

KIC 003533469

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})
003533469-01	OBS	2430.01	10.215082	133.644419	261.3	3.583	15.2	15.8	0.95	5406	1.84	87.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003533469-01	OBS	FP	0.39	0	0	1	0	CENT_RESOLVED_OFFSET

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.

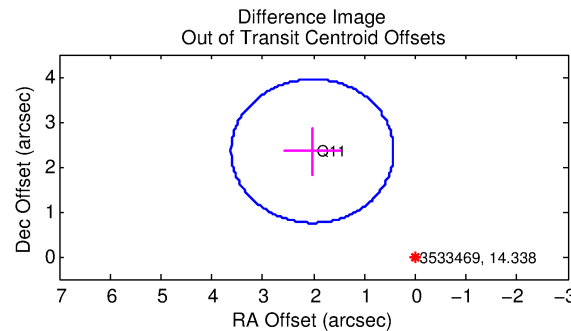
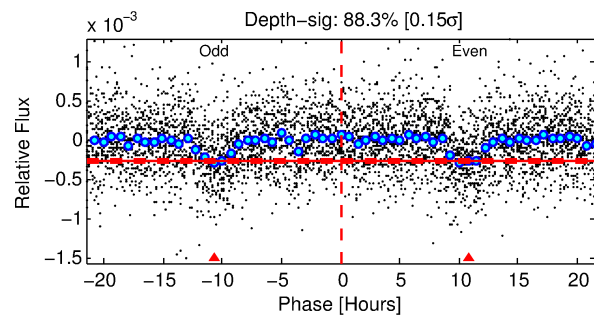
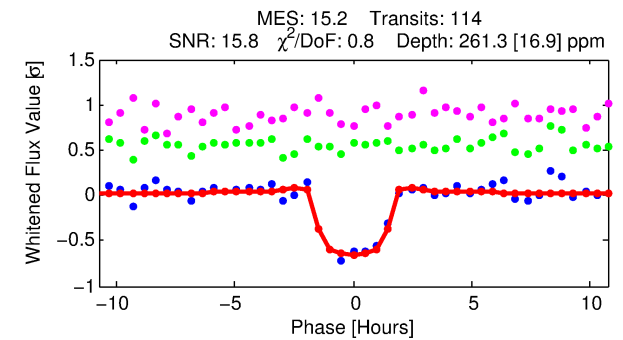
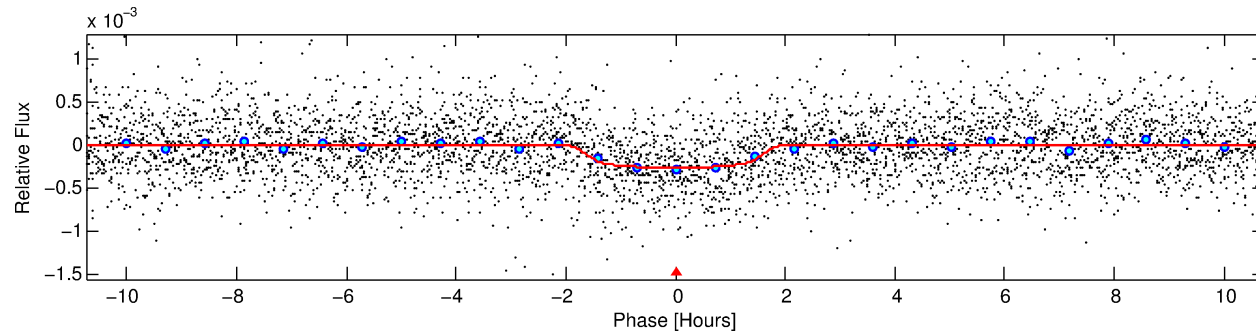
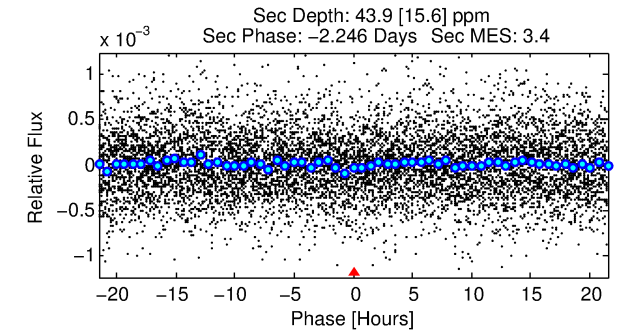
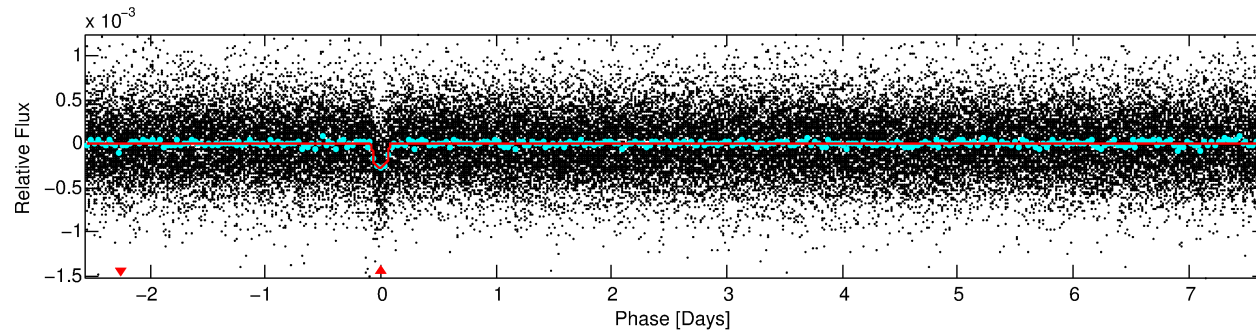
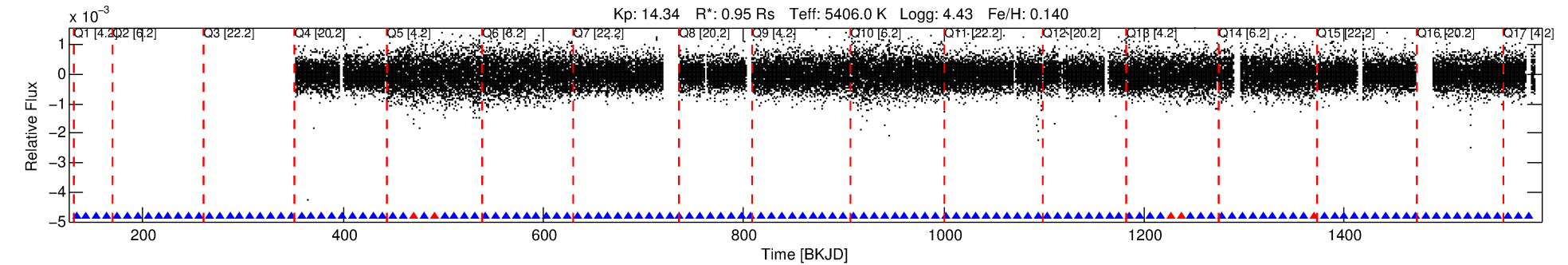
Ephemeris Match Information For 003533469-01

No Significant Match Found

DV One-Page Summary

KIC: 3533469 Candidate: 1 of 1 Period: 10.215 d

KOI: K02430.01 Corr: 0.948



DV Fit Results:

Period = 10.21508 [0.00006] d
Epoch = 133.6444 [0.0054] BKJD
Rp/R* = 0.0178 [0.0048]
a/R* = 10.50 [12.00]
b = 0.90 [0.26]
Seff = 87.75 [14.11]
Teff = 780 [31] K
Rp = 1.84 [0.54] Re
a = 0.0887 [0.0089] AU
Ag = 55.94 [37.09] [1.48σ]
Teffp = 3300 [535] K [4.70σ]

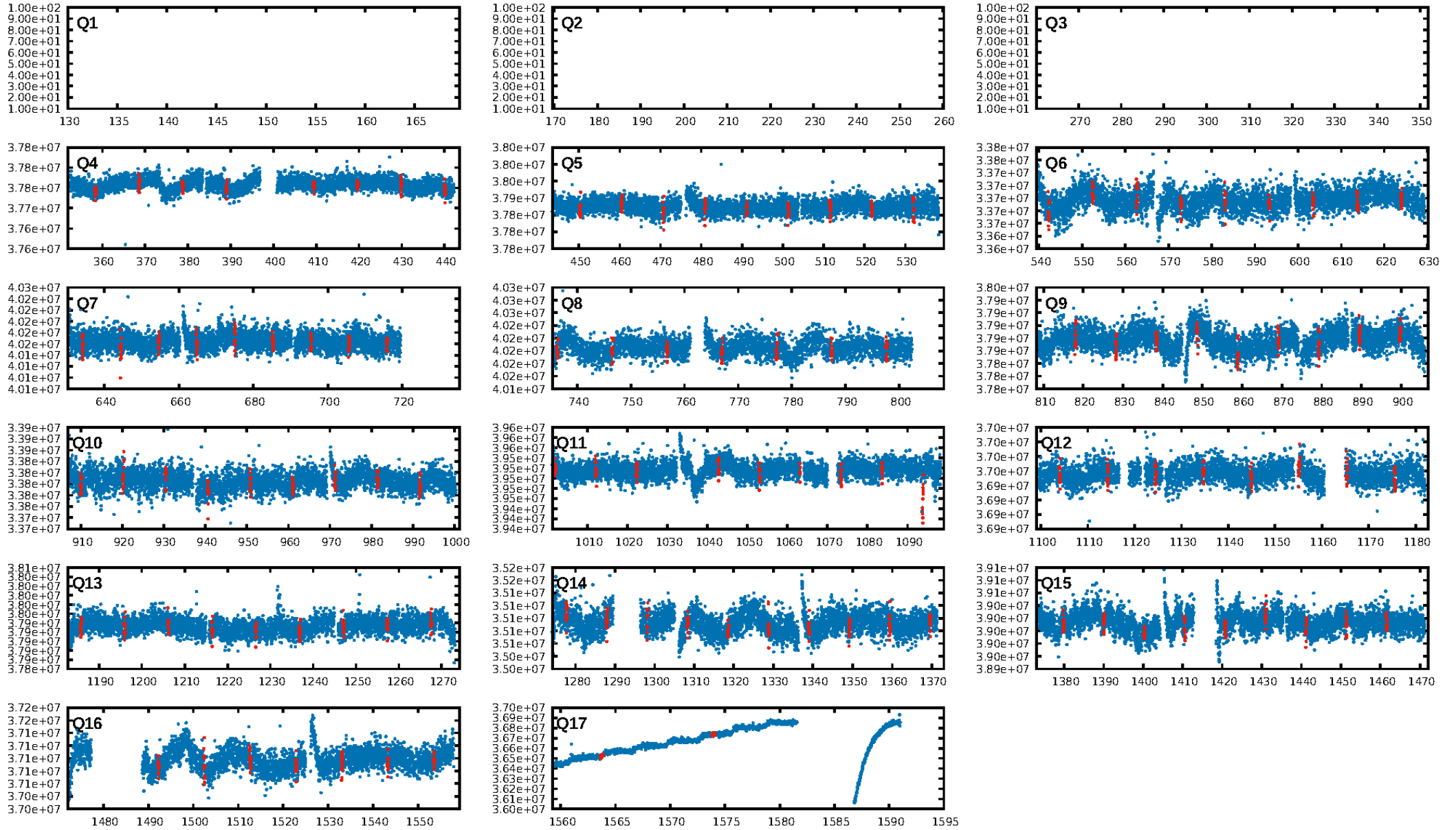
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.93e-49
RollingBand-fgt: 0.96 [107/112]
GhostDiagnostic-chr: 5.561
Centroid-sig: 0.0%
Centroid-so: 1.533 arcsec [3.22σ]
OotOffset-rm: 3.097 arcsec [5.81σ]
KicOffset-rm: 9.635 arcsec [3.57σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [14/14]

