

KIC 008007644

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})
008007644-01	OBS	2328.01	25.203386	137.564498	693.5	4.691	19.7	20.6	0.92	5831	2.66	30.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008007644-01	OBS	PC	0.41	0	0	0	0	CENT_UNCERTAIN

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

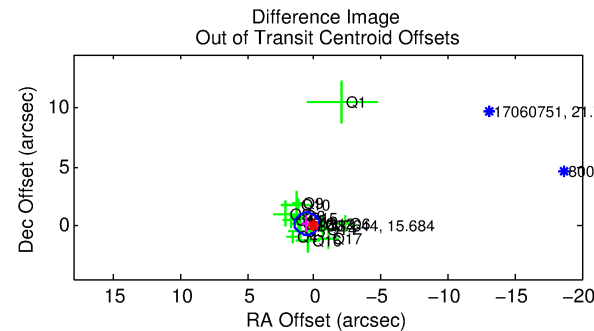
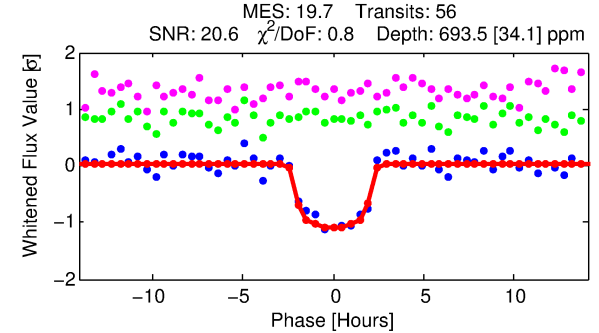
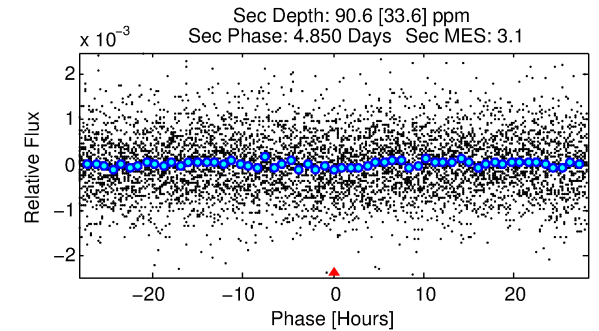
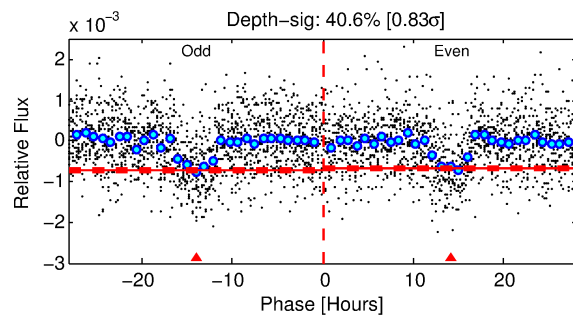
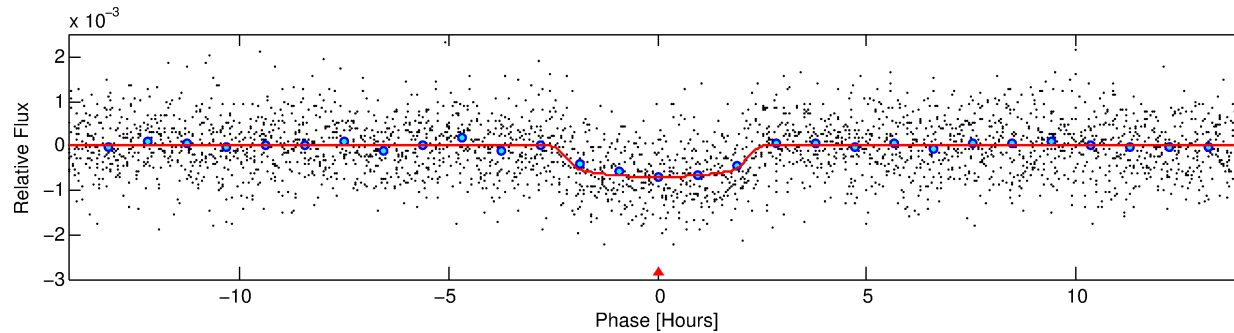
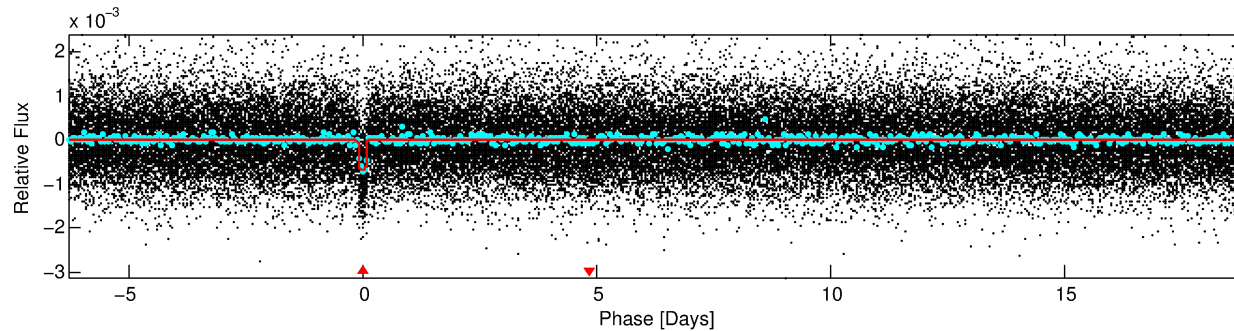
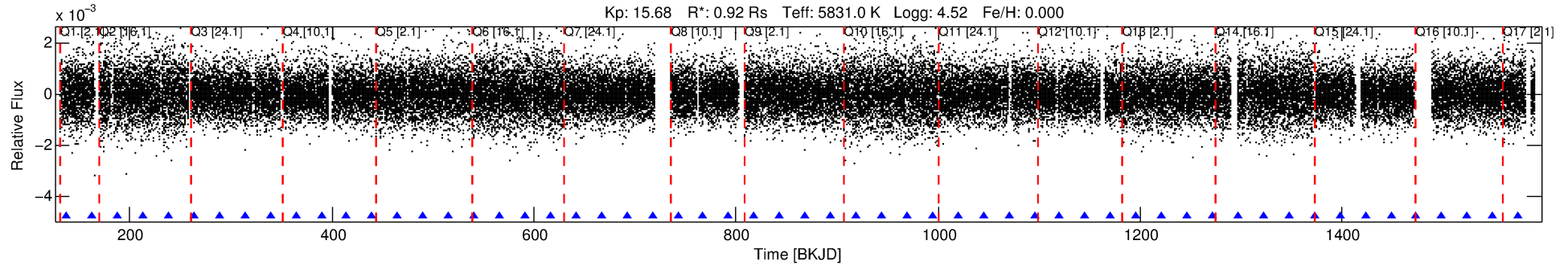
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008007644-01

No Significant Match Found

DV One-Page Summary

KIC: 8007644 Candidate: 1 of 1 Period: 25.203 d
KOI: K02328.01 Corr: 0.985



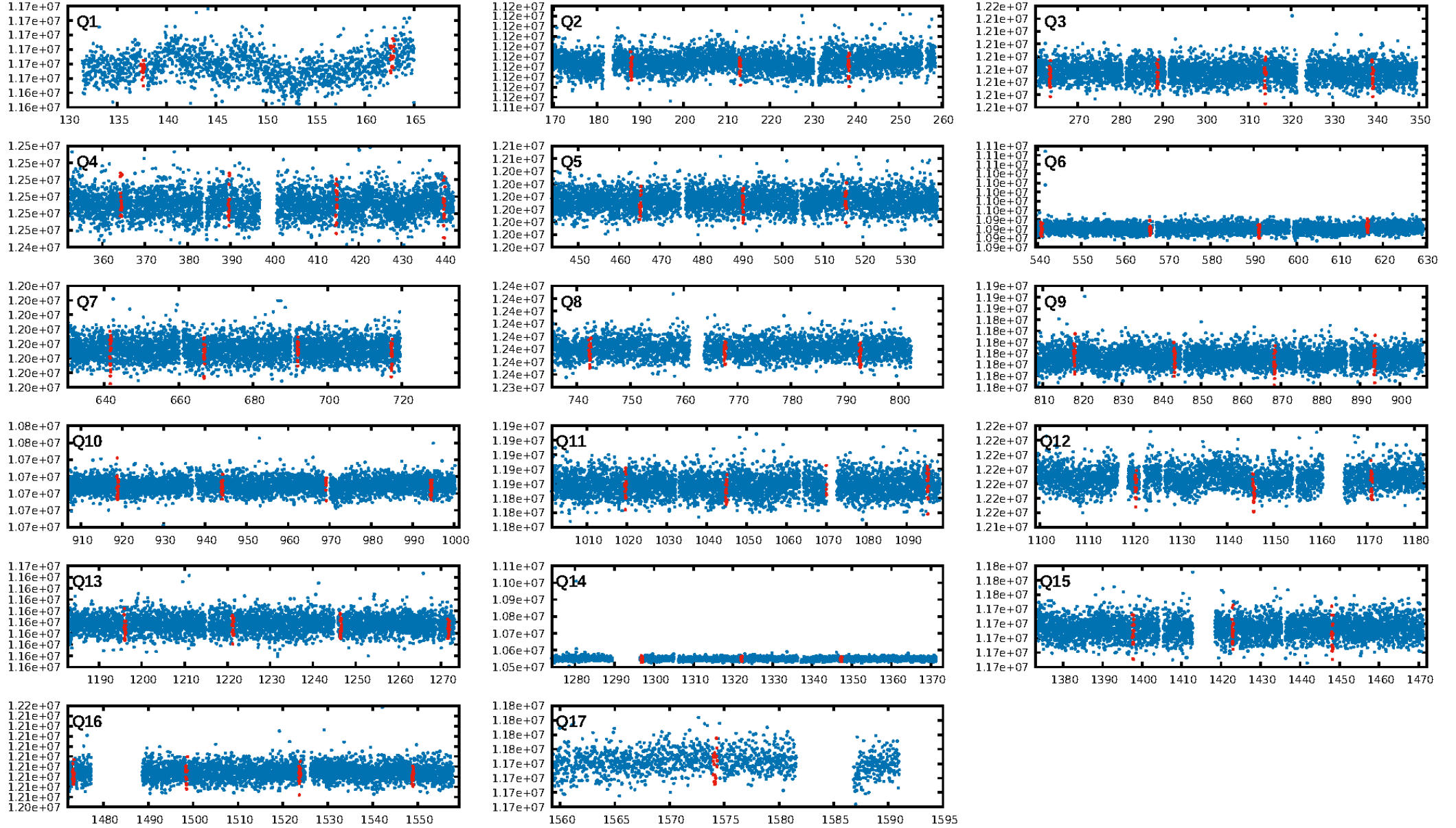
DV Fit Results:

Period = 25.20339 [0.00015] d
Epoch = 137.5645 [0.0048] BKJD
Rp/R* = 0.0265 [0.0079]
a/R* = 27.58 [36.78]
b = 0.78 [0.69]
Seff = 30.67 [11.75]
Teq = 600 [57] K
Rp = 2.66 [1.08] Re
a = 0.1692 [0.0411] AU
Ag = 201.42 [159.11] [1.26 σ]
Teffp = 3495 [622] K [4.64 σ]

