

KIC 004270565

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})
004270565-01	OBS	2819.01	18.011562	139.197068	376.1	5.949	20.9	19.5	0.93	6003	1.91	55.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004270565-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

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.

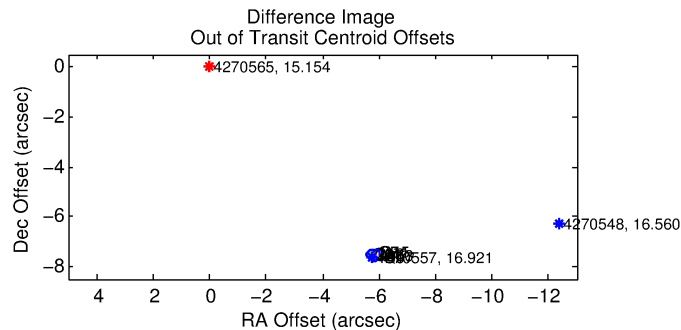
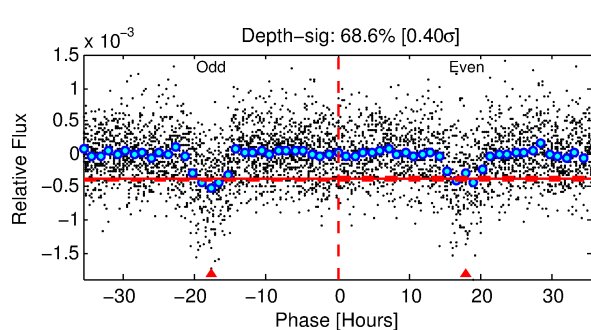
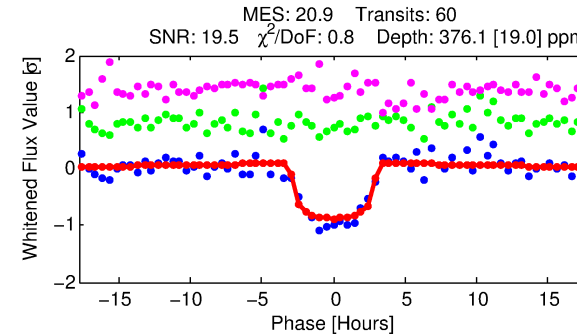
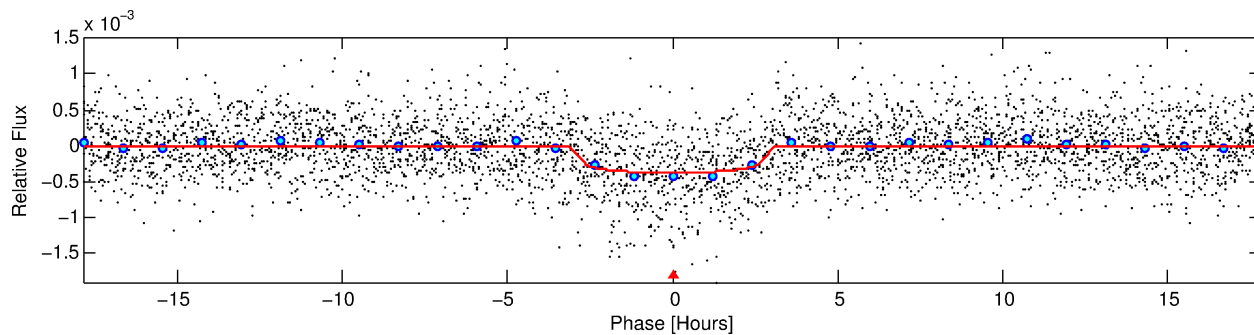
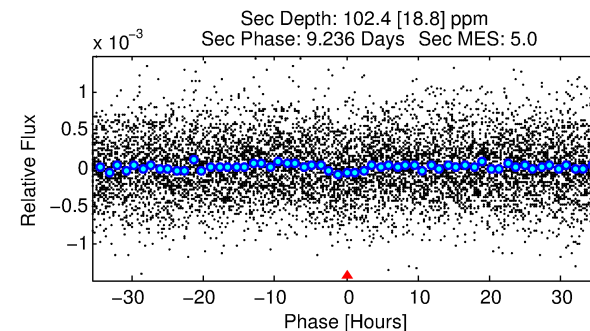
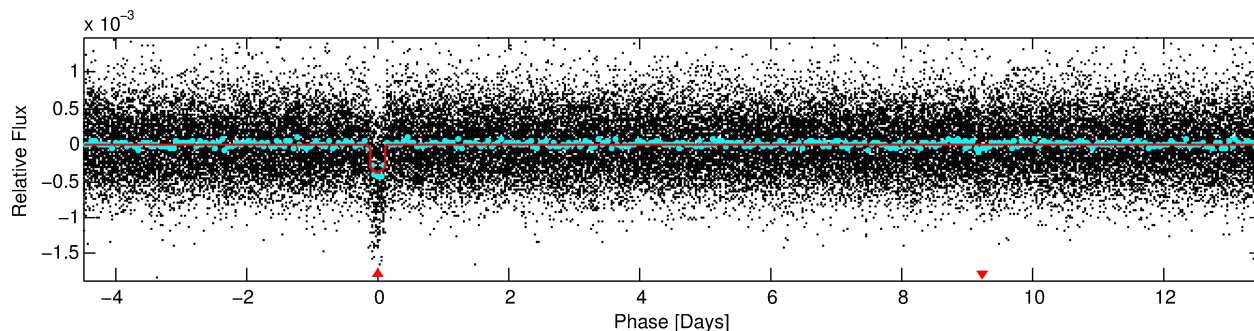
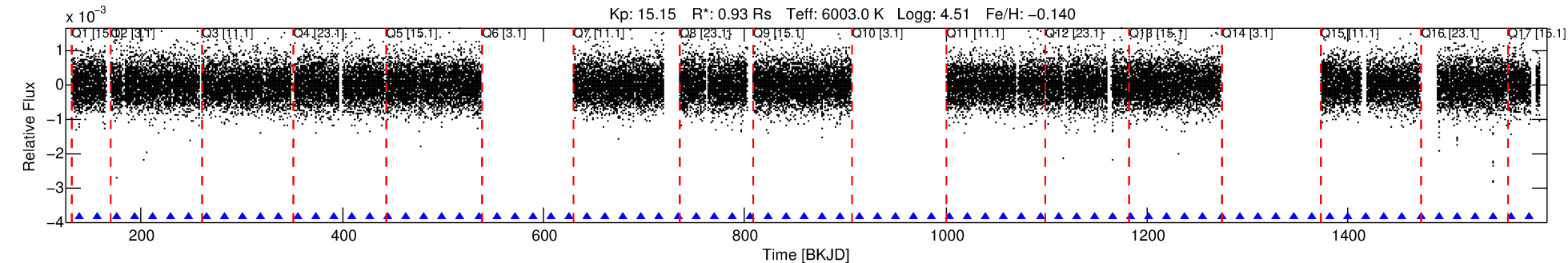
Ephemeris Match Information For 004270565-01

No Significant Match Found

DV One-Page Summary

KIC: 4270565 Candidate: 1 of 1 Period: 18.012 d
KOI: K02819.01 Corr: 0.987

Kp: 15.15 R*: 0.93 Rs Teff: 6003.0 K Logg: 4.51 Fe/H: -0.140



DV Fit Results:

Period = 18.01156 [0.00012] d
Epoch = 139.1971 [0.0050] BKJD
Rp/R* = 0.0188 [0.0090]
a/R* = 17.99 [41.33]
b = 0.66 [2.00]
Seff = 55.20 [21.47]
Teq = 695 [68] K
Rp = 1.91 [1.08] Re
a = 0.1353 [0.0341] AU
Ag = 282.42 [294.19] [0.96σ]
Teff = 4405 [1084] K [3.42σ]

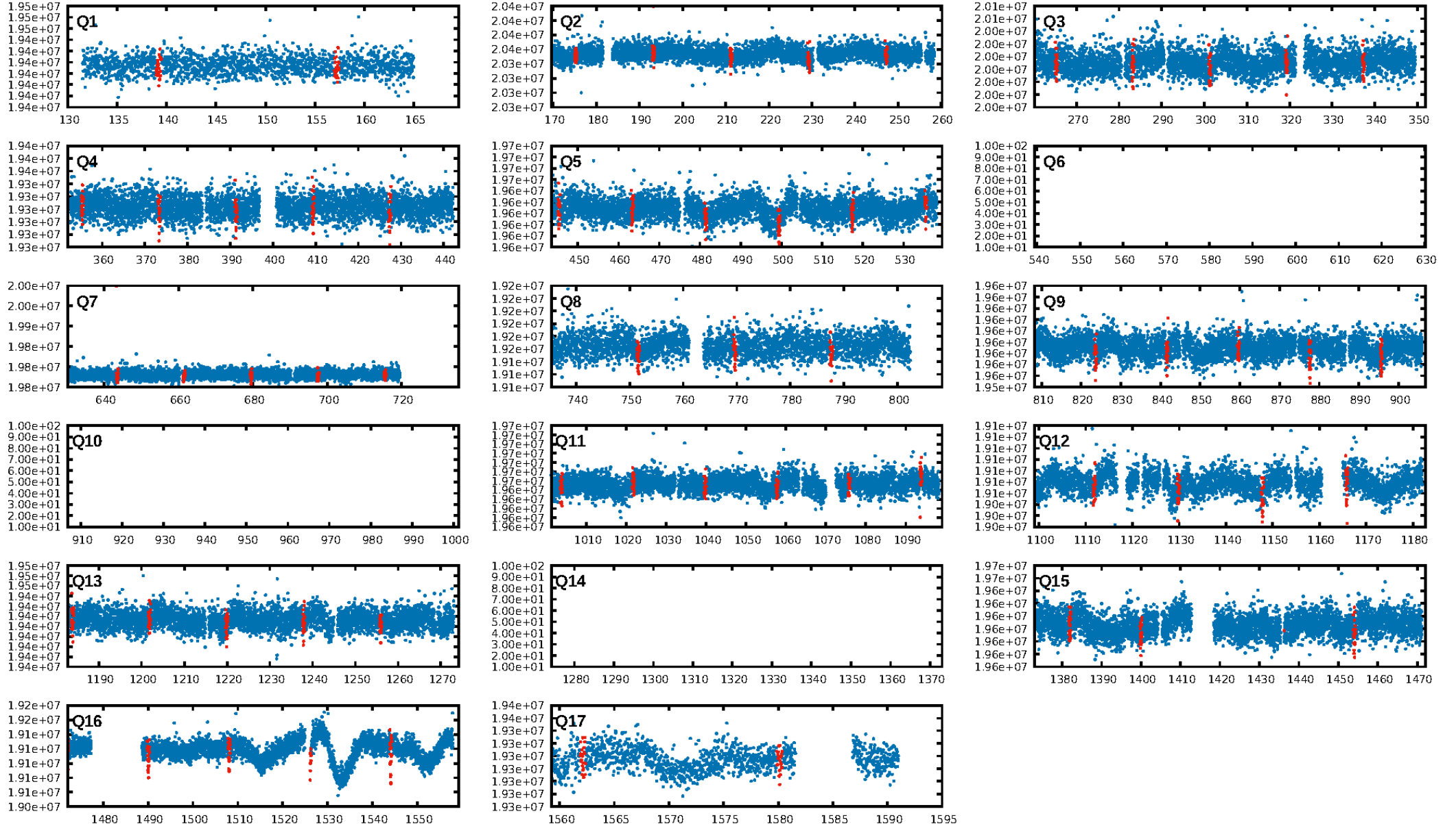
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.70e-95
RollingBand-fgt: 1.00 [56/56]
GhostDiagnostic-chr: -0.5994
Centroid-sig: 0.0%
Centroid-so: 114.952 arcsec [165.84σ]
OotOffset-rm: 9.512 arcsec [126.76σ]
KicOffset-rm: 9.469 arcsec [136.98σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