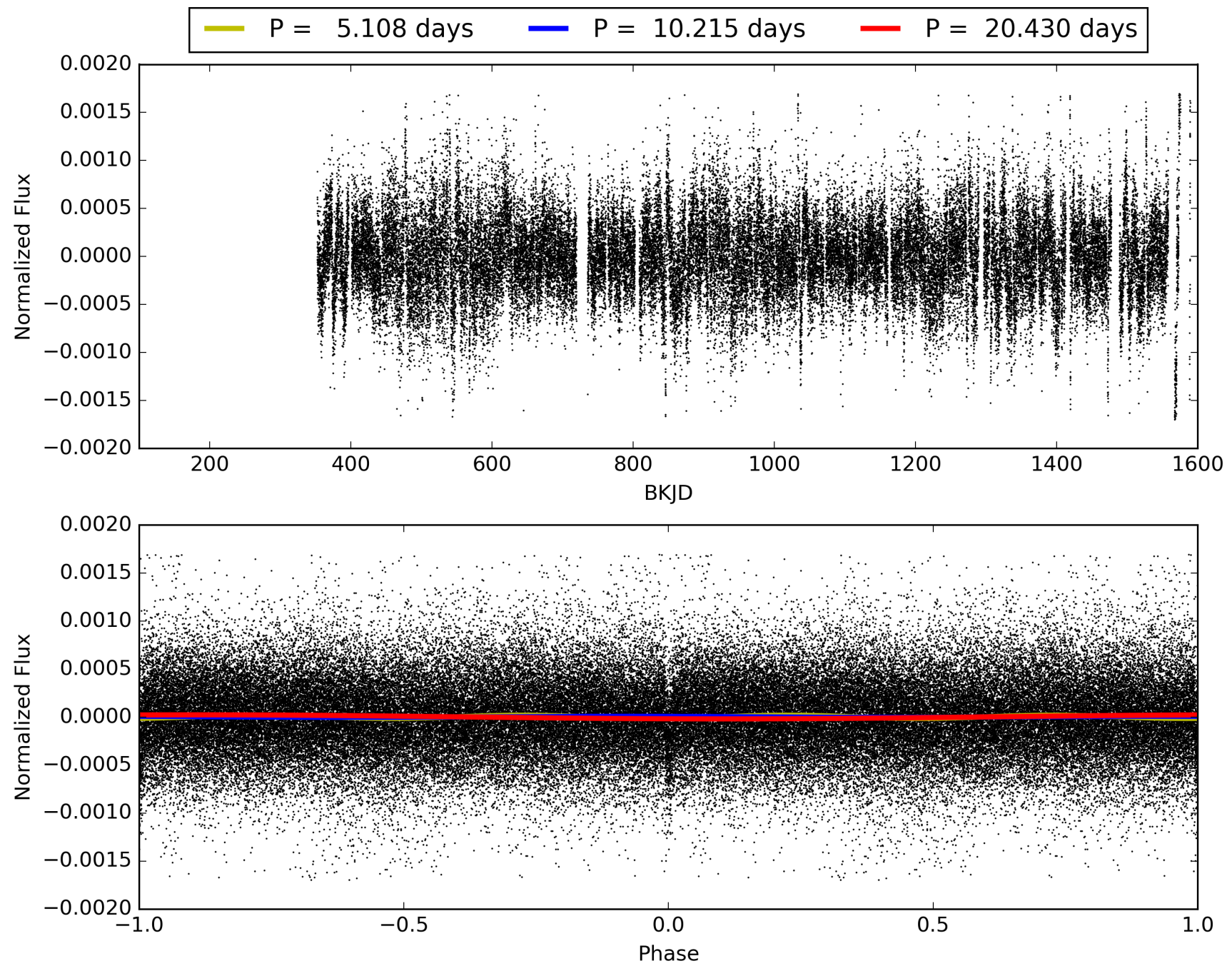
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:20:36 Z

