

KIC 005814613

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})
005814613-01	OBS	No	391.986754	469.820947	306.1	11.882	7.7	7.4	2.17	6681	4.01	5.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005814613-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_KIC_POS

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

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

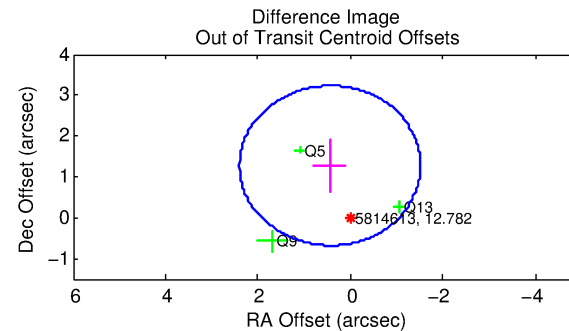
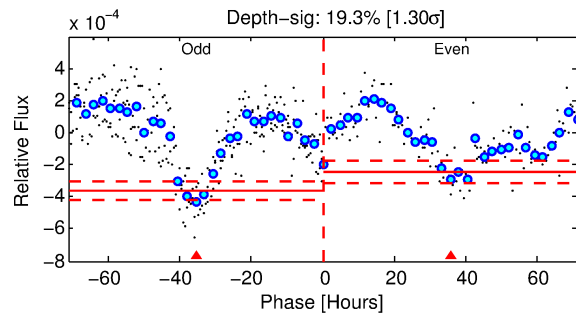
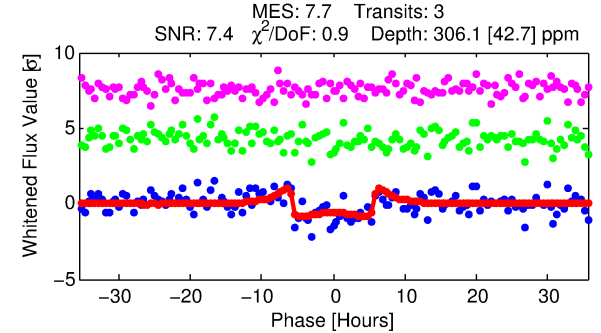
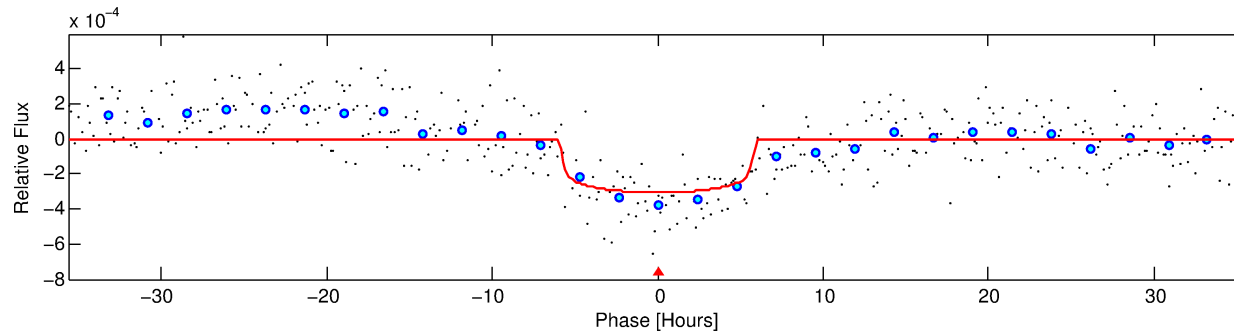
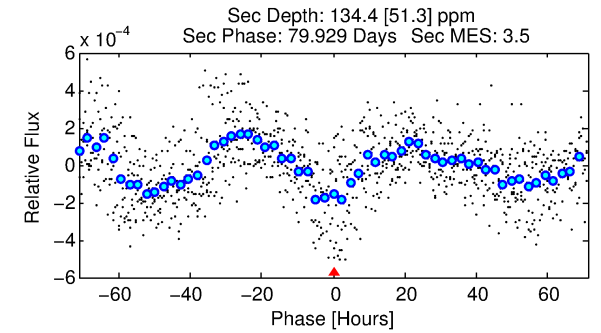
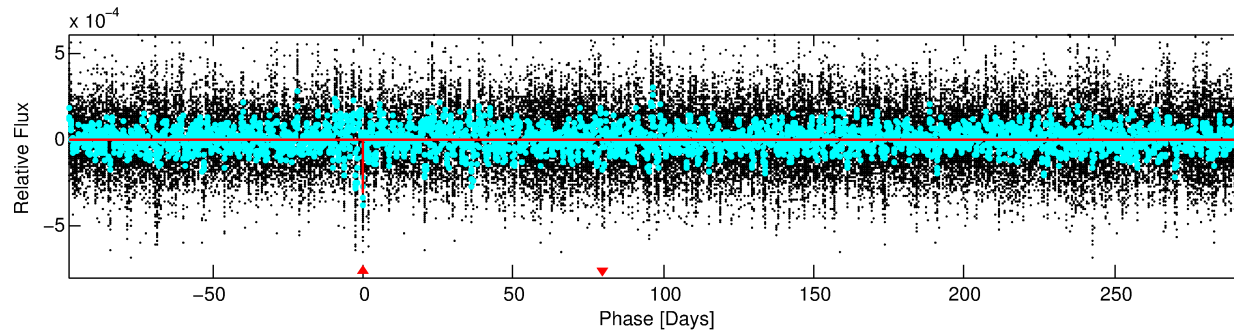
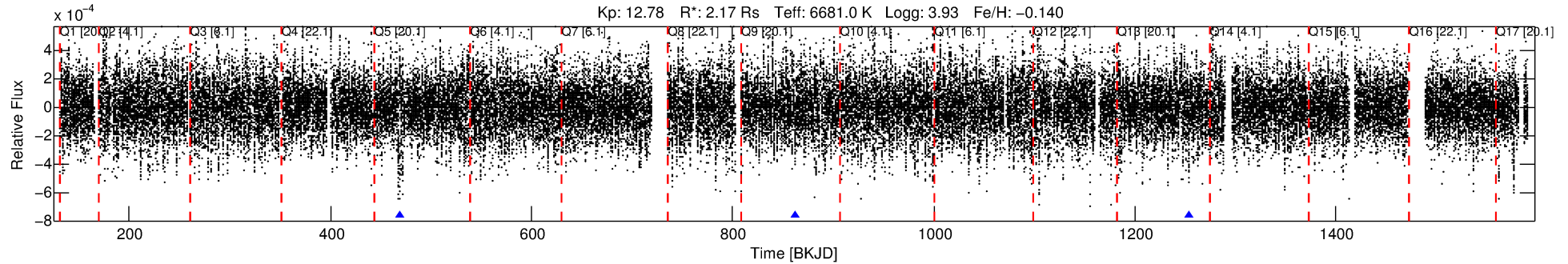
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005814613-01

No Significant Match Found

DV One-Page Summary

KIC: 5814613 Candidate: 1 of 1 Period: 391.987 d



DV Fit Results:

Period = 391.98675 [0.00623] d
Epoch = 469.8209 [0.0086] BKJD
Rp/R* = 0.0170 [0.0054]
a/R* = 198.47 [337.13]
b = 0.64 [1.55]
Seff = 5.91 [2.86]
Teq = 398 [48] K
Rp = 4.01 [1.87] Re
a = 1.1927 [0.3631] AU
Ag = 6527.61 [5739.99] [1.14σ]
Teffp = 5525 [1045] K [4.90σ]

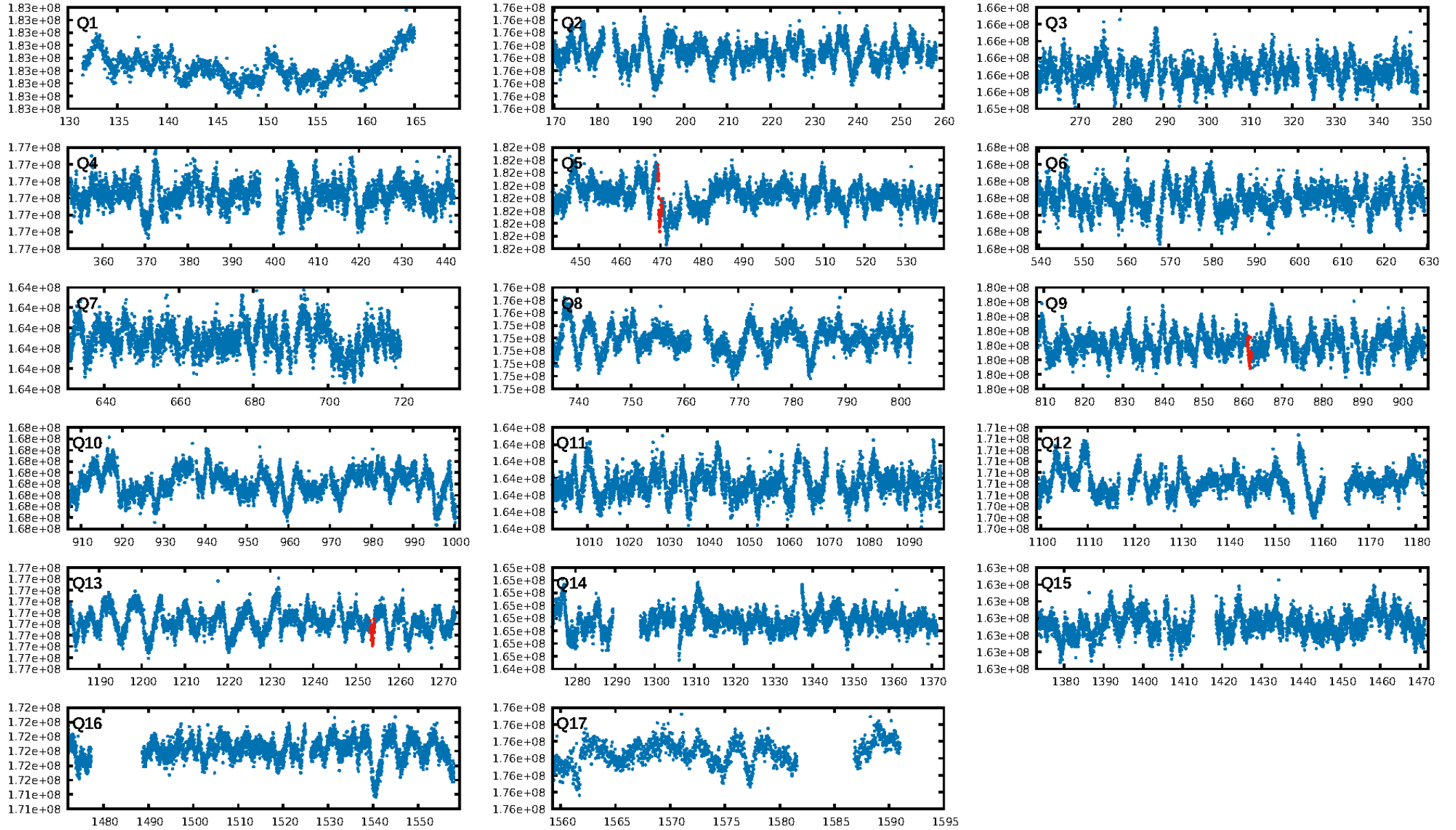
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 17.7%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 5.89e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.473
Centroid-sig: 40.6%
Centroid-so: 0.819 arcsec [0.97σ]
OotOffset-rm: 1.351 arcsec [2.07σ]
KicOffset-rm: 1.176 arcsec [1.71σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

