

KIC 009207344

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})
009207344-01	OBS	No	0.537915	131.734958	12.0	3.340	8.8	7.3	2.58	8759	0.96	122760.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009207344-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

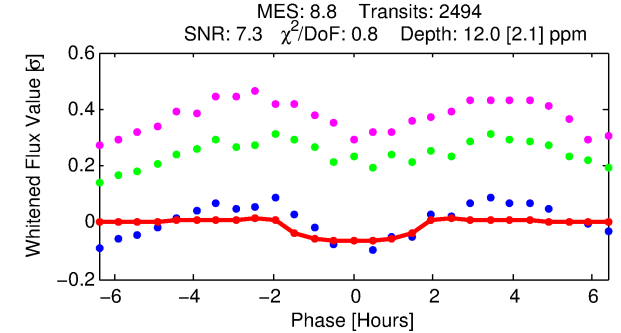
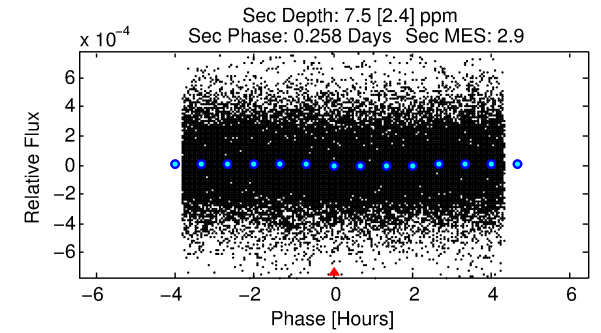
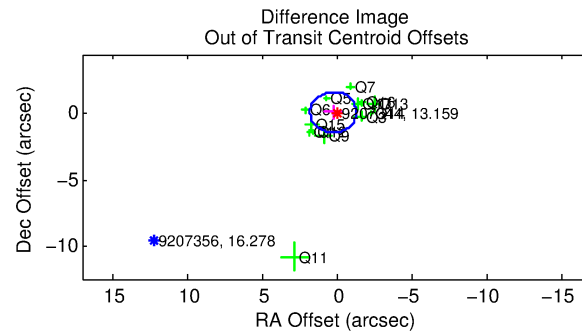
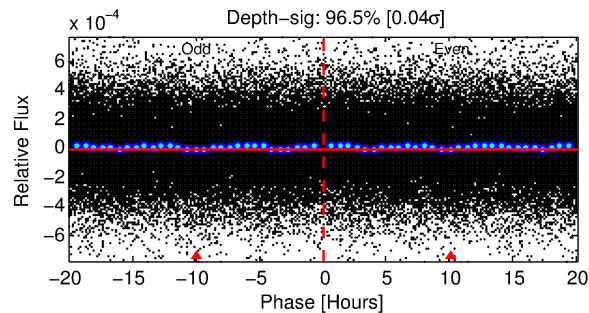
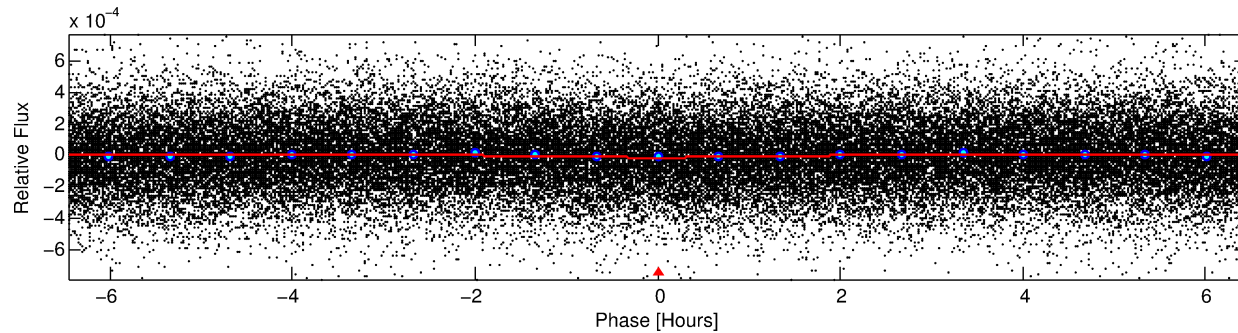
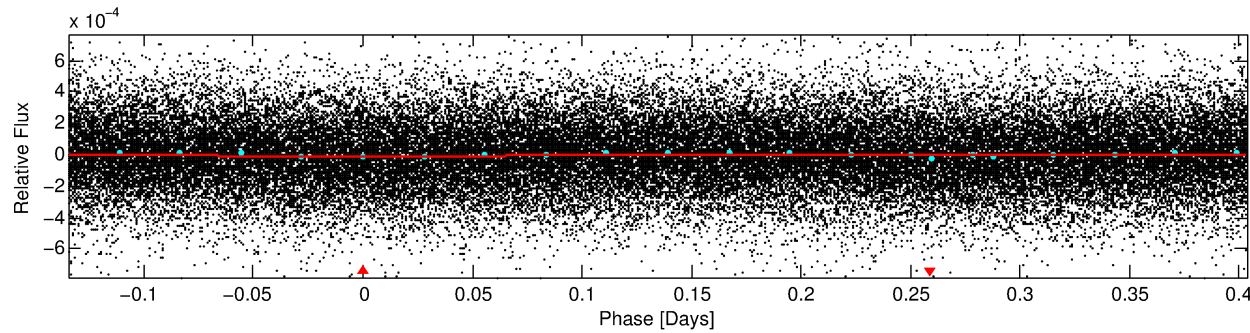
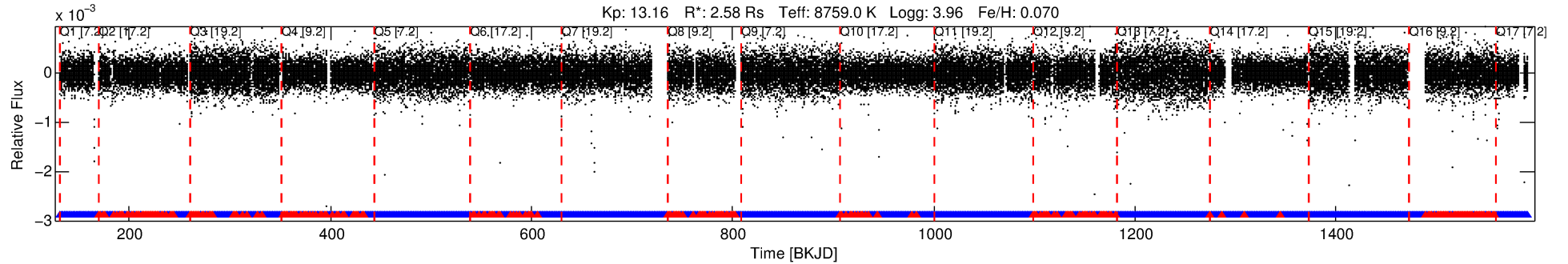
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009207344-01

No Significant Match Found

DV One-Page Summary

KIC: 9207344 Candidate: 1 of 1 Period: 0.538 d



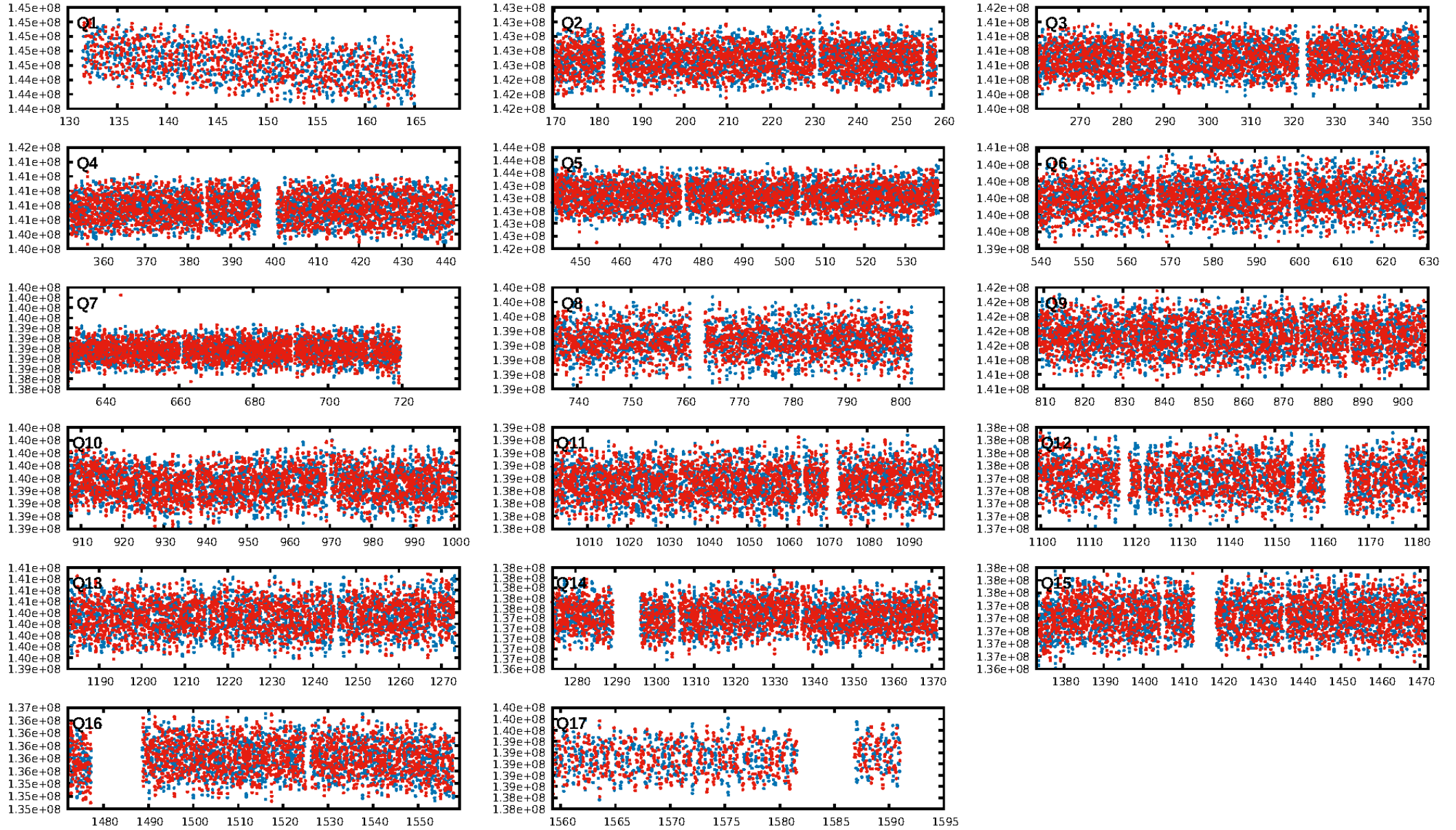
DV Fit Results:

Period = 0.53792 [0.00001] d
Epoch = 131.7350 [0.0052] BKJD
Rp/R* = 0.0034 [0.0014]
a/R* = 1.20 [0.93]
b = 0.72 [1.71]
Seff = 122760.24 [54935.89]
Teq = 4773 [534] K
Rp = 0.96 [0.51] Re
a = 0.0169 [0.0049] AU
Ag = 1.27 [1.21] [0.22 σ]
Teffp = 7831 [1729] K [1.69 σ]

