

KIC 008151055

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})
008151055-01	OBS	3298.01	29.963318	149.943409	832.5	2.825	14.4	16.7	0.64	4463	2.24	5.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008151055-01	OBS	PC	0.99	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 008151055-01

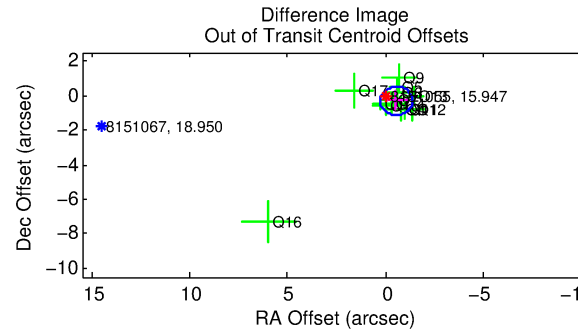
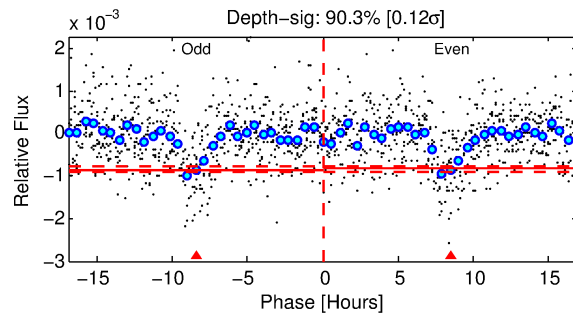
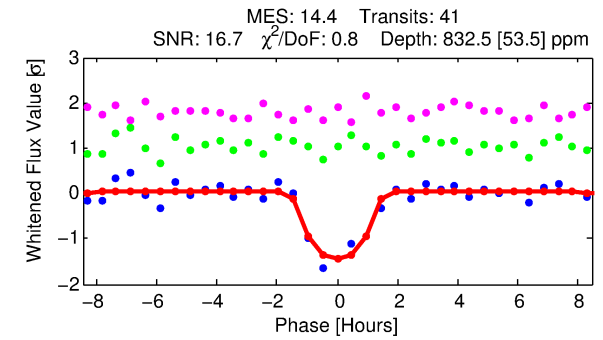
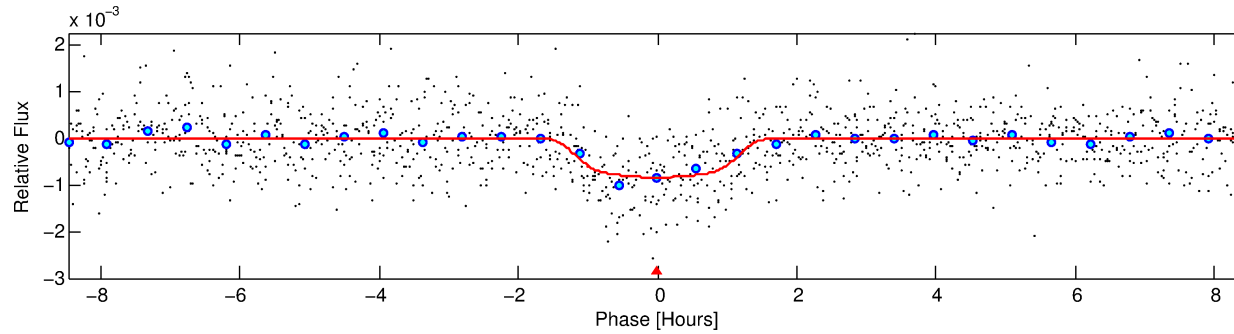
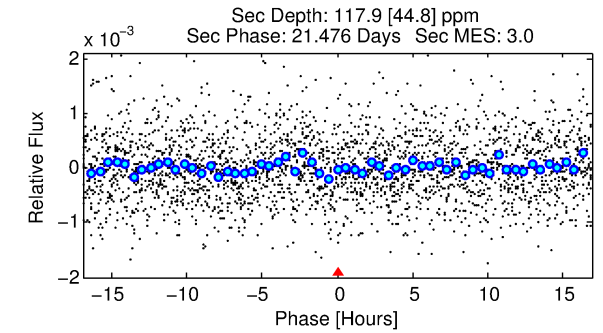
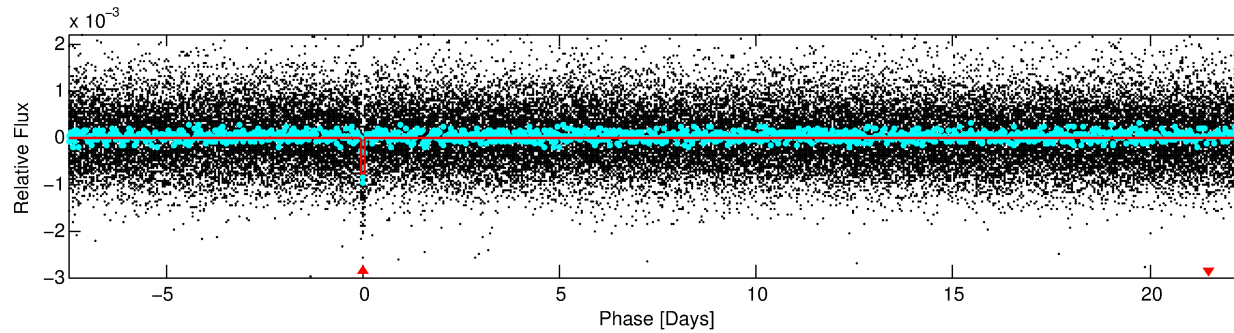
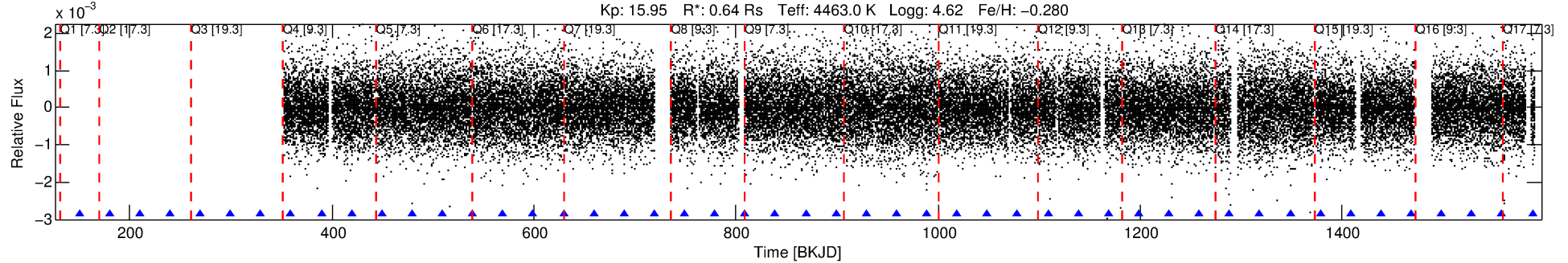
No Significant Match Found

DV One-Page Summary

KIC: 8151055 Candidate: 1 of 1 Period: 29.963 d

KOI: K03298.01 Corr: 0.966

Kp: 15.95 R*: 0.64 Rs Teff: 4463.0 K Logg: 4.62 Fe/H: -0.280



DV Fit Results:

Period = 29.96332 [0.00018] d
Epoch = 149.9434 [0.0055] BKJD
Rp/R* = 0.0321 [0.0078]
a/R* = 42.22 [36.29]
b = 0.89 [0.21]
Seff = 5.56 [0.98]
Teq = 392 [17] K
Rp = 2.24 [0.58] Re
a = 0.1613 [0.0118] AU
Ag = 336.96 [210.28] [1.60σ]
Teff = 2594 [410] K [5.37σ]

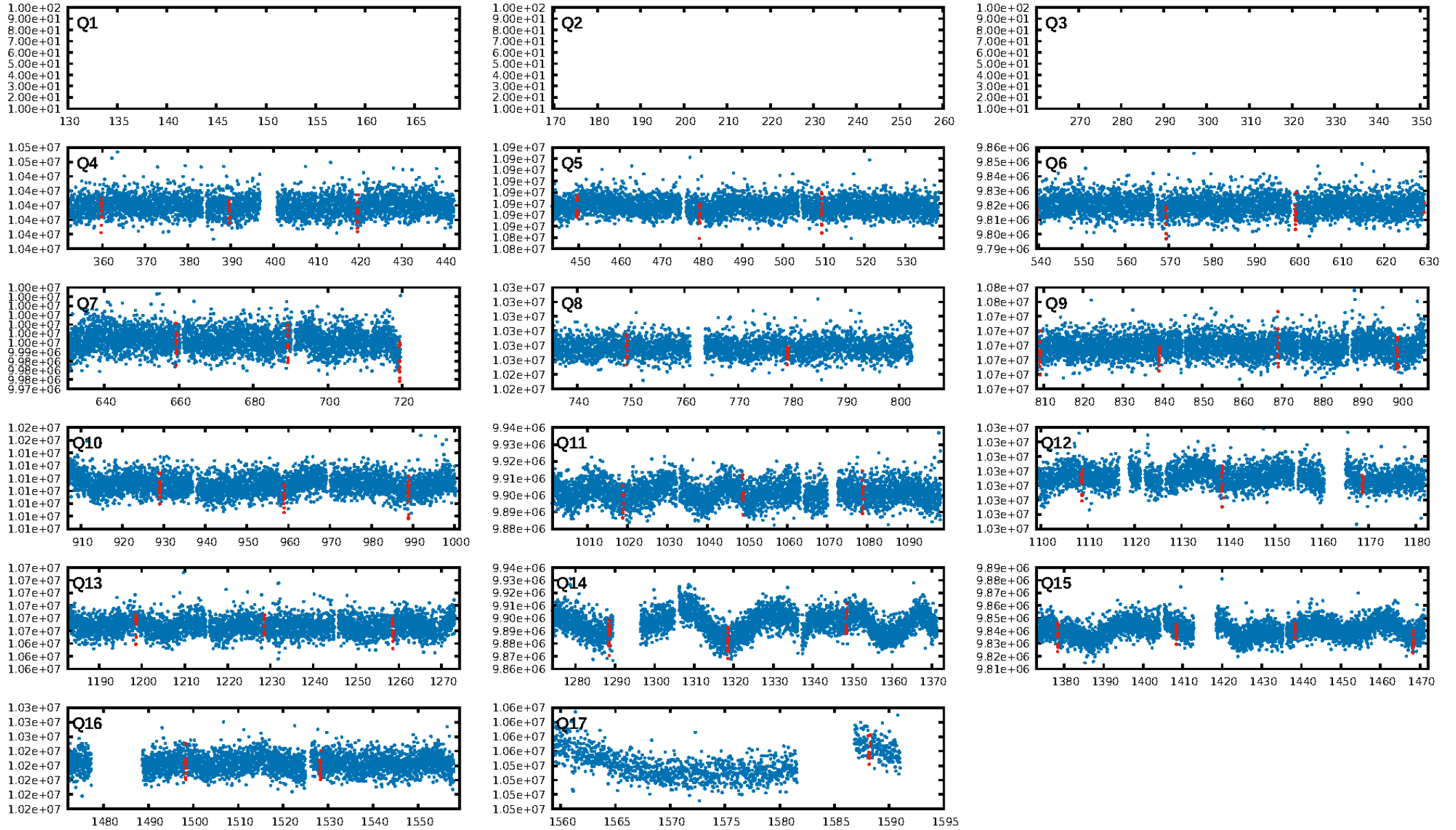
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 74.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.78e-46
RollingBand-fgt: 1.00 [40/40]
GhostDiagnostic-chr: 1.981
Centroid-sig: 9.8%
Centroid-so: 1.093 arcsec [1.20σ]
OotOffset-rm: 0.626 arcsec [2.29σ]
KicOffset-rm: 0.639 arcsec [1.85σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 1.00 [14/14]