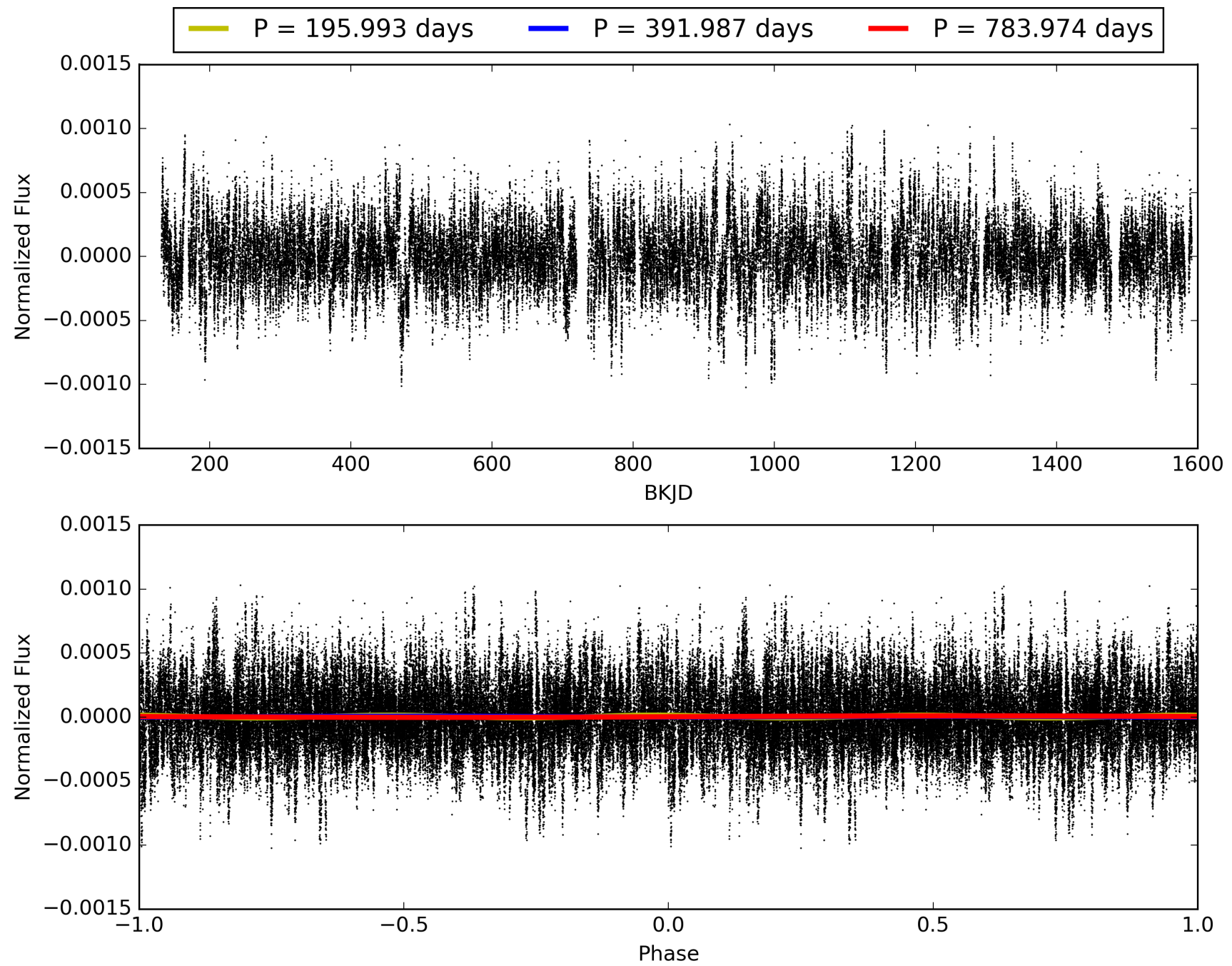
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 10:57:04 Z

