

KIC 010876237

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})
010876237-01	OBS	2960.01	2.931877	132.320823	65.5	1.649	12.9	14.4	2.19	6230	2.07	3507.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010876237-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—CENT_RESOLVED_OFFSET—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.

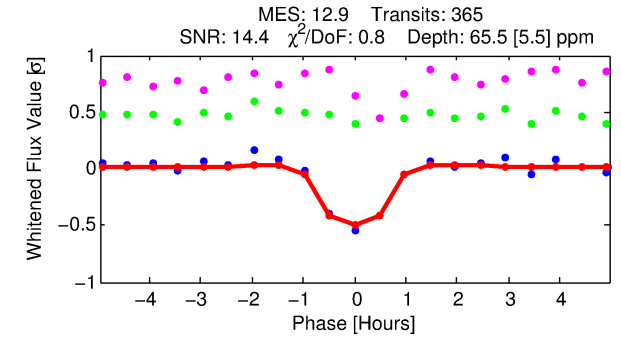
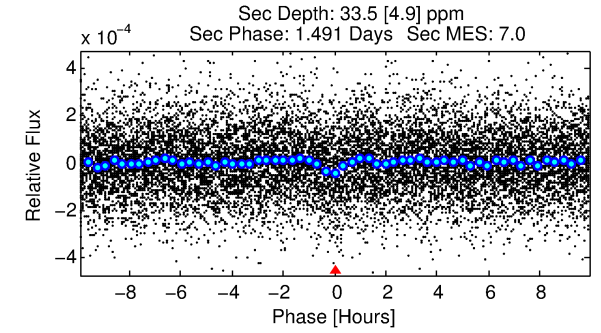
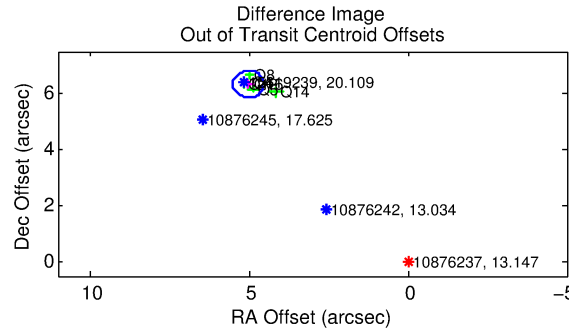
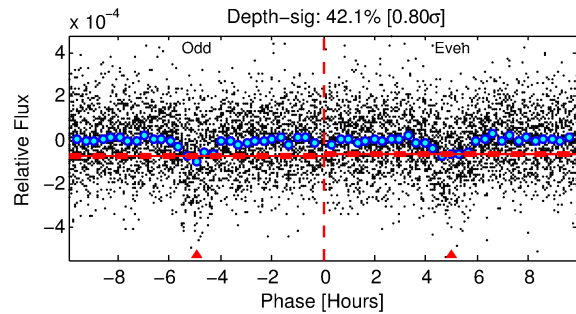
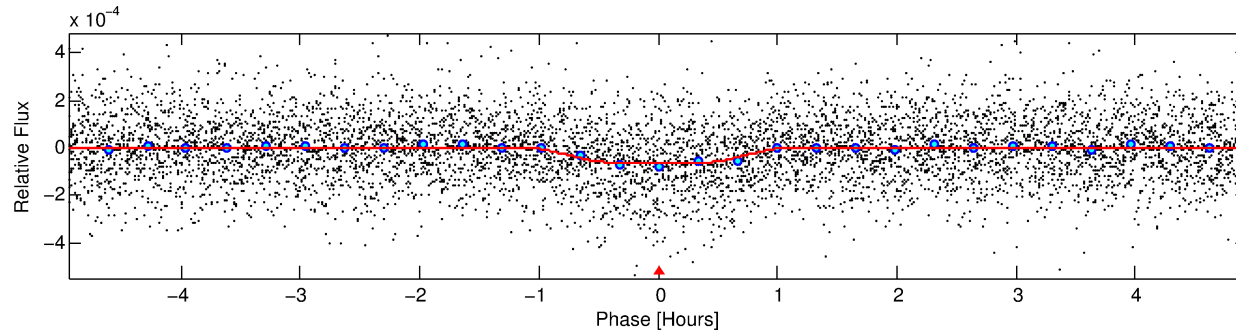
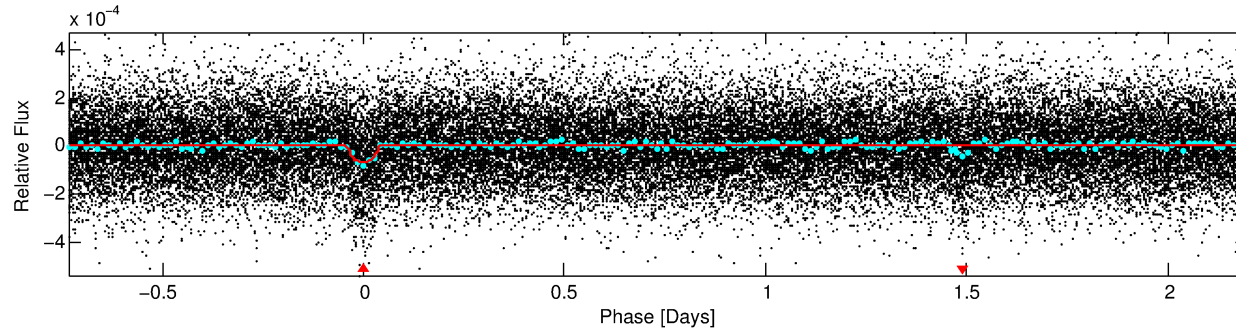
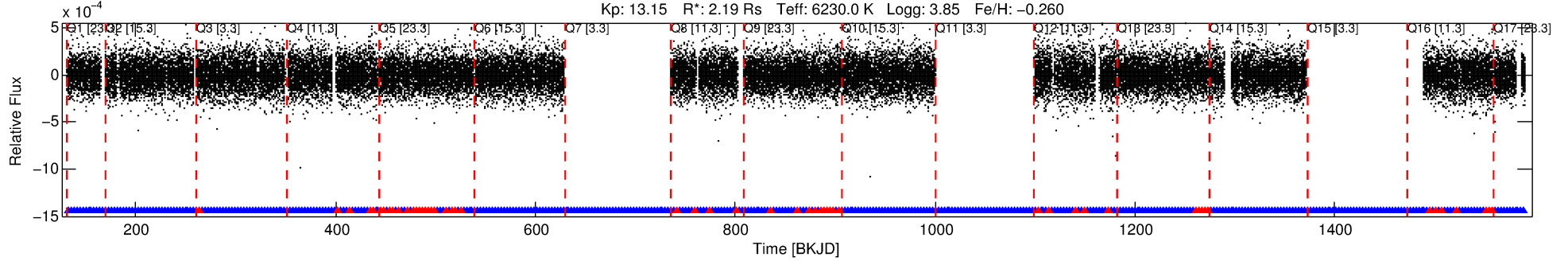
Ephemeris Match Information For 010876237-01

No Significant Match Found

DV One-Page Summary

KIC: 10876237 Candidate: 1 of 1 Period: 2.932 d
KOI: K02960 Corr: No Ephemeris Match

Kp: 13.15 R*: 2.19 Rs Teff: 6230.0 K Logg: 3.85 Fe/H: -0.260



DV Fit Results:

Period = 2.93188 [0.00001] d
Epoch = 132.3208 [0.0020] BKJD
Rp/R* = 0.0087 [0.0036]
a/R* = 6.44 [14.59]
b = 0.89 [0.54]
Seff = 3507.10 [1859.39]
Teq = 1962 [260] K
Rp = 2.07 [1.14] Re
a = 0.0430 [0.0142] AU
Ag = 7.94 [7.93] [0.88σ]
Teff = 5093 [1096] K [2.78σ]

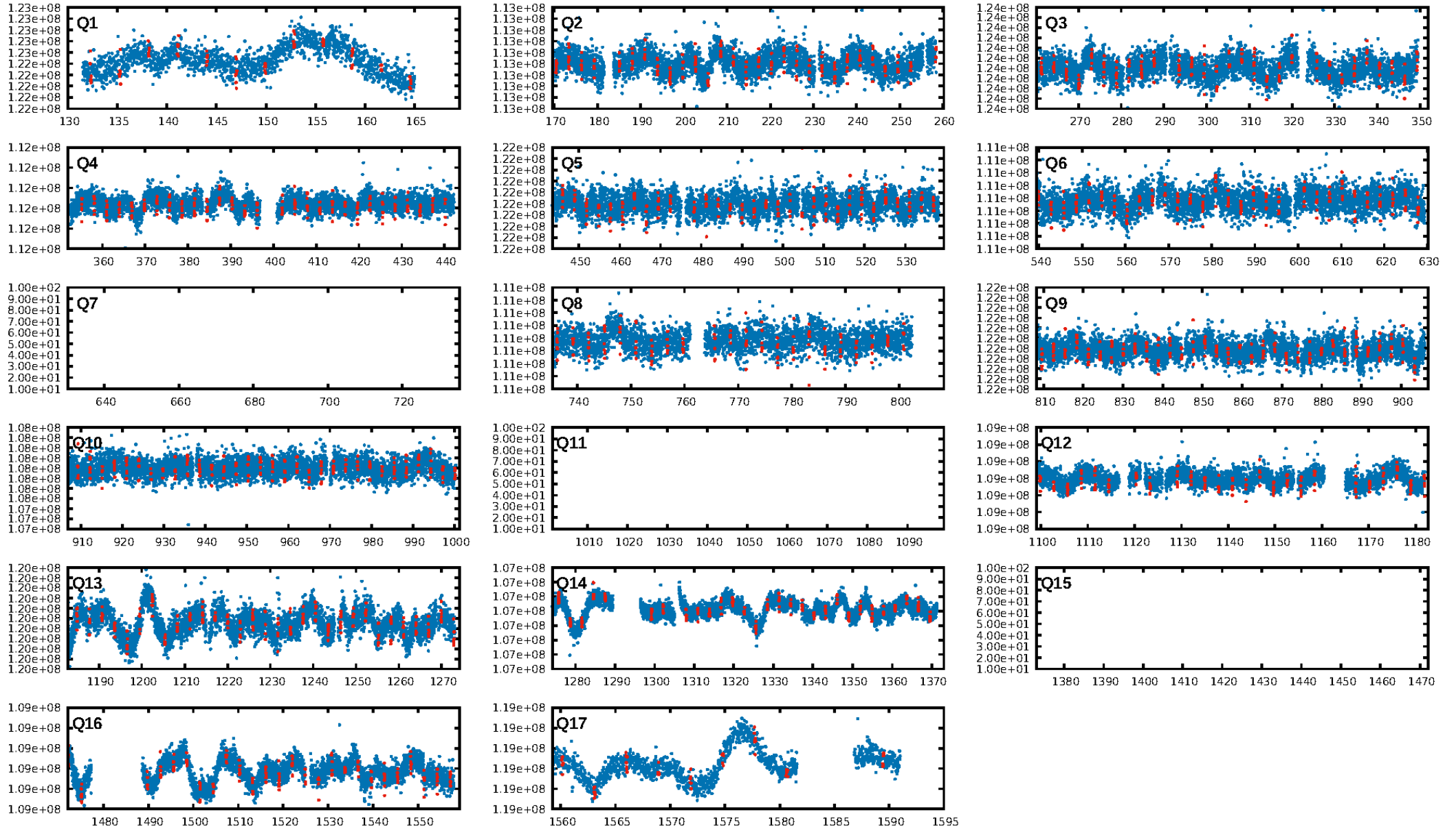
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.74e-37
RollingBand-fgt: 0.84 [290/344]
GhostDiagnostic-chr: -0.1702
Centroid-sig: 0.0%
Centroid-so: 21.300 arcsec [23.16σ]
OotOffset-rm: 8.075 arcsec [50.29σ]
KicOffset-rm: 8.179 arcsec [55.02σ]
OotOffset-st: 1/0/4/1 [6]
KicOffset-st: 1/0/4/1 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 1.00 [14/14]

