

KIC 003864417

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})
003864417-01	OBS	No	0.553874	131.986267	185.7	6.194	11.1	12.9	1.72	7098	2.72	29022.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003864417-01	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.

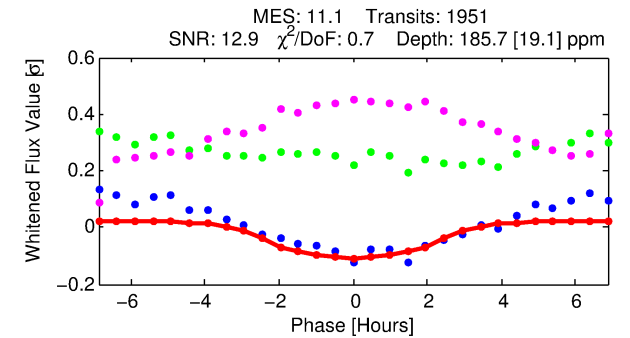
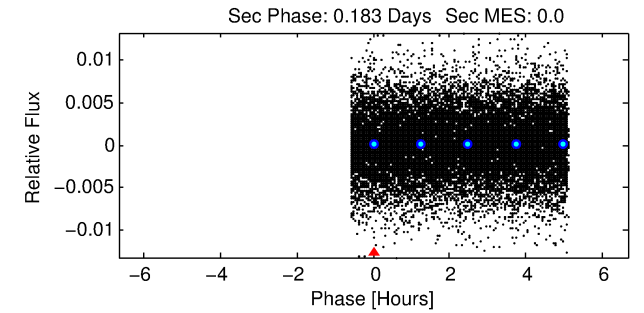
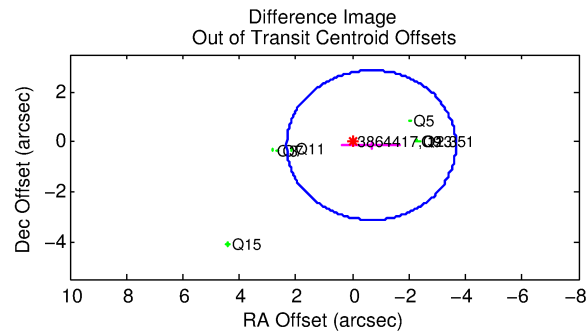
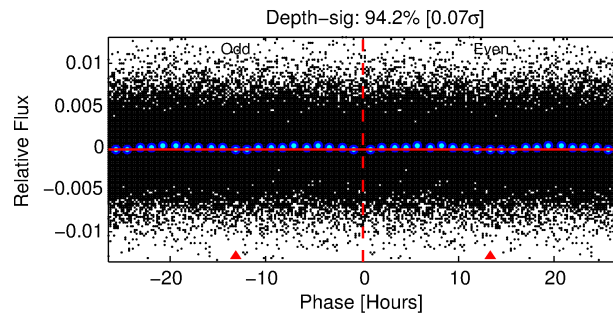
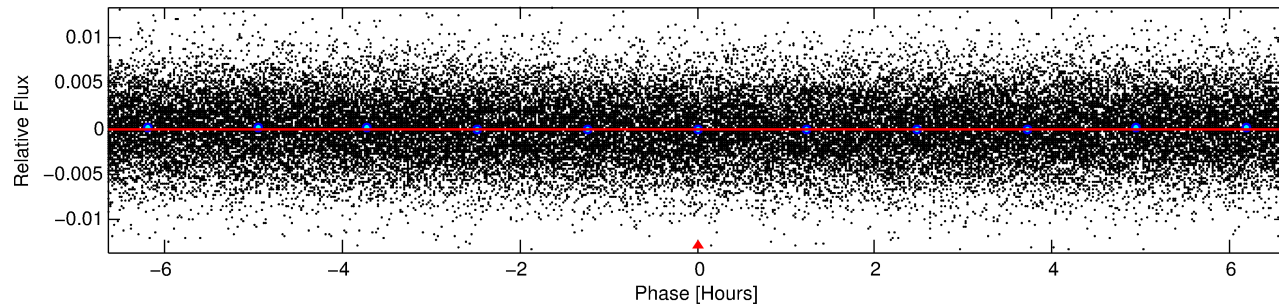
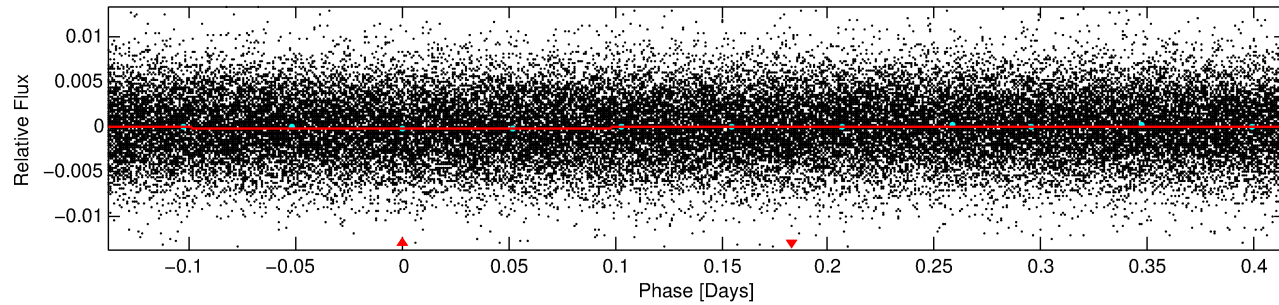
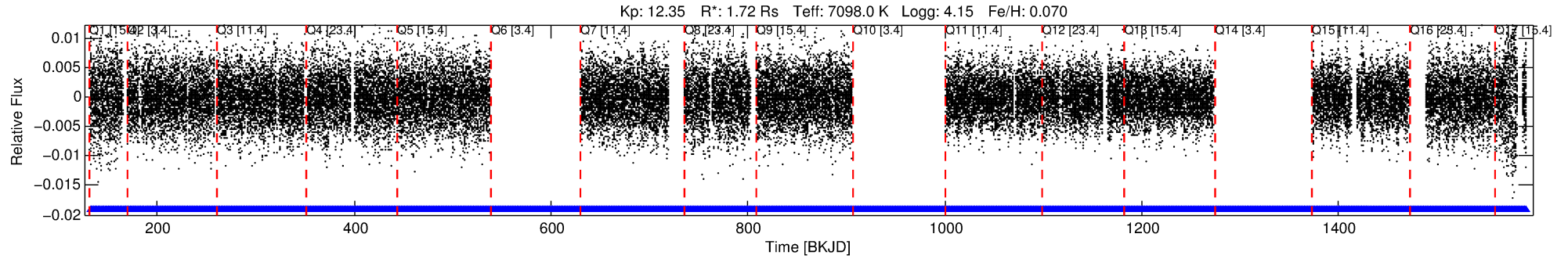
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003864417-01

No Significant Match Found

DV One-Page Summary

KIC: 3864417 Candidate: 1 of 1 Period: 0.554 d



DV Fit Results:

Period = 0.55387 [0.00001] d
Epoch = 131.9863 [0.0064] BKJD
Rp/R* = 0.0145 [0.0022]
a/R* = 1.02 [0.02]
b = 0.90 [0.17]
Seff = 29022.69 [11972.98]
Teff = 3328 [343] K
Rp = 2.72 [1.01] Re
a = 0.0152 [0.0042] AU
Ag = N/A
Teffp = N/A

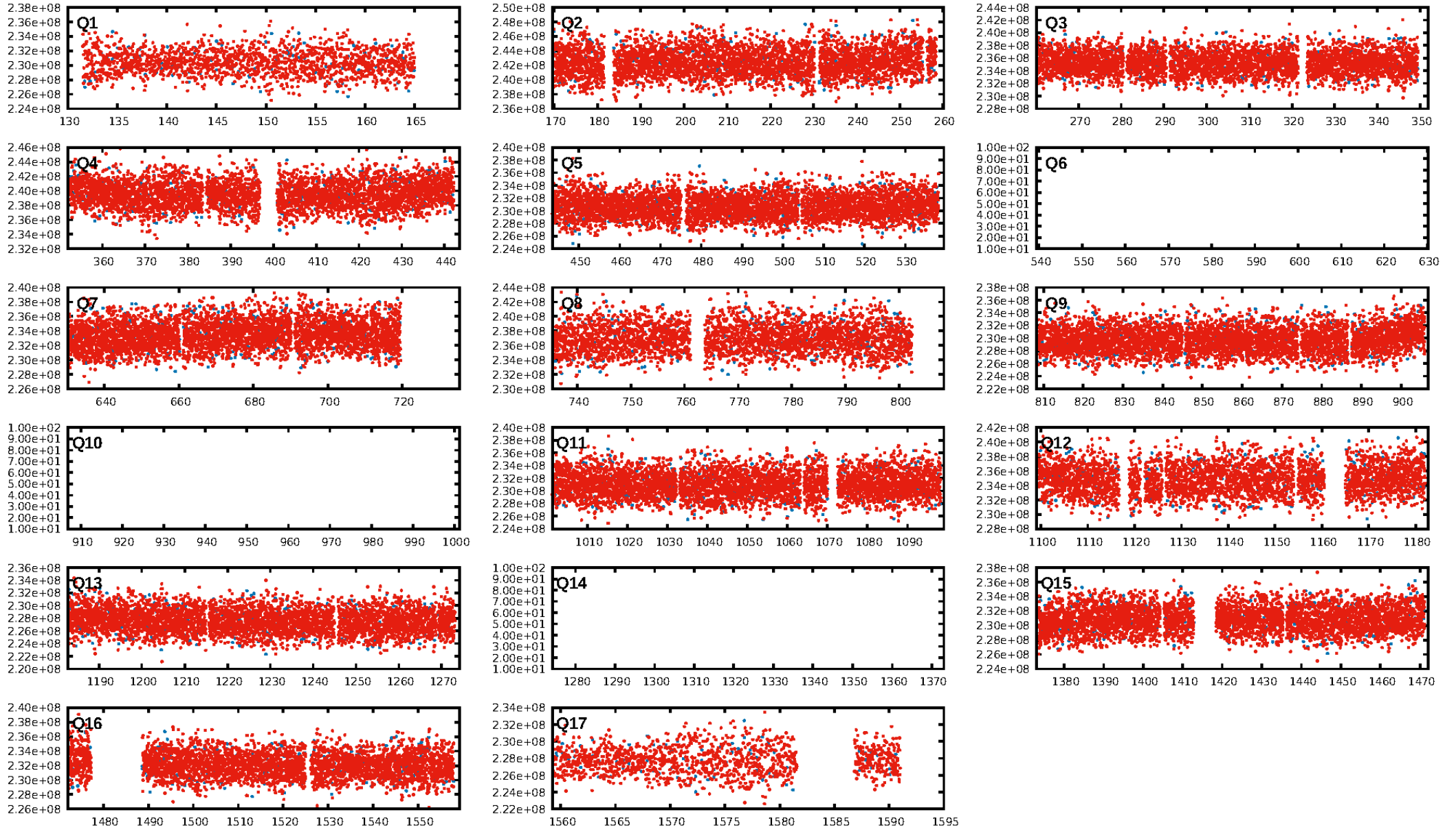
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1841/1841]
GhostDiagnostic-chr: 1.189
Centroid-sig: 0.0%
Centroid-so: 0.192 arcsec [2.65σ]
OotOffset-rm: 0.680 arcsec [0.68σ]
KicOffset-rm: 0.621 arcsec [0.62σ]
OotOffset-st: 0/4/0/3 [7]
KicOffset-st: 0/4/0/3 [7]
DiffImageQuality-fgm: 0.71 [5/7]
DiffImageOverlap-fno: 1.00 [14/14]

