

KIC 005716101

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})
005716101-01	OBS	No	14.699982	134.473823	53.0	41.280	7.7	12.3	1.41	6590	1.11	203.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005716101-01	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.

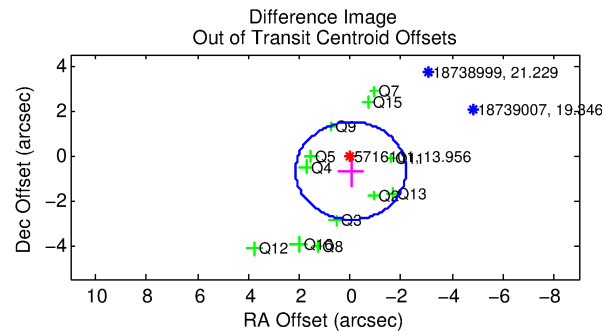
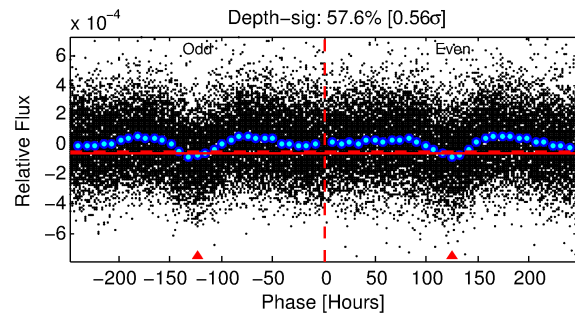
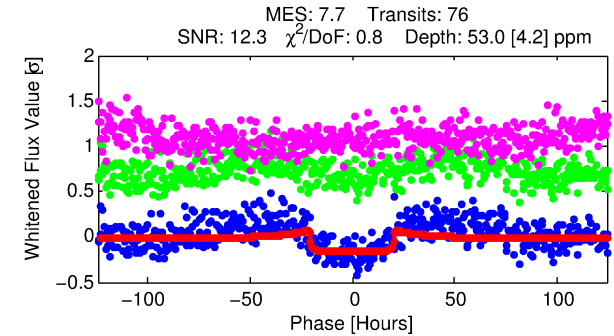
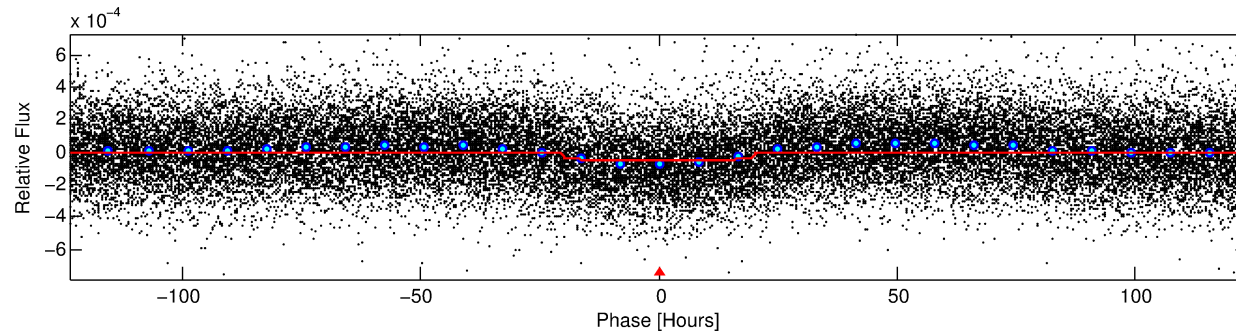
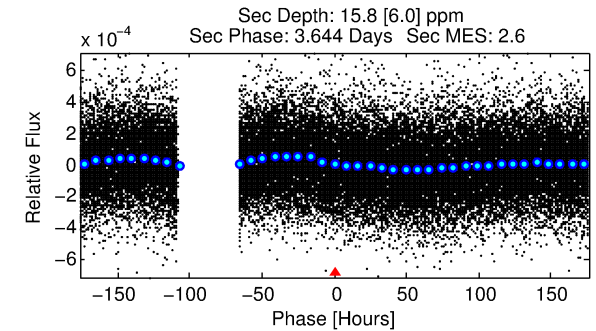
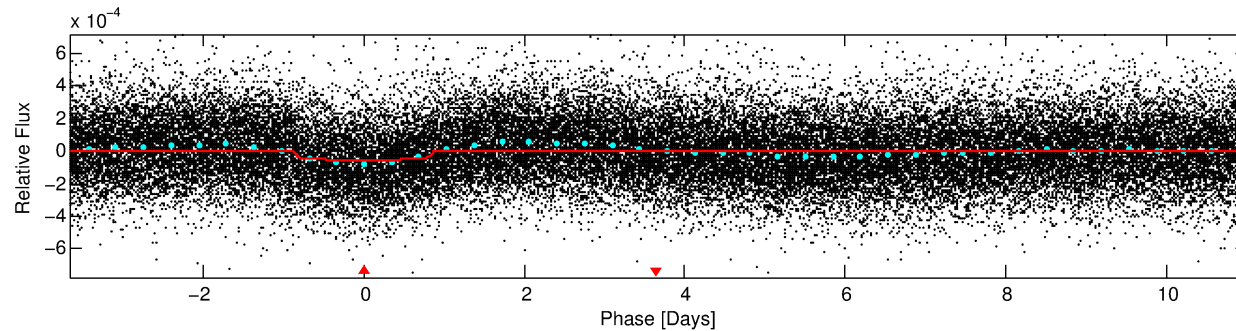
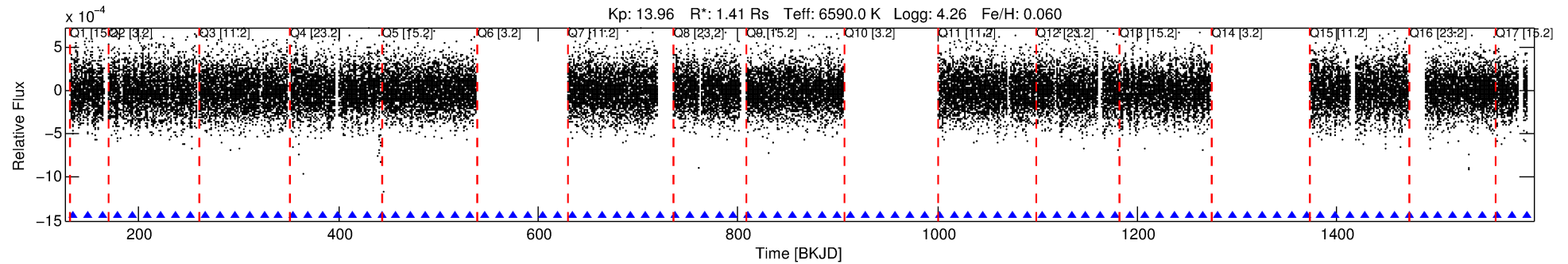
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005716101-01

No Significant Match Found

DV One-Page Summary

KIC: 5716101 Candidate: 1 of 1 Period: 14.700 d



DV Fit Results:

Period = 14.69998 [0.00042] d
Epoch = 134.4738 [0.0235] BKJD
Rp/R* = 0.0072 [0.0007]
a/R* = 2.04 [0.78]
b = 0.74 [0.31]
Seff = 203.53 [43.03]
Teq = 963 [51] K
Rp = 1.11 [0.22] Re
a = 0.1284 [0.0184] AU
Ag = 116.48 [55.21] [2.09σ]
Teffp = 4892 [527] K [7.42σ]

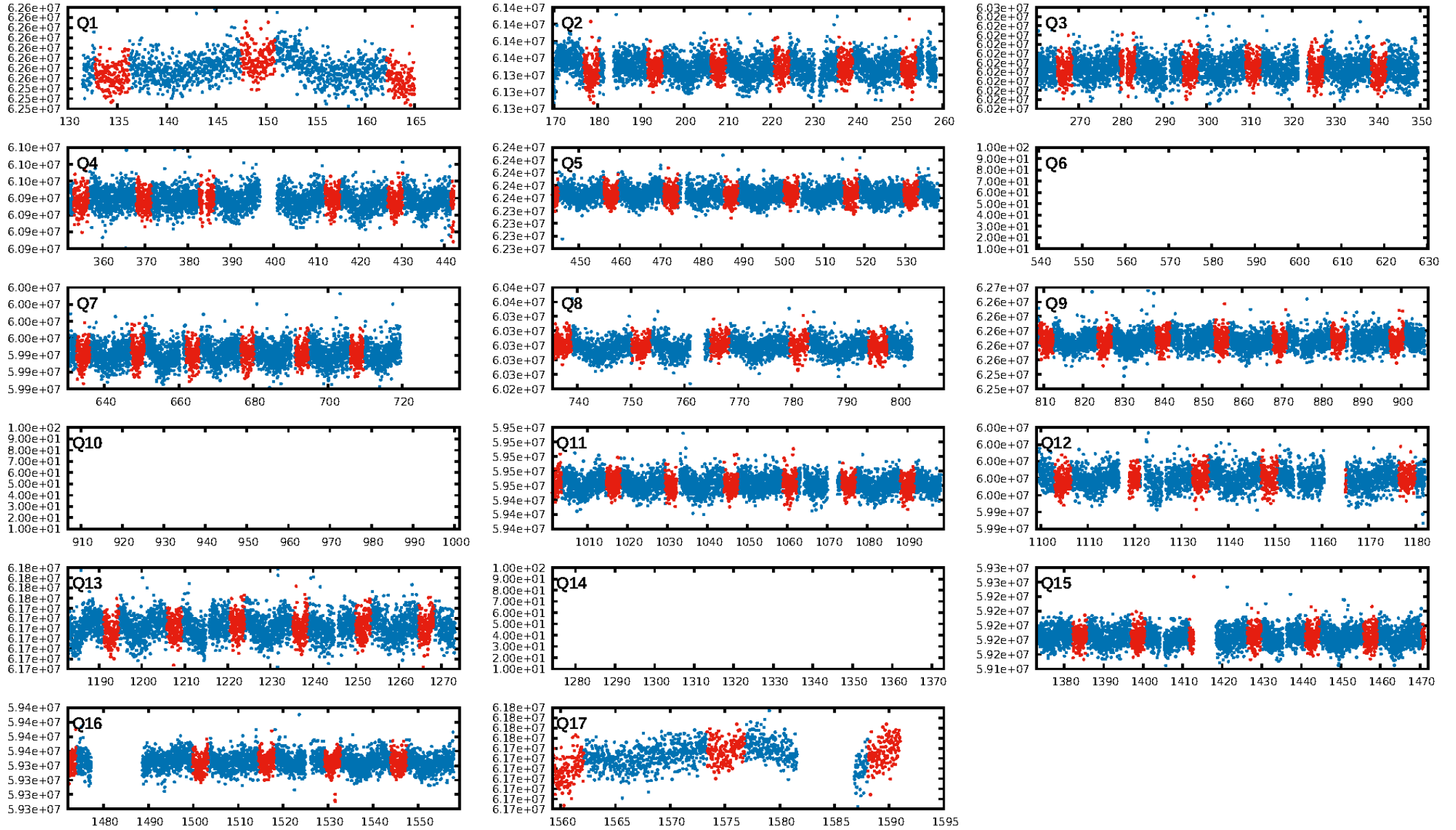
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.09e-14
RollingBand-fgt: 1.00 [70/70]
GhostDiagnostic-chr: 4.101
Centroid-sig: 90.7%
Centroid-so: 0.094 arcsec [0.12σ]
OotOffset-rm: 0.685 arcsec [0.95σ]
KicOffset-rm: 0.726 arcsec [1.01σ]
OotOffset-st: 1/4/4/3 [12]
KicOffset-st: 1/4/4/3 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 1.00 [14/14]

