

KIC 006867766

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})
006867766-01	OBS	1798.01	12.964722	136.143022	3684.0	1.801	203.0	199.9	1.03	6210	9.80	114.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006867766-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

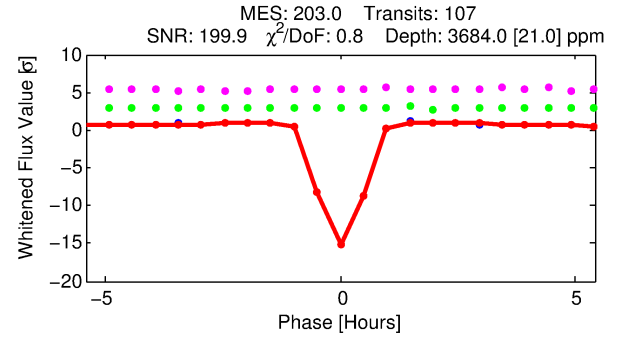
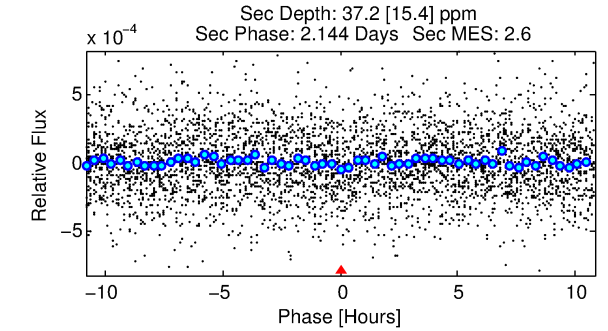
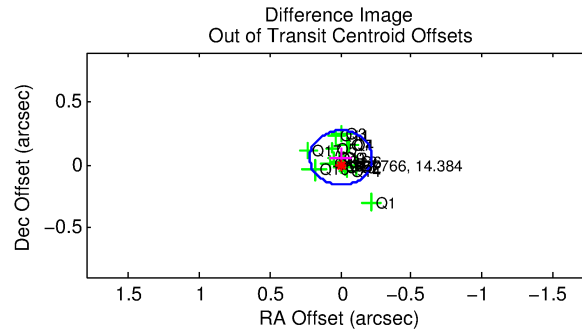
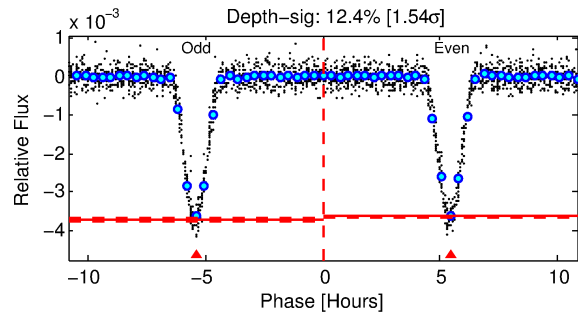
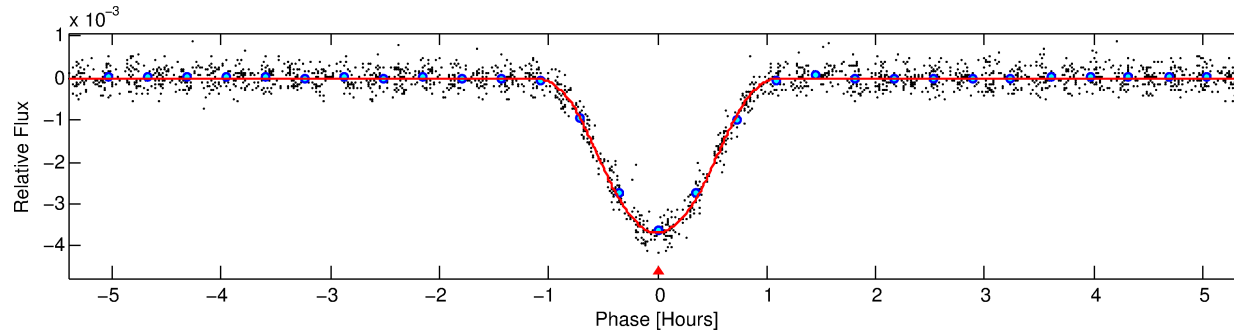
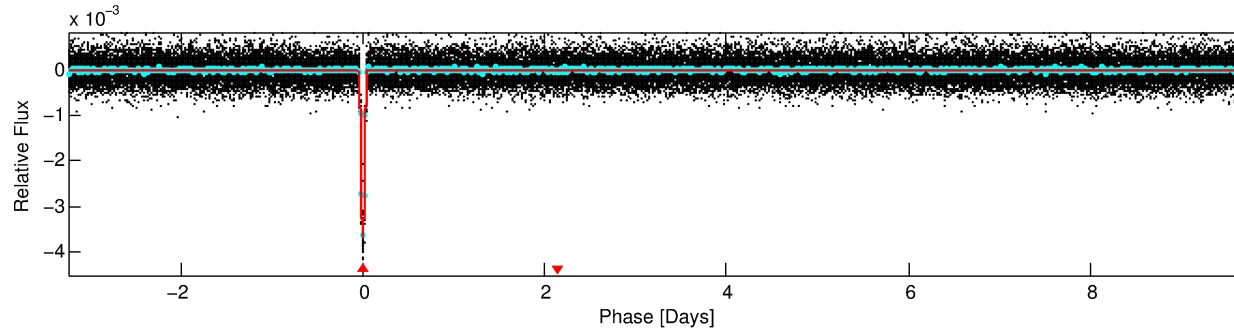
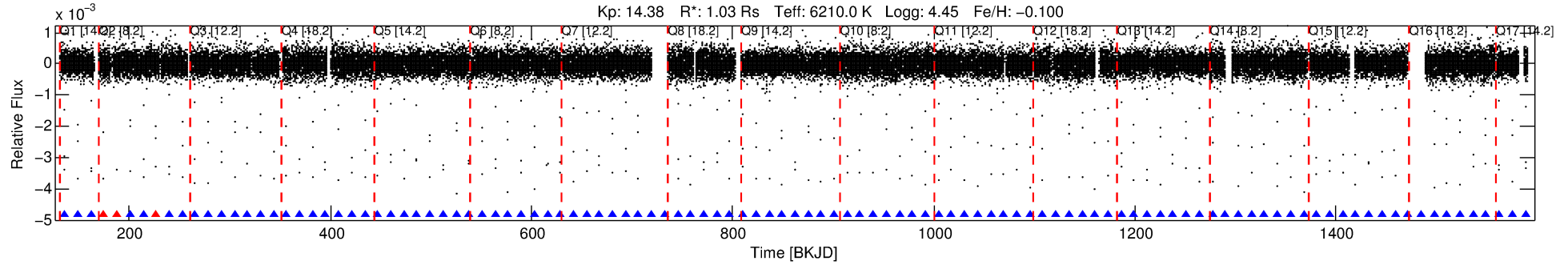
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006867766-01

No Significant Match Found

DV One-Page Summary

KIC: 6867766 Candidate: 1 of 1 Period: 12.965 d
KOI: K01798.01 Corr: 0.995



DV Fit Results:

Period = 12.96472 [0.00000] d
Epoch = 136.1430 [0.0002] BKJD
Rp/R* = 0.0870 [0.0150]
a/R* = 26.57 [1.33]
b = 0.97 [0.03]
Seff = 114.55 [46.18]
Teq = 834 [84] K
Rp = 9.80 [3.58] Re
a = 0.1114 [0.0295] AU
Ag = 2.64 [1.74] [0.95σ]
Teffp = 1644 [229] K [3.32σ]

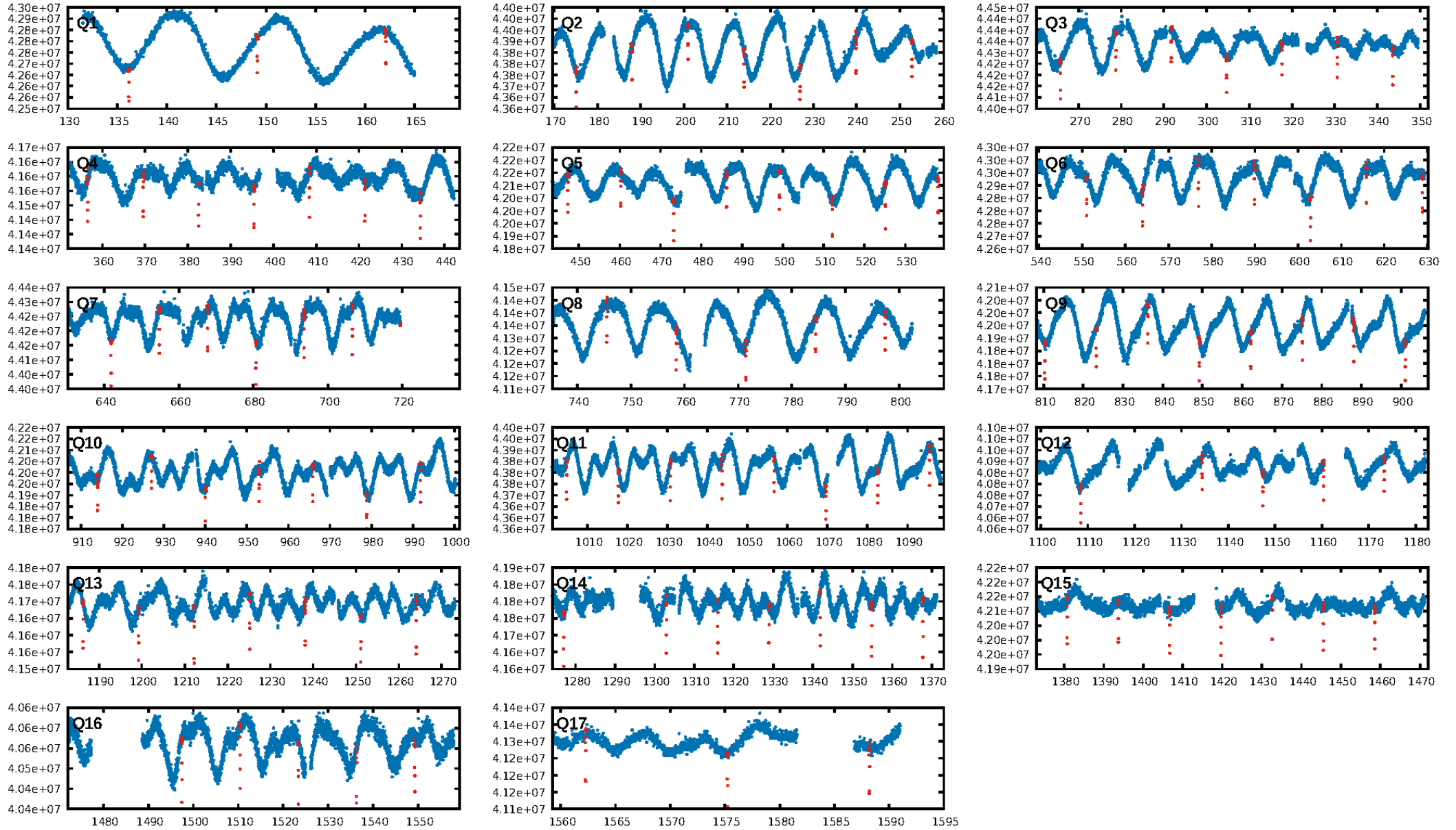
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.97 [98/101]
GhostDiagnostic-chr: 5.346
Centroid-sig: 0.0%
Centroid-so: 0.186 arcsec [2.92σ]
OotOffset-rm: 0.055 arcsec [0.75σ]
KicOffset-rm: 0.015 arcsec [0.20σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

