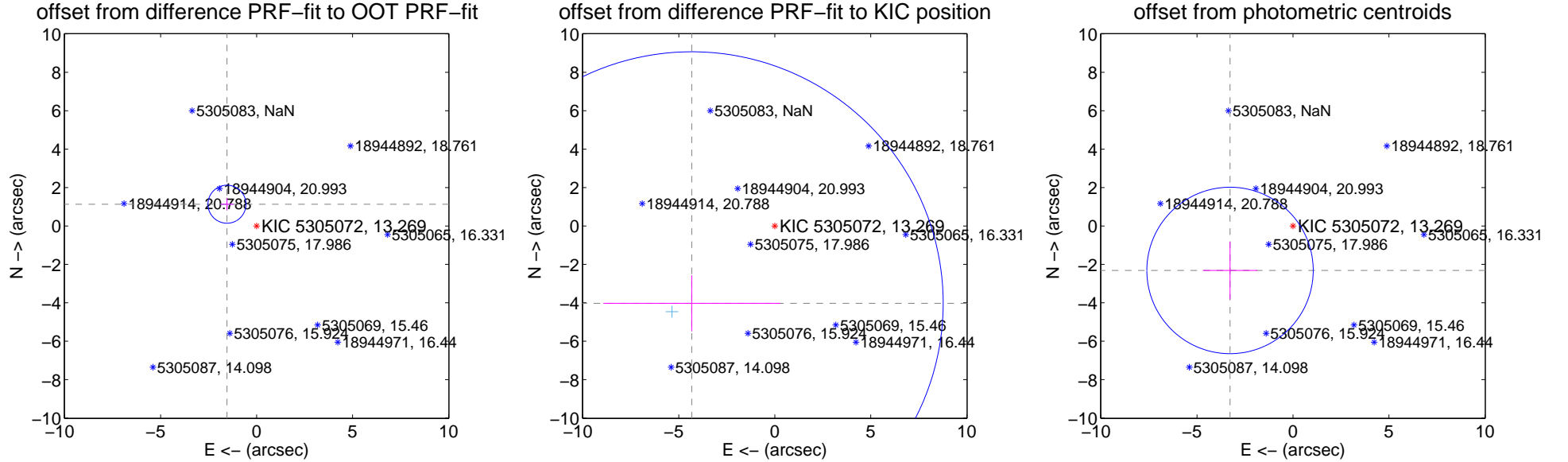
DV Centroid Data

Supplemental centroid analysis for 005305072-01. Kepler magnitude: 13.27. Transit SNR 4.31

There are 1 quarters with good PRF difference image offsets

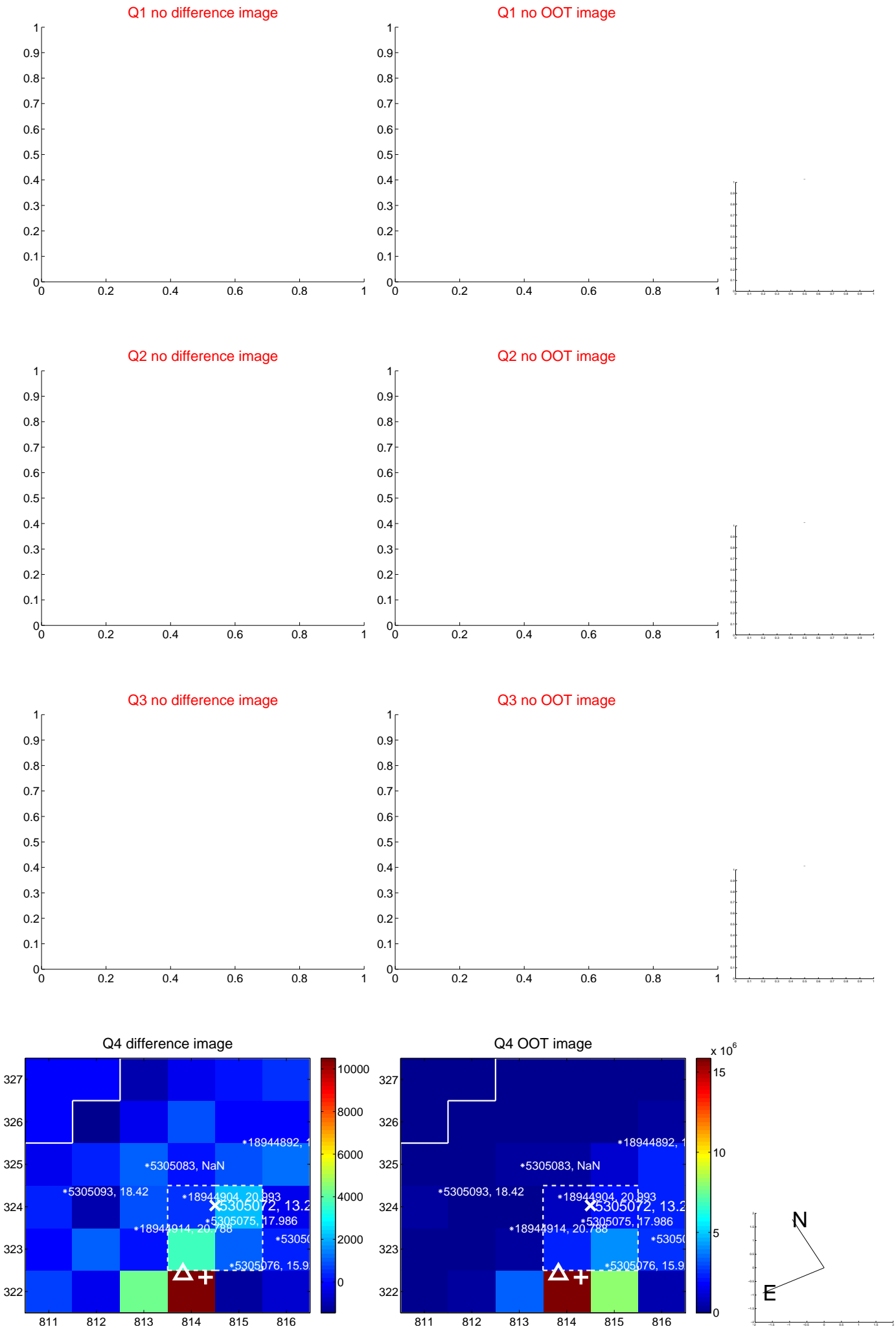
