

KIC 008429566

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})
008429566-01	OBS	2511.01	3.732300	131.930488	156.0	2.230	13.8	15.8	0.87	5762	1.29	370.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008429566-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_ALT—CENT_RESOLVED_OFFSET

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.

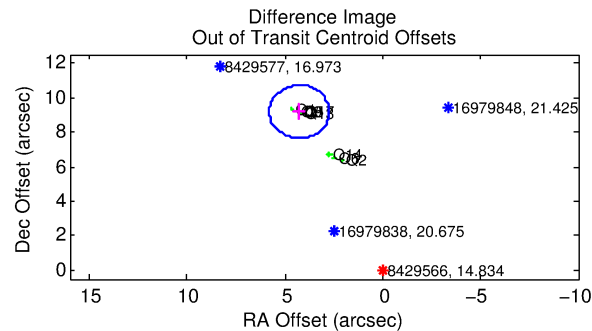
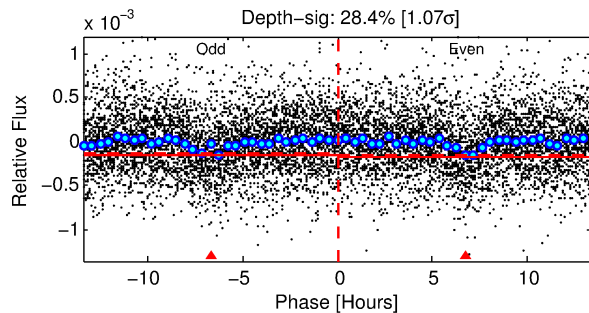
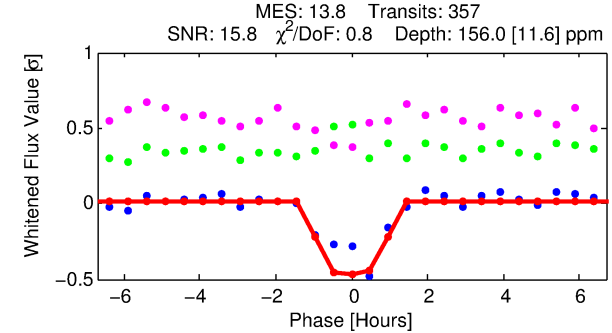
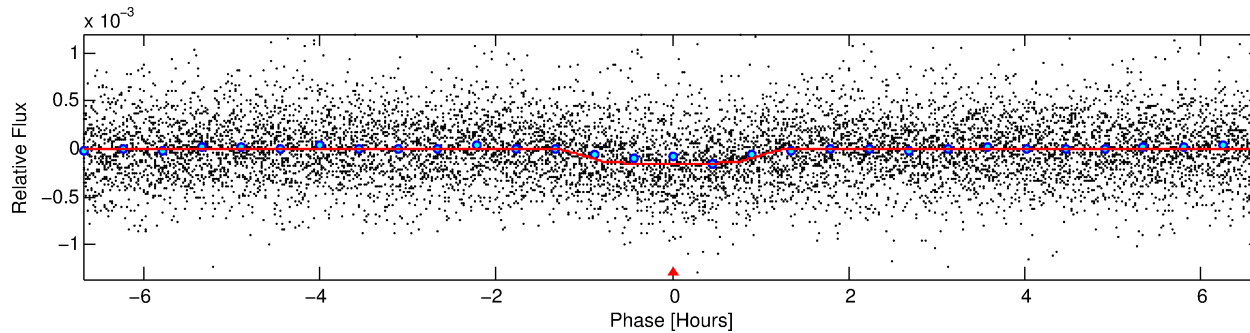
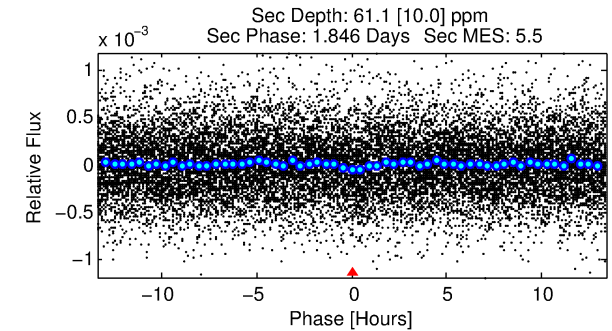
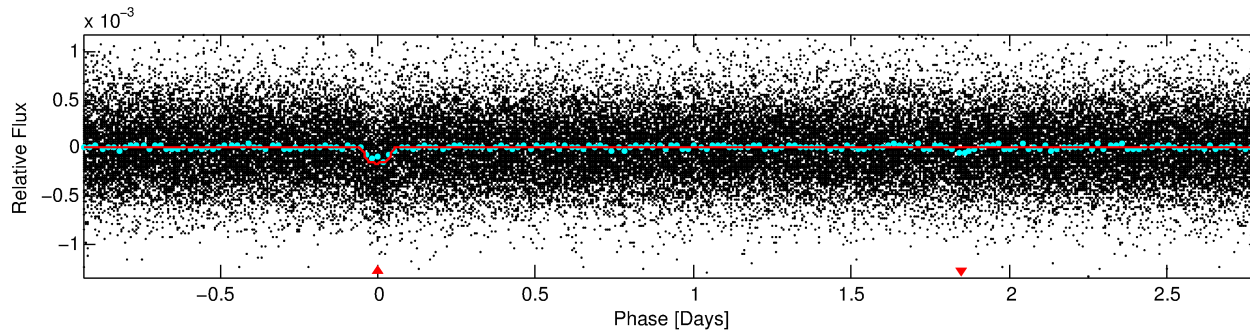
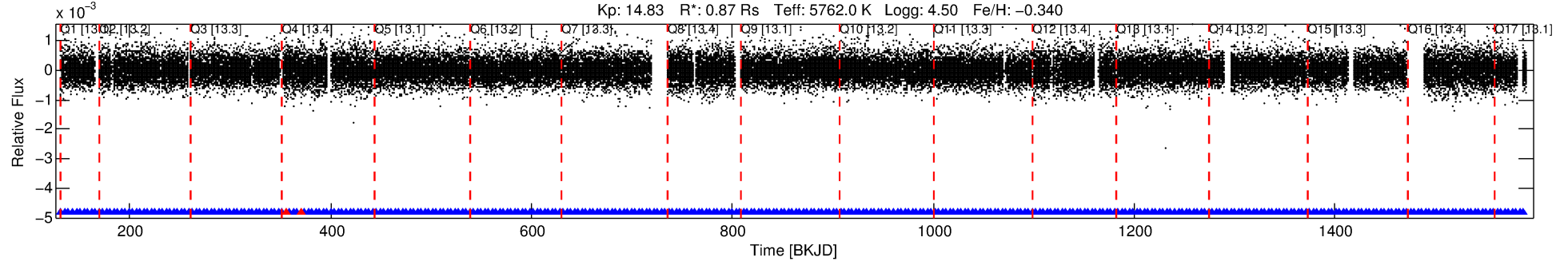
Ephemeris Match Information For 008429566-01

No Significant Match Found

DV One-Page Summary

KIC: 8429566 Candidate: 1 of 1 Period: 3.732 d
KOI: K02511.01 Corr: 0.958

Kp: 14.83 R*: 0.87 Rs Teff: 5762.0 K Logg: 4.50 Fe/H: -0.340



DV Fit Results:

Period = 3.73230 [0.00001] d
Epoch = 131.9305 [0.0025] BKJD
Rp/R* = 0.0136 [0.0063]
a/R* = 5.97 [13.42]
b = 0.90 [0.48]
Seff = 370.88 [128.34]
Teq = 1119 [97] K
Rp = 1.29 [0.69] Re
a = 0.0447 [0.0101] AU
Ag = 40.67 [40.59] [0.98σ]
Teffp = 4369 [1036] K [3.12σ]

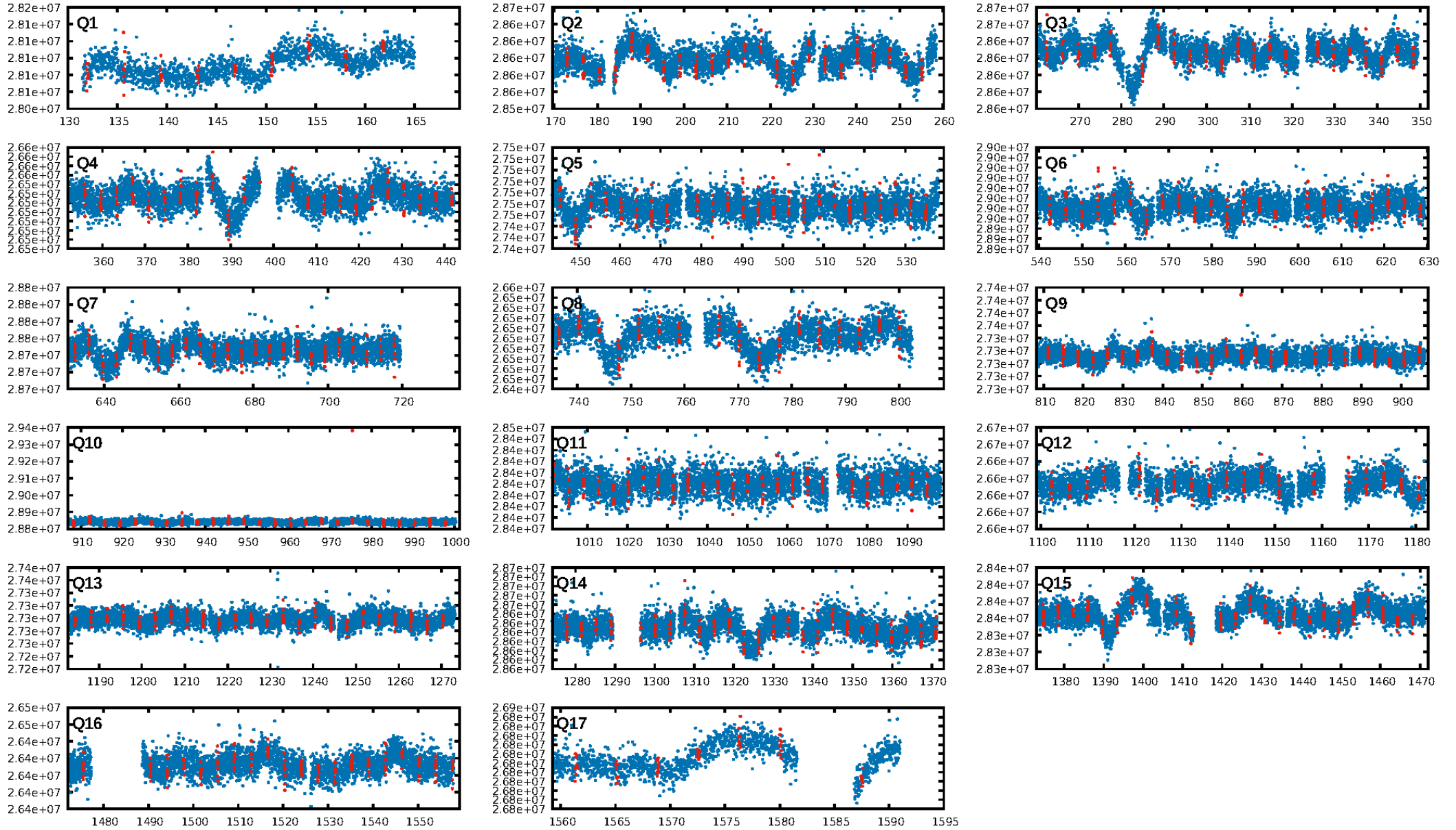
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.66e-42
RollingBand-fgt: 0.99 [339/341]
GhostDiagnostic-chr: -0.552
Centroid-sig: 0.0%
Centroid-so: 48.101 arcsec [54.01σ]
OotOffset-rm: 10.128 arcsec [19.81σ]
KicOffset-rm: 10.131 arcsec [16.35σ]
OotOffset-st: 3/0/0/5 [8]
KicOffset-st: 3/0/0/5 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [17/17]

