

KIC 001432091

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})
001432091-01	OBS	No	4.684852	134.196336	56.1	24.590	7.9	5.5	1.28	5497	0.94	476.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001432091-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL —LPP_DV —CENT_RESOLVED_OFFSET

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

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

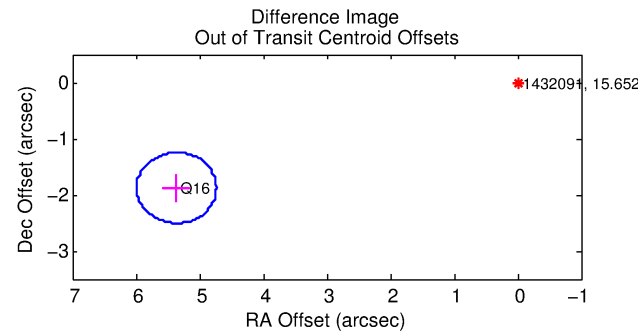
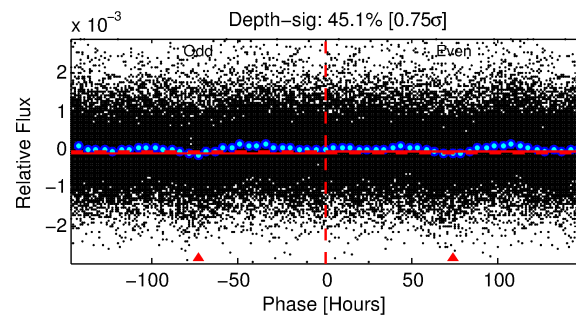
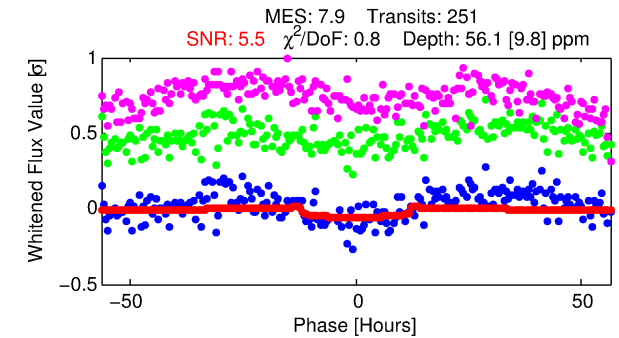
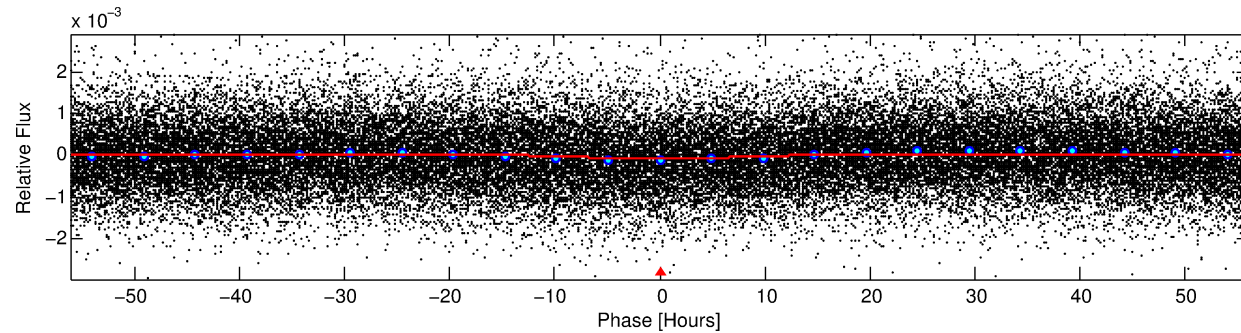
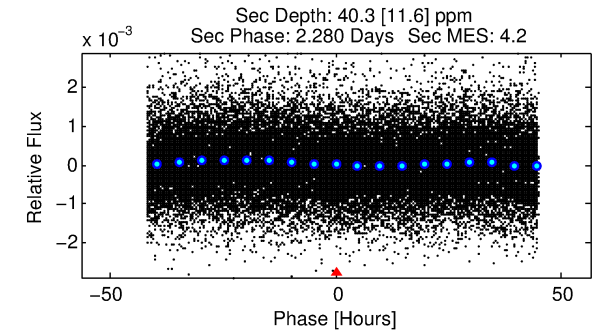
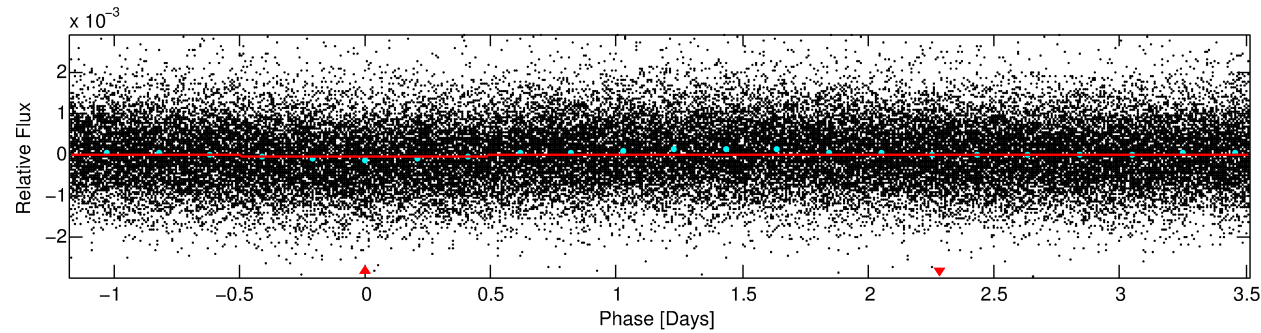
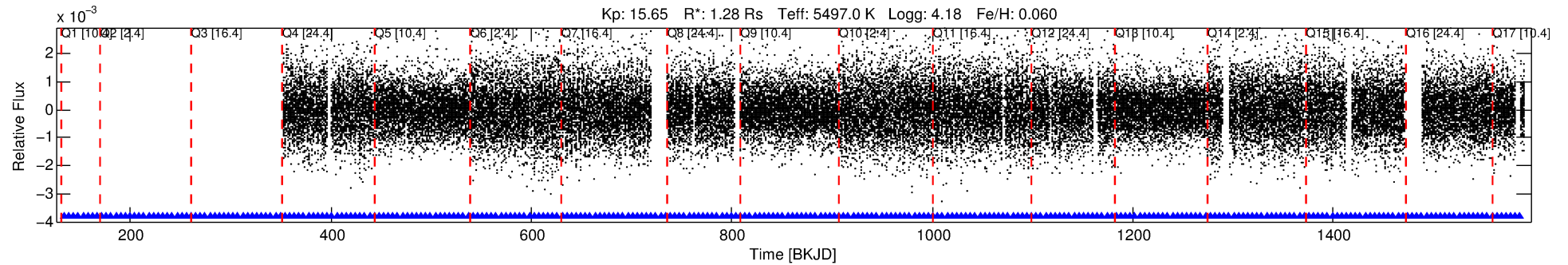
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 001432091-01

No Significant Match Found

DV One-Page Summary

KIC: 1432091 Candidate: 1 of 1 Period: 4.685 d



DV Fit Results:

Period = 4.68485 [0.00025] d
Epoch = 134.1963 [0.0414] BKJD
Rp/R* = 0.0067 [0.0133]
a/R* = 1.59 [7.64]
b = 0.01 [601.41]
Seff = 476.35 [186.60]
Teq = 1191 [117] K
Rp = 0.94 [1.87] Re
a = 0.0529 [0.0127] AU
Ag = 70.55 [281.49] [0.25σ]
Teff = 5338 [5300] K [0.78σ]

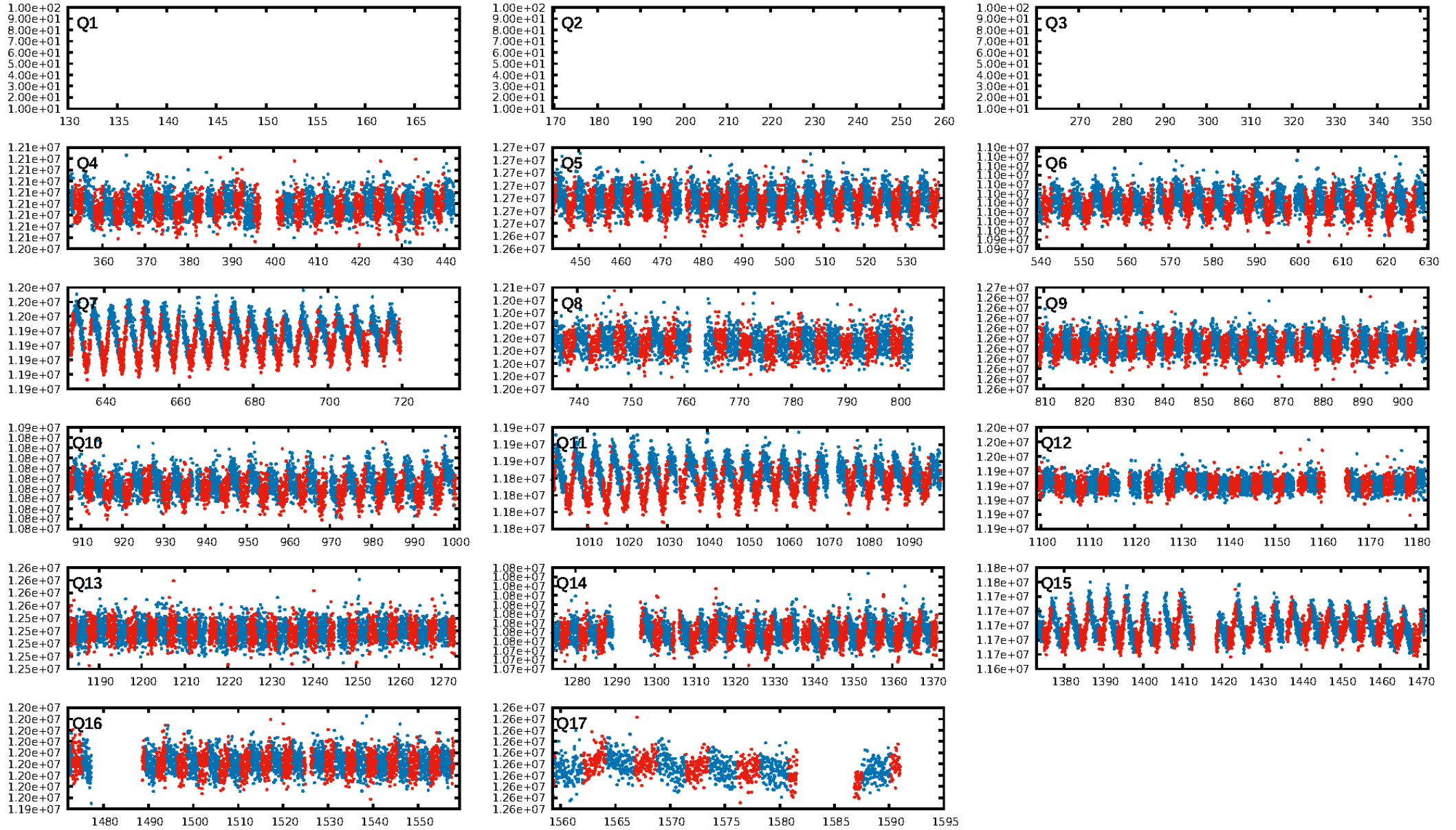
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 9.52e-15
RollingBand-fgt: 1.00 [244/244]
GhostDiagnostic-chr: -0.8332
Centroid-sig: 0.0%
Centroid-so: 22.266 arcsec [5.95σ]
OotOffset-rm: 5.682 arcsec [27.17σ]
KicOffset-rm: 5.768 arcsec [27.56σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [14/14]