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

TCE 005814613-01, PDC Light Curves

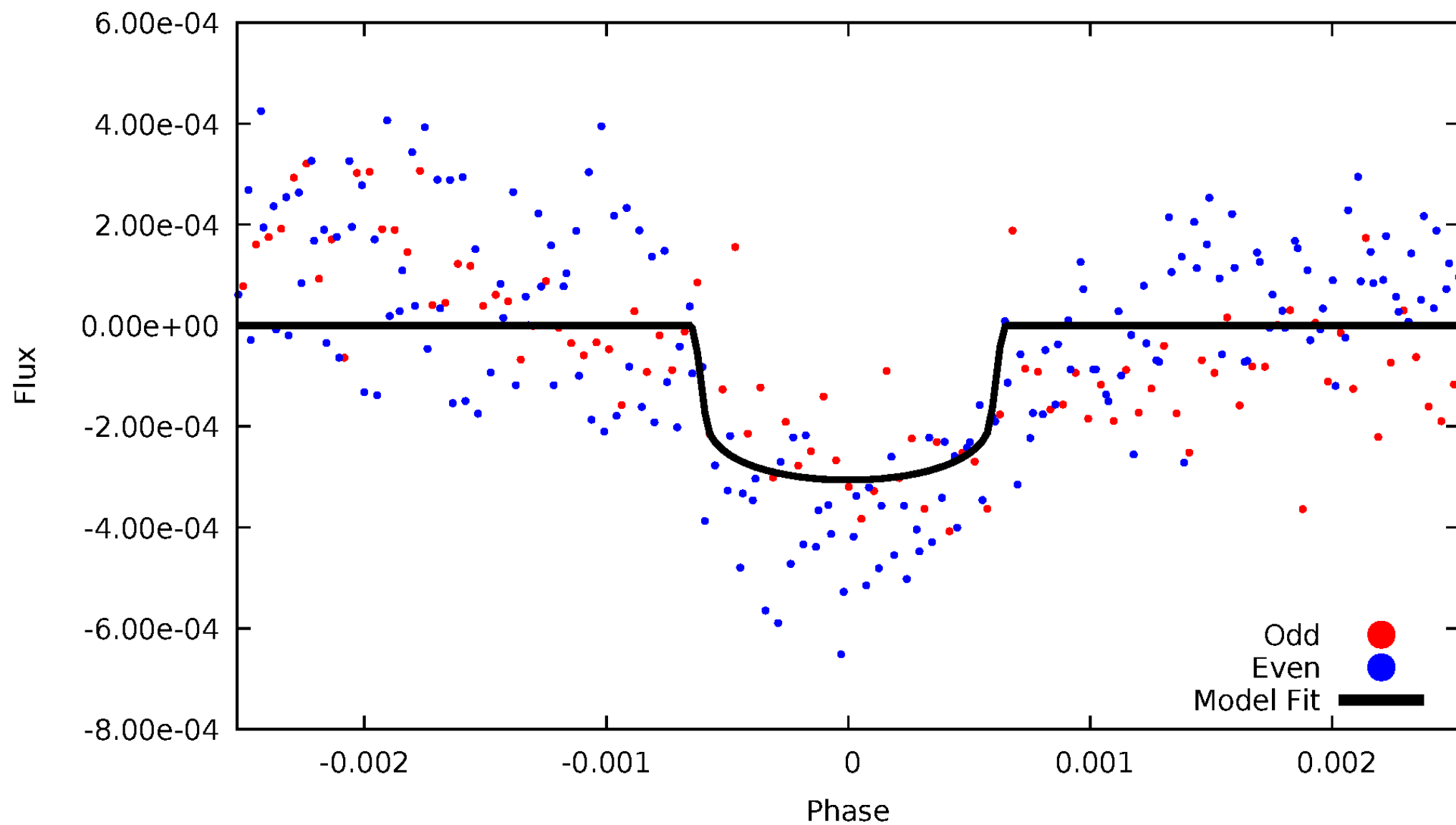


TCE 005814613-01



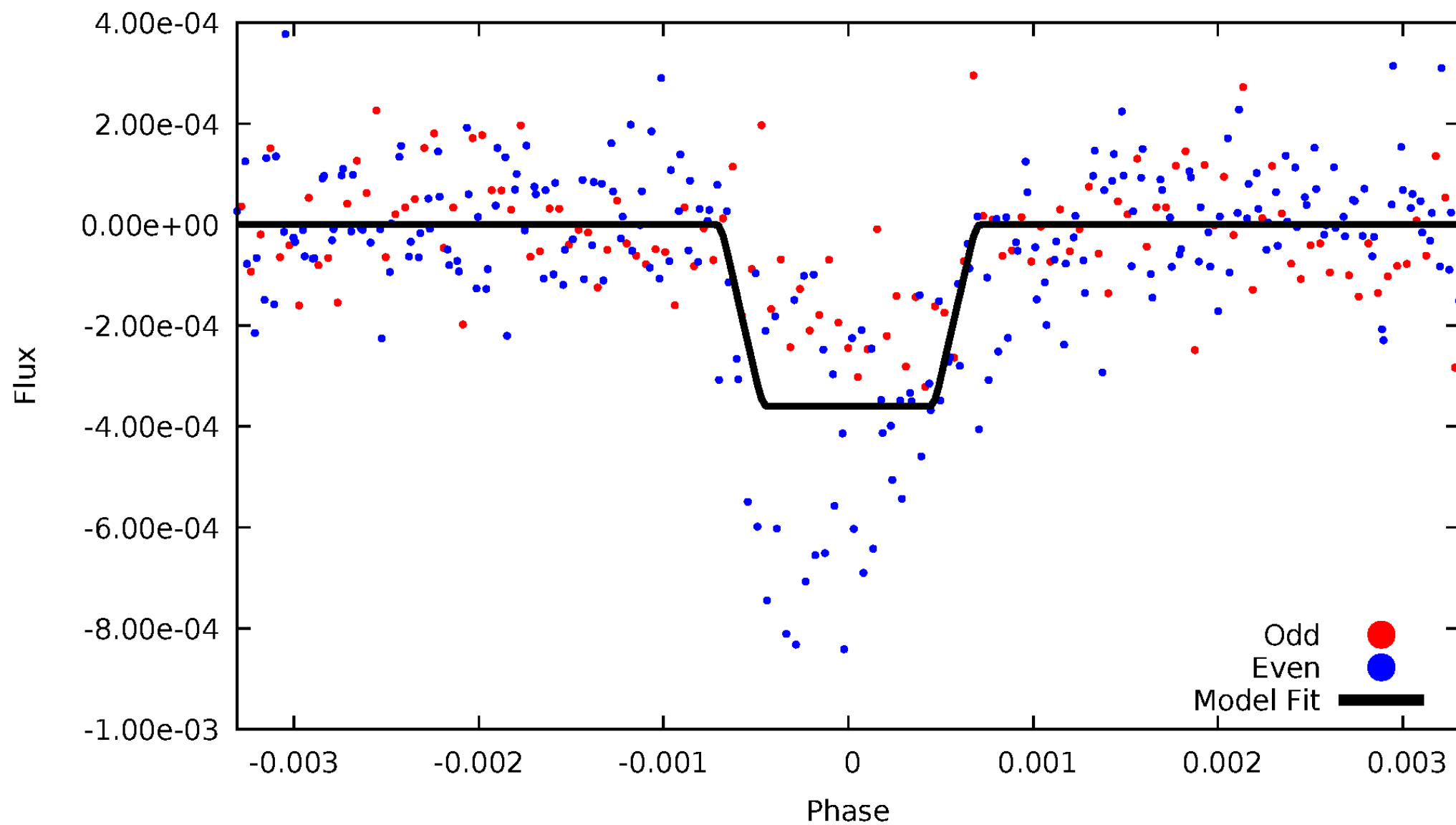
DV Odd/Even

TCE 005814613-01

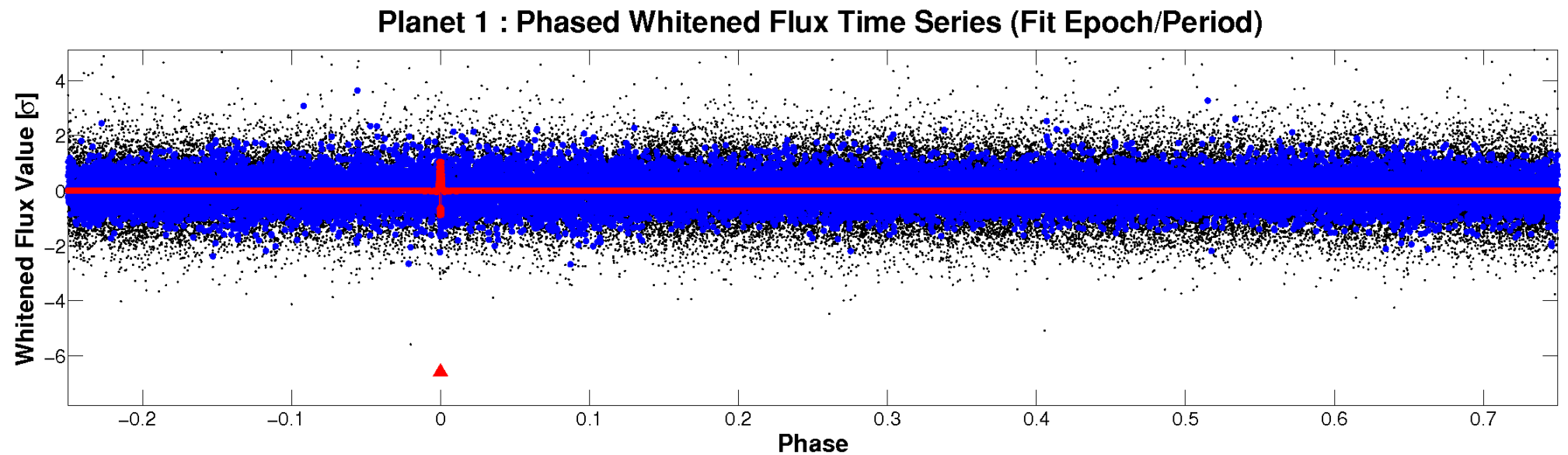
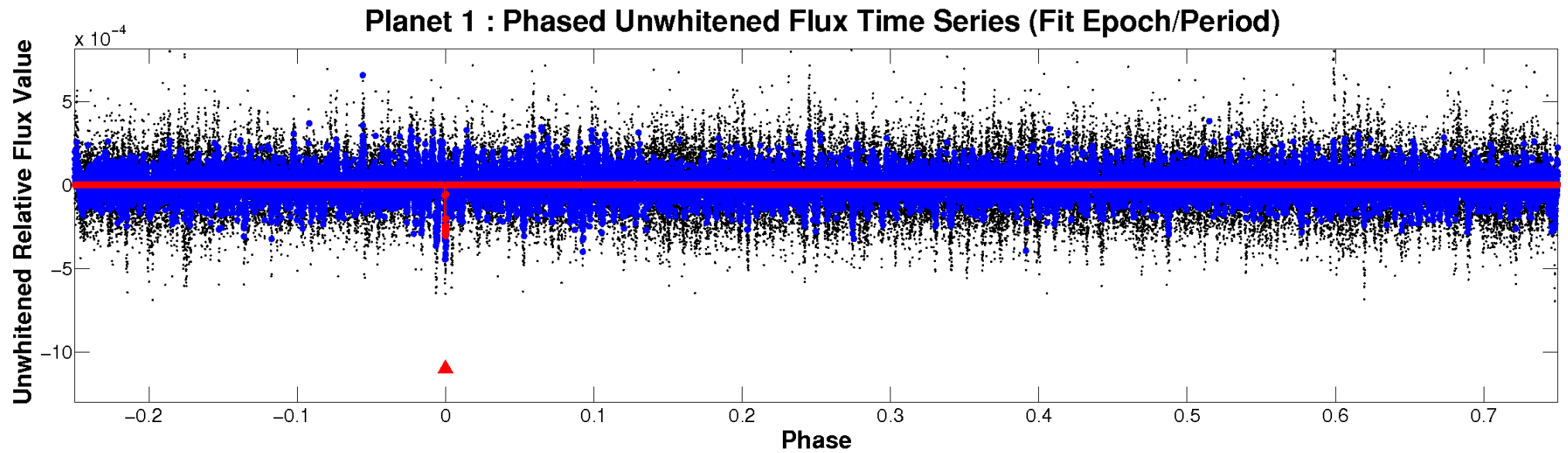


