

KIC 008766650

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})
008766650-01	OBS	1904.01	12.439312	136.378643	263.9	3.538	30.0	31.6	0.77	4987	1.66	36.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008766650-01	OBS	PC	0.98	0	0	0	0	CENT_KIC_POS

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 008766650-01

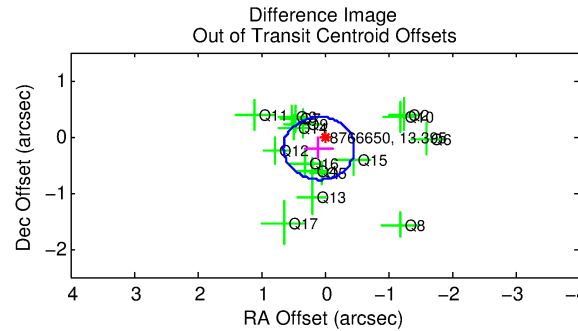
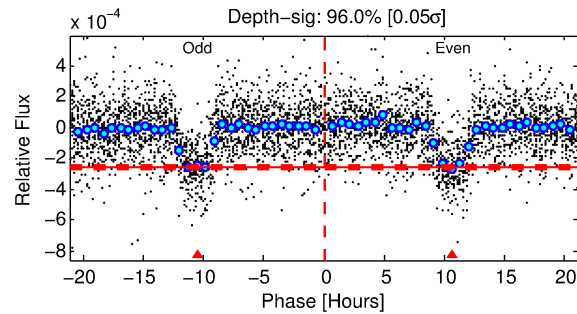
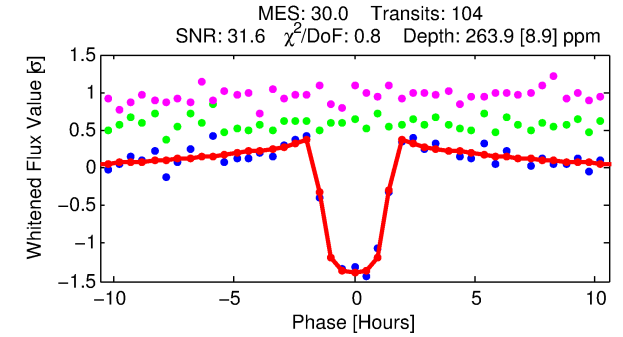
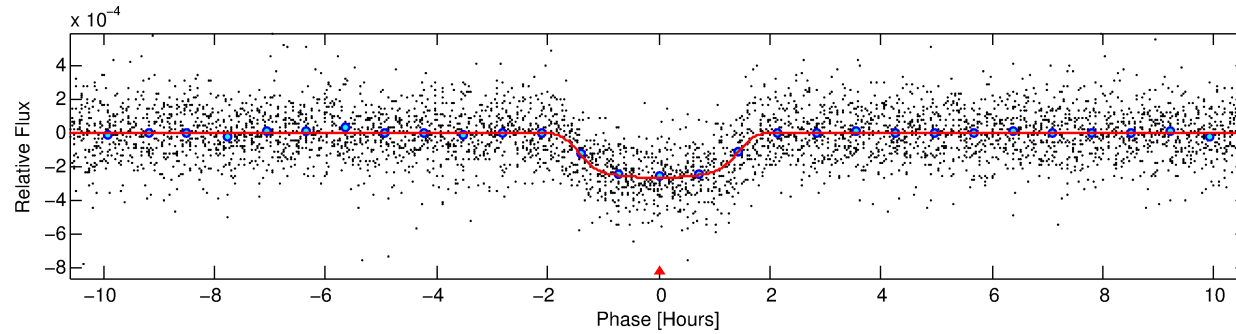
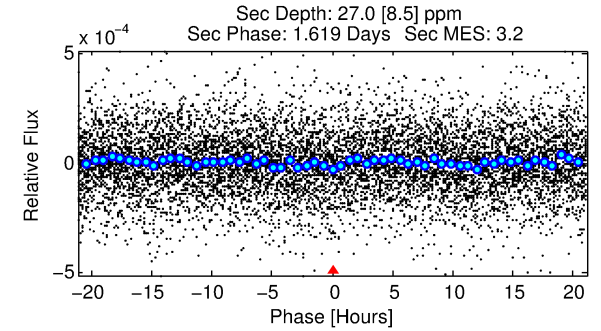
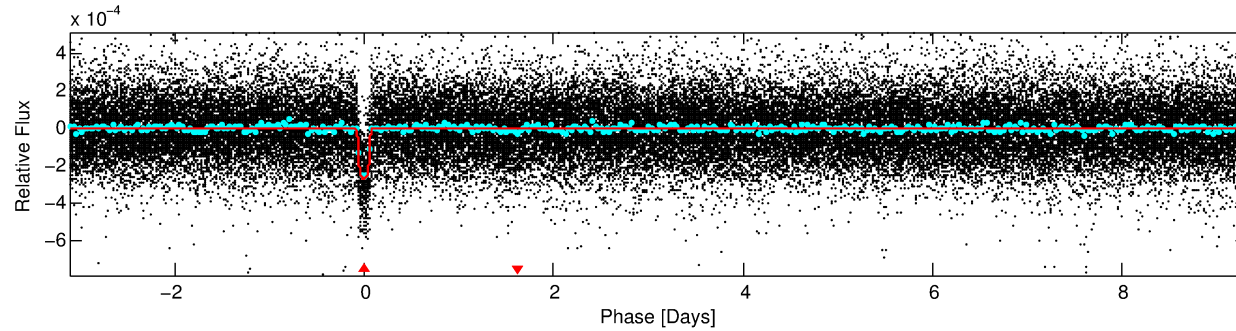
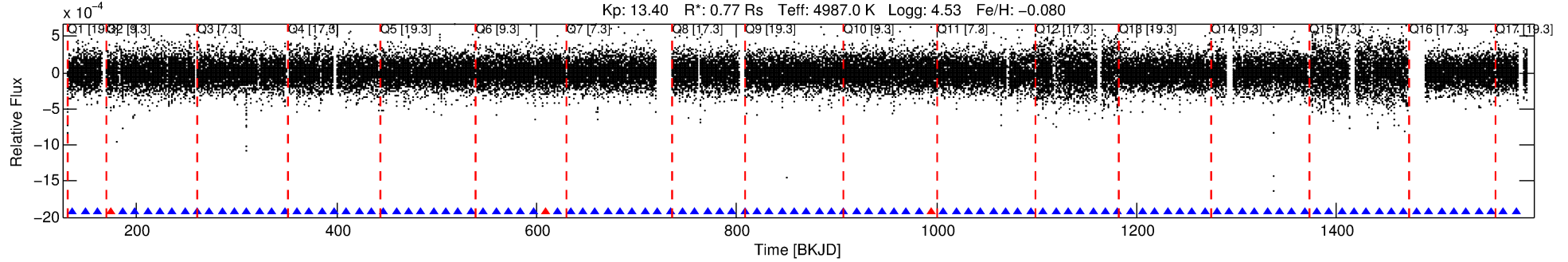
No Significant Match Found

DV One-Page Summary

KIC: 8766650 Candidate: 1 of 1 Period: 12.439 d

KOI: K01904.01 Corr: 0.939

Kp: 13.40 R*: 0.77 Rs Teff: 4987.0 K Logg: 4.53 Fe/H: -0.080



DV Fit Results:

Period = 12.43931 [0.00003] d
Epoch = 136.3786 [0.0021] BKJD
Rp/R* = 0.0197 [0.0008]
a/R* = 9.88 [1.52]
b = 0.95 [0.02]
Seff = 36.64 [5.09]
Teq = 627 [22] K
Rp = 1.66 [0.13] Re
a = 0.0951 [0.0066] AU
Ag = 48.82 [16.78] [2.85σ]
Teffp = 2564 [214] K [9.00σ]

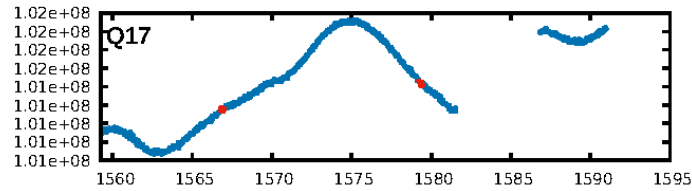
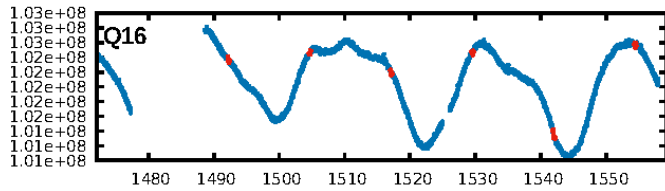
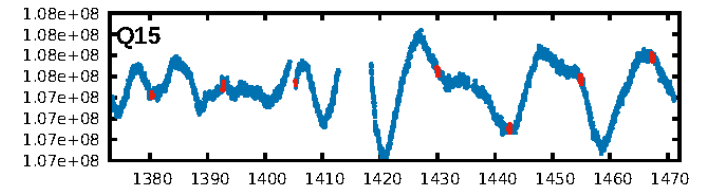
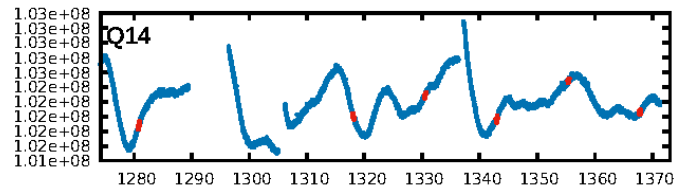
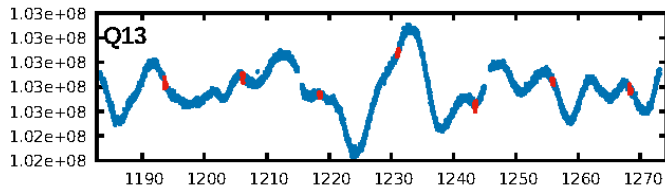
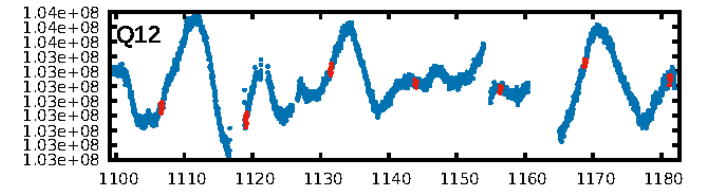
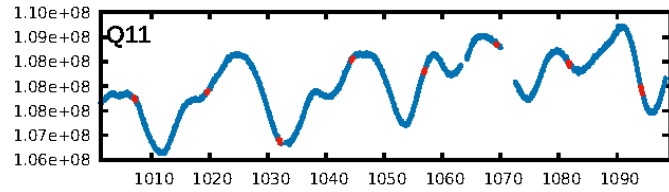
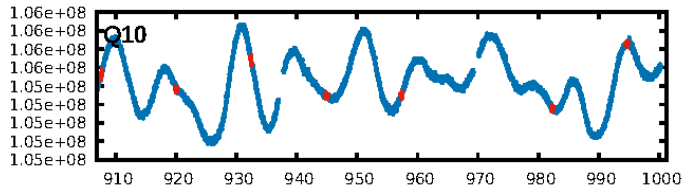
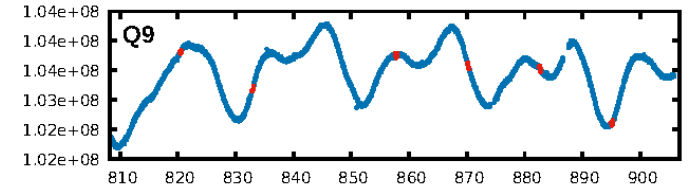
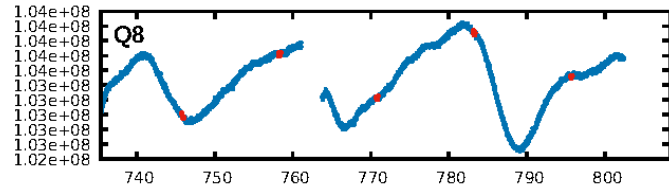
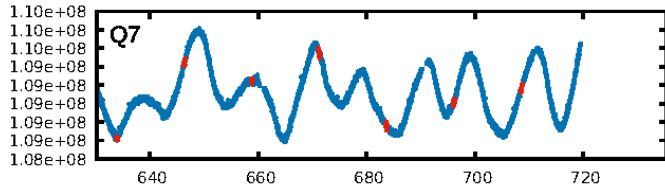
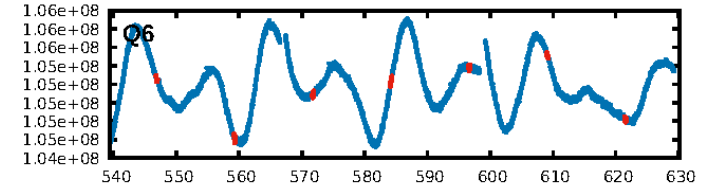
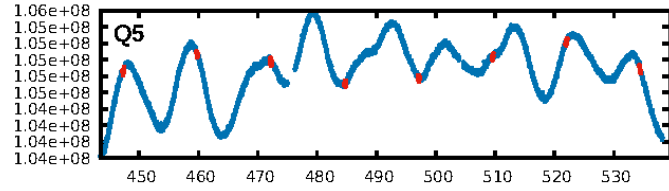
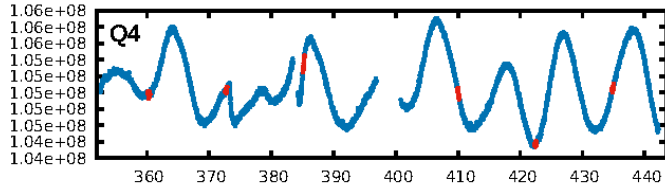
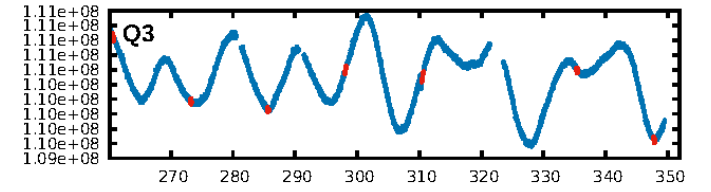
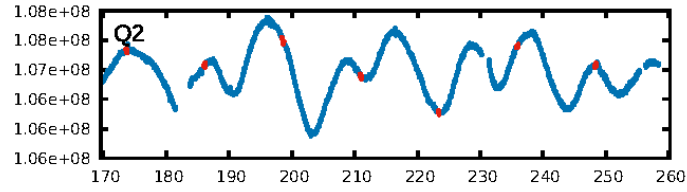
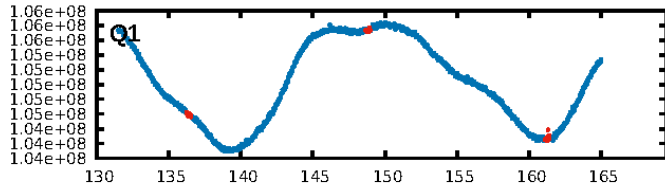
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.79e-185
RollingBand-fgt: 0.97 [96/99]
GhostDiagnostic-chr: 2.812
Centroid-sig: 25.9%
Centroid-so: 0.083 arcsec [0.29σ]
OotOffset-rm: 0.228 arcsec [1.23σ]
KicOffset-rm: 0.537 arcsec [2.75σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [17/17]

