

KIC 008444802

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})
008444802-01	OBS	No	0.573055	131.993569	51.9	4.461	16.5	20.7	1.79	7450	1.32	34119.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008444802-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—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.

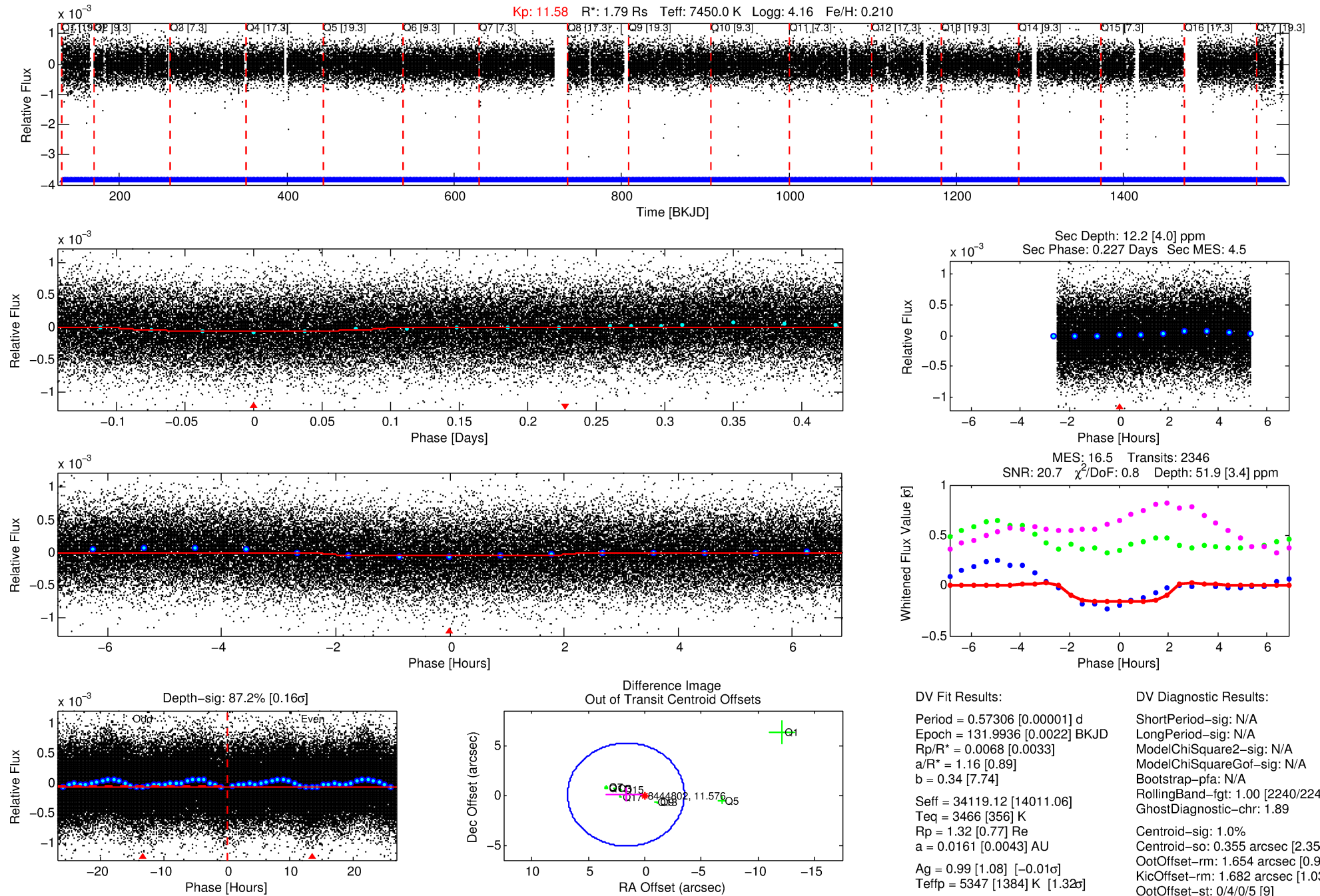
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008444802-01

No Significant Match Found

DV One-Page Summary

KIC: 8444802 Candidate: 1 of 1 Period: 0.573 d



DV Fit Results:

Period = 0.57306 [0.00001] d
Epoch = 131.9936 [0.0022] BKJD
Rp/R* = 0.0068 [0.0033]
a/R* = 1.16 [0.89]
b = 0.34 [7.74]
Seff = 34119.12 [14011.06]
Teff = 3466 [356] K
Rp = 1.32 [0.77] Re
a = 0.0161 [0.0043] AU
Ag = 0.99 [1.08] [-0.01σ]
Teffp = 5347 [1384] K [1.32σ]

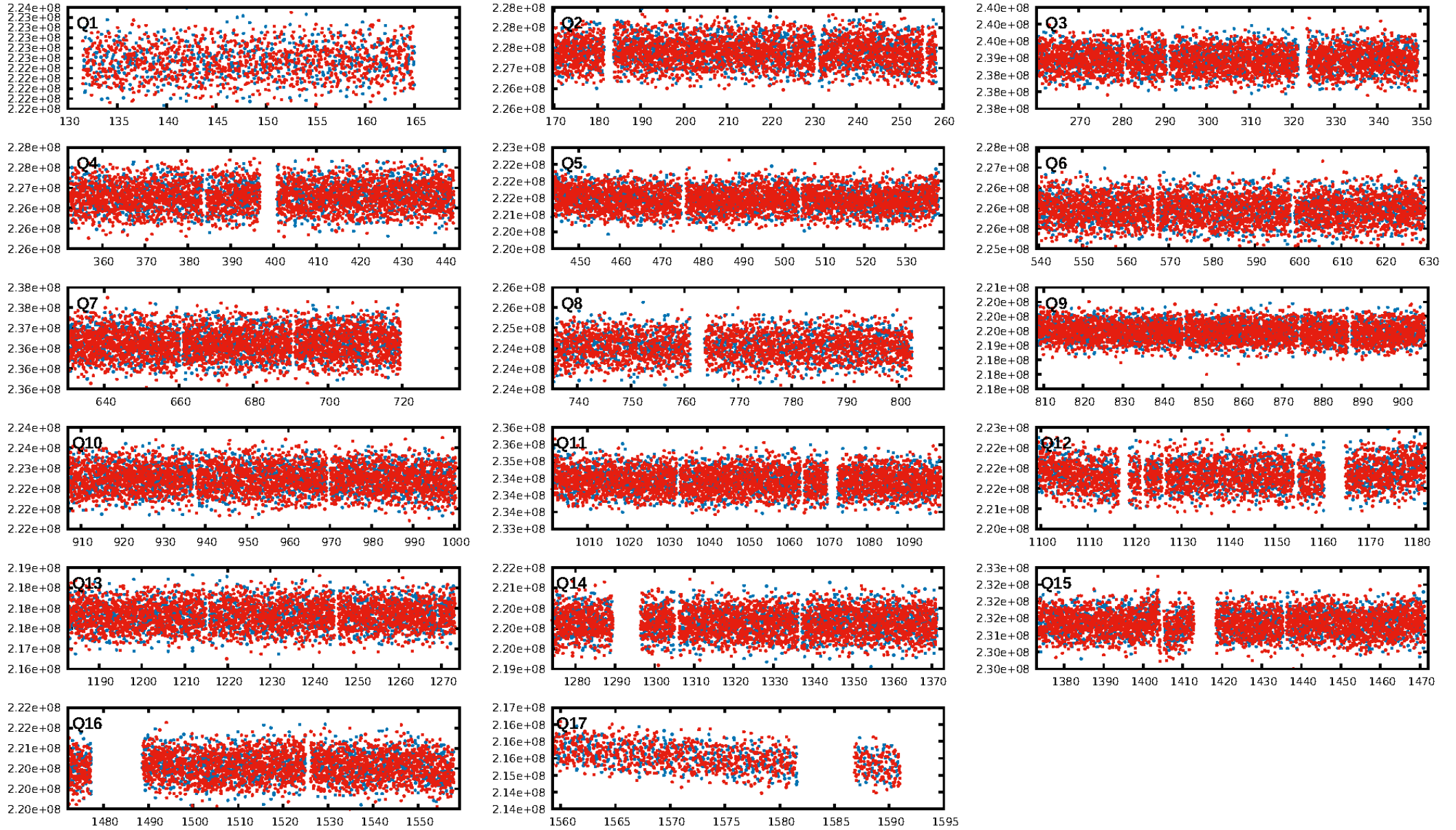
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2240/2240]
GhostDiagnostic-chr: 1.89
Centroid-sig: 1.0%
Centroid-so: 0.355 arcsec [2.35σ]
OotOffset-rm: 1.654 arcsec [0.96σ]
KicOffset-rm: 1.682 arcsec [1.03σ]
OotOffset-st: 0/4/0/5 [9]
KicOffset-st: 0/4/0/5 [9]
DiffImageQuality-fgm: 0.67 [6/9]
DiffImageOverlap-fno: 1.00 [17/17]

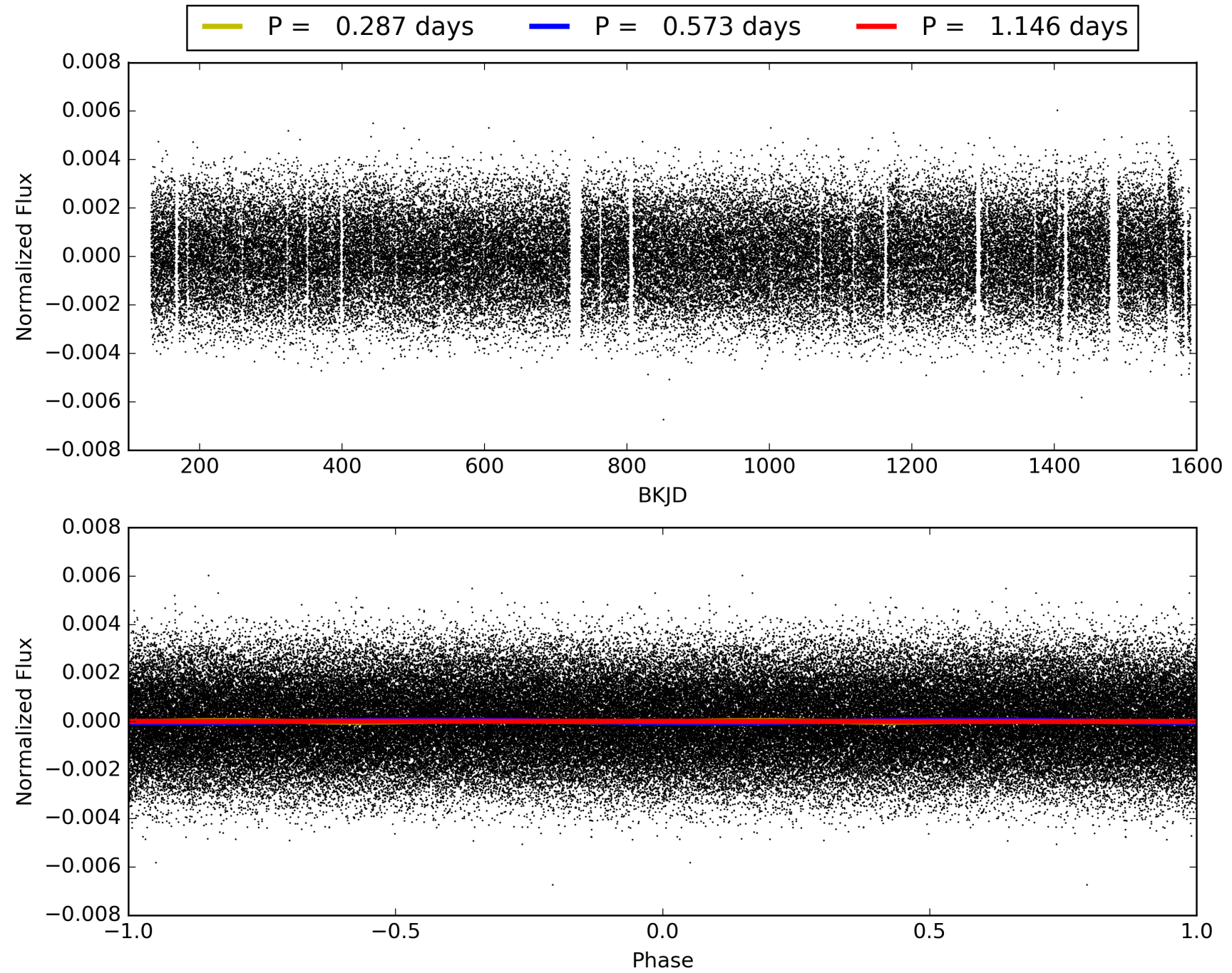
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:45:28 Z

