

KIC 007031517

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})
007031517-01	OBS	0871.01	12.940670	140.600906	42163.7	2.497	1375.2	1224.9	0.81	5875	23.39	64.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007031517-01	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.

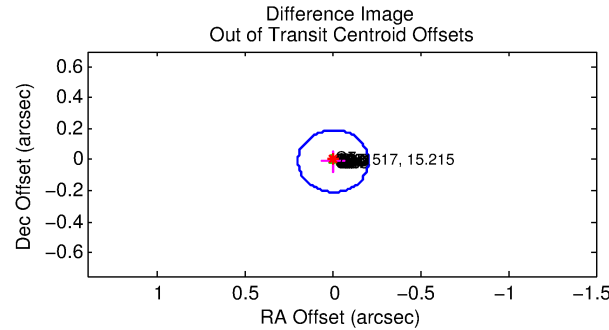
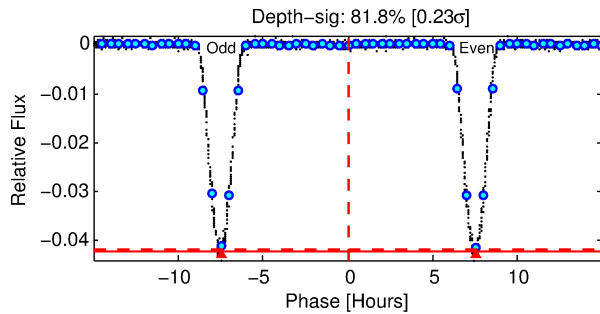
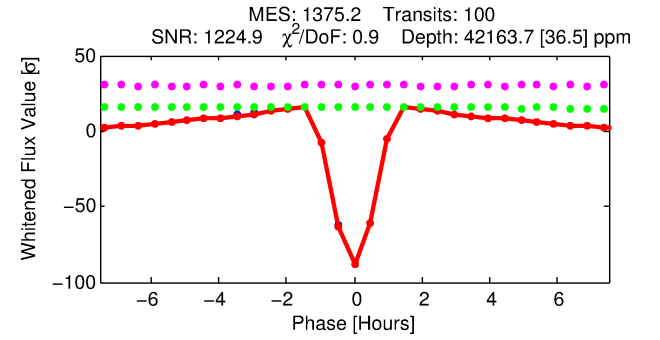
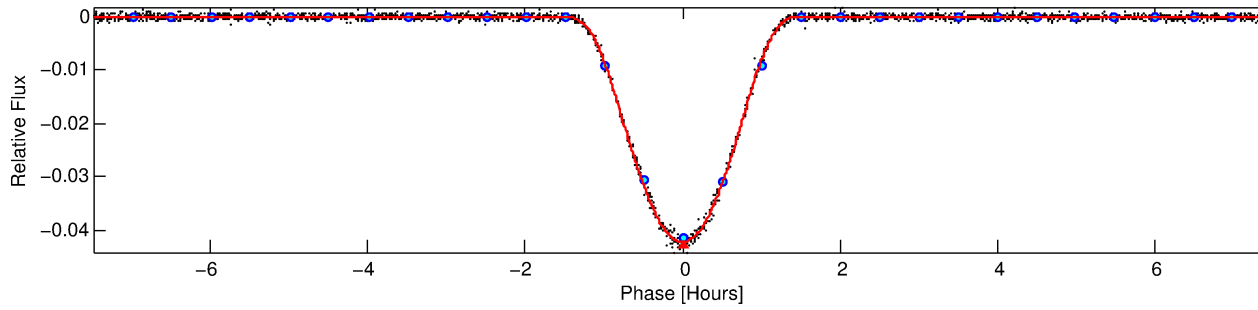
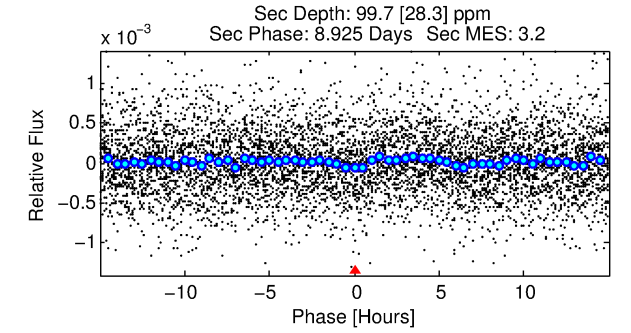
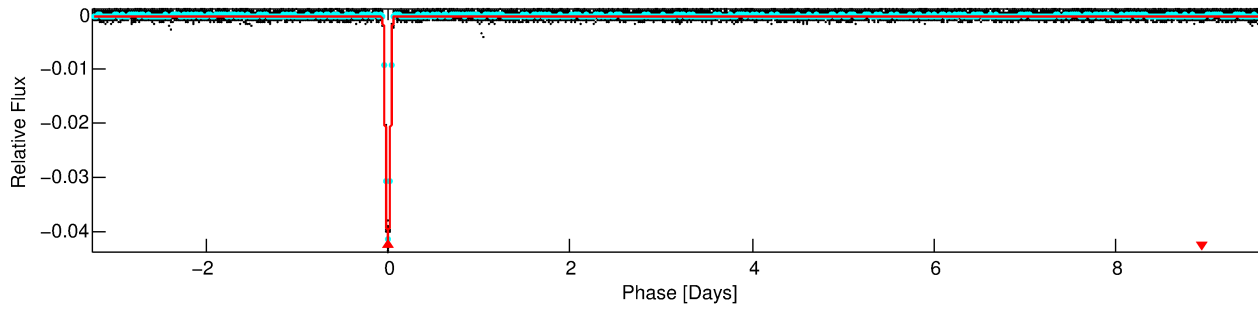
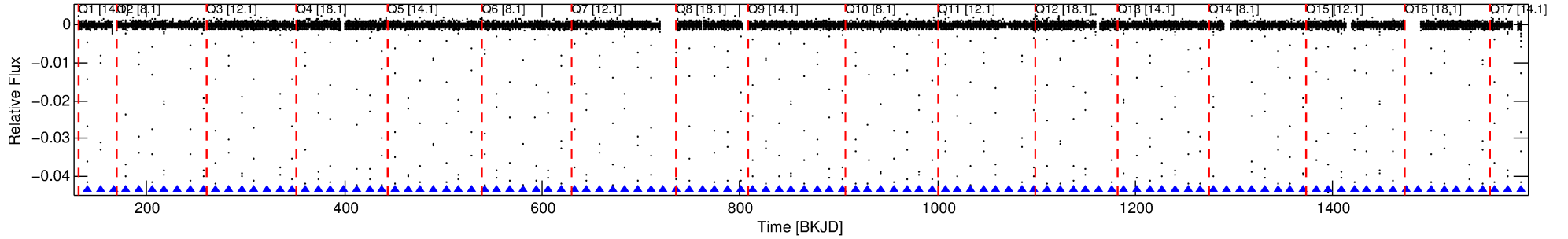
Ephemeris Match Information For 007031517-01

No Significant Match Found

DV One-Page Summary

KIC: 7031517 Candidate: 1 of 1 Period: 12.941 d
KOI: K00871.01 Corr: 0.999

Kp: 15.22 R*: 0.81 Rs Teff: 5875.0 K Logg: 4.57 Fe/H: -0.420



DV Fit Results:

Period = 12.94067 [0.00000] d
Epoch = 140.6009 [0.0000] BKJD
Rp/R* = 0.2649 [0.0068]
a/R* = 34.88 [0.12]
b = 0.91 [0.01]
Seff = 64.81 [18.74]
Teq = 723 [52] K
Rp = 23.39 [5.07] Re
a = 0.1038 [0.0188] AU
Ag = 1.08 [0.42] [0.19σ]
Teffp = 1141 [89] K [4.04σ]

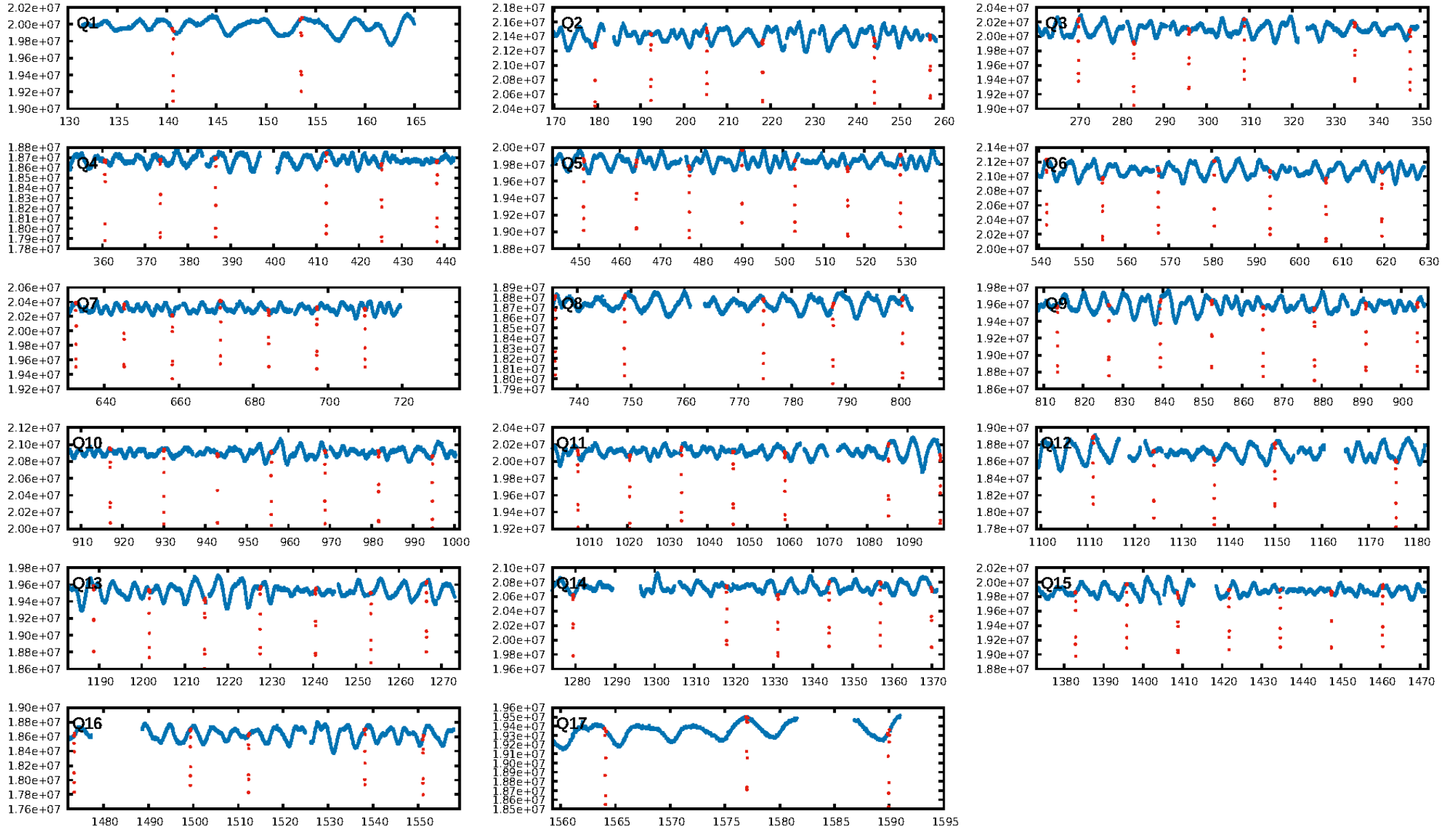
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [95/95]
GhostDiagnostic-chr: 4.435
Centroid-sig: 0.0%
Centroid-so: 0.270 arcsec [29.91σ]
OotOffset-rm: 0.009 arcsec [0.14σ]
KicOffset-rm: 0.185 arcsec [2.72σ]
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]