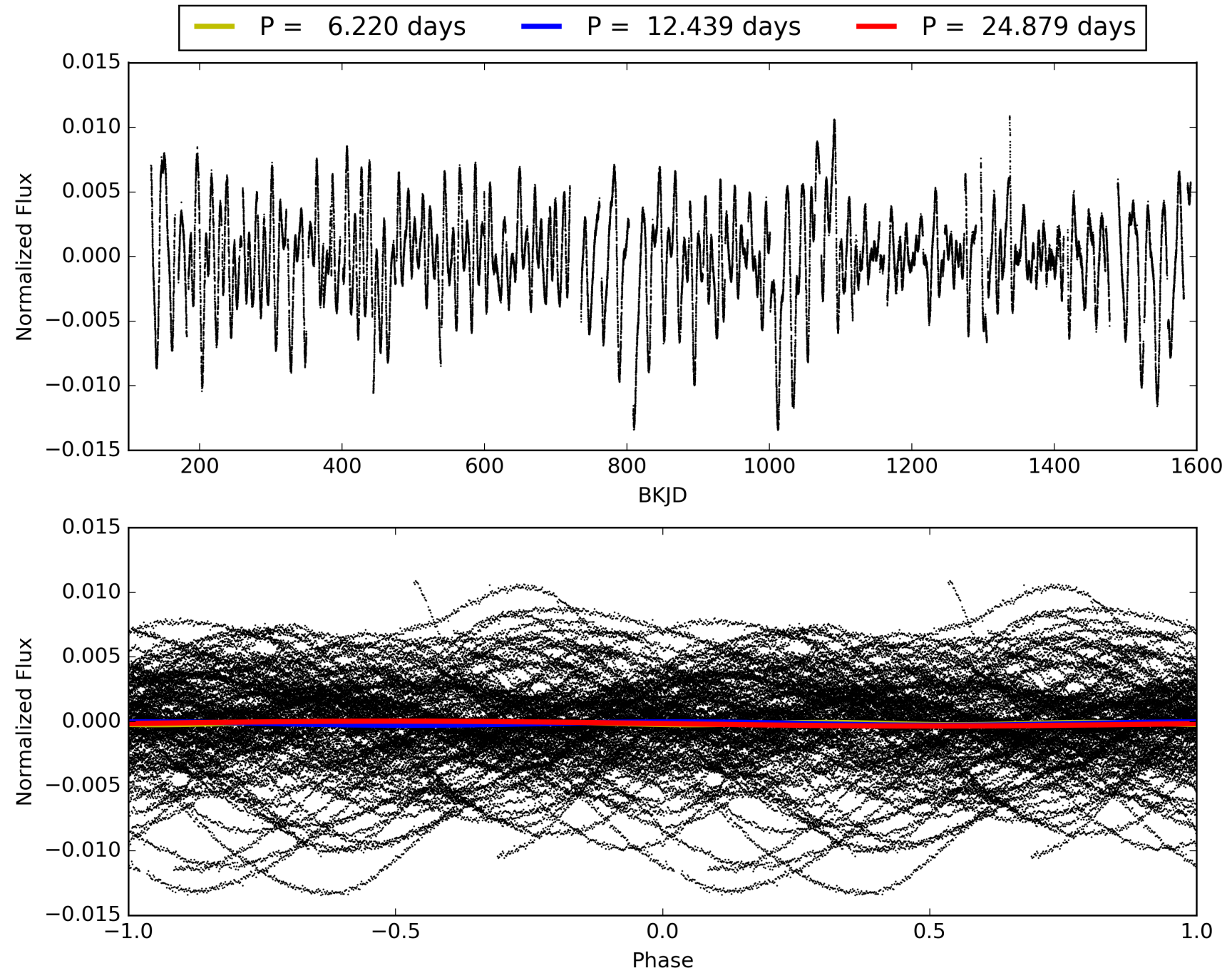
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:38:44 Z