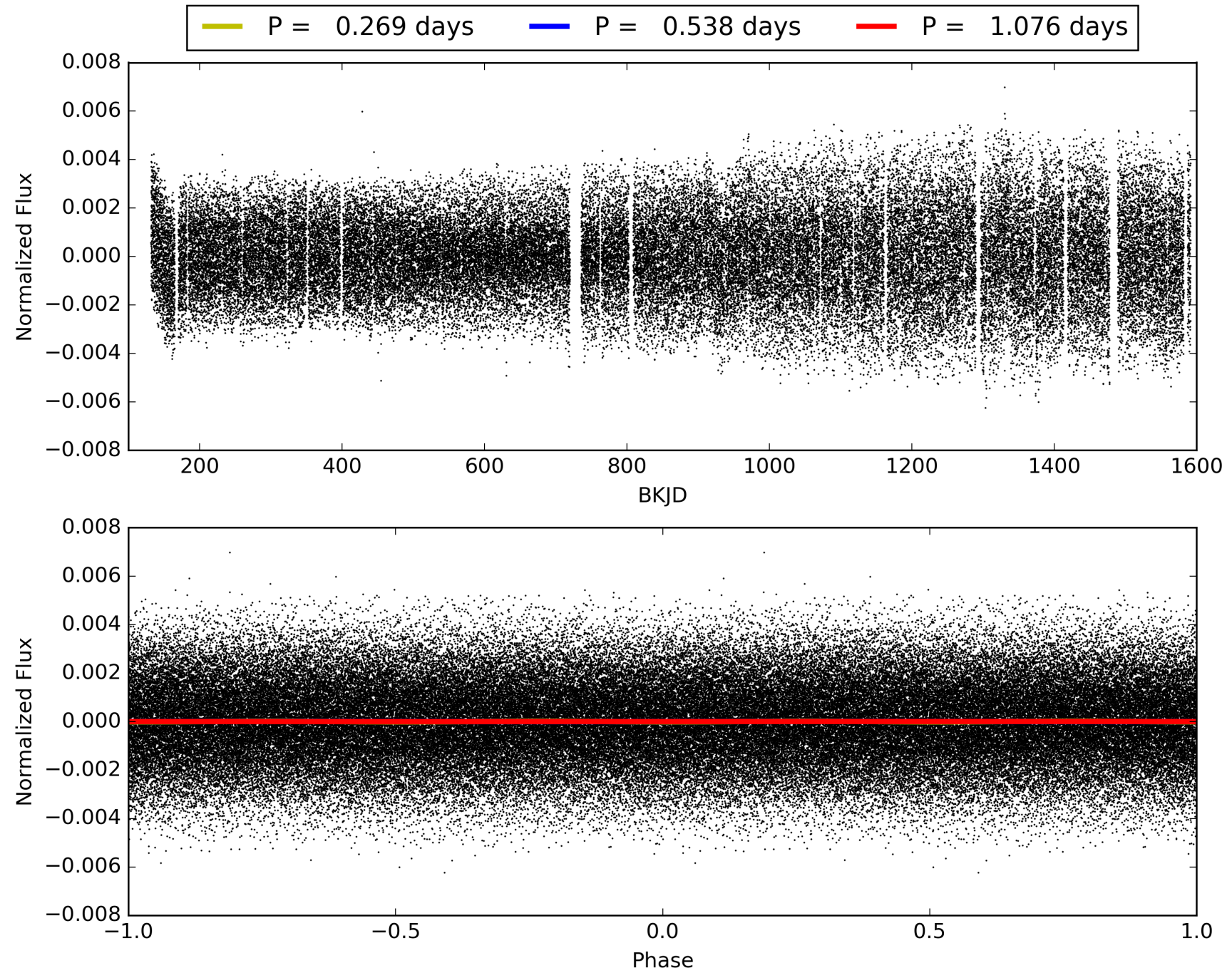
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.79e-14
RollingBand-fgt: 0.87 [2078/2382]
GhostDiagnostic-chr: 2.994
Centroid-sig: 13.4%
Centroid-so: 1.530 arcsec [1.52 σ]
OotOffset-rm: 0.261 arcsec [0.51 σ]
KicOffset-rm: 0.306 arcsec [0.38 σ]
OotOffset-st: 2/4/2/5 [13]
KicOffset-st: 2/4/2/5 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009207344-01, PDC Light Curves

