

KIC 010213964

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})
010213964-01	OBS	No	0.528150	131.567984	133.7	4.370	13.5	19.6	1.81	7214	2.15	40073.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010213964-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

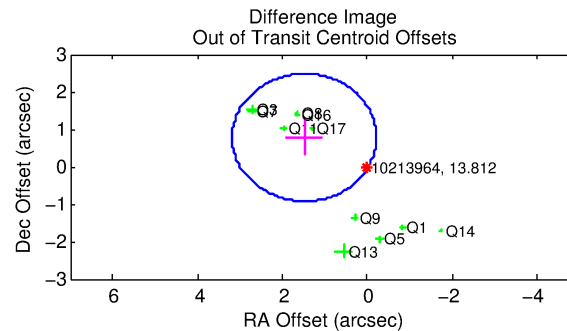
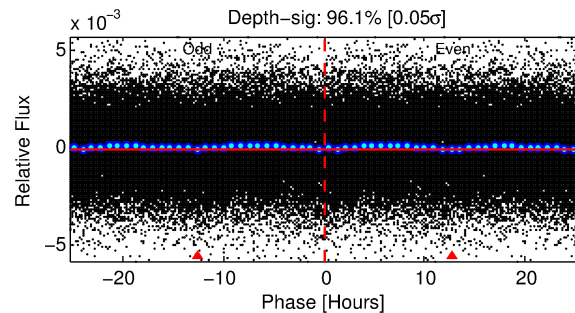
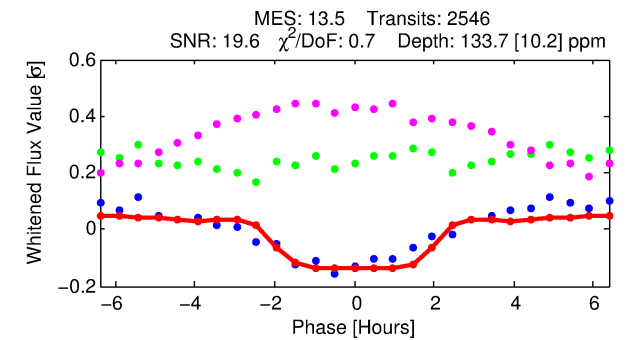
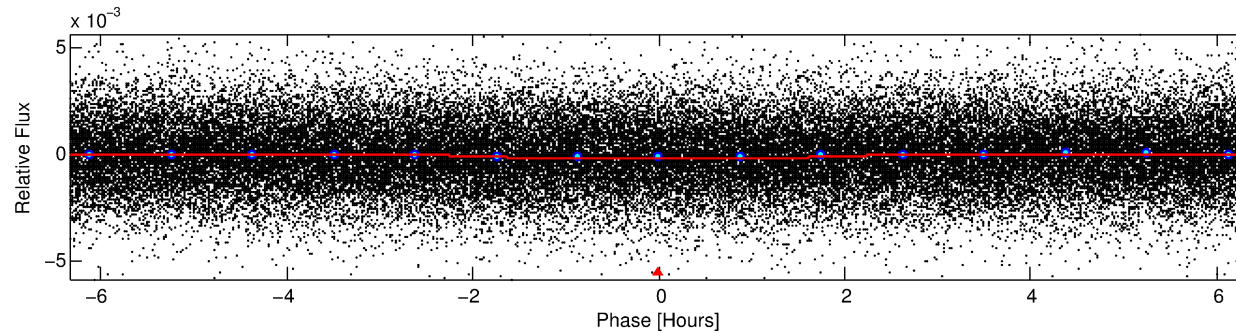
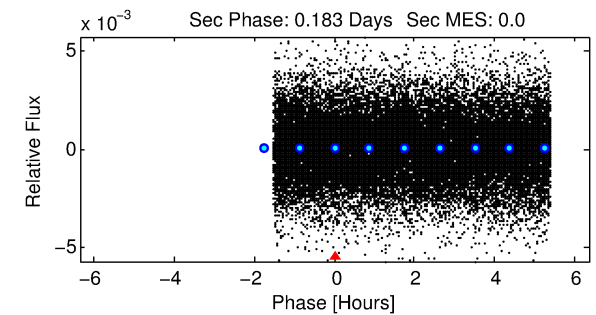
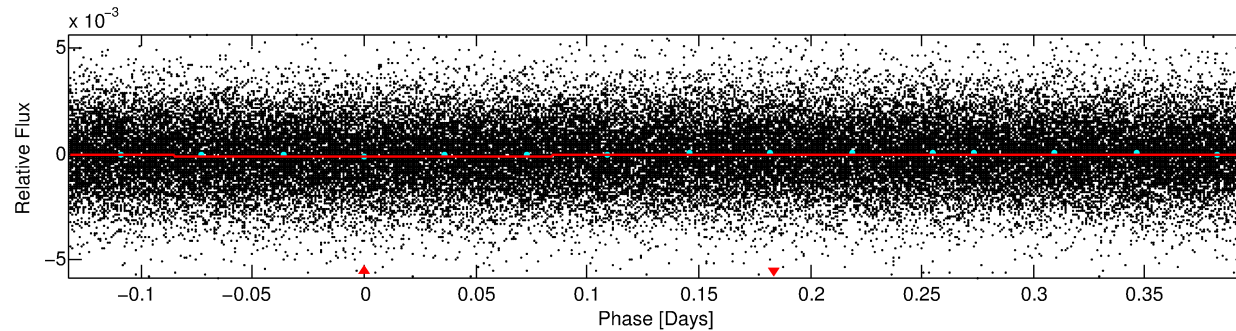
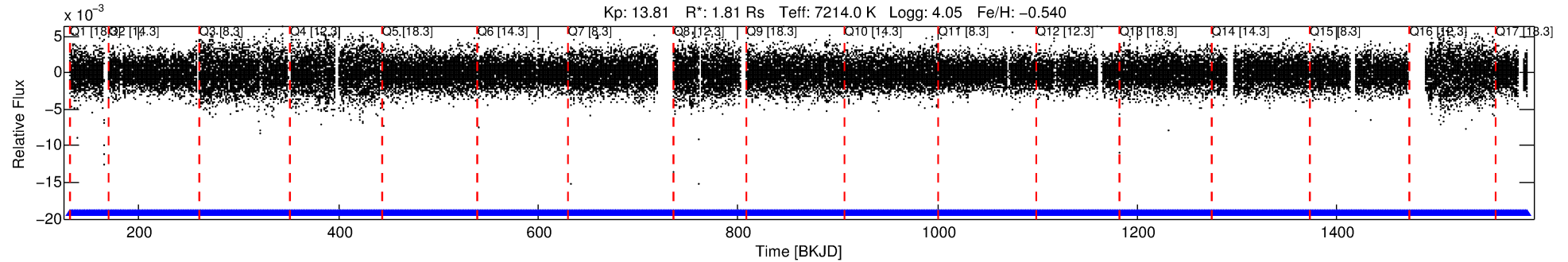
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010213964-01

No Significant Match Found

DV One-Page Summary

KIC: 10213964 Candidate: 1 of 1 Period: 0.528 d



DV Fit Results:

Period = 0.52815 [0.00001] d
Epoch = 131.5680 [0.0026] BKJD
Rp/R* = 0.0109 [0.0076]
a/R* = 1.13 [0.98]
b = 0.38 [9.50]
Seff = 40073.28 [20180.52]
Teq = 3608 [454] K
Rp = 2.15 [1.67] Re
a = 0.0141 [0.0043] AU
Ag = N/A
Teffp = N/A

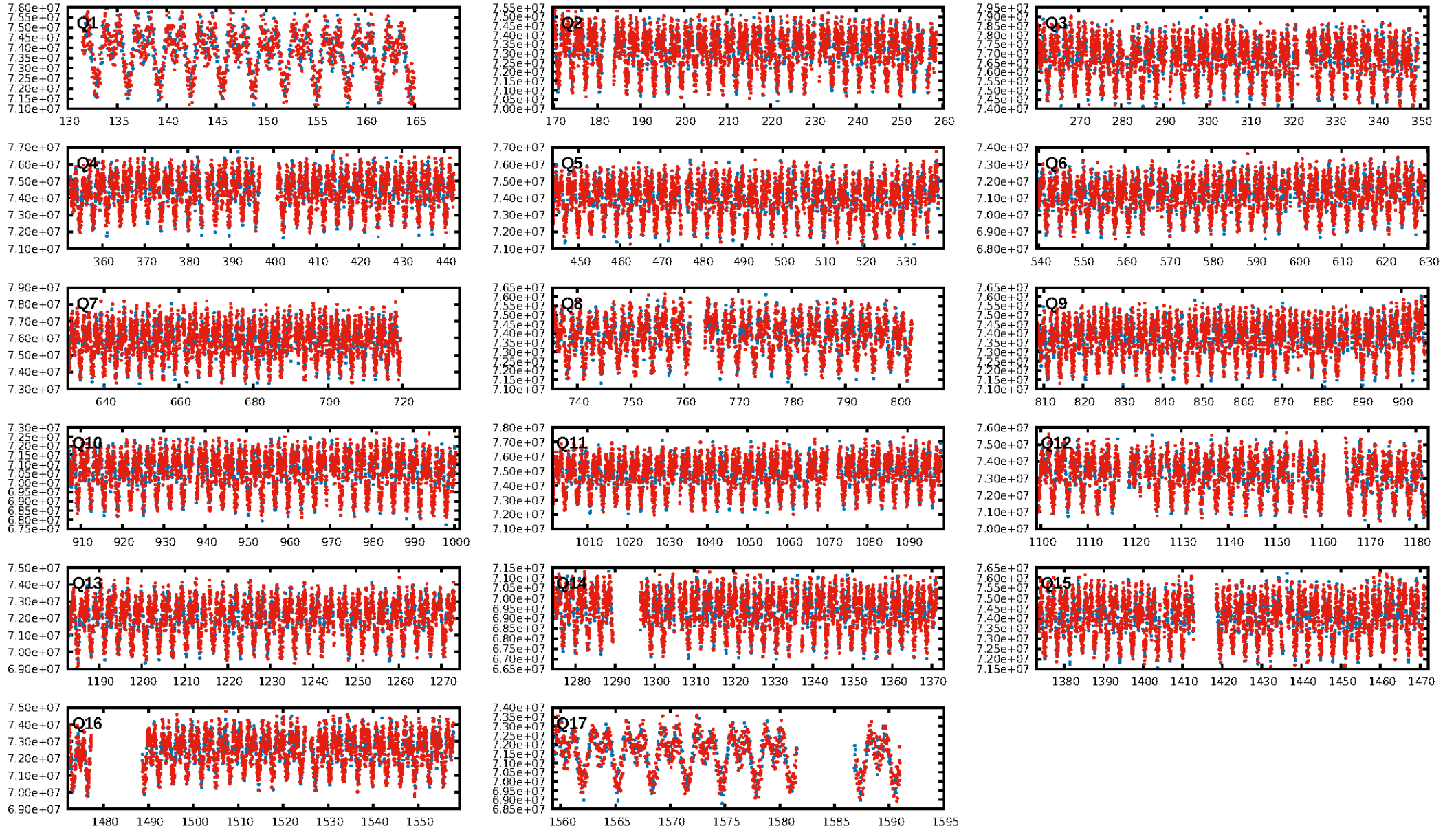
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2431/2431]
GhostDiagnostic-chr: 1.121
Centroid-sig: 15.9%
Centroid-so: 0.342 arcsec [2.75σ]
OotOffset-rm: 1.674 arcsec [2.95σ]
KicOffset-rm: 1.587 arcsec [3.00σ]
OotOffset-st: 1/3/2/5 [11]
KicOffset-st: 1/3/2/5 [11]
DiffImageQuality-fgm: 0.73 [8/11]
DiffImageOverlap-fno: 1.00 [17/17]

