

KIC 010450504

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})
010450504-01	OBS	7327.01	17.990795	141.926312	605.4	1.442	8.2	10.2	0.75	4918	1.86	20.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010450504-01	OBS	PC	0.96	0	0	0	0	NO_COMMENT

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 010450504-01

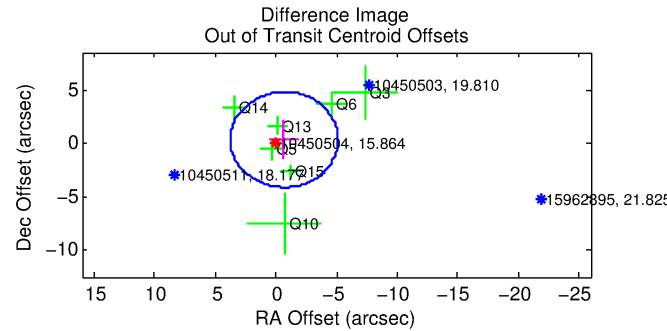
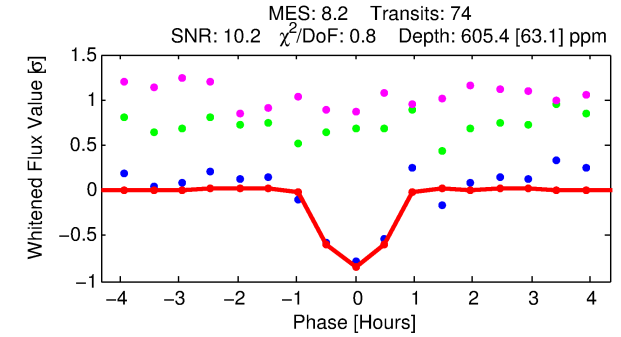
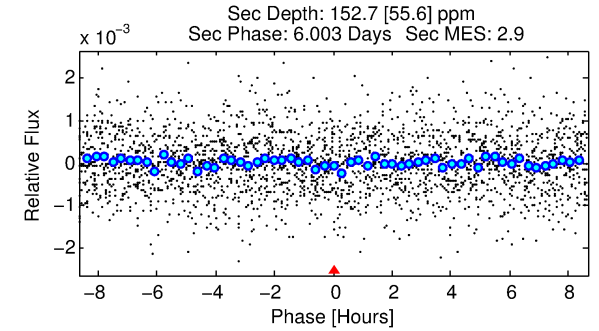
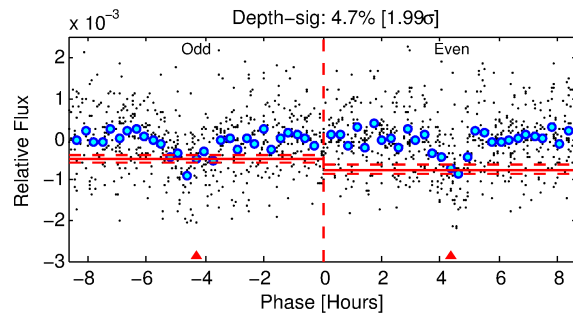
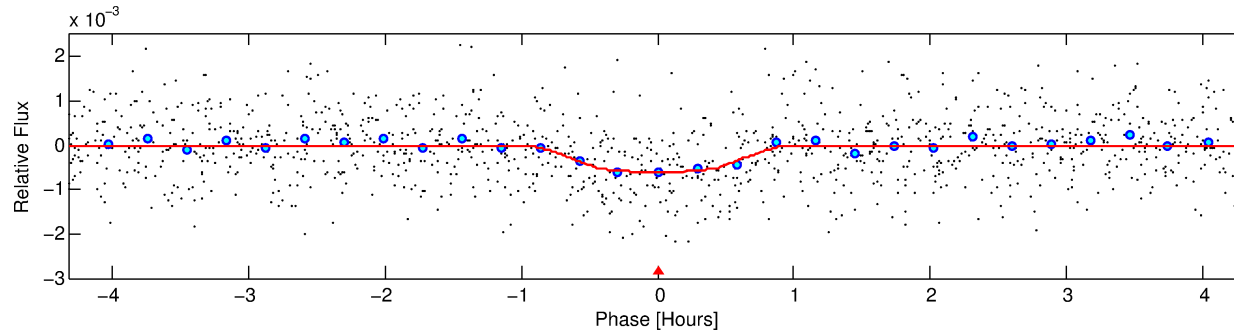
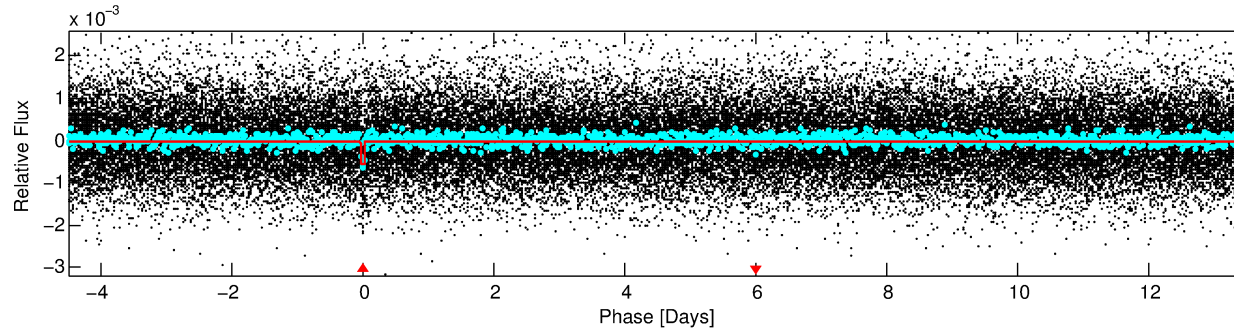
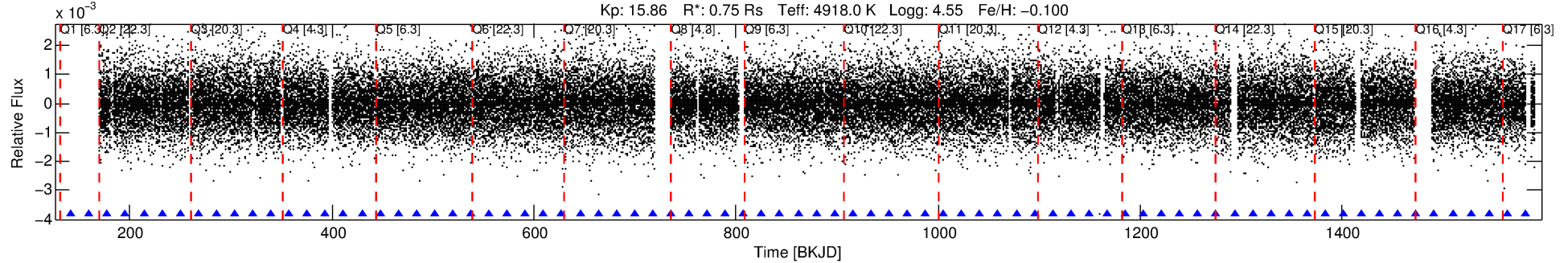
No Significant Match Found

DV One-Page Summary

KIC: 10450504 Candidate: 1 of 1 Period: 17.991 d

KOI: K07327.01 Corr: 0.967

Kp: 15.86 R*: 0.75 Rs Teff: 4918.0 K Logg: 4.55 Fe/H: -0.100



DV Fit Results:

Period = 17.99080 [0.00009] d
Epoch = 141.9263 [0.0042] BKJD
Rp/R* = 0.0227 [0.0284]
a/R* = 86.81 [360.92]
b = 0.46 [7.17]
Seff = 20.33 [3.59]
Teff = 541 [24] K
Rp = 1.86 [2.34] Re
a = 0.1207 [0.0105] AU
Ag = 352.92 [894.16] [0.39σ]
Teffp = 3628 [2298] K [1.34σ]

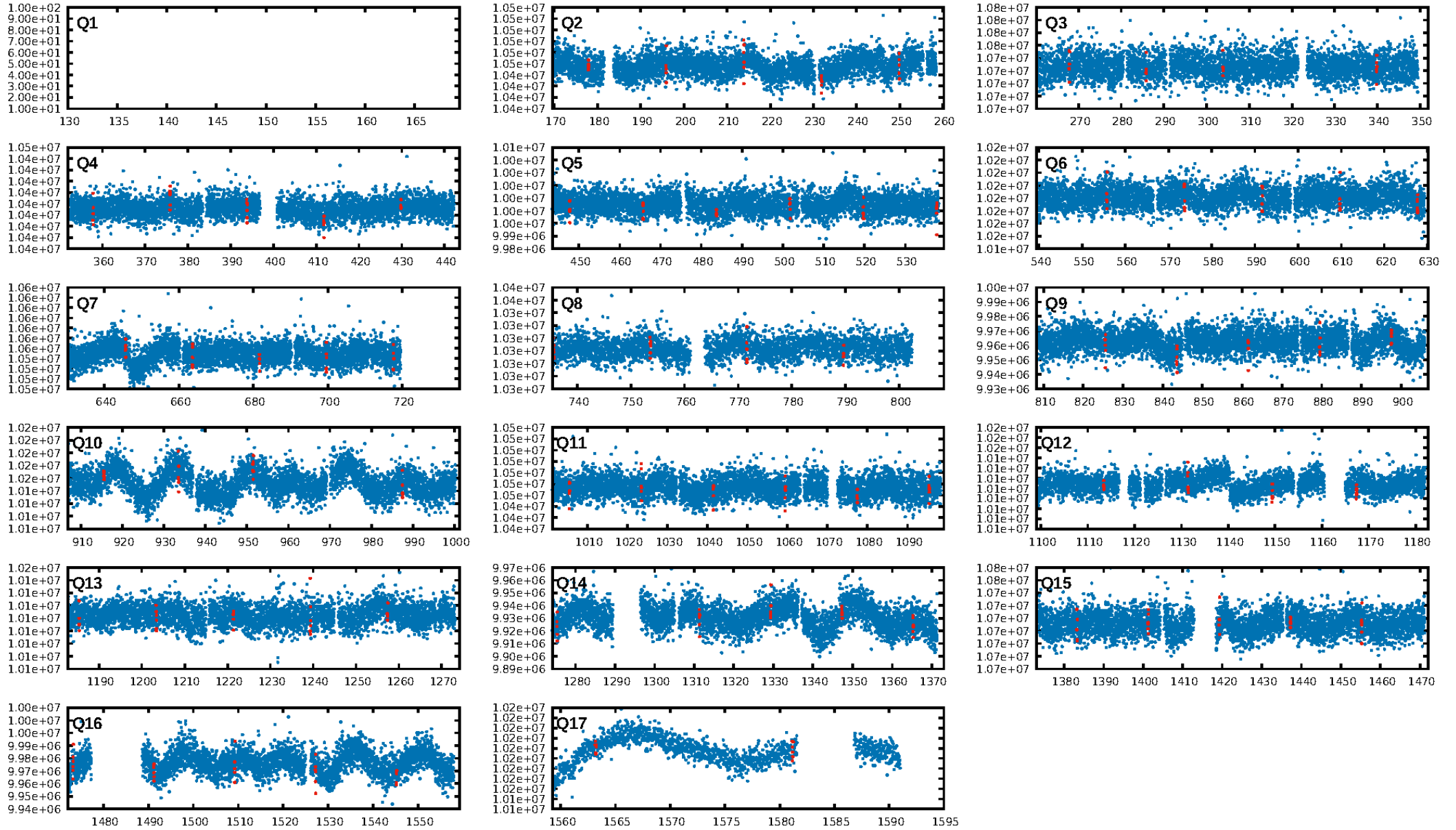
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 95.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.48e-16
RollingBand-fgt: 1.00 [51/51]
GhostDiagnostic-chr: 2.011
Centroid-sig: 0.0%
Centroid-so: 3.967 arcsec [3.10σ]
OotOffset-rm: 0.746 arcsec [0.50σ]
KicOffset-rm: 0.831 arcsec [0.61σ]
OotOffset-st: 3/2/0/2 [7]
KicOffset-st: 3/2/0/2 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 1.00 [16/16]

