

KIC 009598448

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})
009598448-01	OBS	No	0.939700	132.069267	99.7	5.513	11.5	11.4	2.24	7512	2.29	28138.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009598448-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV

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

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

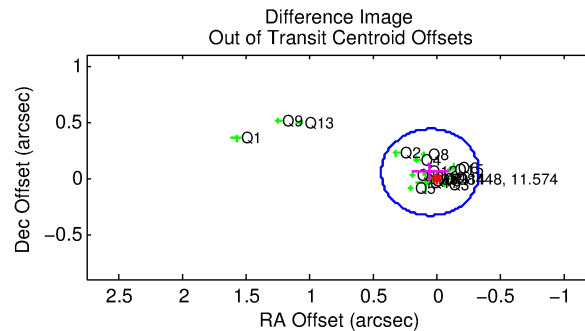
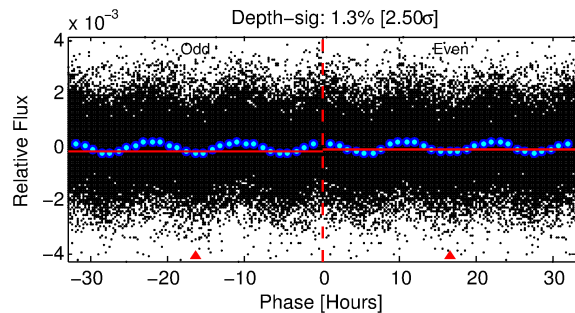
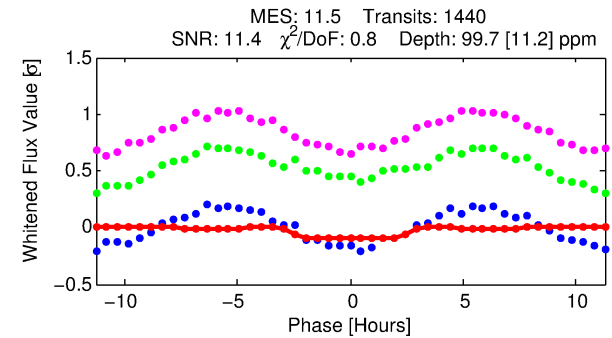
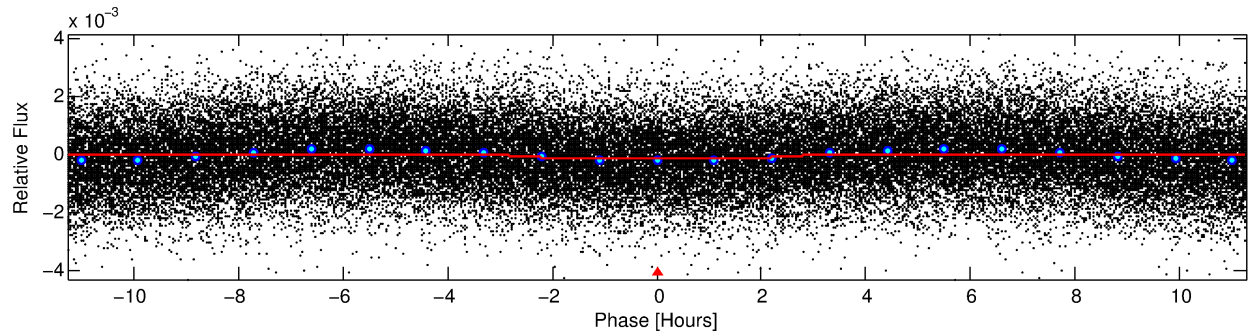
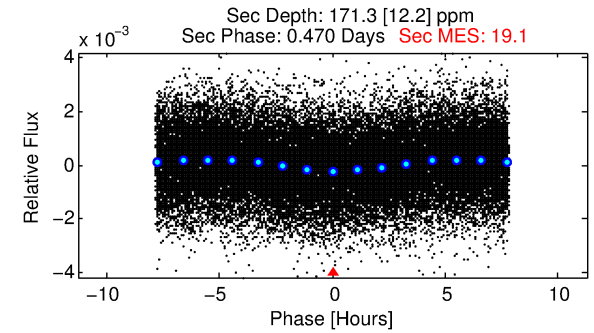
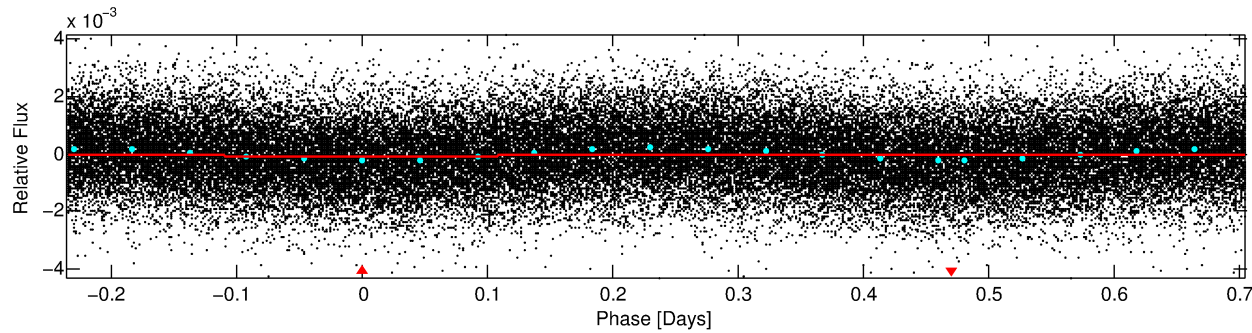
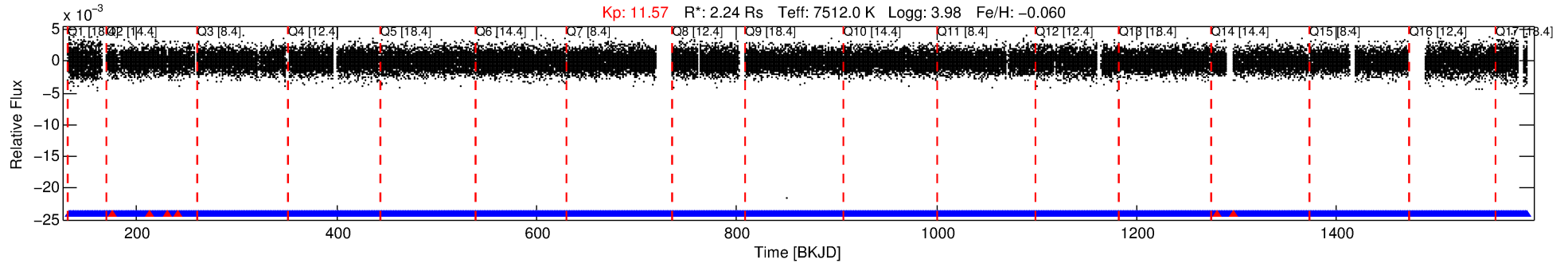
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009598448-01

No Significant Match Found

DV One-Page Summary

KIC: 9598448 Candidate: 1 of 1 Period: 0.940 d



DV Fit Results:

Period = 0.93970 [0.00001] d
Epoch = 132.0693 [0.0054] BKJD
 $R_p/R^* = 0.0094$ [0.0100]
 $a/R^* = 1.41$ [4.52]
 $b = 0.34$ [16.96]
 $S_{\text{eff}} = 28138.48$ [7408.71]
 $T_{\text{eq}} = 3303$ [217] K
 $R_p = 2.29$ [2.47] R_e
 $a = 0.0225$ [0.0037] AU
 $A_g = 9.11$ [19.53] [0.42σ]
 $T_{\text{eff}} = 8872$ [4718] K [1.18σ]