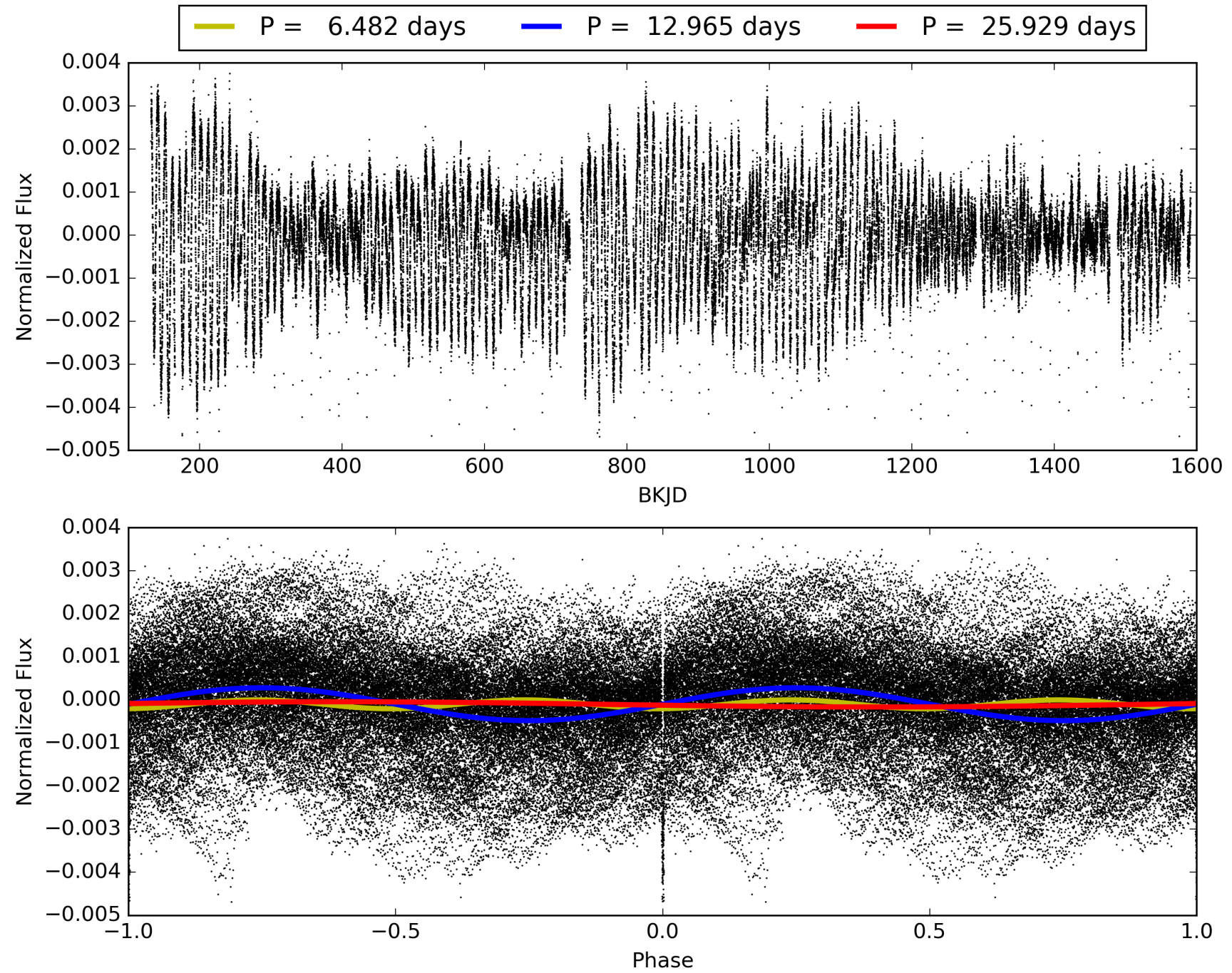
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:26:03 Z