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

TCE 008444802-01, PDC Light Curves

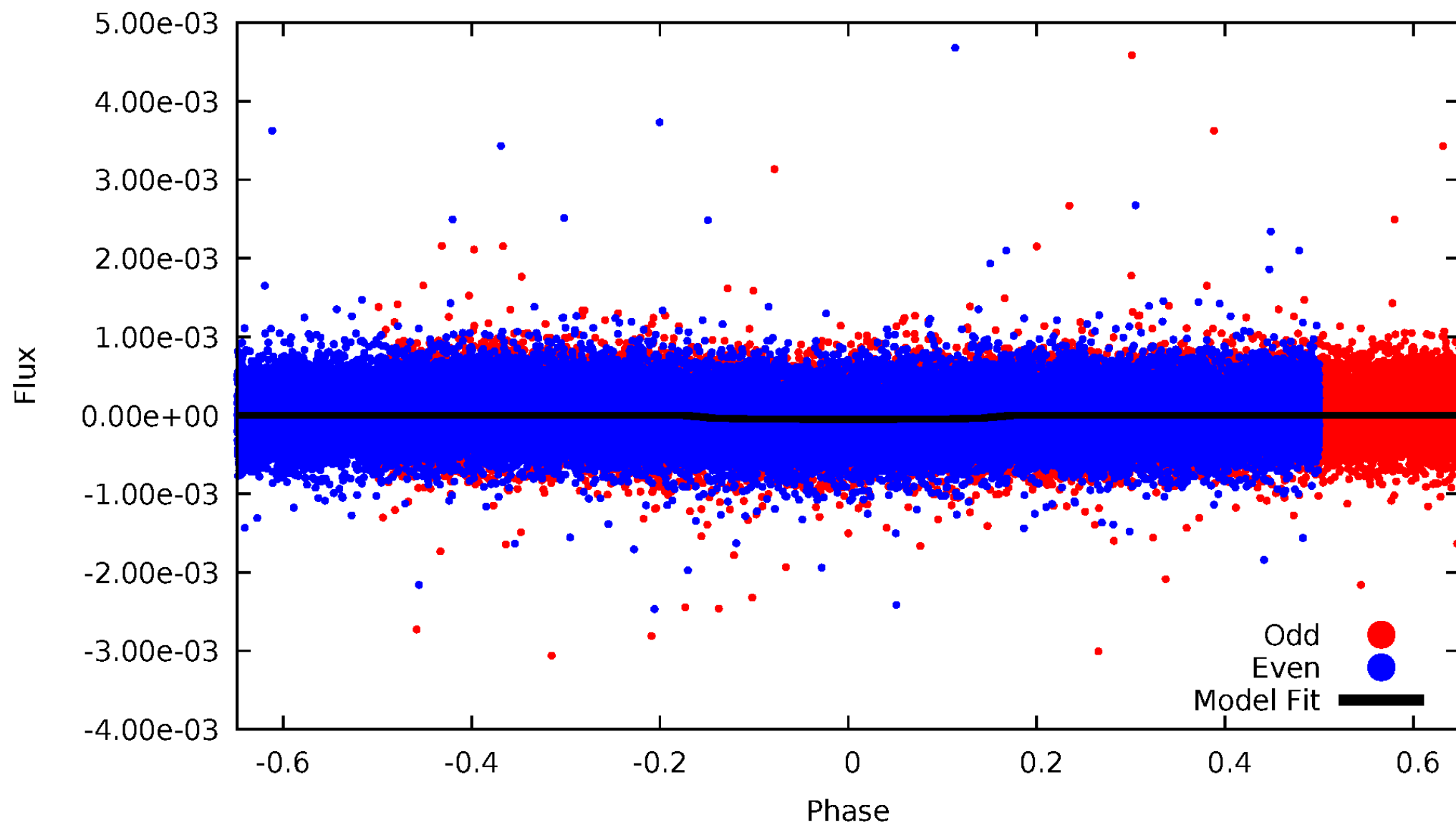


TCE 008444802-01



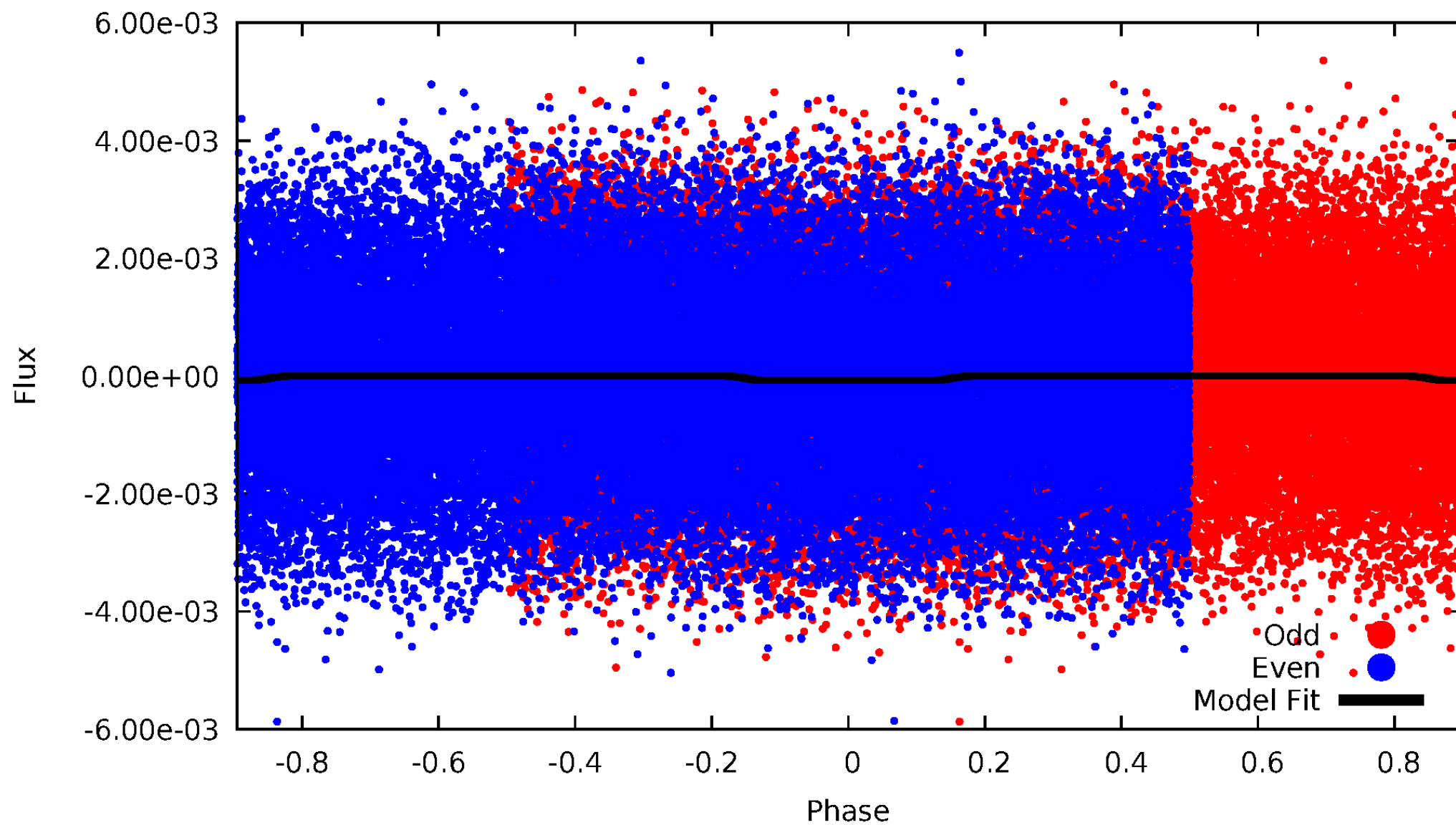
DV Odd/Even

TCE 008444802-01



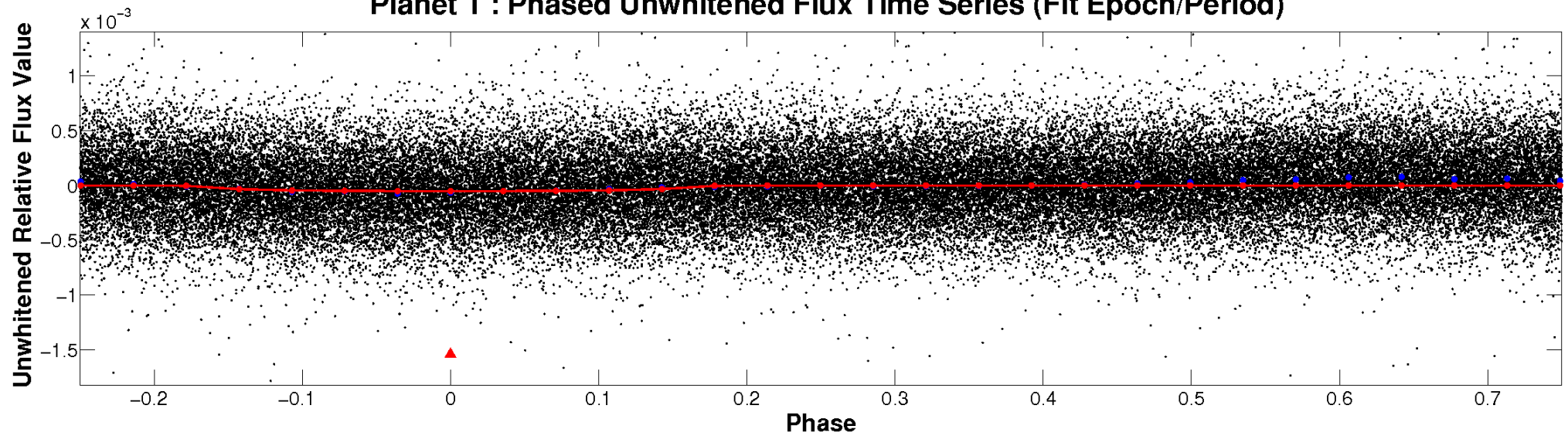
ALT Odd/Even

TCE 008444802-01

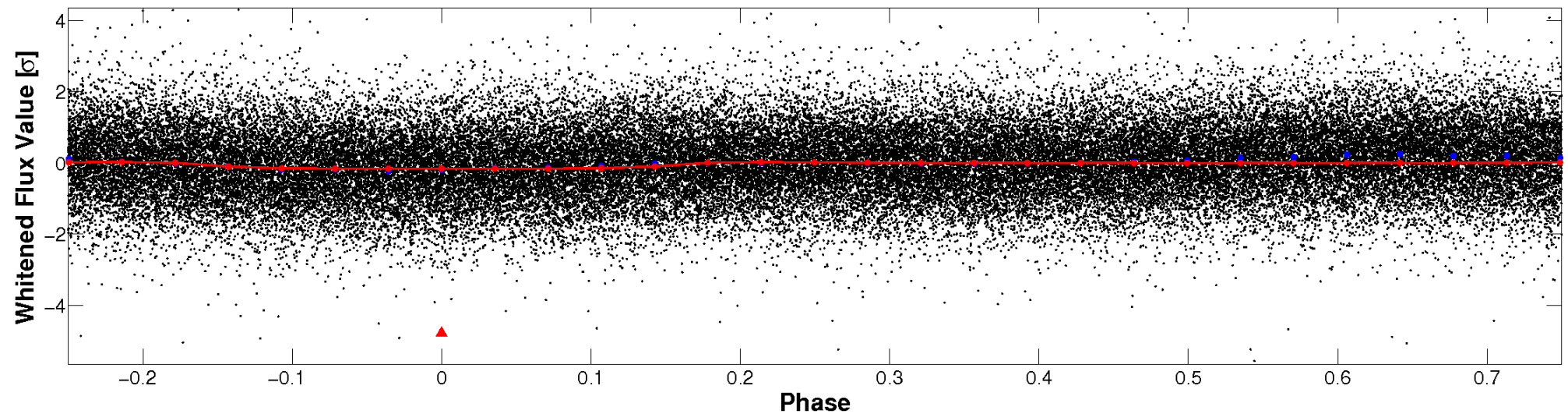


