

KIC 008837530

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})
008837530-01	OBS	No	5.395154	132.283422	21.1	8.785	8.1	8.3	1.75	6603	0.93	1208.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008837530-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_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.

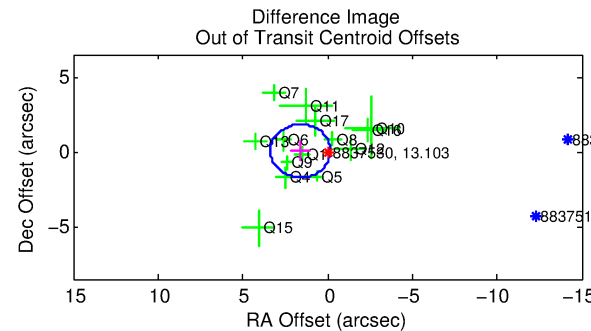
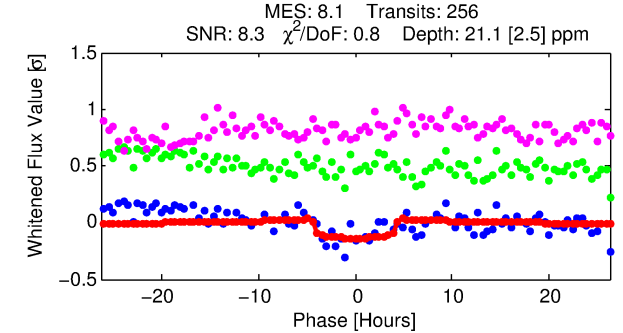
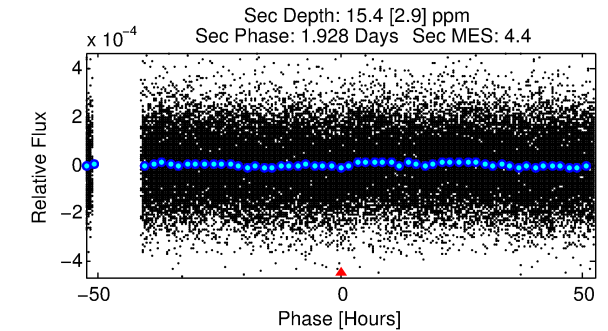
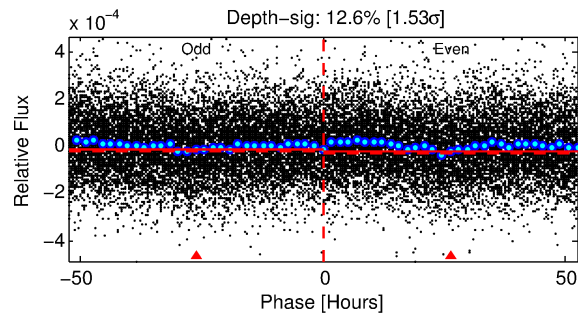
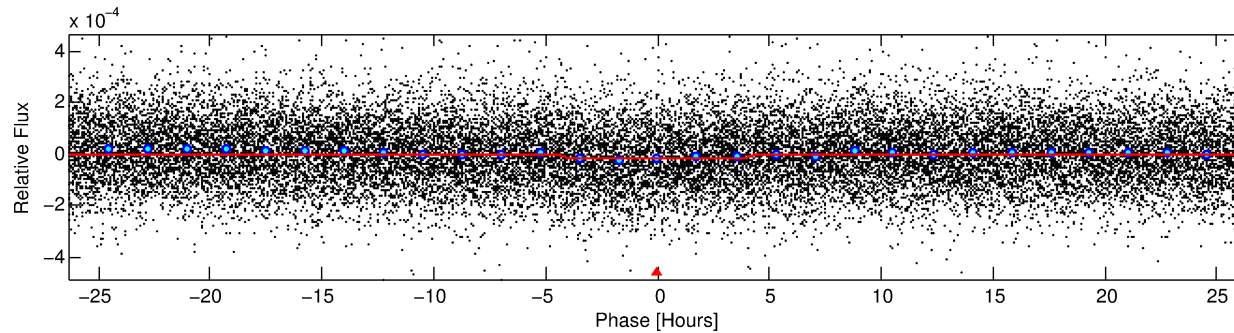
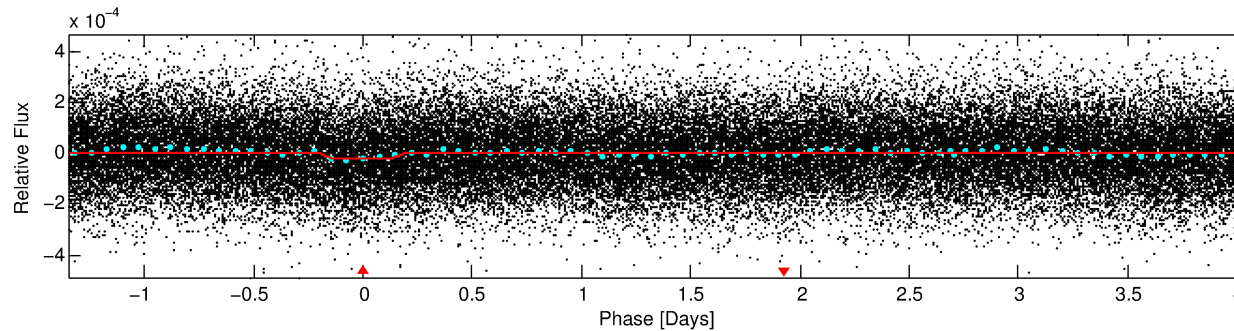
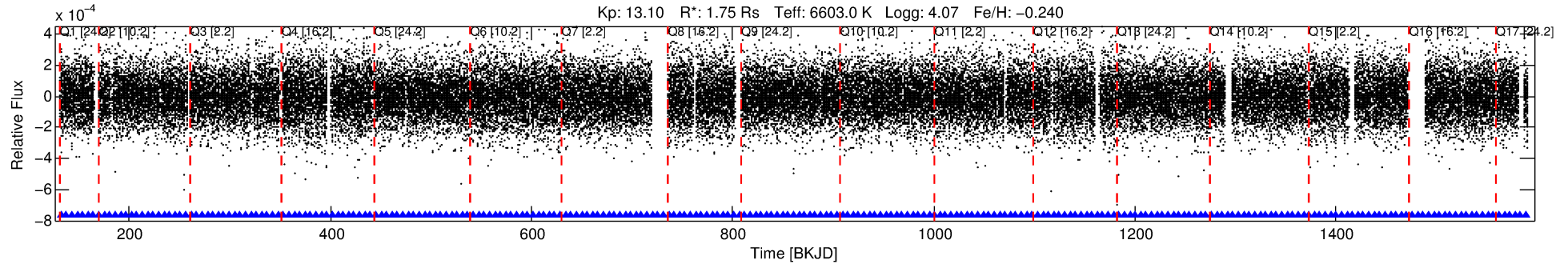
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008837530-01

No Significant Match Found

DV One-Page Summary

KIC: 8837530 Candidate: 1 of 1 Period: 5.395 d



DV Fit Results:

Period = 5.39515 [0.00008] d
Epoch = 132.2834 [0.0112] BKJD
Rp/R* = 0.0048 [0.0014]
a/R* = 2.43 [3.33]
b = 0.88 [0.41]
Seff = 1208.86 [456.94]
Teff = 1504 [142] K
Rp = 0.93 [0.36] Re
a = 0.0658 [0.0155] AU
Ag = 42.70 [29.87] [1.40 σ]
Teffp = 5942 [909] K [4.83 σ]

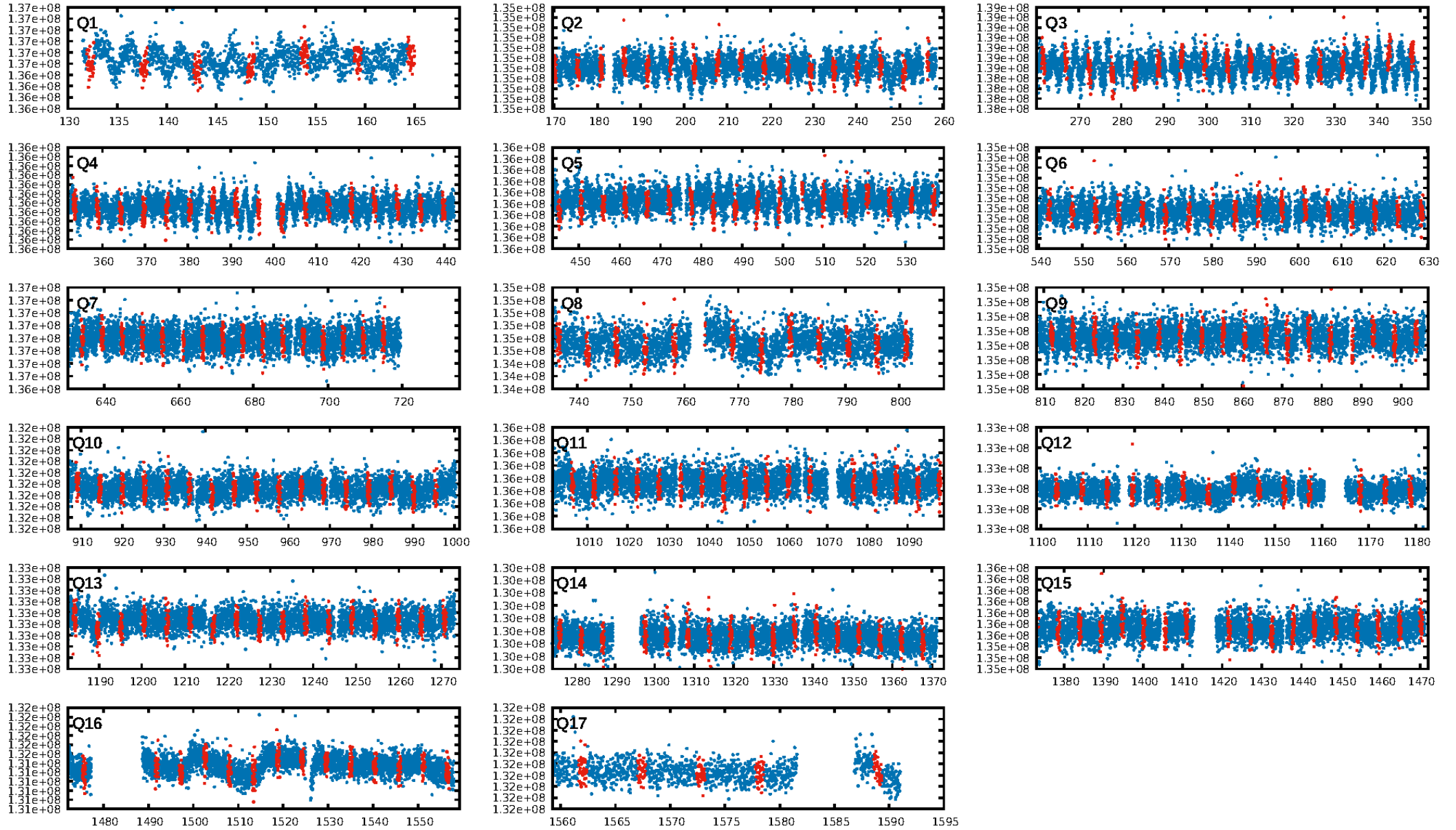
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.97e-15
RollingBand-fgt: 1.00 [244/244]
GhostDiagnostic-chr: 3.82
Centroid-sig: 22.0%
Centroid-so: 2.009 arcsec [1.20 σ]
OotOffset-rm: 1.612 arcsec [2.73 σ]
KicOffset-rm: 1.538 arcsec [2.71 σ]
OotOffset-st: 2/3/4/5 [14]
KicOffset-st: 2/3/4/5 [14]
DiffImageQuality-fgm: 0.43 [6/14]
DiffImageOverlap-fno: 1.00 [17/17]