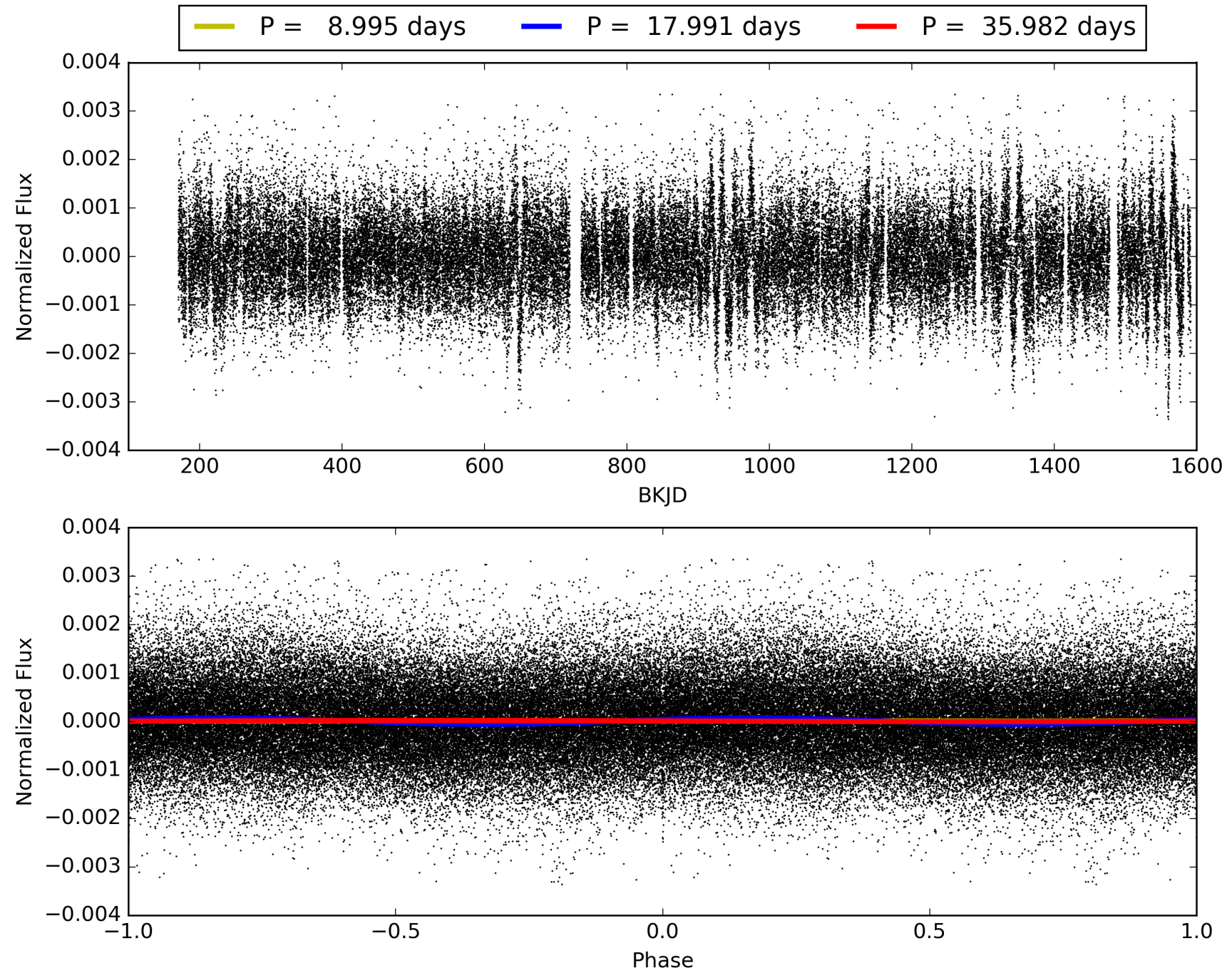
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:14:16 Z

