

KIC 006185331

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})
006185331-01	OBS	1727.01	49.770207	159.985553	3516.7	10.075	88.7	91.8	0.82	5774	5.16	10.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006185331-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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 006185331-01

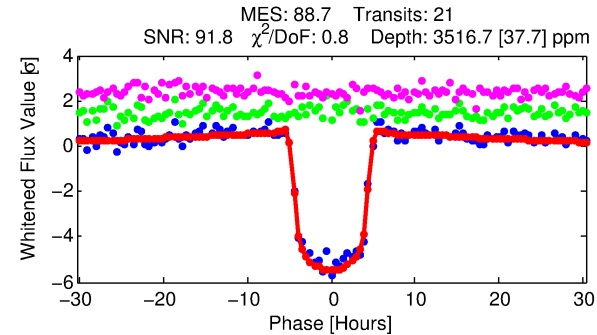
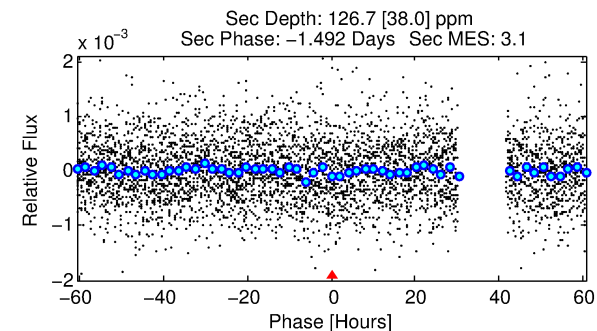
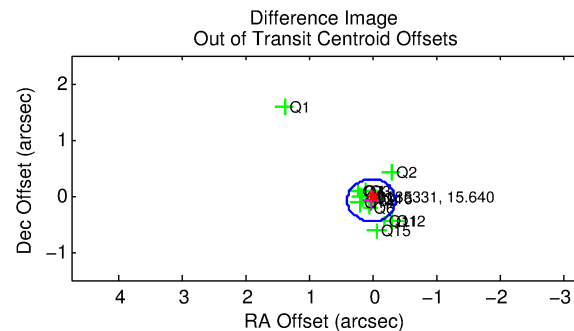
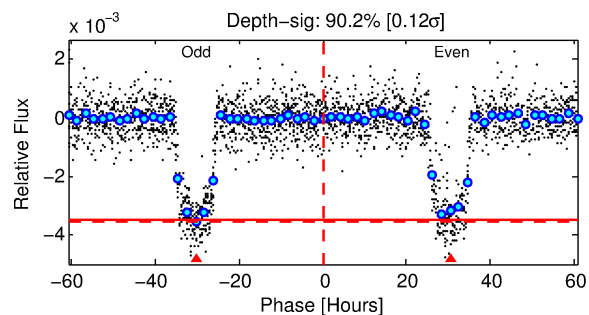
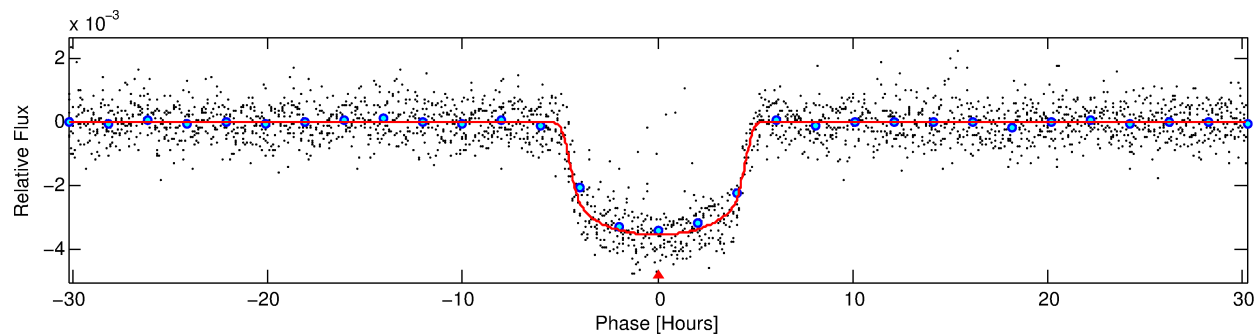
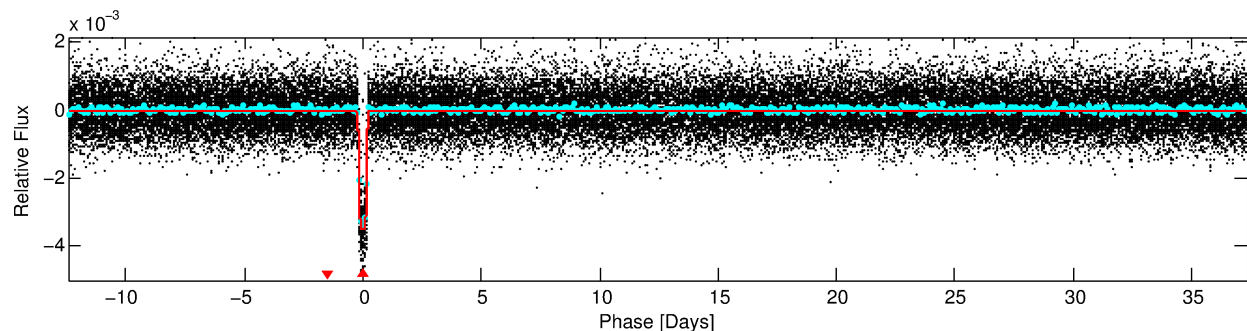
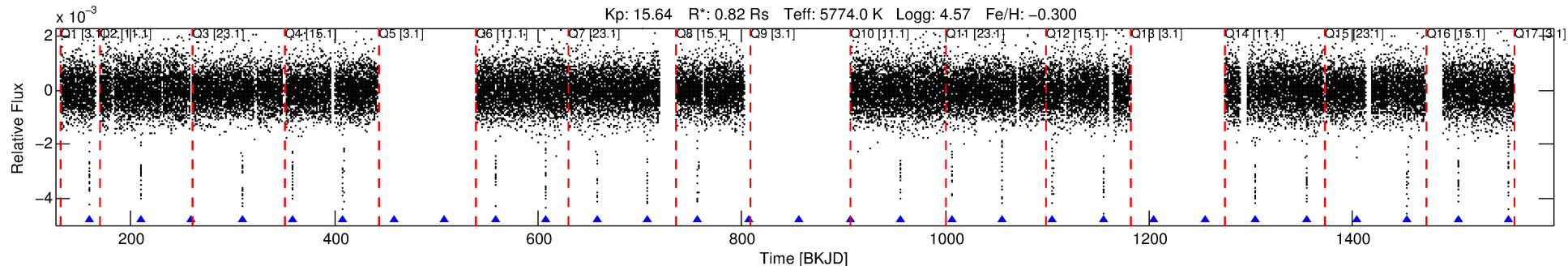
No Significant Match Found

DV One-Page Summary

KIC: 6185331 Candidate: 1 of 1 Period: 49.770 d

KOI: K01727.01 Corr: 0.998

Kp: 15.64 R*: 0.82 Rs Teff: 5774.0 K Logg: 4.57 Fe/H: -0.300



DV Fit Results:

Period = 49.77021 [0.00011] d
Epoch = 159.9856 [0.0019] BKJD
Rp/R* = 0.0578 [0.0010]
a/R* = 30.54 [2.30]
b = 0.68 [0.06]
Seff = 10.19 [3.23]
Teq = 456 [36] K
Rp = 5.16 [1.26] Re
a = 0.2558 [0.0520] AU
Ag = 171.51 [72.37] [2.36σ]
Teffp = 2549 [207] K [9.96σ]

