

KIC 009402195

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})
009402195-01	OBS	No	0.754323	132.271402	2.1	1.873	8.3	0.8	3.75	7042	0.62	76791.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009402195-01	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.

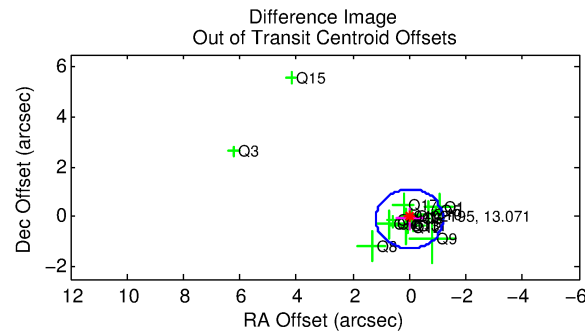
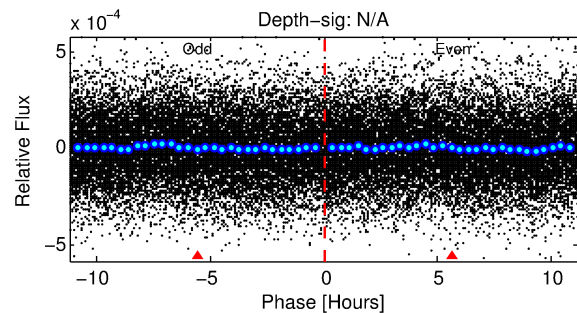
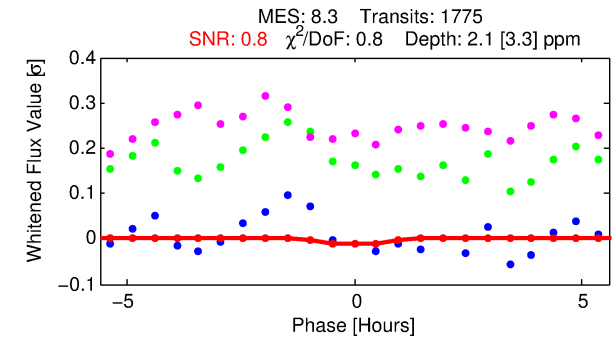
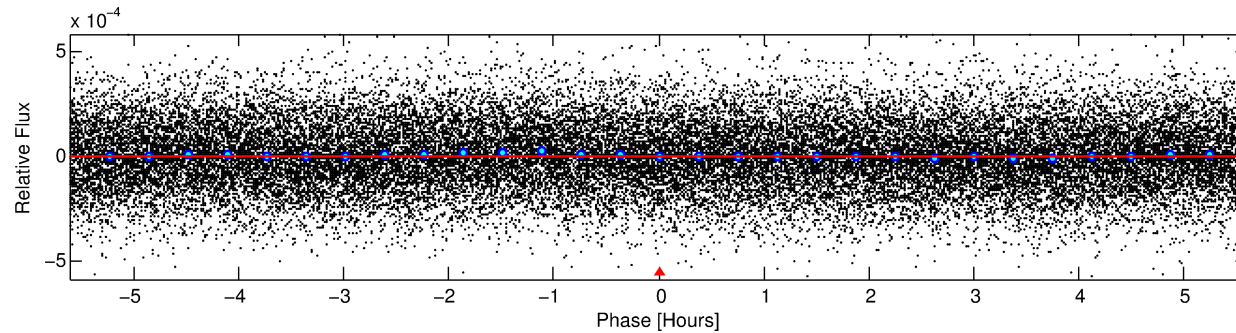
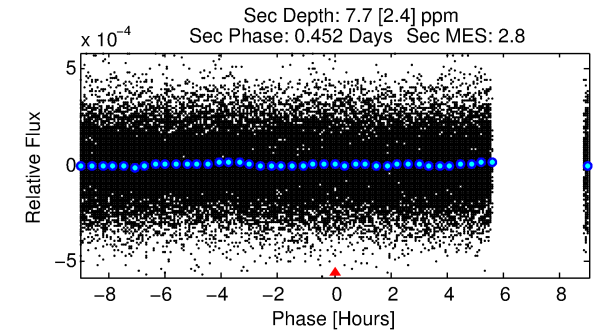
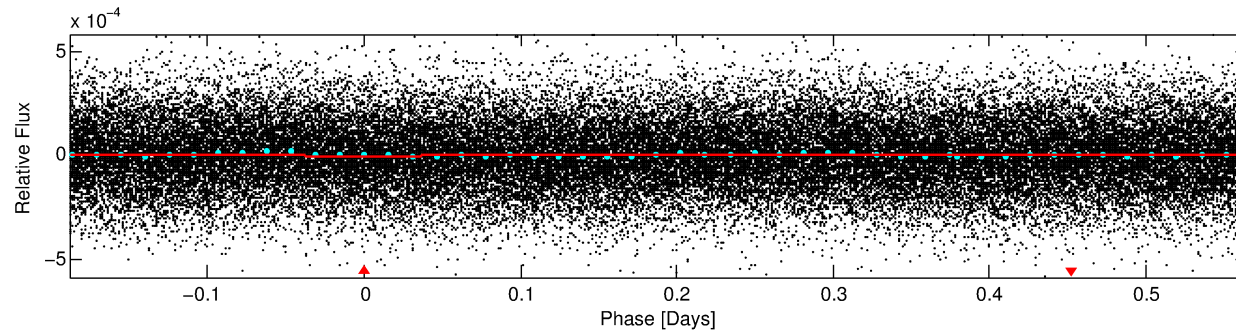
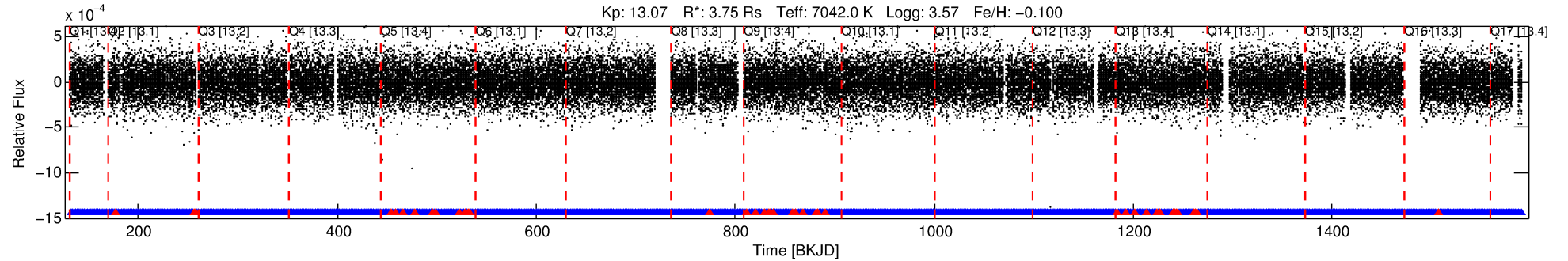
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009402195-01

No Significant Match Found

DV One-Page Summary

KIC: 9402195 Candidate: 1 of 1 Period: 0.754 d



DV Fit Results:

Period = 0.75432 [0.00013] d
Epoch = 132.2714 [0.0283] BKJD
Rp/R* = 0.0015 [0.0014]
a/R* = 1.80 [3.75]
b = 0.86 [0.89]
Seff = 76791.66 [40937.03]
Teq = 4245 [566] K
Rp = 0.62 [0.61] Re
a = 0.0201 [0.0066] AU
Ag = 4.52 [8.88] [0.40σ]
Teffp = 9570 [4549] K [1.16σ]

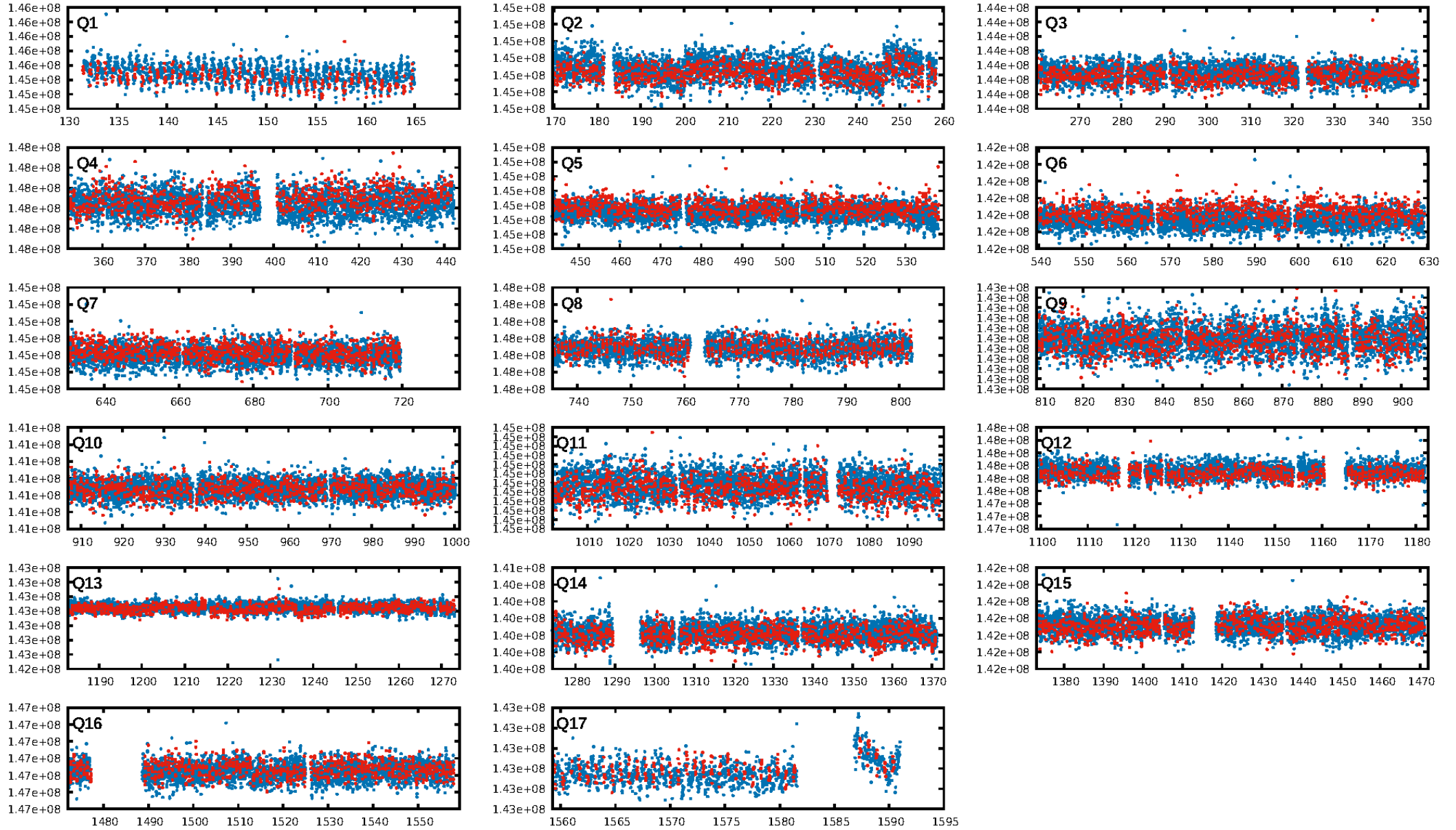
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.08e-15
RollingBand-fgt: 0.97 [1651/1695]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.095 arcsec [0.24σ]
KicOffset-rm: 0.124 arcsec [0.38σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.44 [7/16]
DiffImageOverlap-fno: 1.00 [17/17]