Non-Whitened Vs. Whitened Light Curve

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

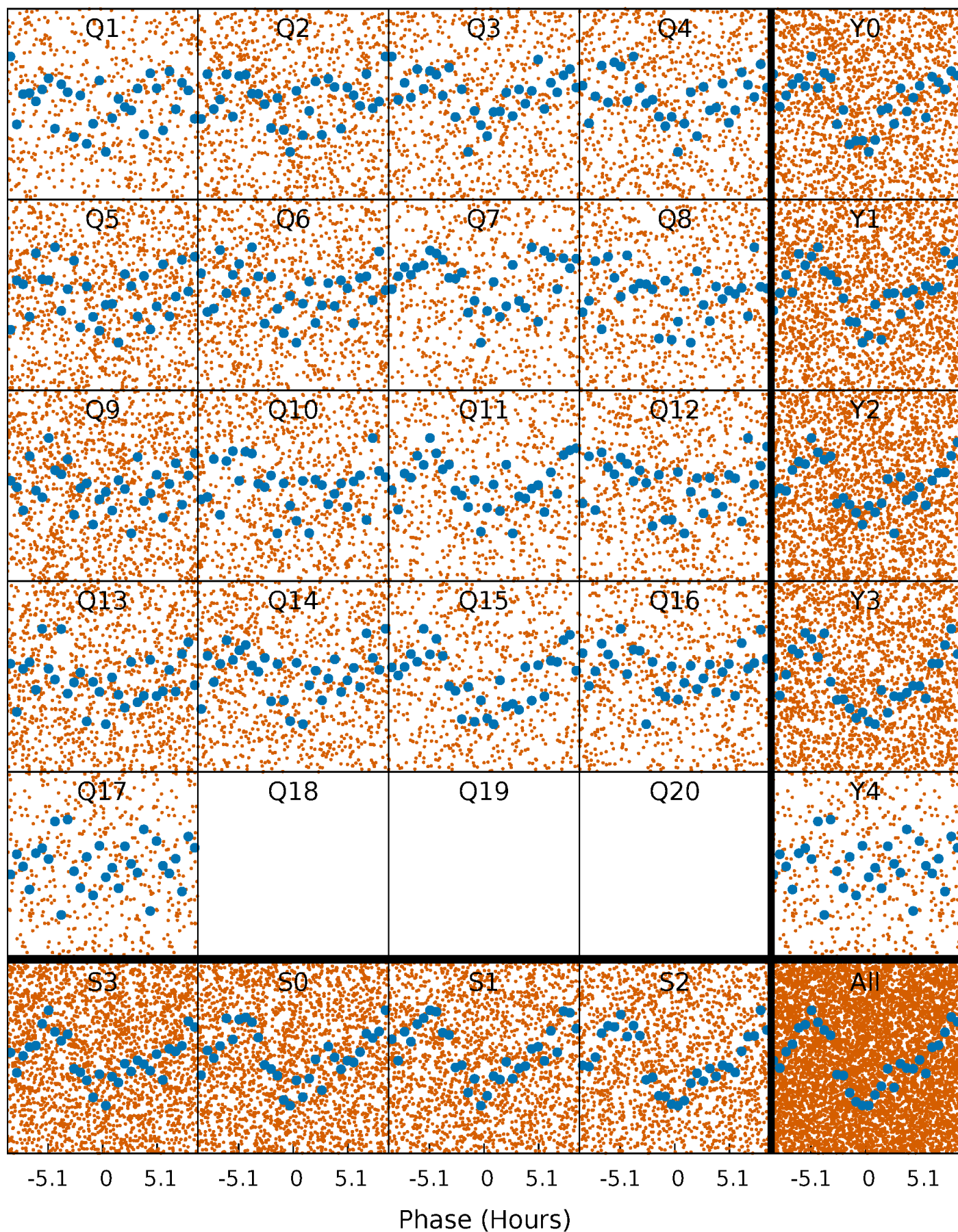


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



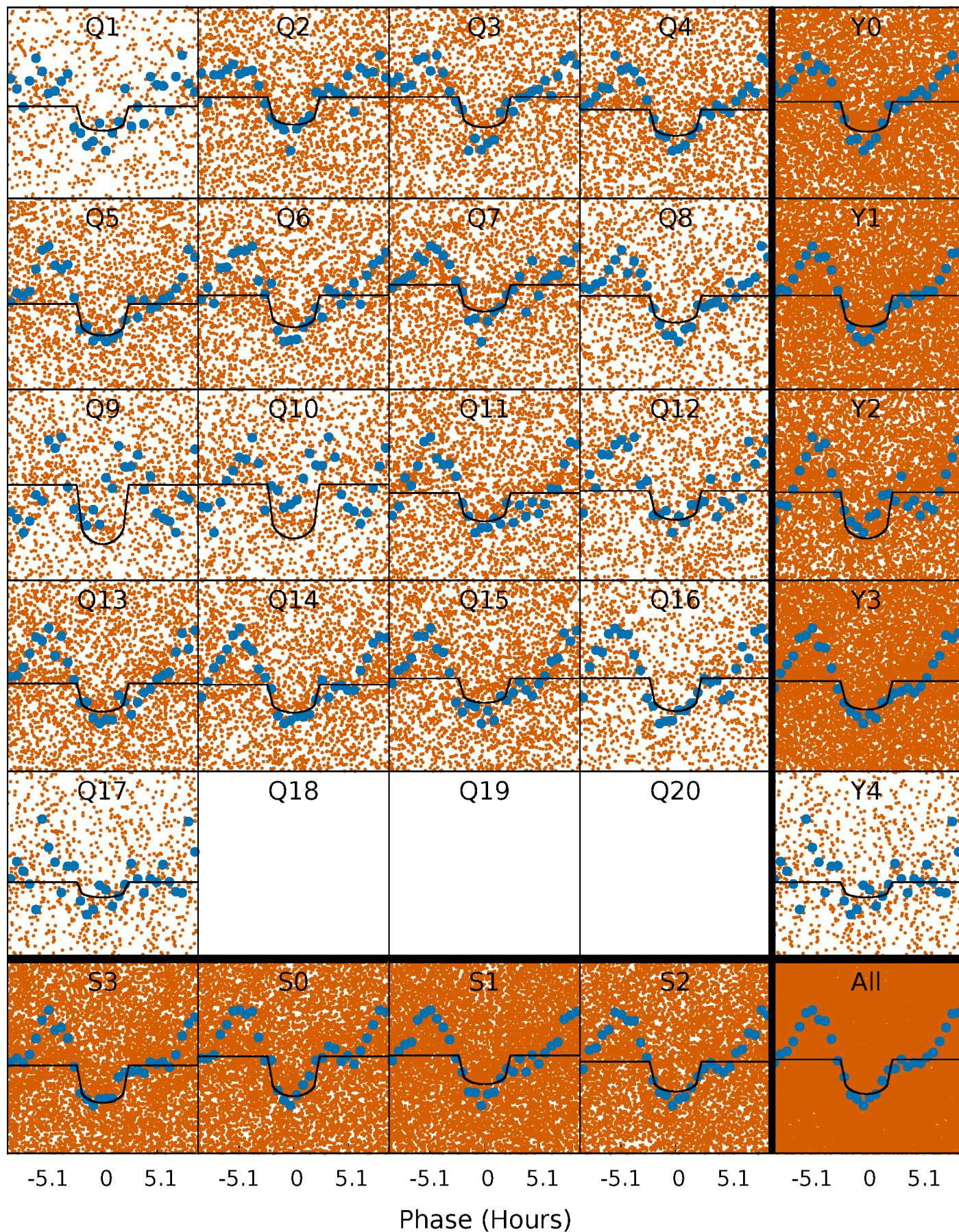
PDC Quarter-Phased Transit Curves

TCE 008444802-01 P= 0.573055 Days $T_0=131.993569$ (BKJD)



