

KIC 007834712

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})
007834712-01	OBS	7850.01	66.119234	145.234968	918.9	3.330	10.5	10.4	1.03	5828	3.77	9.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007834712-01	OBS	PC	0.97	0	0	0	0	CENT_FEW_MEAS

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

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

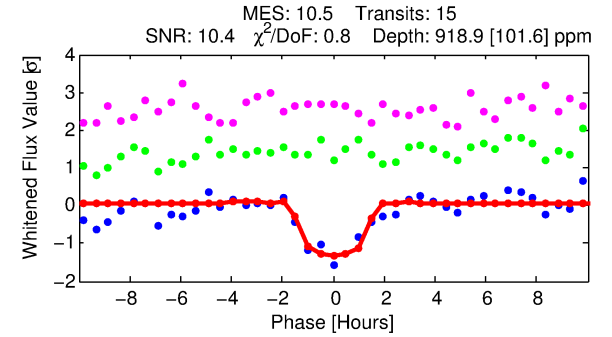
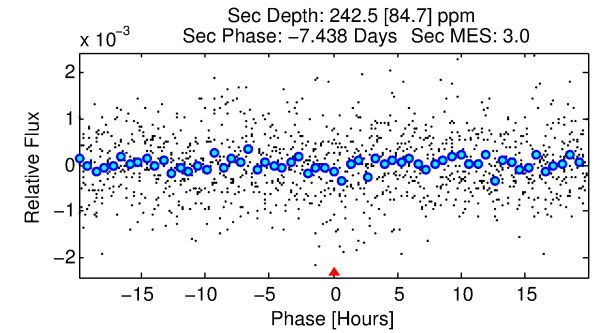
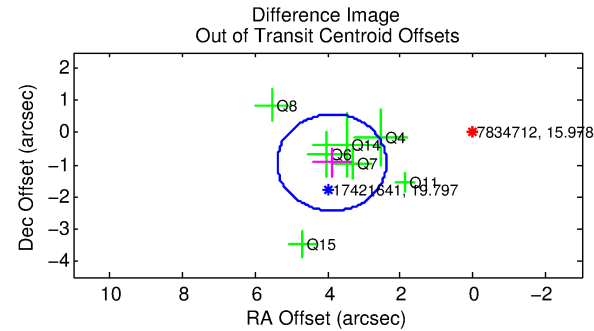
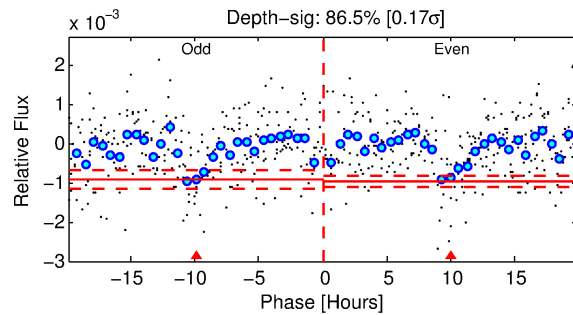