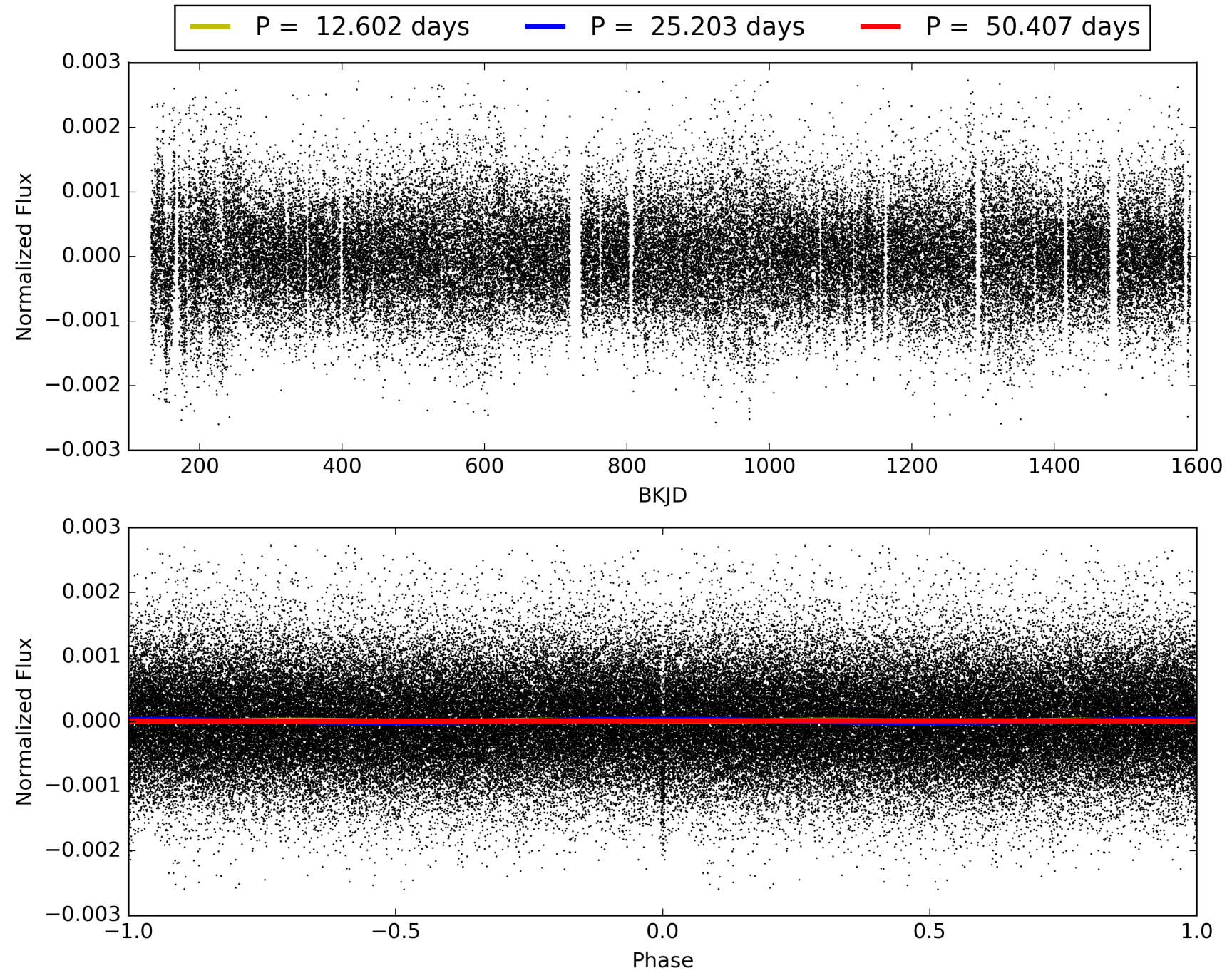
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.58e-87
RollingBand-fgt: 1.00 [53/53]
GhostDiagnostic-chr: 2.081
Centroid-sig: 86.1%
Centroid-so: 0.403 arcsec [0.57 σ]
OotOffset-rm: 0.598 arcsec [1.96 σ]
KicOffset-rm: 0.546 arcsec [1.63 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.76 [13/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008007644-01, PDC Light Curves

