

KIC 004048325

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})
004048325-01	OBS	No	429.825992	549.034905	317.8	6.099	7.2	7.1	0.98	5557	1.93	0.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004048325-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

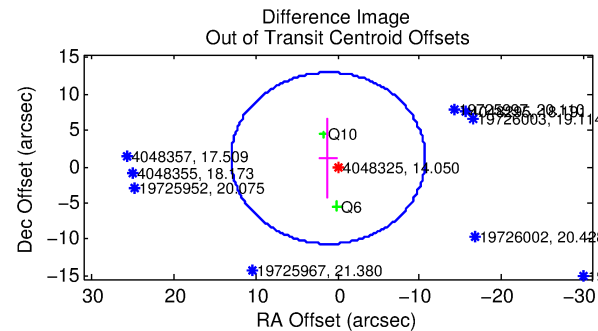
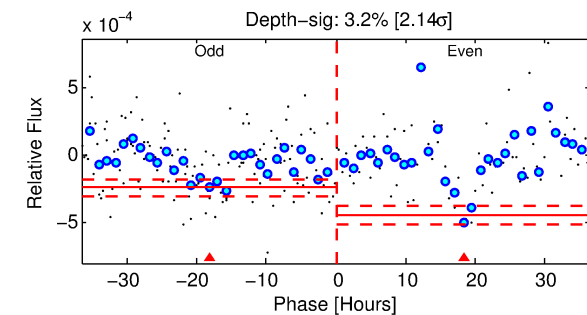
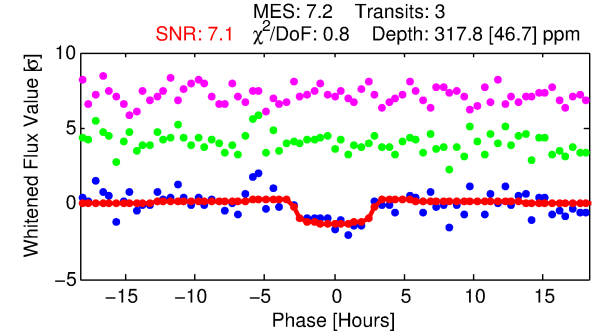
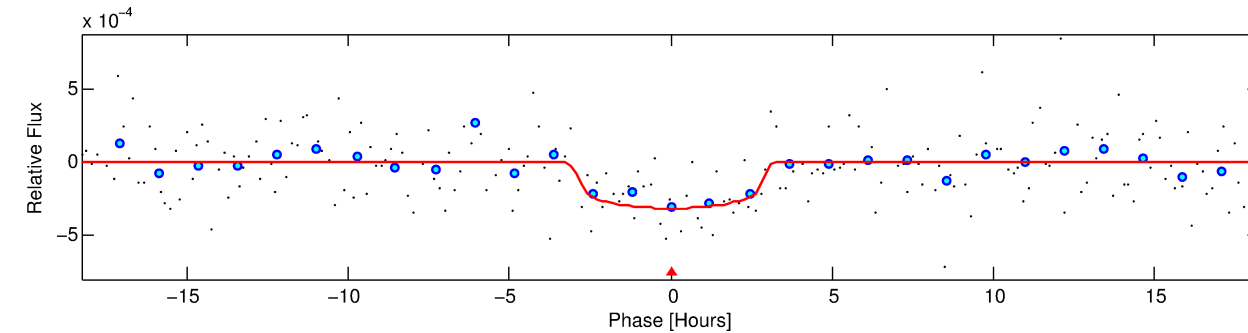
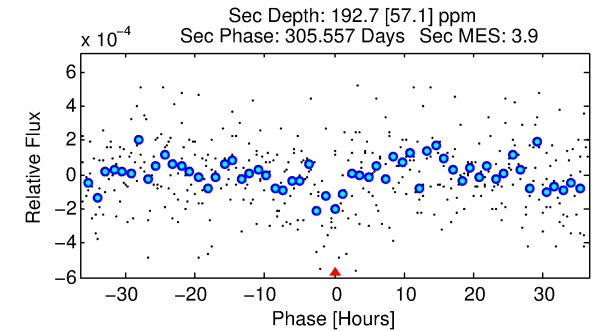
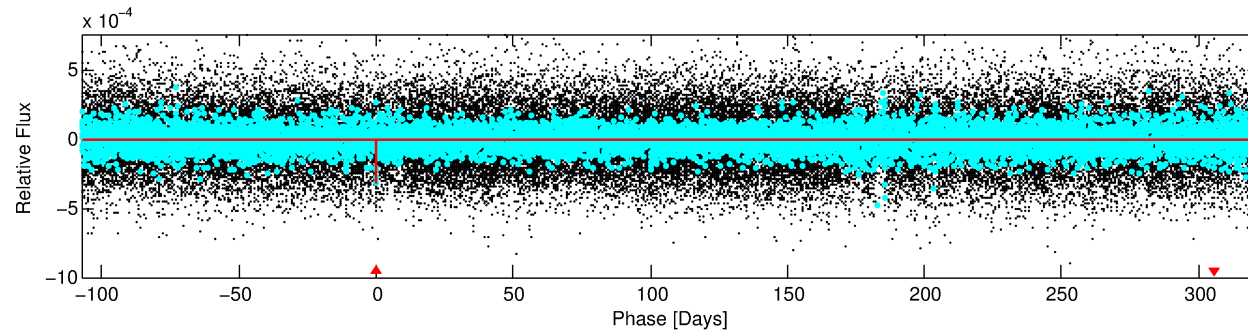
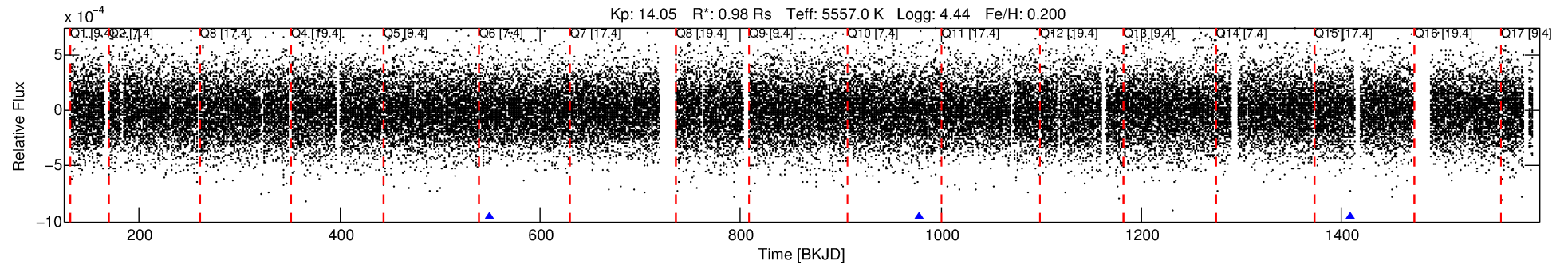
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004048325-01

No Significant Match Found

DV One-Page Summary

KIC: 4048325 Candidate: 1 of 1 Period: 429.826 d



DV Fit Results:

Period = 429.82599 [0.01055] d
Epoch = 549.0349 [0.0139] BKJD
Rp/R* = 0.0180 [0.0209]
a/R* = 352.76 [1679.22]
b = 0.78 [2.44]
Seff = 0.68 [0.13]
Teq = 231 [11] K
Rp = 1.93 [2.25] Re
a = 1.1024 [0.1363] AU
Ag = 34716.14 [81589.80] [0.43σ]
Teffp = 4881 [2859] K [1.63σ]