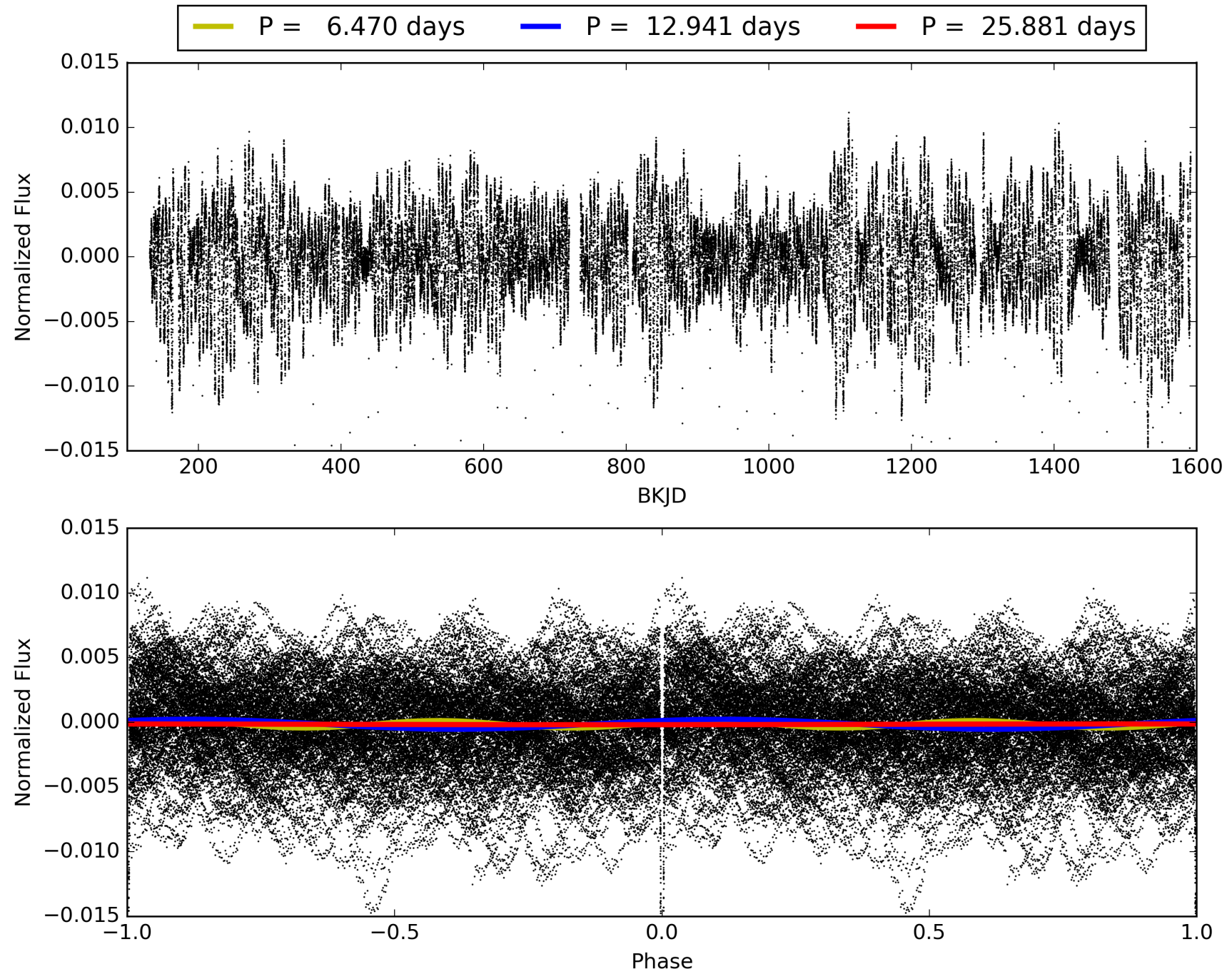
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:21:09 Z