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

TCE 010450504-01, PDC Light Curves

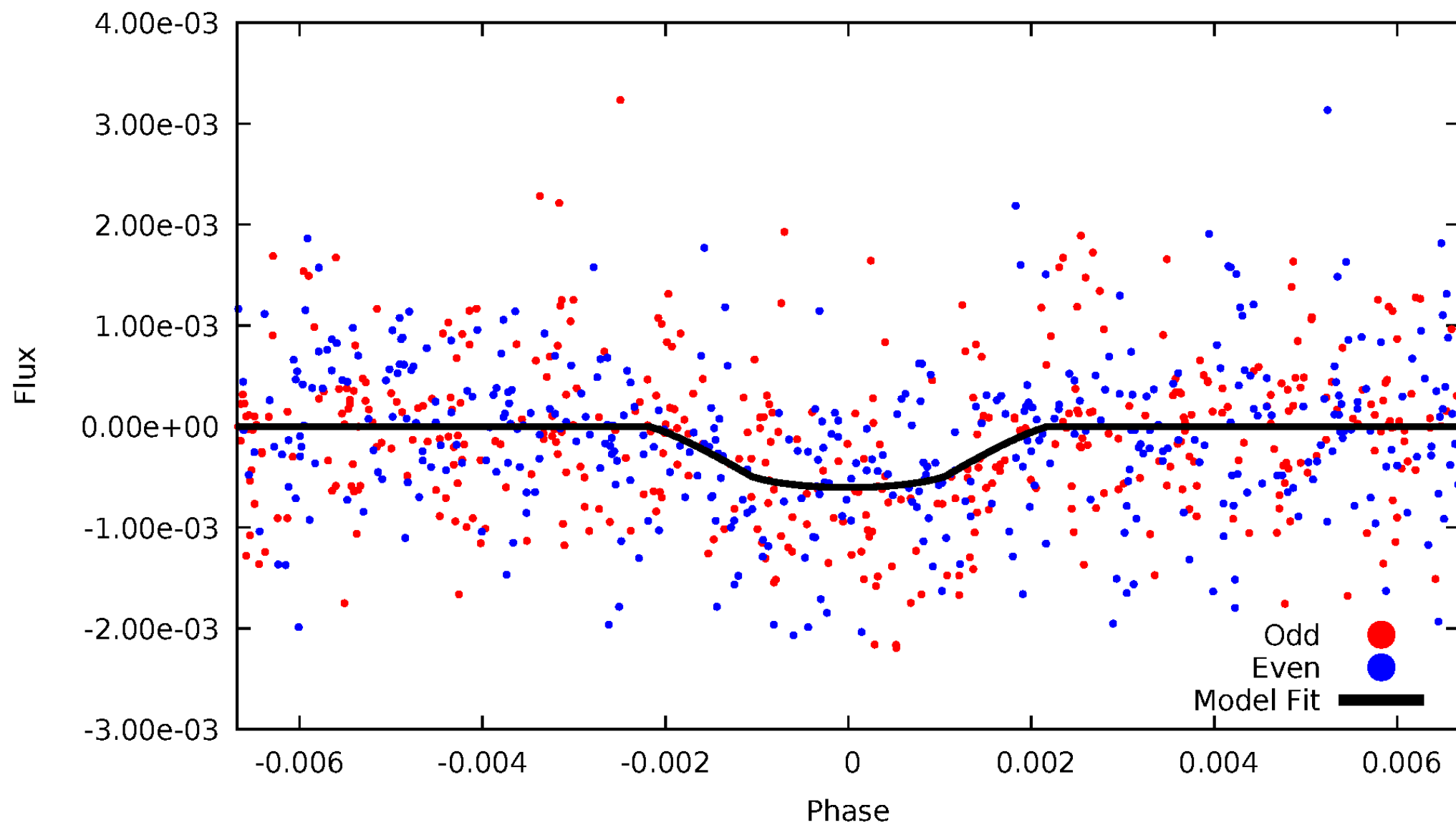


TCE 010450504-01



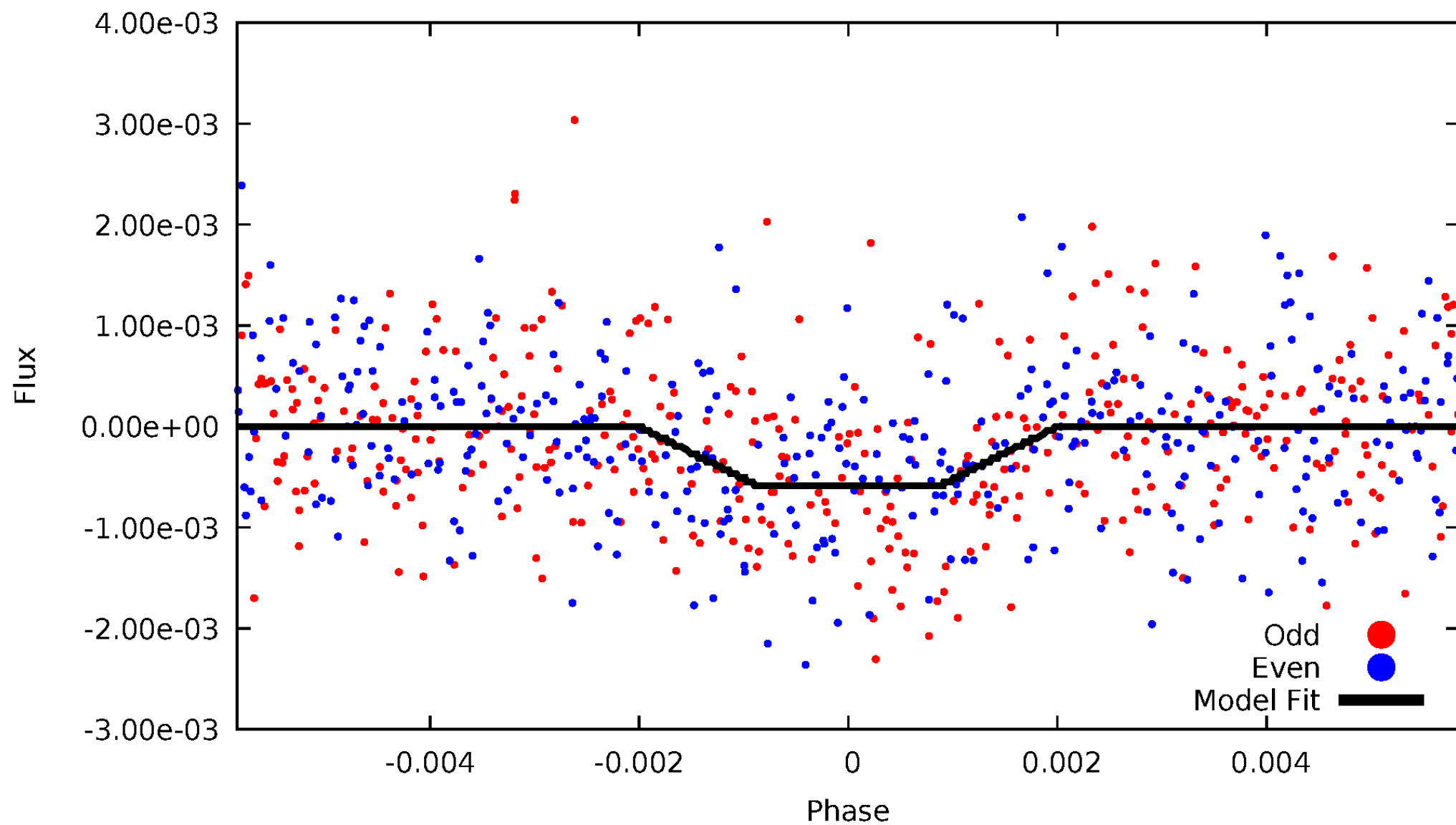
DV Odd/Even

TCE 010450504-01



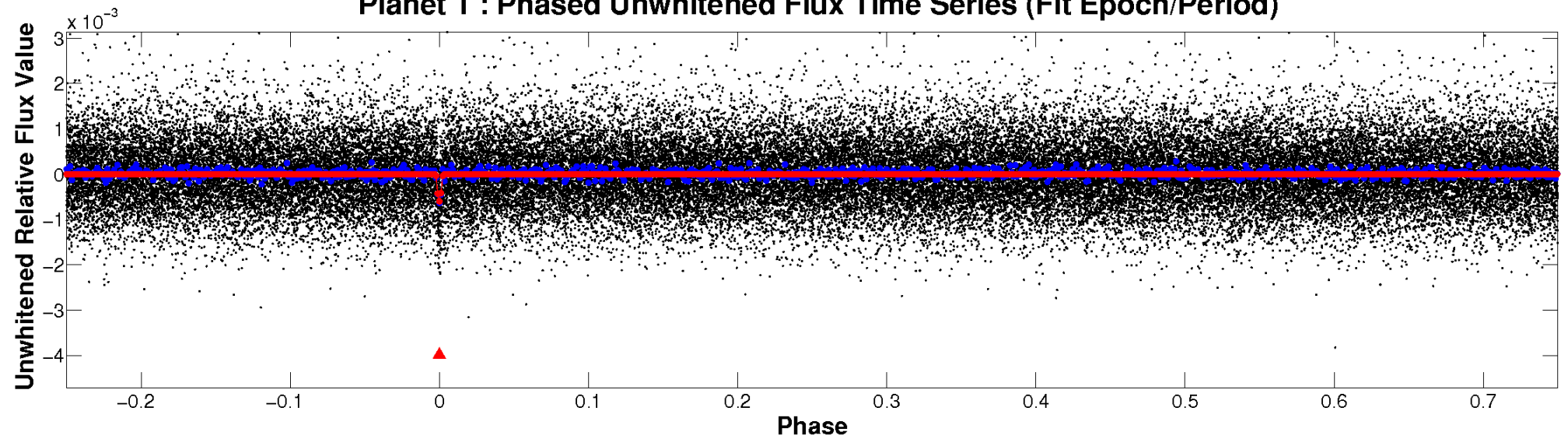
ALT Odd/Even

TCE 010450504-01

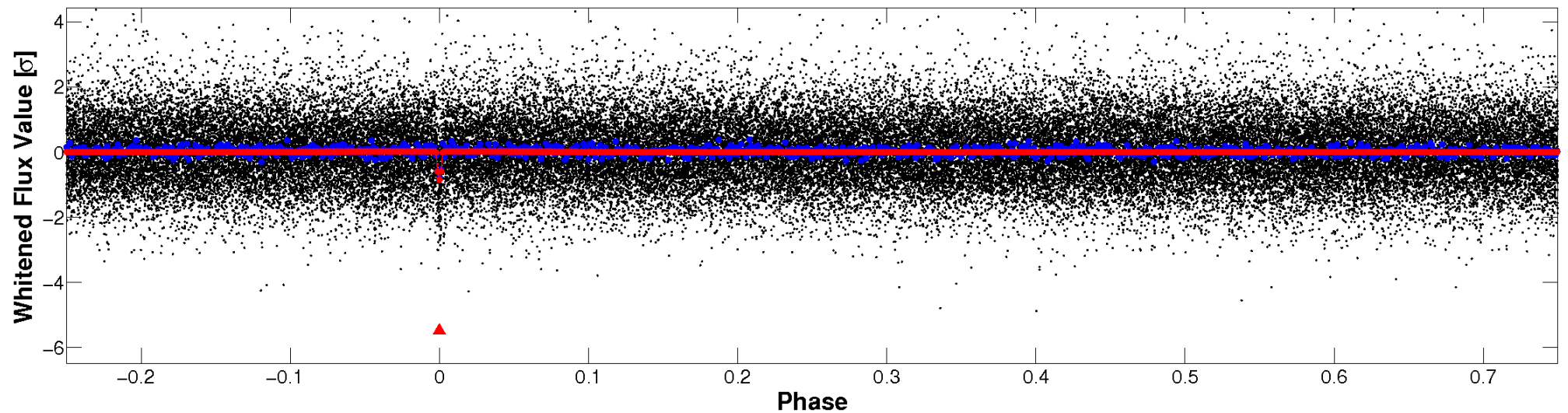


Non-Whitened Vs. Whitened Light Curve

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

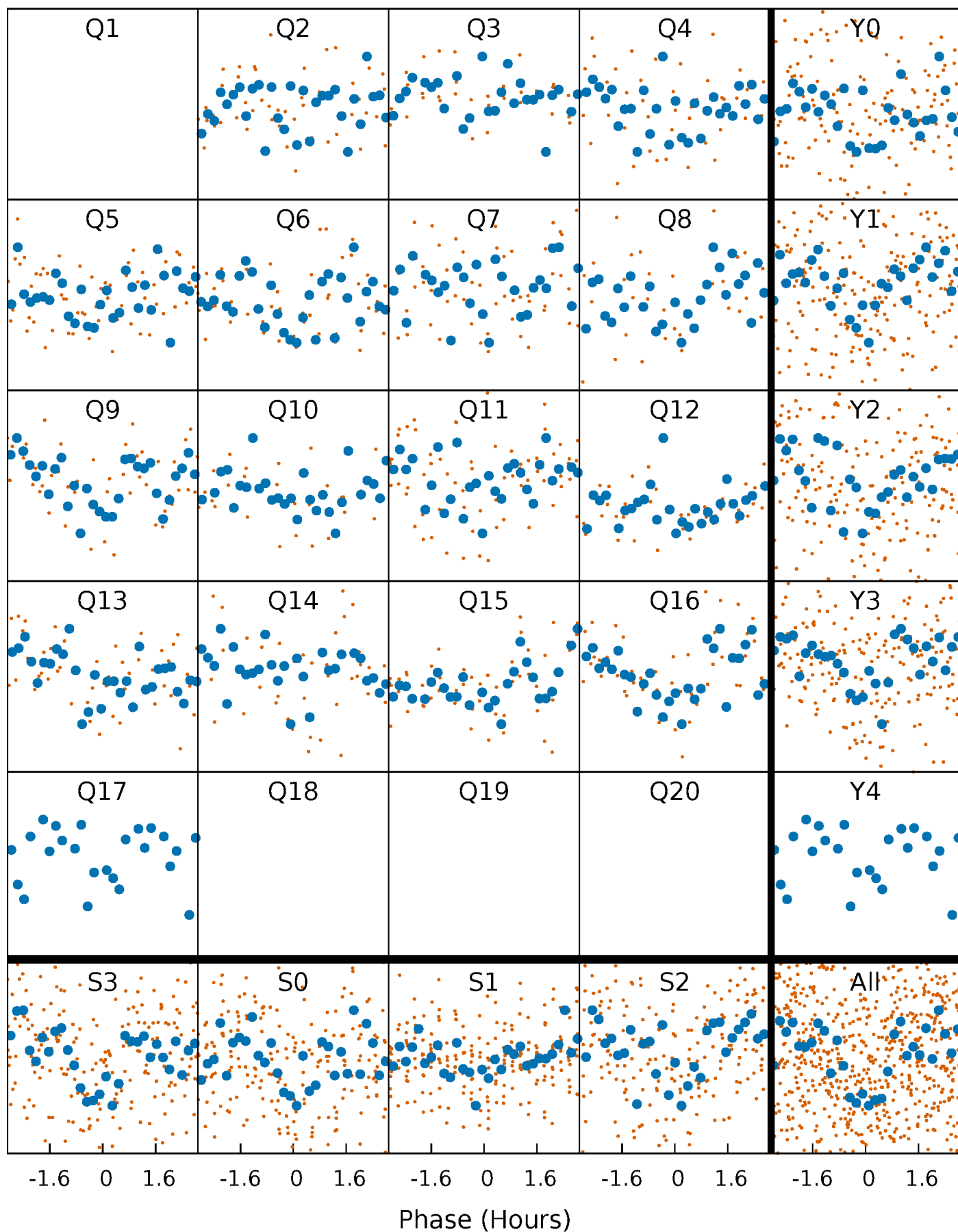


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



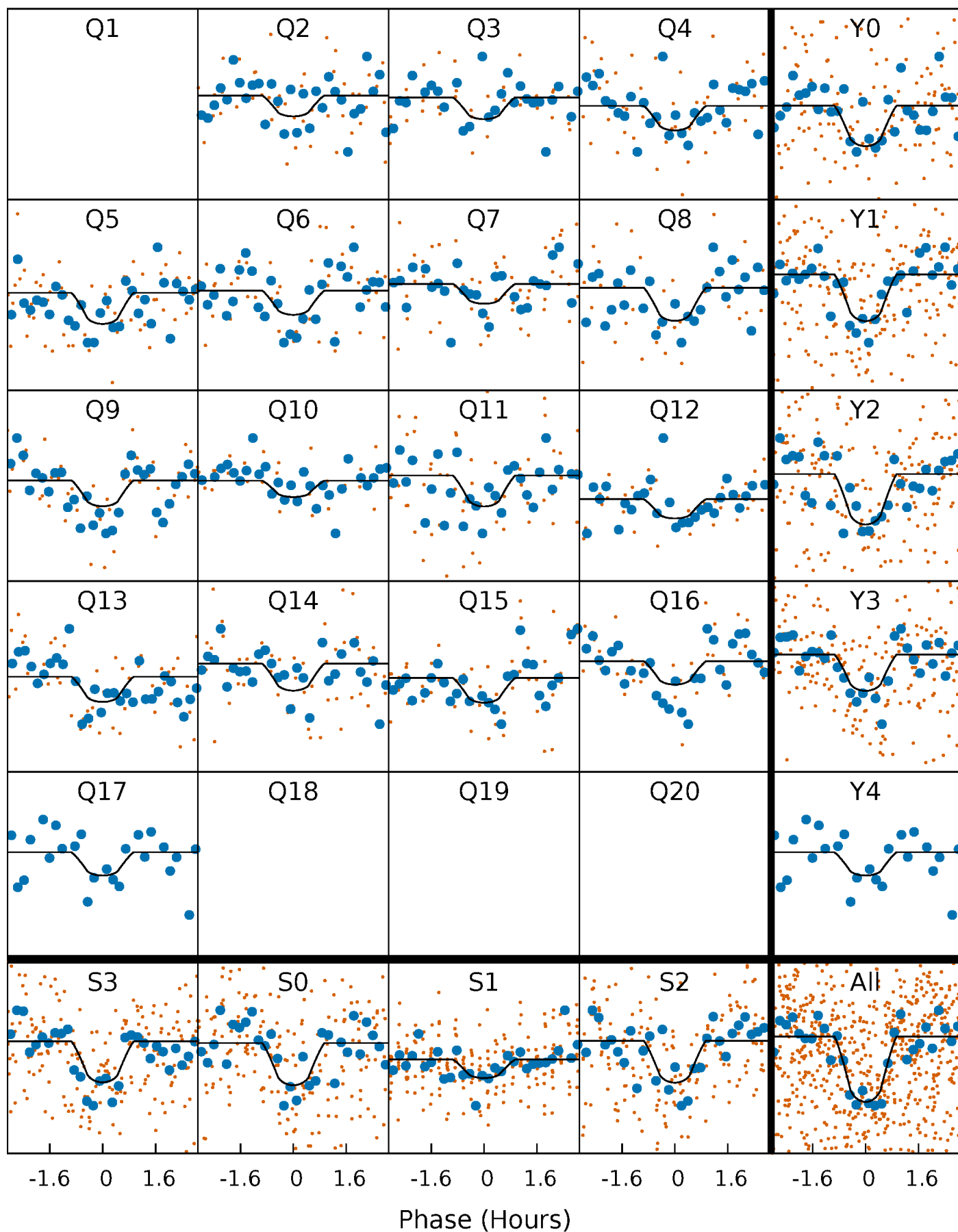
PDC Quarter-Phased Transit Curves

TCE 010450504-01 P= 17.990795 Days $T_0=141.926312$ (BKJD)



