

KIC 010023469

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})
010023469-01	OBS	5757.01	44.637013	157.302213	279.8	6.059	8.3	8.3	0.78	5222	1.52	8.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010023469-01	OBS	FP	0.01	0	0	1	0	CENT_RESOLVED_OFFSET

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 010023469-01

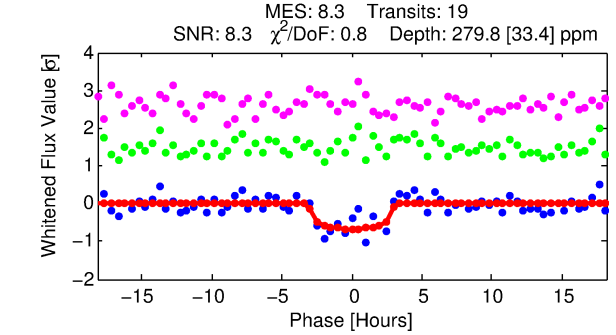
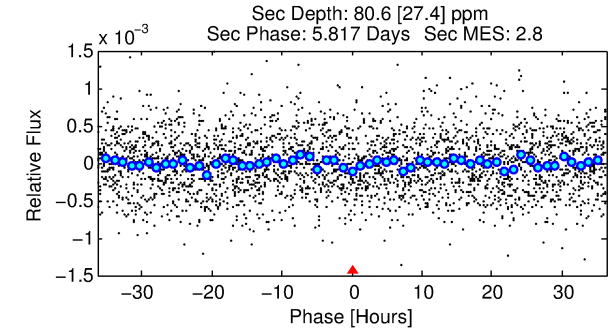
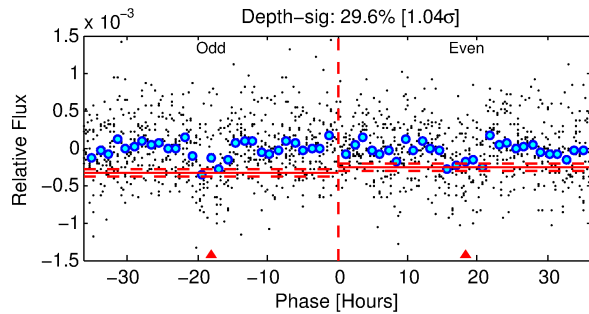
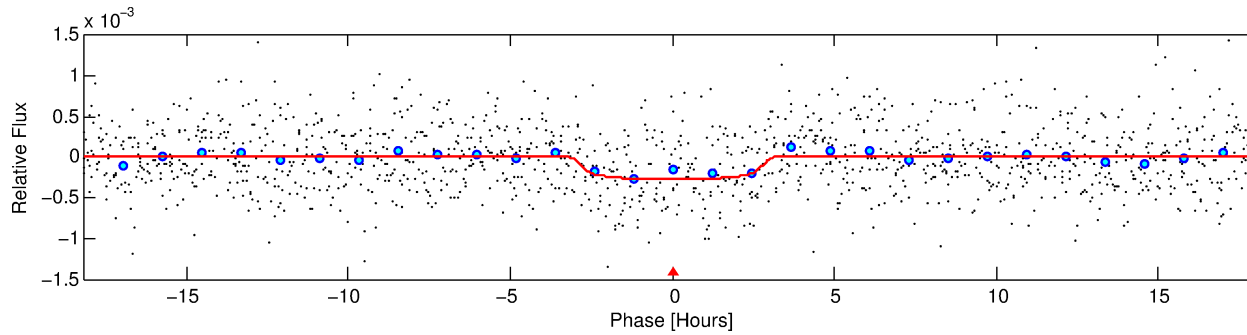
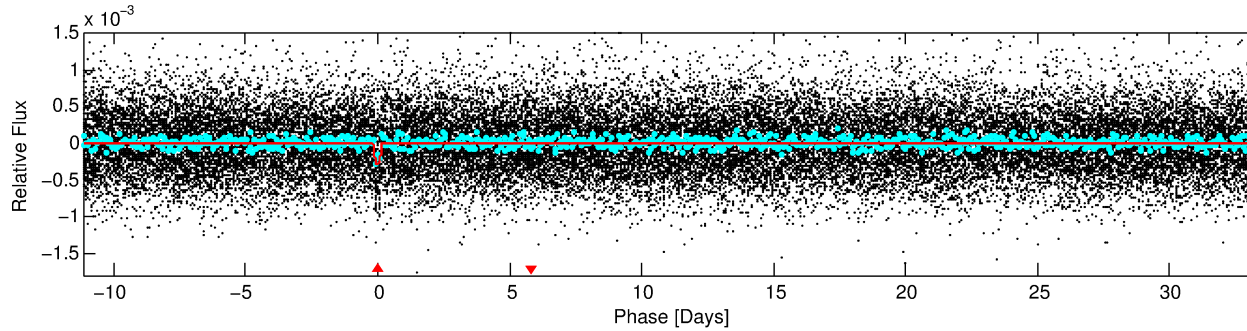
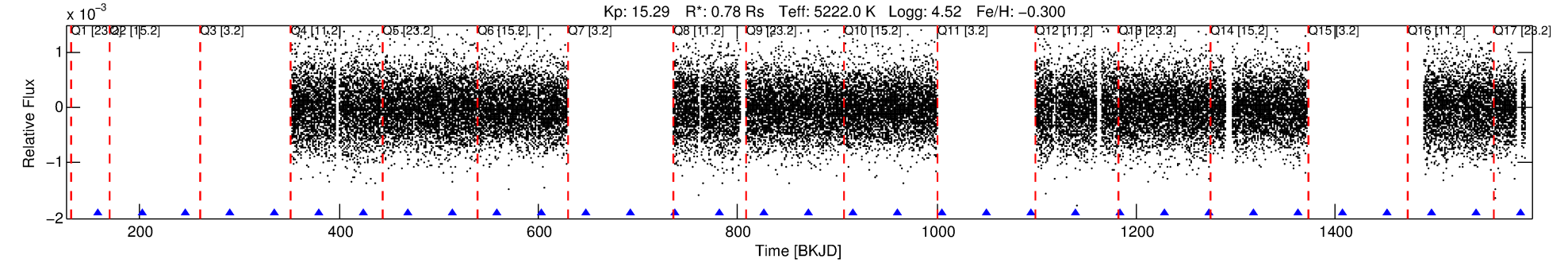
No Significant Match Found

DV One-Page Summary

KIC: 10023469 Candidate: 1 of 1 Period: 44.637 d

KOI: K05757.01 Corr: 0.984

Kp: 15.29 R*: 0.78 Rs Teff: 5222.0 K Logg: 4.52 Fe/H: -0.300



DV Fit Results:

Period = 44.63701 [0.00089] d
Epoch = 157.3022 [0.0168] BKJD
Rp/R* = 0.0178 [0.0096]
a/R* = 30.48 [67.69]
b = 0.86 [0.68]
Seff = 8.23 [1.98]
Teq = 432 [26] K
Rp = 1.52 [0.85] Re
a = 0.2219 [0.0281] AU
Ag = 950.79 [1090.72] [0.87σ]
Teffp = 3708 [1058] K [3.10σ]

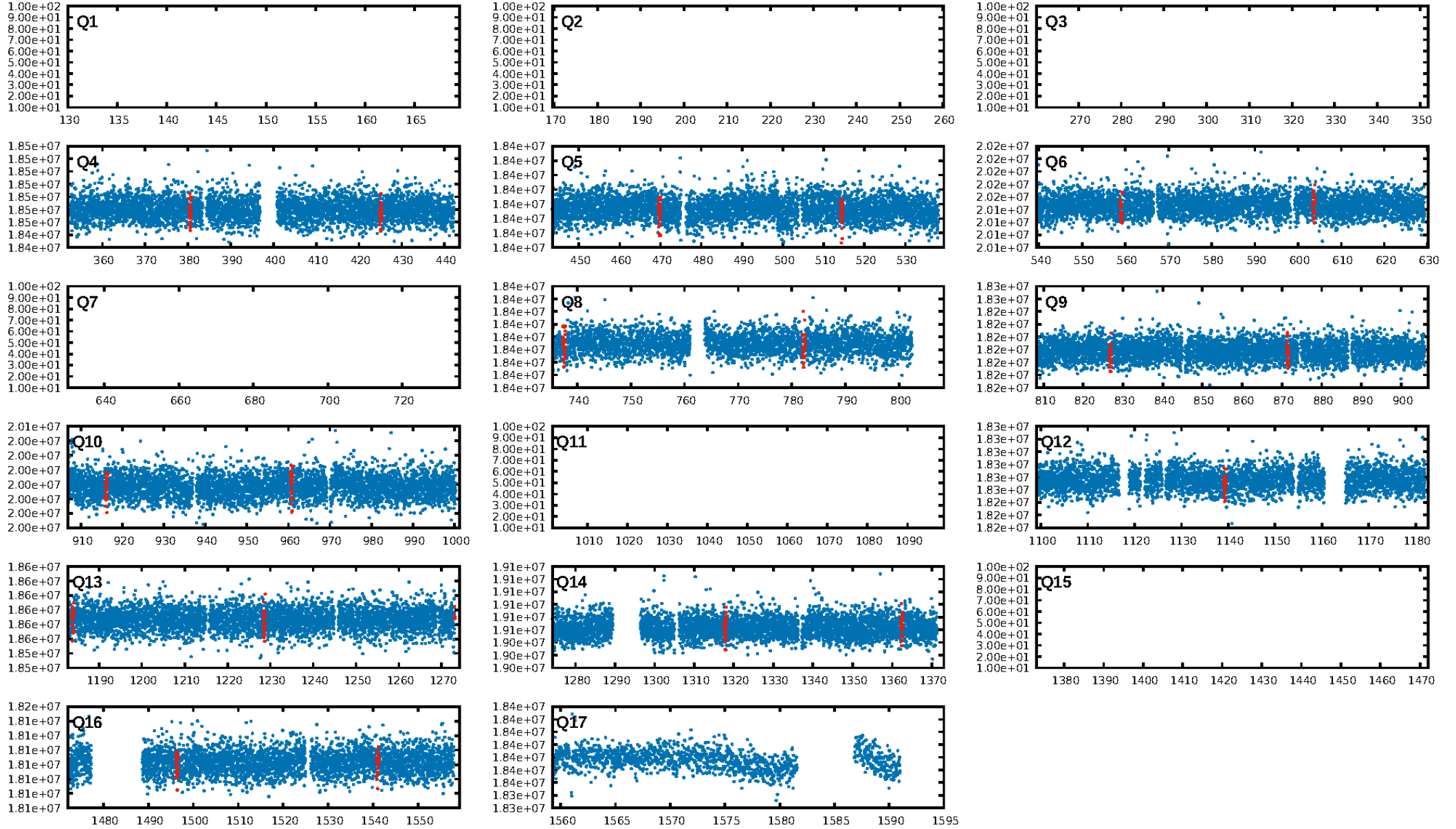
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 92.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.17e-16
RollingBand-fgt: 1.00 [19/19]
GhostDiagnostic-chr: -0.3245
Centroid-sig: 0.0%
Centroid-so: 80.395 arcsec [49.23σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [9/9]