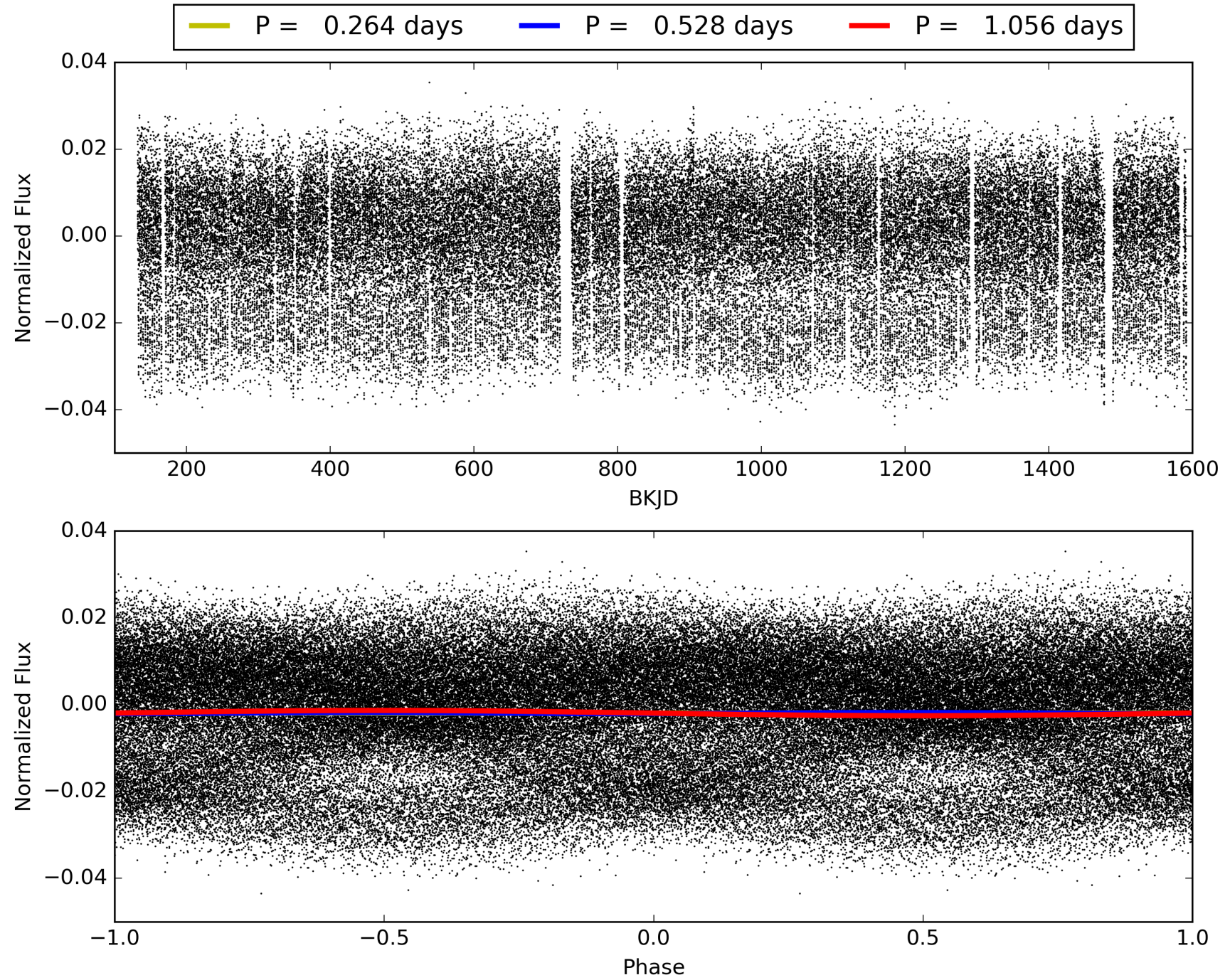
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 10:52:26 Z

