

KIC 002013883

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})
002013883-01	OBS	6258.01	0.764590	131.695695	12.3	1.355	9.0	9.5	1.73	6218	0.72	12733.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002013883-01	OBS	FP	0.00	0	0	1	0	CENT_SATURATED—HALO_GHOST

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 002013883-01

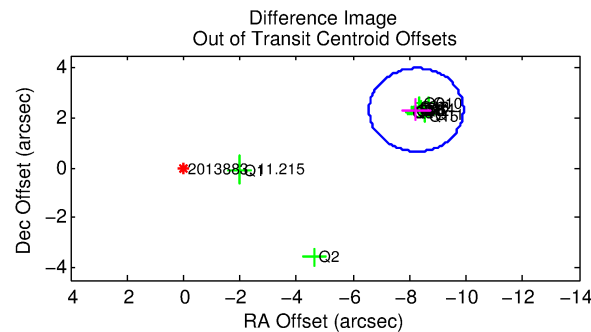
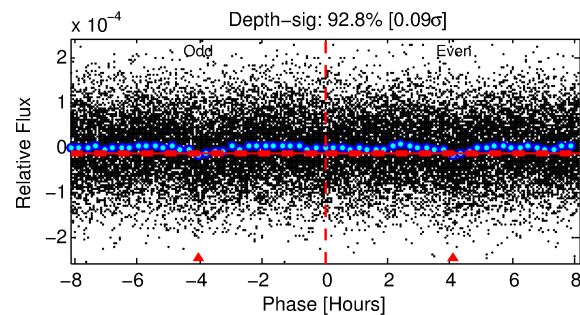
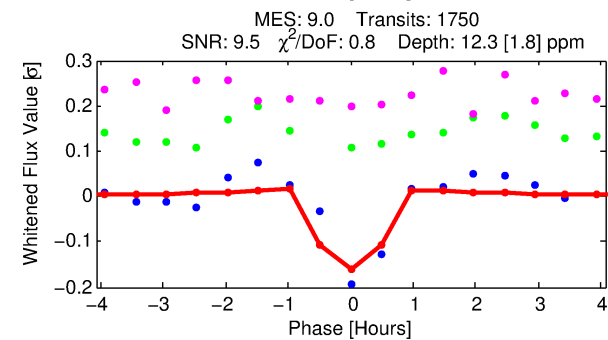
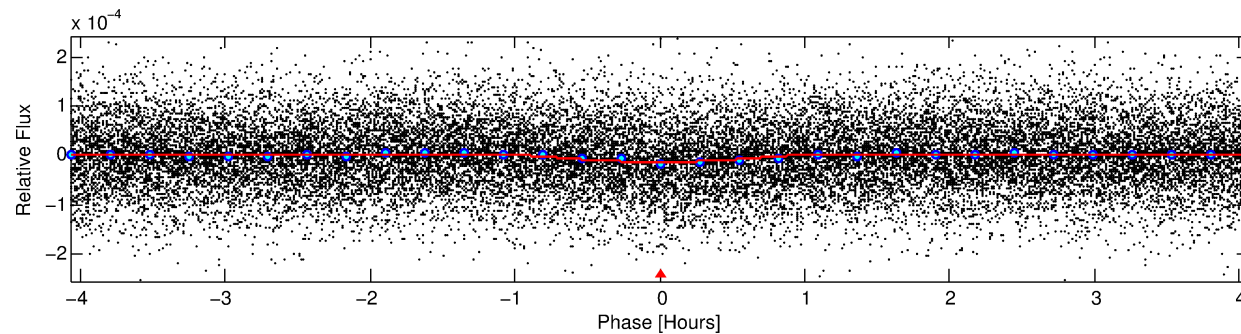
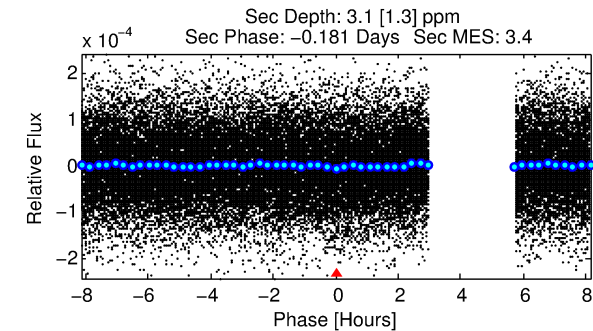
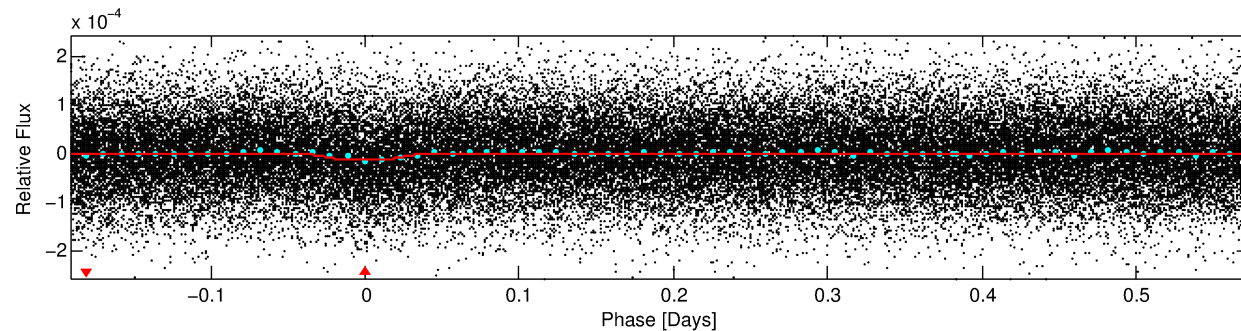
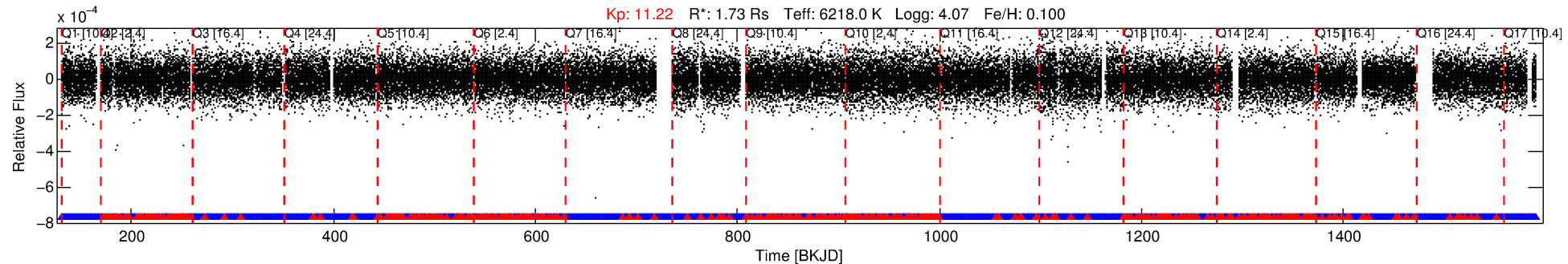
No Significant Match Found

DV One-Page Summary

KIC: 2013883 Candidate: 1 of 1 Period: 0.765 d

KOI: K06258.01 Corr: 0.836

Kp: 11.22 R*: 1.73 Rs Teff: 6218.0 K Logg: 4.07 Fe/H: 0.100



DV Fit Results:

Period = 0.76459 [0.00001] d
Epoch = 131.6957 [0.0020] BKJD
Rp/R* = 0.0038 [0.0007]
a/R* = 2.12 [1.46]
b = 0.90 [0.19]
Seff = 12733.66 [3928.80]
Teq = 2709 [209] K
Rp = 0.72 [0.20] Re
a = 0.0177 [0.0035] AU
Ag = 1.05 [0.65] [0.07σ]
Teff = 4237 [573] K [2.51σ]

