

KIC 009230007

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})
009230007-01	OBS	No	1.660395	132.859594	94.1	19.925	11.5	23.9	2.06	9018	2.25	19513.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009230007-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED

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

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

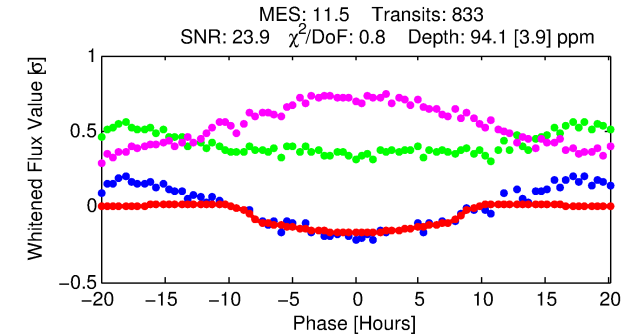
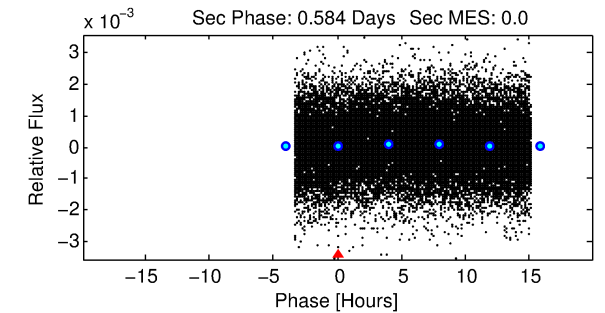
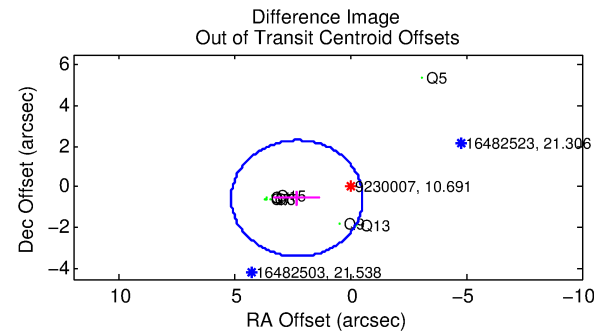
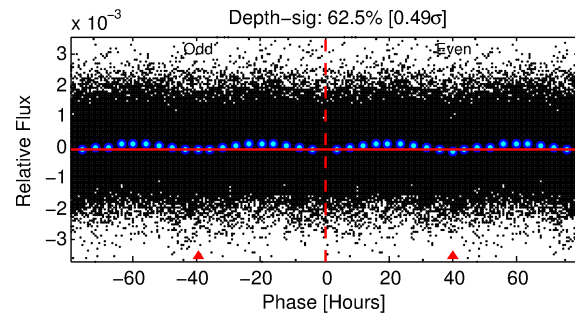
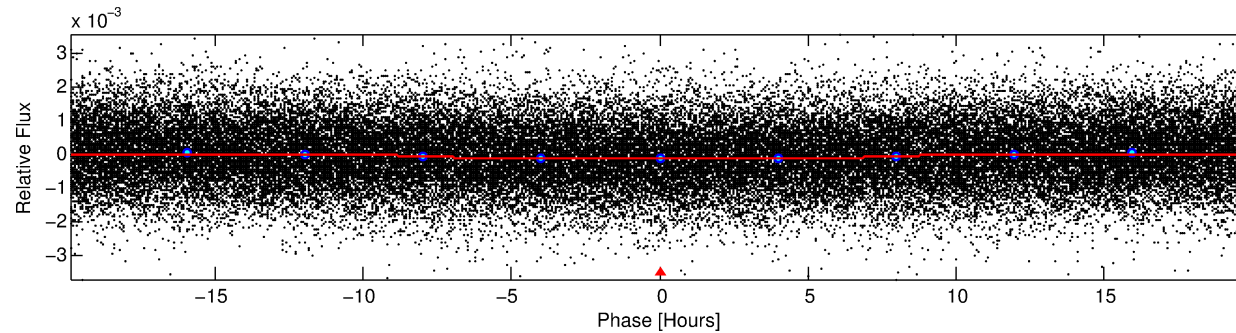
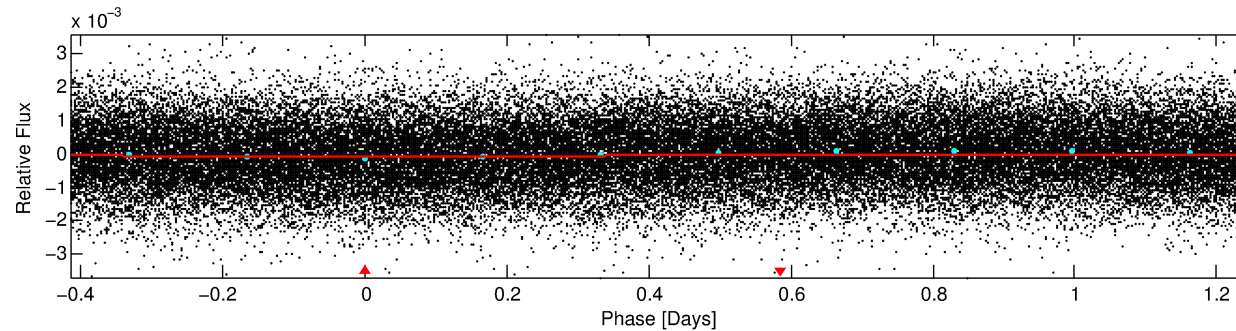
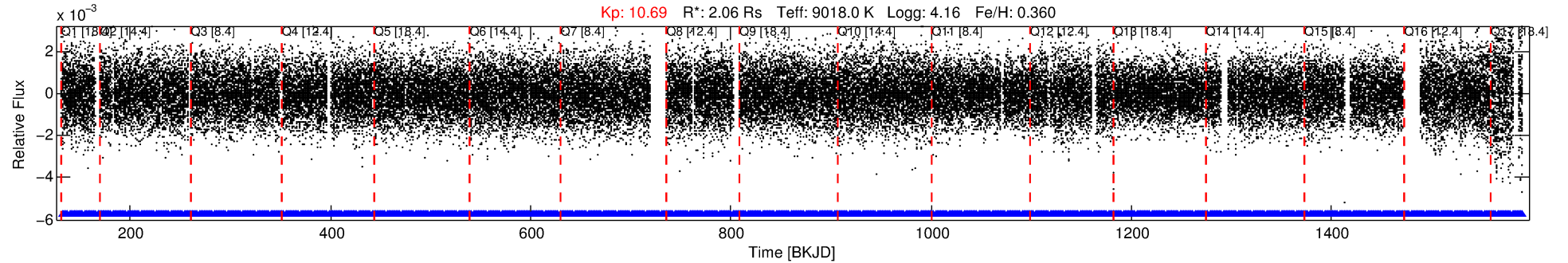
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009230007-01

No Significant Match Found

DV One-Page Summary

KIC: 9230007 Candidate: 1 of 1 Period: 1.660 d



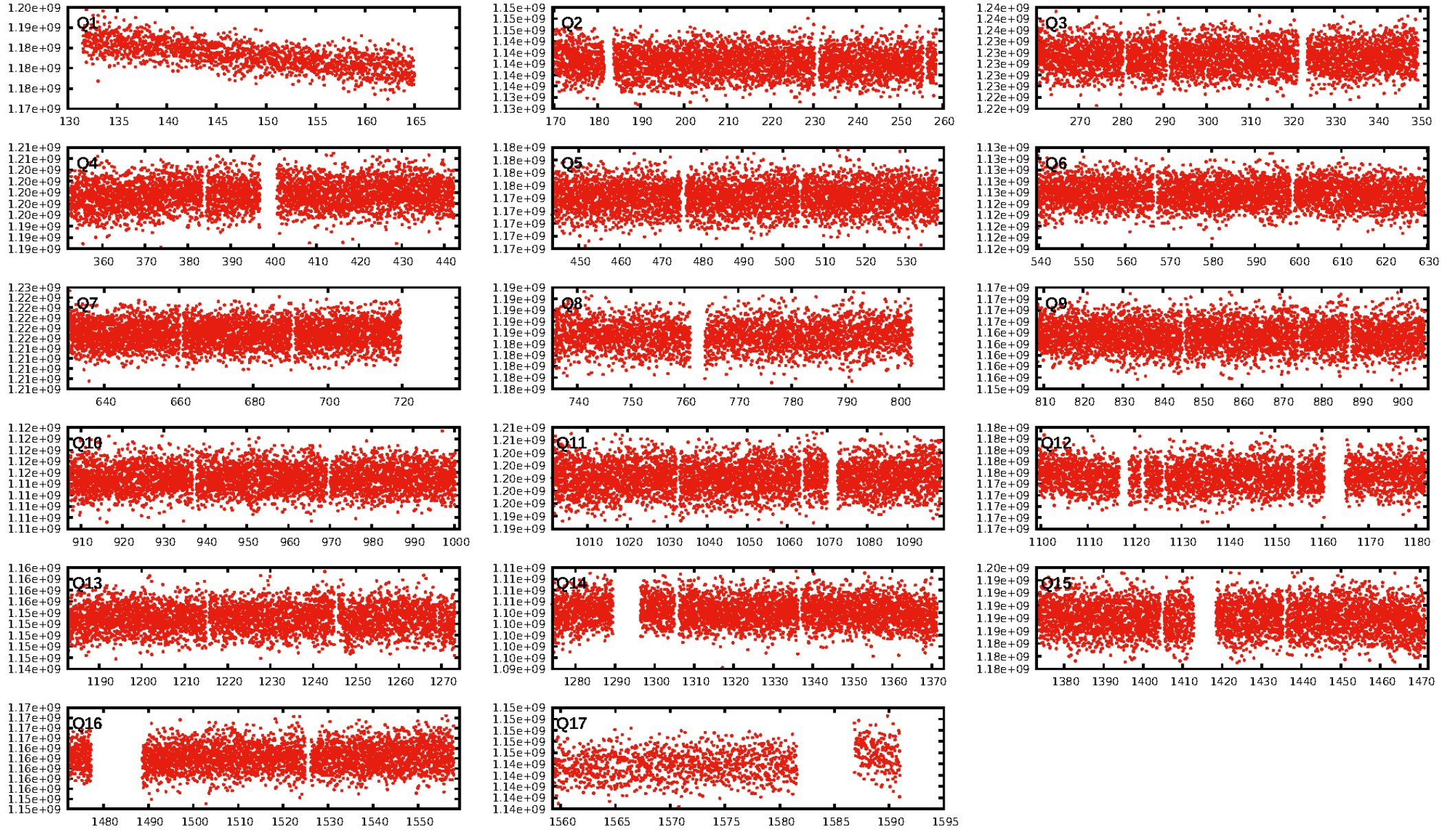
DV Fit Results:

Period = 1.66039 [0.00003] d
Epoch = 132.8596 [0.0136] BKJD
 R_p/R^* = 0.0100 [0.0005]
 a/R^* = 1.01 [0.00]
 b = 0.86 [0.09]
 Seff = 19513.43 [9834.59]
 T_{eq} = 3014 [380] K
 R_p = 2.26 [0.97] R_e
 a = 0.0360 [0.0123] AU
 Ag = N/A
 T_{effp} = N/A

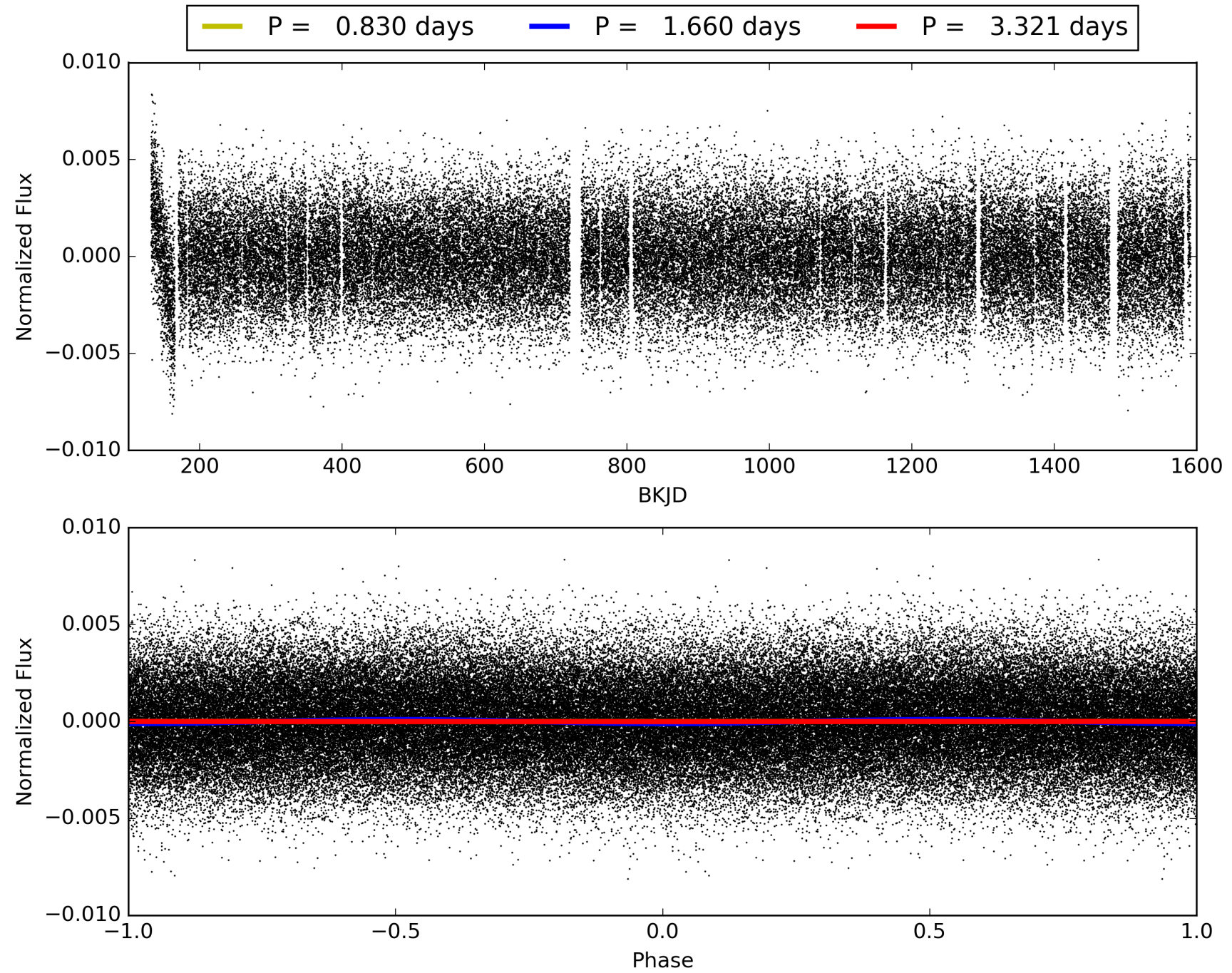
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [795/795]
GhostDiagnostic-chr: 1.477
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 2.382 arcsec [2.51 σ]
KicOffset-rm: 2.851 arcsec [2.38 σ]
OotOffset-st: 0/4/0/3 [7]
KicOffset-st: 0/4/0/3 [7]
DiffImageQuality-fgm: 0.29 [2/7]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009230007-01, PDC Light Curves