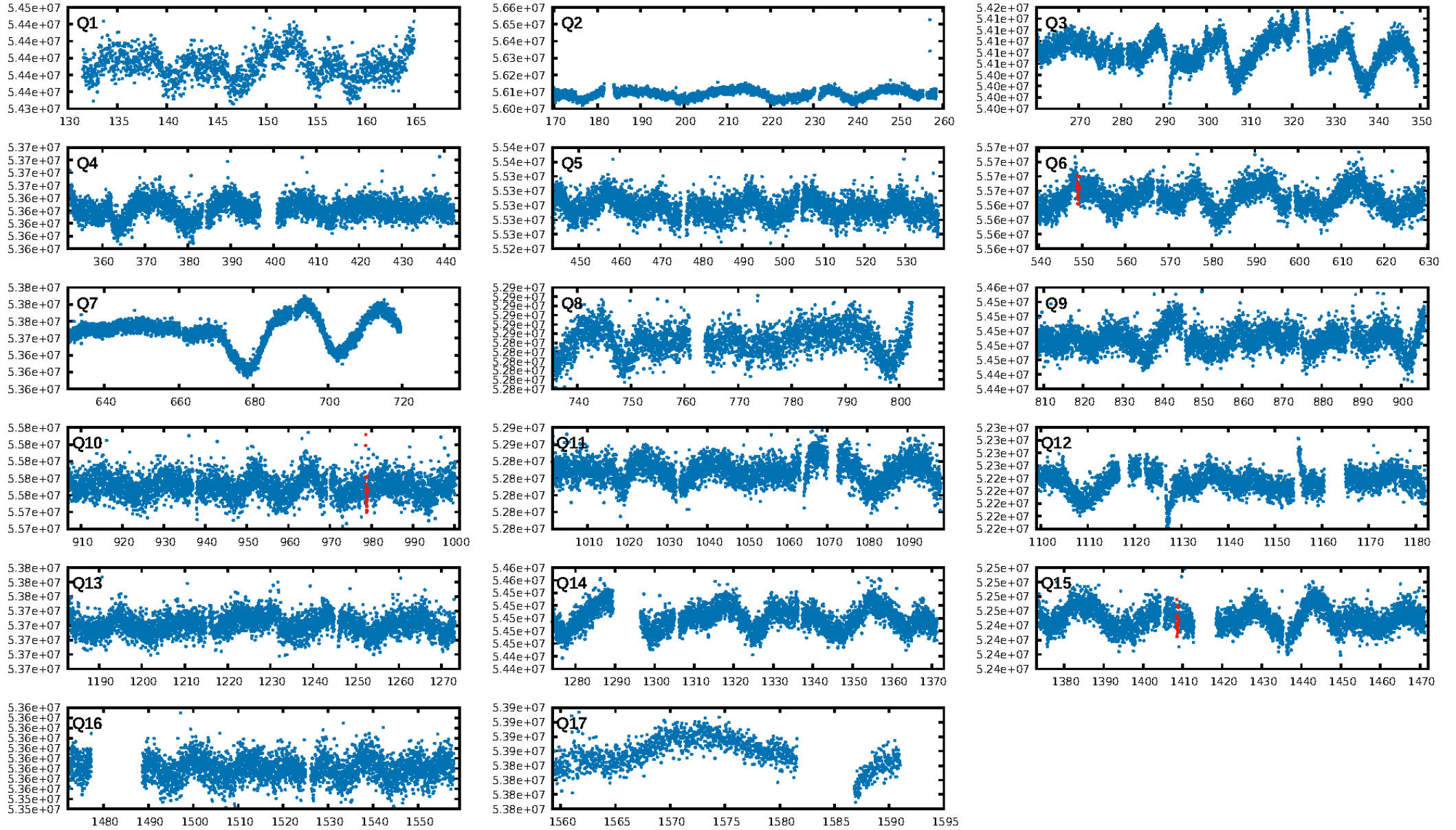
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 26.1%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 1.38e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 24.83
Centroid-sig: 31.2%
Centroid-so: 1.531 arcsec [0.90σ]
OotOffset-rm: 1.643 arcsec [0.42σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-rm: 1.360 arcsec [0.37σ]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

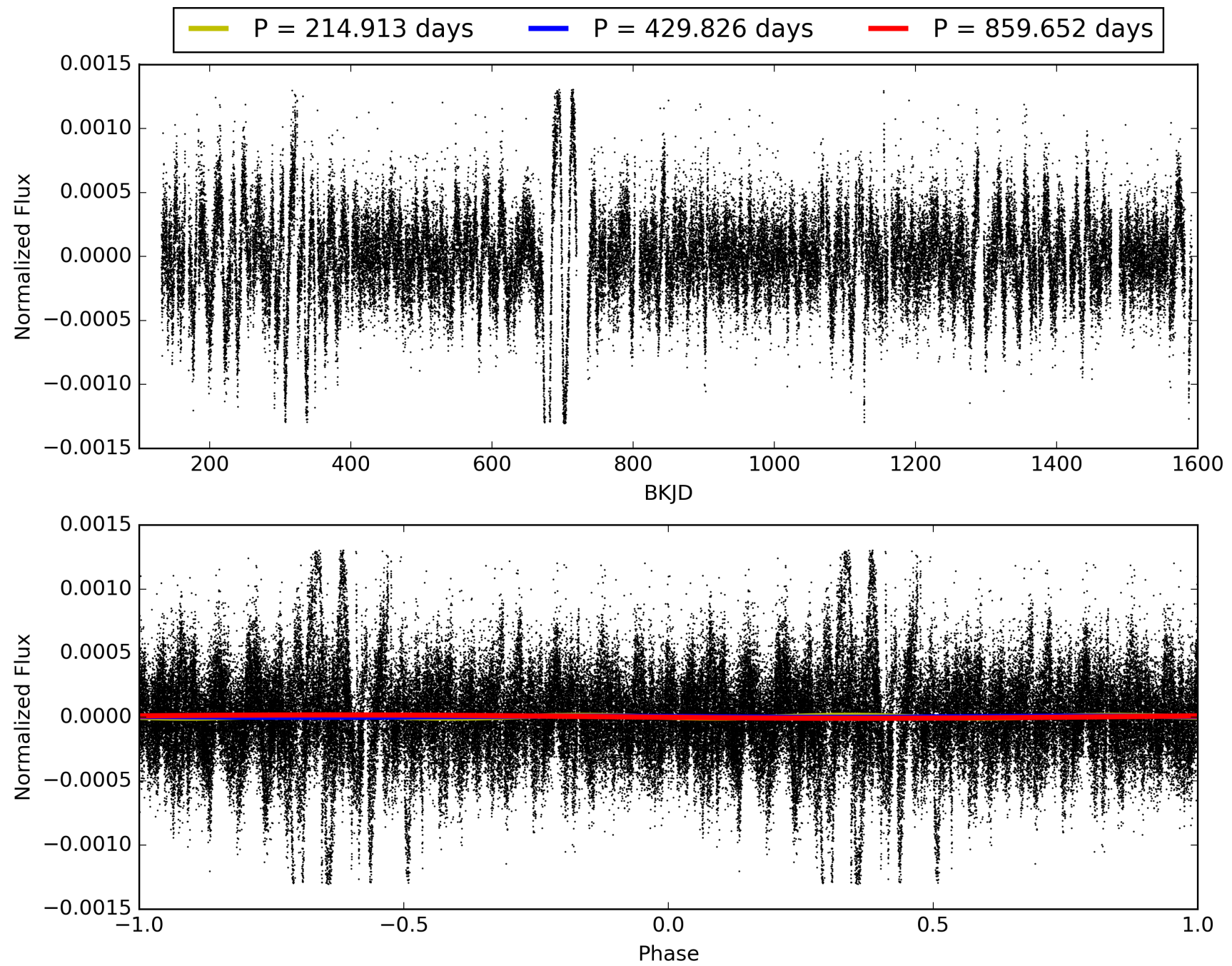
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:47:45 Z