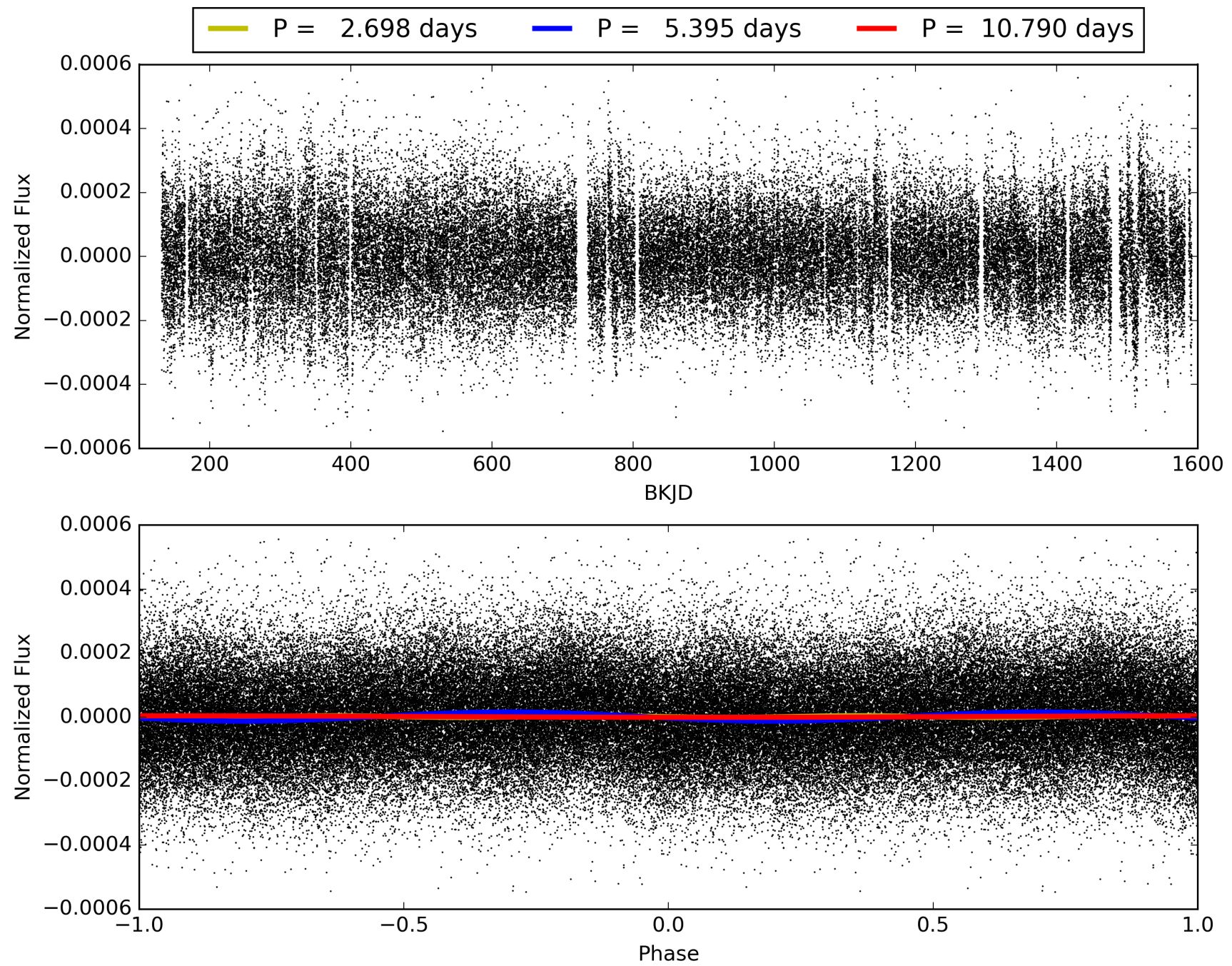
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:08:43 Z