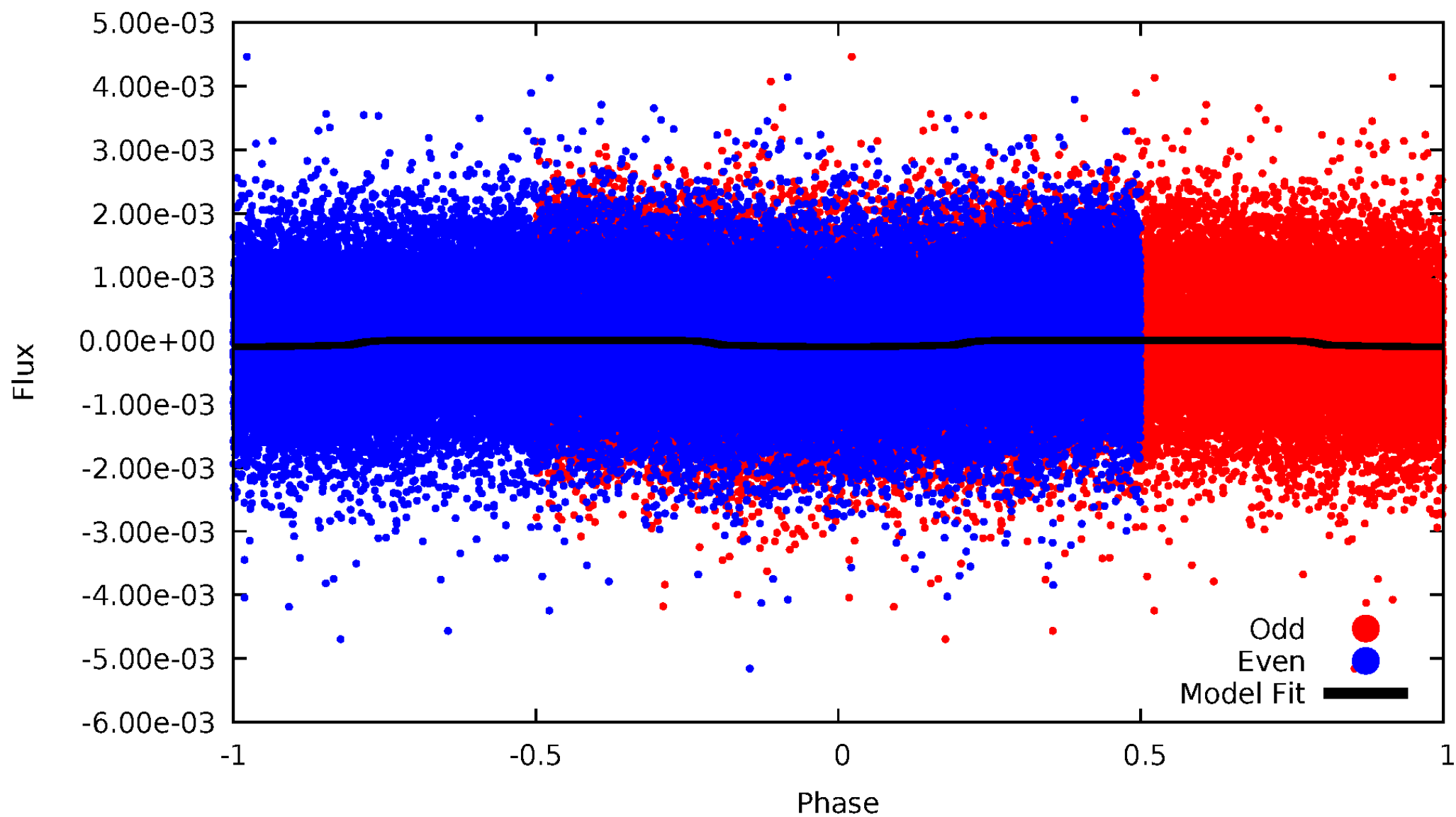


TCE 009230007-01



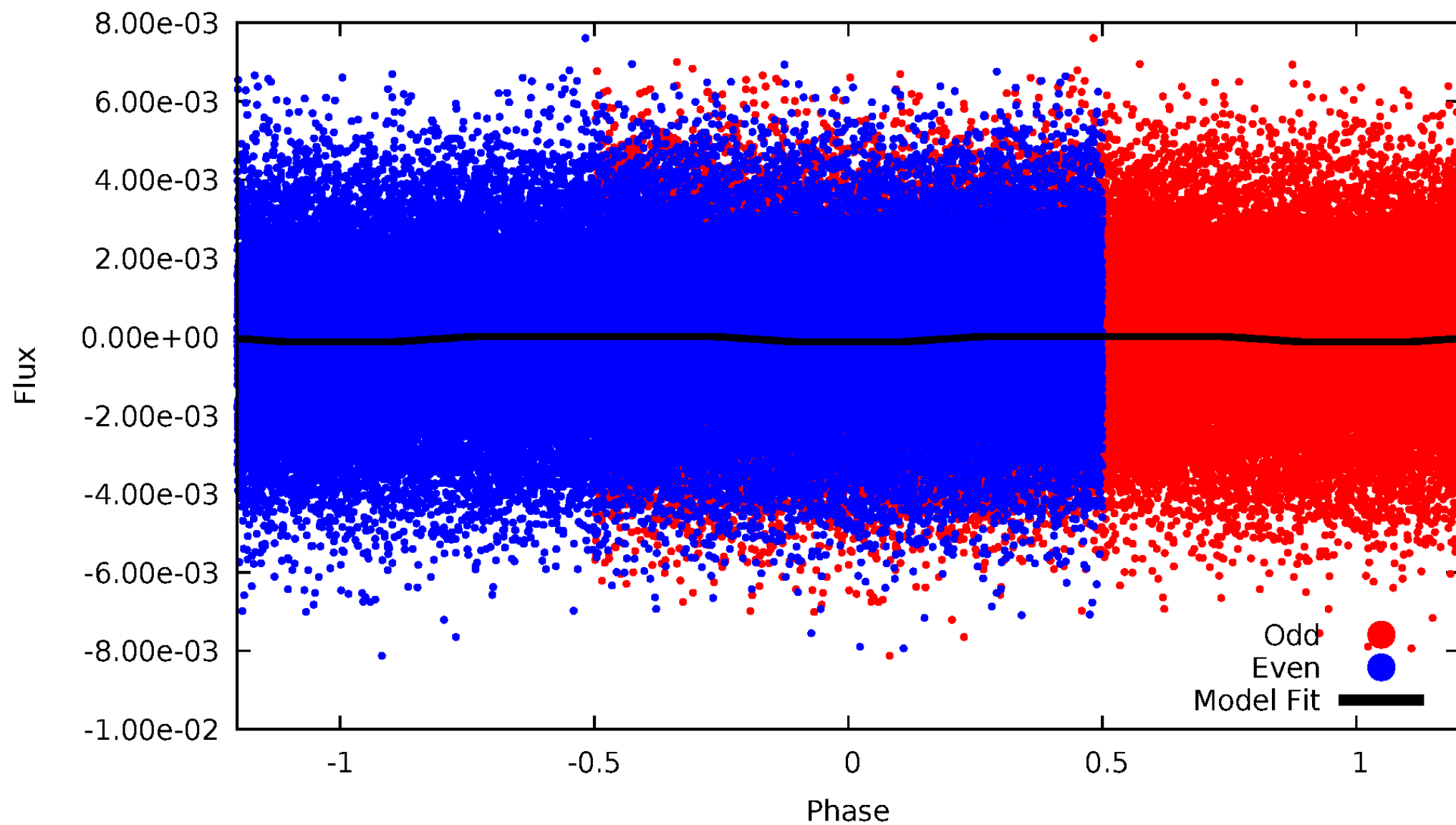
DV Odd/Even

TCE 009230007-01

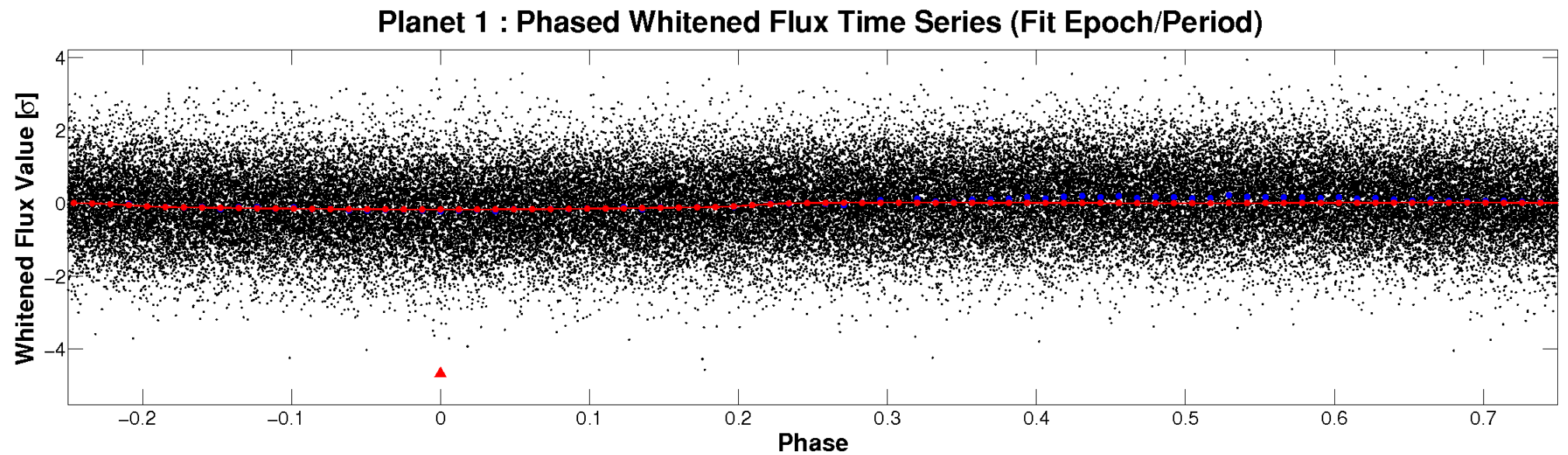
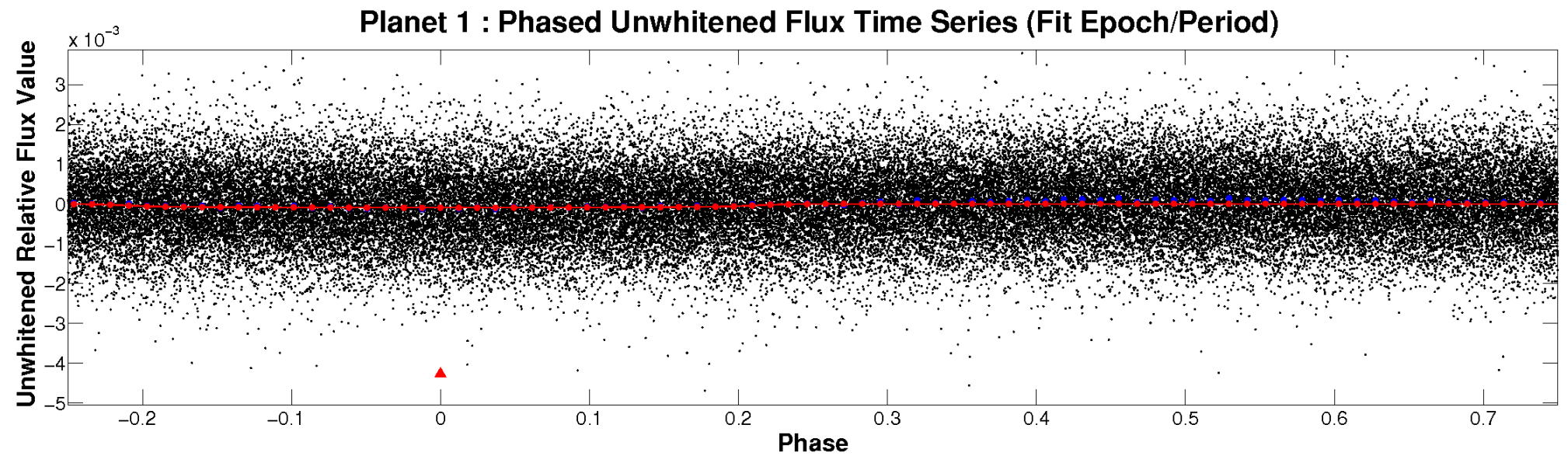


