

KIC 005651104

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})
005651104-01	OBS	0840.01	3.040332	133.464582	10872.2	1.934	653.4	617.8	0.79	5035	9.34	257.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005651104-01	OBS	PC	1.00	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.

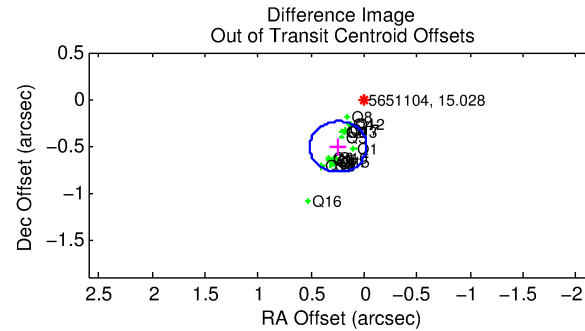
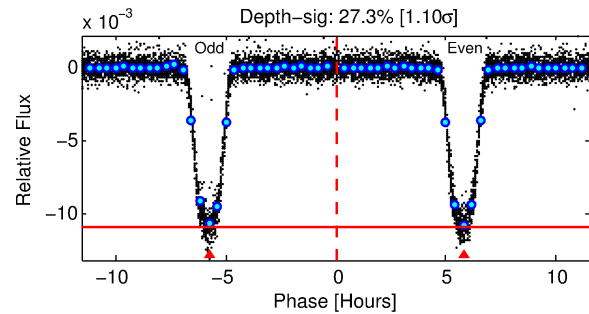
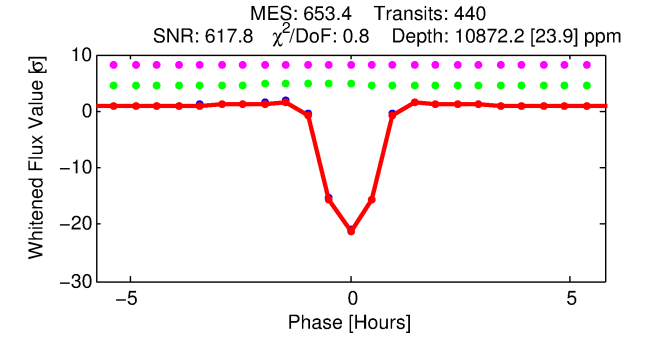
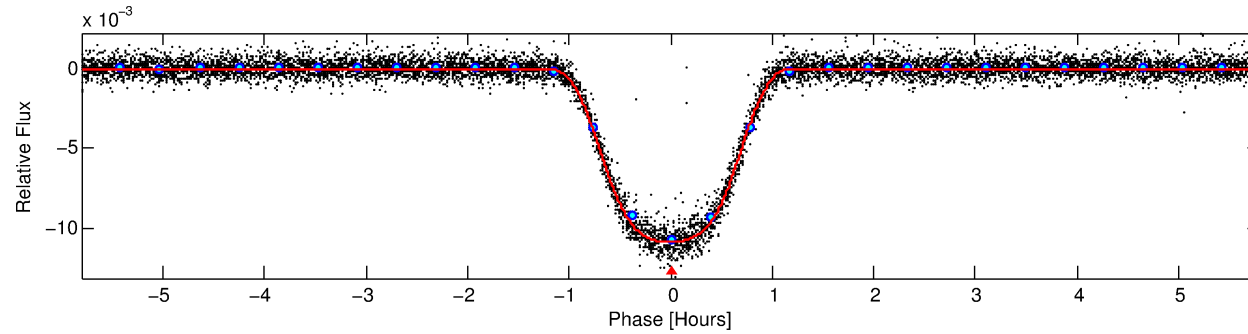
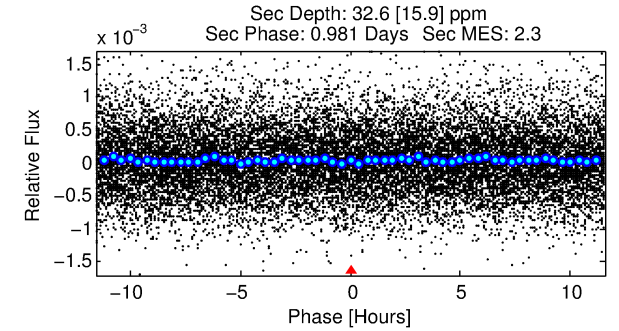
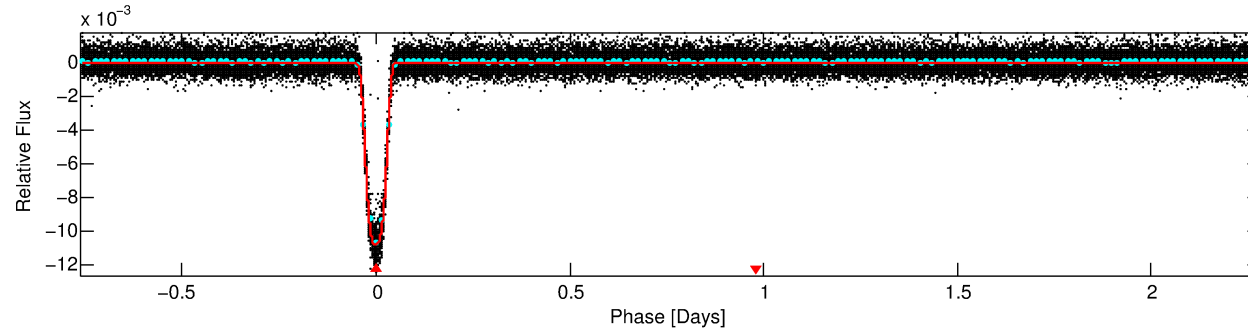
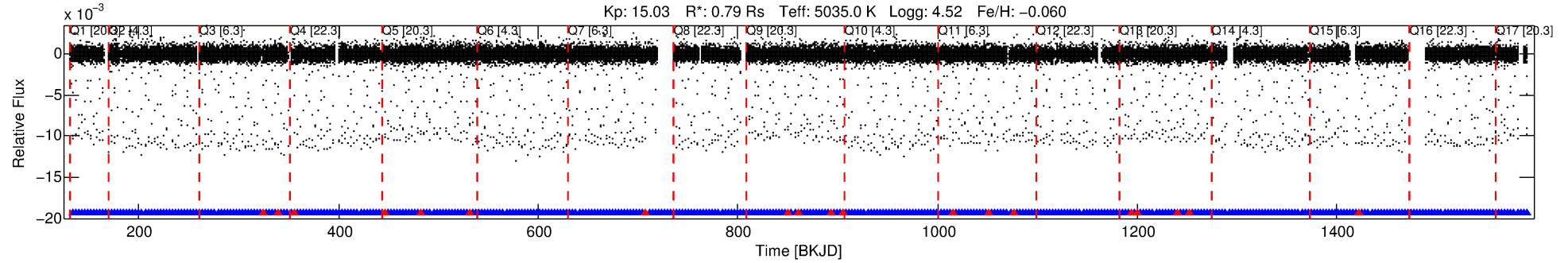
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005651104-01

No Significant Match Found

DV One-Page Summary

KIC: 5651104 Candidate: 1 of 1 Period: 3.040 d
KOI: K00840.01 Corr: 0.975



DV Fit Results:

Period = 3.04033 [0.00000] d
Epoch = 133.4646 [0.0000] BKJD
Rp/R* = 0.1082 [0.0004]
a/R* = 9.20 [0.09]
b = 0.80 [0.00]
Seff = 257.70 [49.16]
Teff = 1022 [49] K
Rp = 9.34 [1.03] Re
a = 0.0374 [0.0037] AU
Ag = 0.29 [0.15] [-4.88 σ]
Teffp = 1156 [145] K [0.88 σ]

