

KIC 010329835

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})
010329835-01	OBS	2058.01	1.523719	131.621520	331.5	1.356	26.8	30.6	0.51	3746	1.10	106.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010329835-01	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.

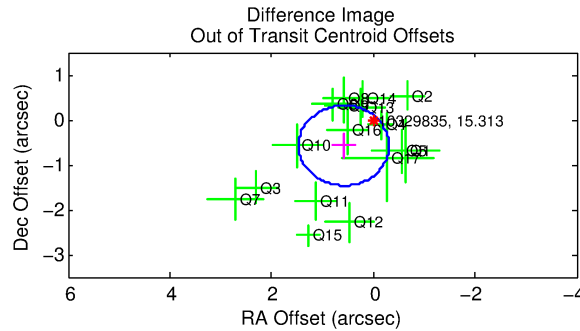
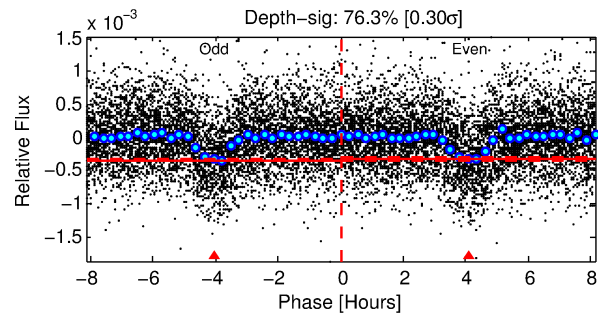
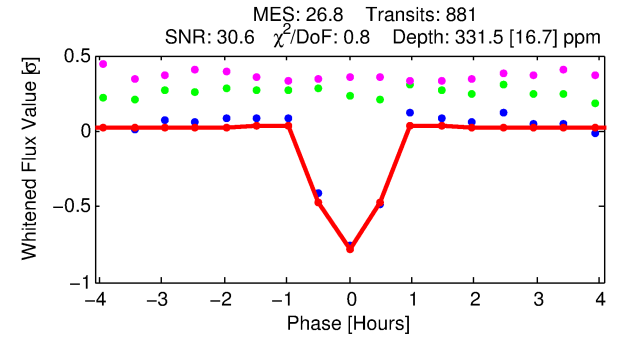
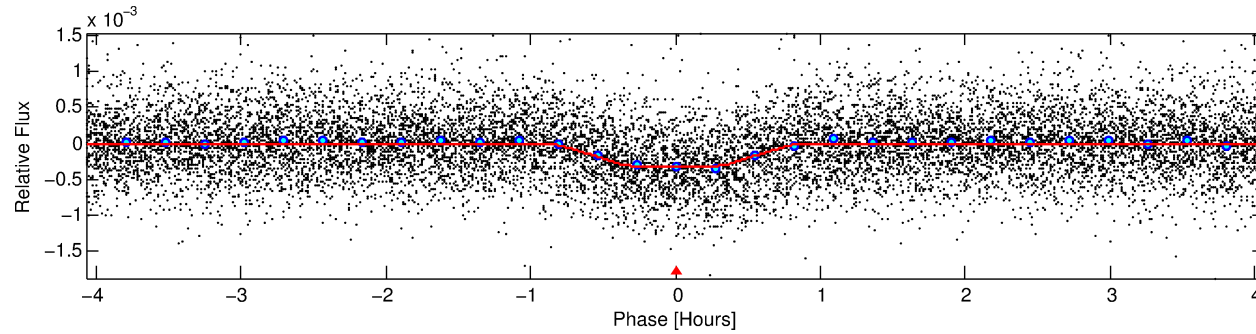
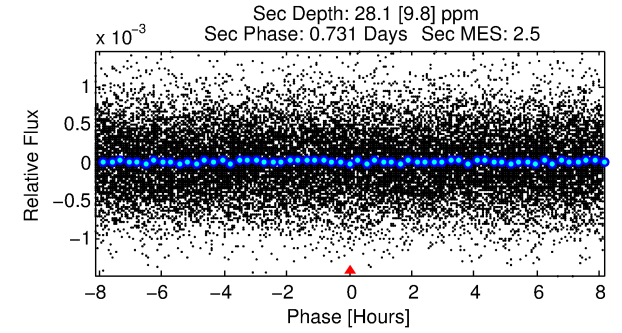
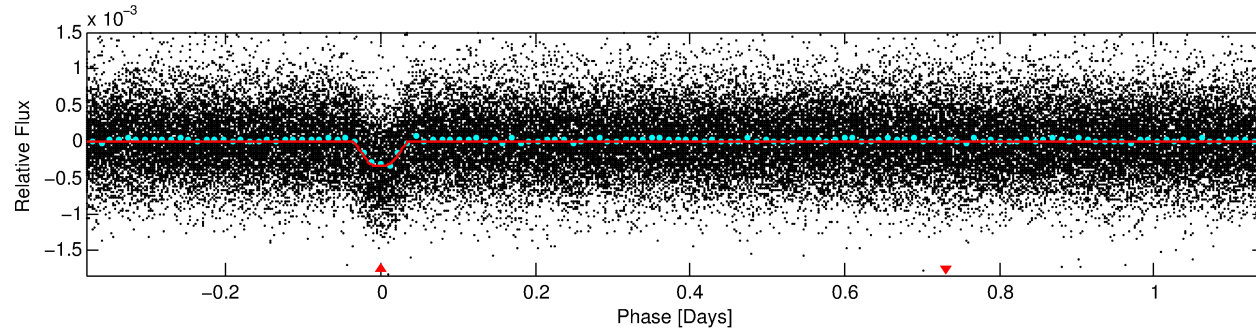
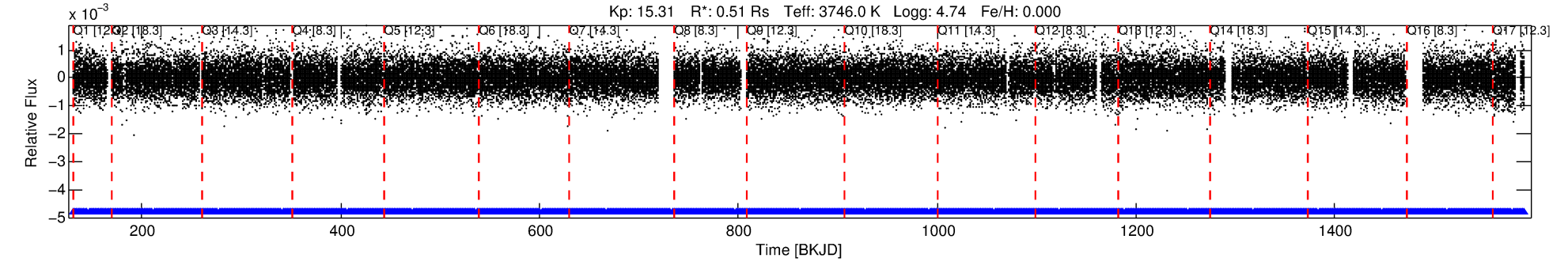
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010329835-01

No Significant Match Found

DV One-Page Summary

KIC: 10329835 Candidate: 1 of 1 Period: 1.524 d
KOI: K02058.01 Corr: 0.947



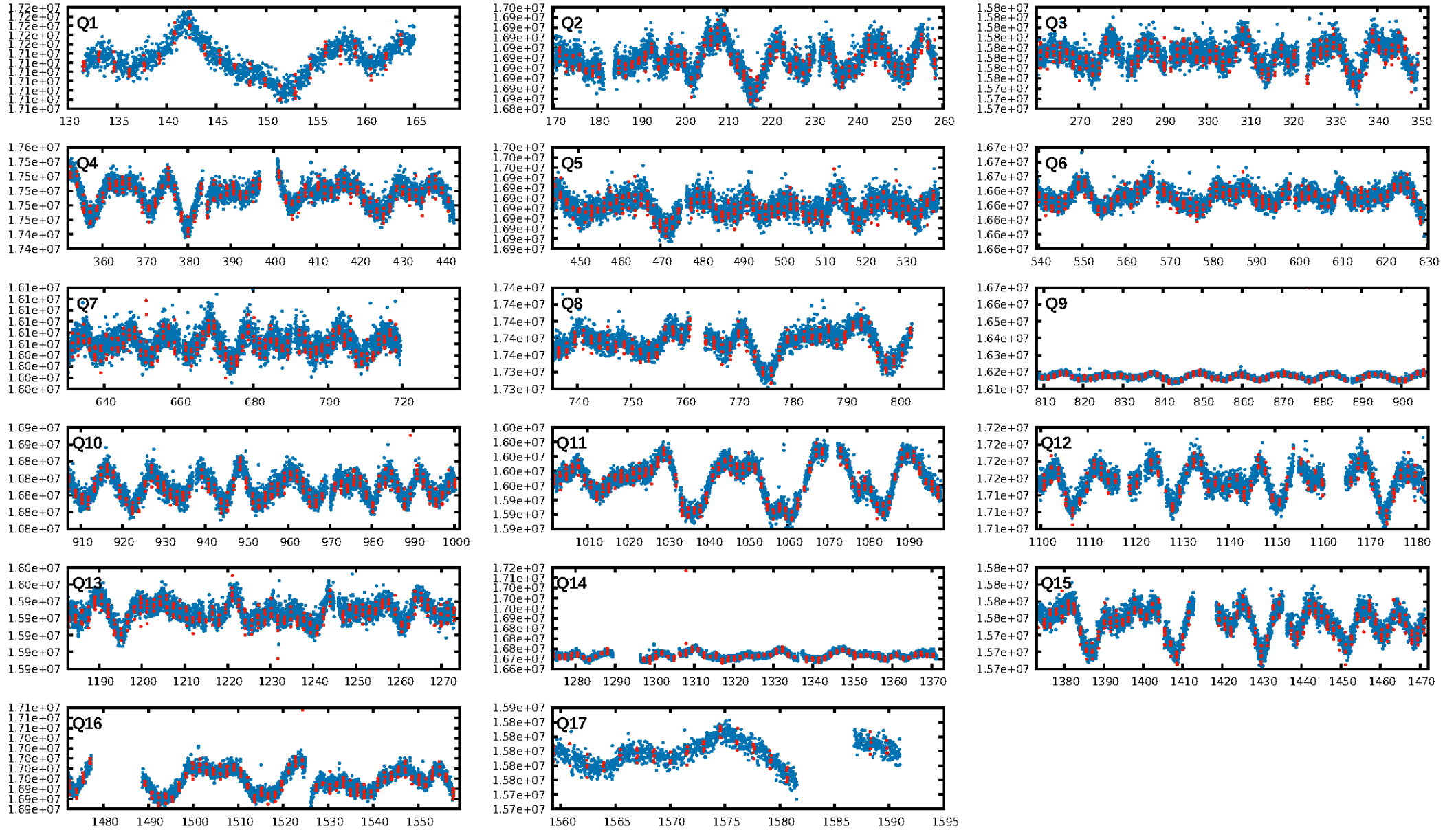
DV Fit Results:

Period = 1.52372 [0.00000] d
Epoch = 131.6215 [0.0007] BKJD
Rp/R* = 0.0199 [0.0058]
a/R* = 4.33 [5.21]
b = 0.89 [0.29]
Seff = 106.09 [14.53]
Teff = 818 [28] K
Rp = 1.10 [0.34] Re
a = 0.0208 [0.0016] AU
Ag = 5.48 [3.76] [1.19σ]
Teffp = 1935 [331] K [3.36σ]

