

KIC 011046025

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})
011046025-01	OBS	1646.01	3.720232	133.412266	160.8	1.968	14.0	15.1	0.80	5017	0.99	195.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011046025-01	OBS	PC	1.00	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 011046025-01

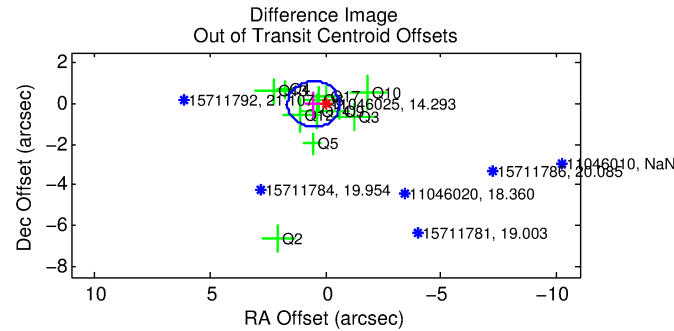
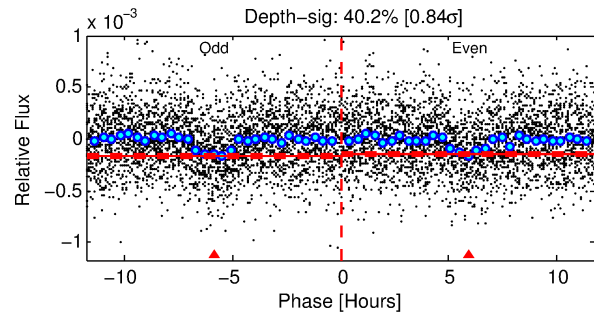
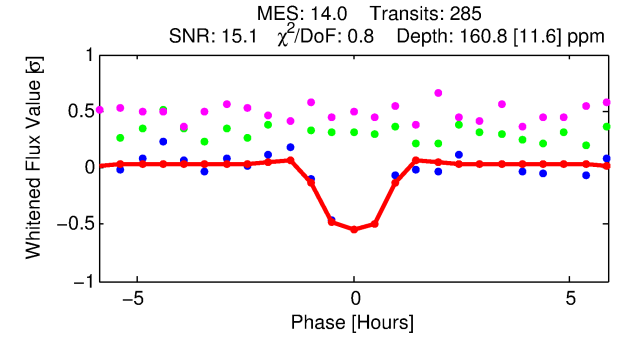
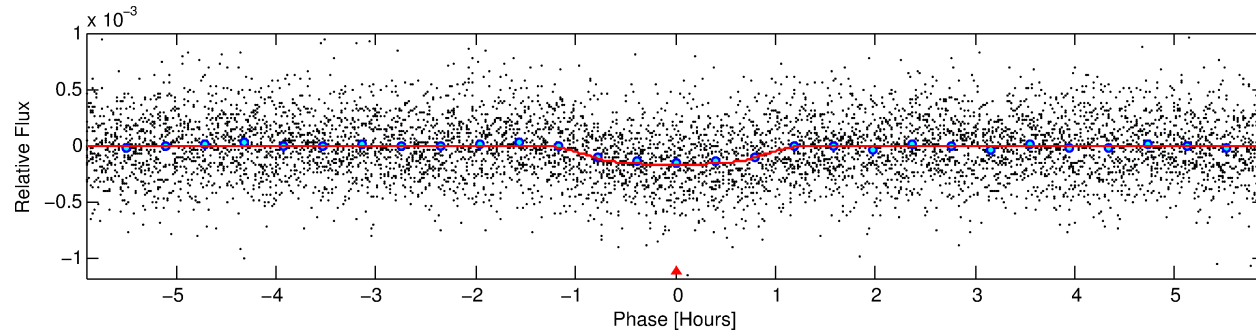
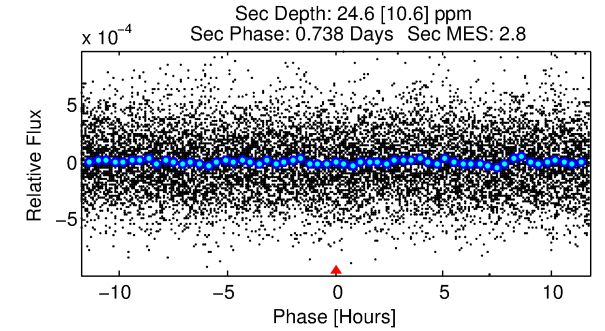
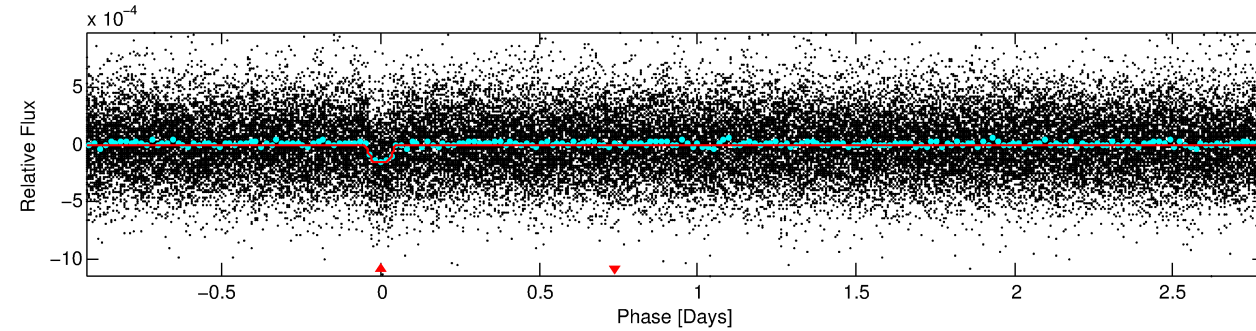
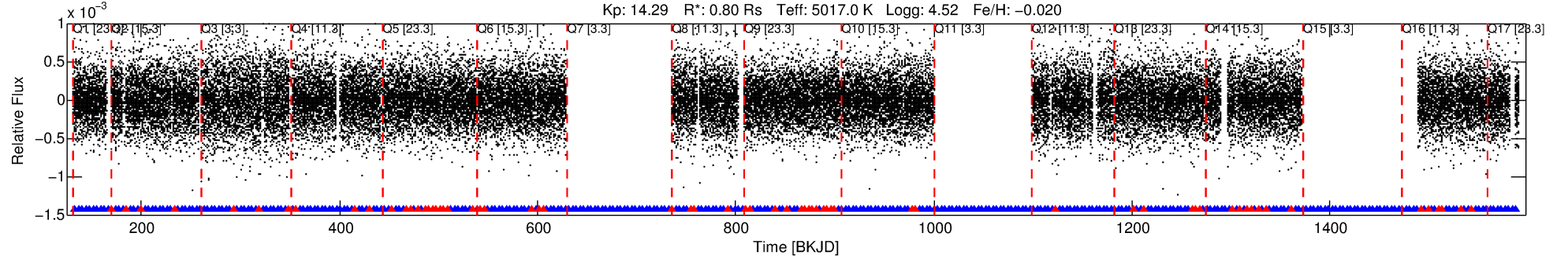
No Significant Match Found

DV One-Page Summary

KIC: 11046025 Candidate: 1 of 1 Period: 3.720 d

KOI: K01646.01 Corr: 0.962

Kp: 14.29 R*: 0.80 Rs Teff: 5017.0 K Logg: 4.52 Fe/H: -0.020



DV Fit Results:

Period = 3.72023 [0.00001] d
Epoch = 133.4123 [0.0023] BKJD
Rp/R* = 0.0114 [0.0109]
a/R* = 14.07 [45.75]
b = 0.28 [11.12]
Seff = 195.98 [38.16]
Teq = 954 [46] K
Rp = 0.99 [0.96] Re
a = 0.0429 [0.0042] AU
Ag = 25.34 [49.98] [0.49σ]
Teffp = 3310 [1630] K [1.44σ]

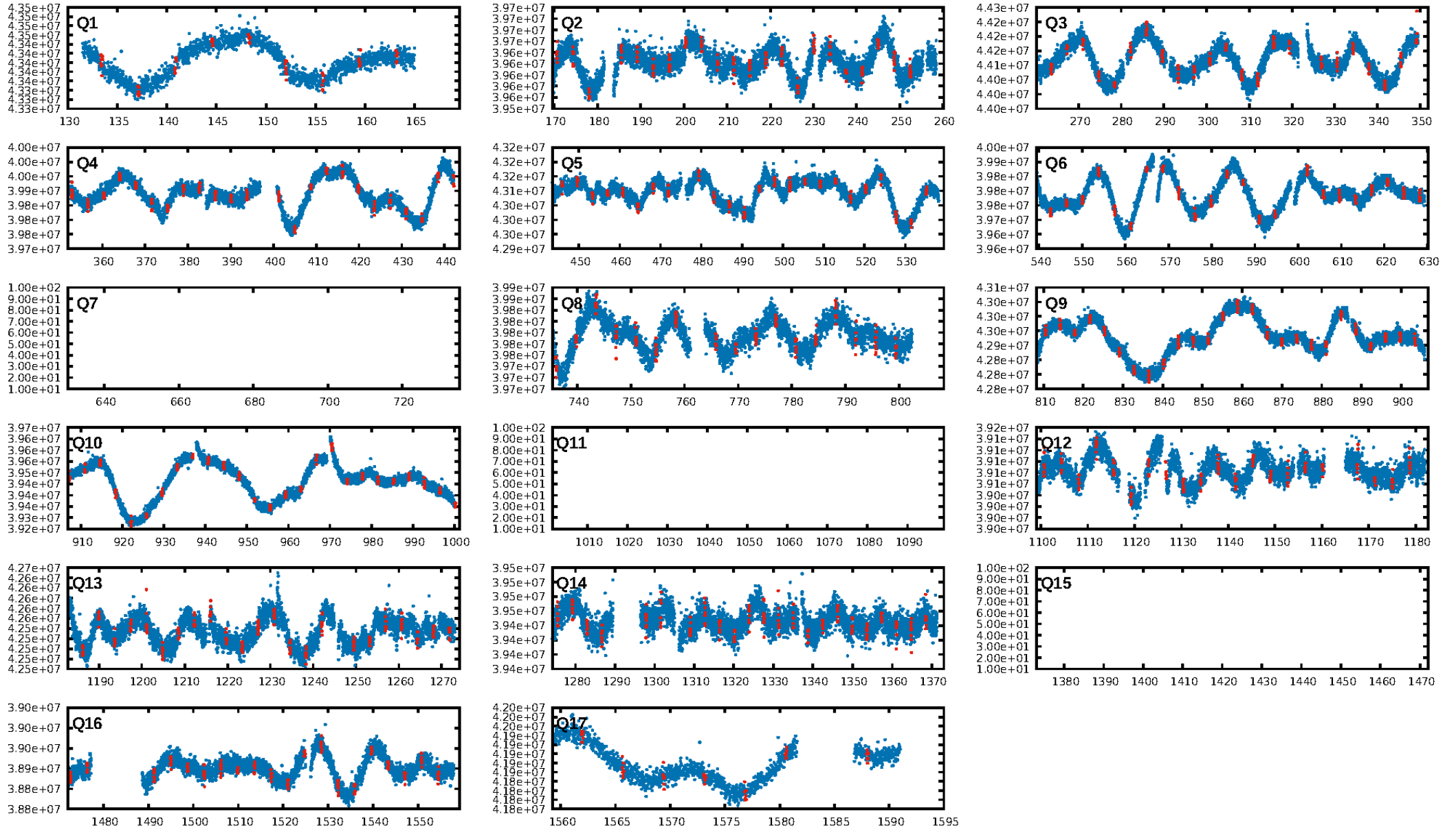
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.20e-42
RollingBand-fgt: 0.76 [204/269]
GhostDiagnostic-chr: 3.312
Centroid-sig: 48.8%
Centroid-so: 0.483 arcsec [0.57σ]
OotOffset-rm: 0.518 arcsec [1.38σ]
KicOffset-rm: 0.318 arcsec [0.59σ]
OotOffset-st: 4/1/2/4 [11]
KicOffset-st: 4/1/2/4 [11]
DiffImageQuality-fgm: 0.82 [9/11]
DiffImageOverlap-fno: 1.00 [14/14]