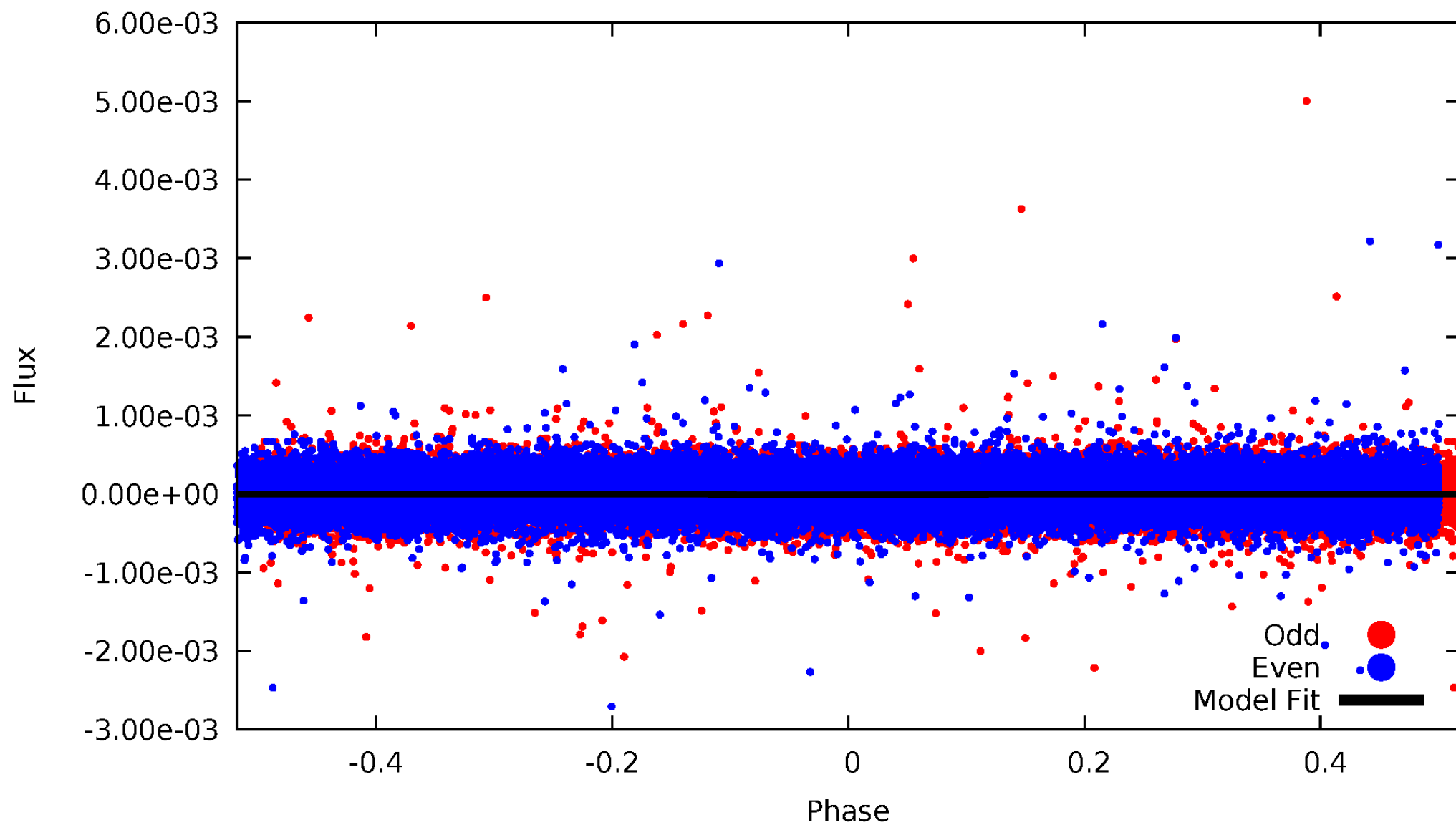


TCE 009207344-01



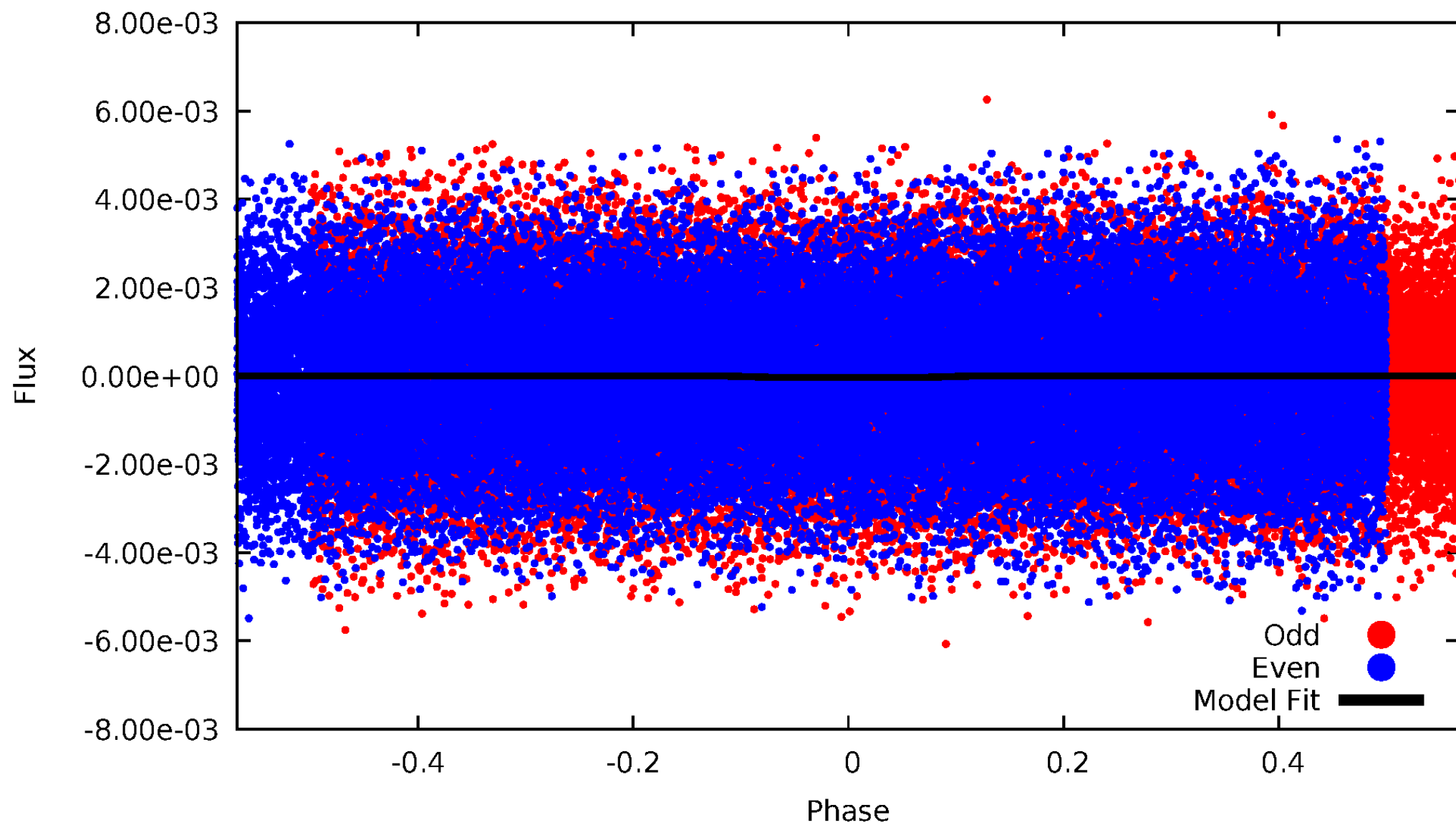
DV Odd/Even

TCE 009207344-01



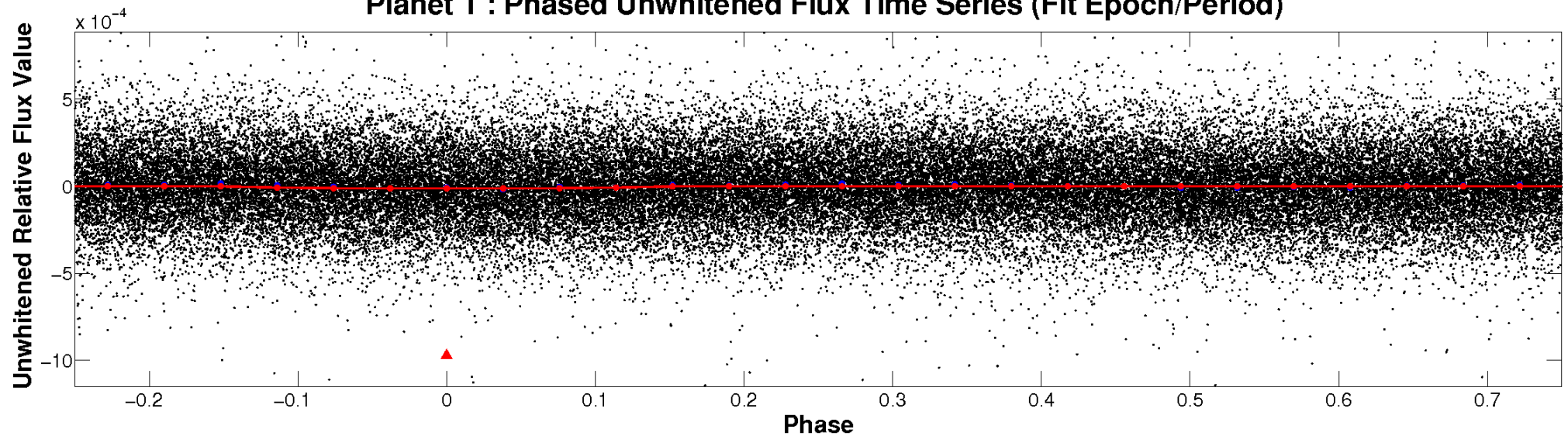
ALT Odd/Even

TCE 009207344-01

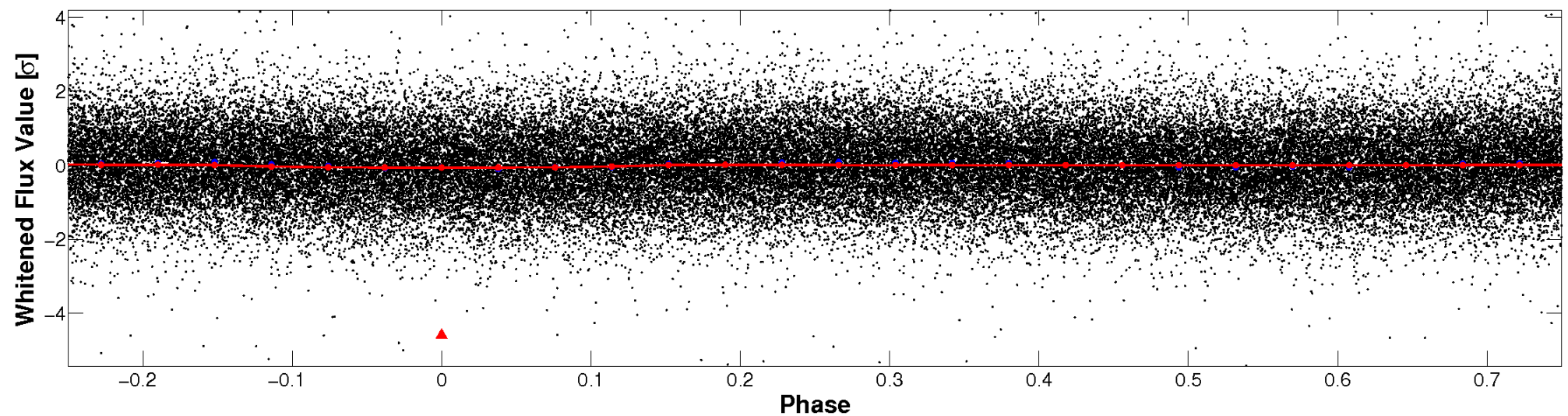


Non-Whitened Vs. Whitened Light Curve

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

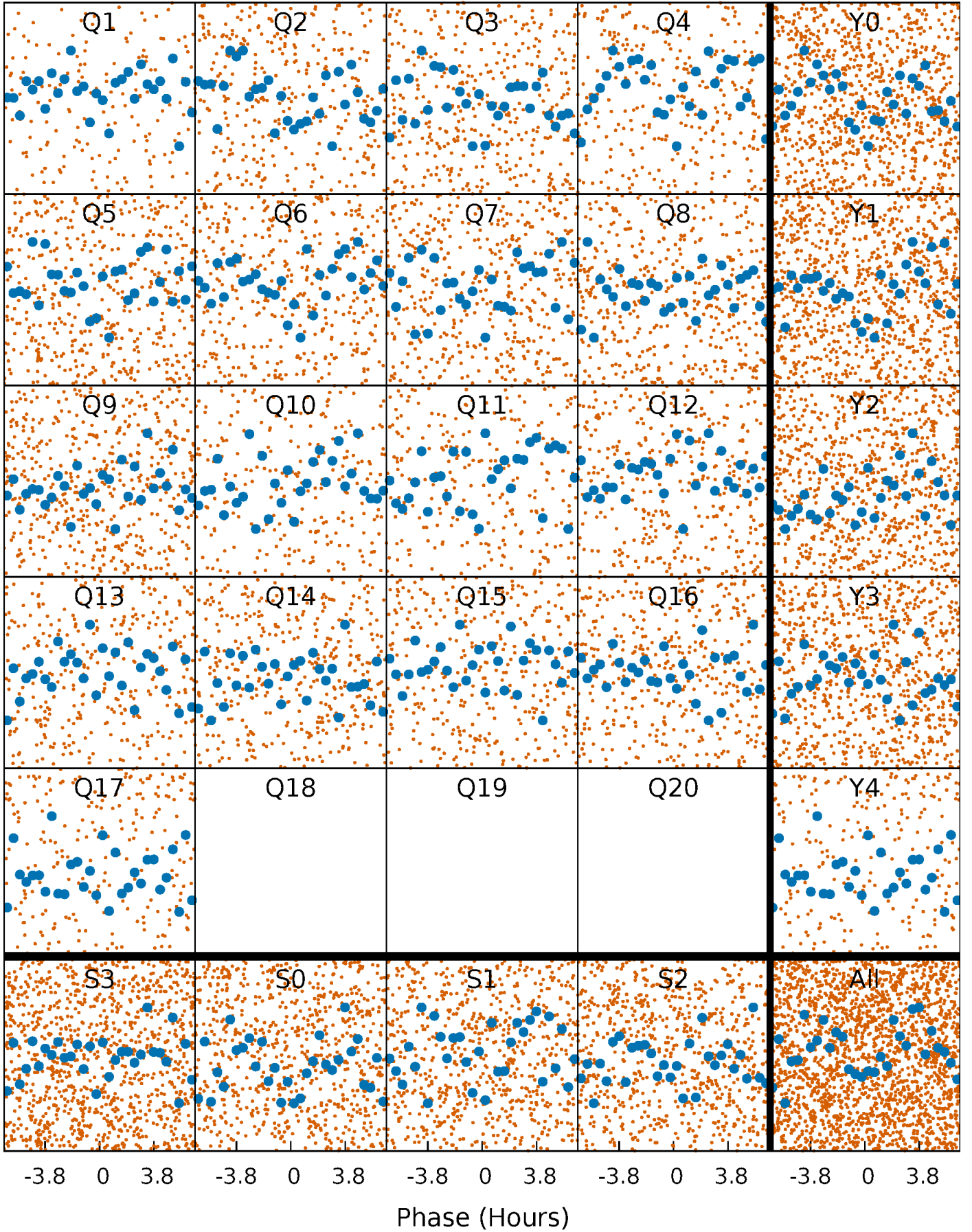


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



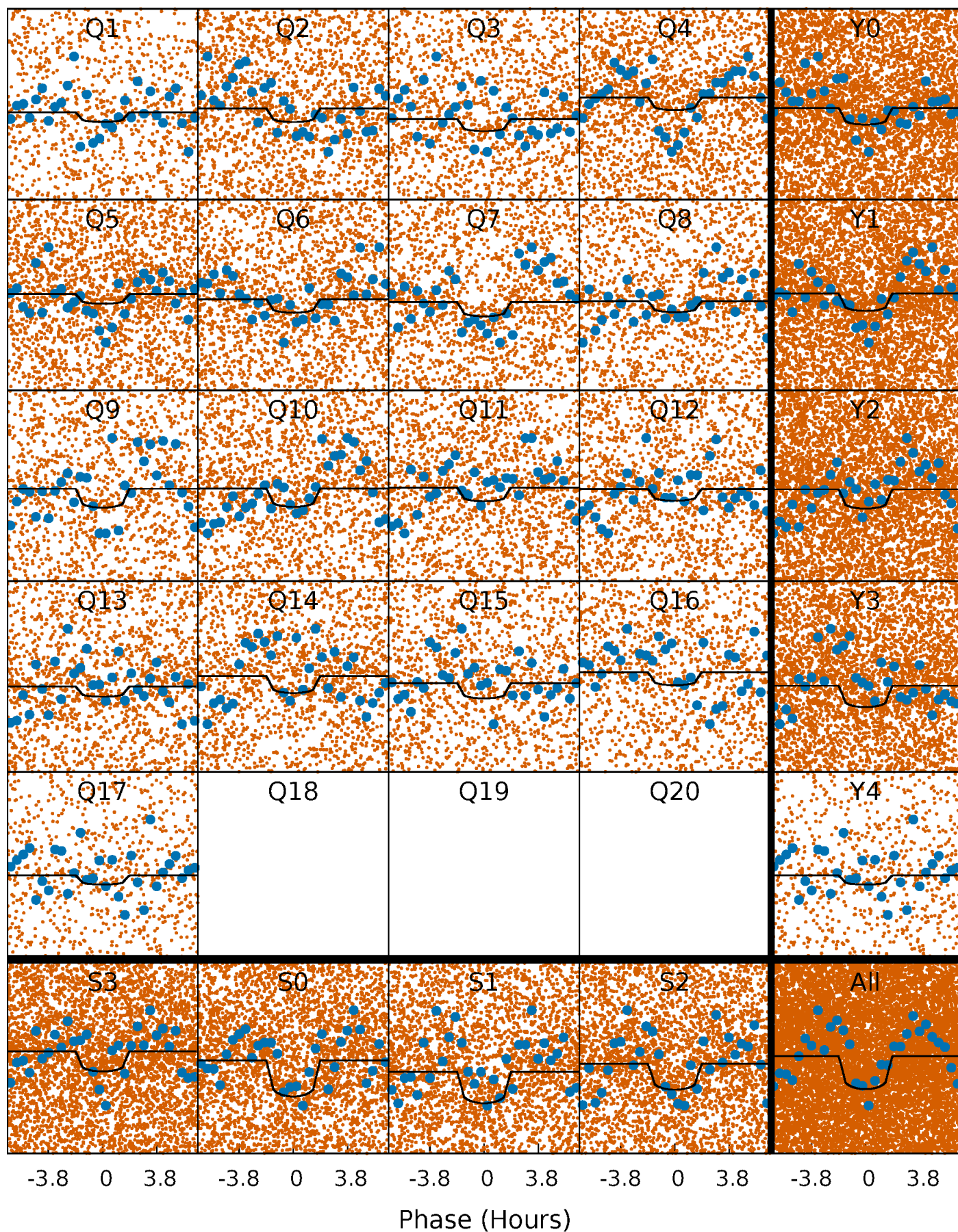
PDC Quarter-Phased Transit Curves

TCE 009207344-01 P= 0.537915 Days $T_0=131.734958$ (BKJD)