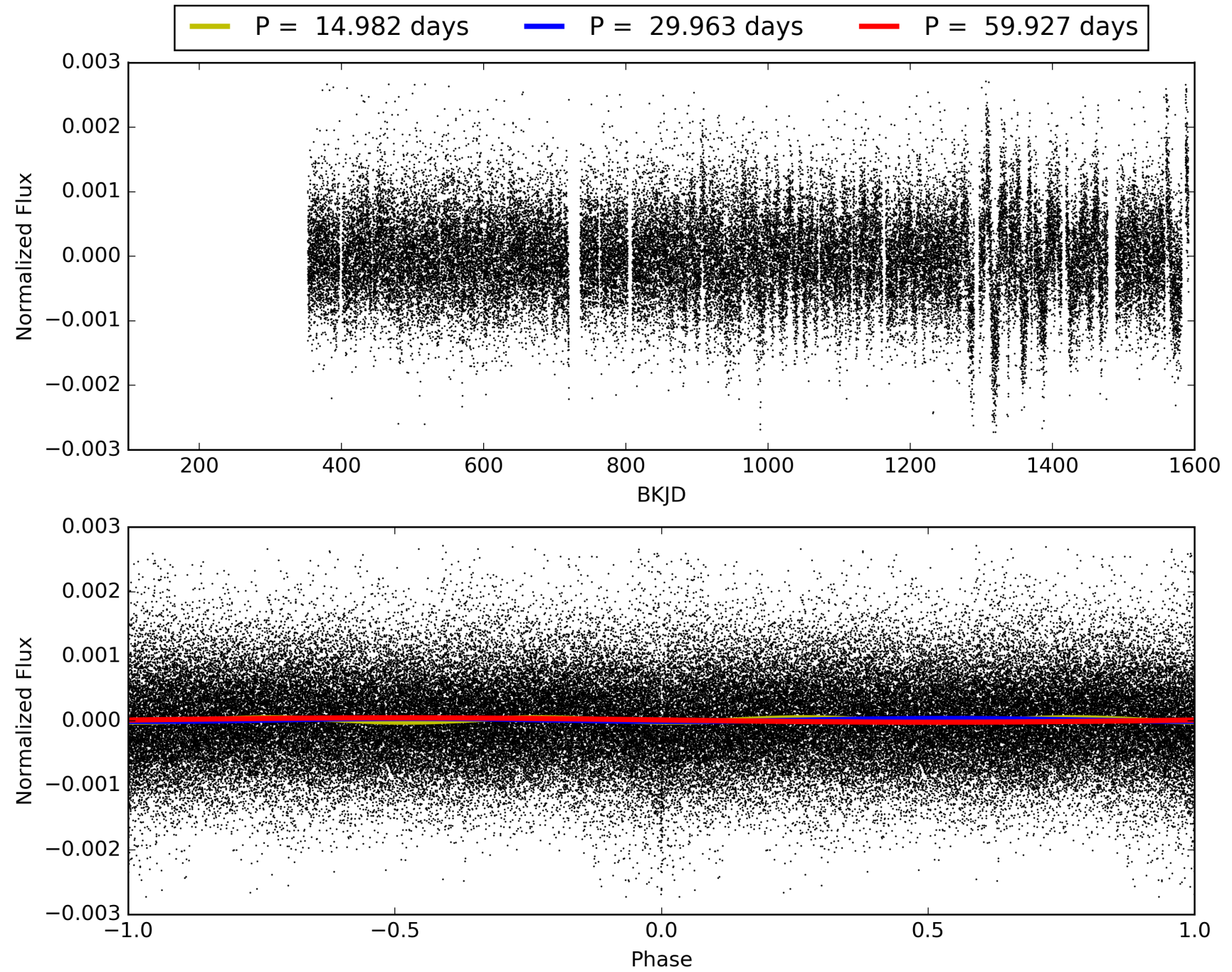
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:35:47 Z