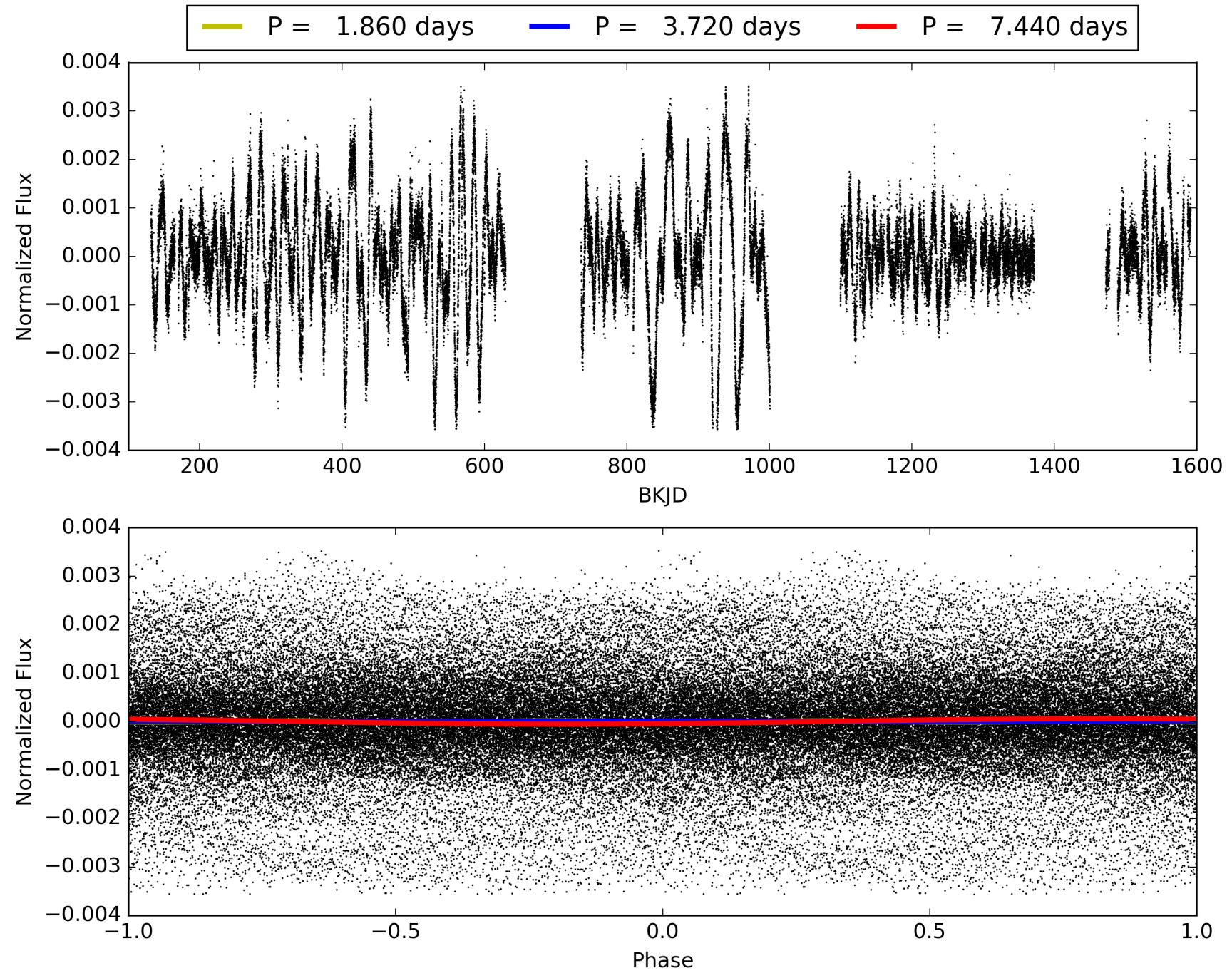
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:48:25 Z