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

TCE 007031517-01, PDC Light Curves

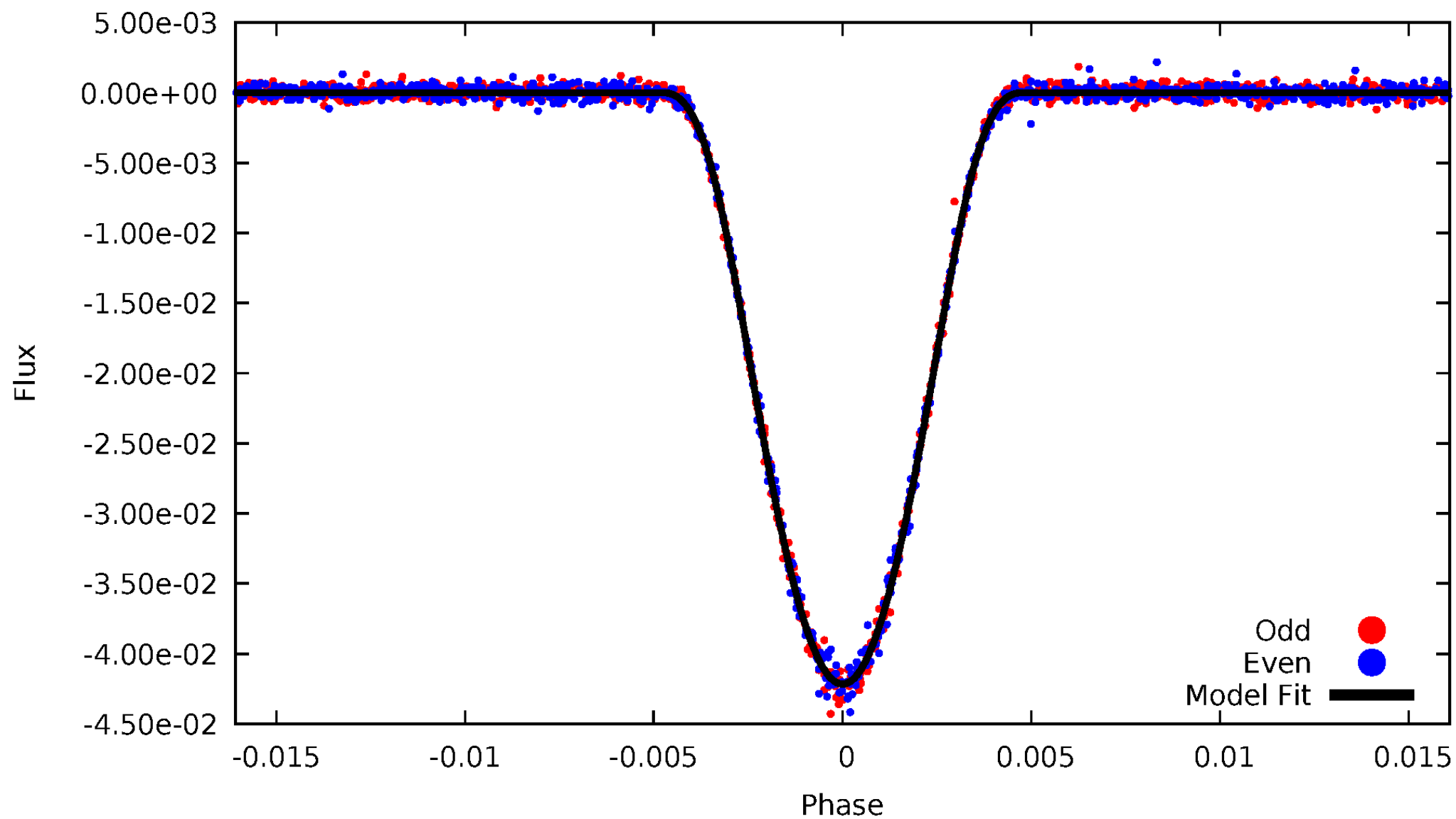


TCE 007031517-01



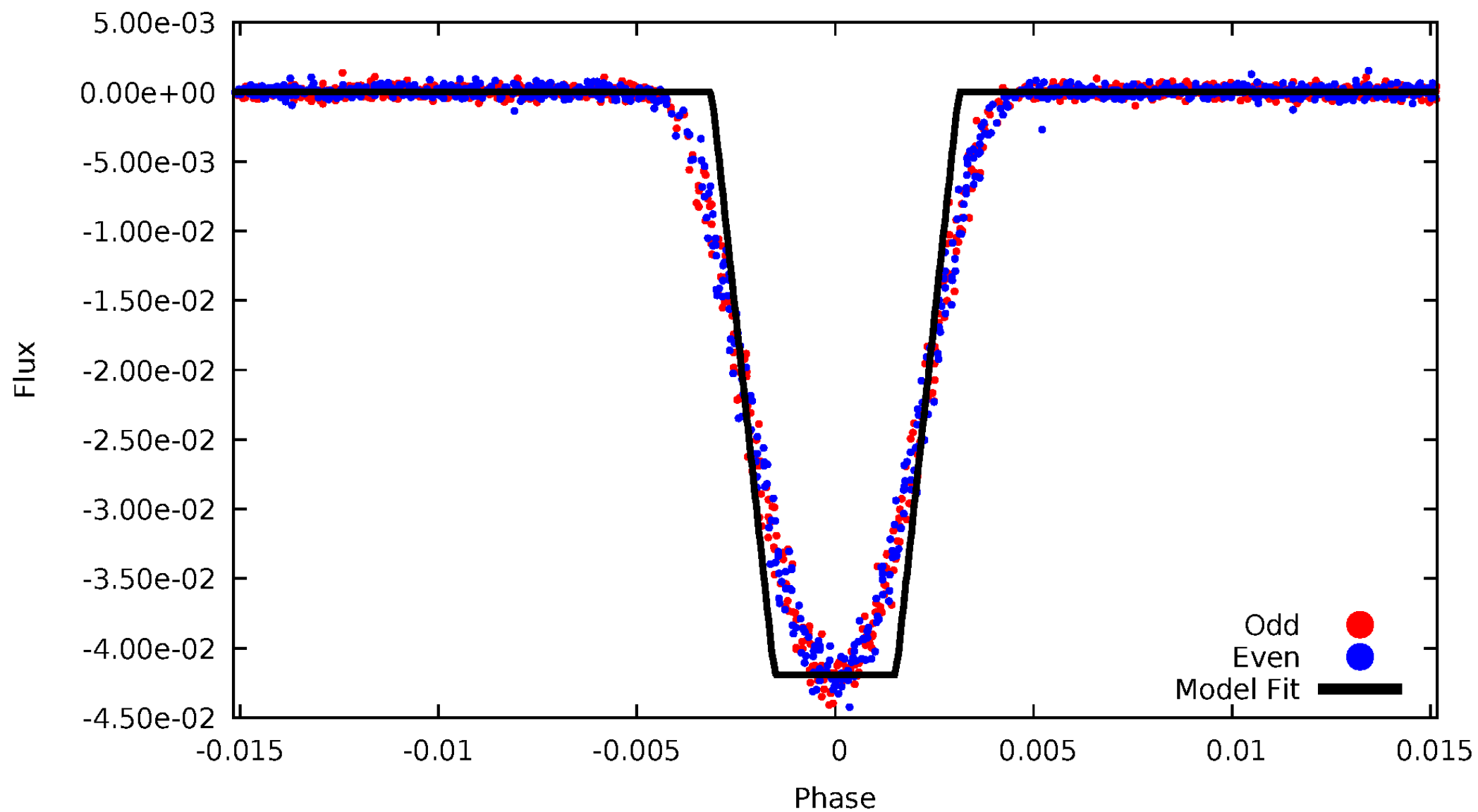
DV Odd/Even

TCE 007031517-01



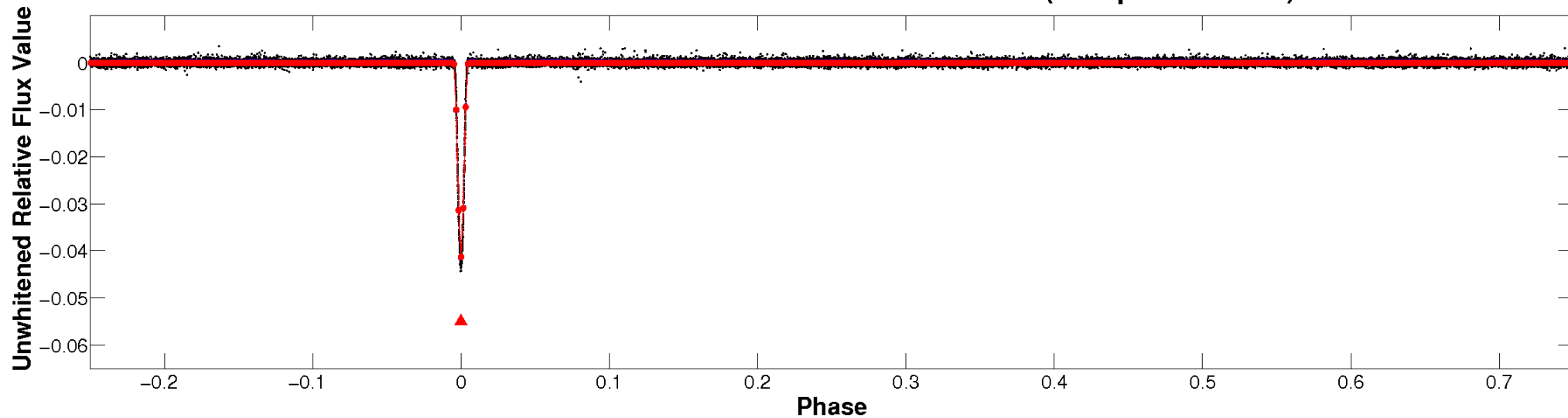
ALT Odd/Even

TCE 007031517-01

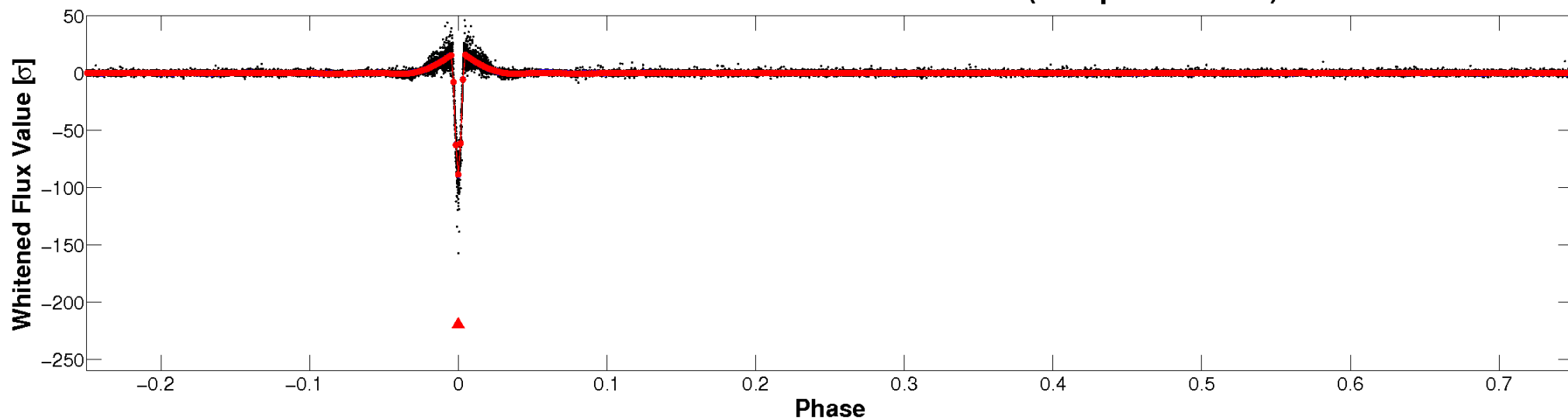


Non-Whitened Vs. Whitened Light Curve

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

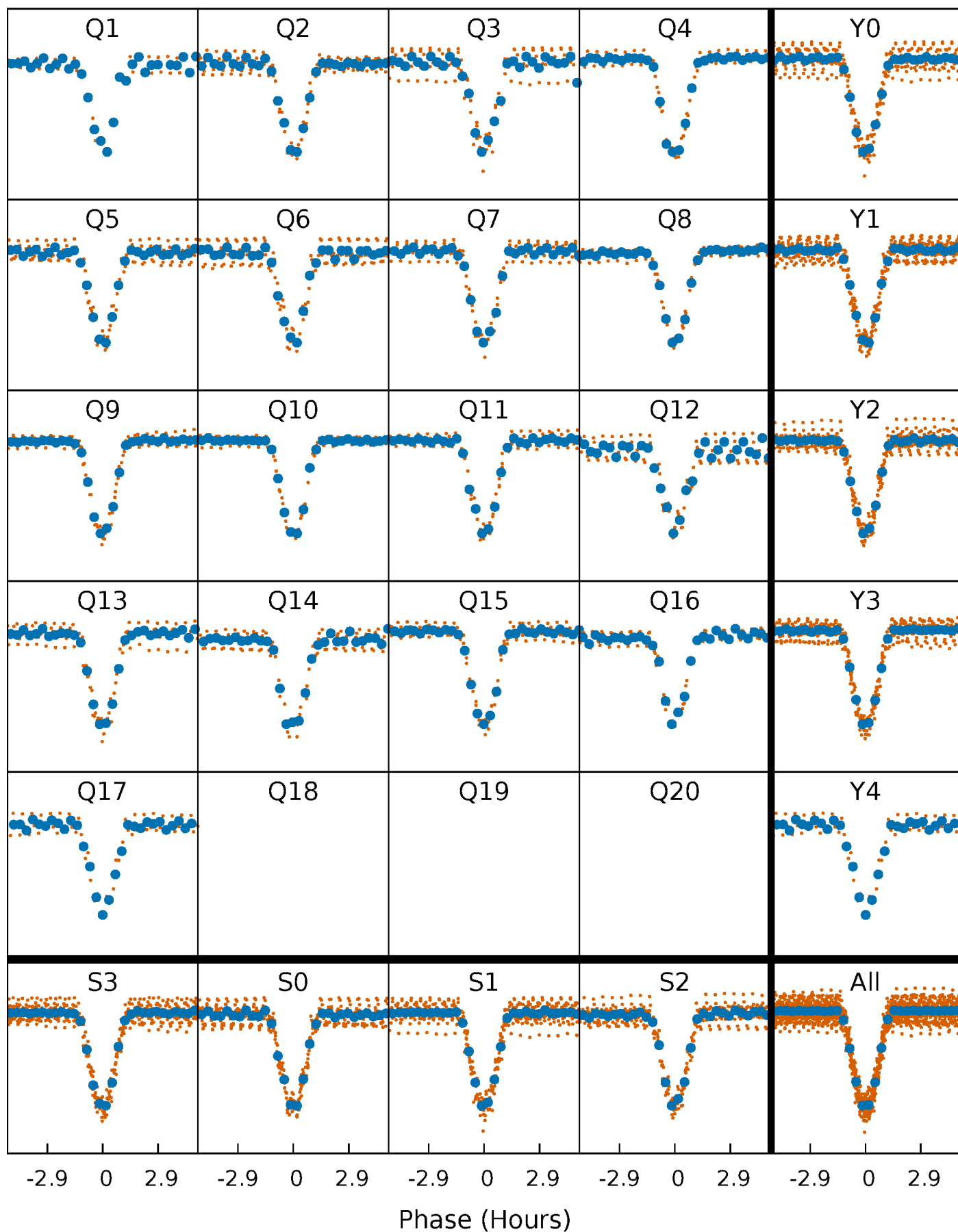


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