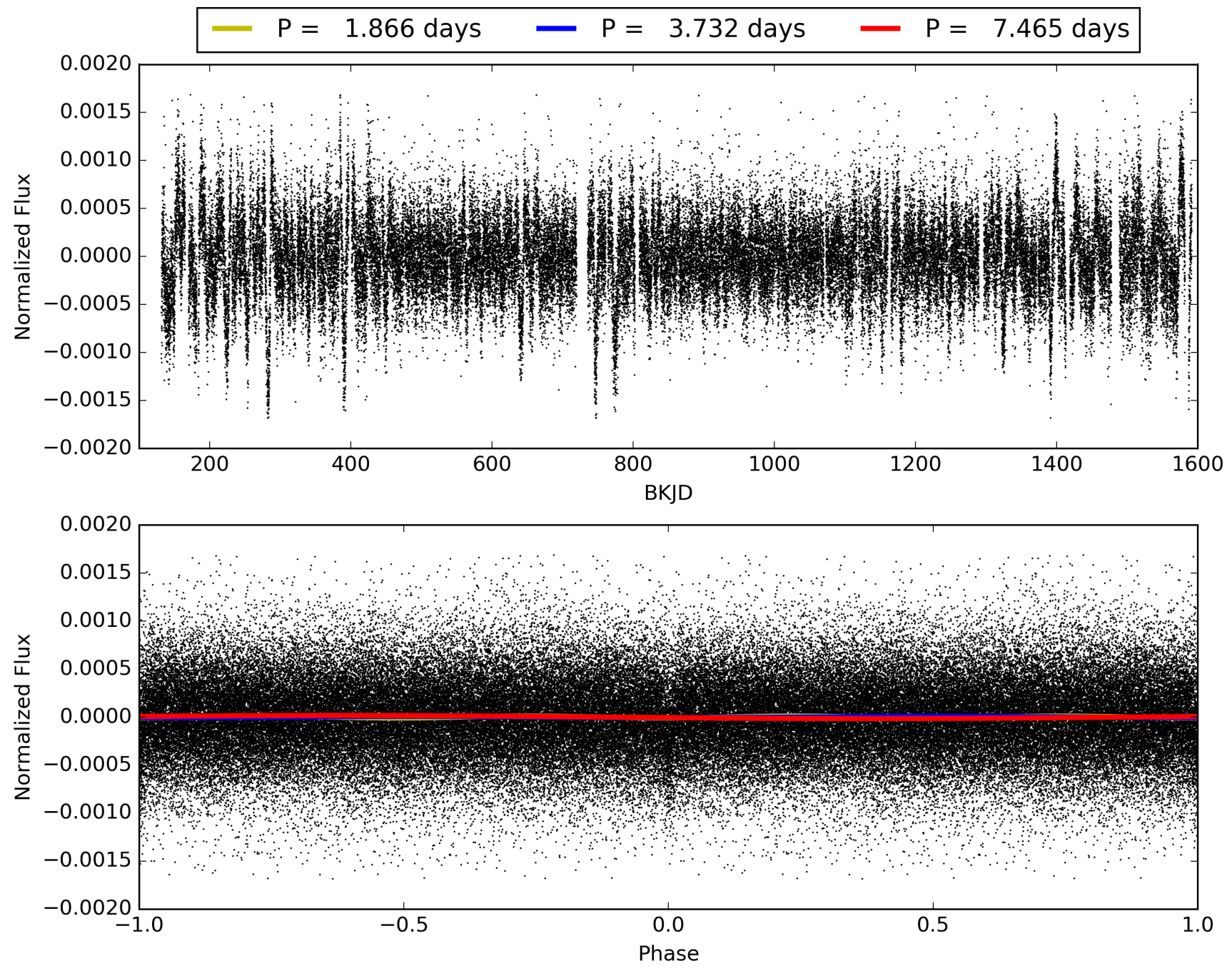
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:58:53 Z