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

TCE 008837530-01, PDC Light Curves

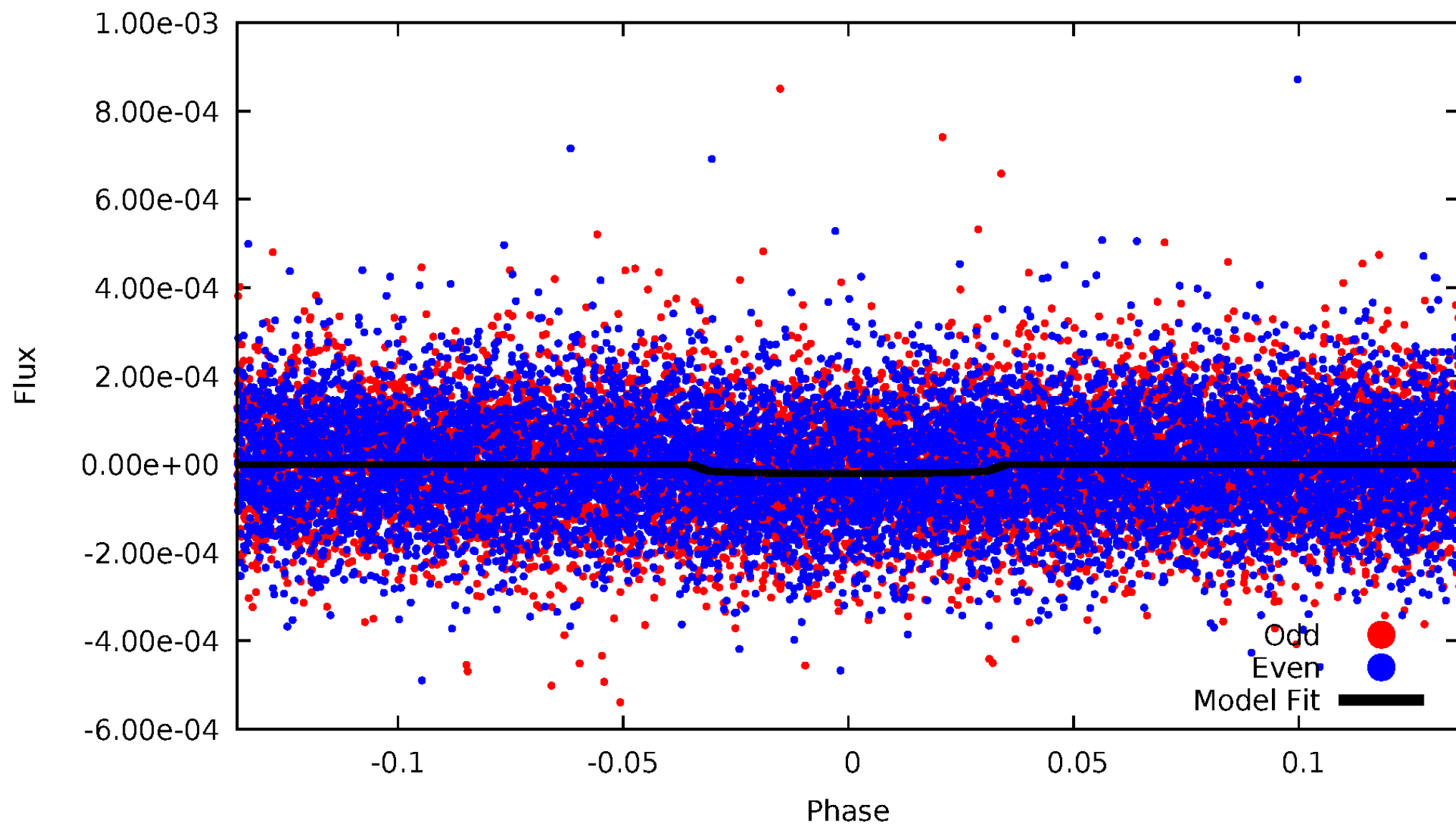


TCE 008837530-01



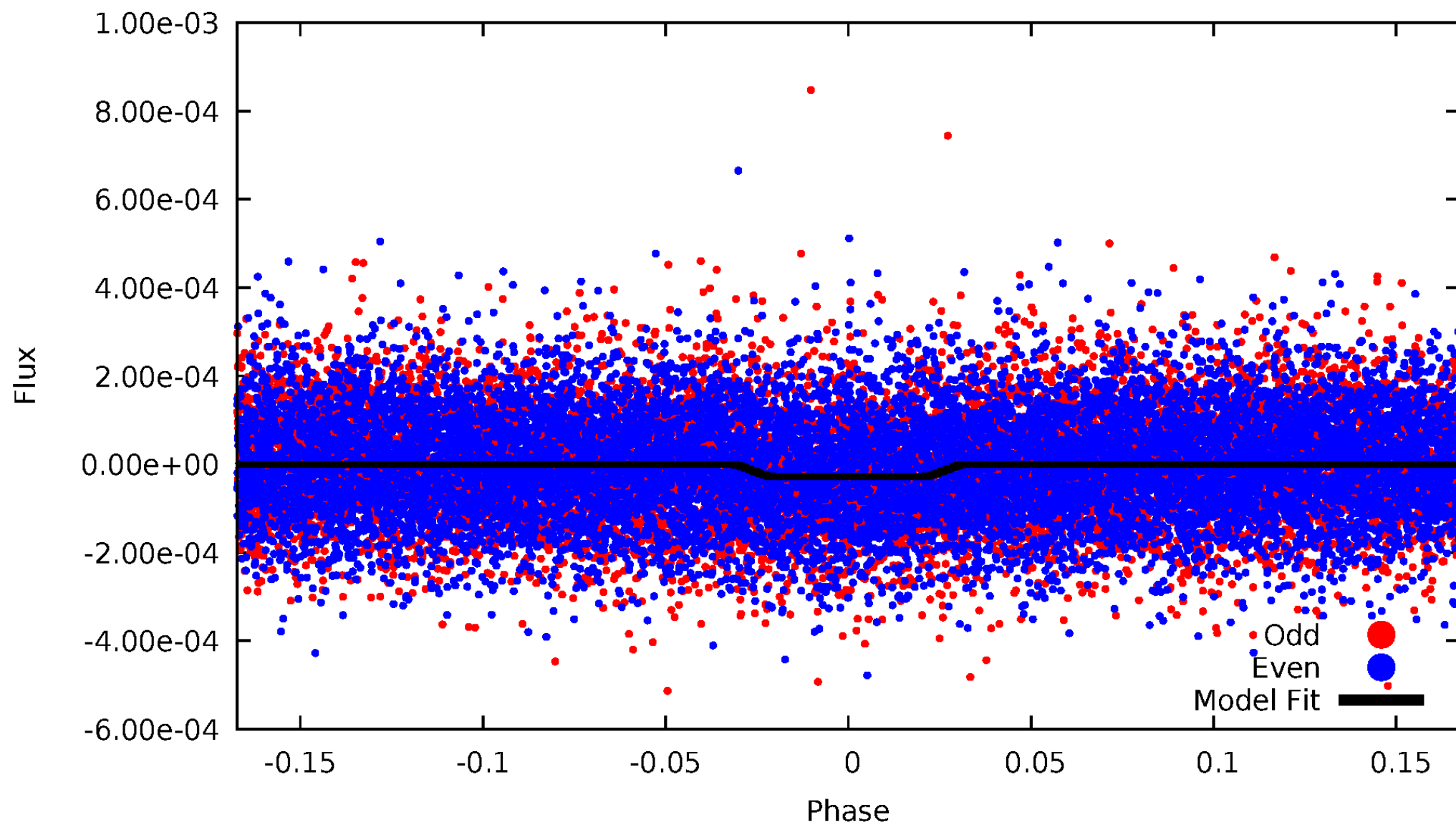
DV Odd/Even

TCE 008837530-01

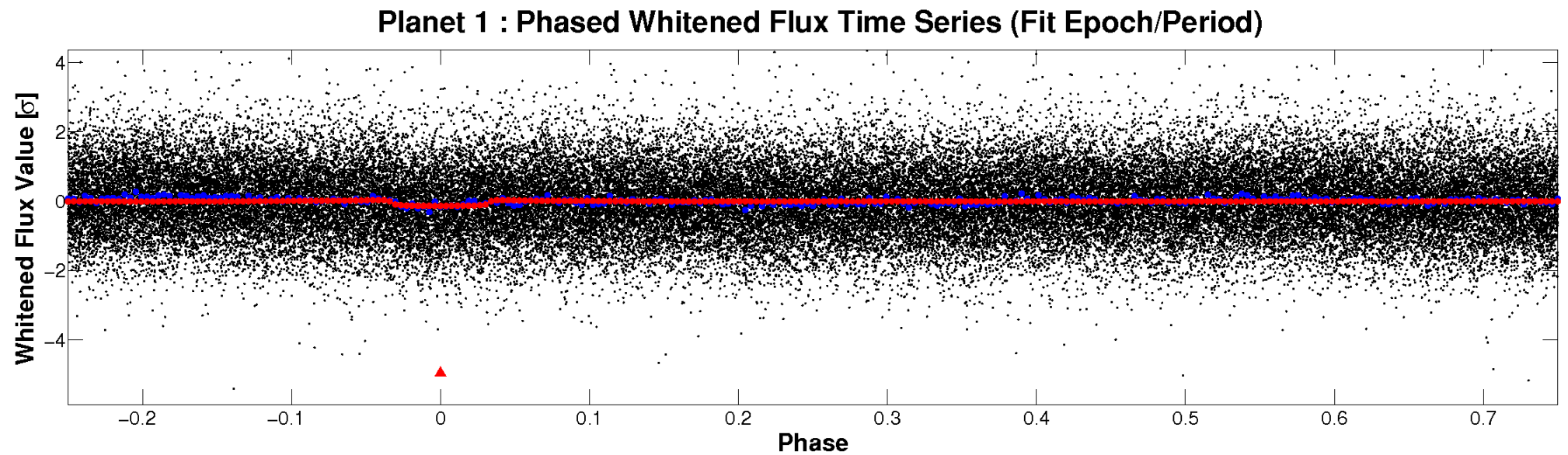
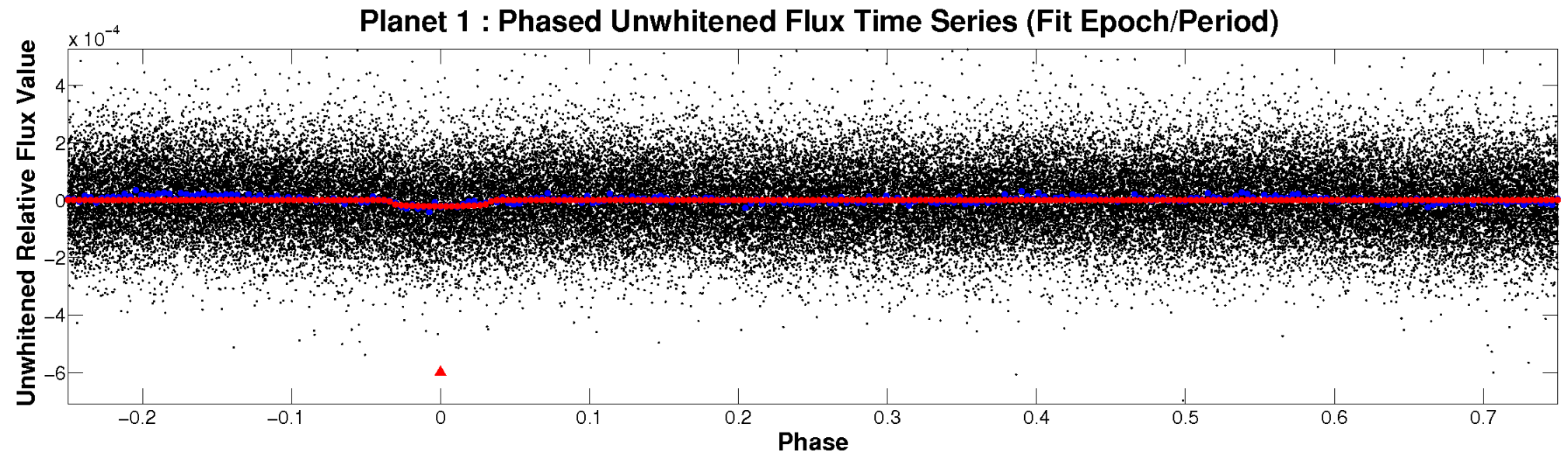


ALT Odd/Even

TCE 008837530-01

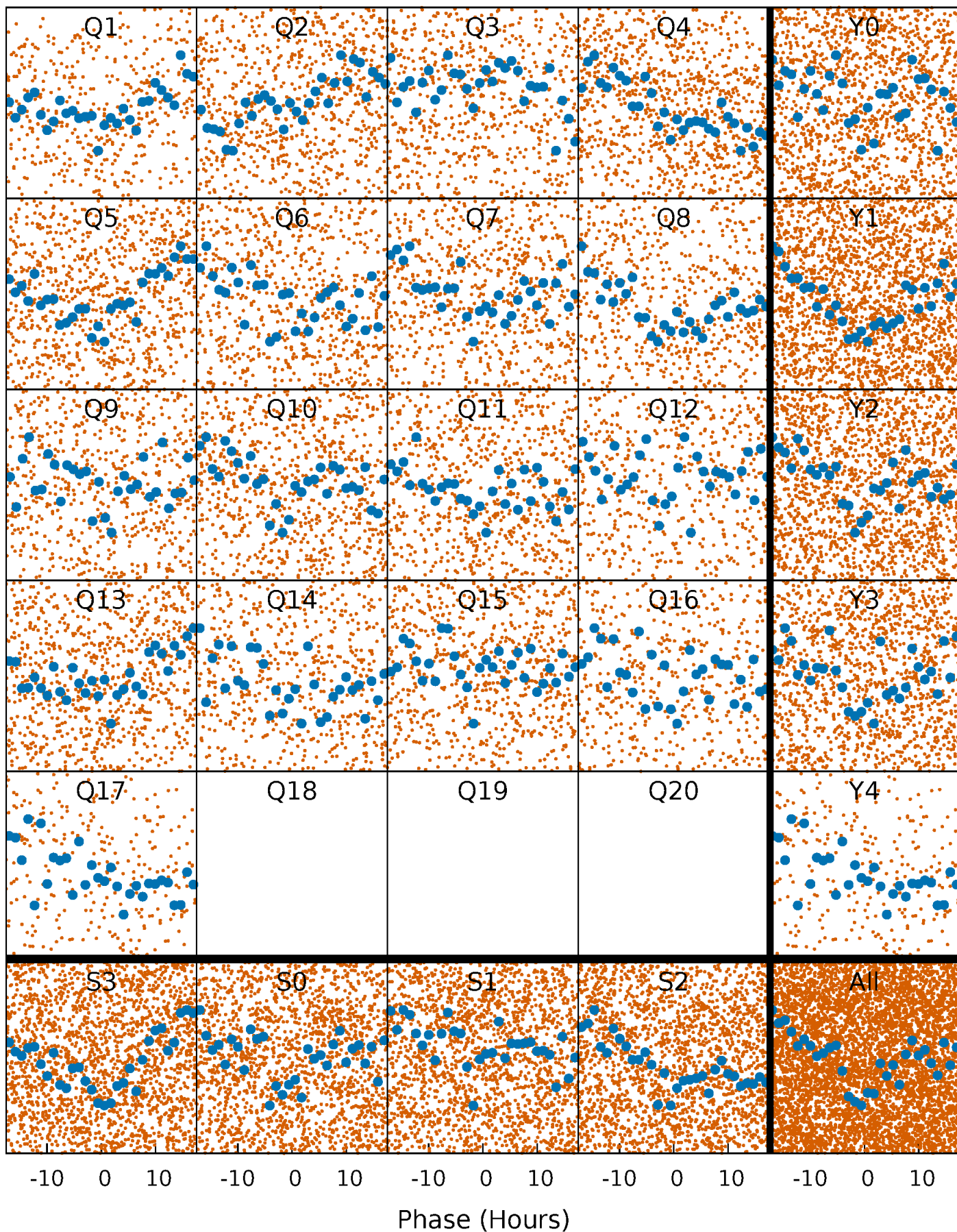


Non-Whitened Vs. Whitened Light Curve



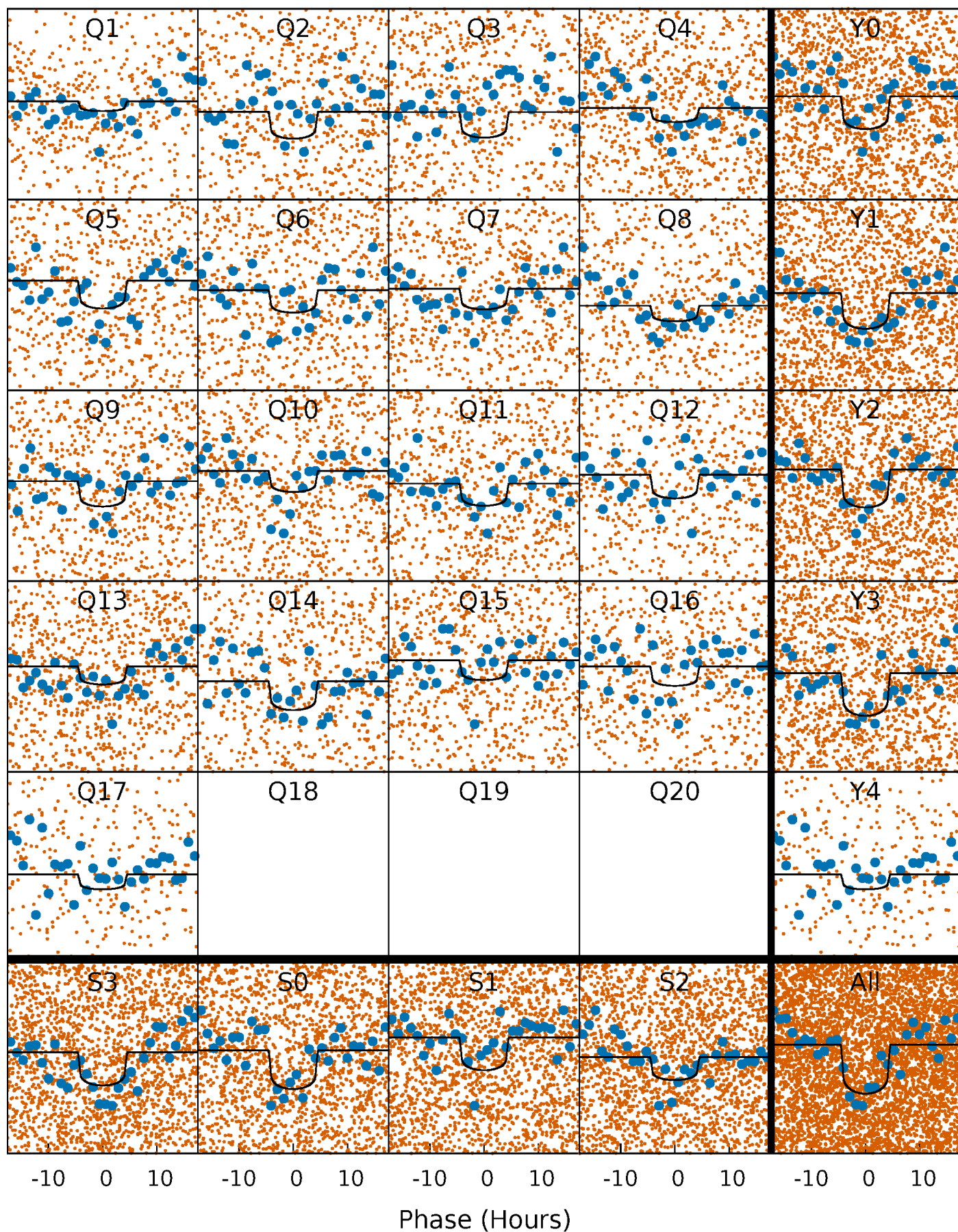
PDC Quarter-Phased Transit Curves

TCE 008837530-01 P= 5.395154 Days $T_0=132.283422$ (BKJD)