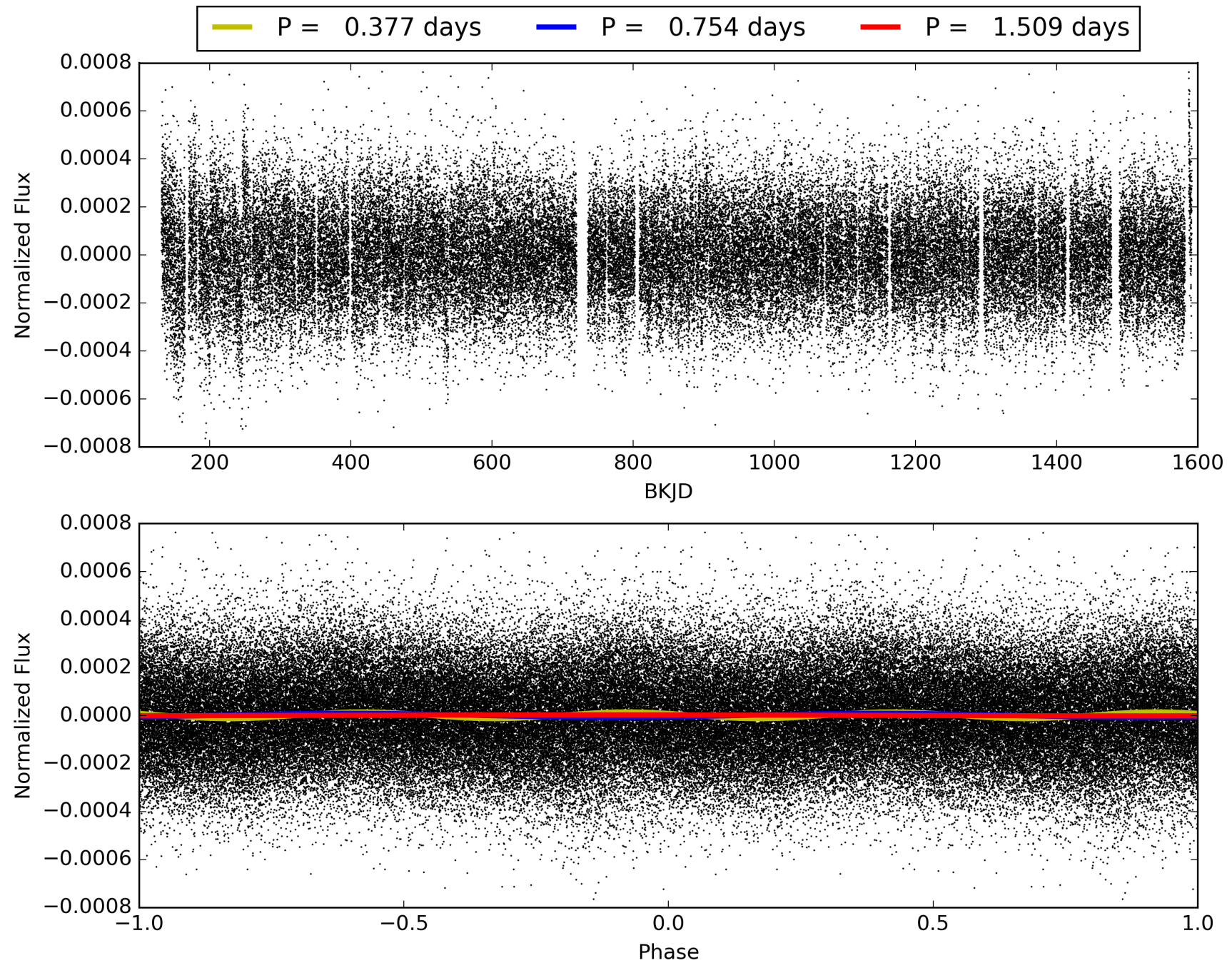
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:10:59 Z