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

TCE 008429566-01, PDC Light Curves

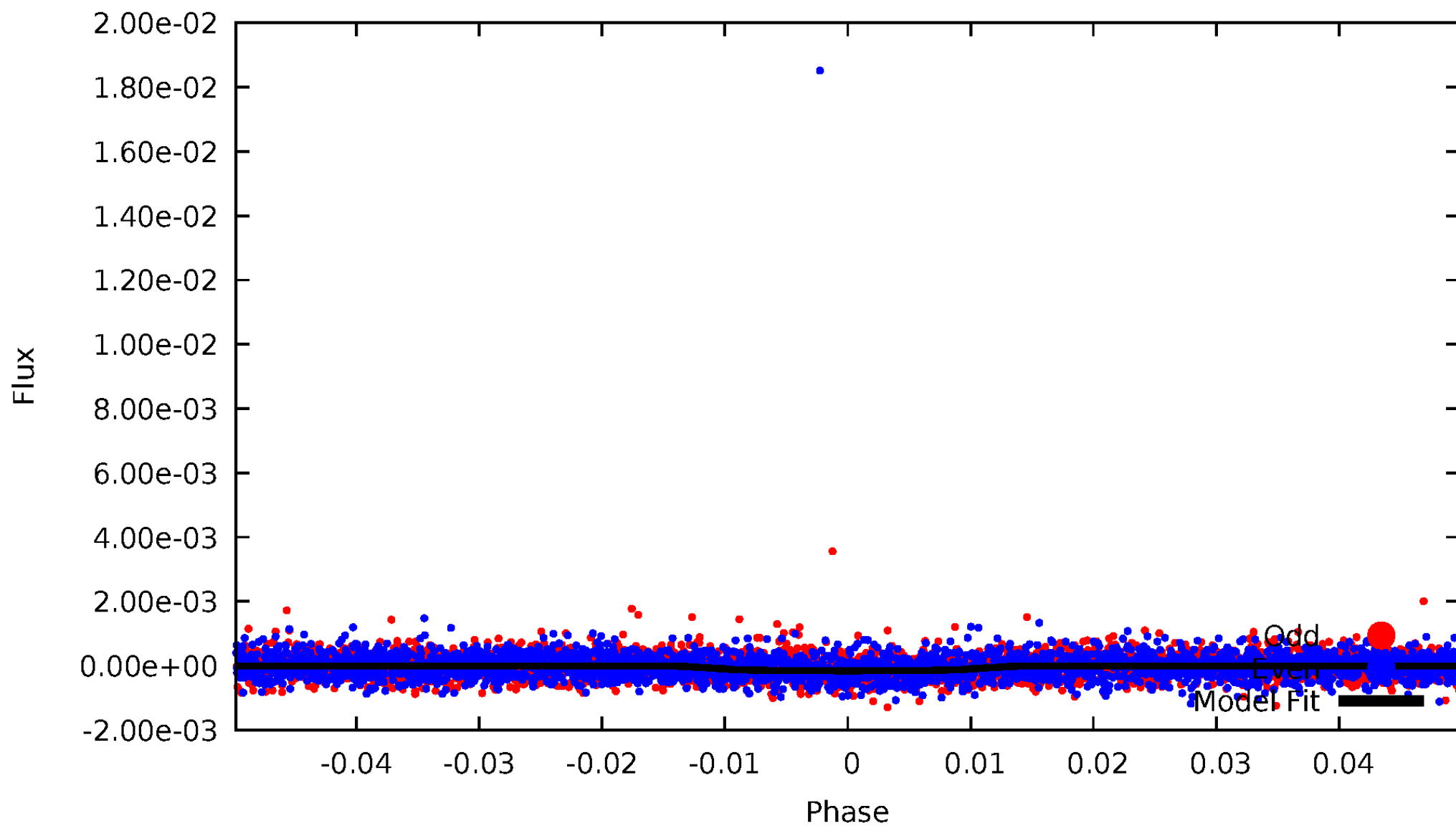


TCE 008429566-01



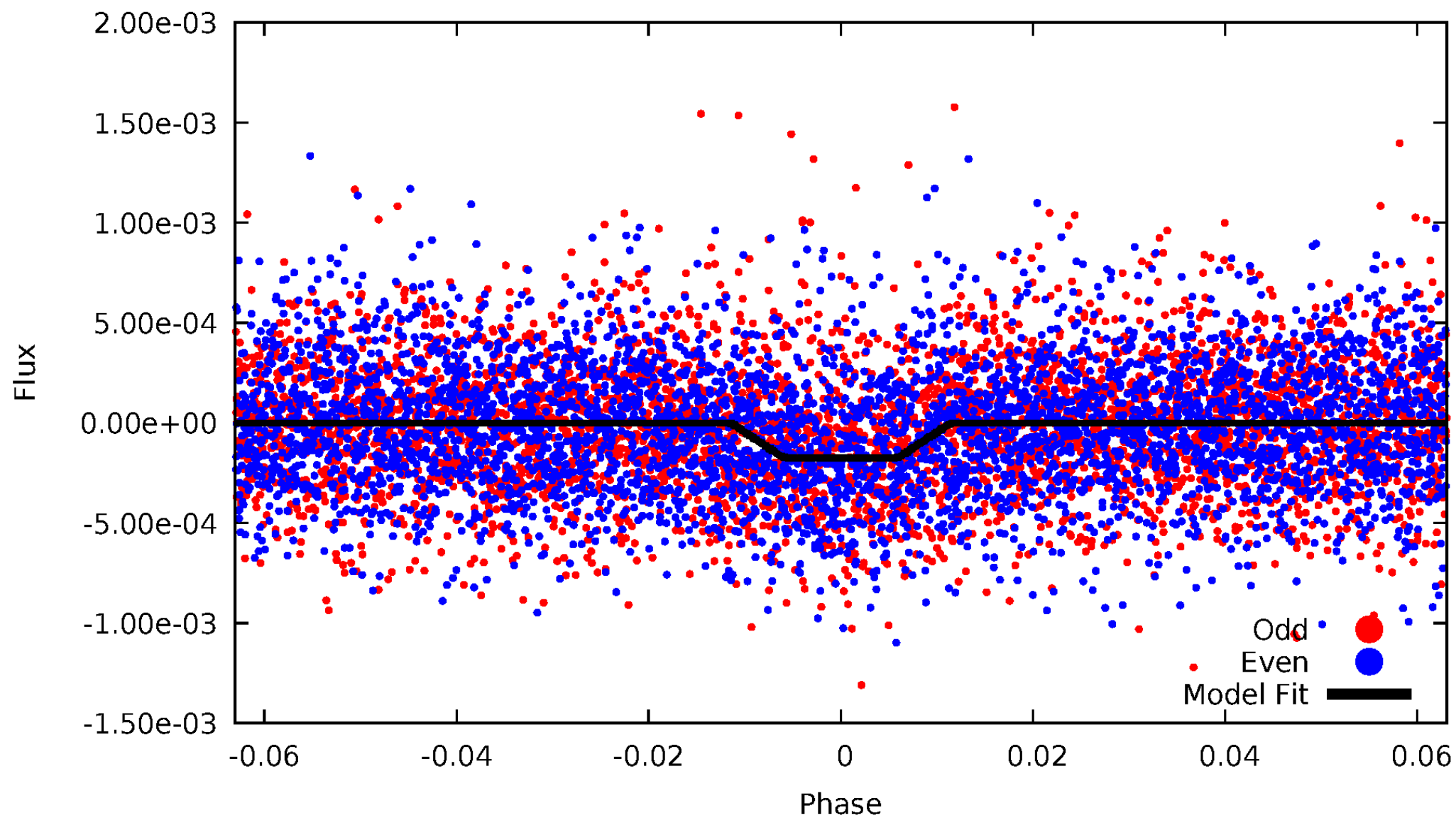
DV Odd/Even

TCE 008429566-01

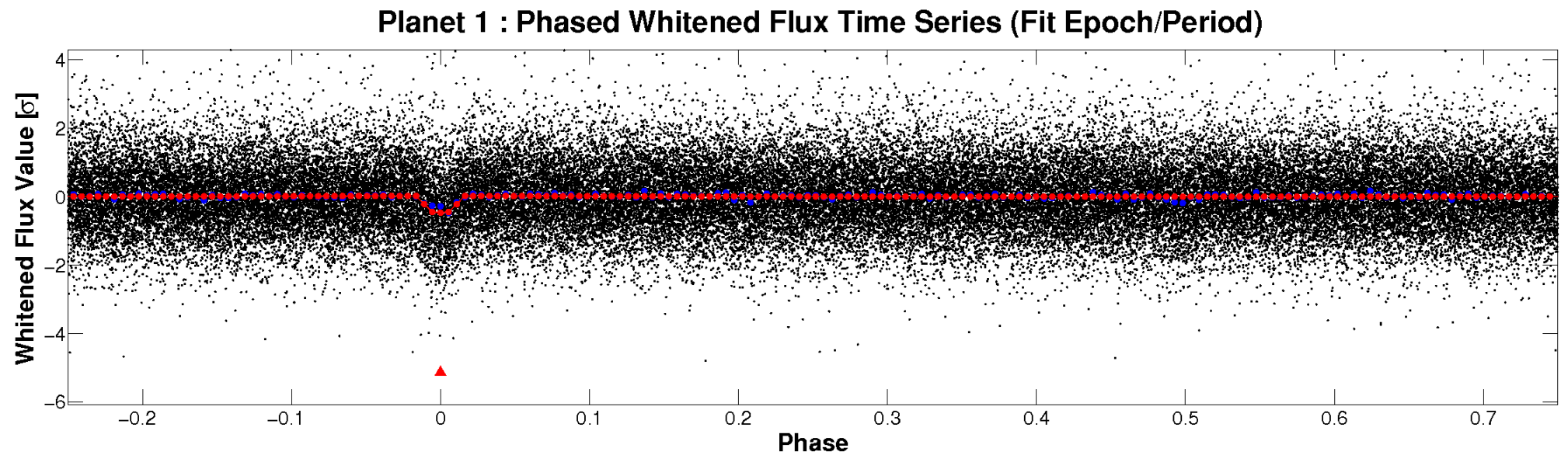
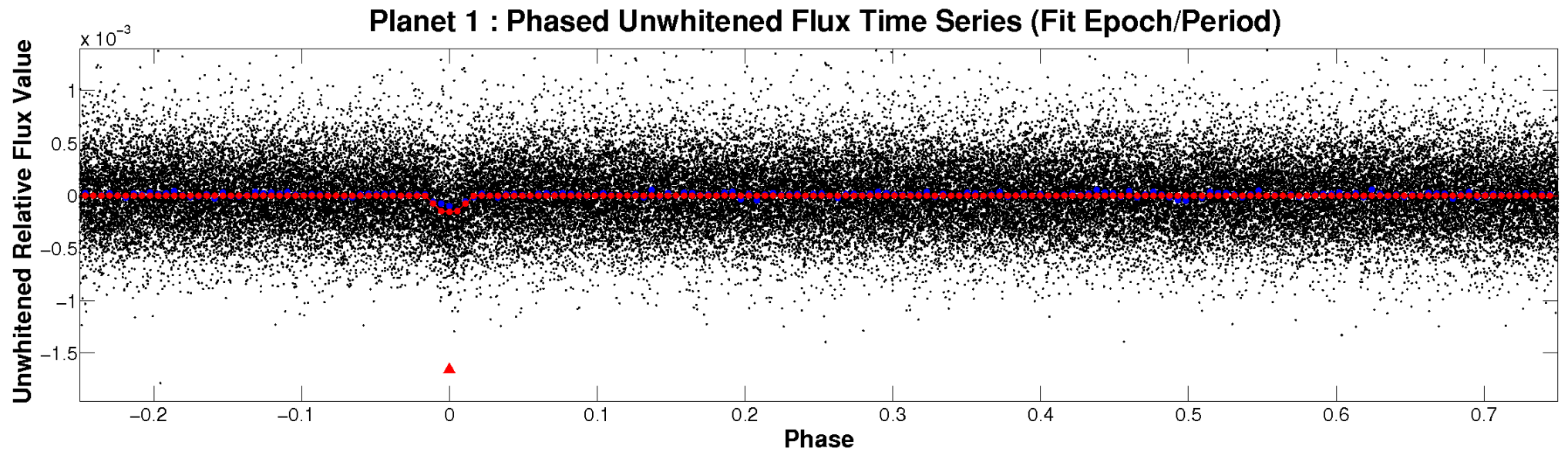


ALT Odd/Even

TCE 008429566-01

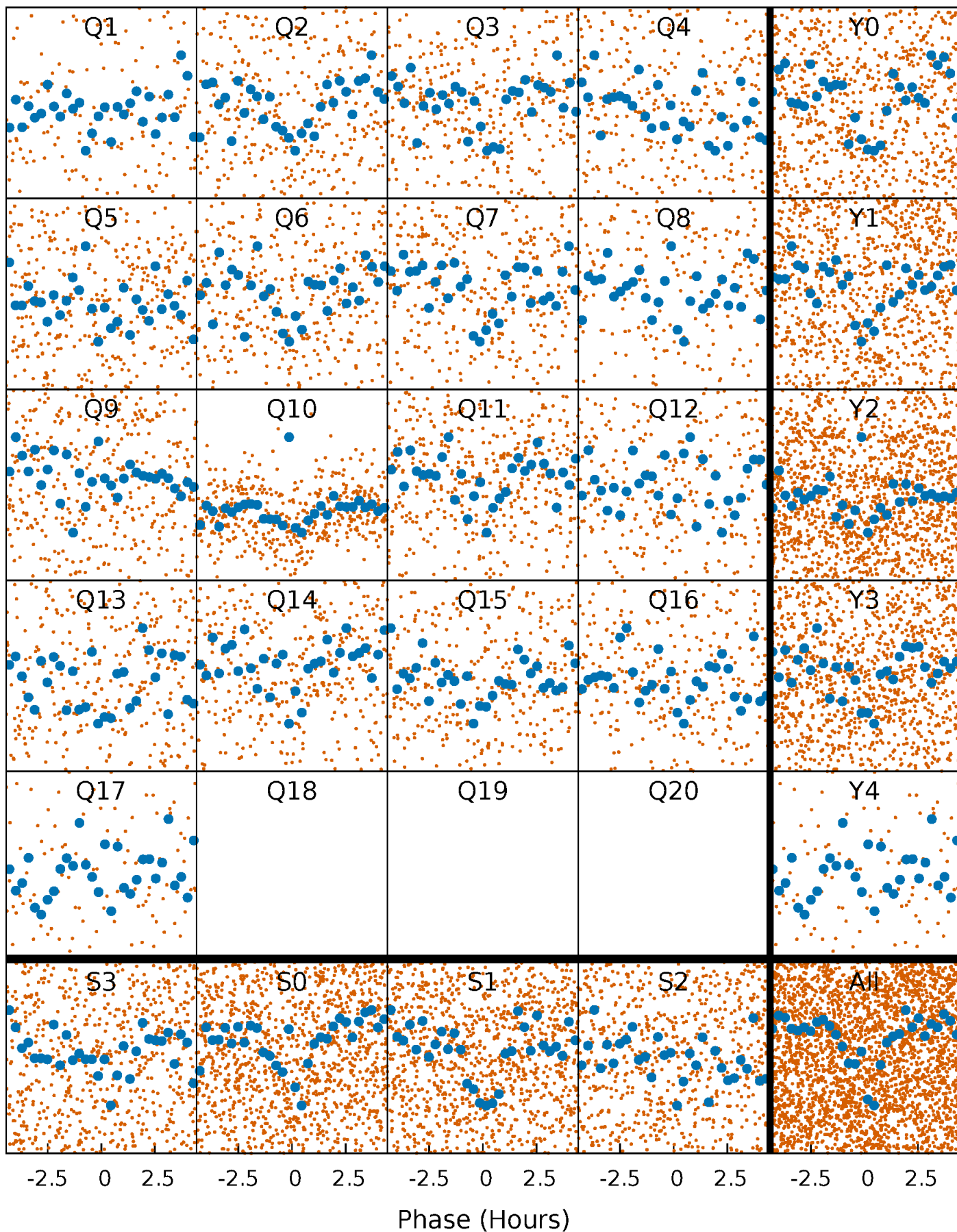


Non-Whitened Vs. Whitened Light Curve



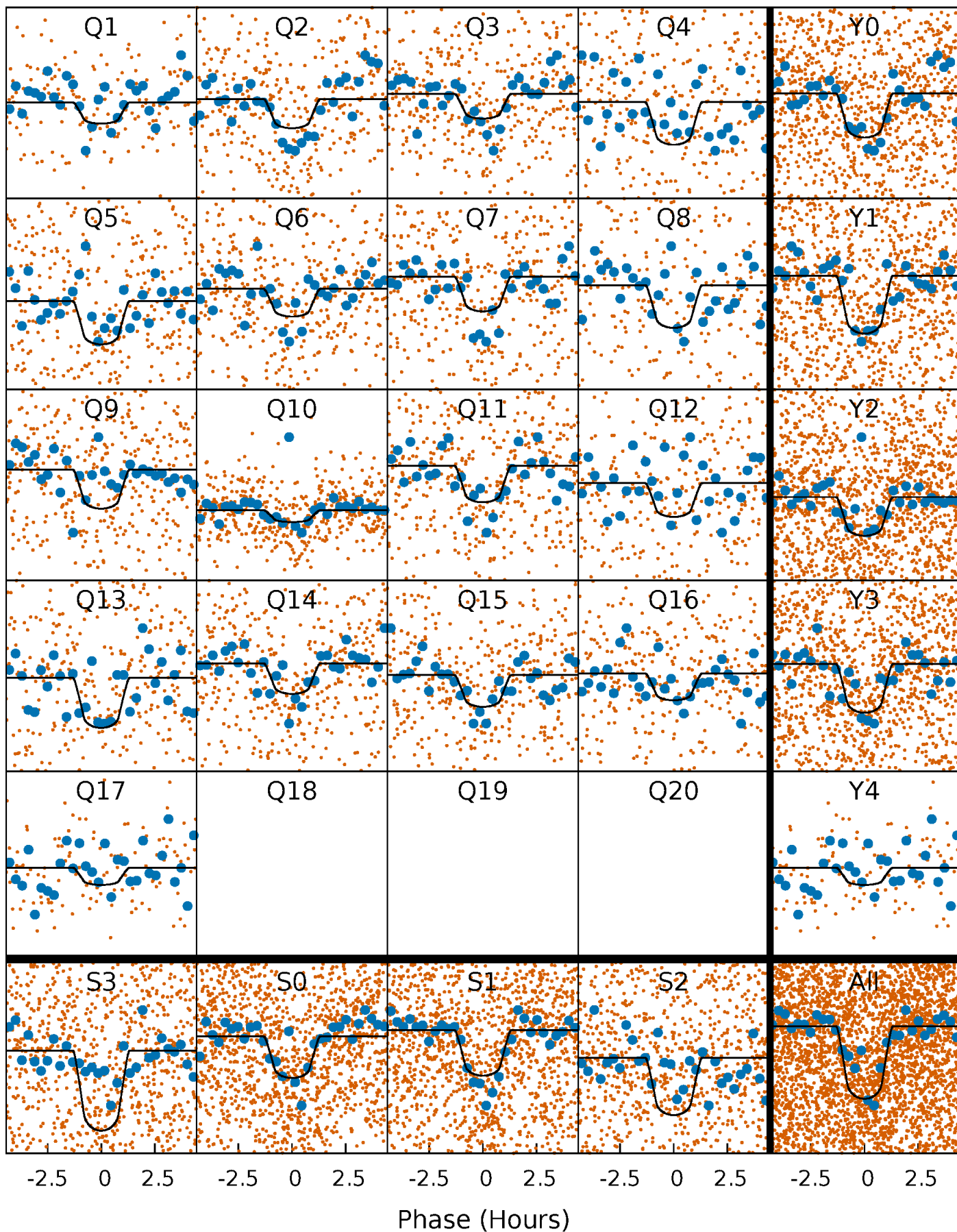
PDC Quarter-Phased Transit Curves

TCE 008429566-01 P= 3.732300 Days $T_0=131.930488$ (BKJD)