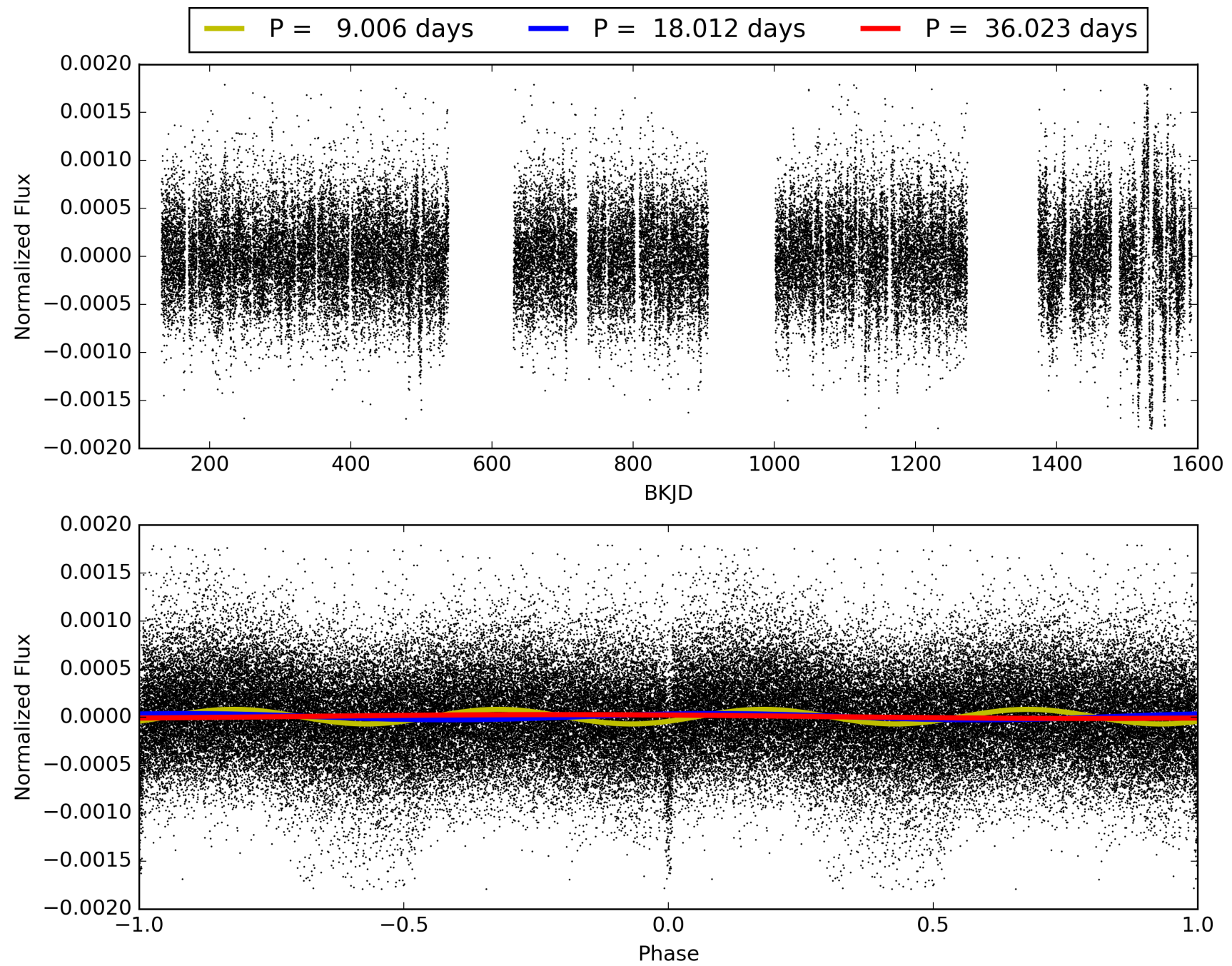
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:50:35 Z