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

TCE 006867766-01, PDC Light Curves

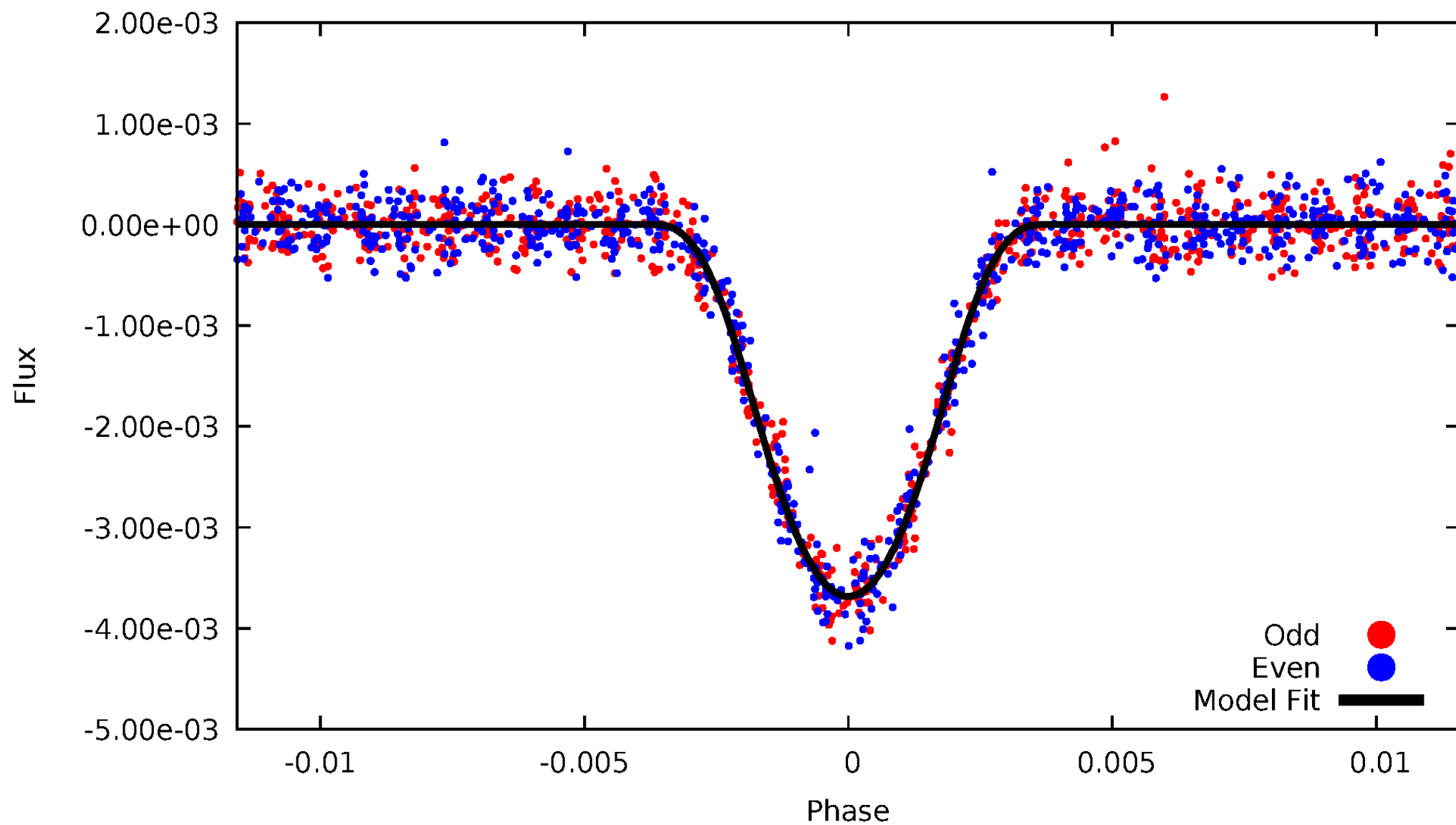


TCE 006867766-01



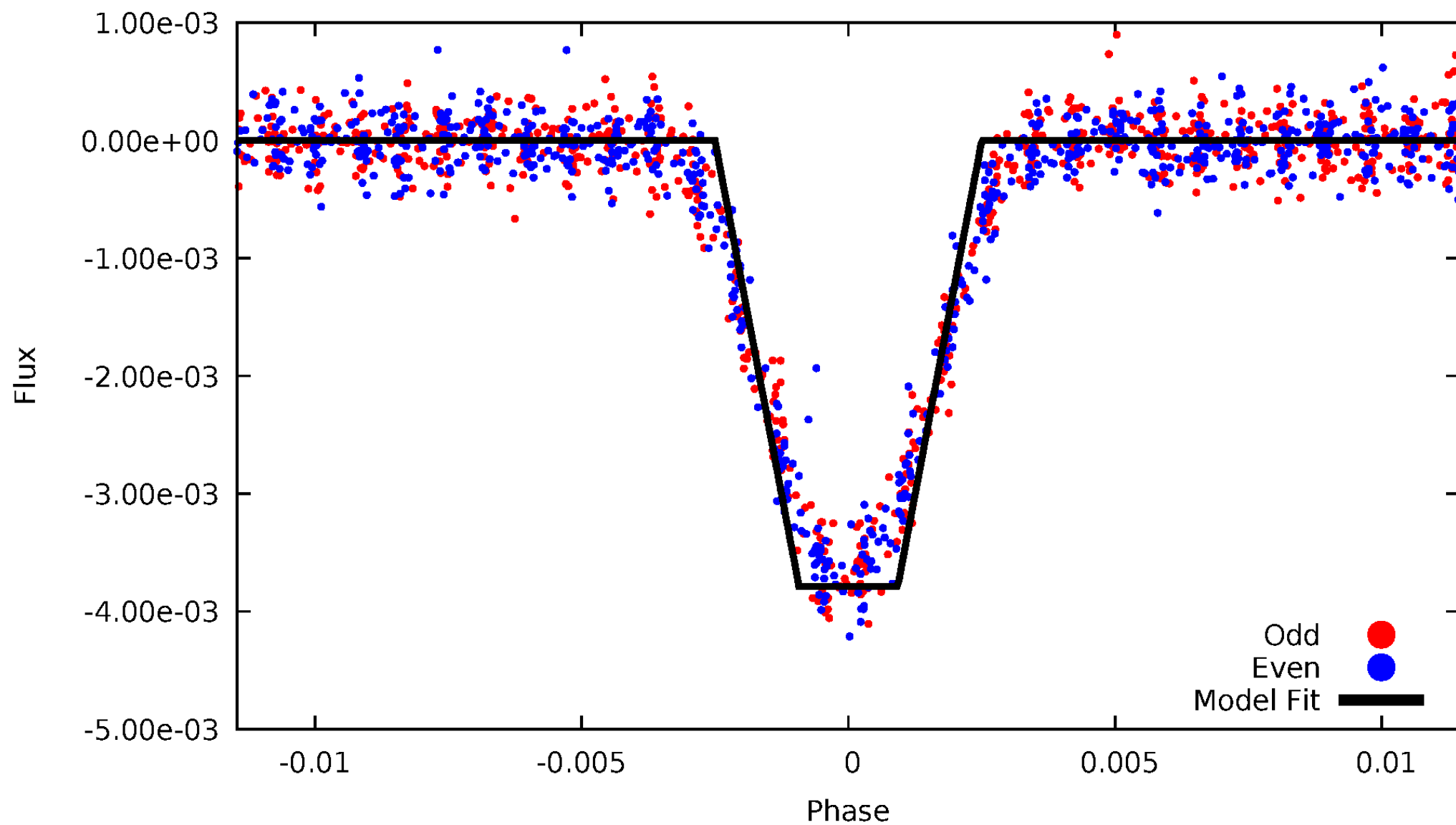
DV Odd/Even

TCE 006867766-01



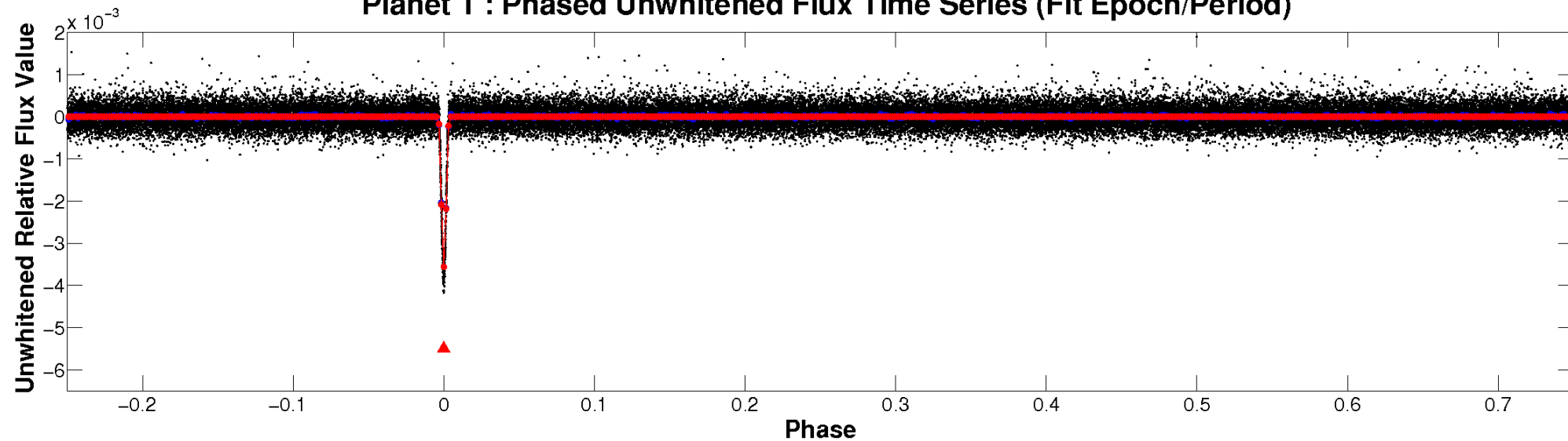
ALT Odd/Even

TCE 006867766-01

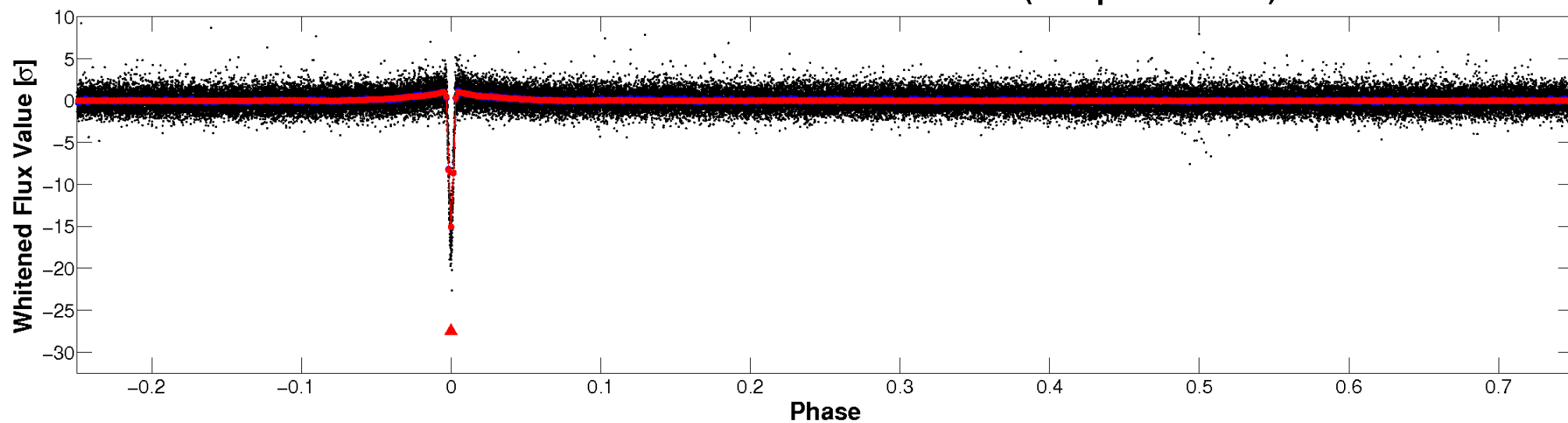


Non-Whitened Vs. Whitened Light Curve

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

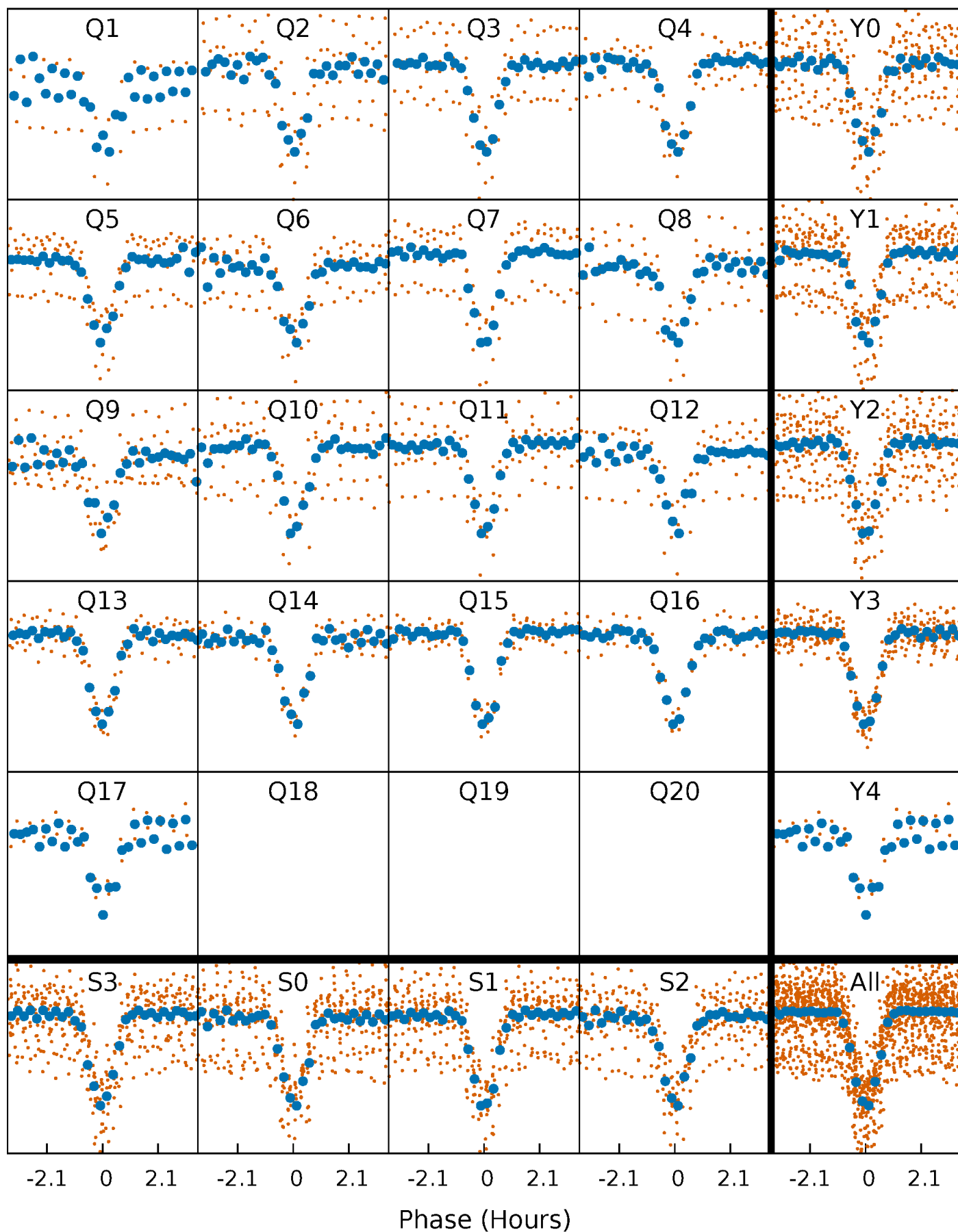


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



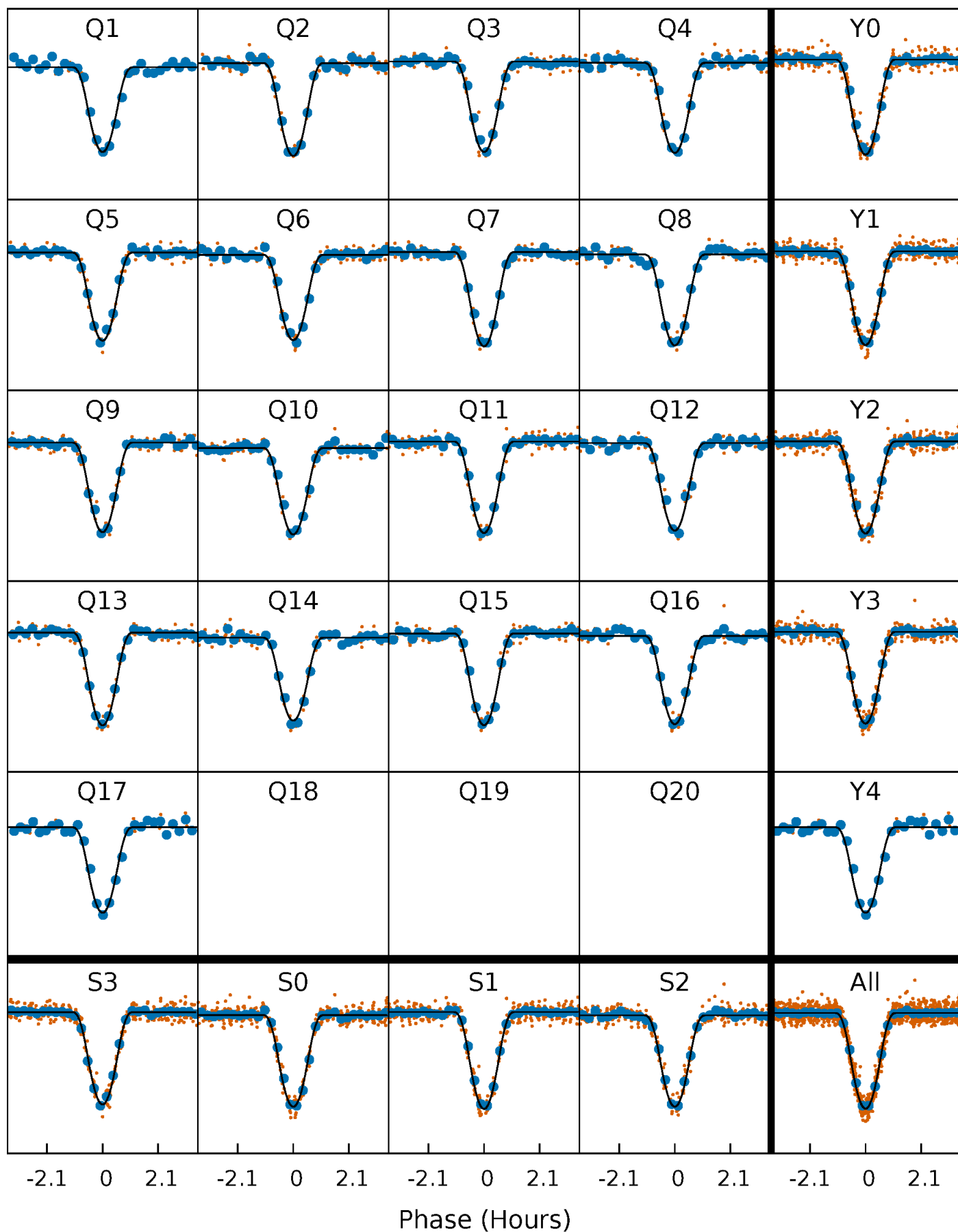
PDC Quarter-Phased Transit Curves

TCE 006867766-01 P= 12.964722 Days $T_0=136.143022$ (BKJD)