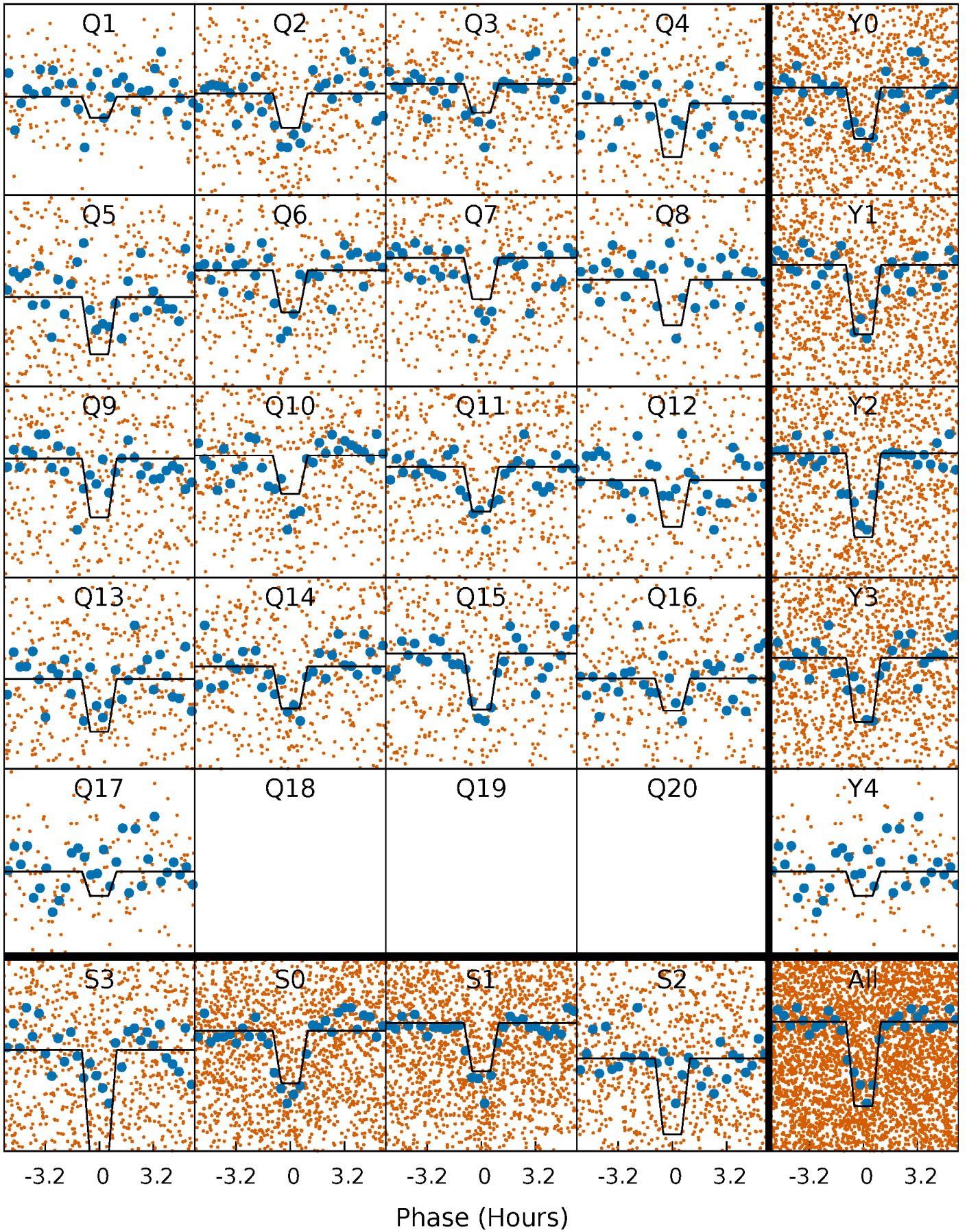
DV Quarter-Phased Transit Curves

TCE 008429566-01 P= 3.732300 Days $T_0=131.930488$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

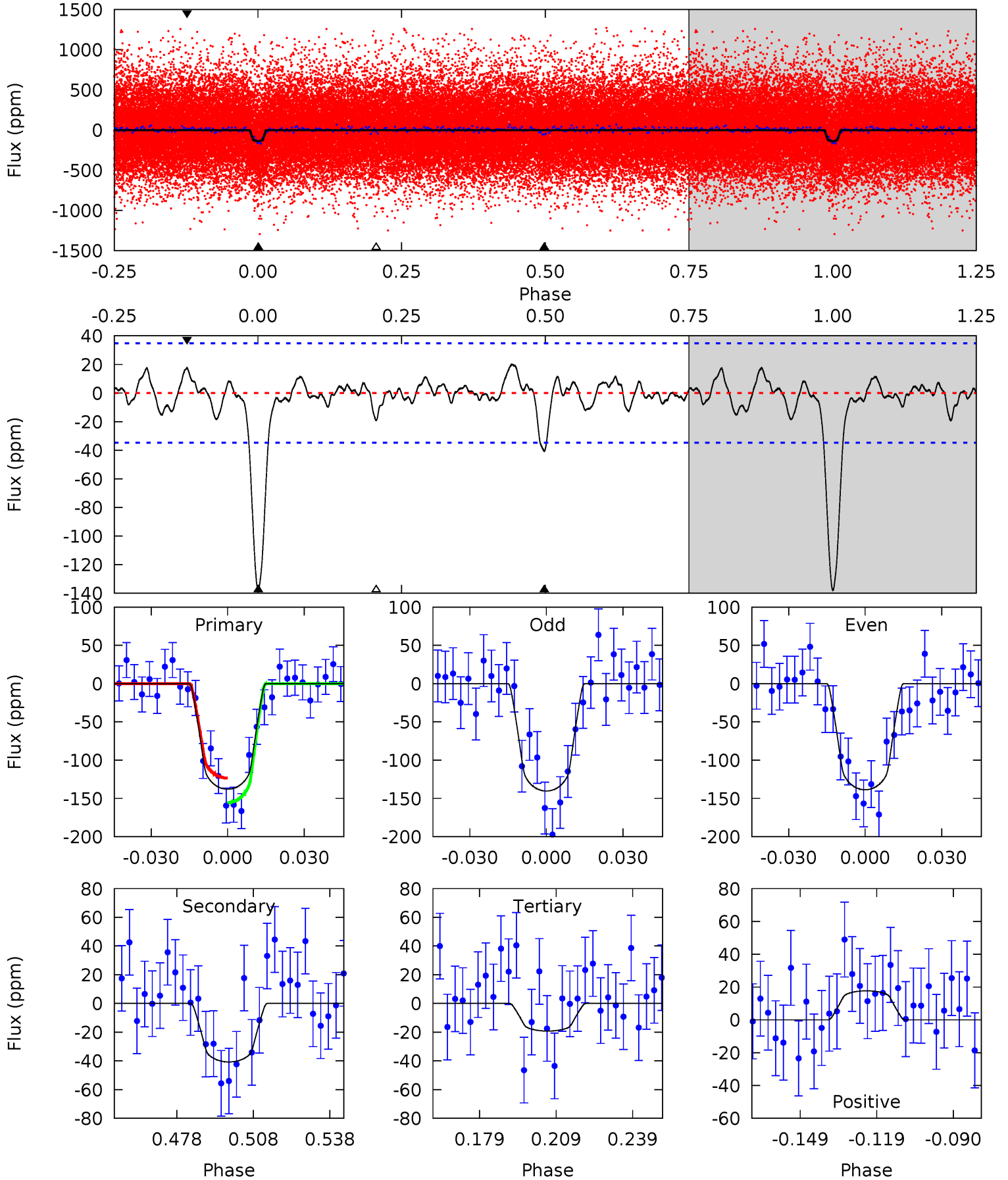
TCE 008429566-01 P= 3.732249 Days $T_0=131.942581$ (BKJD)



