

KIC 003761641

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})
003761641-01	OBS	No	1.204510	131.638172	29.5	10.790	8.5	14.9	2.13	8483	1.18	29143.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003761641-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED

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

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

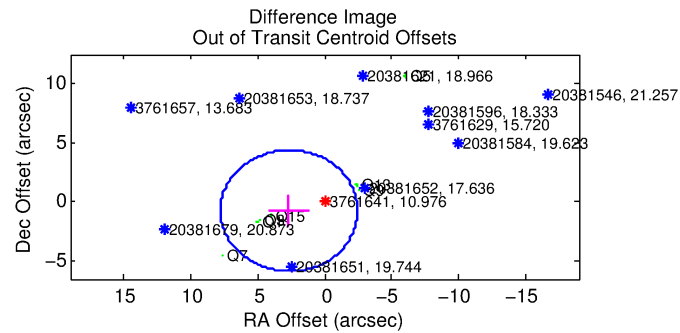
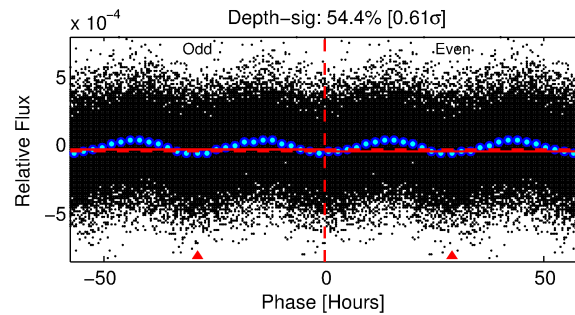
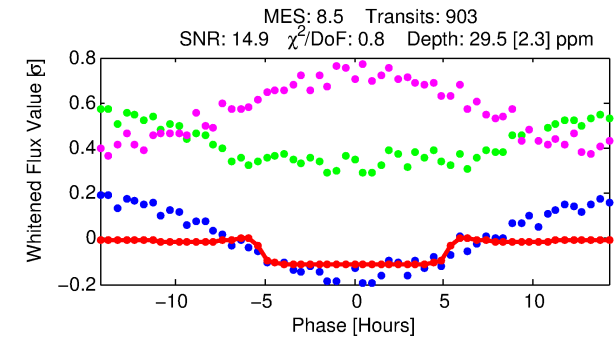
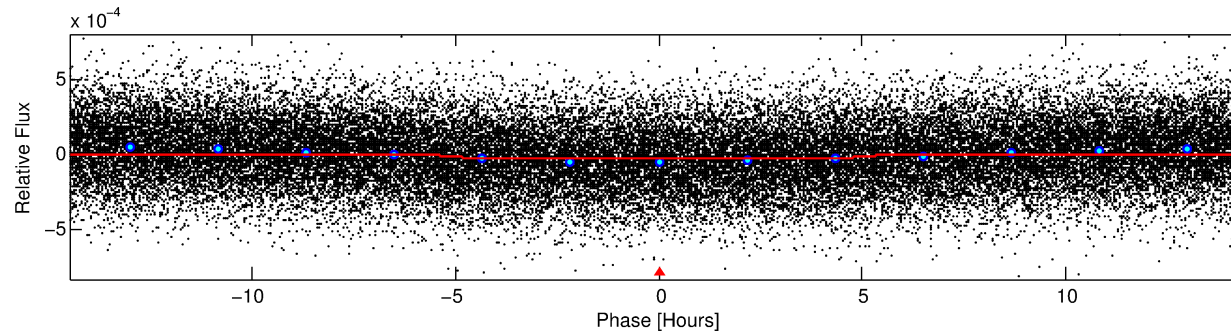
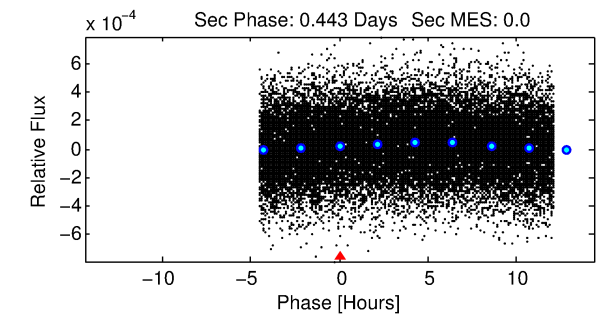
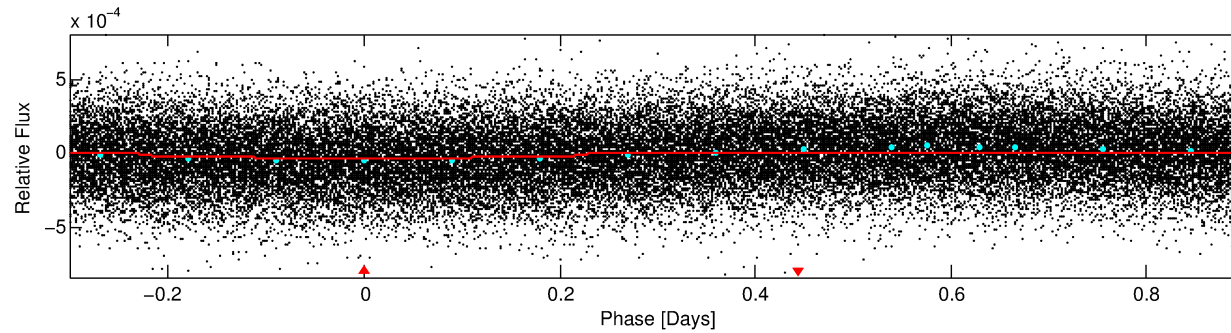
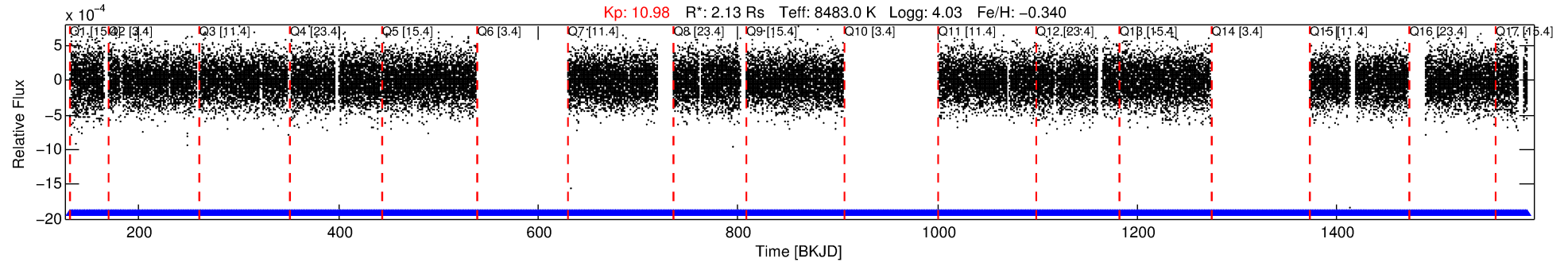
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003761641-01

No Significant Match Found

DV One-Page Summary

KIC: 3761641 Candidate: 1 of 1 Period: 1.205 d



DV Fit Results:

Period = 1.20451 [0.00002] d
Epoch = 131.6382 [0.0057] BKJD
Rp/R* = 0.0051 [0.0032]
a/R* = 1.08 [0.61]
b = 0.27 [13.28]
Seff = 29143.13 [7131.01]
Teq = 3332 [204] K
Rp = 1.18 [0.77] Re
a = 0.0269 [0.0043] AU
Ag = N/A
Teffp = N/A

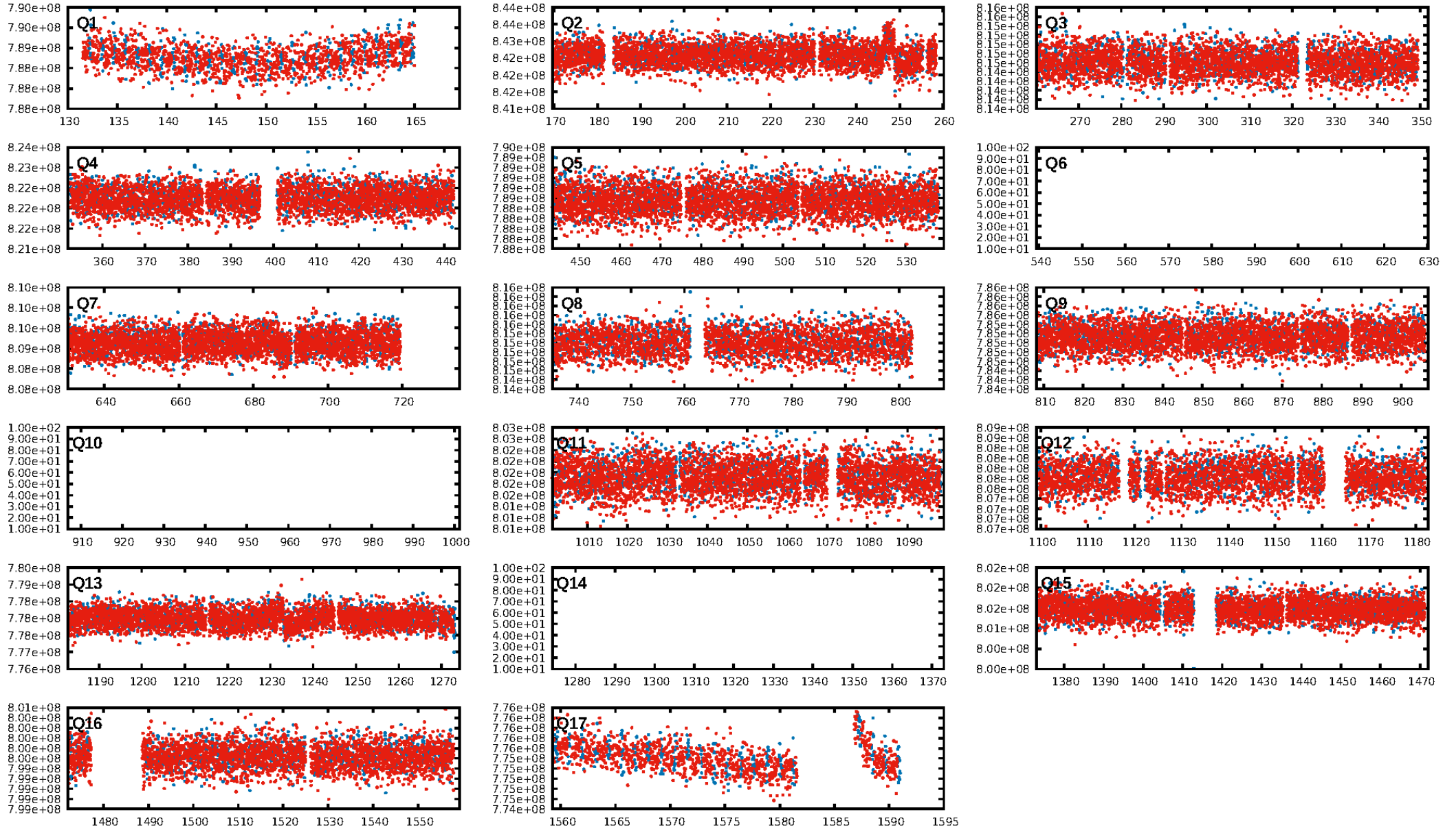
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [853/853]
GhostDiagnostic-chr: 2.873
Centroid-sig: 18.6%
Centroid-so: 0.444 arcsec [1.39σ]
OotOffset-rm: 2.766 arcsec [1.62σ]
KicOffset-rm: 2.677 arcsec [1.24σ]
OotOffset-st: 0/4/0/3 [7]
KicOffset-st: 0/4/0/3 [7]
DiffImageQuality-fgm: 0.00 [0/7]
DiffImageOverlap-fno: 1.00 [14/14]

