

KIC 003527325

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})
003527325-01	OBS	No	594.319098	157.303565	433.1	8.289	8.0	7.6	0.79	5693	1.80	0.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003527325-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—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.

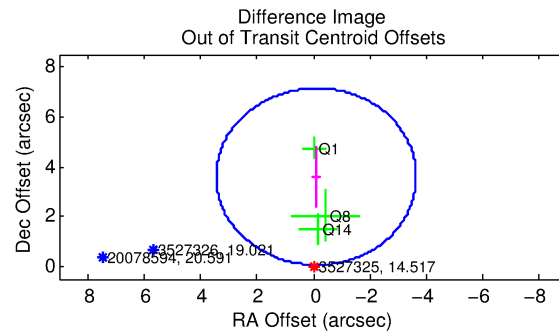
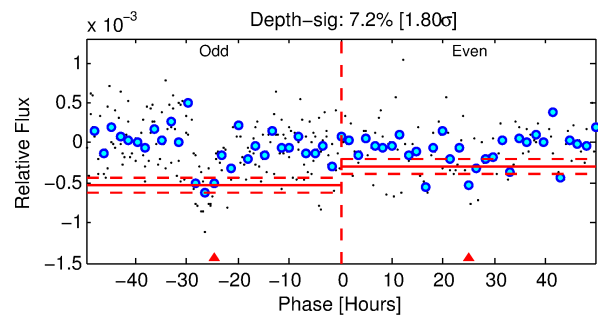
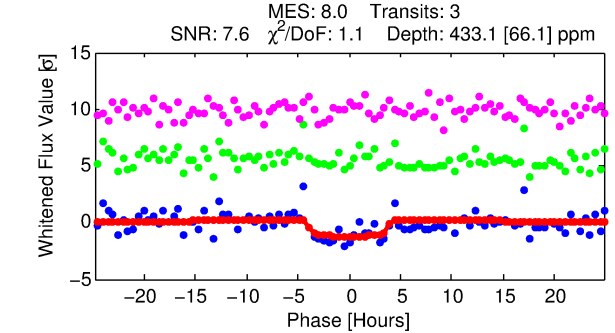
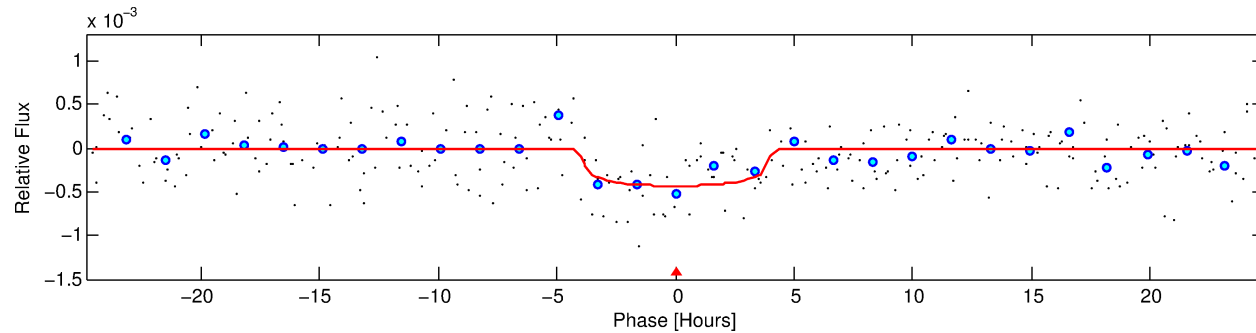
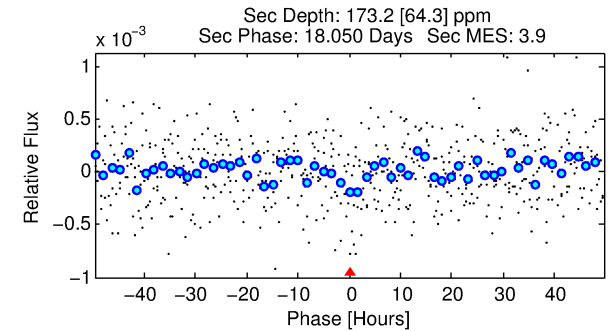
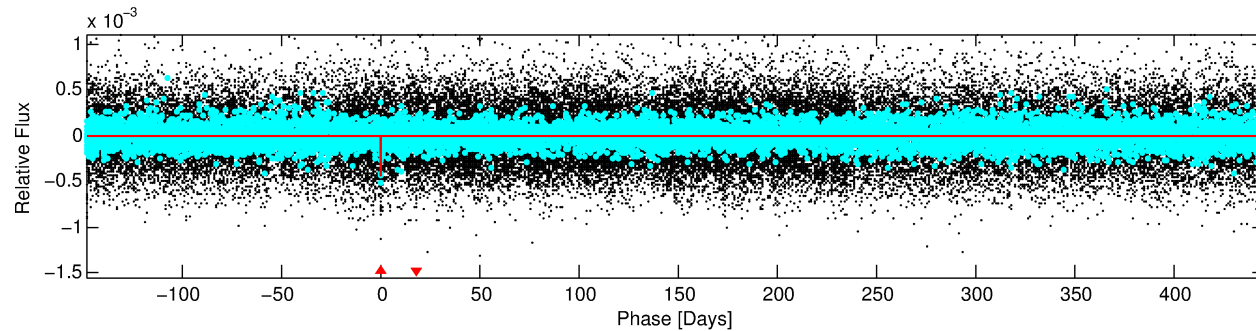
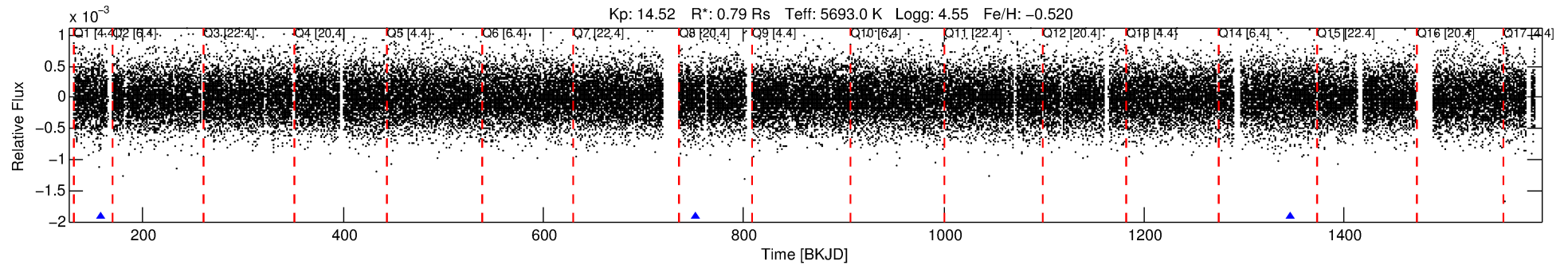
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003527325-01

No Significant Match Found

DV One-Page Summary

KIC: 3527325 Candidate: 1 of 1 Period: 594.319 d



DV Fit Results:

Period = 594.31910 [0.01263] d
Epoch = 157.3036 [0.0168] BKJD
Rp/R* = 0.0210 [0.0189]
a/R* = 358.99 [1539.32]
b = 0.78 [2.14]
Seff = 0.35 [0.10]
Teq = 197 [14] K
Rp = 1.80 [1.67] Re
a = 1.2835 [0.2278] AU
Ag = 48278.38 [89878.59] [0.54 σ]
Teff = 4510 [2083] K [2.07 σ]

