

KIC 005253802

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})
005253802-01	OBS	4713.01	8.796455	134.310709	98.8	4.279	9.1	10.4	1.00	5780	1.17	143.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005253802-01	OBS	PC	0.82	0	0	0	0	NO_COMMENT

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

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

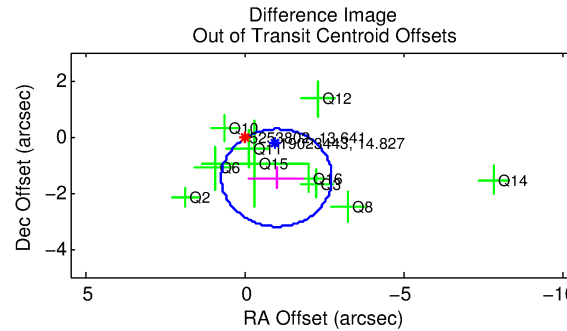
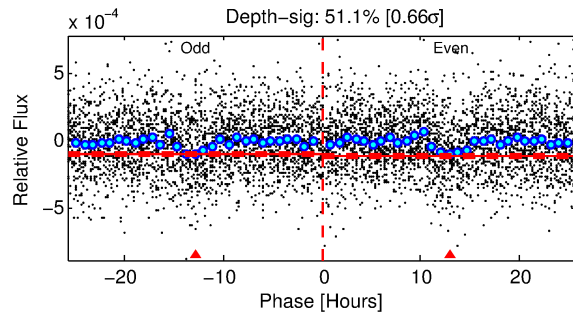
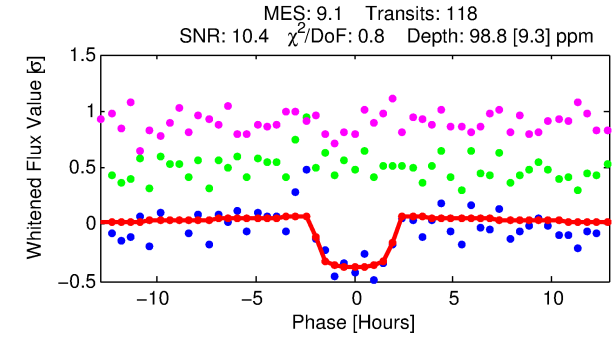
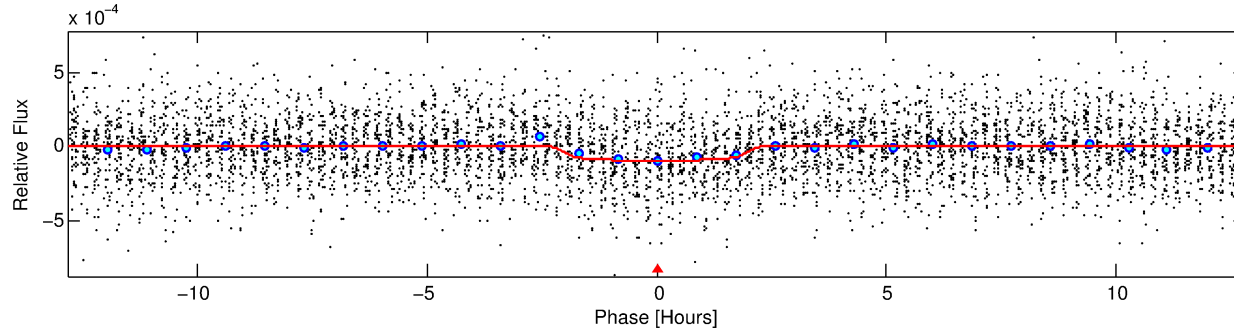
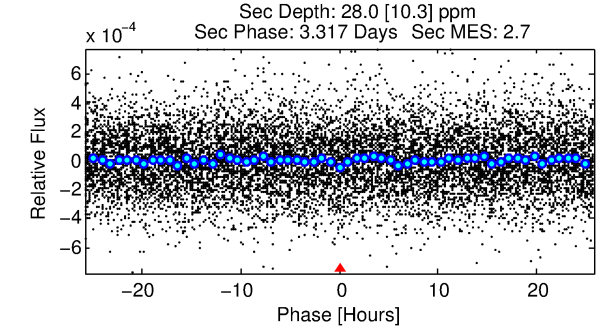
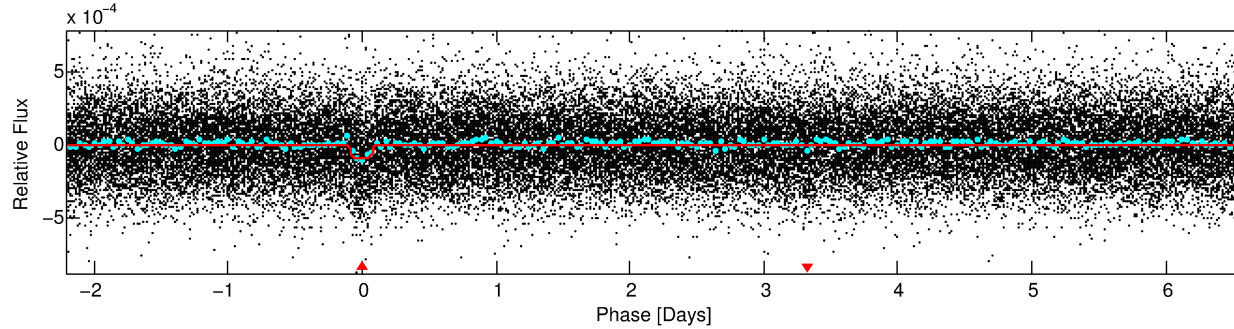
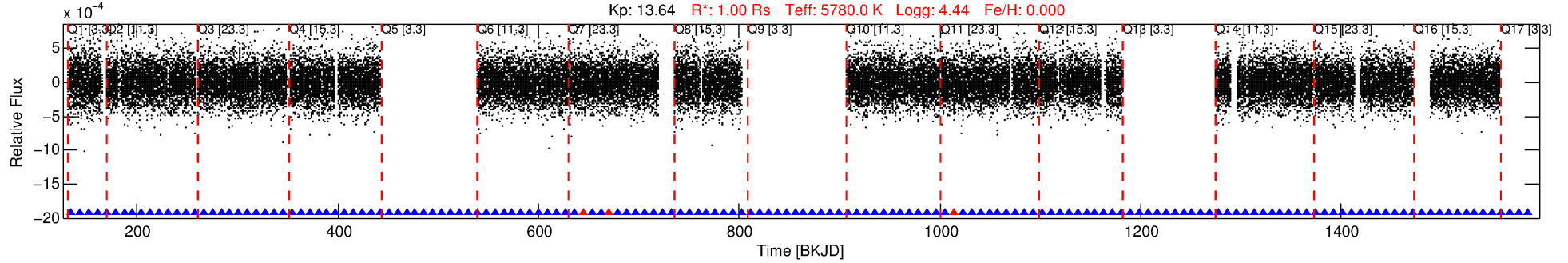
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005253802-01

No Significant Match Found

DV One-Page Summary

KIC: 5253802 Candidate: 1 of 1 Period: 8.796 d
KOI: K04713.01 Corr: 0.903



DV Fit Results:

Period = 8.79646 [0.00007] d
Epoch = 134.3107 [0.0066] BKJD
Rp/R* = 0.0107 [0.0049]
a/R* = 7.62 [16.35]
b = 0.89 [0.53]
Seff = 143.72 [0.00]
Teq = 883 [0] K
Rp = 1.17 [0.53] Re
a = 0.0834 [0.0000] AU
Ag = 78.54 [77.40] [1.00σ]
Teffp = 4064 [1001] K [3.18σ]