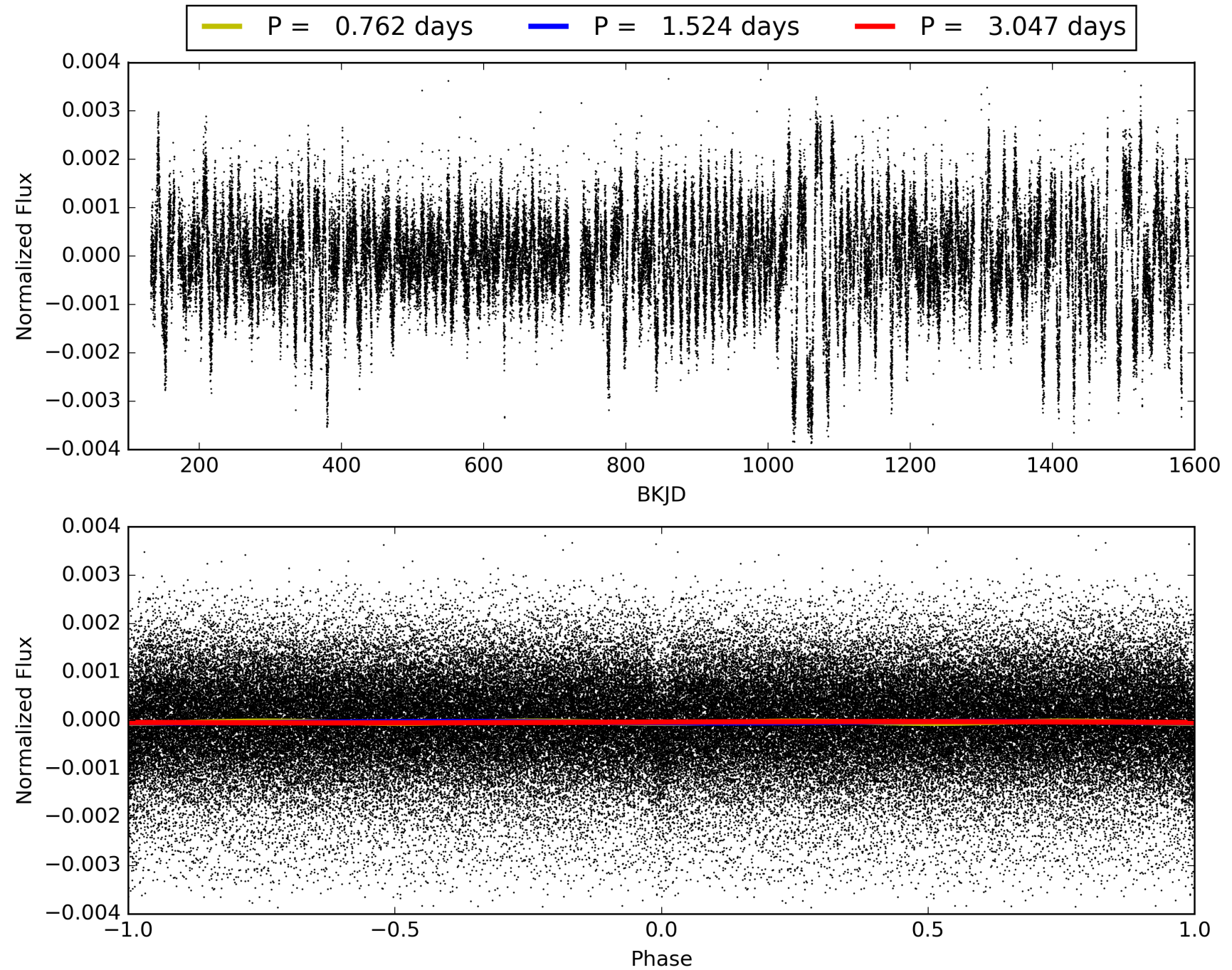
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.99e-151
RollingBand-fgt: 1.00 [842/842]
GhostDiagnostic-chr: 6.923
Centroid-sig: 0.0%
Centroid-so: 0.503 arcsec [1.54σ]
OotOffset-rm: 0.817 arcsec [2.75σ]
KicOffset-rm: 0.423 arcsec [2.41σ]
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]

