

KIC 004372961

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})
004372961-01	OBS	6410.01	2.537854	132.361426	0.0	7.275	8.4	0.0	2.25	6440	0.04	4747.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004372961-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_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.

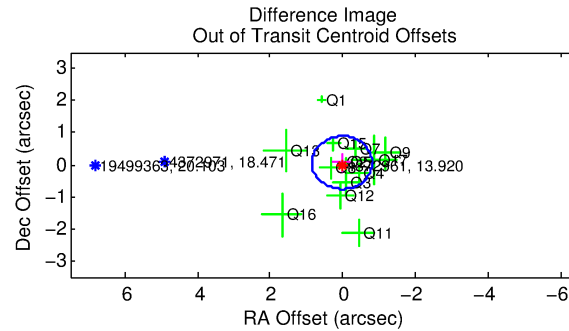
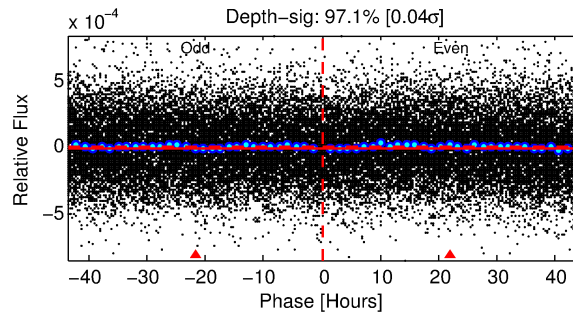
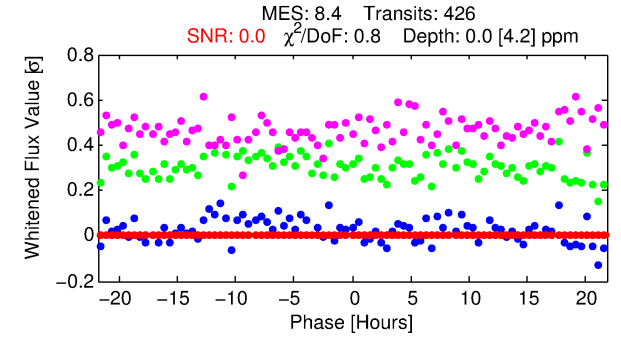
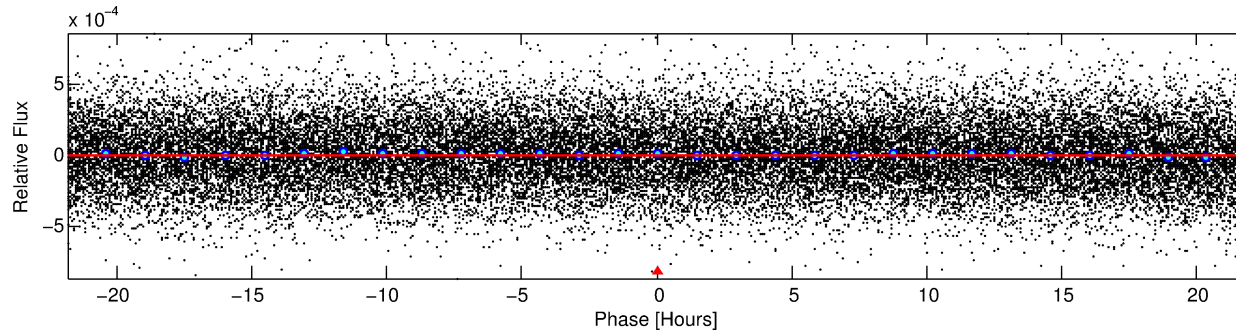
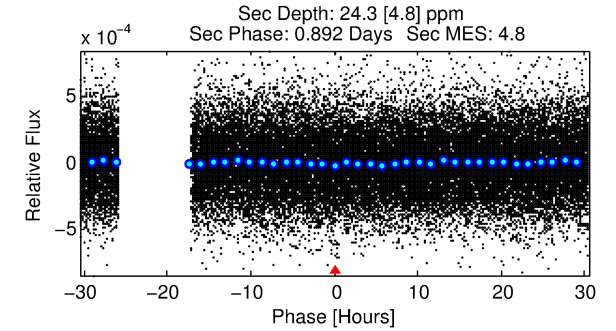
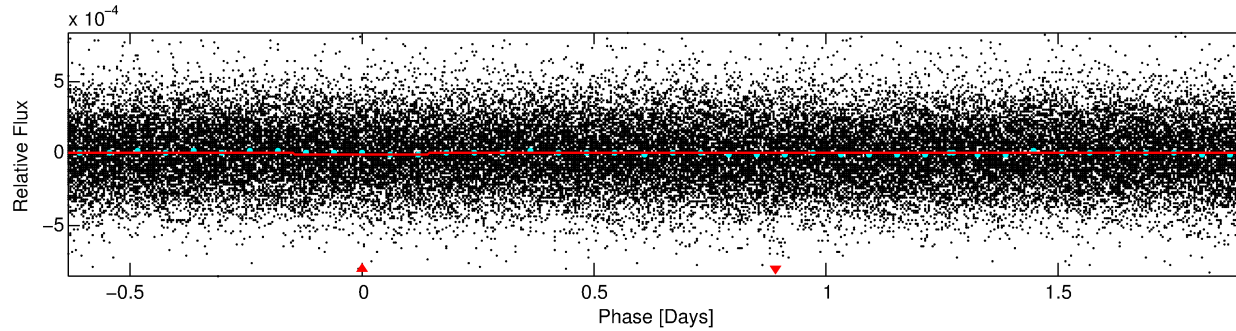
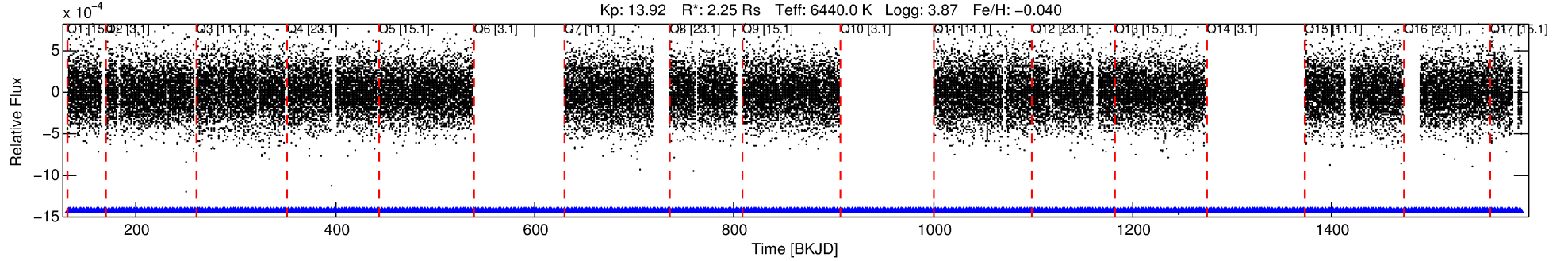
Ephemeris Match Information For 004372961-01

No Significant Match Found

DV One-Page Summary

KIC: 4372961 Candidate: 1 of 1 Period: 2.538 d
KOI: K06410 Corr: No Ephemeris Match

Kp: 13.92 R*: 2.25 Rs Teff: 6440.0 K Logg: 3.87 Fe/H: -0.040



DV Fit Results:

Period = 2.53785 [0.05050] d
Epoch = 132.3614 [10.8768] BKJD
Rp/R* = 0.0001 [0.0133]
a/R* = 2.17 [47.71]
b = 0.65 [32.37]
Seff = 4747.35 [1756.18]
Teq = 2117 [196] K
Rp = 0.04 [3.28] Re
a = 0.0406 [0.0096] AU
Ag = 16457.62 [2943325.26] [0.01]
Teffp = 37066 [1657279] K [0.02]

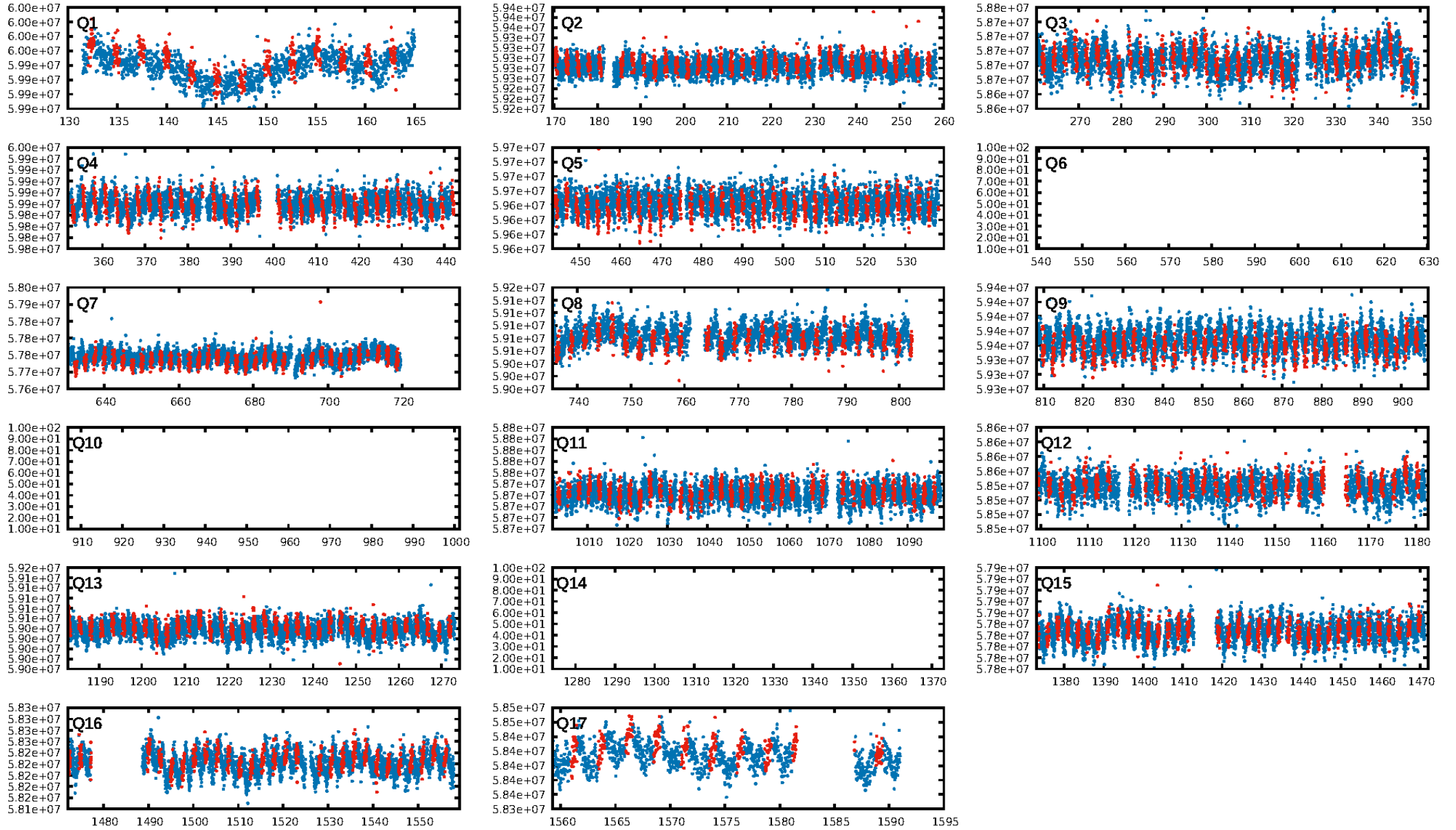
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.31e-14
RollingBand-fgt: 1.00 [403/403]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.068 arcsec [0.25σ]
KicOffset-rm: 0.143 arcsec [0.56σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.36 [5/14]
DiffImageOverlap-fno: 1.00 [14/14]

