

KIC 005729315

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})
005729315-01	OBS	No	418.661938	394.852569	184.0	6.262	7.9	7.4	0.63	4233	0.93	0.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005729315-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—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.

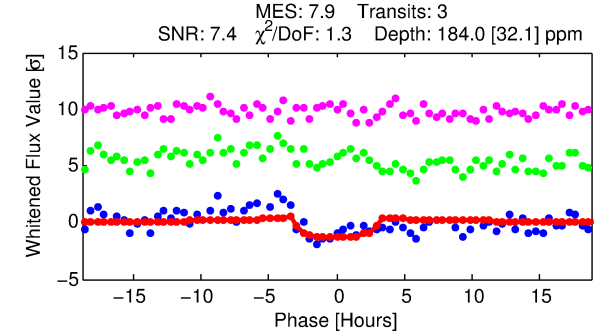
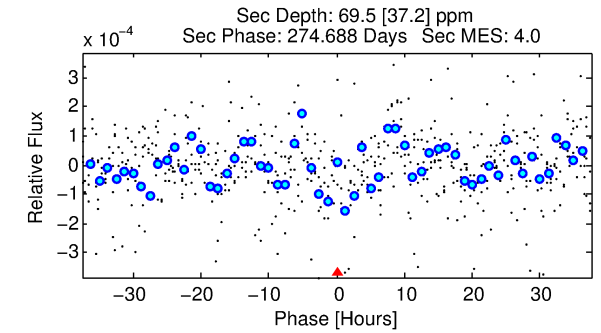
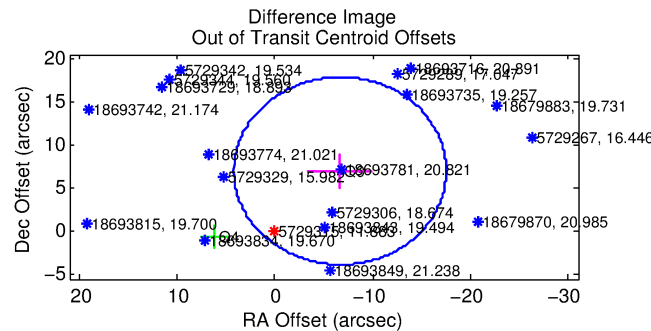
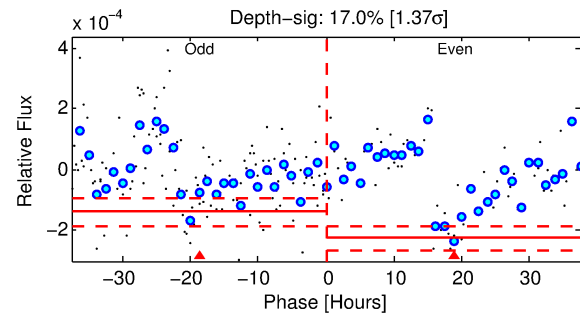
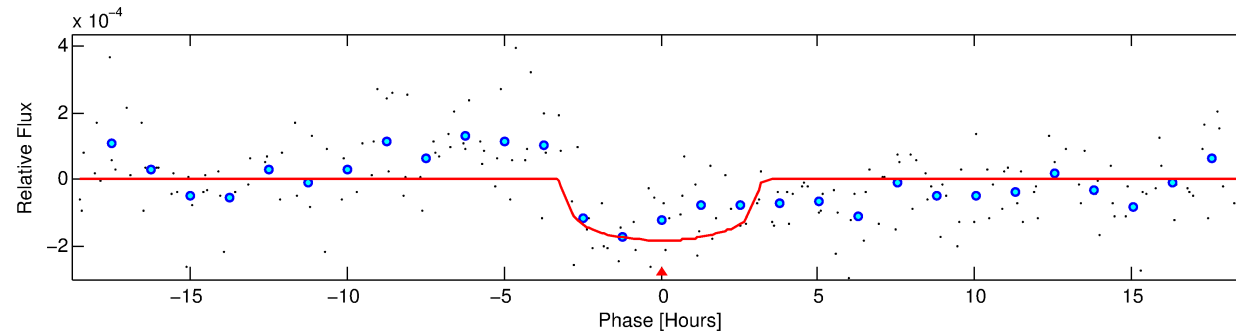
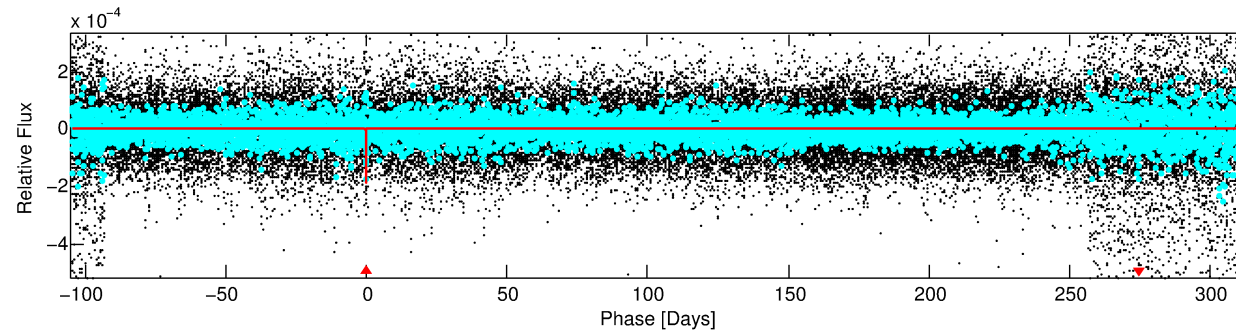
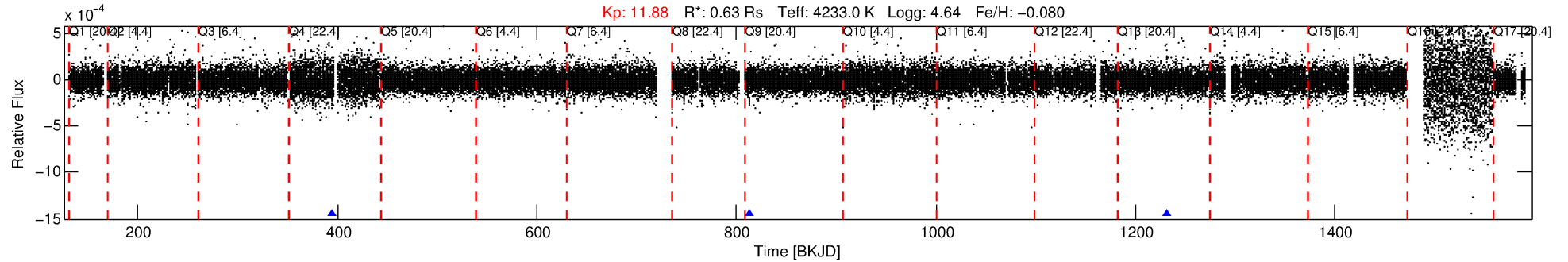
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005729315-01

No Significant Match Found

DV One-Page Summary

KIC: 5729315 Candidate: 1 of 1 Period: 418.662 d



DV Fit Results:

Period = 418.66194 [0.01011] d
Epoch = 394.8526 [0.0129] BKJD
Rp/R* = 0.0136 [0.0124]
a/R* = 348.17 [1089.10]
b = 0.75 [1.85]
Seff = 0.13 [0.02]
Teq = 153 [7] K
Rp = 0.93 [0.86] Re
a = 0.9376 [0.0701] AU
Ag = 38692.59 [73749.75] [0.52 σ]
Teffp = 3317 [1583] K [2.00 σ]