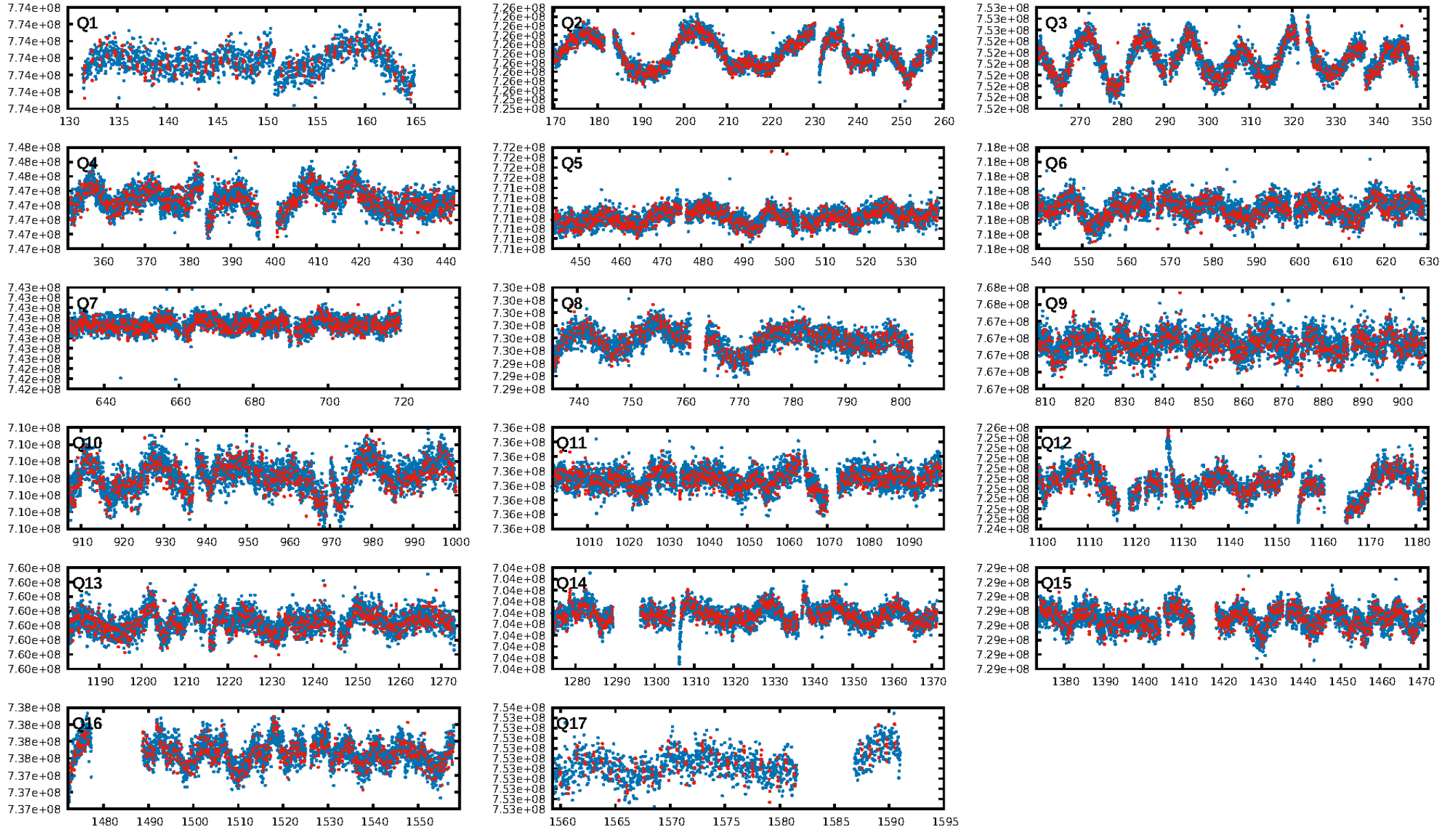
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.26e-18
RollingBand-fgt: 0.77 [1289/1672]
GhostDiagnostic-chr: -0.04312
Centroid-sig: 0.0%
Centroid-so: 13.545 arcsec [14.40σ]
OotOffset-rm: 8.557 arcsec [15.39σ]
KicOffset-rm: 8.528 arcsec [17.45σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.62 [10/16]
DiffImageOverlap-fno: 1.00 [17/17]

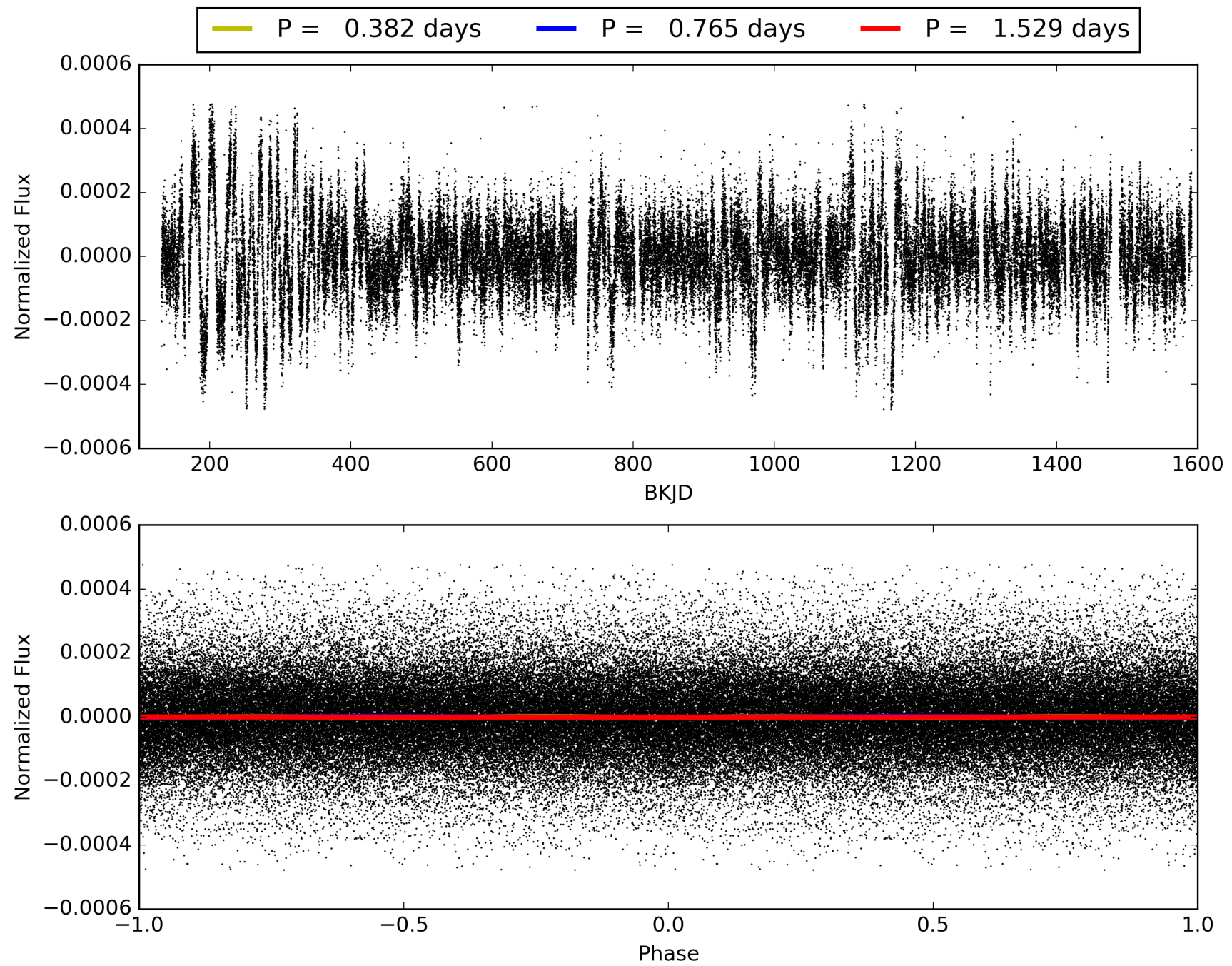
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:49:43 Z