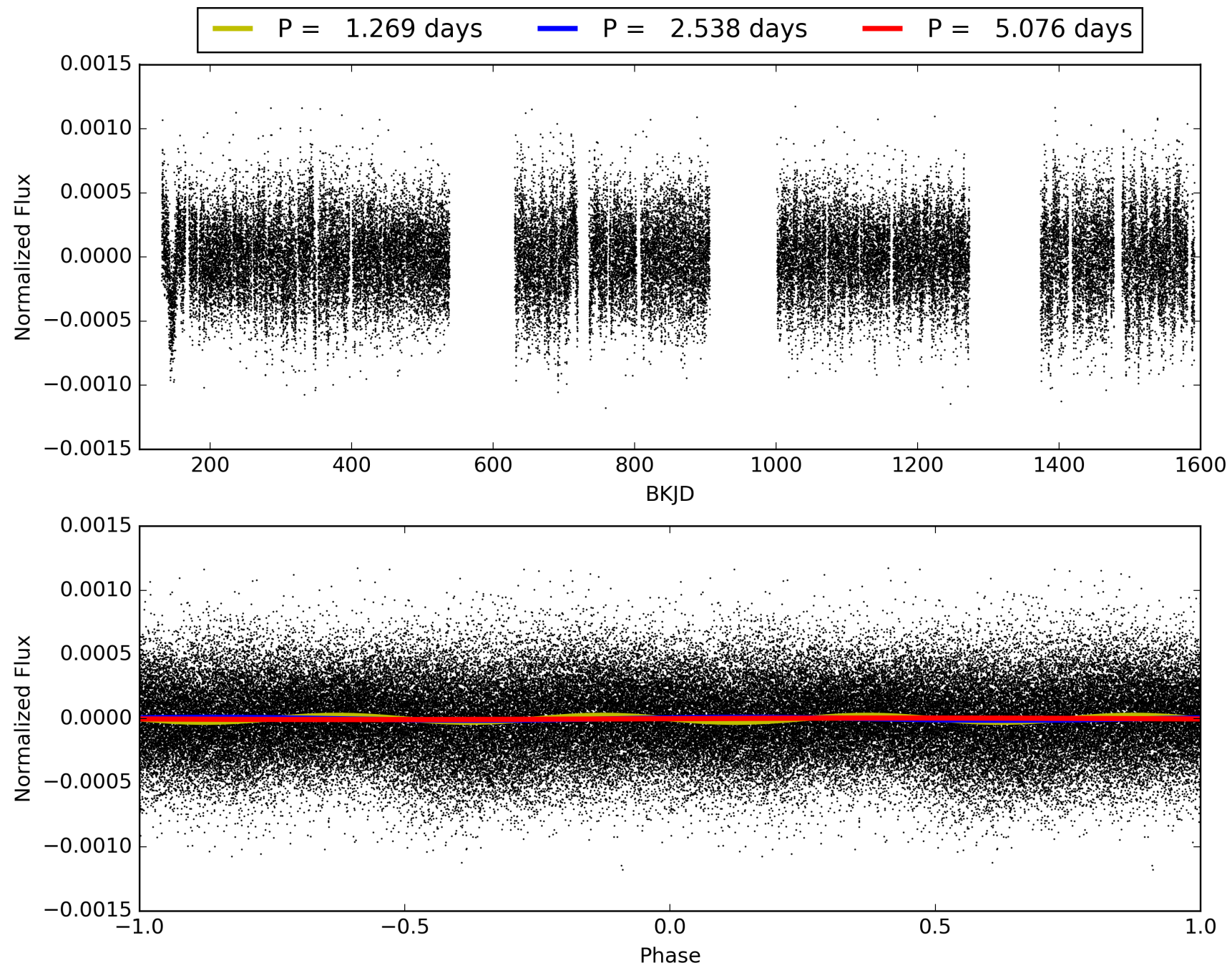
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:48:29 Z