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

TCE 004048325-01, PDC Light Curves

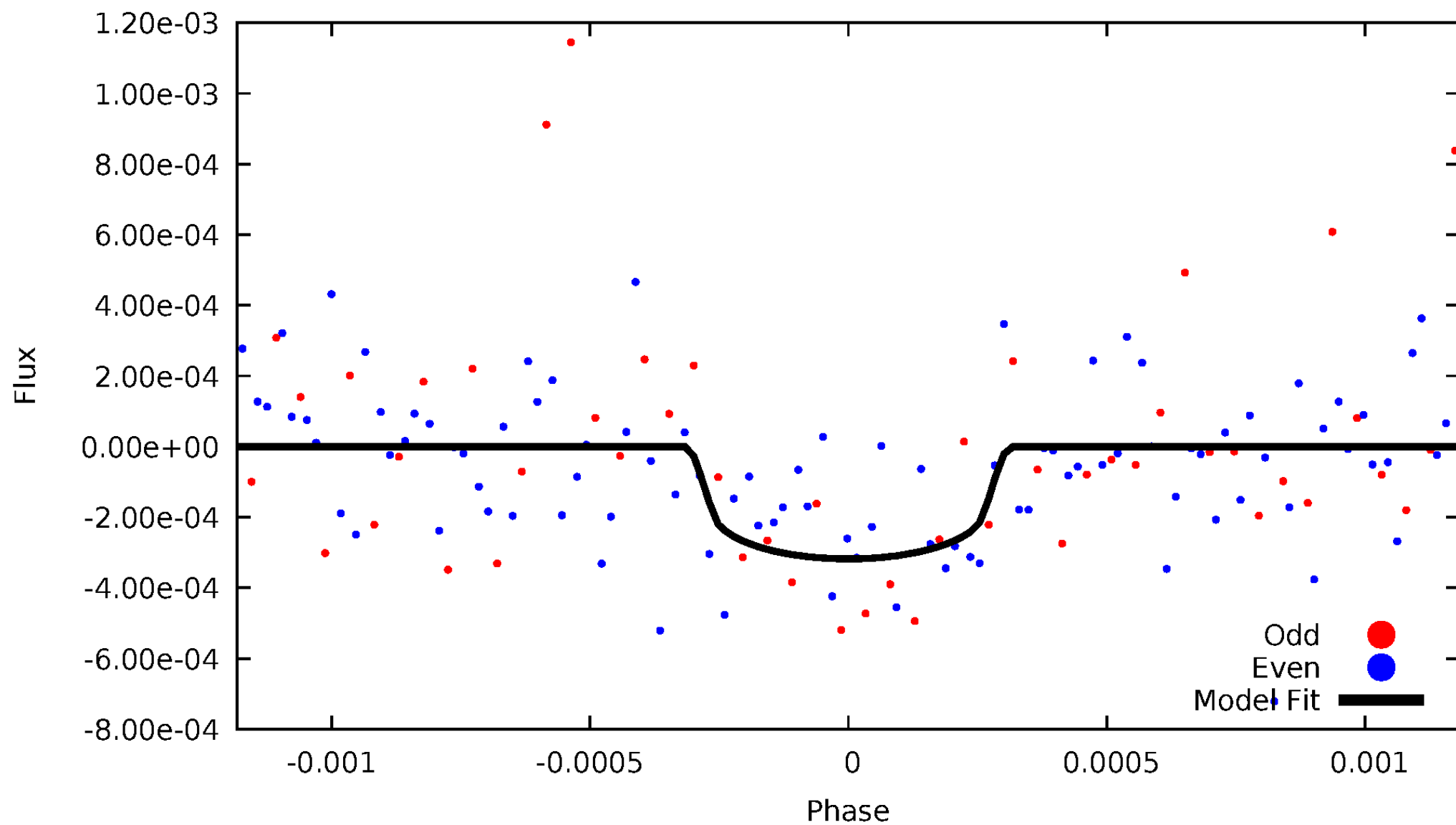


TCE 004048325-01



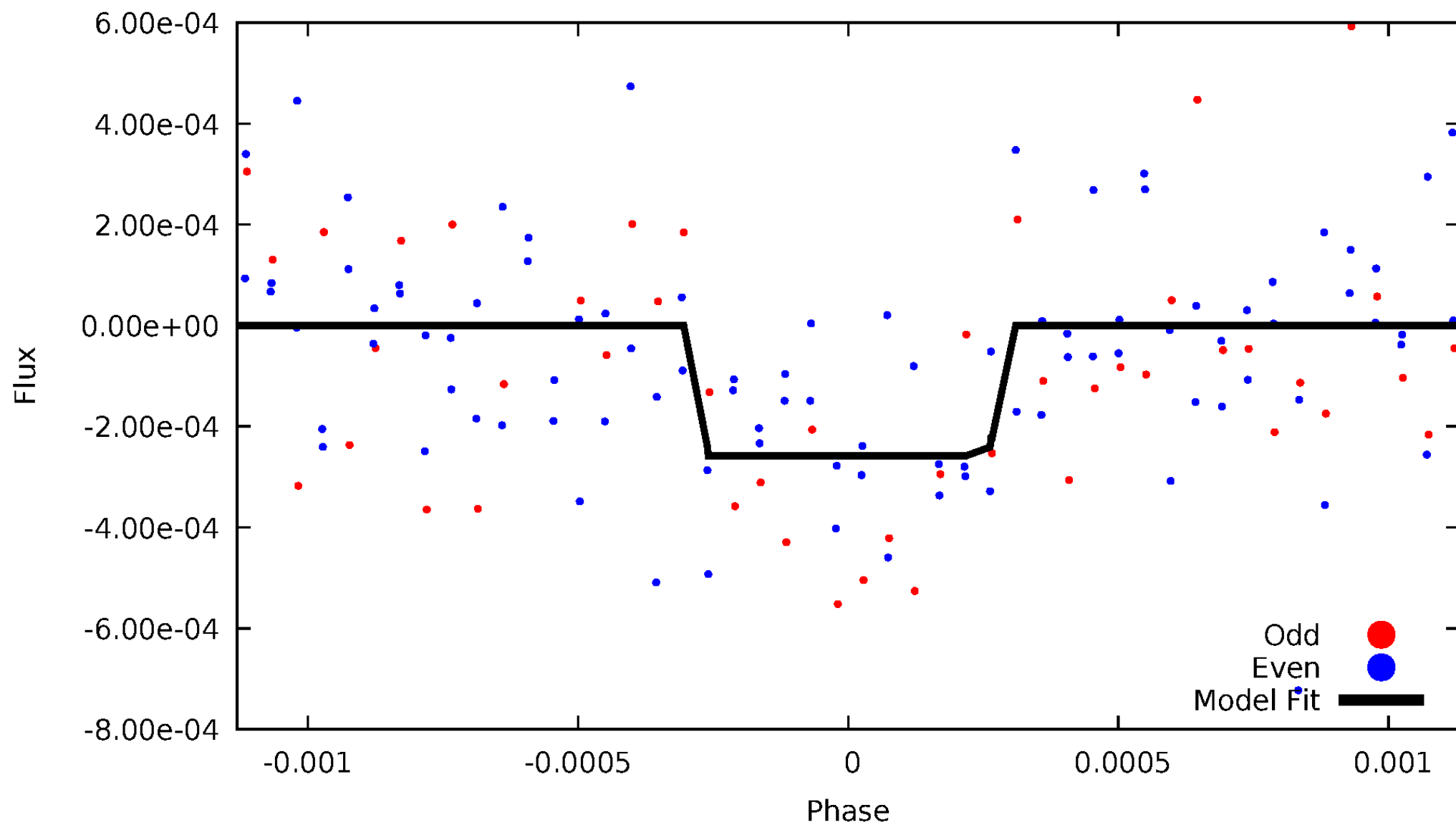
DV Odd/Even

TCE 004048325-01



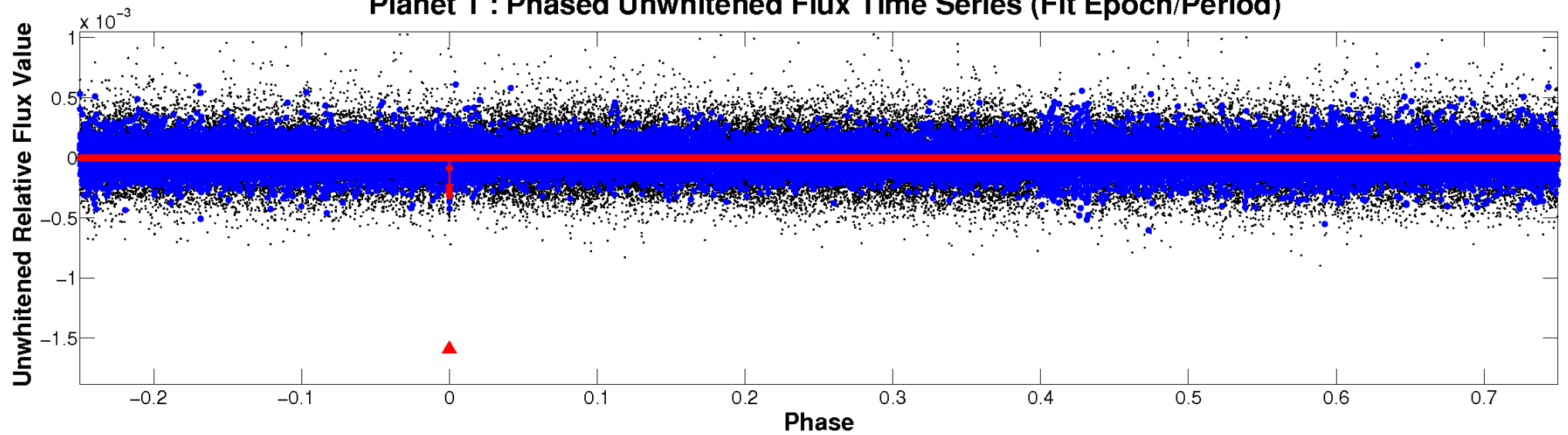
ALT Odd/Even

TCE 004048325-01

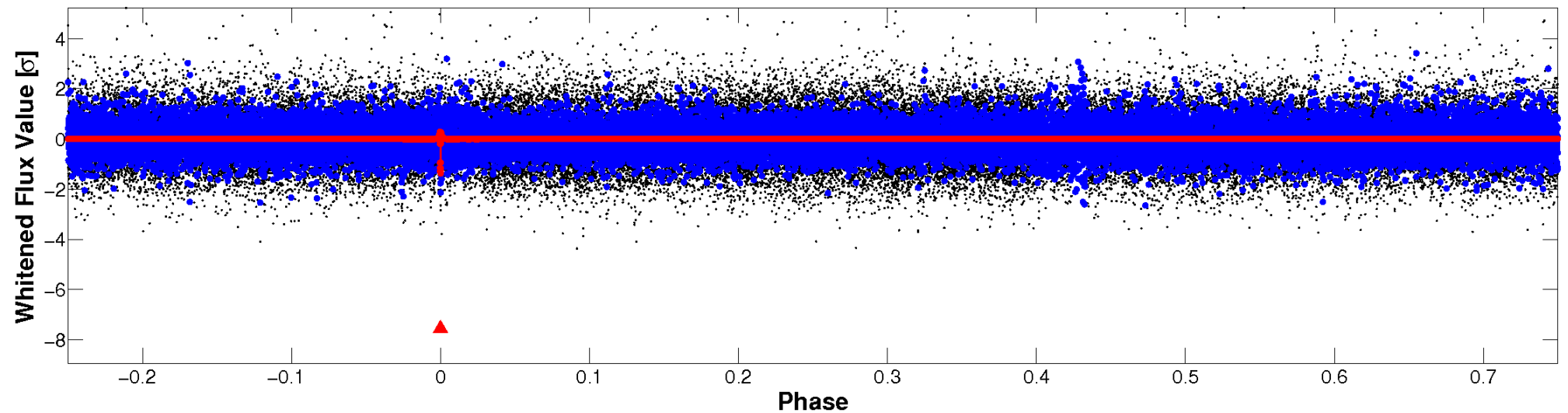