TCE 010329835-01, PDC Light Curves

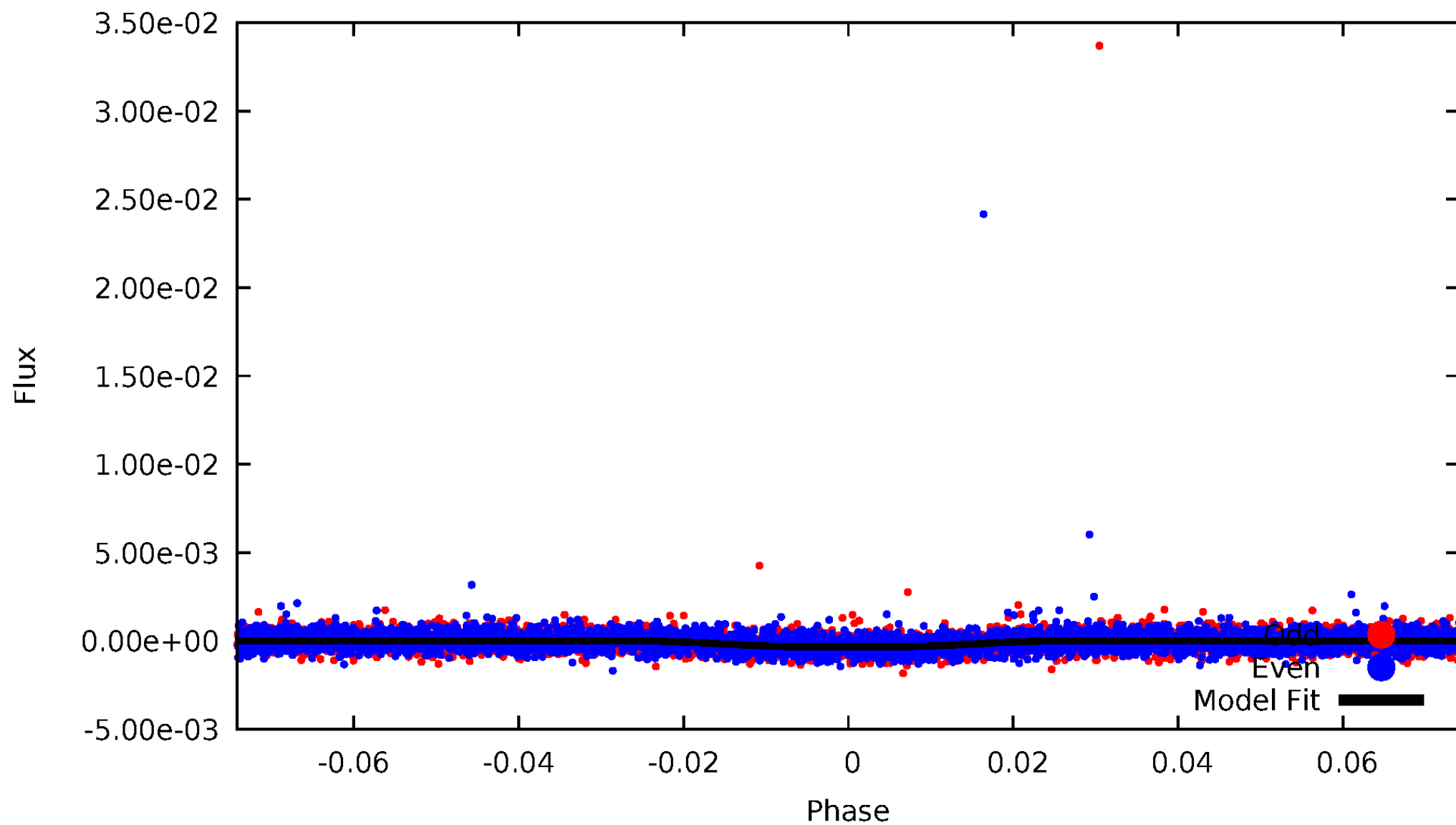


TCE 010329835-01



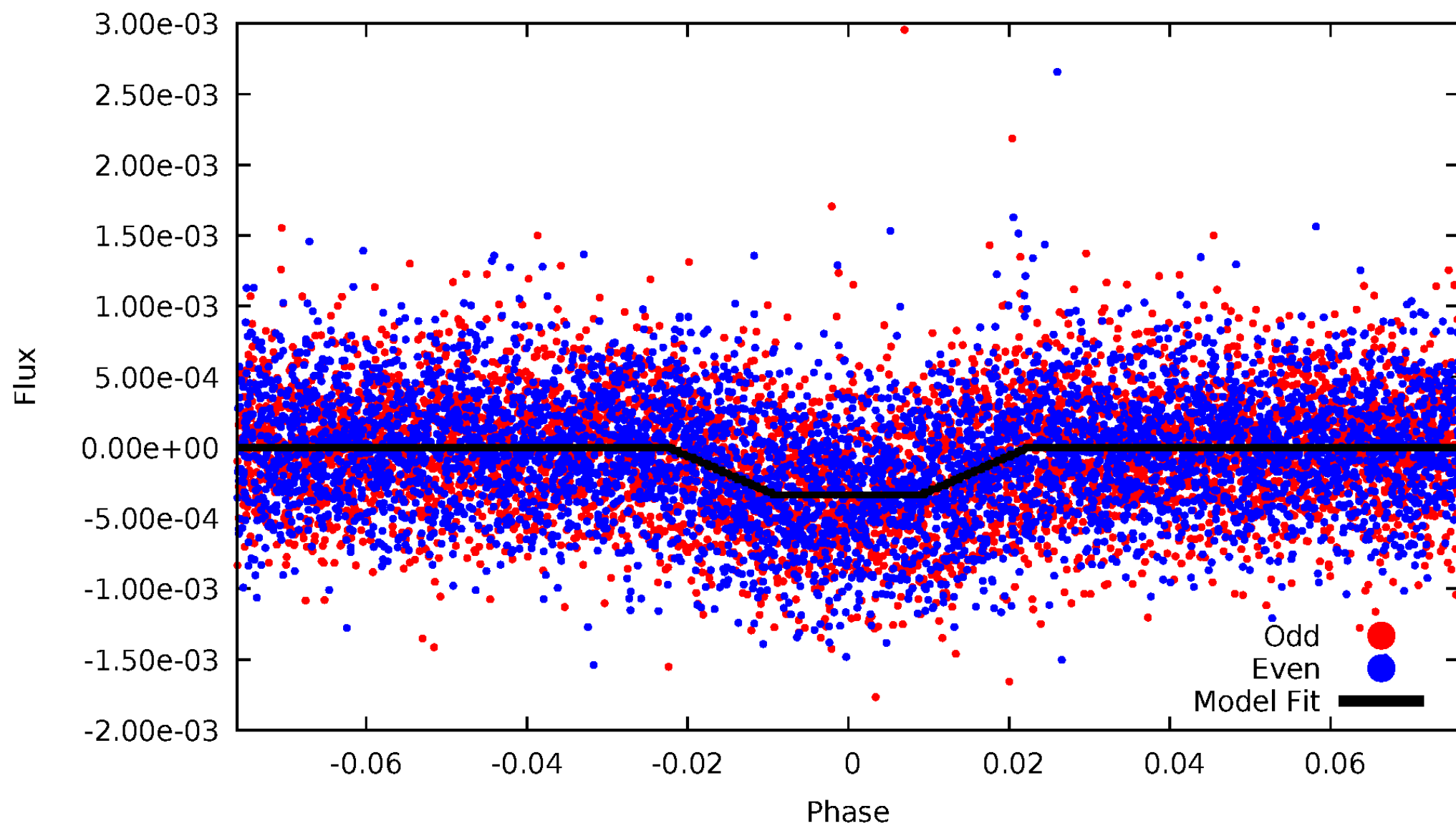
DV Odd/Even

TCE 010329835-01

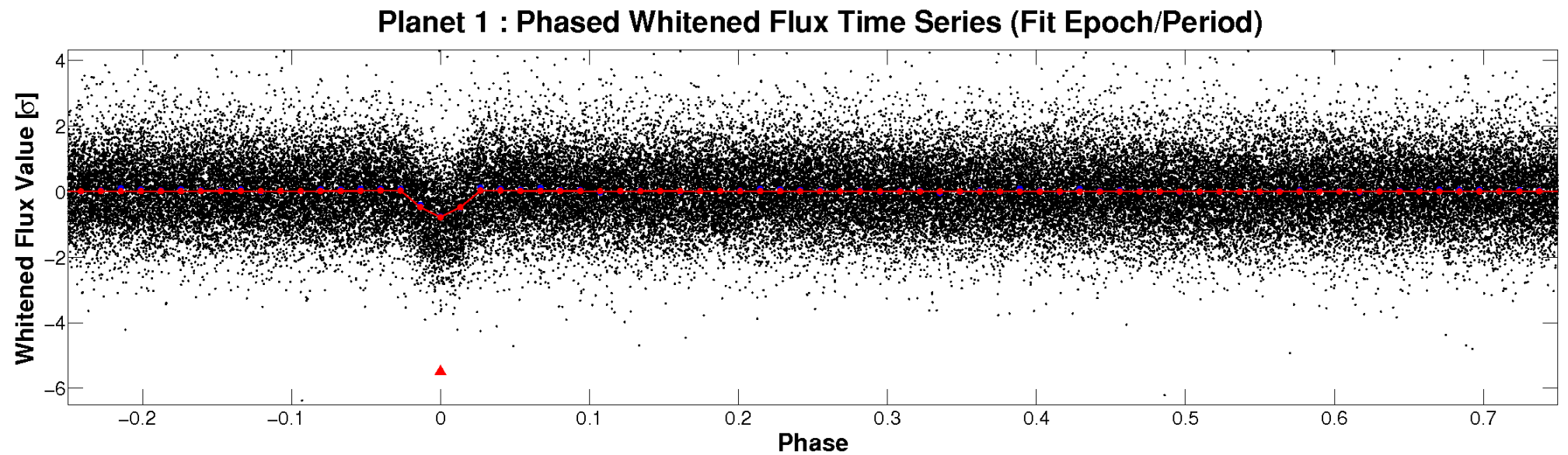
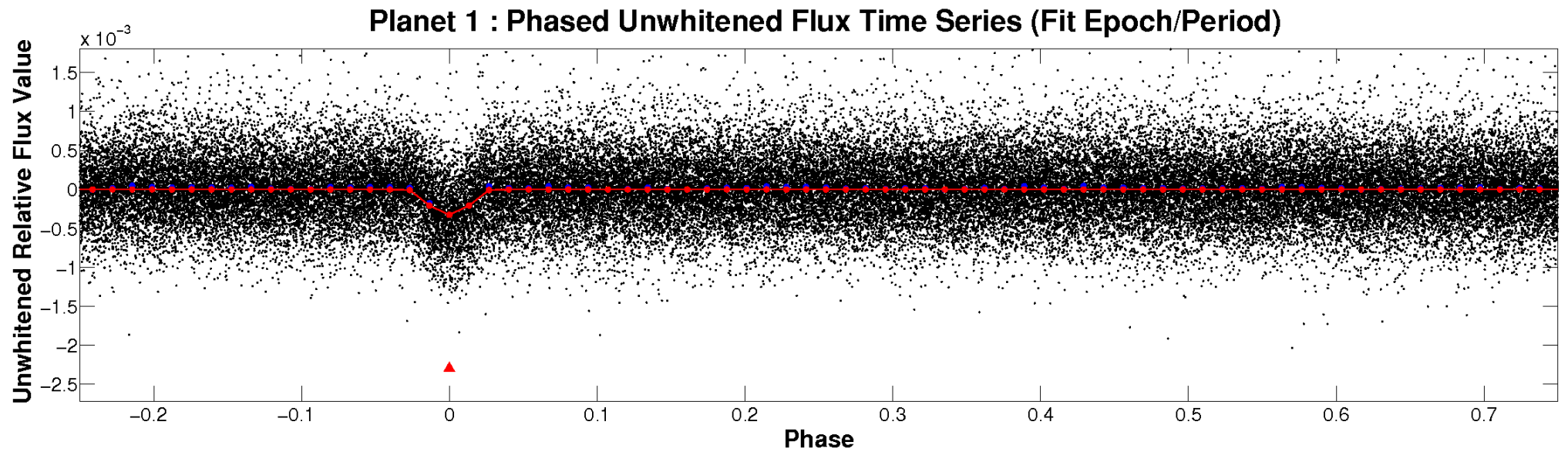


ALT Odd/Even

TCE 010329835-01

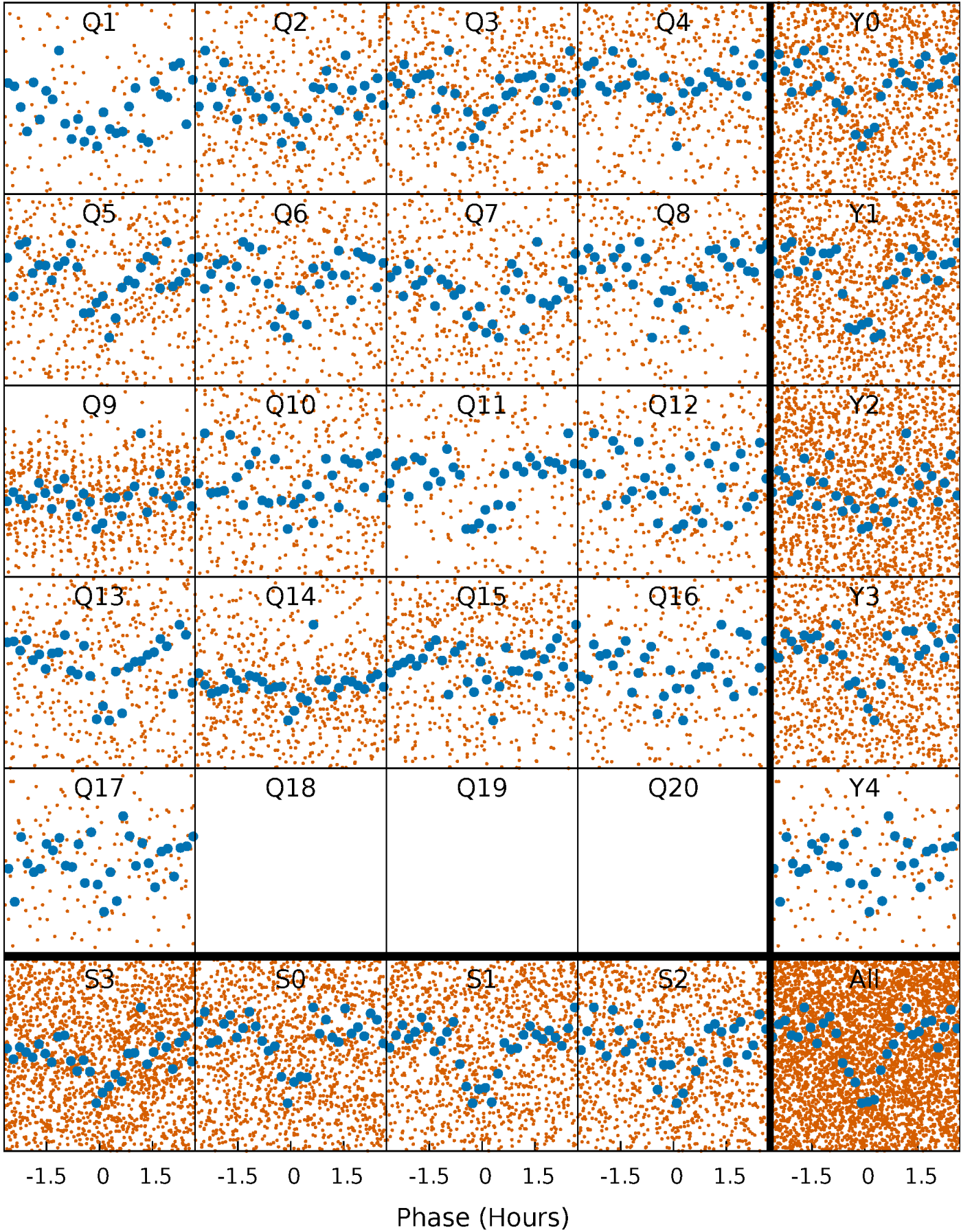


Non-Whitened Vs. Whitened Light Curve



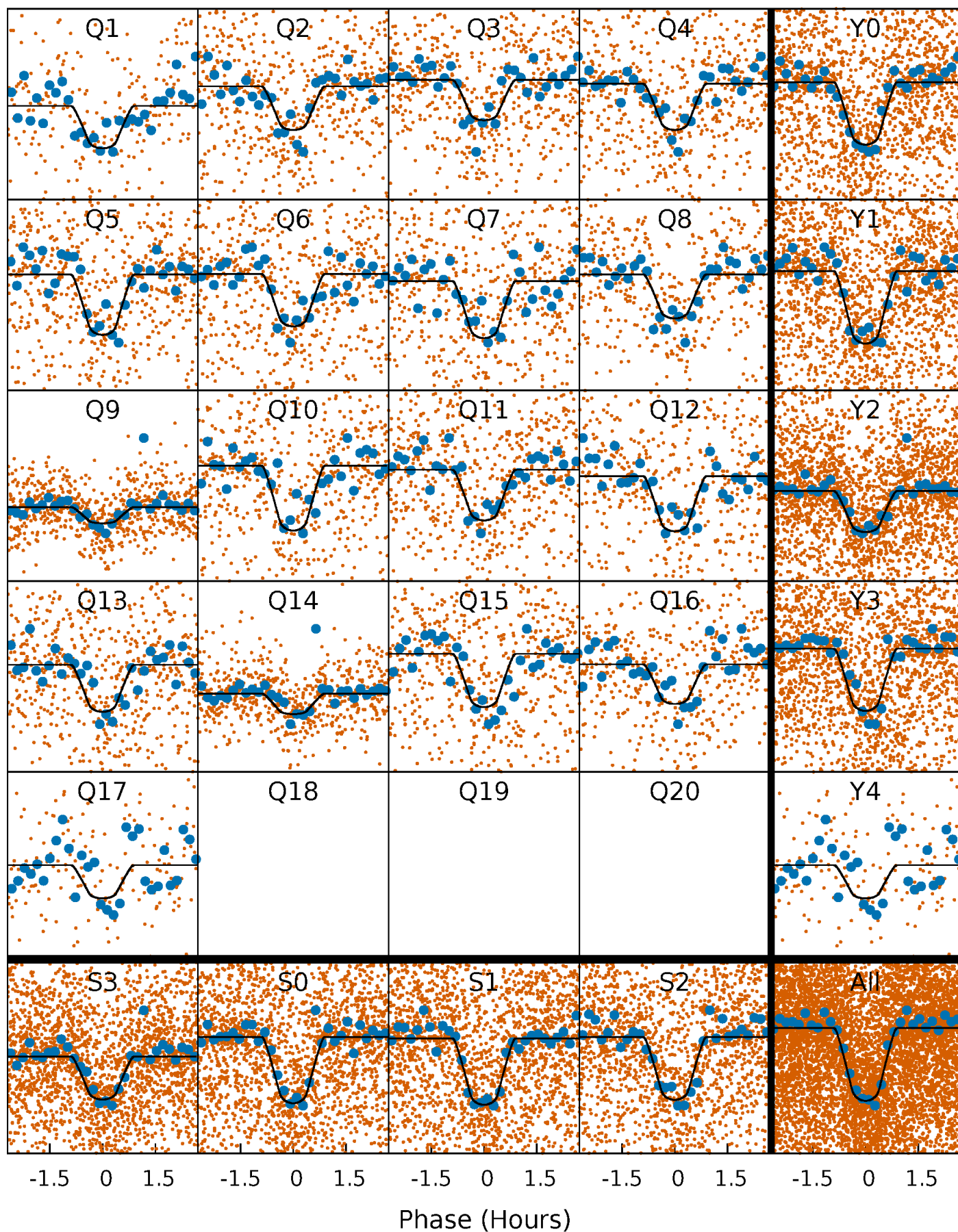
PDC Quarter-Phased Transit Curves

TCE 010329835-01 P= 1.523719 Days $T_0=131.621520$ (BKJD)



