

KIC 005175668

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})
005175668-01	OBS	No	21.913013	151.250354	51.3	20.128	9.3	10.6	1.13	6480	0.89	83.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005175668-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_POS_DV

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

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

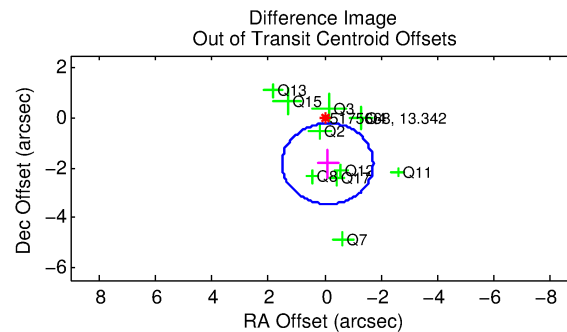
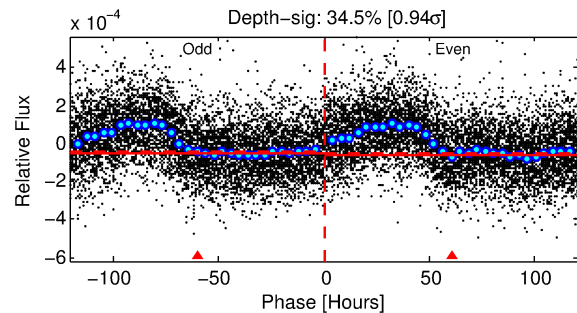
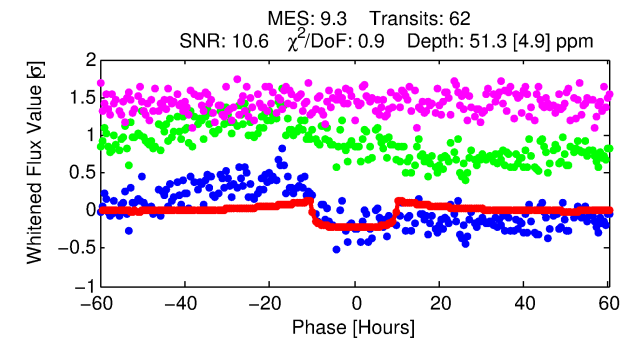
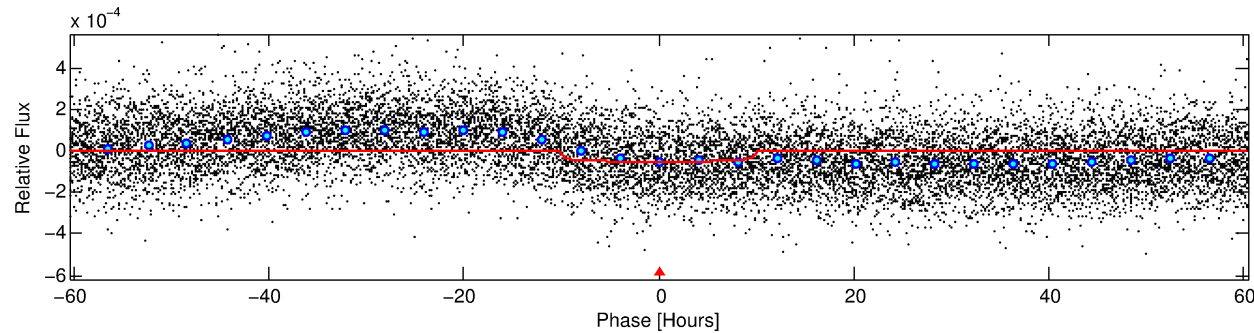
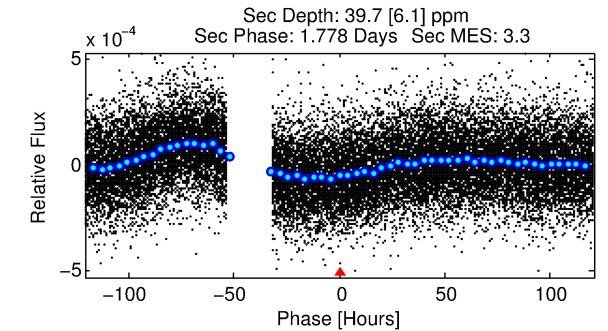
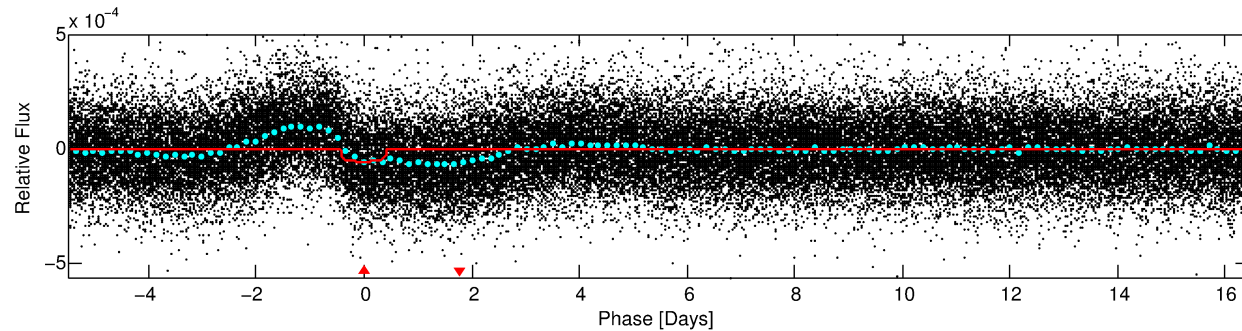
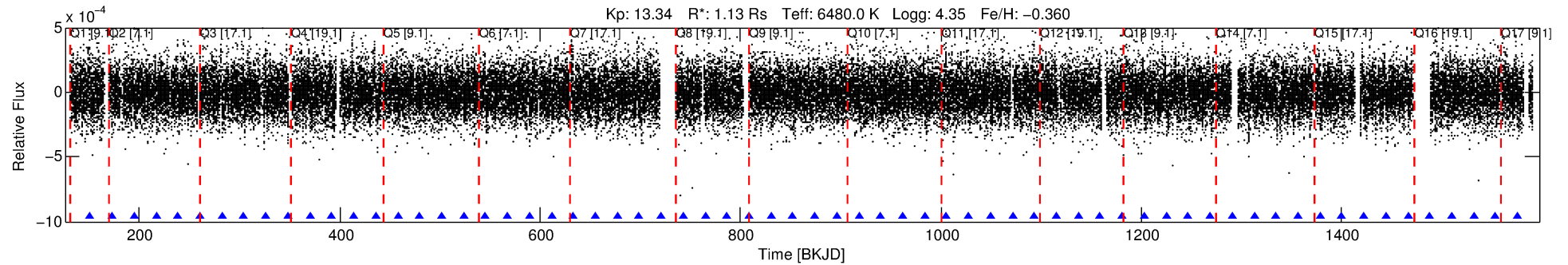
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005175668-01

No Significant Match Found

DV One-Page Summary

KIC: 5175668 Candidate: 1 of 1 Period: 21.913 d



DV Fit Results:

Period = 21.91301 [0.00043] d
Epoch = 151.2504 [0.0160] BKJD
Rp/R* = 0.0072 [0.0012]
a/R* = 5.28 [4.59]
b = 0.79 [0.43]
Seff = 83.46 [23.76]
Teff = 771 [55] K
Rp = 0.89 [0.25] Re
a = 0.1557 [0.0283] AU
Ag = 667.02 [302.15] [2.20 σ]
Teffp = 6056 [592] K [8.89 σ]

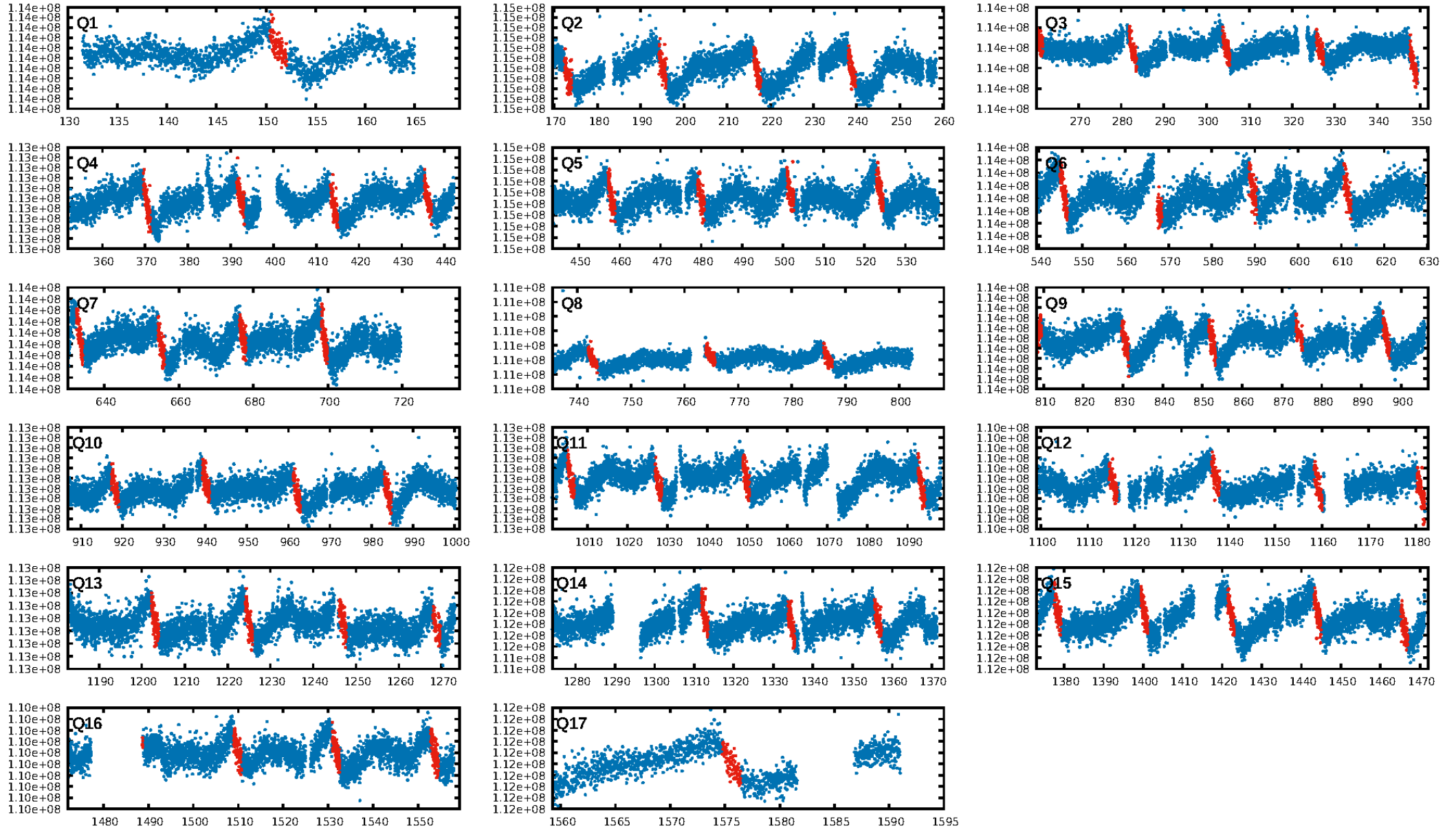
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.74e-19
RollingBand-fgt: 1.00 [60/60]
GhostDiagnostic-chr: 1.367
Centroid-sig: 42.1%
Centroid-so: 0.833 arcsec [0.84 σ]
OotOffset-rm: 1.843 arcsec [3.42 σ]
KicOffset-rm: 1.980 arcsec [3.27 σ]
OotOffset-st: 1/4/3/2 [10]
KicOffset-st: 1/4/3/2 [10]
DiffImageQuality-fgm: 0.60 [6/10]
DiffImageOverlap-fno: 1.00 [17/17]

