

KIC 009466042

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})
009466042-01	OBS	7175.01	9.274284	133.603216	68.7	33.353	16.5	23.8	1.49	5877	1.91	328.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009466042-01	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.

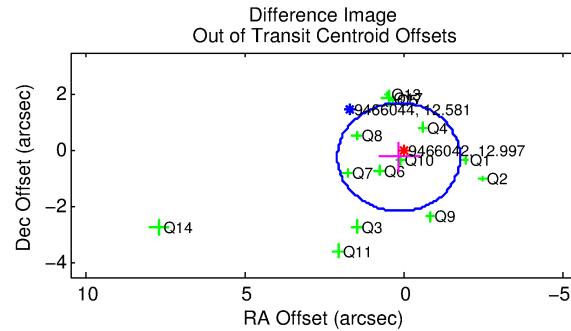
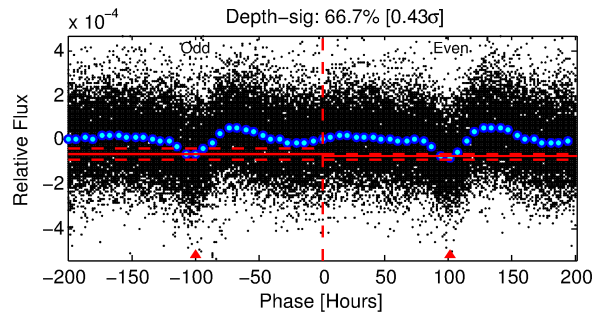
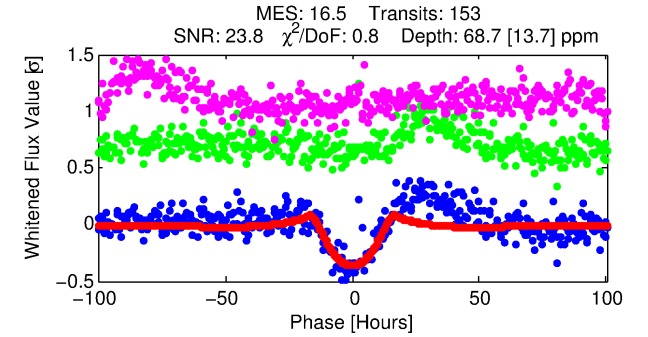
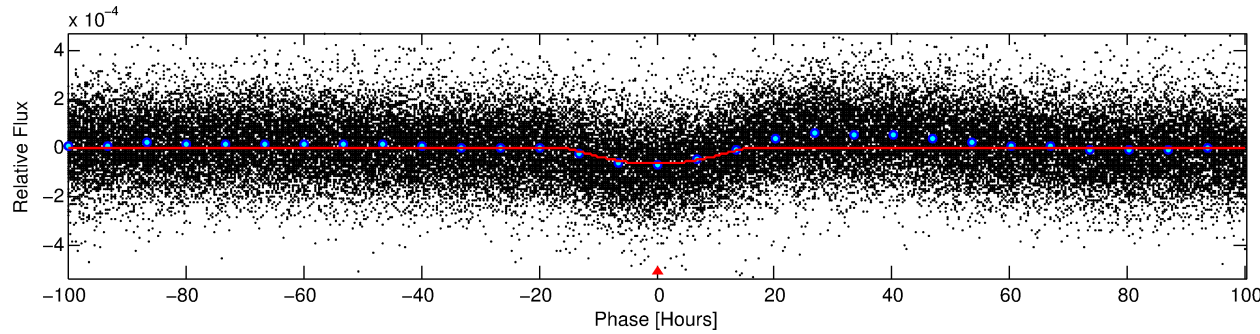
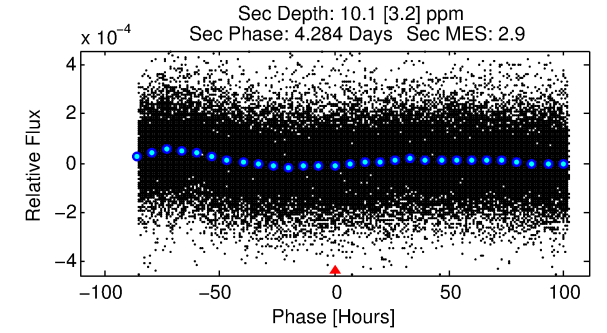
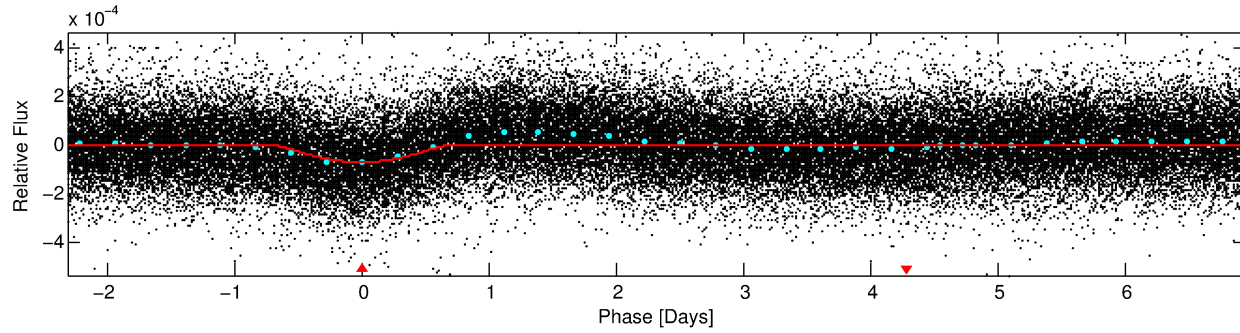
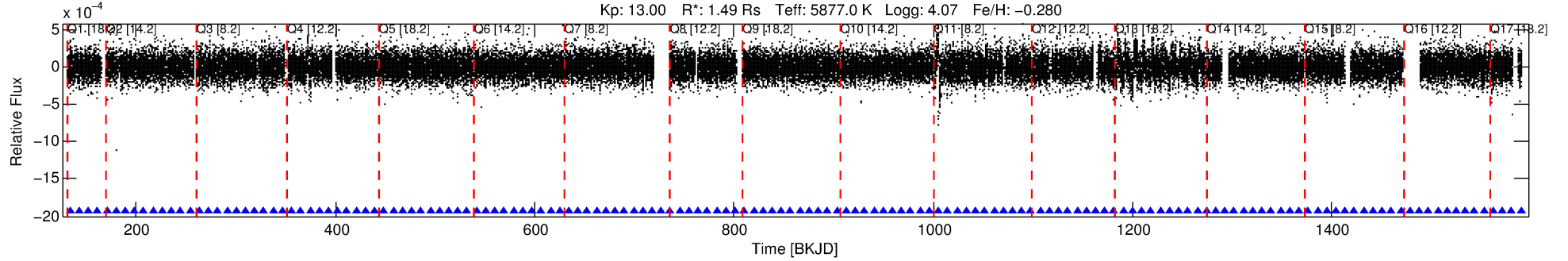
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009466042-01

No Significant Match Found

DV One-Page Summary

KIC: 9466042 Candidate: 1 of 1 Period: 9.274 d
KOI: K07175.01 Corr: 0.872



DV Fit Results:

Period = 9.27428 [0.00031] d
Epoch = 133.6032 [0.0262] BKJD
Rp/R* = 0.0117 [0.0025]
a/R* = 1.08 [0.02]
b = 0.99 [0.01]
Seff = 328.26 [159.93]
Teq = 1085 [132] K
Rp = 1.91 [0.70] Re
a = 0.0849 [0.0250] AU
Ag = 11.02 [7.79] [1.29σ]
Teffp = 3057 [409] K [4.58σ]

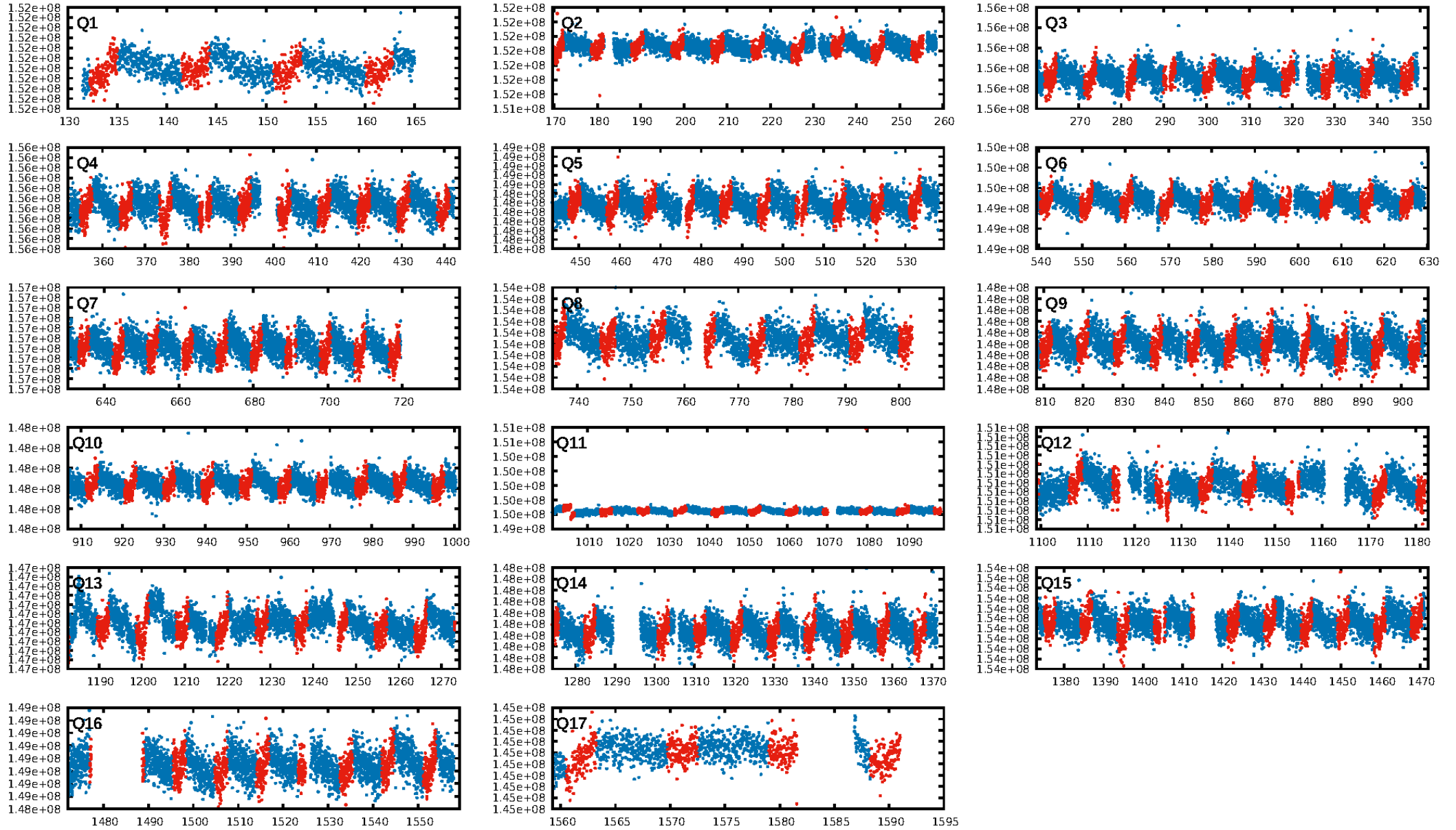
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 89.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.79e-55
RollingBand-fgt: 1.00 [145/145]
GhostDiagnostic-chr: 4.976
Centroid-sig: 1.5%
Centroid-so: 0.463 arcsec [1.15σ]
OotOffset-rm: 0.288 arcsec [0.45σ]
OotOffset-st: 4/3/2/5 [14]
KicOffset-rm: 0.225 arcsec [0.35σ]
KicOffset-st: 4/3/2/5 [14]
DiffImageQuality-fgm: 0.71 [10/14]
DiffImageOverlap-fno: 1.00 [17/17]