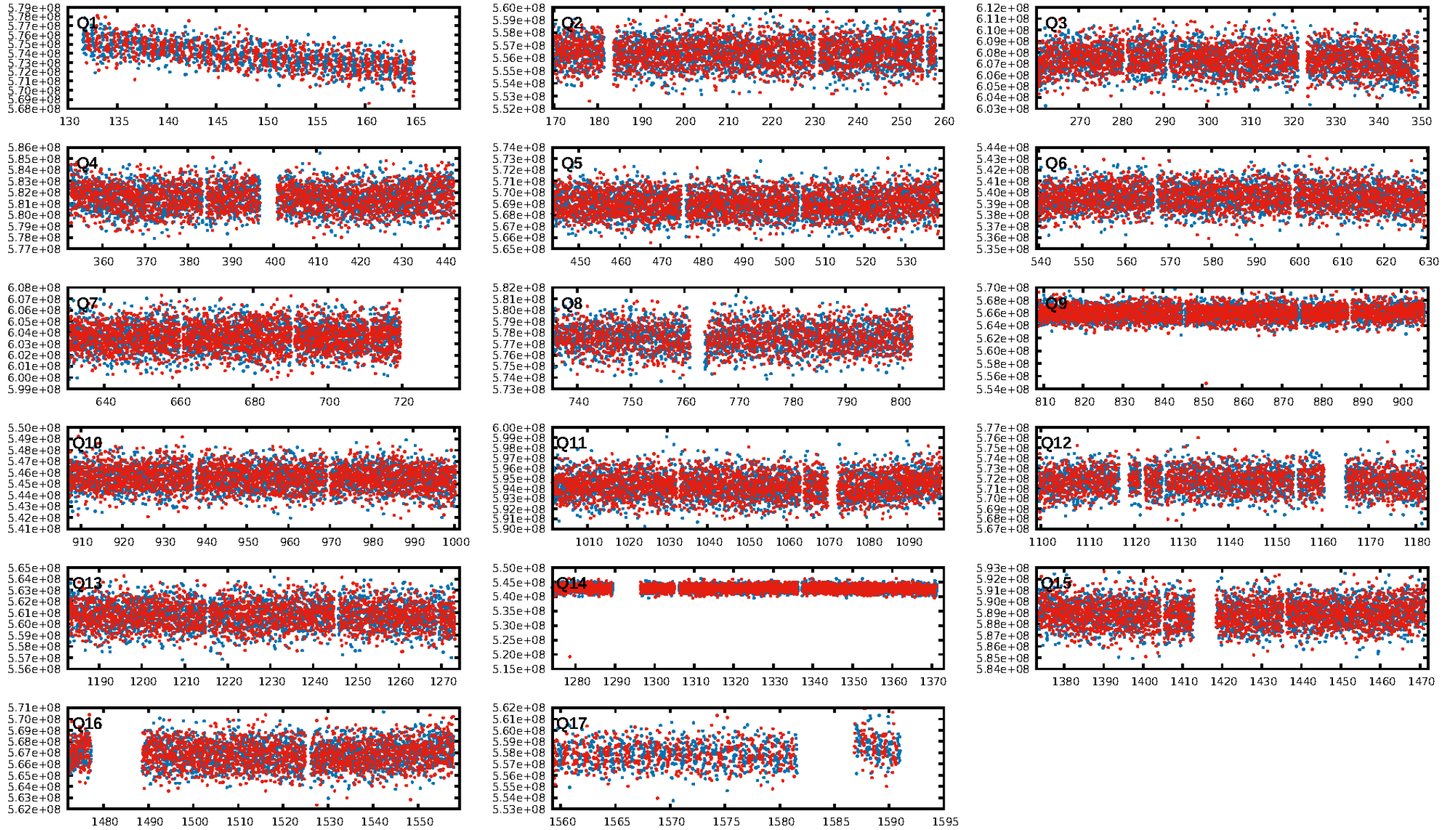
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.30e-16
RollingBand-fgt: 1.00 [1369/1375]
GhostDiagnostic-chr: 1.427
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.069 arcsec [0.54σ]
KicOffset-rm: 0.056 arcsec [0.75σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

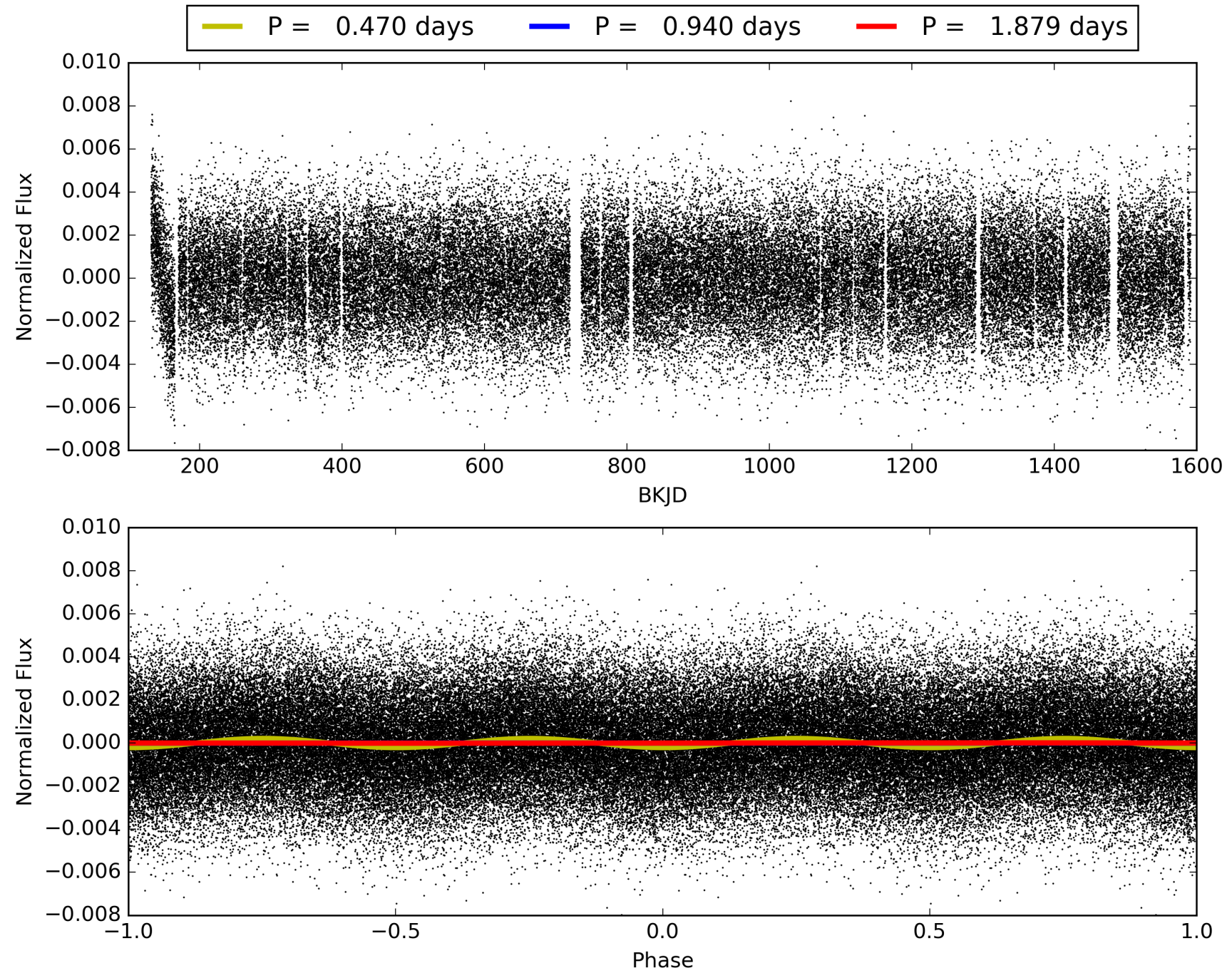
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:00:13 Z