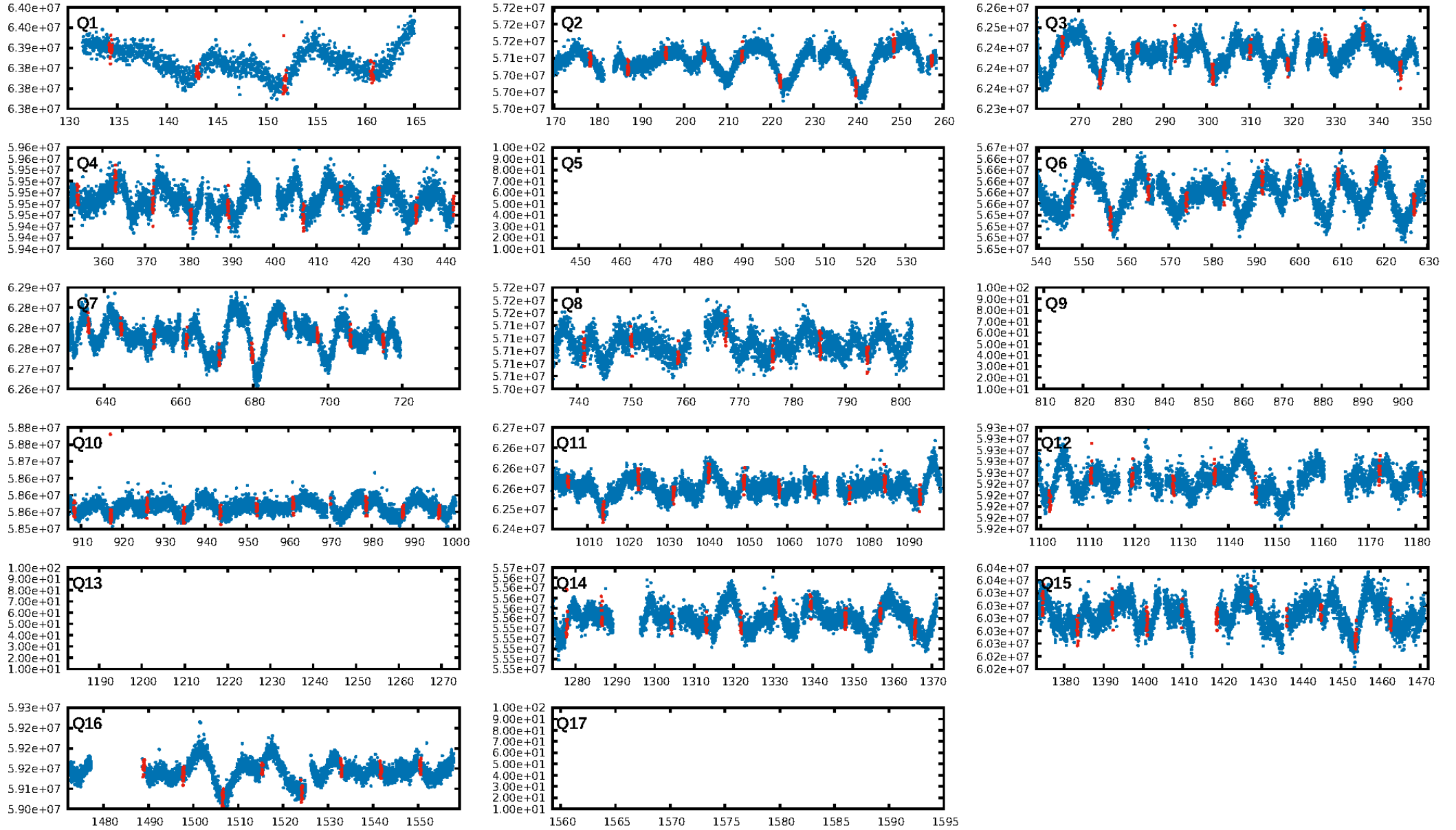
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.58e-19
RollingBand-fgt: 0.97 [111/114]
GhostDiagnostic-chr: 1.557
Centroid-sig: 15.9%
Centroid-so: 1.212 arcsec [1.05σ]
OotOffset-rm: 1.771 arcsec [3.06σ]
KicOffset-rm: 1.637 arcsec [2.62σ]
OotOffset-st: 4/3/3/0 [10]
KicOffset-st: 4/3/3/0 [10]
DiffImageQuality-fgm: 0.80 [8/10]
DiffImageOverlap-fno: 1.00 [13/13]

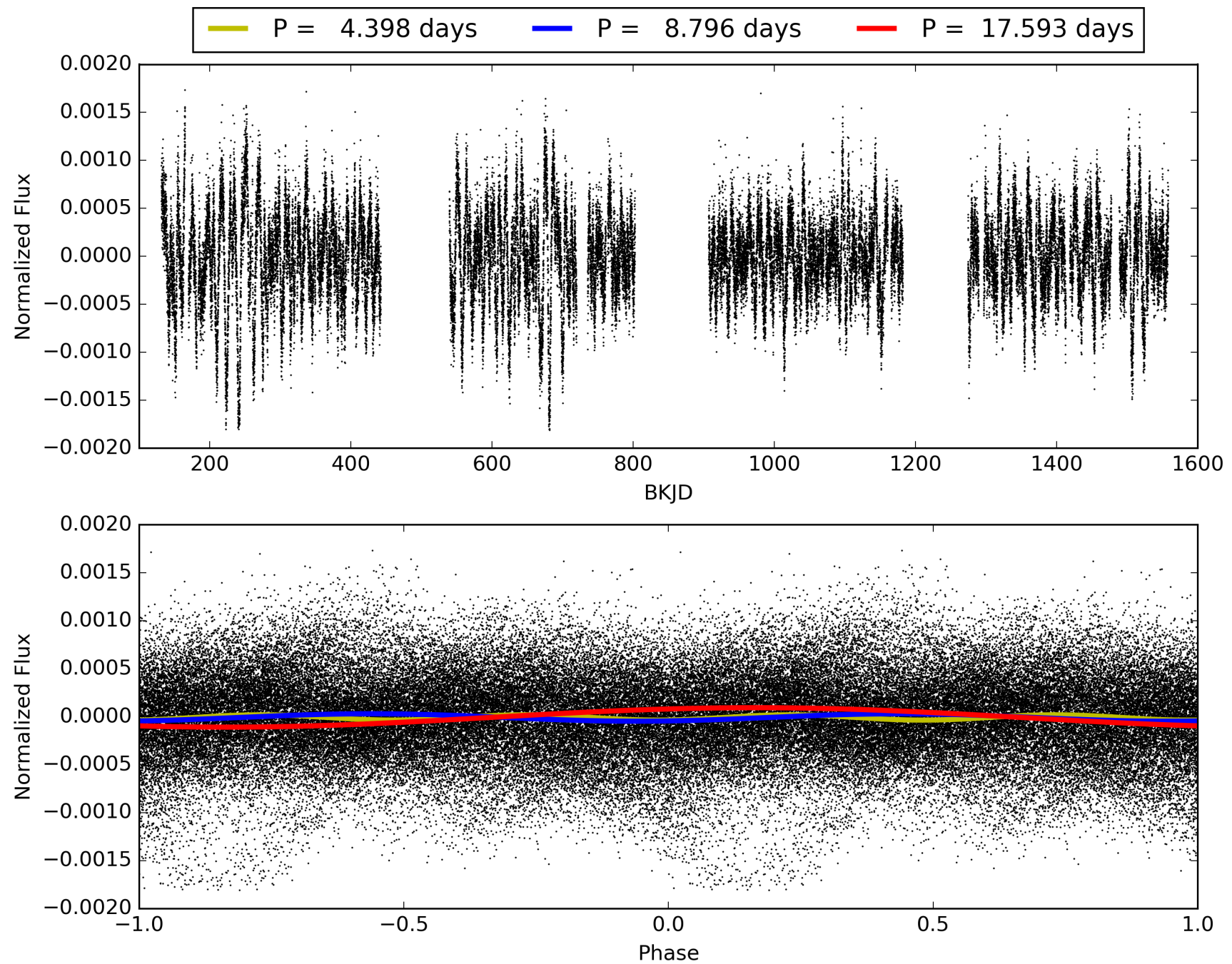
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:37:10 Z