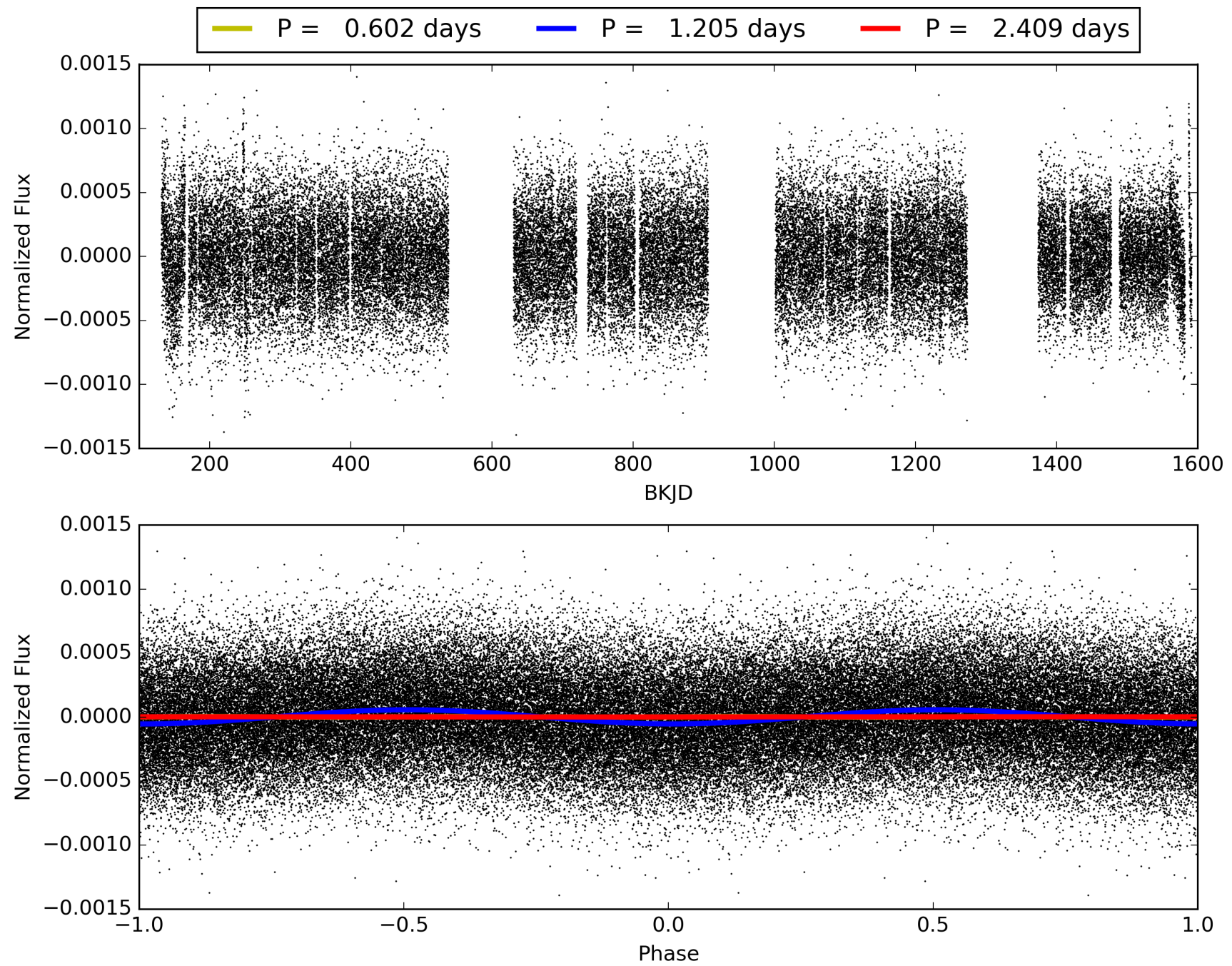
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:30:31 Z