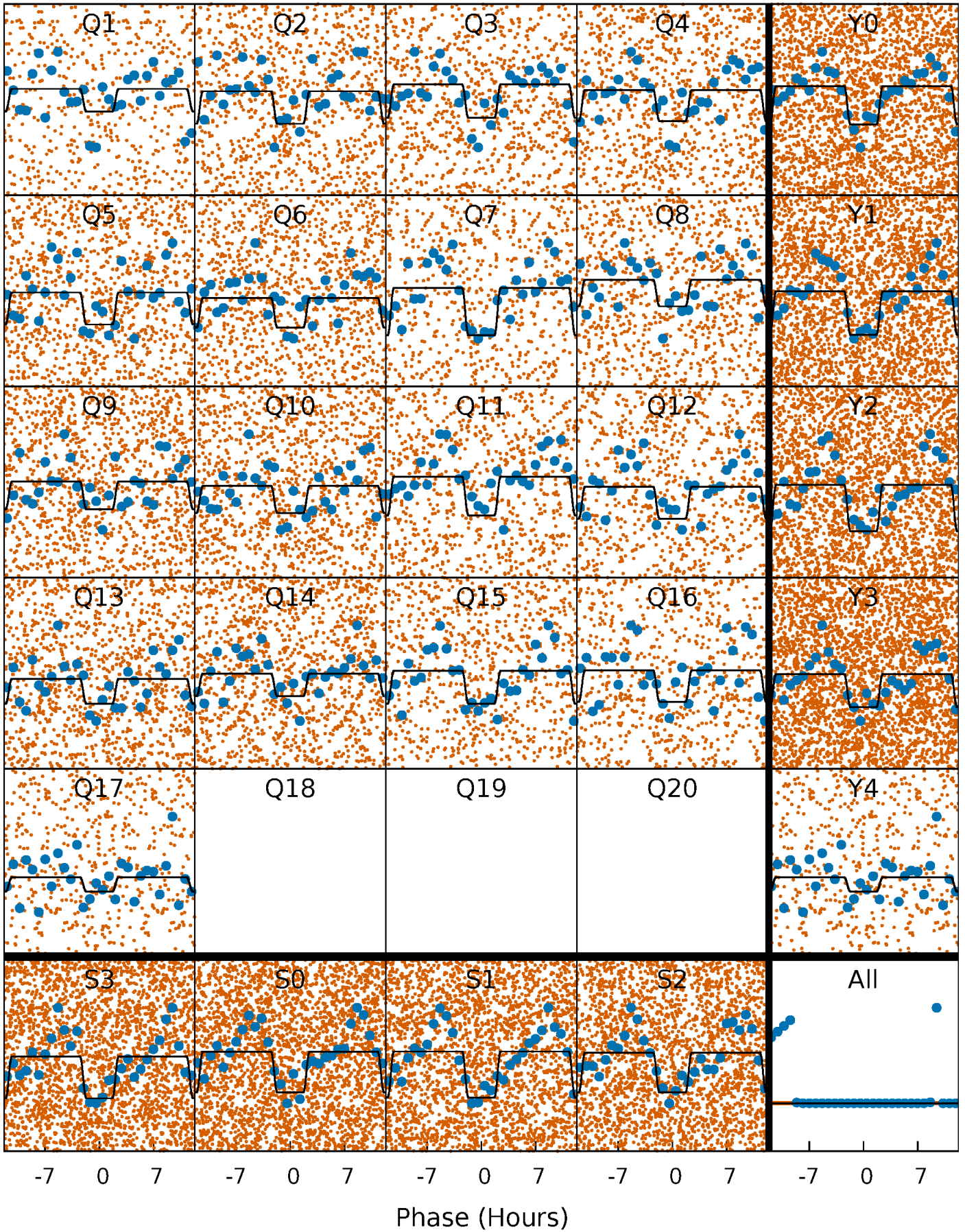
DV Quarter-Phased Transit Curves

TCE 008444802-01 P= 0.573055 Days $T_0=131.993569$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

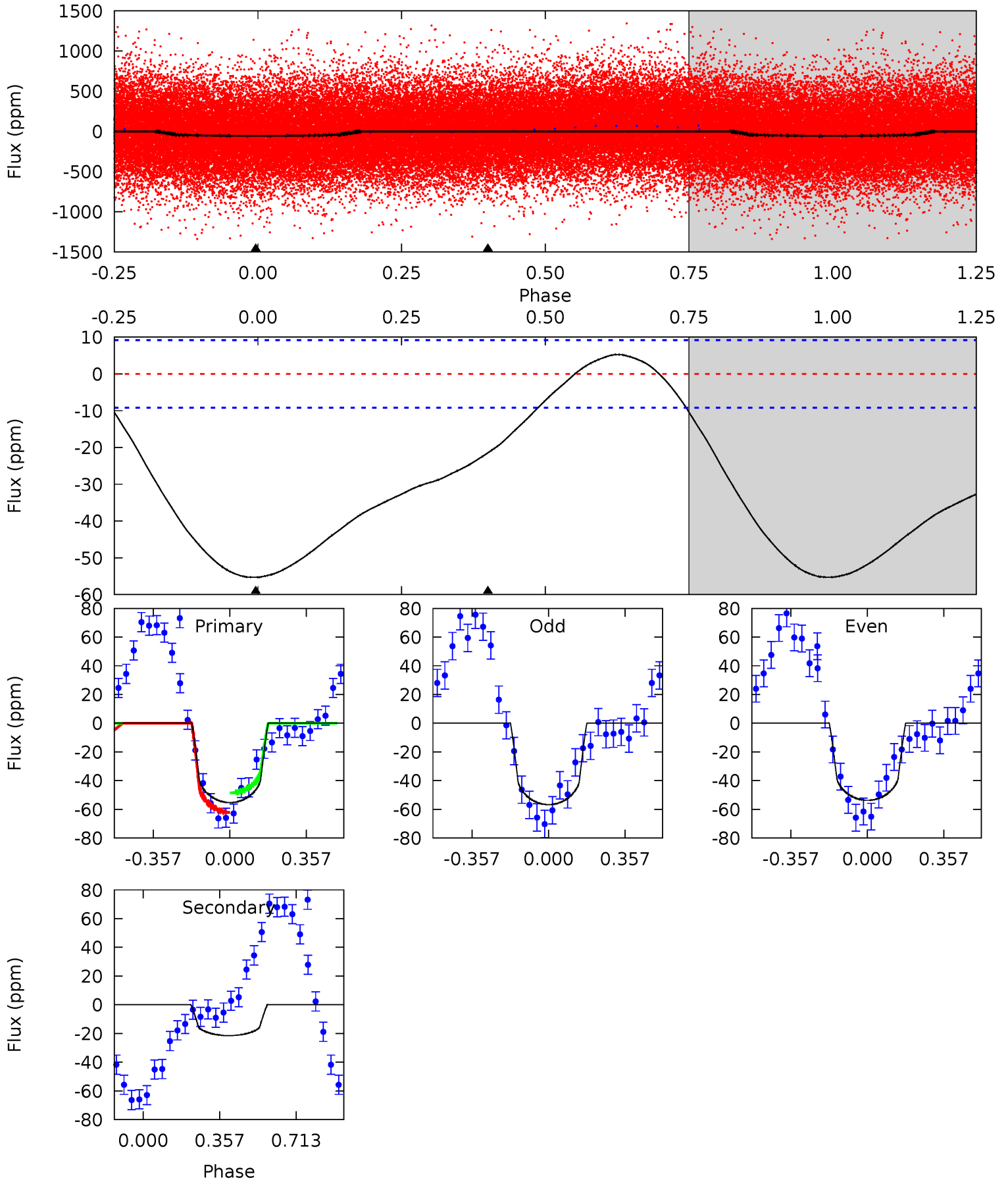
TCE 008444802-01 P= 0.573048 Days $T_0=132.001065$ (BKJD)



DV Model-Shift Uniqueness Test

008444802-01, P = 0.573055 Days, E = 131.420514 Days

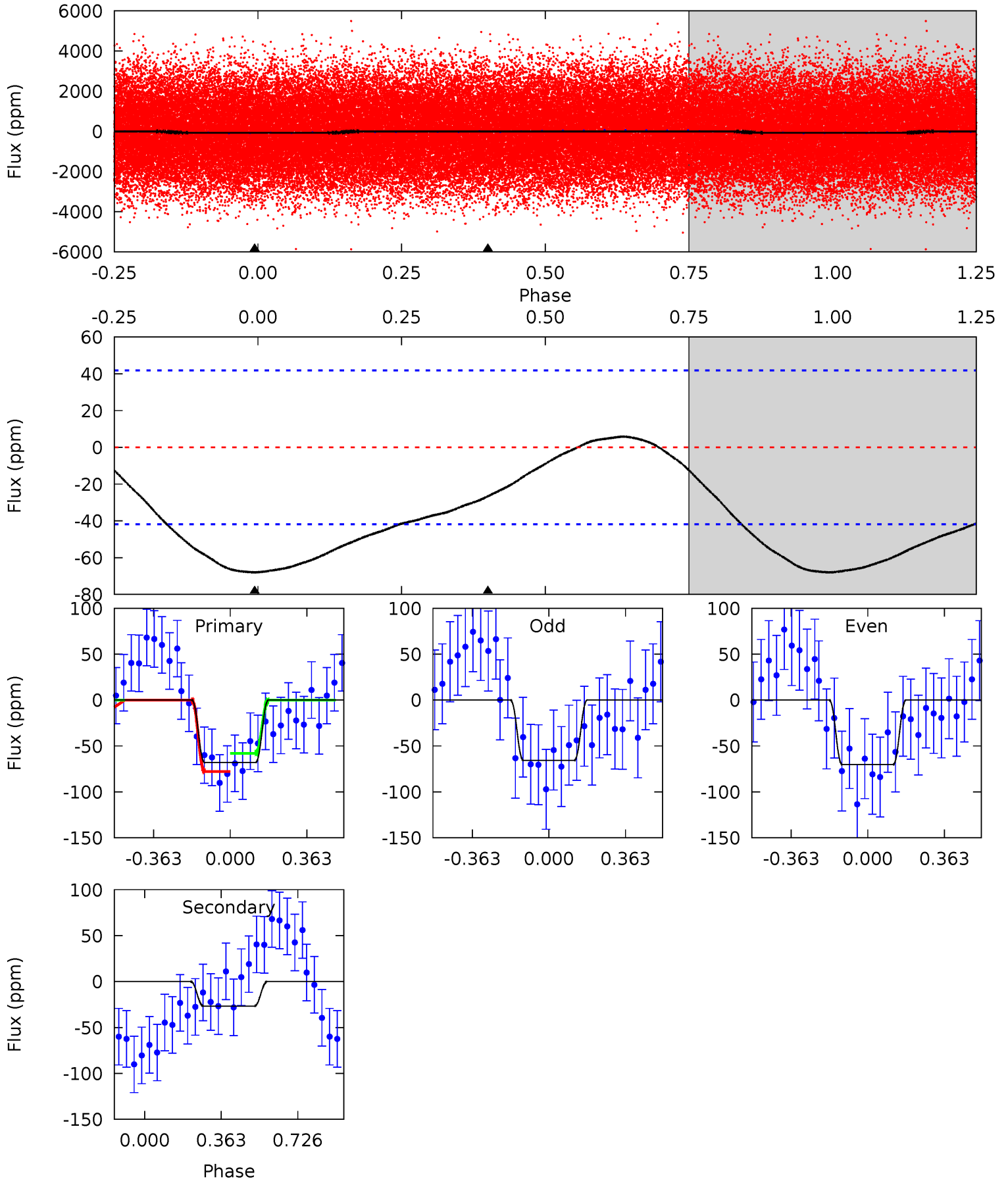
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.9	10.0	0	0	4.29	0.92	2.02	25.9	25.9	10.0	10.0	0.70	1.03	0.09	3.20