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

TCE 011046025-01, PDC Light Curves

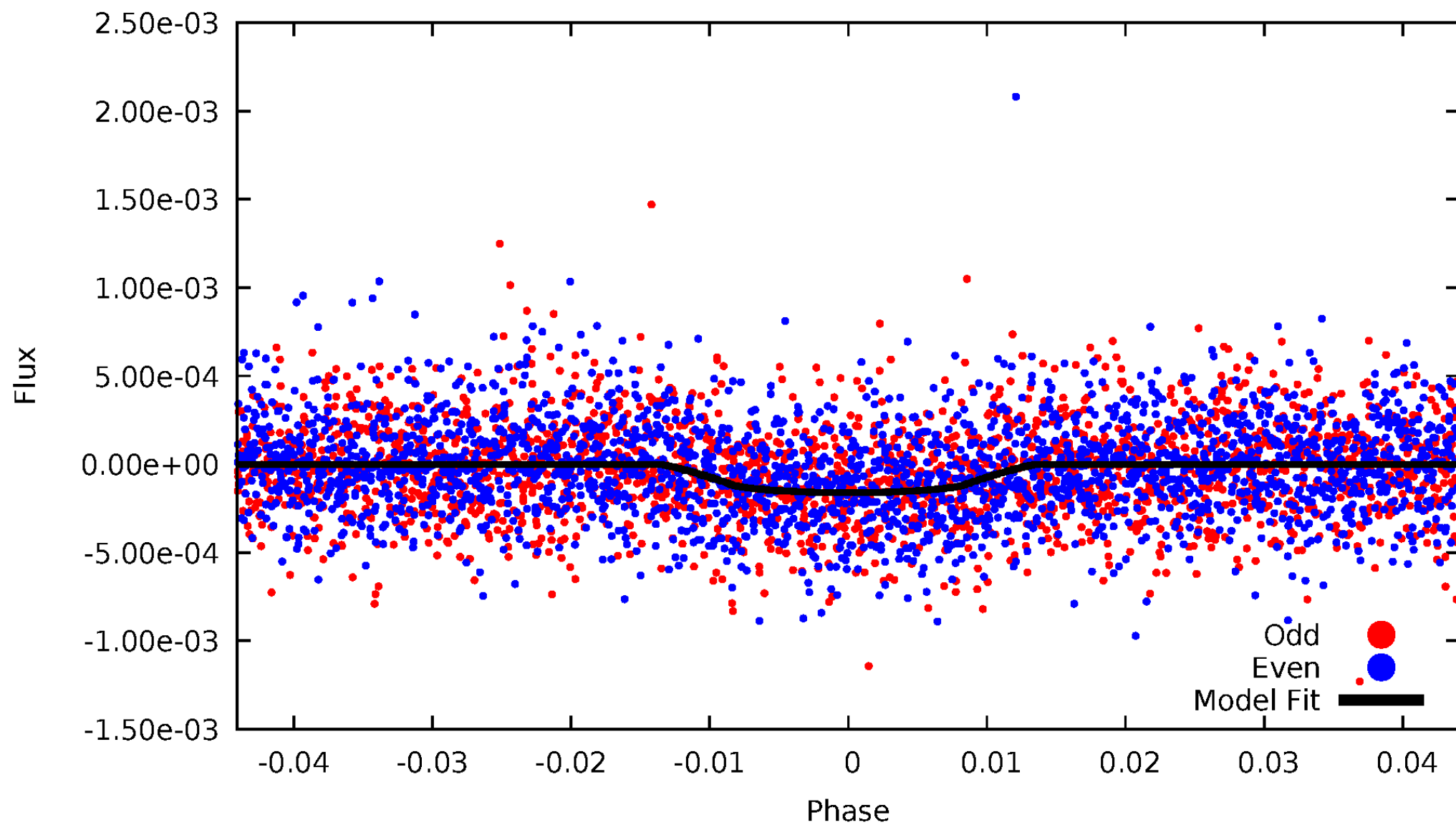


TCE 011046025-01



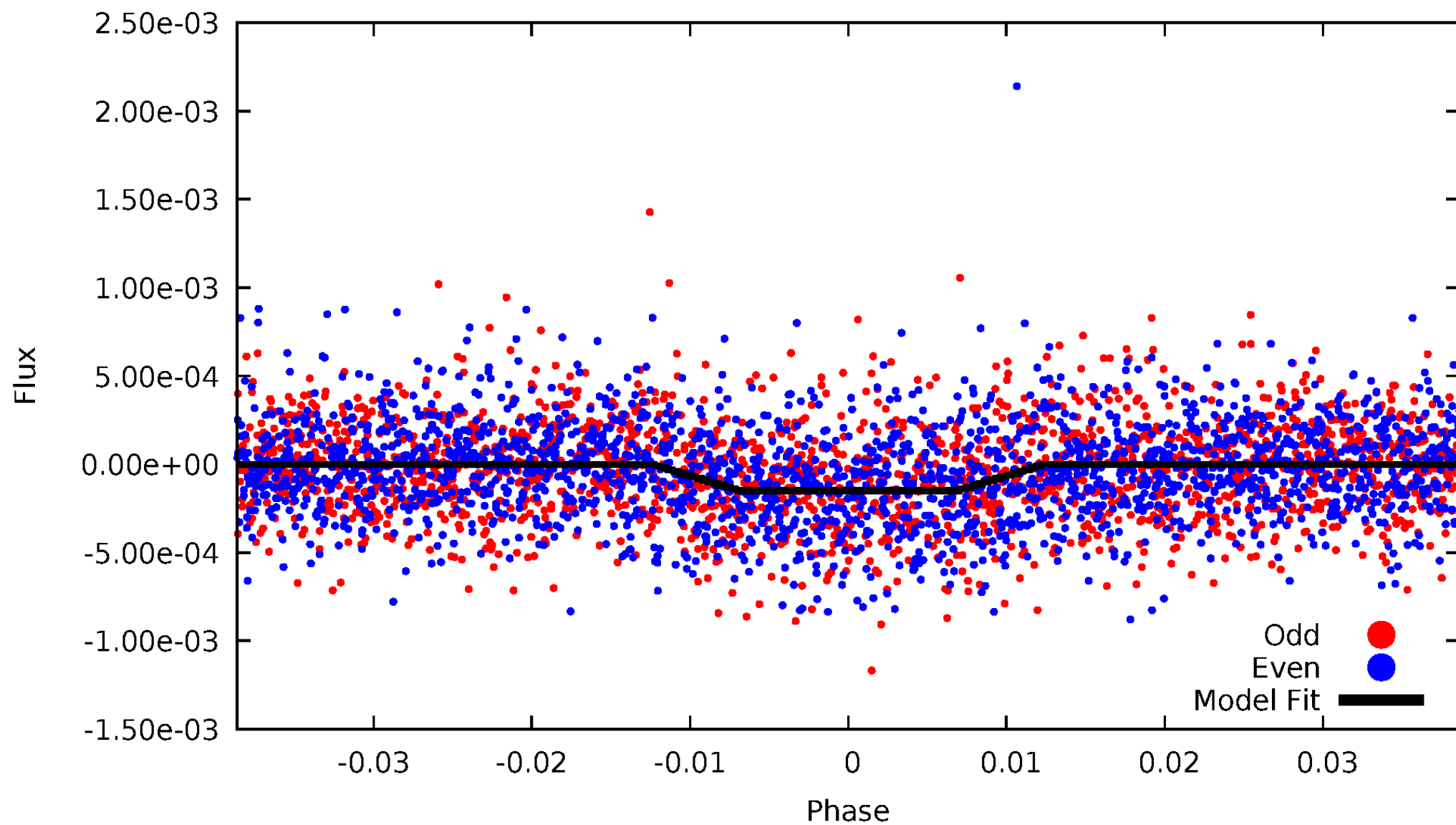
DV Odd/Even

TCE 011046025-01

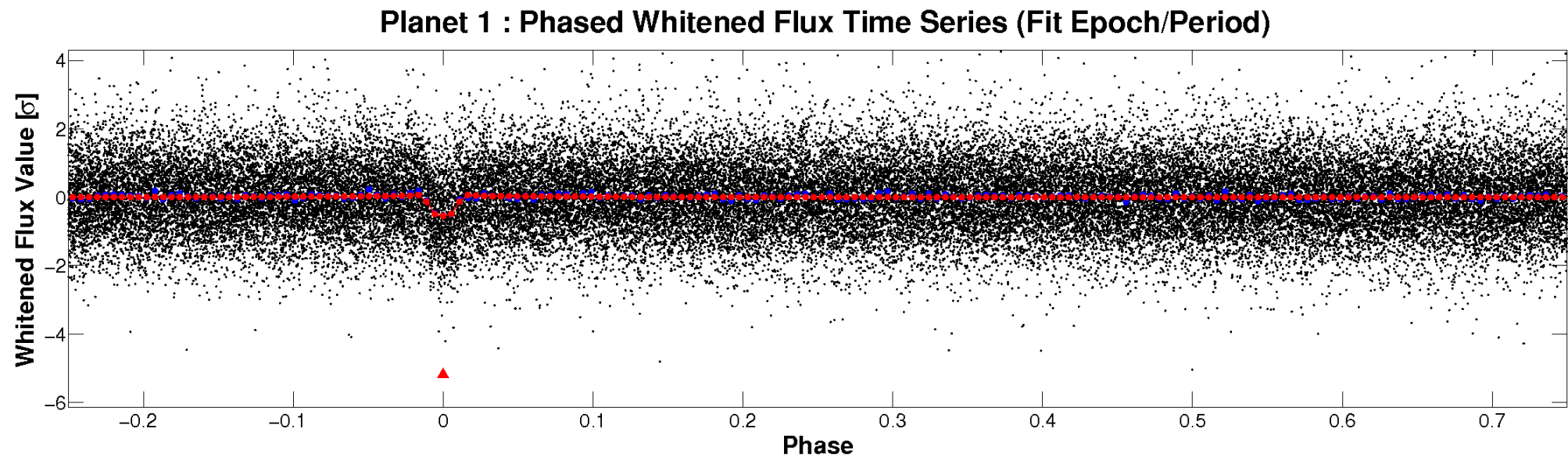
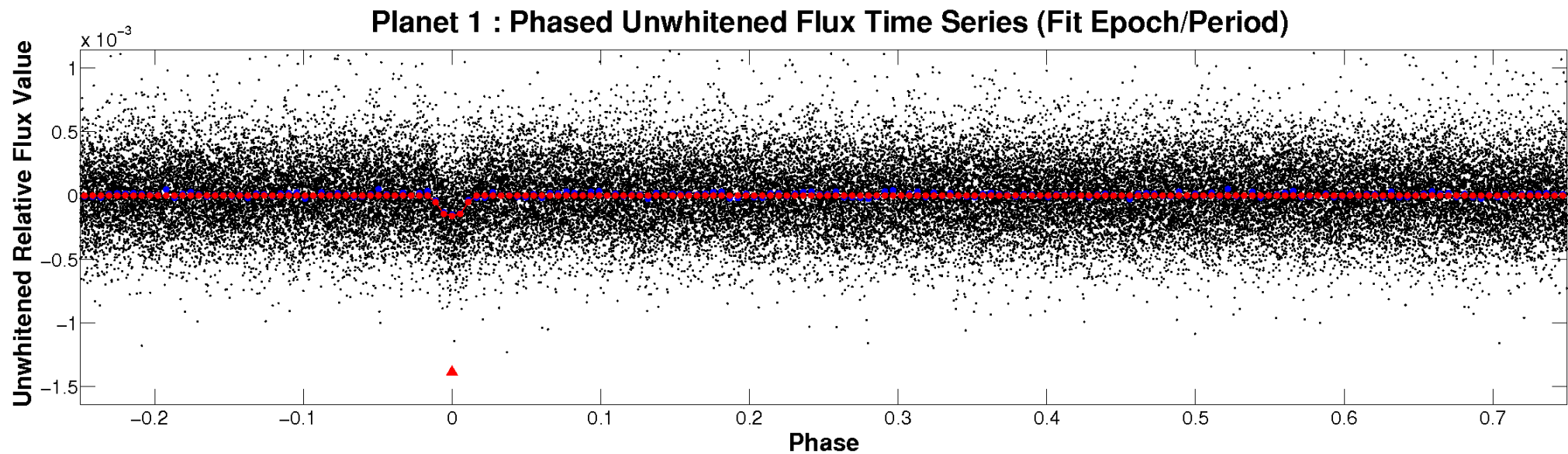