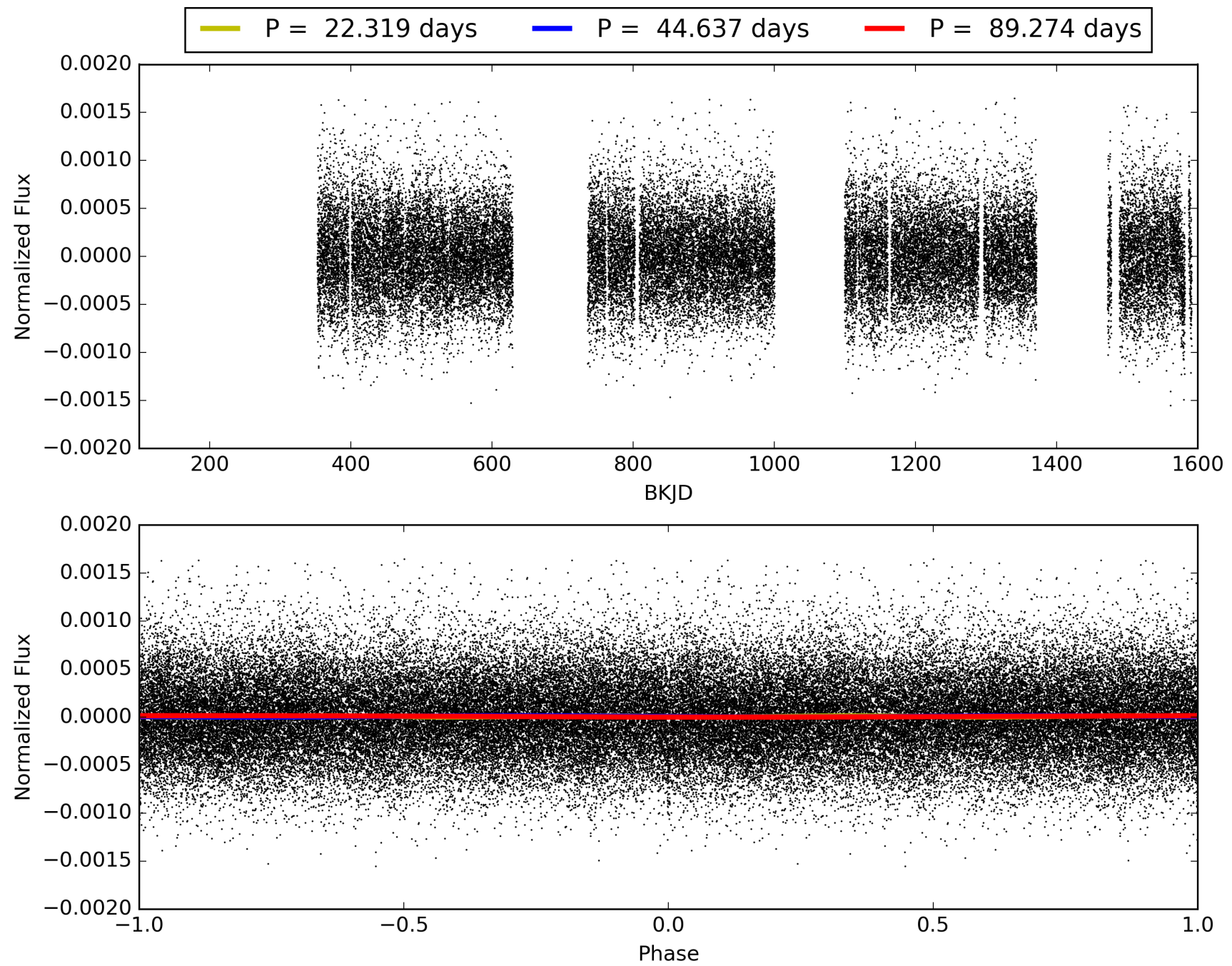
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:53:24 Z