Alt Model-Shift Uniqueness Test

008444802-01, P = 0.573048 Days, E = 131.428017 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.98	2.73	0	0	4.29	0.91	0.53	6.98	6.98	2.73	2.73	0.24	1.05	0.08	1.01



Stellar Parameters For KIC 008444802

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7450^{+206}_{-324}	$4.161^{+0.084}_{-0.196}$	$0.210^{+0.150}_{-0.400}$	$1.789^{+0.587}_{-0.252}$	$1.693^{+0.214}_{-0.235}$	$0.416^{+0.163}_{-0.225}$
	+3%/-4%	+2%/-5%	+71%/-190%	+33%/-14%	+13%/-14%	+39%/-54%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 008444802-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-21 ± 2	$1.35^{+0.75}_{-0.65}$	4893^{+354}_{-291}	5741^{+2949}_{-1320}	$1.632^{+4.420}_{-0.961}$
Alt.	-27 ± 10	$1.74^{+0.70}_{-0.68}$	4912^{+339}_{-309}	5295^{+2000}_{-1239}	$1.246^{+2.259}_{-0.714}$

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

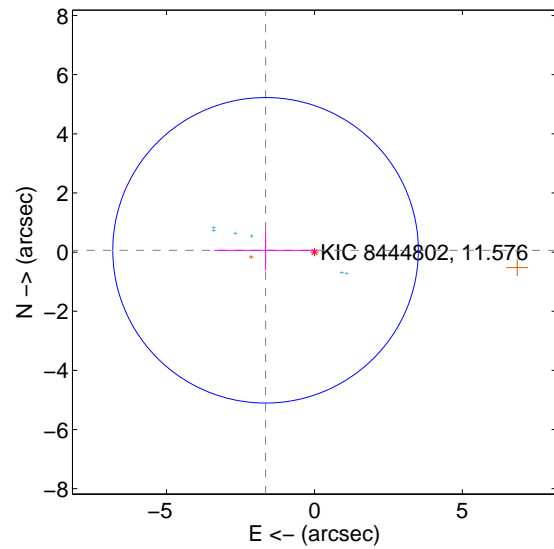
Supplemental centroid analysis for 008444802-01. **Kepler magnitude: 11.58.** Transit SNR 20.75

There are 6 quarters with good PRF difference image offsets

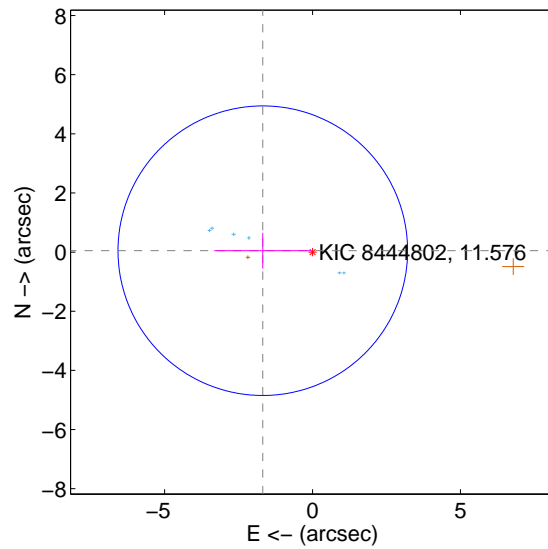
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.654 ± 1.722	0.96	1.653 ± 1.741	0.061 ± 0.679
PRF-fit source offset from KIC position	1.682 ± 1.632	1.03	1.681 ± 1.642	0.047 ± 0.606
photometric centroid source offset	0.36 ± 0.15	2.35	-0.23 ± 0.15	0.27 ± 0.15

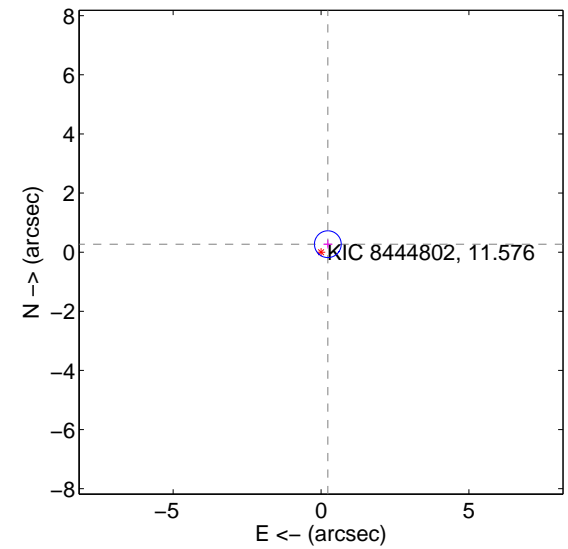
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

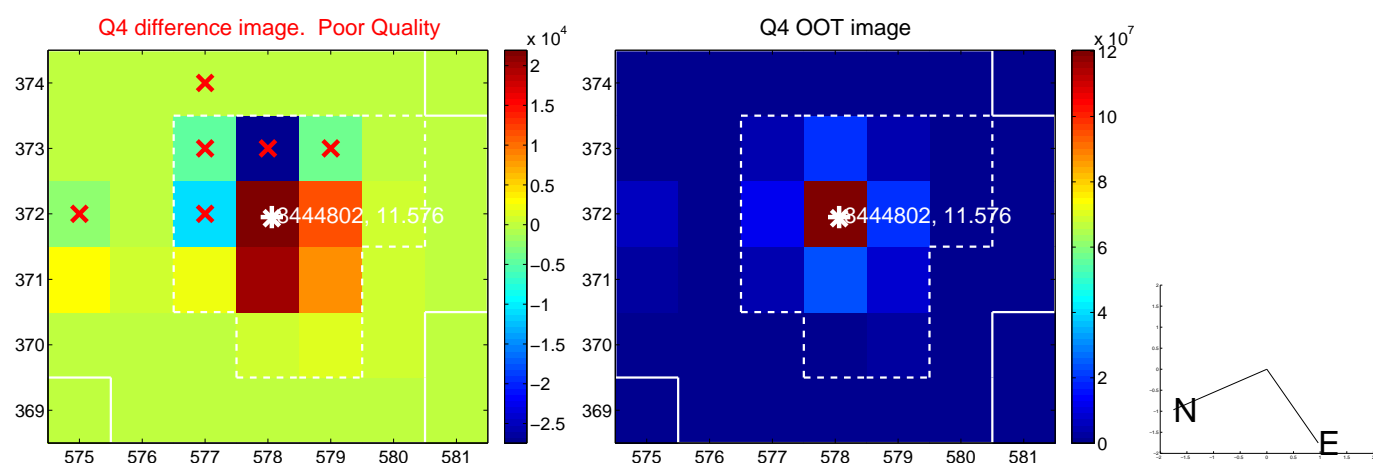
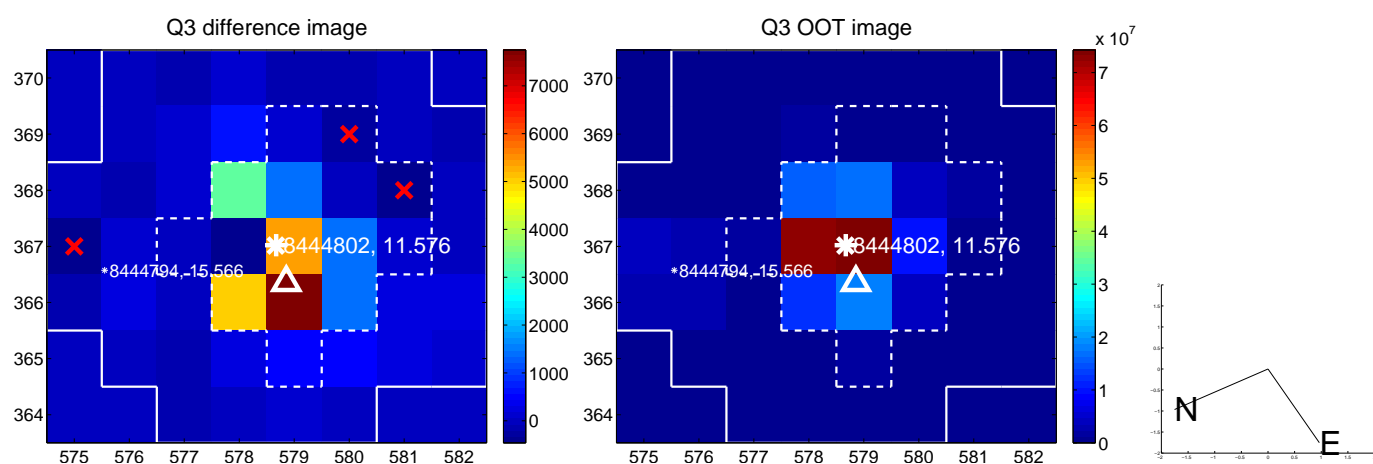
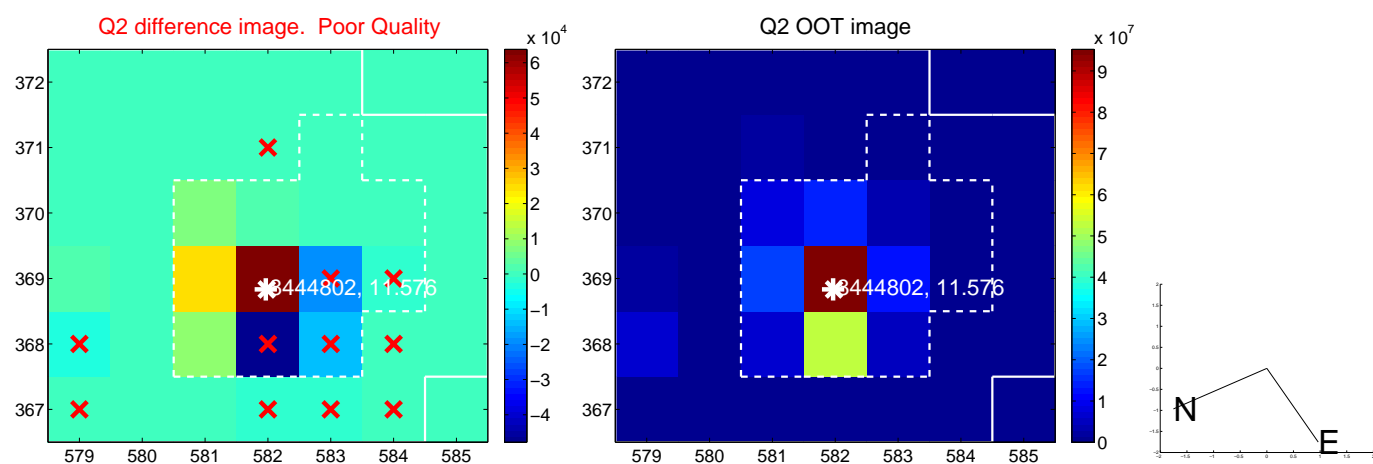
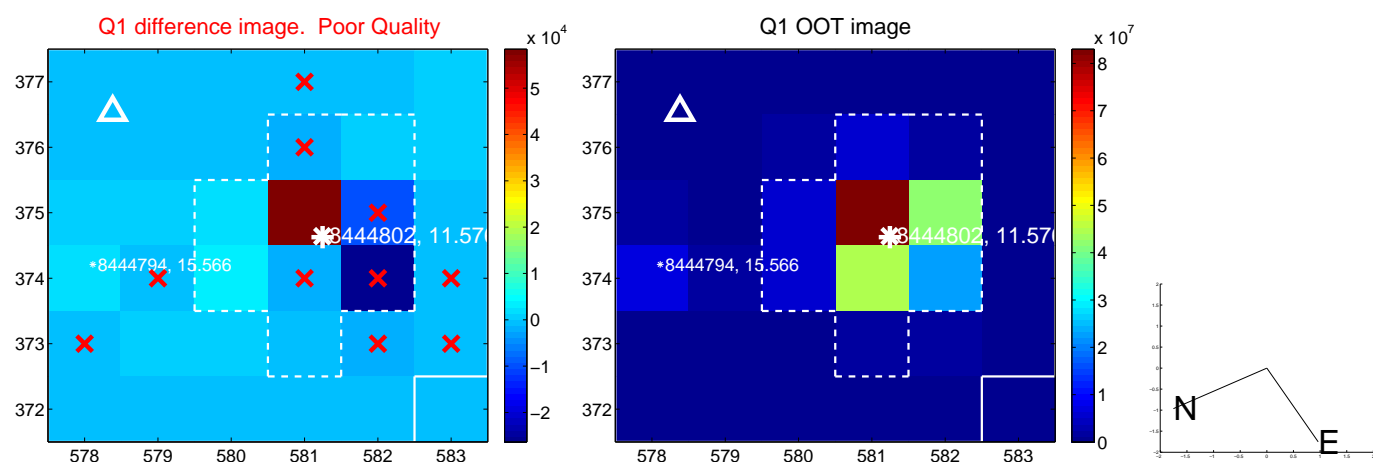


