

KIC 011090405

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})
011090405-01	OBS	No	1.025766	131.925856	18.7	3.634	10.8	8.7	3.20	7939	1.62	58871.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011090405-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_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.

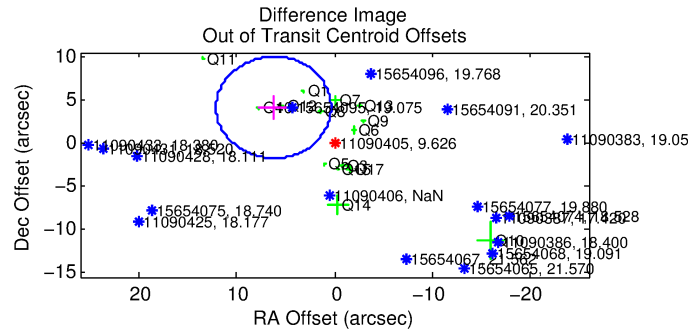
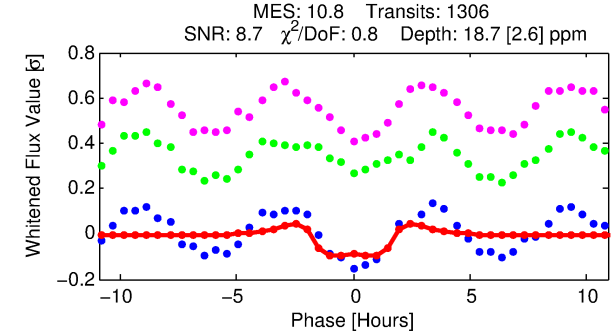
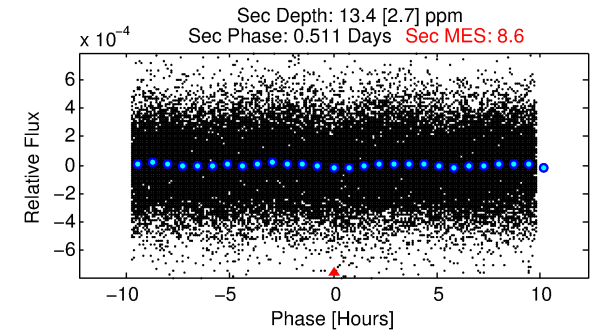
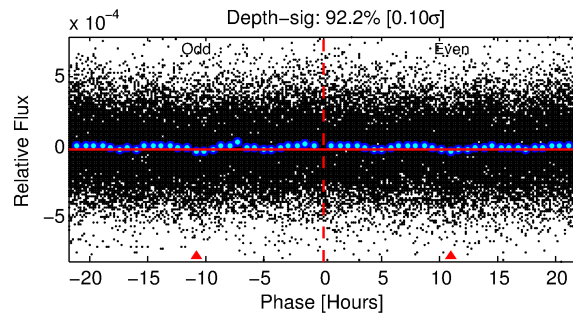
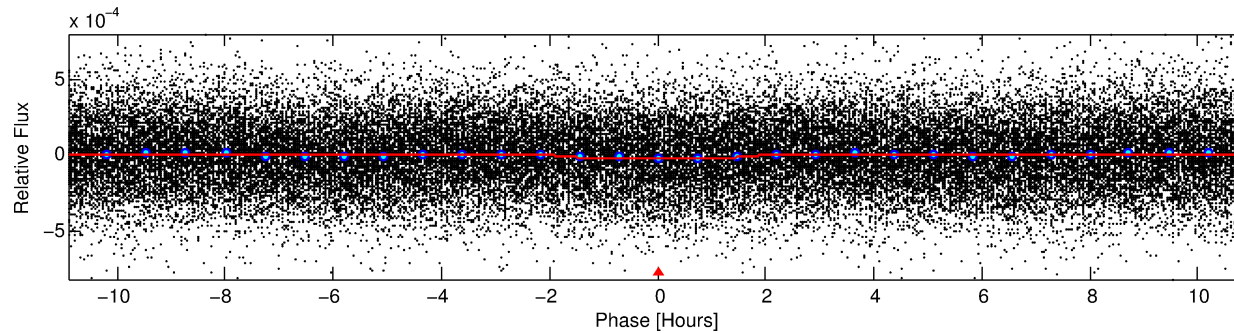
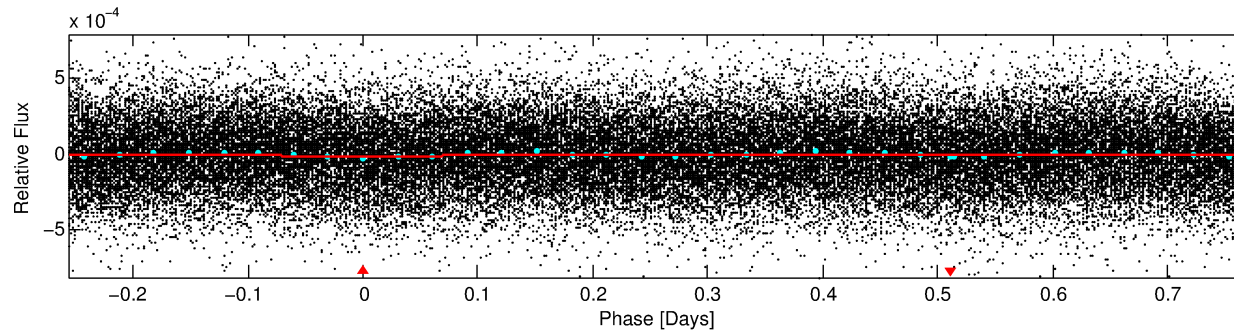
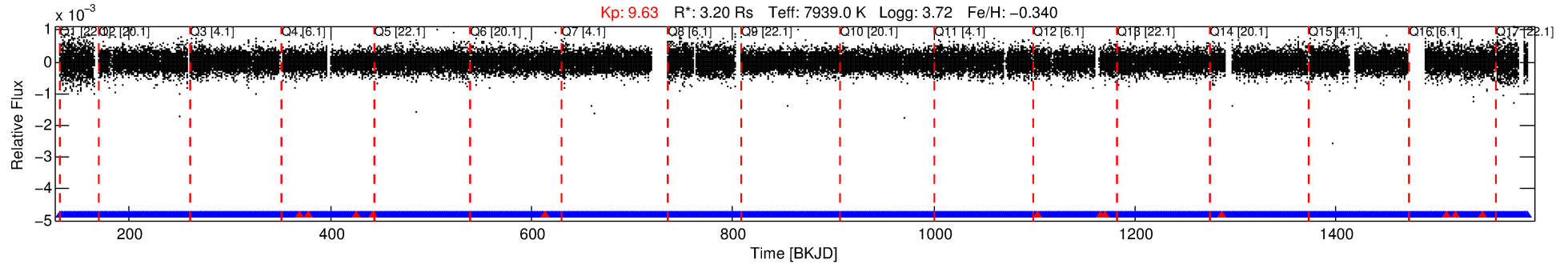
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011090405-01

No Significant Match Found

DV One-Page Summary

KIC: 11090405 Candidate: 1 of 1 Period: 1.026 d



DV Fit Results:

Period = 1.02577 [0.00001] d
Epoch = 131.9259 [0.0039] BKJD
 $R_p/R^* = 0.0046$ [0.0018]
 $a/R^* = 1.33$ [1.38]
 $b = 0.90$ [0.49]
 $\text{Seff} = 58871.15$ [48576.75]
 $T_{\text{eq}} = 3972$ [819] K
 $R_p = 1.62$ [1.04] R_{e}
 $a = 0.0249$ [0.0124] AU
 $A_g = 1.74$ [1.99] [0.37 σ]
 $T_{\text{eff}} = 7055$ [1457] K [1.84 σ]

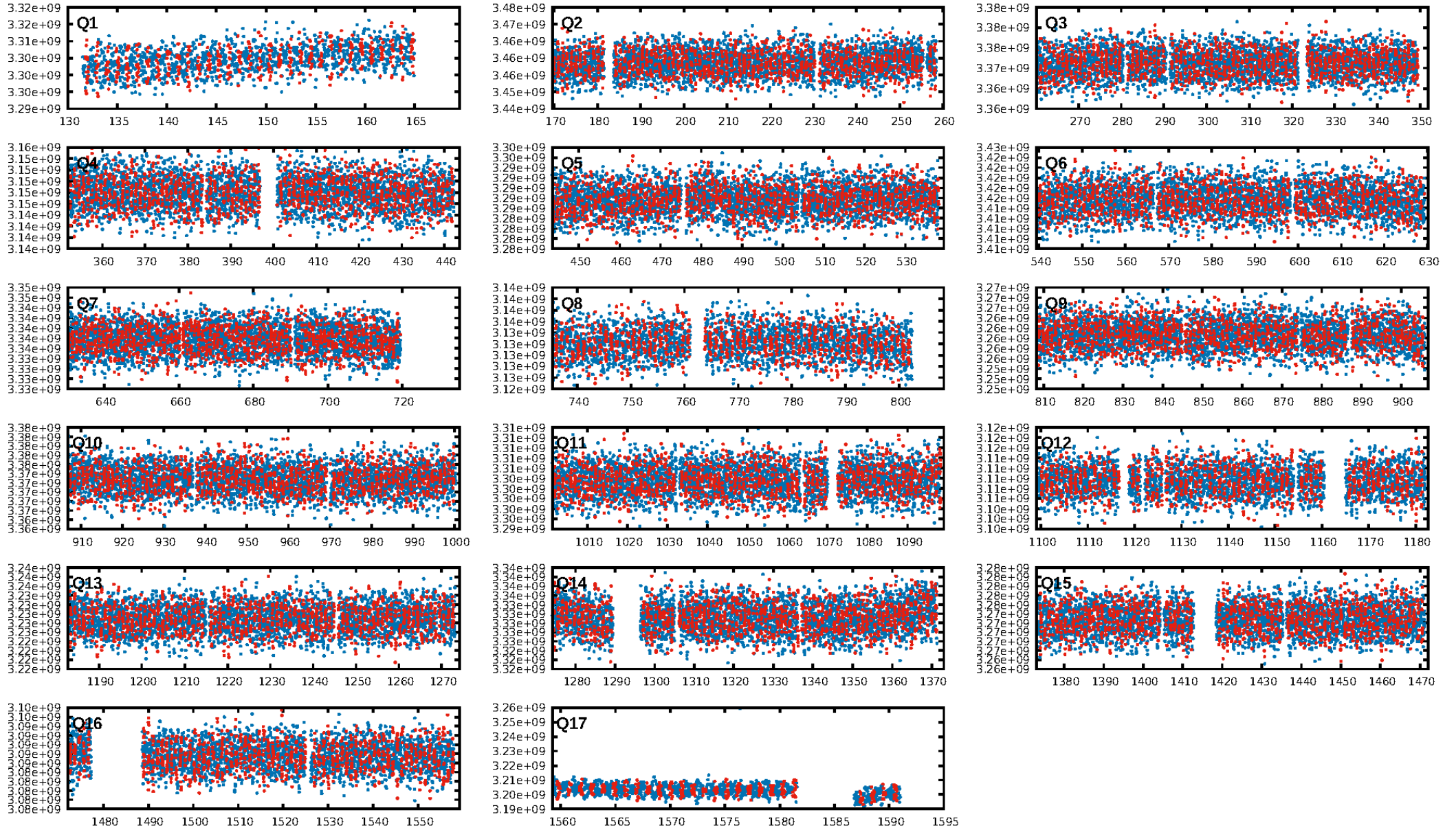
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.16e-27
RollingBand-fgt: 0.99 [1235/1247]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.1%
Centroid-so: 2.400 arcsec [4.26 σ]
OotOffset-rm: 7.466 arcsec [3.81 σ]
KicOffset-rm: 8.206 arcsec [4.12 σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.06 [1/16]
DiffImageOverlap-fno: 1.00 [17/17]