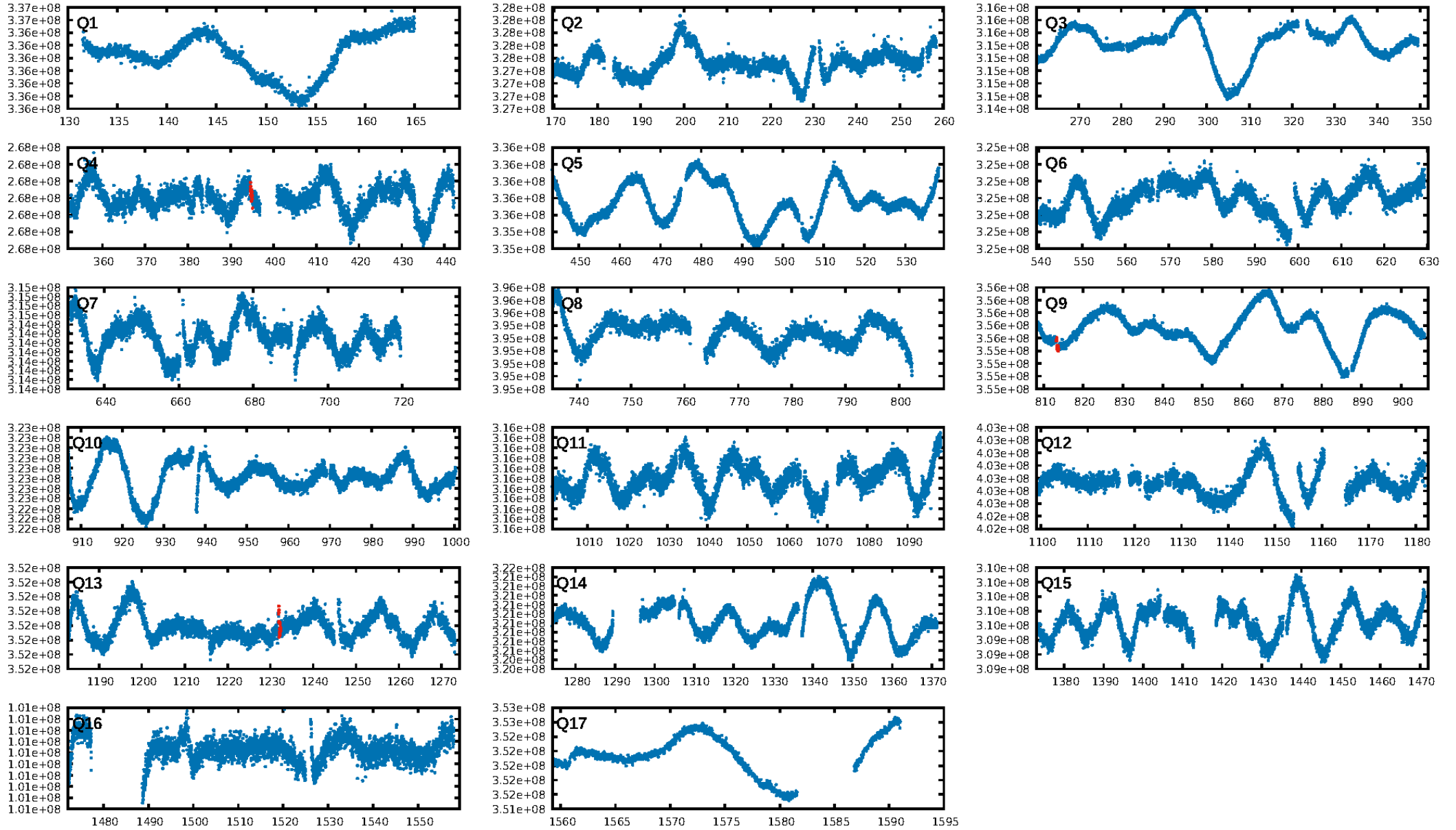
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 21.6%
ModelChiSquareGof-sig: 96.7%
Bootstrap-pfa: 1.39e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.186
Centroid-sig: 95.9%
Centroid-so: 3.288 arcsec [1.88 σ]
OotOffset-rm: 9.673 arcsec [2.67 σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-rm: 10.863 arcsec [2.07 σ]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

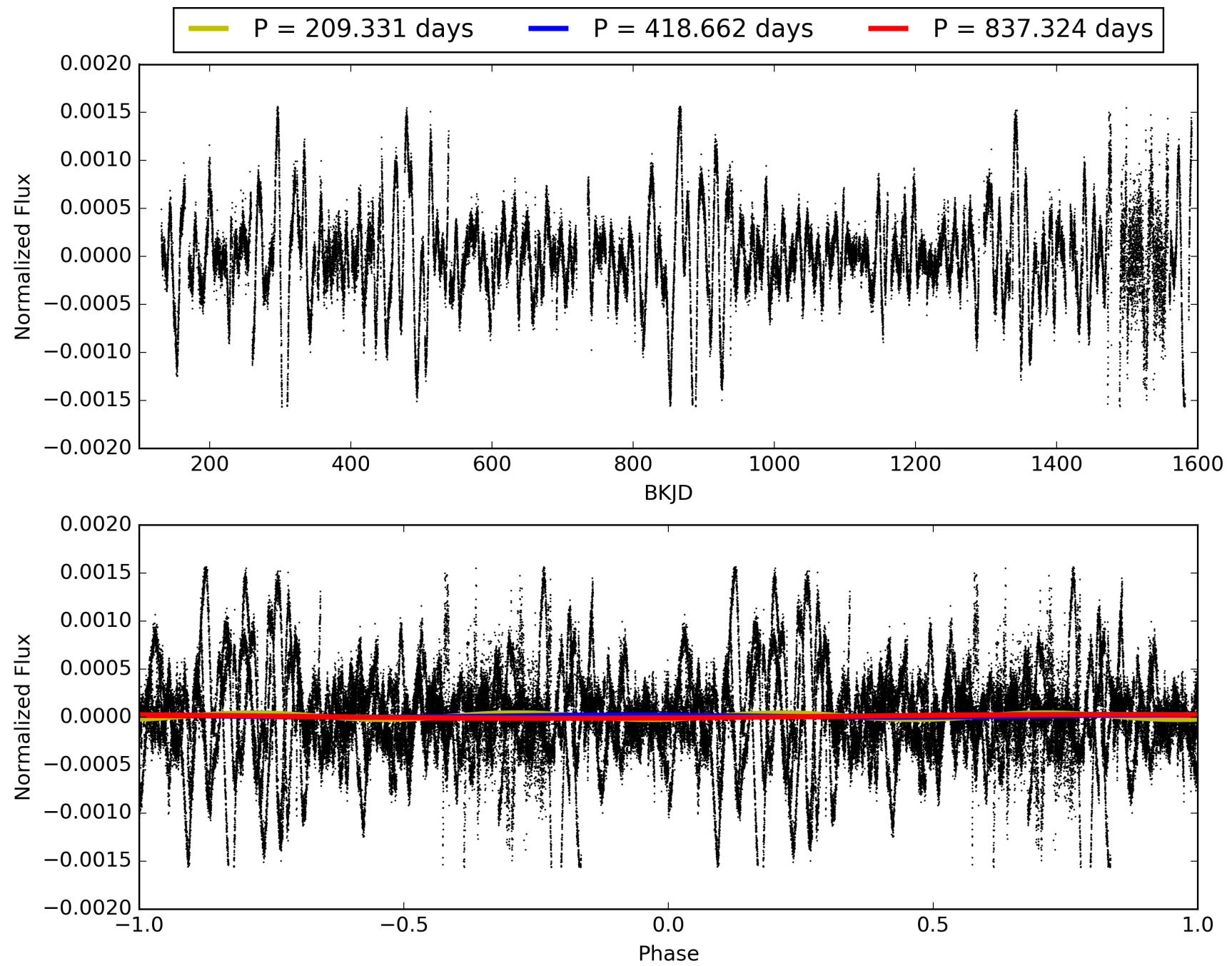
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:42:36 Z