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

TCE 004372961-01, PDC Light Curves

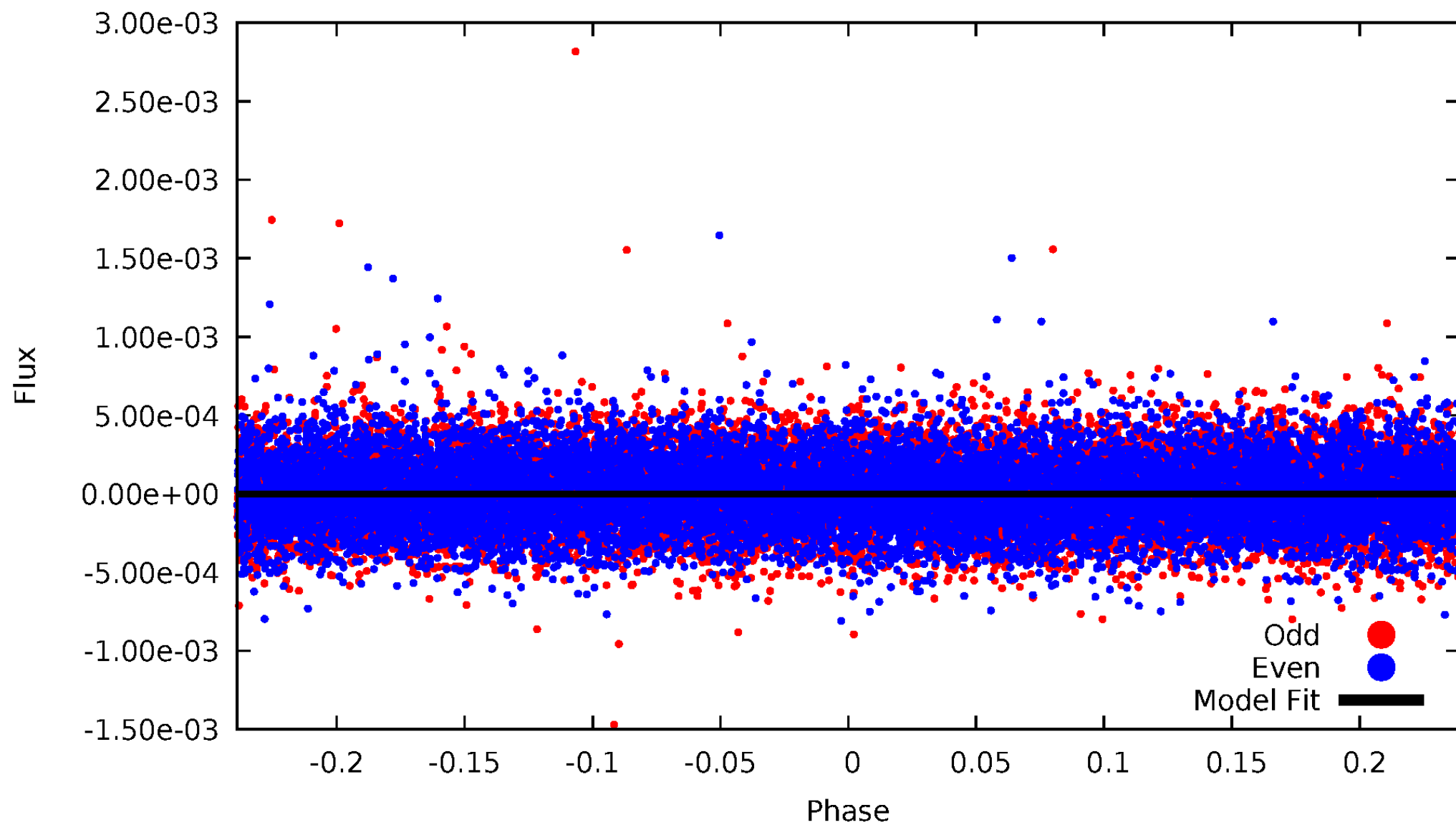


TCE 004372961-01



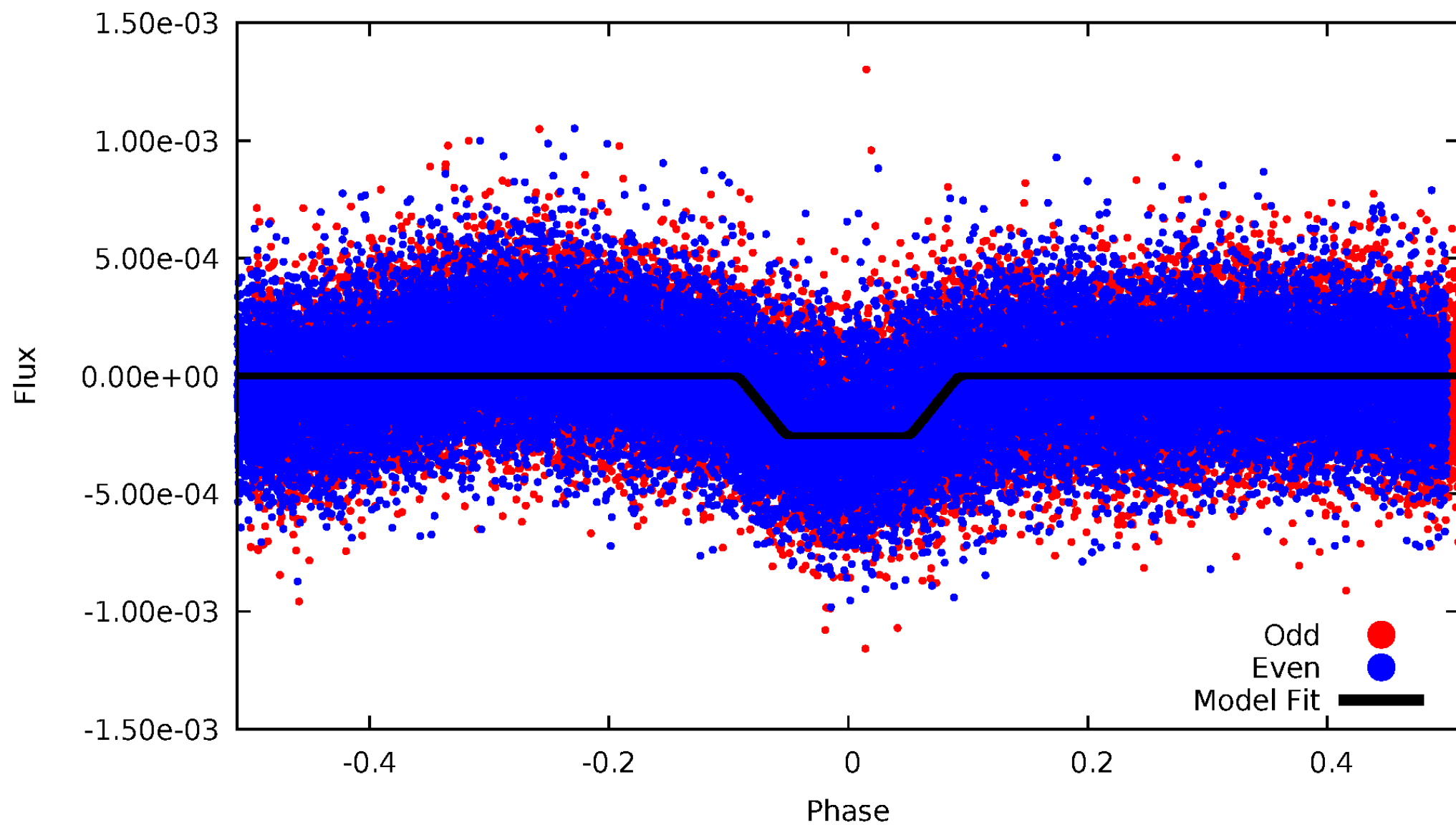
DV Odd/Even

TCE 004372961-01



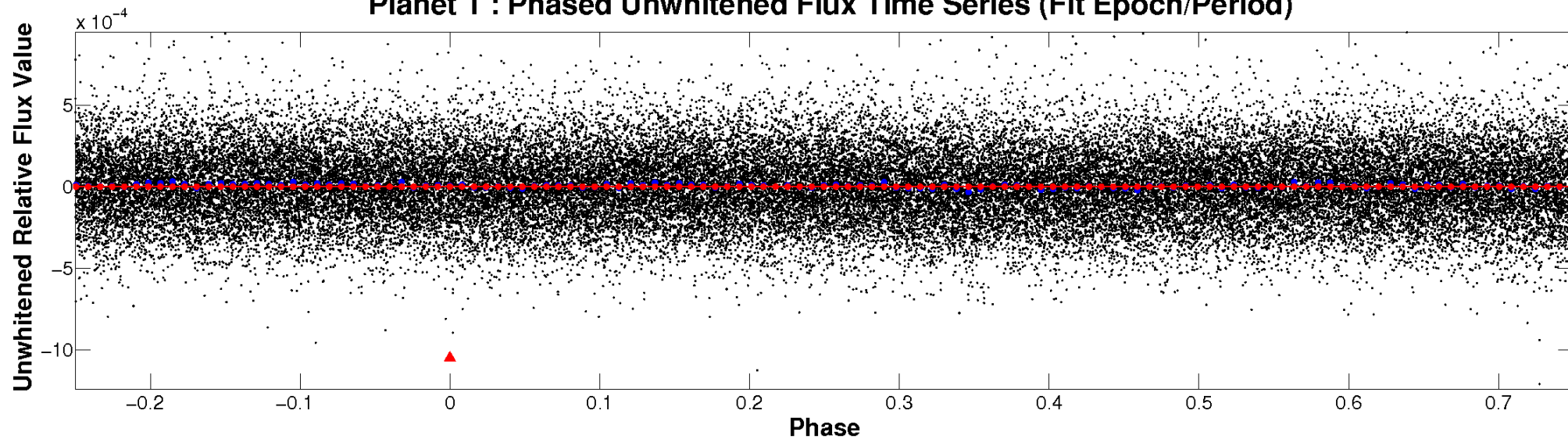
ALT Odd/Even

TCE 004372961-01

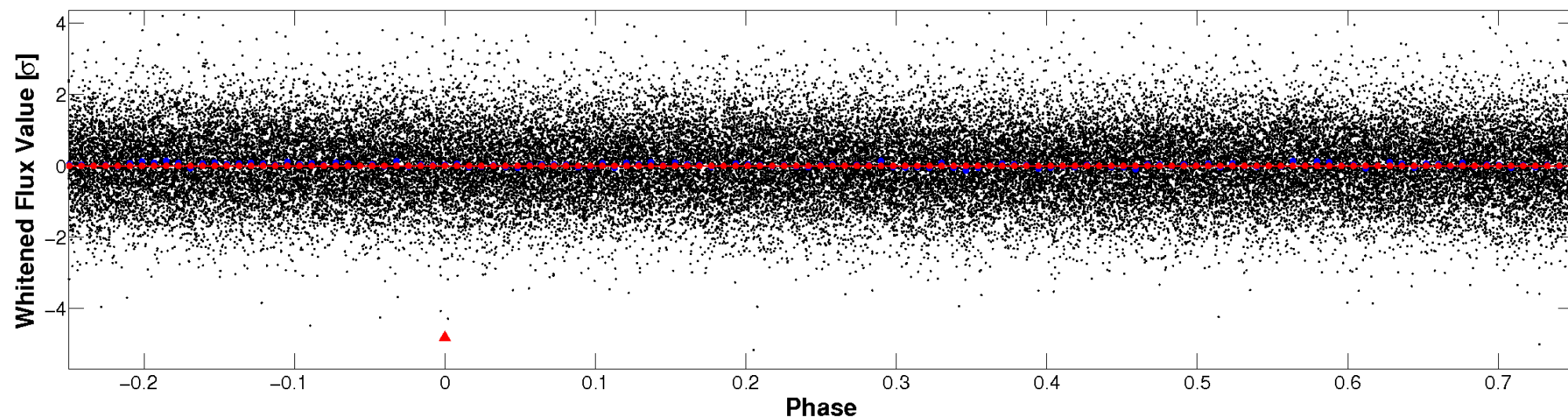


Non-Whitened Vs. Whitened Light Curve

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

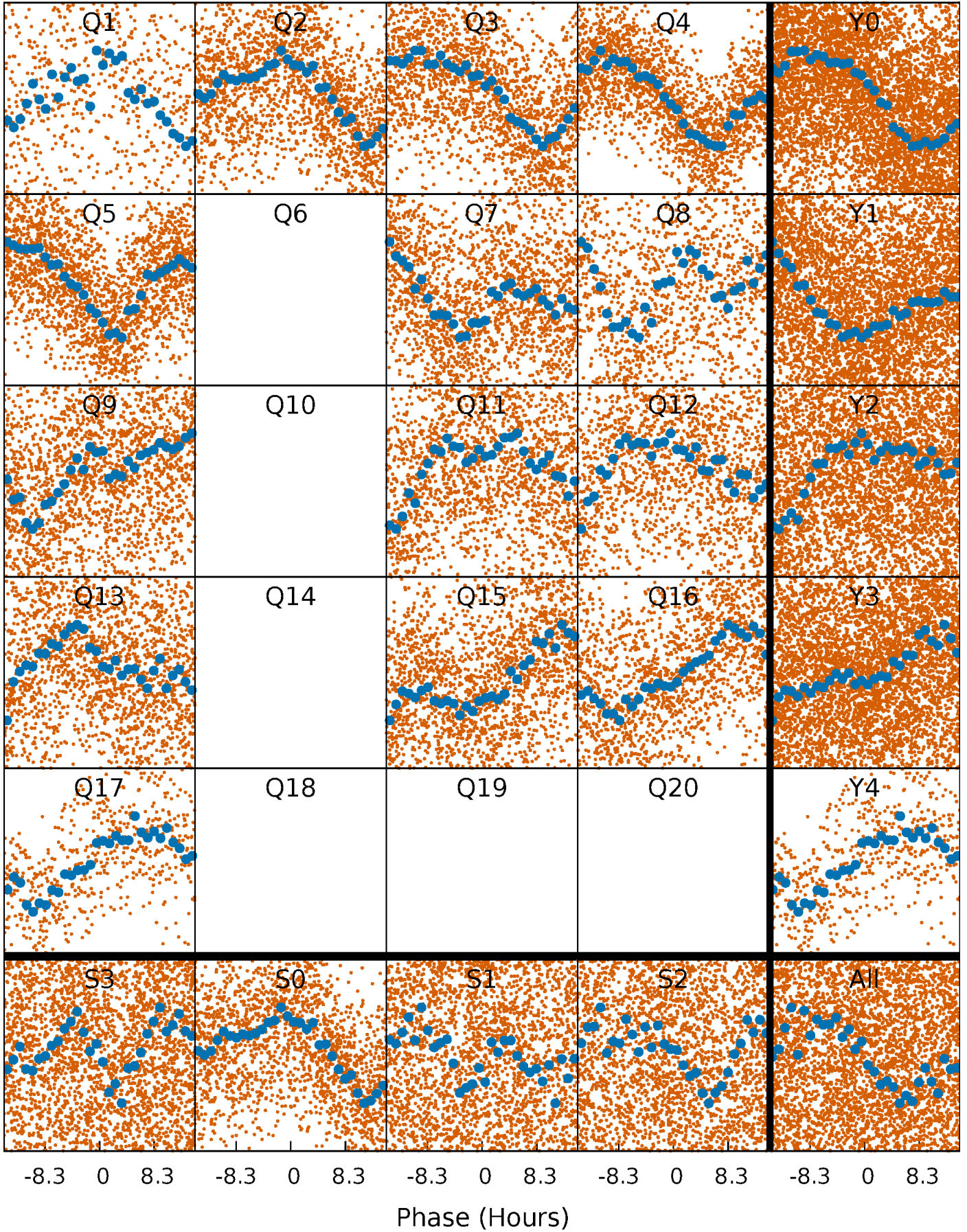