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

TCE 002013883-01, PDC Light Curves

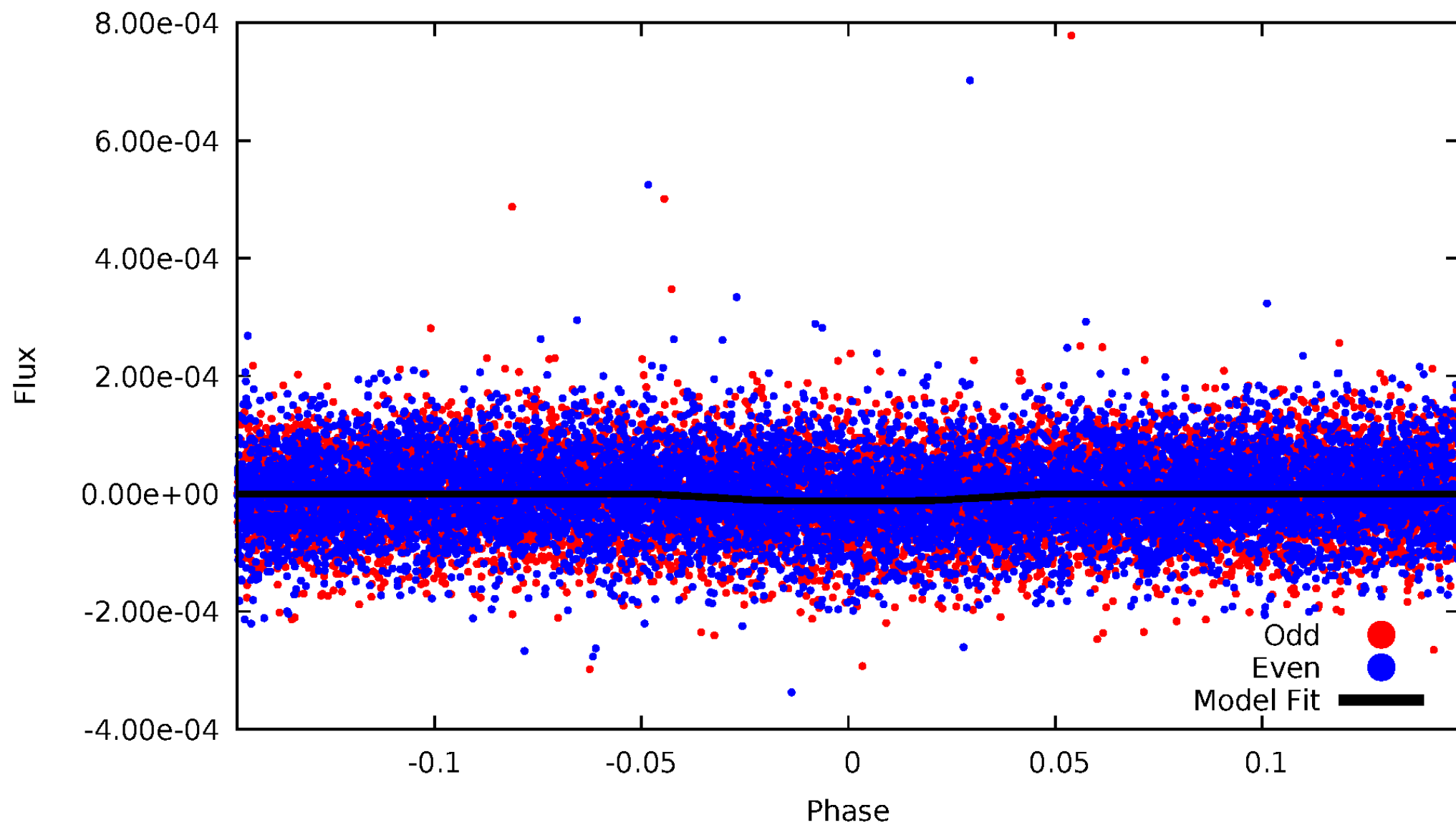


TCE 002013883-01



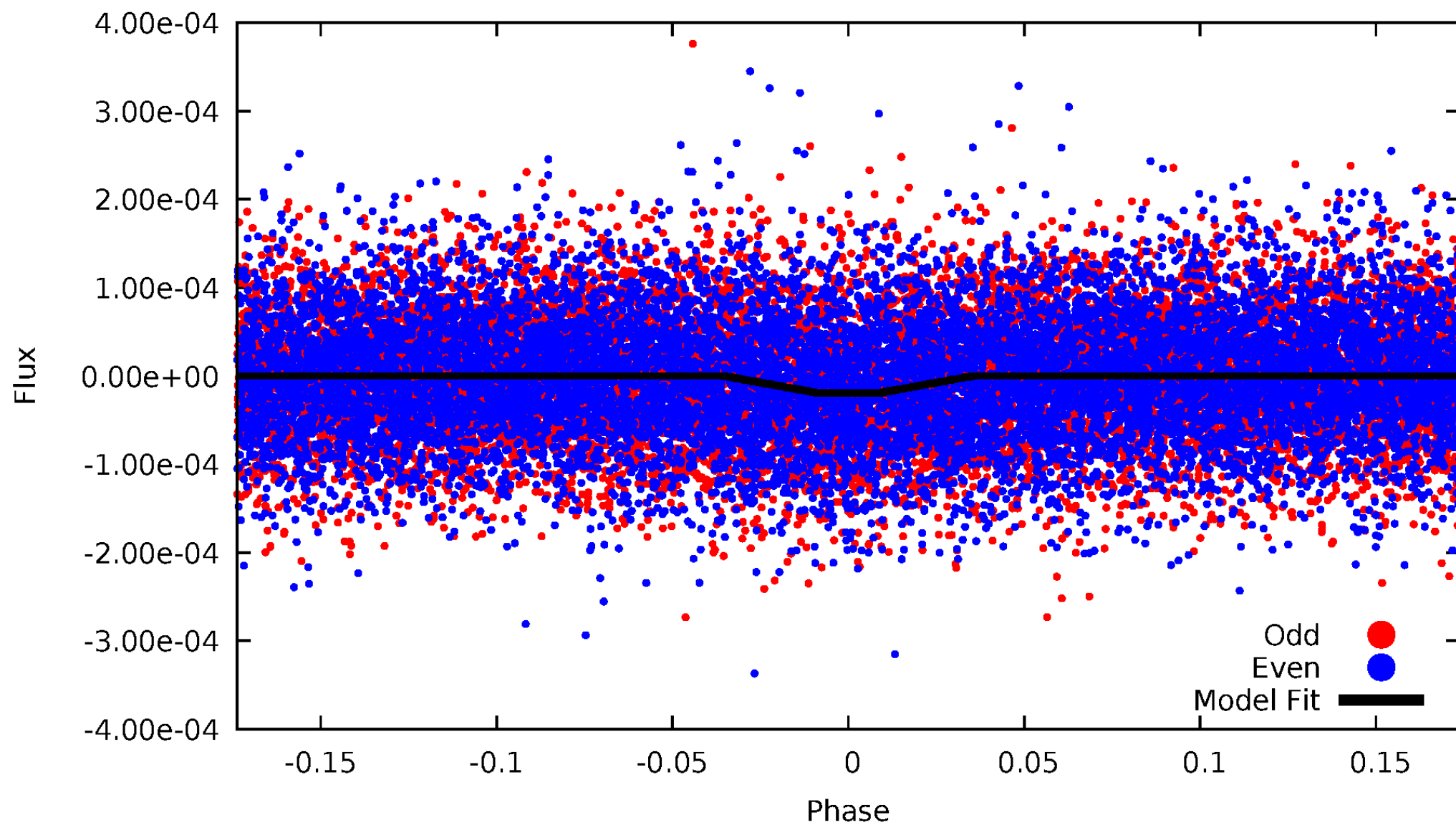
DV Odd/Even

TCE 002013883-01

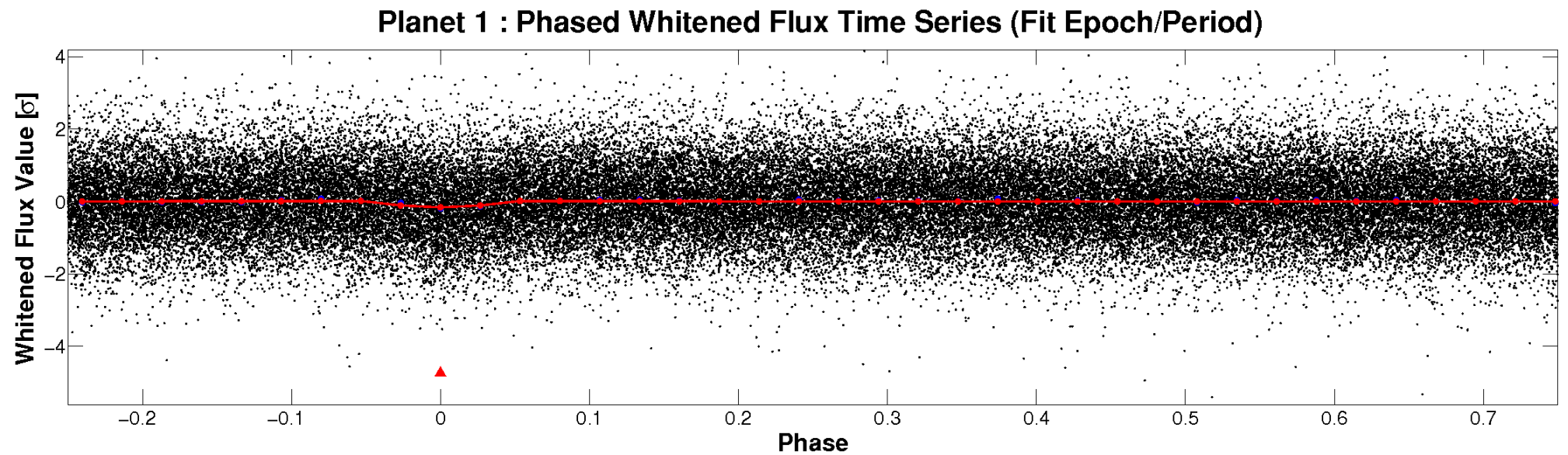
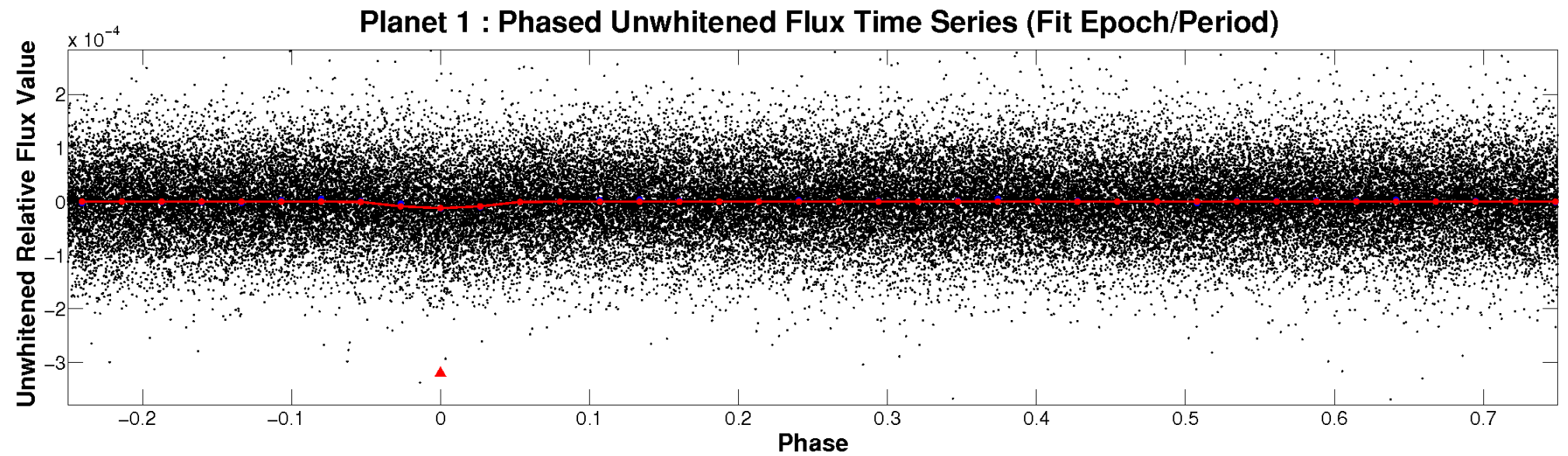