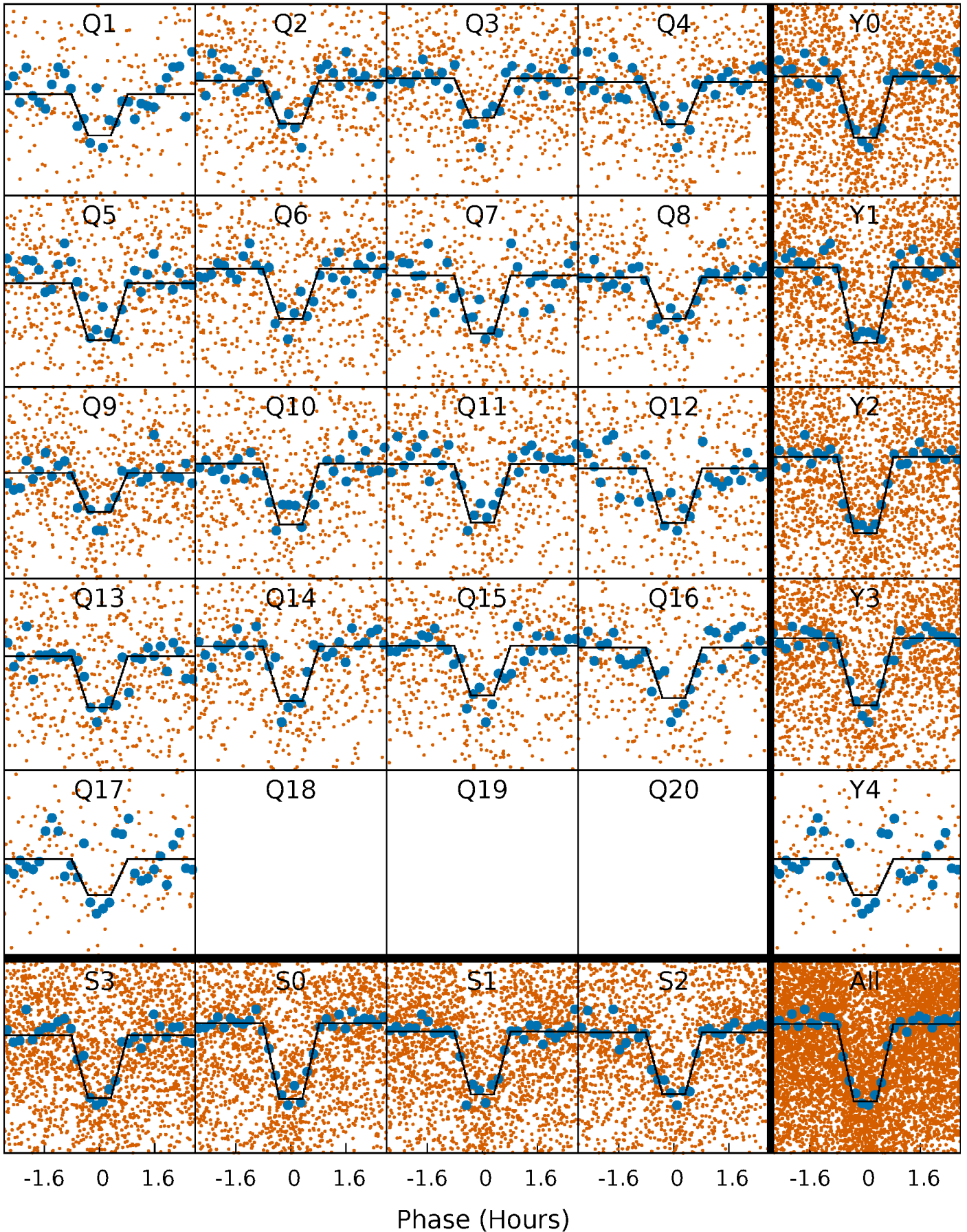
DV Quarter-Phased Transit Curves

TCE 010329835-01 P= 1.523719 Days $T_0=131.621520$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

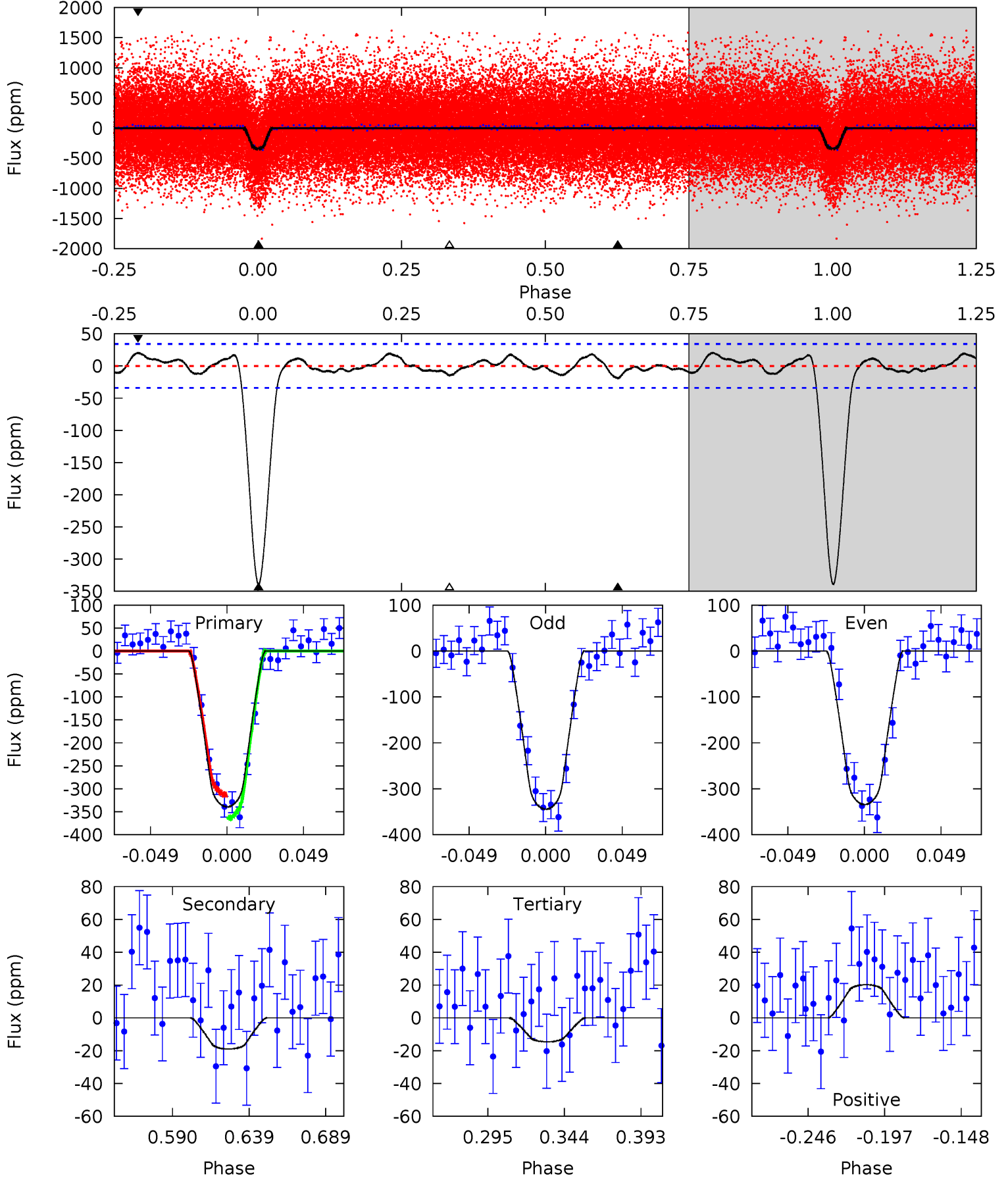
TCE 010329835-01 P= 1.523732 Days $T_0=131.617462$ (BKJD)



DV Model-Shift Uniqueness Test

010329835-01, P = 1.523719 Days, E = 130.097801 Days

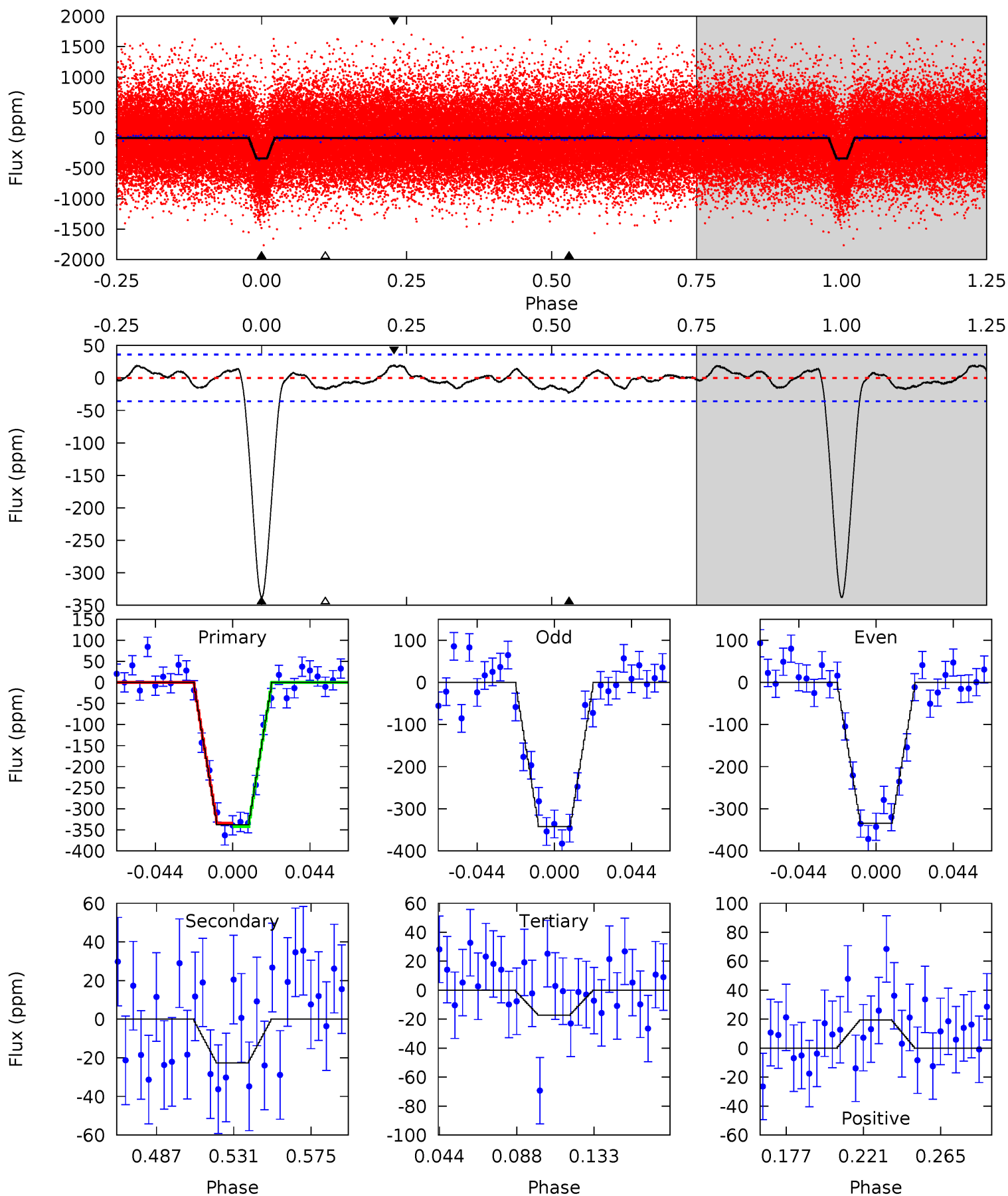
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.0	2.63	2.01	2.80	4.71	1.97	1.20	45.0	44.2	0.62	-0.17	0.71	0.95	0.06	3.54



