

KIC 009632532

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})
009632532-01	OBS	No	0.541816	131.835705	52.8	1.952	8.0	5.3	0.44	3684	0.40	320.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009632532-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

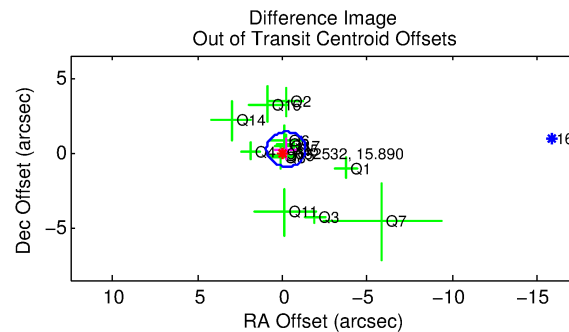
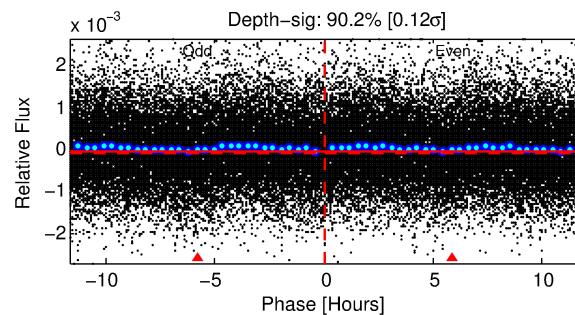
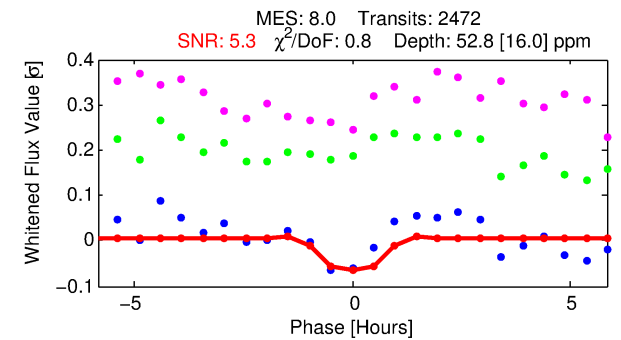
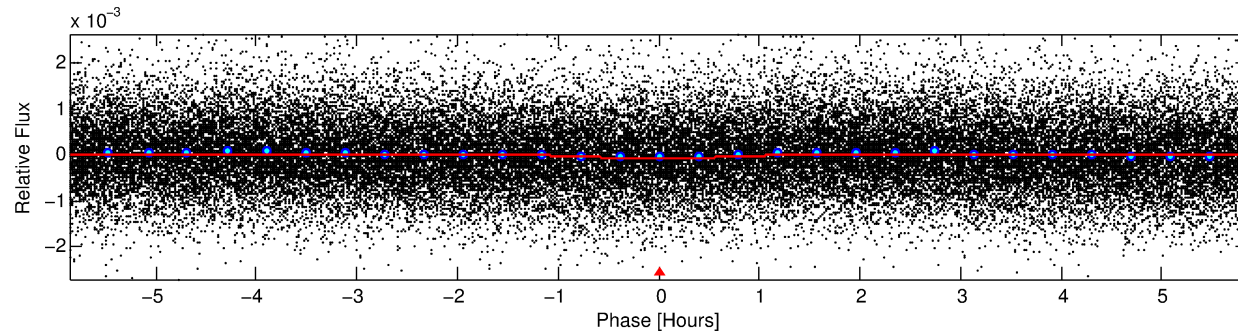
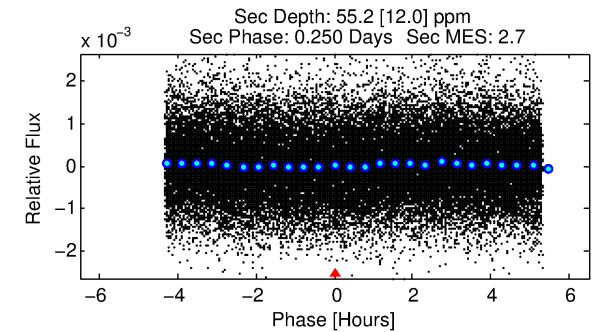
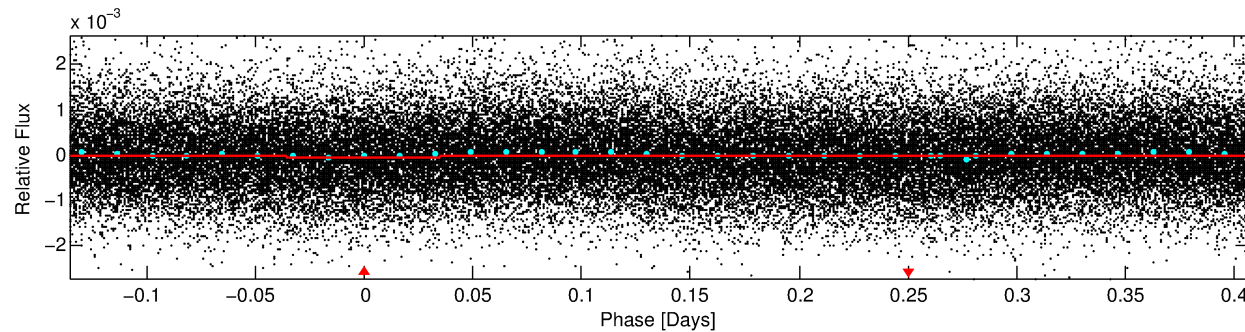
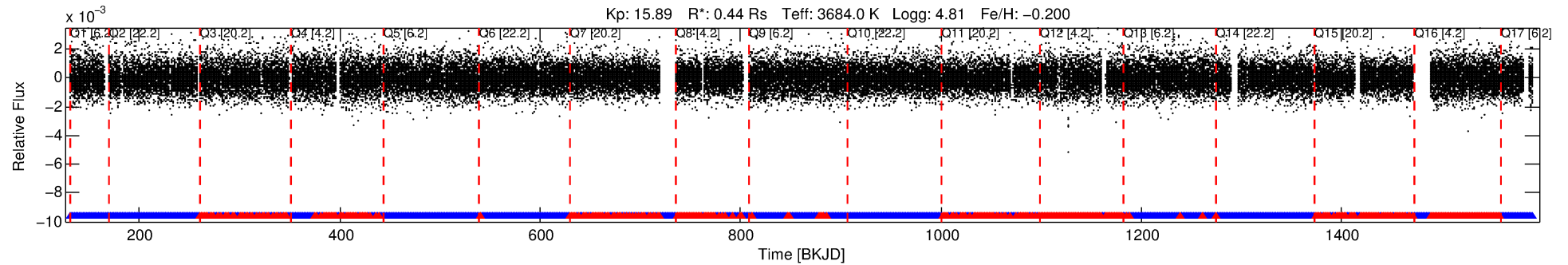
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009632532-01

No Significant Match Found

DV One-Page Summary

KIC: 9632532 Candidate: 1 of 1 Period: 0.542 d



DV Fit Results:

Period = 0.54182 [0.00002] d
Epoch = 131.8357 [0.0046] BKJD
Rp/R* = 0.0083 [0.0099]
a/R* = 1.24 [2.48]
b = 0.94 [0.74]
Seff = 320.14 [34.24]
Teq = 1079 [29] K
Rp = 0.40 [0.48] Re
a = 0.0100 [0.0007] AU
Ag = 19.26 [46.31] [0.39σ]
Teffp = 3494 [2099] K [1.15σ]

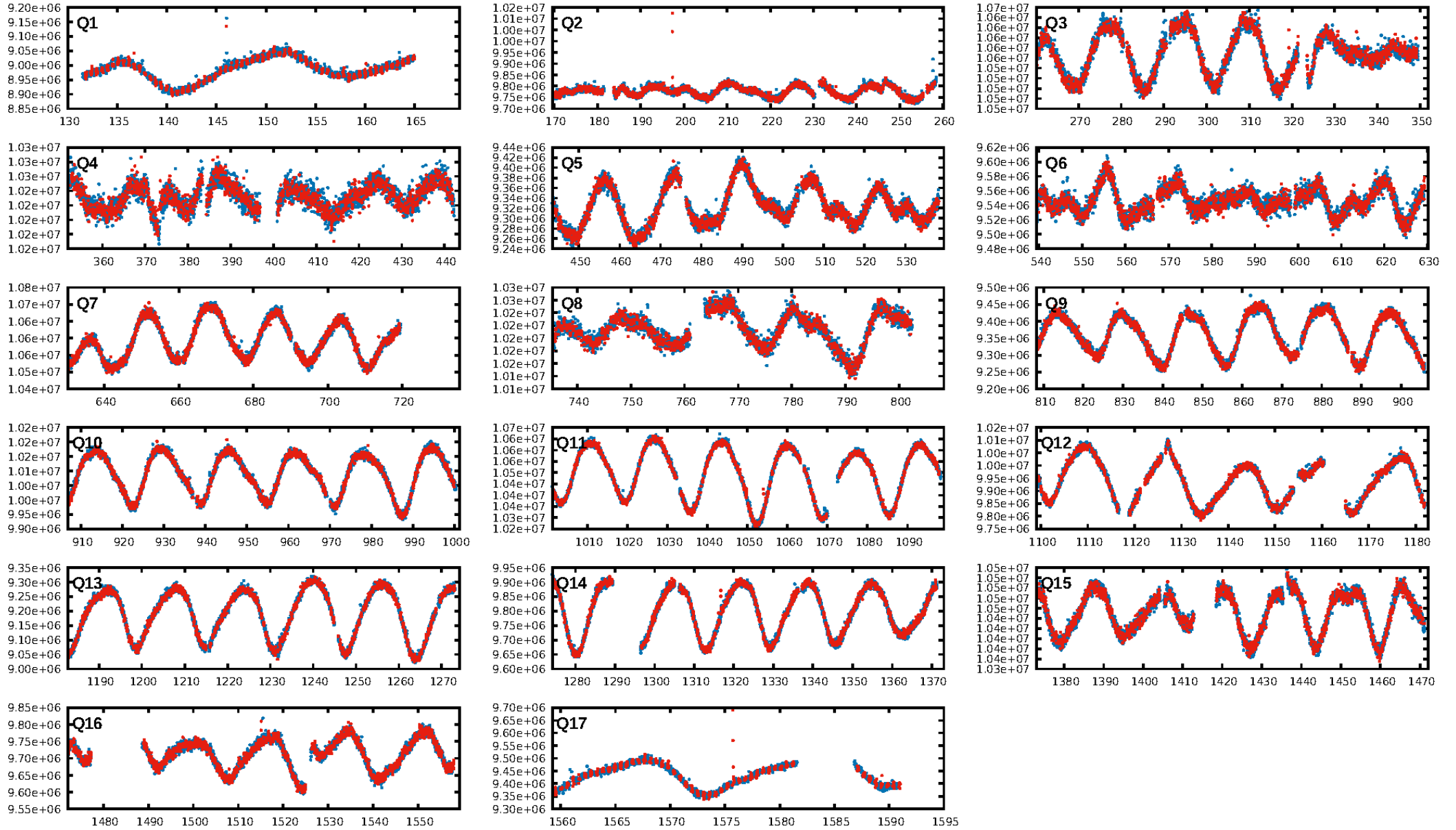
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.28e-16
RollingBand-fgt: 0.74 [1751/2361]
GhostDiagnostic-chr: 1.834
Centroid-sig: 52.9%
Centroid-so: 2.289 arcsec [0.86σ]
OotOffset-rm: 0.318 arcsec [0.82σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-rm: 0.539 arcsec [1.10σ]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 0.29 [4/14]
DiffImageOverlap-fno: 1.00 [17/17]

