

KIC 005781704

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})
005781704-01	OBS	No	317.350691	393.312371	246.8	25.554	8.5	7.8	1.43	5628	2.76	2.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005781704-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

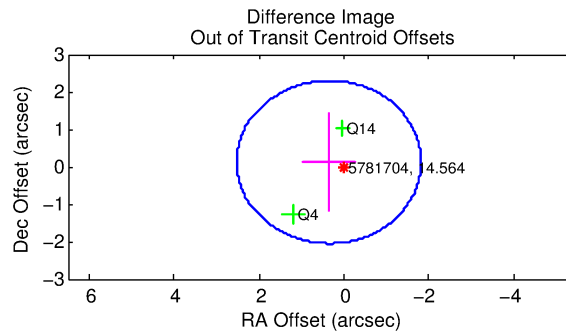
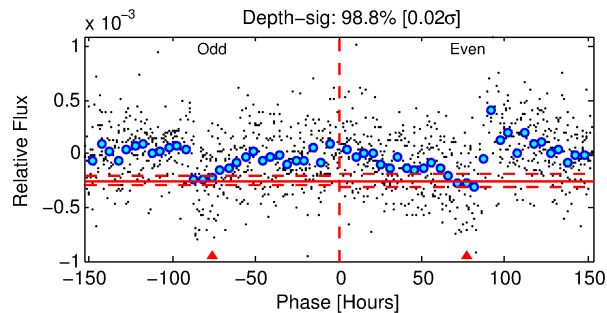
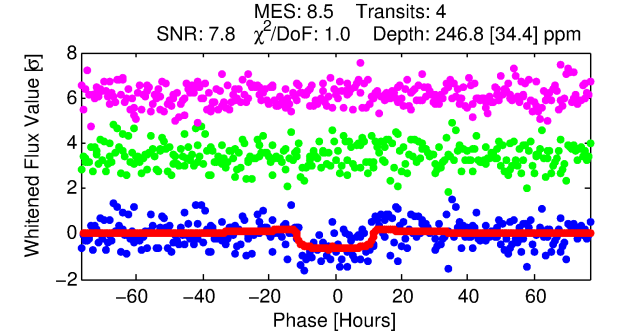
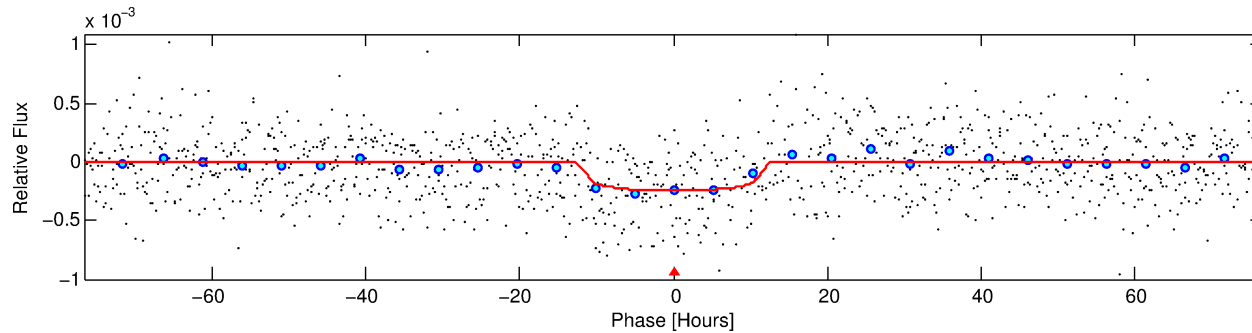
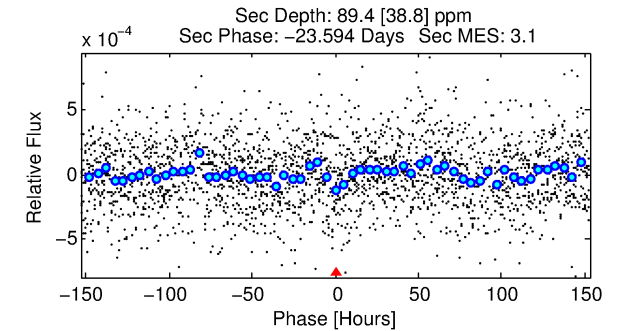
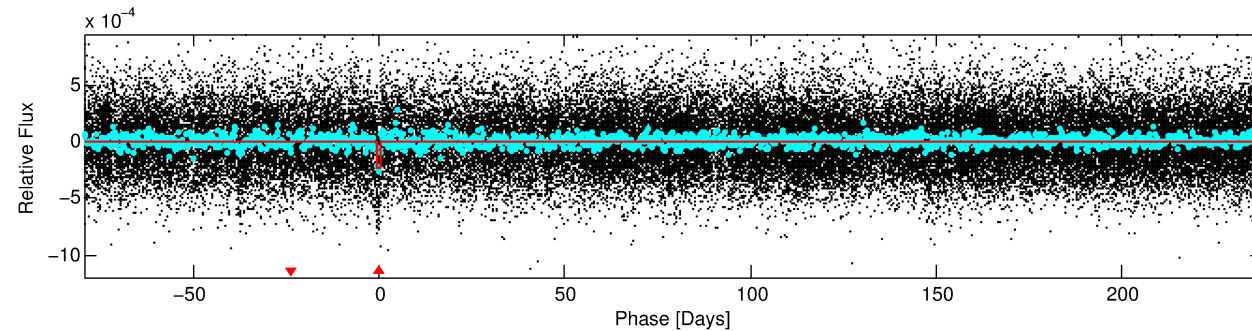
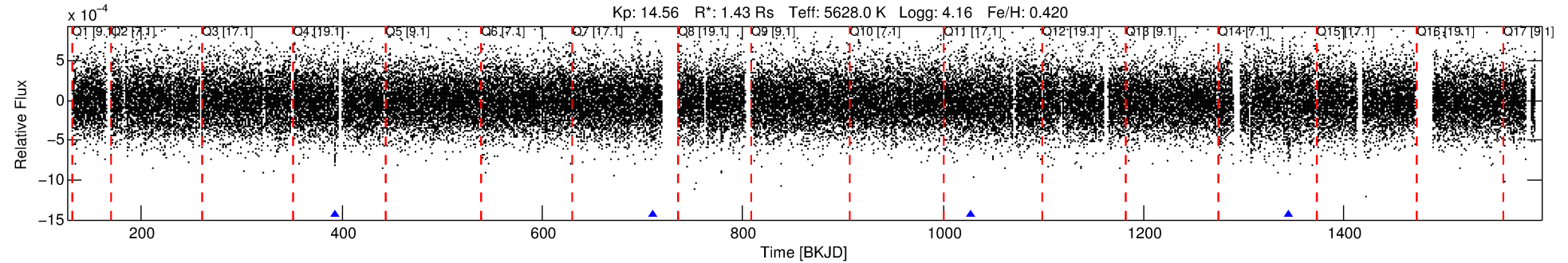
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005781704-01

No Significant Match Found

DV One-Page Summary

KIC: 5781704 Candidate: 1 of 1 Period: 317.351 d



DV Fit Results:

Period = 317.35069 [0.02364] d
Epoch = 393.3124 [0.0433] BKJD
Rp/R* = 0.0177 [0.0026]
a/R* = 41.41 [23.72]
b = 0.92 [0.10]
Seff = 2.10 [0.60]
Teff = 307 [22] K
Rp = 2.76 [0.68] Re
a = 0.9353 [0.1696] AU
Ag = 5659.81 [3377.25] [1.68σ]
Teffp = 4117 [544] K [6.99σ]