DV Model-Shift Uniqueness Test

008429566-01, P = 3.732300 Days, E = 128.198188 Days

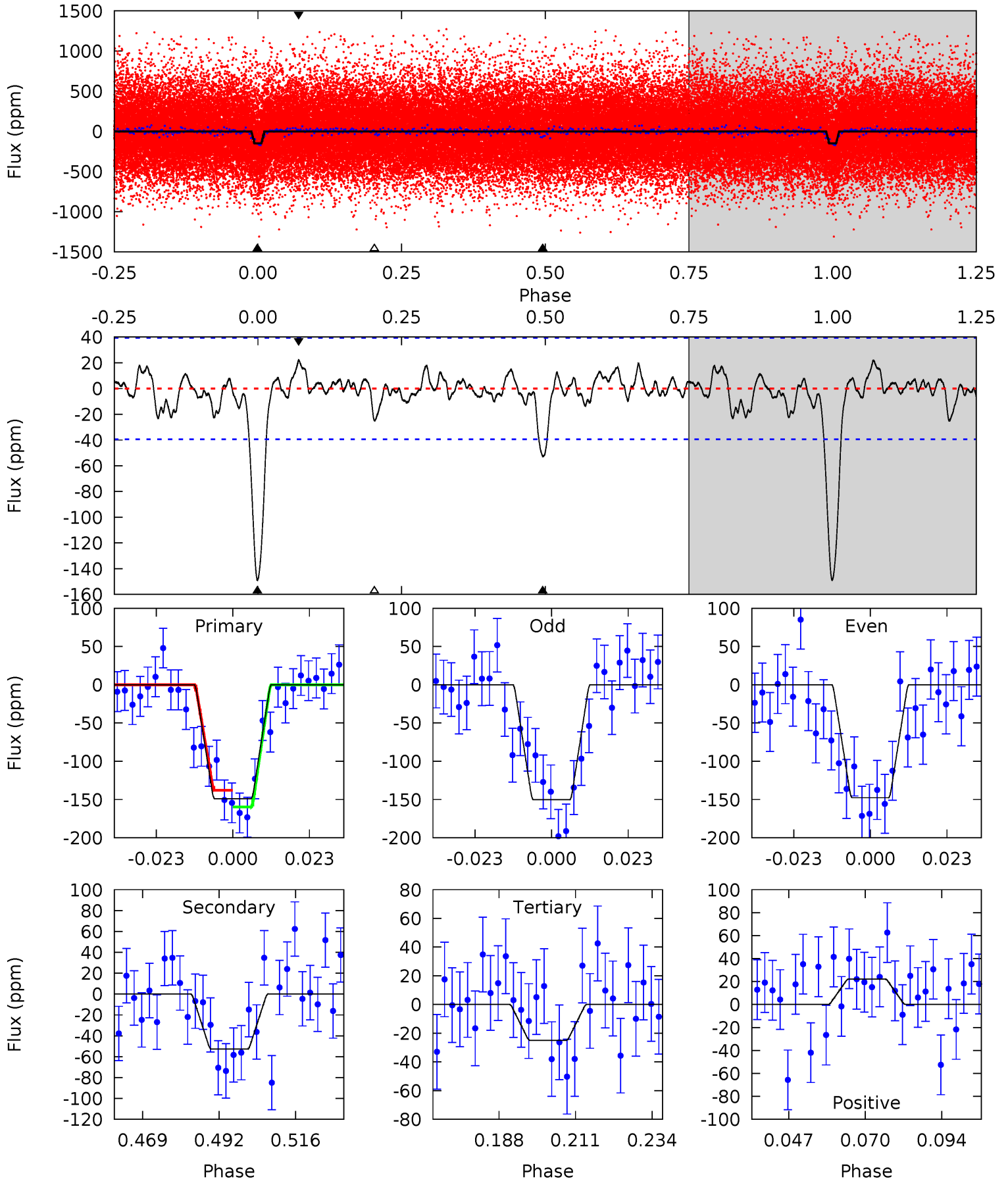
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.1	5.64	2.66	2.45	4.81	2.17	0.98	16.4	16.6	2.98	3.19	0.11	0.76	0.13	2.22



Alt Model-Shift Uniqueness Test

008429566-01, P = 3.732249 Days, E = 128.210332 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	6.49	3.07	2.72	4.86	2.27	1.06	15.3	15.6	3.42	3.77	0.17	0.92	0.13	1.34



Stellar Parameters For KIC 008429566

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5762^{+155}_{-155}	$4.495^{+0.072}_{-0.180}$	$-0.340^{+0.300}_{-0.300}$	$0.867^{+0.232}_{-0.100}$	$0.859^{+0.110}_{-0.080}$	$1.854^{+0.691}_{-0.863}$
	+3%/-3%	+2%/-4%	+88%/-88%	+27%/-12%	+13%/-9%	+37%/-47%
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 008429566-01 / KOI 2511.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-41 ± 7	$1.32^{+0.62}_{-0.56}$	1582^{+119}_{-74}	4216^{+1071}_{-556}	26^{+55}_{-14}
Alt.	-53 ± 8	$1.33^{+0.66}_{-0.62}$	1590^{+99}_{-74}	4436^{+1360}_{-627}	33^{+86}_{-19}

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 $A_{obs} \gg 1.0$

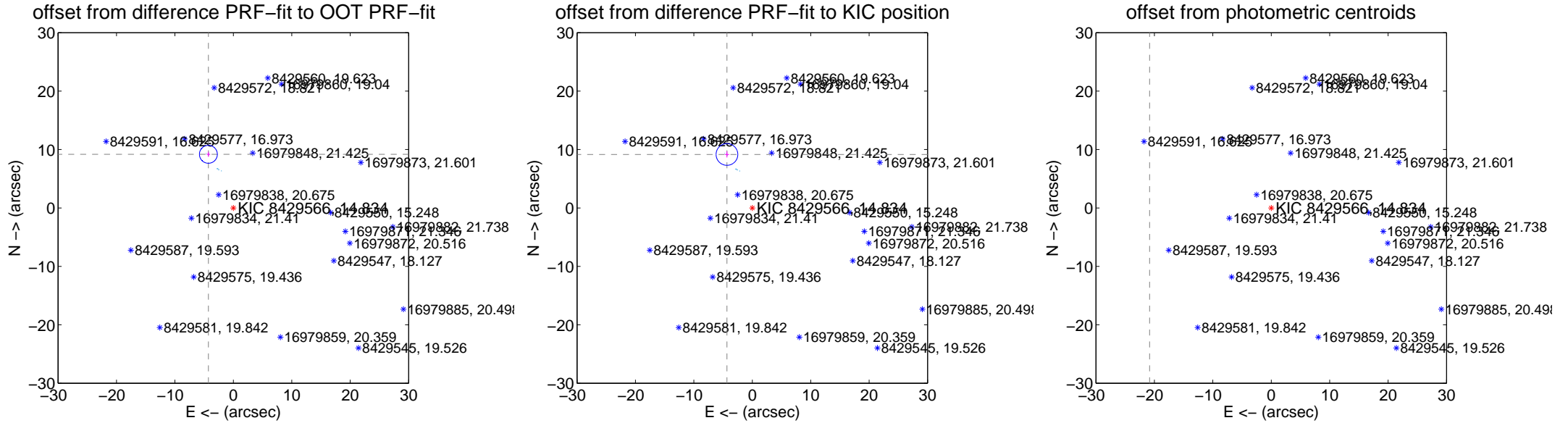
DV Centroid Data

Supplemental centroid analysis for 008429566-01. Kepler magnitude: 14.83. Transit SNR 15.78

There are 8 quarters with good PRF difference image offsets

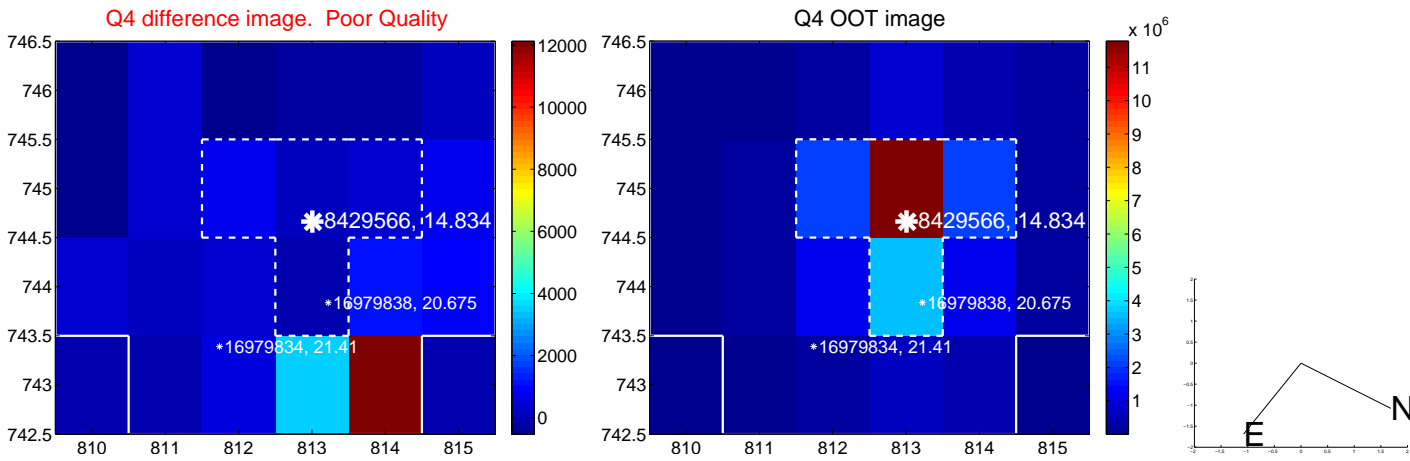
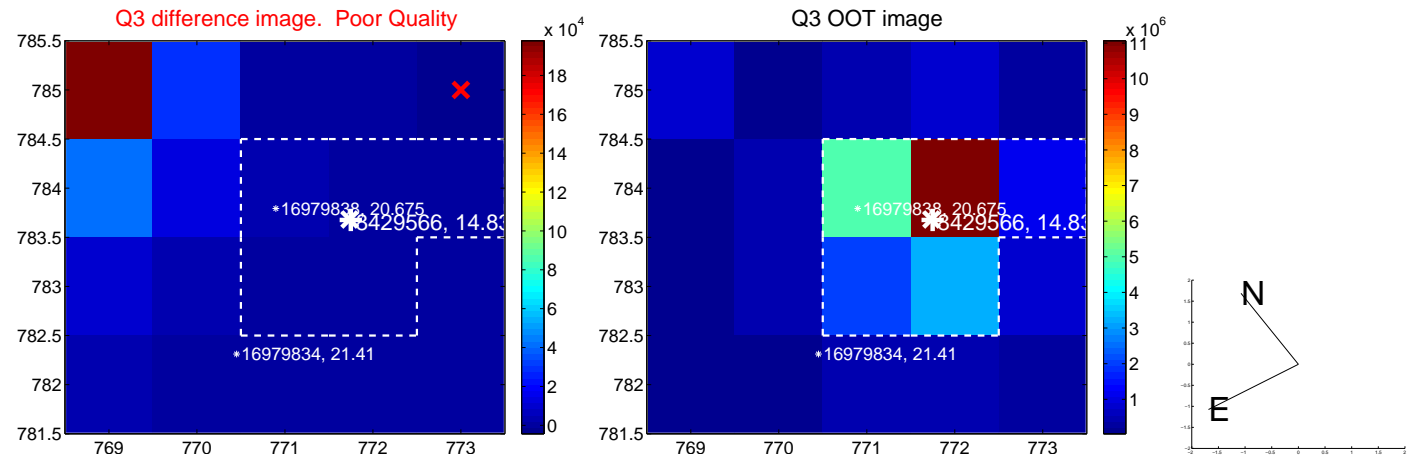
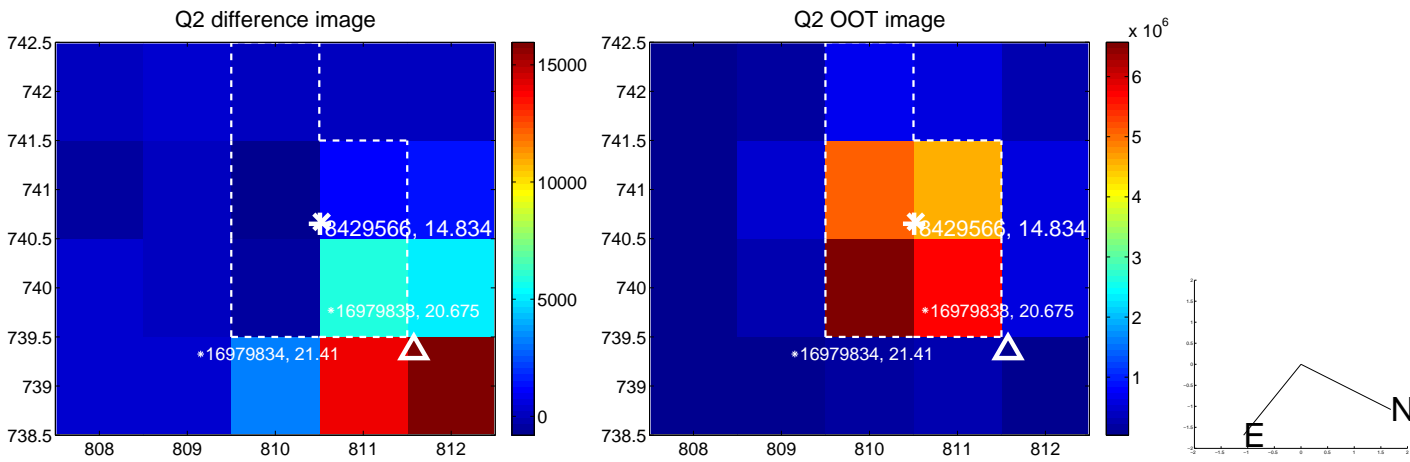
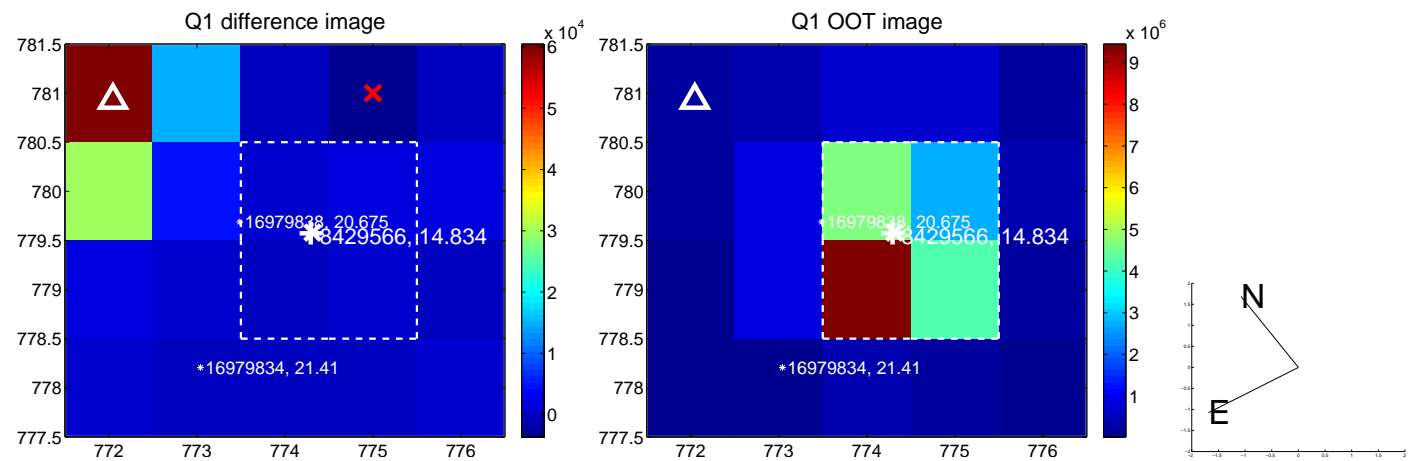
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	10.128 \pm 0.511	19.81	4.272 \pm 0.308	9.183 \pm 0.426
PRF-fit source offset from KIC position	10.131 \pm 0.620	16.35	4.339 \pm 0.371	9.155 \pm 0.514
photometric centroid source offset	48.10 \pm 0.89	54.01	20.83 \pm 0.87	43.36 \pm 0.90