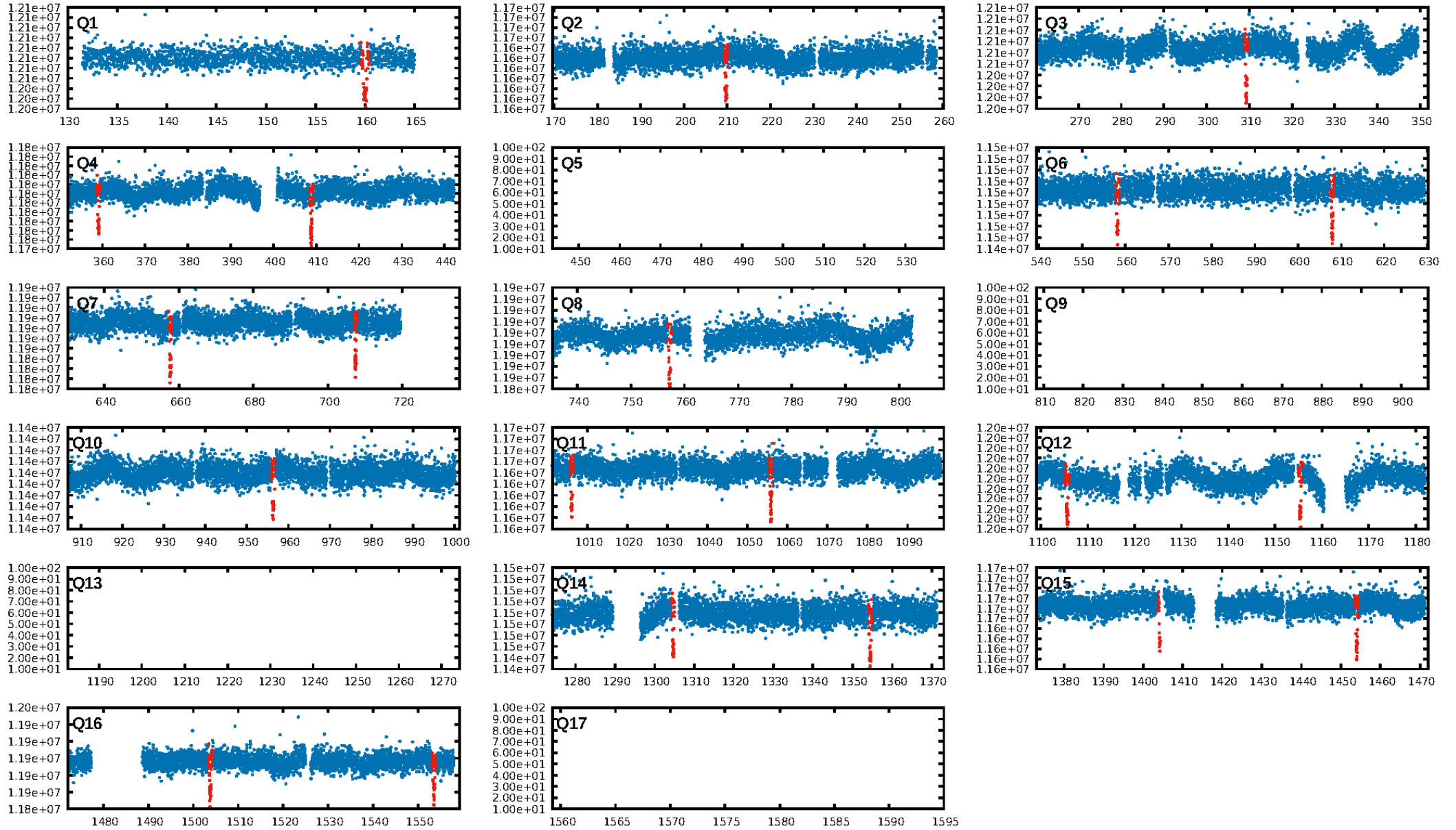
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [20/20]
GhostDiagnostic-chr: 4.32
Centroid-sig: 63.4%
Centroid-so: 0.199 arcsec [1.34σ]
OotOffset-rm: 0.087 arcsec [0.70σ]
KicOffset-rm: 0.121 arcsec [0.66σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

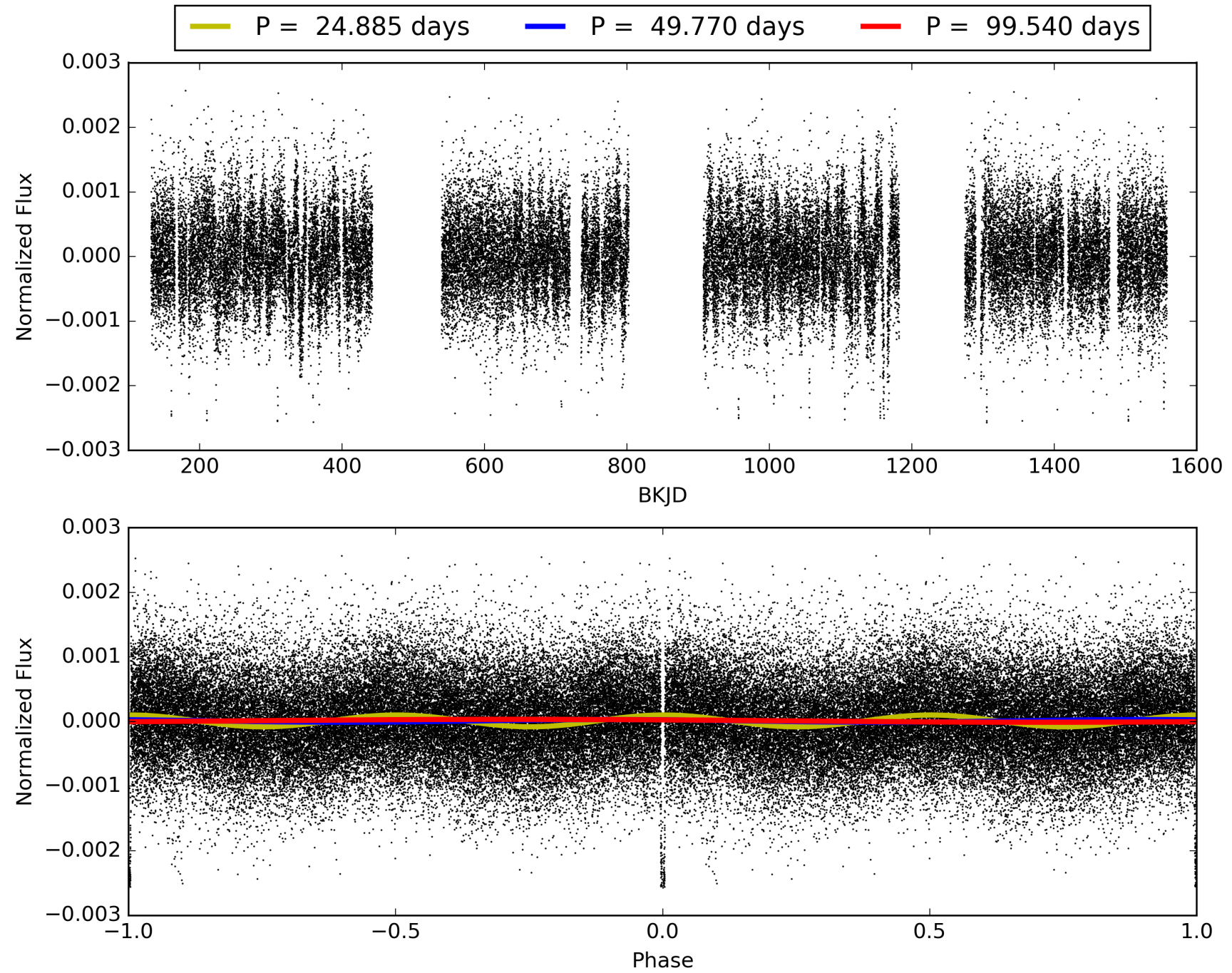
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:29:34 Z

