

KIC 009668027

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})
009668027-01	OBS	No	6.076114	136.885859	11.2	34.897	7.8	4.9	3.07	6582	1.03	2695.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009668027-01	OBS	FP	0.00	1	0	0	0	LPP_DV

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

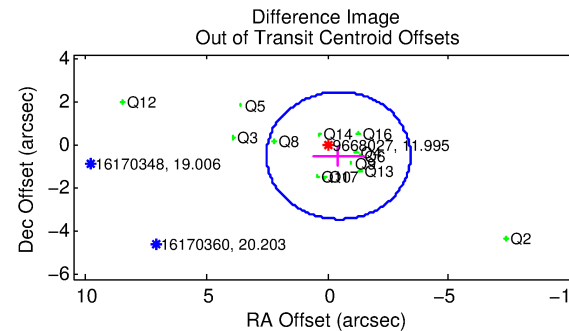
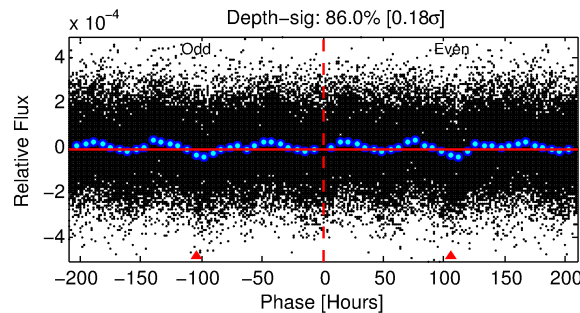
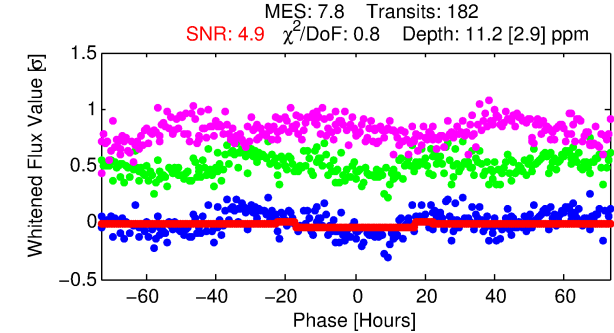
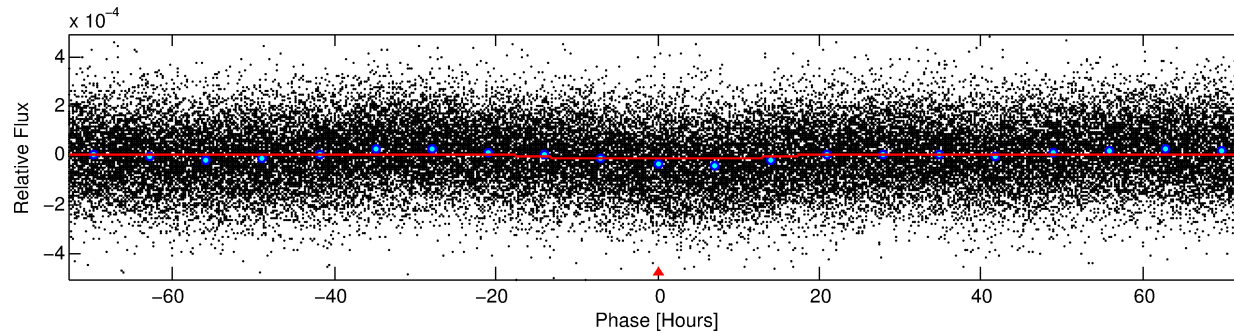
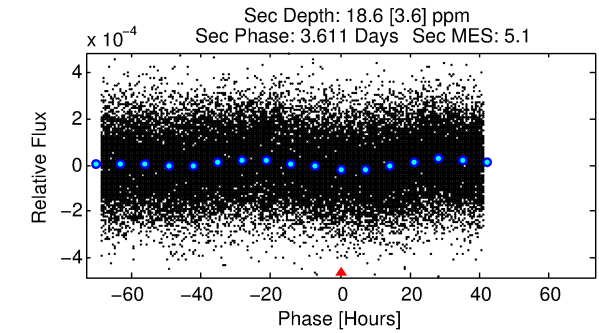
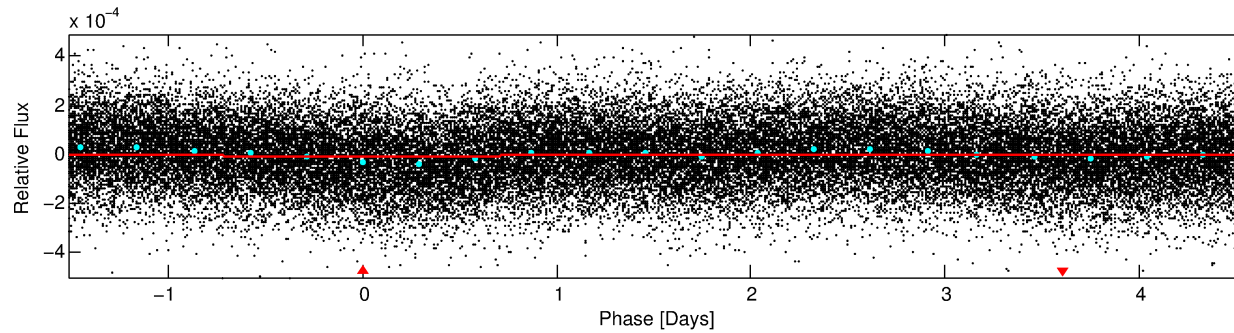
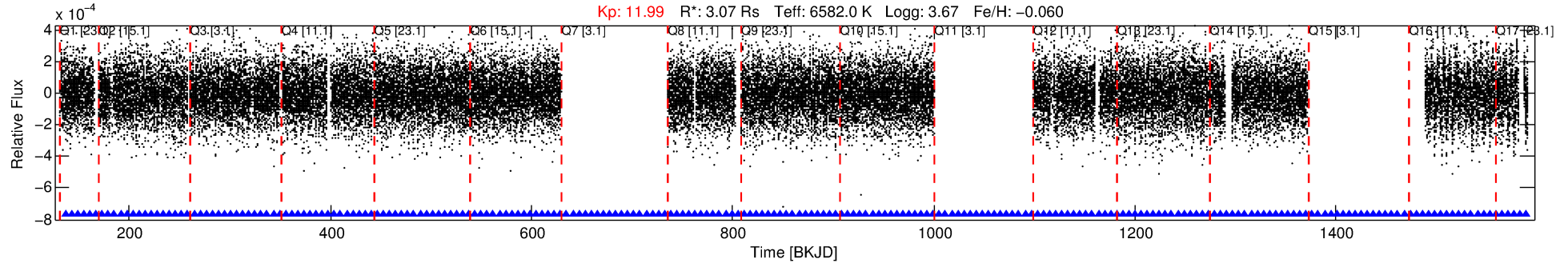
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009668027-01

No Significant Match Found

DV One-Page Summary

KIC: 9668027 Candidate: 1 of 1 Period: 6.076 d



DV Fit Results:

Period = 6.07611 [0.00029] d
Epoch = 136.8859 [0.0319] BKJD
Rp/R* = 0.0031 [0.0047]
a/R* = 1.47 [6.51]
b = 0.01 [1262.20]
Seff = 2695.47 [1387.45]
Teq = 1837 [236] K
Rp = 1.03 [1.61] Re
a = 0.0766 [0.0247] AU
Ag = 56.68 [175.81] [0.32 σ]
Teffp = 7794 [5970] K [1.00 σ]

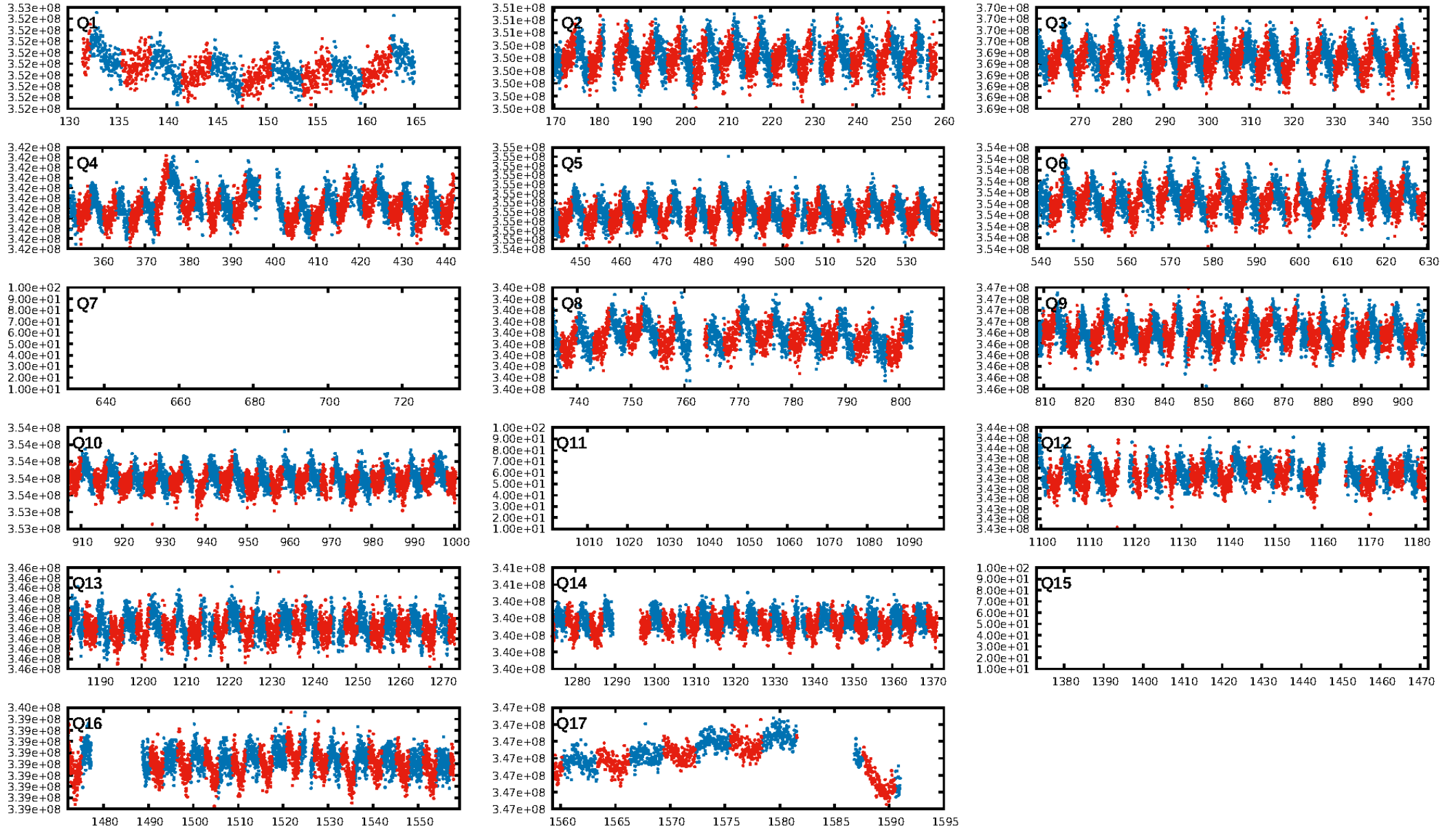
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.43e-16
RollingBand-fgt: 1.00 [171/171]
GhostDiagnostic-chr: 2.952
Centroid-sig: 14.0%
Centroid-so: 1.683 arcsec [1.33 σ]
OotOffset-rm: 0.661 arcsec [0.67 σ]
KicOffset-rm: 0.596 arcsec [0.88 σ]
OotOffset-st: 4/1/4/4 [13]
KicOffset-st: 4/1/4/4 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 1.00 [14/14]