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

TCE 005253802-01, PDC Light Curves

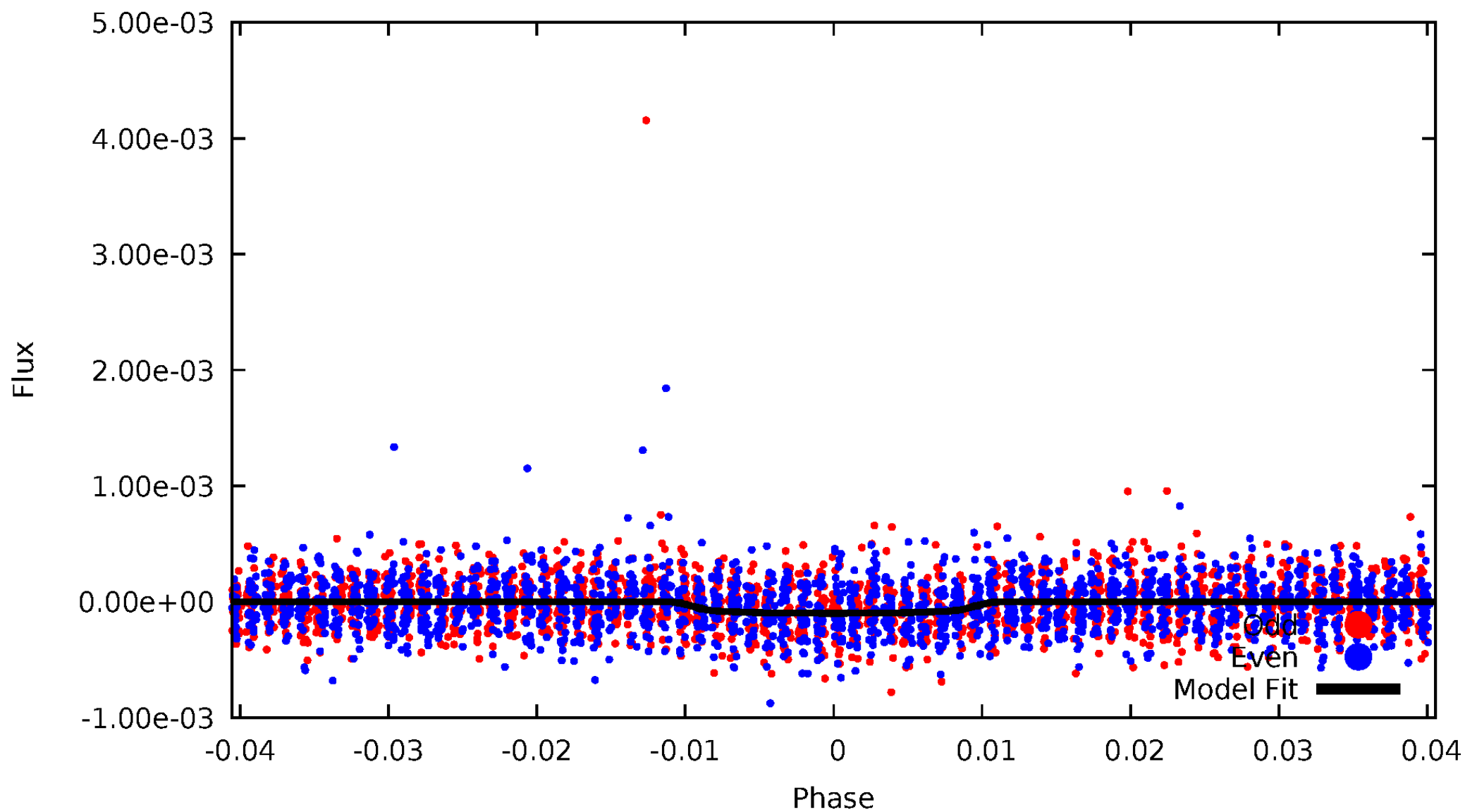


TCE 005253802-01



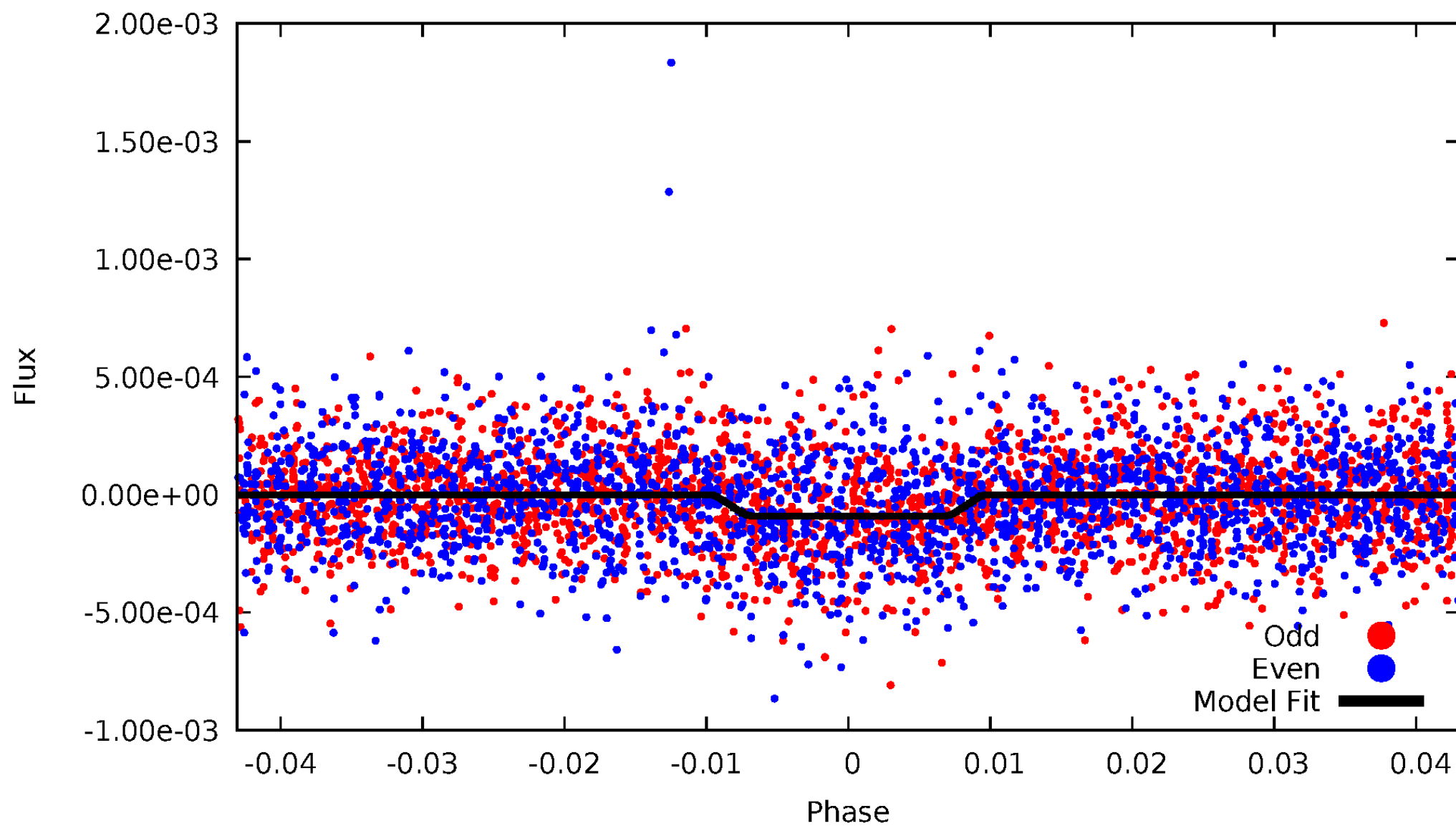
DV Odd/Even

TCE 005253802-01



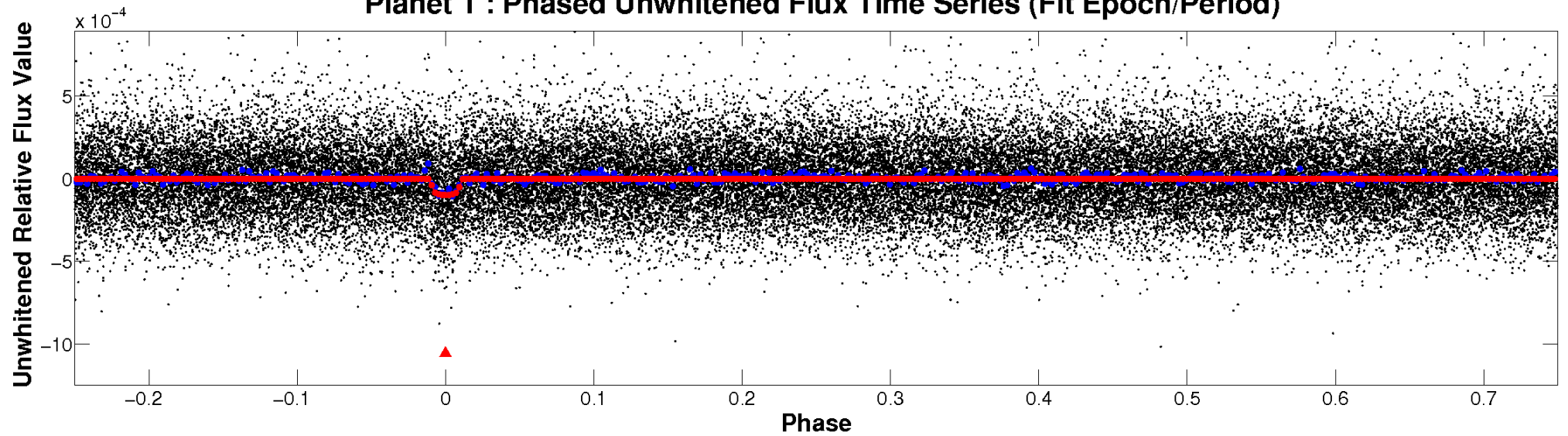
ALT Odd/Even

TCE 005253802-01

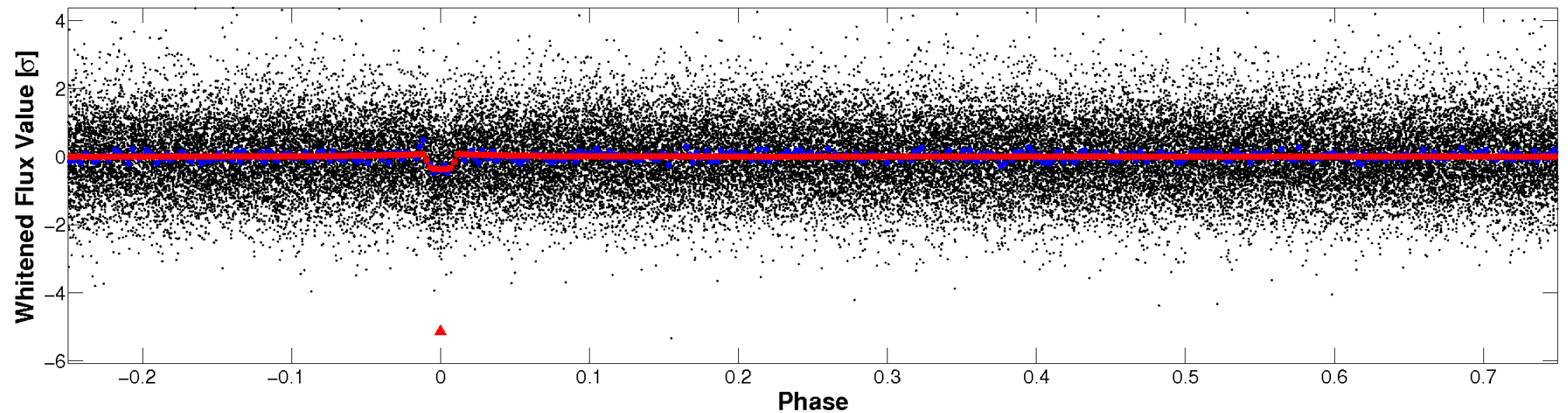