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

TCE 010213964-01, PDC Light Curves

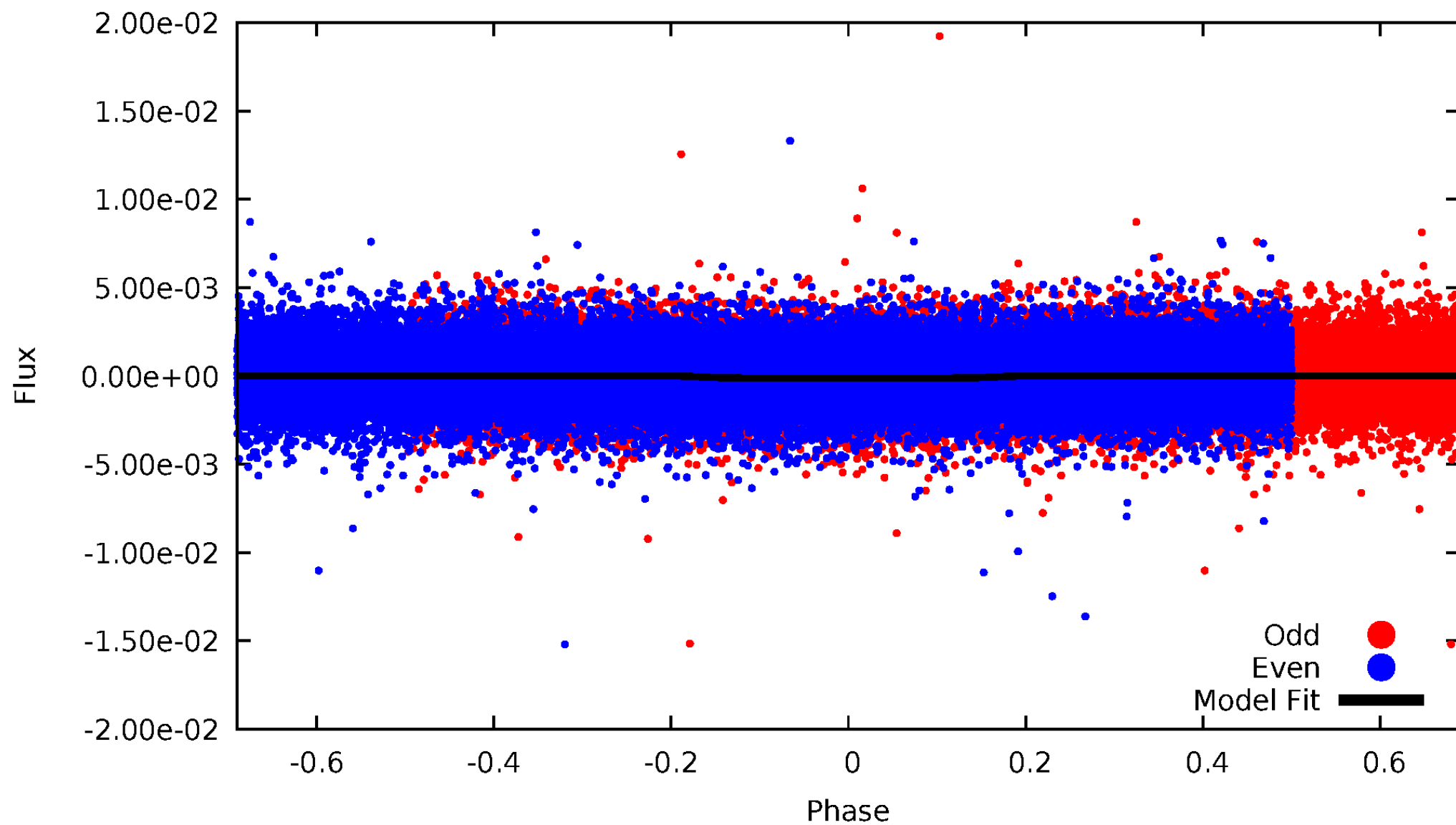


TCE 010213964-01



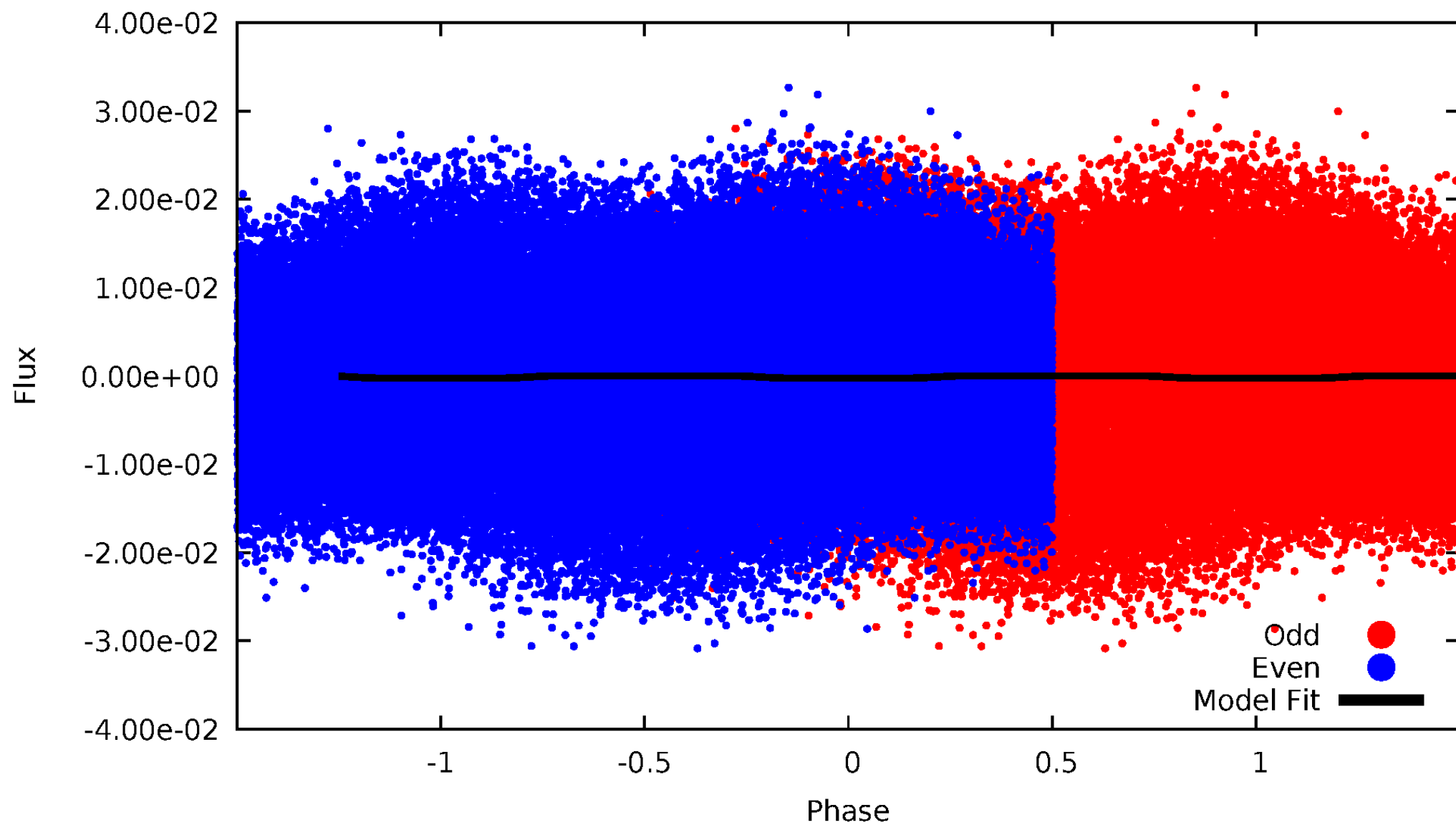
DV Odd/Even

TCE 010213964-01



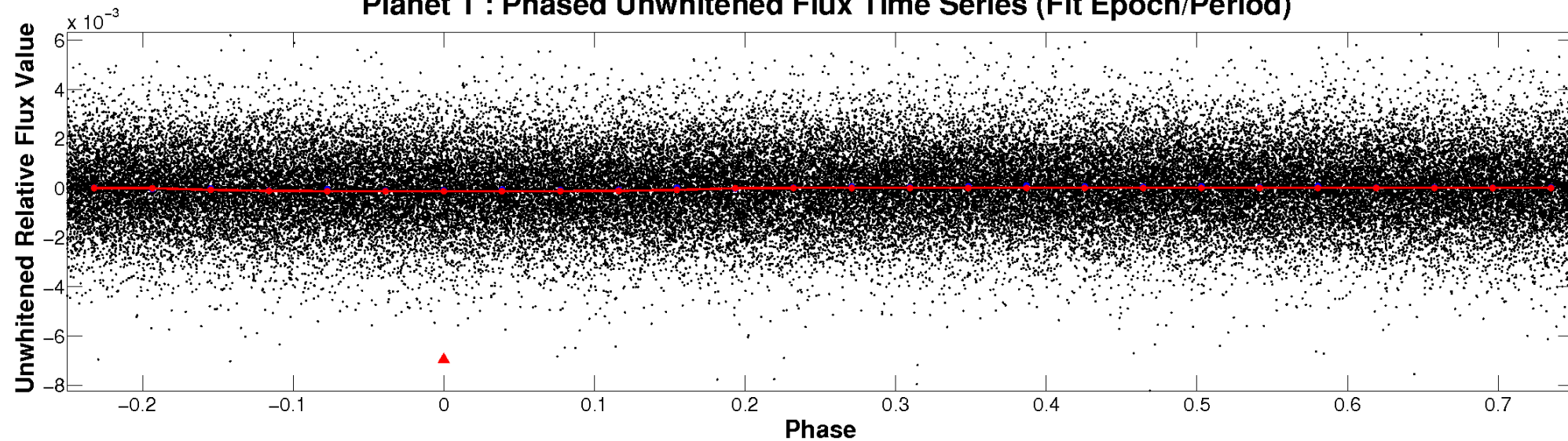
ALT Odd/Even

TCE 010213964-01

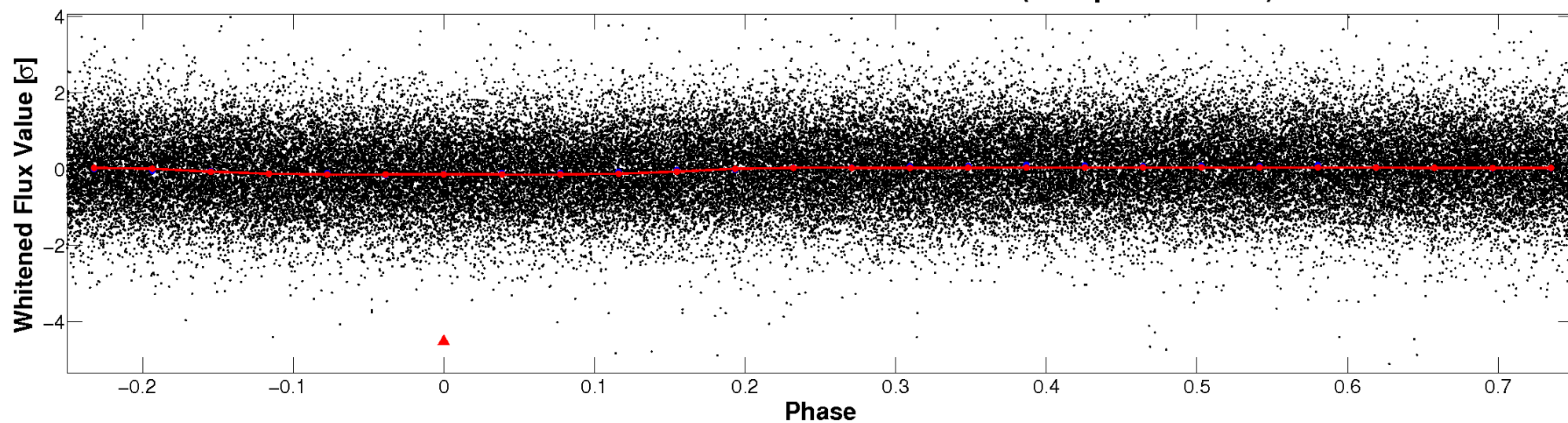


Non-Whitened Vs. Whitened Light Curve

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