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

TCE 005729315-01, PDC Light Curves

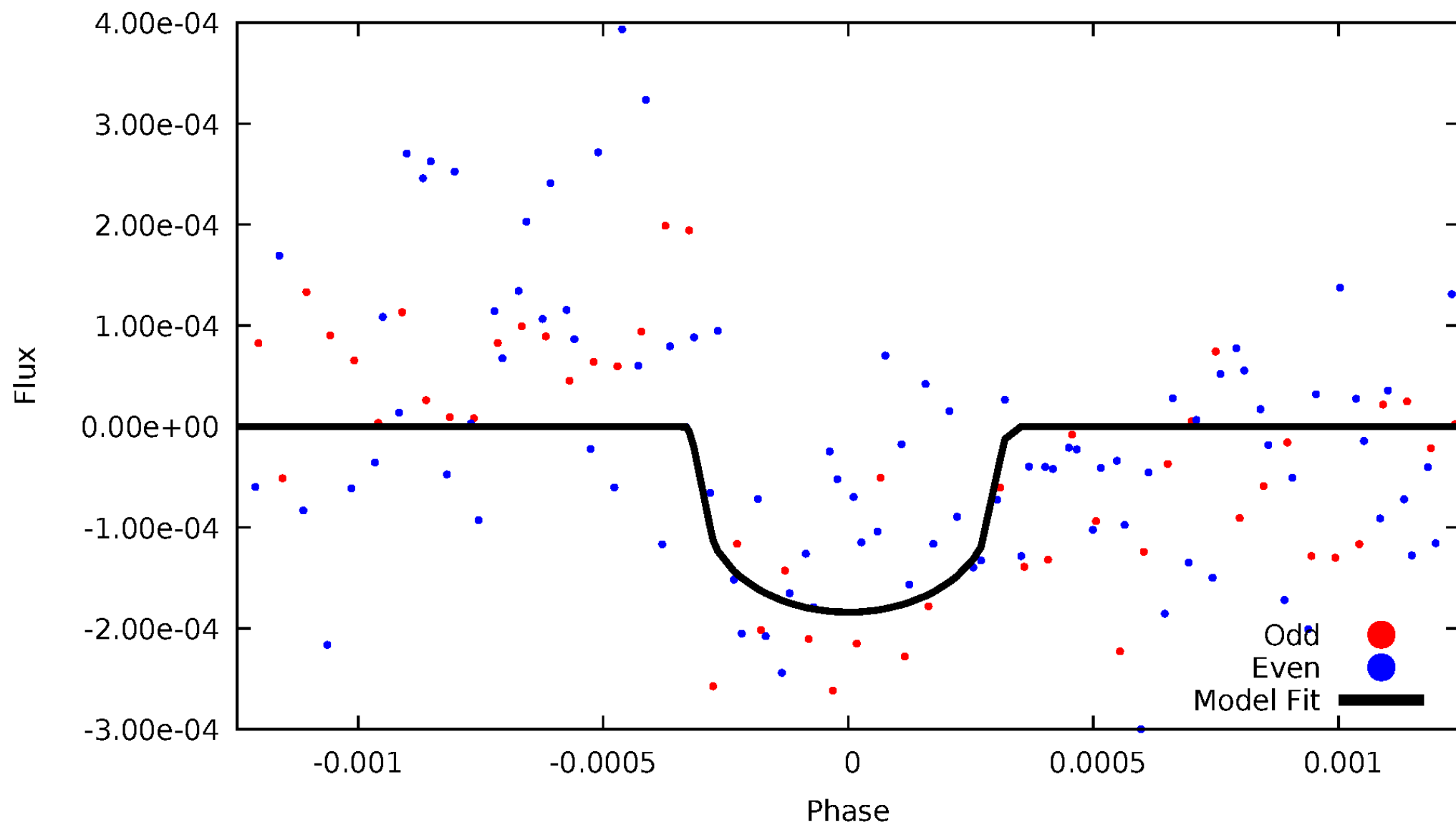


TCE 005729315-01



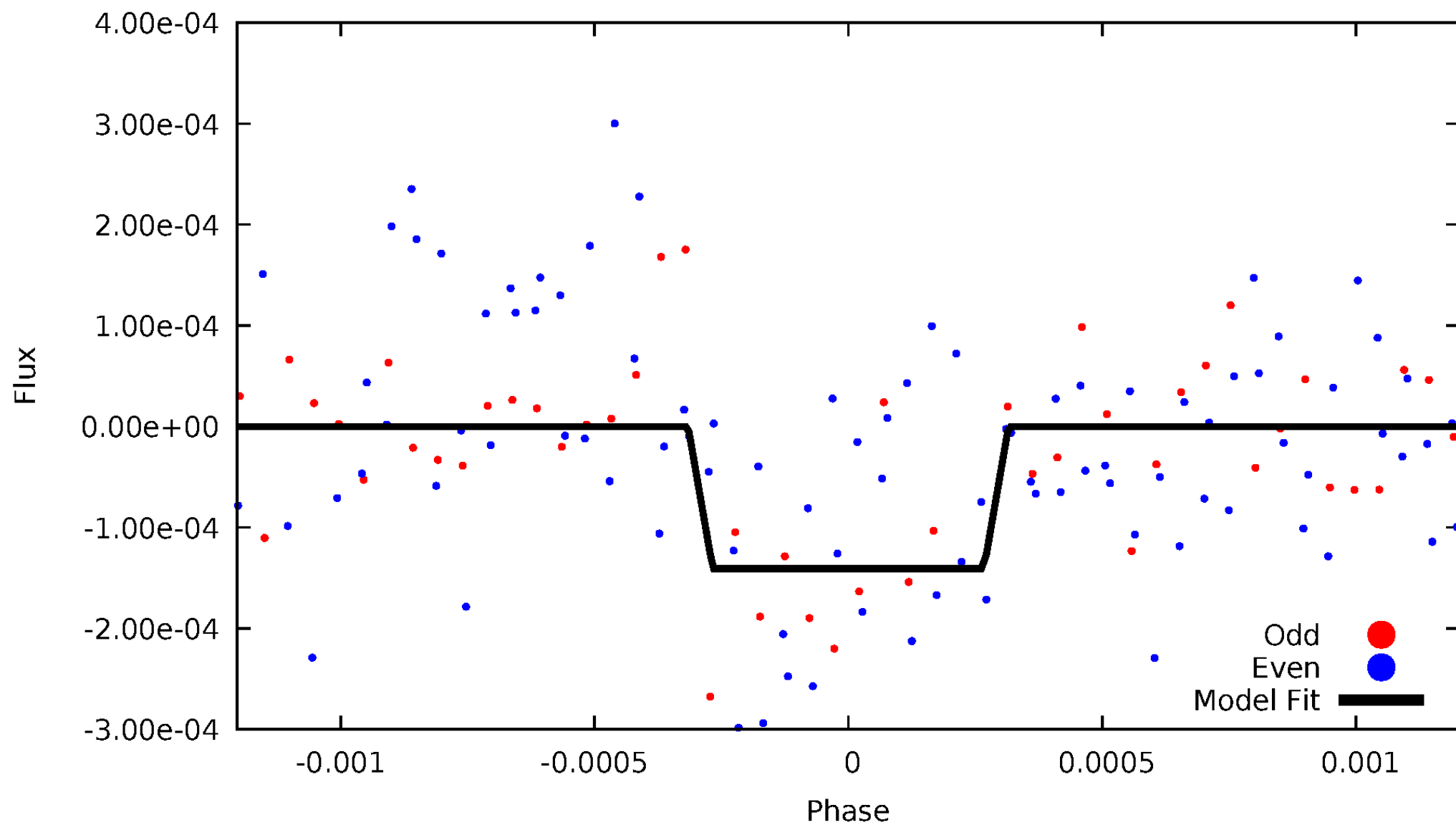
DV Odd/Even

TCE 005729315-01



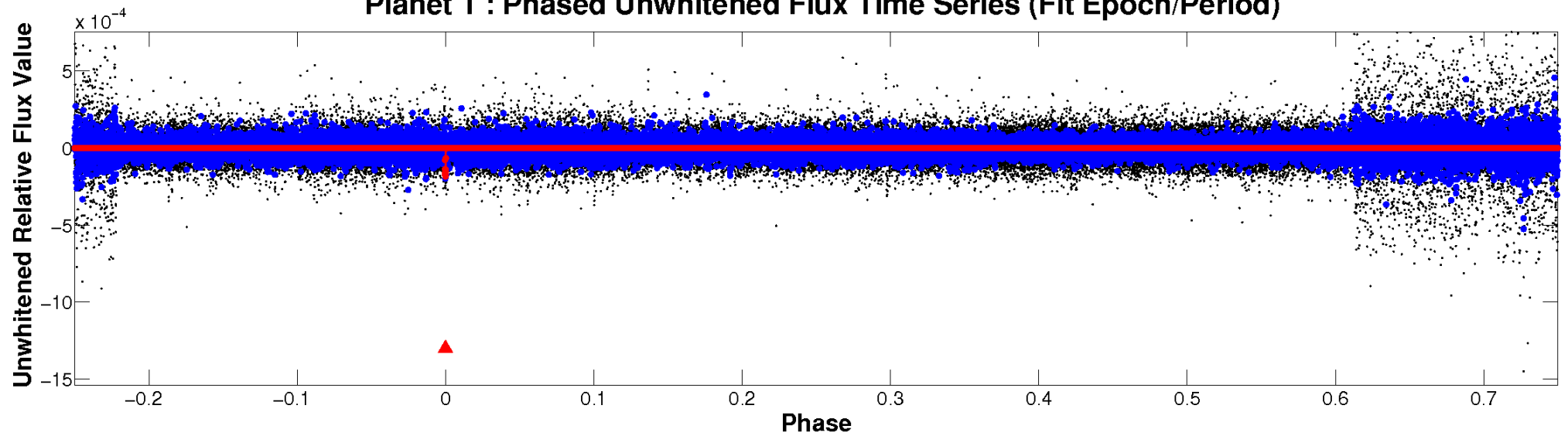
ALT Odd/Even

