

KIC 008481610

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})
008481610-01	OBS	No	1.428643	132.045657	15.1	3.221	7.6	6.1	3.79	7058	1.74	34467.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008481610-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT

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

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

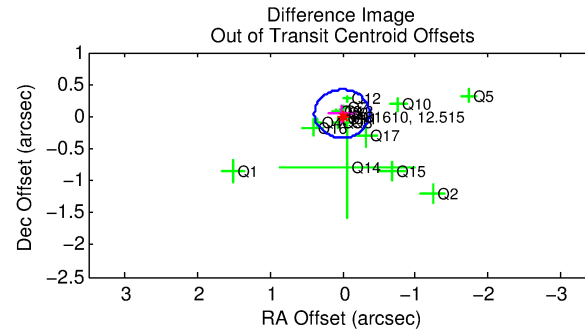
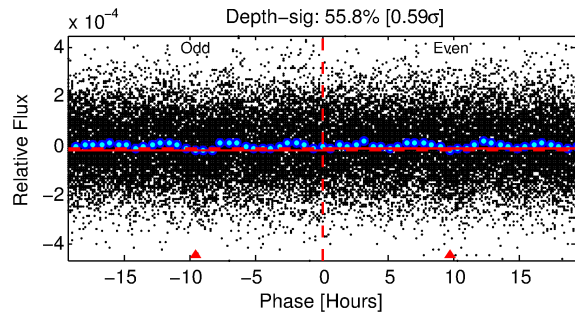
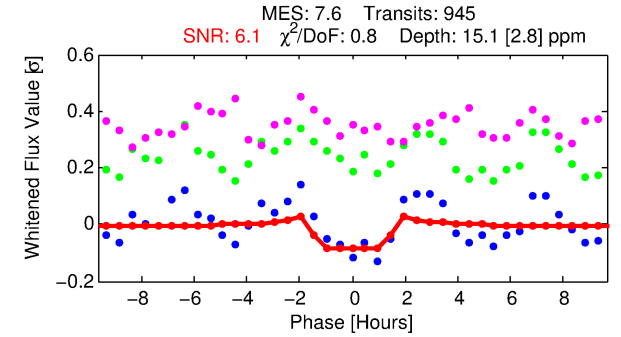
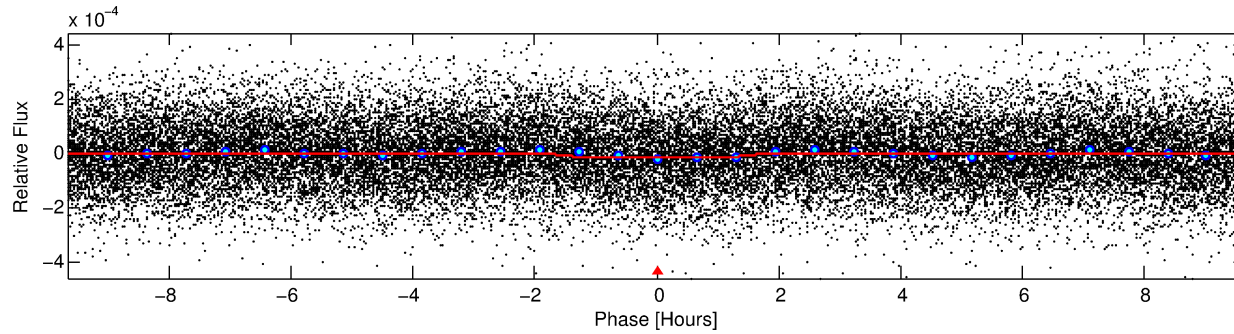
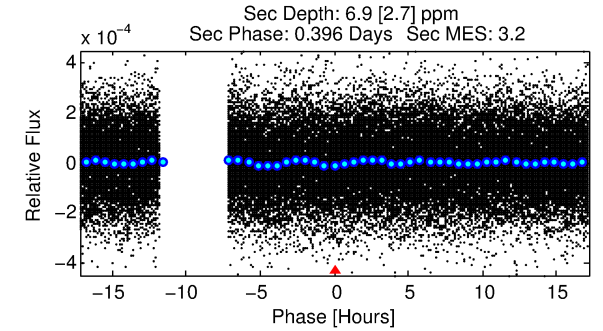
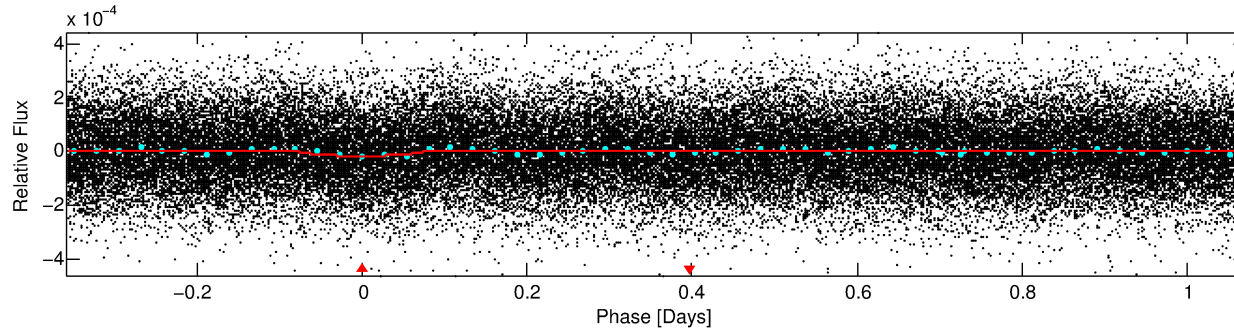
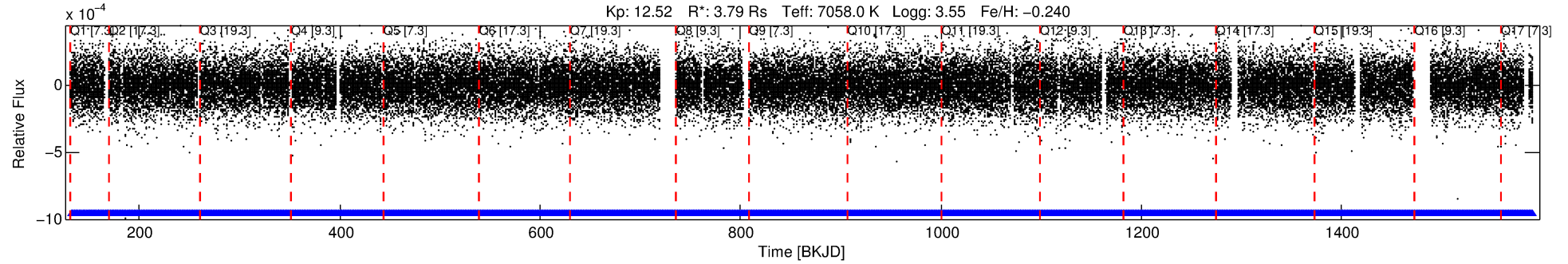
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008481610-01

No Significant Match Found

DV One-Page Summary

KIC: 8481610 Candidate: 1 of 1 Period: 1.429 d



DV Fit Results:

Period = 1.42864 [0.00002] d
Epoch = 132.0457 [0.0043] BKJD
Rp/R* = 0.0042 [0.0011]
a/R* = 1.70 [1.68]
b = 0.91 [0.28]
Seff = 34467.16 [20832.86]
Teff = 3474 [525] K
Rp = 1.73 [0.83] Re
a = 0.0304 [0.0115] AU
Ag = 1.16 [1.03] [0.16σ]
Teffp = 5577 [932] K [1.97σ]