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

TCE 010023469-01, PDC Light Curves

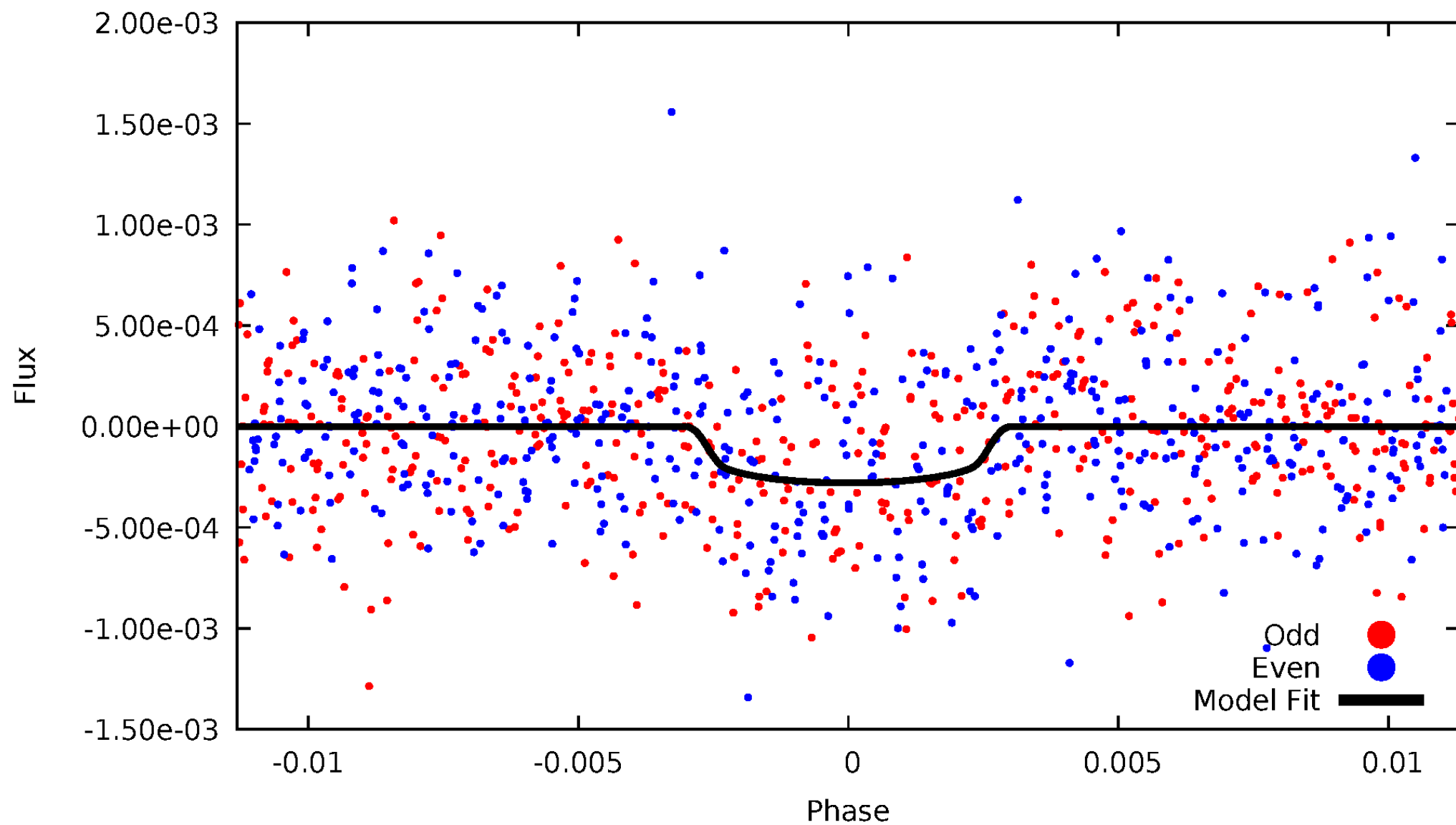


TCE 010023469-01



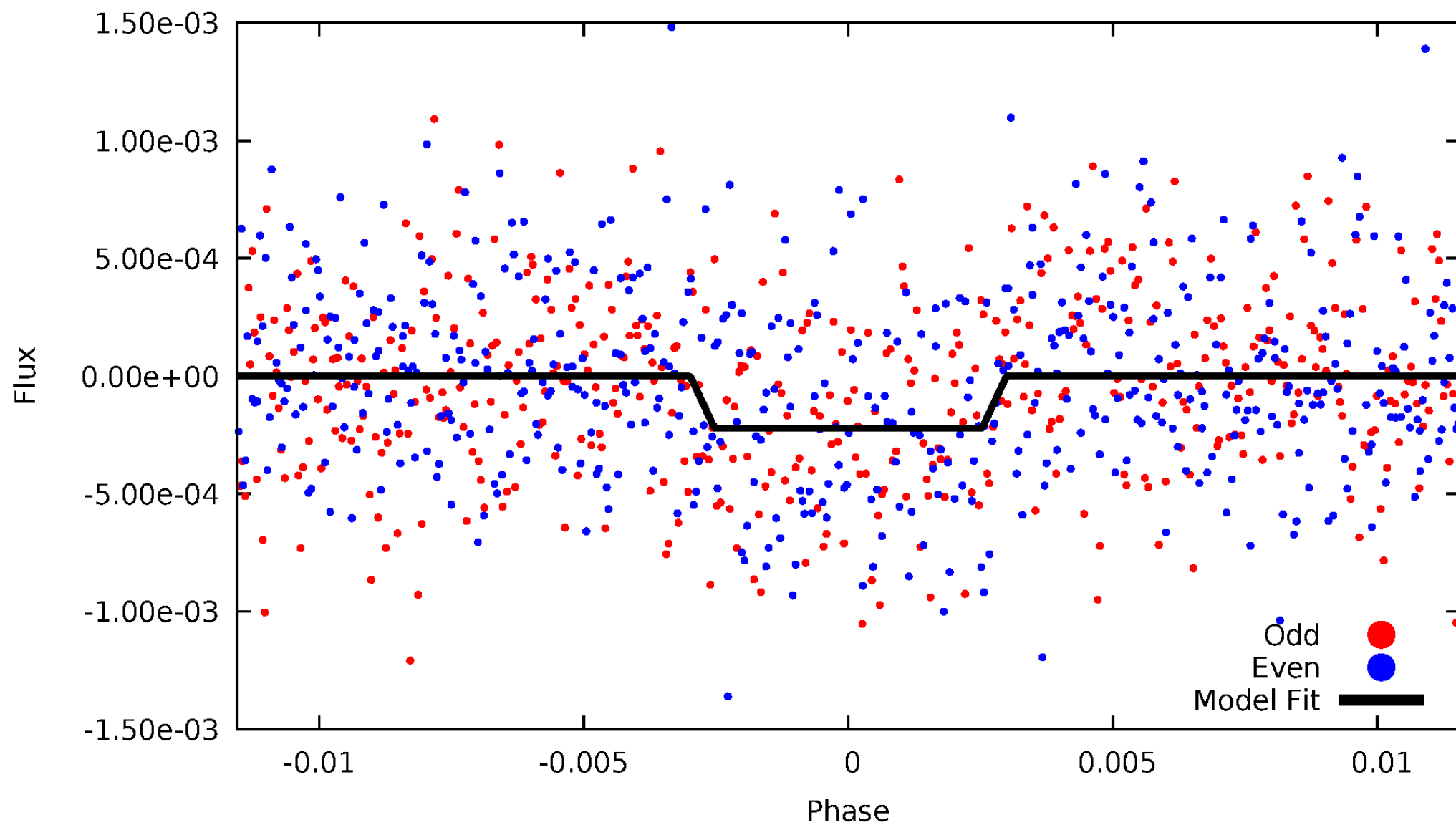
DV Odd/Even

TCE 010023469-01



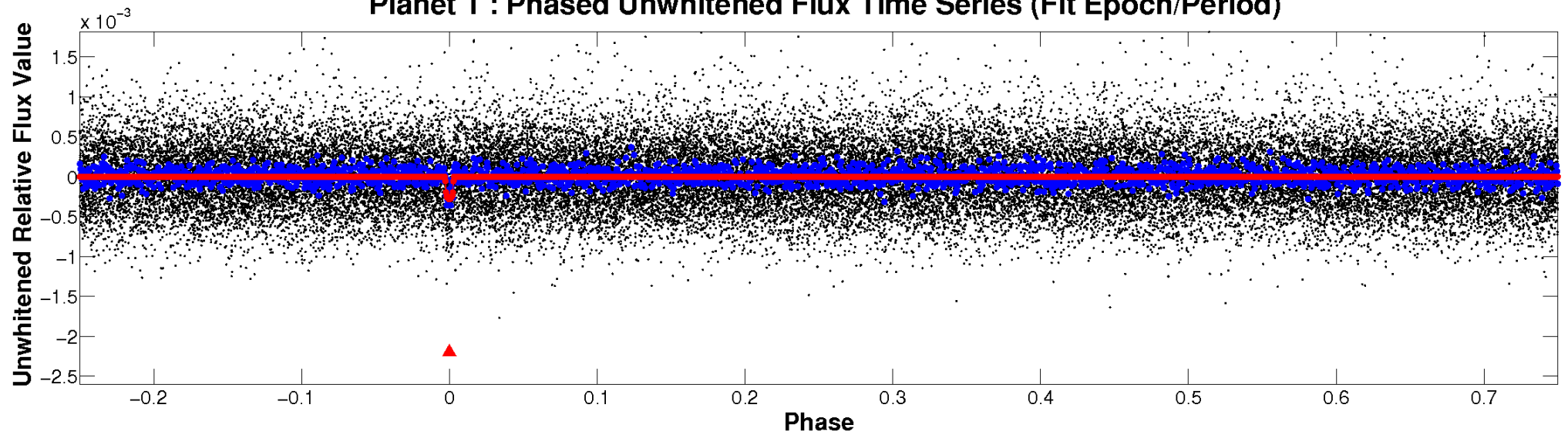
ALT Odd/Even

TCE 010023469-01

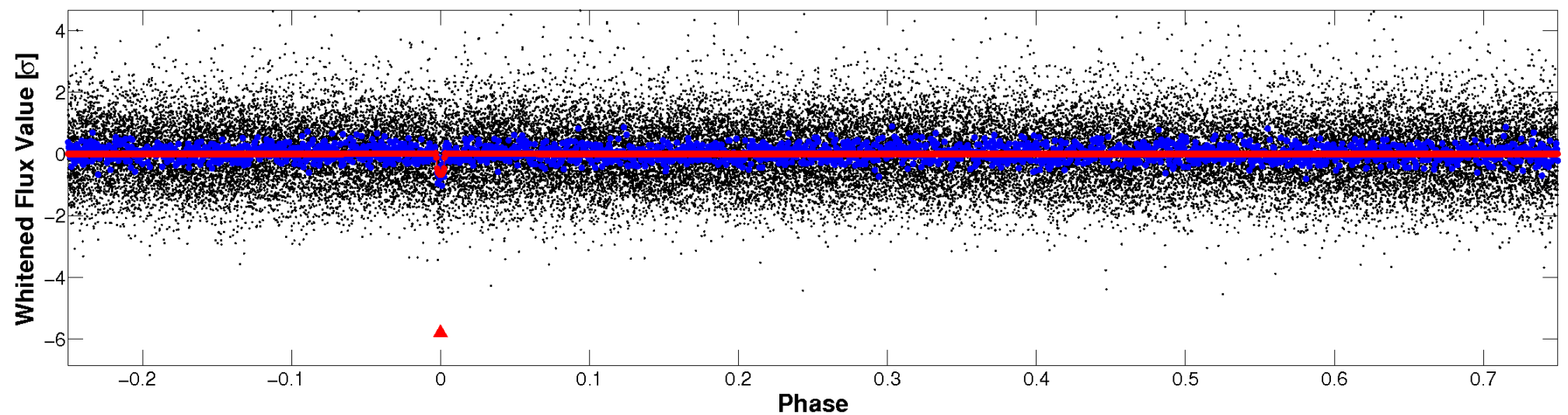


Non-Whitened Vs. Whitened Light Curve

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

