

KIC 006047072

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})
006047072-01	OBS	2100.01	4.271035	133.140337	172.7	2.400	20.4	22.3	0.91	5984	1.41	356.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006047072-01	OBS	PC	0.98	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.

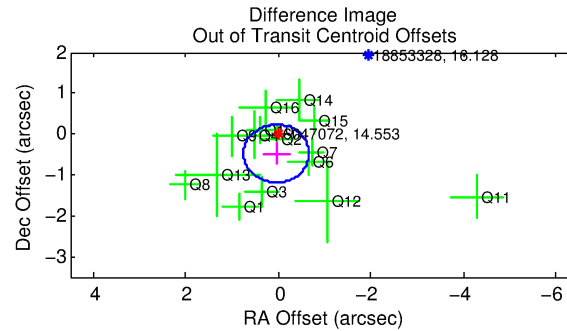
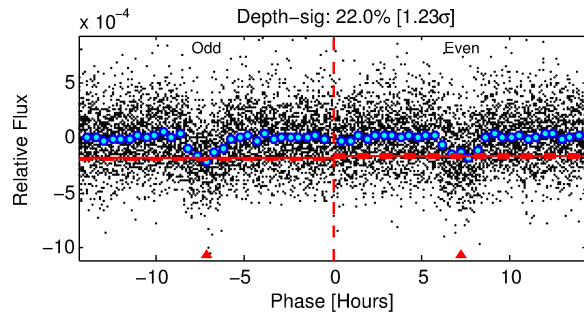
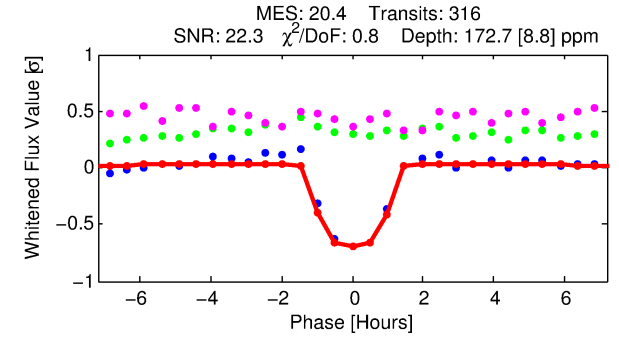
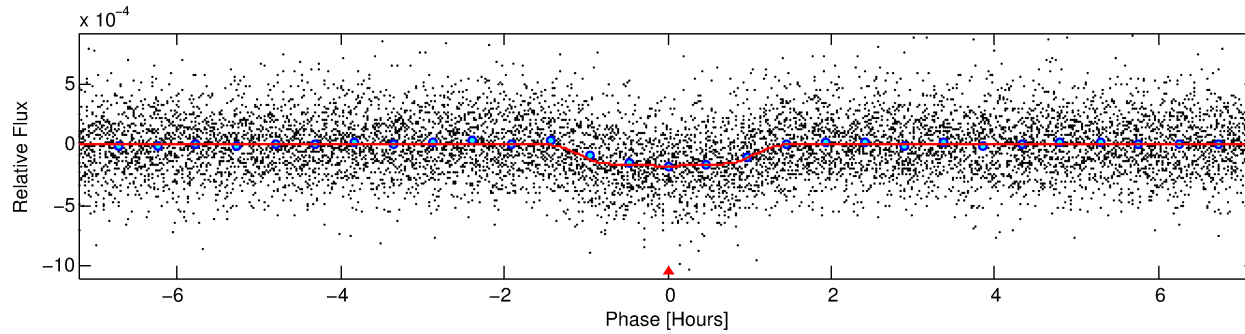
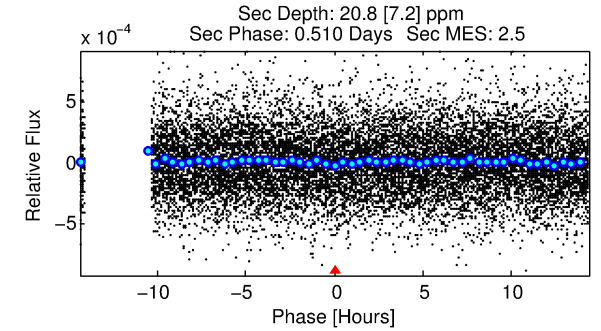
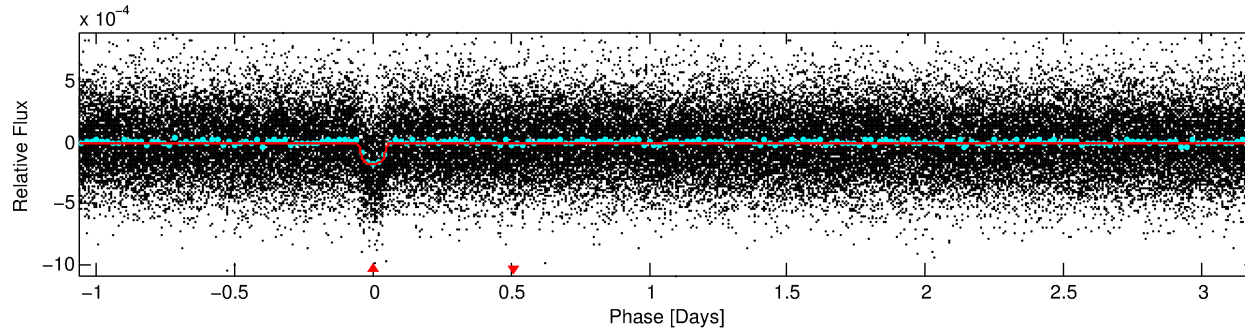
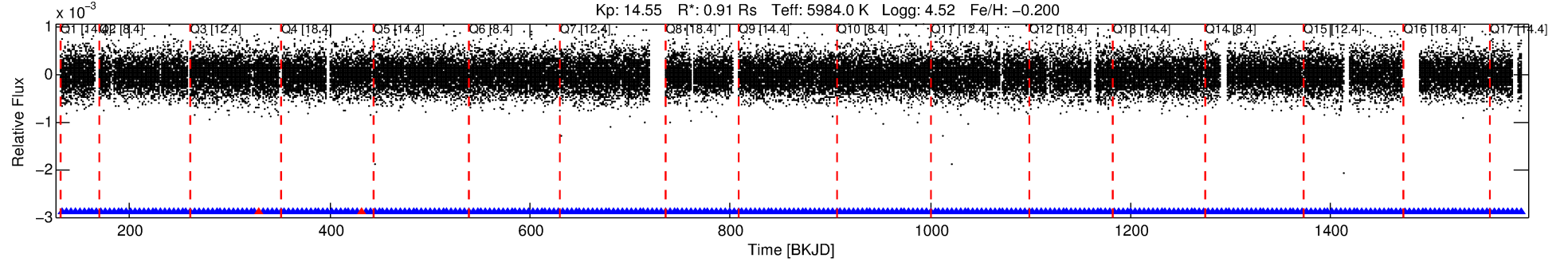
Ephemeris Match Information For 006047072-01

No Significant Match Found

DV One-Page Summary

KIC: 6047072 Candidate: 1 of 1 Period: 4.271 d
KOI: K02100.01 Corr: 0.973

Kp: 14.55 R*: 0.91 Rs Teff: 5984.0 K Logg: 4.52 Fe/H: -0.200



DV Fit Results:

Period = 4.27104 [0.00001] d
Epoch = 133.1403 [0.0019] BKJD
Rp/R* = 0.0143 [0.0038]
a/R* = 6.33 [8.39]
b = 0.90 [0.28]
Seff = 356.64 [143.30]
Teq = 1108 [111] K
Rp = 1.41 [0.57] Re
a = 0.0514 [0.0134] AU
Ag = 15.20 [11.20] [1.27σ]
Teffp = 3383 [546] K [4.08σ]

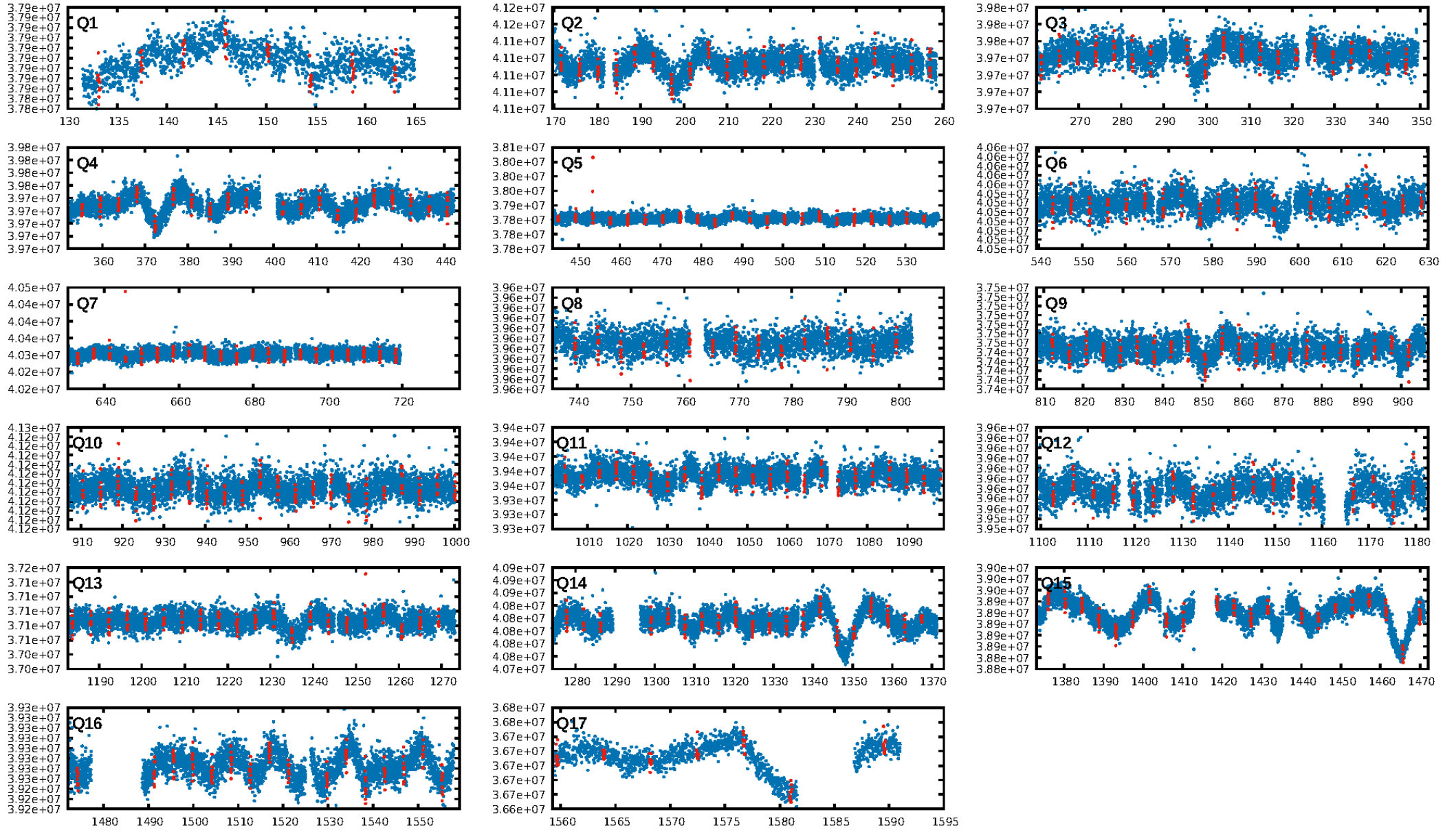
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.41e-91
RollingBand-fgt: 0.99 [299/301]
GhostDiagnostic-chr: 2.538
Centroid-sig: N/A
Centroid-so: 0.669 arcsec [1.09σ]
OotOffset-rm: 0.480 arcsec [2.04σ]
KicOffset-rm: 0.521 arcsec [2.20σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.87 [13/15]
DiffImageOverlap-fno: 1.00 [17/17]