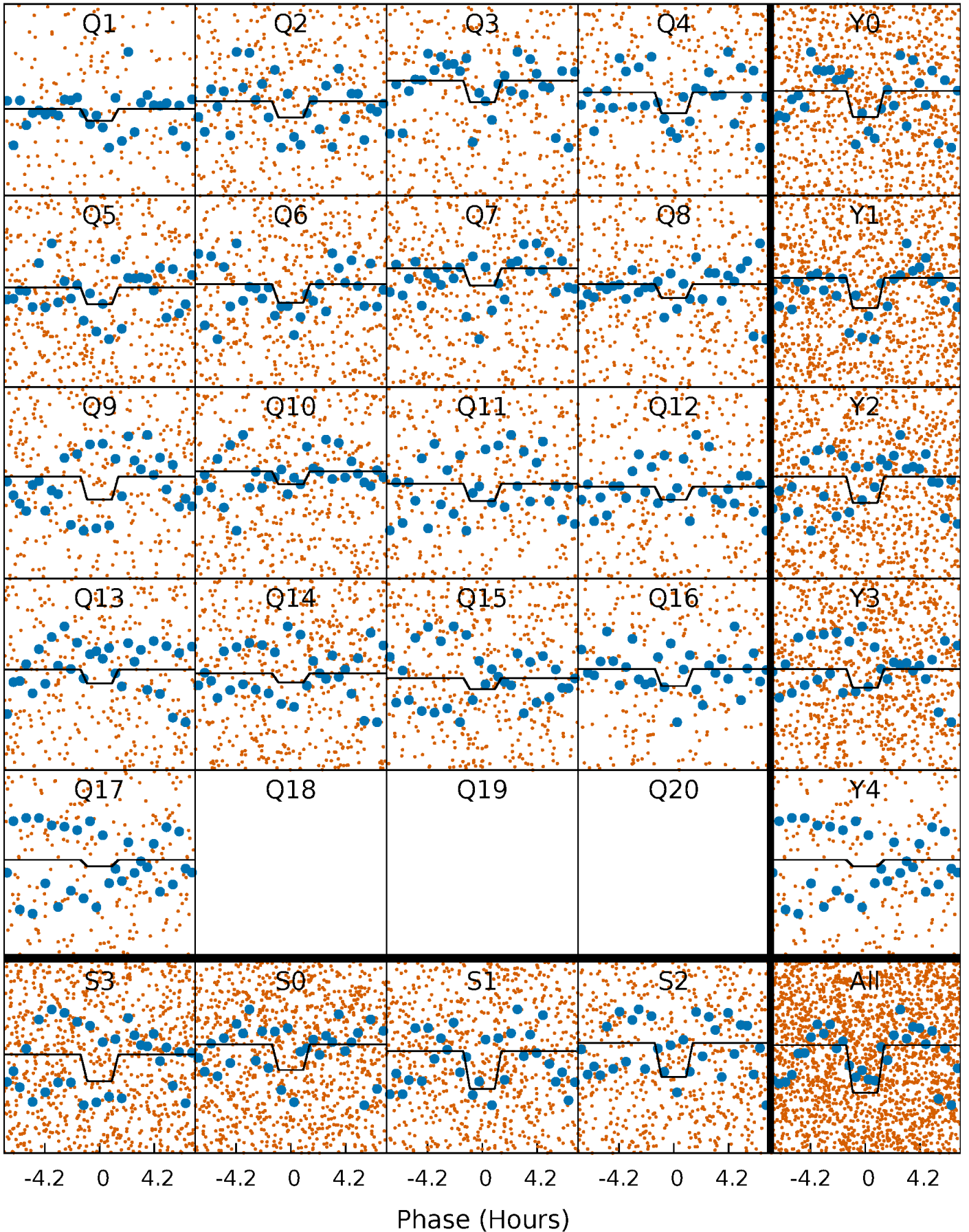
DV Quarter-Phased Transit Curves

TCE 009207344-01 P= 0.537915 Days $T_0=131.734958$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

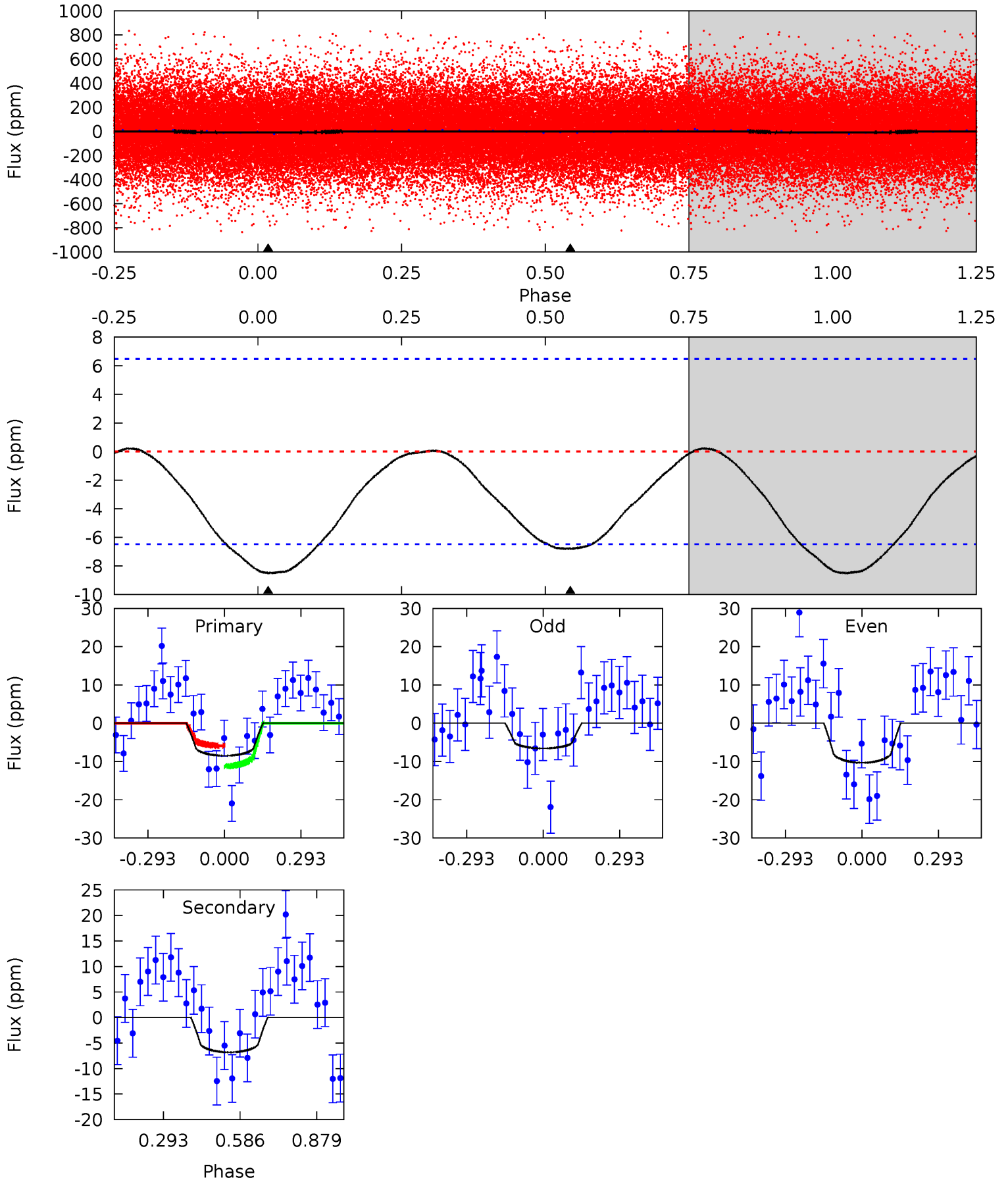
TCE 009207344-01 P= 0.537937 Days $T_0=131.720143$ (BKJD)



DV Model-Shift Uniqueness Test

009207344-01, P = 0.537915 Days, E = 131.197043 Days

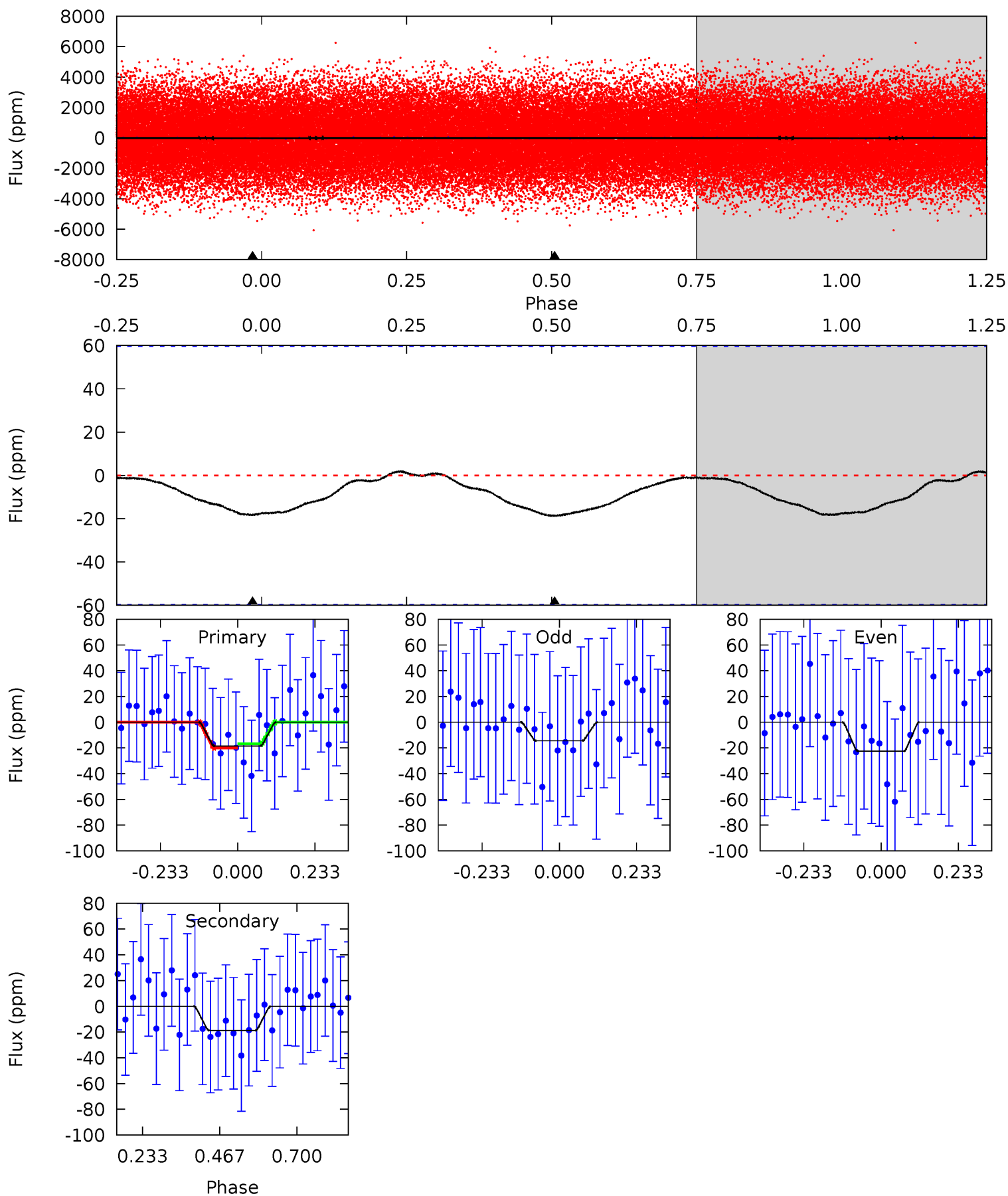
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.69	4.55	0	0	4.33	1.05	0.12	5.69	5.69	4.55	4.55	1.26	1.07	0.03	1.76