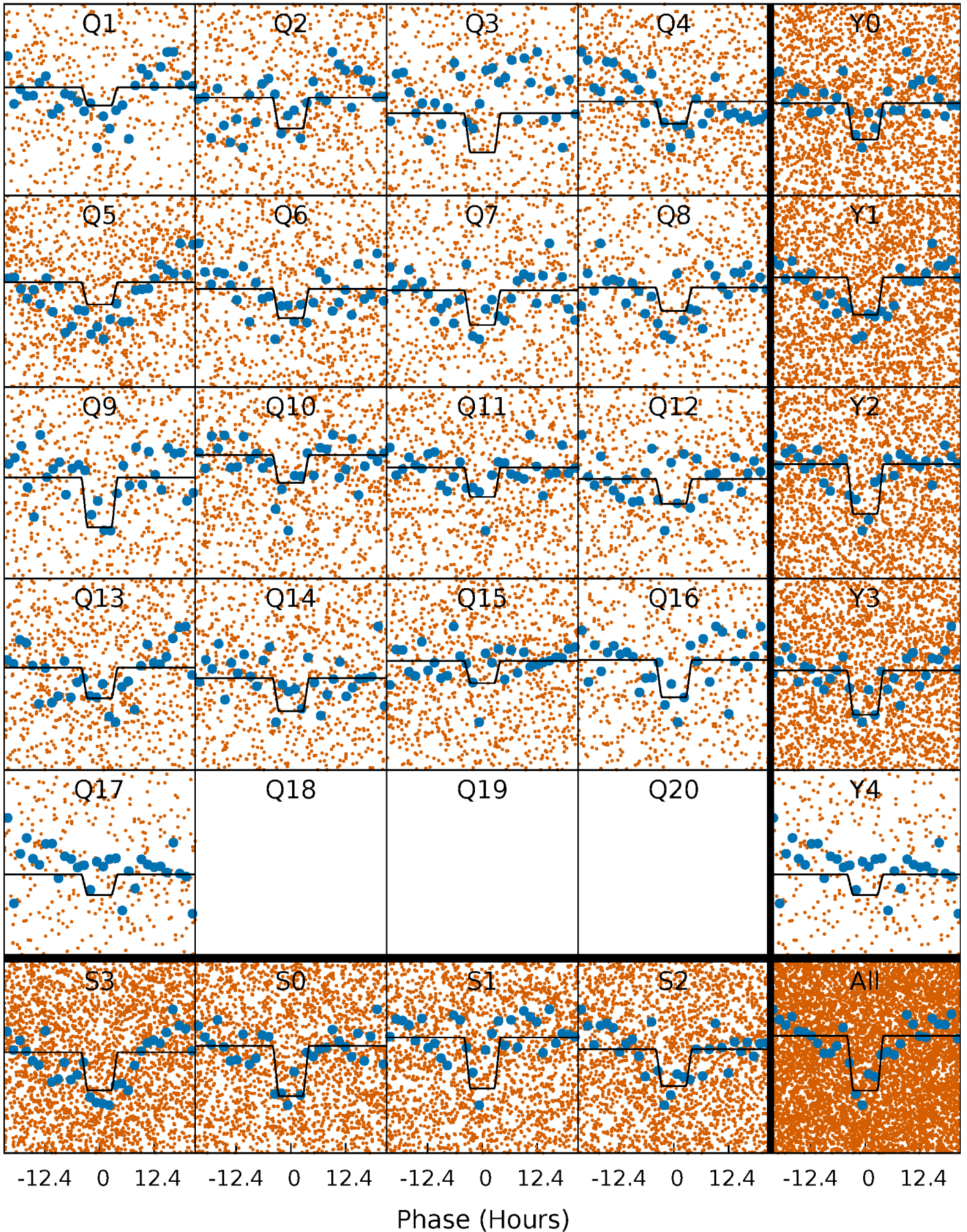
DV Quarter-Phased Transit Curves

TCE 008837530-01 P= 5.395154 Days $T_0=132.283422$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

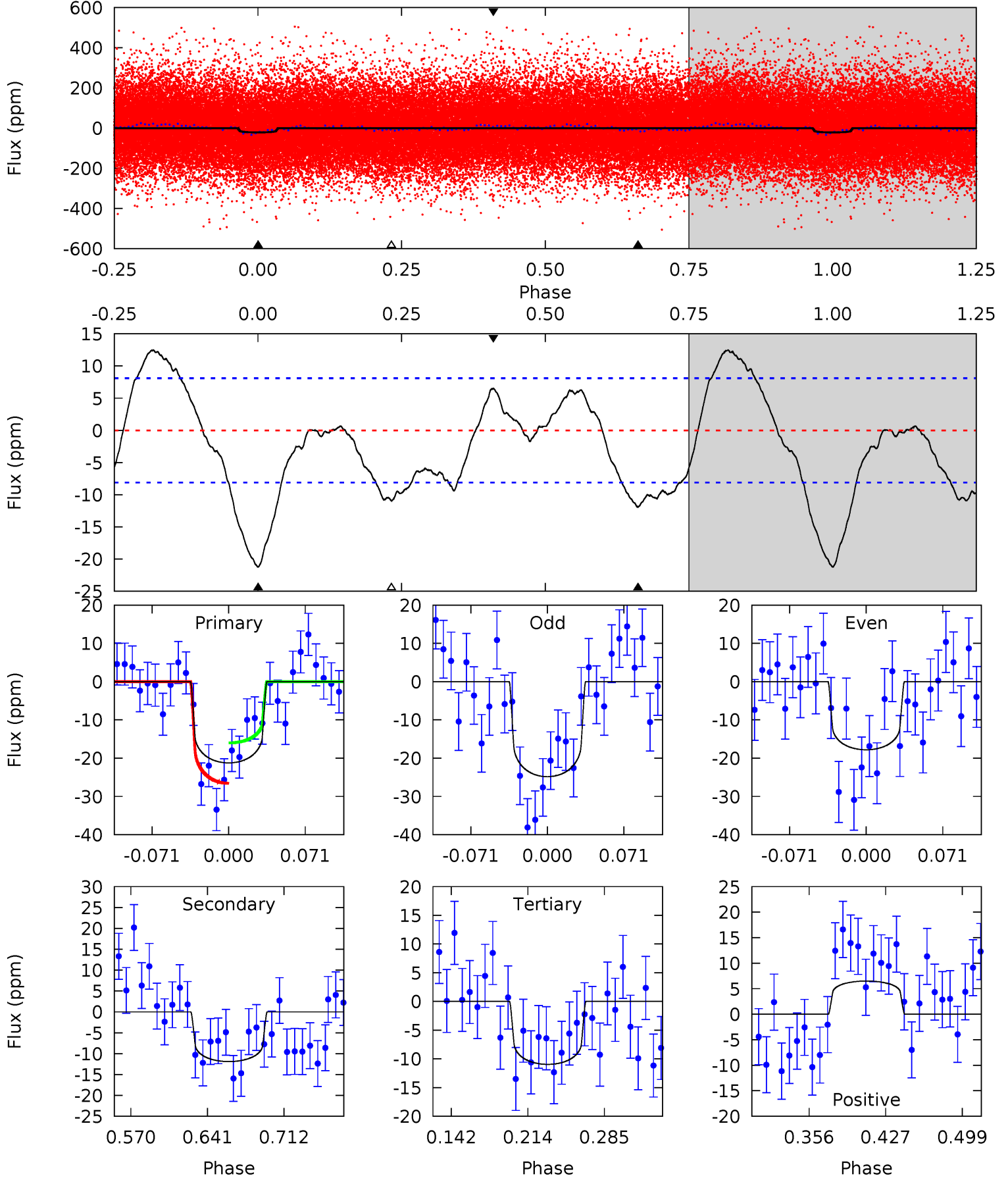
TCE 008837530-01 P= 5.395007 Days $T_0=132.283763$ (BKJD)