ALT Odd/Even

TCE 005814613-01

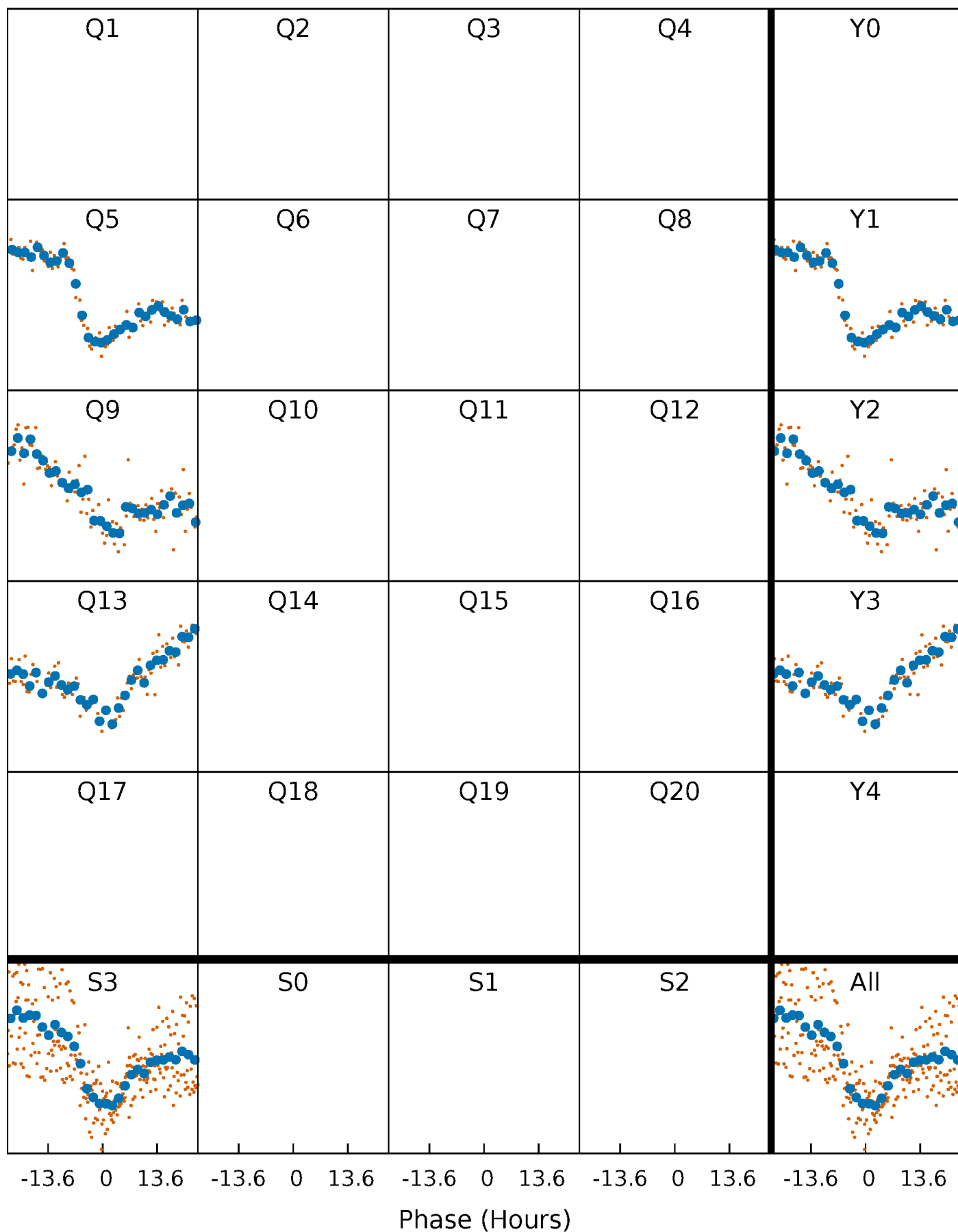


Non-Whitened Vs. Whitened Light Curve



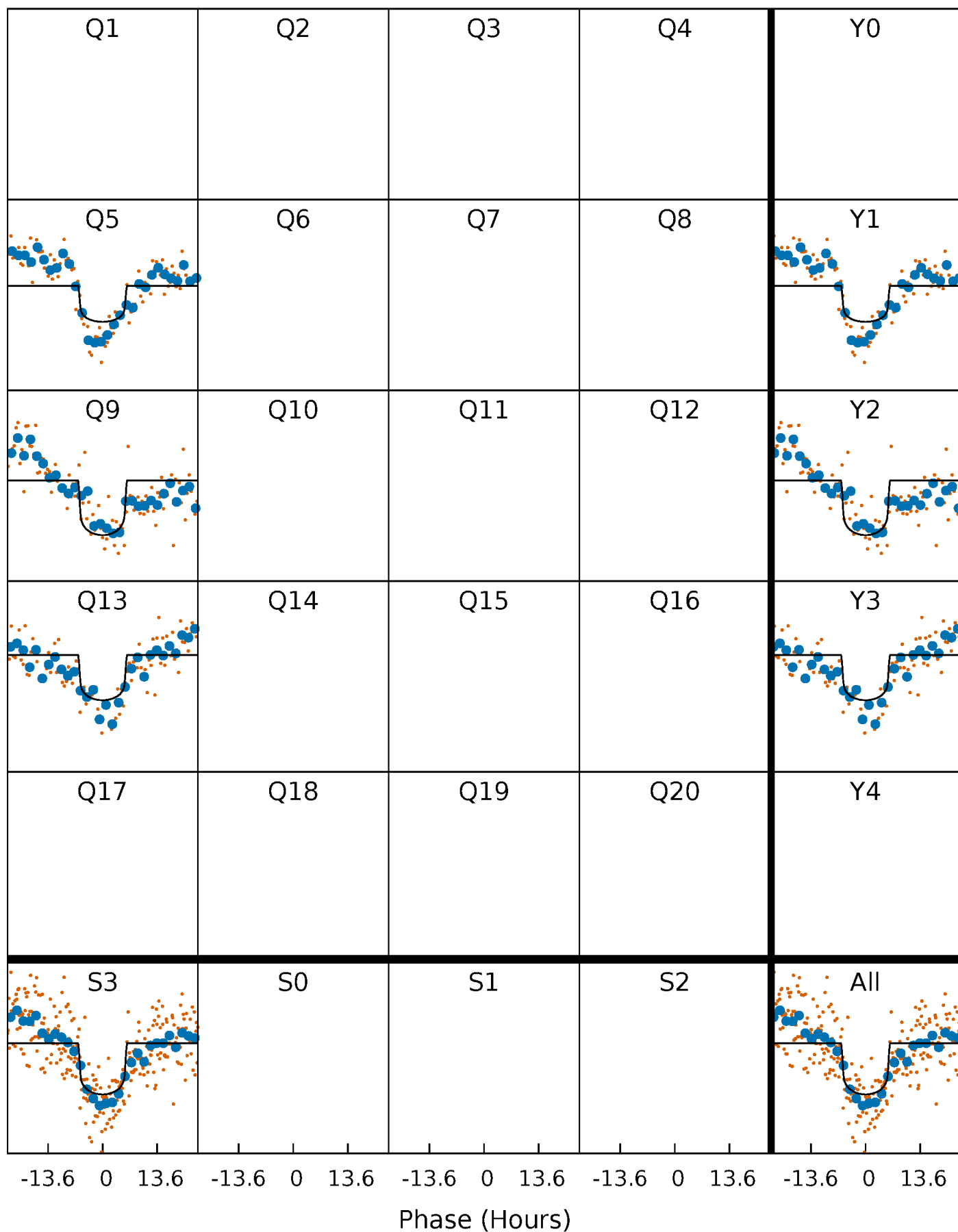
PDC Quarter-Phased Transit Curves

TCE 005814613-01 P=391.986754 Days $T_0=469.820947$ (BKJD)



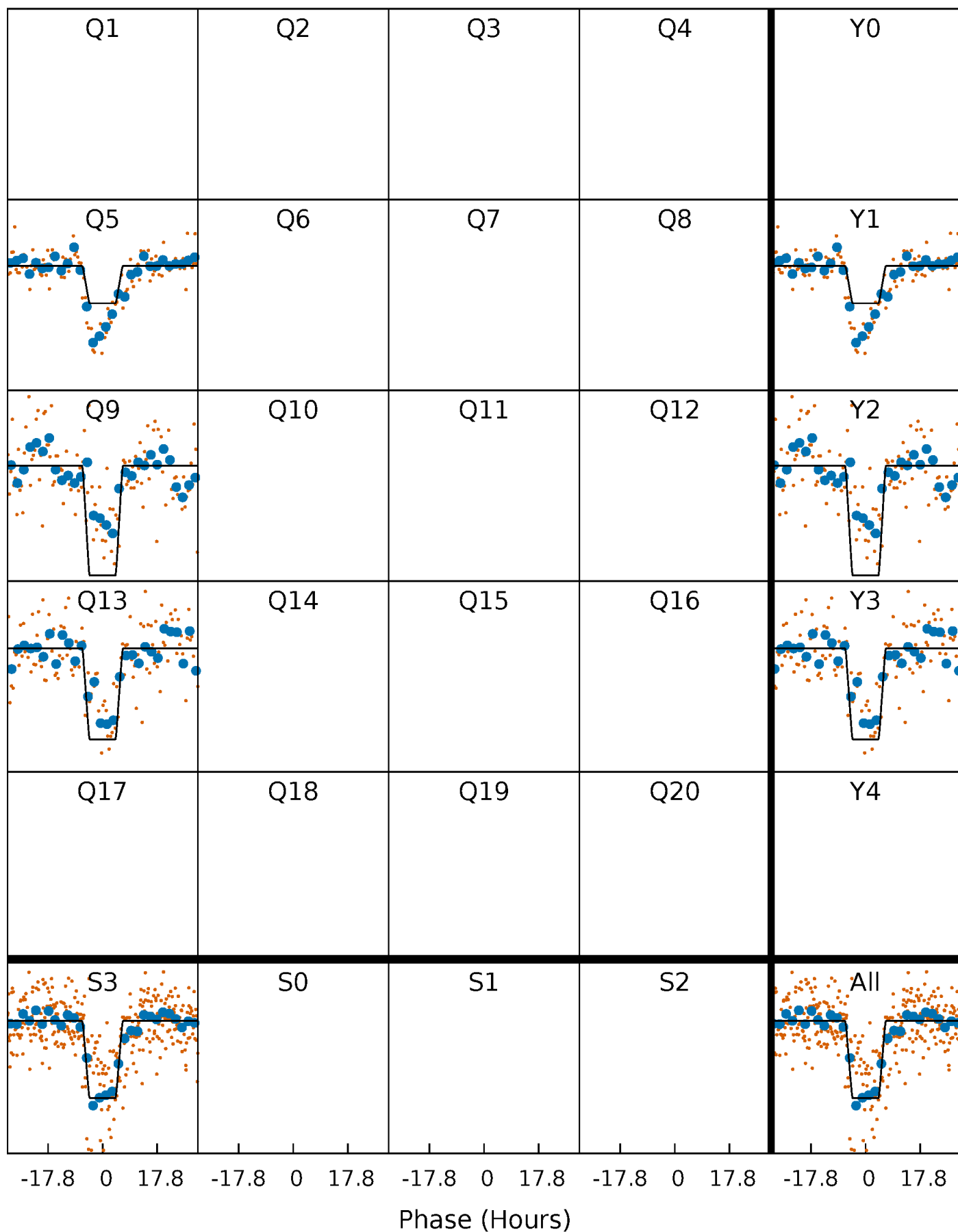
DV Quarter-Phased Transit Curves

TCE 005814613-01 P=391.986754 Days $T_0=469.820947$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