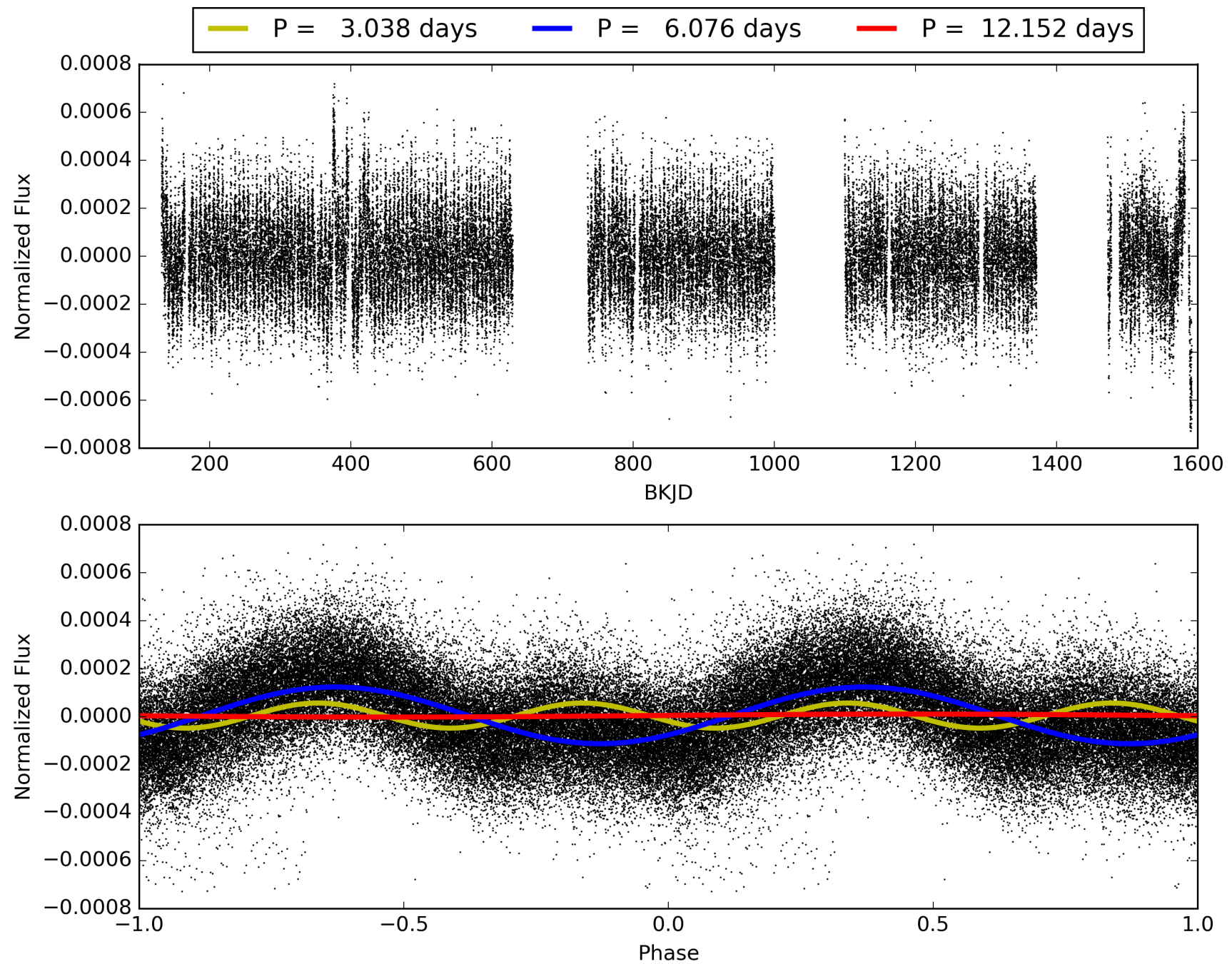
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:31:58 Z