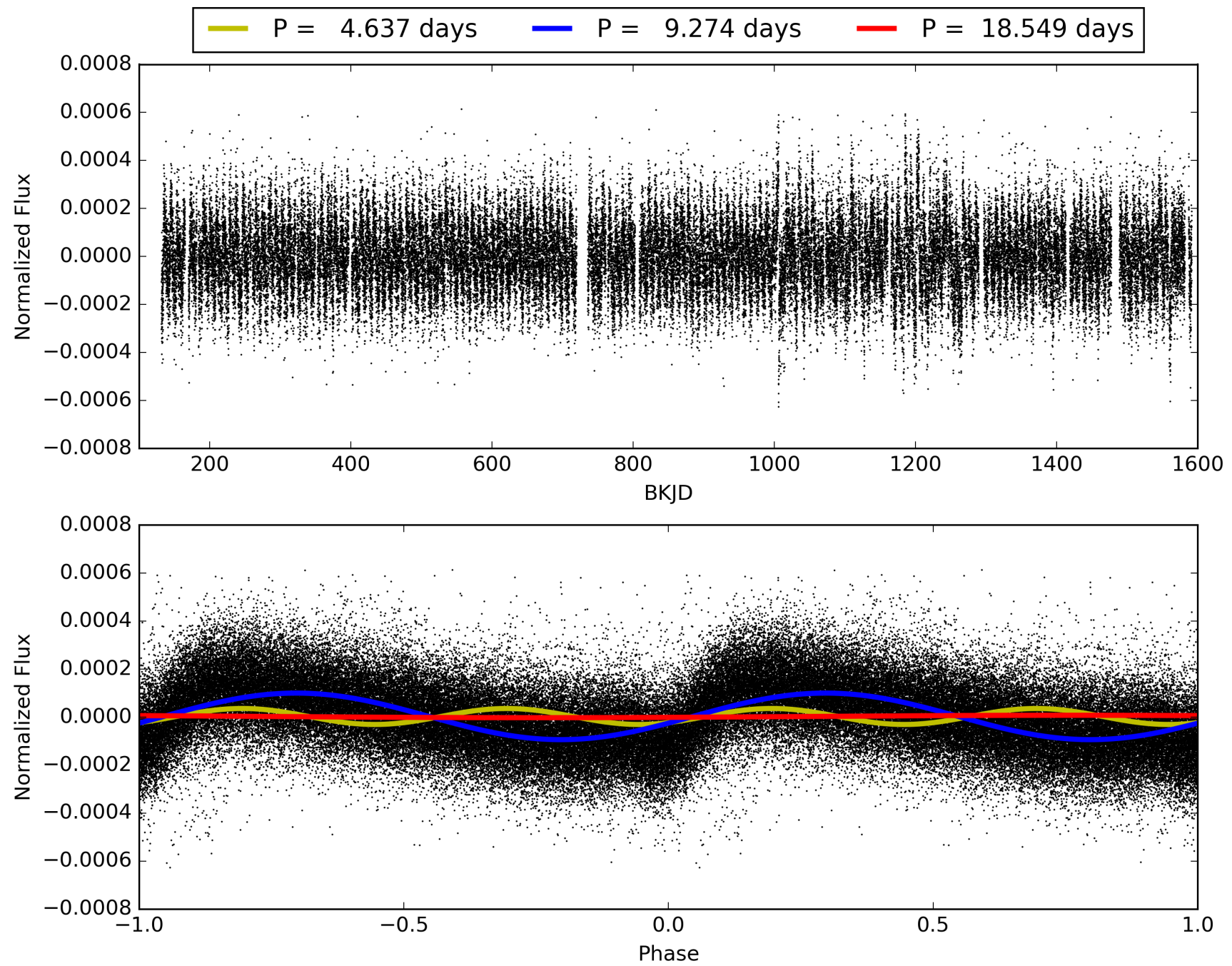
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:15:18 Z

