

KIC 004135665

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})
004135665-01	OBS	1339.01	4.168096	134.898058	255.8	2.857	22.7	24.7	1.31	5689	2.57	628.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004135665-01	OBS	PC	1.00	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.

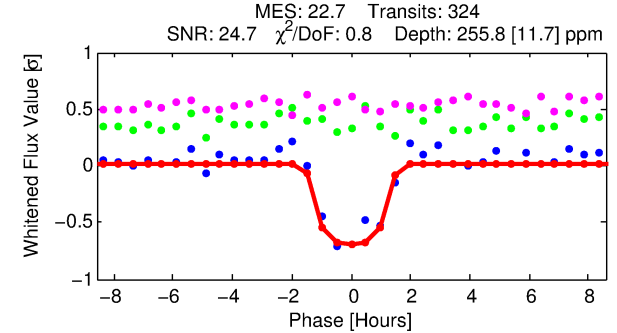
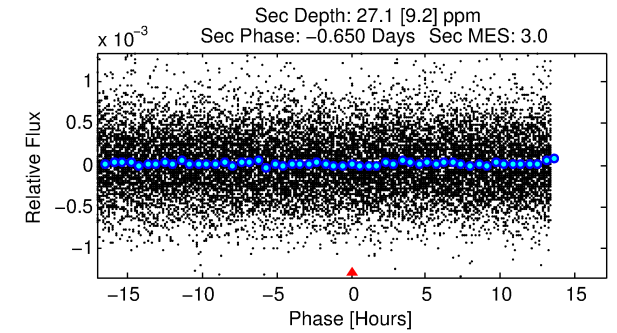
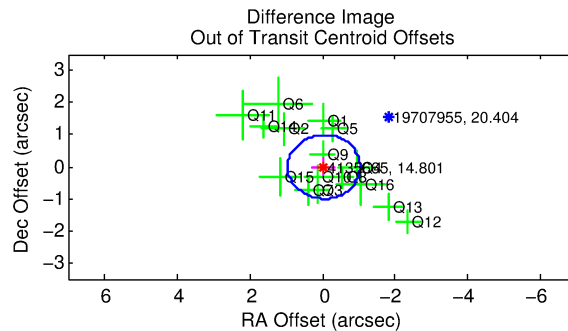
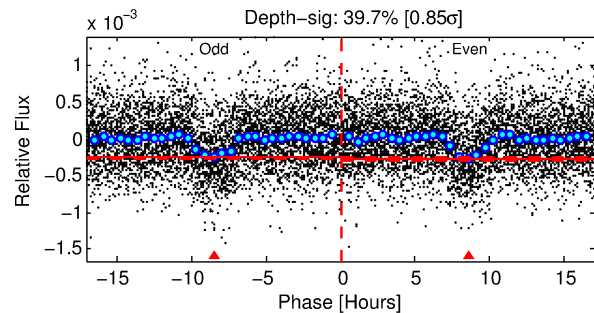
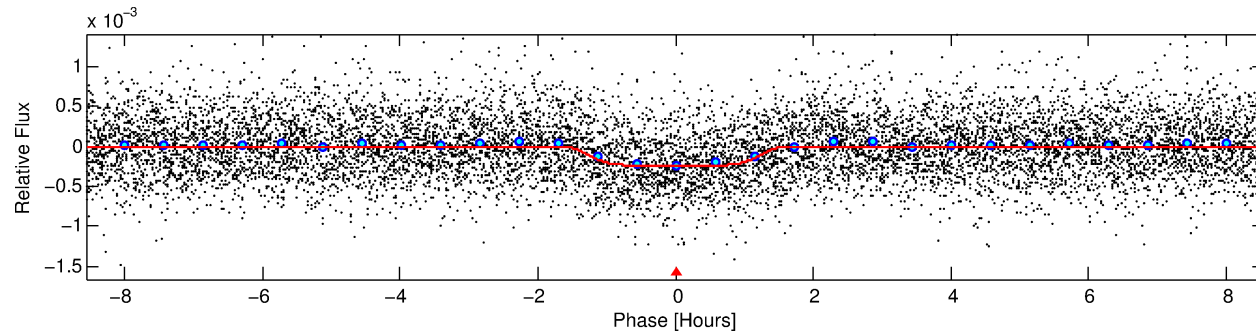
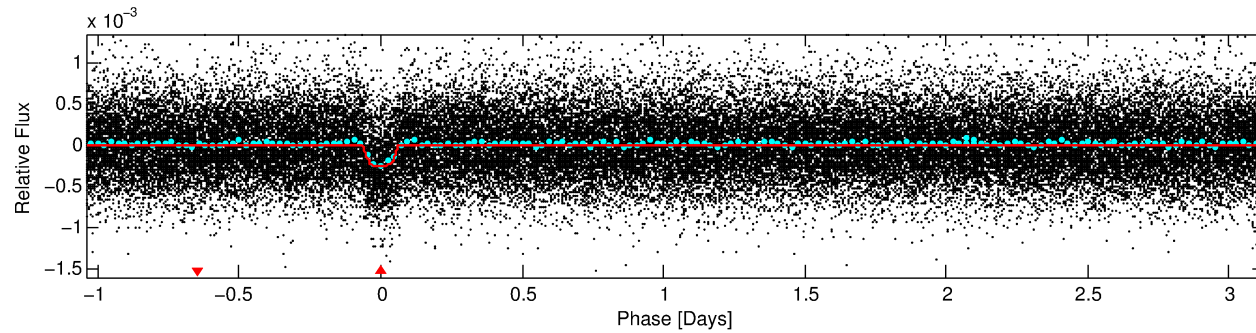
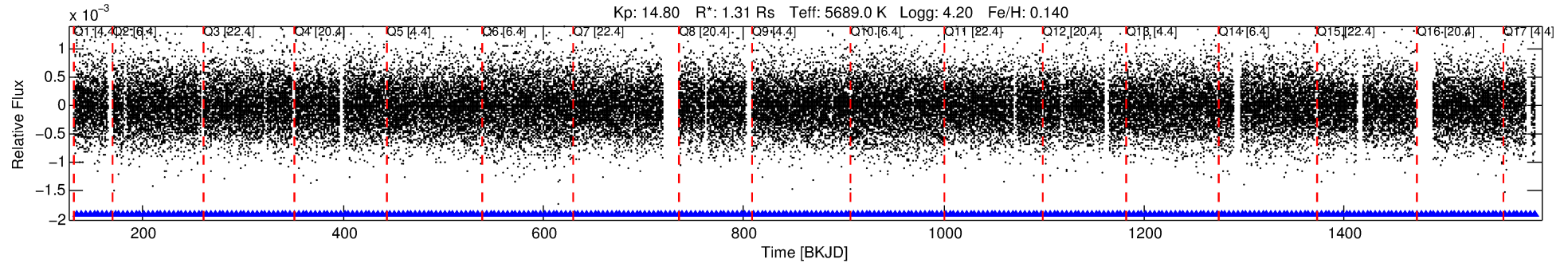
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004135665-01

No Significant Match Found

DV One-Page Summary

KIC: 4135665 Candidate: 1 of 1 Period: 4.168 d
KOI: K01339.01 Corr: 0.976



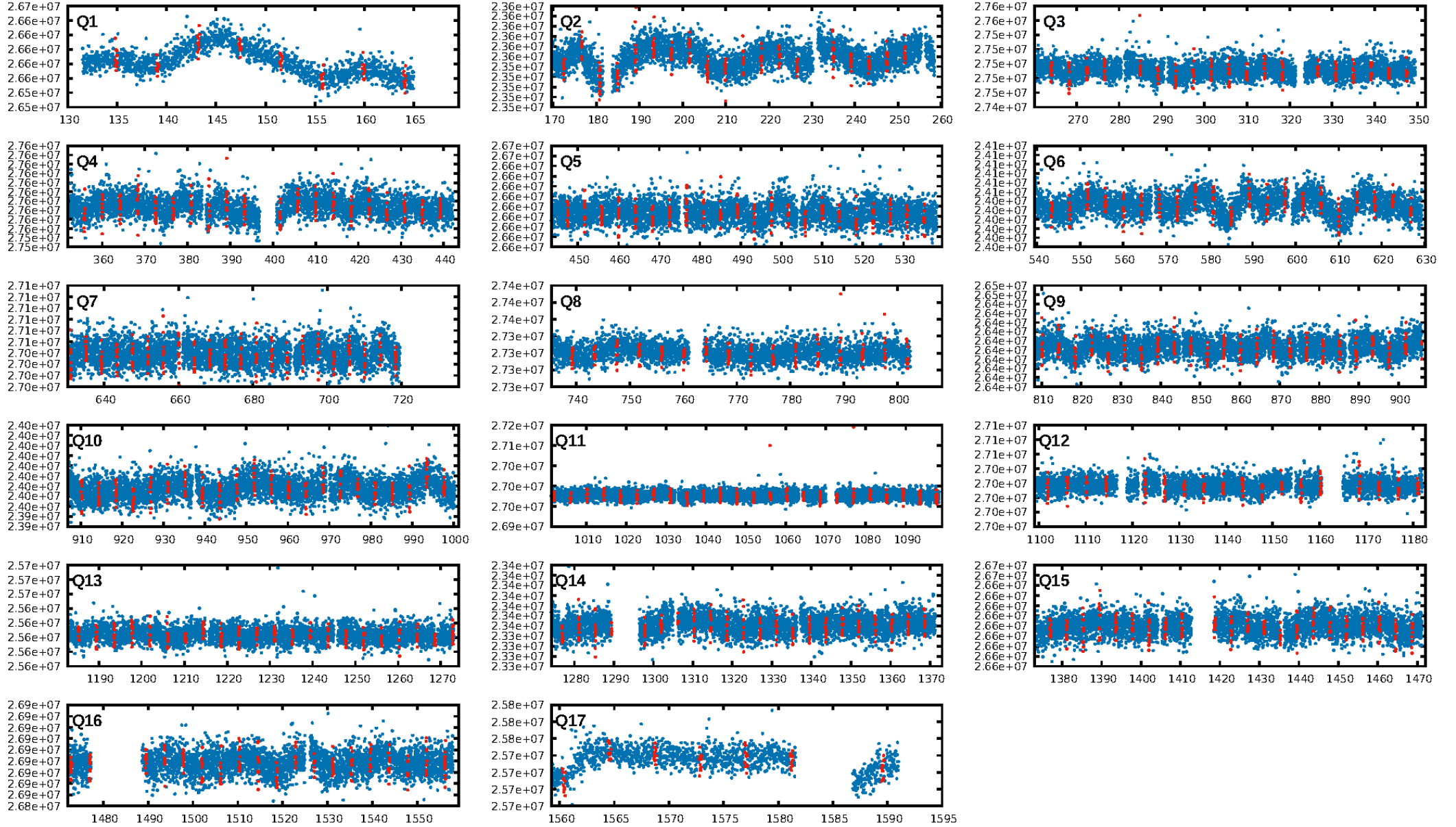
DV Fit Results:

Period = 4.16810 [0.00001] d
Epoch = 134.8981 [0.0020] BKJD
Rp/R* = 0.0180 [0.0027]
a/R* = 4.89 [3.28]
b = 0.92 [0.12]
Seff = 628.97 [178.88]
Teff = 1277 [91] K
Rp = 2.57 [0.63] Re
a = 0.0507 [0.0090] AU
Ag = 5.79 [3.09] [1.55 σ]
Teffp = 3063 [350] K [4.94 σ]

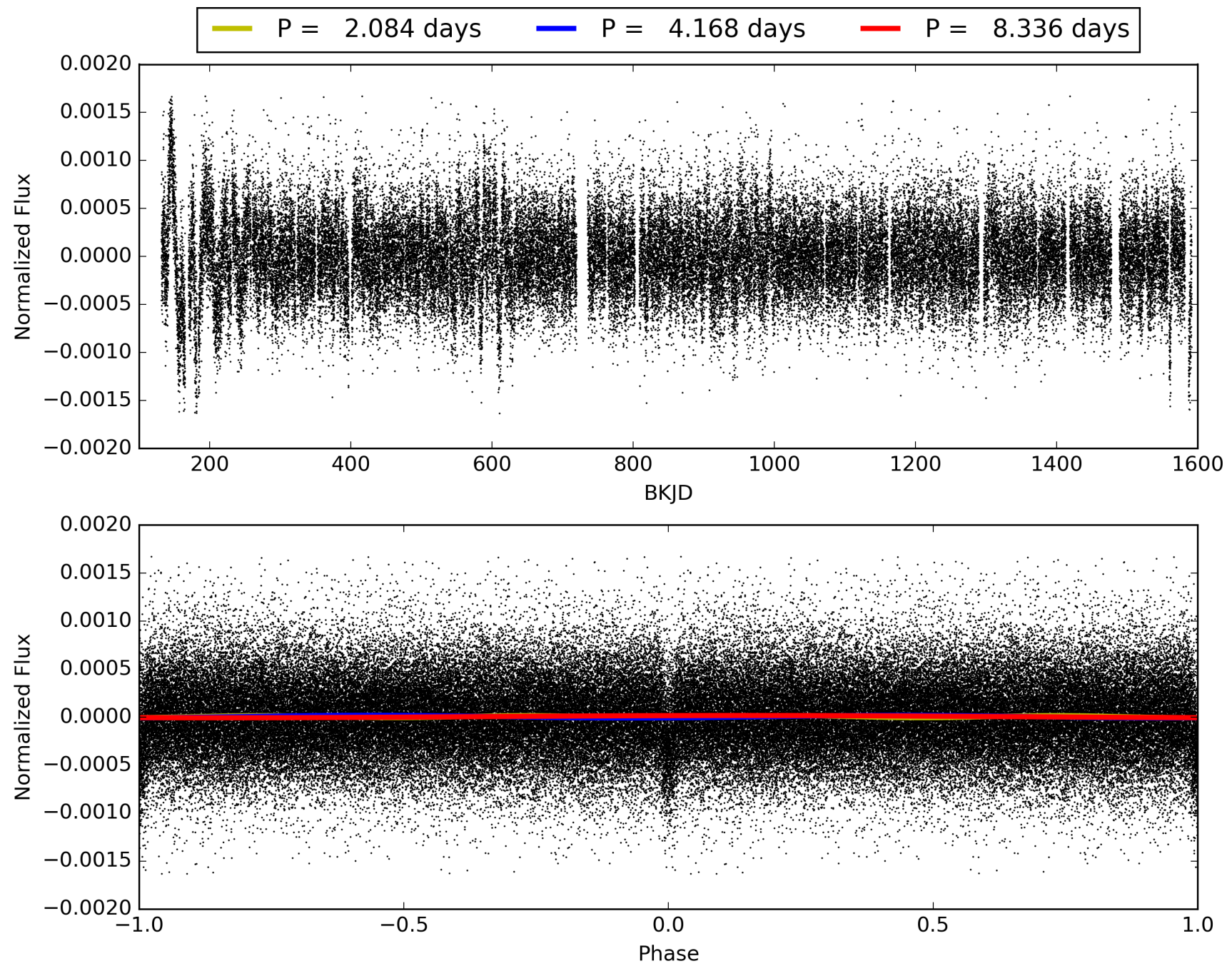
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.63e-111
RollingBand-fgt: 1.00 [309/309]
GhostDiagnostic-chr: 2.792
Centroid-sig: 61.4%
Centroid-so: 0.804 arcsec [1.42 σ]
OotOffset-rm: 0.041 arcsec [0.12 σ]
KicOffset-rm: 0.057 arcsec [0.20 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 004135665-01, PDC Light Curves