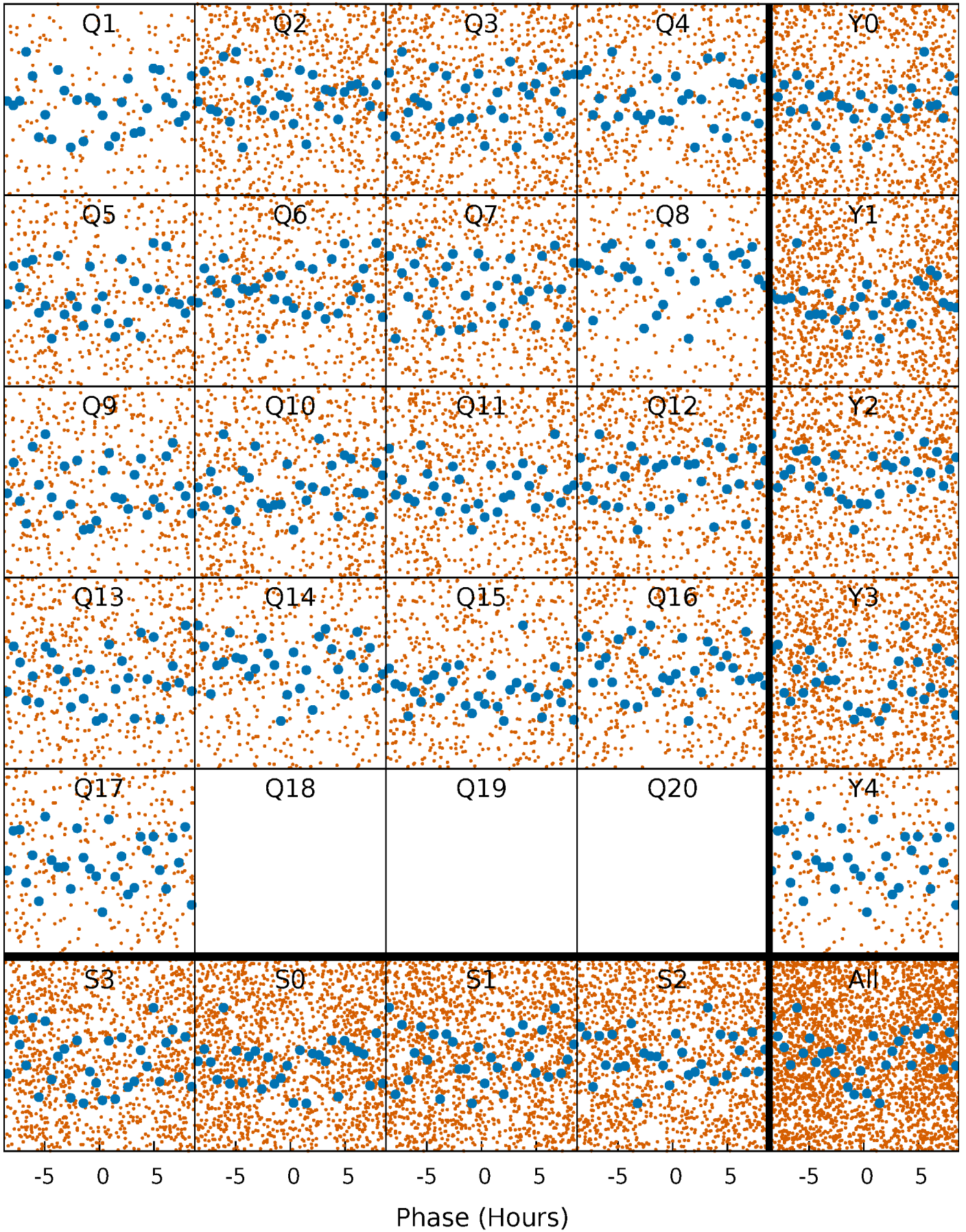


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



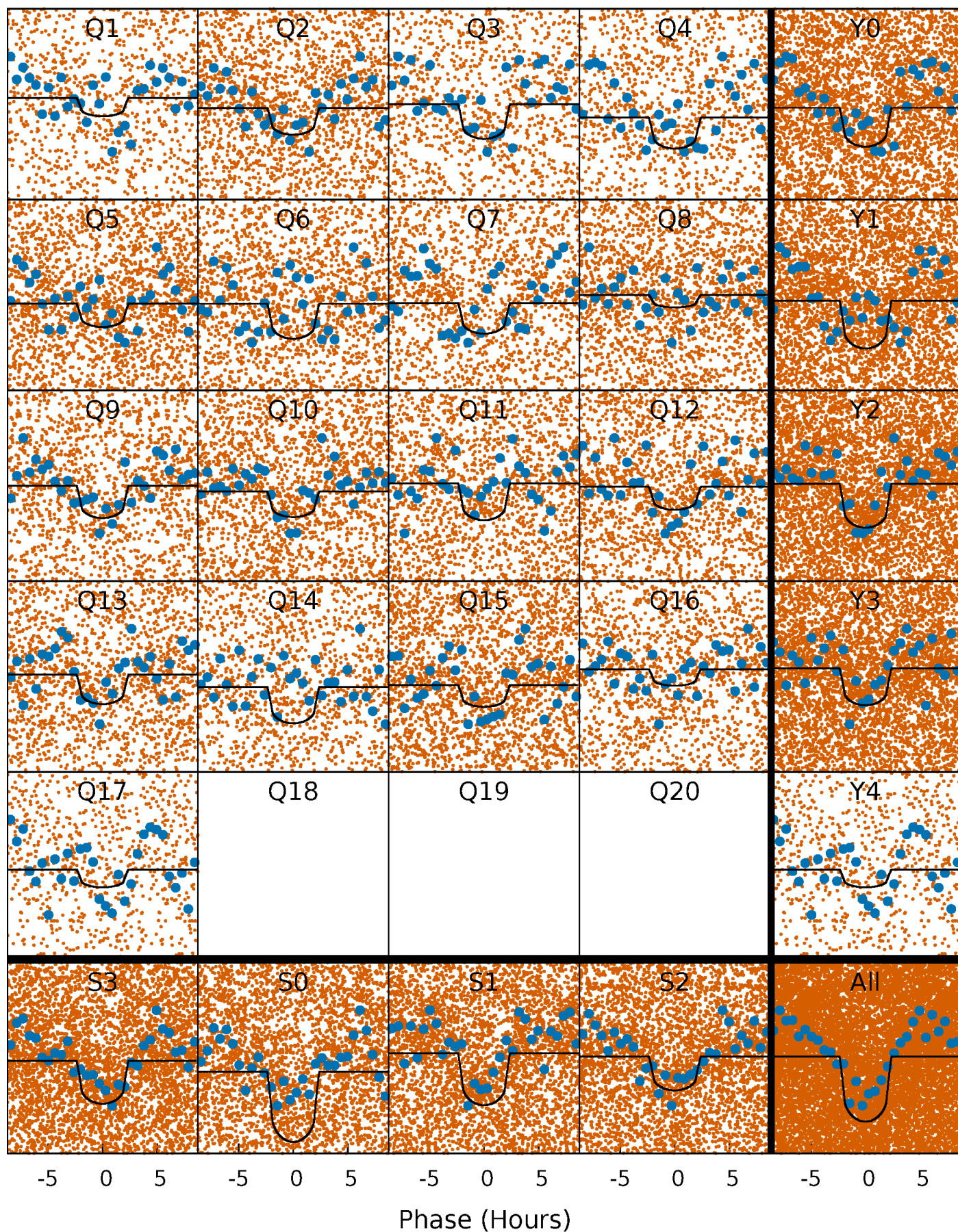
PDC Quarter-Phased Transit Curves

TCE 010213964-01 P= 0.528150 Days $T_0=131.567984$ (BKJD)



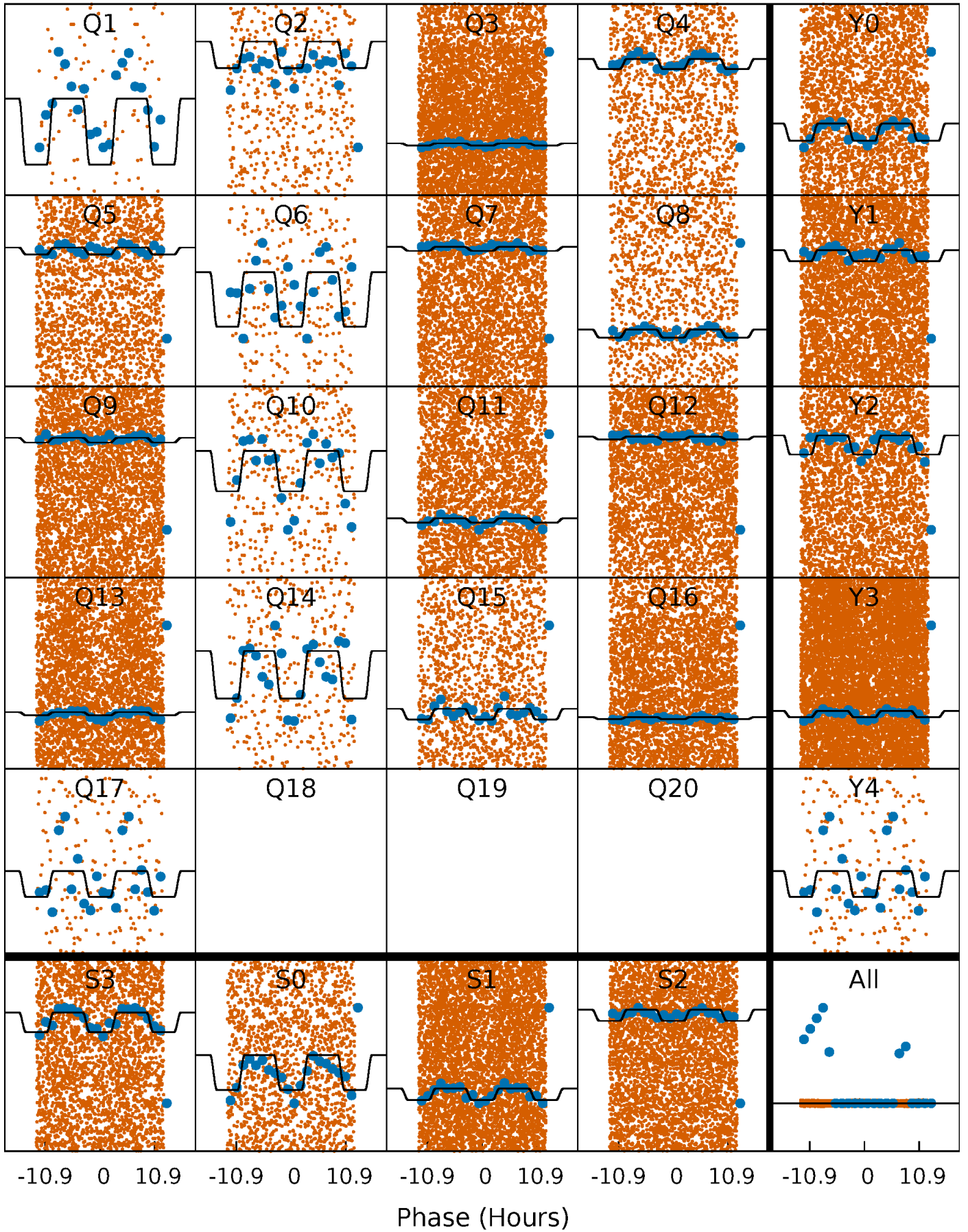
DV Quarter-Phased Transit Curves

TCE 010213964-01 P= 0.528150 Days $T_0=131.567984$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