offset from photometric centroids

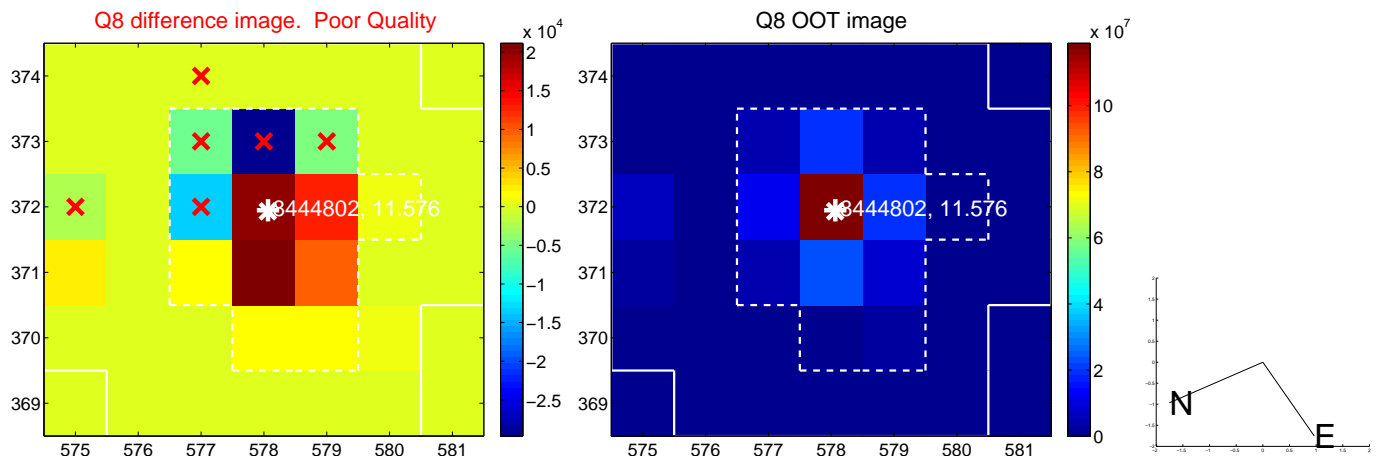
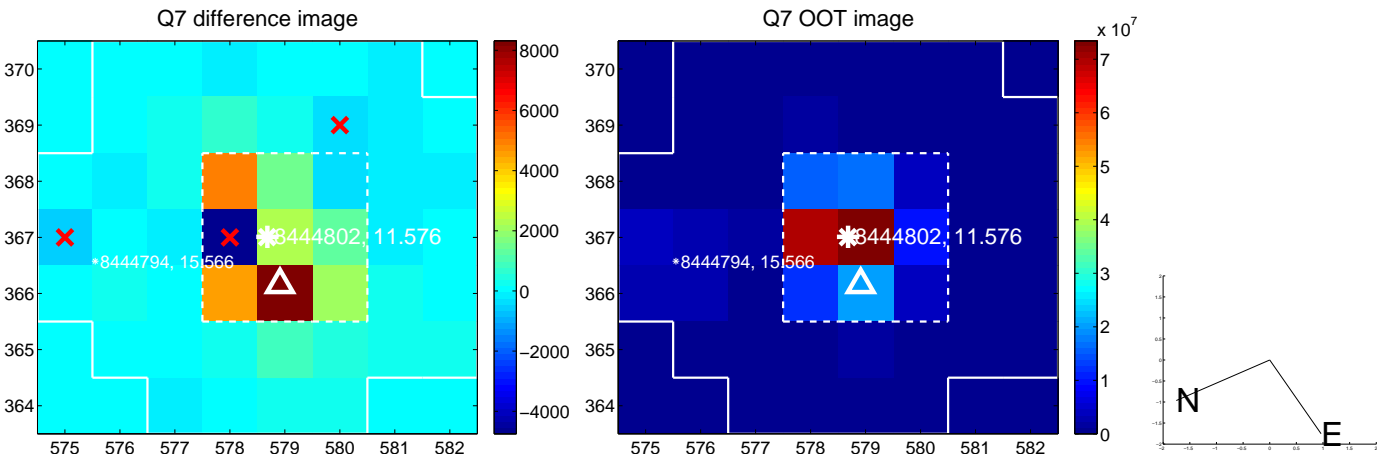
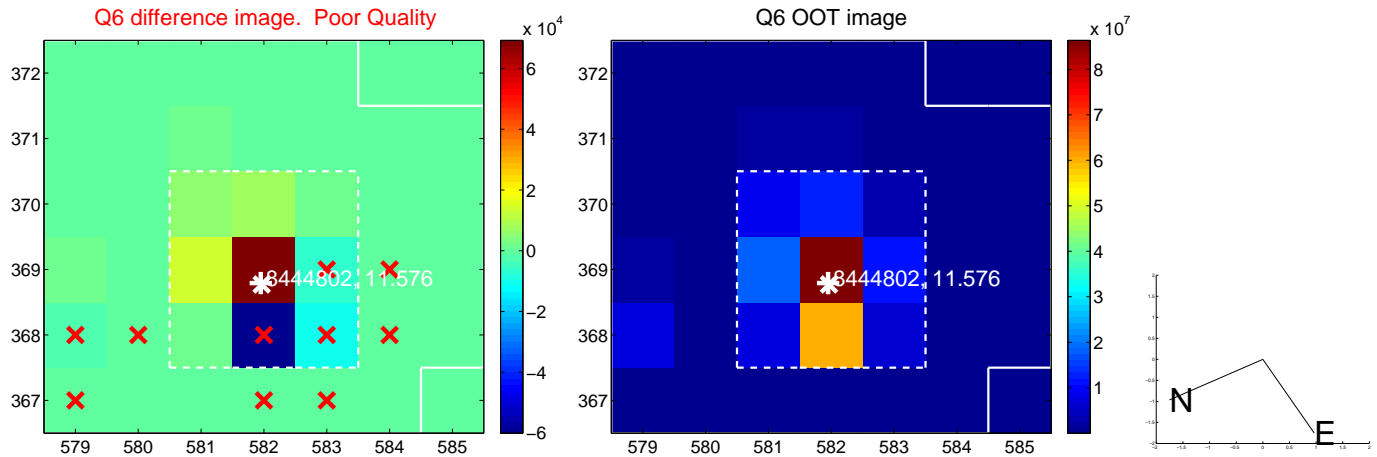
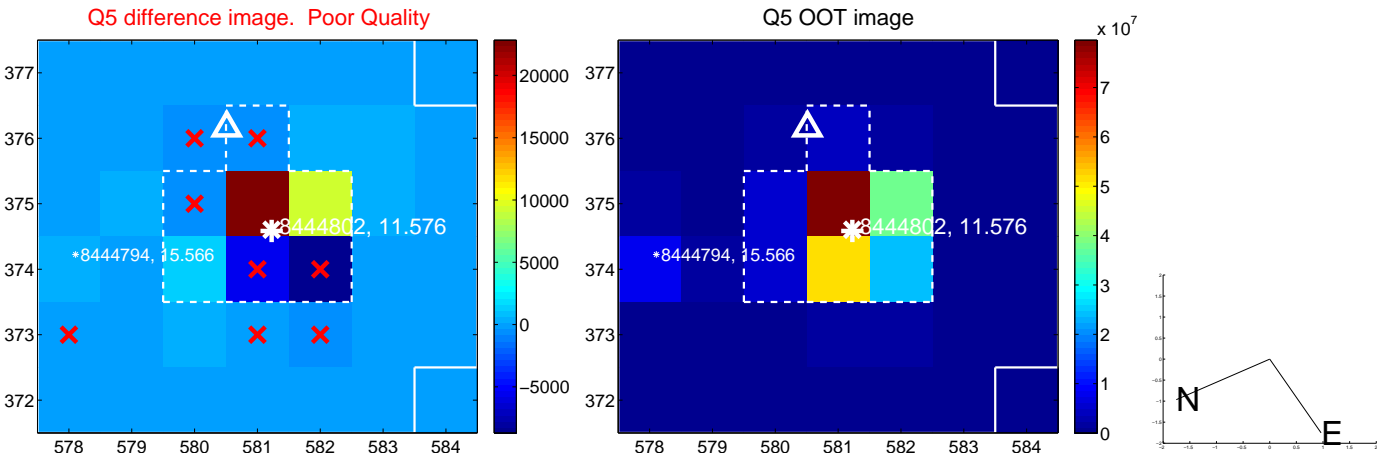