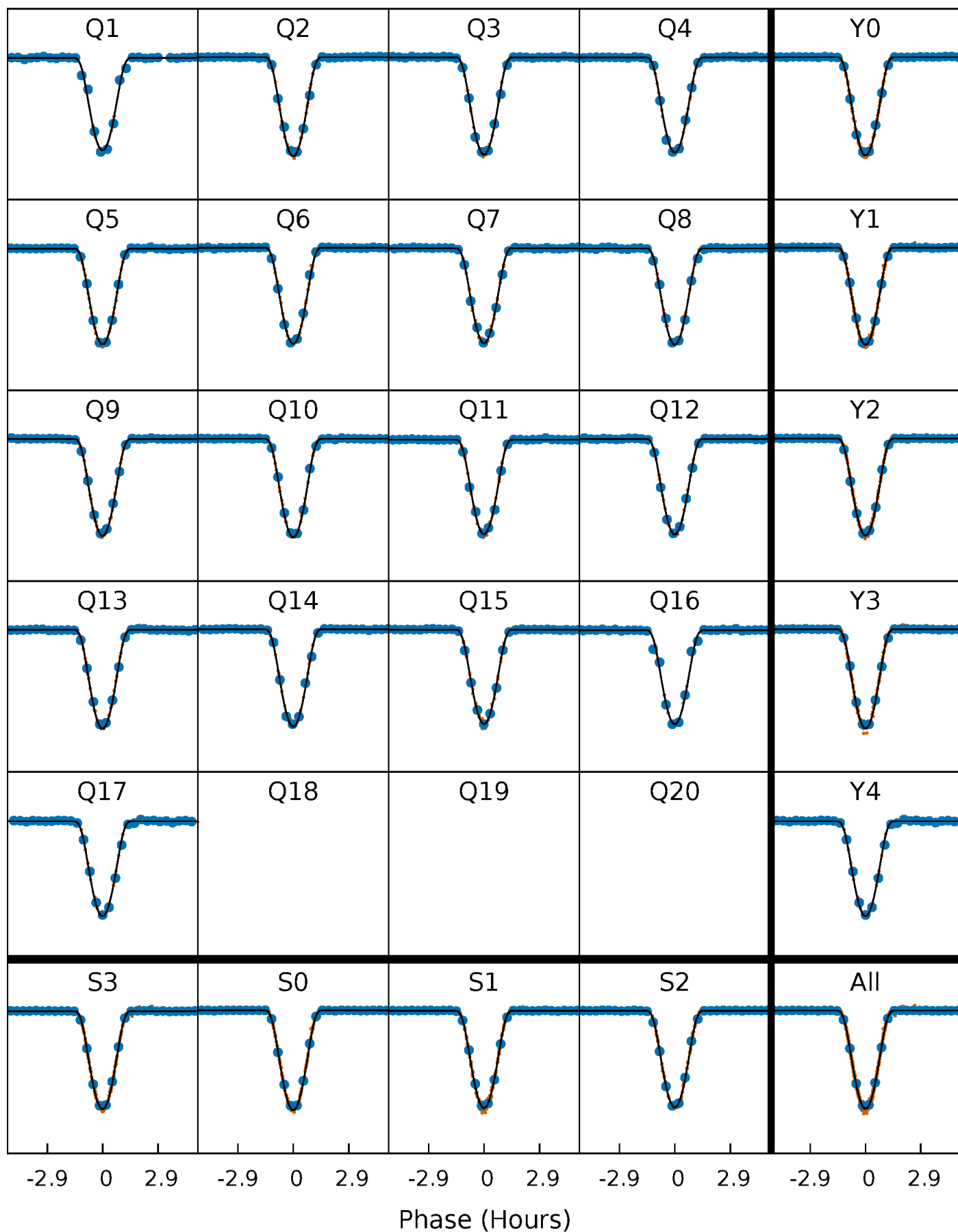
PDC Quarter-Phased Transit Curves

TCE 007031517-01 P= 12.940670 Days $T_0=140.600906$ (BKJD)



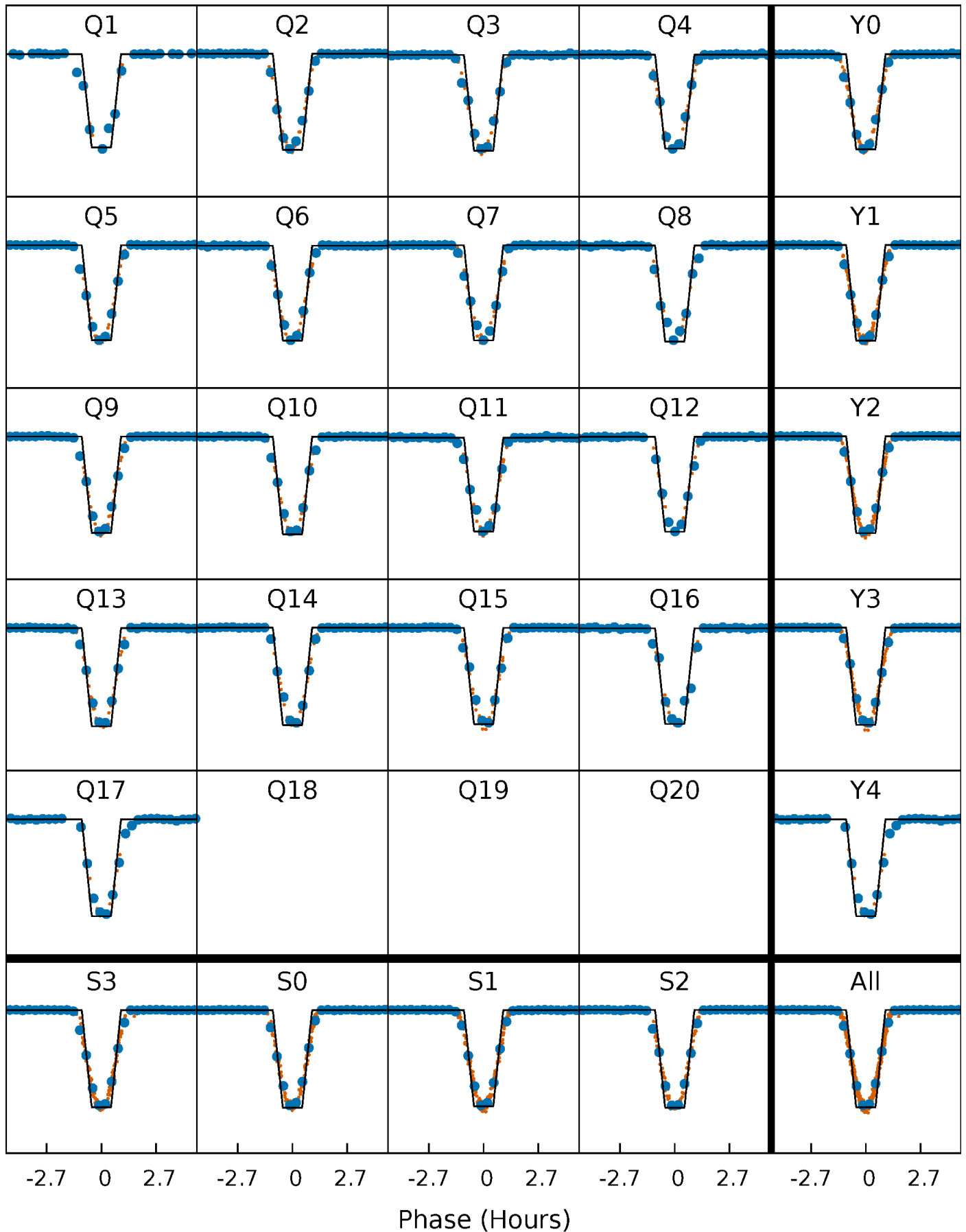
DV Quarter-Phased Transit Curves

TCE 007031517-01 P= 12.940670 Days $T_0=140.600906$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

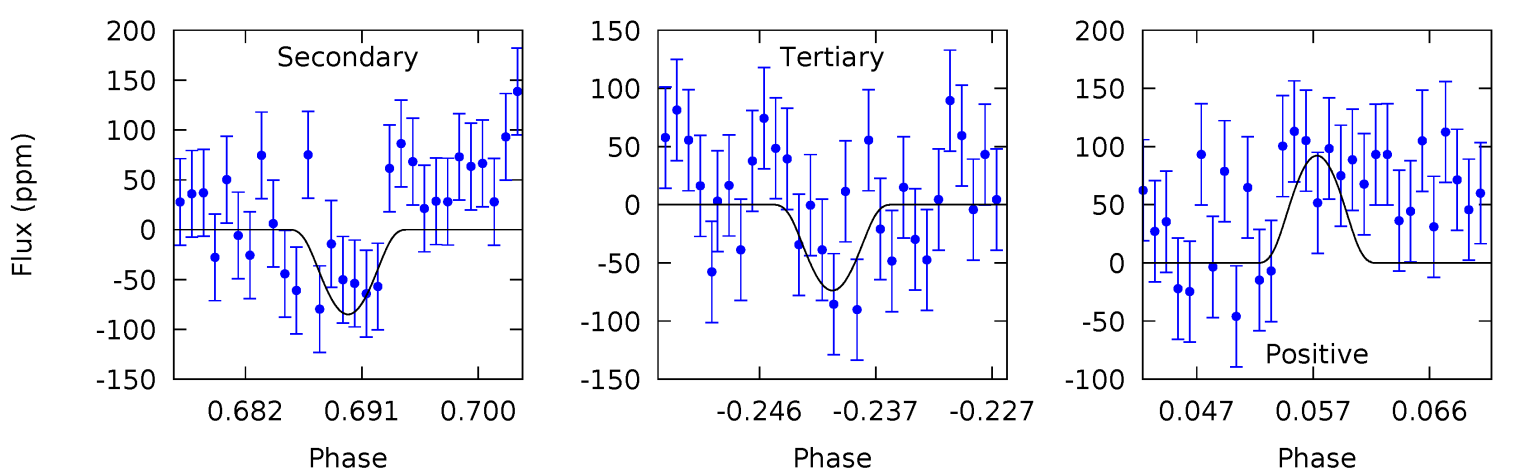
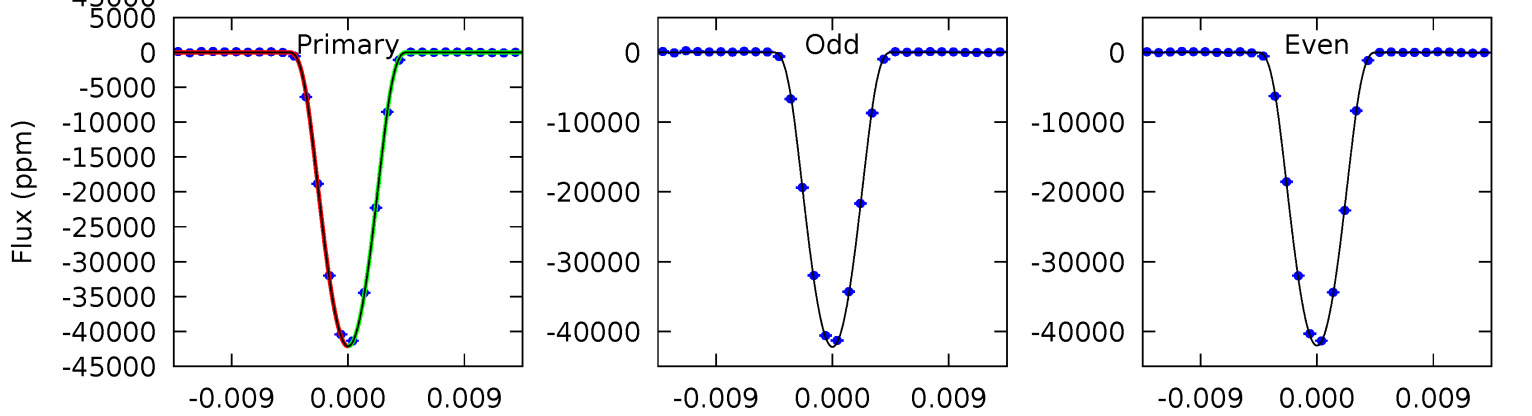
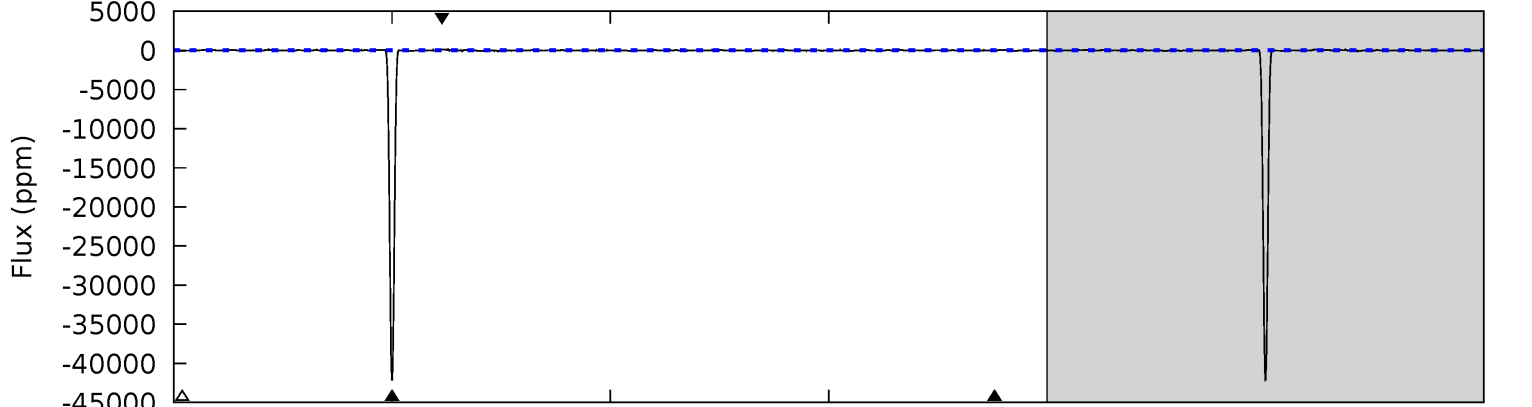
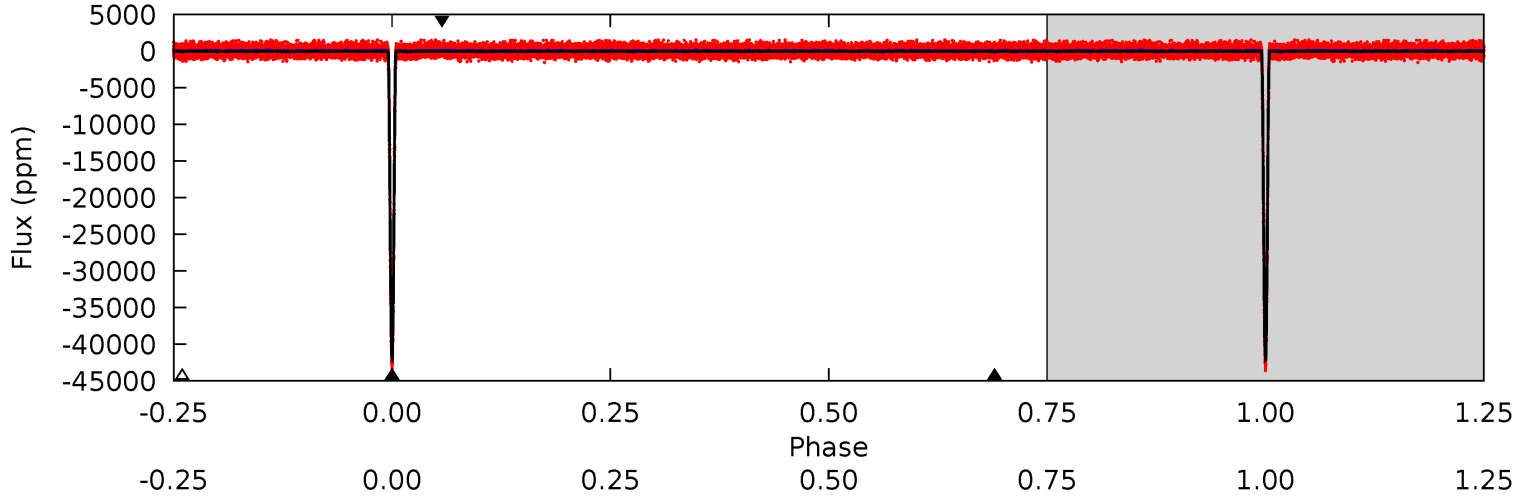
TCE 007031517-01 P= 12.940619 Days $T_0=140.603722$ (BKJD)