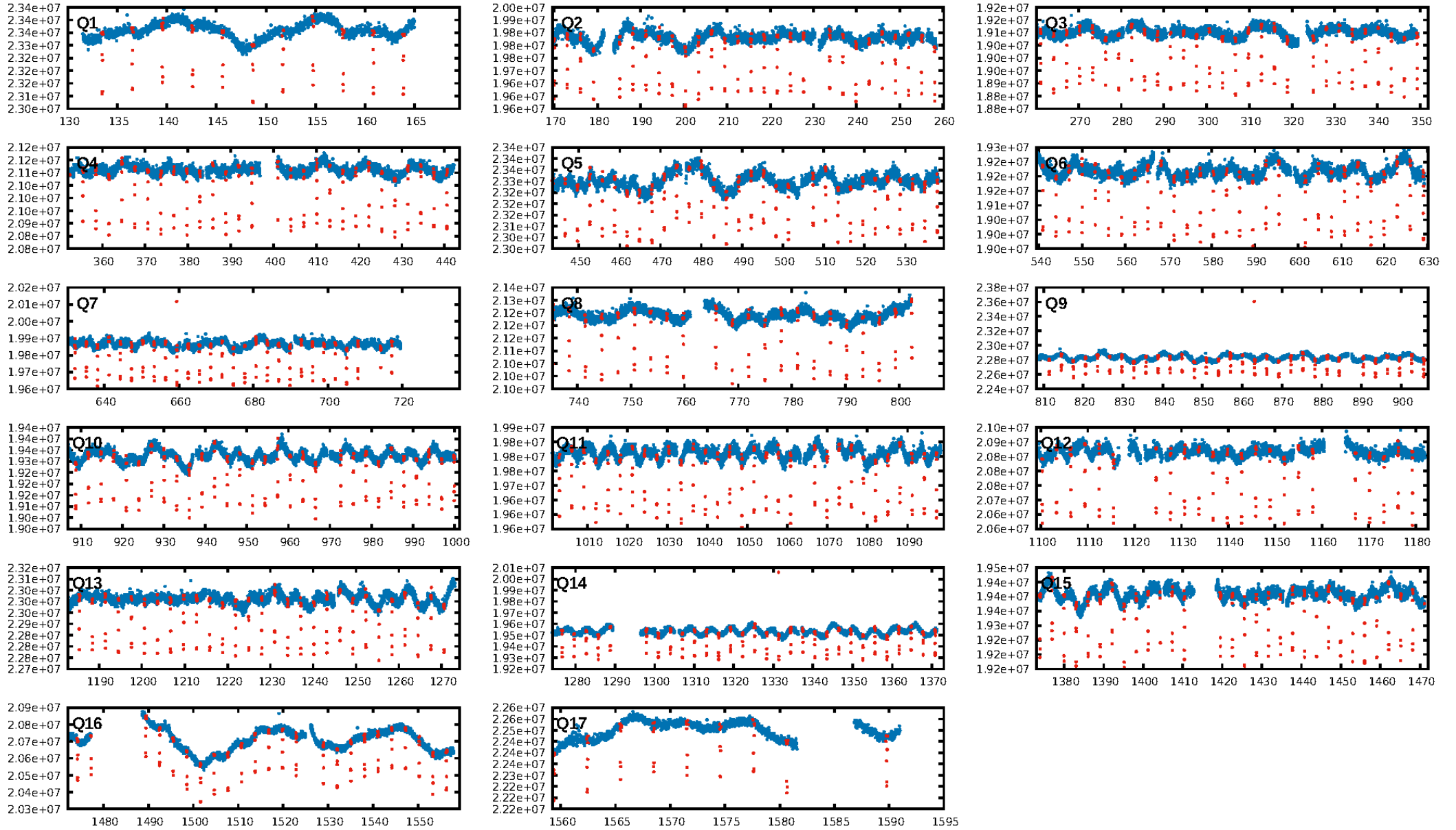
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.95 [401/420]
GhostDiagnostic-chr: 3.953
Centroid-sig: 0.0%
Centroid-so: 0.594 arcsec [29.74 σ]
OotOffset-rm: 0.564 arcsec [6.25 σ]
KicOffset-rm: 0.116 arcsec [1.71 σ]
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]

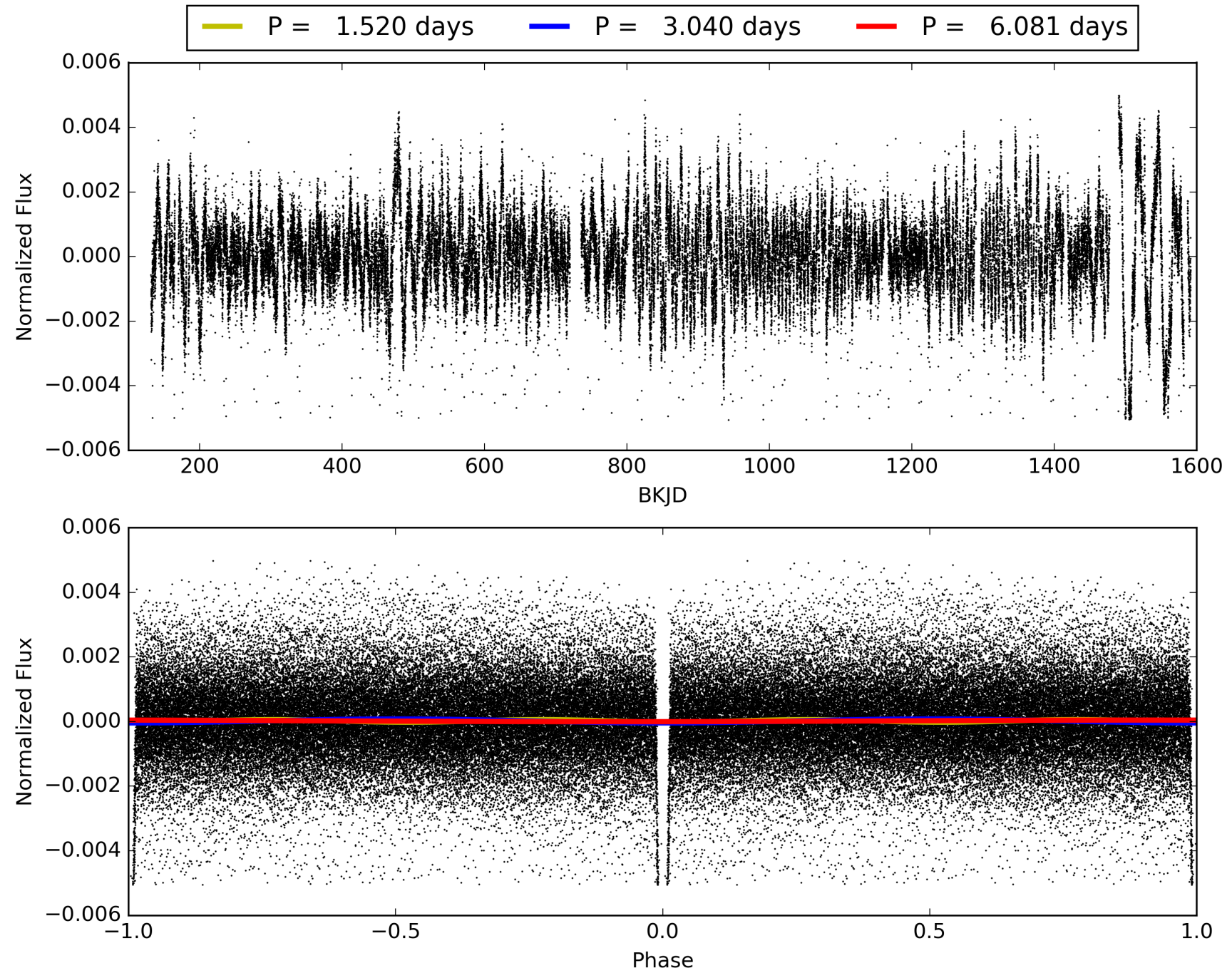
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:11:53 Z