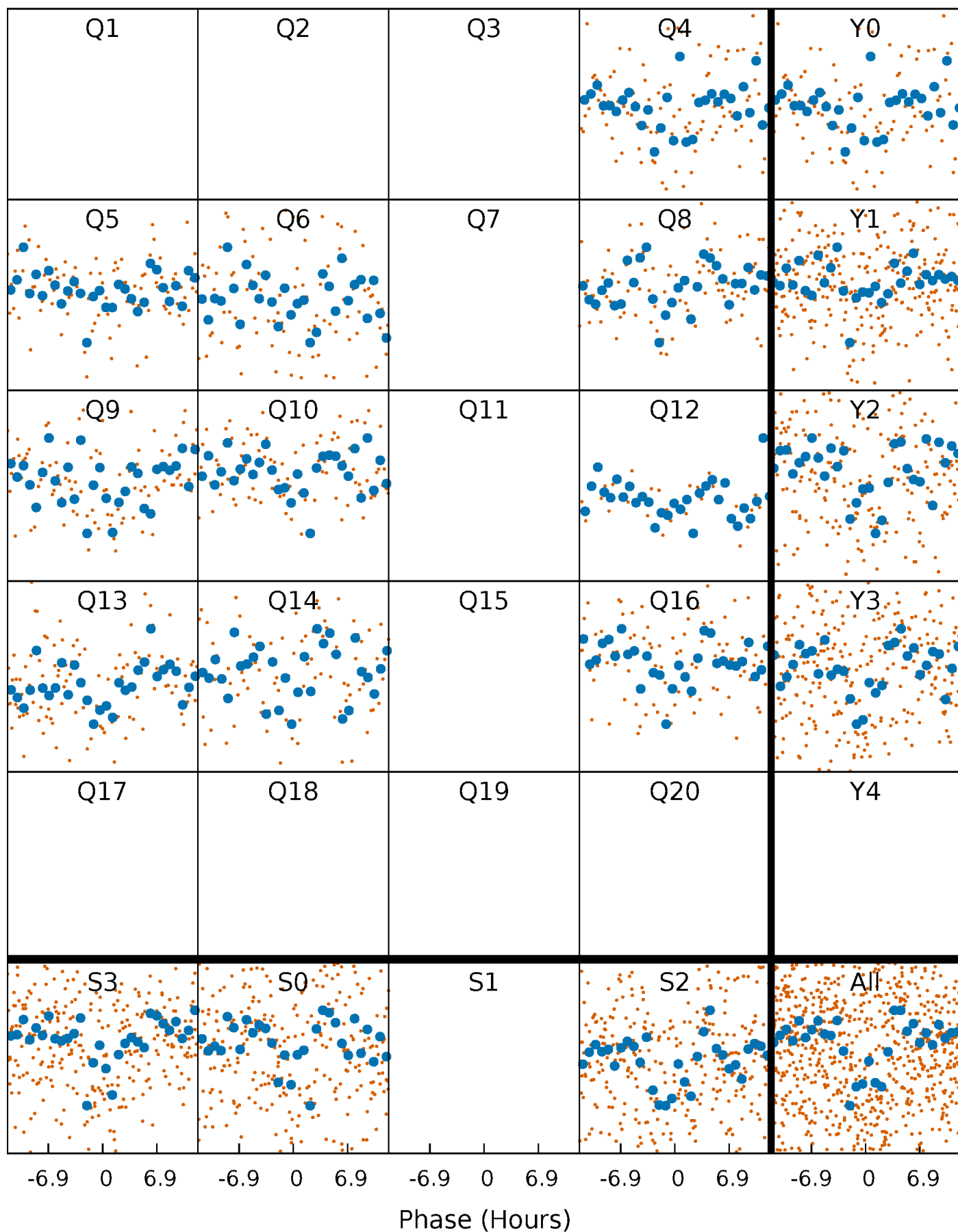


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



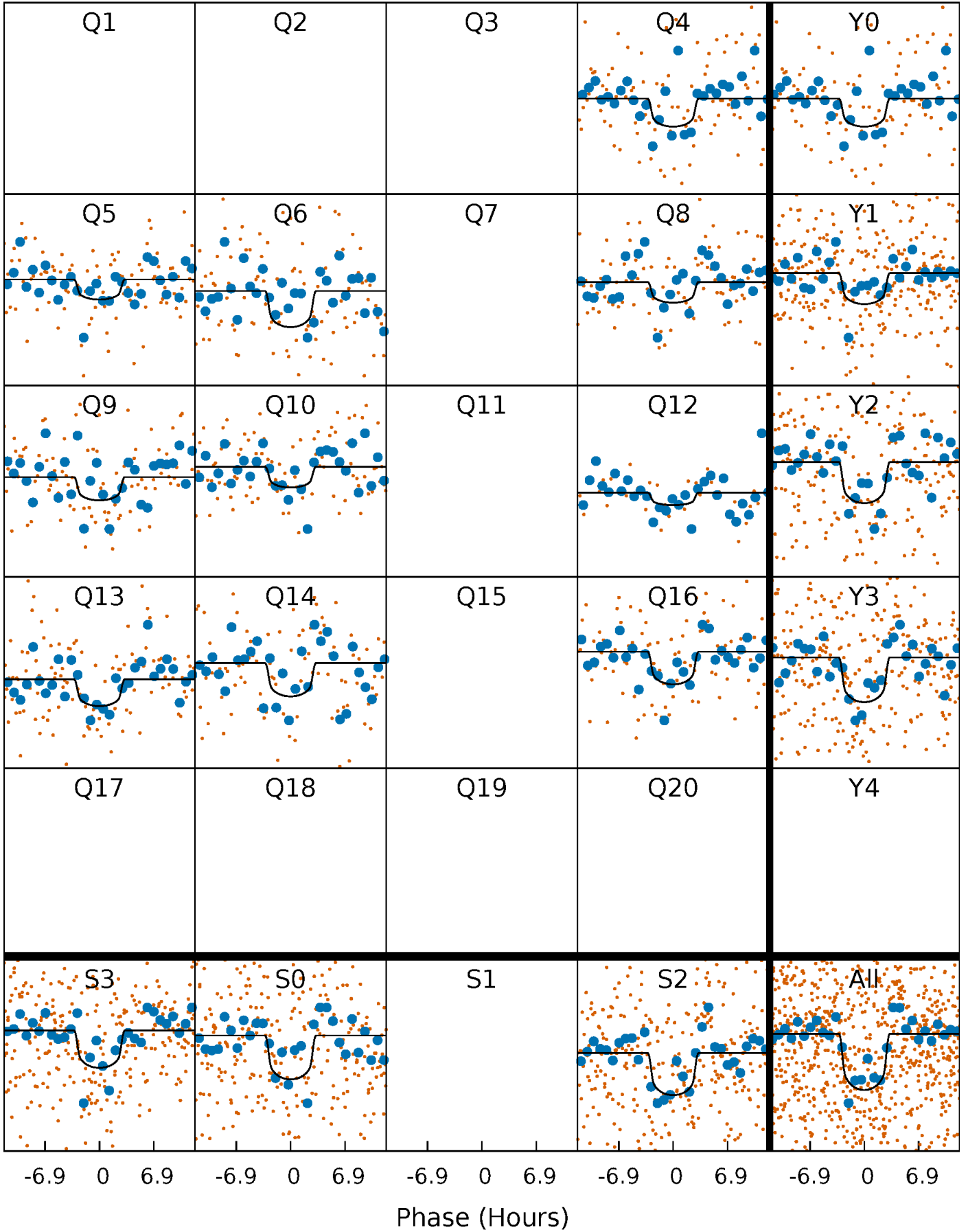
PDC Quarter-Phased Transit Curves

TCE 010023469-01 P= 44.637013 Days $T_0=157.302213$ (BKJD)



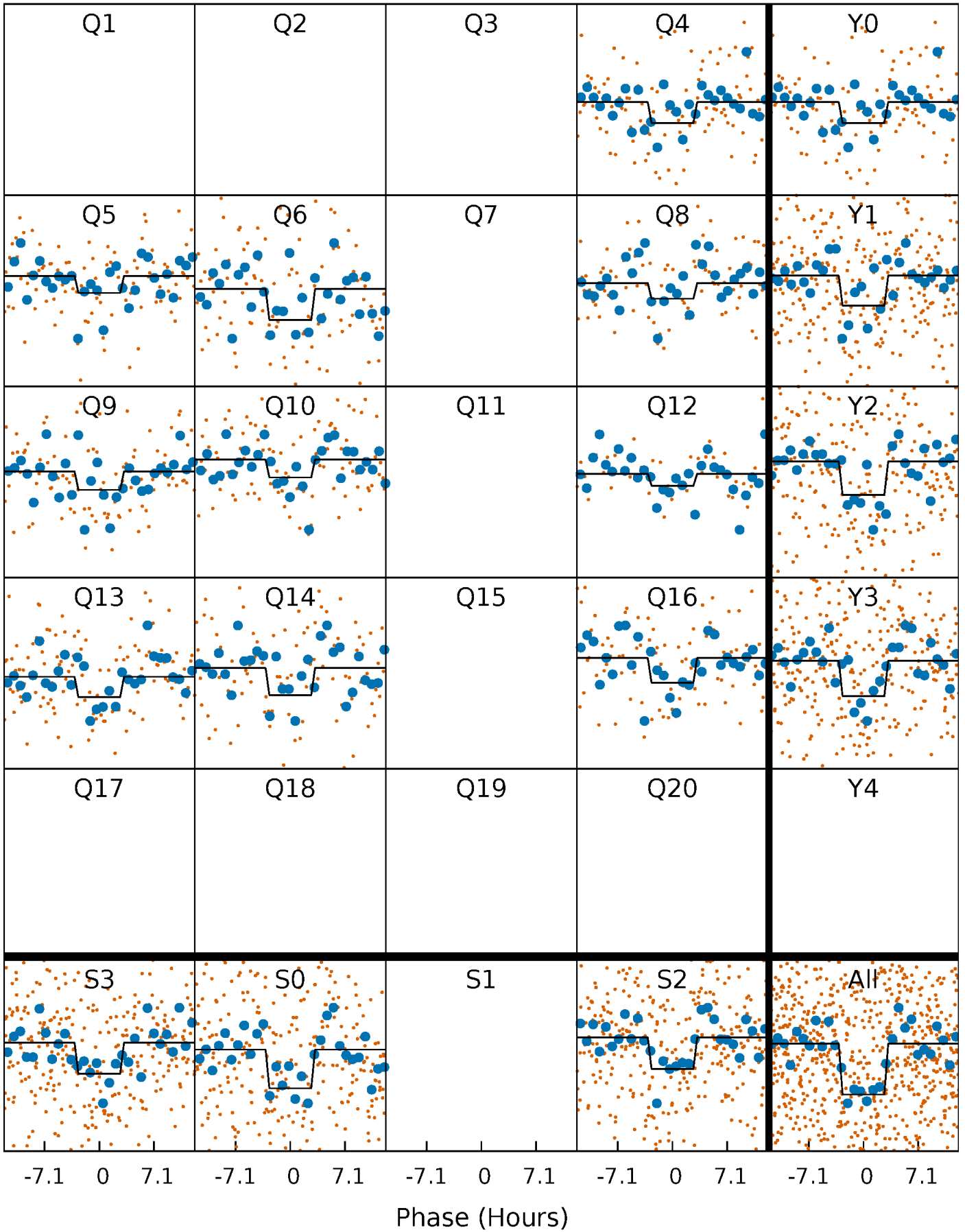
DV Quarter-Phased Transit Curves

TCE 010023469-01 P= 44.637013 Days $T_0=157.302213$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