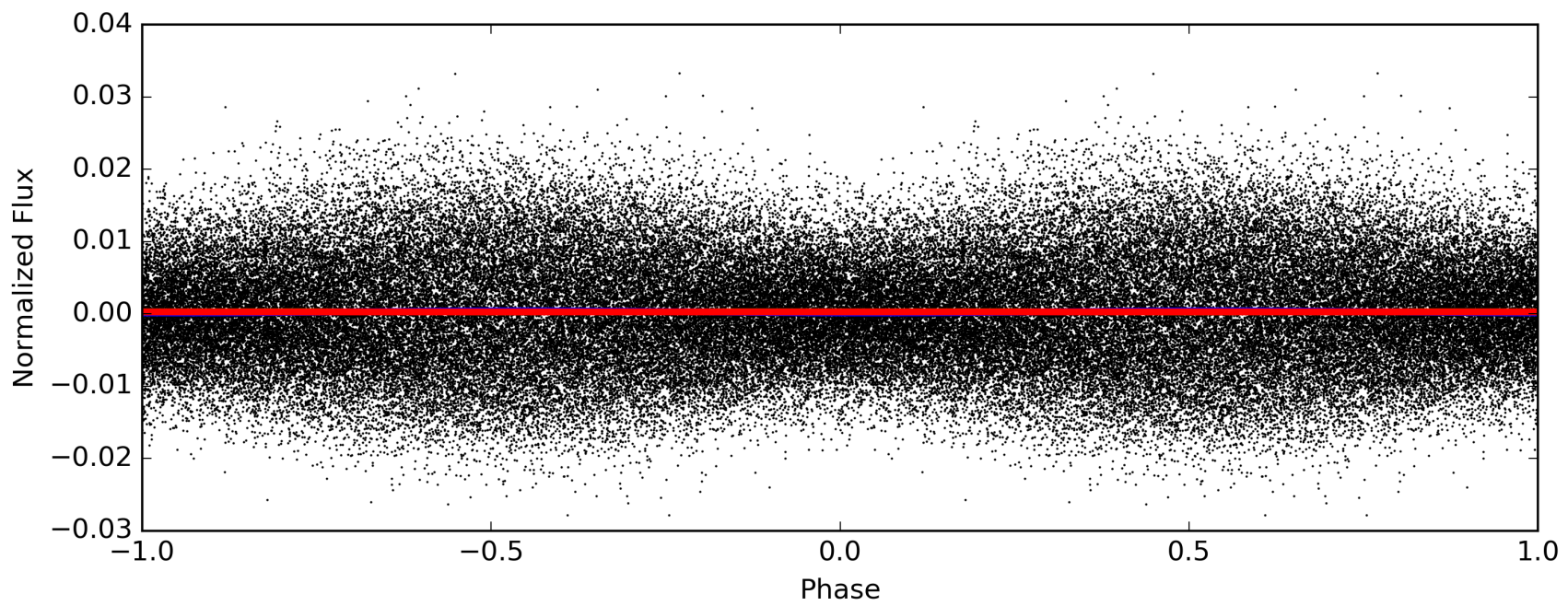
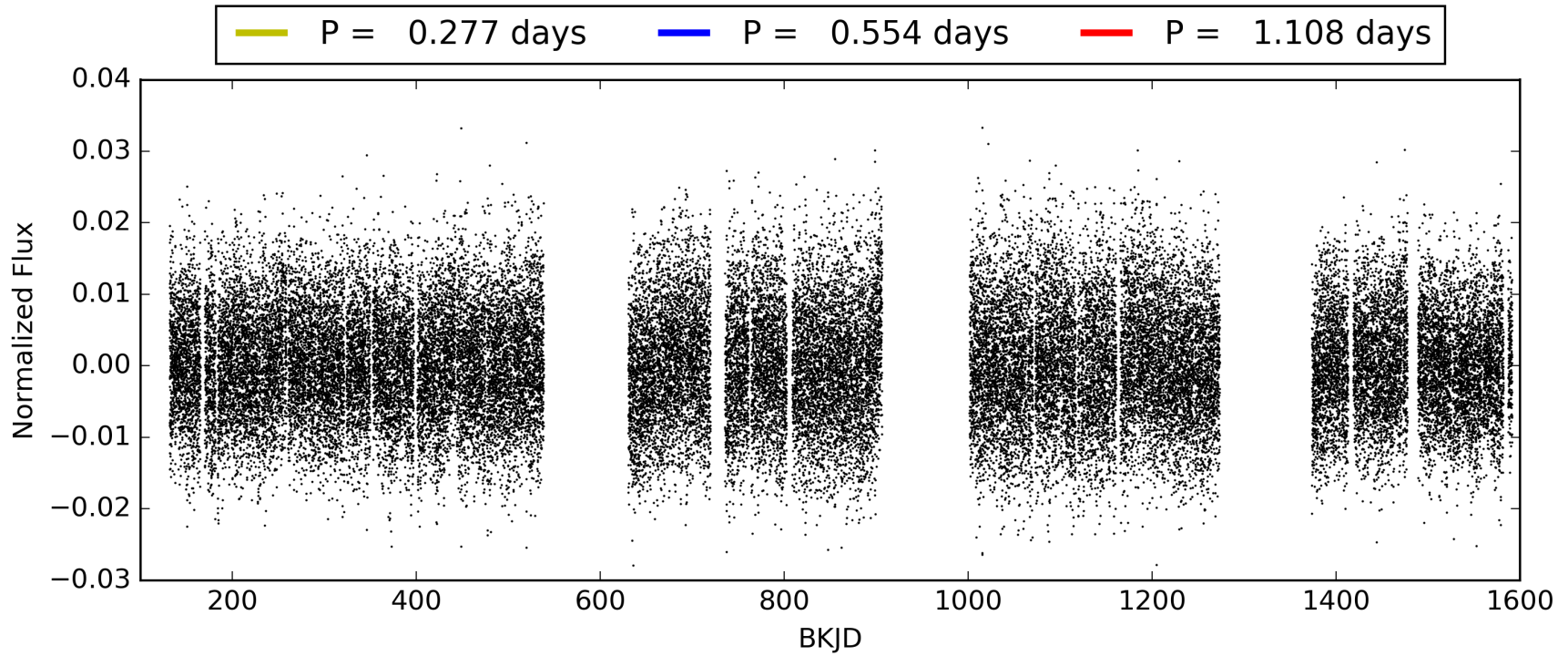
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:02:01 Z

