

KIC 008588377

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})
008588377-01	OBS	3861.01	0.994655	131.637579	563.6	1.020	35.0	48.7	1.02	5750	2.90	3071.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008588377-01	OBS	FP	0.00	0	1	1	0	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 008588377-01

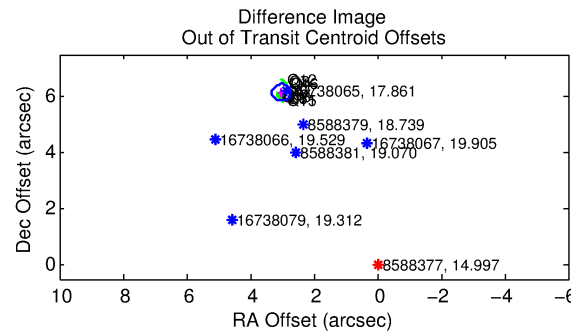
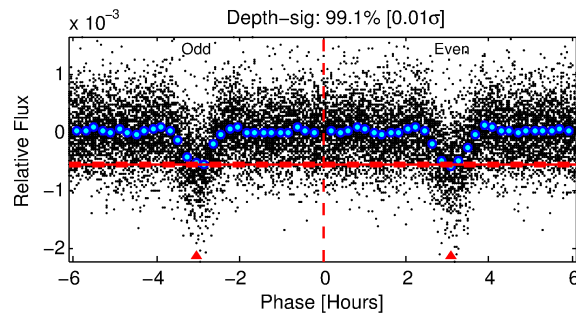
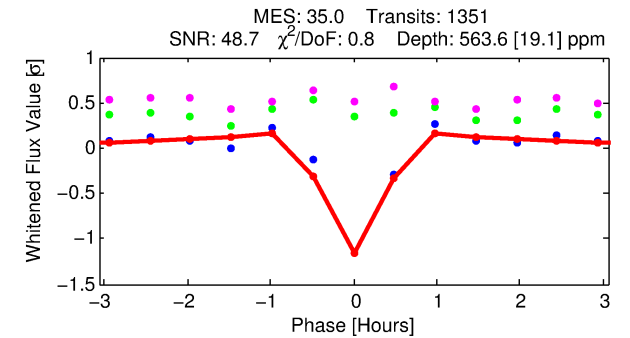
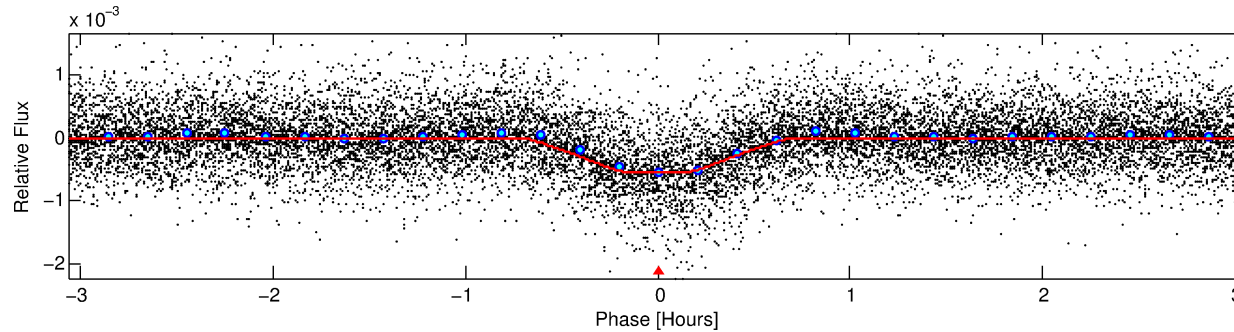
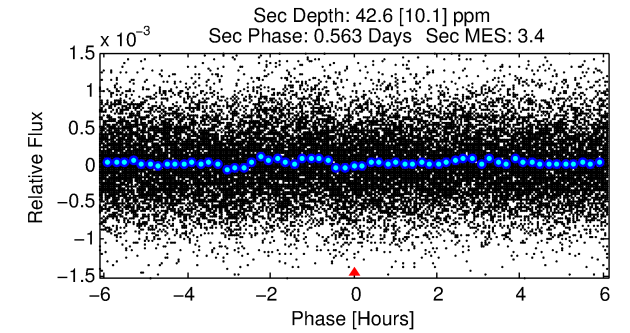
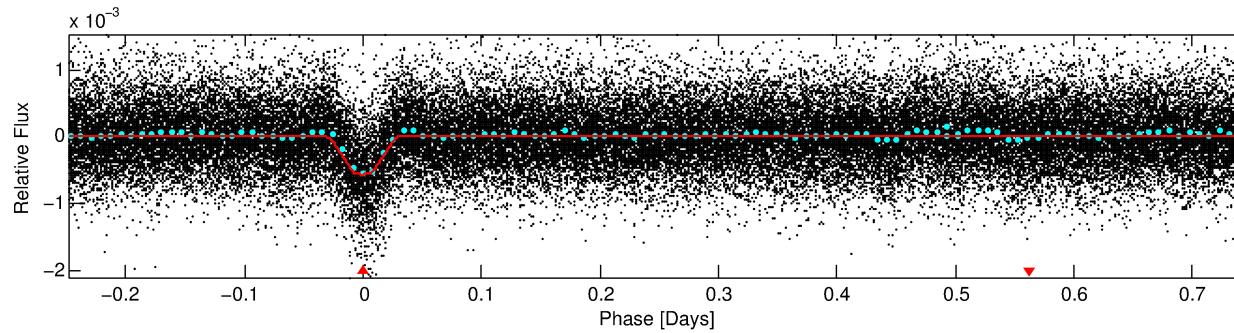
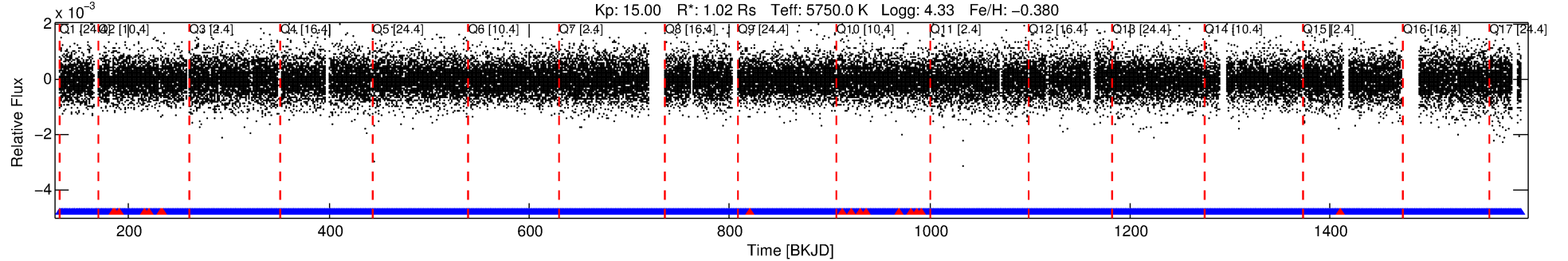
No Significant Match Found

DV One-Page Summary

KIC: 8588377 Candidate: 1 of 1 Period: 0.995 d

KOI: K03861.01 Corr: 0.804

Kp: 15.00 R*: 1.02 Rs Teff: 5750.0 K Logg: 4.33 Fe/H: -0.380



DV Fit Results:

Period = 0.99465 [0.00000] d
Epoch = 131.6376 [0.0003] BKJD
Rp/R* = 0.0260 [0.0033]
a/R* = 3.77 [2.10]
b = 0.90 [0.13]
Seff = 3071.52 [1188.07]
Teq = 1898 [184] K
Rp = 2.90 [0.90] Re
a = 0.0182 [0.0045] AU
Ag = 0.92 [0.47] [-0.16σ]
Teff = 2878 [265] K [3.04σ]

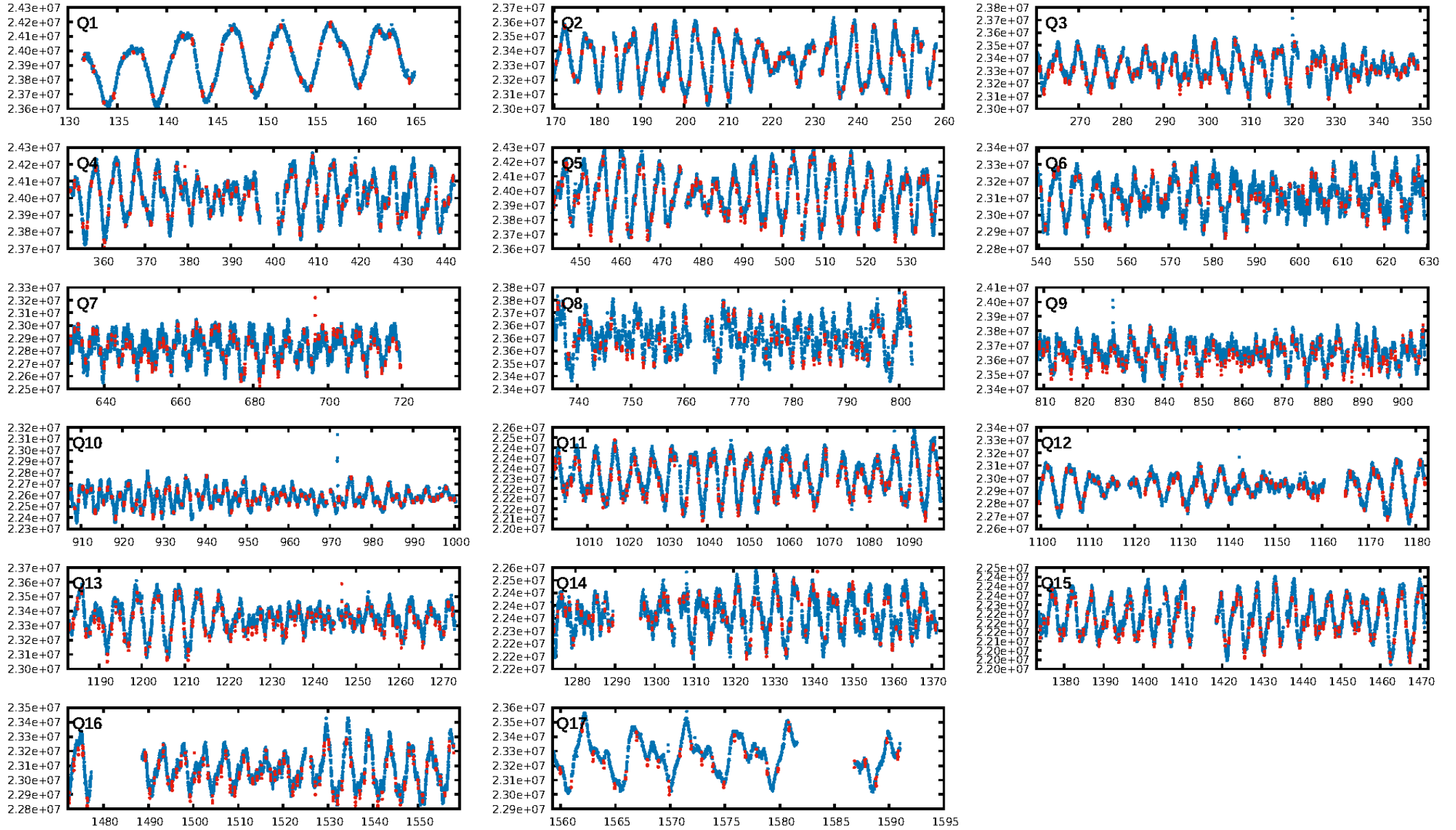
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.87e-253
RollingBand-fgt: 0.99 [1273/1290]
GhostDiagnostic-chr: -0.1032
Centroid-sig: 0.0%
Centroid-so: 45.168 arcsec [164.86σ]
OotOffset-rm: 6.844 arcsec [67.67σ]
KicOffset-rm: 6.825 arcsec [66.33σ]
OotOffset-st: 0/4/4/5 [13]
KicOffset-st: 0/4/4/5 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [17/17]