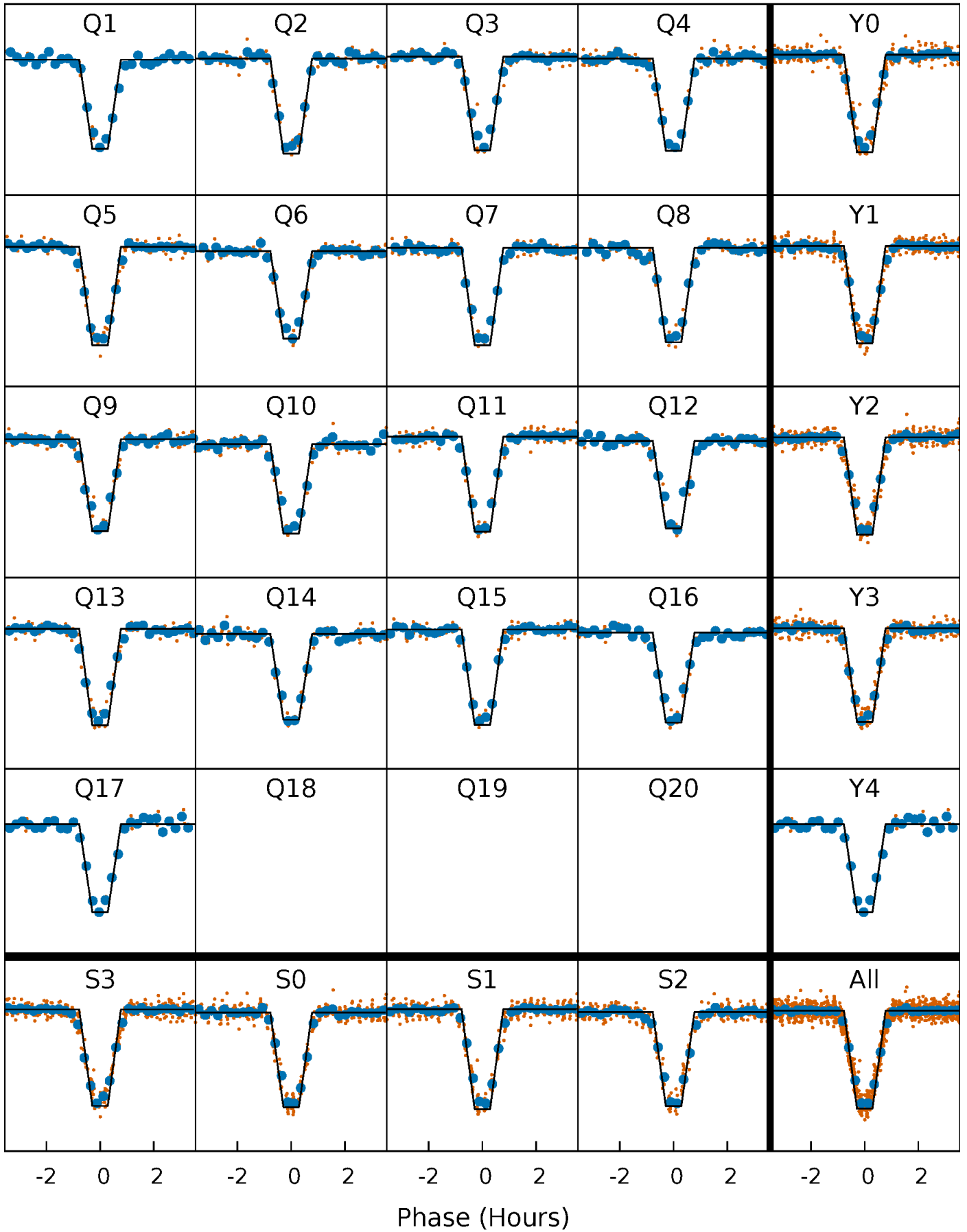
DV Quarter-Phased Transit Curves

TCE 006867766-01 P= 12.964722 Days $T_0=136.143022$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

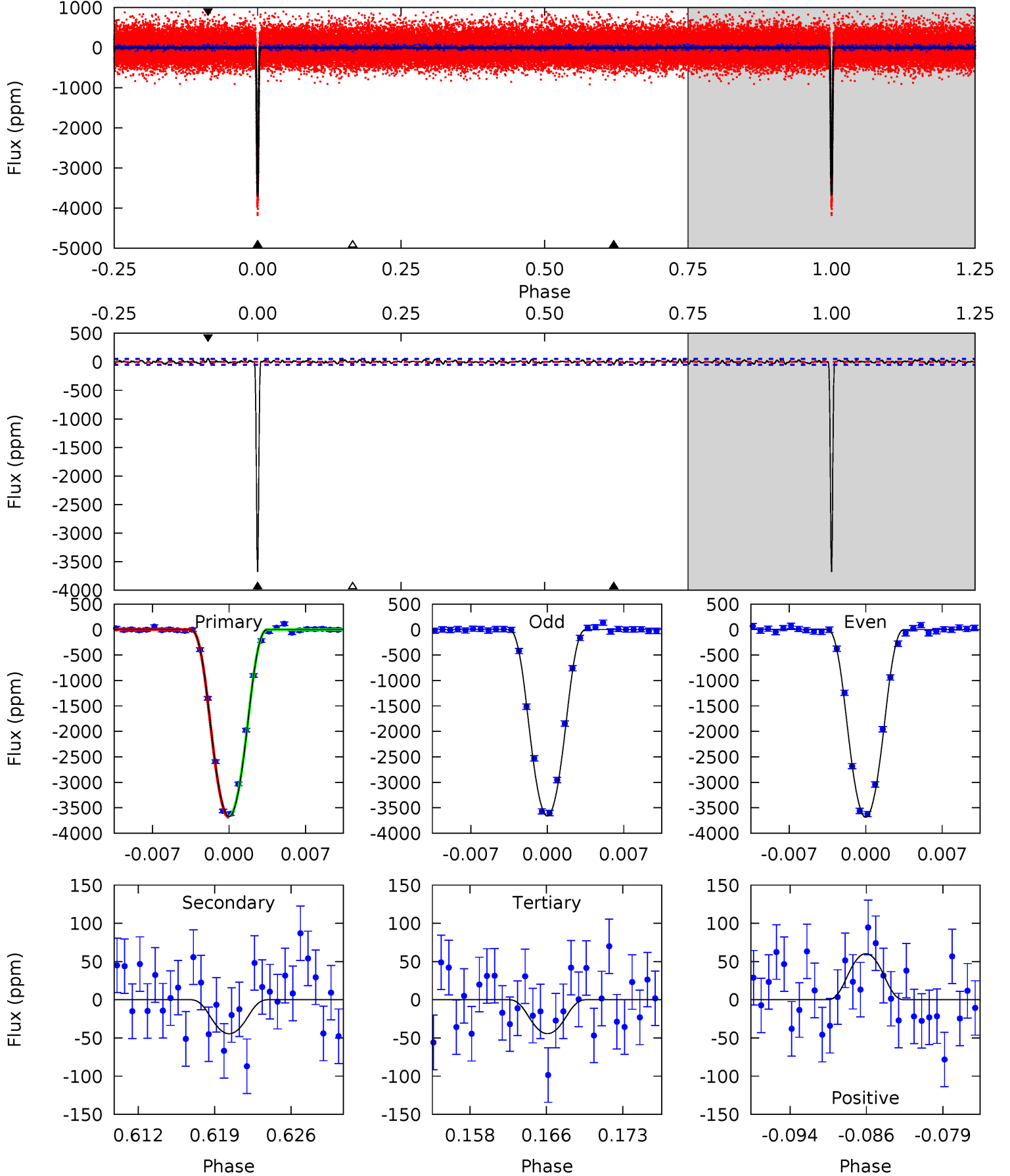
TCE 006867766-01 P= 12.964734 Days $T_0=136.142487$ (BKJD)



DV Model-Shift Uniqueness Test

006867766-01, P = 12.964722 Days, E = 123.178300 Days

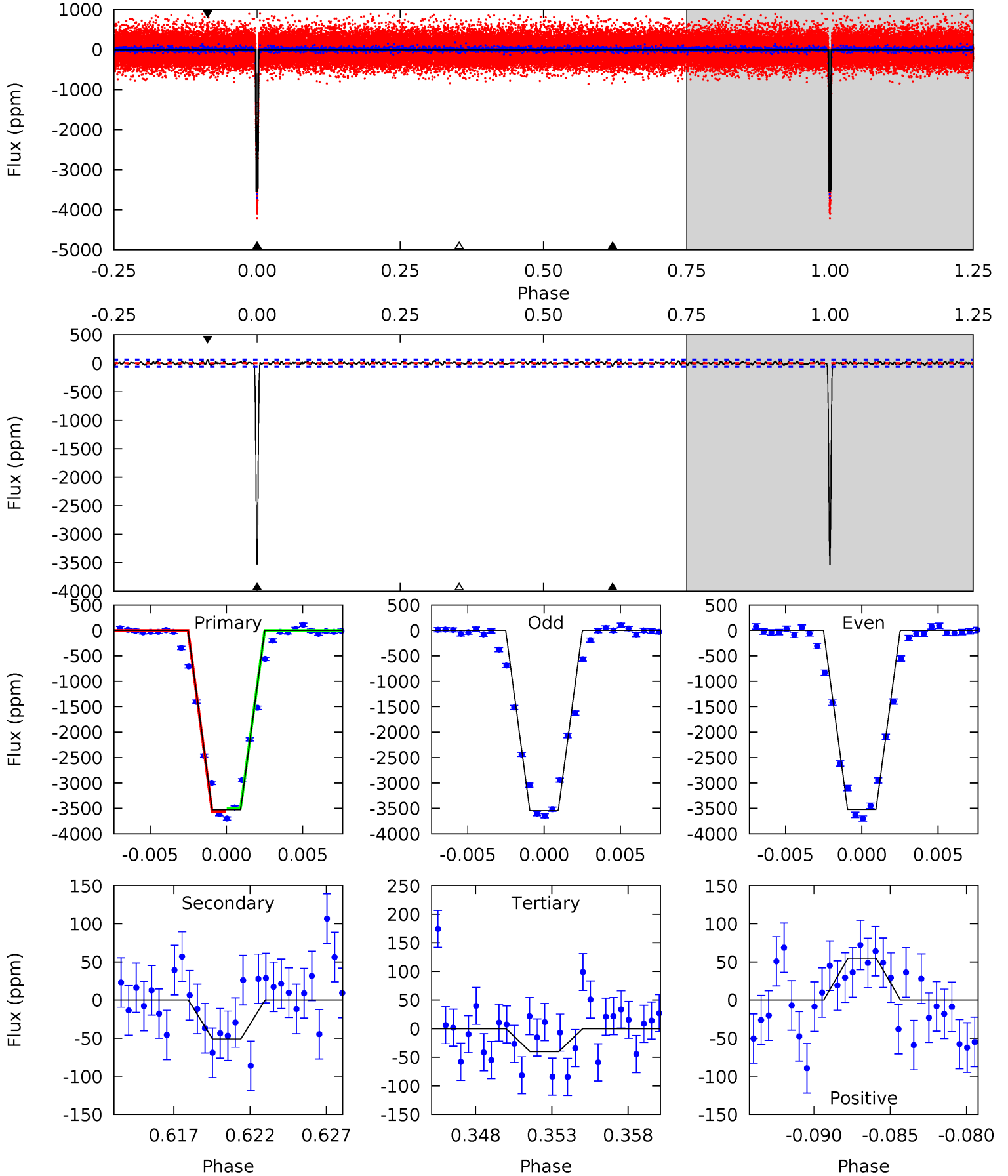
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
360.4	4.37	4.36	5.92	5.09	2.69	1.59	356.1	354.5	0.01	-1.55	1.17	1.00	0.02	1.59