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

TCE 003864417-01, PDC Light Curves

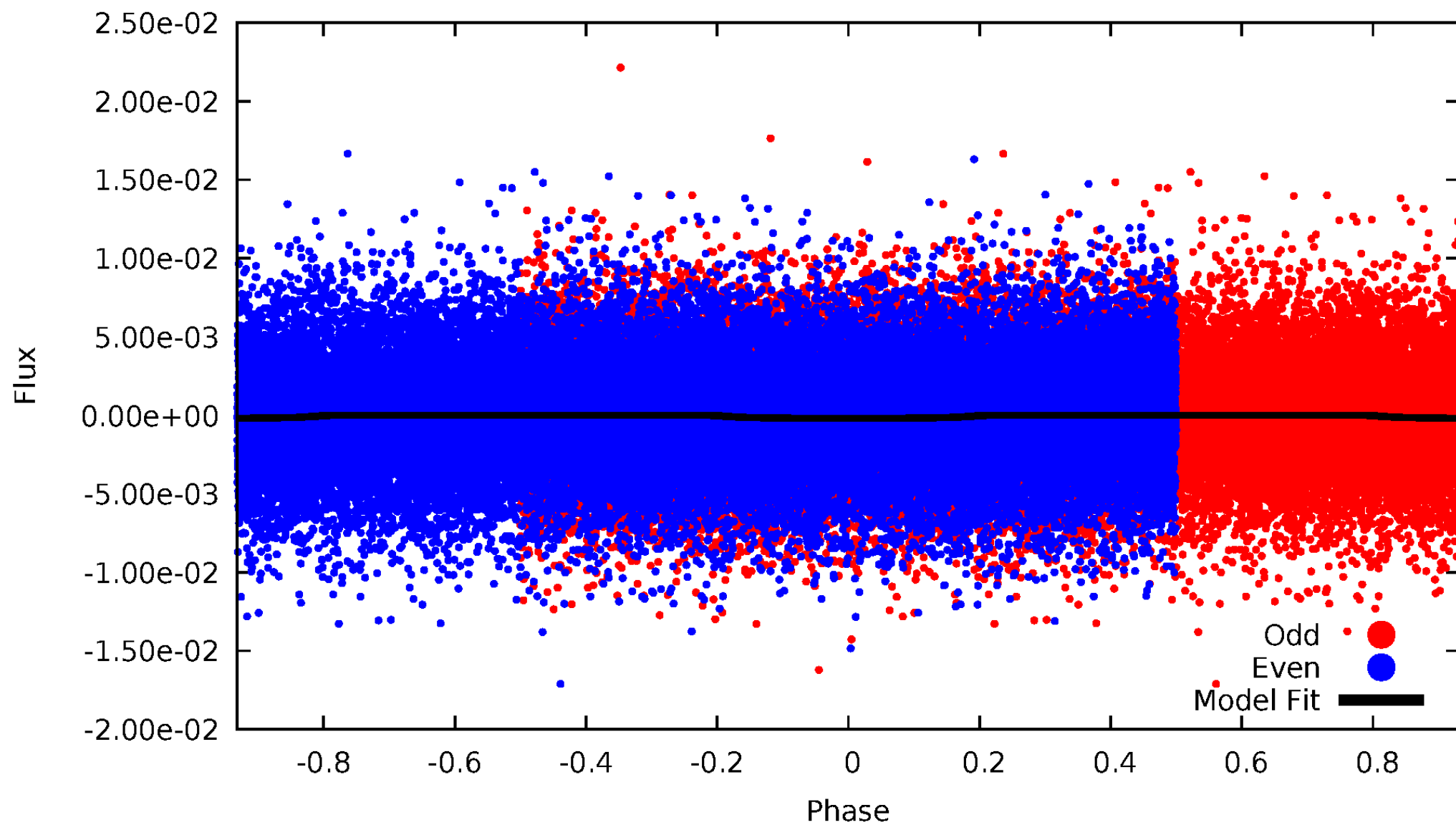


TCE 003864417-01



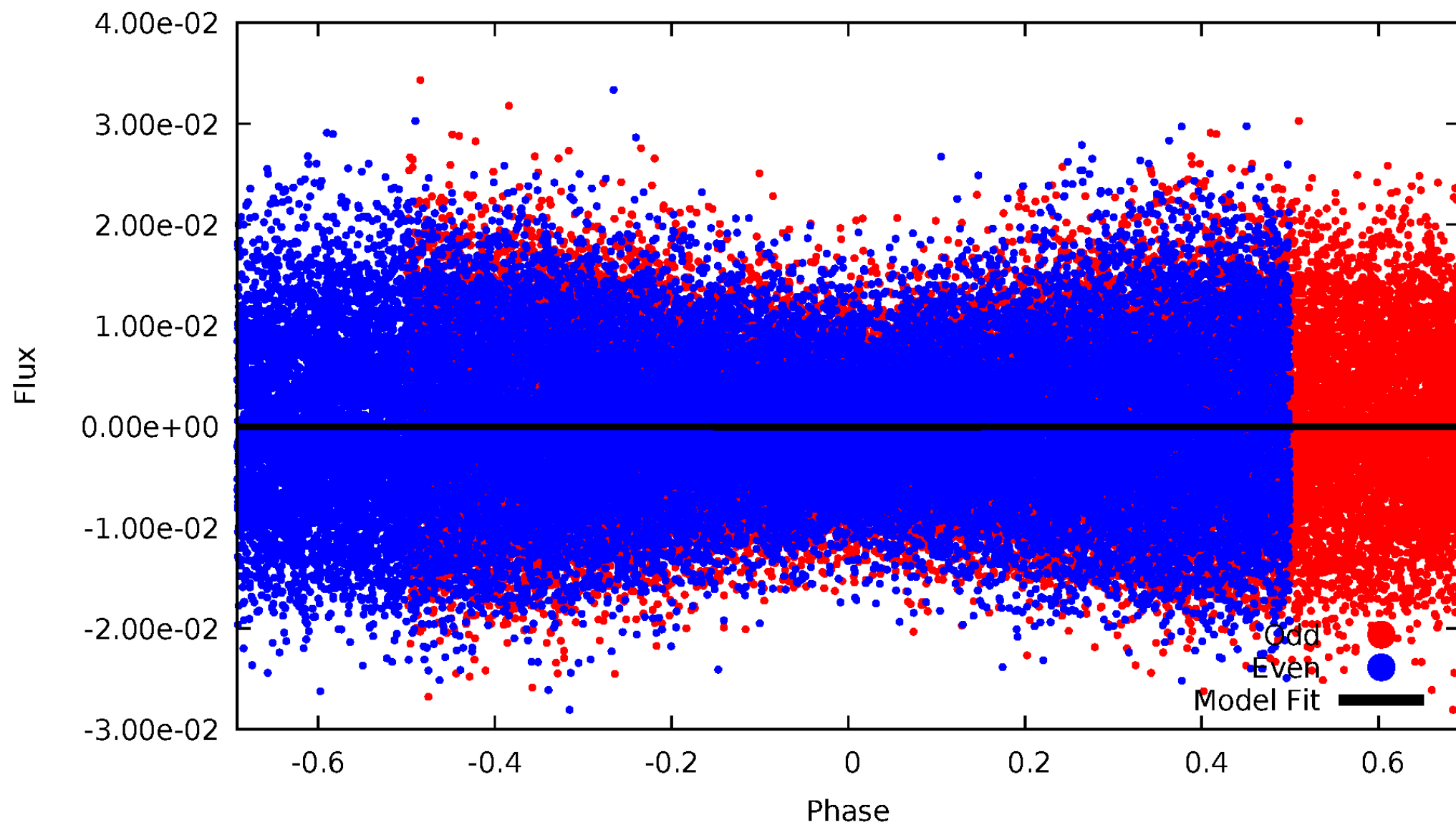
DV Odd/Even

TCE 003864417-01



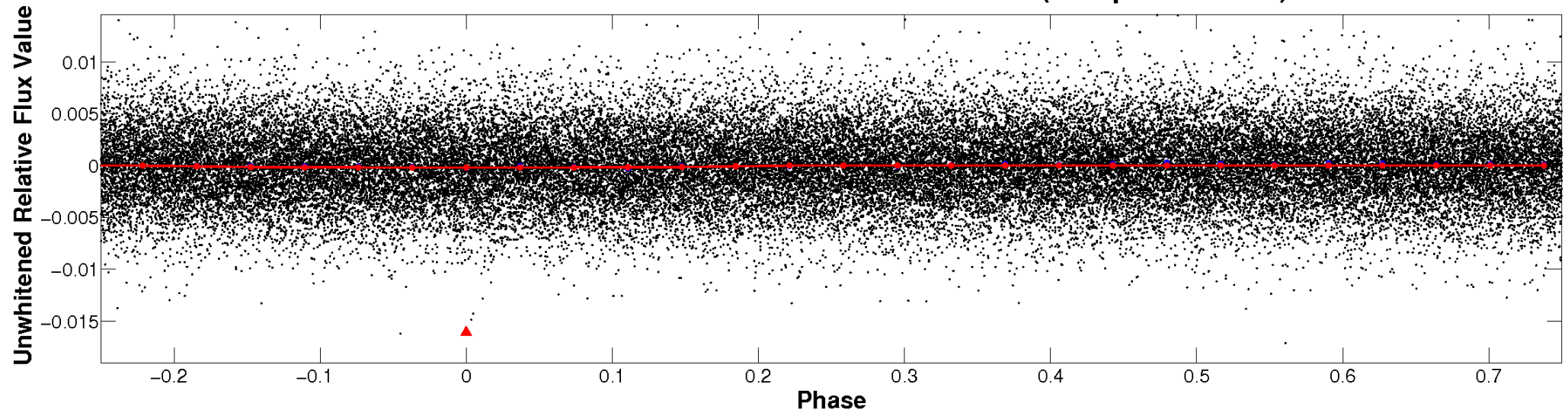
ALT Odd/Even

TCE 003864417-01

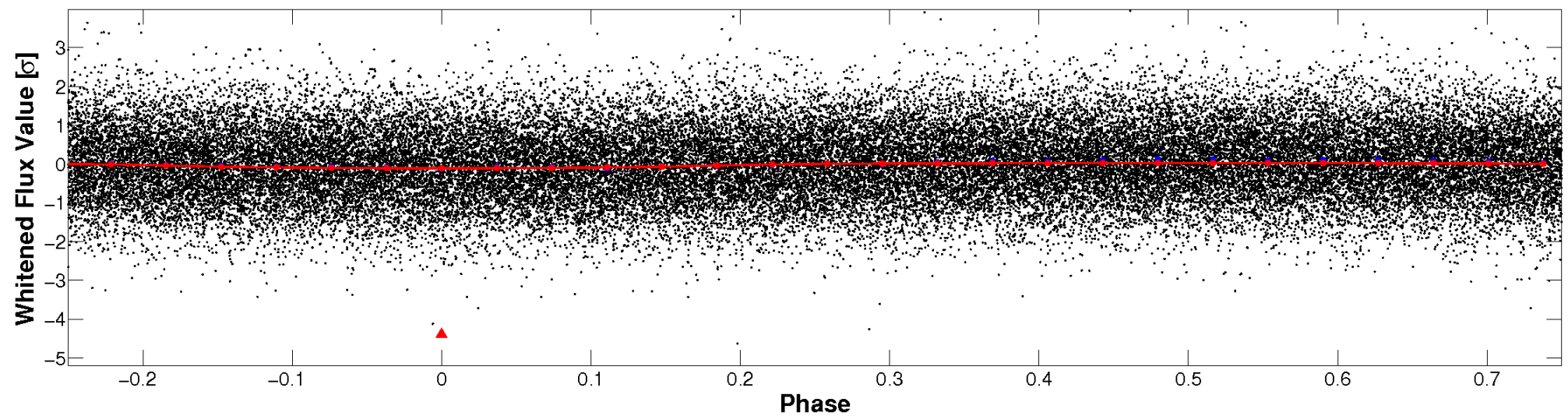


Non-Whitened Vs. Whitened Light Curve

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

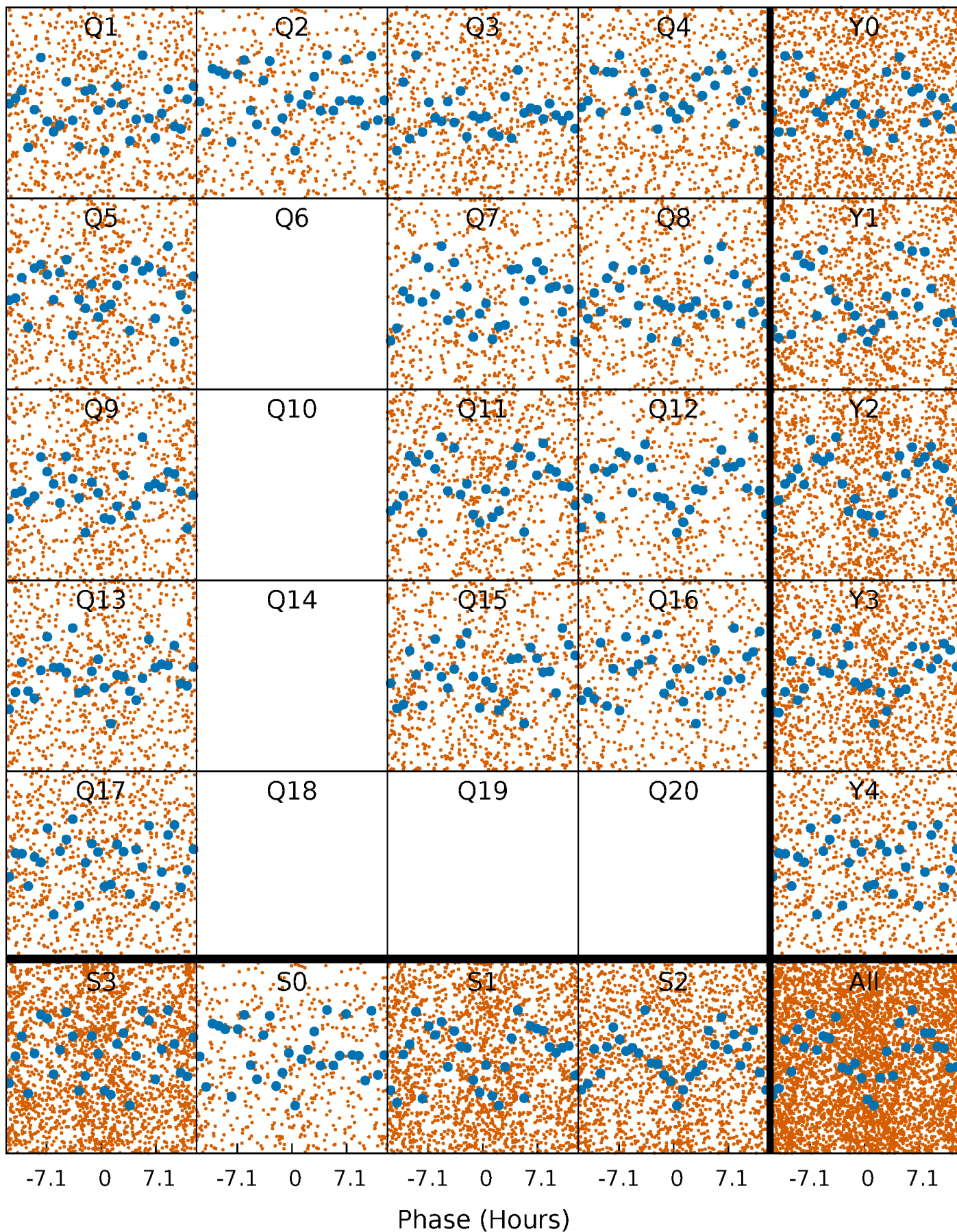