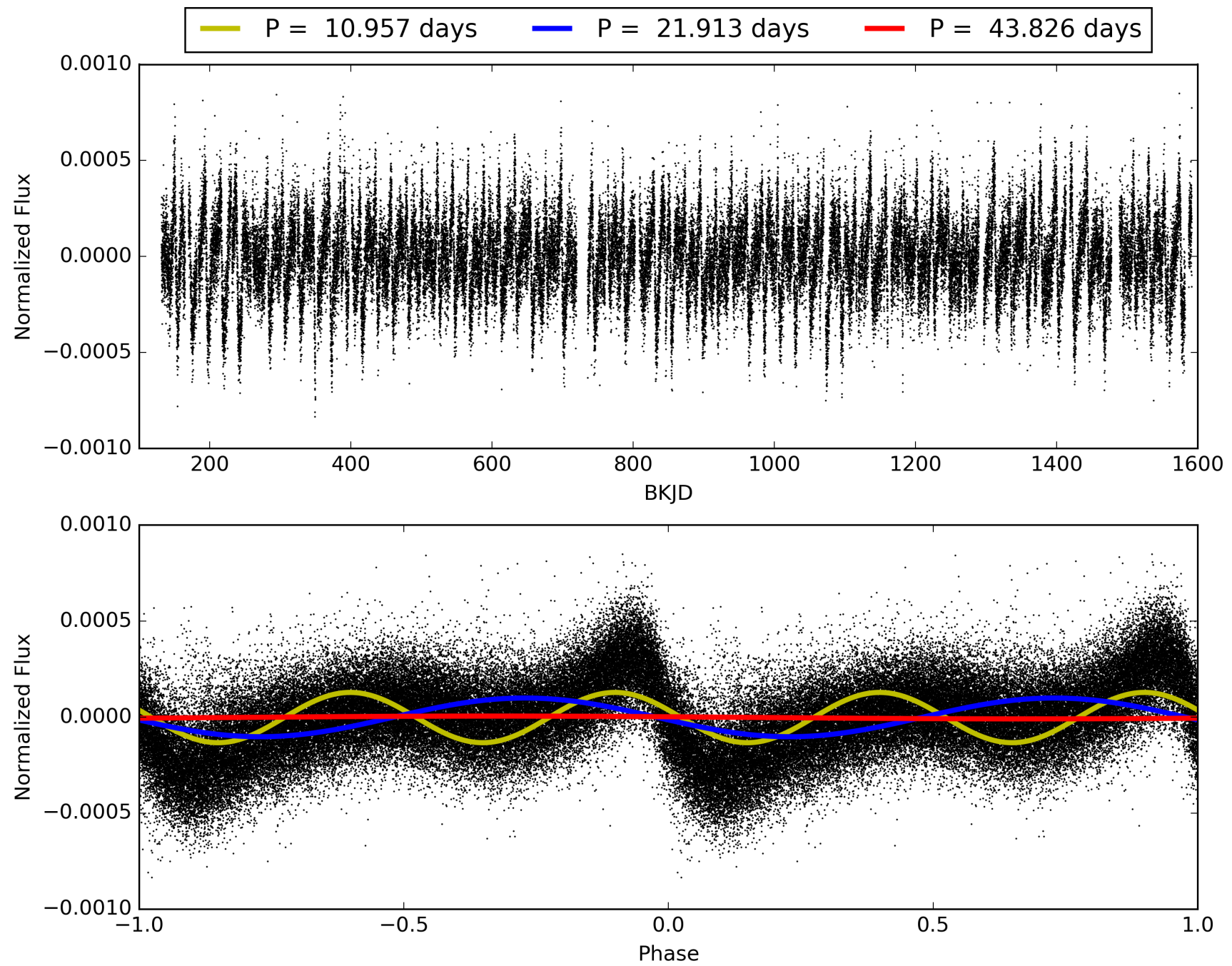
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:27:45 Z