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

TCE 009402195-01, PDC Light Curves

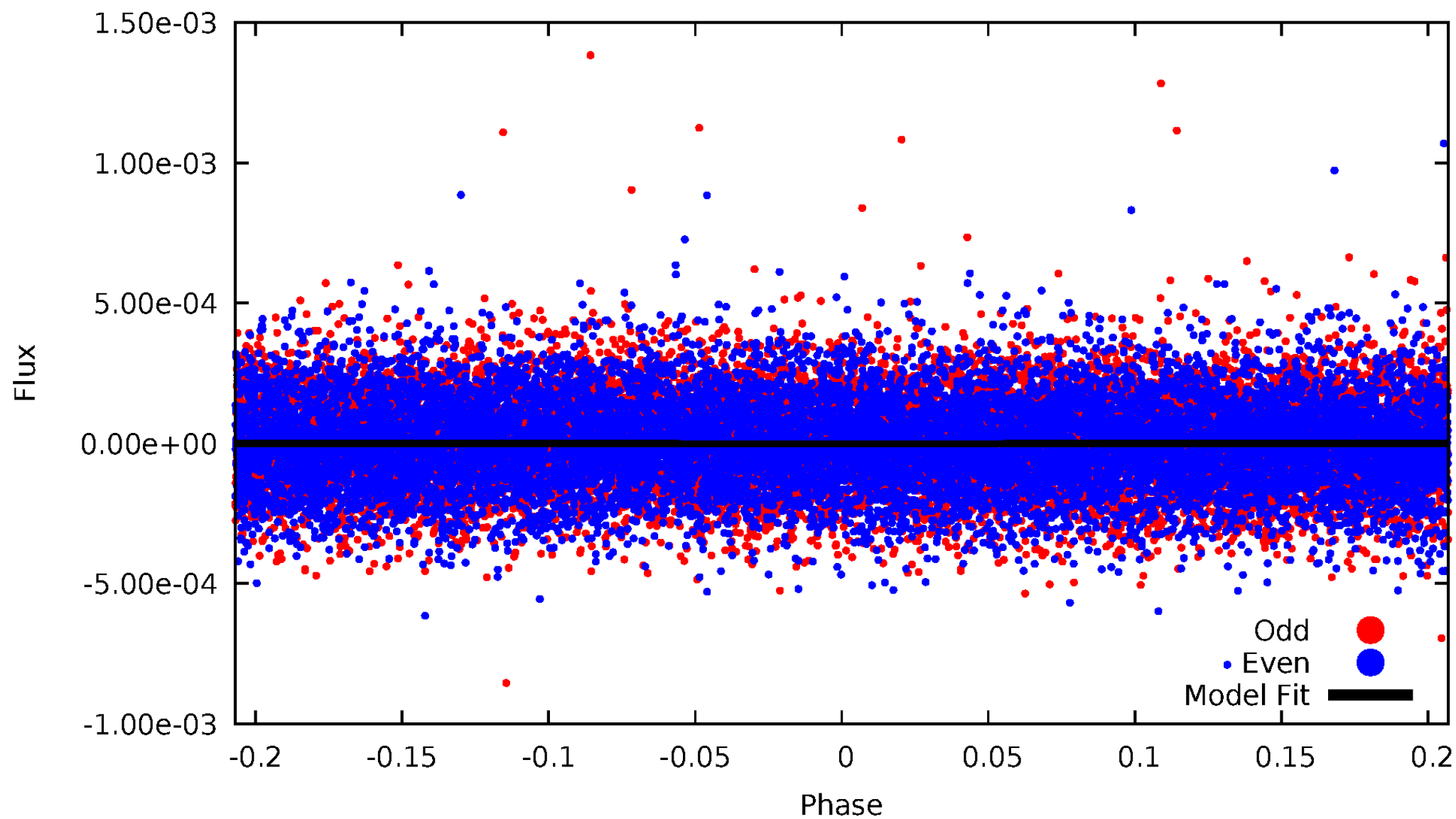


TCE 009402195-01



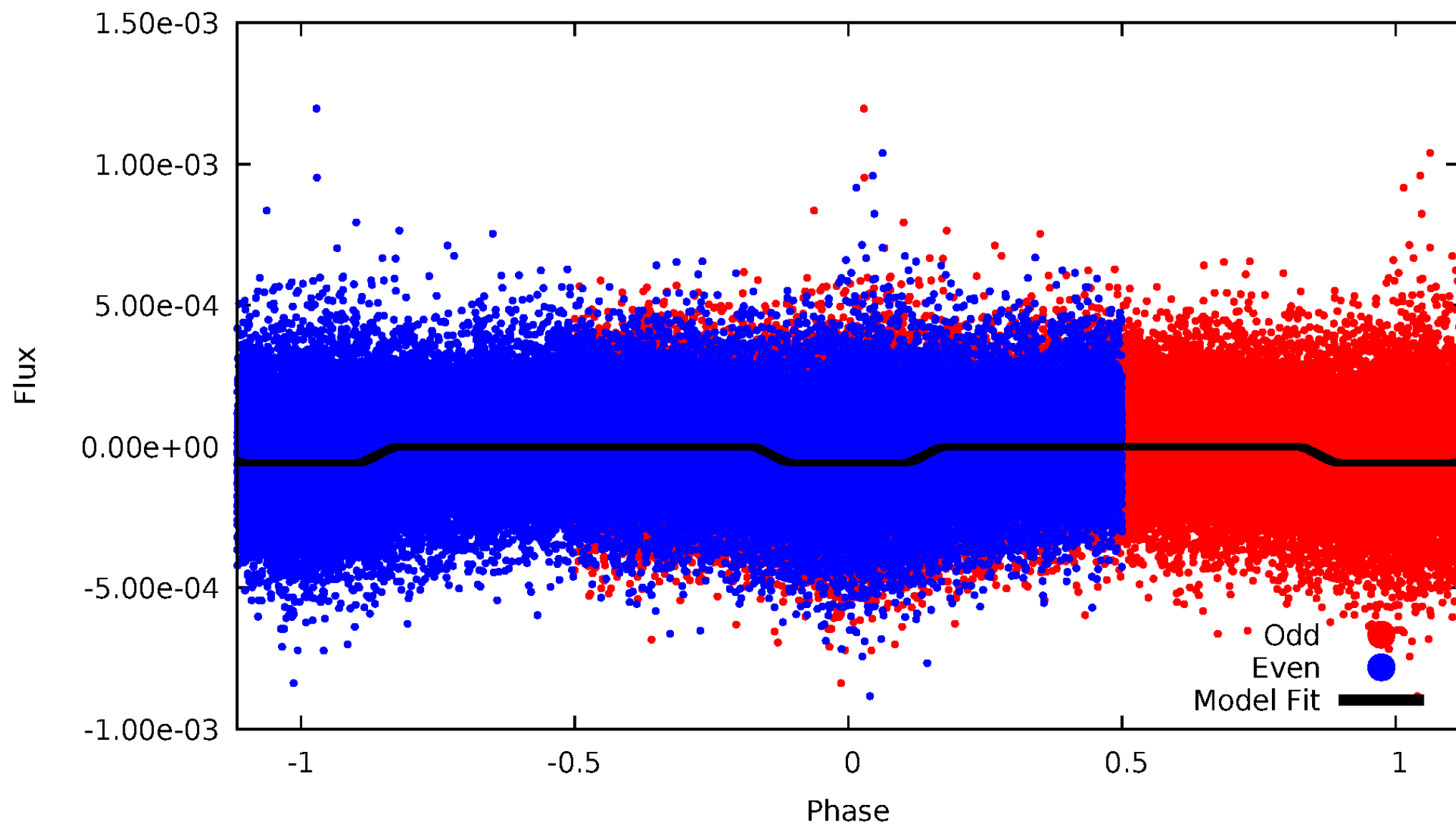
DV Odd/Even

TCE 009402195-01



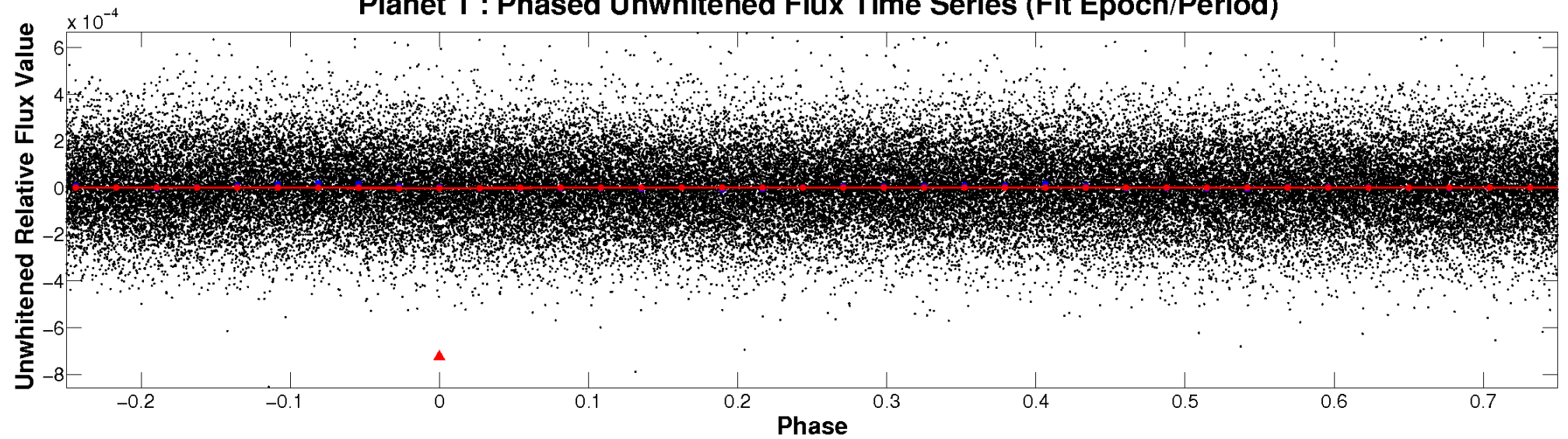
ALT Odd/Even

TCE 009402195-01

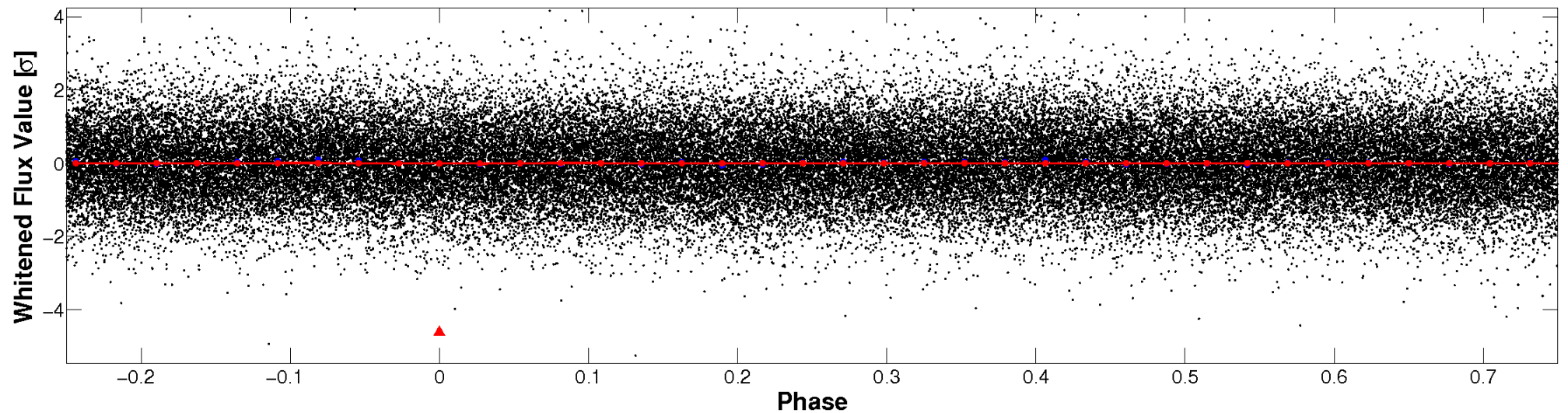


Non-Whitened Vs. Whitened Light Curve

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

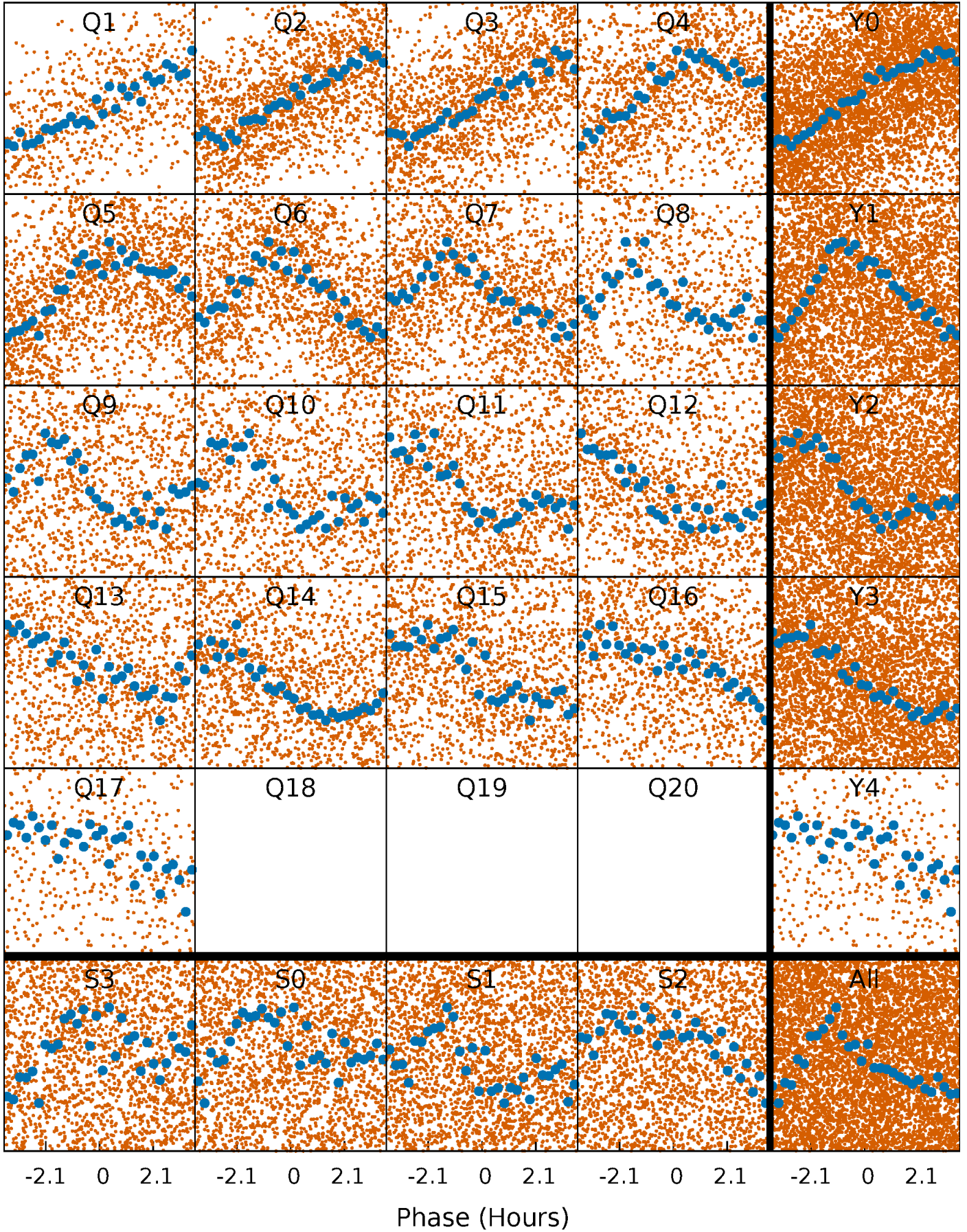