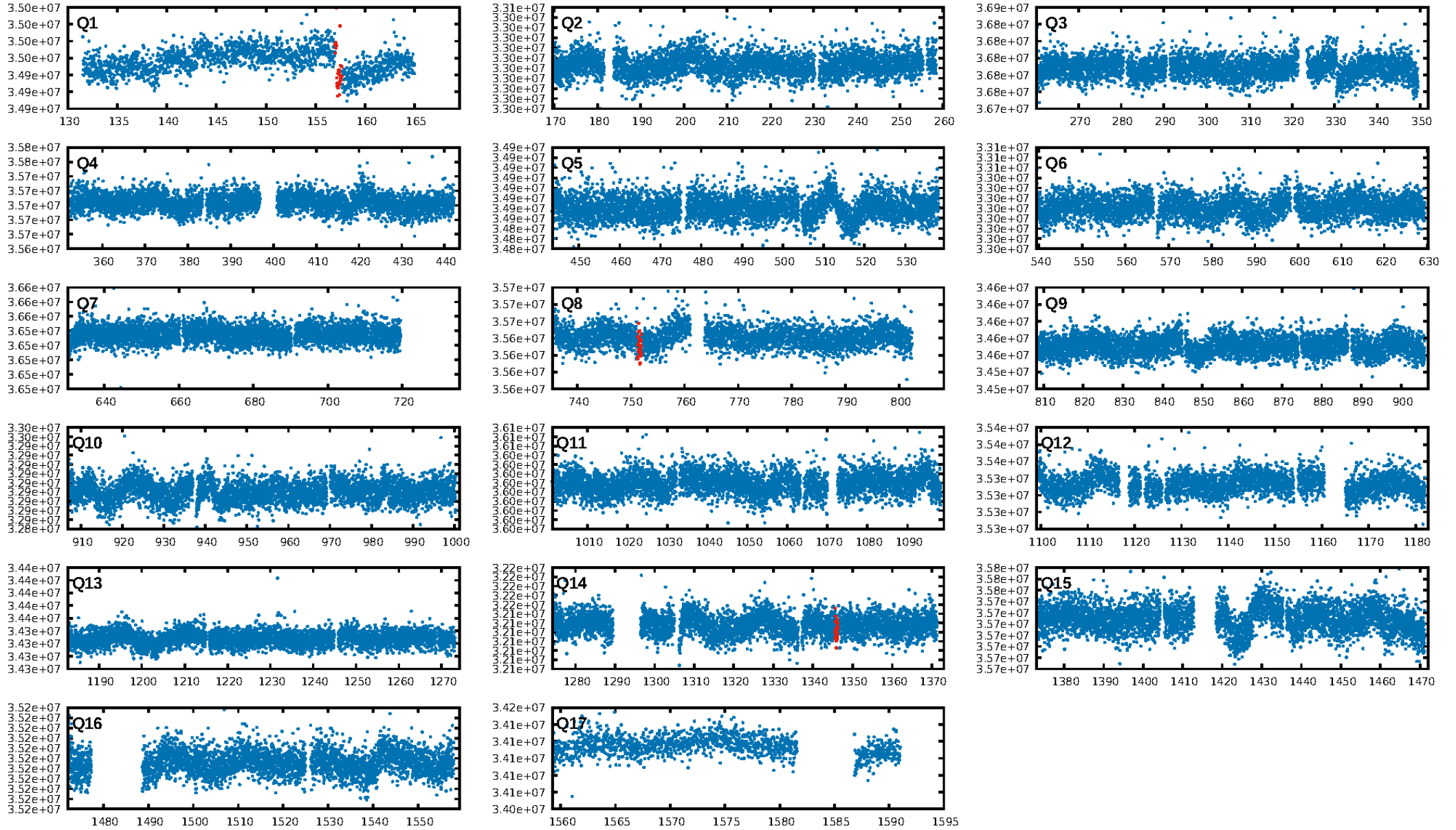
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.2%
ModelChiSquareGof-sig: 90.8%
Bootstrap-pfa: 8.96e-19
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -3.387
Centroid-sig: 1.0%
Centroid-so: 2.329 arcsec [1.48 σ]
OotOffset-rm: 3.598 arcsec [3.05 σ]
KicOffset-rm: 3.622 arcsec [3.24 σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

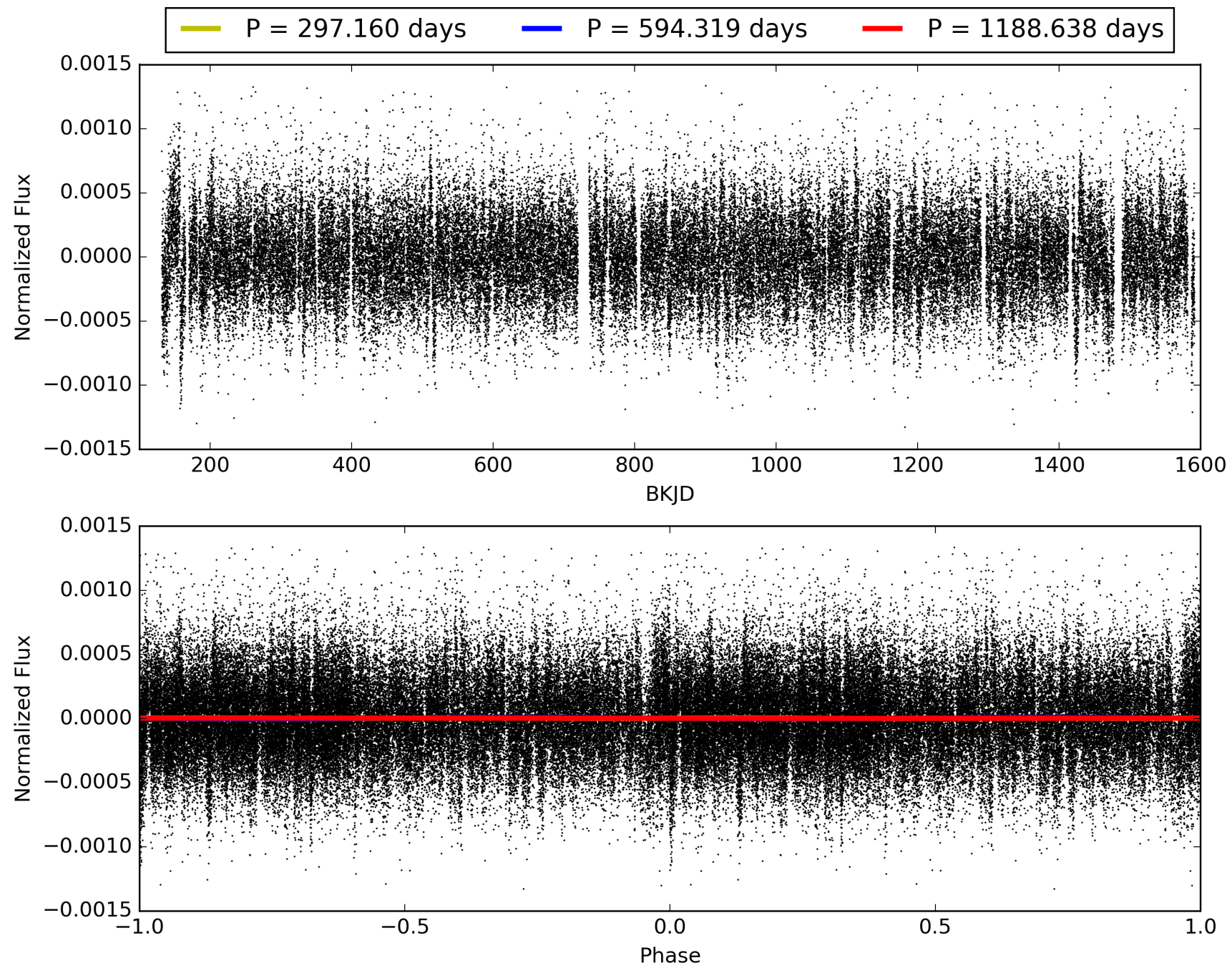
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:58:58 Z