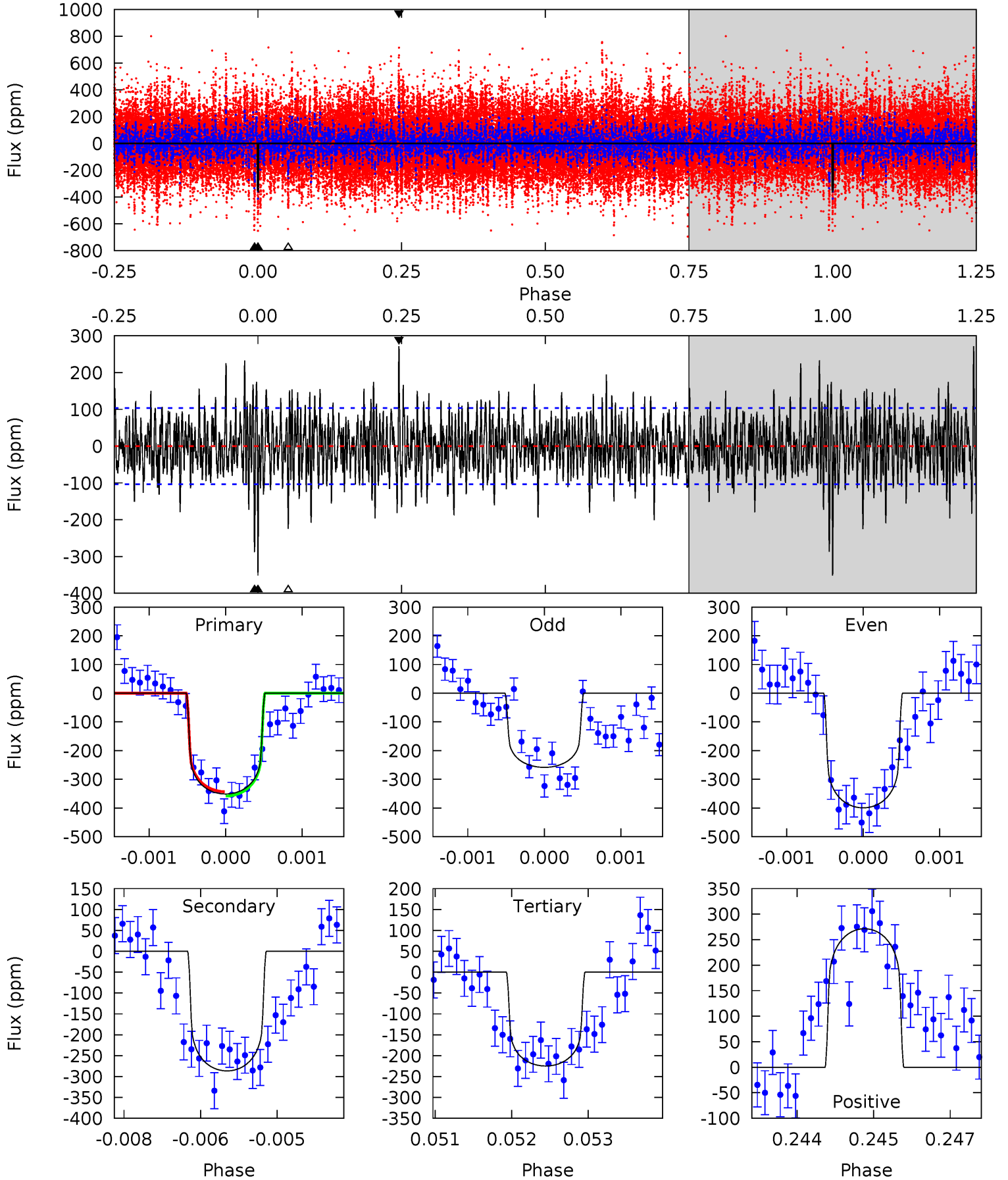
TCE 005814613-01 P=391.990604 Days $T_0=469.818005$ (BKJD)



DV Model-Shift Uniqueness Test

005814613-01, $P = 391.986754$ Days, $E = 77.834193$ Days

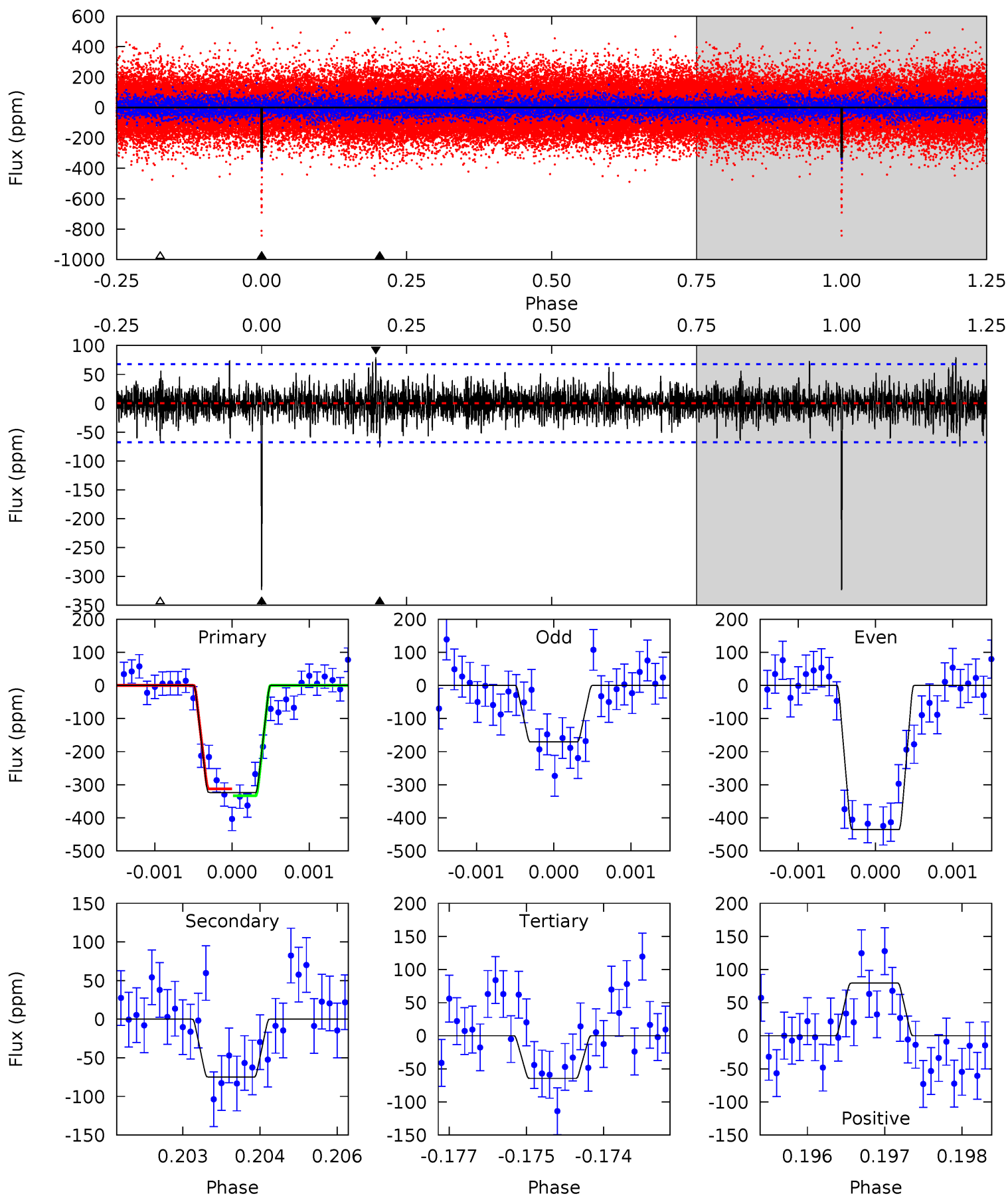
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	15.0	11.7	14.2	5.41	3.22	3.33	6.61	4.17	3.22	0.79	3.48	0.93	0.44	0.40



Alt Model-Shift Uniqueness Test

005814613-01, $P = 391.990604$ Days, $E = 77.827401$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.8	5.96	5.13	6.33	5.39	3.19	1.41	20.6	19.4	0.83	-0.37	10.2	1.38	0.20	0.81



Stellar Parameters For KIC 005814613

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6681^{+167}_{-217}	$3.933^{+0.266}_{-0.114}$	$-0.140^{+0.300}_{-0.250}$	$2.170^{+0.452}_{-0.735}$	$1.474^{+0.164}_{-0.304}$	$0.203^{+0.362}_{-0.073}$
	+2%/-3%	+7%/-3%	+214%/-179%	+21%/-34%	+11%/-21%	+178%/-36%
Source	PHO1	FLK73	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 005814613-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-286 ± 19	$3.76^{+1.57}_{-1.32}$	545^{+37}_{-43}	6704^{+1633}_{-939}	15802^{+20794}_{-7971}
Alt.	-75 ± 13	$4.17^{+1.41}_{-1.20}$	544^{+35}_{-44}	4655^{+666}_{-467}	3282^{+3114}_{-1532}