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

TCE 008766650-01, PDC Light Curves

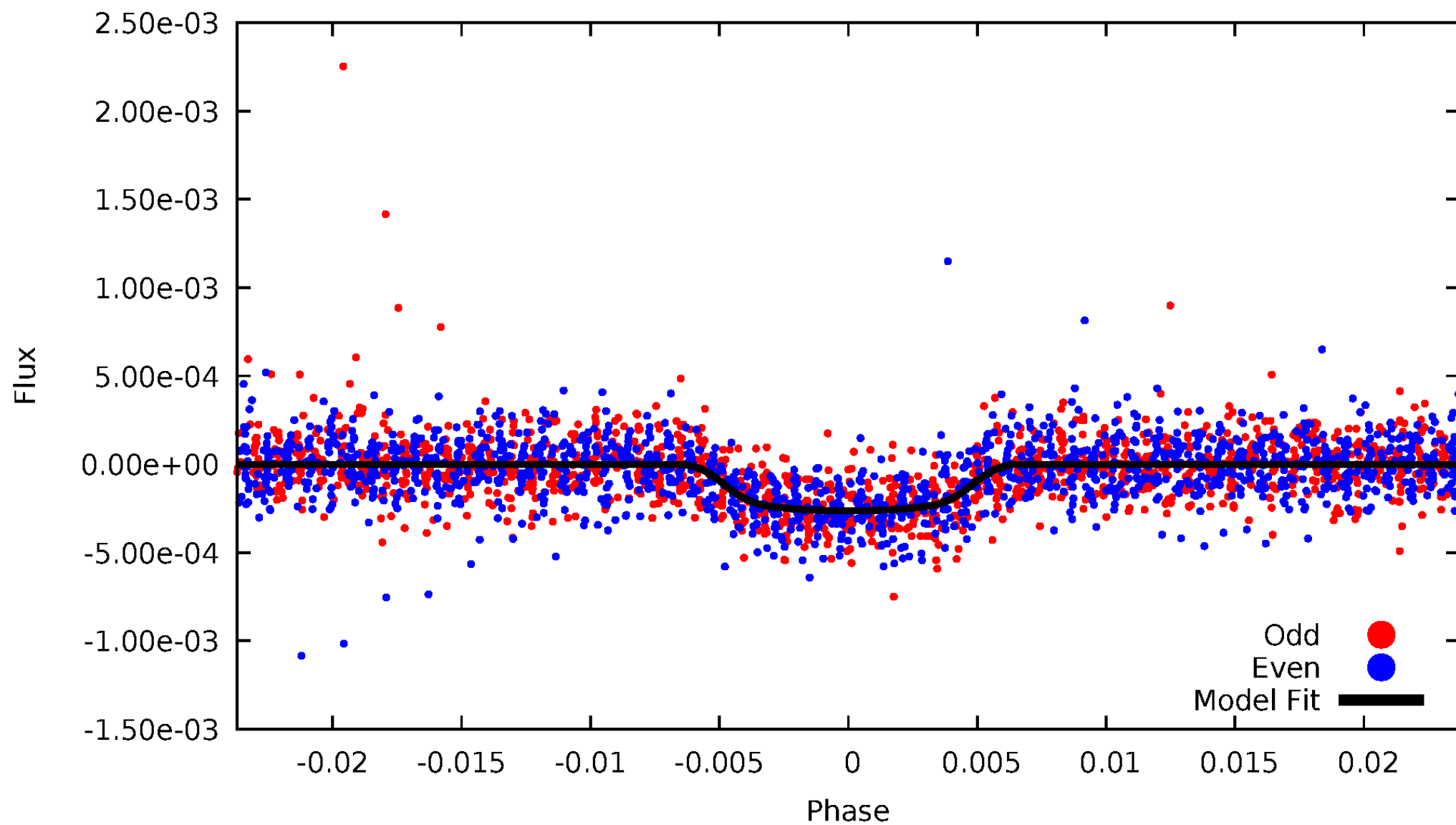


TCE 008766650-01



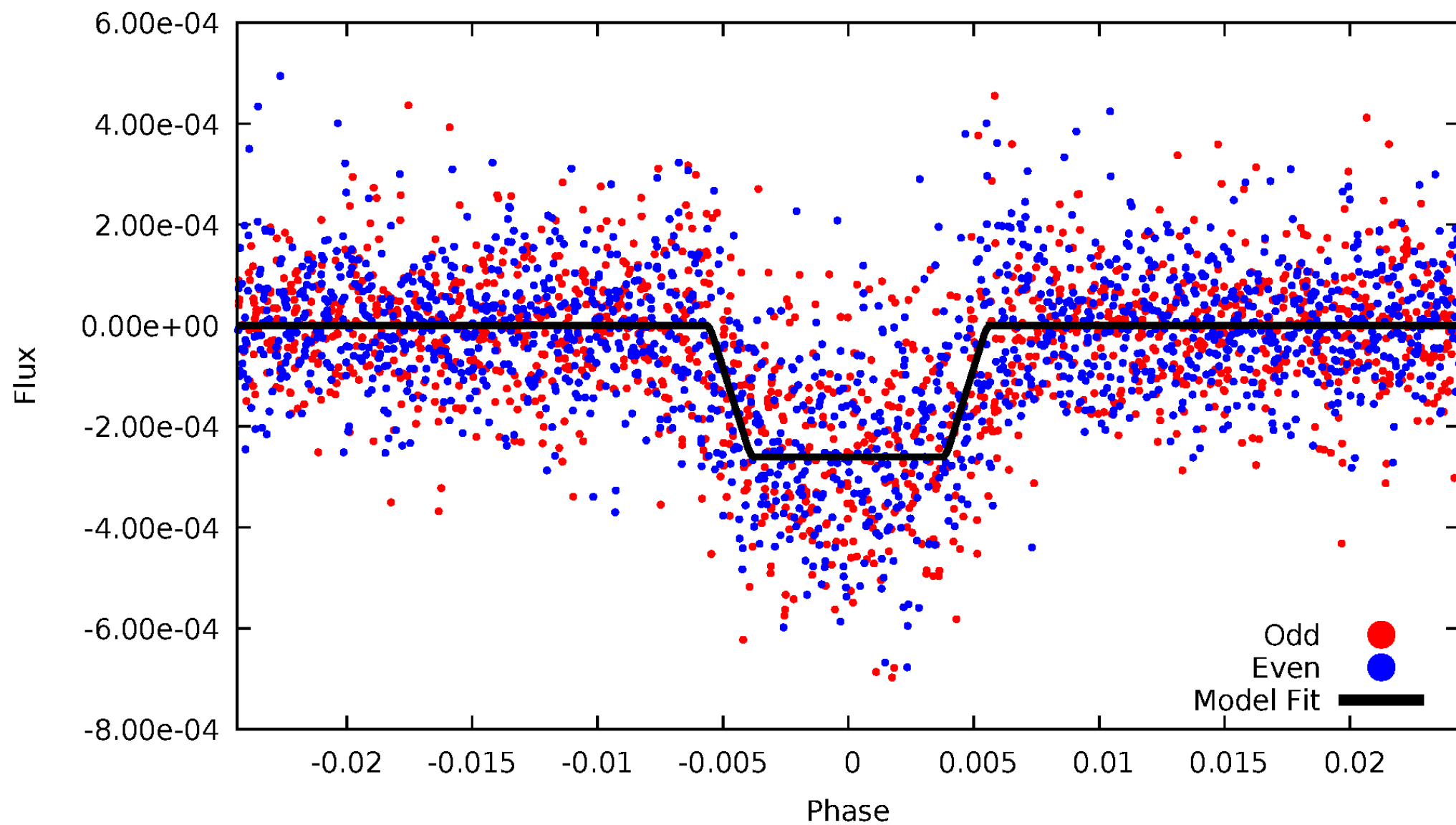
DV Odd/Even

TCE 008766650-01



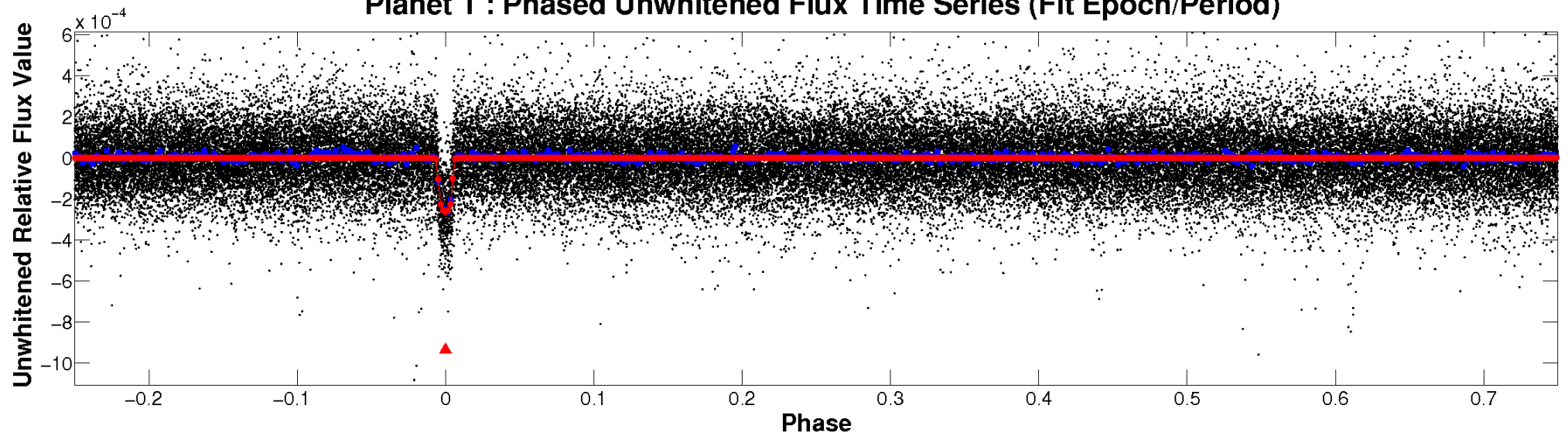
ALT Odd/Even

TCE 008766650-01

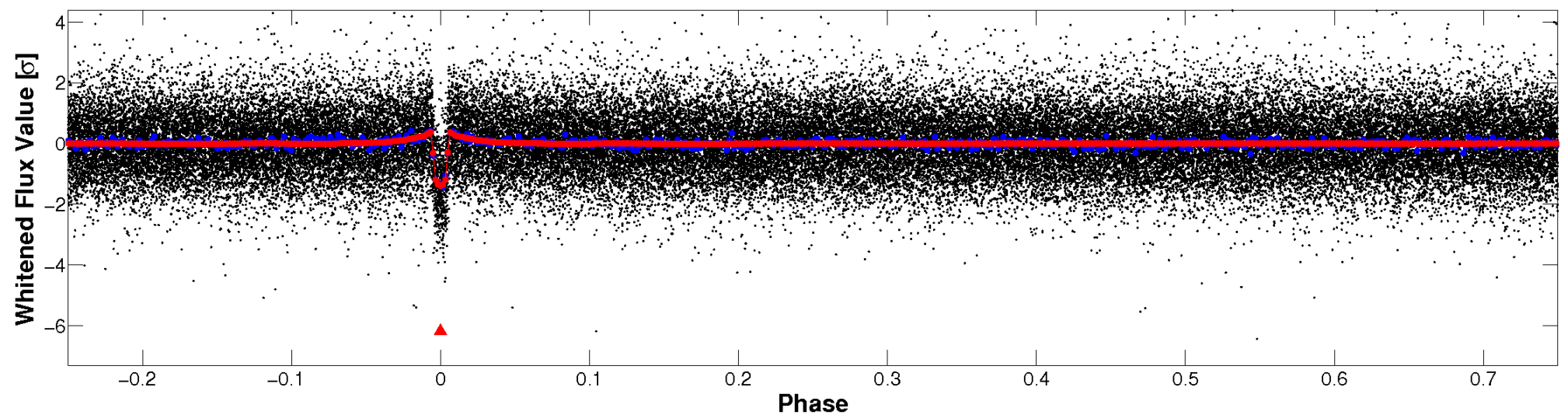


Non-Whitened Vs. Whitened Light Curve

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

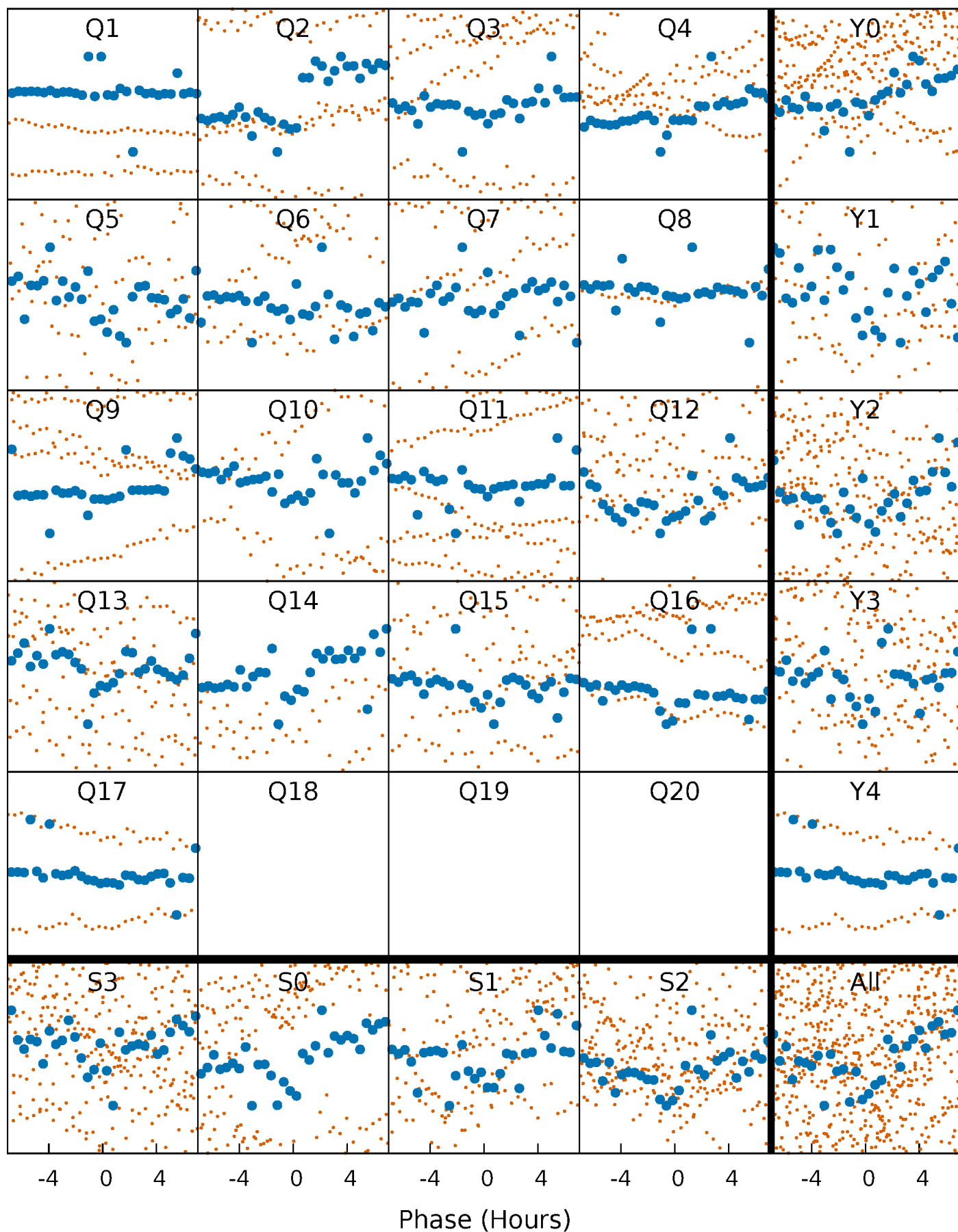