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

TCE 003527325-01, PDC Light Curves

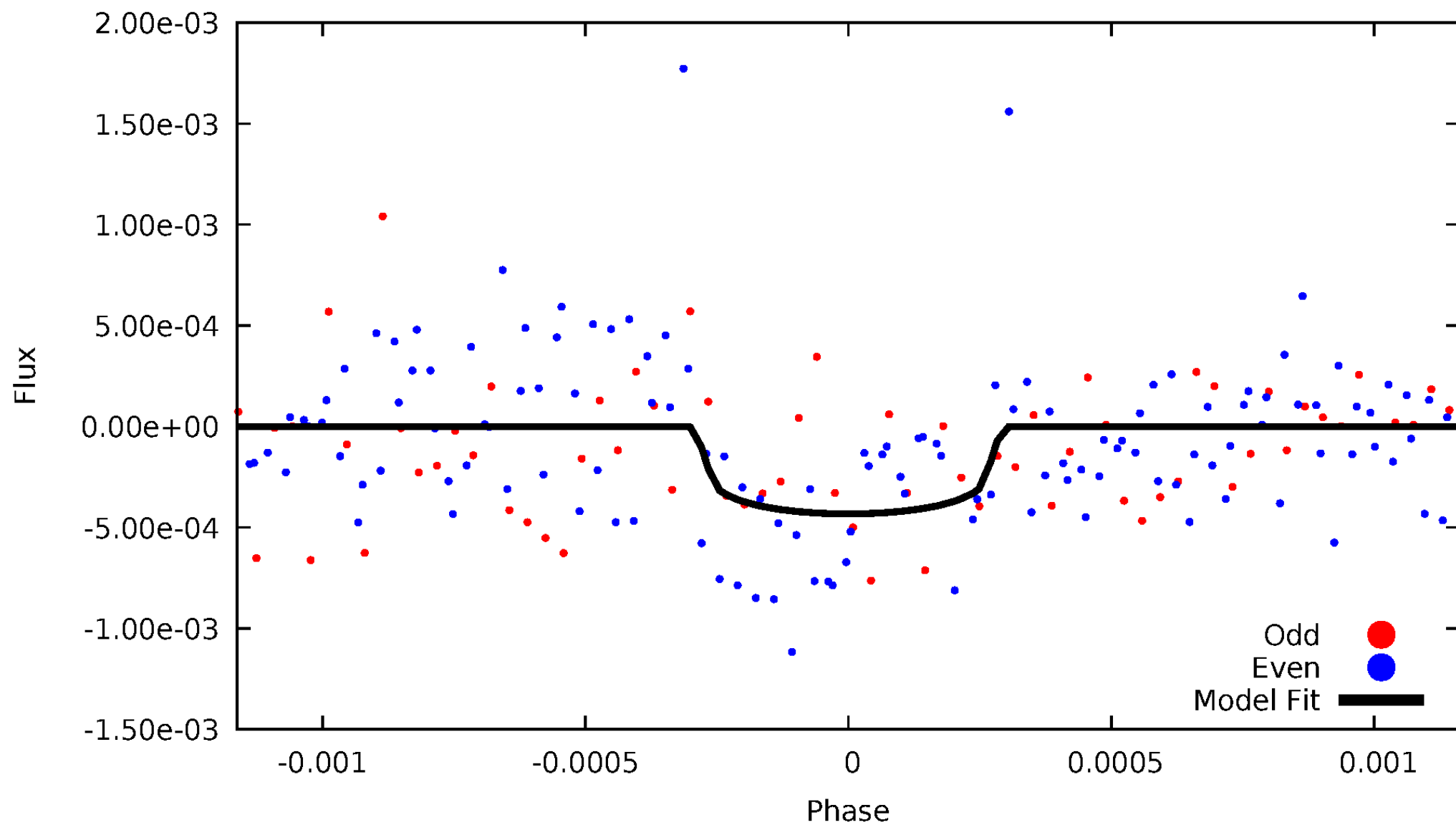


TCE 003527325-01



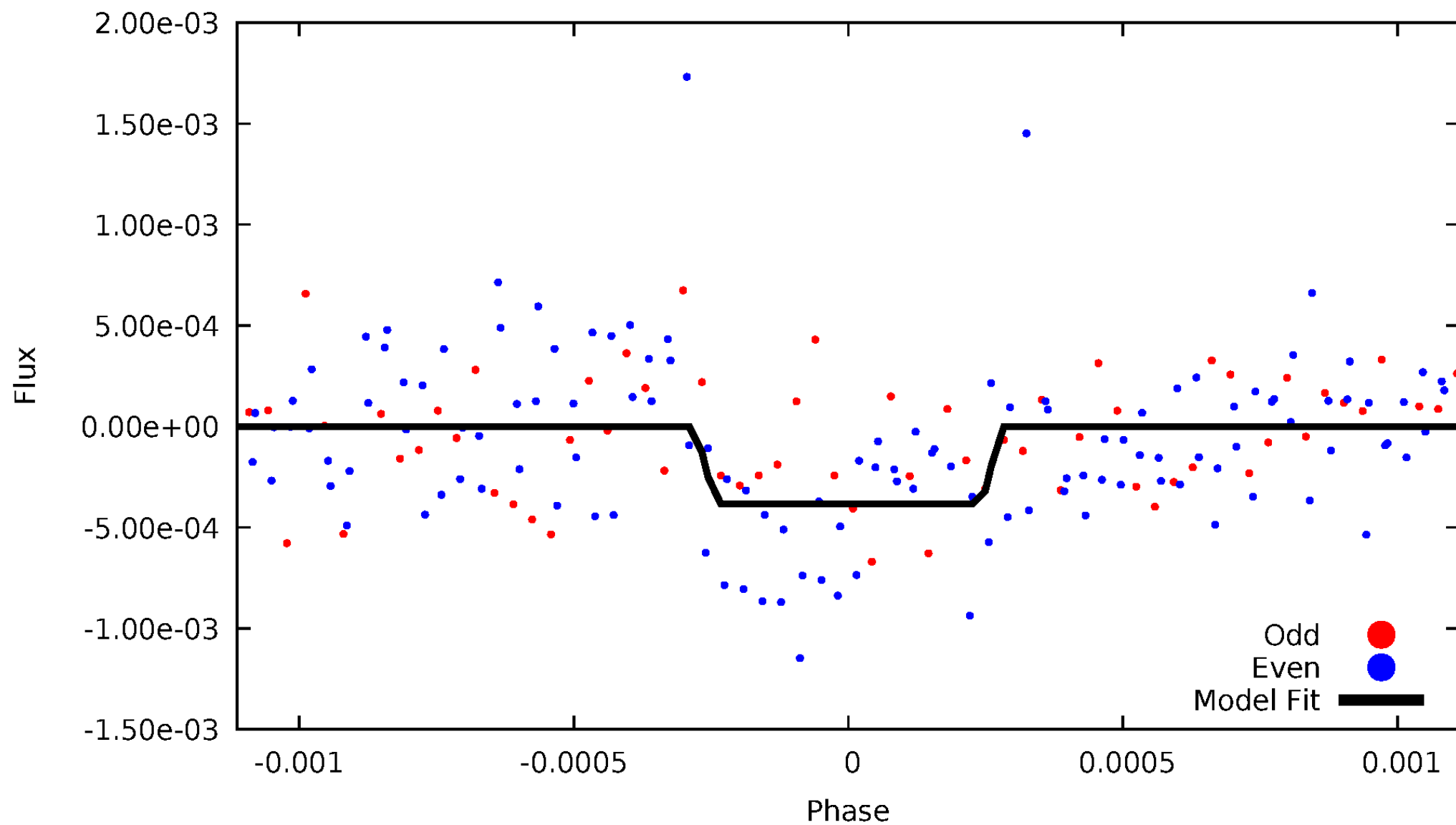
DV Odd/Even

TCE 003527325-01



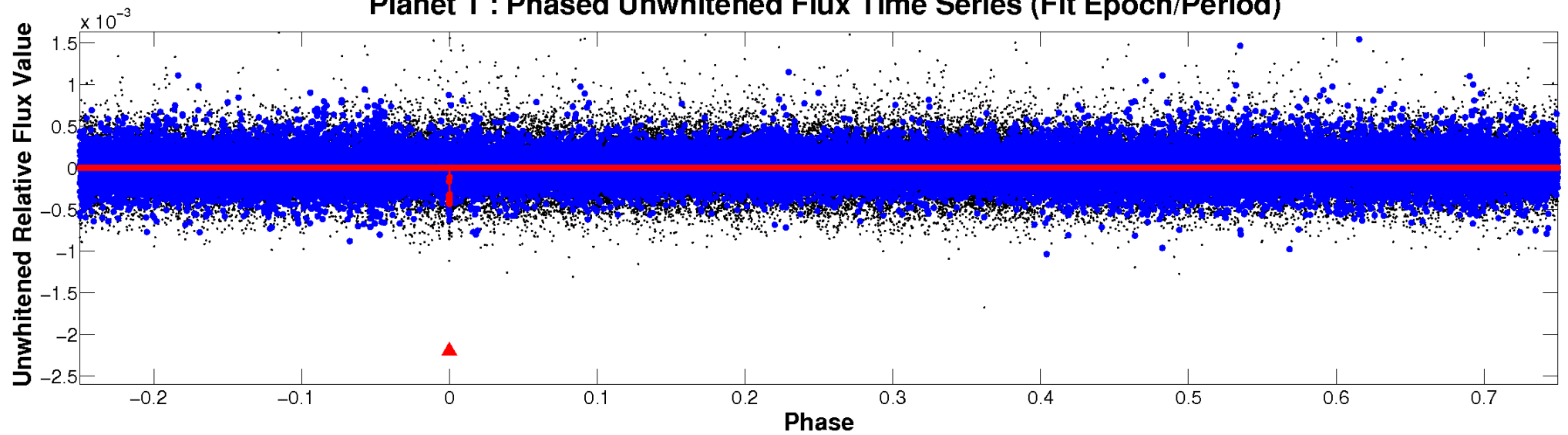
ALT Odd/Even