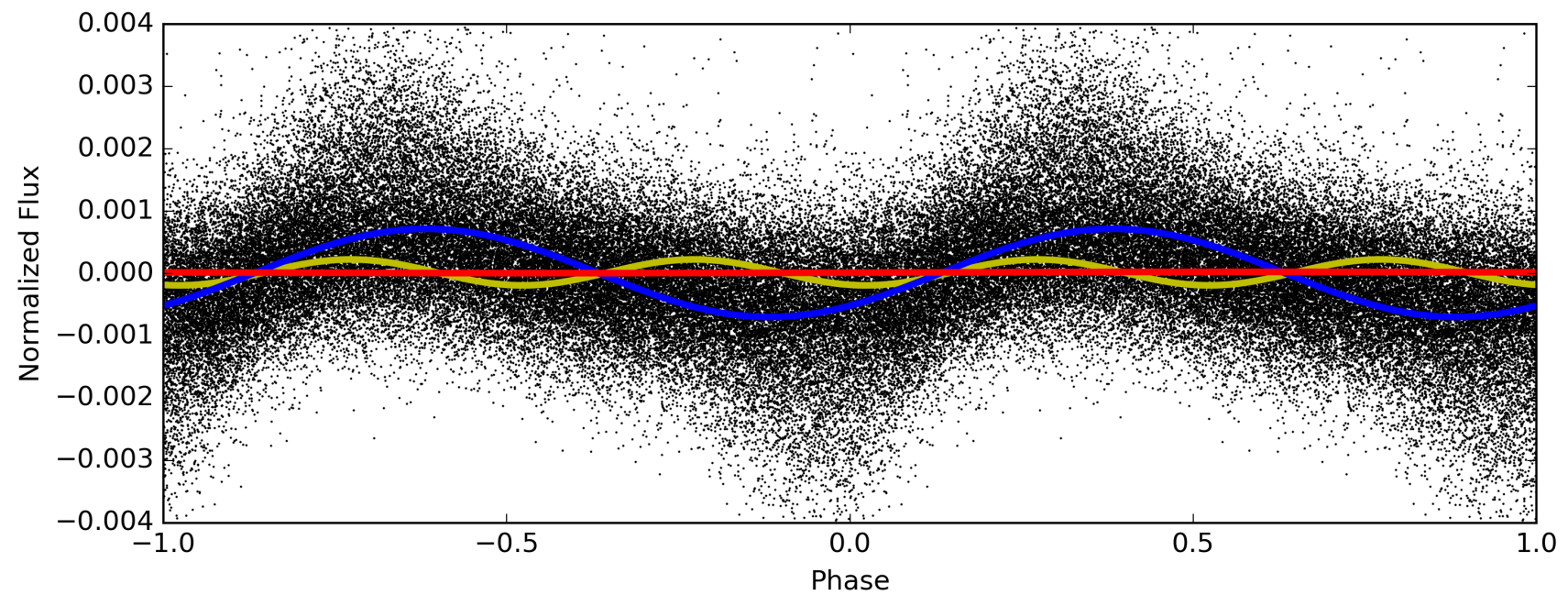
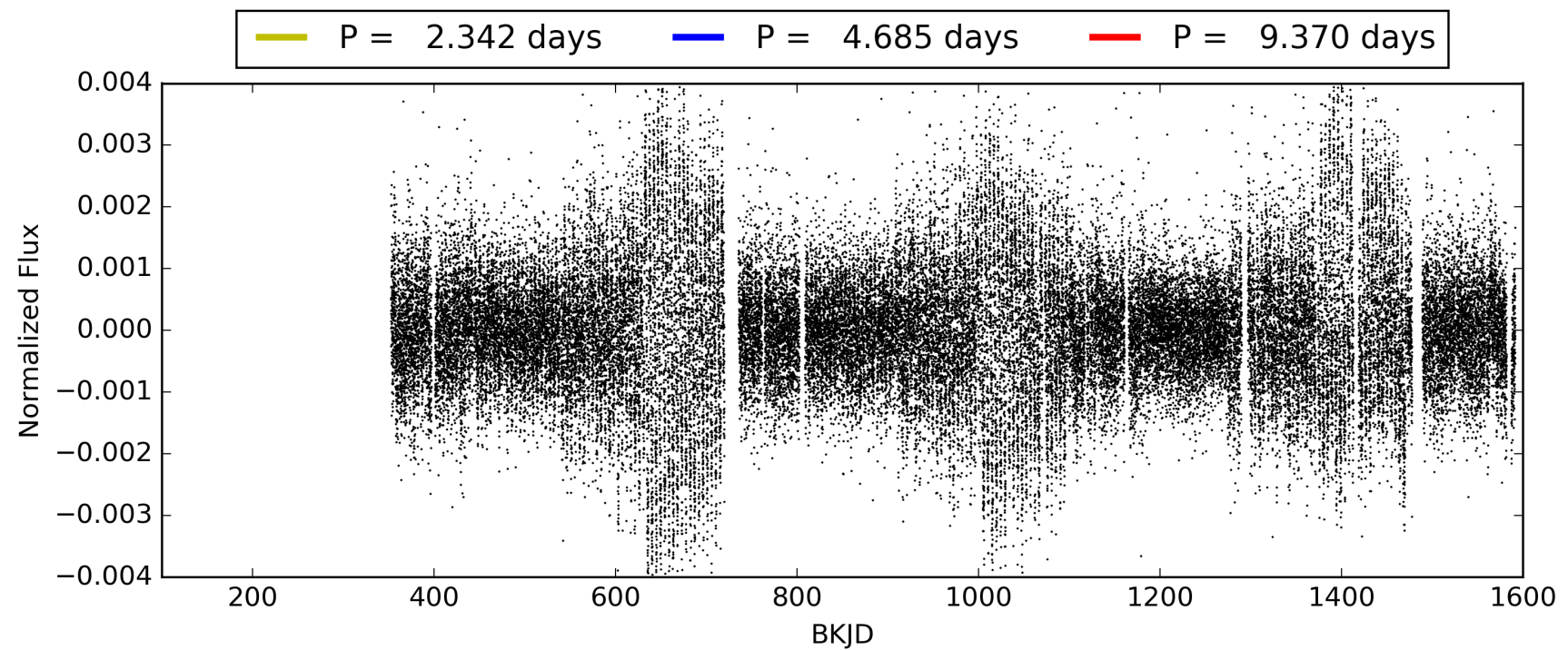
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:12:44 Z