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

TCE 009598448-01, PDC Light Curves

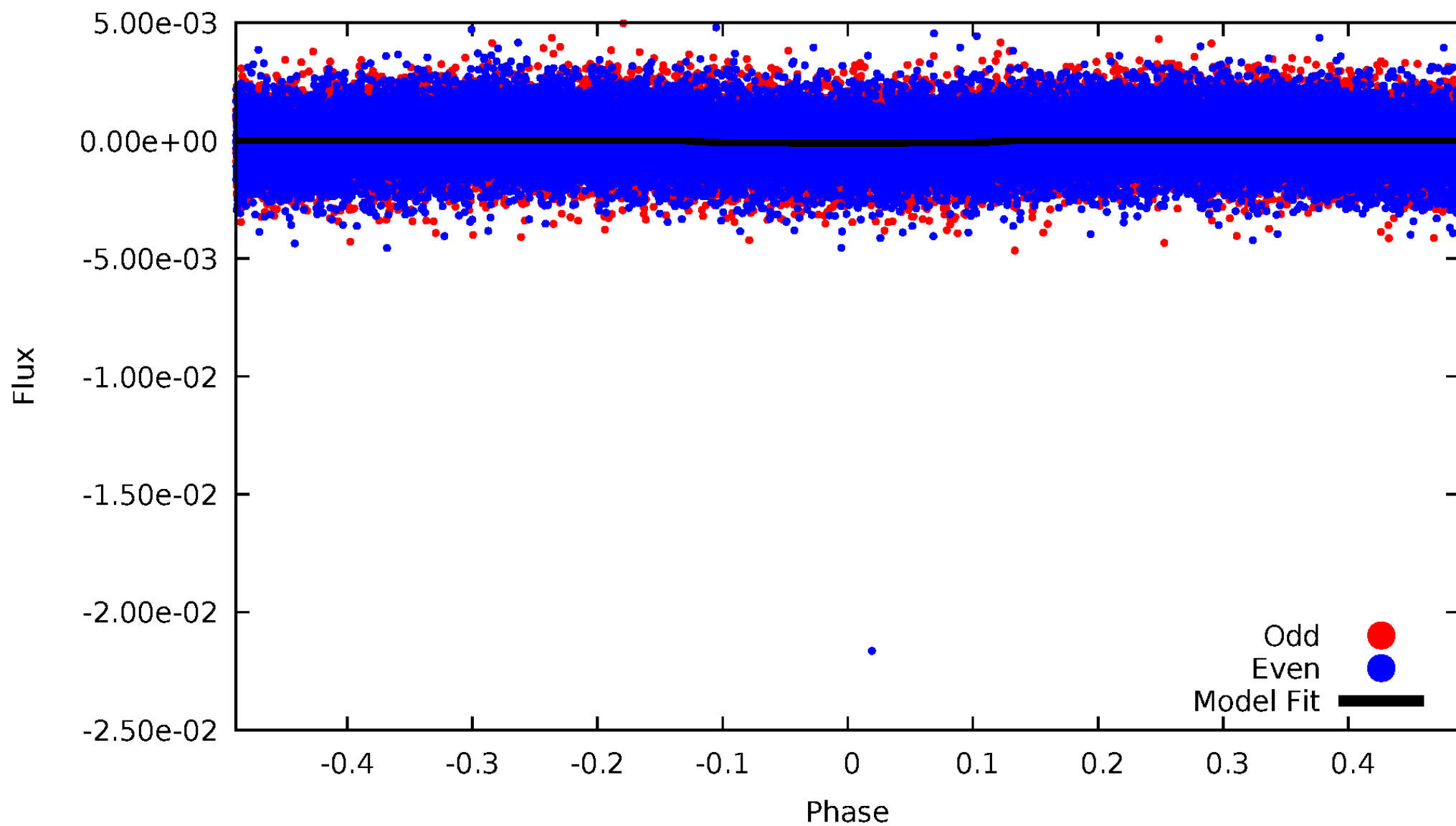


TCE 009598448-01



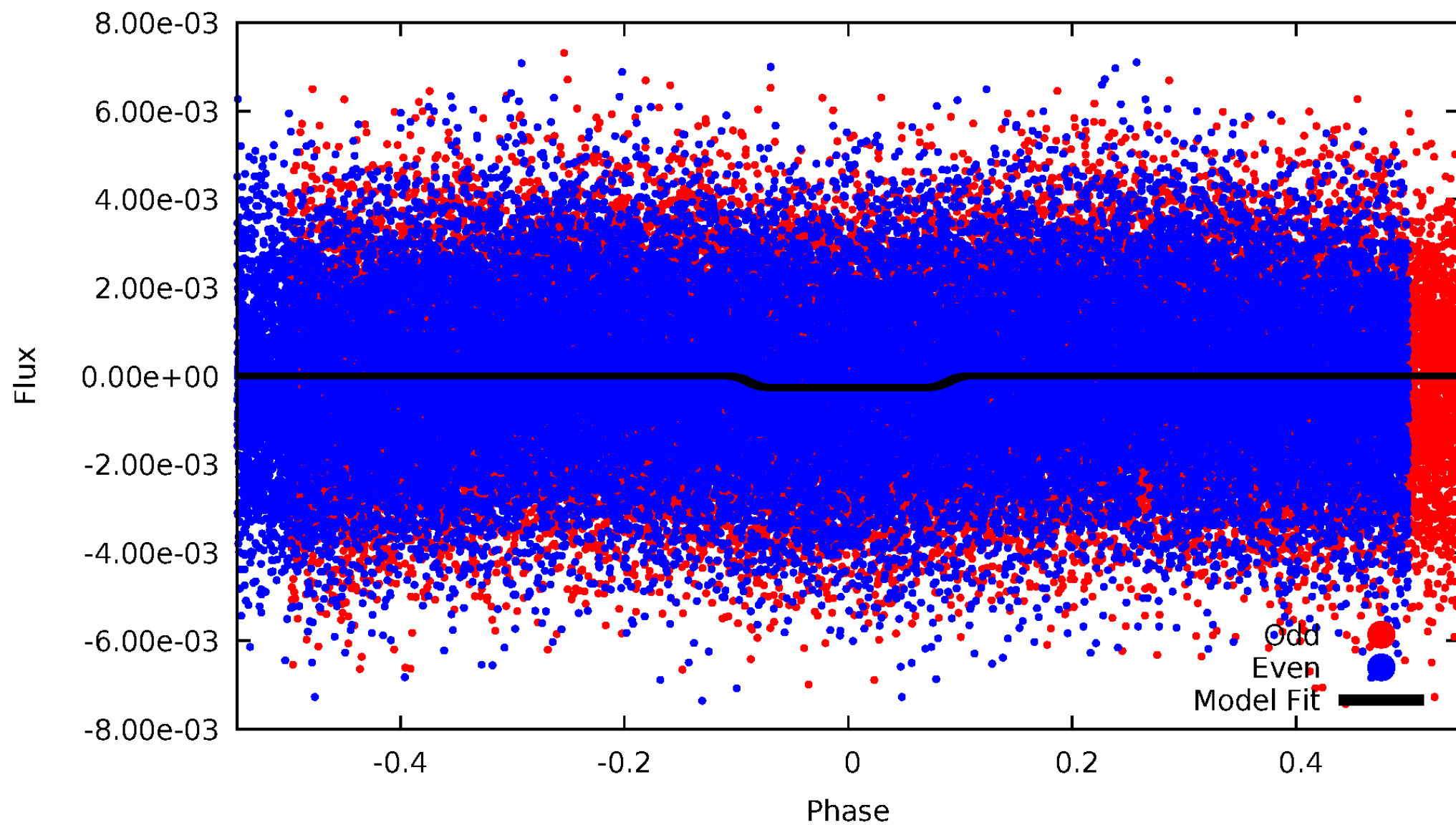
DV Odd/Even

TCE 009598448-01



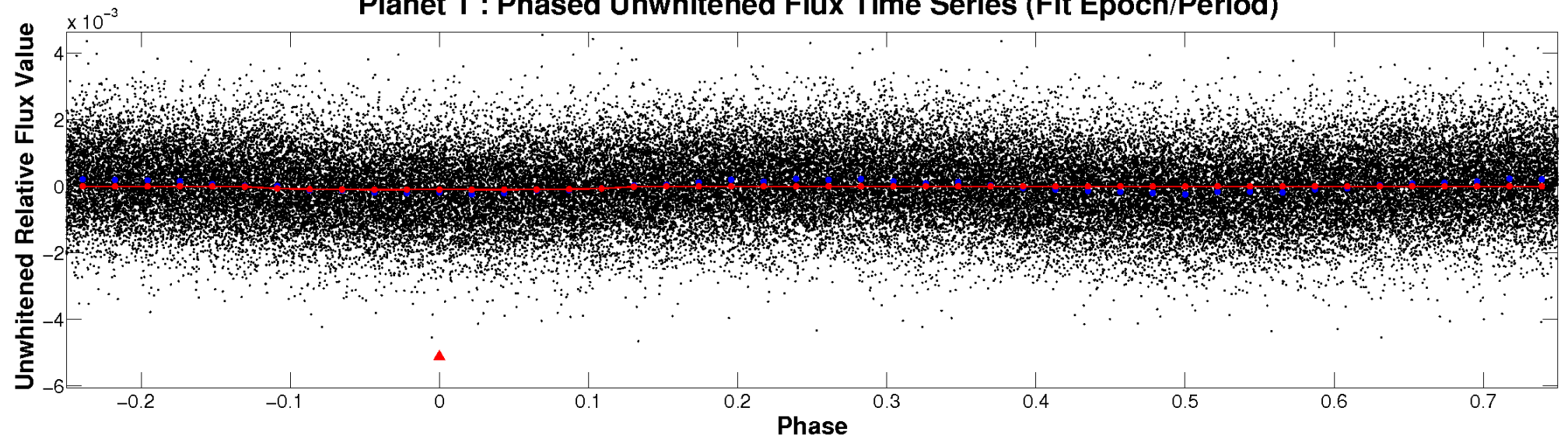
ALT Odd/Even

TCE 009598448-01

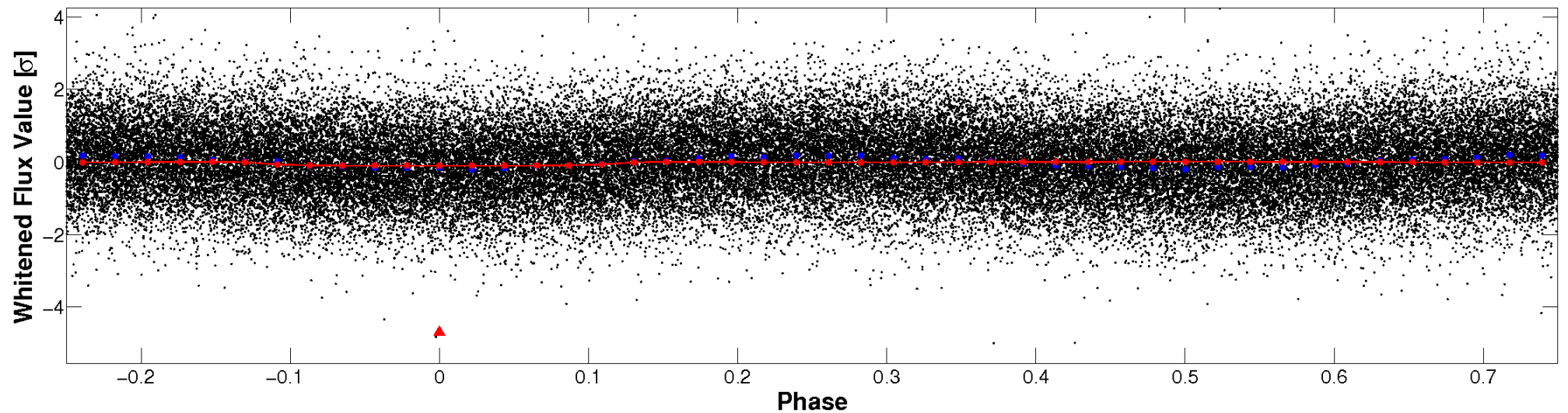