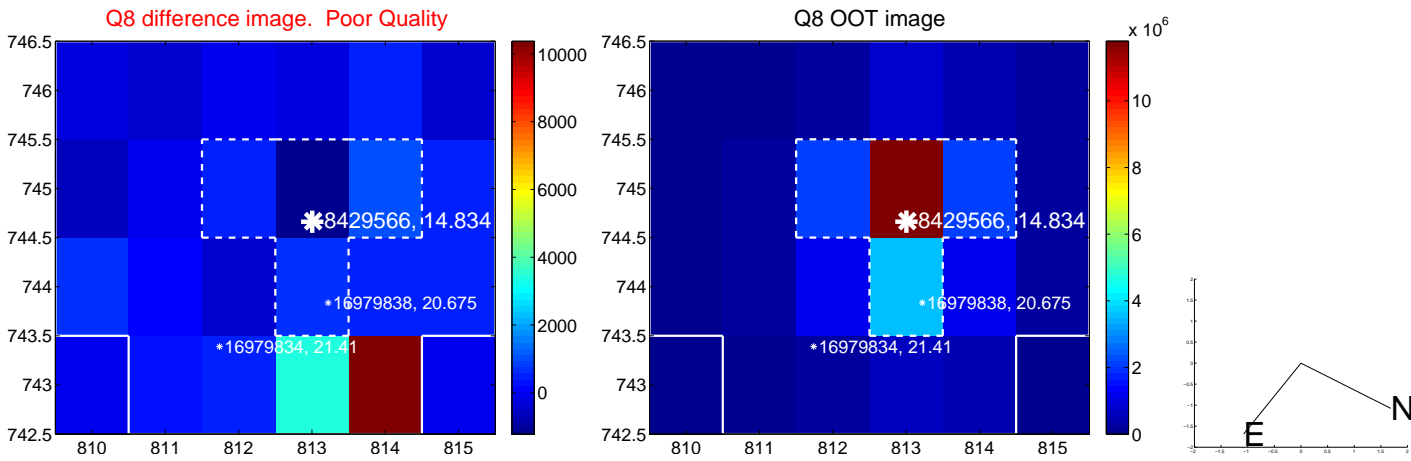
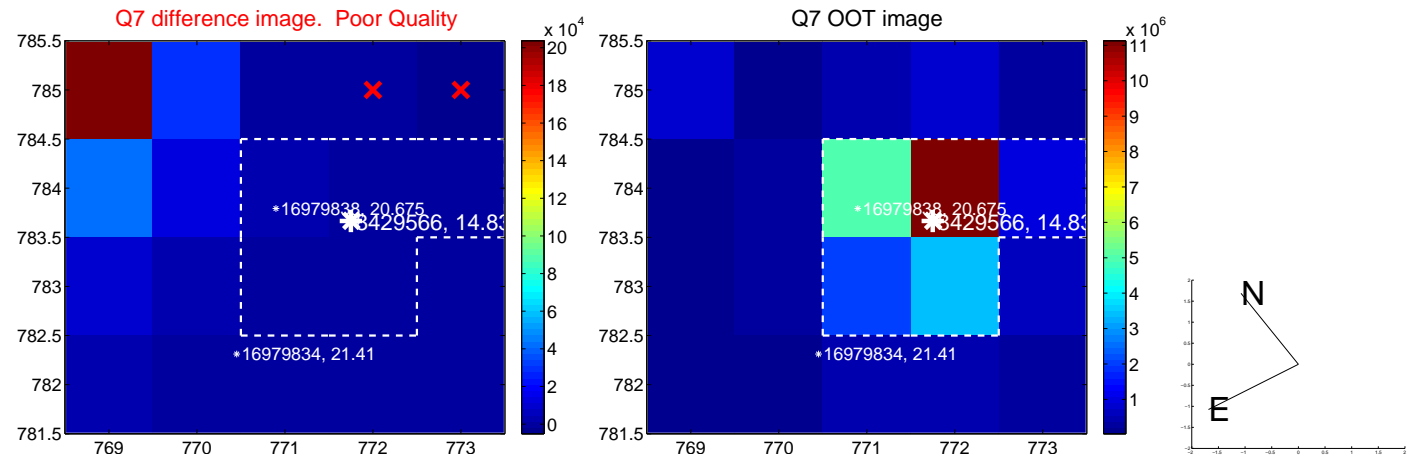
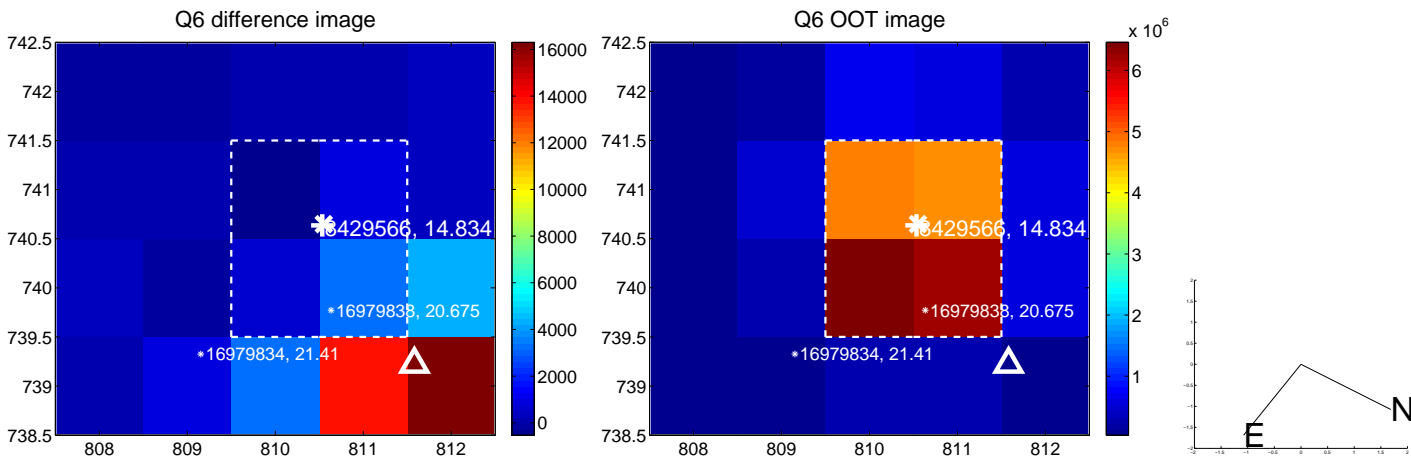
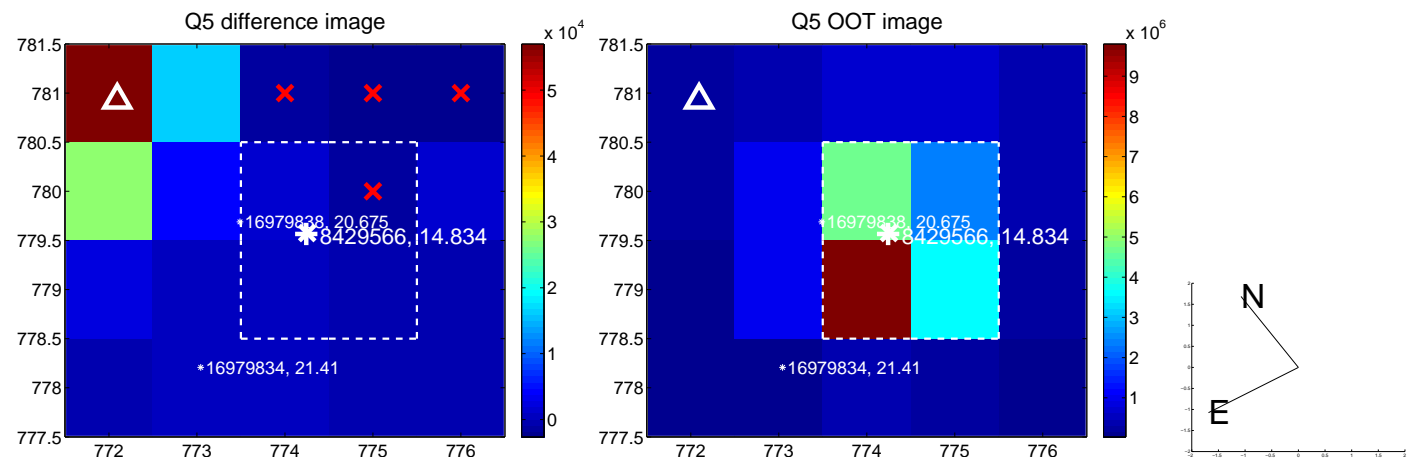