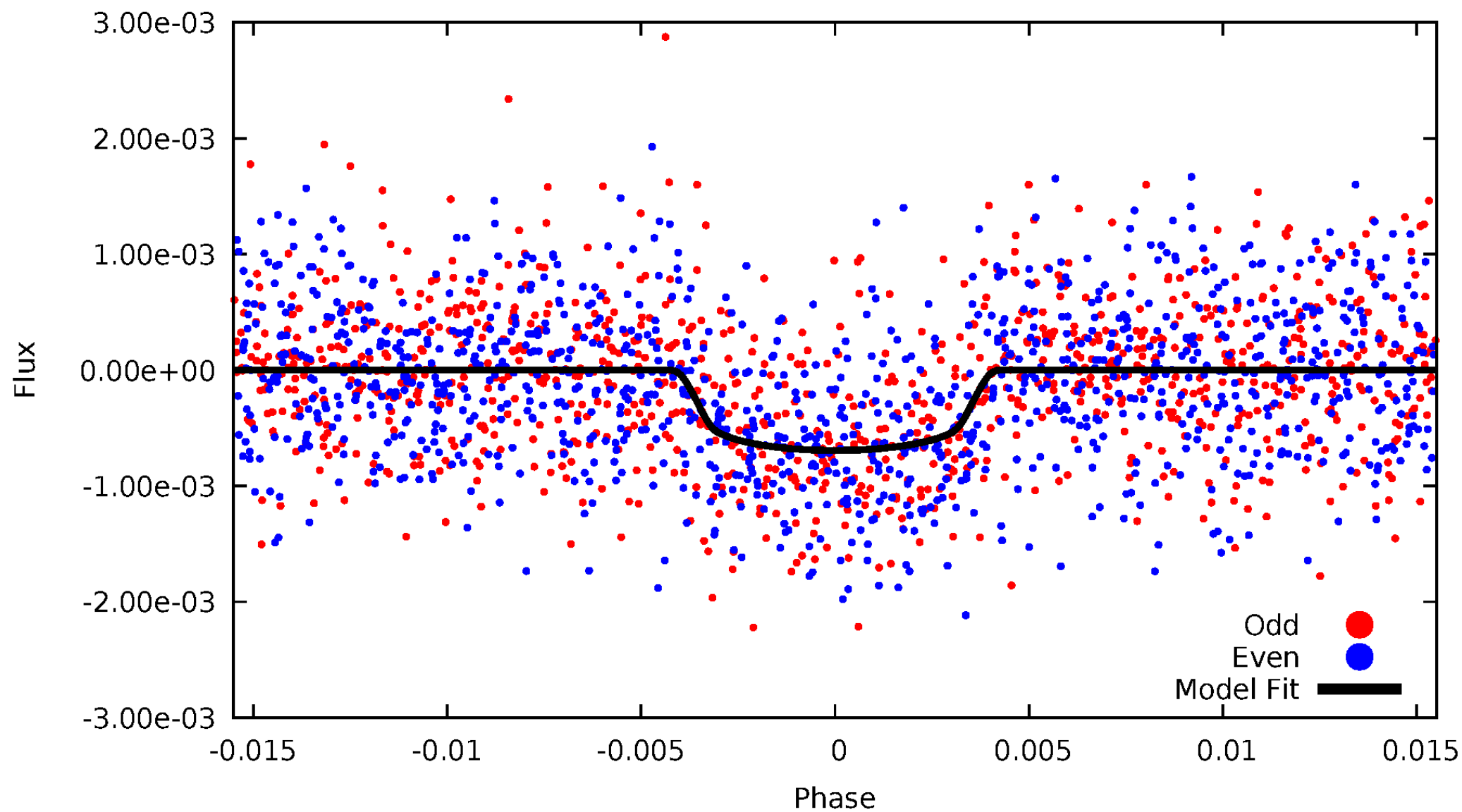


TCE 008007644-01



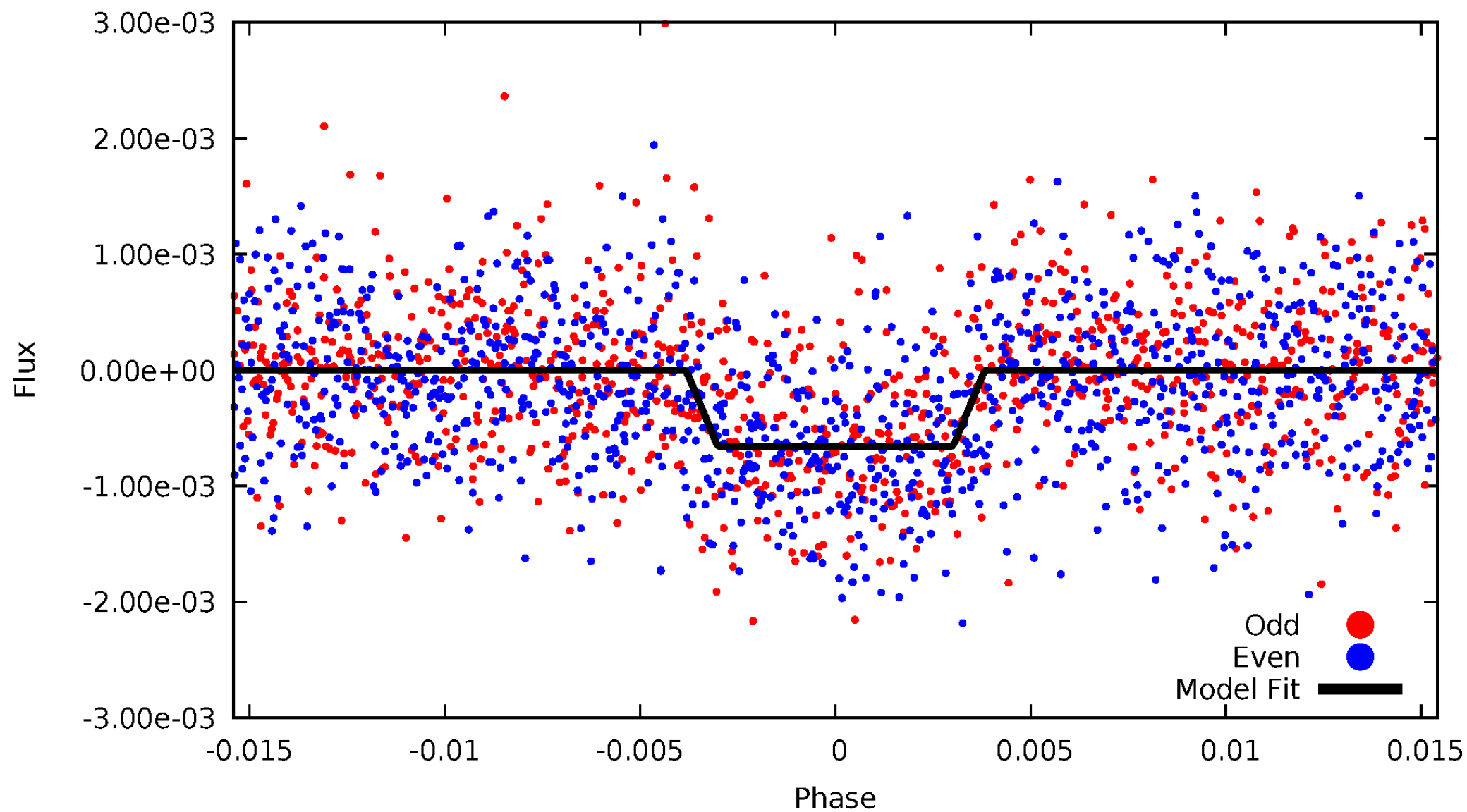
DV Odd/Even

TCE 008007644-01



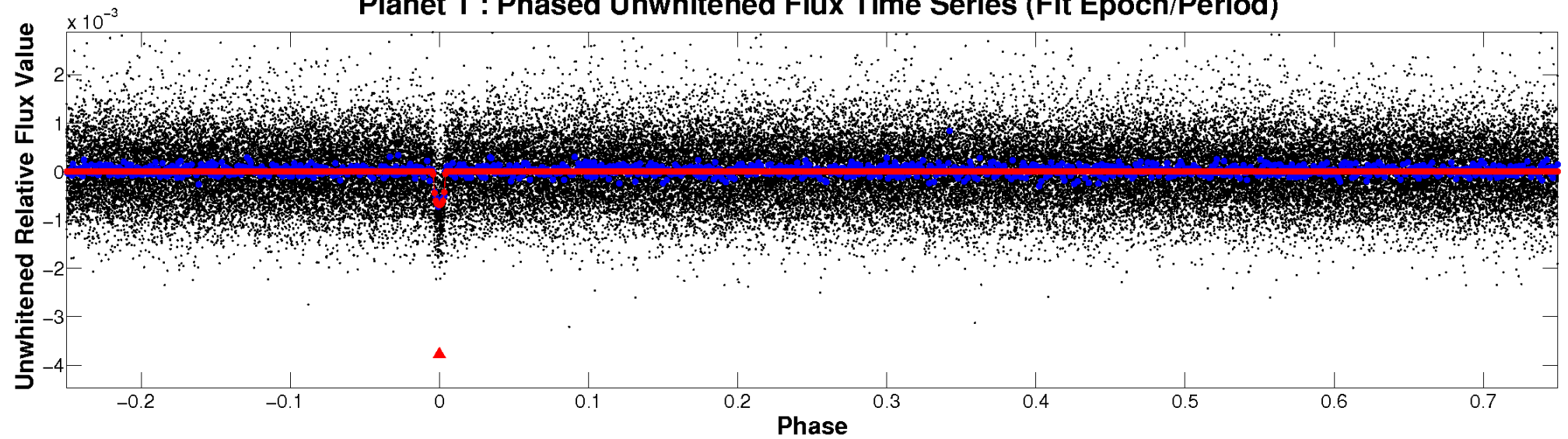
ALT Odd/Even

TCE 008007644-01

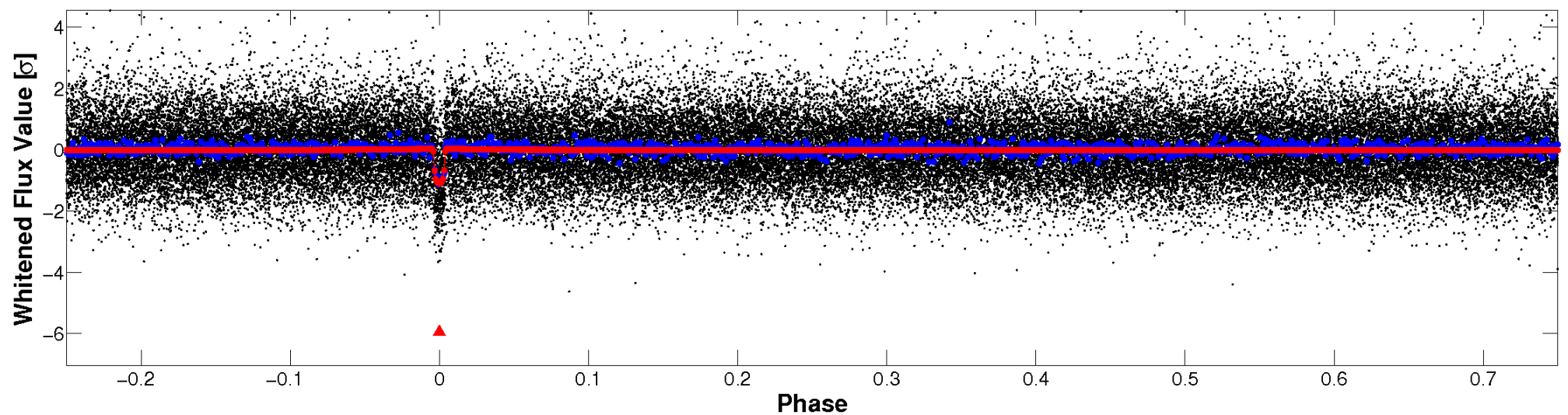


Non-Whitened Vs. Whitened Light Curve

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

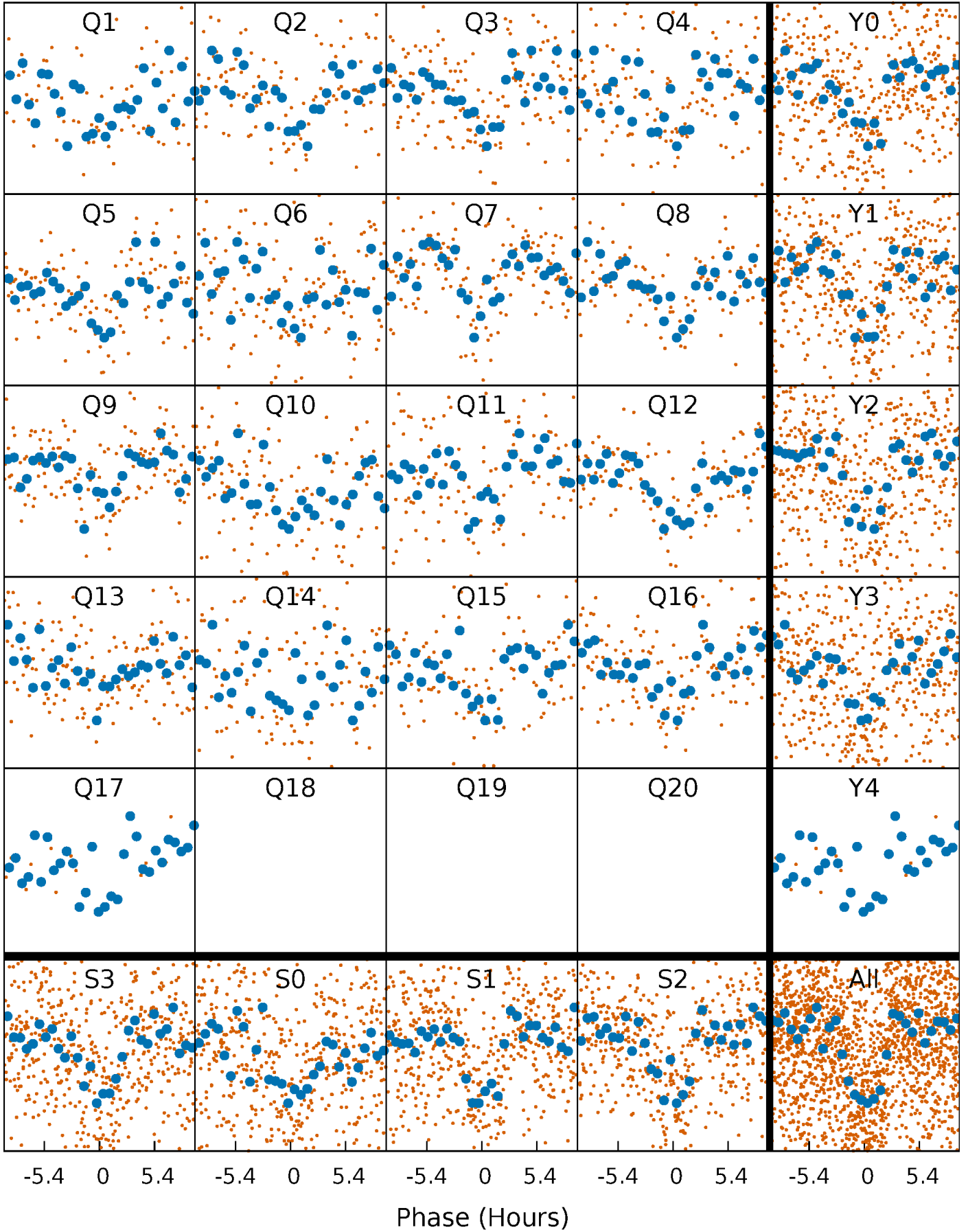


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



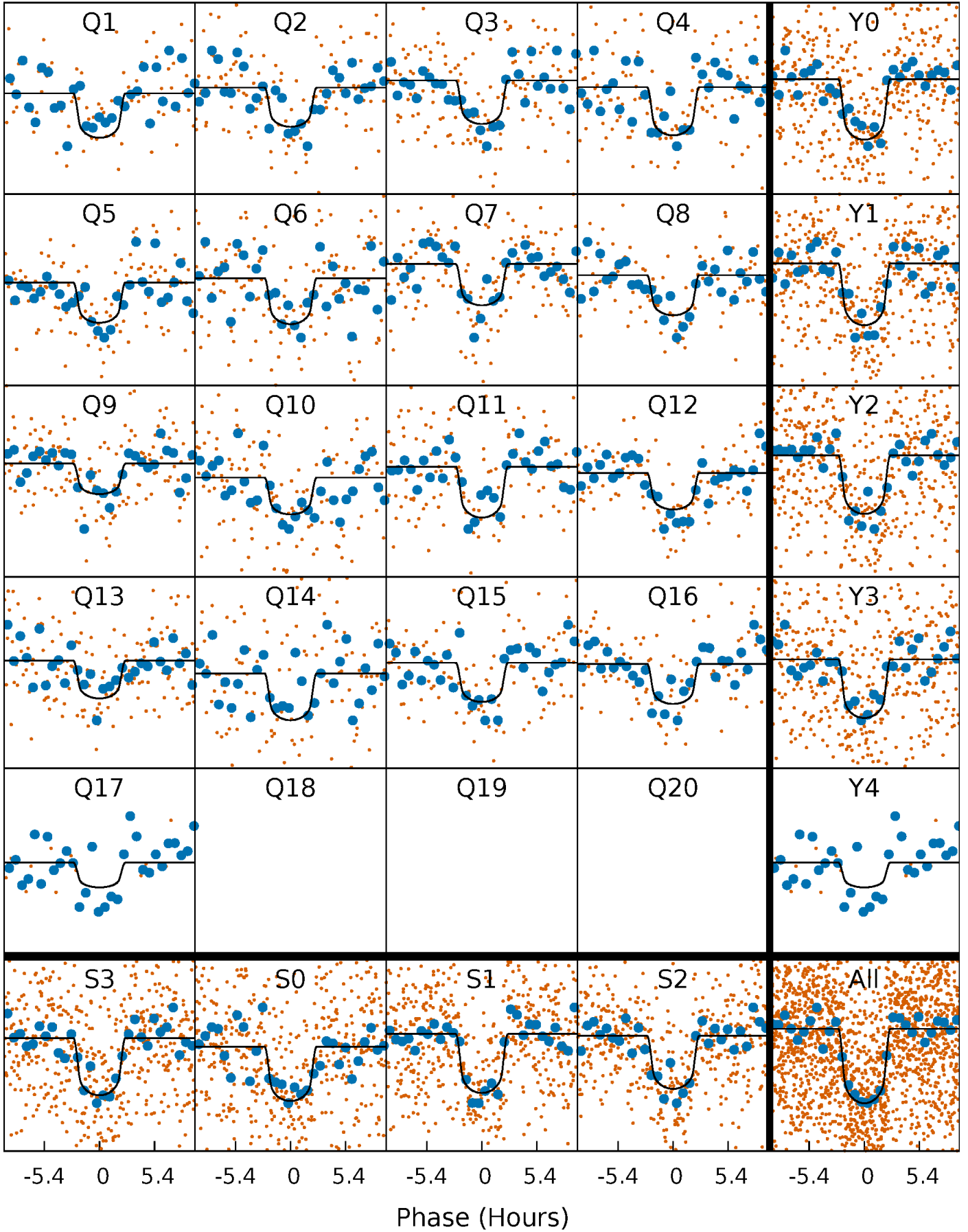
PDC Quarter-Phased Transit Curves

TCE 008007644-01 P= 25.203386 Days $T_0=137.564498$ (BKJD)