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

TCE 008151055-01, PDC Light Curves

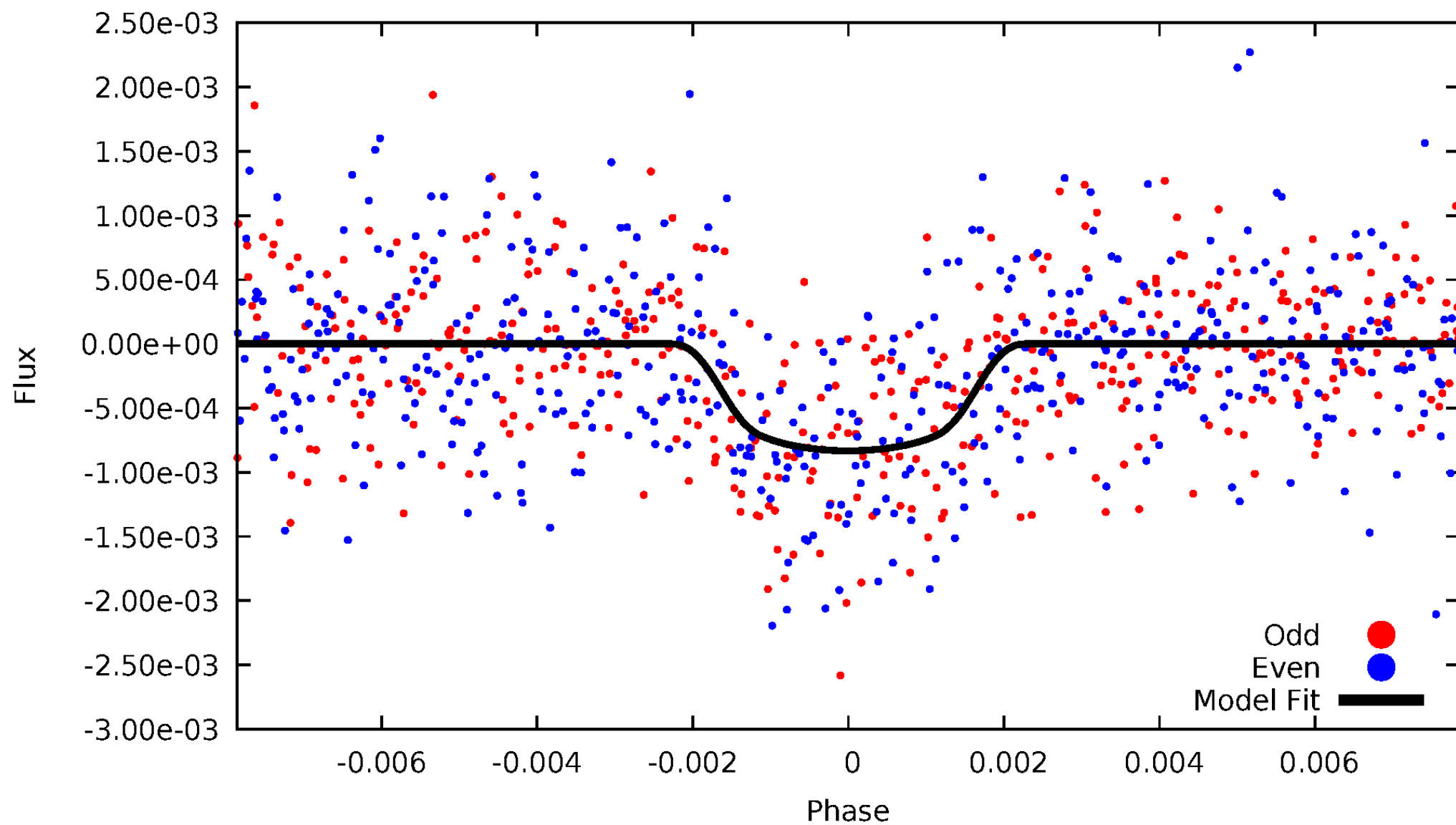


TCE 008151055-01



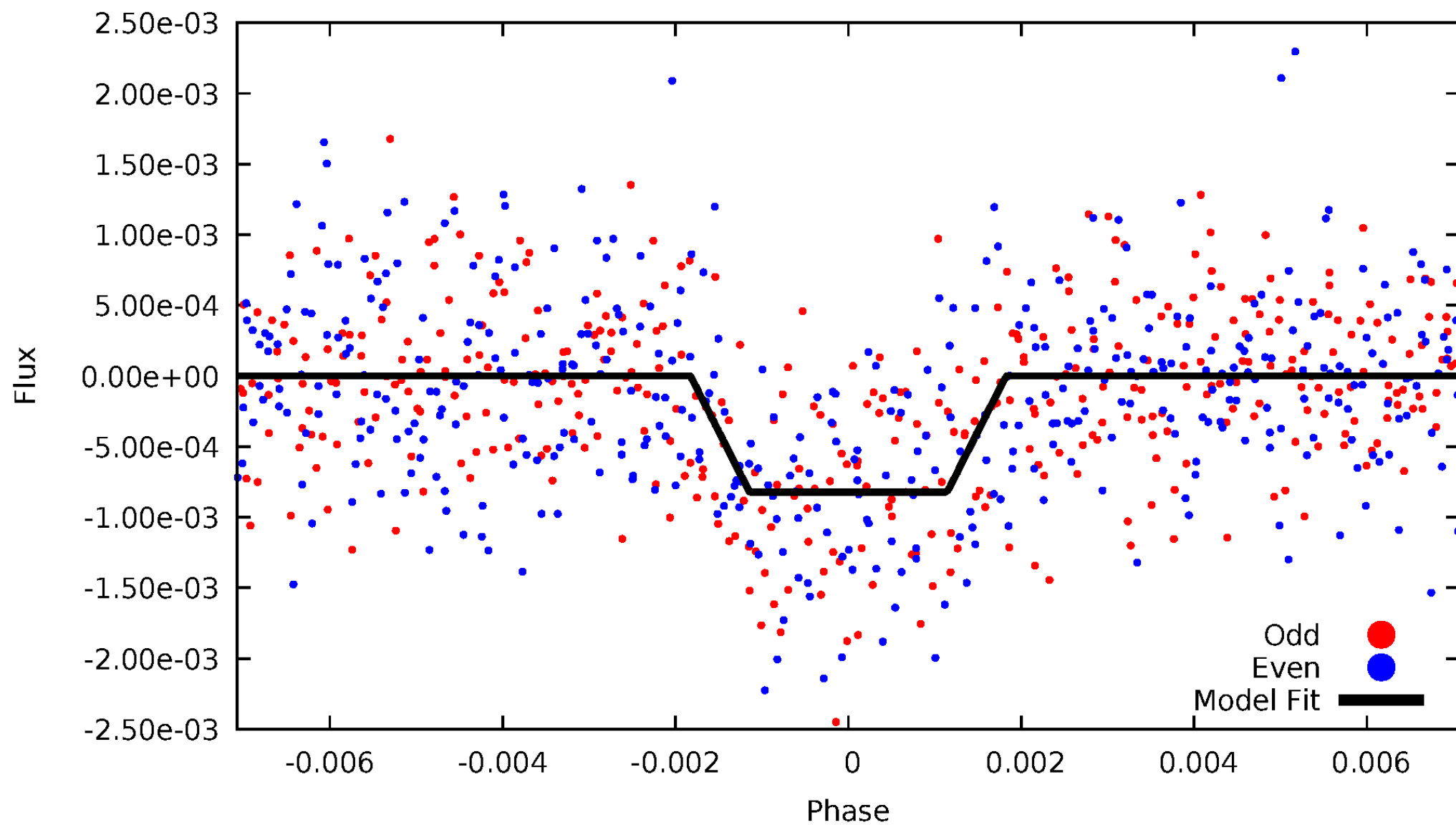
DV Odd/Even

TCE 008151055-01

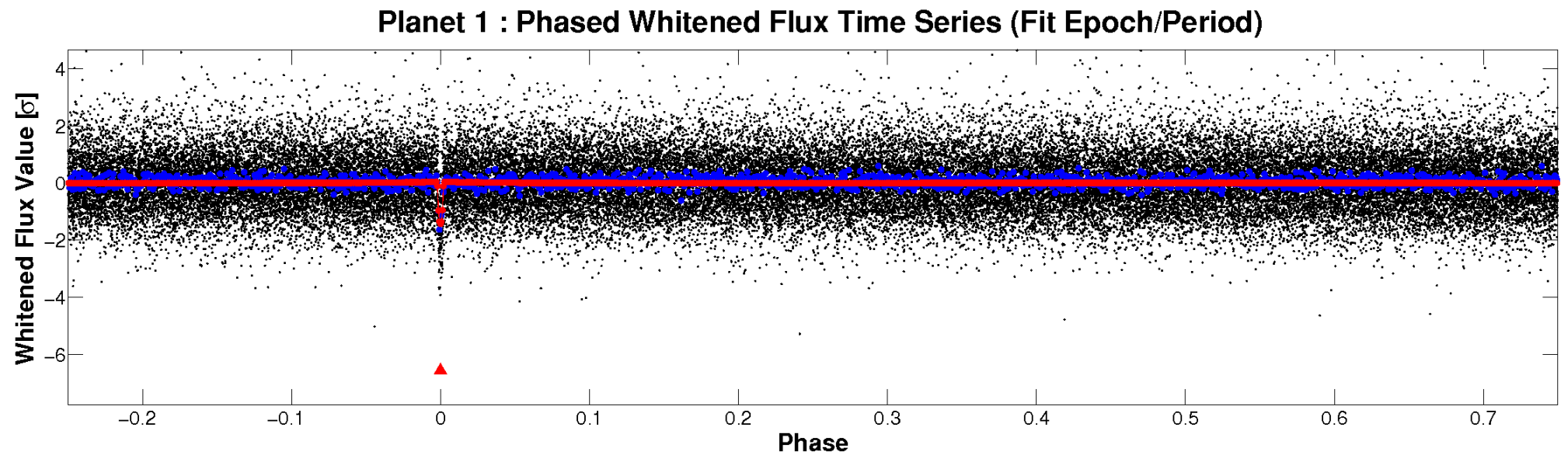
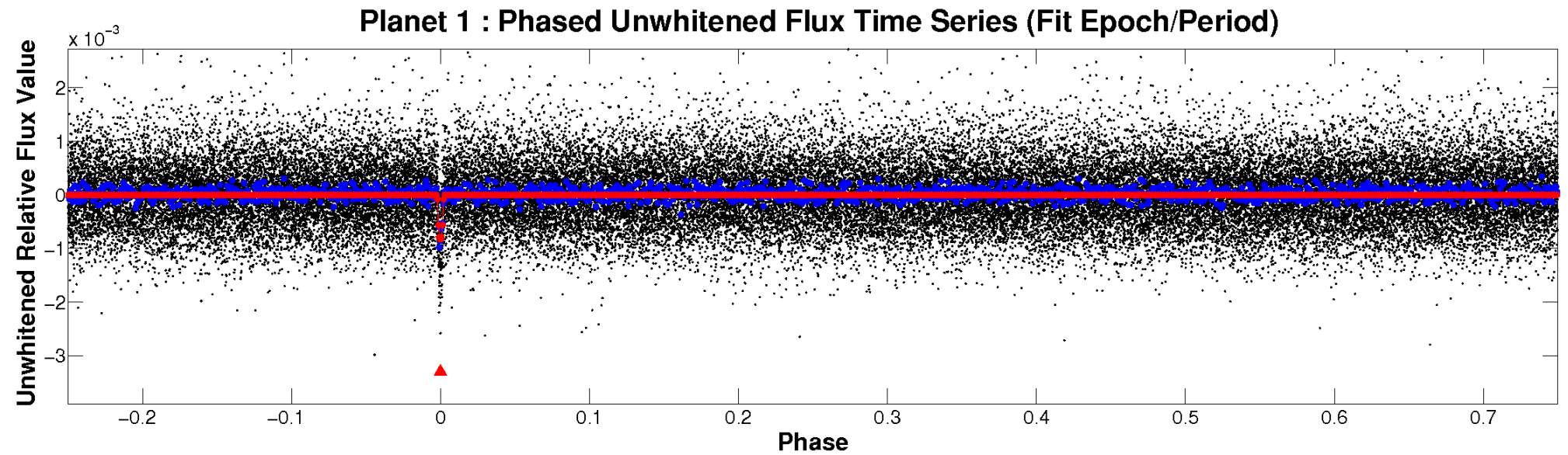