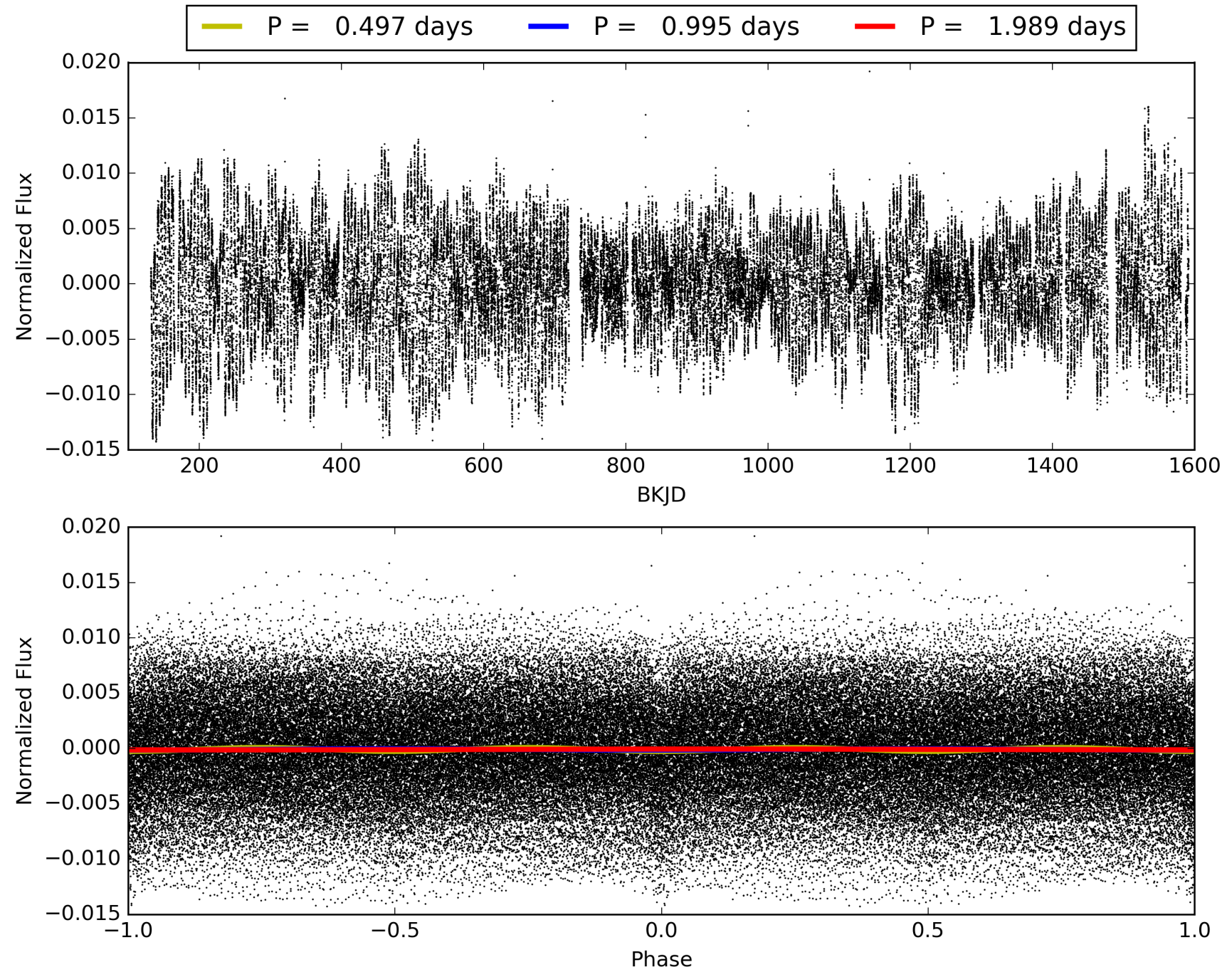
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:58:54 Z