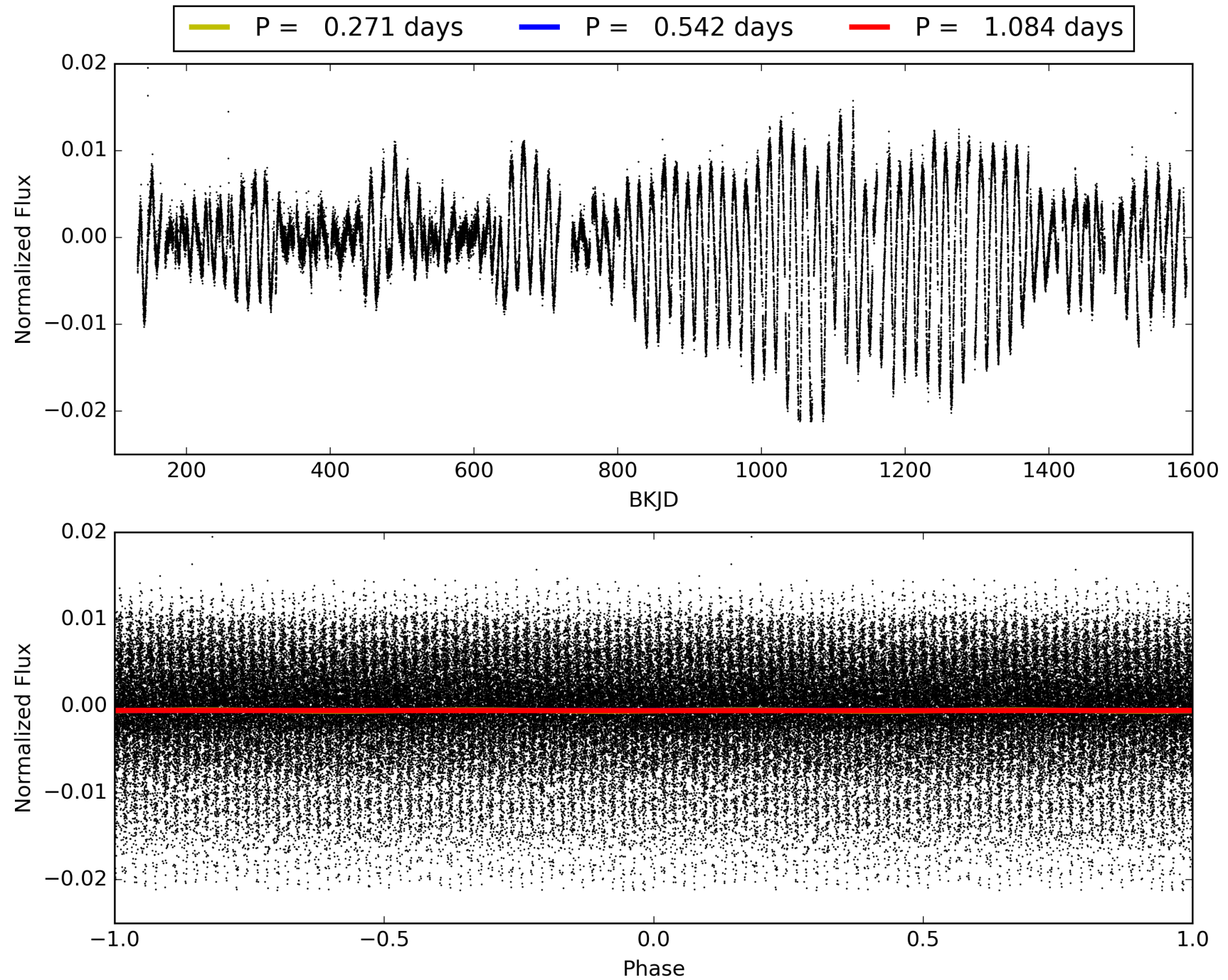
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:13:35 Z