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

TCE 005651104-01, PDC Light Curves

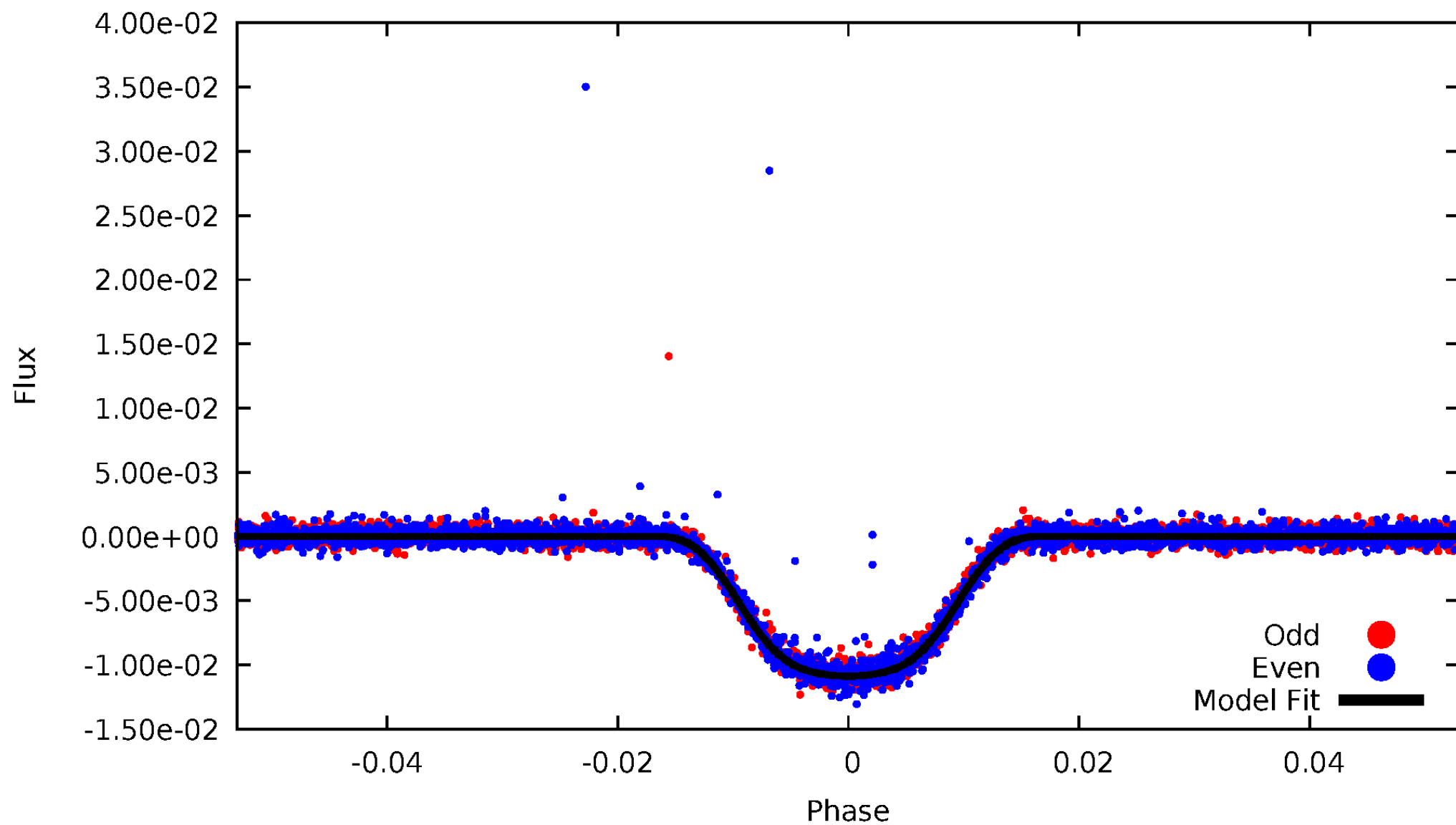


TCE 005651104-01



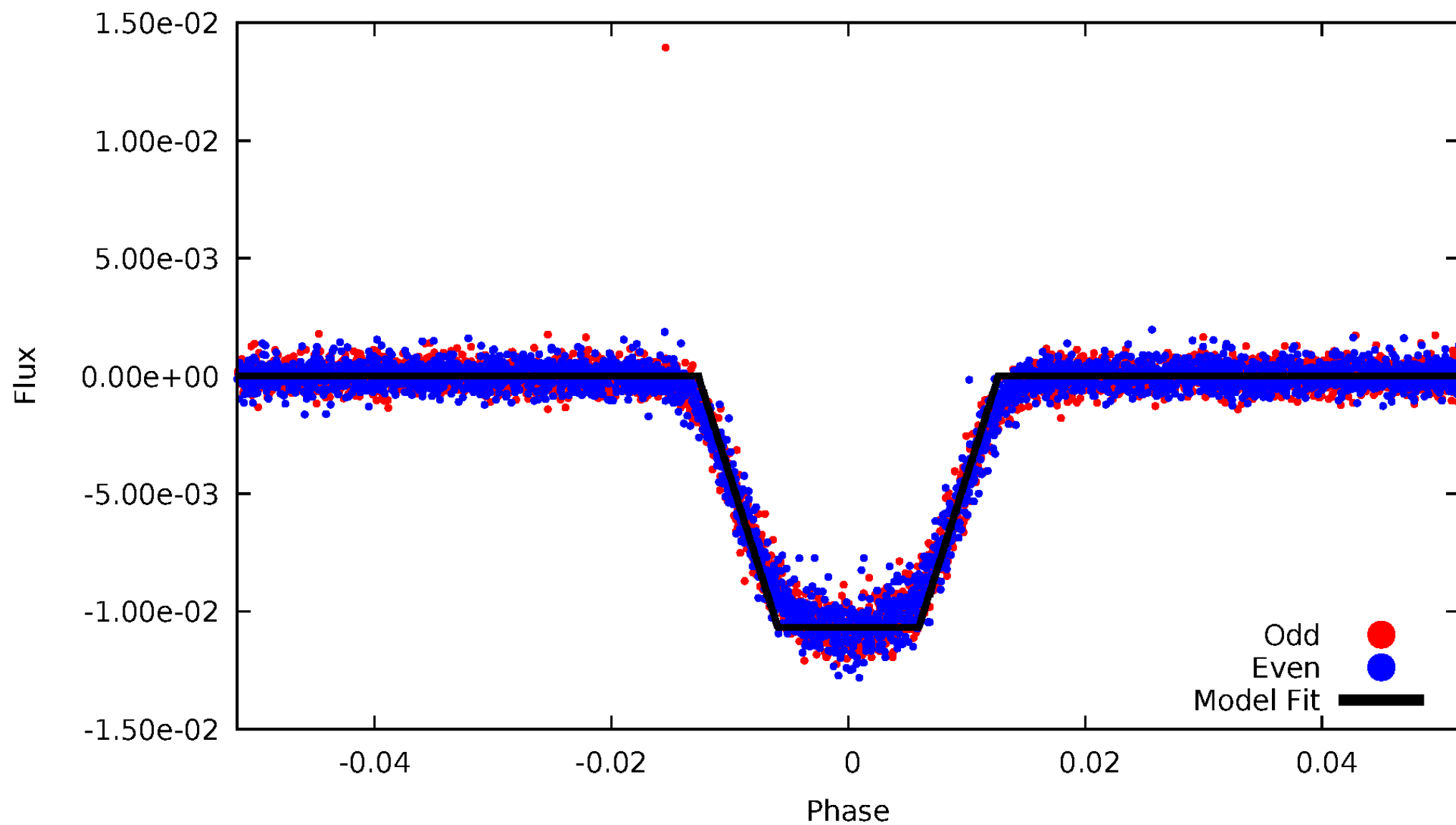
DV Odd/Even

TCE 005651104-01



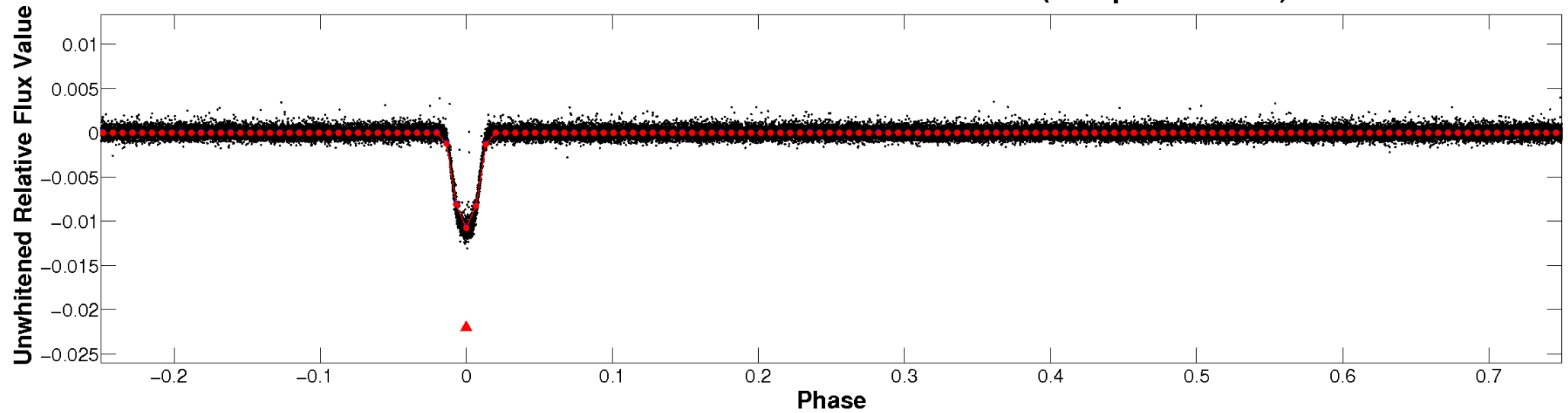
ALT Odd/Even

TCE 005651104-01

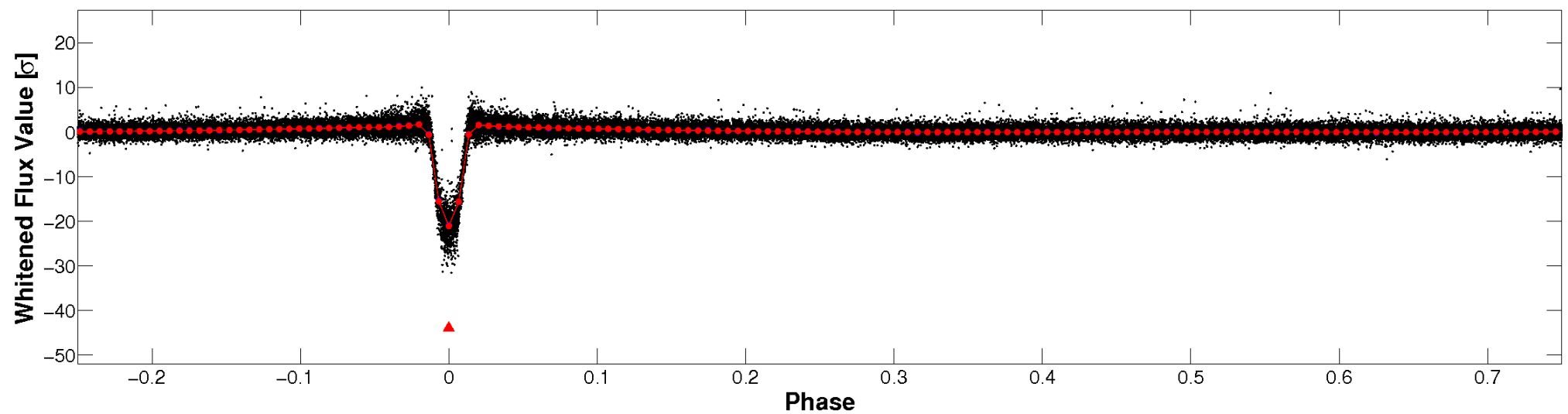


Non-Whitened Vs. Whitened Light Curve

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