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

TCE 009466042-01, PDC Light Curves

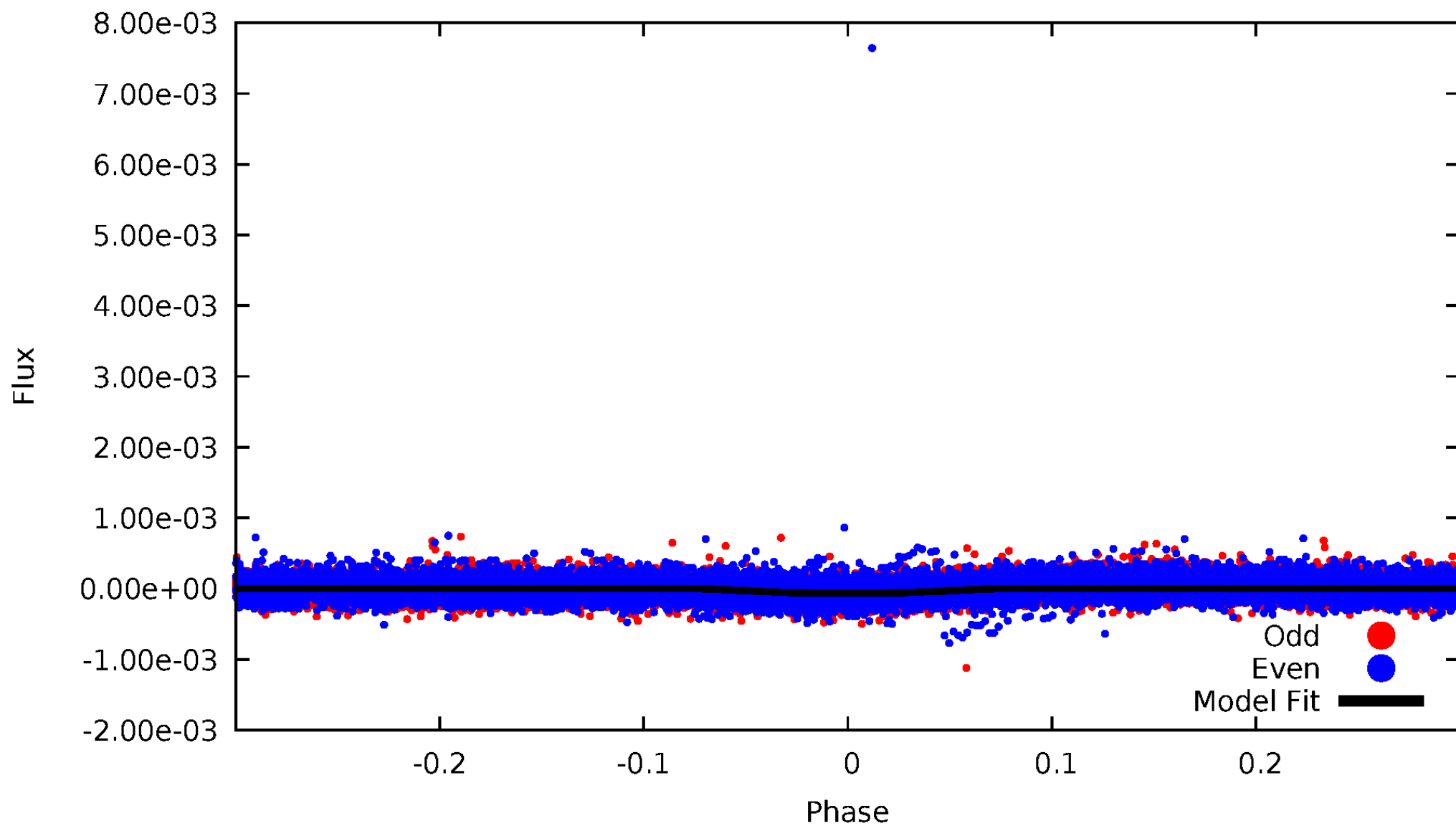


TCE 009466042-01



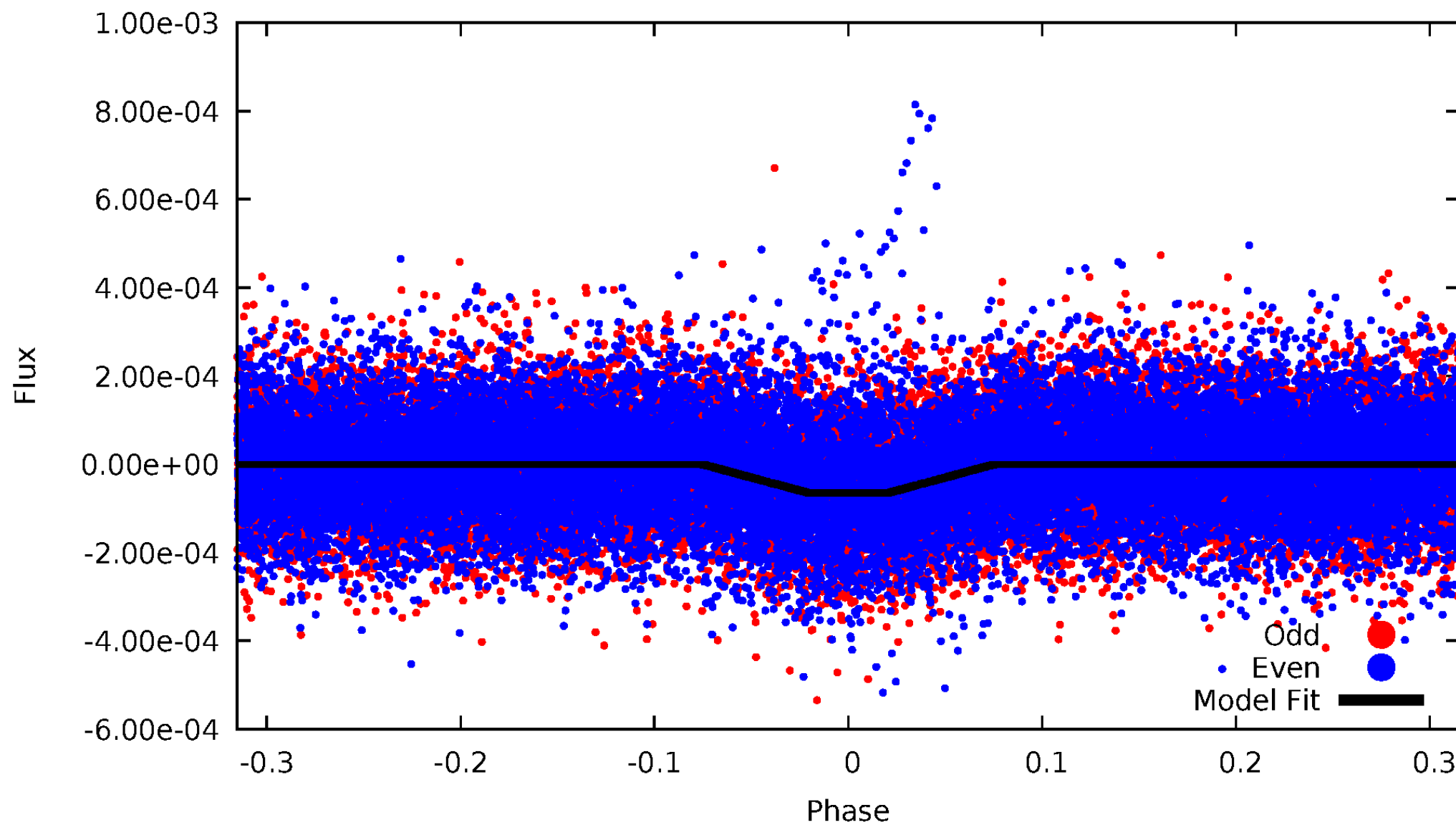
DV Odd/Even

TCE 009466042-01



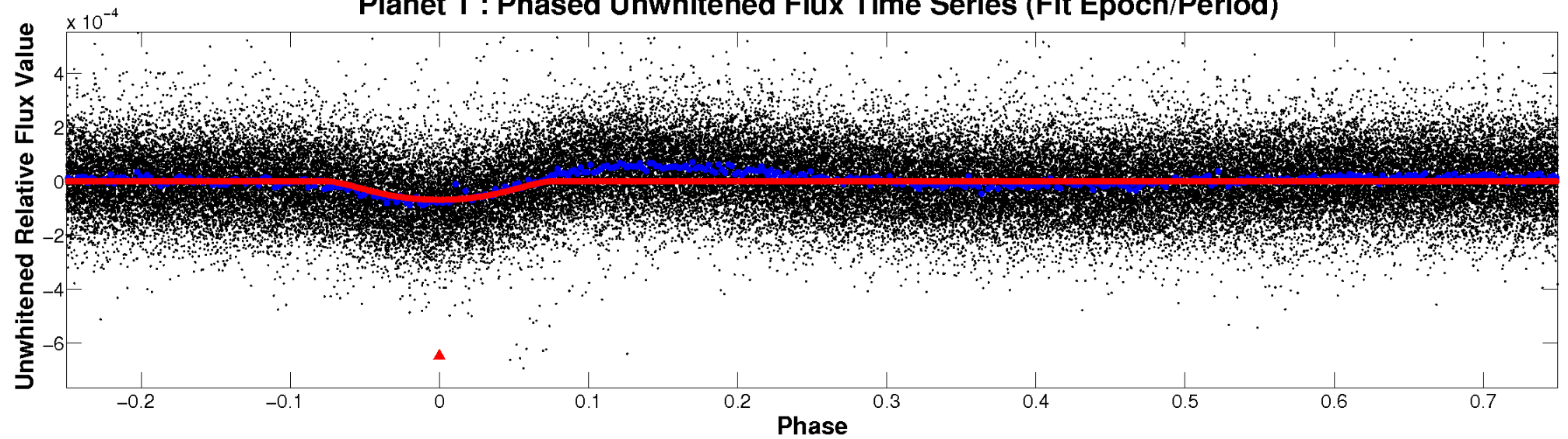
ALT Odd/Even

TCE 009466042-01

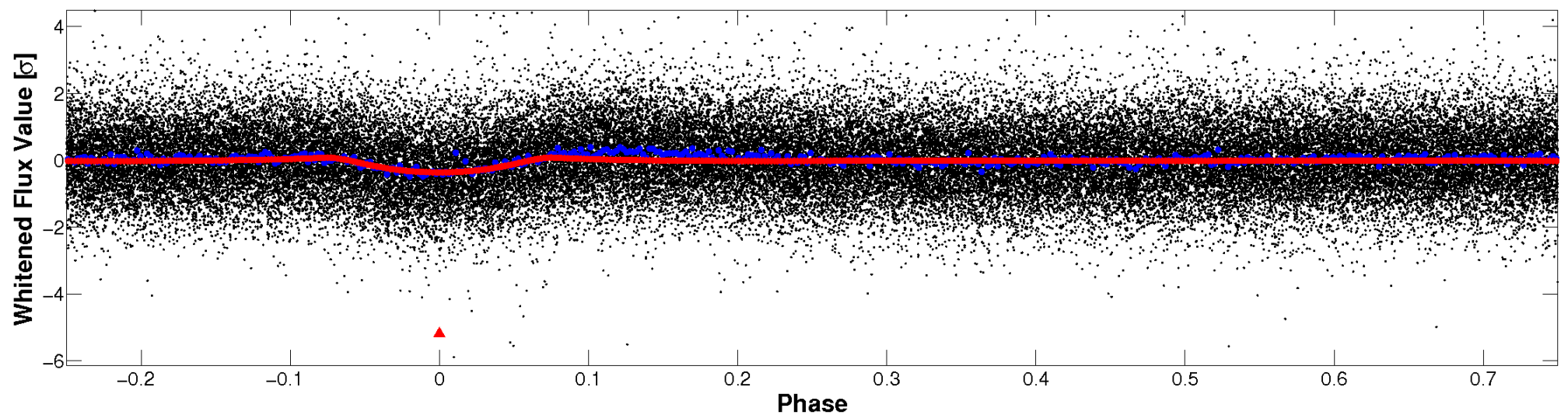


Non-Whitened Vs. Whitened Light Curve

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

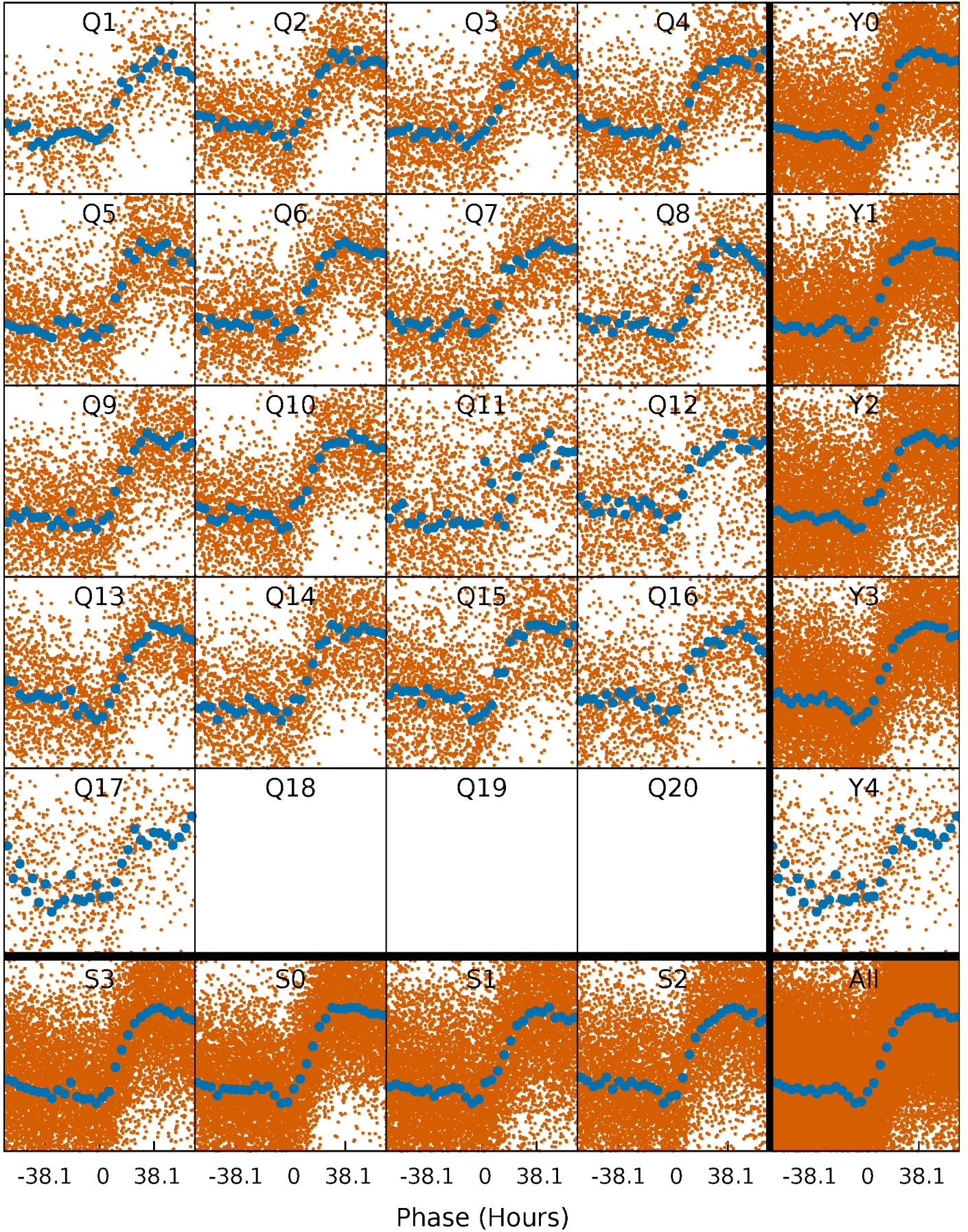


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



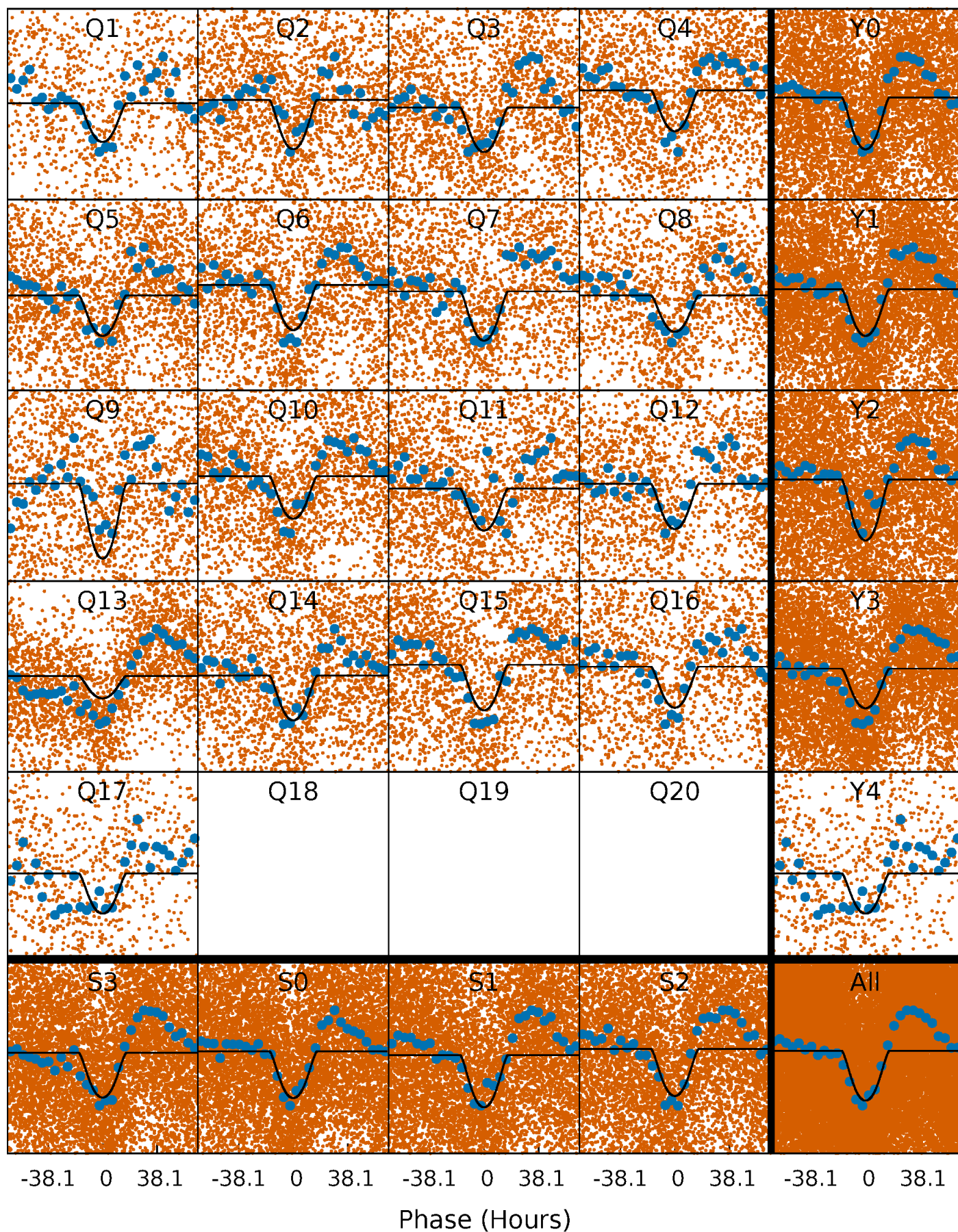
PDC Quarter-Phased Transit Curves

TCE 009466042-01 P= 9.274284 Days $T_0=133.603216$ (BKJD)