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



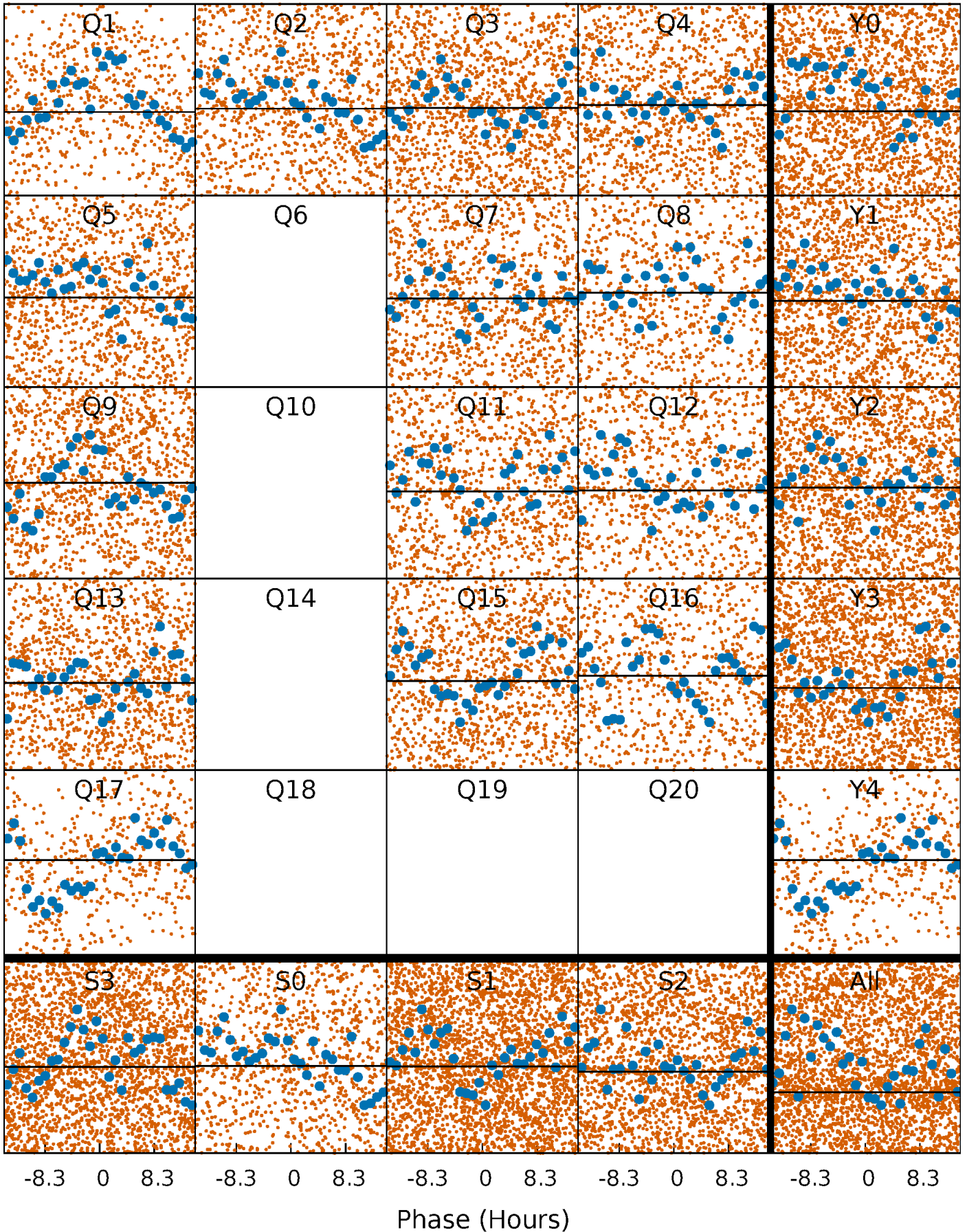
PDC Quarter-Phased Transit Curves

TCE 004372961-01 P= 2.537854 Days $T_0=132.361426$ (BKJD)



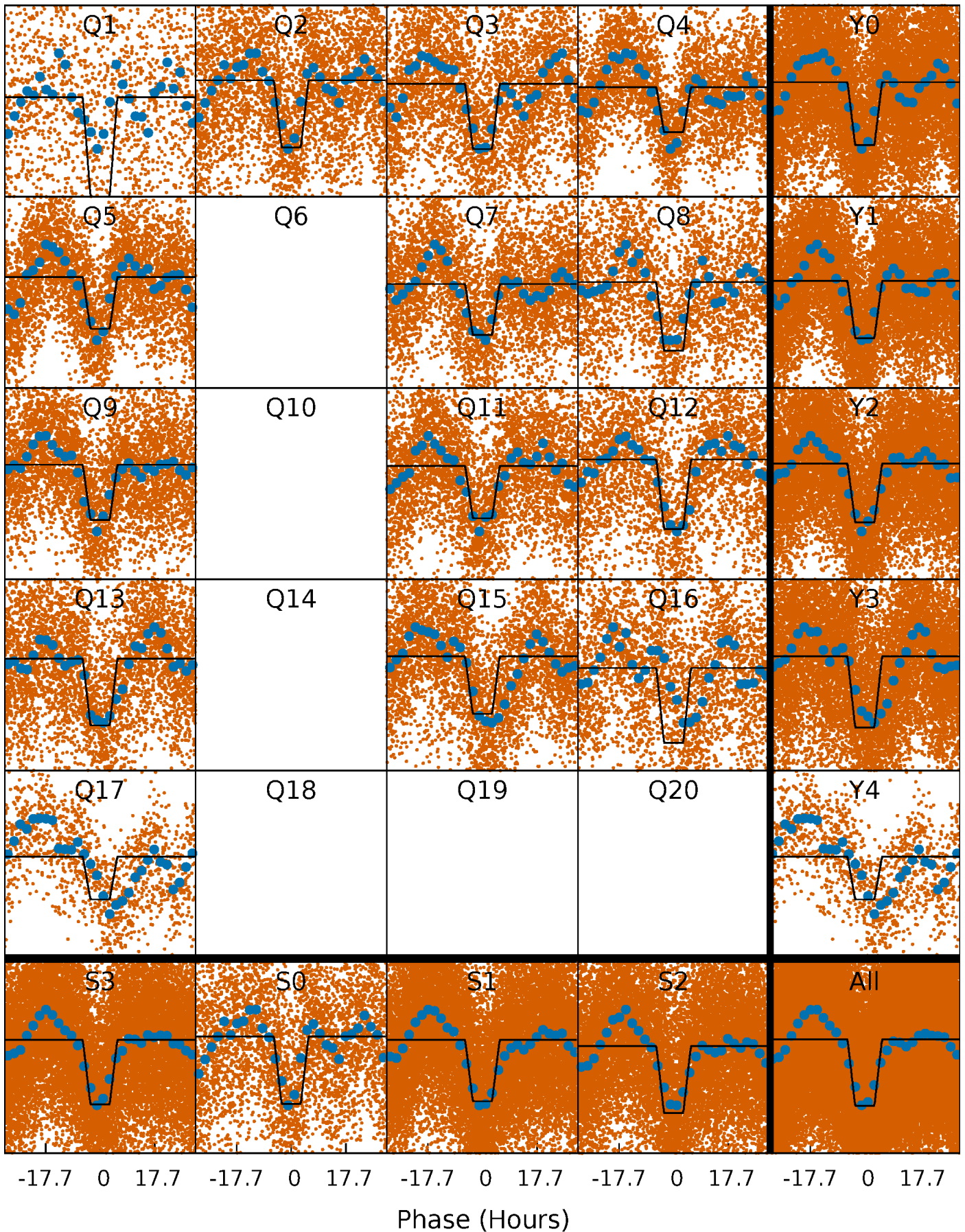
DV Quarter-Phased Transit Curves

TCE 004372961-01 P= 2.537854 Days $T_0=132.361426$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

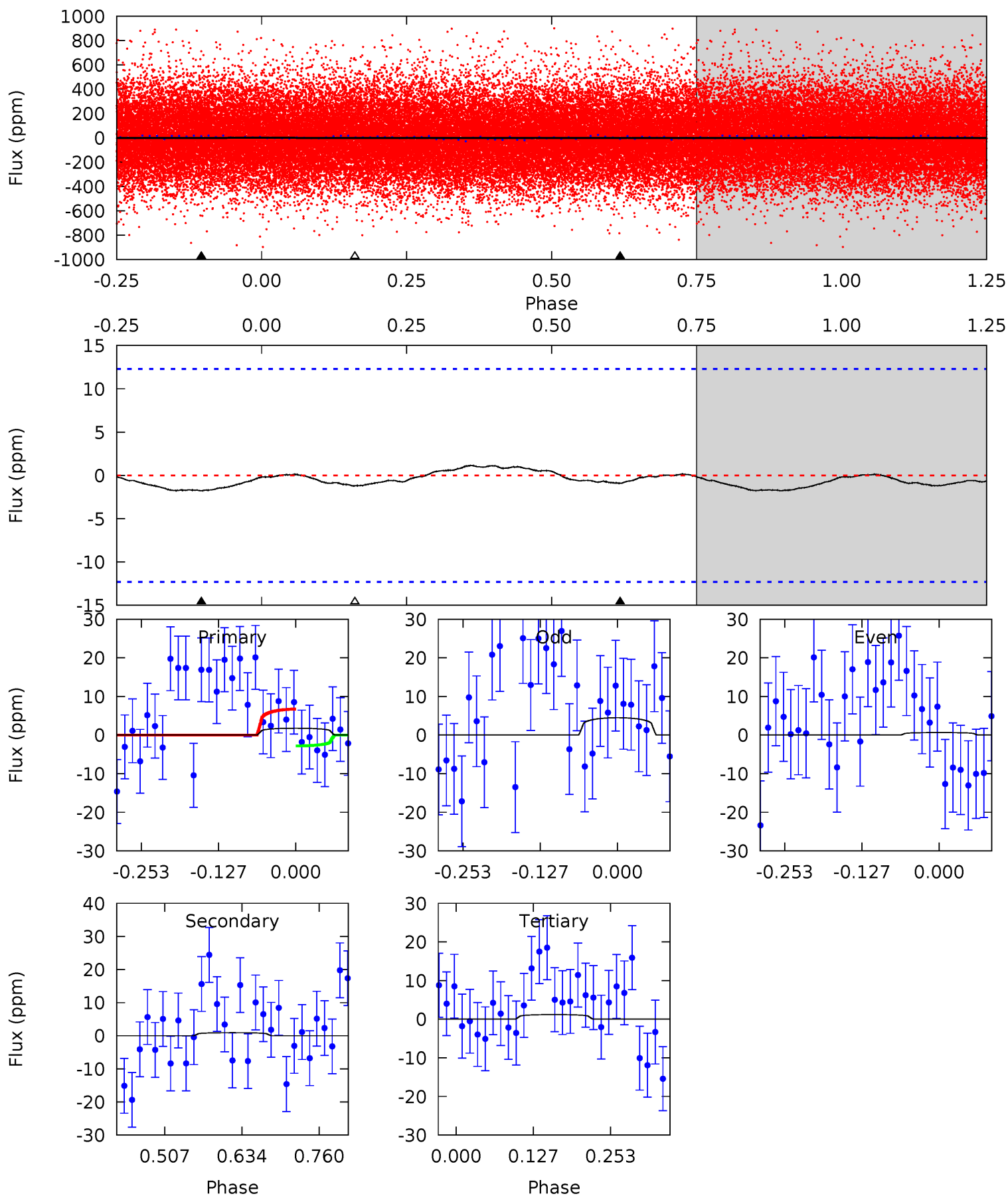
TCE 004372961-01 P= 2.534284 Days $T_0=132.979552$ (BKJD)