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

TCE 006185331-01, PDC Light Curves

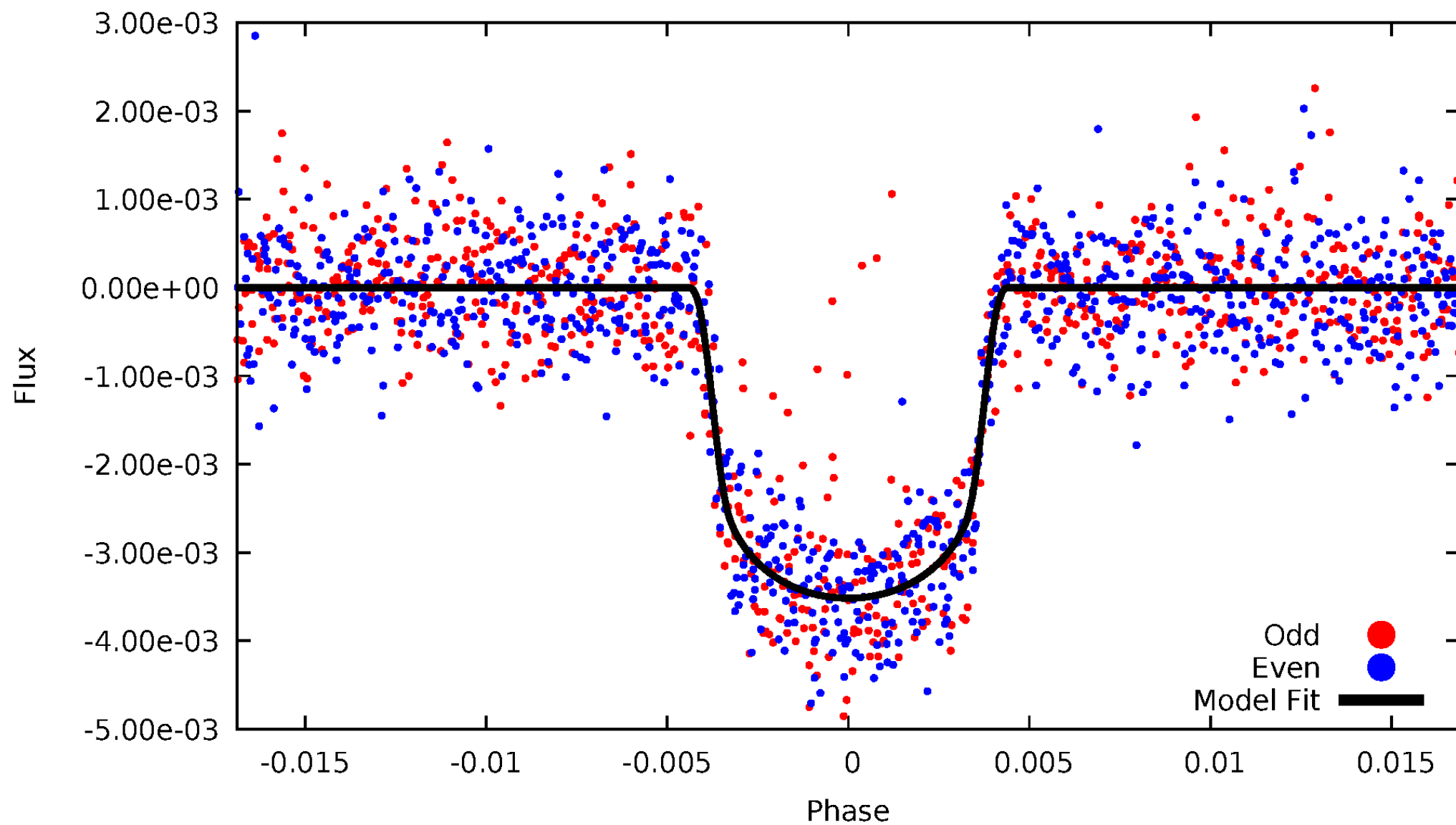


TCE 006185331-01



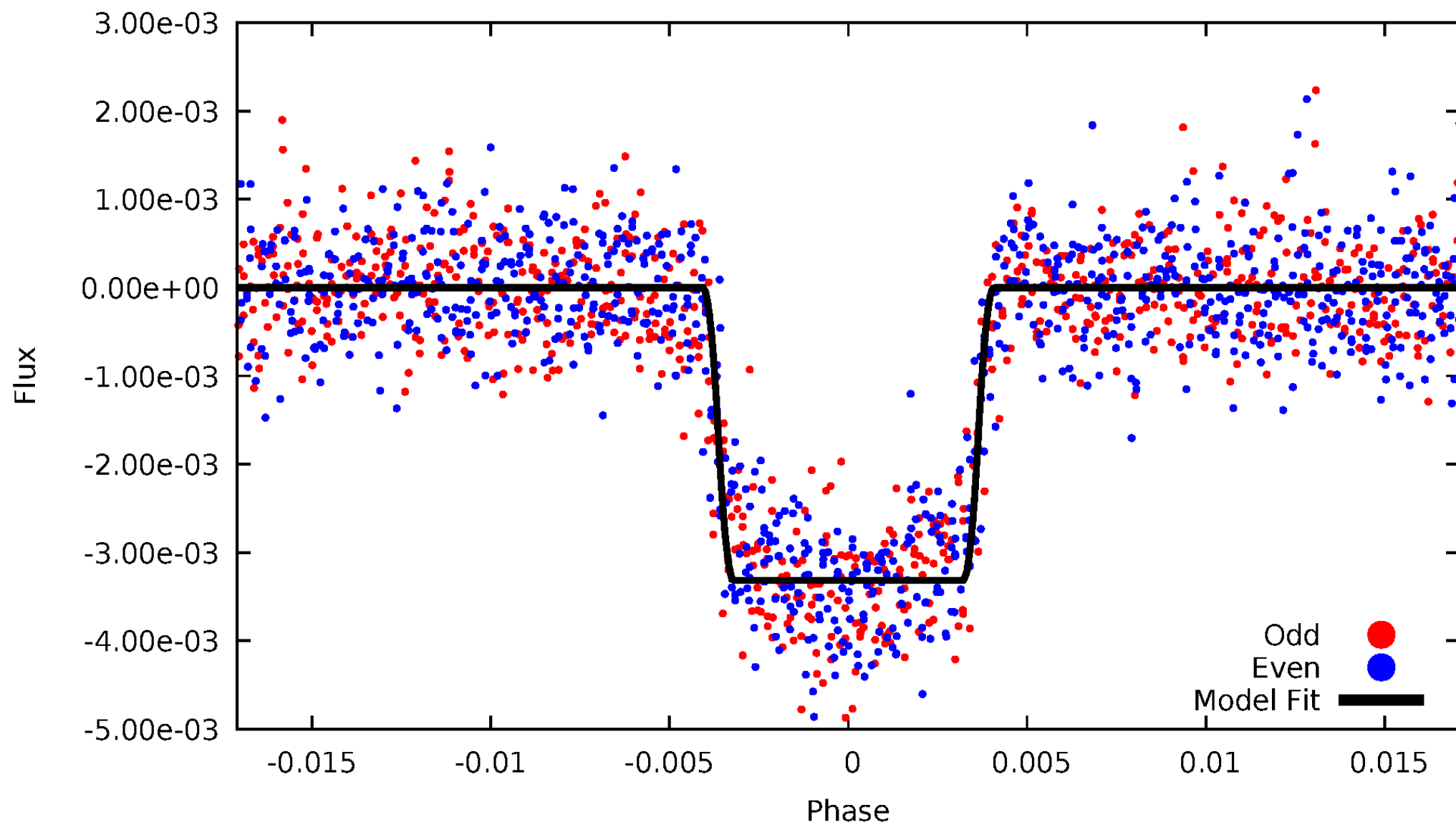
DV Odd/Even

TCE 006185331-01



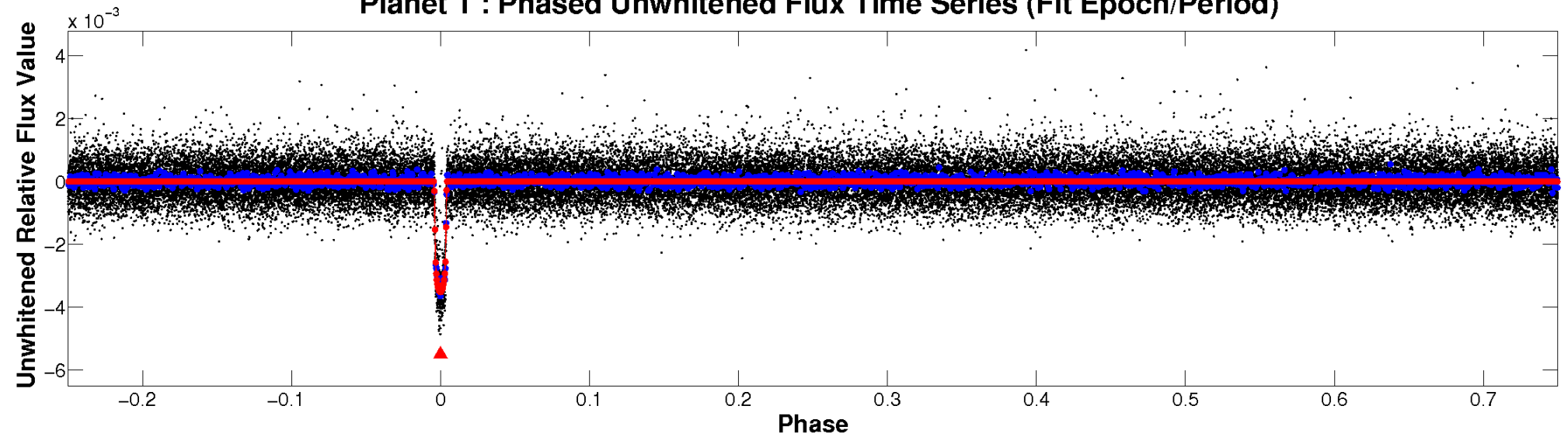
ALT Odd/Even

TCE 006185331-01

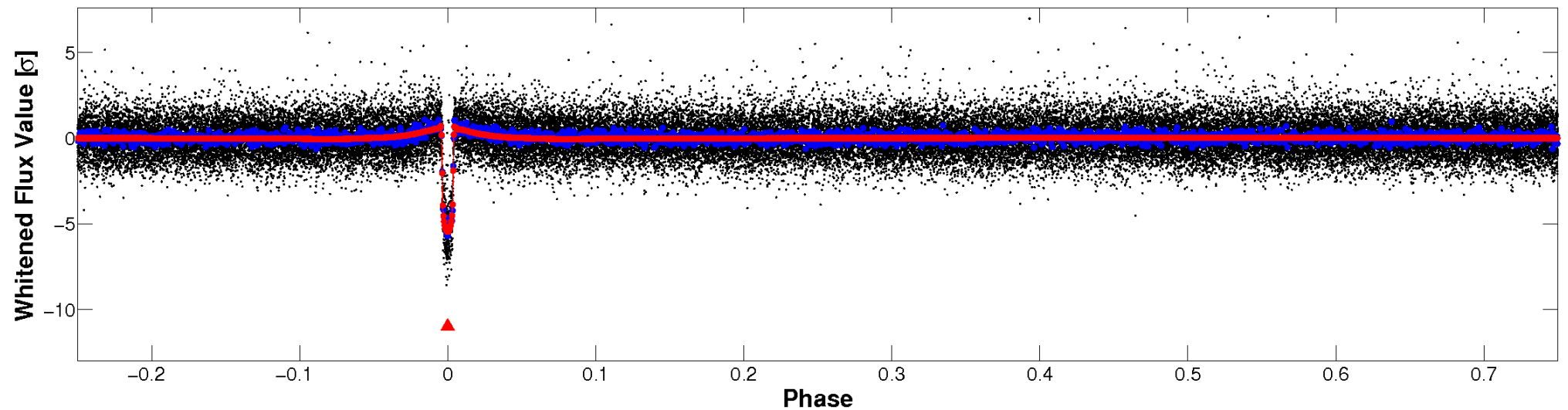


Non-Whitened Vs. Whitened Light Curve

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