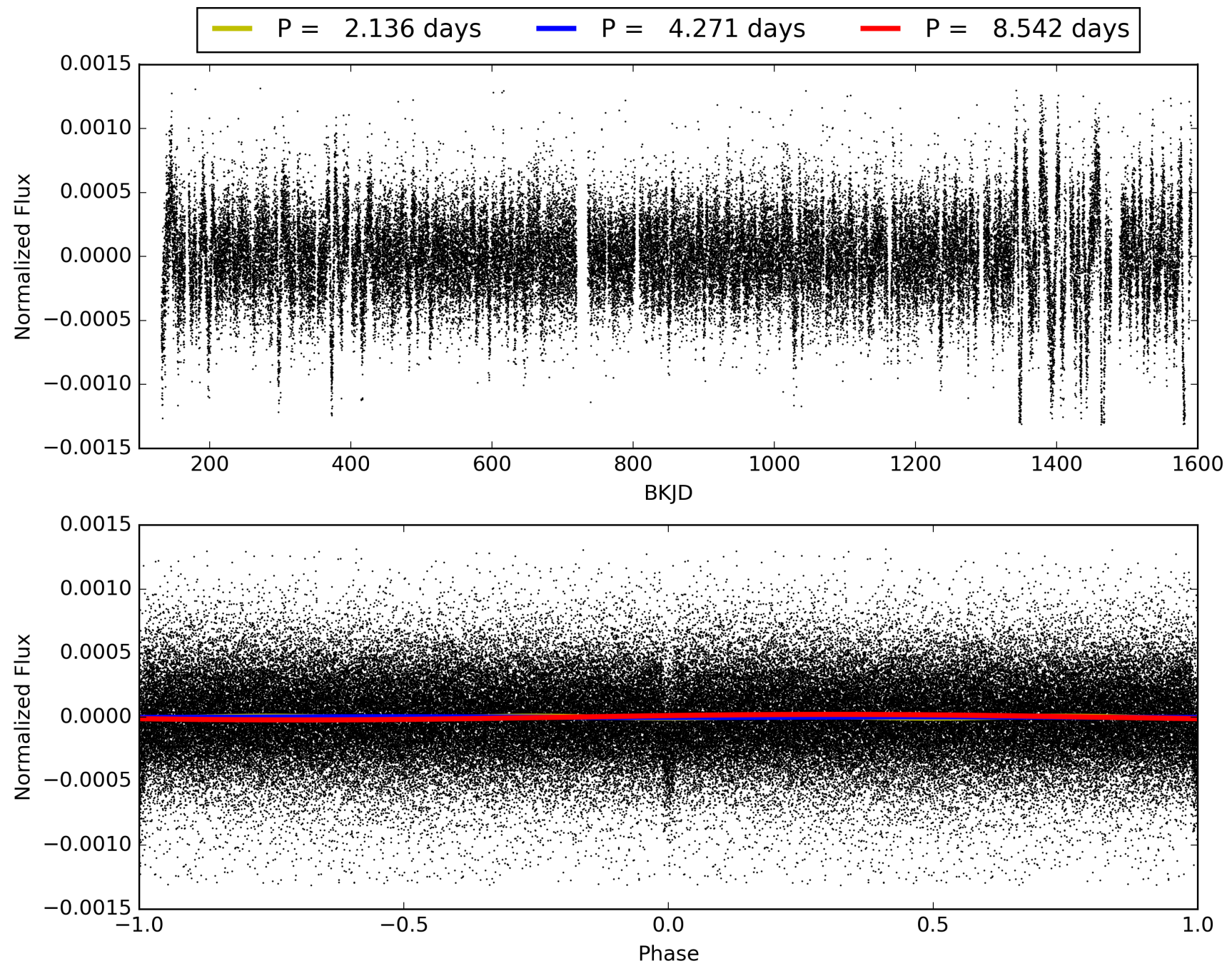
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:32:39 Z