ALT Odd/Even

TCE 009230007-01

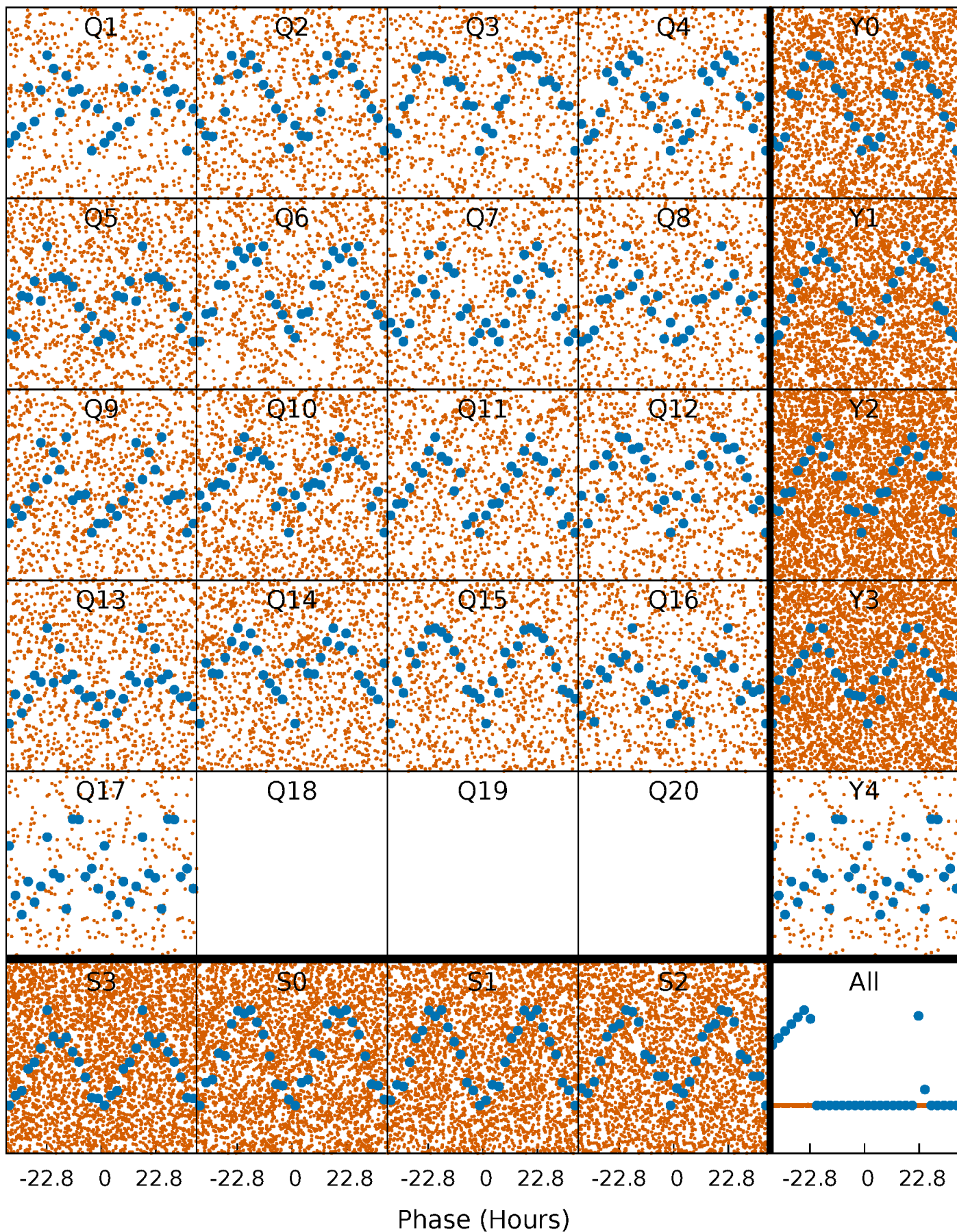


Non-Whitened Vs. Whitened Light Curve



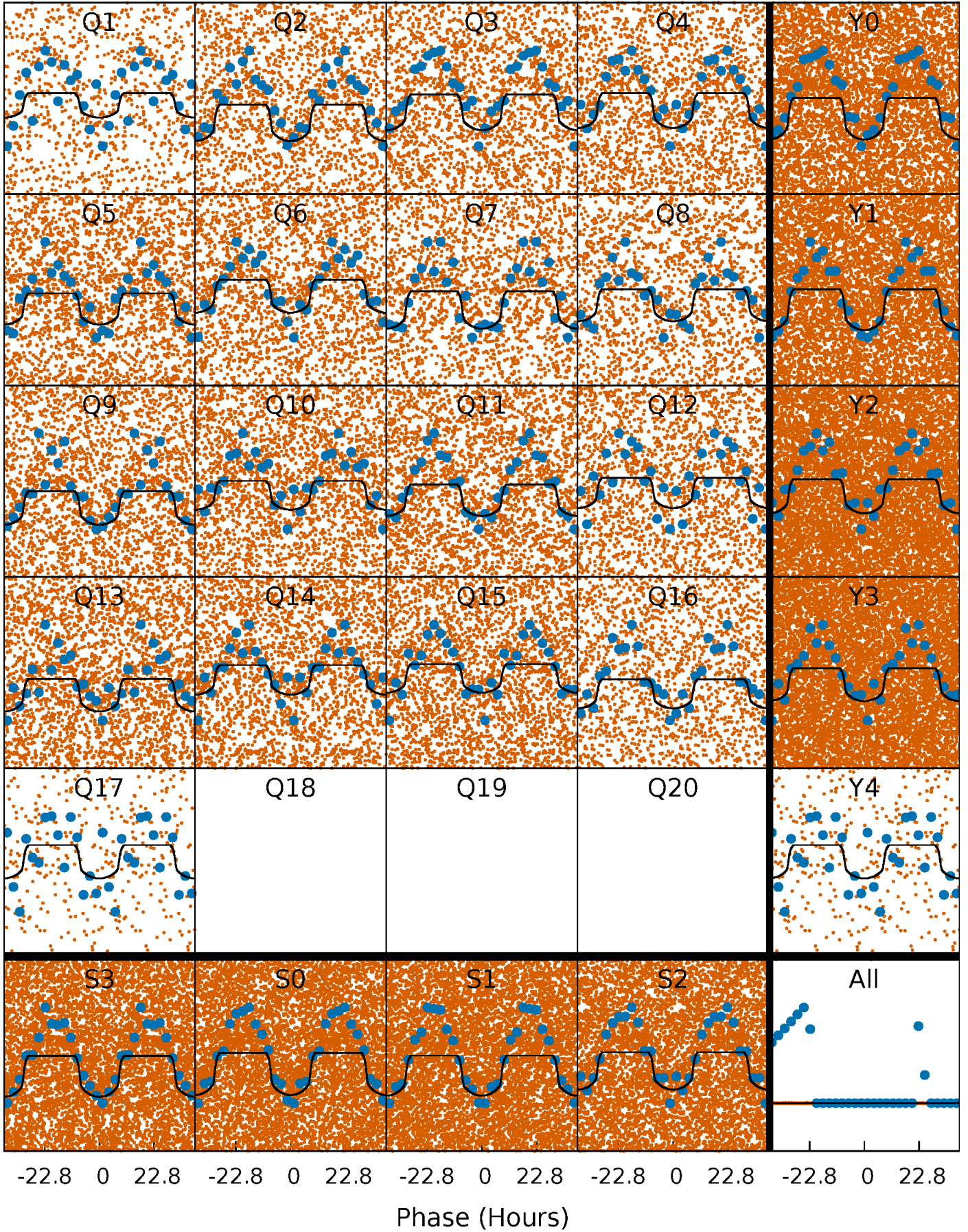
PDC Quarter-Phased Transit Curves

TCE 009230007-01 P= 1.660395 Days $T_0=132.859594$ (BKJD)



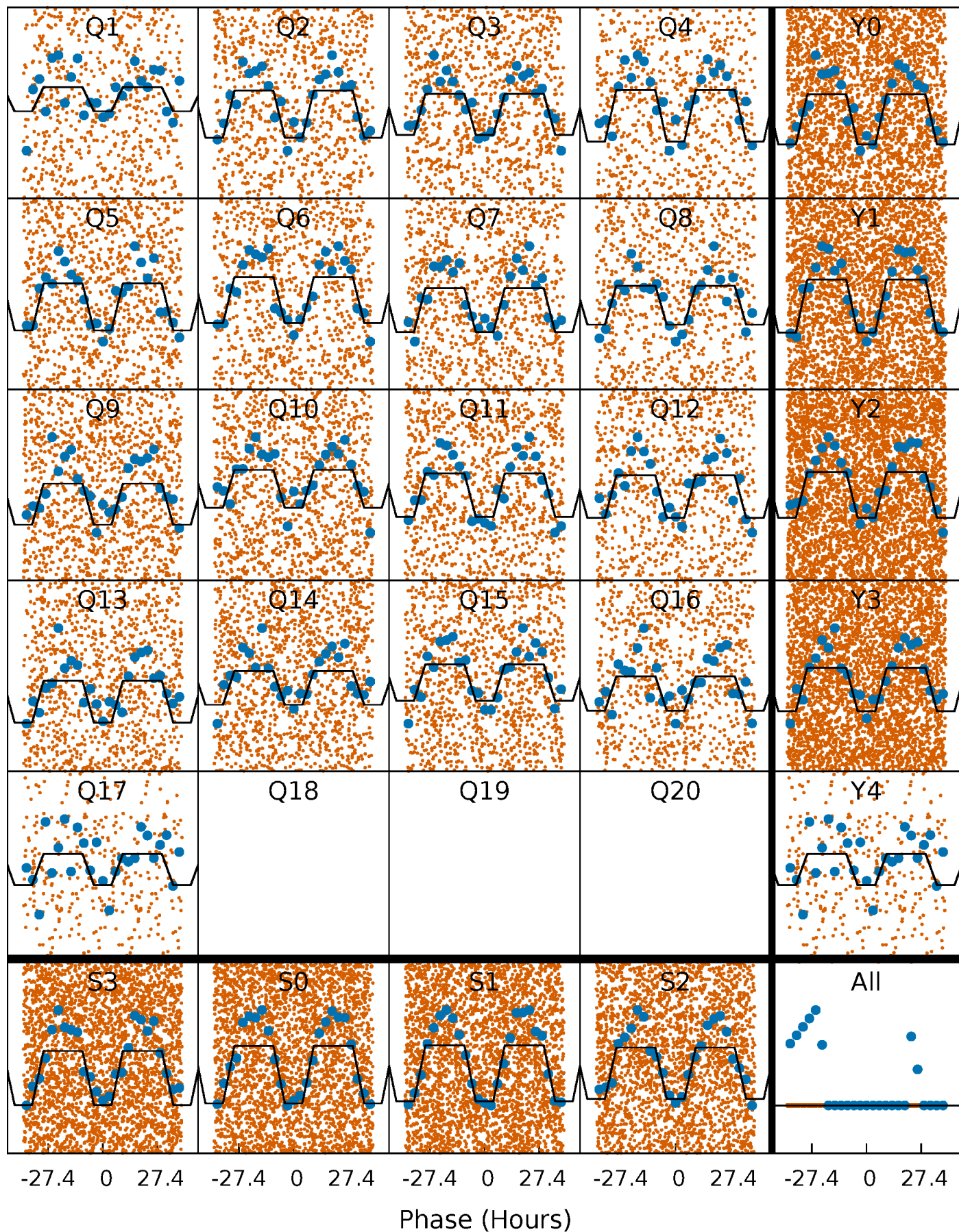
DV Quarter-Phased Transit Curves

TCE 009230007-01 P= 1.660395 Days $T_0=132.859594$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

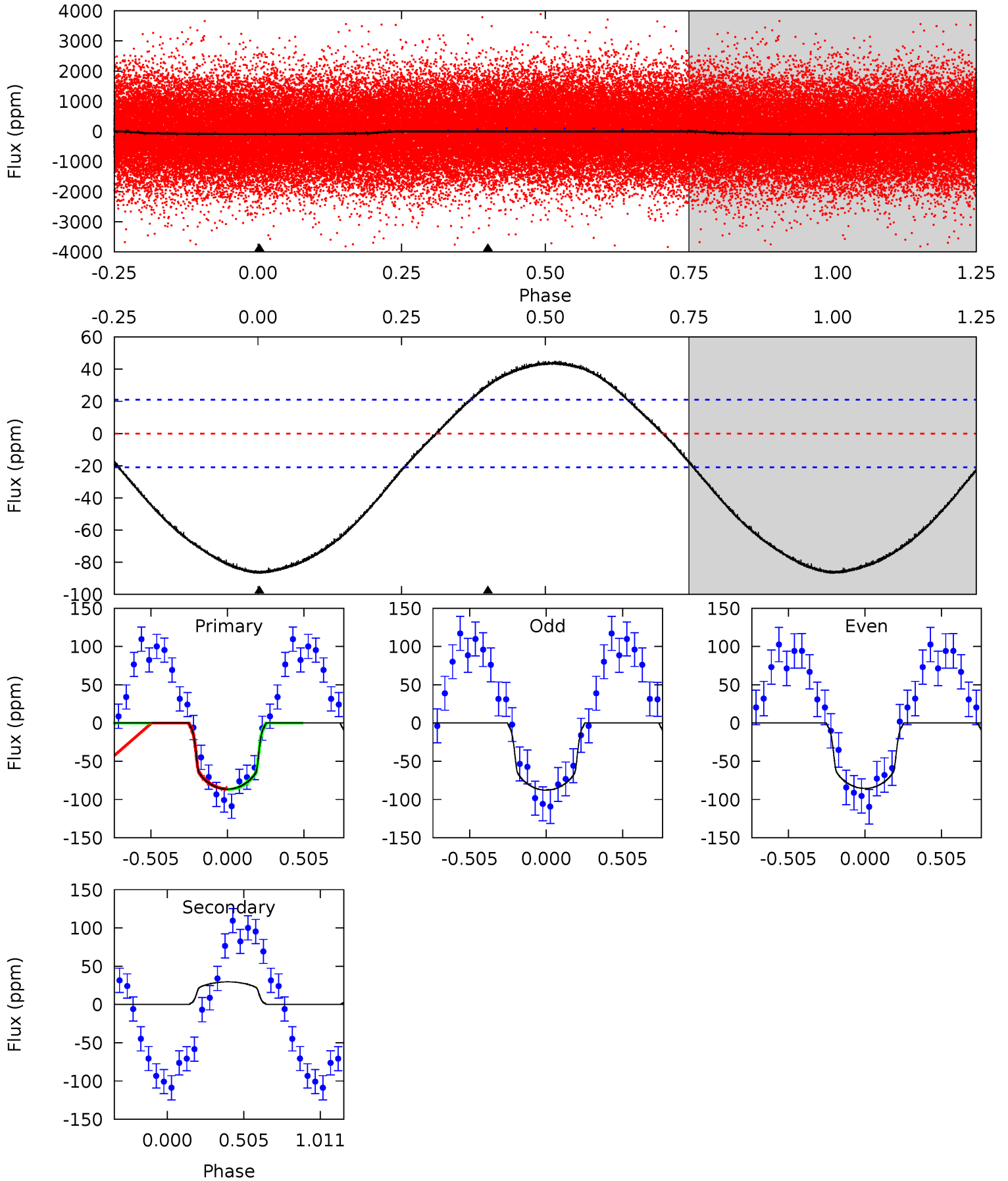
TCE 009230007-01 P= 1.660290 Days $T_0=132.908921$ (BKJD)