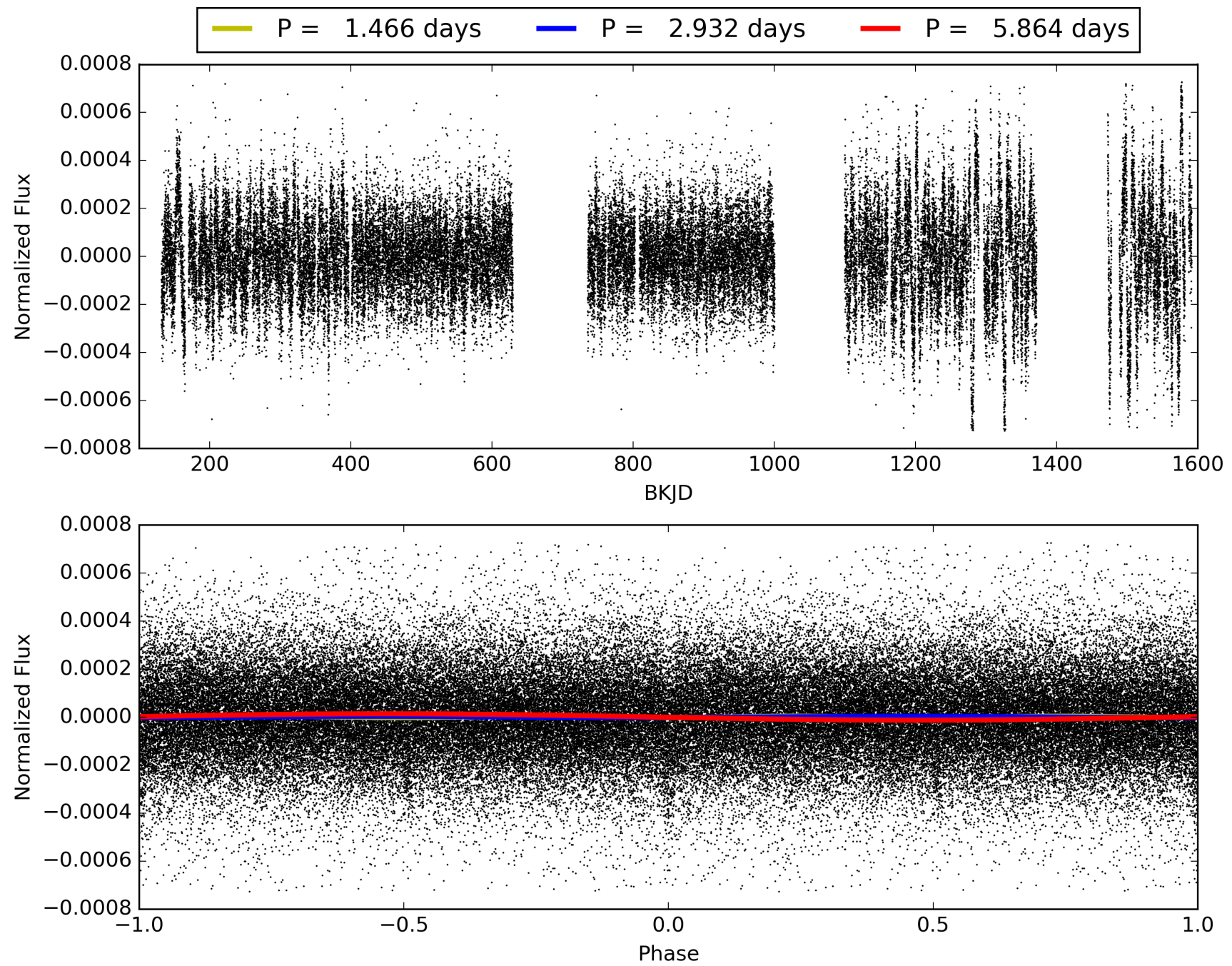
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:17:08 Z