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

TCE 006047072-01, PDC Light Curves

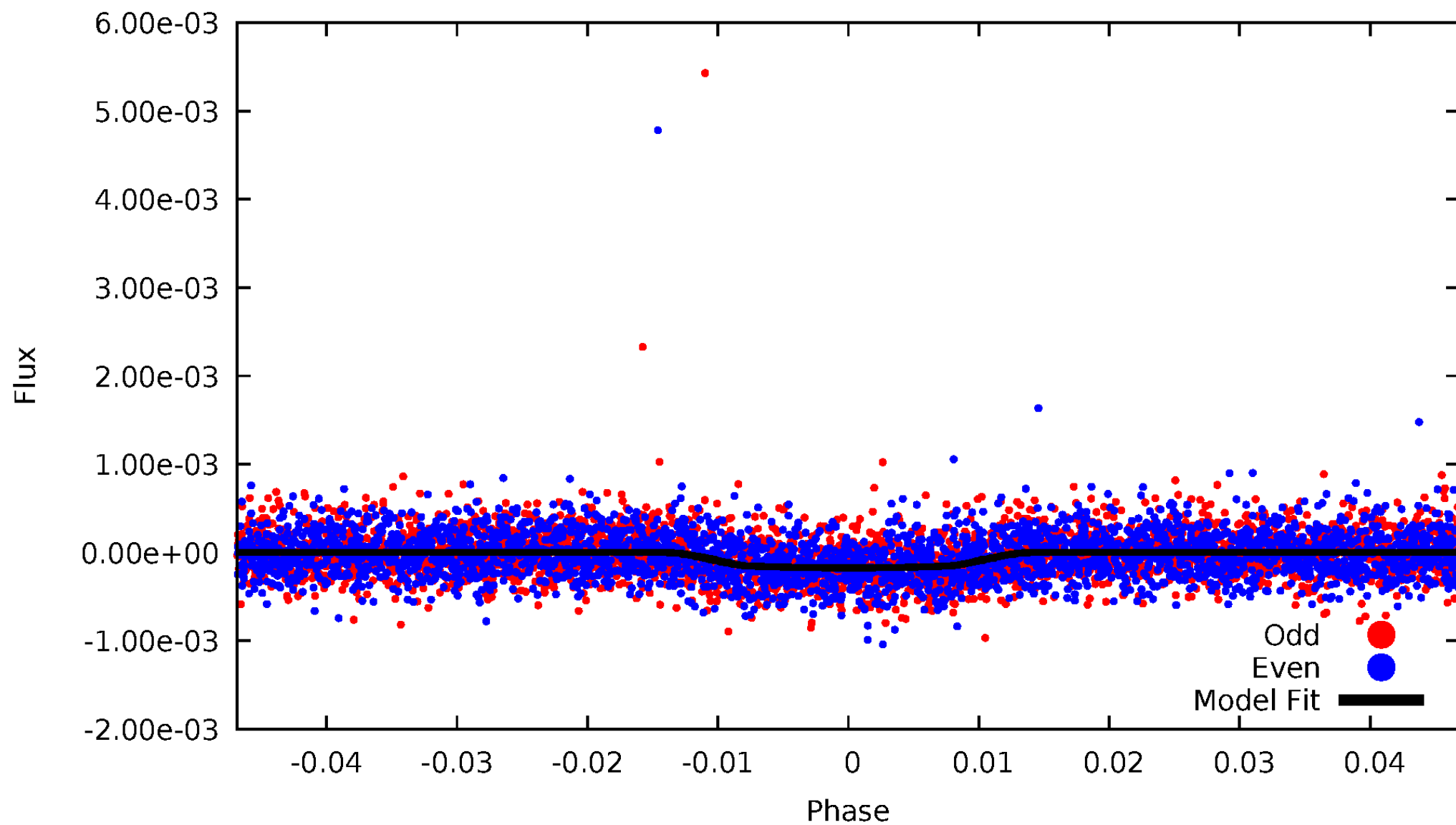


TCE 006047072-01



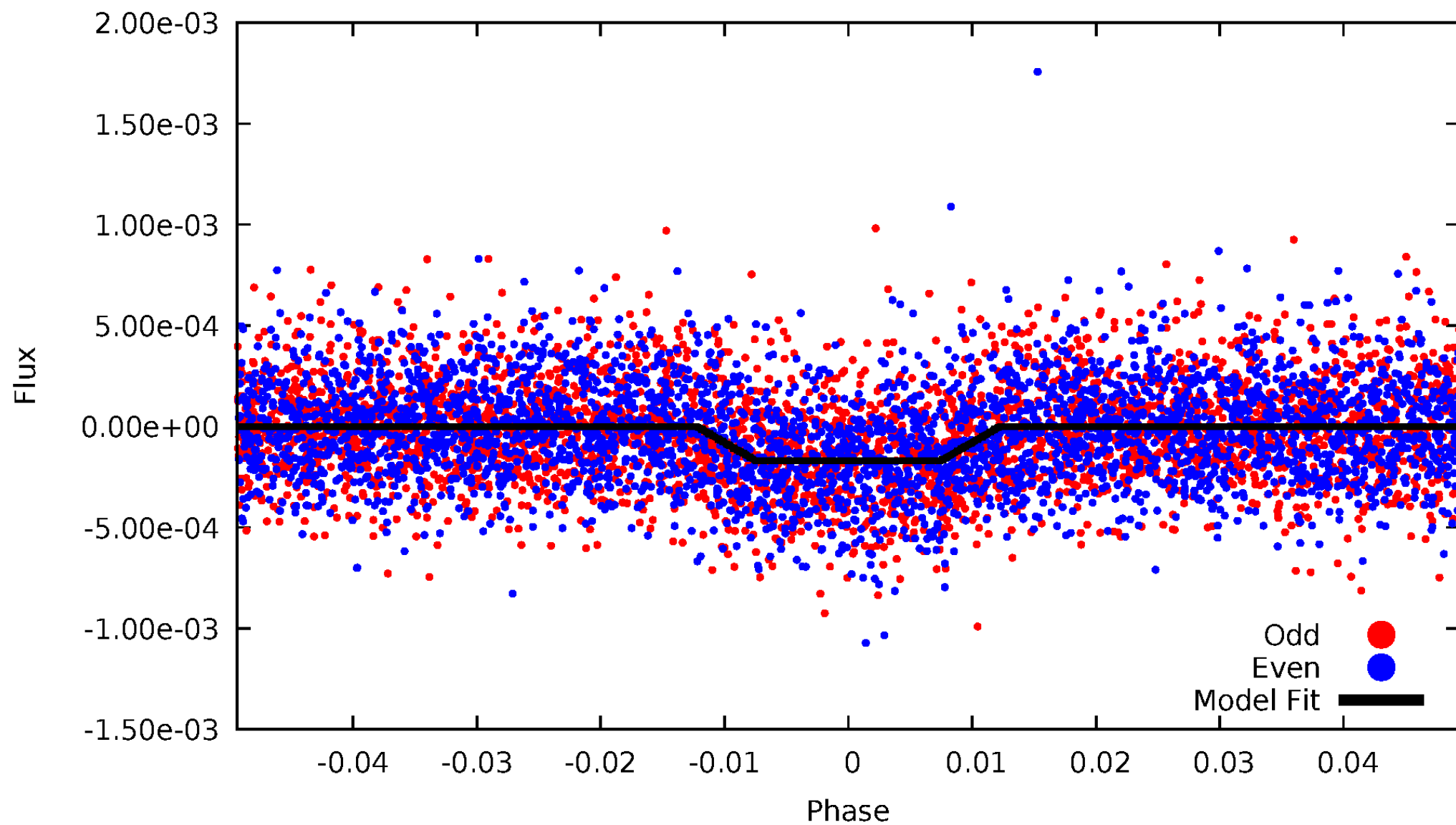
DV Odd/Even

TCE 006047072-01



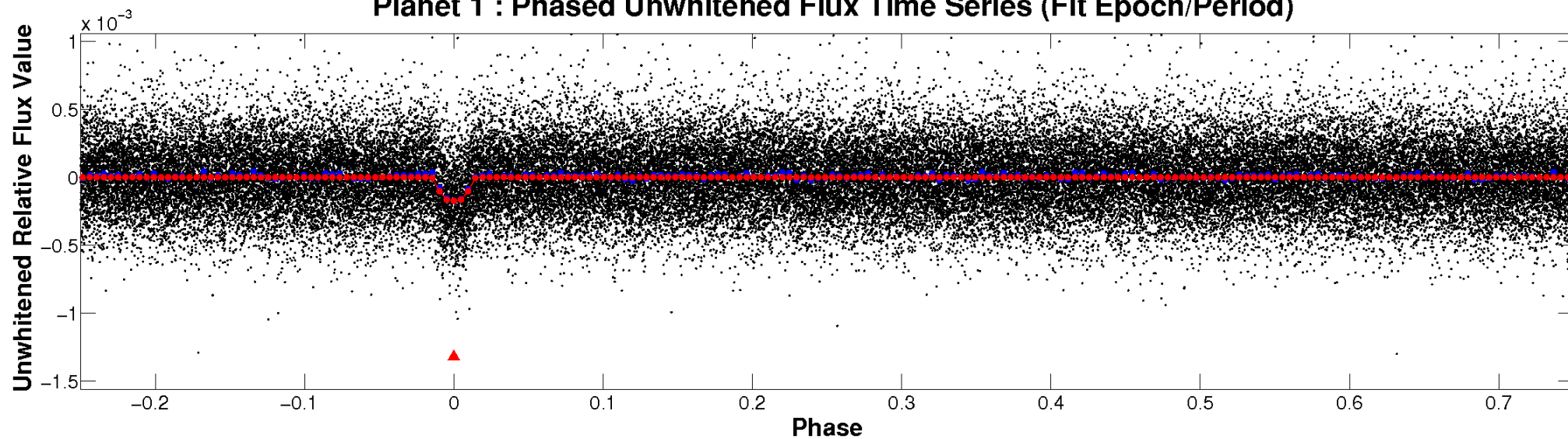
ALT Odd/Even

TCE 006047072-01

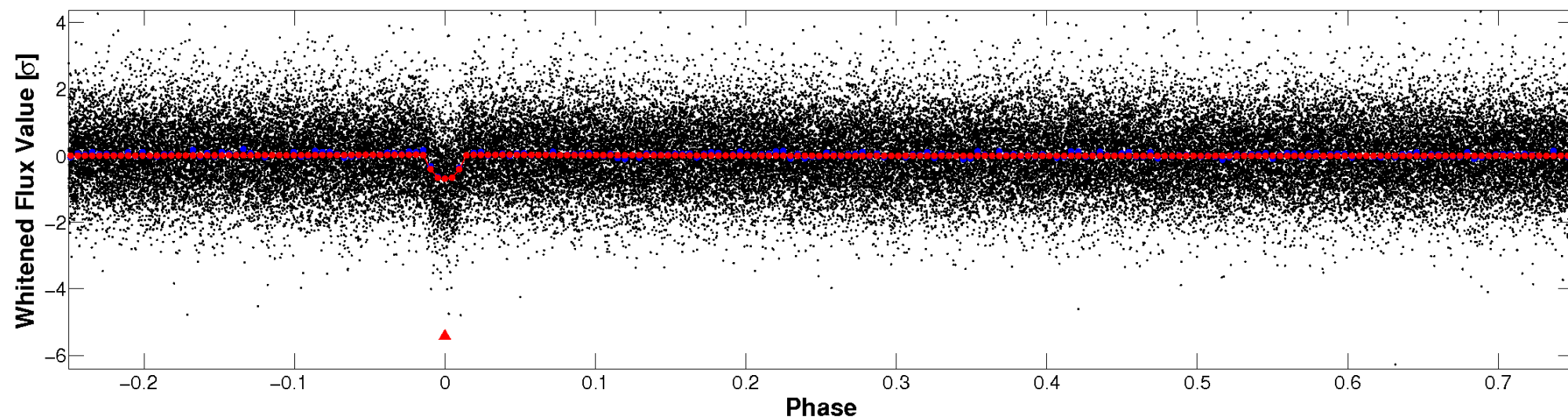


Non-Whitened Vs. Whitened Light Curve

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

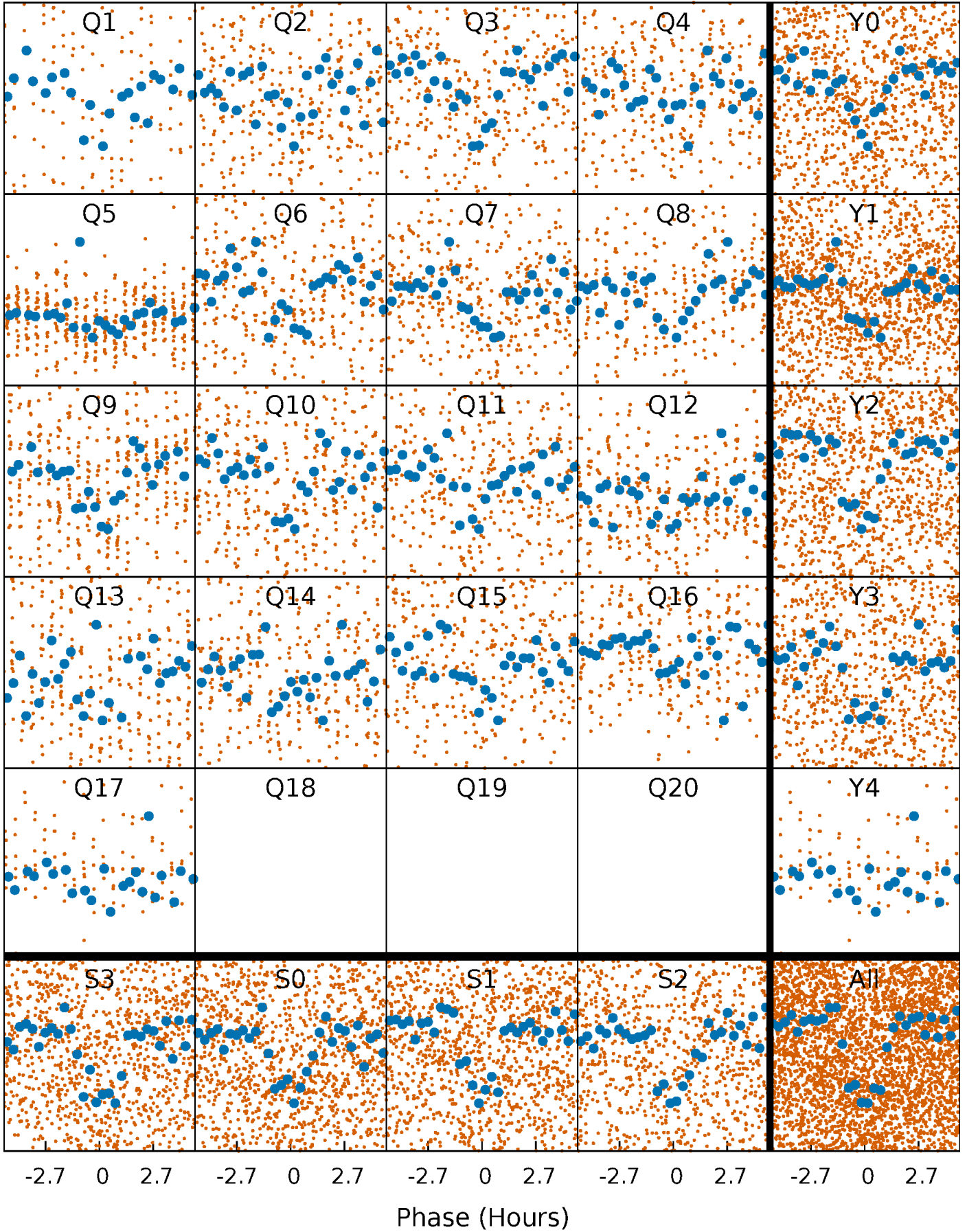


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



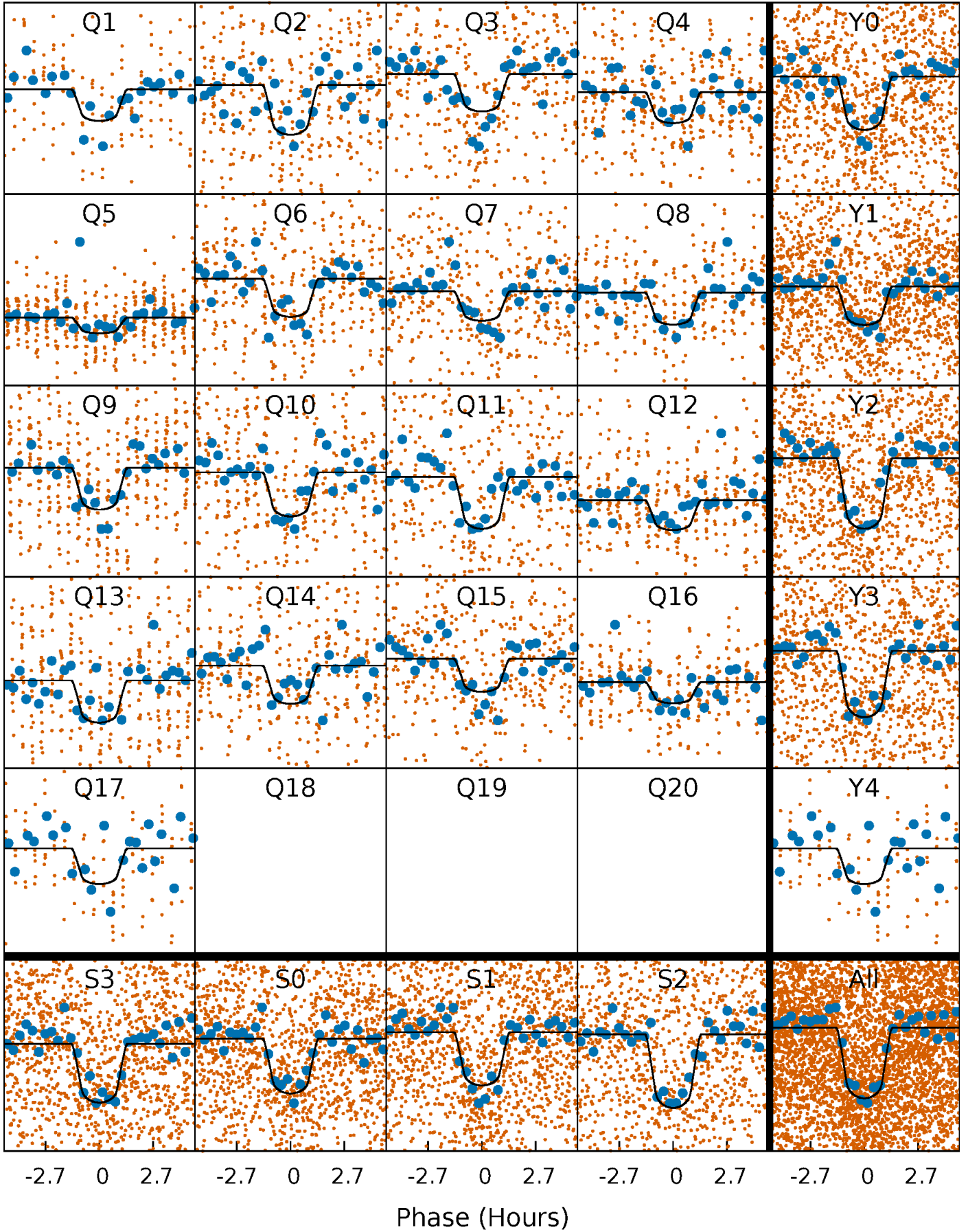
PDC Quarter-Phased Transit Curves

TCE 006047072-01 P= 4.271035 Days $T_0=133.140337$ (BKJD)