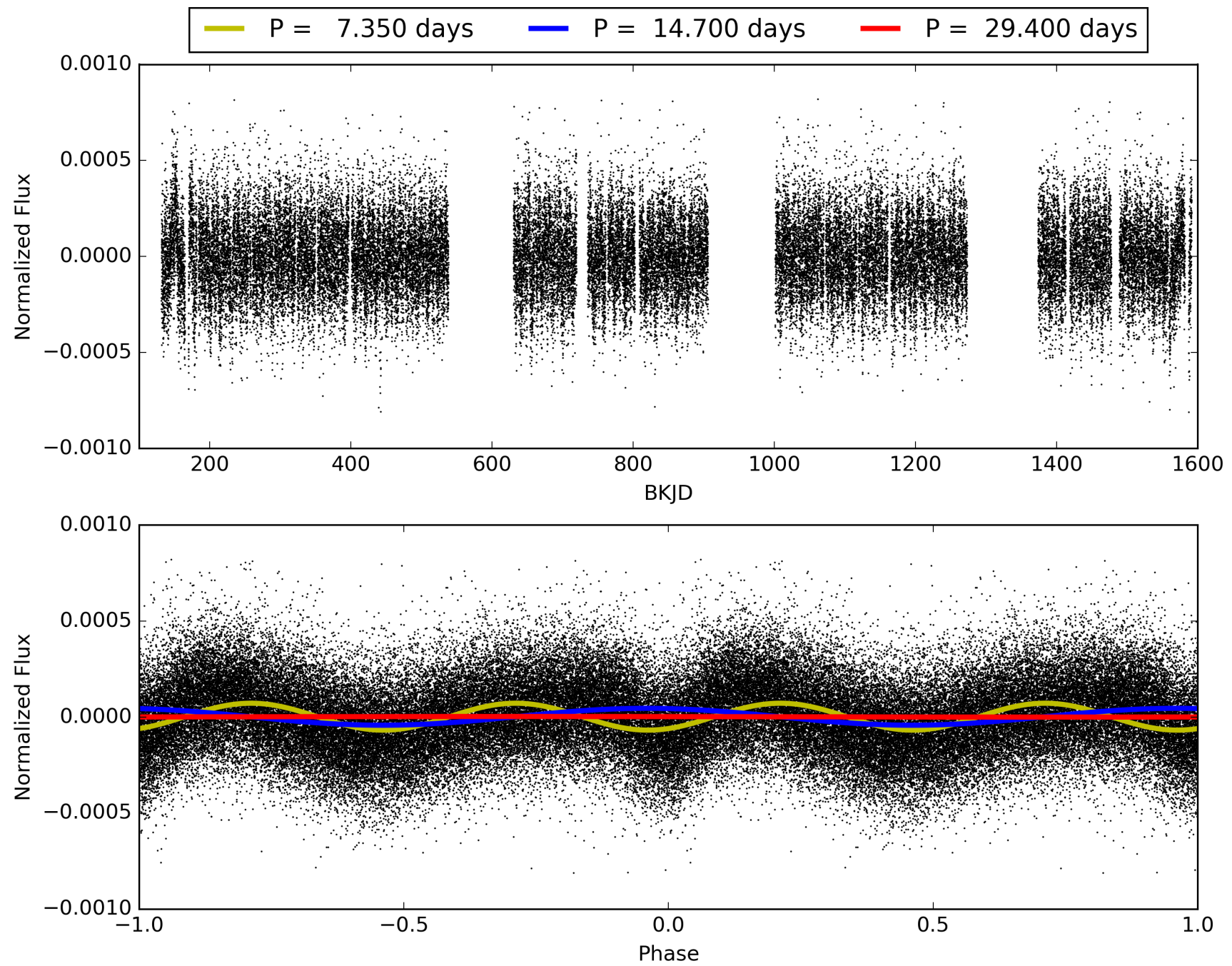
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:24:44 Z