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

TCE 010876237-01, PDC Light Curves

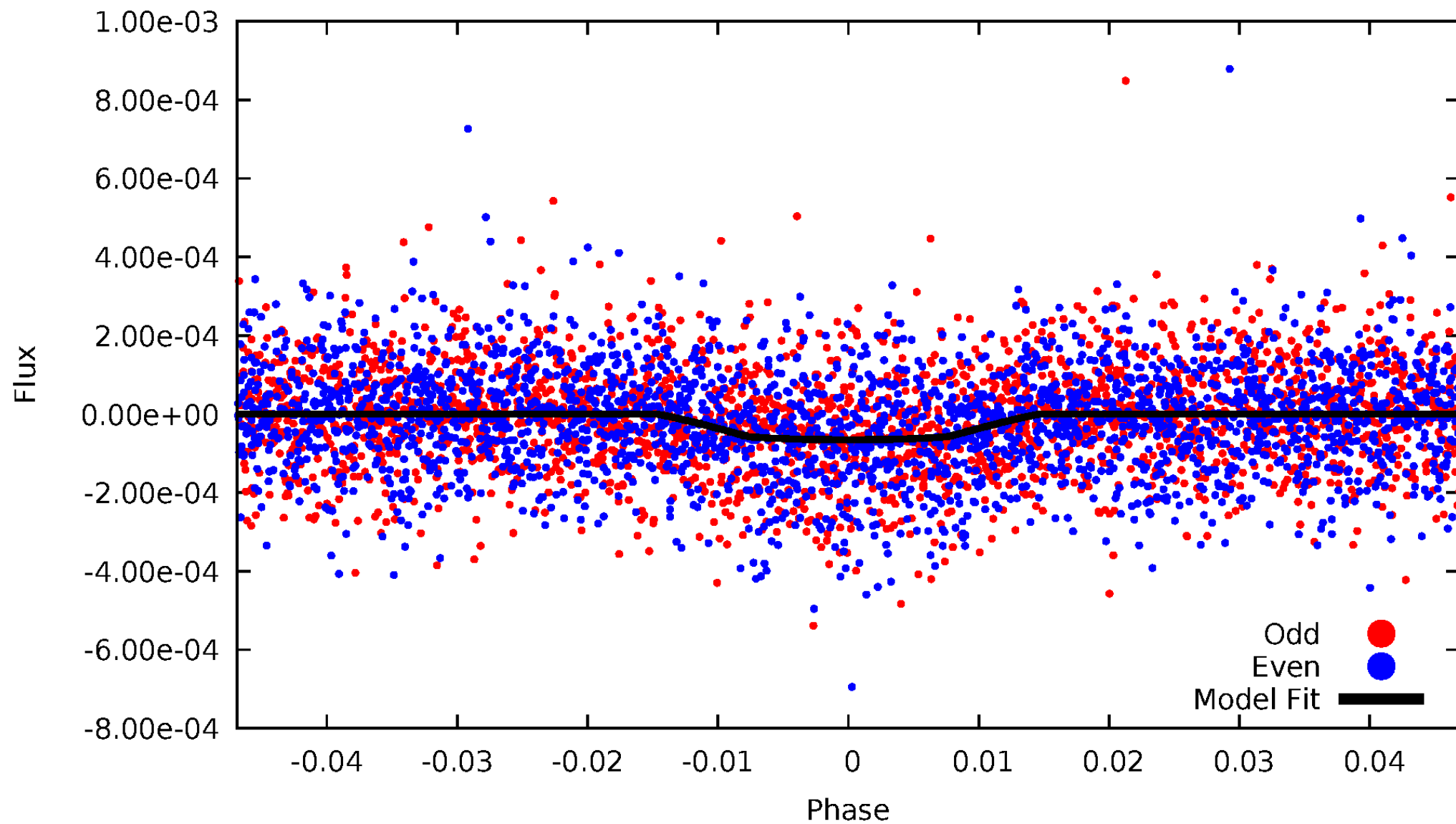


TCE 010876237-01



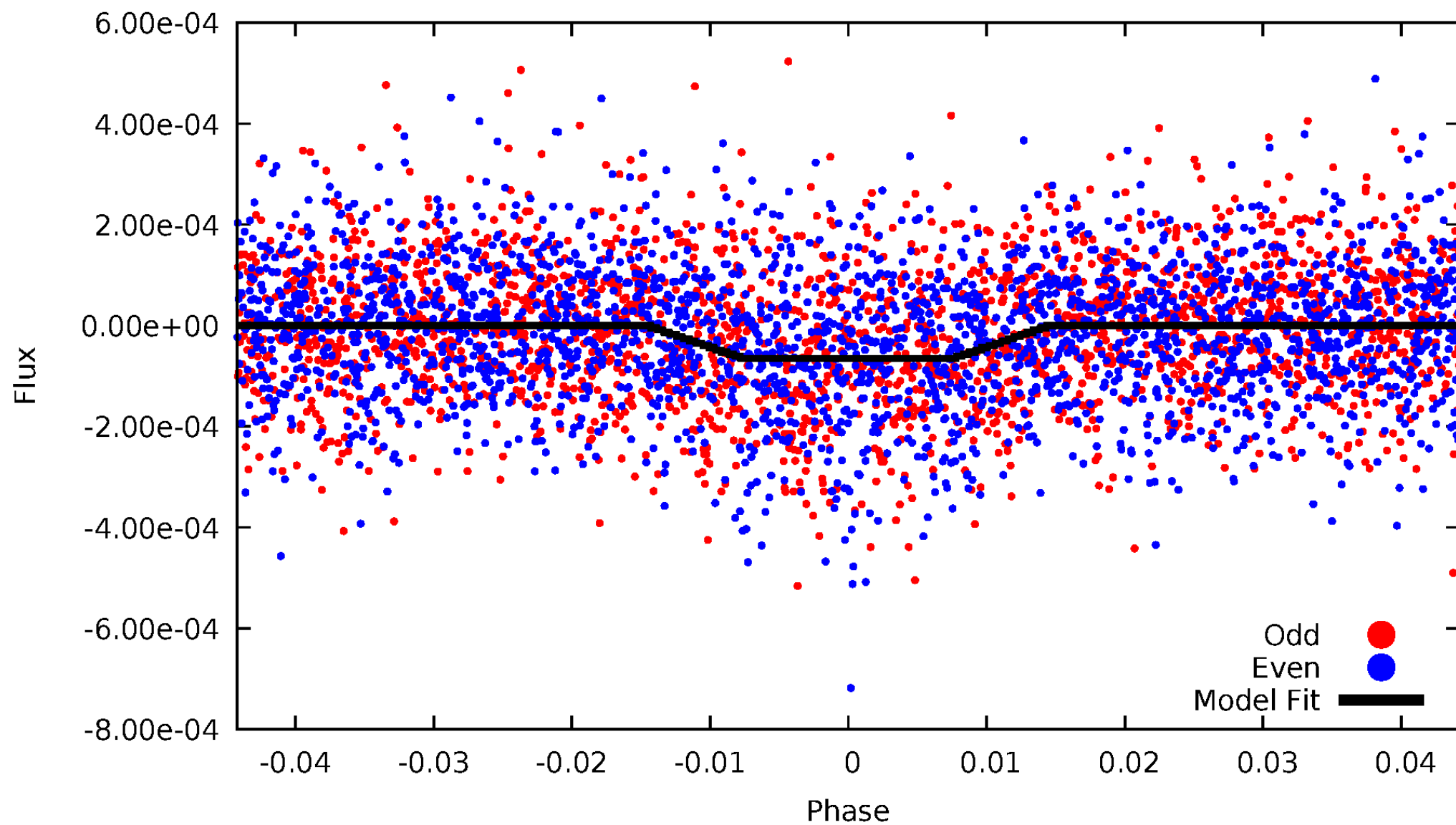
DV Odd/Even

TCE 010876237-01



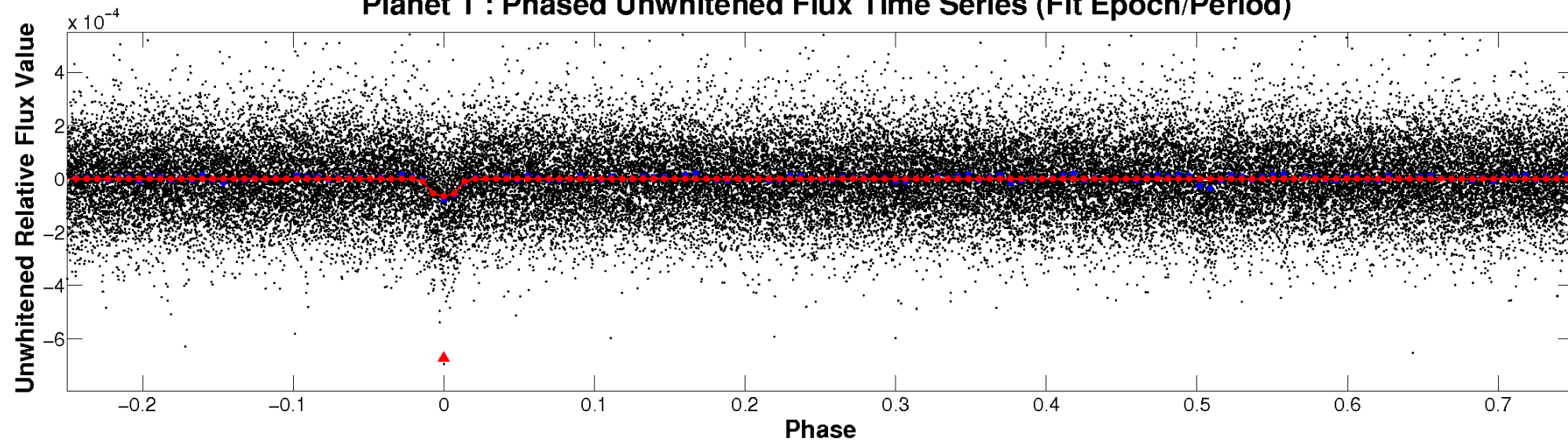
ALT Odd/Even

TCE 010876237-01

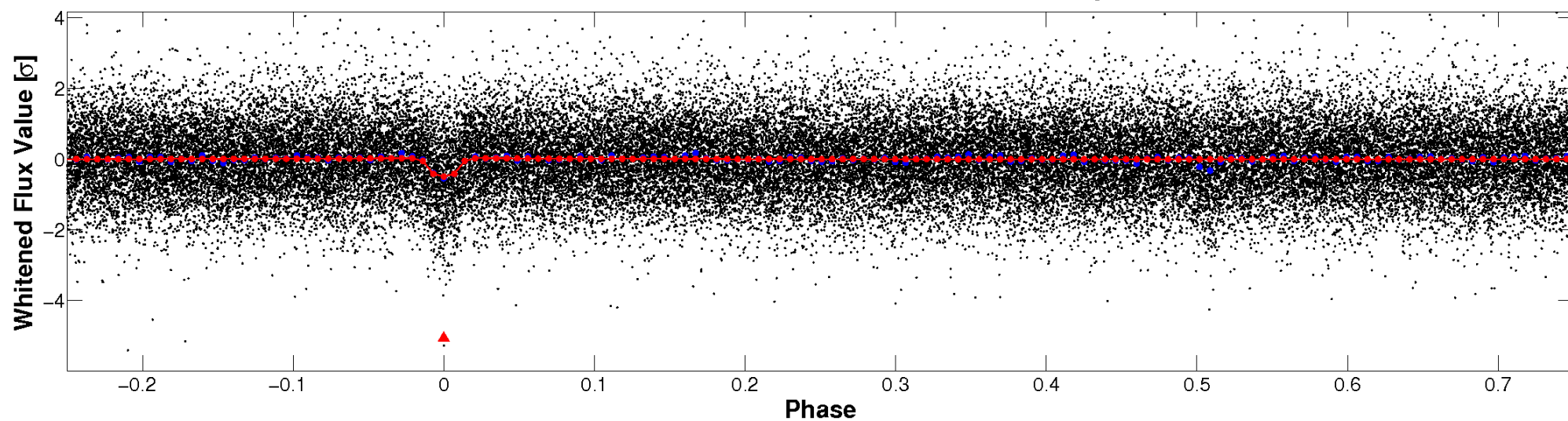


Non-Whitened Vs. Whitened Light Curve

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