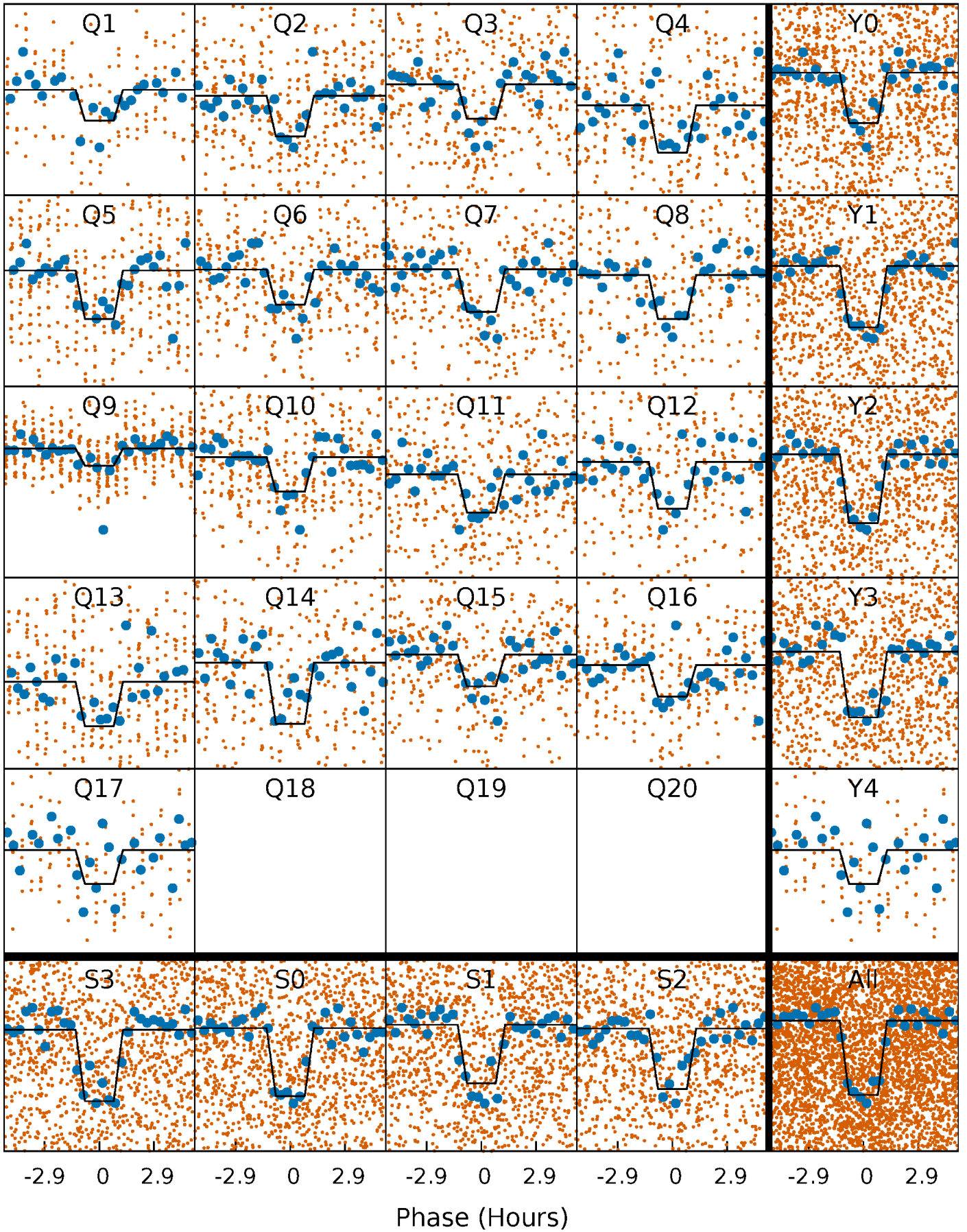
DV Quarter-Phased Transit Curves

TCE 006047072-01 P= 4.271035 Days $T_0=133.140337$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

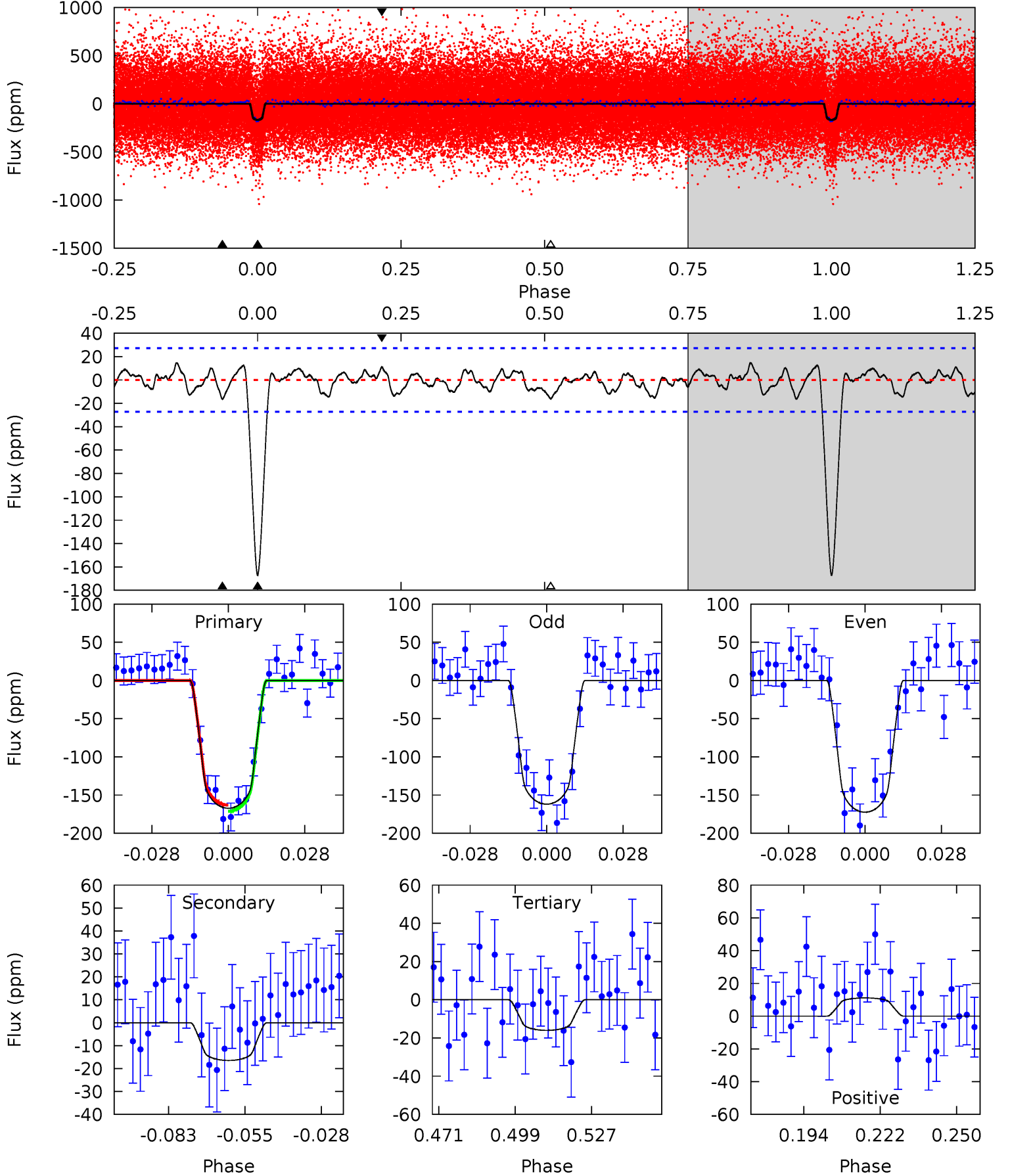
TCE 006047072-01 P= 4.271007 Days $T_0=133.144759$ (BKJD)



DV Model-Shift Uniqueness Test

006047072-01, P = 4.271035 Days, E = 128.869302 Days

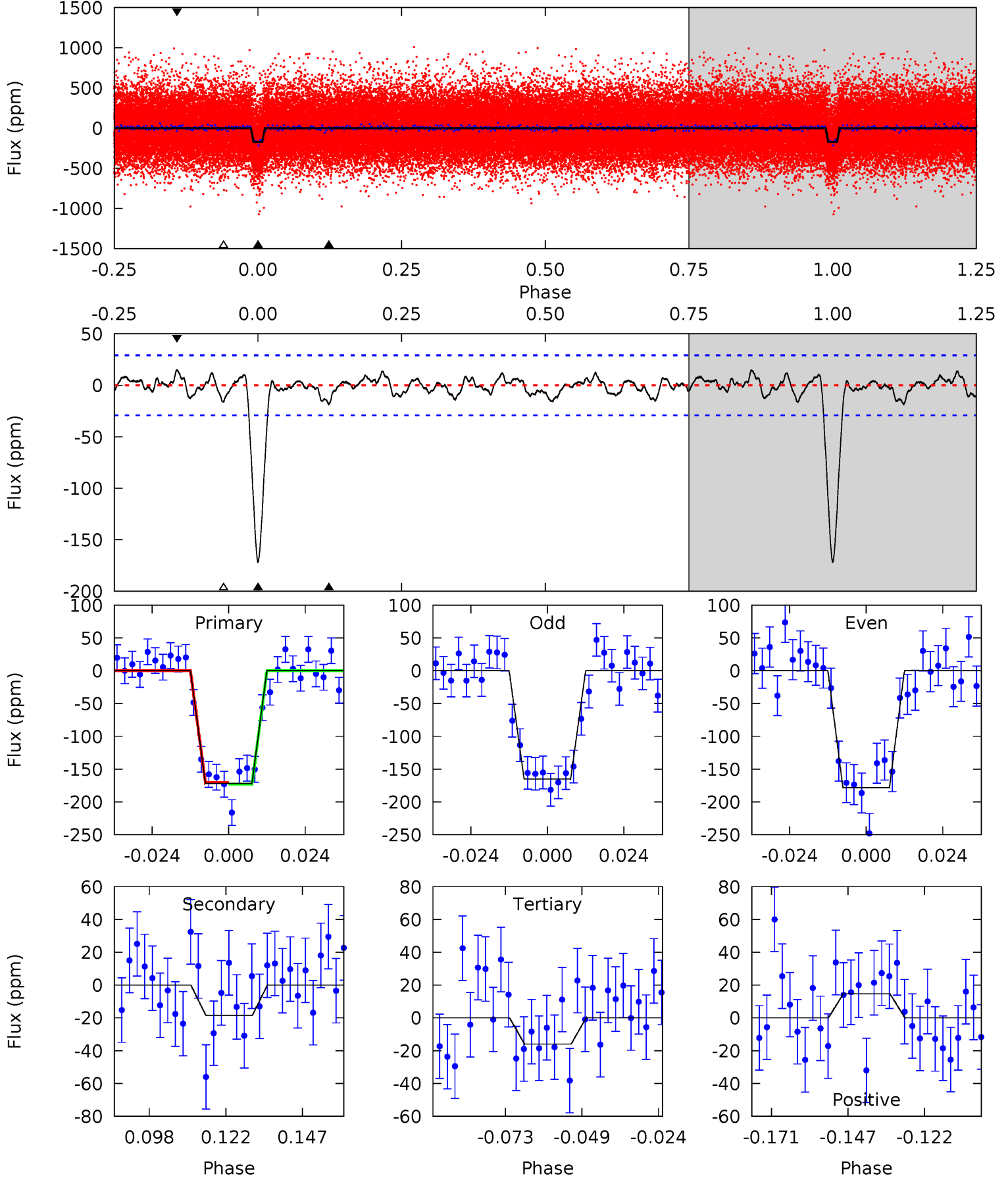
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.6	2.92	2.84	1.97	4.83	2.20	1.13	26.8	27.7	0.08	0.95	0.93	1.01	0.08	0.71