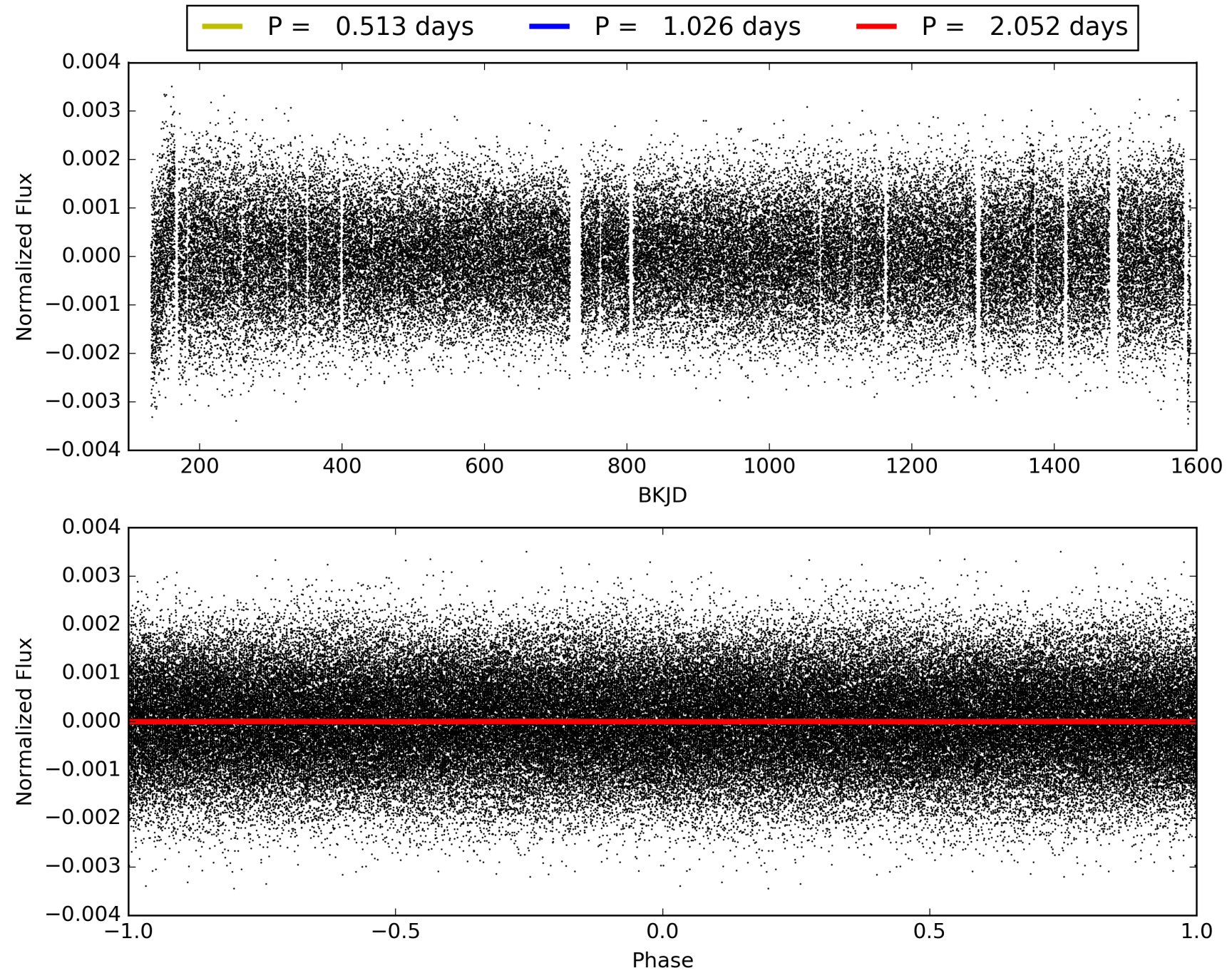
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:38:05 Z