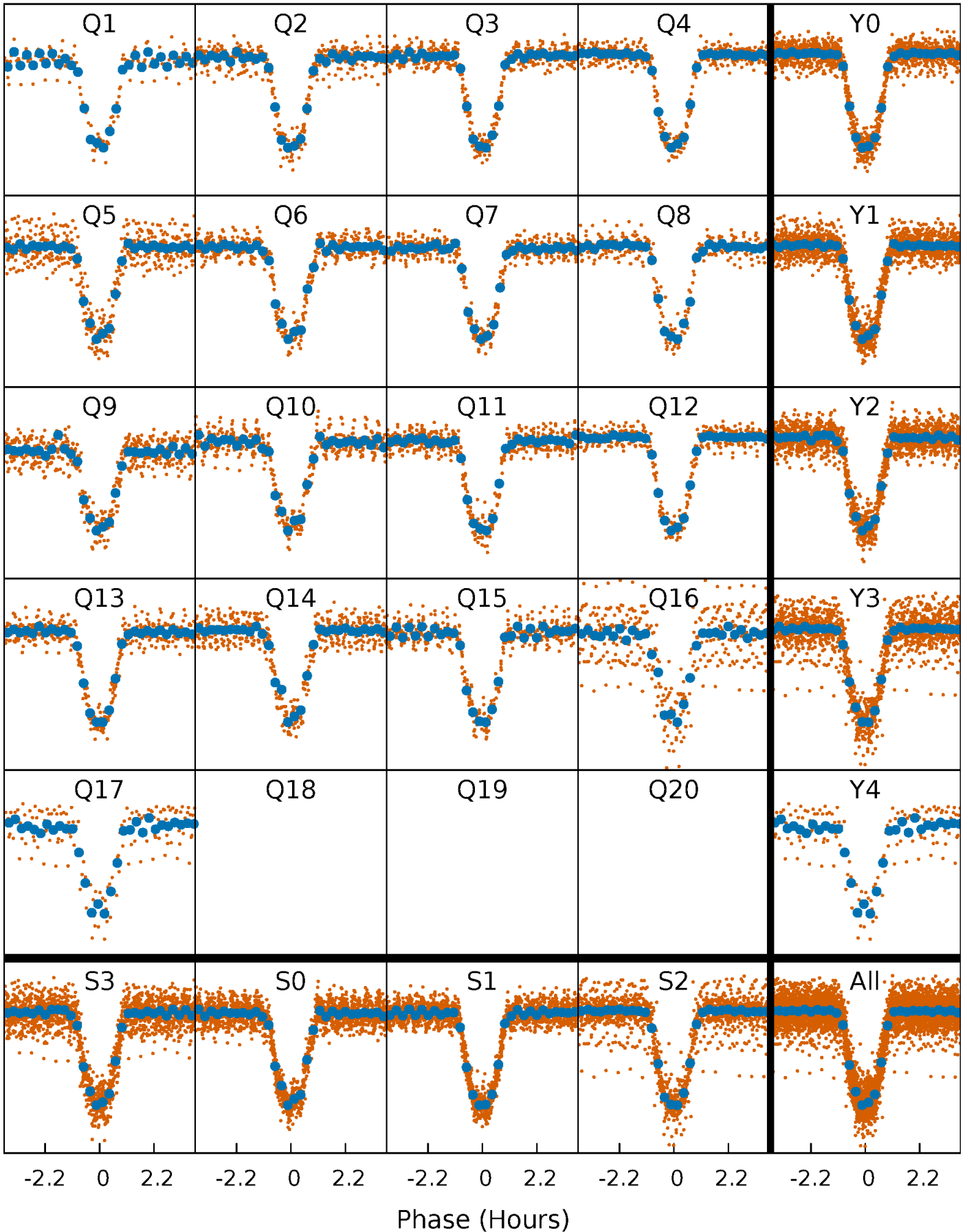


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



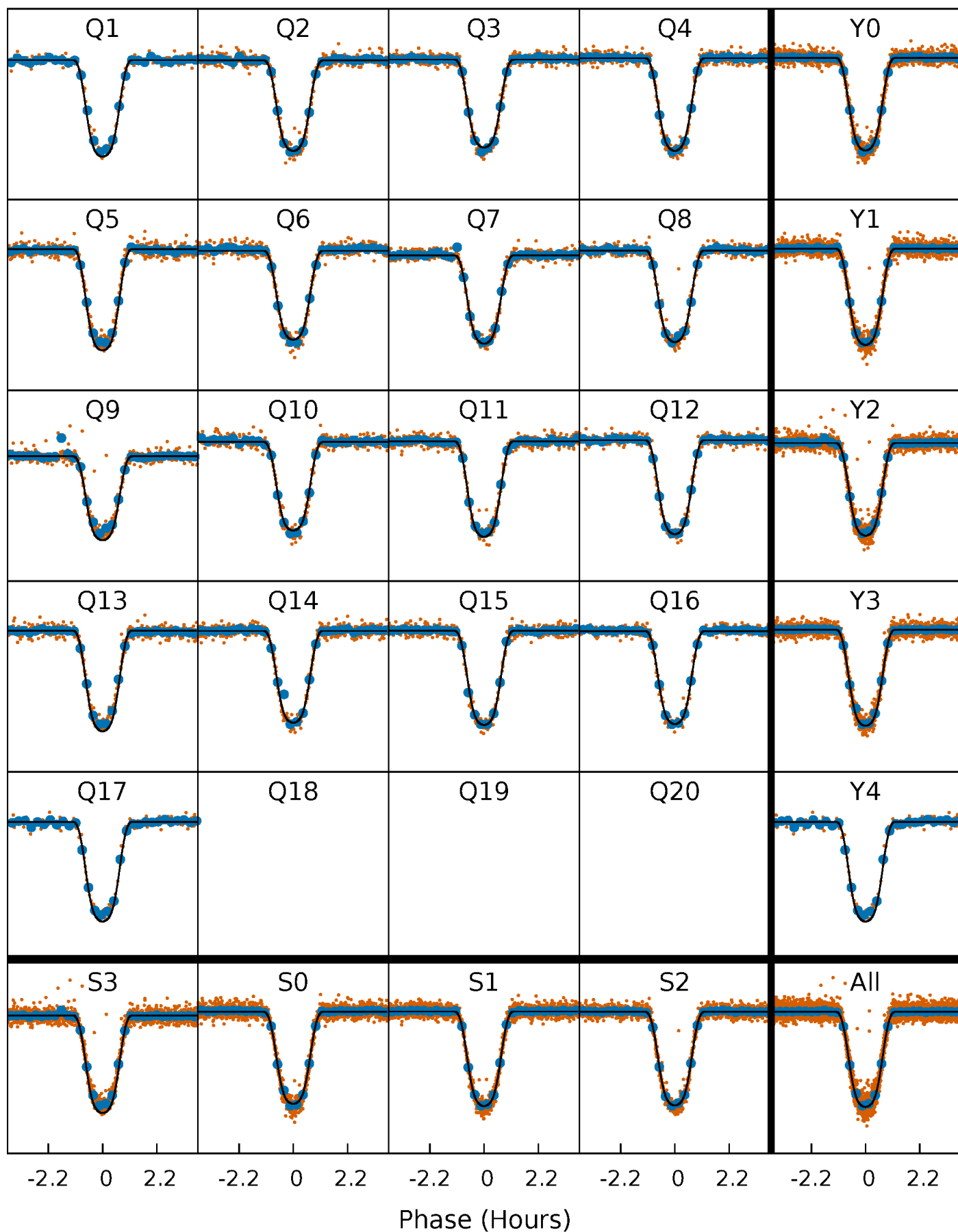
PDC Quarter-Phased Transit Curves

TCE 005651104-01 P= 3.040332 Days $T_0=133.464582$ (BKJD)



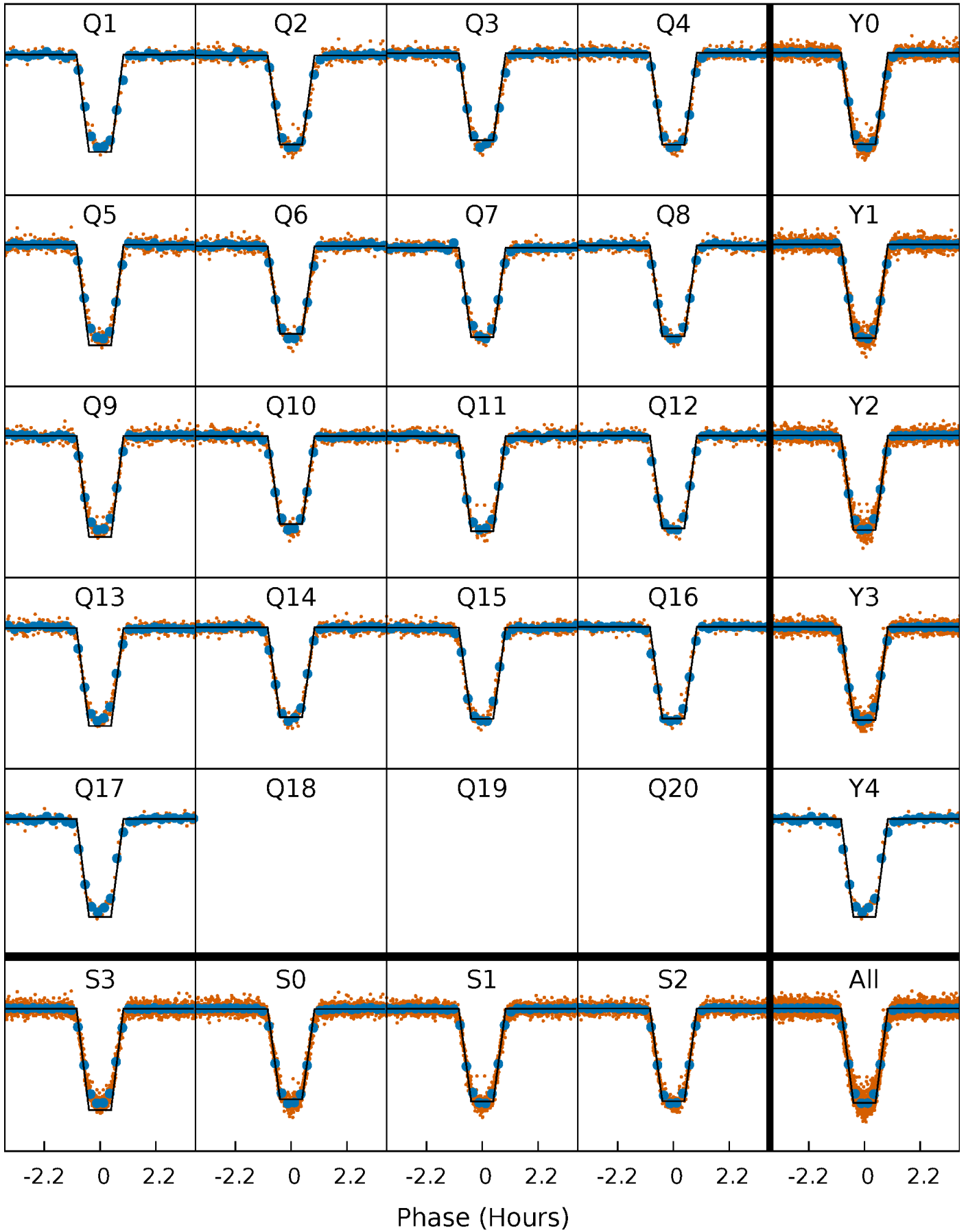
DV Quarter-Phased Transit Curves

TCE 005651104-01 P= 3.040332 Days $T_0=133.464582$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