ALT Odd/Even

TCE 011046025-01

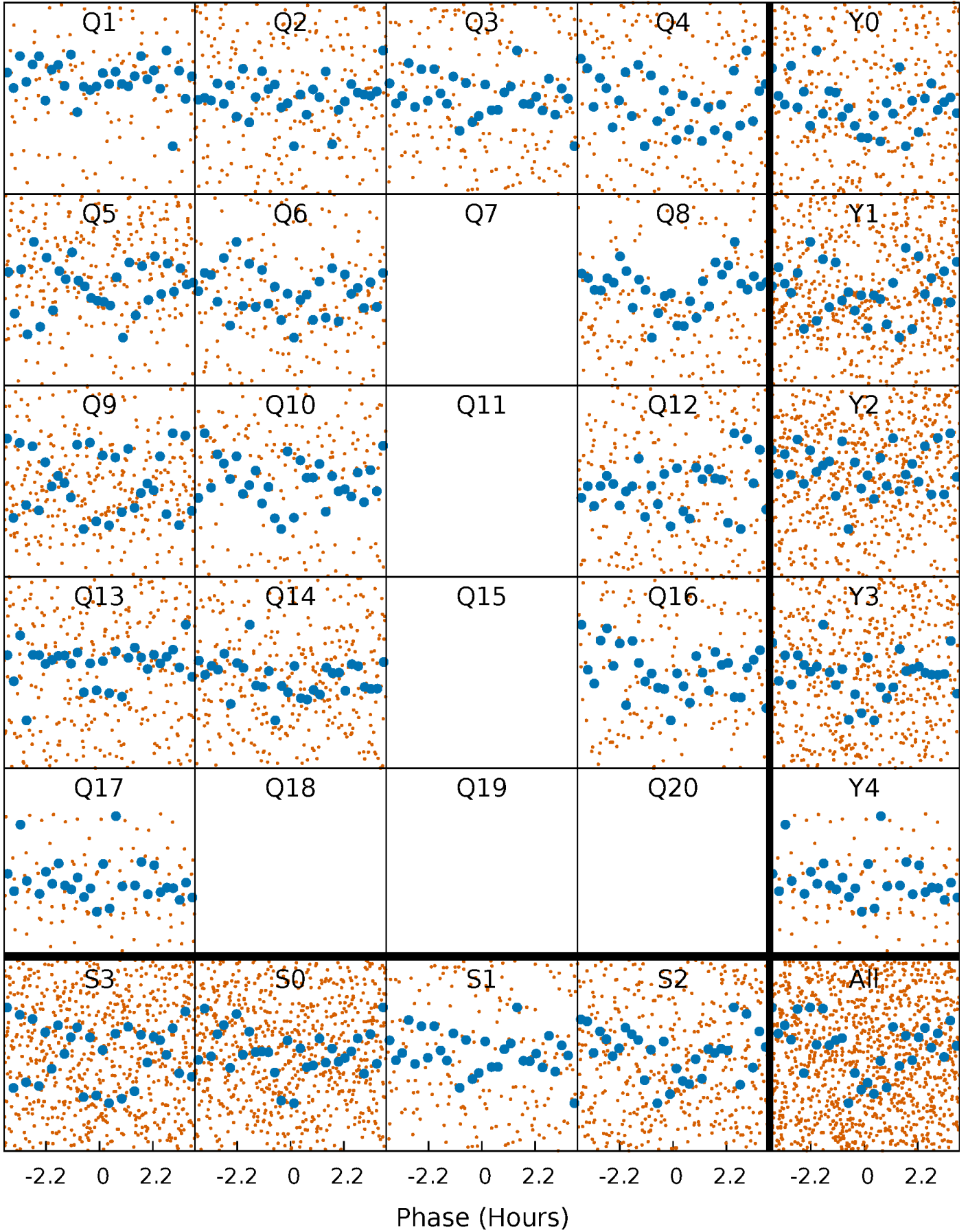


Non-Whitened Vs. Whitened Light Curve



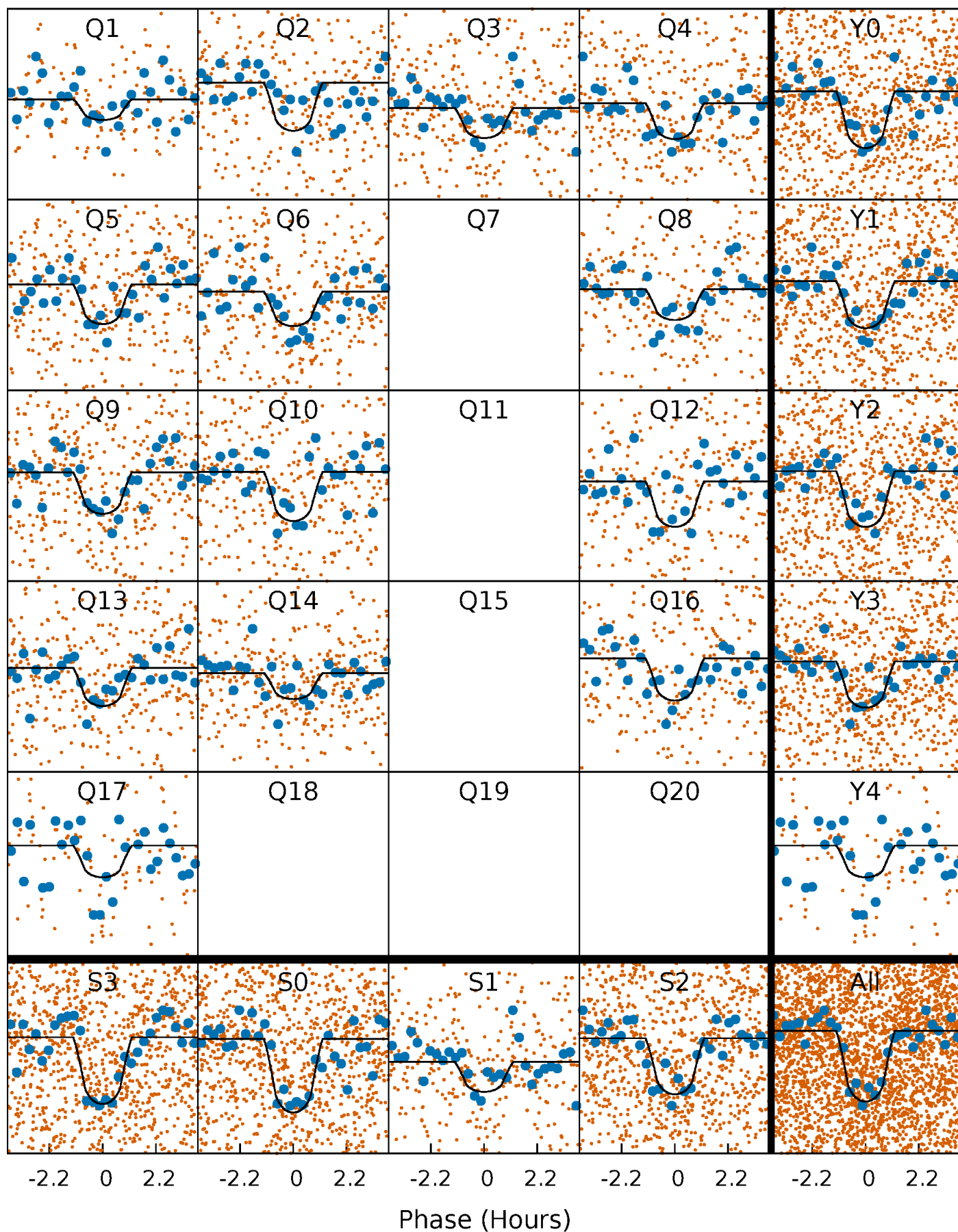
PDC Quarter-Phased Transit Curves

TCE 011046025-01 P= 3.720232 Days $T_0=133.412266$ (BKJD)



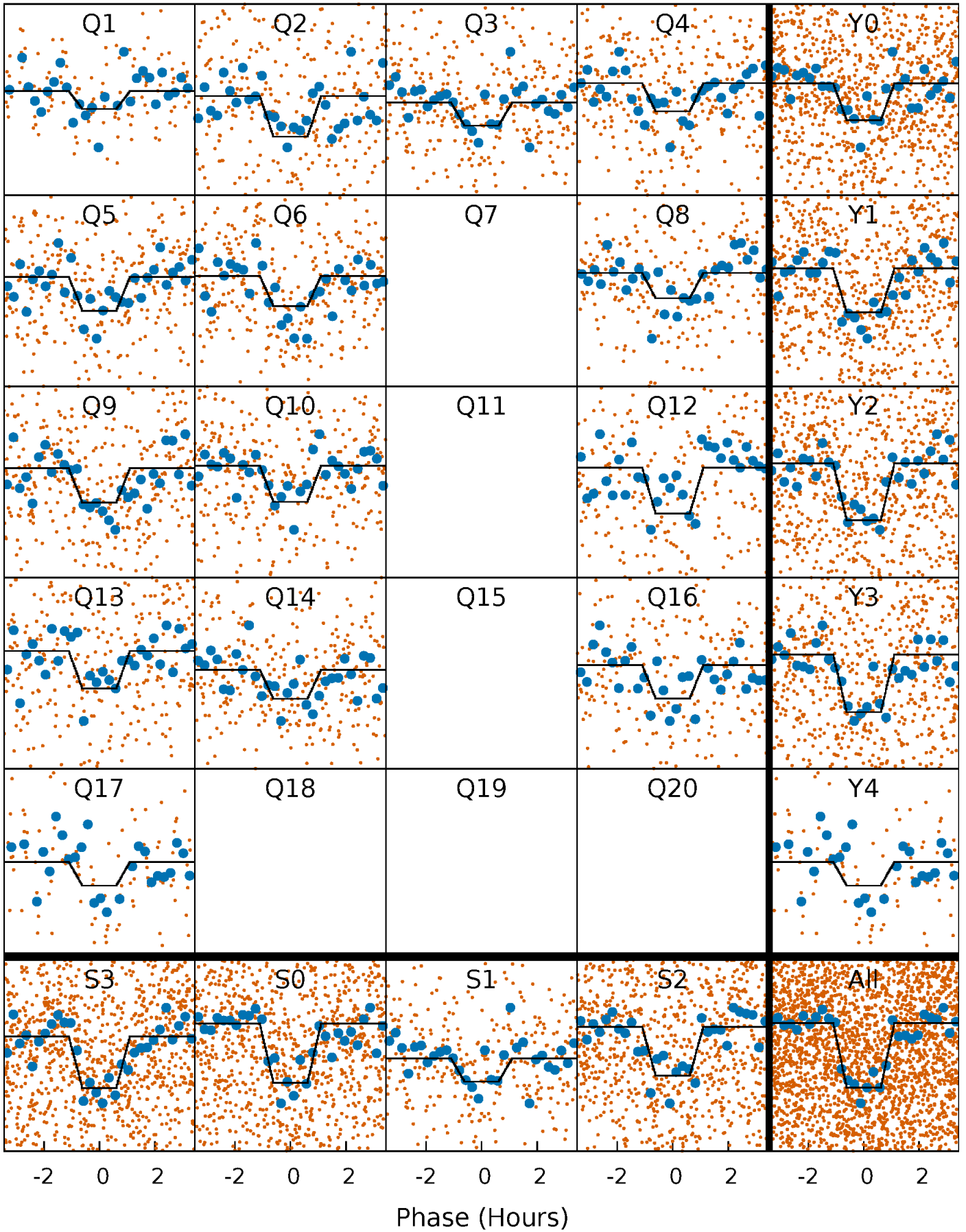
DV Quarter-Phased Transit Curves

TCE 011046025-01 P= 3.720232 Days $T_0=133.412266$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

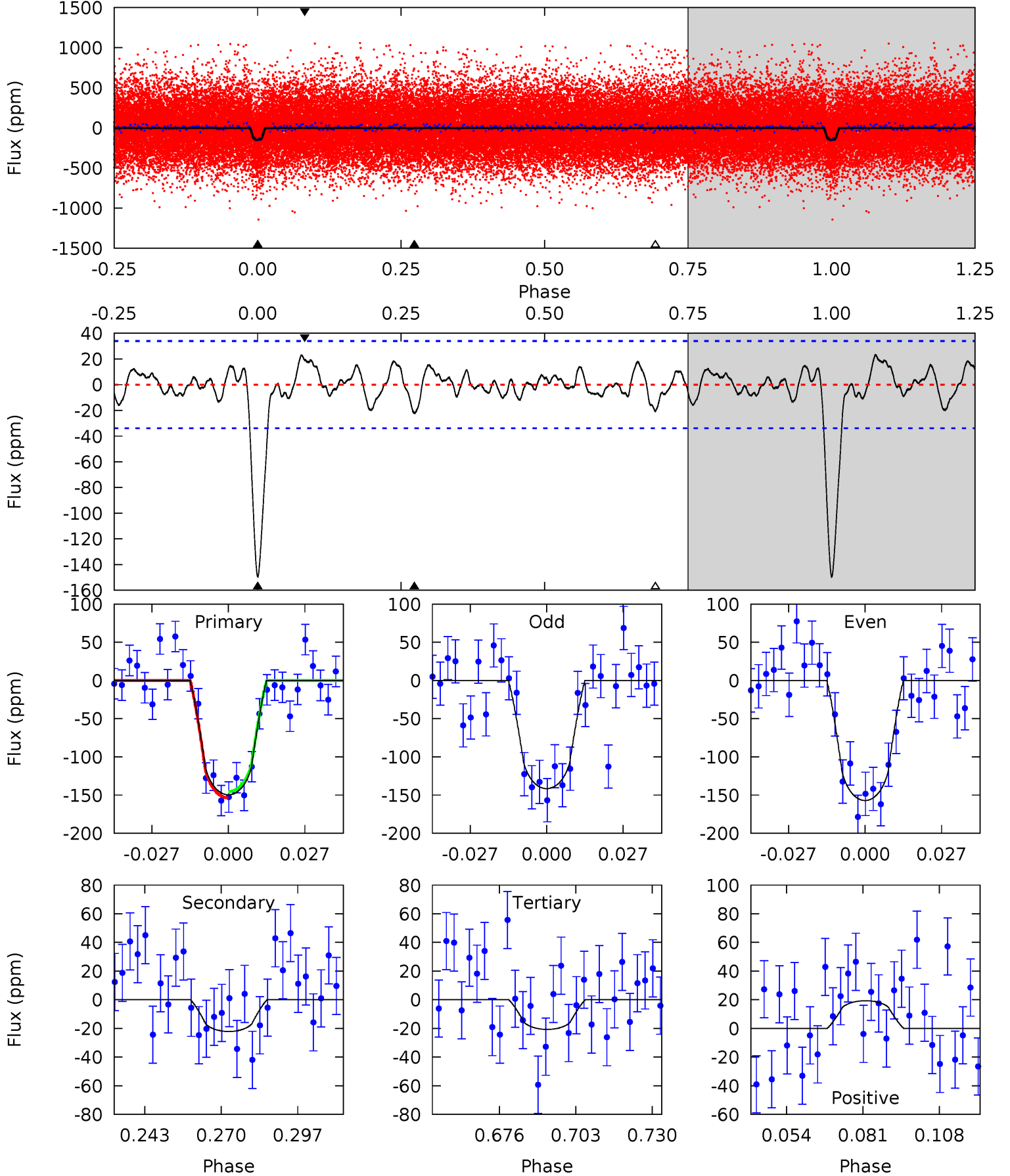
TCE 011046025-01 P= 3.720182 Days $T_0=133.420499$ (BKJD)