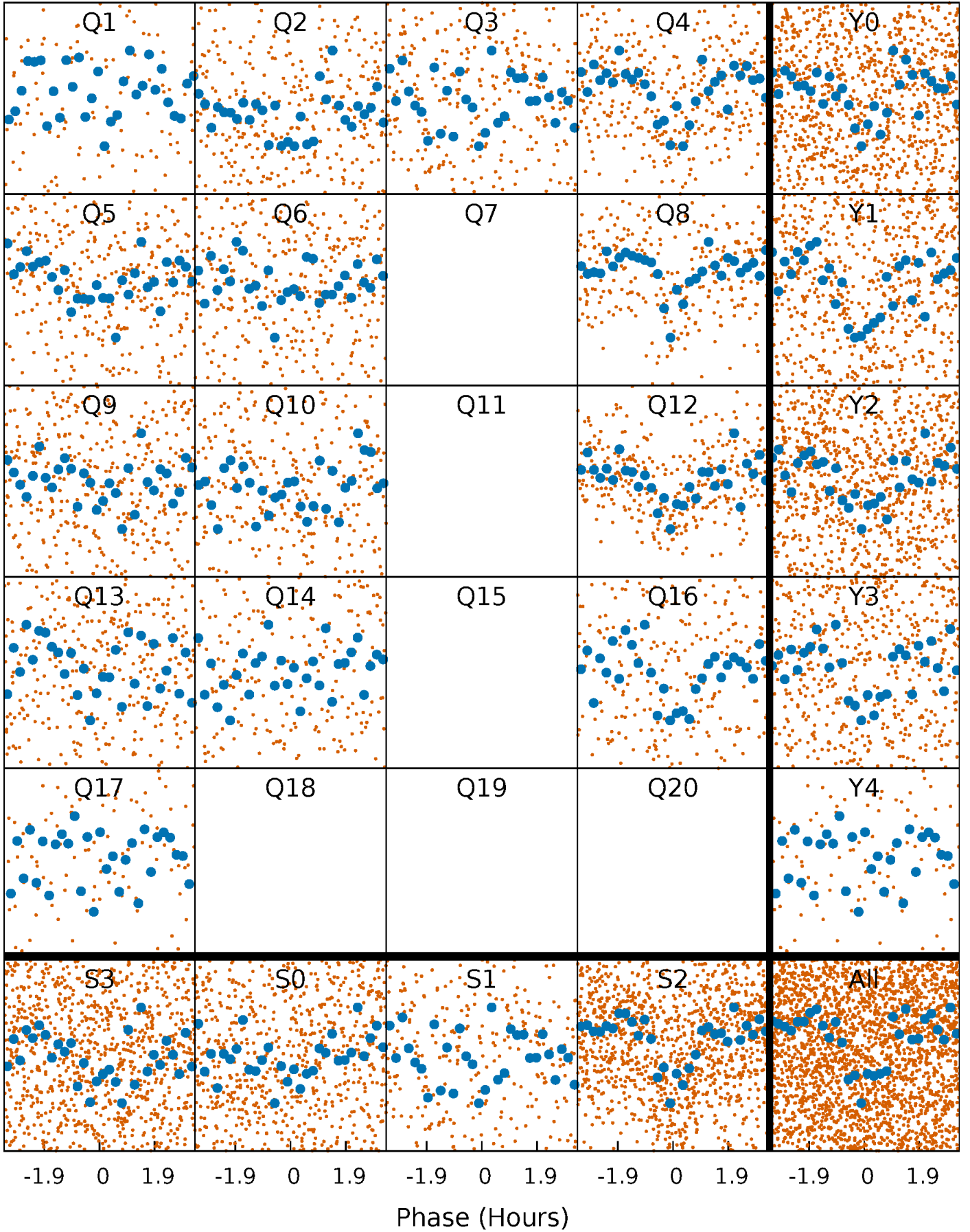


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



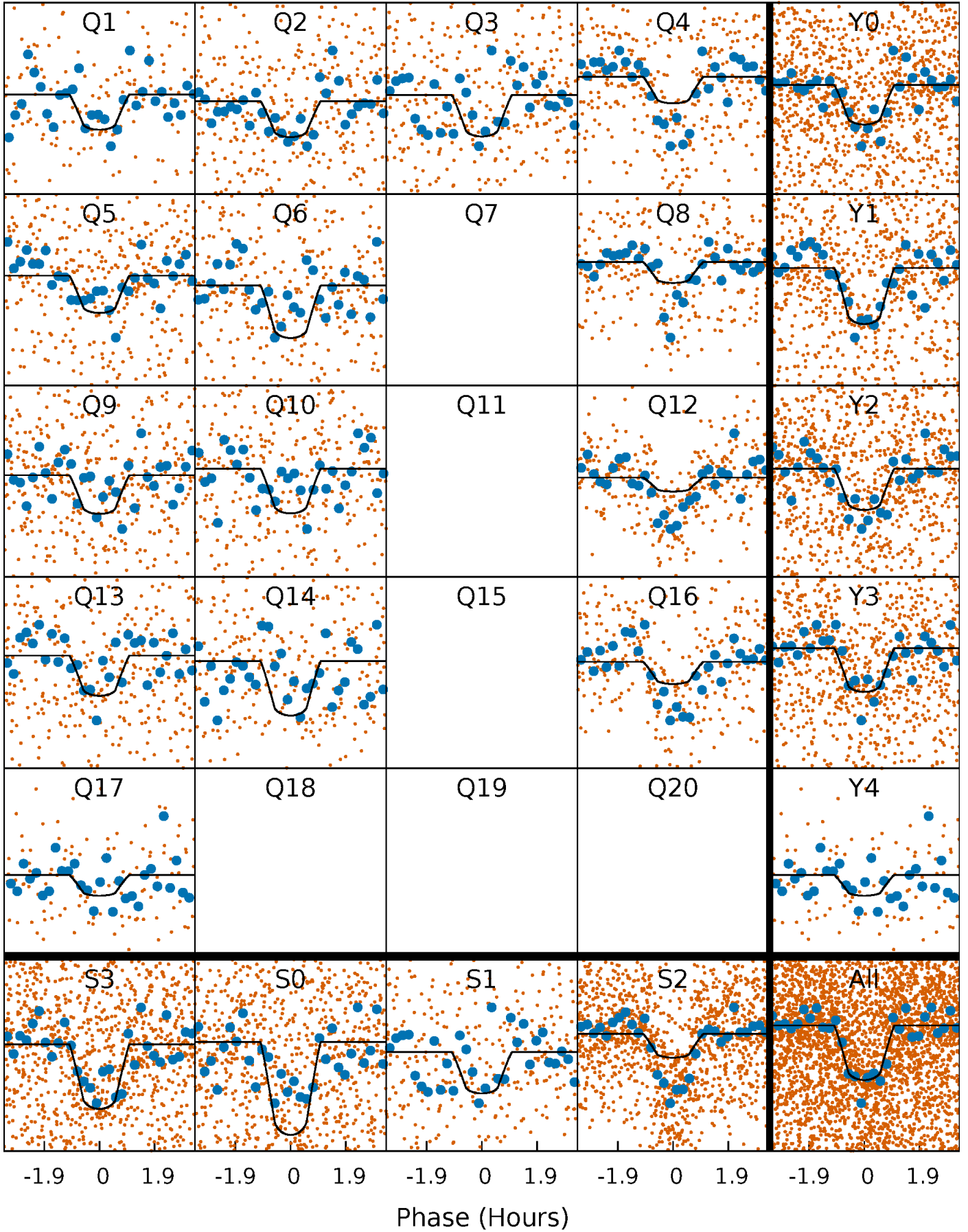
PDC Quarter-Phased Transit Curves

TCE 010876237-01 P= 2.931877 Days $T_0=132.320823$ (BKJD)



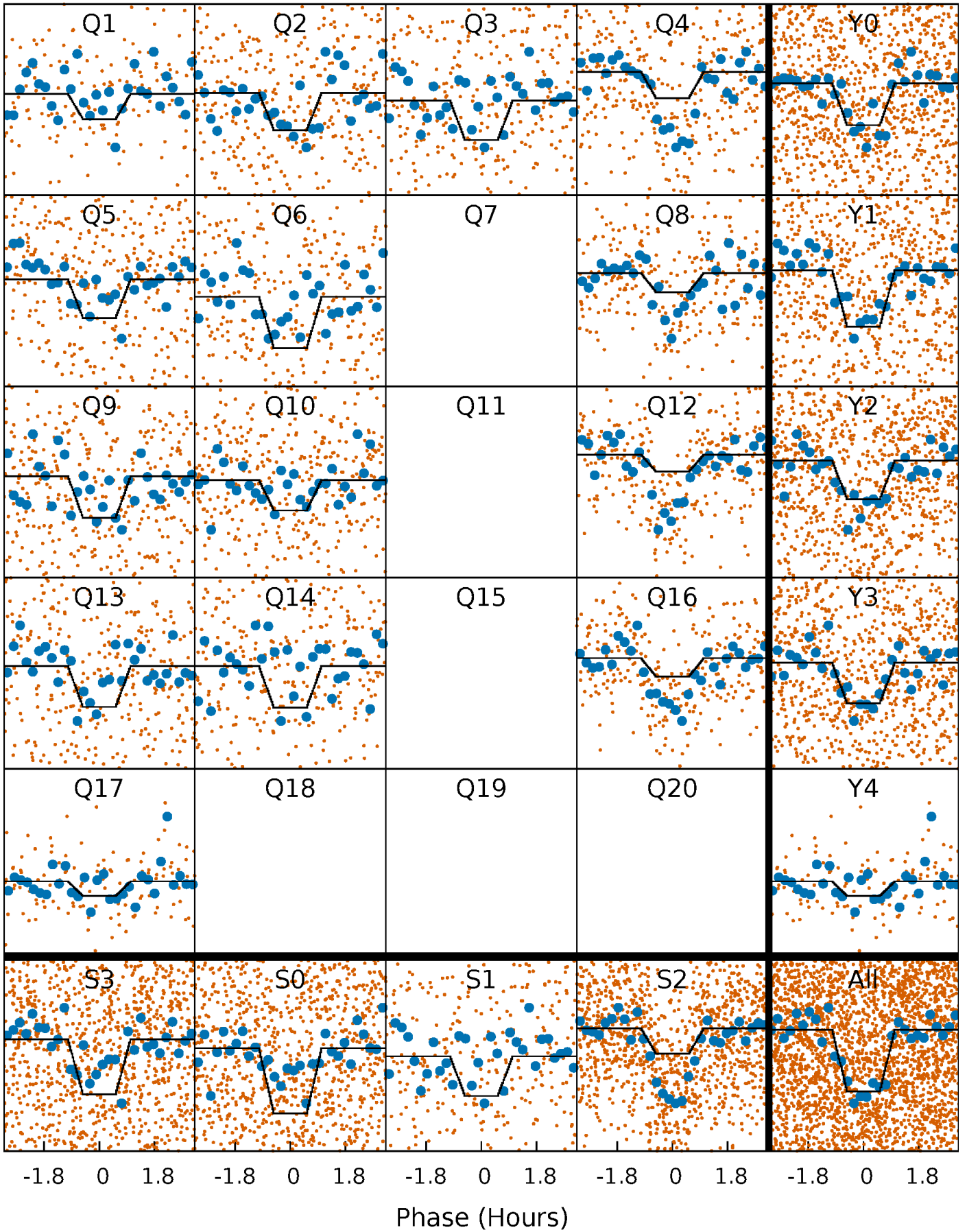
DV Quarter-Phased Transit Curves

TCE 010876237-01 P= 2.931877 Days $T_0=132.320823$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