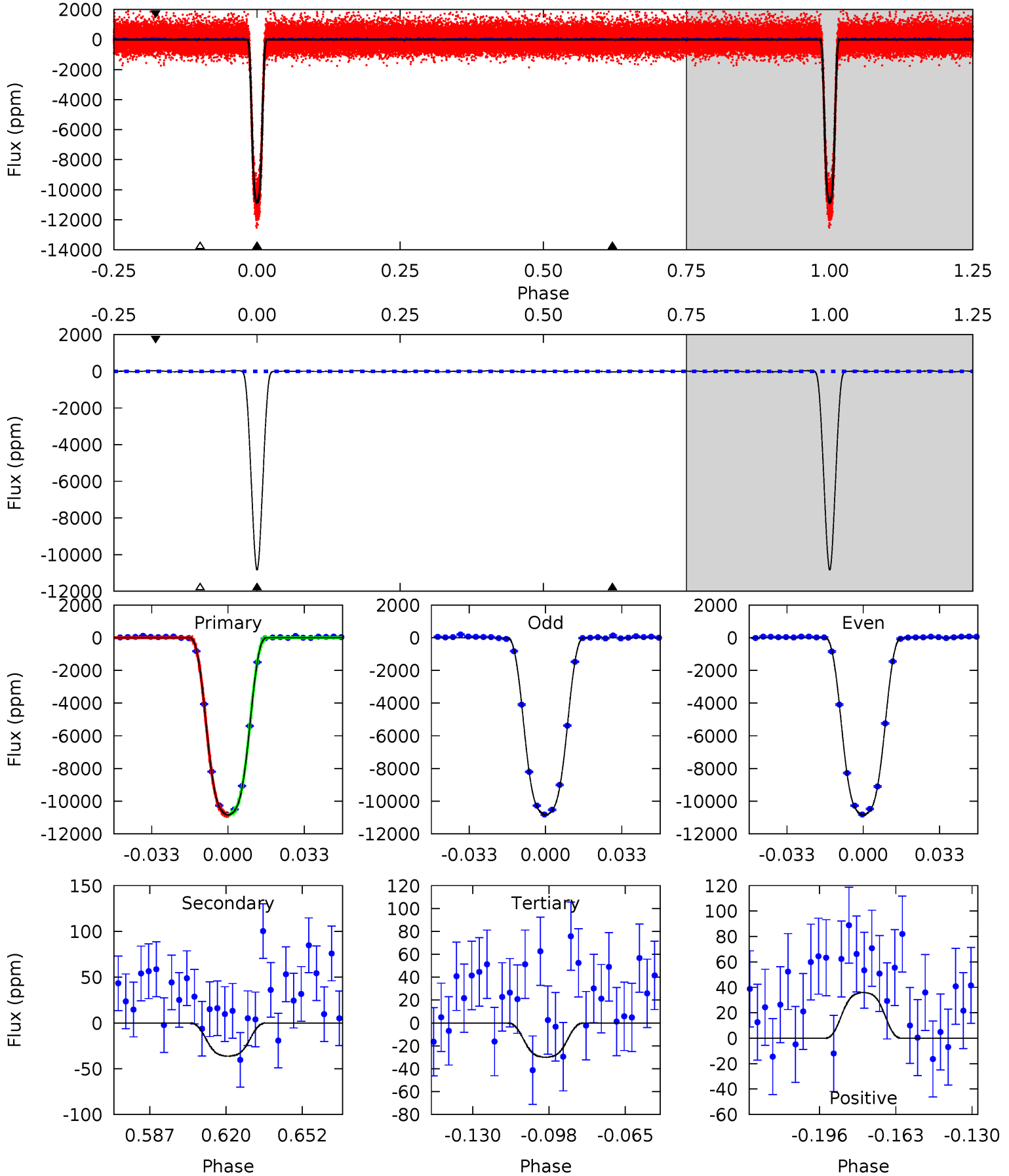
TCE 005651104-01 P= 3.040339 Days $T_0=133.463025$ (BKJD)



DV Model-Shift Uniqueness Test

005651104-01, P = 3.040332 Days, E = 130.424250 Days

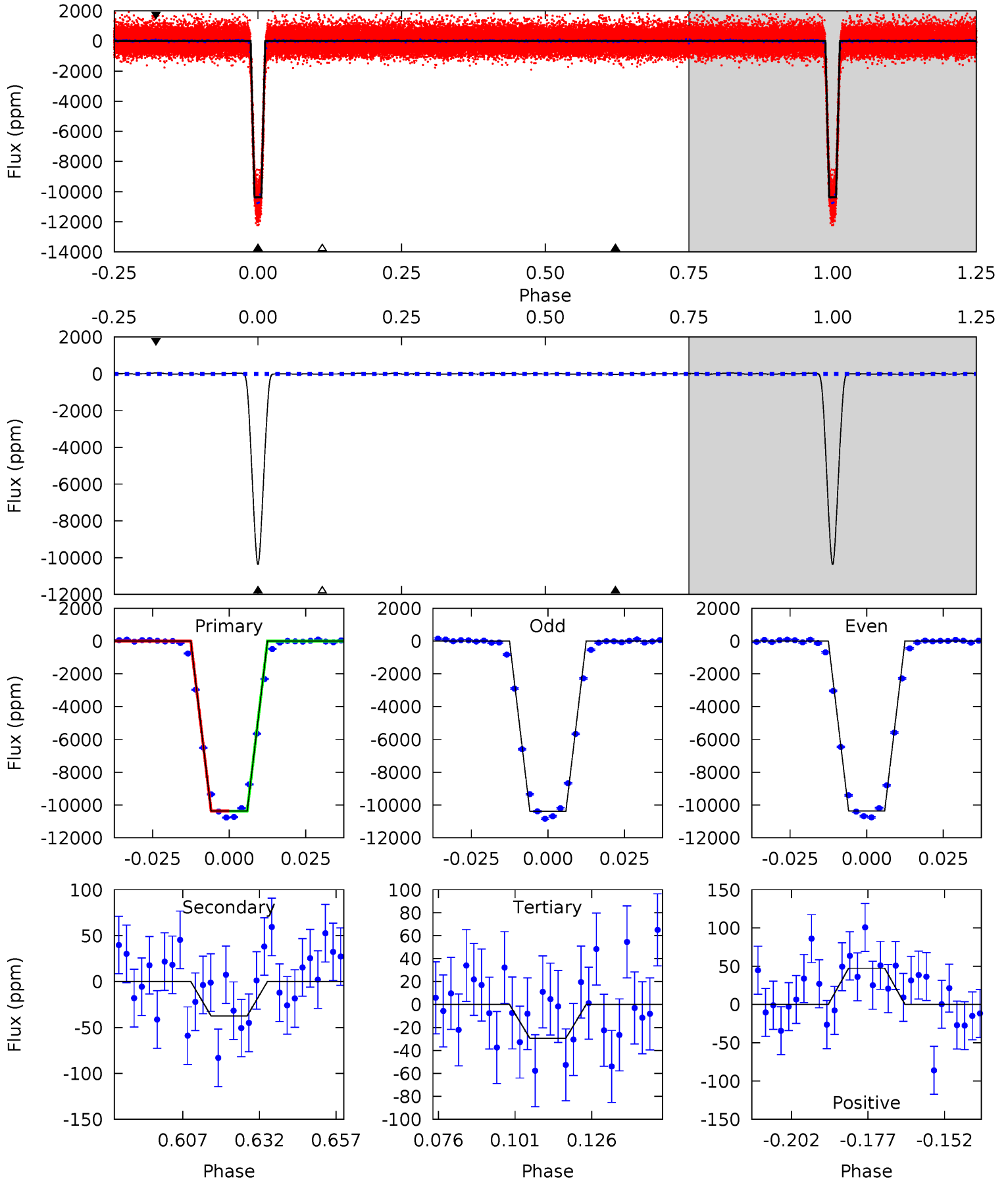
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1067	3.57	2.95	3.54	4.79	2.14	1.40	1064	1064	0.62	0.03	0.58	0.99	0.00	1.62



Alt Model-Shift Uniqueness Test

005651104-01, P = 3.040339 Days, E = 130.422686 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
889.0	3.21	2.52	4.07	4.85	2.24	1.26	886.5	885.0	0.69	-0.85	0.79	1.00	0.00	0.26



Stellar Parameters For KIC 005651104

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5035^{+151}_{-151}	$4.519^{+0.084}_{-0.063}$	$-0.060^{+0.300}_{-0.300}$	$0.791^{+0.071}_{-0.087}$	$0.754^{+0.095}_{-0.055}$	$2.144^{+0.802}_{-0.455}$
	+3%/-3%	+2%/-1%	+500%/-500%	+9%/-11%	+13%/-7%	+37%/-21%
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 005651104-01 / KOI 0840.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-36 ± 10	$9.38^{+0.57}_{-0.62}$	1421^{+57}_{-58}	1621^{+317}_{-3457}	$0.318^{+0.113}_{-0.089}$
Alt.	-37 ± 12	$8.94^{+0.50}_{-0.55}$	1423^{+60}_{-60}	1829^{+189}_{-3576}	$0.372^{+0.125}_{-0.114}$