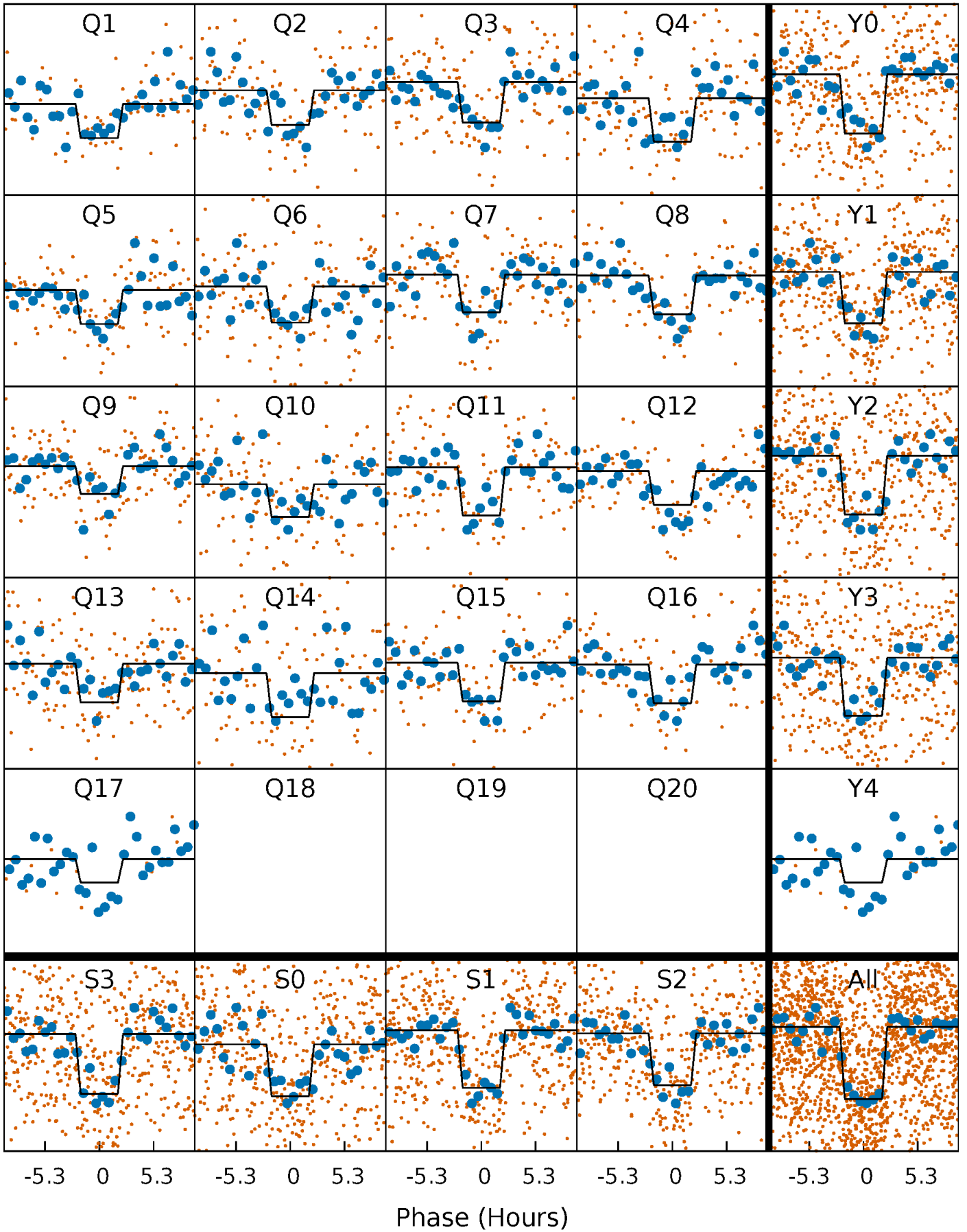
DV Quarter-Phased Transit Curves

TCE 008007644-01 P= 25.203386 Days $T_0=137.564498$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

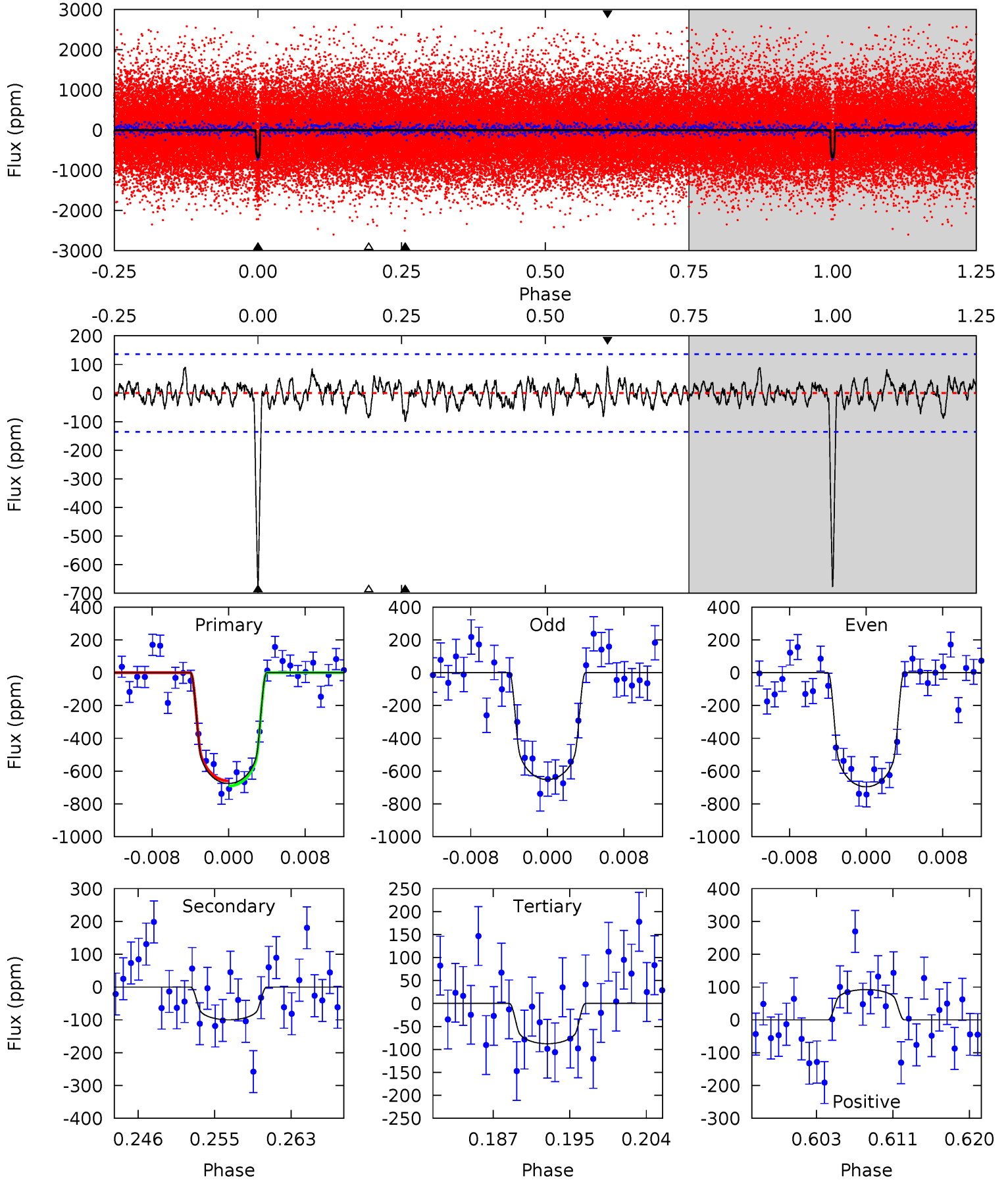
TCE 008007644-01 P= 25.203273 Days $T_0=137.567833$ (BKJD)



DV Model-Shift Uniqueness Test

008007644-01, P = 25.203386 Days, E = 112.361112 Days

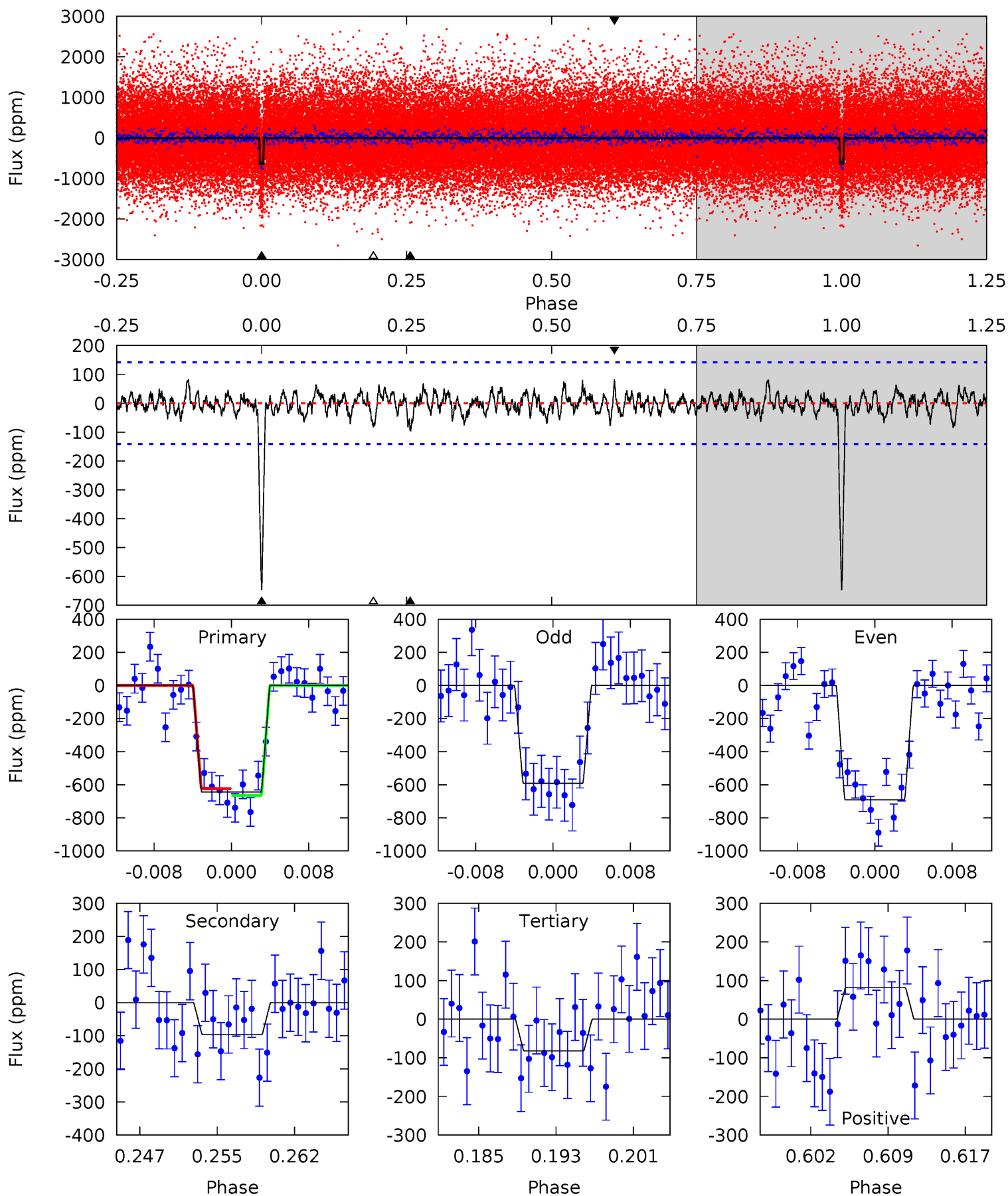
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.2	3.72	3.26	3.44	5.06	2.63	1.07	21.9	21.7	0.46	0.28	0.83	0.92	0.12	0.59