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

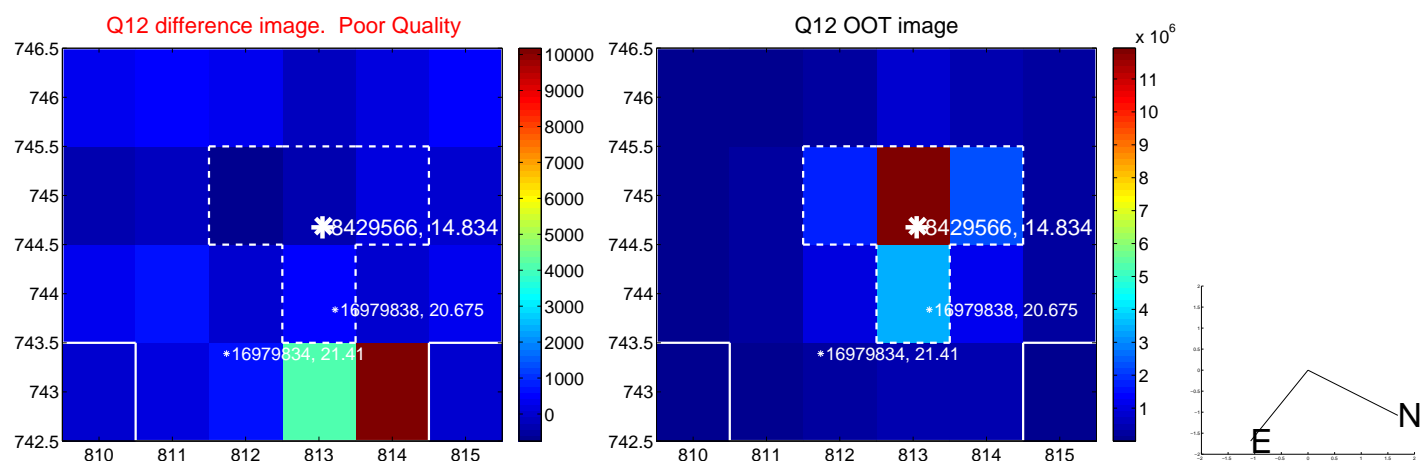
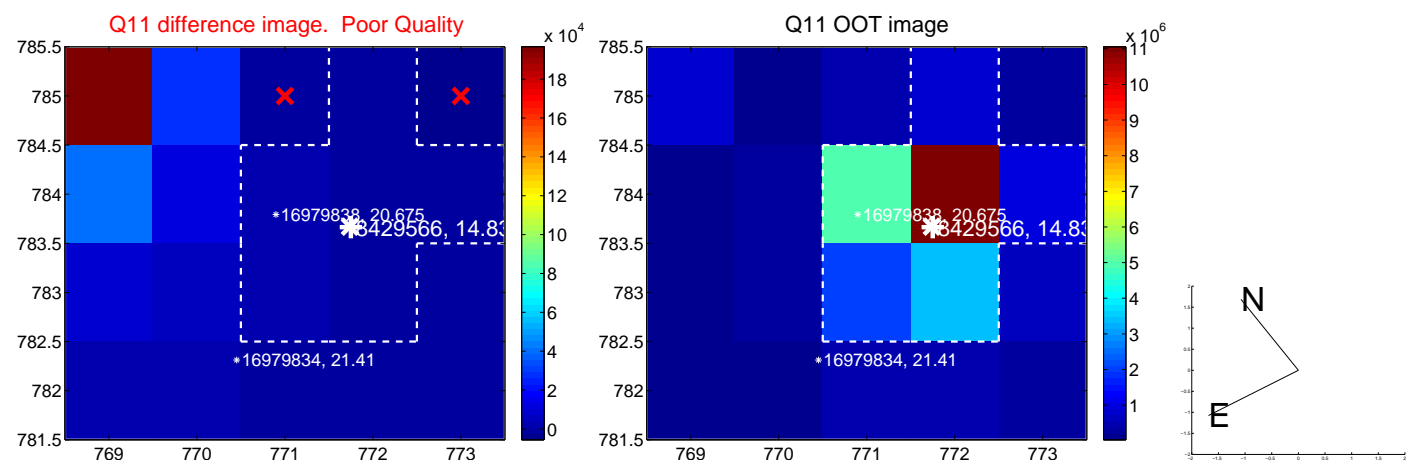
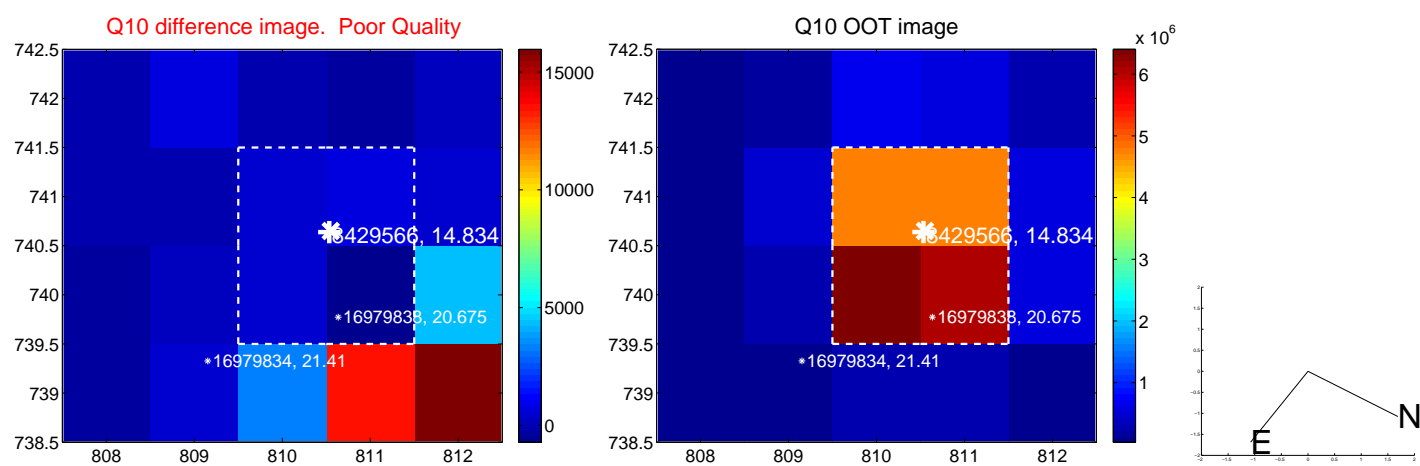
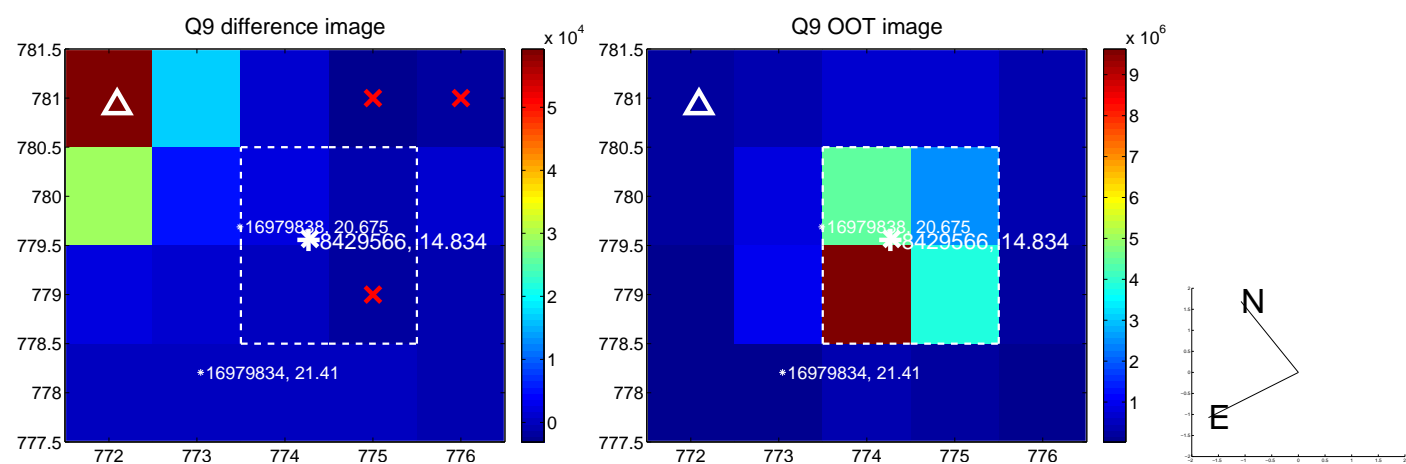
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