TCE 005729315-01

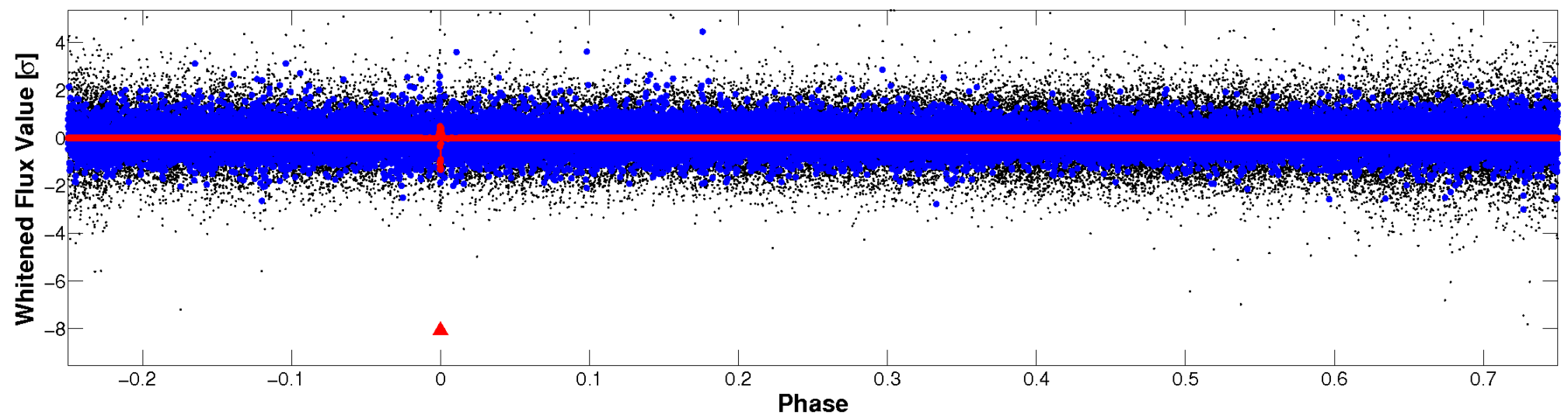


Non-Whitened Vs. Whitened Light Curve

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

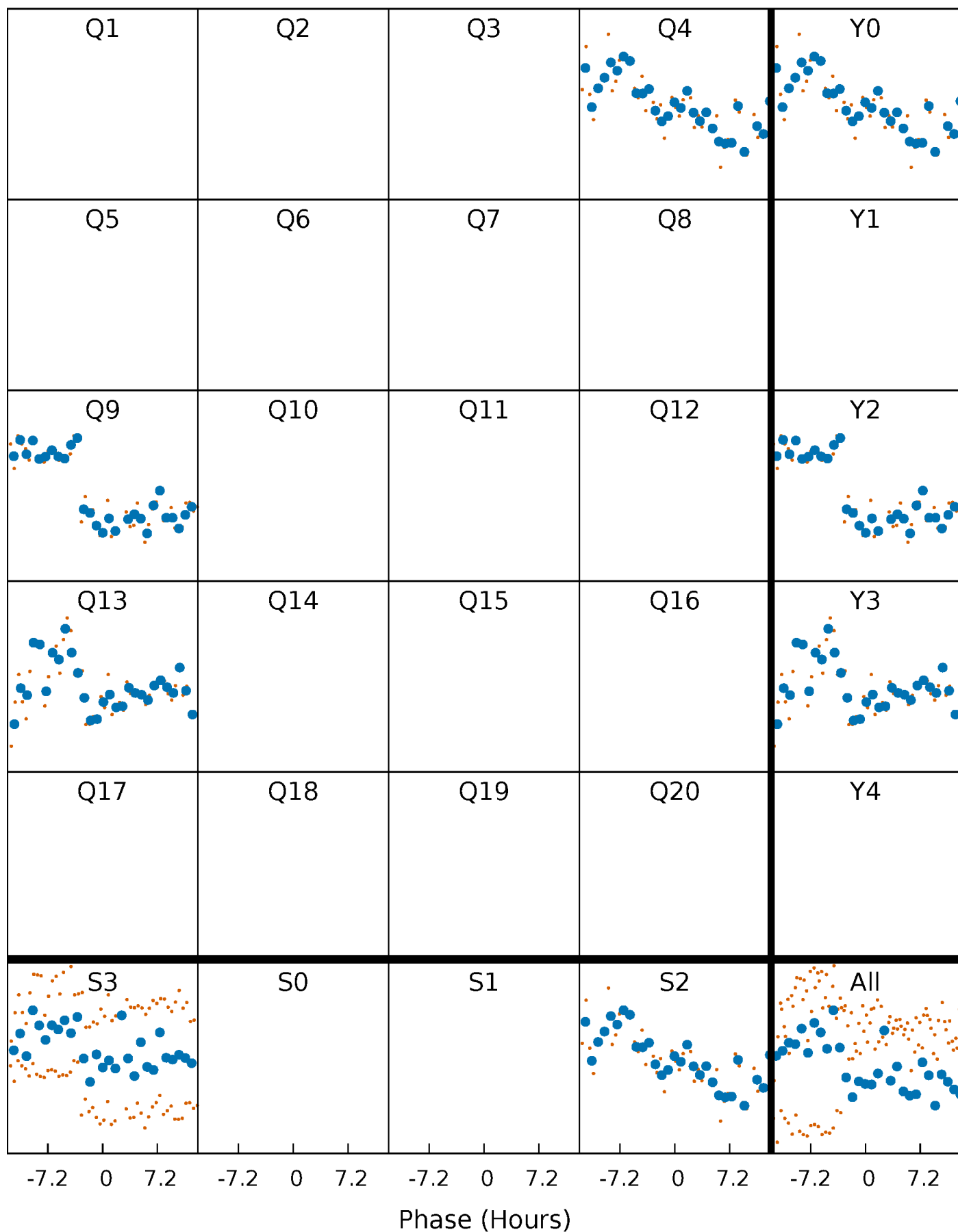


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



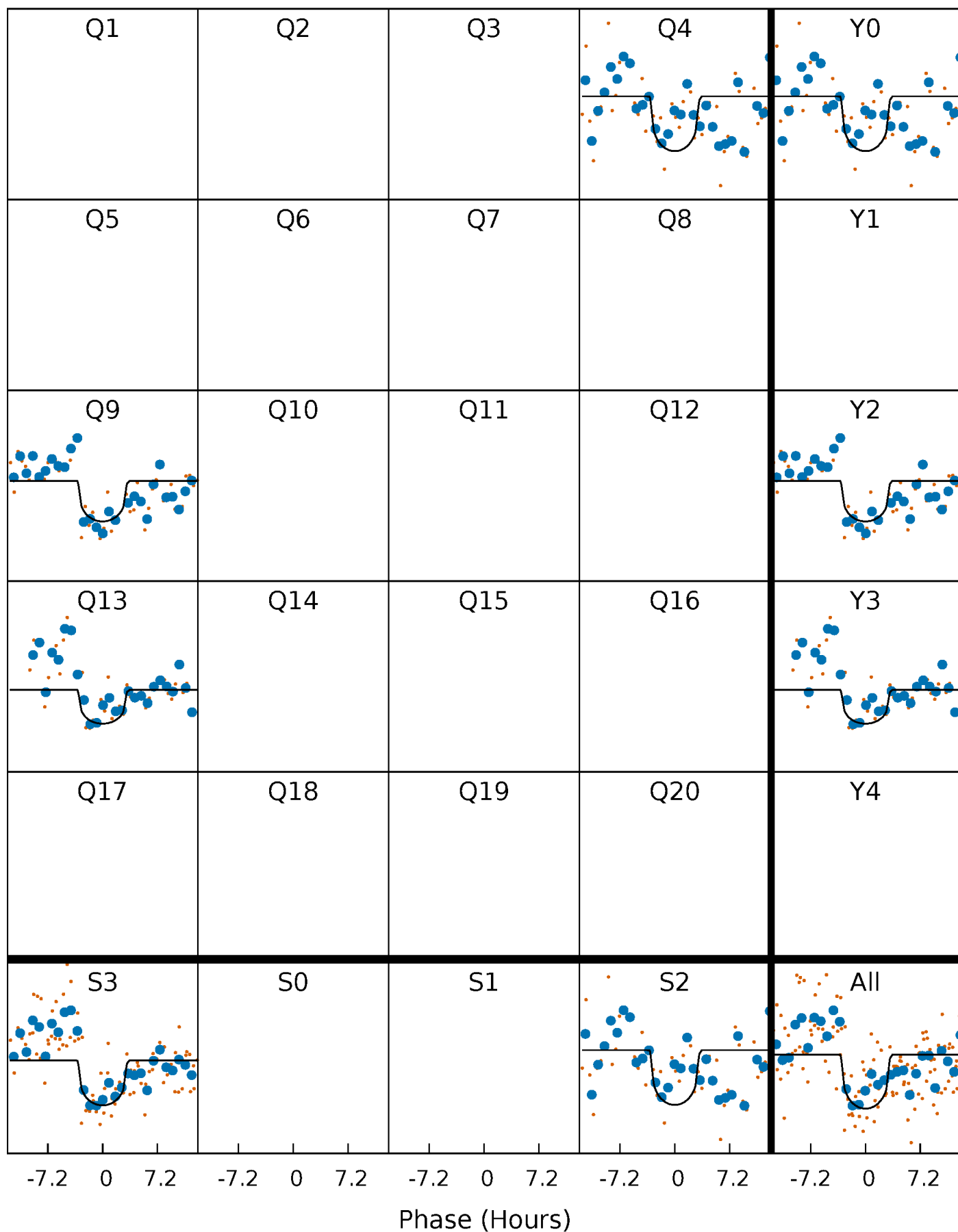