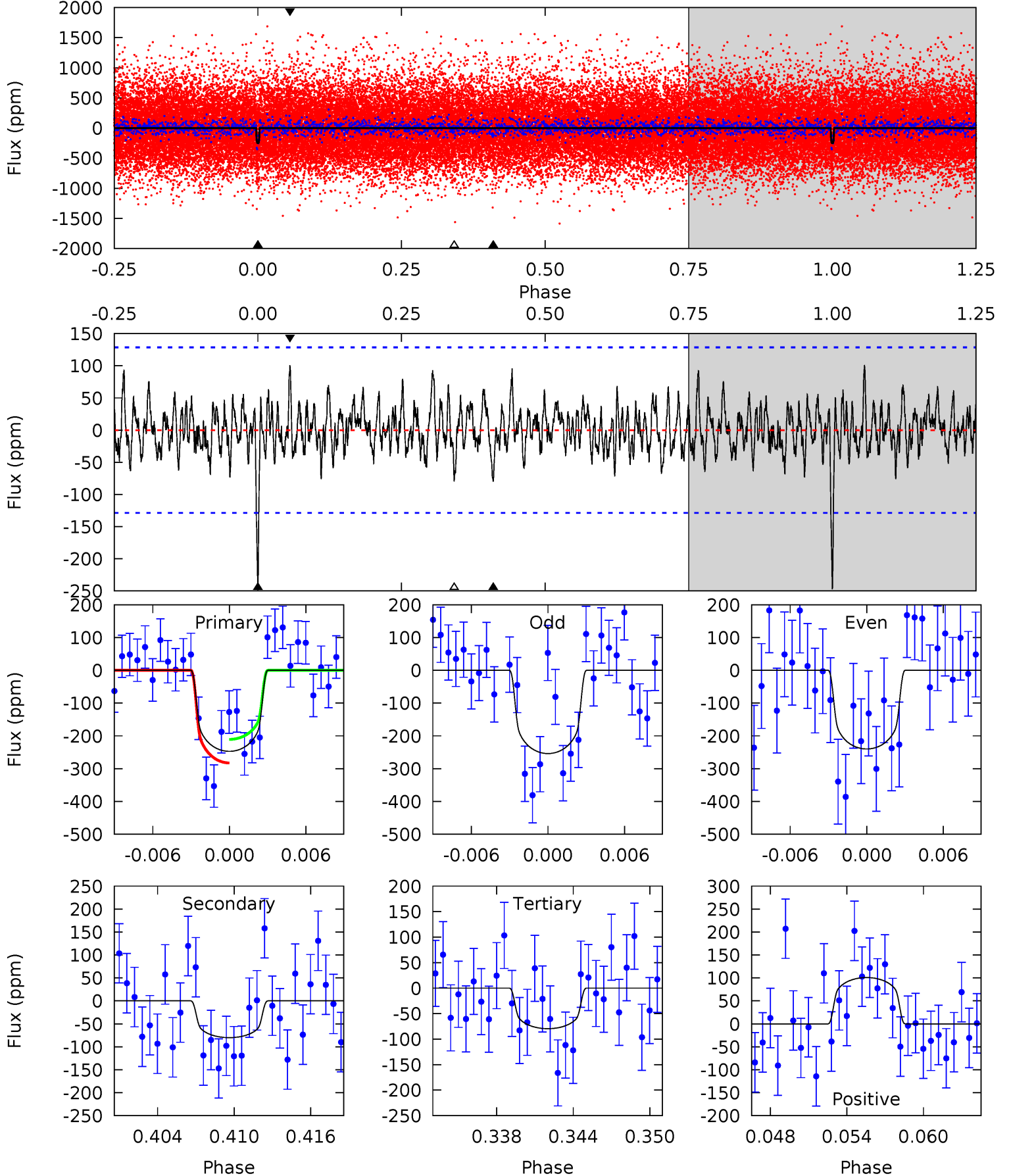
TCE 010023469-01 P= 44.634361 Days $T_0=157.342197$ (BKJD)



DV Model-Shift Uniqueness Test

010023469-01, P = 44.637013 Days, E = 157.302213 Days

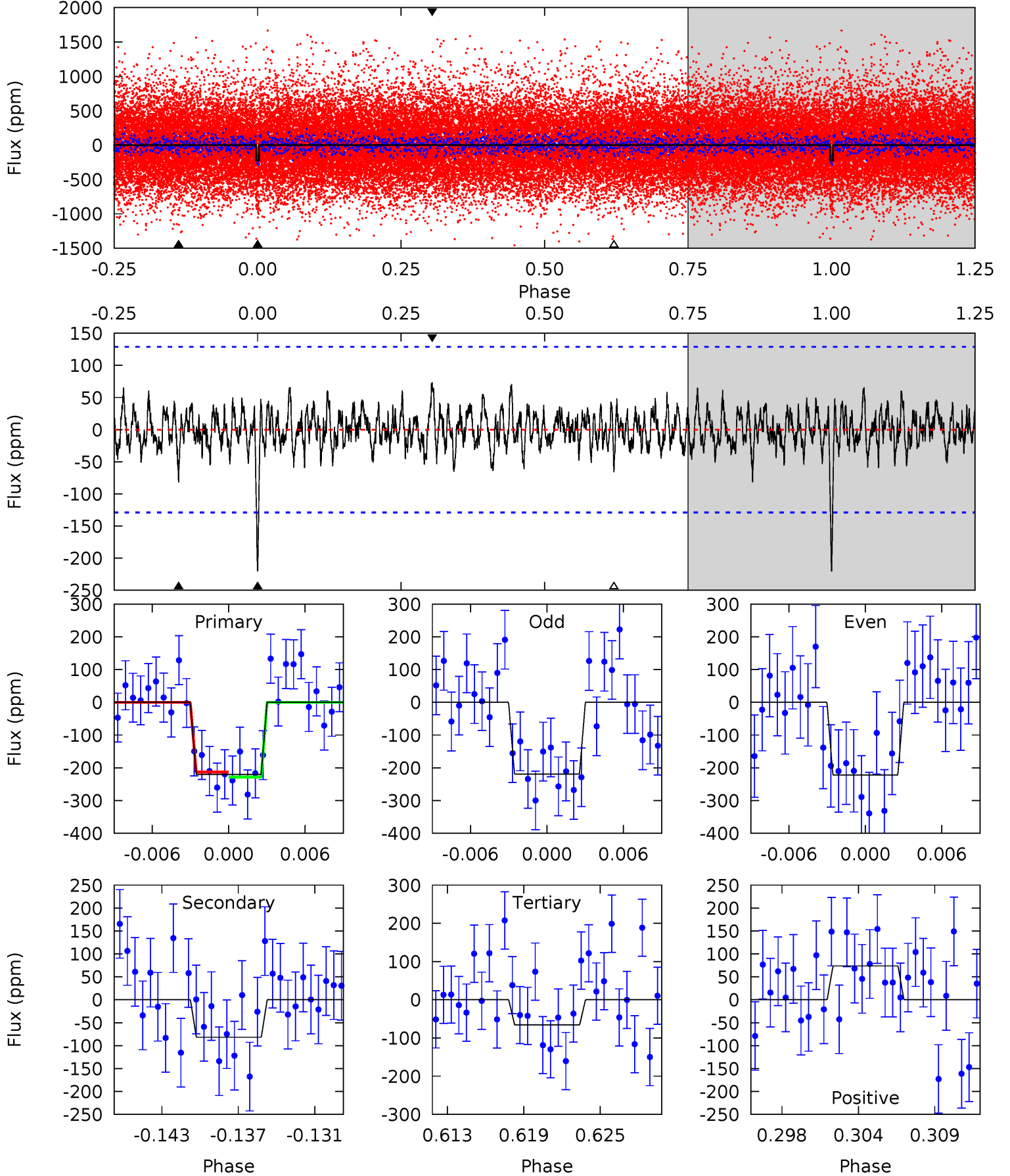
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.84	3.19	3.17	4.02	5.12	2.75	1.18	6.68	5.83	0.02	-0.83	0.28	1.02	0.29	1.43



Alt Model-Shift Uniqueness Test

010023469-01, P = 44.634361 Days, E = 157.342197 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.77	3.25	2.62	2.93	5.12	2.75	0.95	6.15	5.84	0.63	0.32	0.06	1.01	0.25	0.30



Stellar Parameters For KIC 010023469

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5222^{+196}_{-179}	$4.518^{+0.095}_{-0.105}$	$-0.300^{+0.350}_{-0.300}$	$0.780^{+0.114}_{-0.093}$	$0.730^{+0.114}_{-0.049}$	$2.169^{+0.804}_{-0.644}$
	+4%/-3%	+2%/-2%	+117%/-100%	+15%/-12%	+16%/-7%	+37%/-30%
Source	KIC0	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 010023469-01 / KOI 5757.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-80 ± 25	$1.56^{+0.85}_{-0.78}$	605^{+32}_{-28}	3942^{+1245}_{-541}	870^{+2762}_{-521}
Alt.	-82 ± 25	$1.37^{+0.76}_{-0.81}$	604^{+32}_{-30}	4159^{+1773}_{-637}	1126^{+5590}_{-678}

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

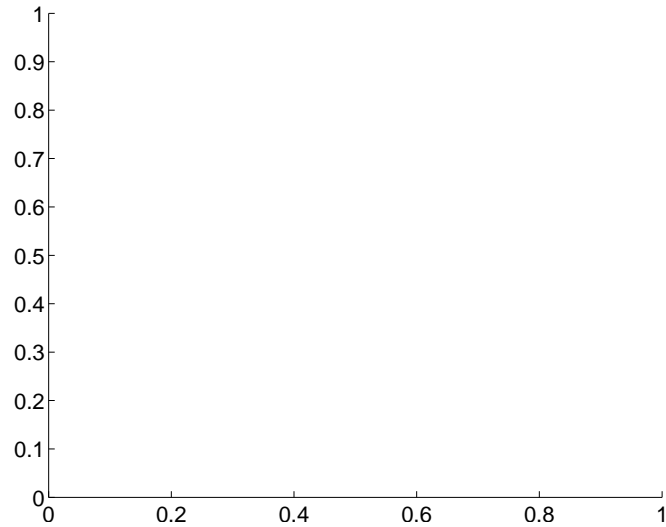
Supplemental centroid analysis for 010023469-01. Kepler magnitude: 15.29. Transit SNR 8.30