ALT Odd/Even

TCE 002013883-01

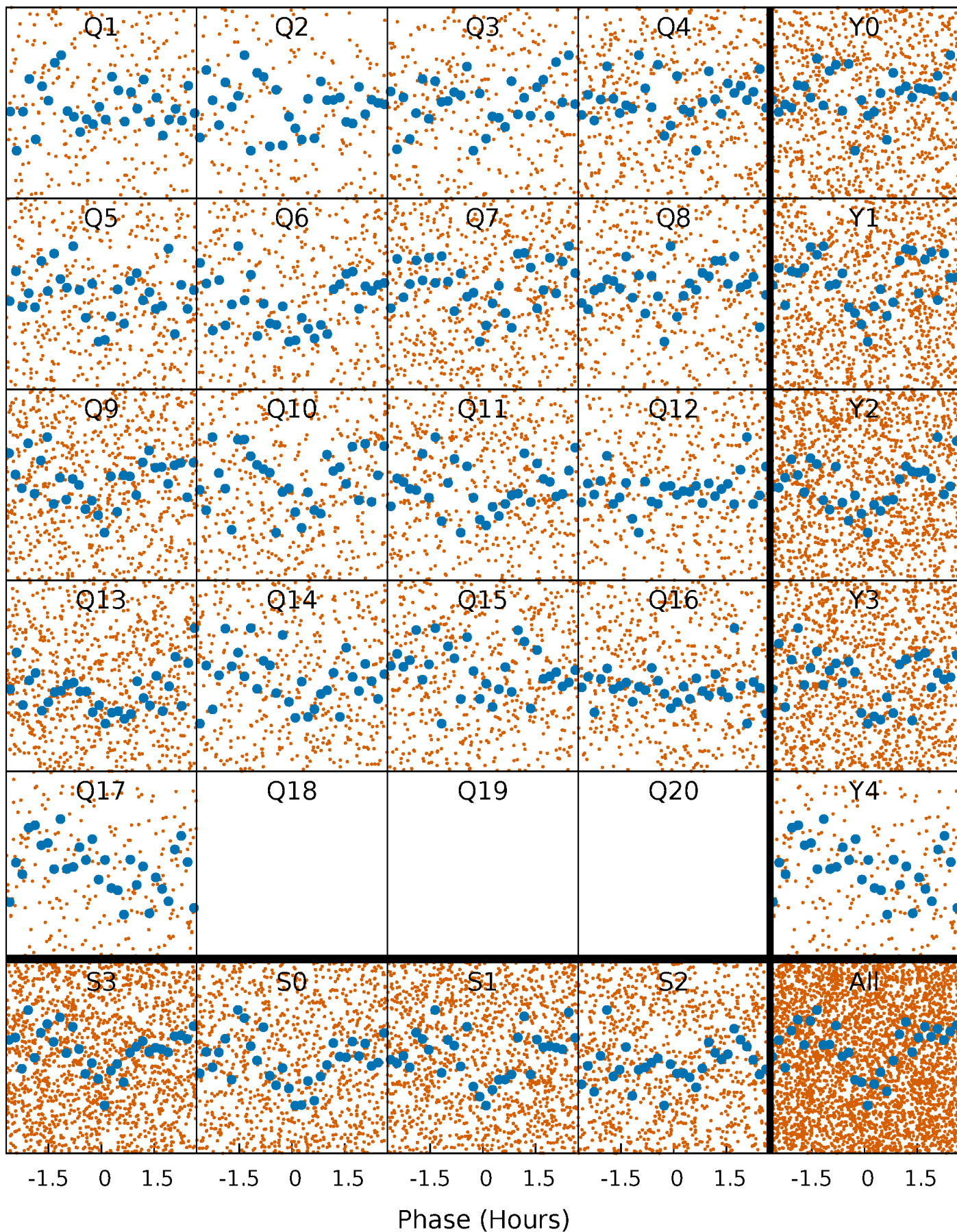


Non-Whitened Vs. Whitened Light Curve



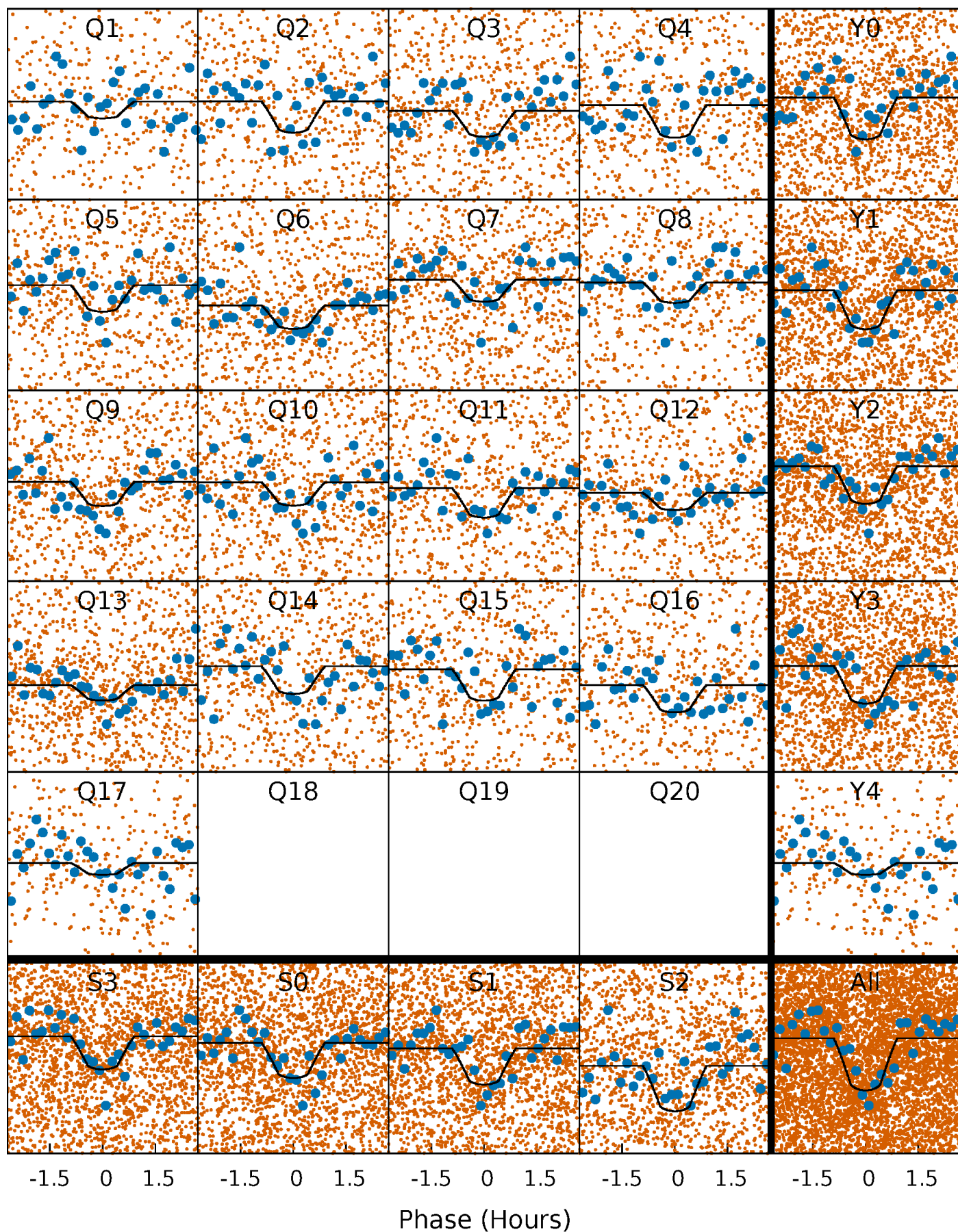
PDC Quarter-Phased Transit Curves

TCE 002013883-01 P= 0.764590 Days $T_0=131.695695$ (BKJD)