Non-Whitened Vs. Whitened Light Curve

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

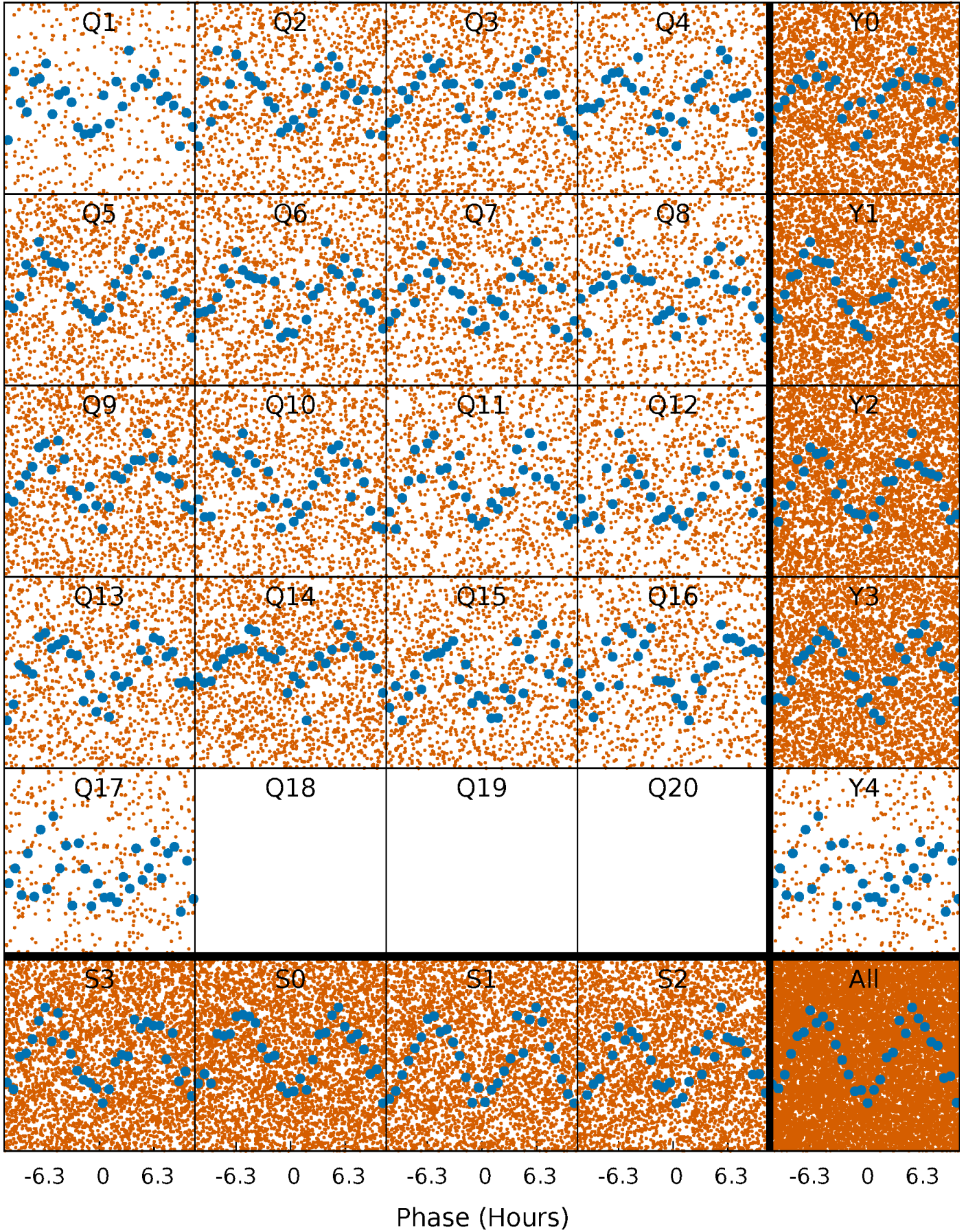


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



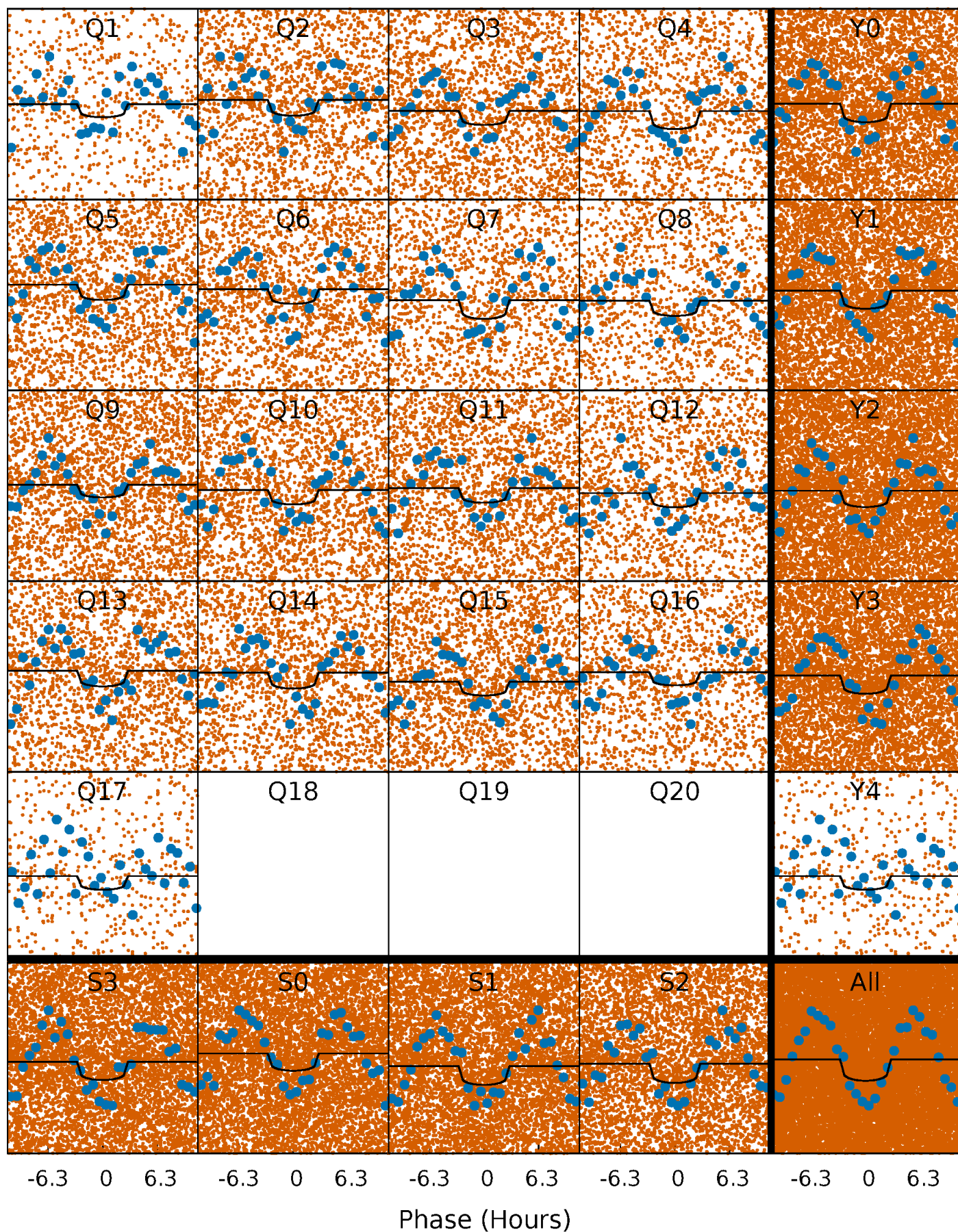
PDC Quarter-Phased Transit Curves

TCE 009598448-01 P= 0.939700 Days $T_0=132.069267$ (BKJD)