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 $A_{obs} \gg 1.0$

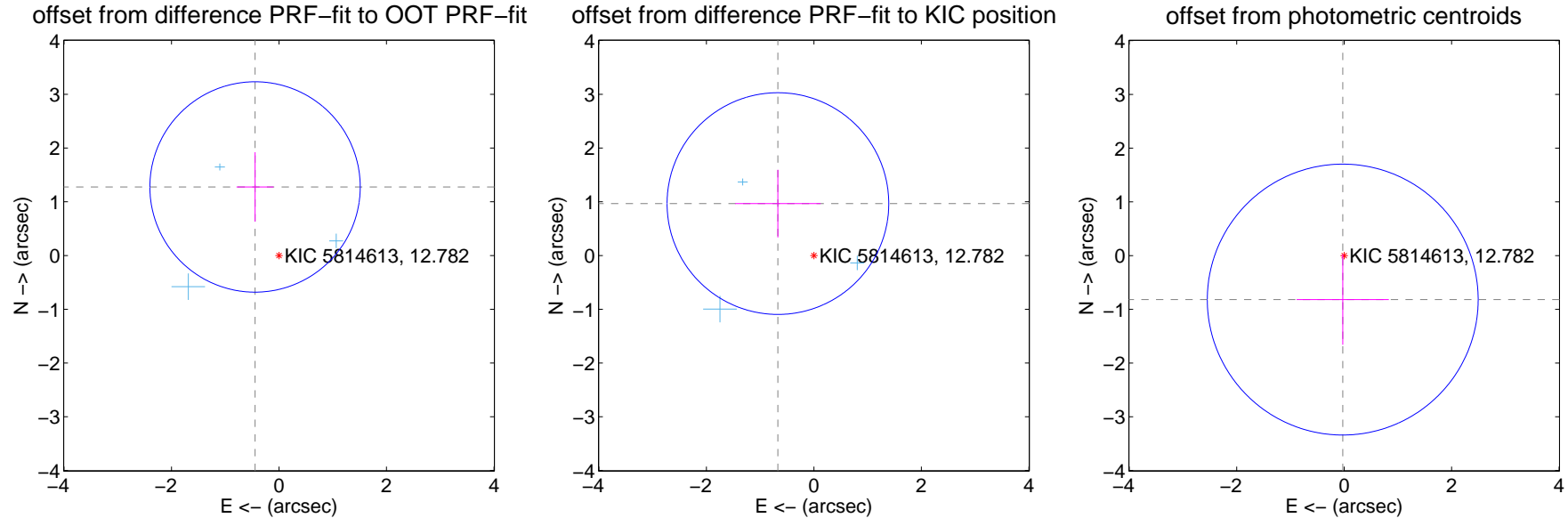
DV Centroid Data

Supplemental centroid analysis for 005814613-01. Kepler magnitude: 12.78. Transit SNR 7.36

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.48 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.351 ± 0.652	2.07	0.445 ± 0.344	1.276 ± 0.646
PRF-fit source offset from KIC position	1.176 ± 0.687	1.71	0.669 ± 0.795	0.966 ± 0.629
photometric centroid source offset	0.82 ± 0.84	0.97	0.03 ± 0.86	-0.82 ± 0.84

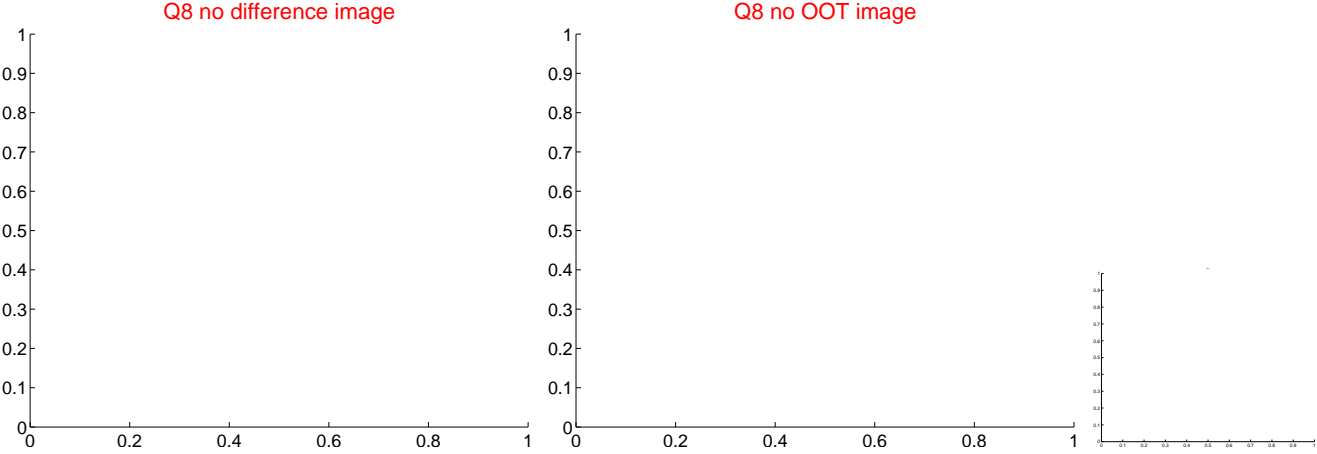
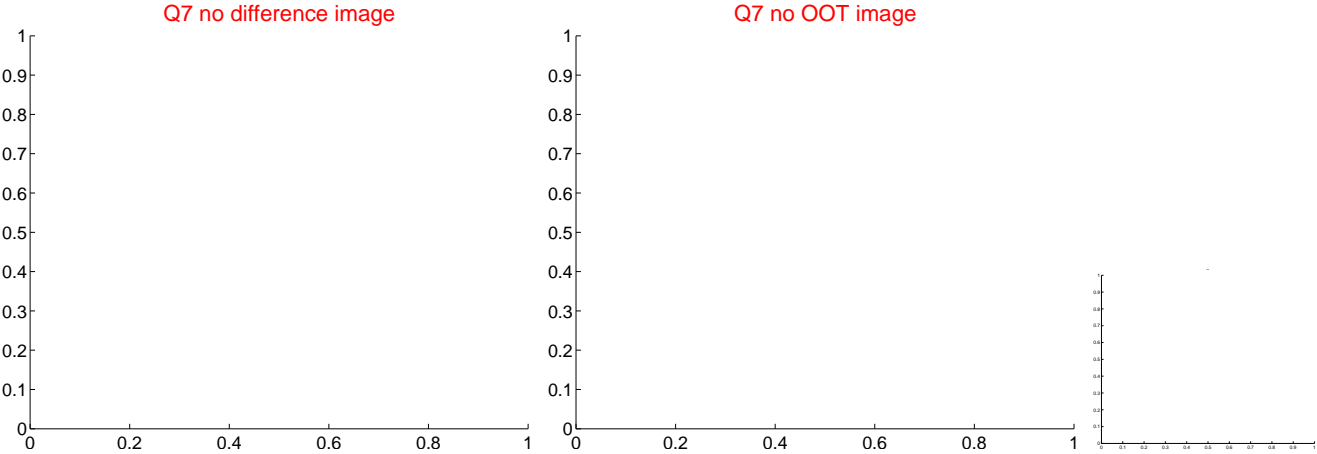
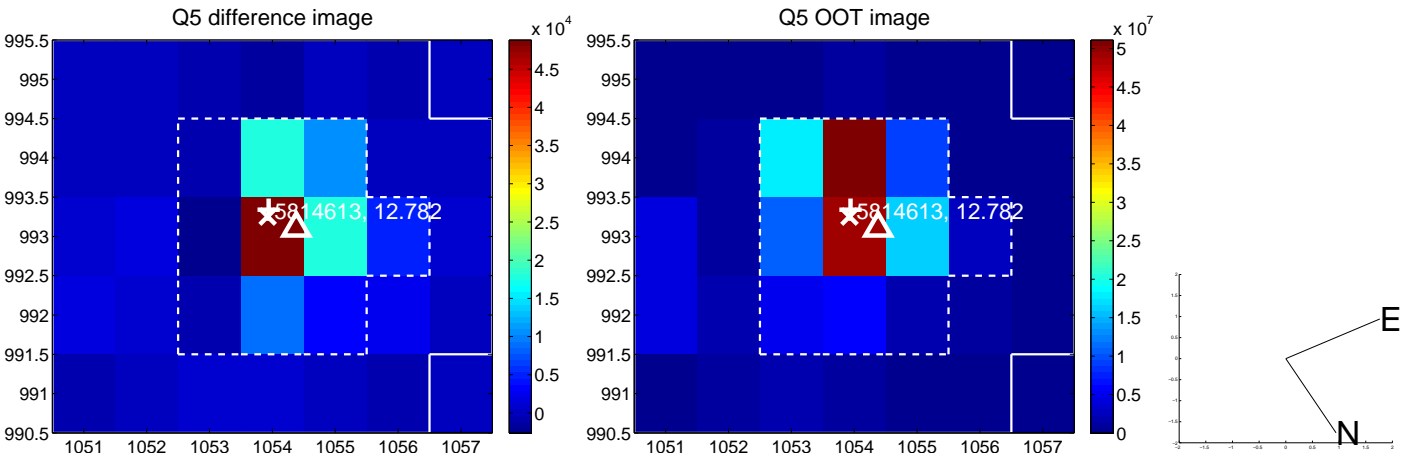