DV Model-Shift Uniqueness Test

007031517-01, P = 12.940670 Days, E = 127.660236 Days

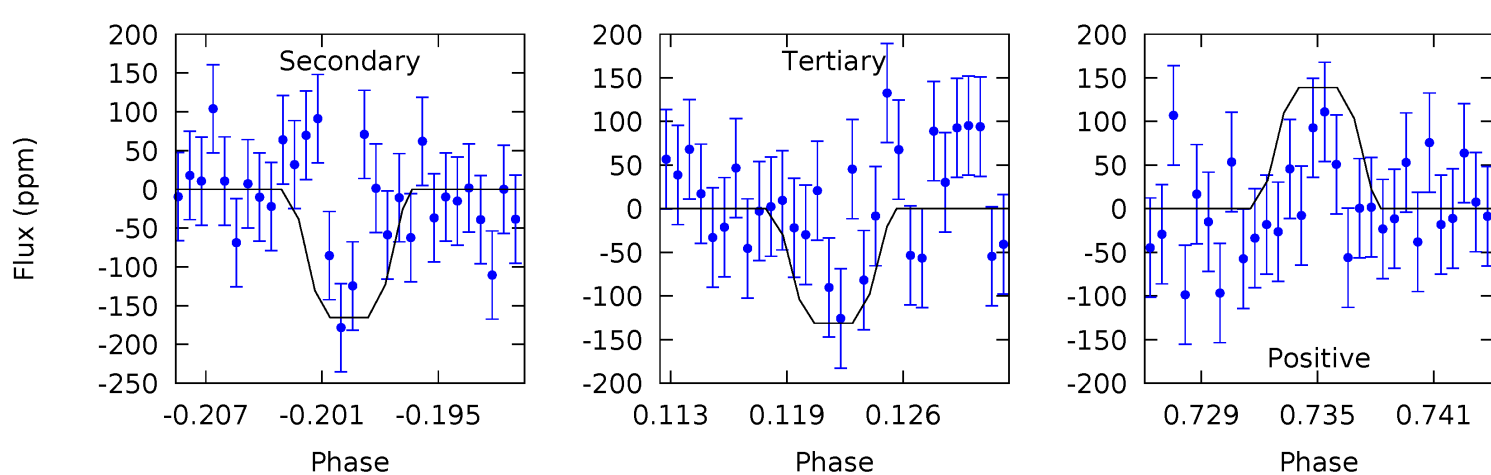
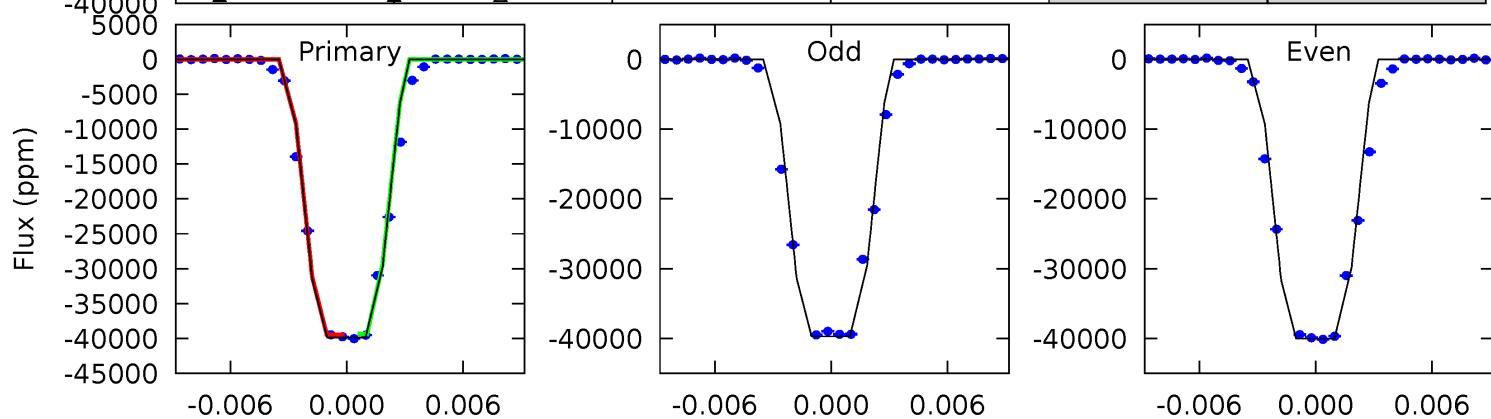
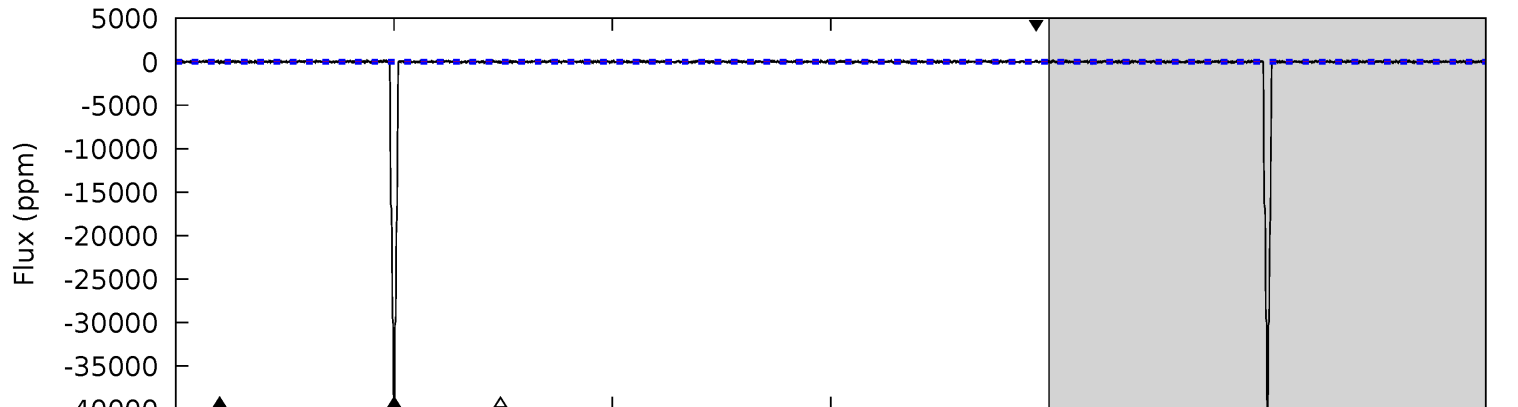
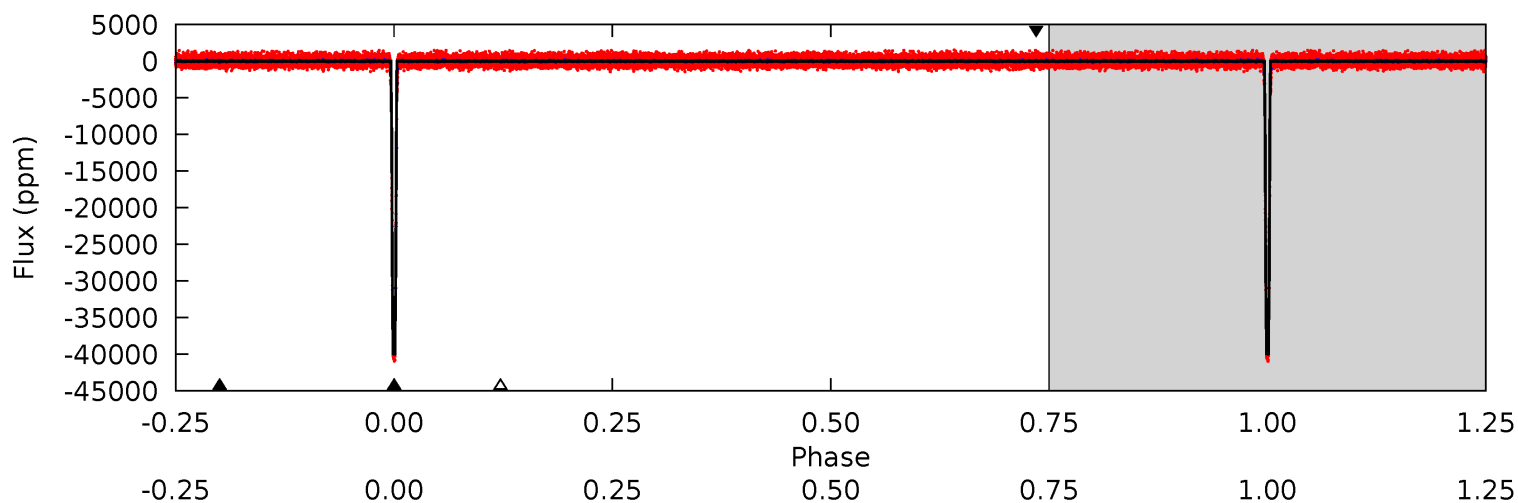
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2656	5.36	4.65	5.81	5.04	2.59	1.88	2651	2650	0.71	-0.46	6.03	1.00	0.00	0.19