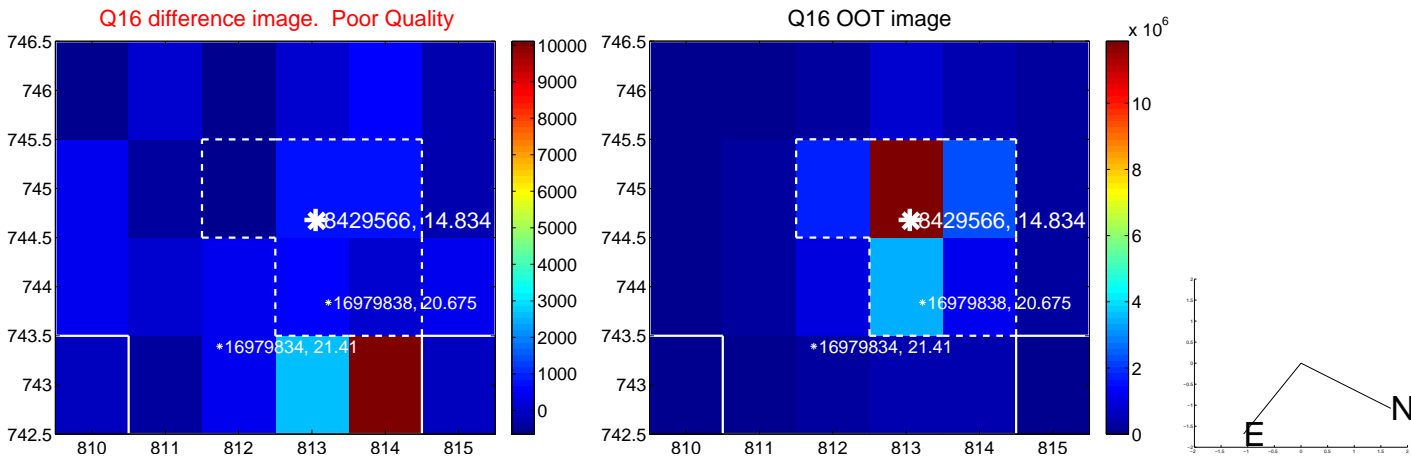
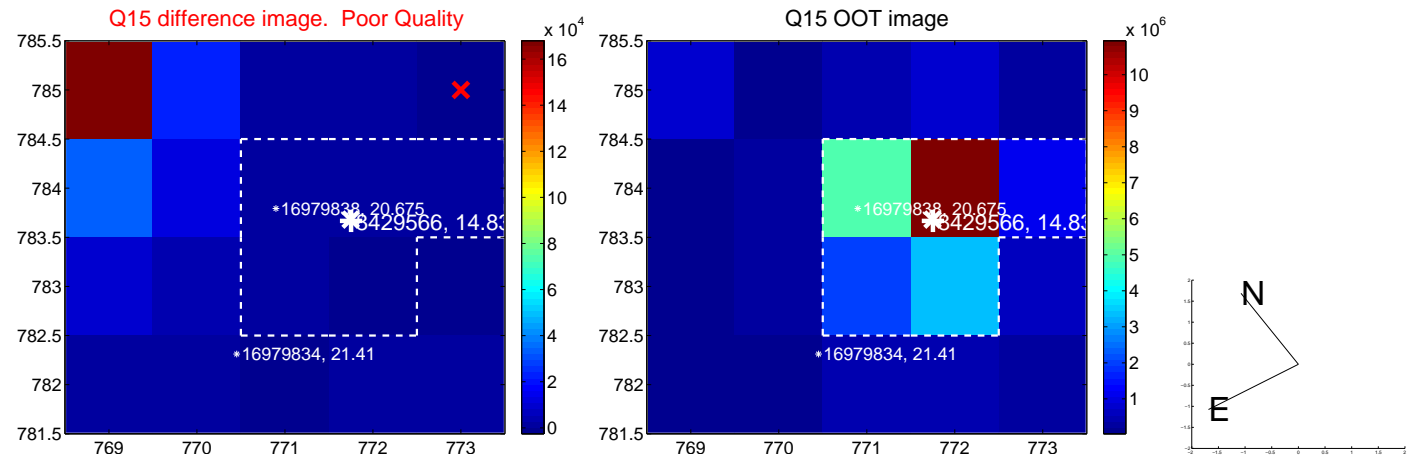
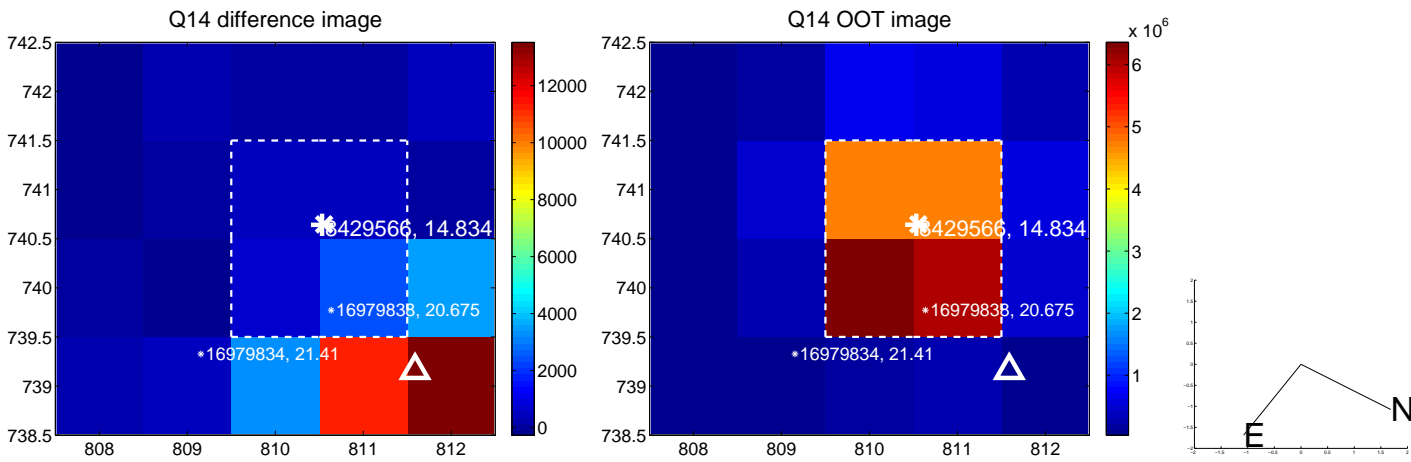
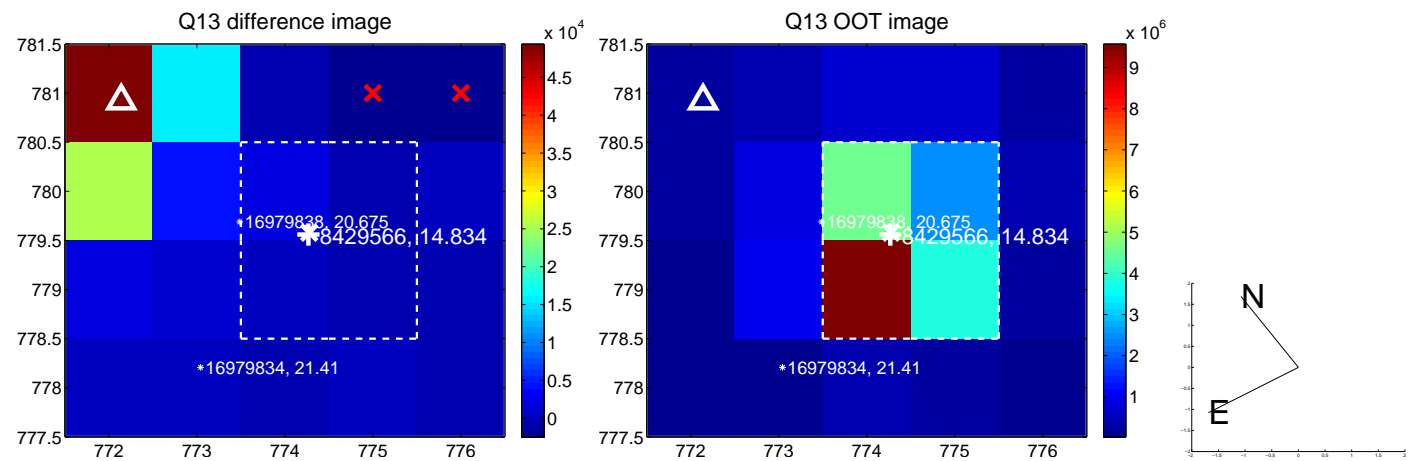
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



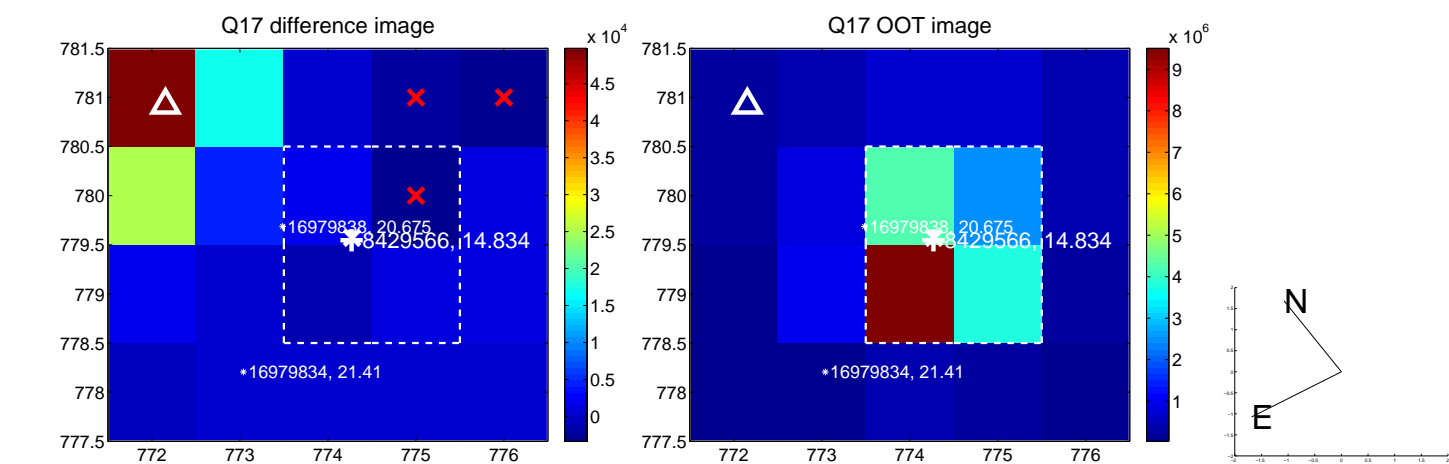
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



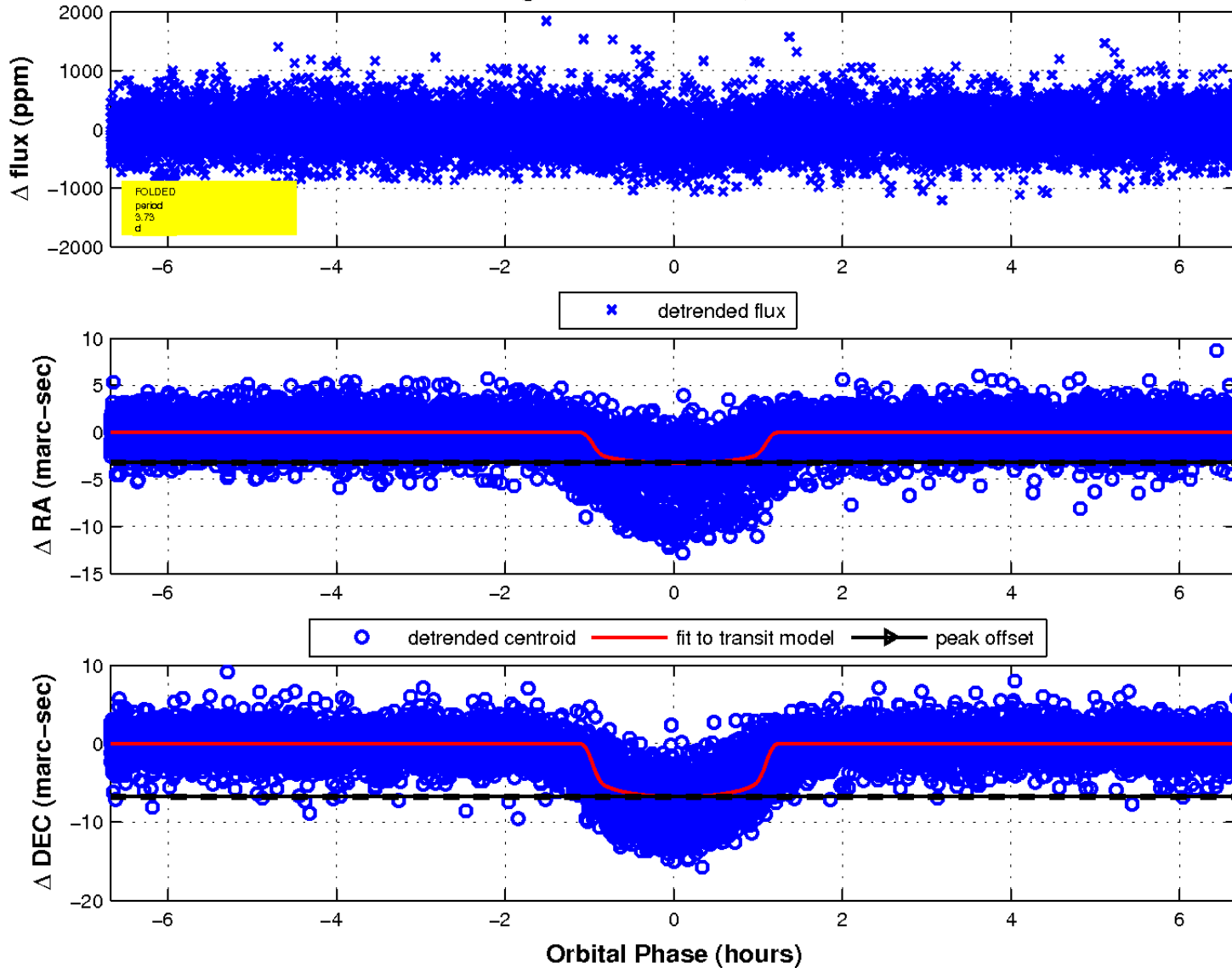
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