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

TCE 001432091-01, PDC Light Curves

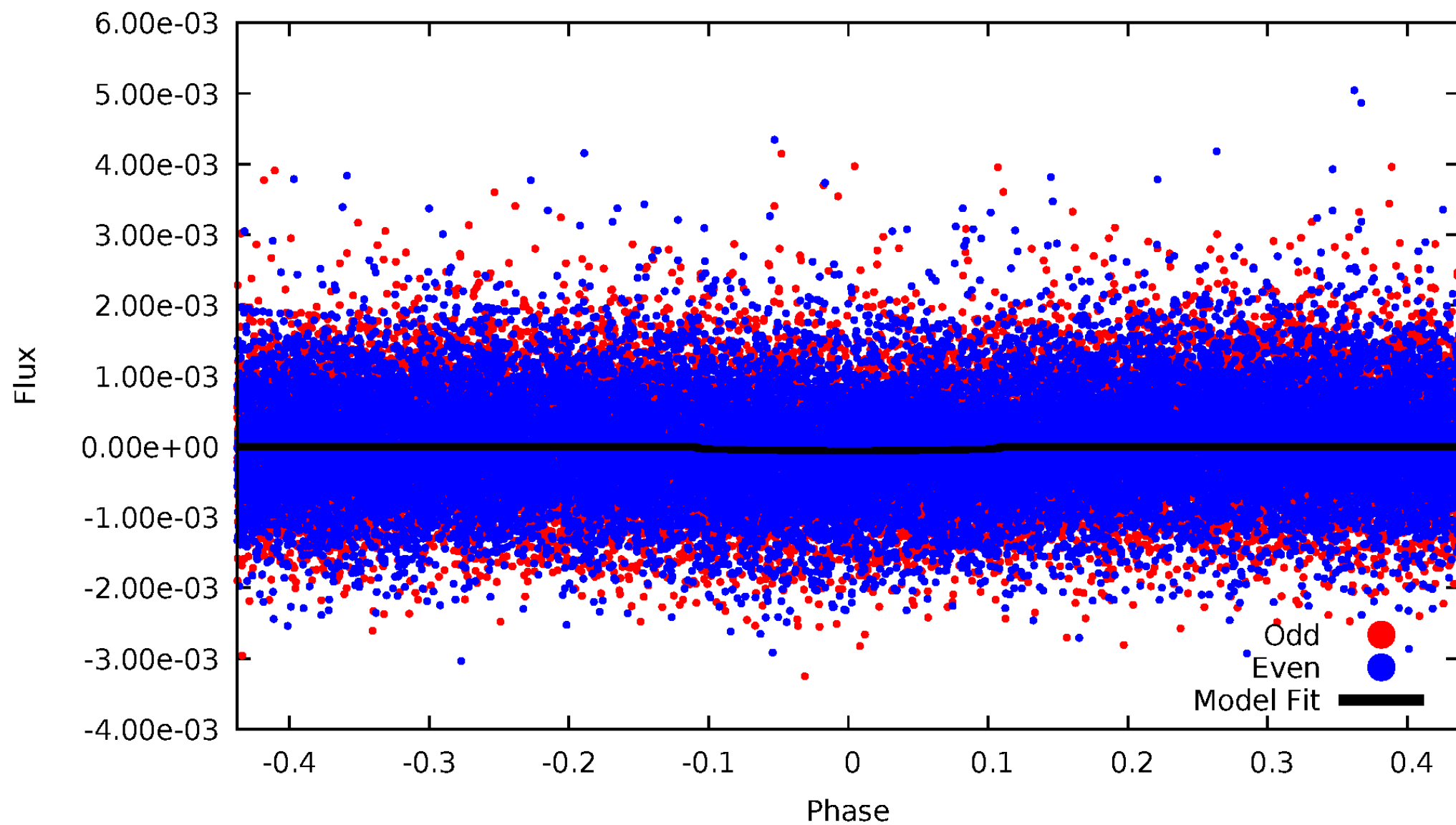


TCE 001432091-01



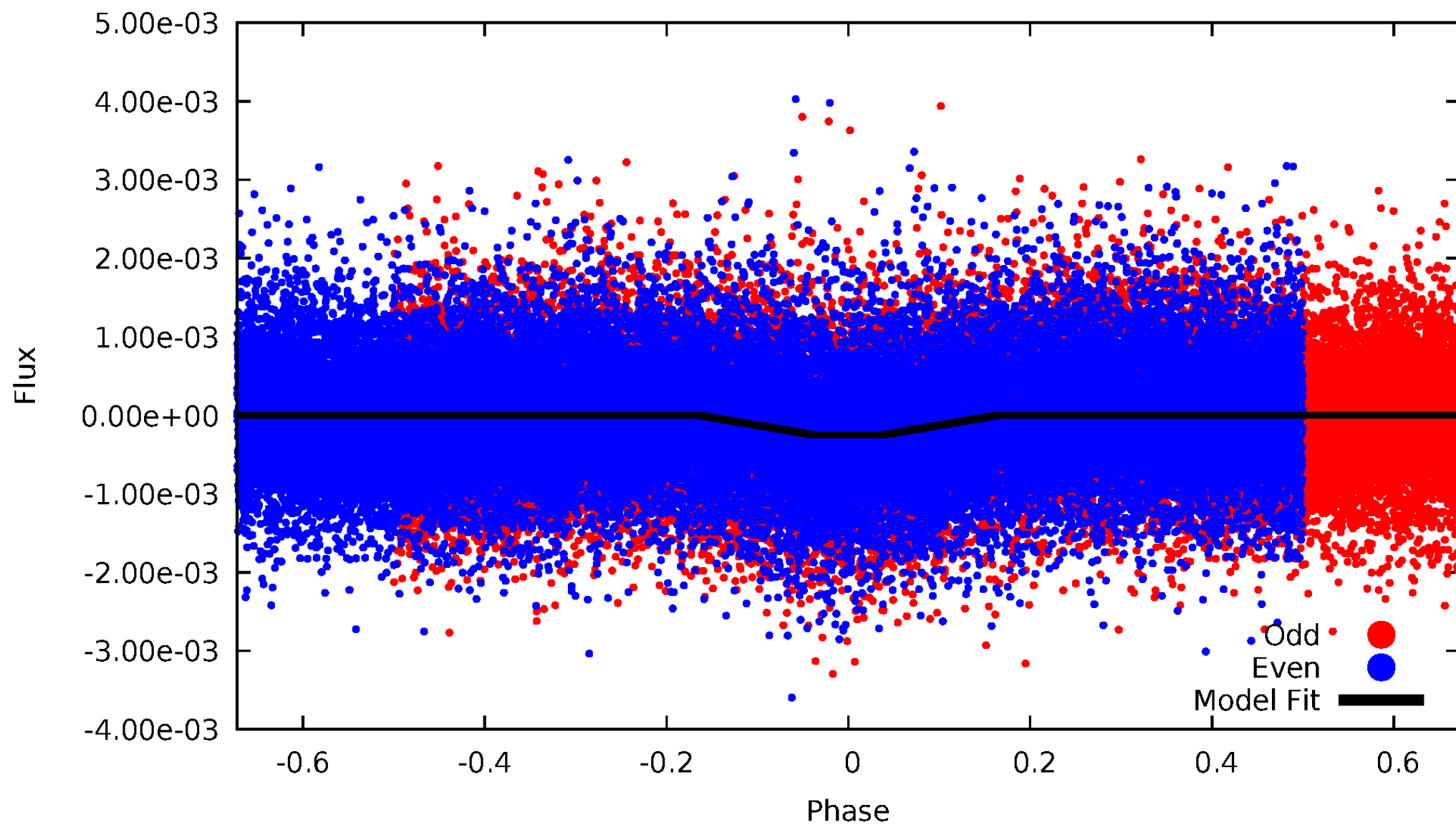
DV Odd/Even

TCE 001432091-01

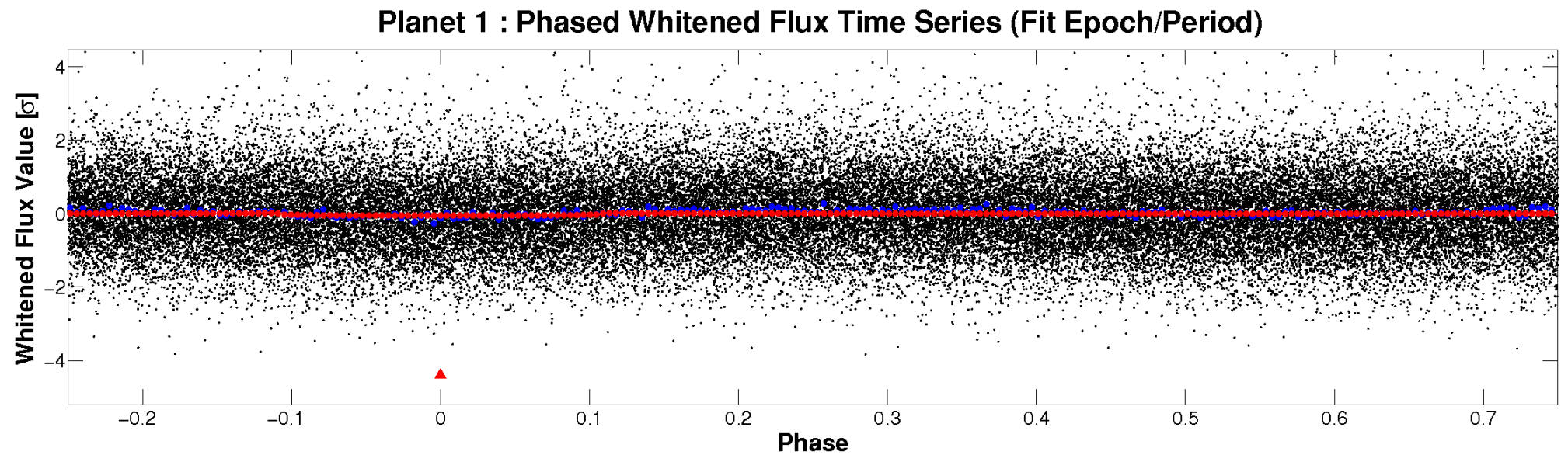
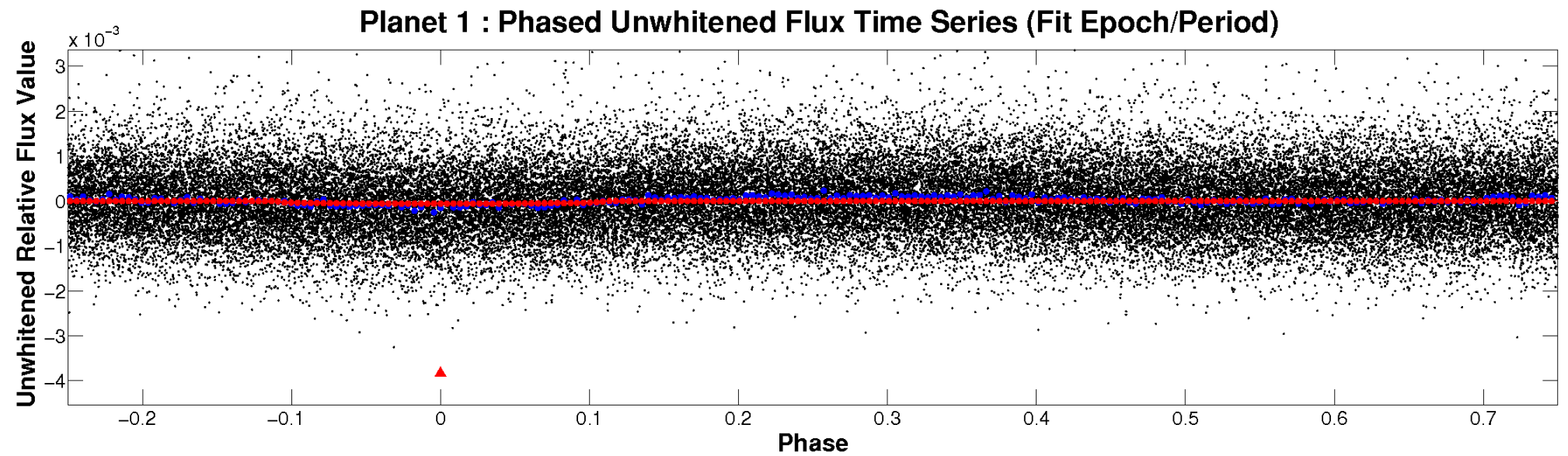