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

TCE 005716101-01, PDC Light Curves

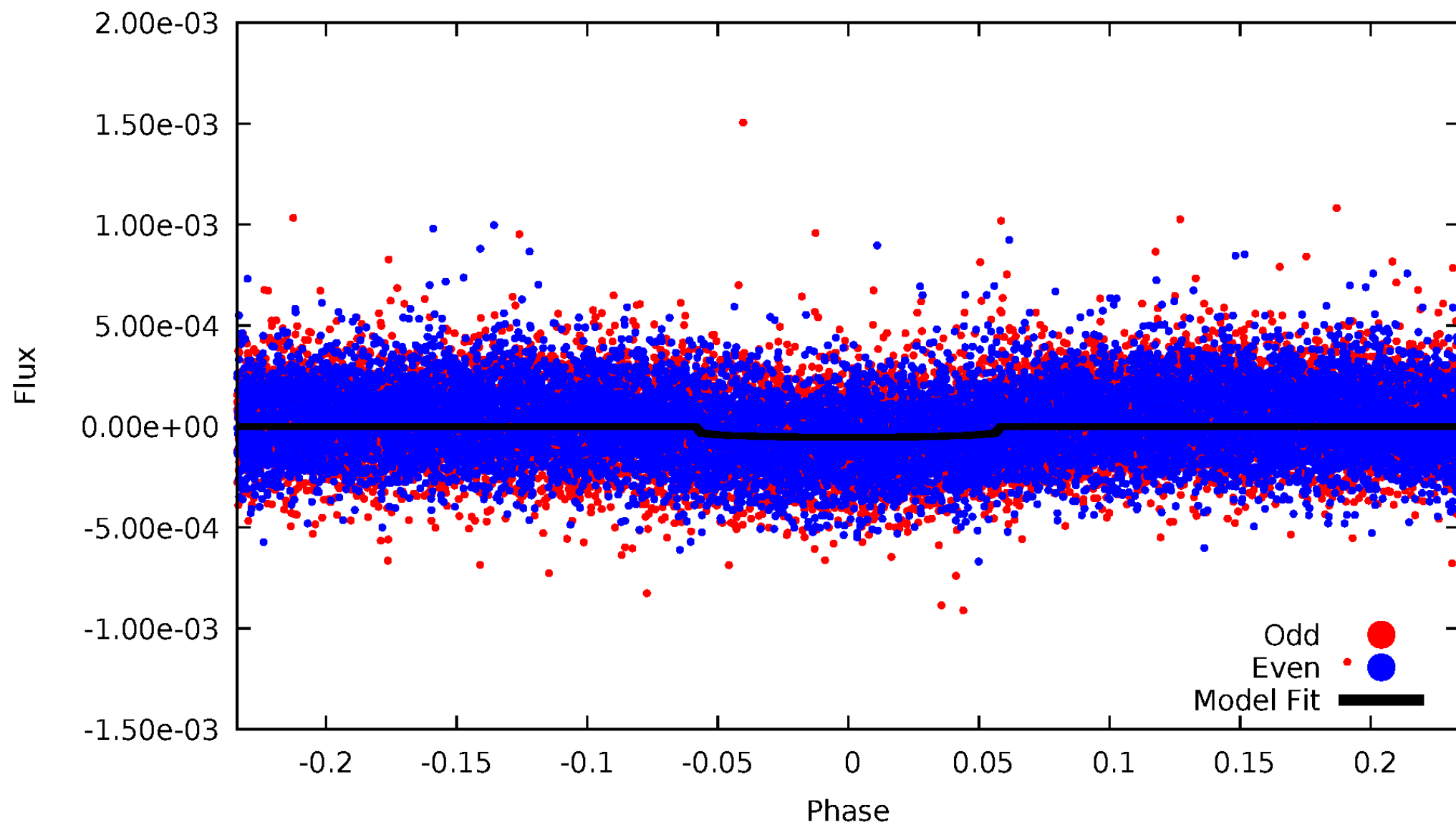


TCE 005716101-01



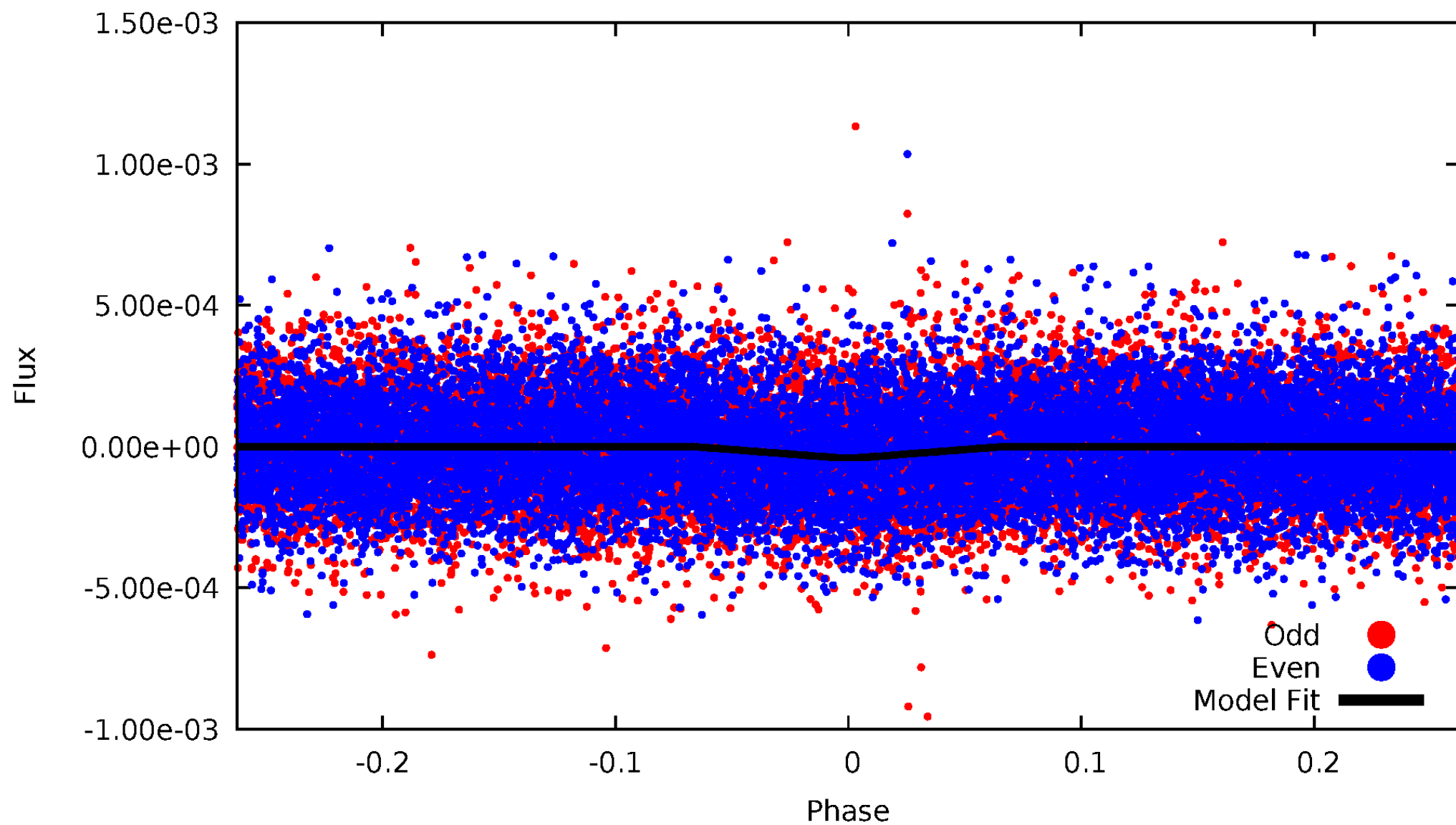
DV Odd/Even

TCE 005716101-01

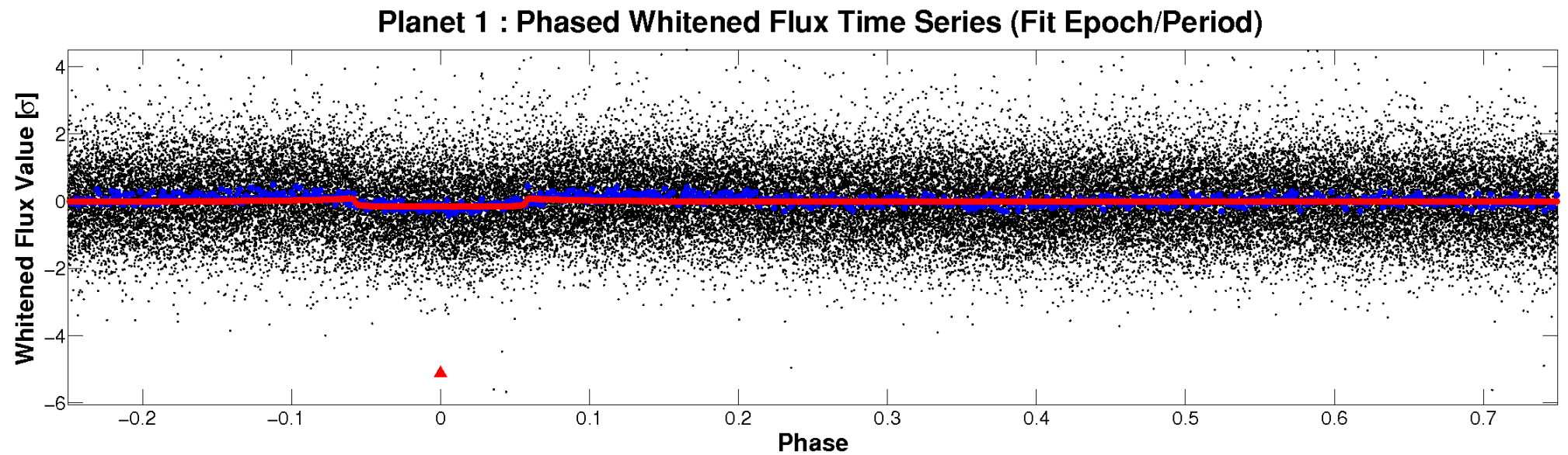
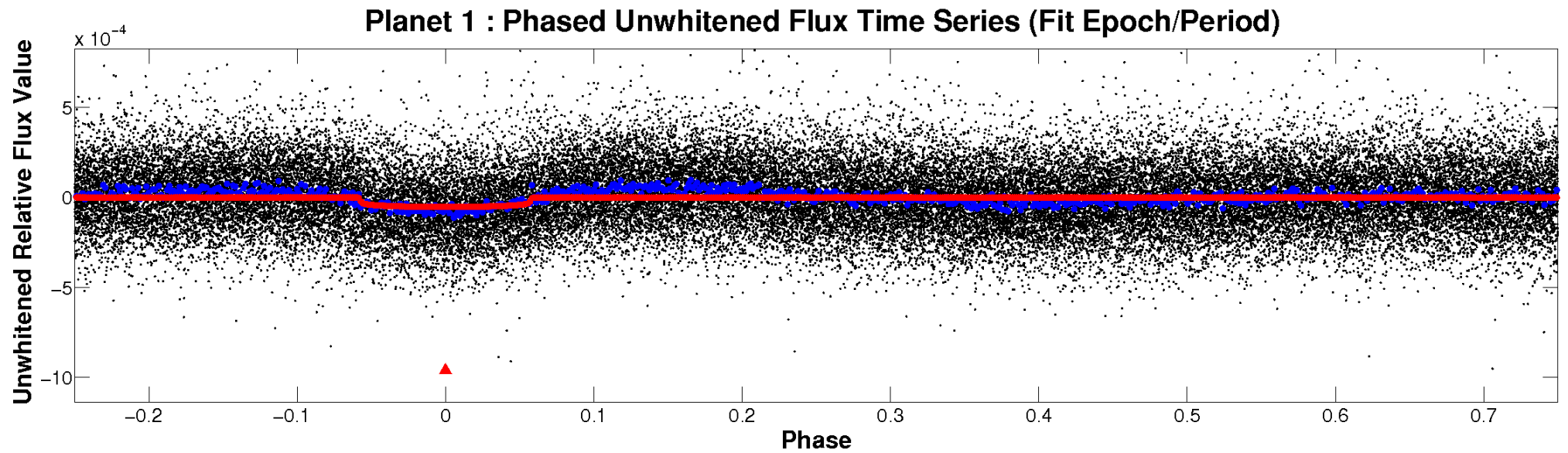