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

TCE 008588377-01, PDC Light Curves

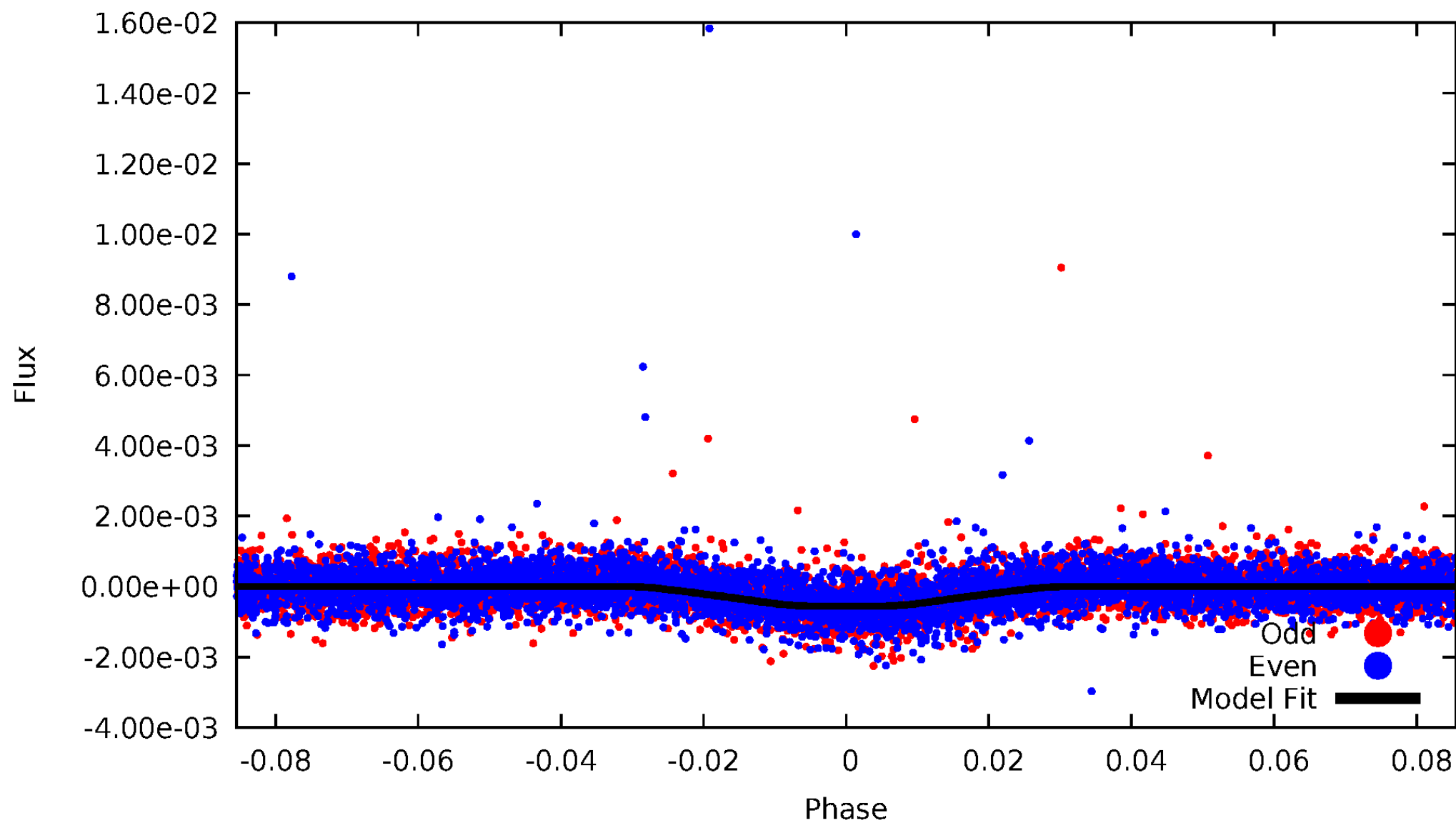


TCE 008588377-01



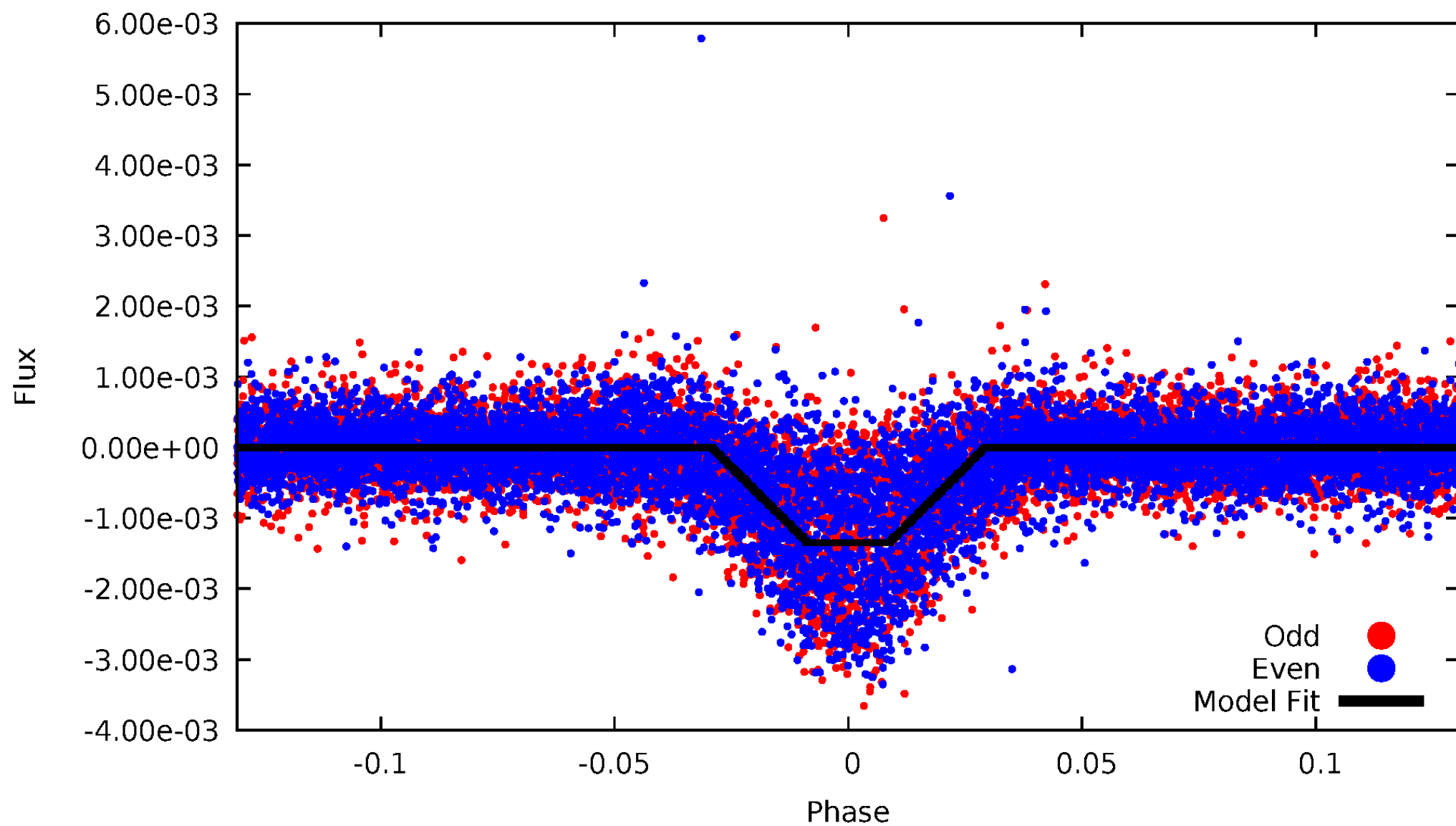
DV Odd/Even

TCE 008588377-01



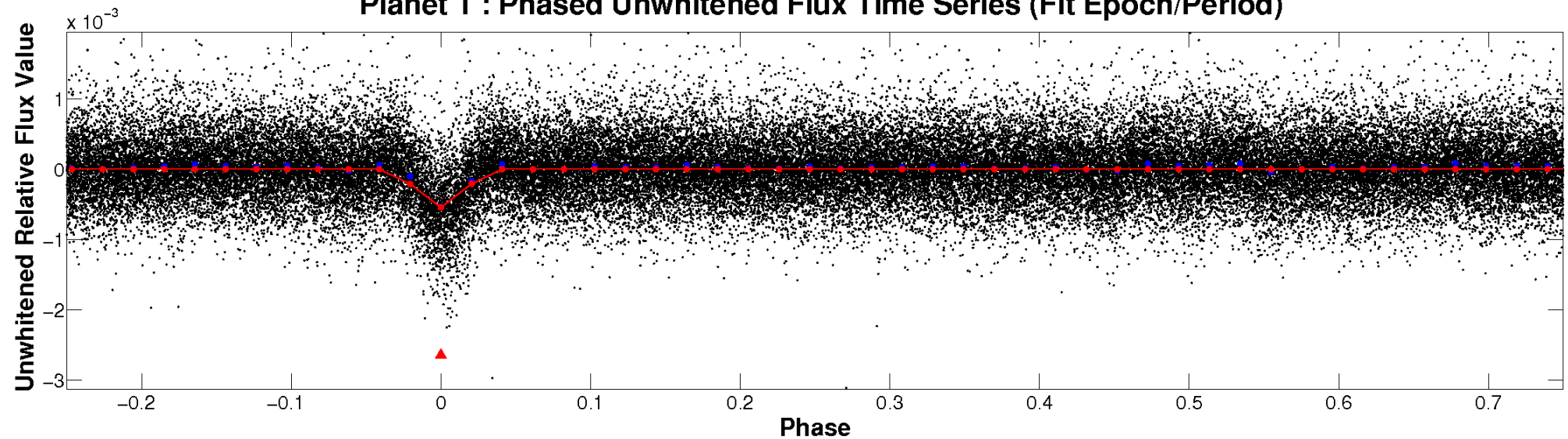
ALT Odd/Even

TCE 008588377-01

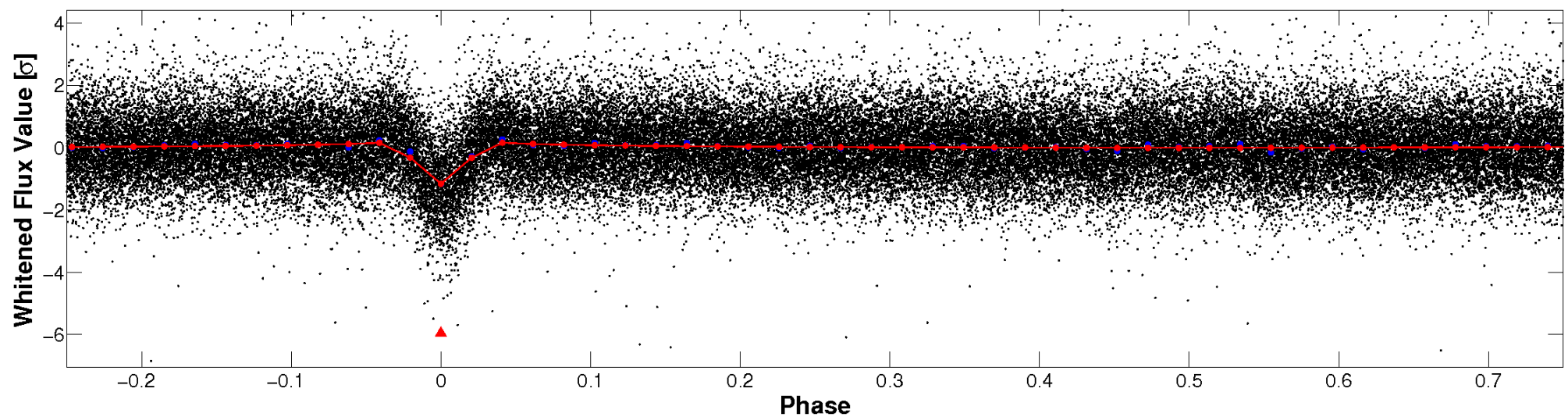


Non-Whitened Vs. Whitened Light Curve

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

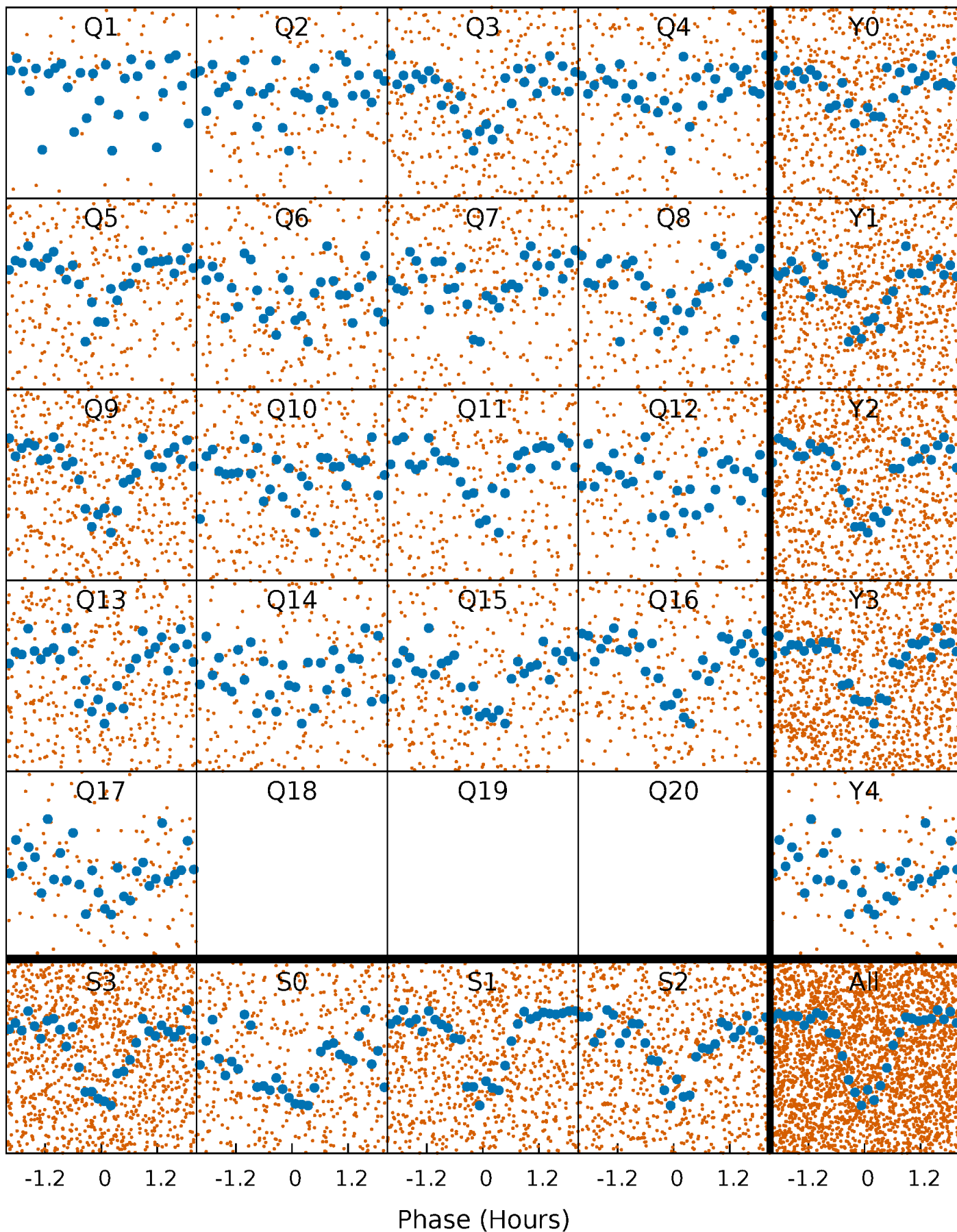