TCE 003527325-01

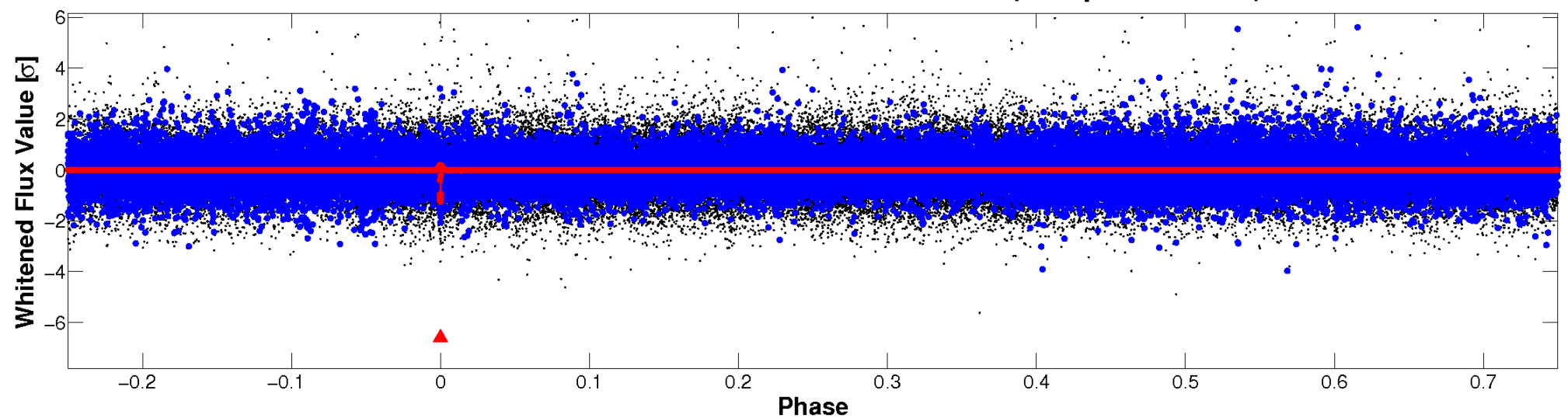


Non-Whitened Vs. Whitened Light Curve

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

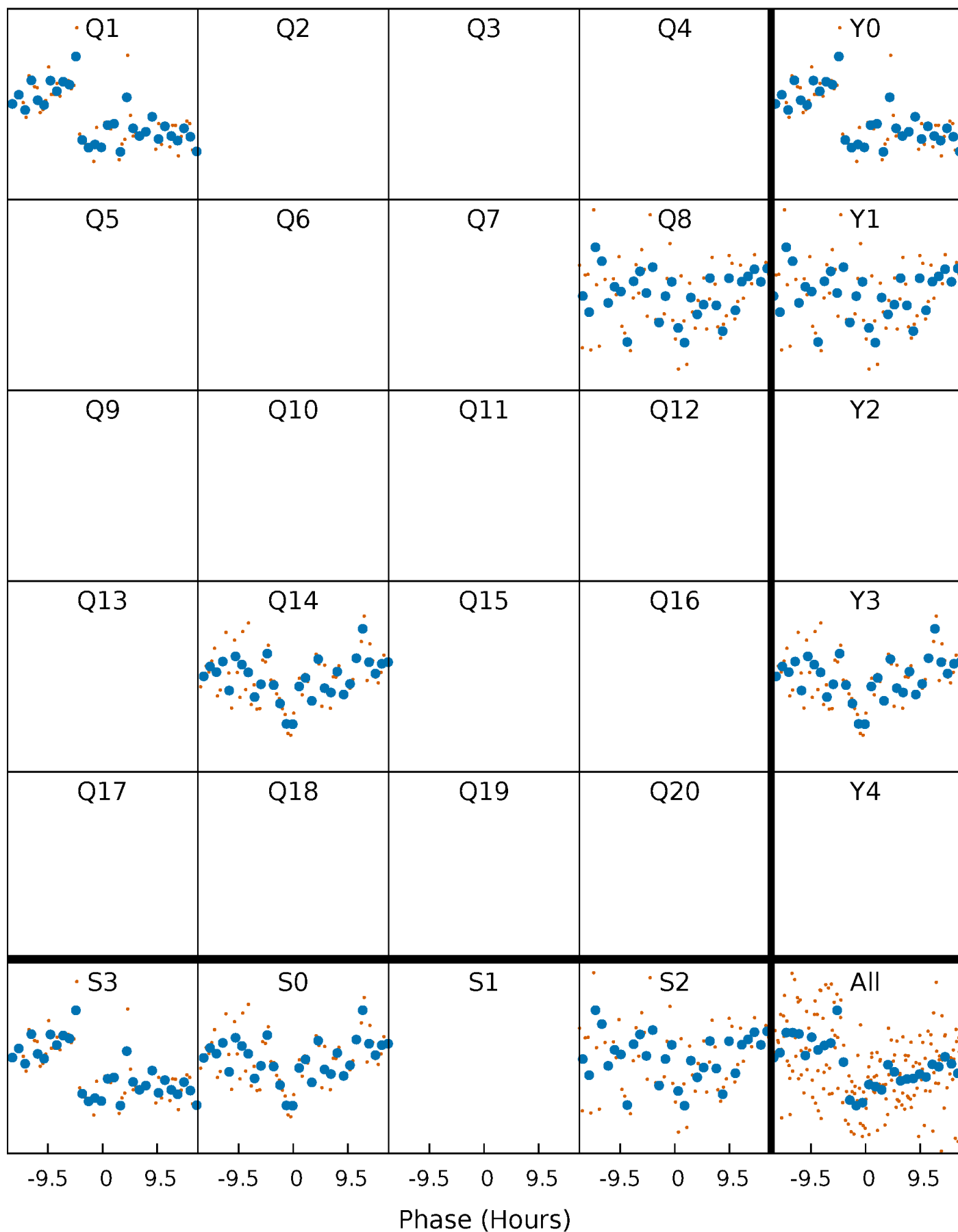


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



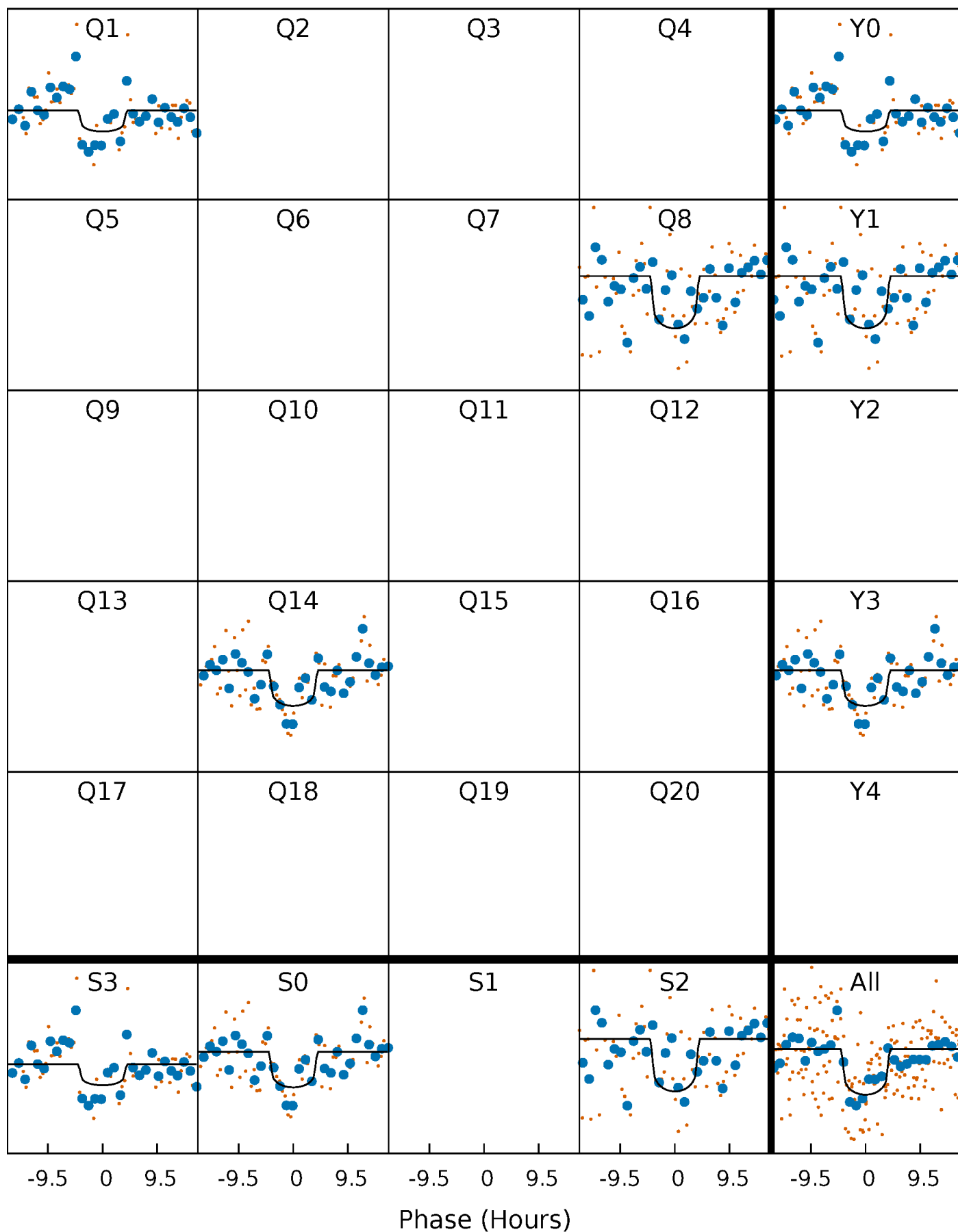