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



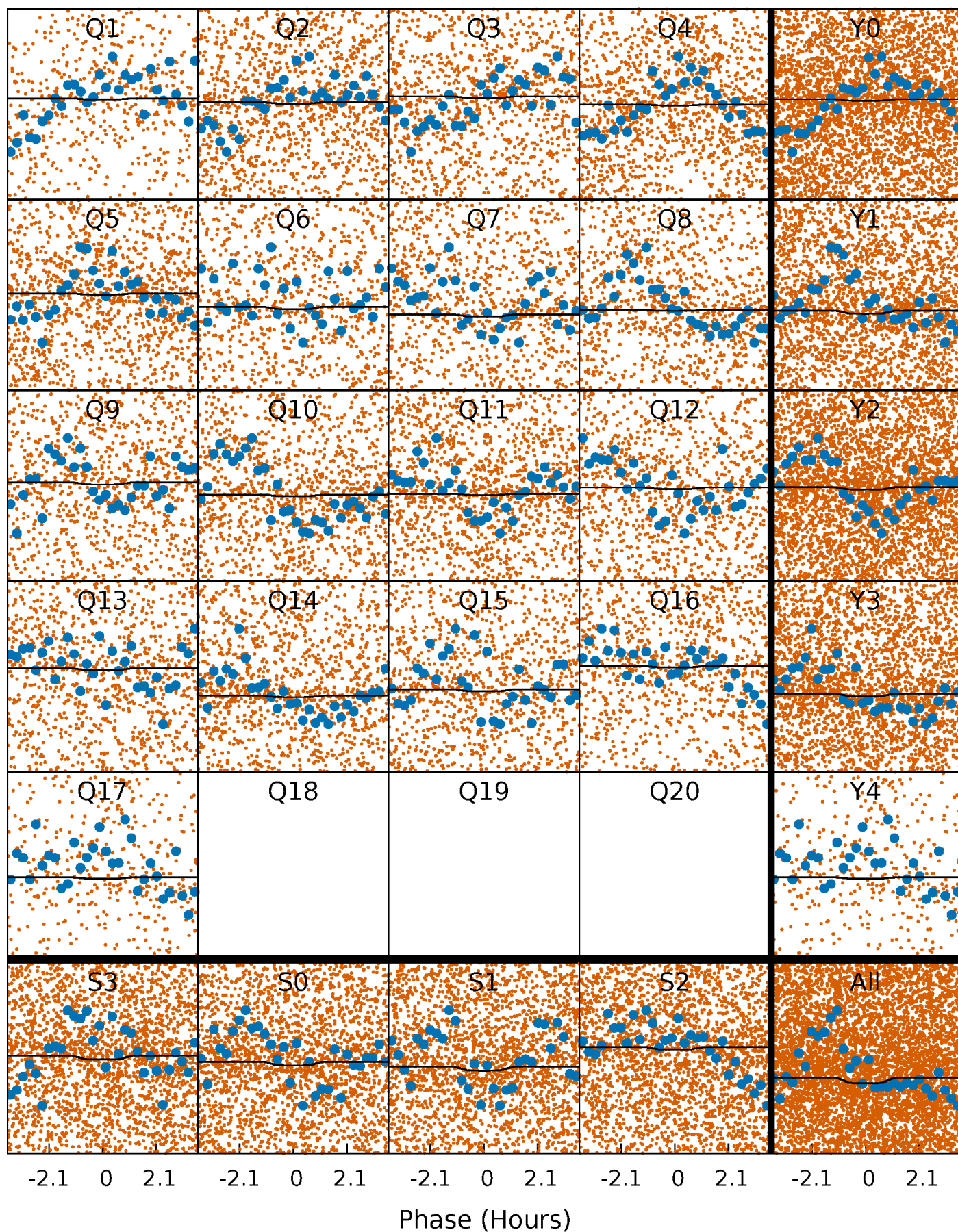
PDC Quarter-Phased Transit Curves

TCE 009402195-01 P= 0.754323 Days $T_0=132.271402$ (BKJD)



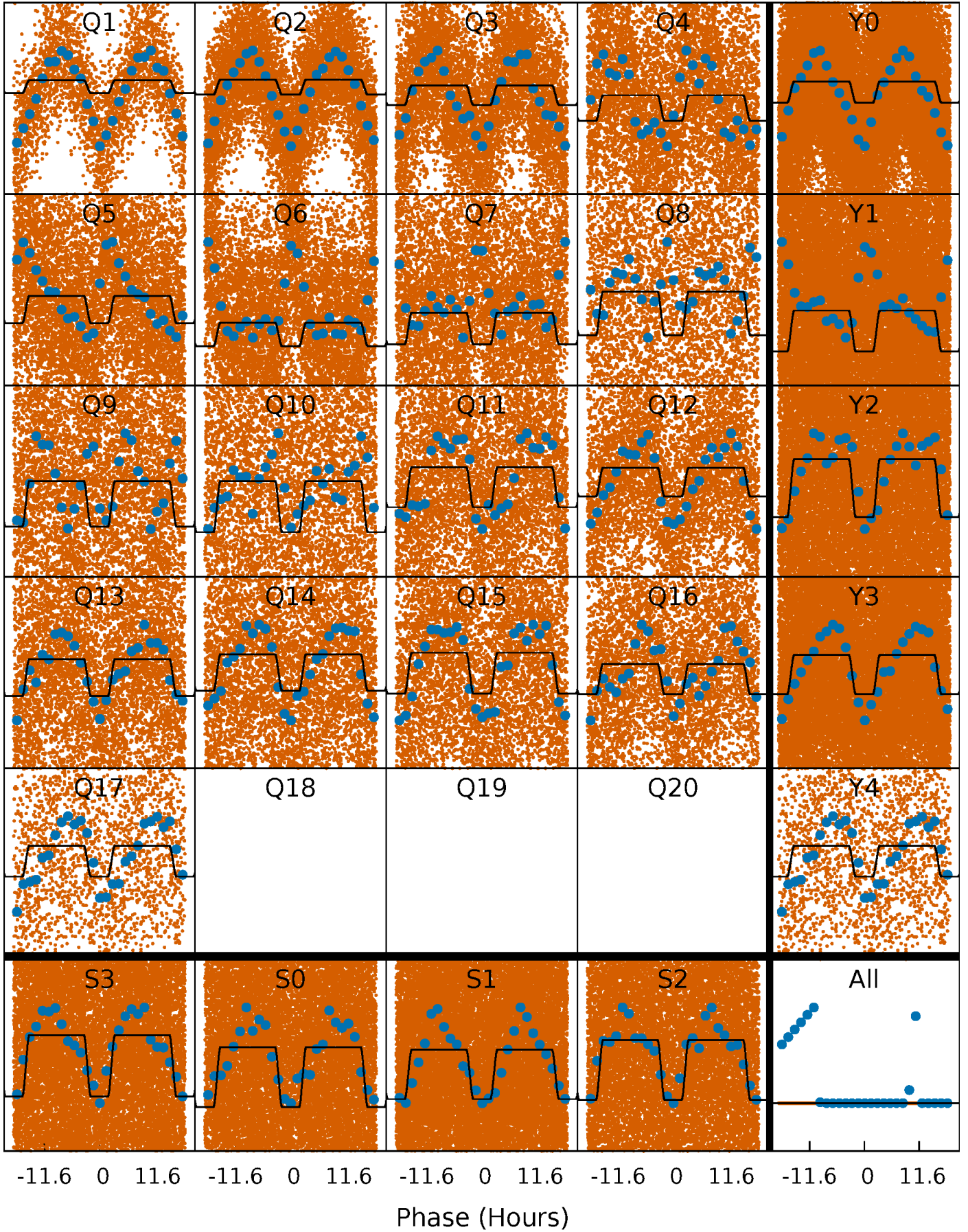
DV Quarter-Phased Transit Curves

TCE 009402195-01 P= 0.754323 Days $T_0=132.271402$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

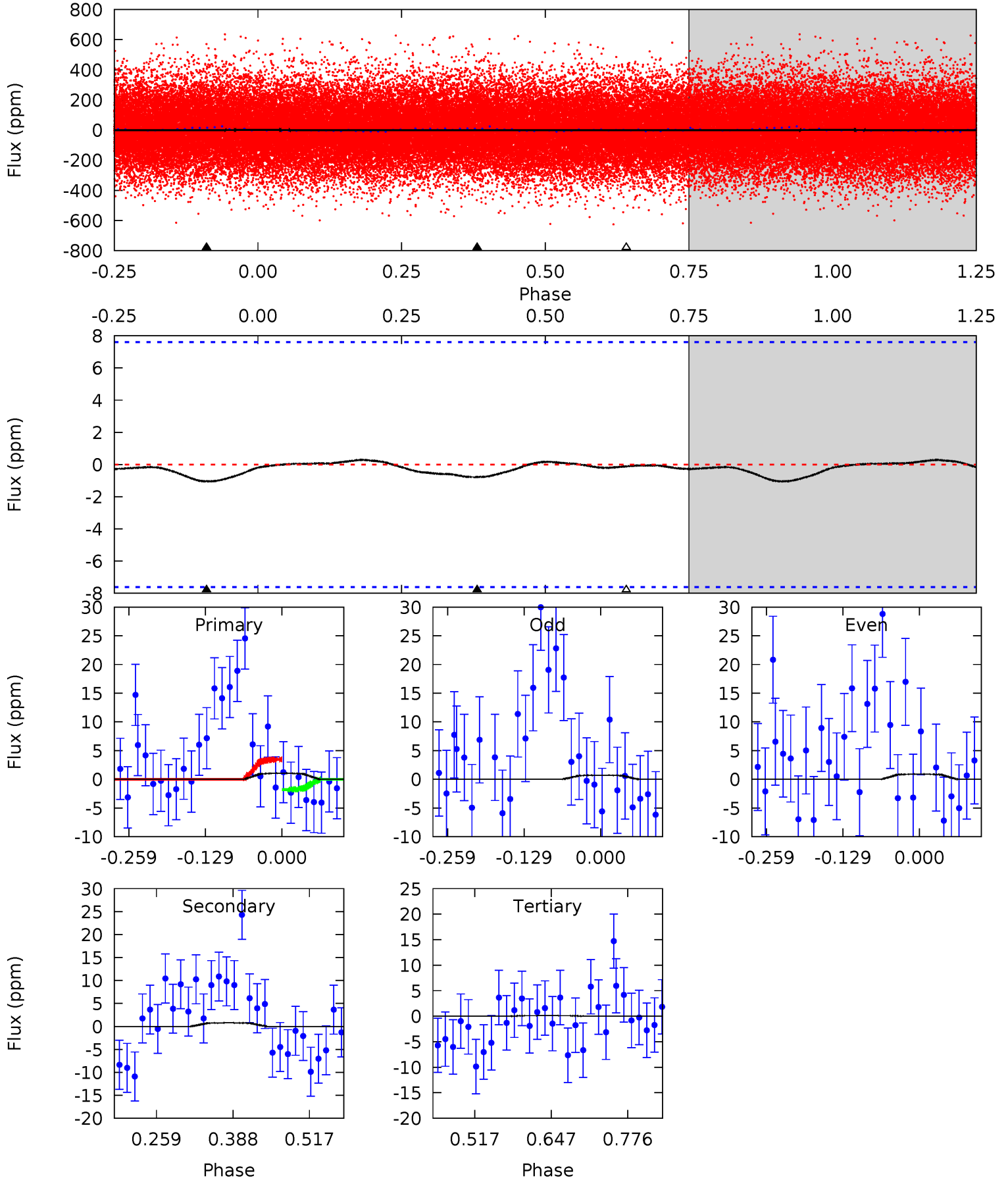
TCE 009402195-01 P= 0.754472 Days $T_0=132.132867$ (BKJD)