Non-Whitened Vs. Whitened Light Curve

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

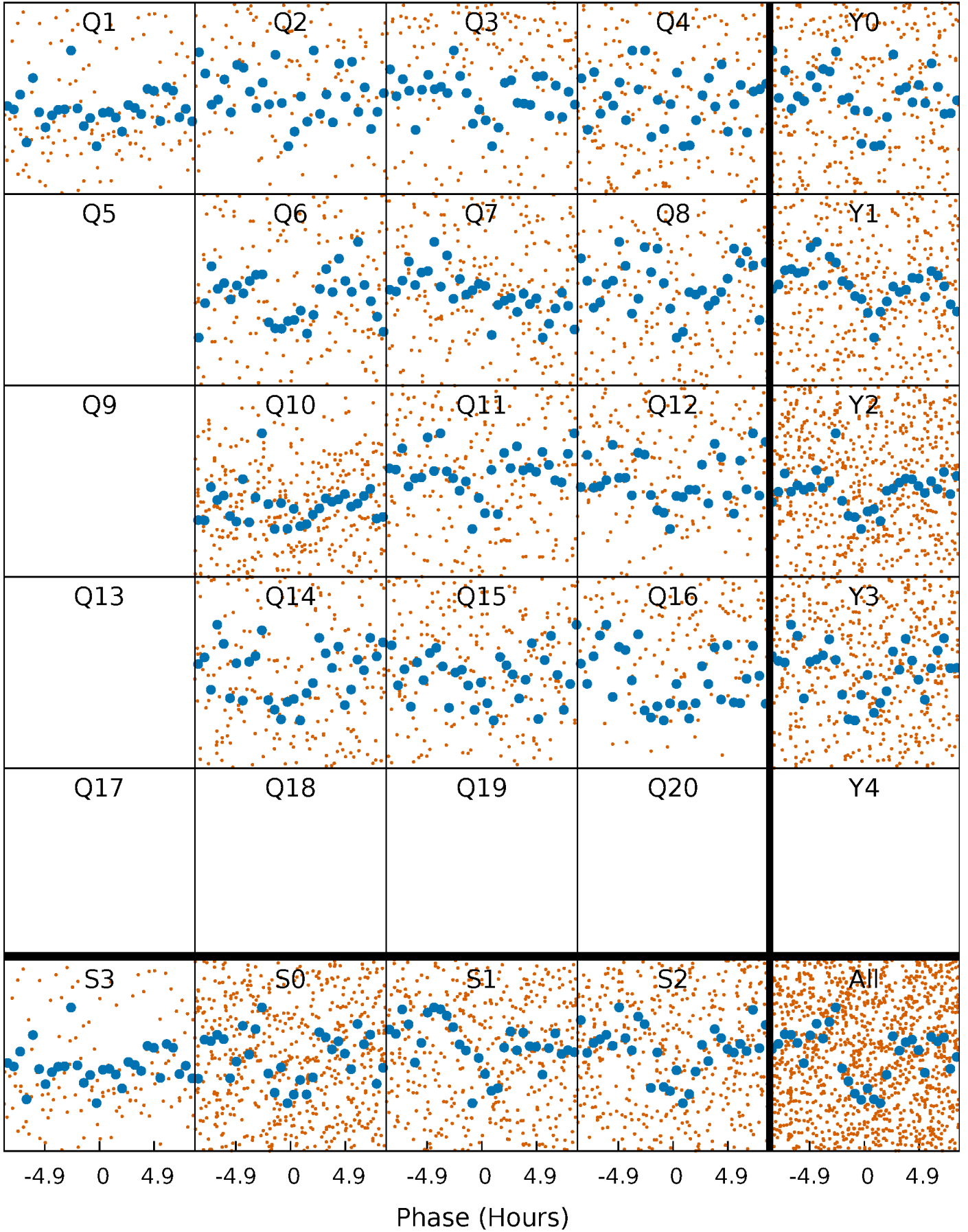


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



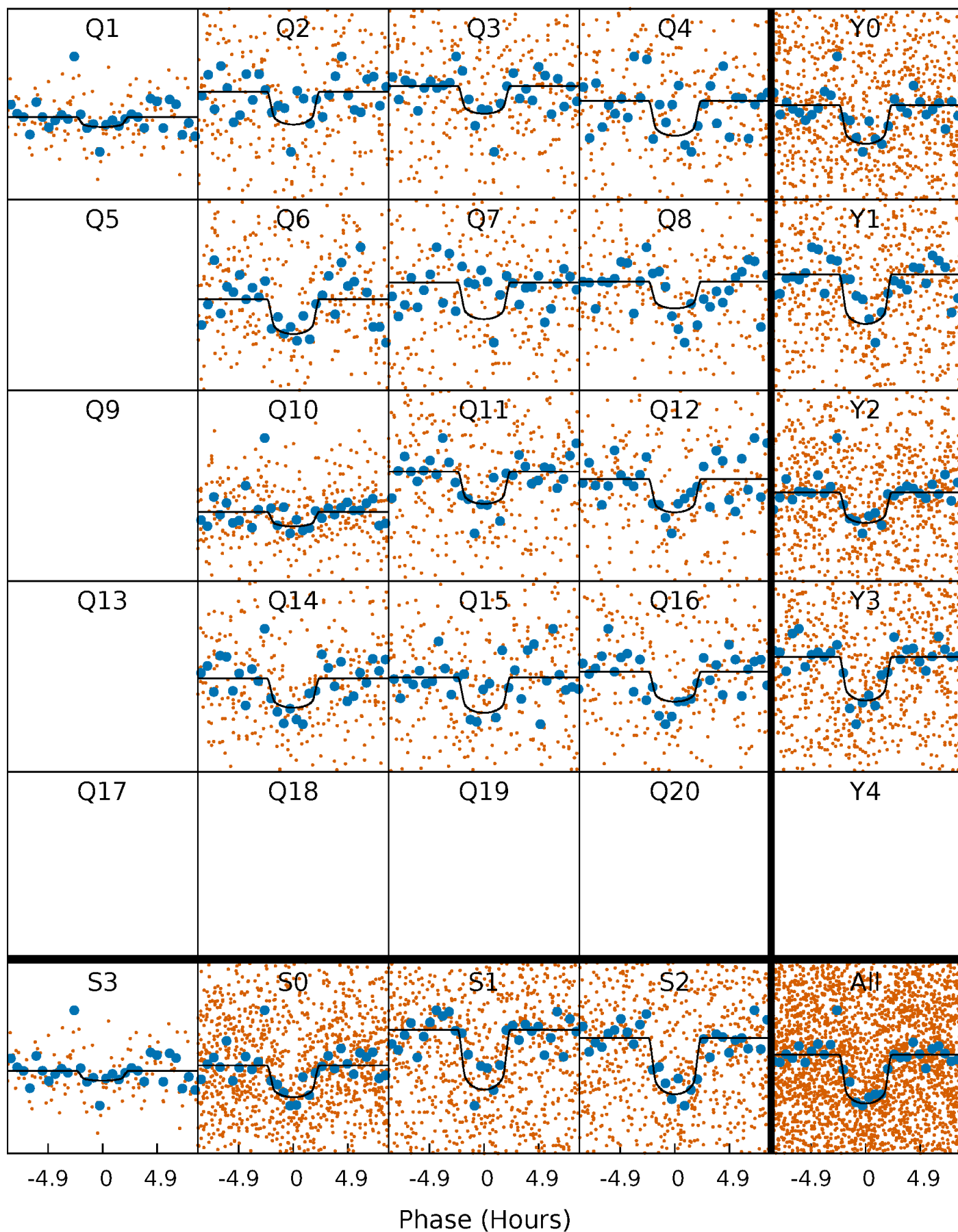
PDC Quarter-Phased Transit Curves

TCE 005253802-01 P= 8.796455 Days $T_0=134.310709$ (BKJD)