PDC Quarter-Phased Transit Curves

TCE 003527325-01 P=594.319098 Days $T_0=157.303565$ (BKJD)



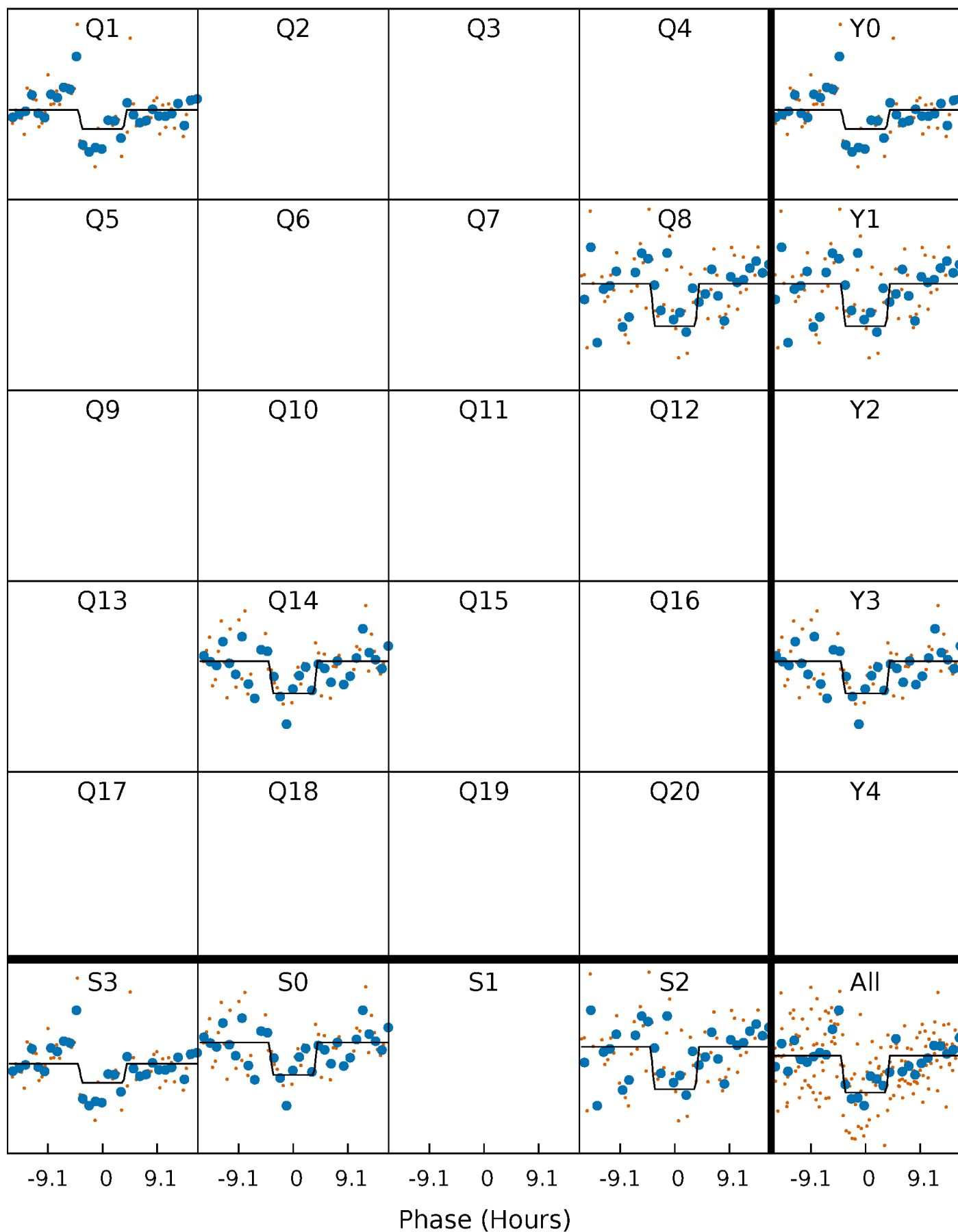
DV Quarter-Phased Transit Curves

TCE 003527325-01 P=594.319098 Days $T_0=157.303565$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