ALT Odd/Even

TCE 001432091-01

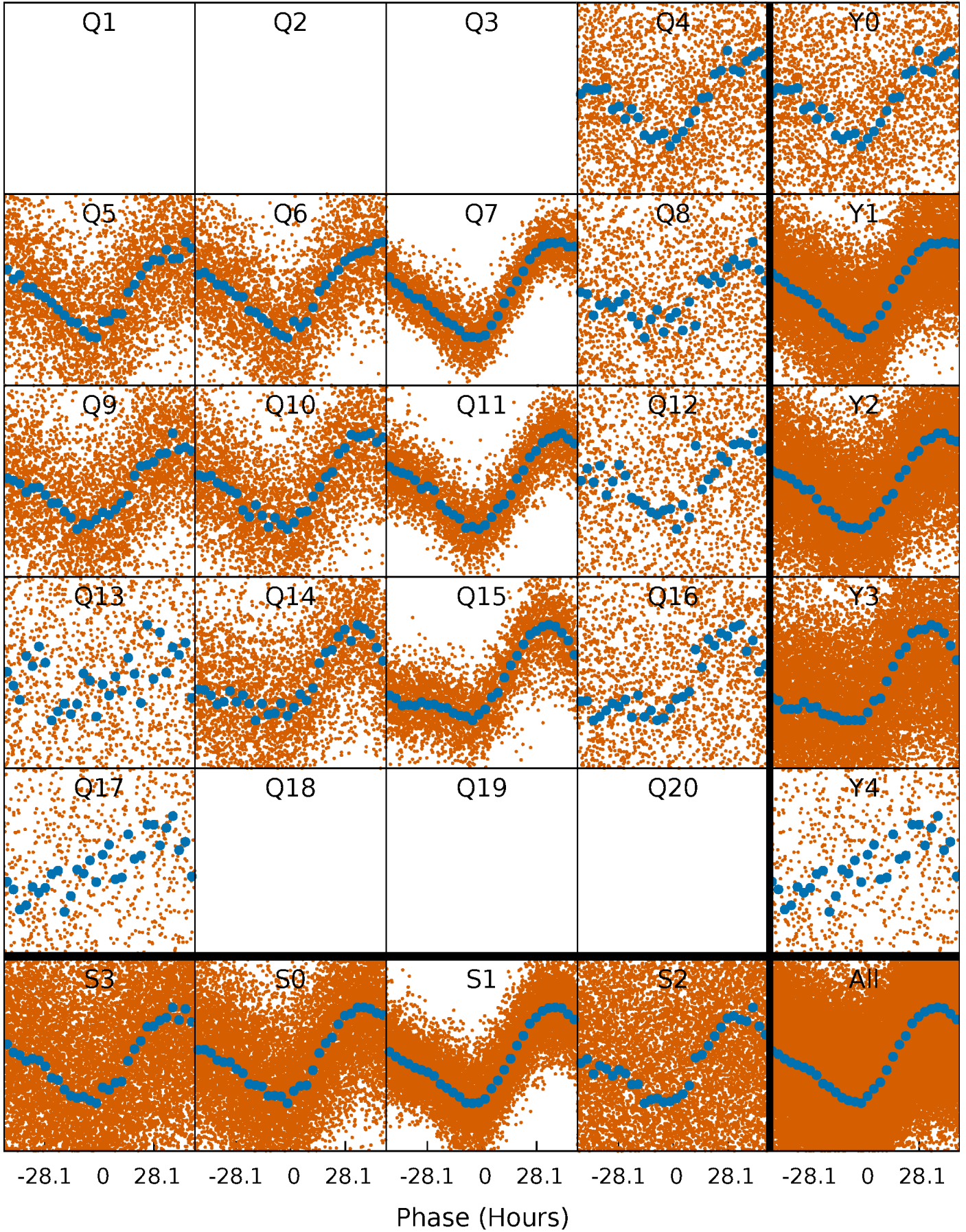


Non-Whitened Vs. Whitened Light Curve



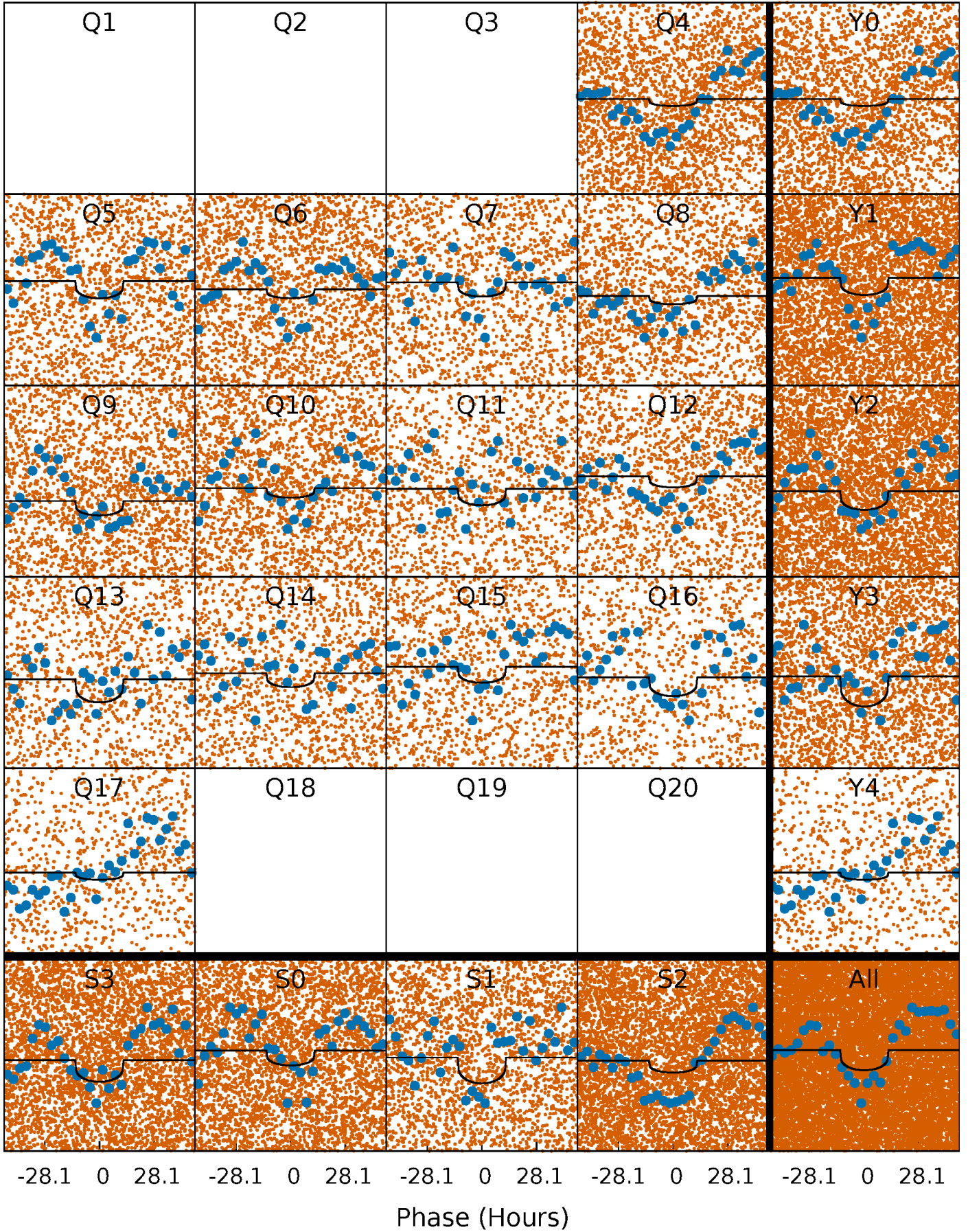
PDC Quarter-Phased Transit Curves

TCE 001432091-01 P= 4.684852 Days $T_0=134.196336$ (BKJD)



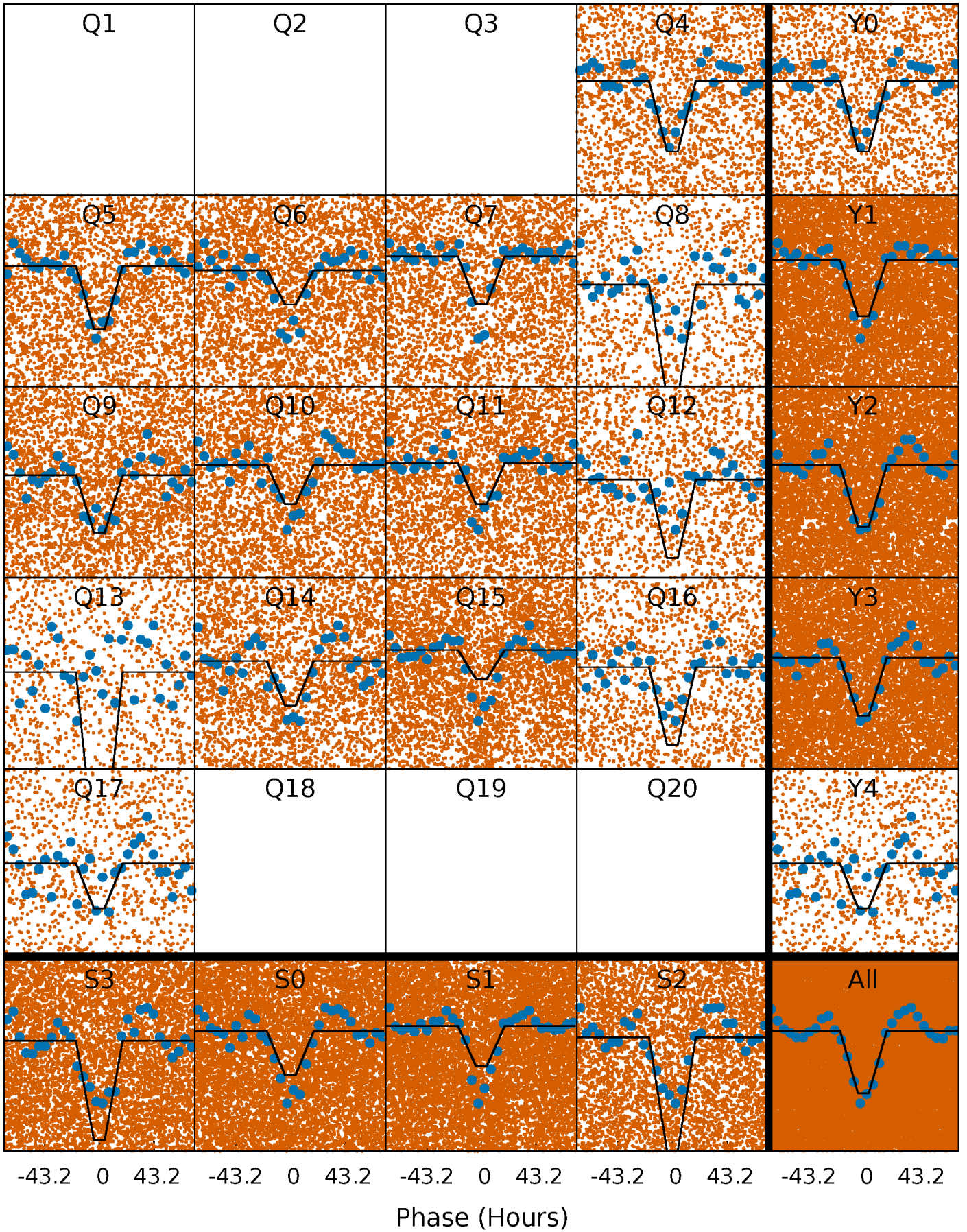
DV Quarter-Phased Transit Curves

TCE 001432091-01 P= 4.684852 Days $T_0=134.196336$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

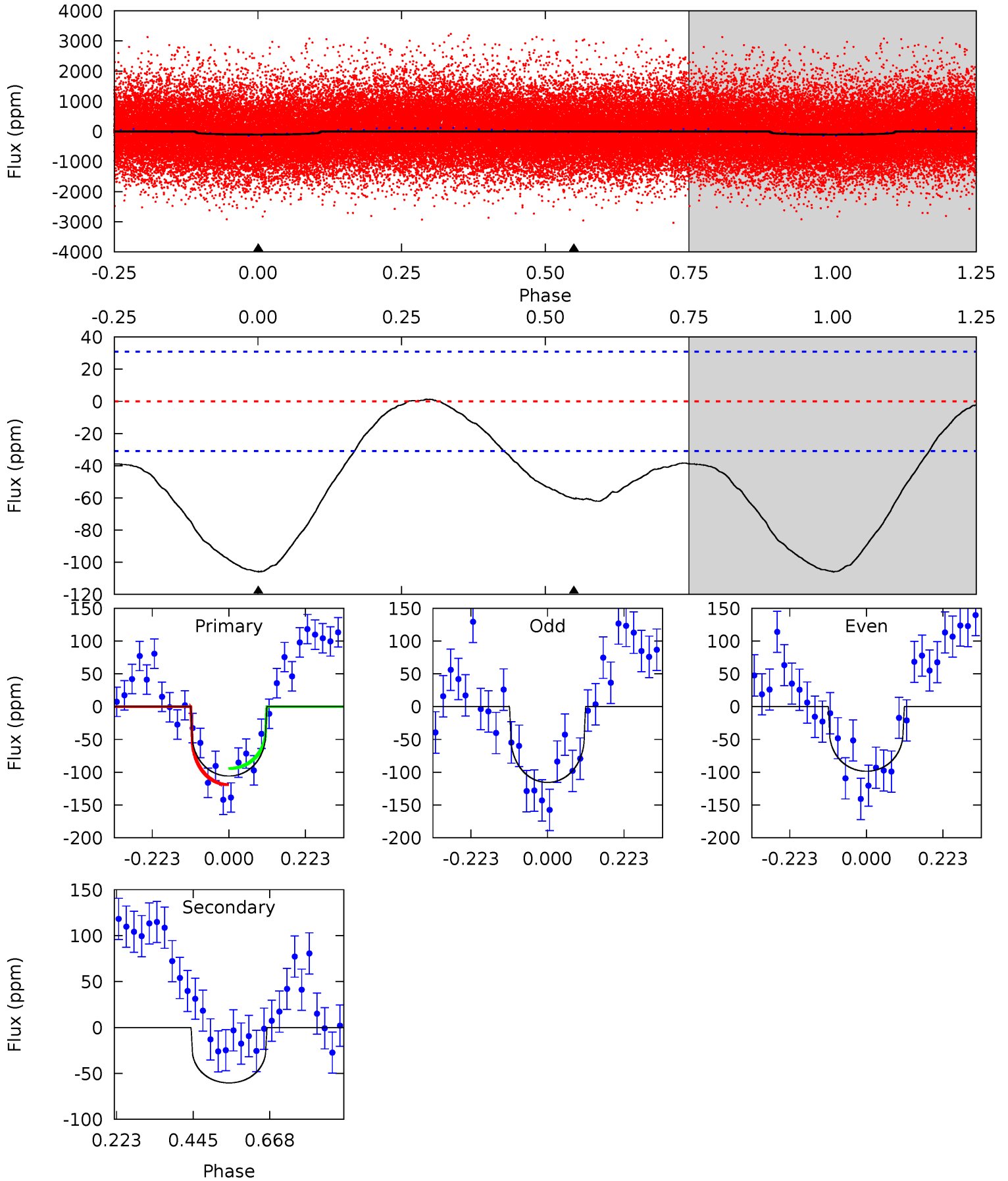
TCE 001432091-01 P= 4.684687 Days $T_0=134.250278$ (BKJD)