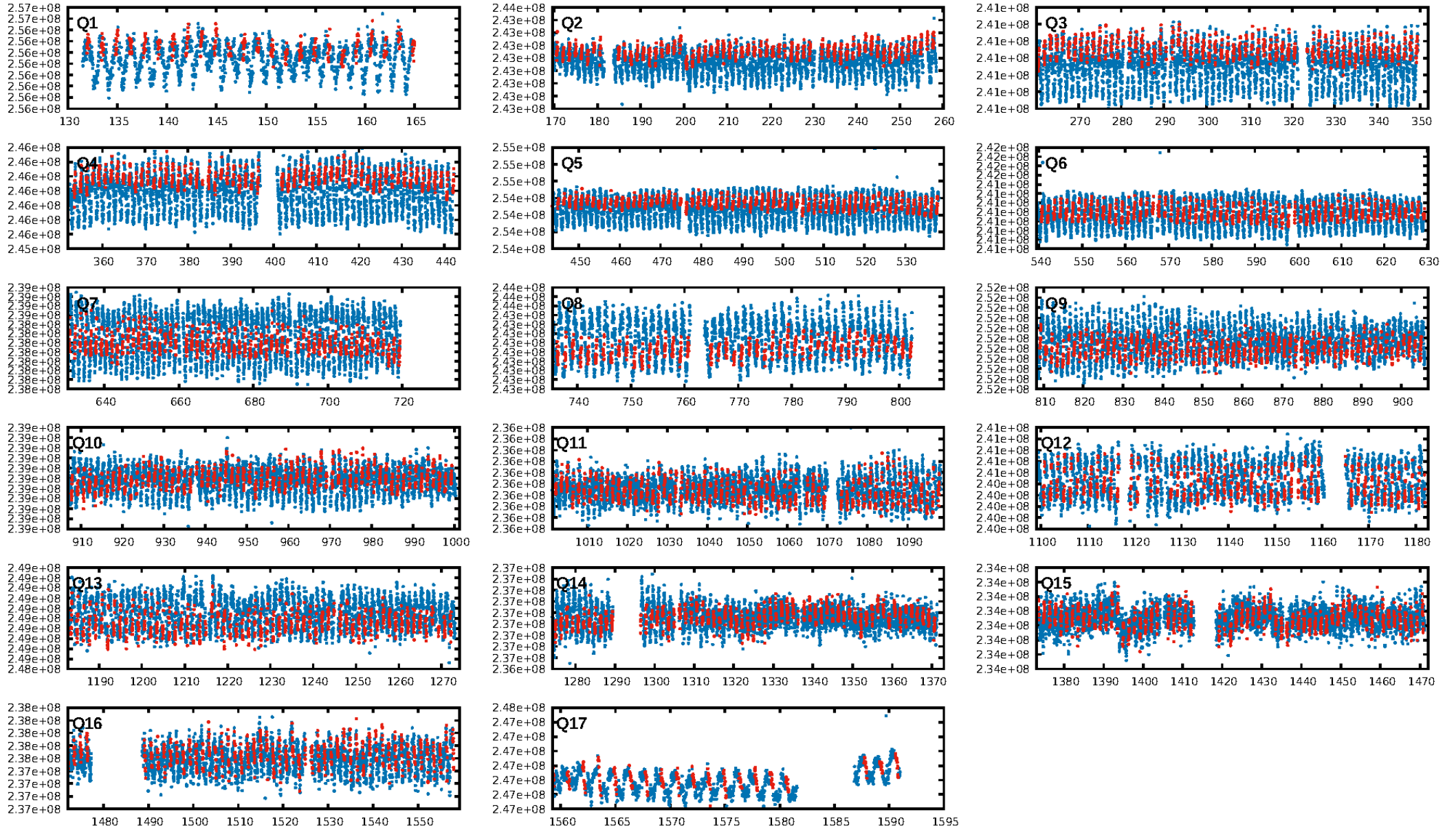
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.85e-13
RollingBand-fgt: 1.00 [902/902]
GhostDiagnostic-chr: 0.5309
Centroid-sig: 0.5%
Centroid-so: 1.757 arcsec [2.13σ]
OotOffset-rm: 0.044 arcsec [0.35σ]
KicOffset-rm: 0.097 arcsec [0.71σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 1.00 [17/17]

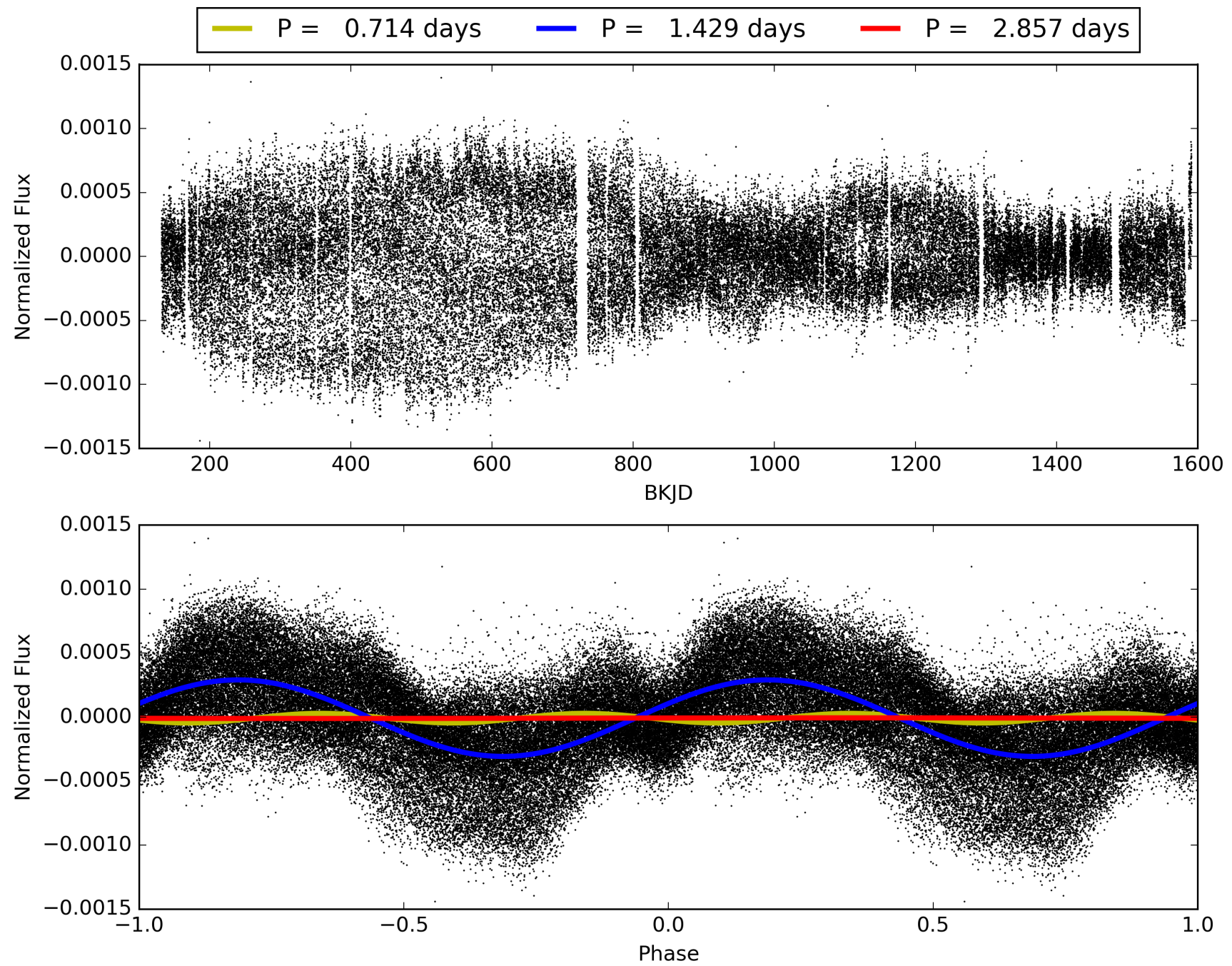
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 02:53:32 Z