DV Model-Shift Uniqueness Test

004372961-01, P = 2.537854 Days, E = 129.823572 Days

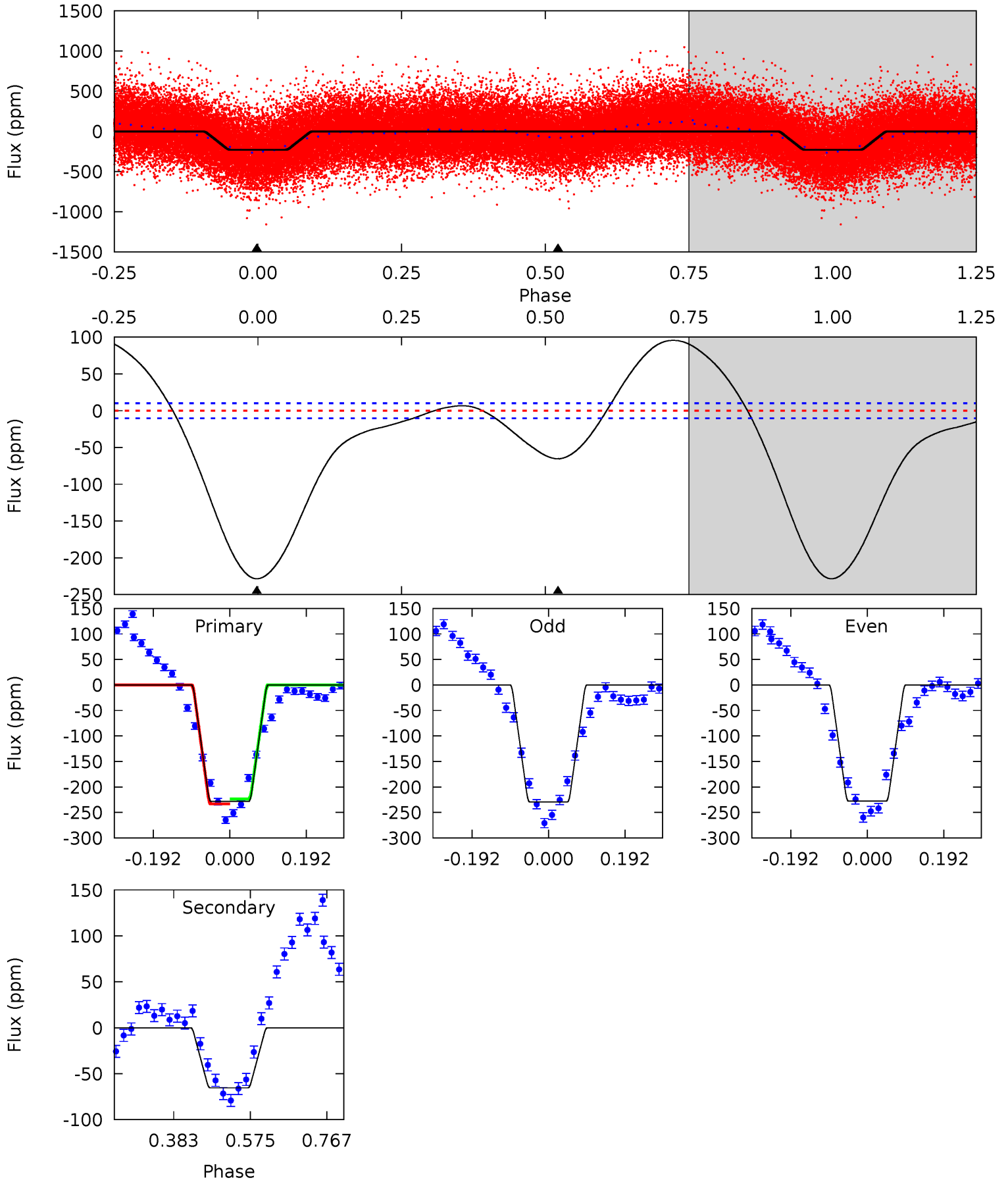
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.65	0.34	0.44	0	4.51	1.53	0.27	0.21	0.65	-0.10	0.34	0.70	-40.8	0.39	0.72



Alt Model-Shift Uniqueness Test

004372961-01, P = 2.534284 Days, E = 130.445268 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
98.9	28.3	0	0	4.43	1.31	20.5	98.9	98.9	28.3	28.3	0.34	1.00	0.30	2.06



Stellar Parameters For KIC 004372961

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6440^{+77}_{-77}	$3.874^{+0.210}_{-0.090}$	$-0.040^{+0.150}_{-0.150}$	$2.254^{+0.390}_{-0.585}$	$1.386^{+0.185}_{-0.151}$	$0.171^{+0.191}_{-0.057}$
	+1%/-1%	+5%/-2%	+375%/-375%	+17%/-26%	+13%/-11%	+112%/-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 004372961-01 / KOI 6410.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1 ± 3	$2.05^{+2.33}_{-1.45}$	2933^{+134}_{-204}	-2822^{+6956}_{-606}	$0.114^{+2.160}_{-0.494}$
Alt.	-65 ± 2	$4.27^{+3.05}_{-2.55}$	2928^{+133}_{-184}	4436^{+2344}_{-899}	$3.243^{+17.378}_{-2.097}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

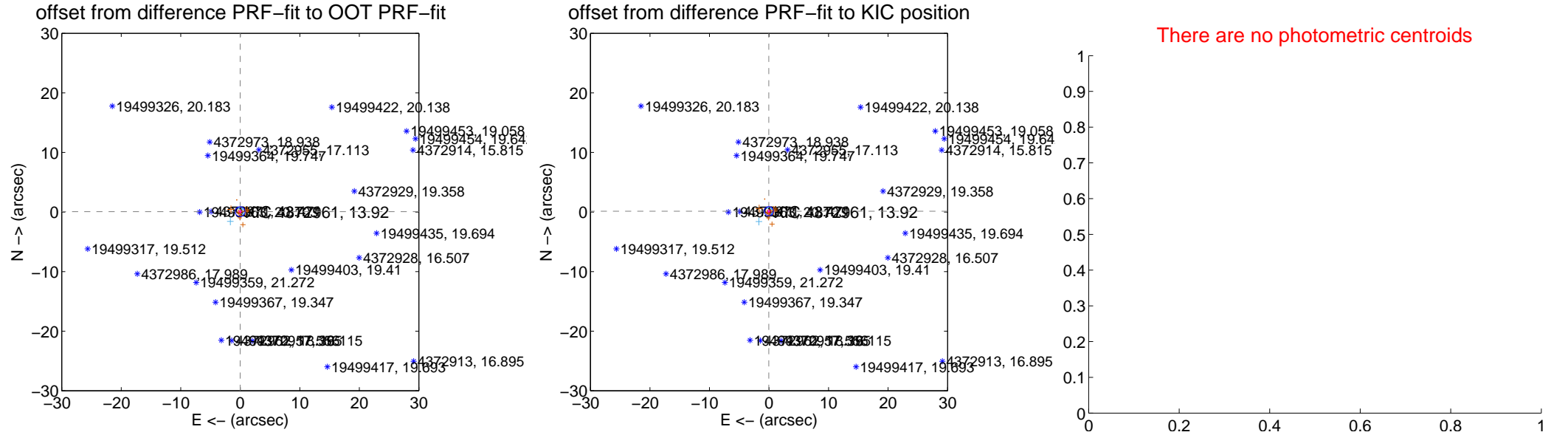
DV Centroid Data

Supplemental centroid analysis for 004372961-01. Kepler magnitude: 13.92. Transit SNR 0.01