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

TCE 009632532-01, PDC Light Curves

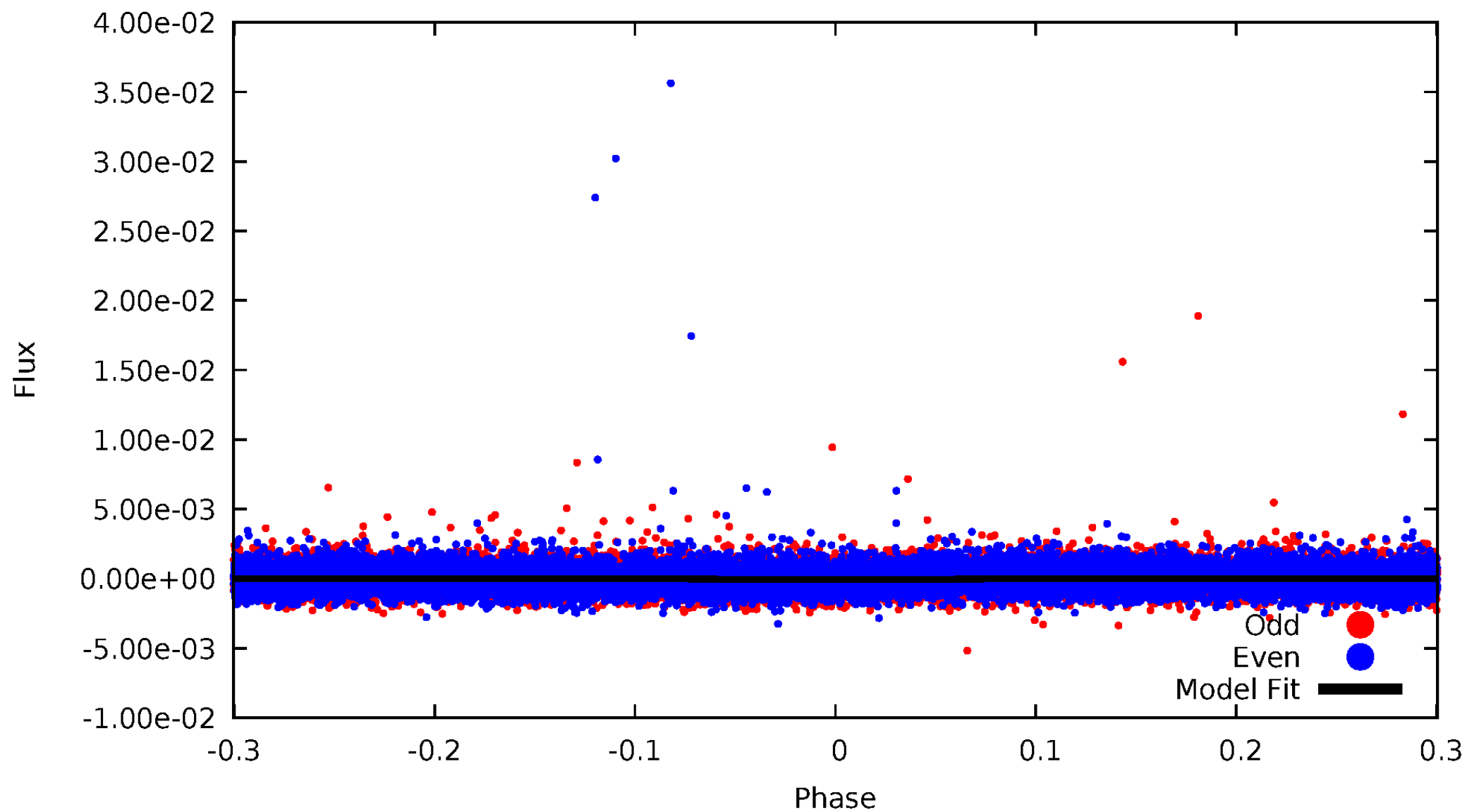


TCE 009632532-01



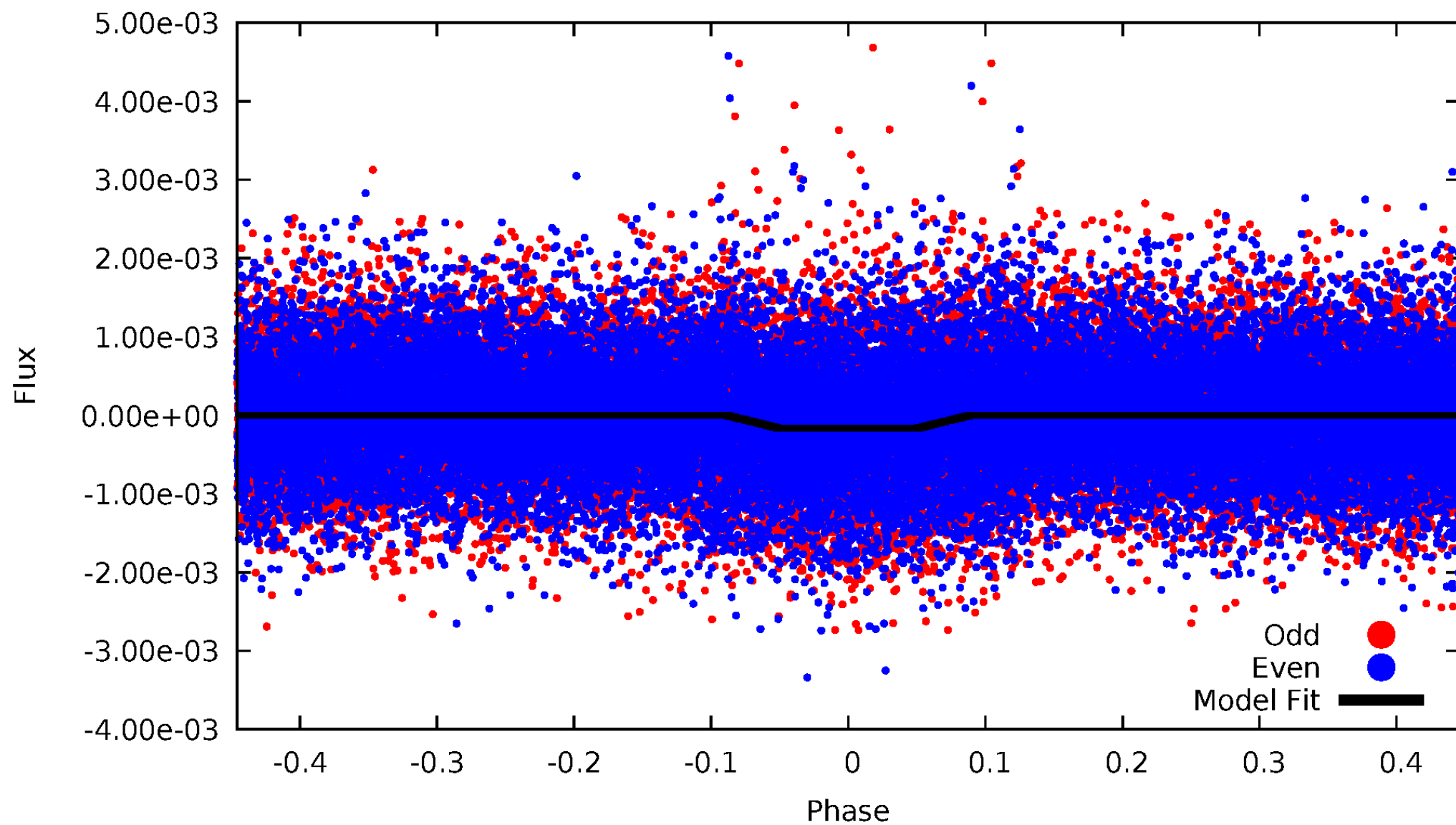
DV Odd/Even

TCE 009632532-01



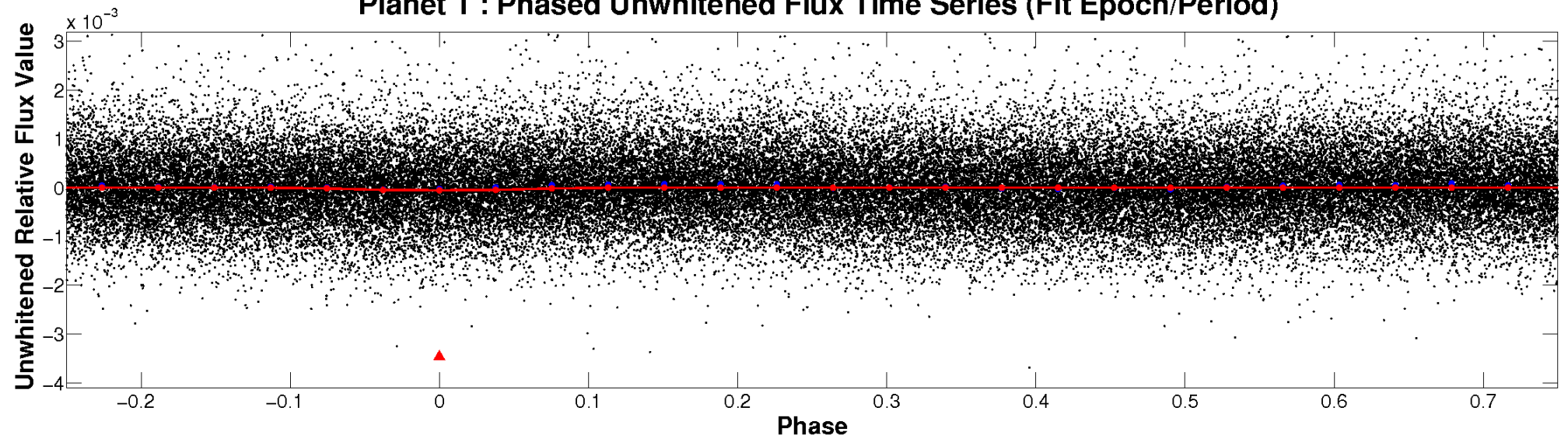
ALT Odd/Even

TCE 009632532-01

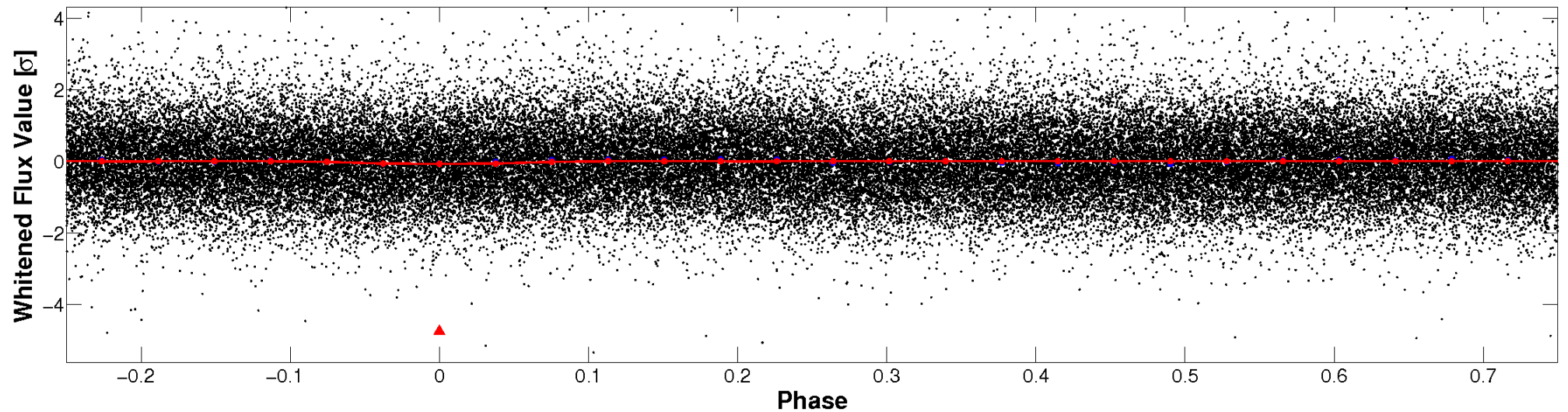


Non-Whitened Vs. Whitened Light Curve

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

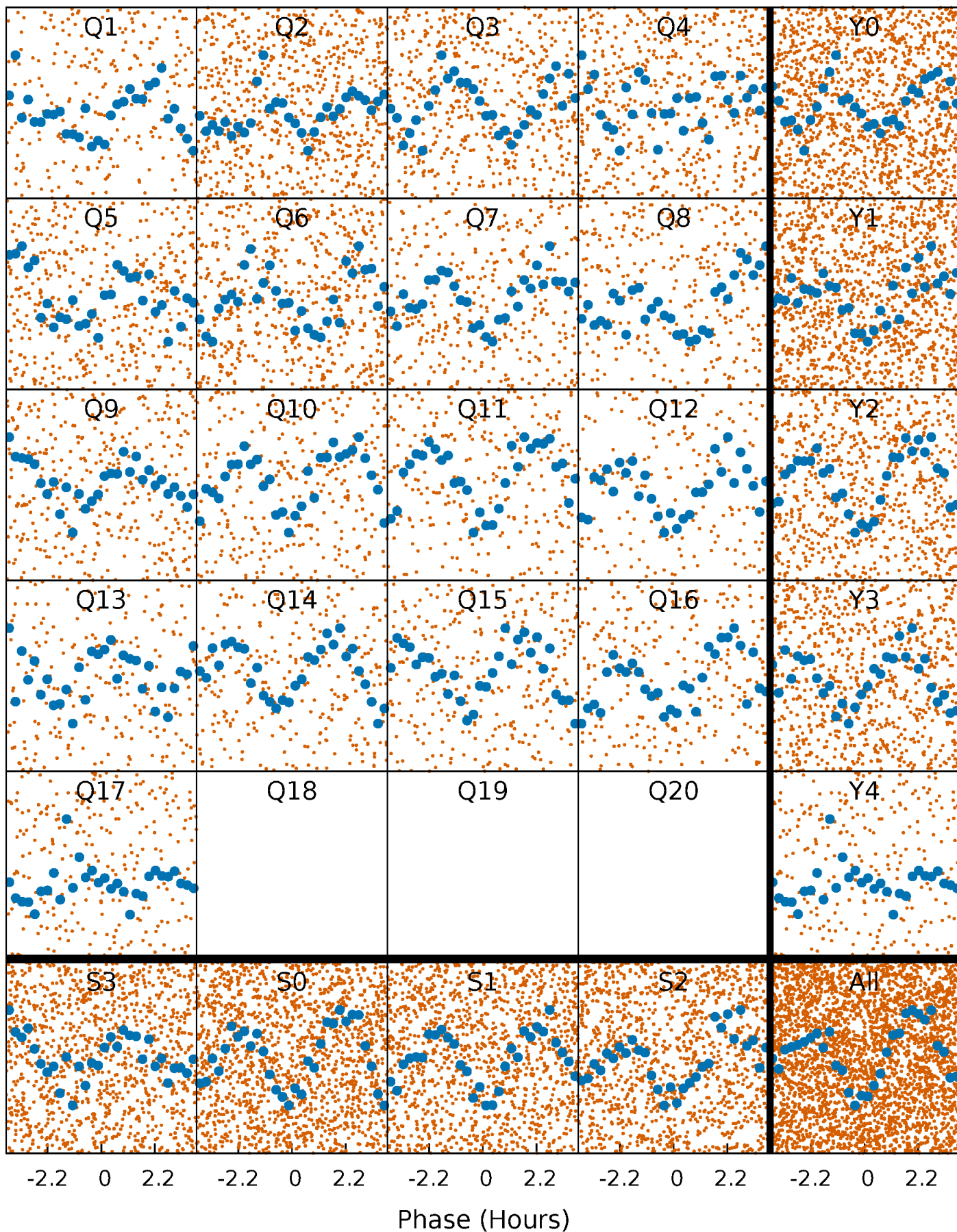


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



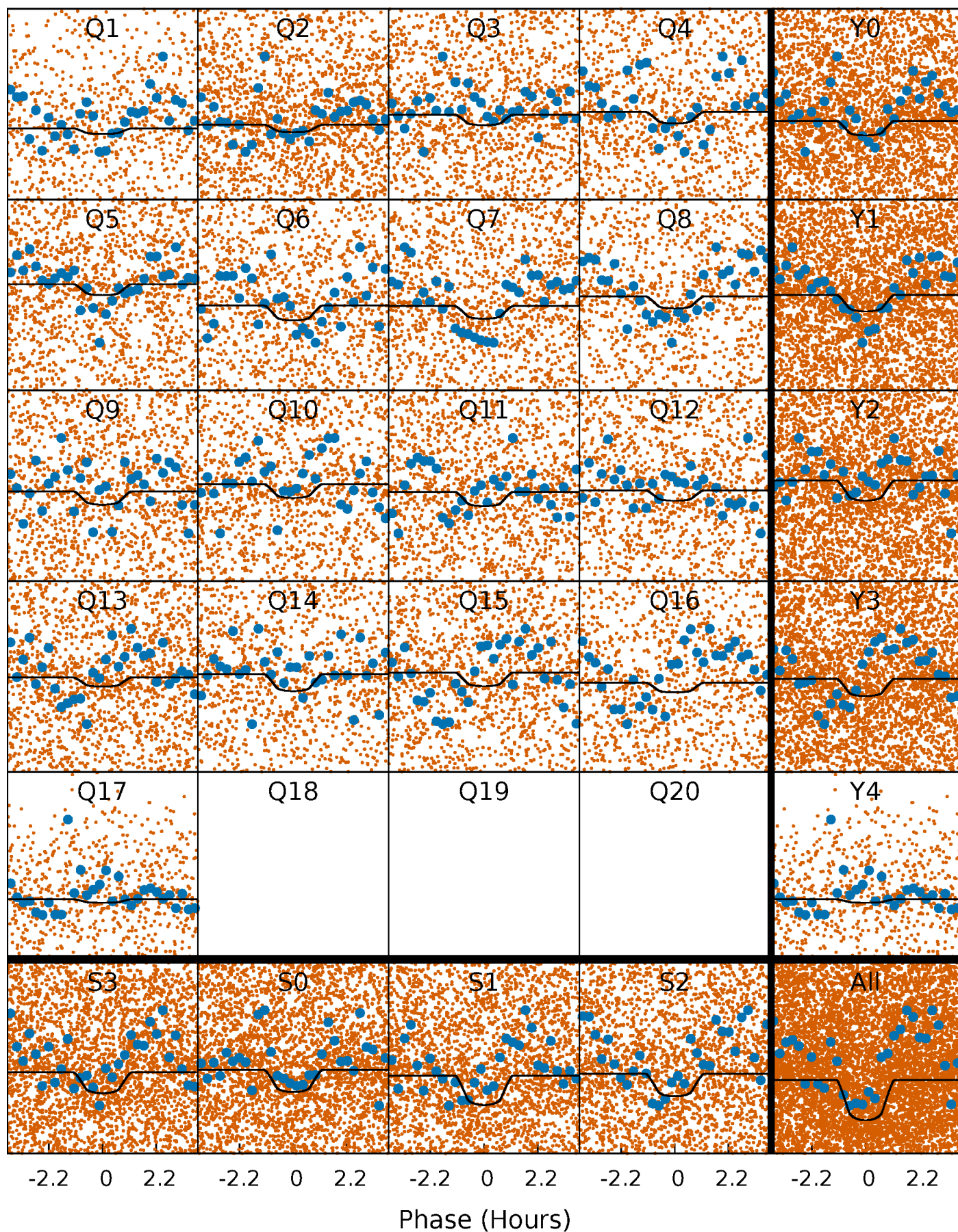
PDC Quarter-Phased Transit Curves

TCE 009632532-01 P= 0.541816 Days $T_0=131.835705$ (BKJD)