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



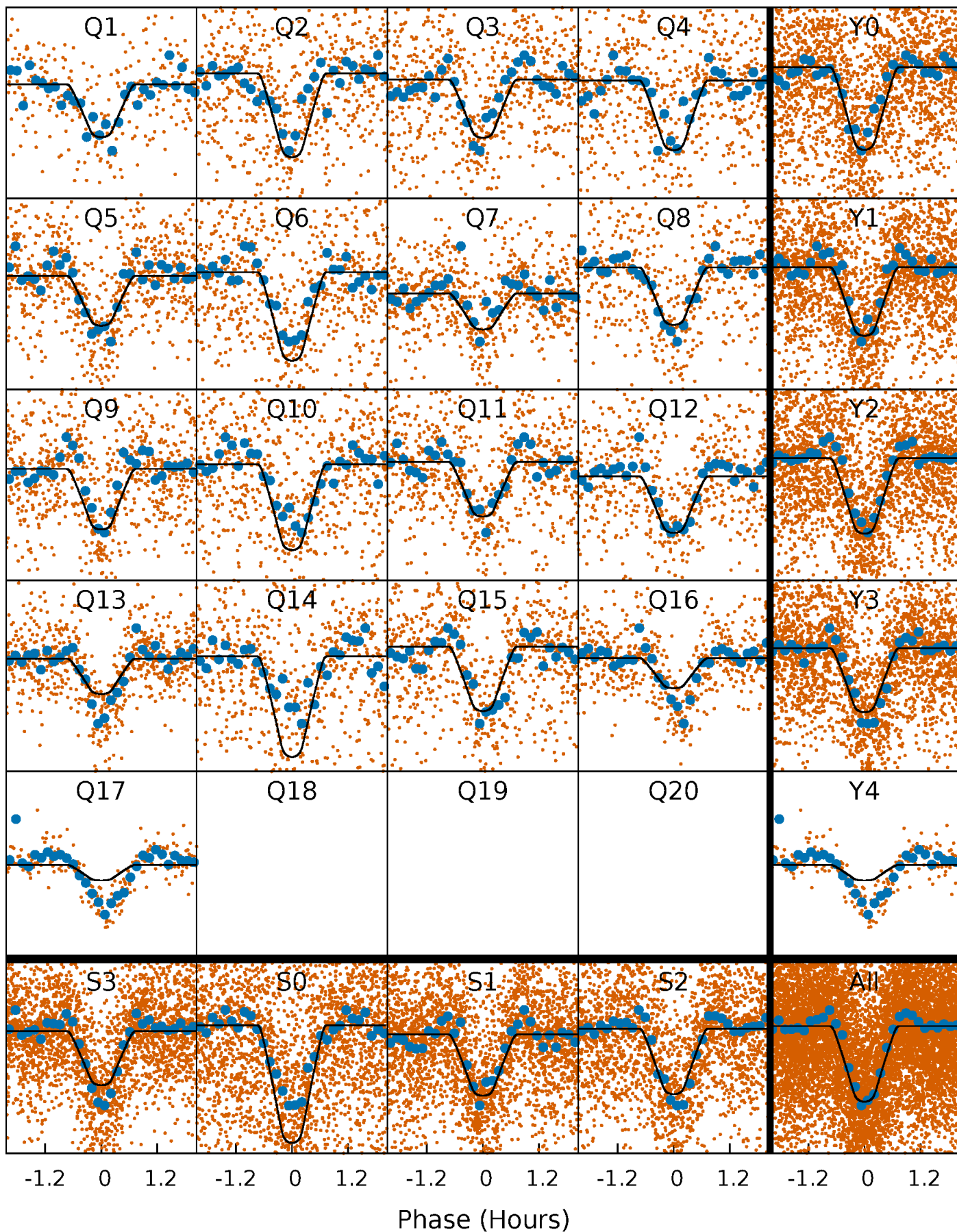
PDC Quarter-Phased Transit Curves

TCE 008588377-01 P= 0.994655 Days $T_0=131.637579$ (BKJD)



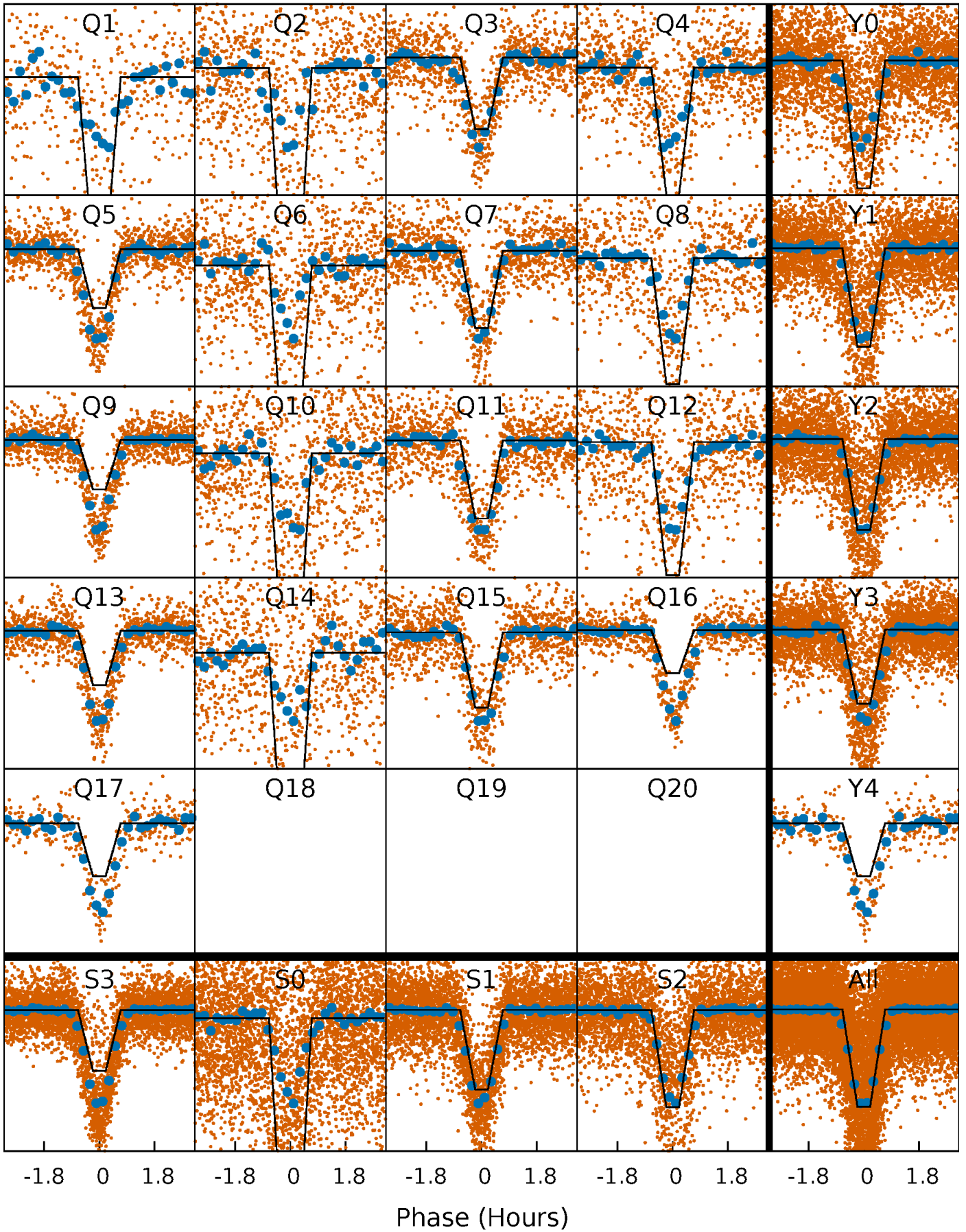
DV Quarter-Phased Transit Curves

TCE 008588377-01 P= 0.994655 Days $T_0=131.637579$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

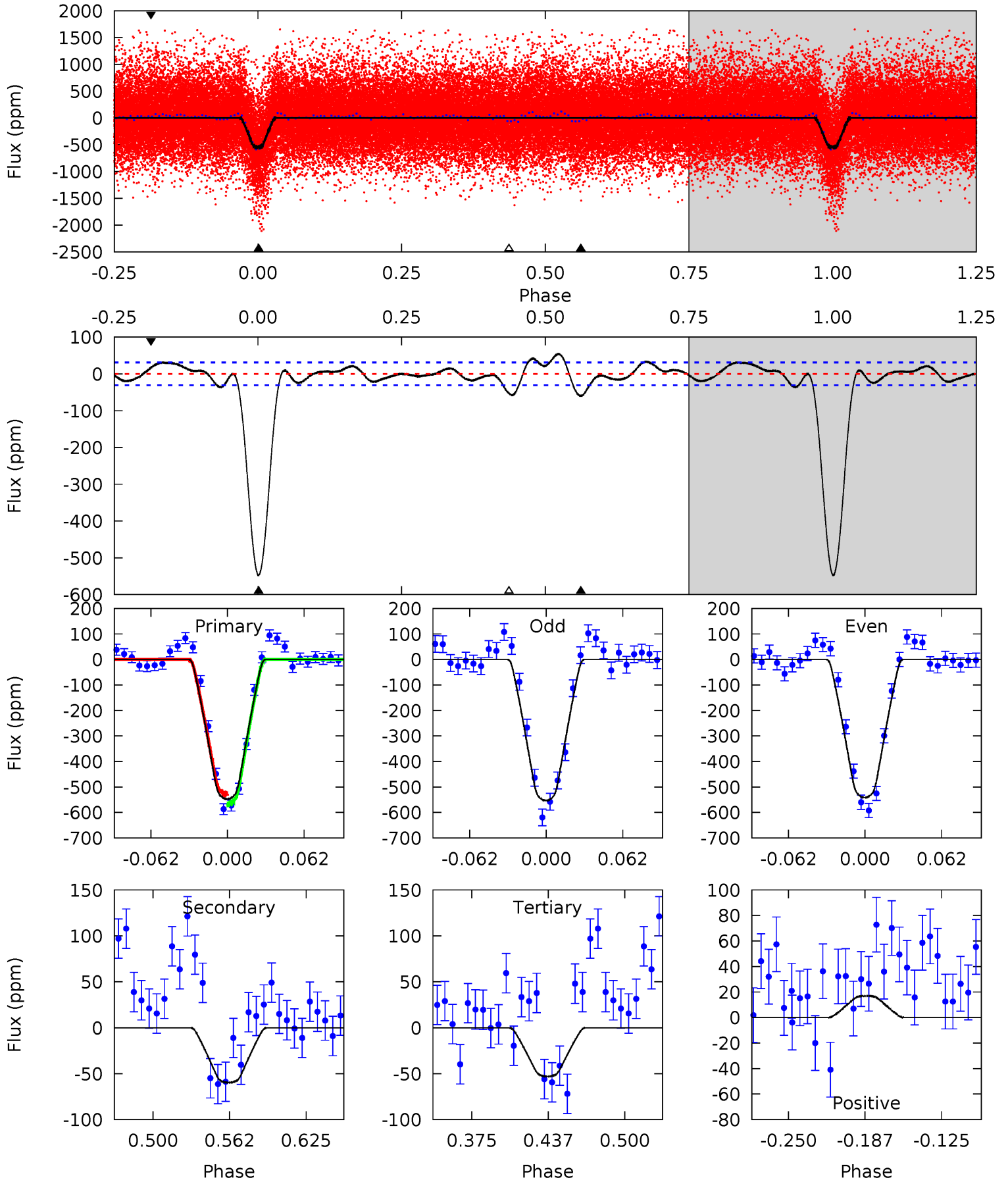
TCE 008588377-01 P= 0.994658 Days $T_0=131.635877$ (BKJD)