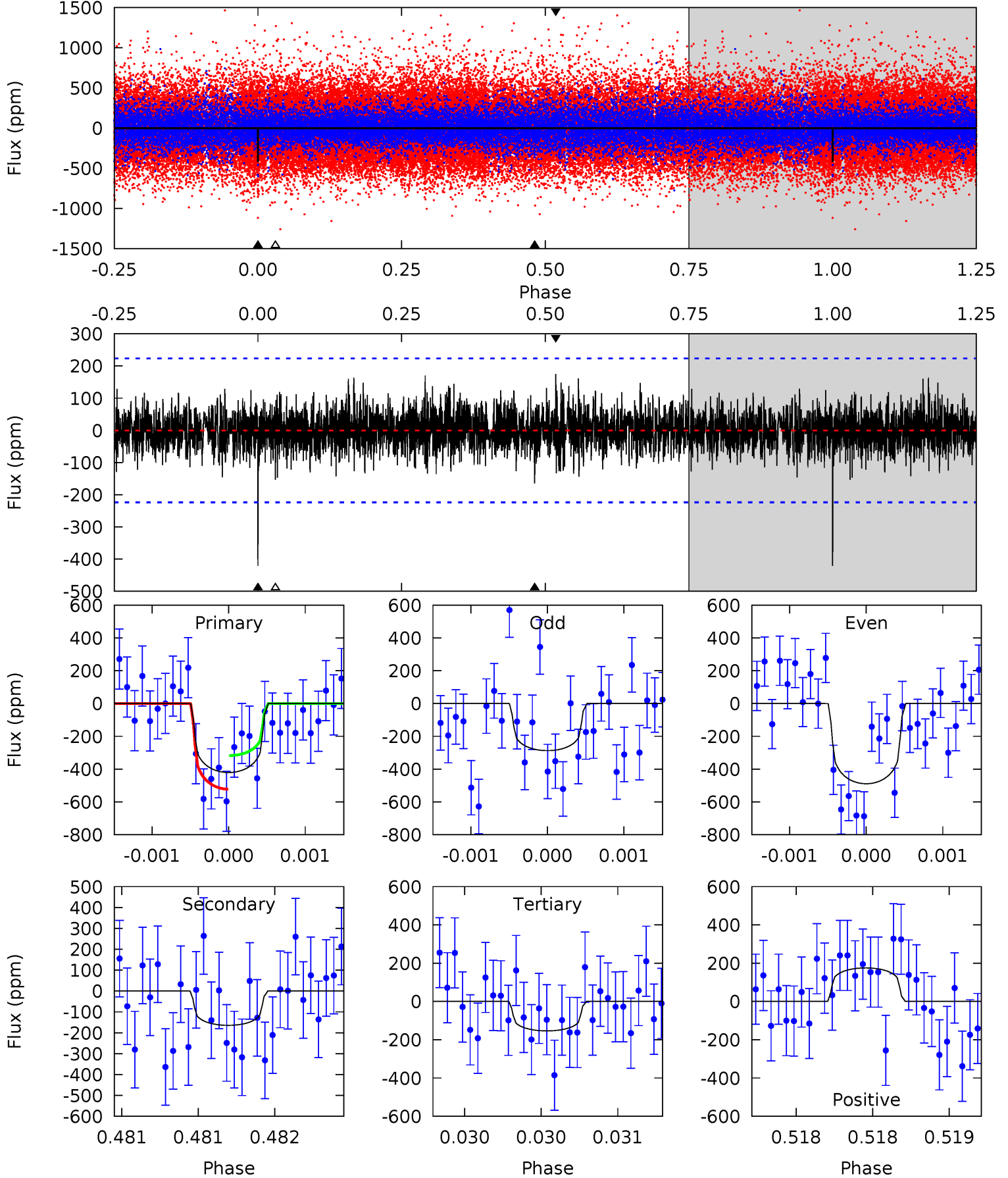
TCE 003527325-01 P=594.330526 Days $T_0=157.292185$ (BKJD)



DV Model-Shift Uniqueness Test

003527325-01, P = 594.319098 Days, E = 157.303565 Days

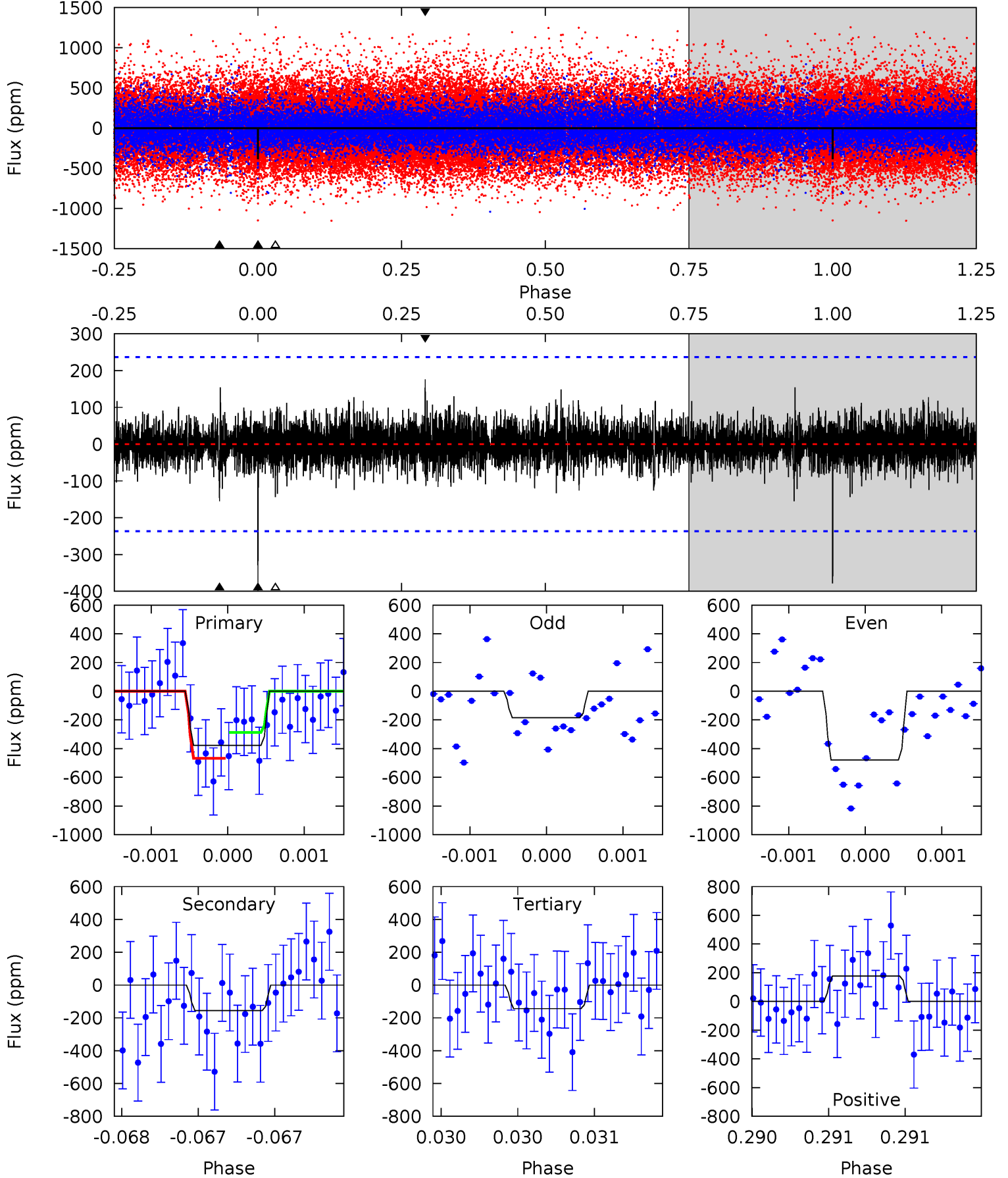
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	4.08	3.81	4.34	5.54	3.43	1.11	6.62	6.09	0.27	-0.27	2.38	1.08	0.29	2.54



Alt Model-Shift Uniqueness Test

003527325-01, P = 594.330526 Days, E = 157.292185 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.89	3.65	3.38	4.14	5.57	3.47	0.86	5.51	4.75	0.27	-0.49	3.30	1.15	0.32	2.12



Stellar Parameters For KIC 003527325

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5693^{+173}_{-155}	$4.547^{+0.060}_{-0.140}$	$-0.520^{+0.300}_{-0.300}$	$0.788^{+0.167}_{-0.077}$	$0.797^{+0.095}_{-0.063}$	$2.297^{+0.668}_{-0.915}$
	+3%/-3%	+1%/-3%	+58%/-58%	+21%/-10%	+12%/-8%	+29%/-40%
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 003527325-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-164 ± 40	$2.04^{+1.55}_{-1.25}$	278^{+15}_{-11}	4417^{+2294}_{-784}	$34334^{+199085}_{-23053}$
Alt.	-155 ± 43	$2.00^{+1.59}_{-1.21}$	278^{+16}_{-11}	4376^{+2305}_{-807}	$33338^{+179982}_{-23283}$

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

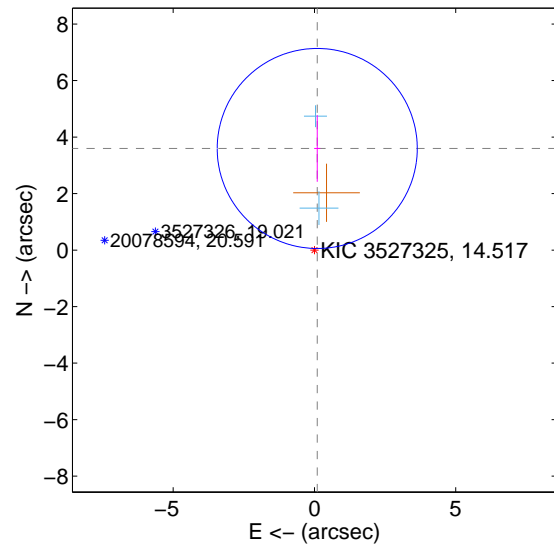
Supplemental centroid analysis for 003527325-01. Kepler magnitude: 14.52. Transit SNR 7.64