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

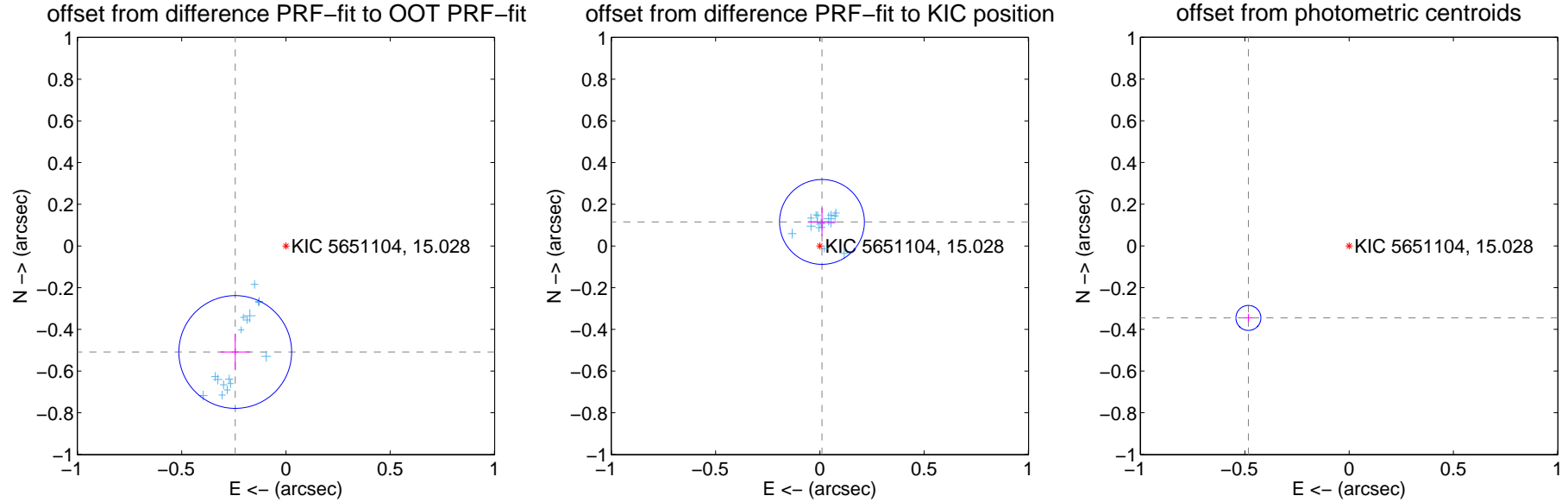
DV Centroid Data

Supplemental centroid analysis for 005651104-01. Kepler magnitude: 15.03. Transit SNR 617.76

There are 17 quarters with good PRF difference image offsets

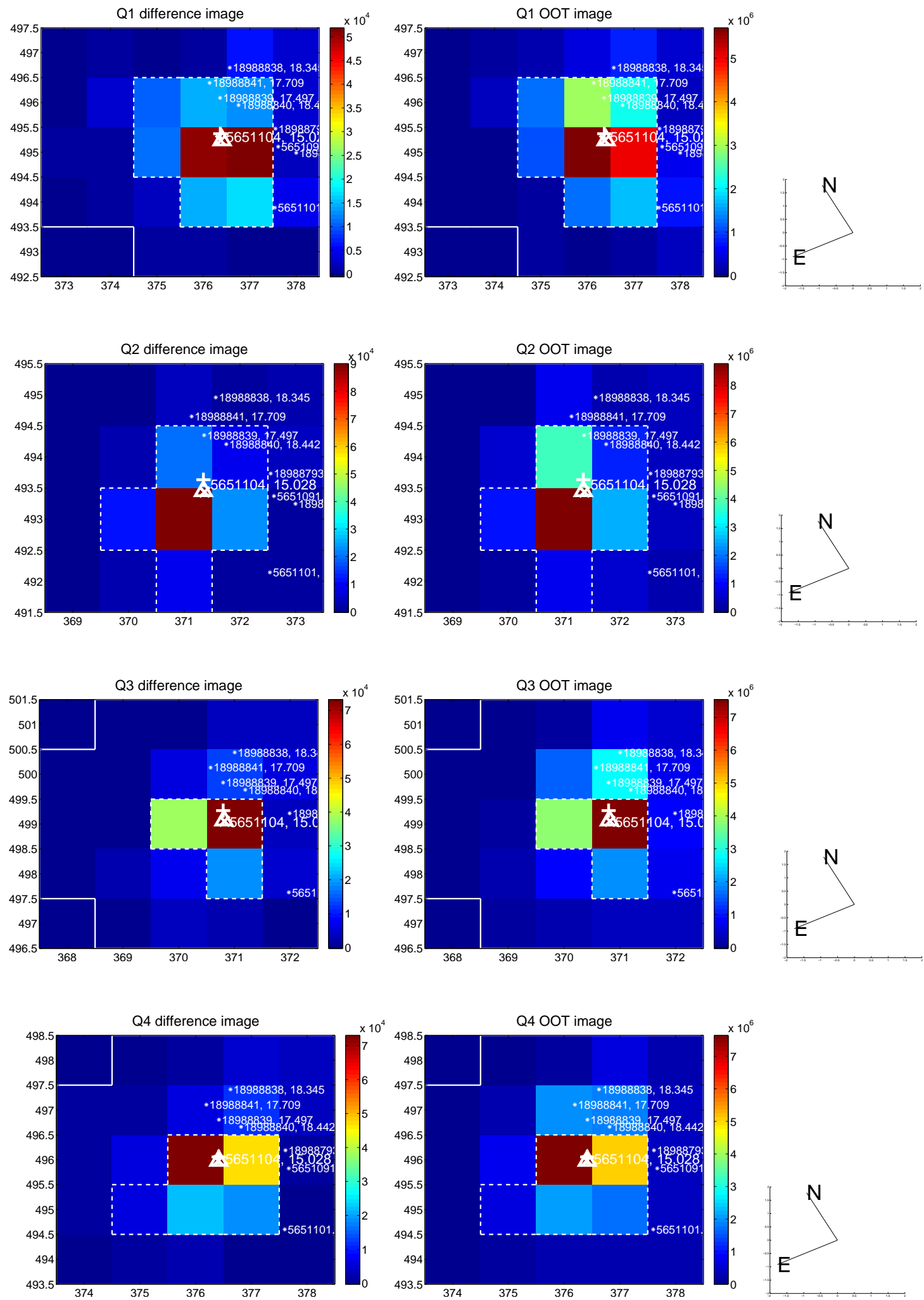
The direct PRF centroid is offset from the target star catalog position by about 0.51 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.564 ± 0.090	6.25	0.243 ± 0.071	-0.509 ± 0.087
PRF-fit source offset from KIC position	0.116 ± 0.068	1.71	-0.010 ± 0.068	0.115 ± 0.068
photometric centroid source offset	0.59 ± 0.02	29.74	0.48 ± 0.02	-0.35 ± 0.02