ALT Odd/Even

TCE 005716101-01

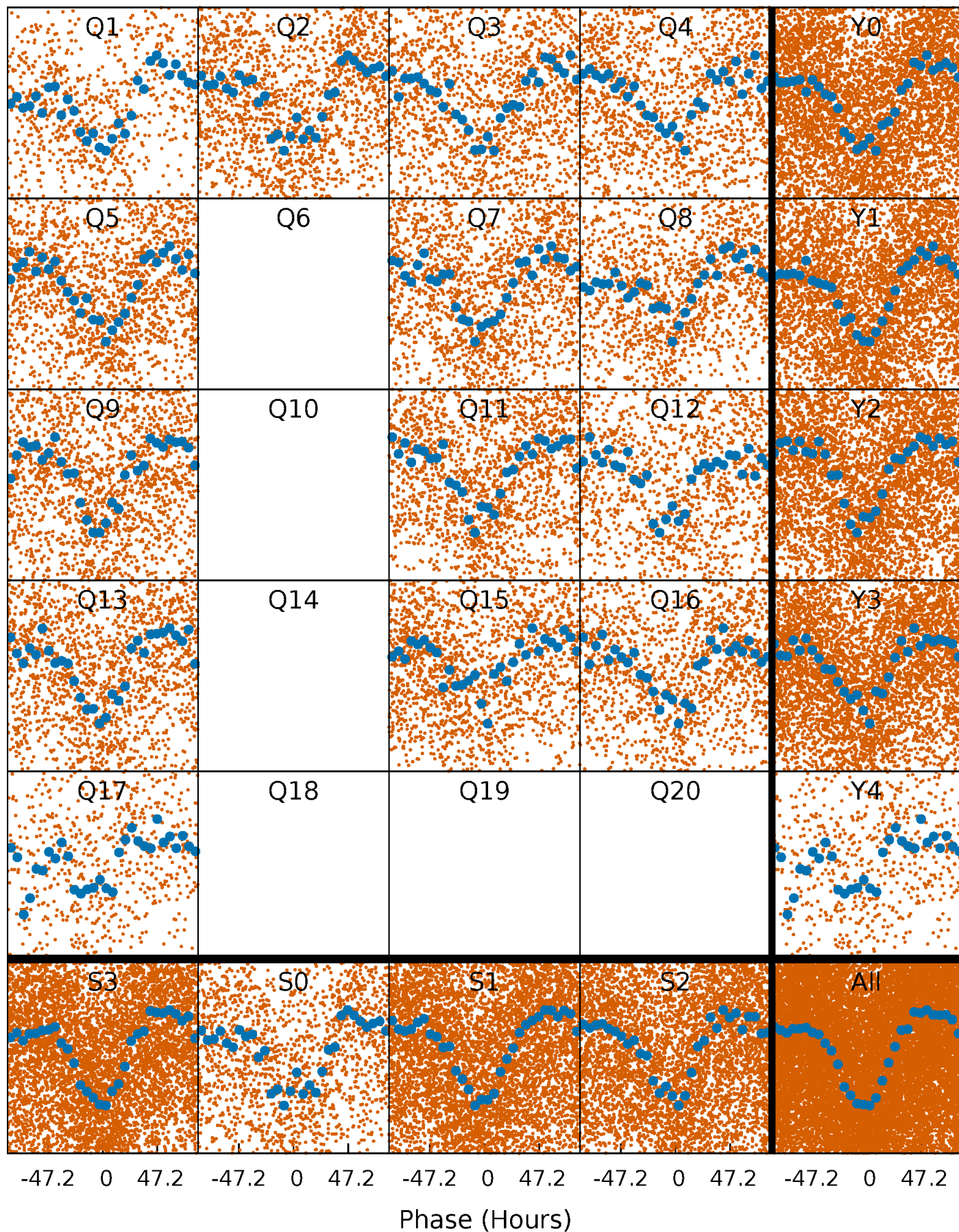


Non-Whitened Vs. Whitened Light Curve



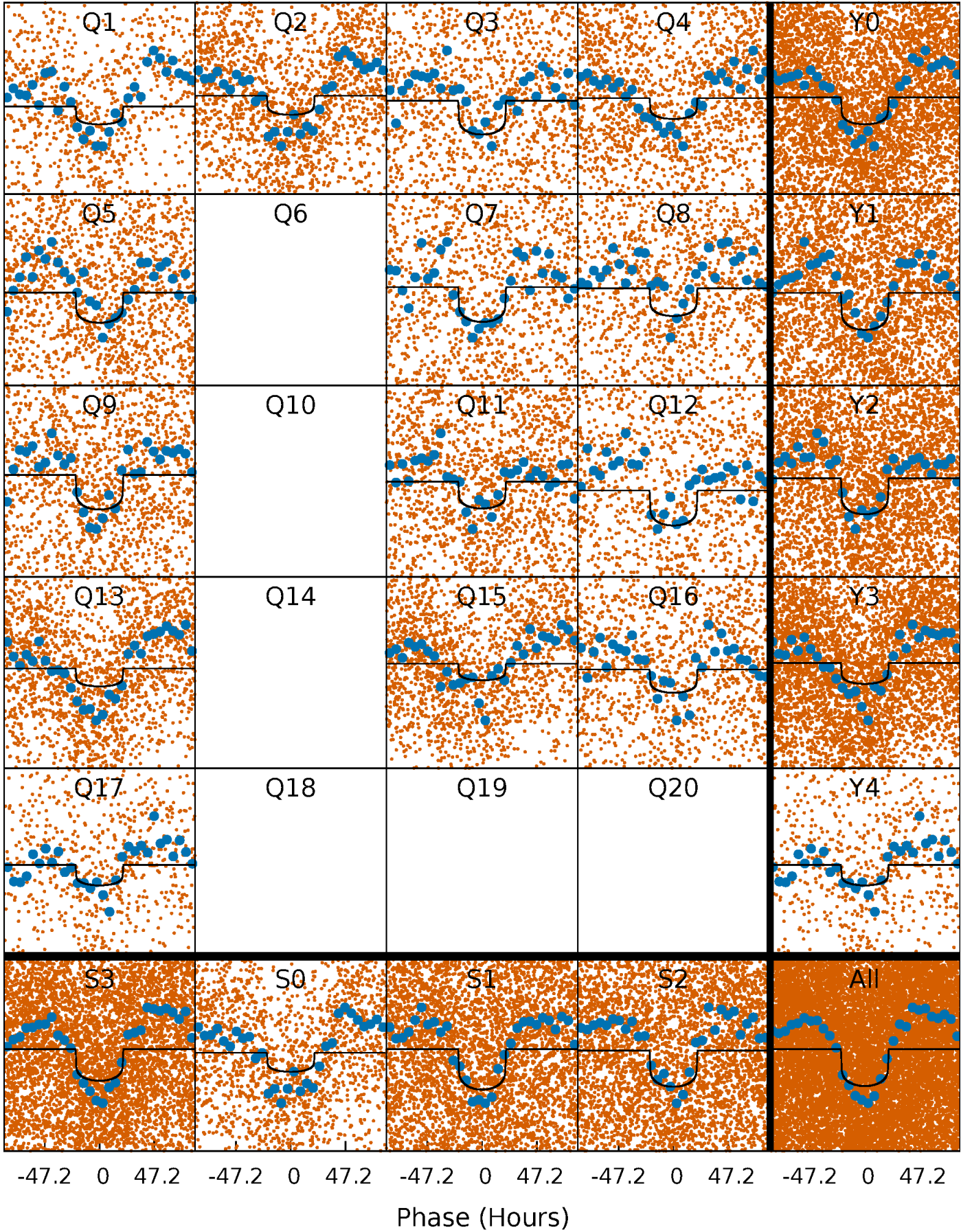
PDC Quarter-Phased Transit Curves

TCE 005716101-01 P= 14.699982 Days $T_0=134.473823$ (BKJD)



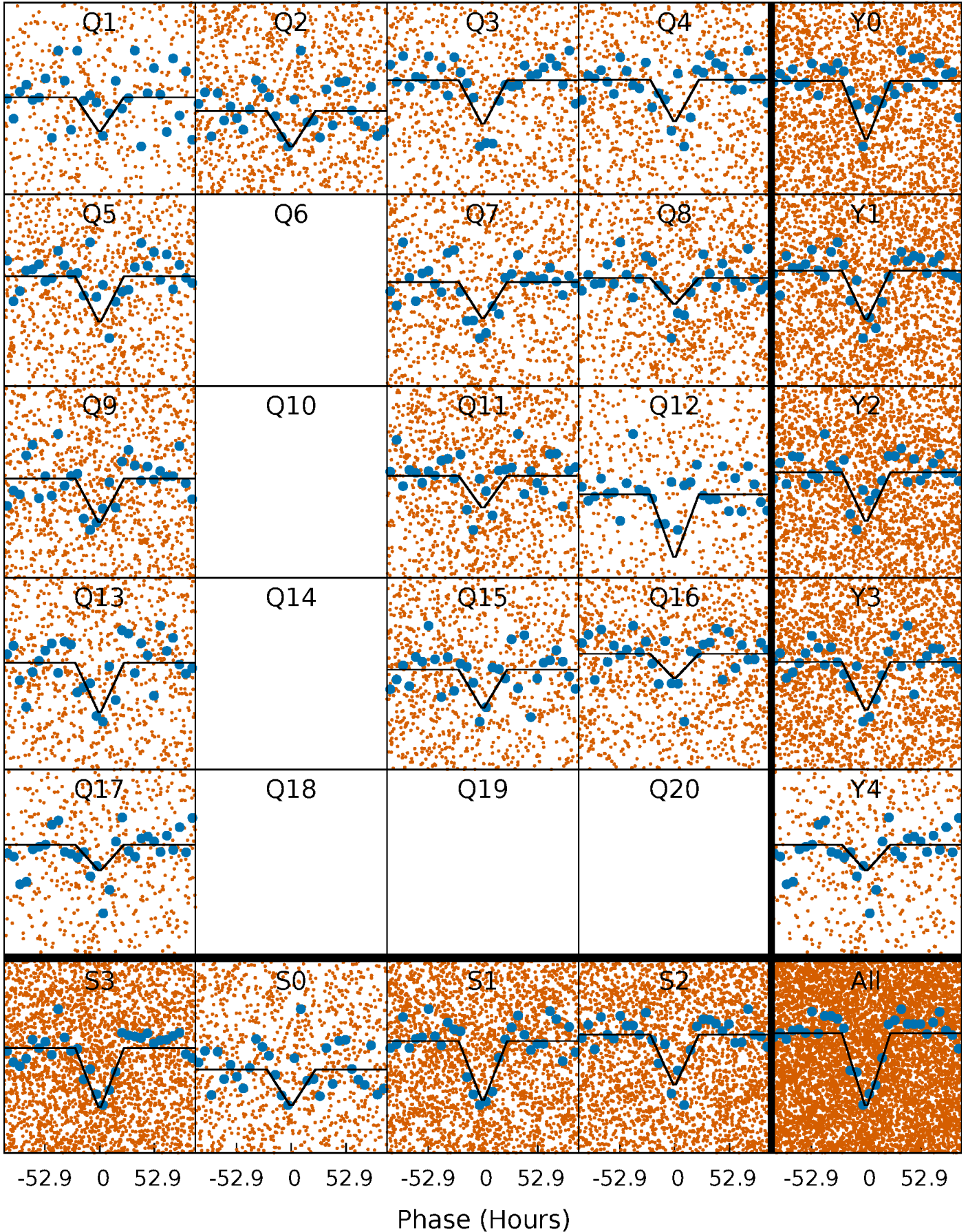
DV Quarter-Phased Transit Curves

TCE 005716101-01 P= 14.699982 Days $T_0=134.473823$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