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

TCE 004270565-01, PDC Light Curves

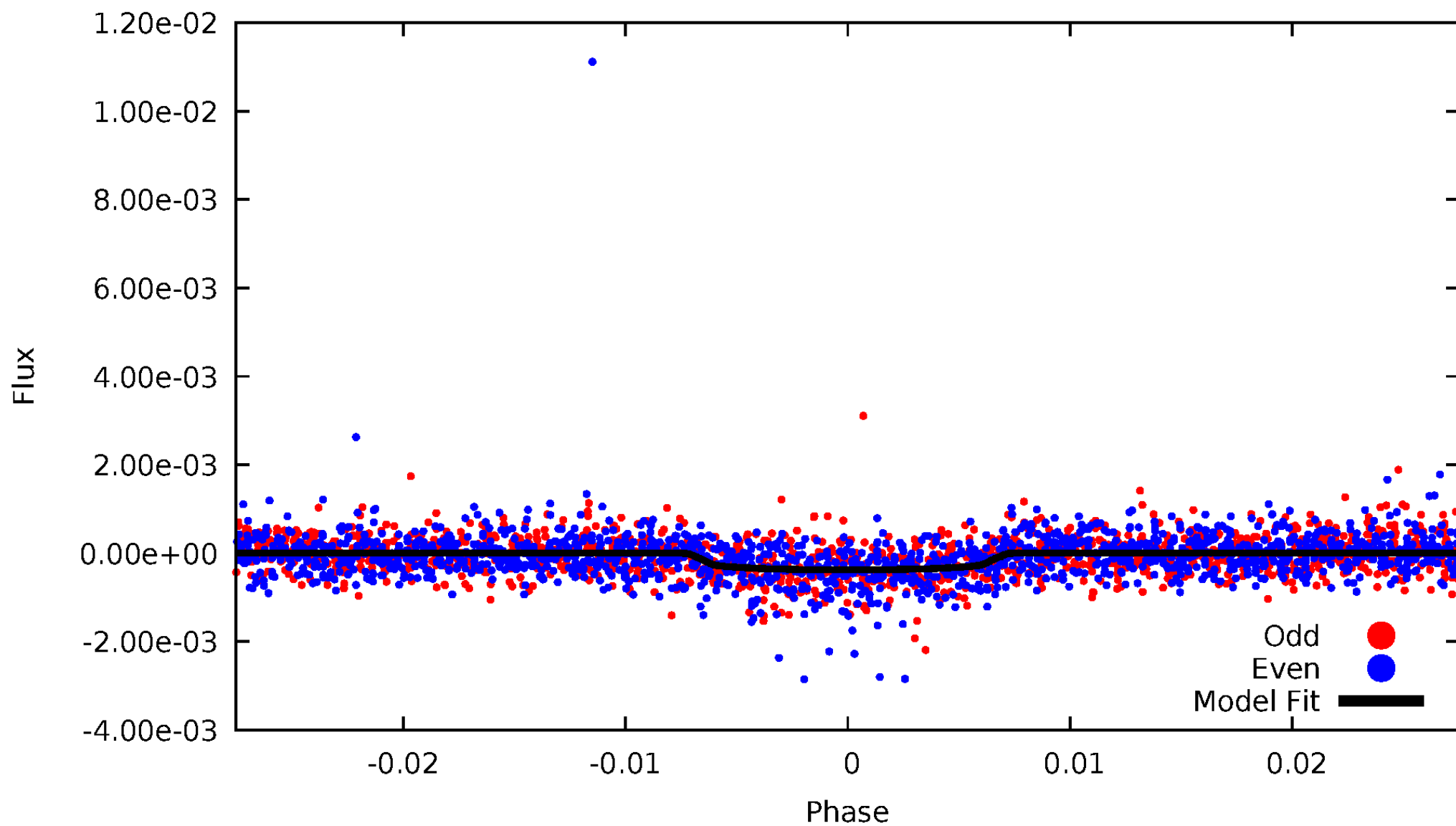


TCE 004270565-01



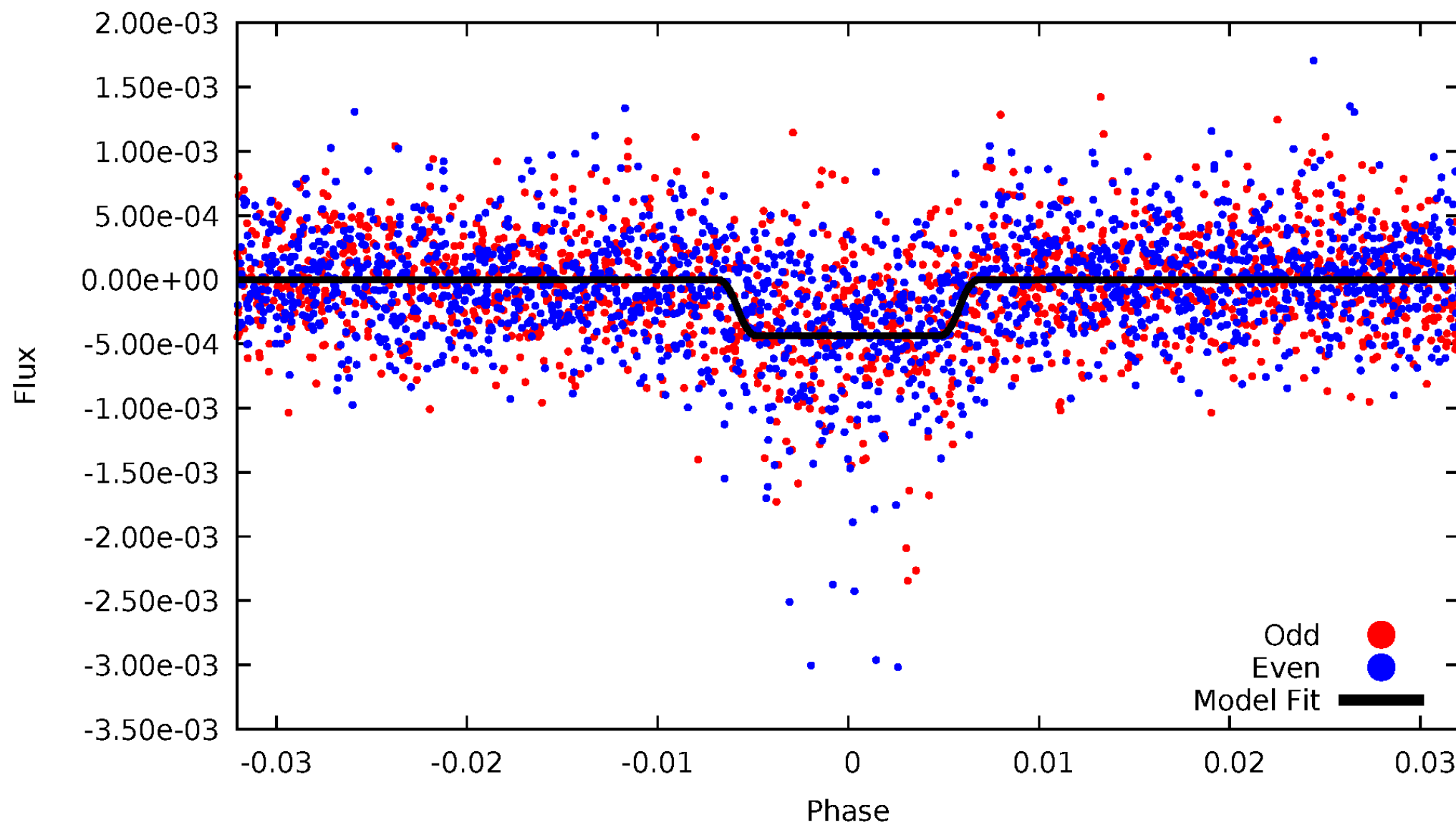
DV Odd/Even

TCE 004270565-01



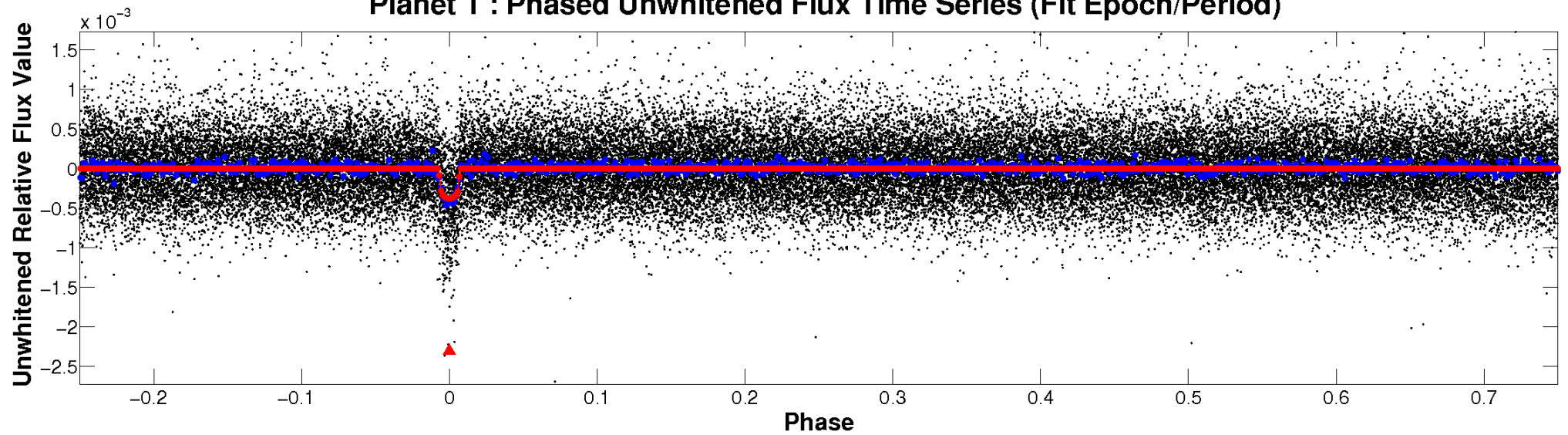
ALT Odd/Even

TCE 004270565-01

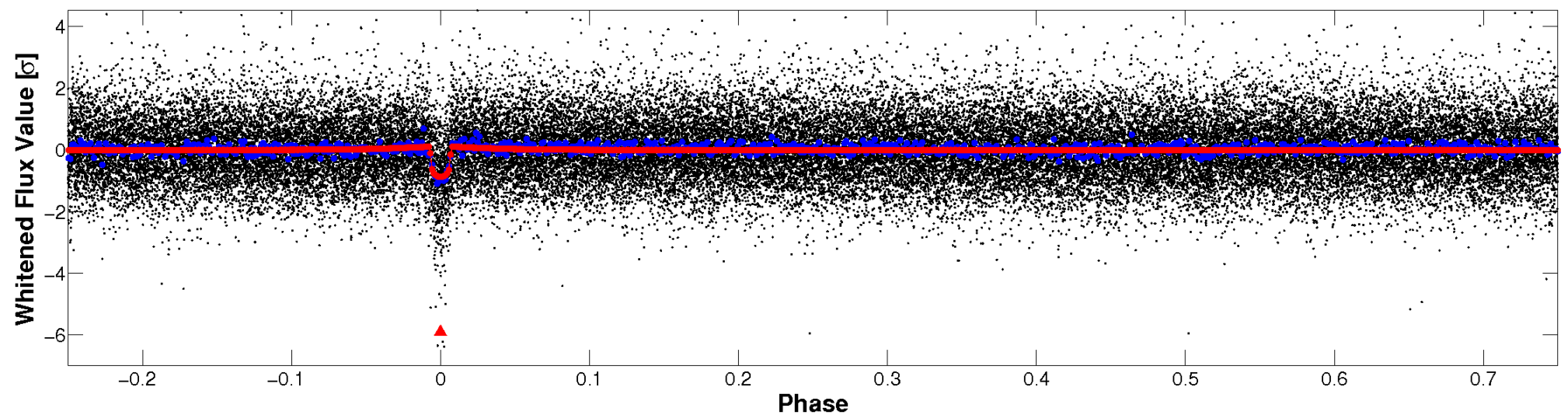


Non-Whitened Vs. Whitened Light Curve

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

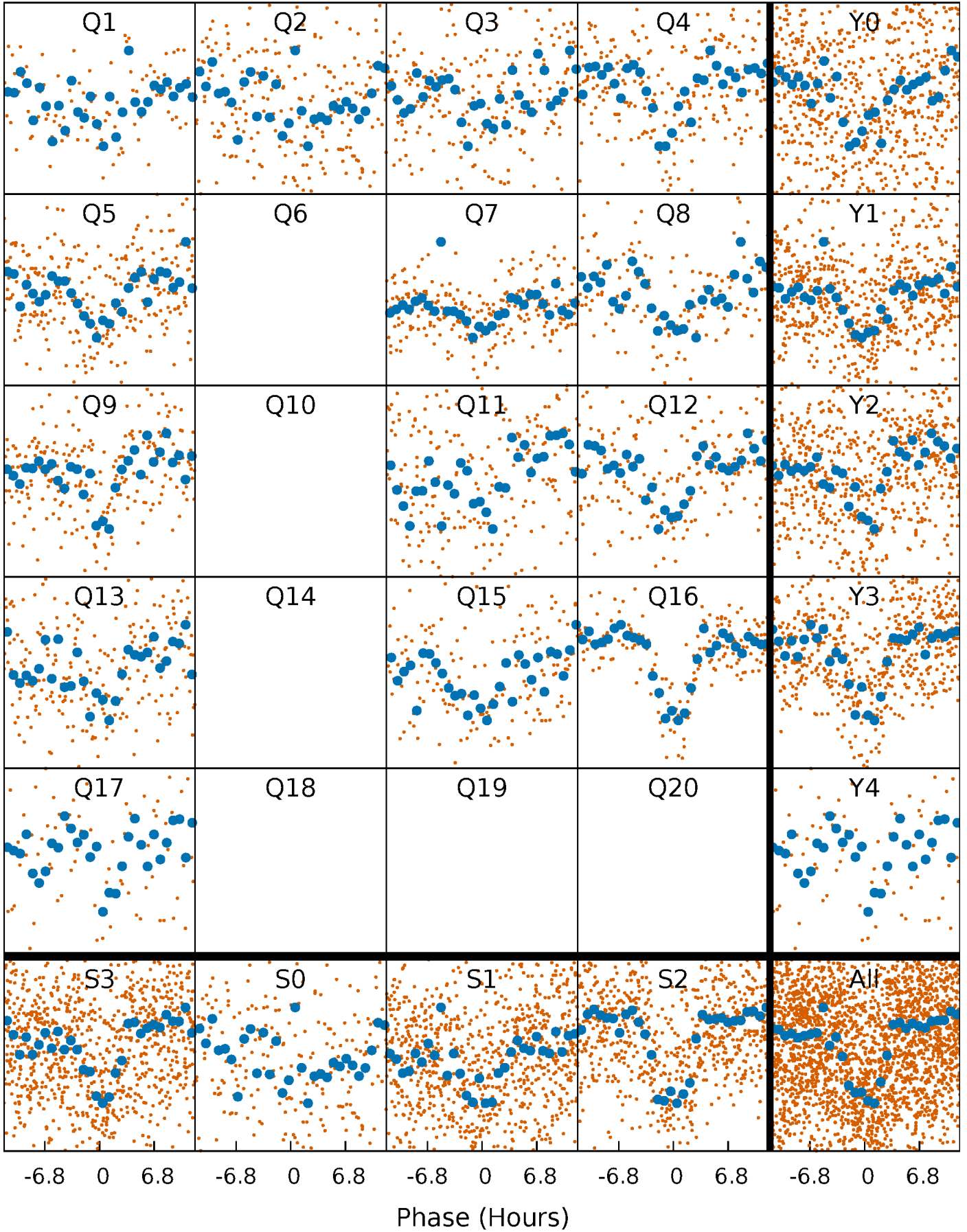


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



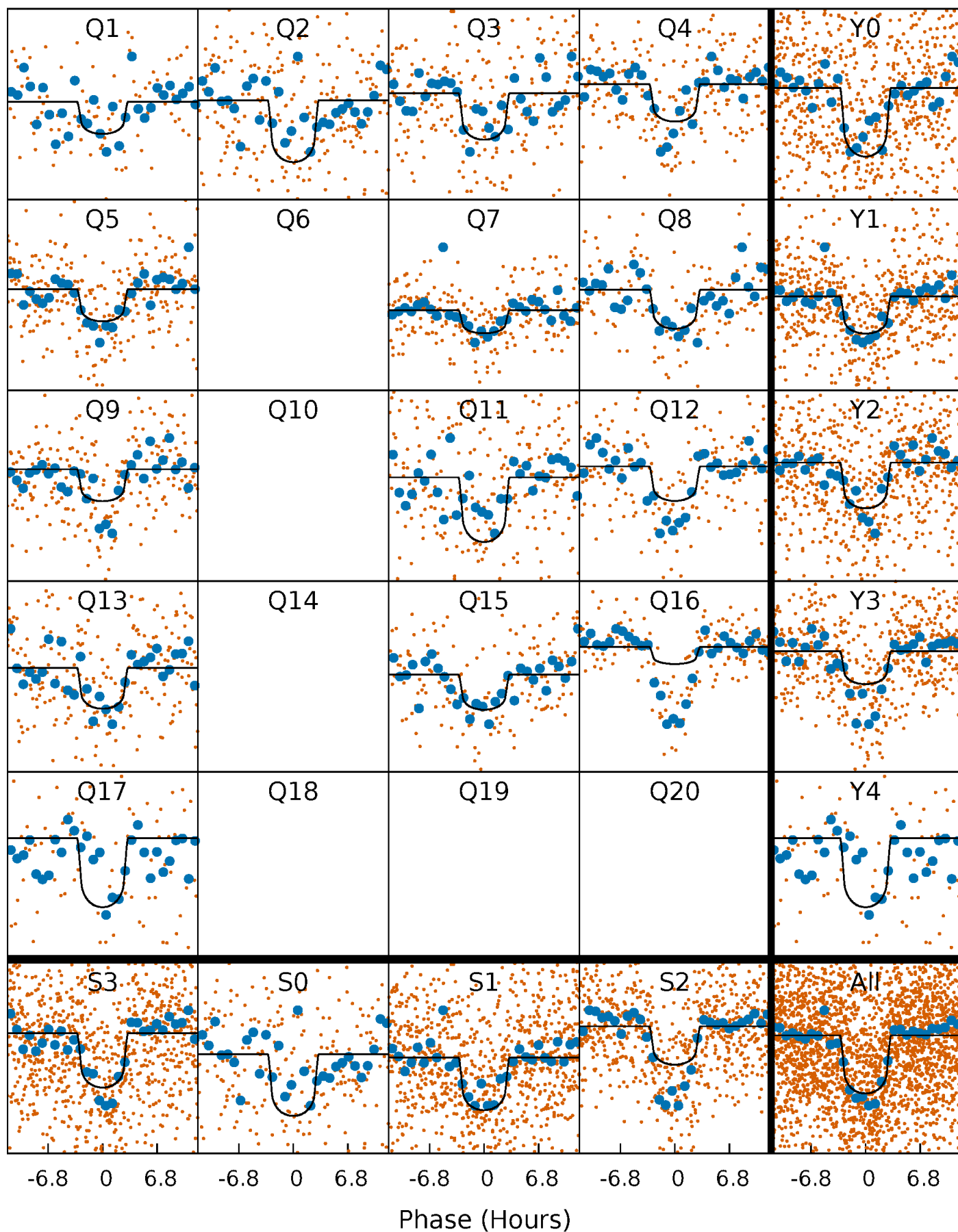
PDC Quarter-Phased Transit Curves

TCE 004270565-01 P= 18.011562 Days $T_0=139.197068$ (BKJD)