Alt Model-Shift Uniqueness Test

006047072-01, P = 4.271007 Days, E = 128.873752 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.6	3.08	2.66	2.45	4.85	2.25	1.03	25.9	26.2	0.41	0.62	1.10	0.93	0.08	0.21



Stellar Parameters For KIC 006047072

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5984^{+161}_{-197}	$4.521^{+0.052}_{-0.208}$	$-0.200^{+0.300}_{-0.300}$	$0.906^{+0.279}_{-0.093}$	$0.993^{+0.121}_{-0.121}$	$1.883^{+0.396}_{-1.000}$
	+3%/-3%	+1%/-5%	+150%/-150%	+31%/-10%	+12%/-12%	+21%/-53%
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 006047072-01 / KOI 2100.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-16 ± 6	$1.47^{+0.47}_{-0.39}$	1583^{+114}_{-84}	3611^{+444}_{-378}	11^{+11}_{-6}
Alt.	-18 ± 6	$1.35^{+0.44}_{-0.38}$	1575^{+128}_{-72}	3775^{+552}_{-372}	14^{+17}_{-7}

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 $A_{obs} \gg 1.0$

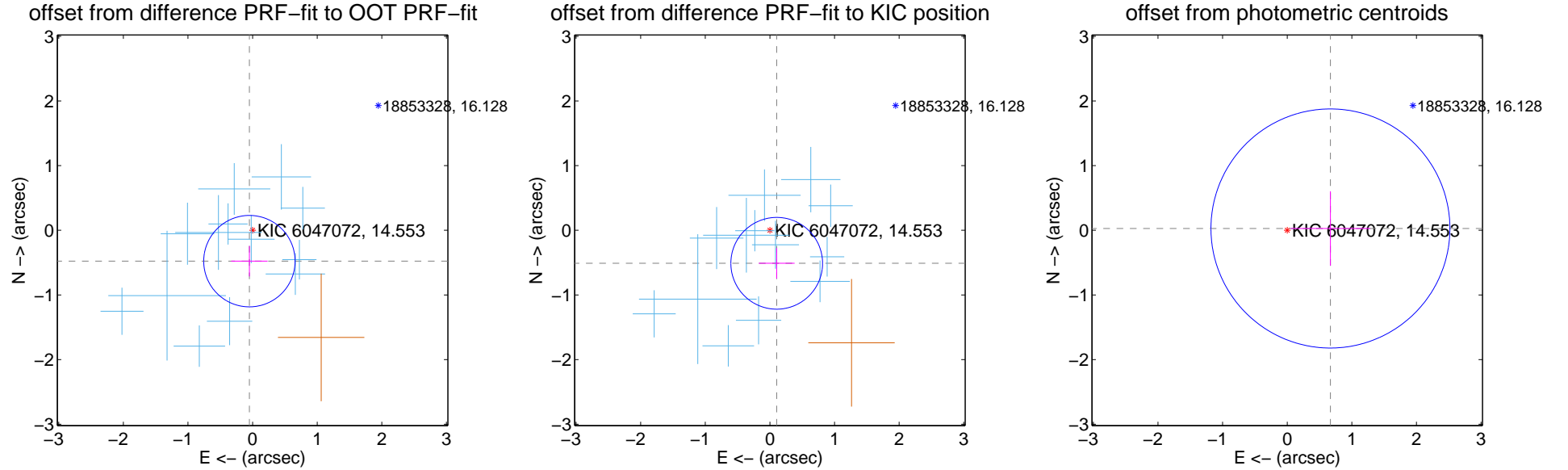
DV Centroid Data

Supplemental centroid analysis for 006047072-01. Kepler magnitude: 14.55. Transit SNR 22.33

There are 13 quarters with good PRF difference image offsets

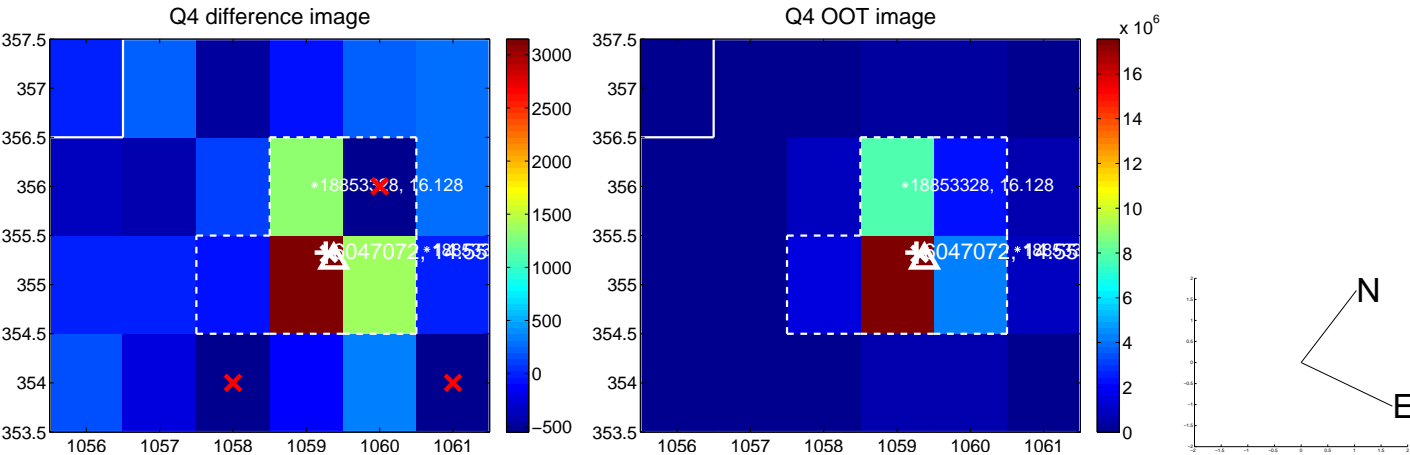
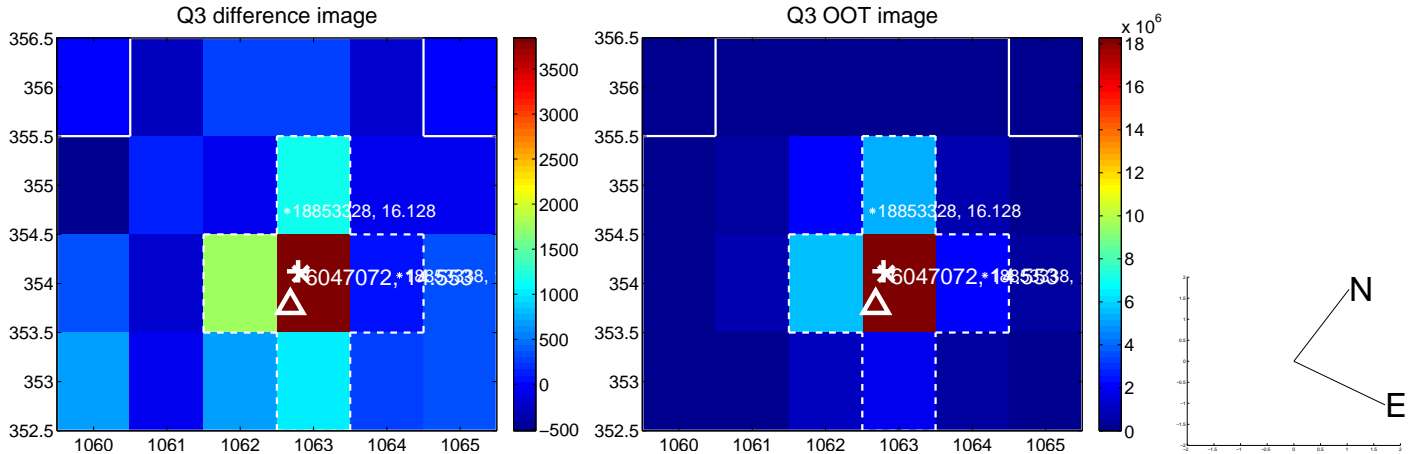
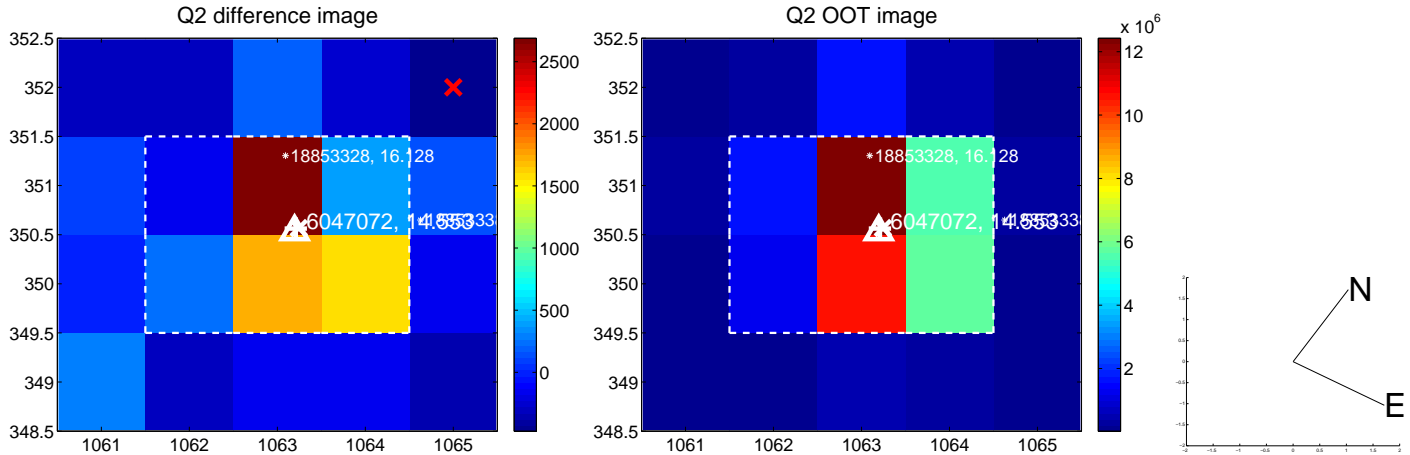
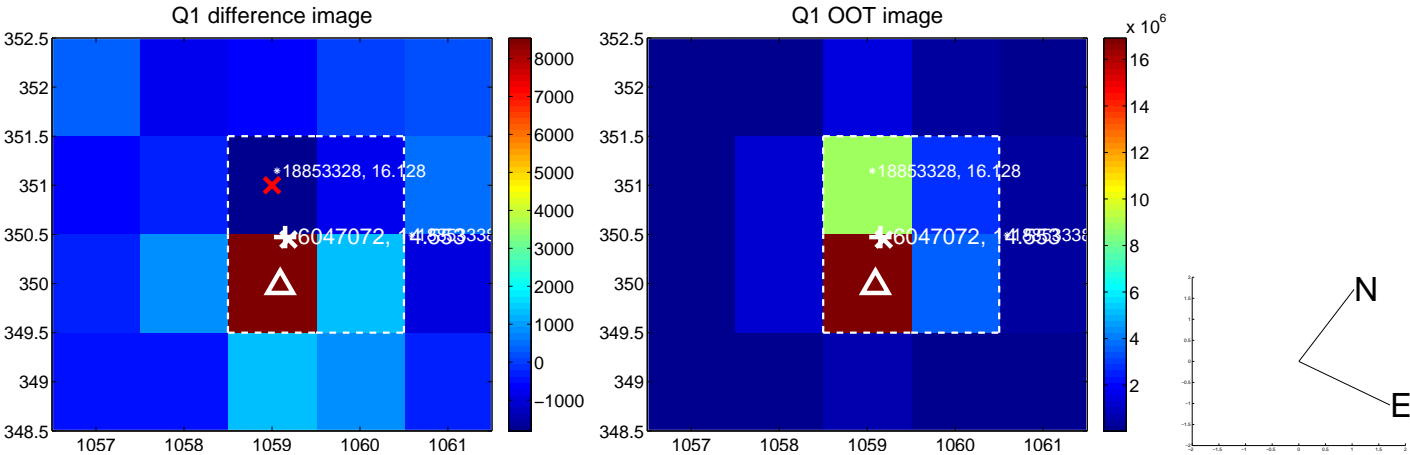
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.480 ± 0.236	2.04	0.049 ± 0.282	-0.477 ± 0.235
PRF-fit source offset from KIC position	0.521 ± 0.237	2.20	-0.105 ± 0.277	-0.511 ± 0.235
photometric centroid source offset	0.67 ± 0.62	1.09	-0.67 ± 0.62	0.03 ± 0.58