DV Model-Shift Uniqueness Test

009402195-01, P = 0.754323 Days, E = 130.762756 Days

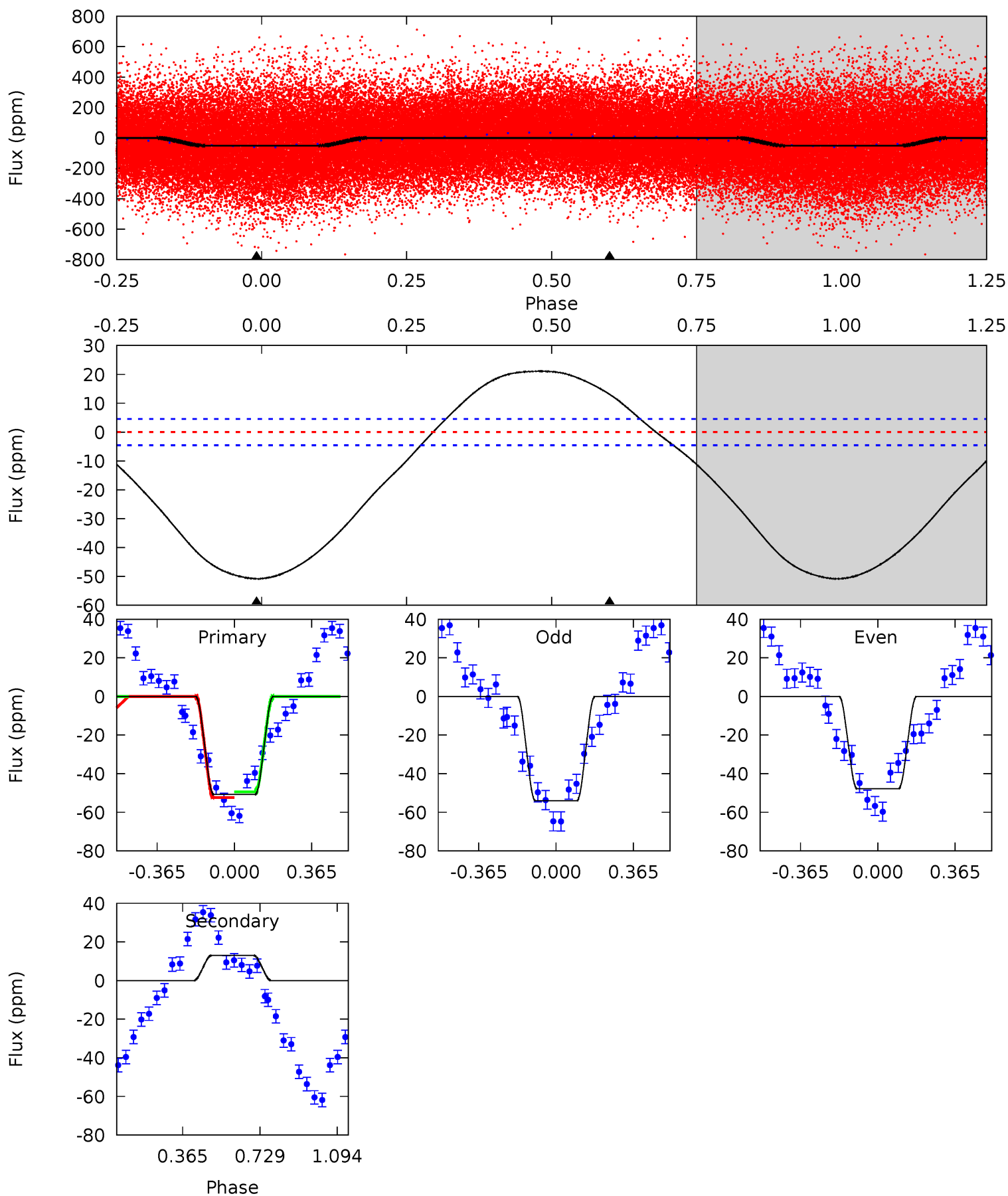
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.62	0.46	0.07	0	4.51	1.52	0.09	0.55	0.62	0.39	0.46	0.06	0.62	0.22	0.49



Alt Model-Shift Uniqueness Test

009402195-01, P = 0.754472 Days, E = 131.378395 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.9	-12.3	0	0	4.29	0.91	5.79	47.9	47.9	-12.3	-12.3	2.94	1.00	0.29	1.27



Stellar Parameters For KIC 009402195

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7042^{+188}_{-251}	$3.568^{+0.298}_{-0.053}$	$-0.100^{+0.250}_{-0.250}$	$3.746^{+0.309}_{-1.313}$	$1.892^{+0.192}_{-0.313}$	$0.051^{+0.102}_{-0.009}$
	+3%/-4%	+8%/-1%	+250%/-250%	+8%/-35%	+10%/-17%	+201%/-18%
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 009402195-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1 ± 2	$0.65^{+0.48}_{-0.42}$	5770^{+330}_{-445}	-3355^{+11265}_{-2579}	$0.260^{+2.536}_{-0.790}$
Alt.	13 ± 1	$2.93^{+0.68}_{-0.66}$	5793^{+318}_{-527}	-5688^{+340}_{-334}	$-0.342^{+0.118}_{-0.210}$

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

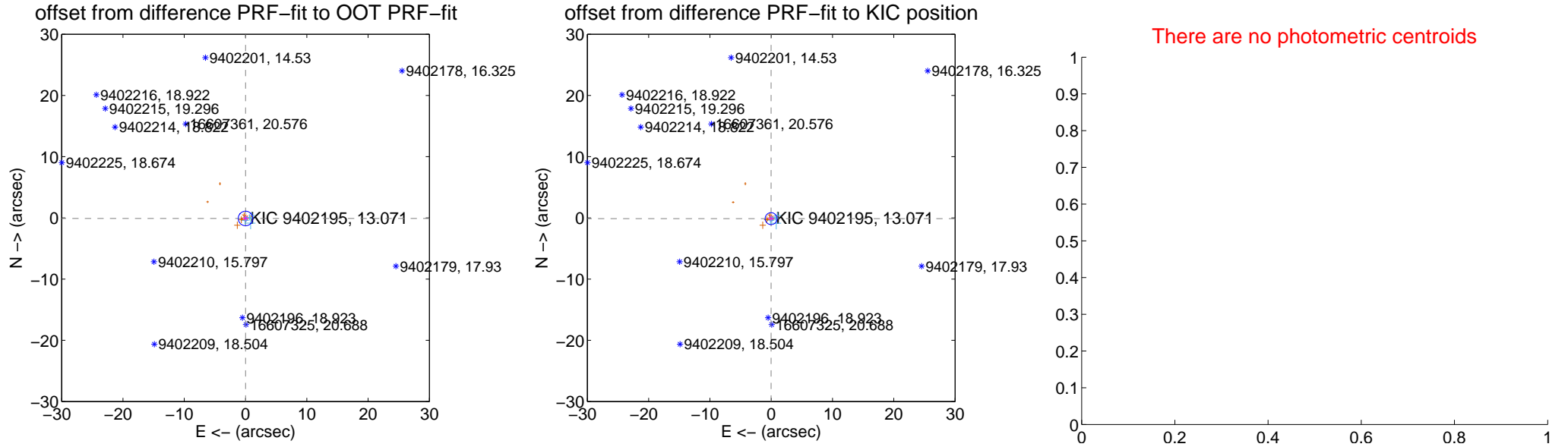
DV Centroid Data

Supplemental centroid analysis for 009402195-01. Kepler magnitude: 13.07. Transit SNR 0.78