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

TCE 005175668-01, PDC Light Curves

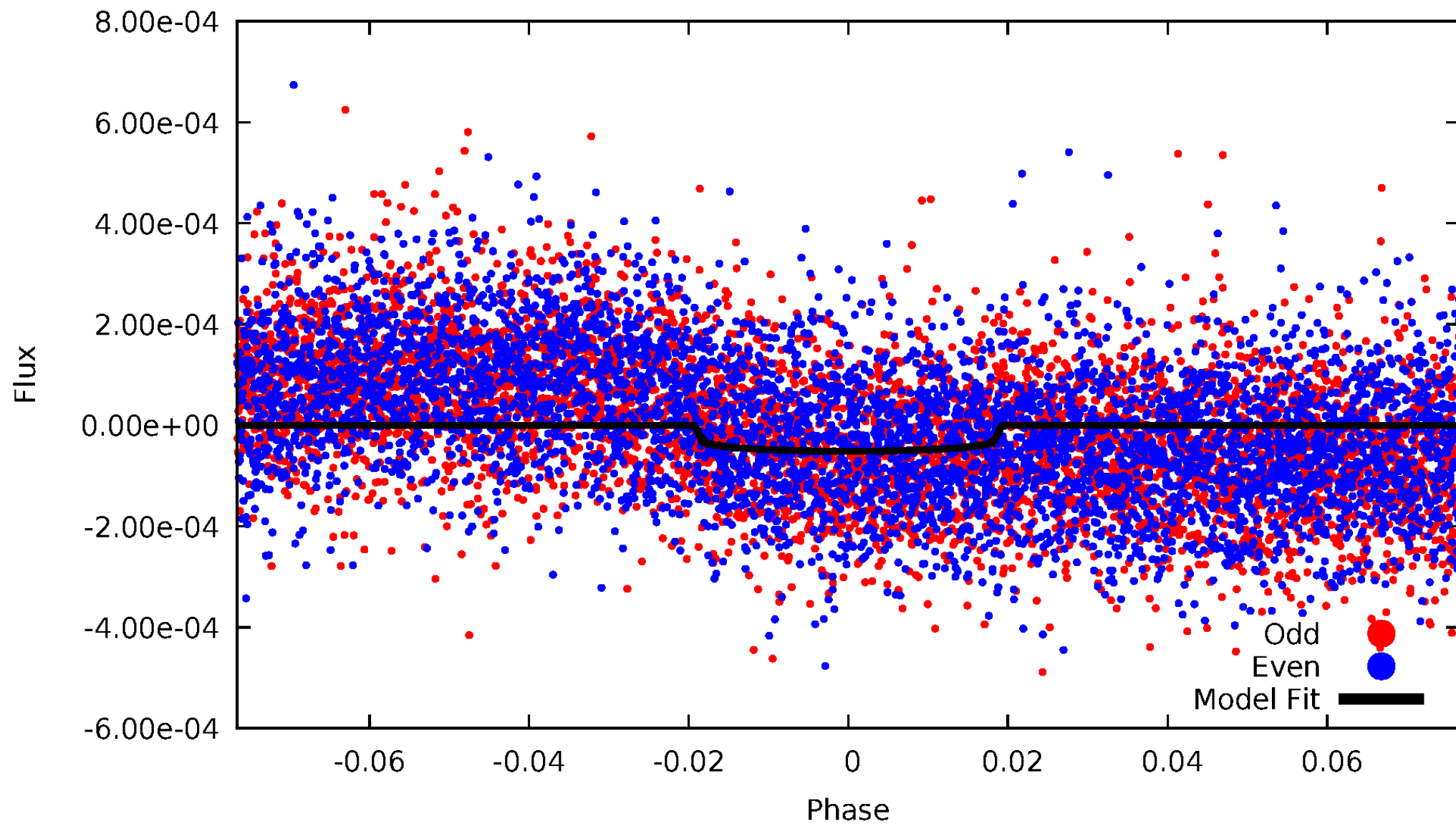


TCE 005175668-01



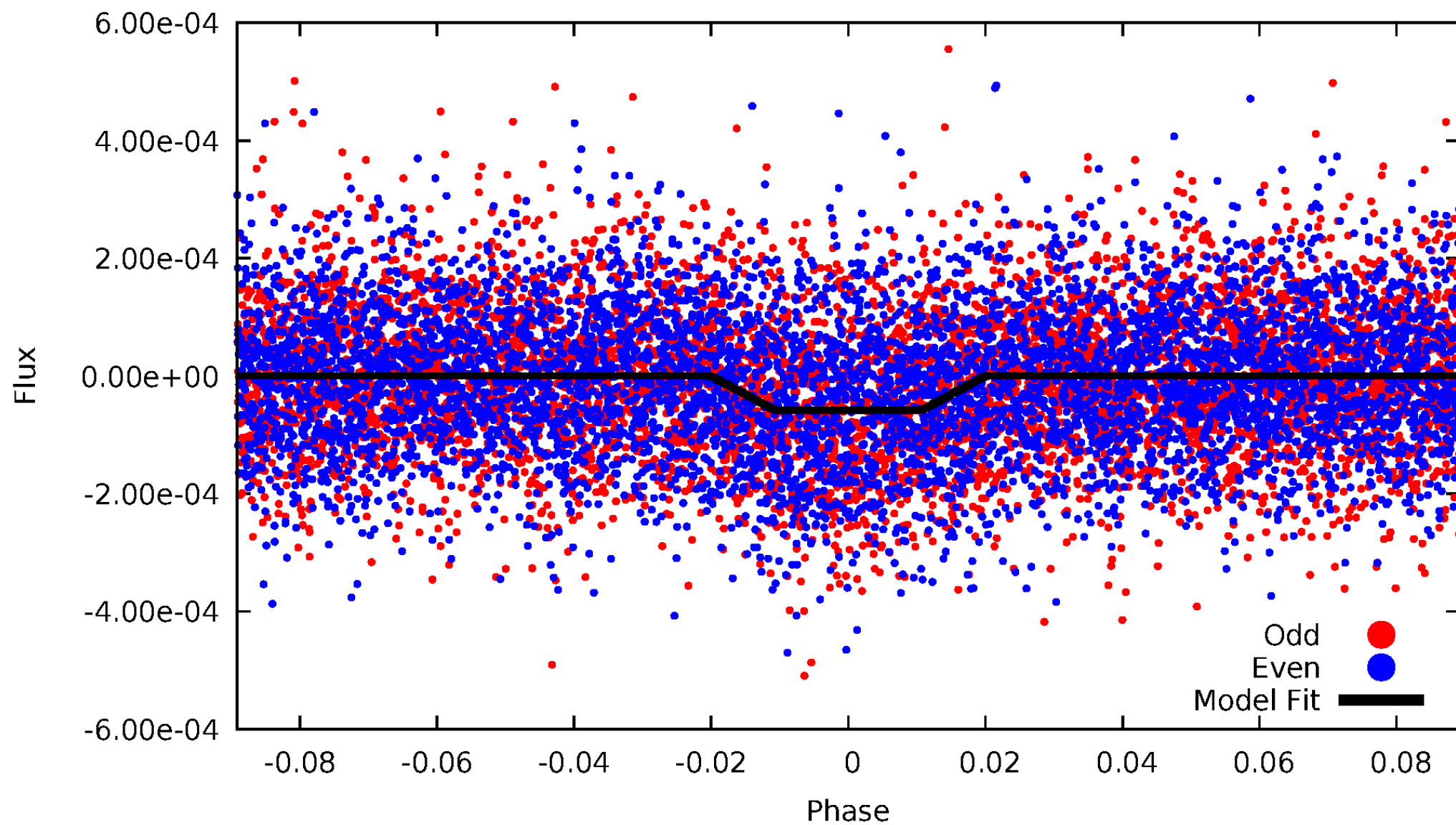
DV Odd/Even

TCE 005175668-01



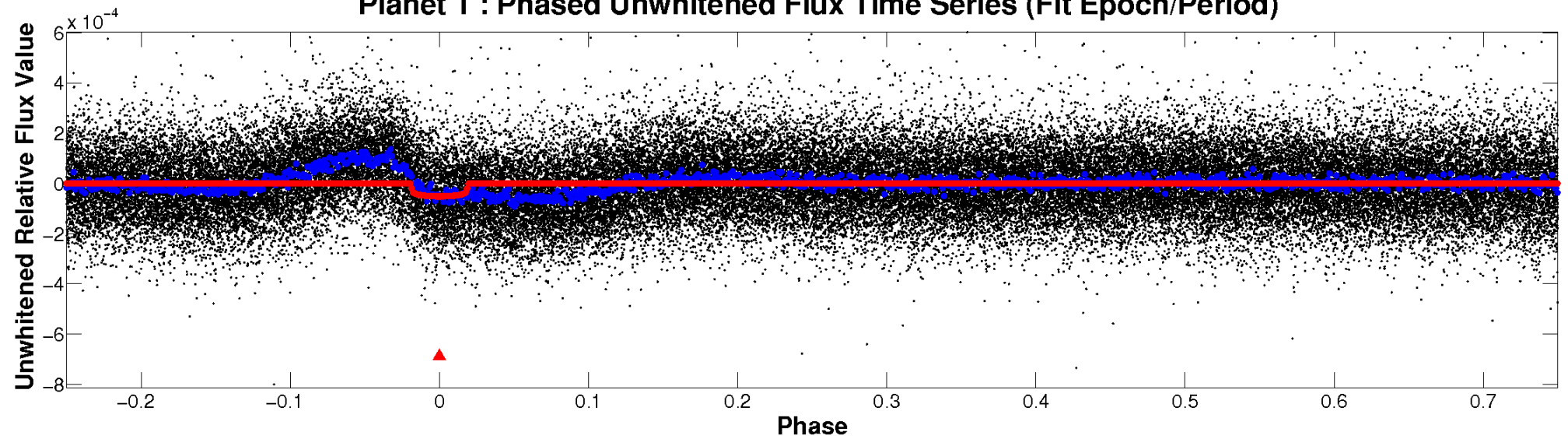
ALT Odd/Even

TCE 005175668-01

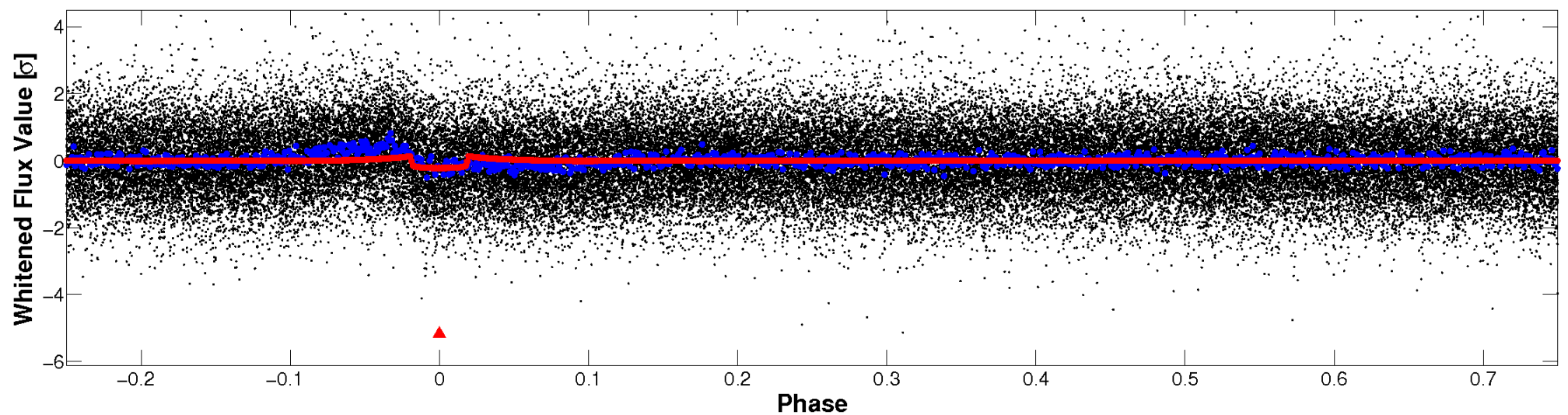


Non-Whitened Vs. Whitened Light Curve

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

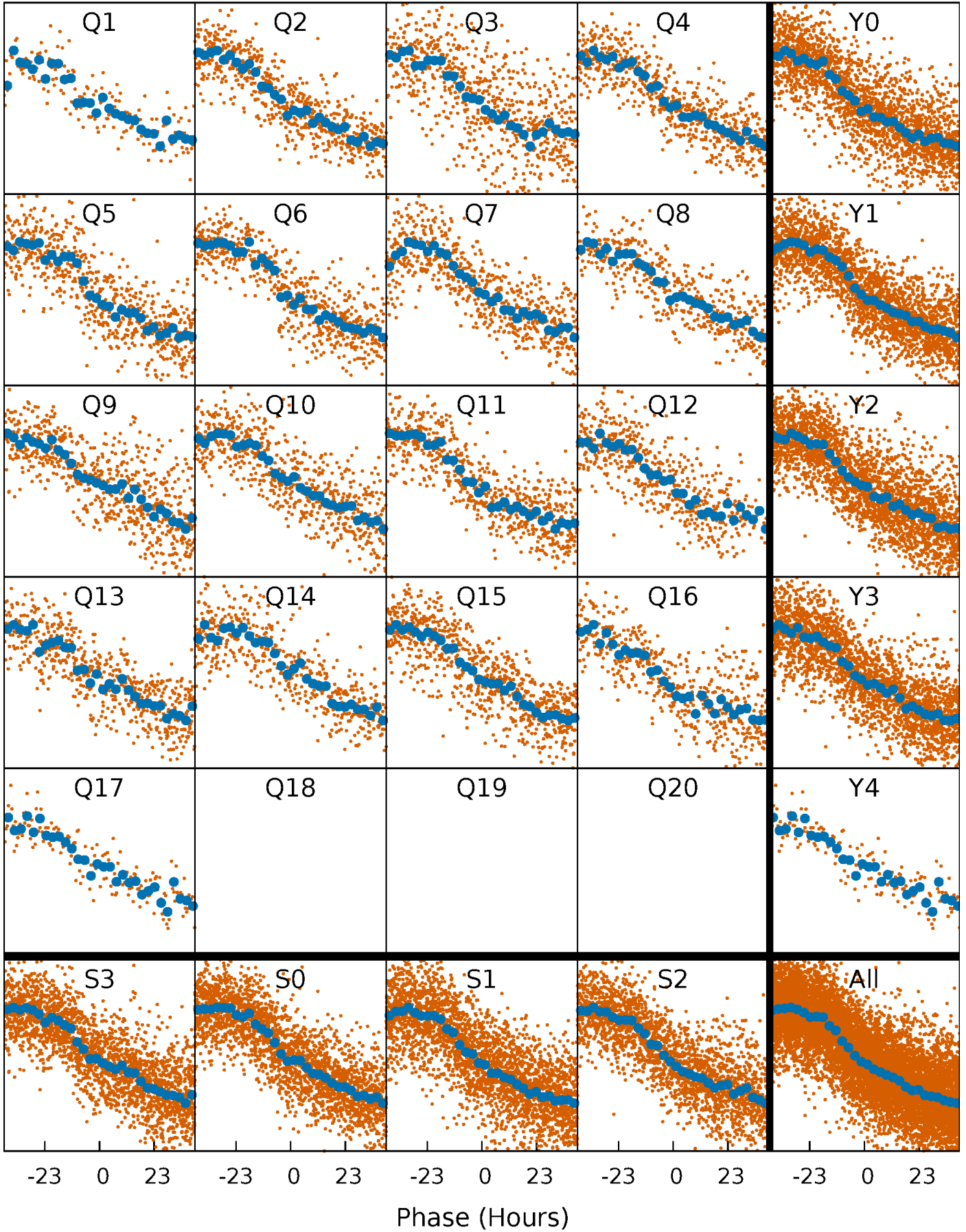


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



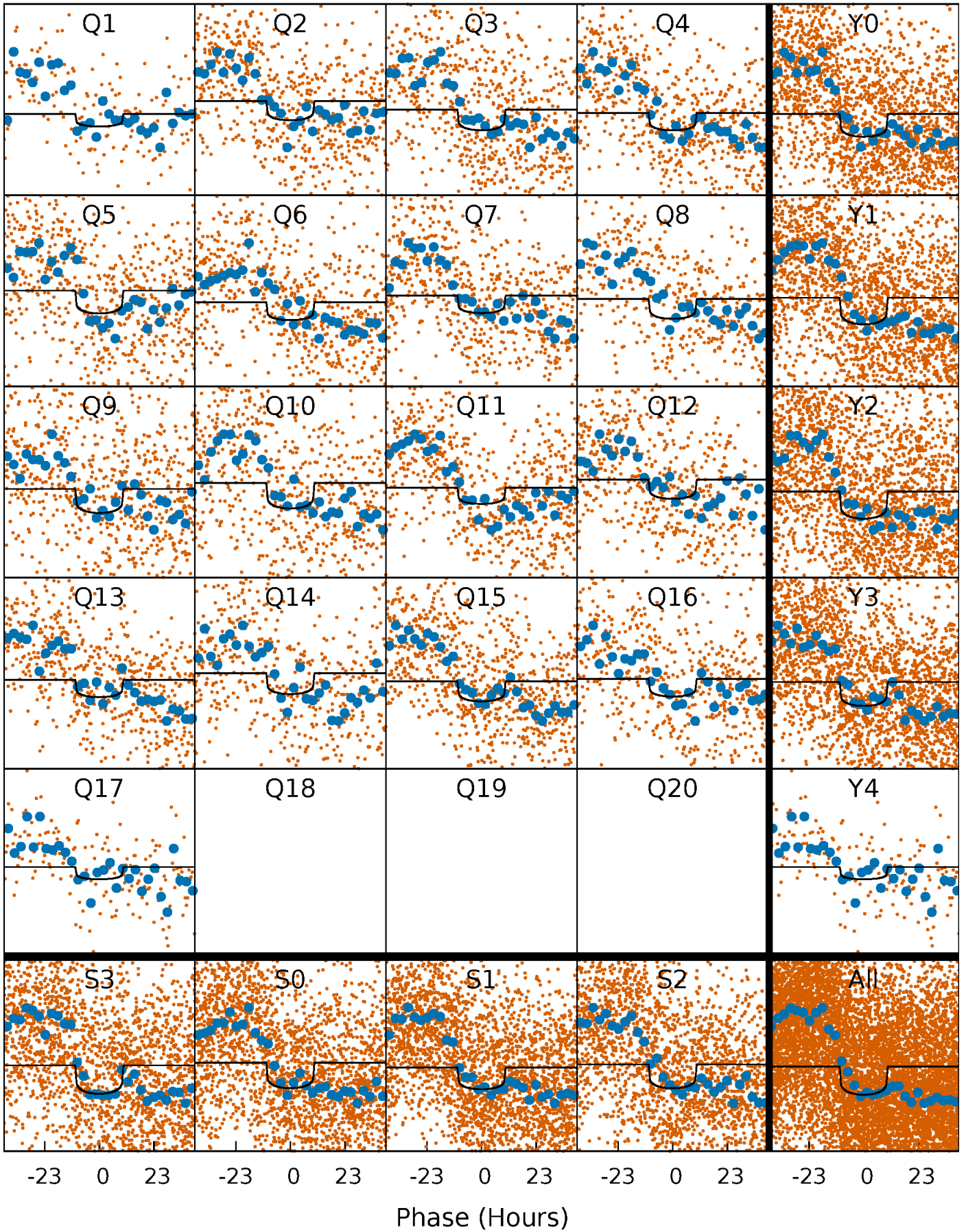
PDC Quarter-Phased Transit Curves

TCE 005175668-01 P= 21.913013 Days $T_0=151.250354$ (BKJD)