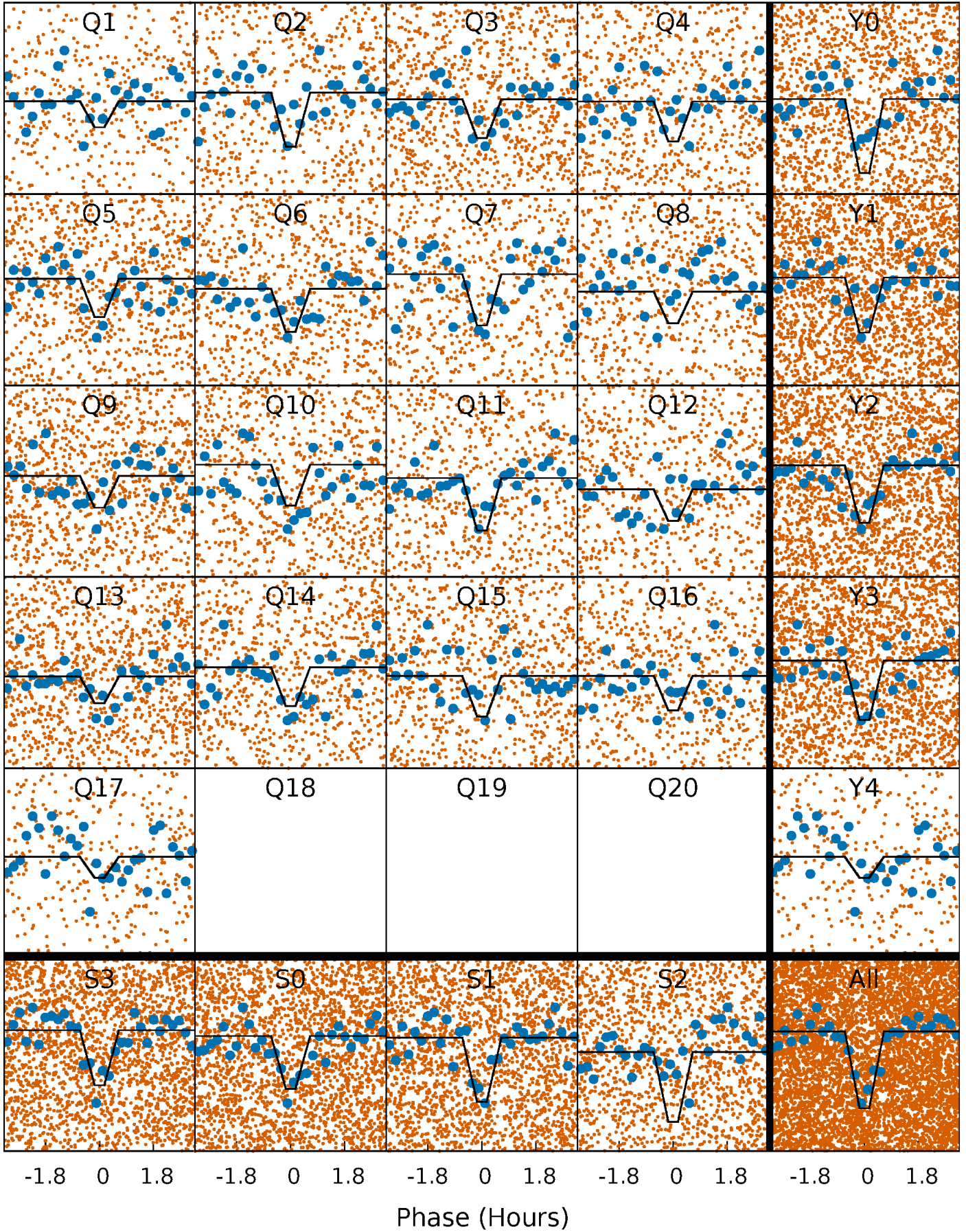
DV Quarter-Phased Transit Curves

TCE 002013883-01 P= 0.764590 Days $T_0=131.695695$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

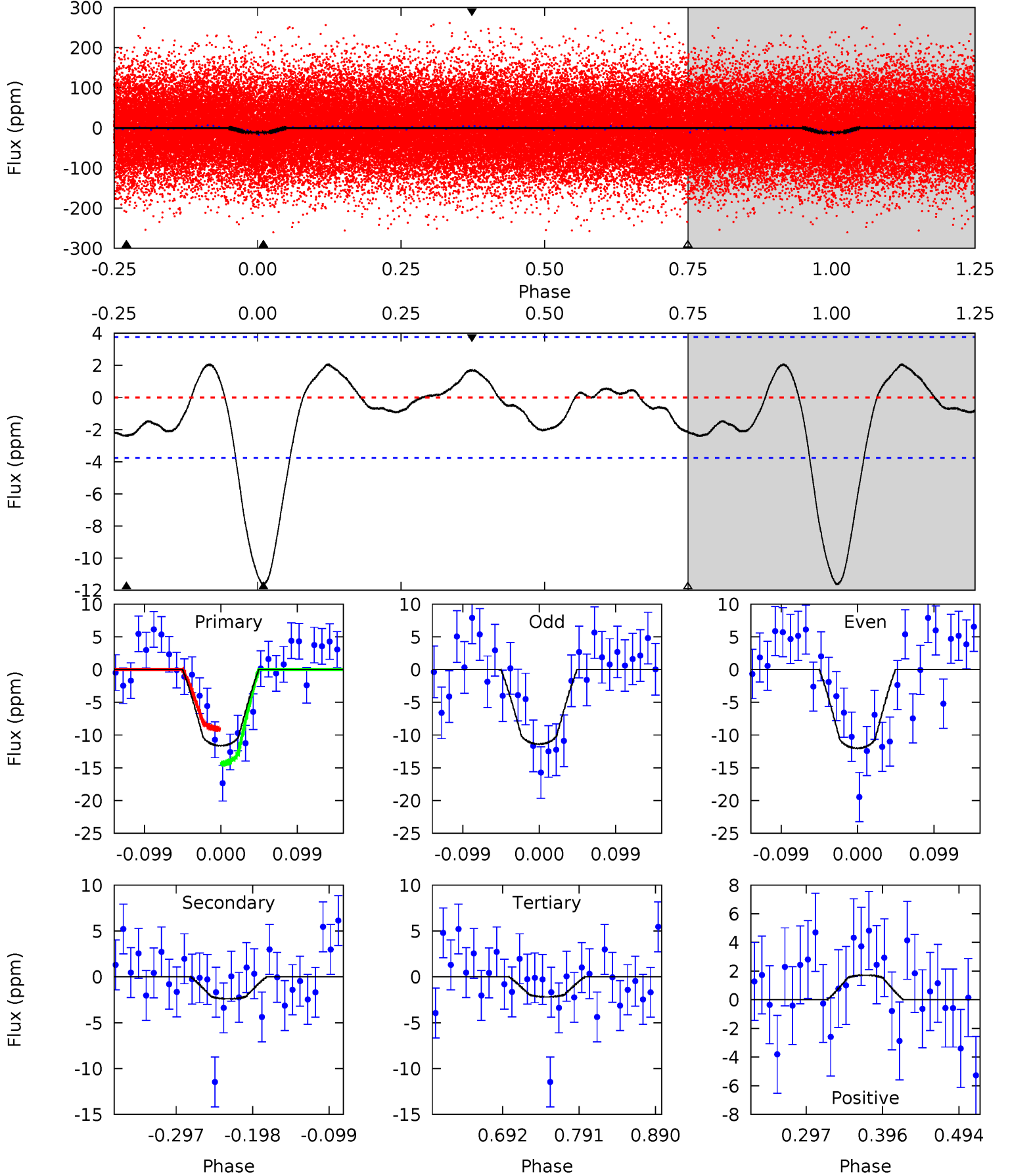
TCE 002013883-01 P= 0.764598 Days $T_0=131.694518$ (BKJD)