PDC Quarter-Phased Transit Curves

TCE 005729315-01 P=418.661938 Days $T_0=394.852569$ (BKJD)



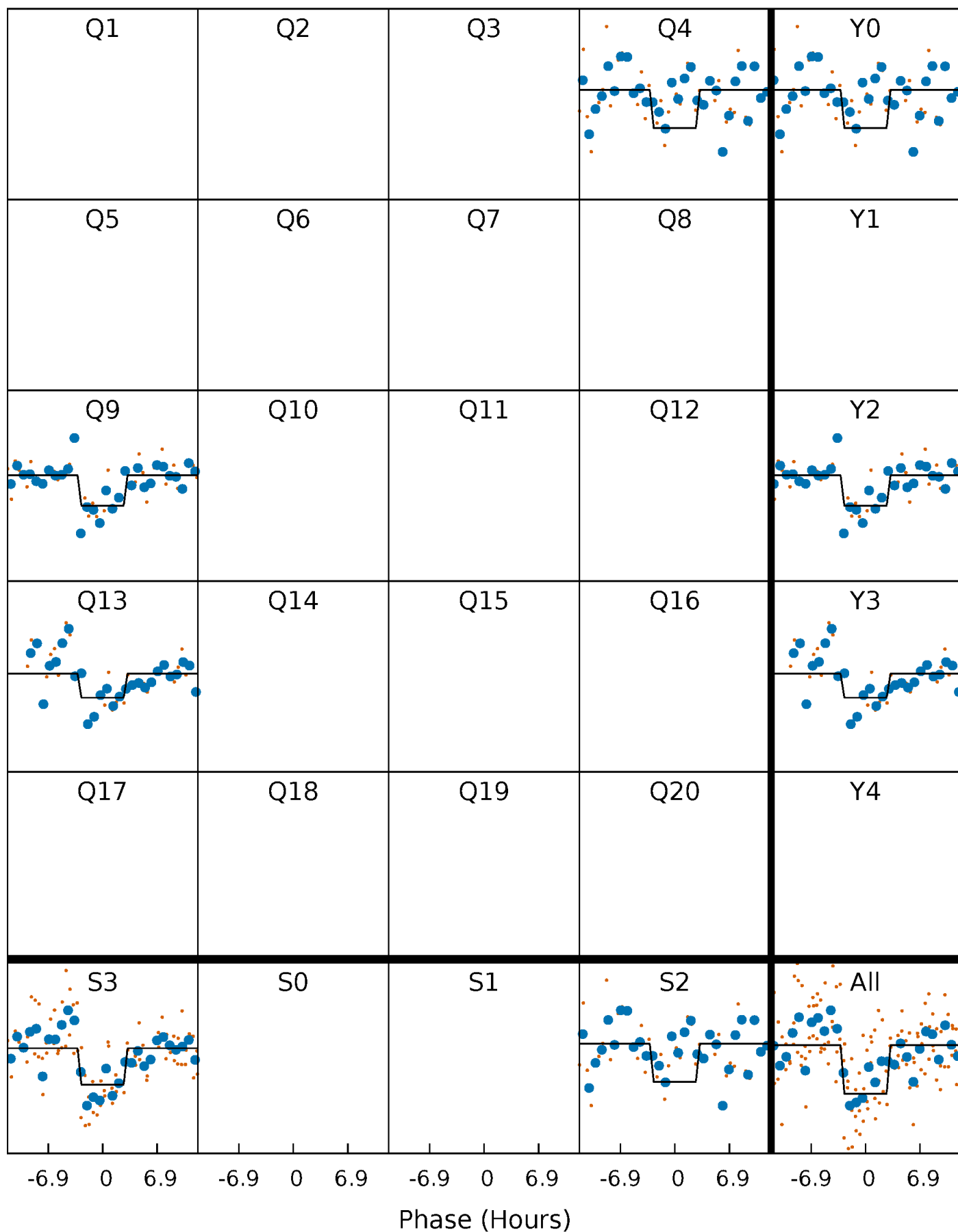
DV Quarter-Phased Transit Curves

TCE 005729315-01 P=418.661938 Days $T_0=394.852569$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