Alt Model-Shift Uniqueness Test

010329835-01, P = 1.523732 Days, E = 130.093730 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.5	2.99	2.26	2.57	4.73	2.01	1.17	42.2	41.9	0.72	0.42	0.51	0.96	0.05	0.55



Stellar Parameters For KIC 010329835

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3746^{+75}_{-83}	$4.736^{+0.053}_{-0.025}$	$0.000^{+0.150}_{-0.150}$	$0.510^{+0.033}_{-0.050}$	$0.516^{+0.038}_{-0.042}$	$5.482^{+1.279}_{-0.586}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+6%/-10%	+7%/-8%	+23%/-11%
Source	SPE70	SPE60	SPE70	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010329835-01 / KOI 2058.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-19 ± 7	$1.11^{+0.29}_{-0.33}$	1137^{+29}_{-33}	2410^{+243}_{-229}	$3.688^{+4.117}_{-1.959}$
Alt.	-23 ± 8	$1.00^{+0.35}_{-0.30}$	1138^{+29}_{-32}	2507^{+288}_{-209}	$5.113^{+6.328}_{-2.604}$

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

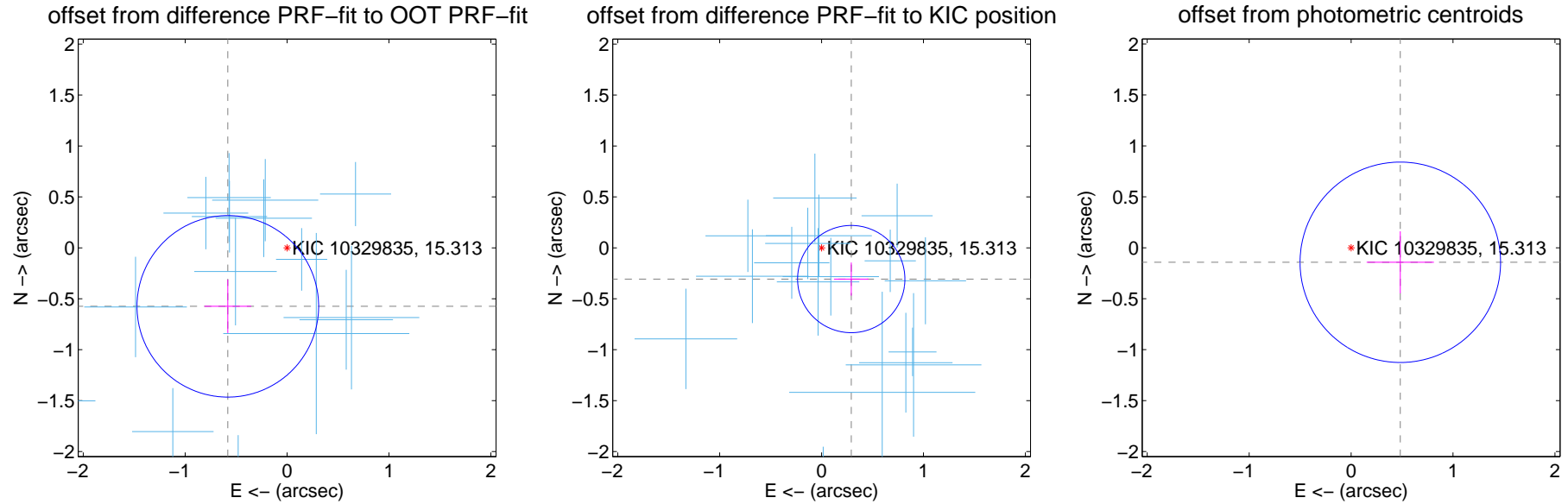
DV Centroid Data

Supplemental centroid analysis for 010329835-01. Kepler magnitude: 15.31. Transit SNR 30.60

There are 17 quarters with good PRF difference image offsets

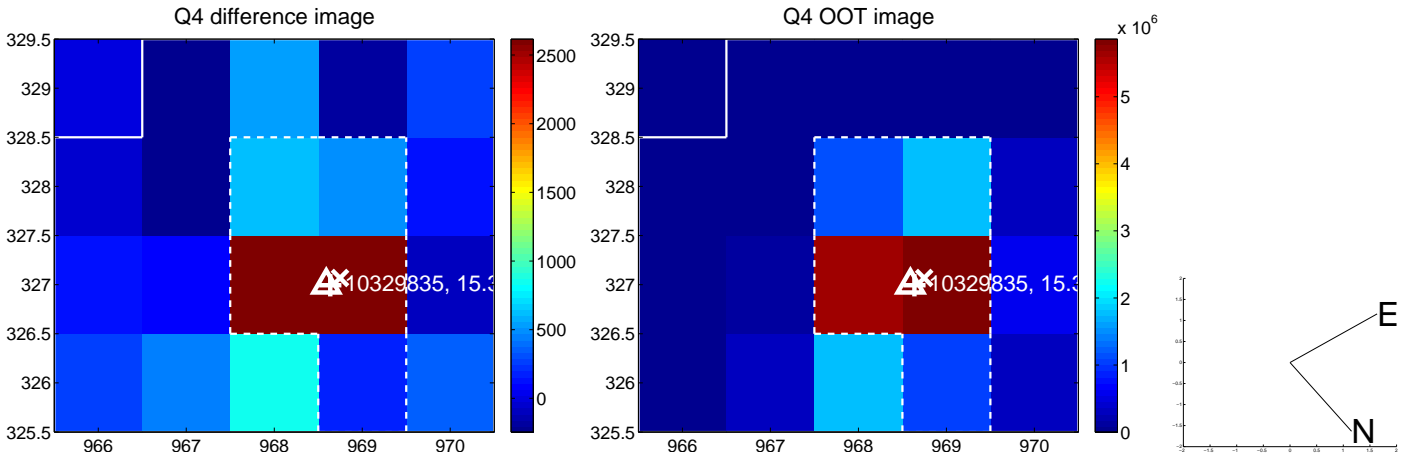
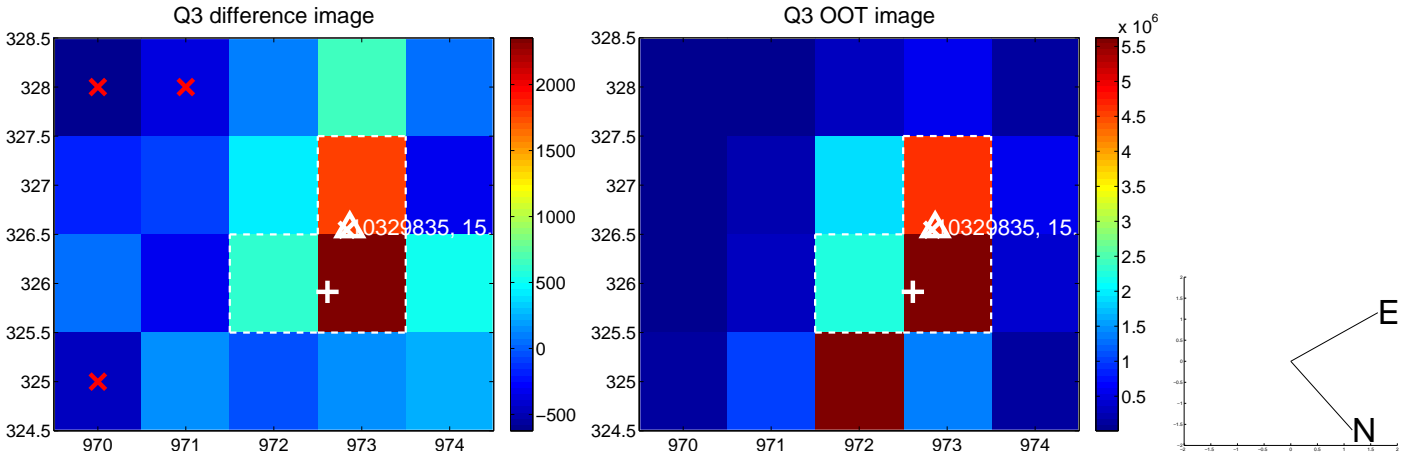
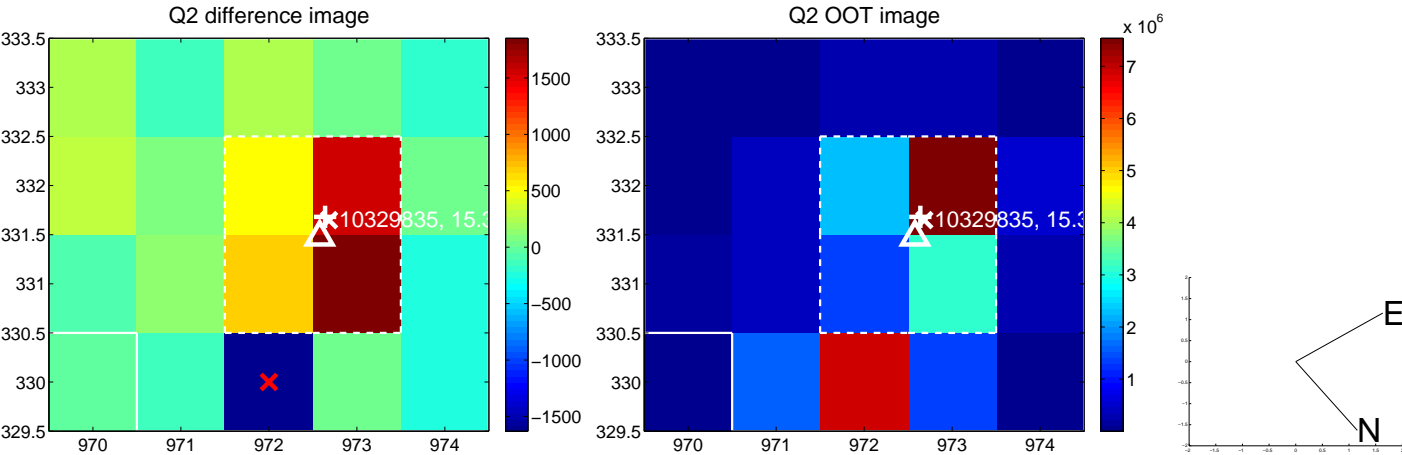
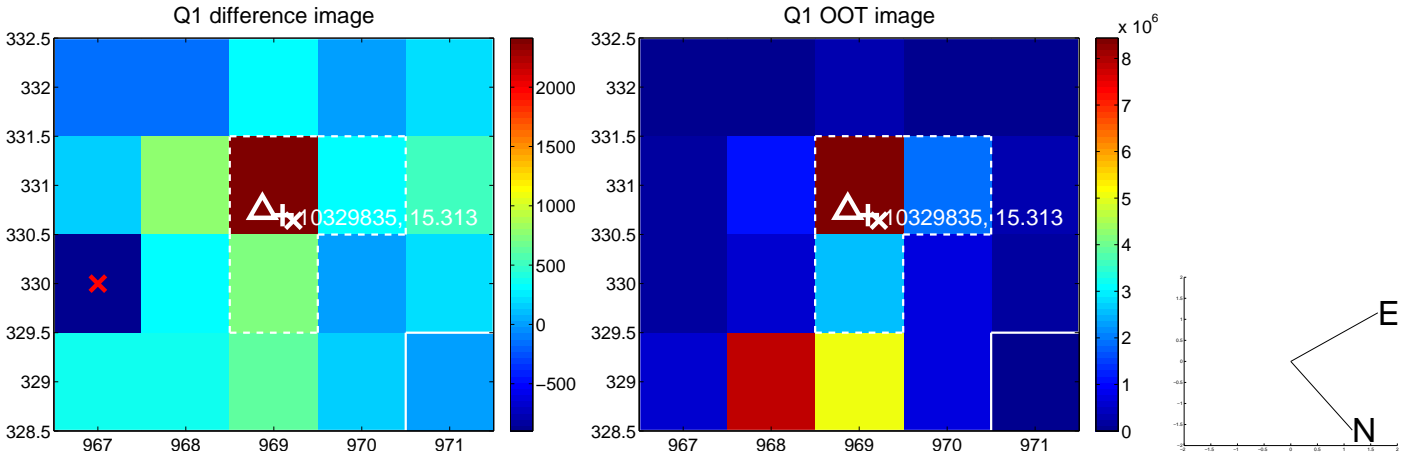
The direct PRF centroid is offset from the target star catalog position by about 0.66 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.817 ± 0.297	2.75	0.581 ± 0.230	-0.574 ± 0.262
PRF-fit source offset from KIC position	0.423 ± 0.175	2.41	-0.291 ± 0.169	-0.307 ± 0.163
photometric centroid source offset	0.50 ± 0.33	1.54	-0.48 ± 0.33	-0.14 ± 0.30