DV Model-Shift Uniqueness Test

002013883-01, P = 0.764590 Days, E = 130.931105 Days

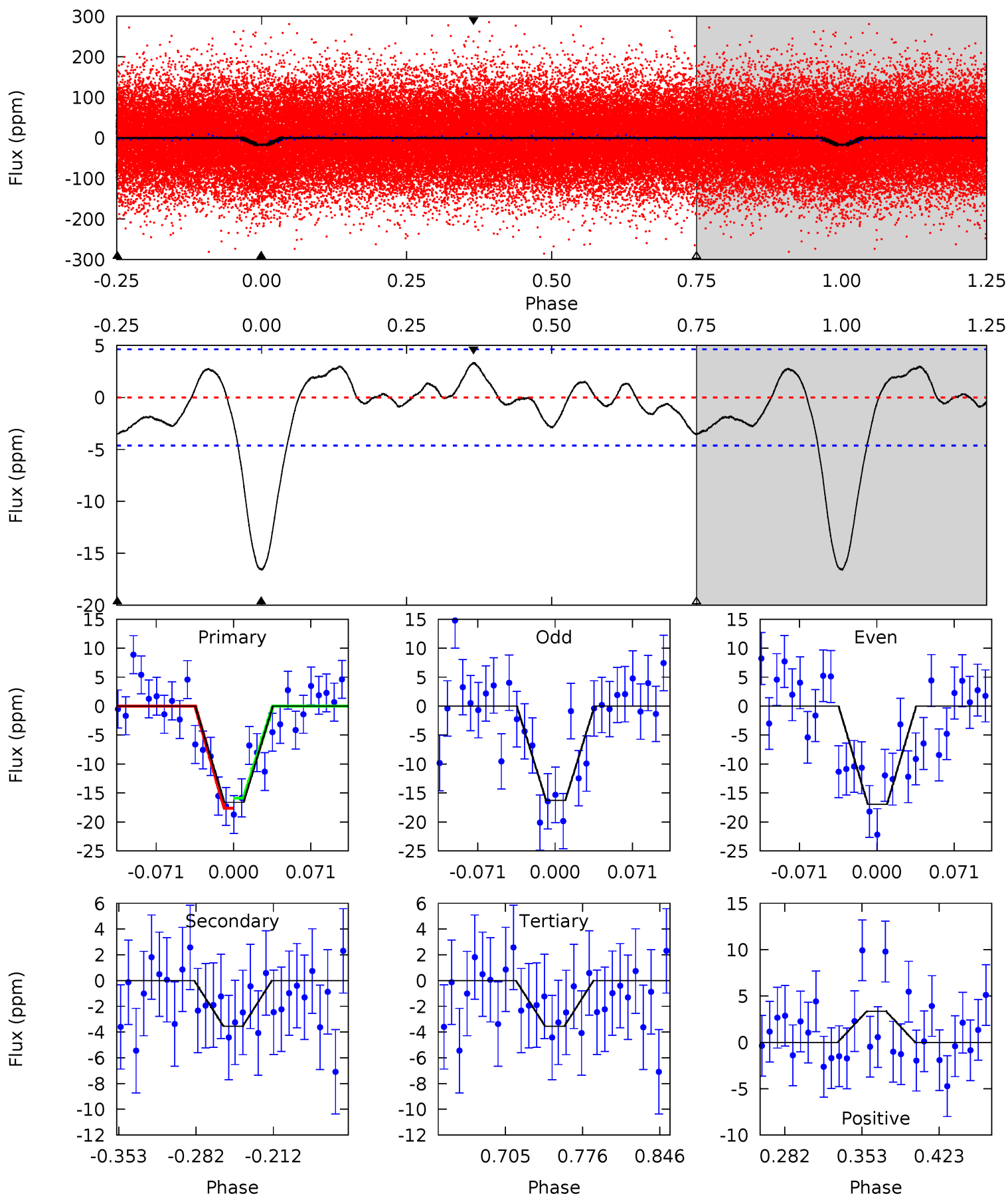
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	2.91	2.65	2.09	4.57	1.65	1.26	11.5	12.0	0.26	0.83	0.38	0.96	0.15	3.21



Alt Model-Shift Uniqueness Test

002013883-01, P = 0.764598 Days, E = 130.929920 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	3.55	3.55	3.36	4.64	1.81	1.57	13.1	13.3	0.00	0.19	0.34	0.98	0.17	0.87



Stellar Parameters For KIC 002013883

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6218^{+80}_{-80}	$4.066^{+0.174}_{-0.116}$	$0.100^{+0.150}_{-0.150}$	$1.726^{+0.308}_{-0.377}$	$1.263^{+0.132}_{-0.119}$	$0.346^{+0.308}_{-0.120}$
	+1%/-1%	+4%/-3%	+150%/-150%	+18%/-22%	+10%/-9%	+89%/-35%
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 002013883-01 / KOI 6258.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2 ± 1	$0.71^{+0.15}_{-0.15}$	3767^{+174}_{-216}	3843^{+574}_{-640}	$0.791^{+0.626}_{-0.353}$
Alt.	-4 ± 1	$0.81^{+0.16}_{-0.14}$	3774^{+181}_{-207}	3995^{+449}_{-517}	$0.916^{+0.524}_{-0.364}$

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

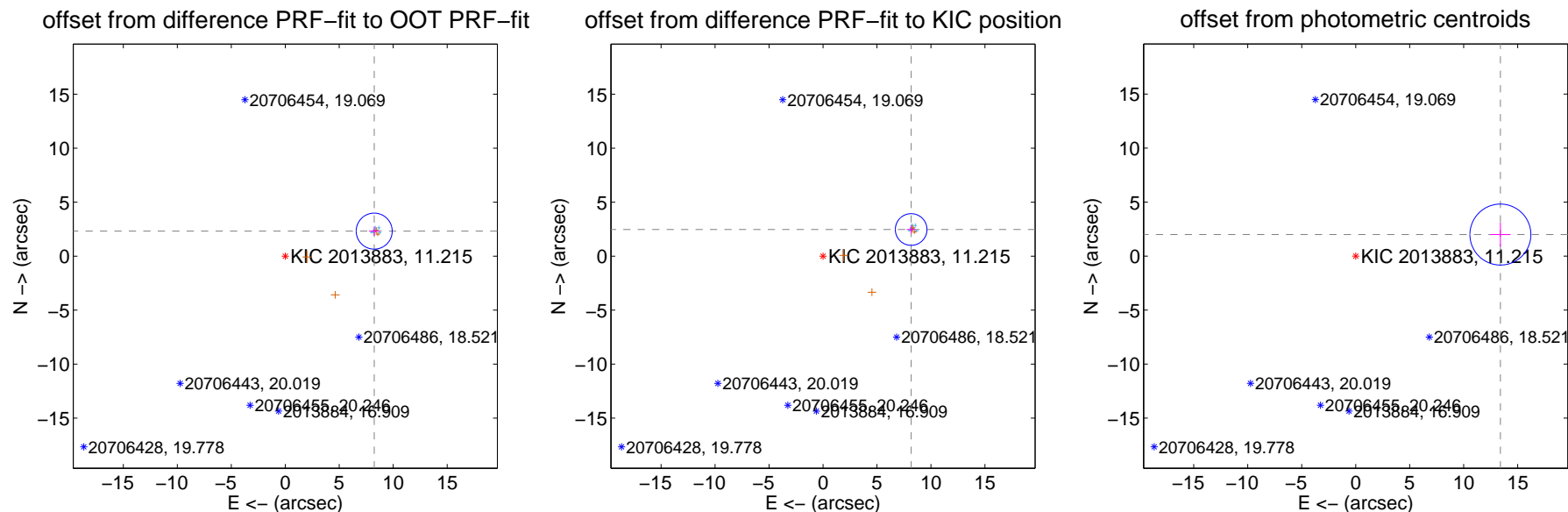
DV Centroid Data

Supplemental centroid analysis for 002013883-01. **Kepler magnitude: 11.21.** Transit SNR 9.49

There are 10 quarters with good PRF difference image offsets

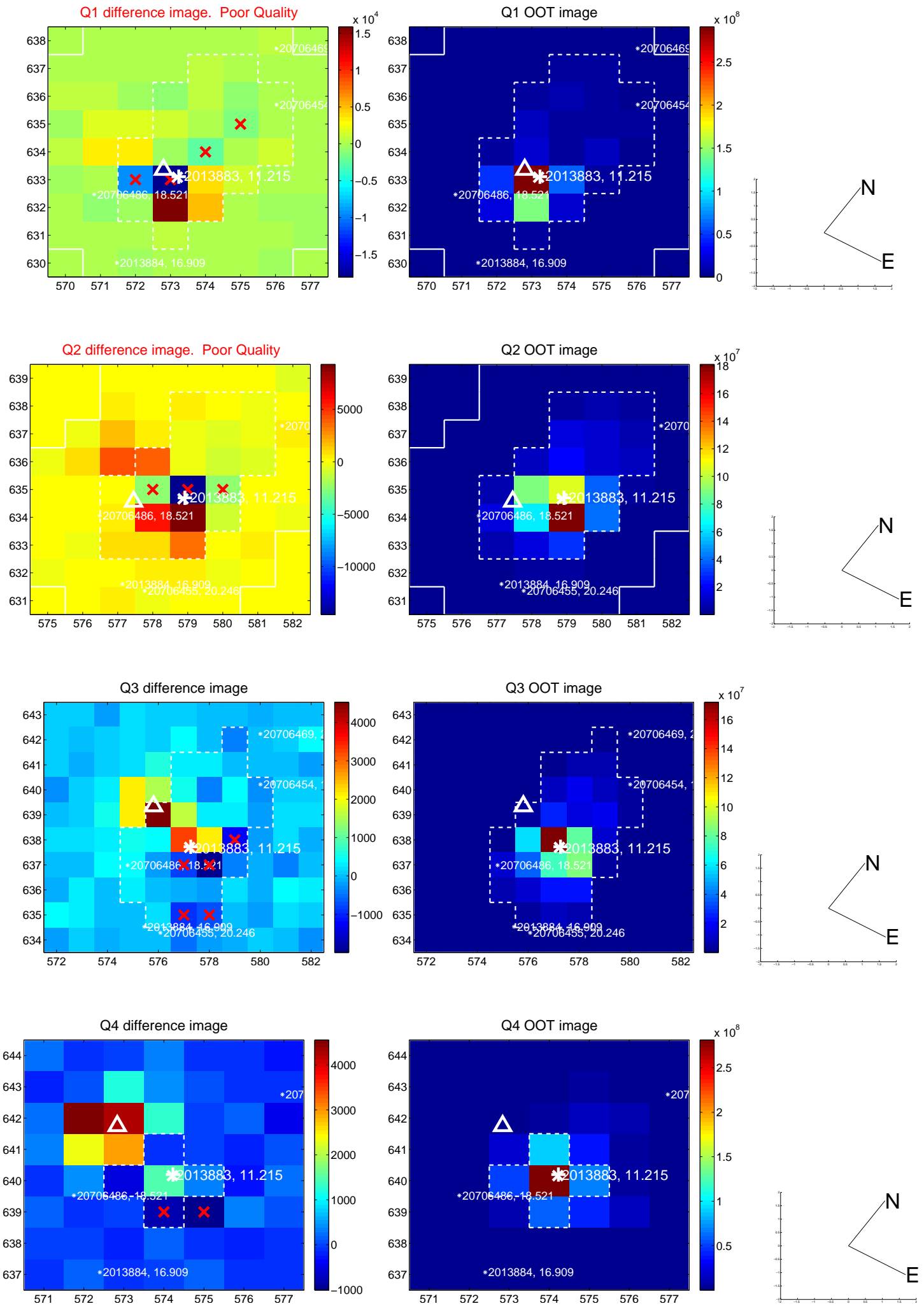
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.557 ± 0.556	15.39	-8.237 ± 0.479	2.317 ± 0.430
PRF-fit source offset from KIC position	8.528 ± 0.489	17.45	-8.163 ± 0.417	2.468 ± 0.386
photometric centroid source offset	13.55 ± 0.94	14.40	-13.40 ± 0.94	1.99 ± 1.10