DV Model-Shift Uniqueness Test

008837530-01, P = 5.395154 Days, E = 126.888268 Days

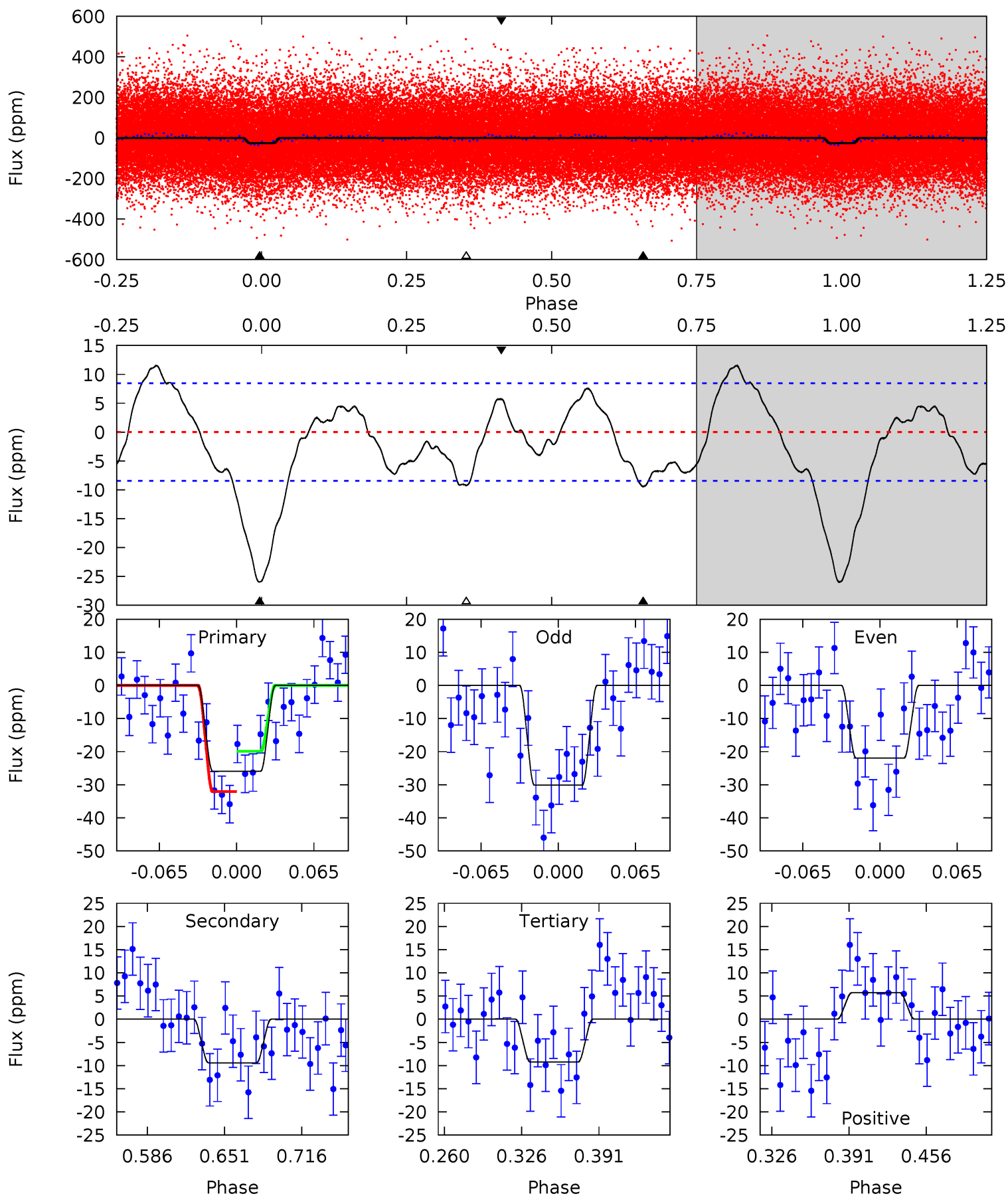
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	6.80	6.26	3.72	4.64	1.80	3.49	5.88	8.43	0.54	3.09	2.01	1.01	0.37	3.01



Alt Model-Shift Uniqueness Test

008837530-01, P = 5.395007 Days, E = 126.888756 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	5.19	5.08	3.15	4.65	1.84	2.80	9.20	11.1	0.10	2.04	2.24	1.11	0.31	3.33



Stellar Parameters For KIC 008837530

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6603^{+175}_{-194}	$4.066^{+0.204}_{-0.136}$	$-0.240^{+0.300}_{-0.250}$	$1.753^{+0.378}_{-0.463}$	$1.311^{+0.161}_{-0.221}$	$0.343^{+0.407}_{-0.141}$
	+3%/-3%	+5%/-3%	+125%/-104%	+22%/-26%	+12%/-17%	+119%/-41%
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 008837530-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-12 ± 2	$0.90^{+0.31}_{-0.28}$	2093^{+136}_{-141}	5580^{+1113}_{-651}	34^{+40}_{-15}
Alt.	-9 ± 2	$0.98^{+0.30}_{-0.27}$	2085^{+136}_{-139}	5102^{+818}_{-527}	23^{+21}_{-10}

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

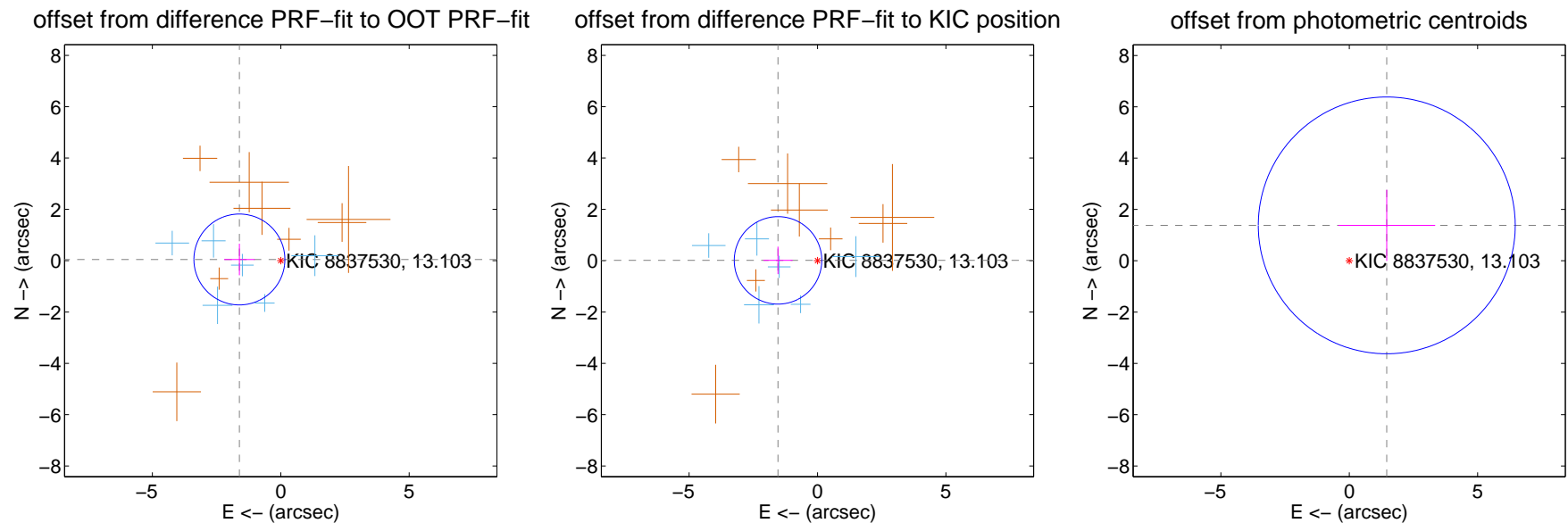
DV Centroid Data

Supplemental centroid analysis for 008837530-01. Kepler magnitude: 13.10. Transit SNR 8.28

There are 6 quarters with good PRF difference image offsets

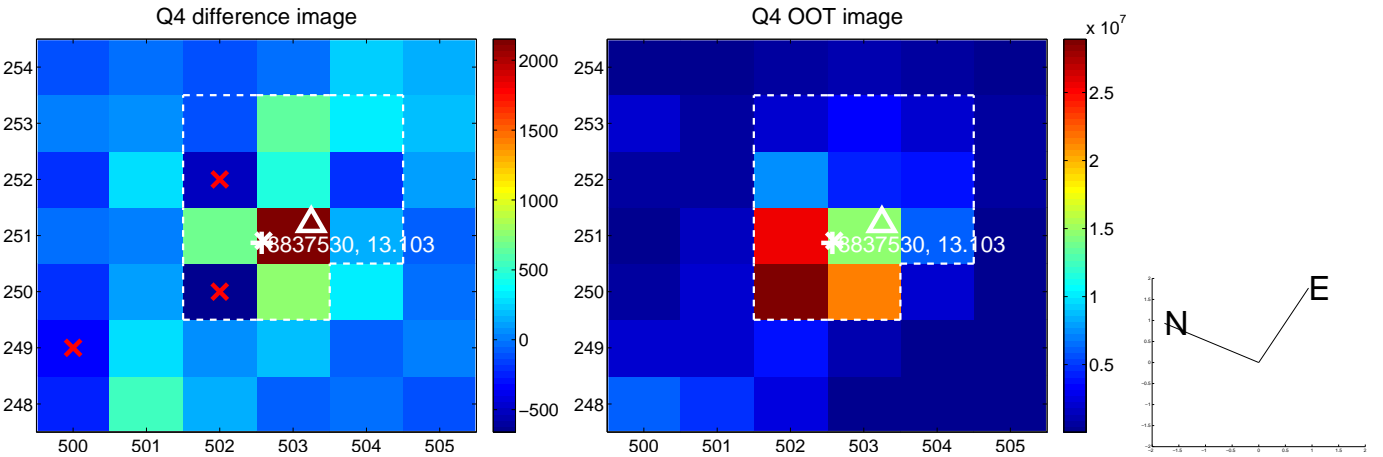
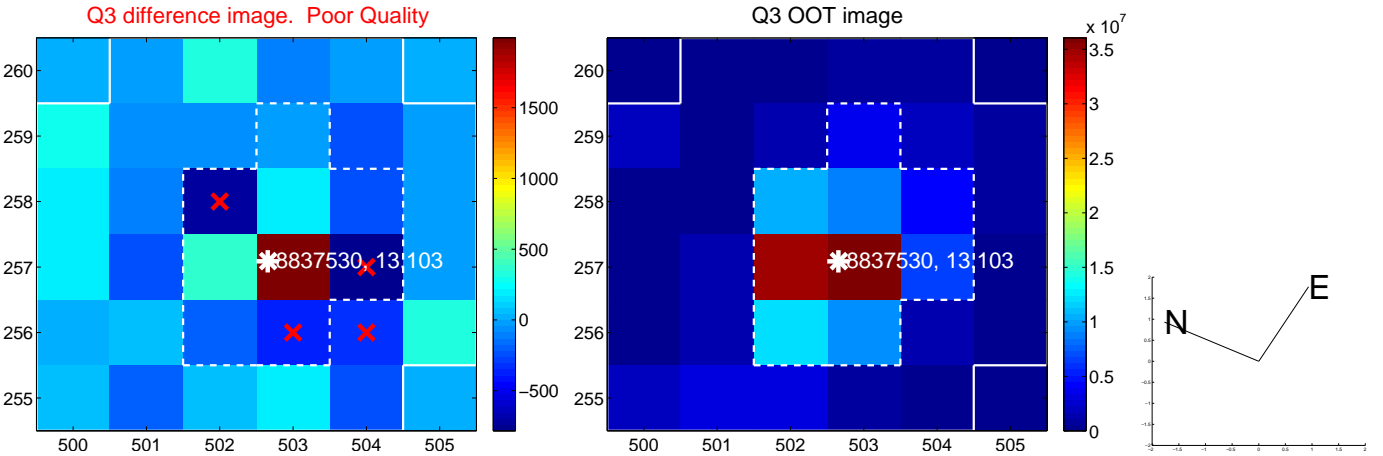
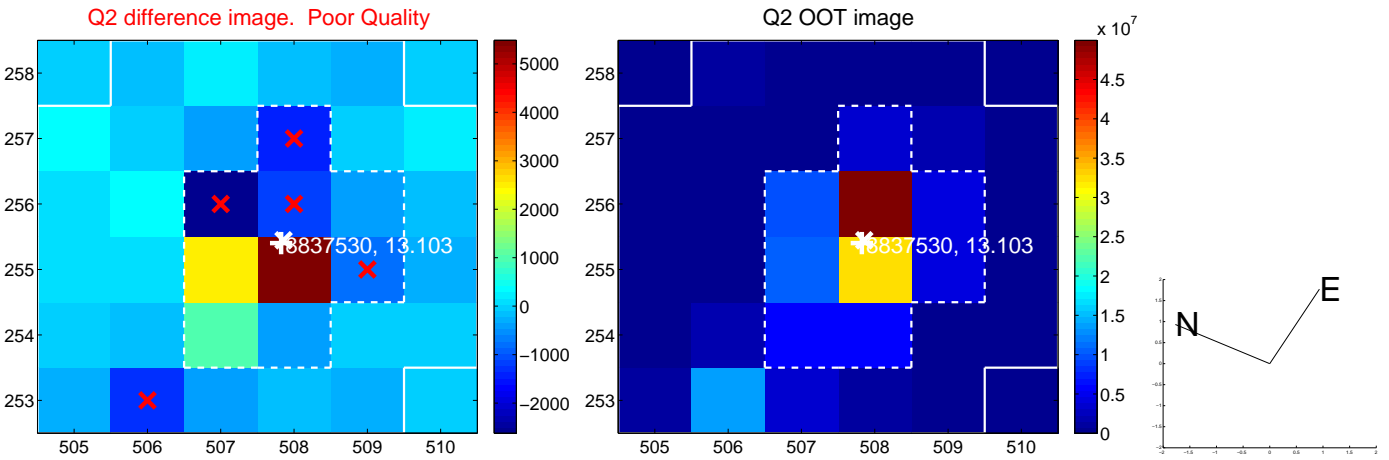
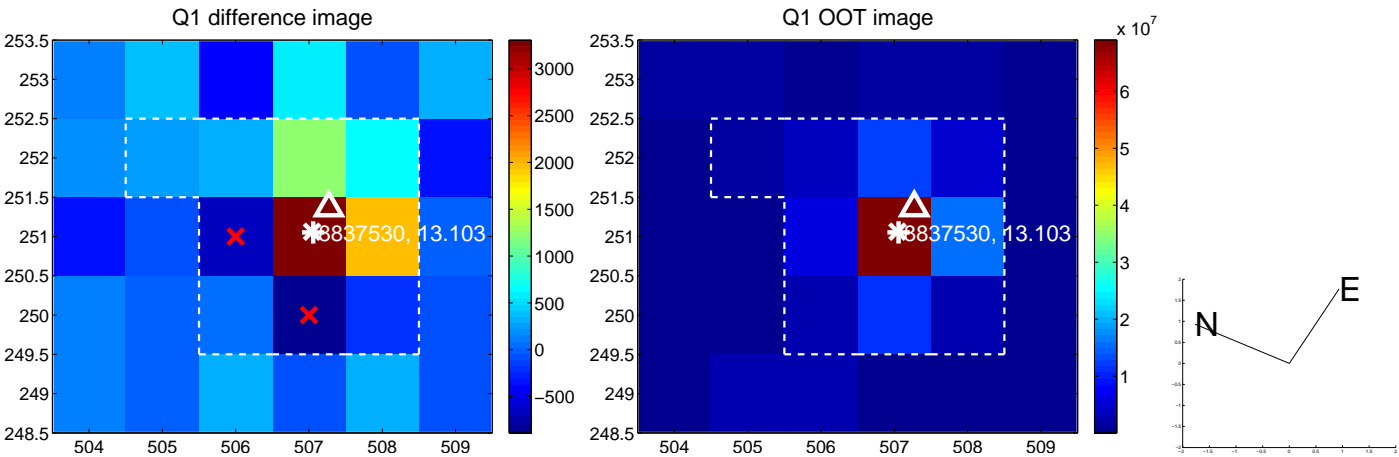
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.612 ± 0.590	2.73	1.611 ± 0.594	0.048 ± 0.615
PRF-fit source offset from KIC position	1.538 ± 0.568	2.71	1.538 ± 0.569	0.012 ± 0.535
photometric centroid source offset	2.01 ± 1.67	1.20	-1.46 ± 1.88	1.38 ± 1.38