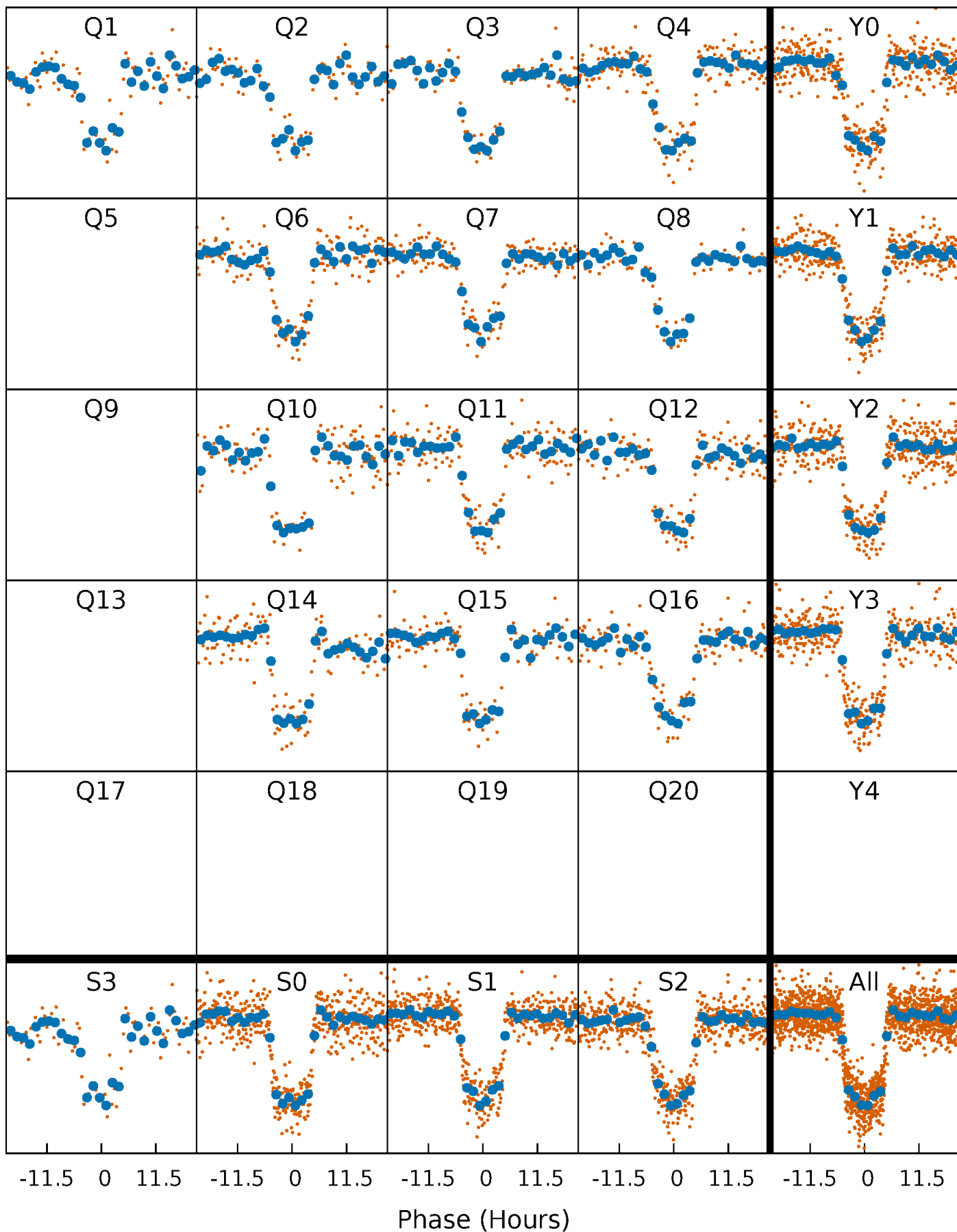


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



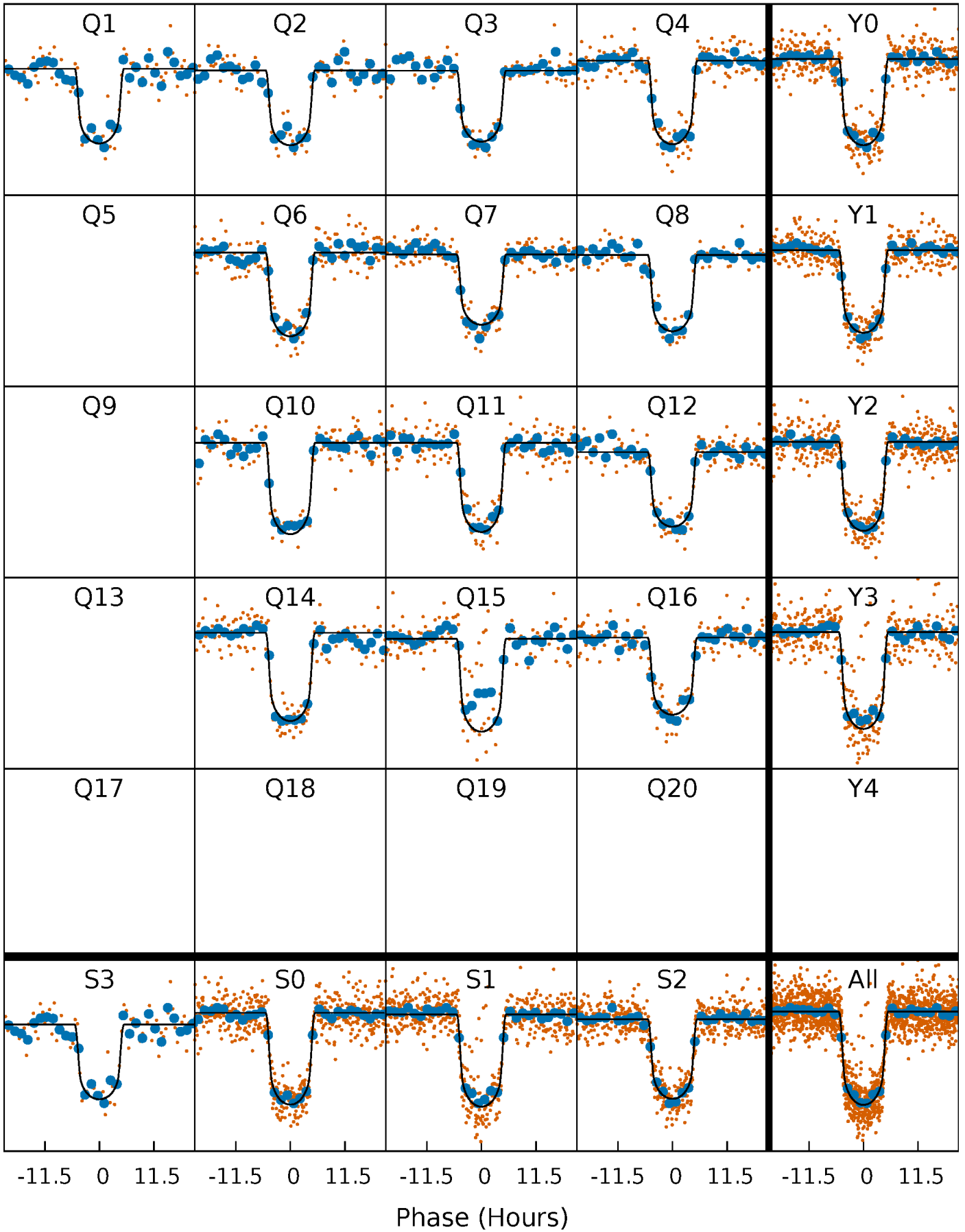
PDC Quarter-Phased Transit Curves

TCE 006185331-01 P= 49.770207 Days $T_0=159.985553$ (BKJD)



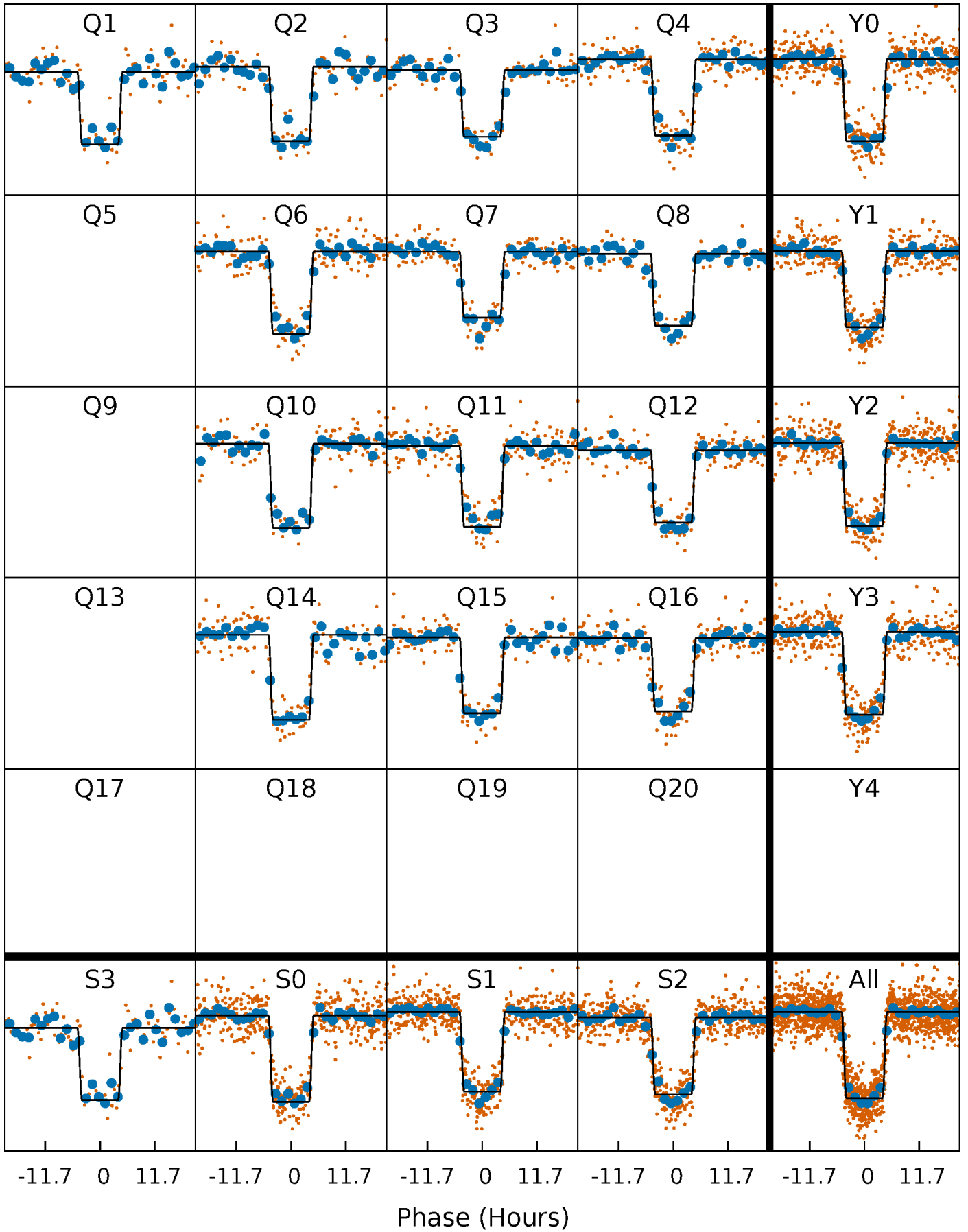
DV Quarter-Phased Transit Curves

TCE 006185331-01 P= 49.770207 Days $T_0=159.985553$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