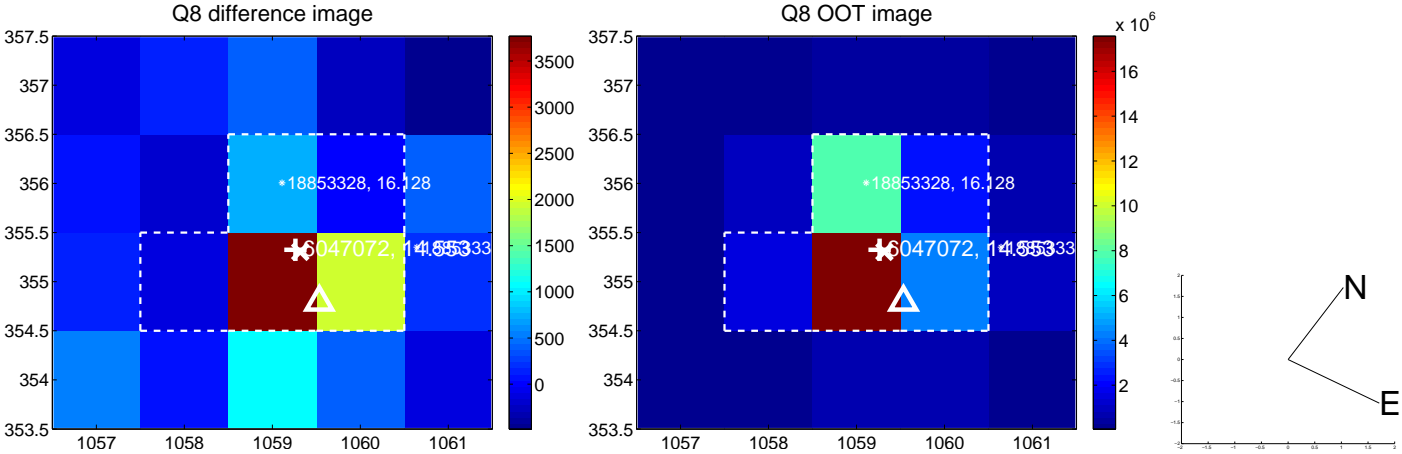
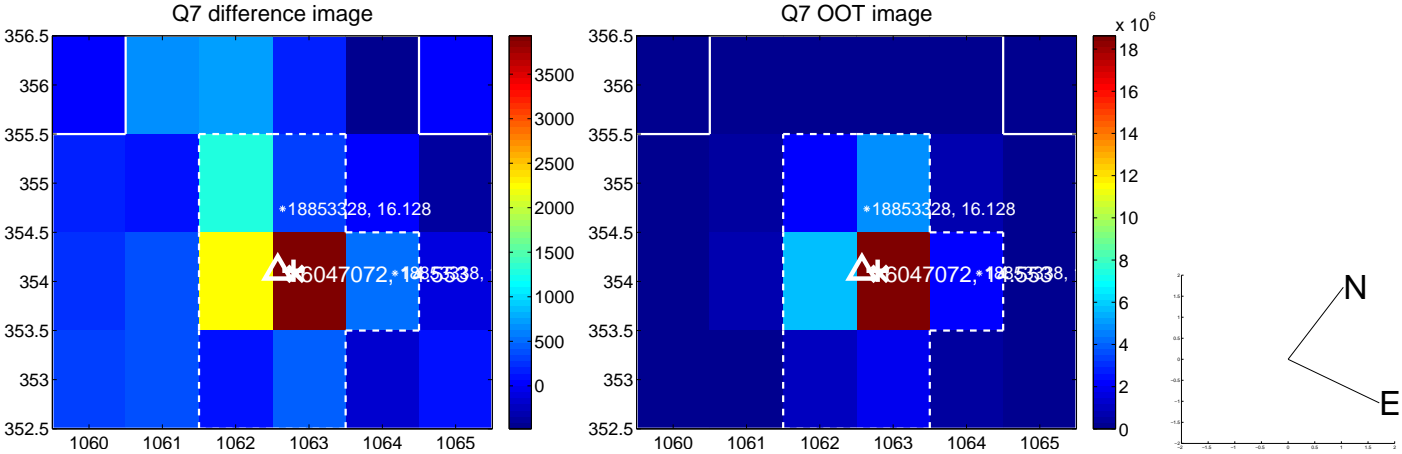
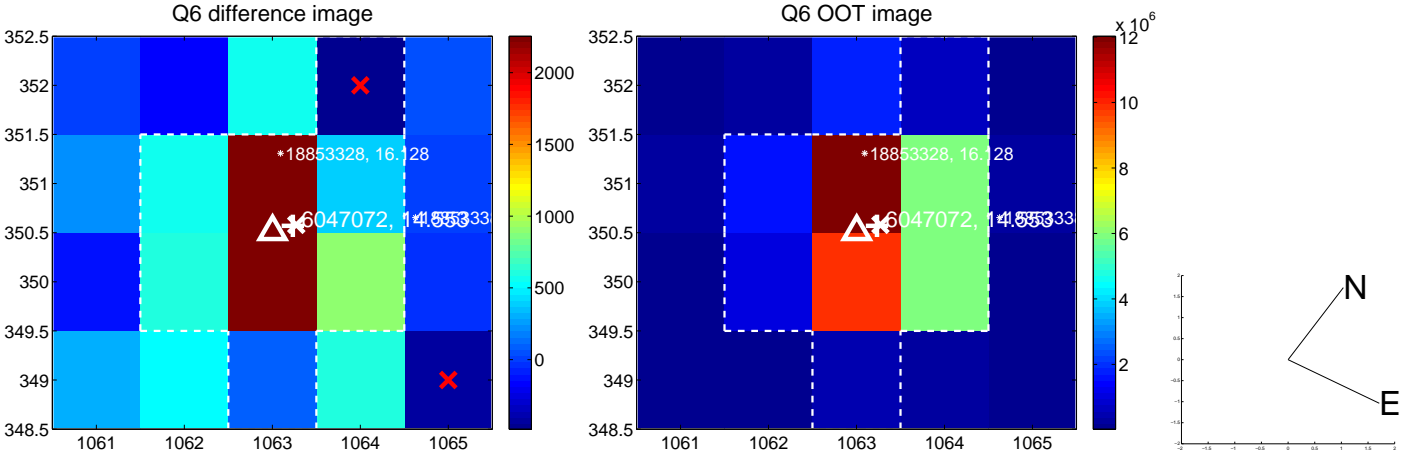
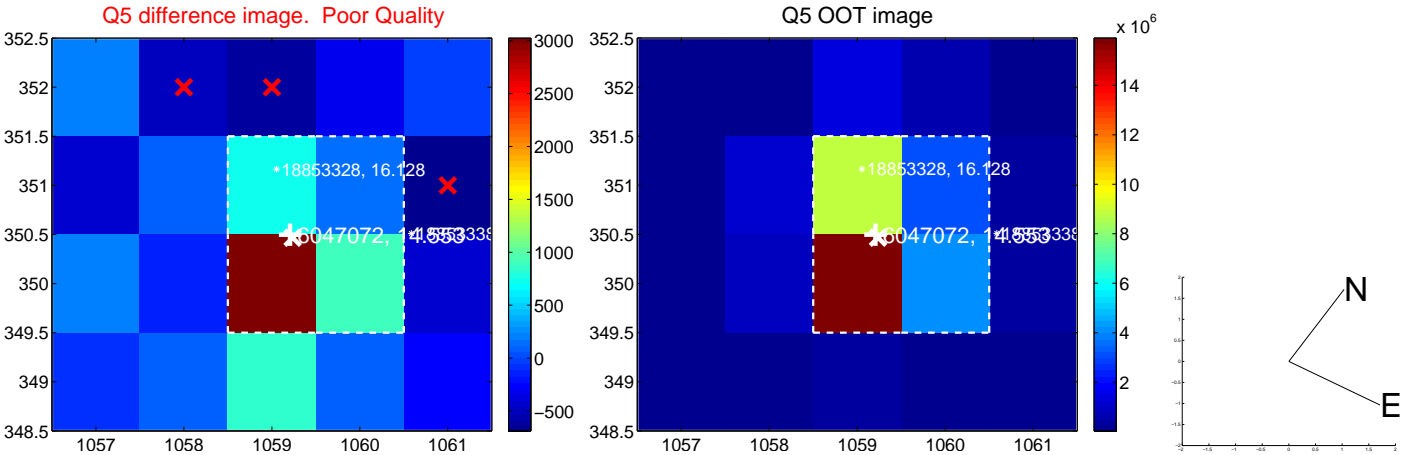