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

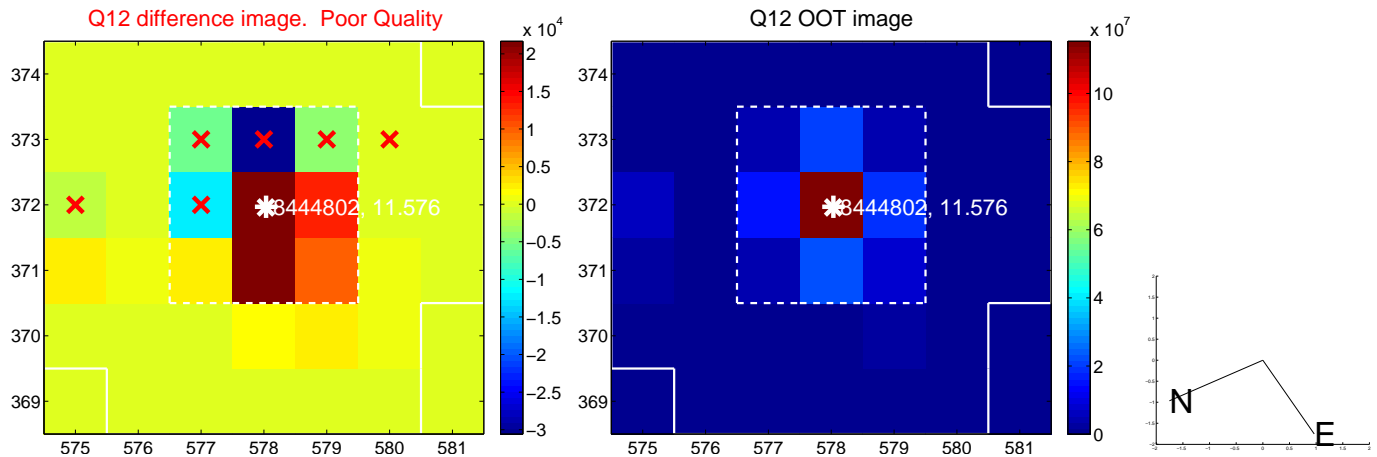
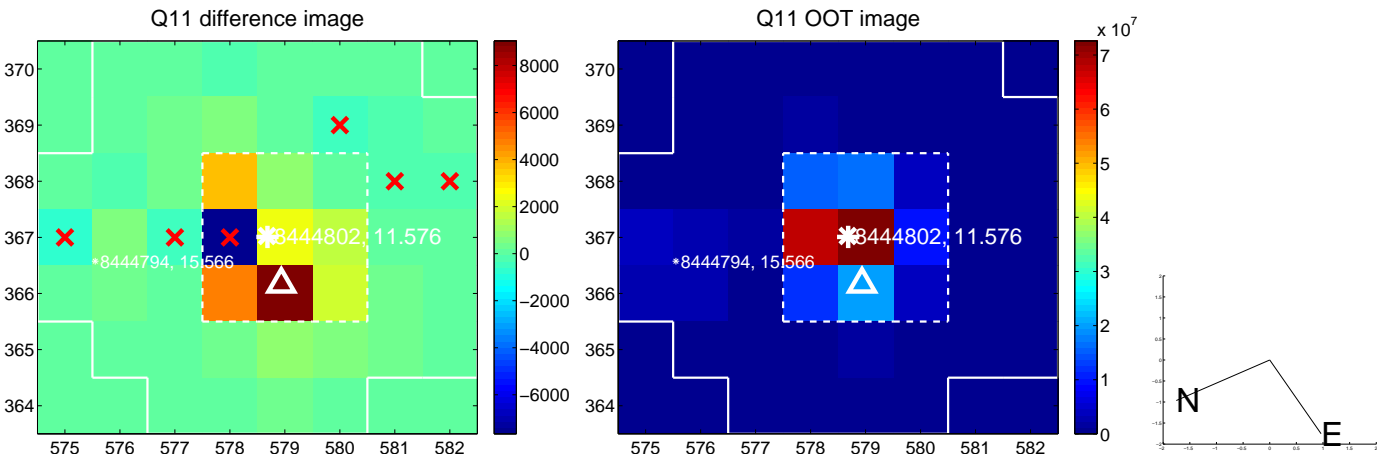
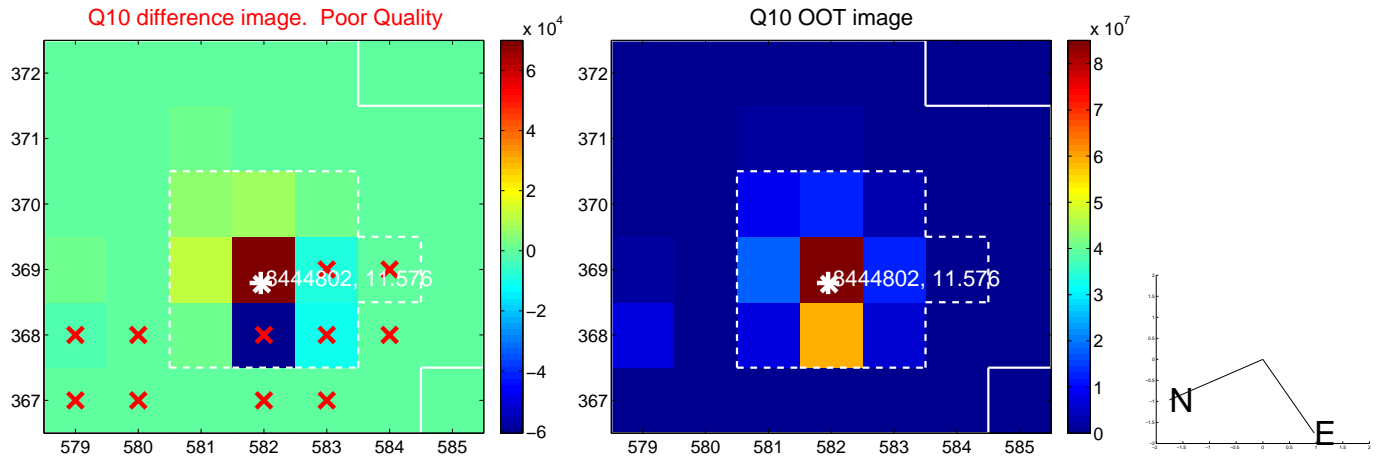
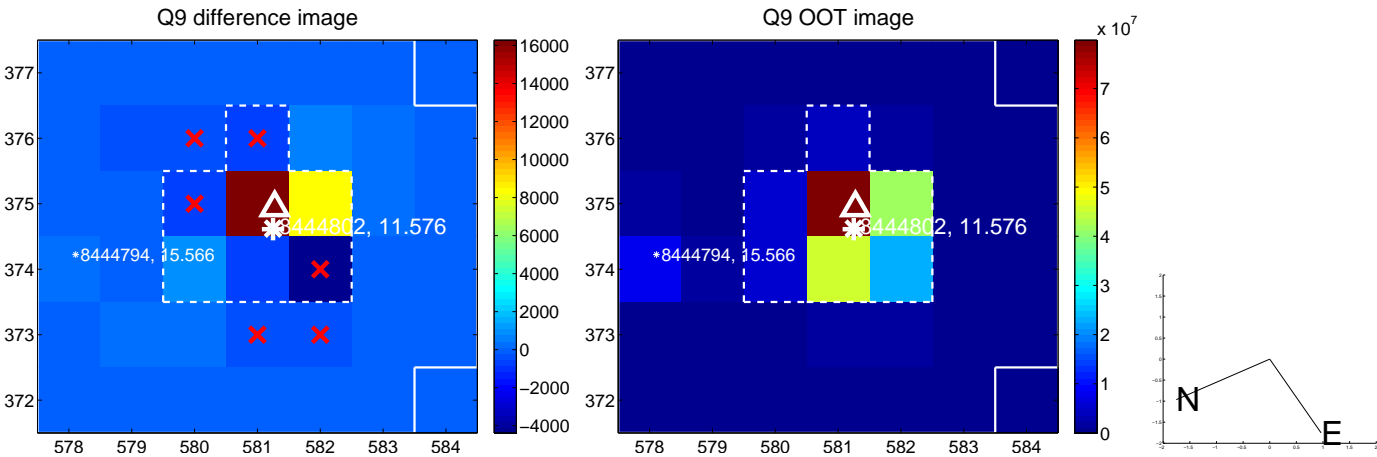
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