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



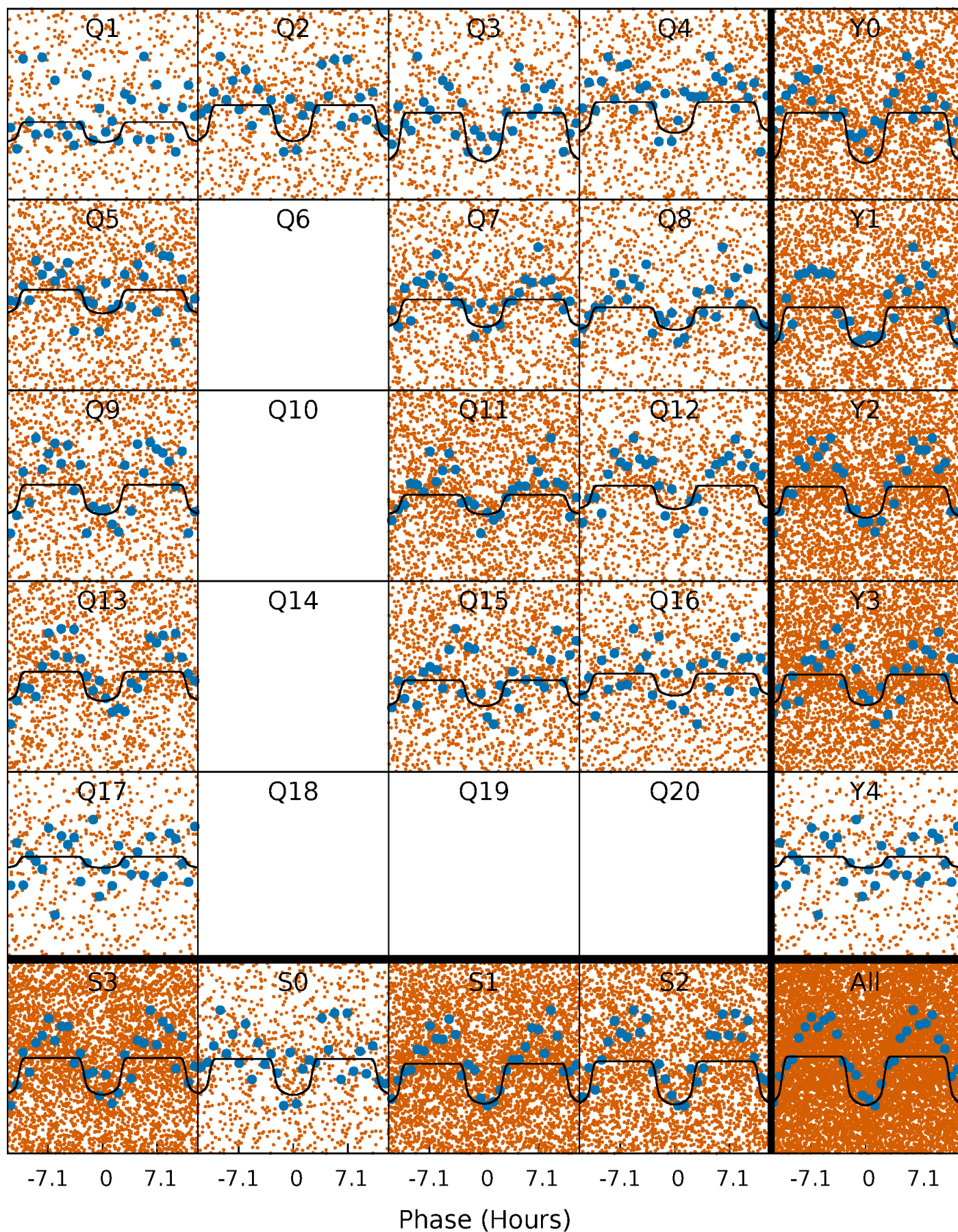
PDC Quarter-Phased Transit Curves

TCE 003864417-01 P= 0.553874 Days $T_0=131.986267$ (BKJD)



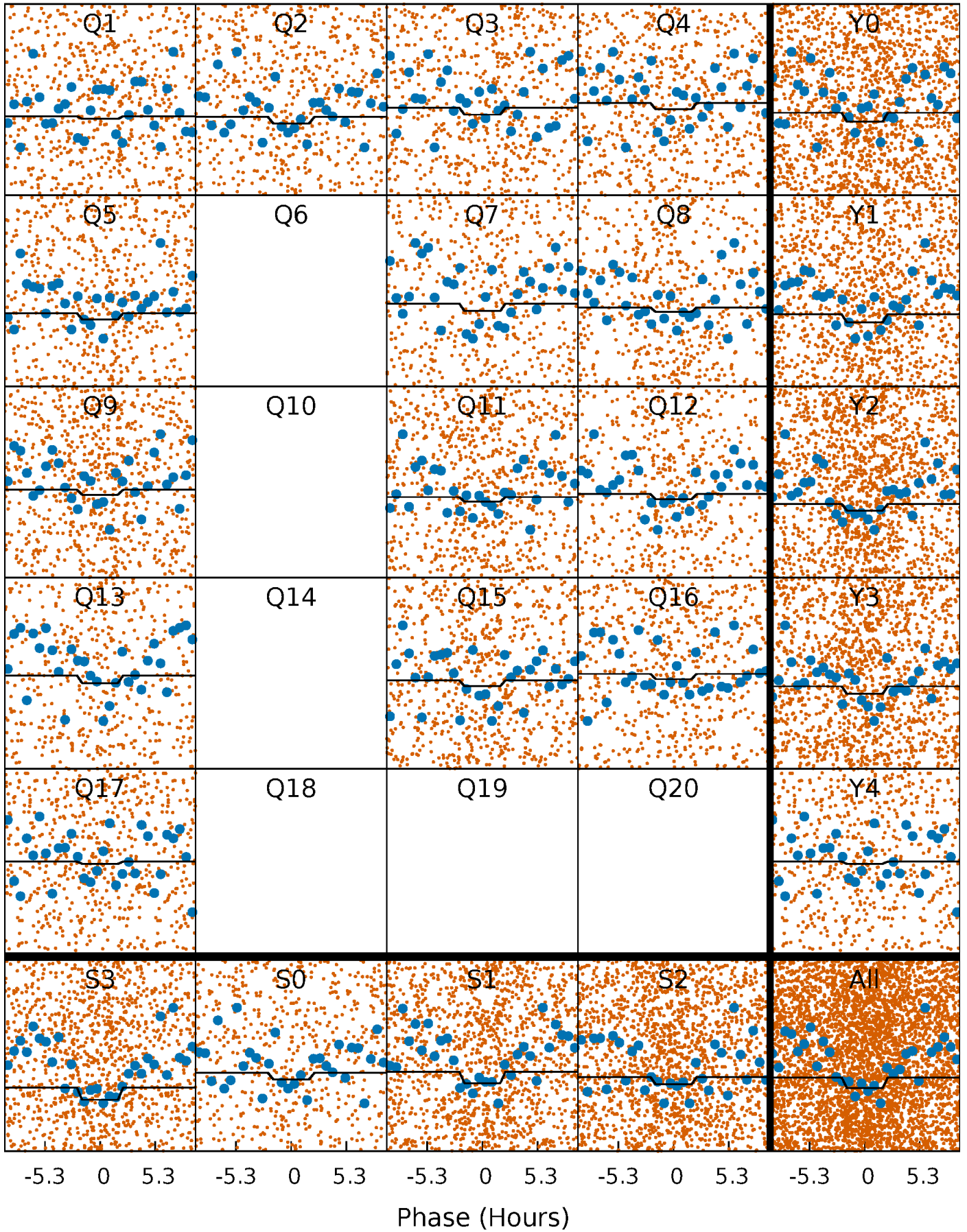
DV Quarter-Phased Transit Curves

TCE 003864417-01 P= 0.553874 Days $T_0=131.986267$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

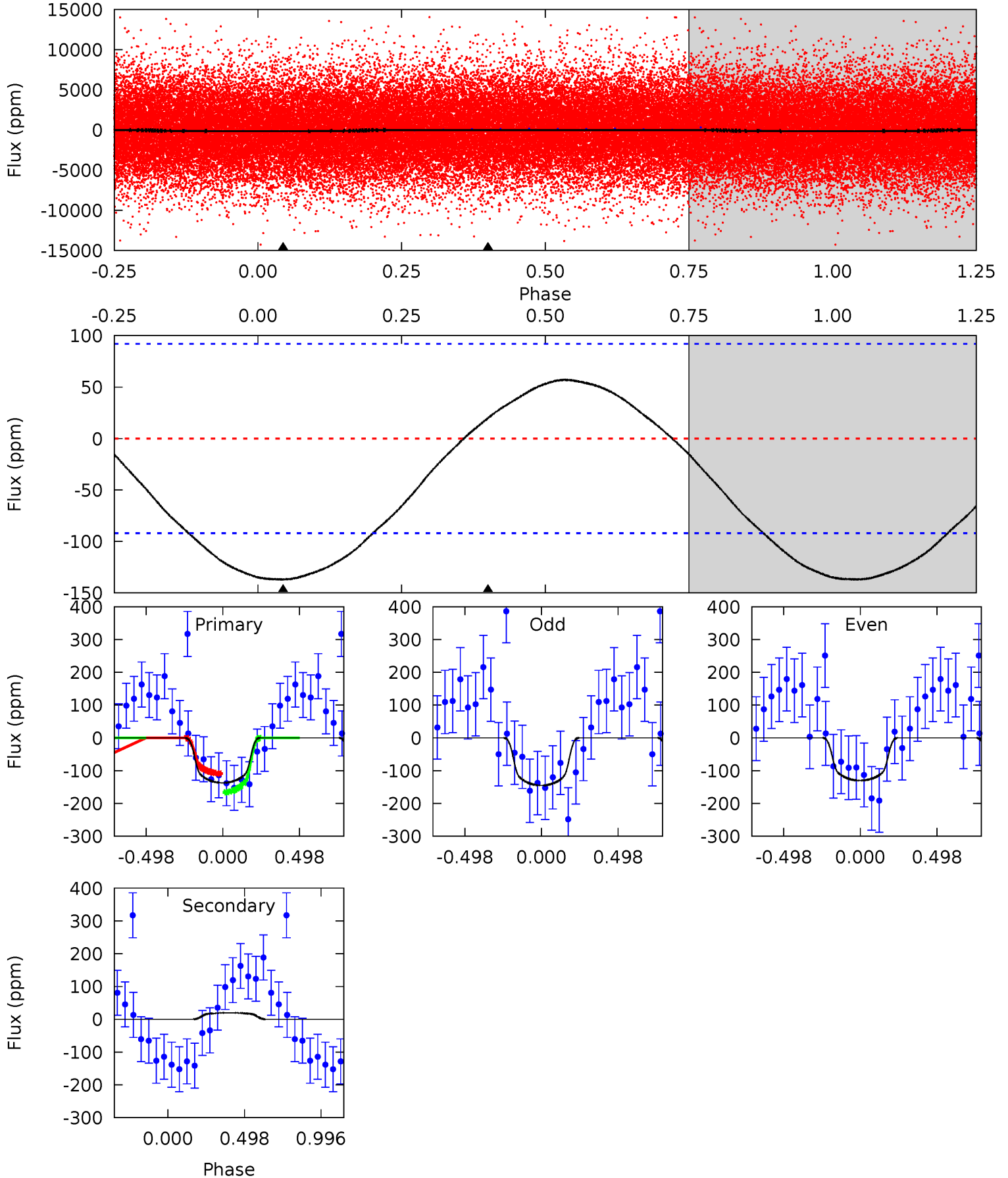
TCE 003864417-01 P= 0.553929 Days $T_0=131.916826$ (BKJD)