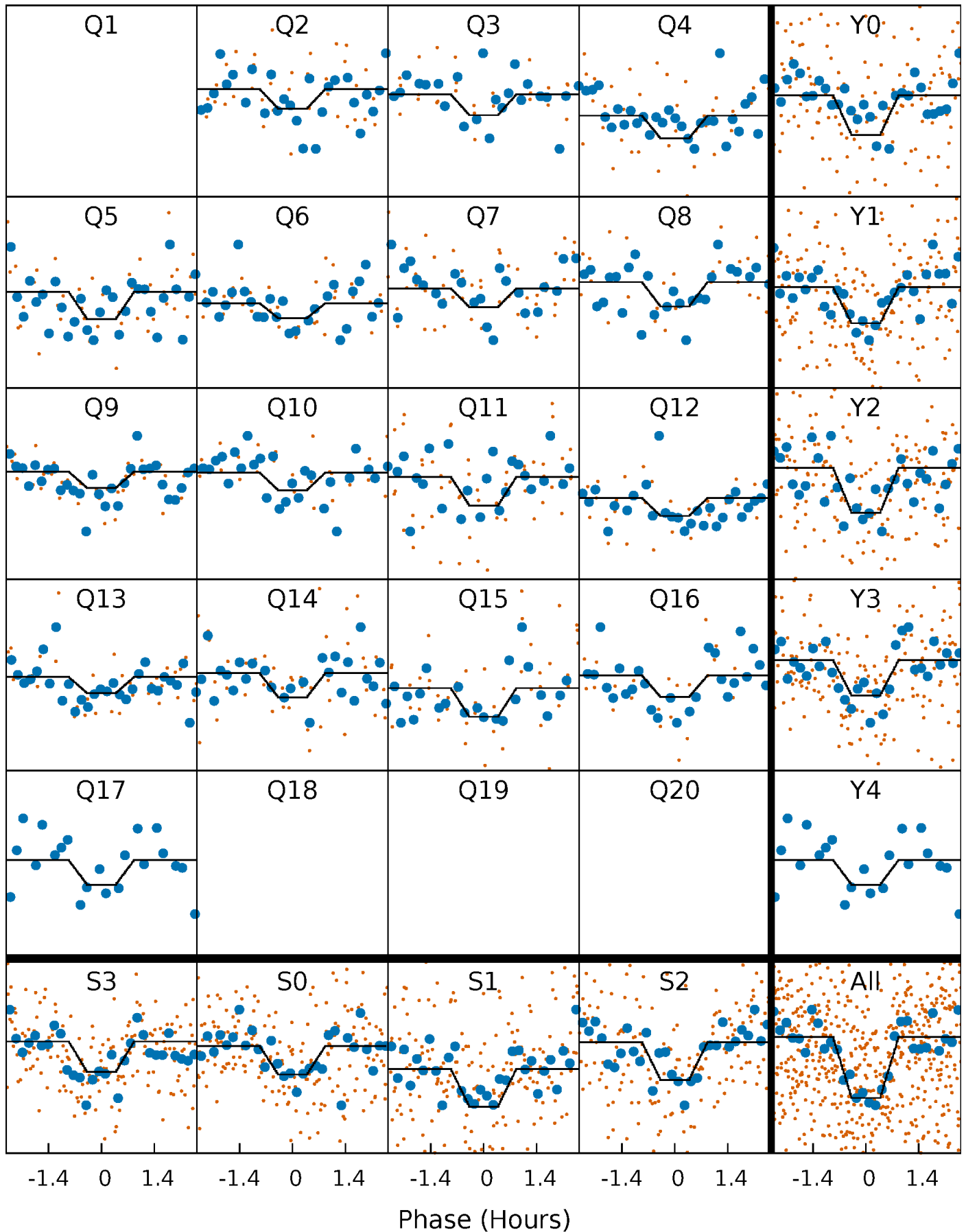
DV Quarter-Phased Transit Curves

TCE 010450504-01 P= 17.990795 Days $T_0=141.926312$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

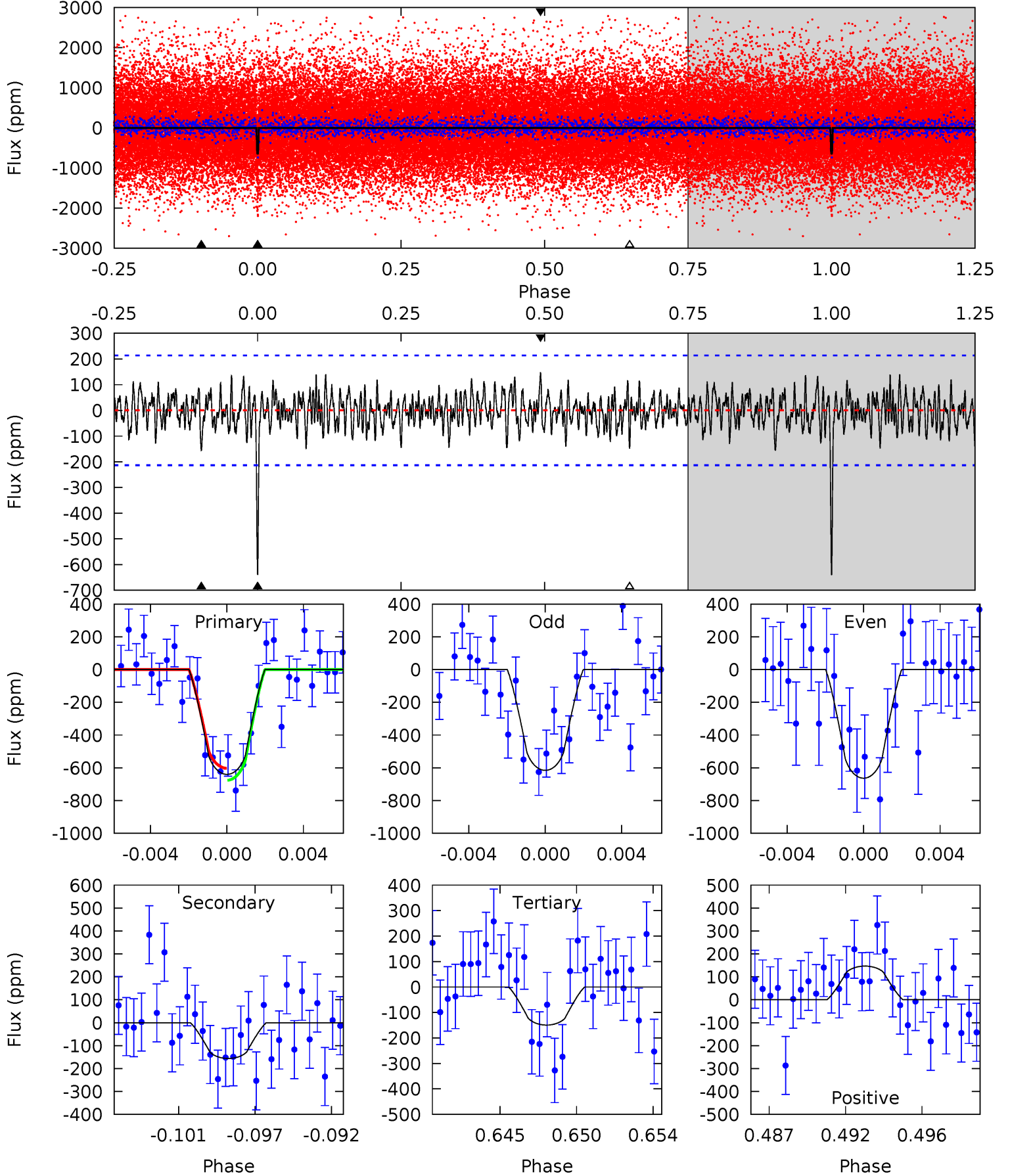
TCE 010450504-01 P= 17.990943 Days $T_0=141.919627$ (BKJD)



DV Model-Shift Uniqueness Test

010450504-01, $P = 17.990795$ Days, $E = 141.926312$ Days

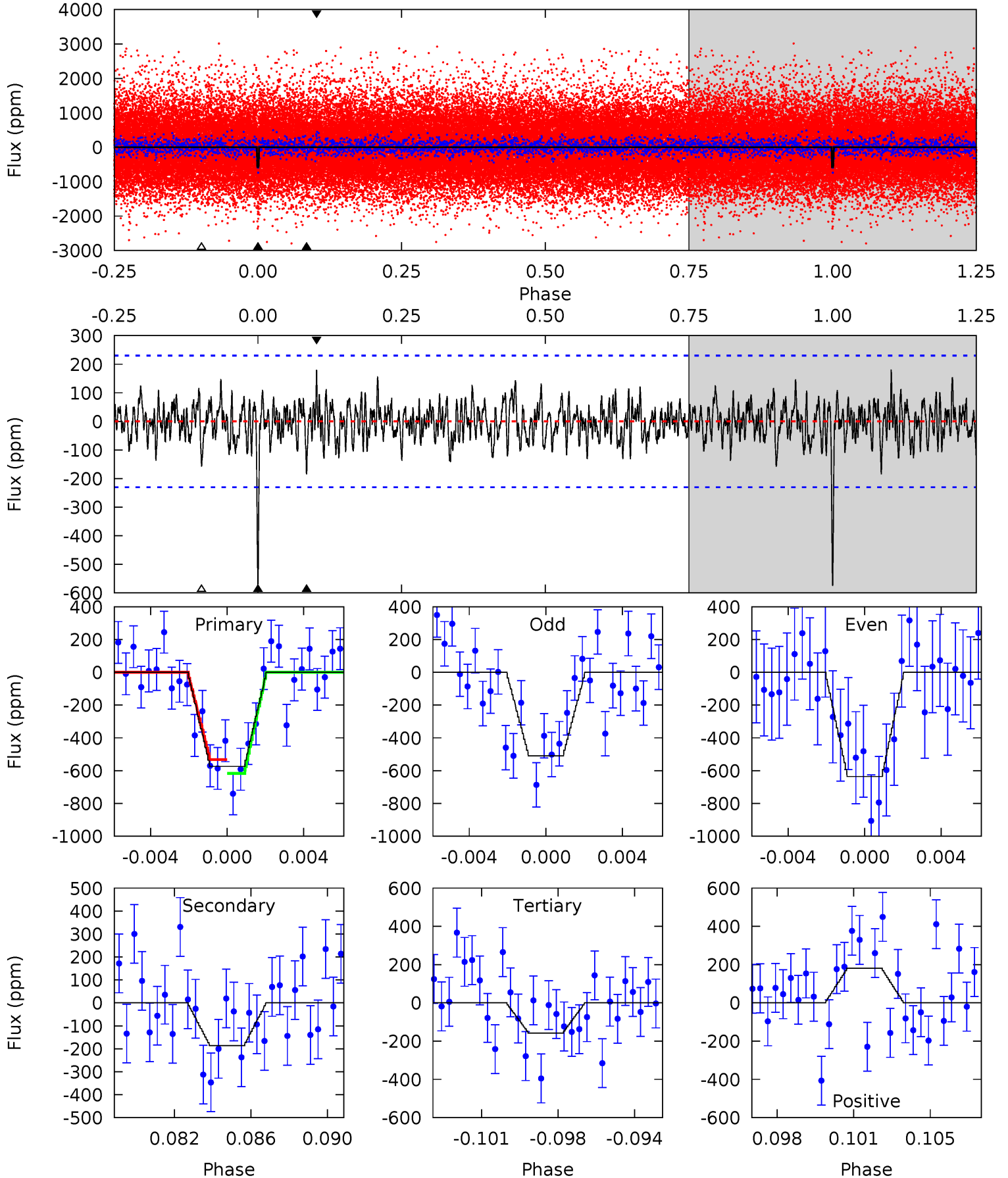
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	3.79	3.62	3.56	5.18	2.85	1.26	11.9	12.0	0.16	0.23	0.58	0.88	0.19	0.89