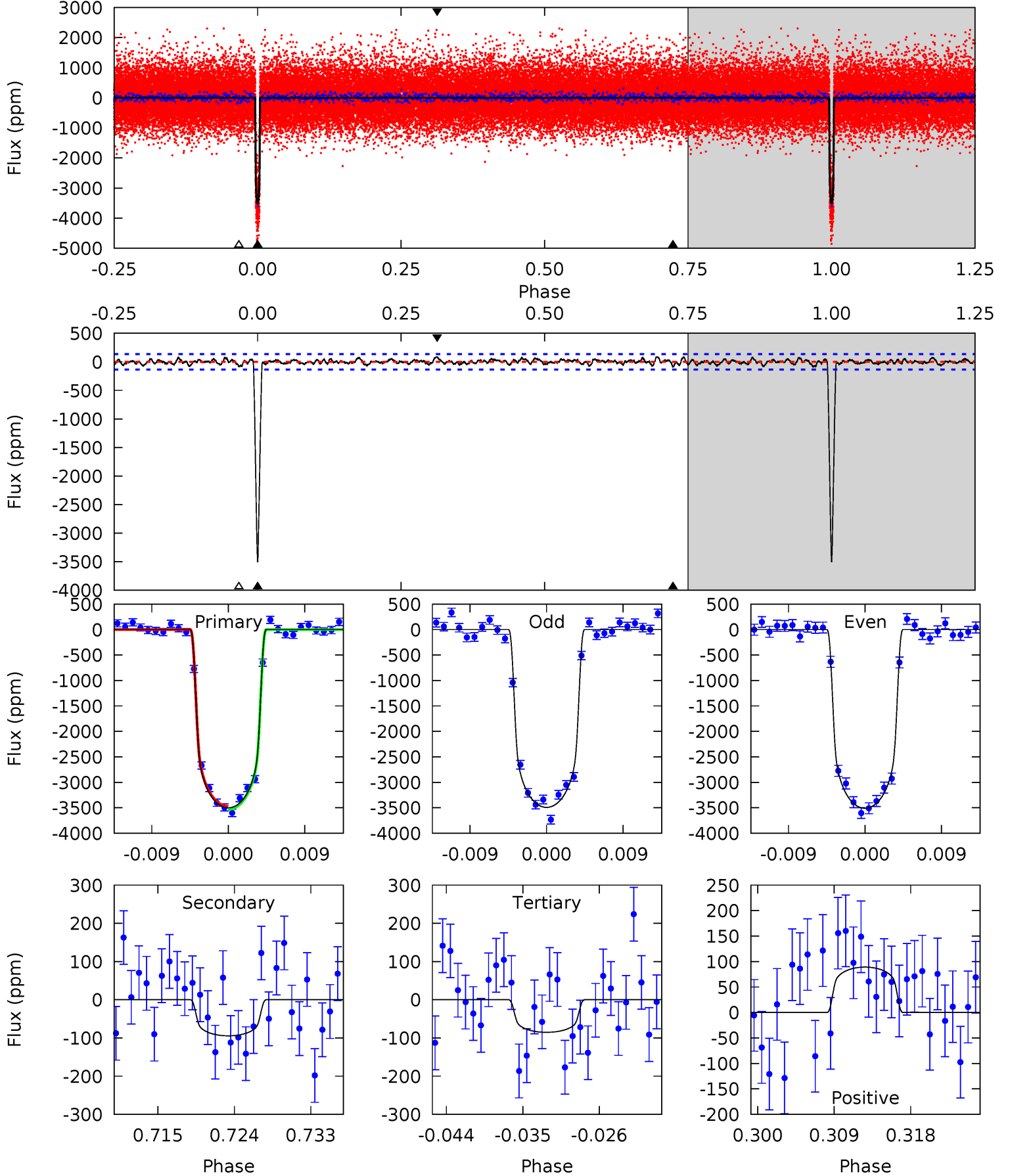
TCE 006185331-01 P= 49.771102 Days $T_0=159.973034$ (BKJD)



DV Model-Shift Uniqueness Test

006185331-01, $P = 49.770207$ Days, $E = 110.215346$ Days

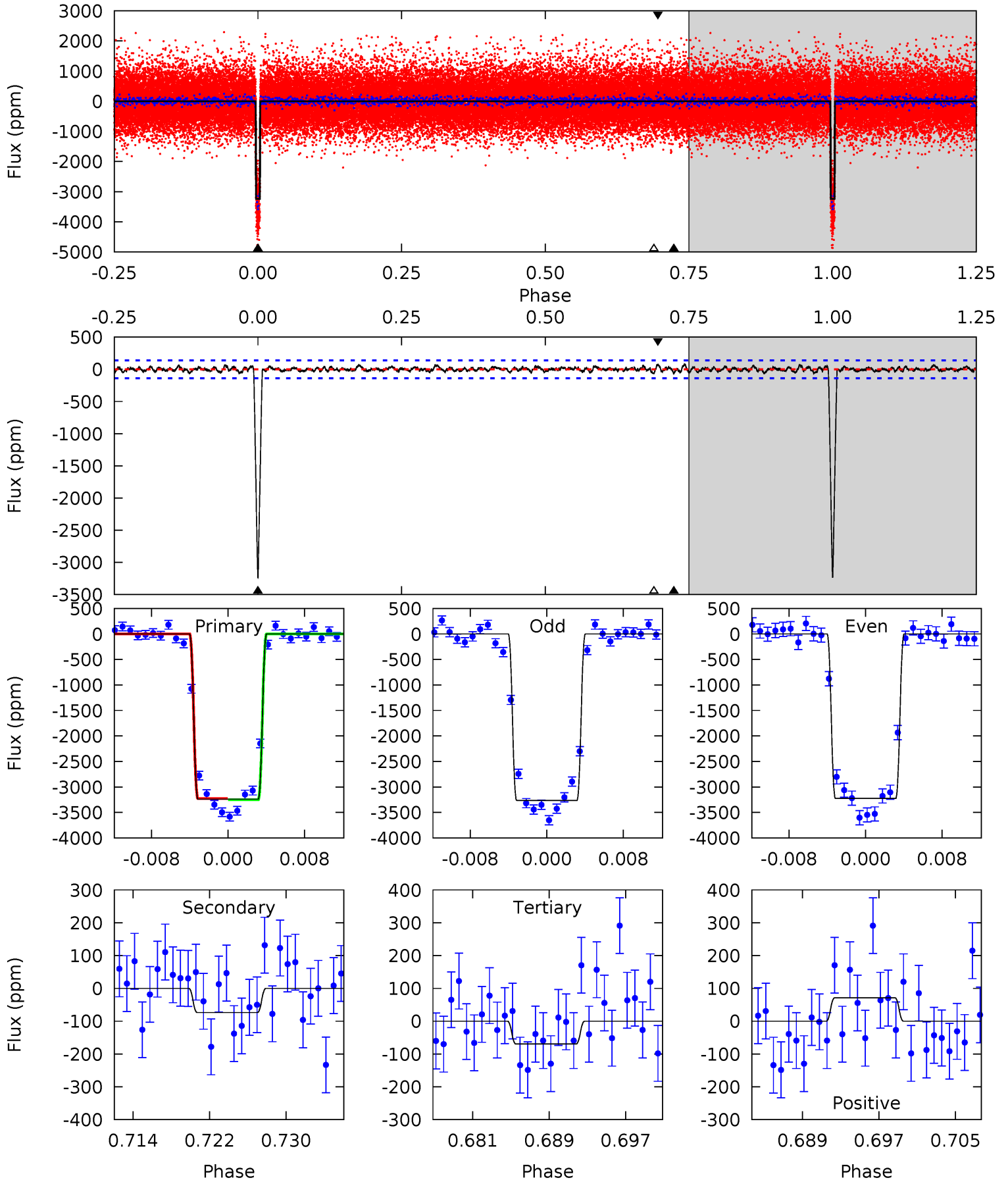
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
131.8	3.55	3.21	3.36	5.05	2.62	1.15	128.6	128.5	0.35	0.20	0.31	0.97	0.02	1.07