DV Model-Shift Uniqueness Test

008588377-01, P = 0.994655 Days, E = 130.642924 Days

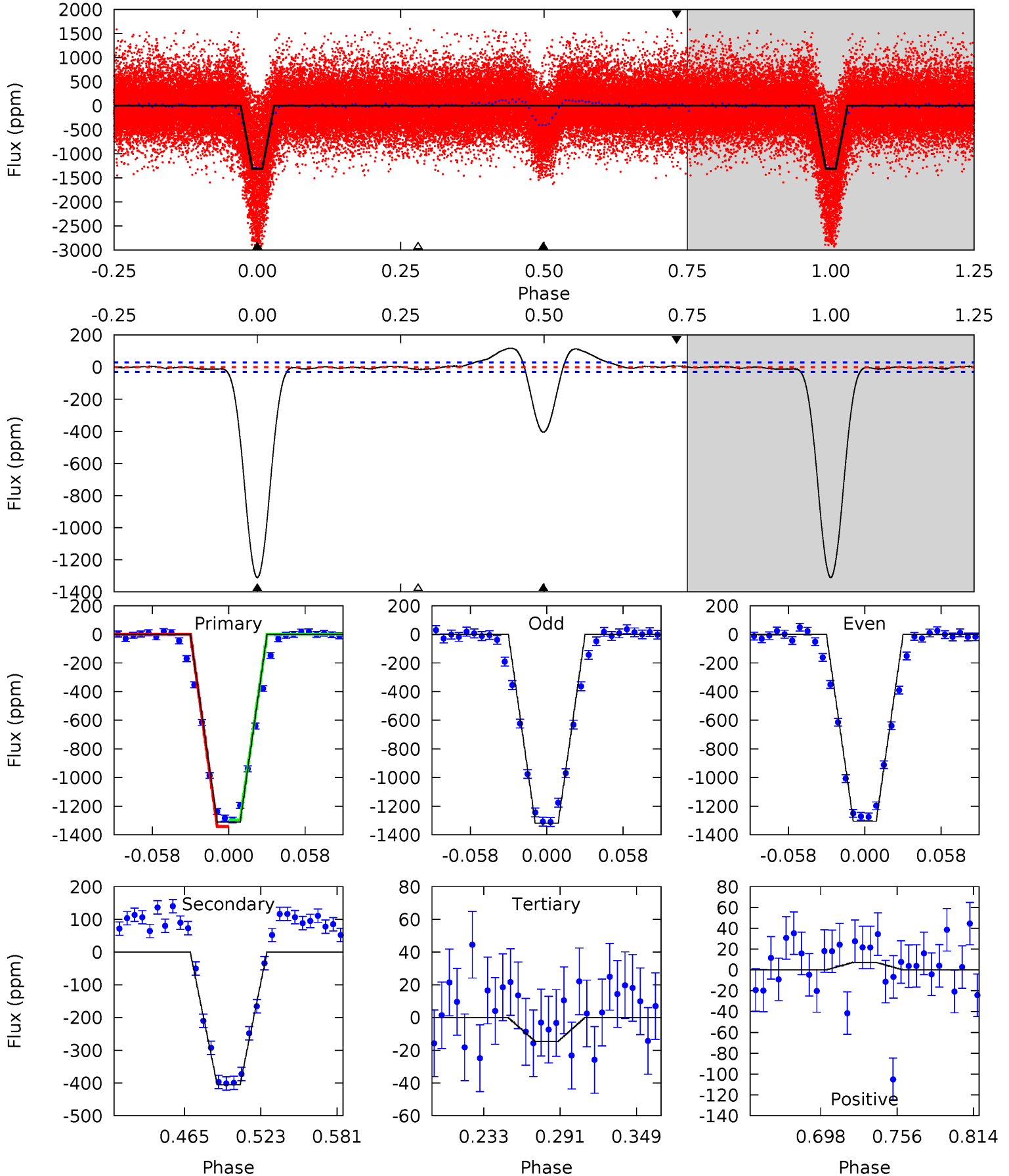
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
82.6	9.02	8.01	2.56	4.66	1.86	2.82	74.6	80.1	1.01	6.46	0.88	0.97	0.09	2.98



Alt Model-Shift Uniqueness Test

008588377-01, P = 0.994658 Days, E = 130.641219 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
206.6	63.9	2.30	1.14	4.68	1.89	4.61	204.3	205.5	61.6	62.8	1.07	1.01	0.08	3.68



Stellar Parameters For KIC 008588377

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5750^{+173}_{-173}	$4.332^{+0.205}_{-0.205}$	$-0.380^{+0.300}_{-0.250}$	$1.021^{+0.291}_{-0.212}$	$0.816^{+0.123}_{-0.061}$	$1.080^{+1.067}_{-0.529}$
	+3%/-3%	+5%/-5%	+79%/-66%	+29%/-21%	+15%/-7%	+99%/-49%
Source	PHO1	KIC0	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 008588377-01 / KOI 3861.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-60 ± 7	$2.92^{+0.62}_{-0.51}$	2658^{+205}_{-205}	3436^{+229}_{-210}	$1.327^{+0.597}_{-0.449}$
Alt.	-405 ± 6	$4.10^{+0.73}_{-0.63}$	2654^{+220}_{-203}	4399^{+193}_{-201}	$4.507^{+1.738}_{-1.297}$

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

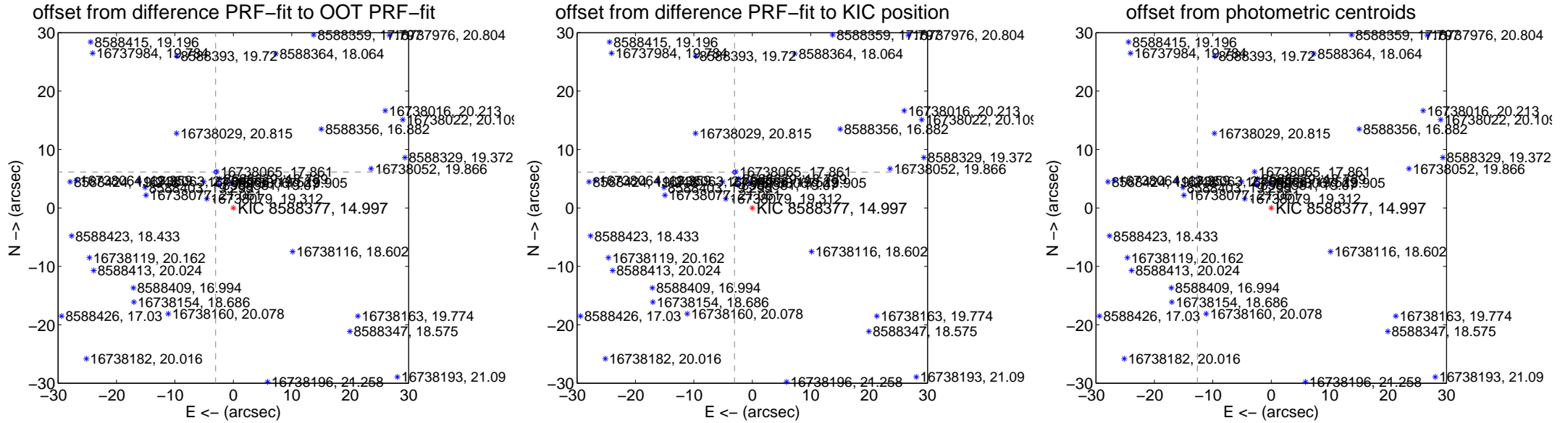
DV Centroid Data

Supplemental centroid analysis for 008588377-01. Kepler magnitude: 15.00. Transit SNR 48.69