Alt Model-Shift Uniqueness Test

006867766-01, $P = 12.964734$ Days, $E = 123.177753$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
295.9	4.27	3.38	4.60	5.16	2.81	1.17	292.5	291.3	0.89	-0.32	1.02	1.00	0.02	2.80



Stellar Parameters For KIC 006867766

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6210^{+166}_{-222}	$4.450^{+0.054}_{-0.202}$	$-0.100^{+0.250}_{-0.350}$	$1.033^{+0.332}_{-0.111}$	$1.093^{+0.141}_{-0.155}$	$1.397^{+0.385}_{-0.719}$
	+3%/-4%	+1%/-5%	+250%/-350%	+32%/-11%	+13%/-14%	+28%/-51%
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 006867766-01 / KOI 1798.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-45 ± 10	$10.24^{+2.43}_{-1.95}$	1191^{+78}_{-61}	2513^{+174}_{-138}	$2.804^{+1.816}_{-1.031}$
Alt.	-51 ± 12	$7.10^{+2.04}_{-1.71}$	1186^{+88}_{-60}	2819^{+245}_{-189}	$6.649^{+5.193}_{-2.907}$

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 $A_{obs} \gg 1.0$

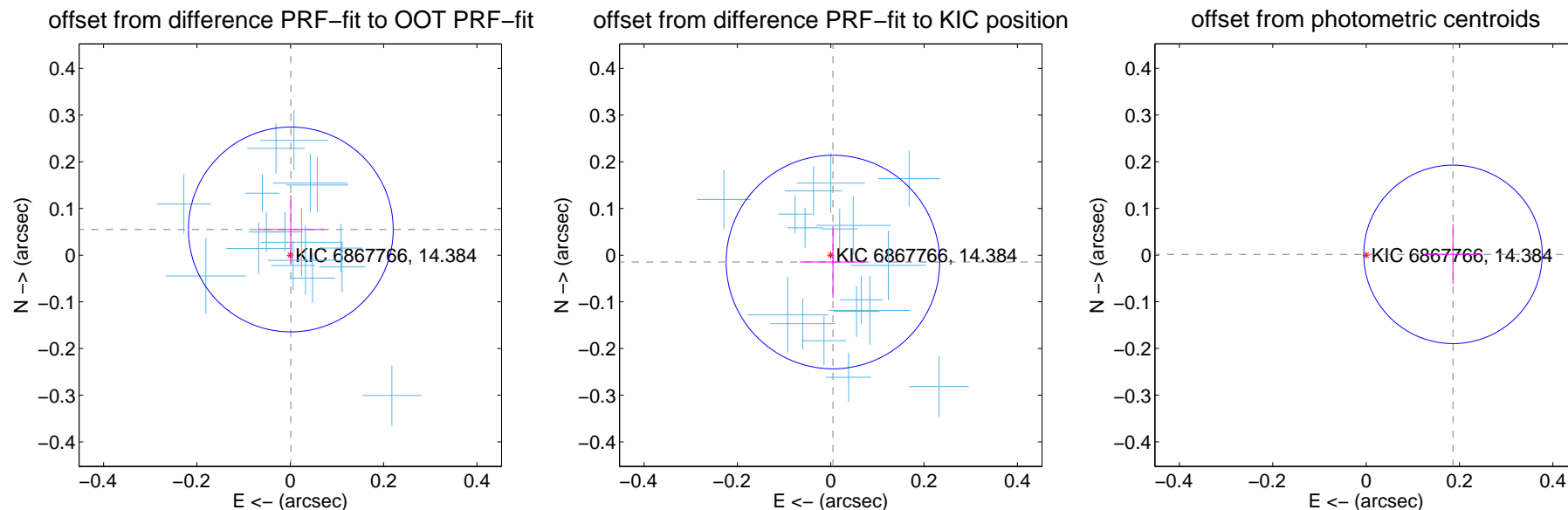
DV Centroid Data

Supplemental centroid analysis for 006867766-01. Kepler magnitude: 14.38. Transit SNR 199.90

There are 17 quarters with good PRF difference image offsets

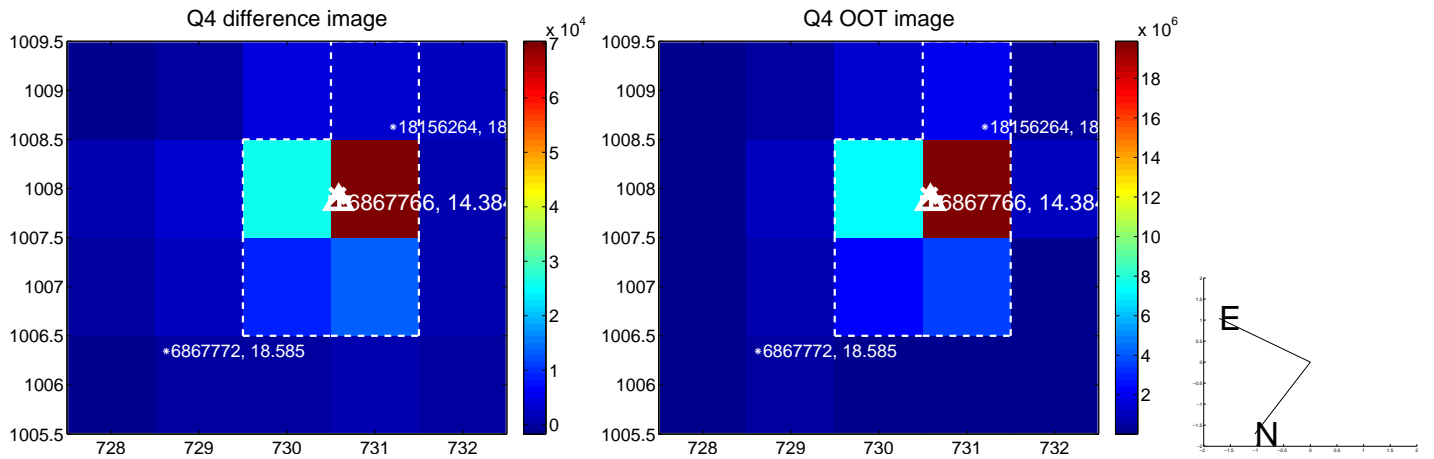
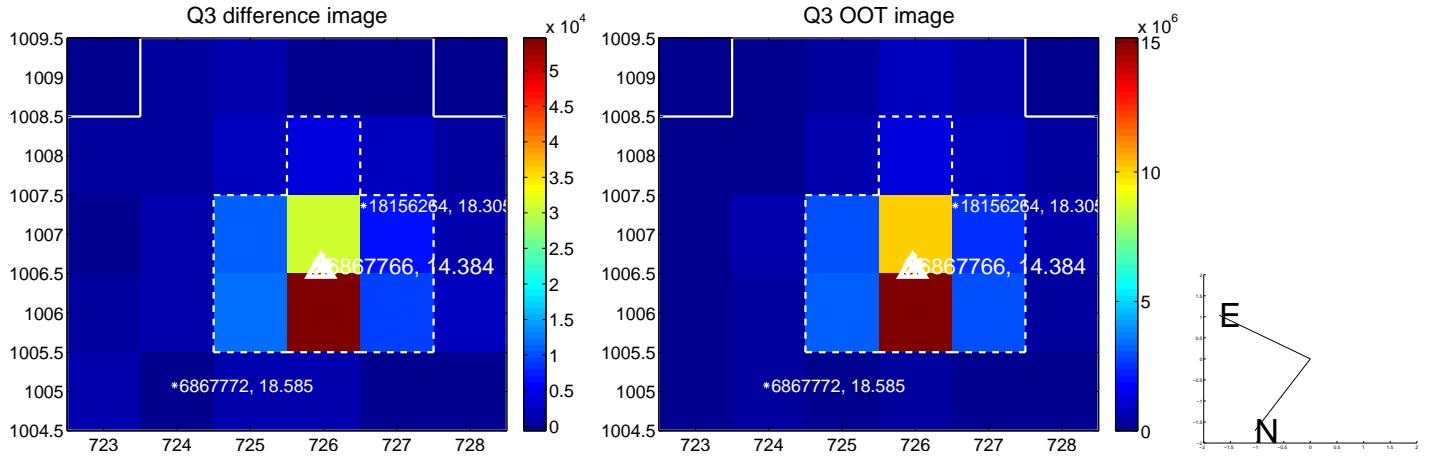
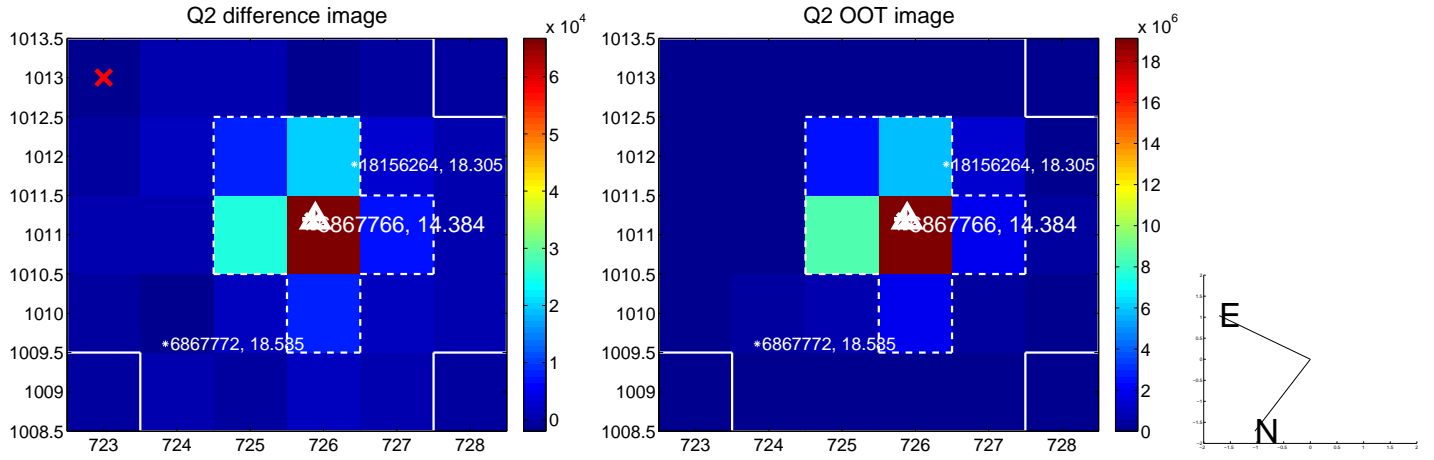
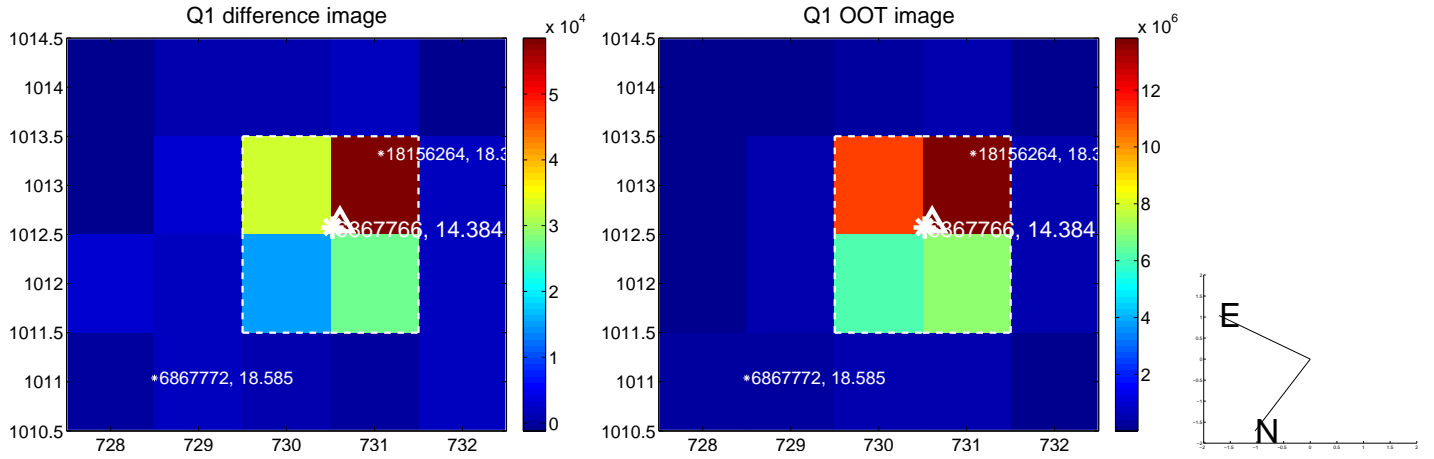
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.055 ± 0.073	0.75	-0.001 ± 0.071	0.055 ± 0.073
PRF-fit source offset from KIC position	0.015 ± 0.076	0.20	-0.005 ± 0.071	-0.015 ± 0.077
photometric centroid source offset	0.19 ± 0.06	2.92	-0.19 ± 0.06	0.00 ± 0.06