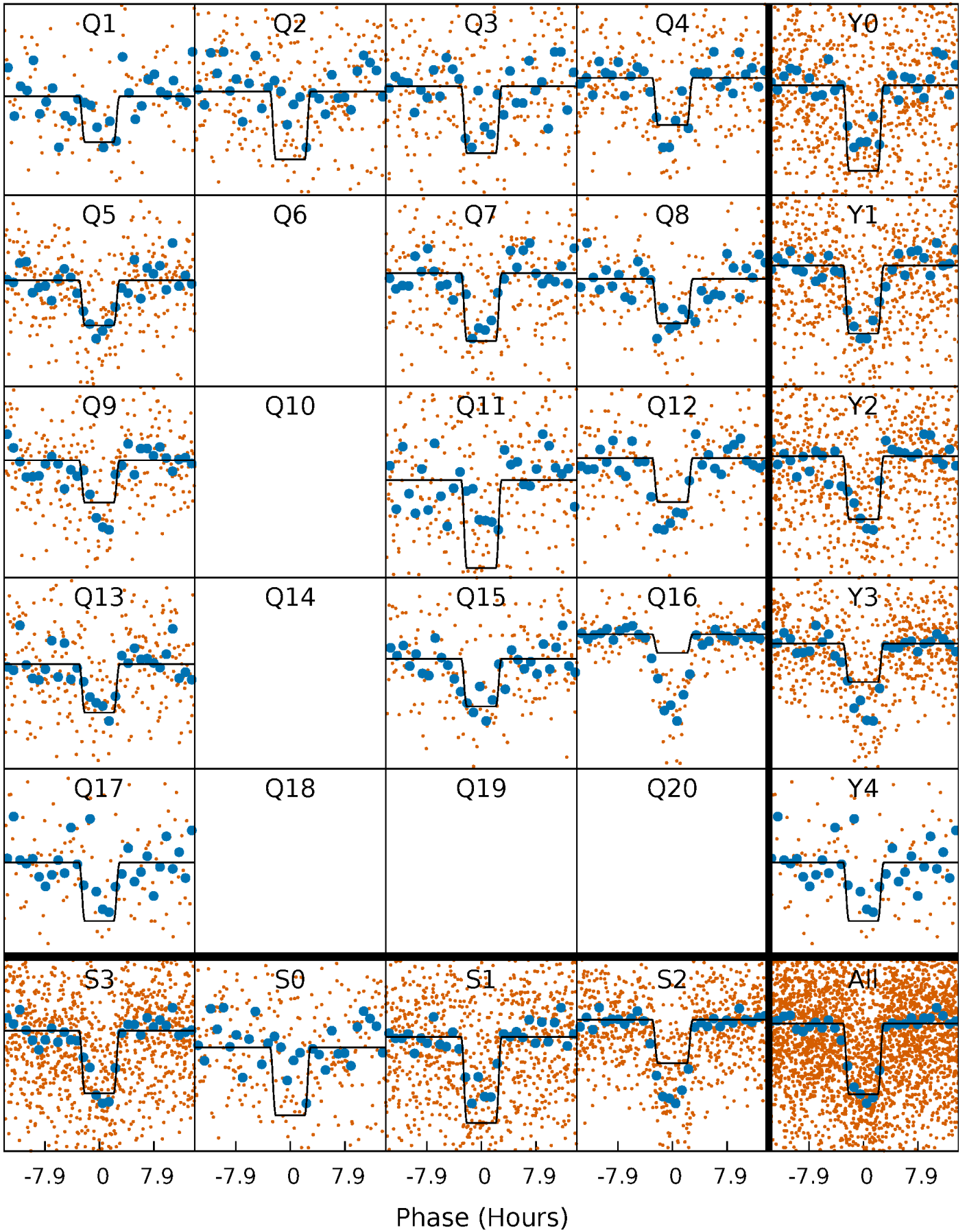
DV Quarter-Phased Transit Curves

TCE 004270565-01 P= 18.011562 Days $T_0=139.197068$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

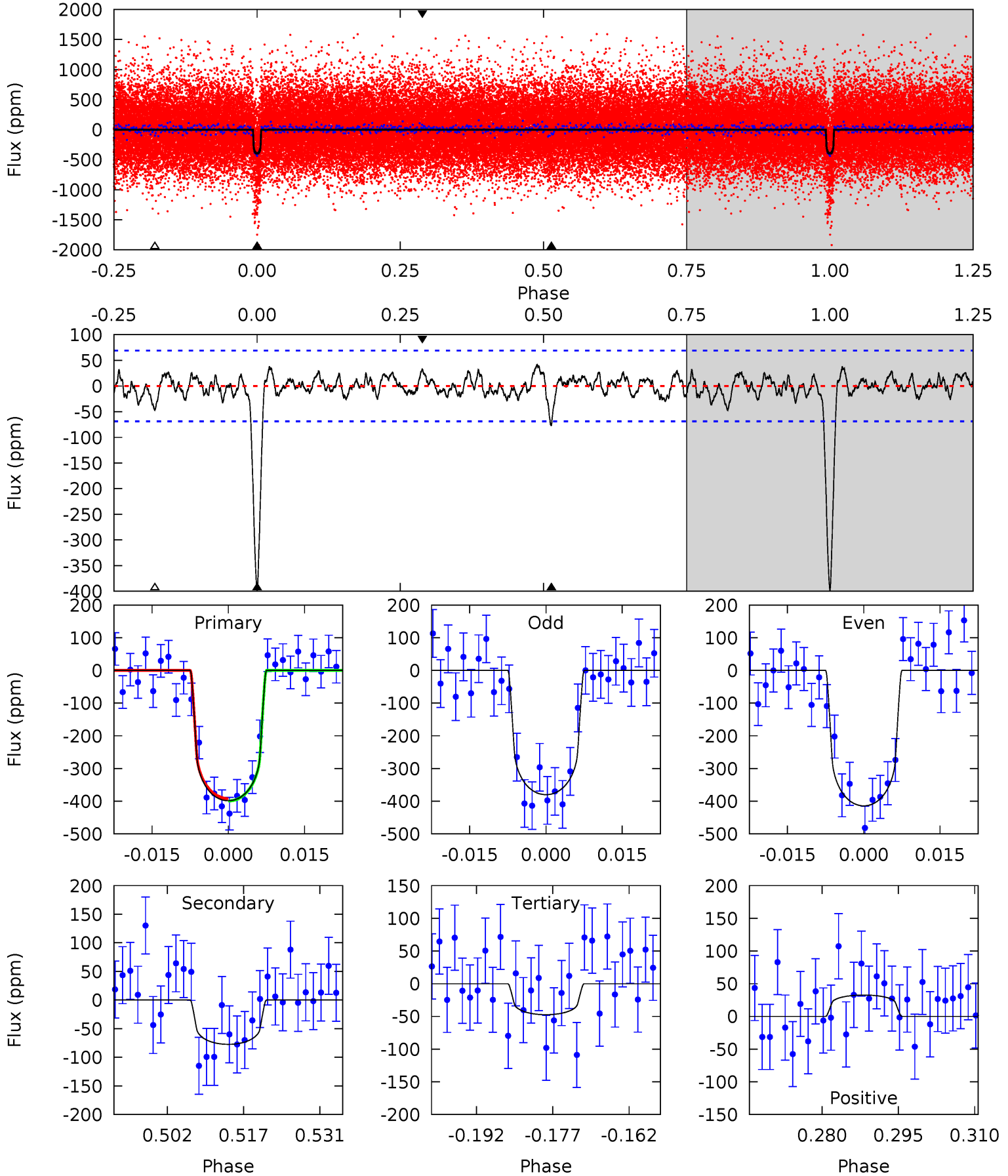
TCE 004270565-01 P= 18.011589 Days $T_0=139.194657$ (BKJD)



DV Model-Shift Uniqueness Test

004270565-01, P = 18.011562 Days, E = 121.185506 Days

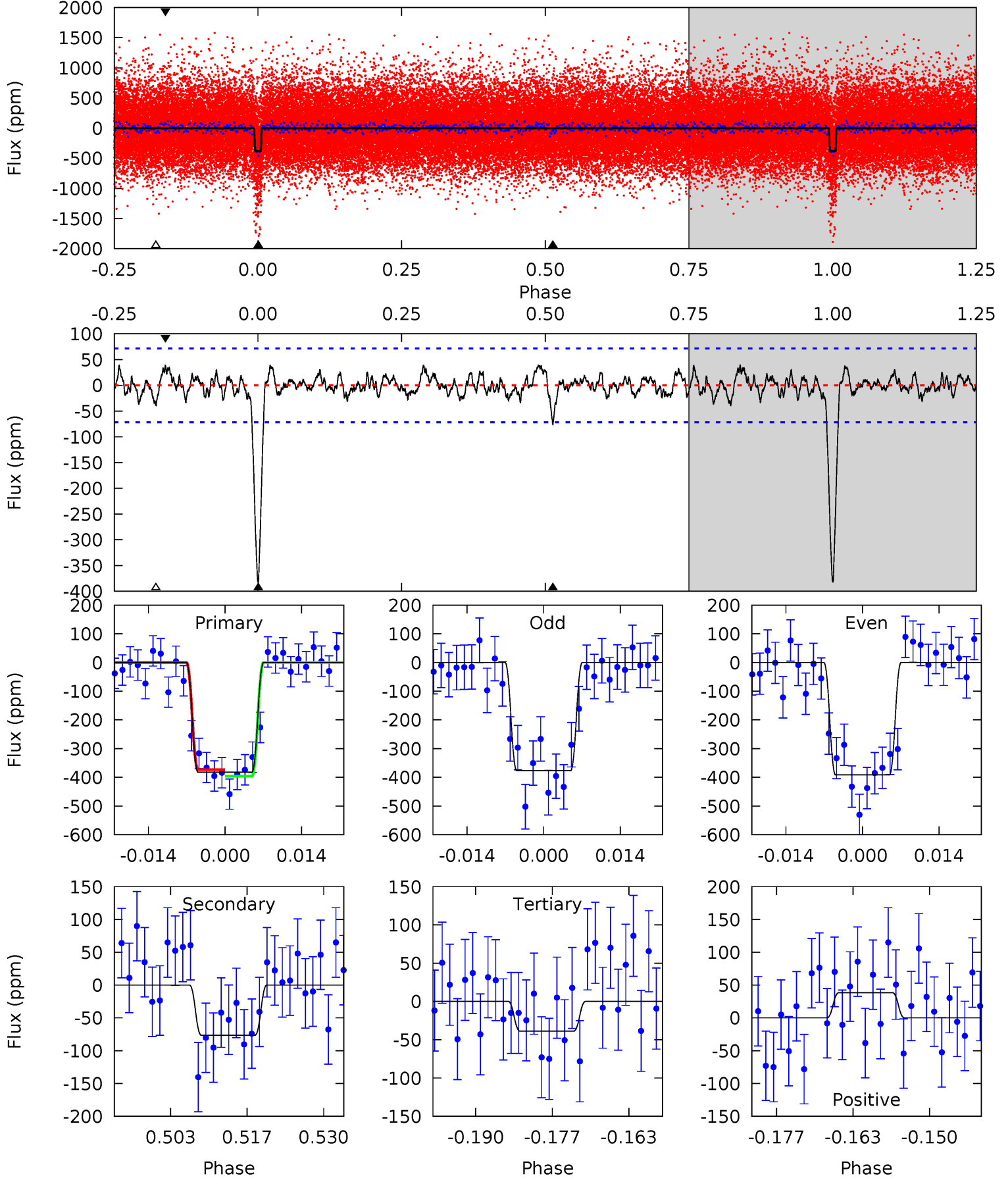
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.6	5.56	3.40	2.34	4.95	2.44	1.09	25.2	26.3	2.16	3.22	1.22	1.09	0.10	0.26