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

TCE 009668027-01, PDC Light Curves

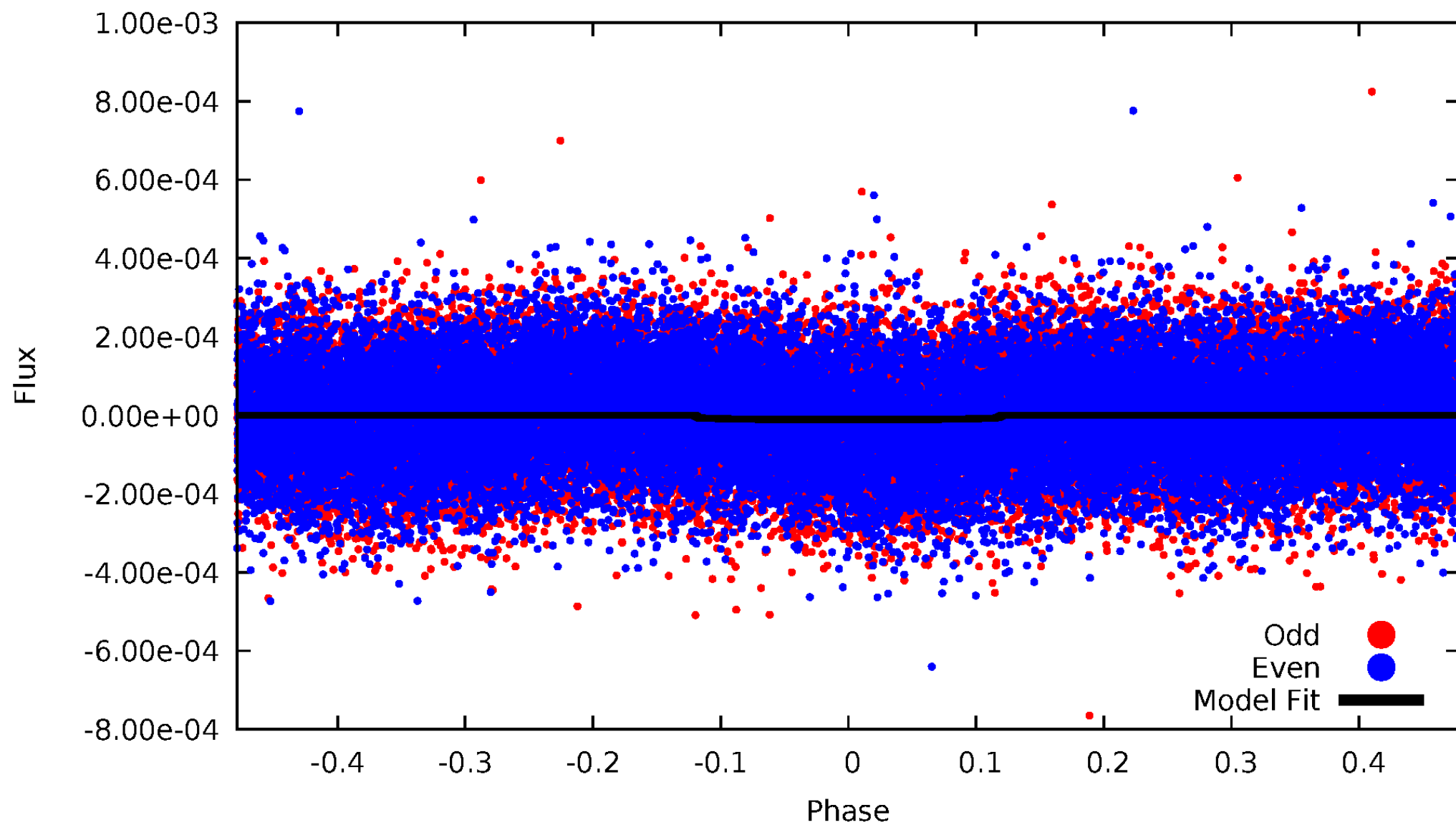


TCE 009668027-01



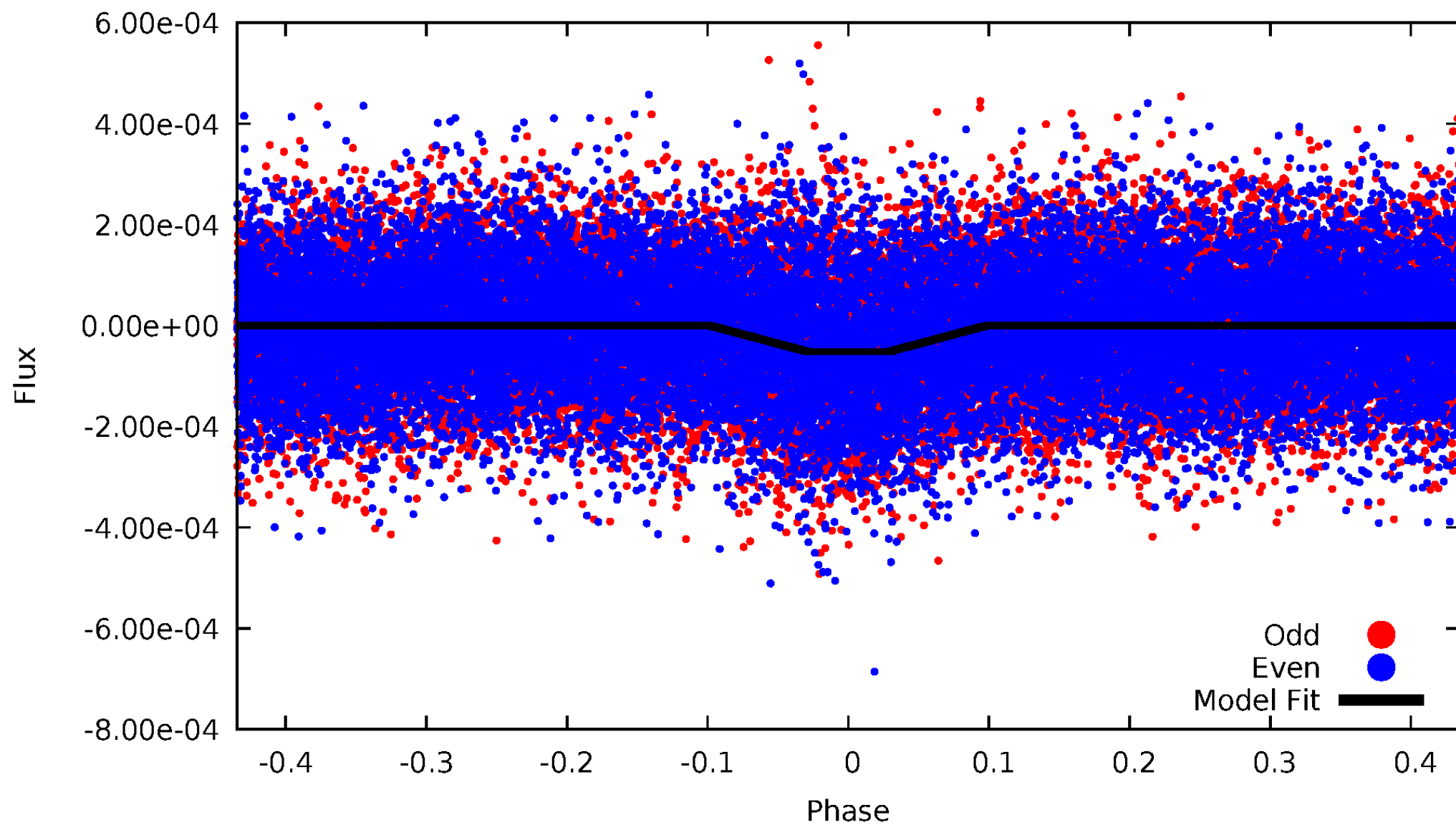
DV Odd/Even

TCE 009668027-01



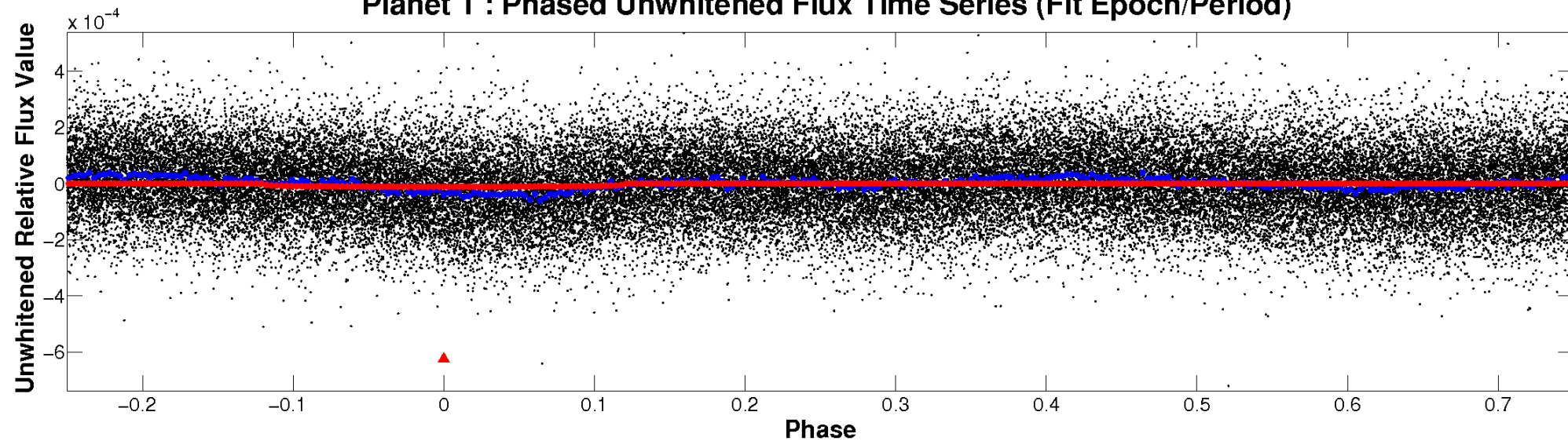
ALT Odd/Even

TCE 009668027-01

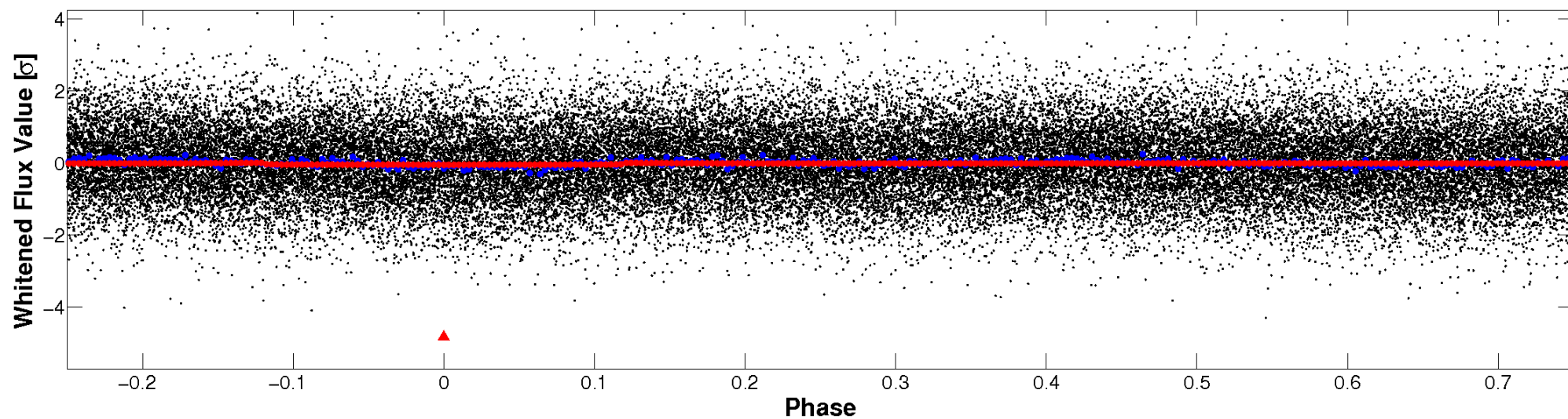


Non-Whitened Vs. Whitened Light Curve

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

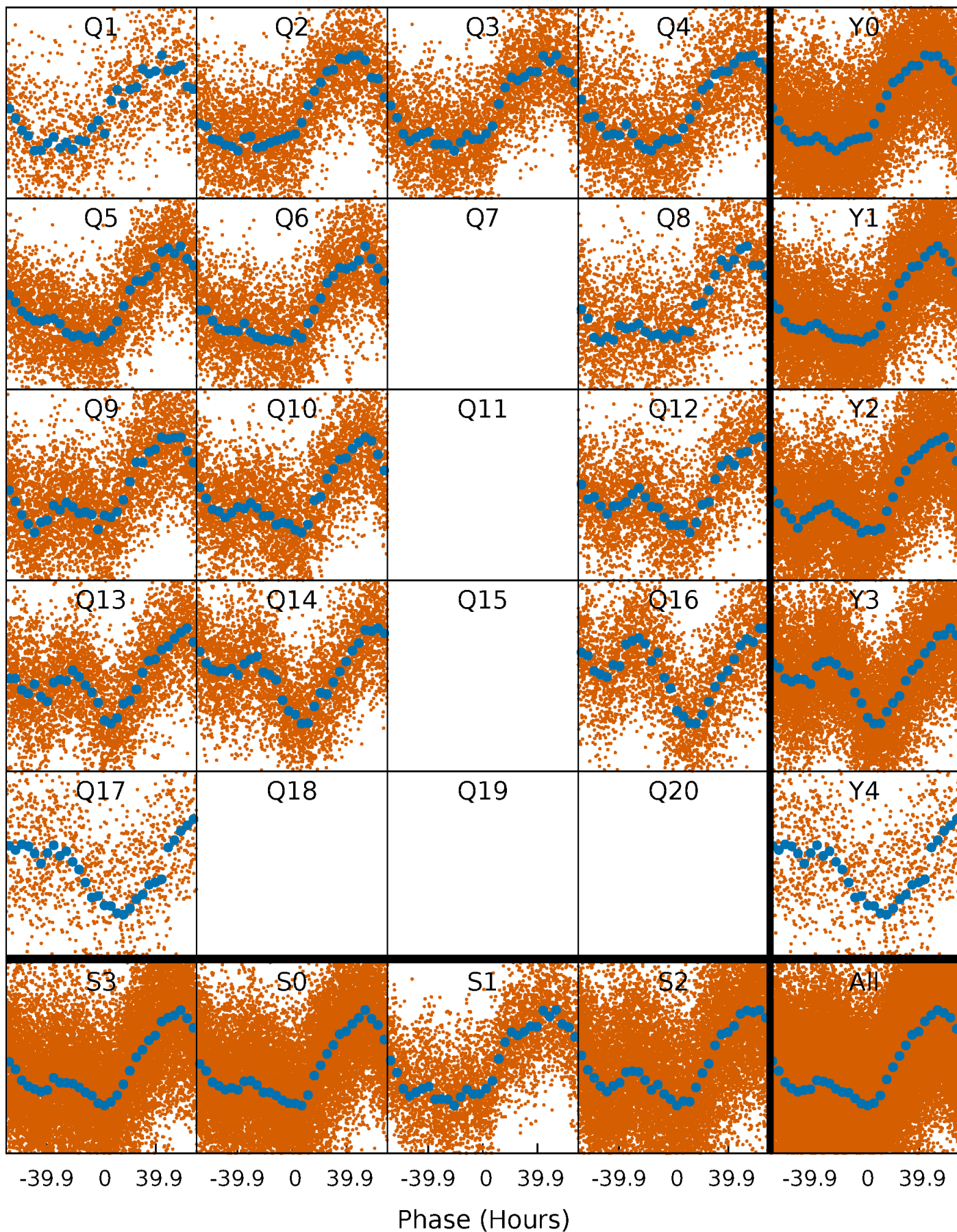