ALT Odd/Even

TCE 008151055-01

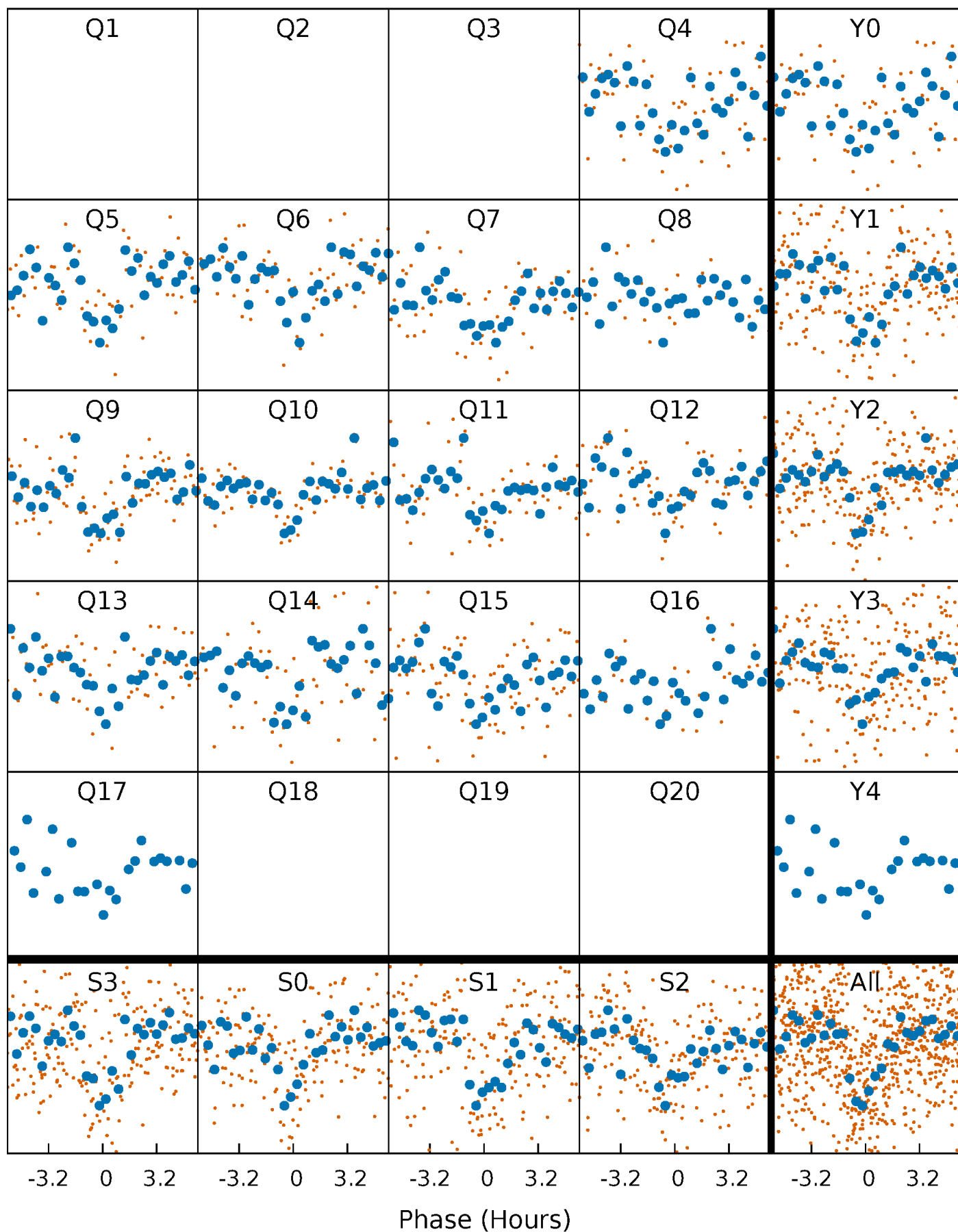


Non-Whitened Vs. Whitened Light Curve



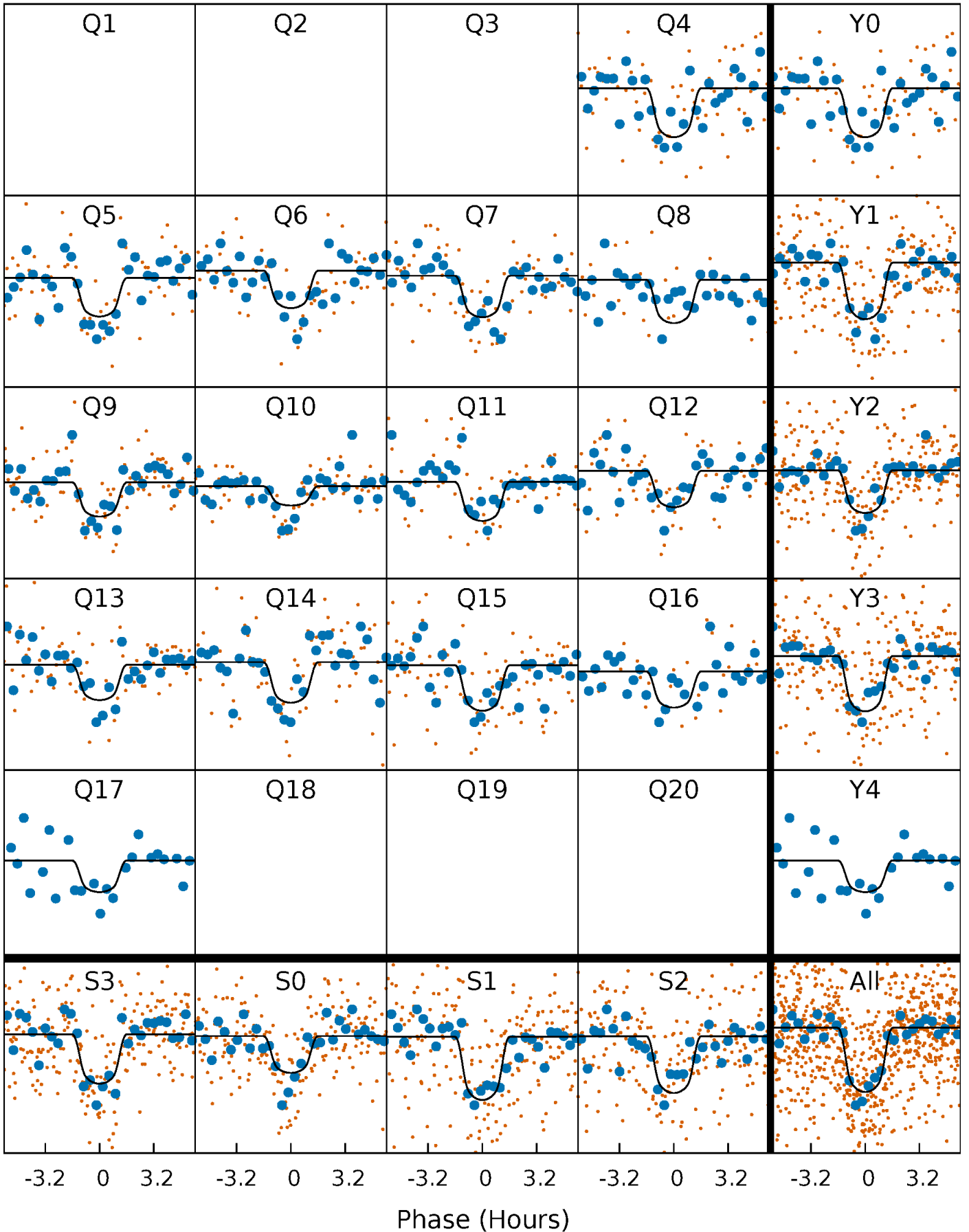
PDC Quarter-Phased Transit Curves

TCE 008151055-01 P= 29.963318 Days $T_0=149.943409$ (BKJD)



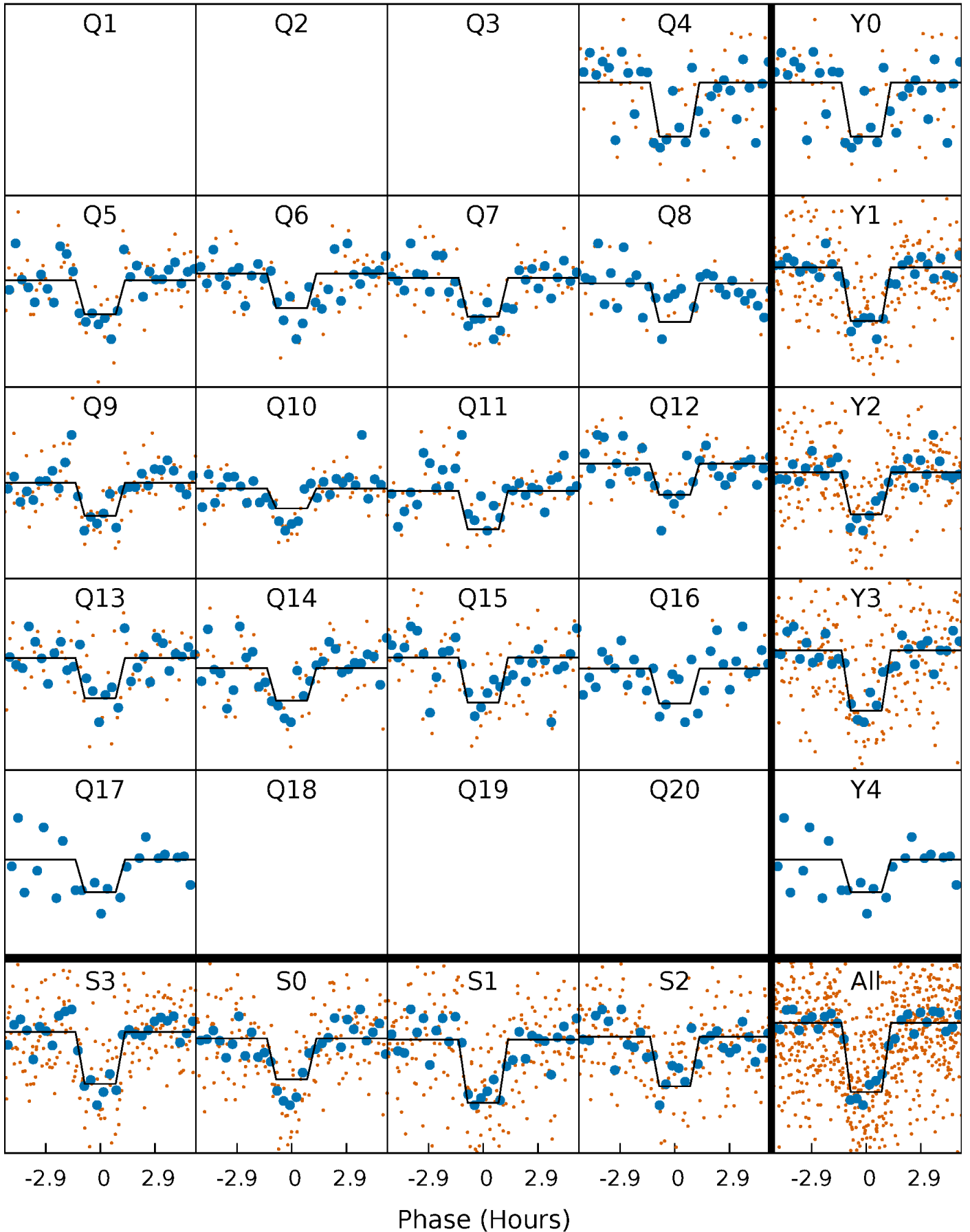
DV Quarter-Phased Transit Curves

TCE 008151055-01 P= 29.963318 Days $T_0=149.943409$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

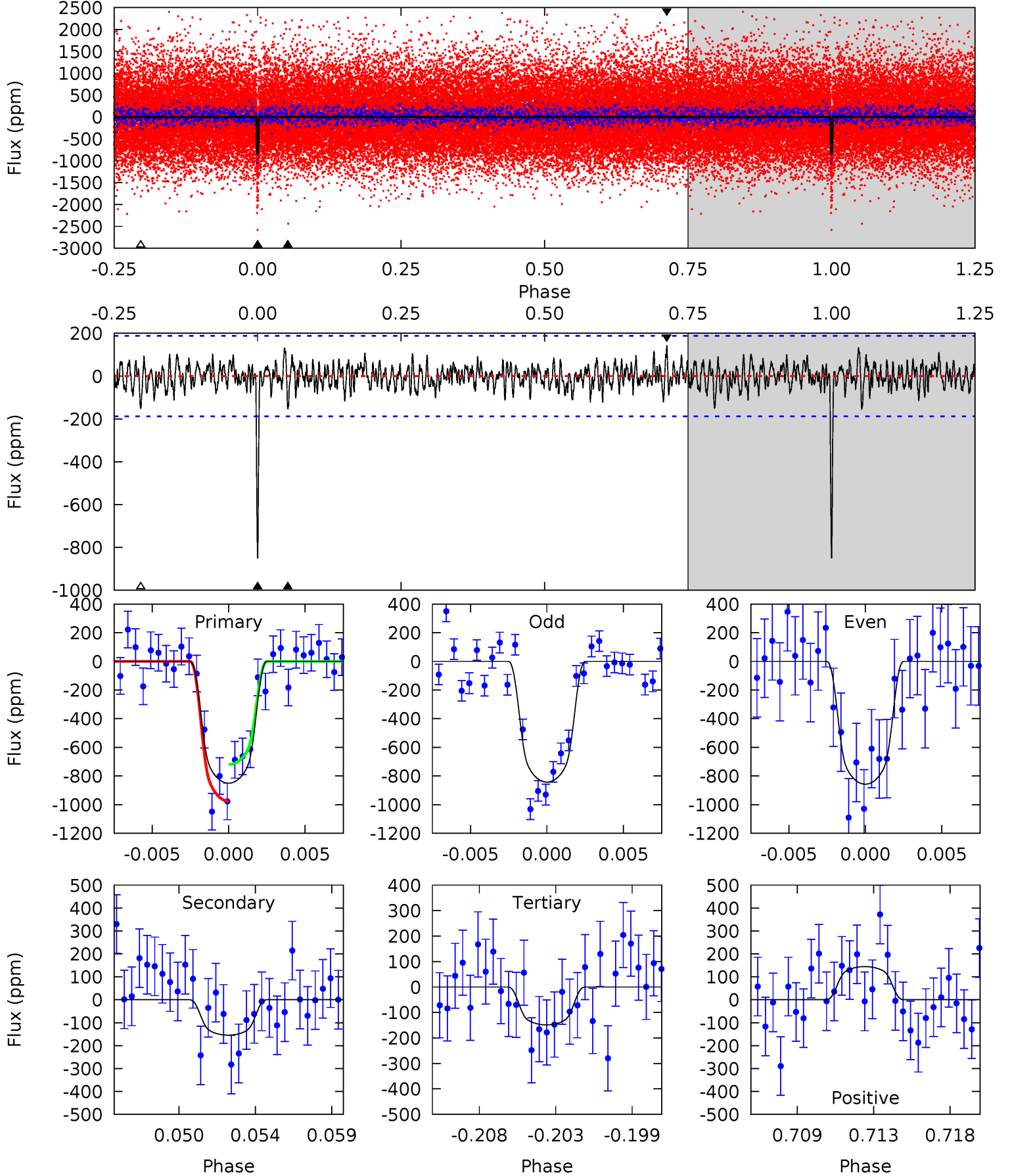
TCE 008151055-01 P= 29.963223 Days $T_0=149.945708$ (BKJD)