DV Model-Shift Uniqueness Test

003864417-01, P = 0.553874 Days, E = 131.432393 Days

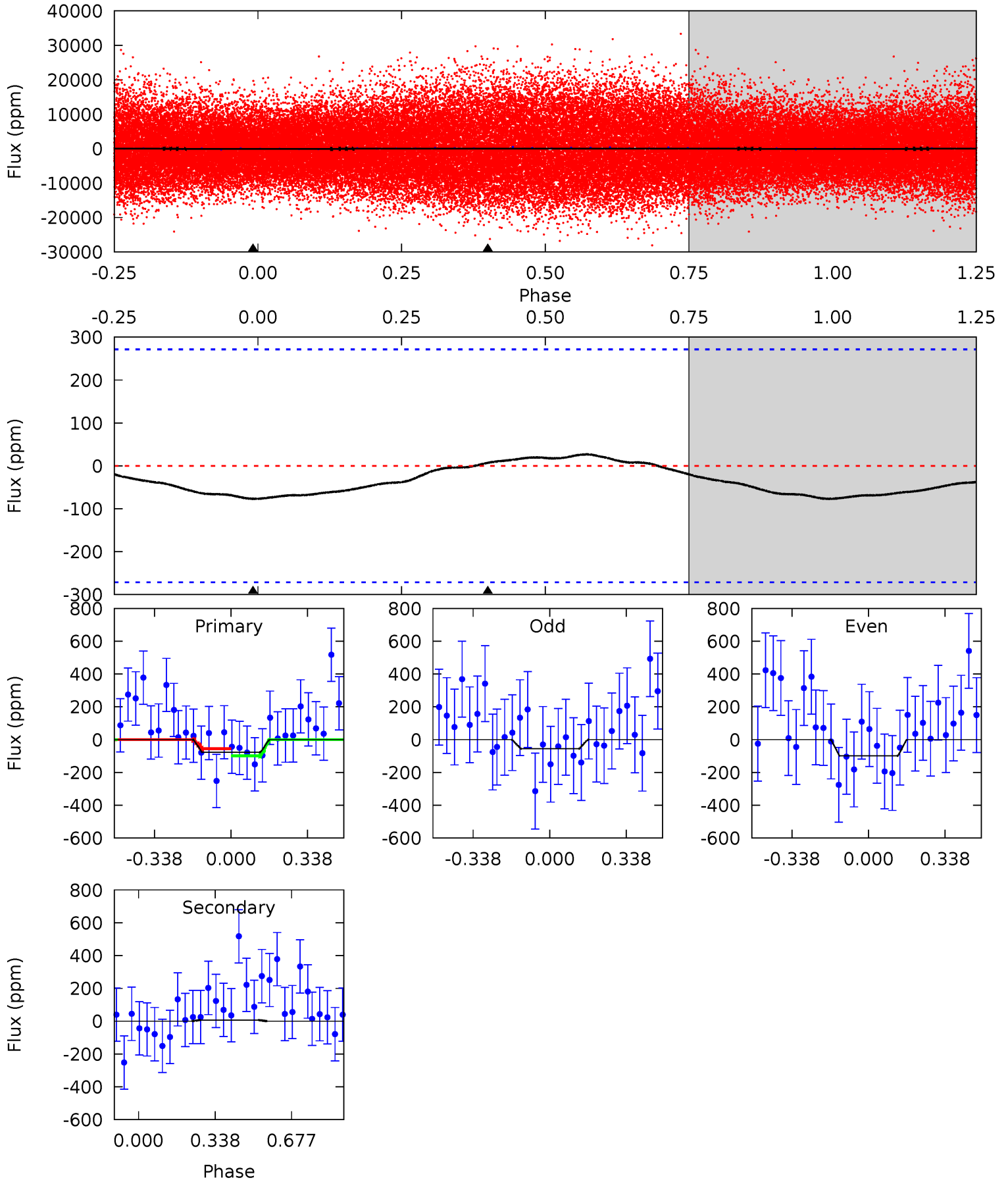
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.29	-0.90	0	0	4.22	0.68	0.68	6.29	6.29	-0.90	-0.90	0.35	0.77	0.29	1.35



Alt Model-Shift Uniqueness Test

003864417-01, P = 0.553929 Days, E = 131.362897 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.22	-0.11	0	0	4.30	0.96	0.14	1.22	1.22	-0.11	-0.11	0.35	0.72	0.26	0.41



Stellar Parameters For KIC 003864417

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7098^{+172}_{-271}	$4.152^{+0.109}_{-0.202}$	$0.070^{+0.200}_{-0.350}$	$1.717^{+0.580}_{-0.312}$	$1.527^{+0.214}_{-0.235}$	$0.425^{+0.266}_{-0.234}$
	+2%/-4%	+3%/-5%	+286%/-500%	+34%/-18%	+14%/-15%	+63%/-55%
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 003864417-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	20 ± 22	$2.80^{+0.63}_{-0.51}$	4677^{+395}_{-269}	-4697^{+670}_{-572}	$-0.287^{+0.299}_{-0.463}$
Alt.	7 ± 63	$1.59^{+0.51}_{-0.44}$	4696^{+315}_{-276}	-4814^{+11299}_{-2737}	$-0.362^{+3.201}_{-3.411}$

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

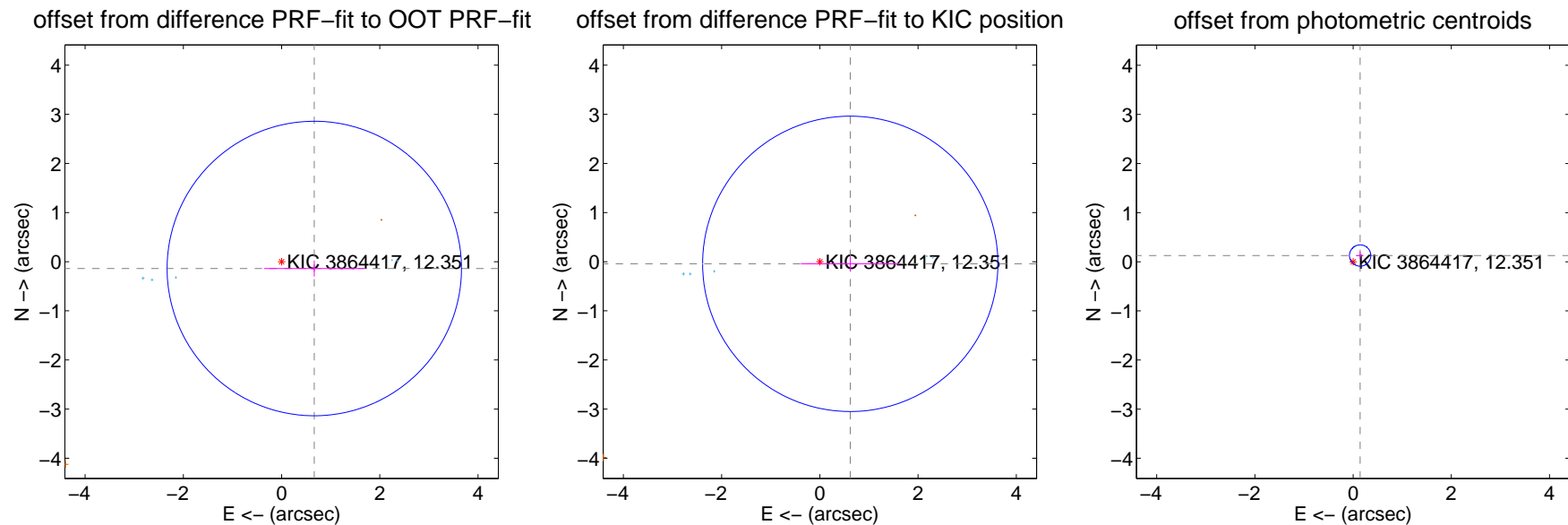
DV Centroid Data

Supplemental centroid analysis for 003864417-01. Kepler magnitude: 12.35. Transit SNR 12.86