Non-Whitened Vs. Whitened Light Curve

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

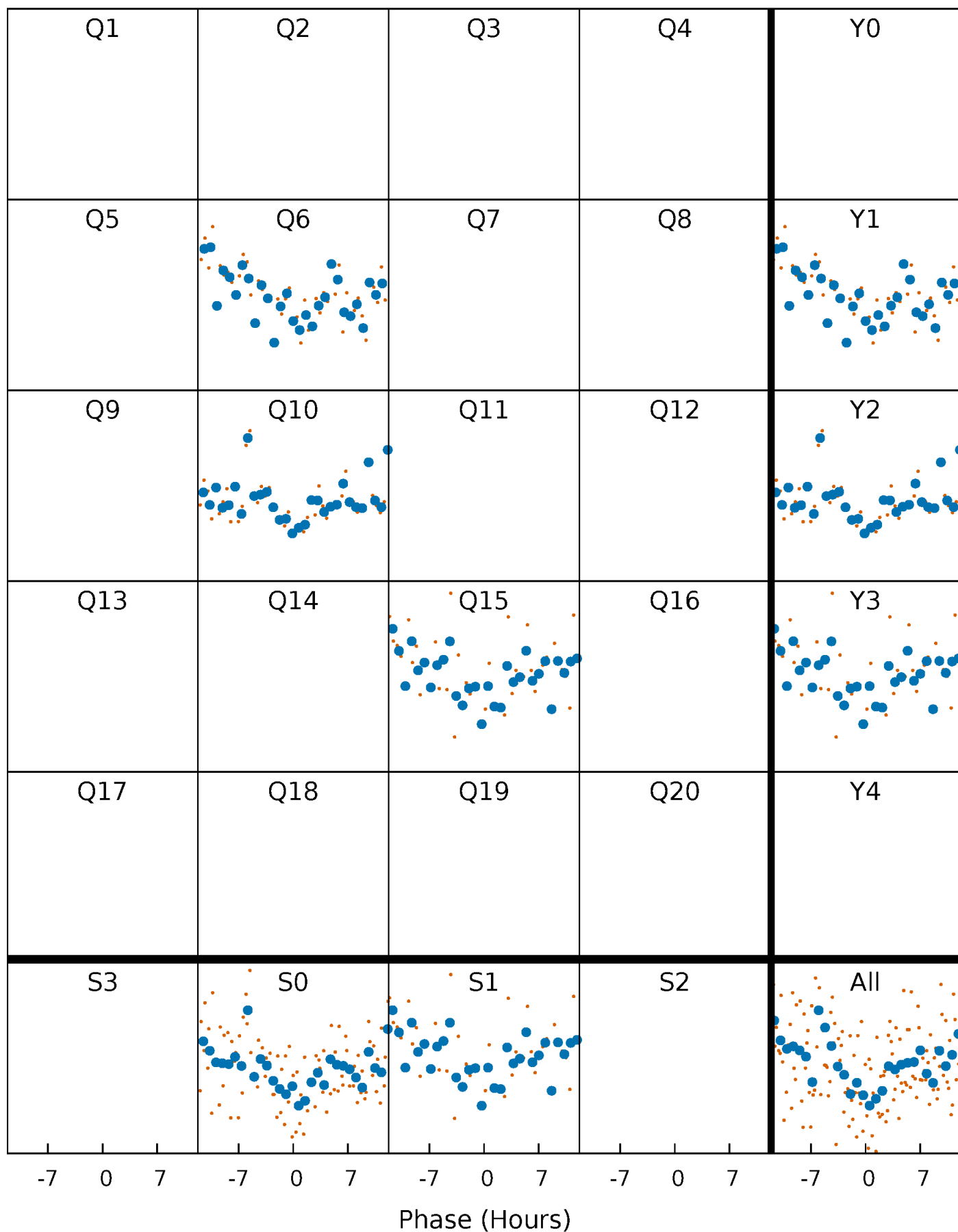


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



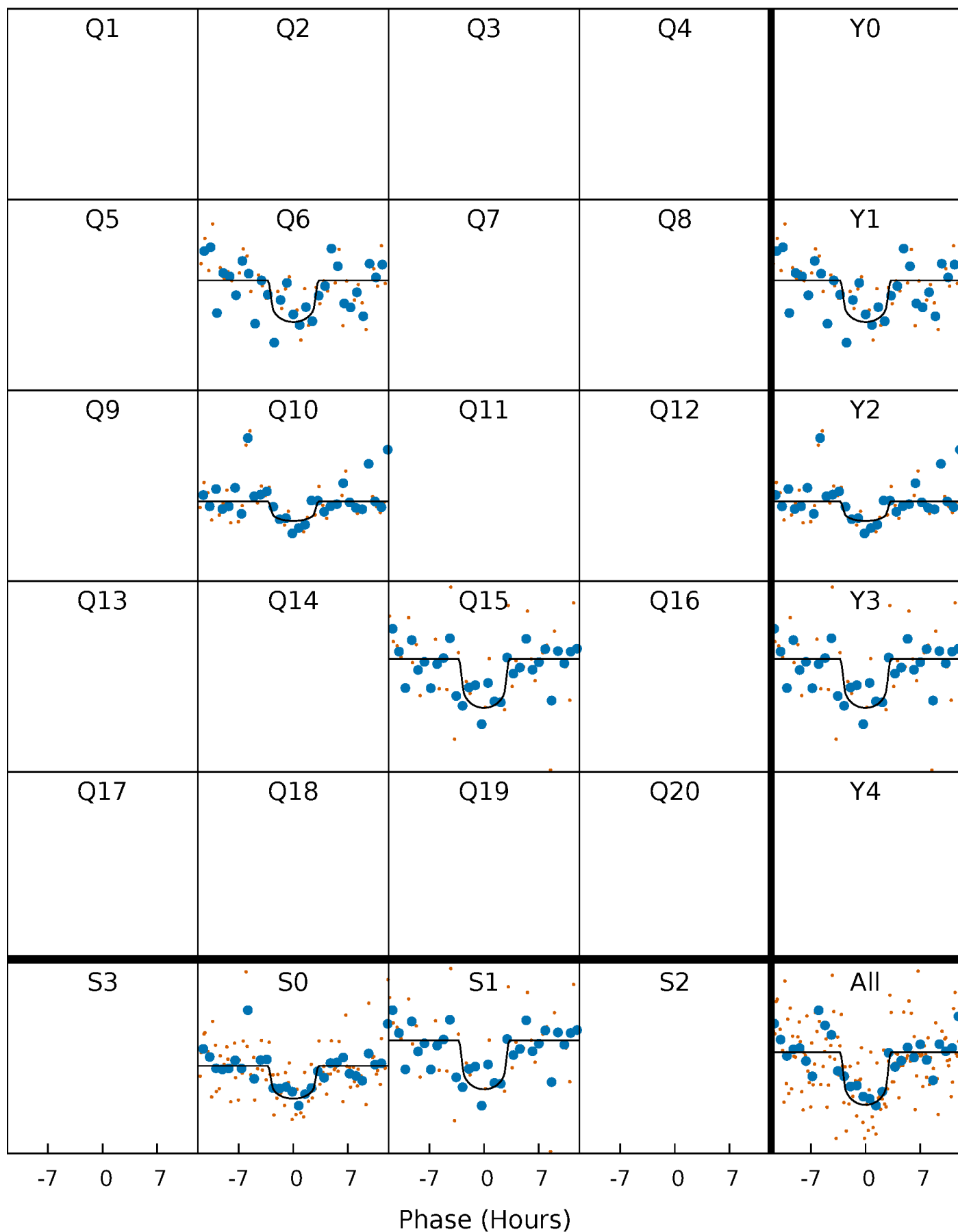
PDC Quarter-Phased Transit Curves

TCE 004048325-01 P=429.825992 Days $T_0=549.034905$ (BKJD)