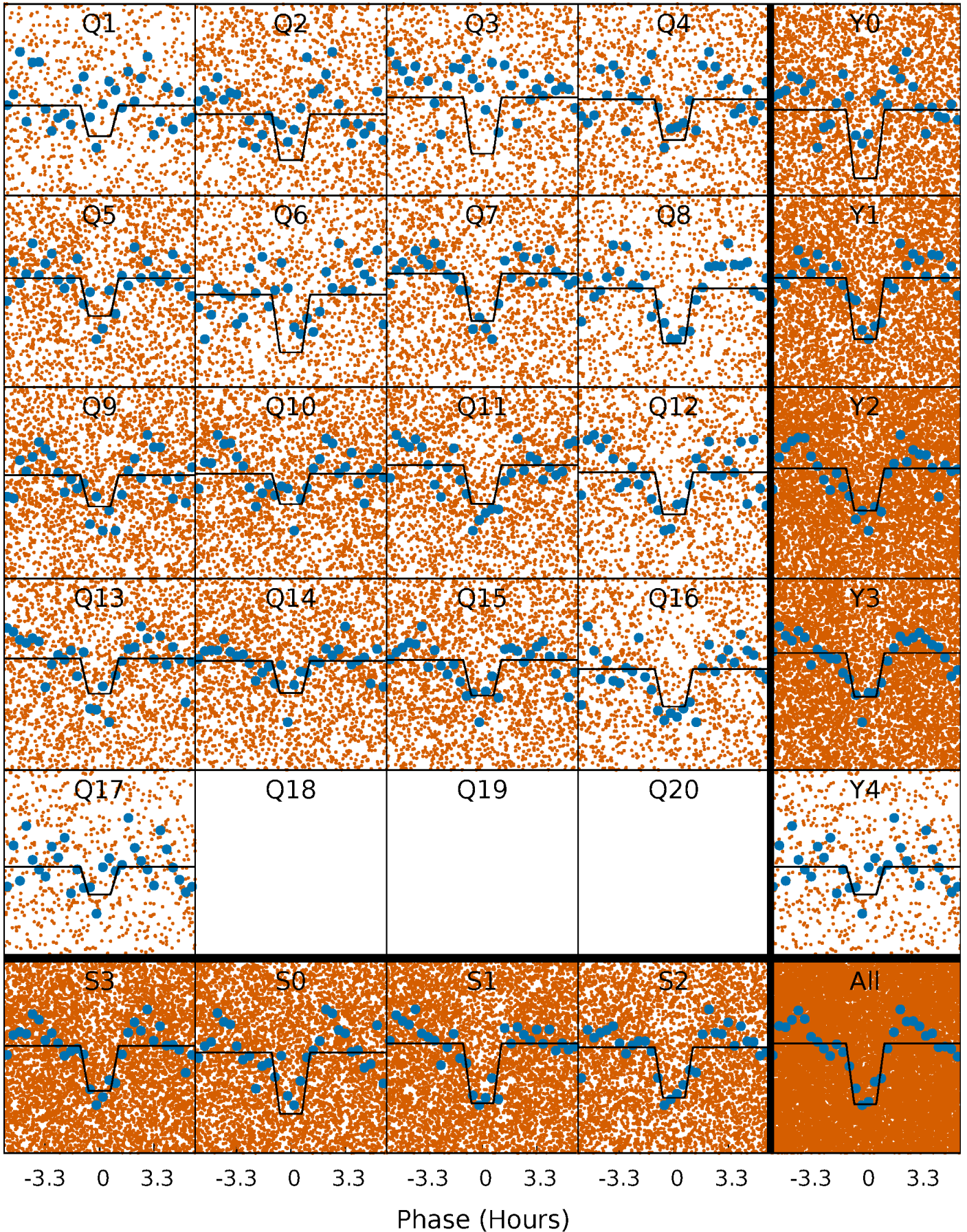
DV Quarter-Phased Transit Curves

TCE 009632532-01 P= 0.541816 Days $T_0=131.835705$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

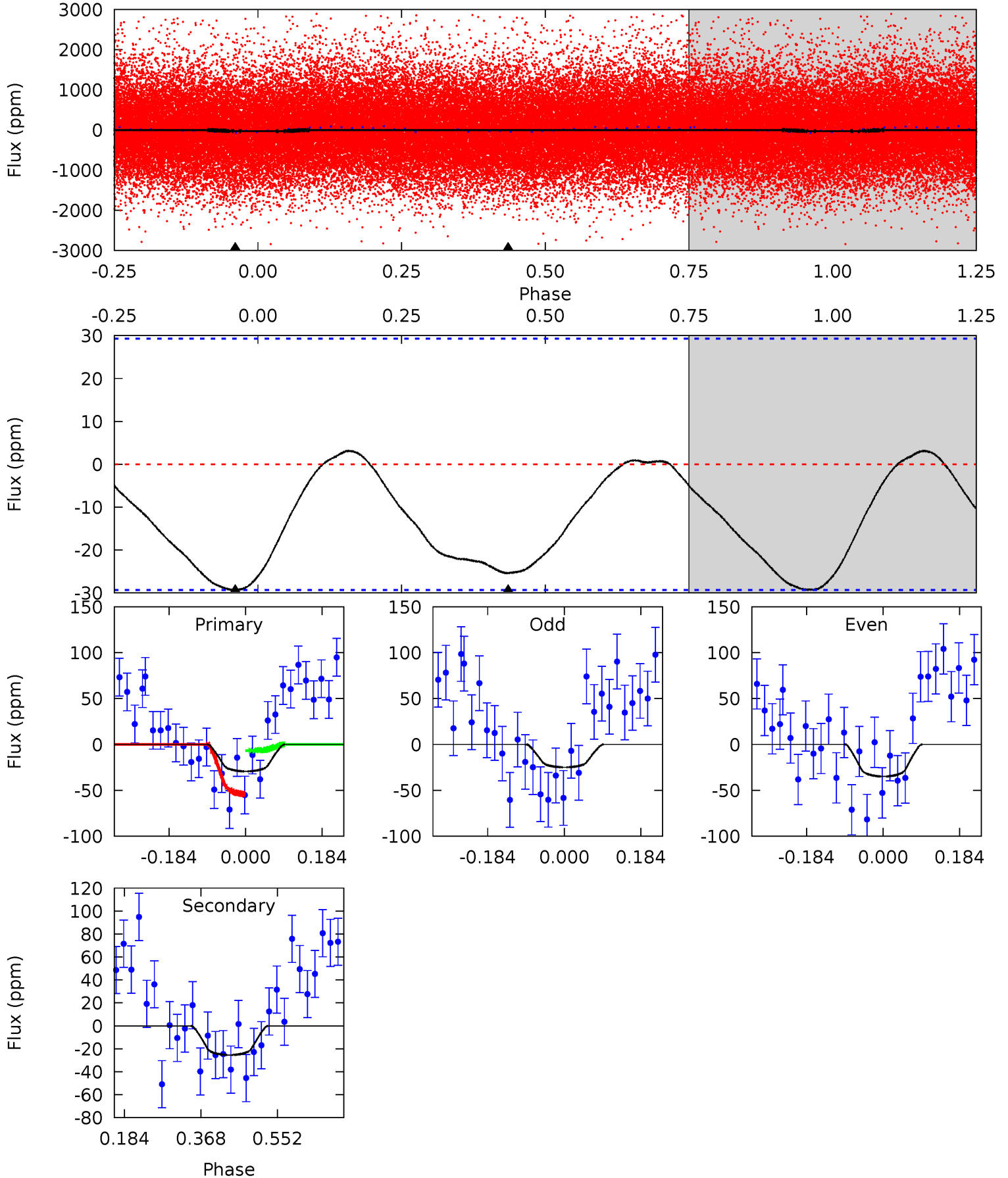
TCE 009632532-01 P= 0.541783 Days $T_0=131.853931$ (BKJD)