Alt Model-Shift Uniqueness Test

009207344-01, P = 0.537937 Days, E = 131.182206 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.35	1.38	0	0	4.38	1.19	0.08	1.35	1.35	1.38	1.38	0.30	0.90	0.10	0.12



Stellar Parameters For KIC 009207344

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8759^{+246}_{-387}	$3.962^{+0.220}_{-0.160}$	$0.070^{+0.250}_{-0.600}$	$2.576^{+0.824}_{-0.906}$	$2.219^{+0.337}_{-0.578}$	$0.183^{+0.294}_{-0.088}$
	+3%/-4%	+6%/-4%	+357%/-857%	+32%/-35%	+15%/-26%	+161%/-48%
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 009207344-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-7 ± 1	$0.92^{+0.45}_{-0.37}$	6589^{+552}_{-533}	6742^{+3130}_{-1723}	$1.200^{+2.171}_{-0.657}$
Alt.	-19 ± 14	$1.46^{+0.52}_{-0.42}$	6645^{+466}_{-537}	6924^{+2512}_{-3349}	$1.276^{+1.626}_{-0.938}$

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

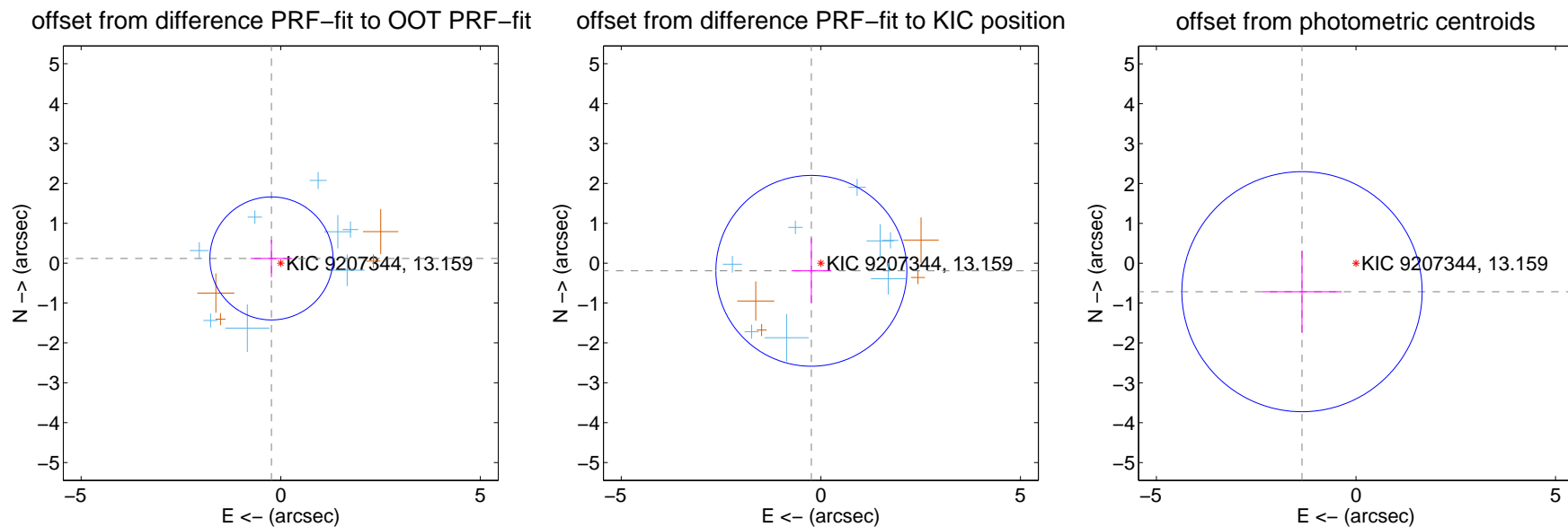
DV Centroid Data

Supplemental centroid analysis for 009207344-01. Kepler magnitude: 13.16. Transit SNR 7.30

There are 8 quarters with good PRF difference image offsets

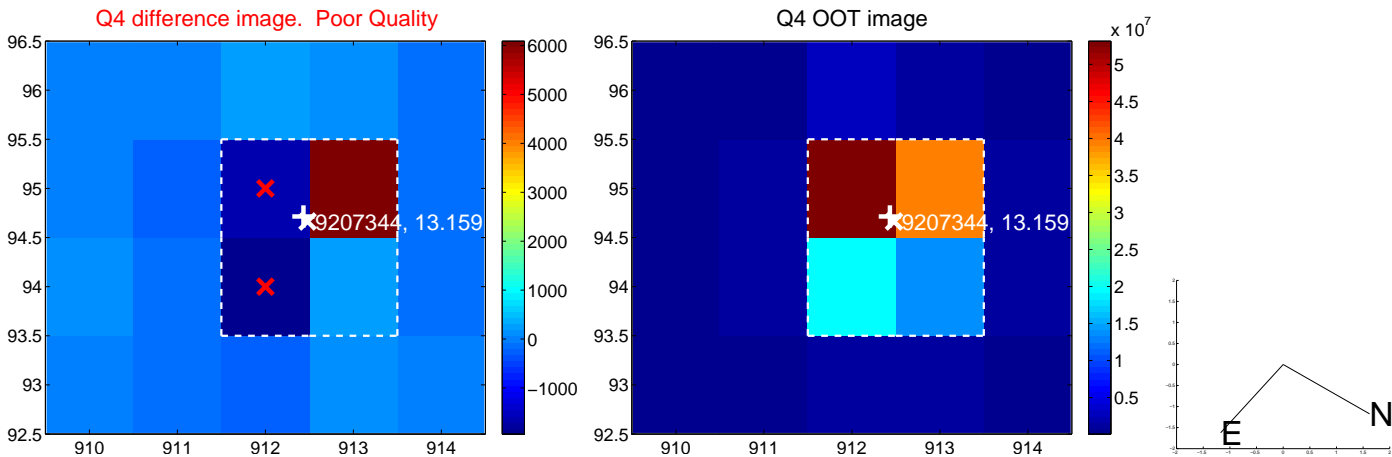
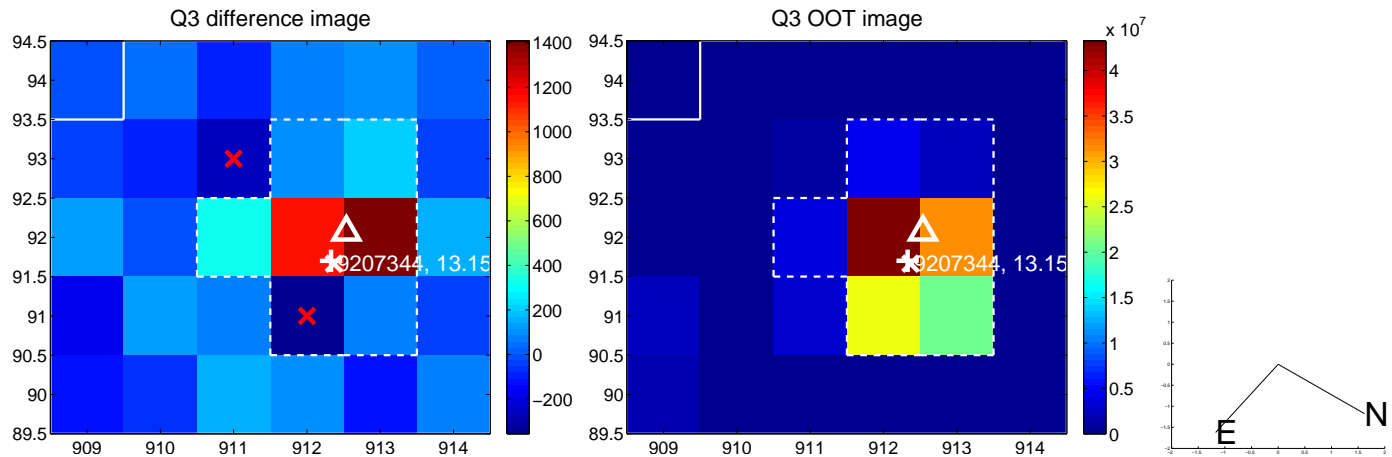
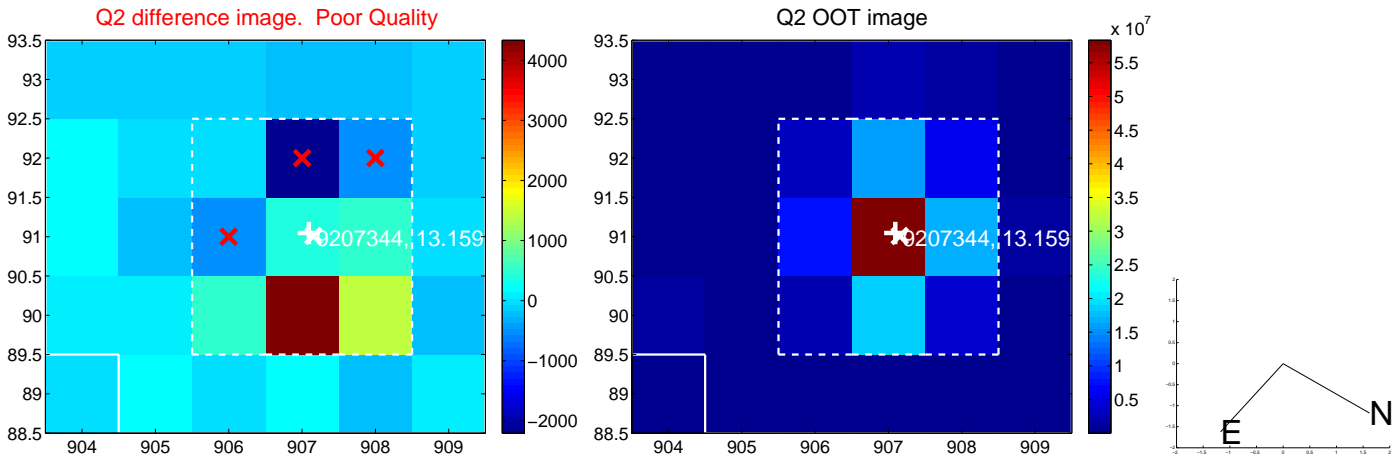
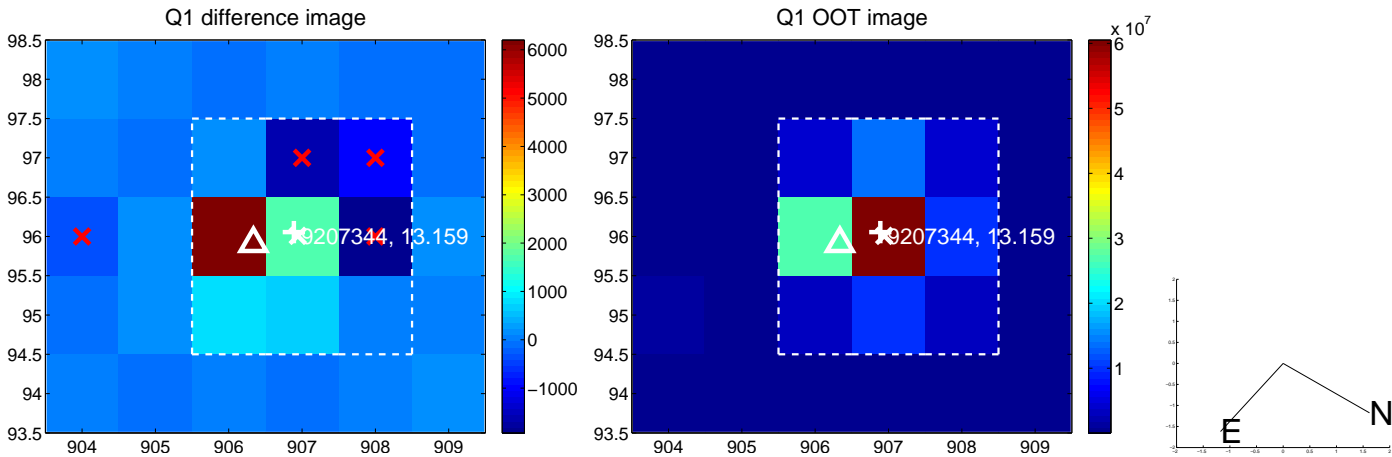
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.261 ± 0.514	0.51	0.233 ± 0.525	0.118 ± 0.469
PRF-fit source offset from KIC position	0.306 ± 0.797	0.38	0.238 ± 0.499	-0.193 ± 0.819
photometric centroid source offset	1.53 ± 1.00	1.52	1.35 ± 1.00	-0.71 ± 1.03