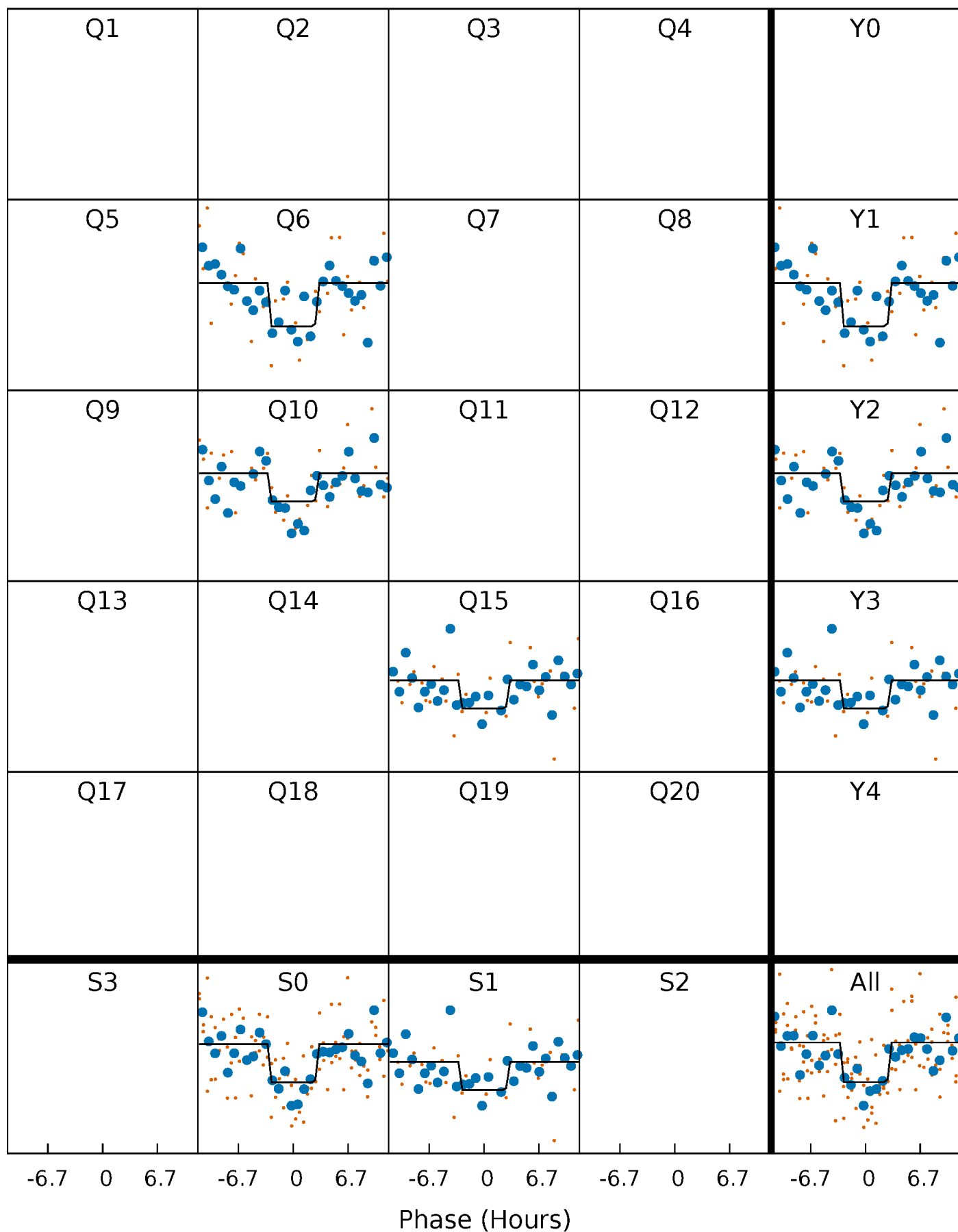
DV Quarter-Phased Transit Curves

TCE 004048325-01 P=429.825992 Days $T_0=549.034905$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

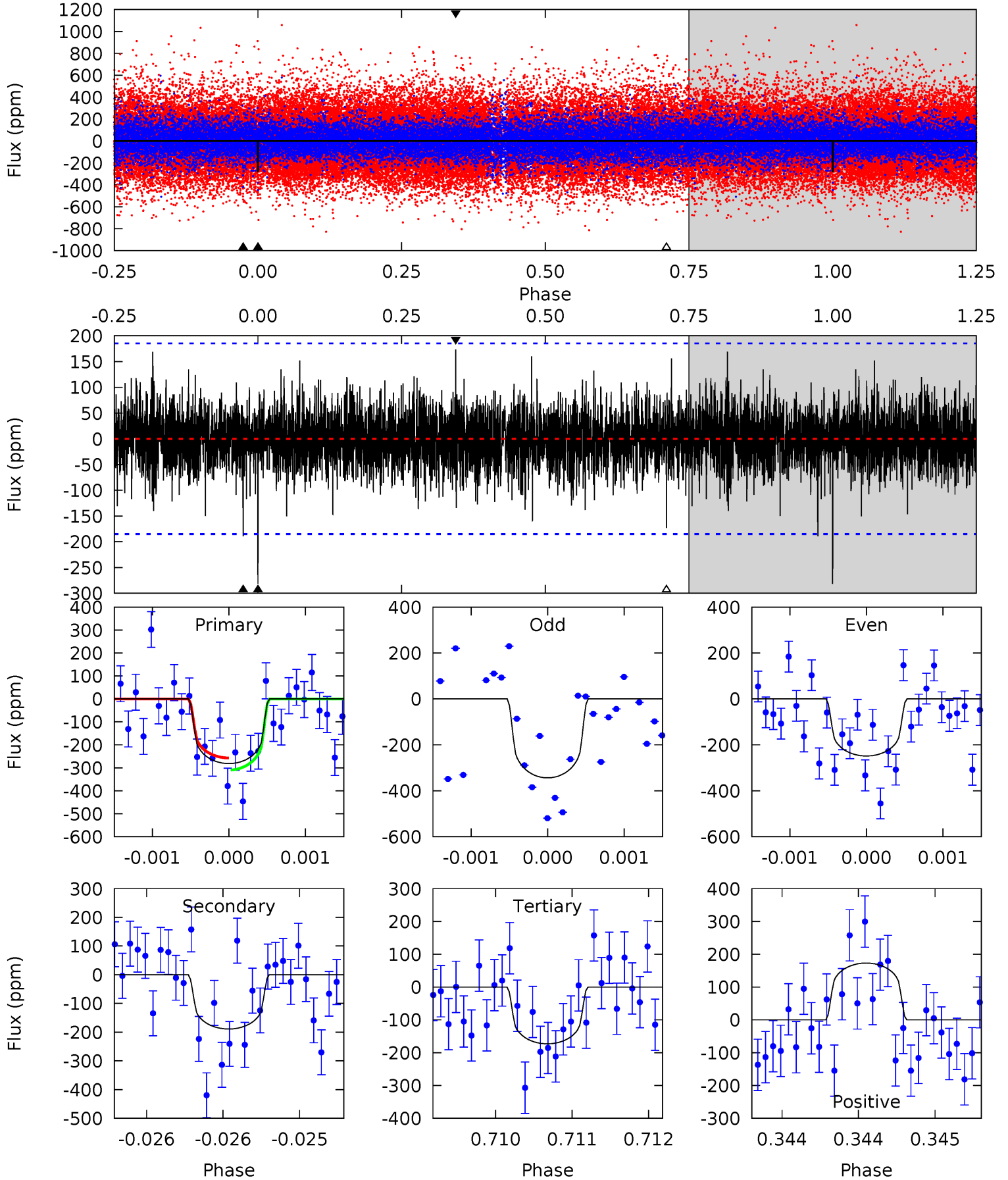
TCE 004048325-01 P=429.819935 Days $T_0=549.043350$ (BKJD)