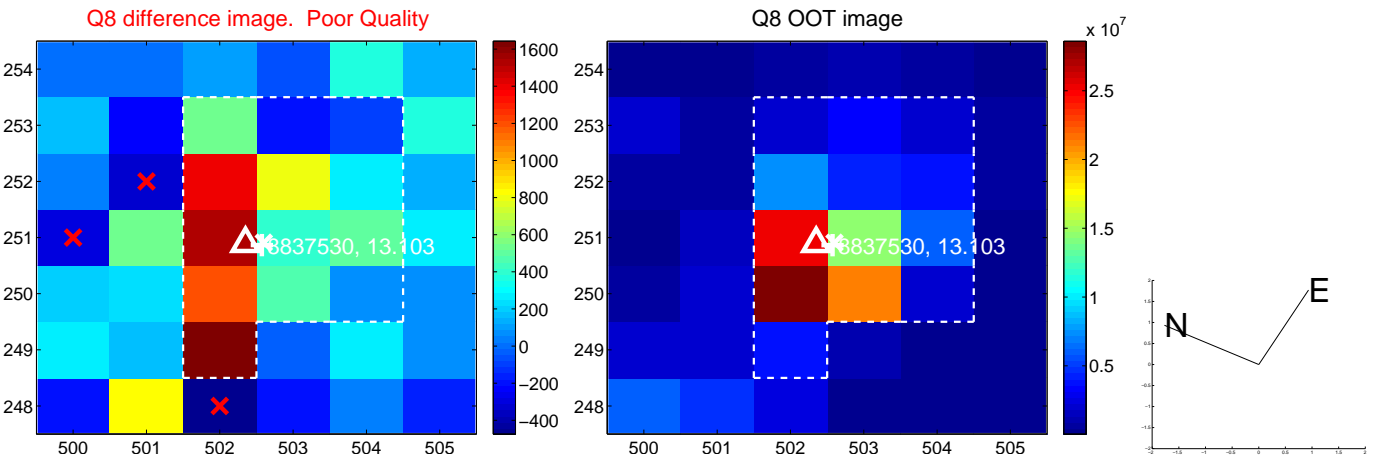
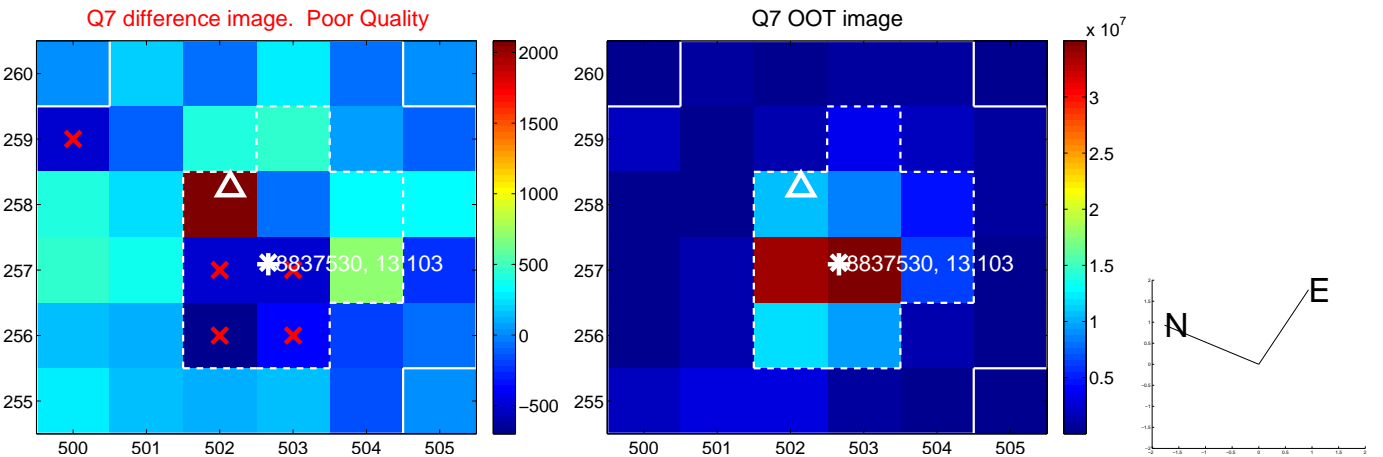
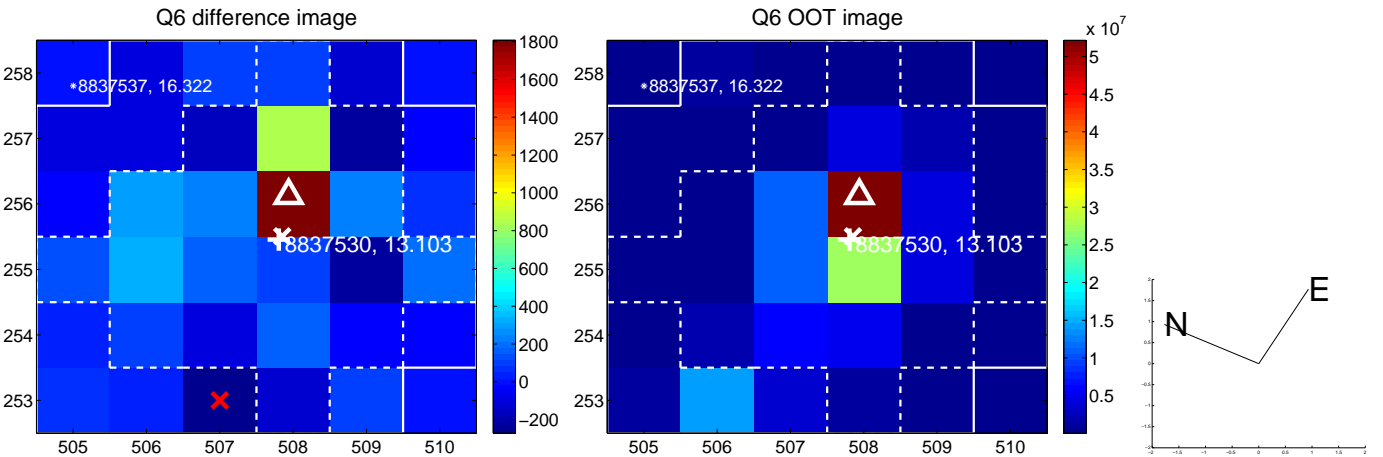
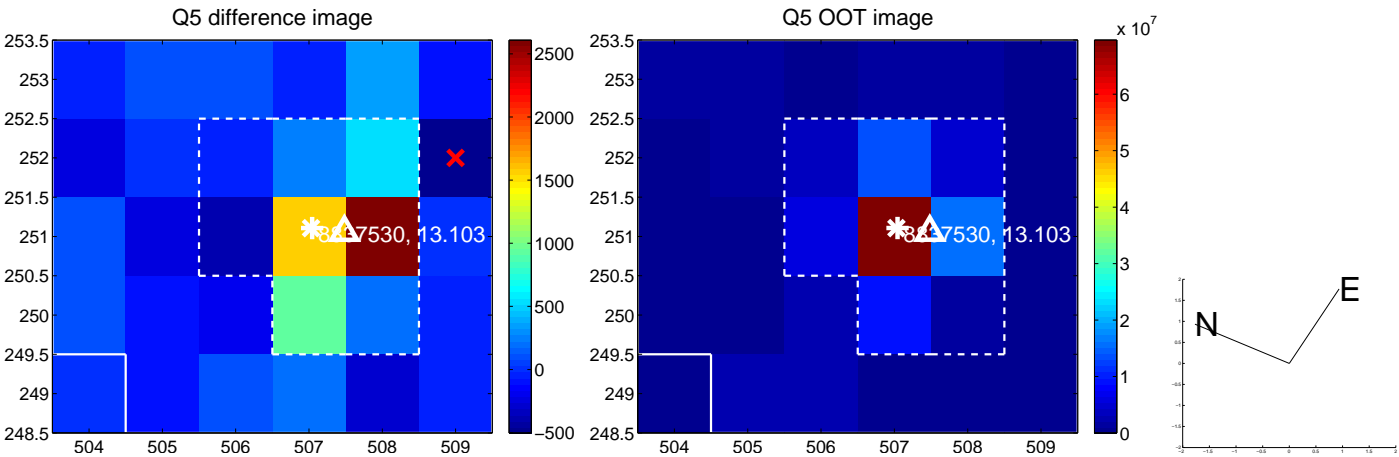