There are 5 quarters with good PRF difference image offsets

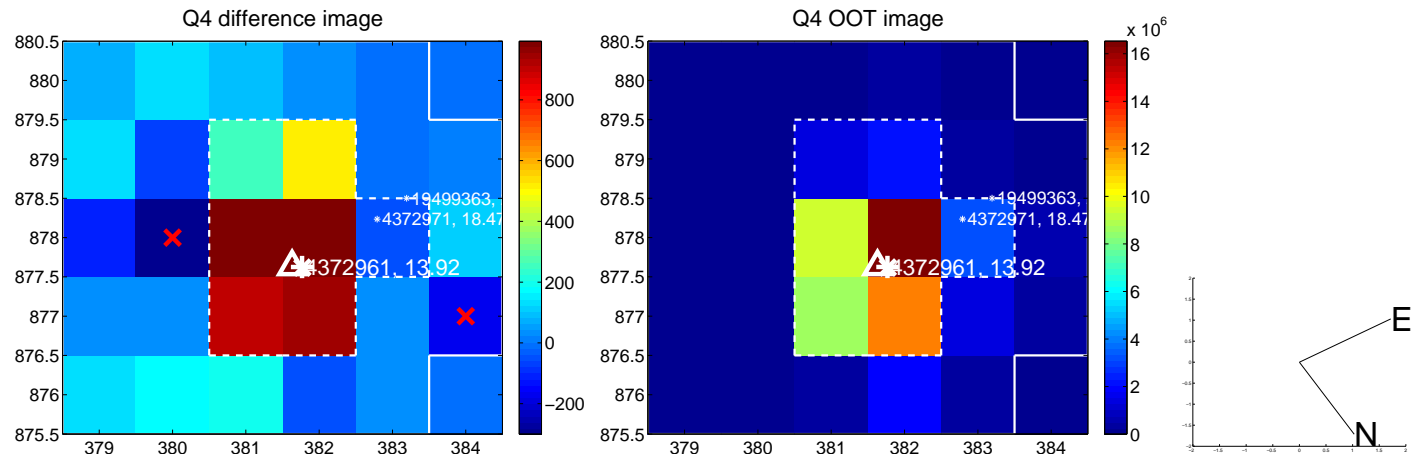
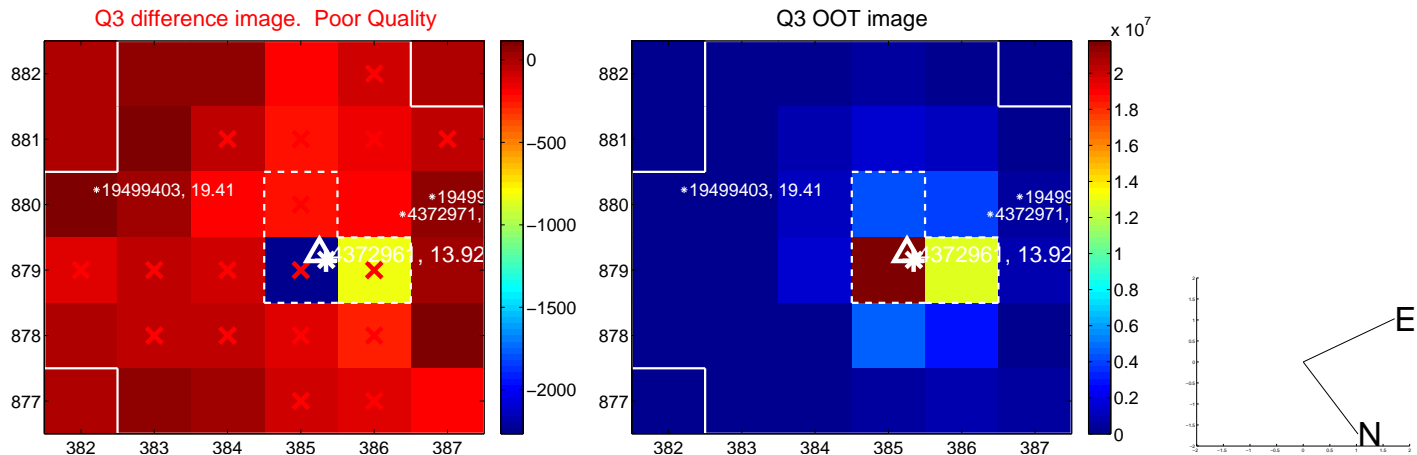
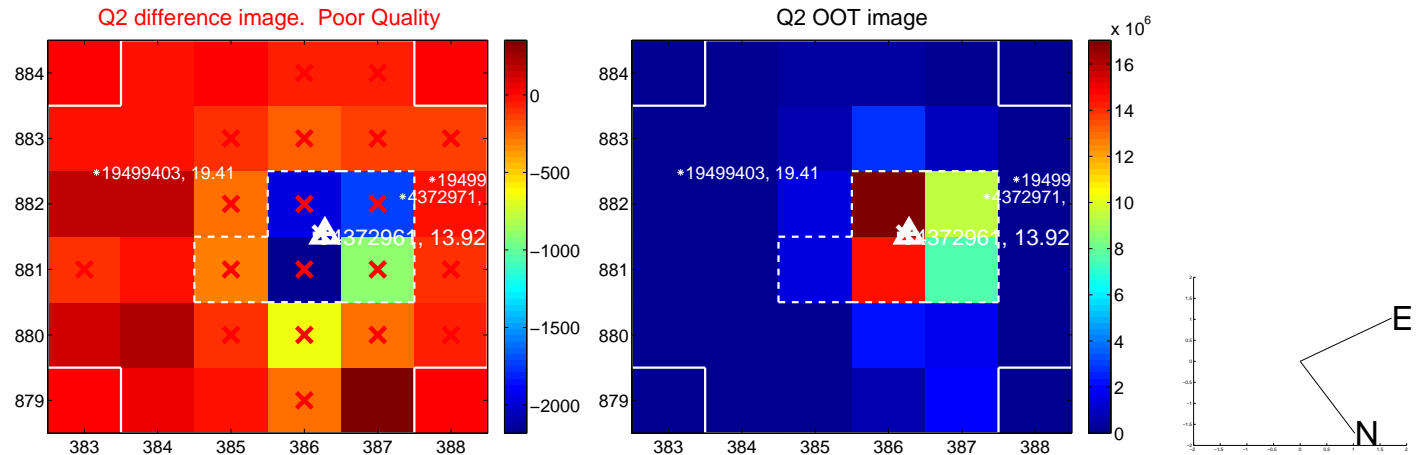
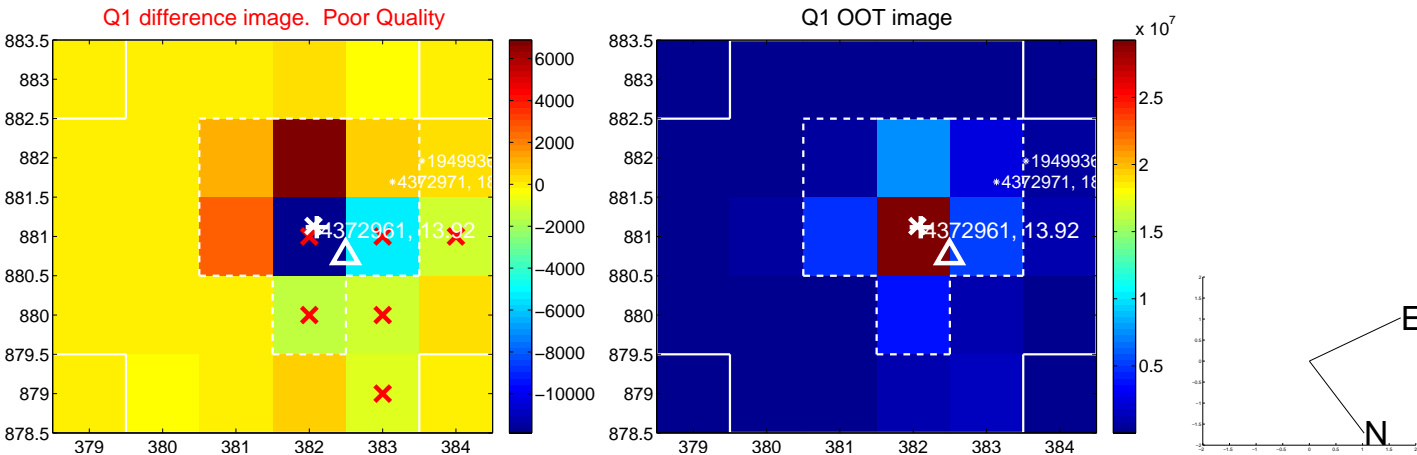
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.068 ± 0.275	0.25	0.023 ± 0.227	0.064 ± 0.283
PRF-fit source offset from KIC position	0.143 ± 0.255	0.56	0.029 ± 0.229	0.140 ± 0.256
photometric centroid source offset	—	—	—	—