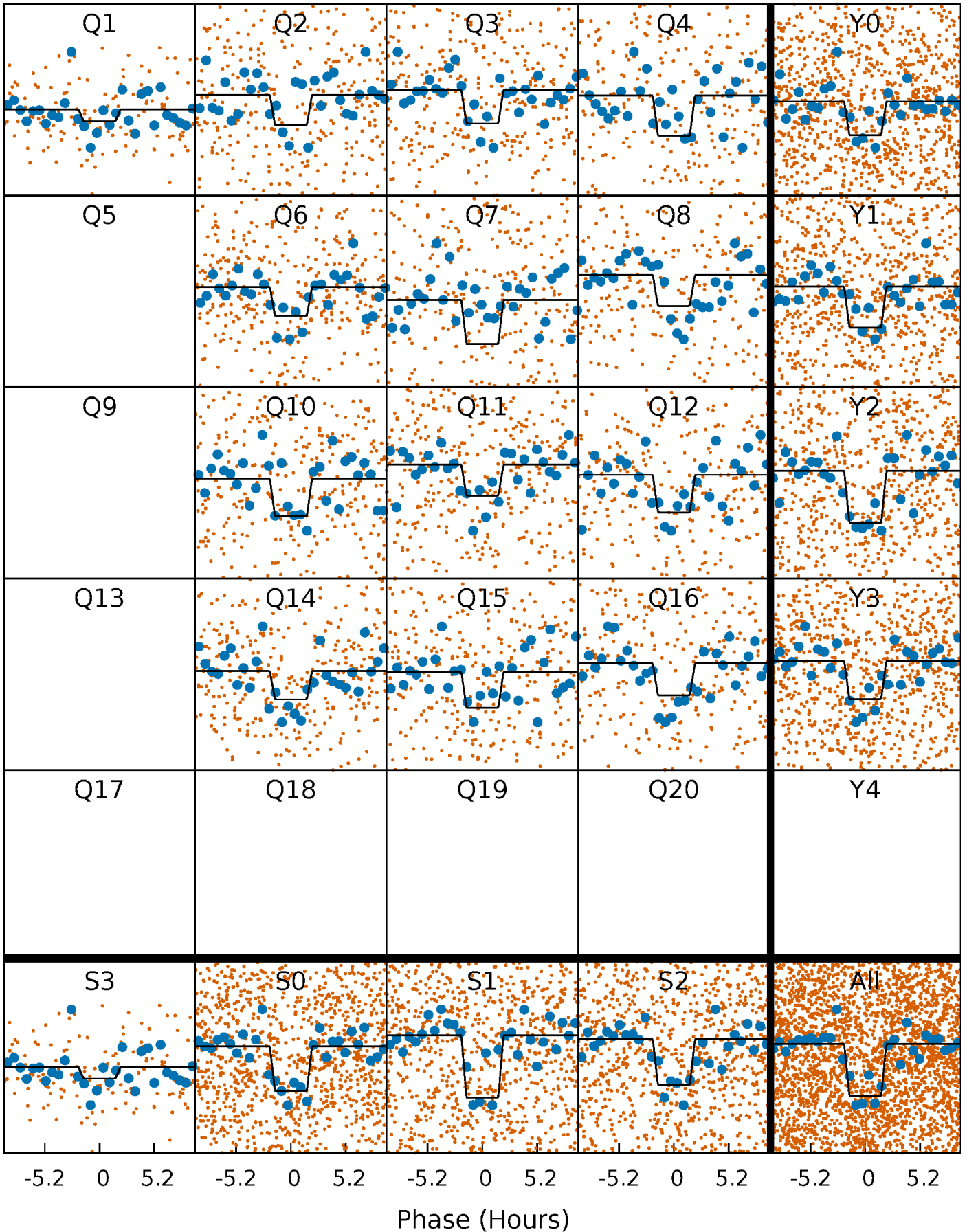
DV Quarter-Phased Transit Curves

TCE 005253802-01 P= 8.796455 Days $T_0=134.310709$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

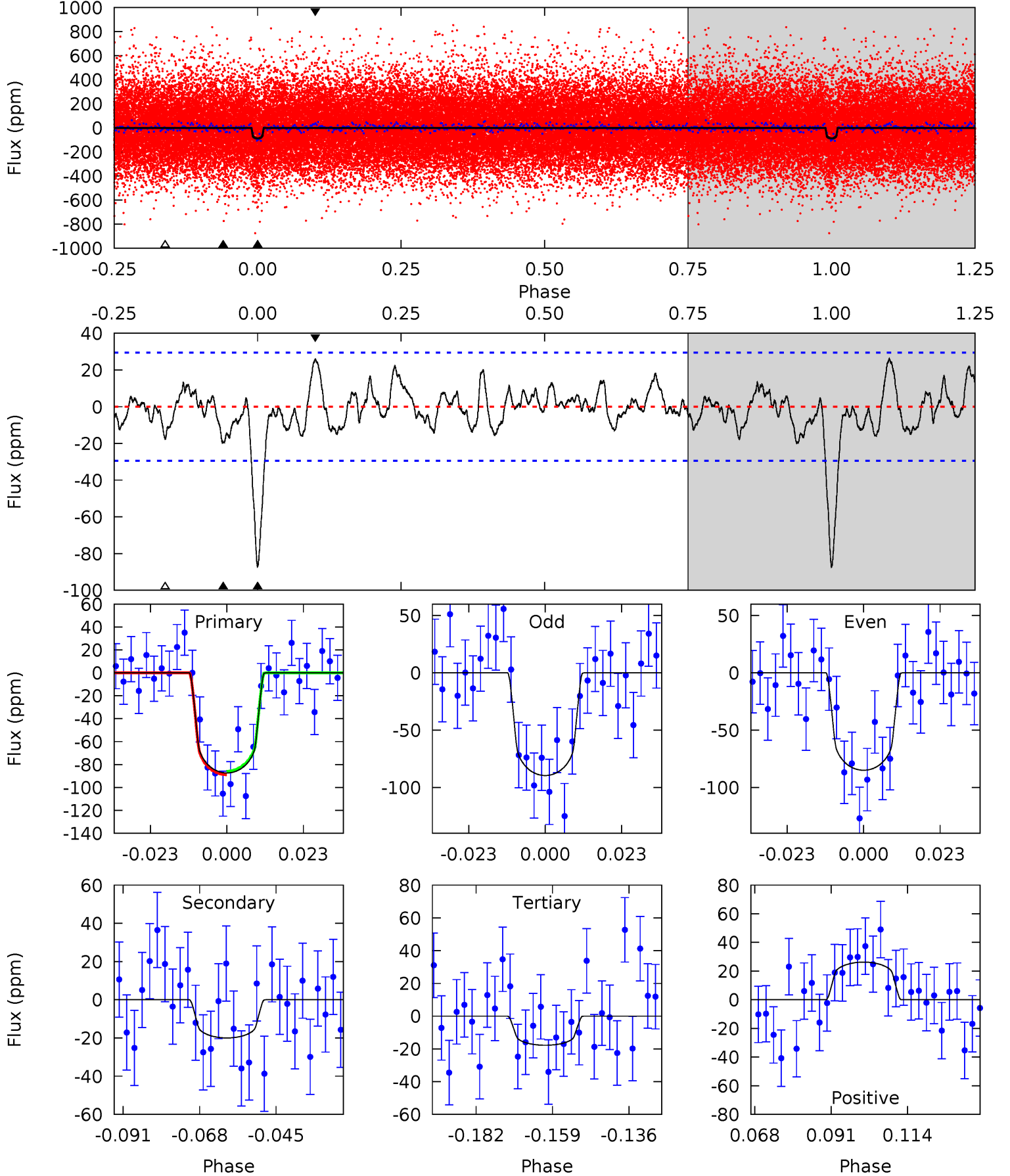
TCE 005253802-01 P= 8.796359 Days $T_0=134.321244$ (BKJD)