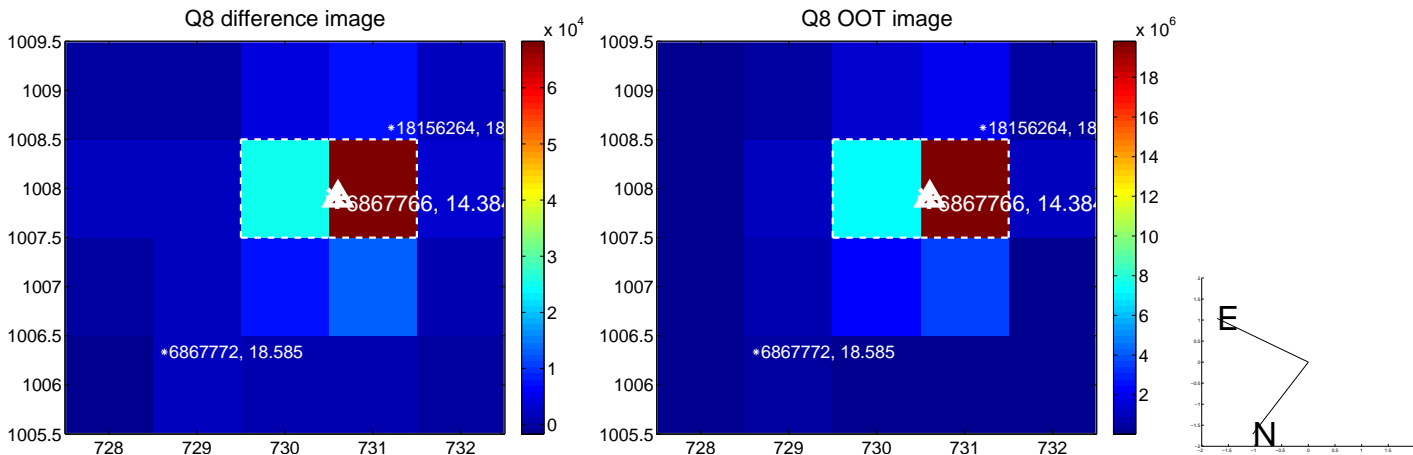
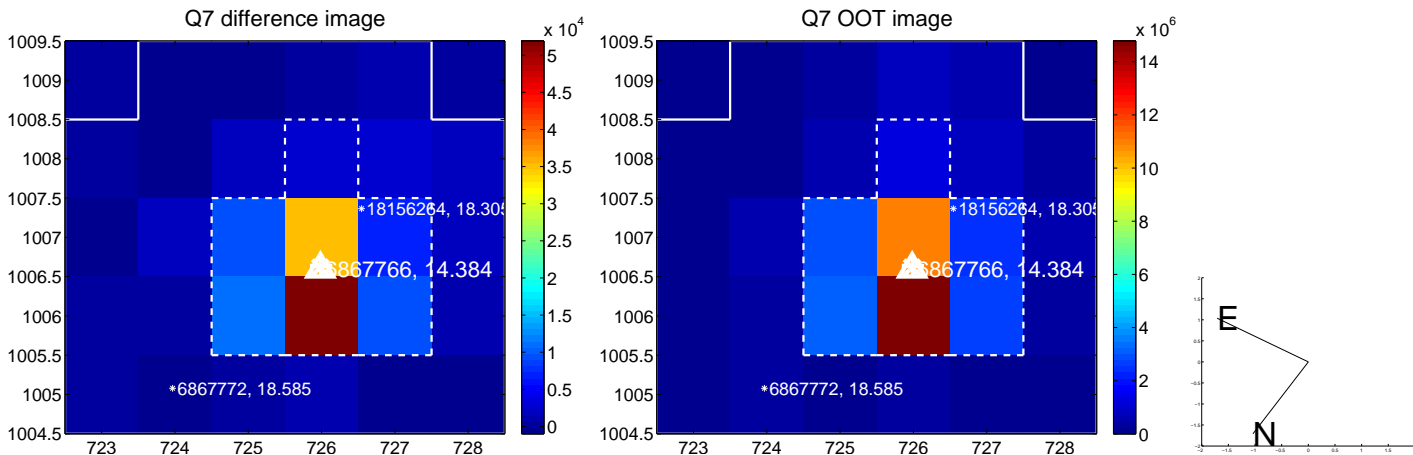
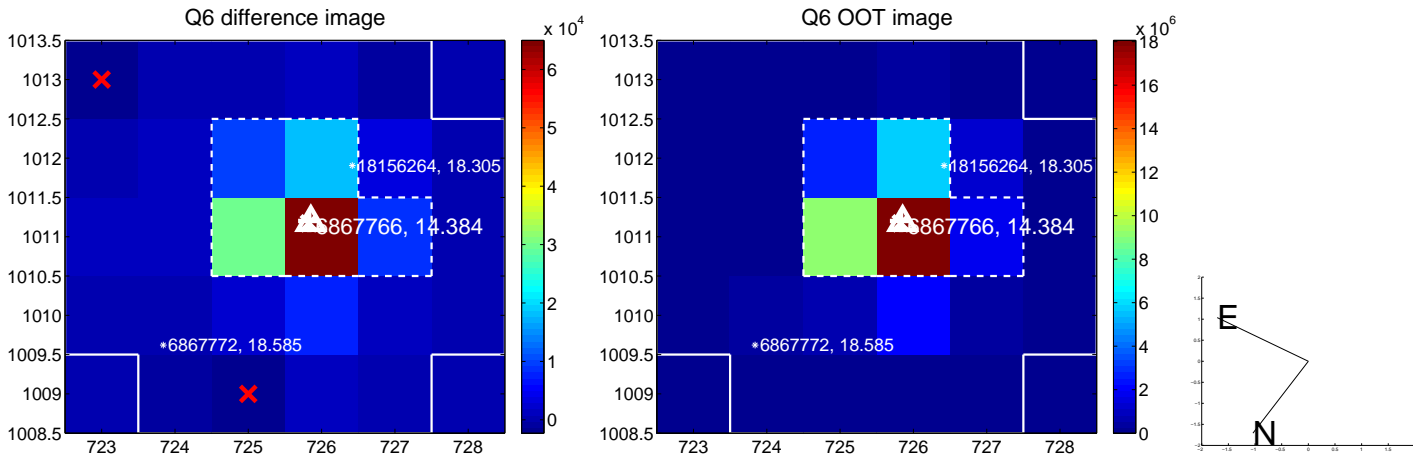
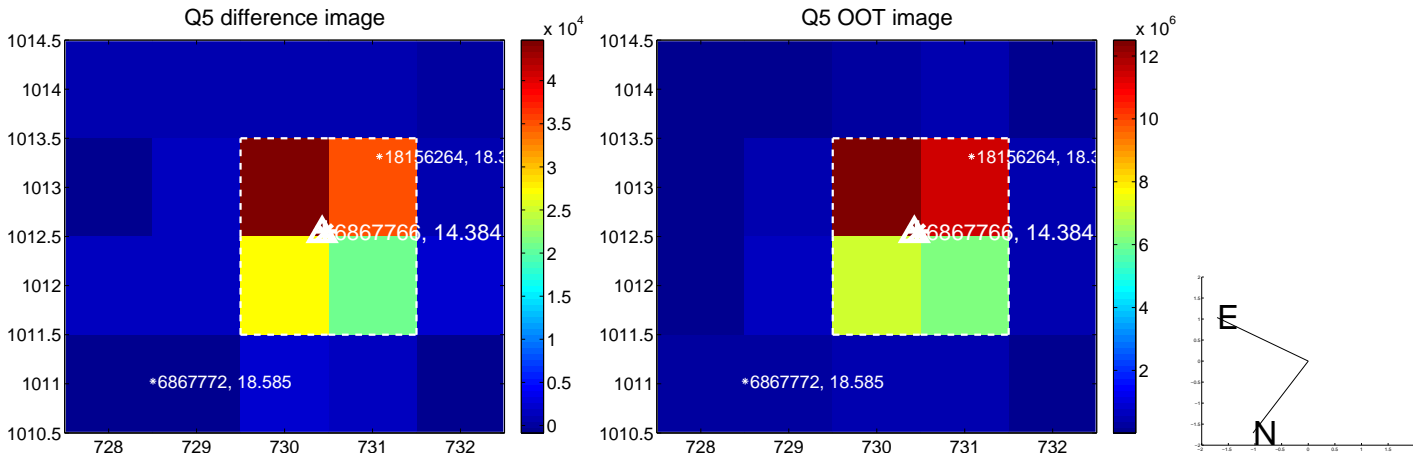