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



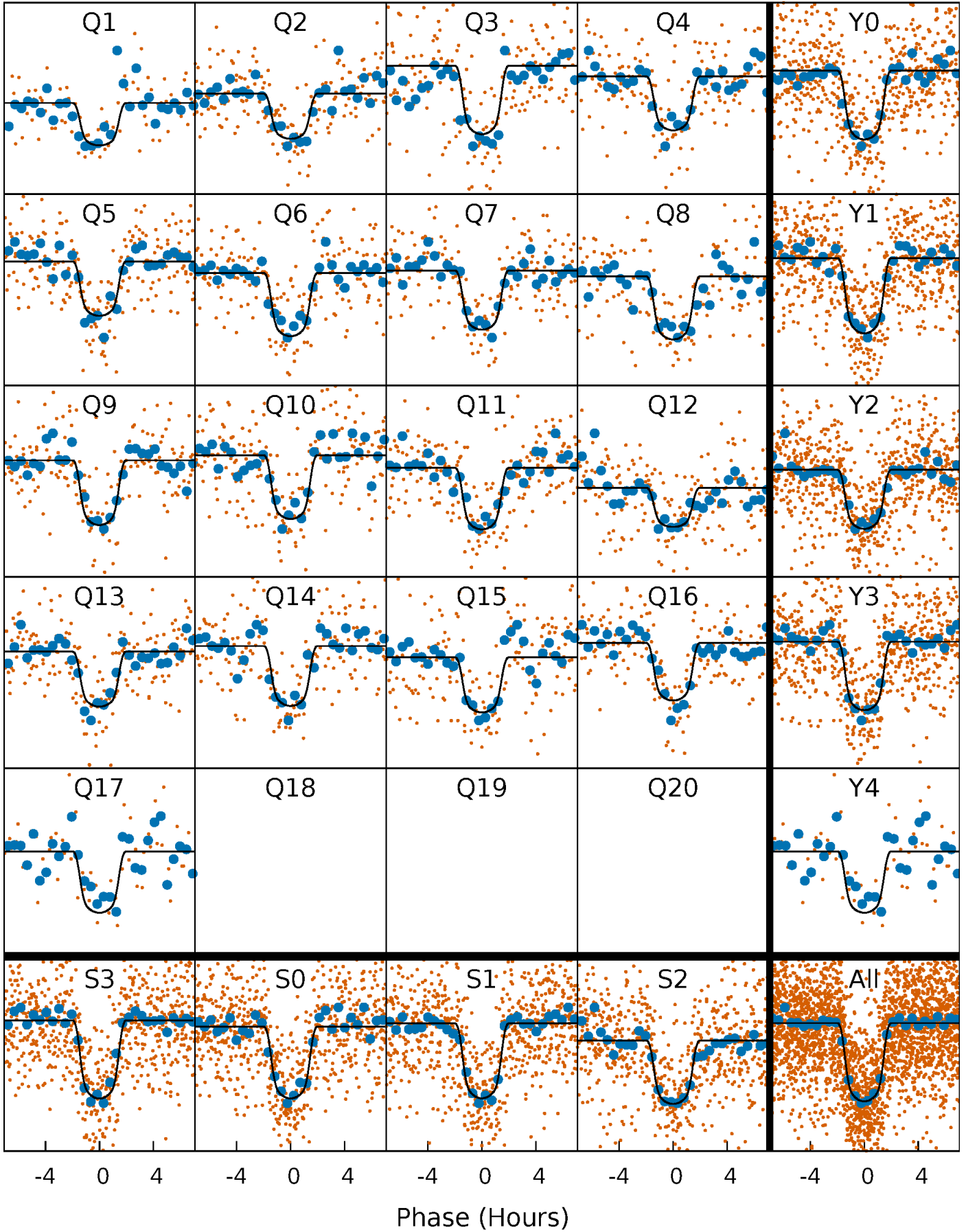
PDC Quarter-Phased Transit Curves

TCE 008766650-01 P= 12.439312 Days $T_0=136.378643$ (BKJD)



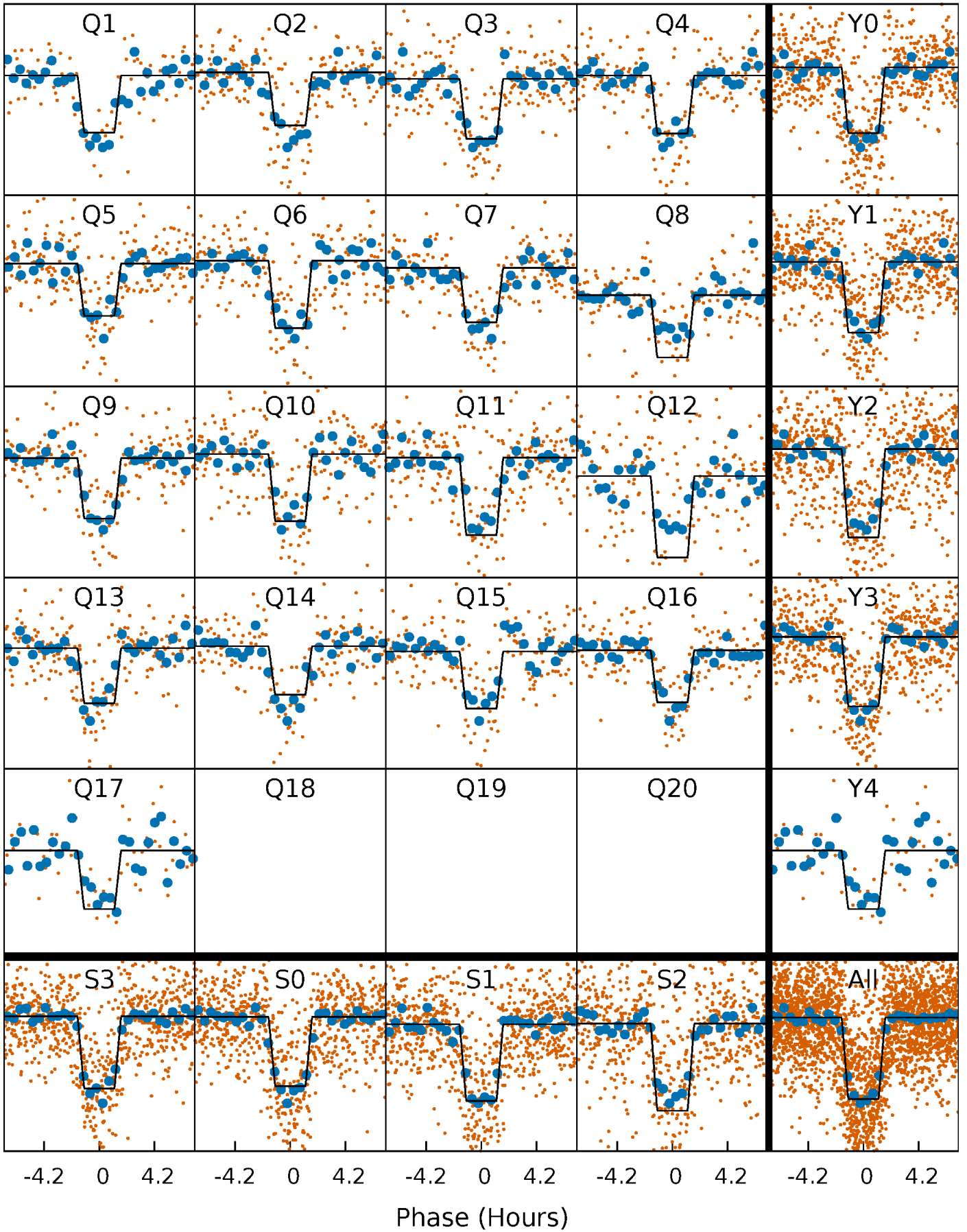
DV Quarter-Phased Transit Curves

TCE 008766650-01 P= 12.439312 Days $T_0=136.378643$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

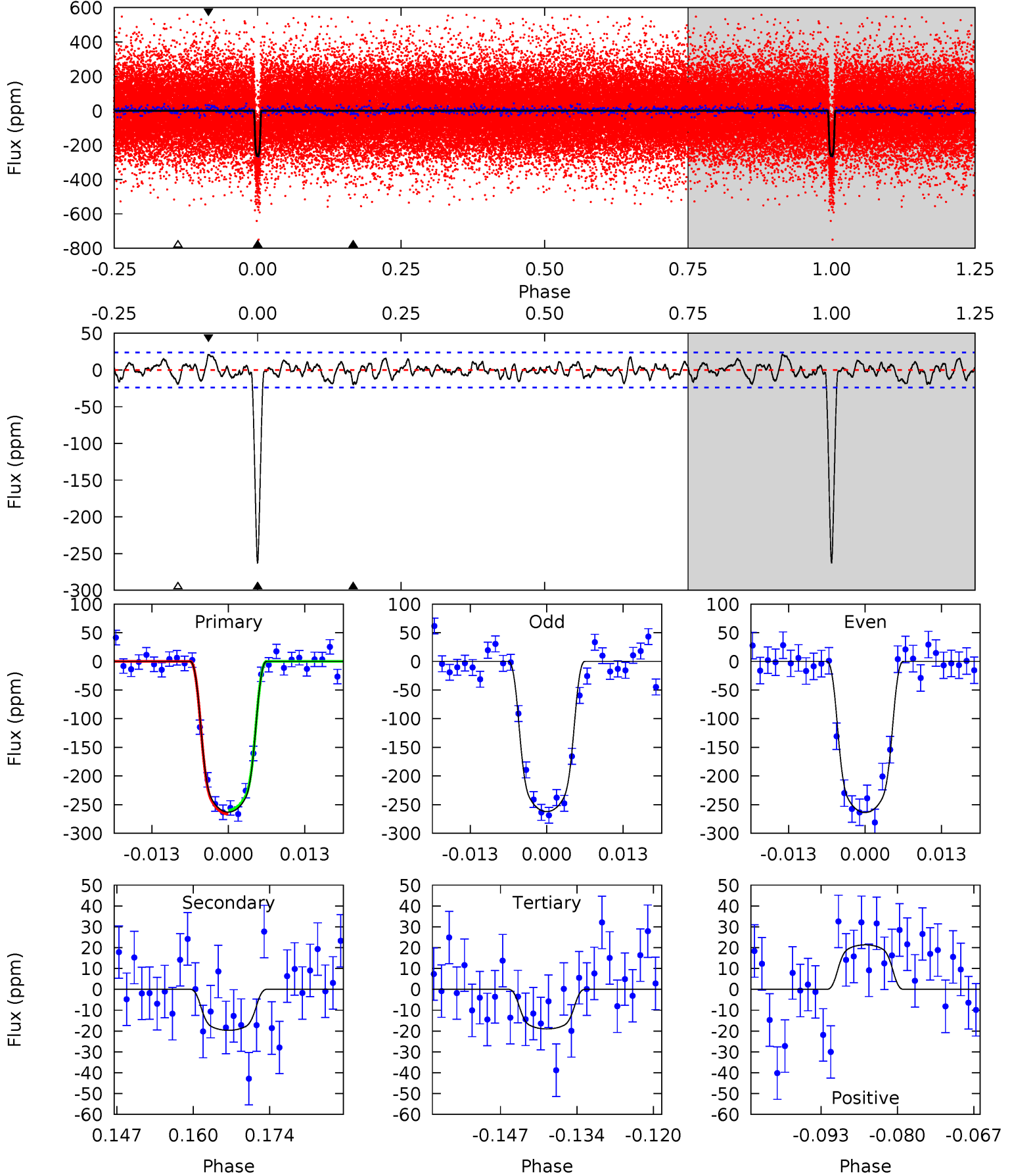
TCE 008766650-01 P= 12.439344 Days $T_0=136.376369$ (BKJD)