DV Model-Shift Uniqueness Test

009230007-01, P = 1.660395 Days, E = 131.199199 Days

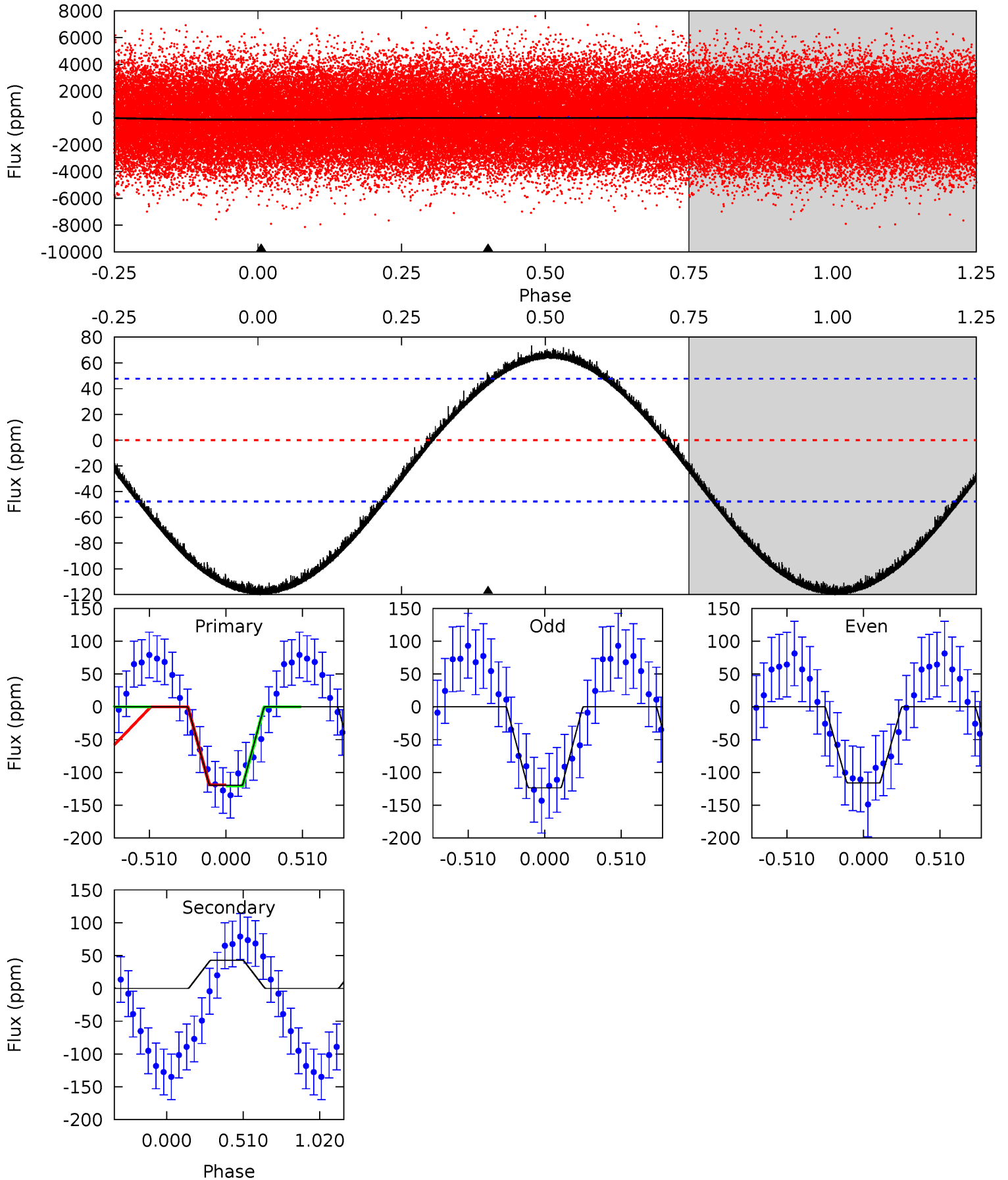
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.4	-5.94	0	0	4.21	0.67	2.17	17.4	17.4	-5.94	-5.94	0.22	1.51	0.34	0.07



Alt Model-Shift Uniqueness Test

009230007-01, P = 1.660290 Days, E = 131.248631 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	-3.77	0	0	4.21	0.66	1.38	10.6	10.6	-3.77	-3.77	0.33	0.95	0.38	0.08



Stellar Parameters For KIC 009230007

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9018^{+282}_{-376}	$4.161^{+0.062}_{-0.248}$	$0.360^{+0.050}_{-0.200}$	$2.065^{+0.883}_{-0.276}$	$2.253^{+0.350}_{-0.223}$	$0.360^{+0.102}_{-0.231}$
	+3%/-4%	+1%/-6%	+14%/-56%	+43%/-13%	+16%/-10%	+28%/-64%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009230007-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	30 ± 5	$2.39^{+0.54}_{-0.28}$	4313^{+446}_{-256}	-6413^{+323}_{-361}	$-3.603^{+1.165}_{-1.195}$
Alt.	43 ± 11	$2.66^{+0.57}_{-0.28}$	4313^{+403}_{-261}	-6584^{+509}_{-514}	$-3.989^{+1.485}_{-1.576}$

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

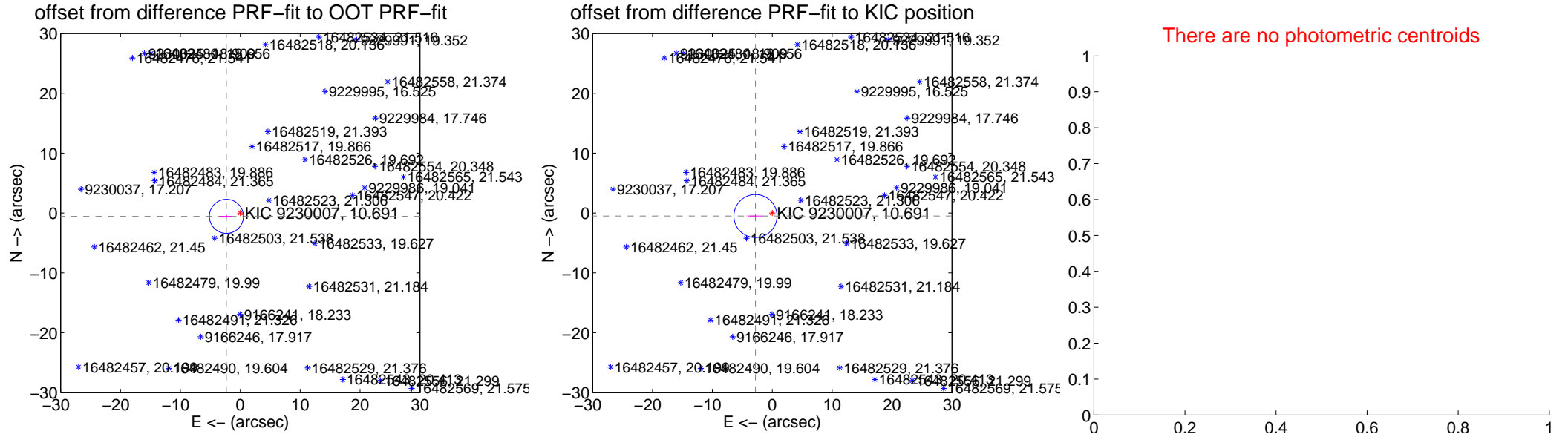
DV Centroid Data

Supplemental centroid analysis for 009230007-01. **Kepler magnitude: 10.69.** Transit SNR 23.91