DV Model-Shift Uniqueness Test

009632532-01, P = 0.541816 Days, E = 131.293889 Days

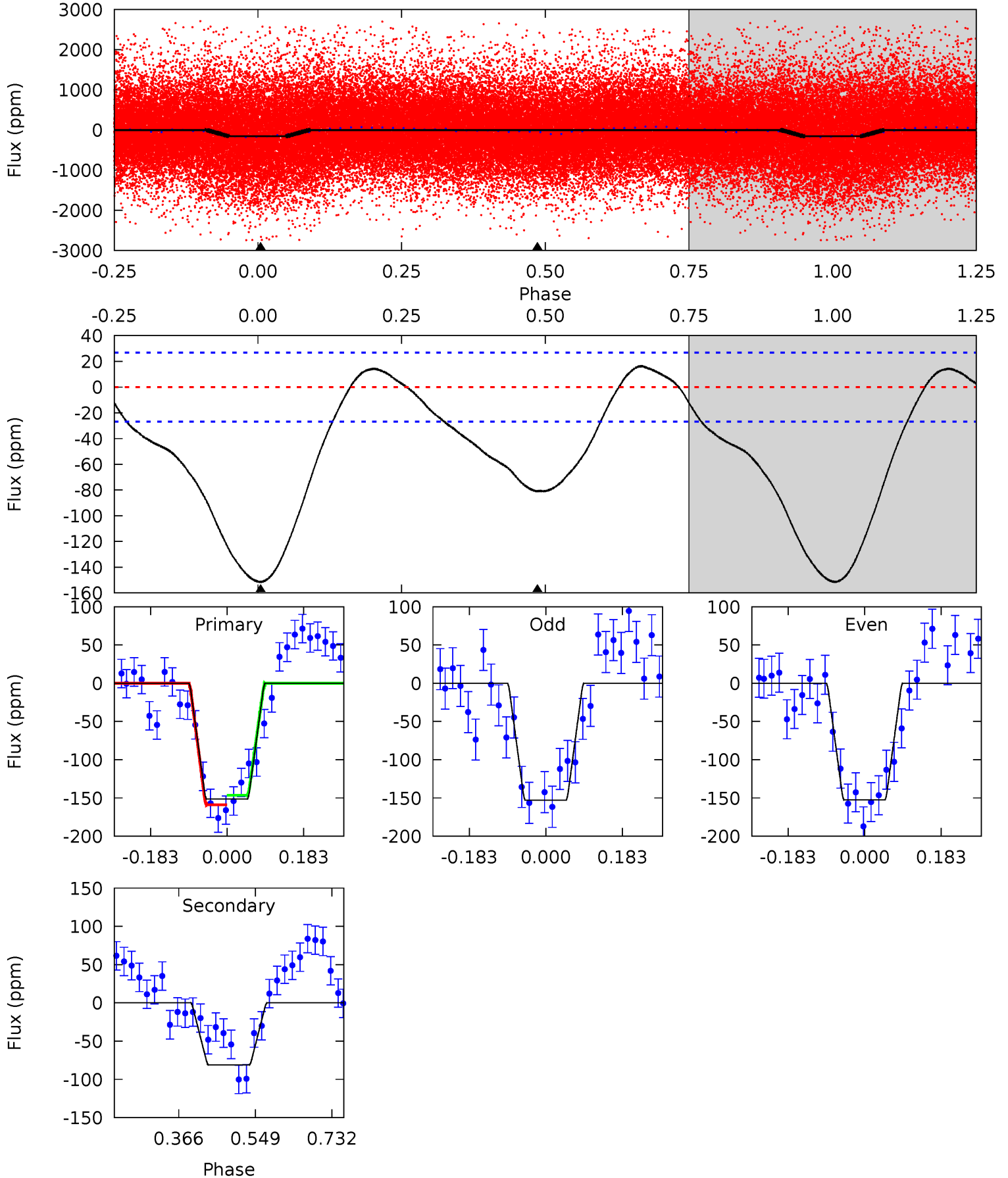
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.44	3.85	0	0	4.44	1.33	0.54	4.44	4.44	3.85	3.85	0.76	0.77	0.10	3.61



Alt Model-Shift Uniqueness Test

009632532-01, P = 0.541783 Days, E = 131.312148 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.0	13.4	0	0	4.44	1.33	3.03	25.0	25.0	13.4	13.4	0.04	0.91	0.10	1.04



Stellar Parameters For KIC 009632532

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3684^{+58}_{-58}	$4.807^{+0.042}_{-0.028}$	$-0.200^{+0.100}_{-0.100}$	$0.440^{+0.028}_{-0.038}$	$0.453^{+0.032}_{-0.032}$	$7.499^{+1.454}_{-0.907}$
	+2%/-2%	+1%/-1%	+50%/-50%	+6%/-9%	+7%/-7%	+19%/-12%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 009632532-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-25 ± 7	$0.53^{+0.42}_{-0.34}$	1504^{+32}_{-32}	2879^{+1097}_{-456}	$4.936^{+31.859}_{-3.430}$
Alt.	-81 ± 6	$0.67^{+0.44}_{-0.40}$	1504^{+30}_{-32}	3198^{+1153}_{-440}	$9.997^{+50.428}_{-6.312}$

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

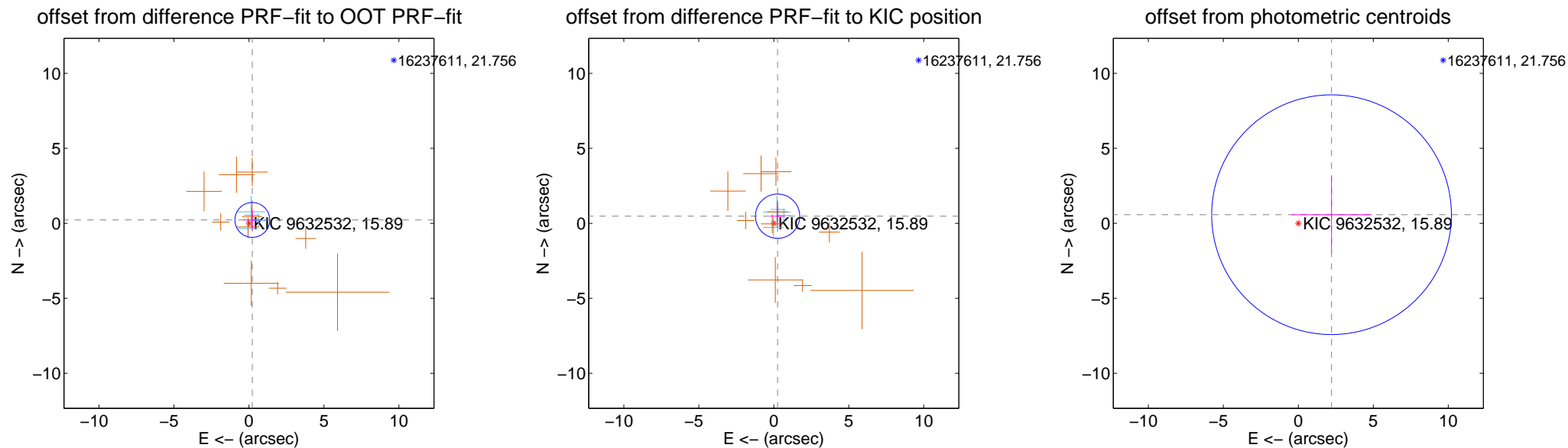
DV Centroid Data

Supplemental centroid analysis for 009632532-01. Kepler magnitude: 15.89. Transit SNR 5.29

There are 4 quarters with good PRF difference image offsets

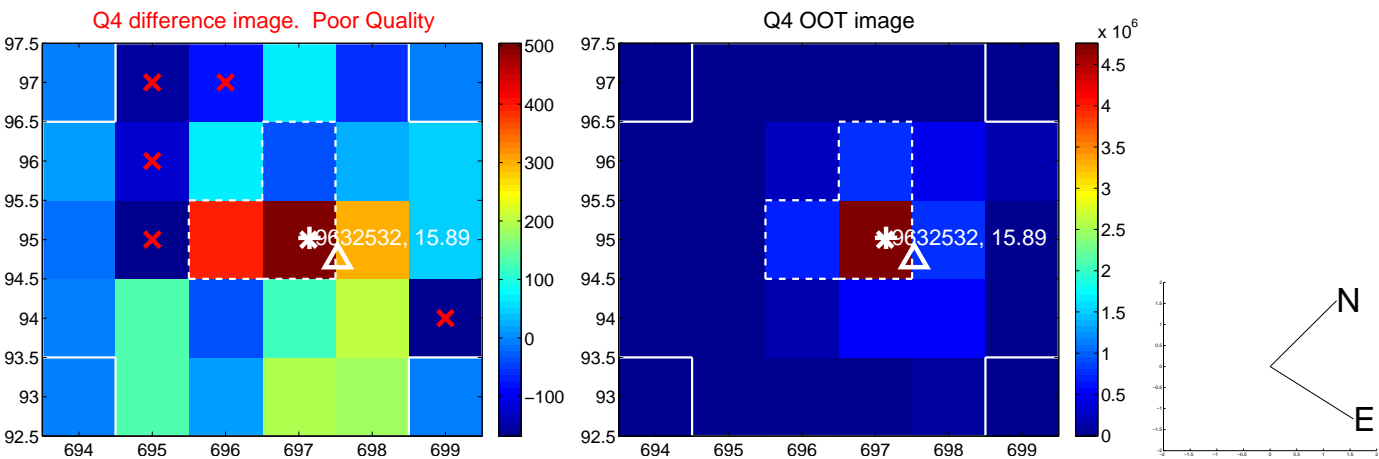
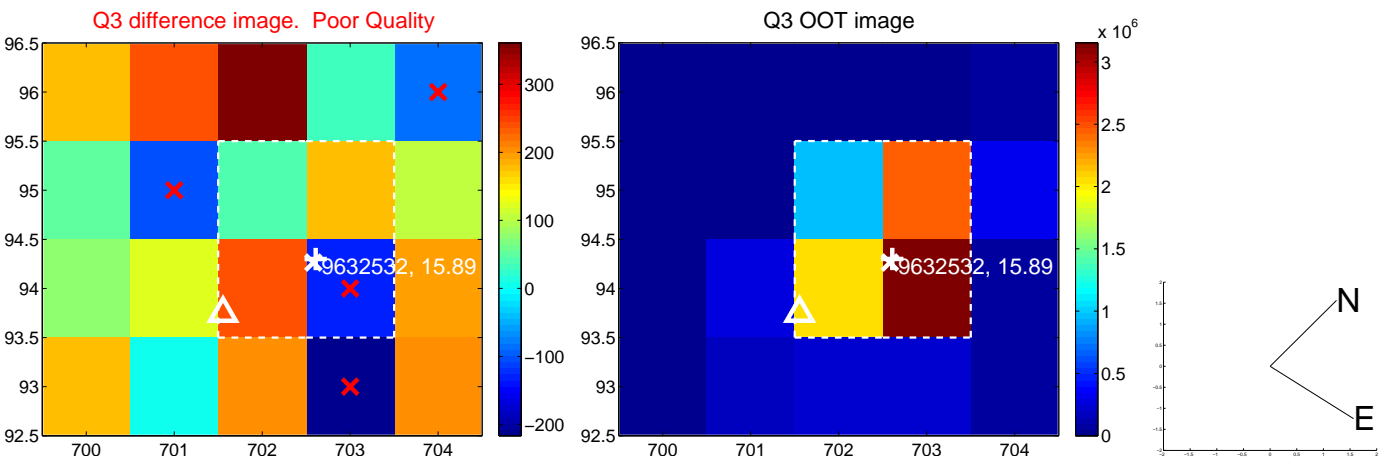
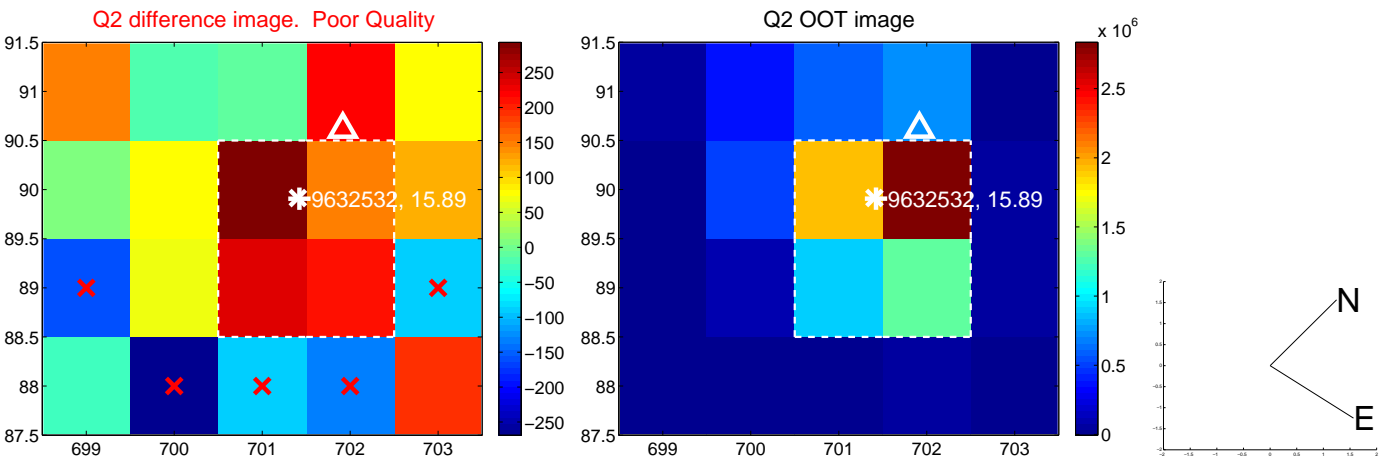
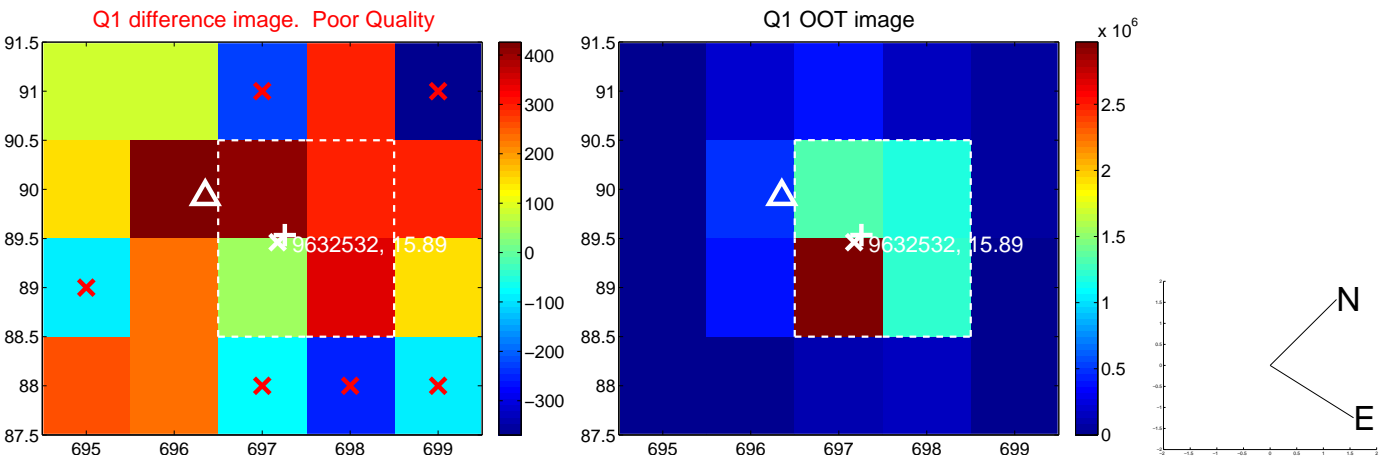
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.318 ± 0.387	0.82	-0.224 ± 0.601	0.225 ± 0.684
PRF-fit source offset from KIC position	0.539 ± 0.492	1.10	-0.254 ± 0.498	0.475 ± 0.642
photometric centroid source offset	2.29 ± 2.66	0.86	-2.22 ± 2.67	0.57 ± 2.53