DV Model-Shift Uniqueness Test

008766650-01, $P = 12.439312$ Days, $E = 123.939331$ Days

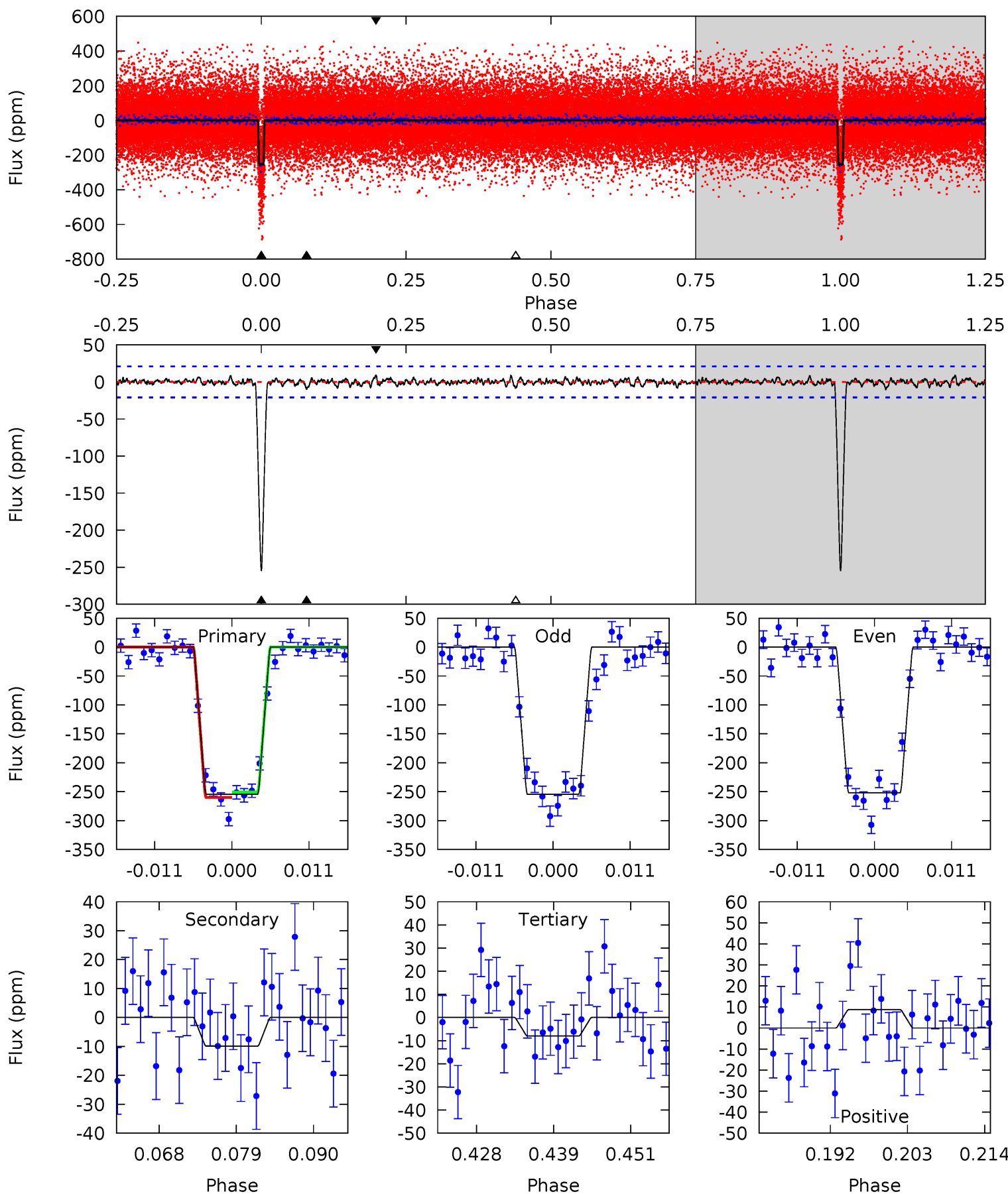
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.8	4.10	3.96	4.45	4.97	2.47	1.50	50.9	50.4	0.14	-0.35	0.16	1.02	0.08	0.66



Alt Model-Shift Uniqueness Test

008766650-01, $P = 12.439344$ Days, $E = 123.937025$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
60.8	2.37	1.91	2.08	5.00	2.53	0.65	58.9	58.7	0.46	0.29	0.34	0.98	0.03	1.08



Stellar Parameters For KIC 008766650

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4987^{+99}_{-1}	$4.531^{+0.068}_{-0.023}$	$-0.080^{+0.150}_{-0.150}$	$0.773^{+0.036}_{-0.053}$	$0.742^{+0.060}_{-0.028}$	$2.258^{+0.576}_{-0.210}$
	+2%/-0%	+2%/-1%	+188%/-188%	+5%/-7%	+8%/-4%	+26%/-9%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 008766650-01 / KOI 1904.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-20 ± 5	$1.65^{+0.09}_{-0.10}$	867^{+28}_{-36}	2980^{+122}_{-130}	37^{+10}_{-10}
Alt.	-10 ± 4	$1.36^{+0.08}_{-0.09}$	867^{+24}_{-35}	2870^{+155}_{-203}	28^{+13}_{-11}

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 $A_{obs} \gg 1.0$

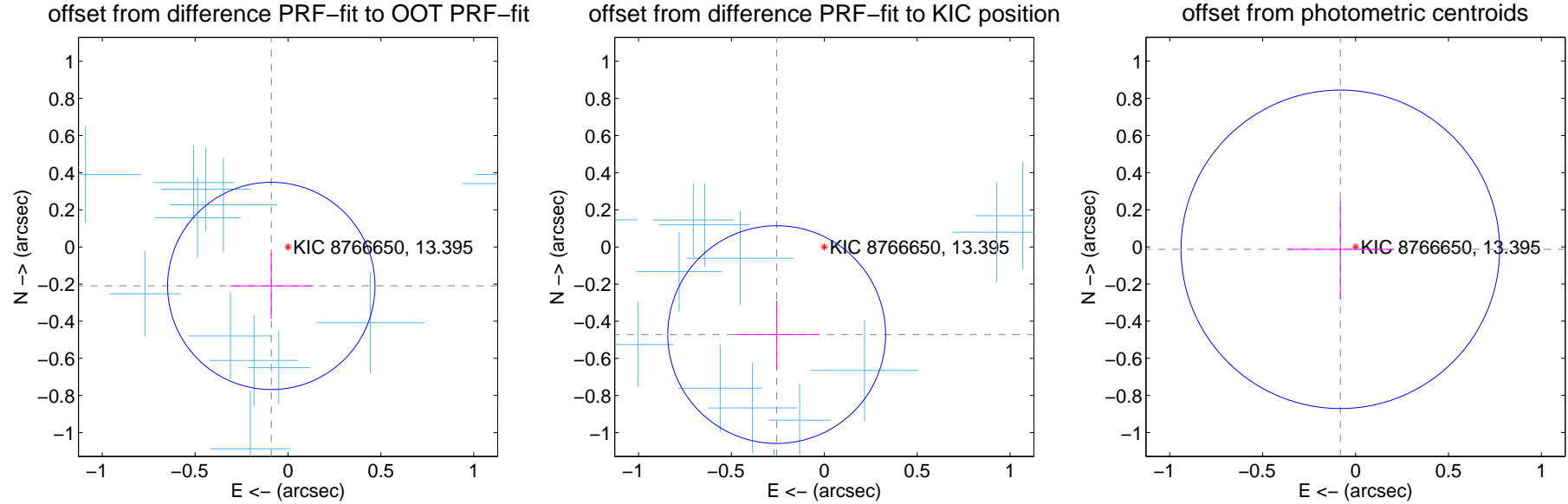
DV Centroid Data

Supplemental centroid analysis for 008766650-01. Kepler magnitude: 13.39. Transit SNR 31.63

There are 16 quarters with good PRF difference image offsets

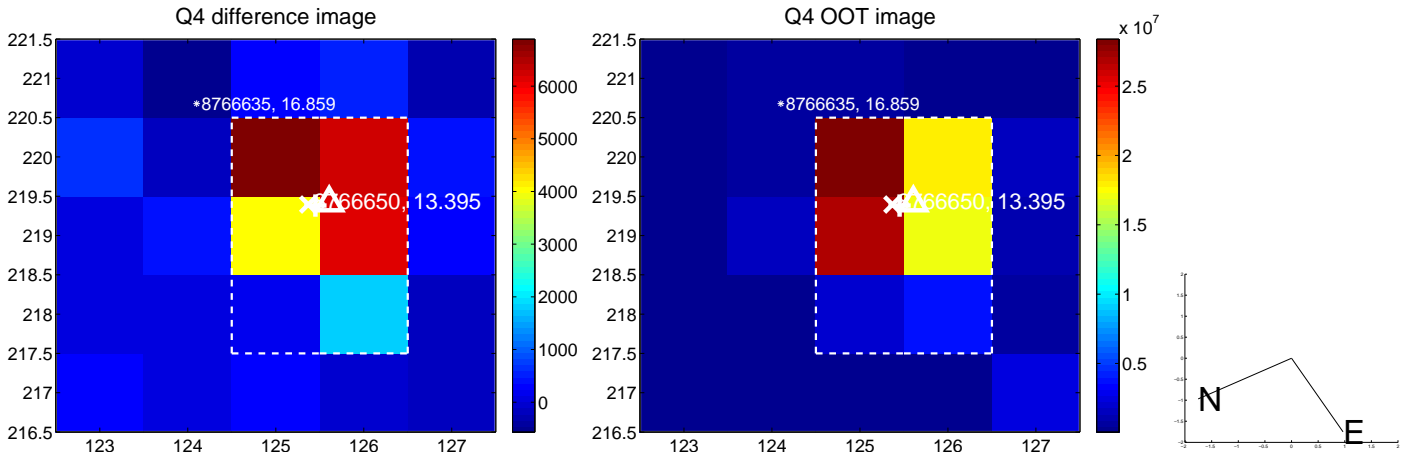
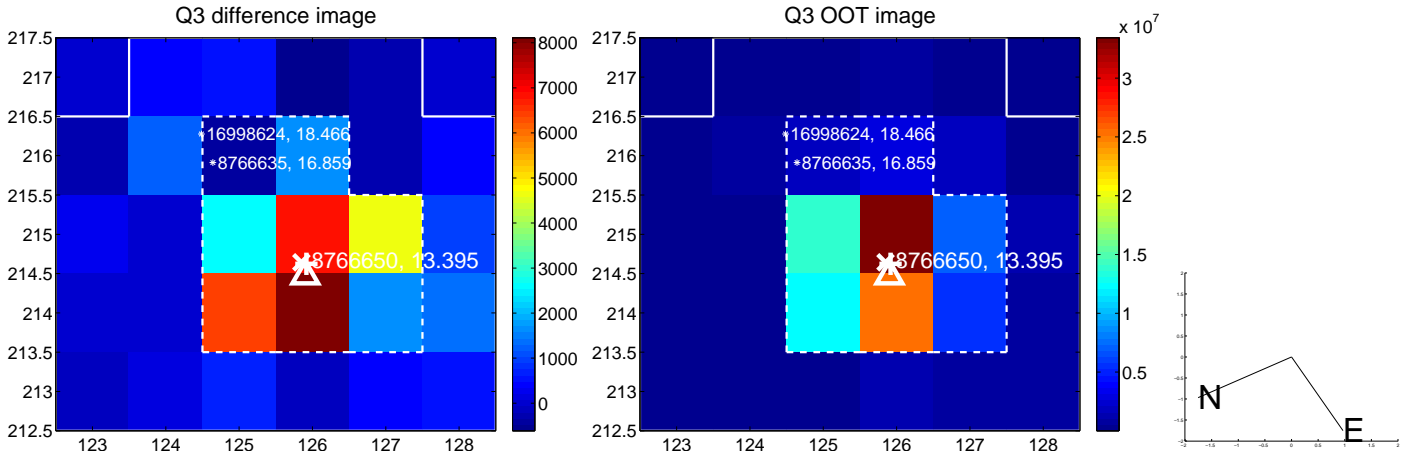
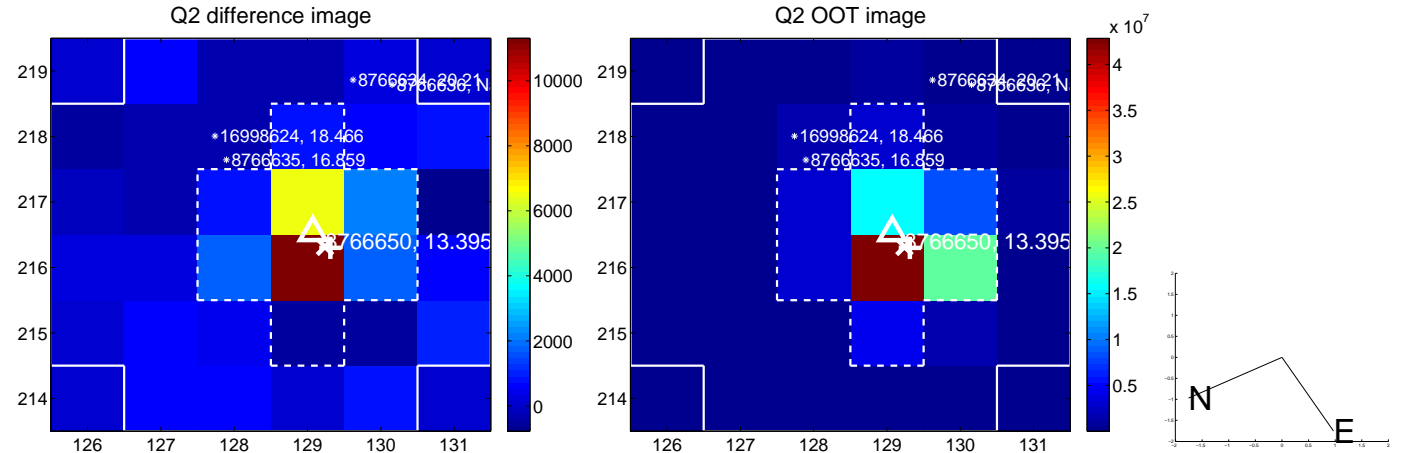
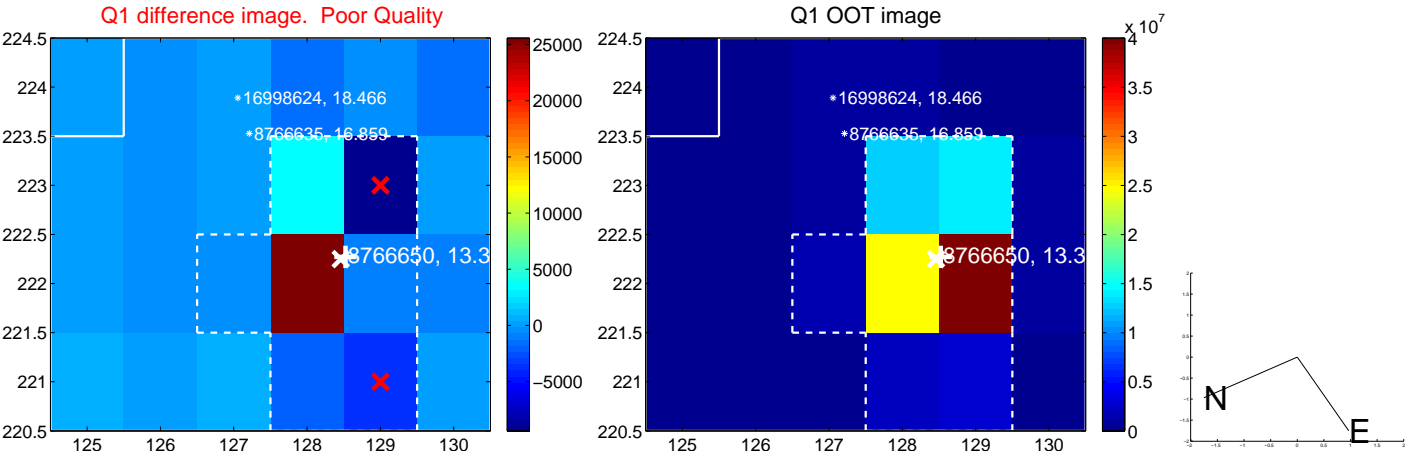
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.228 ± 0.186	1.23	0.090 ± 0.227	-0.210 ± 0.178
PRF-fit source offset from KIC position	0.537 ± 0.195	2.75	0.256 ± 0.230	-0.472 ± 0.184
photometric centroid source offset	0.08 ± 0.29	0.29	0.08 ± 0.29	-0.01 ± 0.27