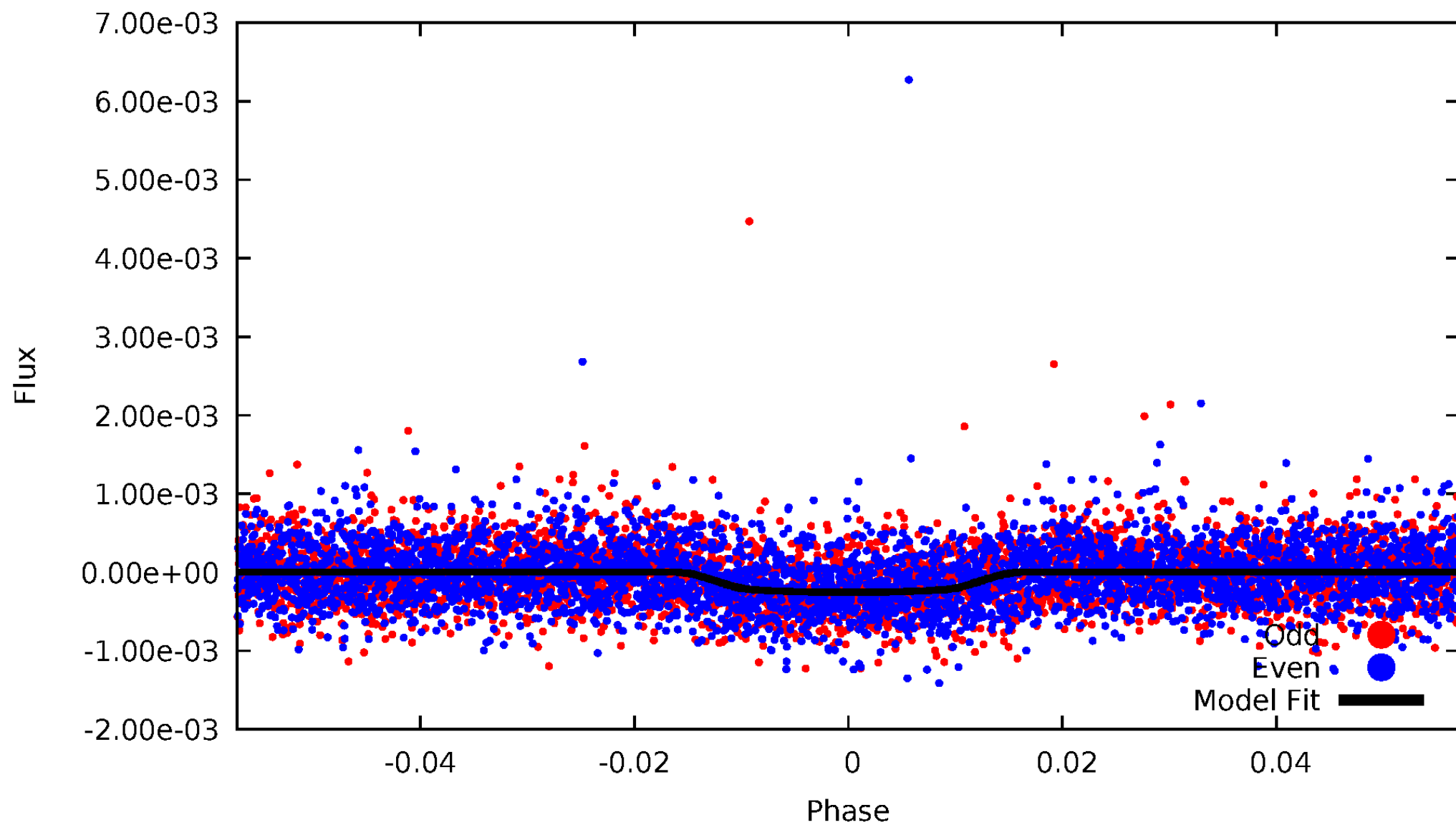


TCE 004135665-01



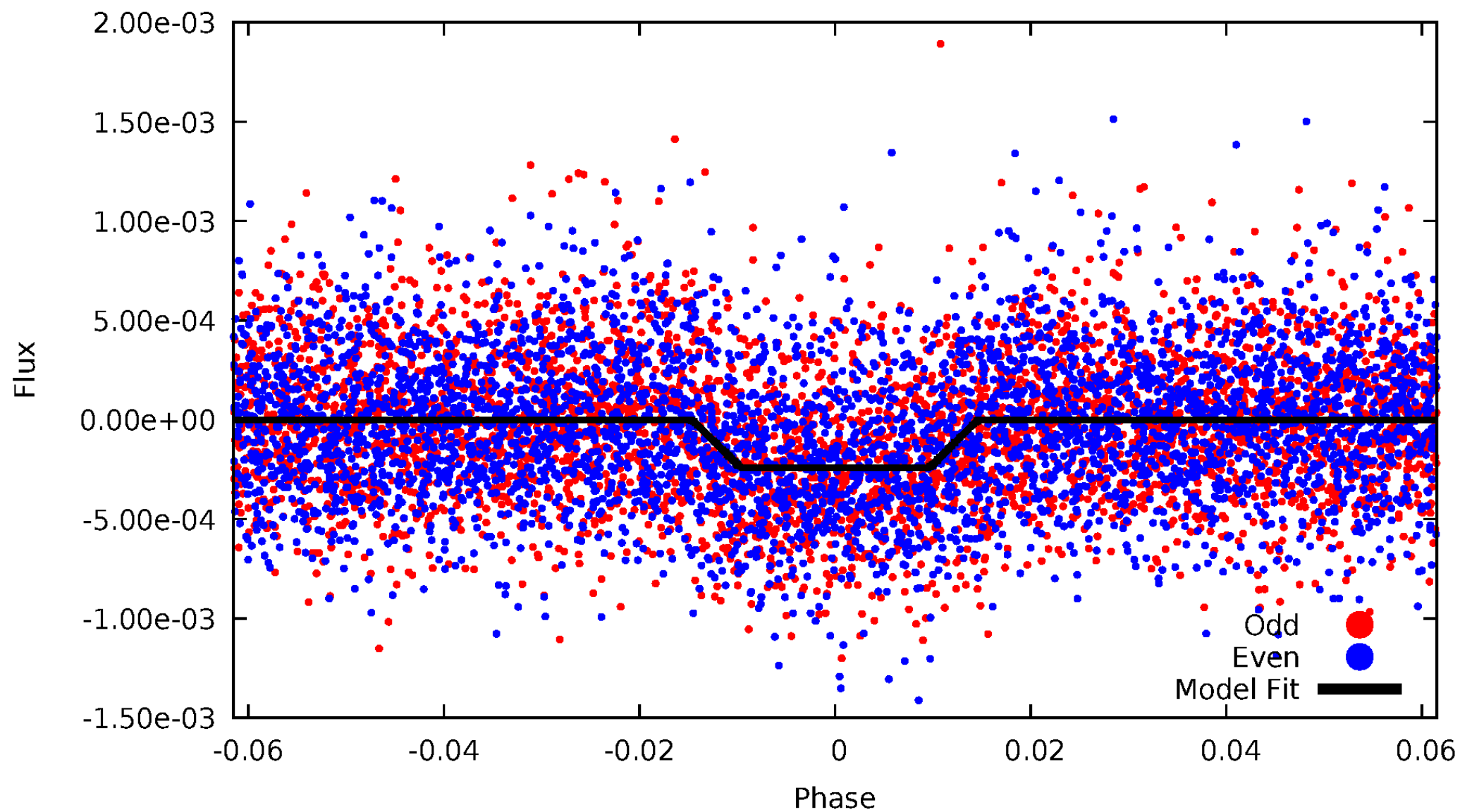
DV Odd/Even

TCE 004135665-01



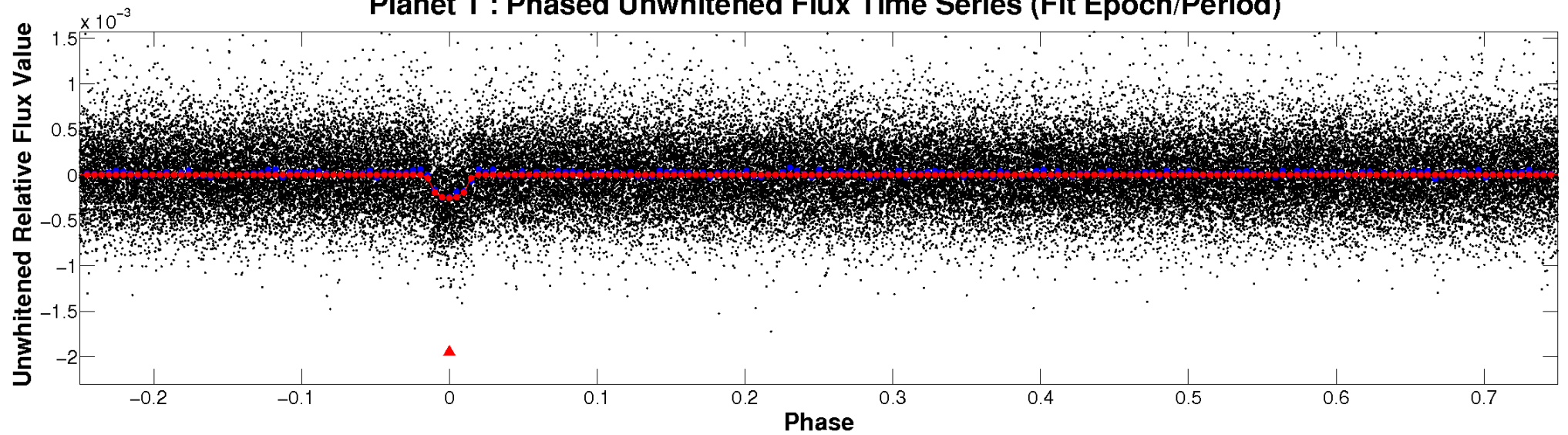
ALT Odd/Even

TCE 004135665-01

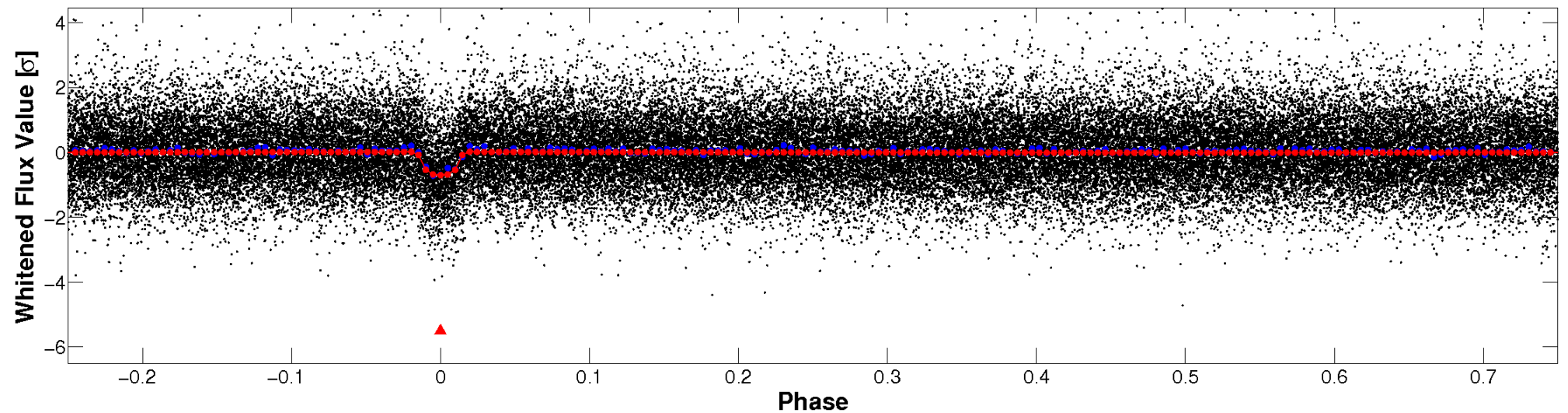


Non-Whitened Vs. Whitened Light Curve

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

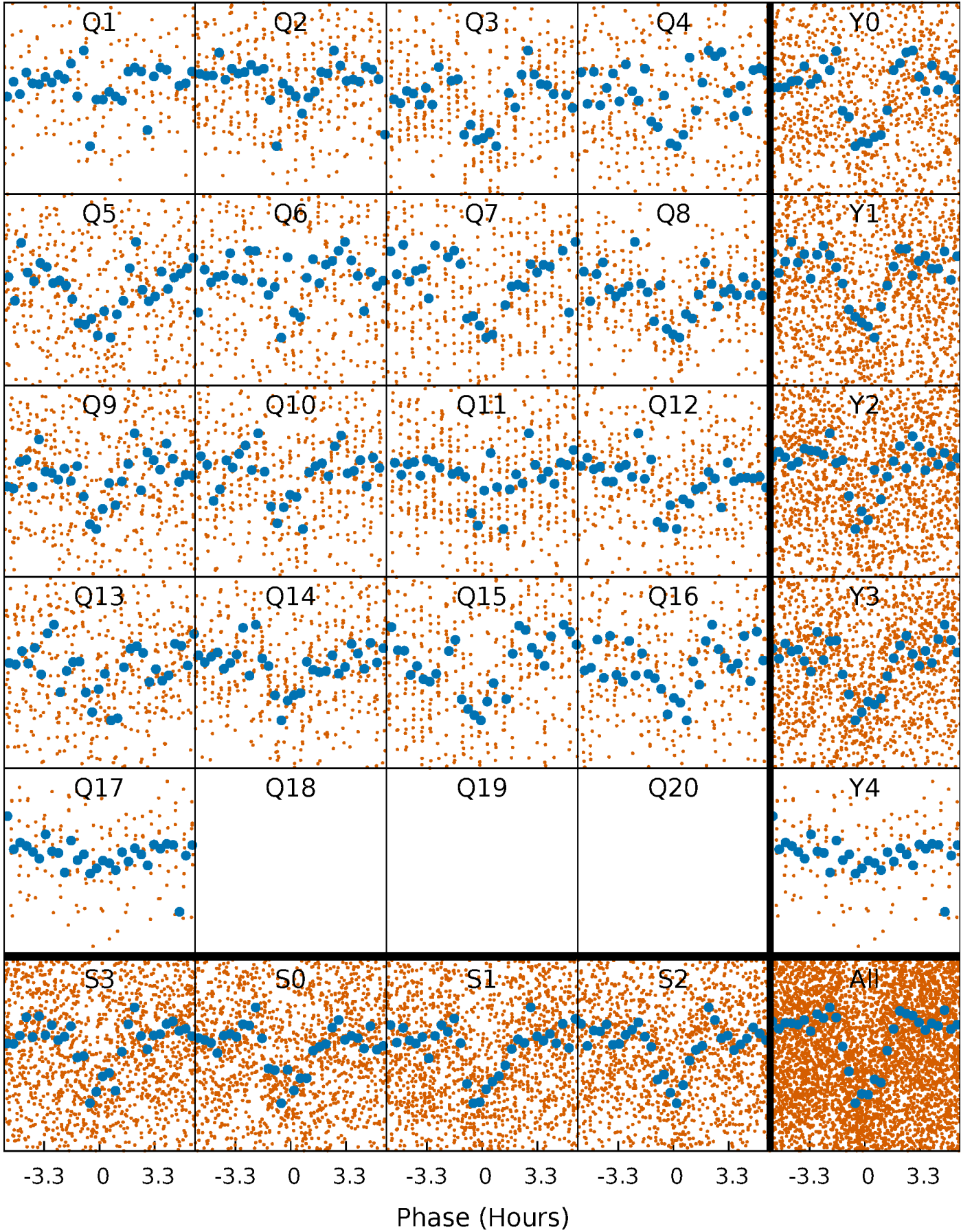


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