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

TCE 003533469-01, PDC Light Curves

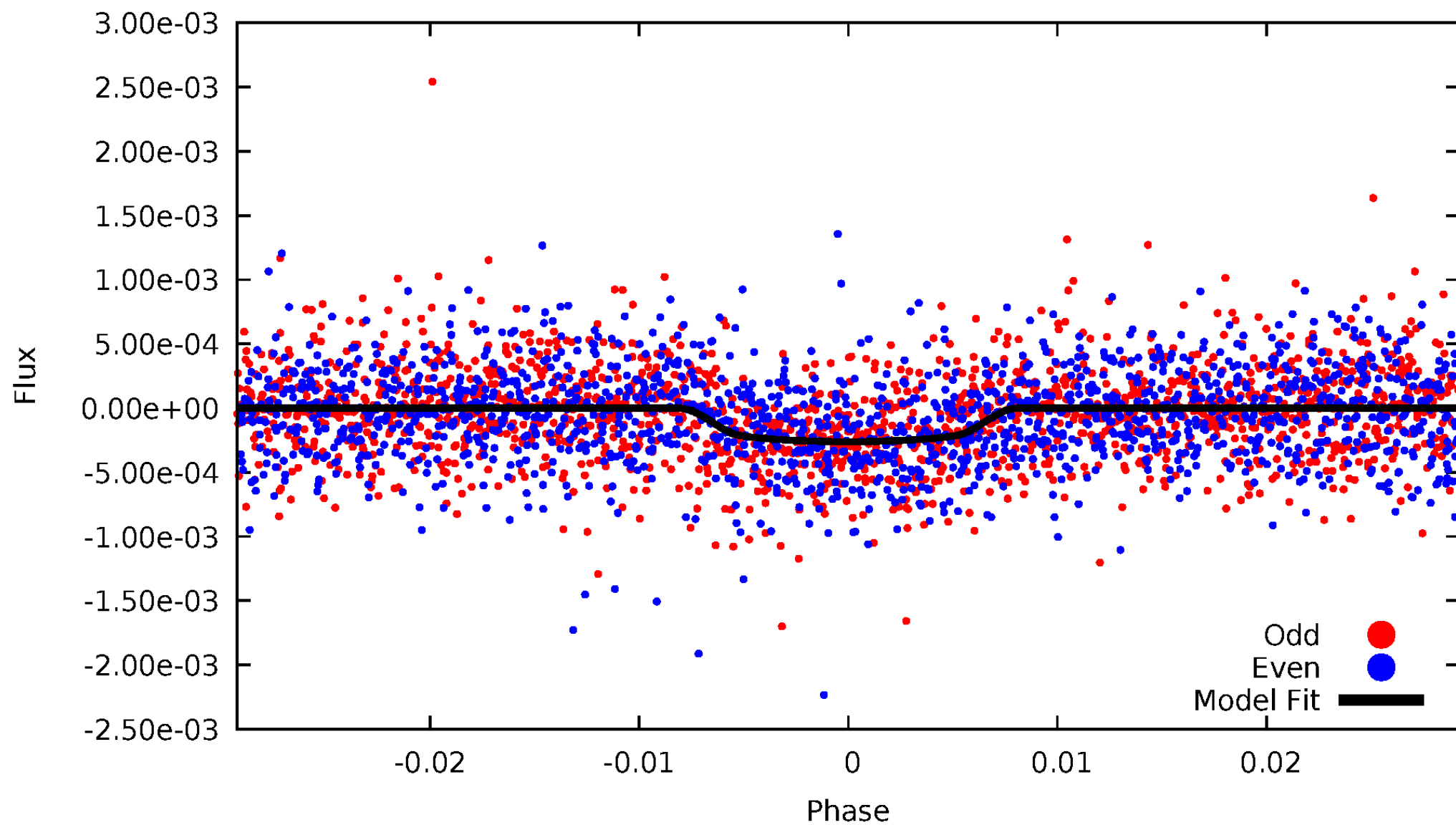


TCE 003533469-01



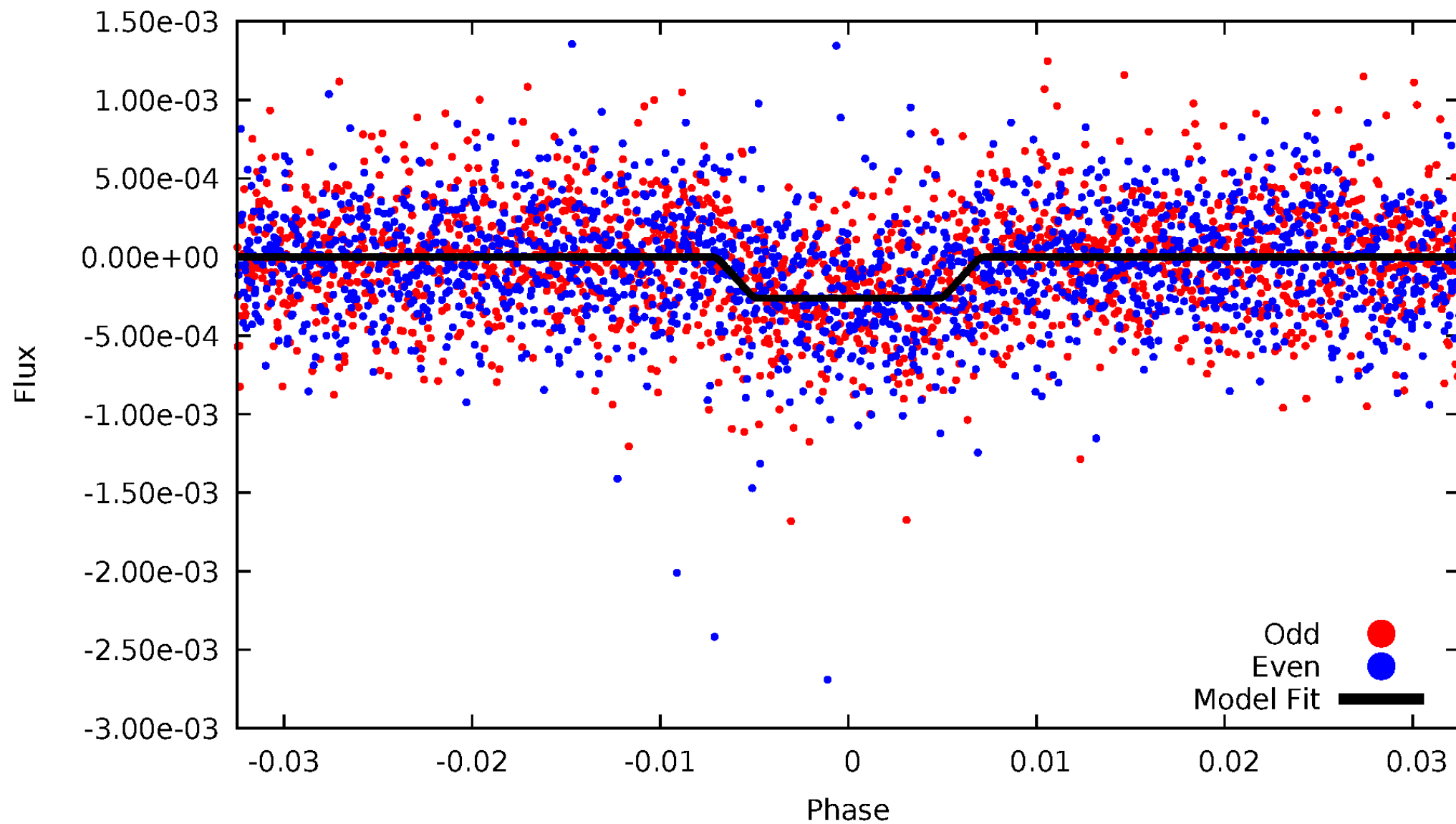
DV Odd/Even

TCE 003533469-01



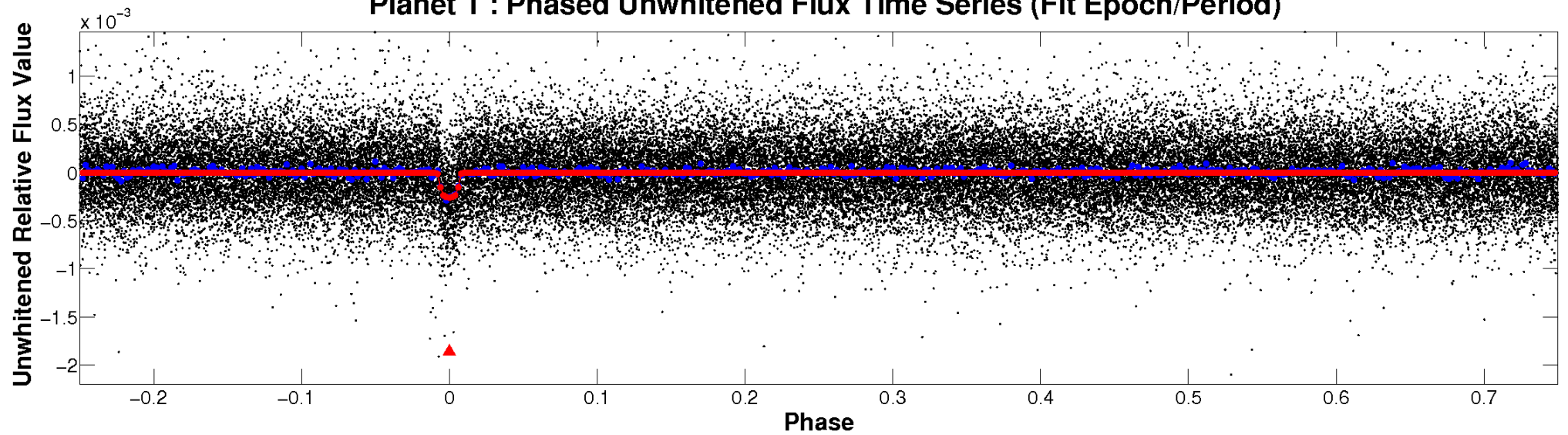
ALT Odd/Even

TCE 003533469-01

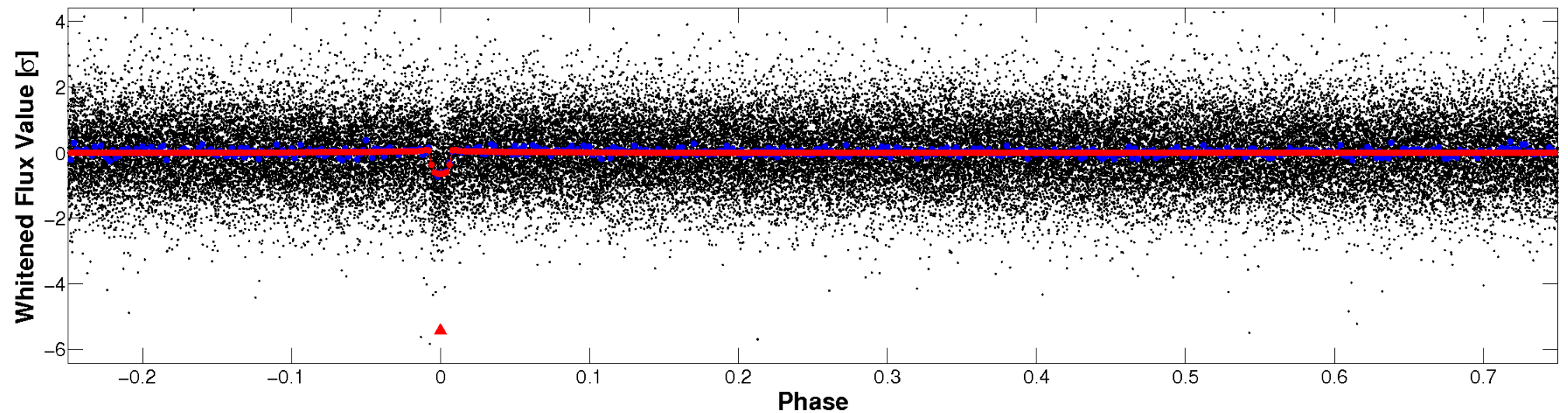


Non-Whitened Vs. Whitened Light Curve

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

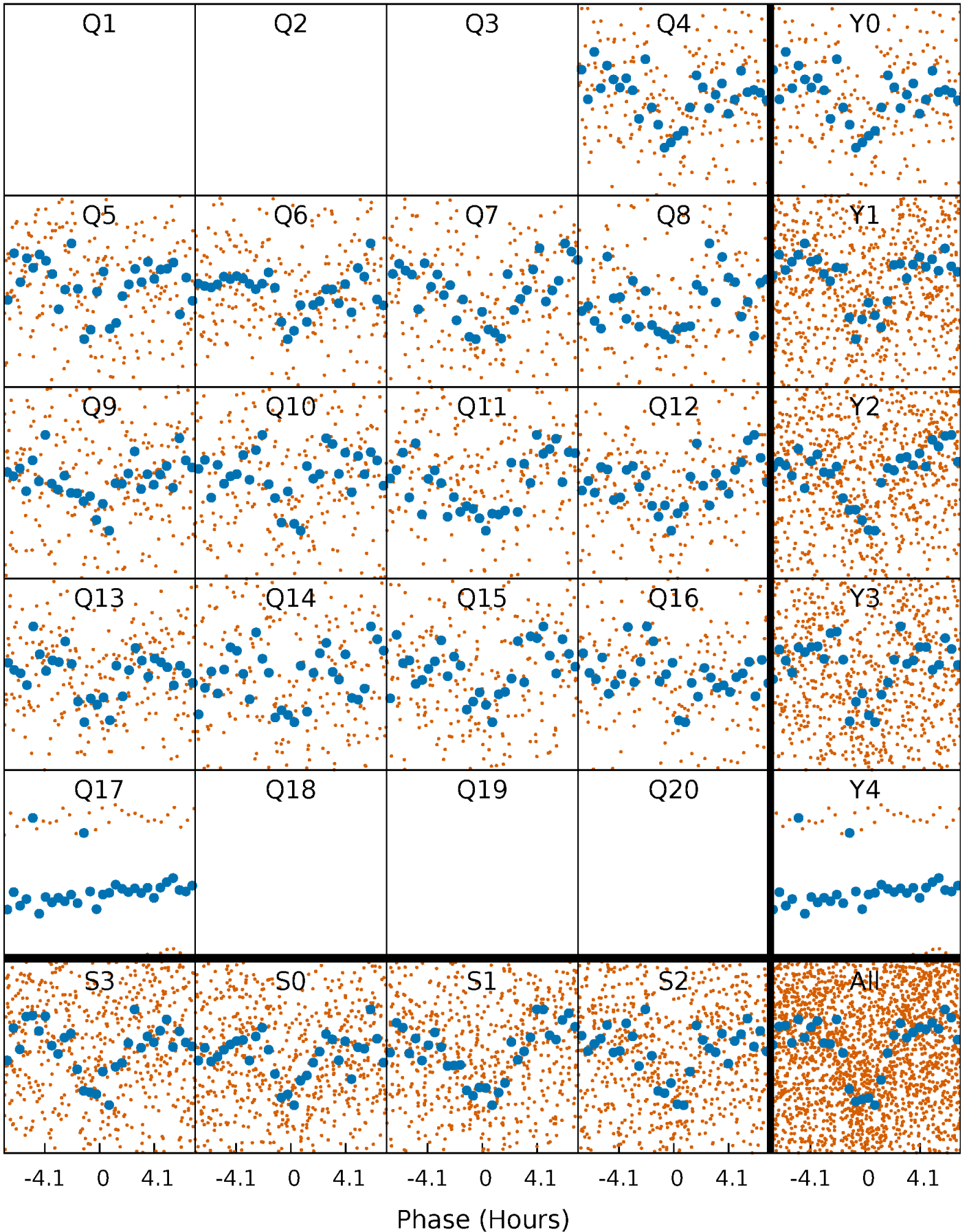