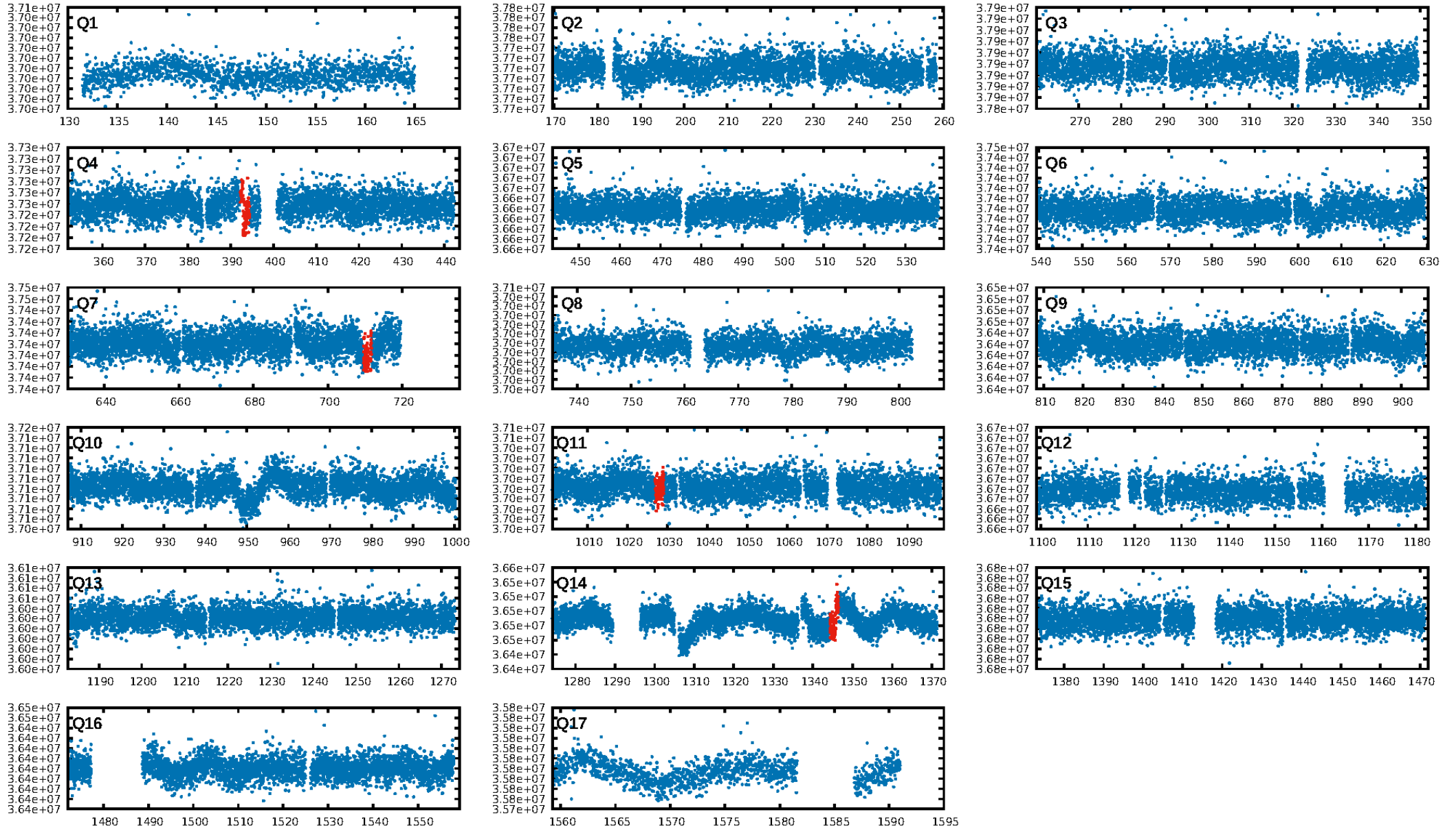
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 4.09e-17
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.712
Centroid-sig: 21.5%
Centroid-so: 1.254 arcsec [0.85σ]
OotOffset-rm: 0.367 arcsec [0.51σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-rm: 0.252 arcsec [0.44σ]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

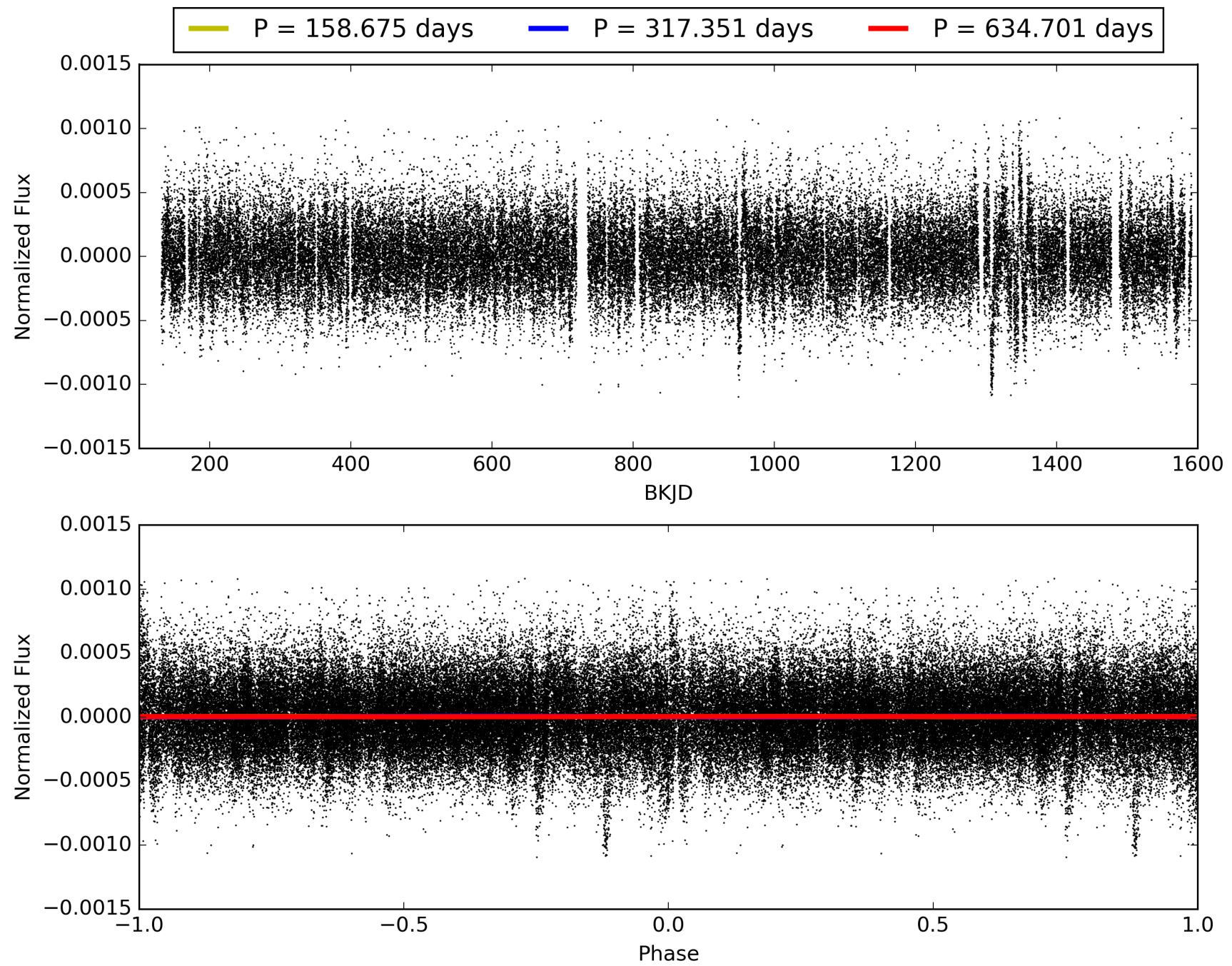
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:24:34 Z