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

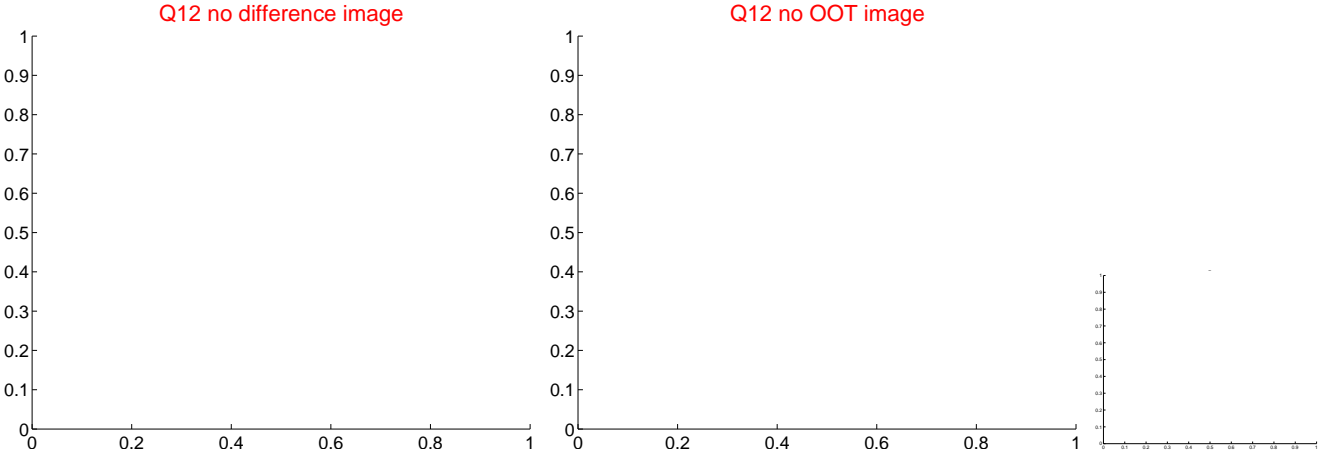
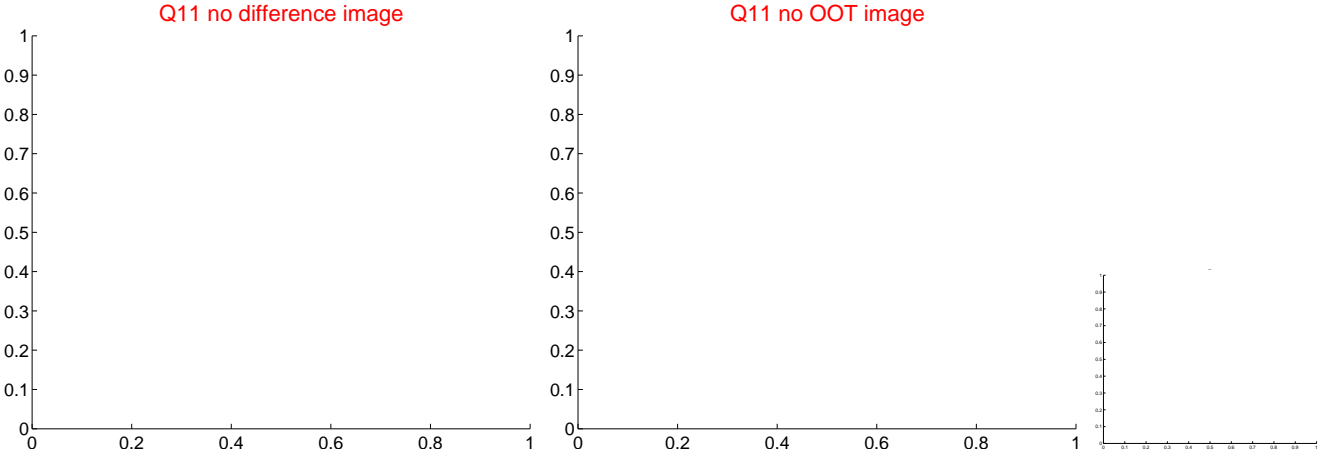
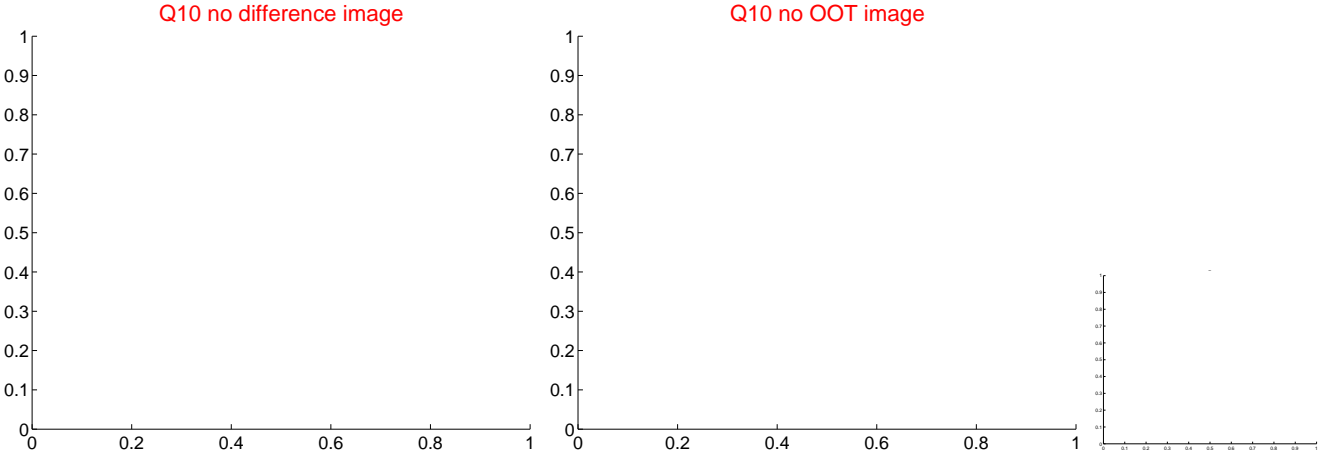
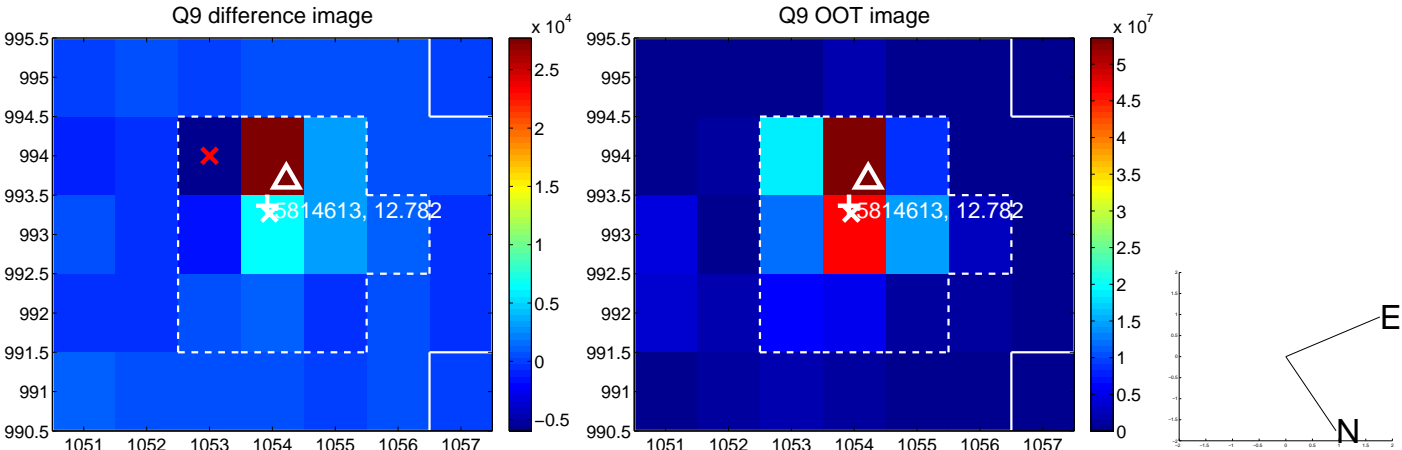
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