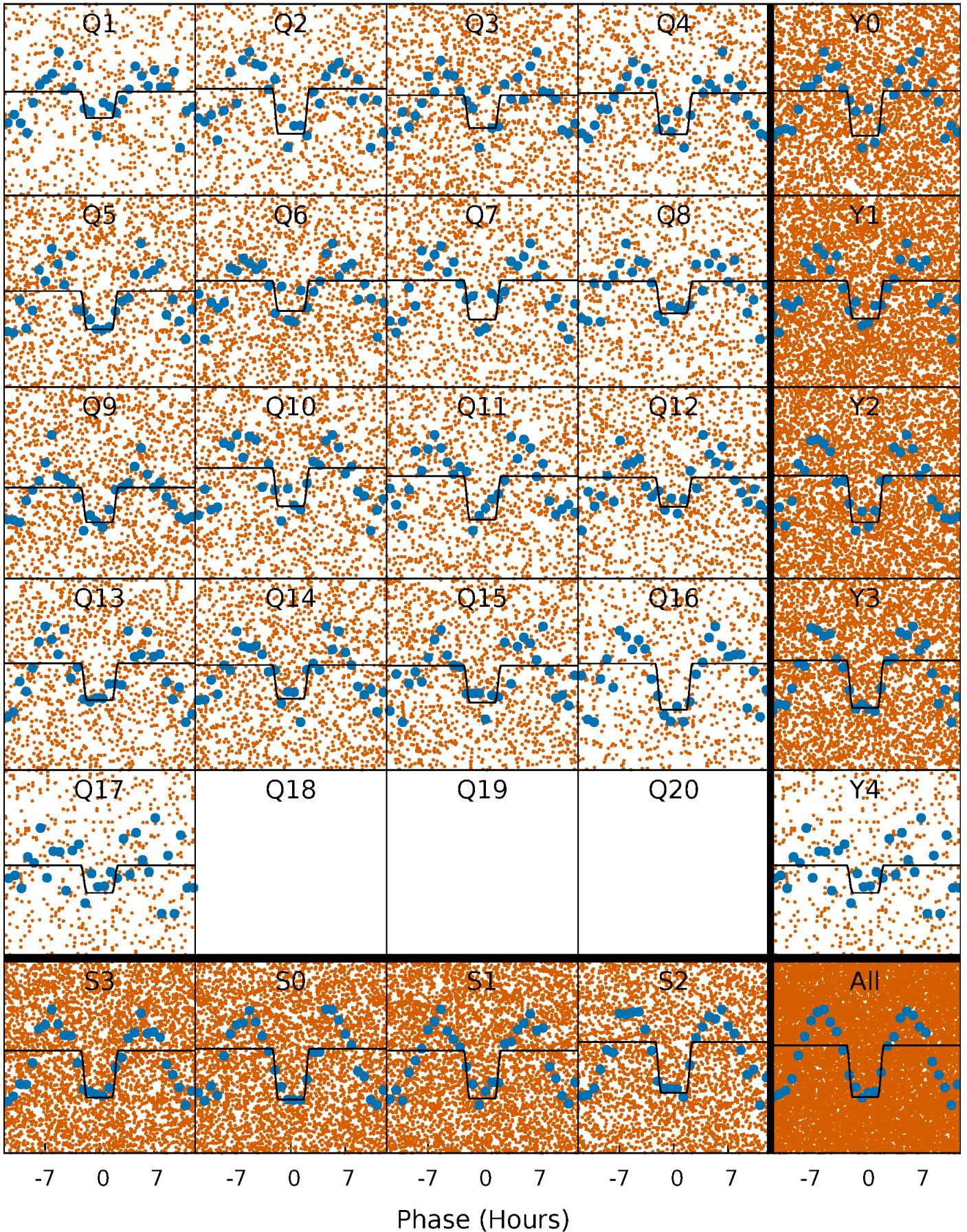
DV Quarter-Phased Transit Curves

TCE 009598448-01 P= 0.939700 Days $T_0=132.069267$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

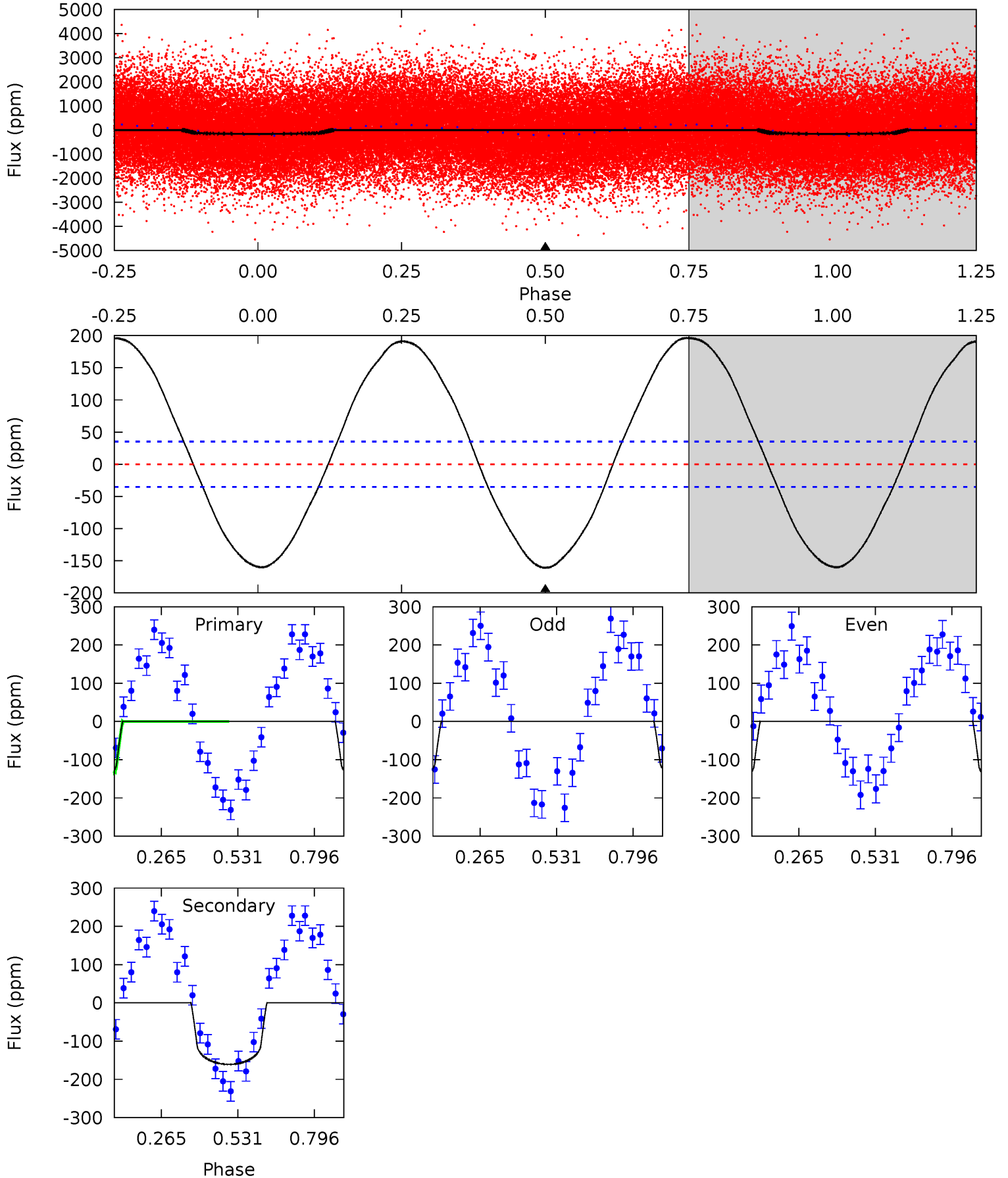
TCE 009598448-01 P= 0.939766 Days $T_0=132.020788$ (BKJD)