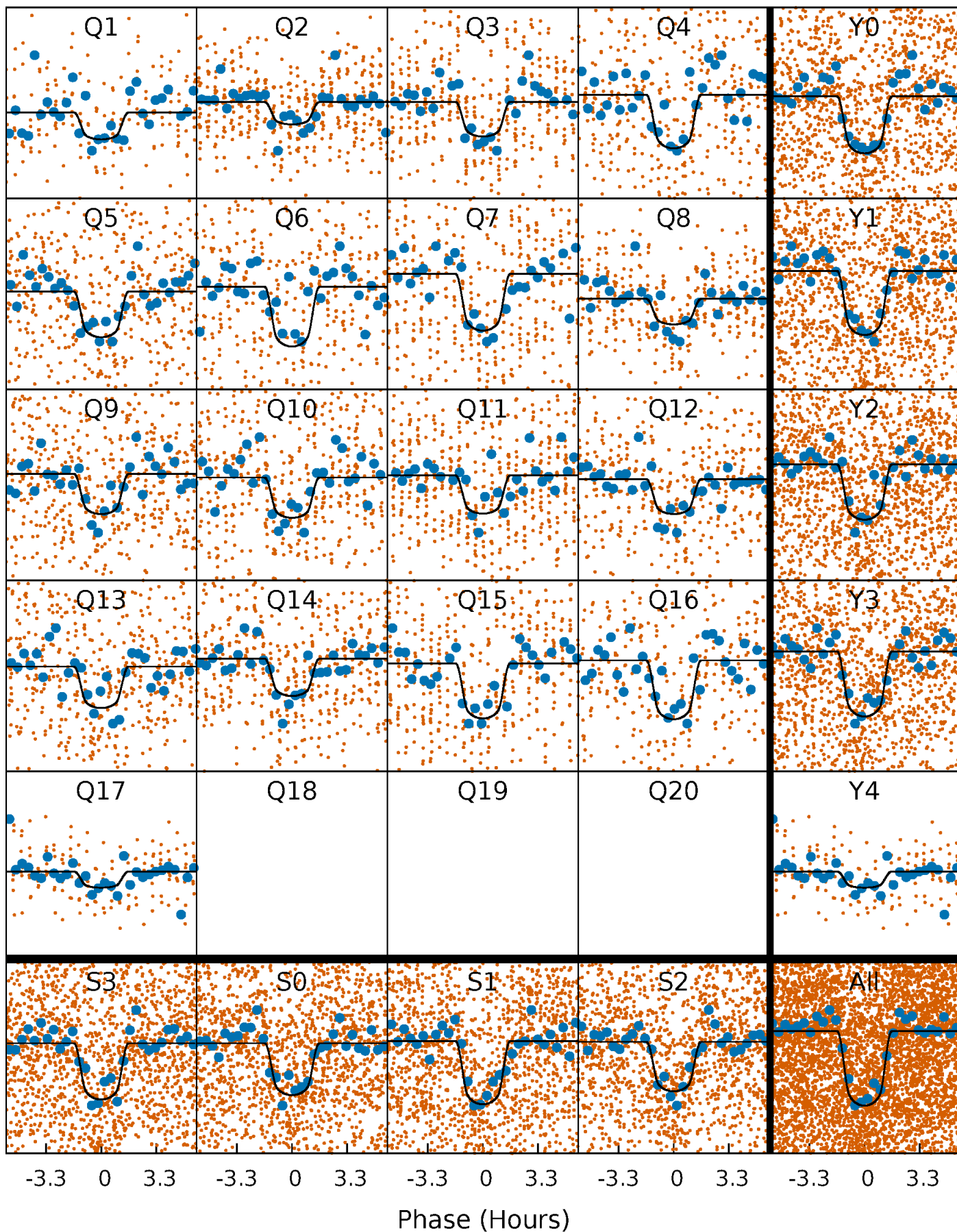
PDC Quarter-Phased Transit Curves

TCE 004135665-01 P= 4.168096 Days $T_0=134.898058$ (BKJD)



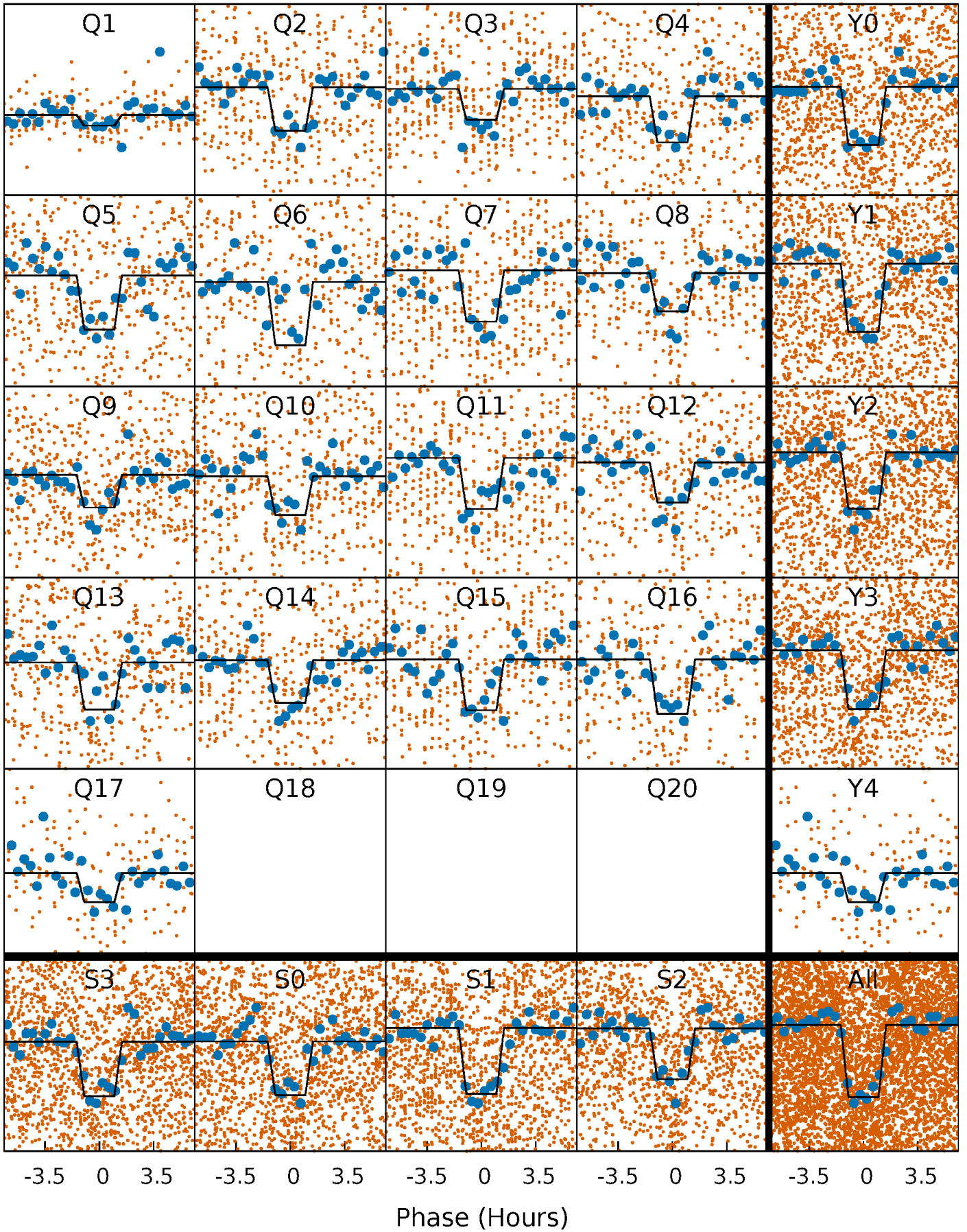
DV Quarter-Phased Transit Curves

TCE 004135665-01 P= 4.168096 Days $T_0=134.898058$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

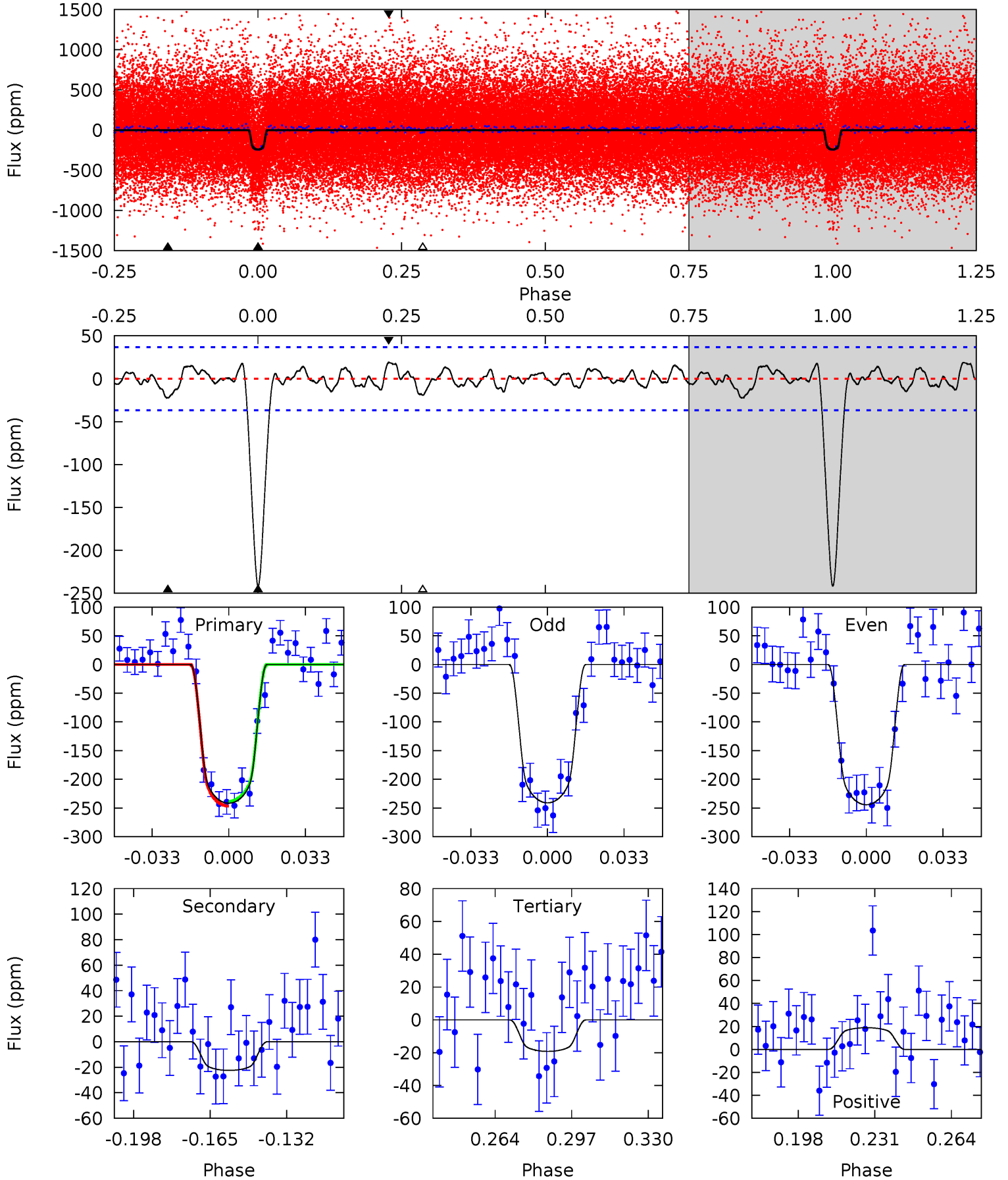
TCE 004135665-01 P= 4.168106 Days $T_0=134.897632$ (BKJD)