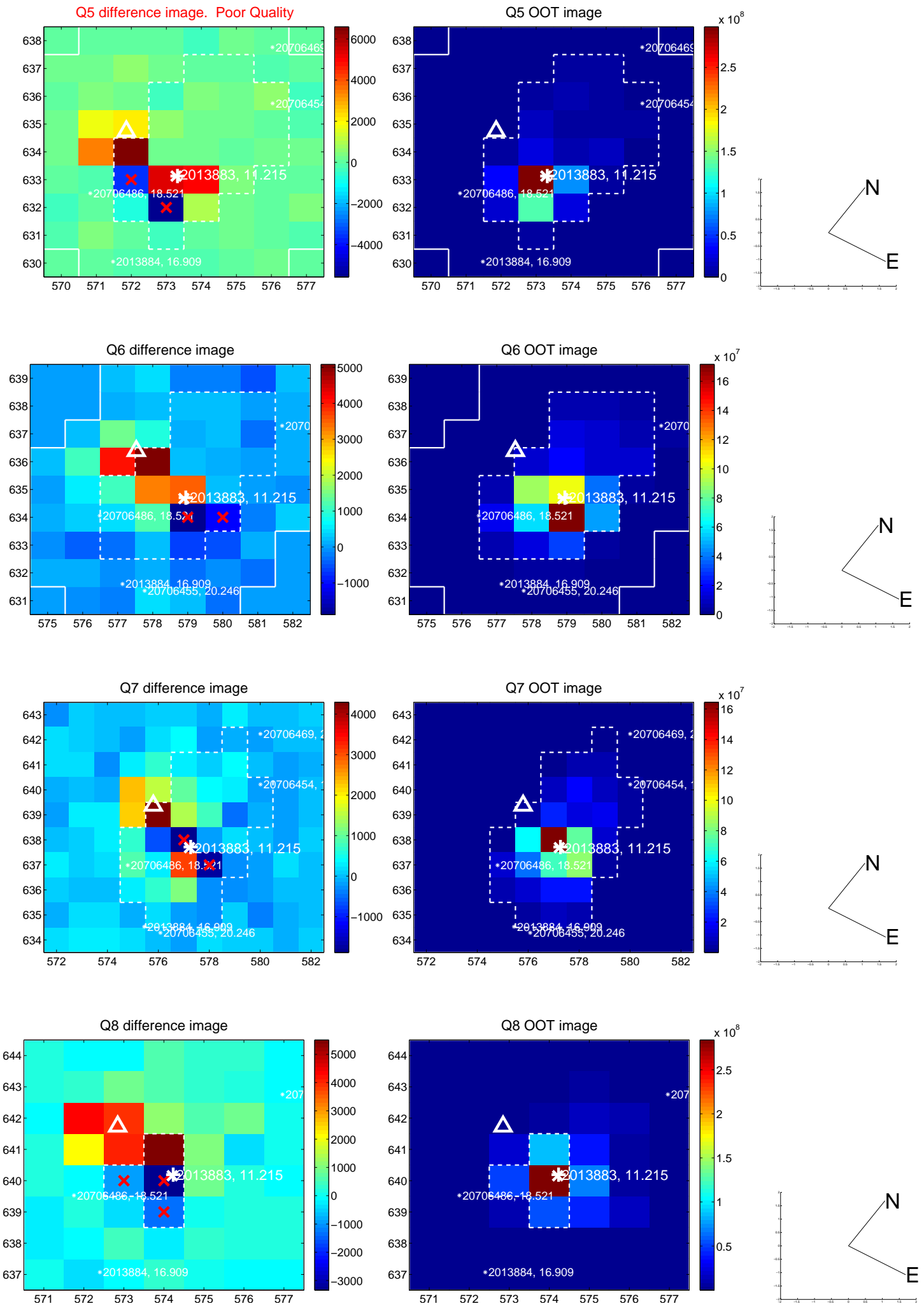


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

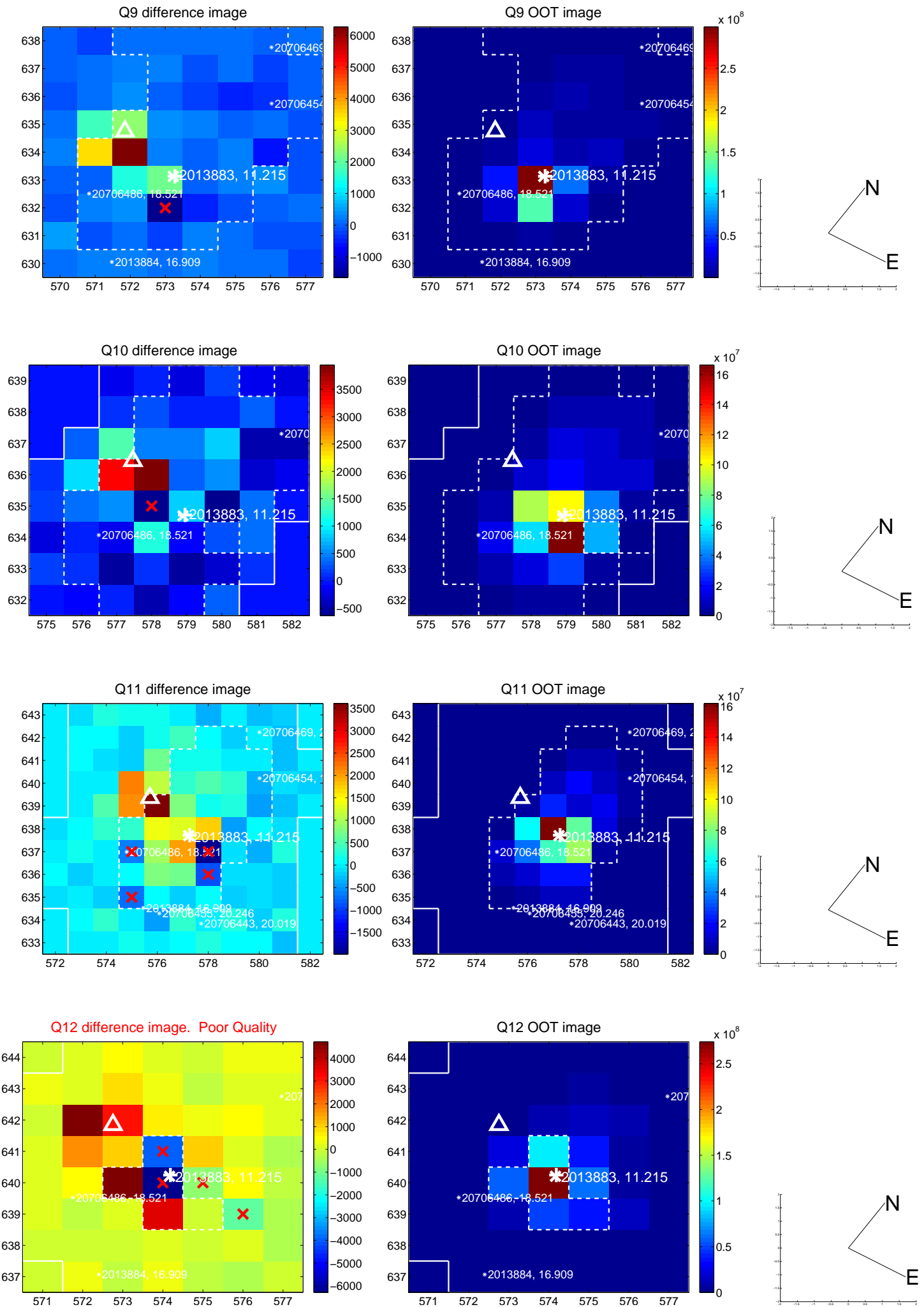
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