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

TCE 003761641-01, PDC Light Curves

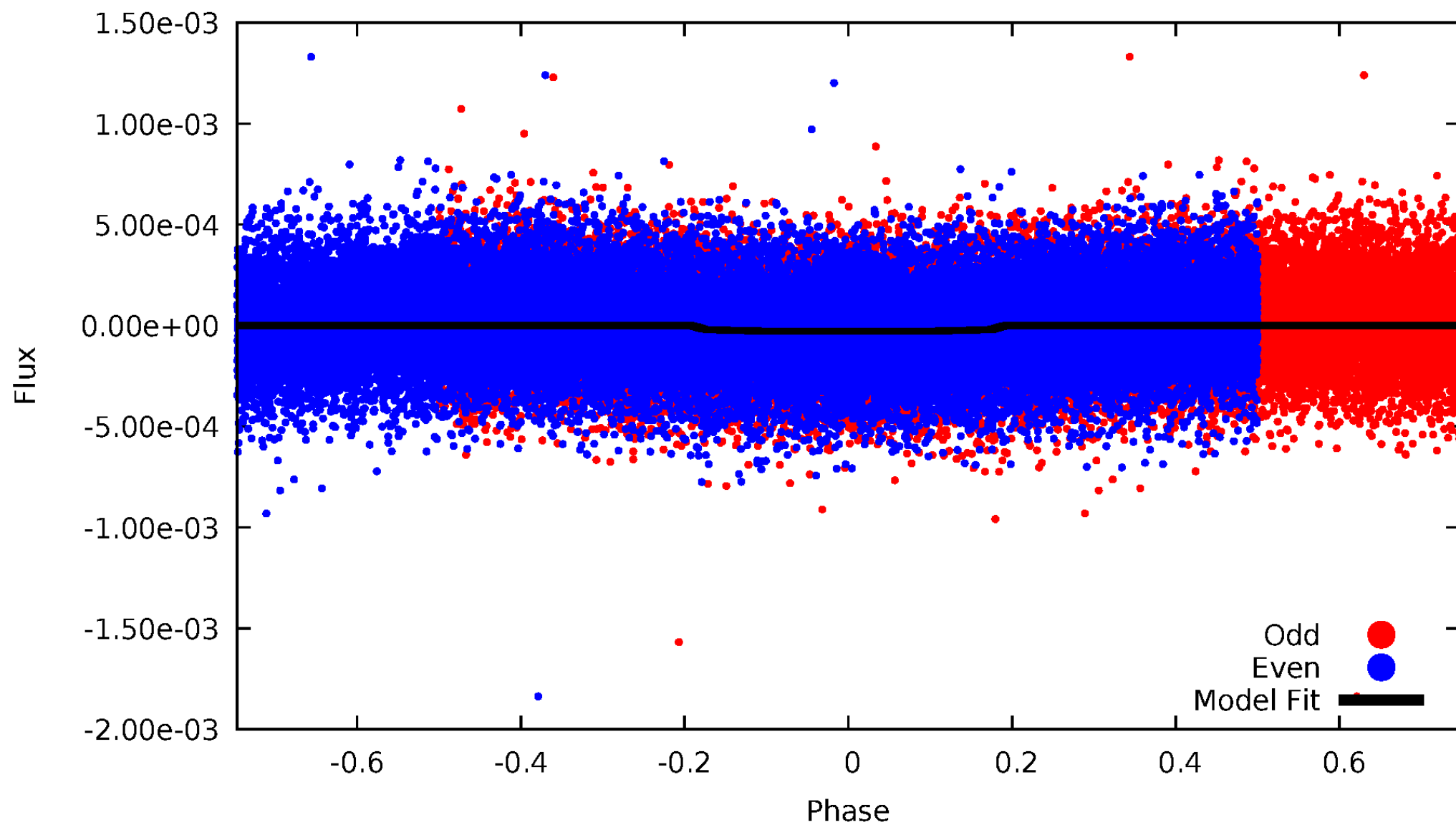


TCE 003761641-01



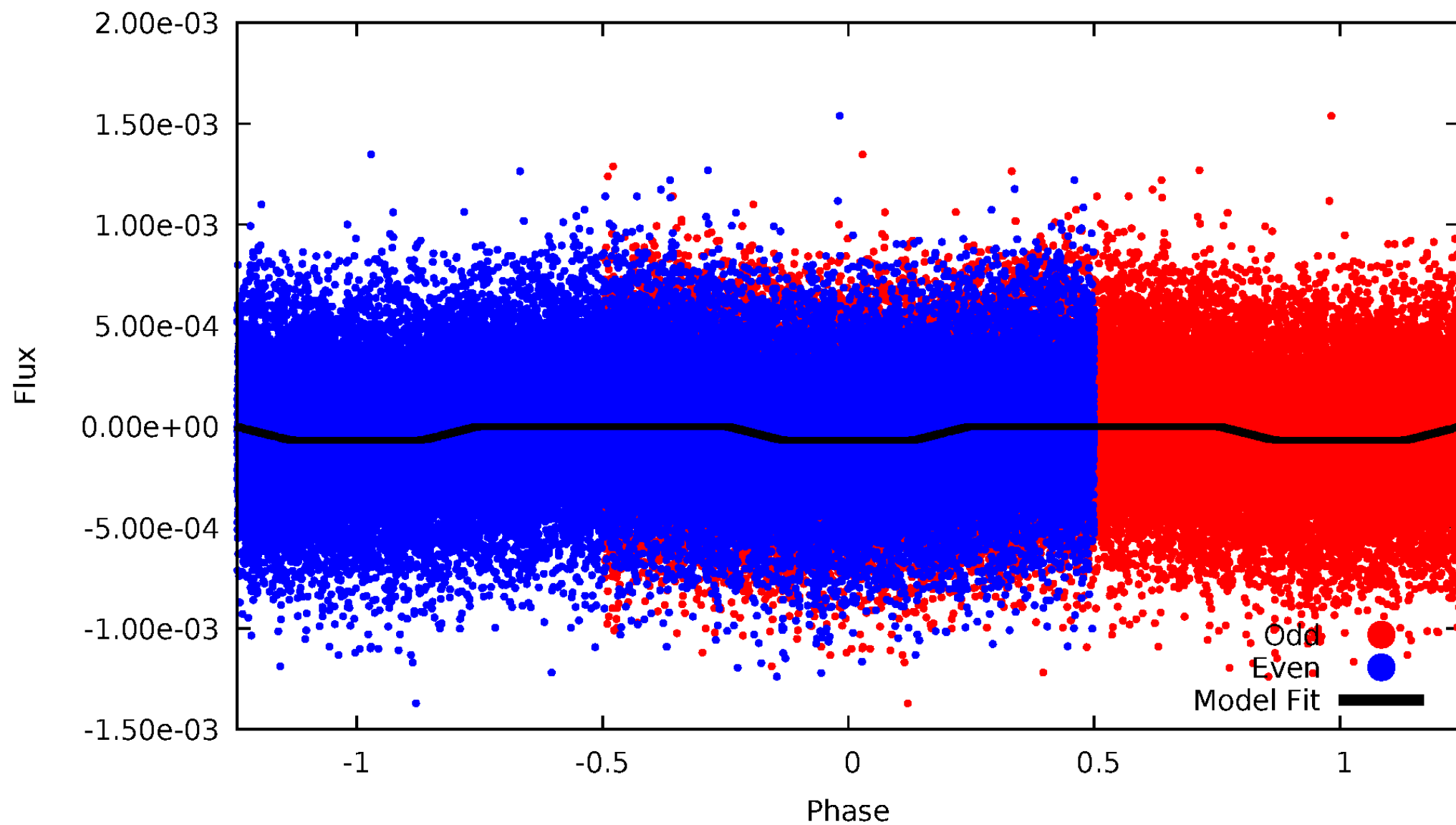
DV Odd/Even

TCE 003761641-01



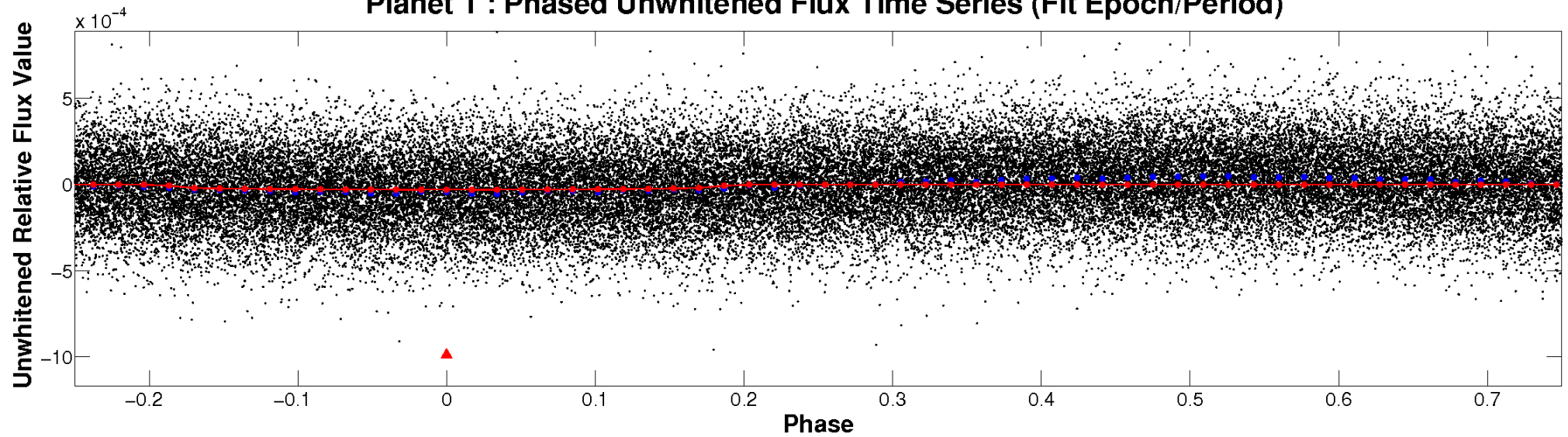
ALT Odd/Even

TCE 003761641-01

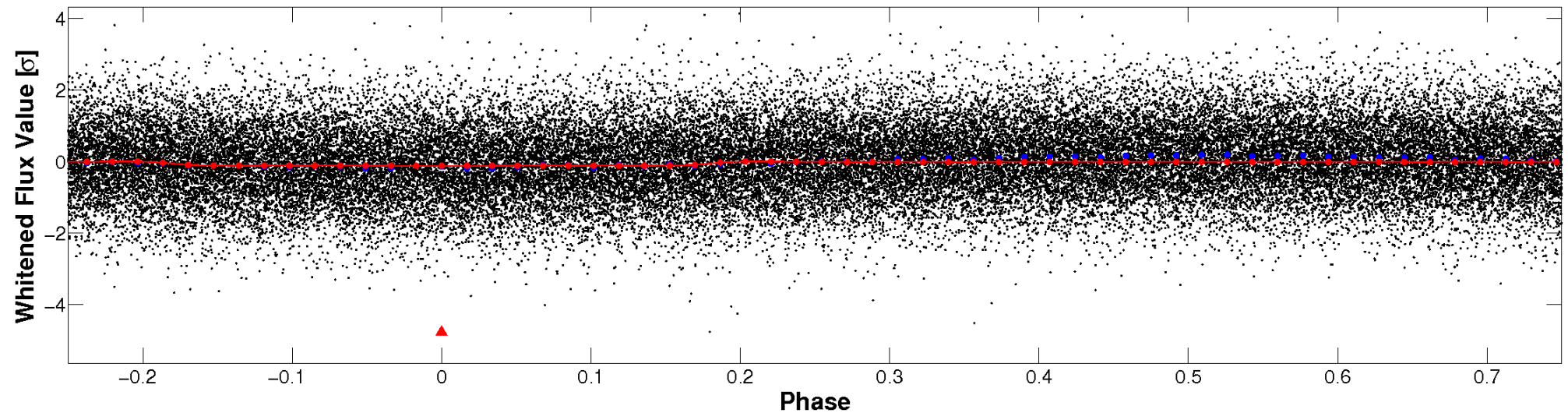


Non-Whitened Vs. Whitened Light Curve

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