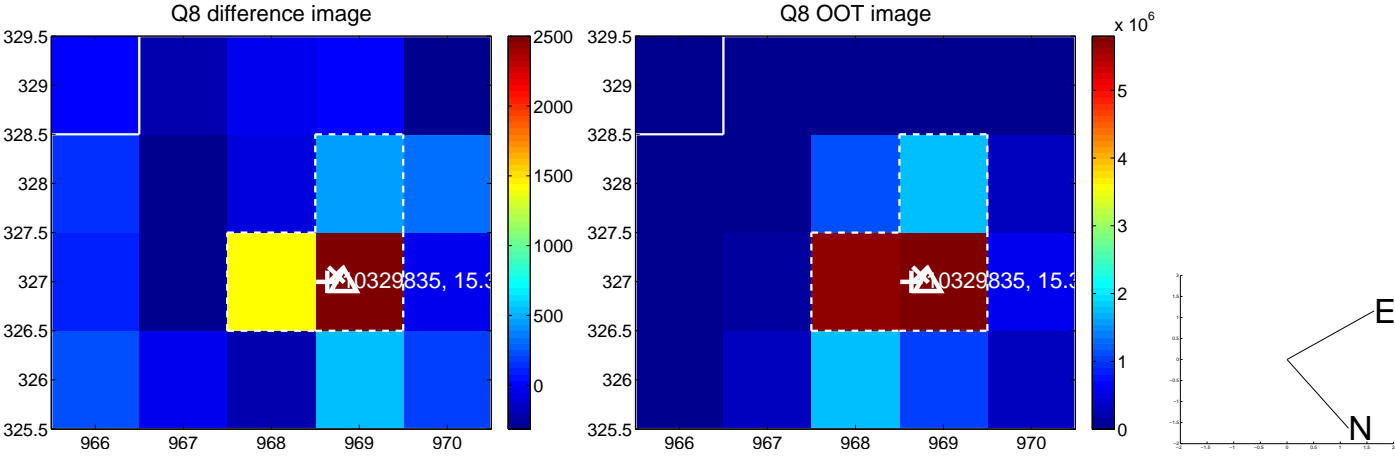
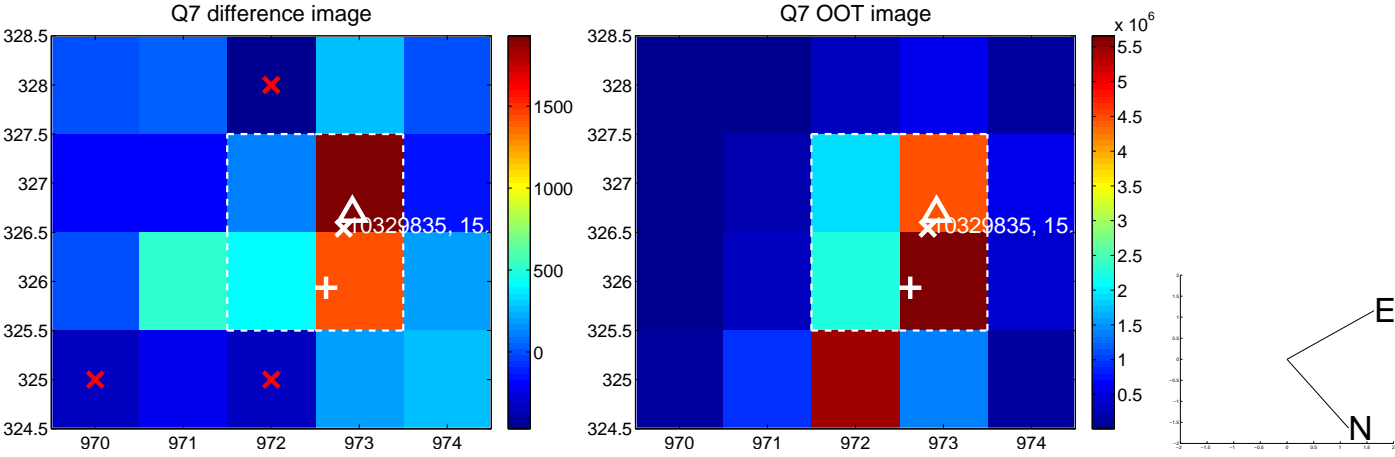
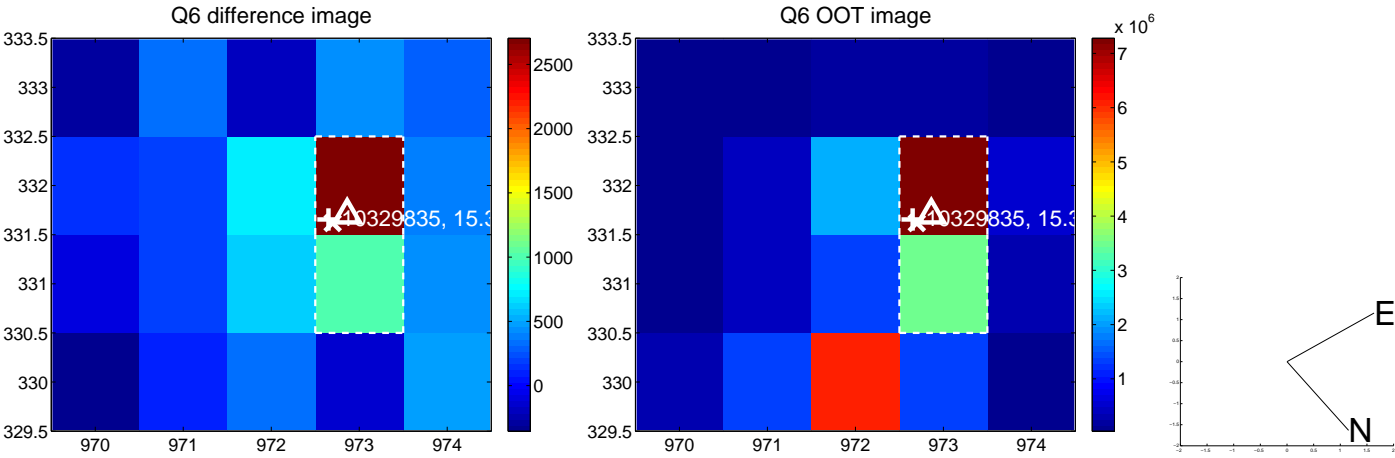
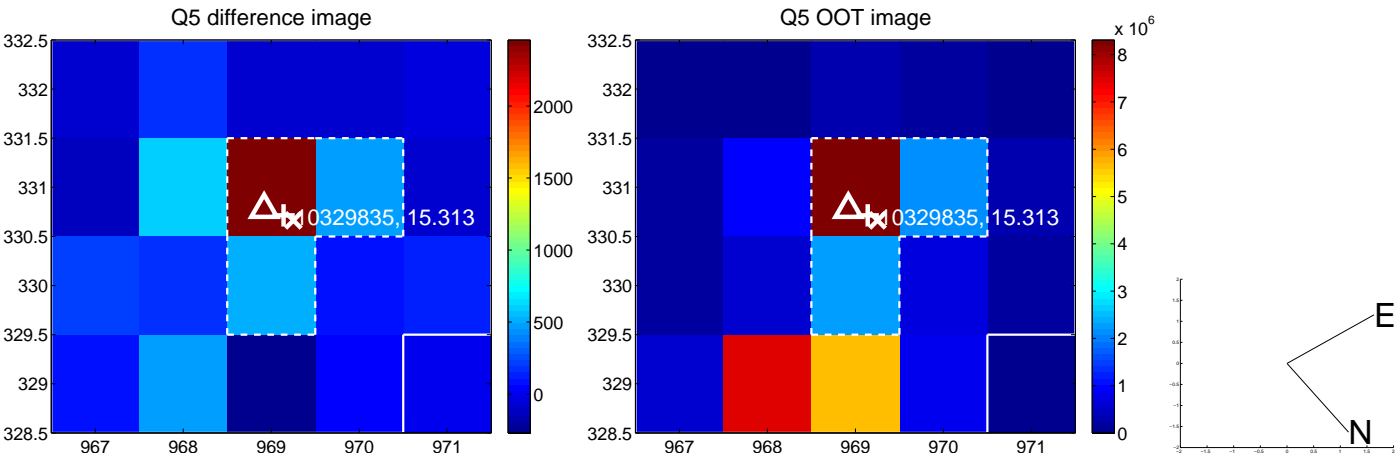