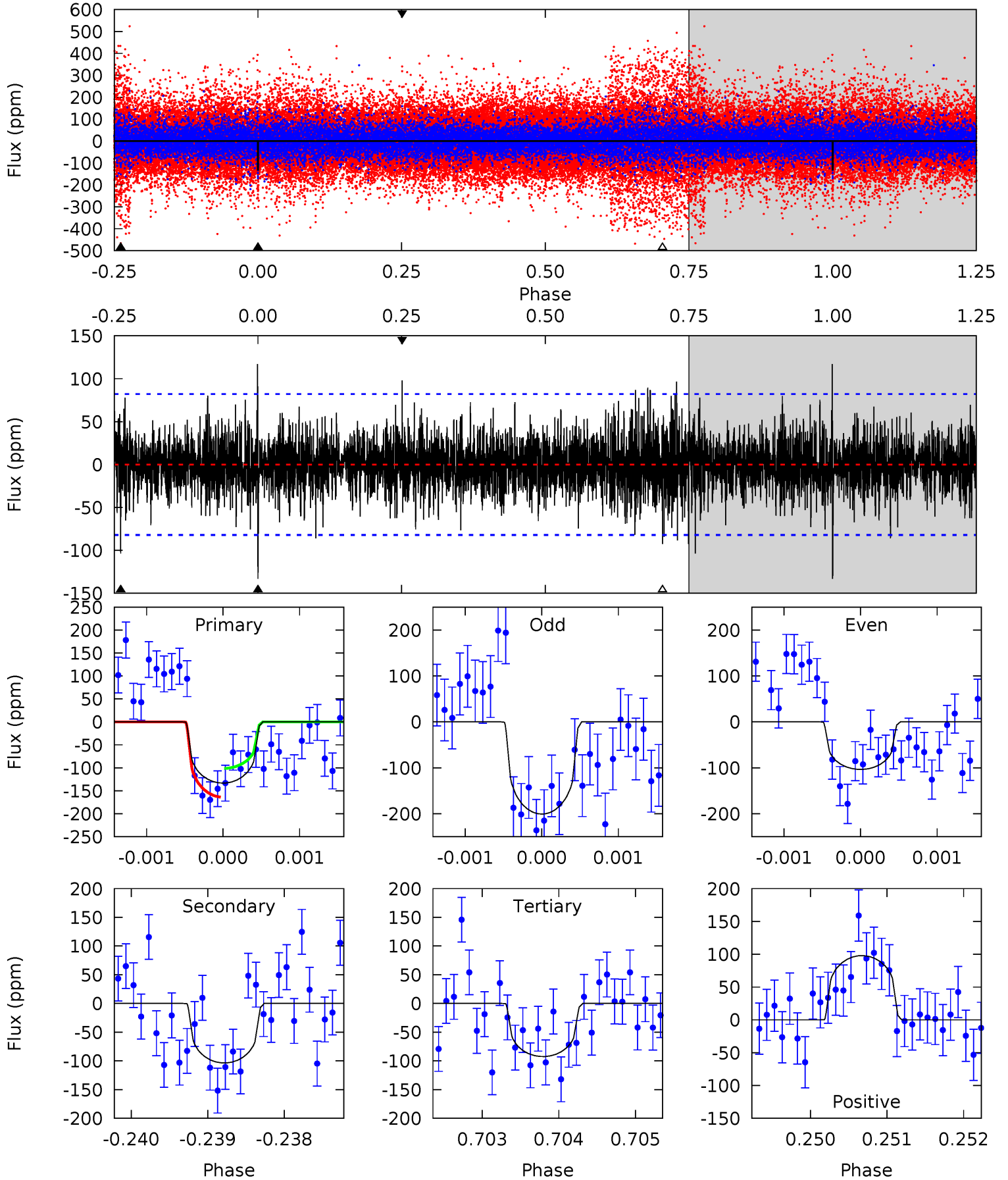
TCE 005729315-01 P=418.663211 Days $T_0=394.849606$ (BKJD)



DV Model-Shift Uniqueness Test

005729315-01, P = 418.661938 Days, E = 394.852569 Days

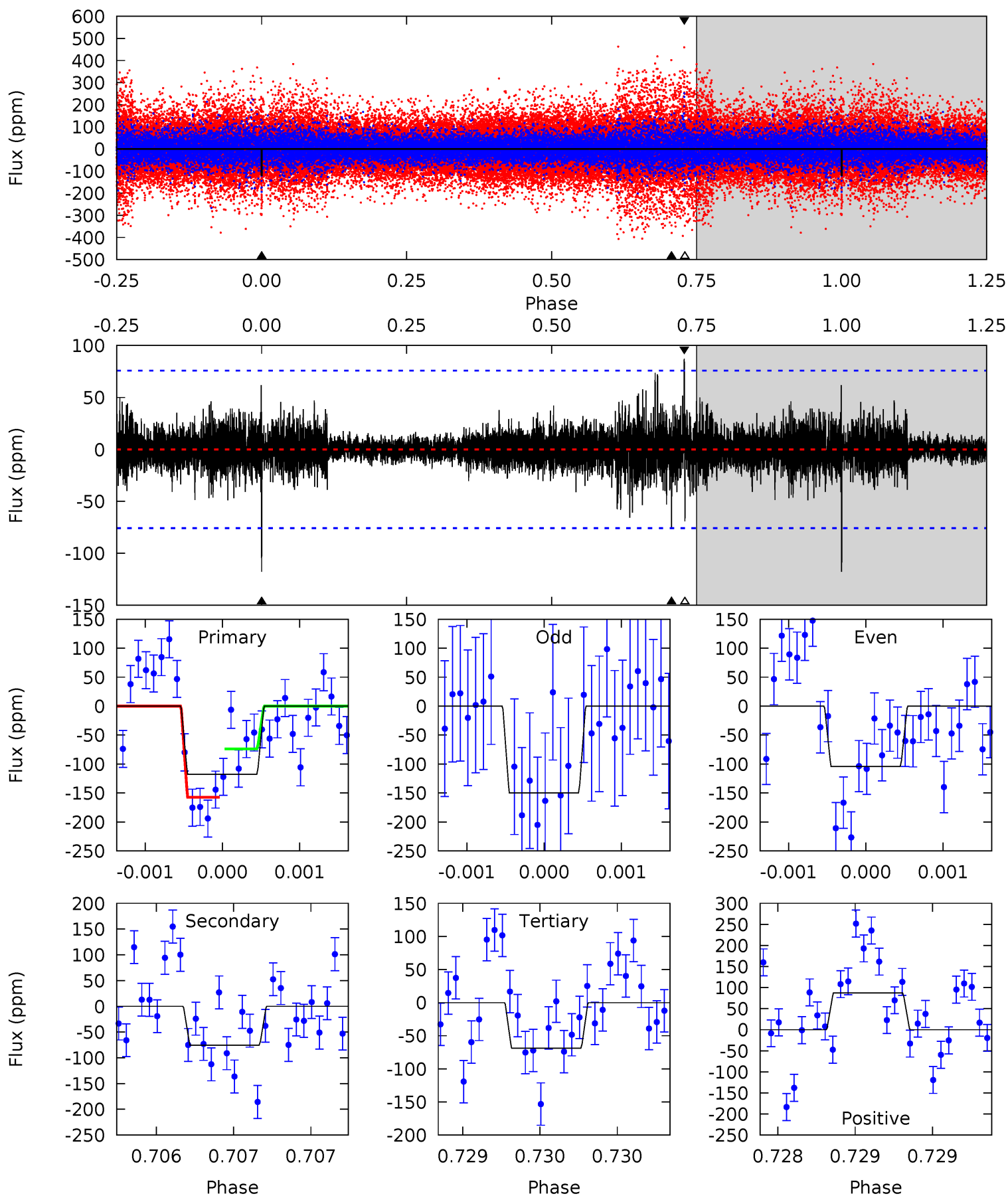
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.95	6.96	6.21	6.57	5.52	3.40	1.57	2.74	2.38	0.75	0.39	2.68	1.16	0.47	2.10



Alt Model-Shift Uniqueness Test

005729315-01, P = 418.663211 Days, E = 394.849606 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.60	5.52	5.05	6.38	5.54	3.44	0.90	3.56	2.22	0.47	-0.86	1.36	0.80	0.43	3.04



Stellar Parameters For KIC 005729315

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4233^{+149}_{-149}	$4.638^{+0.049}_{-0.025}$	$-0.080^{+0.300}_{-0.300}$	$0.629^{+0.041}_{-0.061}$	$0.627^{+0.063}_{-0.056}$	$3.551^{+0.832}_{-0.381}$
	+4%/-4%	+1%/-1%	+375%/-375%	+7%/-10%	+10%/-9%	+23%/-11%
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 005729315-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-104 ± 15	$1.08^{+0.75}_{-0.69}$	212^{+9}_{-8}	3620^{+1631}_{-542}	$43464^{+272618}_{-29105}$
Alt.	-75 ± 14	$0.98^{+0.74}_{-0.59}$	213^{+8}_{-9}	3552^{+1583}_{-539}	$38597^{+206716}_{-26664}$