Alt Model-Shift Uniqueness Test

006185331-01, $P = 49.771102$ Days, $E = 110.201932$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
118.5	2.69	2.55	2.61	5.07	2.65	0.88	116.0	115.9	0.15	0.09	0.69	0.99	0.02	0.37



Stellar Parameters For KIC 006185331

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5774^{+155}_{-172}	$4.567^{+0.040}_{-0.160}$	$-0.300^{+0.300}_{-0.300}$	$0.818^{+0.199}_{-0.066}$	$0.907^{+0.090}_{-0.110}$	$2.332^{+0.401}_{-1.051}$
	+3%/-3%	+1%/-4%	+100%/-100%	+24%/-8%	+10%/-12%	+17%/-45%
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 006185331-01 / KOI 1727.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-94 ± 27	$5.27^{+0.69}_{-0.35}$	650^{+35}_{-29}	3025^{+138}_{-143}	118^{+38}_{-39}
Alt.	-74 ± 27	$5.26^{+0.67}_{-0.37}$	647^{+38}_{-27}	2913^{+146}_{-190}	89^{+37}_{-37}

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

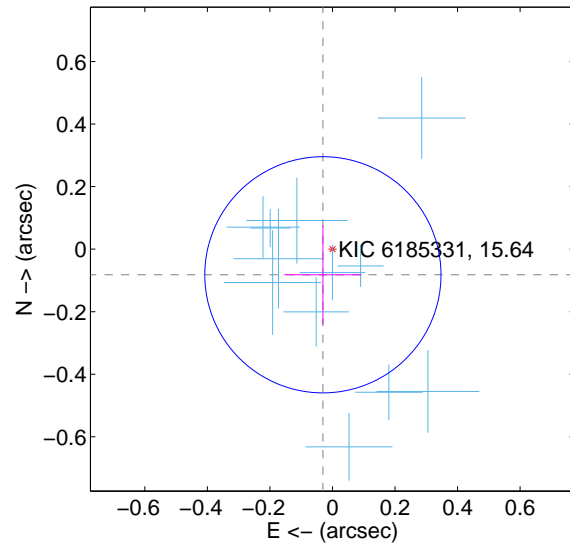
Supplemental centroid analysis for 006185331-01. Kepler magnitude: 15.64. Transit SNR 91.82

There are 13 quarters with good PRF difference image offsets

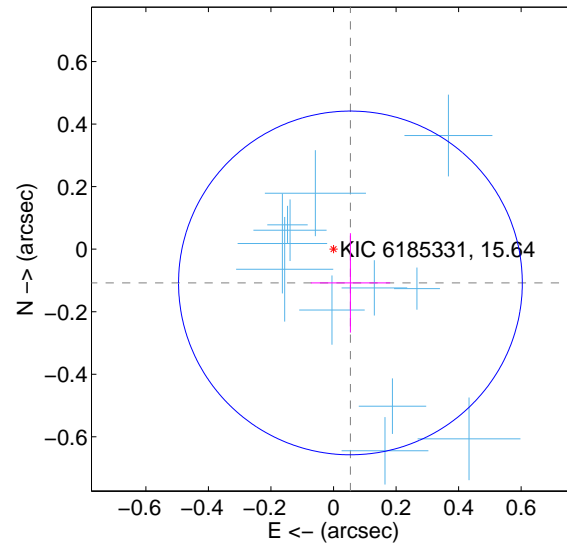
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.087 ± 0.126	0.70	0.031 ± 0.123	-0.082 ± 0.159
PRF-fit source offset from KIC position	0.121 ± 0.183	0.66	-0.054 ± 0.127	-0.108 ± 0.159
photometric centroid source offset	0.20 ± 0.15	1.34	-0.20 ± 0.15	0.03 ± 0.15

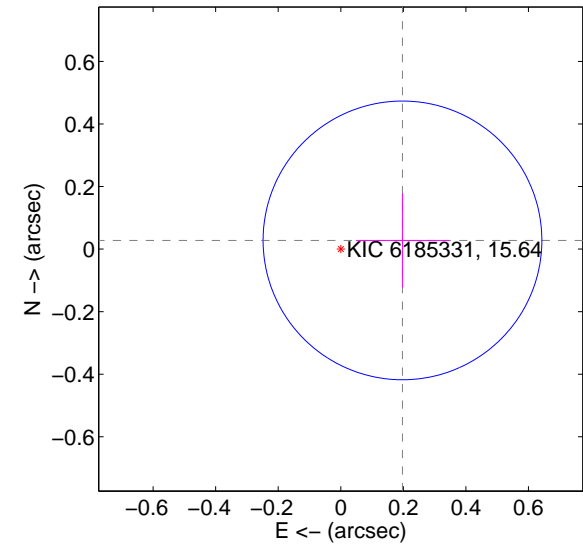
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

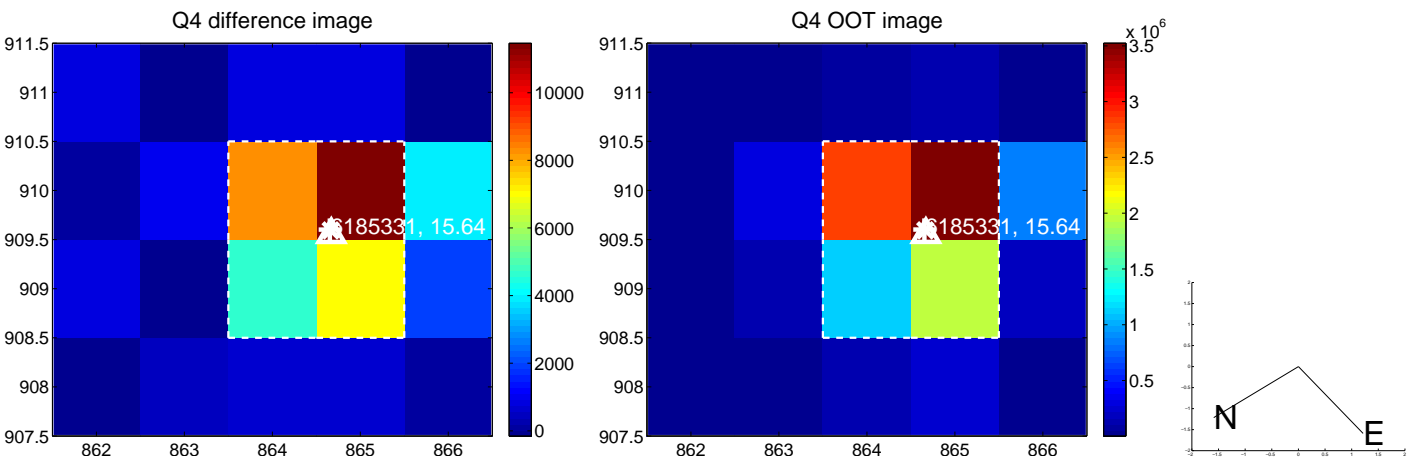
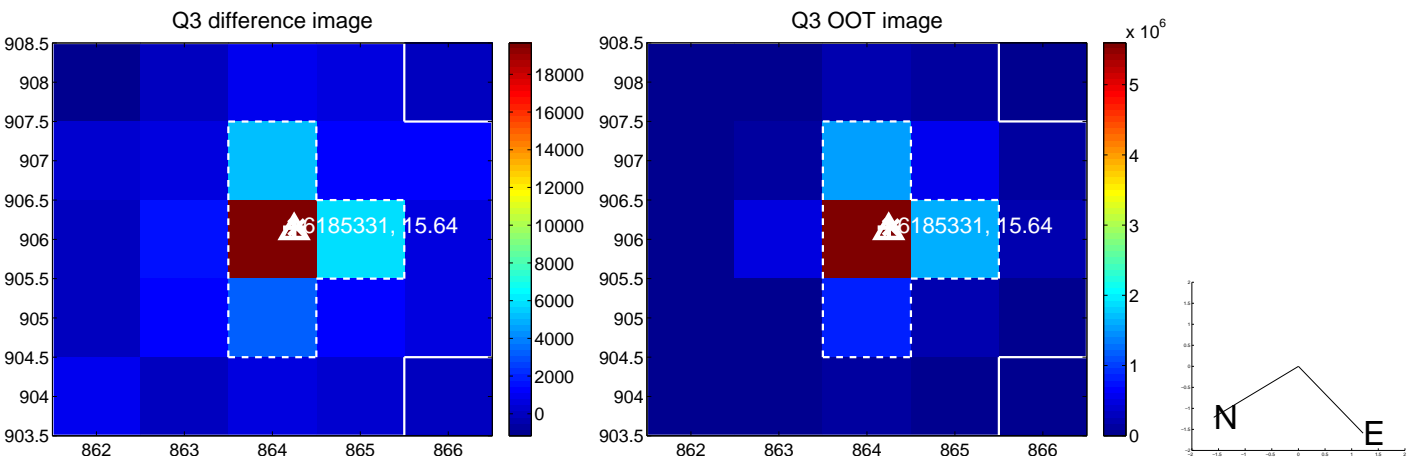
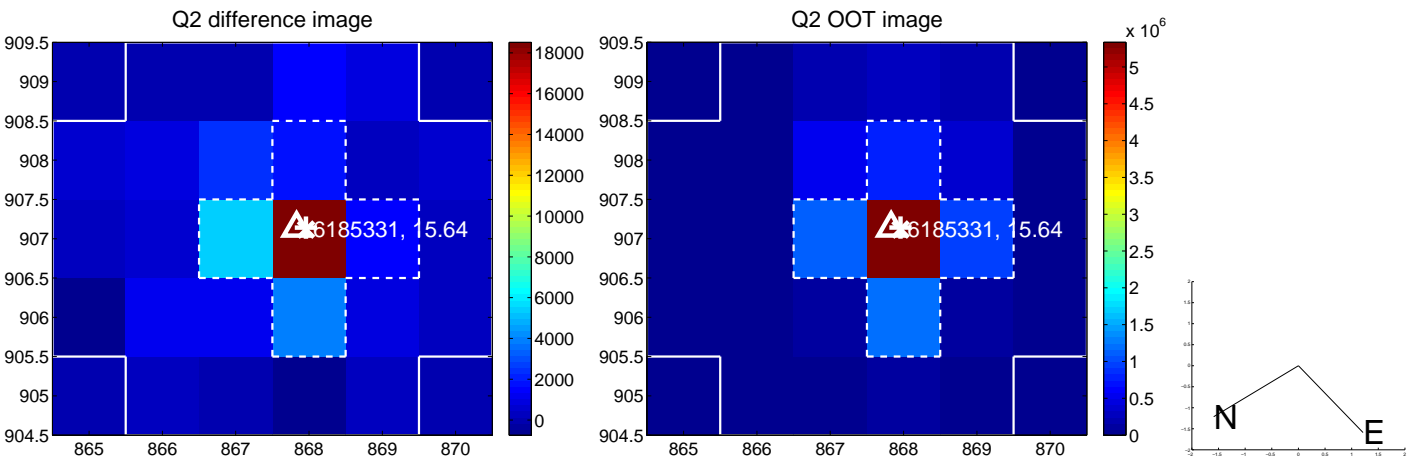
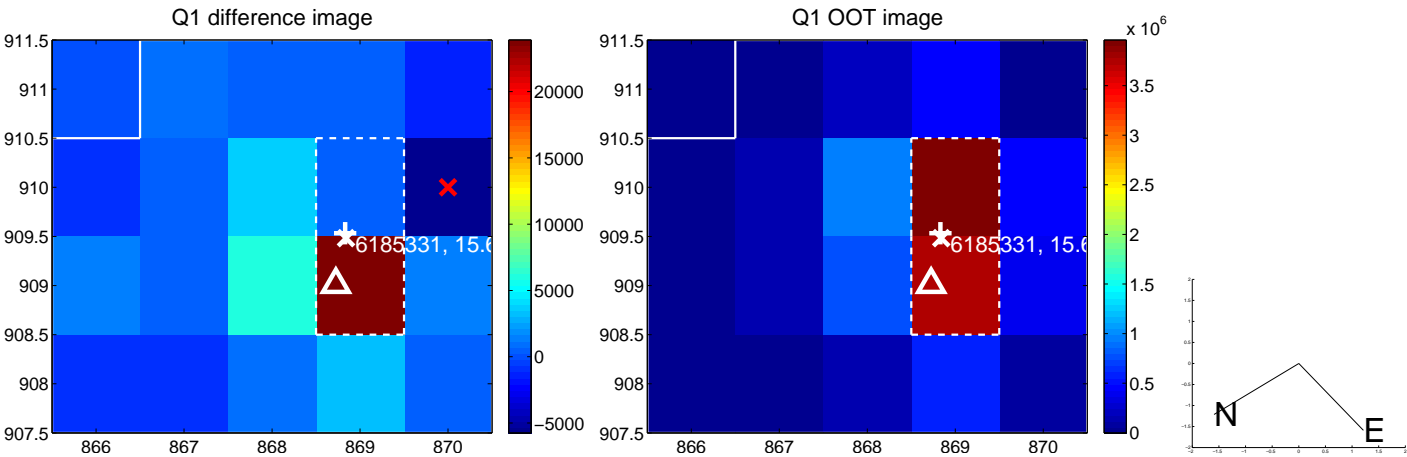