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

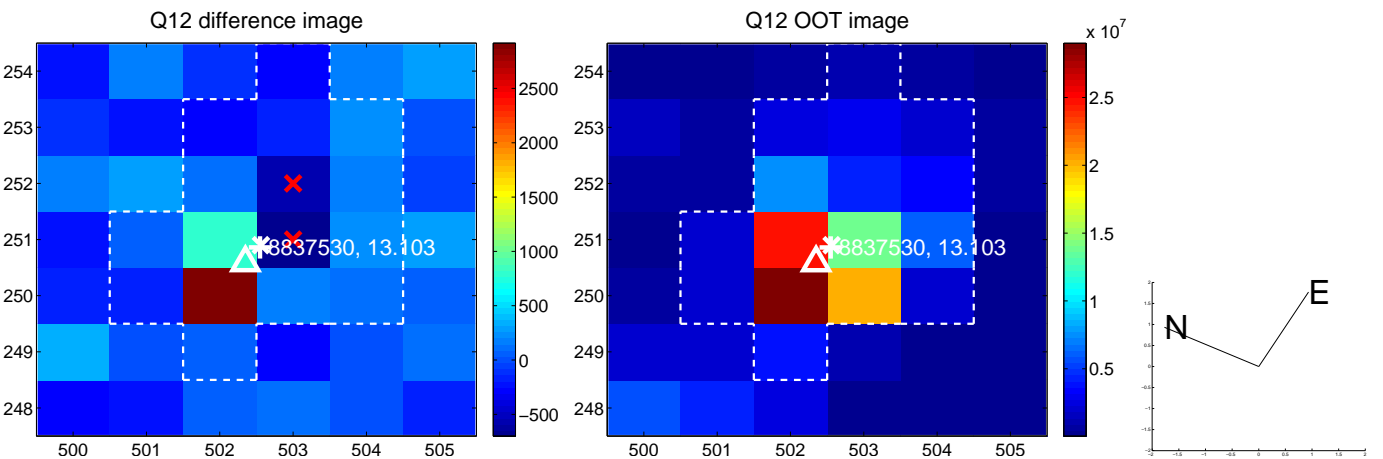
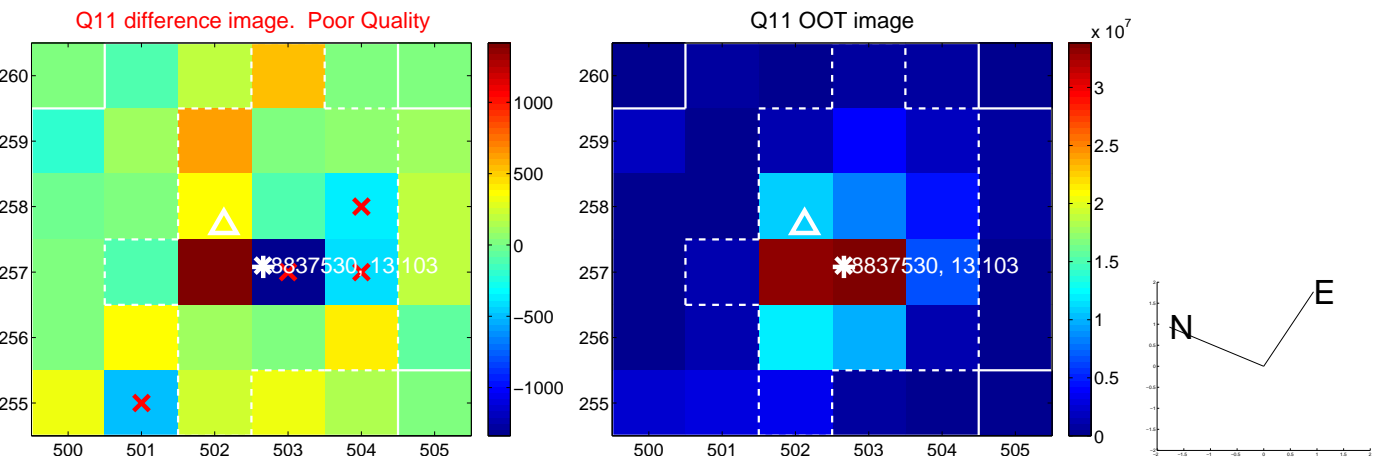
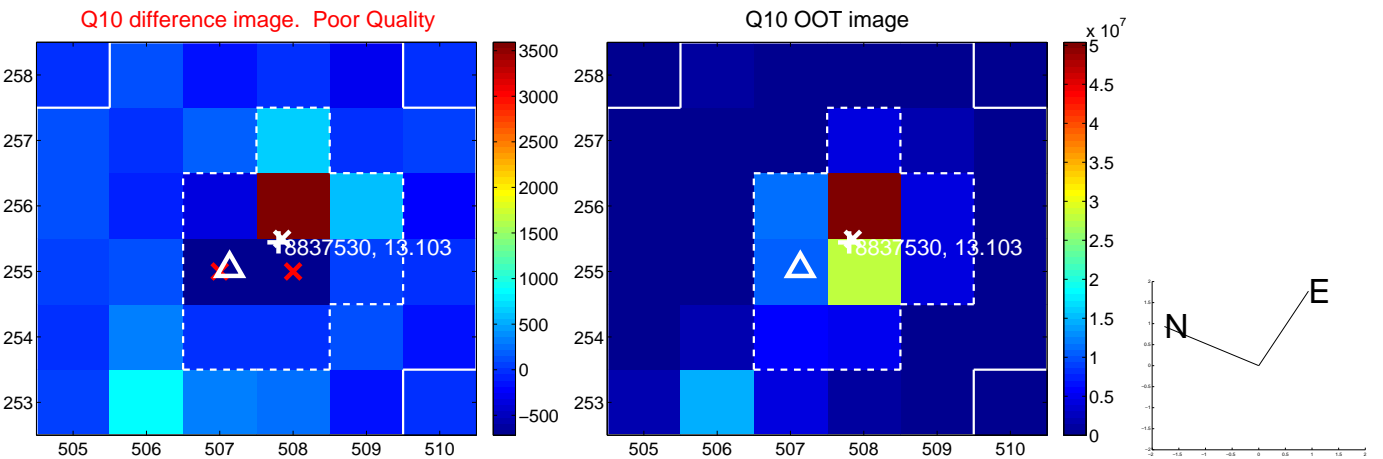
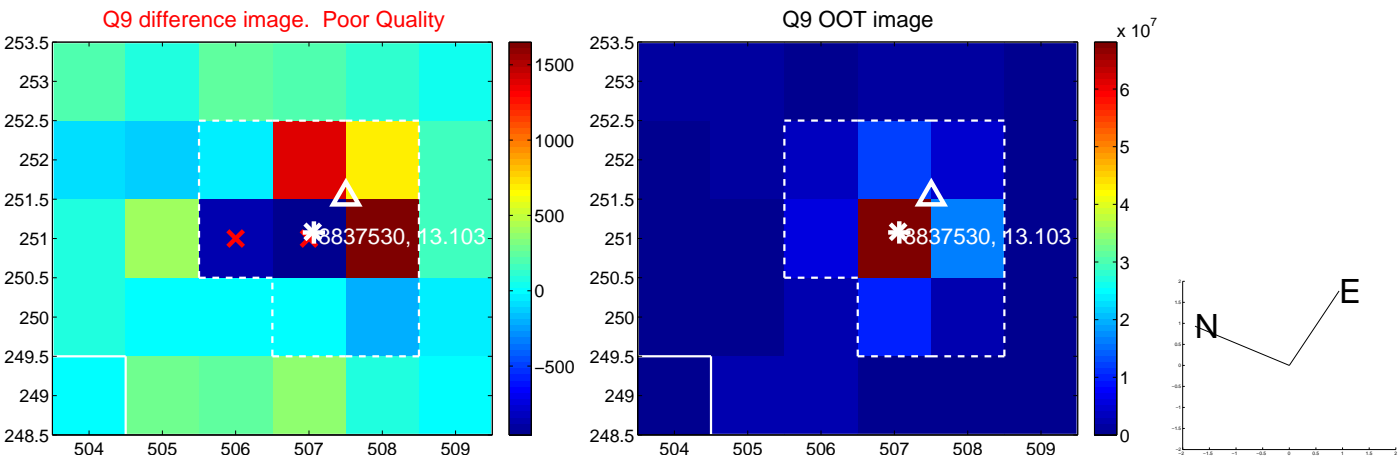
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