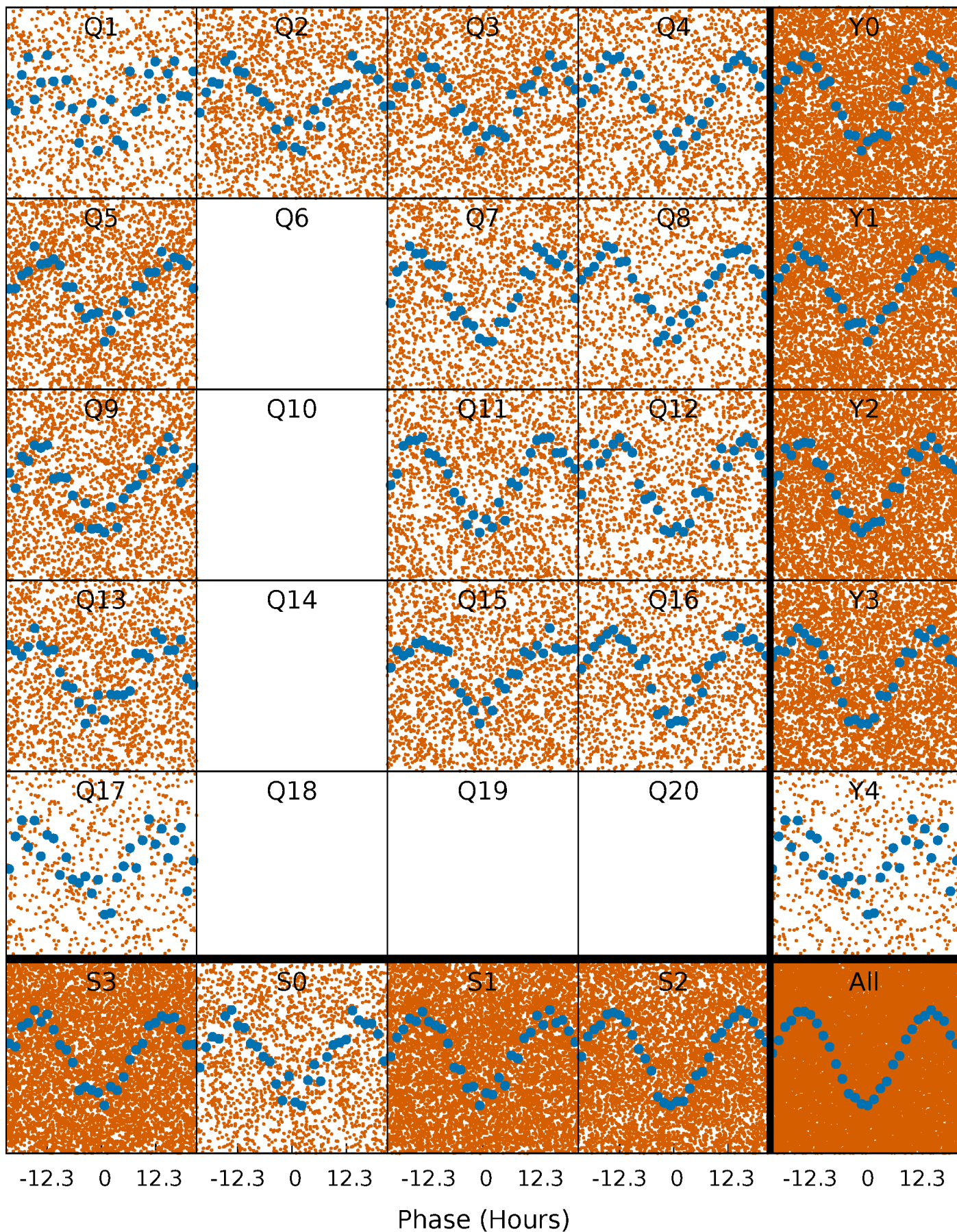


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



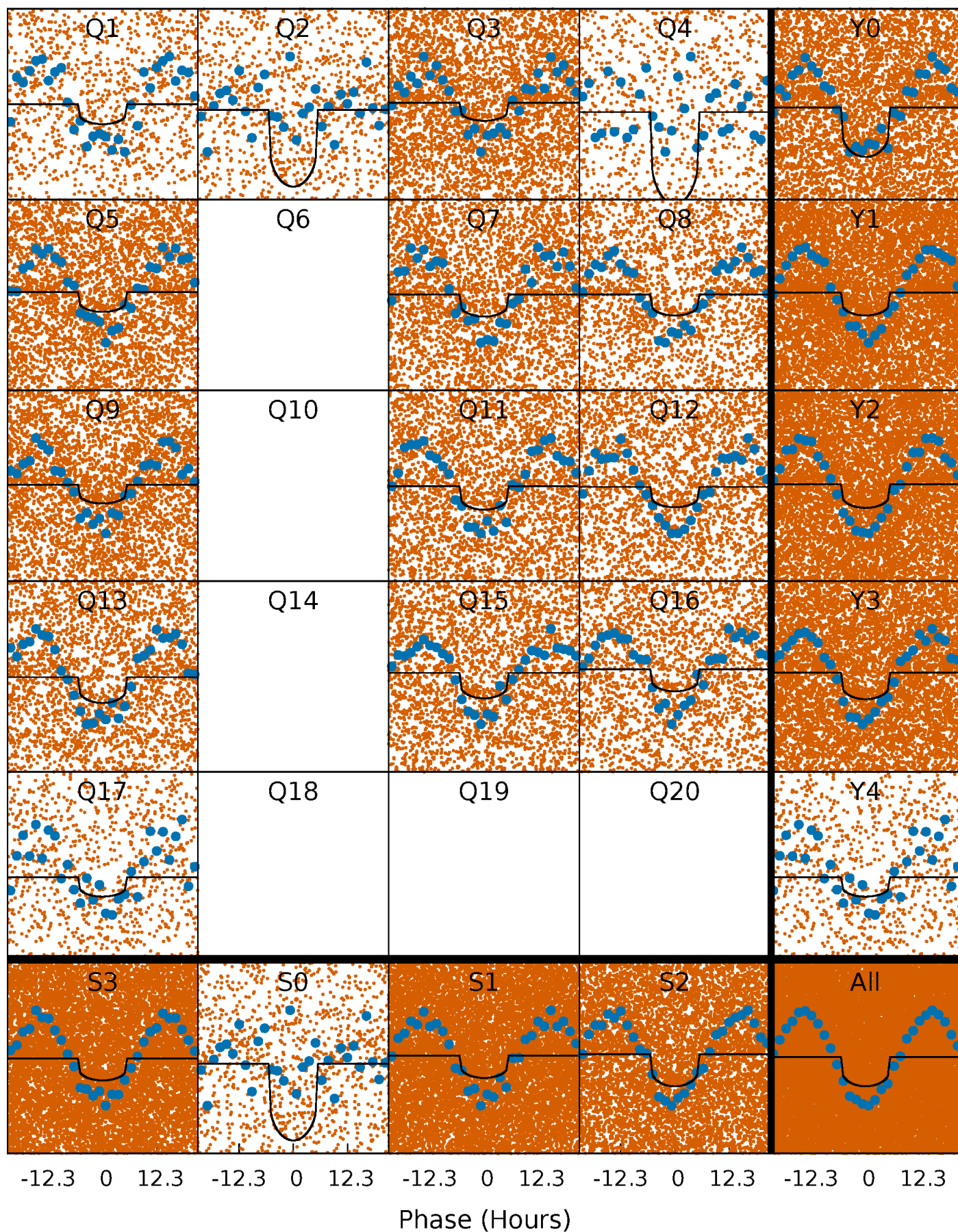
PDC Quarter-Phased Transit Curves

TCE 003761641-01 P= 1.204510 Days $T_0=131.638172$ (BKJD)



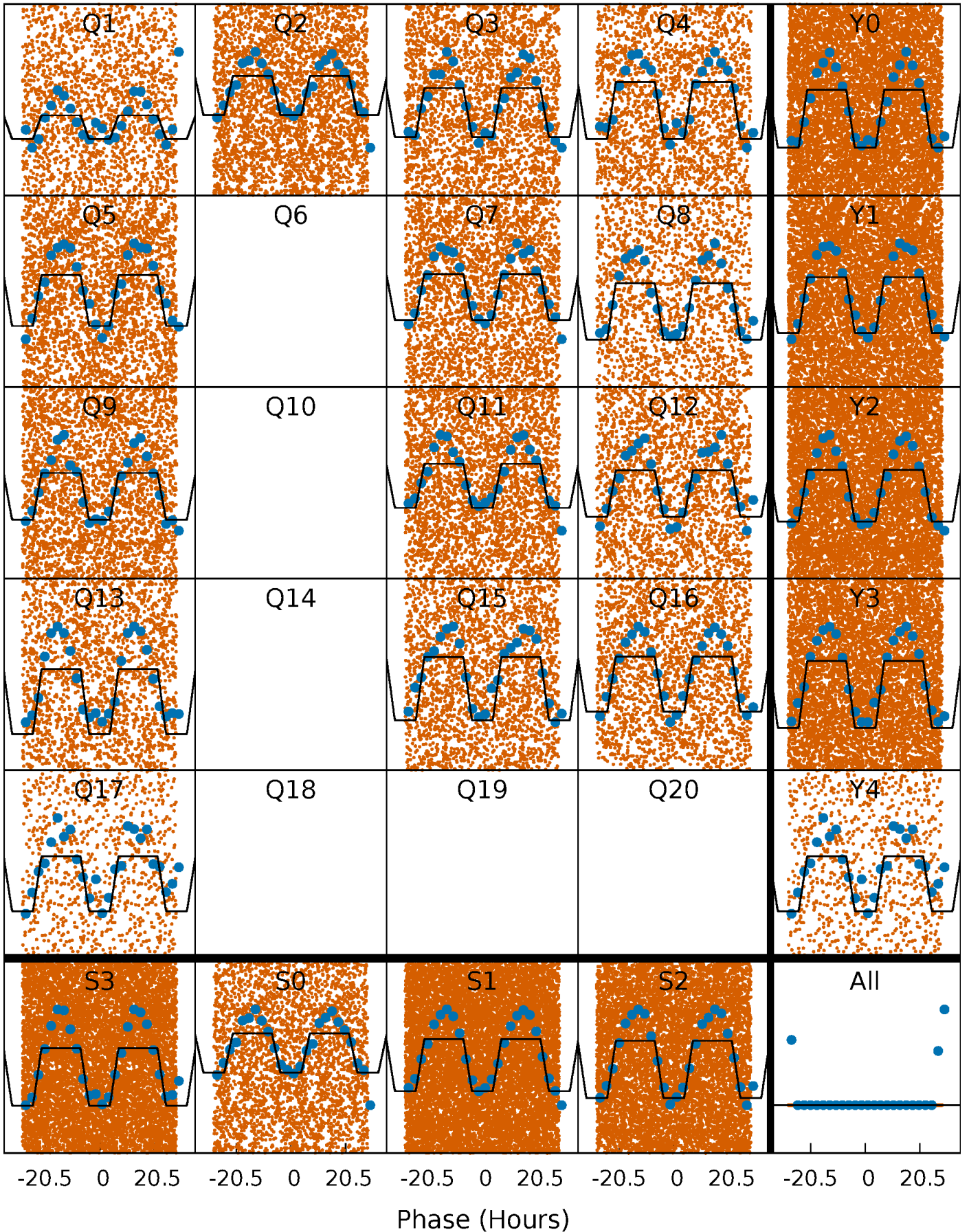
DV Quarter-Phased Transit Curves

TCE 003761641-01 P= 1.204510 Days $T_0=131.638172$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