DV Model-Shift Uniqueness Test

001432091-01, P = 4.684852 Days, E = 134.196336 Days

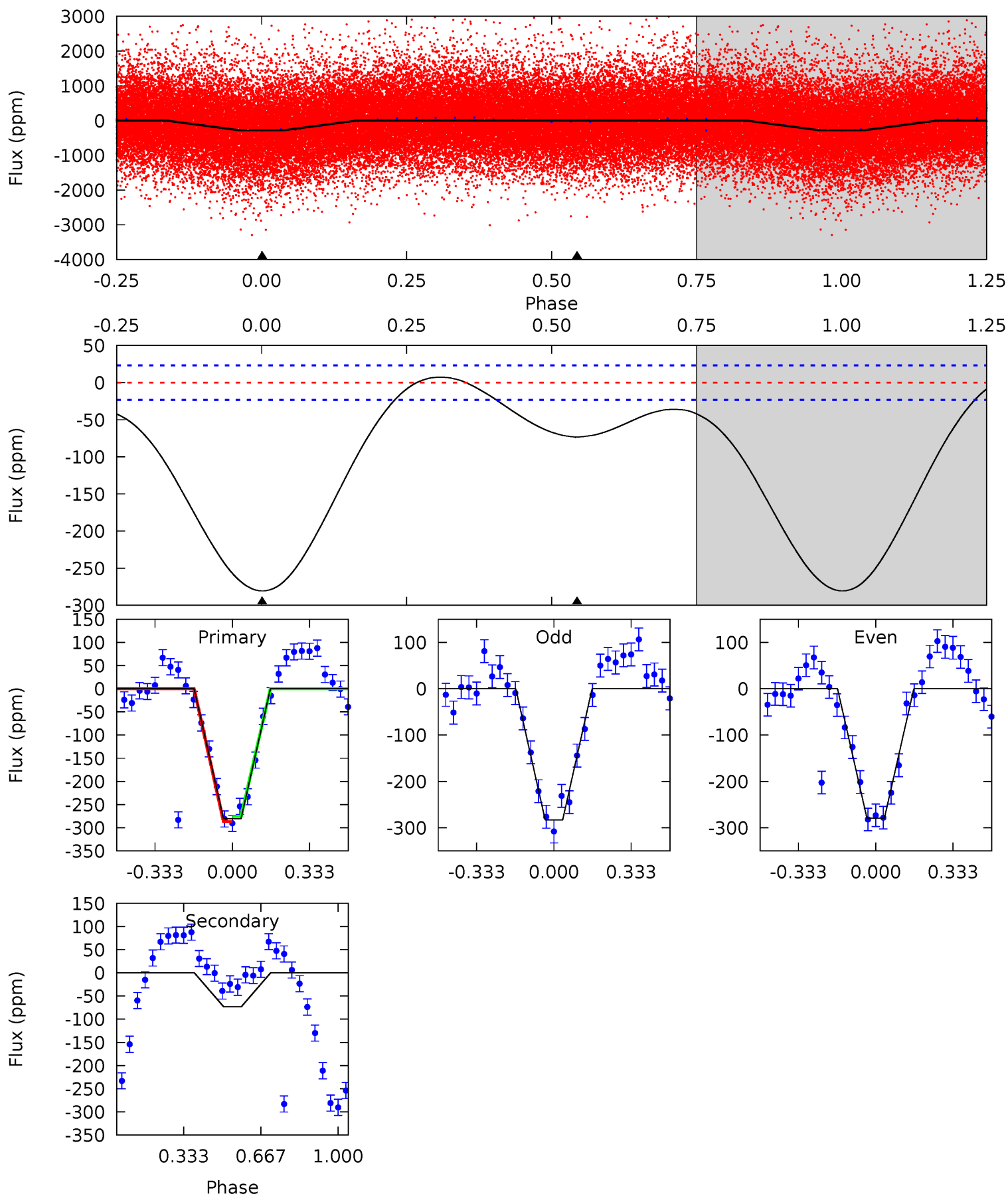
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	8.58	0	0	4.39	1.22	1.22	15.0	15.0	8.58	8.58	1.21	1.34	0.01	1.79



Alt Model-Shift Uniqueness Test

001432091-01, P = 4.684687 Days, E = 134.250278 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.9	13.6	0	0	4.31	0.97	3.27	51.9	51.9	13.6	13.6	0.37	1.14	0.03	0.98



Stellar Parameters For KIC 001432091

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5497^{+82}_{-65}	$4.180^{+0.228}_{-0.123}$	$0.060^{+0.150}_{-0.100}$	$1.277^{+0.211}_{-0.317}$	$0.902^{+0.063}_{-0.037}$	$0.609^{+0.760}_{-0.216}$
	+1%/-1%	+5%/-3%	+250%/-167%	+17%/-25%	+7%/-4%	+125%/-35%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 001432091-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-60 ± 7	$1.58^{+1.60}_{-1.04}$	1656^{+87}_{-118}	4623^{+3307}_{-1012}	37^{+275}_{-28}
Alt.	-73 ± 5	$2.37^{+1.74}_{-1.40}$	1656^{+89}_{-111}	4103^{+1936}_{-672}	20^{+101}_{-13}

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 $A_{obs} \gg 1.0$

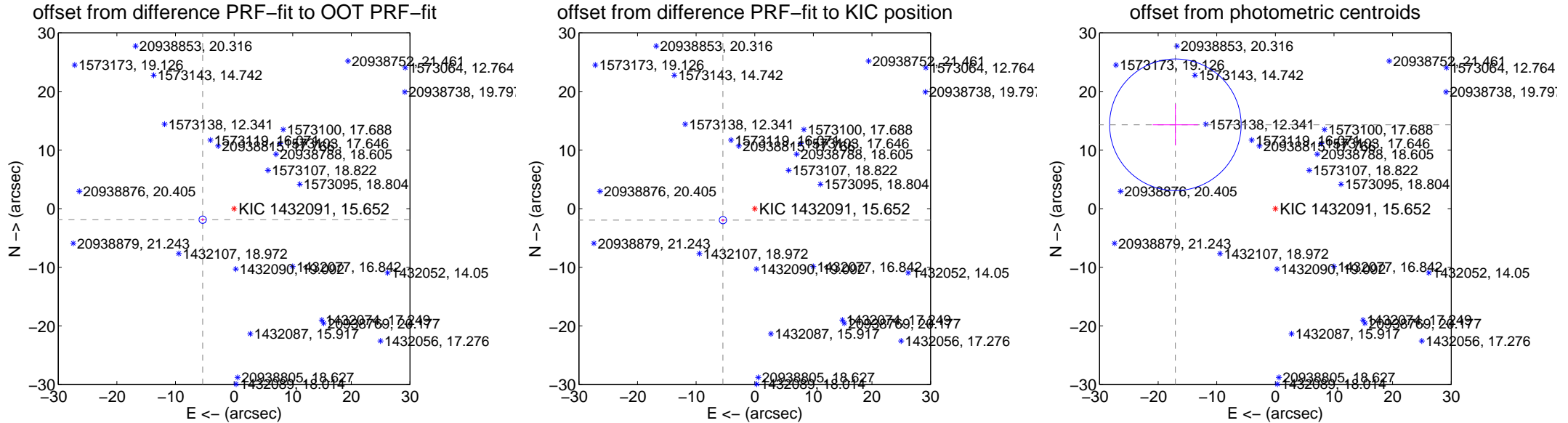
DV Centroid Data

Supplemental centroid analysis for 001432091-01. Kepler magnitude: 15.65. Transit SNR 5.54