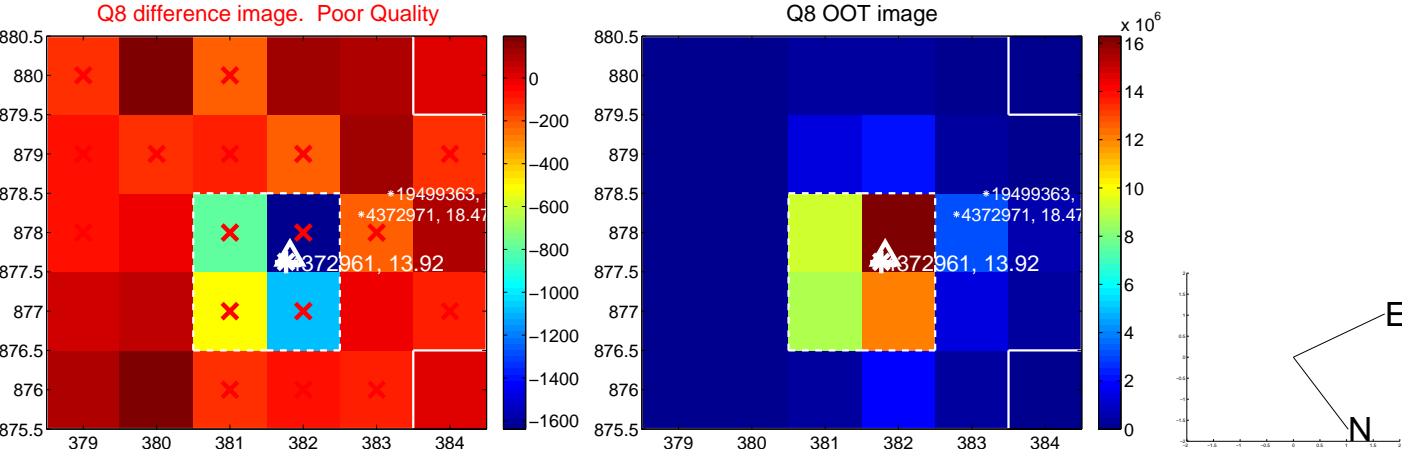
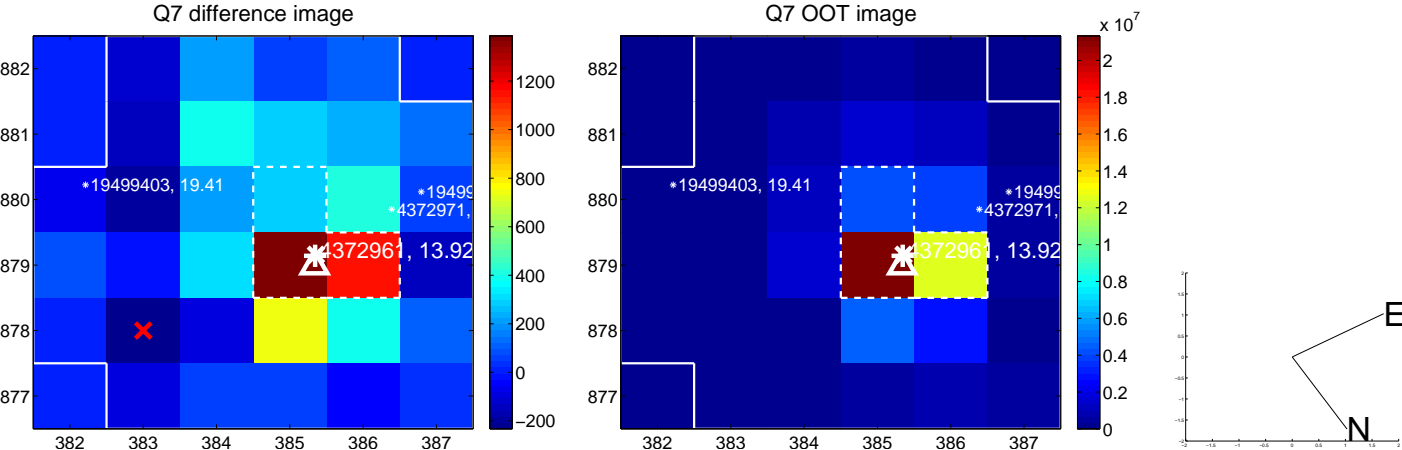
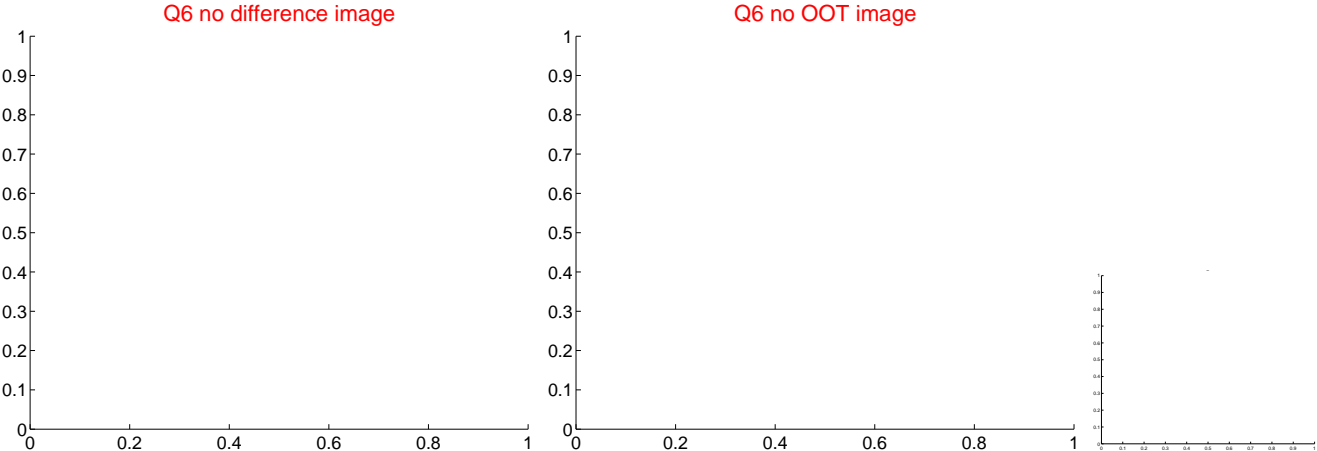
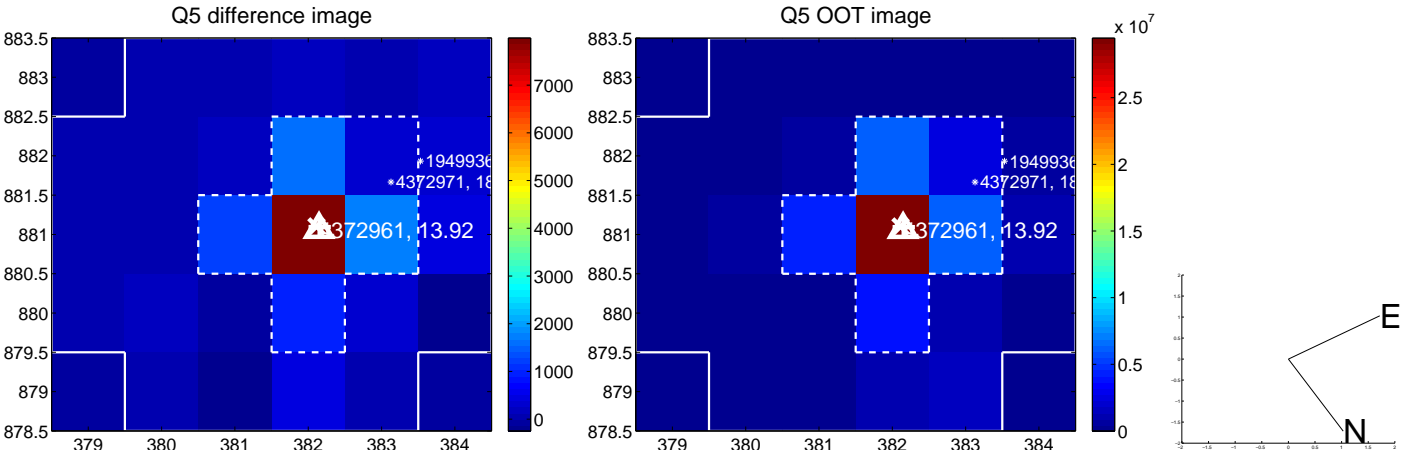


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

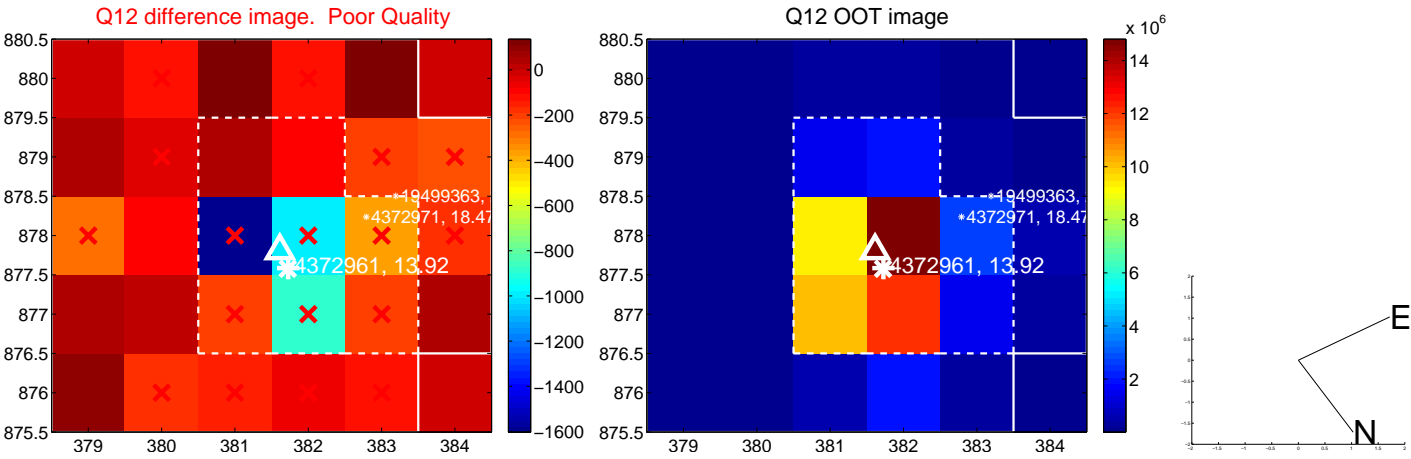
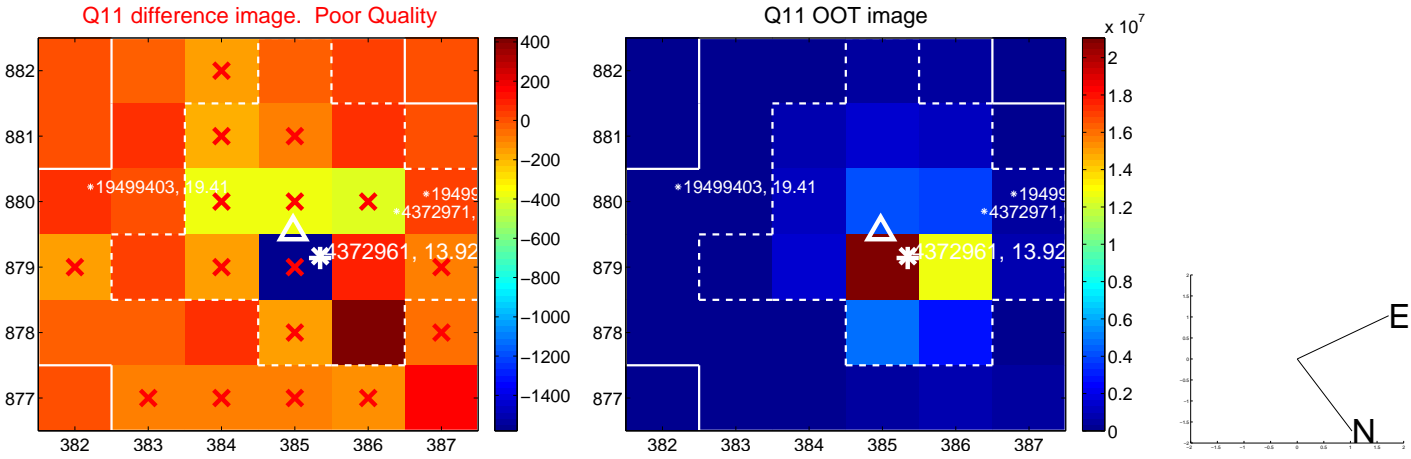
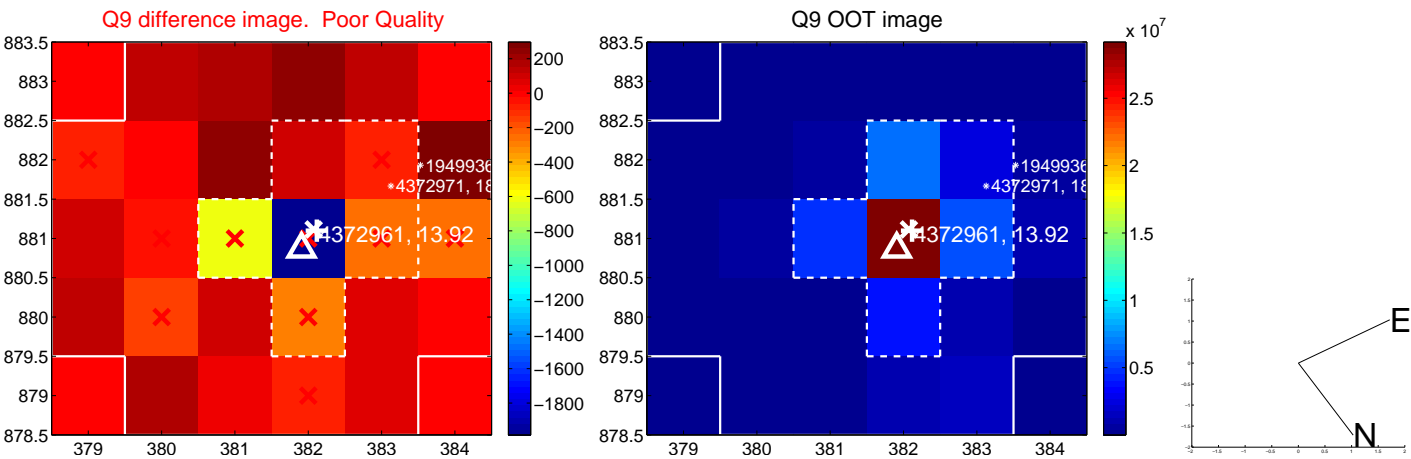
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