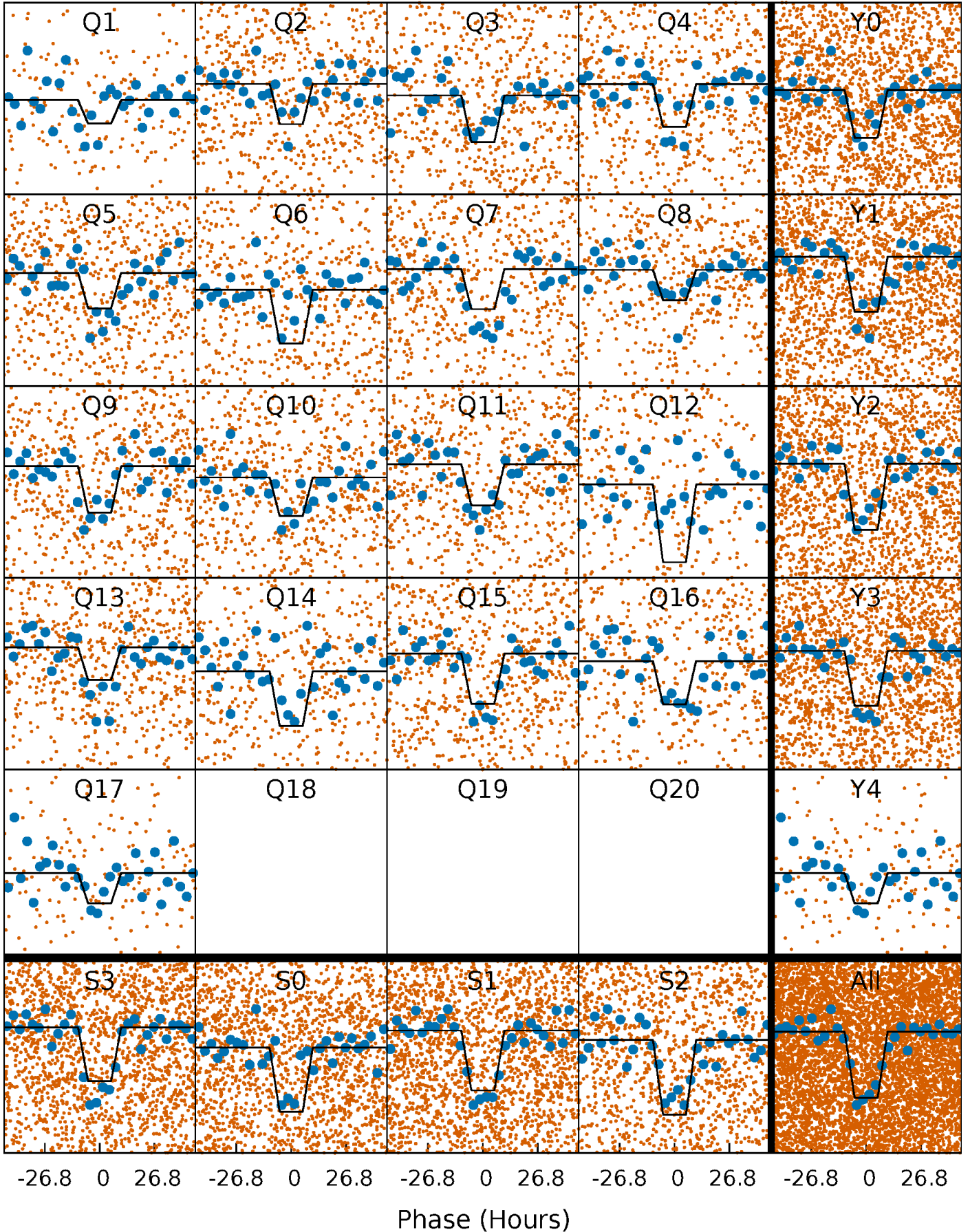
DV Quarter-Phased Transit Curves

TCE 005175668-01 P= 21.913013 Days $T_0=151.250354$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

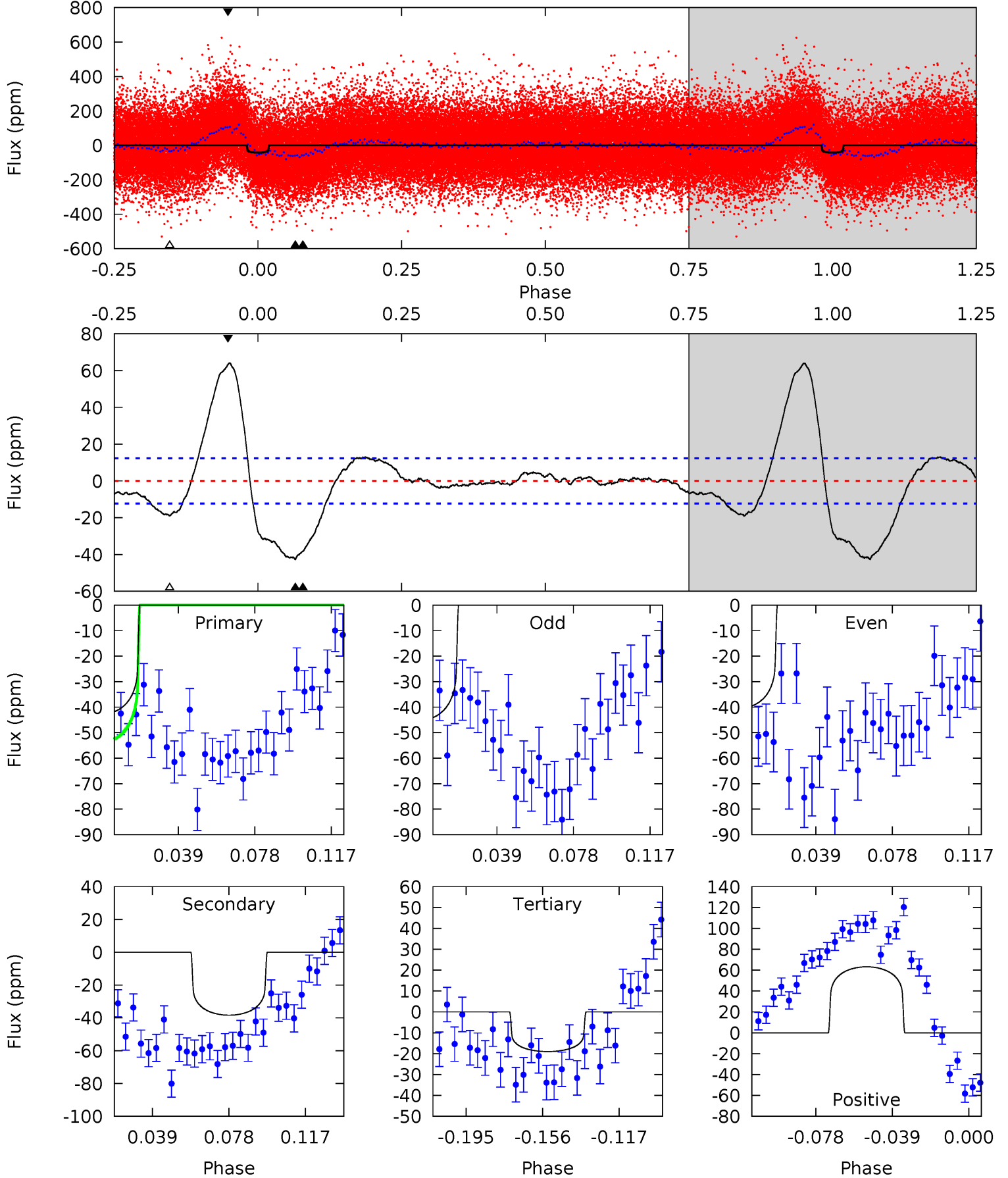
TCE 005175668-01 P= 21.910866 Days $T_0=151.257708$ (BKJD)



DV Model-Shift Uniqueness Test

005175668-01, P = 21.913013 Days, E = 129.337341 Days

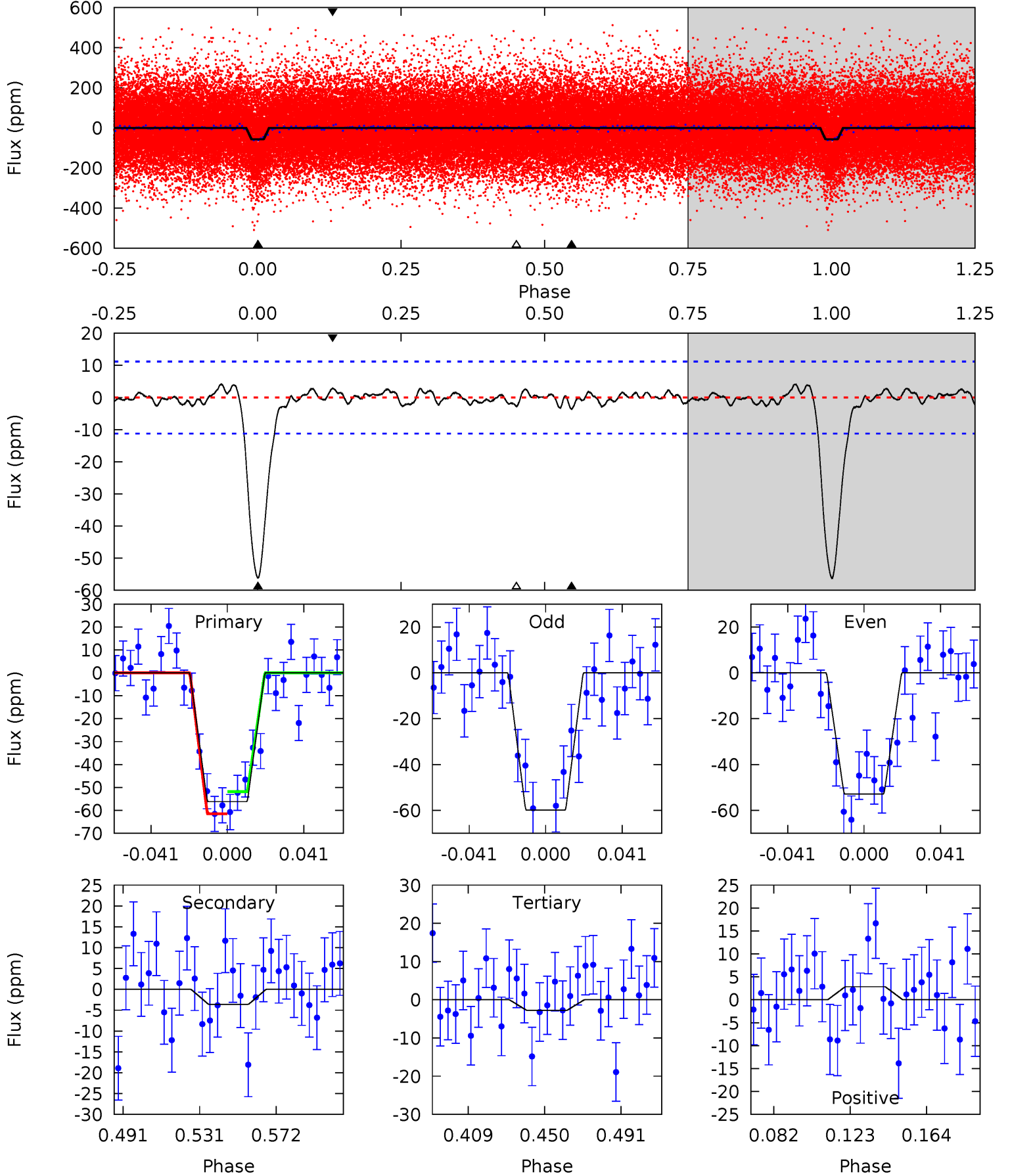
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.6	14.9	7.36	24.5	4.76	2.06	6.36	9.19	-7.92	7.50	-9.61	0.90	0.91	0.60	4.28