There are 0 quarters with good PRF difference image offsets

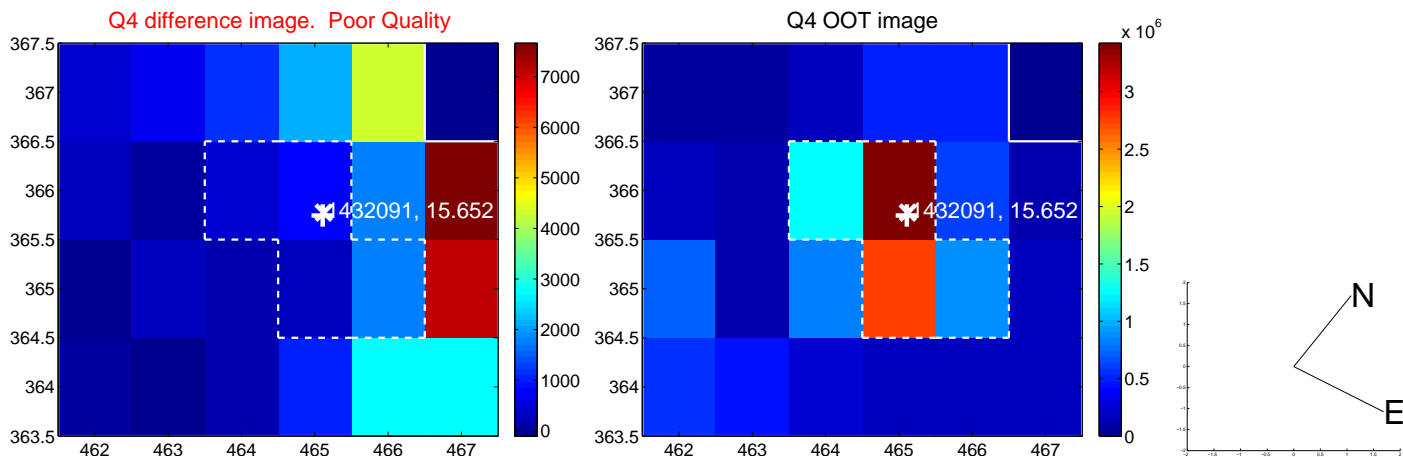
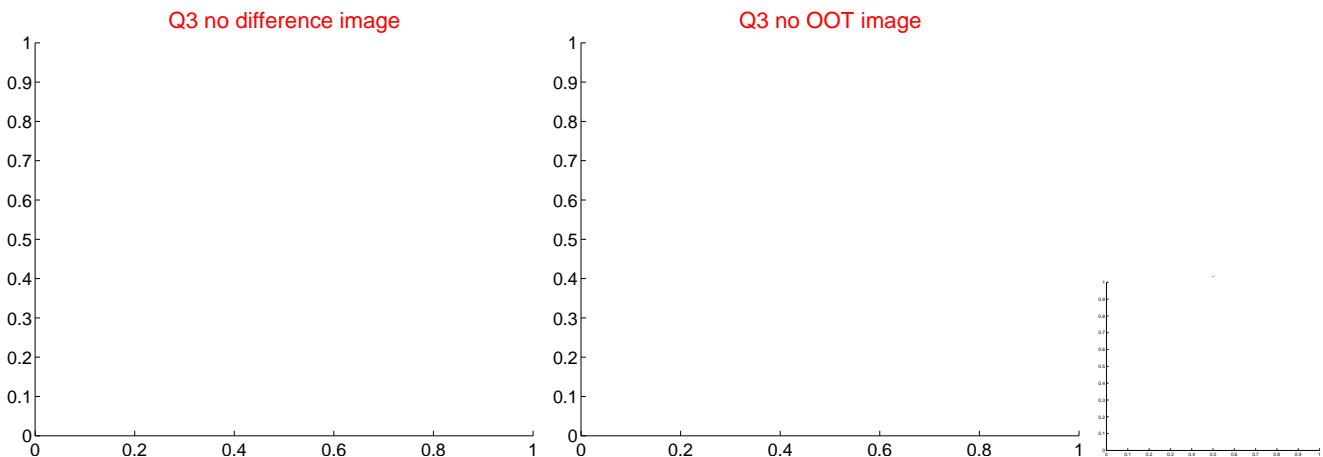
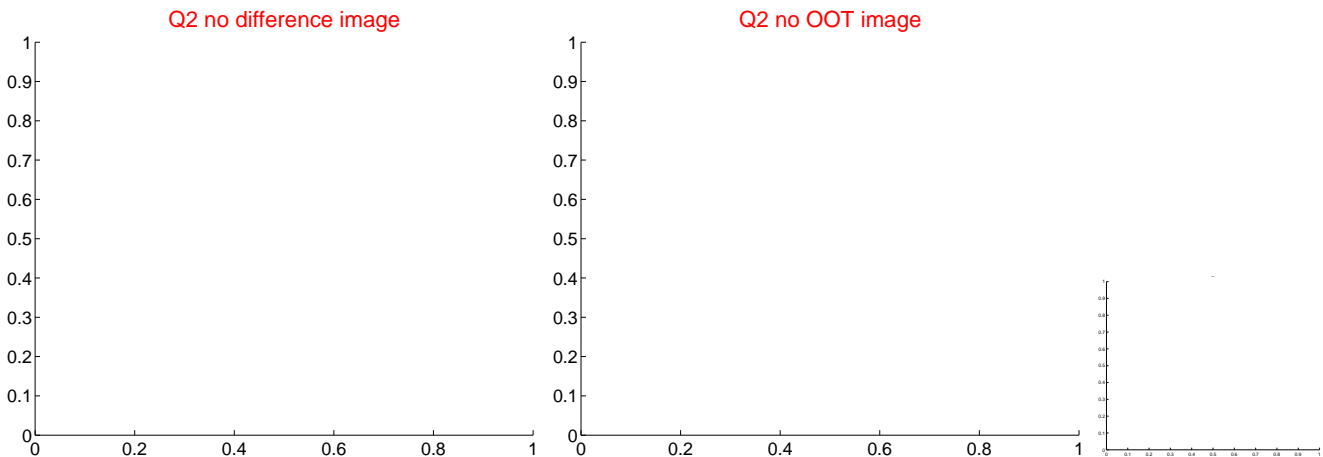
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.682 \pm 0.209	27.17	5.362 \pm 0.207	-1.879 \pm 0.226
PRF-fit source offset from KIC position	5.768 \pm 0.209	27.56	5.427 \pm 0.207	-1.954 \pm 0.226
photometric centroid source offset	22.27 \pm 3.74	5.95	17.06 \pm 3.88	14.31 \pm 3.53

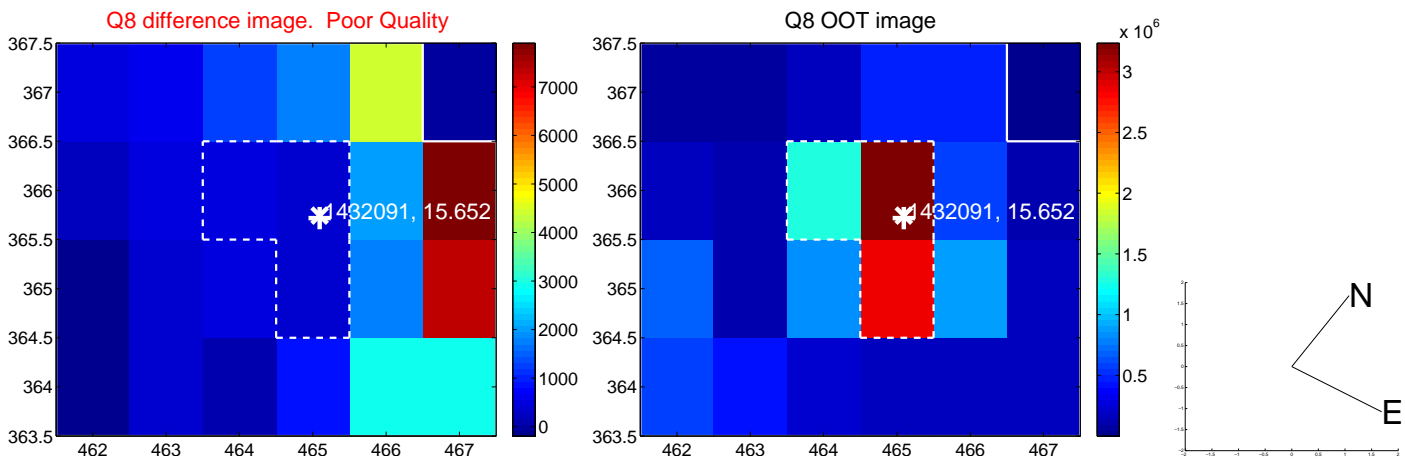
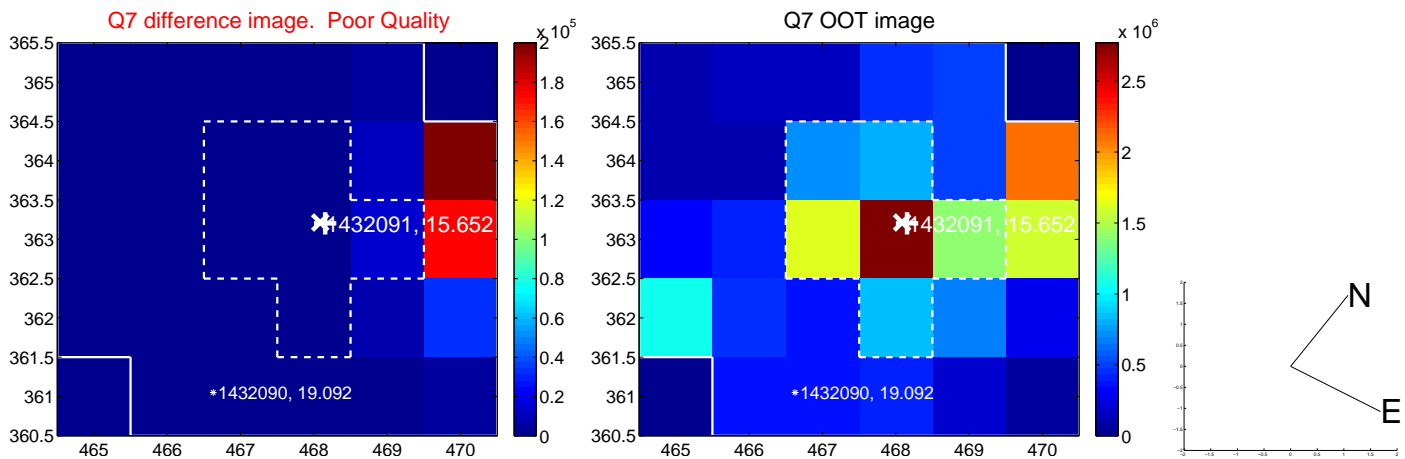
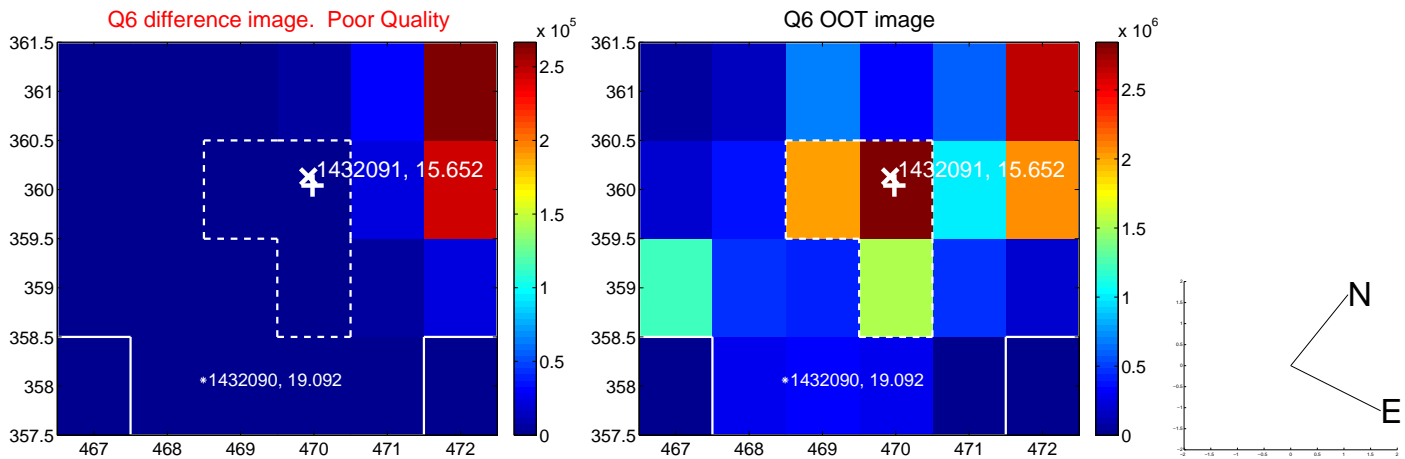
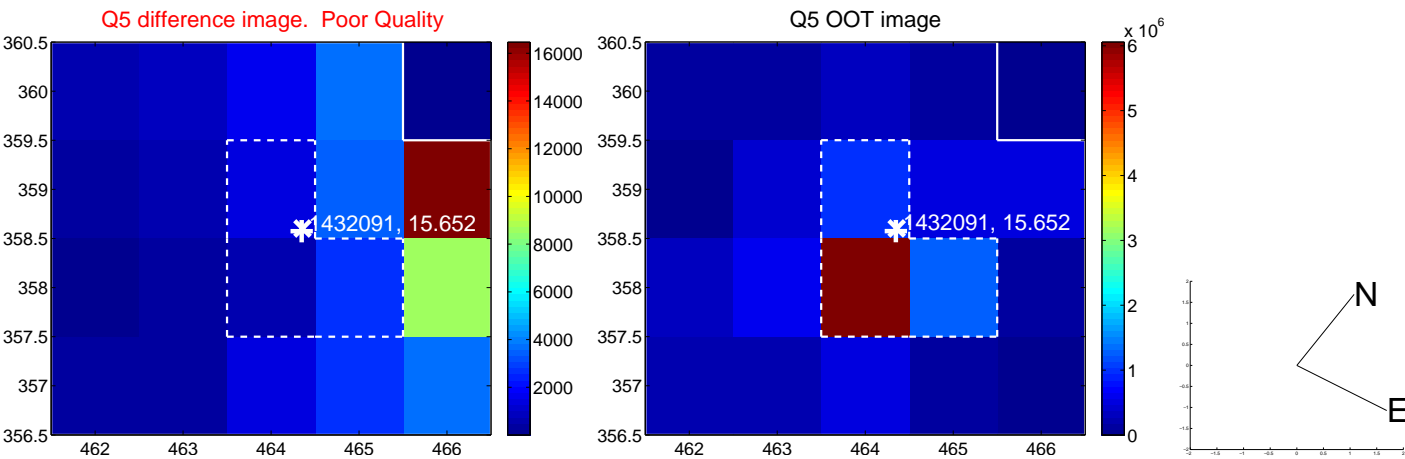