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

TCE 005781704-01, PDC Light Curves

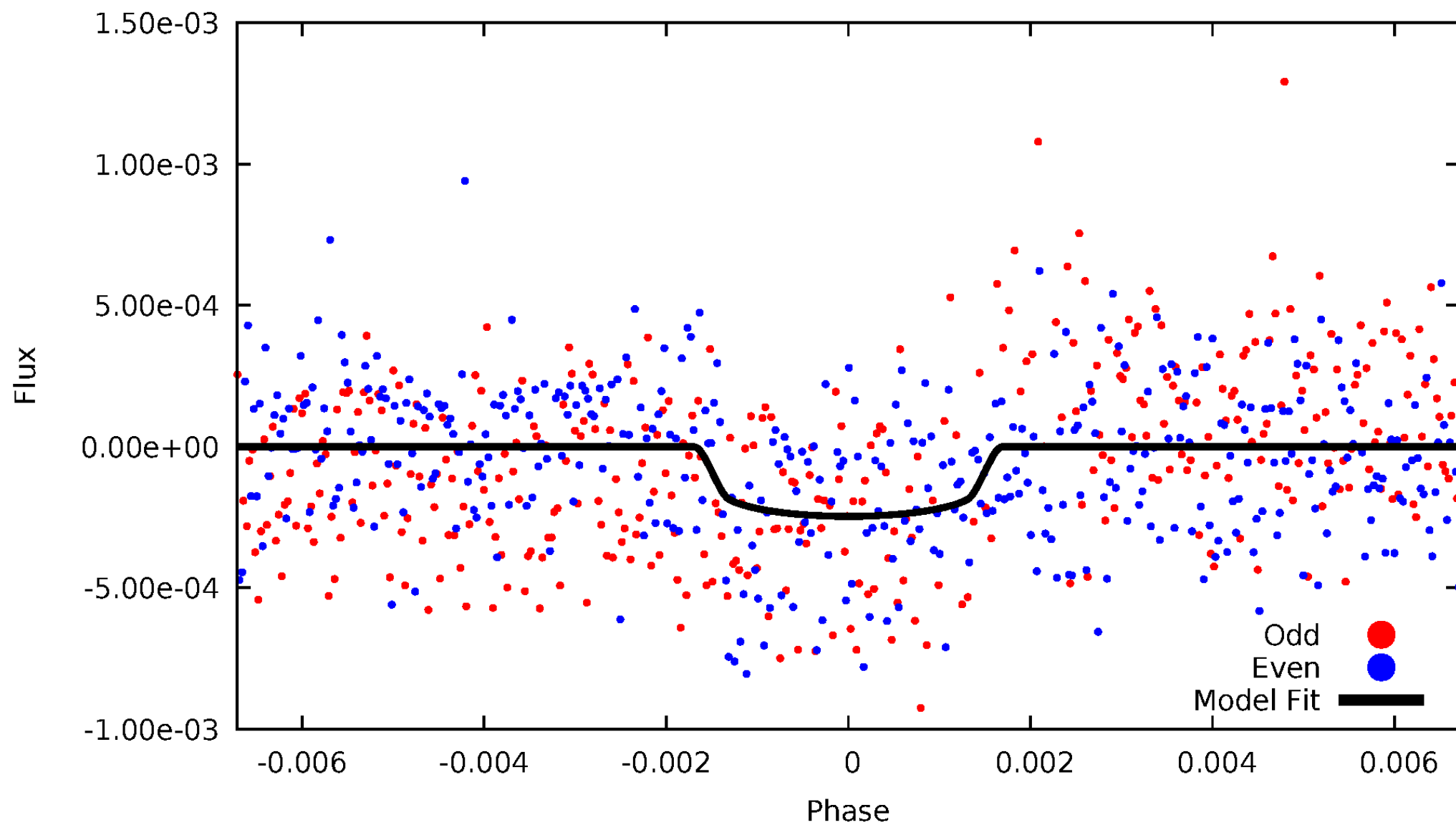


TCE 005781704-01



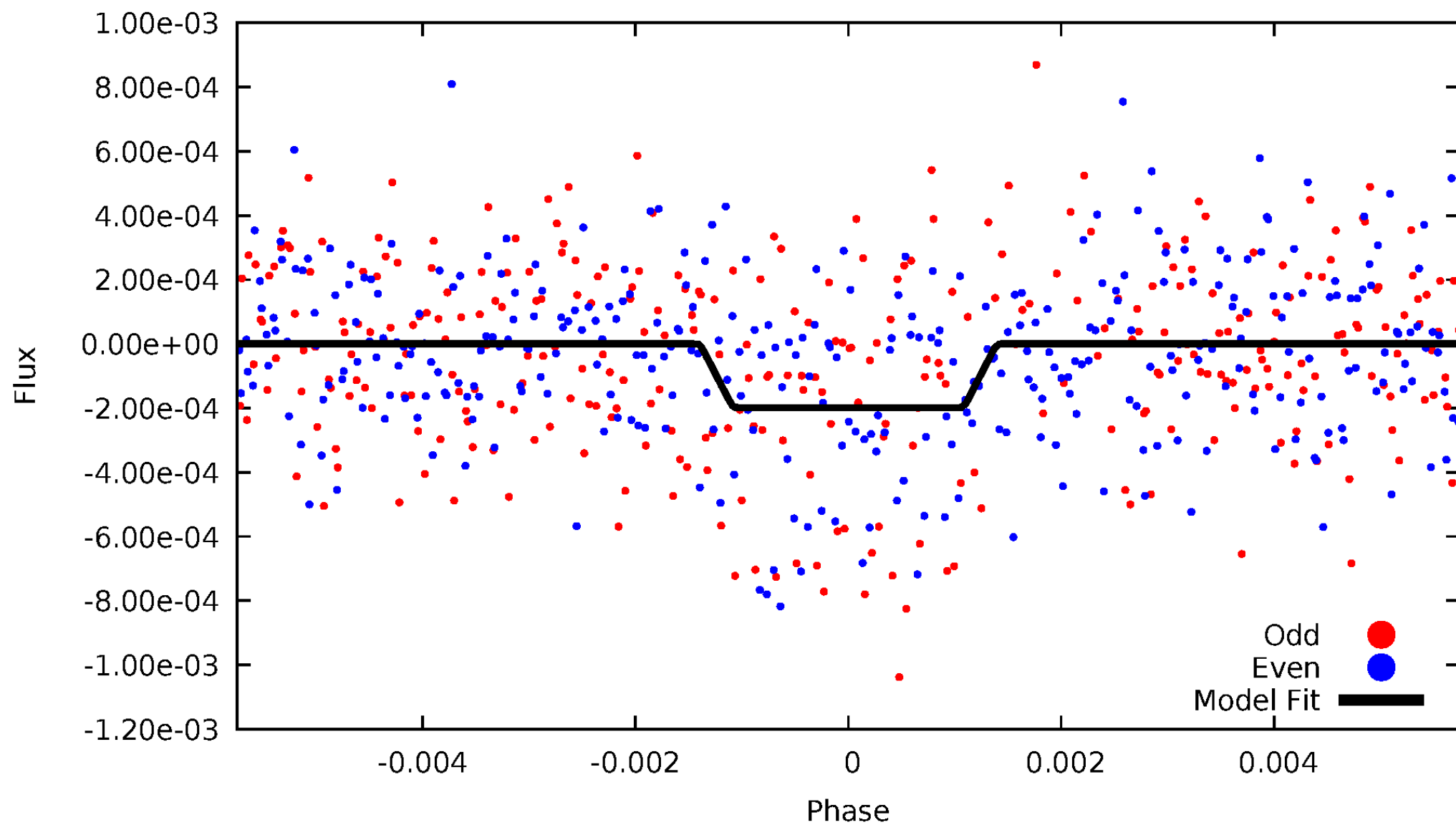
DV Odd/Even

TCE 005781704-01



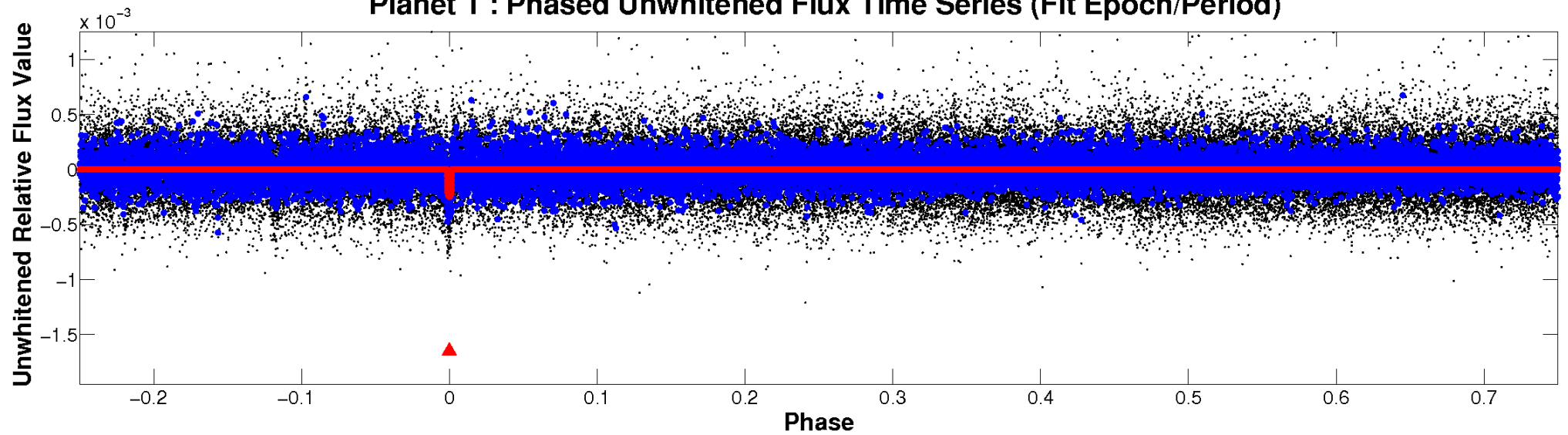
ALT Odd/Even