Alt Model-Shift Uniqueness Test

010450504-01, $P = 17.990943$ Days, $E = 141.919627$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	4.19	3.56	4.07	5.20	2.89	1.20	9.41	8.89	0.64	0.12	1.43	0.89	0.24	0.96



Stellar Parameters For KIC 010450504

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4918^{+148}_{-133}	$4.546^{+0.072}_{-0.039}$	$-0.100^{+0.300}_{-0.300}$	$0.752^{+0.057}_{-0.076}$	$0.727^{+0.090}_{-0.055}$	$2.404^{+0.724}_{-0.343}$
	+3%/-3%	+2%/-1%	+300%/-300%	+8%/-10%	+12%/-8%	+30%/-14%
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 010450504-01 / KOI 7327.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-156 ± 41	$2.44^{+2.10}_{-1.60}$	753^{+29}_{-27}	3535^{+1725}_{-596}	204^{+1540}_{-148}
Alt.	-186 ± 44	$2.65^{+2.10}_{-1.79}$	753^{+28}_{-27}	3578^{+1920}_{-603}	224^{+1762}_{-162}

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 $A_{\text{obs}} \gg 1.0$

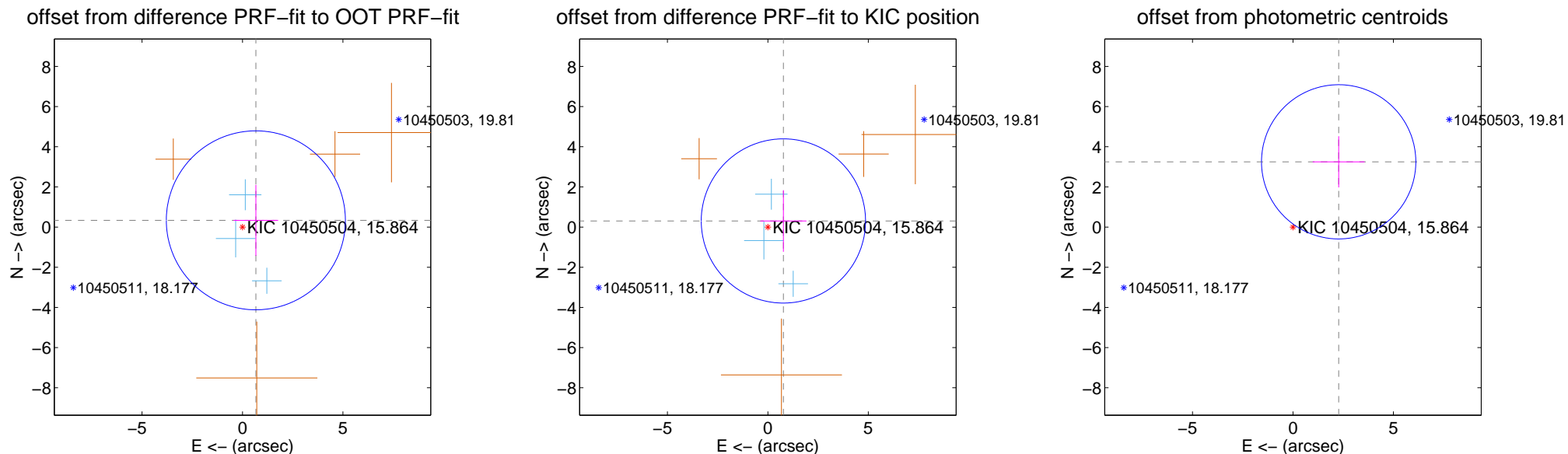
DV Centroid Data

Supplemental centroid analysis for 010450504-01. Kepler magnitude: 15.86. Transit SNR 10.17

There are 3 quarters with good PRF difference image offsets

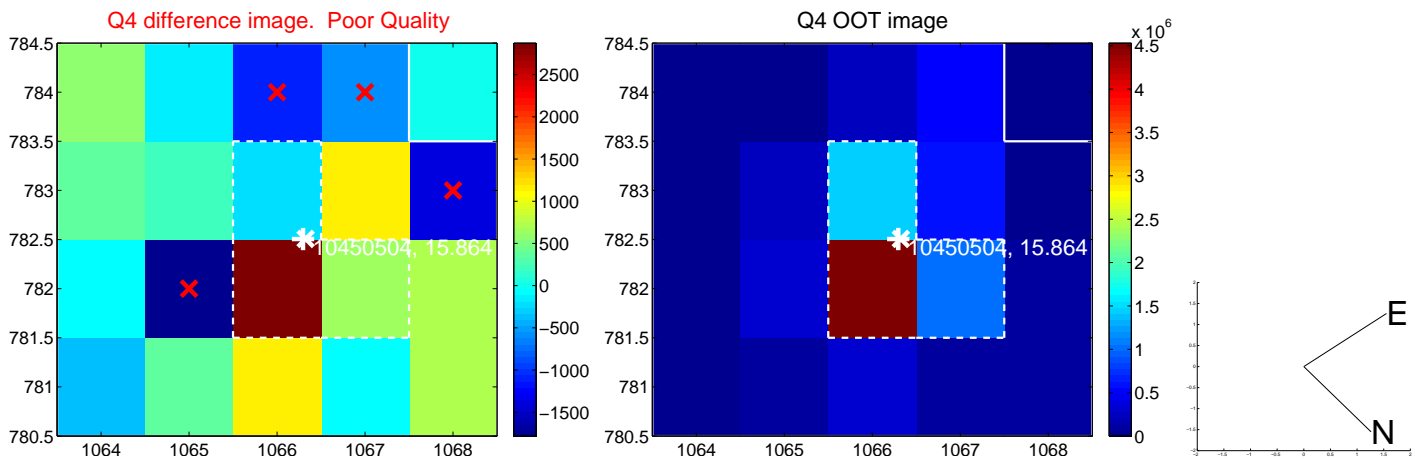
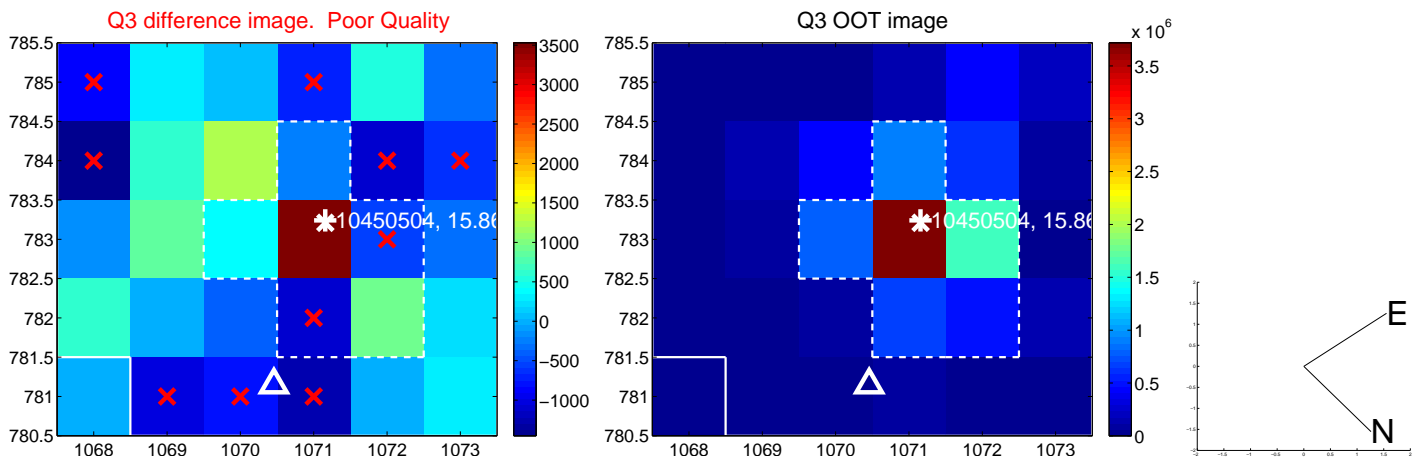
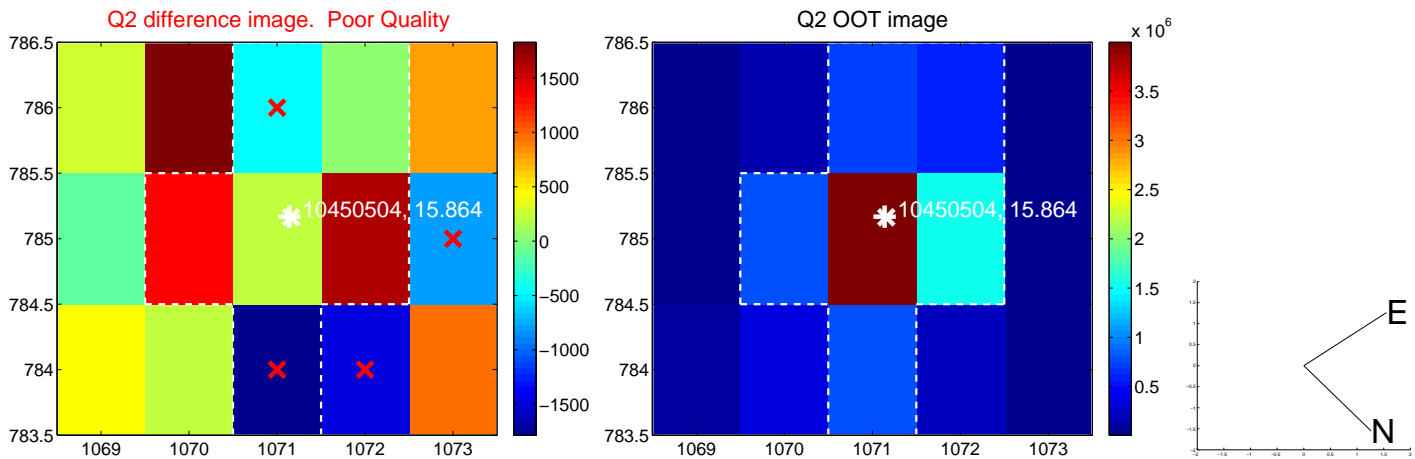
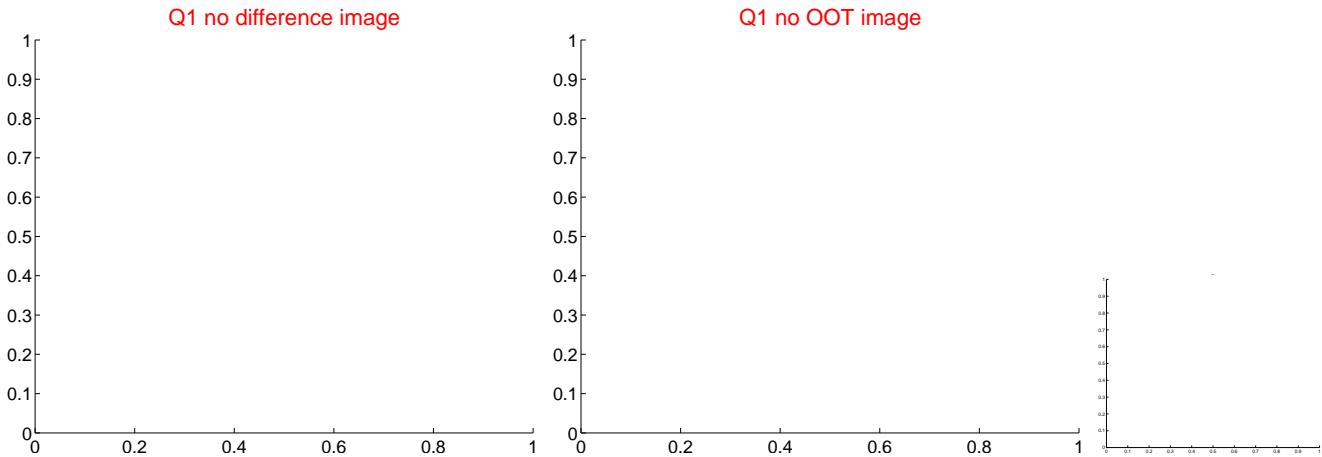
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.746 ± 1.485	0.50	-0.666 ± 1.108	0.337 ± 1.765
PRF-fit source offset from KIC position	0.831 ± 1.363	0.61	-0.773 ± 1.149	0.305 ± 1.535
photometric centroid source offset	3.97 ± 1.28	3.10	-2.27 ± 1.29	3.25 ± 1.27