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

TCE 011090405-01, PDC Light Curves

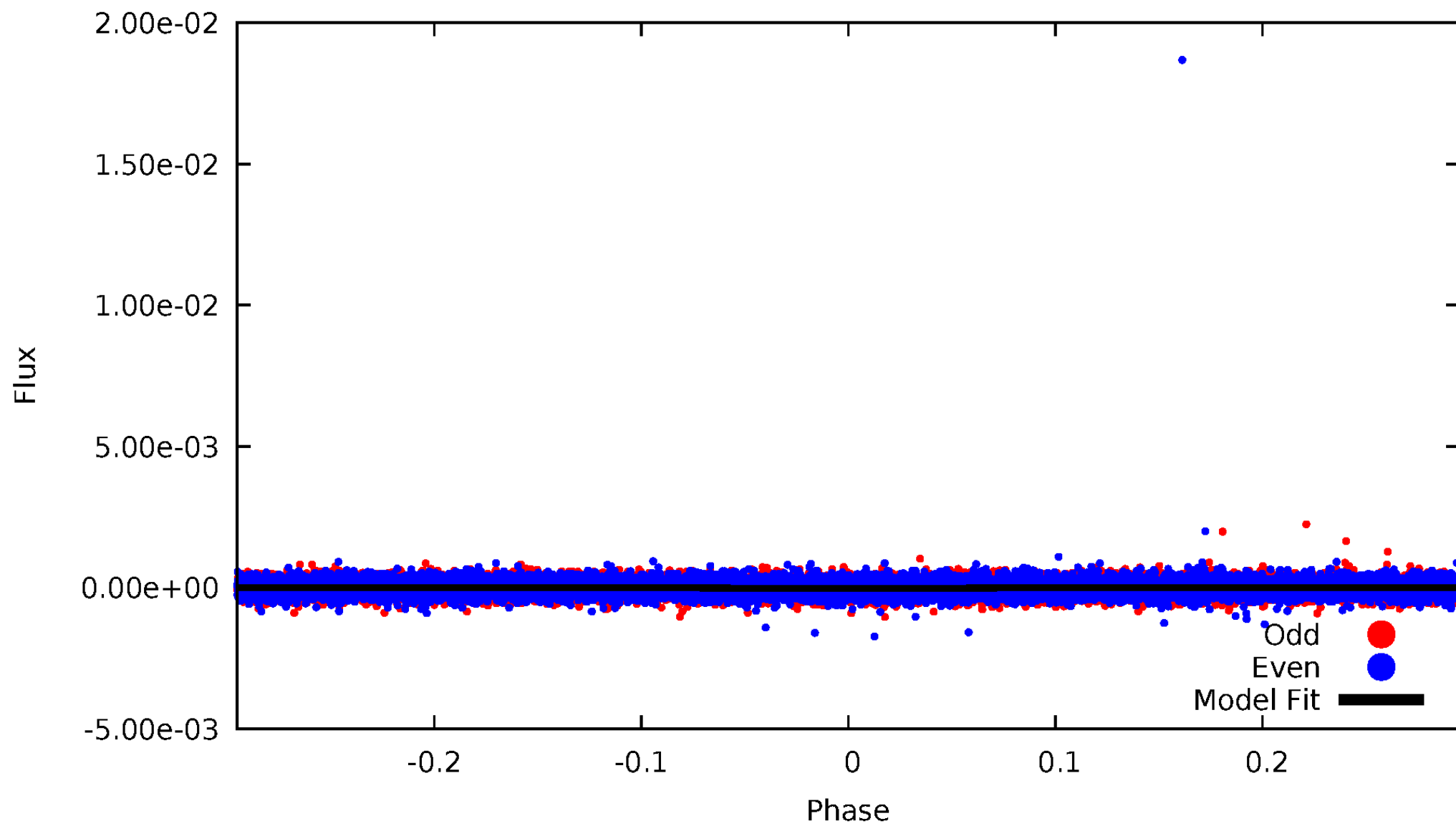


TCE 011090405-01



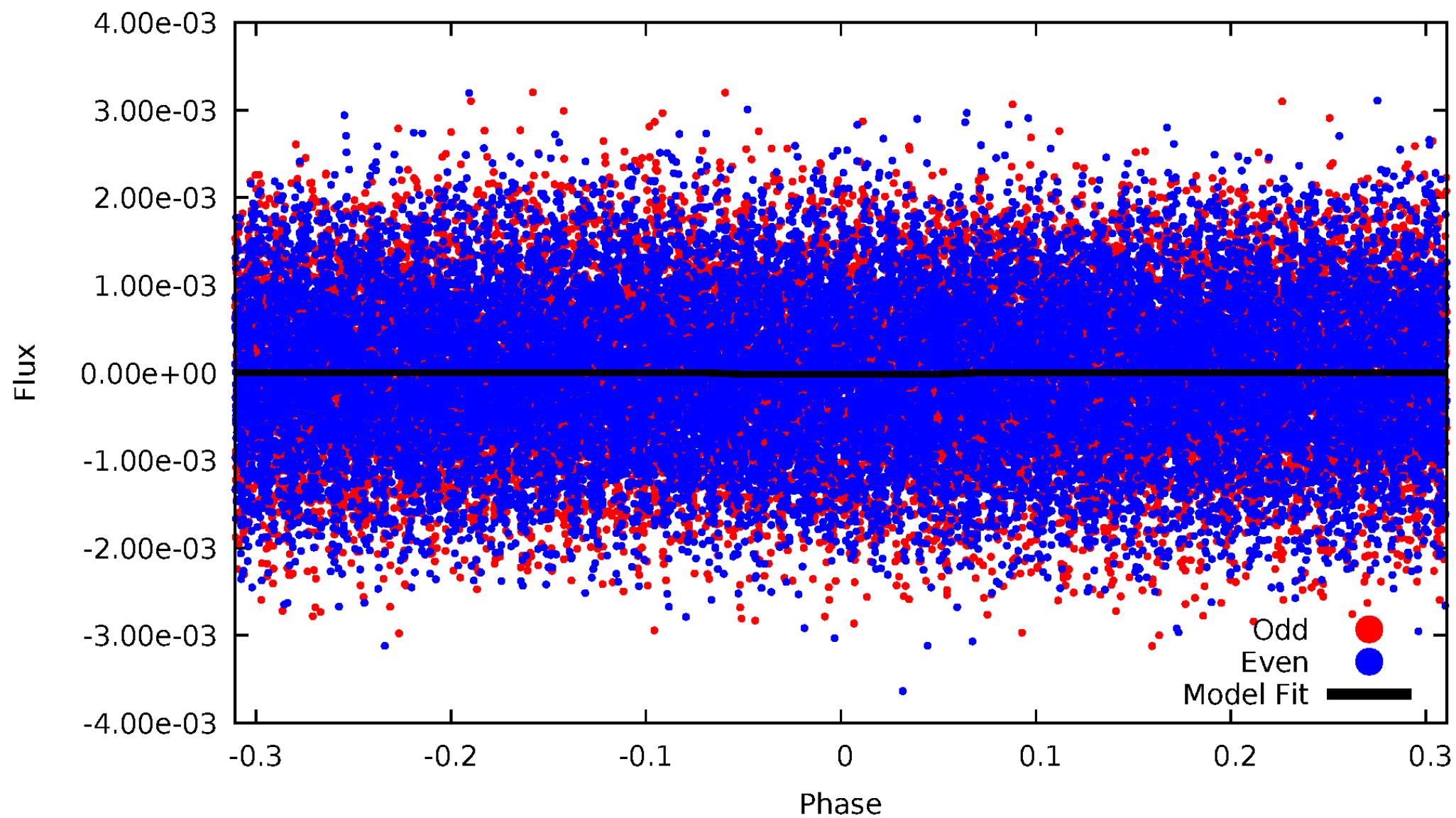
DV Odd/Even

TCE 011090405-01

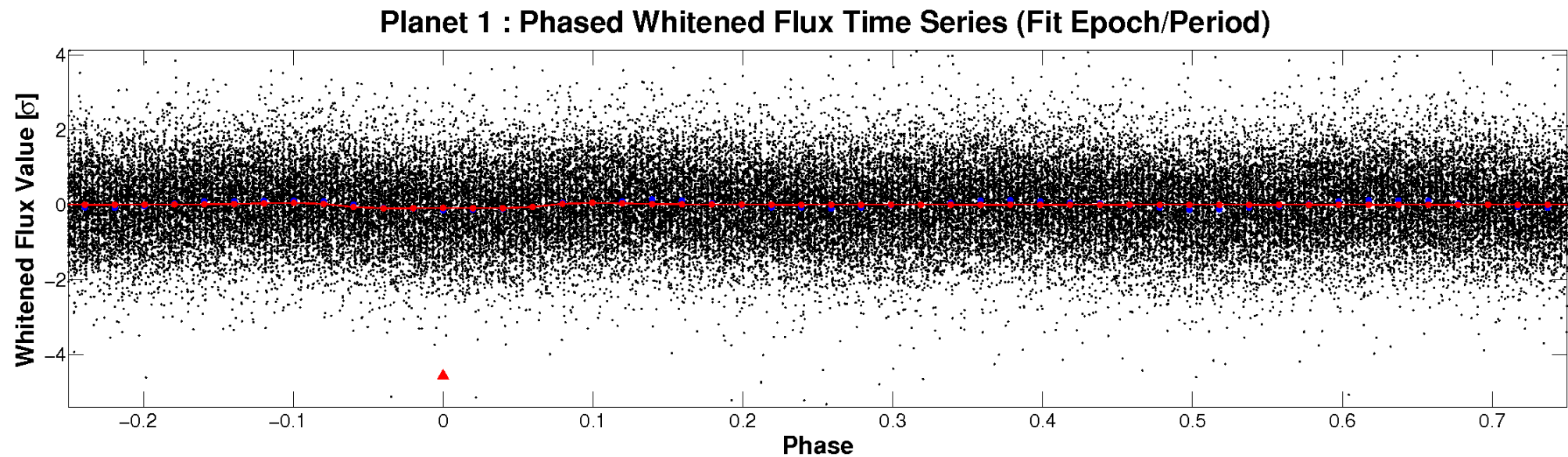
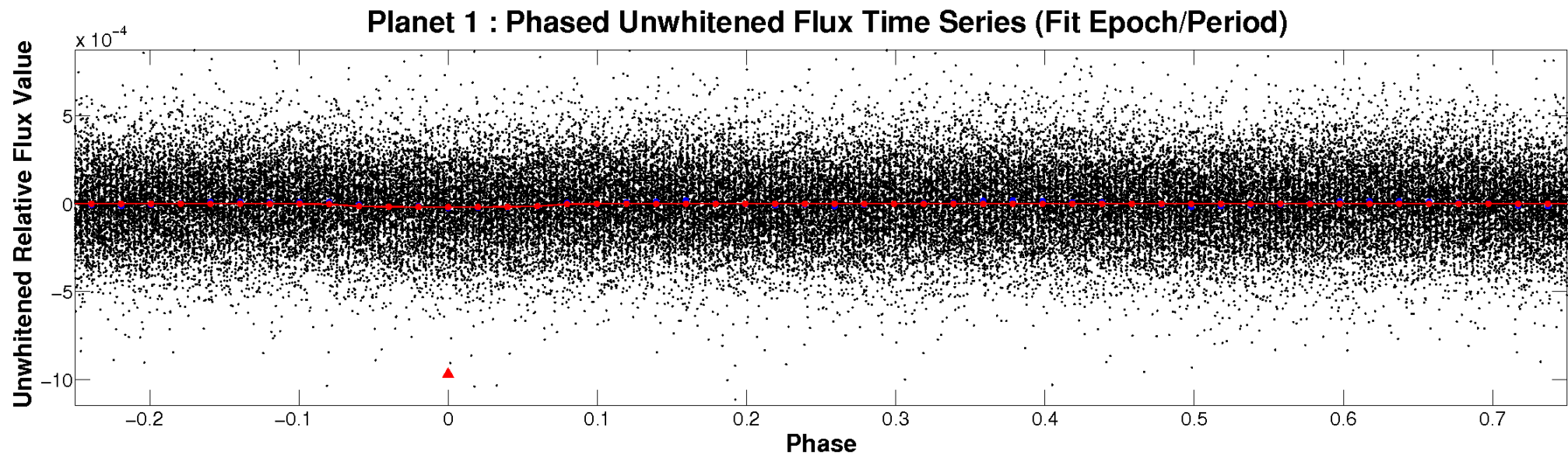