DV Model-Shift Uniqueness Test

011046025-01, P = 3.720232 Days, E = 129.692034 Days

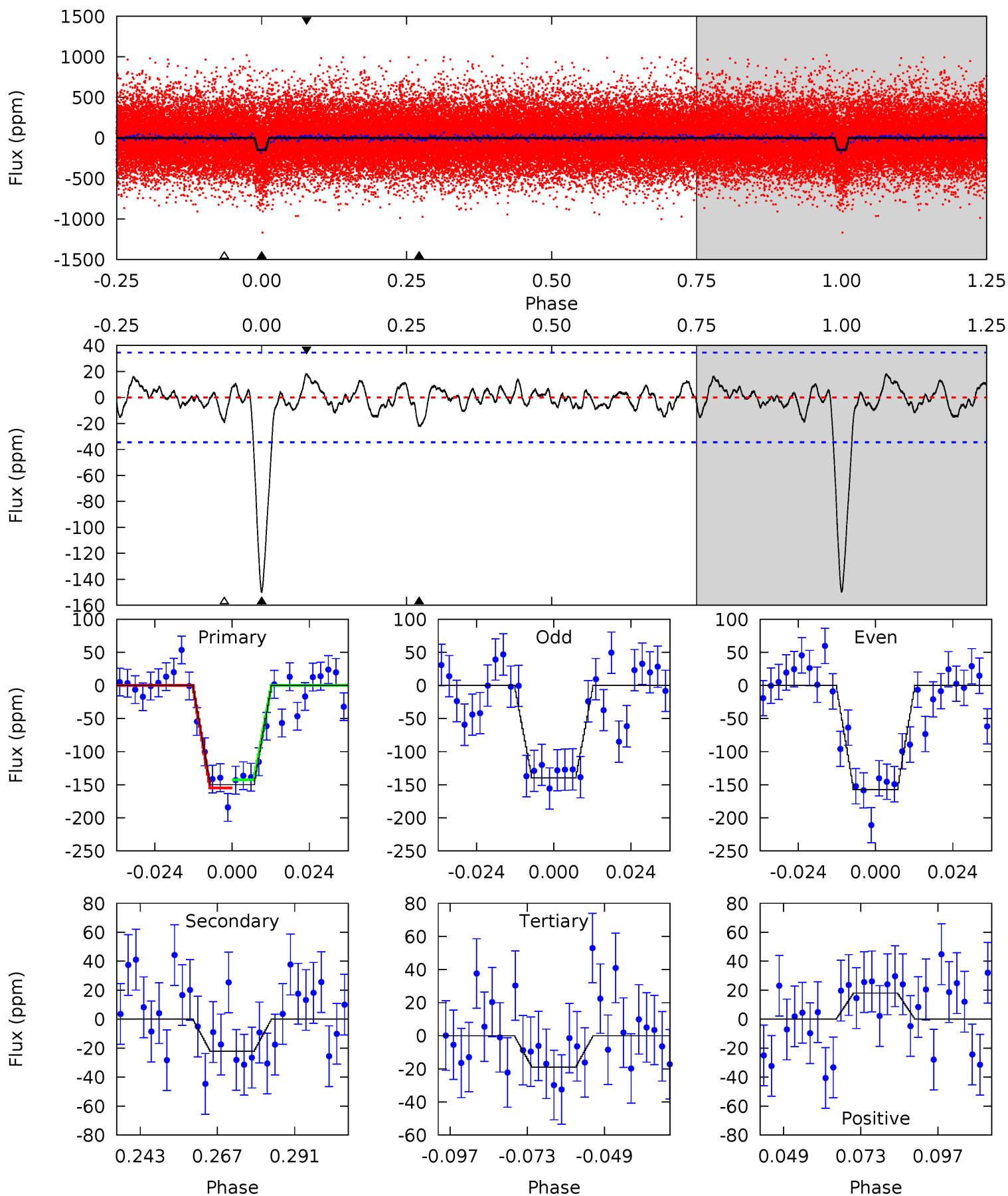
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.3	3.16	2.95	2.75	4.83	2.21	1.20	18.4	18.6	0.21	0.41	1.11	1.02	0.13	0.59



Alt Model-Shift Uniqueness Test

011046025-01, P = 3.720182 Days, E = 129.700317 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.1	3.11	2.67	2.54	4.85	2.25	0.95	18.4	18.6	0.44	0.57	1.24	1.05	0.11	0.87



Stellar Parameters For KIC 011046025

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5017^{+151}_{-151}	$4.516^{+0.088}_{-0.088}$	$-0.020^{+0.300}_{-0.300}$	$0.797^{+0.078}_{-0.086}$	$0.760^{+0.095}_{-0.055}$	$2.117^{+0.710}_{-0.486}$
	+3%/-3%	+2%/-2%	+1500%/-1500%	+10%/-11%	+12%/-7%	+34%/-23%
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 011046025-01 / KOI 1646.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-22 ± 7	$1.14^{+0.86}_{-0.66}$	1334^{+54}_{-55}	3474^{+1330}_{-619}	18^{+86}_{-13}
Alt.	-22 ± 7	$1.22^{+0.95}_{-0.77}$	1334^{+59}_{-55}	3355^{+1486}_{-523}	15^{+93}_{-10}

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 $A_{obs} \gg 1.0$

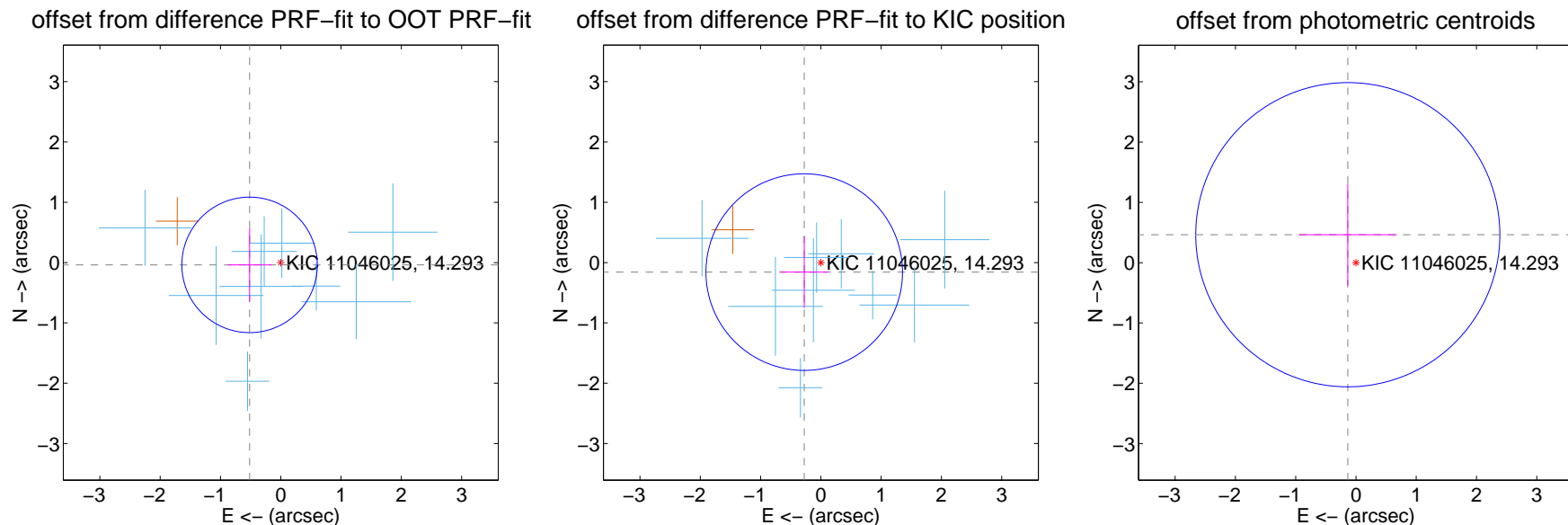
DV Centroid Data

Supplemental centroid analysis for 011046025-01. Kepler magnitude: 14.29. Transit SNR 15.11

There are 9 quarters with good PRF difference image offsets

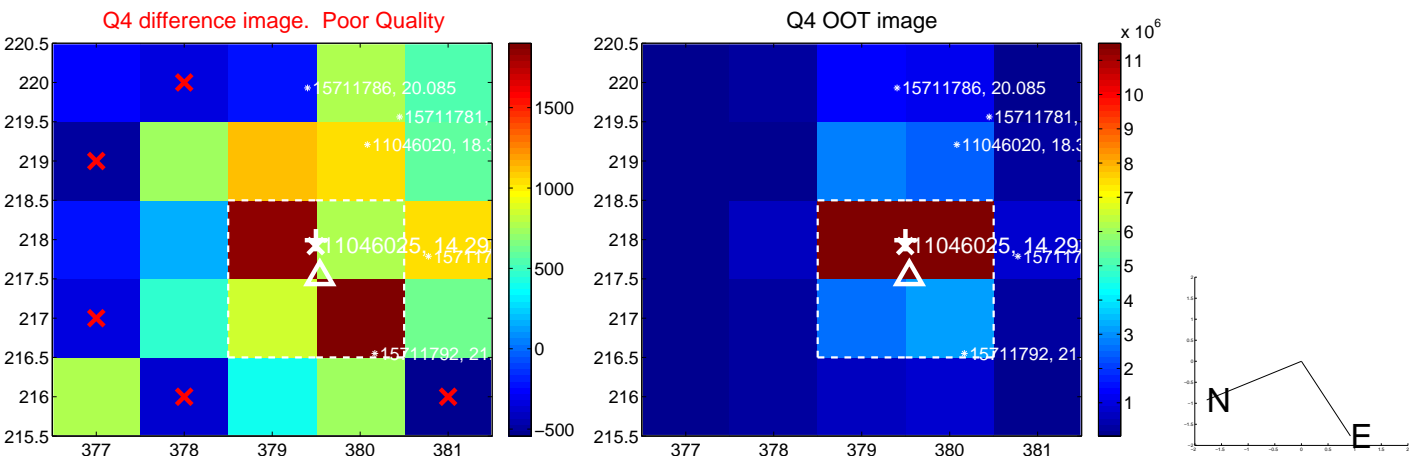
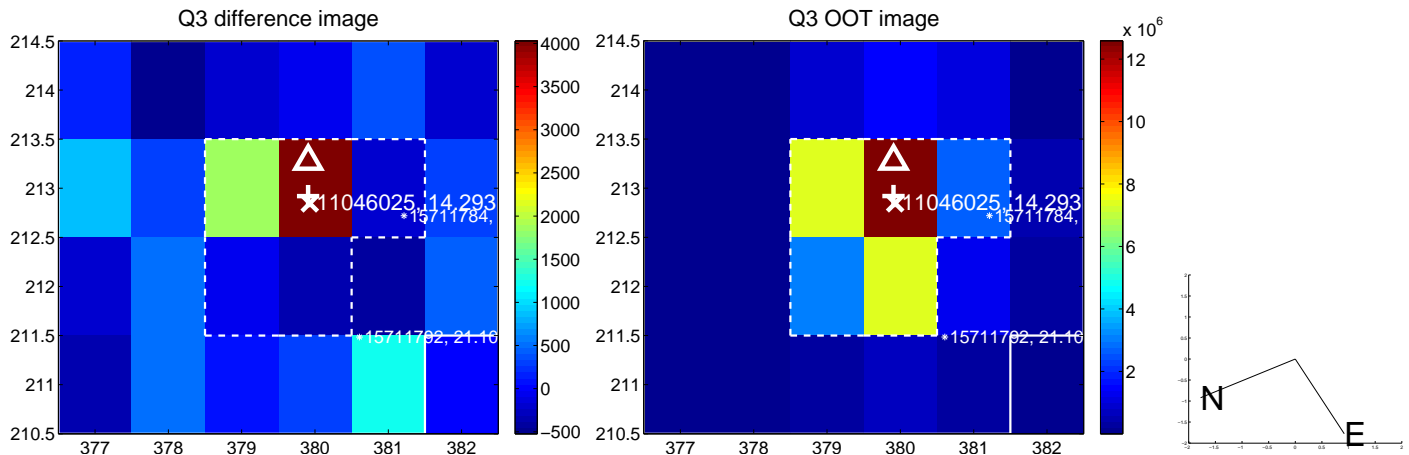
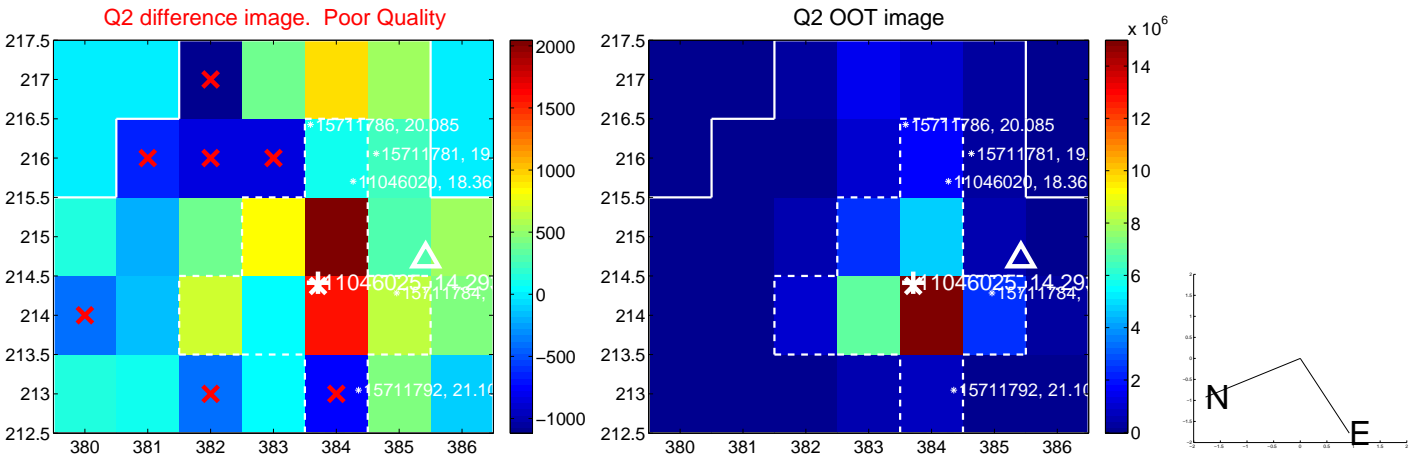
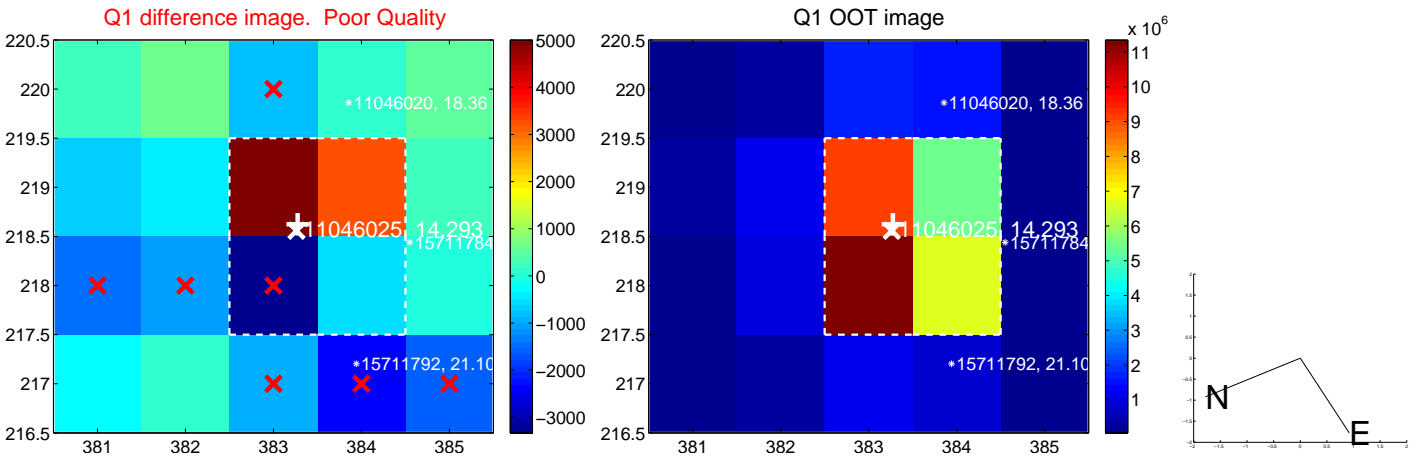
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.518 ± 0.375	1.38	0.517 ± 0.362	-0.038 ± 0.607
PRF-fit source offset from KIC position	0.318 ± 0.543	0.59	0.276 ± 0.395	-0.158 ± 0.592
photometric centroid source offset	0.48 ± 0.84	0.57	0.14 ± 0.81	0.46 ± 0.84