There are 13 quarters with good PRF difference image offsets

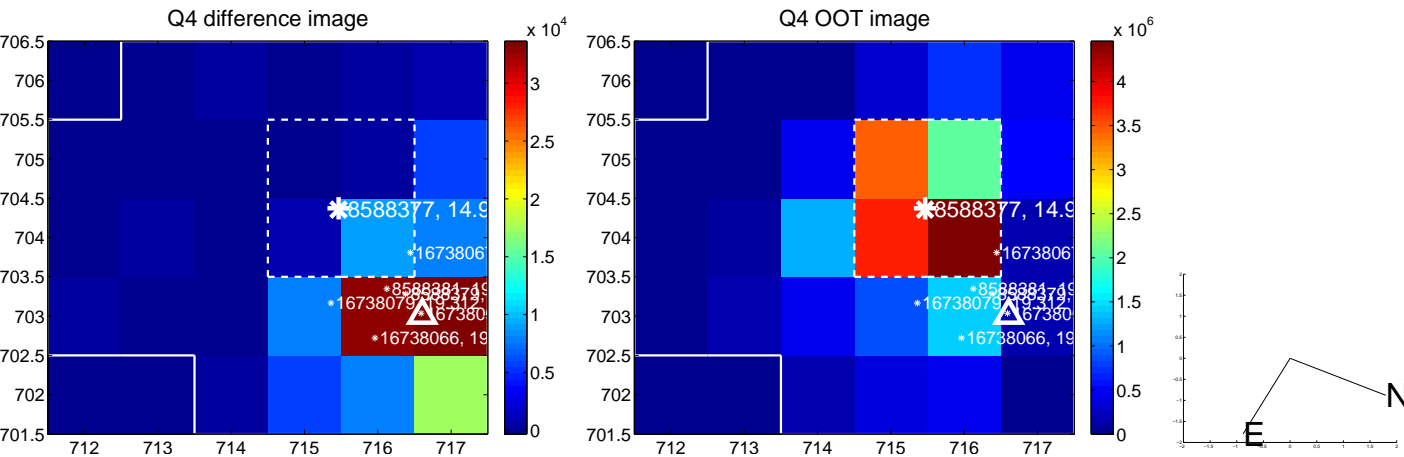
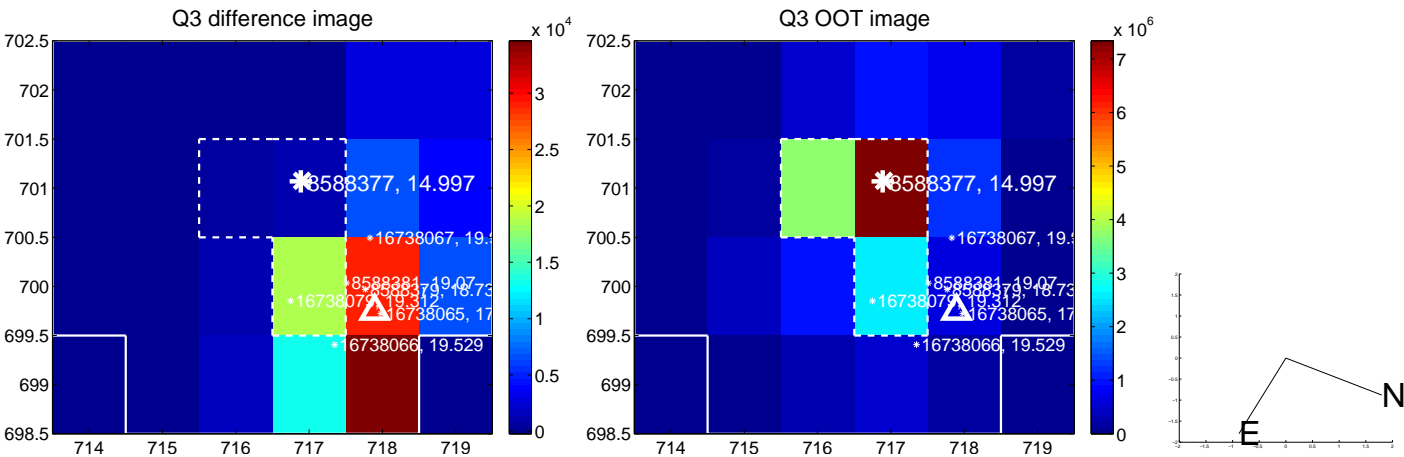
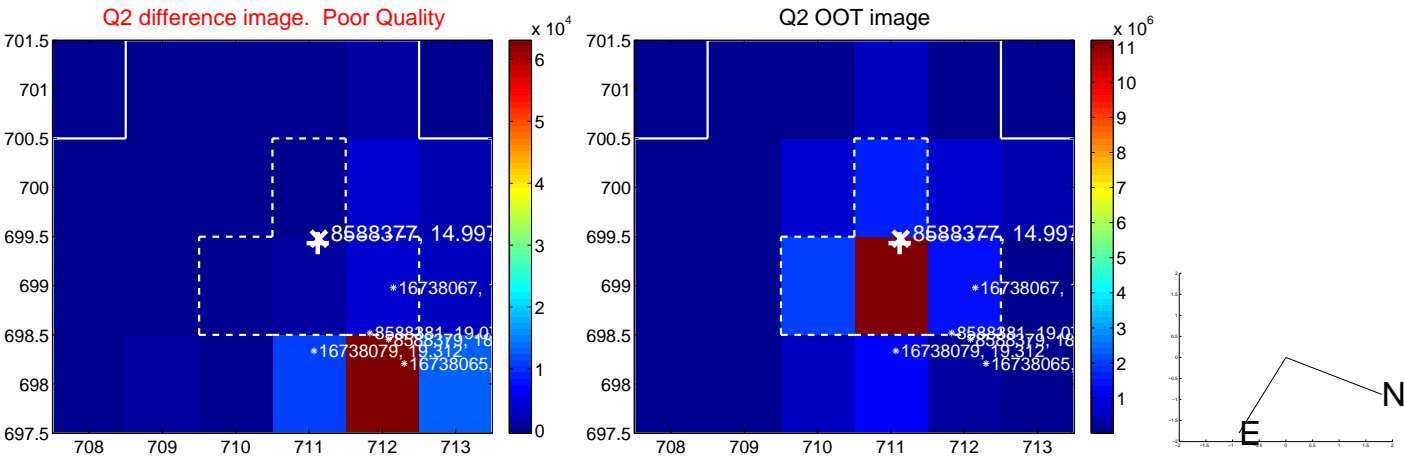
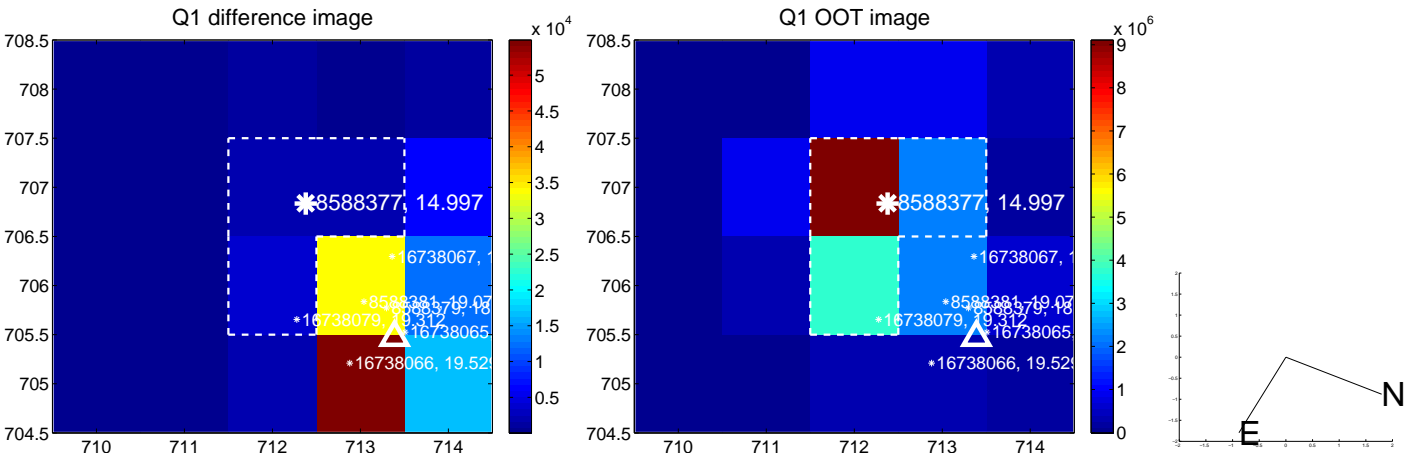
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.844 \pm 0.101	67.67	3.030 \pm 0.073	6.137 \pm 0.107
PRF-fit source offset from KIC position	6.825 \pm 0.103	66.33	3.050 \pm 0.074	6.106 \pm 0.109
photometric centroid source offset	45.17 \pm 0.27	164.86	12.64 \pm 0.24	43.36 \pm 0.28