ALT Odd/Even

TCE 011090405-01

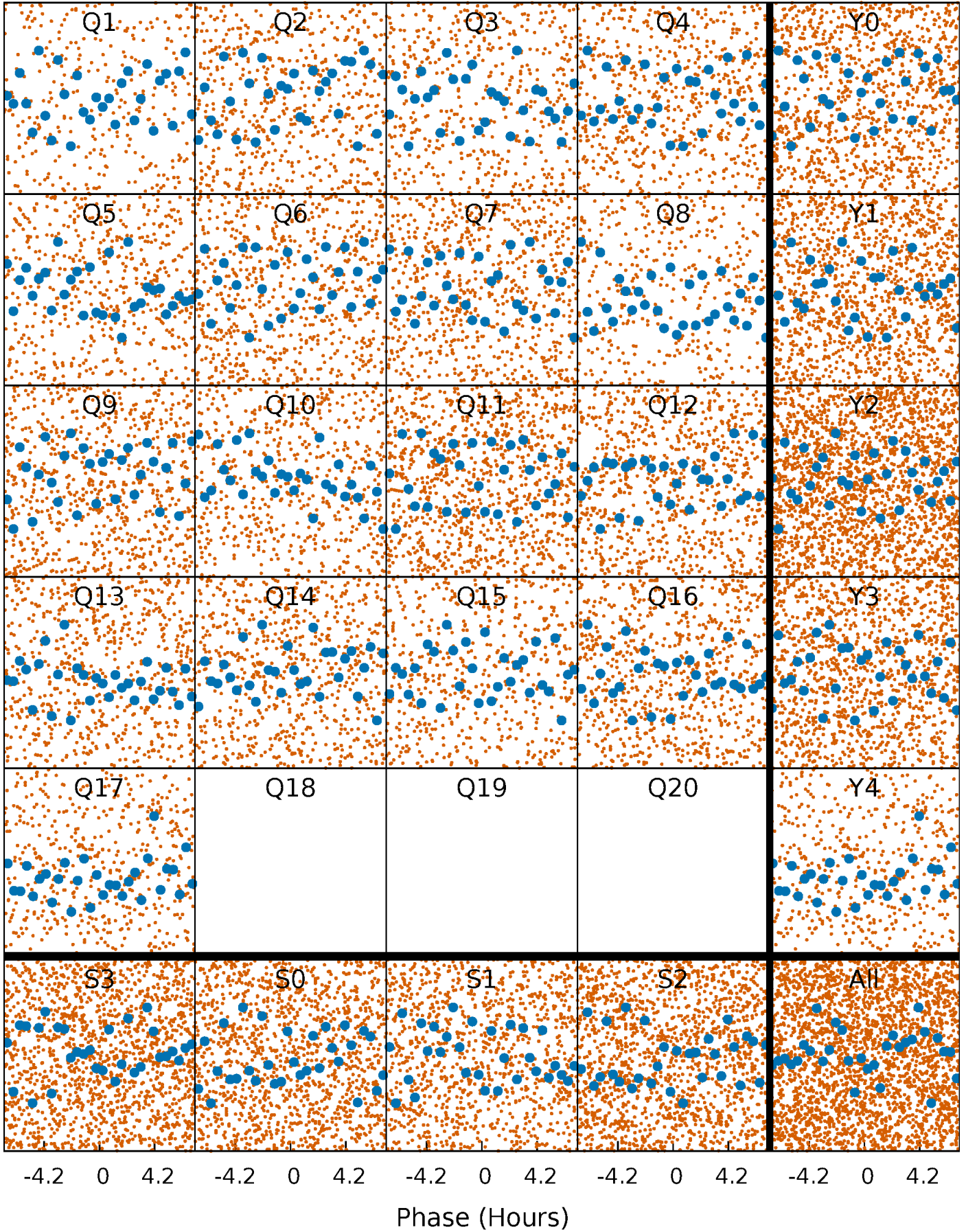


Non-Whitened Vs. Whitened Light Curve



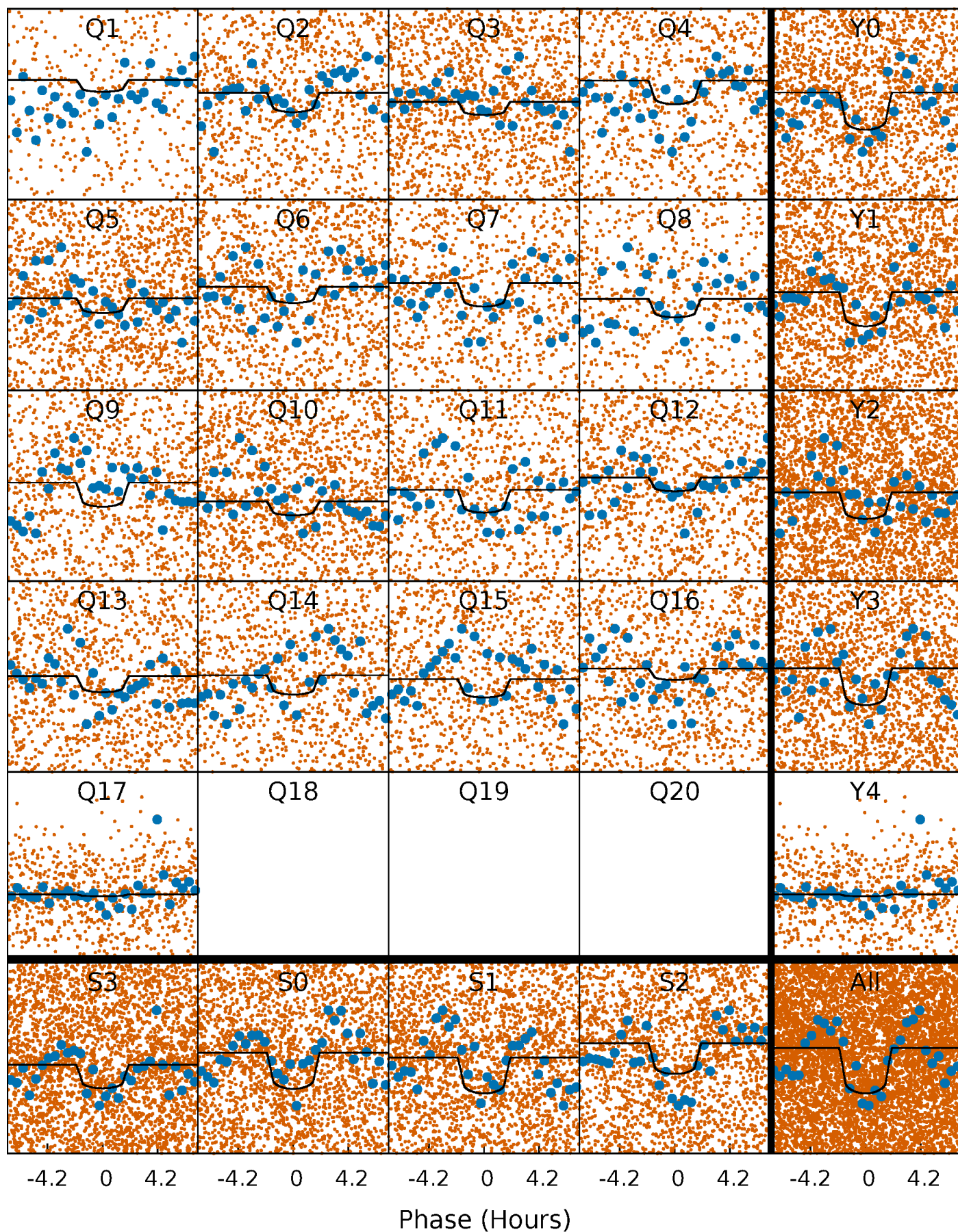
PDC Quarter-Phased Transit Curves

TCE 011090405-01 P= 1.025766 Days $T_0=131.925856$ (BKJD)



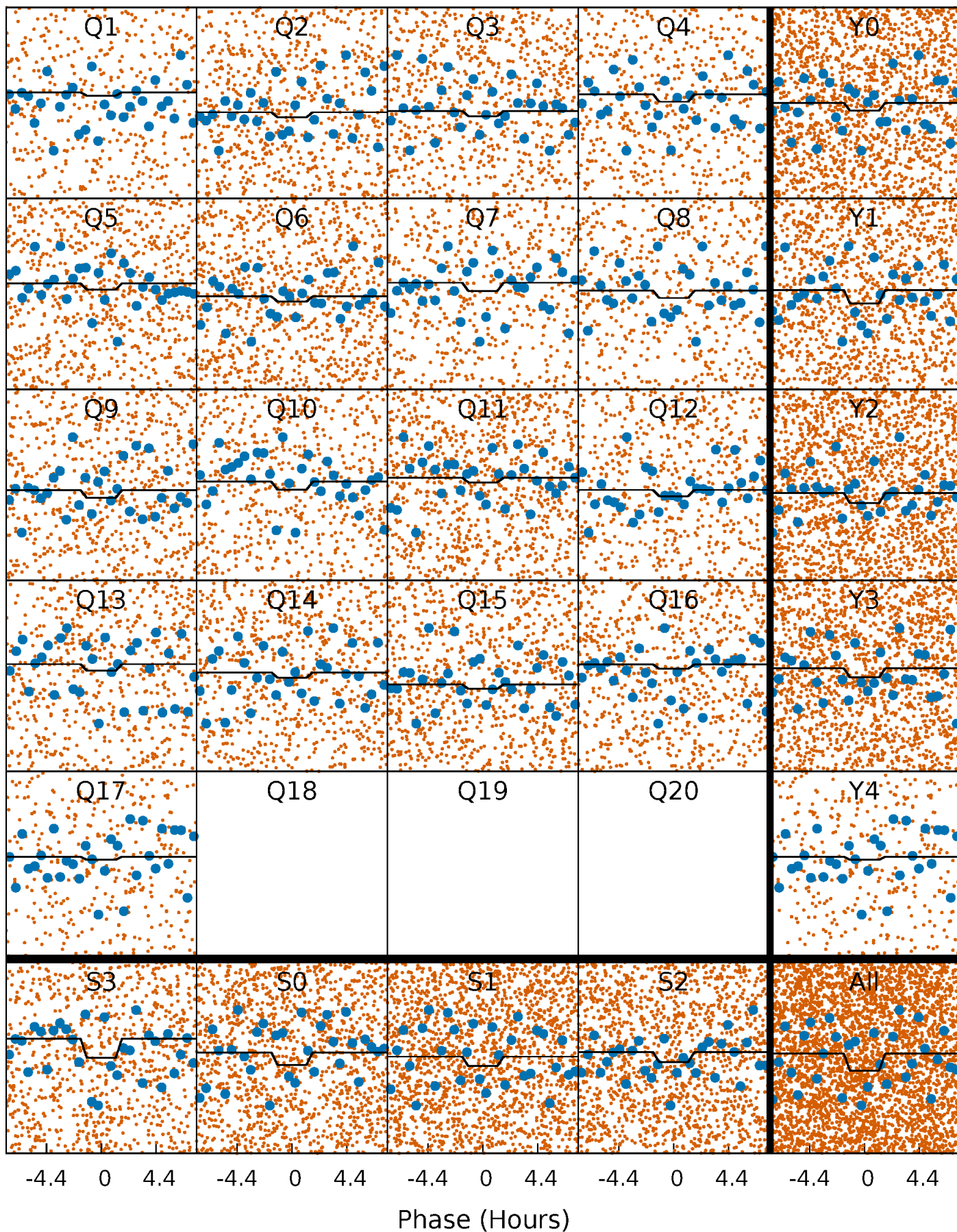
DV Quarter-Phased Transit Curves

TCE 011090405-01 P= 1.025766 Days $T_0=131.925856$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