Alt Model-Shift Uniqueness Test

004270565-01, P = 18.011589 Days, E = 121.183068 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.5	5.30	2.69	2.65	4.97	2.47	1.02	23.8	23.9	2.62	2.65	0.52	1.20	0.09	0.79



Stellar Parameters For KIC 004270565

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6003^{+179}_{-197}	$4.507^{+0.050}_{-0.200}$	$-0.140^{+0.300}_{-0.300}$	$0.932^{+0.279}_{-0.093}$	$1.019^{+0.121}_{-0.134}$	$1.772^{+0.455}_{-0.876}$
	+3%/-3%	+1%/-4%	+214%/-214%	+30%/-10%	+12%/-13%	+26%/-49%
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 004270565-01 / KOI 2819.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-77 ± 14	$2.05^{+0.99}_{-0.95}$	993^{+73}_{-51}	4275^{+1258}_{-567}	182^{+442}_{-104}
Alt.	-76 ± 14	$2.31^{+0.97}_{-0.98}$	991^{+64}_{-49}	4078^{+973}_{-446}	138^{+278}_{-70}

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 $A_{obs} \gg 1.0$

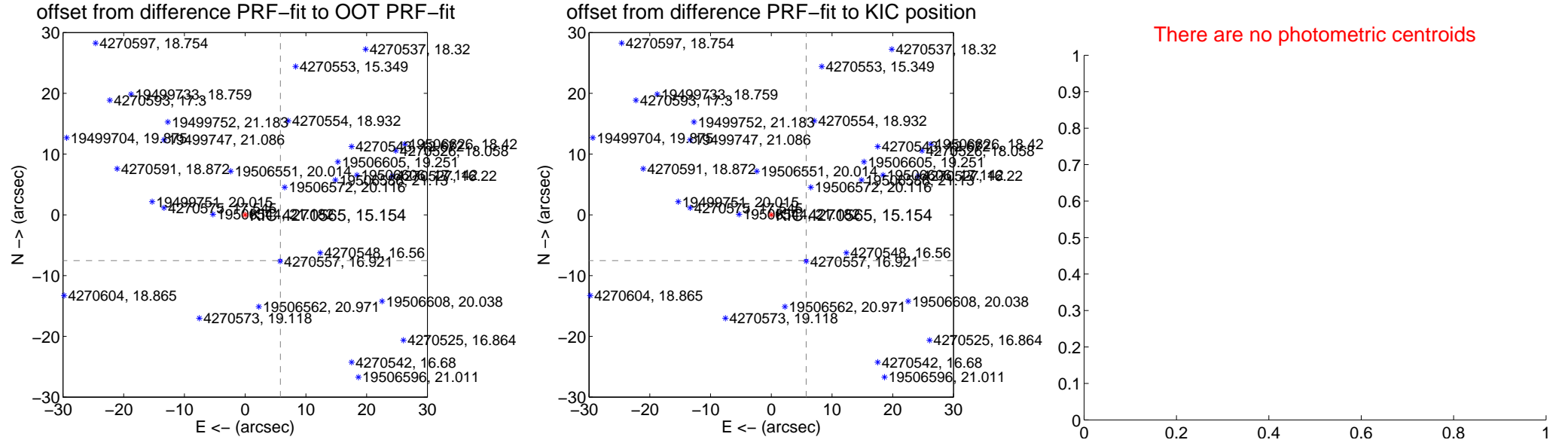
DV Centroid Data

Supplemental centroid analysis for 004270565-01. Kepler magnitude: 15.15. Transit SNR 19.48

There are 14 quarters with good PRF difference image offsets

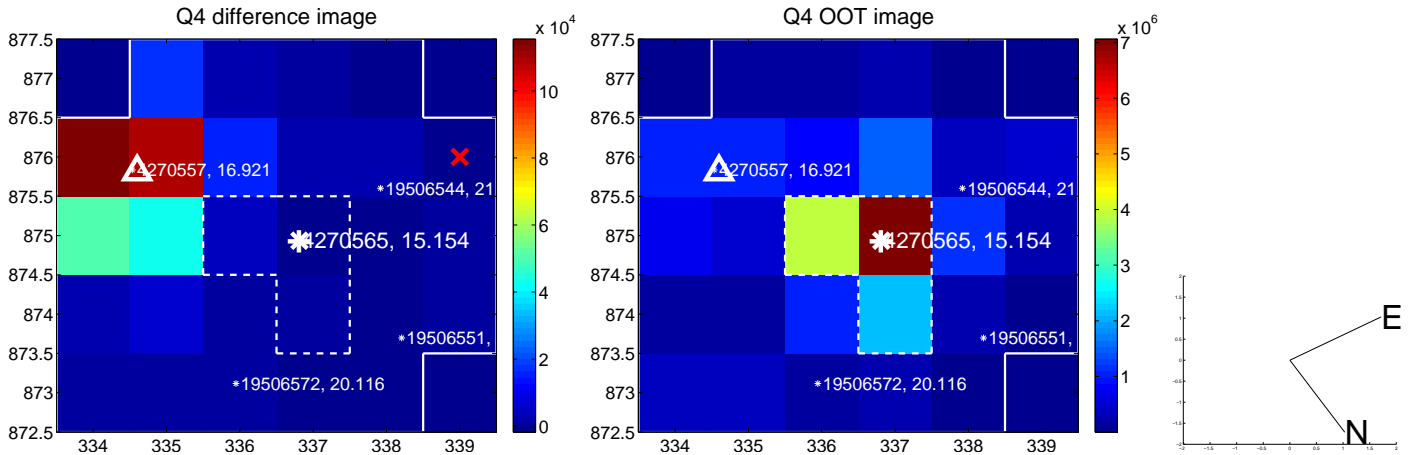
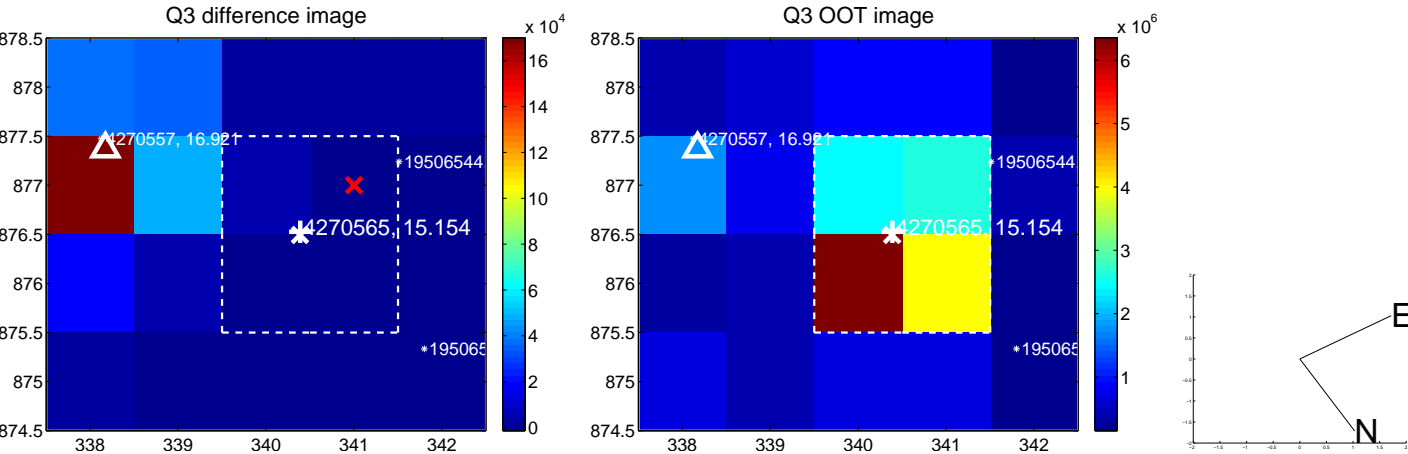
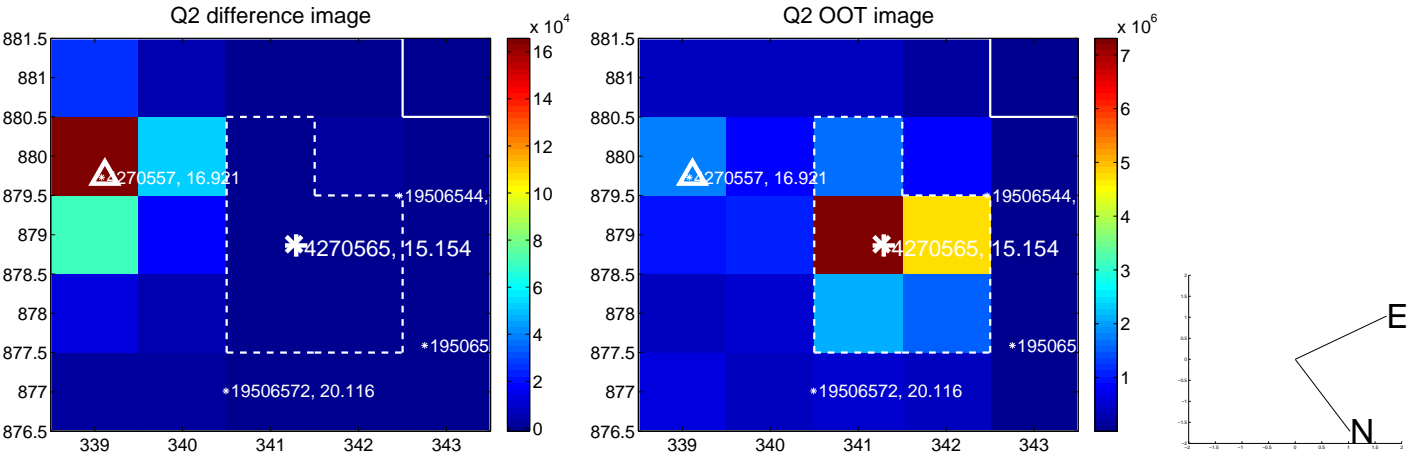
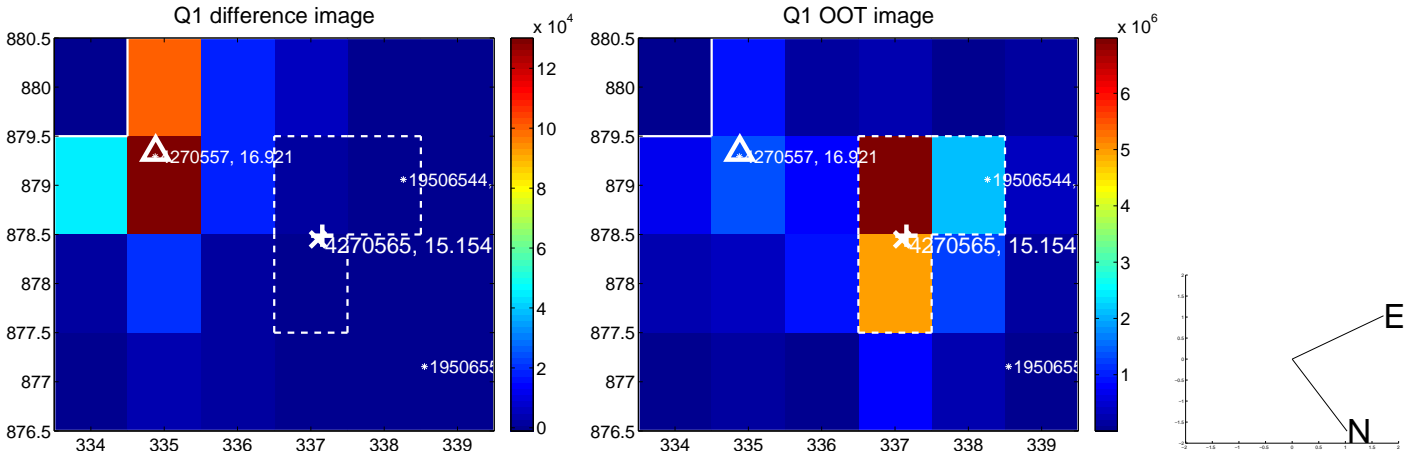
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.512 \pm 0.075	126.76	-5.802 \pm 0.077	-7.538 \pm 0.070
PRF-fit source offset from KIC position	9.469 \pm 0.069	136.98	-5.741 \pm 0.068	-7.531 \pm 0.068
photometric centroid source offset	—	—	—	—