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

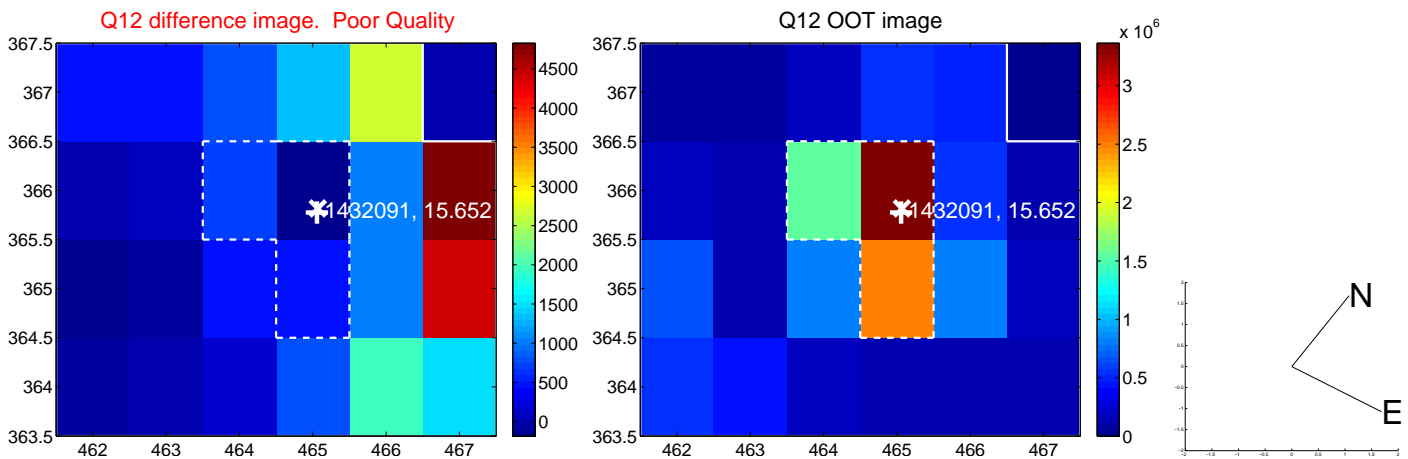
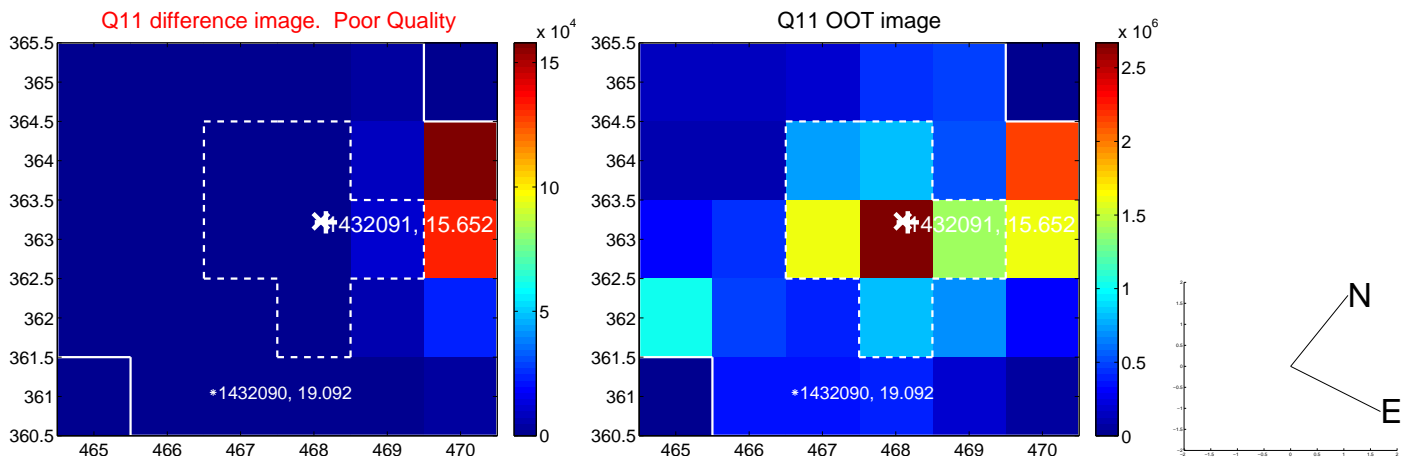
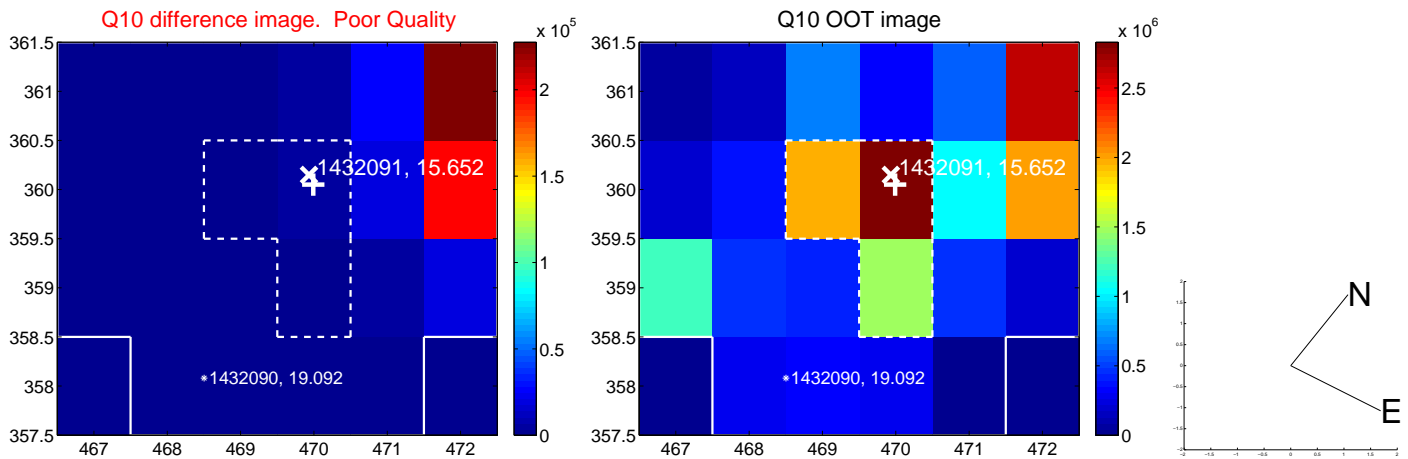
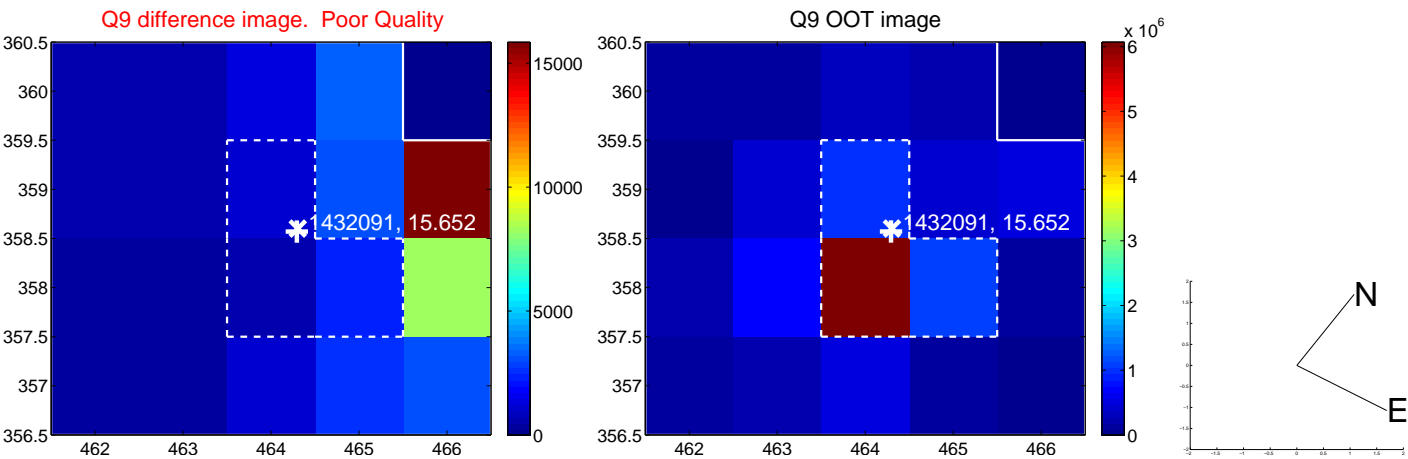
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