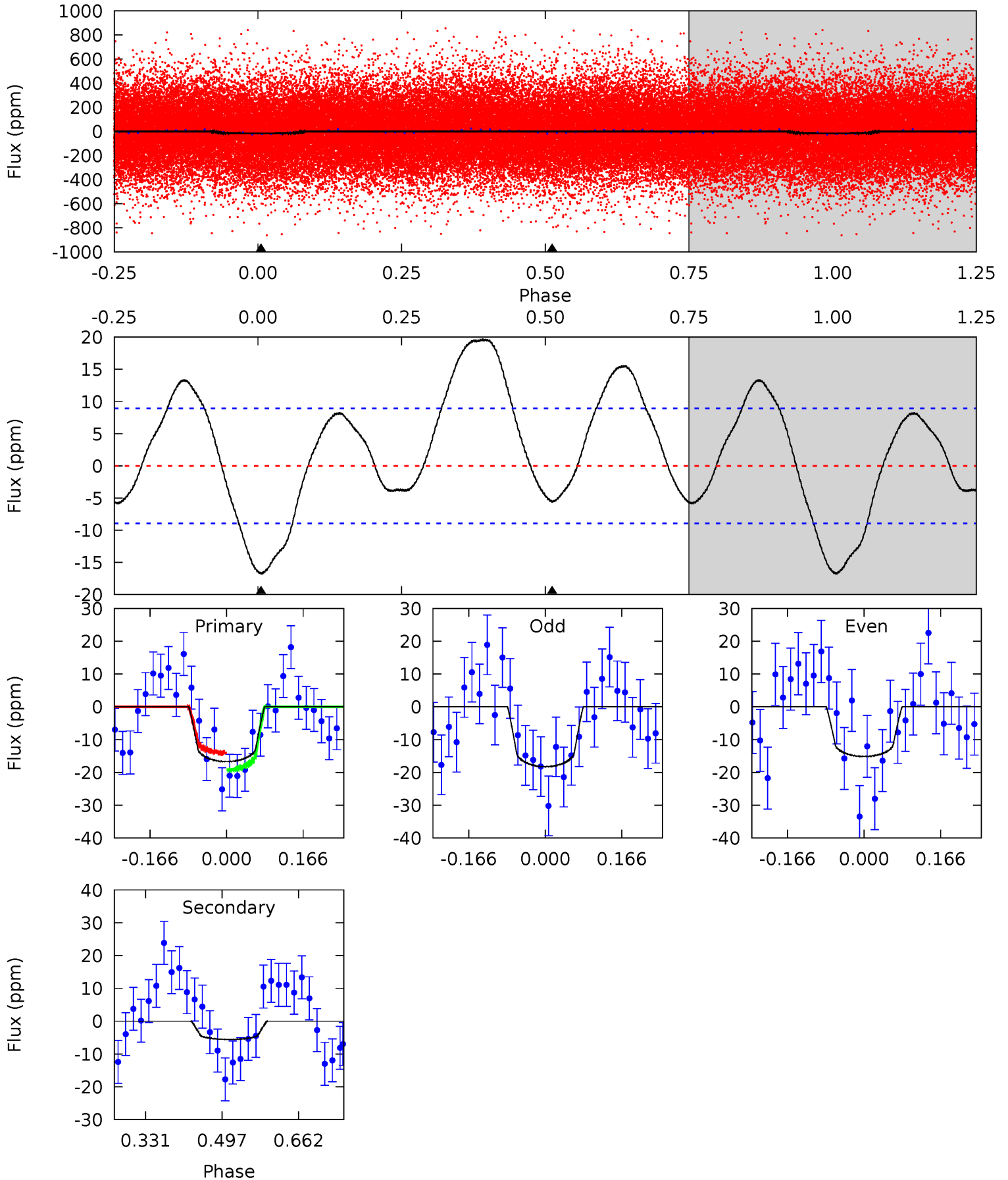
TCE 011090405-01 P= 1.025782 Days $T_0=131.924868$ (BKJD)



DV Model-Shift Uniqueness Test

011090405-01, P = 1.025766 Days, E = 130.900090 Days

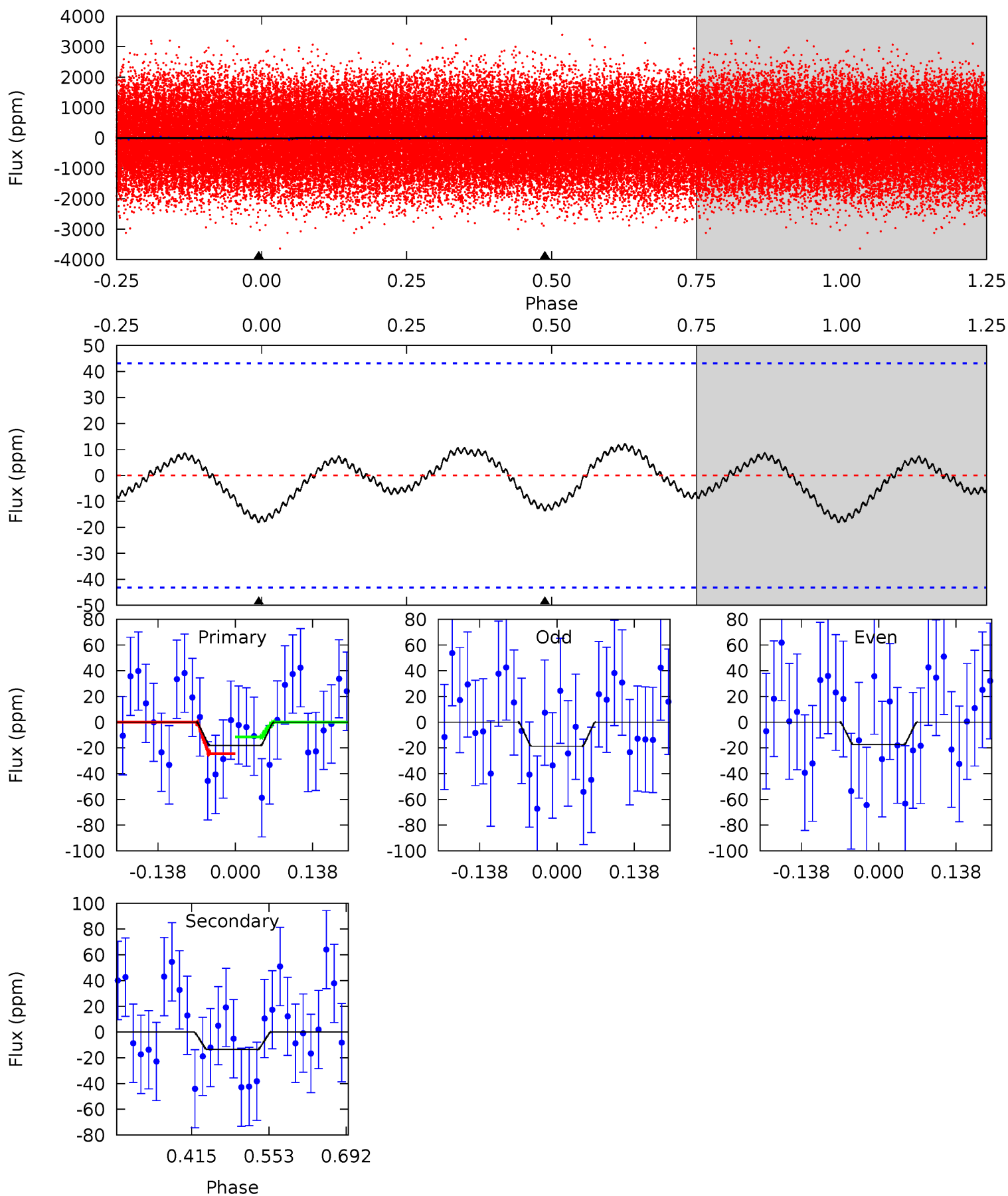
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.34	2.78	0	0	4.46	1.39	2.63	8.34	8.34	2.78	2.78	0.78	0.99	0.54	1.27



Alt Model-Shift Uniqueness Test

011090405-01, P = 1.025782 Days, E = 130.899086 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.87	1.41	0	0	4.50	1.48	0.57	1.87	1.87	1.41	1.41	0.06	0.99	0.40	0.68



Stellar Parameters For KIC 011090405

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7939^{+223}_{-334}	$3.718^{+0.477}_{-0.079}$	$-0.340^{+0.200}_{-0.300}$	$3.199^{+0.289}_{-1.637}$	$1.952^{+0.097}_{-0.520}$	$0.084^{+0.378}_{-0.022}$
	+3%/-4%	+13%/-2%	+59%/-88%	+9%/-51%	+5%/-27%	+450%/-26%
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 011090405-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-6 ± 2	$1.43^{+0.69}_{-0.62}$	5408^{+330}_{-748}	5012^{+1875}_{-1661}	$0.860^{+1.938}_{-0.509}$
Alt.	-13 ± 10	$1.31^{+0.72}_{-0.58}$	5395^{+330}_{-657}	6889^{+3607}_{-2762}	$2.496^{+6.302}_{-2.008}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

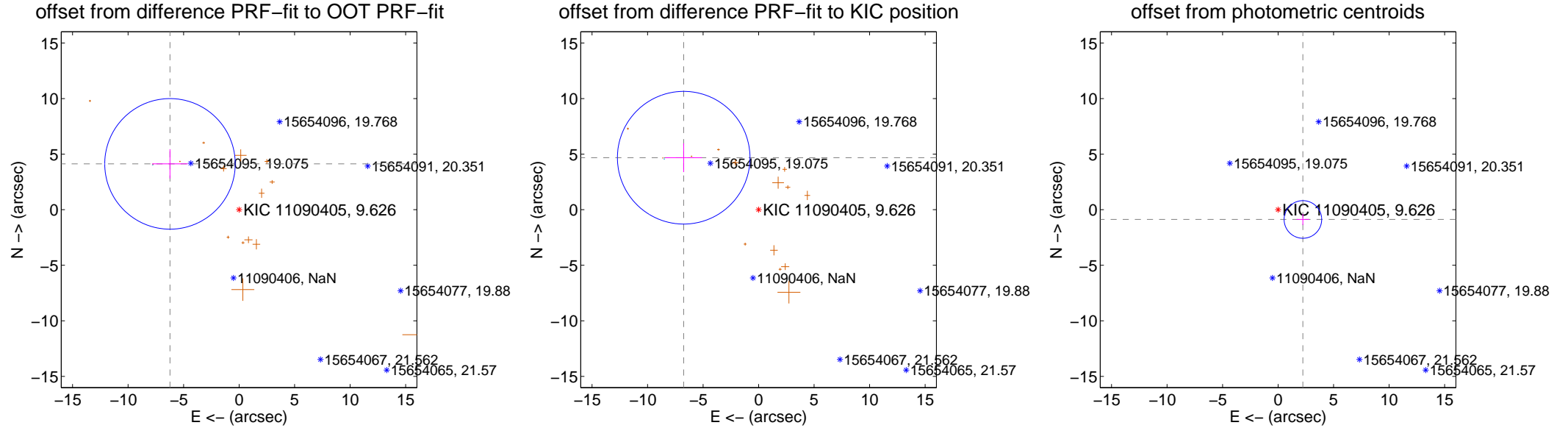
DV Centroid Data

Supplemental centroid analysis for 011090405-01. **Kepler magnitude: 9.63.** Transit SNR 8.72