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



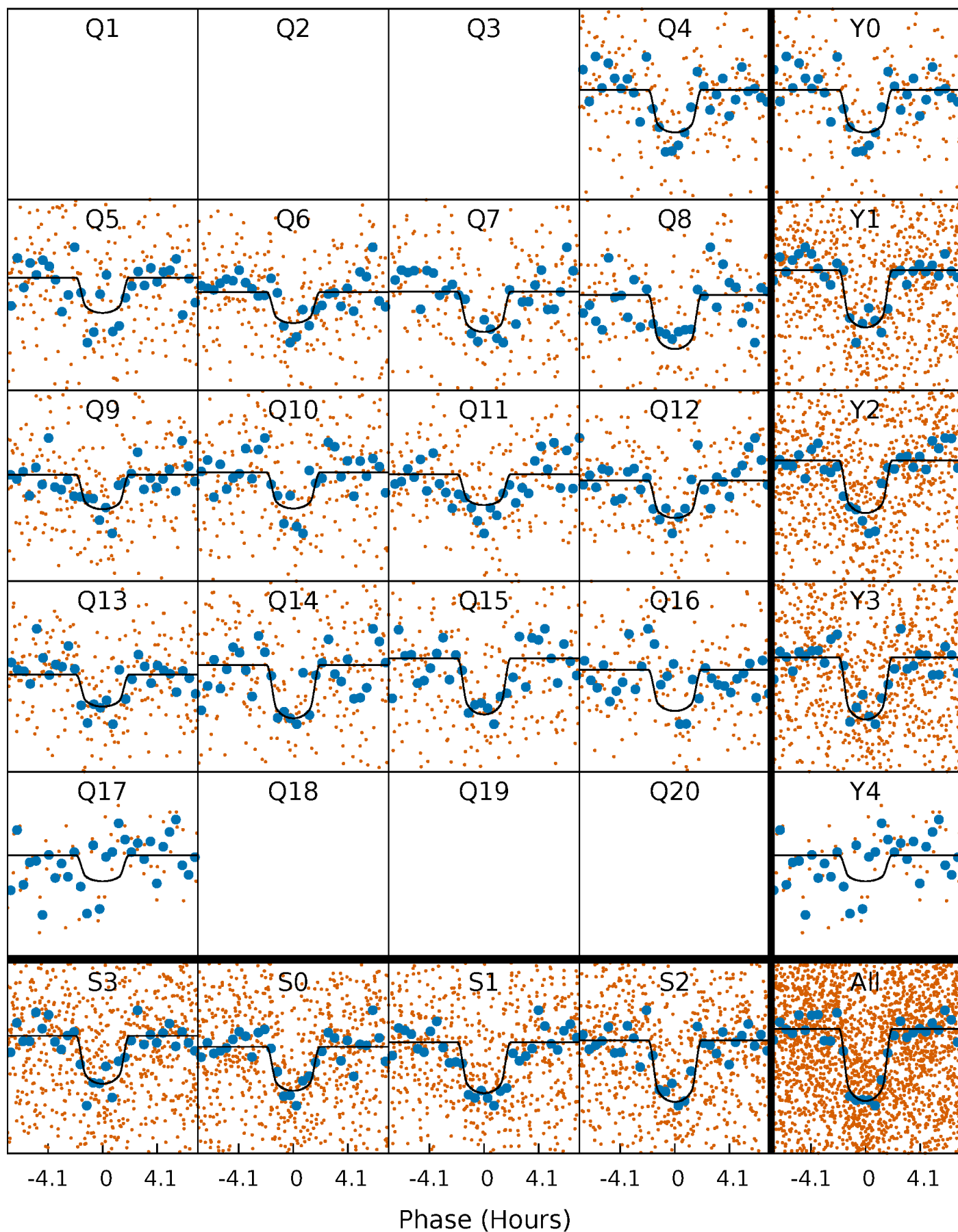
PDC Quarter-Phased Transit Curves

TCE 003533469-01 P= 10.215082 Days $T_0=133.644419$ (BKJD)



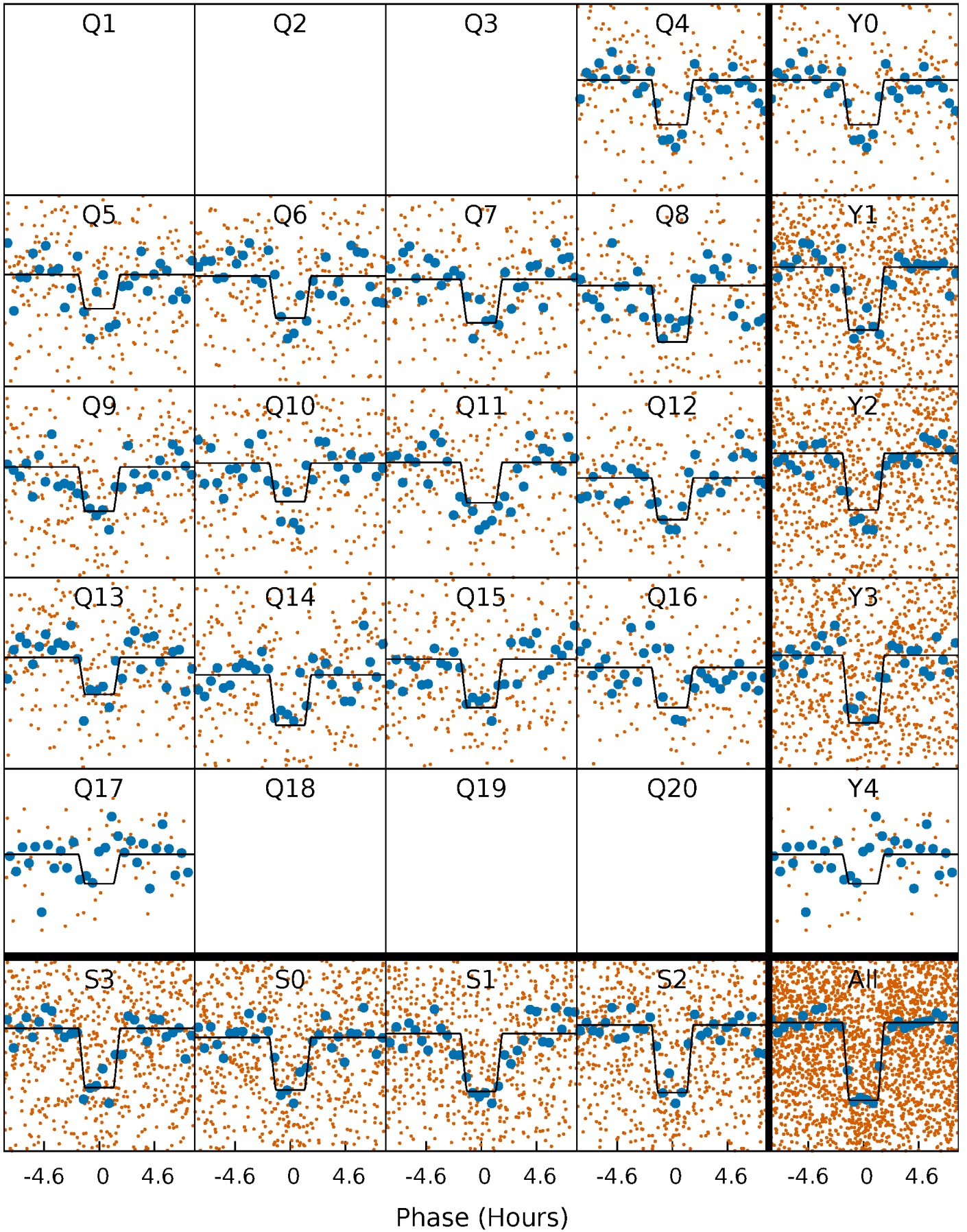
DV Quarter-Phased Transit Curves

TCE 003533469-01 P= 10.215082 Days $T_0=133.644419$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

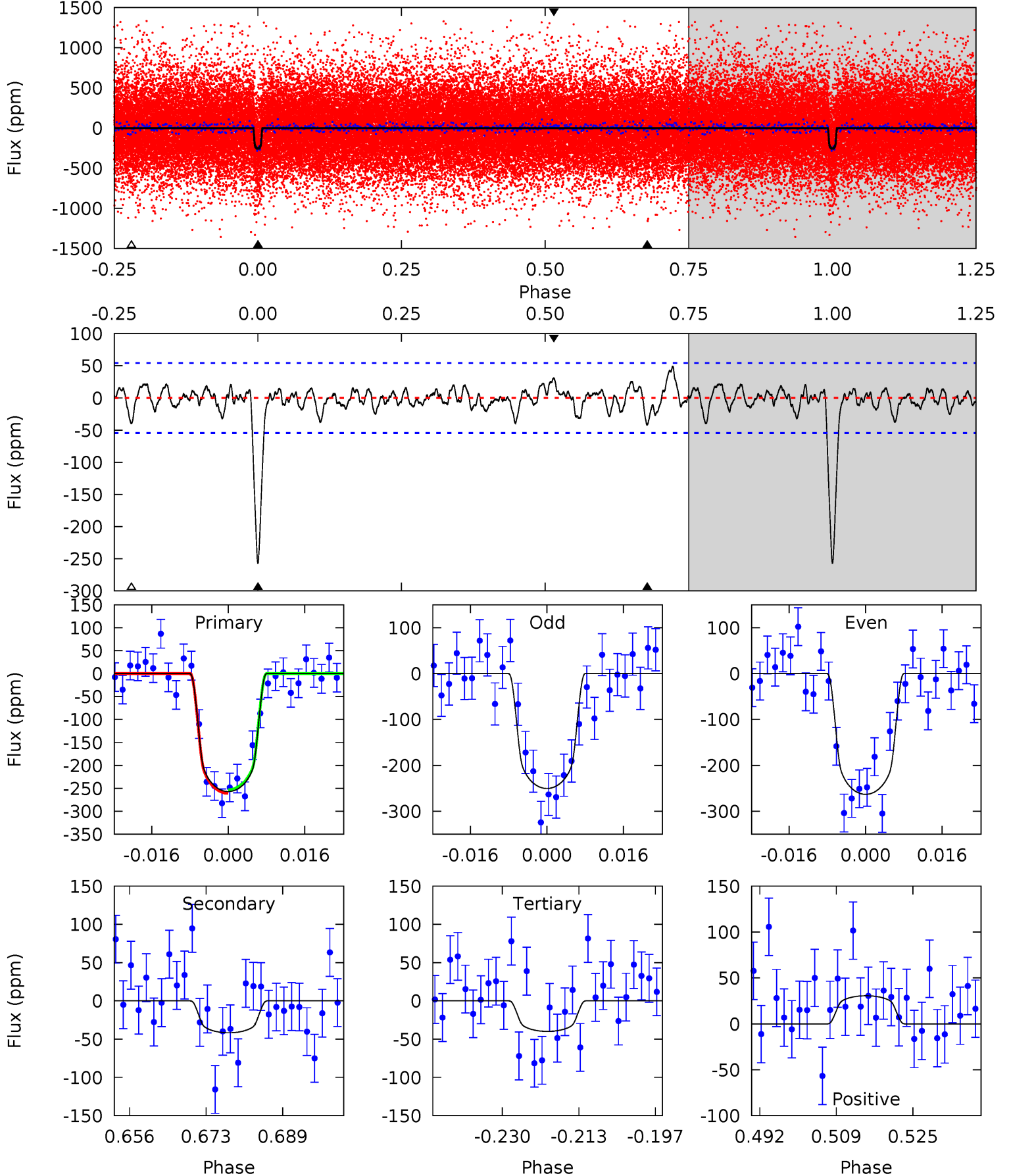
TCE 003533469-01 P= 10.215129 Days $T_0=133.639492$ (BKJD)