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

TCE 008481610-01, PDC Light Curves

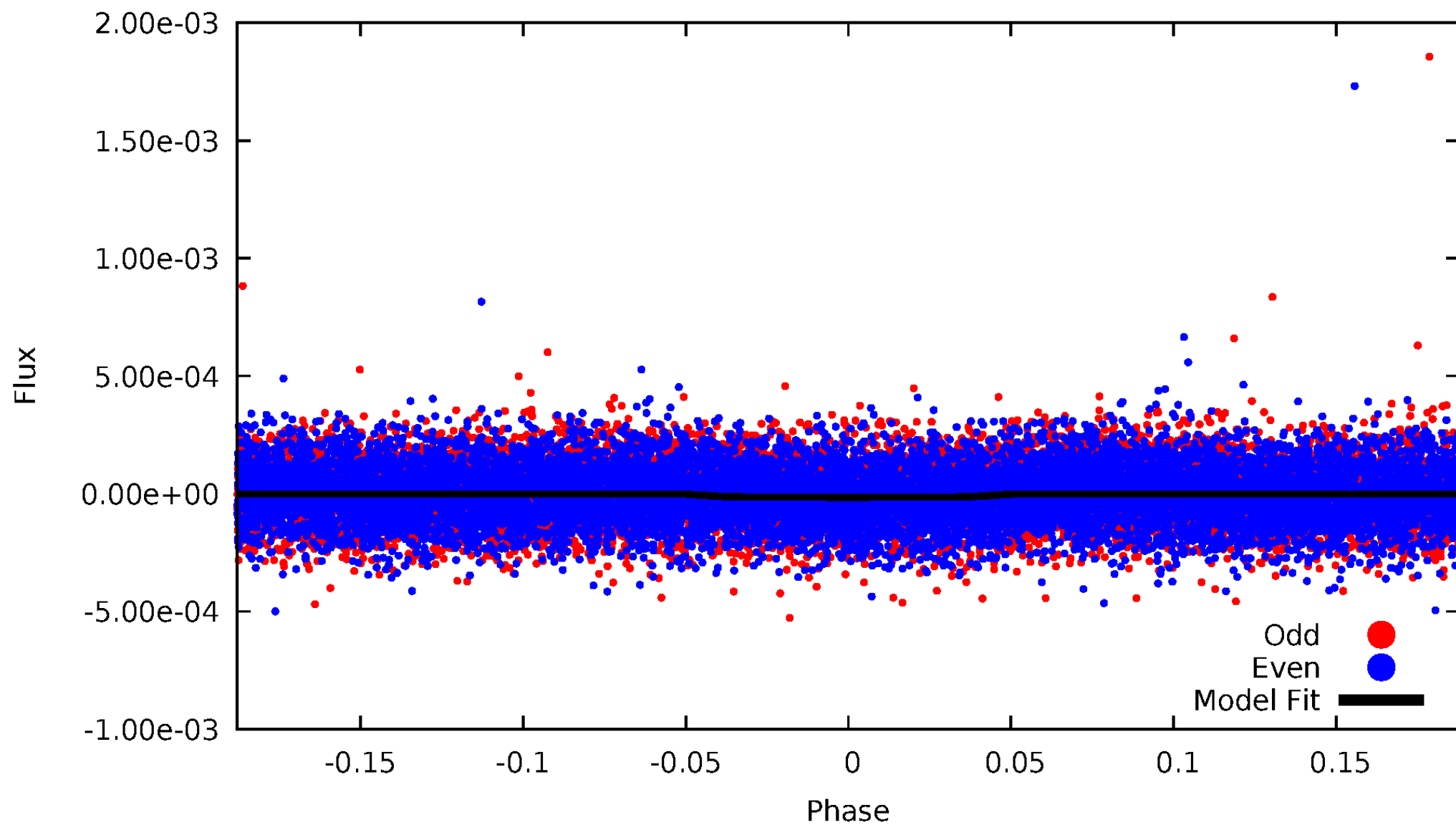


TCE 008481610-01



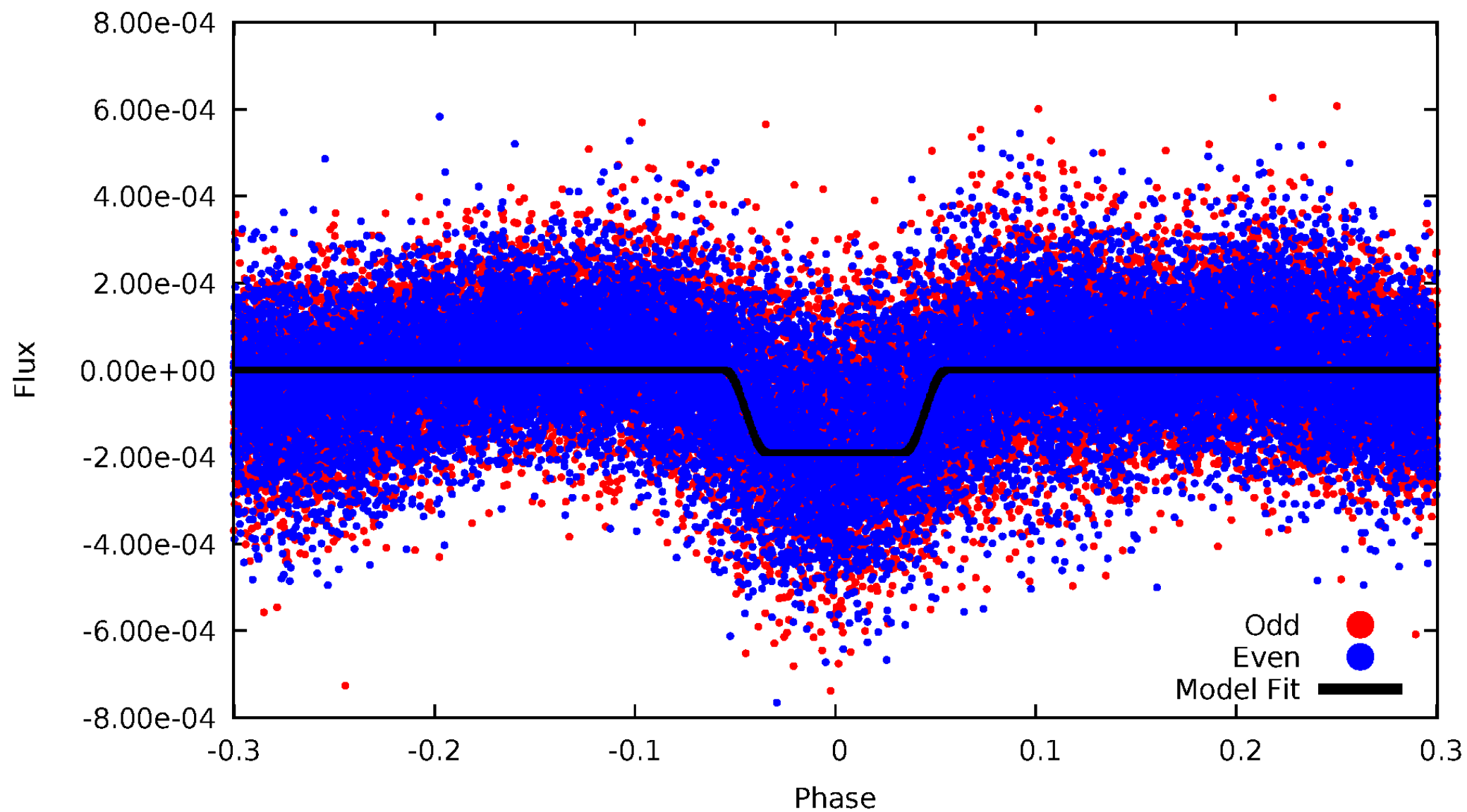
DV Odd/Even

TCE 008481610-01



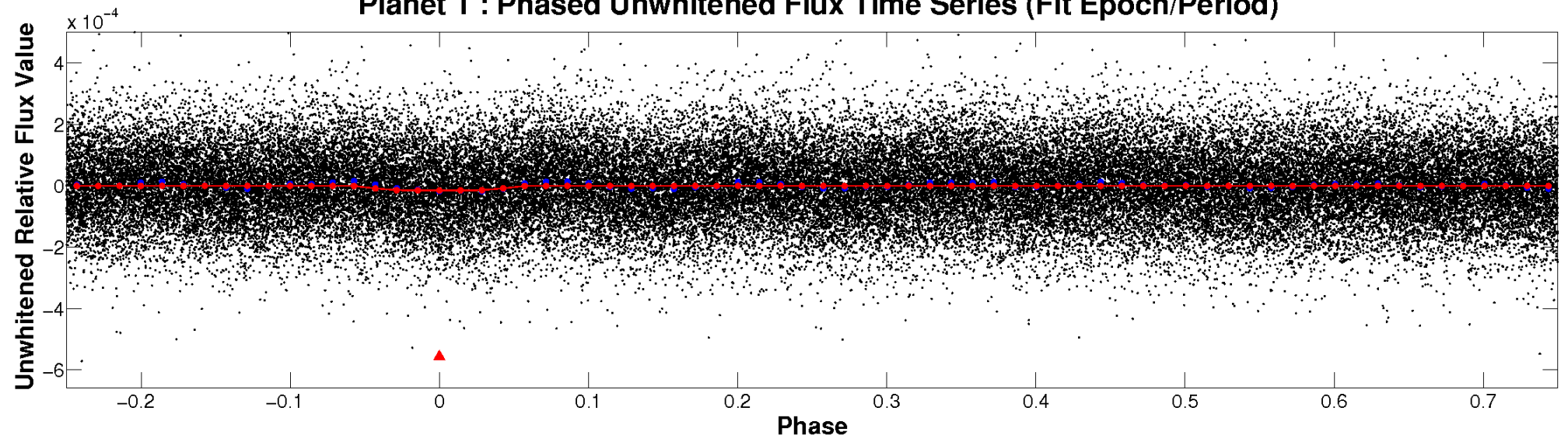
ALT Odd/Even

TCE 008481610-01

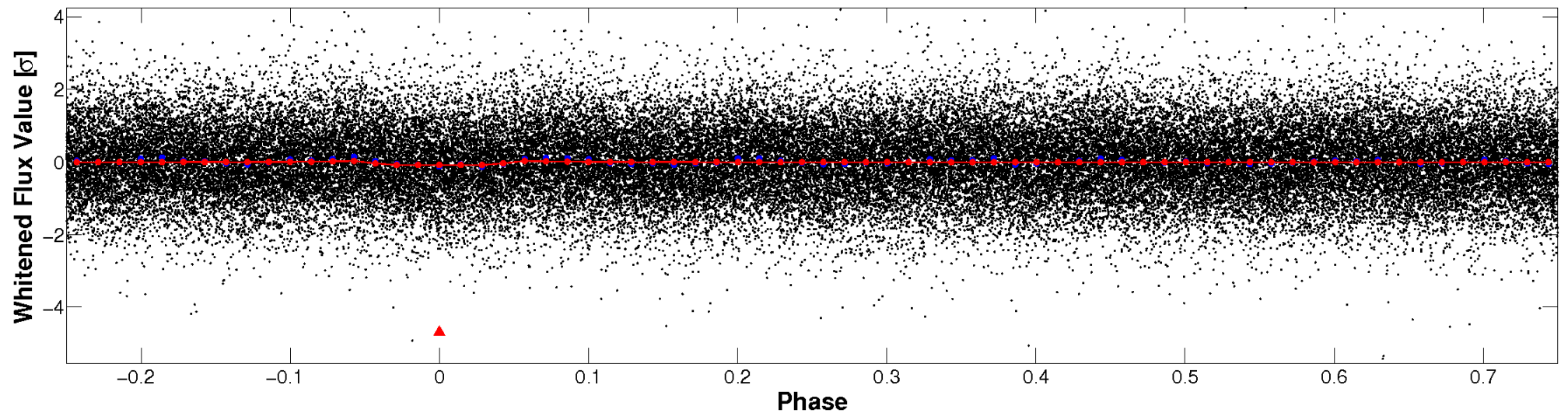