DV Model-Shift Uniqueness Test

004135665-01, P = 4.168096 Days, E = 130.729962 Days

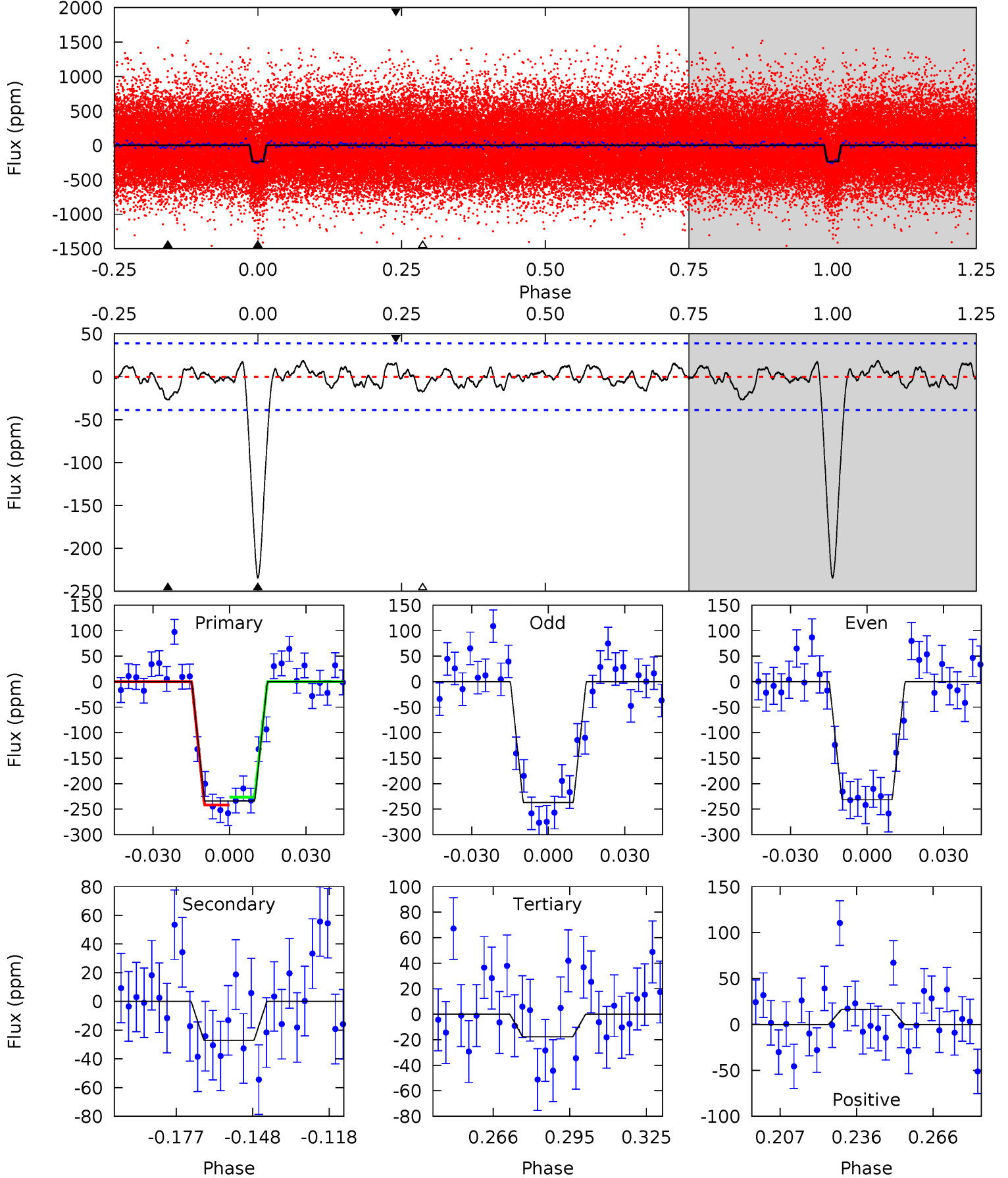
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.5	2.93	2.51	2.46	4.79	2.13	0.98	29.0	29.1	0.42	0.47	0.21	0.96	0.07	0.52



Alt Model-Shift Uniqueness Test

004135665-01, P = 4.168106 Days, E = 130.729526 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.0	3.34	2.19	2.02	4.81	2.18	0.95	26.8	27.0	1.15	1.33	0.35	1.02	0.07	0.97



Stellar Parameters For KIC 004135665

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5689^{+77}_{-77}	$4.202^{+0.162}_{-0.108}$	$0.140^{+0.150}_{-0.150}$	$1.313^{+0.204}_{-0.250}$	$1.000^{+0.079}_{-0.064}$	$0.622^{+0.504}_{-0.203}$
	+1%/-1%	+4%/-3%	+107%/-107%	+16%/-19%	+8%/-6%	+81%/-33%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 004135665-01 / KOI 1339.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-22 ± 8	$2.55^{+0.46}_{-0.47}$	1781^{+79}_{-93}	3390^{+259}_{-286}	$4.921^{+3.013}_{-2.189}$
Alt.	-27 ± 8	$2.20^{+0.46}_{-0.43}$	1778^{+81}_{-95}	3675^{+301}_{-279}	$7.901^{+4.965}_{-3.274}$

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 $A_{obs} \gg 1.0$

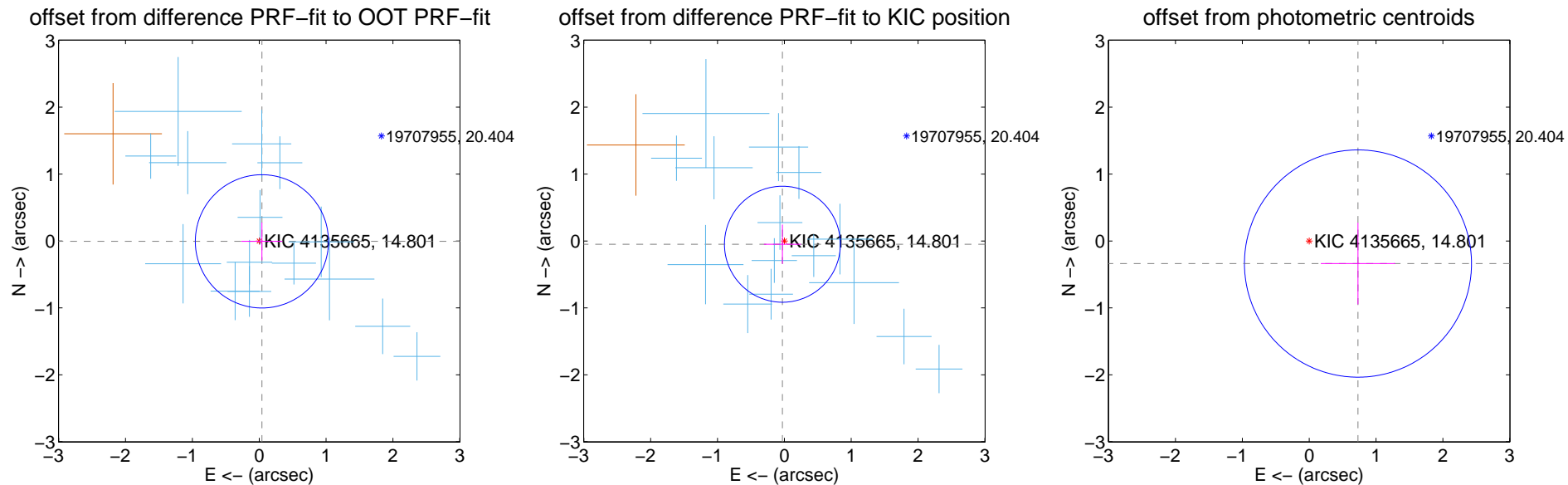
DV Centroid Data

Supplemental centroid analysis for 004135665-01. Kepler magnitude: 14.80. Transit SNR 24.66

There are 15 quarters with good PRF difference image offsets

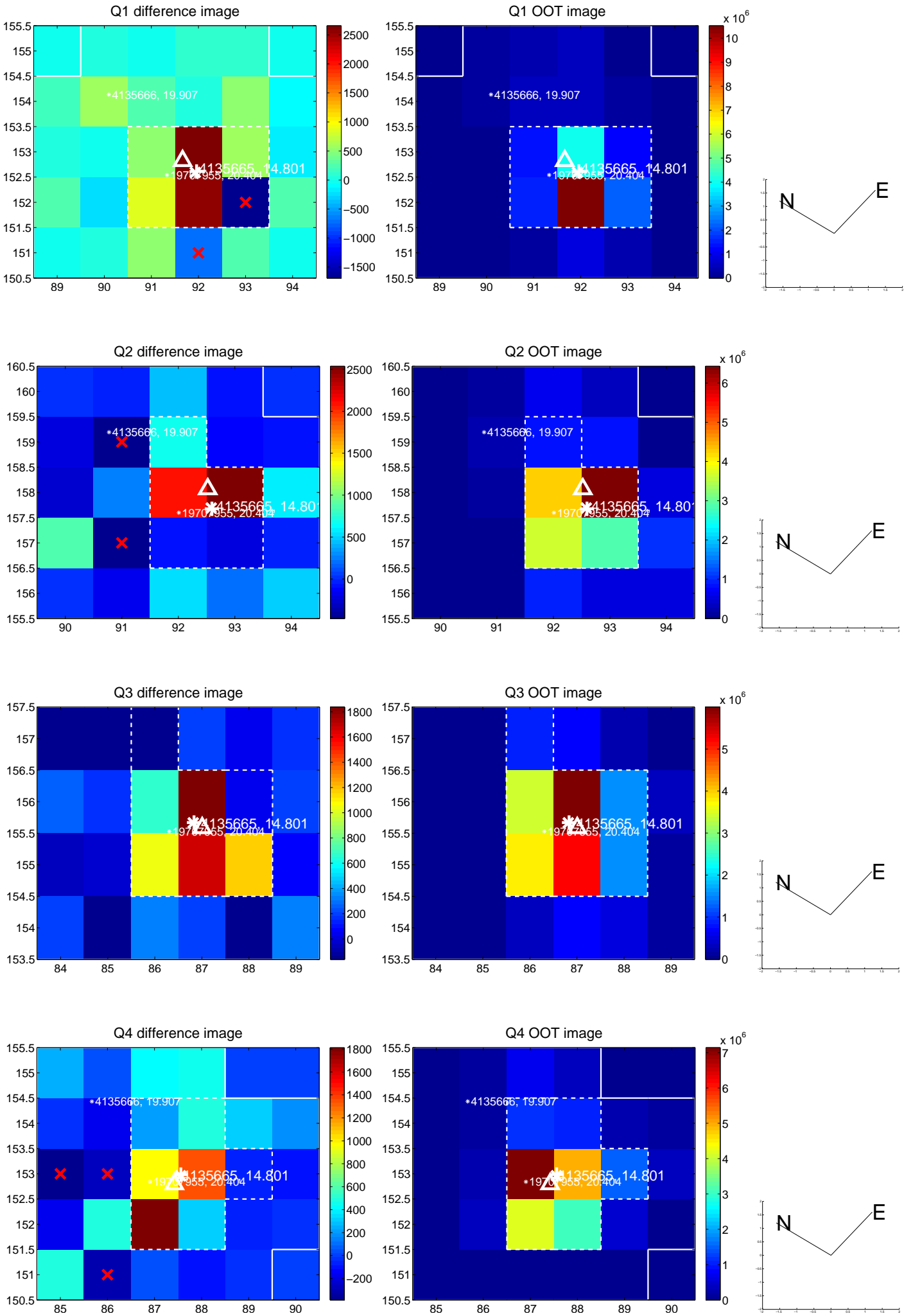
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.041 ± 0.332	0.12	-0.040 ± 0.306	-0.006 ± 0.282
PRF-fit source offset from KIC position	0.057 ± 0.289	0.20	0.029 ± 0.276	-0.049 ± 0.293
photometric centroid source offset	0.80 ± 0.57	1.42	-0.73 ± 0.56	-0.34 ± 0.61