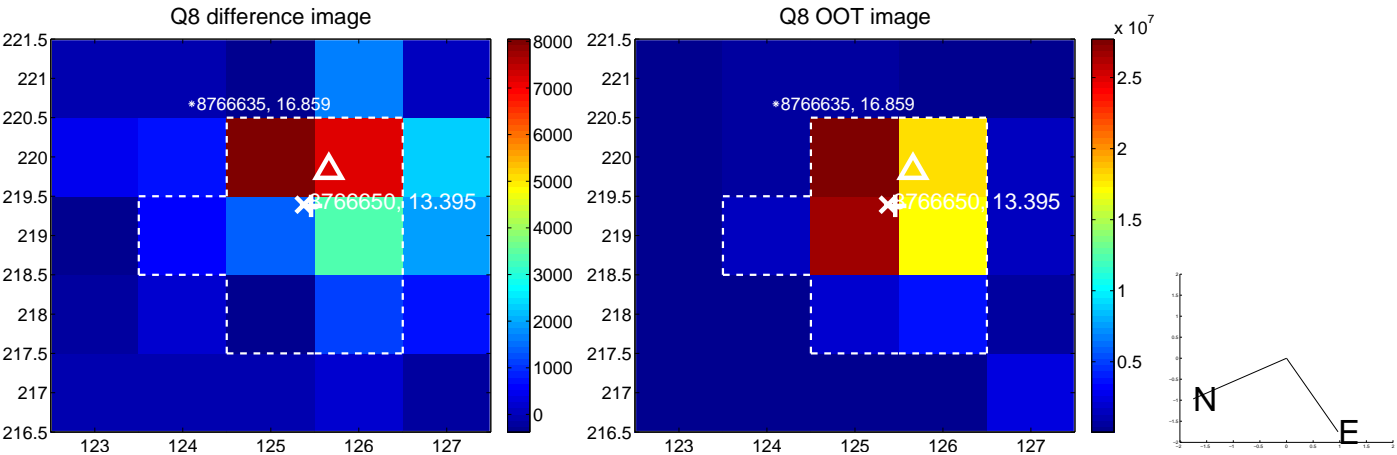
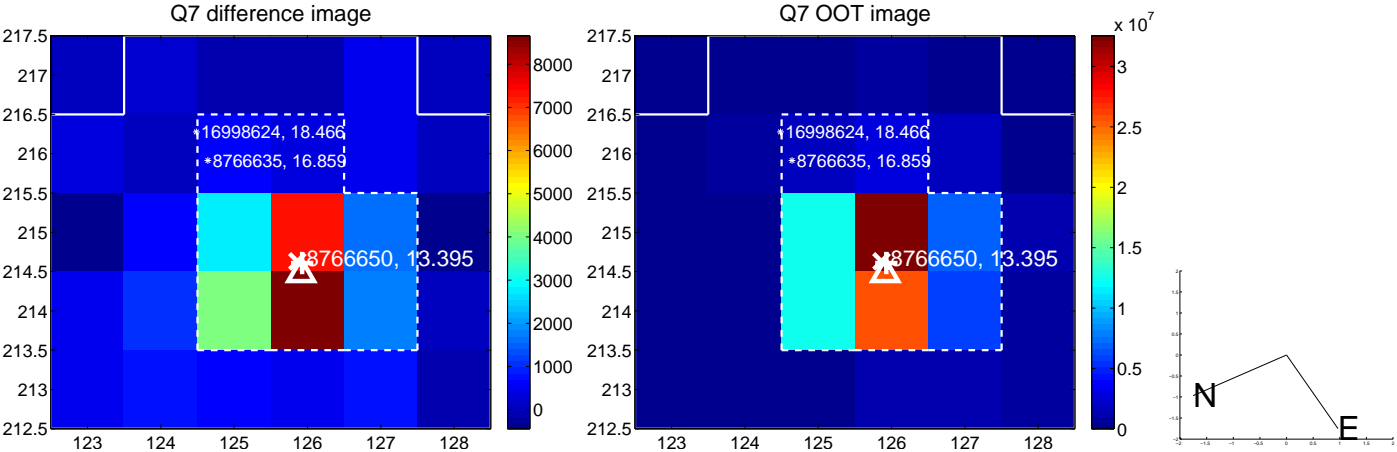
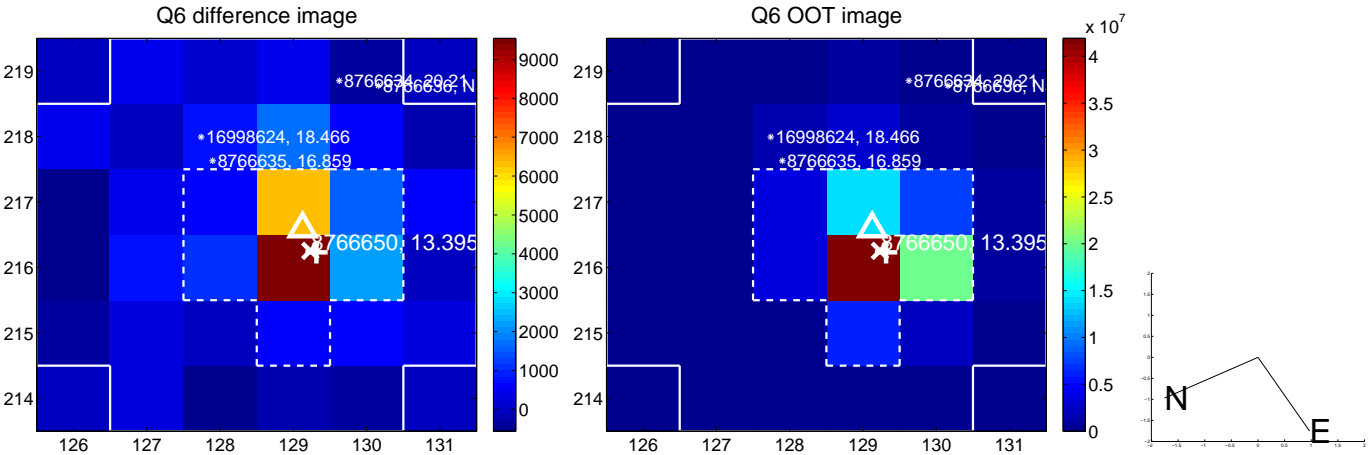
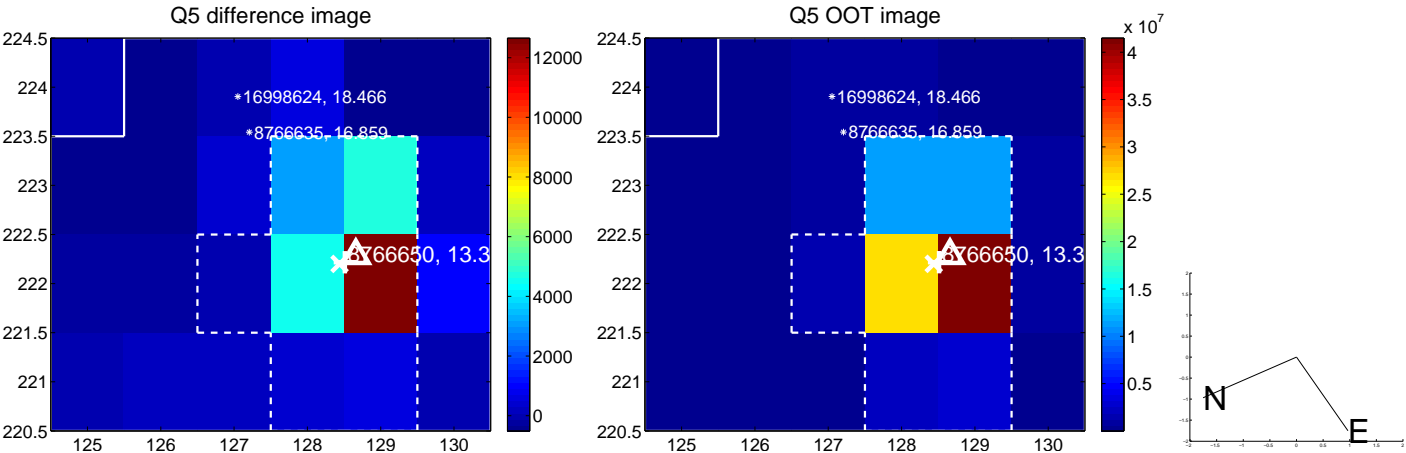