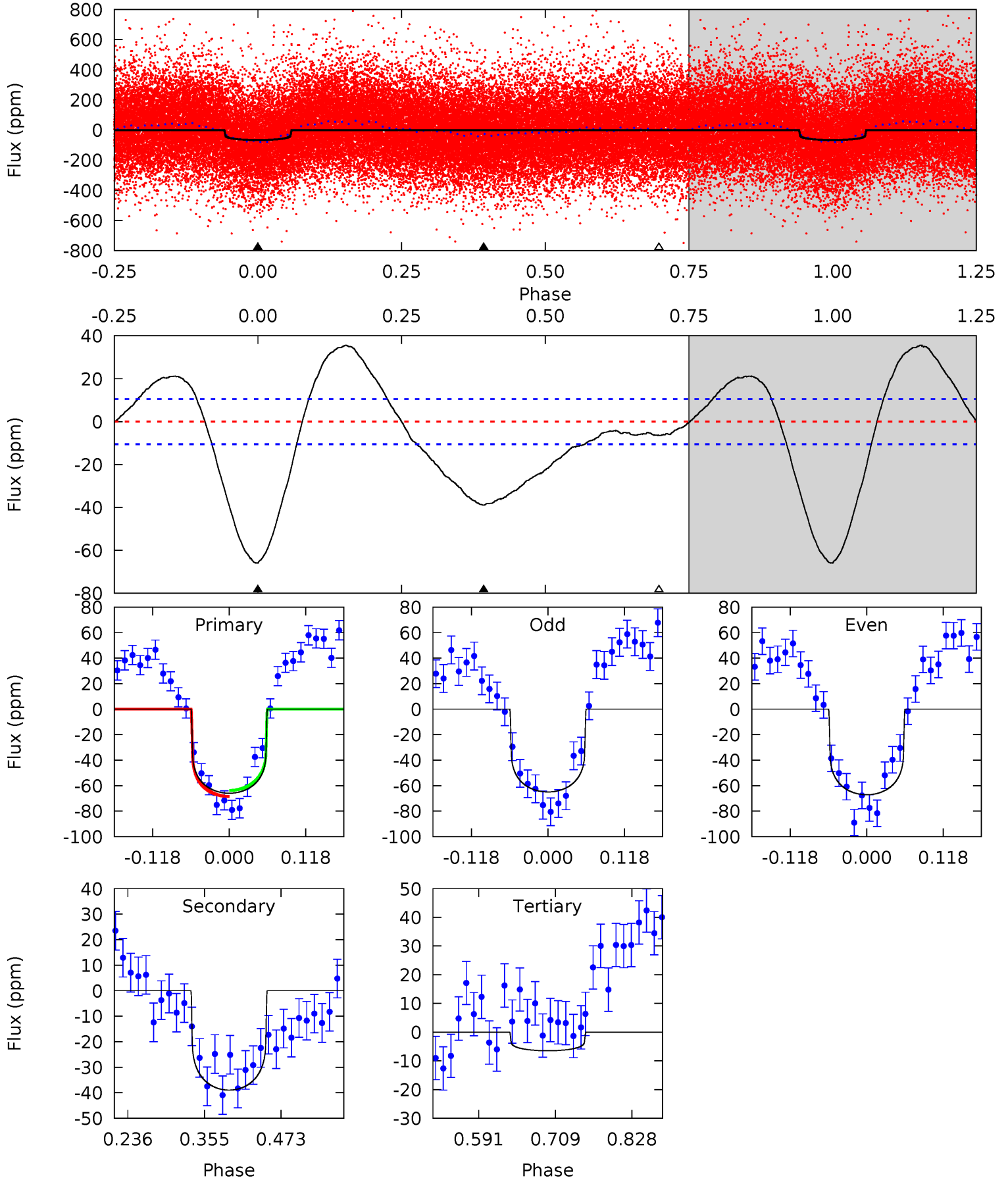
TCE 005716101-01 P= 14.704083 Days $T_0=134.230649$ (BKJD)



DV Model-Shift Uniqueness Test

005716101-01, P = 14.699982 Days, E = 119.773841 Days

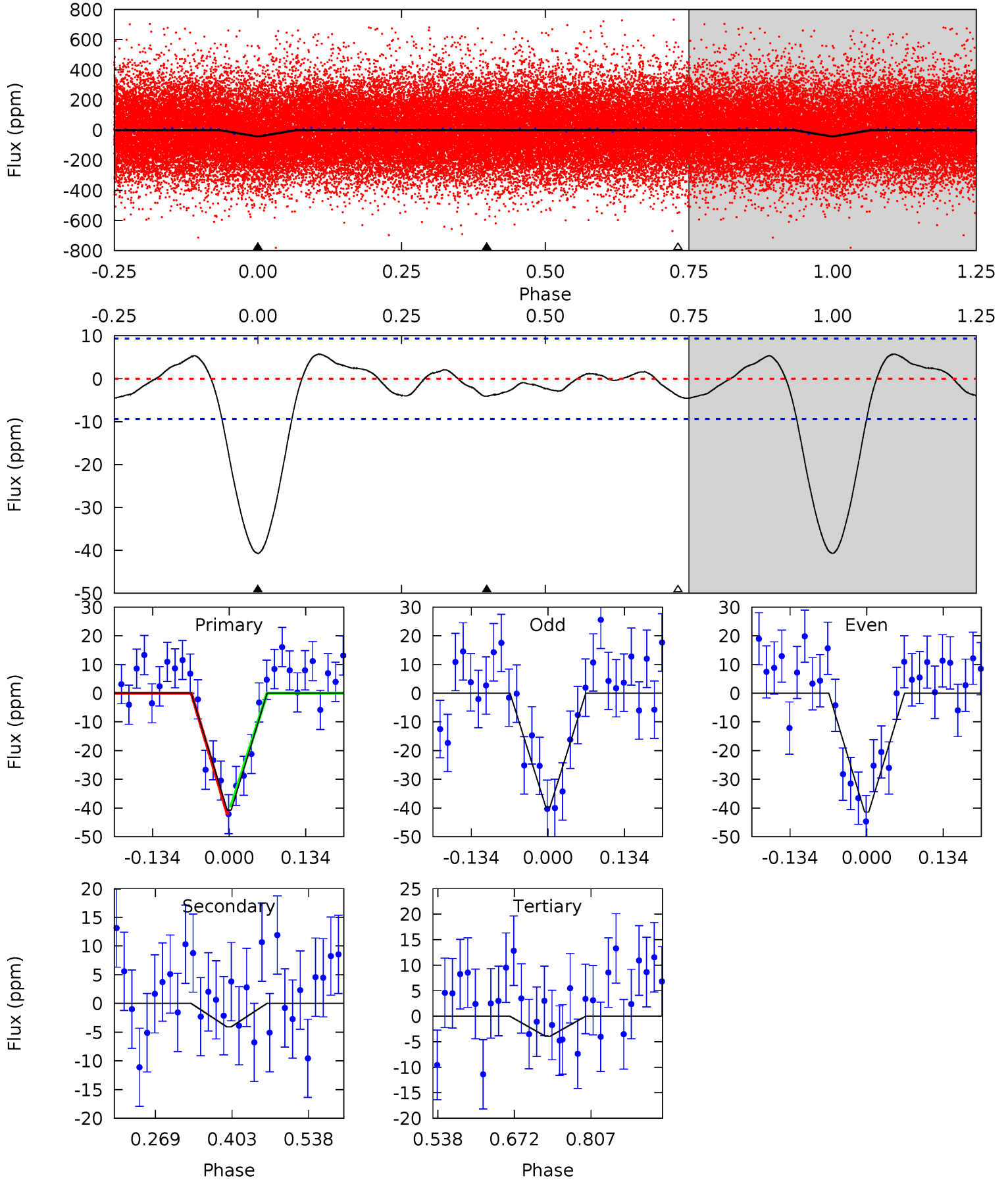
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.4	16.8	2.79	0	4.53	1.56	6.66	25.6	28.4	14.0	16.8	0.47	0.97	0.35	1.02



Alt Model-Shift Uniqueness Test

005716101-01, P = 14.704083 Days, E = 119.526566 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	1.97	1.91	0	4.50	1.50	1.13	17.7	19.6	0.06	1.97	0.42	0.78	0.12	0.62



Stellar Parameters For KIC 005716101

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6590^{+69}_{-88}	$4.256^{+0.068}_{-0.110}$	$0.060^{+0.150}_{-0.200}$	$1.409^{+0.244}_{-0.131}$	$1.307^{+0.093}_{-0.093}$	$0.658^{+0.191}_{-0.223}$
	+1%/-1%	+2%/-3%	+250%/-333%	+17%/-9%	+7%/-7%	+29%/-34%
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 005716101-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-39 ± 2	$1.13^{+0.14}_{-0.13}$	1352^{+50}_{-41}	6091^{+357}_{-291}	276^{+80}_{-58}
Alt.	-4 ± 2	$0.97^{+0.14}_{-0.13}$	1347^{+55}_{-41}	3993^{+394}_{-478}	37^{+26}_{-19}

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 $A_{obs} \gg 1.0$

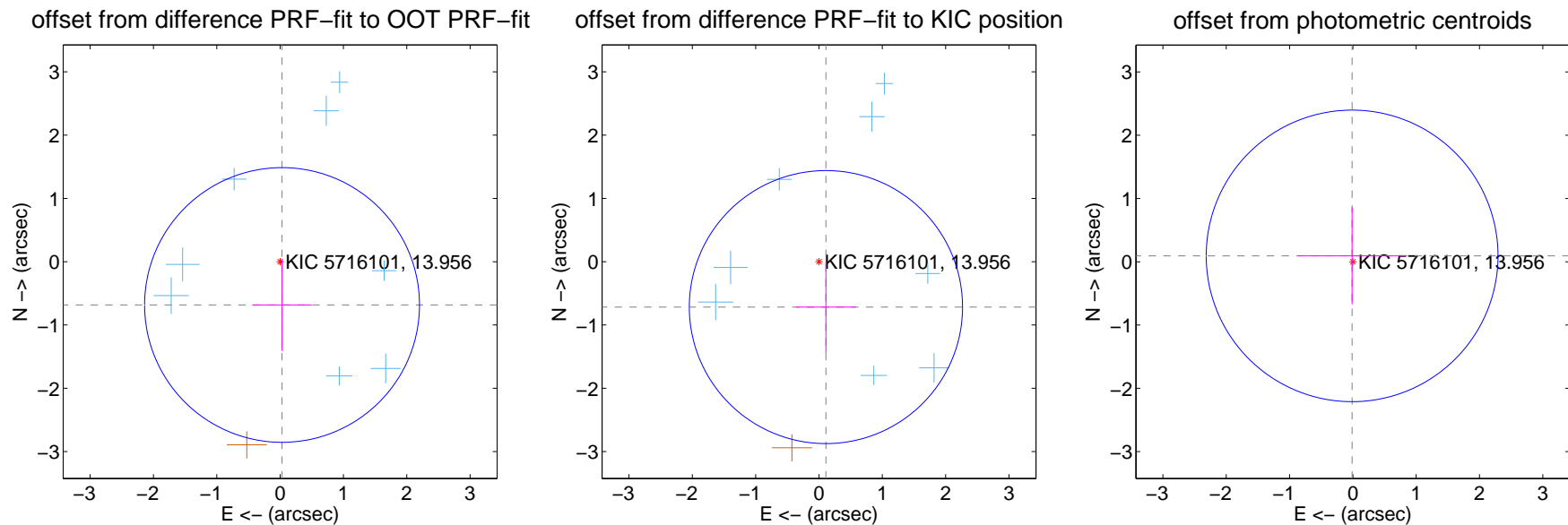
DV Centroid Data

Supplemental centroid analysis for 005716101-01. Kepler magnitude: 13.96. Transit SNR 12.28