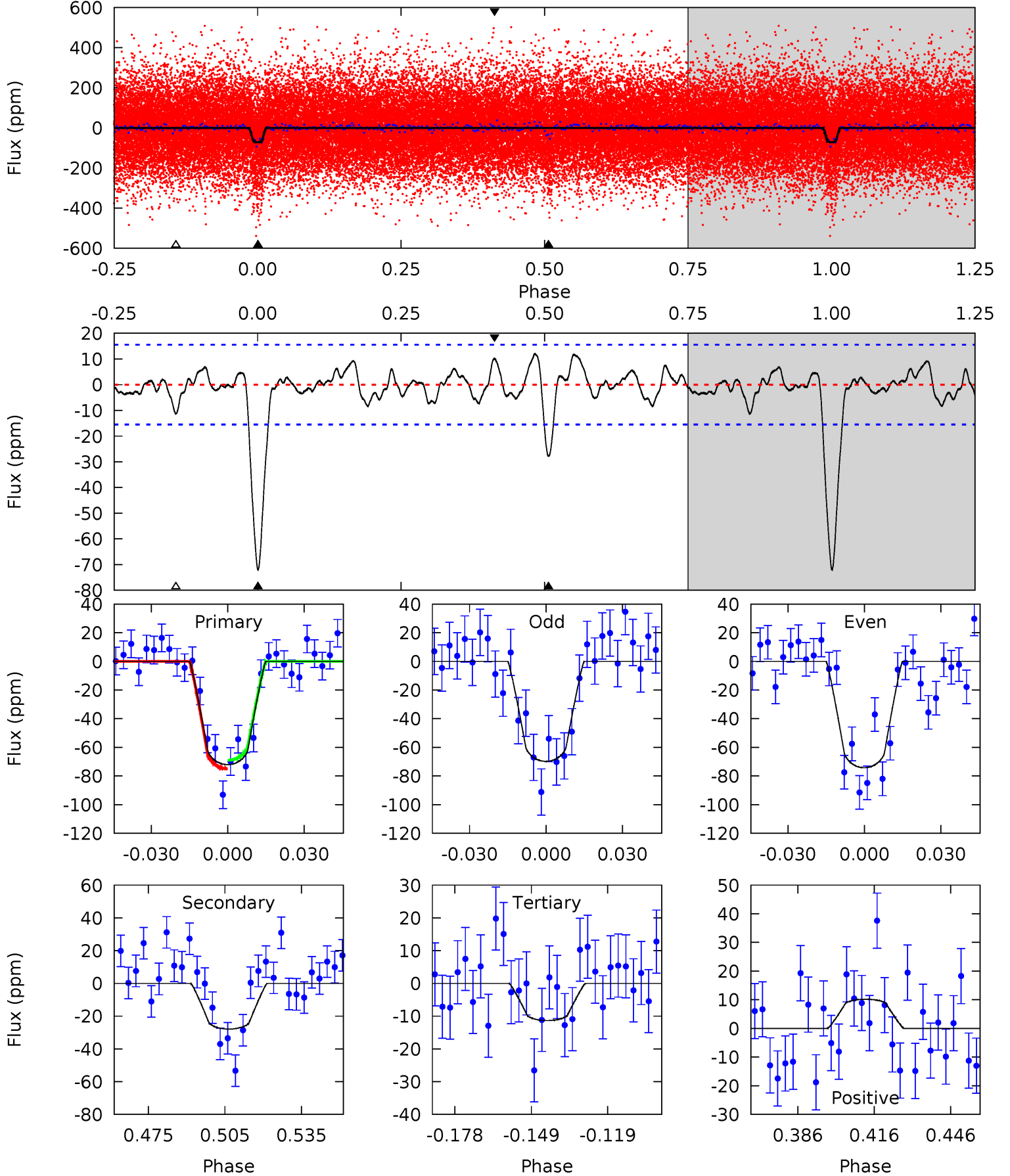
TCE 010876237-01 P= 2.931898 Days $T_0=132.316273$ (BKJD)



DV Model-Shift Uniqueness Test

010876237-01, P = 2.931877 Days, E = 129.388946 Days

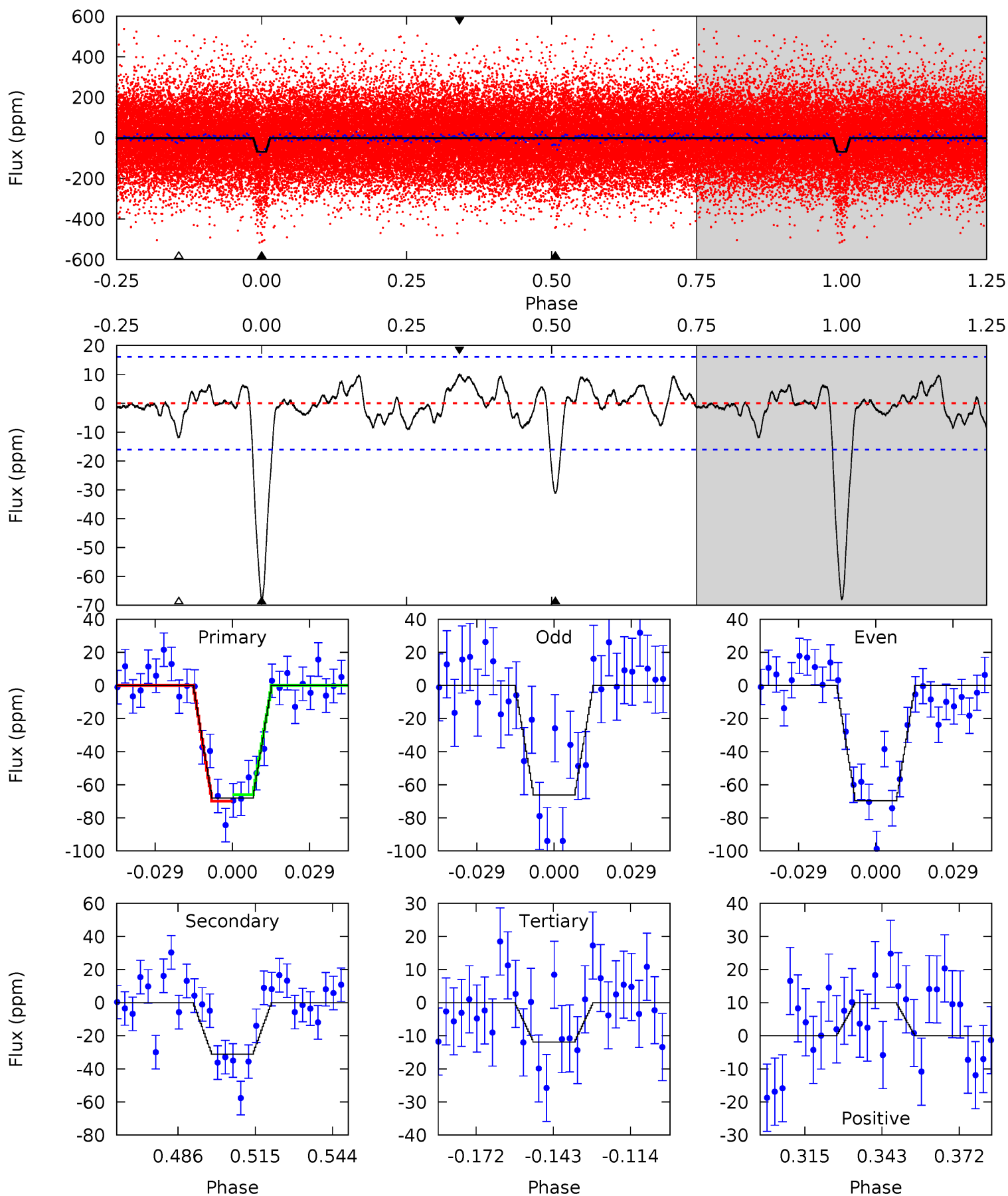
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.4	8.66	3.52	3.16	4.81	2.17	1.32	18.9	19.2	5.14	5.50	0.69	1.16	0.14	0.93



Alt Model-Shift Uniqueness Test

010876237-01, P = 2.931898 Days, E = 129.384375 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.4	9.34	3.57	2.99	4.82	2.19	1.34	16.8	17.4	5.77	6.35	0.52	1.05	0.13	0.59



Stellar Parameters For KIC 010876237

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6230^{+171}_{-171}	$3.847^{+0.300}_{-0.100}$	$-0.260^{+0.300}_{-0.300}$	$2.190^{+0.422}_{-0.784}$	$1.229^{+0.218}_{-0.218}$	$0.165^{+0.343}_{-0.051}$
	+3%/-3%	+8%/-3%	+115%/-115%	+19%/-36%	+18%/-18%	+208%/-31%
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 010876237-01 / KOI 2960.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-28 ± 3	$1.93^{+0.98}_{-0.81}$	2692^{+174}_{-232}	4900^{+1328}_{-685}	$7.522^{+14.942}_{-4.058}$
Alt.	-31 ± 3	$1.84^{+0.91}_{-0.83}$	2698^{+157}_{-234}	5156^{+1694}_{-771}	$9.519^{+21.160}_{-5.290}$

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

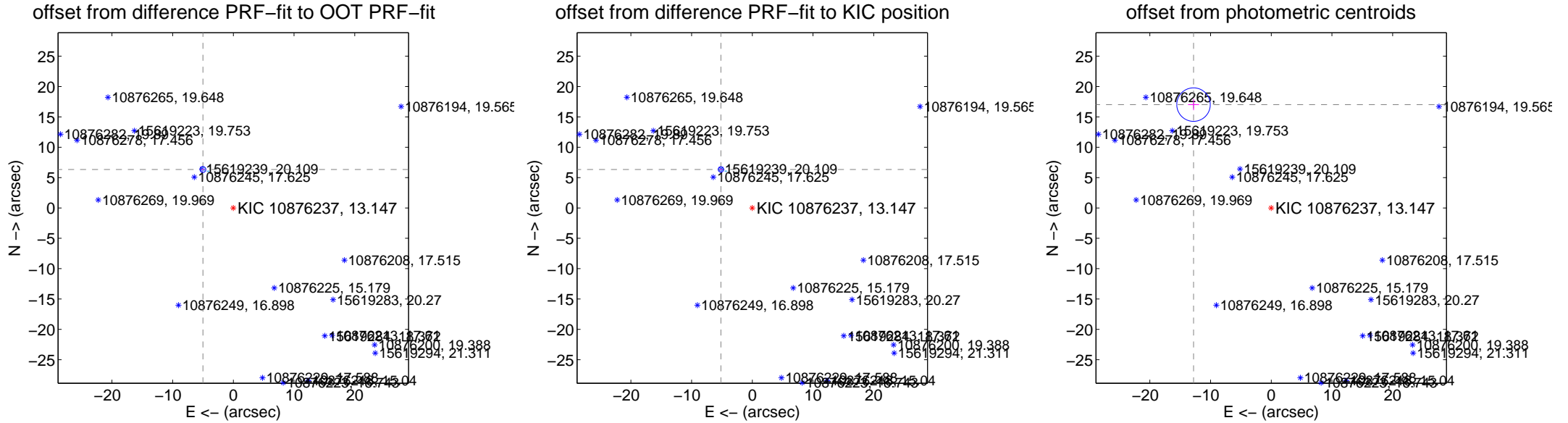
DV Centroid Data

Supplemental centroid analysis for 010876237-01. Kepler magnitude: 13.15. Transit SNR 14.36