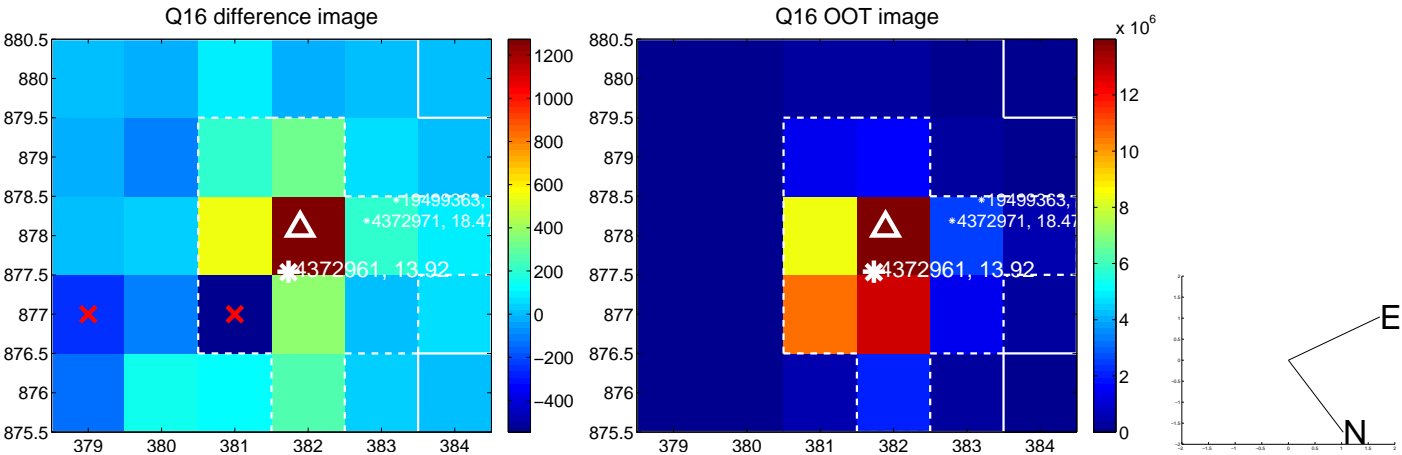
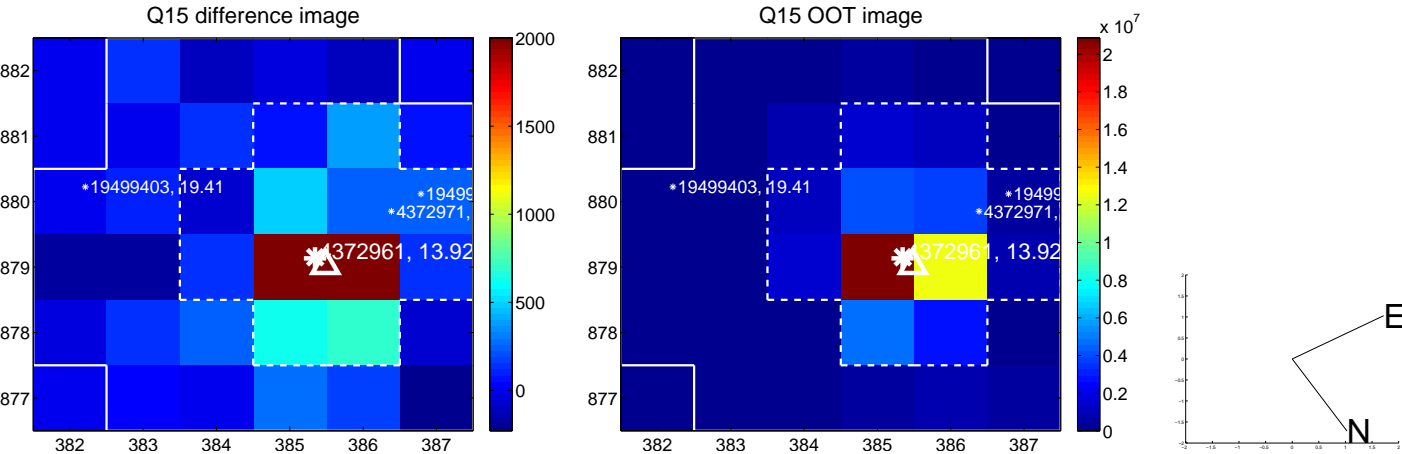
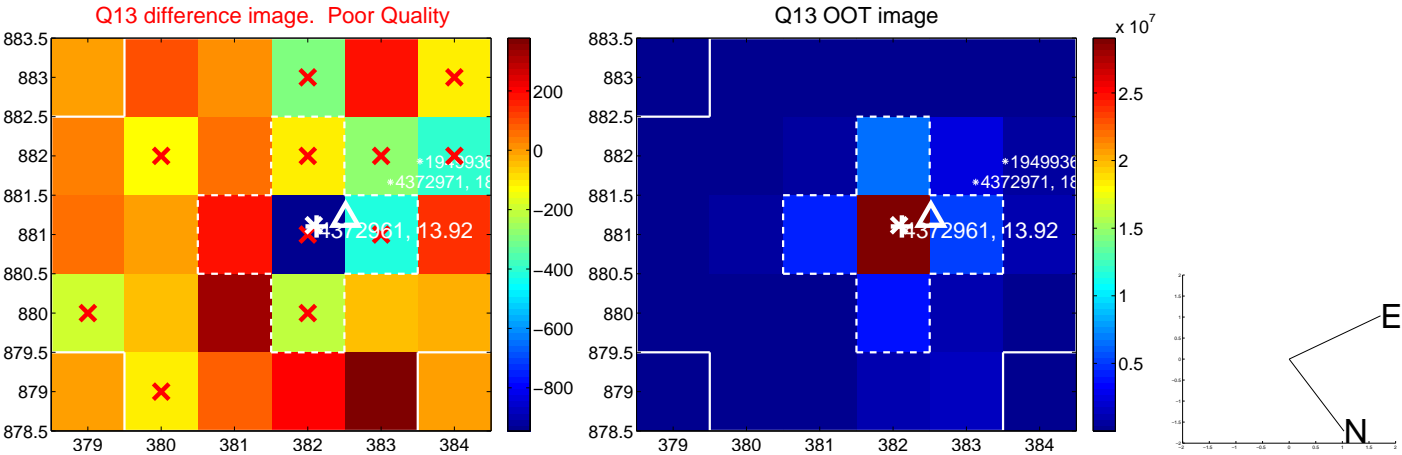
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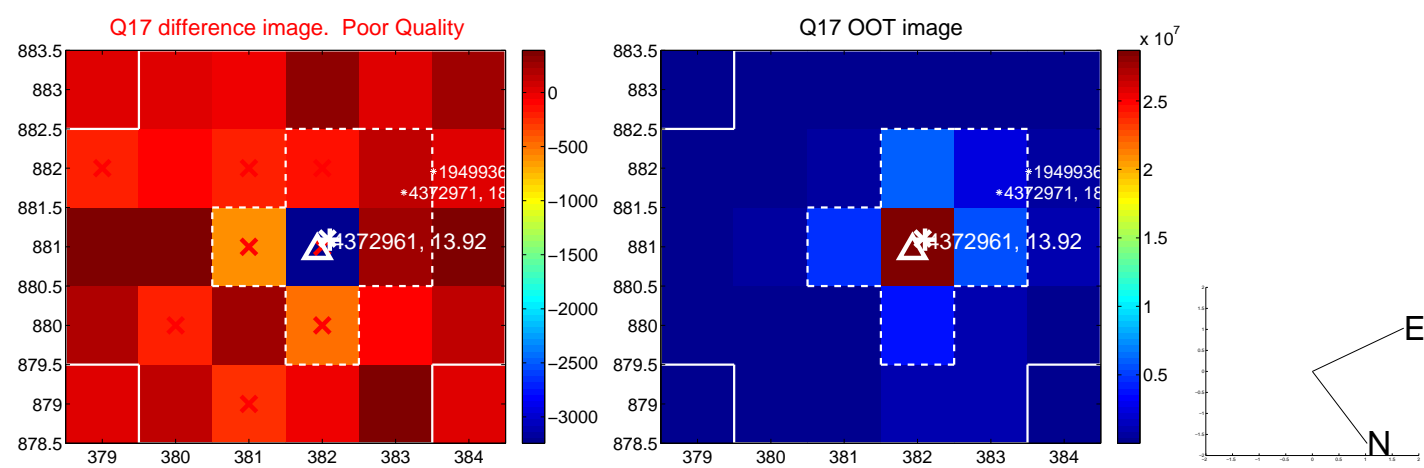
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination