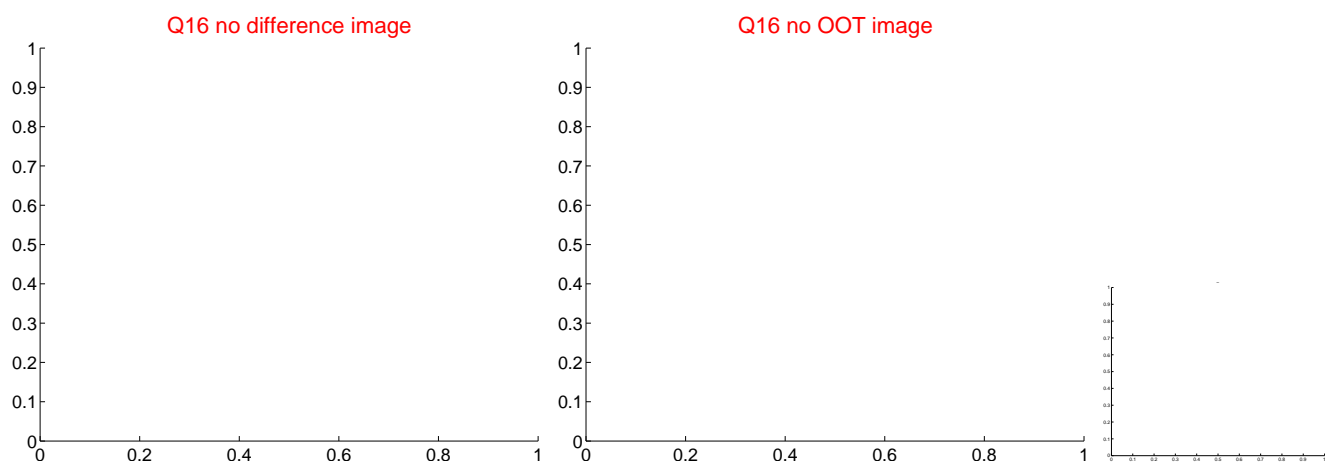
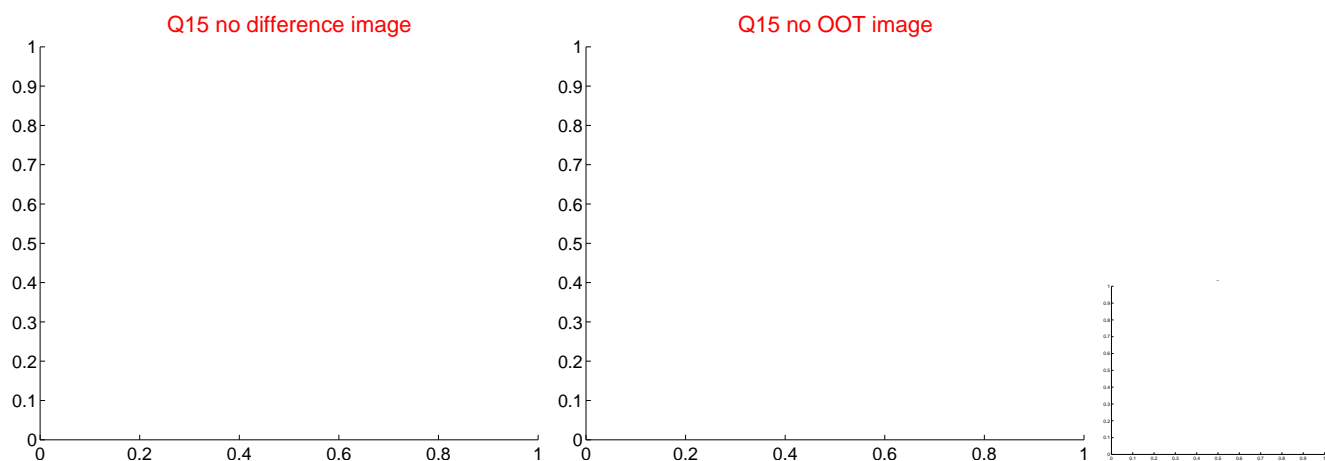
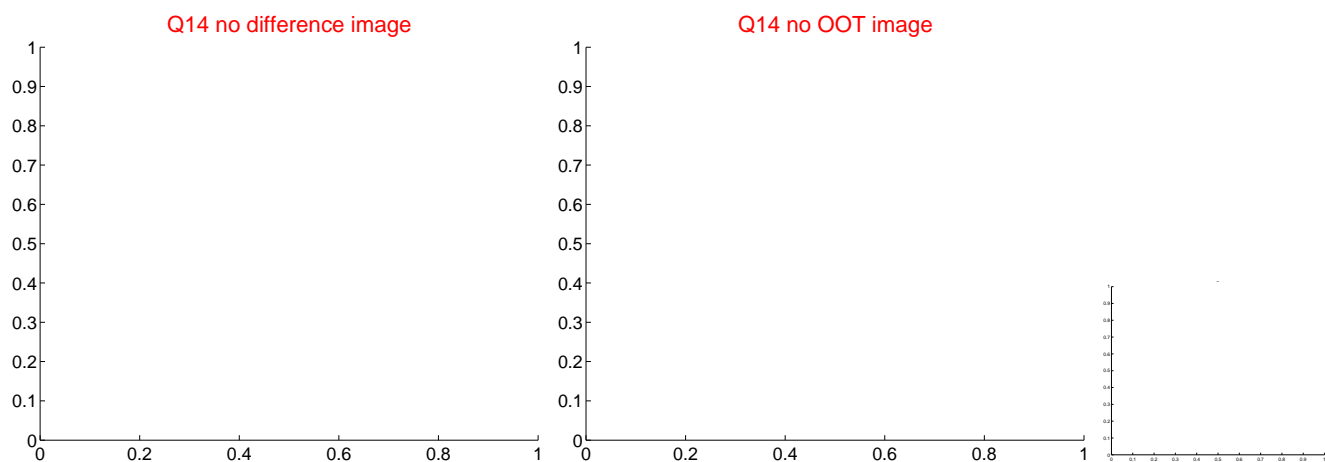
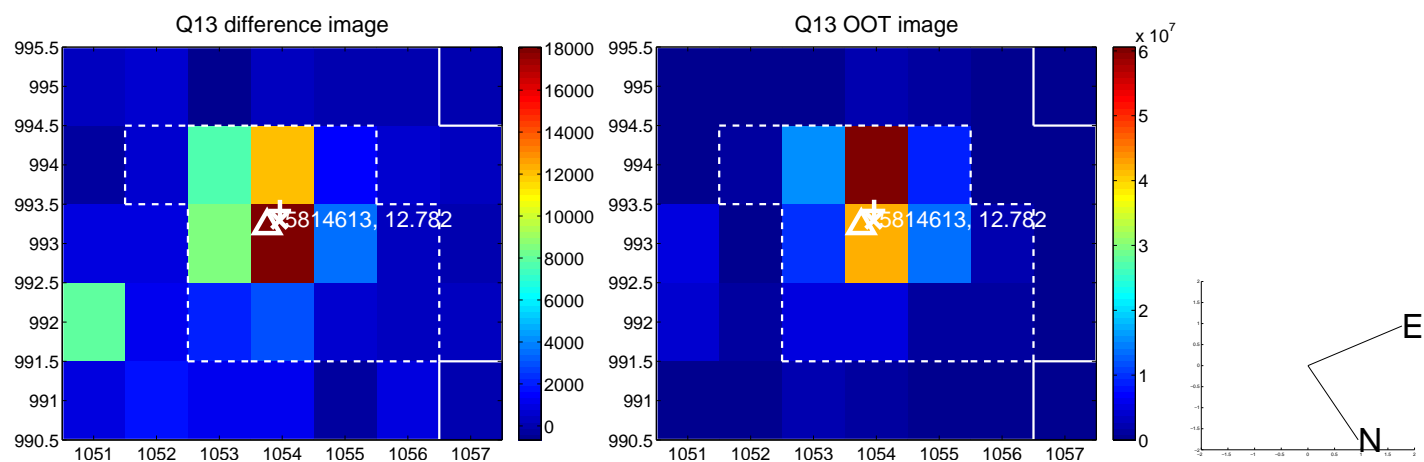
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



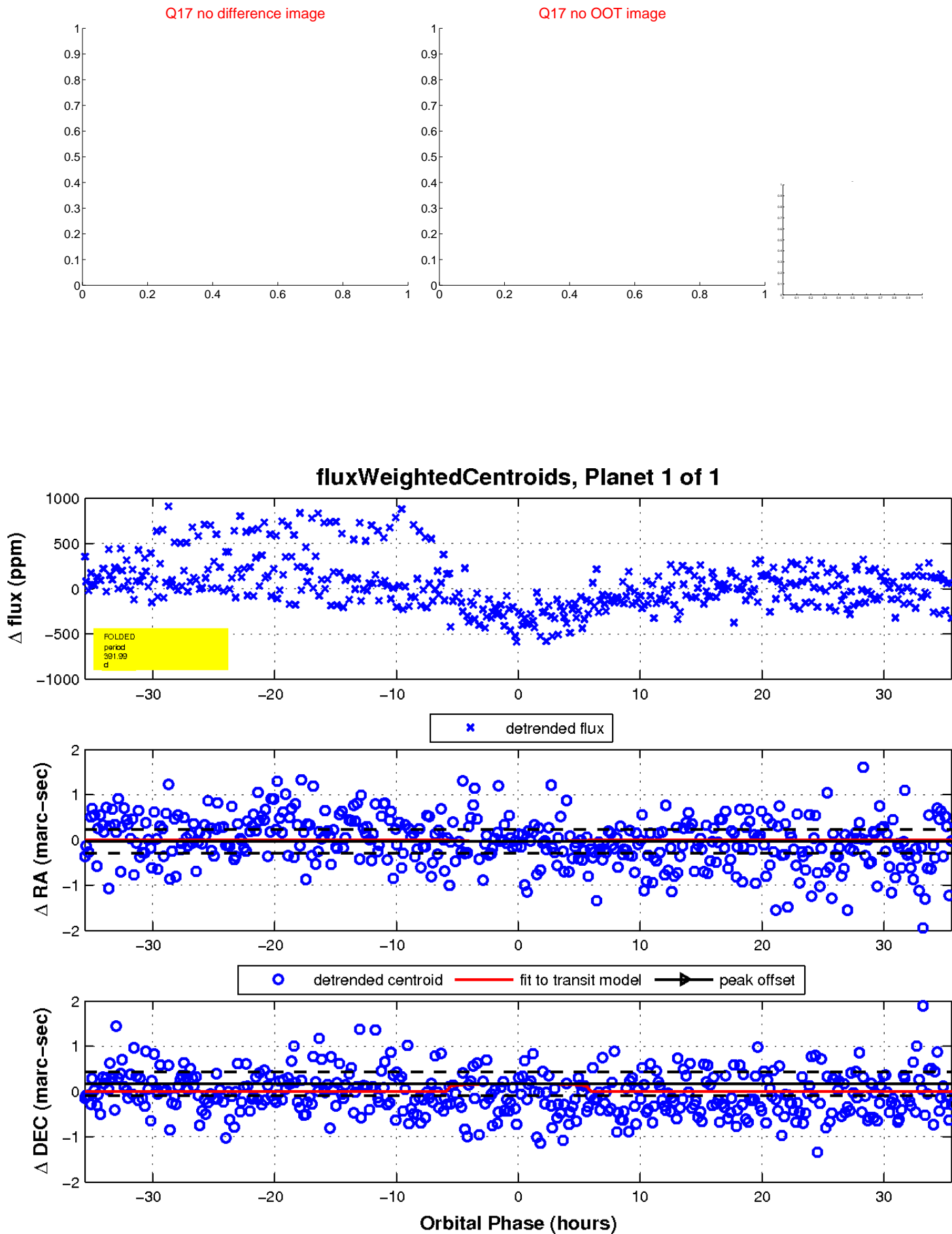
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