There are 2 quarters with good PRF difference image offsets

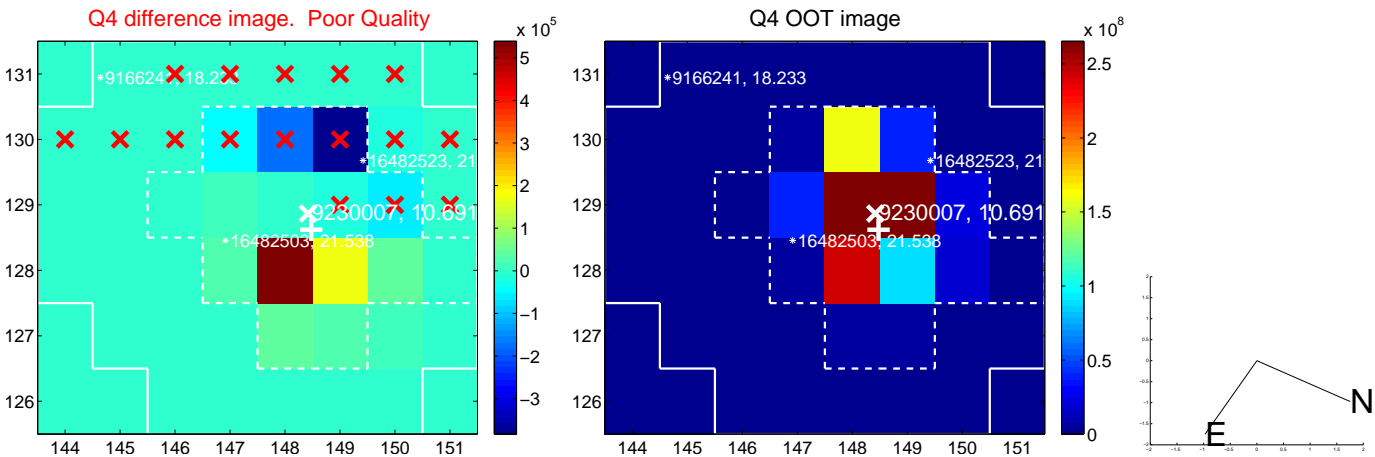
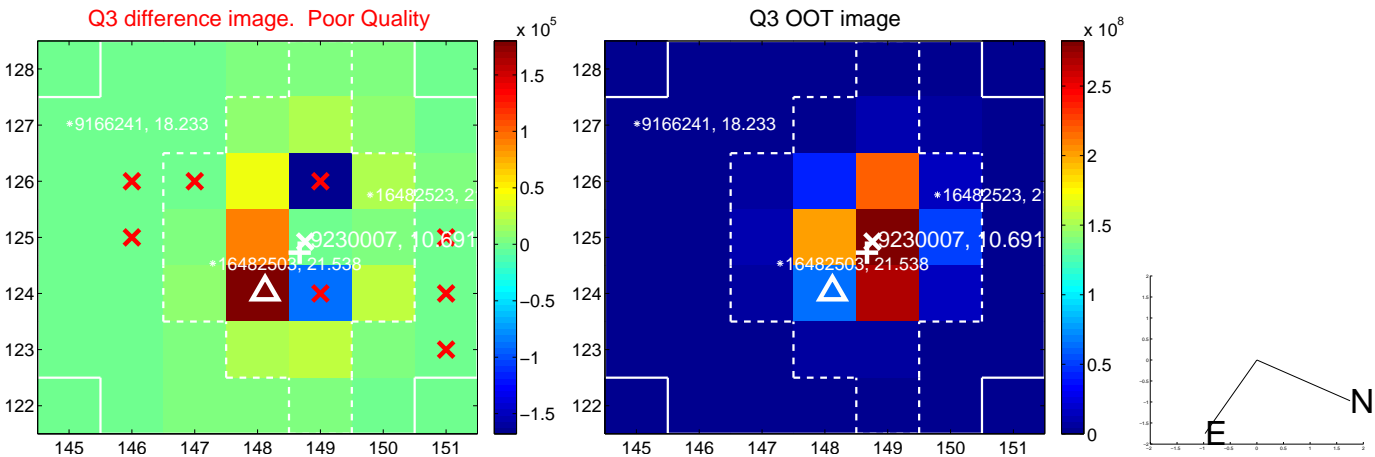
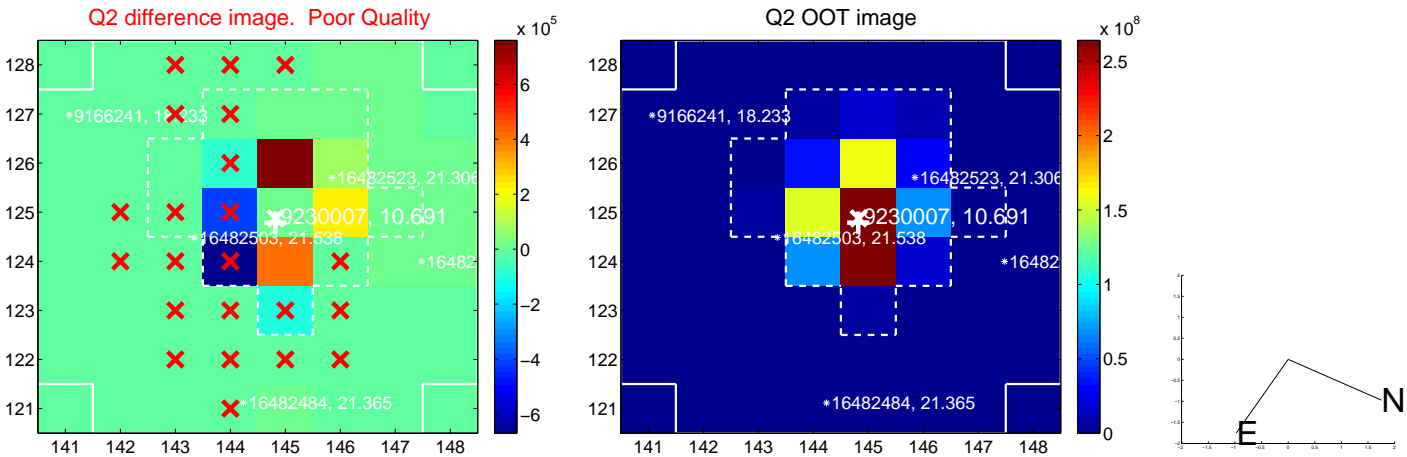
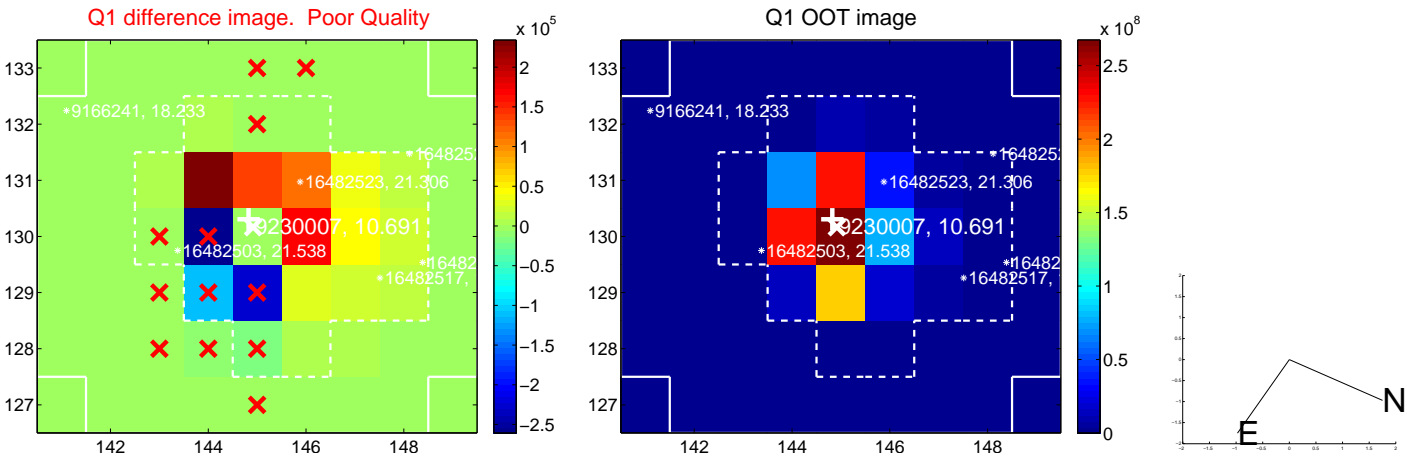
The direct PRF centroid is offset from the target star catalog position by about 0.85 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.382 ± 0.948	2.51	2.316 ± 0.972	-0.555 ± 0.309
PRF-fit source offset from KIC position	2.851 ± 1.199	2.38	2.806 ± 1.217	-0.505 ± 0.298
photometric centroid source offset	—	—	—	—

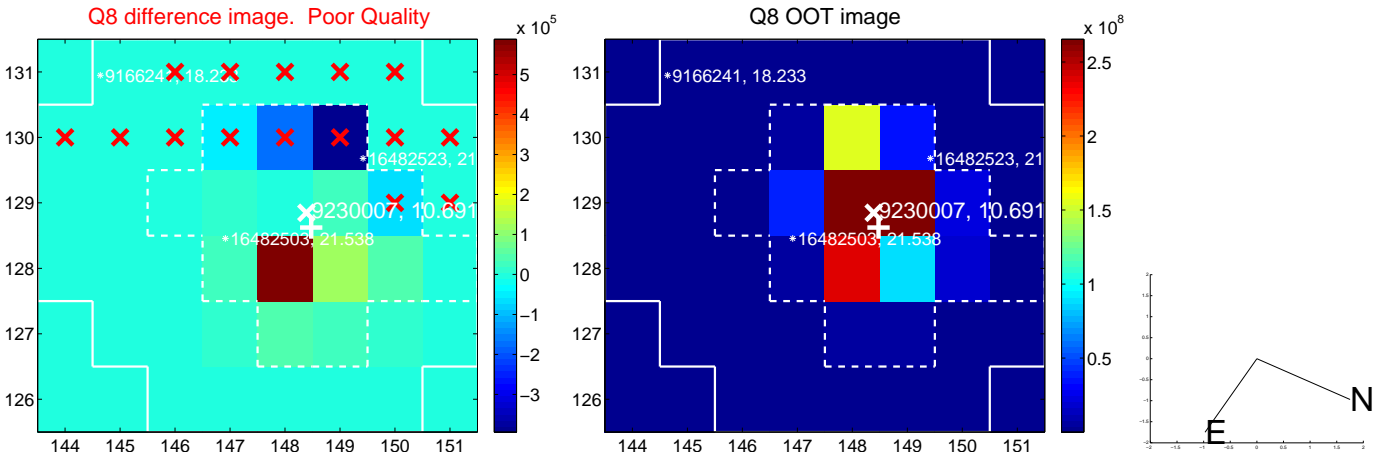
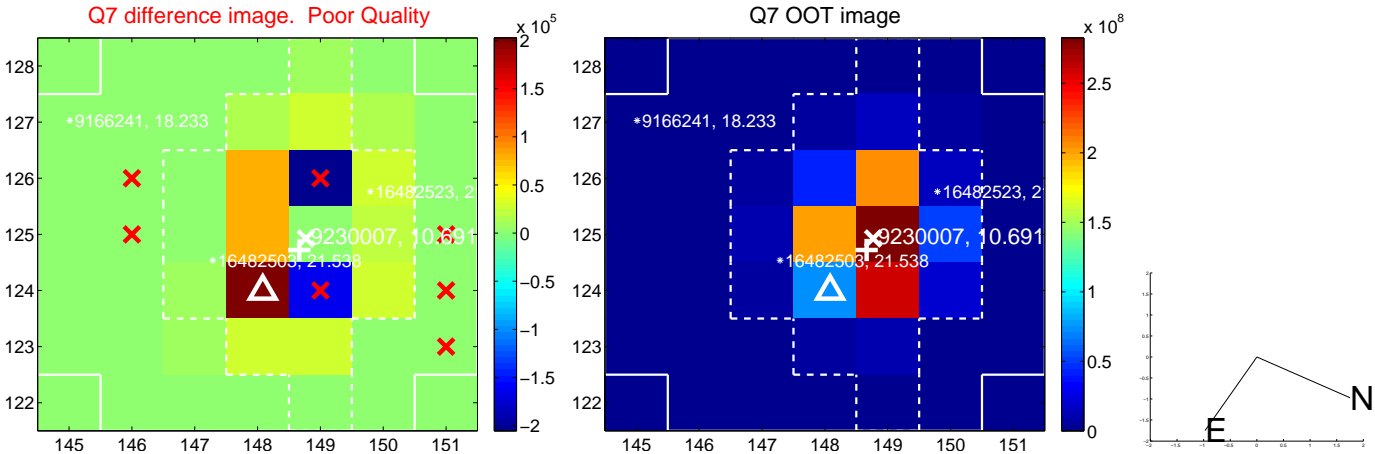
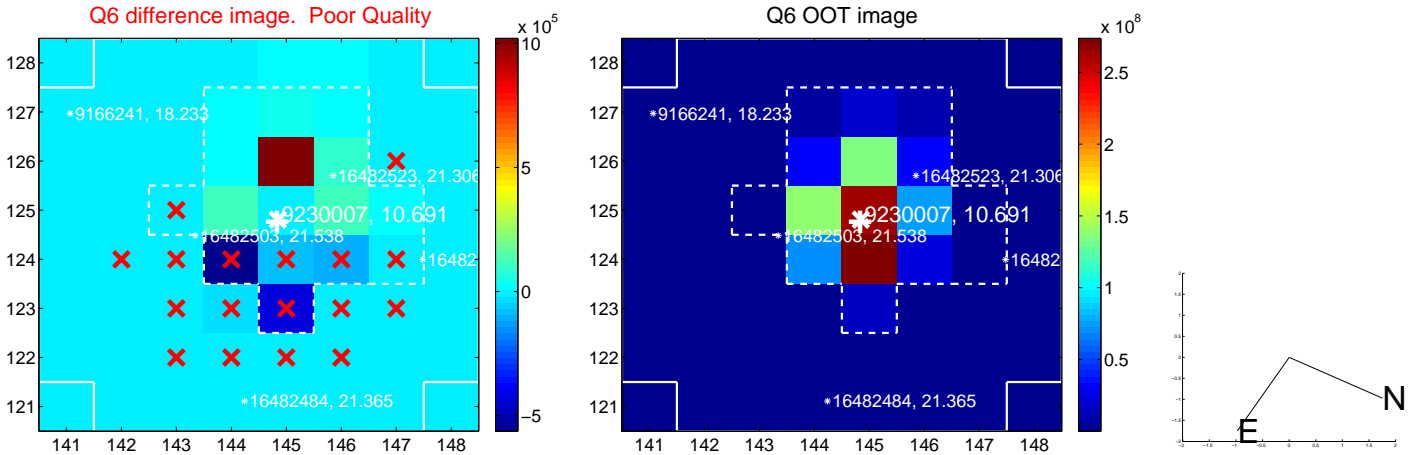
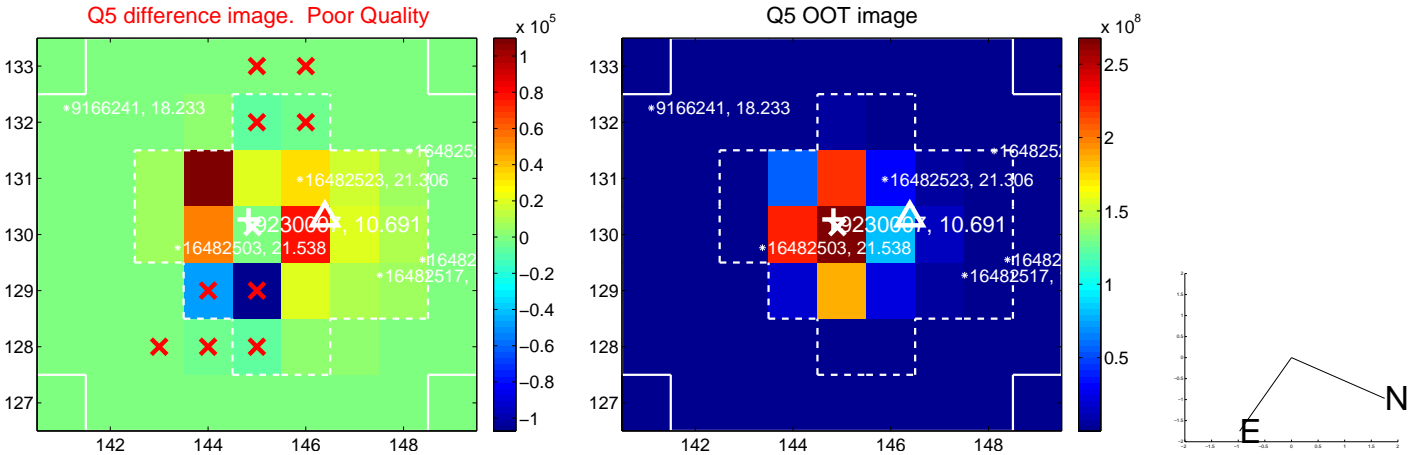