There are 1 quarters with good PRF difference image offsets

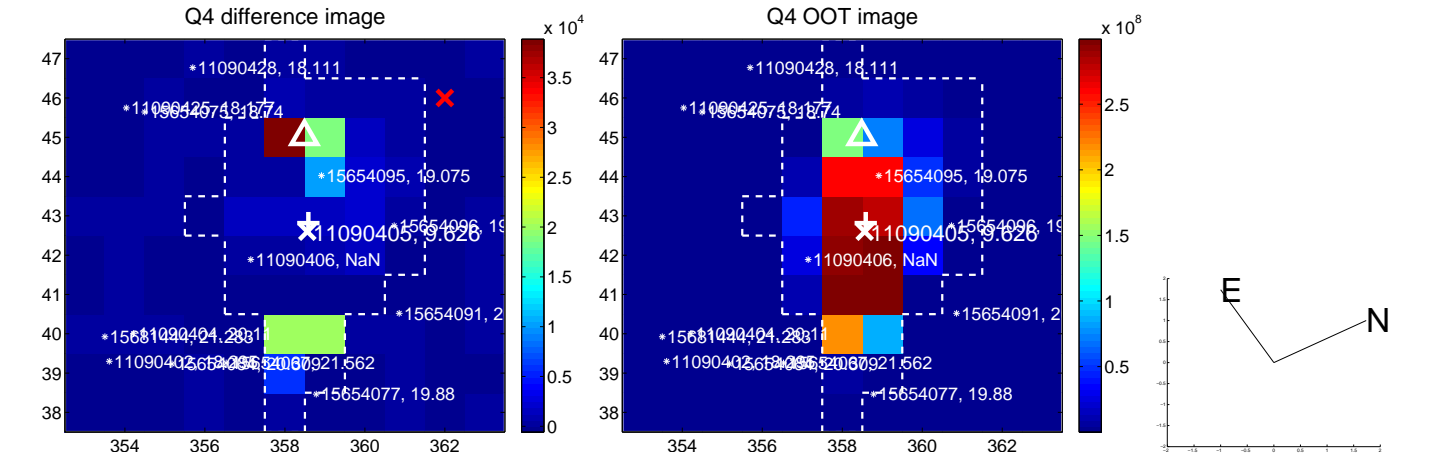
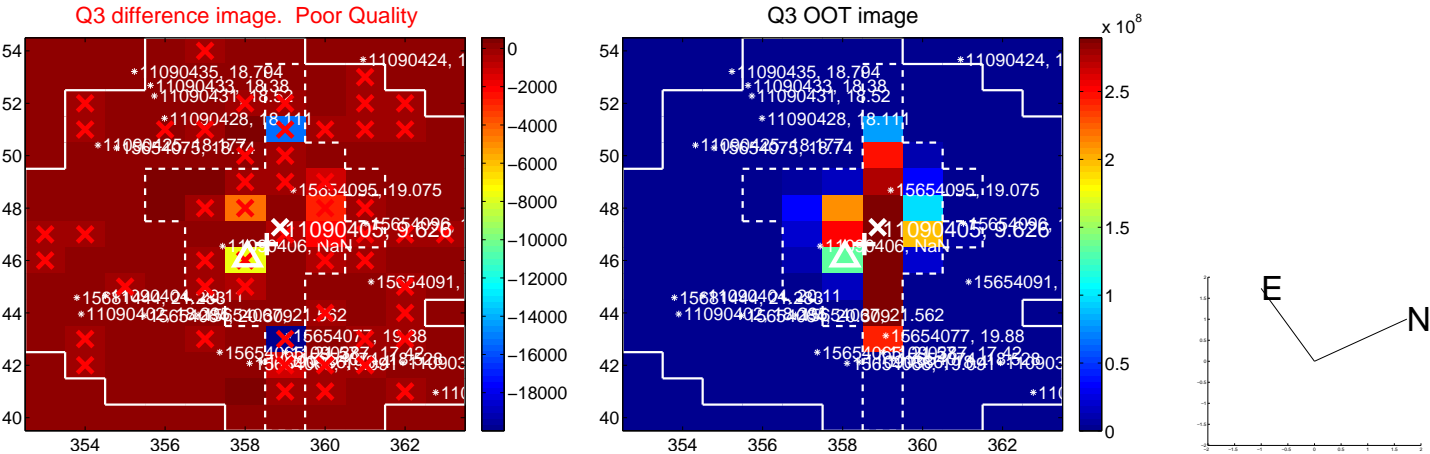
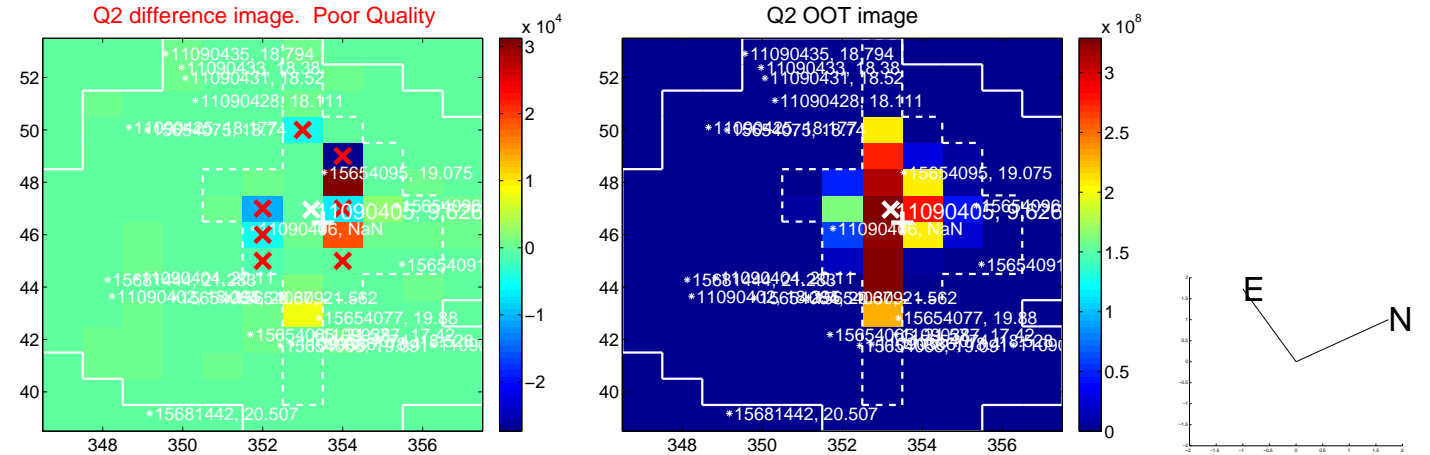
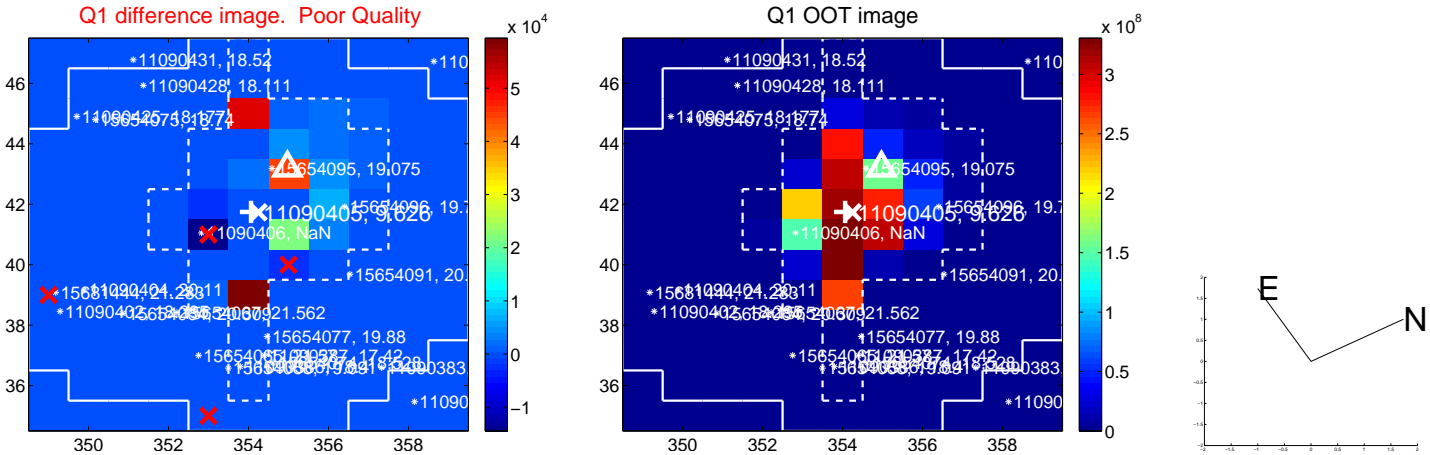
The direct PRF centroid is offset from the target star catalog position by about 0.57 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.466 ± 1.958	3.81	6.224 ± 1.605	4.123 ± 1.317
PRF-fit source offset from KIC position	8.206 ± 1.989	4.12	6.743 ± 1.651	4.677 ± 1.297
photometric centroid source offset	2.40 ± 0.56	4.26	-2.23 ± 0.57	-0.88 ± 0.49