DV Model-Shift Uniqueness Test

003533469-01, P = 10.215082 Days, E = 133.644419 Days

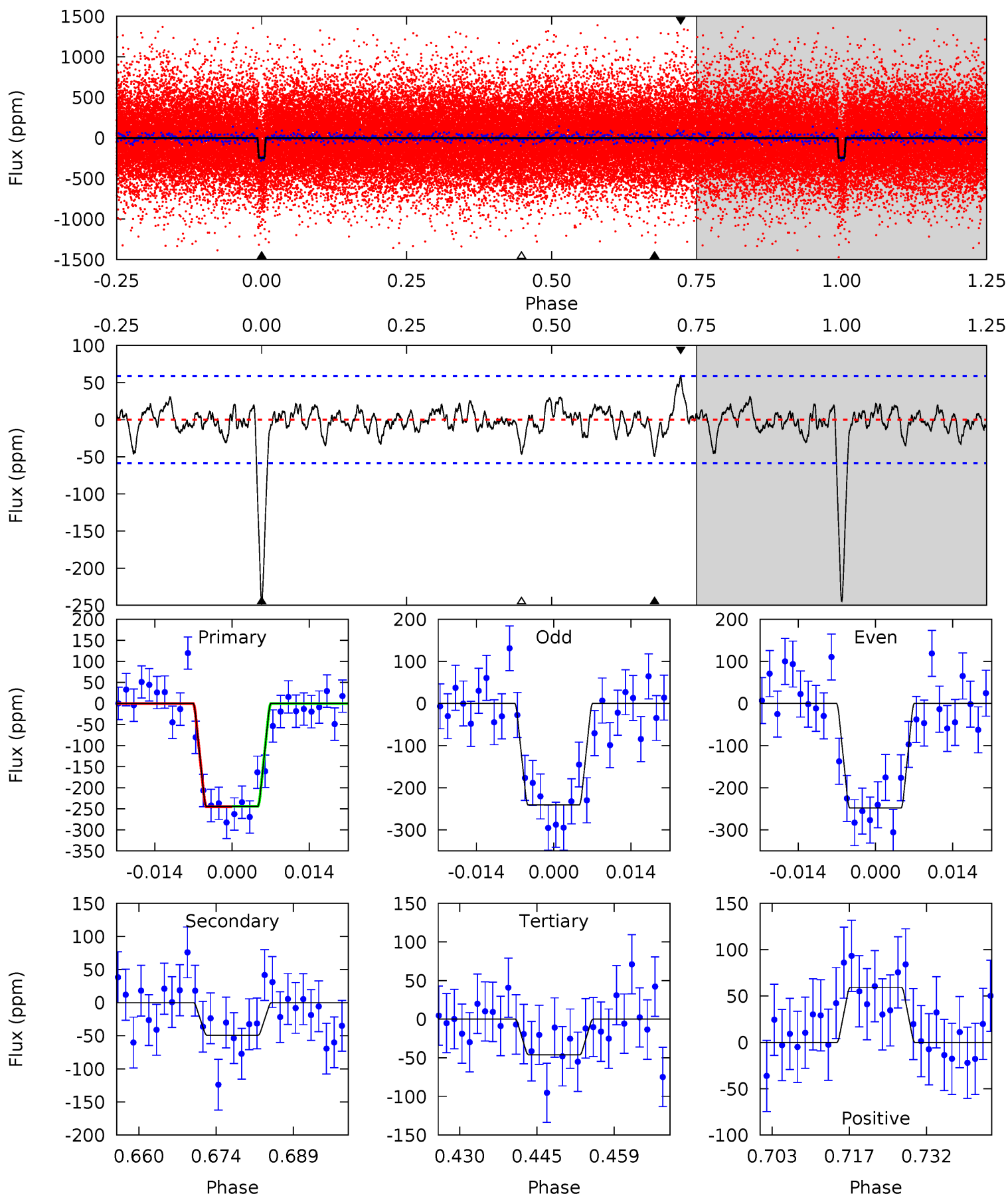
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.3	3.78	3.62	2.77	4.93	2.40	1.23	19.7	20.5	0.17	1.01	0.58	1.08	0.16	0.35



Alt Model-Shift Uniqueness Test

003533469-01, P = 10.215129 Days, E = 133.639492 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	4.15	3.89	5.01	4.96	2.45	1.21	16.8	15.6	0.26	-0.86	0.30	1.05	0.20	0.03



Stellar Parameters For KIC 003533469

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5406^{+75}_{-75}	$4.433^{+0.085}_{-0.085}$	$0.140^{+0.150}_{-0.150}$	$0.950^{+0.108}_{-0.088}$	$0.893^{+0.060}_{-0.037}$	$1.466^{+0.460}_{-0.385}$
	+1%/-1%	+2%/-2%	+107%/-107%	+11%/-9%	+7%/-4%	+31%/-26%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 003533469-01 / KOI 2430.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-42 ± 11	$1.83^{+0.52}_{-0.51}$	1091^{+36}_{-35}	3668^{+494}_{-328}	53^{+56}_{-23}
Alt.	-49 ± 12	$1.67^{+0.50}_{-0.50}$	1092^{+36}_{-33}	3912^{+525}_{-356}	77^{+77}_{-33}

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

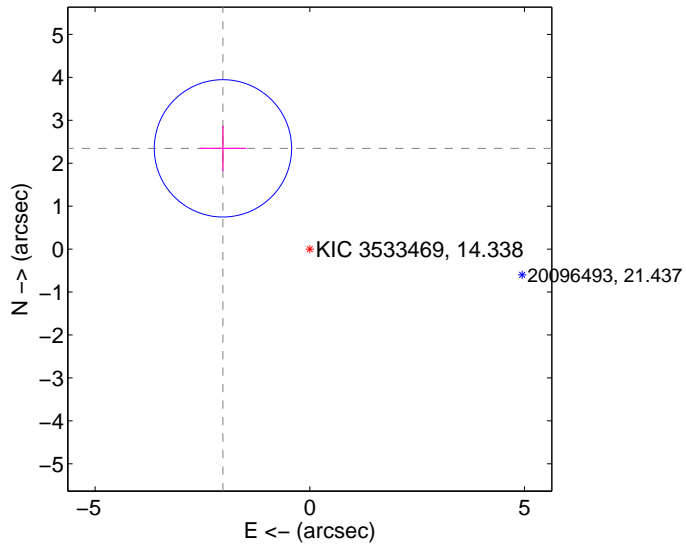
Supplemental centroid analysis for 003533469-01. Kepler magnitude: 14.34. Transit SNR 15.75

There are 2 quarters with good PRF difference image offsets

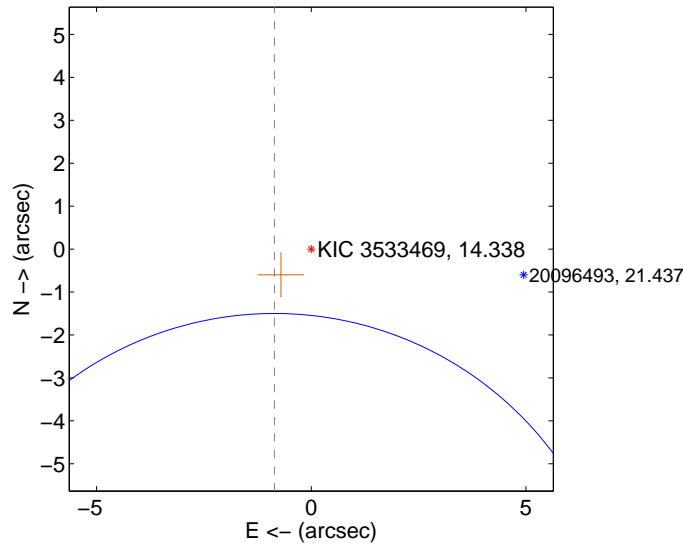
The OOT PRF centroid is offset from the target star catalog position by about 3.22 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.097 ± 0.533	5.81	2.022 ± 0.540	2.346 ± 0.528
PRF-fit source offset from KIC position	9.635 ± 2.699	3.57	0.856 ± 0.336	-9.597 ± 2.726
photometric centroid source offset	1.53 ± 0.48	3.22	-0.04 ± 0.32	-1.53 ± 0.48

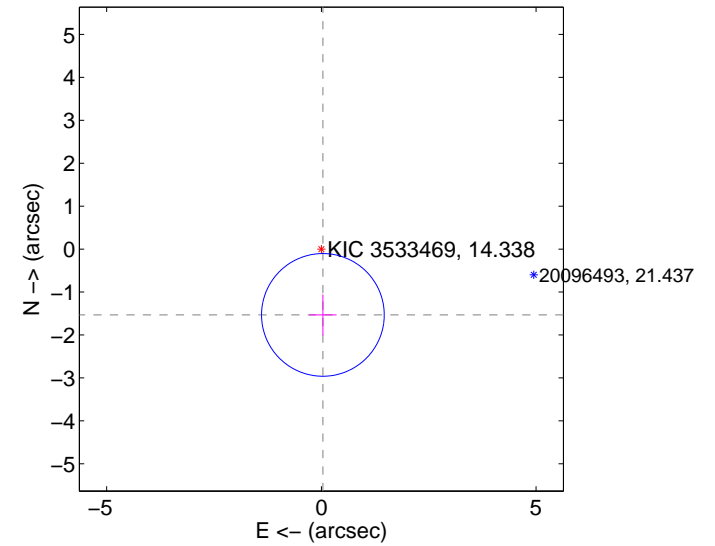
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