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

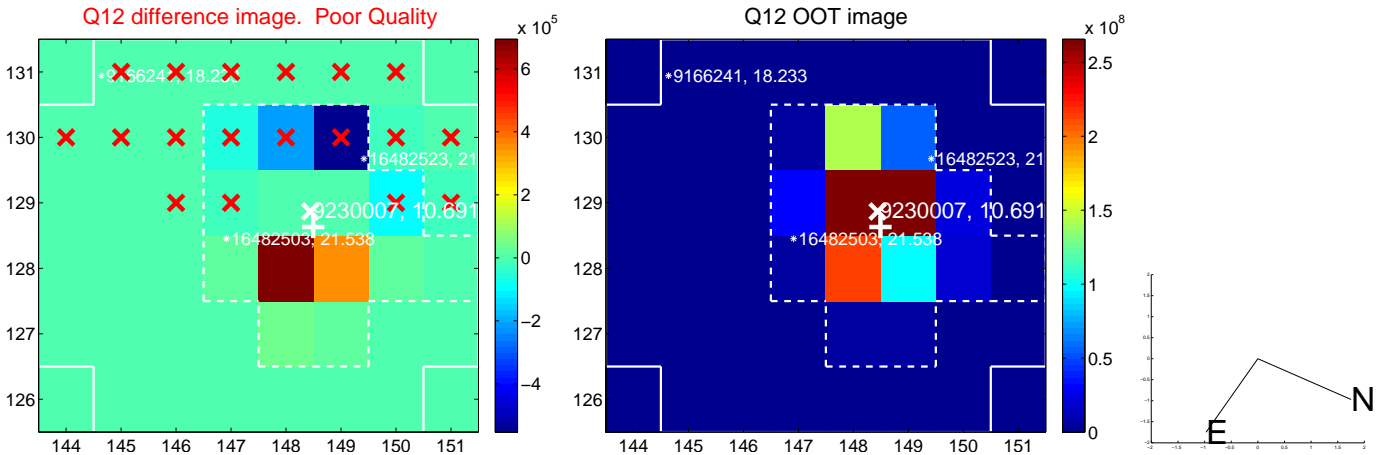
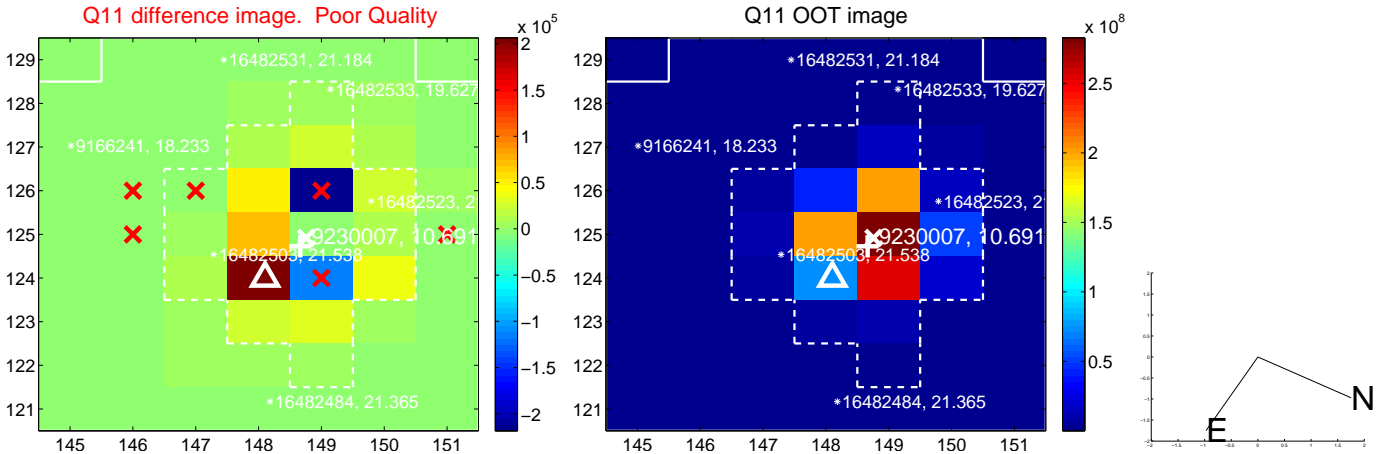
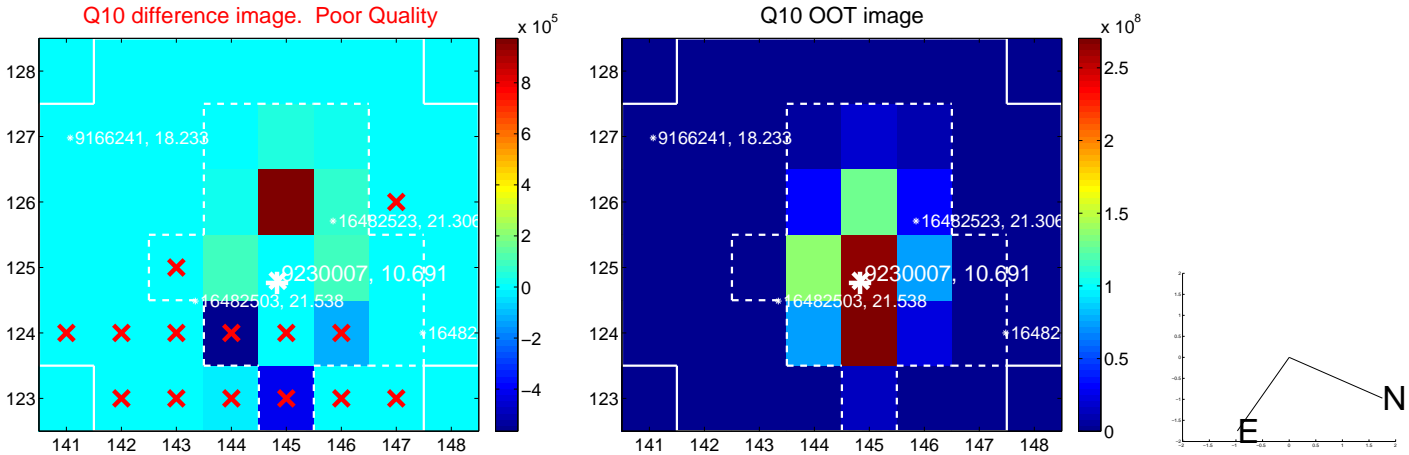
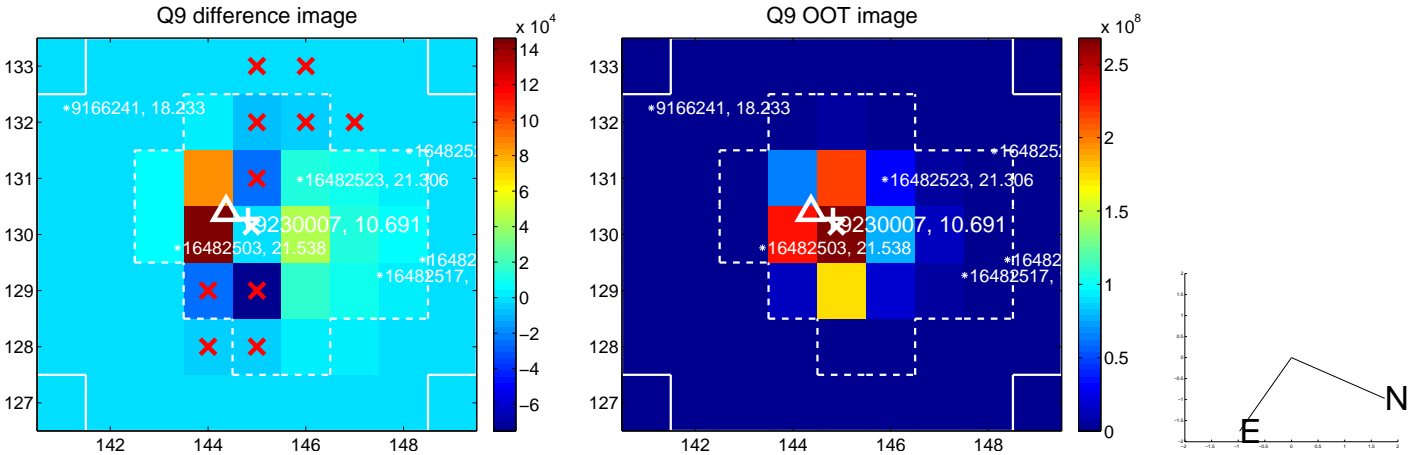
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