There are 0 quarters with good PRF difference image offsets

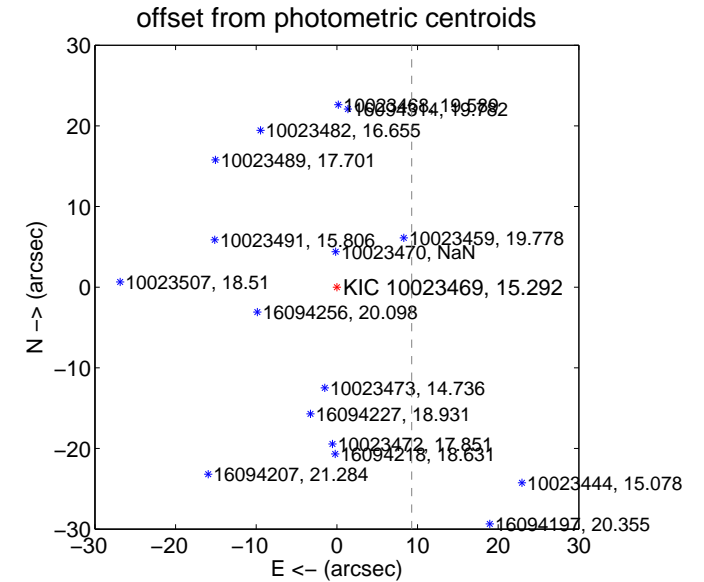
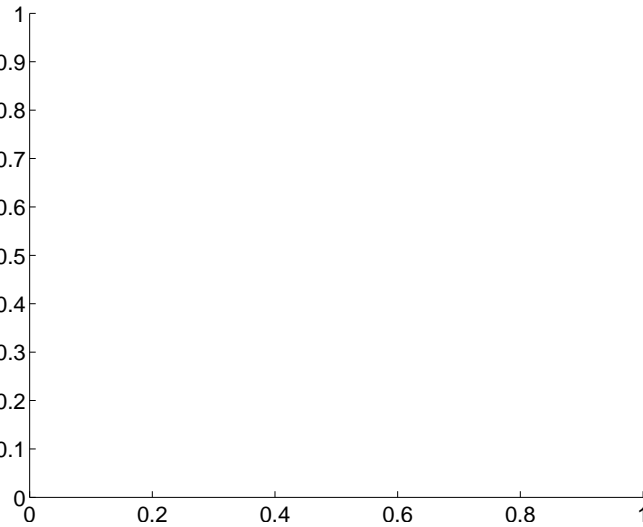
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	80.40 ± 1.63	49.23	-9.27 ± 1.52	-79.86 ± 1.63

There is no PRF-fit offset from OOT-fit

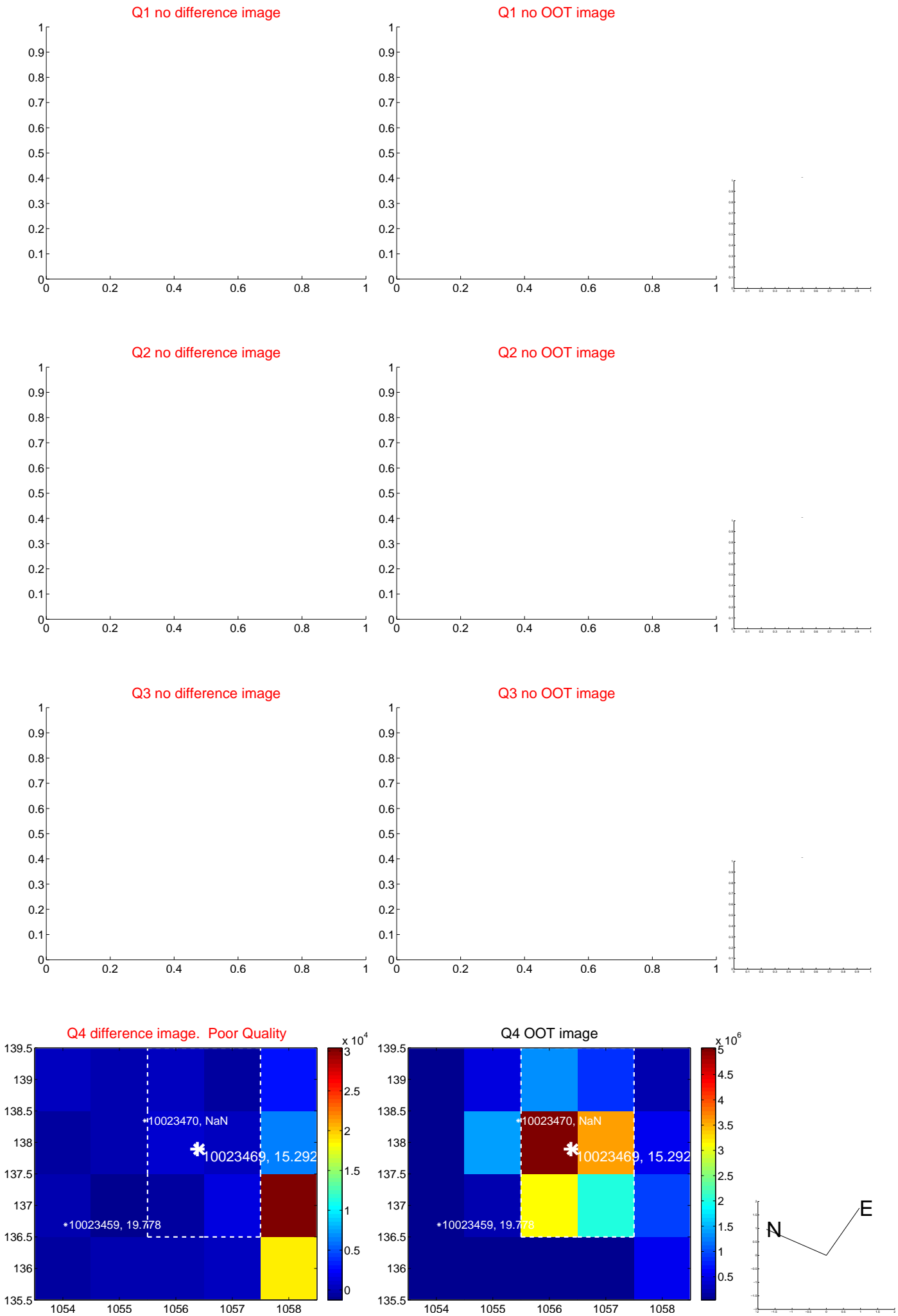


There is no PRF-fit offset from KIC

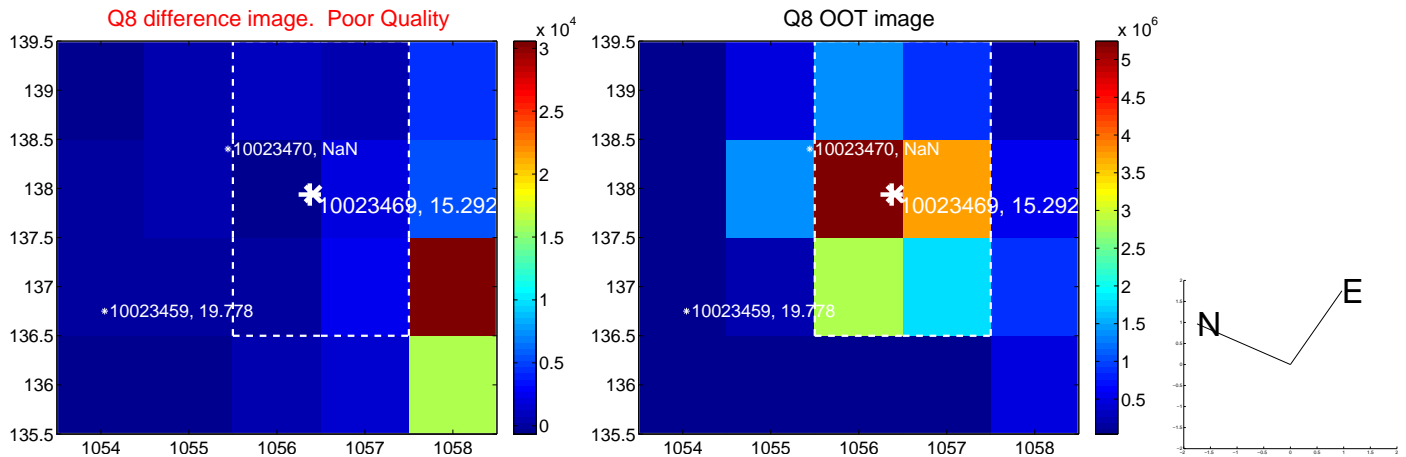
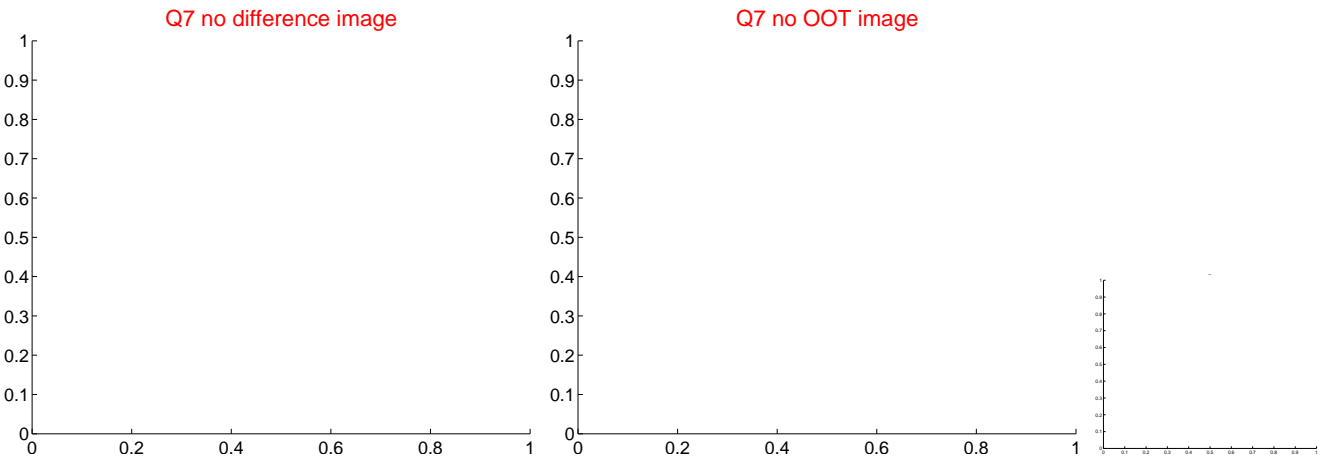
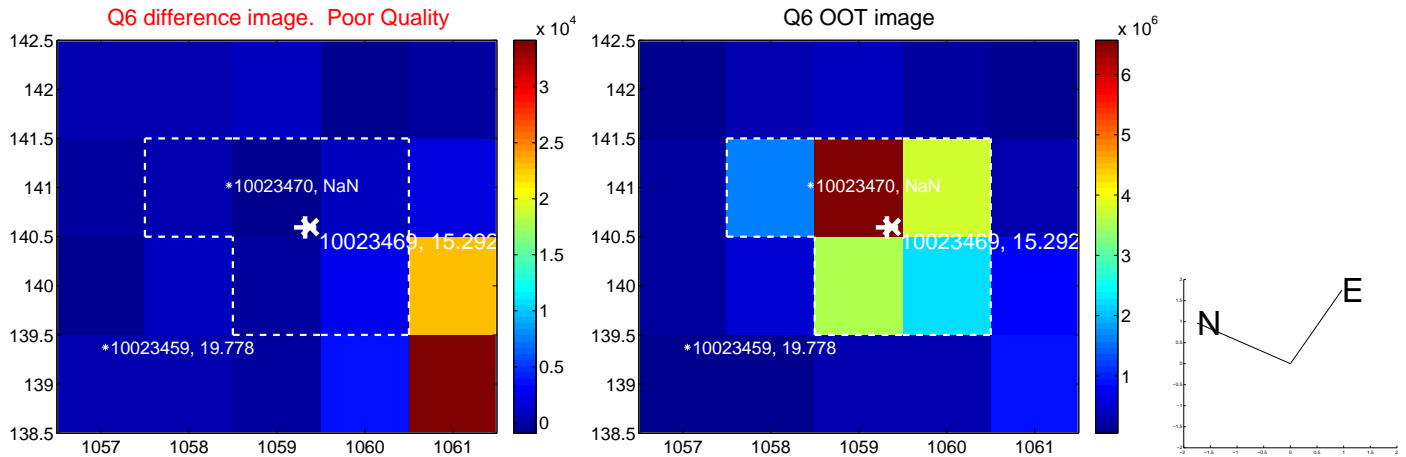
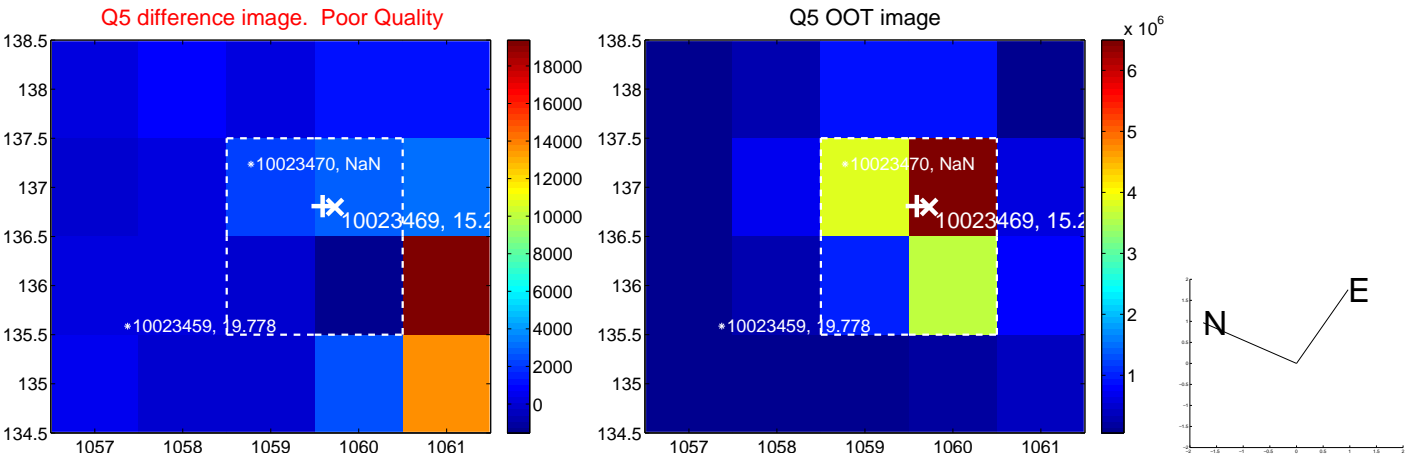