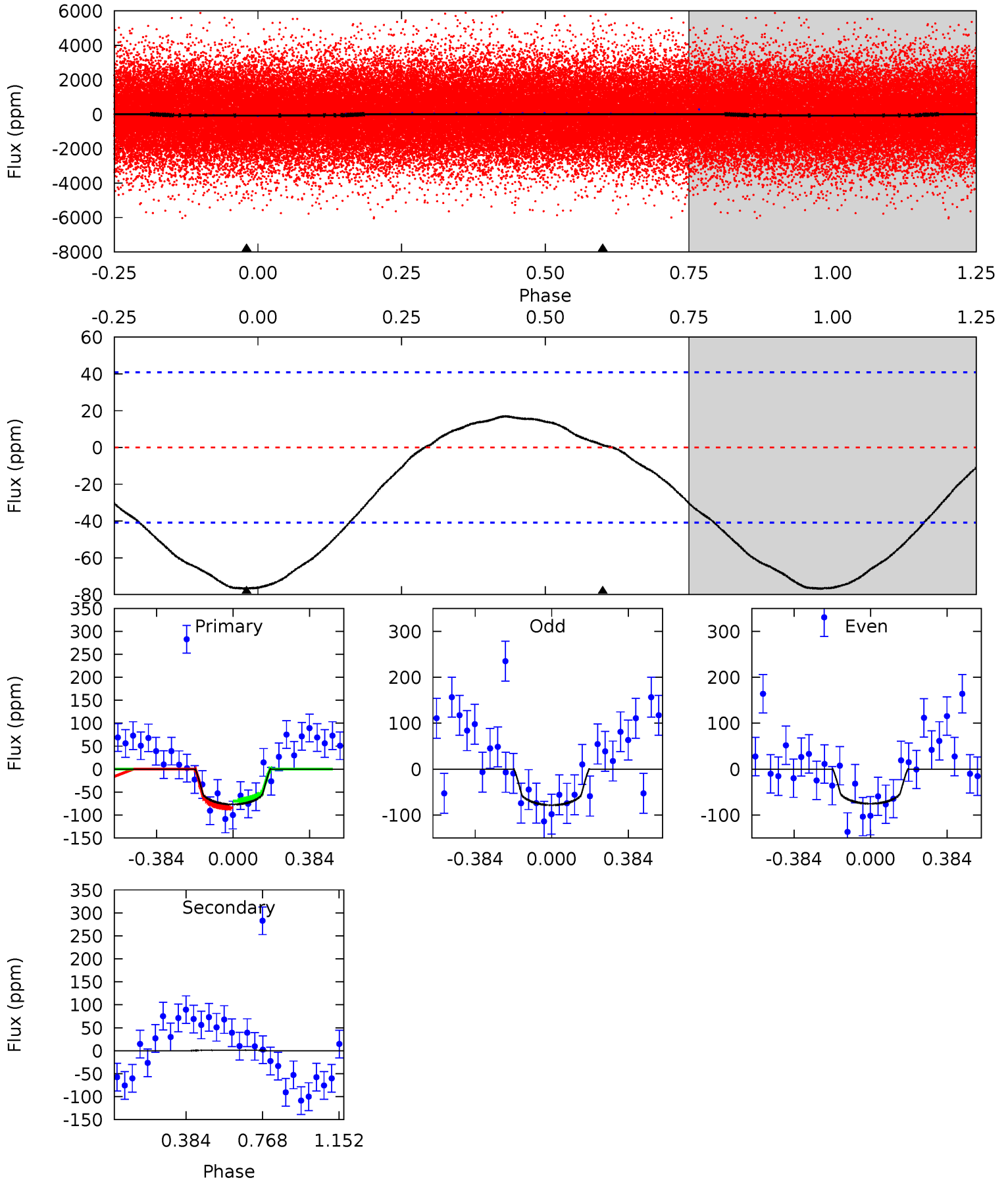
TCE 010213964-01 P= 0.528139 Days $T_0=131.571193$ (BKJD)



DV Model-Shift Uniqueness Test

010213964-01, P = 0.528150 Days, E = 131.039834 Days

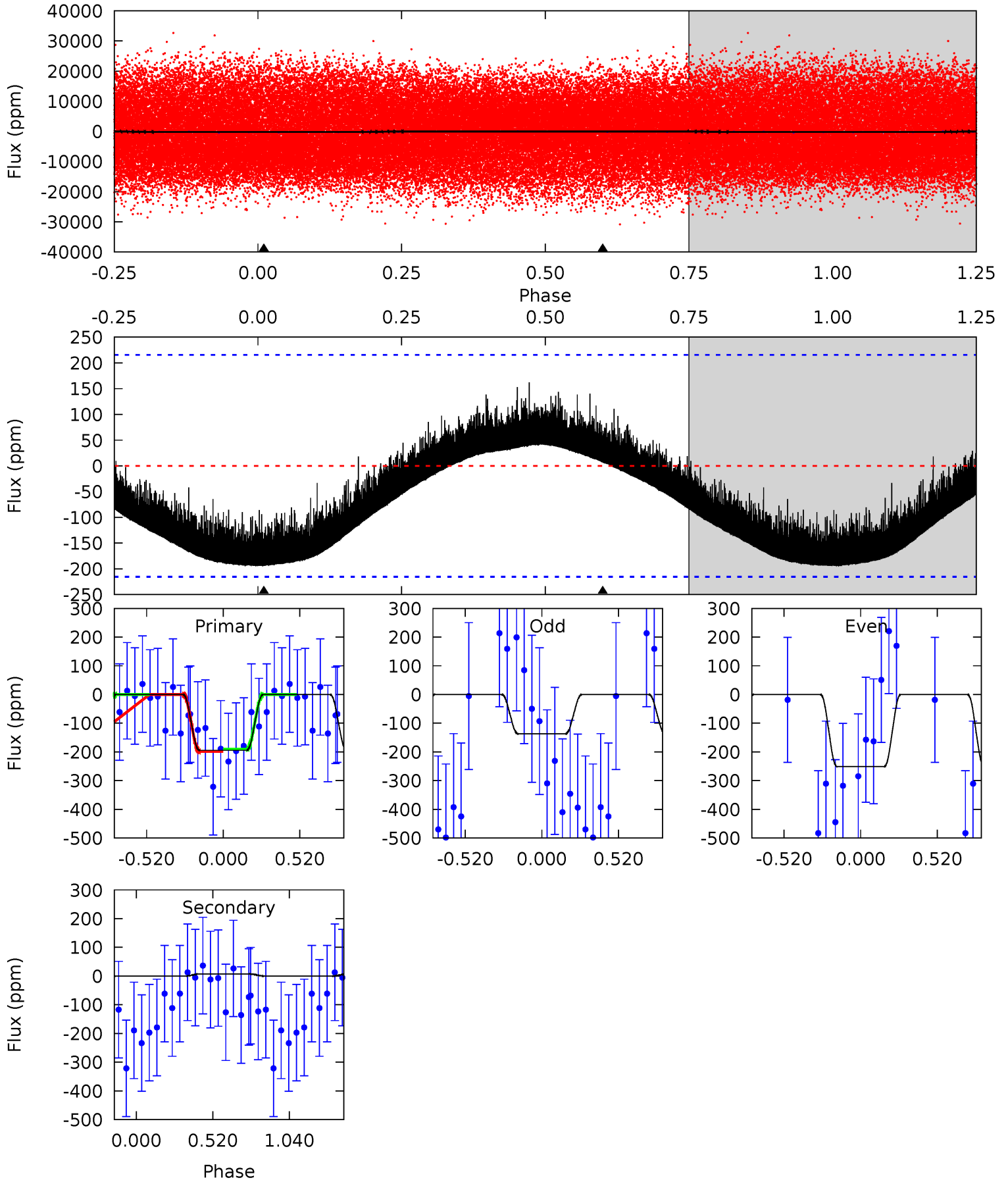
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.04	-0.12	0	0	4.27	0.87	0.69	8.04	8.04	-0.12	-0.12	0.17	0.92	0.18	0.76



Alt Model-Shift Uniqueness Test

010213964-01, P = 0.528139 Days, E = 131.043054 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.79	-0.14	0	0	4.21	0.64	0.44	3.79	3.79	-0.14	-0.14	1.01	0.09	0.46	0.08



Stellar Parameters For KIC 010213964

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7214^{+225}_{-300}	$4.049^{+0.273}_{-0.147}$	$-0.540^{+0.250}_{-0.300}$	$1.813^{+0.458}_{-0.610}$	$1.342^{+0.193}_{-0.257}$	$0.318^{+0.543}_{-0.130}$
	+3%/-4%	+7%/-4%	+46%/-56%	+25%/-34%	+14%/-19%	+171%/-41%
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 010213964-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	1 ± 10	$2.10^{+1.54}_{-1.21}$	4962^{+382}_{-473}	-4322^{+1356}_{-859}	$-0.009^{+0.266}_{-0.466}$
Alt.	7 ± 51	$3.00^{+1.53}_{-1.48}$	4973^{+395}_{-403}	-4382^{+9013}_{-1298}	$-0.041^{+0.856}_{-0.865}$