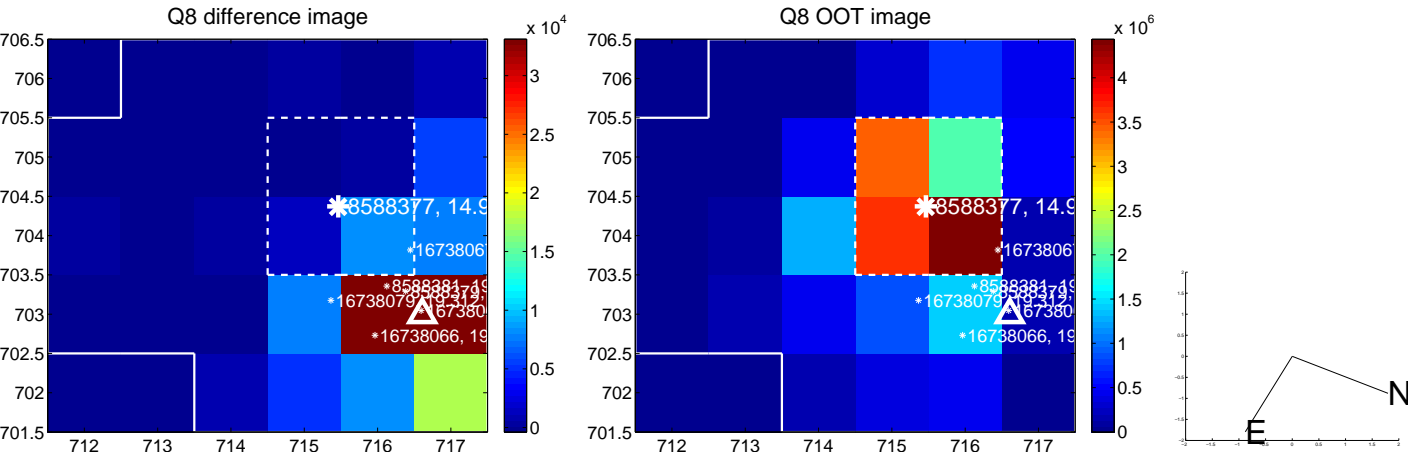
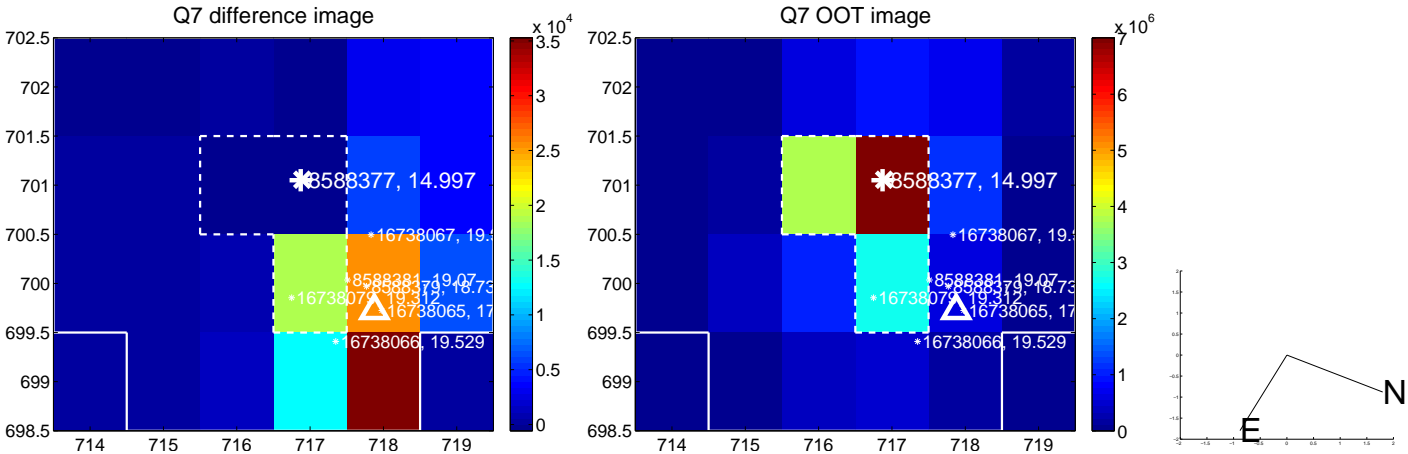
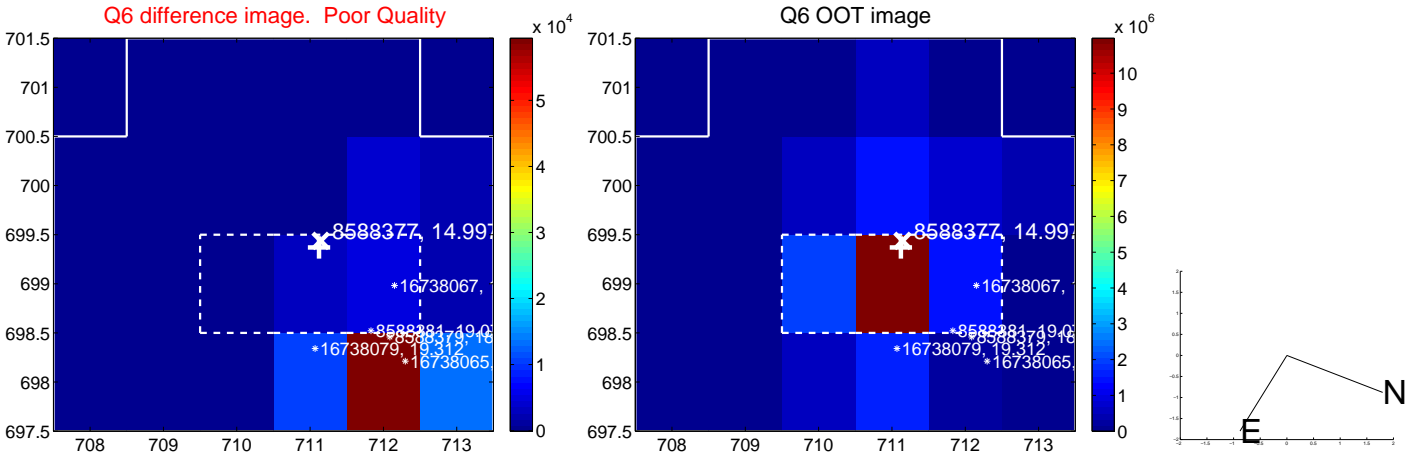
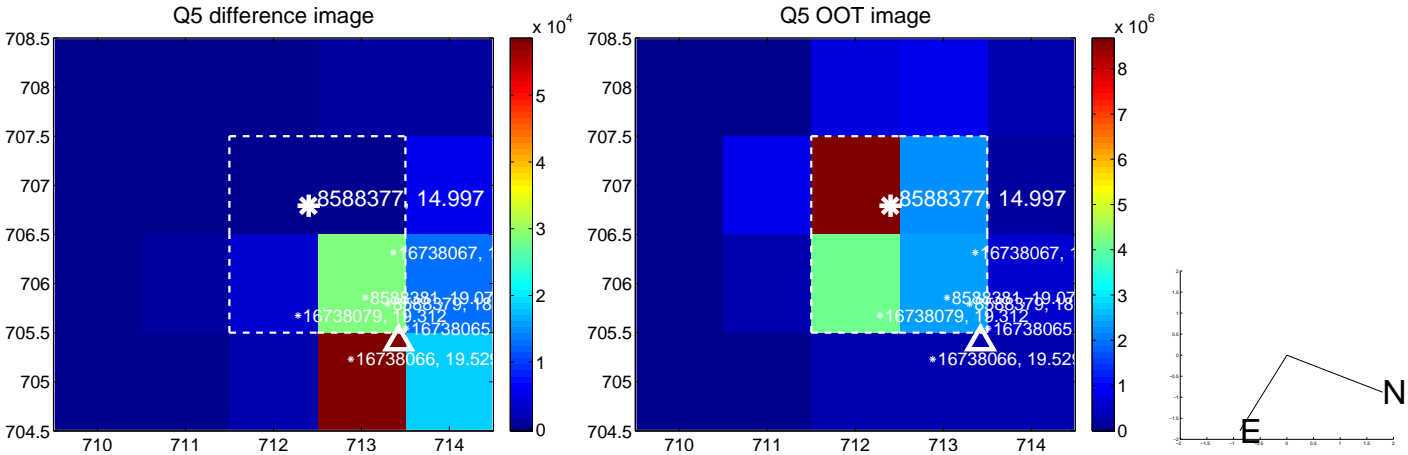


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

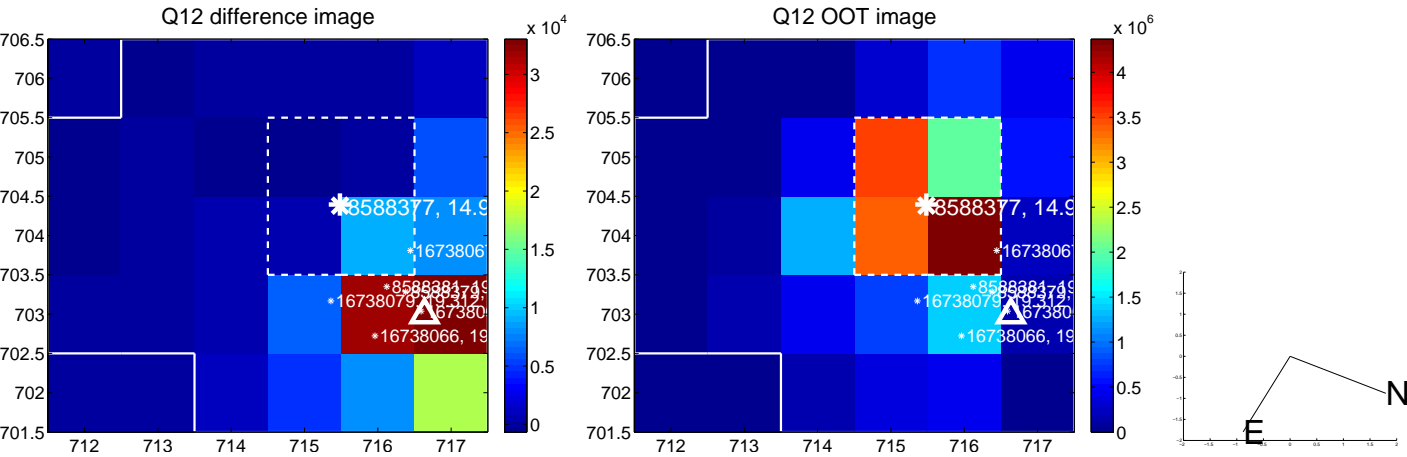
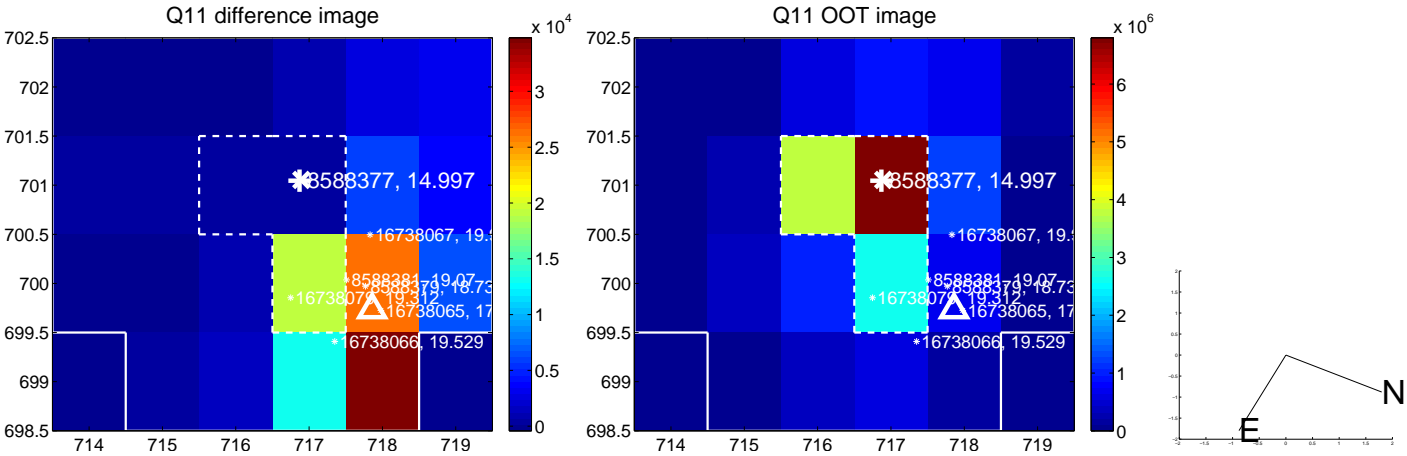
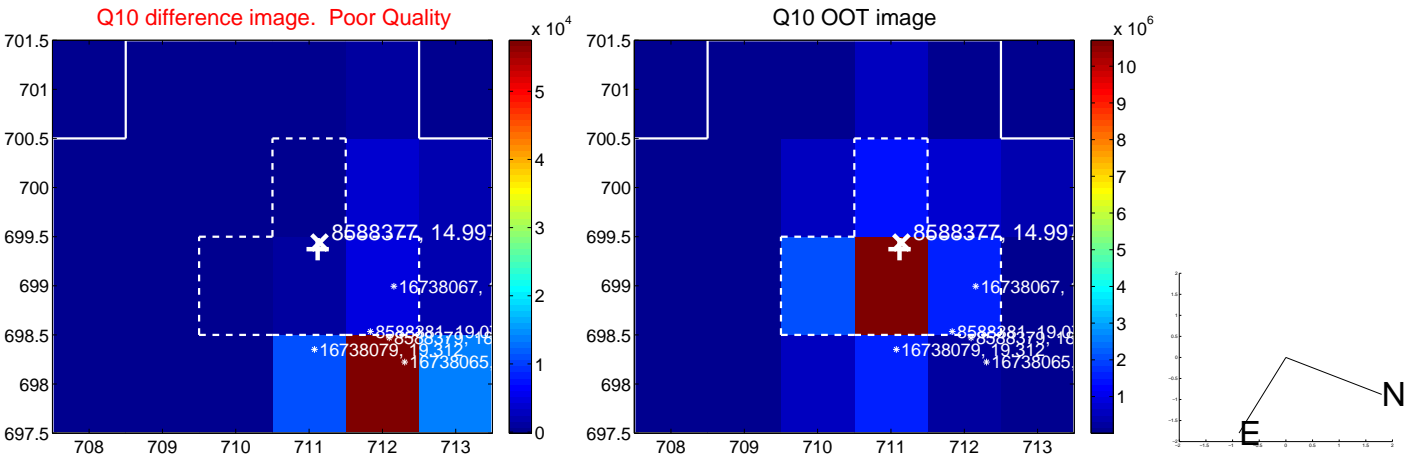
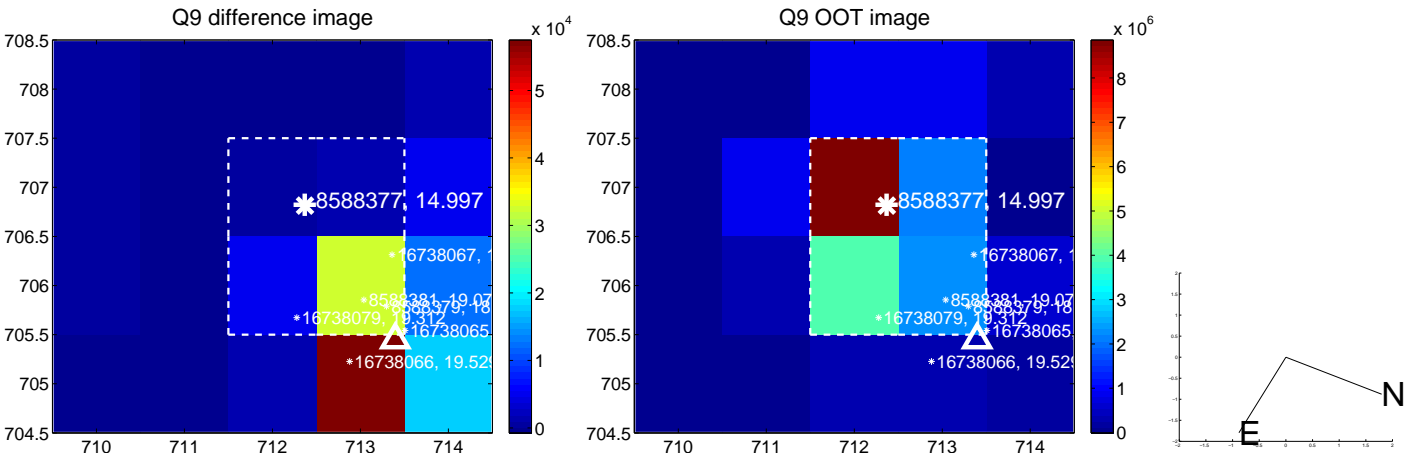
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