DV Model-Shift Uniqueness Test

008151055-01, $P = 29.963318$ Days, $E = 149.943409$ Days

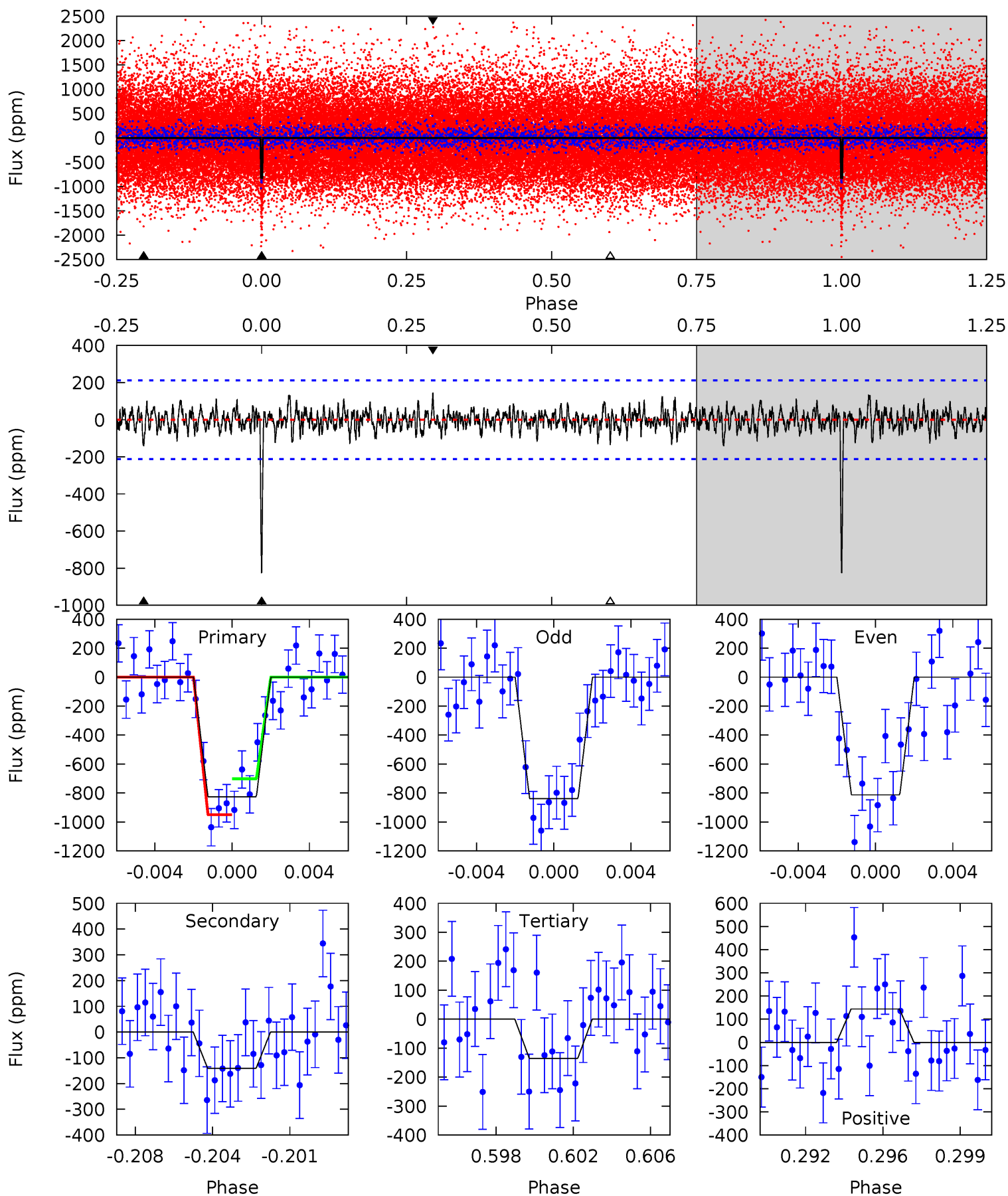
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.4	4.25	4.09	3.98	5.18	2.84	1.21	19.3	19.4	0.16	0.27	0.19	0.94	0.15	3.52



Alt Model-Shift Uniqueness Test

008151055-01, $P = 29.963223$ Days, $E = 149.945708$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.3	3.47	3.34	3.54	5.22	2.91	1.05	17.0	16.8	0.13	-0.07	0.33	0.91	0.15	3.06



Stellar Parameters For KIC 008151055

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4463^{+159}_{-159}	$4.623^{+0.056}_{-0.024}$	$-0.280^{+0.300}_{-0.300}$	$0.638^{+0.051}_{-0.057}$	$0.624^{+0.070}_{-0.051}$	$3.389^{+0.843}_{-0.412}$
	+4%/-4%	+1%/-1%	+107%/-107%	+8%/-9%	+11%/-8%	+25%/-12%
Source	KIC0	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 008151055-01 / KOI 3298.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-154 ± 36	$2.18^{+0.61}_{-0.52}$	545^{+19}_{-21}	3241^{+331}_{-247}	455^{+380}_{-187}
Alt.	-141 ± 41	$1.98^{+0.55}_{-0.56}$	541^{+22}_{-20}	3281^{+409}_{-278}	510^{+541}_{-227}

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

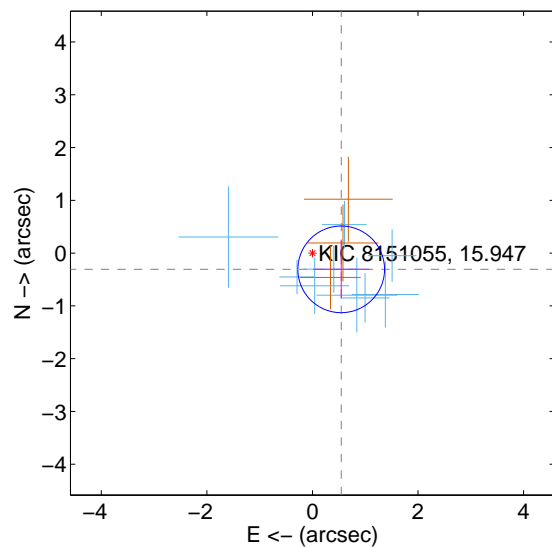
Supplemental centroid analysis for 008151055-01. Kepler magnitude: 15.95. Transit SNR 16.66

There are 9 quarters with good PRF difference image offsets

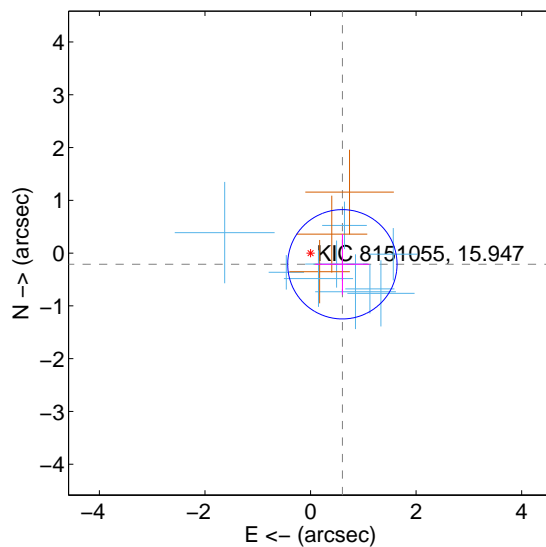
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.626 ± 0.274	2.29	-0.545 ± 0.535	-0.308 ± 0.550
PRF-fit source offset from KIC position	0.639 ± 0.345	1.85	-0.603 ± 0.513	-0.212 ± 0.574
photometric centroid source offset	1.09 ± 0.91	1.20	-0.64 ± 0.85	0.89 ± 0.94

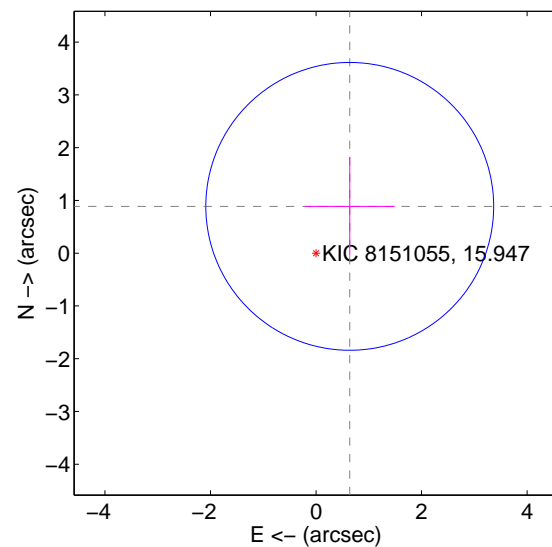
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