Alt Model-Shift Uniqueness Test

008007644-01, P = 25.203273 Days, E = 112.364560 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.1	3.45	2.95	2.92	5.08	2.66	0.97	20.1	20.2	0.51	0.53	1.78	1.01	0.11	0.74



Stellar Parameters For KIC 008007644

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5831^{+157}_{-175}	$4.517^{+0.048}_{-0.204}$	$0.000^{+0.250}_{-0.300}$	$0.921^{+0.256}_{-0.092}$	$1.016^{+0.116}_{-0.127}$	$1.834^{+0.373}_{-0.919}$
	+3%/-3%	+1%/-5%	+inf%/-inf%	+28%/-10%	+11%/-12%	+20%/-50%
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 008007644-01 / KOI 2328.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-100 ± 27	$2.79^{+0.94}_{-0.84}$	857^{+57}_{-39}	3890^{+572}_{-371}	196^{+196}_{-99}
Alt.	-96 ± 28	$2.65^{+0.94}_{-0.77}$	856^{+57}_{-39}	3941^{+650}_{-418}	205^{+232}_{-105}

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 $A_{obs} \gg 1.0$

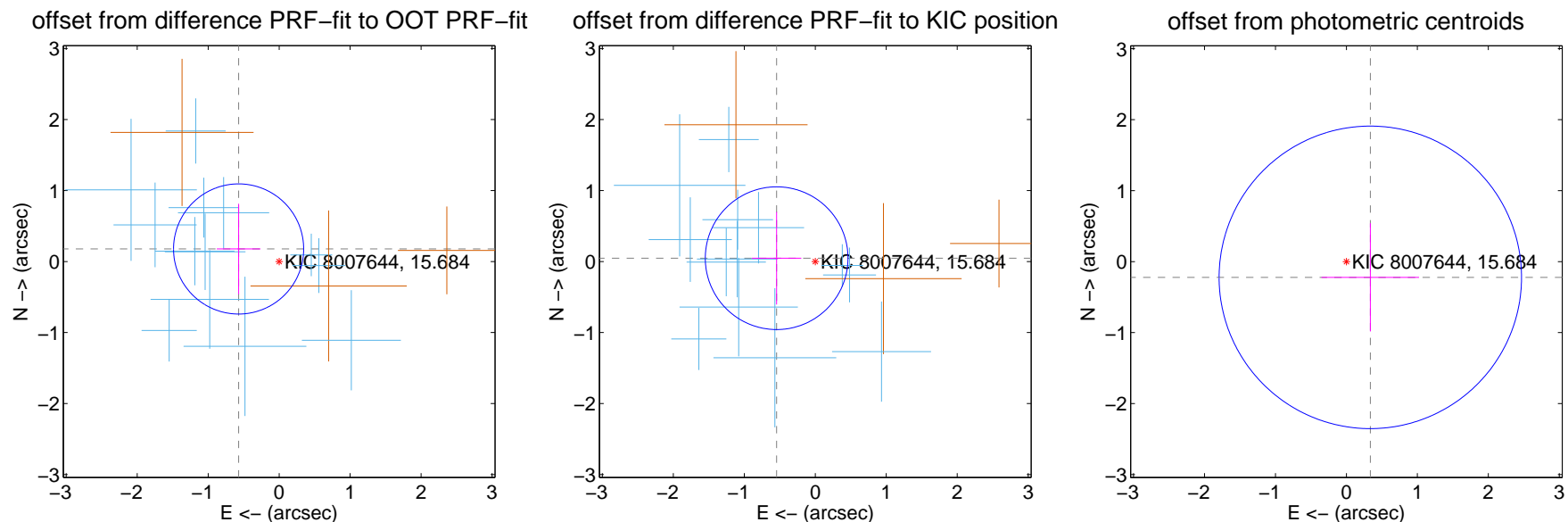
DV Centroid Data

Supplemental centroid analysis for 008007644-01. Kepler magnitude: 15.68. Transit SNR 20.59

There are 13 quarters with good PRF difference image offsets

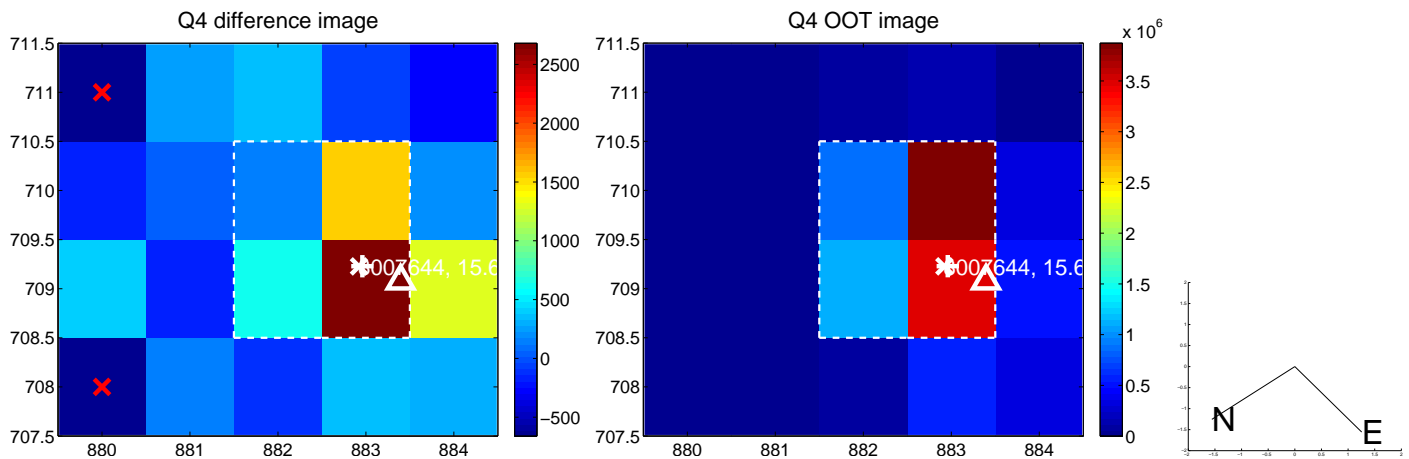
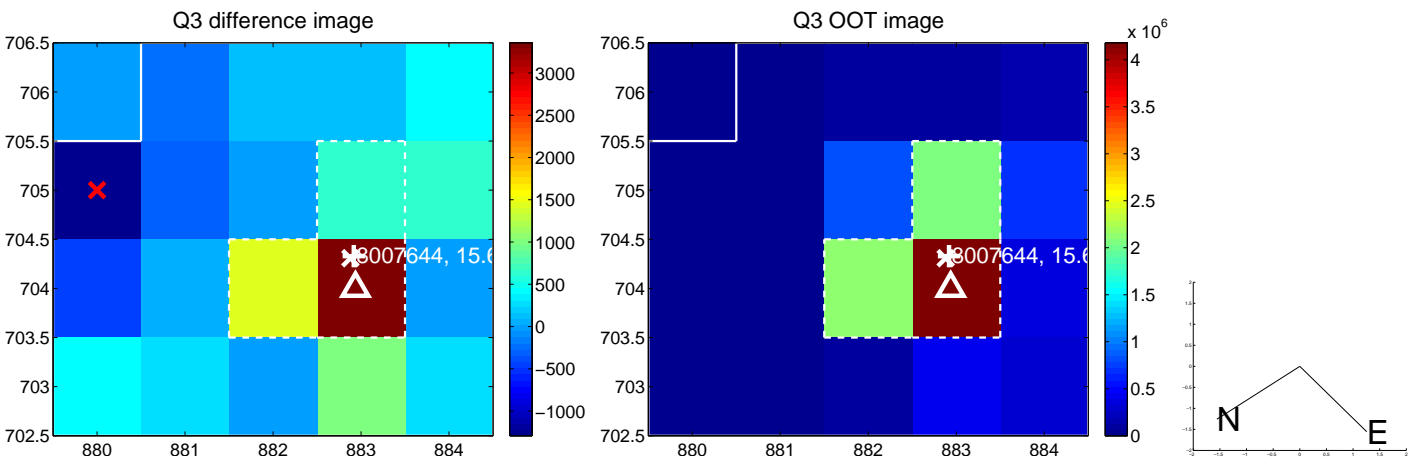
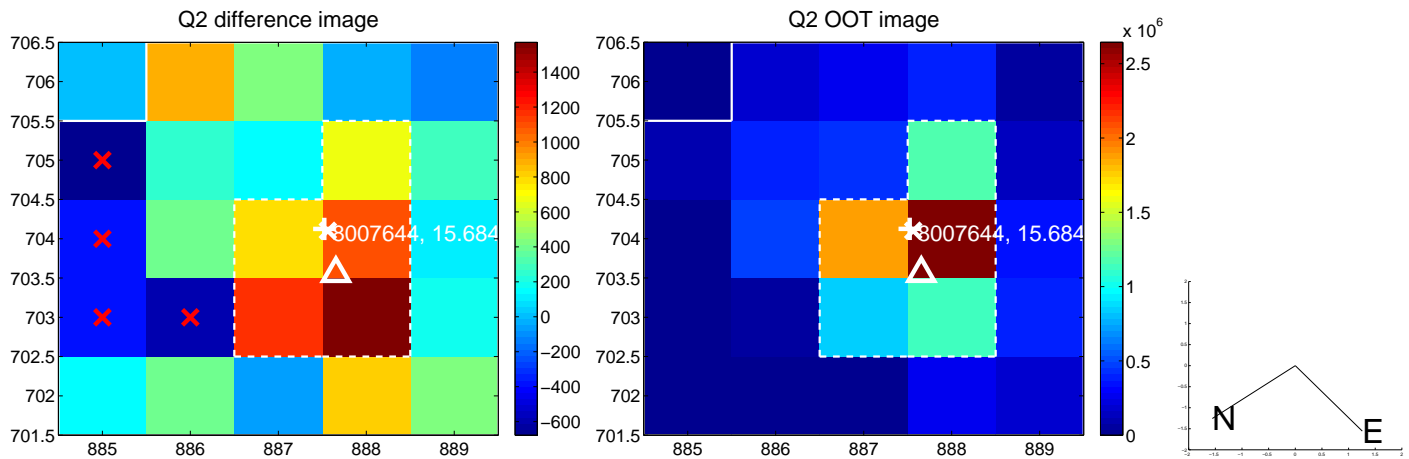
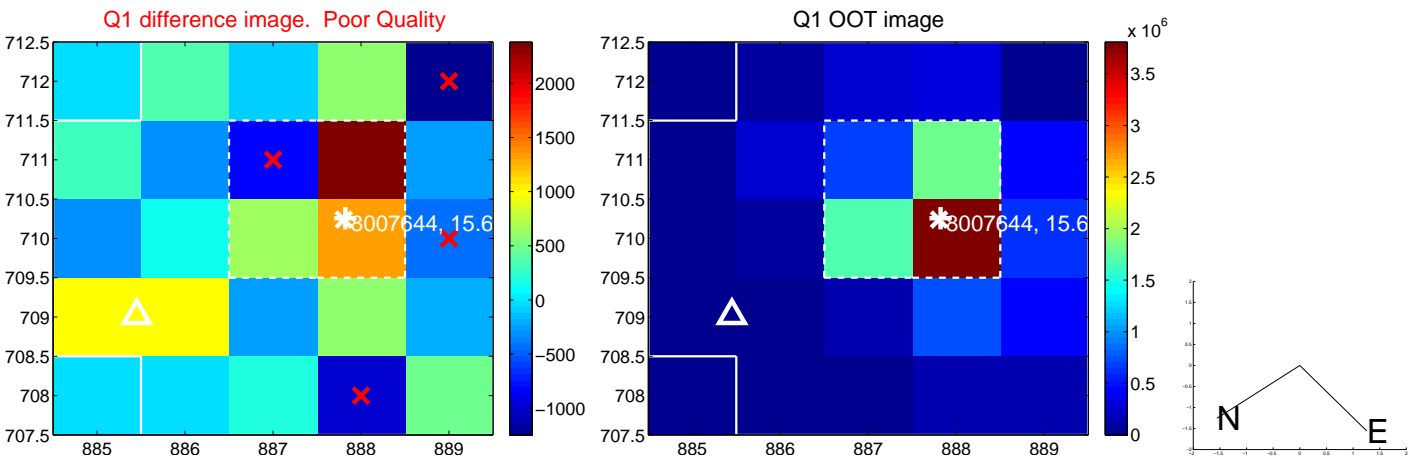
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.598 ± 0.305	1.96	0.571 ± 0.307	0.177 ± 0.636
PRF-fit source offset from KIC position	0.546 ± 0.335	1.63	0.544 ± 0.348	0.047 ± 0.652
photometric centroid source offset	0.40 ± 0.71	0.57	-0.34 ± 0.69	-0.22 ± 0.76