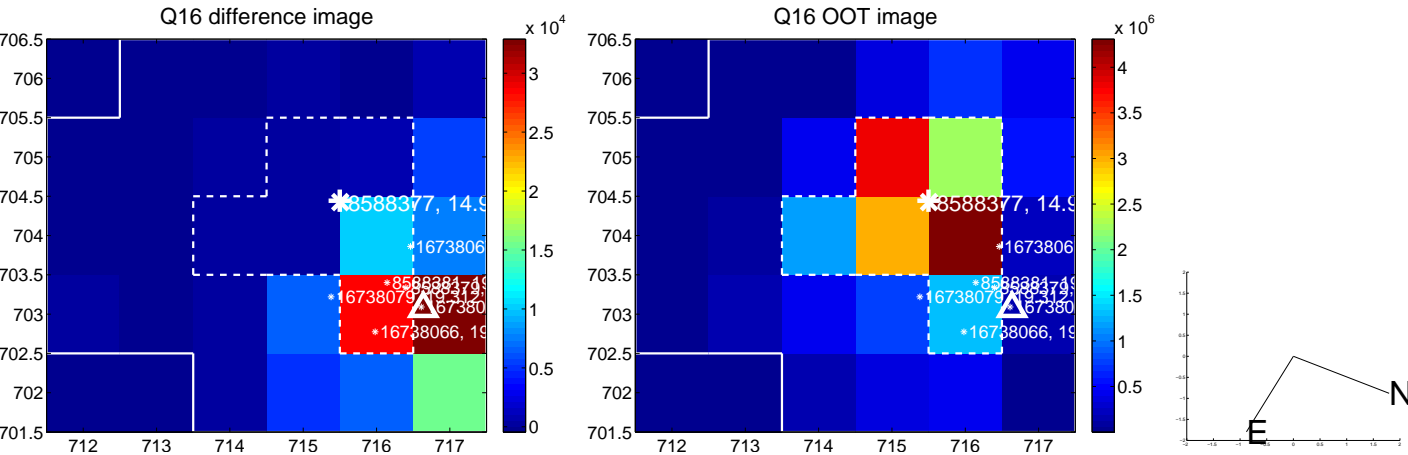
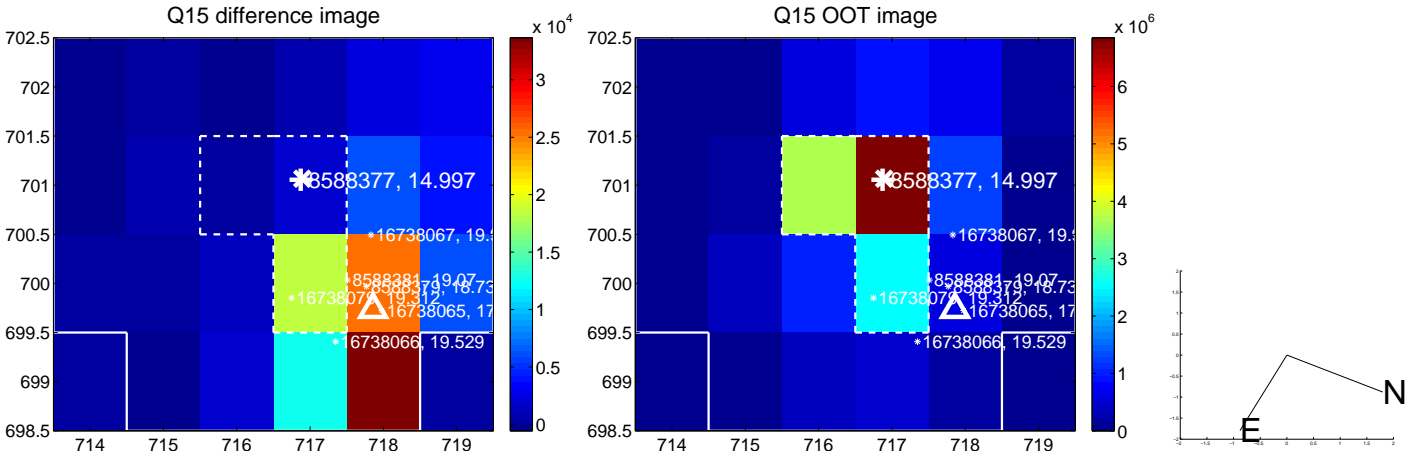
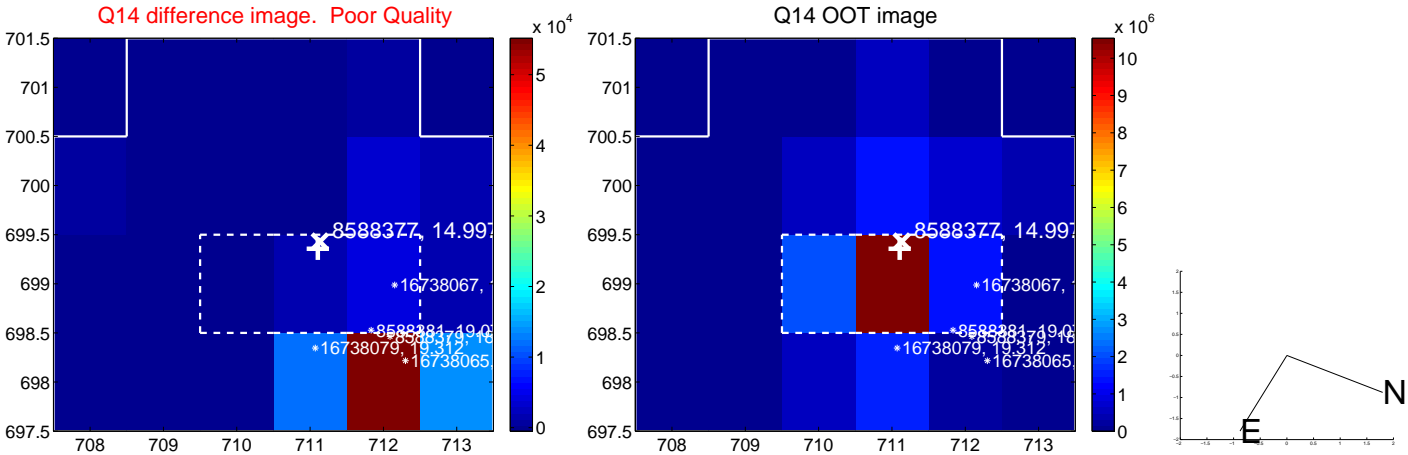
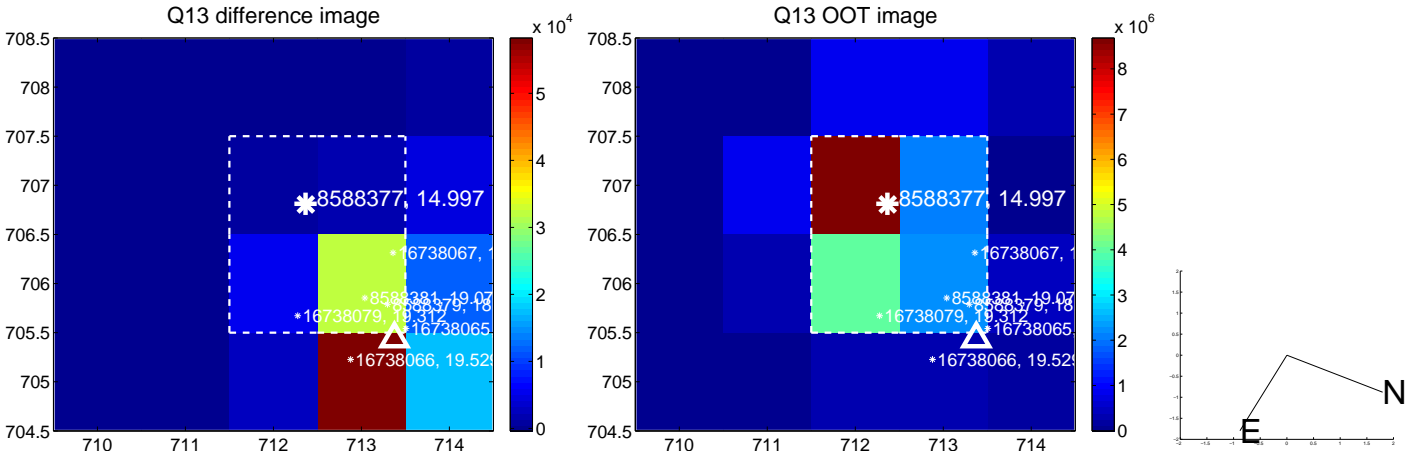
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