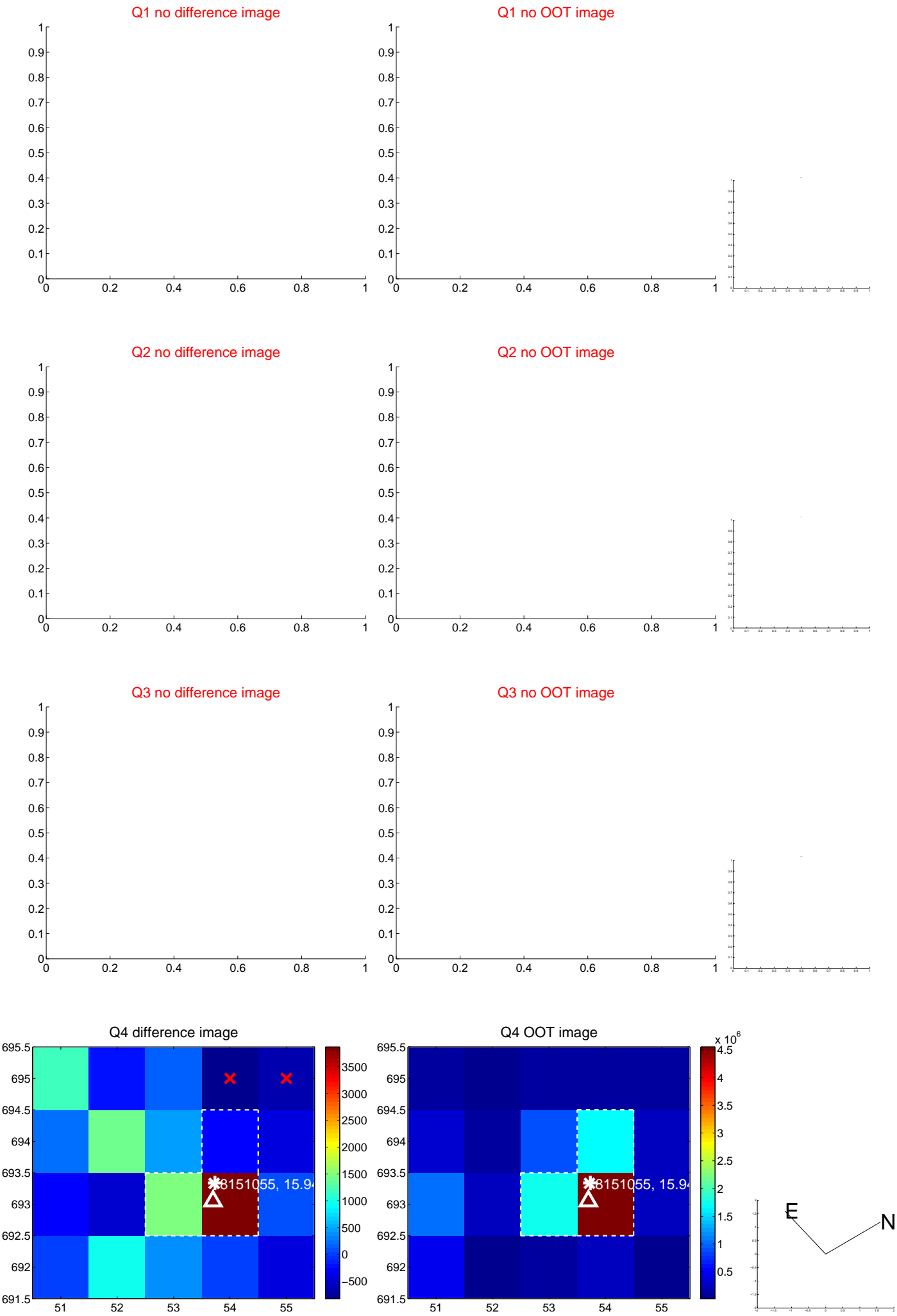


offset from photometric centroids

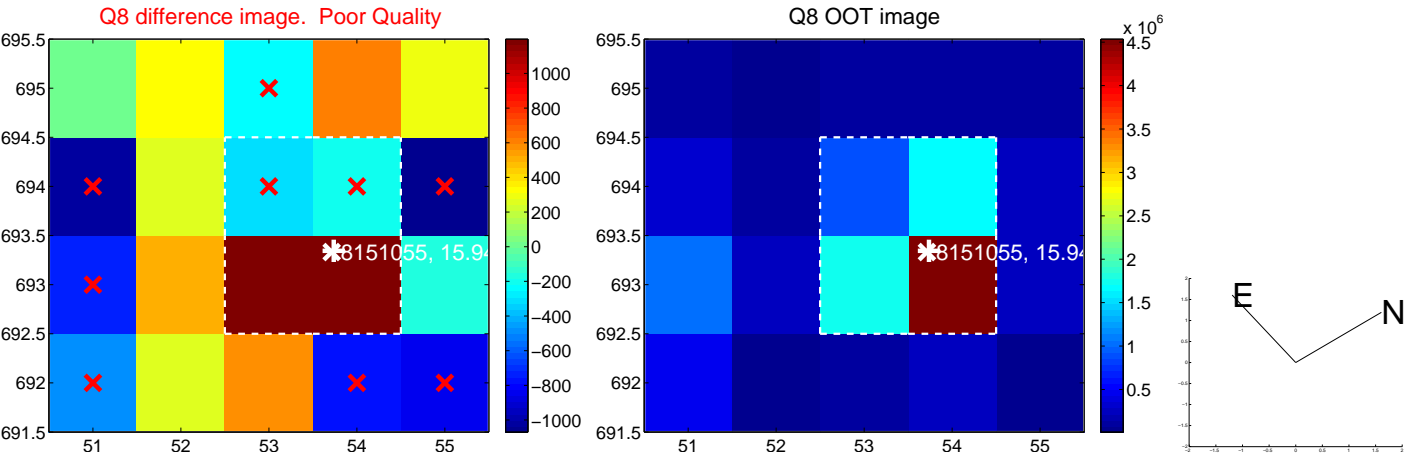
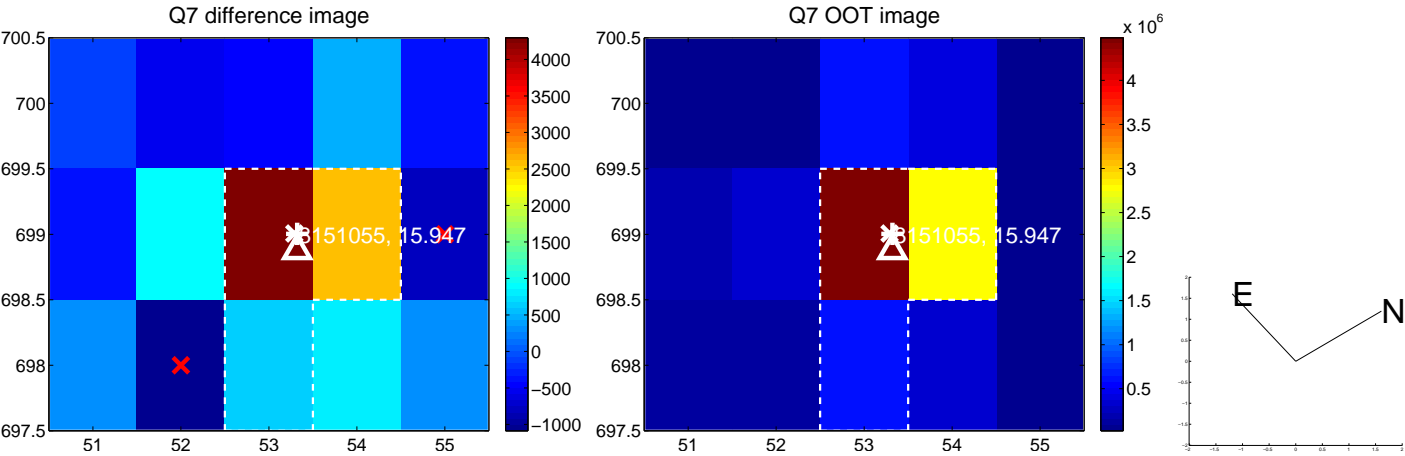
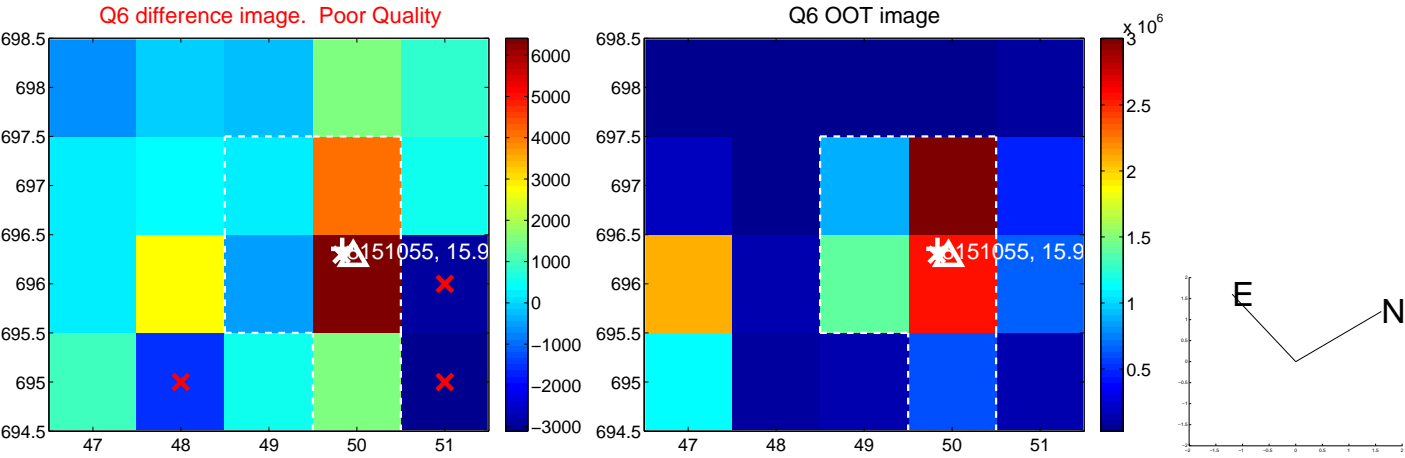
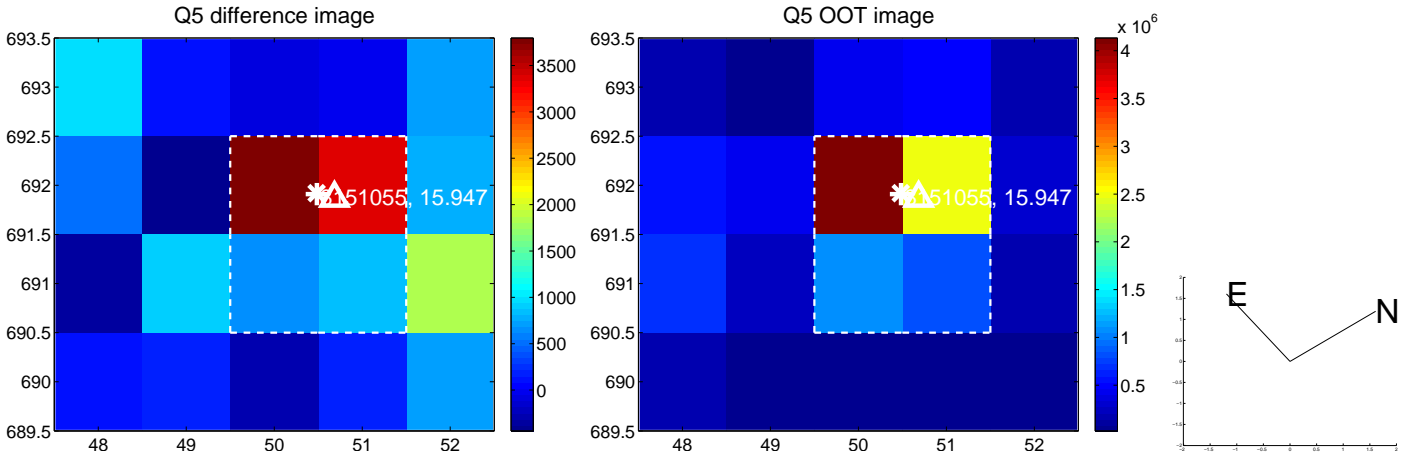