TCE 005781704-01

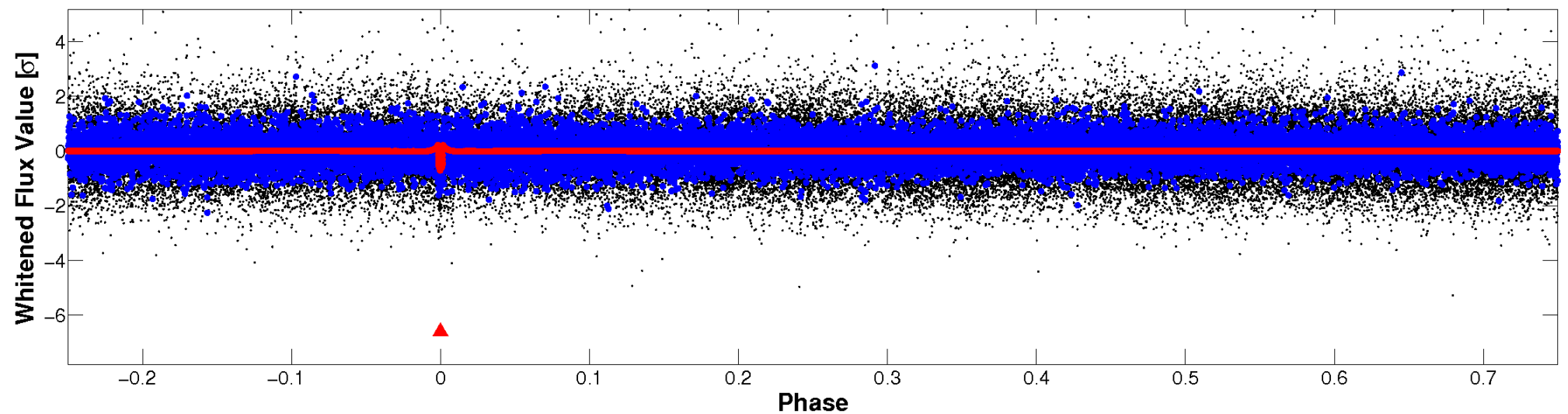


Non-Whitened Vs. Whitened Light Curve

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

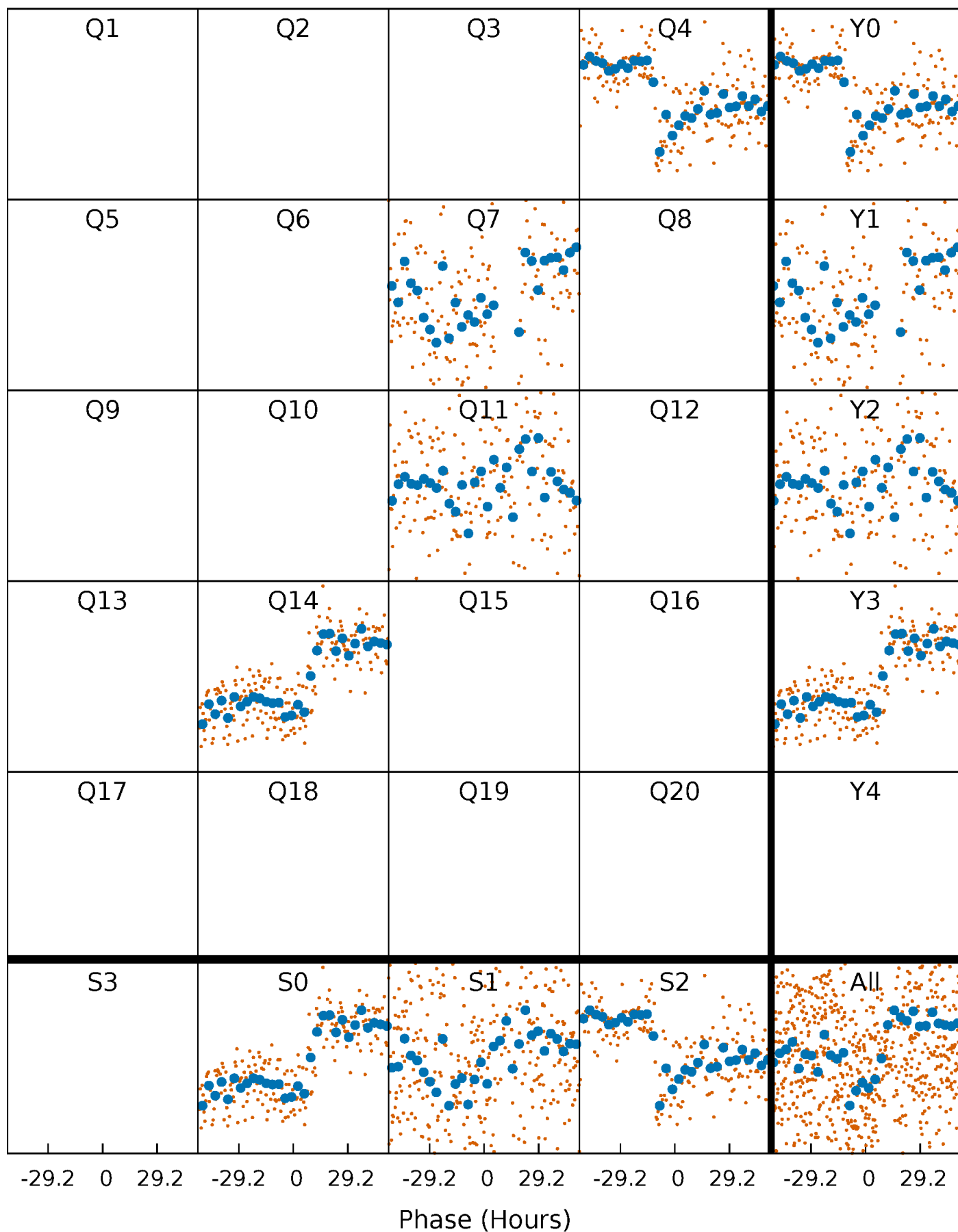


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



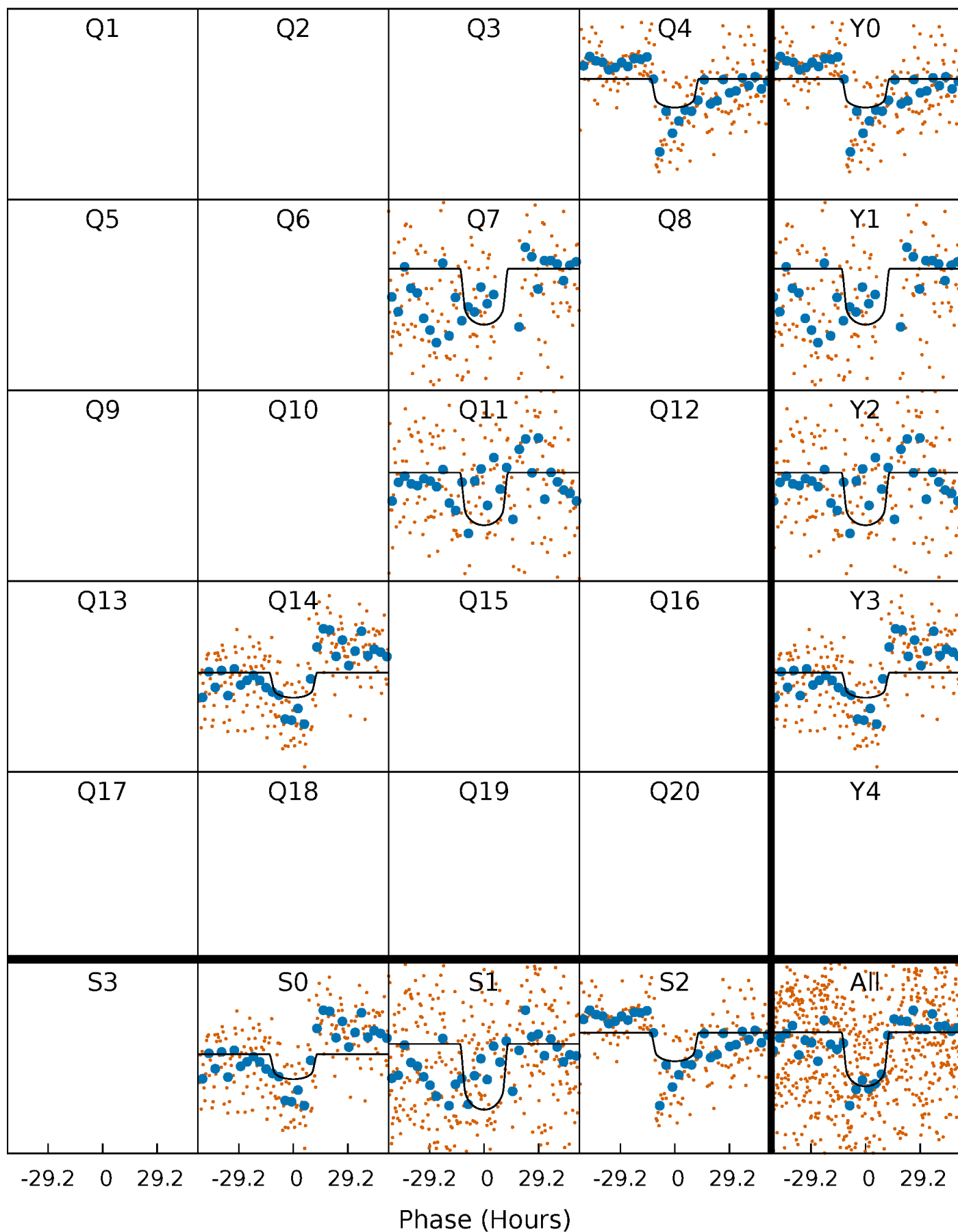