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

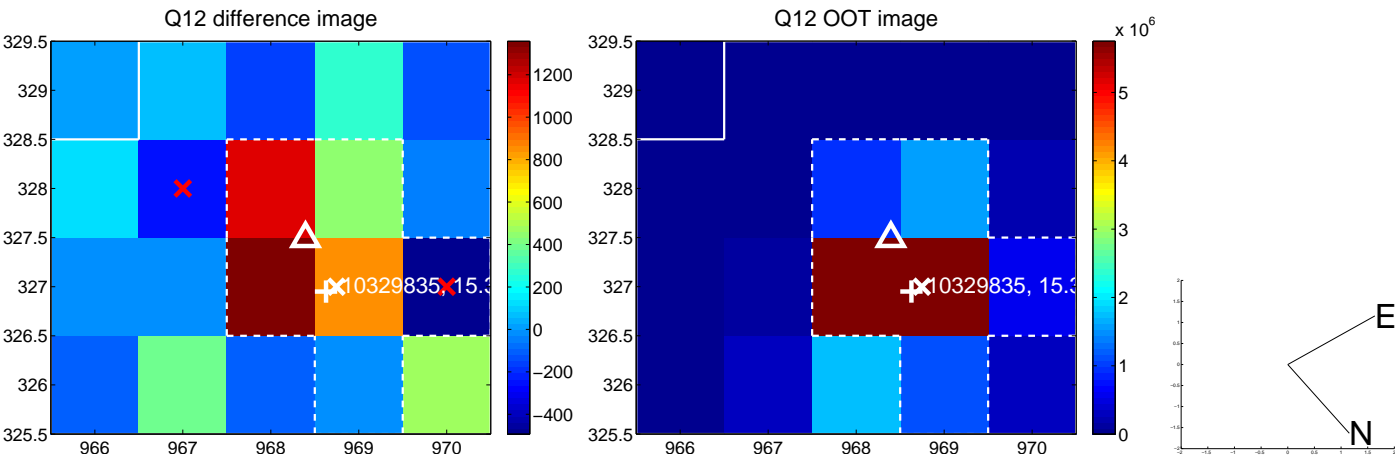
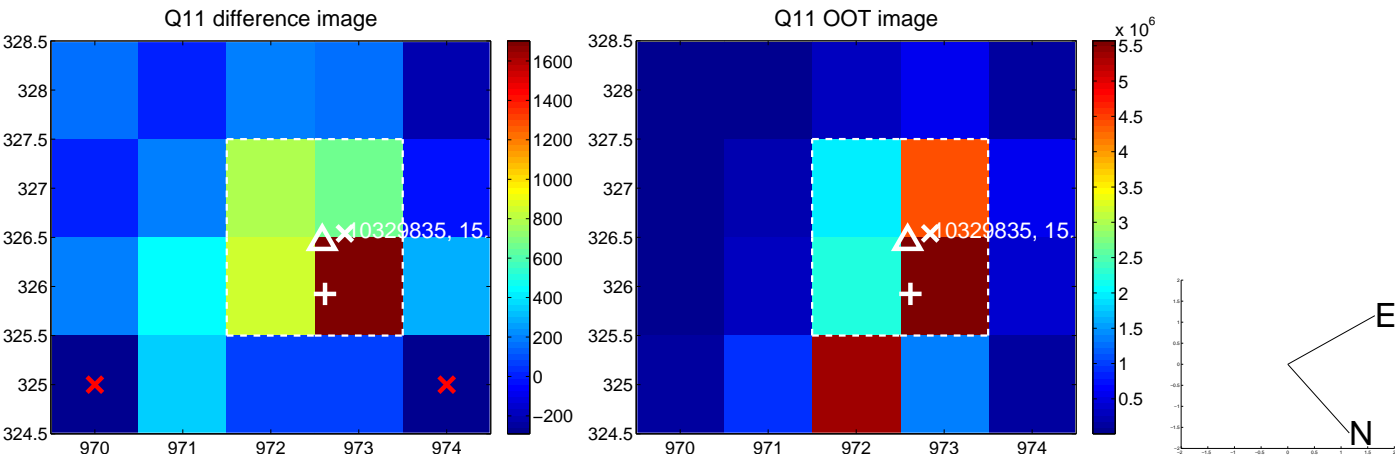
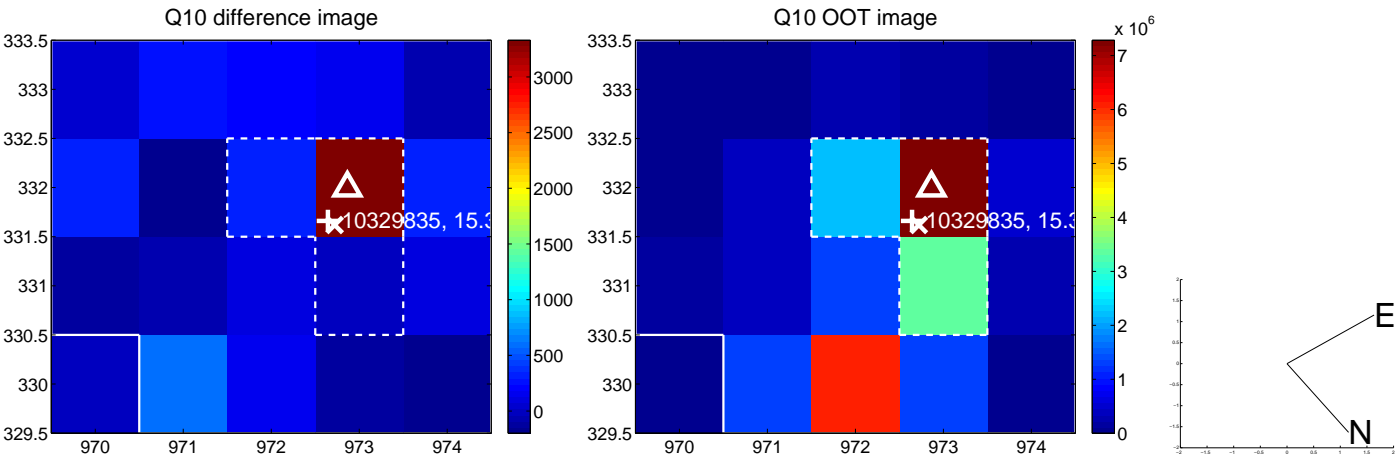
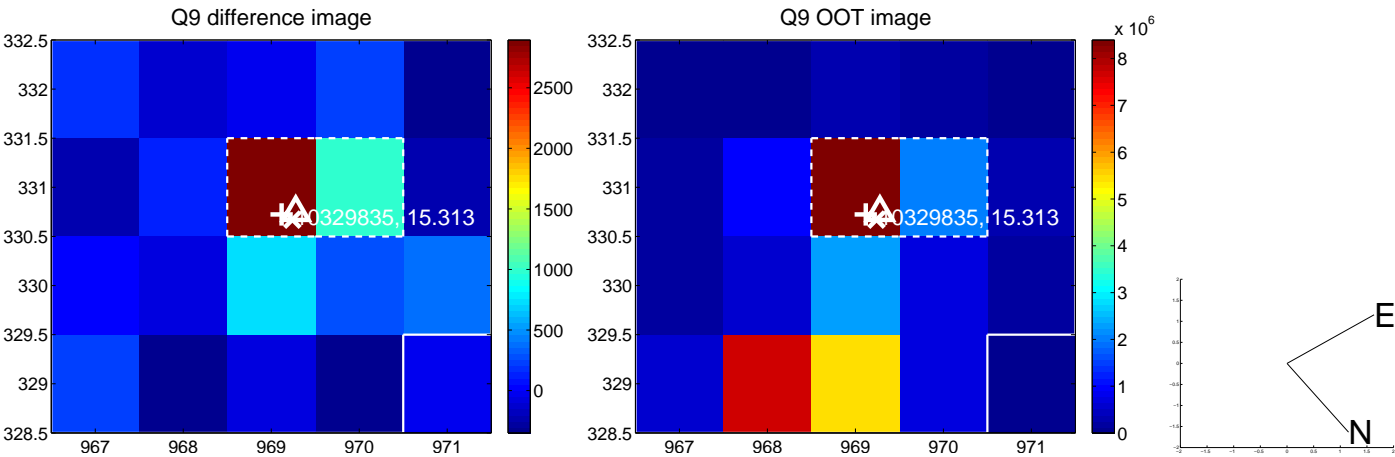
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