Alt Model-Shift Uniqueness Test

007031517-01, P = 12.940619 Days, E = 127.663103 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1132	4.69	3.73	3.94	5.11	2.73	1.21	1129	1128	0.96	0.75	4.57	1.00	0.00	0



Stellar Parameters For KIC 007031517

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5875^{+140}_{-175}	$4.572^{+0.036}_{-0.144}$	$-0.420^{+0.300}_{-0.300}$	$0.809^{+0.174}_{-0.069}$	$0.895^{+0.089}_{-0.099}$	$2.376^{+0.465}_{-0.987}$
	+2%/-3%	+1%/-3%	+71%/-71%	+22%/-9%	+10%/-11%	+20%/-42%
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 007031517-01 / KOI 0871.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-85 ± 16	$23.97^{+2.63}_{-1.74}$	1025^{+55}_{-40}	1983^{+60}_{-80}	$0.842^{+0.210}_{-0.206}$
Alt.	-165 ± 35	$18.53^{+1.99}_{-1.34}$	1027^{+56}_{-38}	2339^{+67}_{-82}	$2.745^{+0.797}_{-0.719}$

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

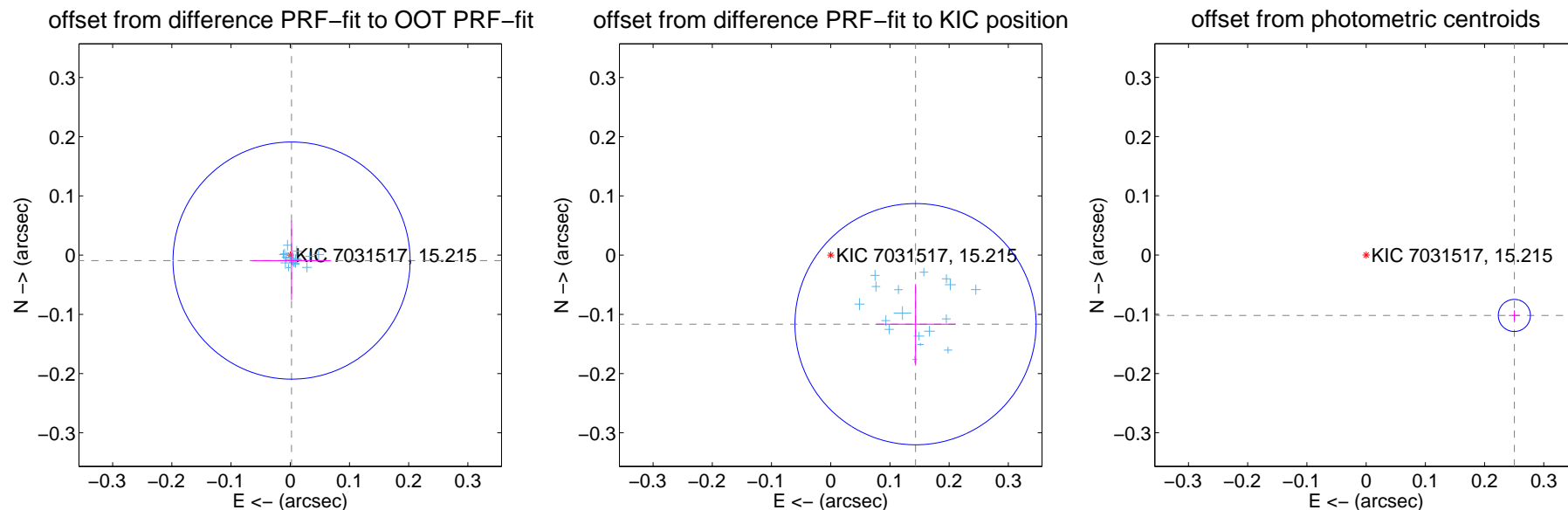
DV Centroid Data

Supplemental centroid analysis for 007031517-01. Kepler magnitude: 15.21. Transit SNR 1224.93

There are 17 quarters with good PRF difference image offsets

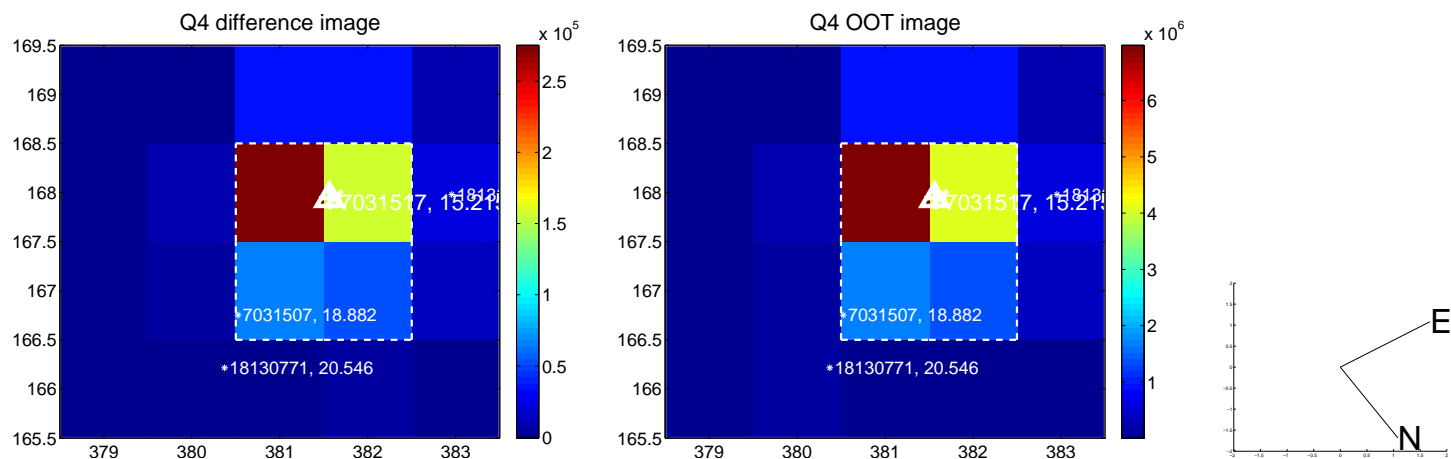
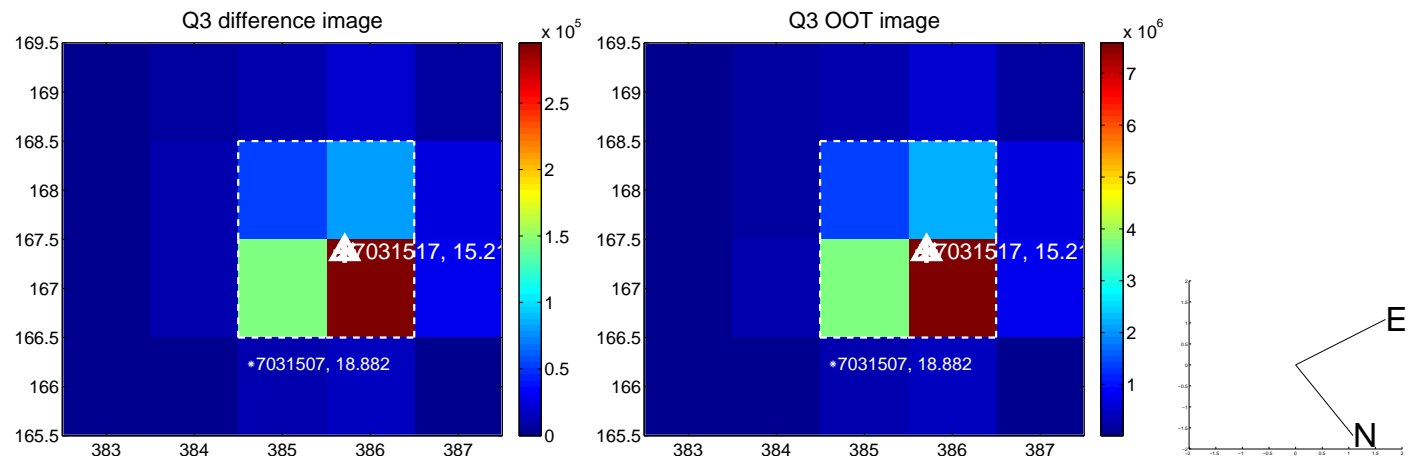
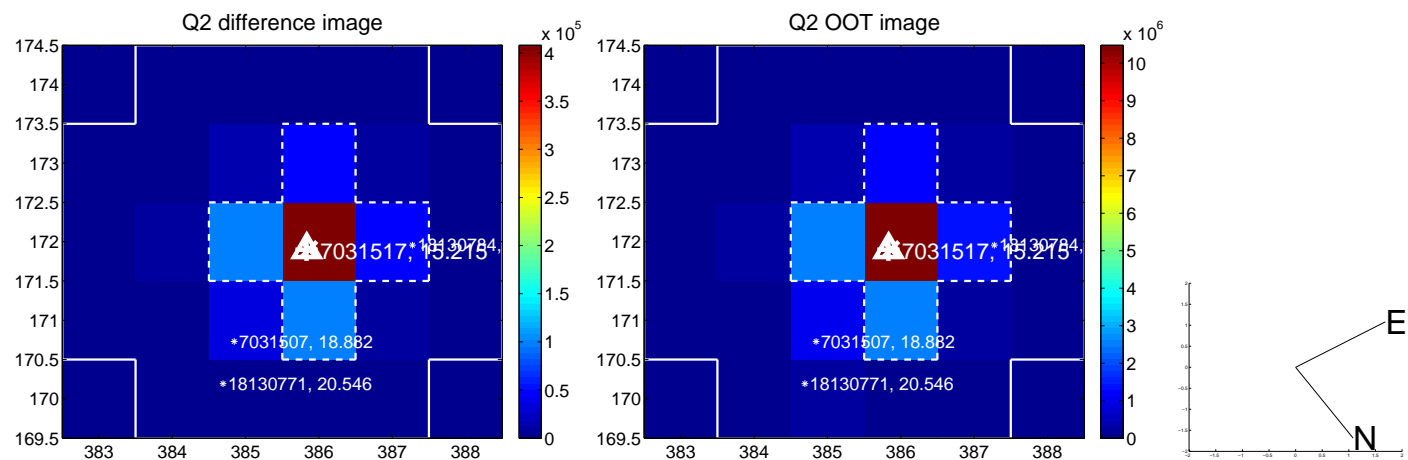
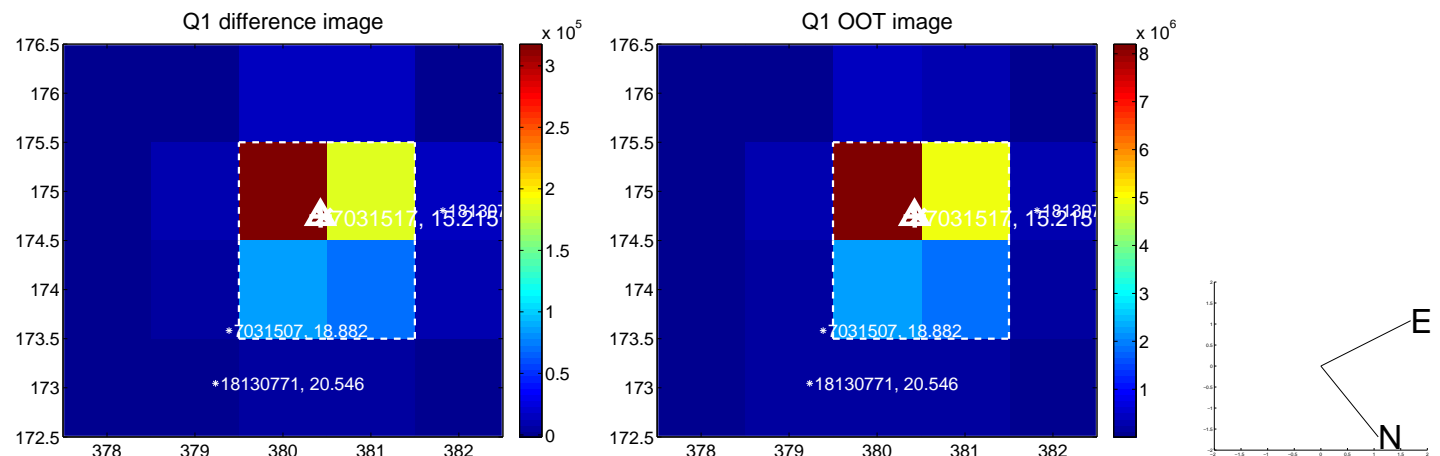
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.009 ± 0.067	0.14	-0.002 ± 0.067	-0.009 ± 0.067
PRF-fit source offset from KIC position	0.185 ± 0.068	2.72	-0.143 ± 0.068	-0.117 ± 0.068
photometric centroid source offset	0.27 ± 0.01	29.91	-0.25 ± 0.01	-0.10 ± 0.01