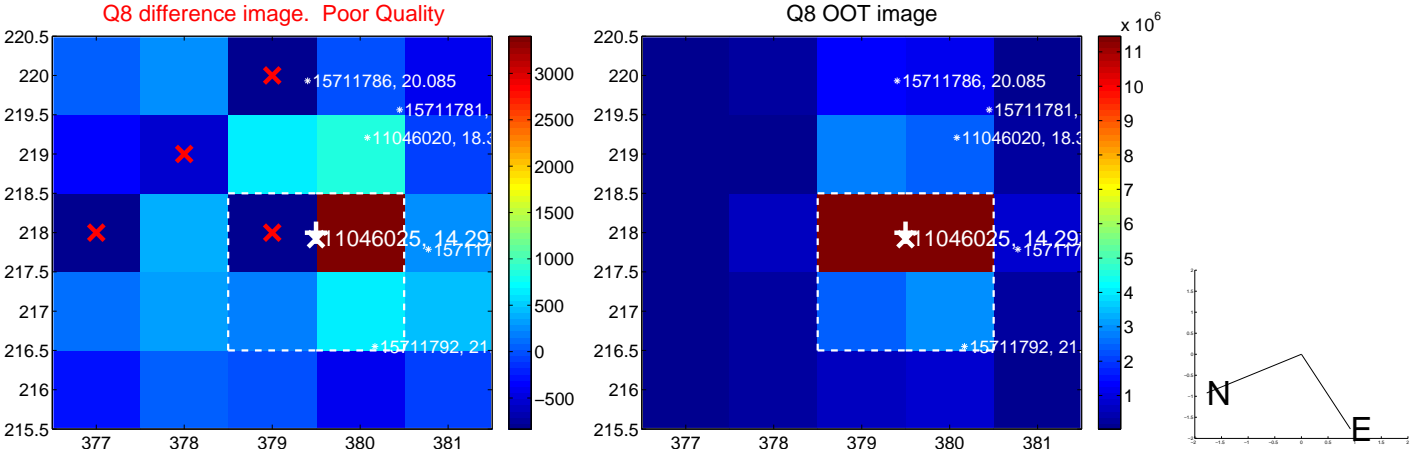
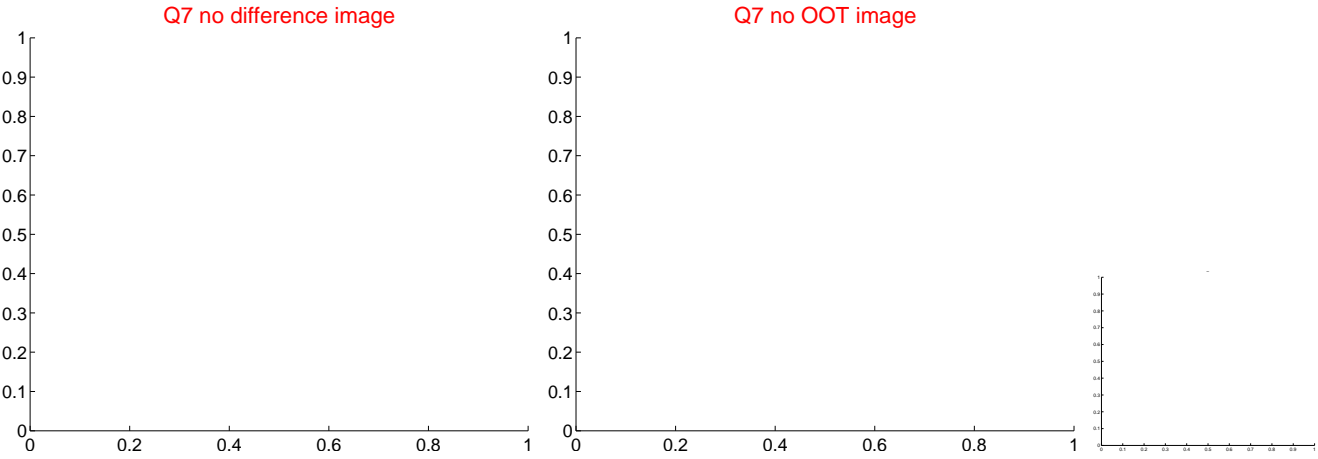
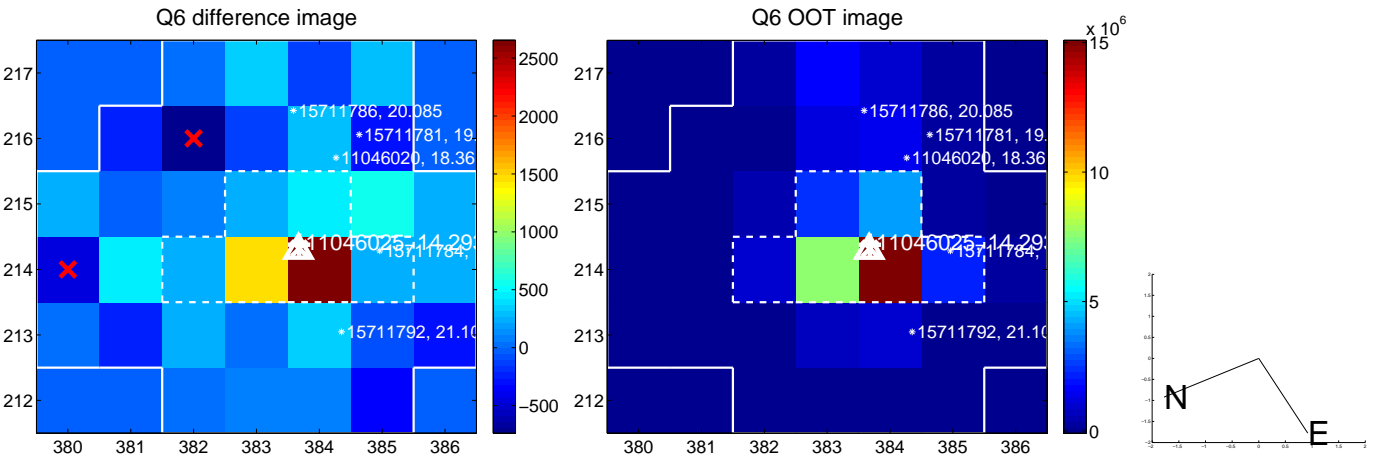
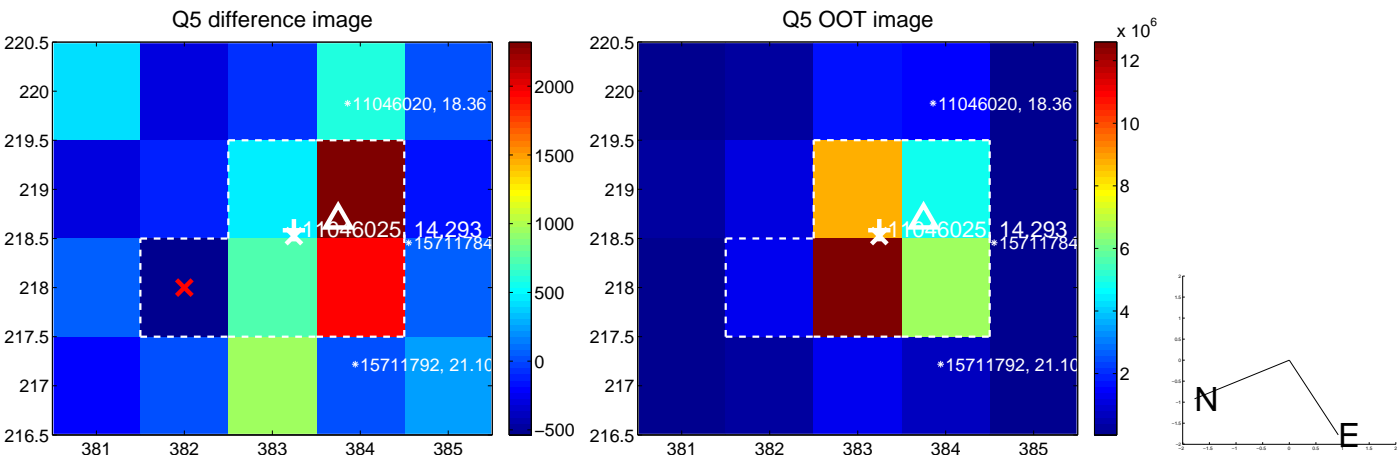