There are 6 quarters with good PRF difference image offsets

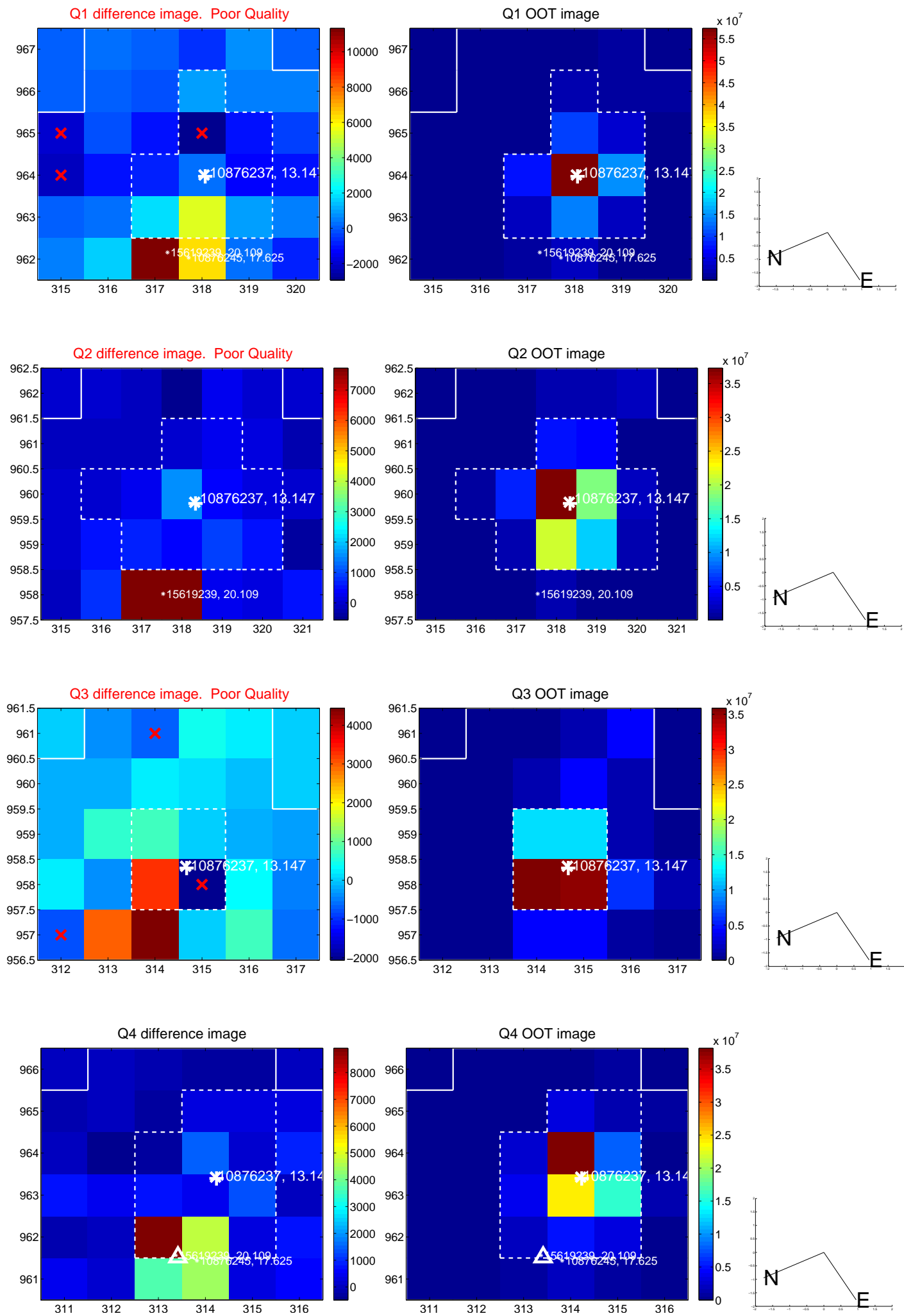
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.075 \pm 0.161	50.29	5.009 \pm 0.161	6.333 \pm 0.108
PRF-fit source offset from KIC position	8.179 \pm 0.149	55.02	5.173 \pm 0.147	6.335 \pm 0.104
photometric centroid source offset	21.30 \pm 0.92	23.16	12.80 \pm 0.91	17.02 \pm 0.92

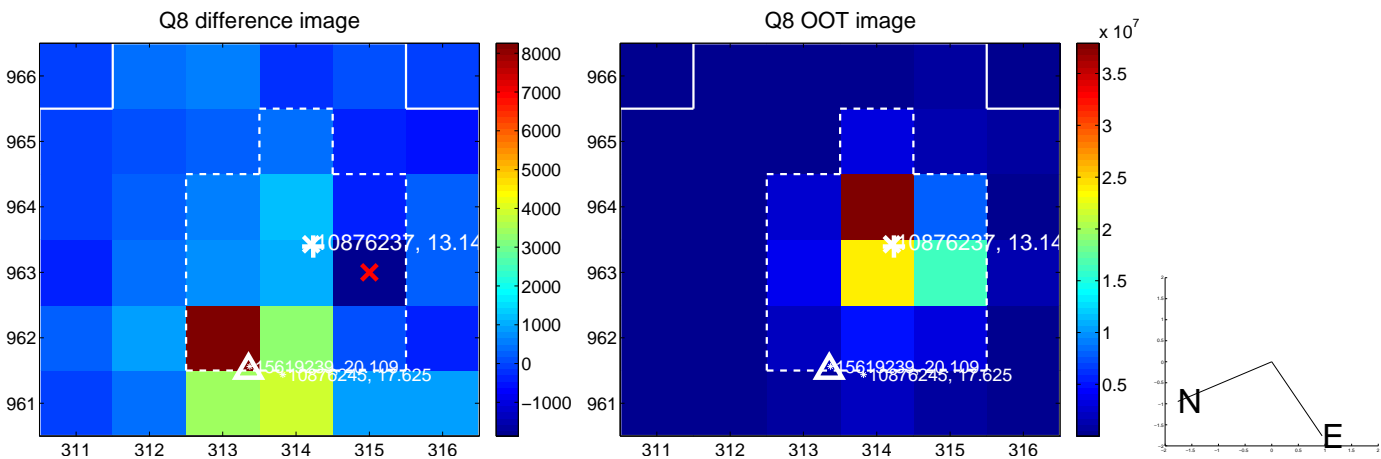
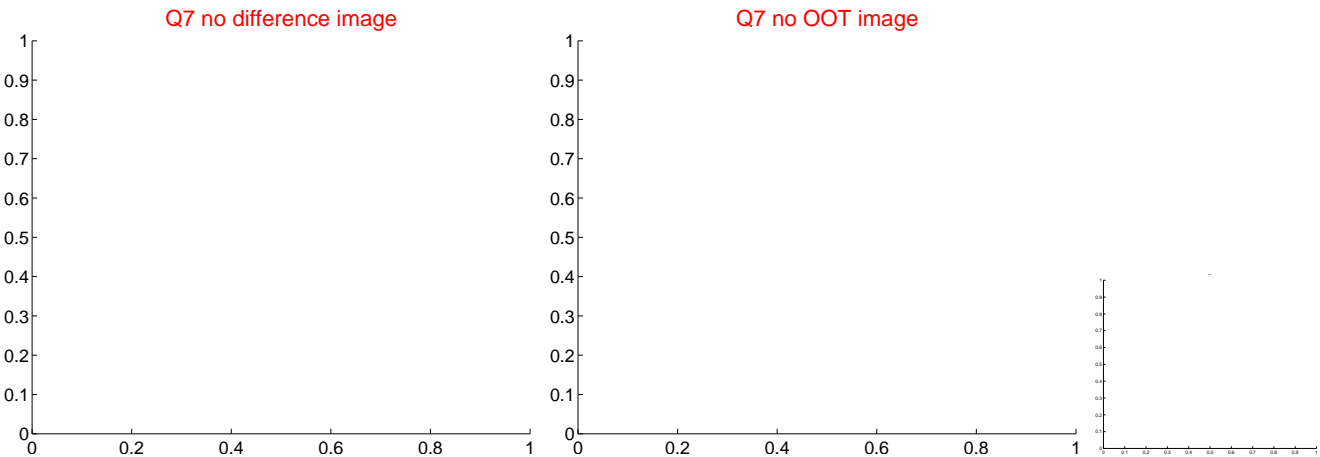
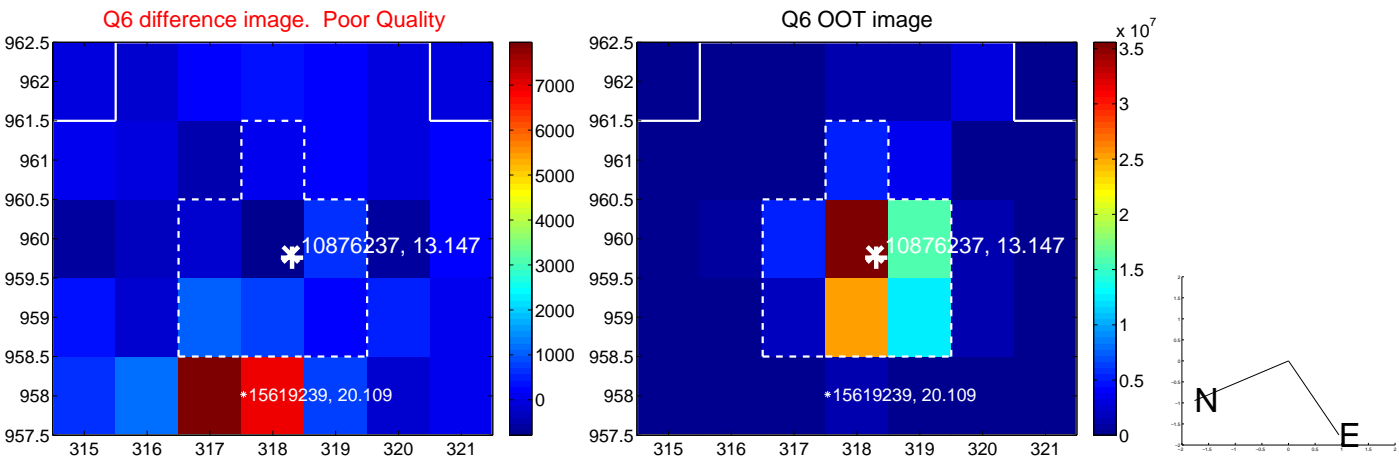
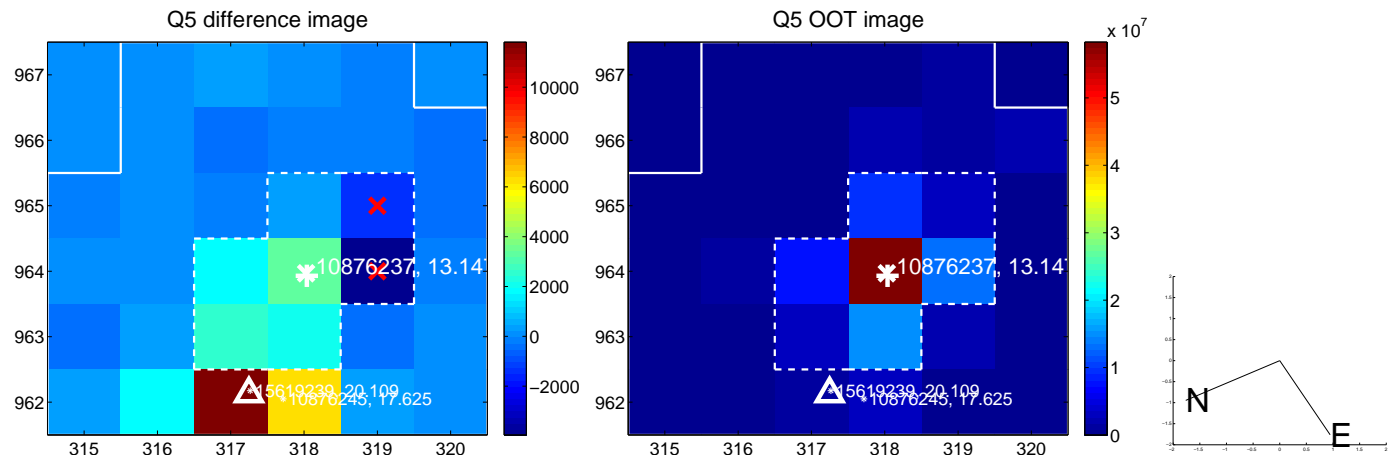