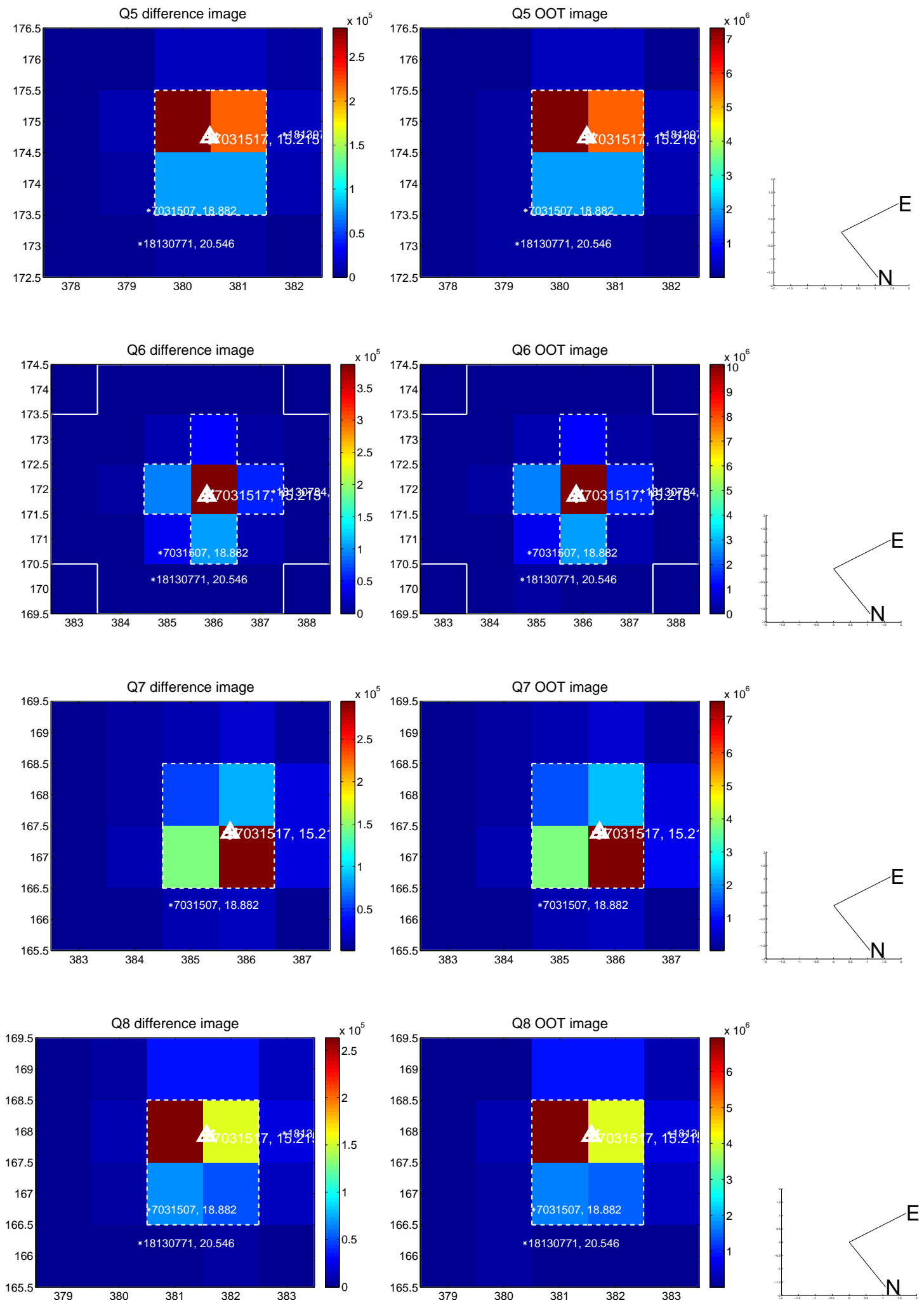


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

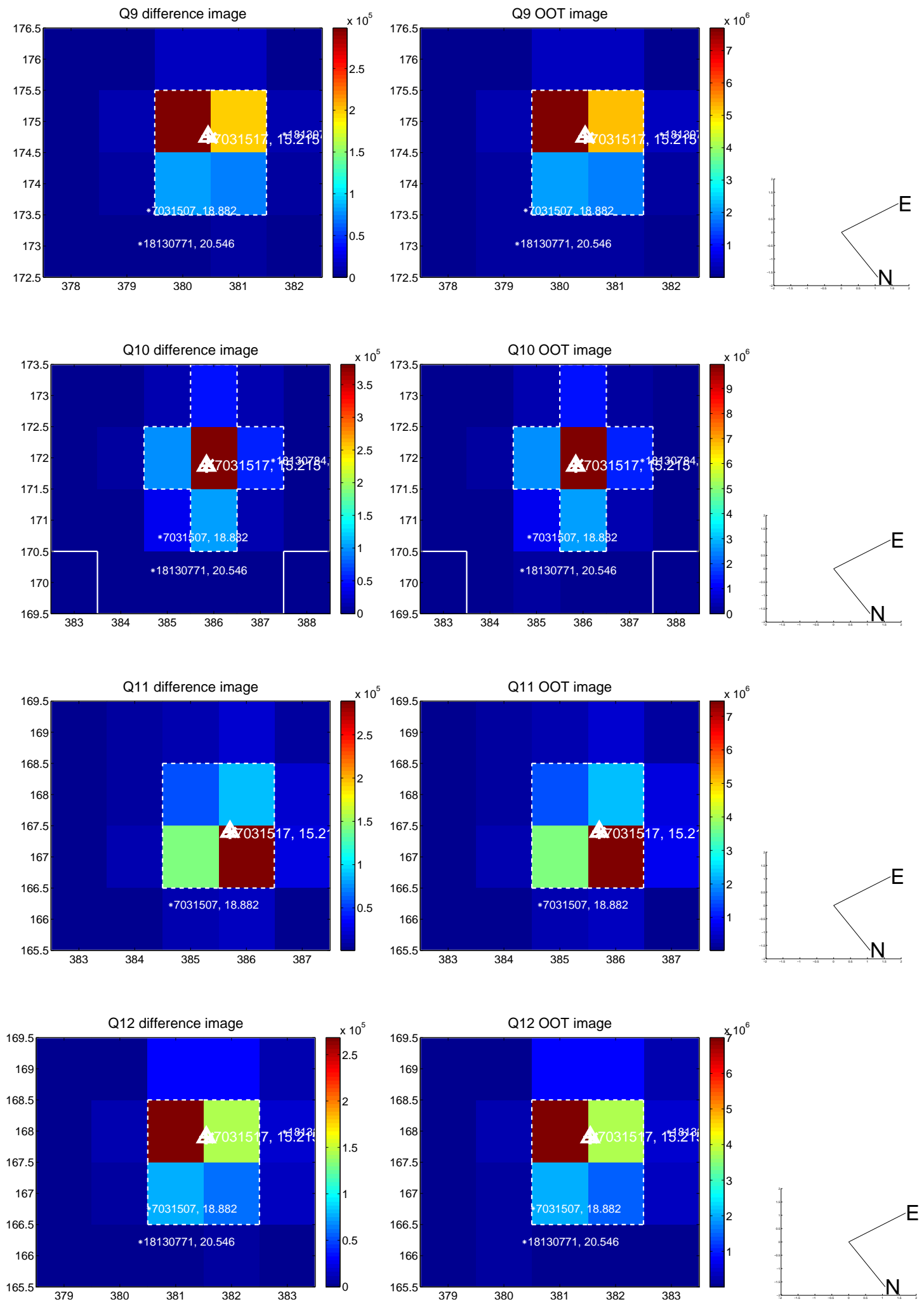
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