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

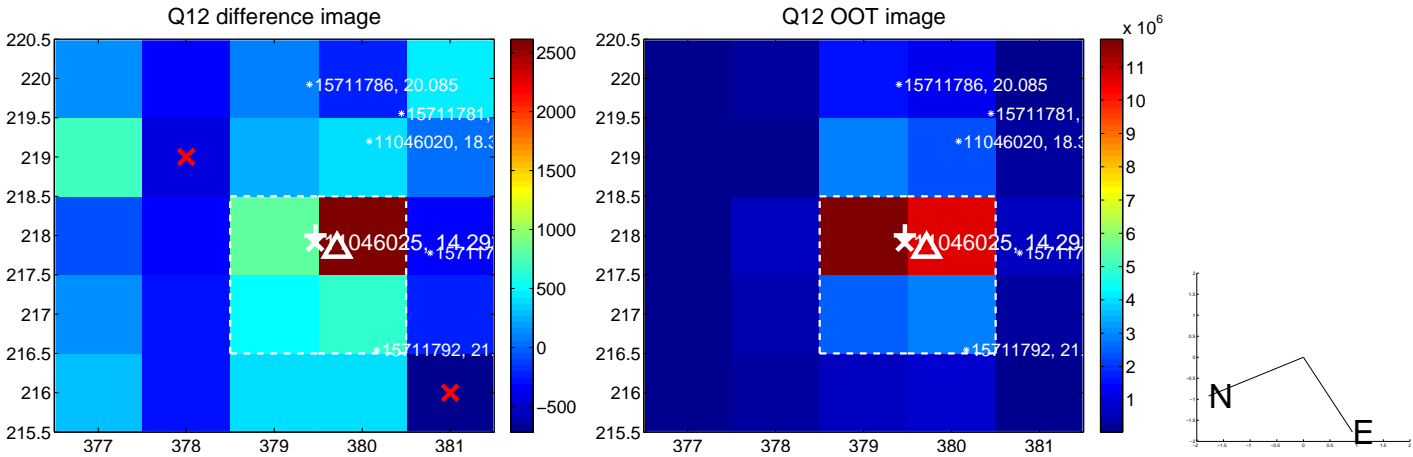
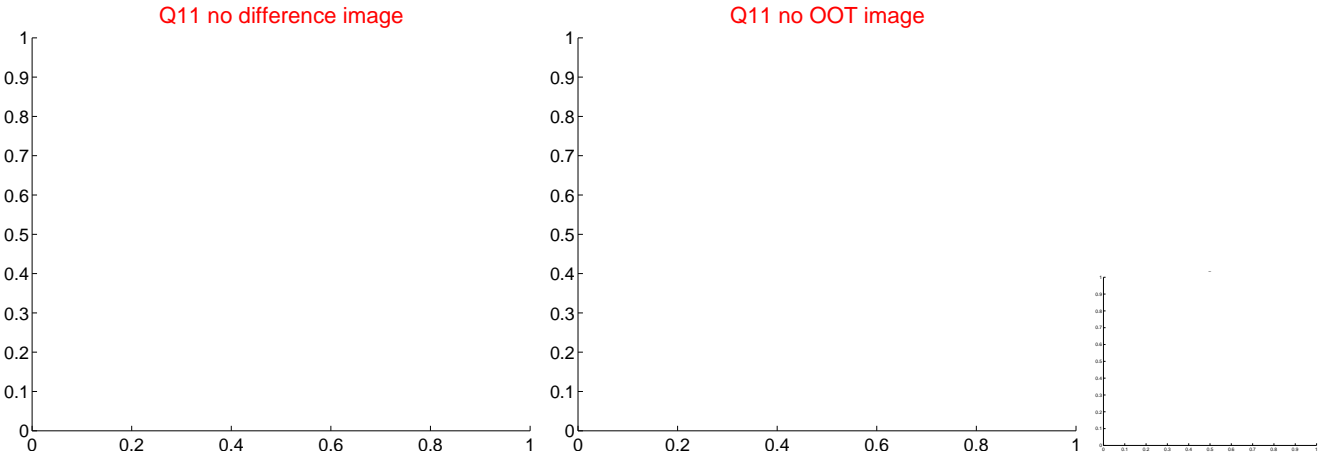
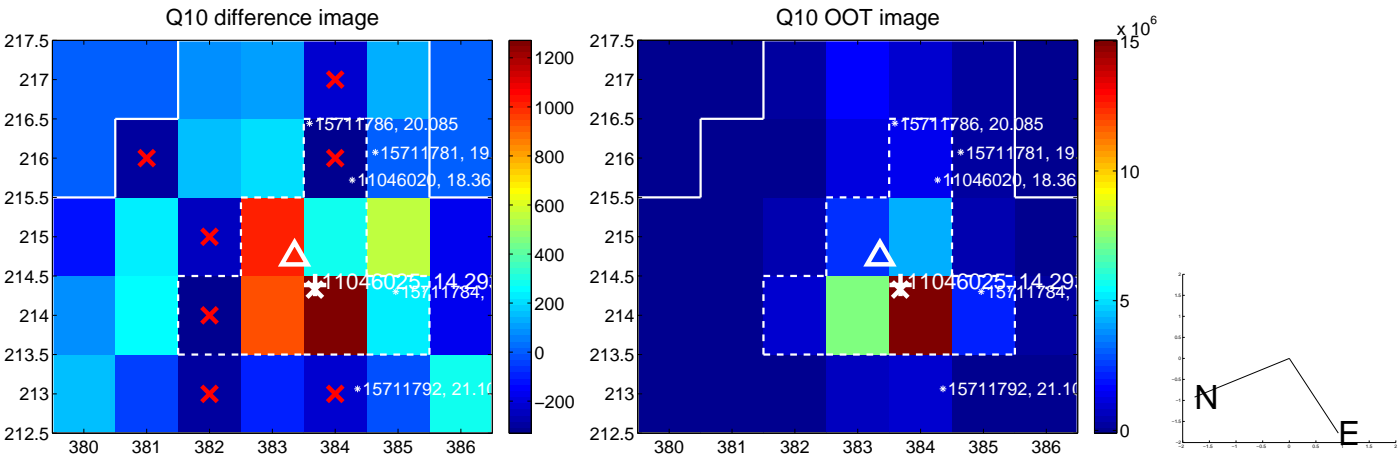
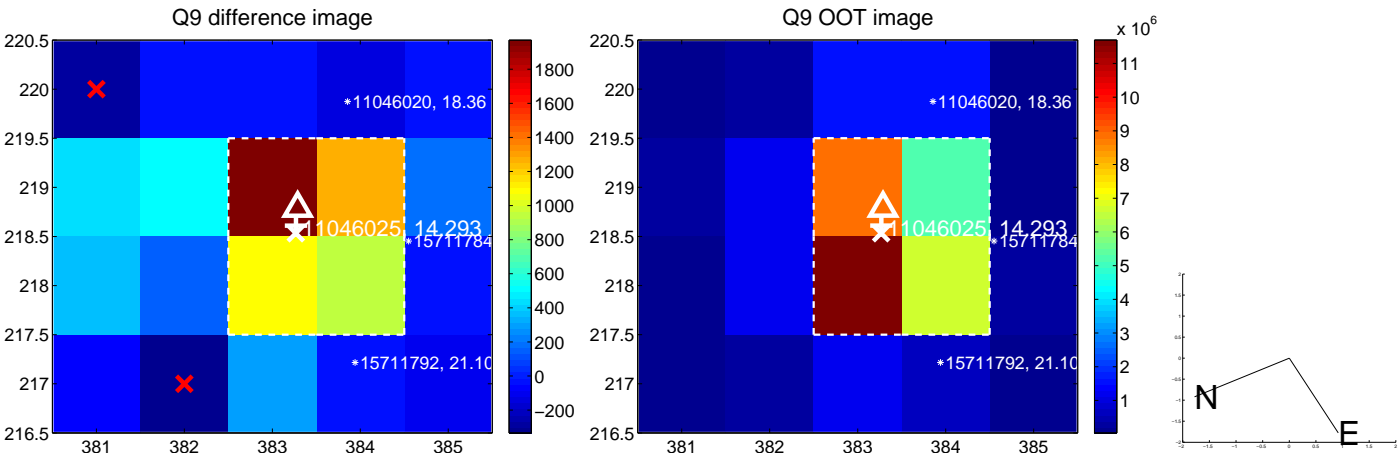
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