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 $A_{obs} \gg 1.0$

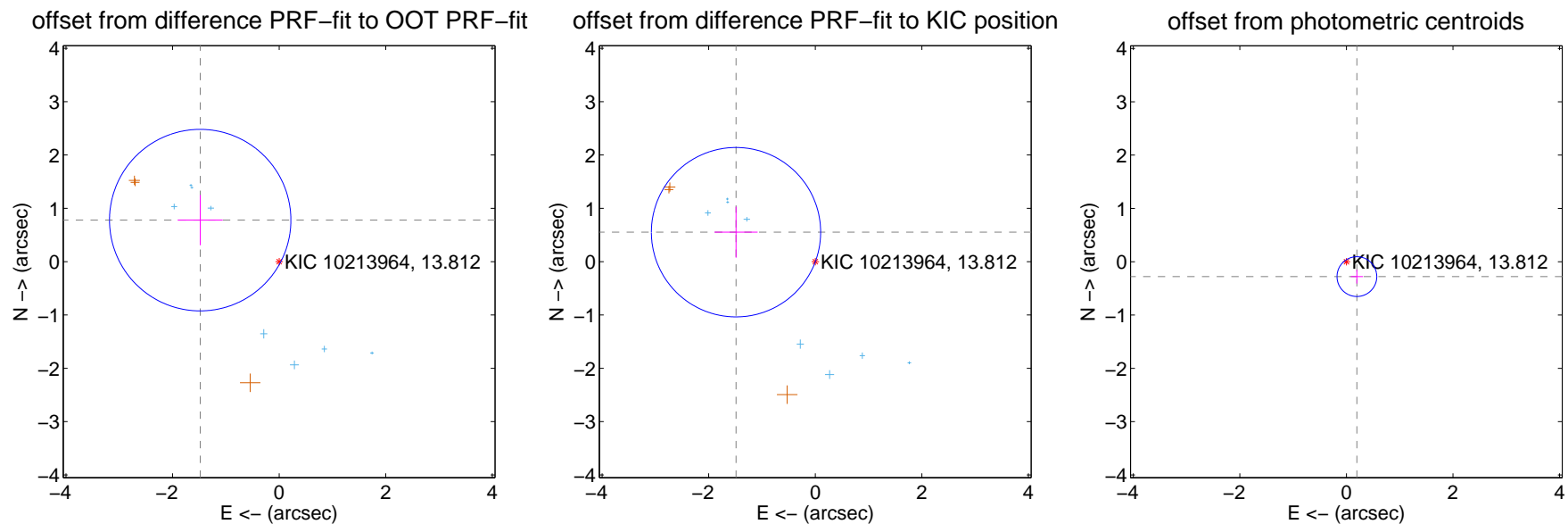
DV Centroid Data

Supplemental centroid analysis for 010213964-01. Kepler magnitude: 13.81. Transit SNR 19.56

There are 8 quarters with good PRF difference image offsets

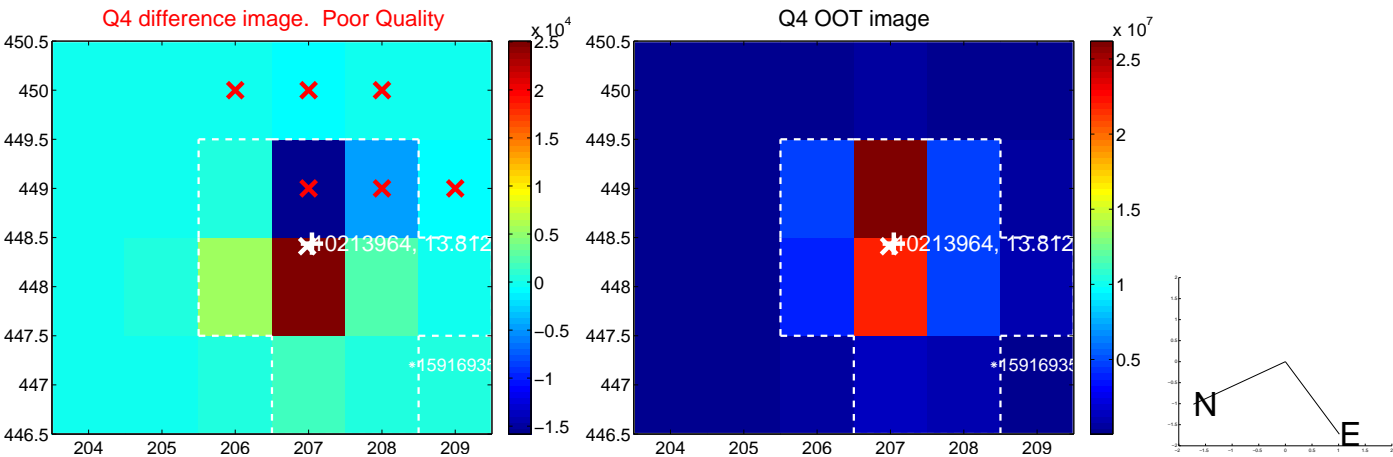
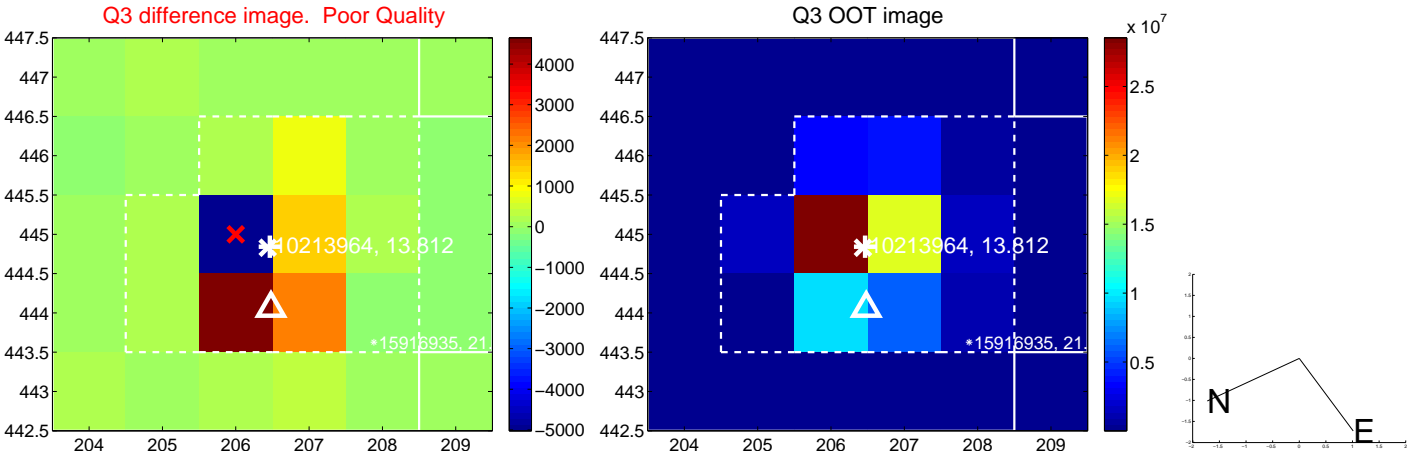
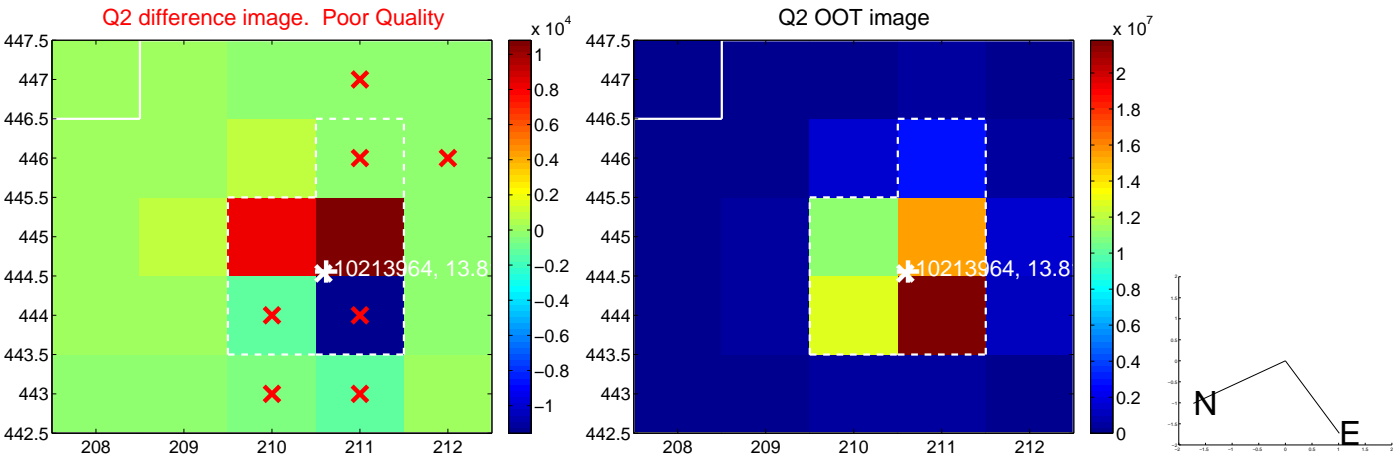
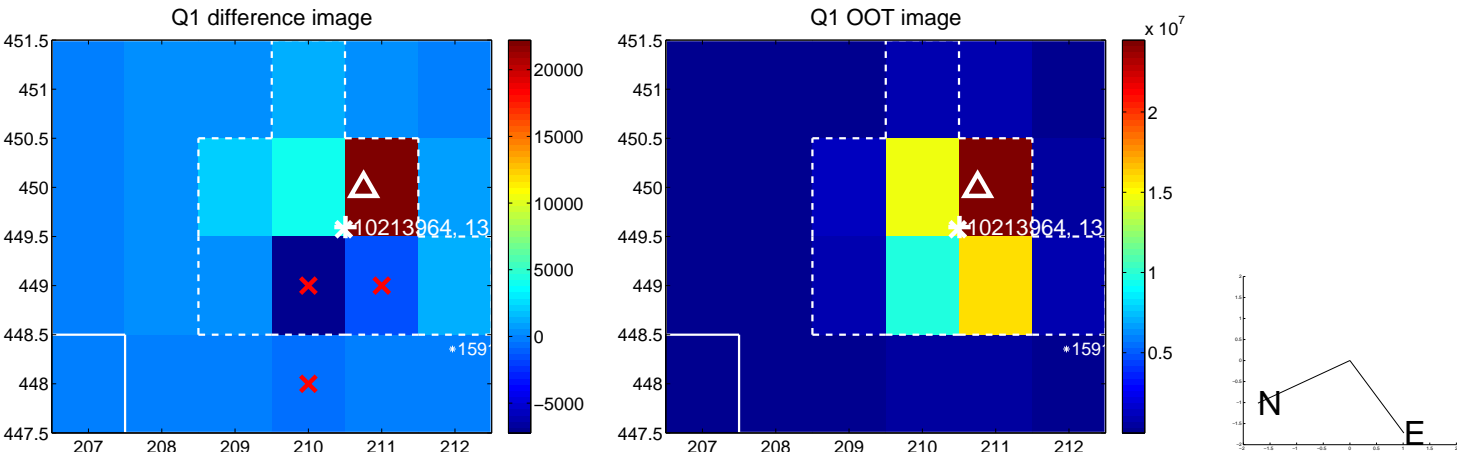
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.674 ± 0.567	2.95	1.482 ± 0.422	0.778 ± 0.470
PRF-fit source offset from KIC position	1.587 ± 0.529	3.00	1.488 ± 0.406	0.552 ± 0.478
photometric centroid source offset	0.34 ± 0.12	2.75	-0.20 ± 0.11	-0.28 ± 0.13