DV Model-Shift Uniqueness Test

005253802-01, P = 8.796455 Days, E = 125.514254 Days

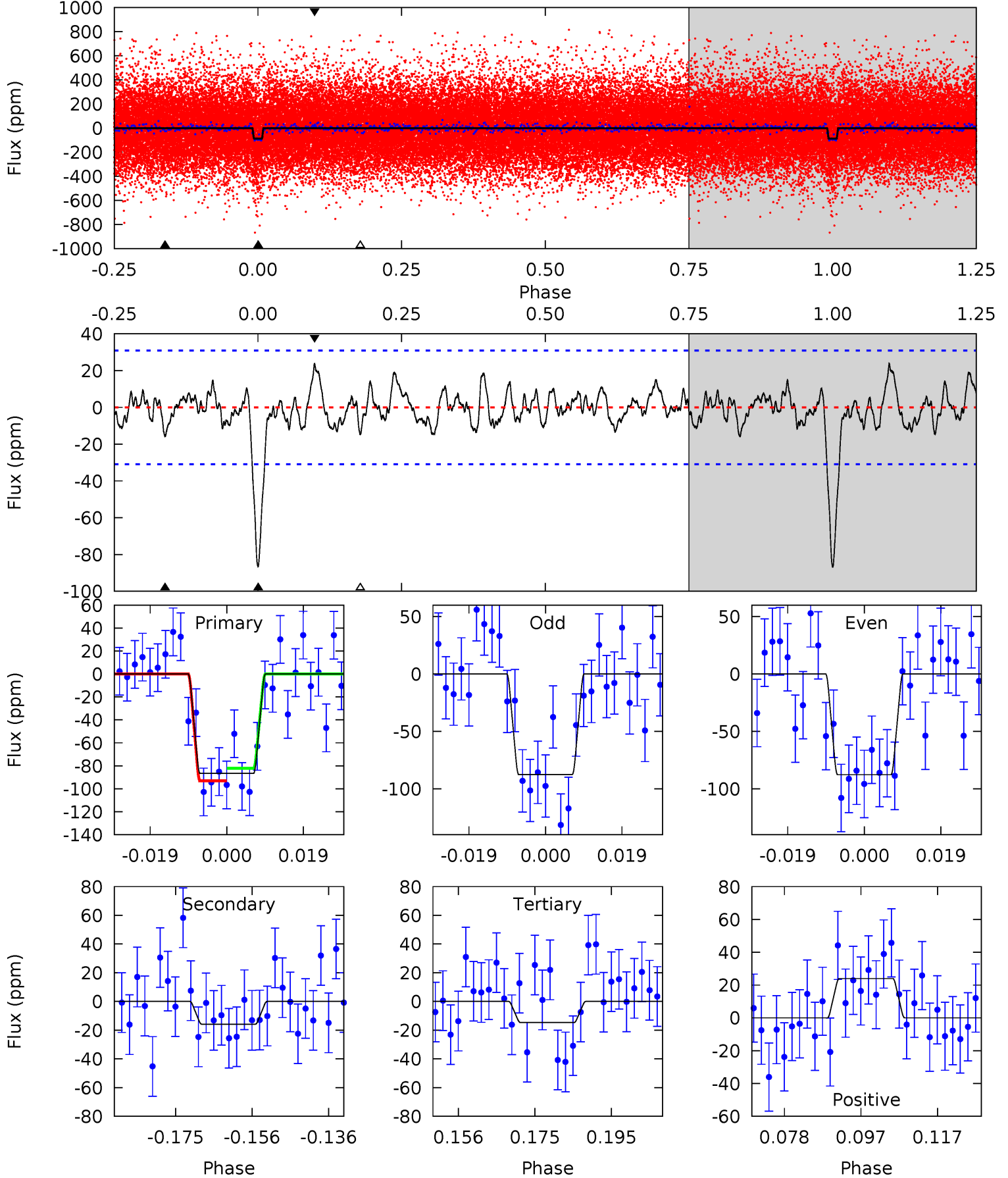
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	3.30	2.93	4.33	4.87	2.28	1.37	11.5	10.1	0.37	-1.03	0.38	0.95	0.23	0.25



Alt Model-Shift Uniqueness Test

005253802-01, P = 8.796359 Days, E = 125.524885 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	2.51	2.32	3.80	4.90	2.34	1.14	11.4	9.93	0.18	-1.29	0.01	0.98	0.22	0.86



Stellar Parameters For KIC 005253802

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 005253802-01 / KOI 4713.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-20 ± 6	$1.17^{+0.55}_{-0.52}$	1236^{+59}_{-59}	4032^{+992}_{-545}	54^{+111}_{-30}
Alt.	-16 ± 6	$1.04^{+0.51}_{-0.52}$	1232^{+61}_{-58}	4035^{+1339}_{-625}	57^{+182}_{-37}

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

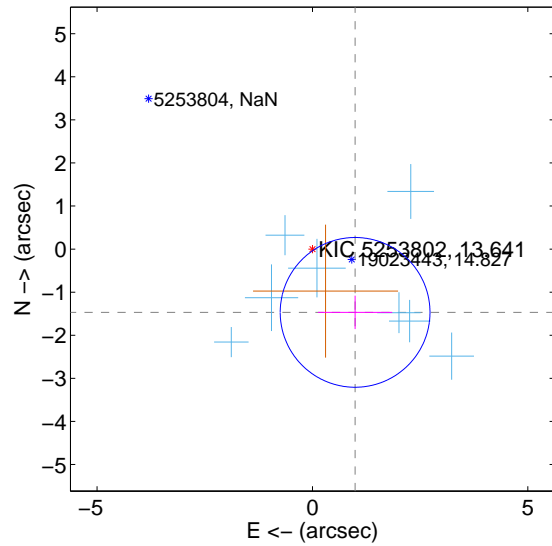
Supplemental centroid analysis for 005253802-01. Kepler magnitude: 13.64. Transit SNR 10.40

There are 8 quarters with good PRF difference image offsets

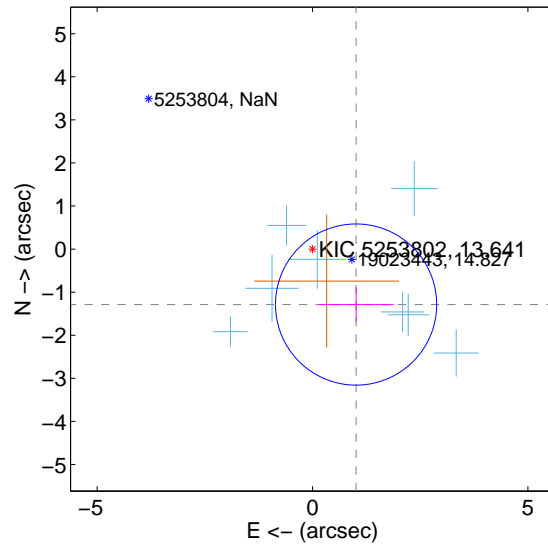
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.771 ± 0.579	3.06	-0.990 ± 0.861	-1.469 ± 0.389
PRF-fit source offset from KIC position	1.637 ± 0.624	2.62	-1.011 ± 0.873	-1.287 ± 0.398
photometric centroid source offset	1.21 ± 1.16	1.05	-0.70 ± 1.20	-0.99 ± 1.14

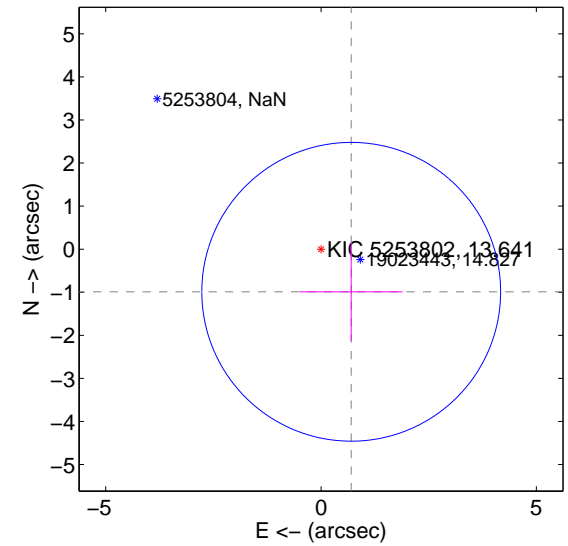
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