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

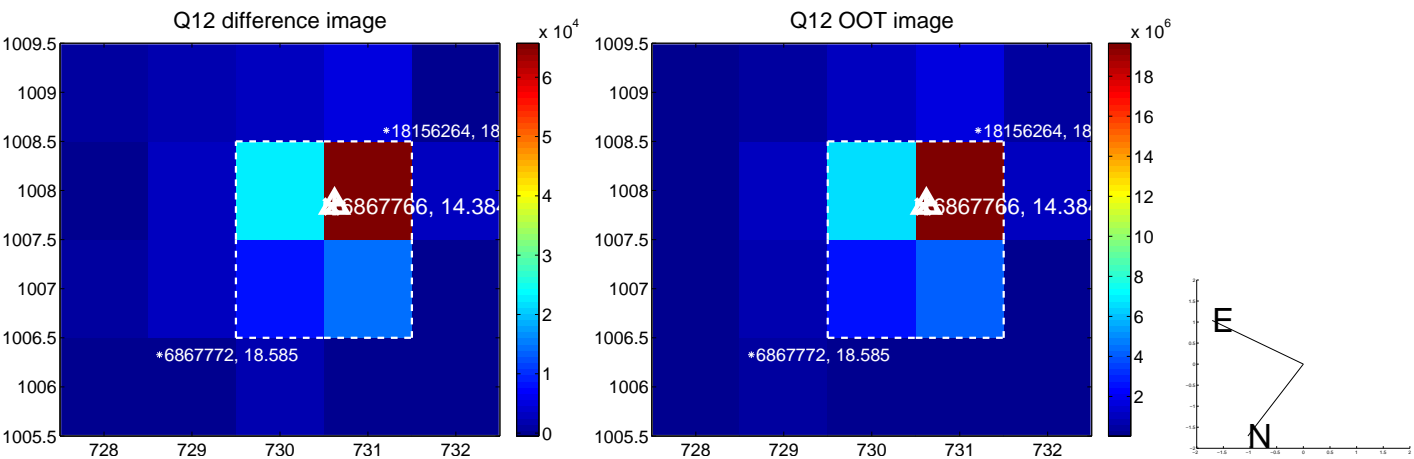
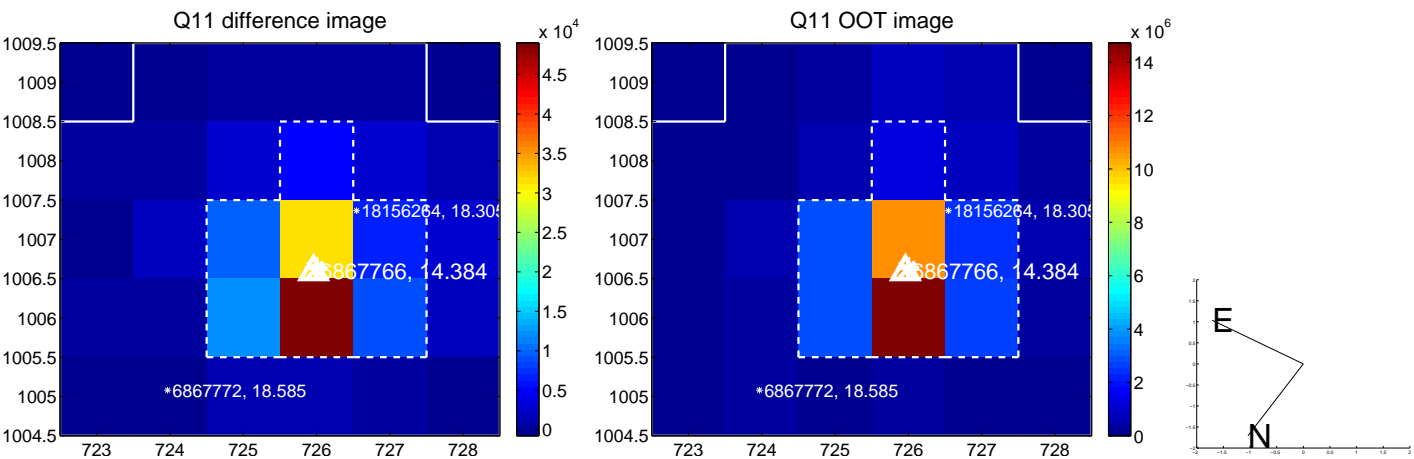
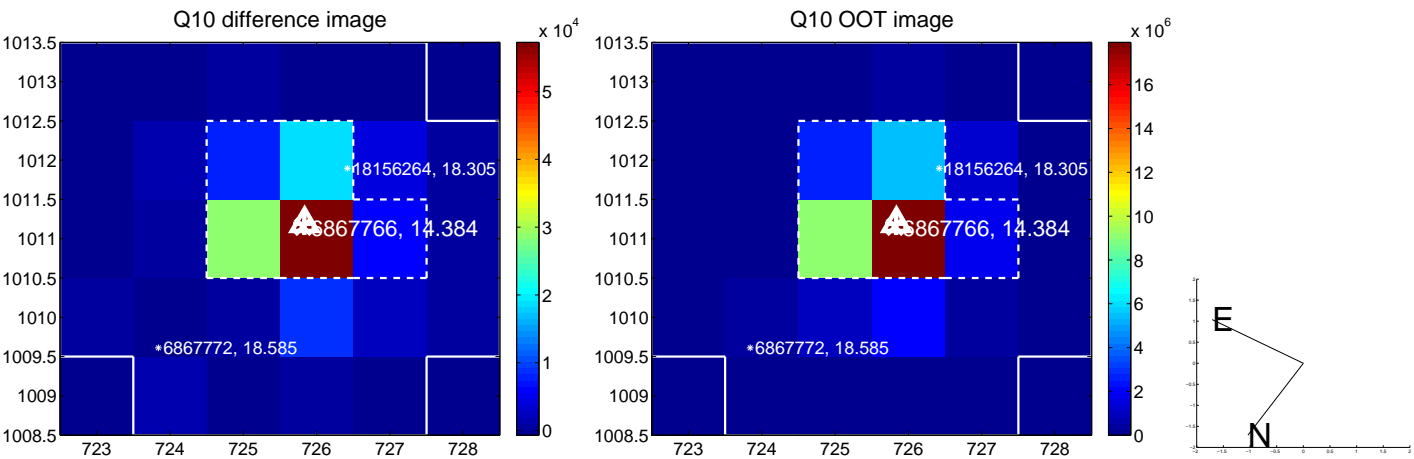
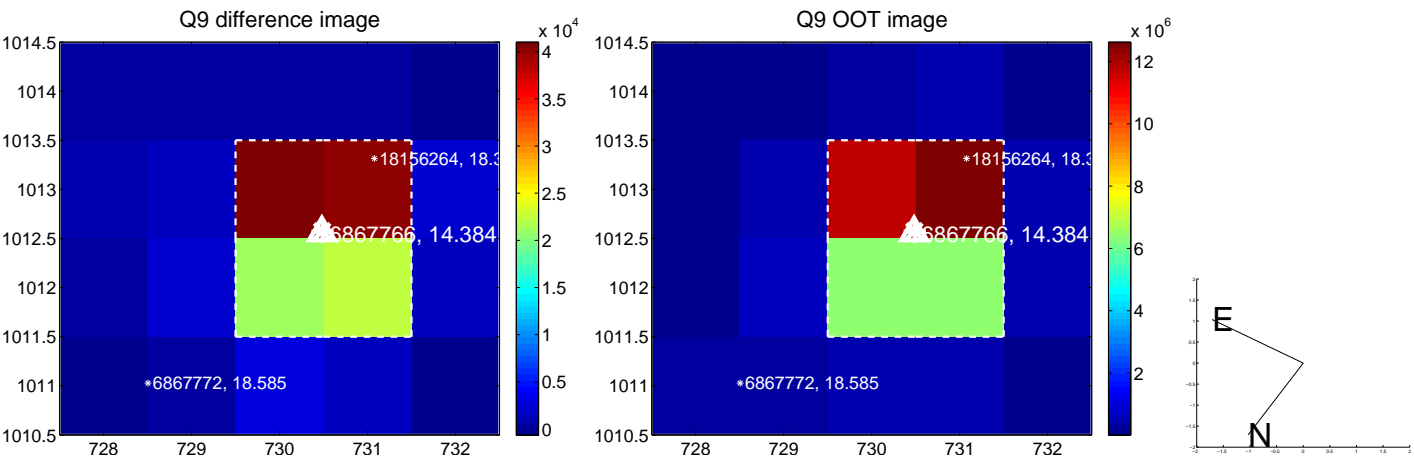
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