There are 9 quarters with good PRF difference image offsets

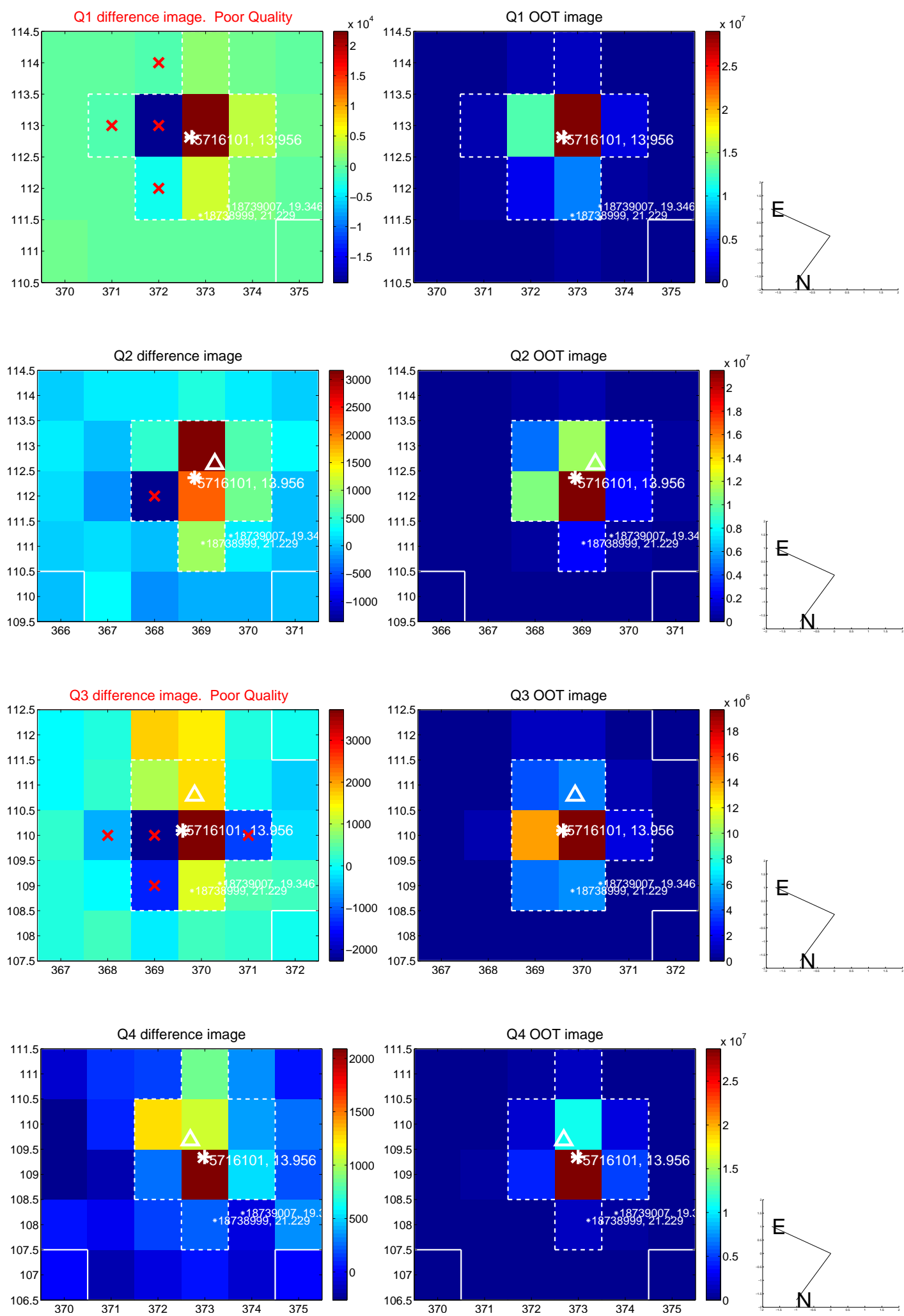
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.685 ± 0.724	0.95	-0.031 ± 0.471	-0.684 ± 0.724
PRF-fit source offset from KIC position	0.726 ± 0.719	1.01	-0.110 ± 0.470	-0.717 ± 0.724
photometric centroid source offset	0.09 ± 0.77	0.12	0.01 ± 0.85	0.09 ± 0.77

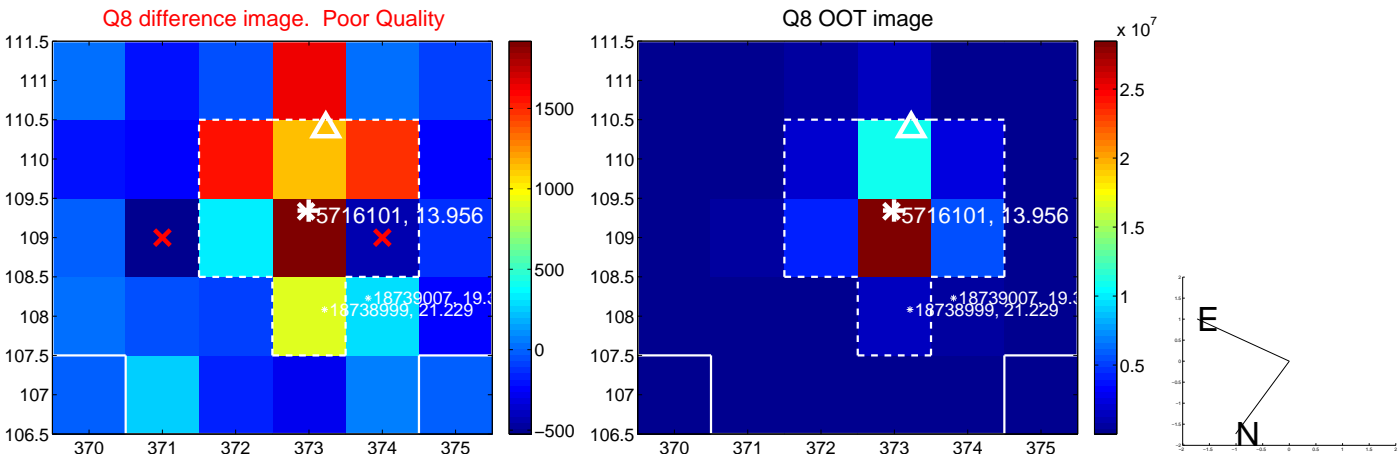
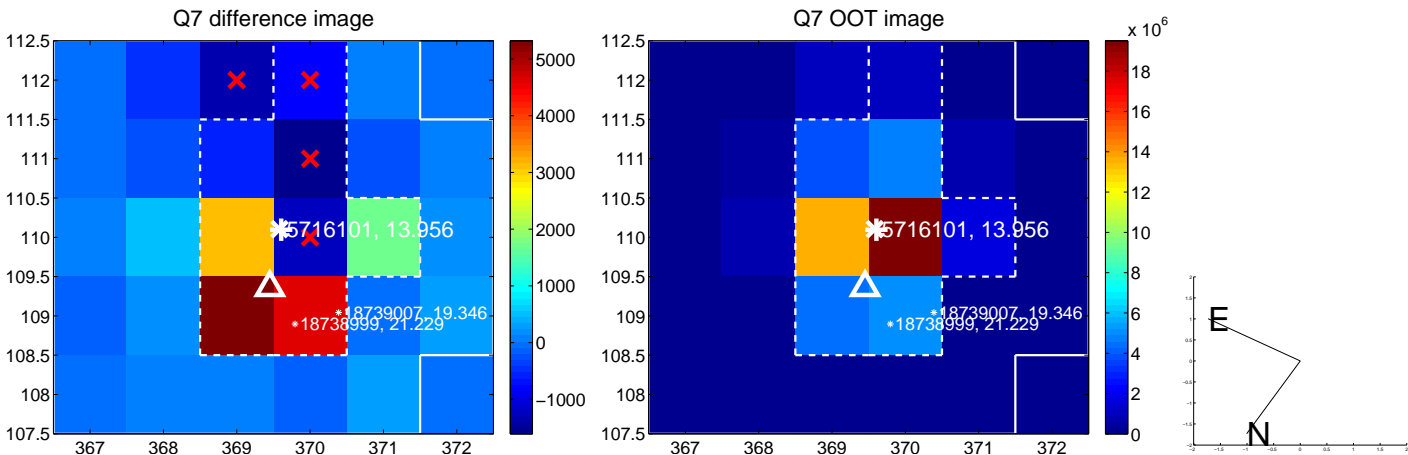
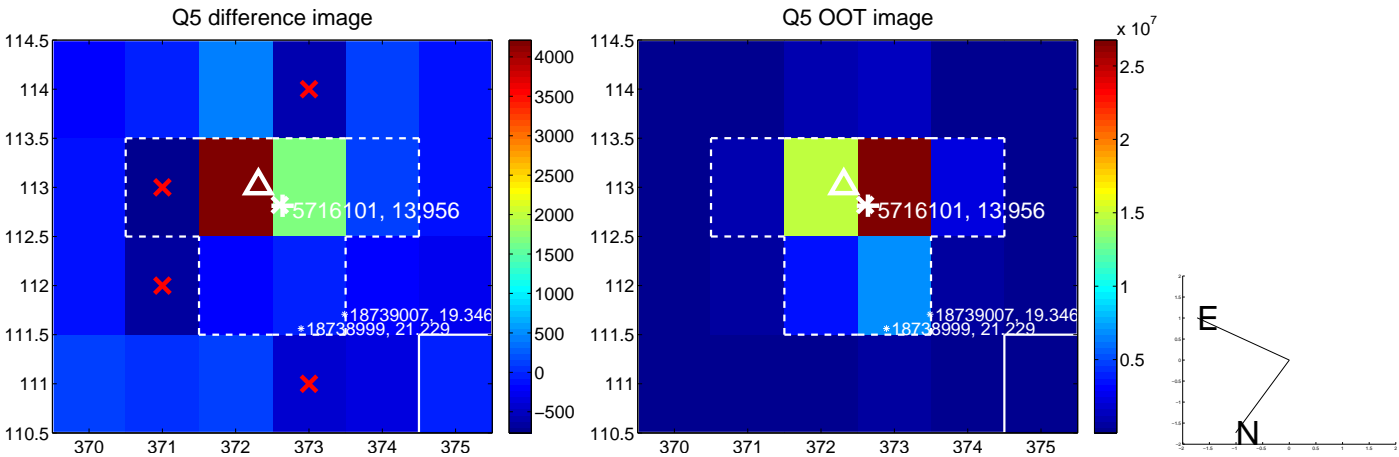