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

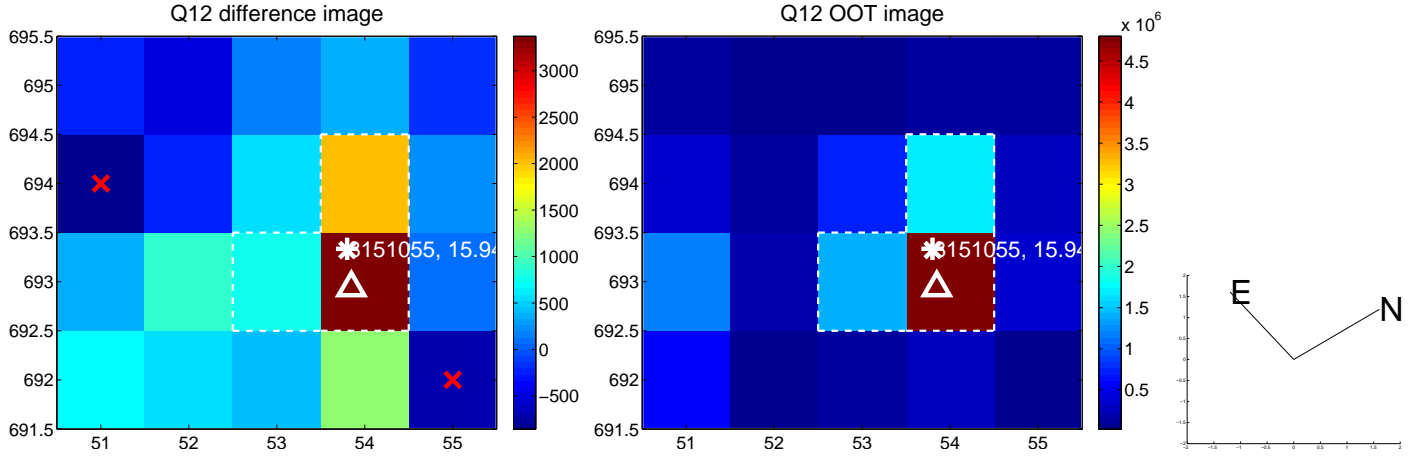
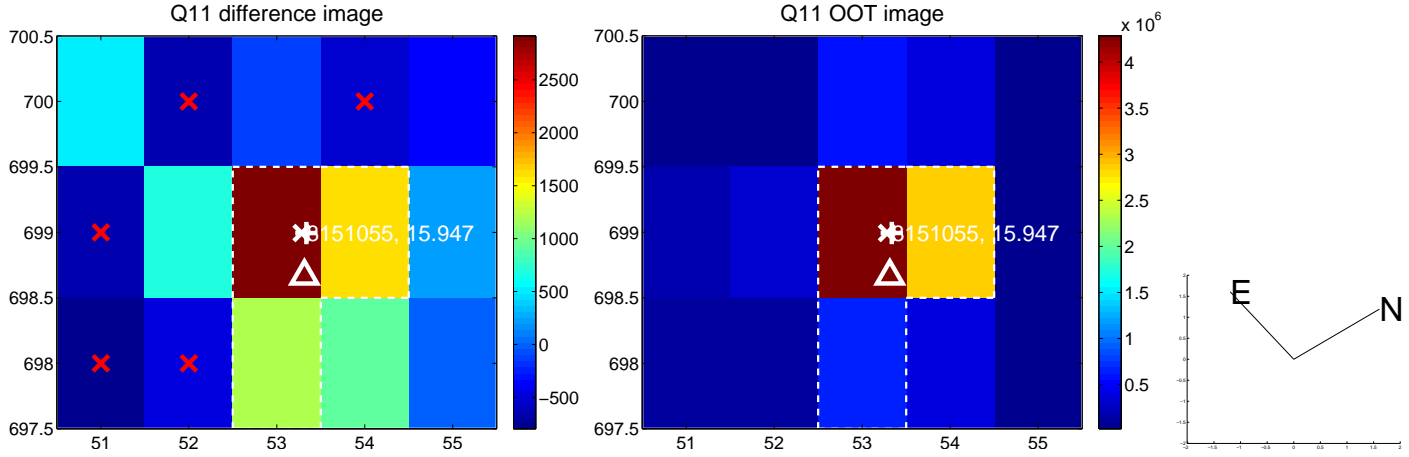
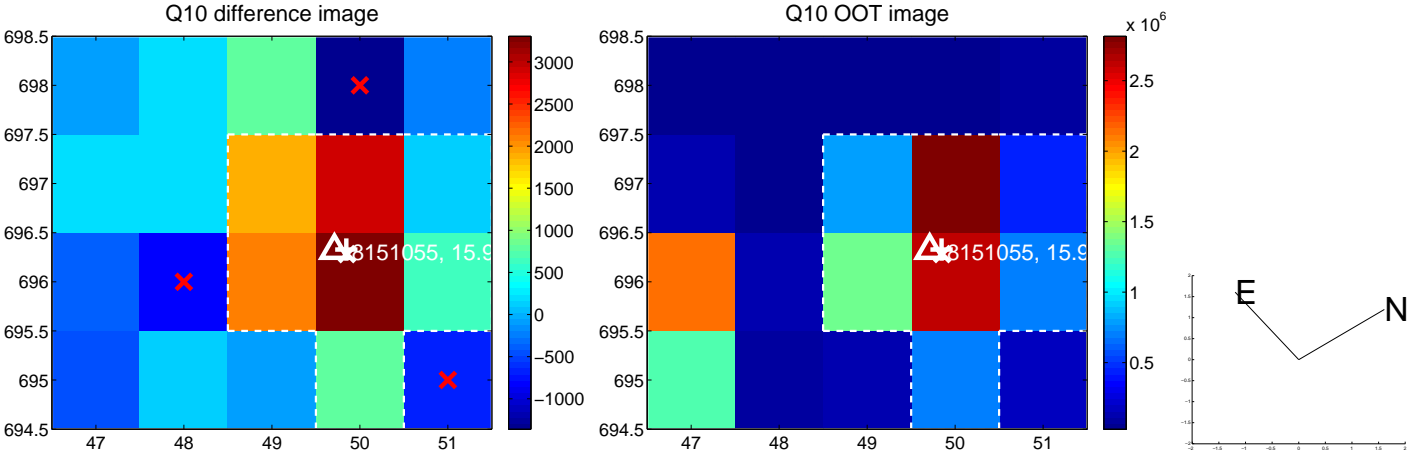
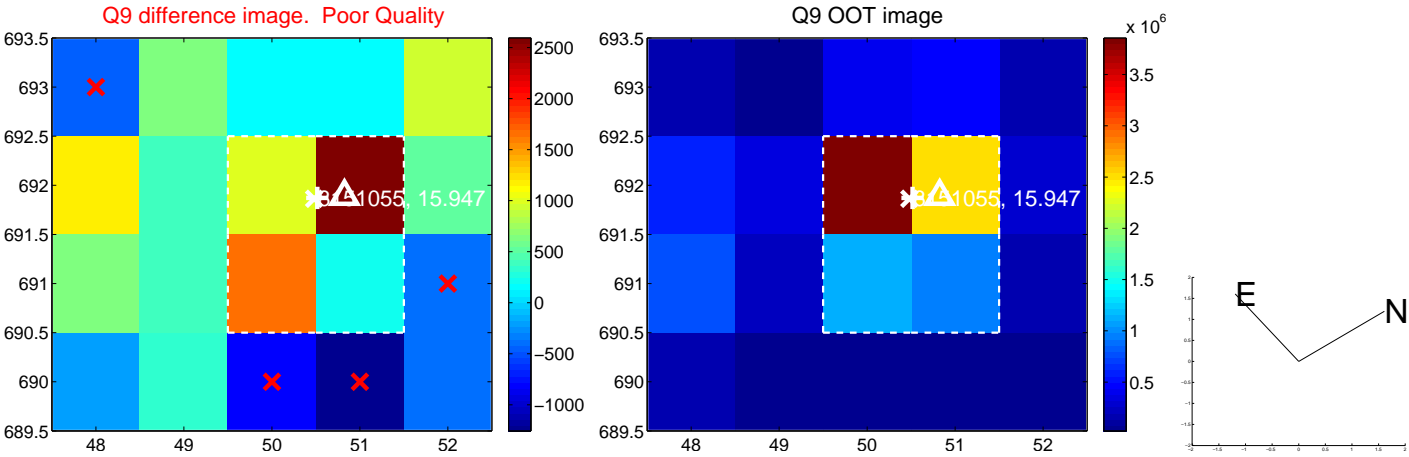
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