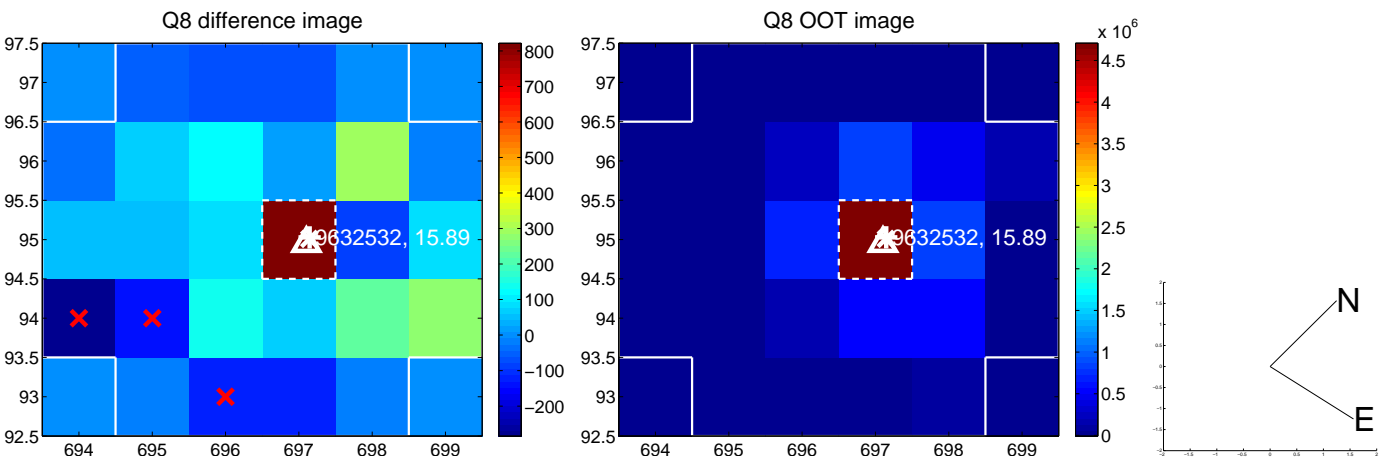
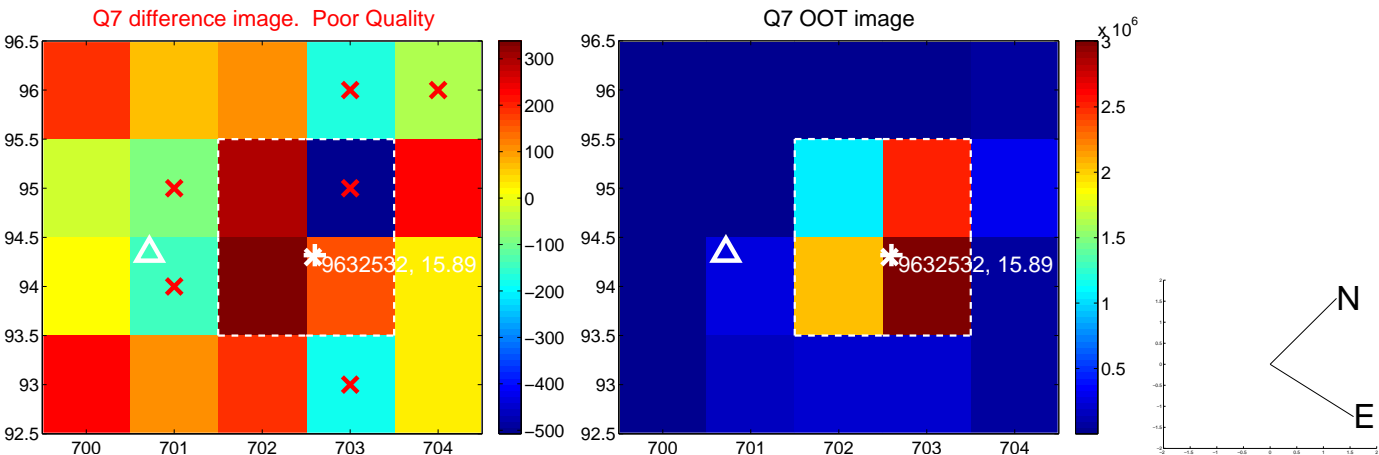
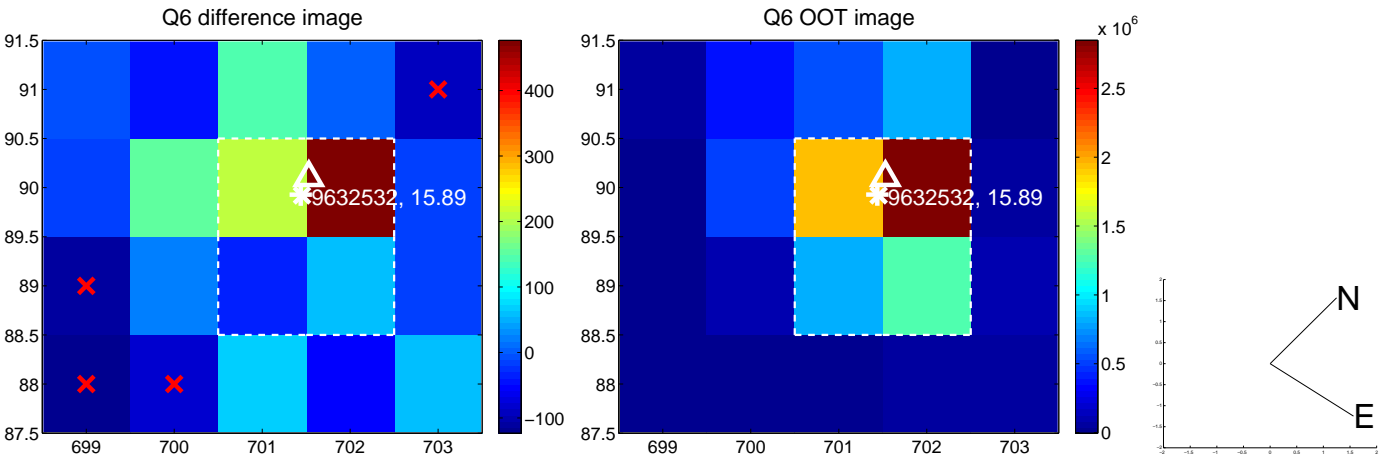
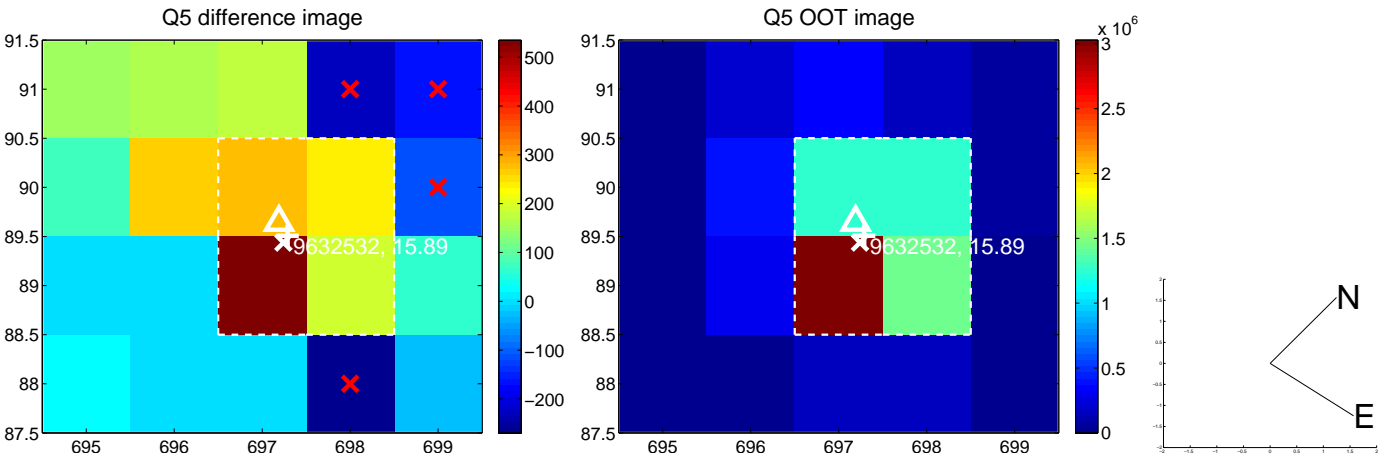