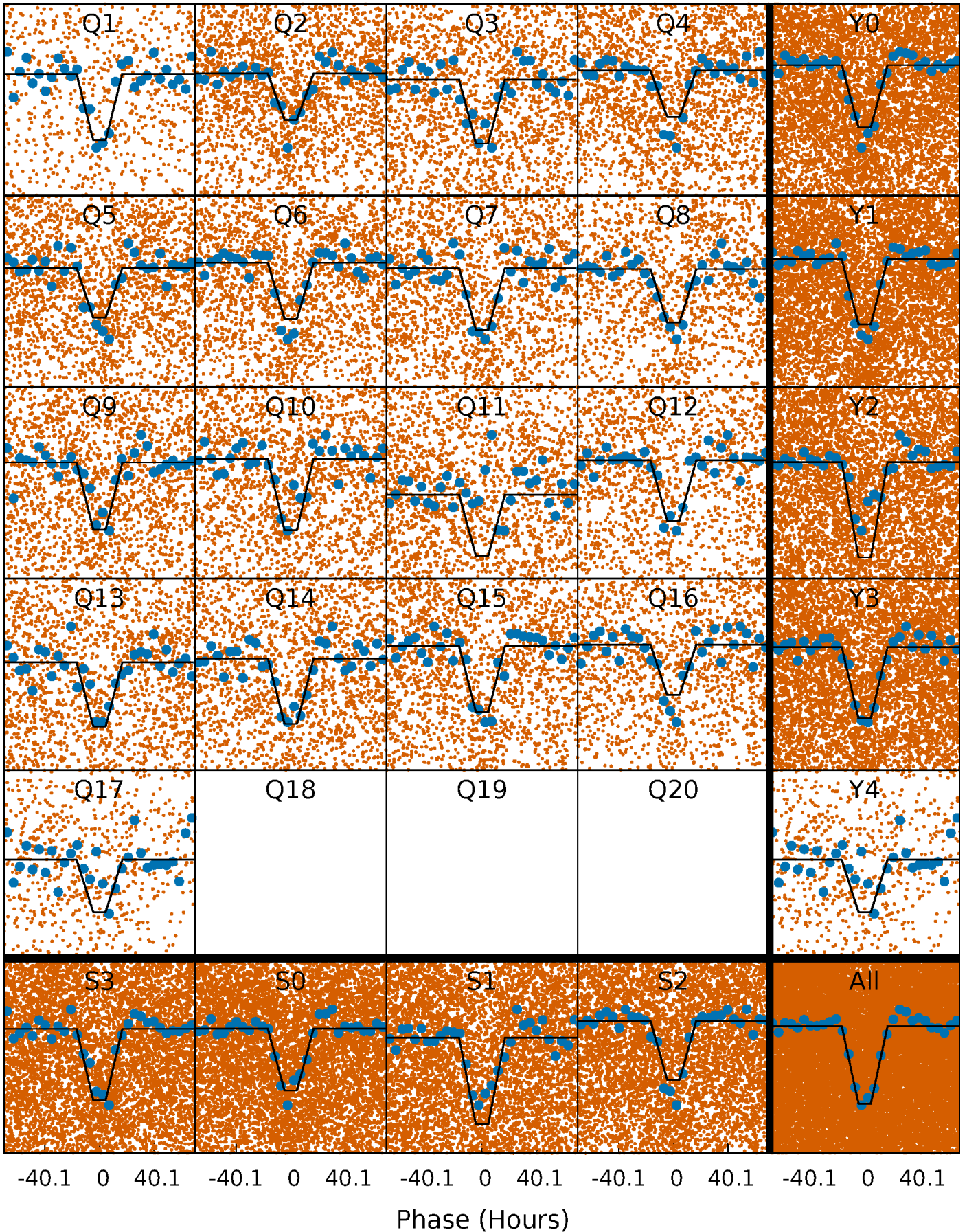
DV Quarter-Phased Transit Curves

TCE 009466042-01 P= 9.274284 Days $T_0=133.603216$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

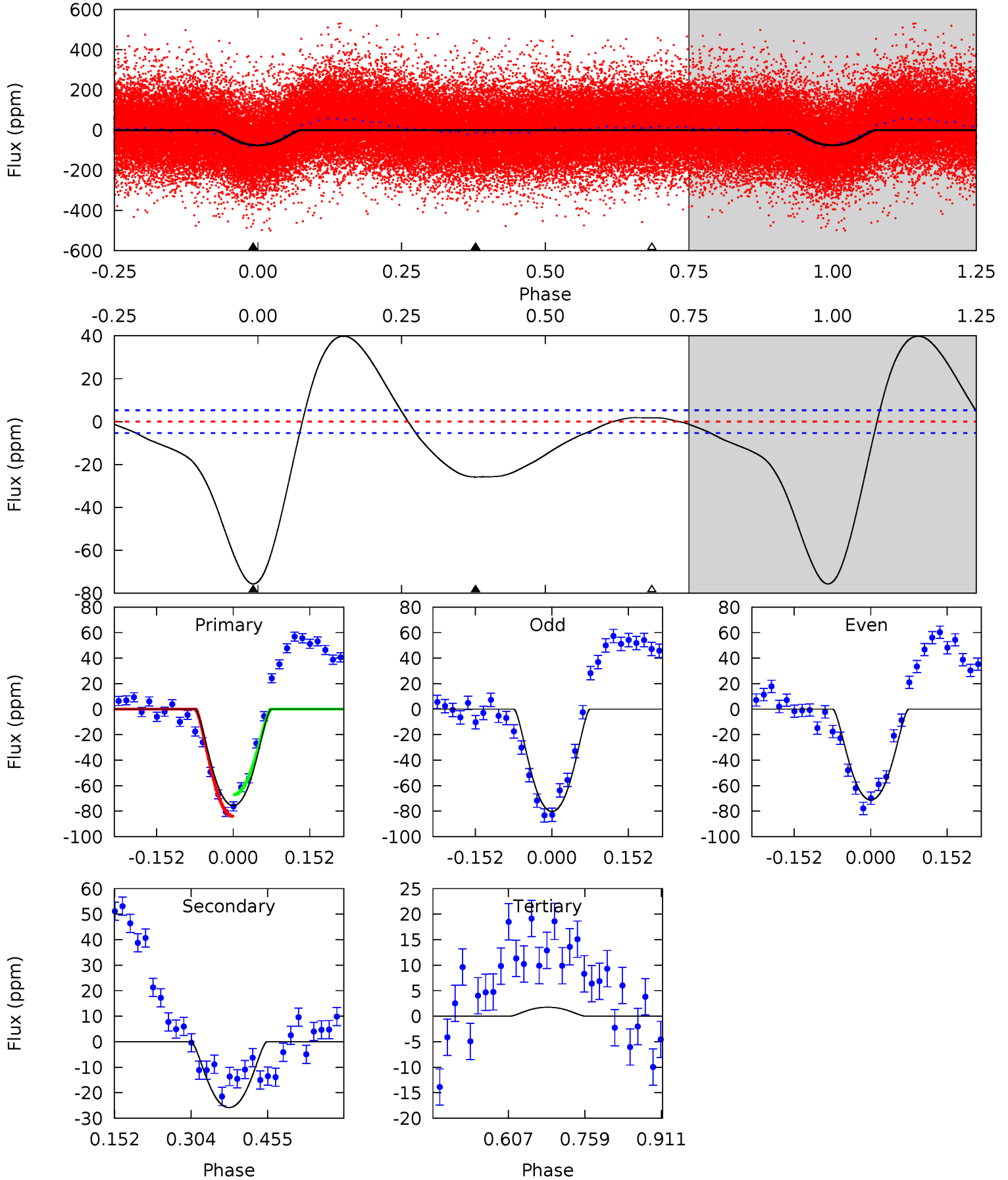
TCE 009466042-01 P= 9.273656 Days $T_0=133.660086$ (BKJD)



DV Model-Shift Uniqueness Test

009466042-01, P = 9.274284 Days, E = 124.328932 Days

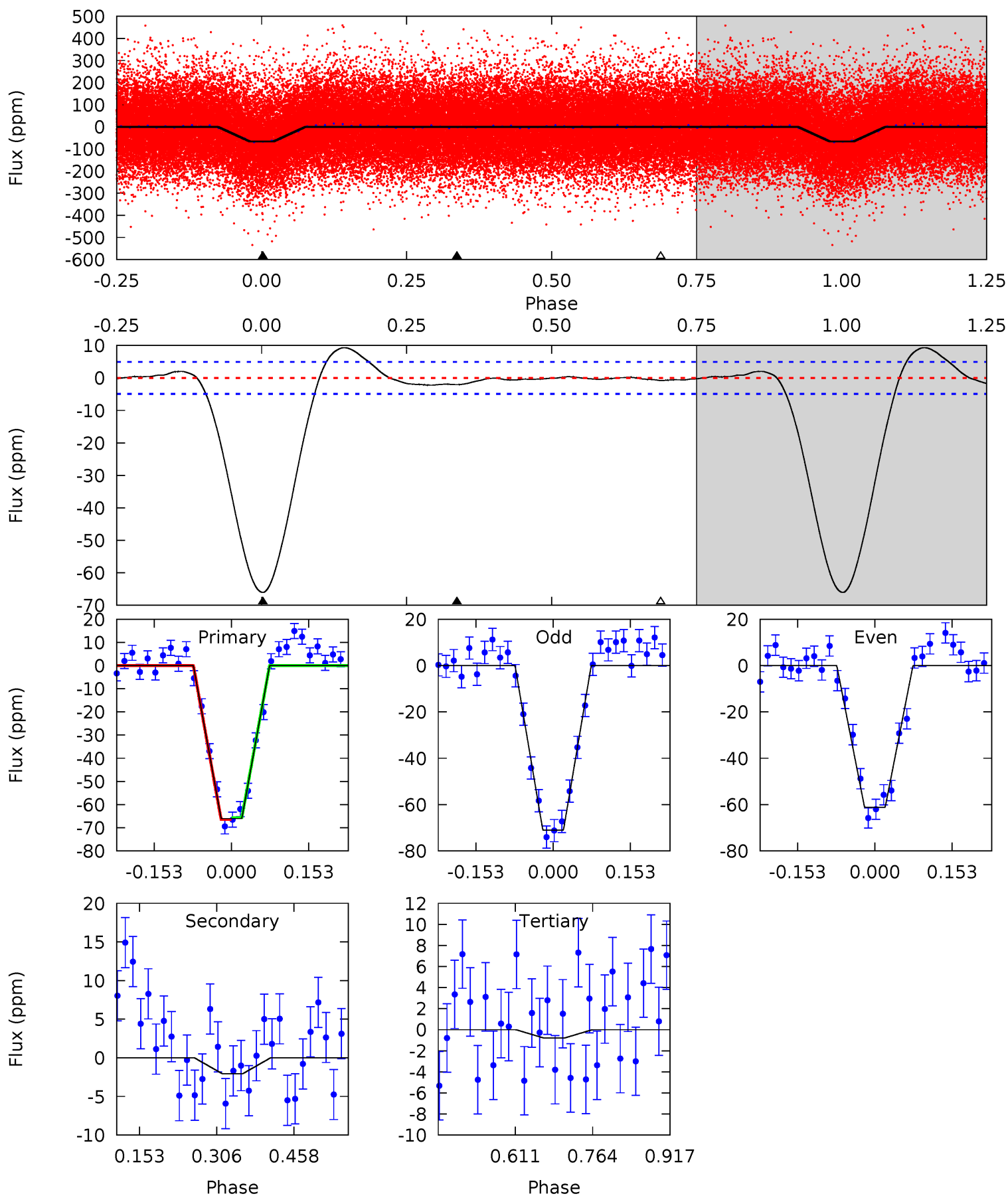
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.7	21.7	-1.48	0	4.48	1.43	12.4	65.1	63.7	23.2	21.7	3.78	1.33	0.34	7.10