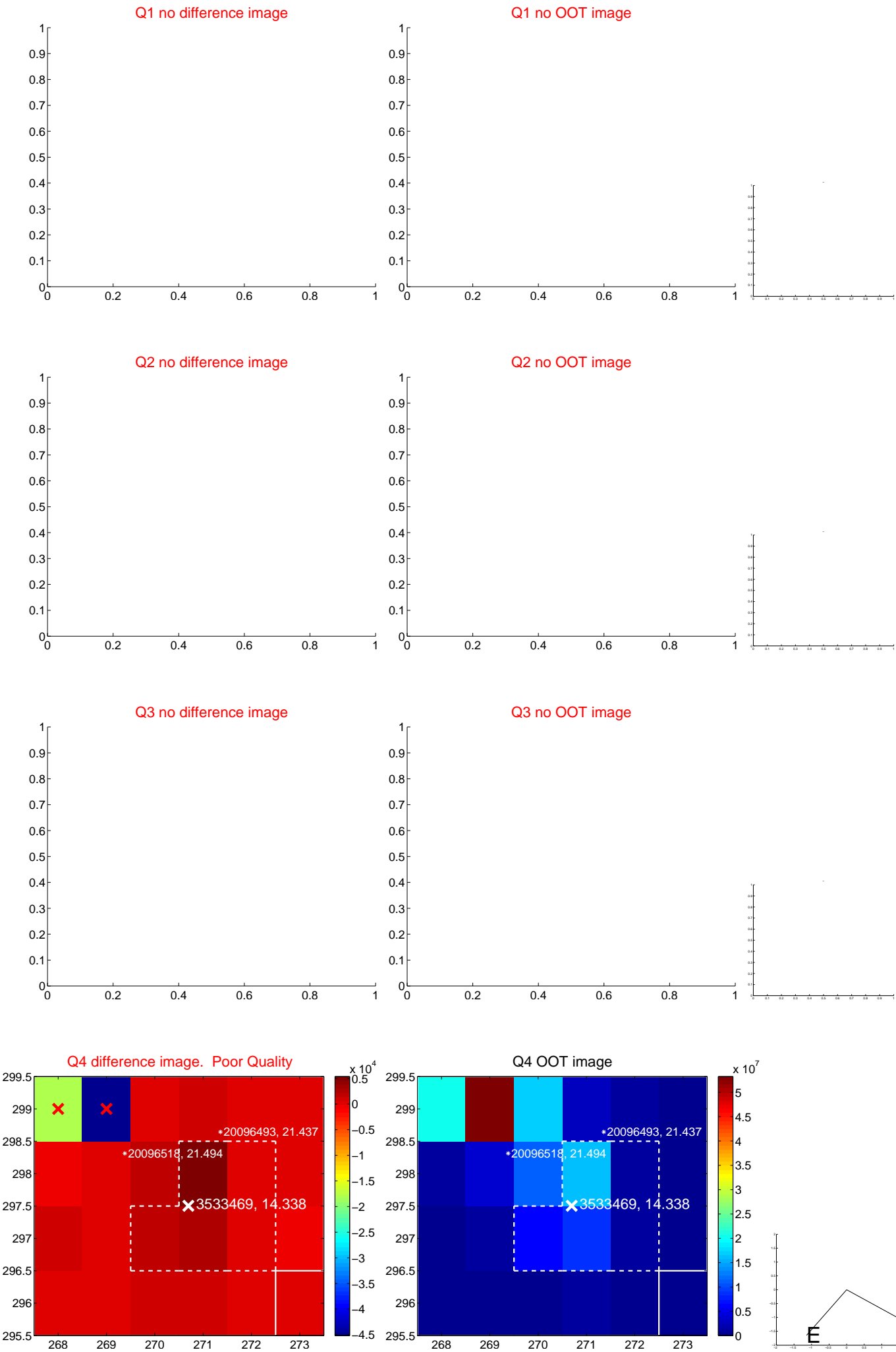


offset from photometric centroids

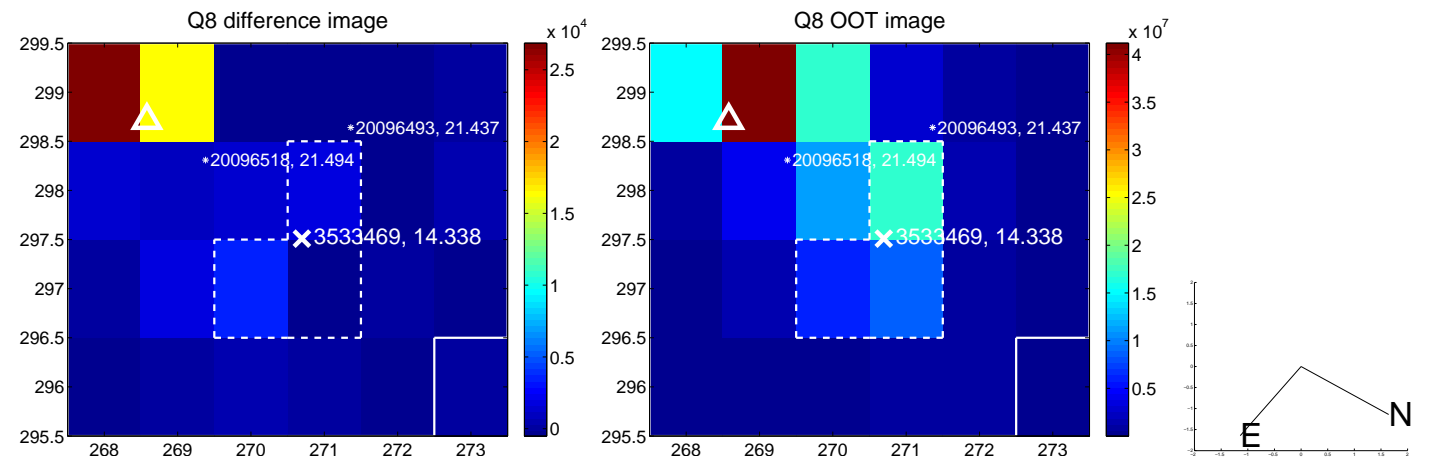
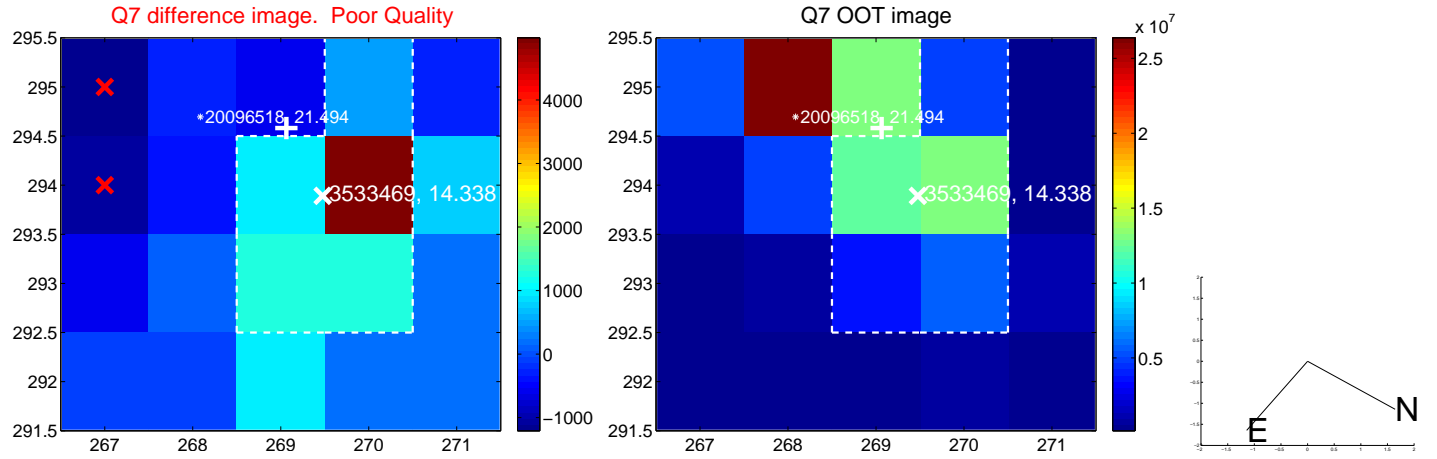
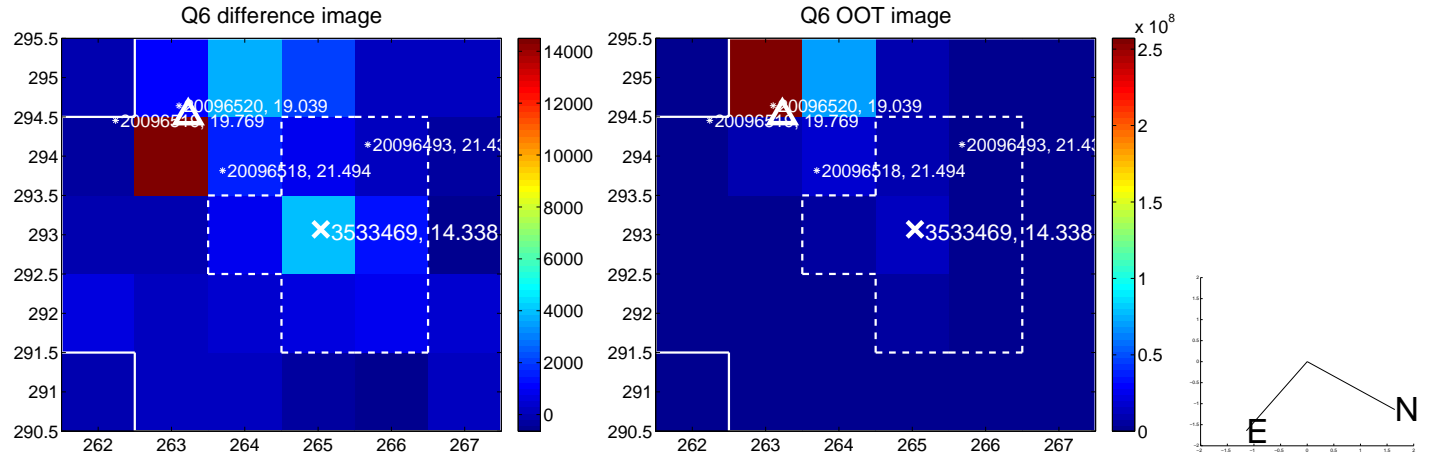
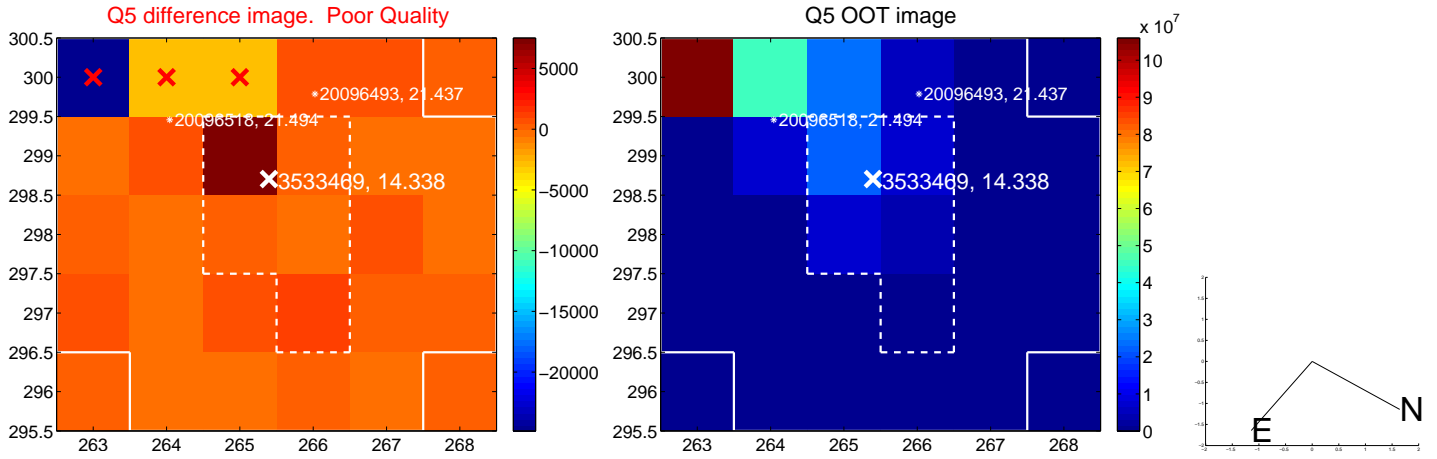