The OOT PRF centroid is offset from the target star catalog position by about 6.77 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.915 \pm 0.330	5.80	1.544 \pm 0.334	1.133 \pm 0.323
PRF-fit source offset from KIC position	5.909 \pm 4.366	1.35	4.325 \pm 4.608	-4.027 \pm 1.459
photometric centroid source offset	4.01 \pm 1.44	2.78	3.28 \pm 1.42	-2.32 \pm 1.50



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.

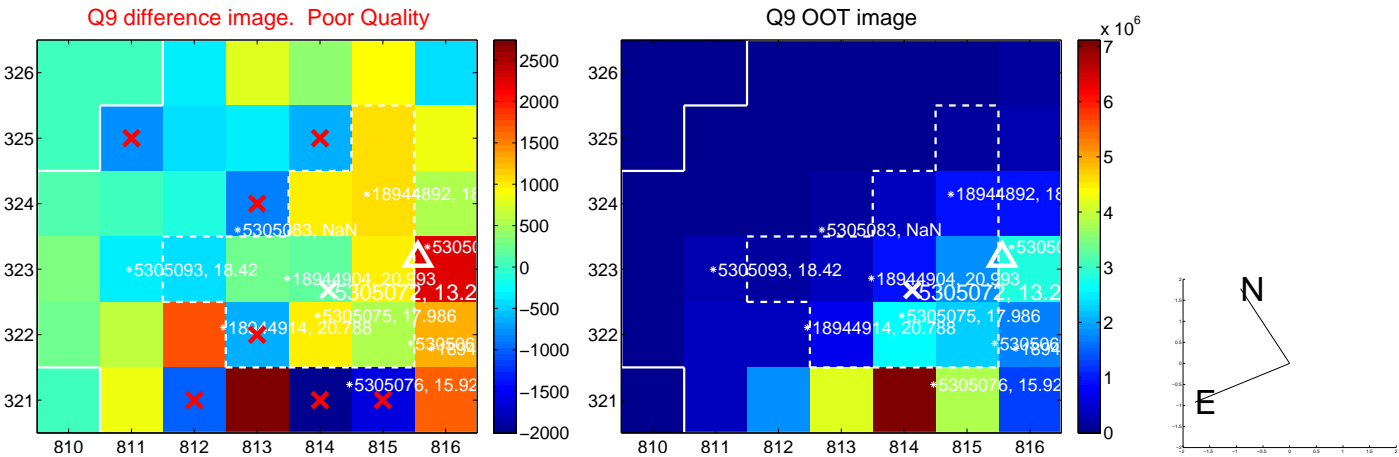