Alt Model-Shift Uniqueness Test

005175668-01, P = 21.910866 Days, E = 129.346842 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.8	1.53	1.18	1.21	4.75	2.04	0.61	22.6	22.6	0.34	0.32	1.49	0.97	0.07	2.04



Stellar Parameters For KIC 005175668

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6480^{+146}_{-194}	$4.351^{+0.092}_{-0.138}$	$-0.360^{+0.250}_{-0.300}$	$1.132^{+0.251}_{-0.135}$	$1.045^{+0.150}_{-0.112}$	$1.014^{+0.413}_{-0.407}$
	+2%/-3%	+2%/-3%	+69%/-83%	+22%/-12%	+14%/-11%	+41%/-40%
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 005175668-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-38 ± 3	$0.90^{+0.19}_{-0.17}$	1079^{+59}_{-48}	5971^{+654}_{-474}	627^{+328}_{-204}
Alt.	-4 ± 2	$0.96^{+0.19}_{-0.17}$	1079^{+58}_{-49}	3622^{+441}_{-574}	50^{+48}_{-35}

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 $A_{obs} \gg 1.0$

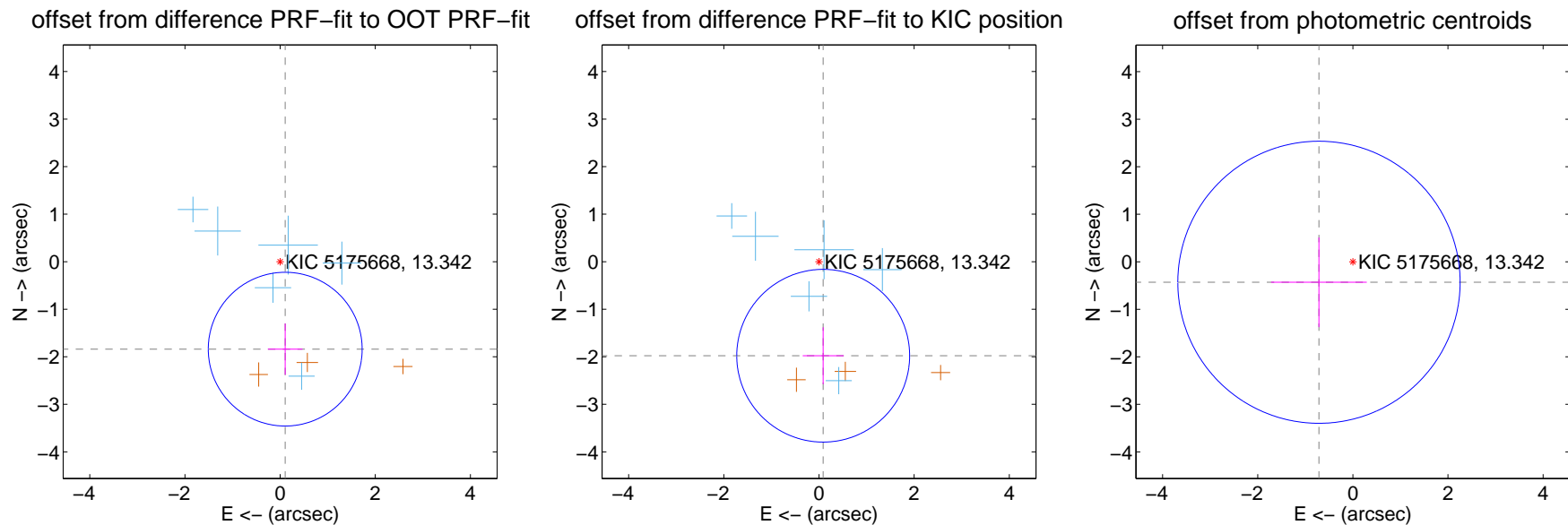
DV Centroid Data

Supplemental centroid analysis for 005175668-01. Kepler magnitude: 13.34. Transit SNR 10.58

There are 6 quarters with good PRF difference image offsets

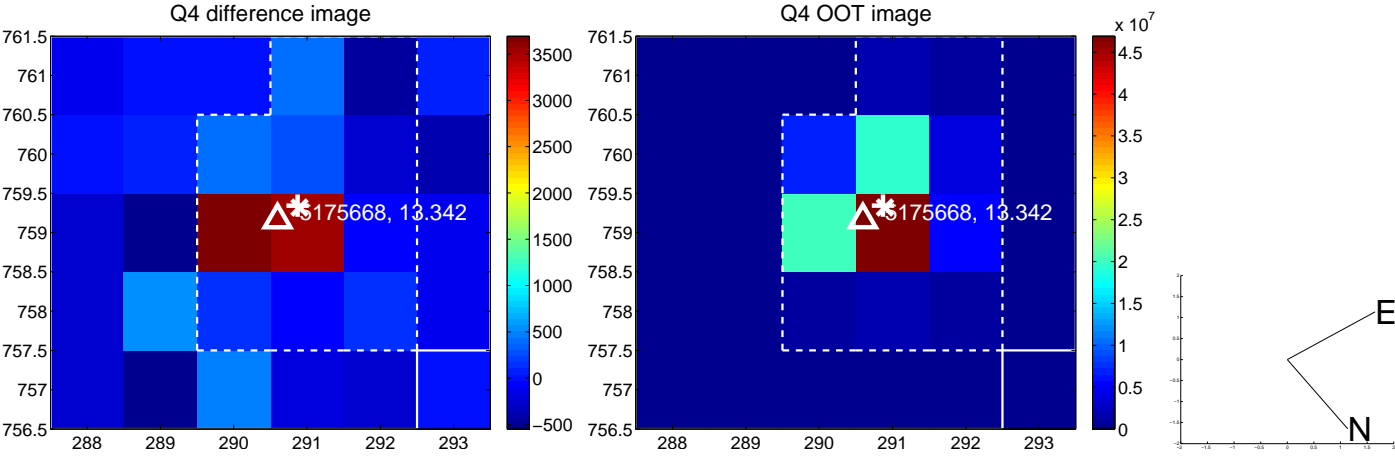
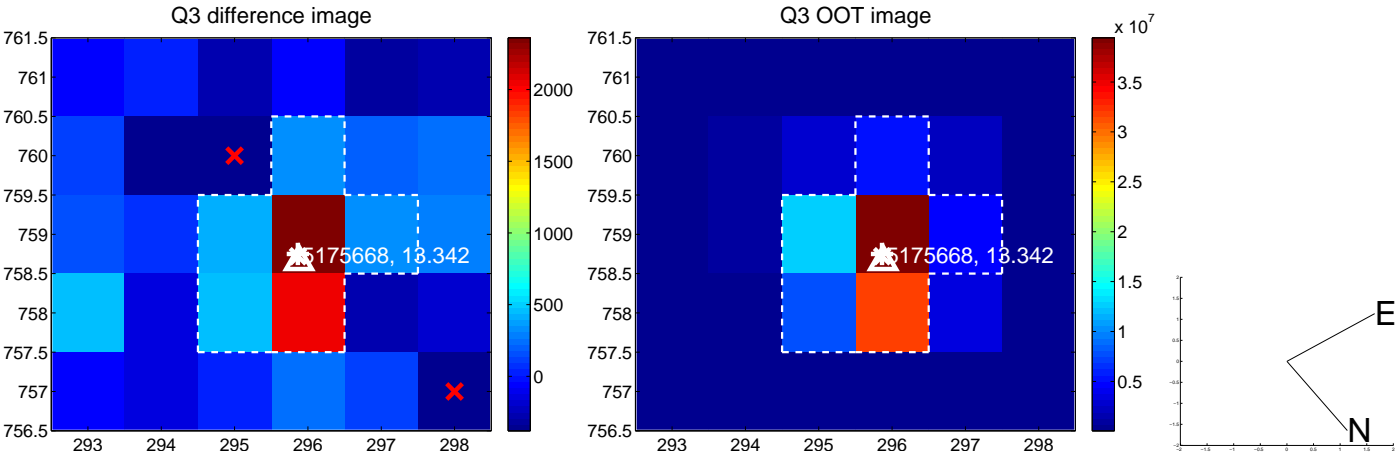
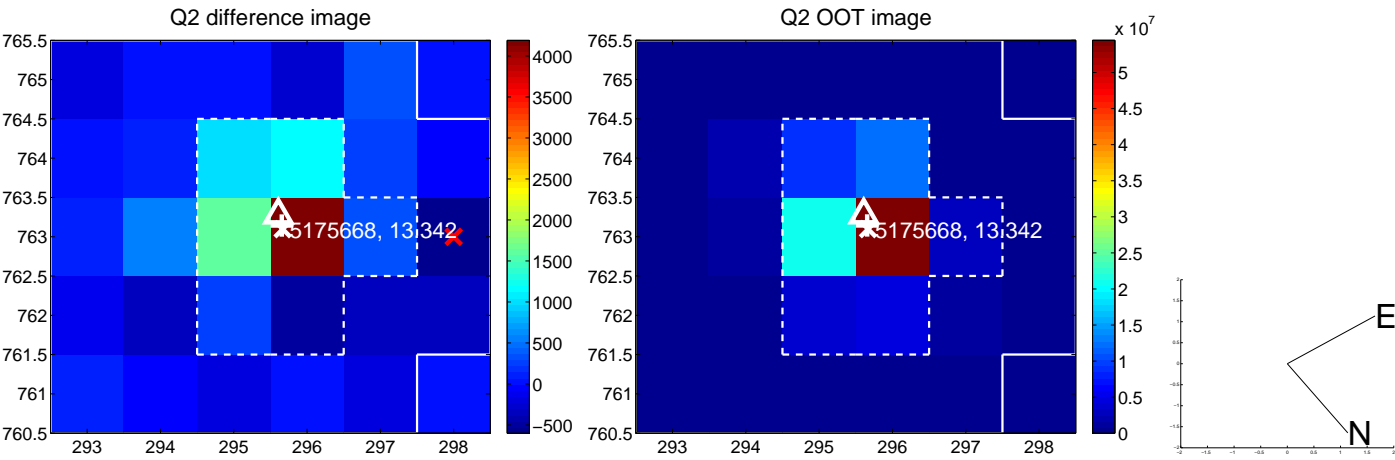
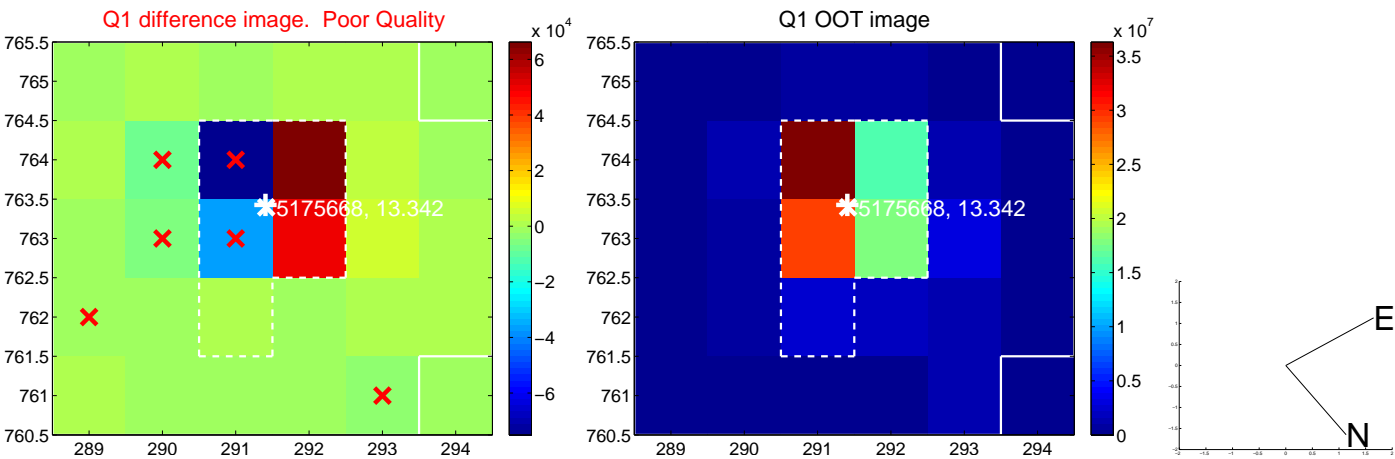
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.843 ± 0.539	3.42	-0.107 ± 0.363	-1.840 ± 0.540
PRF-fit source offset from KIC position	1.980 ± 0.606	3.27	-0.088 ± 0.431	-1.978 ± 0.598
photometric centroid source offset	0.83 ± 0.99	0.84	0.71 ± 1.01	-0.43 ± 0.94