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



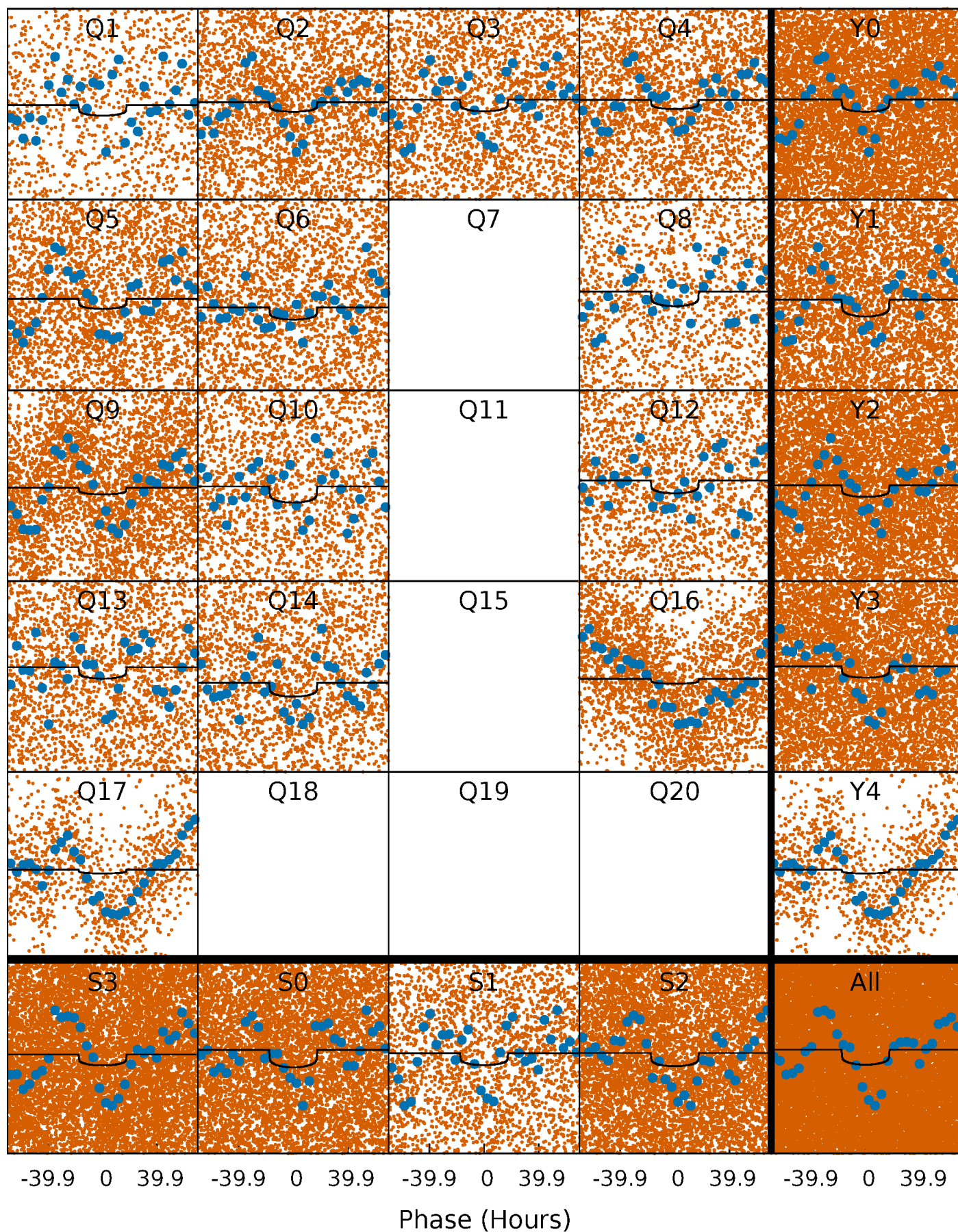
PDC Quarter-Phased Transit Curves

TCE 009668027-01 P= 6.076114 Days $T_0=136.885859$ (BKJD)



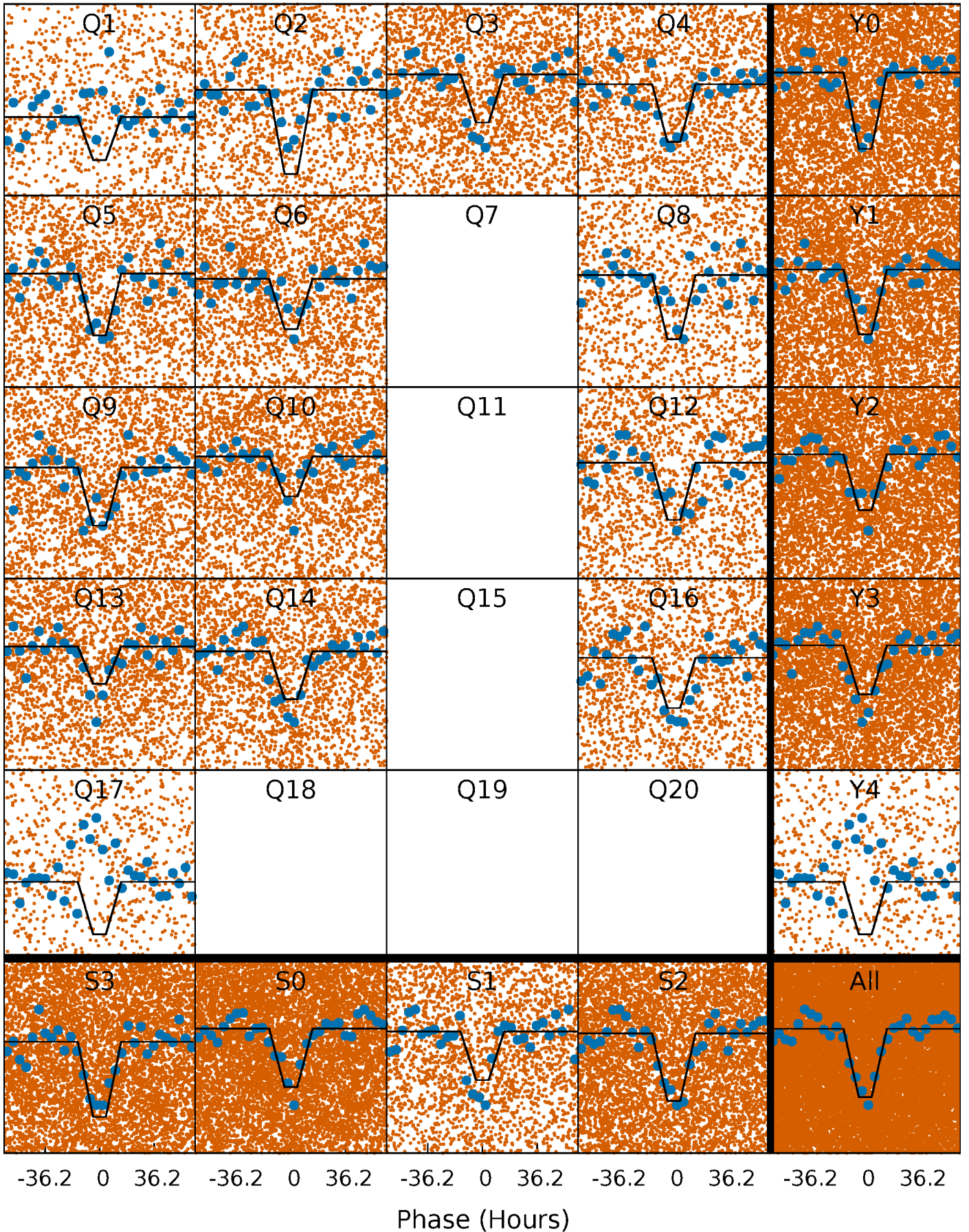
DV Quarter-Phased Transit Curves

TCE 009668027-01 P= 6.076114 Days $T_0=136.885859$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

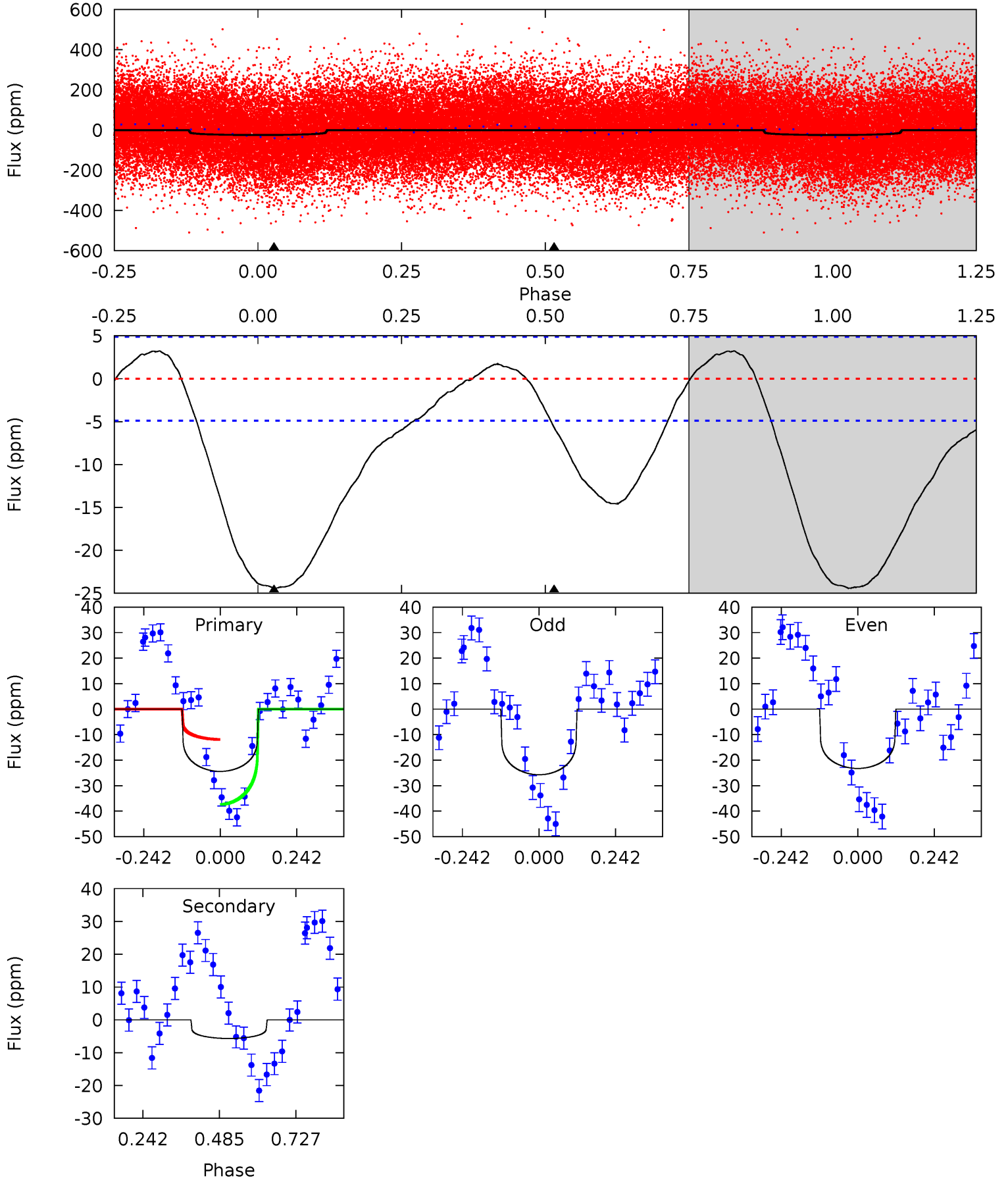
TCE 009668027-01 P= 6.077027 Days $T_0=137.050254$ (BKJD)