DV Model-Shift Uniqueness Test

009598448-01, P = 0.939700 Days, E = 131.129567 Days

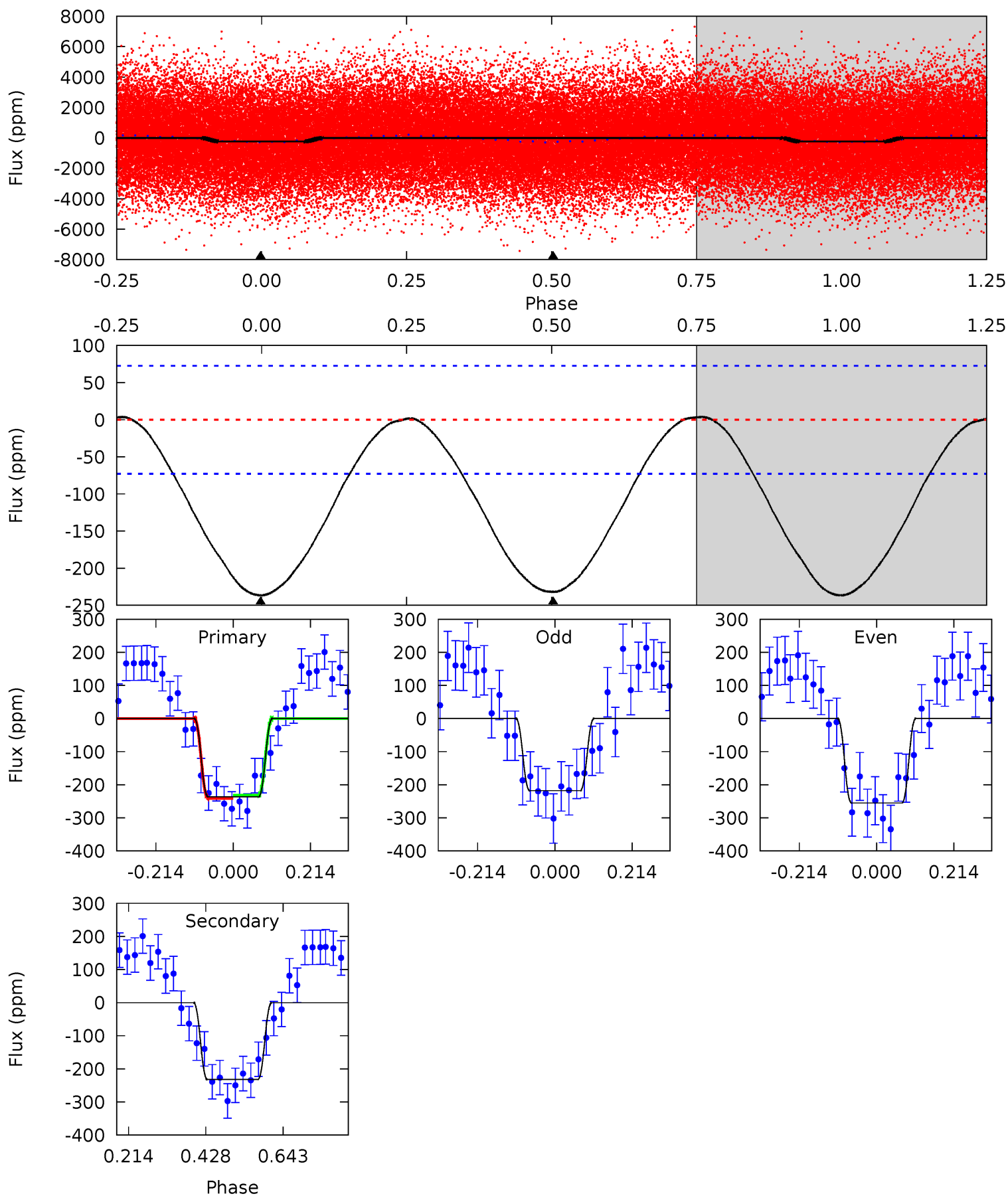
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	19.9	0	0	4.36	1.11	14.8	19.9	19.9	19.9	19.9	0.71	1.10	0.55	1.00



Alt Model-Shift Uniqueness Test

009598448-01, P = 0.939766 Days, E = 131.081022 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	14.0	0	0	4.40	1.24	0.22	14.3	14.3	14.0	14.0	1.12	1.00	0.02	0.28



Stellar Parameters For KIC 009598448

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7512^{+75}_{-82}	$3.976^{+0.150}_{-0.113}$	$-0.060^{+0.150}_{-0.150}$	$2.239^{+0.403}_{-0.403}$	$1.727^{+0.155}_{-0.173}$	$0.217^{+0.165}_{-0.075}$
	+1%/-1%	+4%/-3%	+250%/-250%	+18%/-18%	+9%/-10%	+76%/-35%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 009598448-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-161±8	$2.67^{+2.19}_{-1.73}$	4601^{+210}_{-247}	7985^{+11346}_{-2316}	$6.336^{+44.749}_{-4.415}$
Alt.	-232±17	$4.00^{+2.37}_{-2.18}$	4595^{+219}_{-228}	6983^{+5476}_{-1580}	$4.068^{+15.516}_{-2.469}$

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 $A_{obs} \gg 1.0$

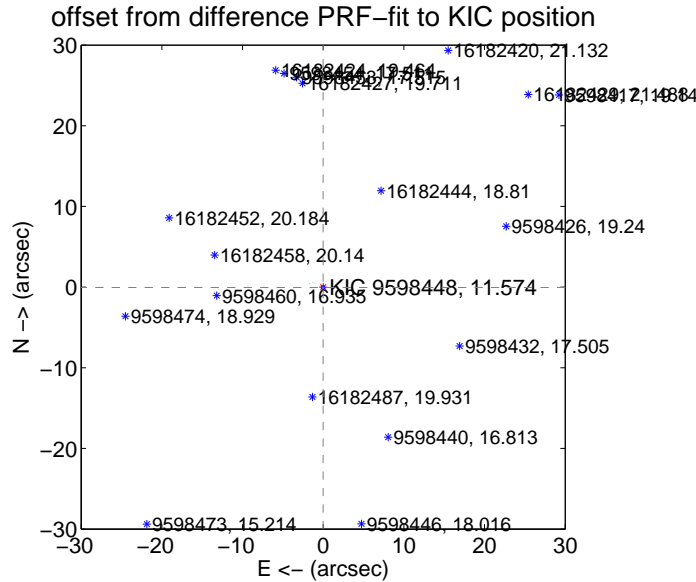
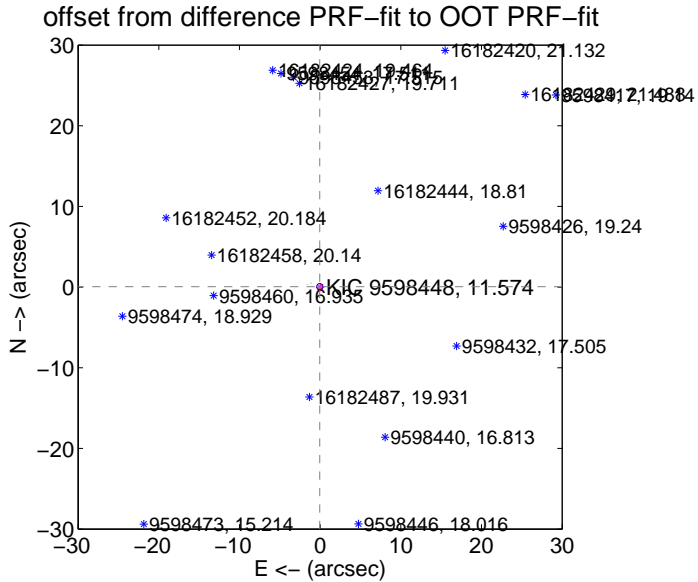
DV Centroid Data

Supplemental centroid analysis for 009598448-01. **Kepler magnitude: 11.57.** Transit SNR 11.37

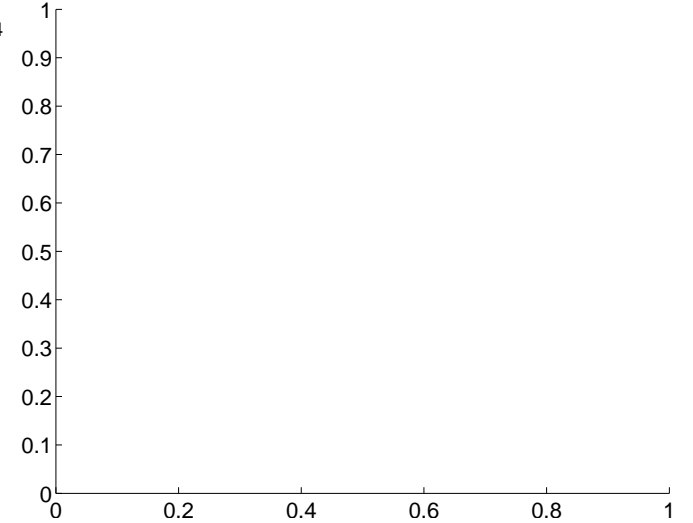
There are 17 quarters with good PRF difference image offsets

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	0.069 ± 0.128	0.54	0.047 ± 0.137	0.050 ± 0.080
PRF-fit source offset from KIC position	0.056 ± 0.076	0.75	0.009 ± 0.139	-0.056 ± 0.085
photometric centroid source offset	—	—	—	—