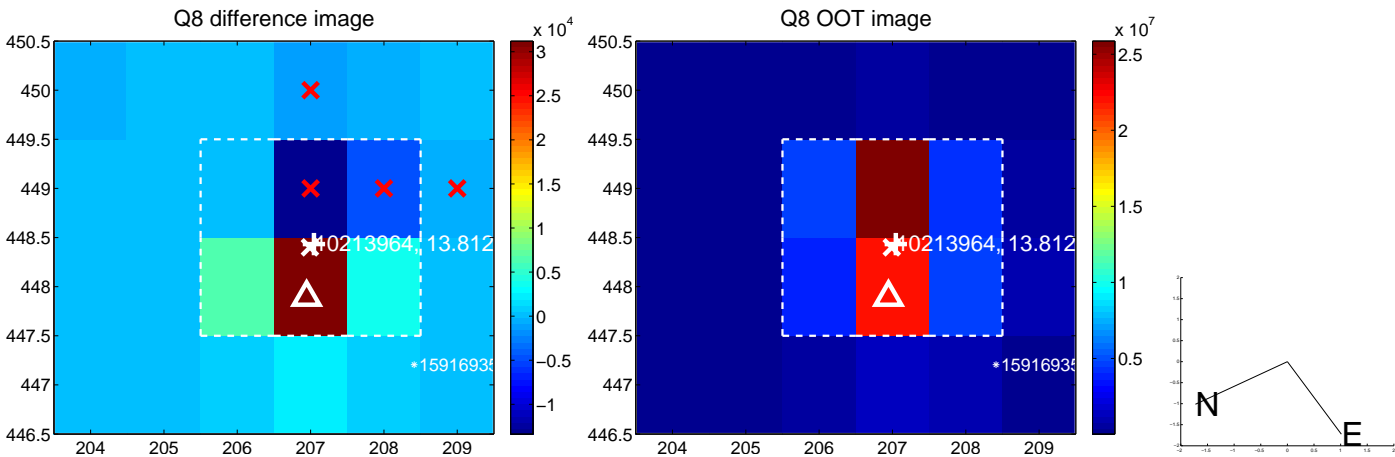
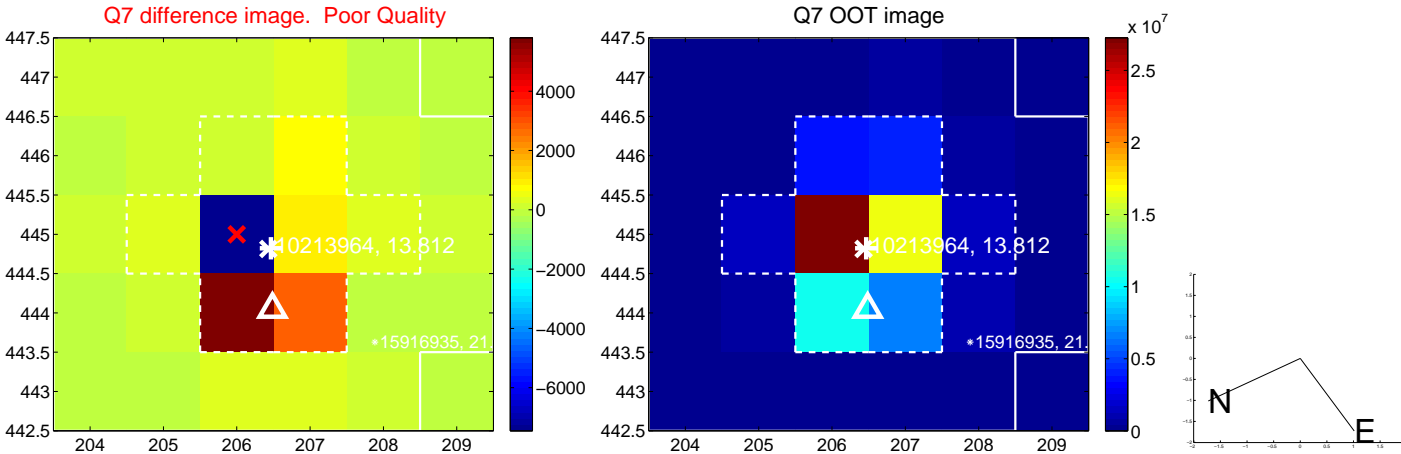
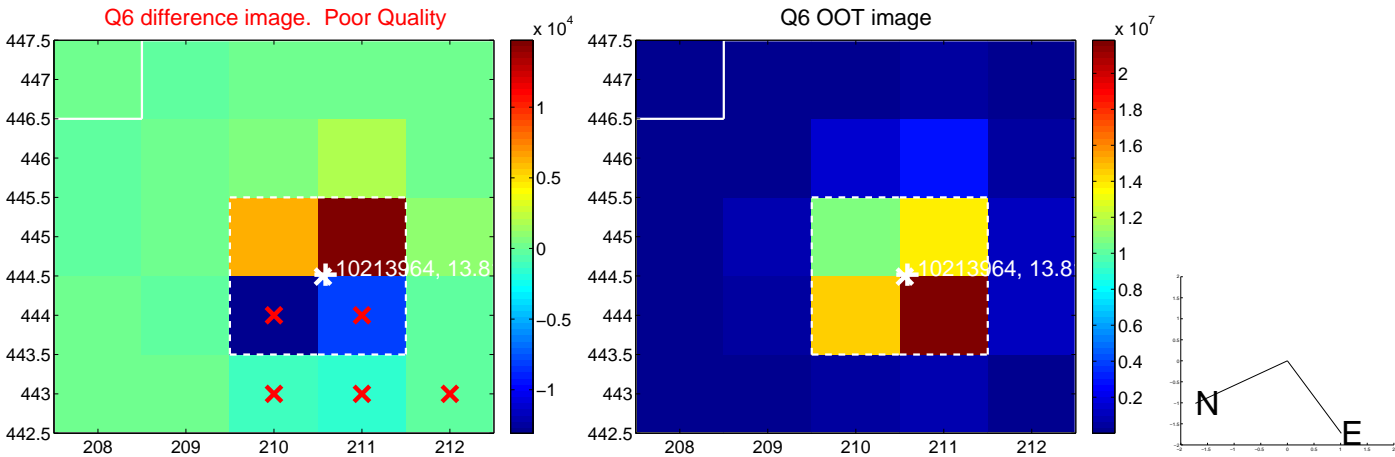
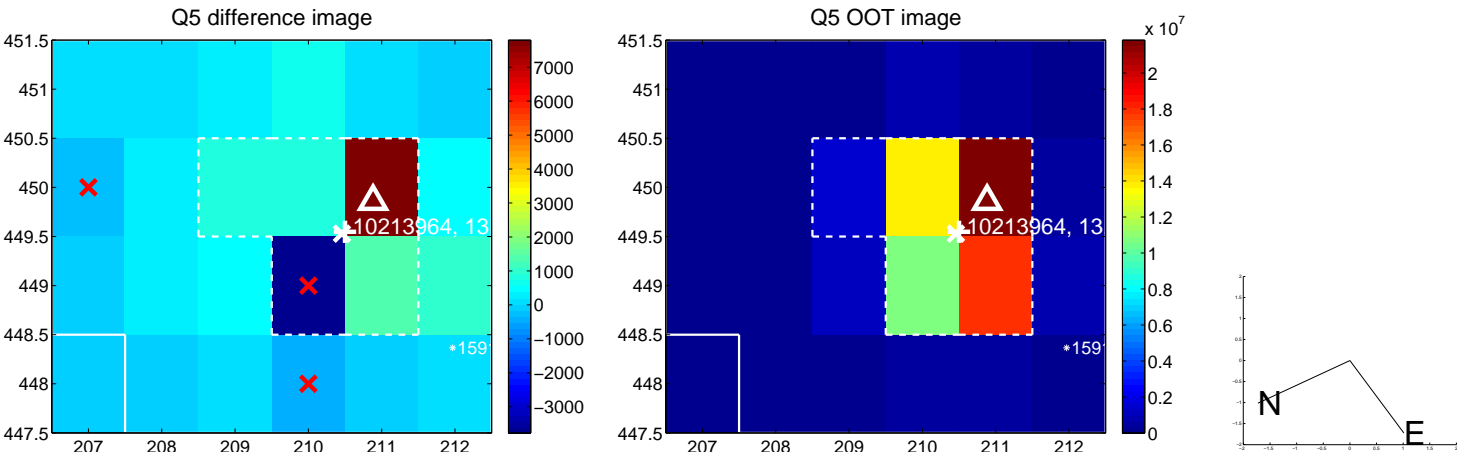