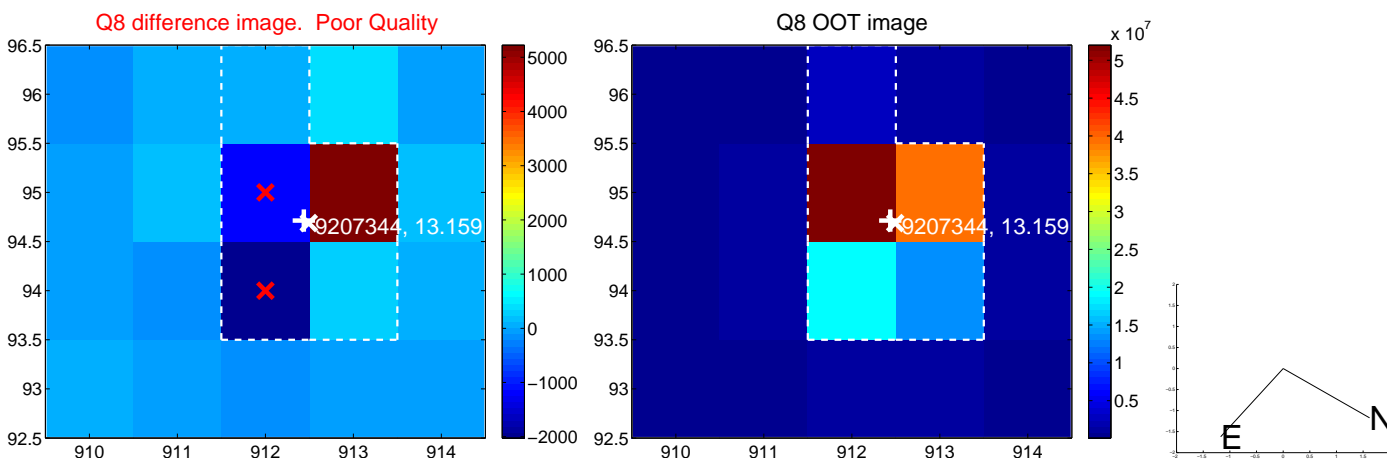
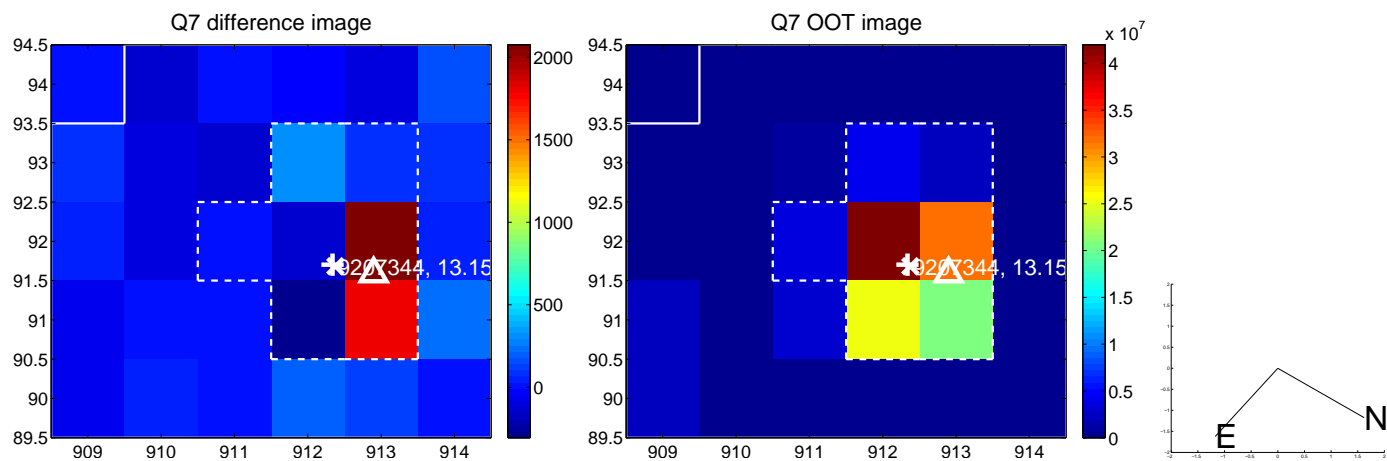
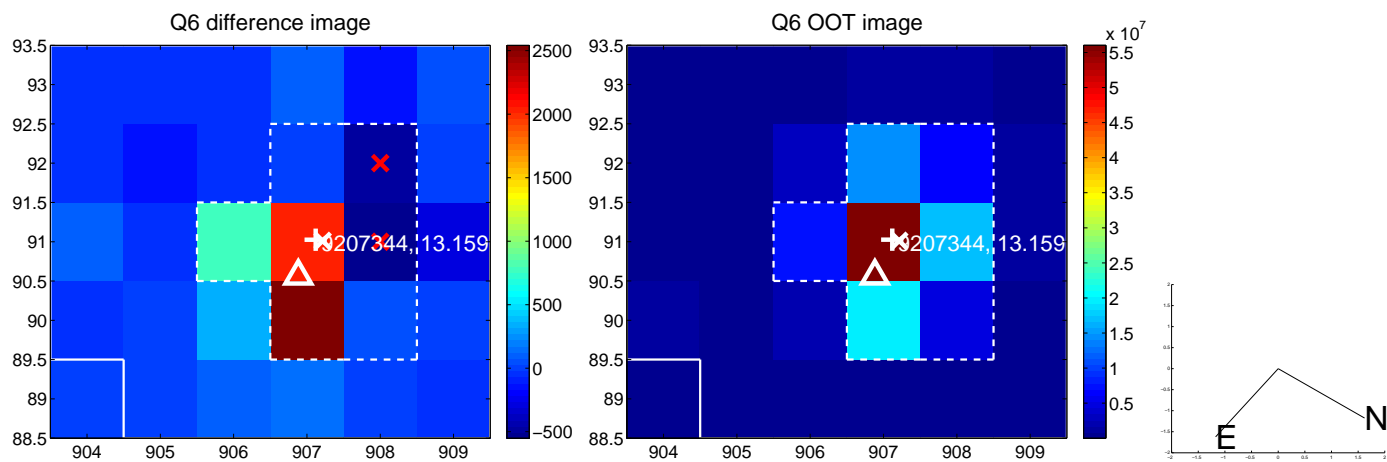
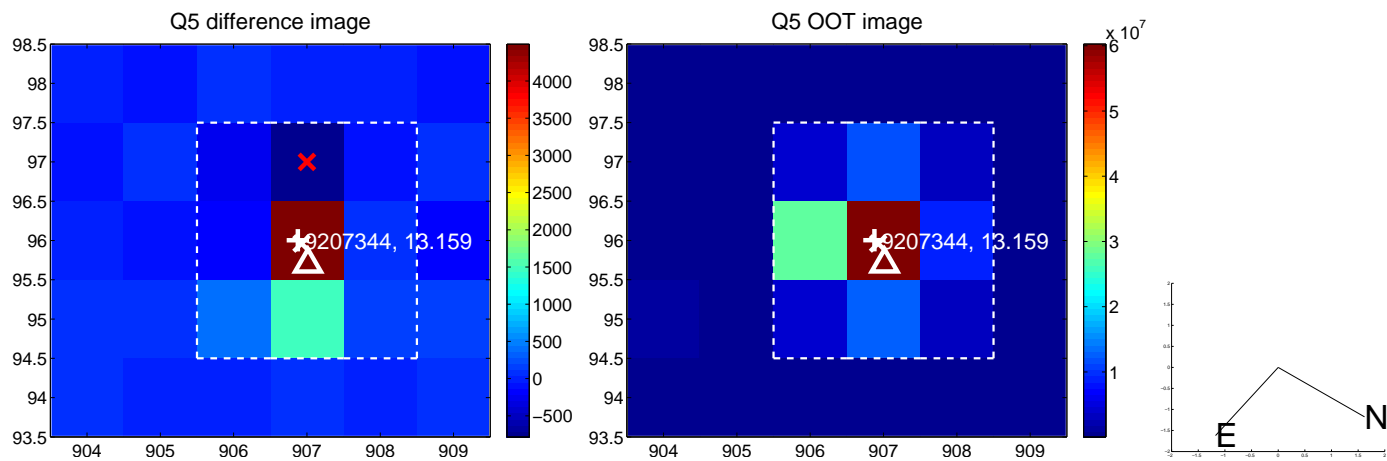