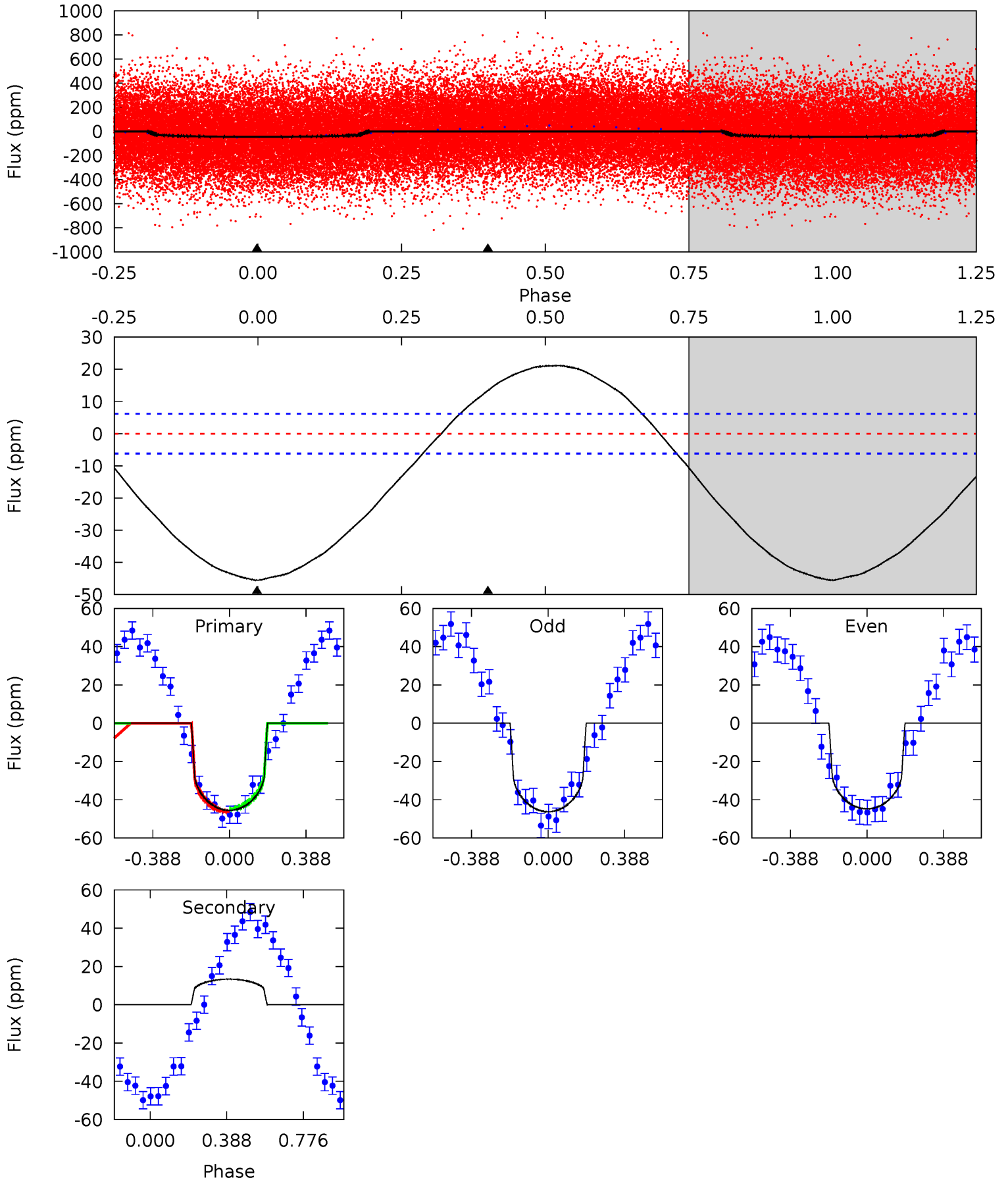
TCE 003761641-01 P= 1.204495 Days $T_0=131.653036$ (BKJD)



DV Model-Shift Uniqueness Test

003761641-01, P = 1.204510 Days, E = 130.433662 Days

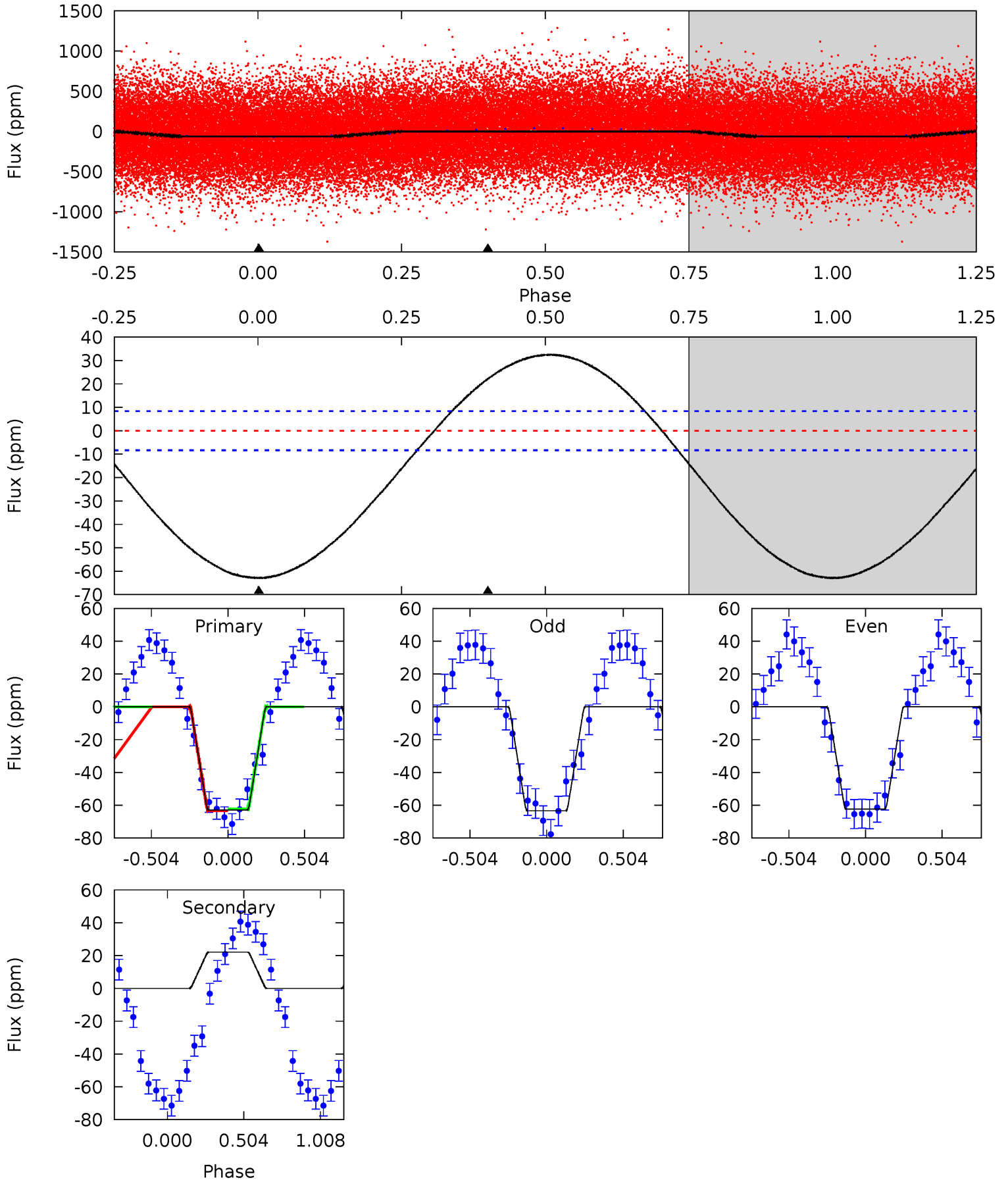
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.5	-9.27	0	0	4.27	0.86	4.12	31.5	31.5	-9.27	-9.27	0.51	0.97	0.32	0.50



Alt Model-Shift Uniqueness Test

003761641-01, P = 1.204495 Days, E = 130.448541 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.7	-11.1	0	0	4.21	0.67	4.32	31.7	31.7	-11.1	-11.1	0.26	1.16	0.34	0.26



Stellar Parameters For KIC 003761641

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8483^{+67}_{-84}	$4.033^{+0.136}_{-0.084}$	$-0.340^{+0.050}_{-0.150}$	$2.132^{+0.239}_{-0.388}$	$1.789^{+0.043}_{-0.172}$	$0.260^{+0.176}_{-0.063}$
	+1%/-1%	+3%/-2%	+15%/-44%	+11%/-18%	+2%/-10%	+68%/-24%
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 003761641-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	13 ± 1	$1.21^{+0.69}_{-0.67}$	4648^{+142}_{-206}	-6948^{+1322}_{-4549}	$-3.560^{+2.091}_{-14.521}$
Alt.	22 ± 2	$1.86^{+0.71}_{-0.68}$	4645^{+161}_{-211}	-6368^{+784}_{-1690}	$-2.528^{+1.224}_{-3.768}$