Non-Whitened Vs. Whitened Light Curve

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

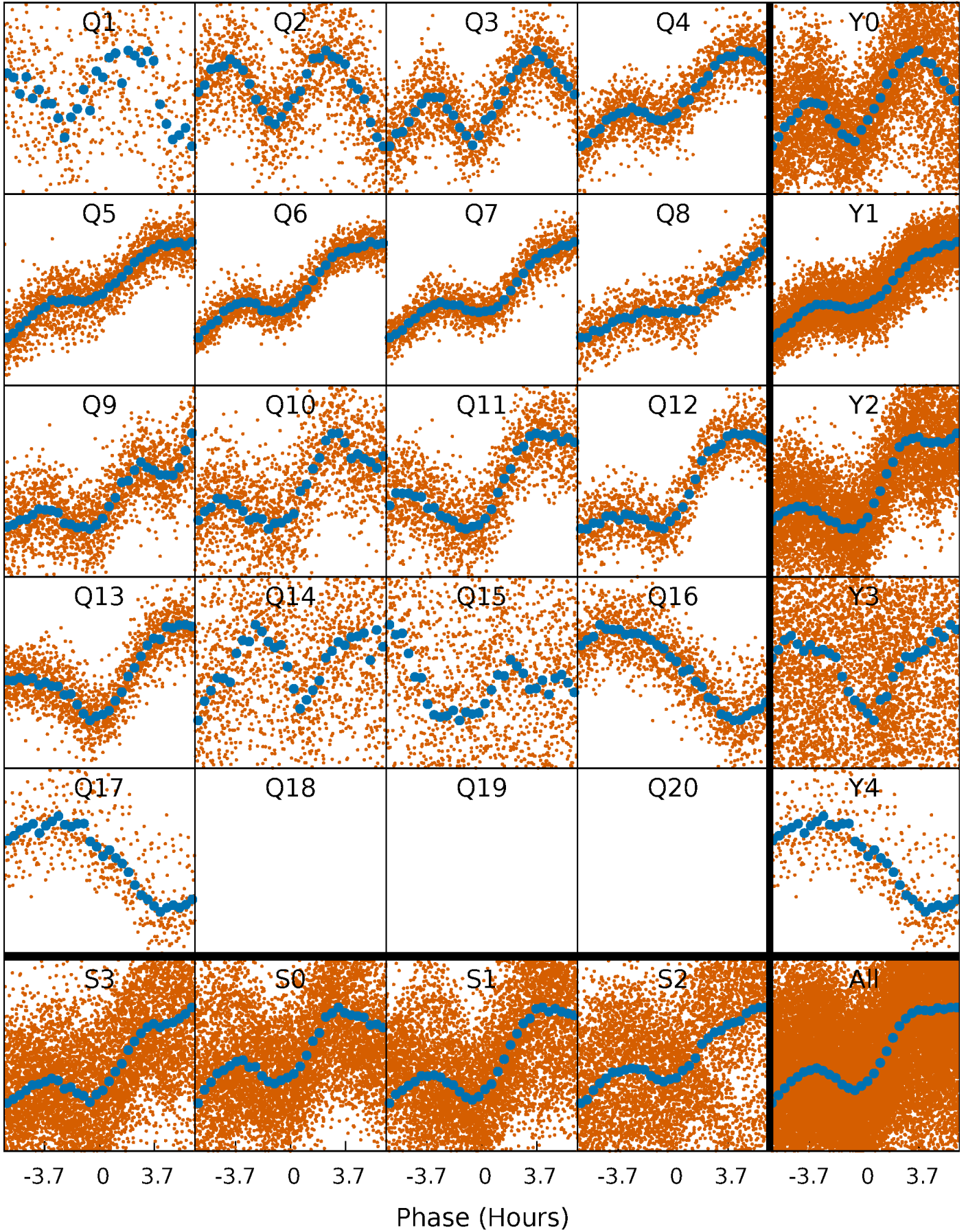


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



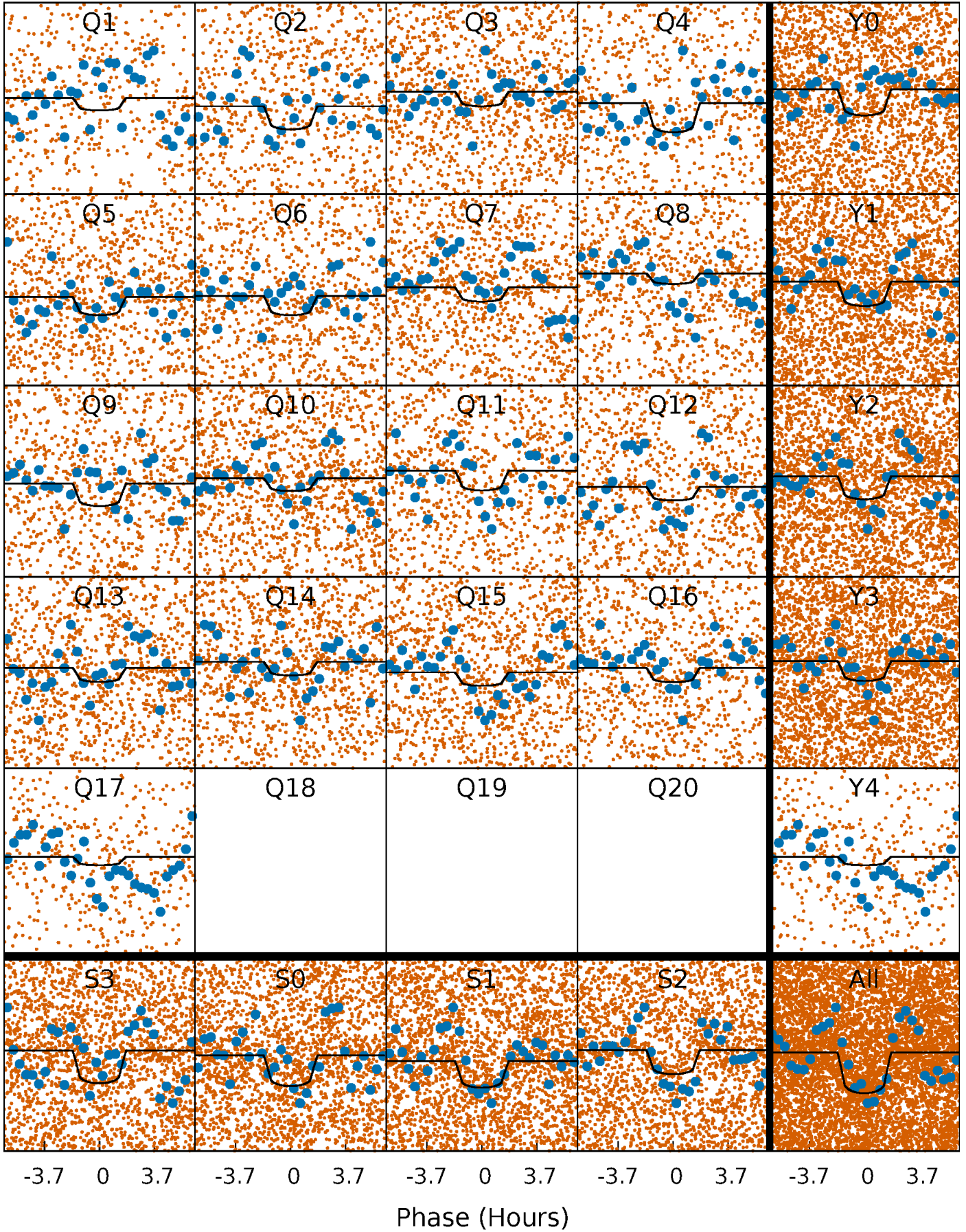
PDC Quarter-Phased Transit Curves

TCE 008481610-01 P= 1.428643 Days $T_0=132.045657$ (BKJD)