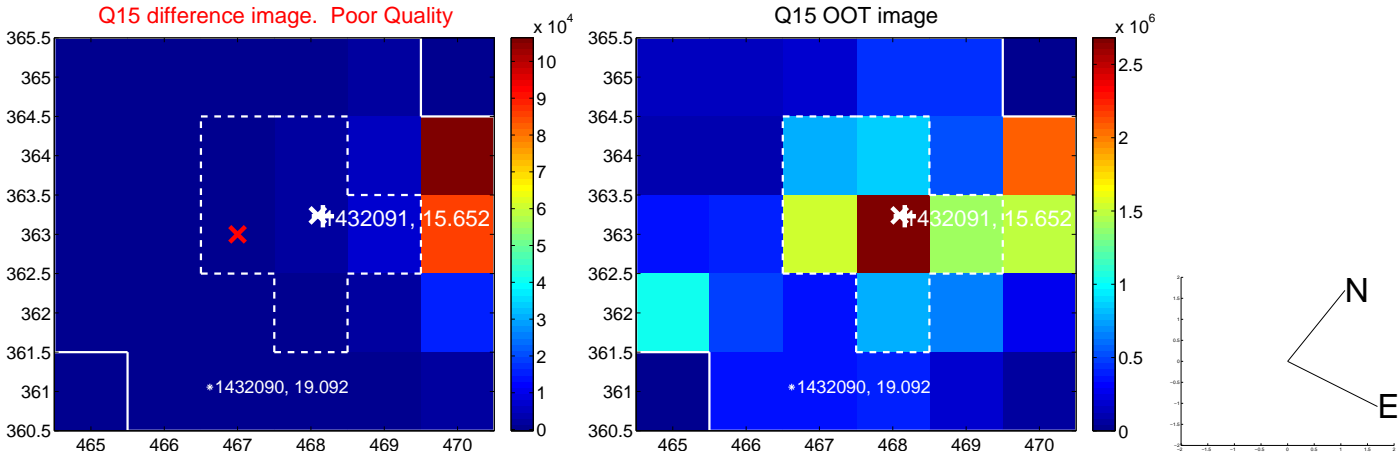
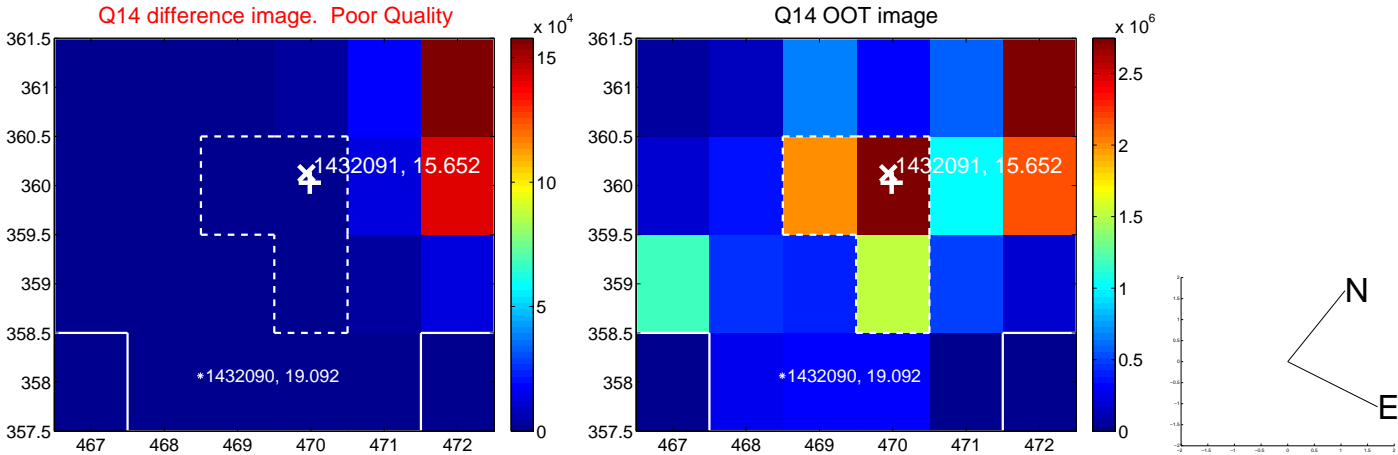
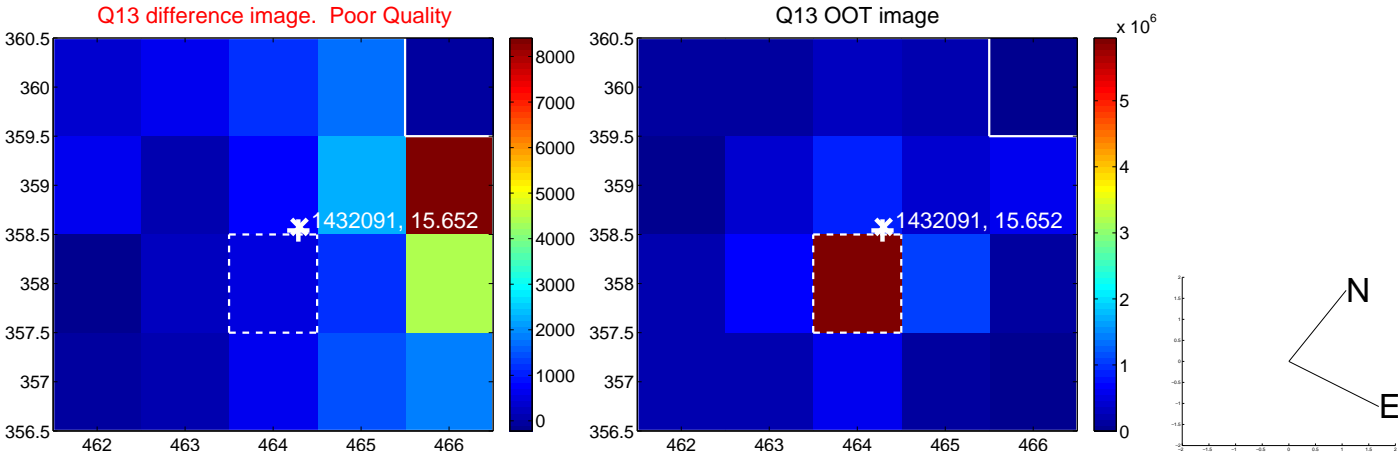
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



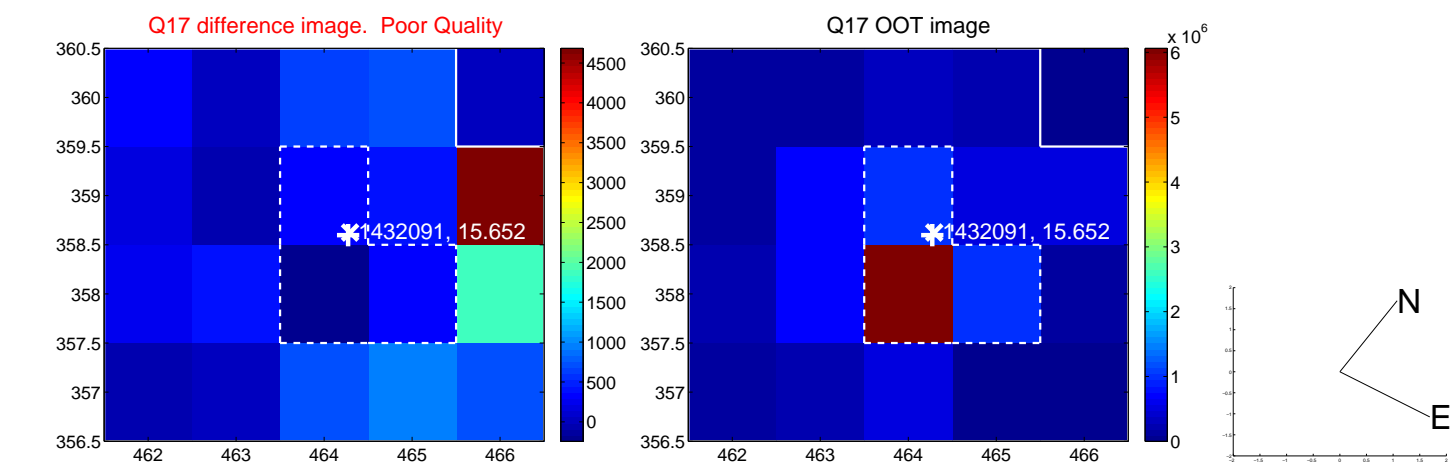
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



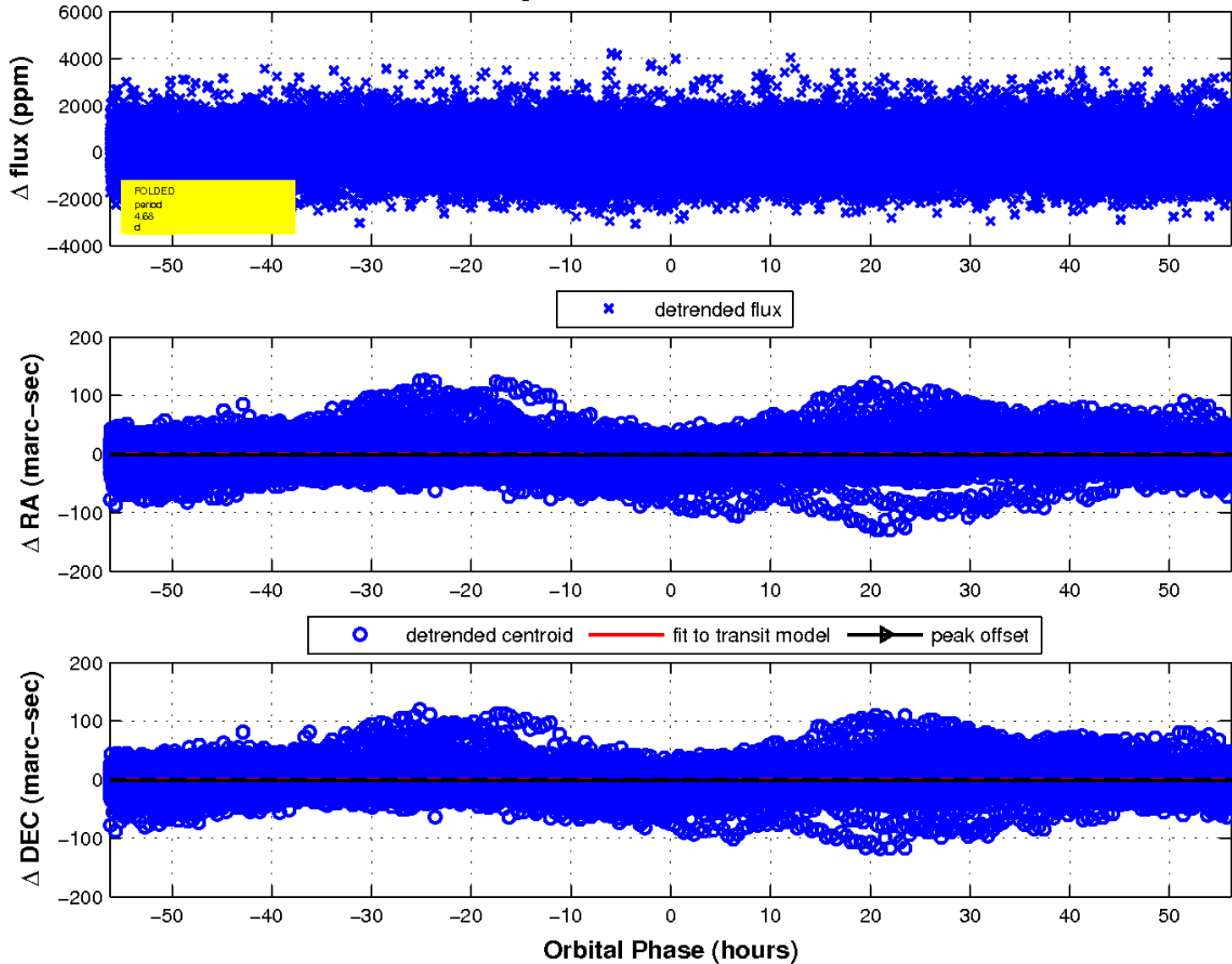
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