DV Model-Shift Uniqueness Test

004048325-01, P = 429.825992 Days, E = 119.208913 Days

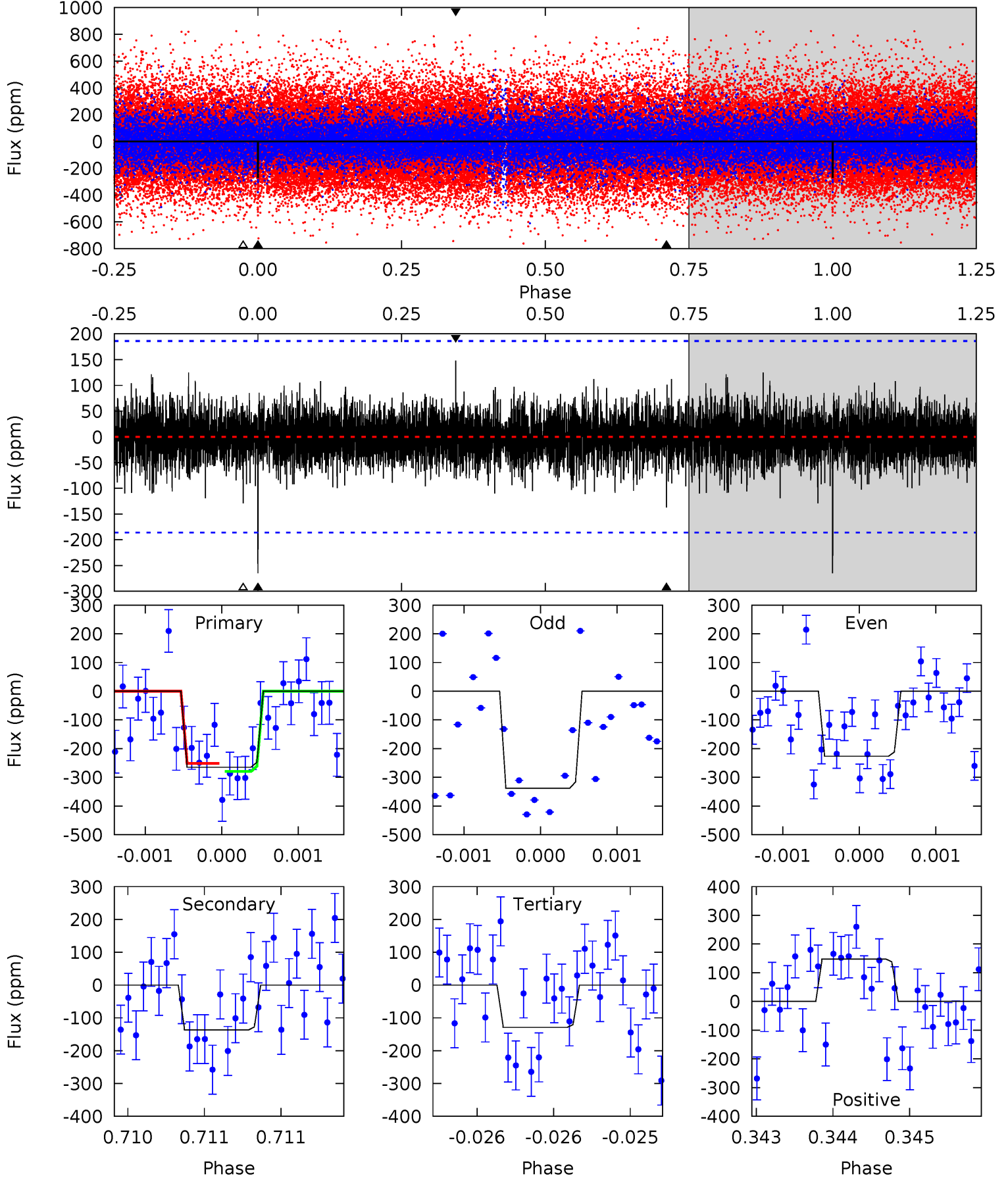
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.43	5.66	5.18	5.18	5.54	3.43	1.24	3.25	3.24	0.48	0.47	1.35	1.08	0.38	0.78



Alt Model-Shift Uniqueness Test

004048325-01, P = 429.819935 Days, E = 119.223415 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.90	4.09	3.86	4.41	5.55	3.45	0.93	4.05	3.50	0.23	-0.32	1.58	1.16	0.36	0.42



Stellar Parameters For KIC 004048325

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5557^{+75}_{-75}	$4.440^{+0.063}_{-0.108}$	$0.200^{+0.150}_{-0.150}$	$0.981^{+0.135}_{-0.083}$	$0.966^{+0.050}_{-0.056}$	$1.442^{+0.356}_{-0.456}$
	+1%/-1%	+1%/-2%	+75%/-75%	+14%/-8%	+5%/-6%	+25%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004048325-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-189 ± 33	$2.68^{+1.92}_{-1.72}$	325^{+12}_{-10}	4330^{+2584}_{-760}	$17043^{+115504}_{-11602}$
Alt.	-137 ± 34	$2.48^{+1.95}_{-1.61}$	325^{+13}_{-9}	4192^{+2547}_{-738}	$13718^{+107009}_{-9231}$

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 $A_{obs} \gg 1.0$

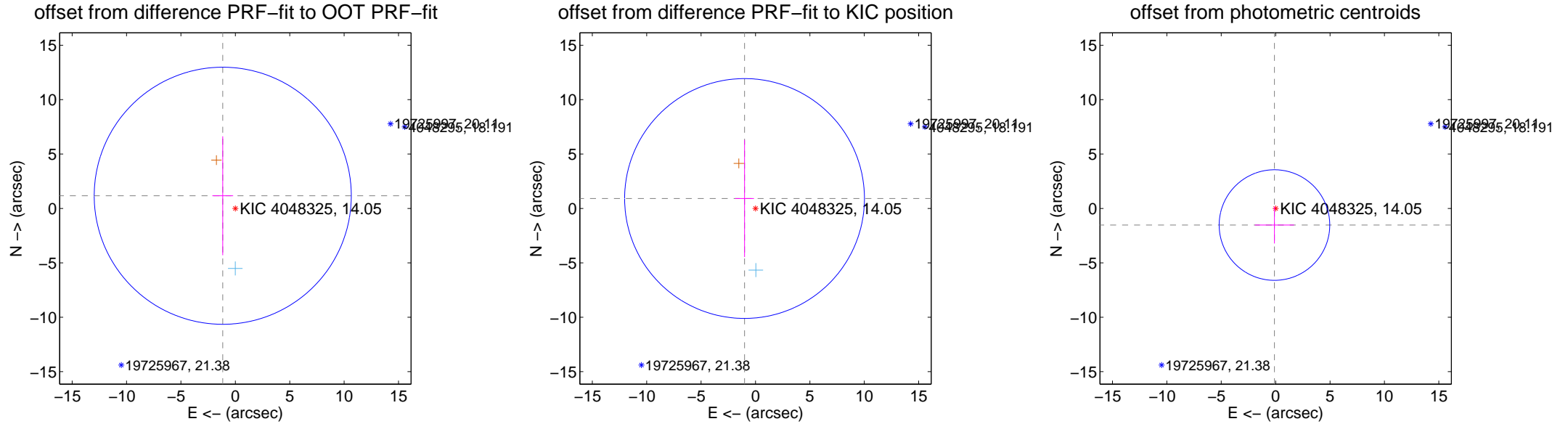
DV Centroid Data

Supplemental centroid analysis for 004048325-01. Kepler magnitude: 14.05. Transit SNR 7.07

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.643 ± 3.939	0.42	1.157 ± 0.958	1.167 ± 5.466
PRF-fit source offset from KIC position	1.360 ± 3.675	0.37	1.007 ± 0.865	0.914 ± 5.386
photometric centroid source offset	1.53 ± 1.69	0.90	0.11 ± 1.80	-1.53 ± 1.69