Alt Model-Shift Uniqueness Test

009466042-01, P = 9.273656 Days, E = 124.386430 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
59.9	1.86	0.72	0	4.47	1.43	1.75	59.2	59.9	1.15	1.86	4.44	0.99	0.12	0.37



Stellar Parameters For KIC 009466042

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5877^{+162}_{-147}	$4.070^{+0.280}_{-0.120}$	$-0.280^{+0.350}_{-0.250}$	$1.488^{+0.299}_{-0.449}$	$0.950^{+0.146}_{-0.106}$	$0.406^{+0.714}_{-0.143}$
	+3%/-3%	+7%/-3%	+125%/-89%	+20%/-30%	+15%/-11%	+176%/-35%
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 009466042-01 / KOI 7175.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-26 ± 1	$1.84^{+0.47}_{-0.49}$	1496^{+96}_{-115}	4141^{+383}_{-281}	30^{+26}_{-11}
Alt.	-2 ± 1	$1.25^{+0.45}_{-0.42}$	1493^{+93}_{-129}	3082^{+439}_{-394}	$5.312^{+8.209}_{-3.284}$

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

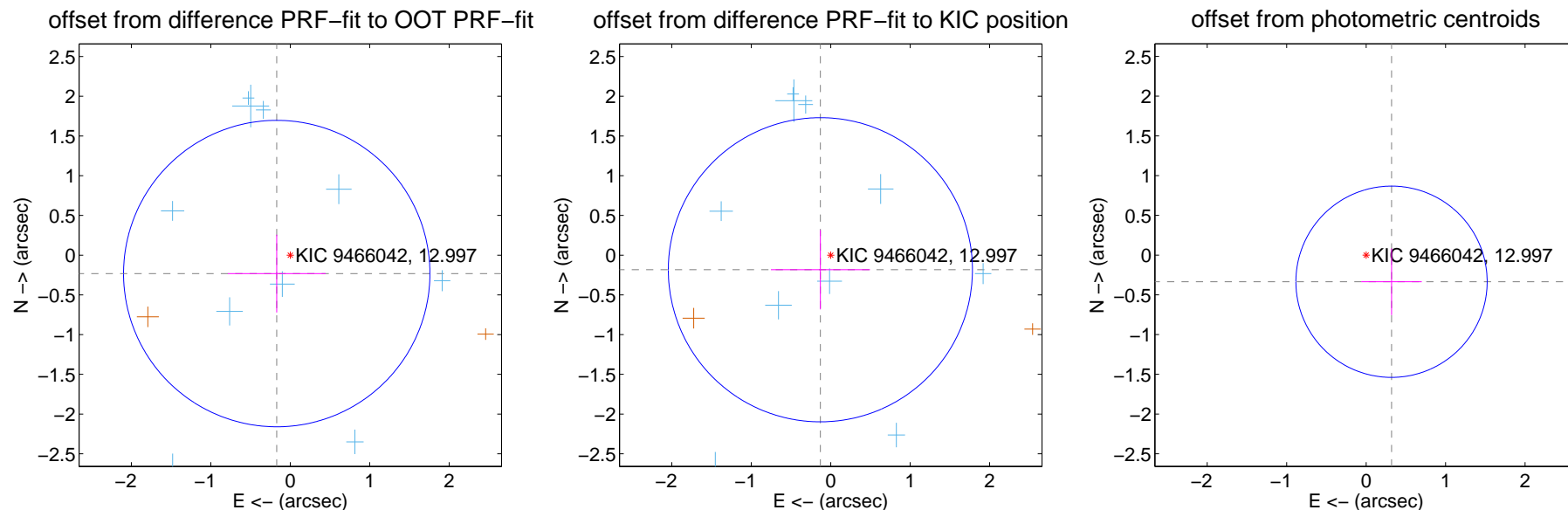
DV Centroid Data

Supplemental centroid analysis for 009466042-01. Kepler magnitude: 13.00. Transit SNR 23.77

There are 10 quarters with good PRF difference image offsets

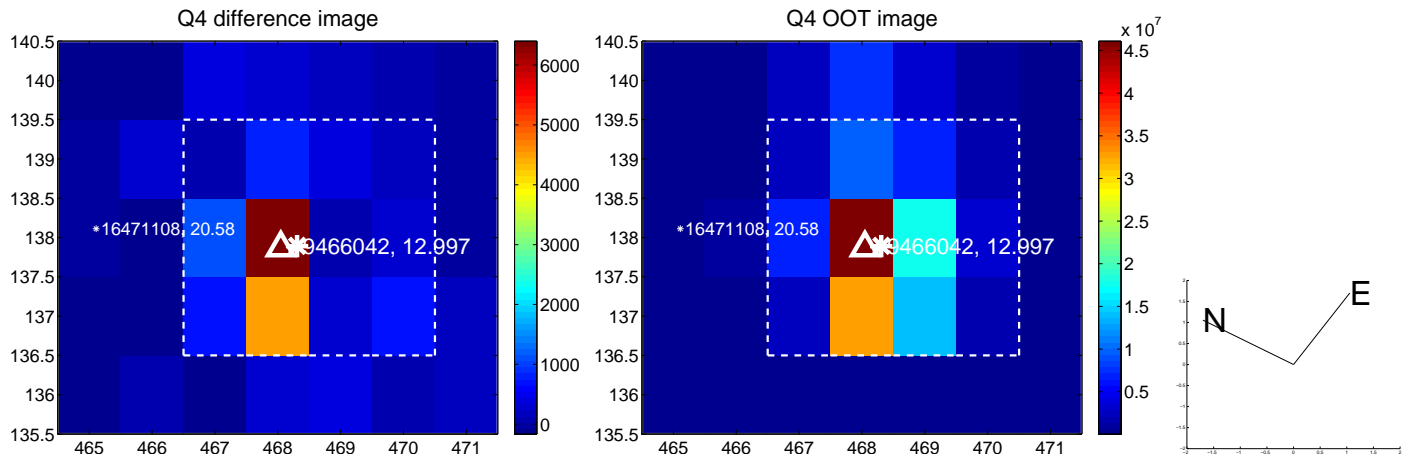
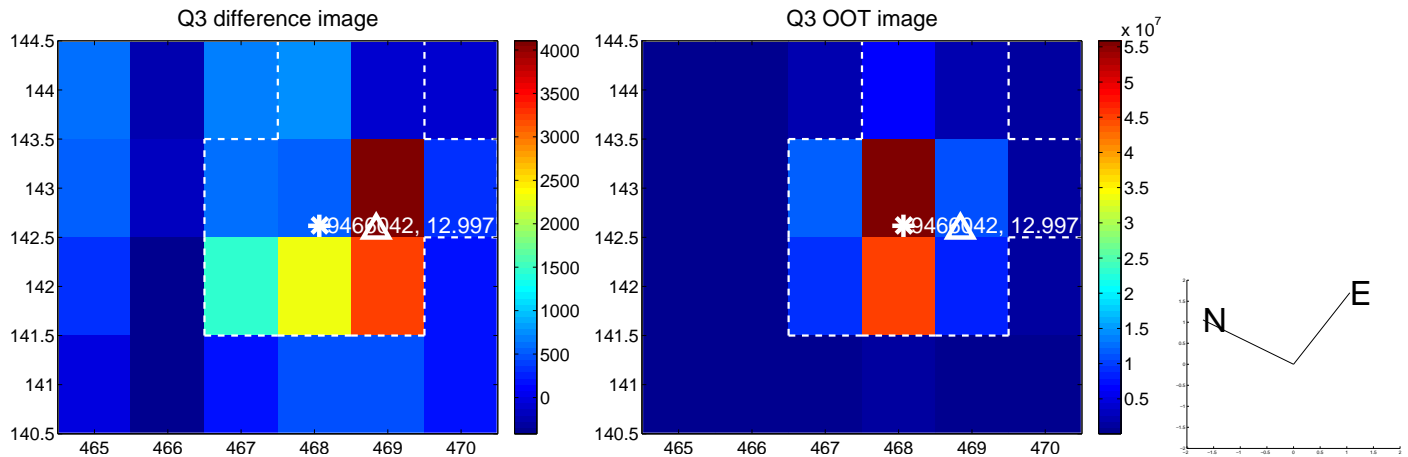
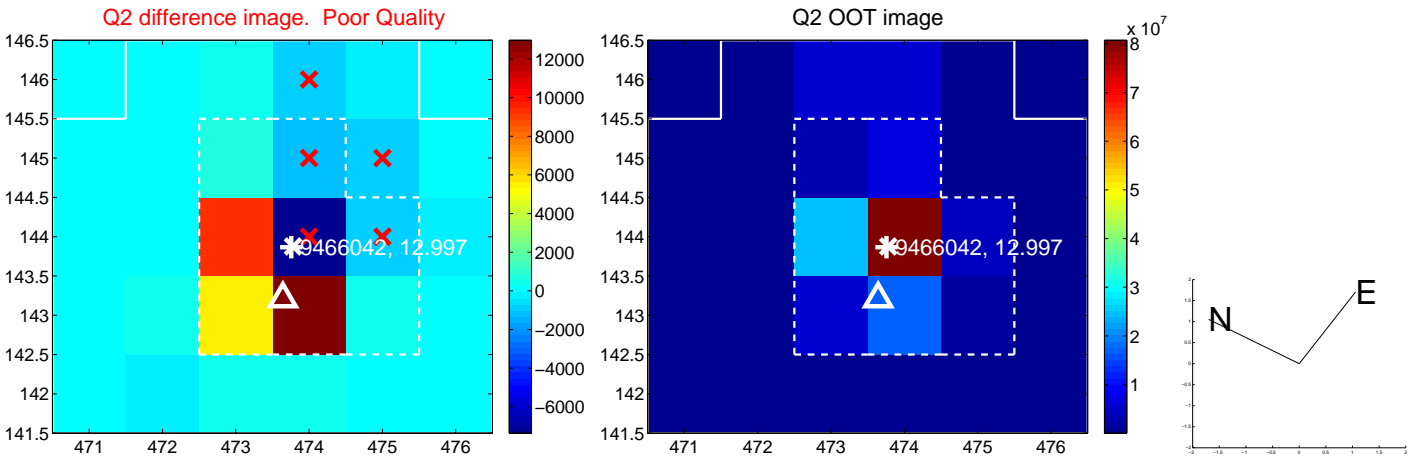
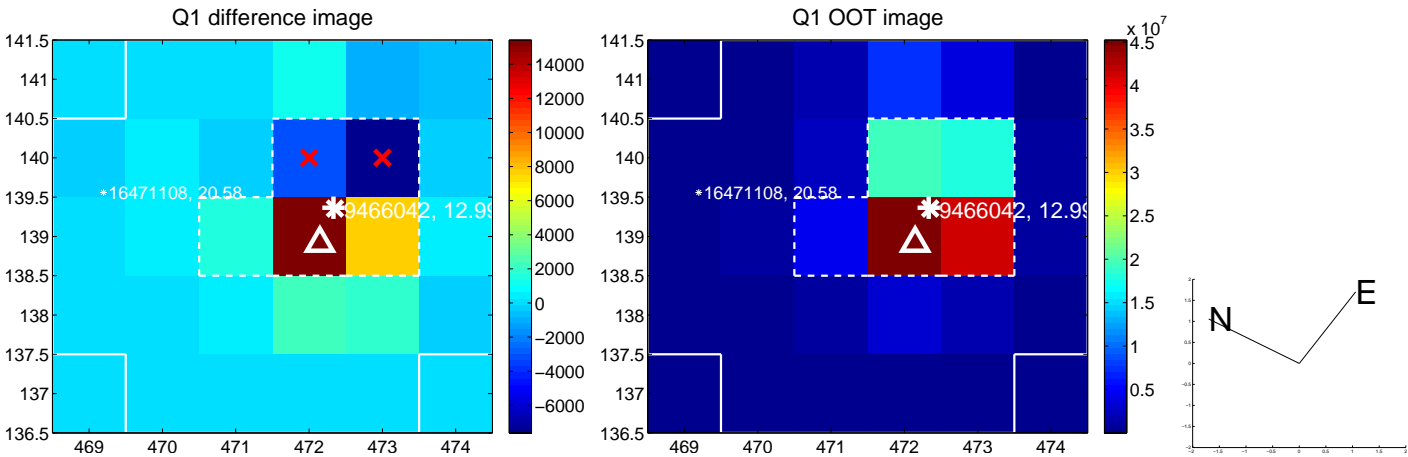
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.288 ± 0.643	0.45	0.170 ± 0.616	-0.232 ± 0.490
PRF-fit source offset from KIC position	0.225 ± 0.638	0.35	0.130 ± 0.624	-0.184 ± 0.499
photometric centroid source offset	0.46 ± 0.40	1.15	-0.32 ± 0.38	-0.34 ± 0.42