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

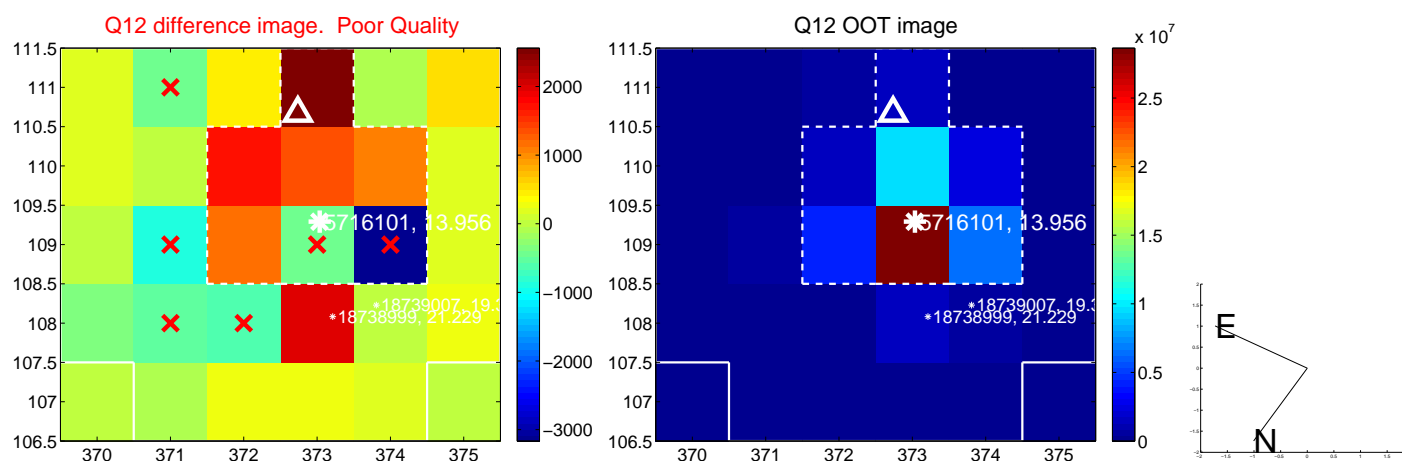
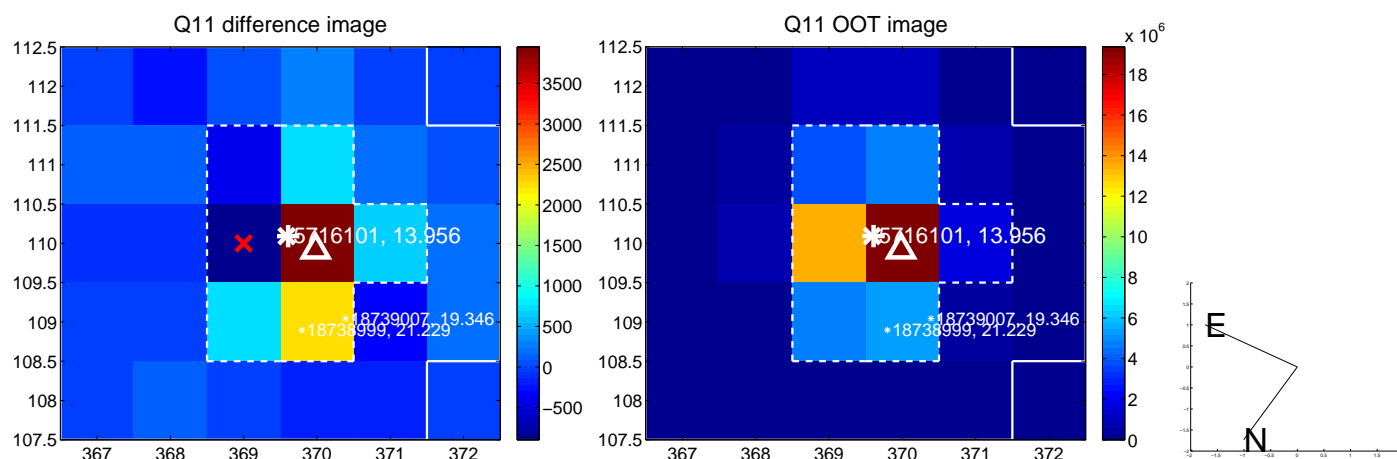
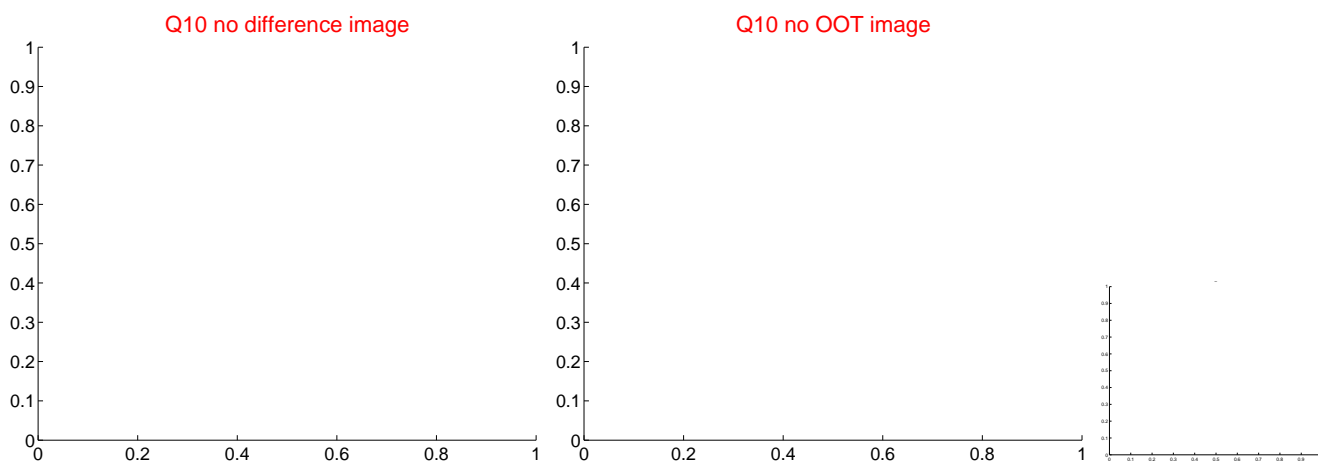
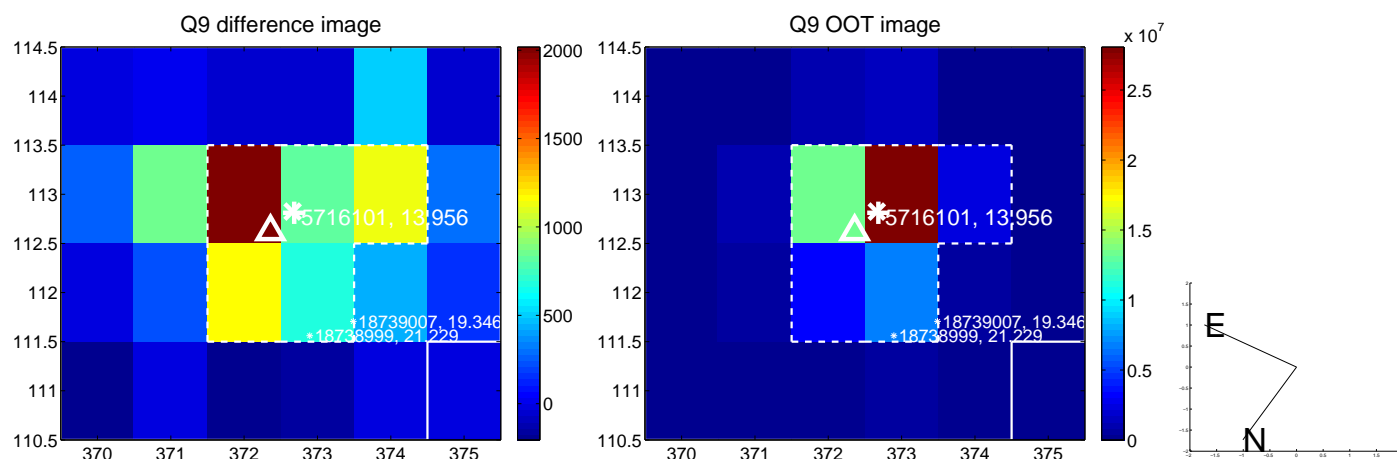
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