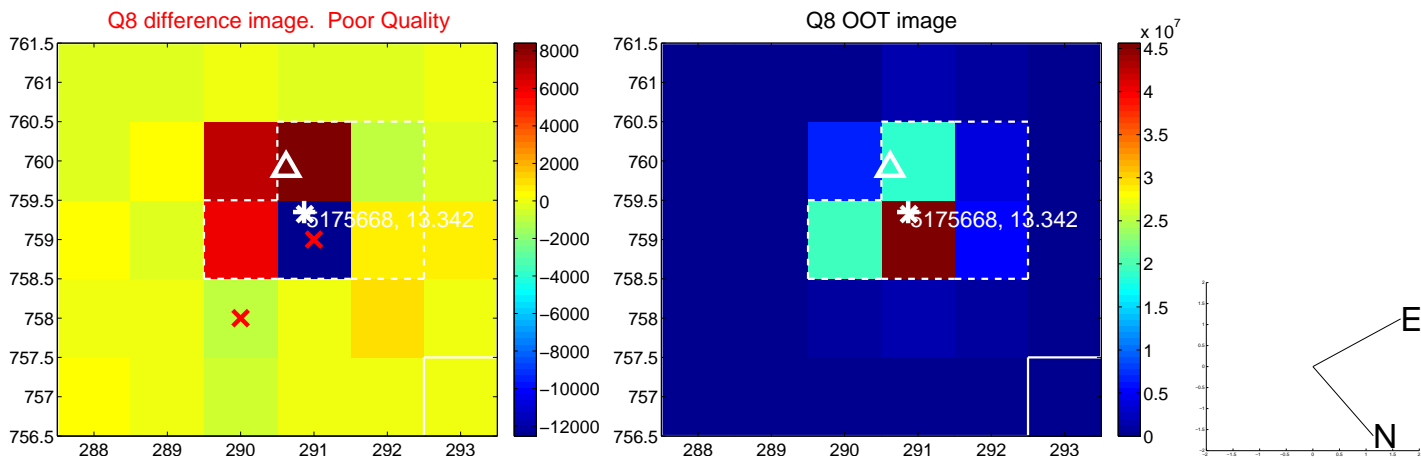
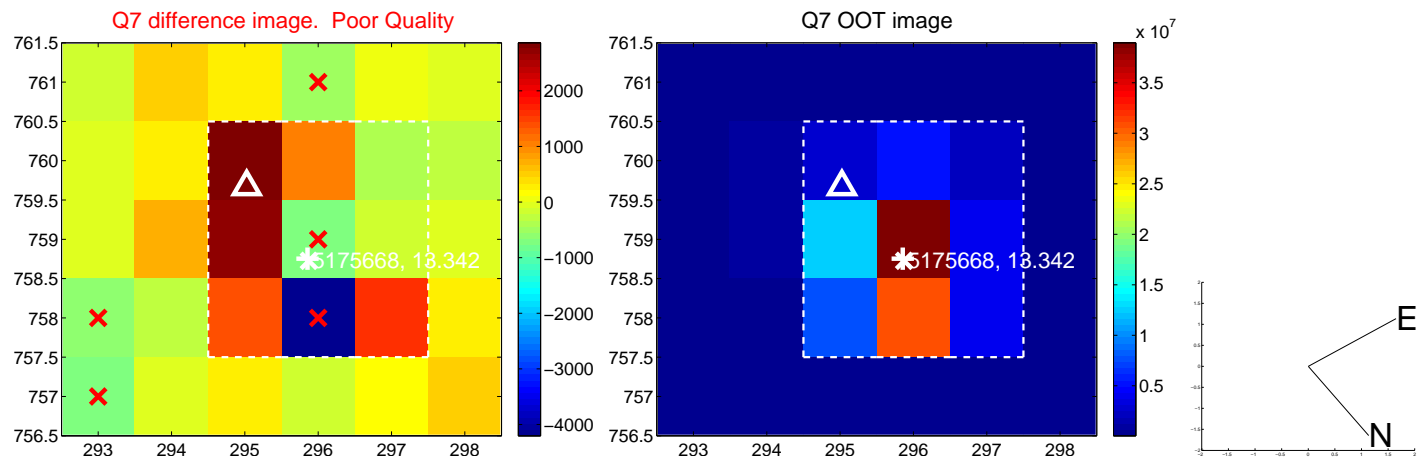
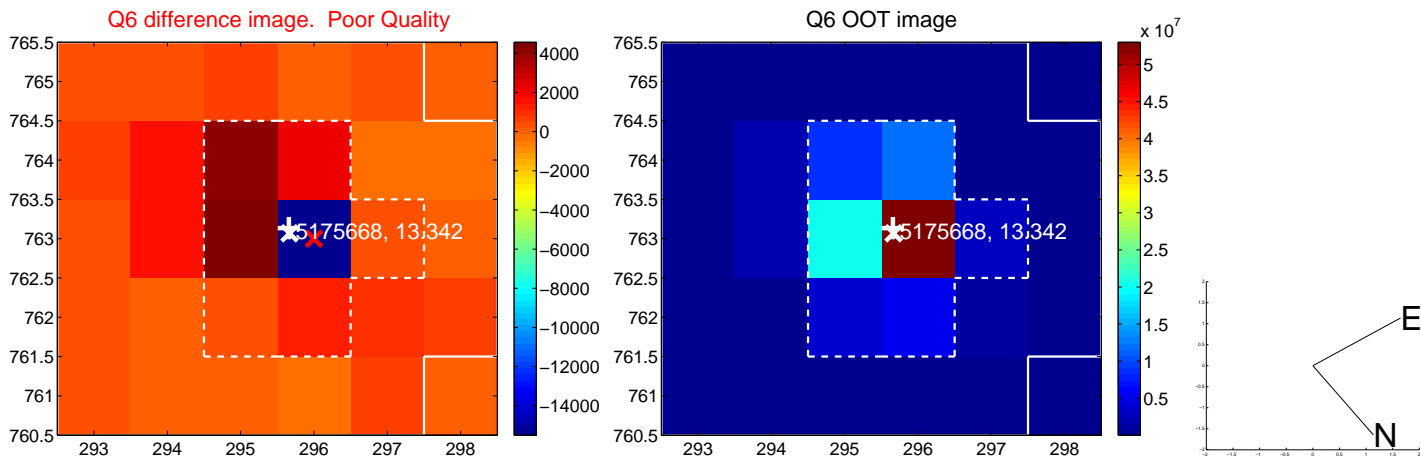
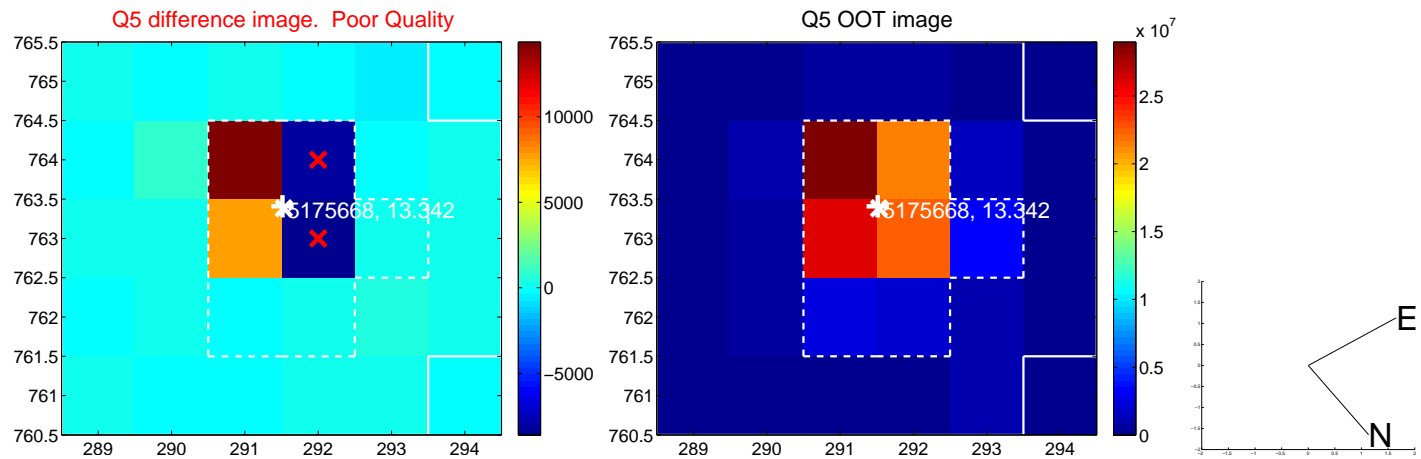