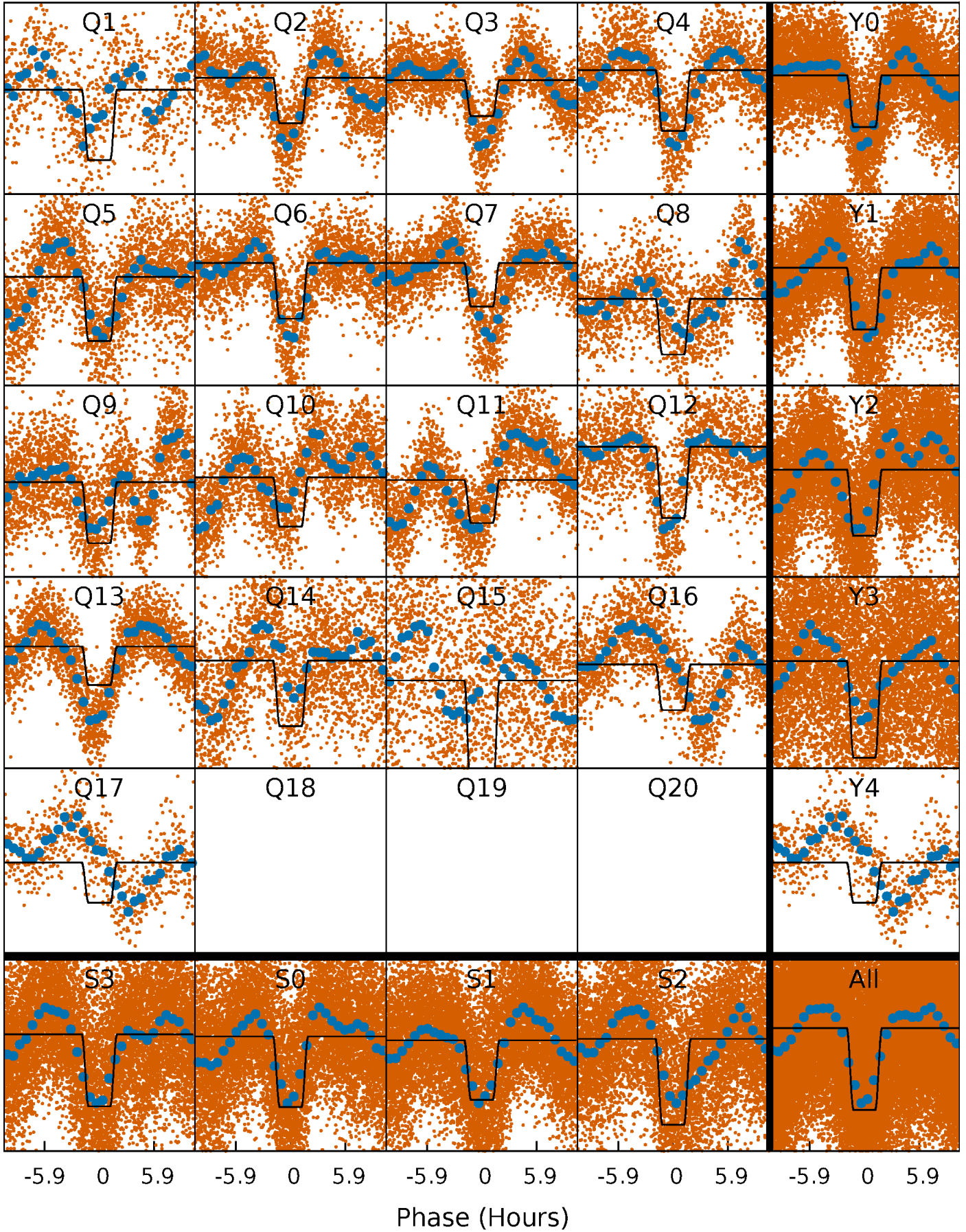
DV Quarter-Phased Transit Curves

TCE 008481610-01 P= 1.428643 Days $T_0=132.045657$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

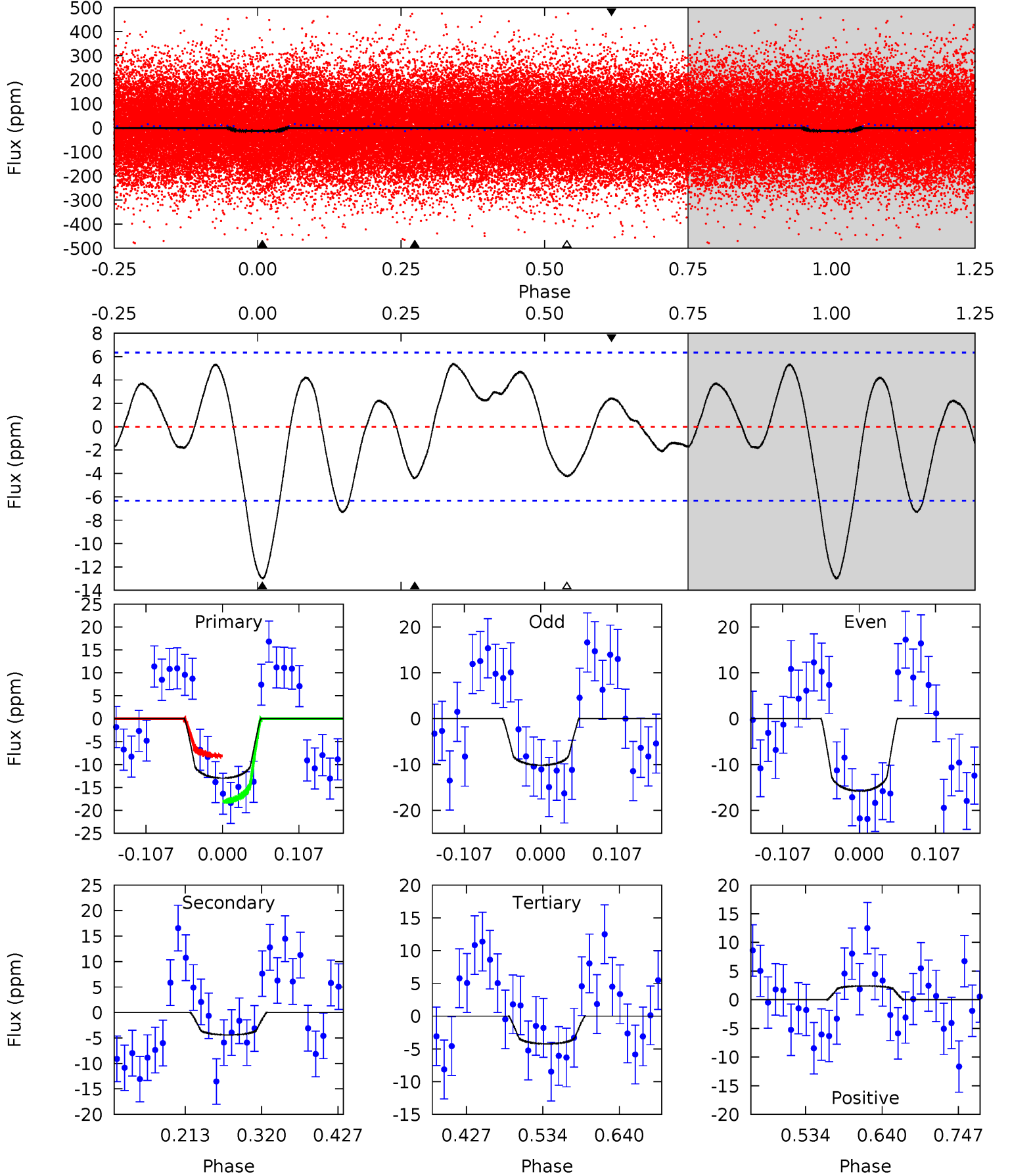
TCE 008481610-01 P= 1.428713 Days $T_0=132.012429$ (BKJD)



DV Model-Shift Uniqueness Test

008481610-01, P = 1.428643 Days, E = 130.617014 Days

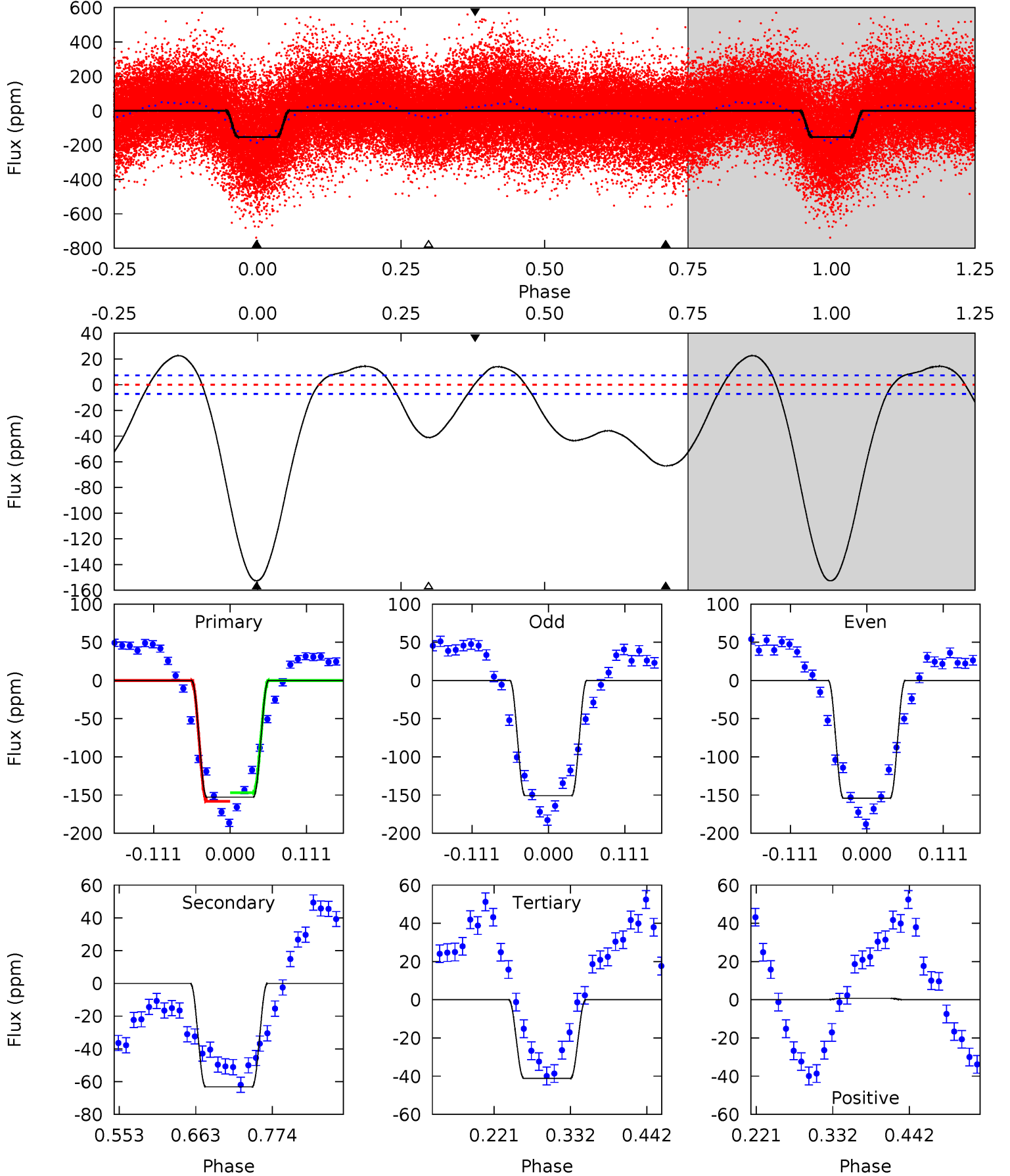
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.31	3.16	3.03	1.74	4.55	1.61	2.06	6.28	7.57	0.13	1.43	2.01	1.08	0.29	3.55