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

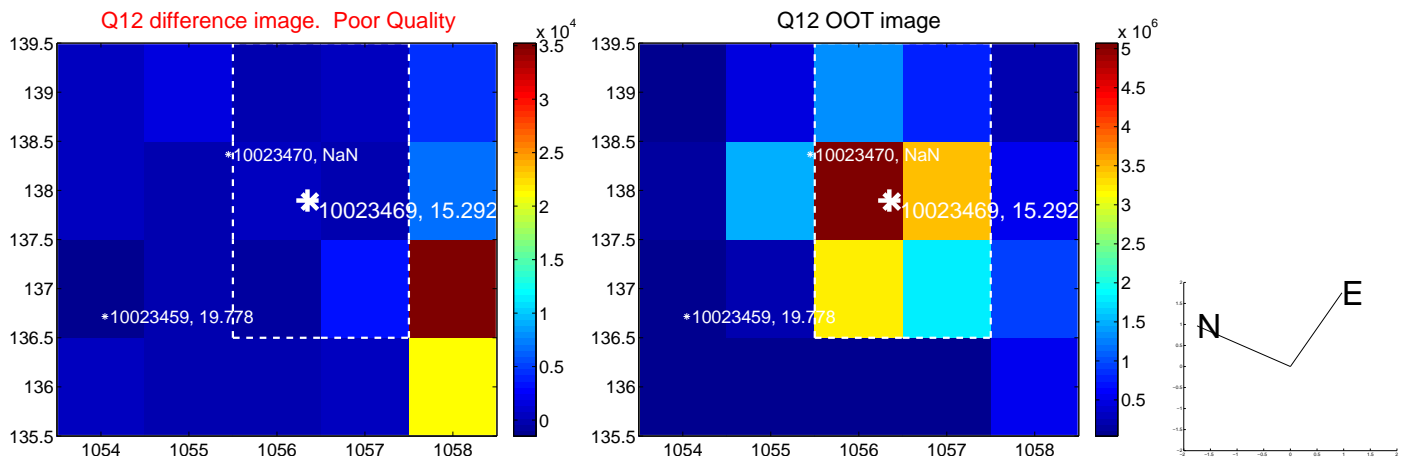
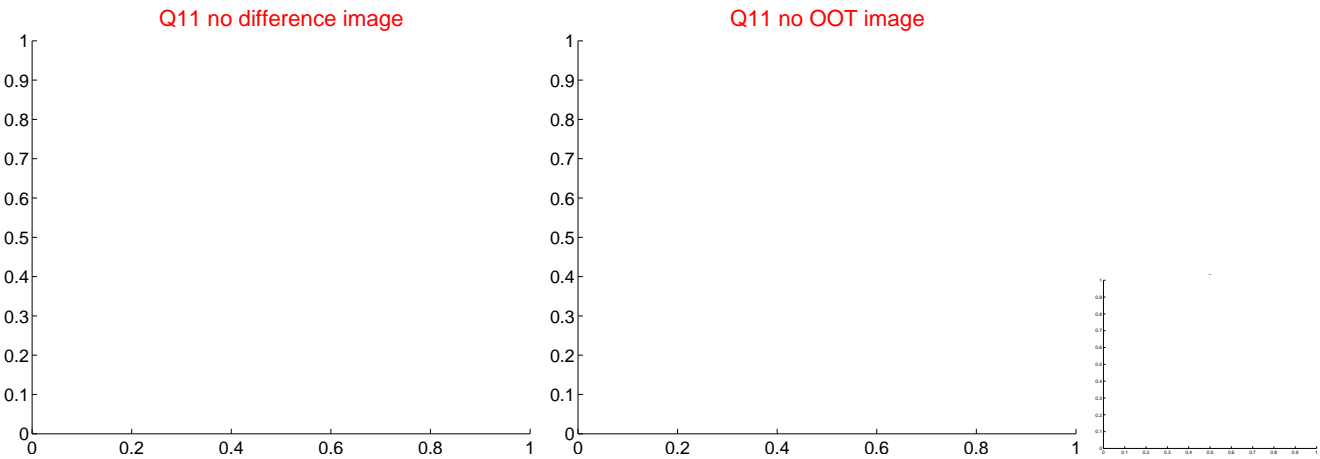
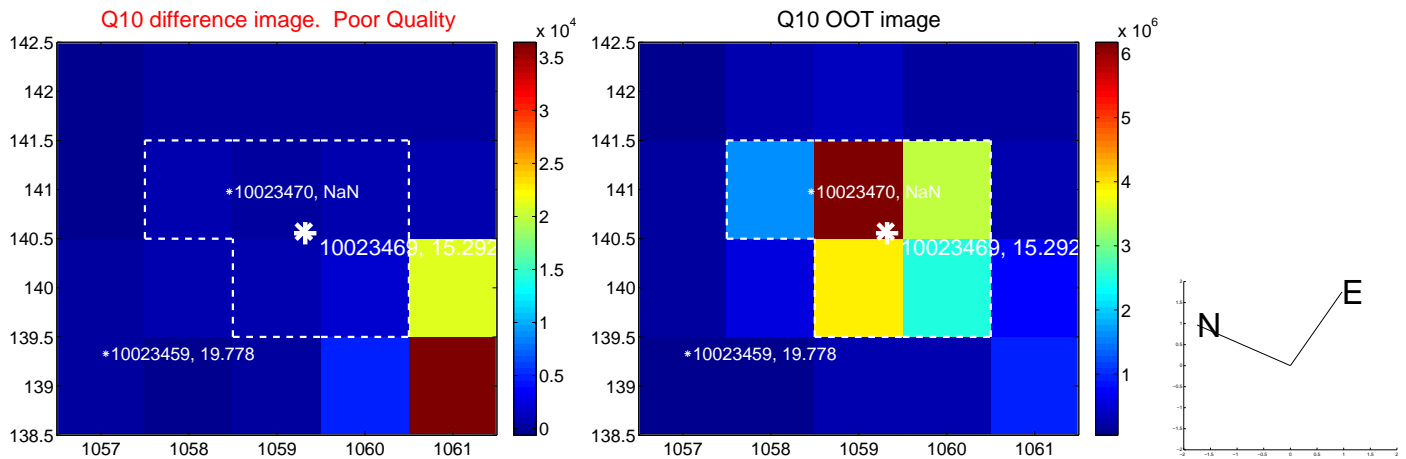
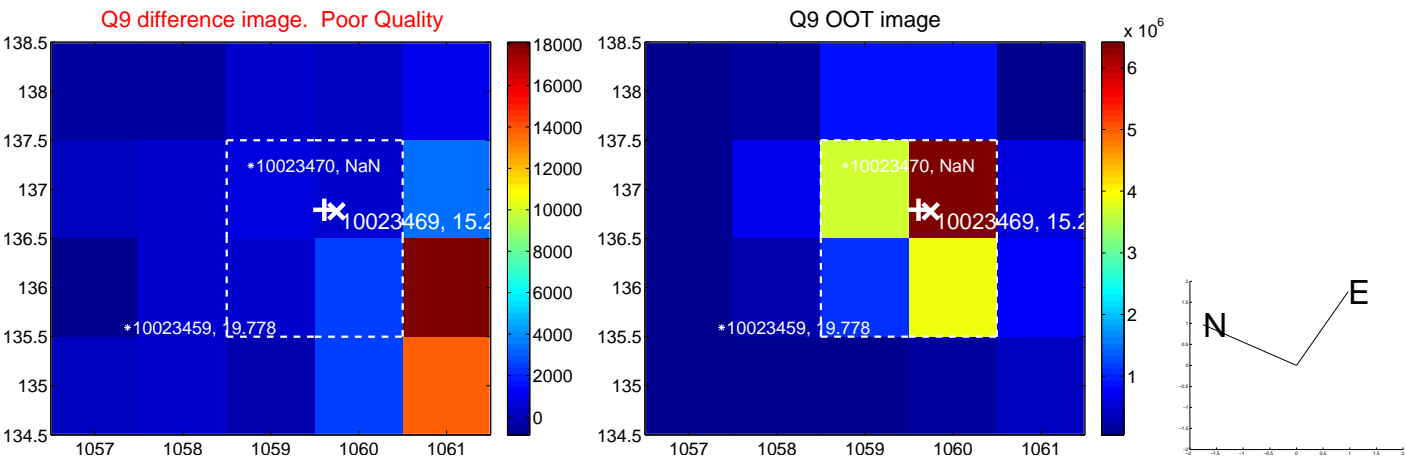
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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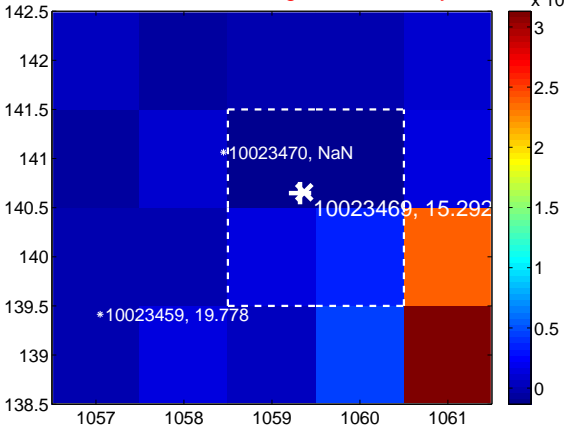
Q13 no difference image