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

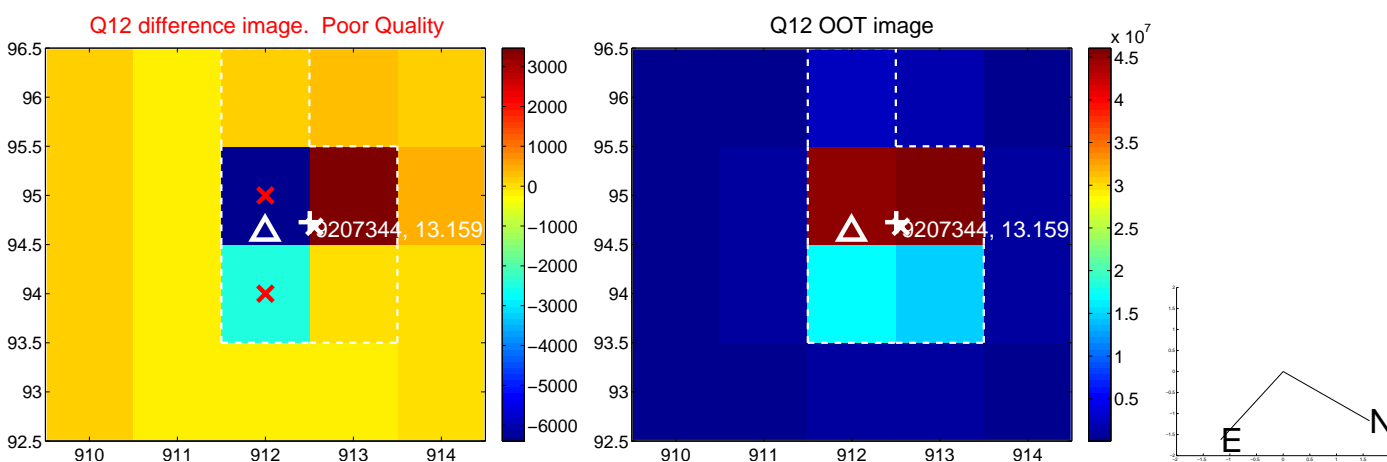
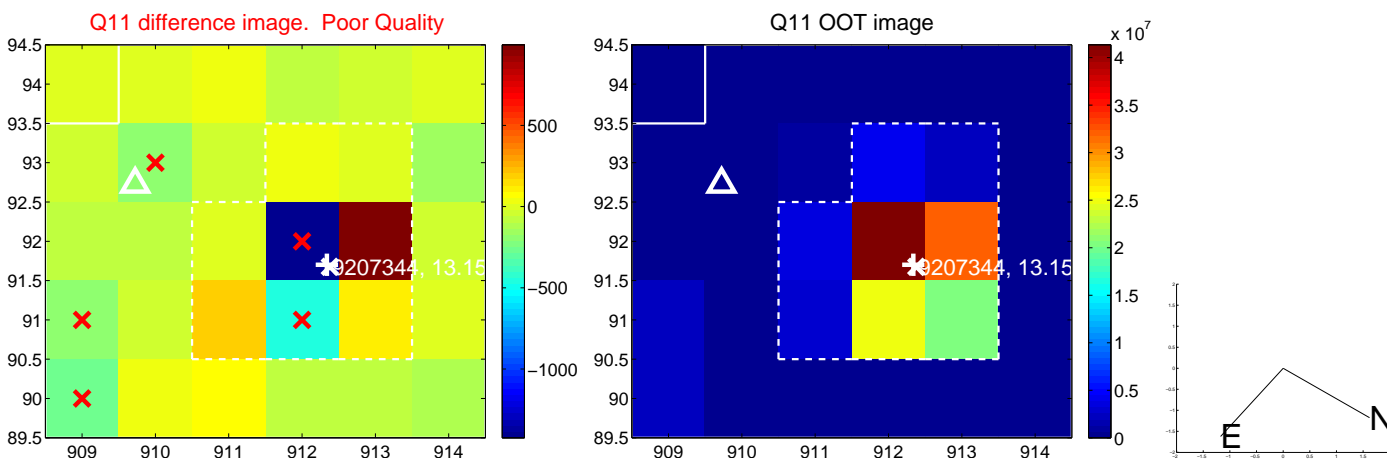
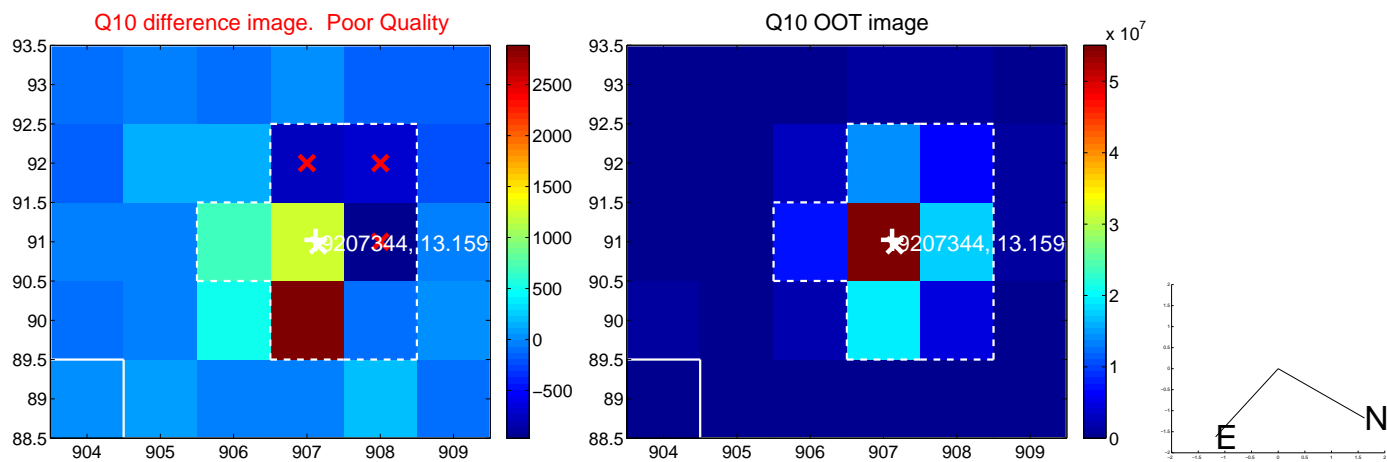
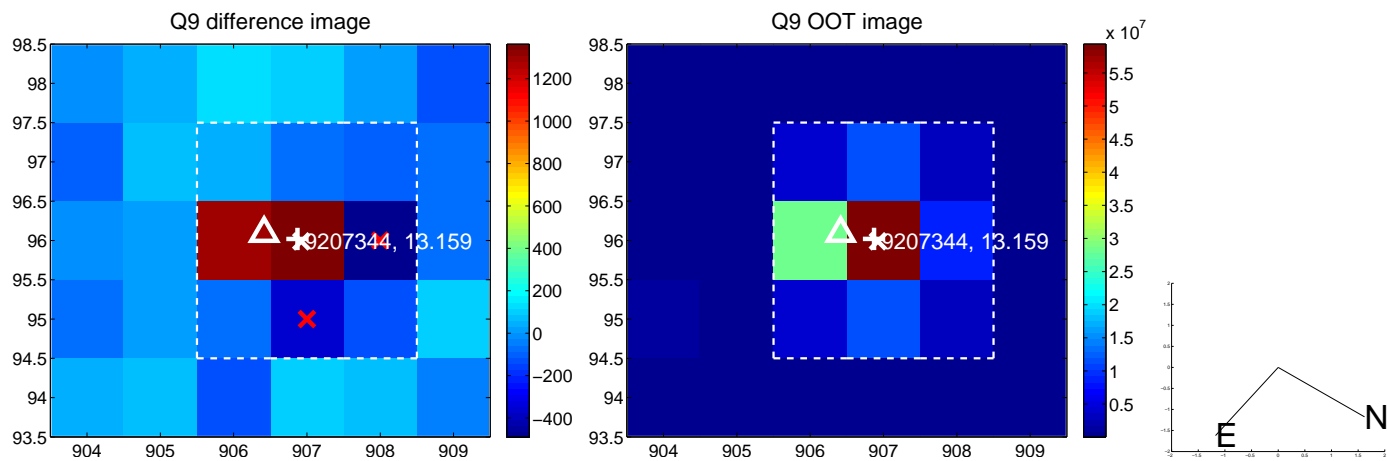
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