There are 5 quarters with good PRF difference image offsets

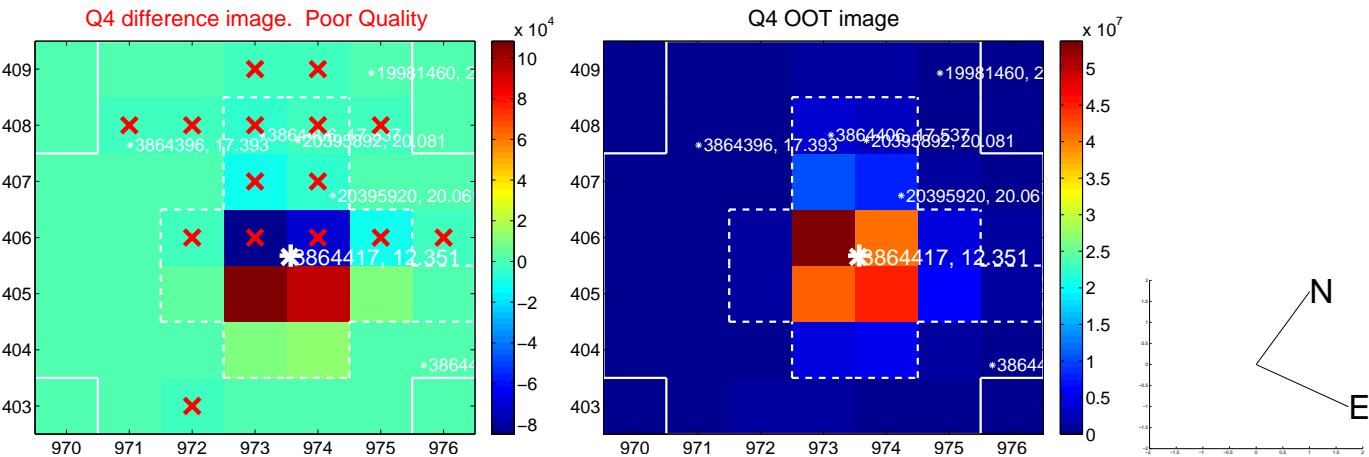
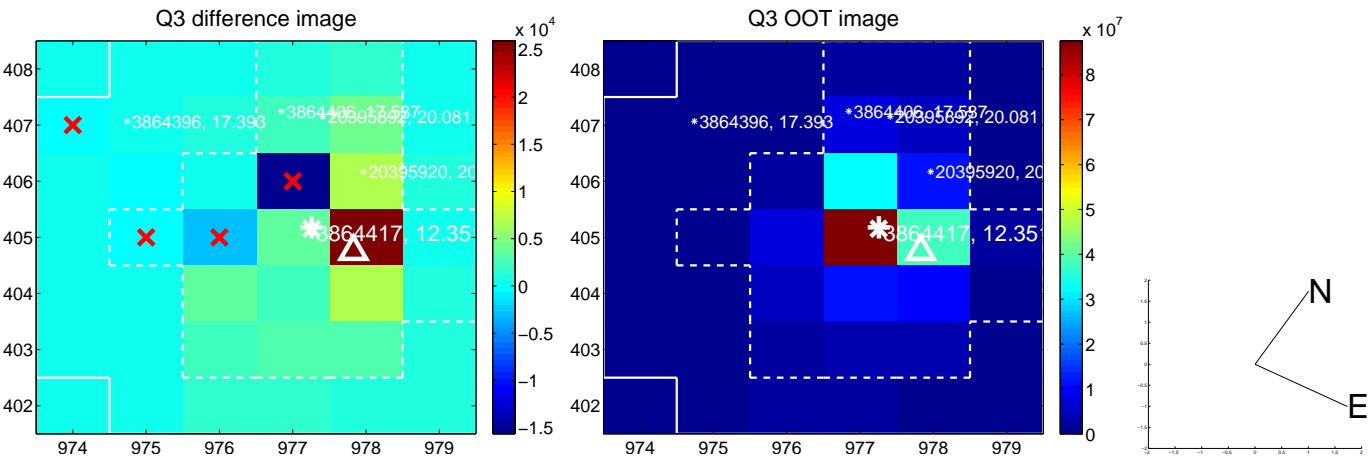
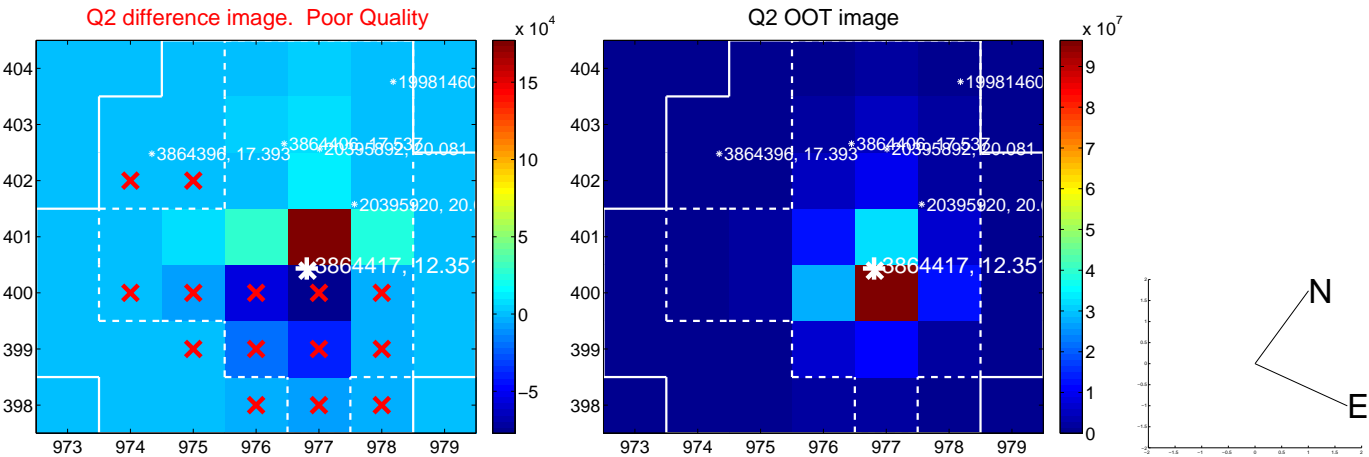
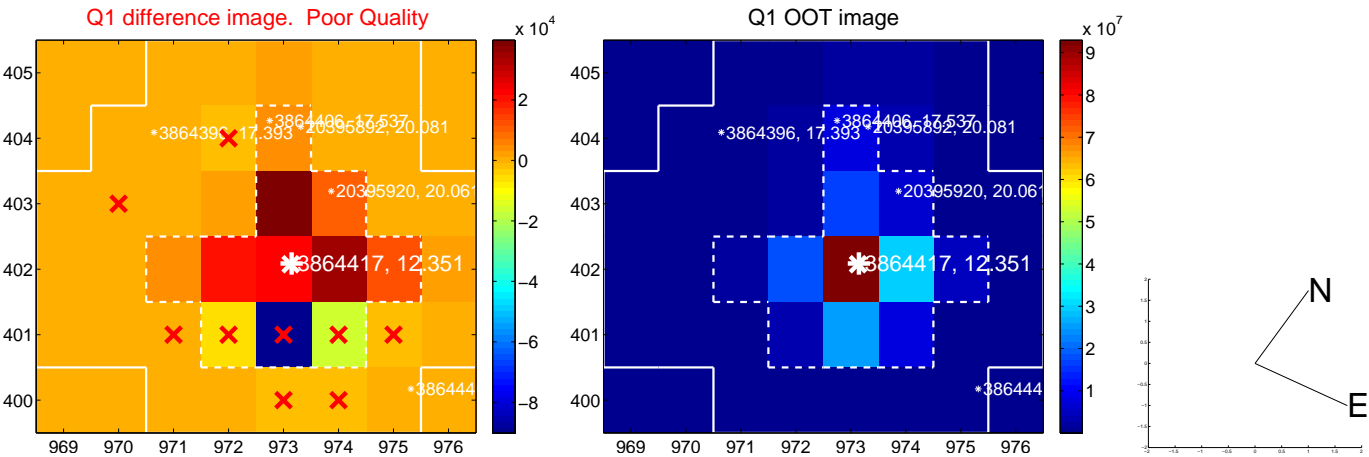
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.680 ± 0.999	0.68	-0.666 ± 1.020	-0.139 ± 0.164
PRF-fit source offset from KIC position	0.621 ± 1.002	0.62	-0.619 ± 1.004	-0.044 ± 0.149
photometric centroid source offset	0.19 ± 0.07	2.65	-0.14 ± 0.07	0.13 ± 0.08

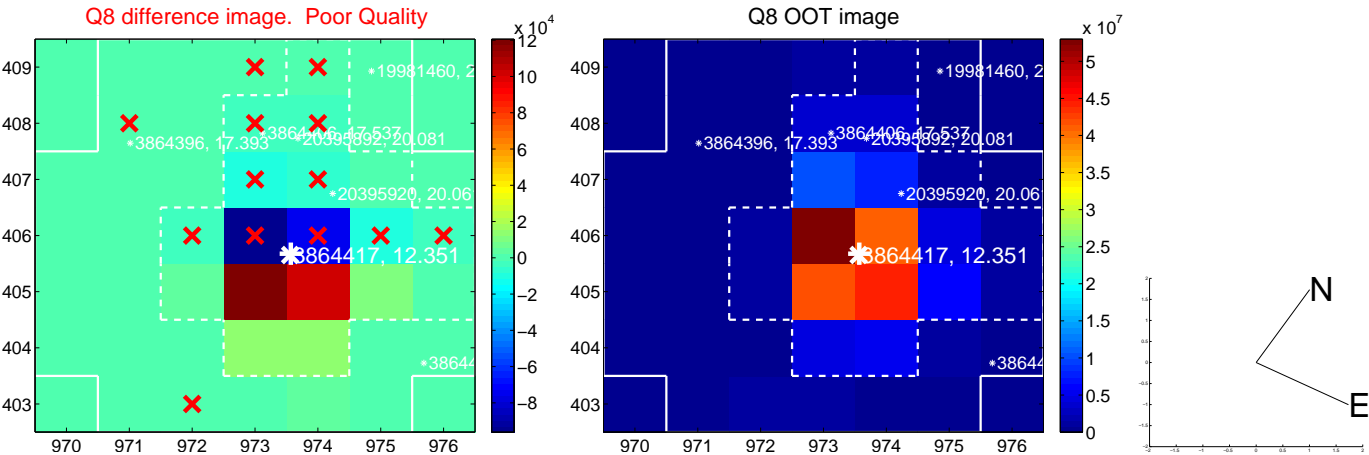
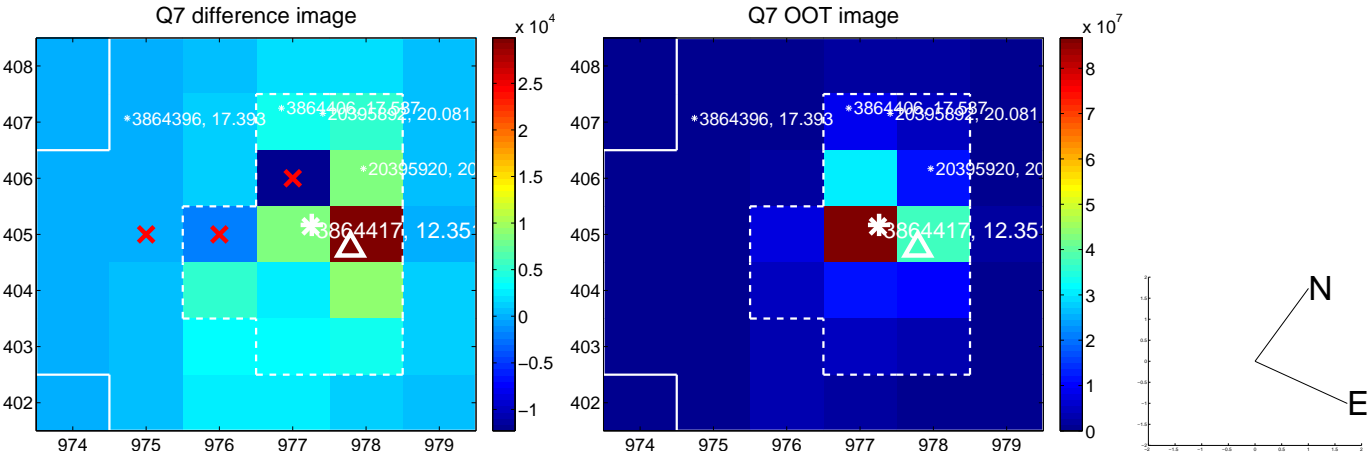
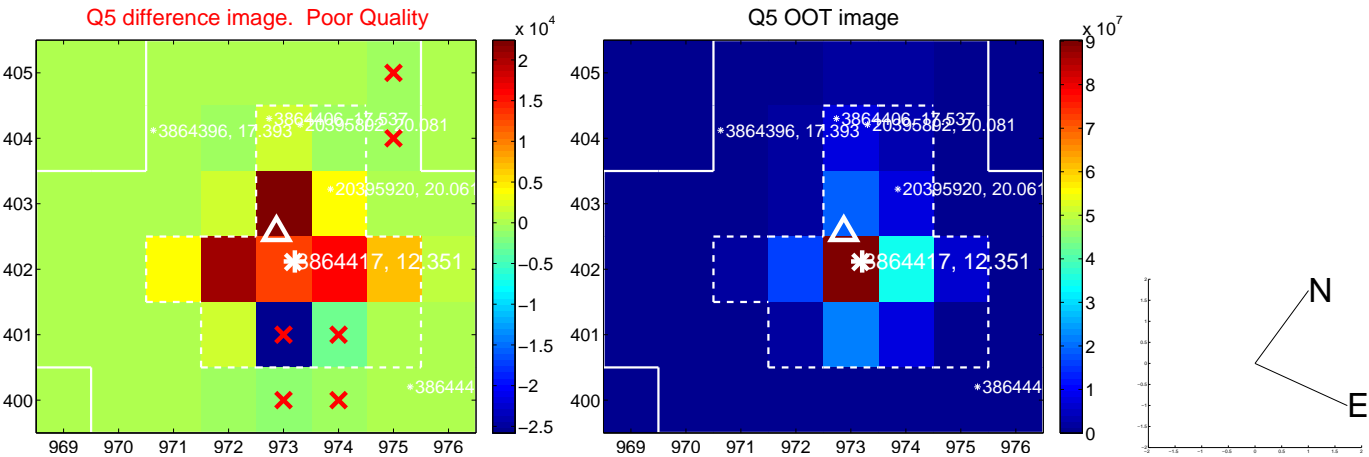