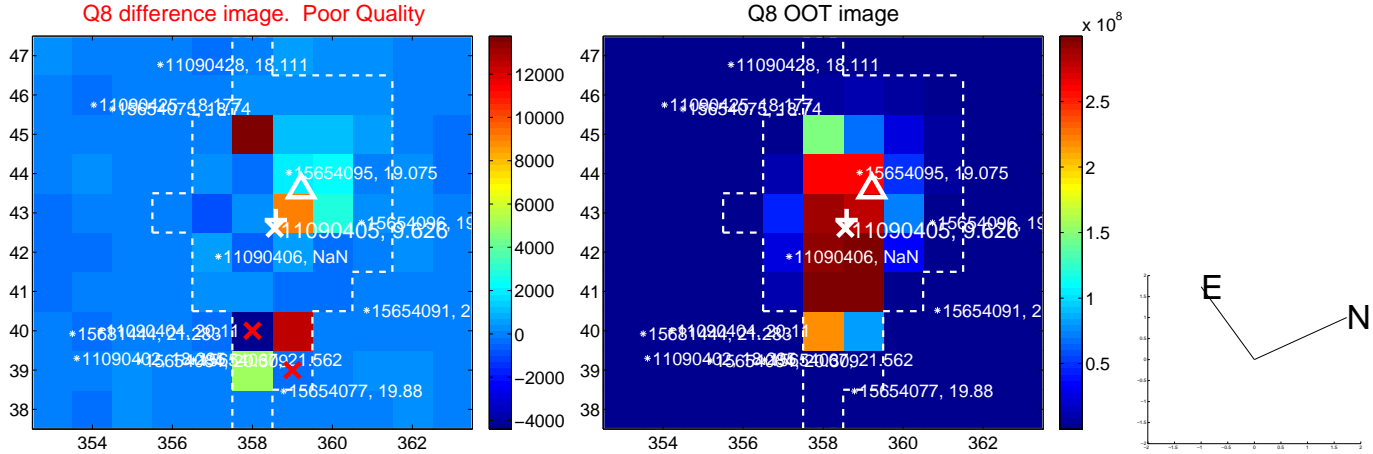
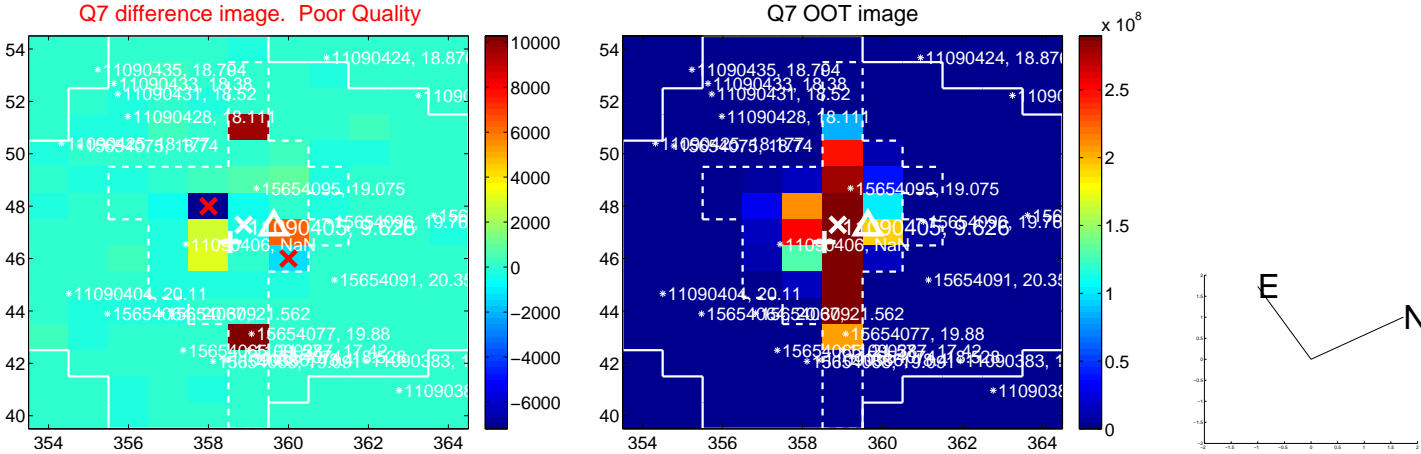
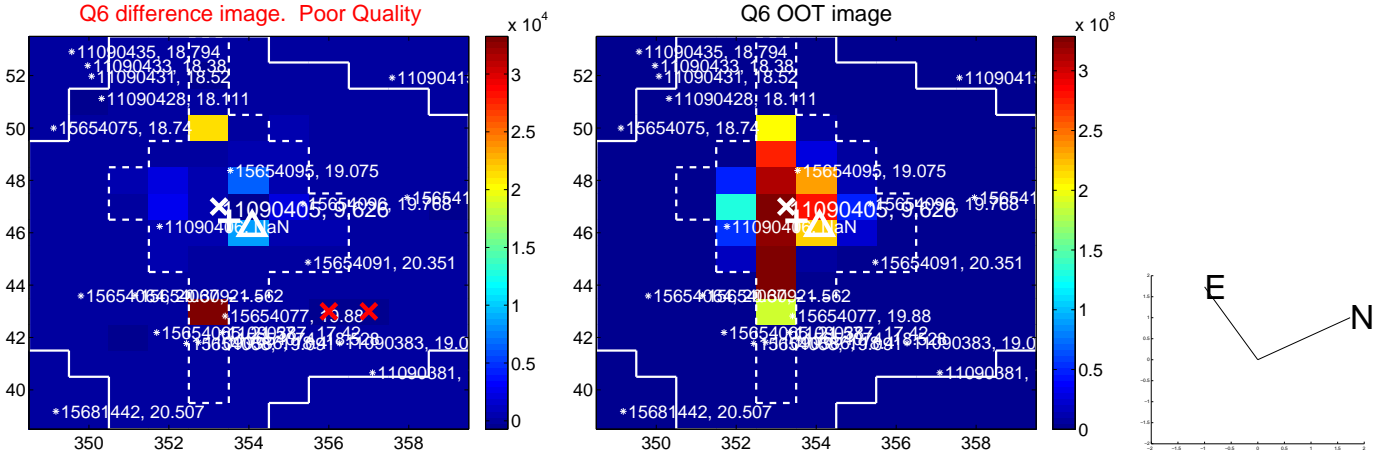
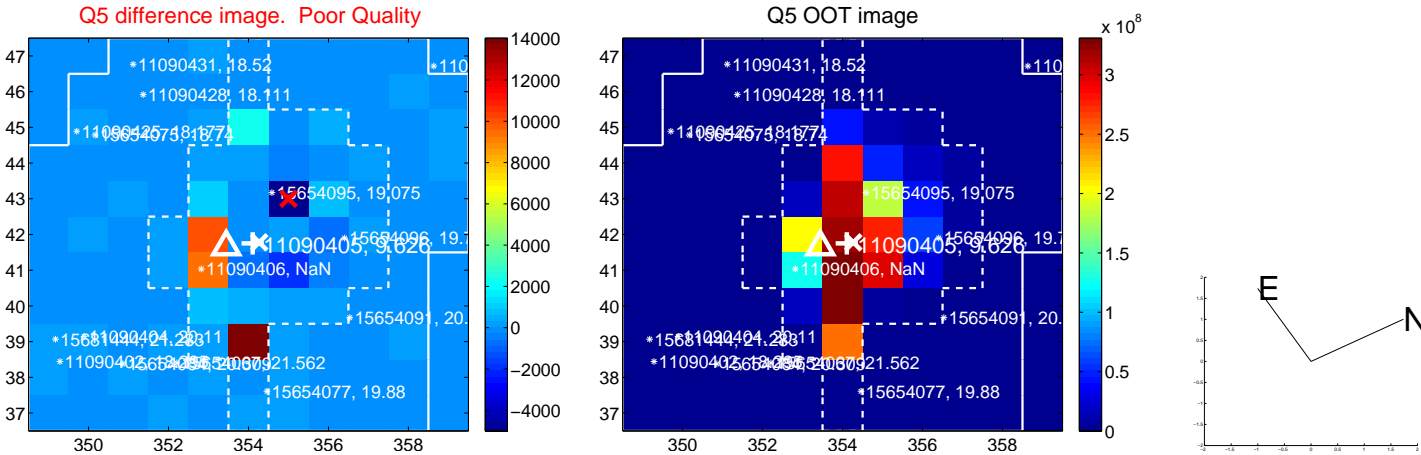


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

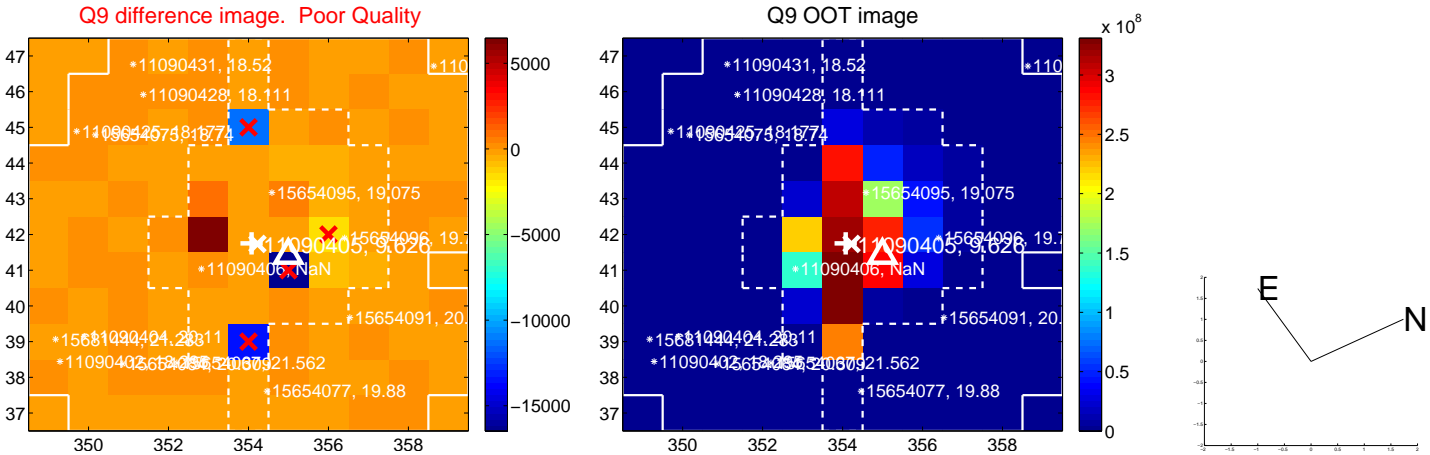
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