offset from photometric centroids

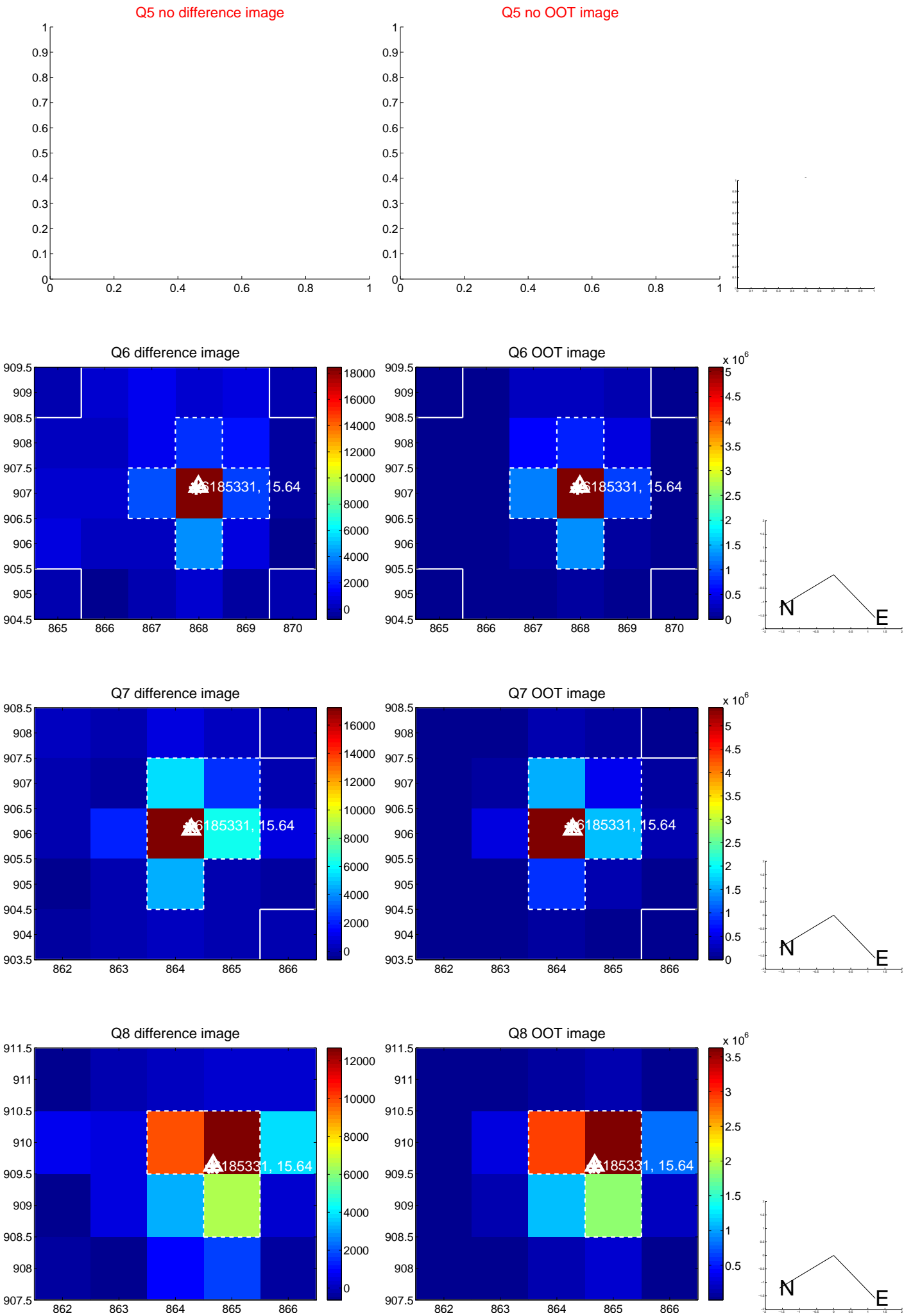


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

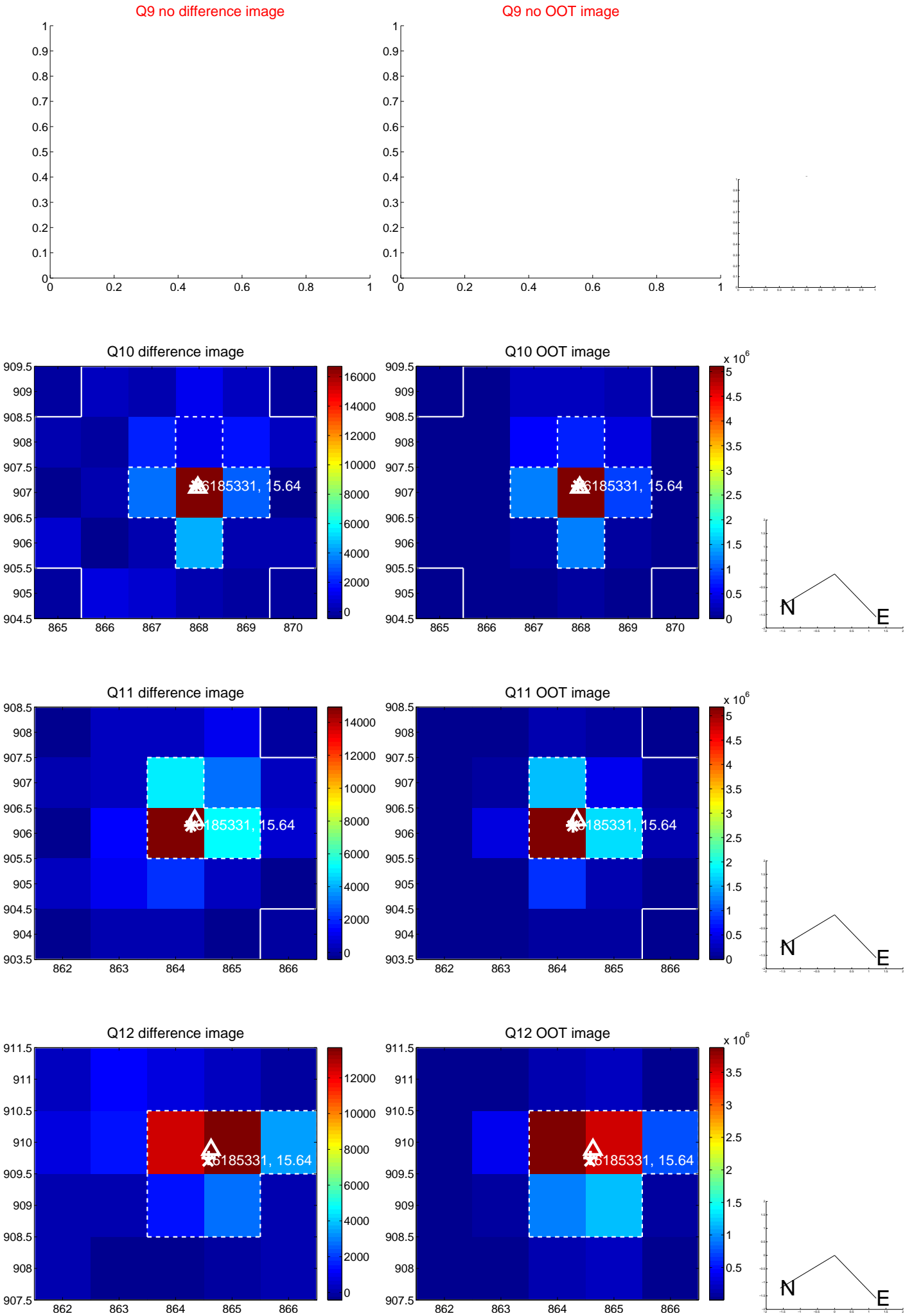
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