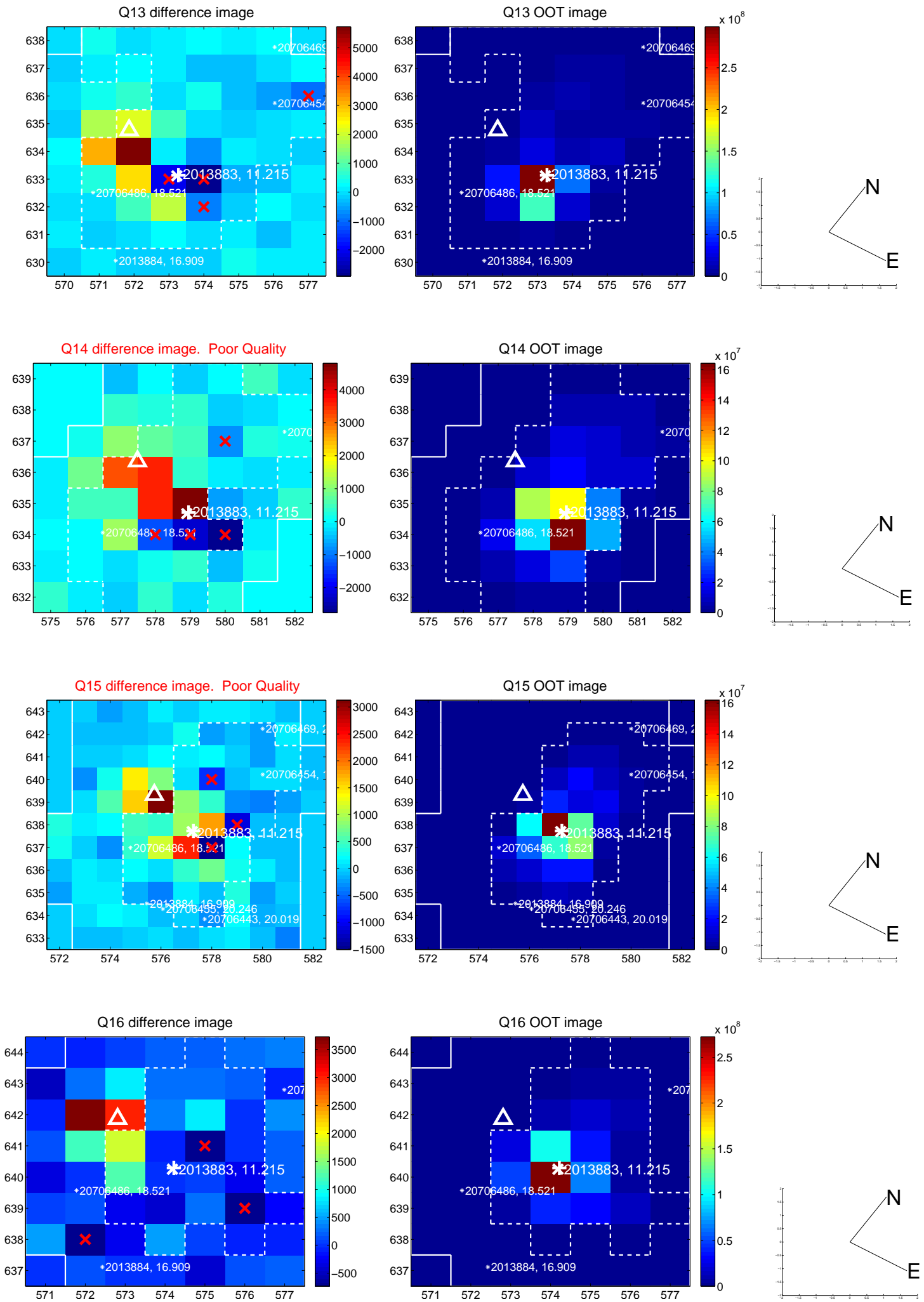
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



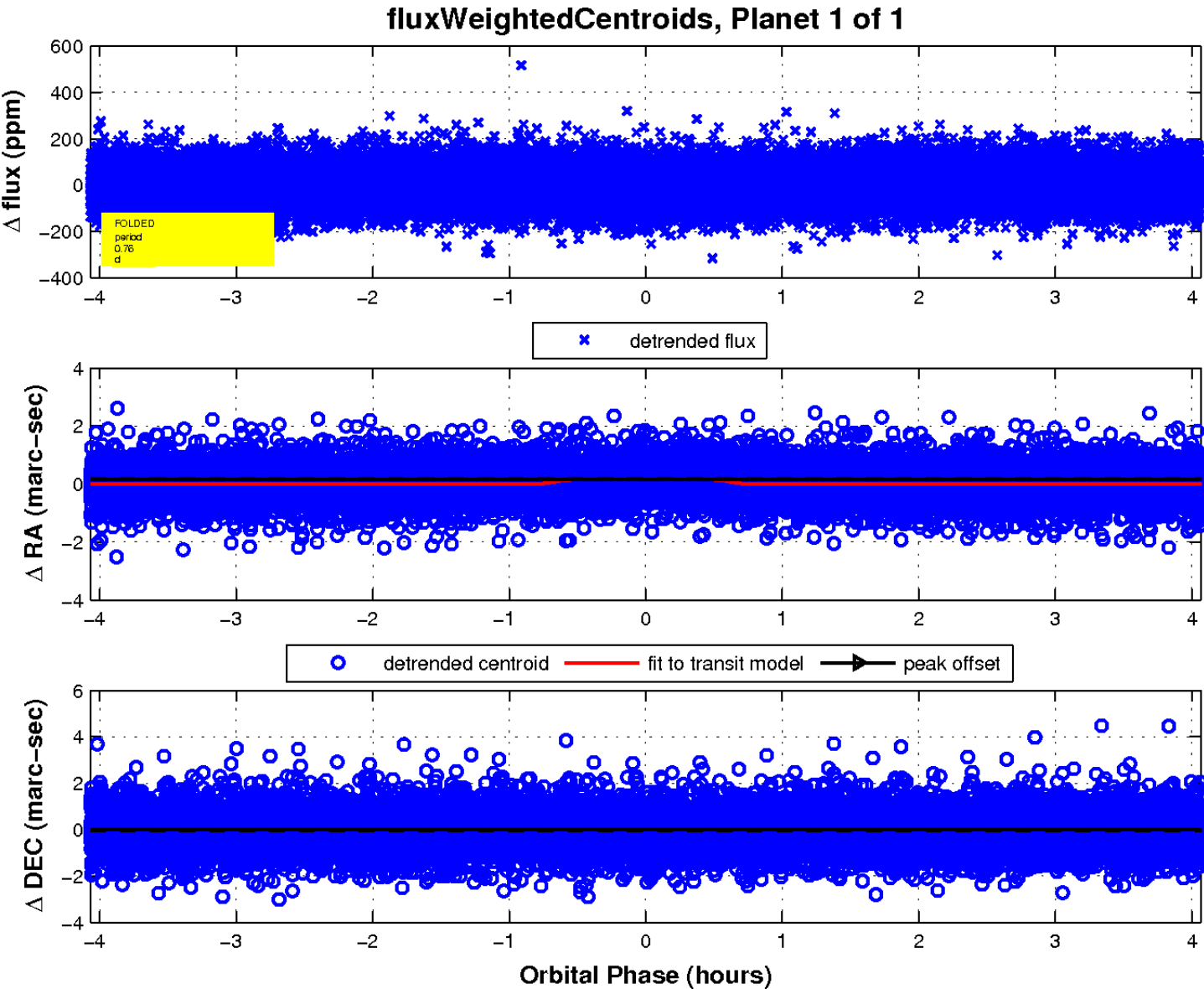
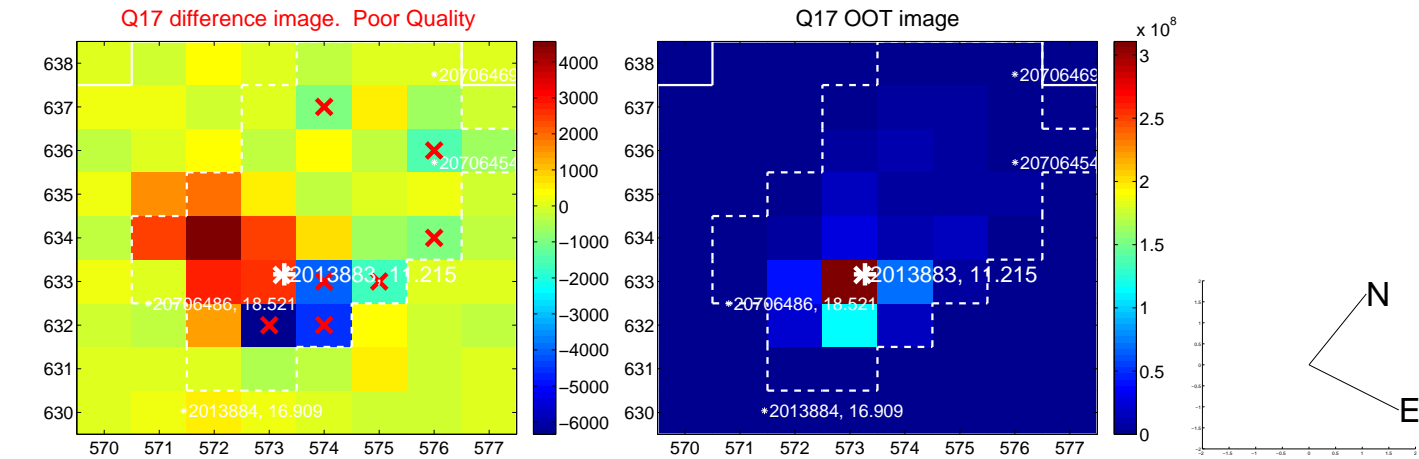
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