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

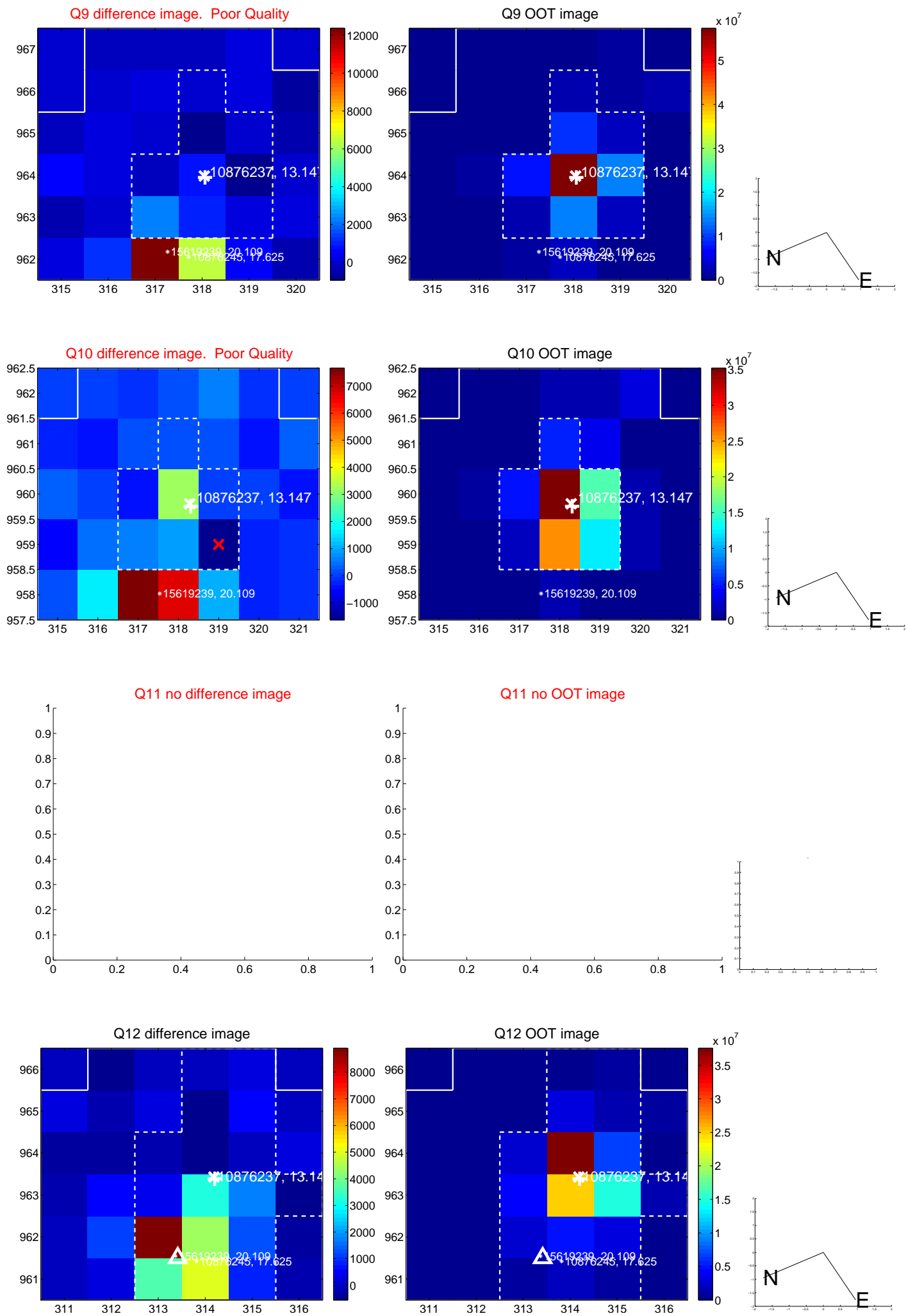
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