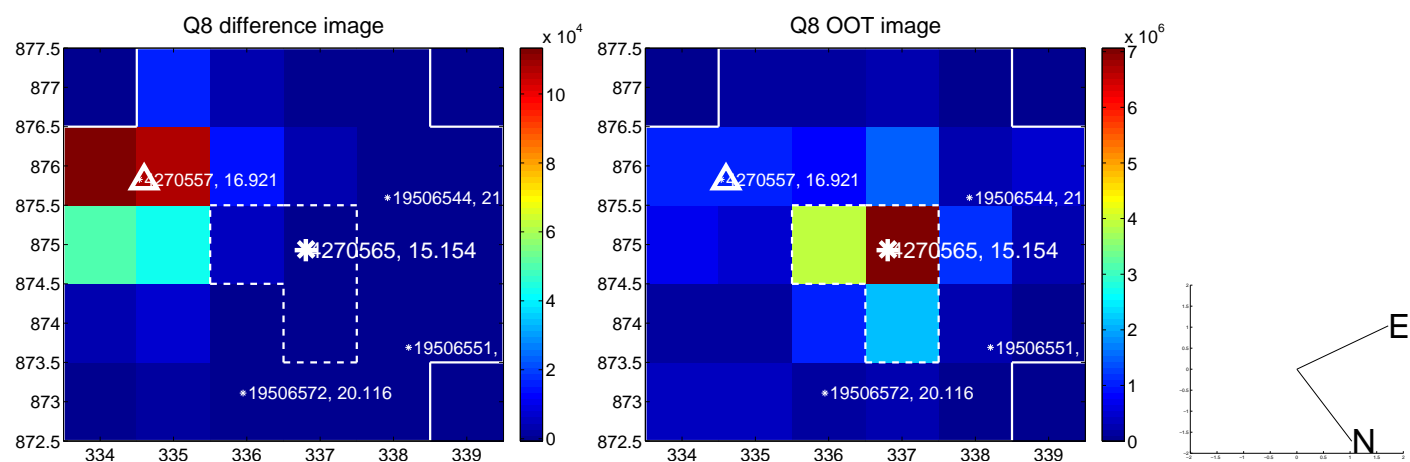
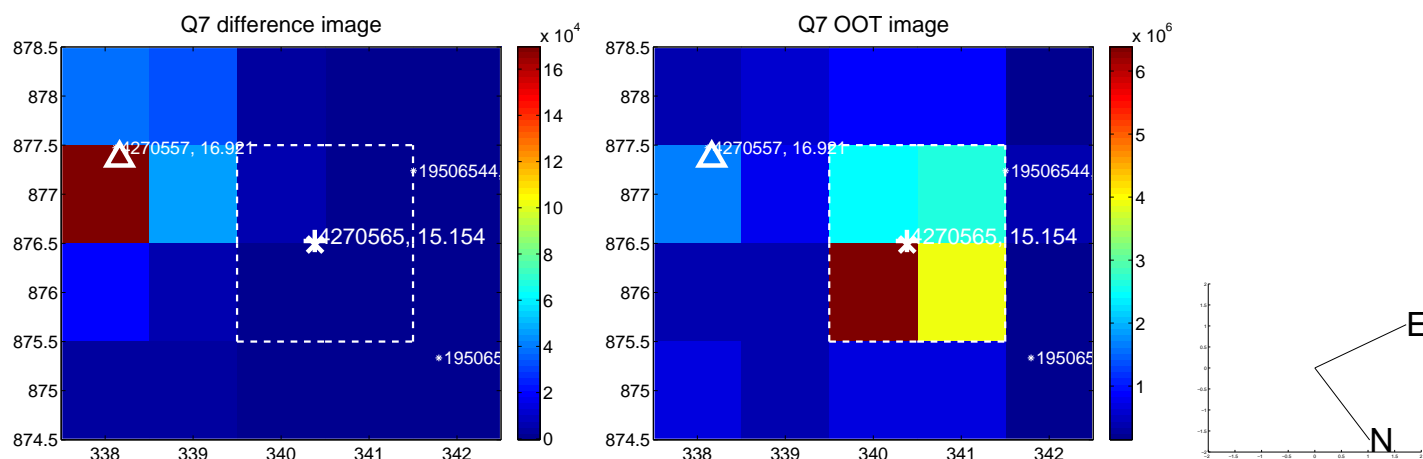
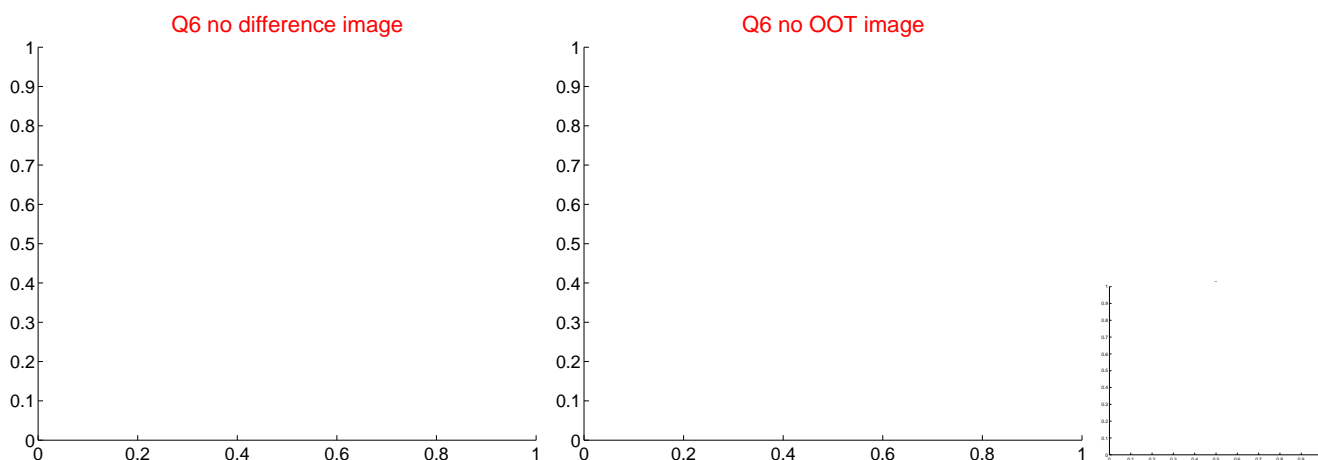
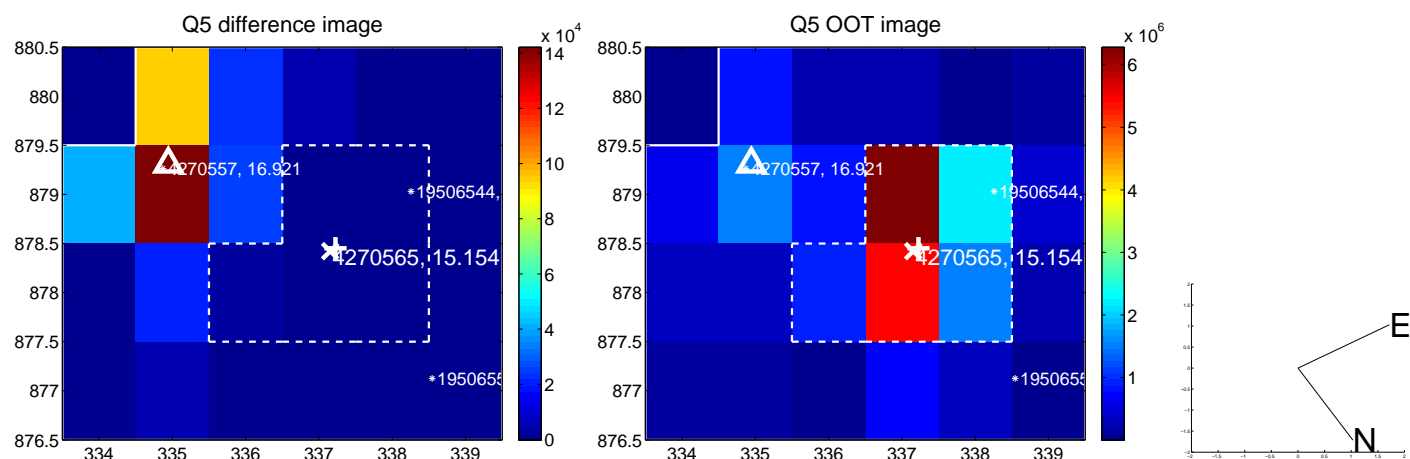