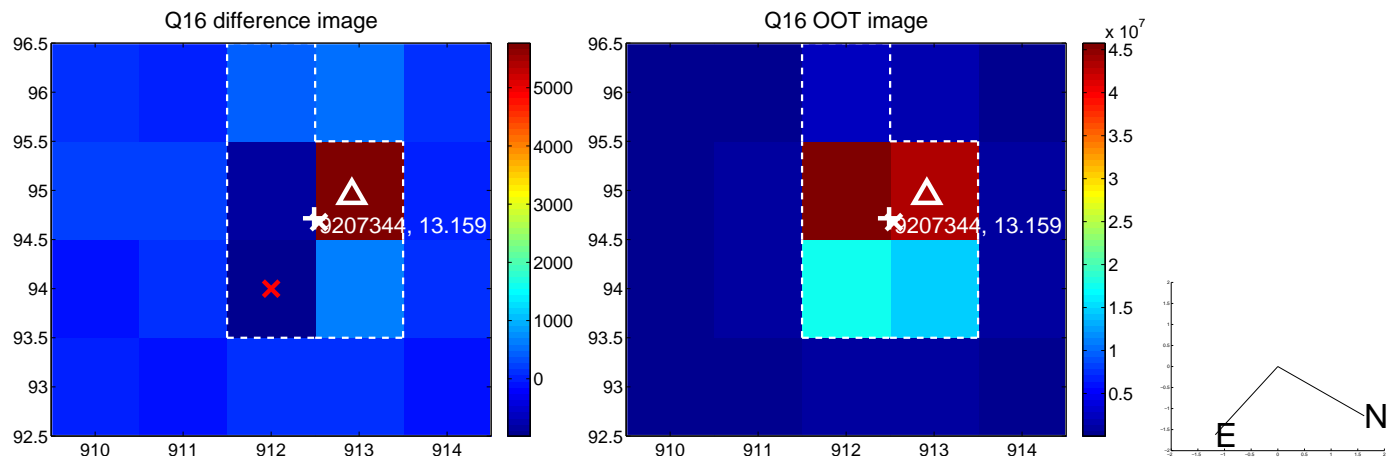
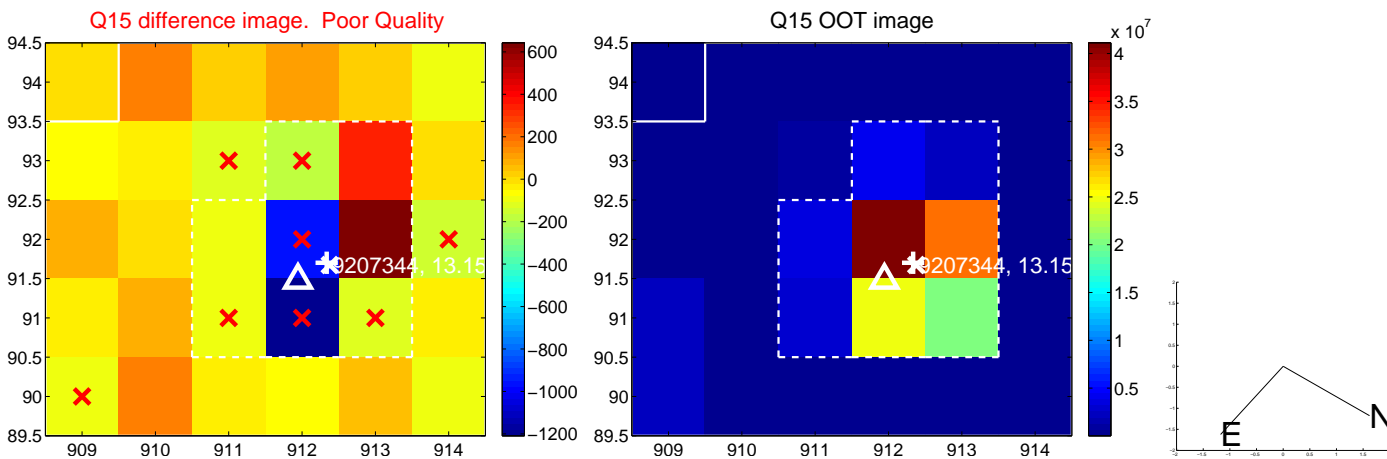
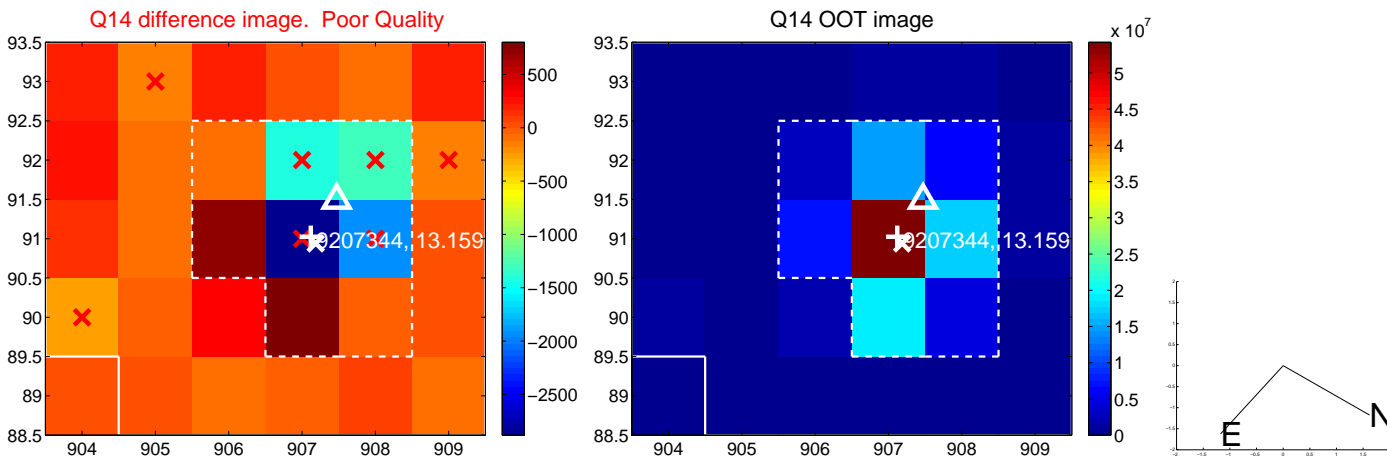
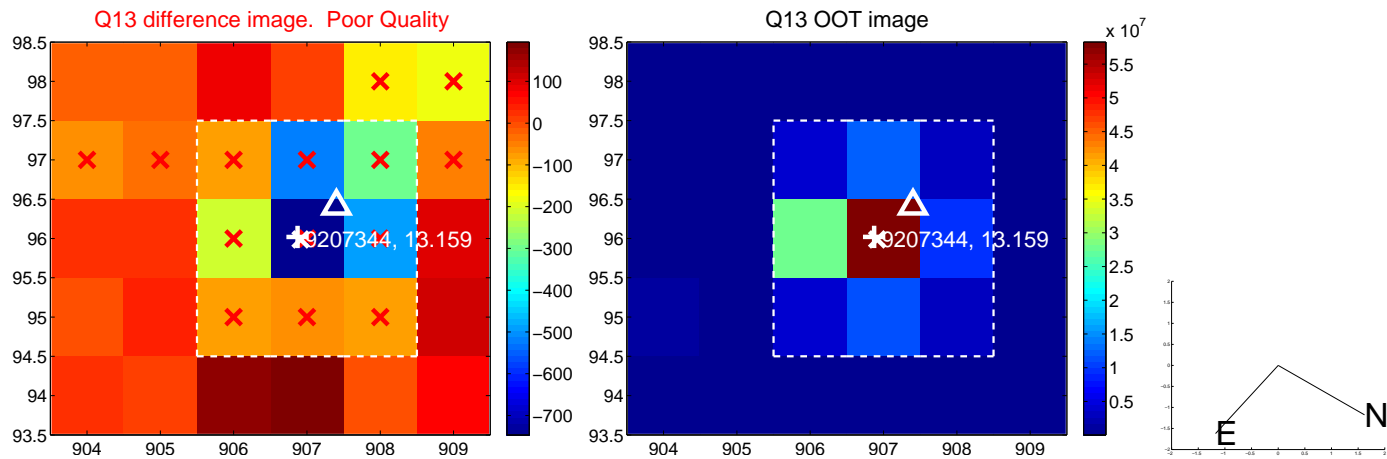
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



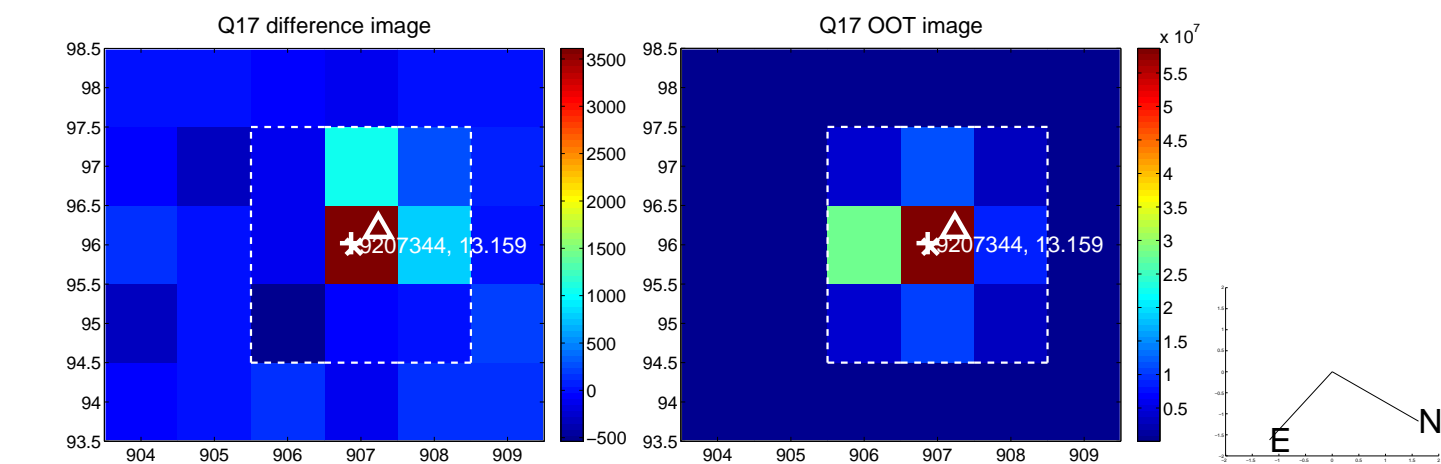
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



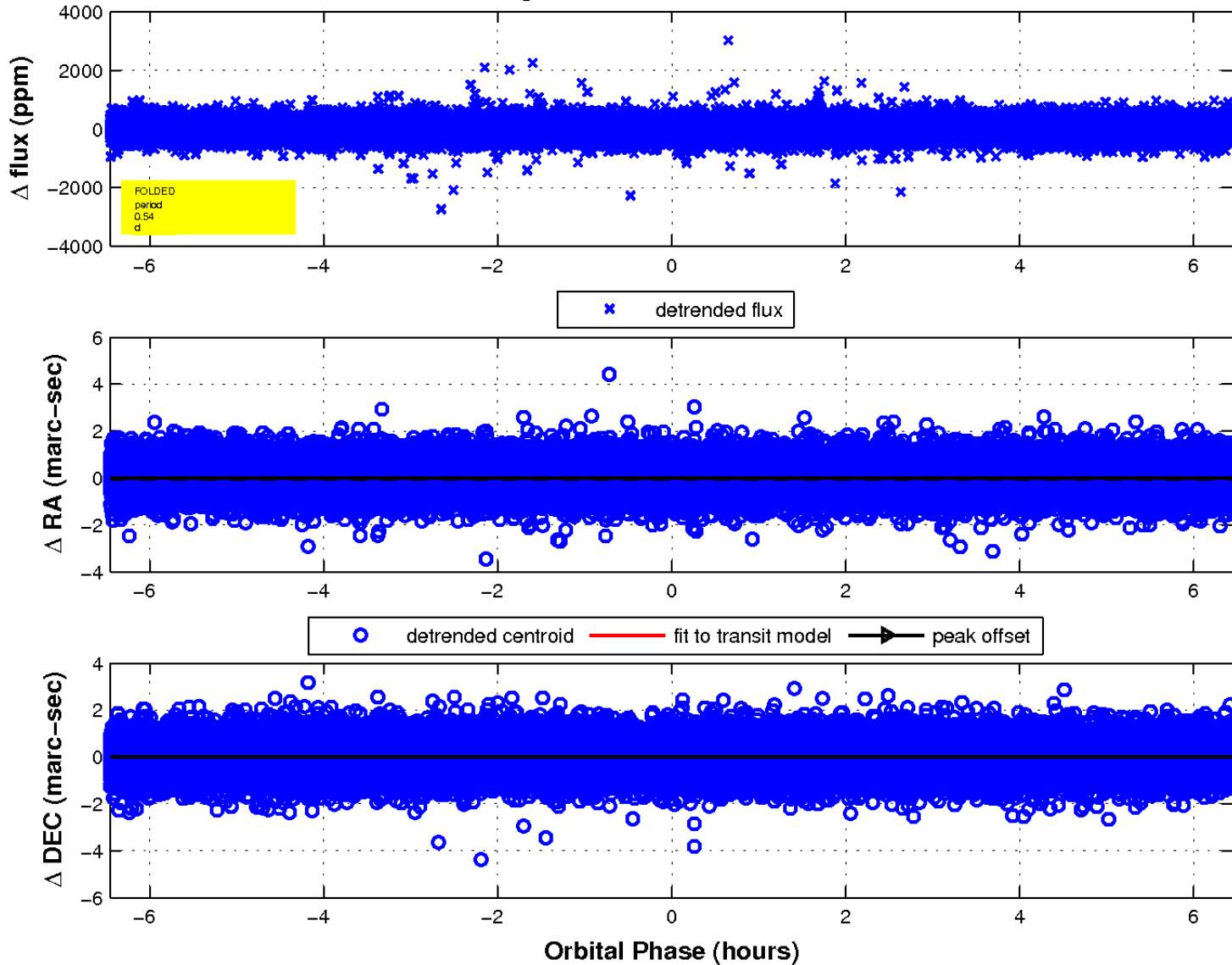
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