There are 7 quarters with good PRF difference image offsets

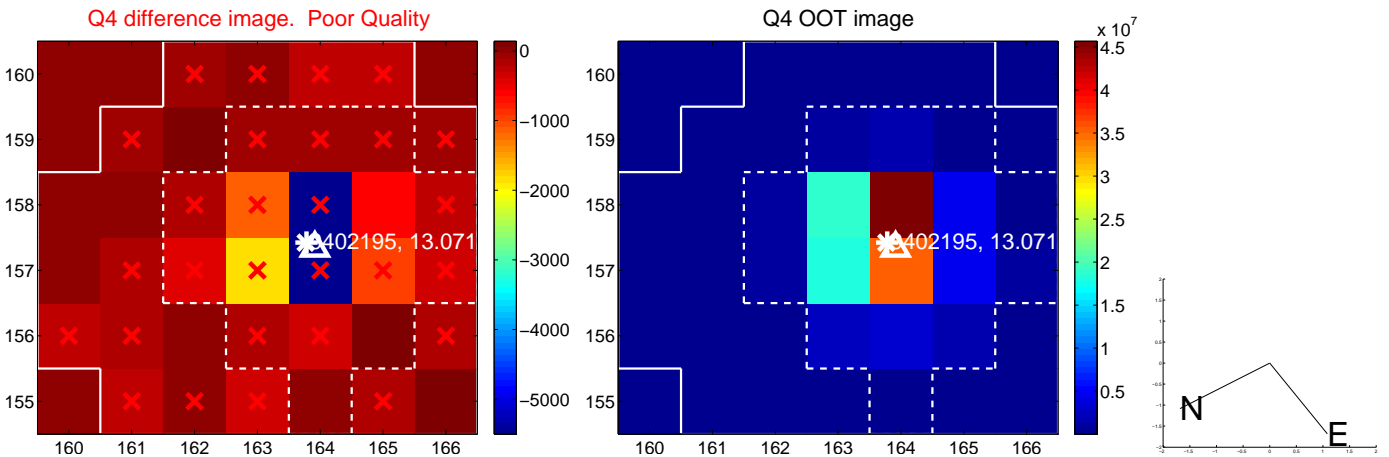
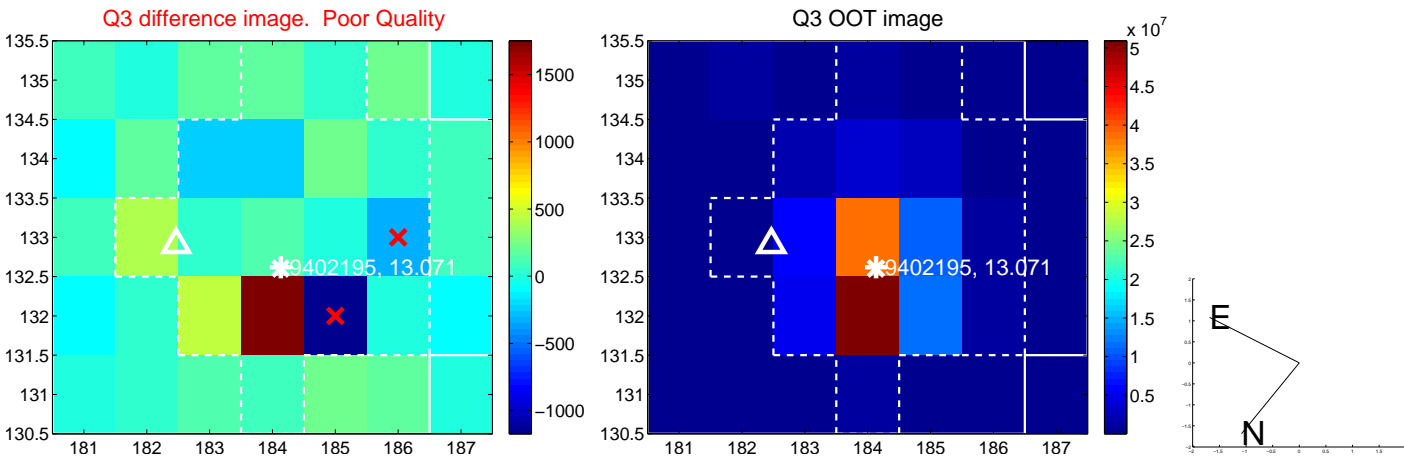
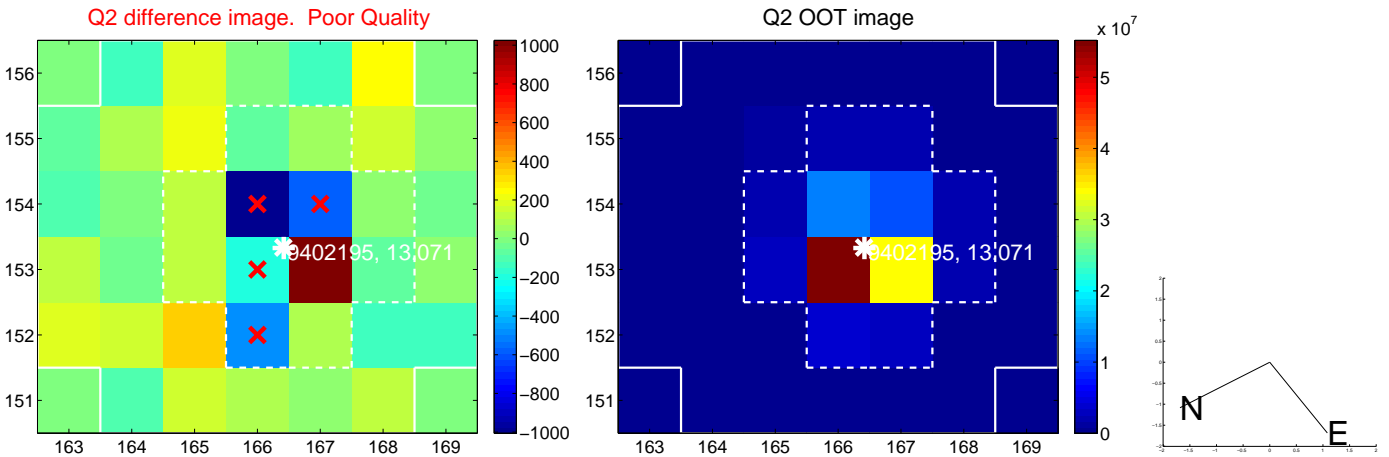
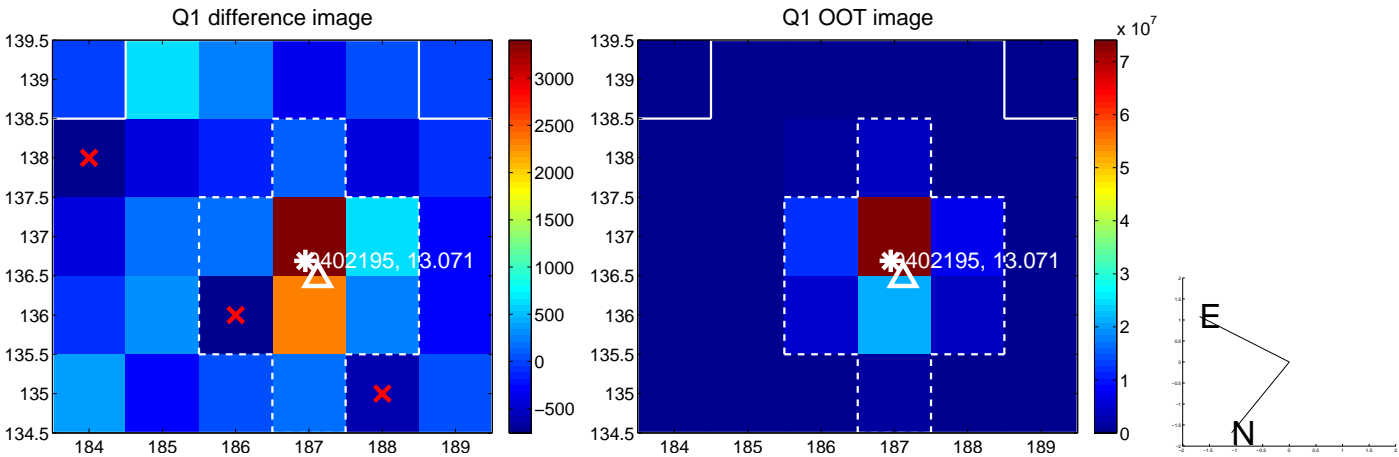
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.095 ± 0.396	0.24	-0.000 ± 0.467	-0.095 ± 0.395
PRF-fit source offset from KIC position	0.124 ± 0.325	0.38	0.019 ± 0.452	-0.123 ± 0.368
photometric centroid source offset	—	—	—	—

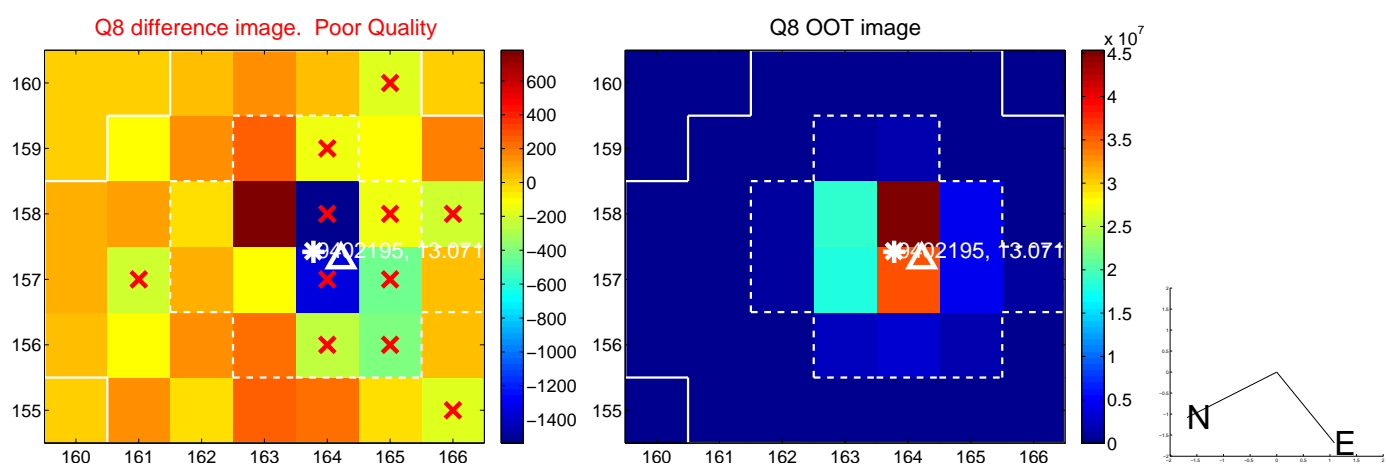
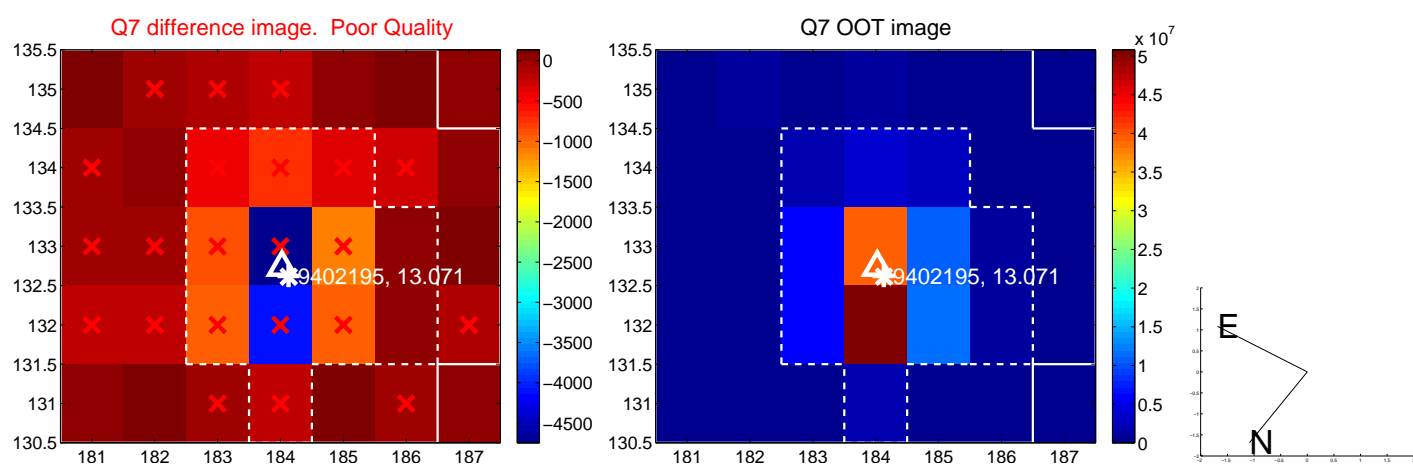
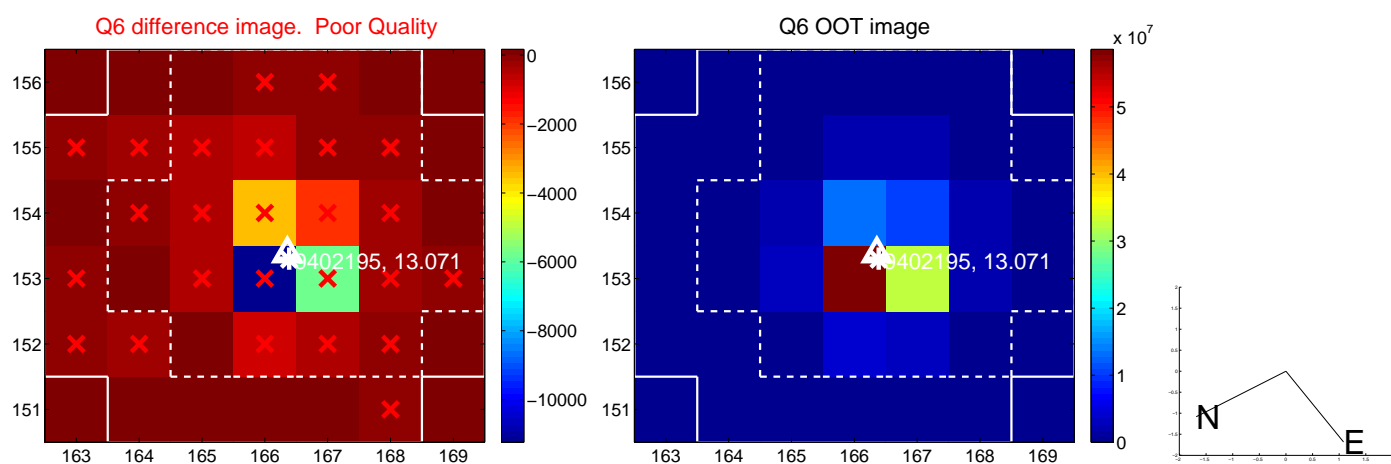
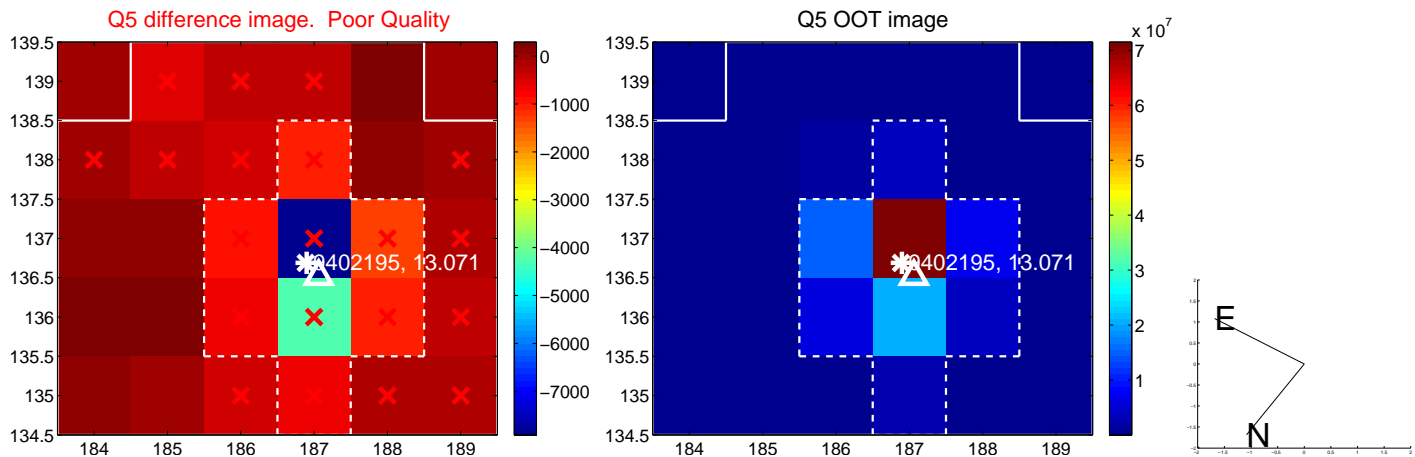