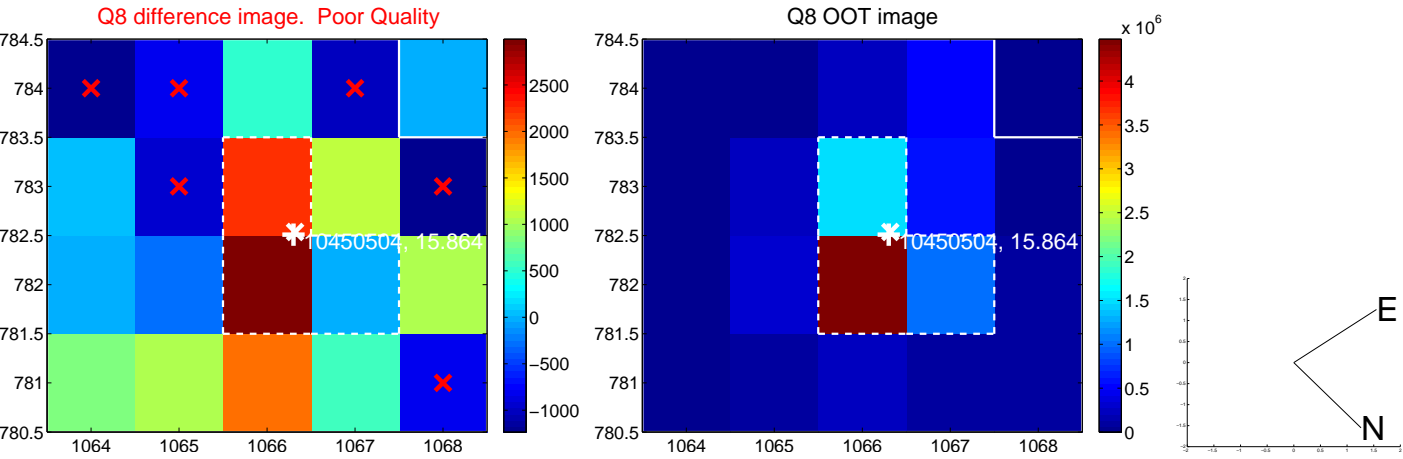
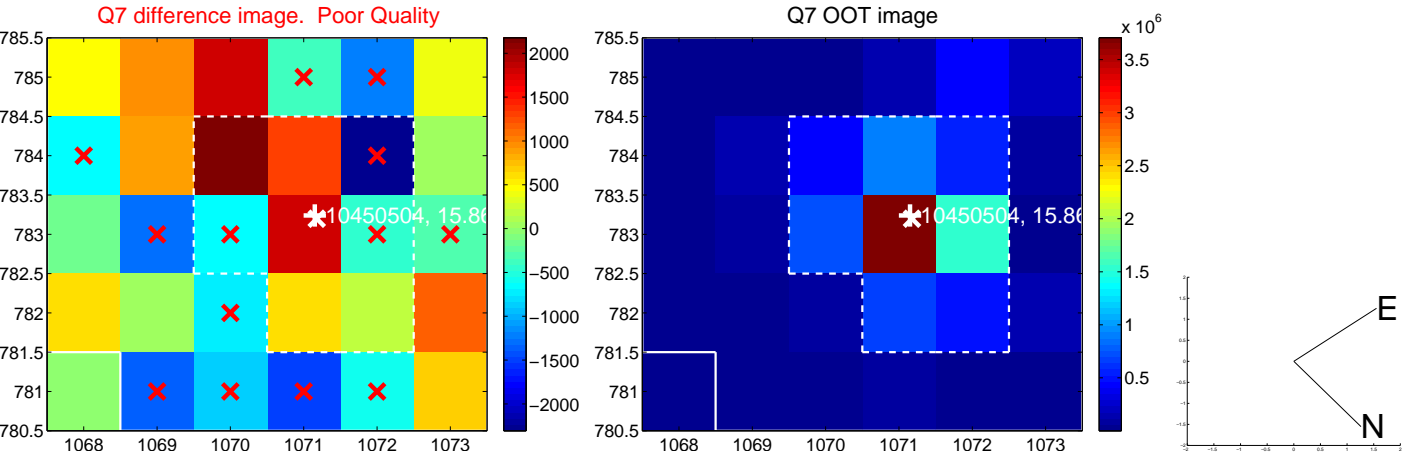
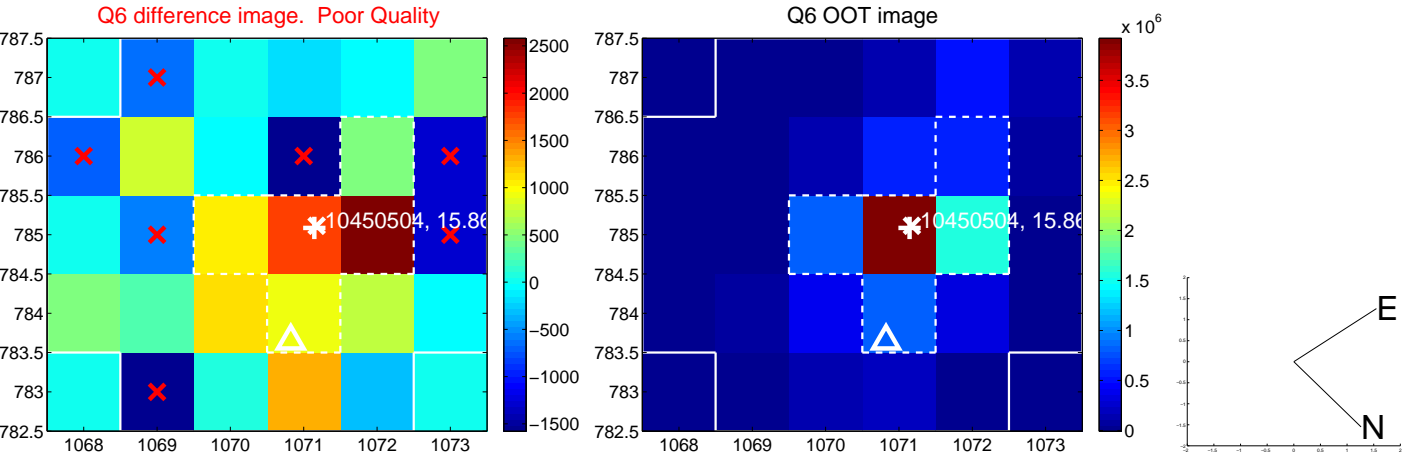
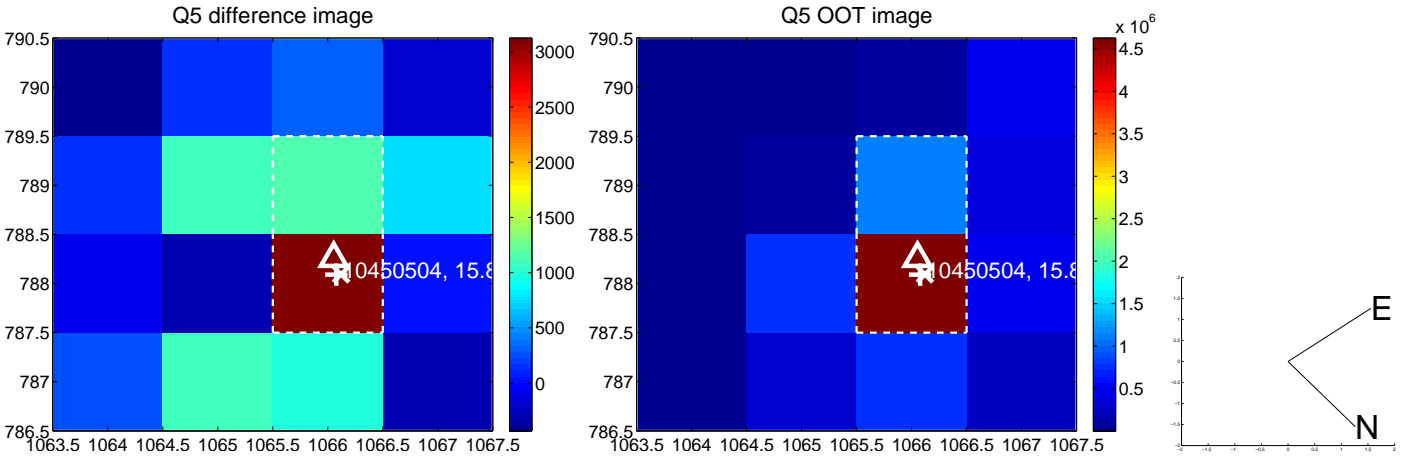