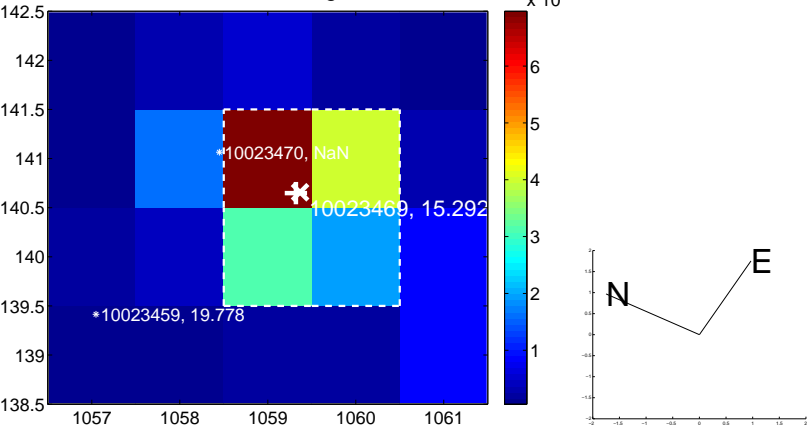
Q13 no OOT image



Q14 difference image. Poor Quality



Q14 OOT image



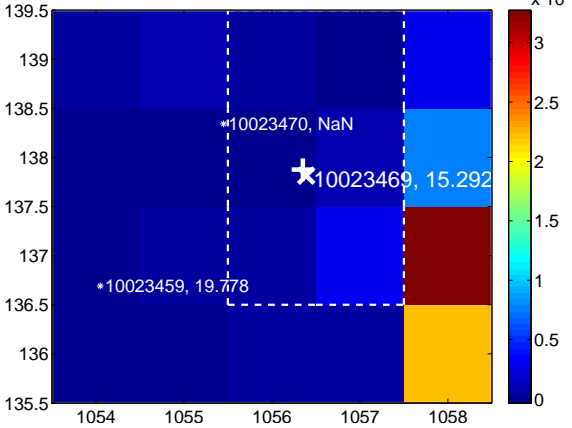
Q15 no difference image



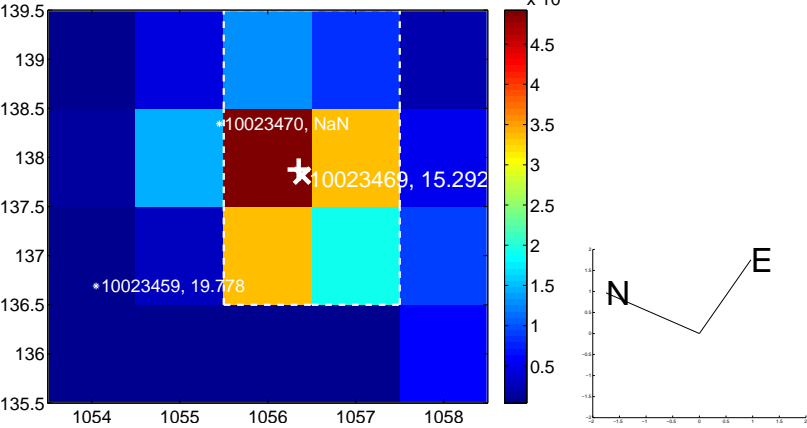
Q15 no OOT image



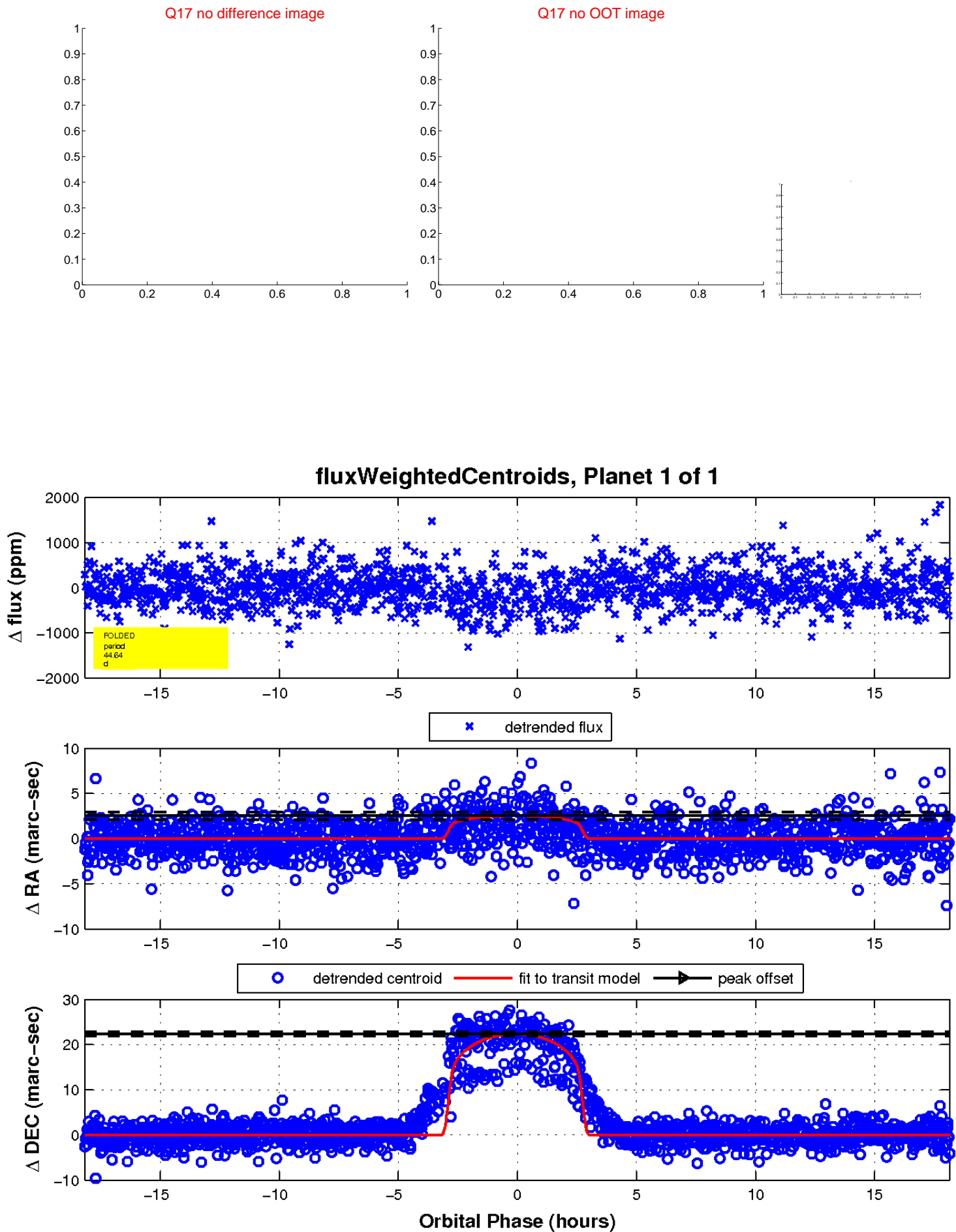
Q16 difference image. Poor Quality



Q16 OOT image



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



UKIRT Image

Declination