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

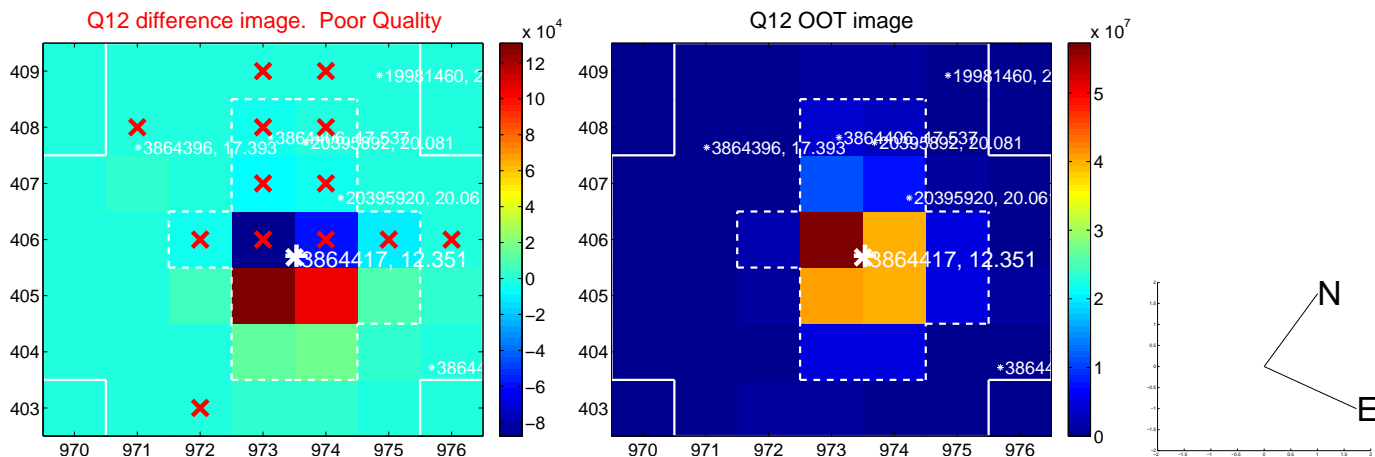
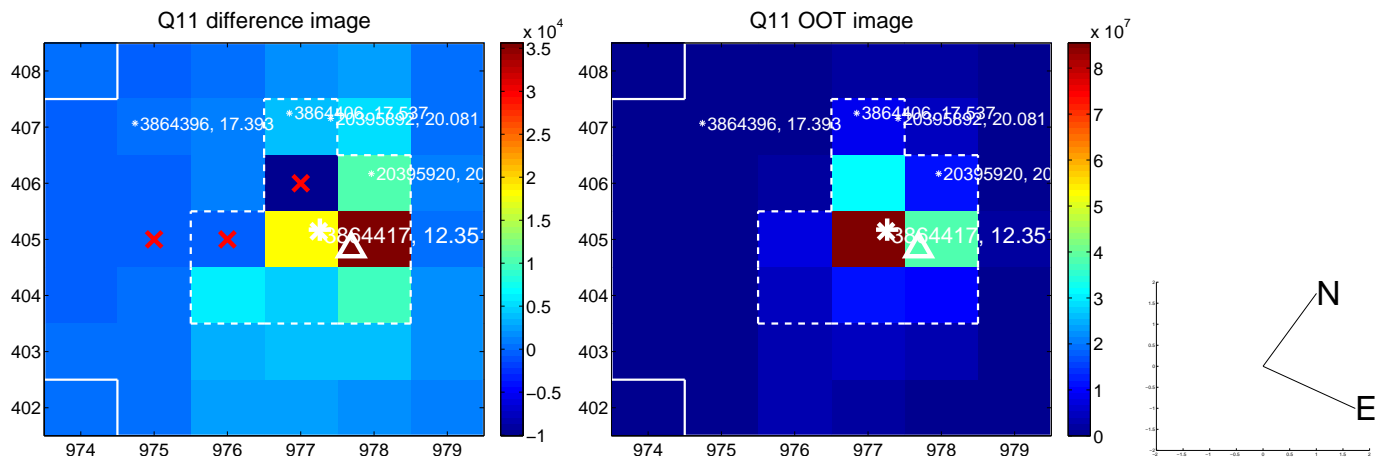
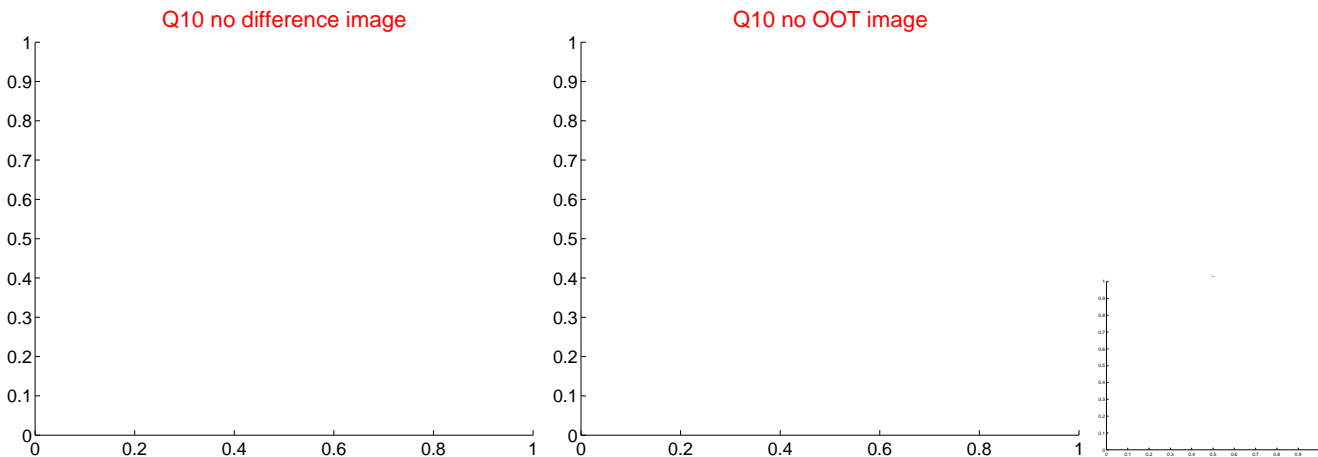
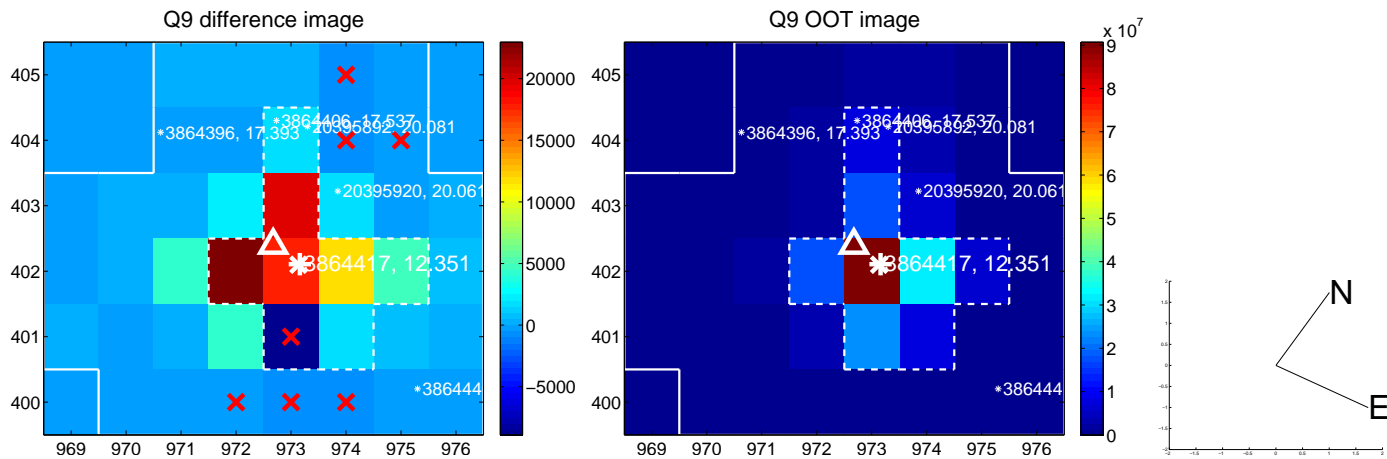
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