DV Model-Shift Uniqueness Test

009668027-01, P = 6.076114 Days, E = 130.809745 Days

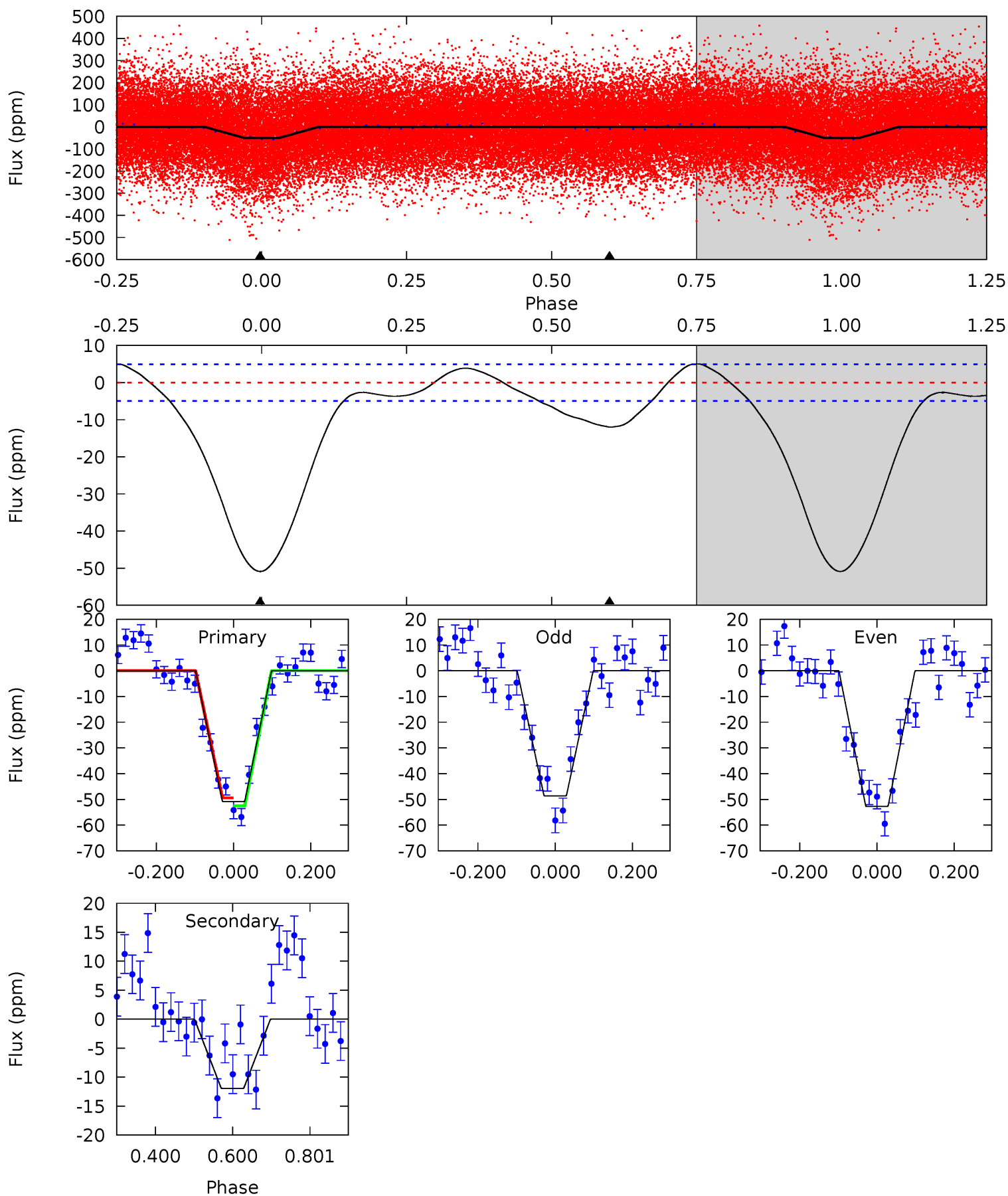
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.8	5.08	0	0	4.38	1.17	2.82	21.8	21.8	5.08	5.08	1.10	1.12	0.12	11.6



Alt Model-Shift Uniqueness Test

009668027-01, P = 6.077027 Days, E = 130.973227 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.5	10.7	0	0	4.42	1.28	2.64	45.5	45.5	10.7	10.7	1.80	1.02	0.09	1.39



Stellar Parameters For KIC 009668027

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6582^{+177}_{-196}	$3.675^{+0.288}_{-0.072}$	$-0.060^{+0.300}_{-0.250}$	$3.067^{+0.464}_{-1.082}$	$1.623^{+0.244}_{-0.298}$	$0.079^{+0.149}_{-0.024}$
	+3%/-3%	+8%/-2%	+500%/-417%	+15%/-35%	+15%/-18%	+187%/-30%
Source	PHO1	FLK73	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 009668027-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-6 ± 1	$1.45^{+1.34}_{-0.96}$	2520^{+140}_{-220}	4839^{+3376}_{-1119}	$9.123^{+62.635}_{-6.772}$
Alt.	-12 ± 1	$2.37^{+1.51}_{-1.33}$	2508^{+138}_{-212}	4612^{+1871}_{-838}	$6.955^{+30.762}_{-4.345}$

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

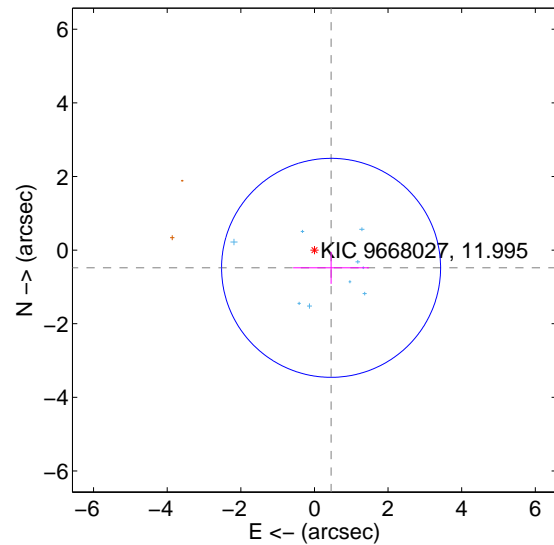
Supplemental centroid analysis for 009668027-01. **Kepler magnitude: 11.99.** Transit SNR 4.88

There are 9 quarters with good PRF difference image offsets

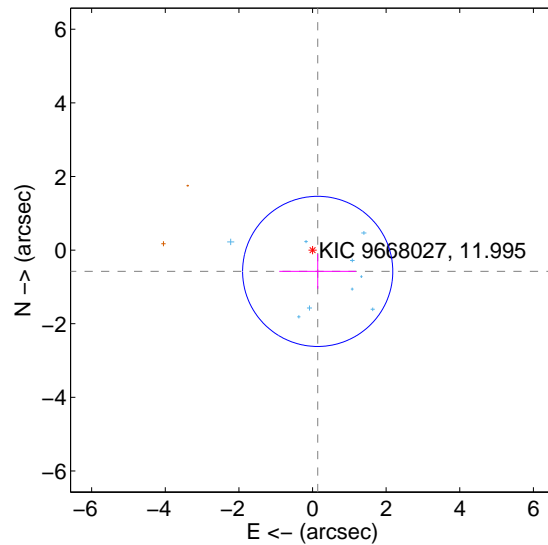
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.661 ± 0.992	0.67	-0.452 ± 1.031	-0.482 ± 0.435
PRF-fit source offset from KIC position	0.596 ± 0.680	0.88	-0.140 ± 1.045	-0.579 ± 0.473
photometric centroid source offset	1.68 ± 1.27	1.33	0.35 ± 1.45	-1.65 ± 1.26

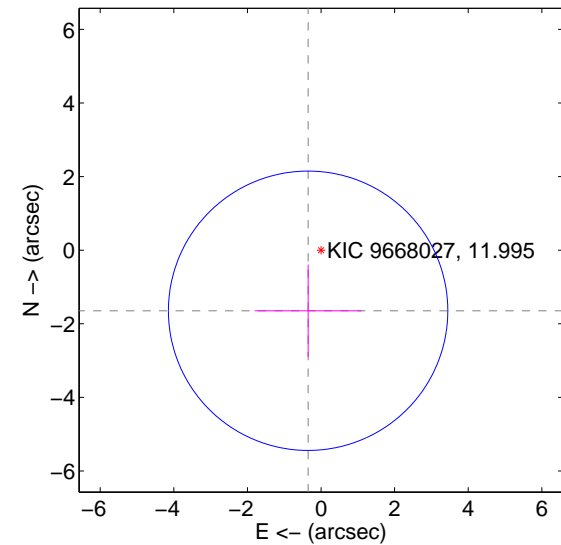
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