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

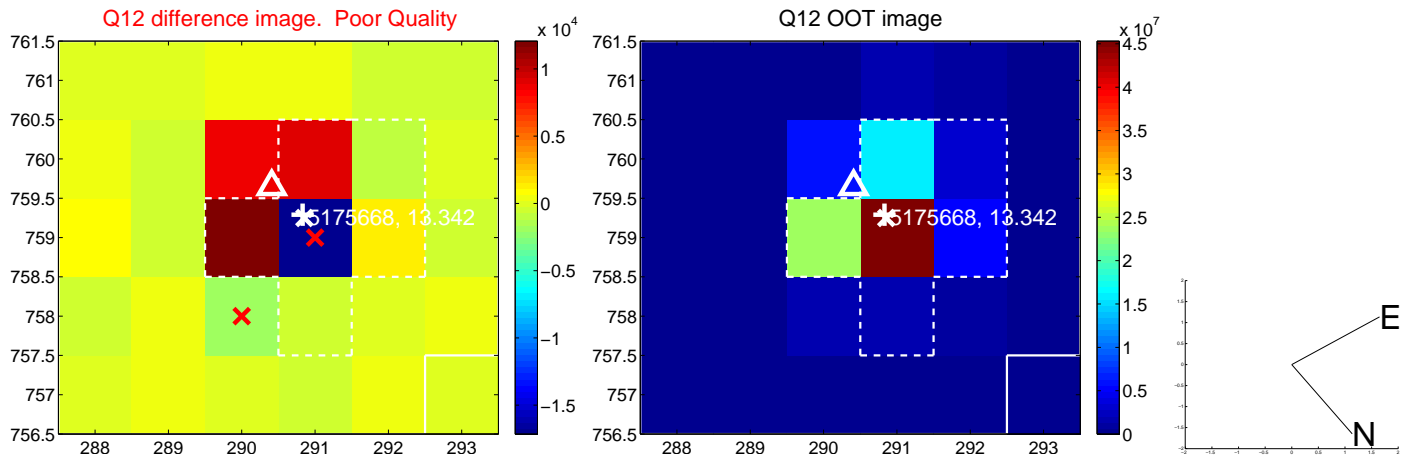
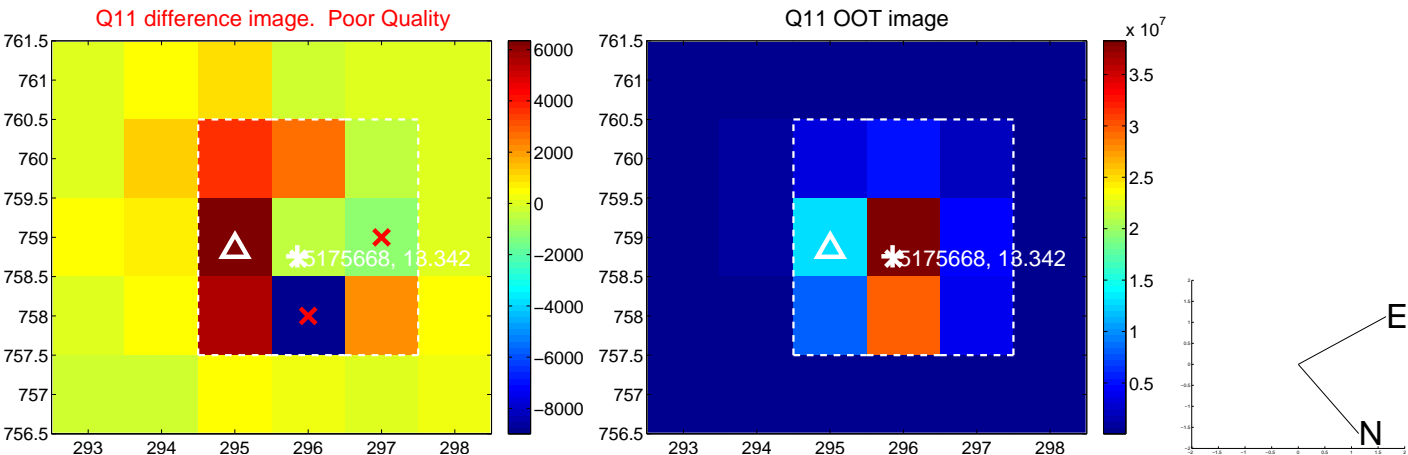
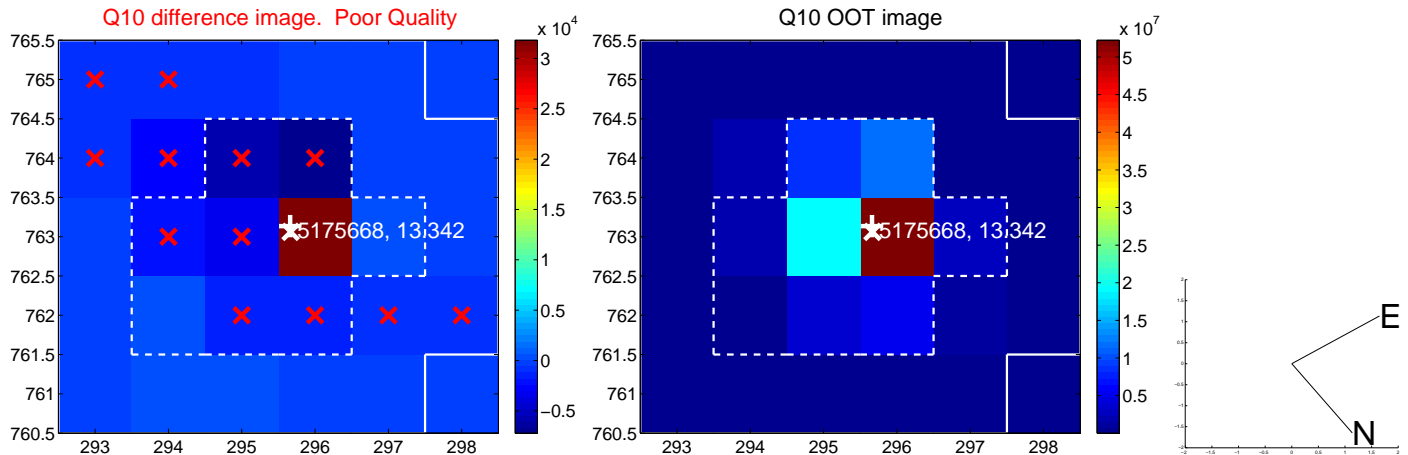
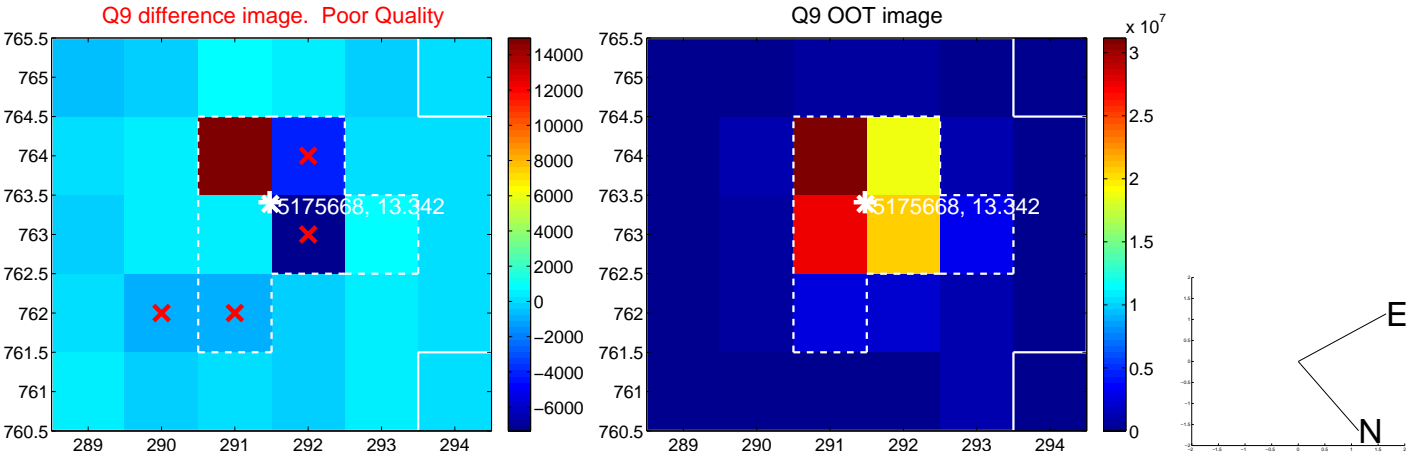
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