Alt Model-Shift Uniqueness Test

008481610-01, P = 1.428713 Days, E = 130.583716 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
95.9	39.7	25.9	0.49	4.54	1.60	14.1	70.1	95.4	13.8	39.2	1.09	0.96	0.13	3.59



Stellar Parameters For KIC 008481610

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7058^{+190}_{-211}	$3.546^{+0.344}_{-0.086}$	$-0.240^{+0.300}_{-0.250}$	$3.789^{+0.269}_{-1.527}$	$1.843^{+0.193}_{-0.359}$	$0.048^{+0.127}_{-0.011}$
	+3%/-3%	+10%/-2%	+125%/-104%	+7%/-40%	+10%/-19%	+267%/-22%
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 008481610-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 1	$1.69^{+0.47}_{-0.53}$	4775^{+246}_{-363}	4515^{+1008}_{-898}	$0.789^{+0.899}_{-0.354}$
Alt.	-63 ± 2	$5.54^{+0.72}_{-1.13}$	4788^{+229}_{-457}	5002^{+268}_{-271}	$1.067^{+0.530}_{-0.228}$

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 $A_{obs} \gg 1.0$

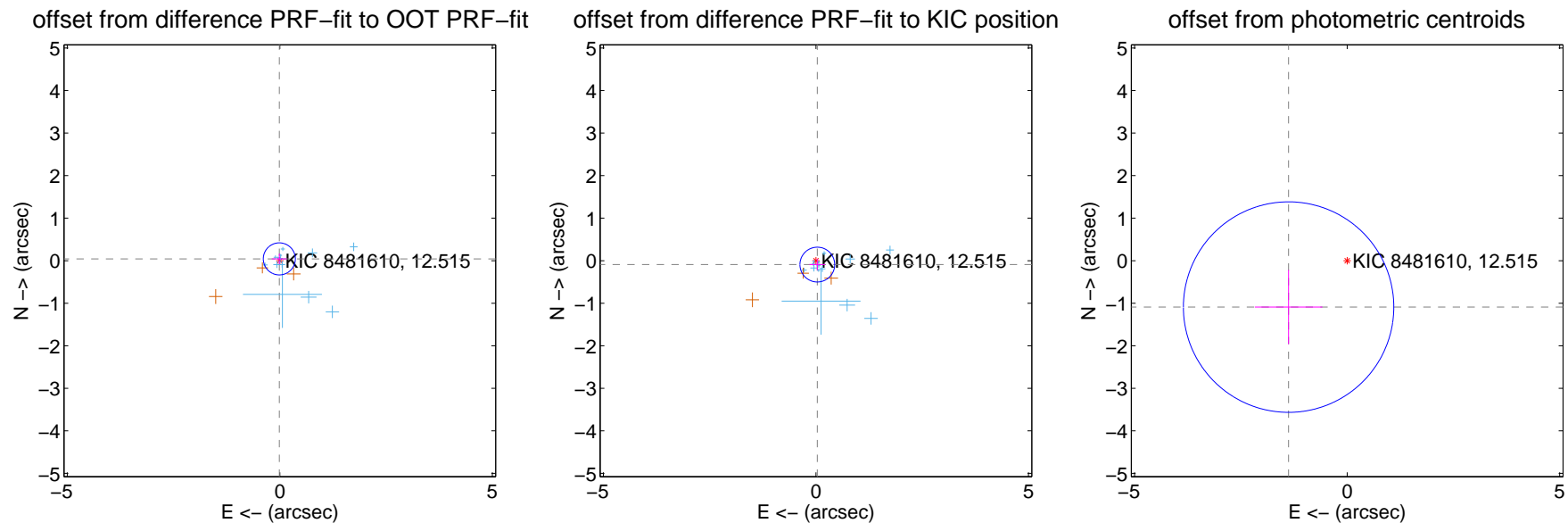
DV Centroid Data

Supplemental centroid analysis for 008481610-01. Kepler magnitude: 12.52. Transit SNR 6.08

There are 14 quarters with good PRF difference image offsets

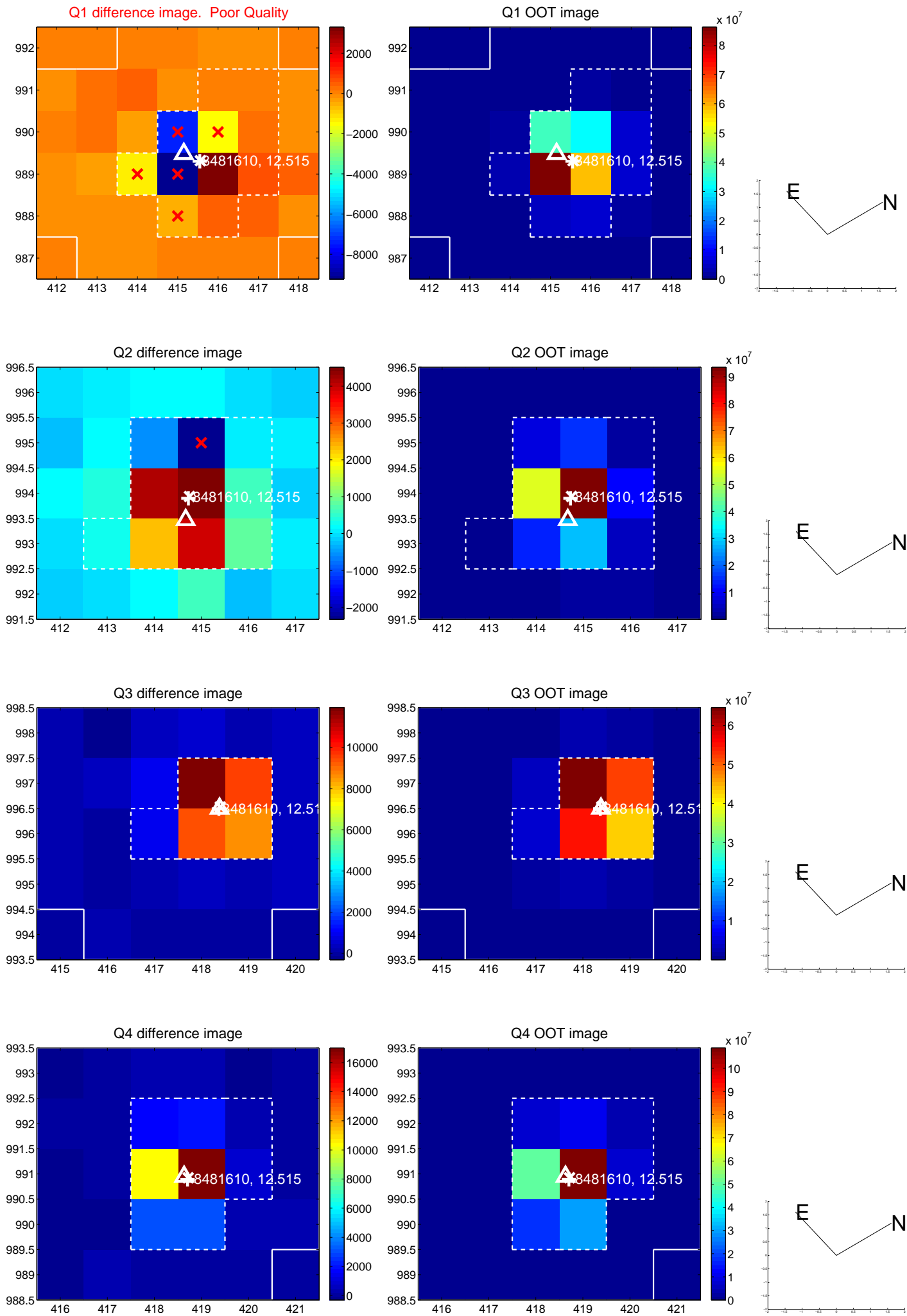
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.044 ± 0.126	0.35	0.011 ± 0.177	0.043 ± 0.125
PRF-fit source offset from KIC position	0.097 ± 0.136	0.71	-0.033 ± 0.186	-0.091 ± 0.130
photometric centroid source offset	1.76 ± 0.83	2.13	1.38 ± 0.79	-1.09 ± 0.87