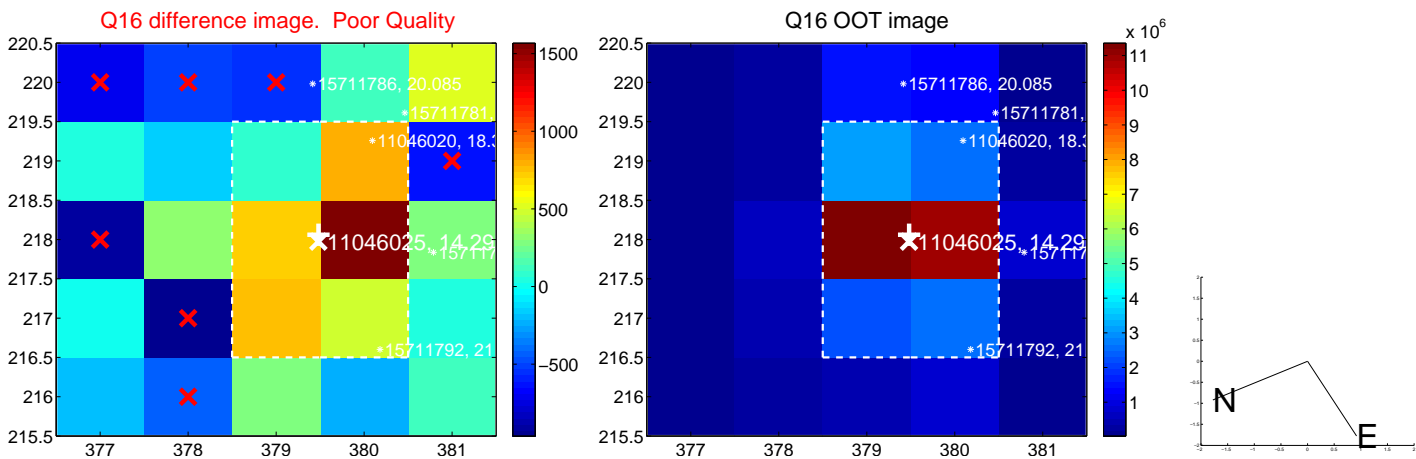
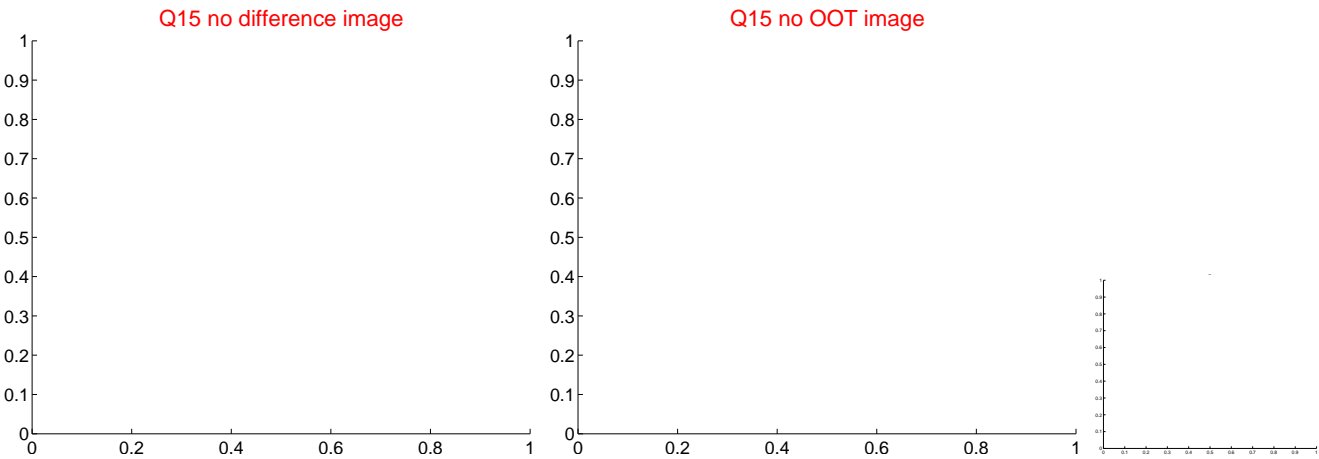
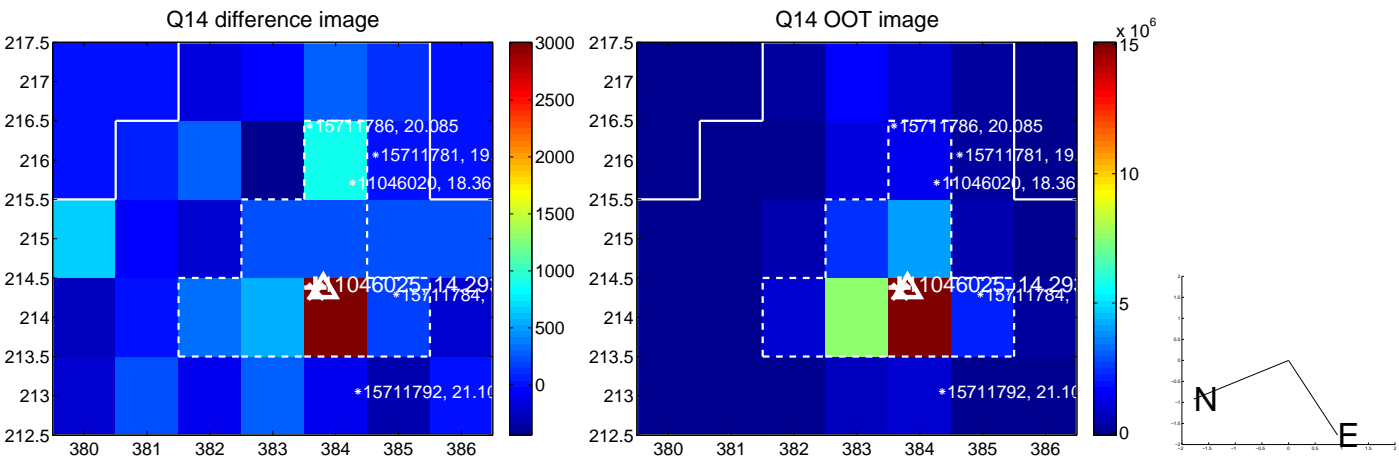
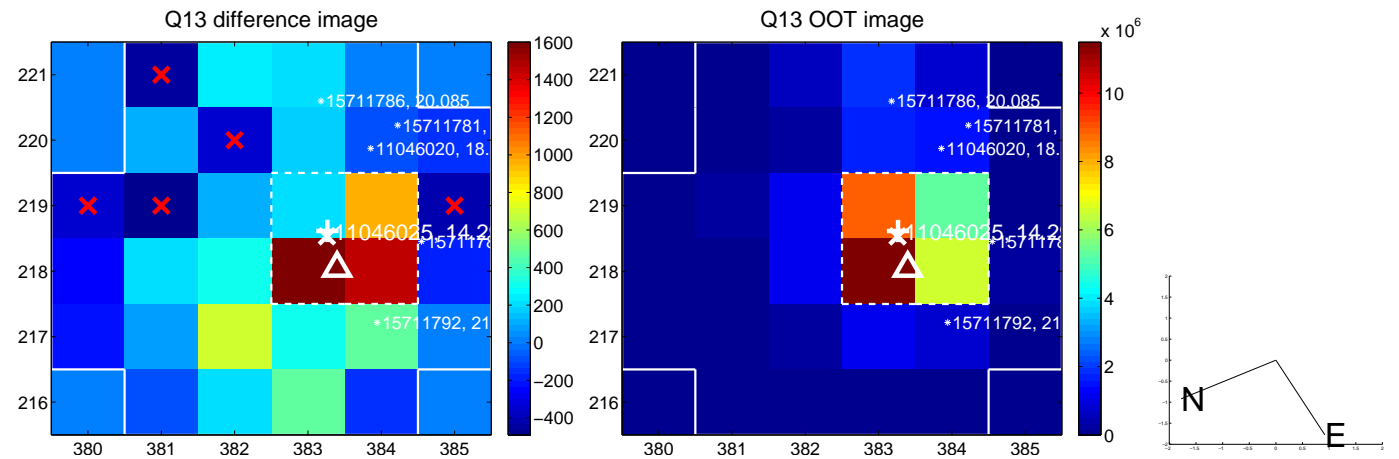
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



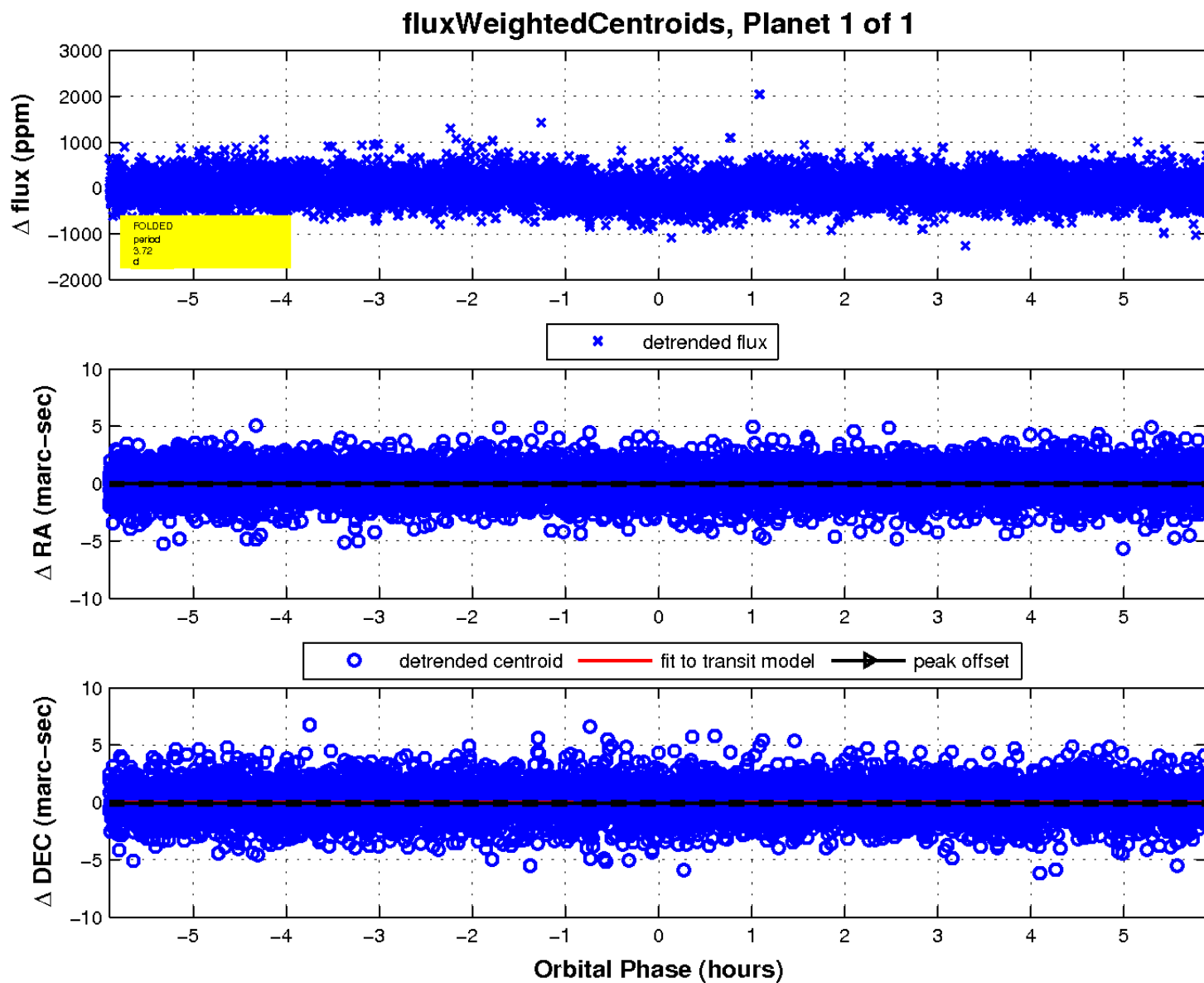
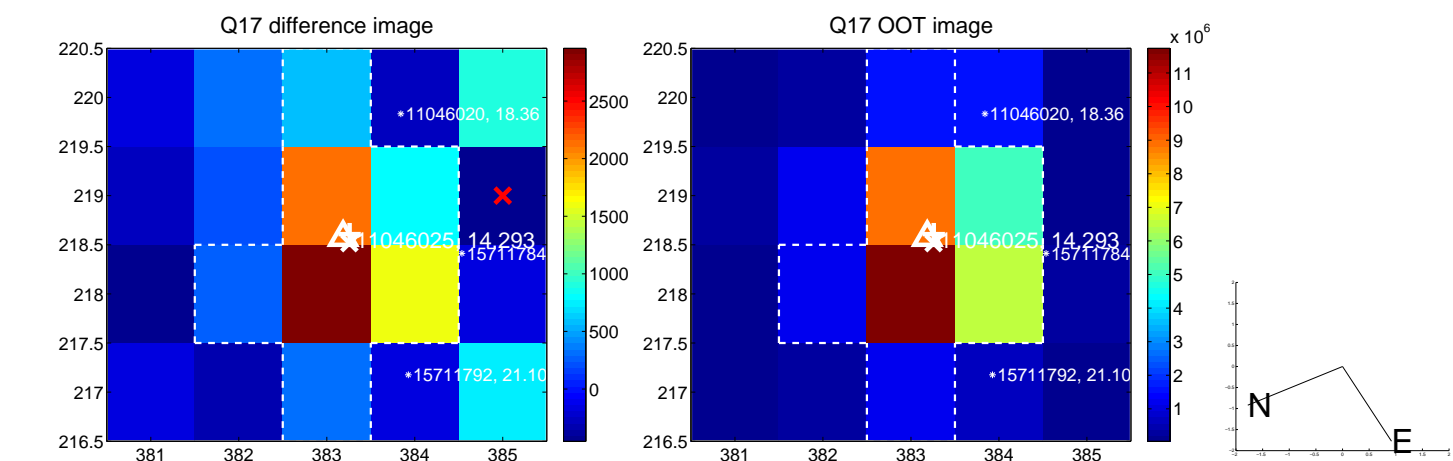
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