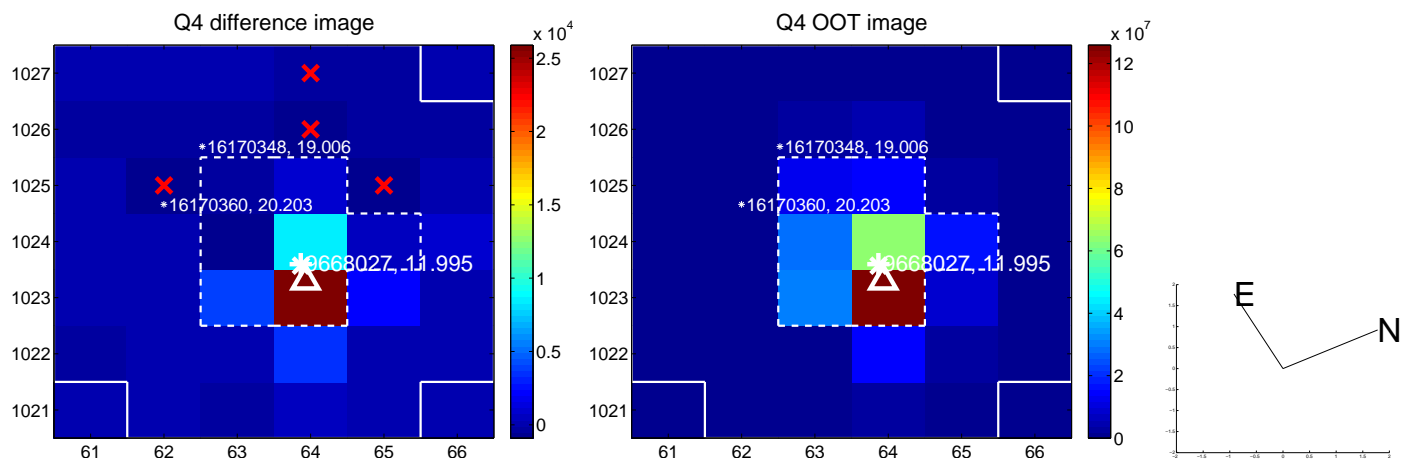
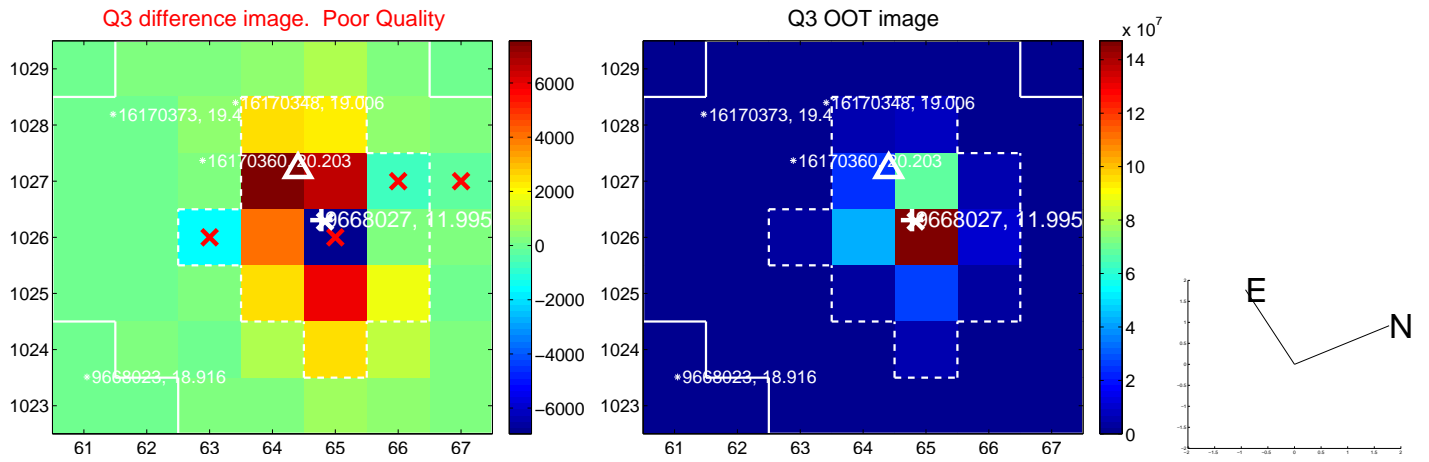
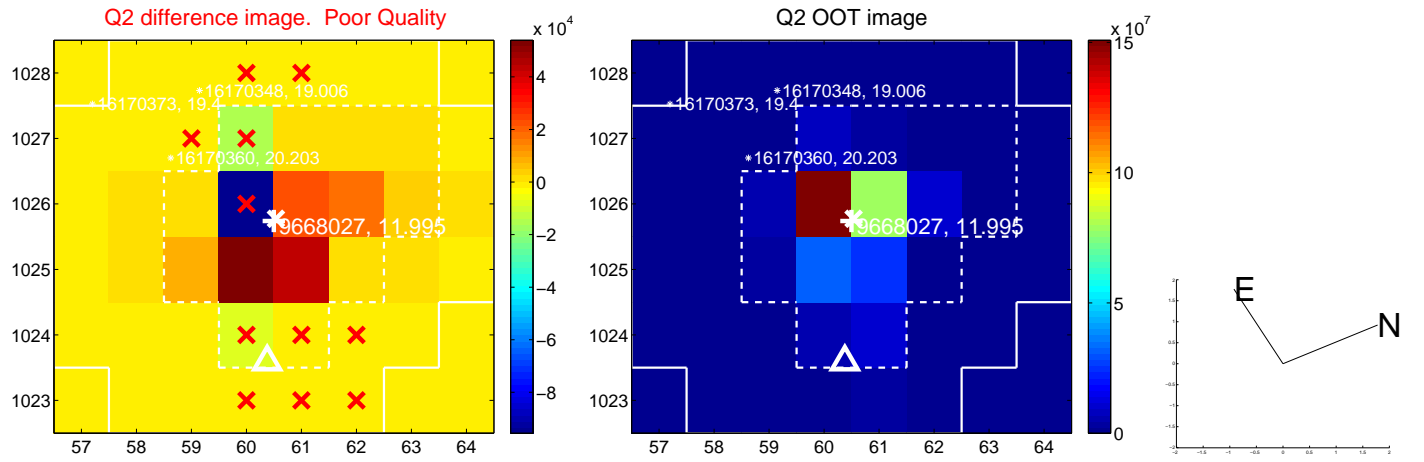
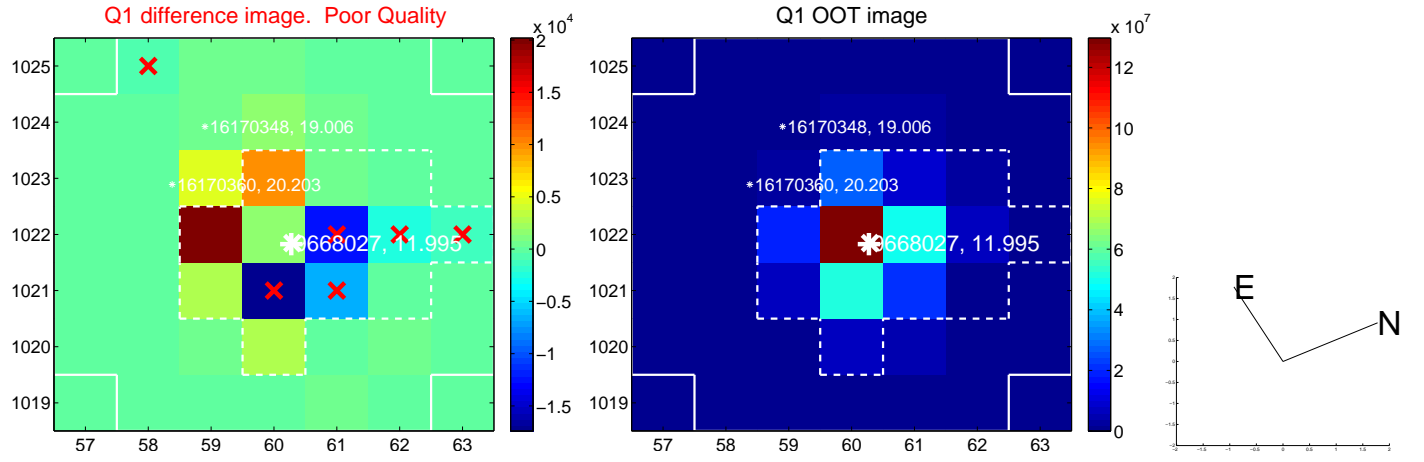


offset from photometric centroids

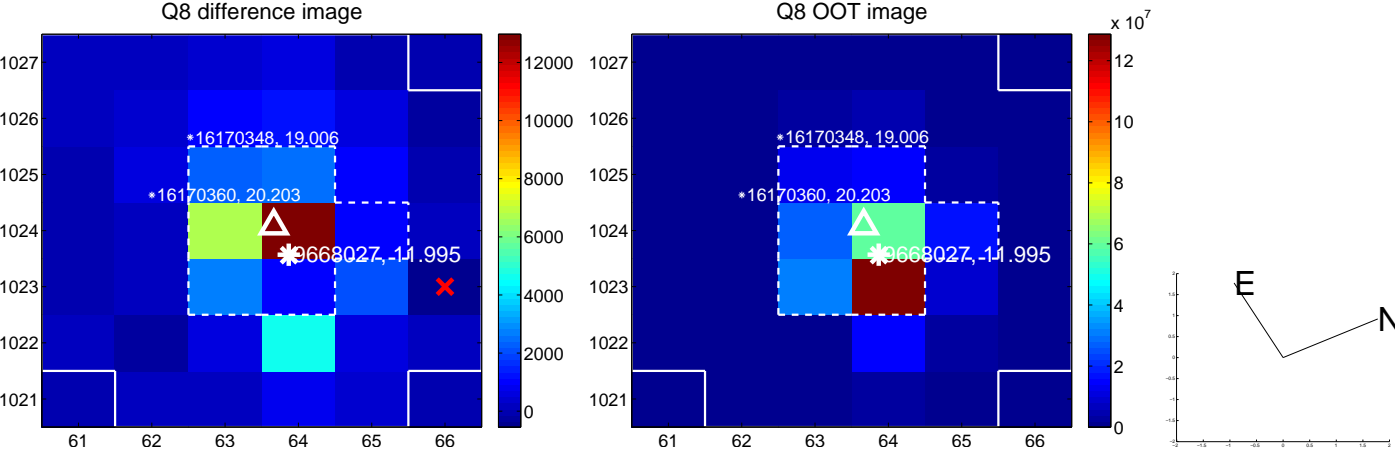
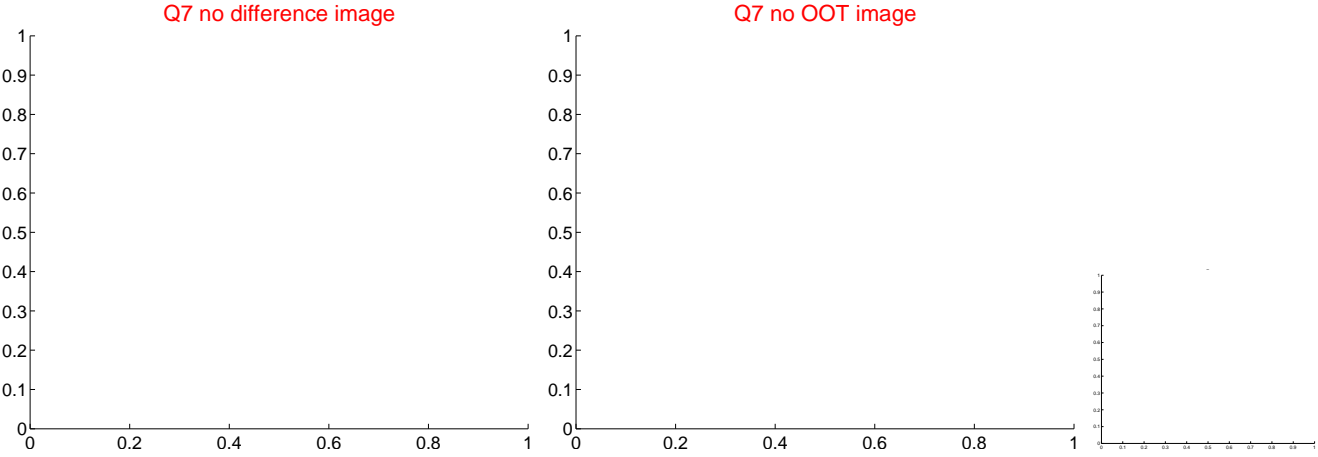
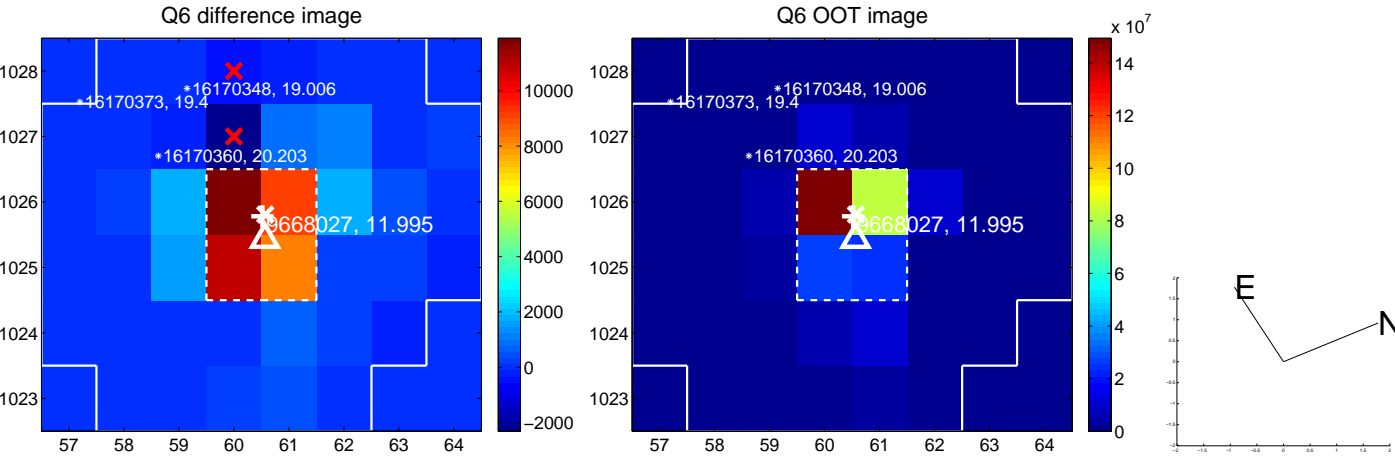
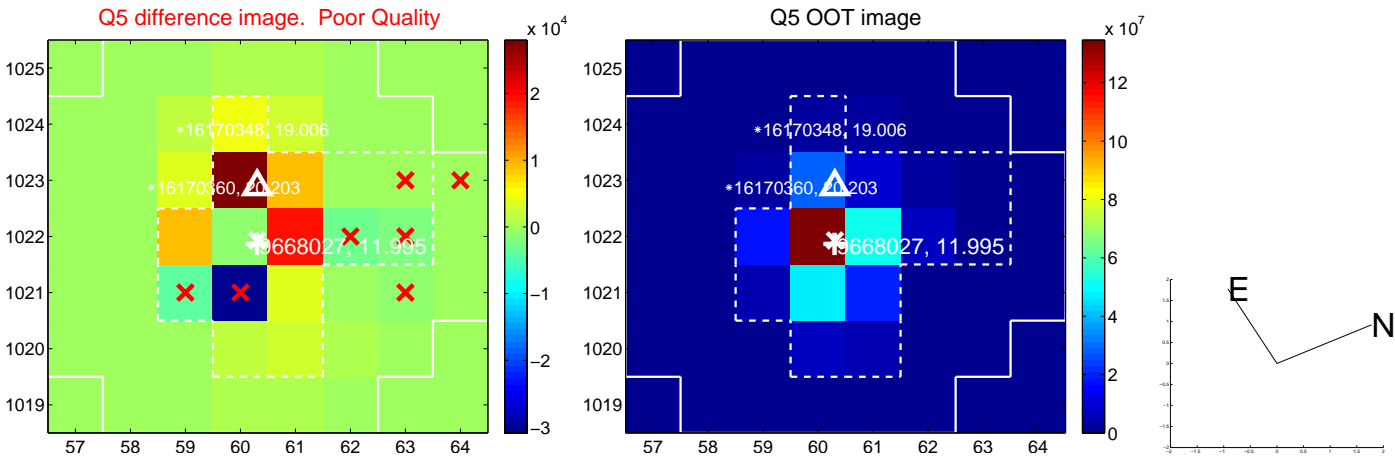