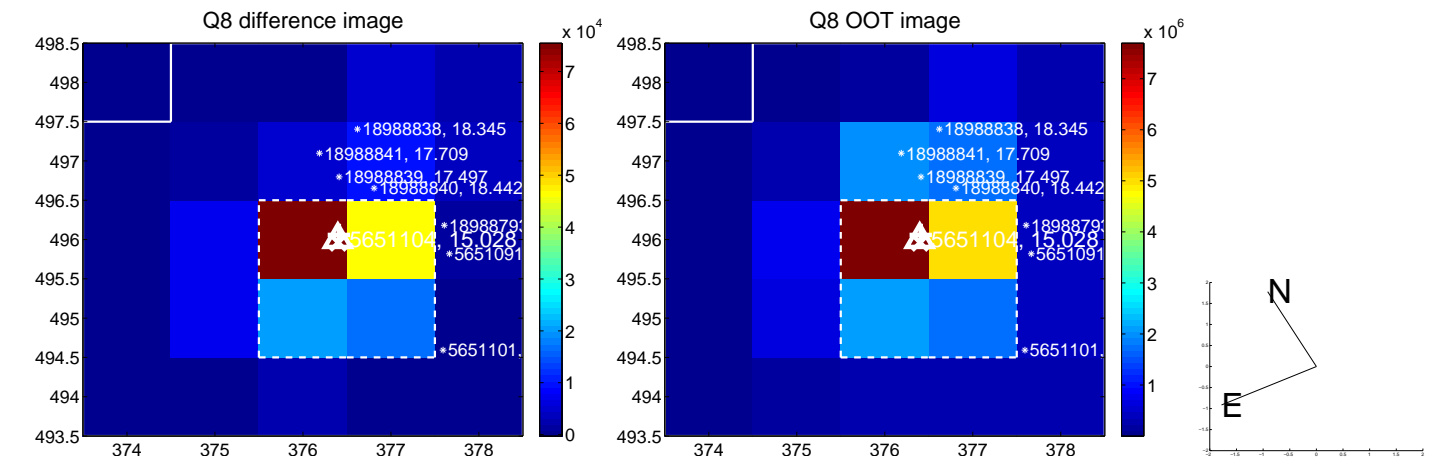
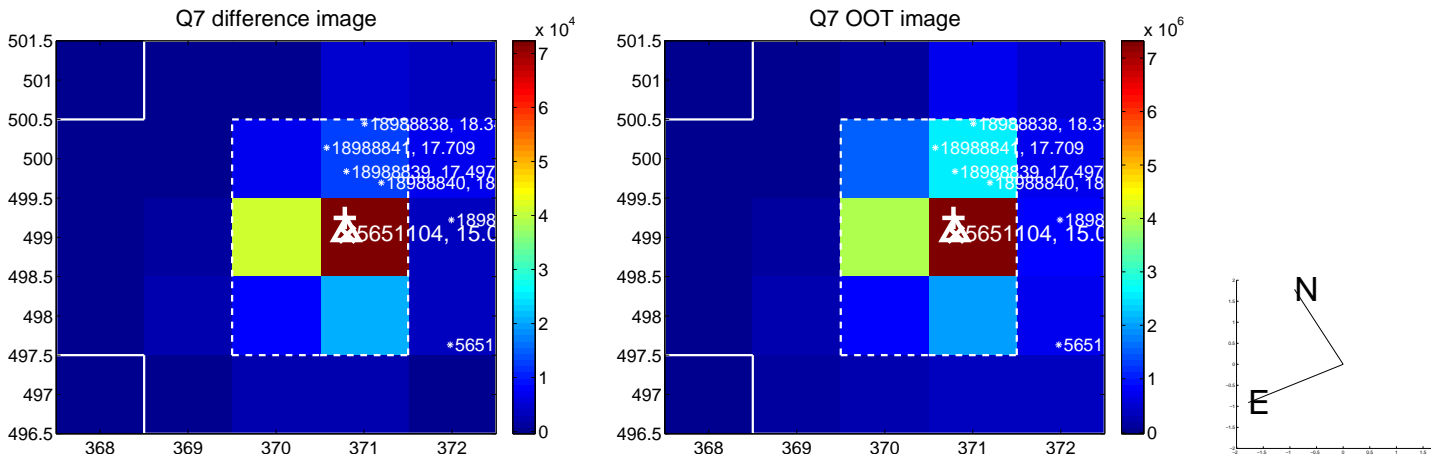
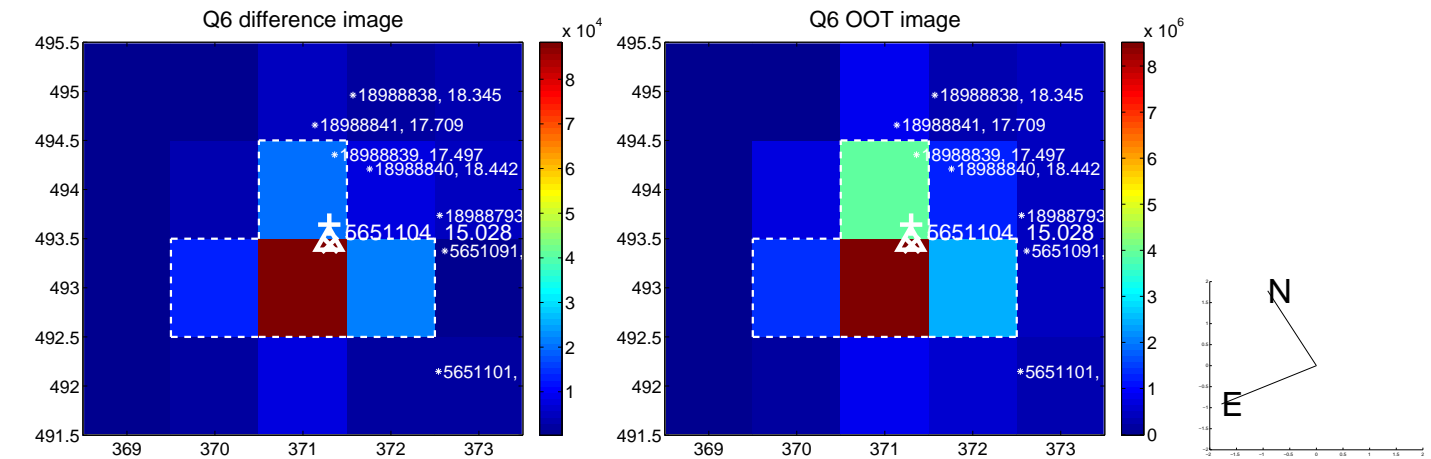
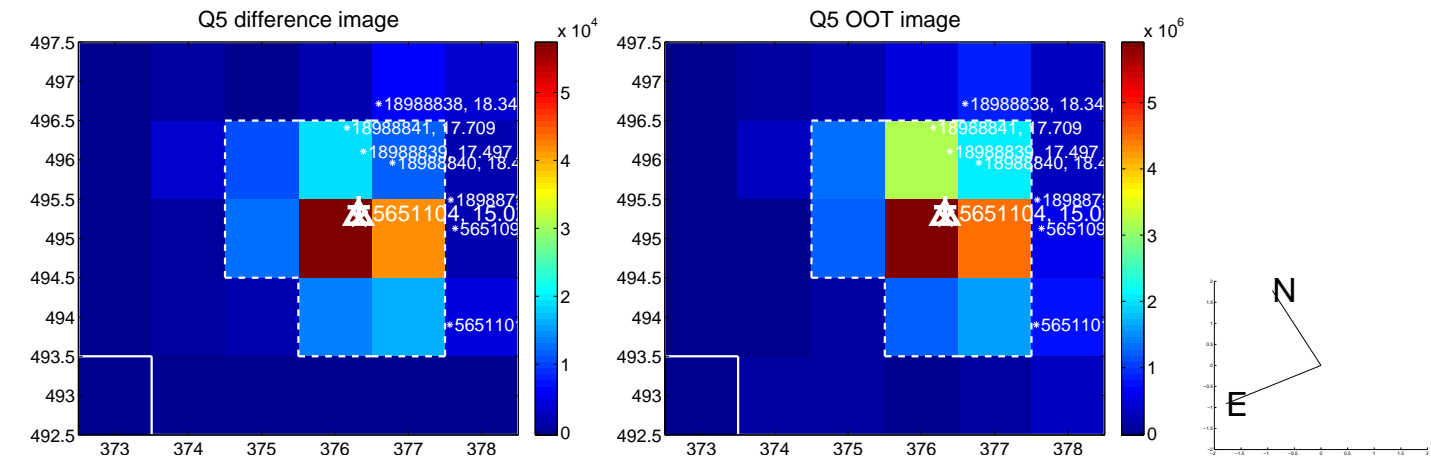


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

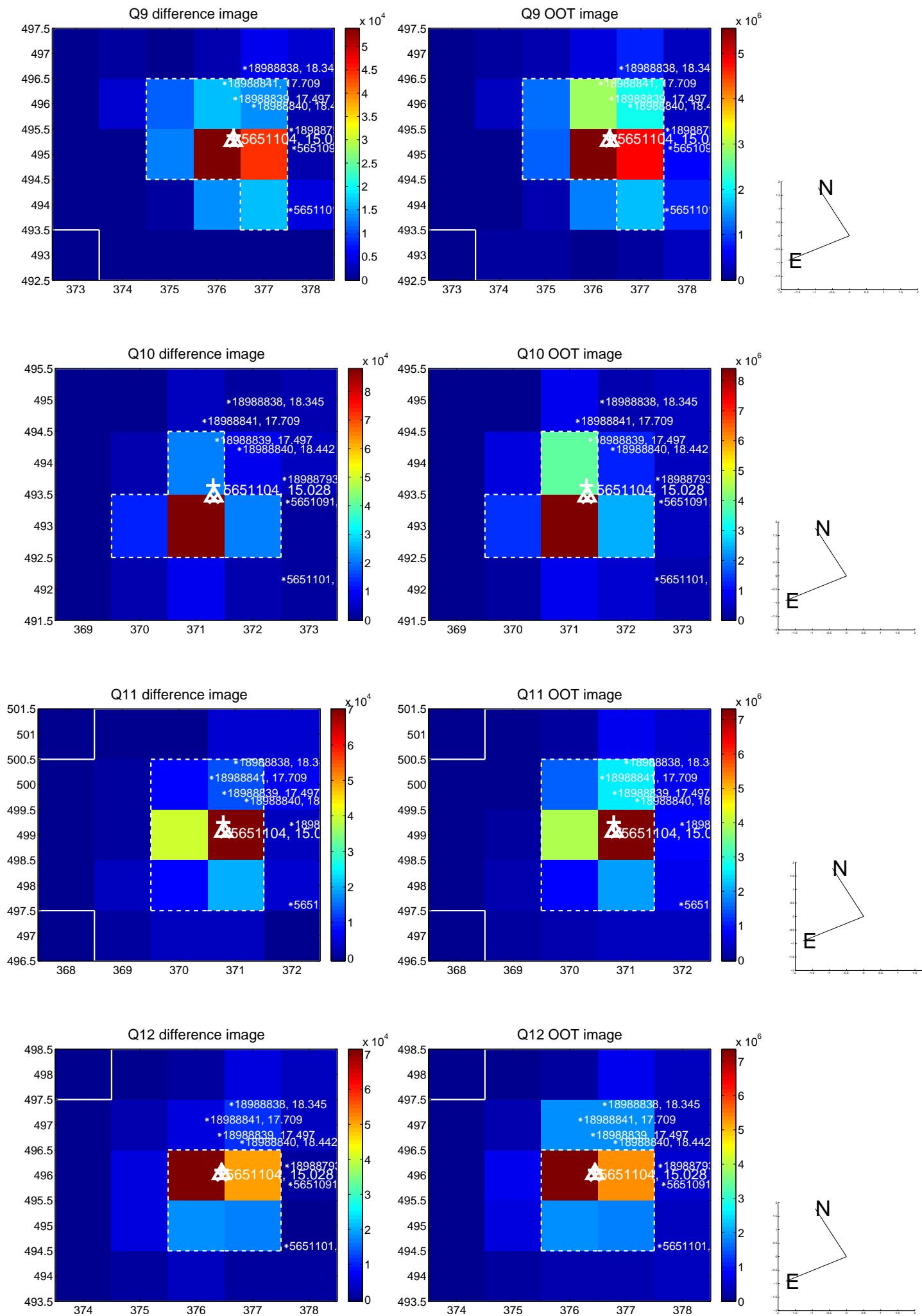
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