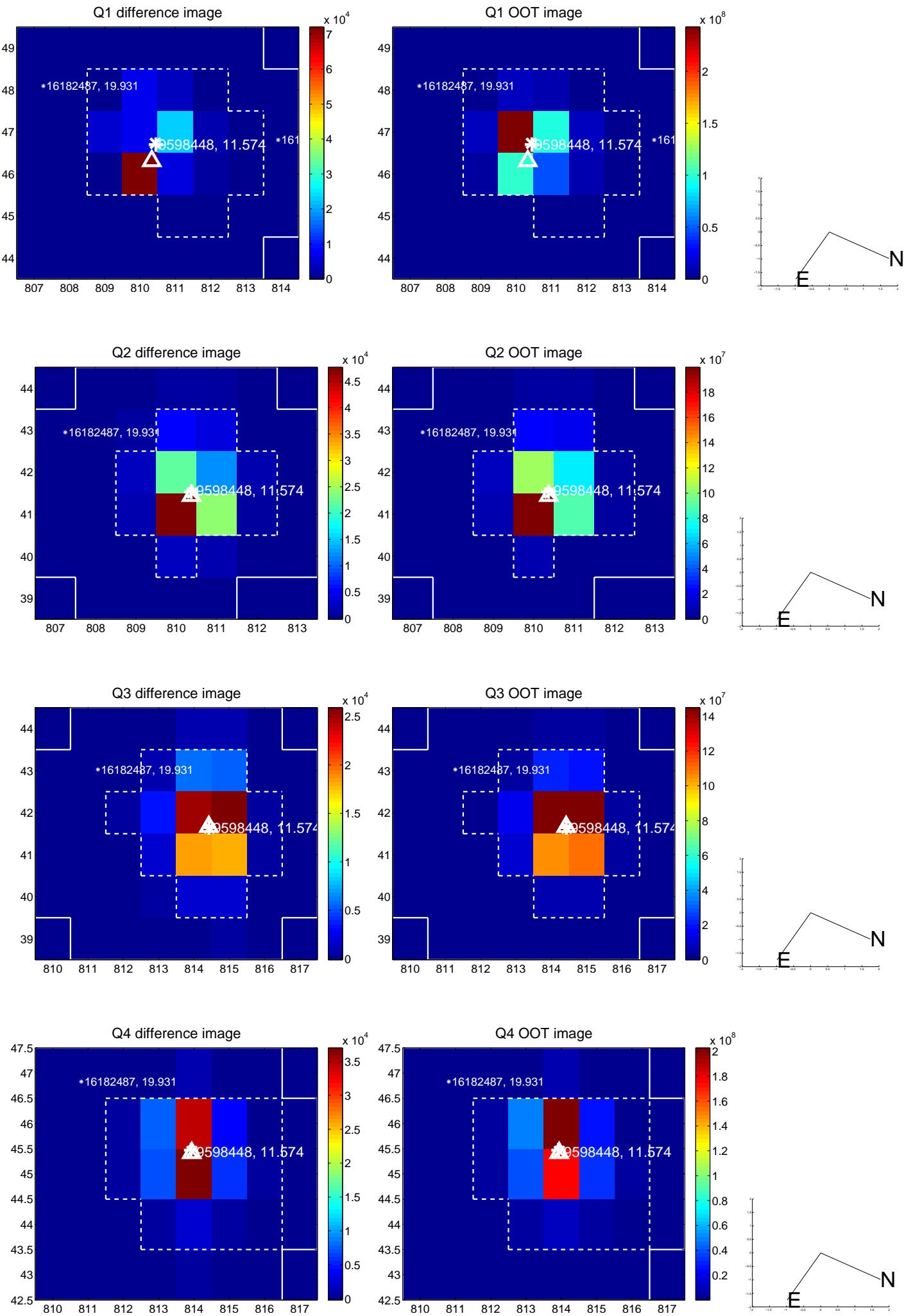


There are no photometric centroids

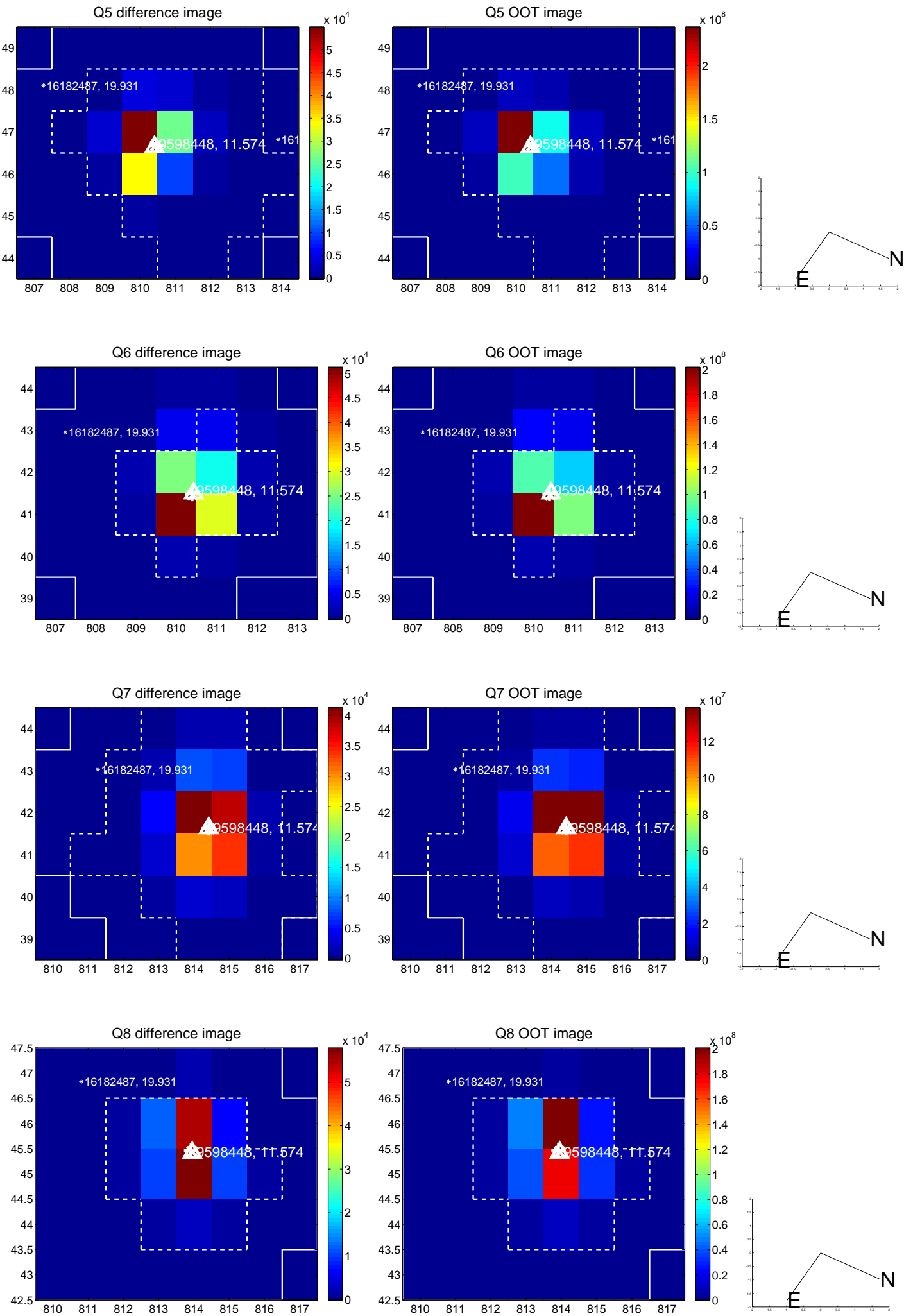


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

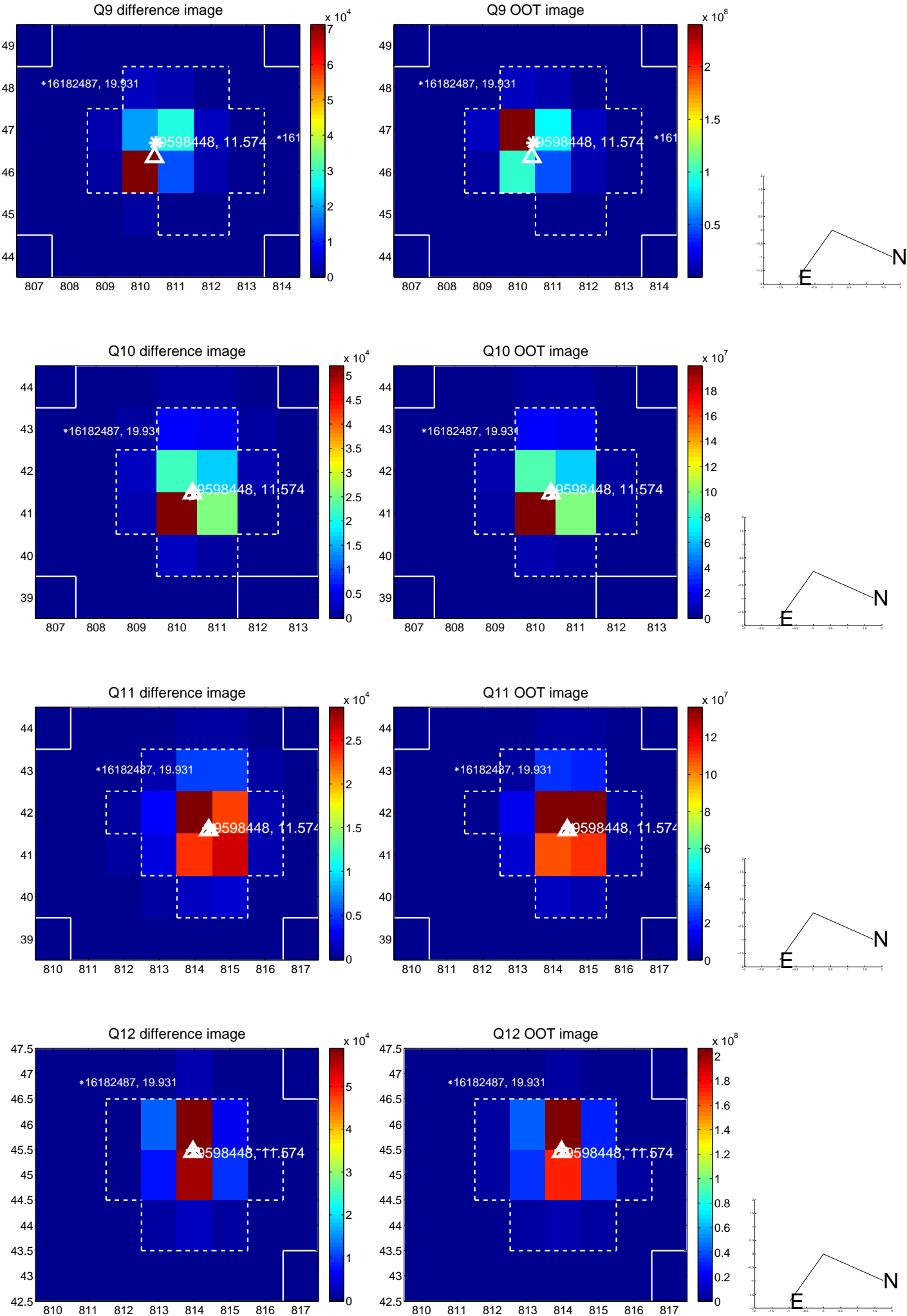