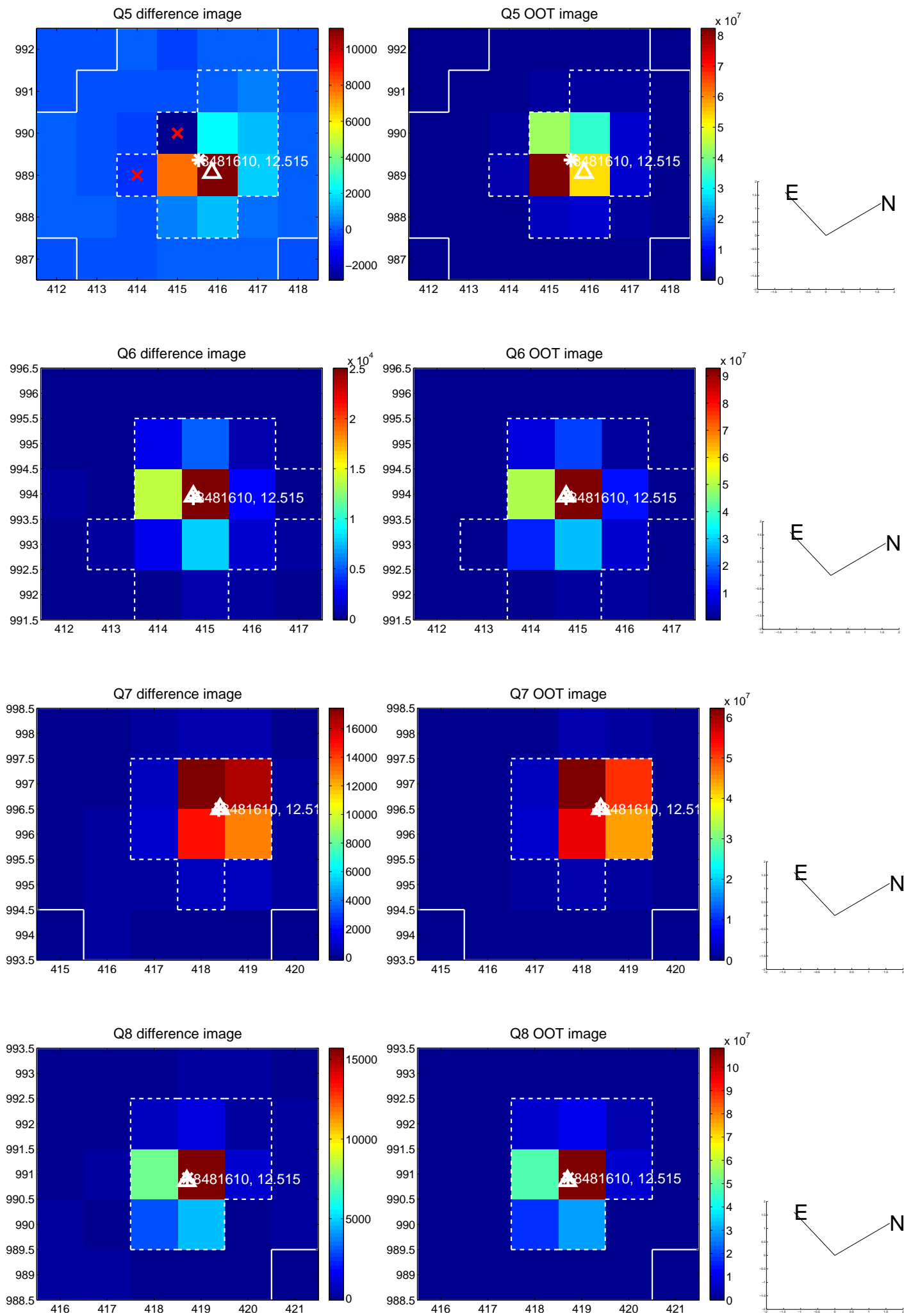


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

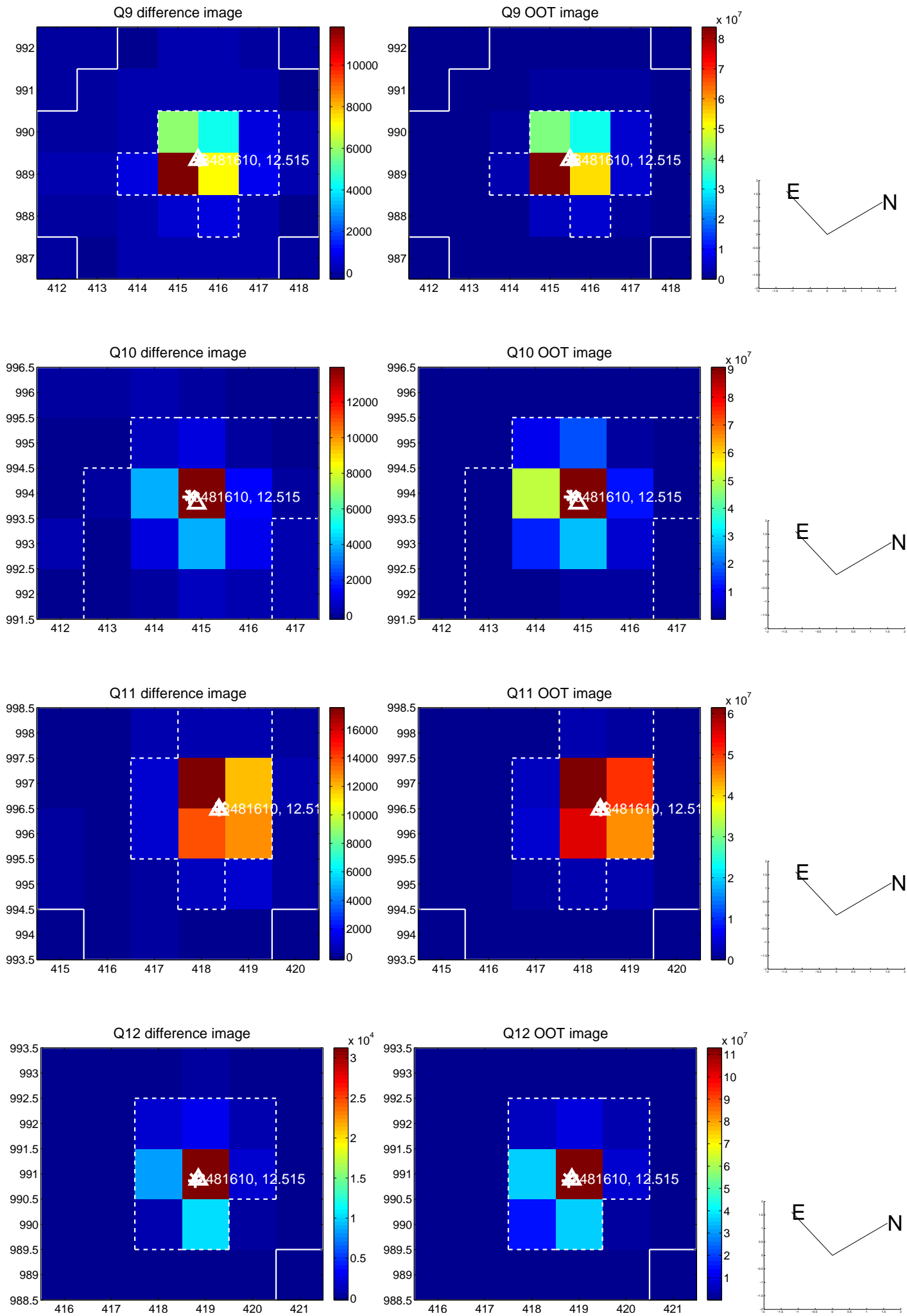
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