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

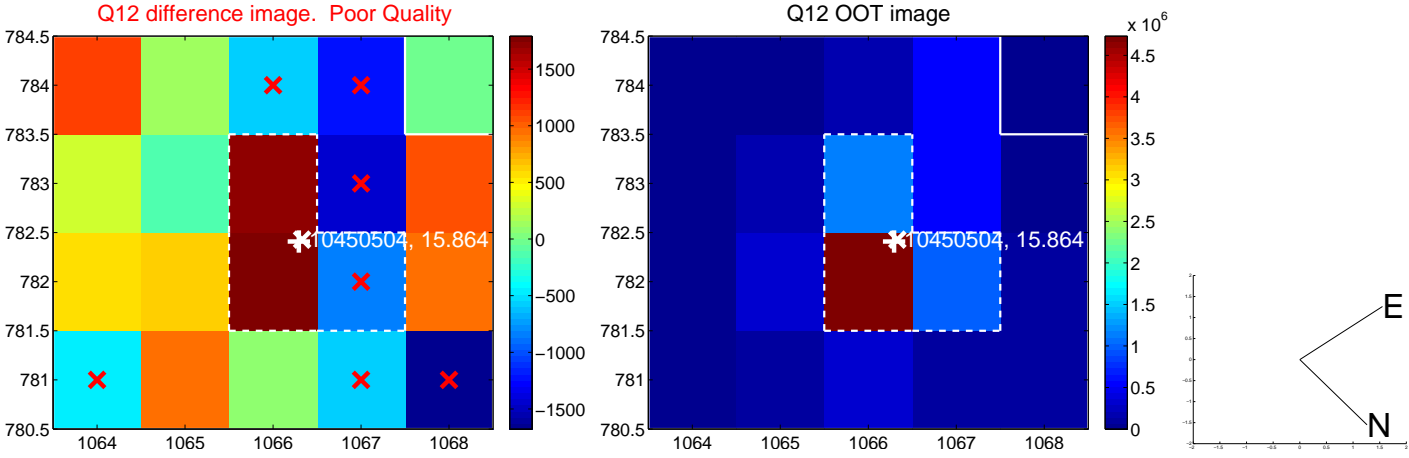
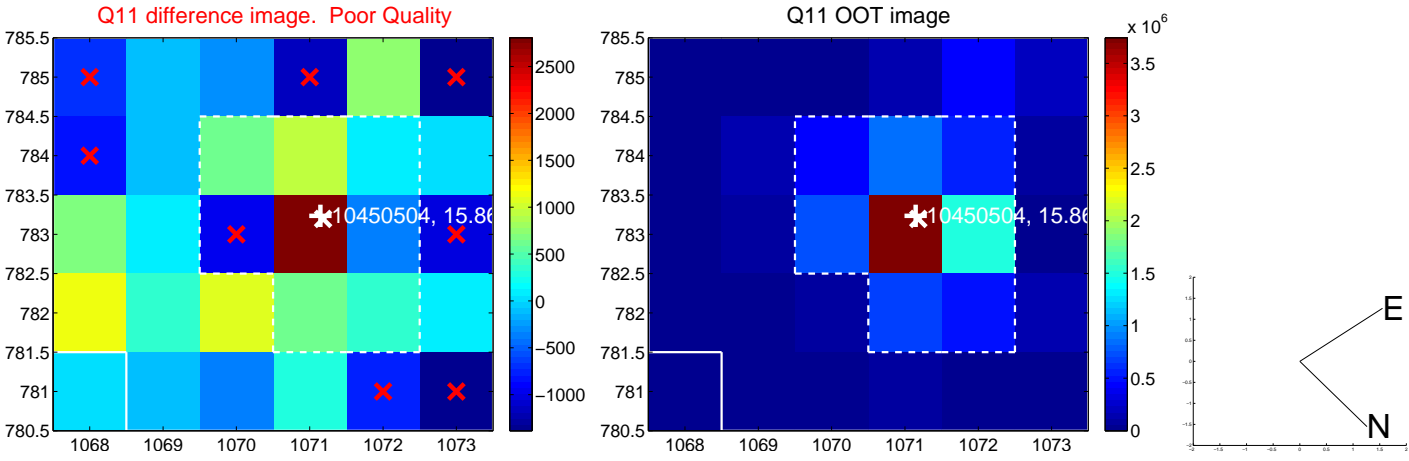
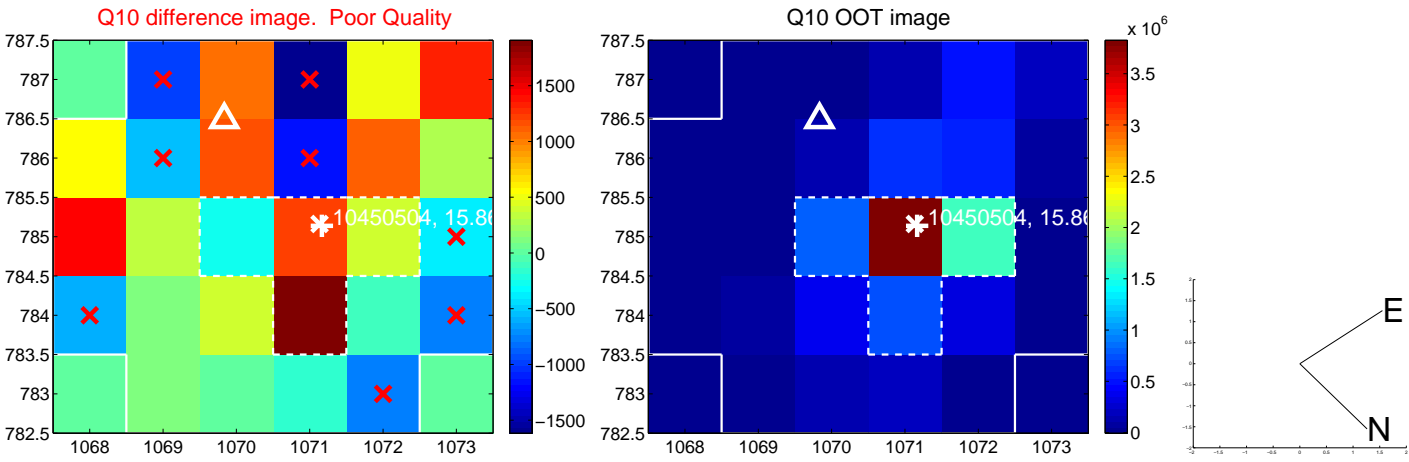
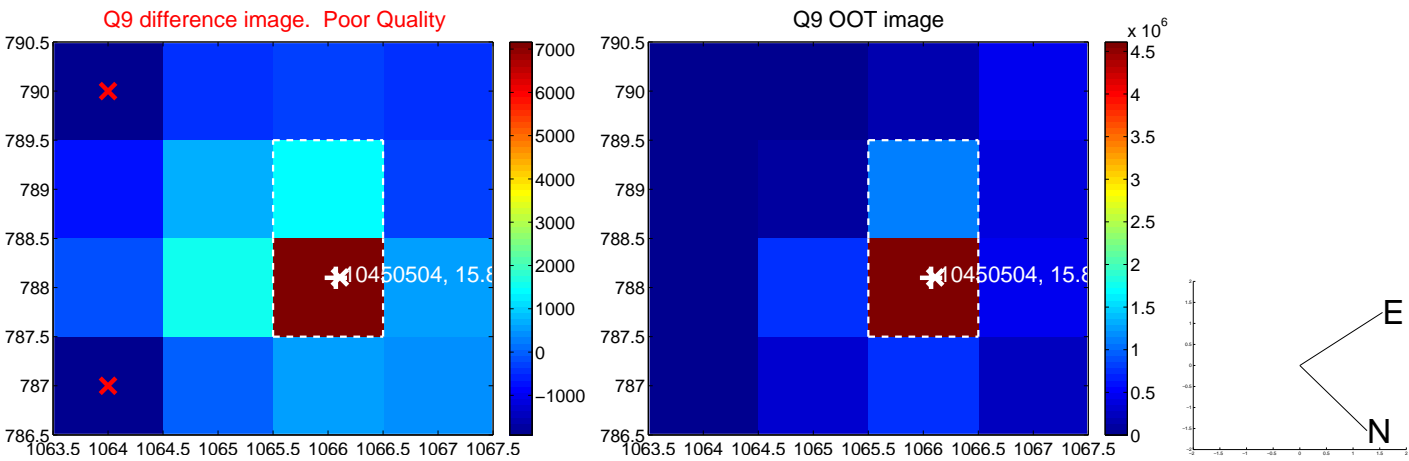
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