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

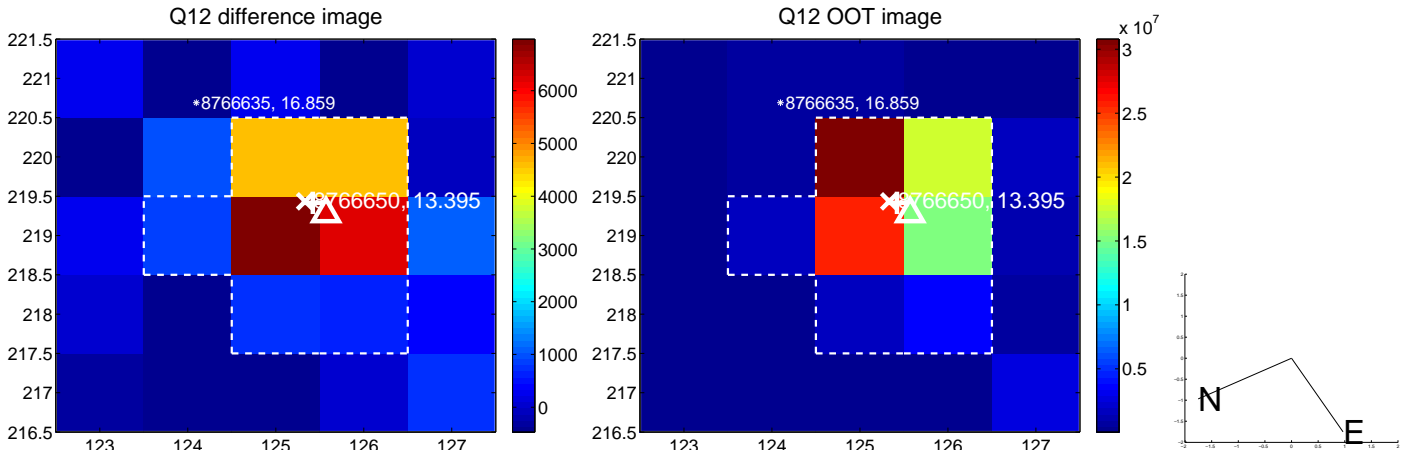
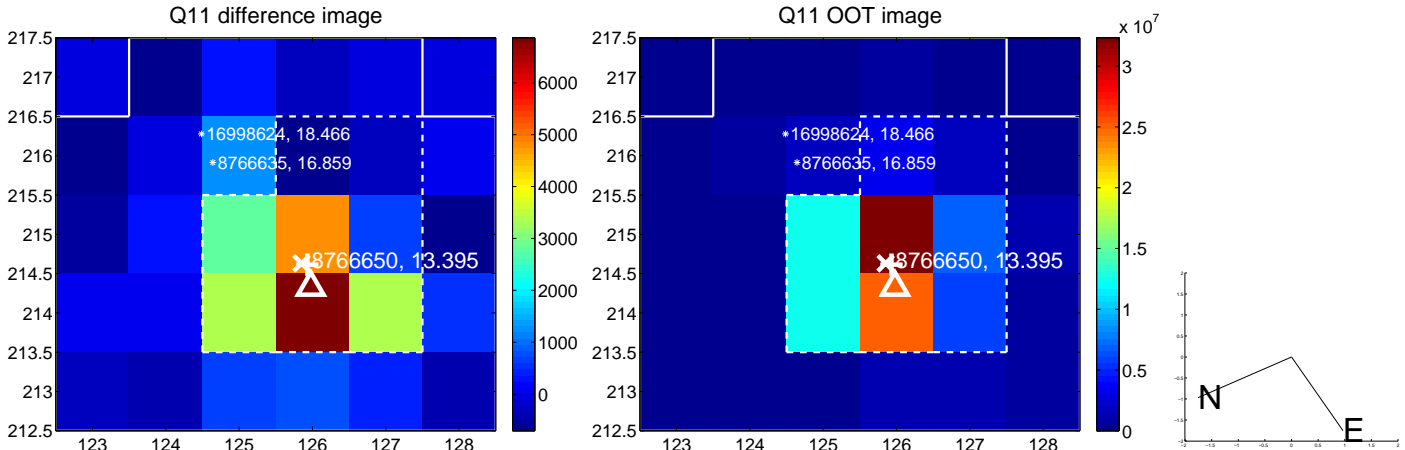
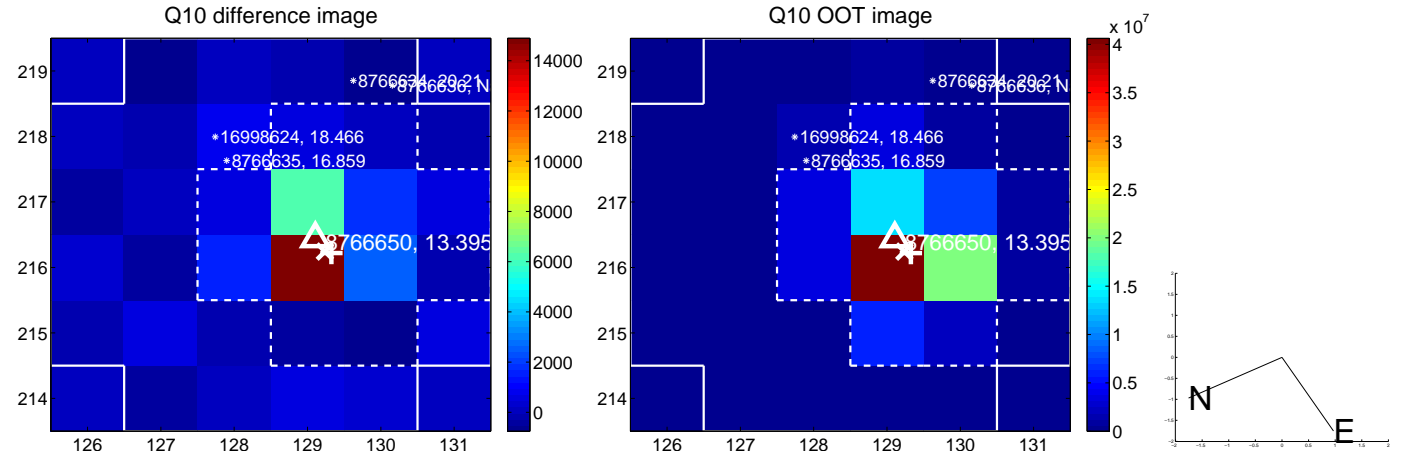
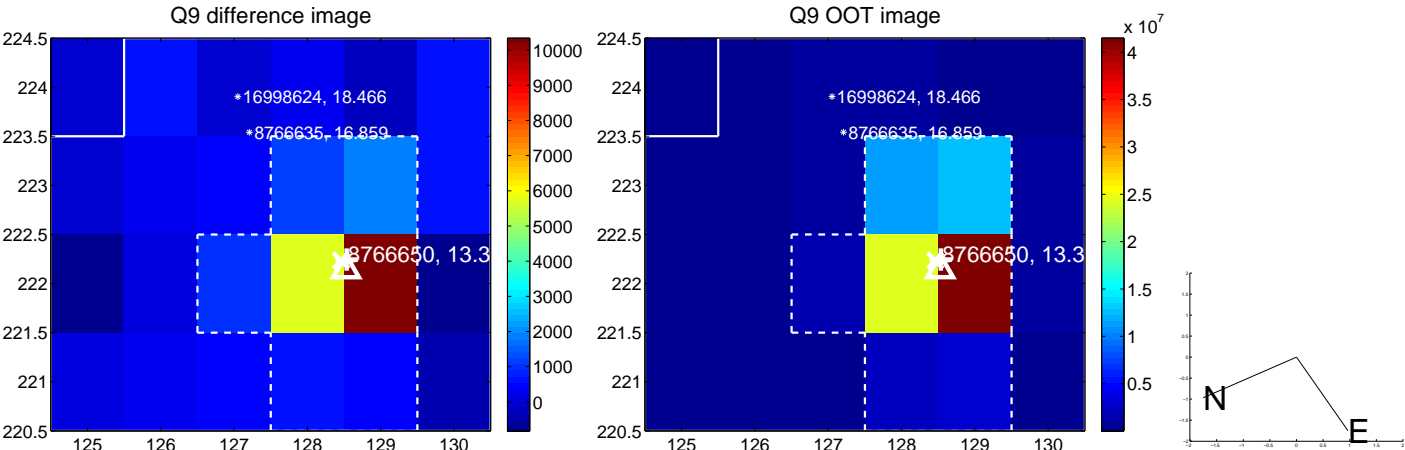
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