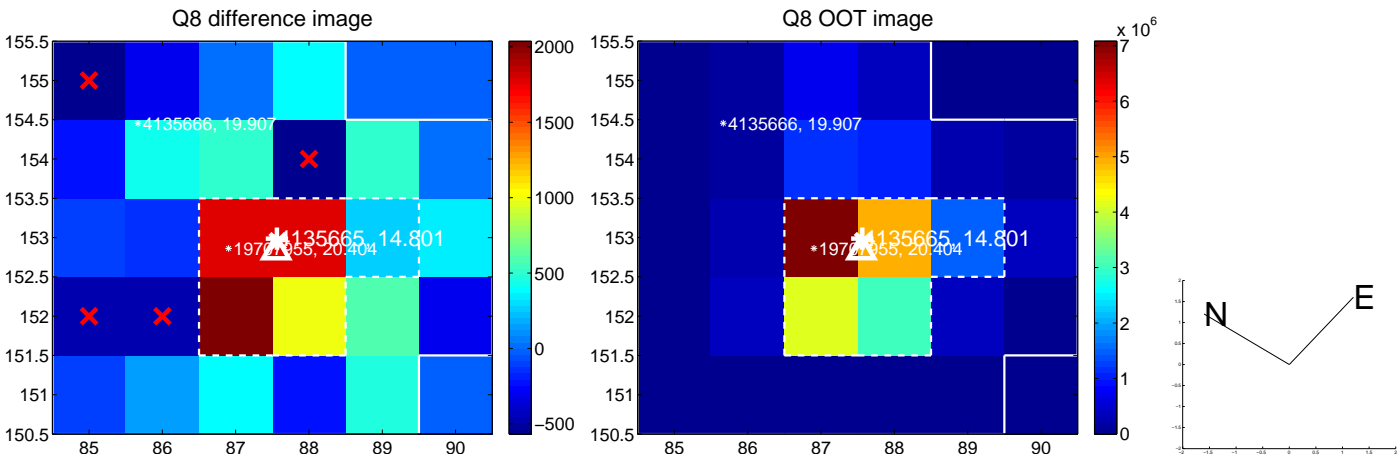
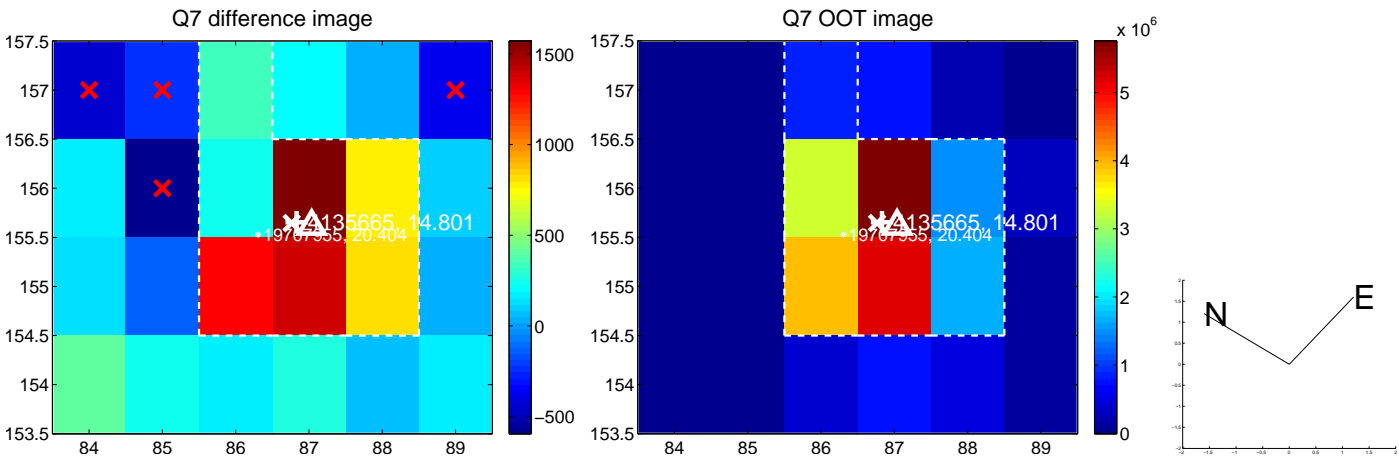
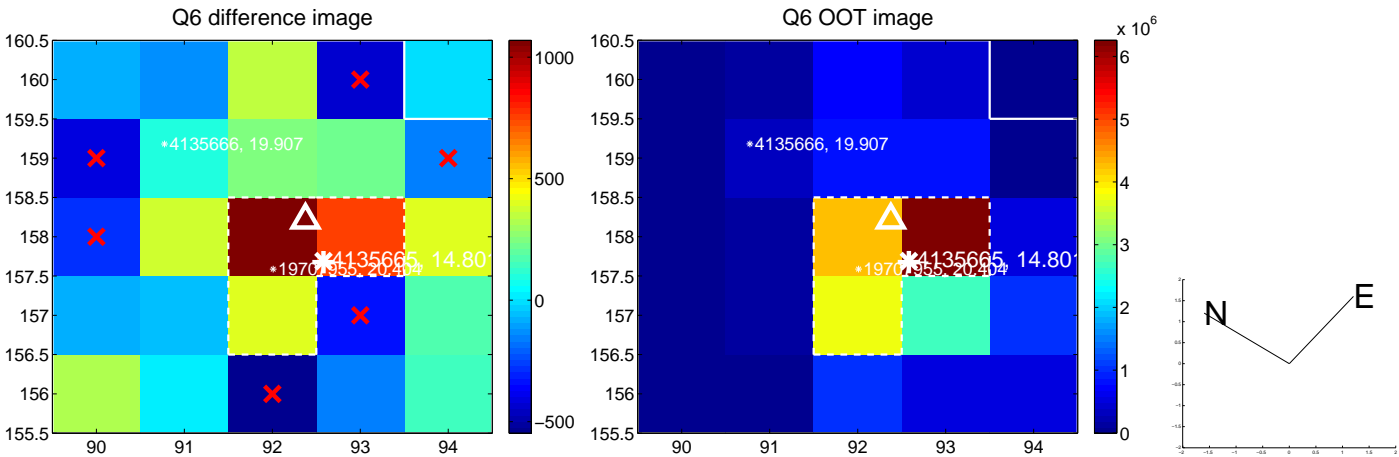
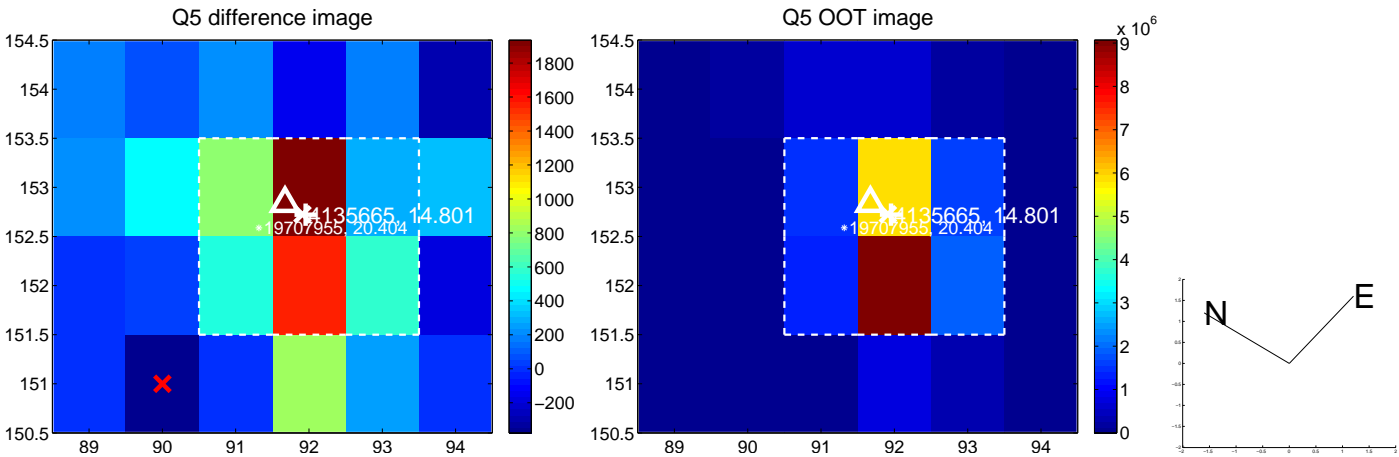