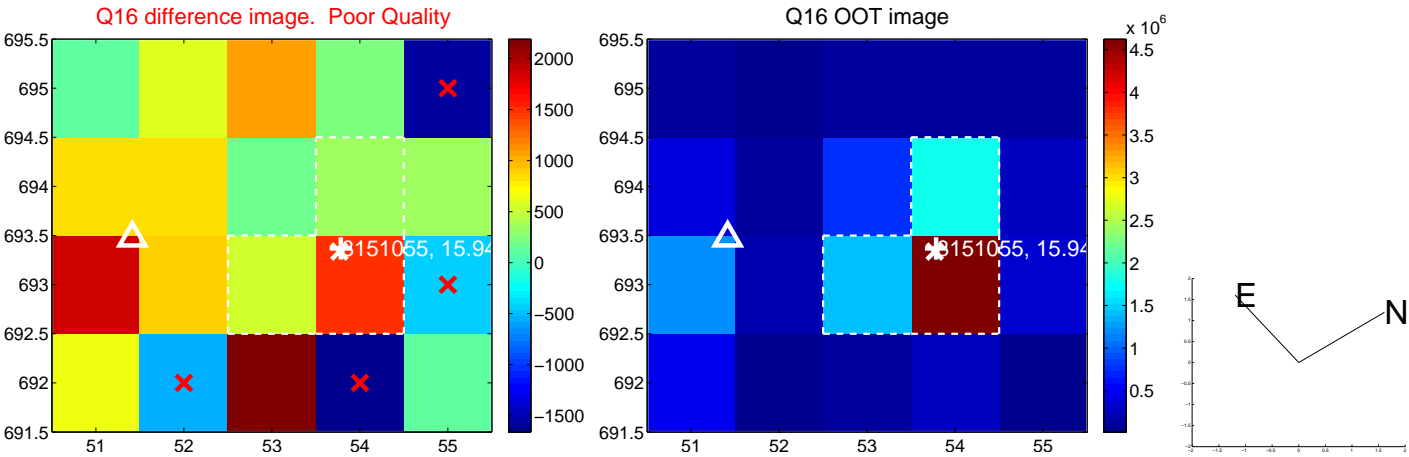
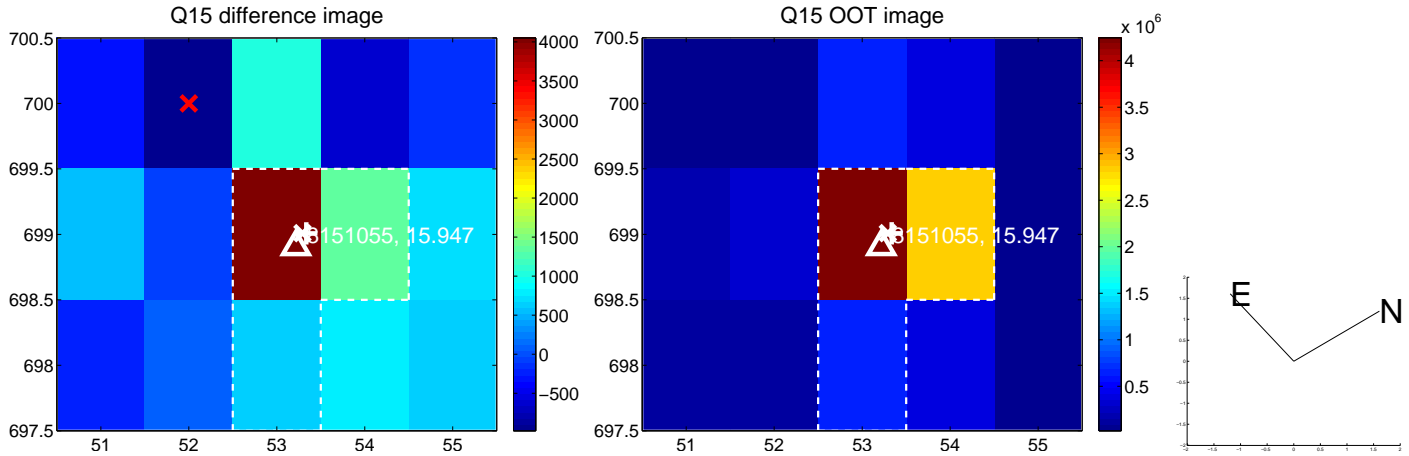
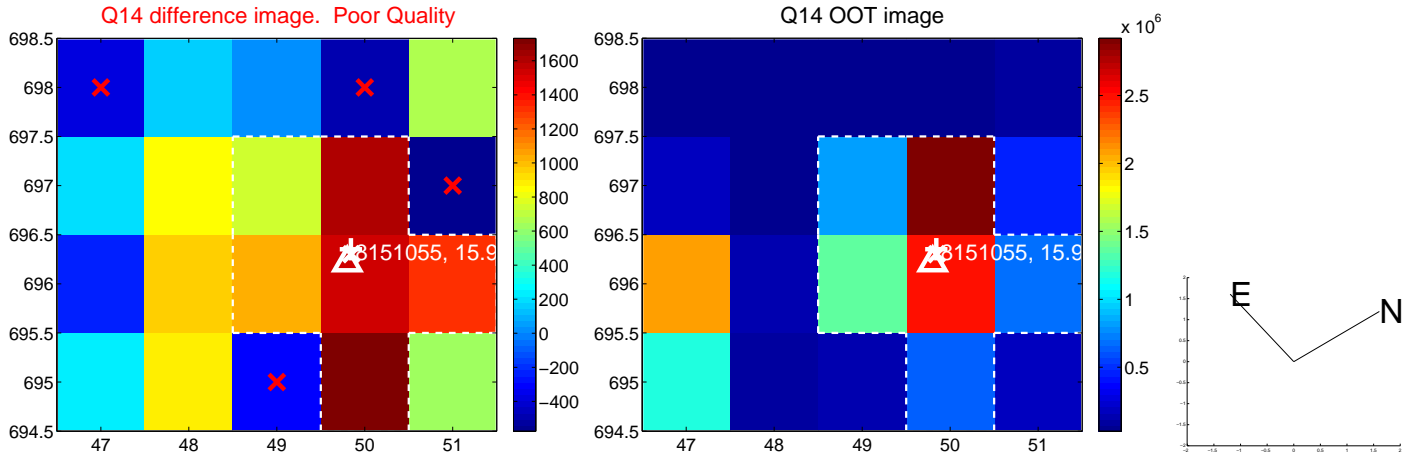
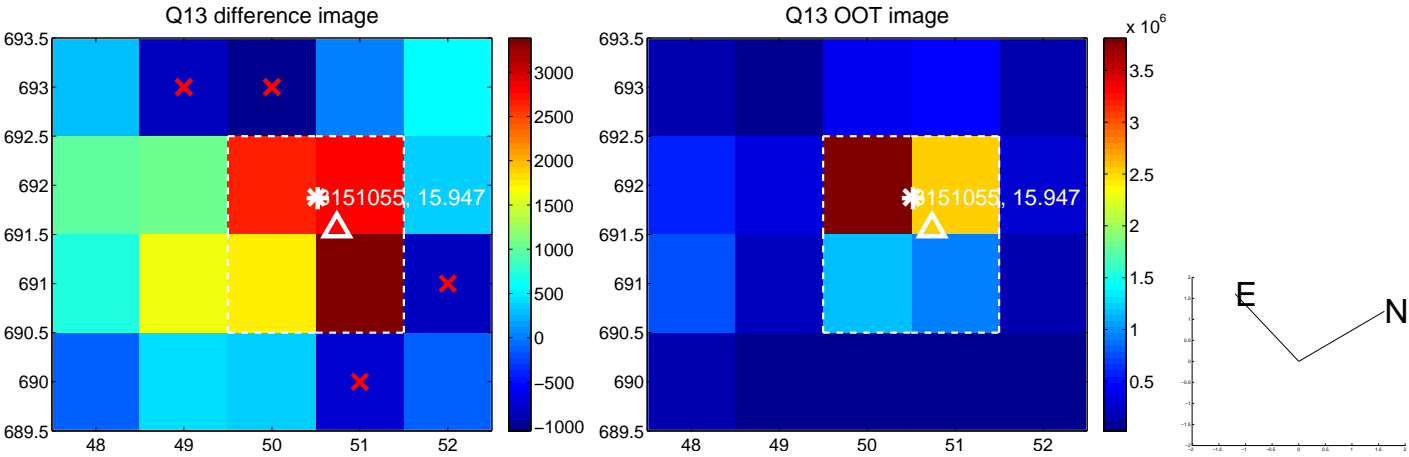
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



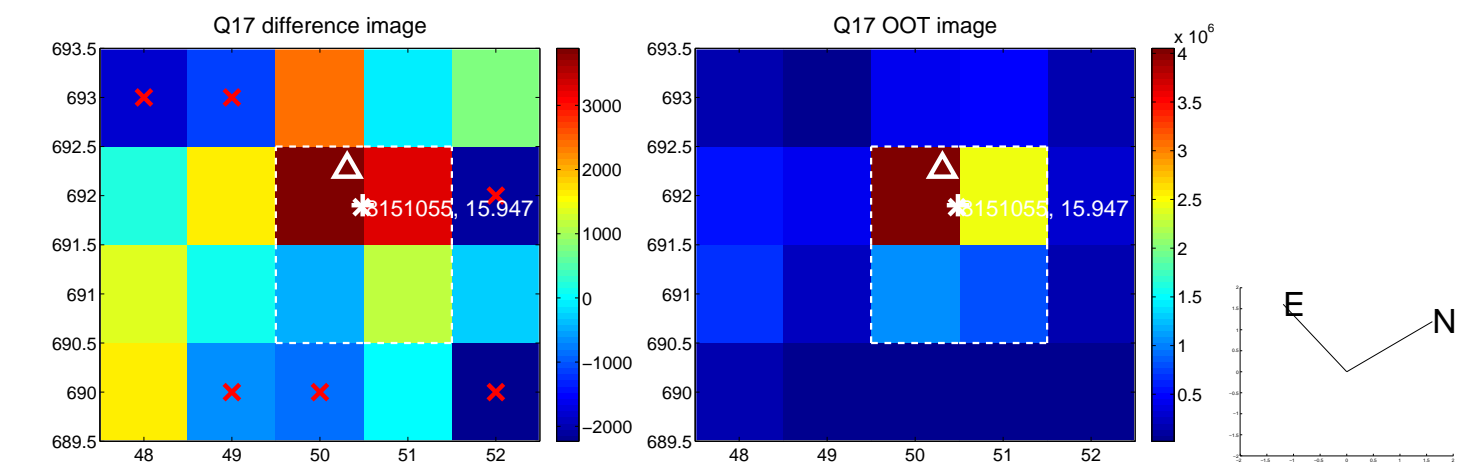
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



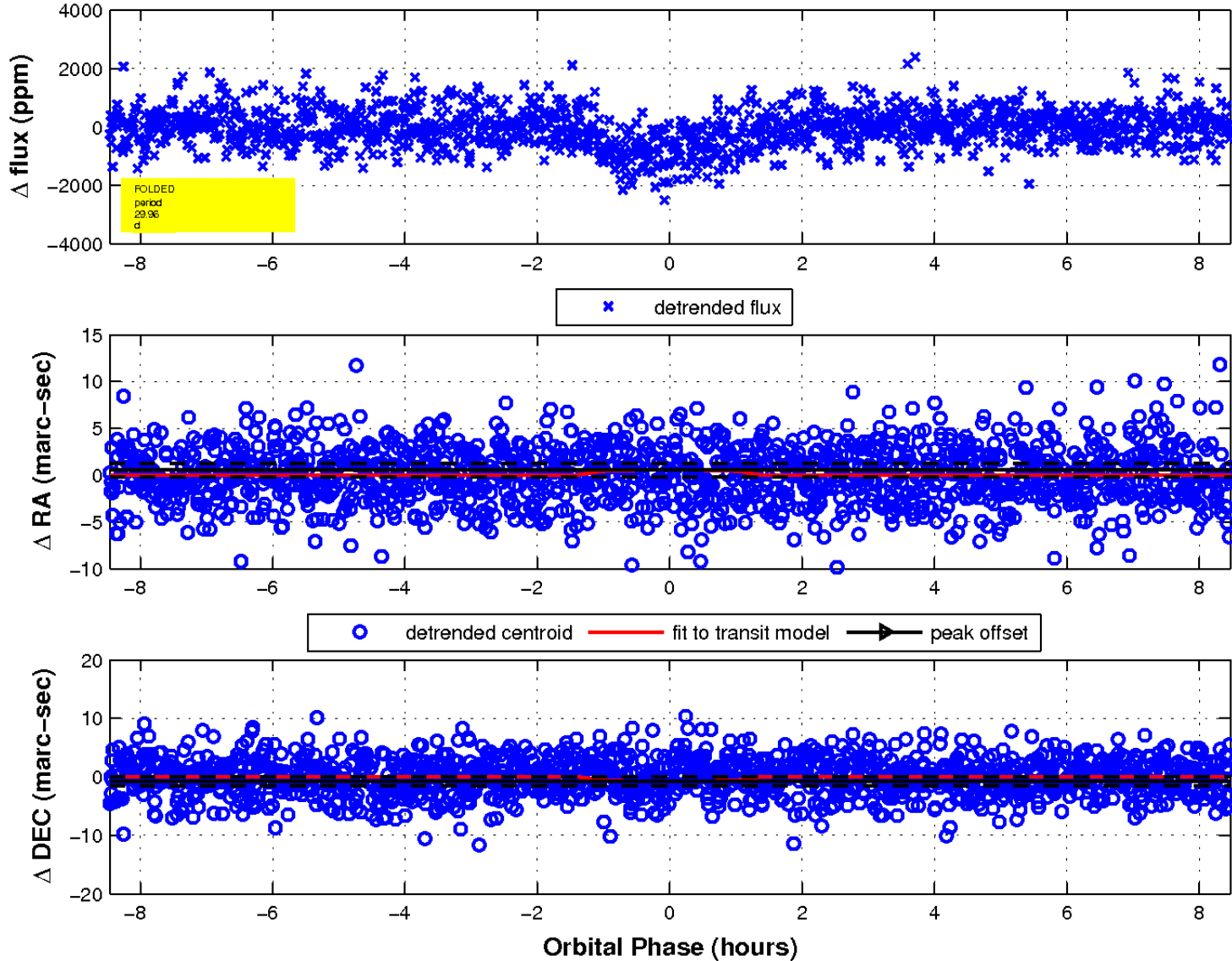
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