There are 2 quarters with good PRF difference image offsets

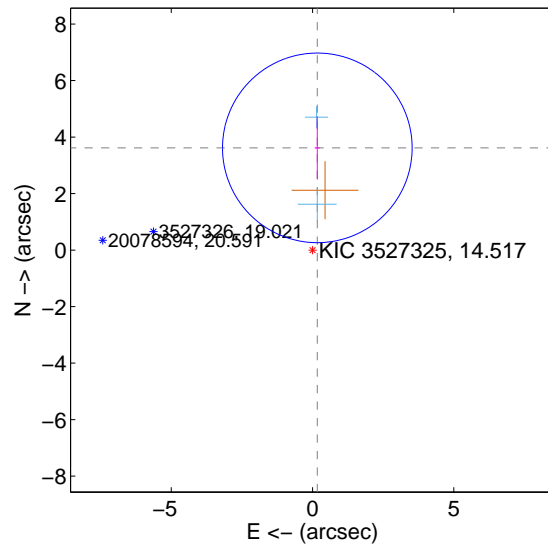
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.598 ± 1.180	3.05	-0.099 ± 0.108	3.596 ± 1.180
PRF-fit source offset from KIC position	3.622 ± 1.118	3.24	-0.170 ± 0.093	3.618 ± 1.120
photometric centroid source offset	2.33 ± 1.57	1.48	-1.11 ± 1.38	2.05 ± 1.62

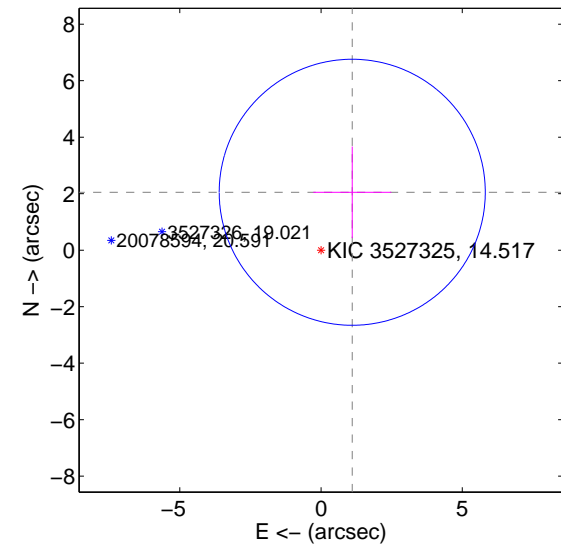
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