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

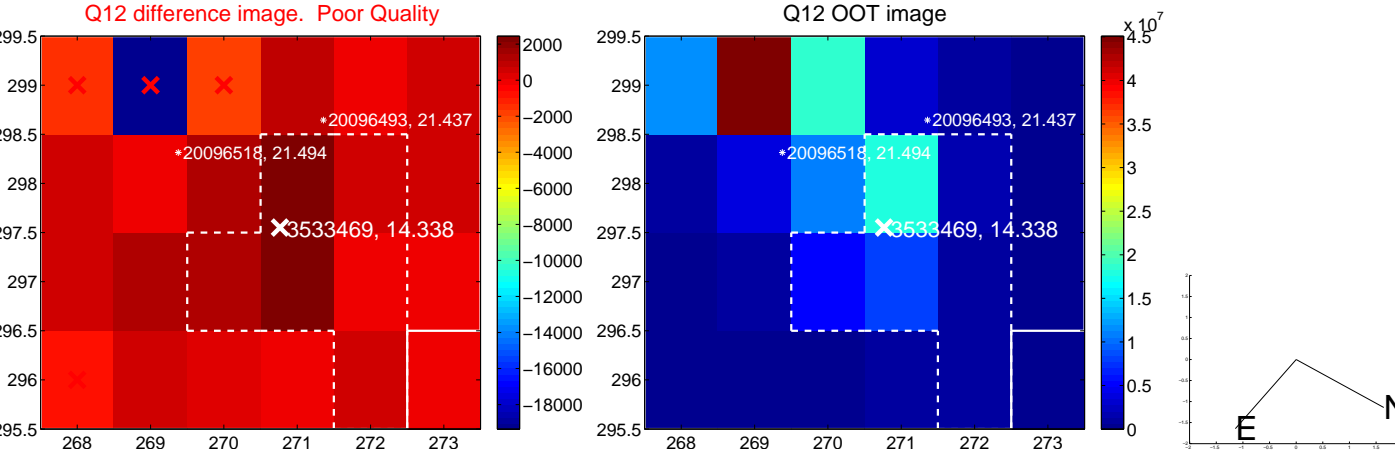
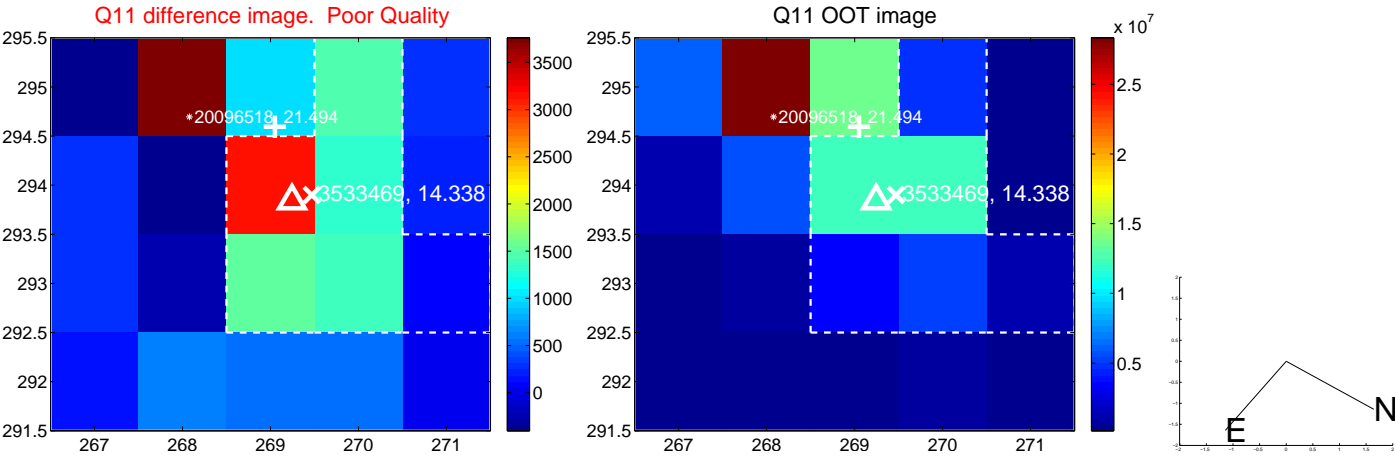
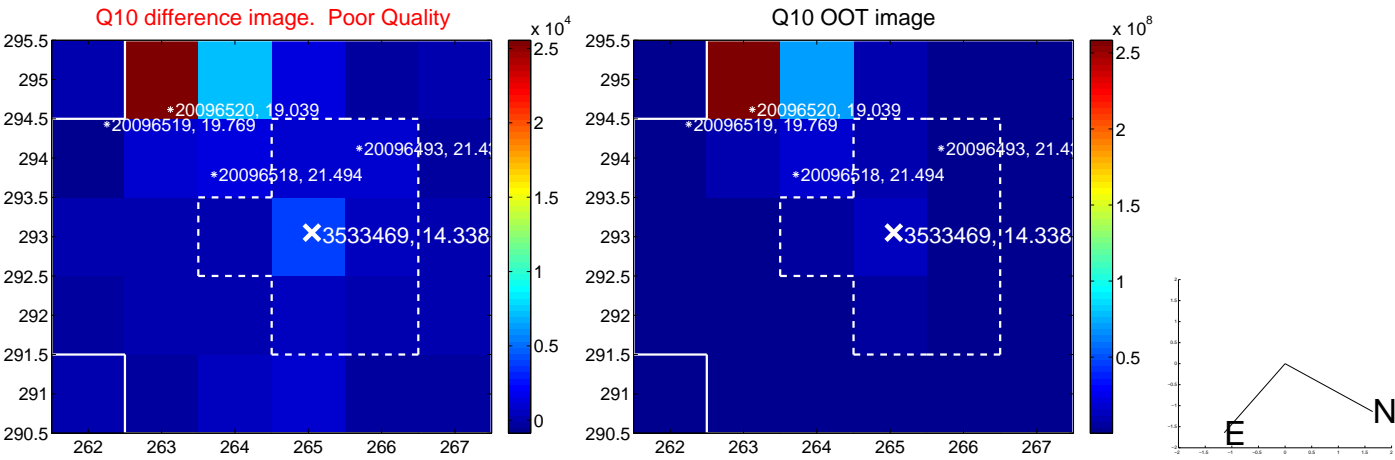
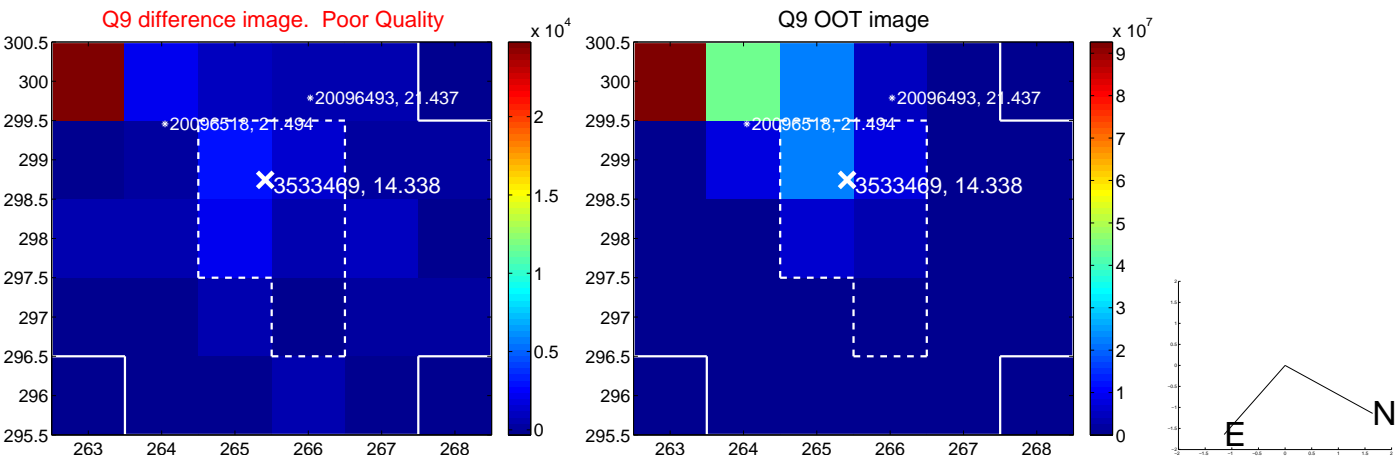
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