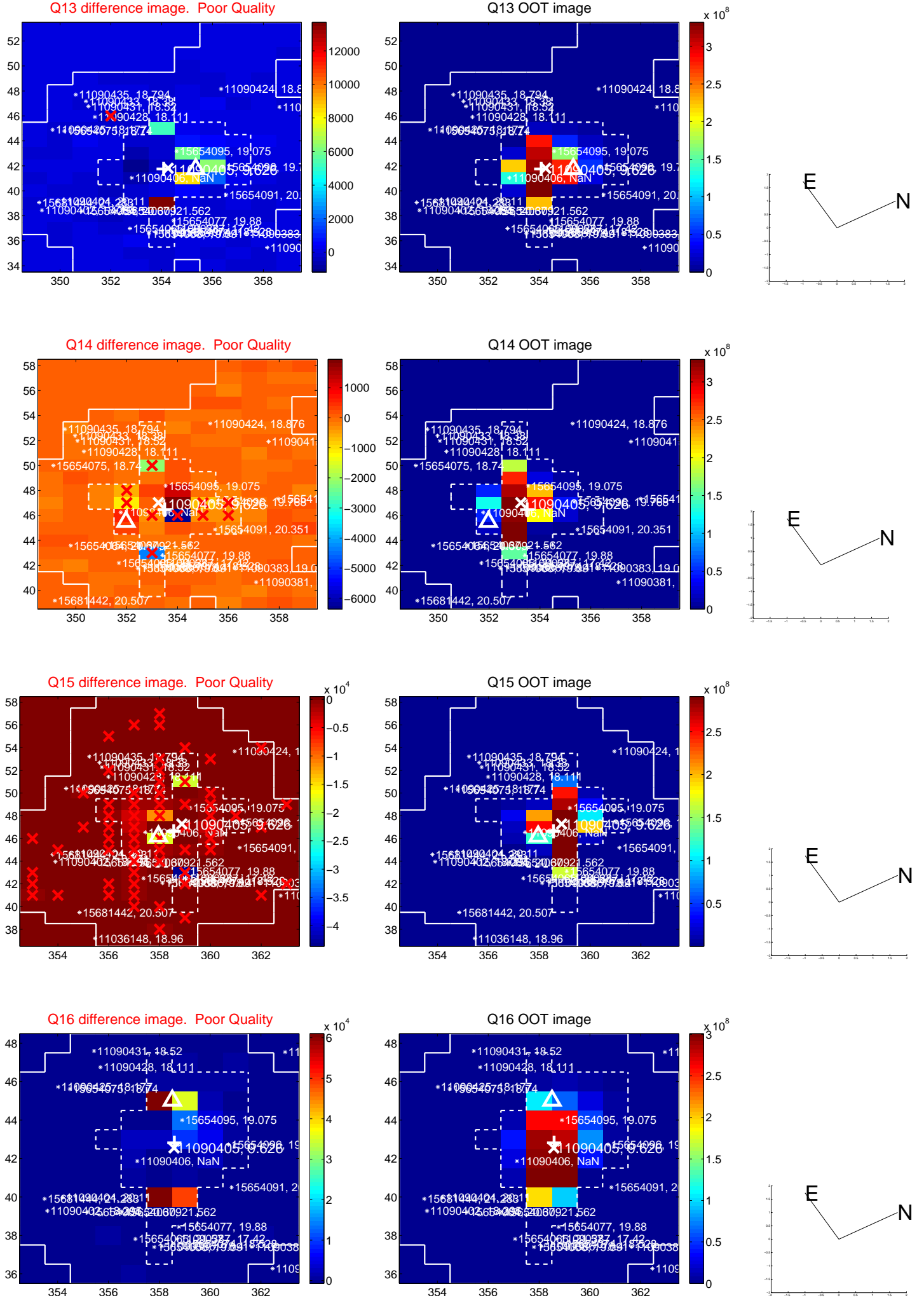
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



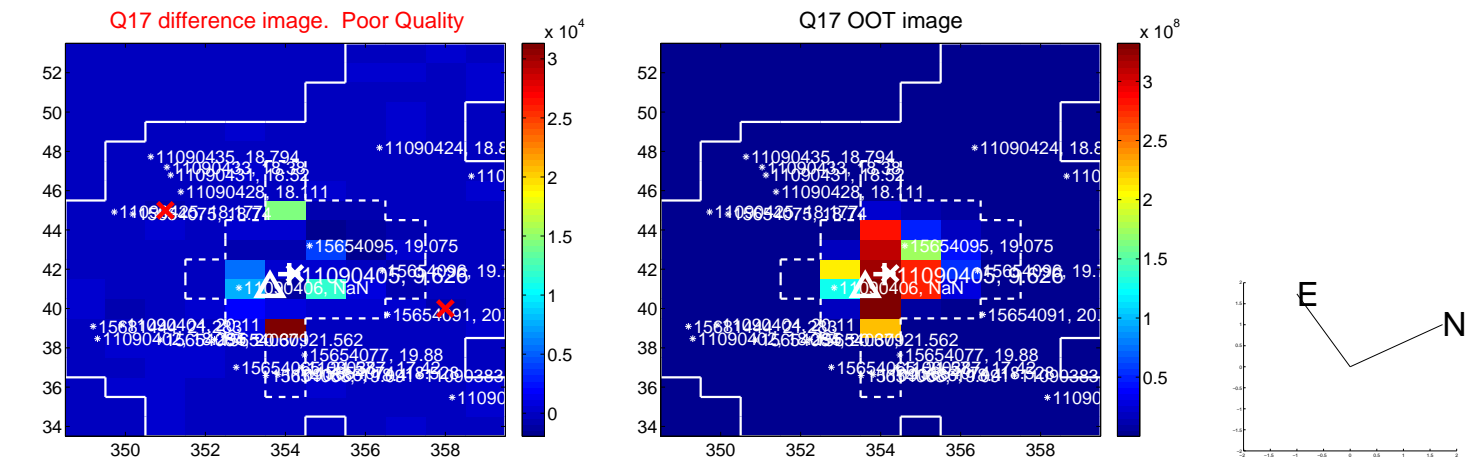
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



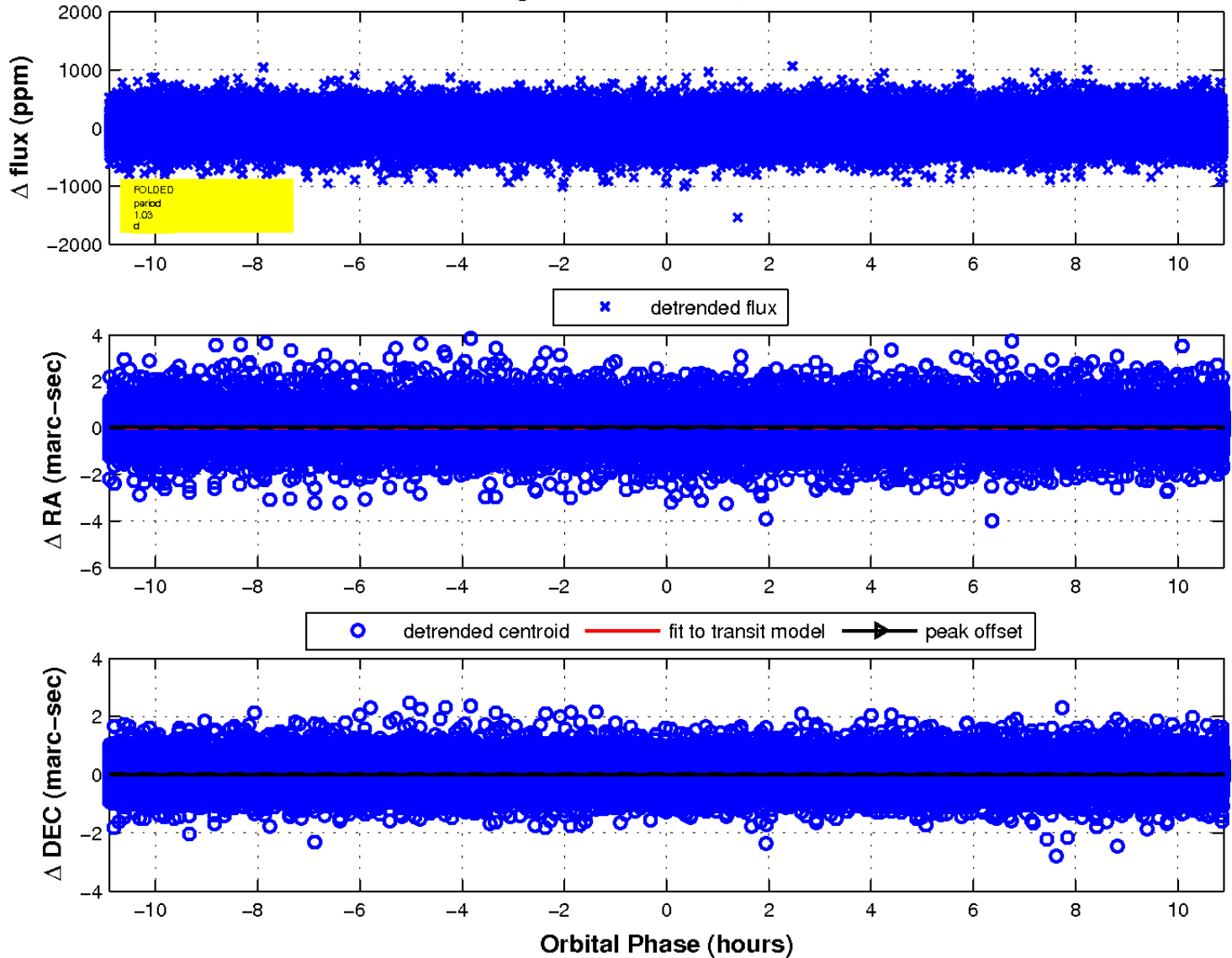
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