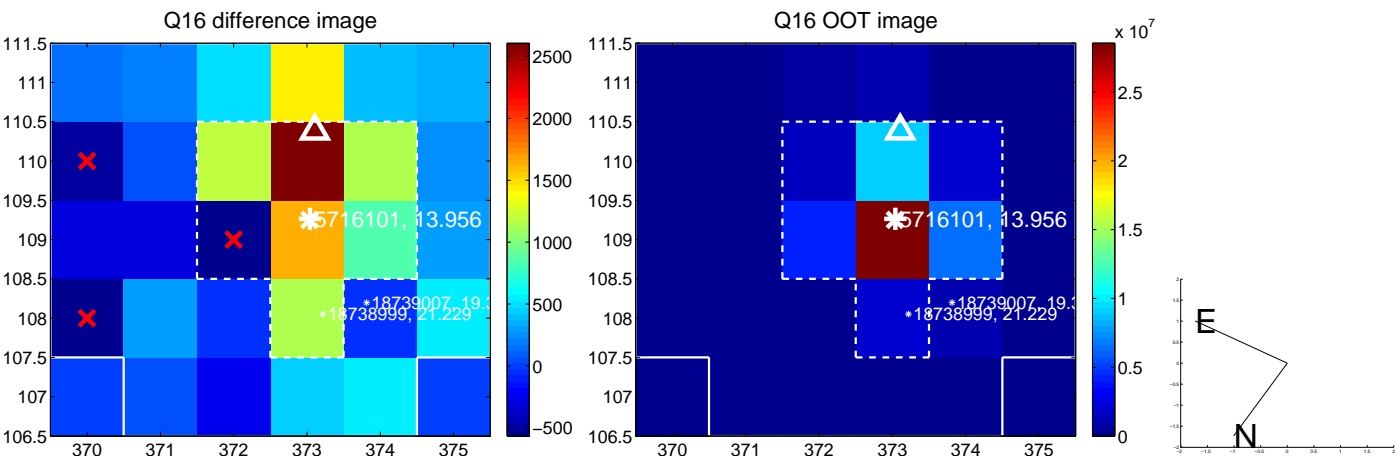
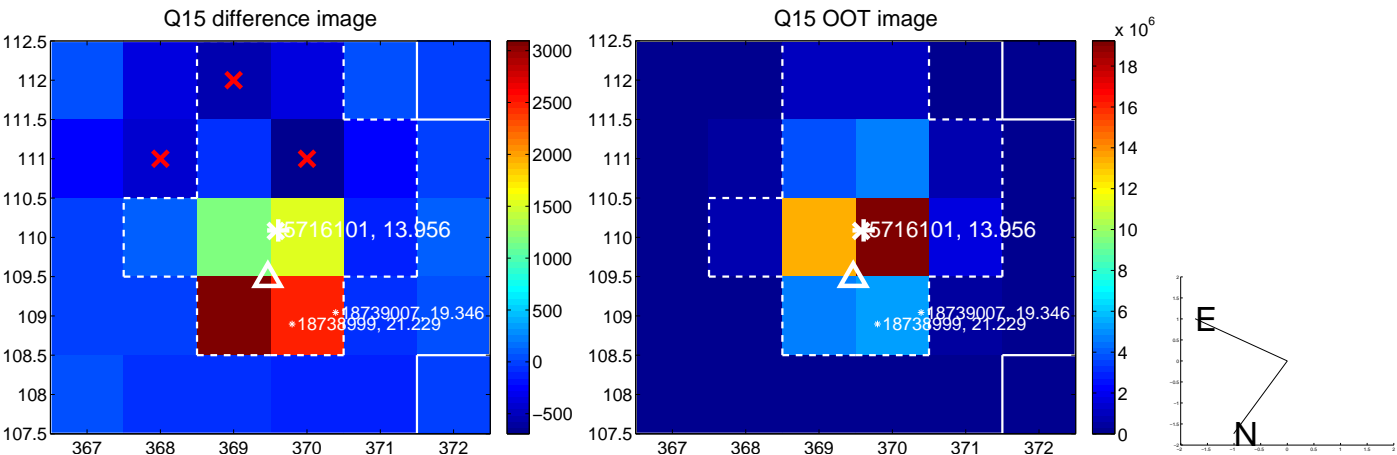
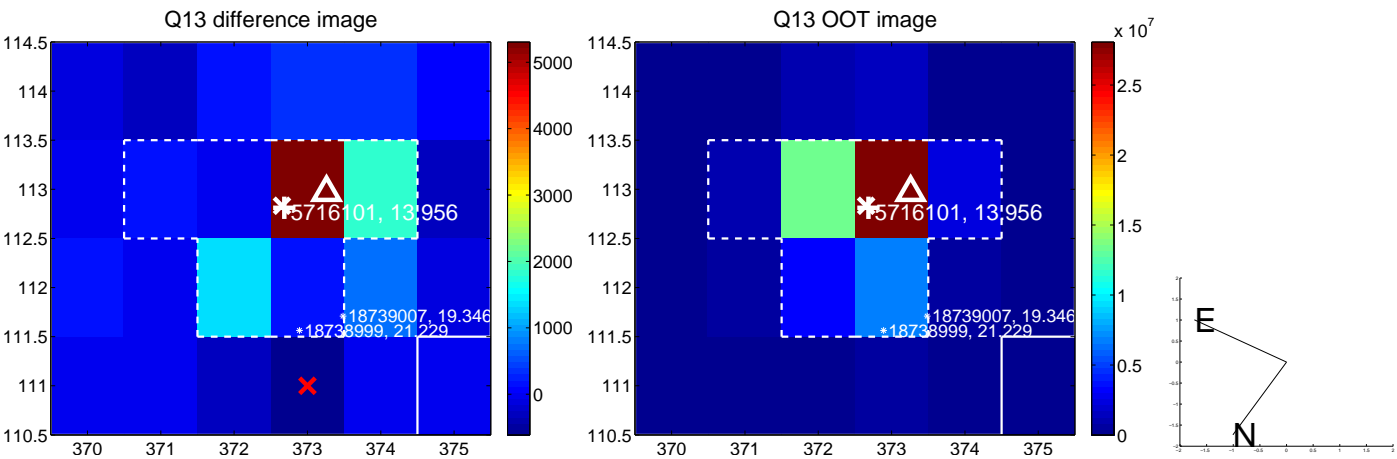
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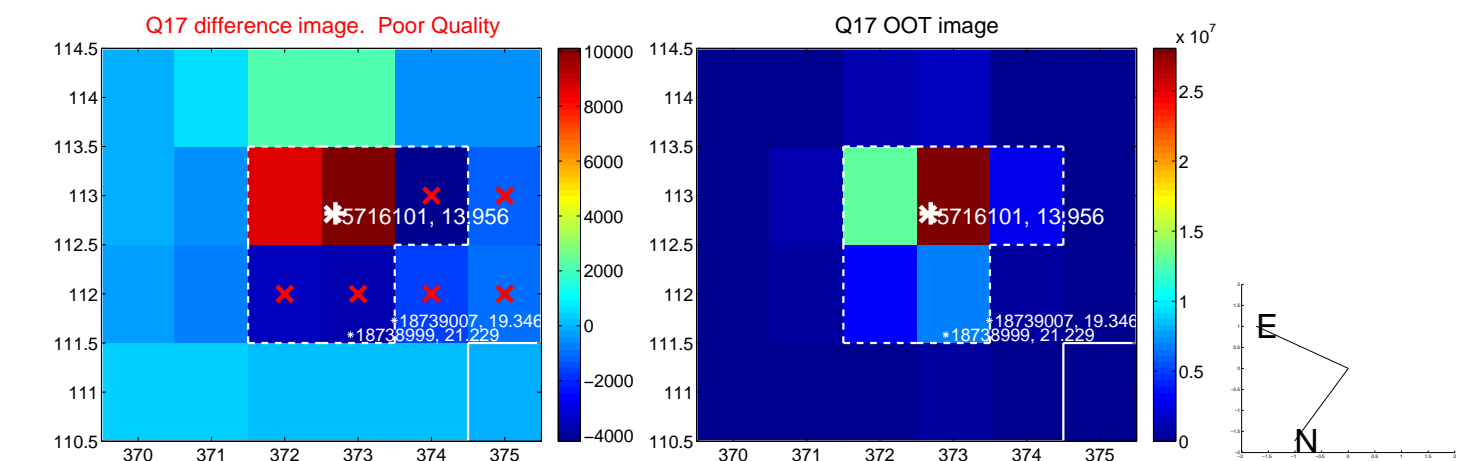
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



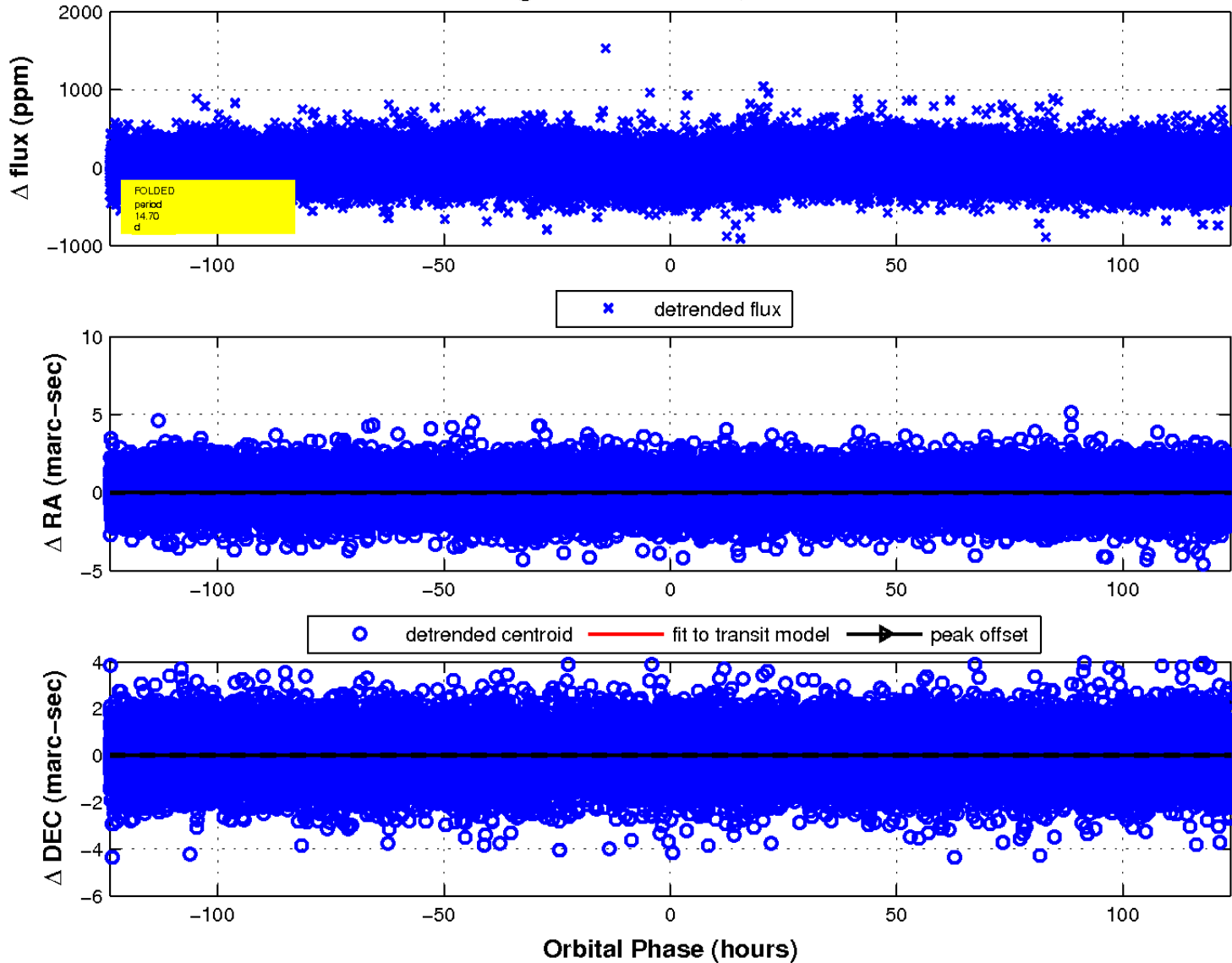
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