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

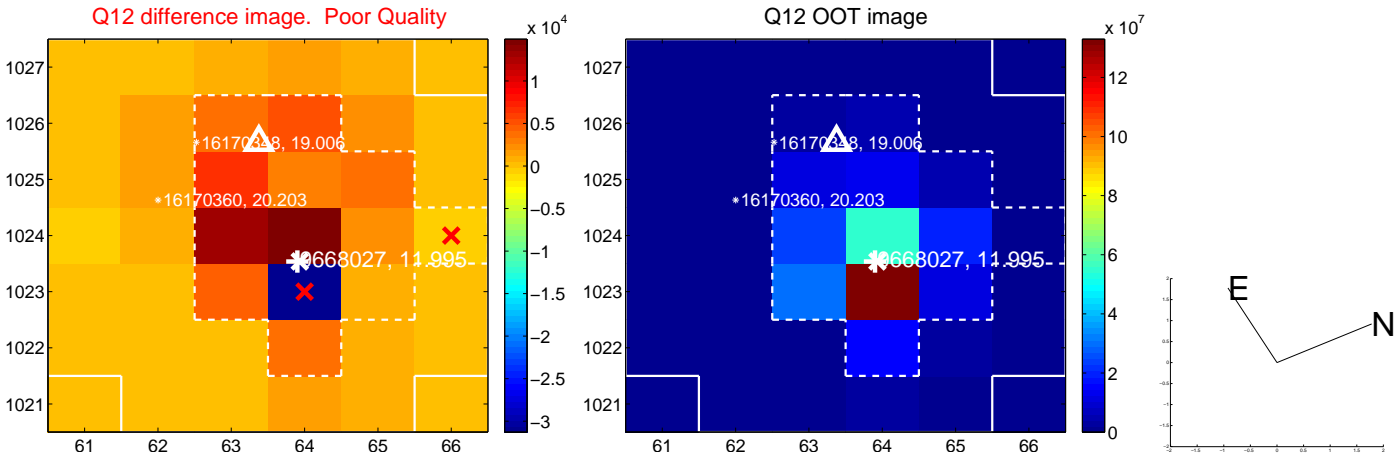
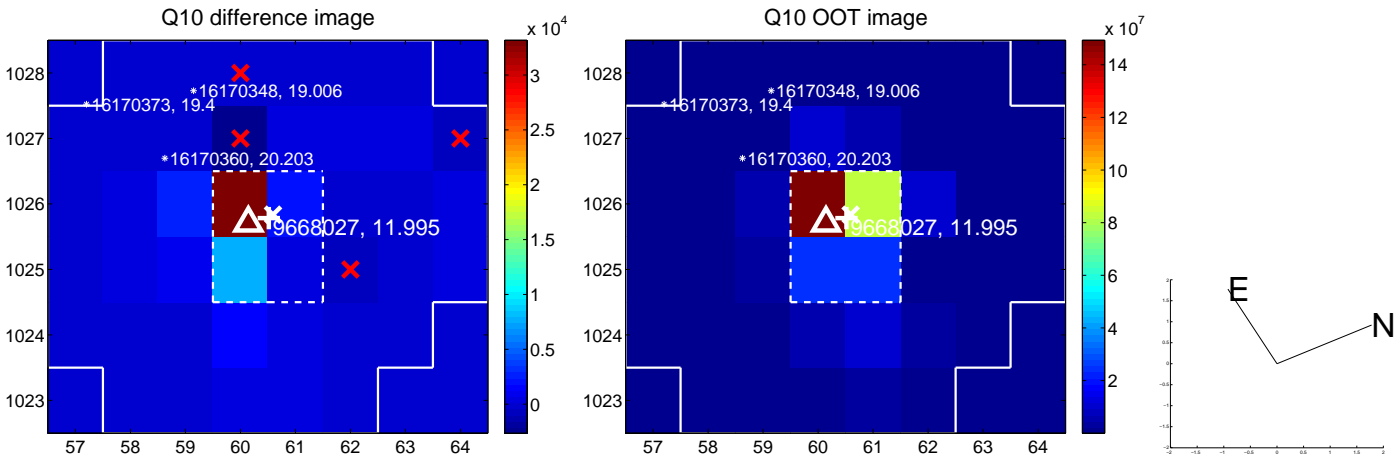
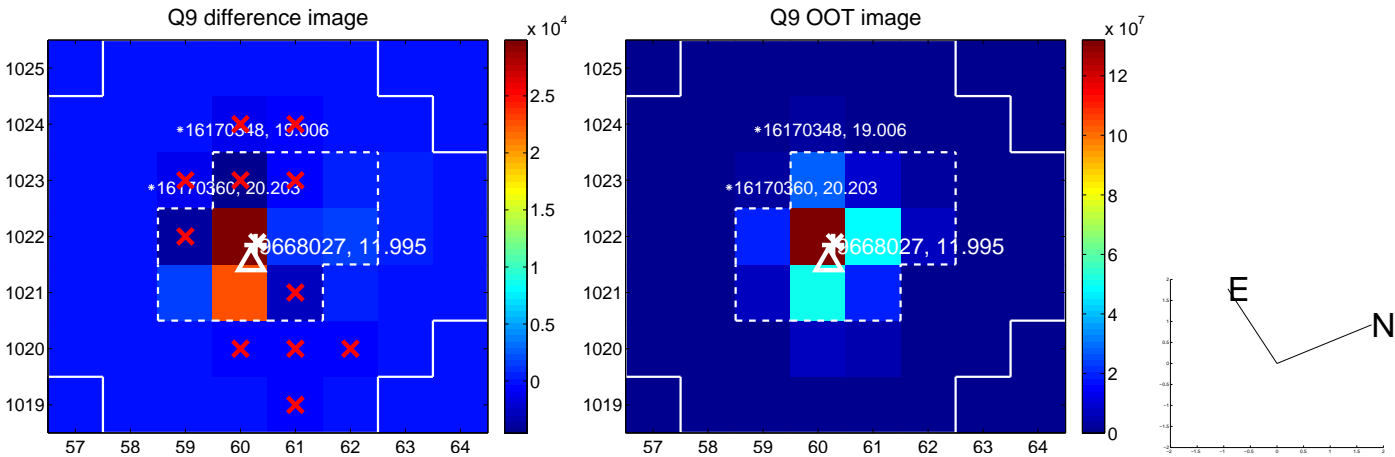
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