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

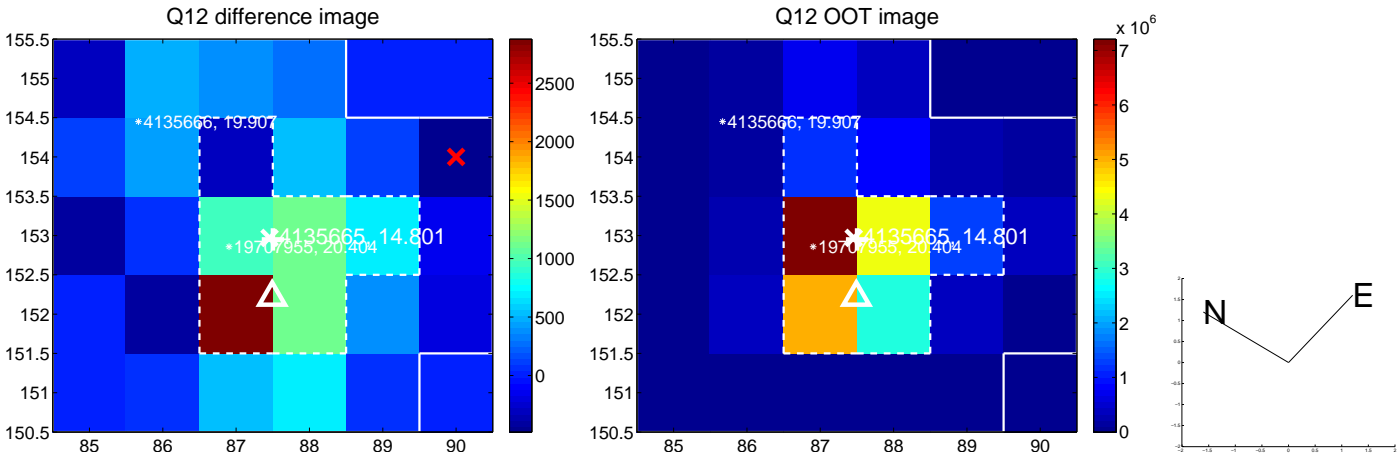
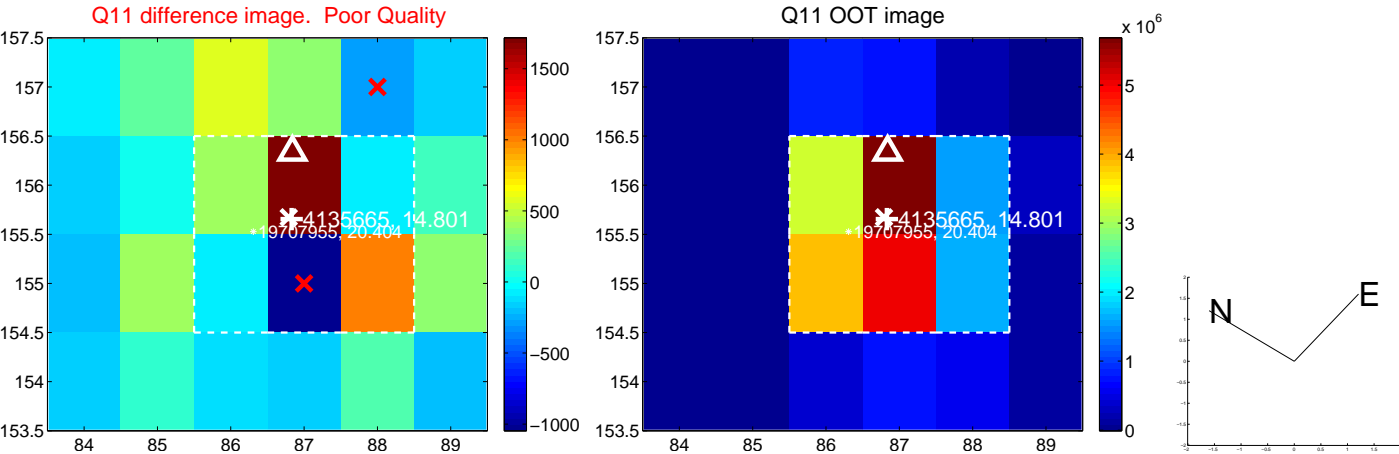
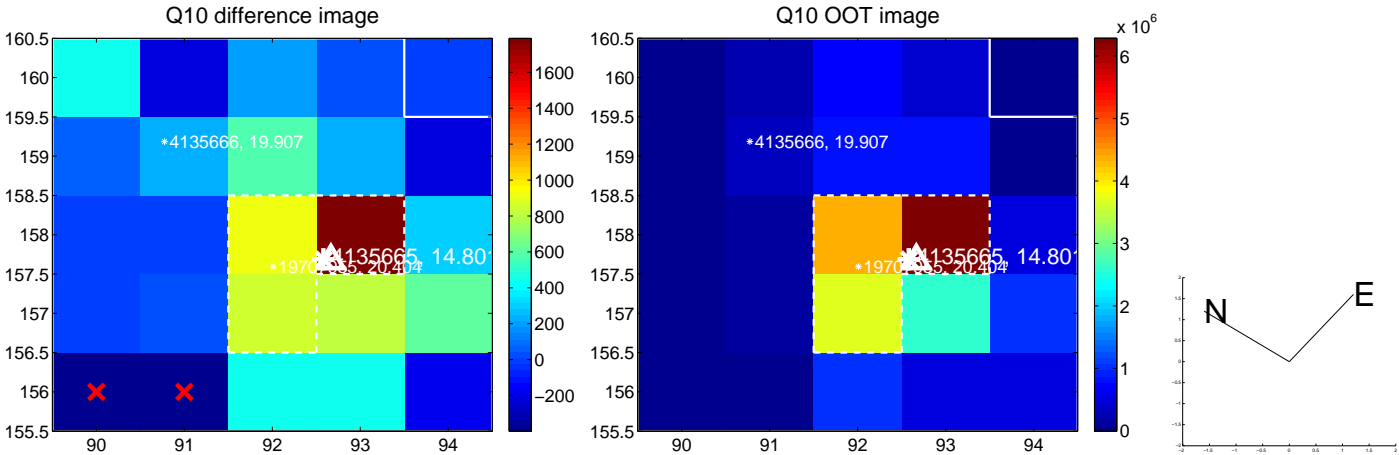
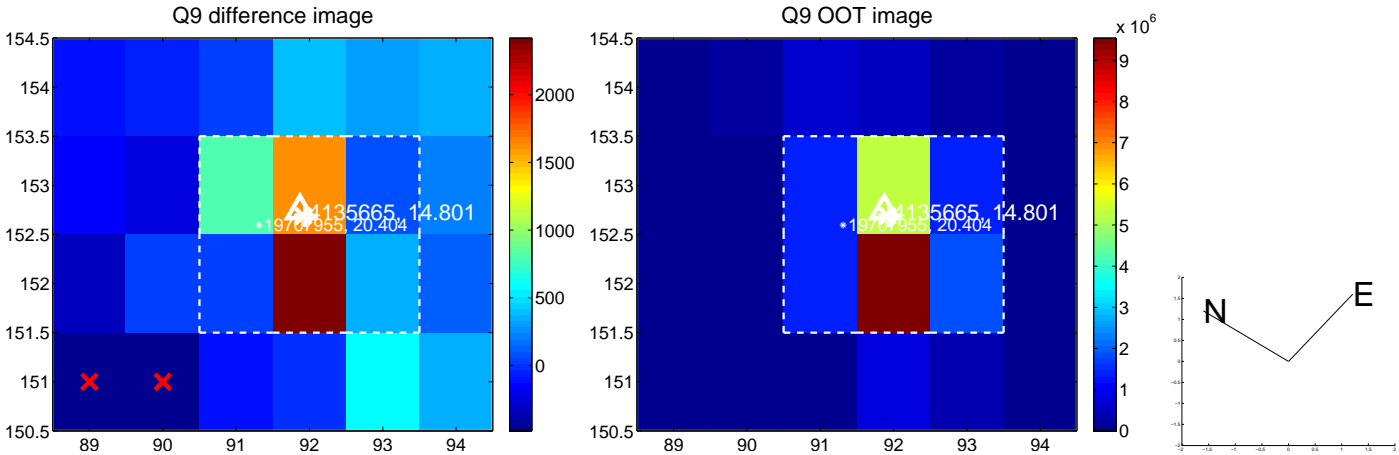
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