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

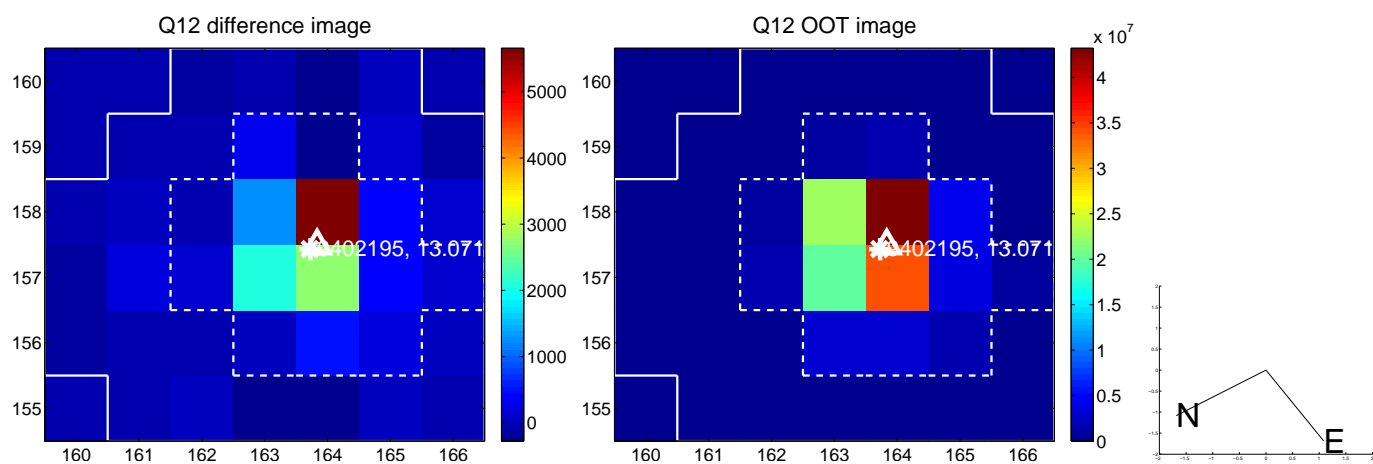
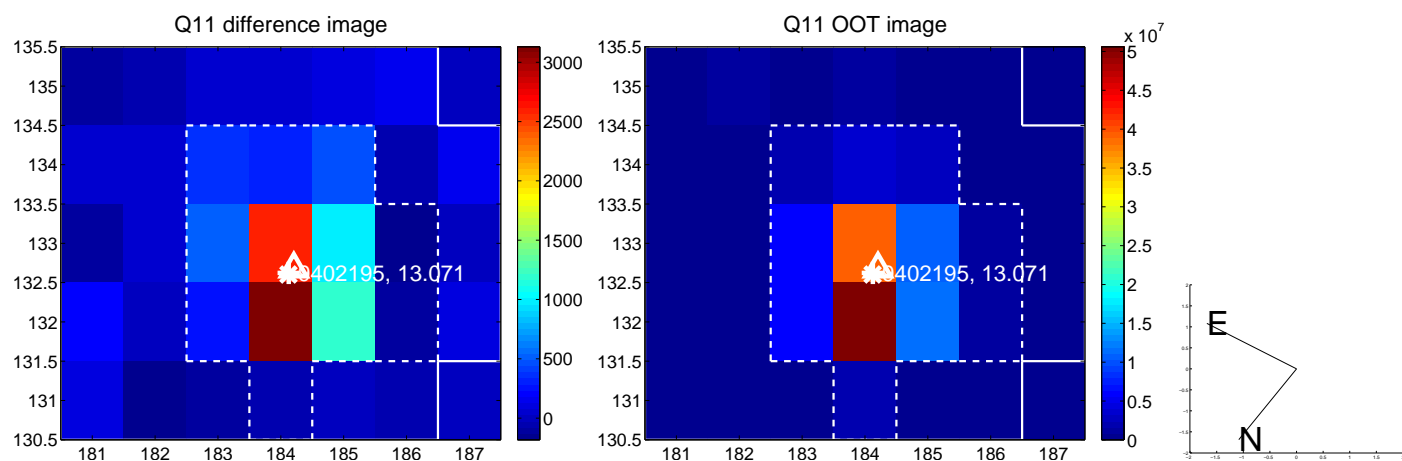
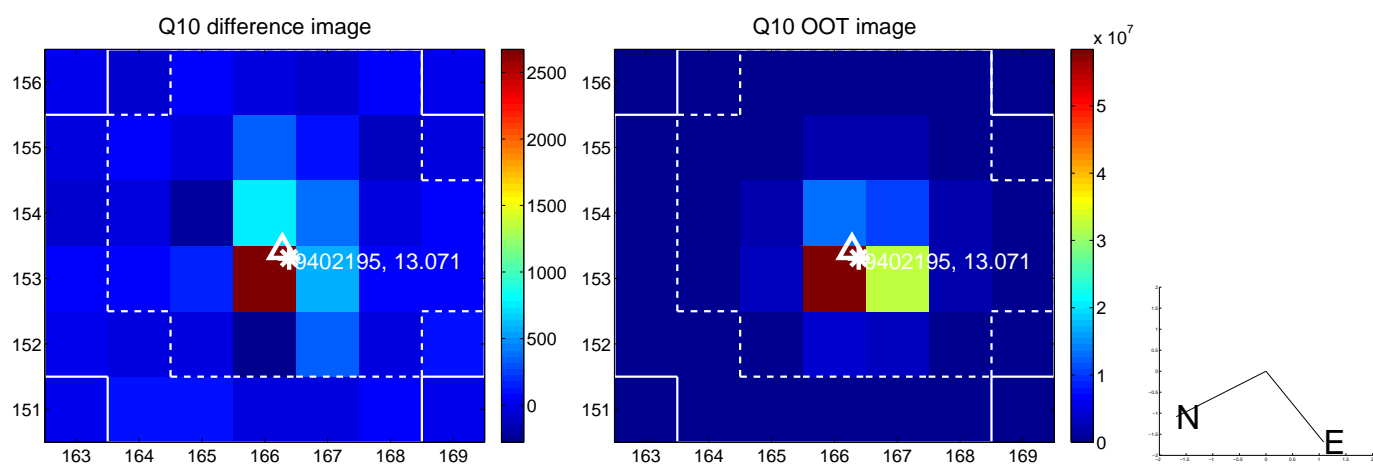
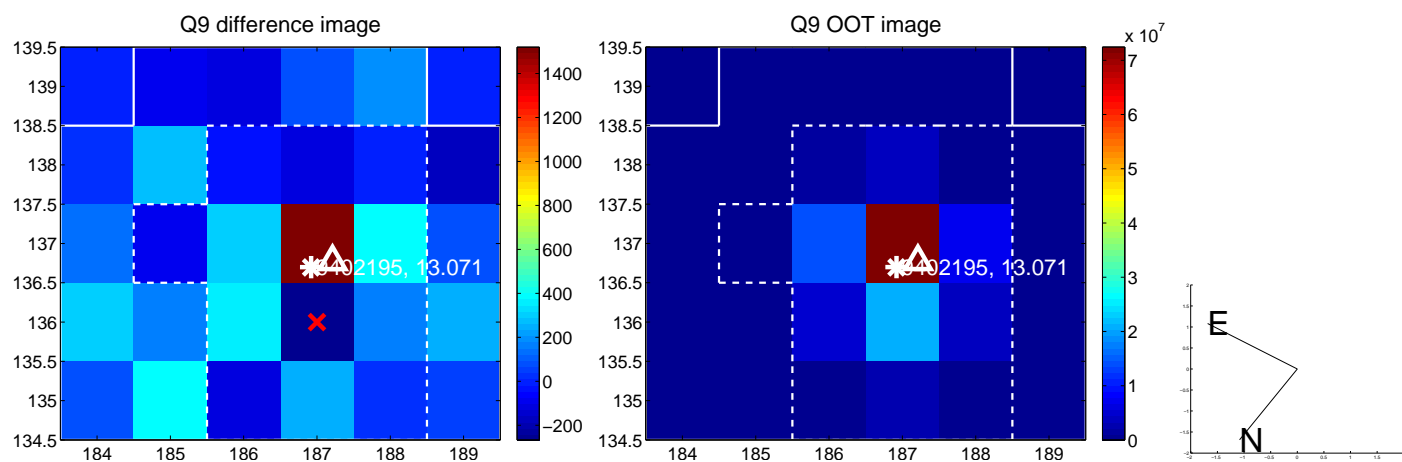
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