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

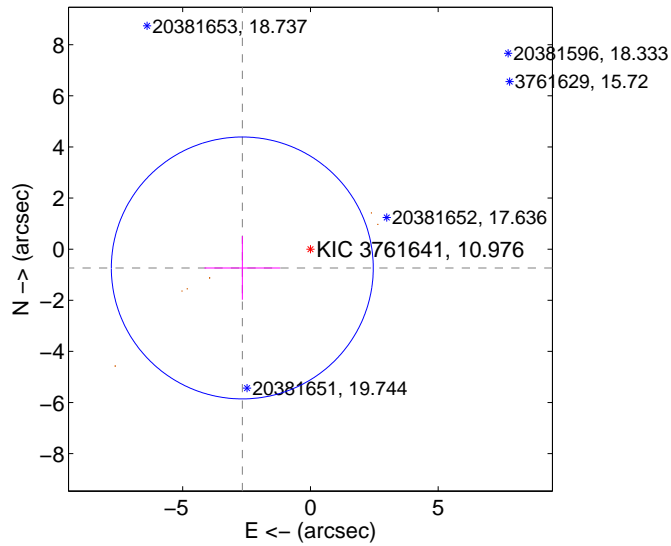
Supplemental centroid analysis for 003761641-01. **Kepler magnitude: 10.98.** Transit SNR 14.93

There are 0 quarters with good PRF difference image offsets

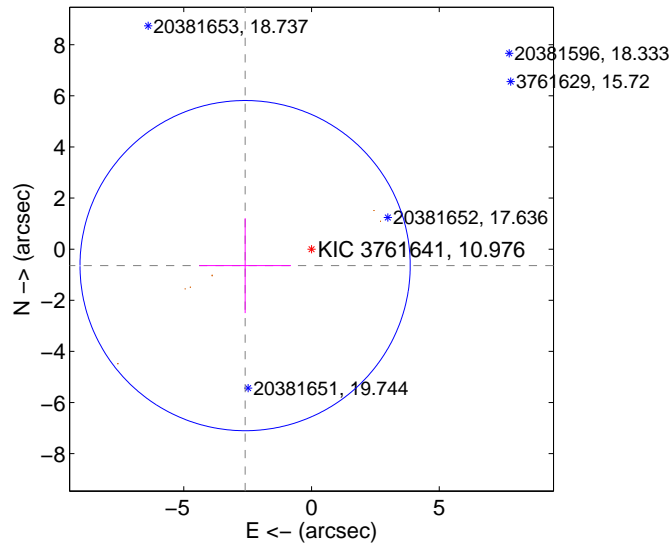
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.766 ± 1.708	1.62	2.666 ± 1.480	-0.735 ± 1.242
PRF-fit source offset from KIC position	2.677 ± 2.154	1.24	2.598 ± 1.793	-0.644 ± 1.857
photometric centroid source offset	0.44 ± 0.32	1.39	0.40 ± 0.31	0.20 ± 0.34

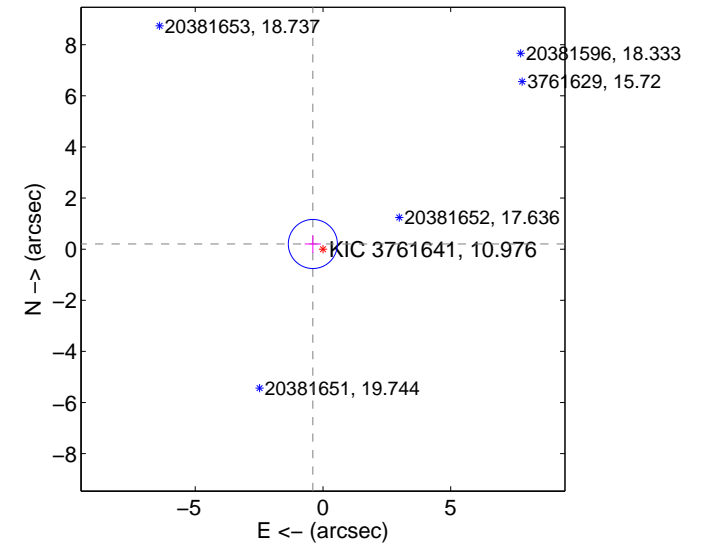
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