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

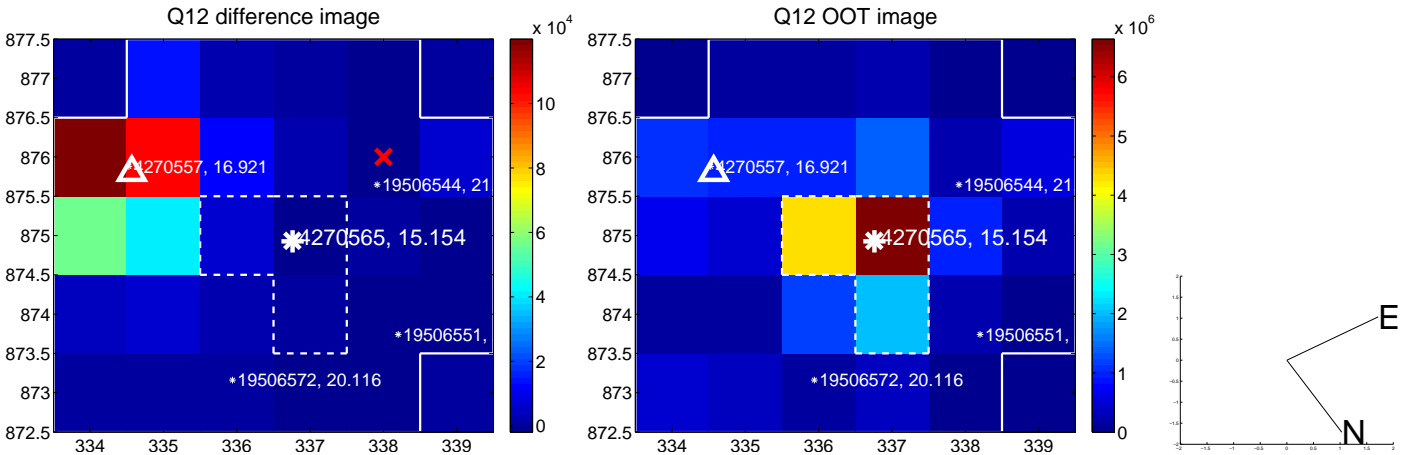
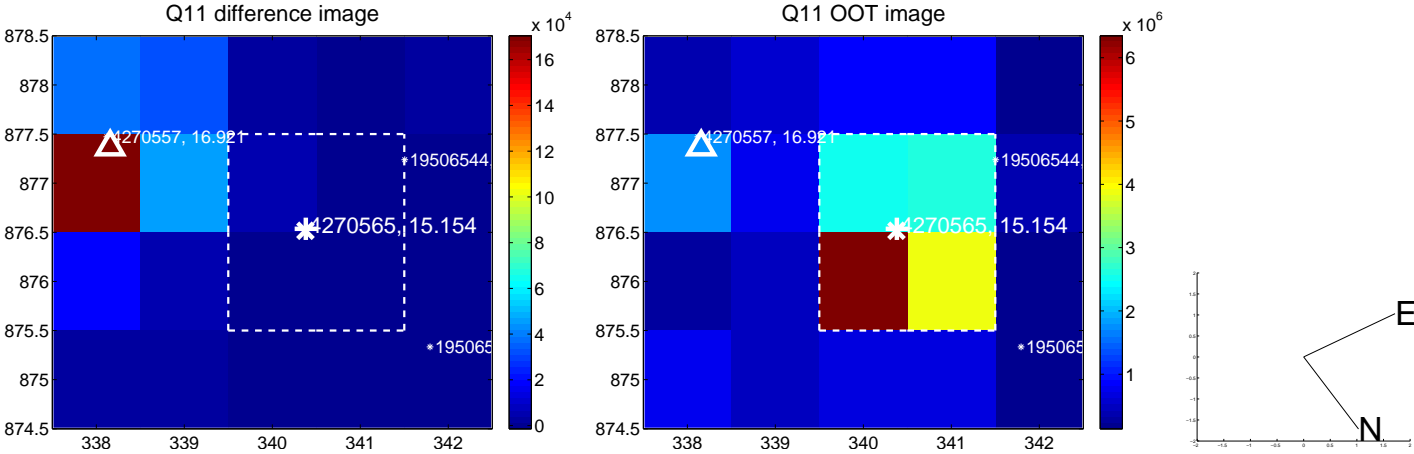
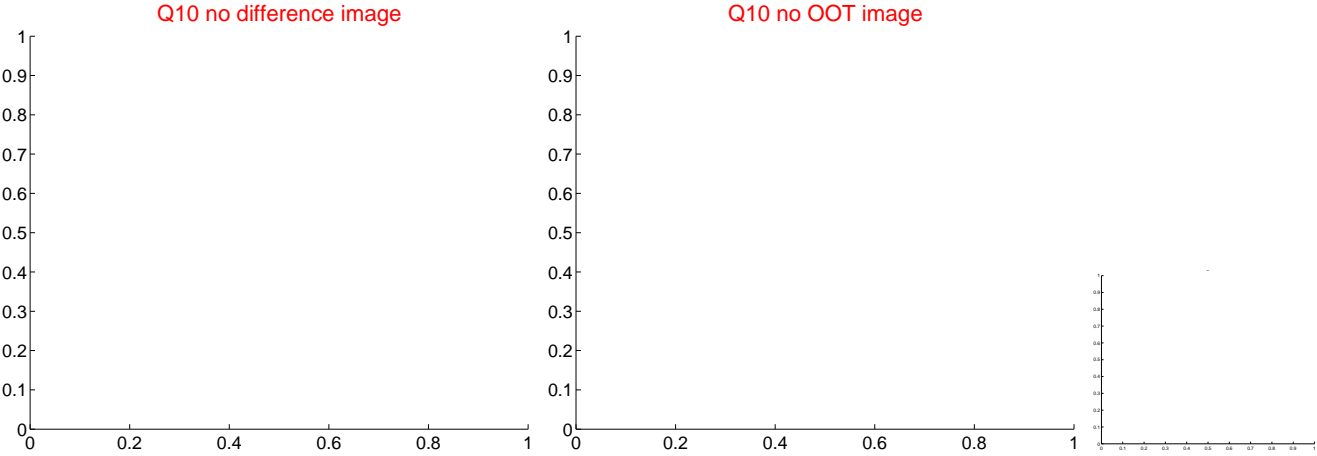
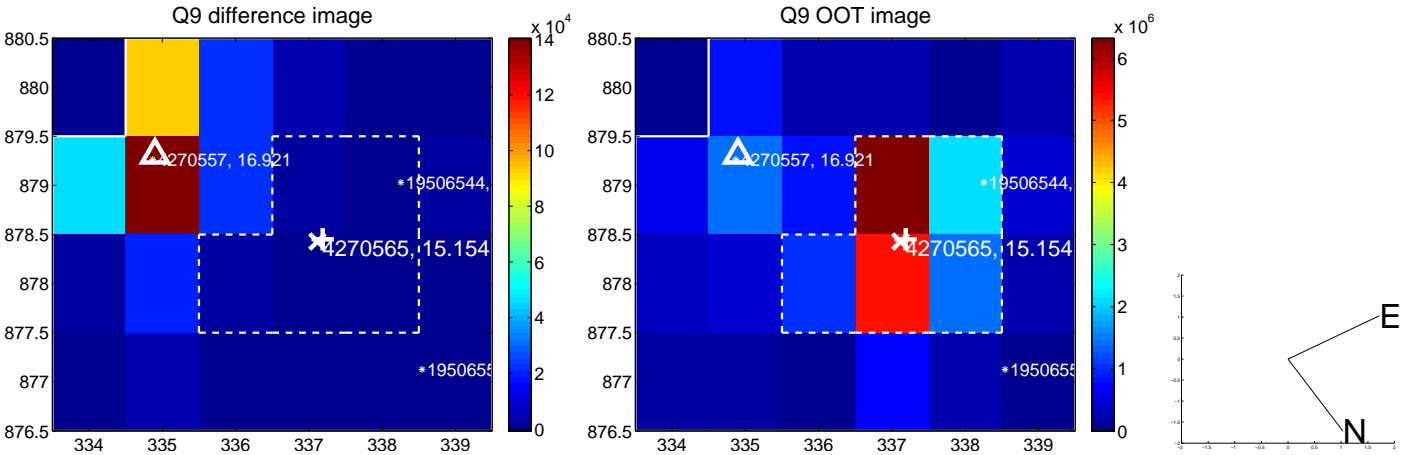
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