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

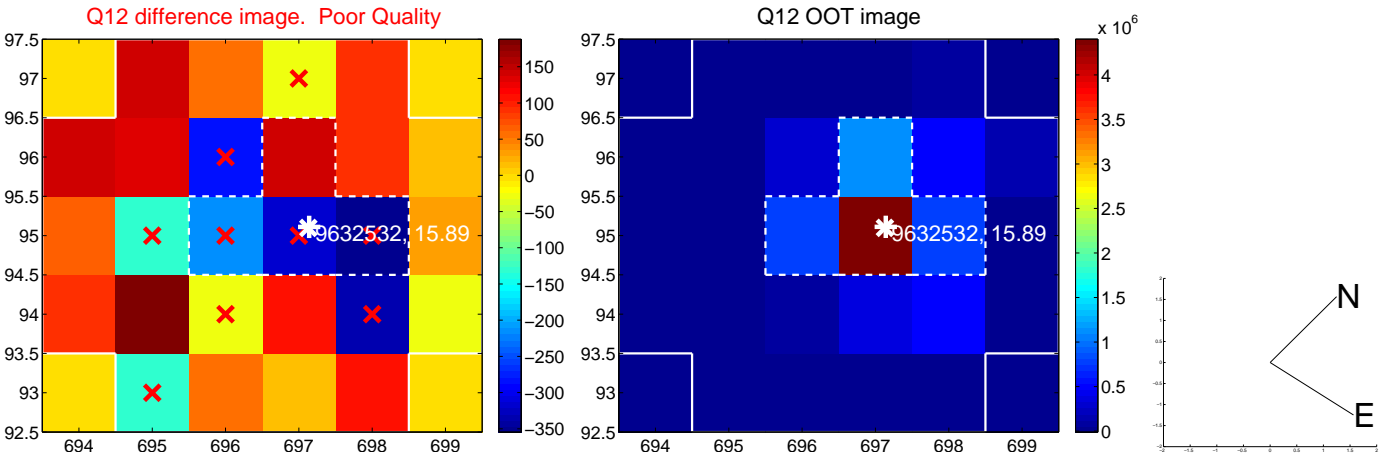
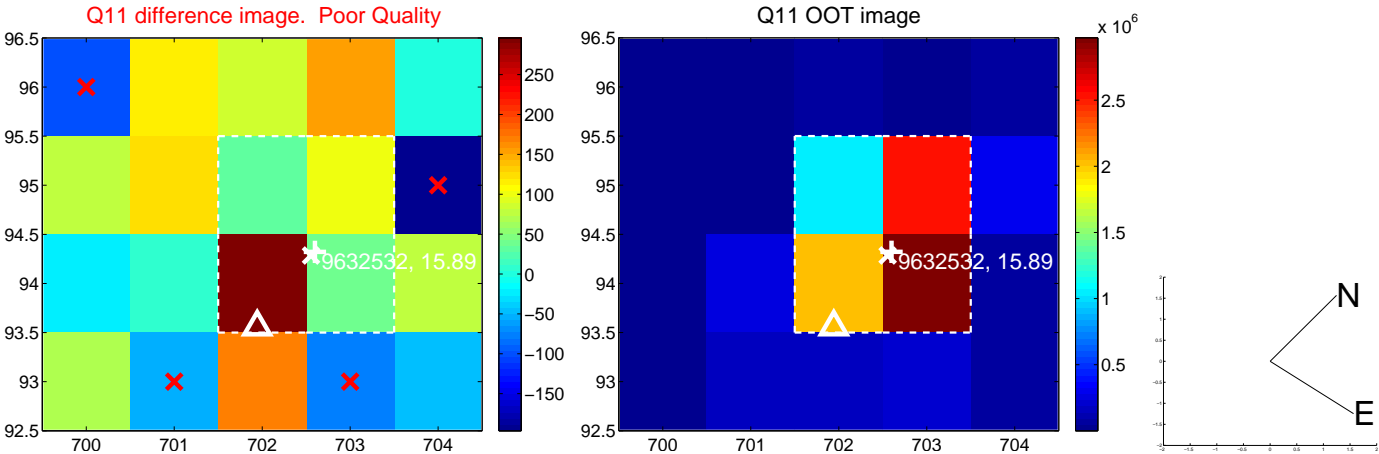
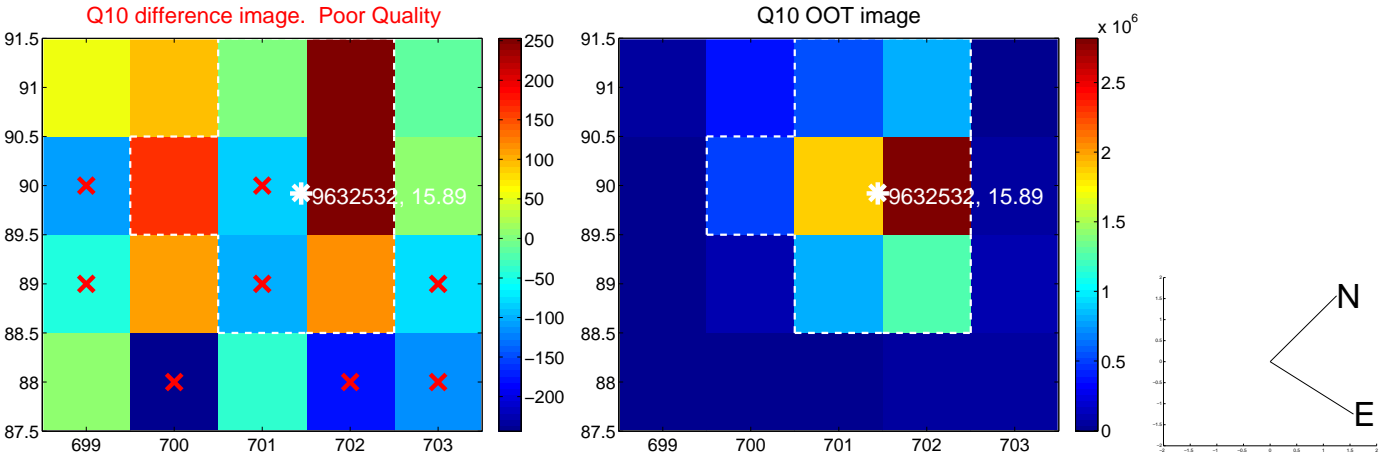
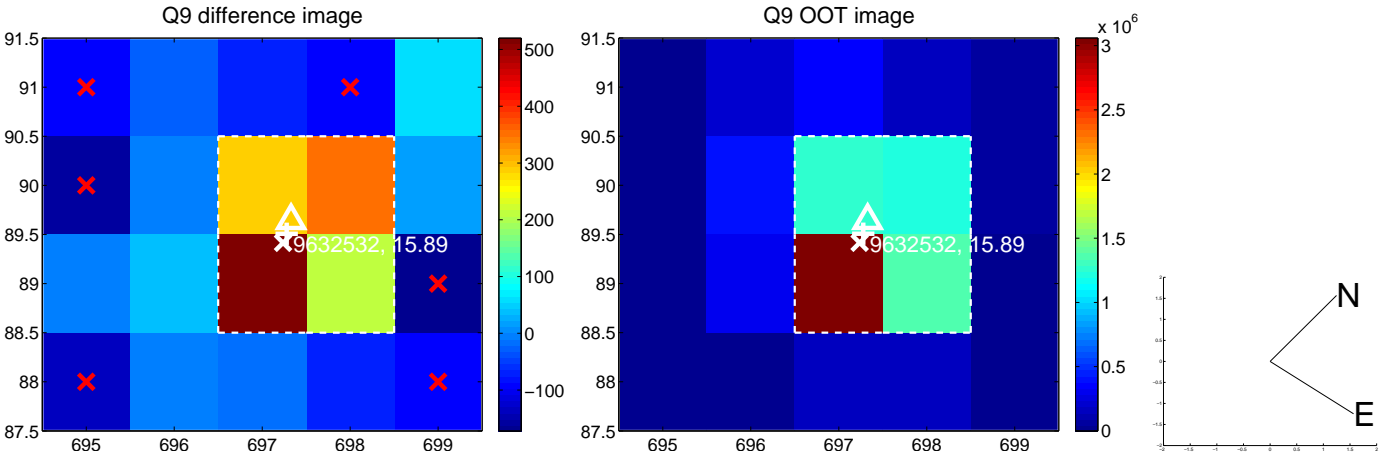
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