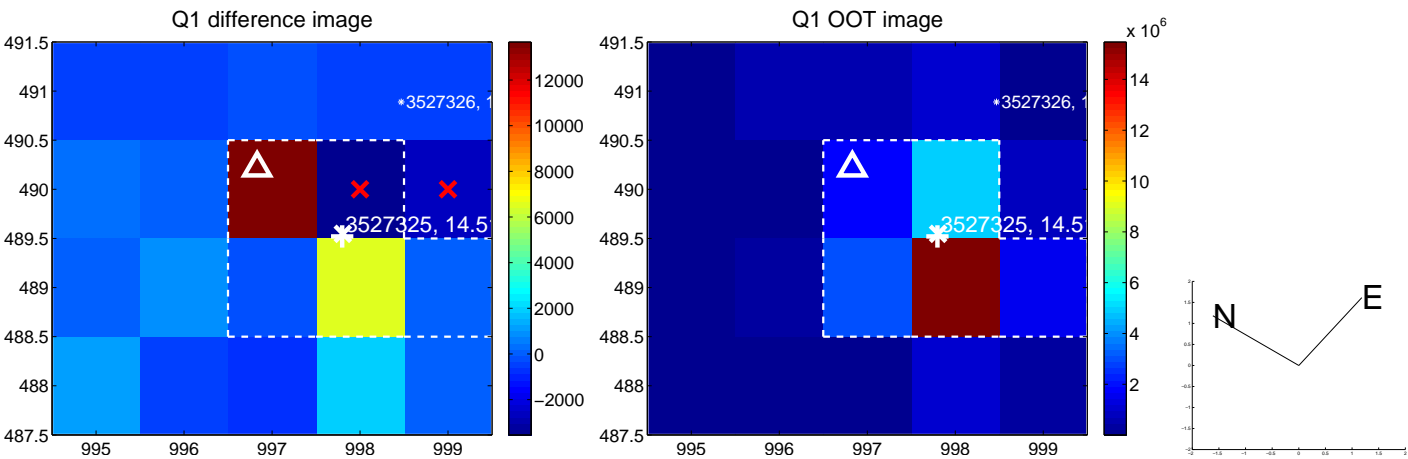


offset from photometric centroids

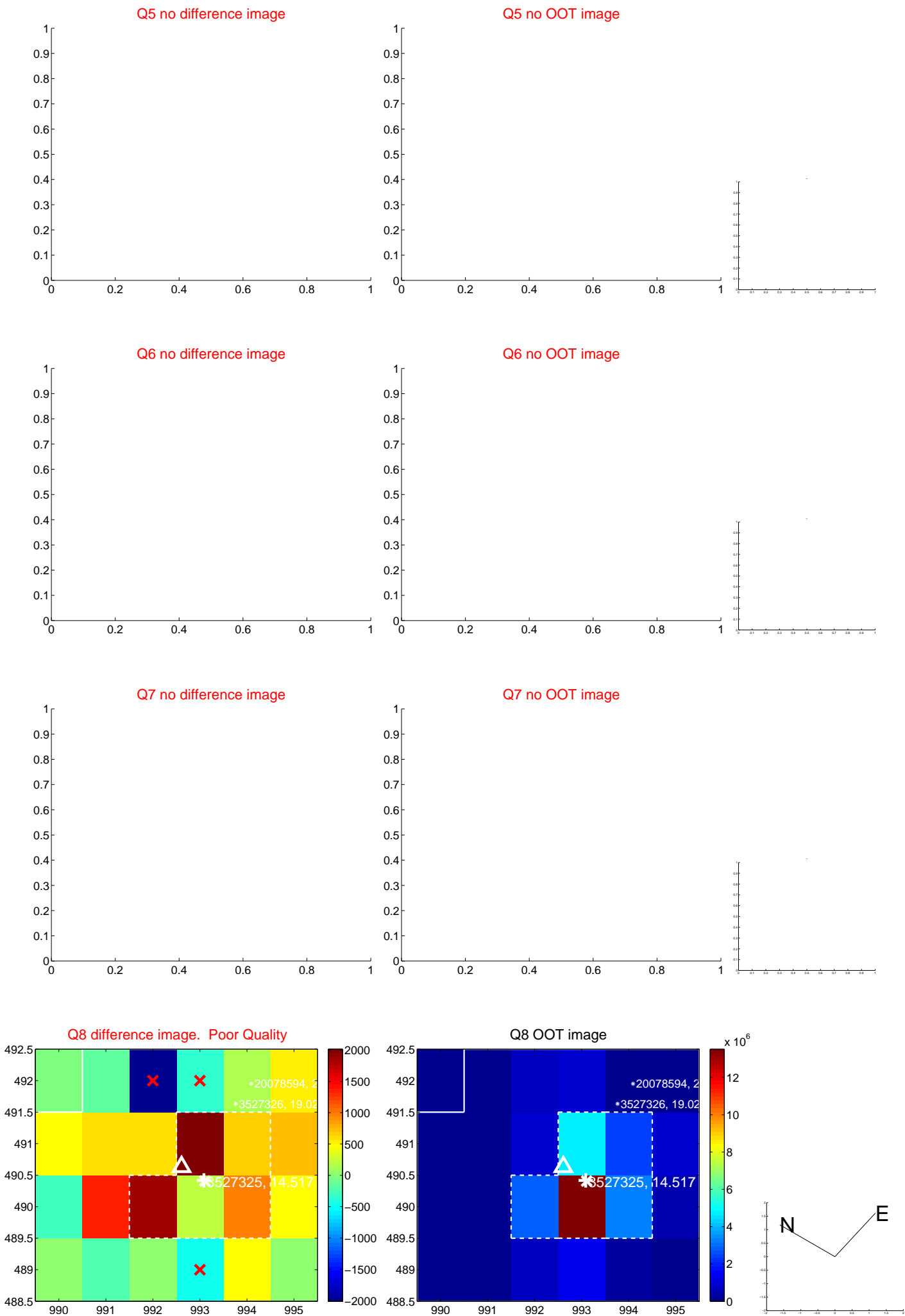


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



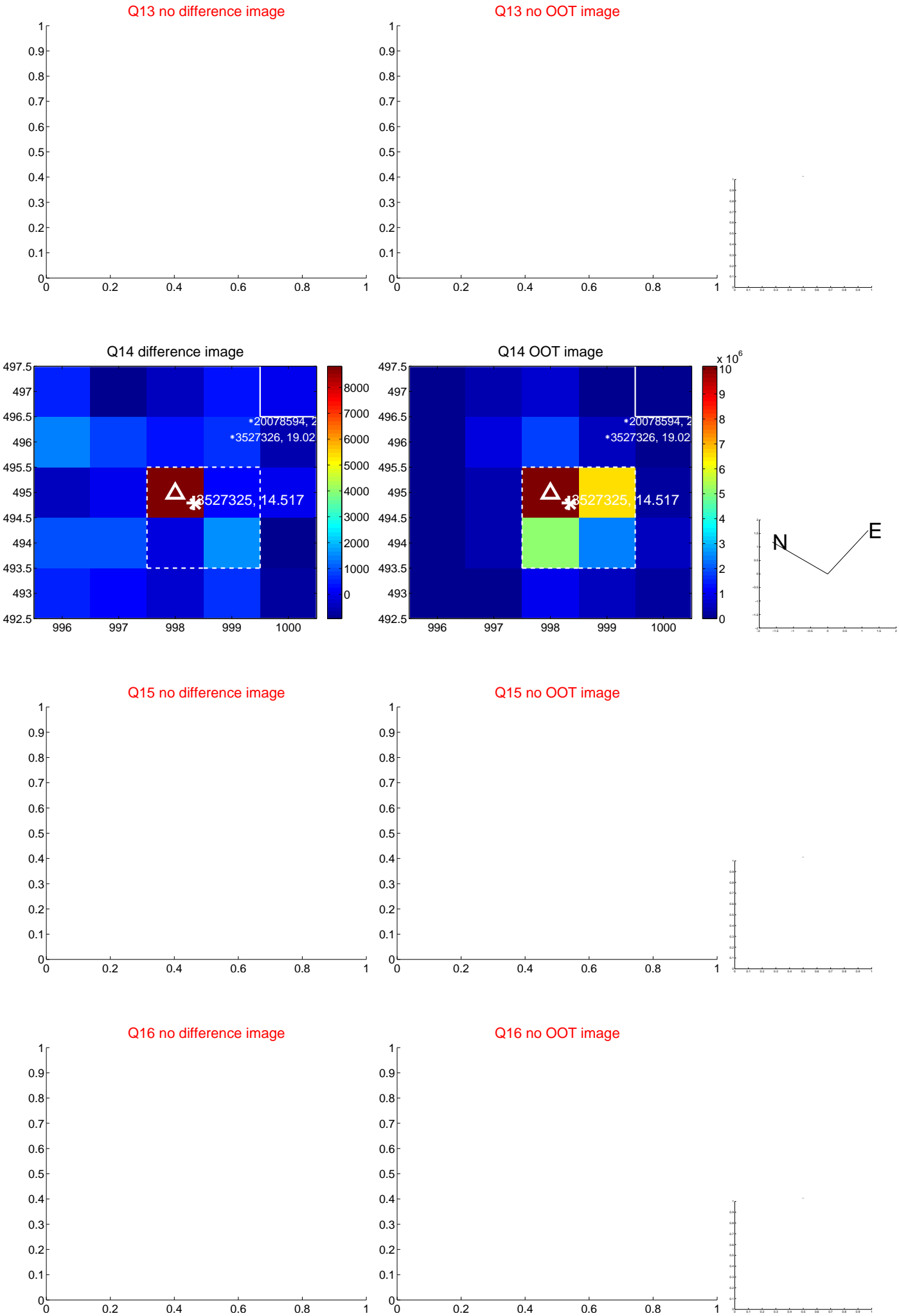
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



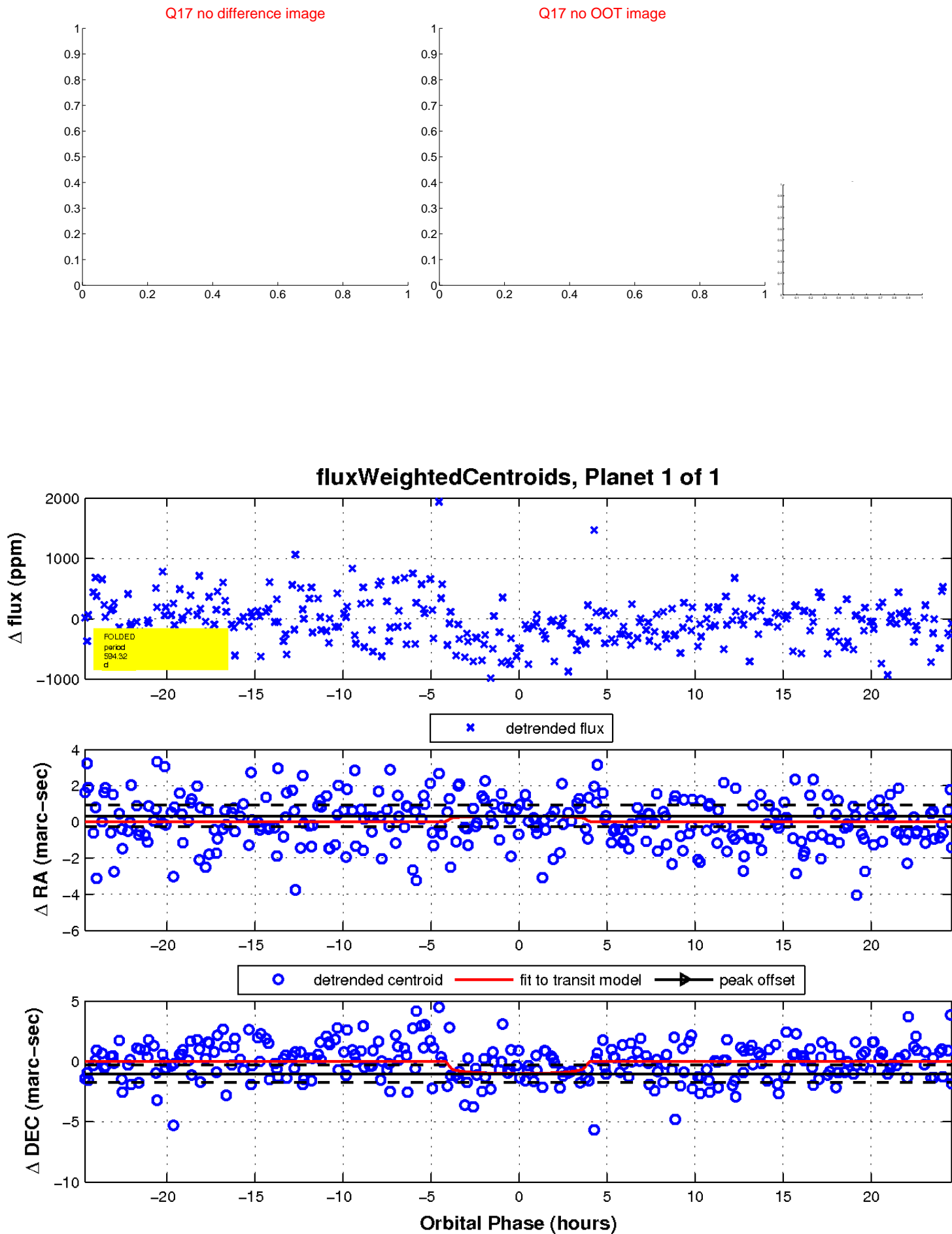
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