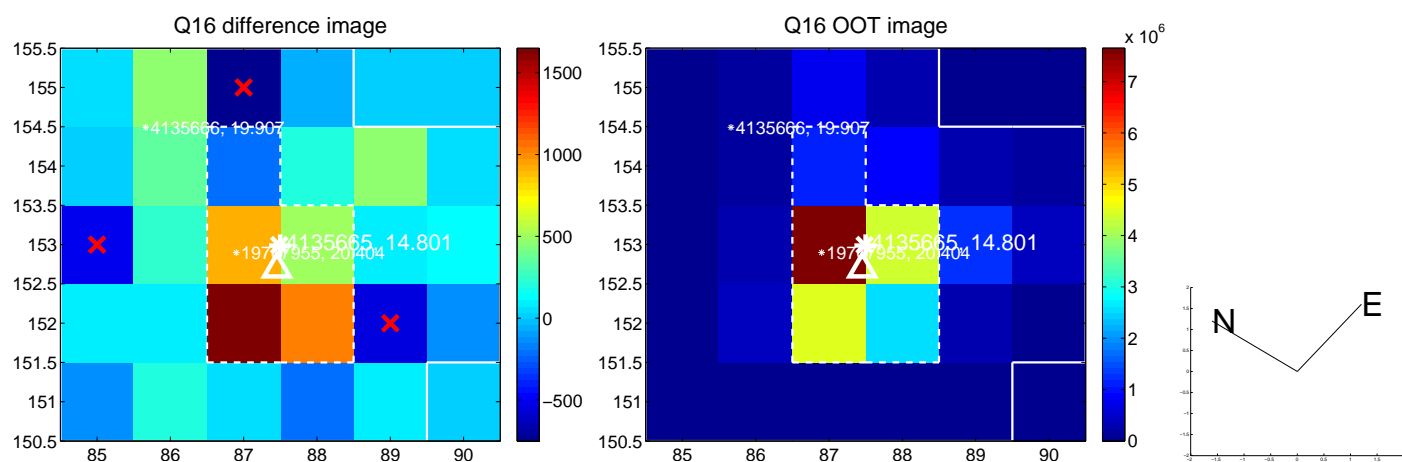
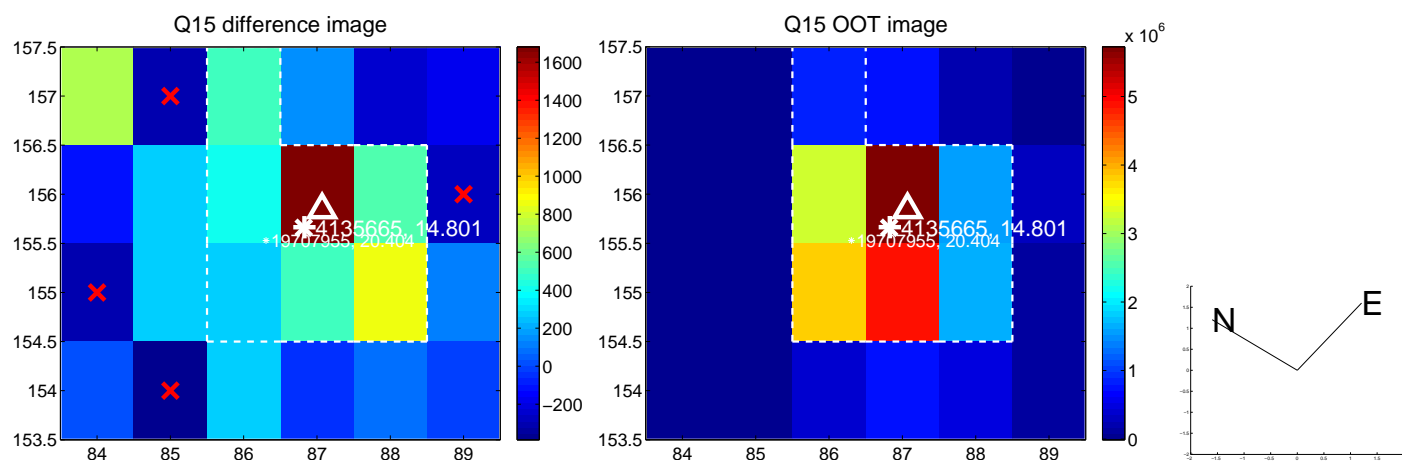
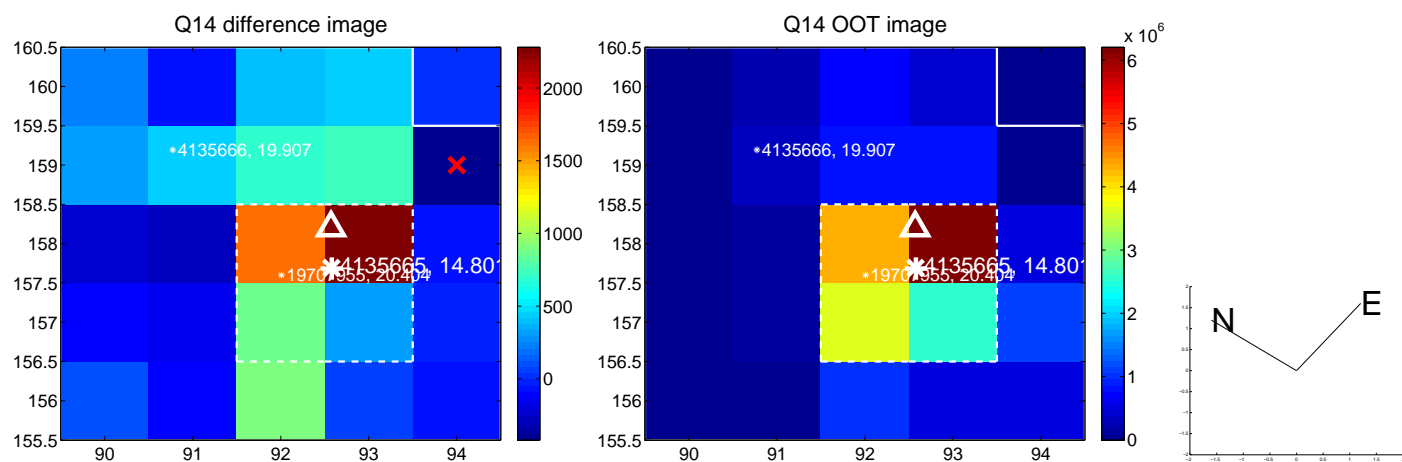
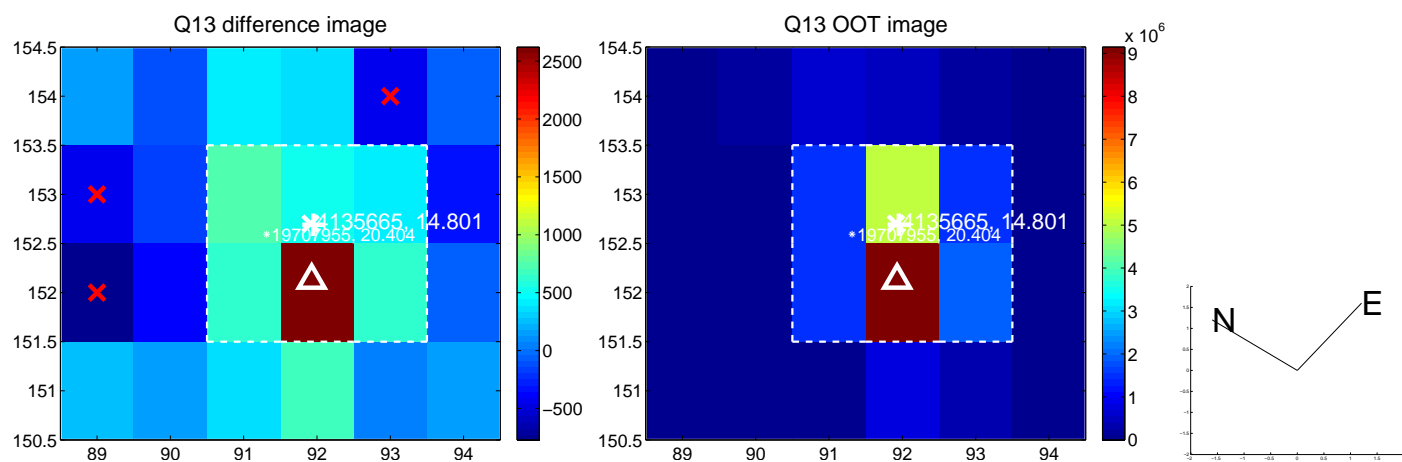
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



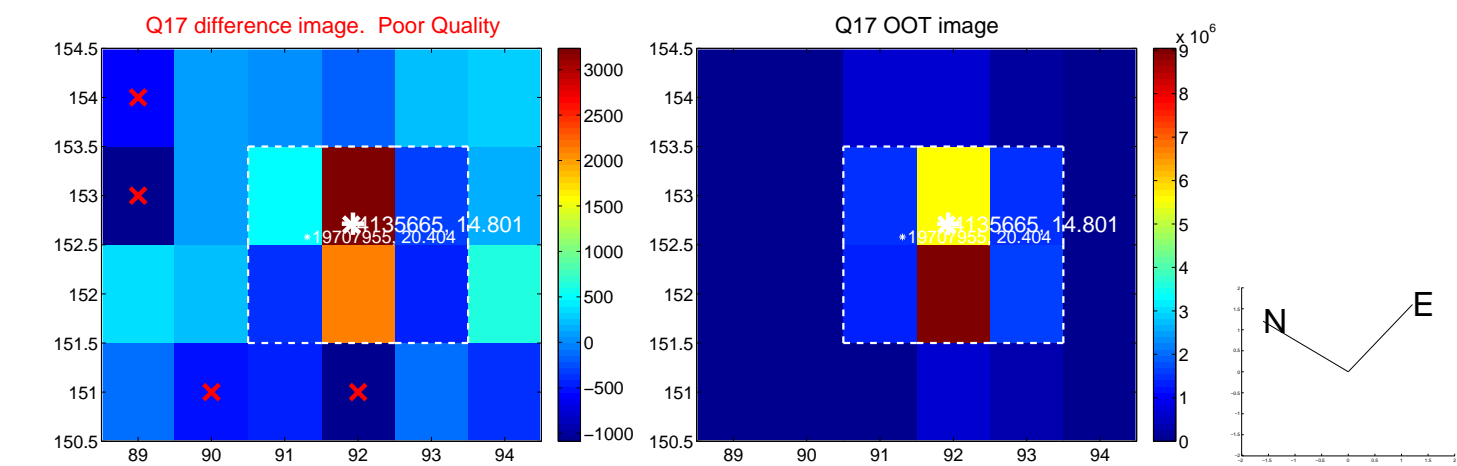
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



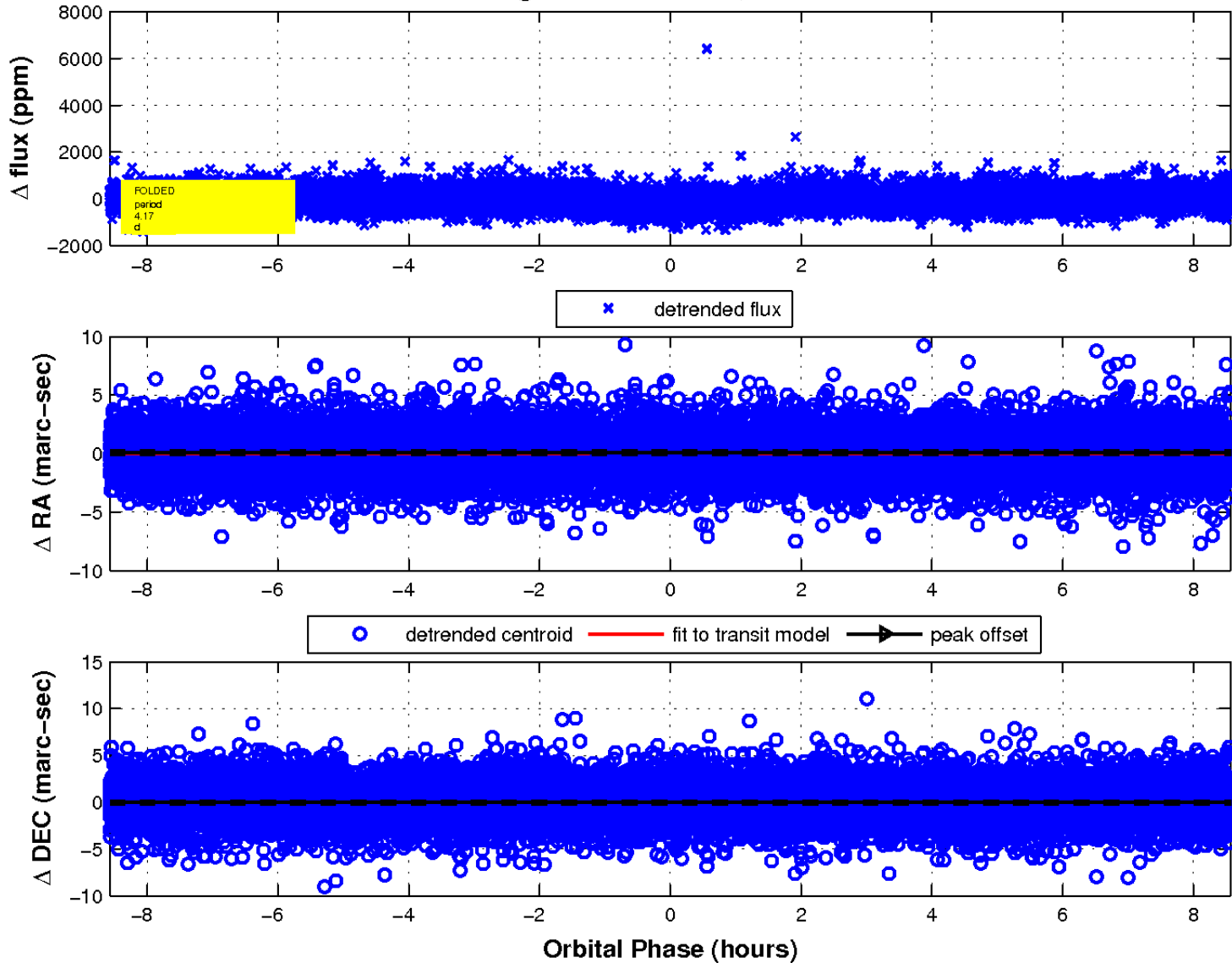
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