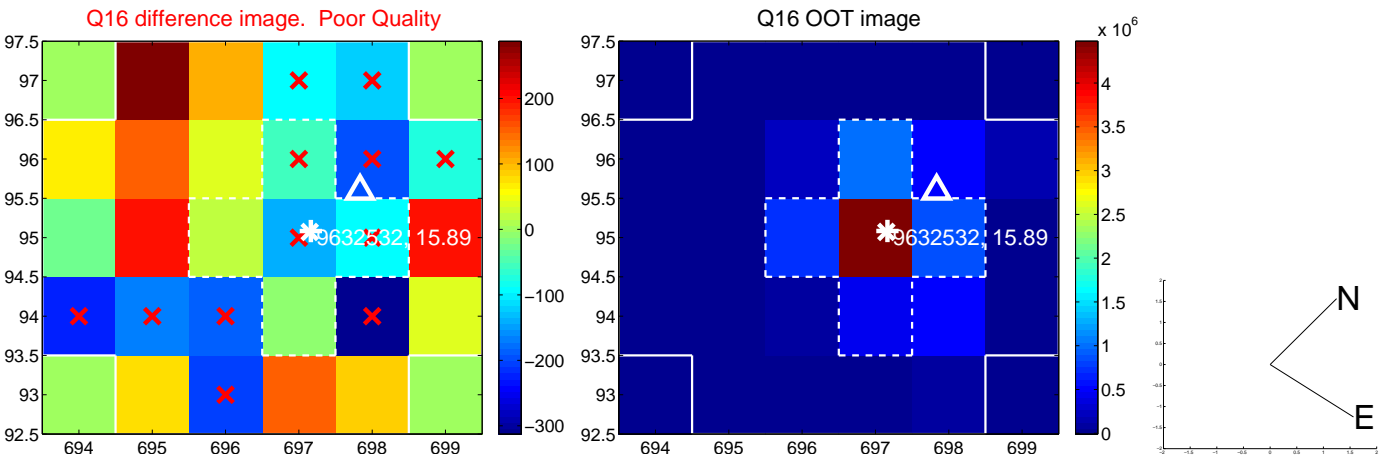
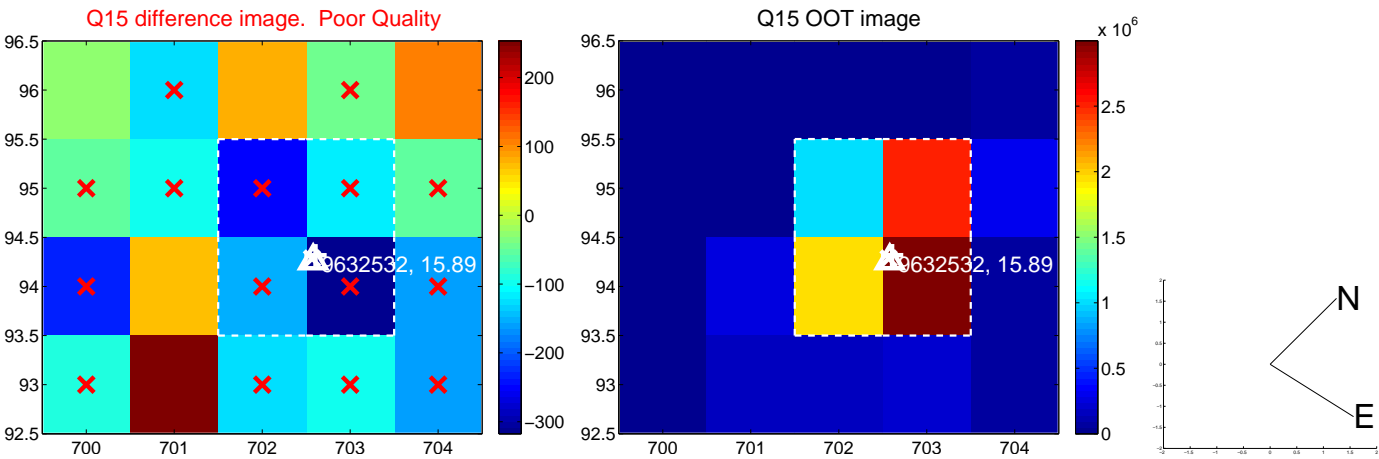
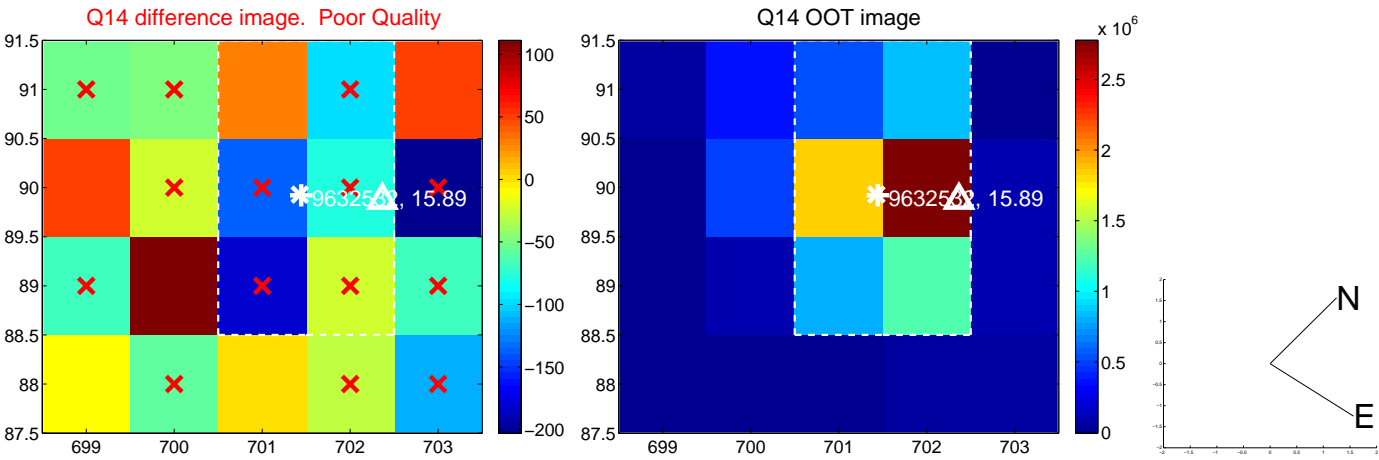
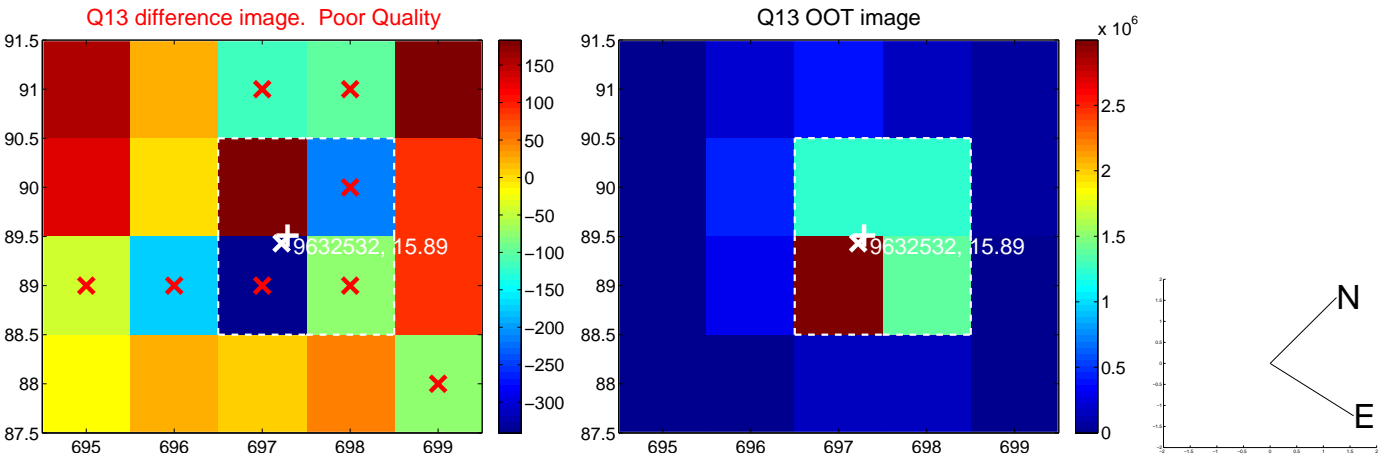
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



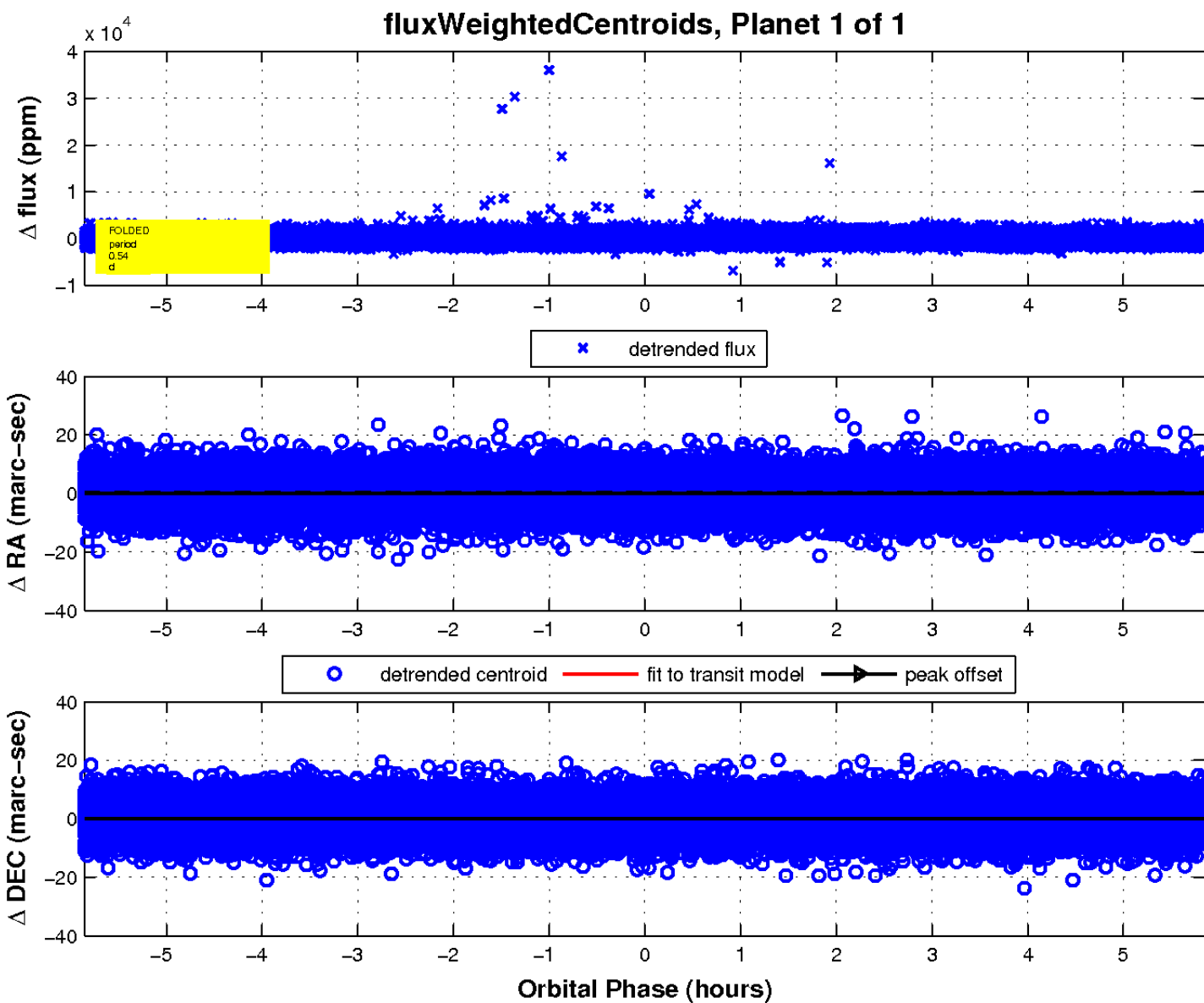
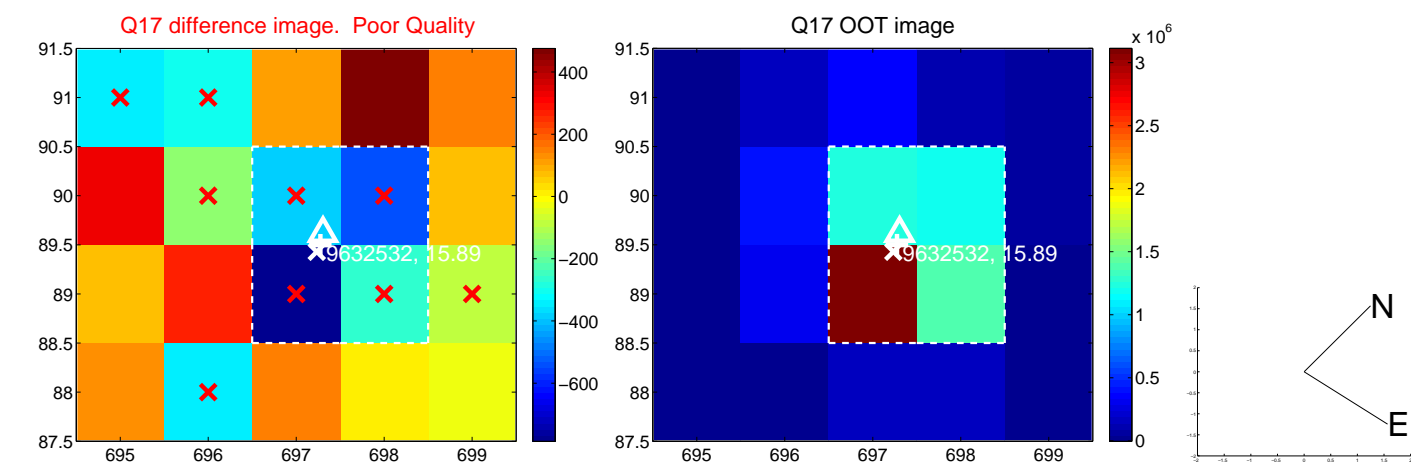
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