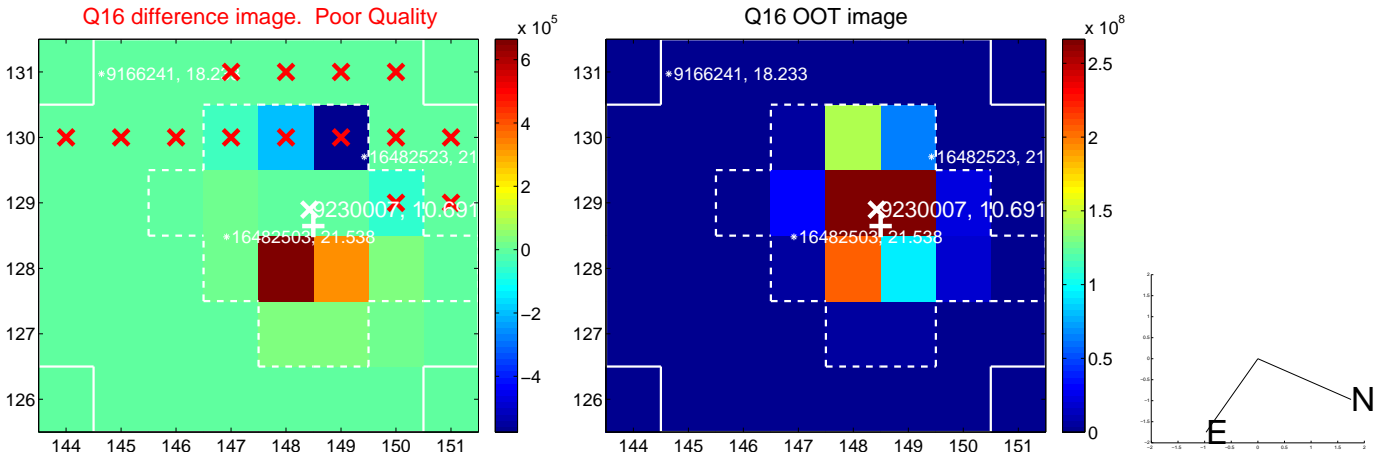
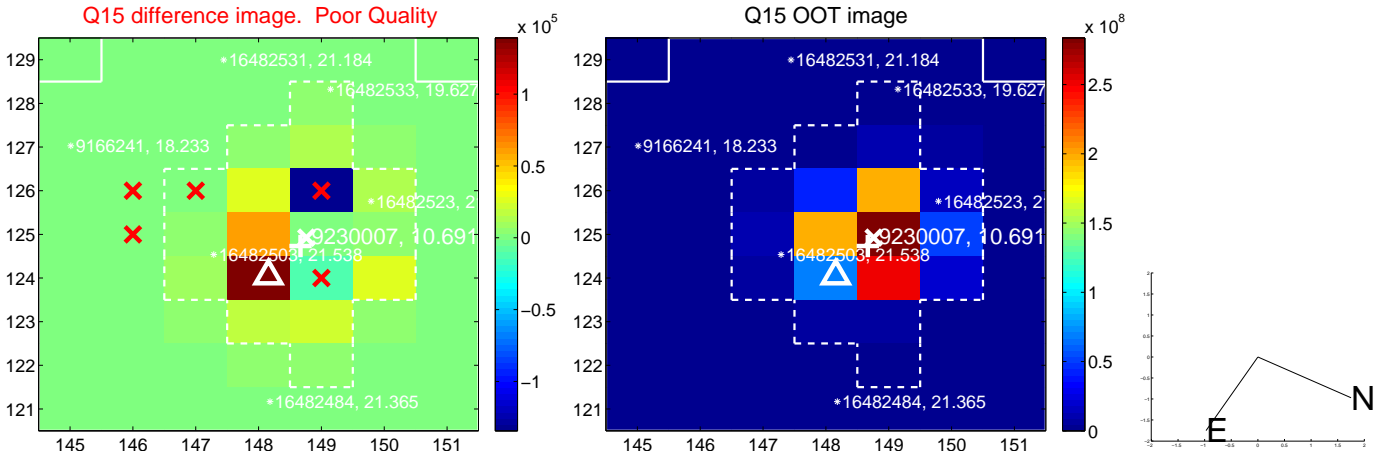
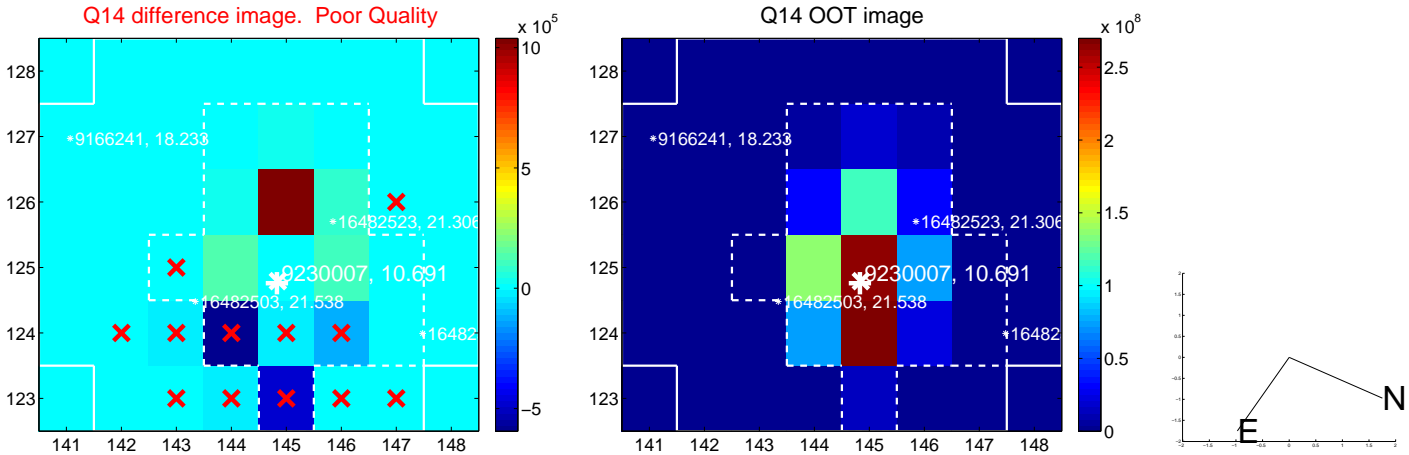
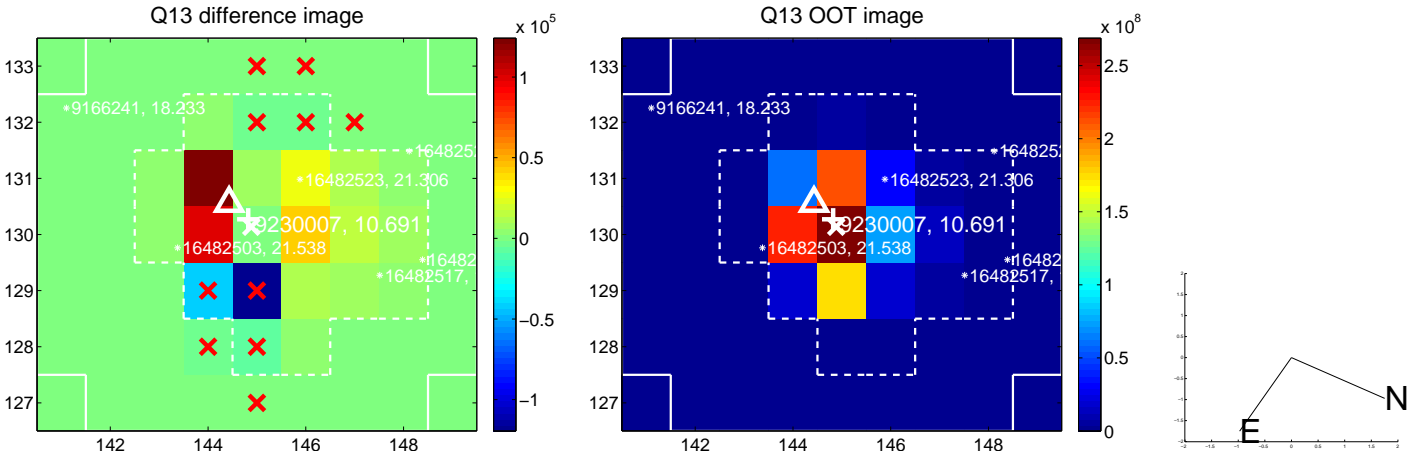
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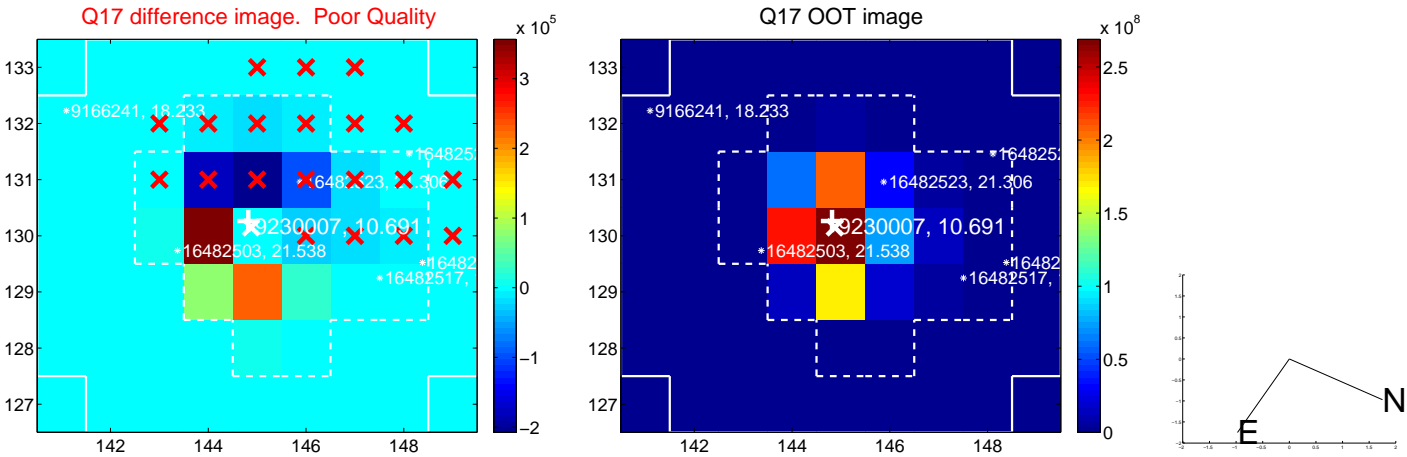
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination