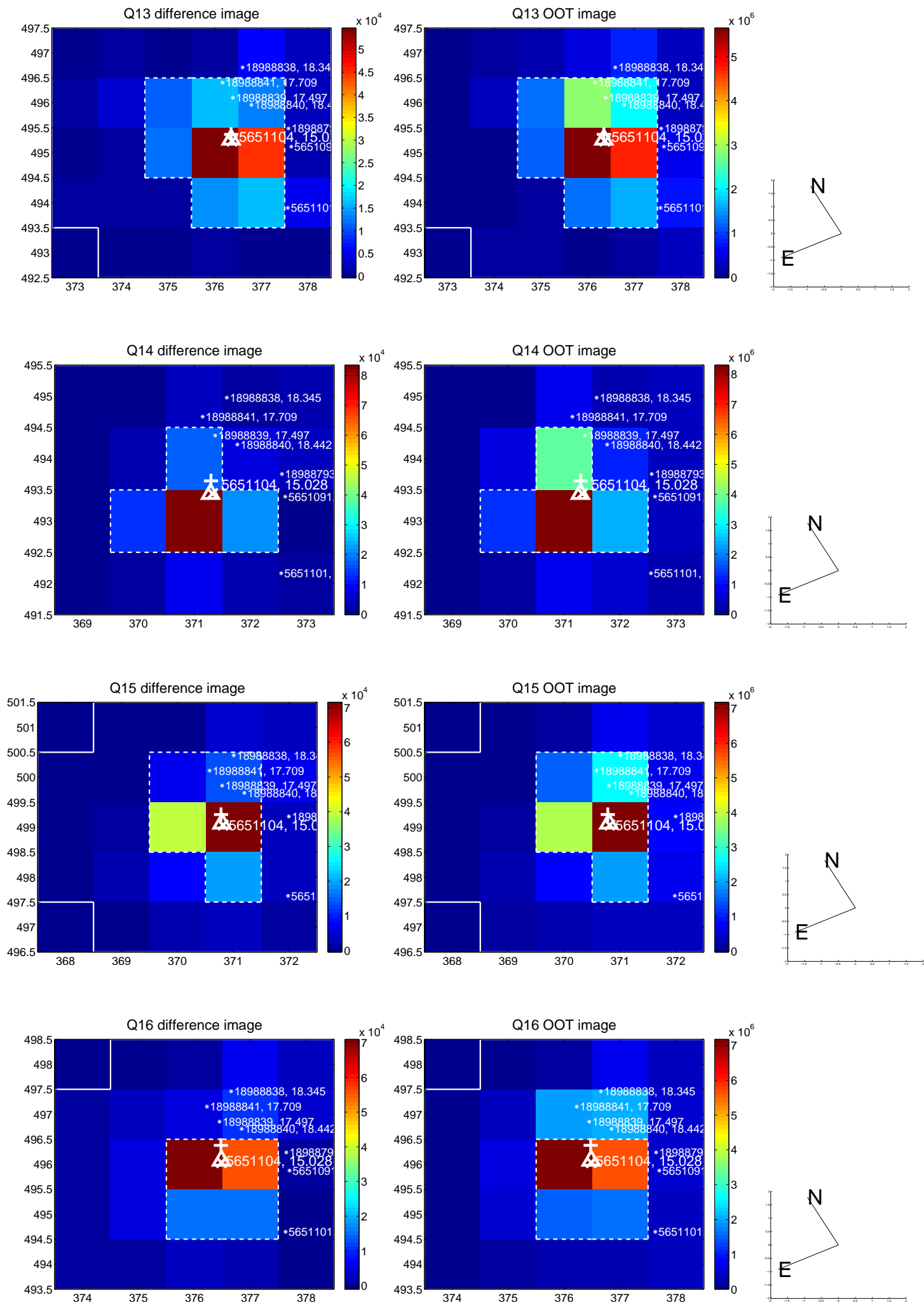
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



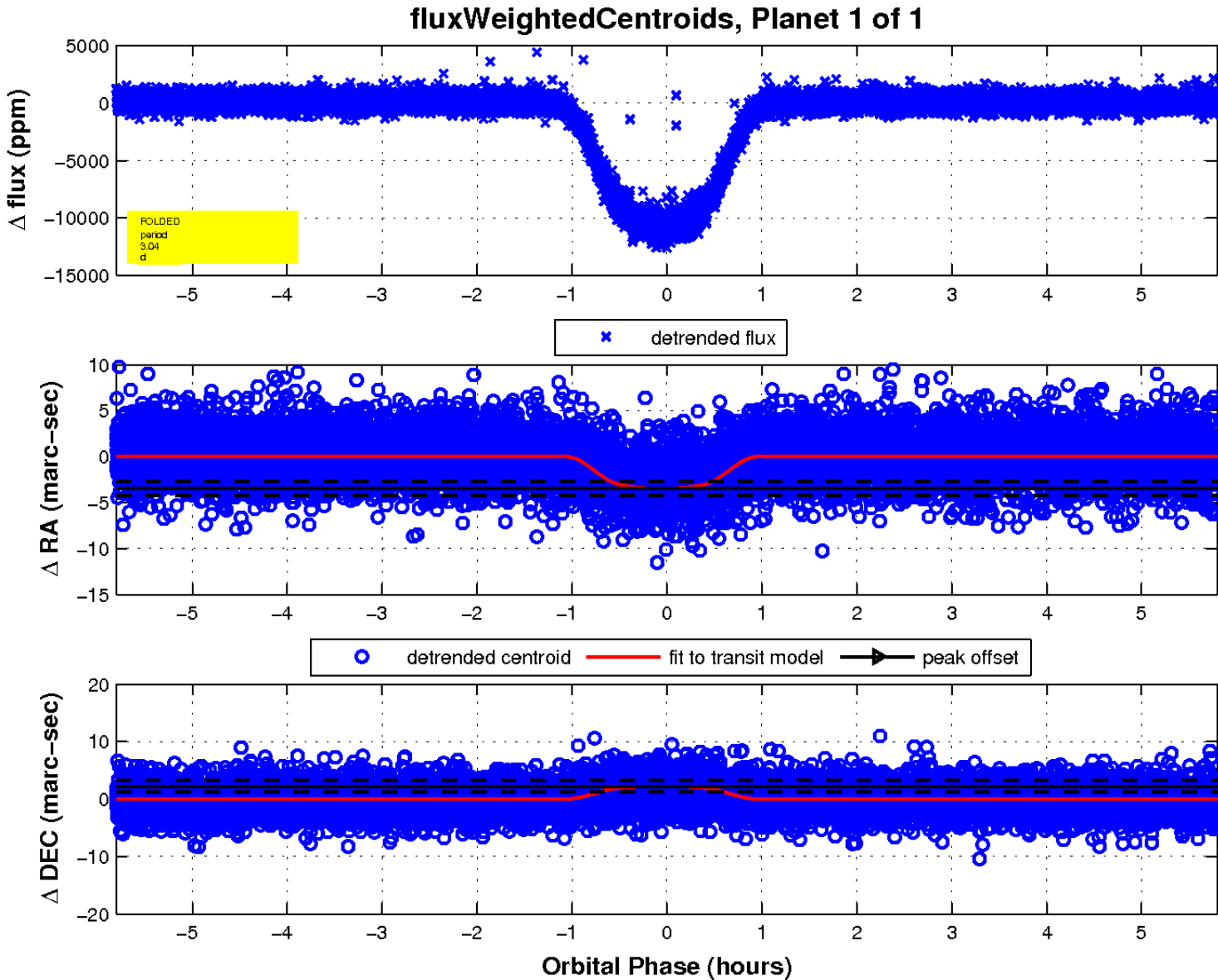
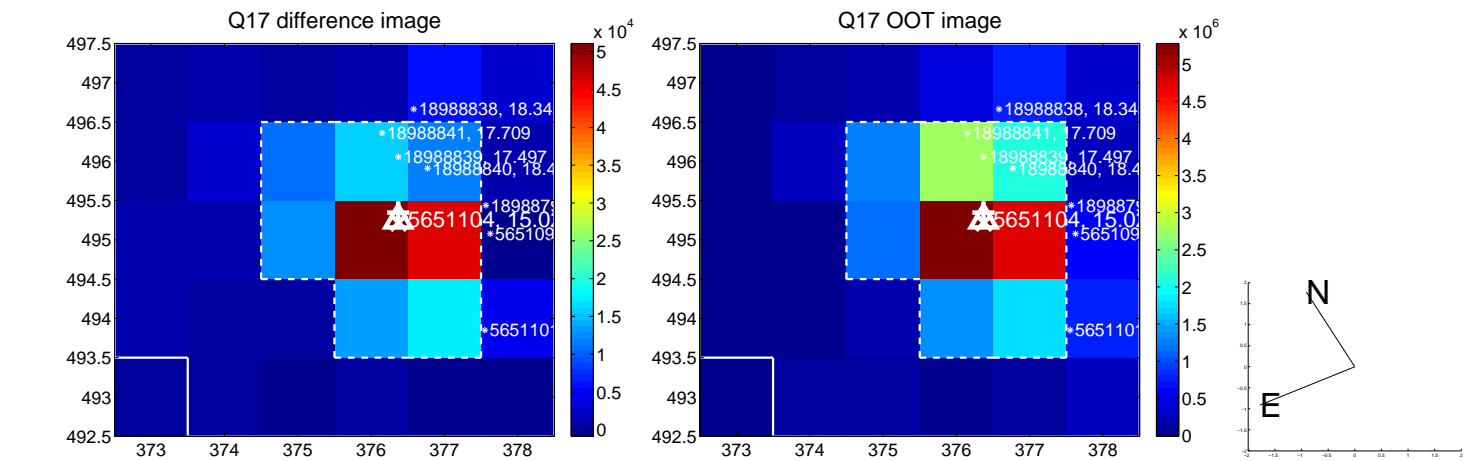
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