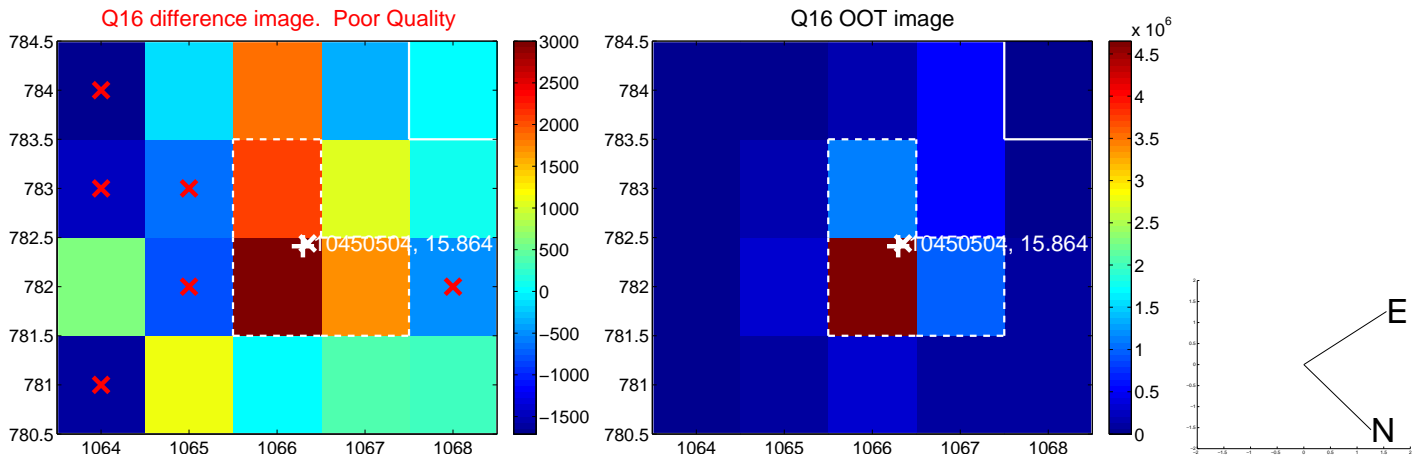
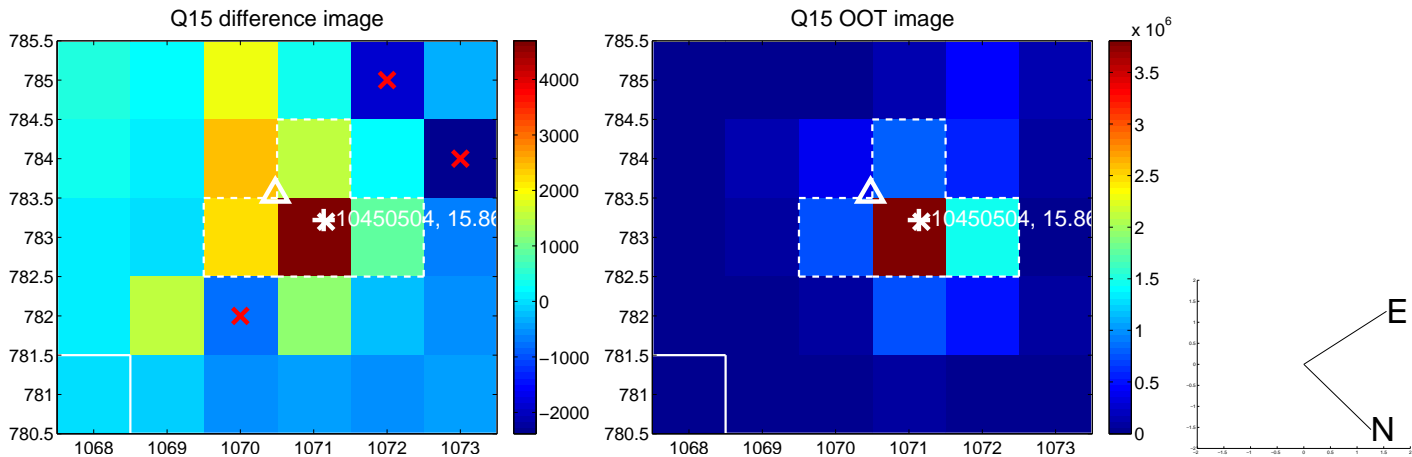
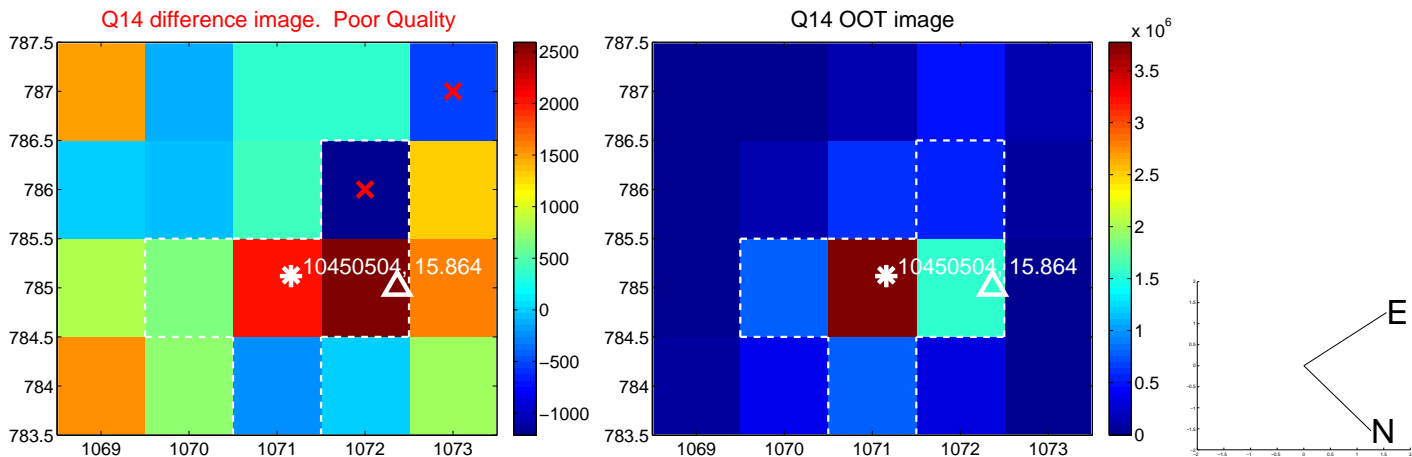
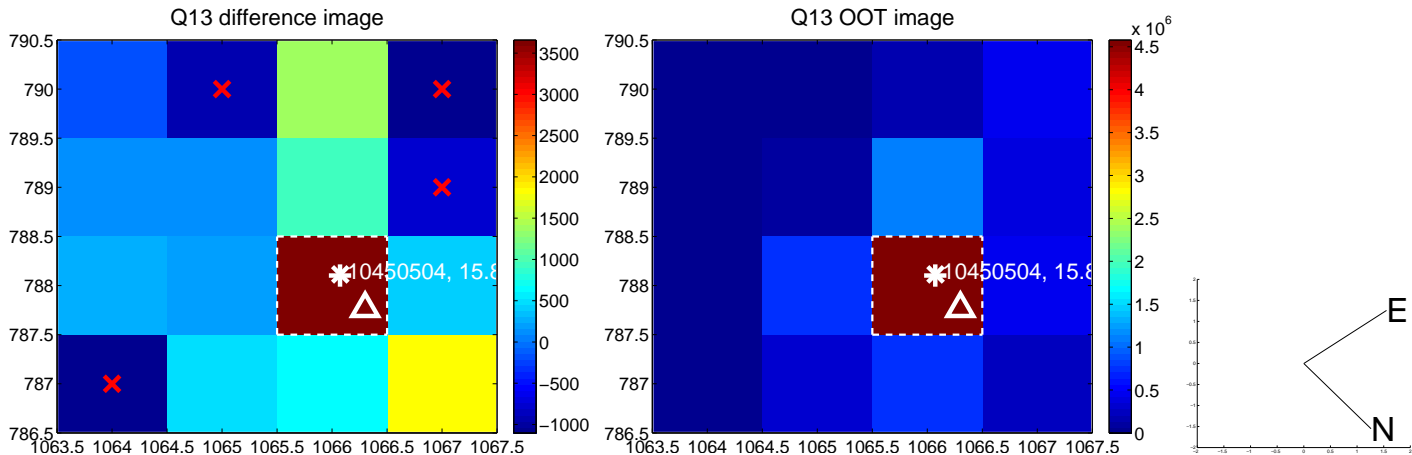
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



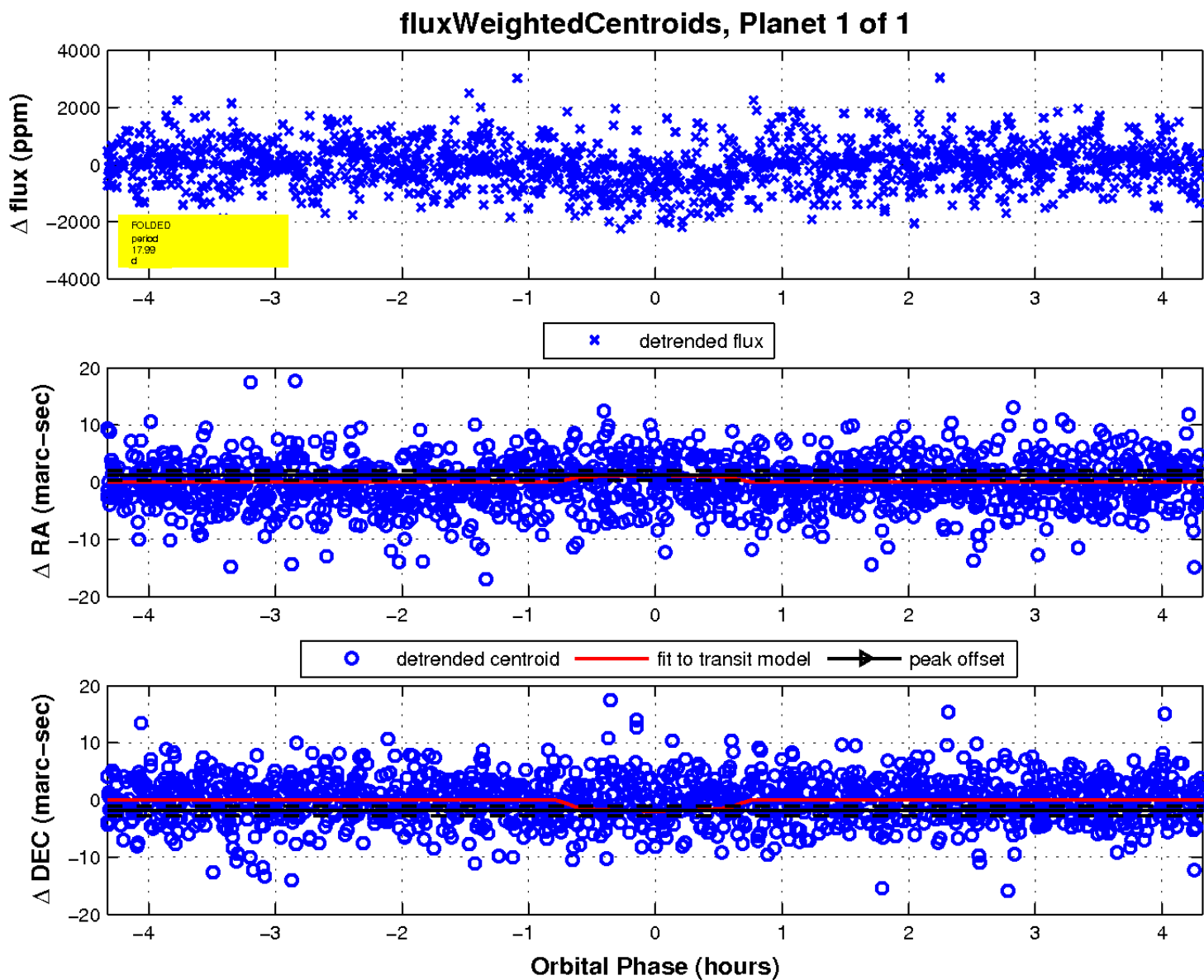
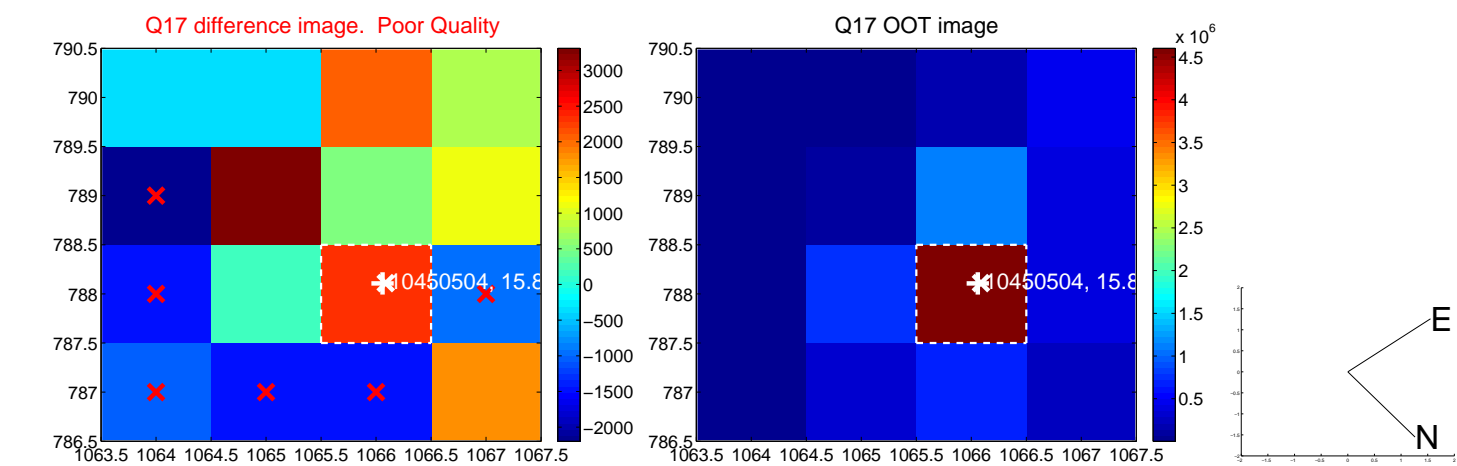
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



UKIRT Image

Declination