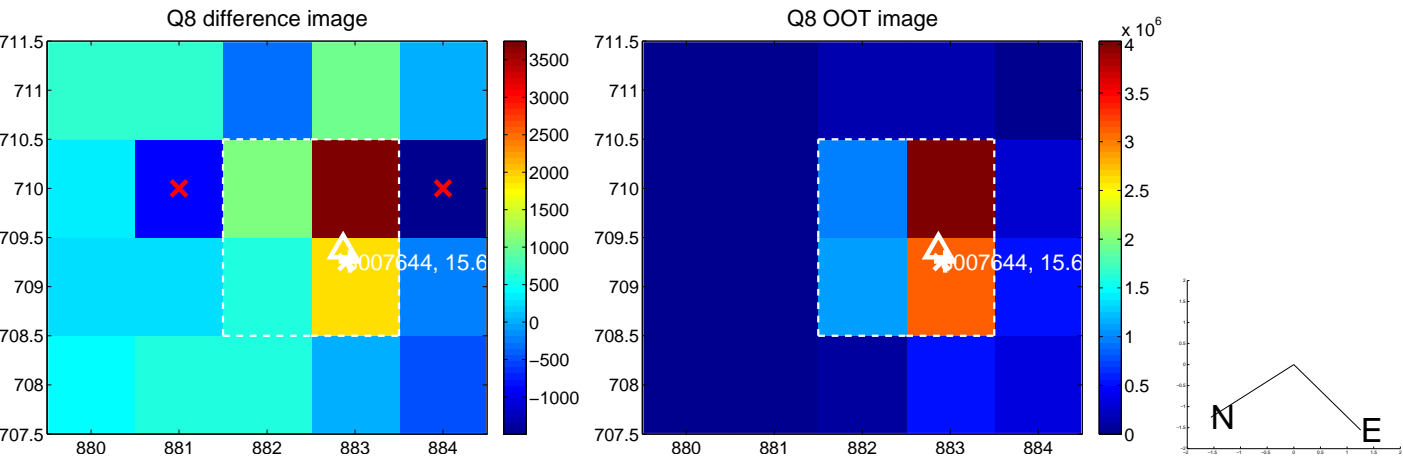
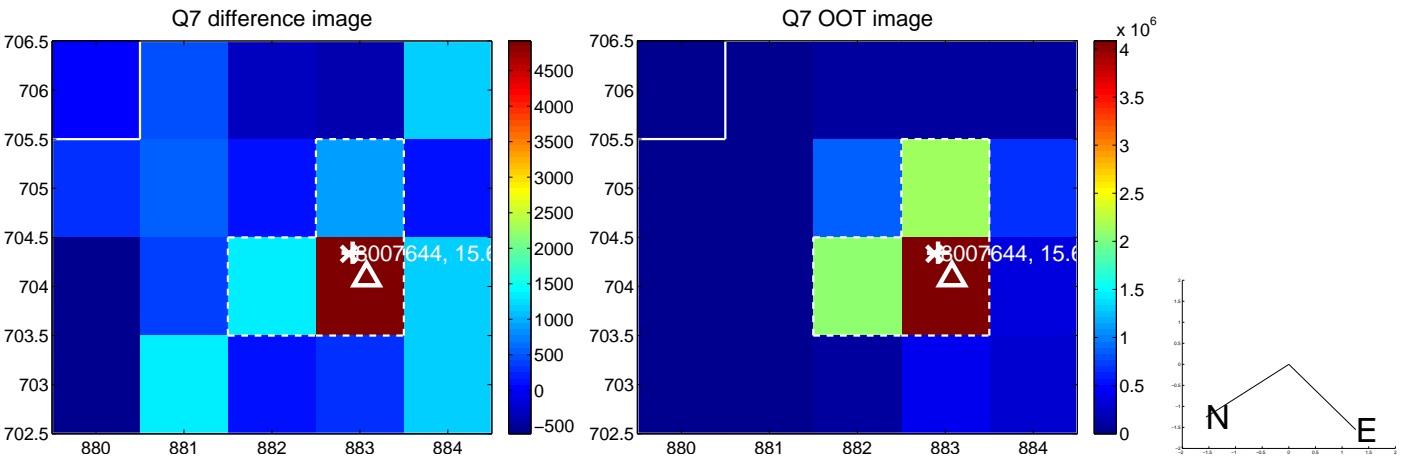
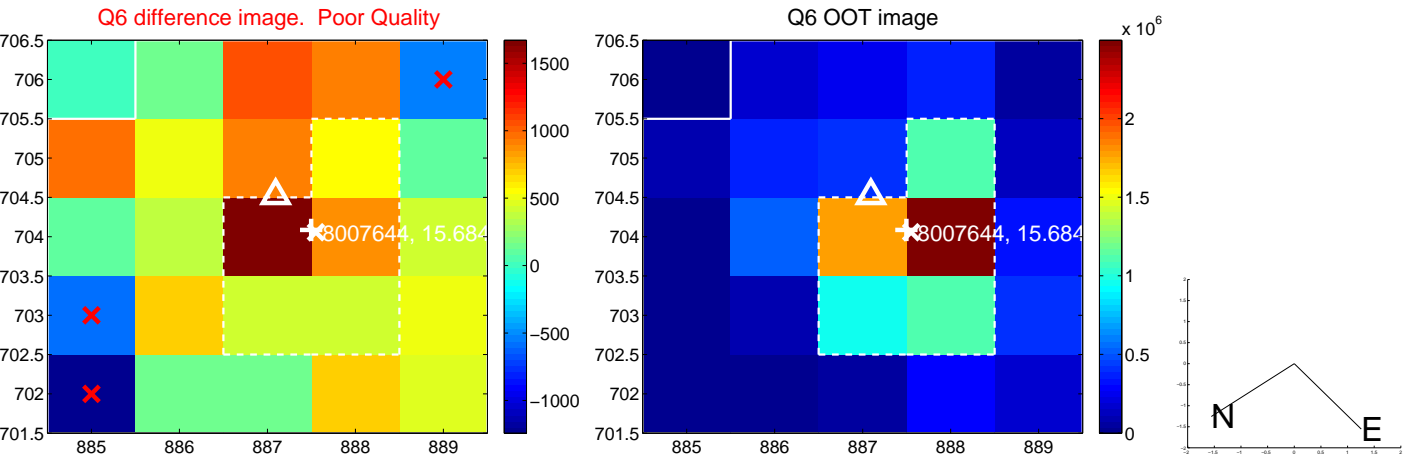
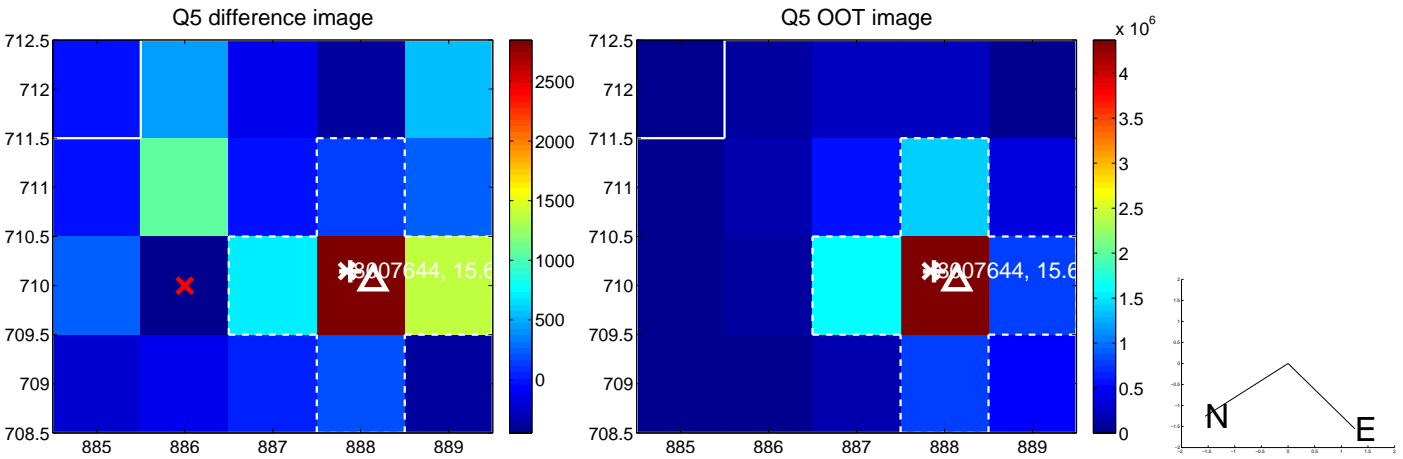