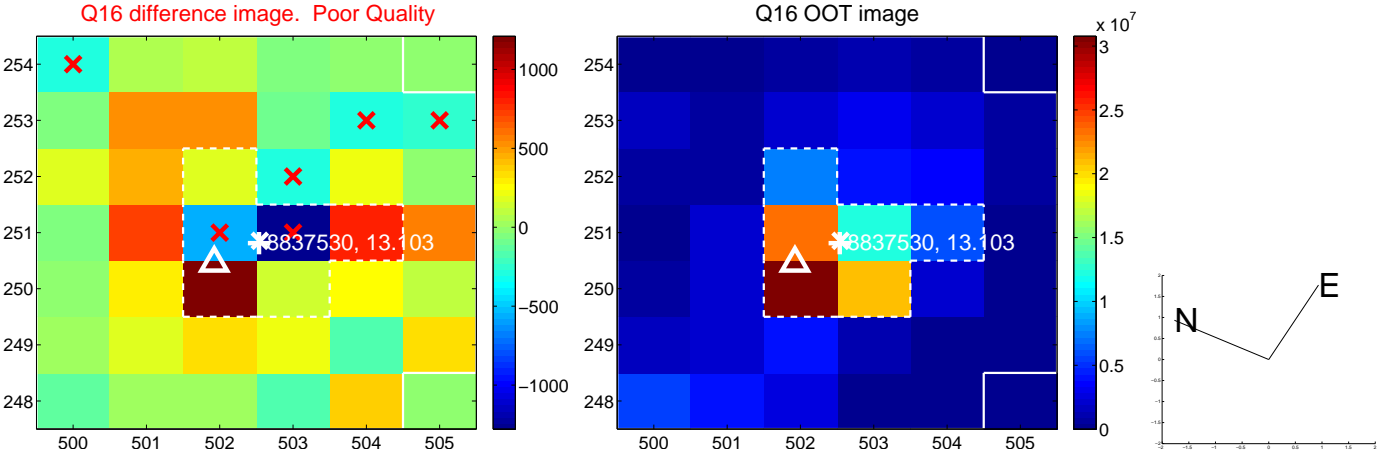
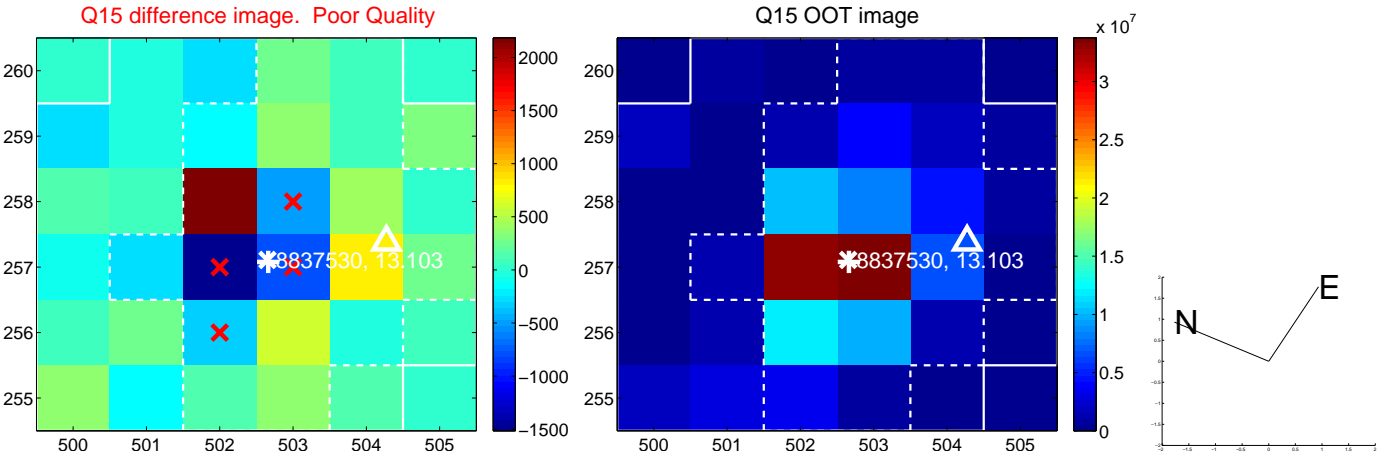
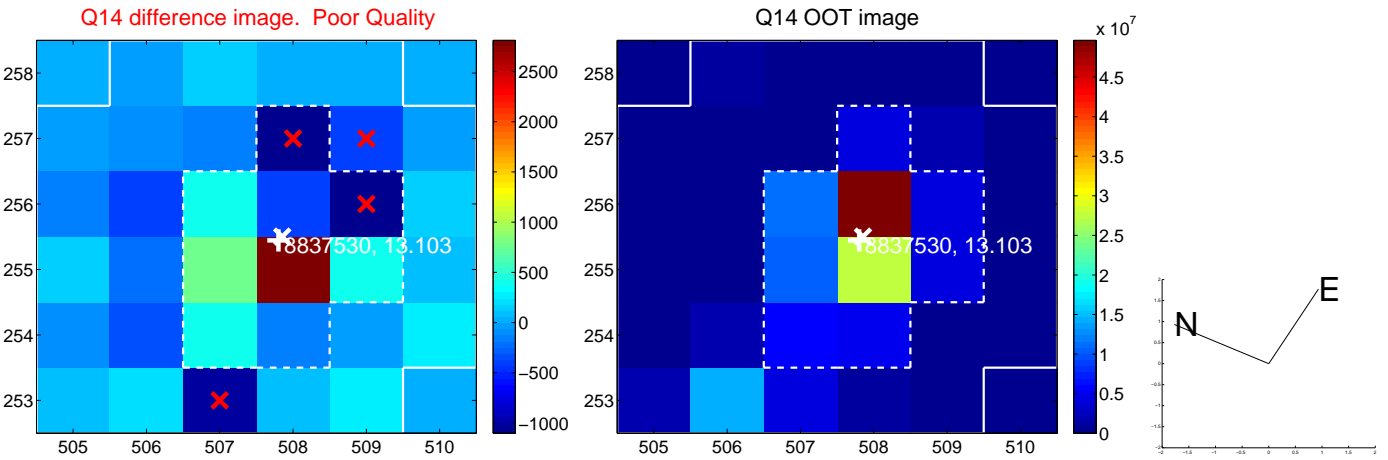
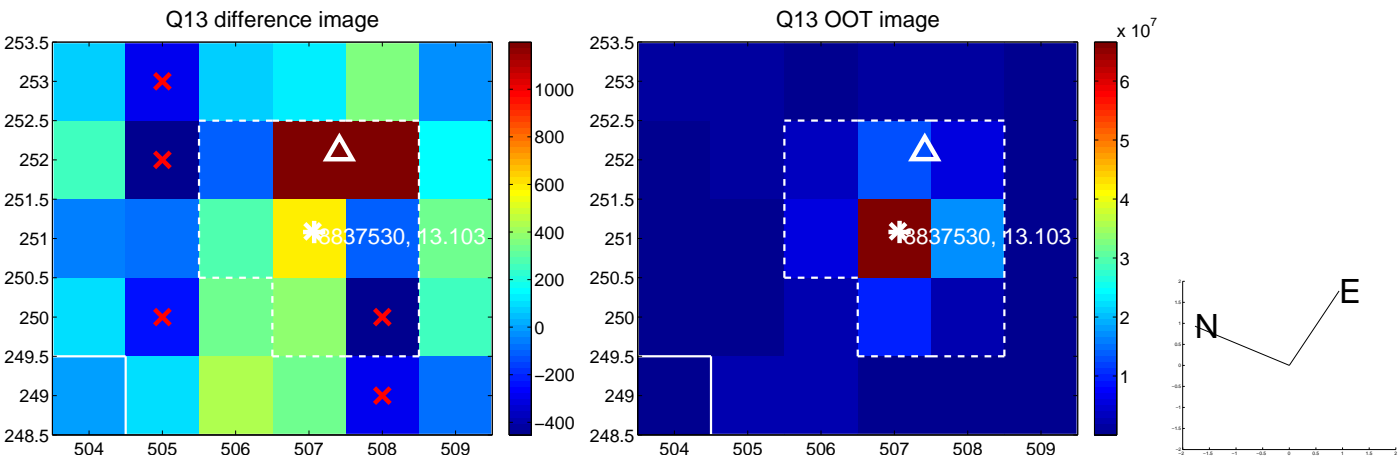
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



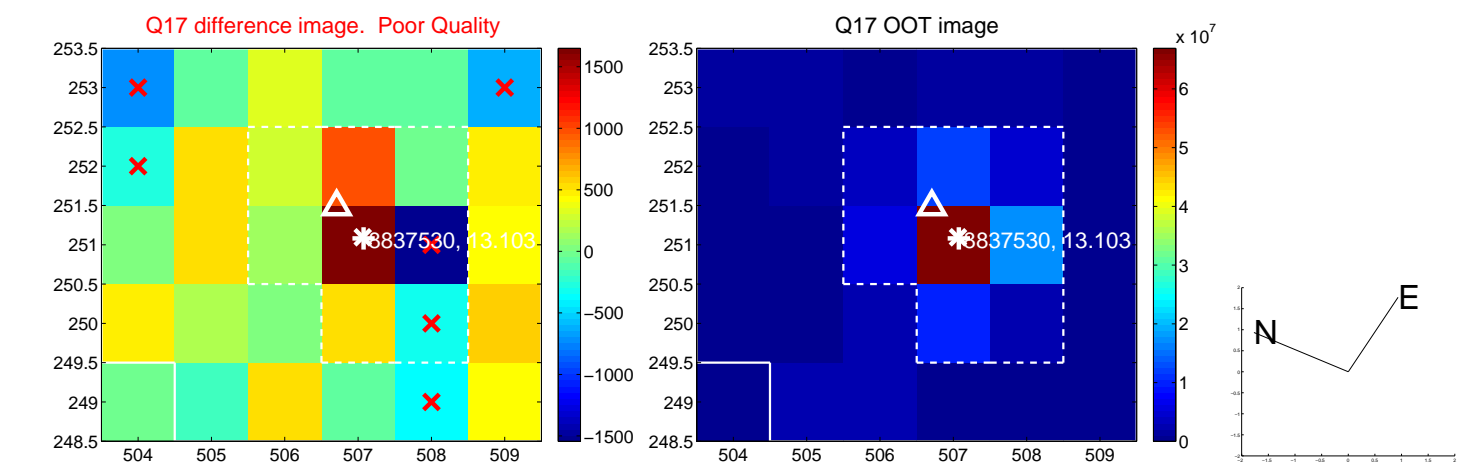
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



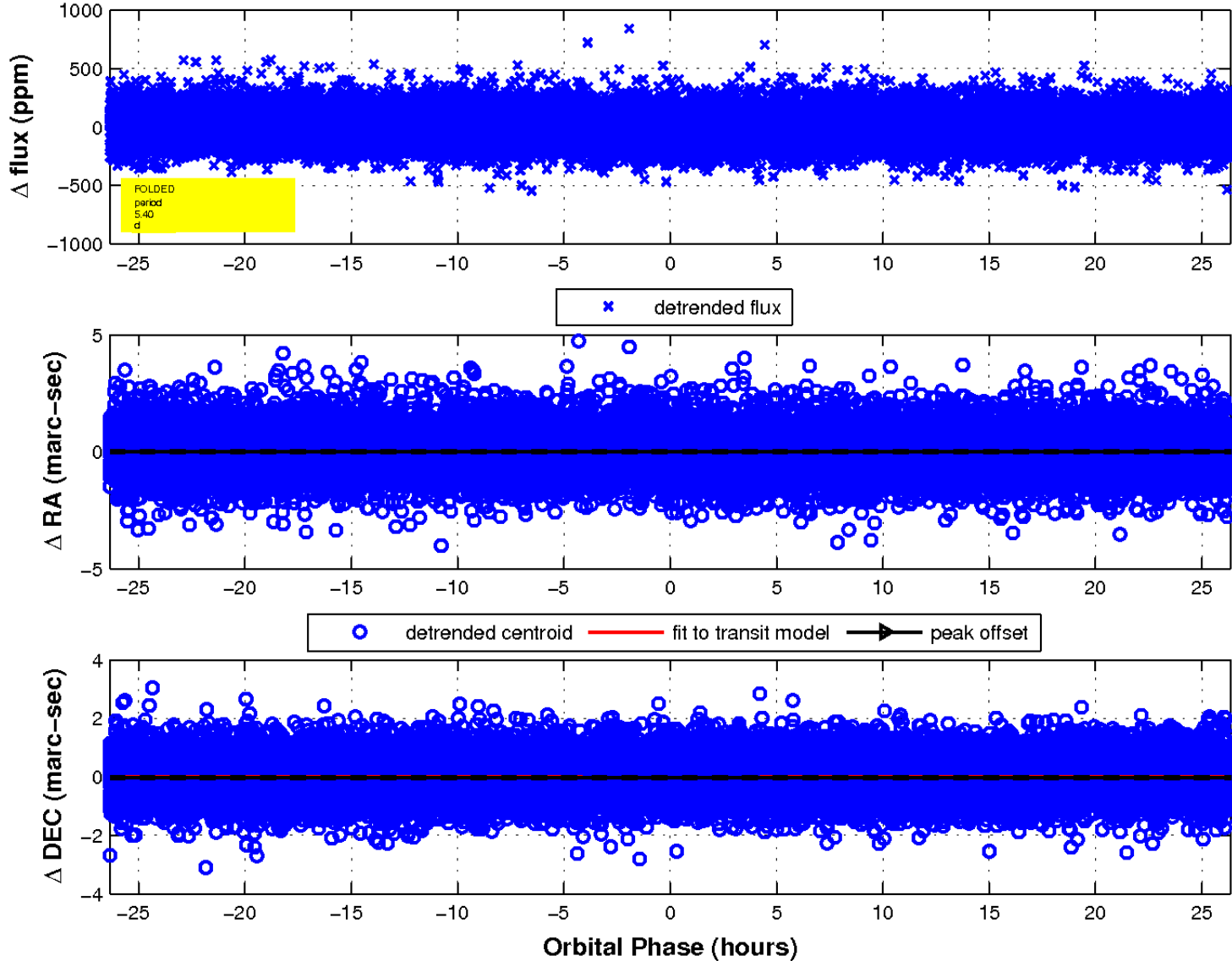
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