PDC Quarter-Phased Transit Curves

TCE 005781704-01 P=317.350691 Days $T_0=393.312371$ (BKJD)



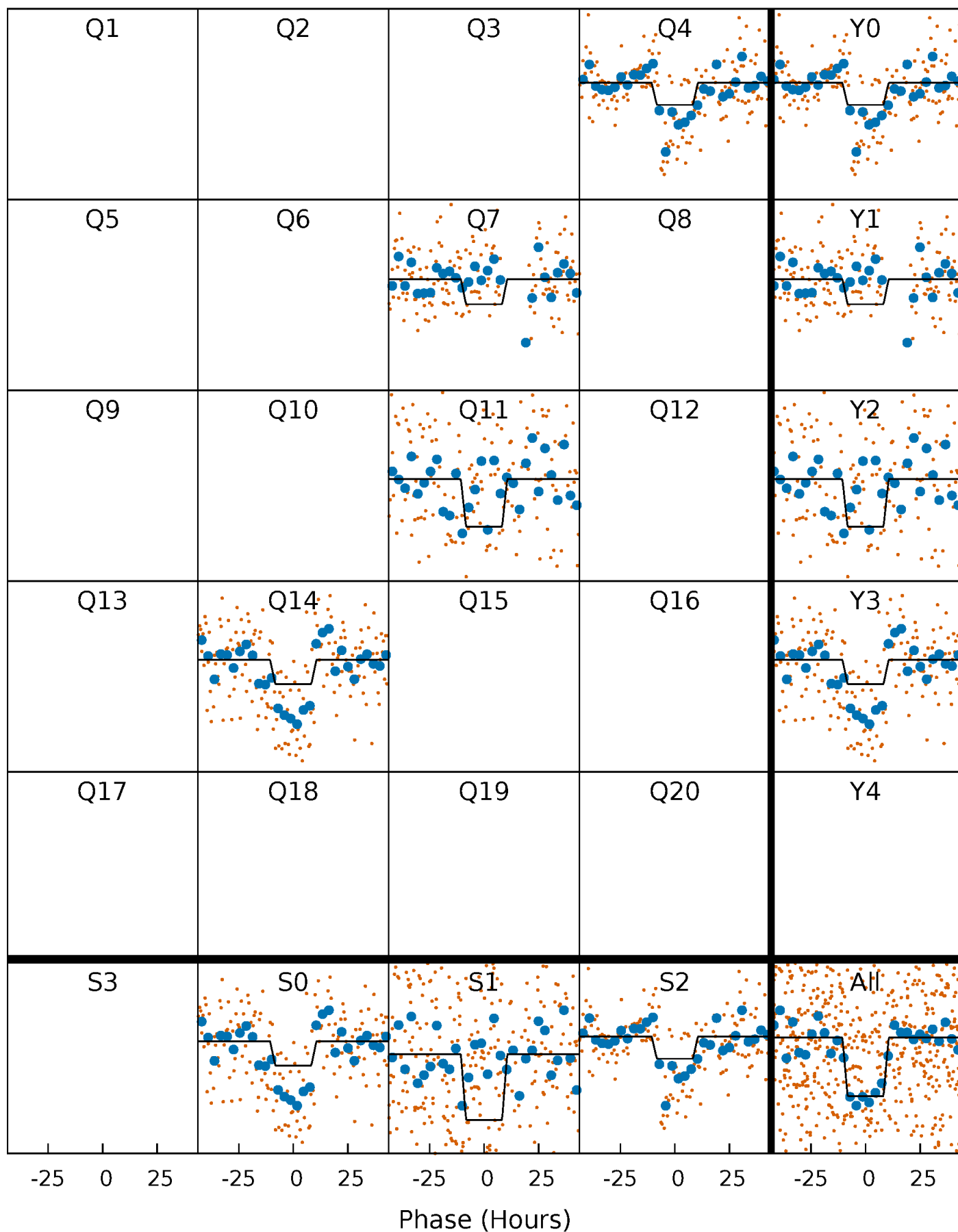
DV Quarter-Phased Transit Curves

TCE 005781704-01 P=317.350691 Days $T_0=393.312371$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