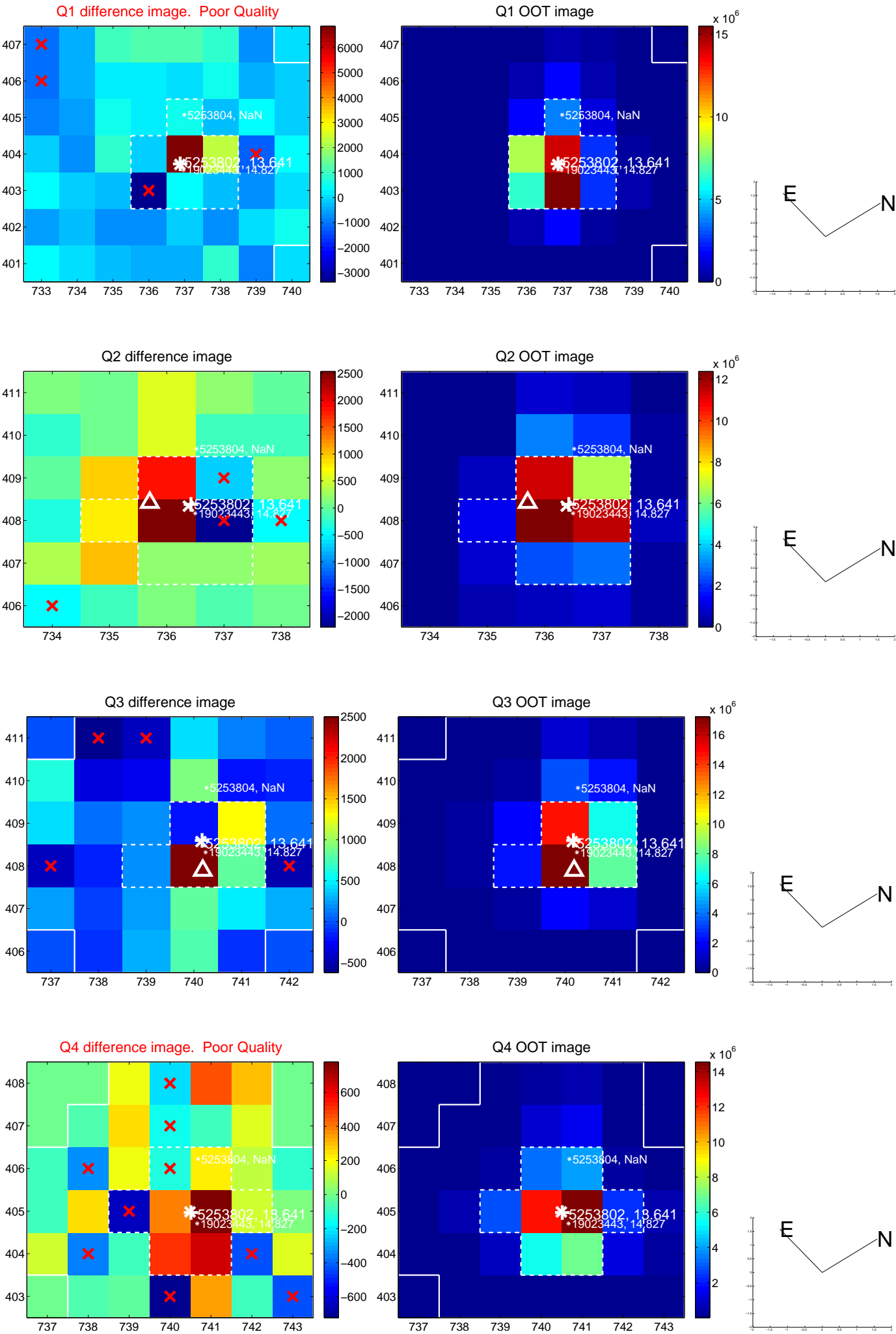


offset from photometric centroids

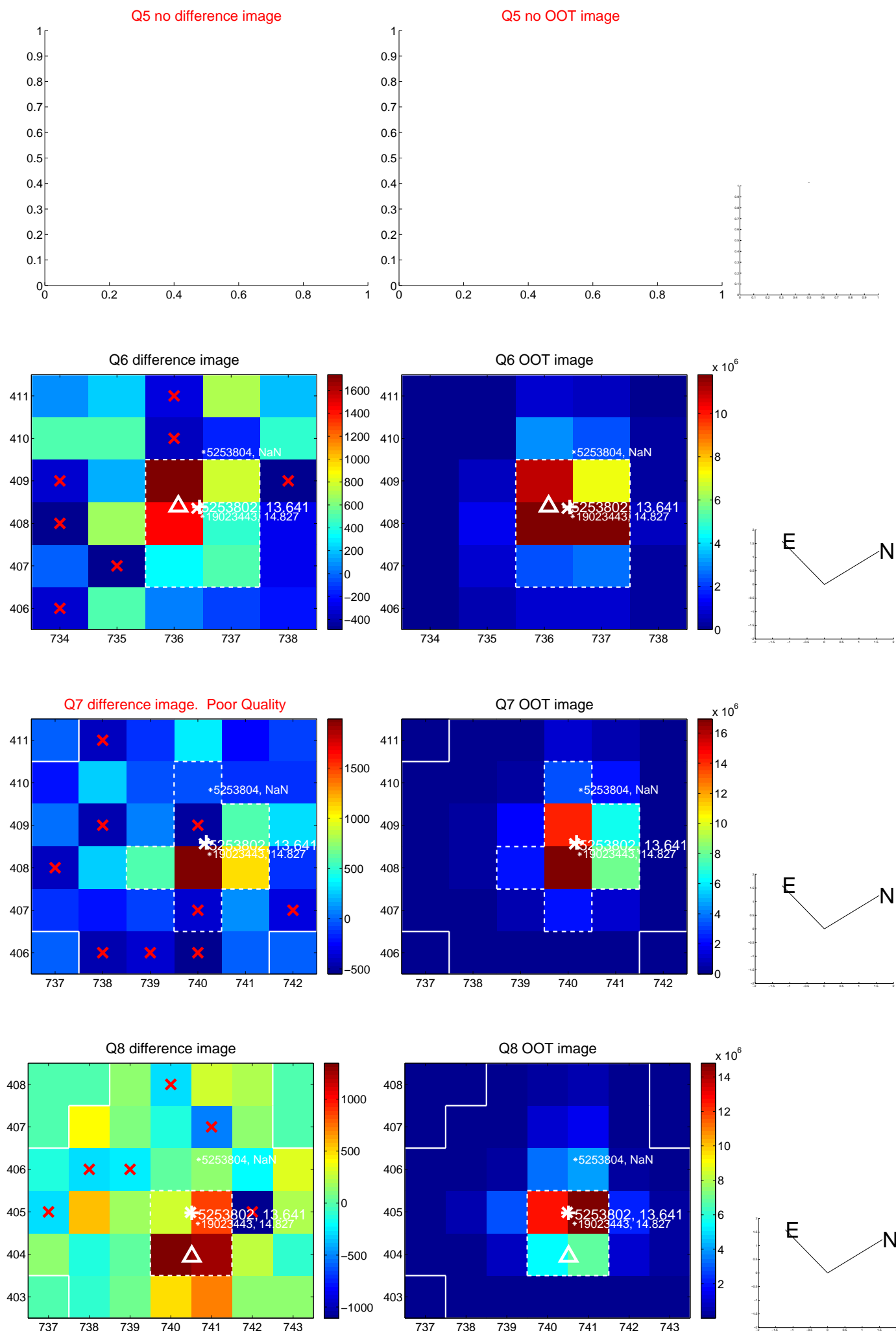


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

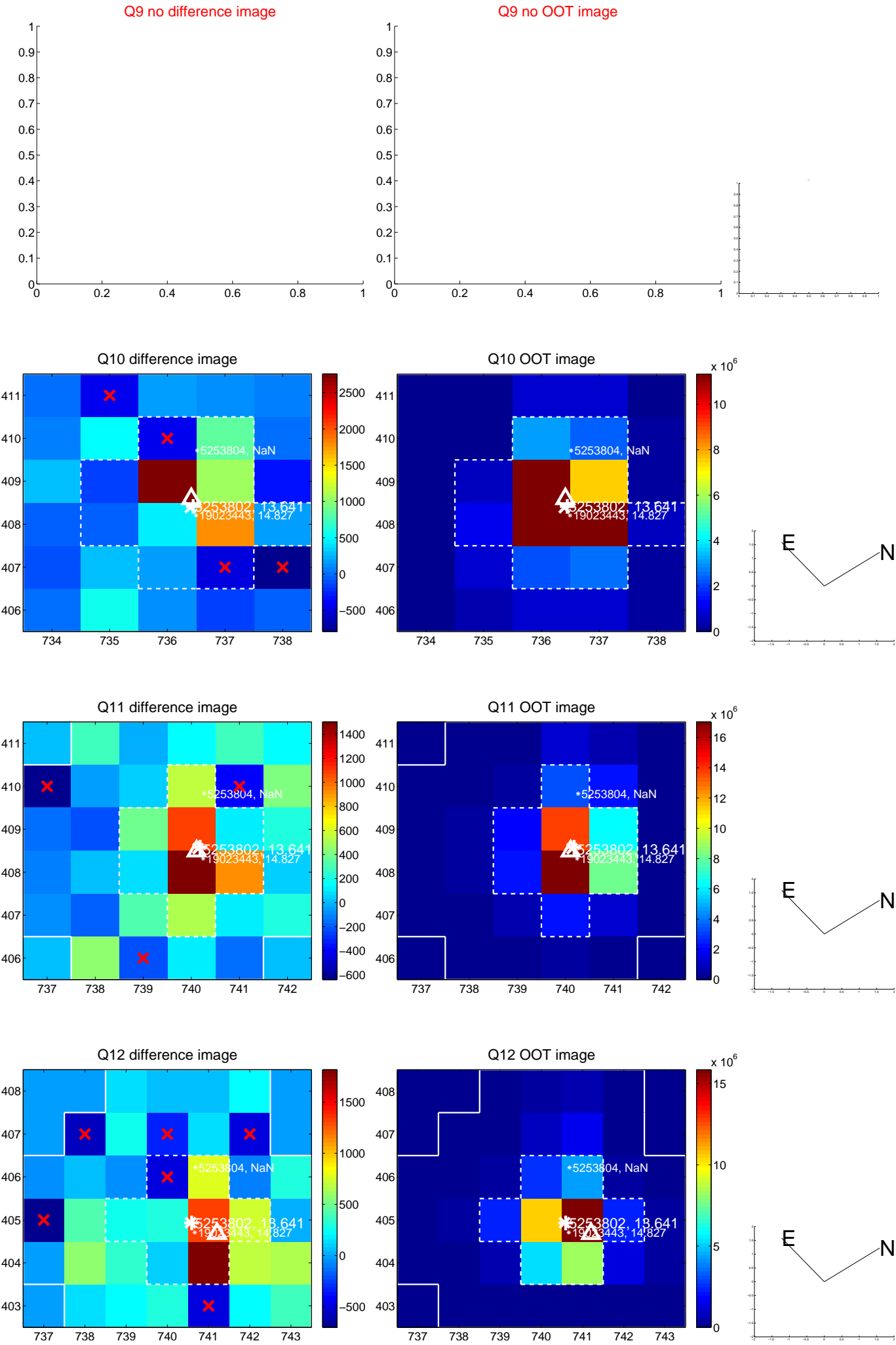
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