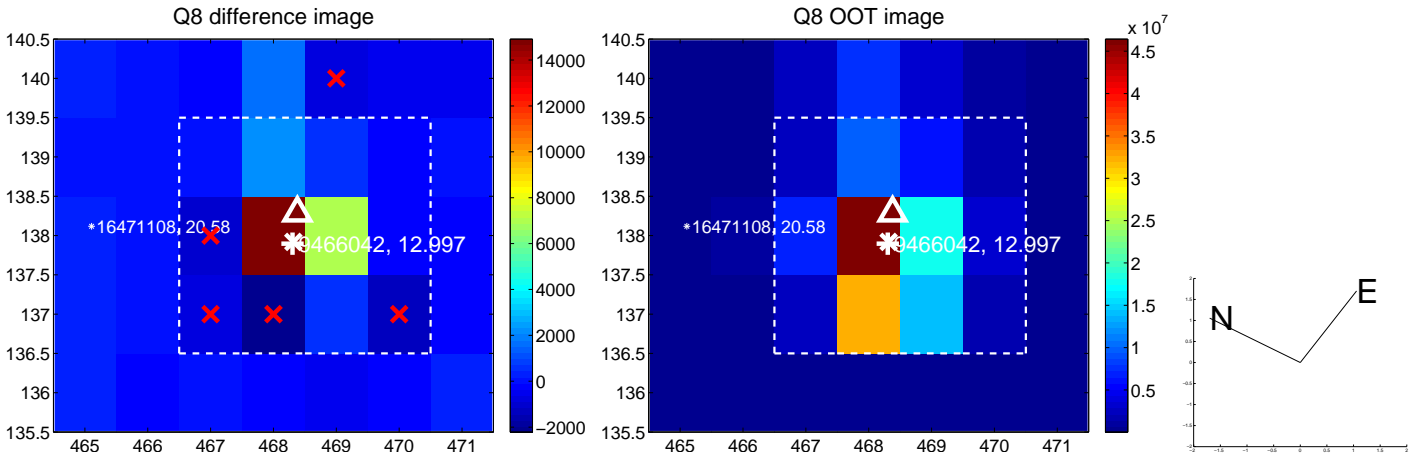
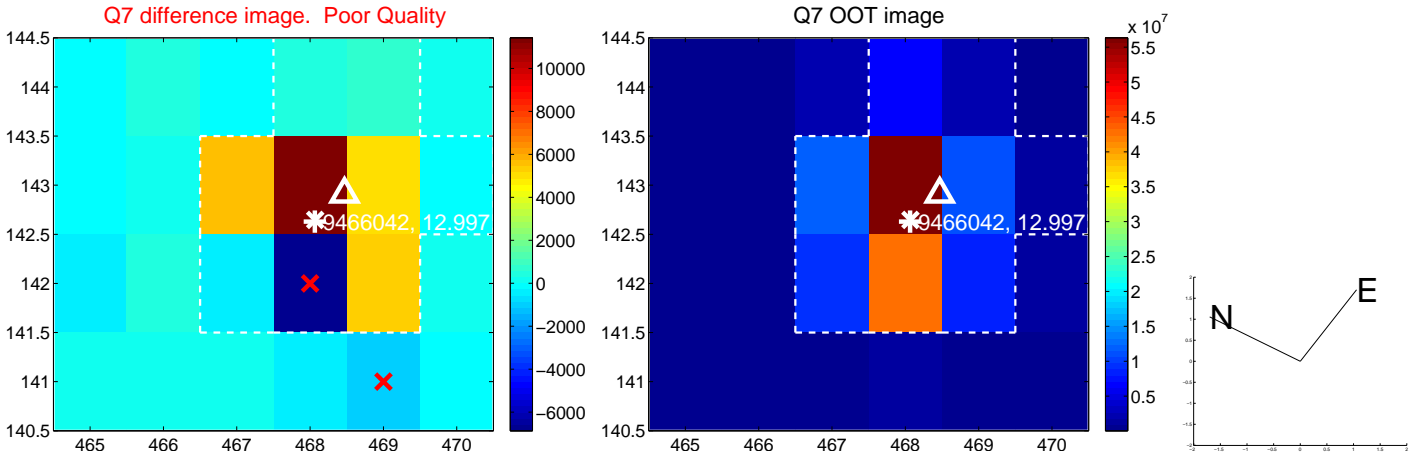
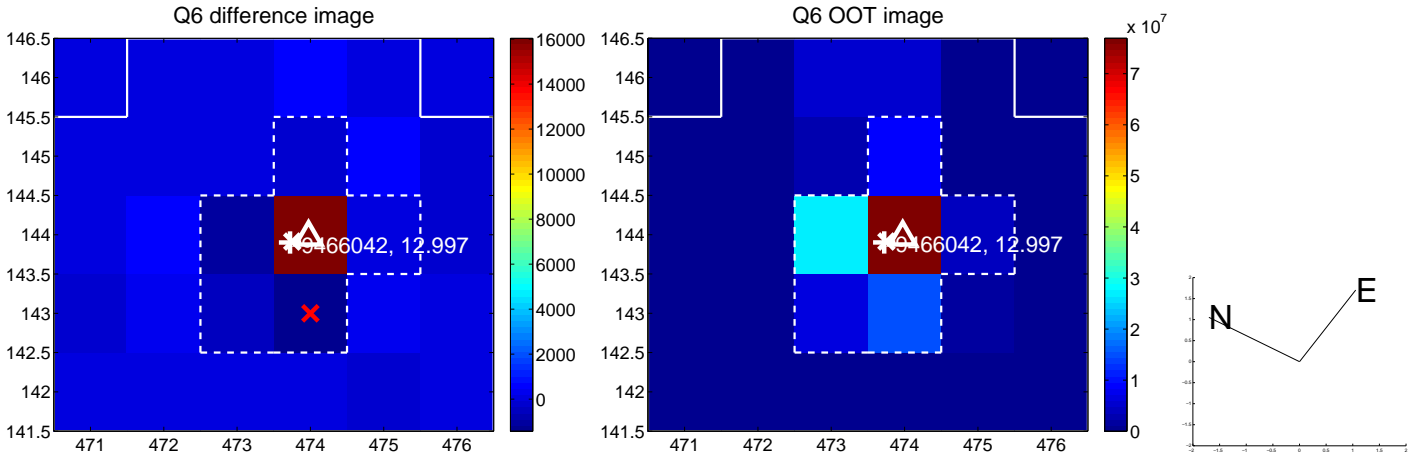
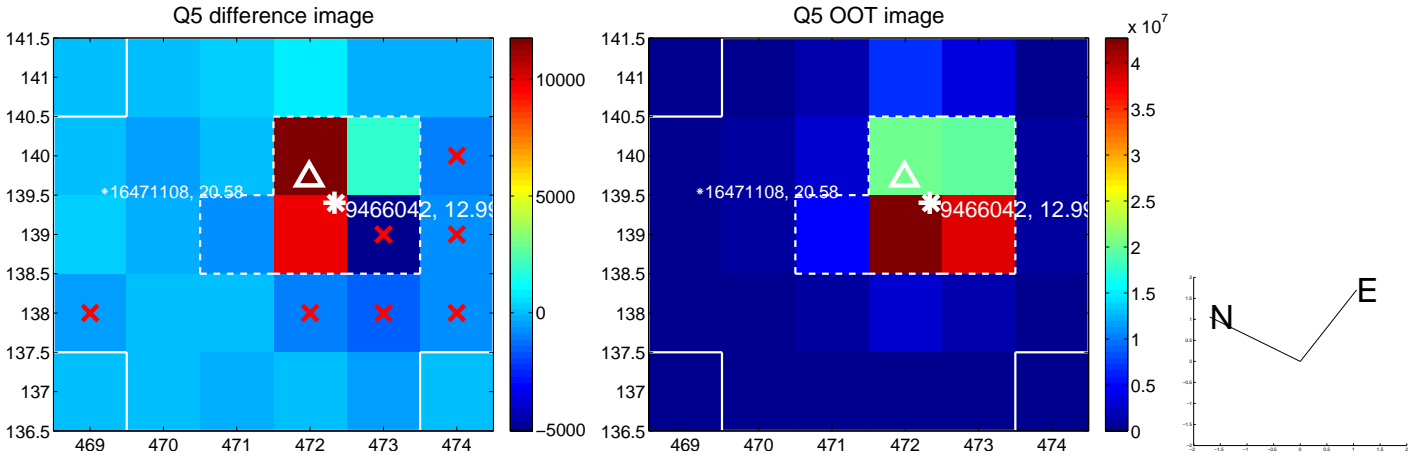