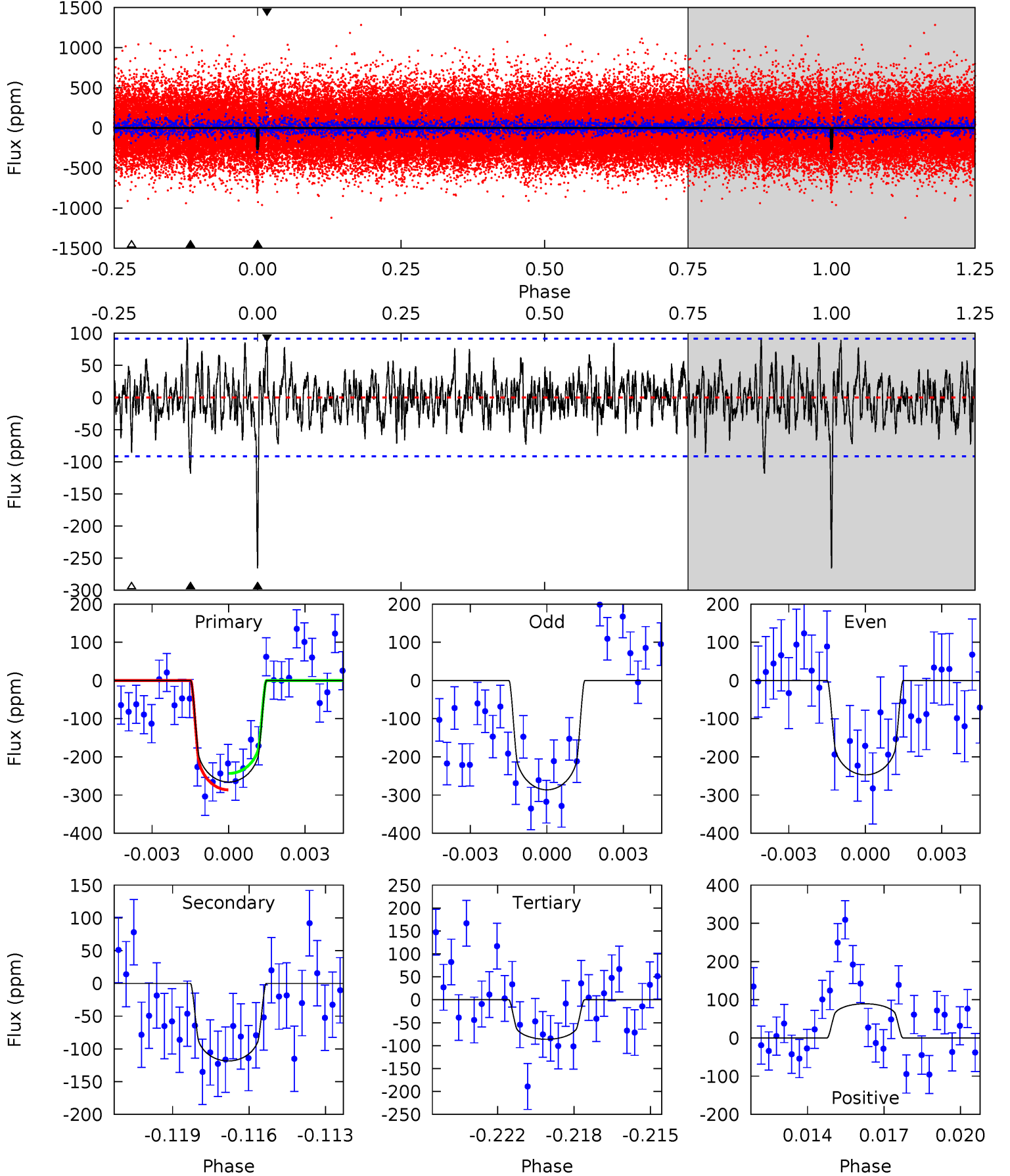
TCE 005781704-01 P=317.435355 Days $T_0=393.159463$ (BKJD)



DV Model-Shift Uniqueness Test

005781704-01, $P = 317.350691$ Days, $E = 75.961680$ Days

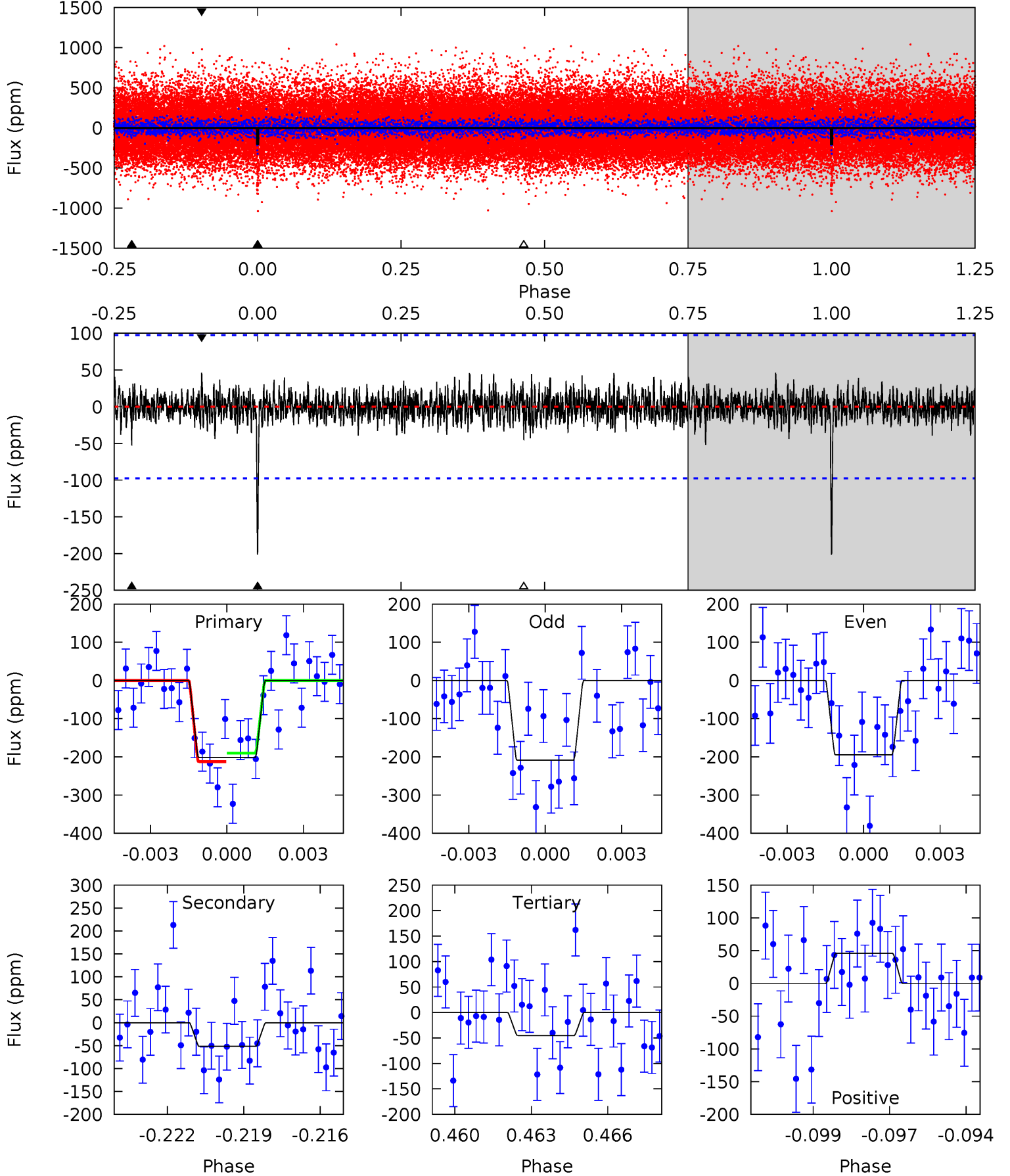
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	6.76	4.92	5.11	5.23	2.93	1.50	10.3	10.1	1.84	1.65	1.11	0.95	0.26	1.22