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



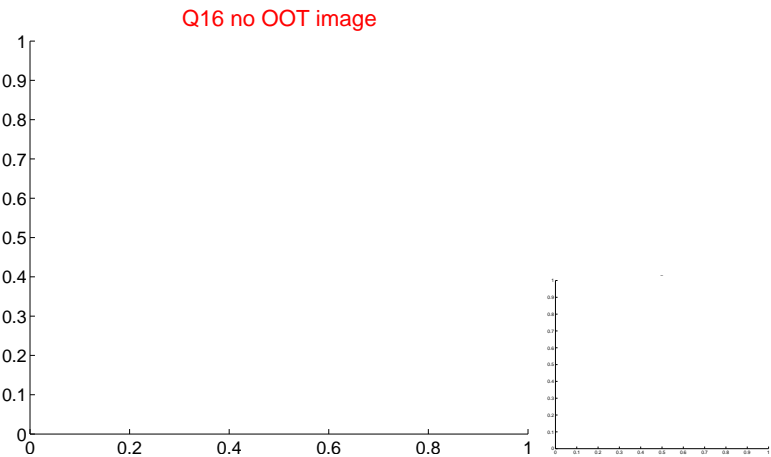
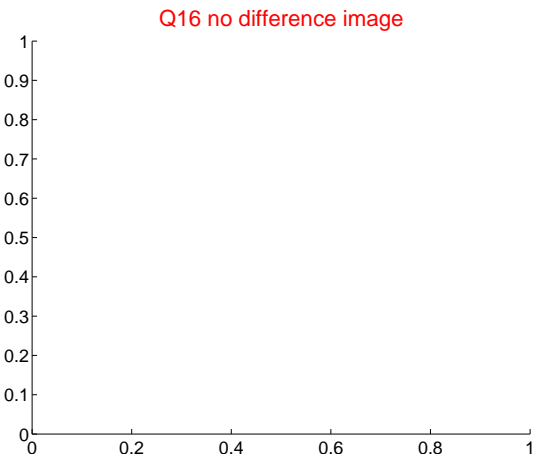
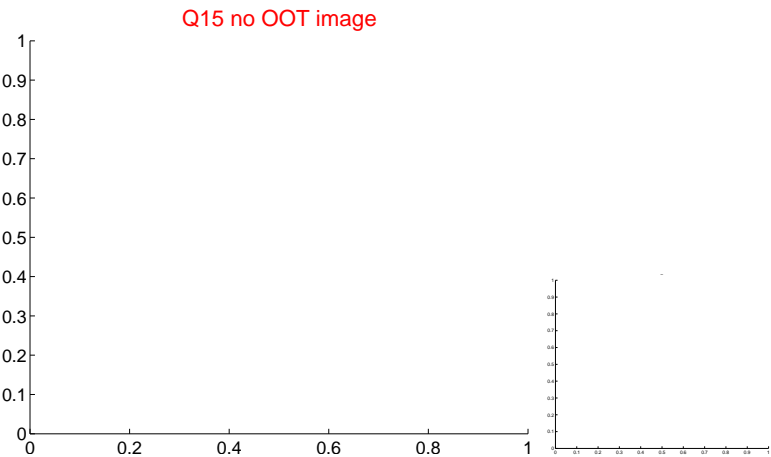
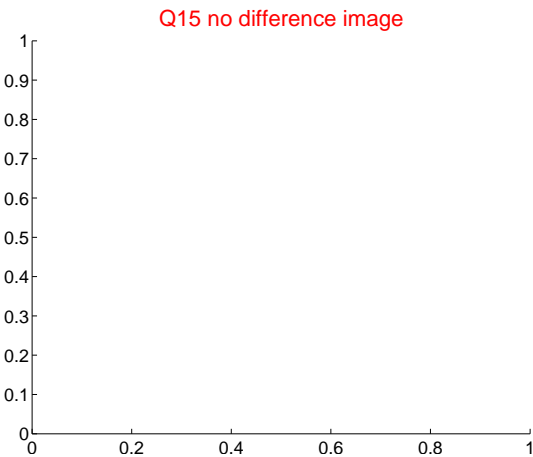
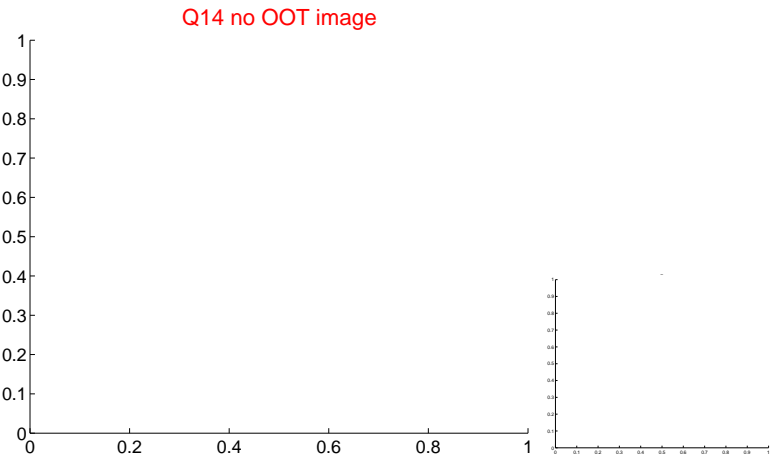