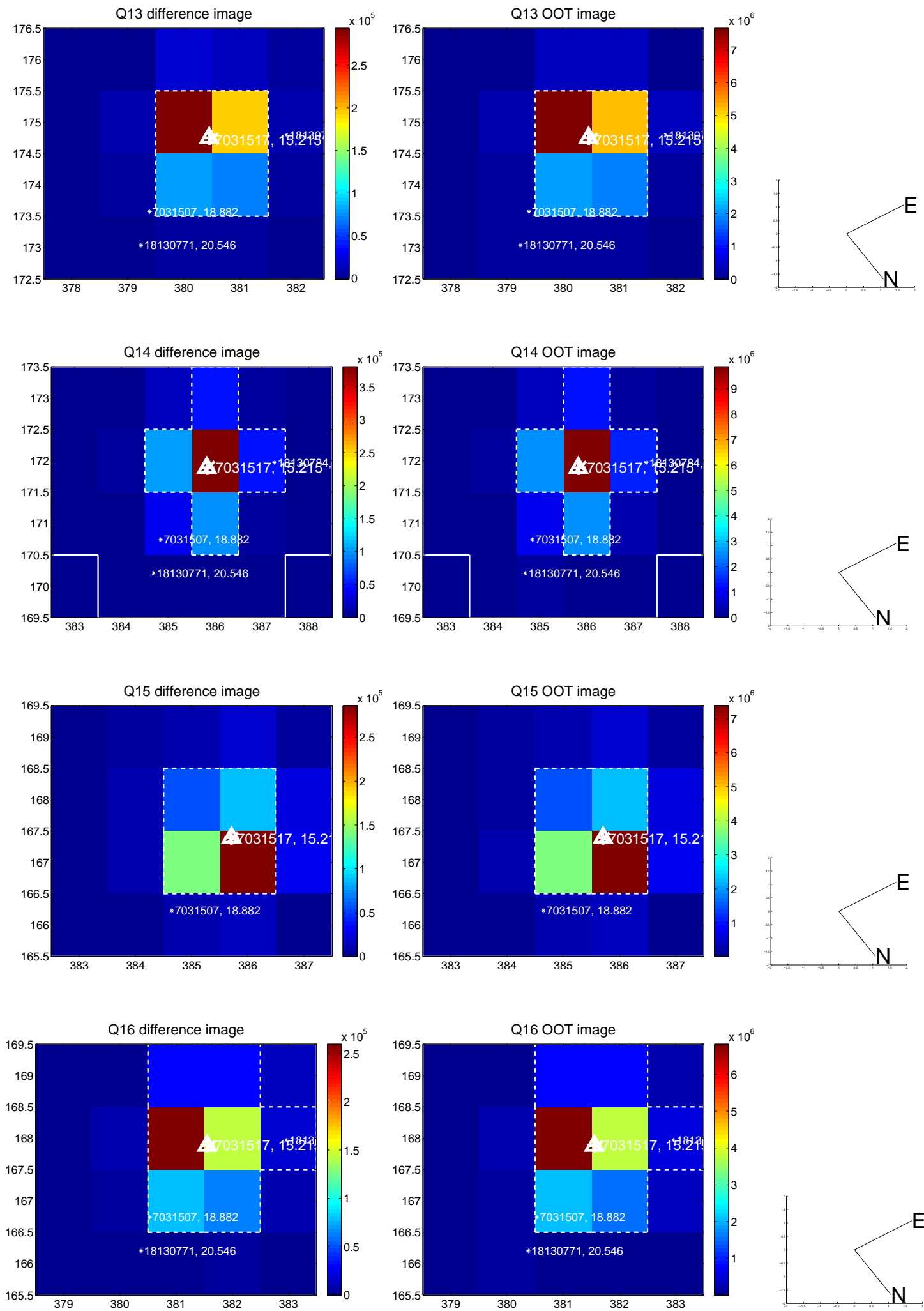
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



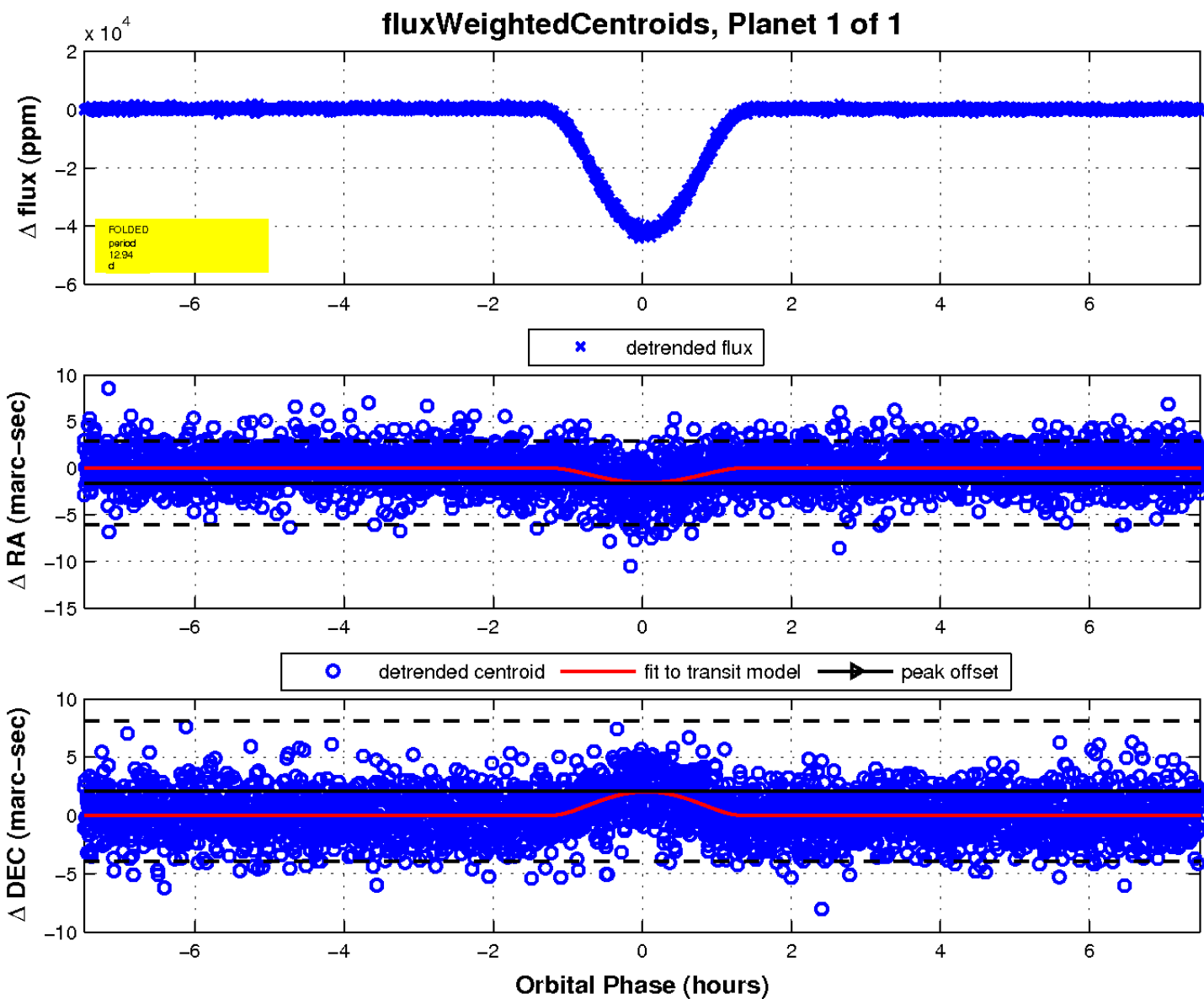
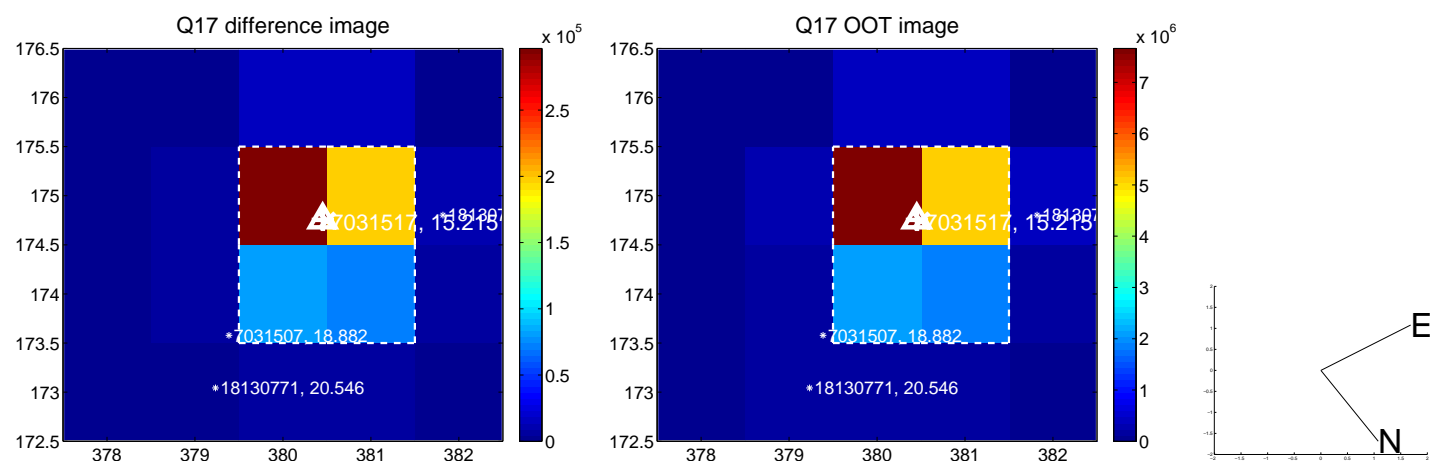
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