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

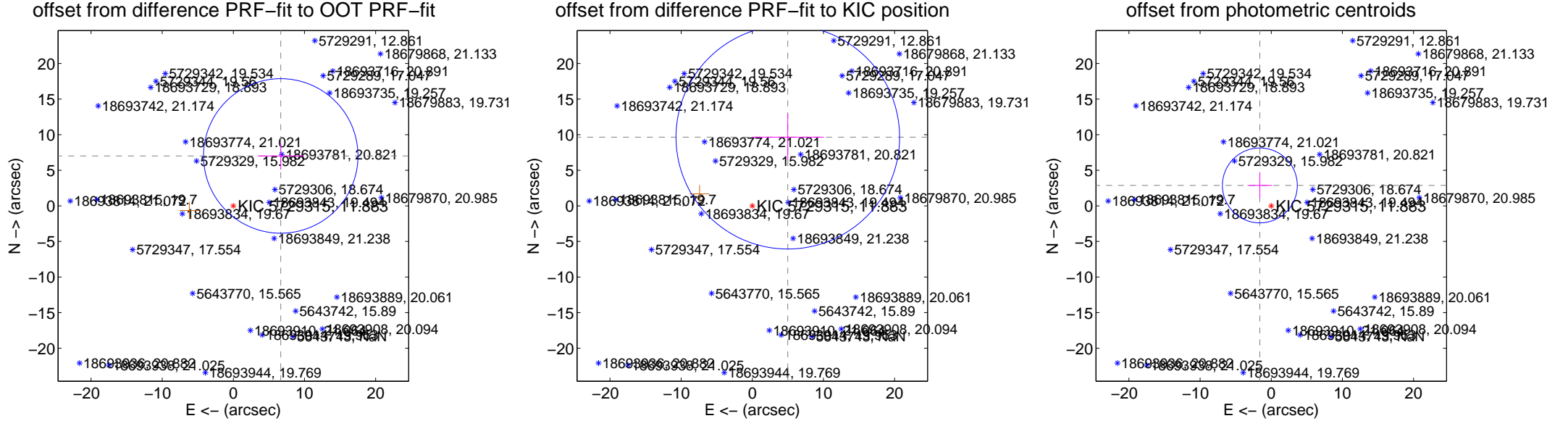
DV Centroid Data

Supplemental centroid analysis for 005729315-01. **Kepler magnitude: 11.88.** Transit SNR 7.39

There are 0 quarters with good PRF difference image offsets

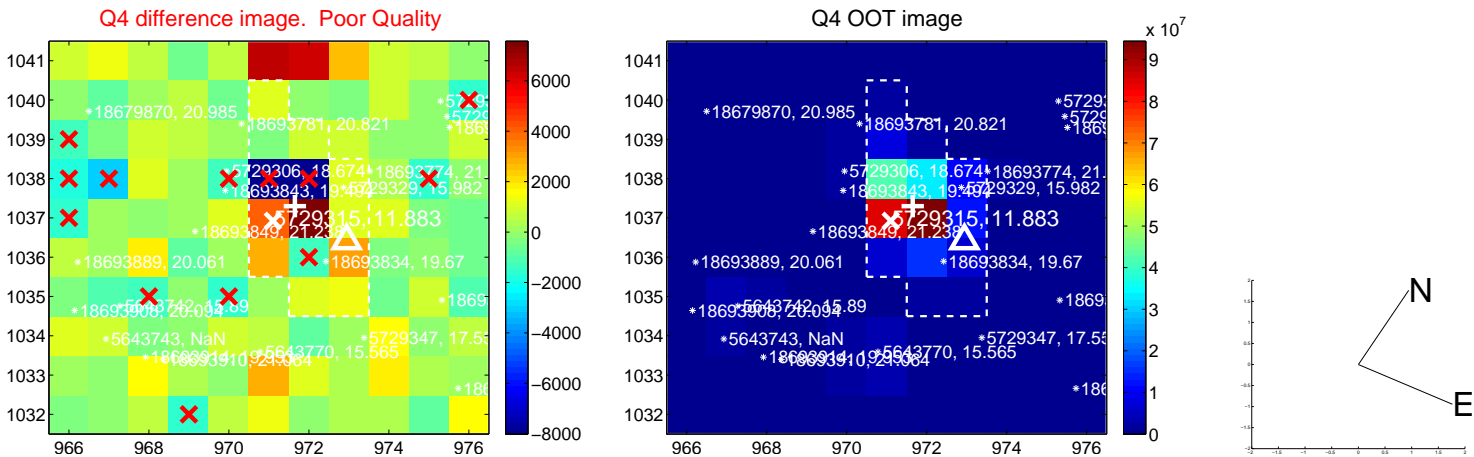
The OOT PRF centroid is offset from the target star catalog position by about 3.13 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.673 ± 3.618	2.67	-6.663 ± 3.226	7.012 ± 1.927
PRF-fit source offset from KIC position	10.863 ± 5.236	2.07	-4.989 ± 5.082	9.650 ± 3.268
photometric centroid source offset	3.29 ± 1.75	1.88	1.60 ± 1.74	2.87 ± 1.76



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.