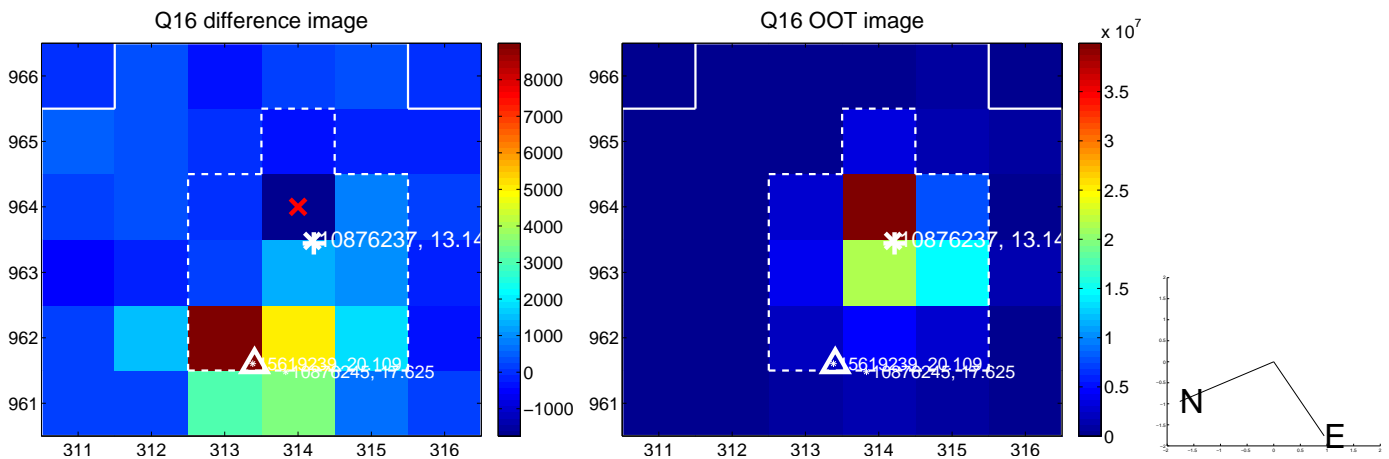
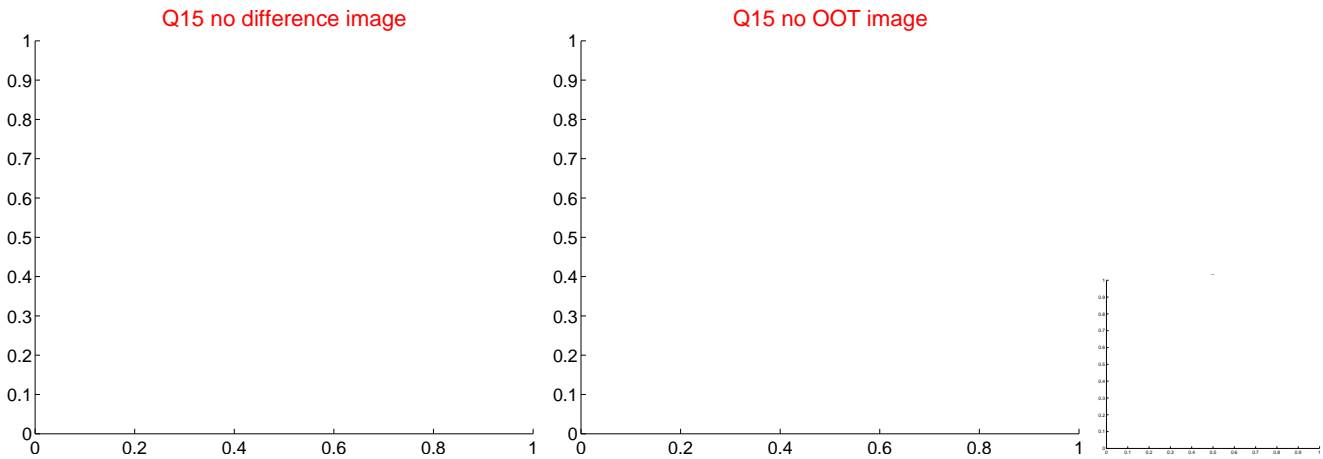
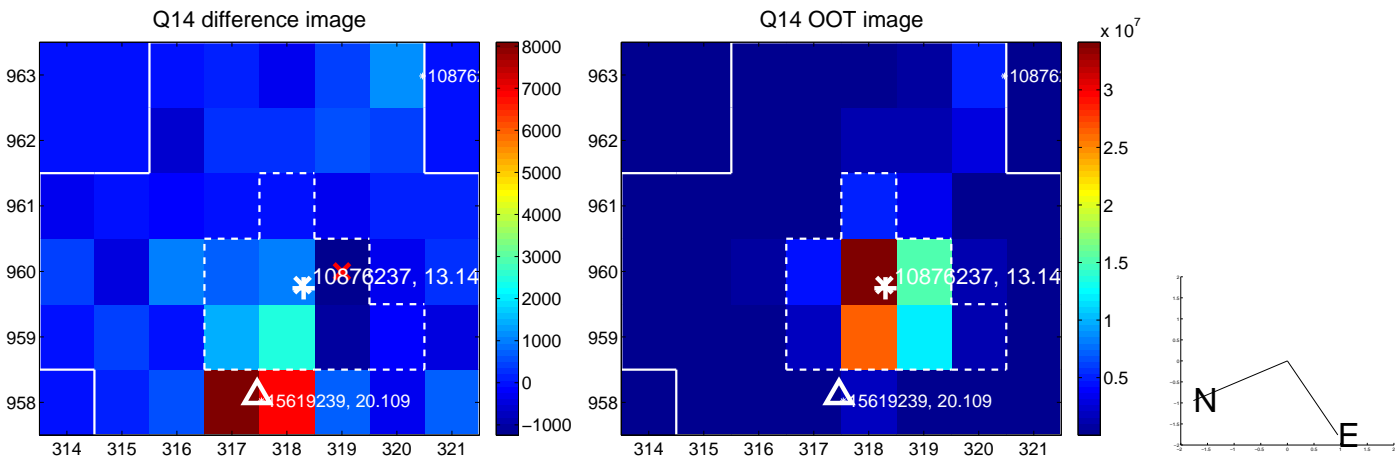
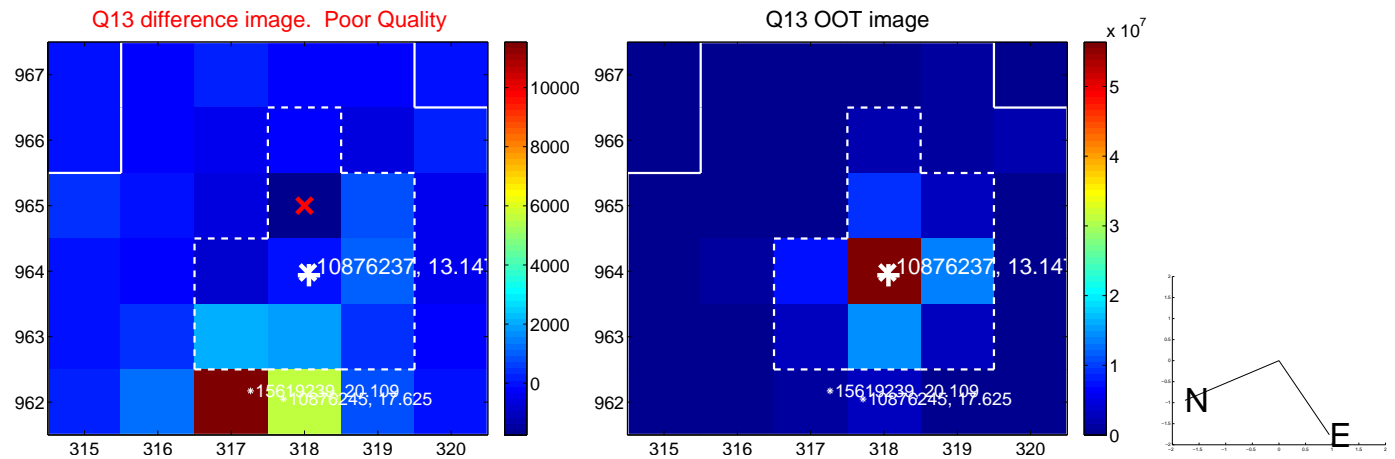
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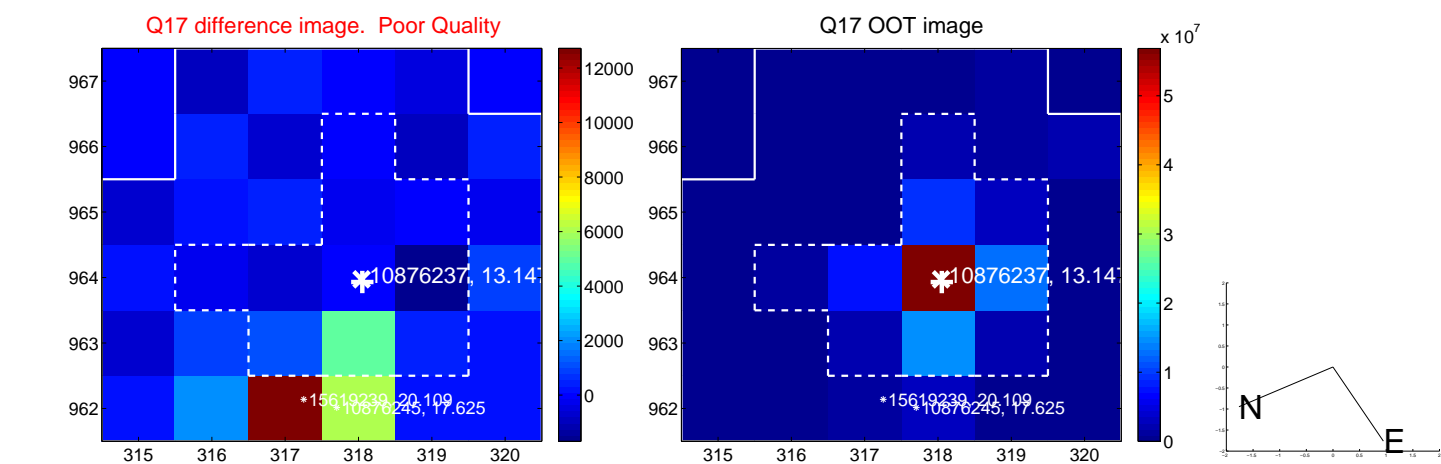
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



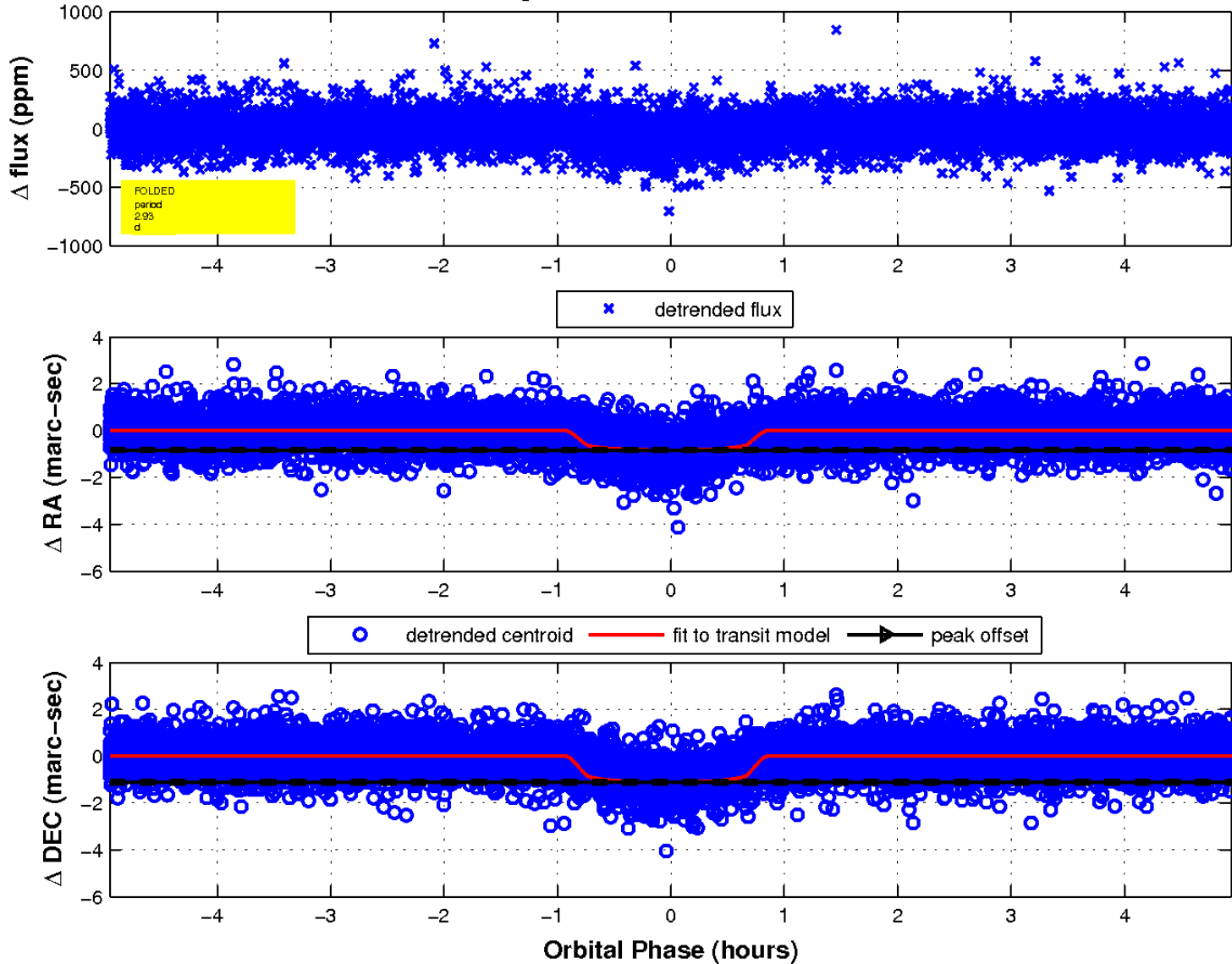
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