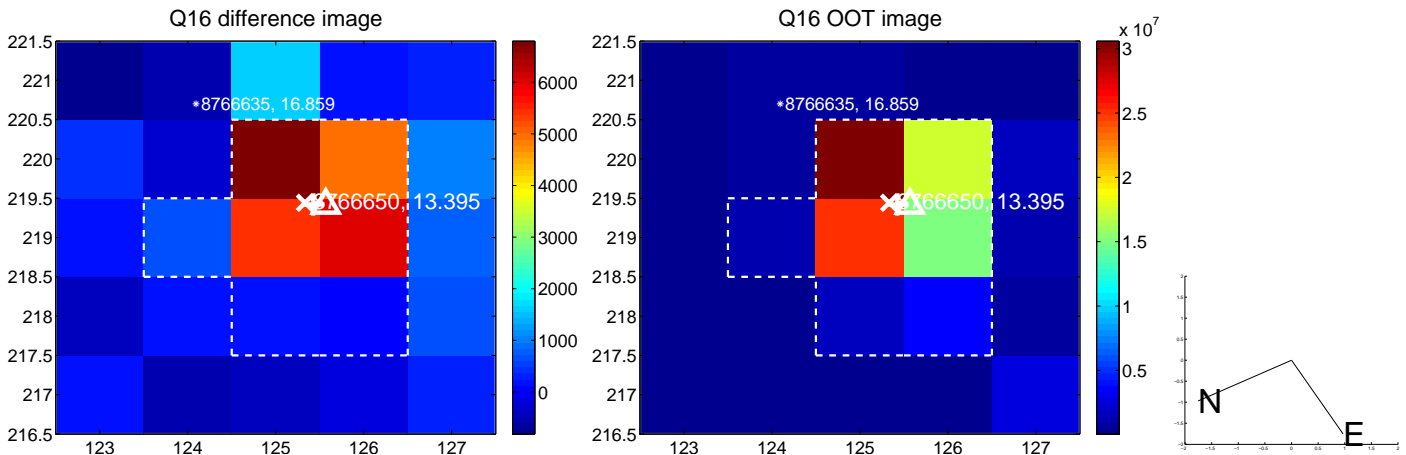
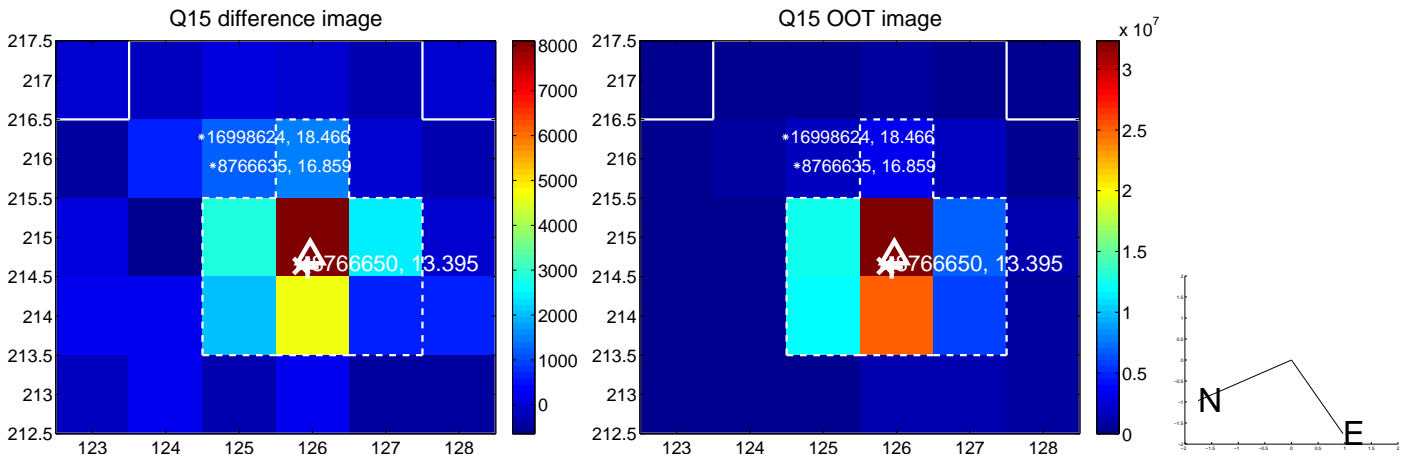
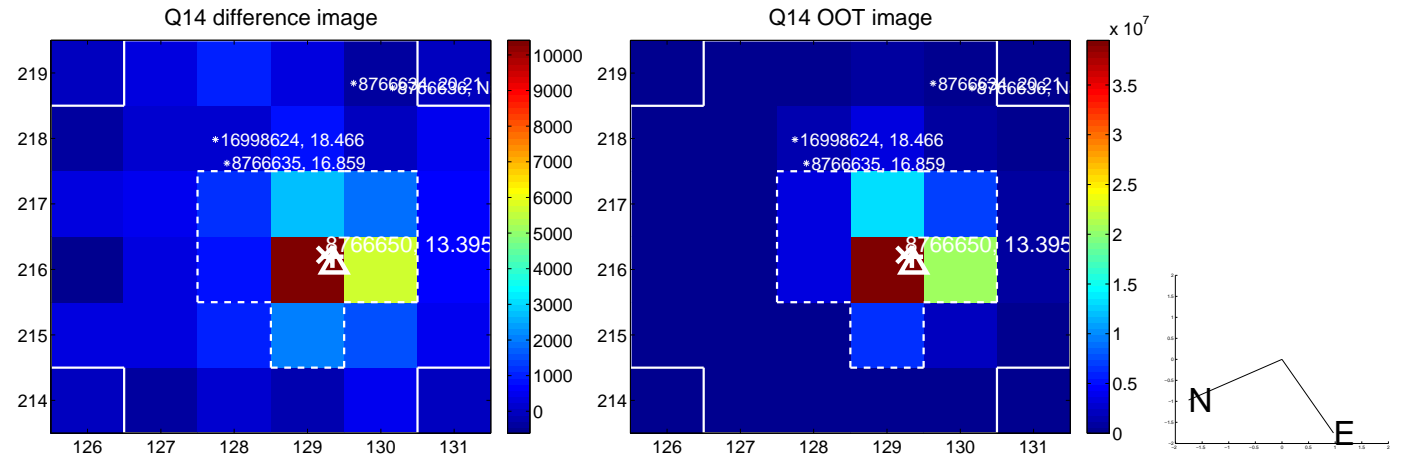
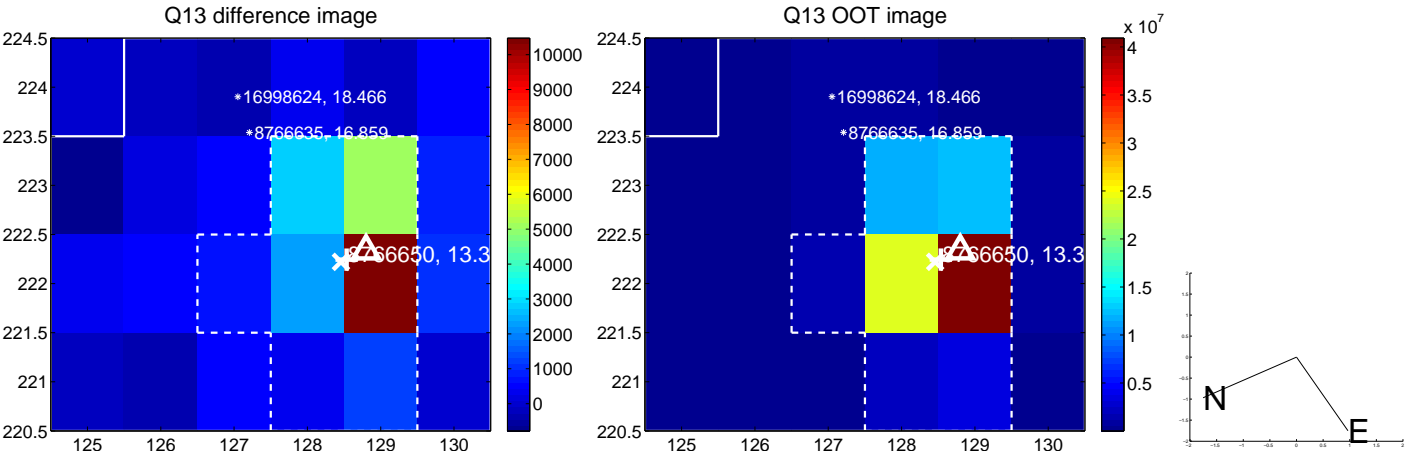
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



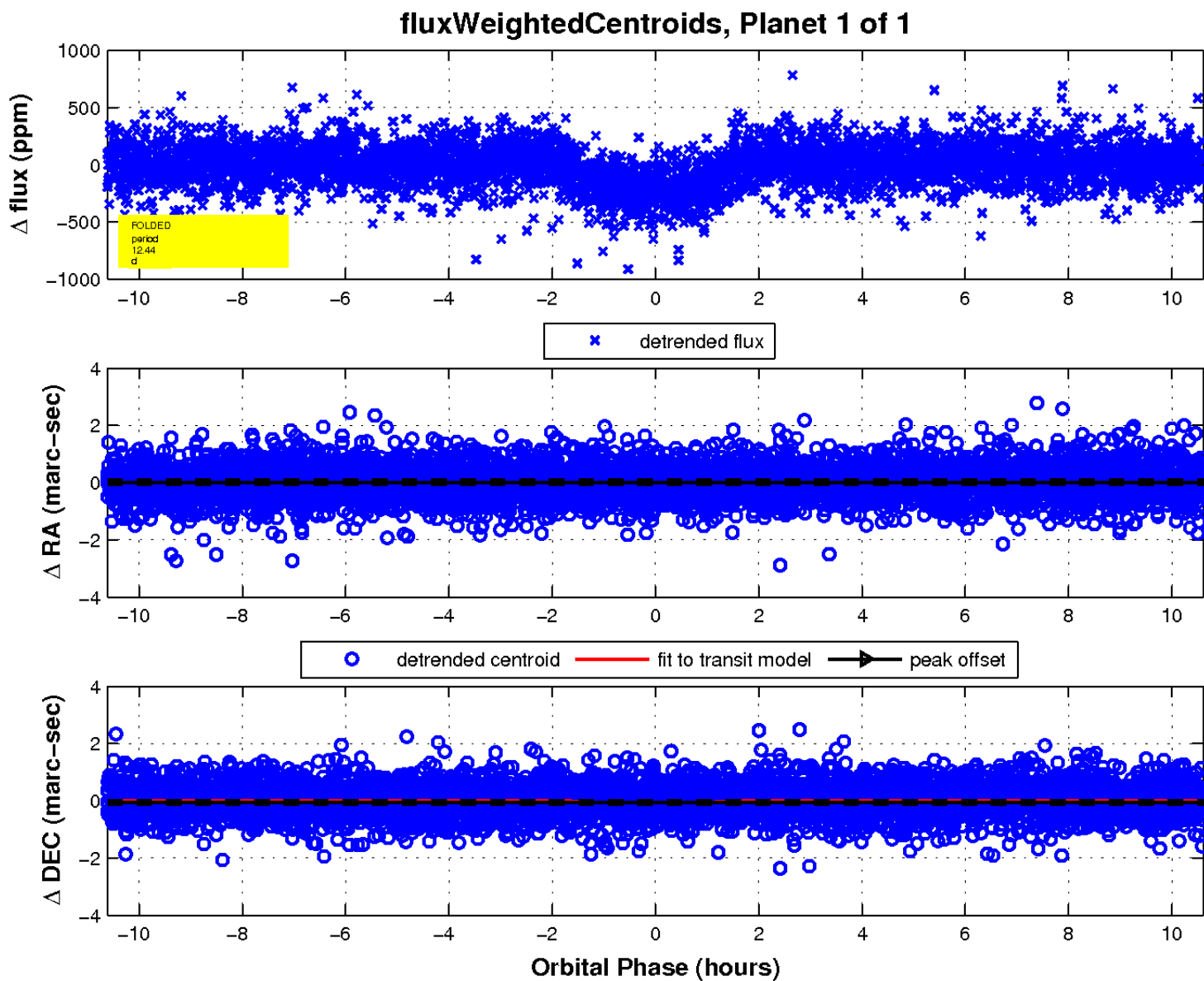
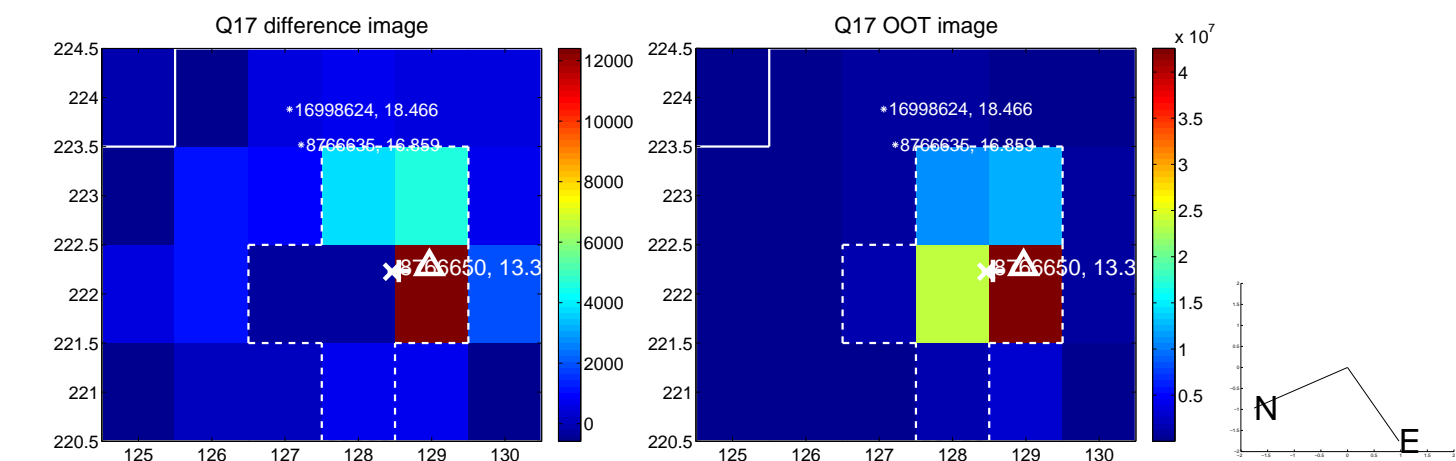
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