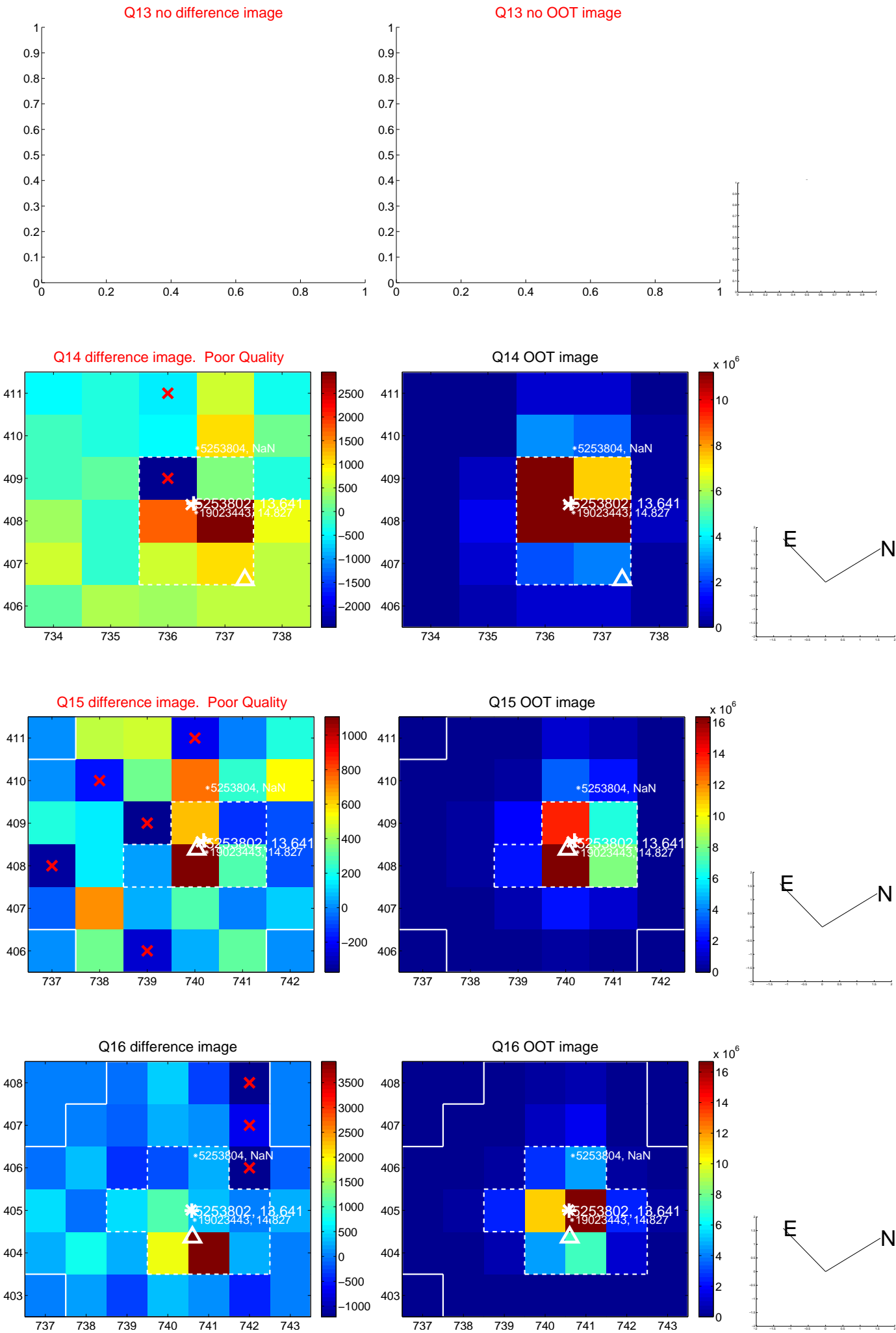
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



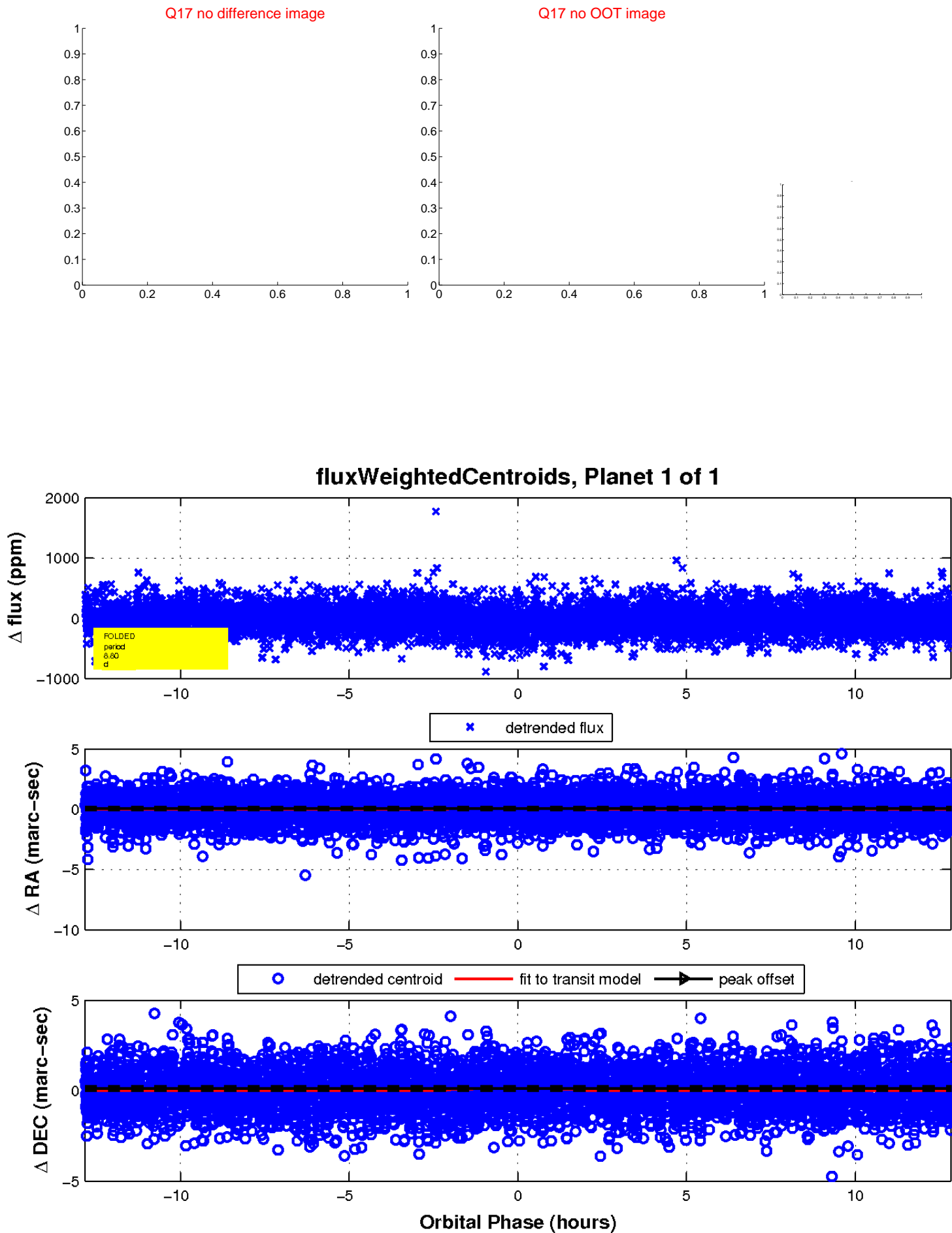
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