Alt Model-Shift Uniqueness Test

005781704-01, $P = 317.435355$ Days, $E = 75.724108$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	2.79	2.44	2.48	5.26	2.98	0.76	8.45	8.40	0.36	0.32	0.38	1.02	0.19	0.60



Stellar Parameters For KIC 005781704

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5628^{+76}_{-76}	$4.162^{+0.162}_{-0.108}$	$0.420^{+0.050}_{-0.150}$	$1.430^{+0.232}_{-0.283}$	$1.081^{+0.104}_{-0.064}$	$0.521^{+0.426}_{-0.172}$
	+1%/-1%	+4%/-3%	+12%/-36%	+16%/-20%	+10%/-6%	+82%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005781704-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-118 ± 18	$2.74^{+0.47}_{-0.50}$	427^{+19}_{-23}	4564^{+357}_{-263}	7710^{+4071}_{-2371}
Alt.	-52 ± 19	$2.18^{+0.50}_{-0.46}$	428^{+20}_{-21}	4253^{+455}_{-406}	5221^{+3829}_{-2366}

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 $A_{obs} \gg 1.0$

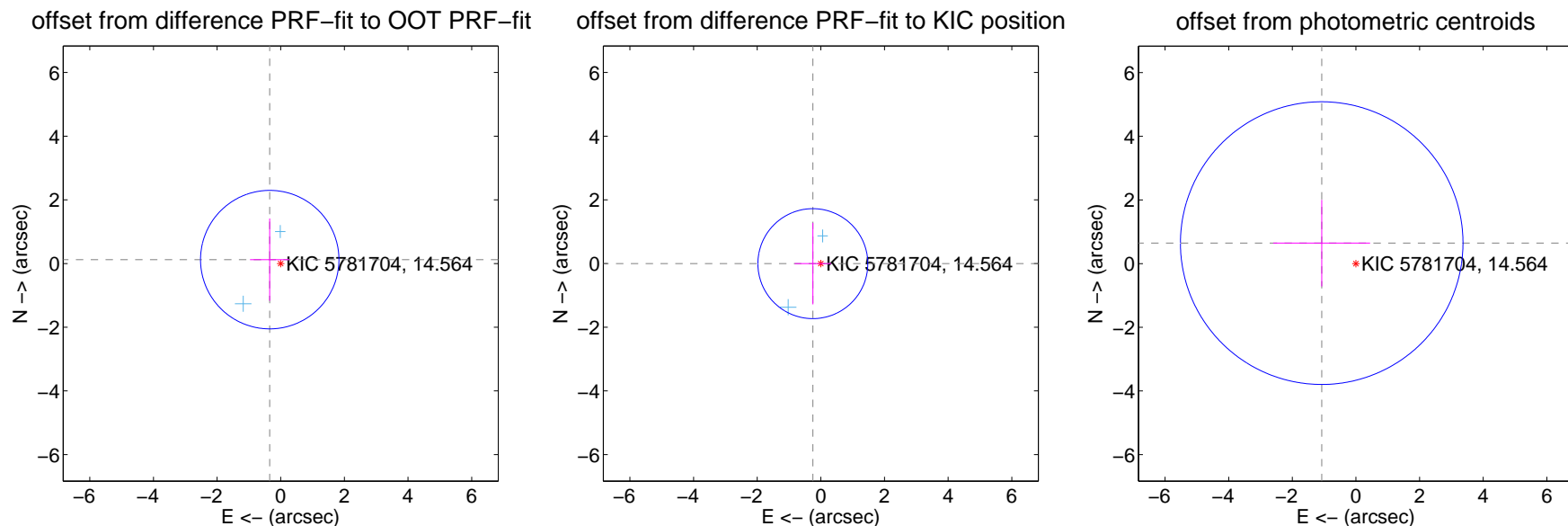
DV Centroid Data

Supplemental centroid analysis for 005781704-01. Kepler magnitude: 14.56. Transit SNR 7.83

There are 2 quarters with good PRF difference image offsets

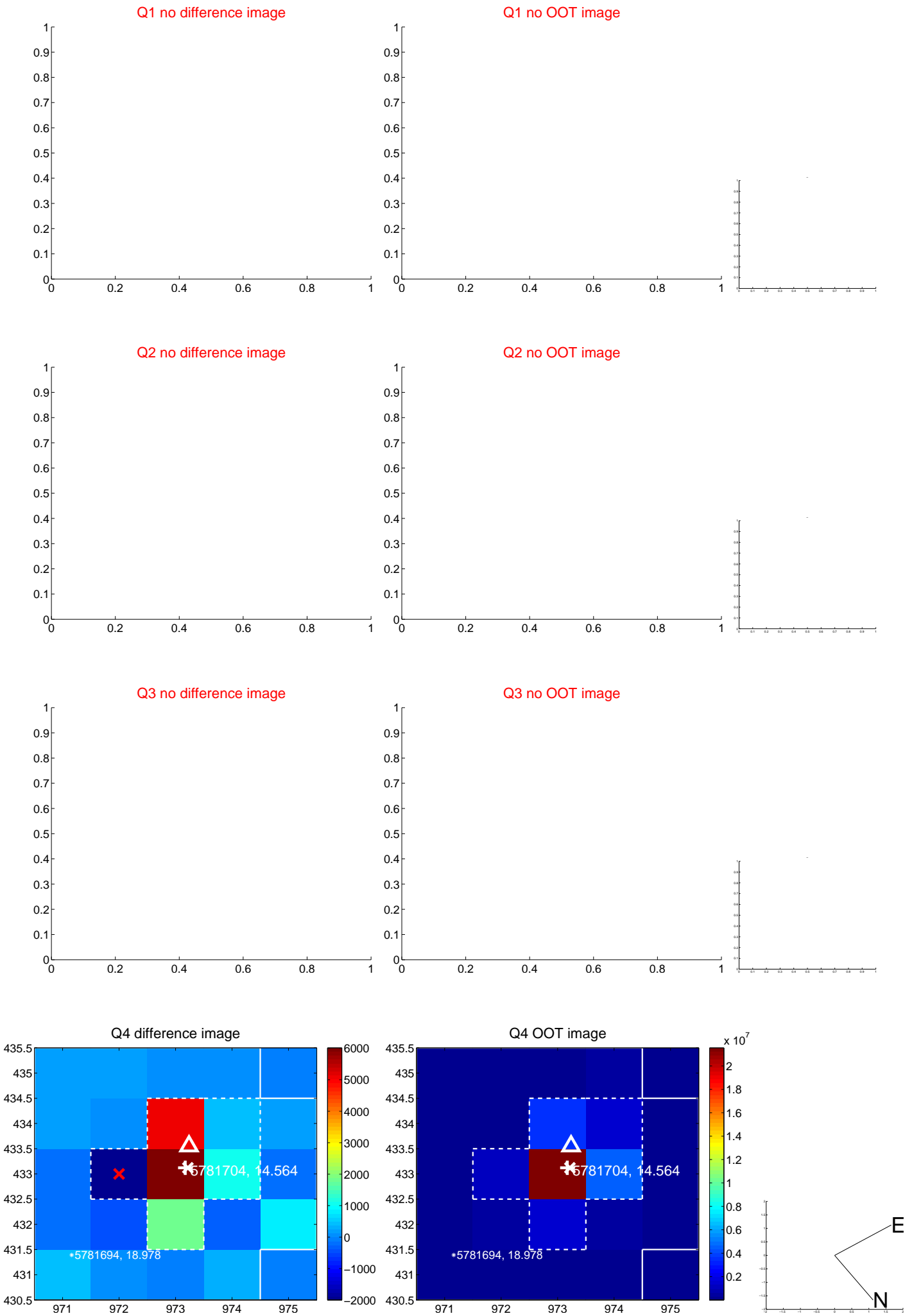
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.367 ± 0.725	0.51	0.346 ± 0.618	0.123 ± 1.293
PRF-fit source offset from KIC position	0.252 ± 0.576	0.44	0.252 ± 0.575	-0.003 ± 1.278
photometric centroid source offset	1.25 ± 1.48	0.85	1.08 ± 1.52	0.64 ± 1.36



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.