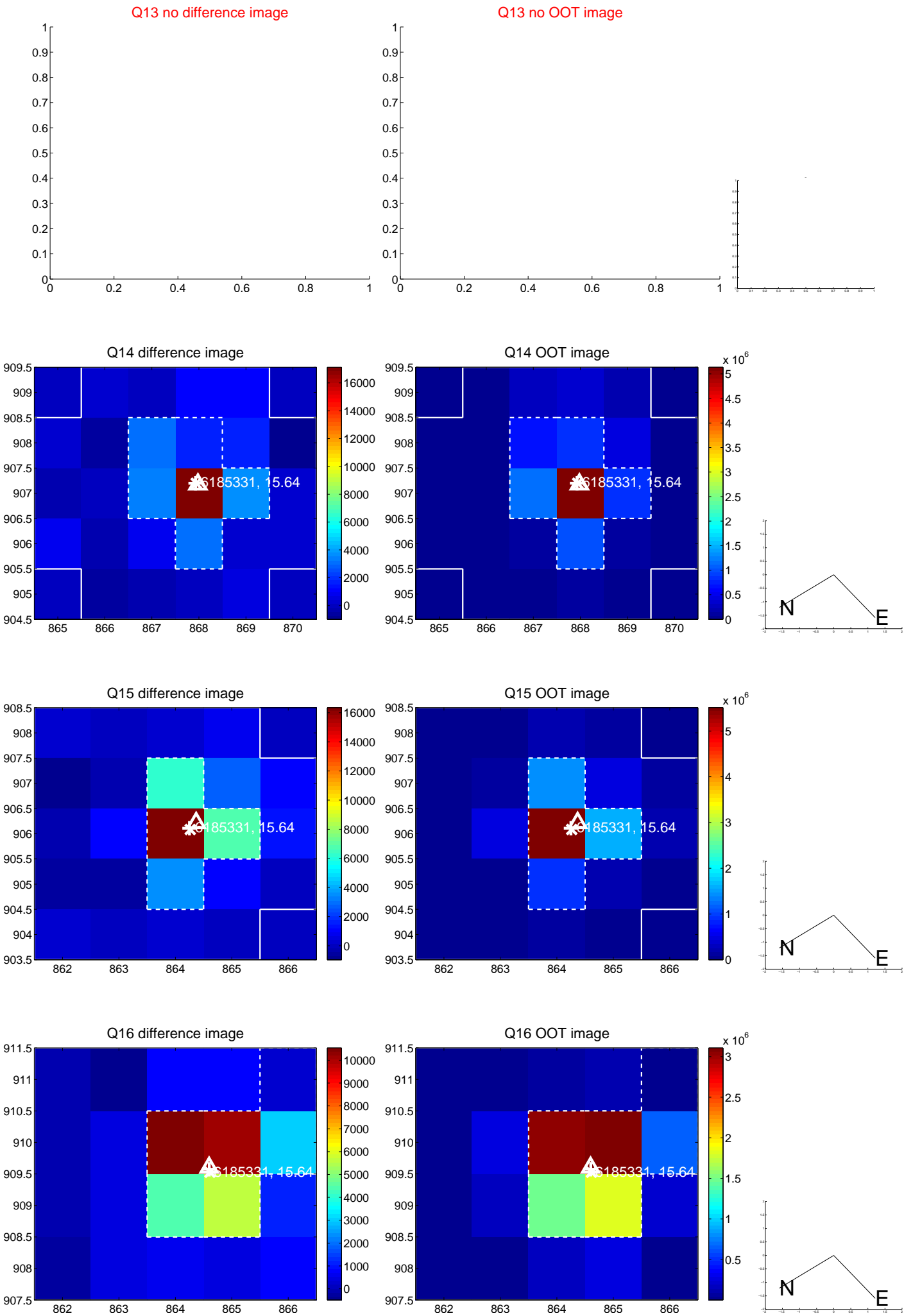
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



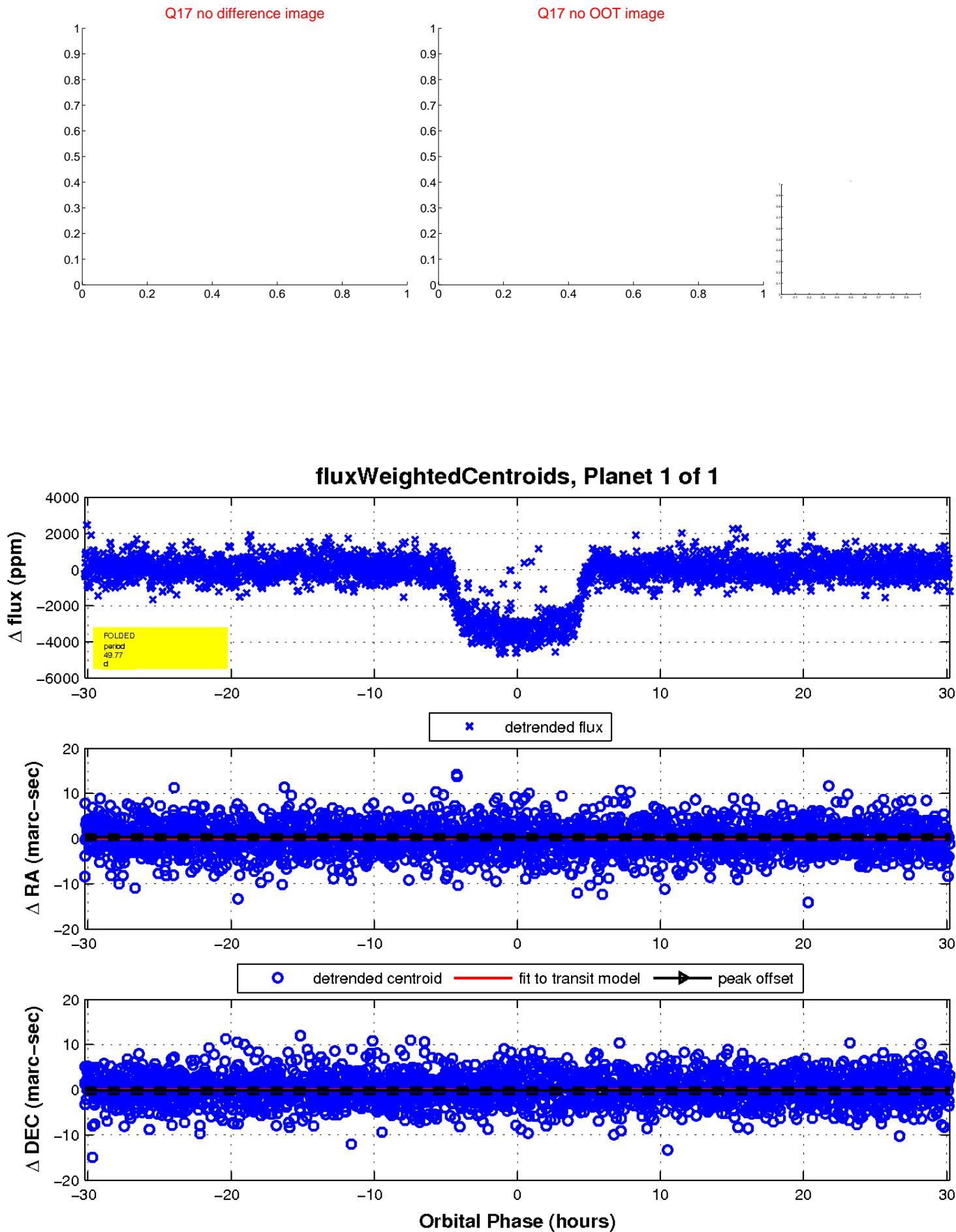
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