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

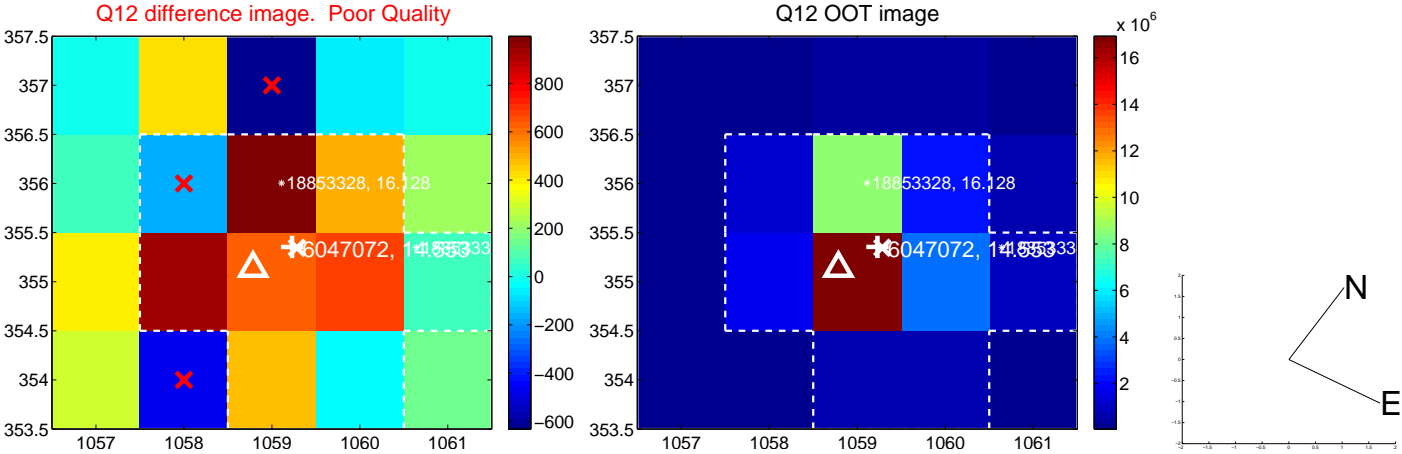
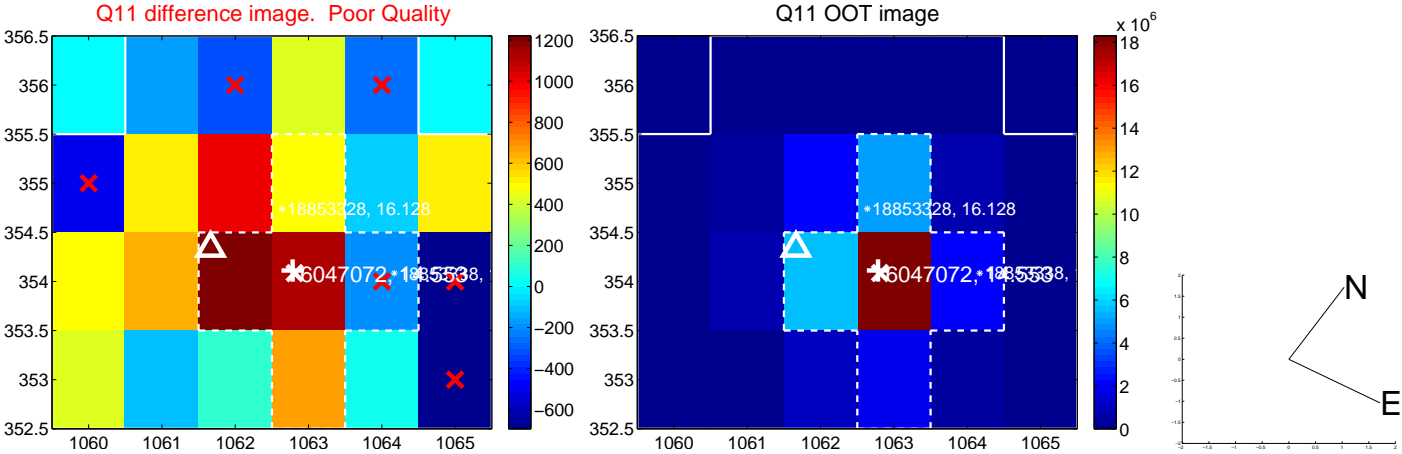
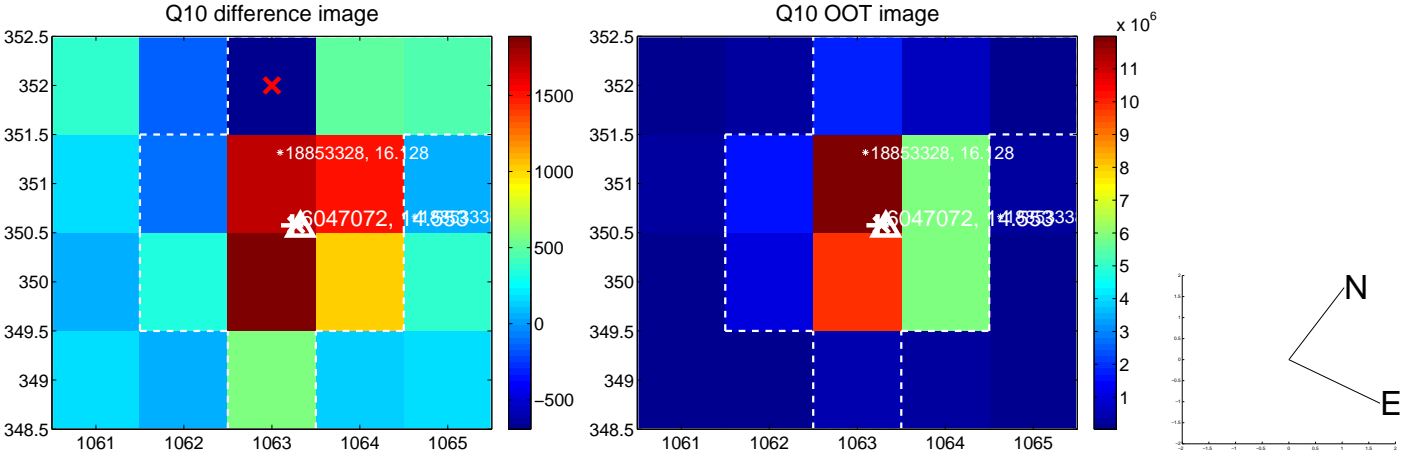
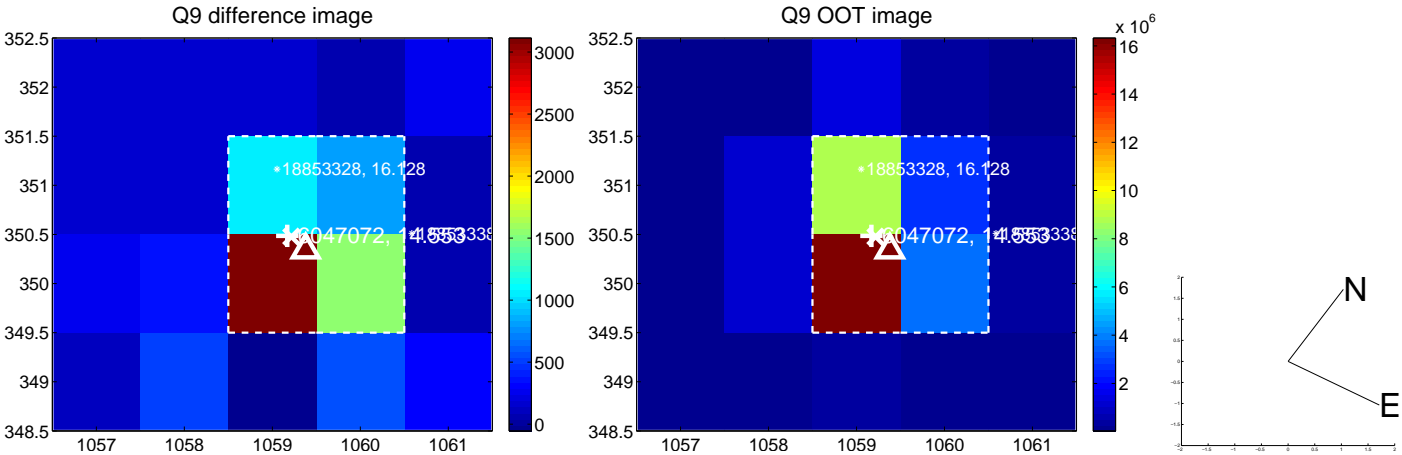
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