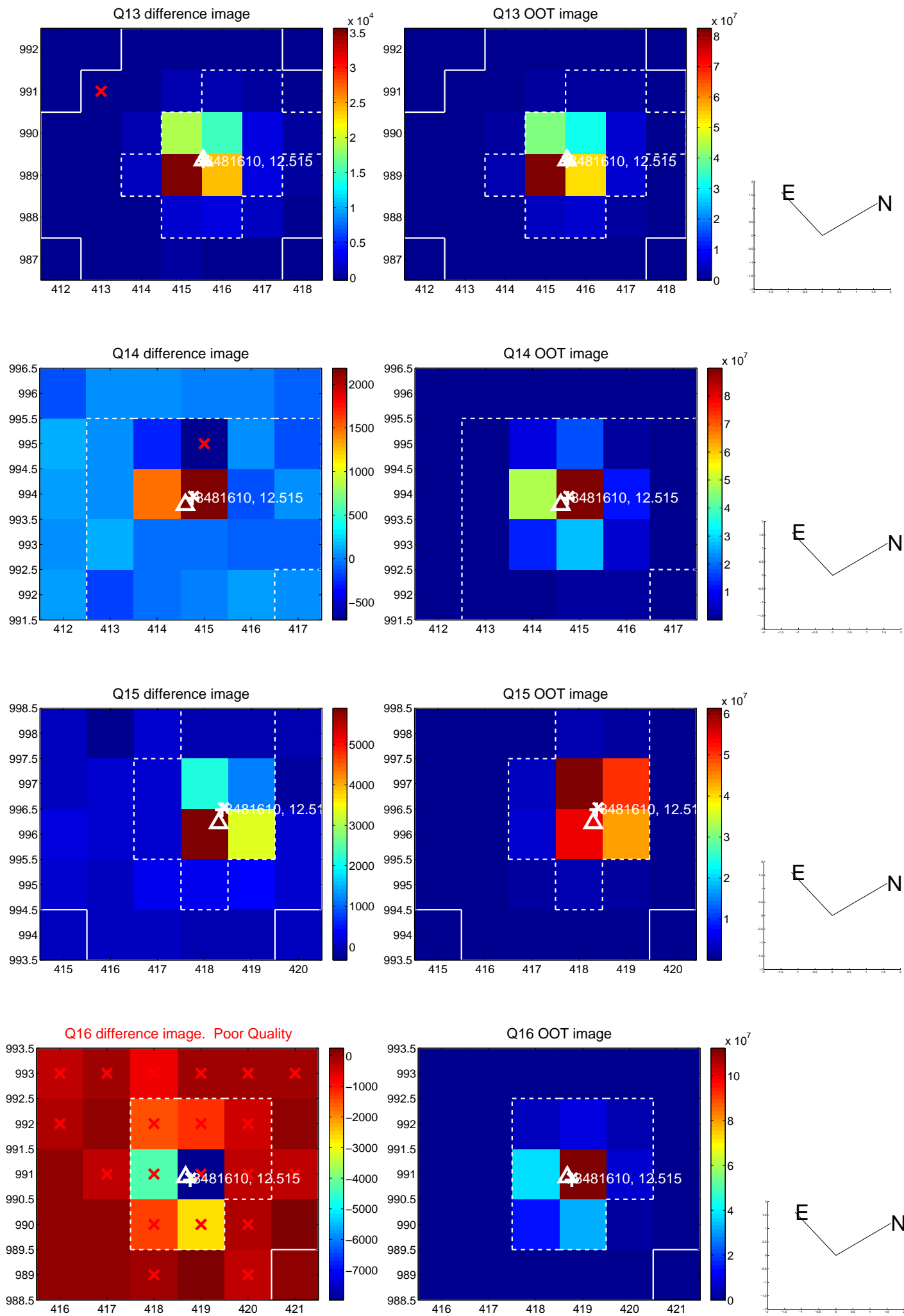
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



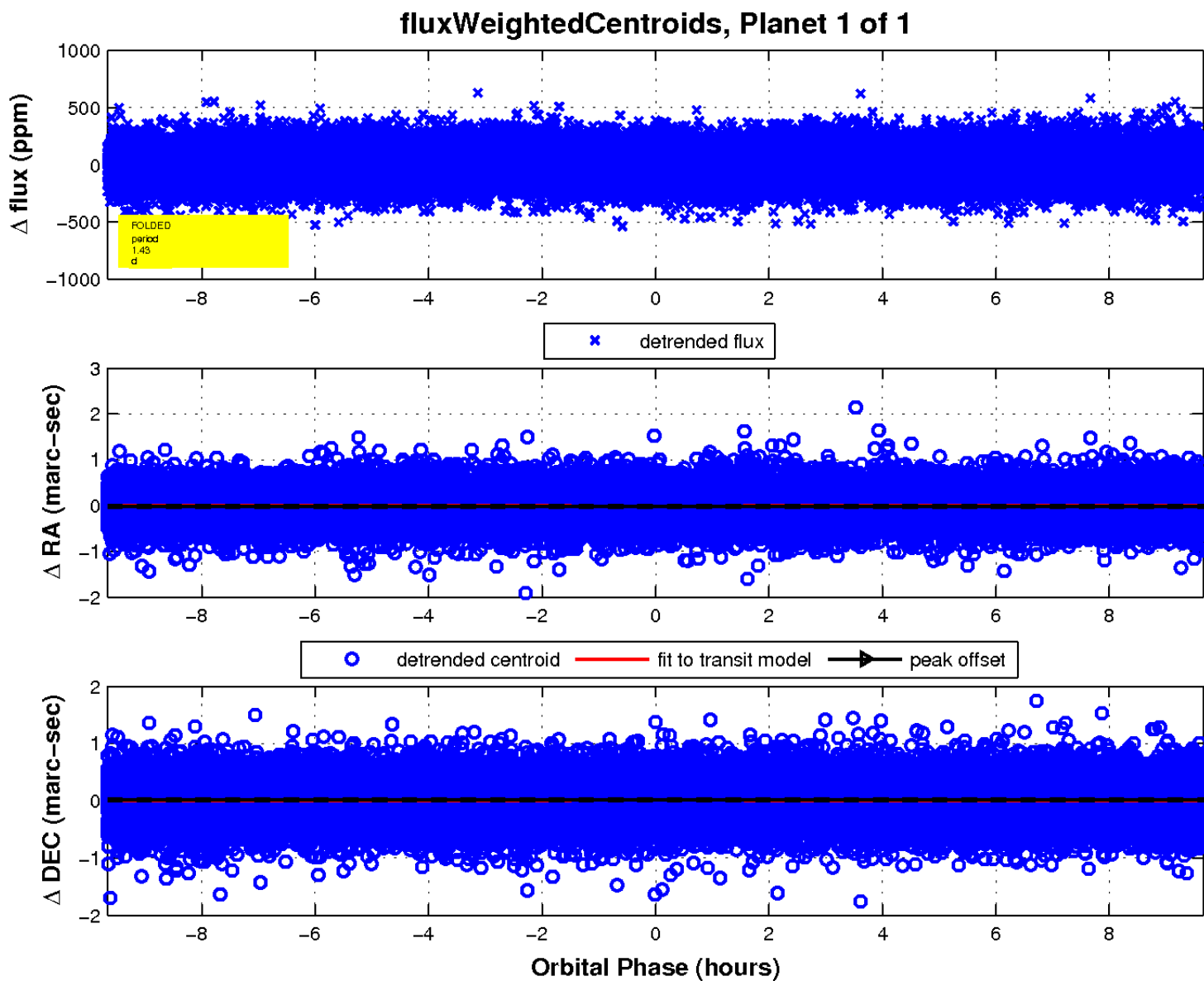
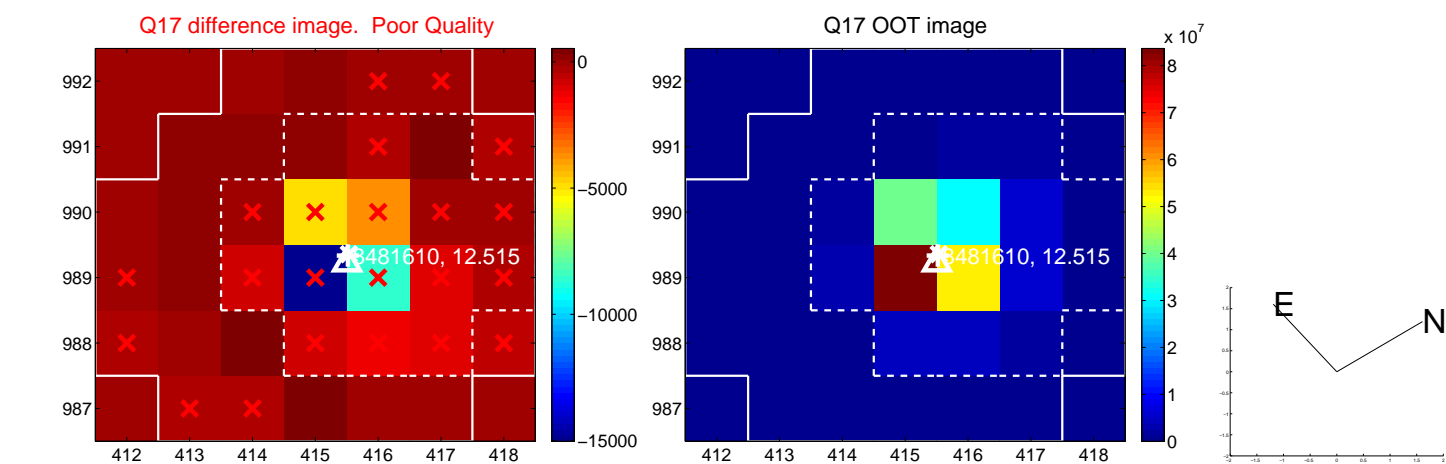
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