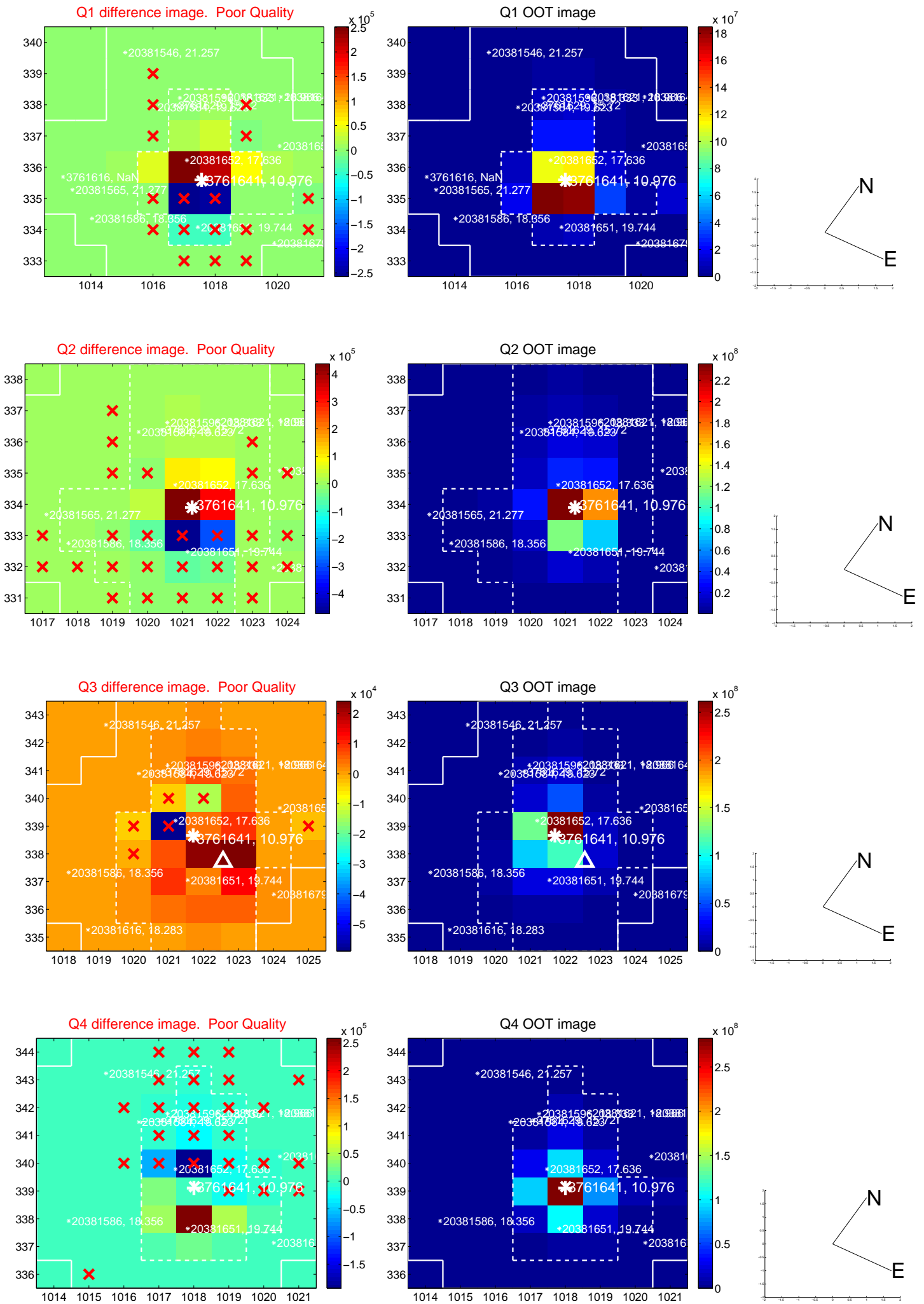


offset from photometric centroids

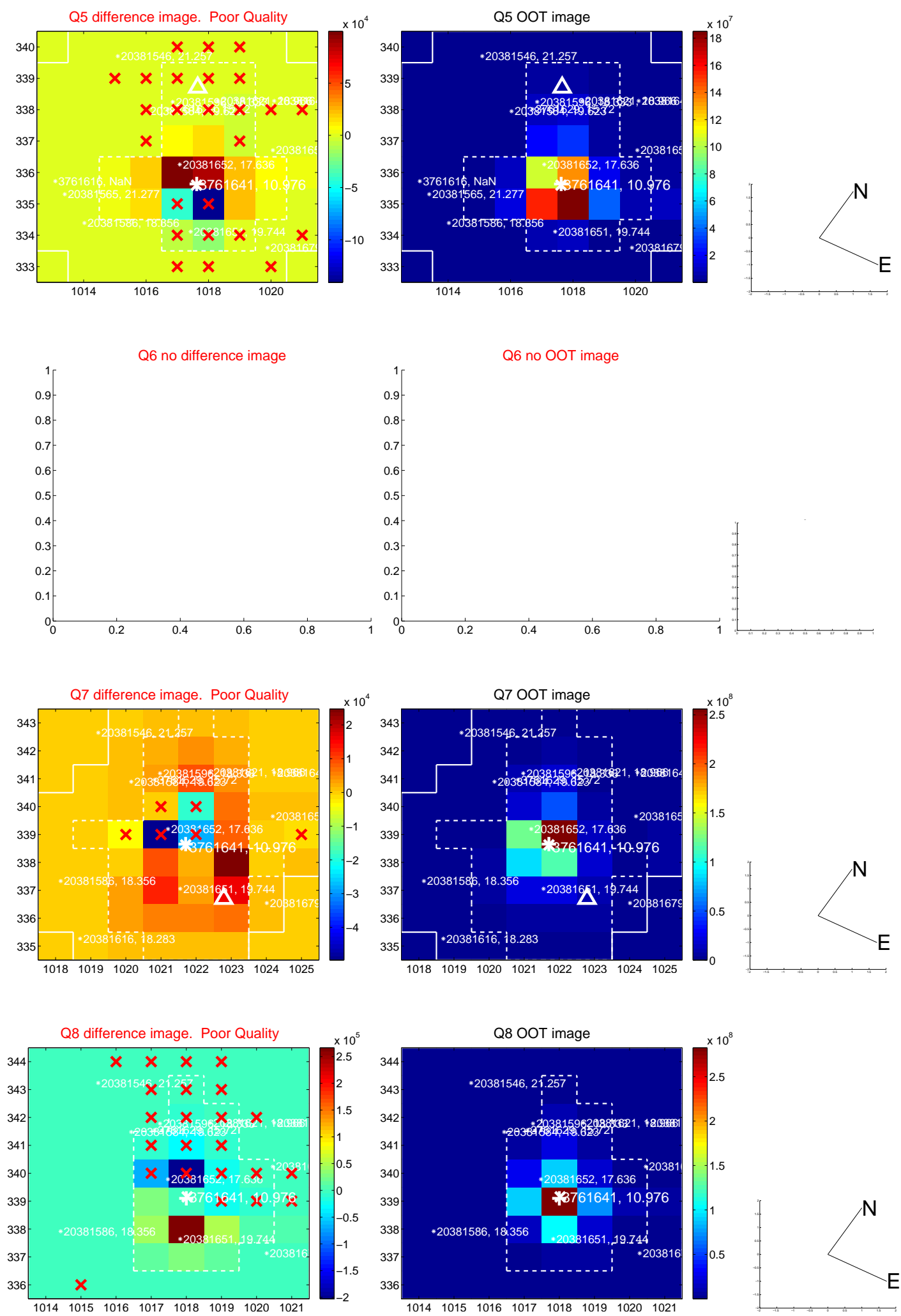


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

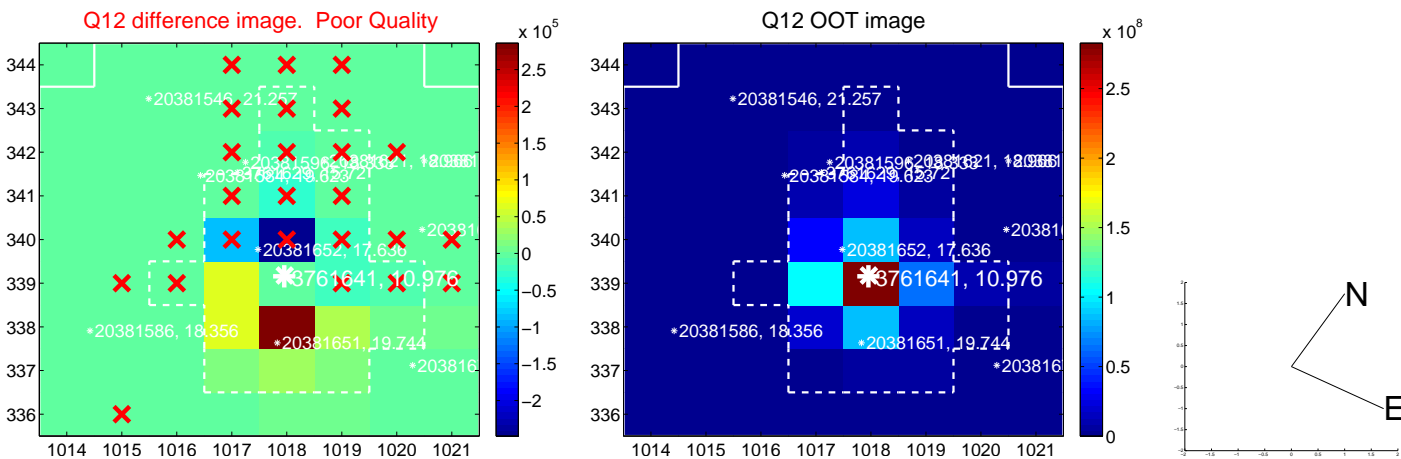
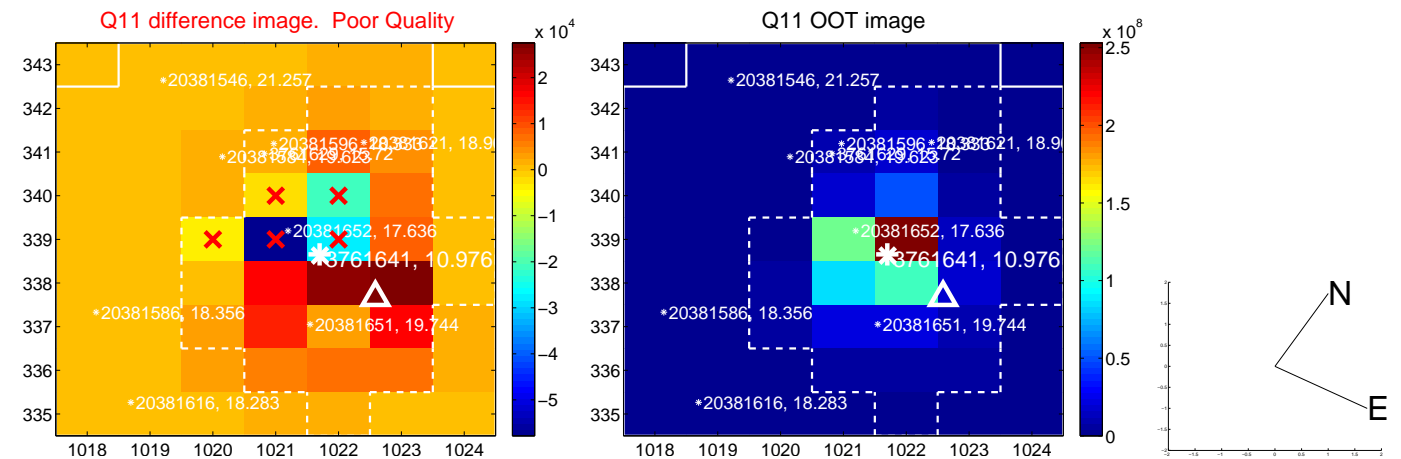
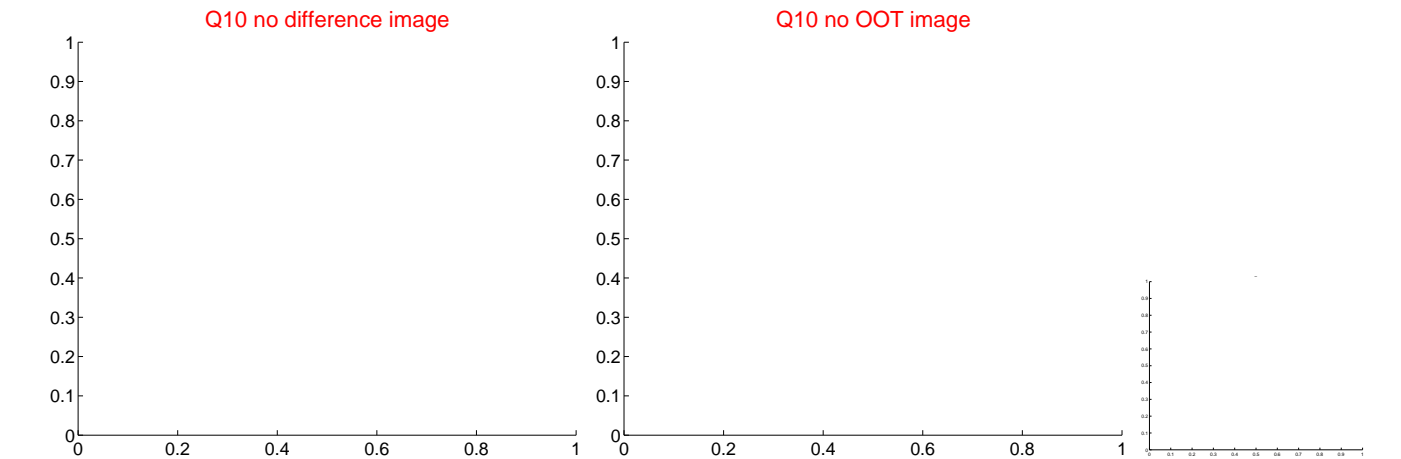
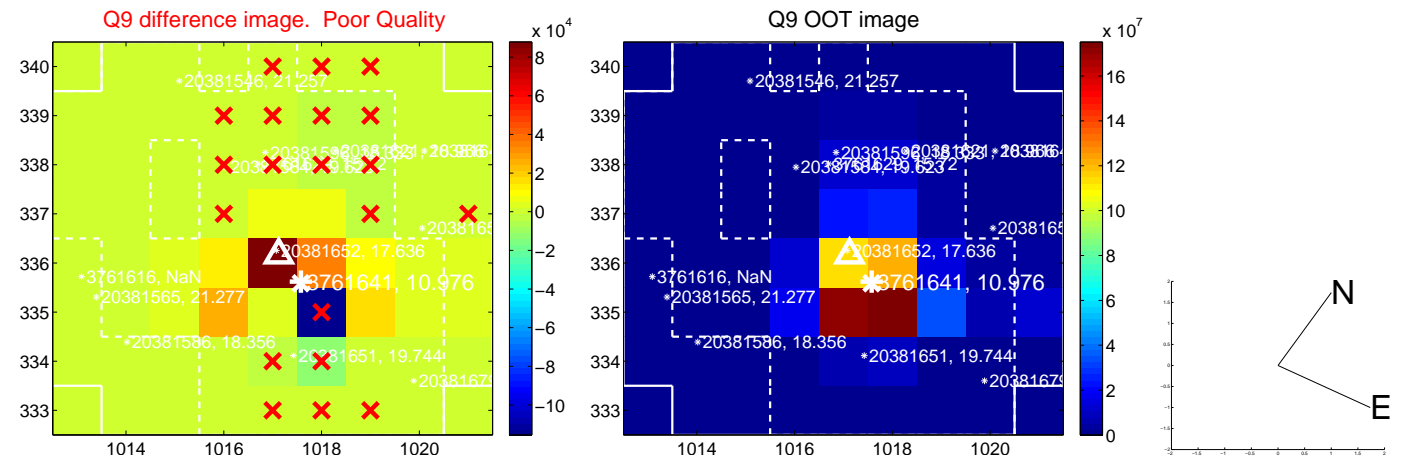
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