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

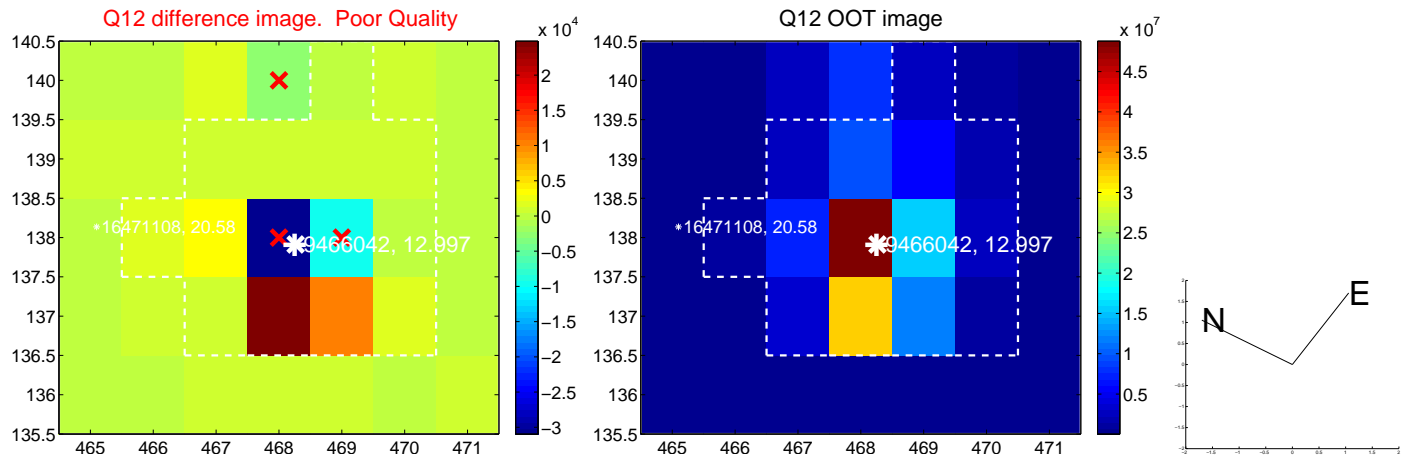
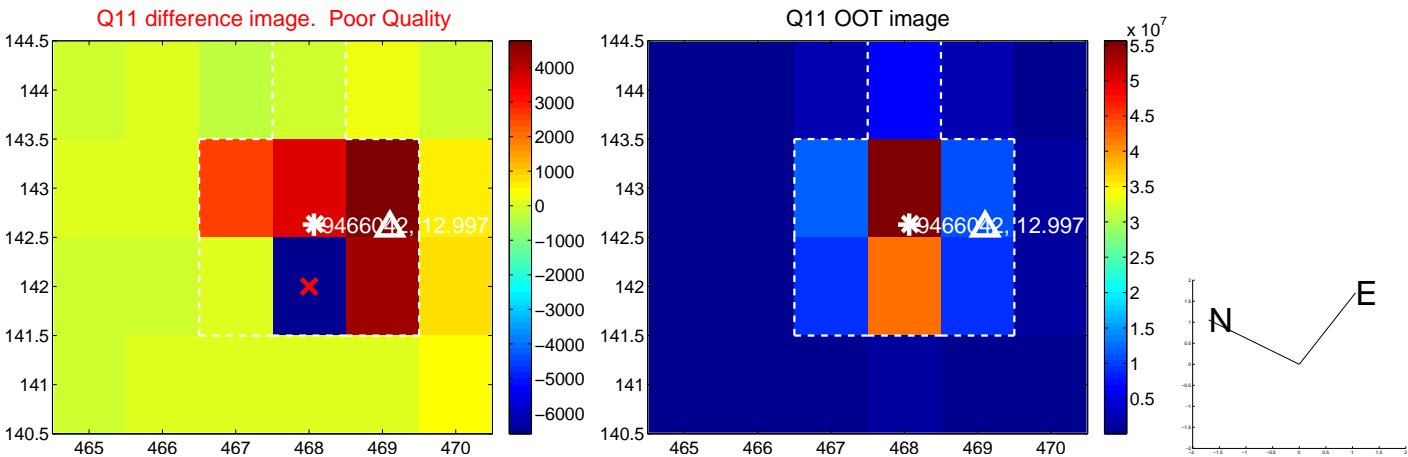
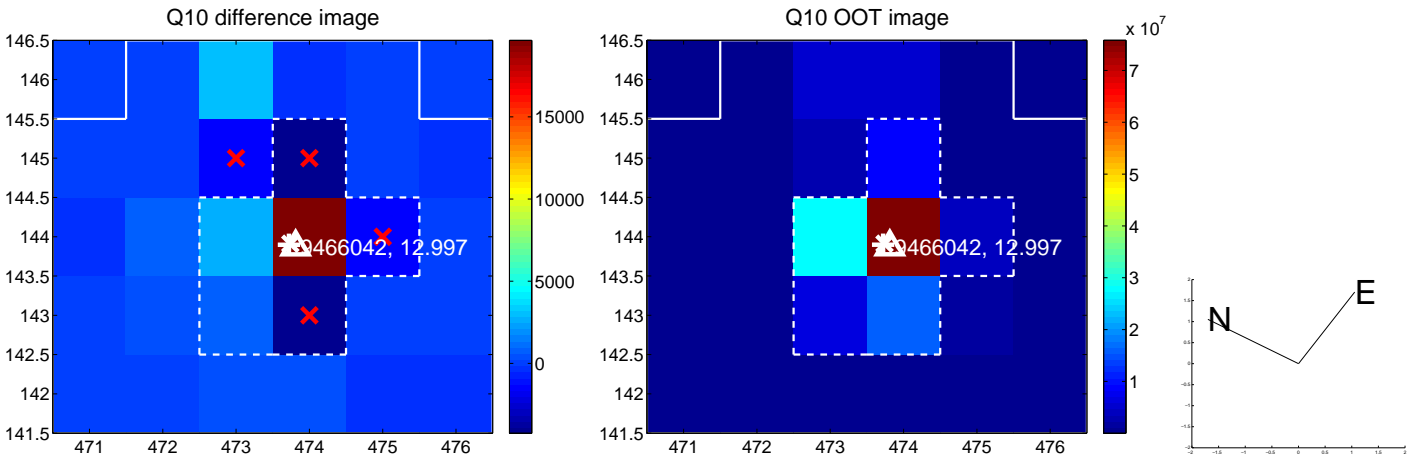
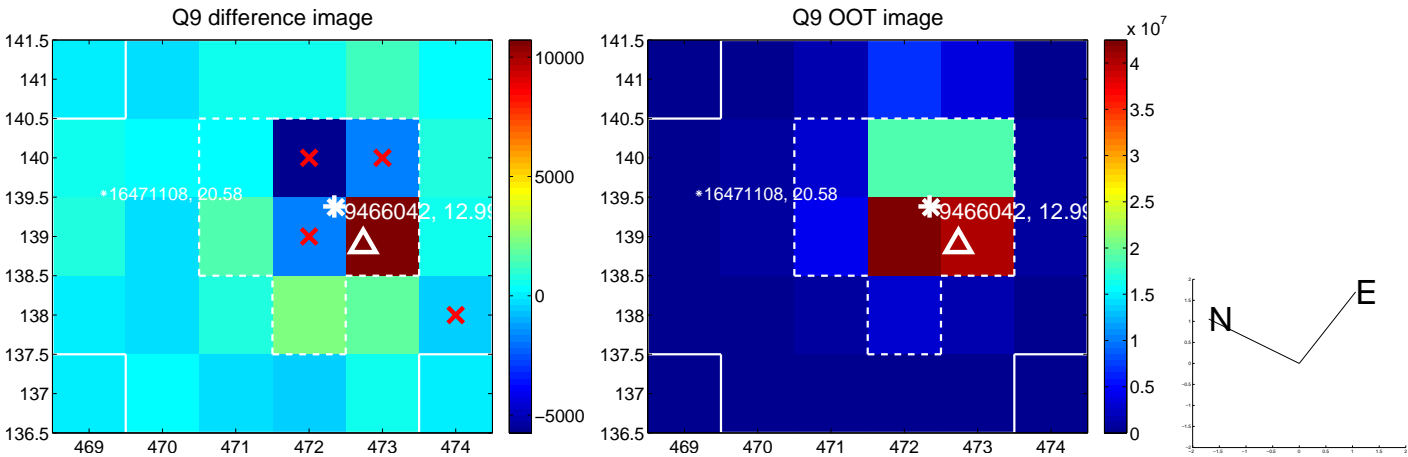
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