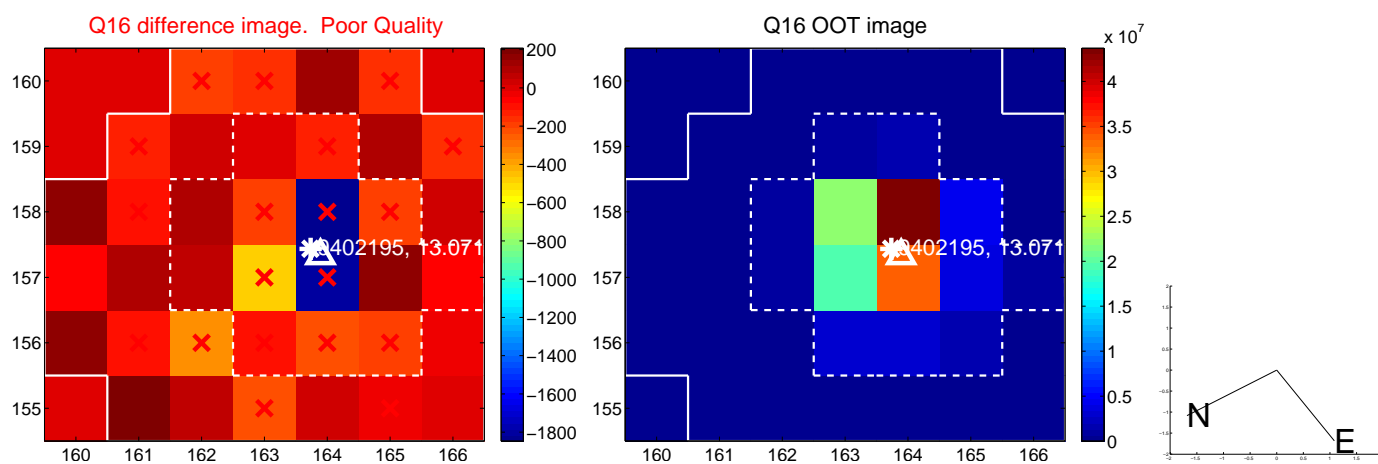
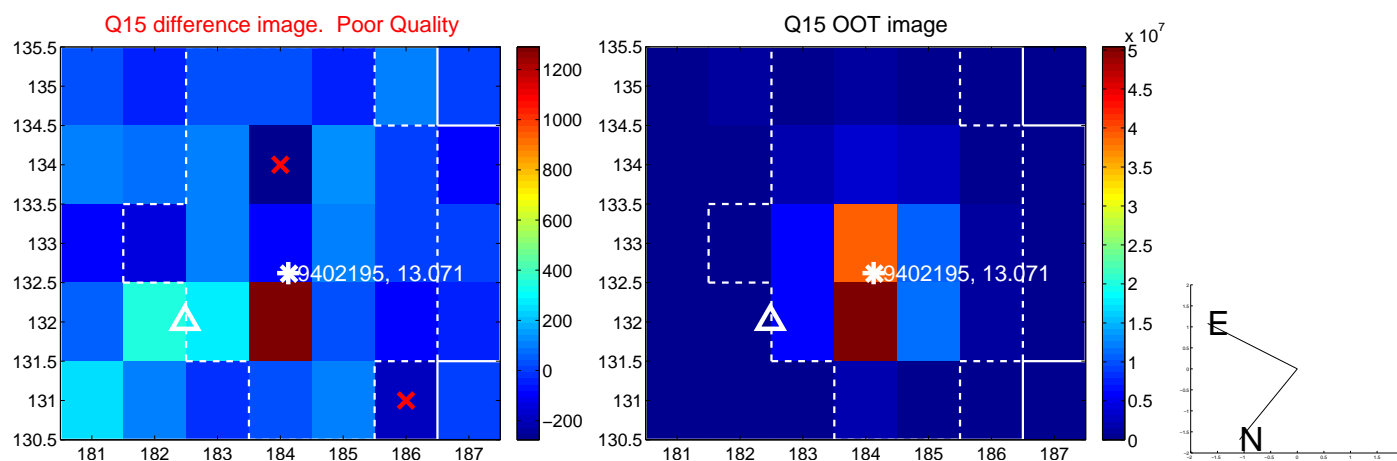
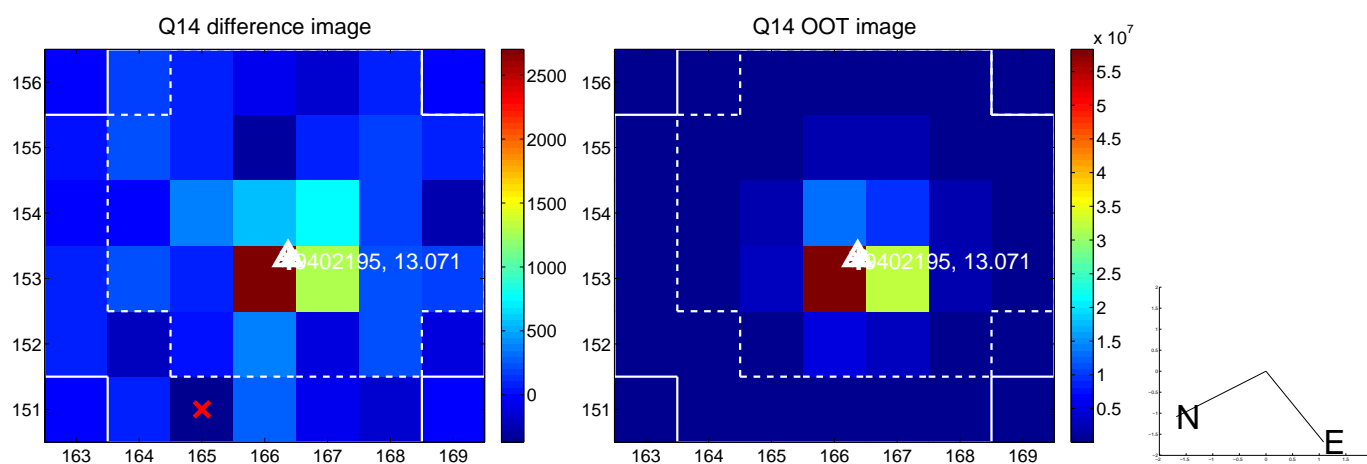
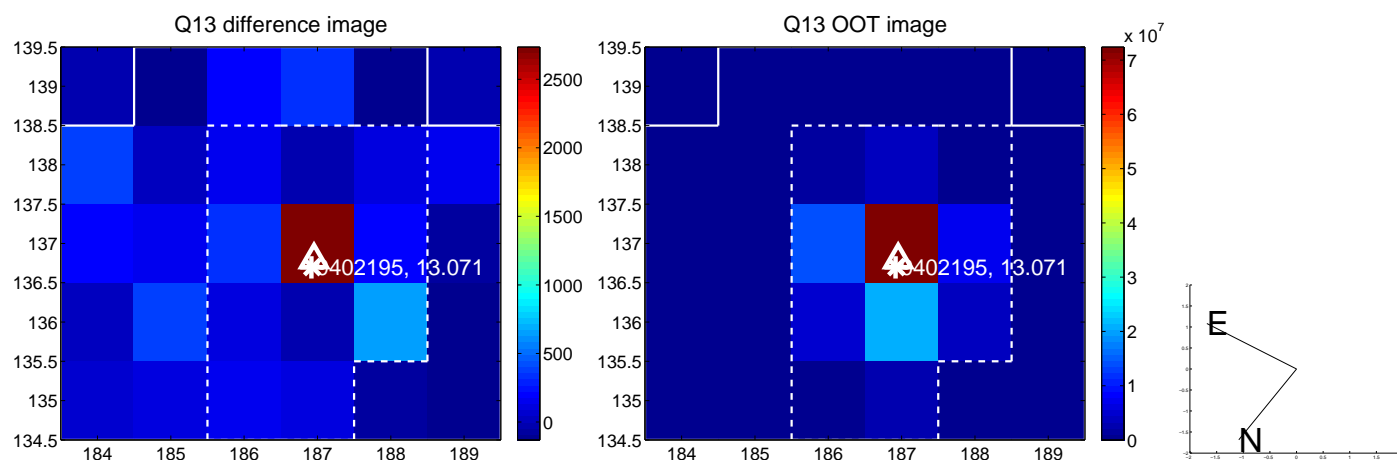
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



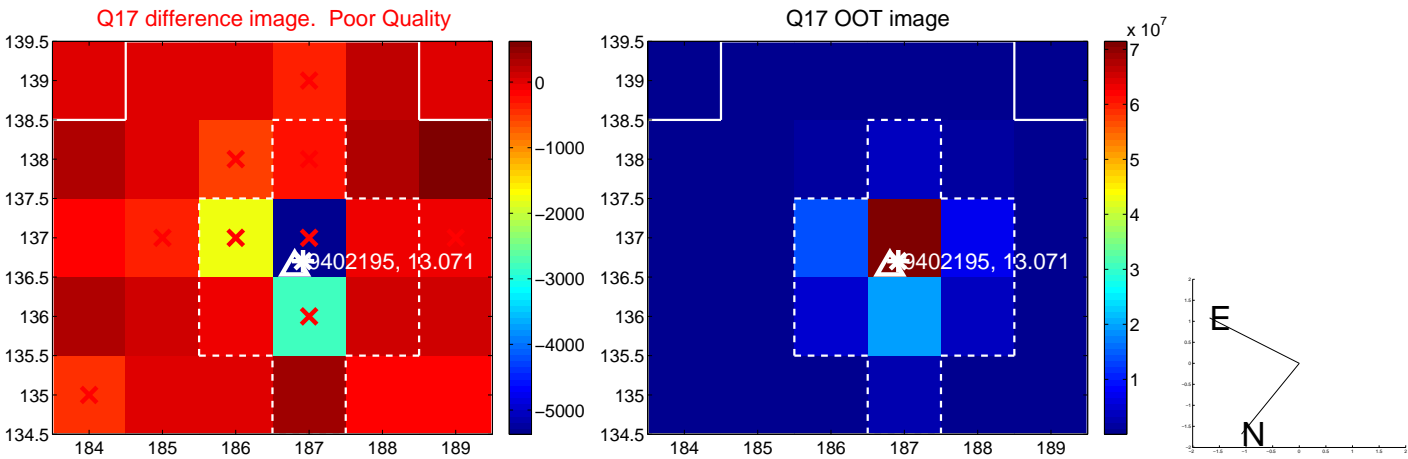
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



folded centroid time series figure for this object.

UKIRT Image

Declination