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

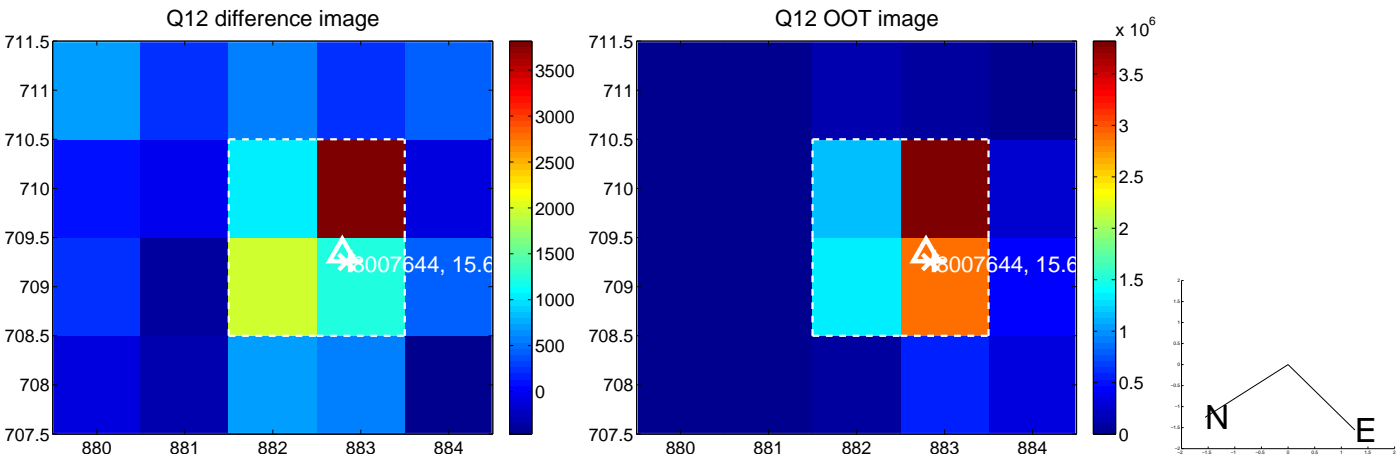
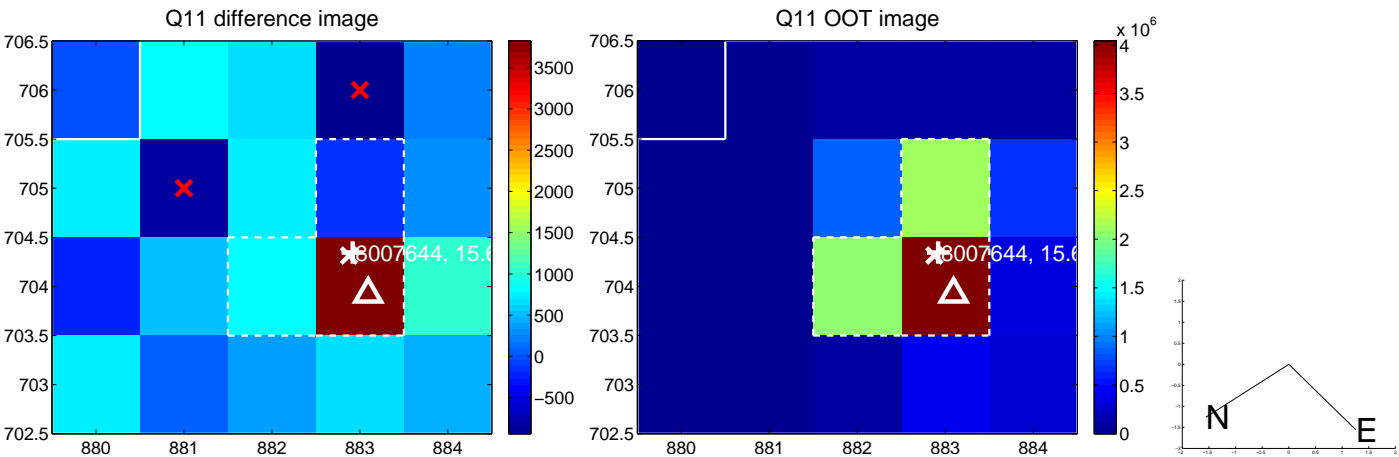
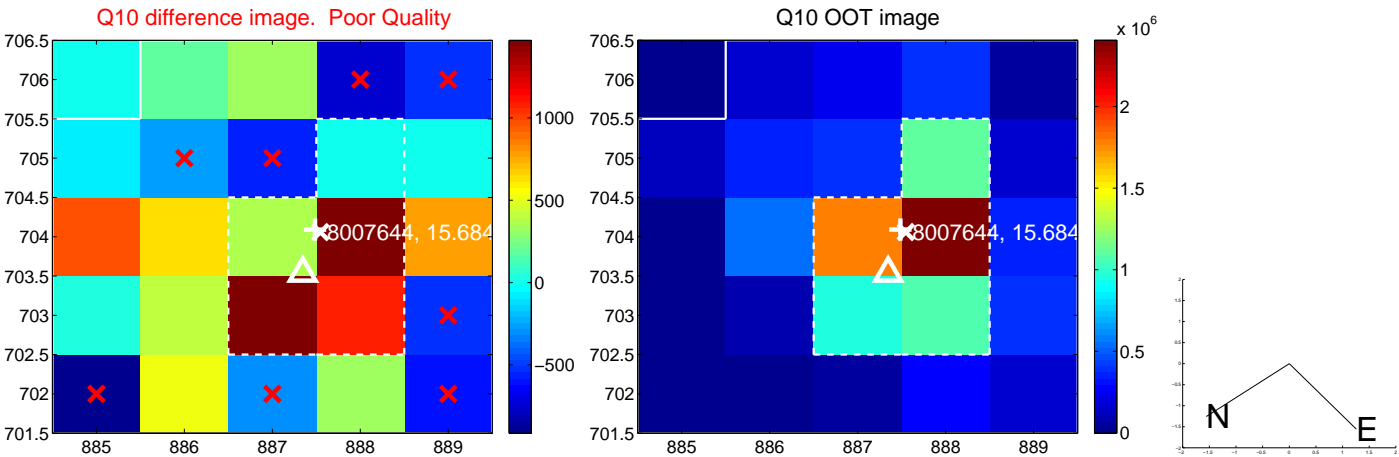
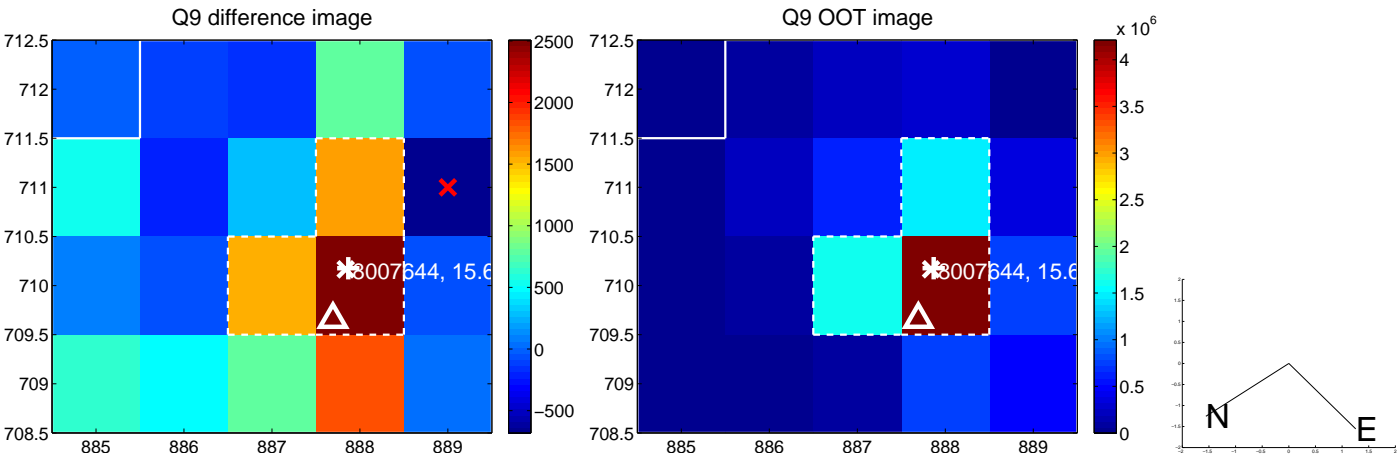
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