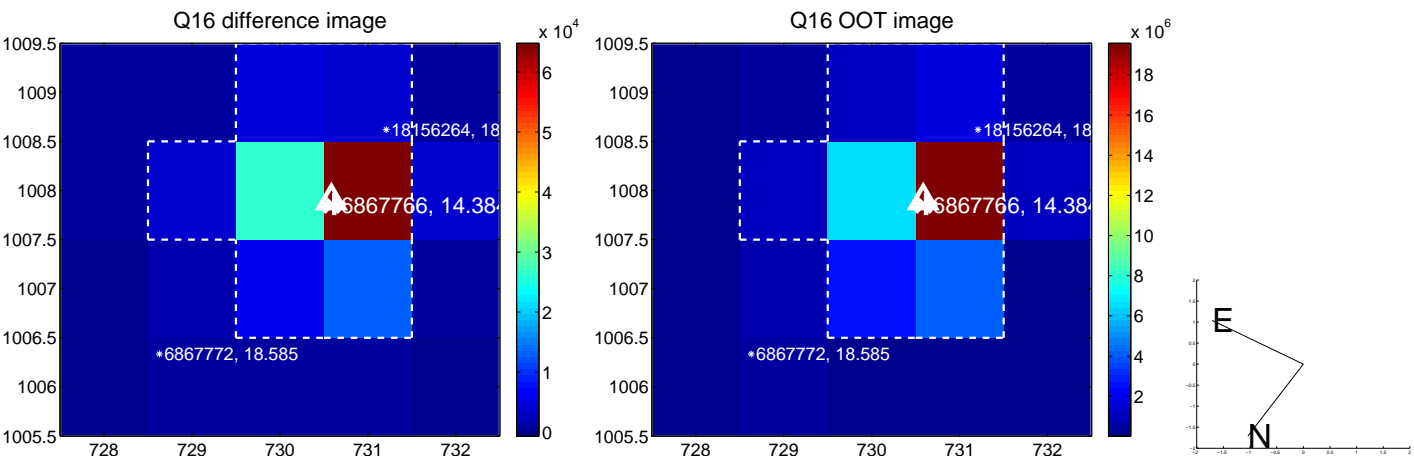
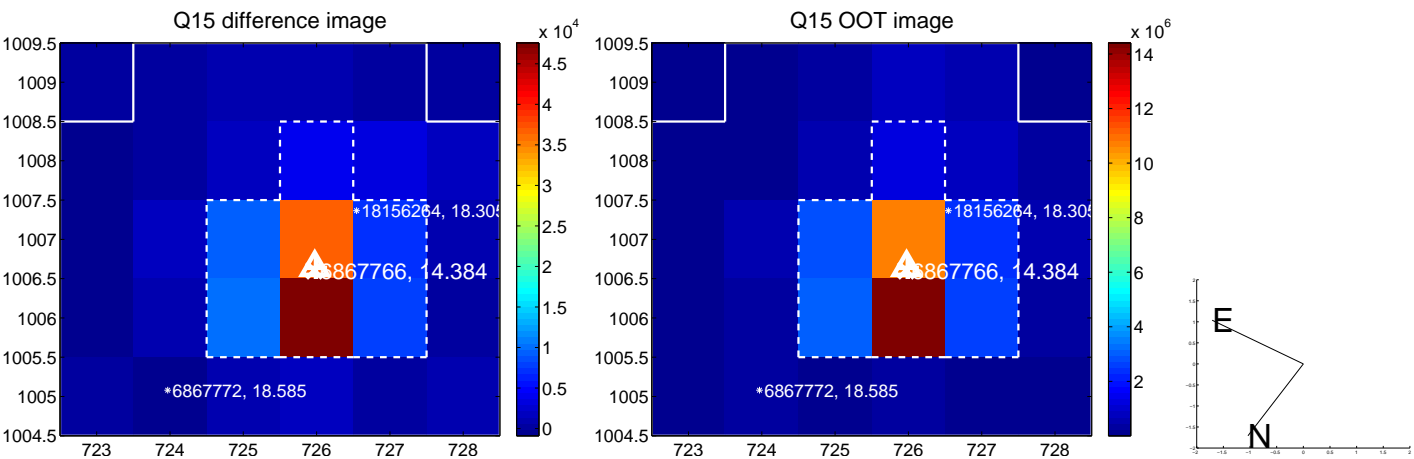
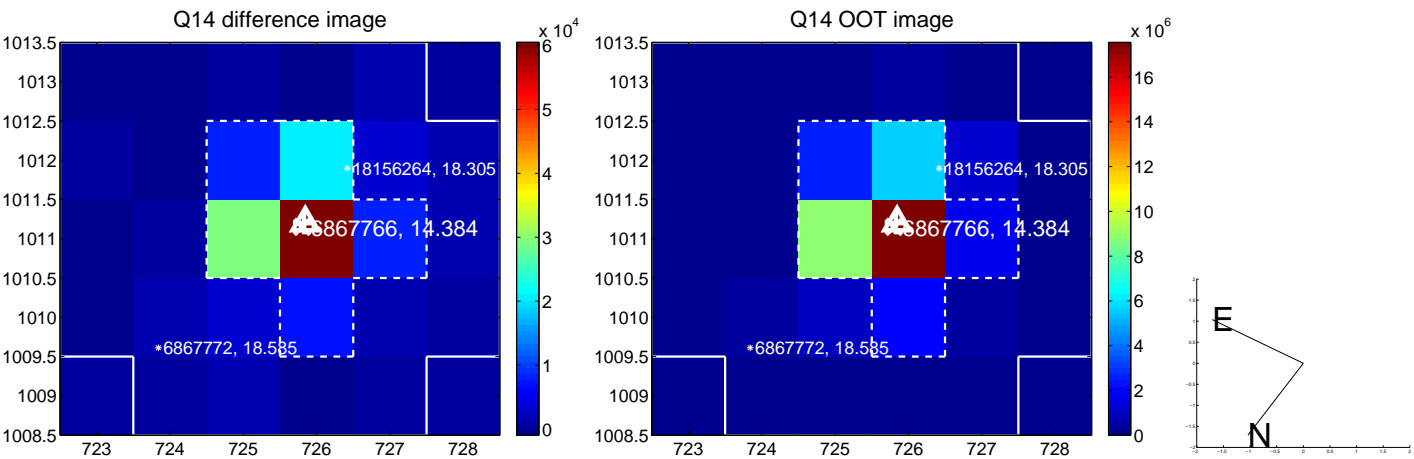
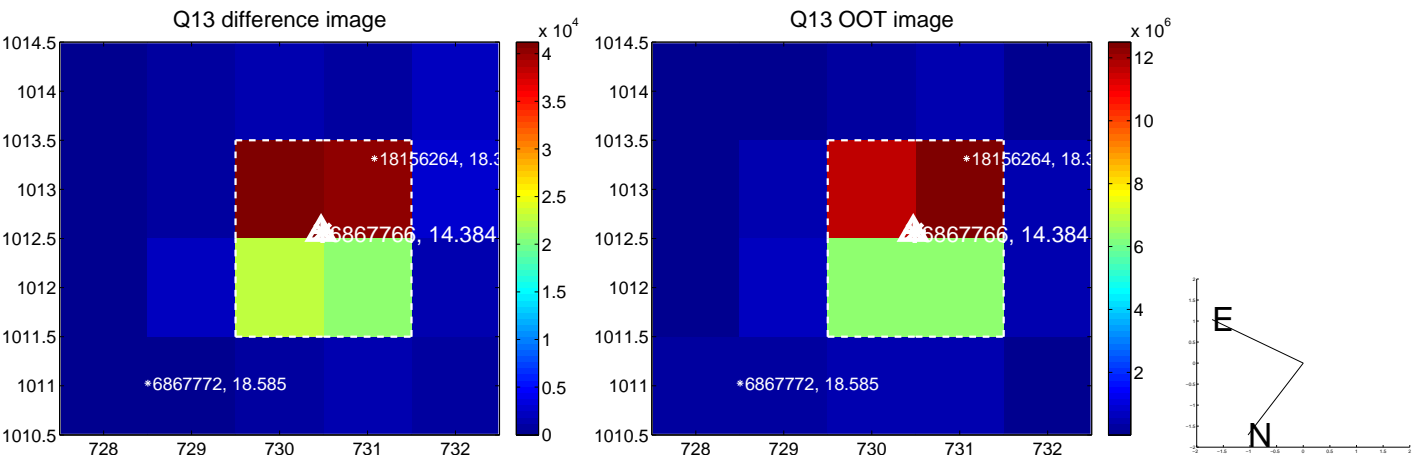
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



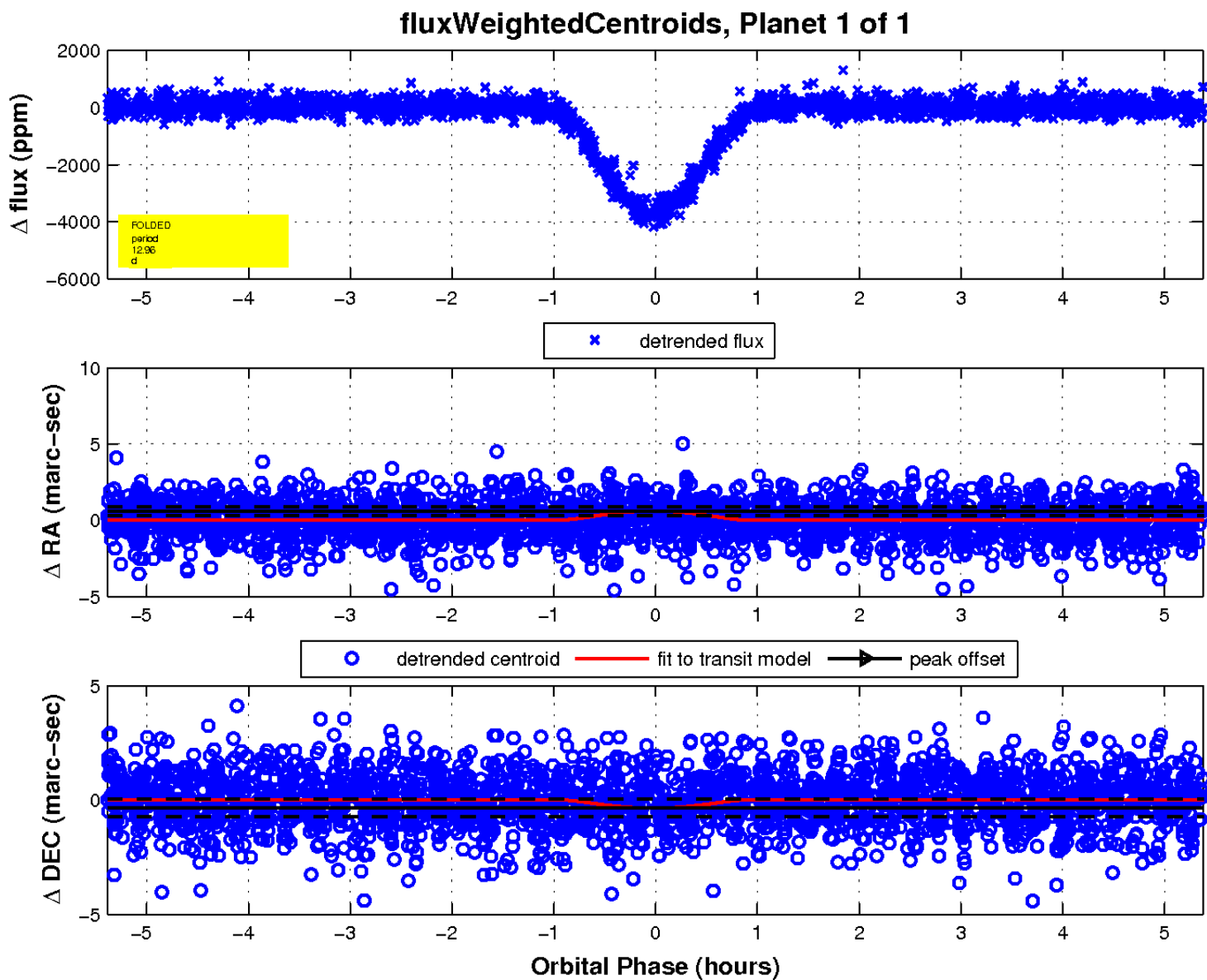
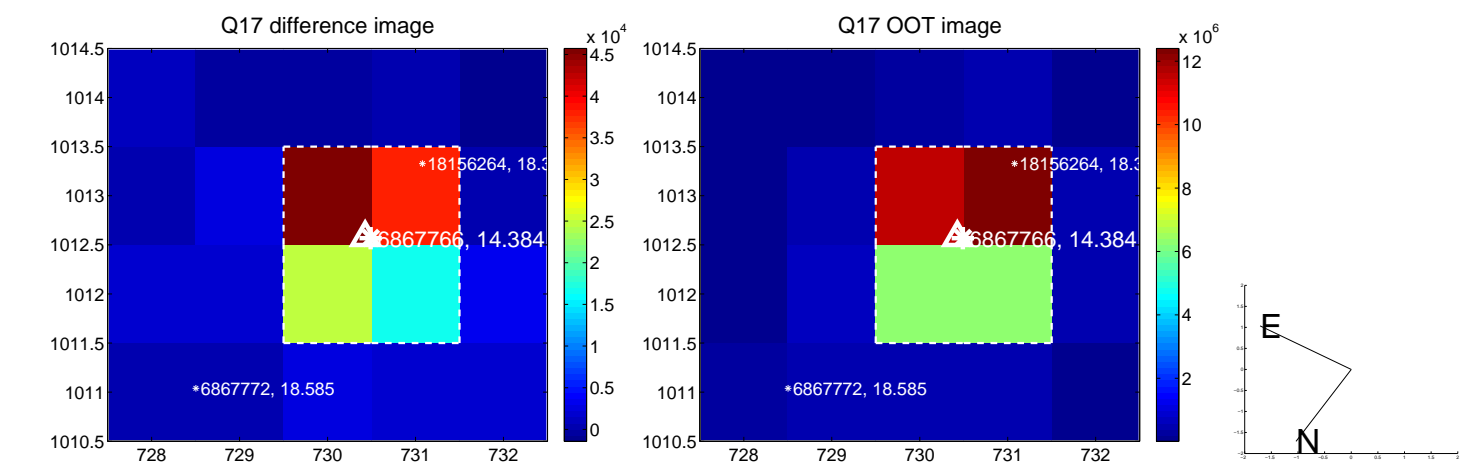
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