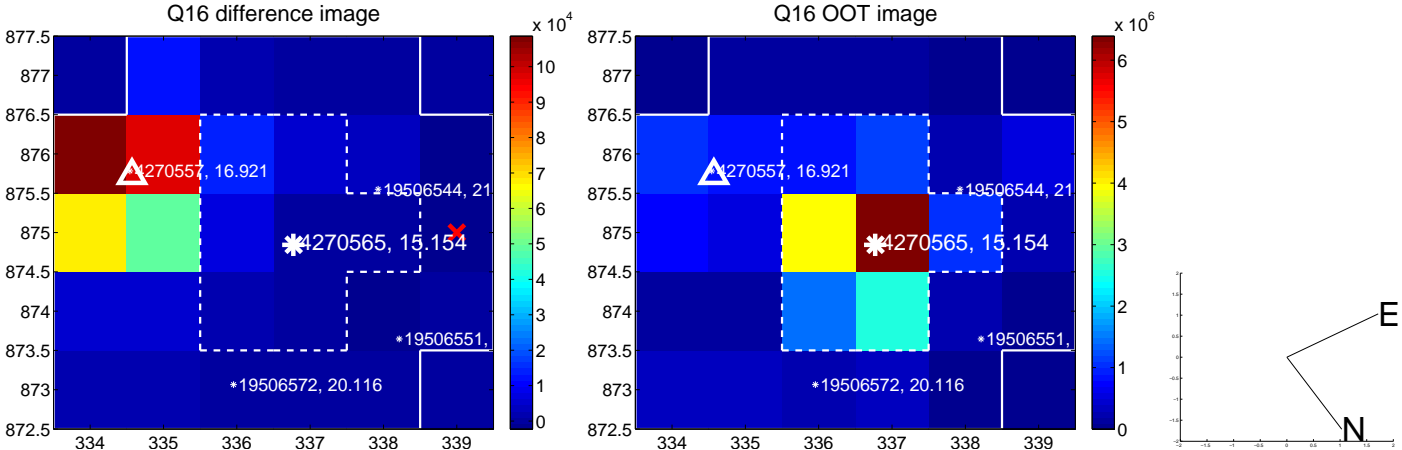
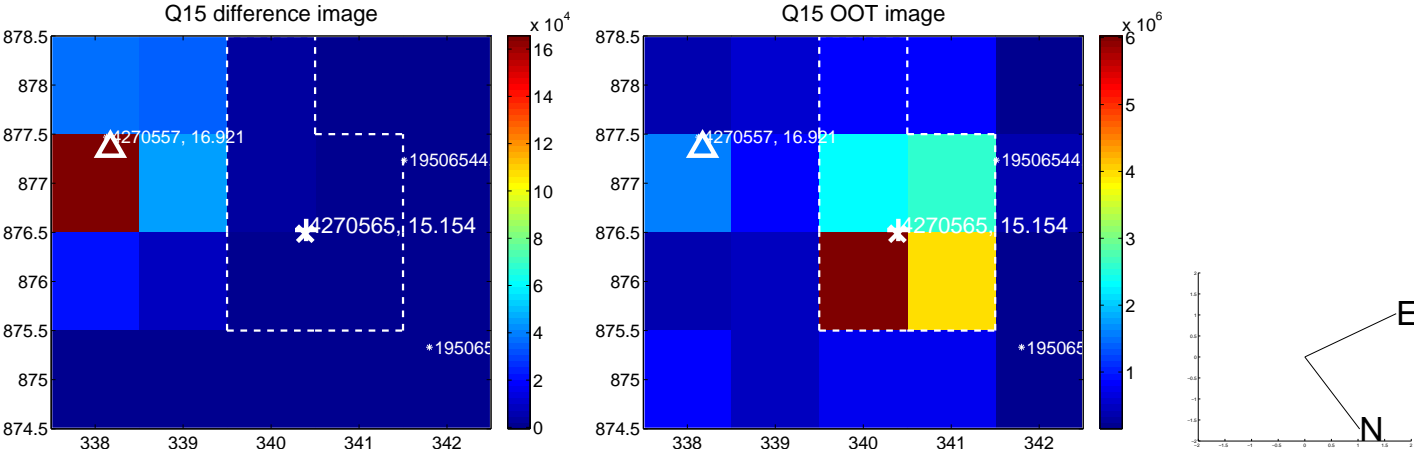
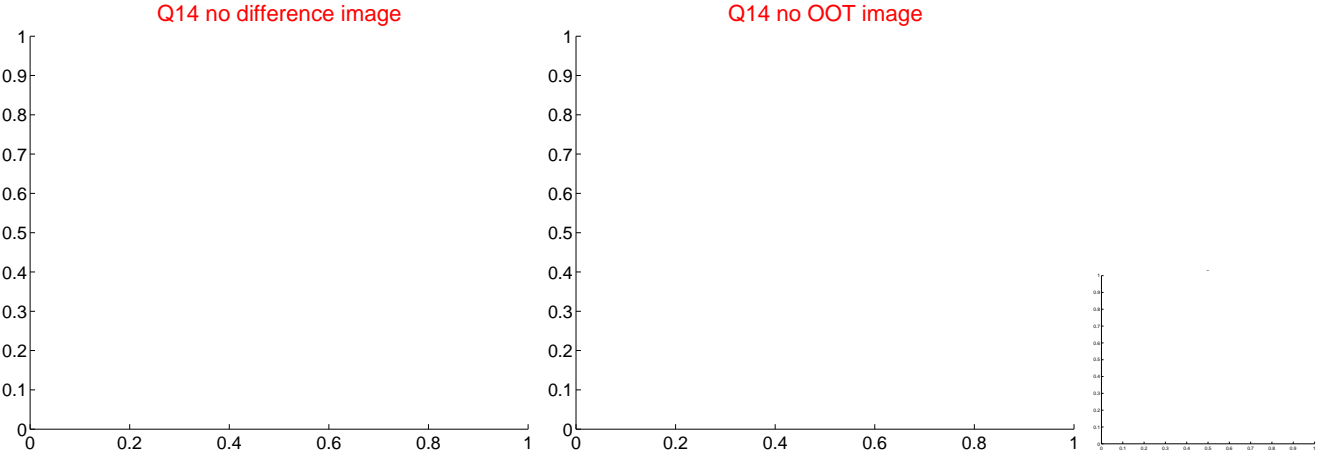
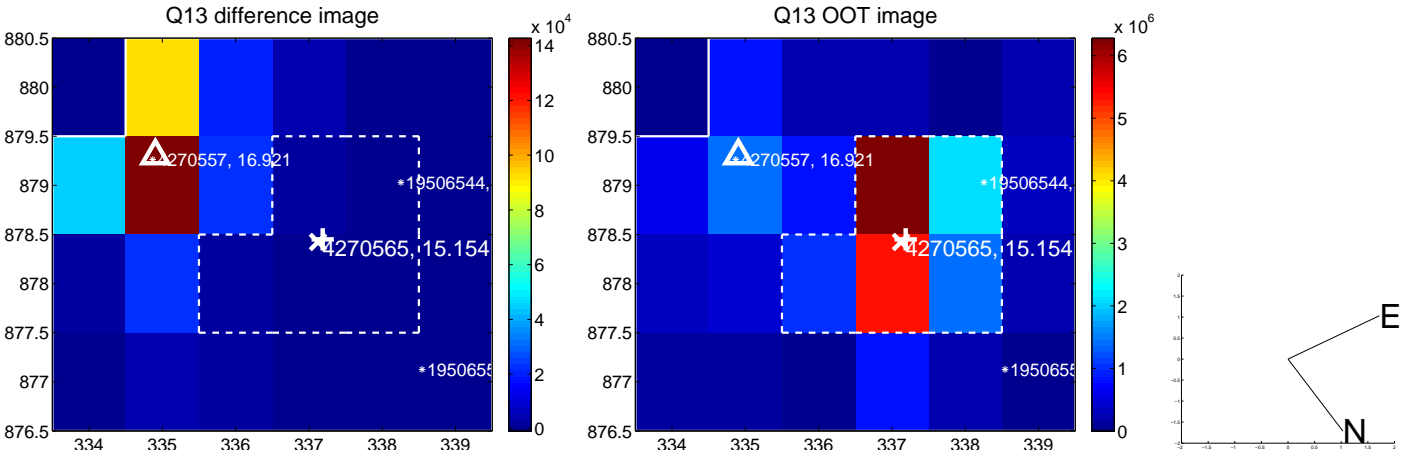
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



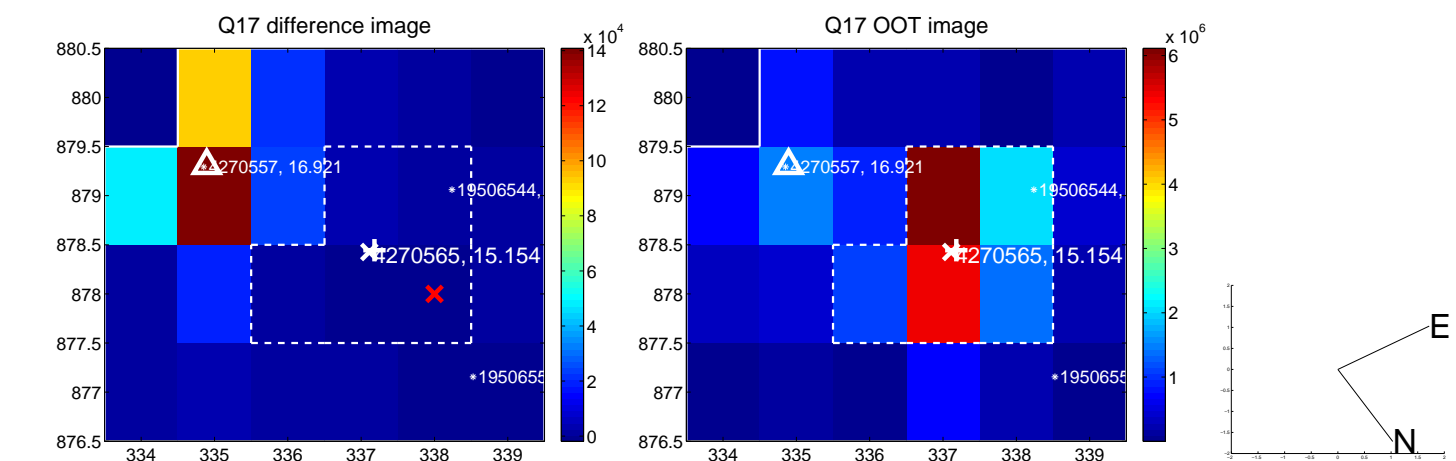
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



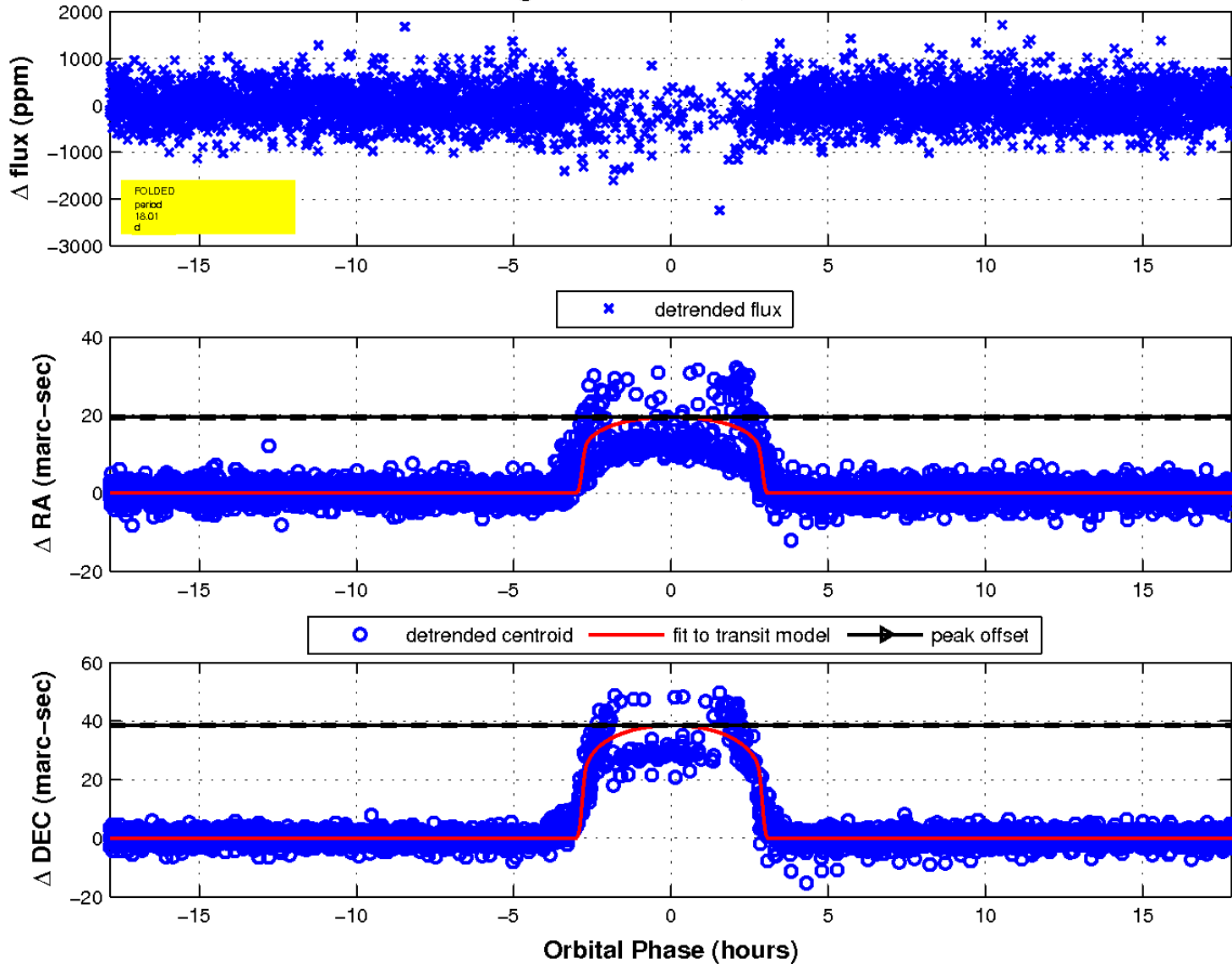
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