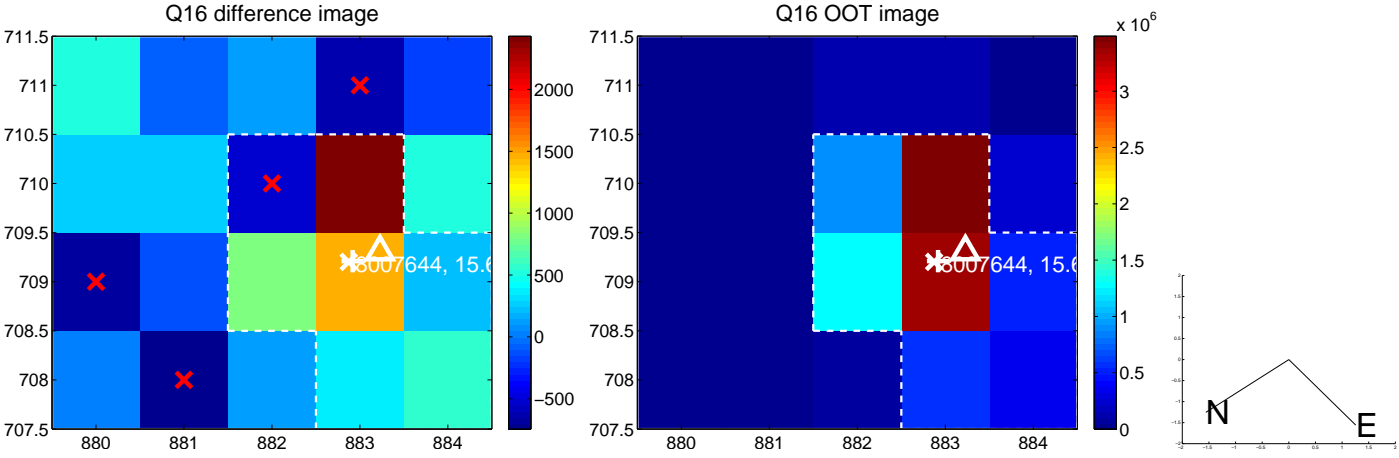
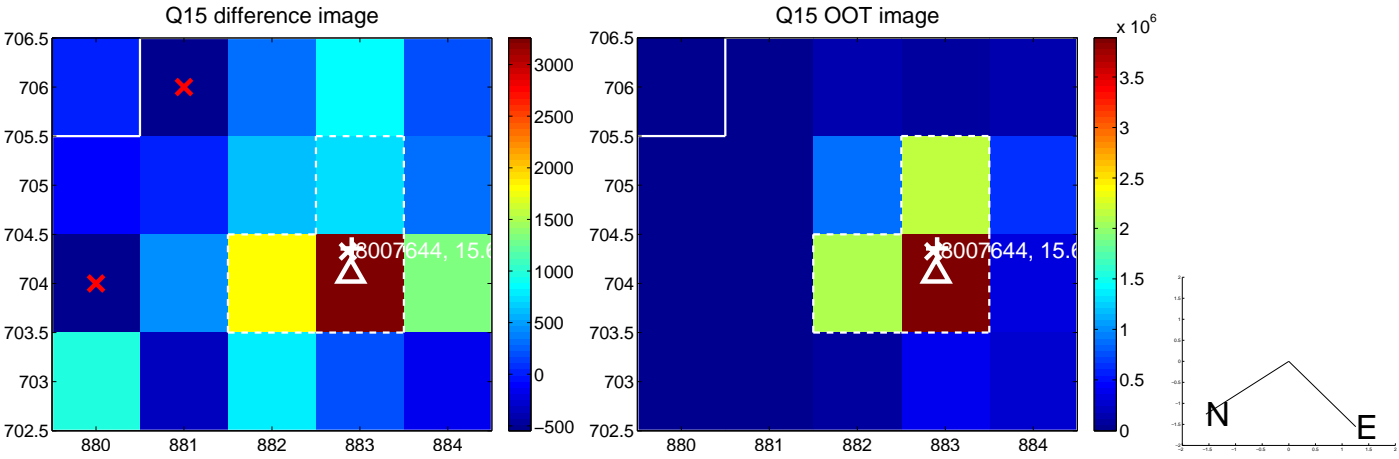
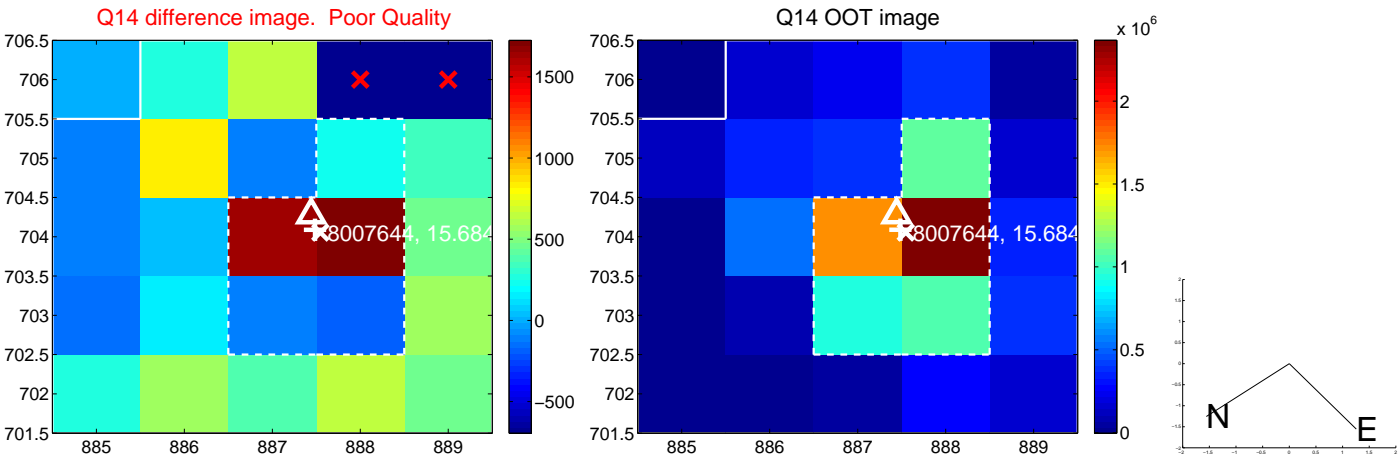
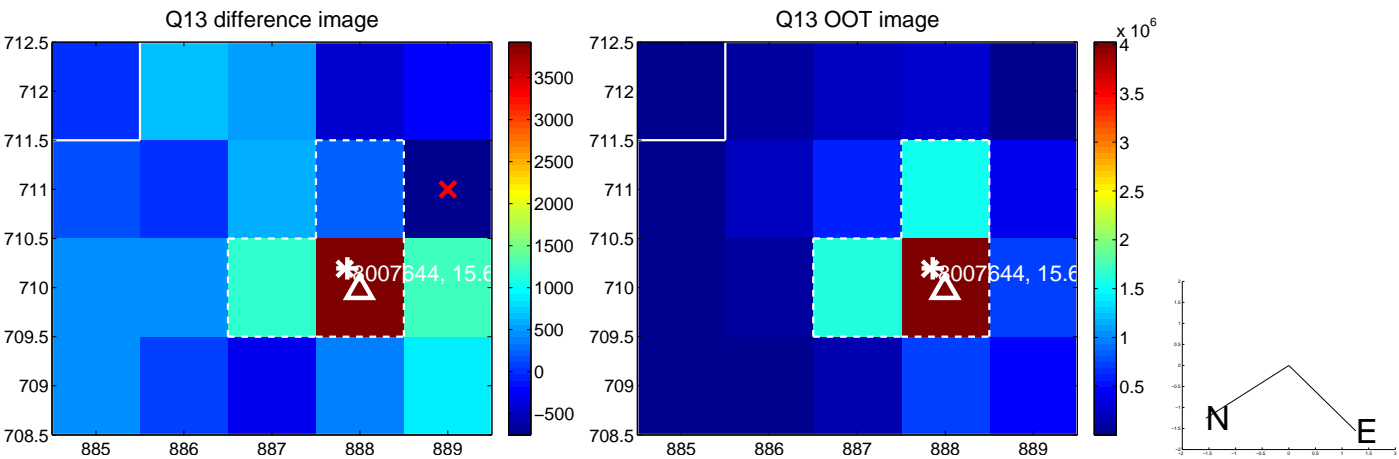
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



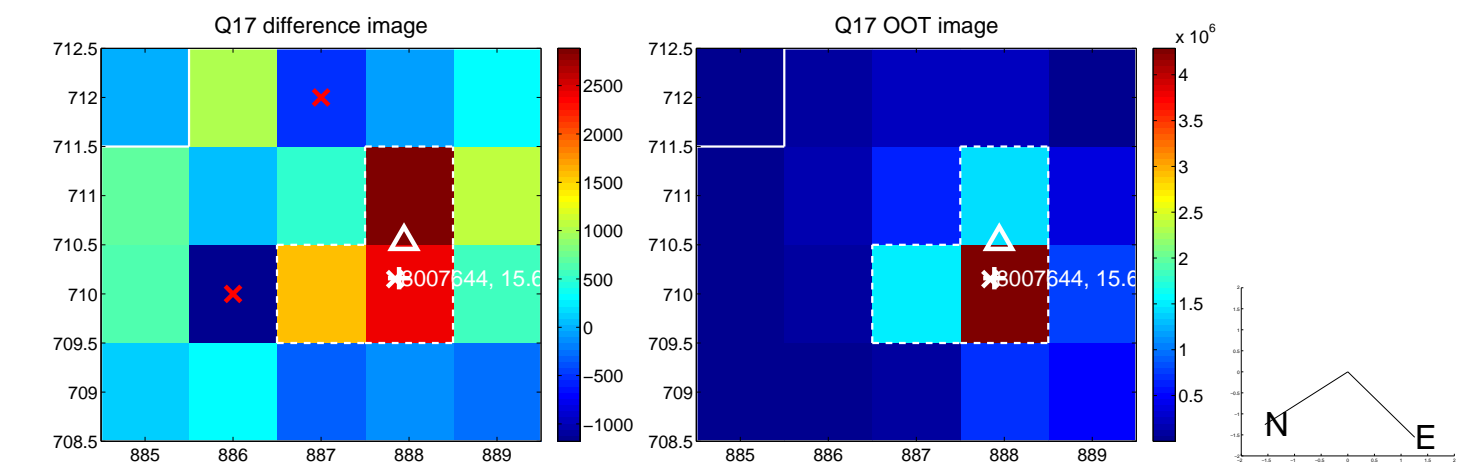
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



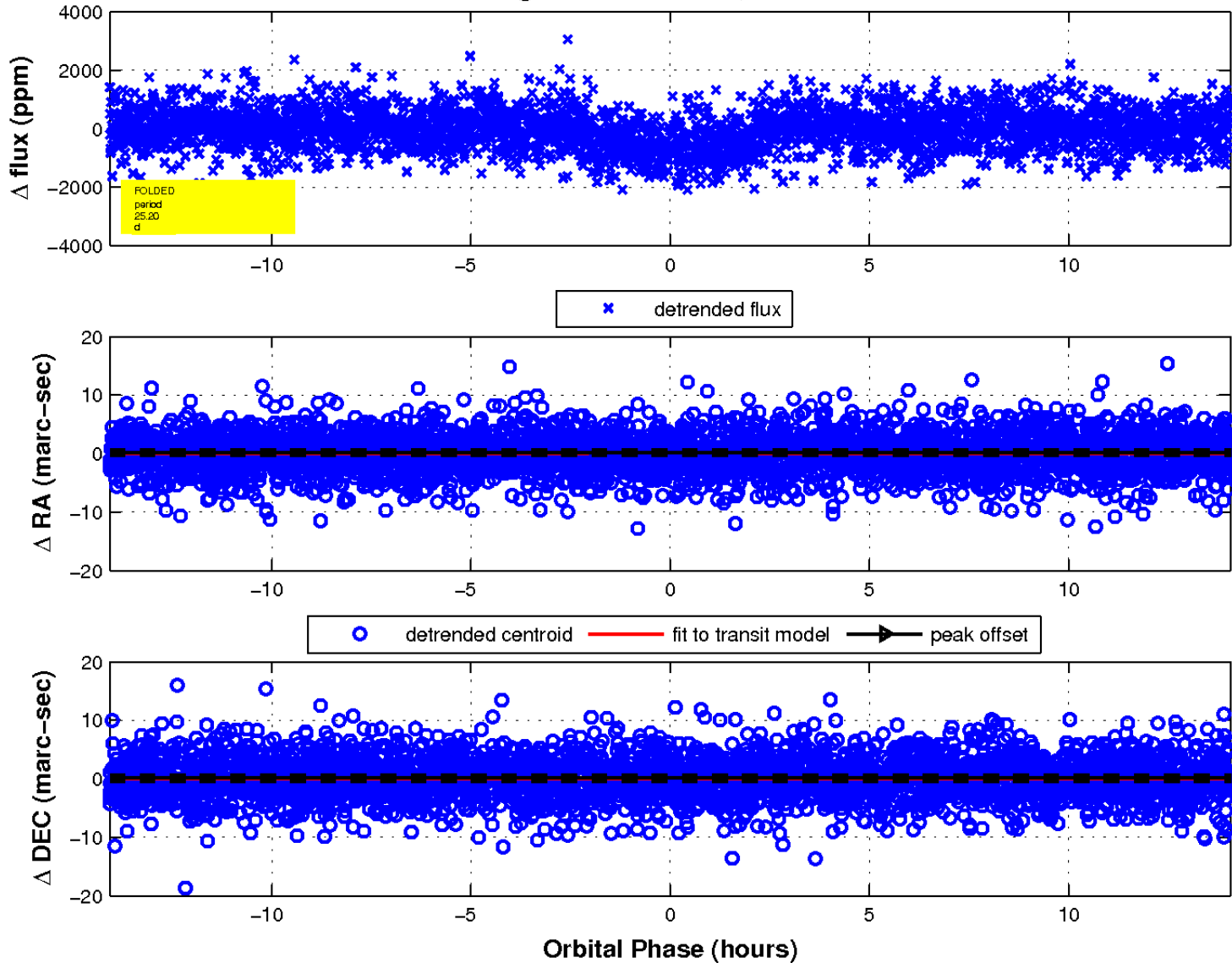
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