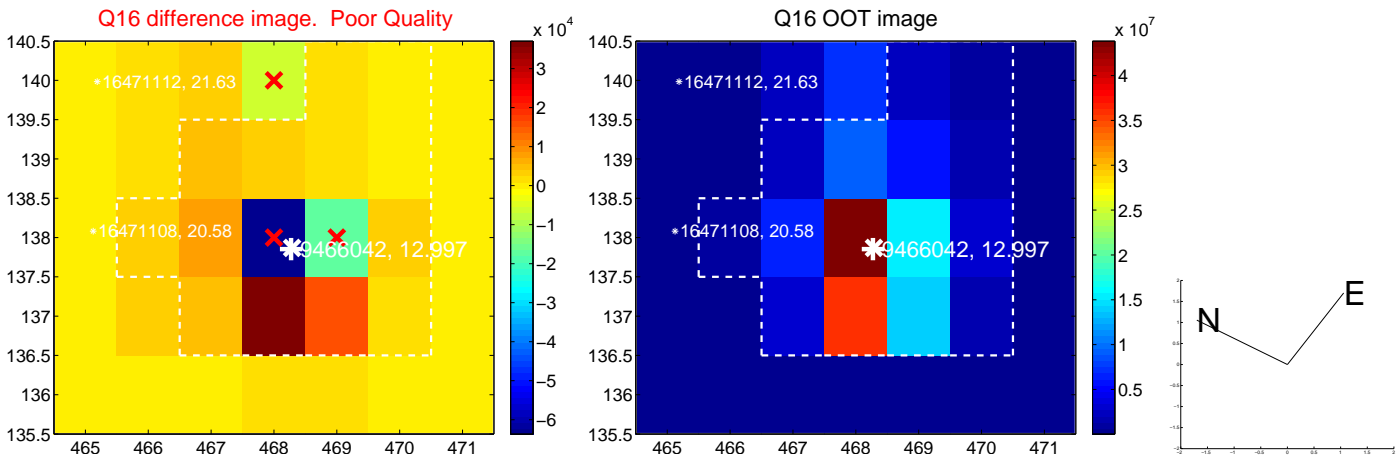
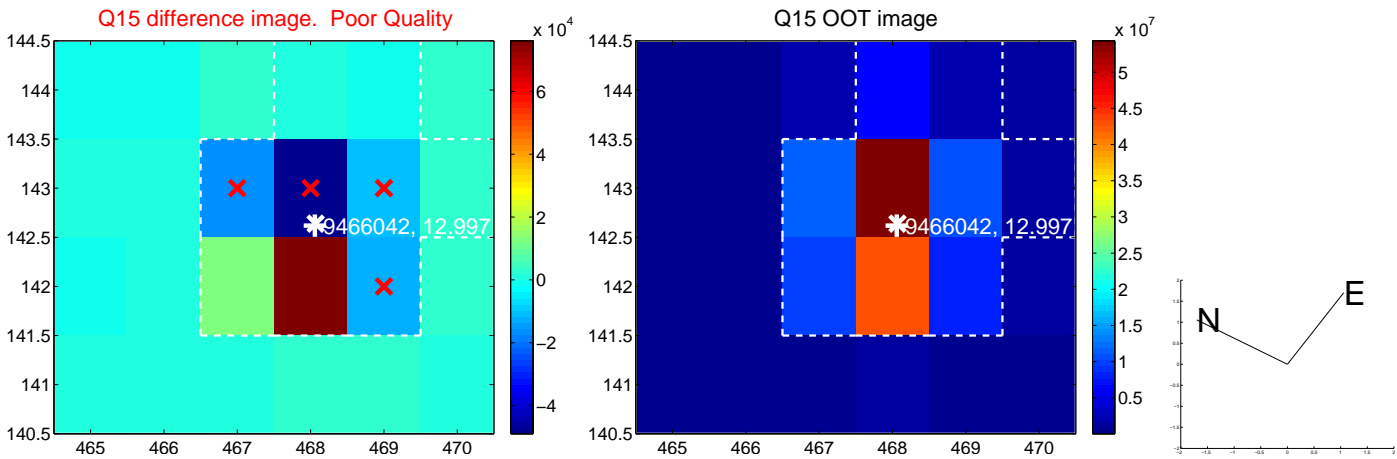
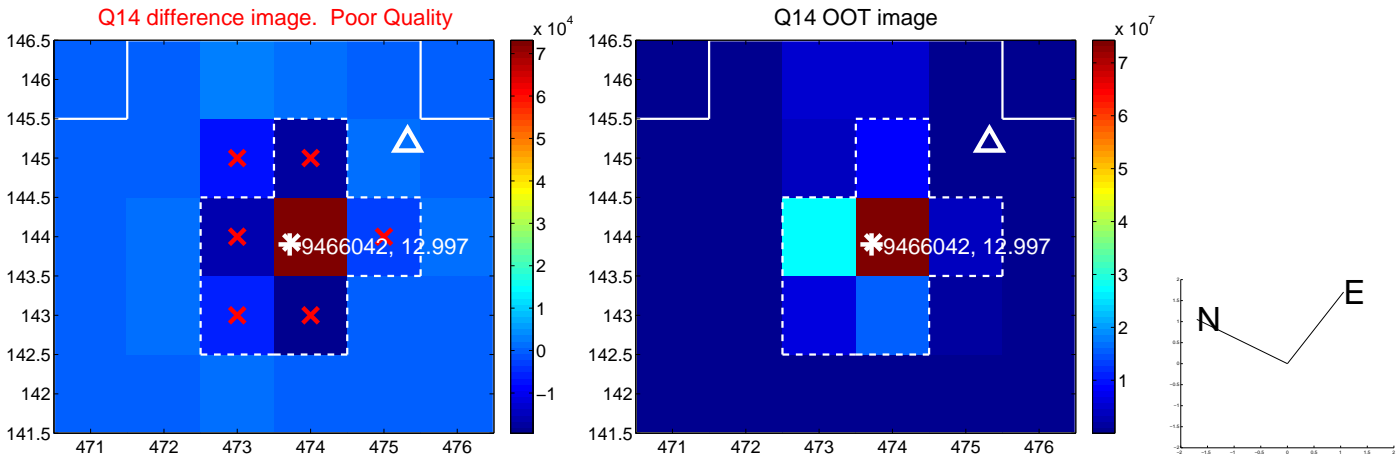
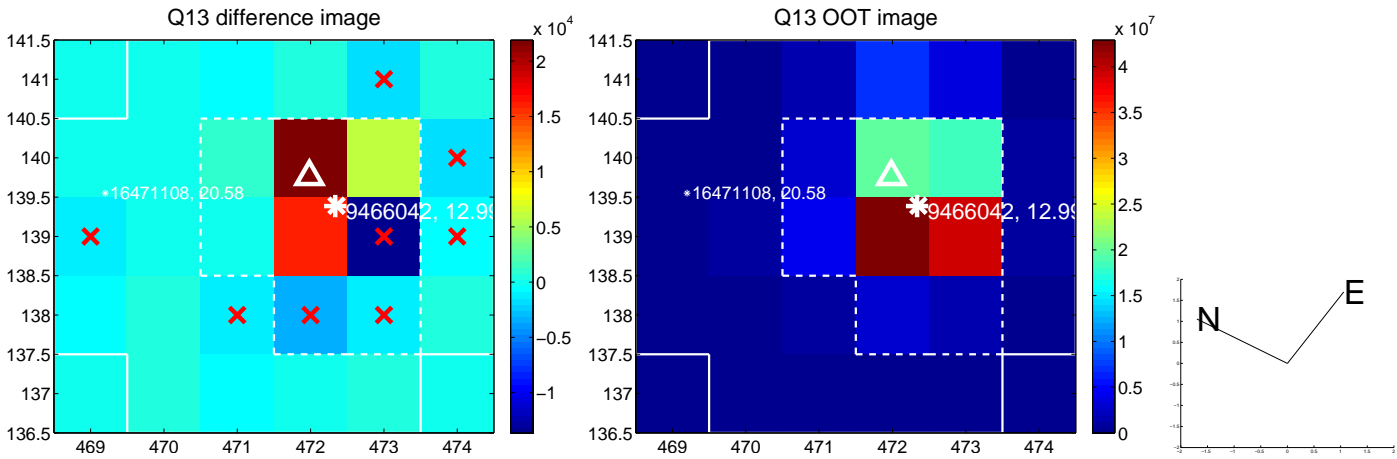
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



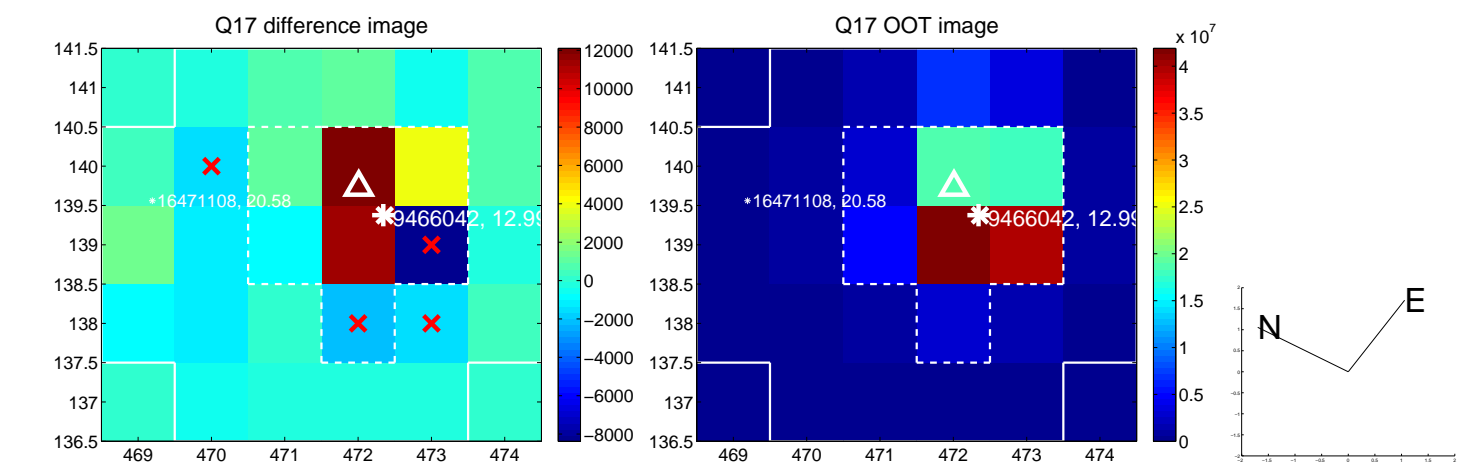
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



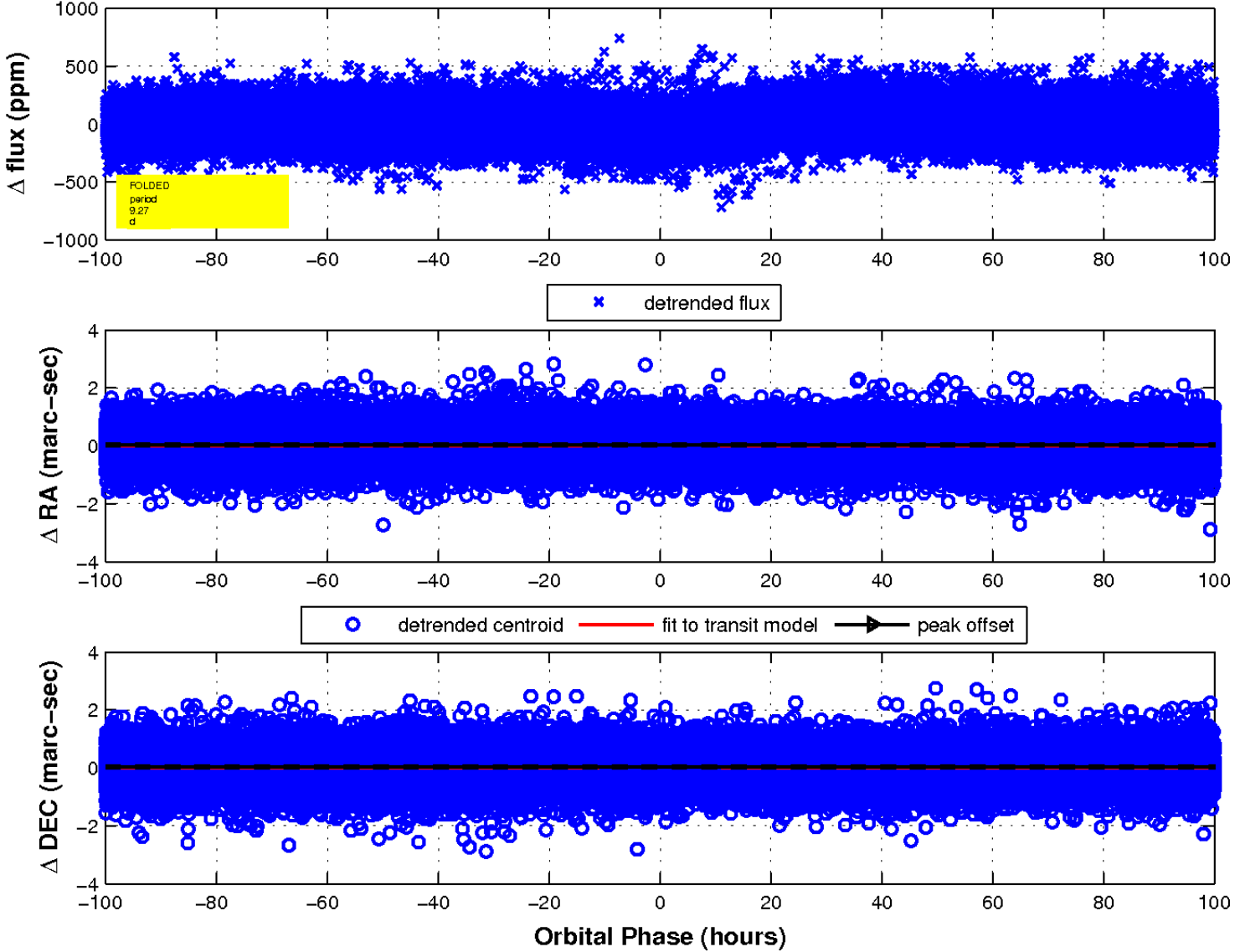
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