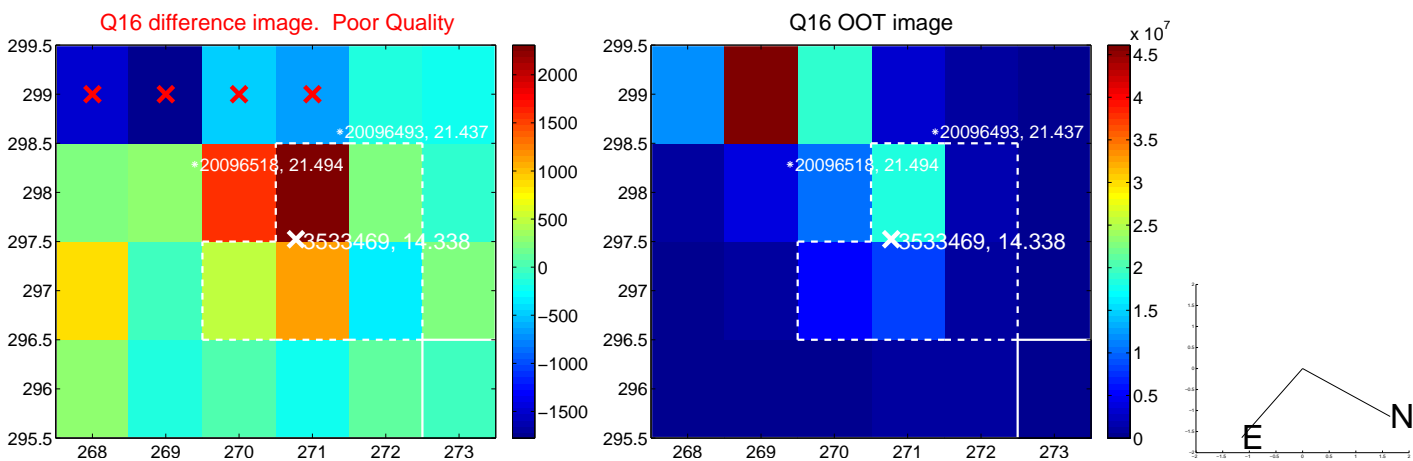
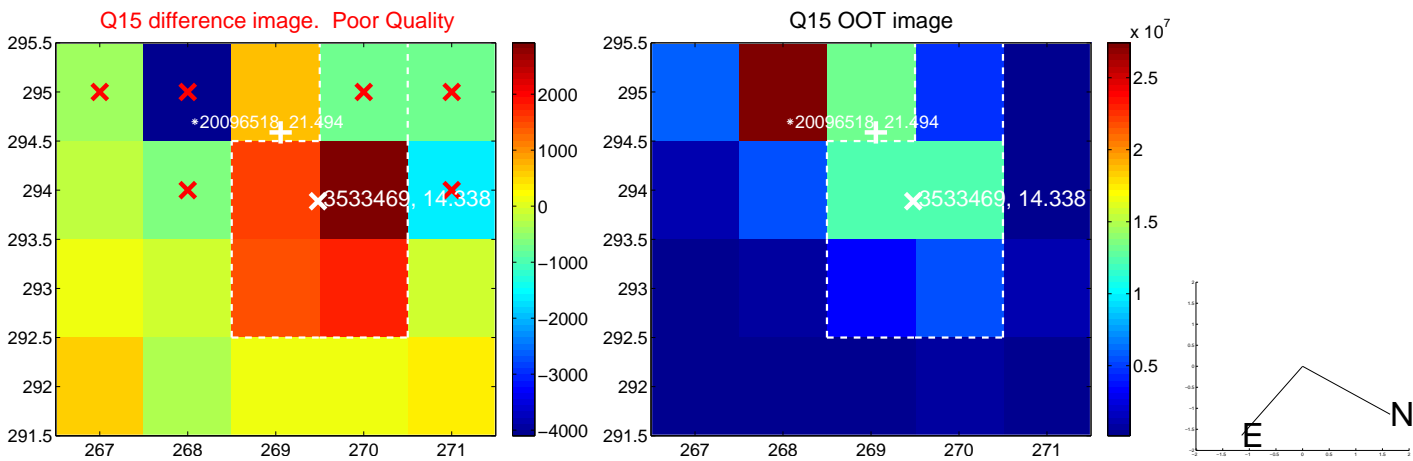
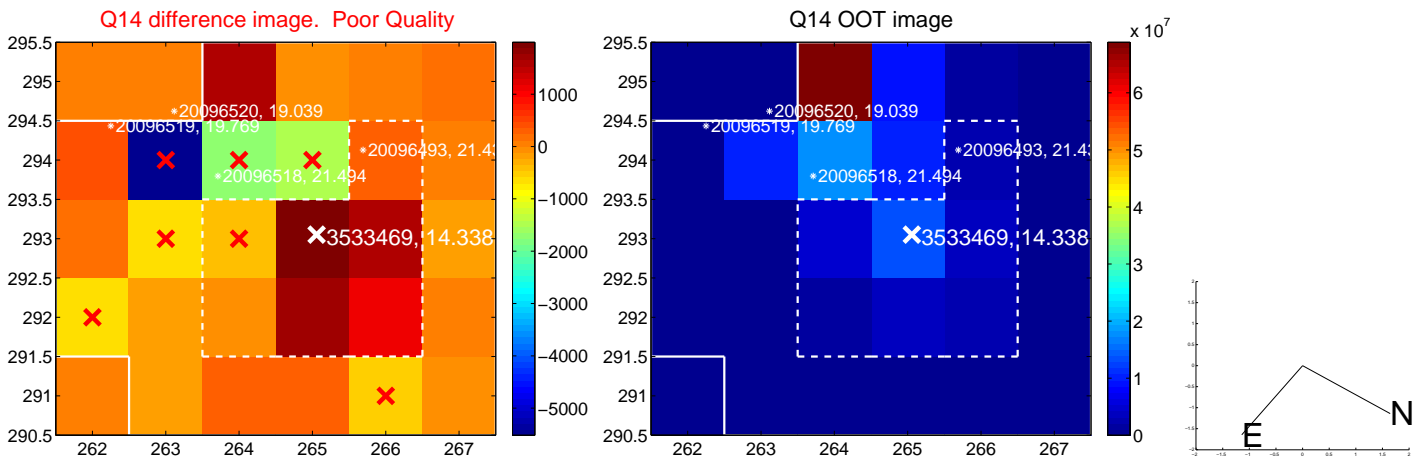
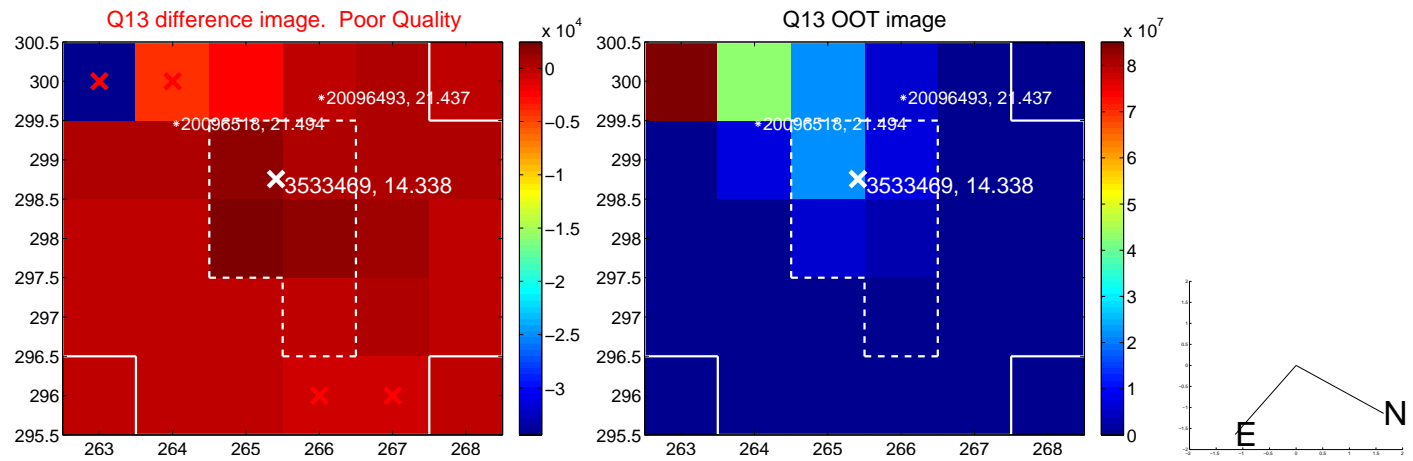
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



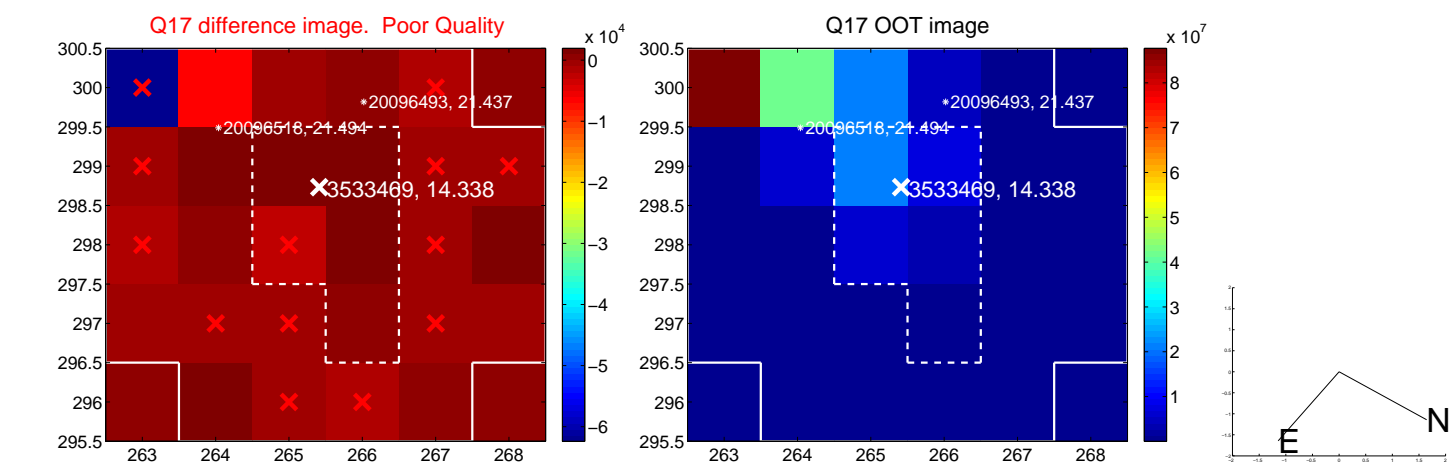
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



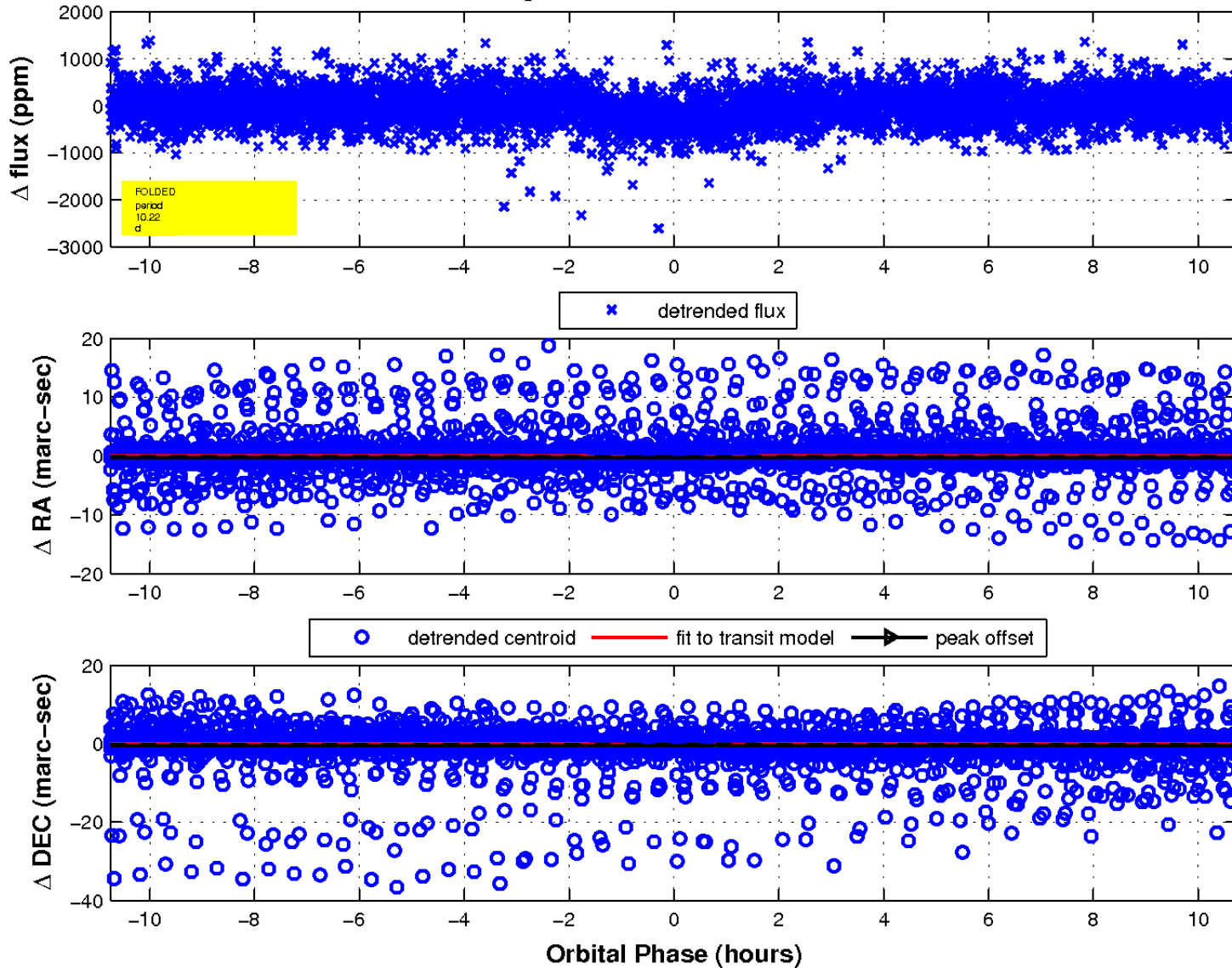
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