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

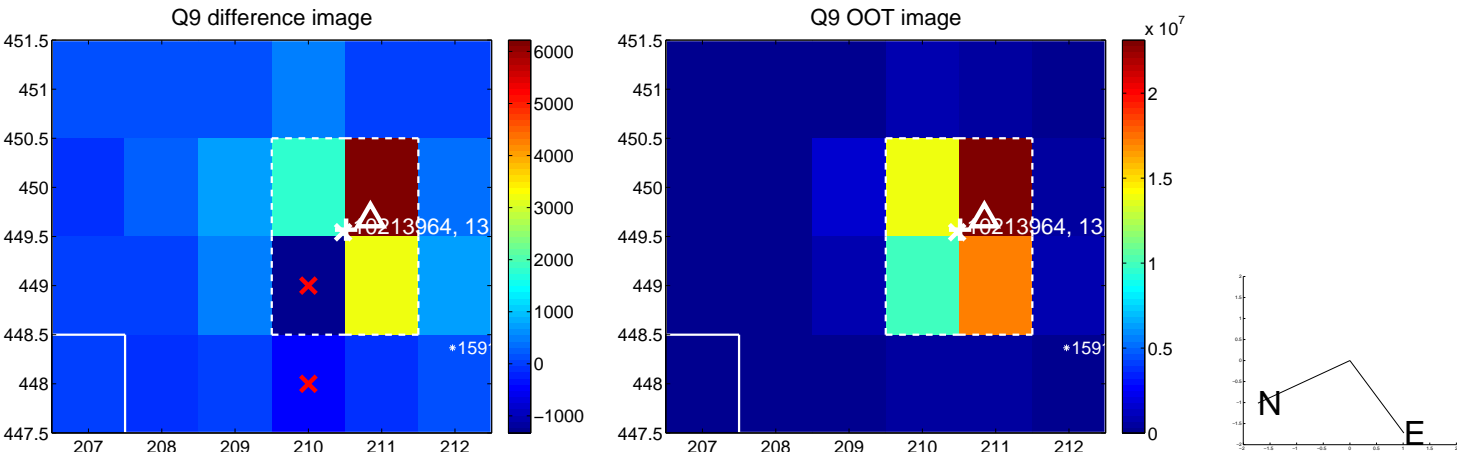
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



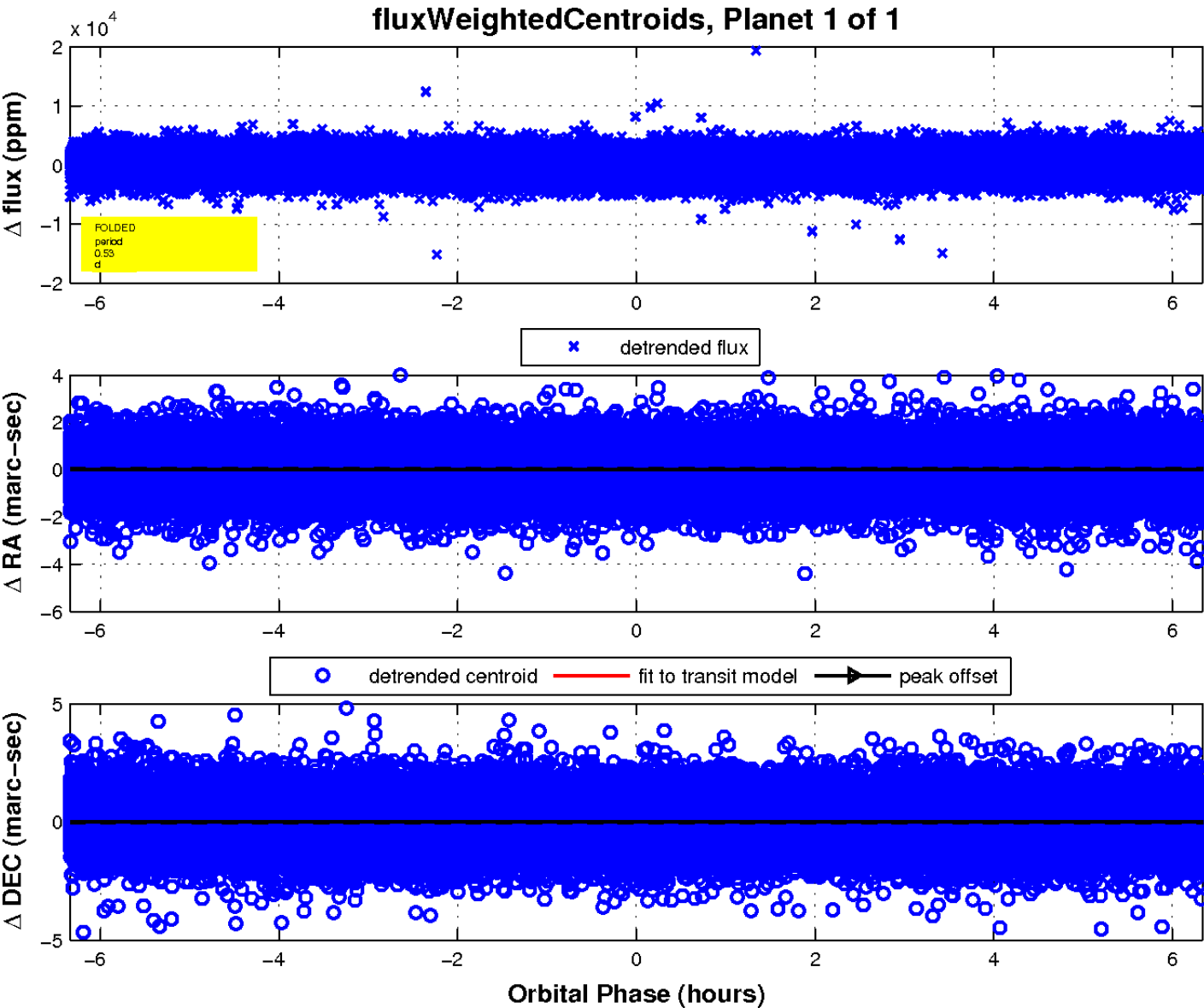
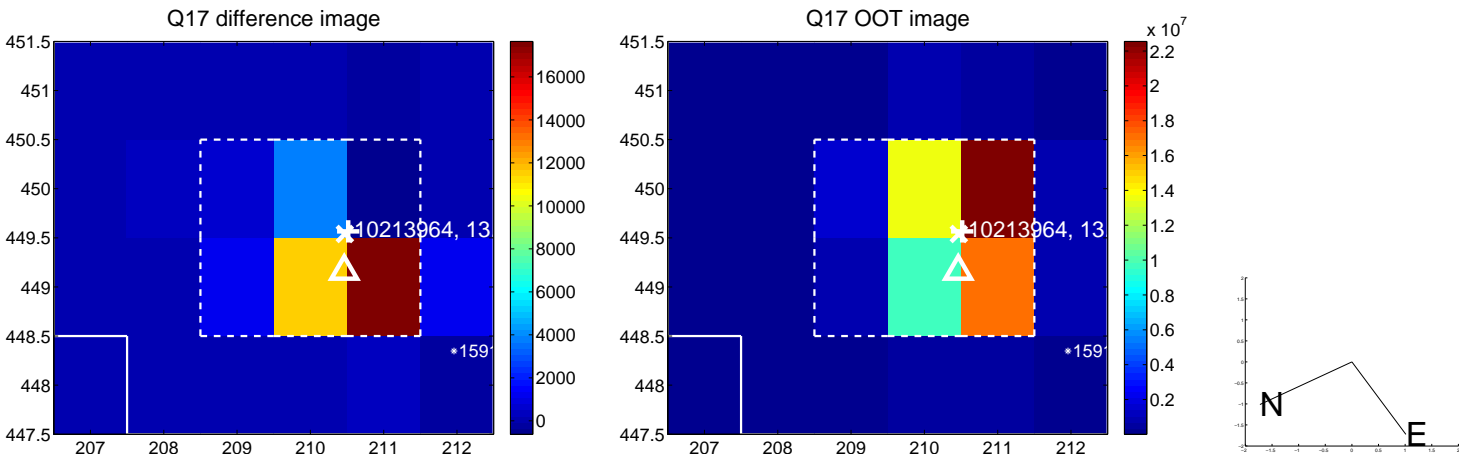
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