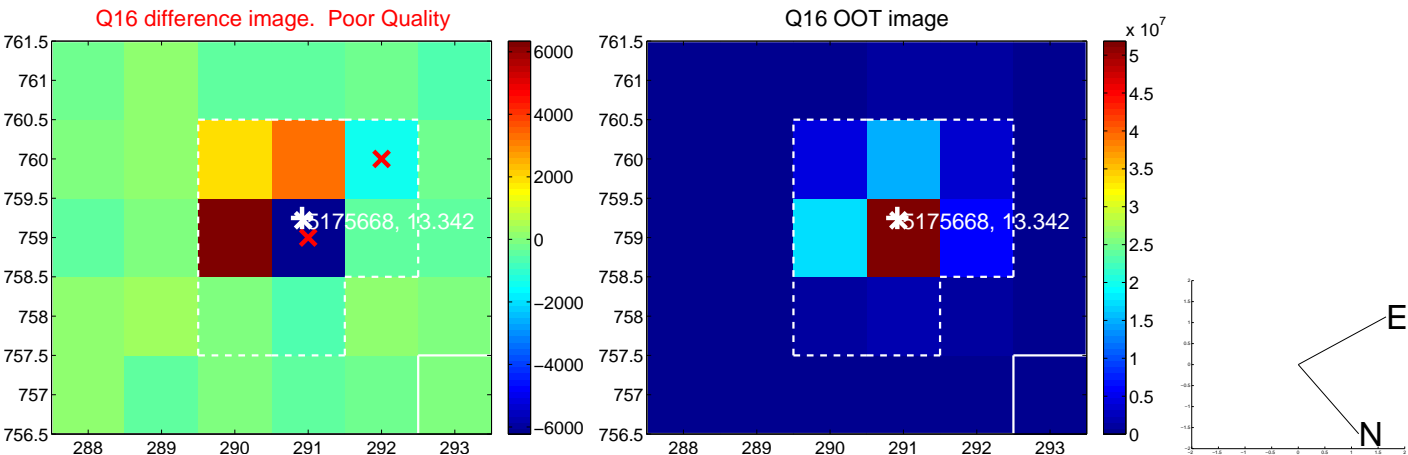
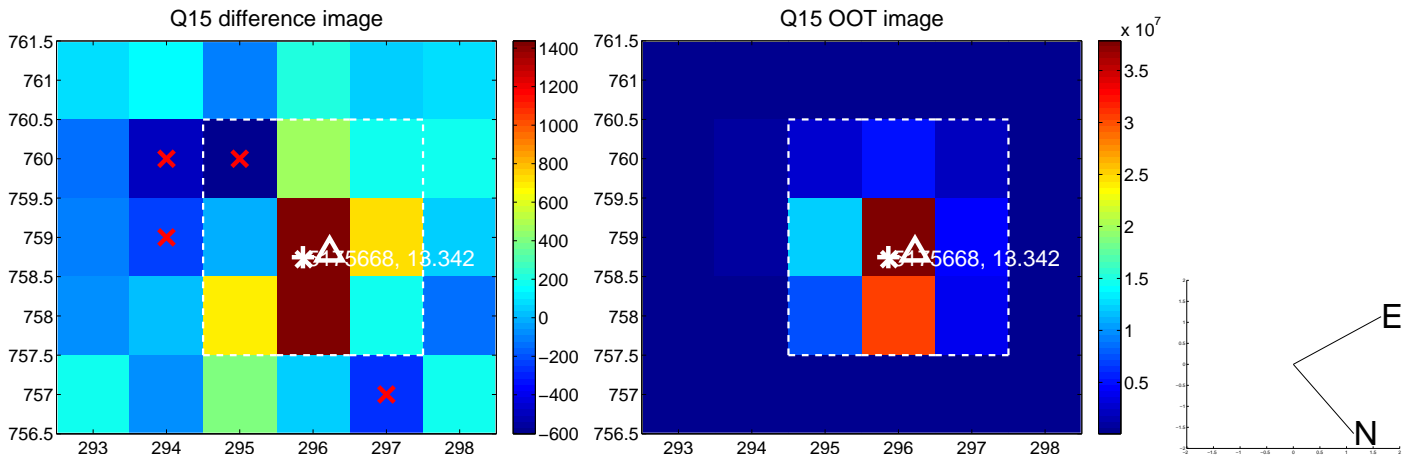
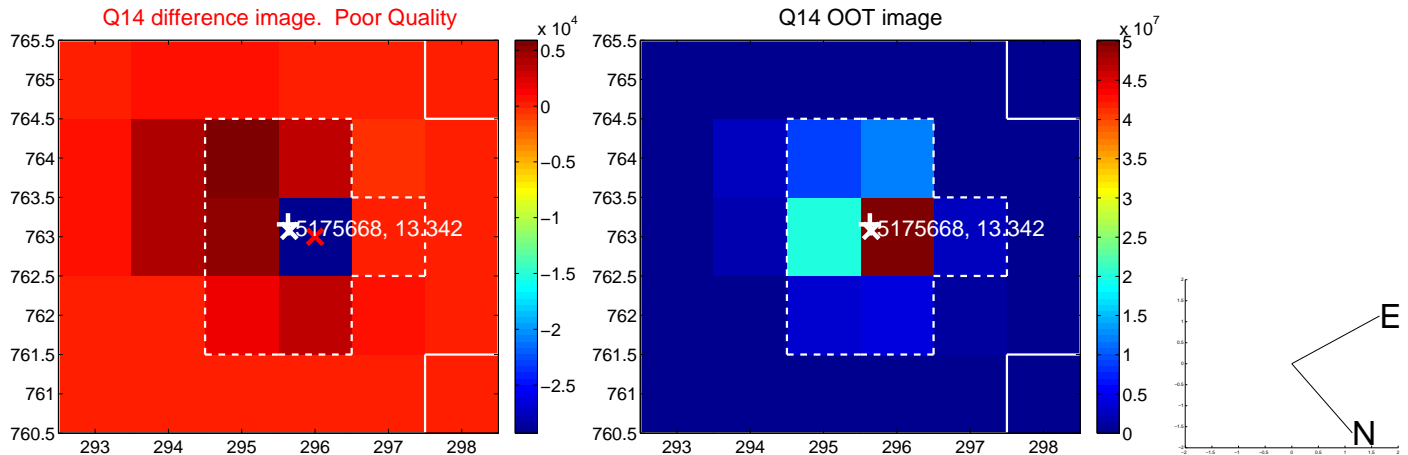
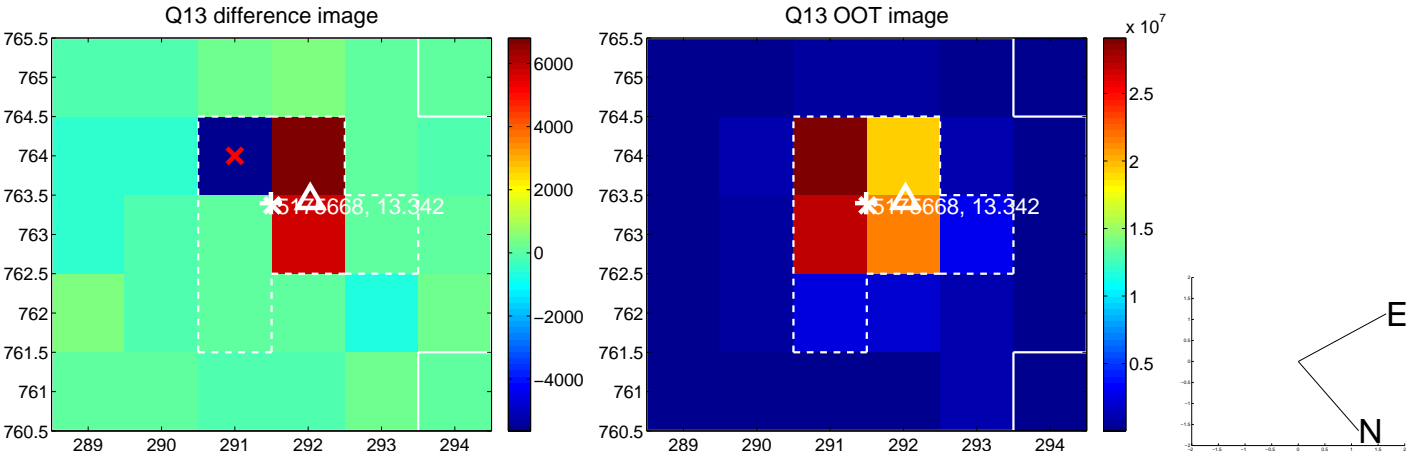
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



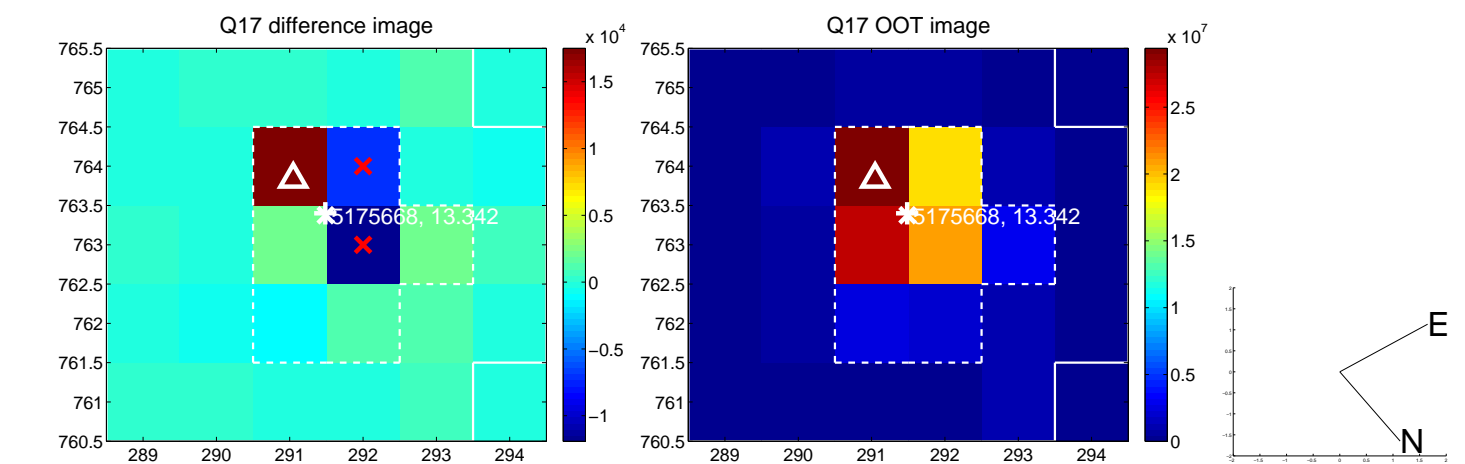
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



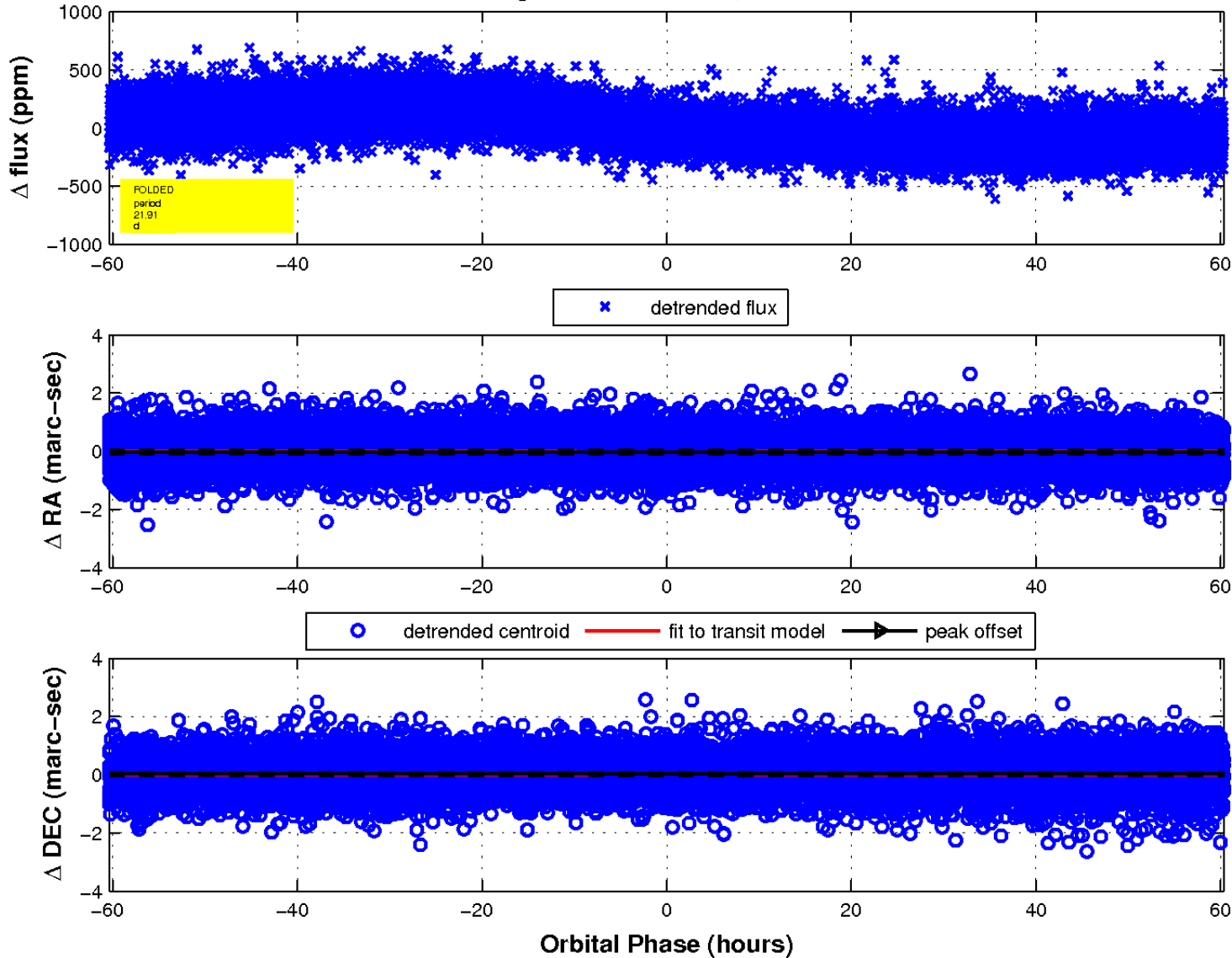
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