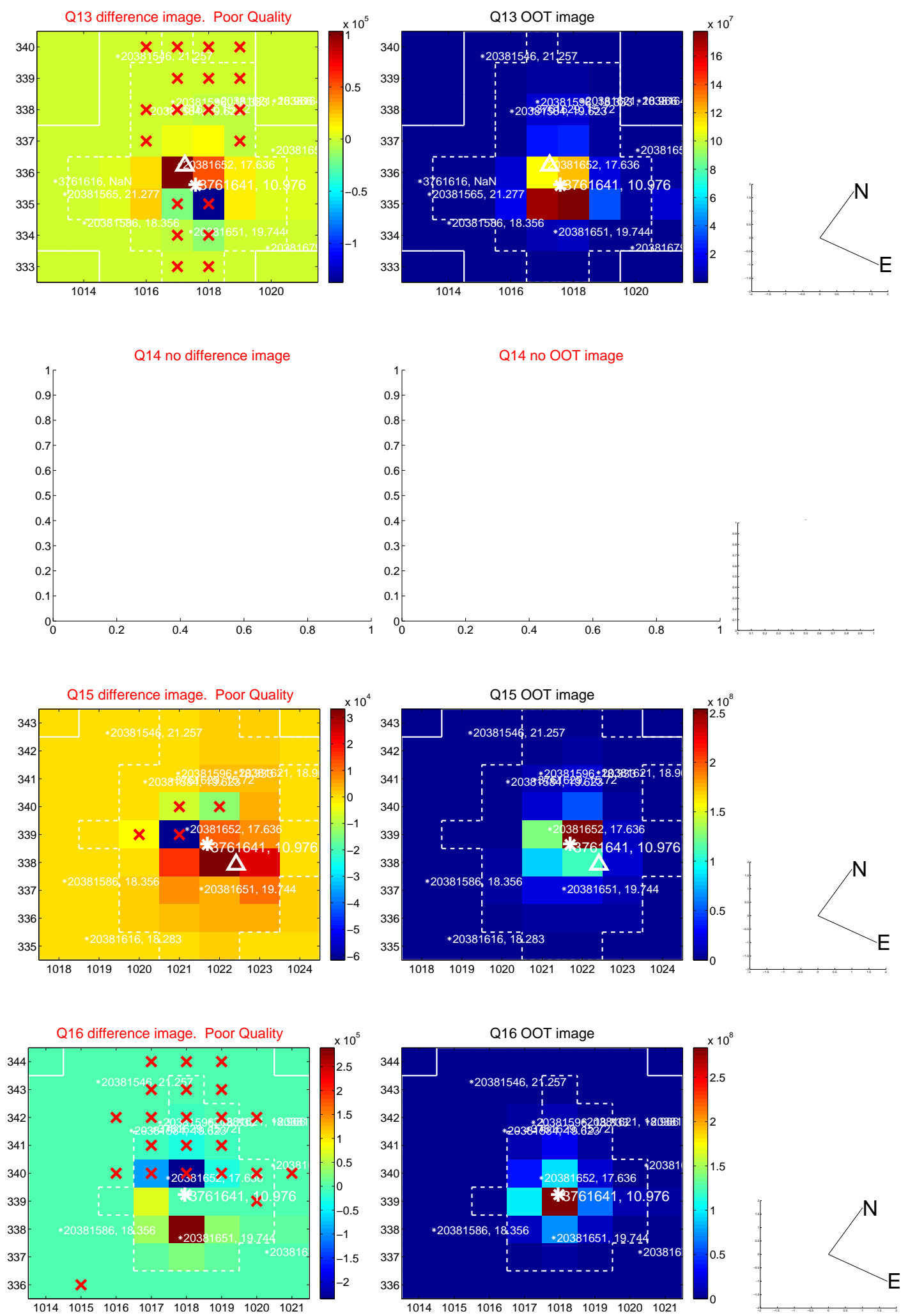
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



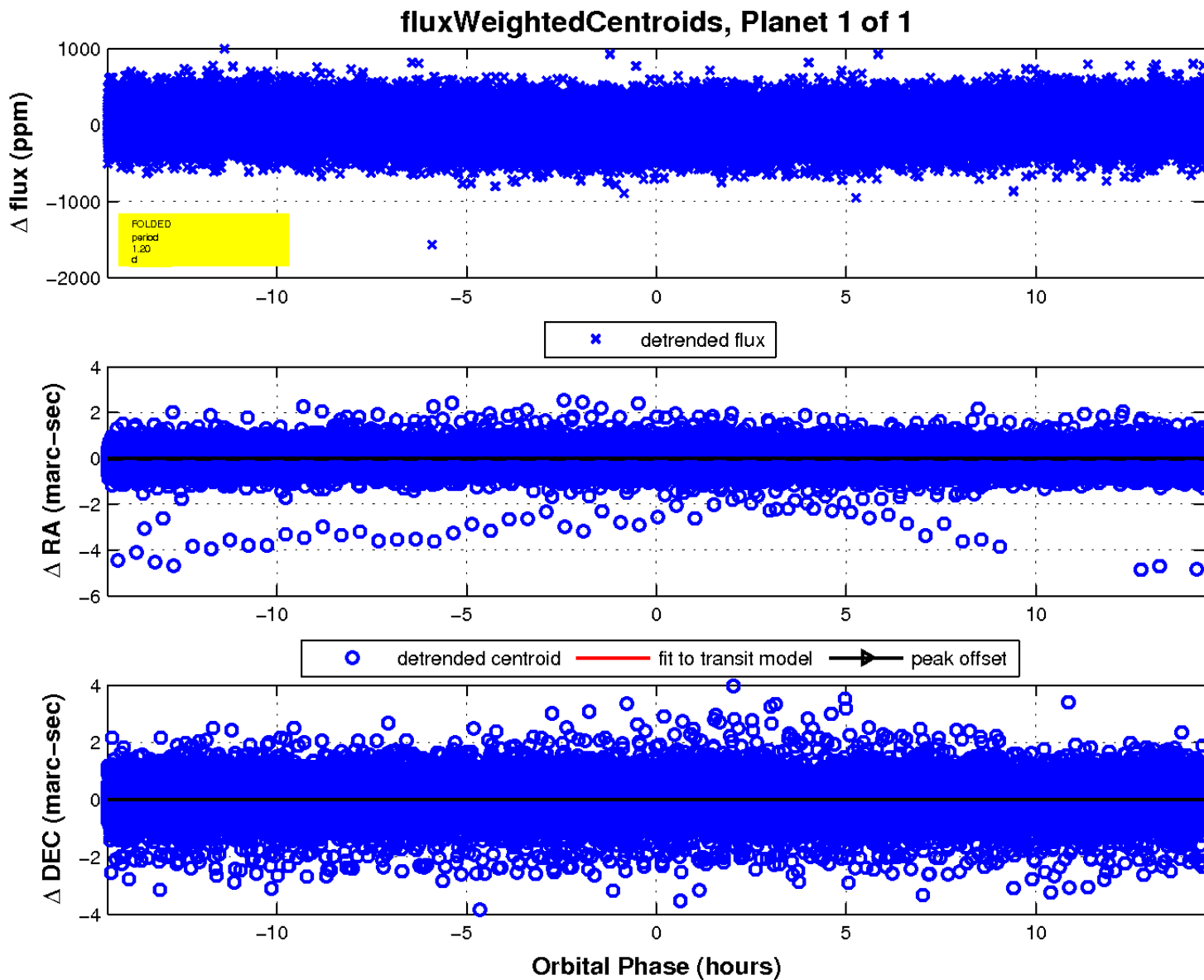
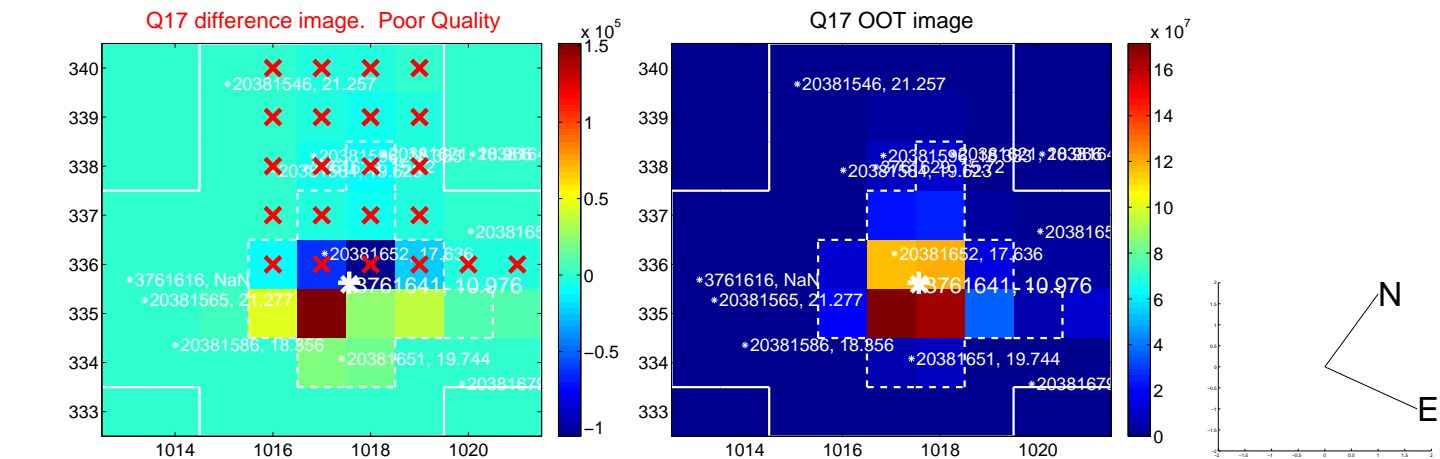
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