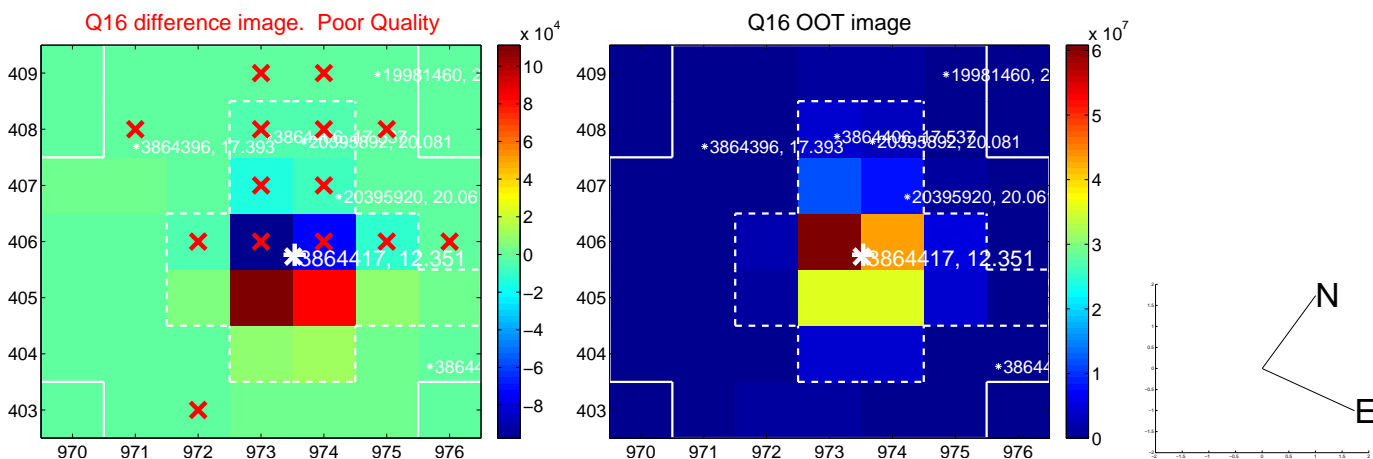
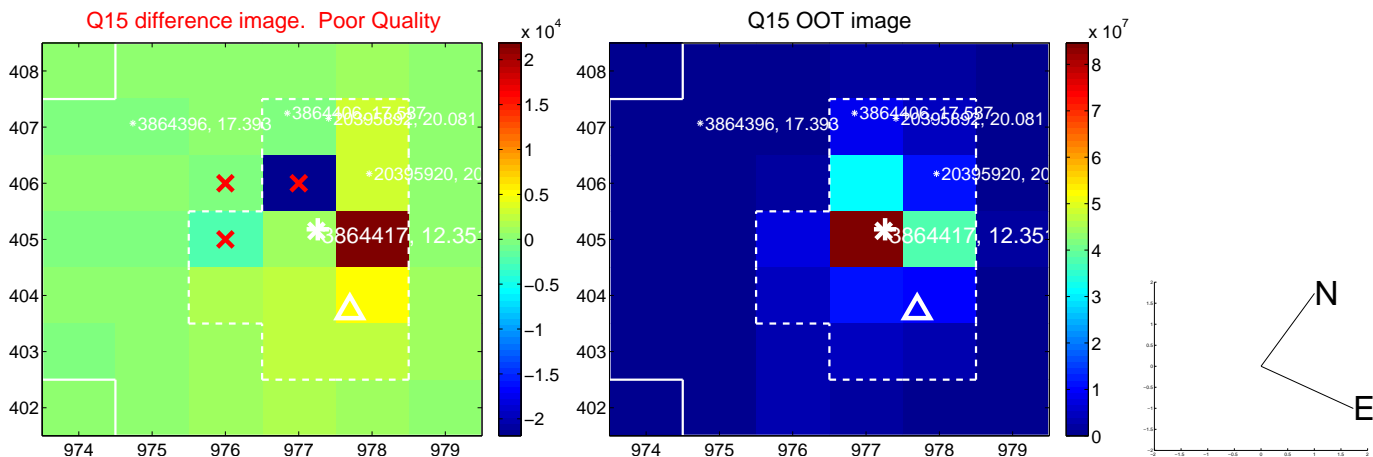
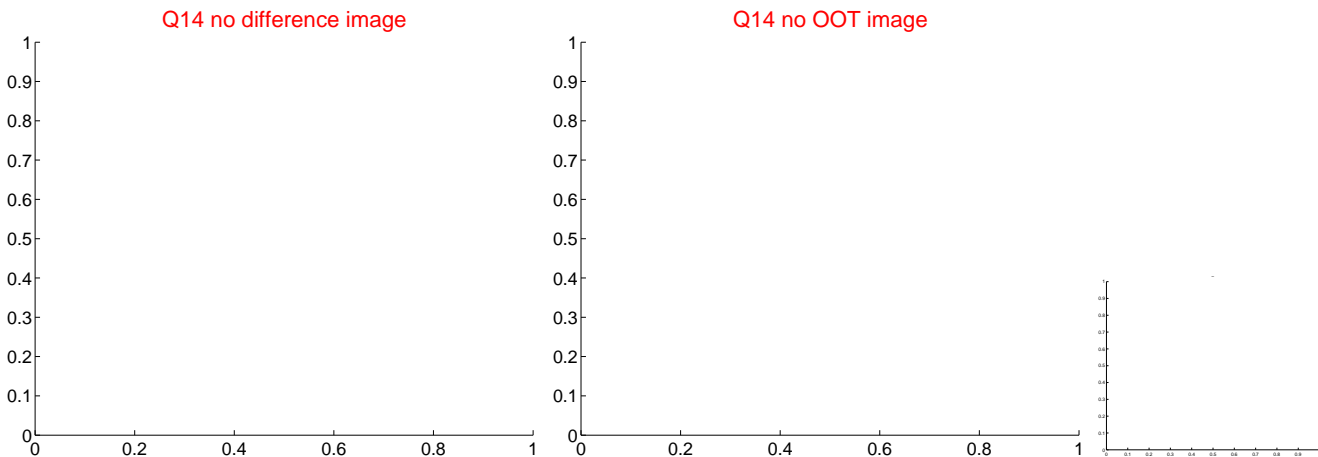
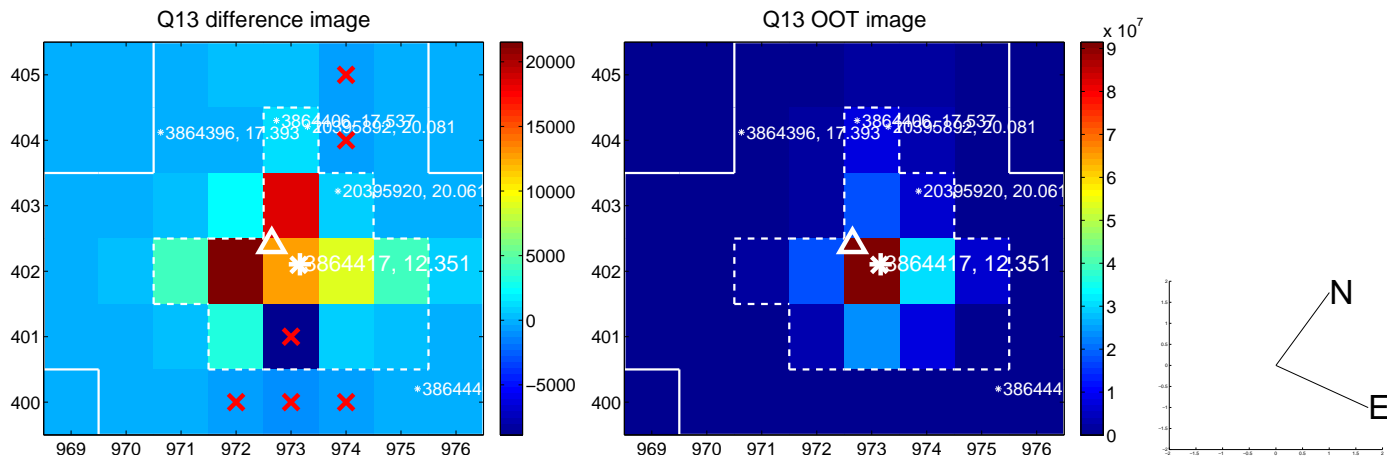
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



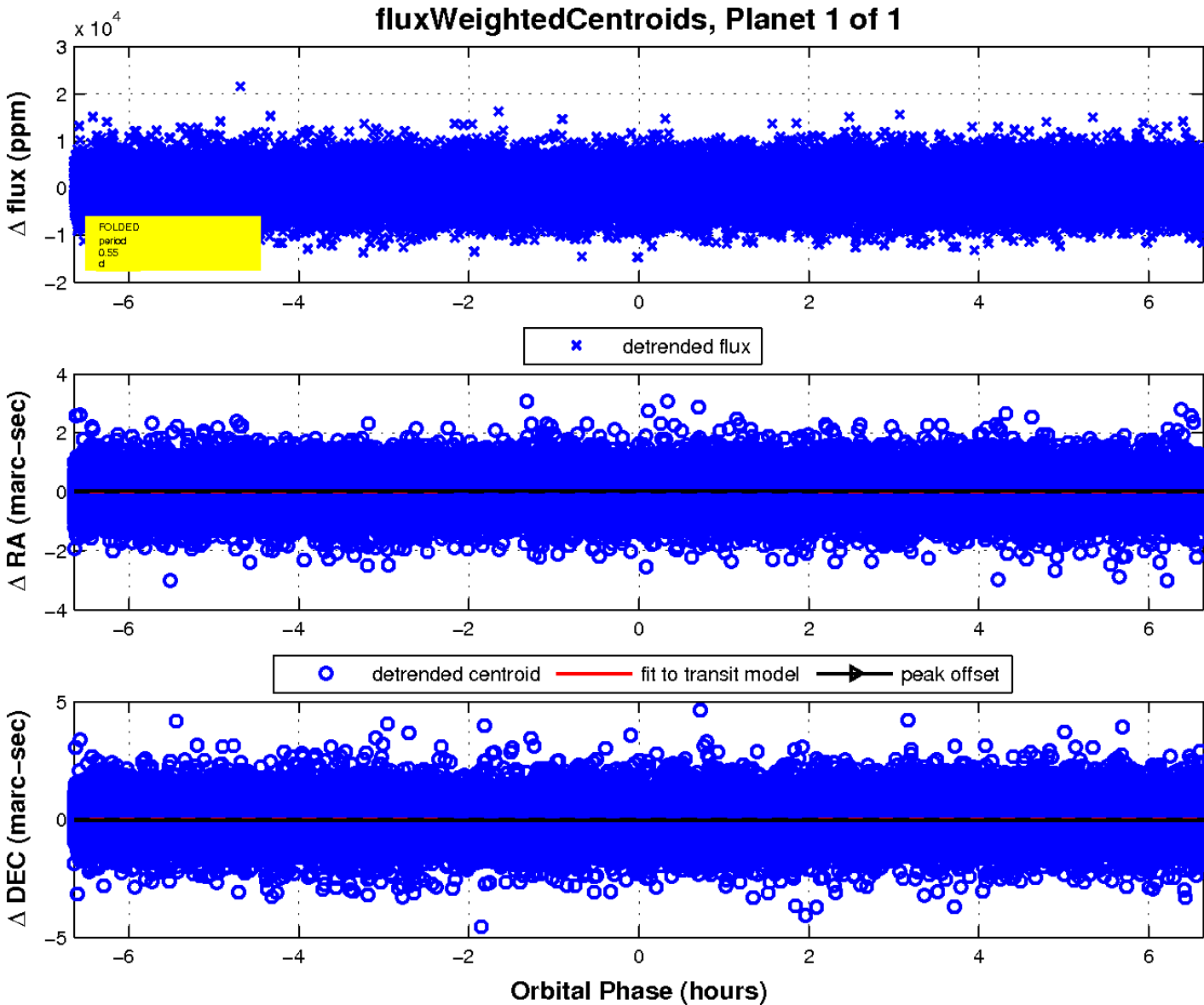
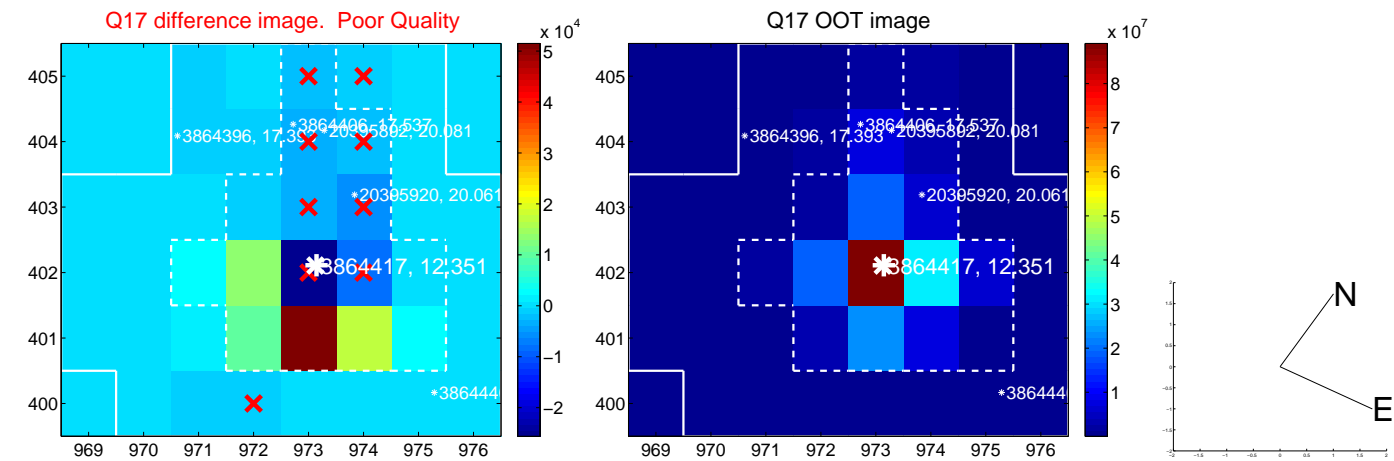
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