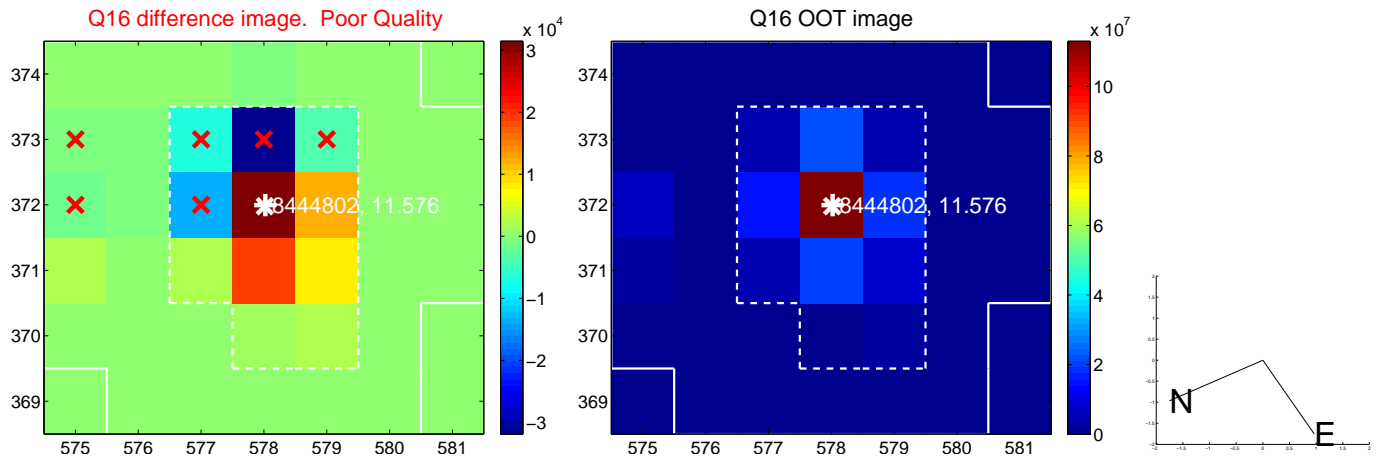
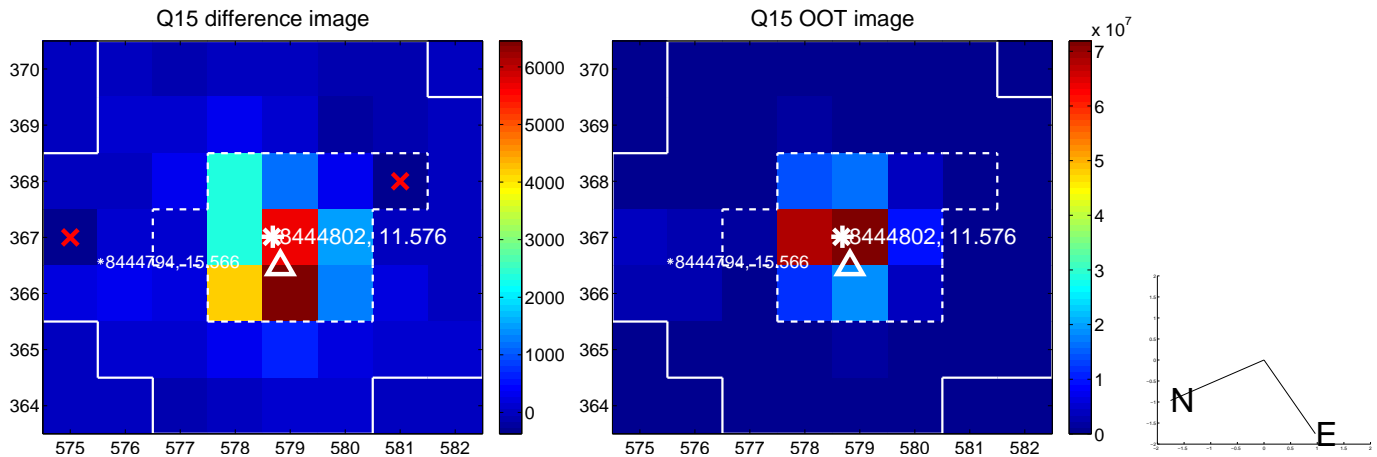
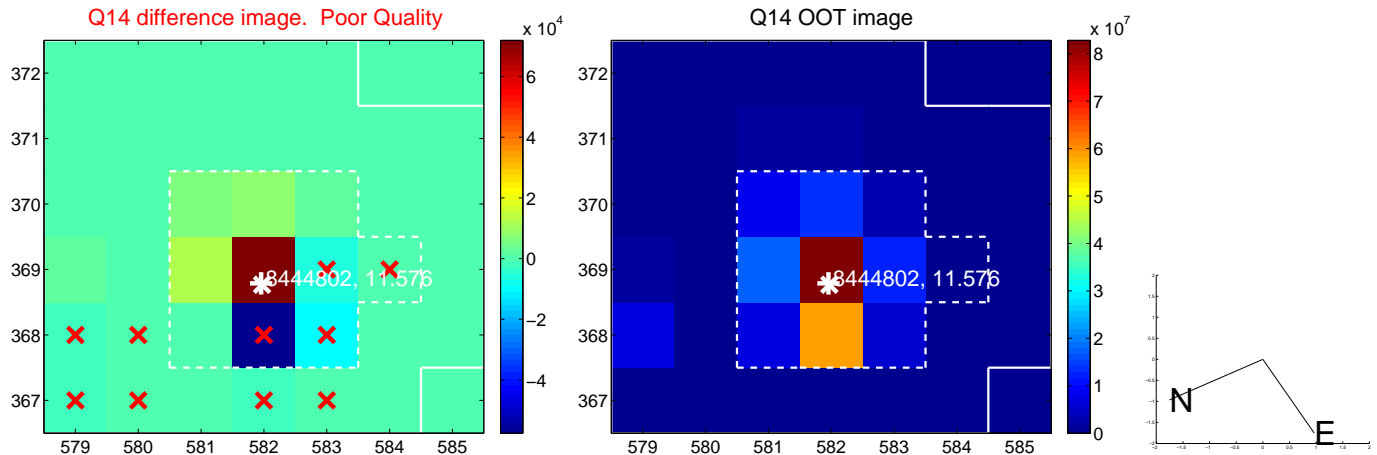
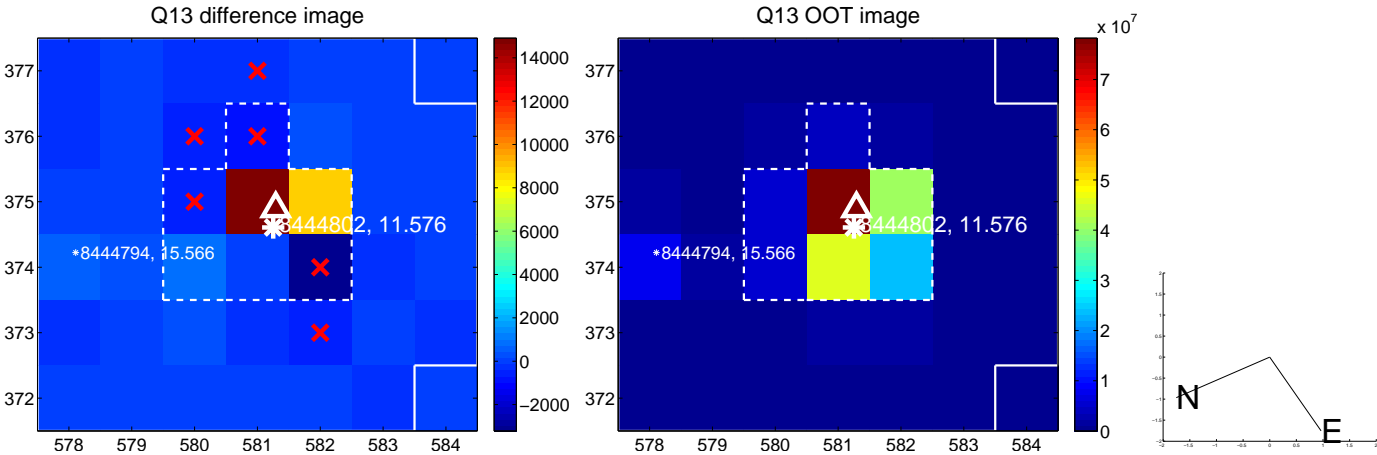
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



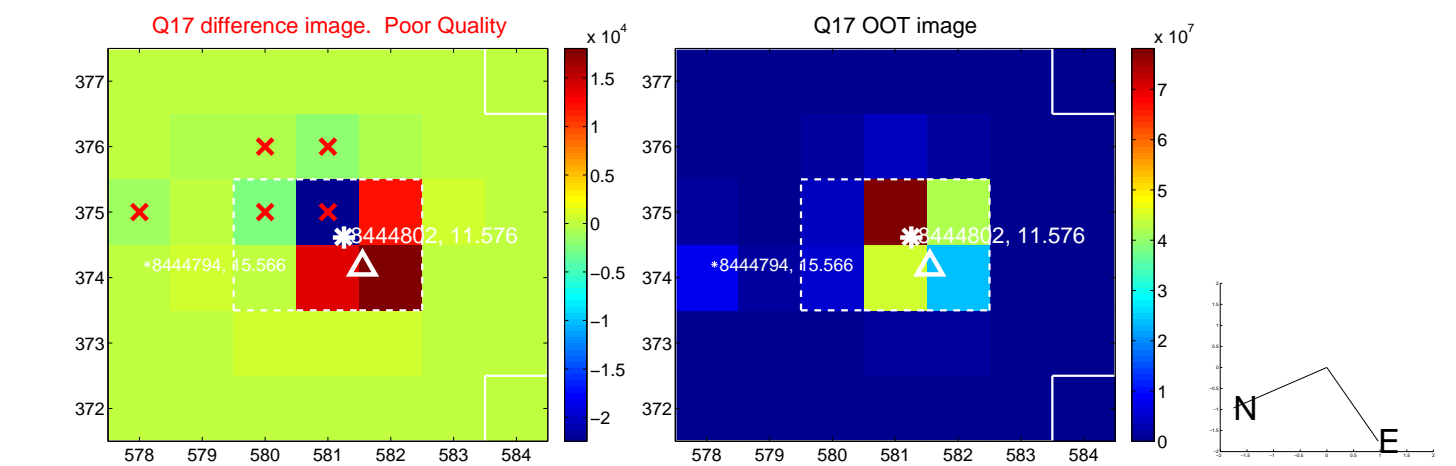
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



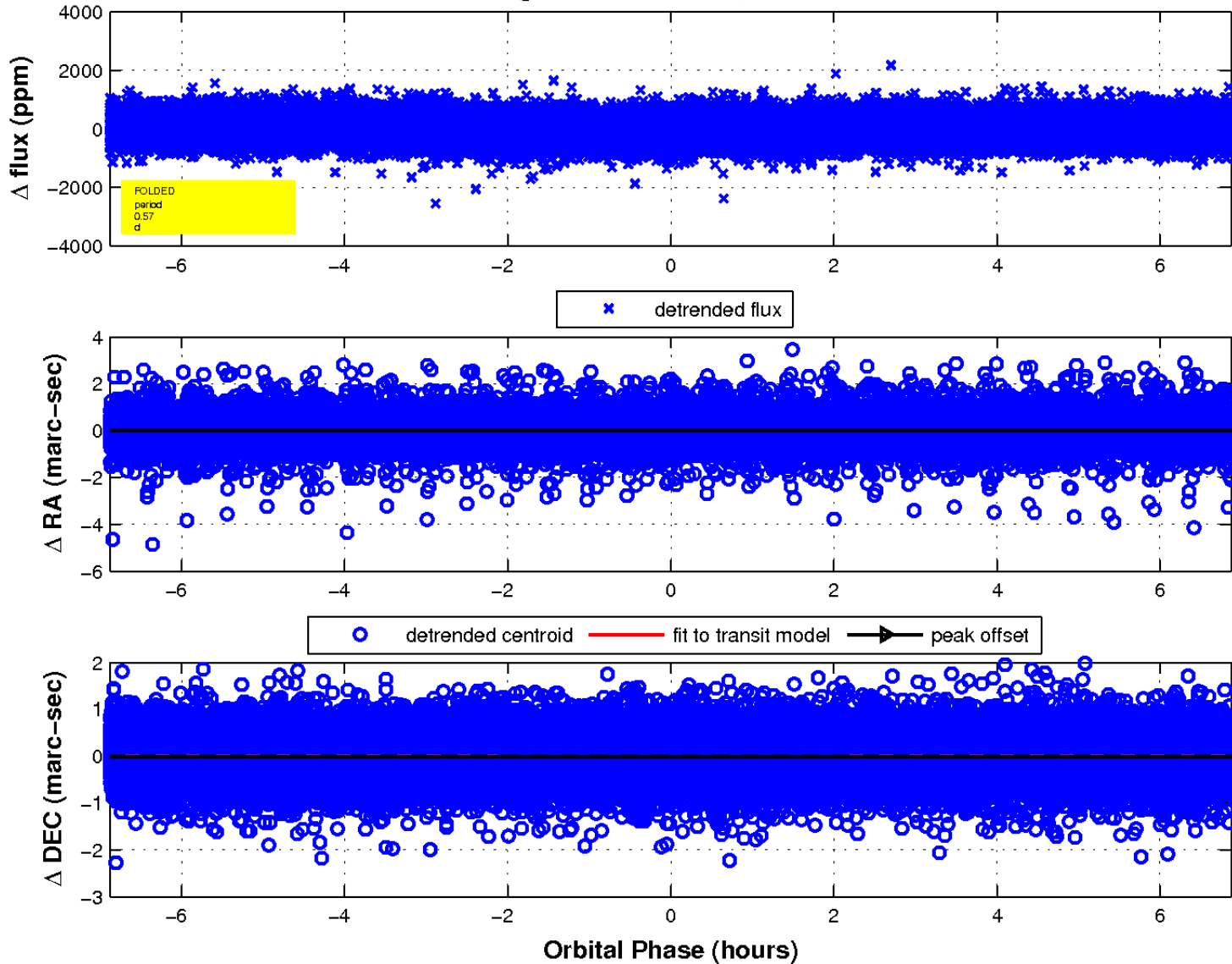
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