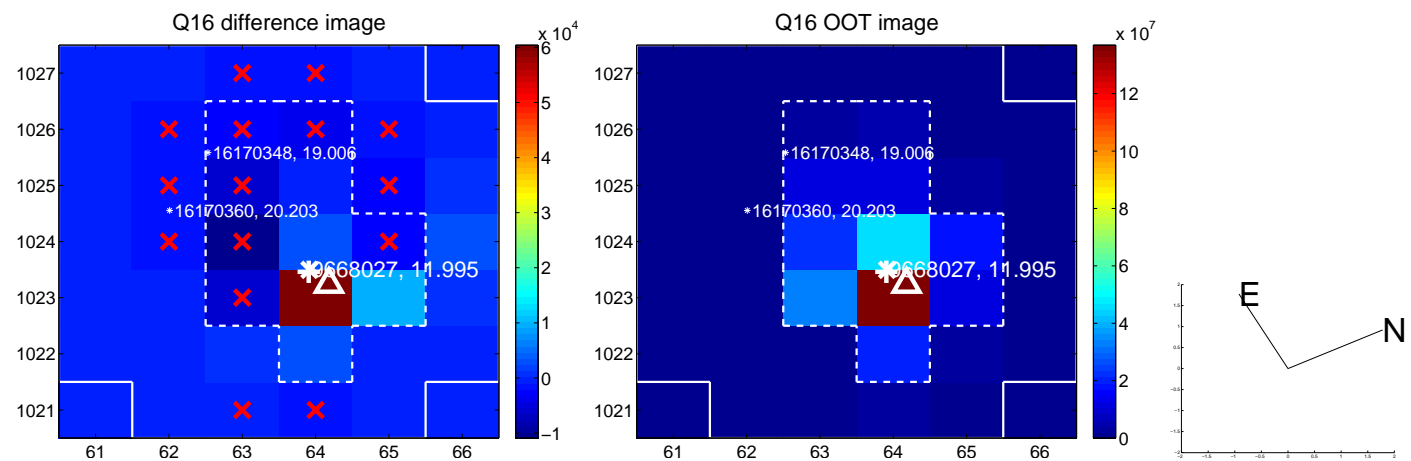
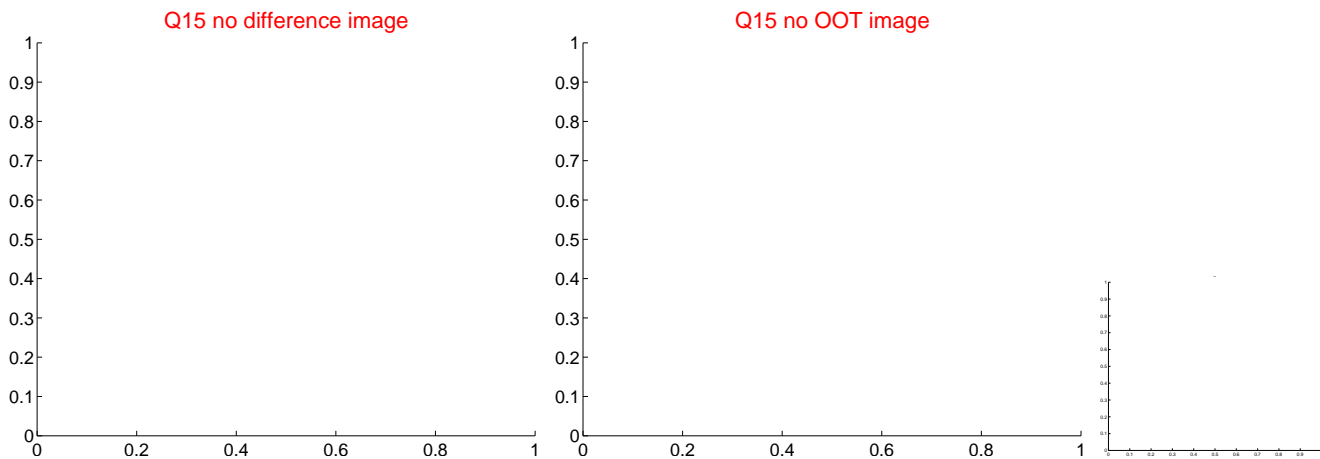
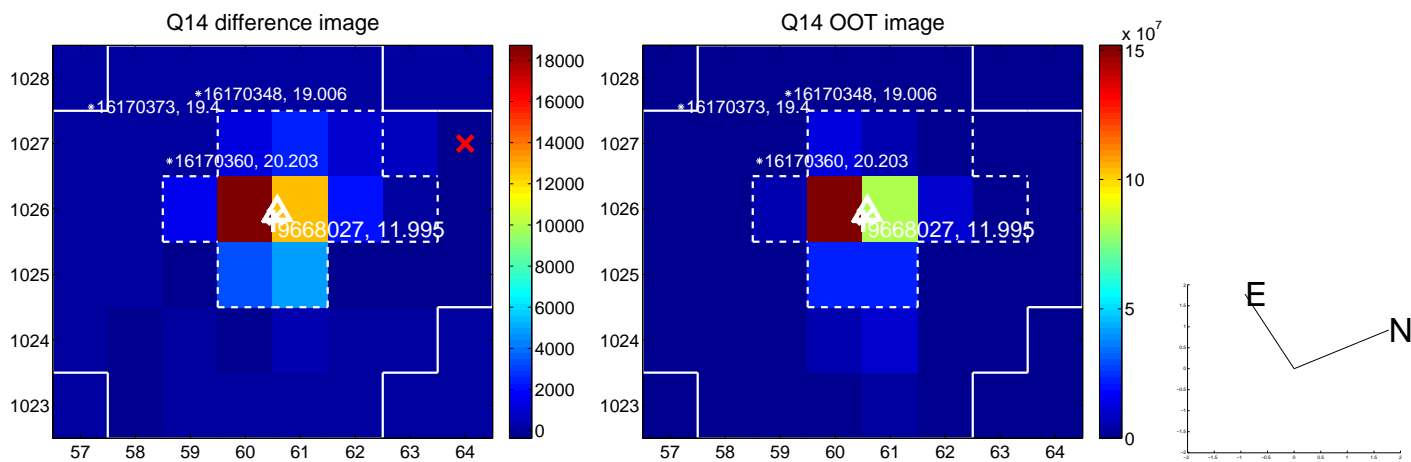
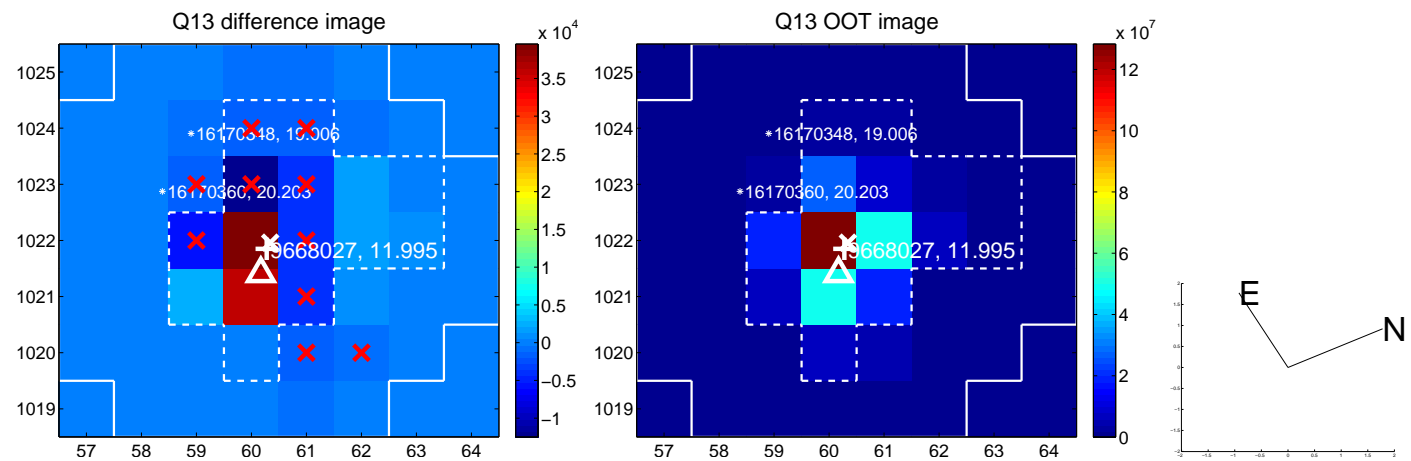
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



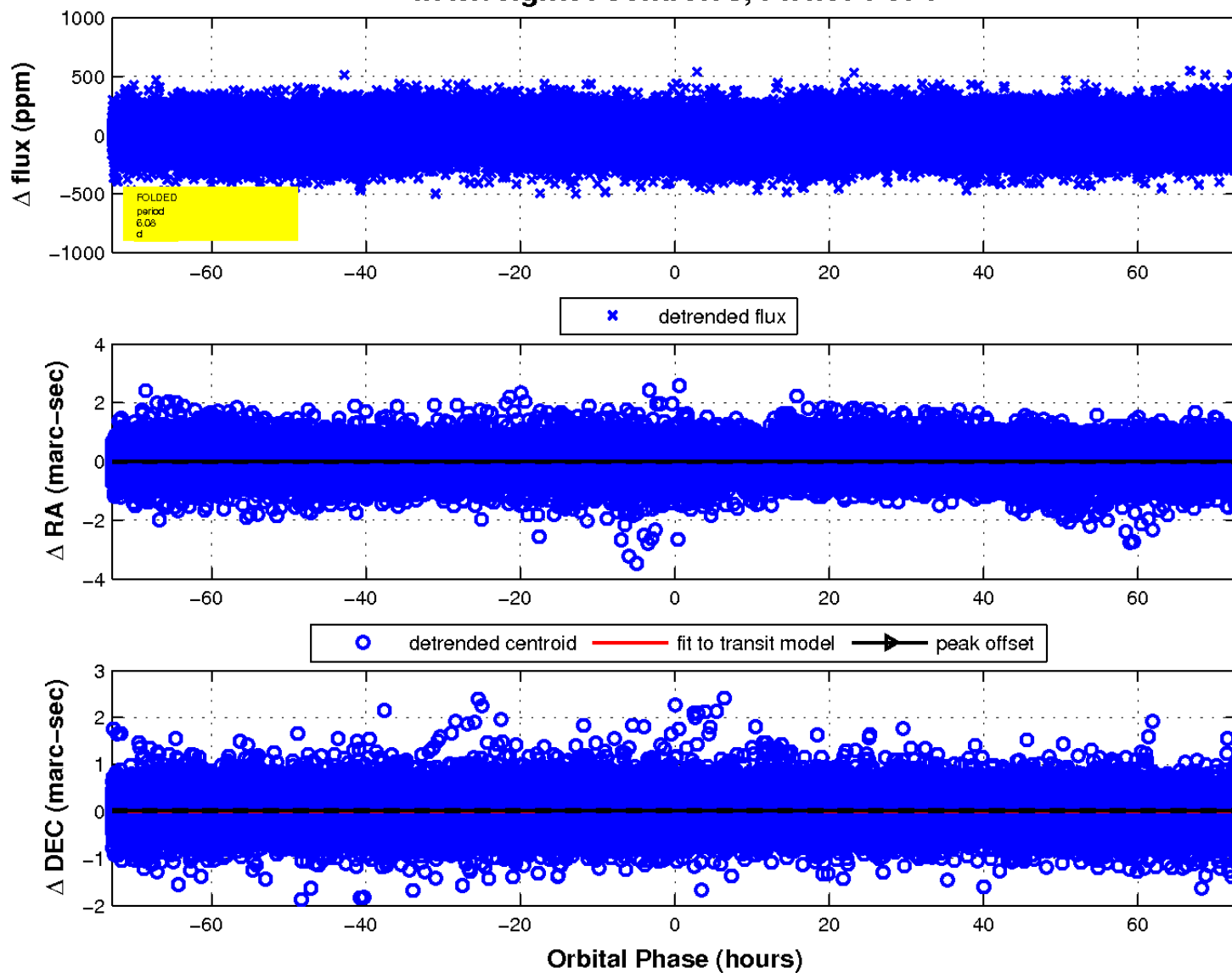
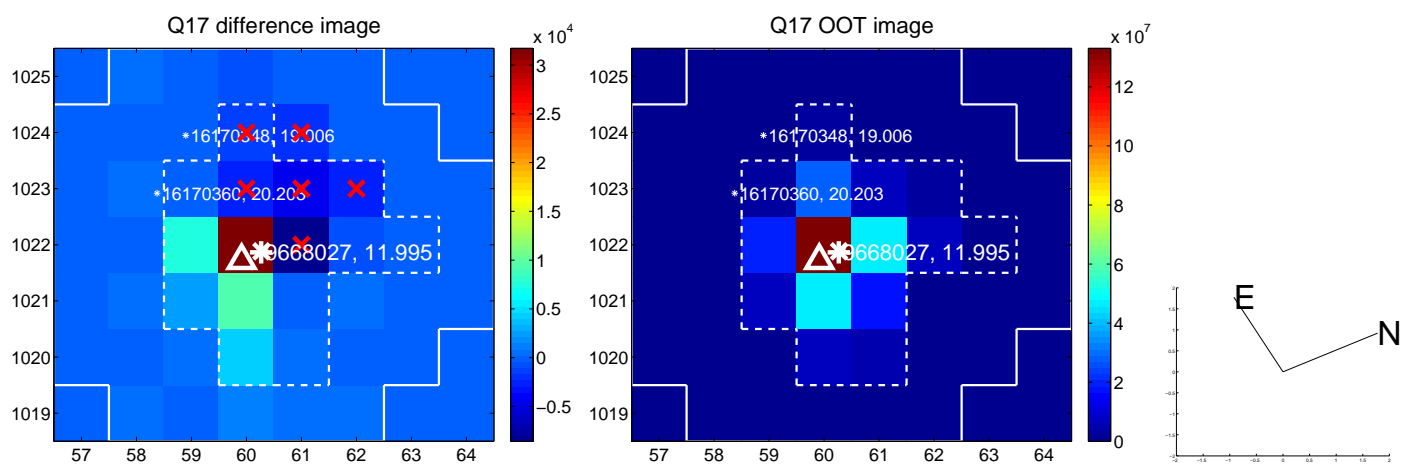
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