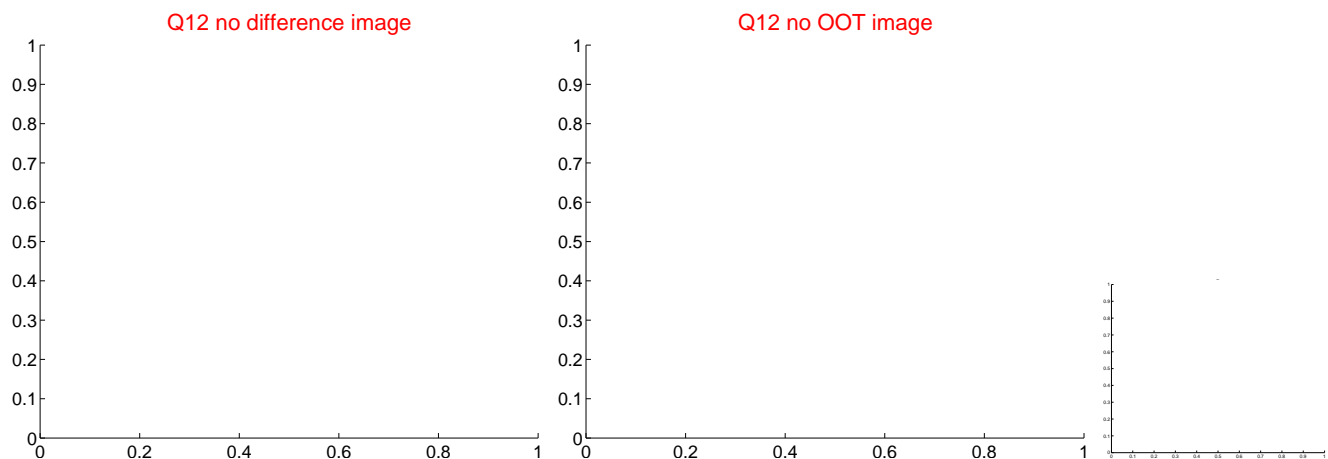
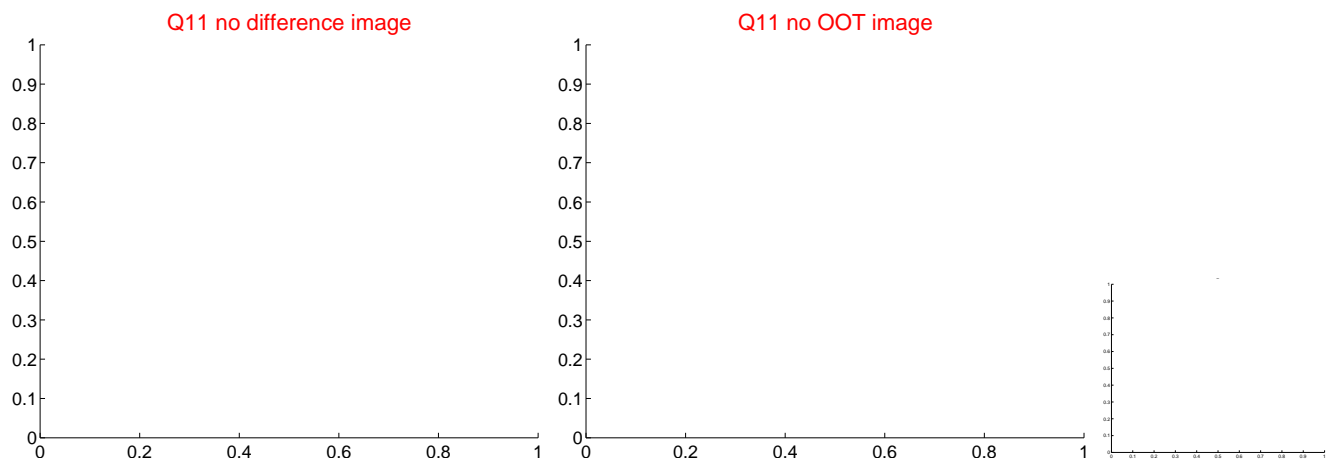
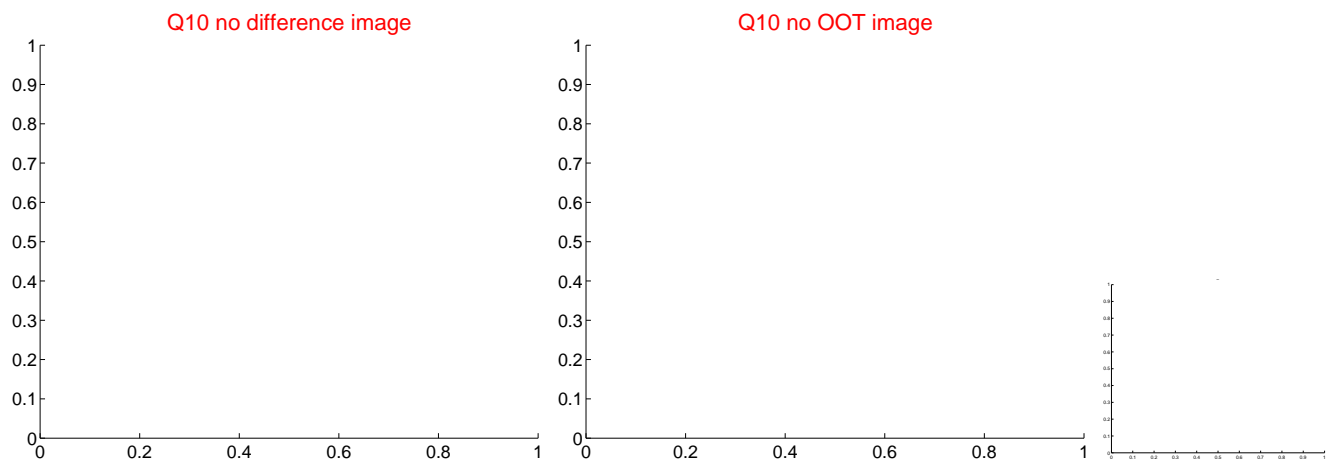
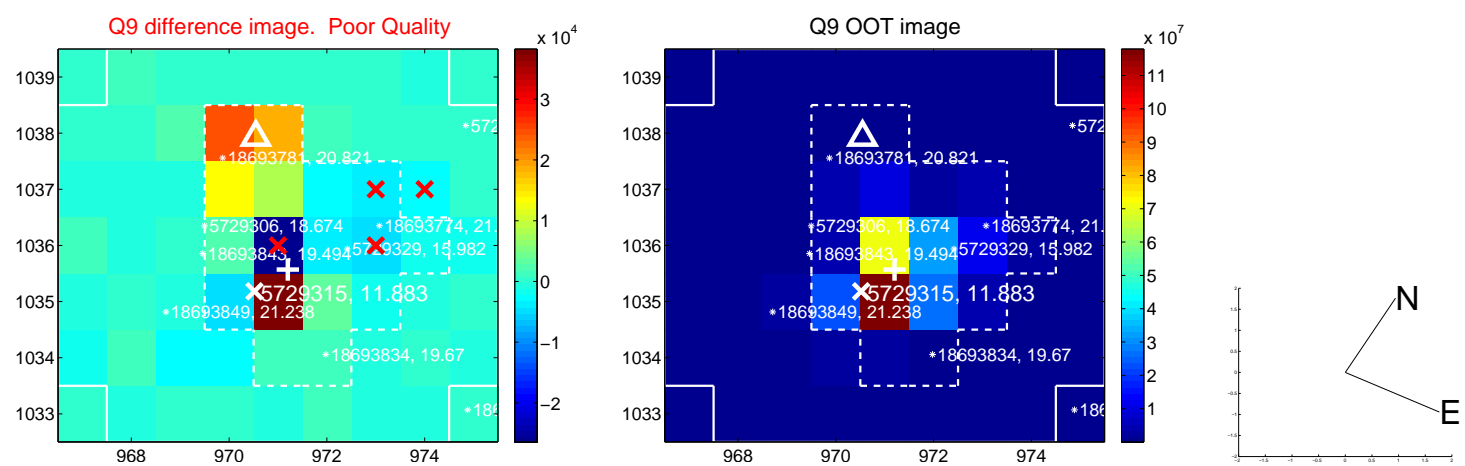
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



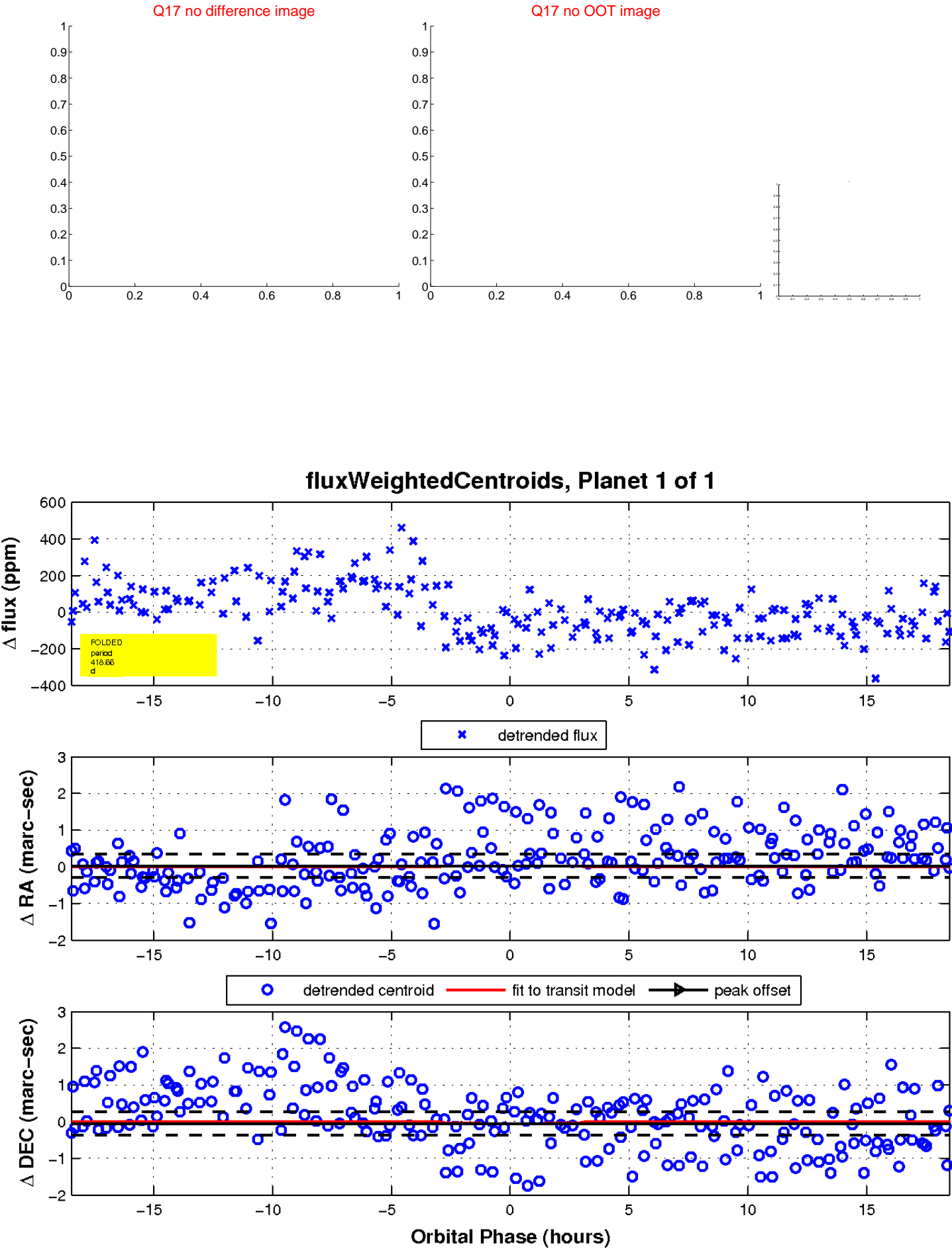
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