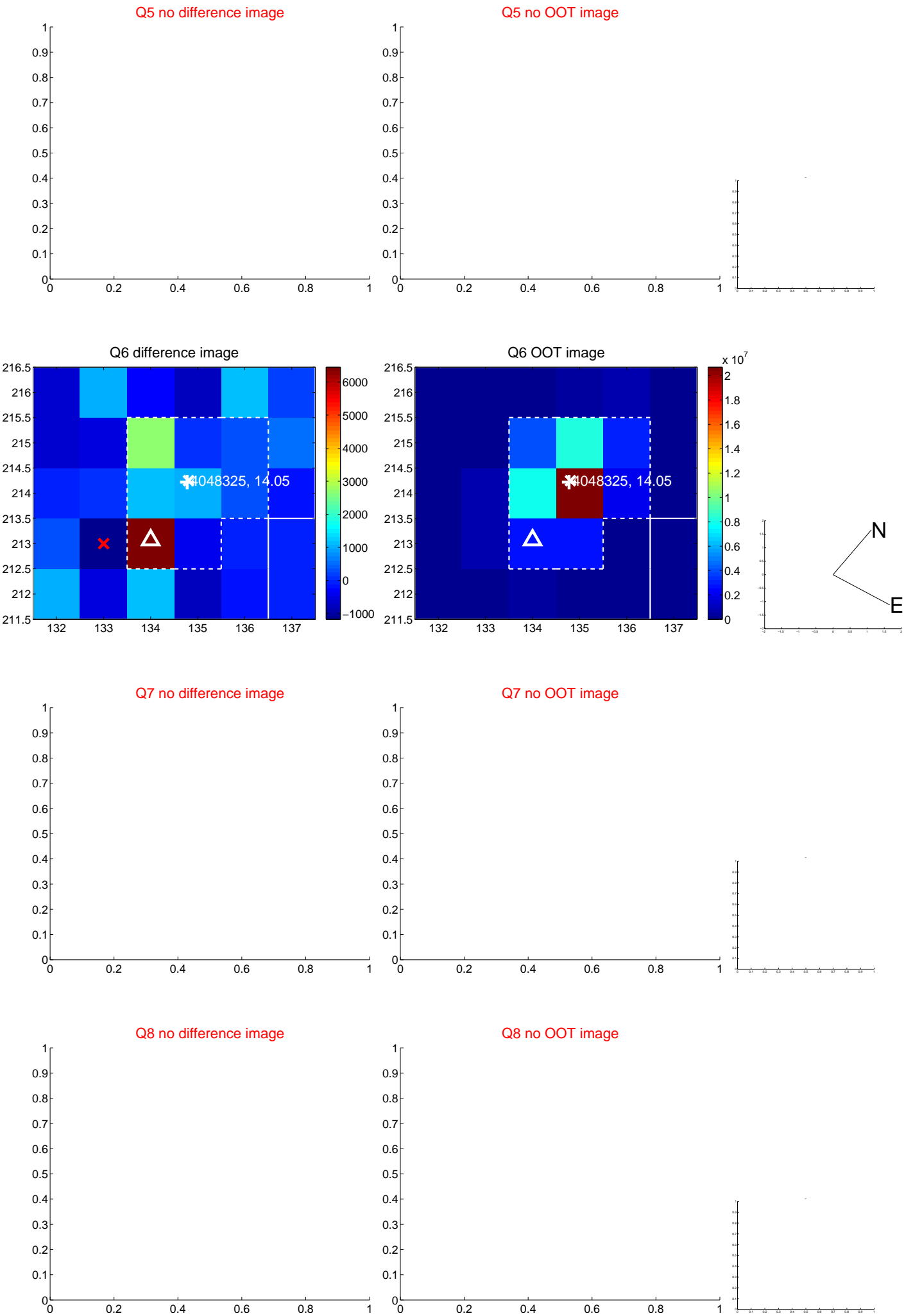


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

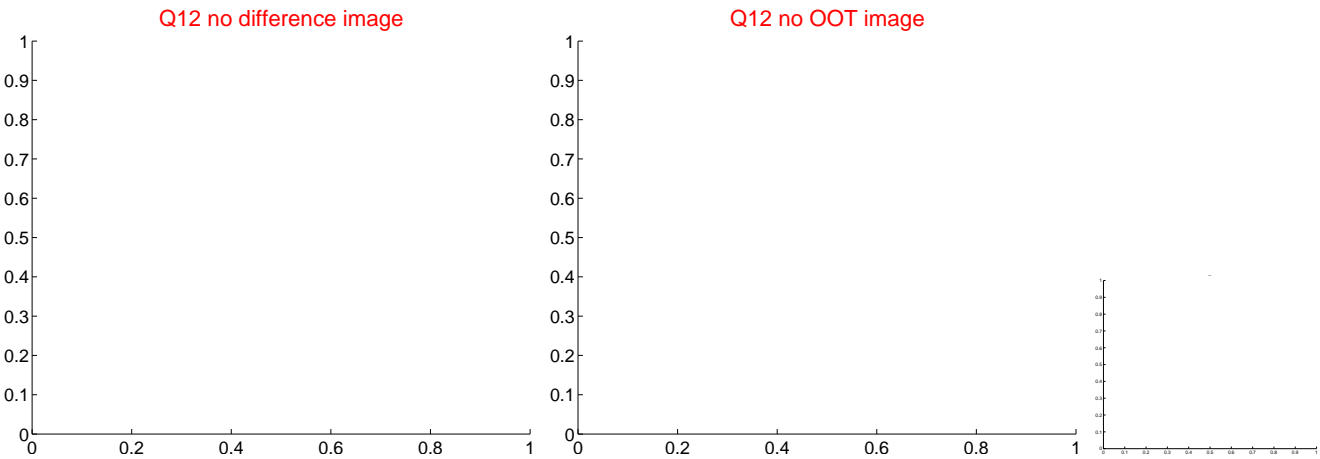
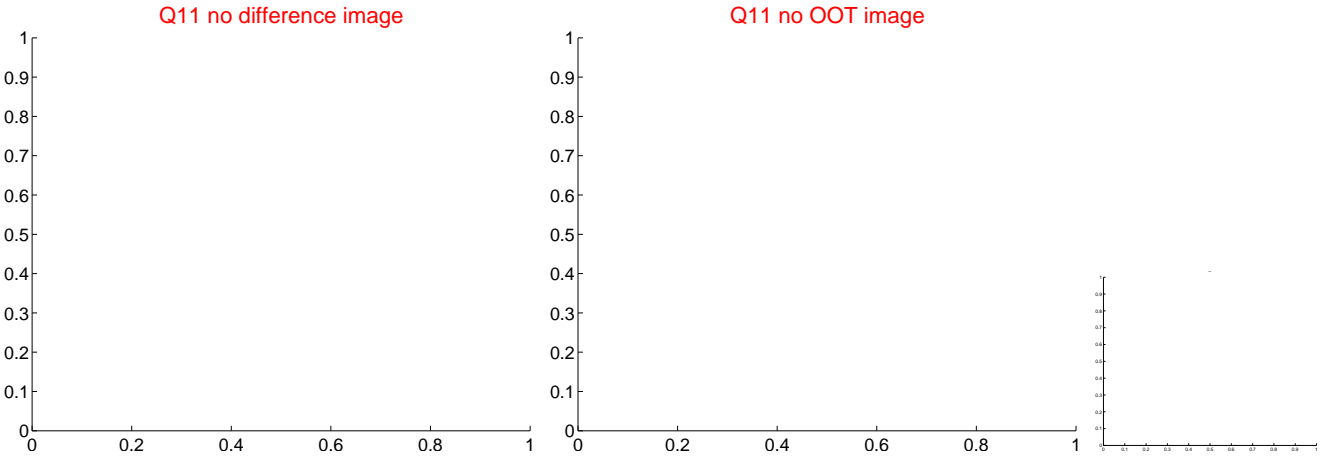
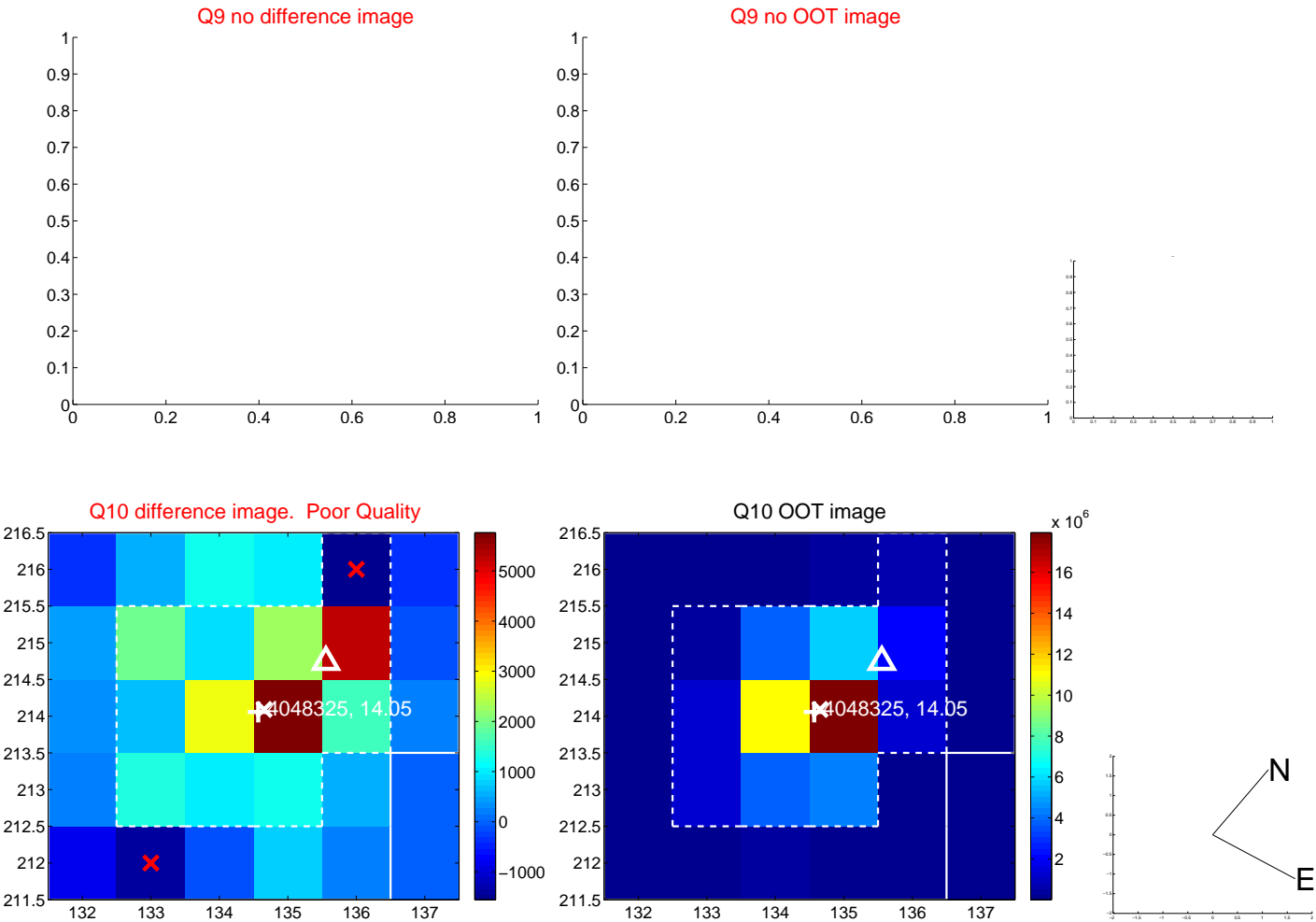
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