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



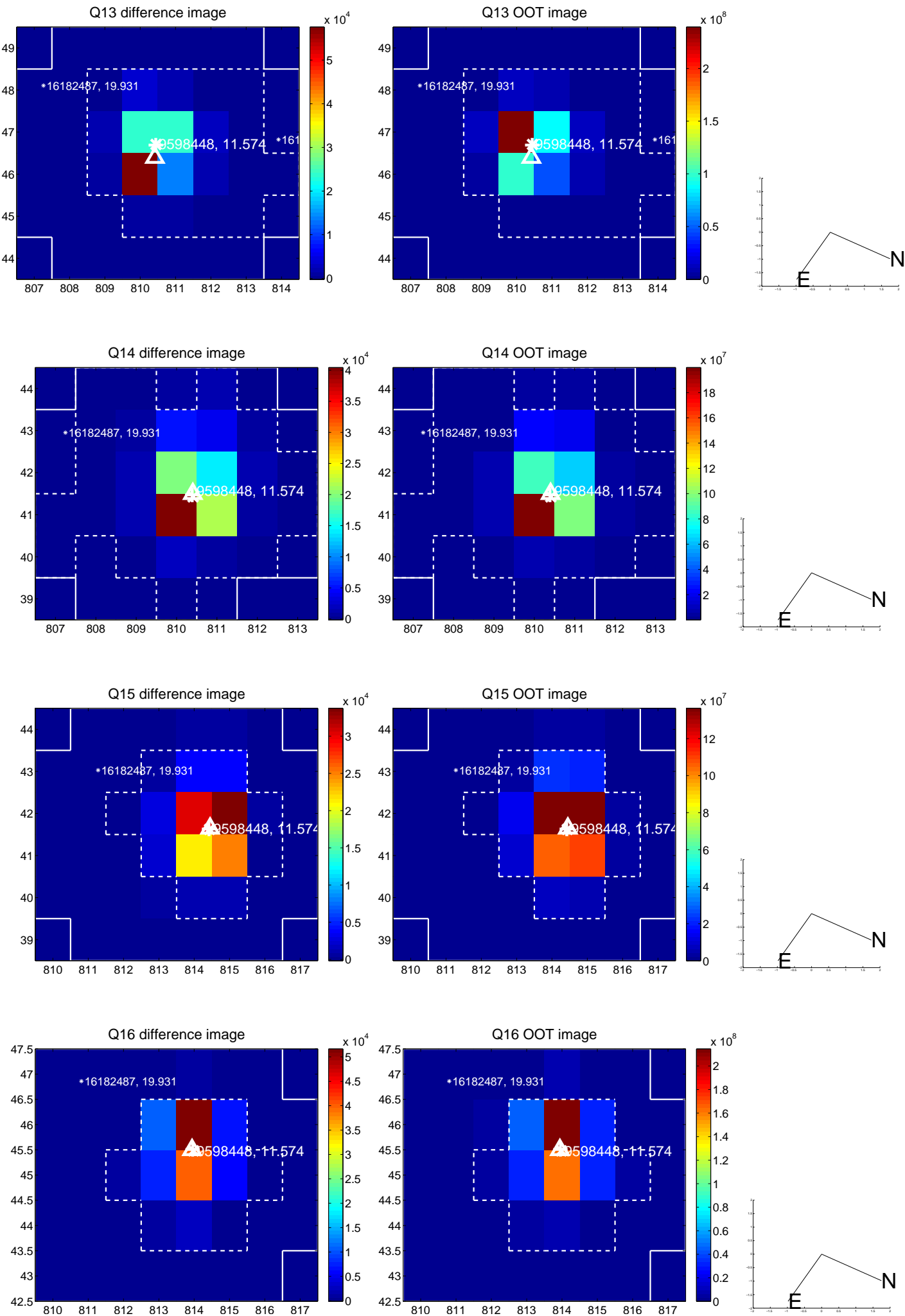
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



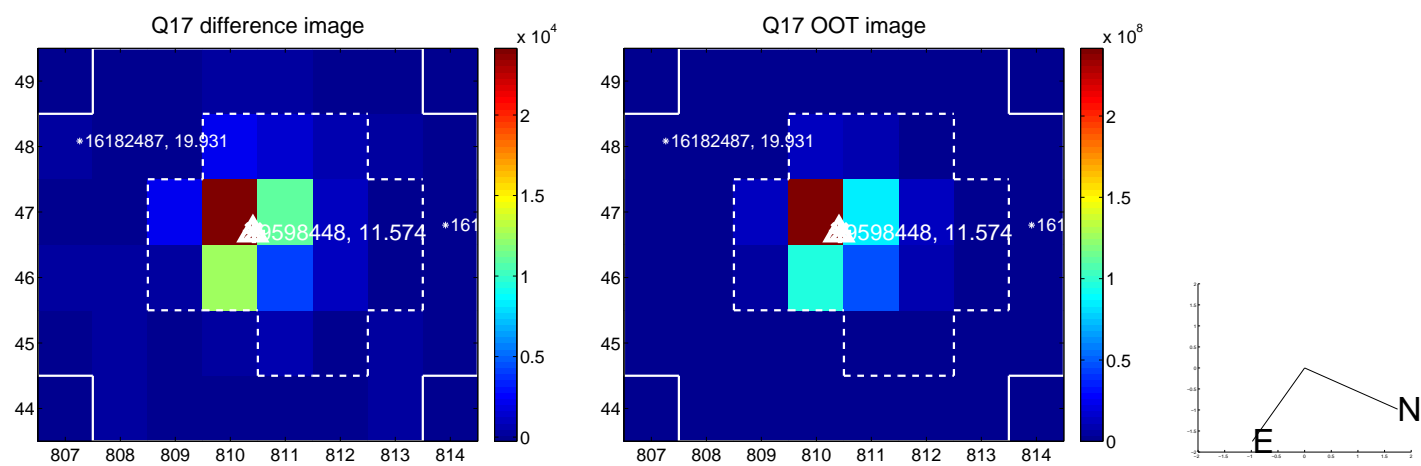
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination