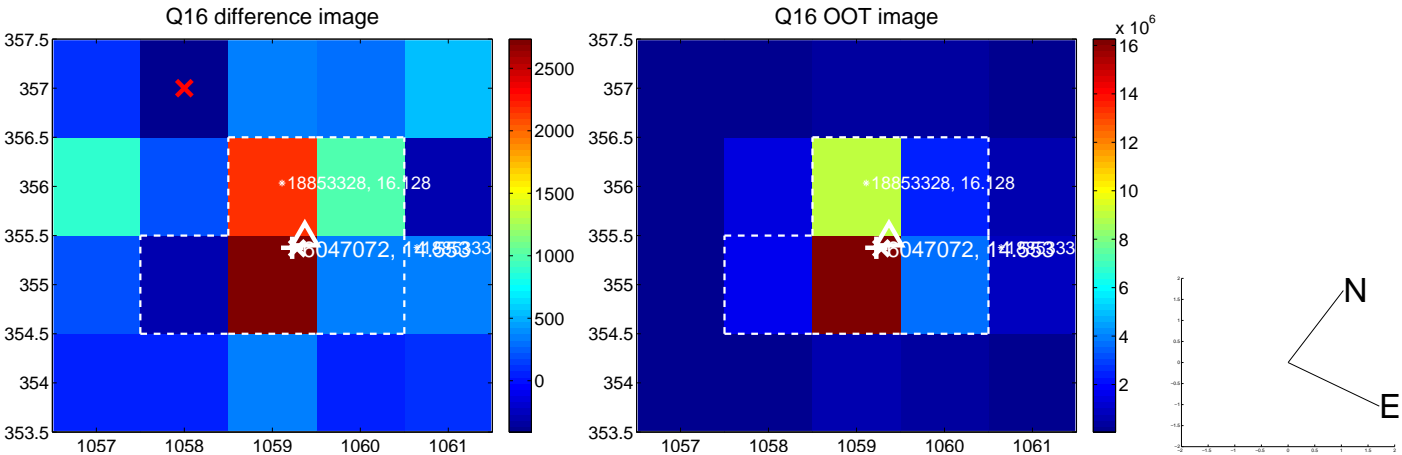
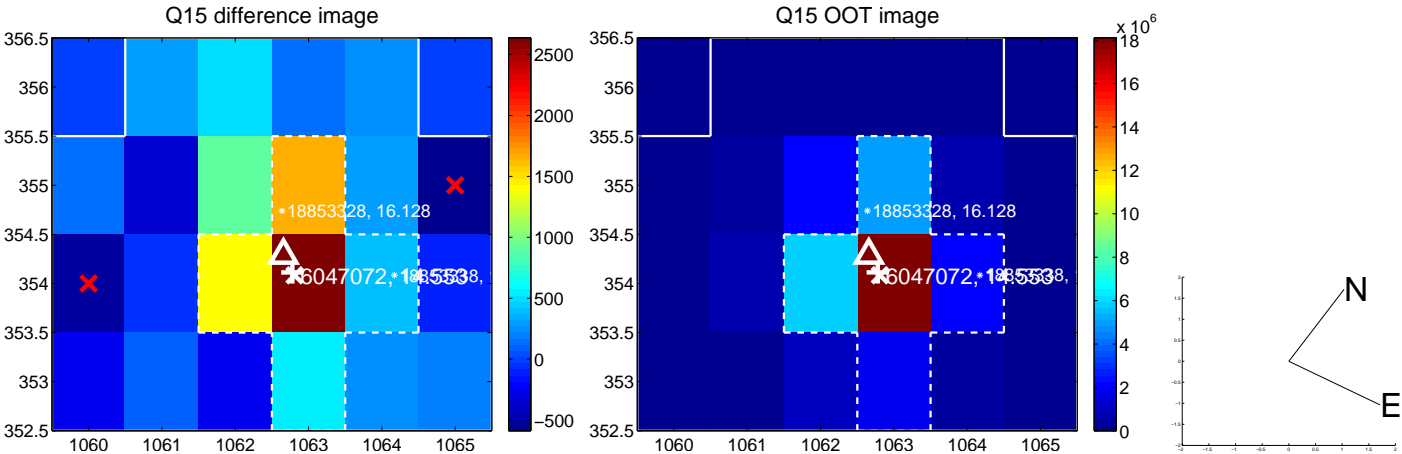
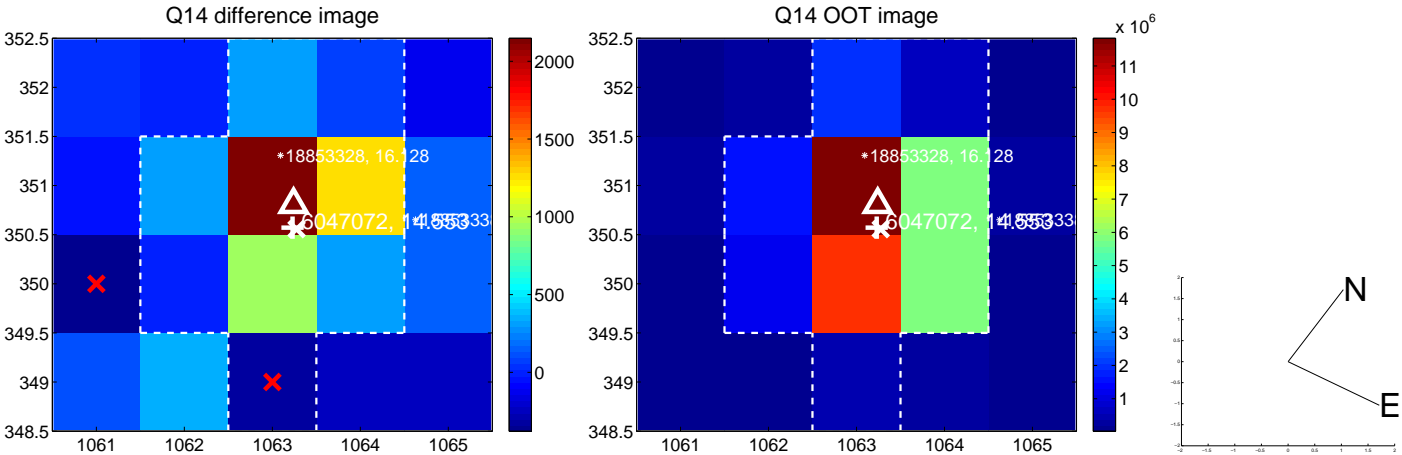
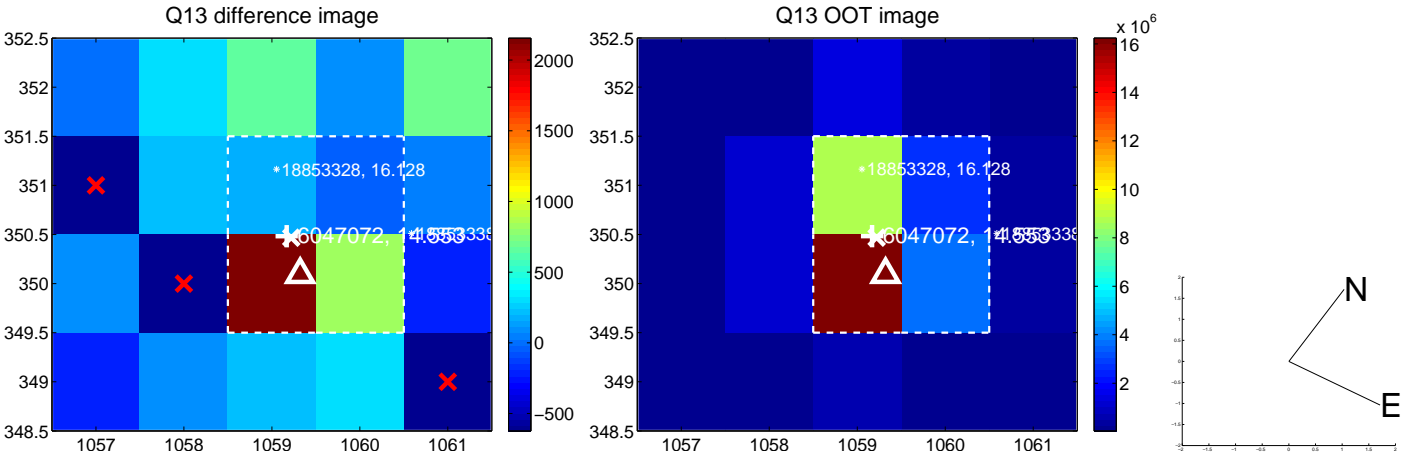
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



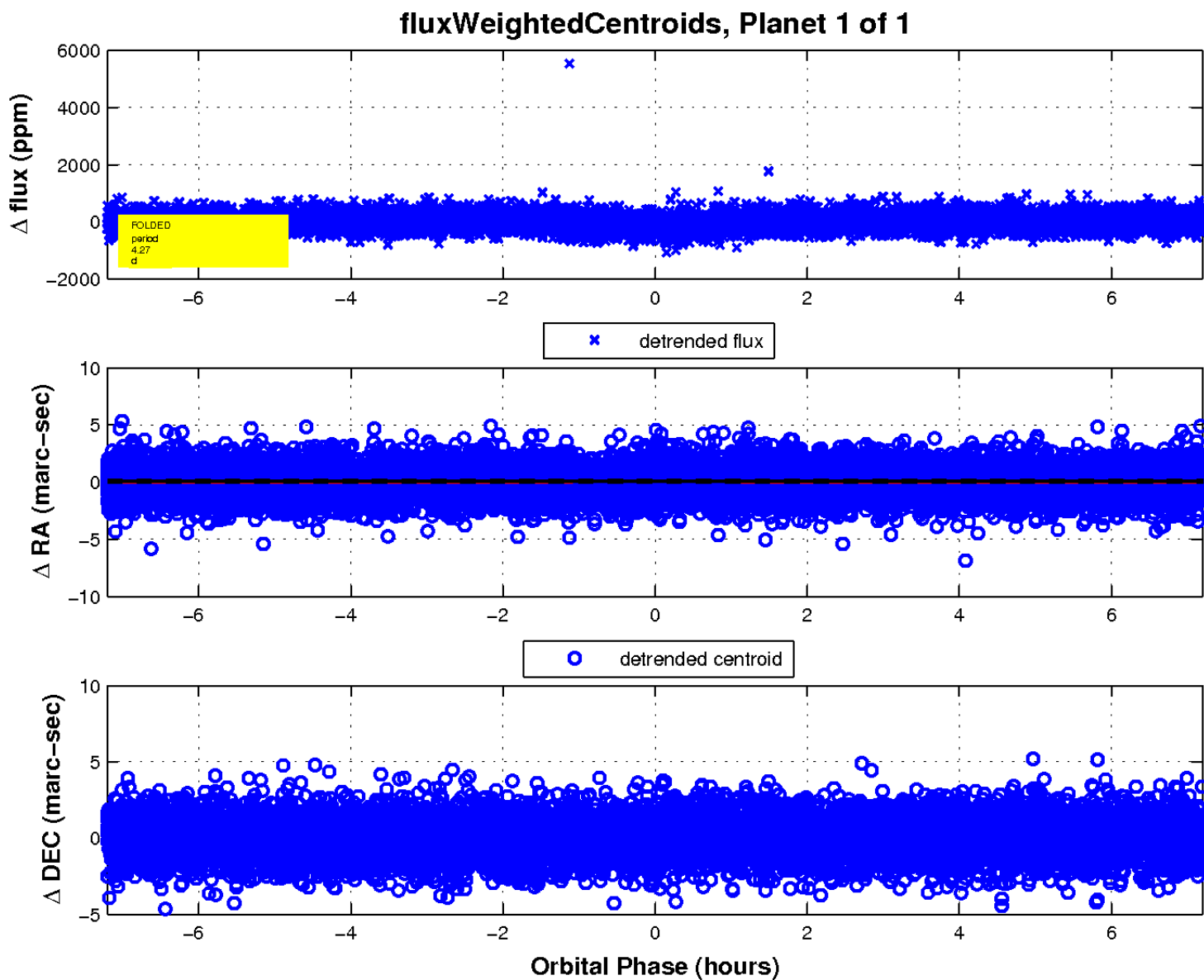
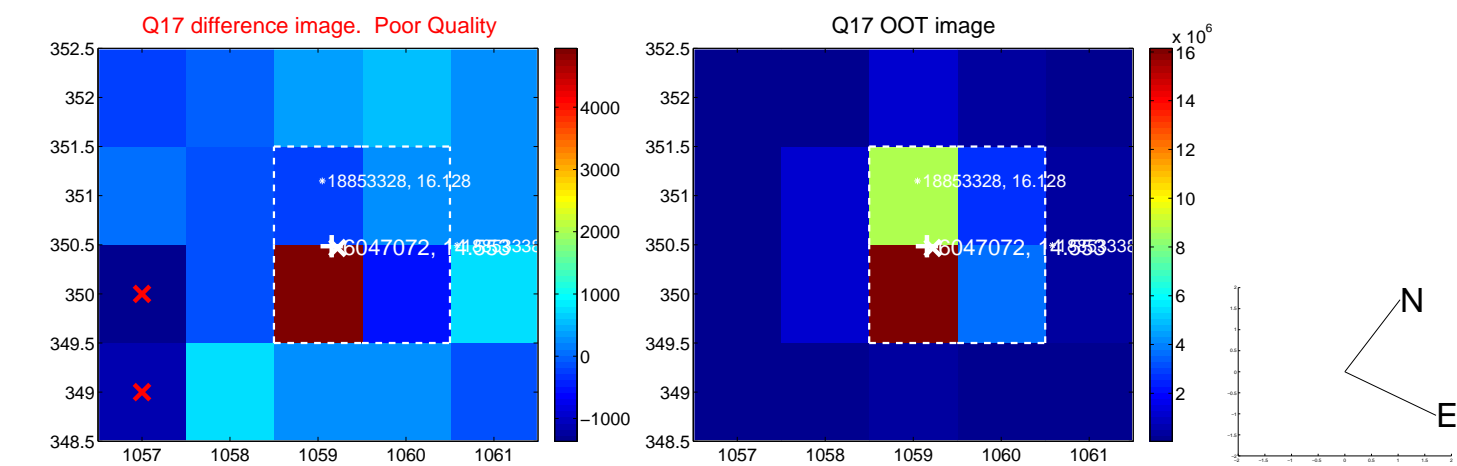
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