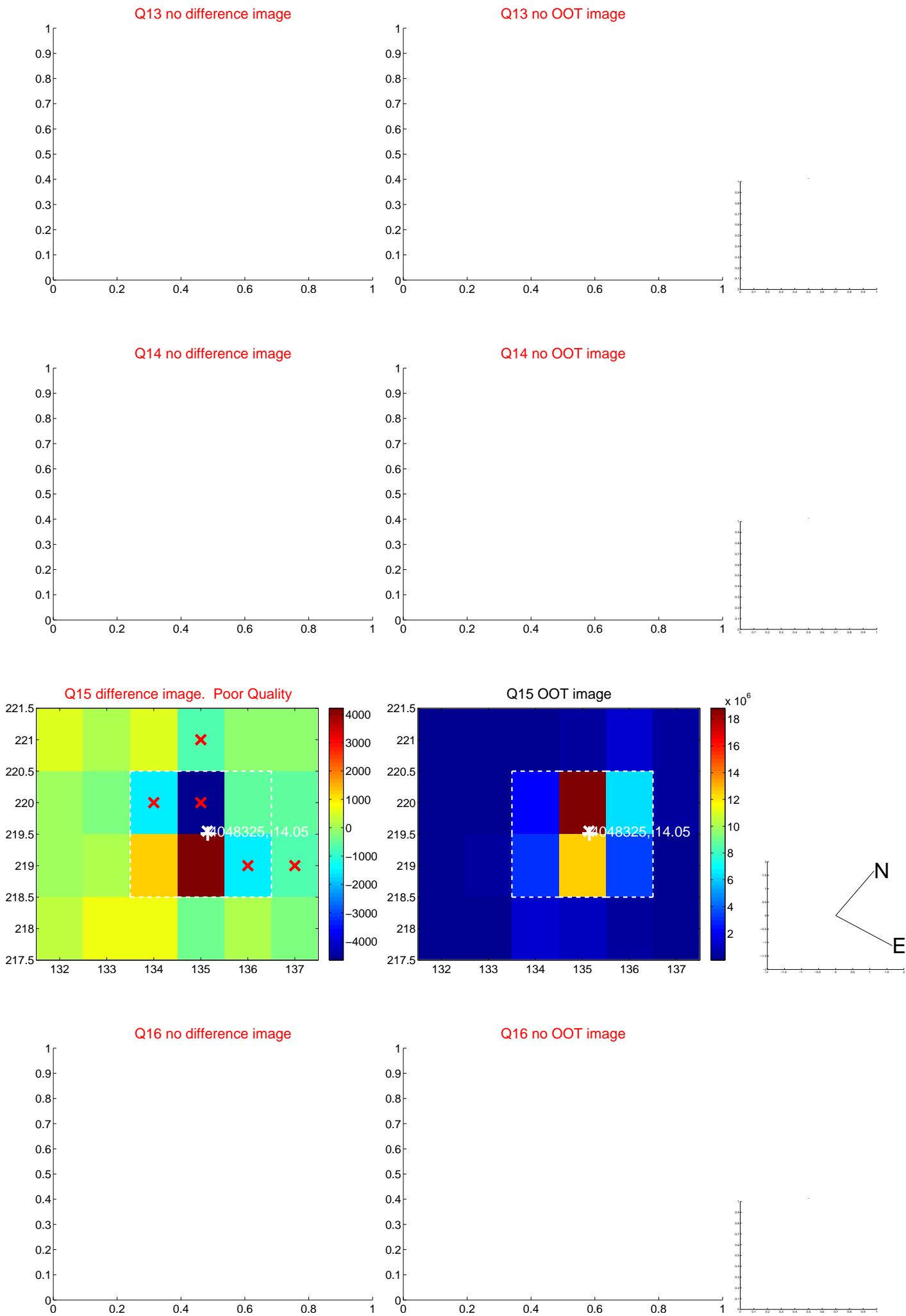
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



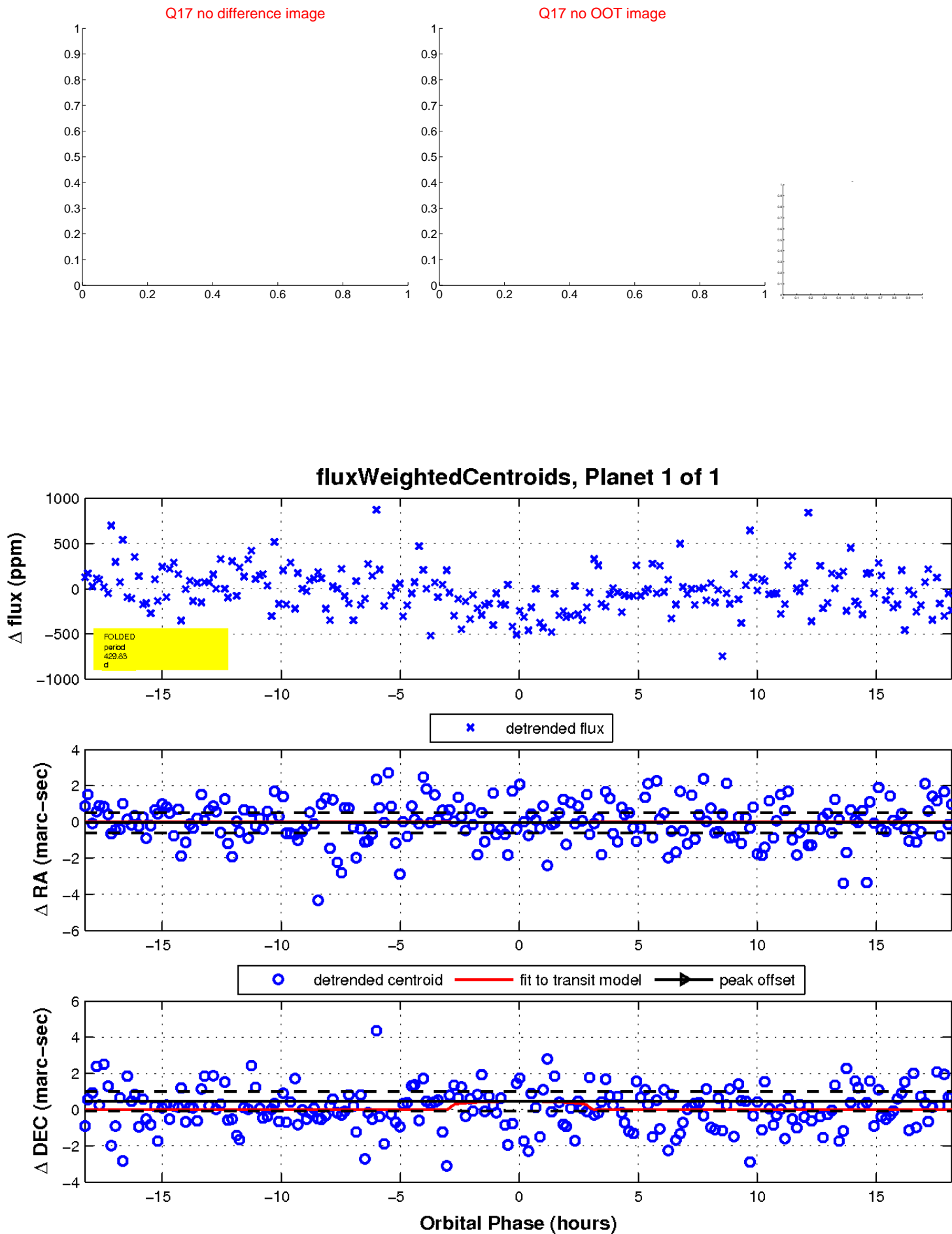
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