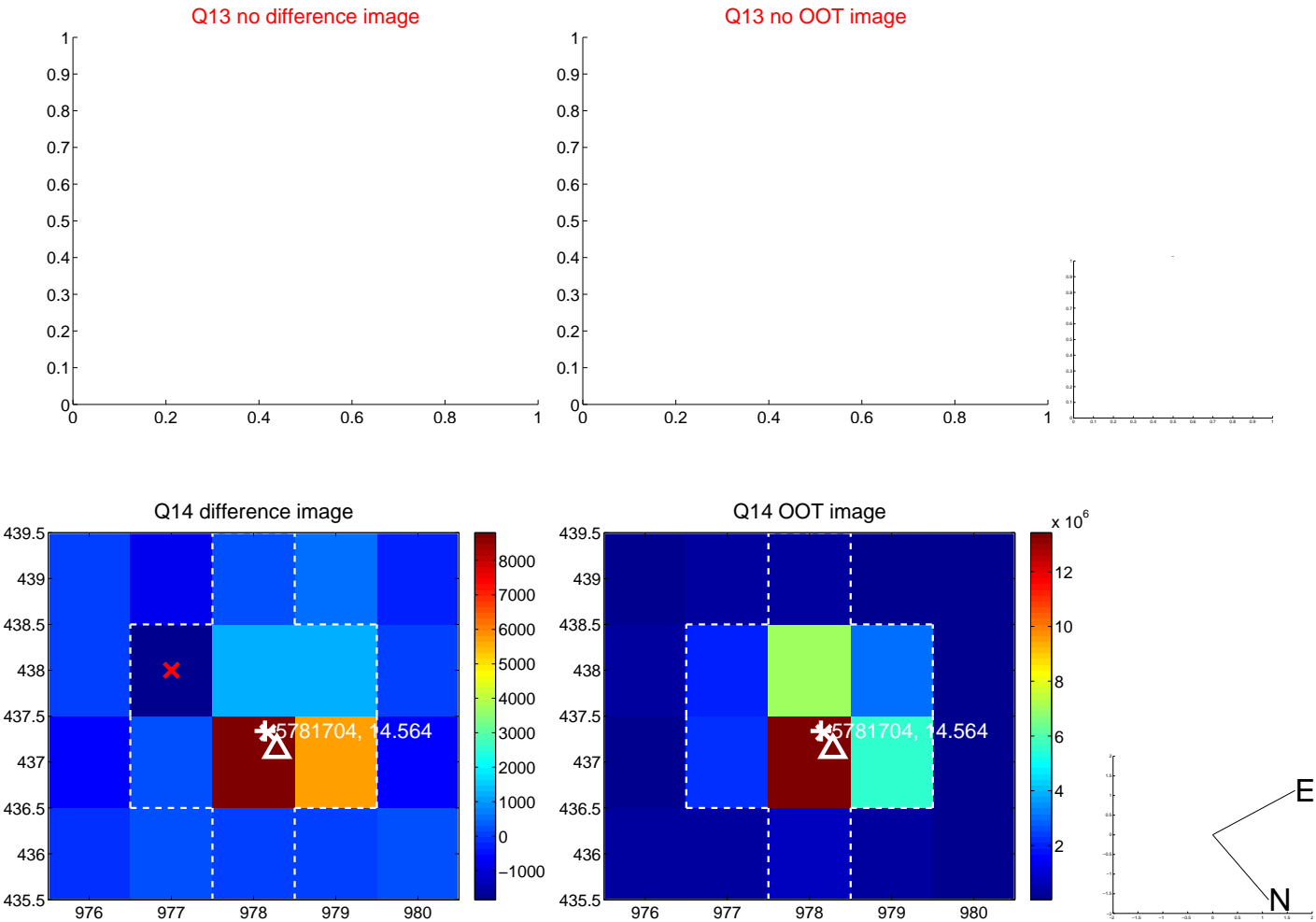
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



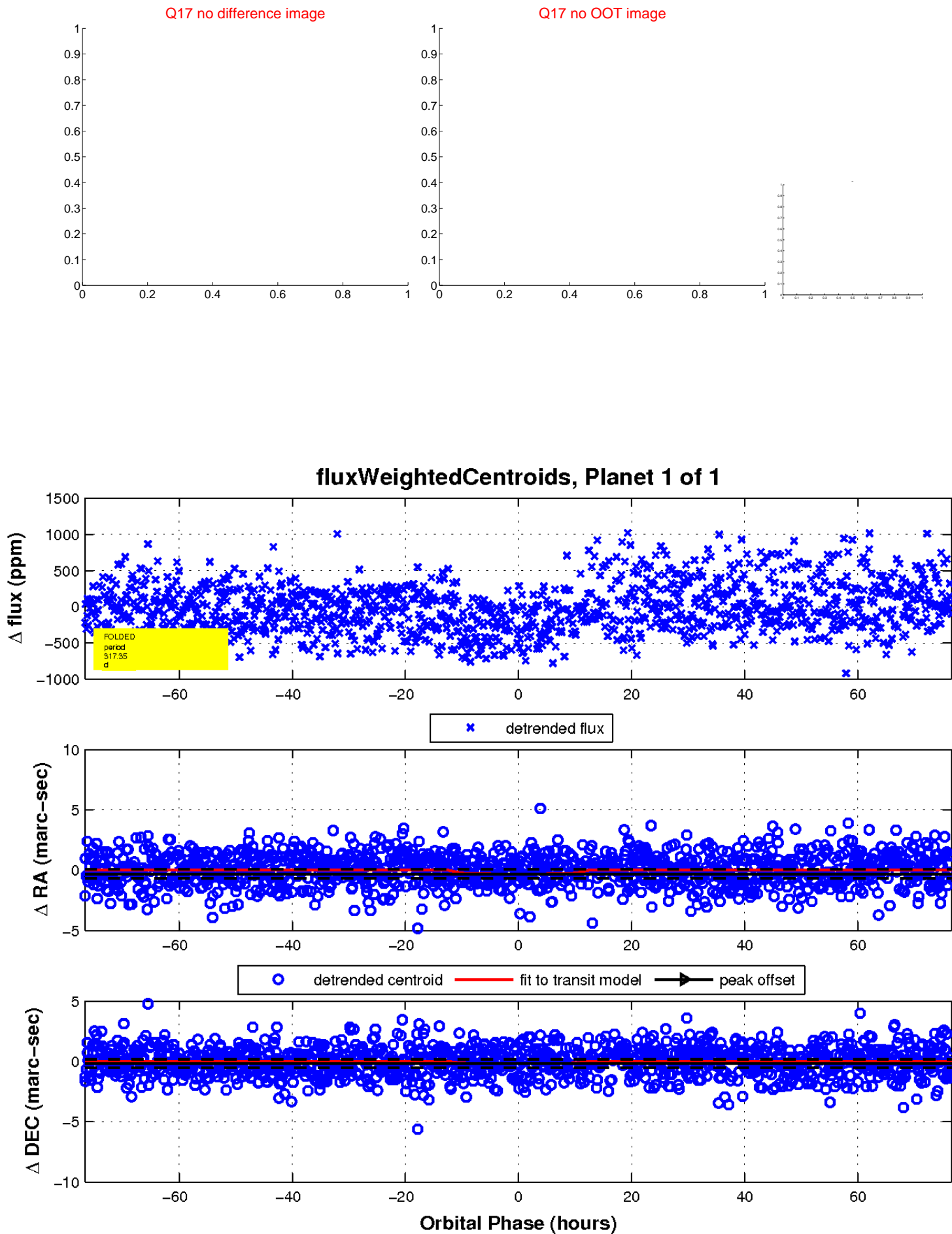
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