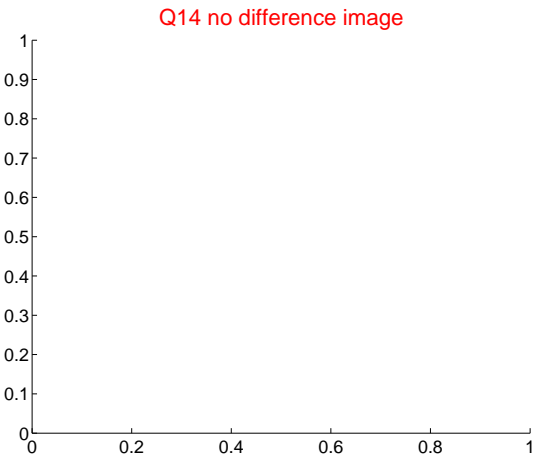
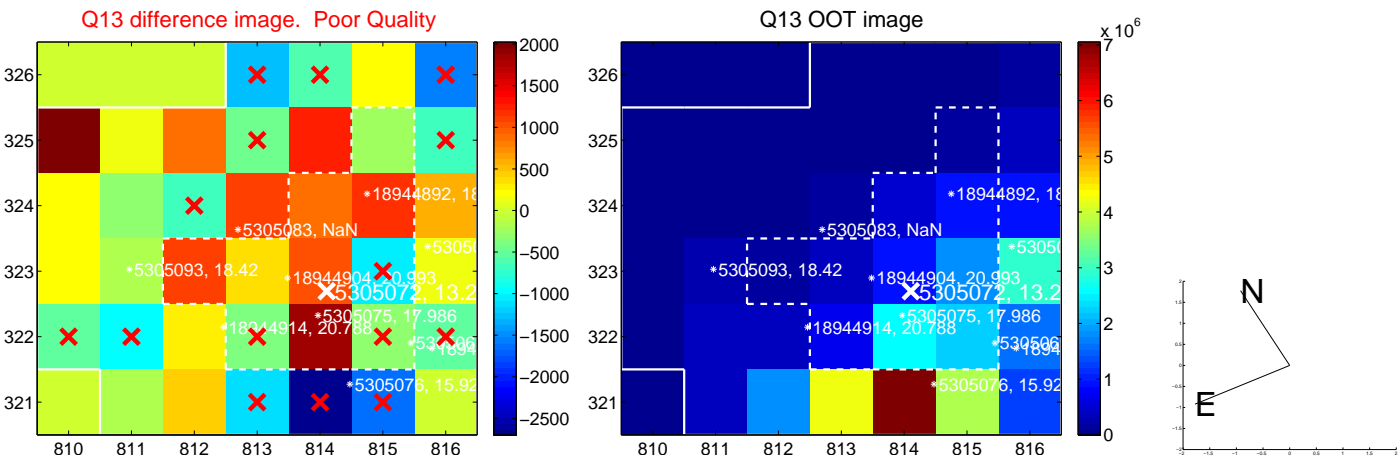
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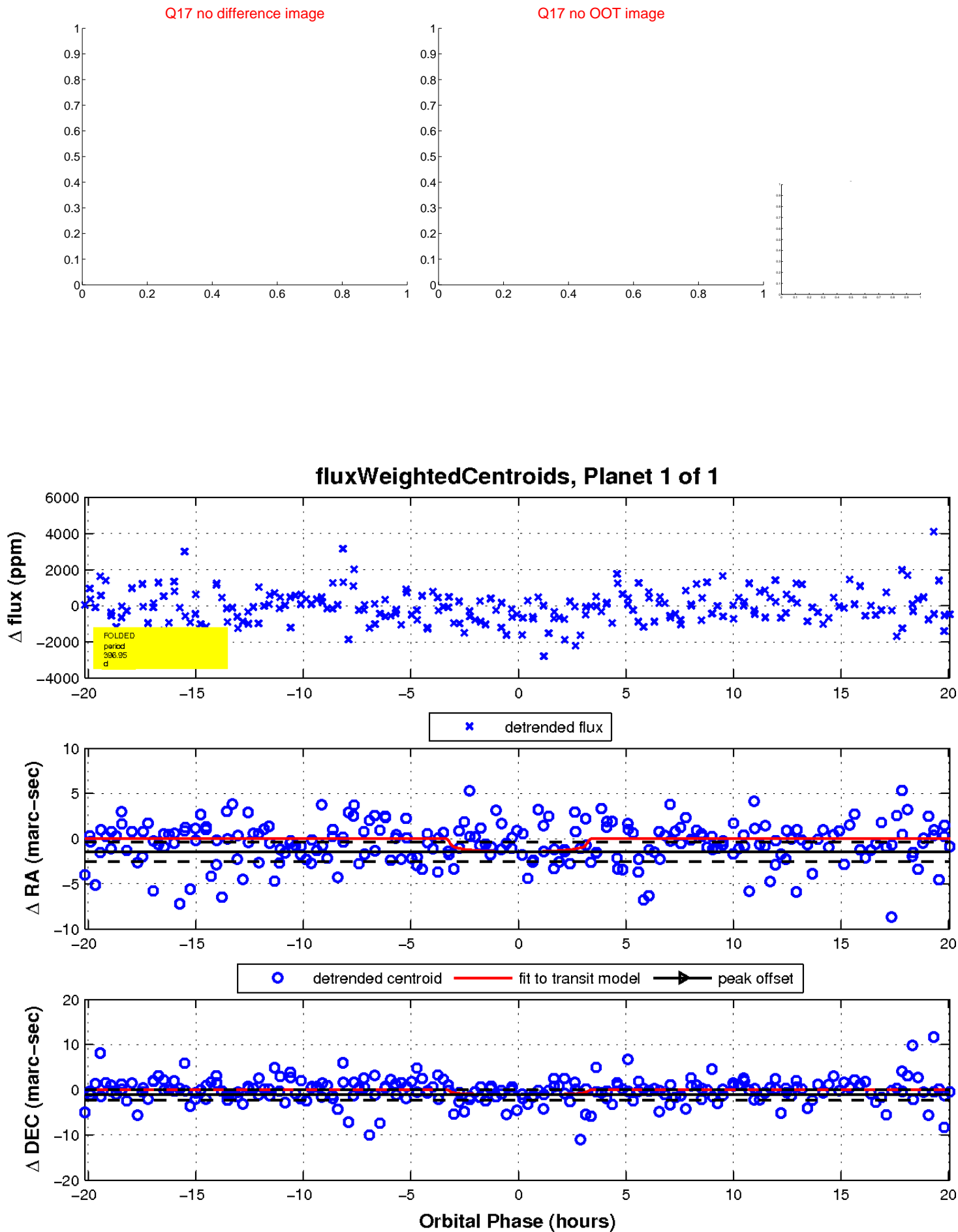
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UKIRT Image