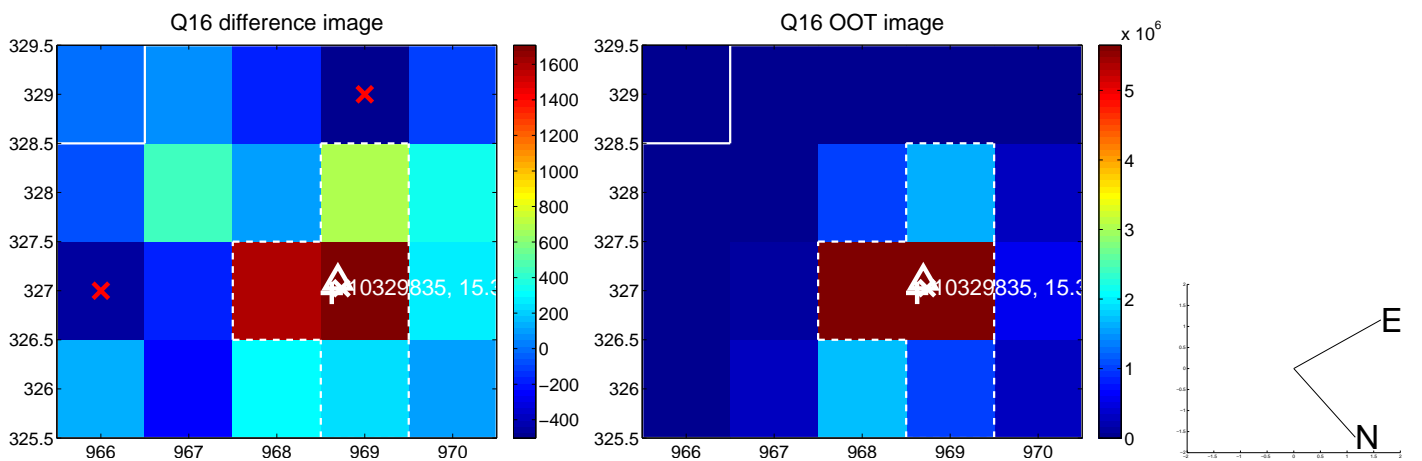
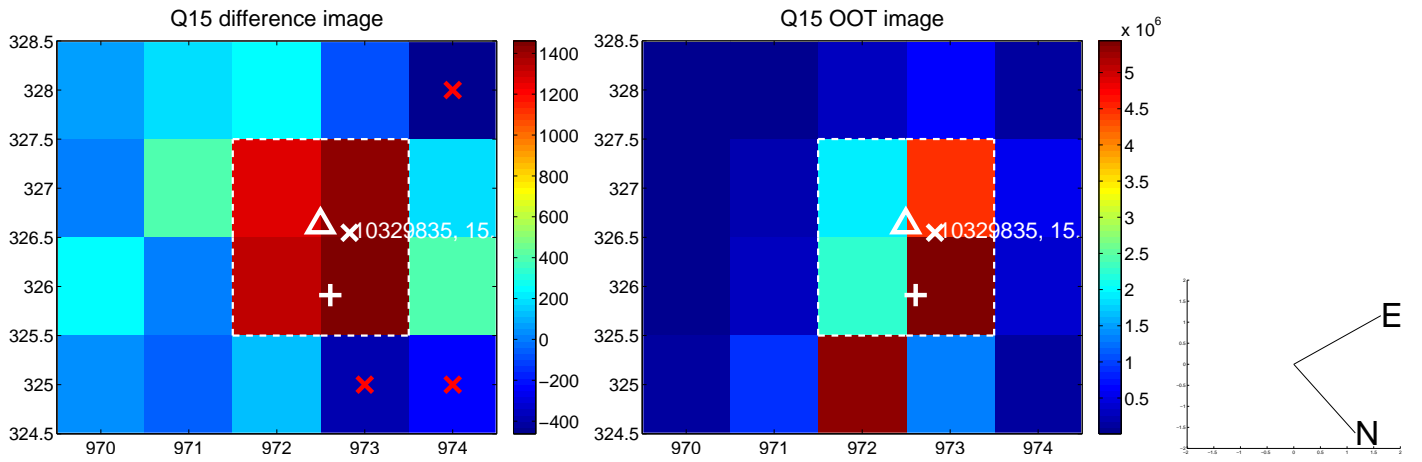
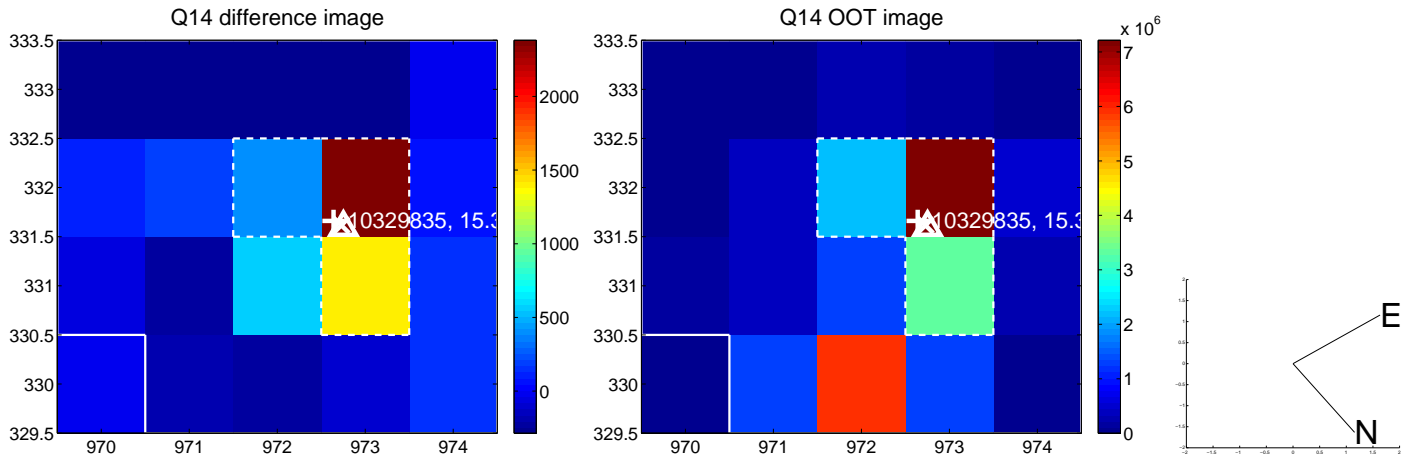
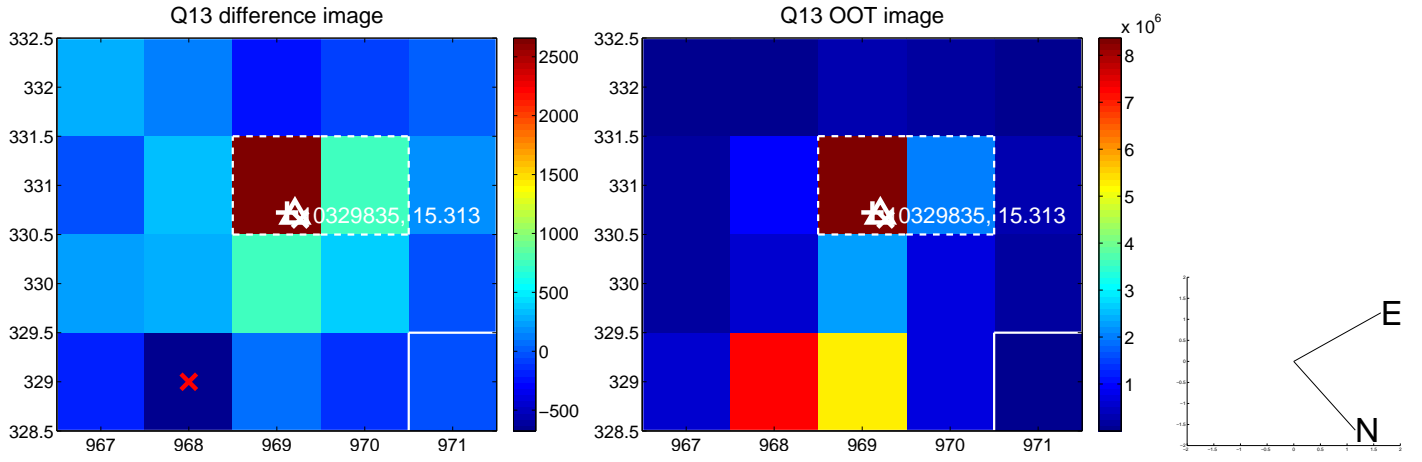
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



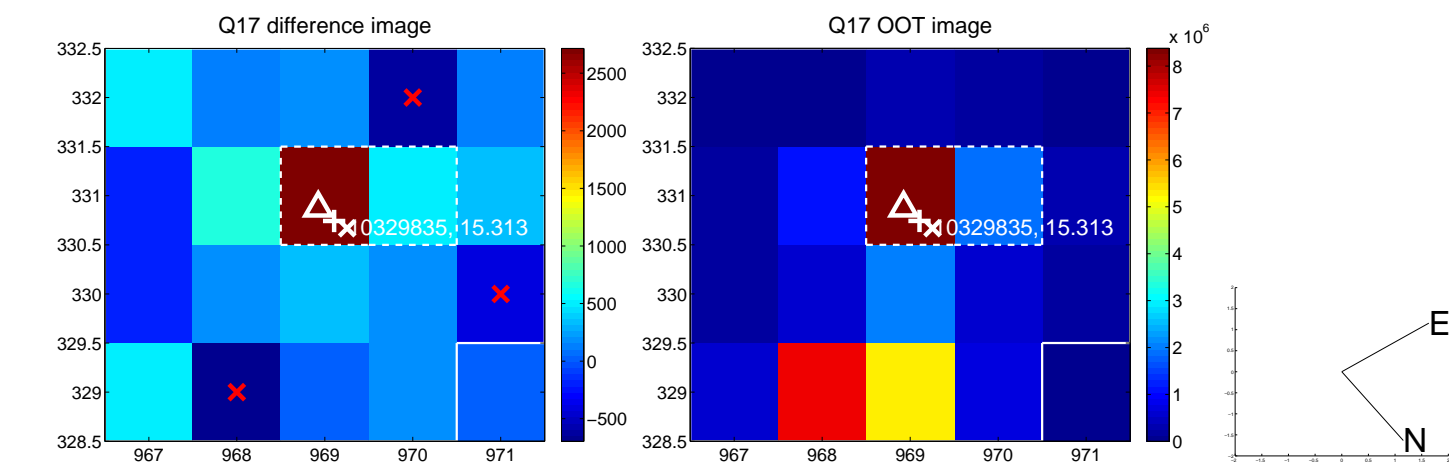
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



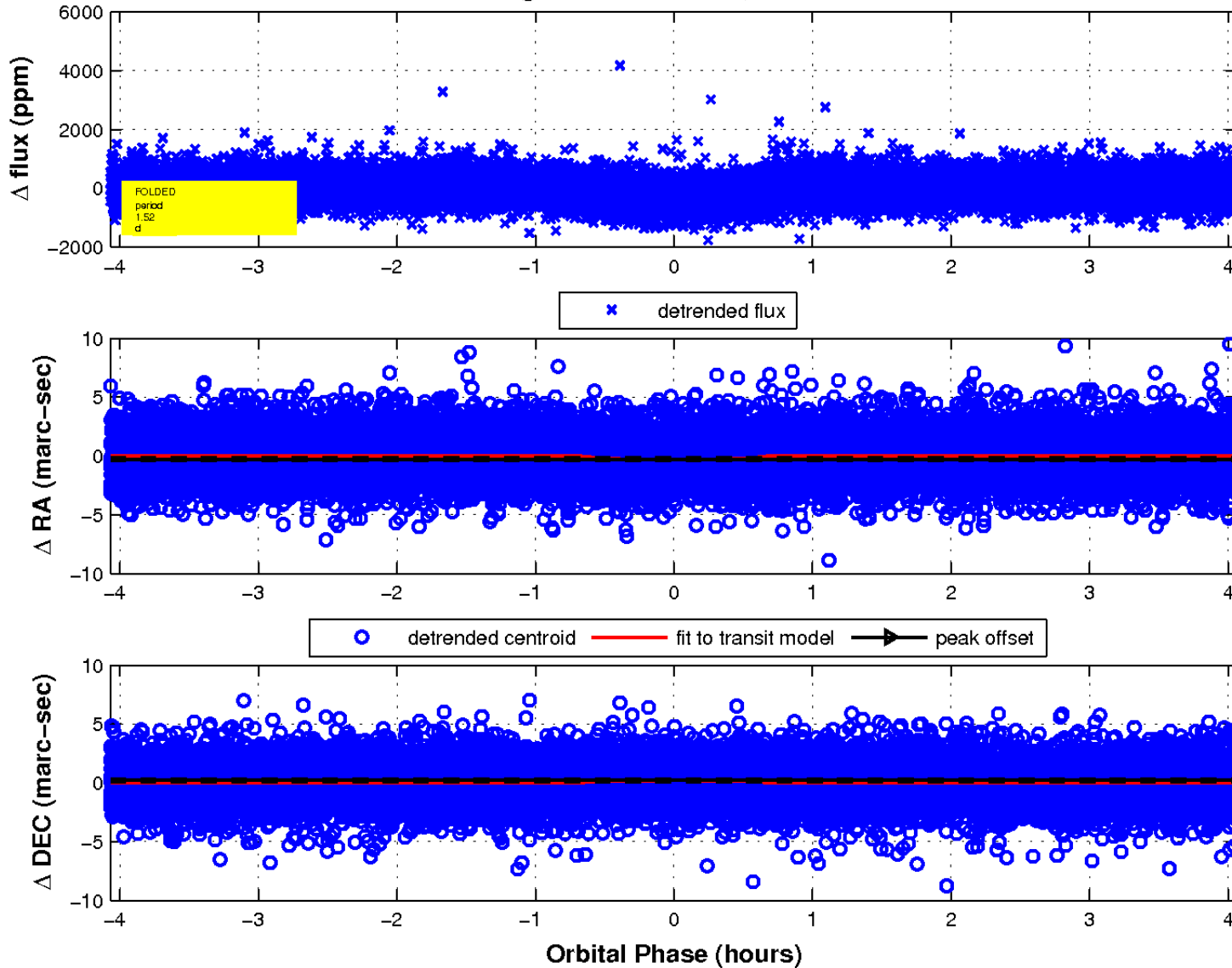
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