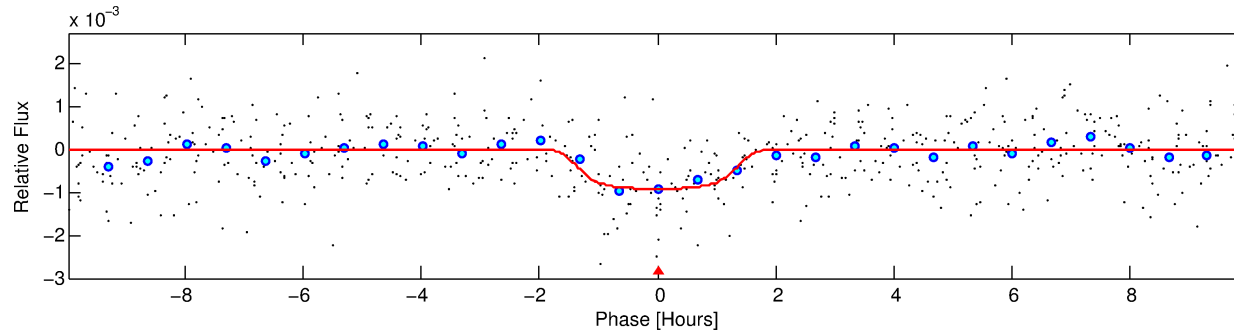
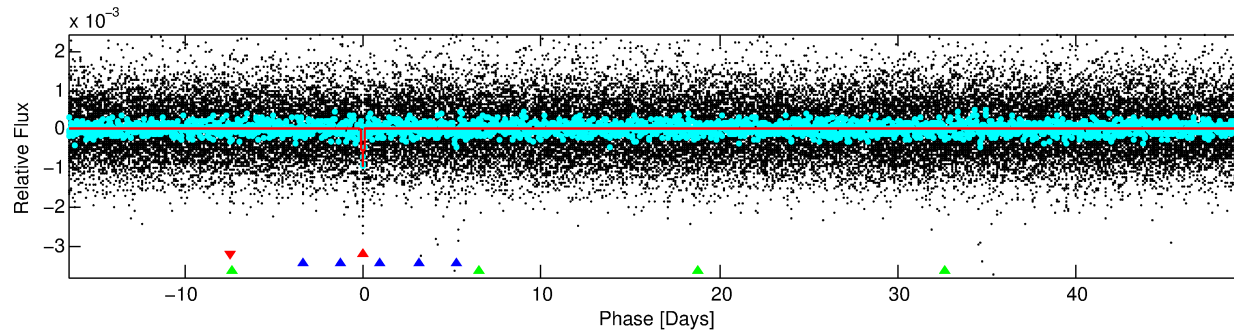
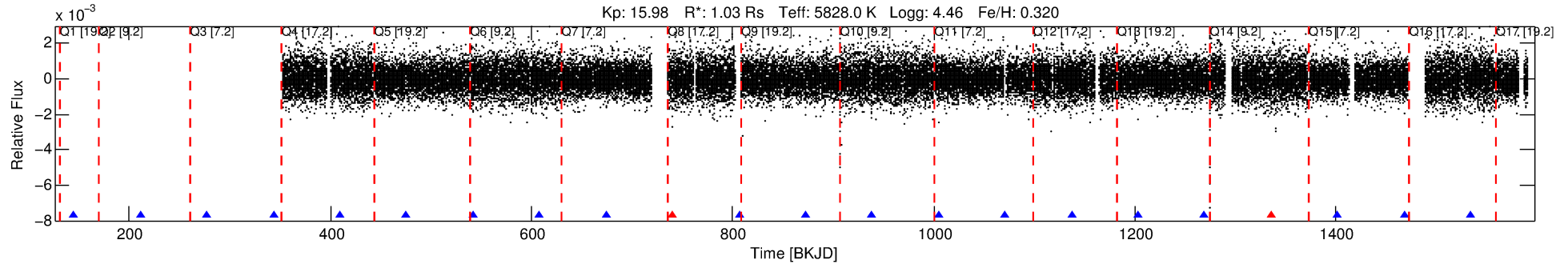
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007834712-01

No Significant Match Found

DV One-Page Summary

KIC: 7834712 Candidate: 1 of 3 Period: 66.119 d



DV Fit Results:

Period = 66.11923 [0.00074] d
Epoch = 145.2350 [0.0103] BKJD
Rp/R* = 0.0336 [0.0068]
a/R* = 73.80 [59.22]
b = 0.91 [0.15]
Seff = 9.91 [3.82]
Teq = 452 [44] K
Rp = 3.77 [1.31] Re
a = 0.3321 [0.0804] AU
Ag = 1035.08 [667.86] [1.55 σ]
Teffp = 3967 [549] K [6.38 σ]

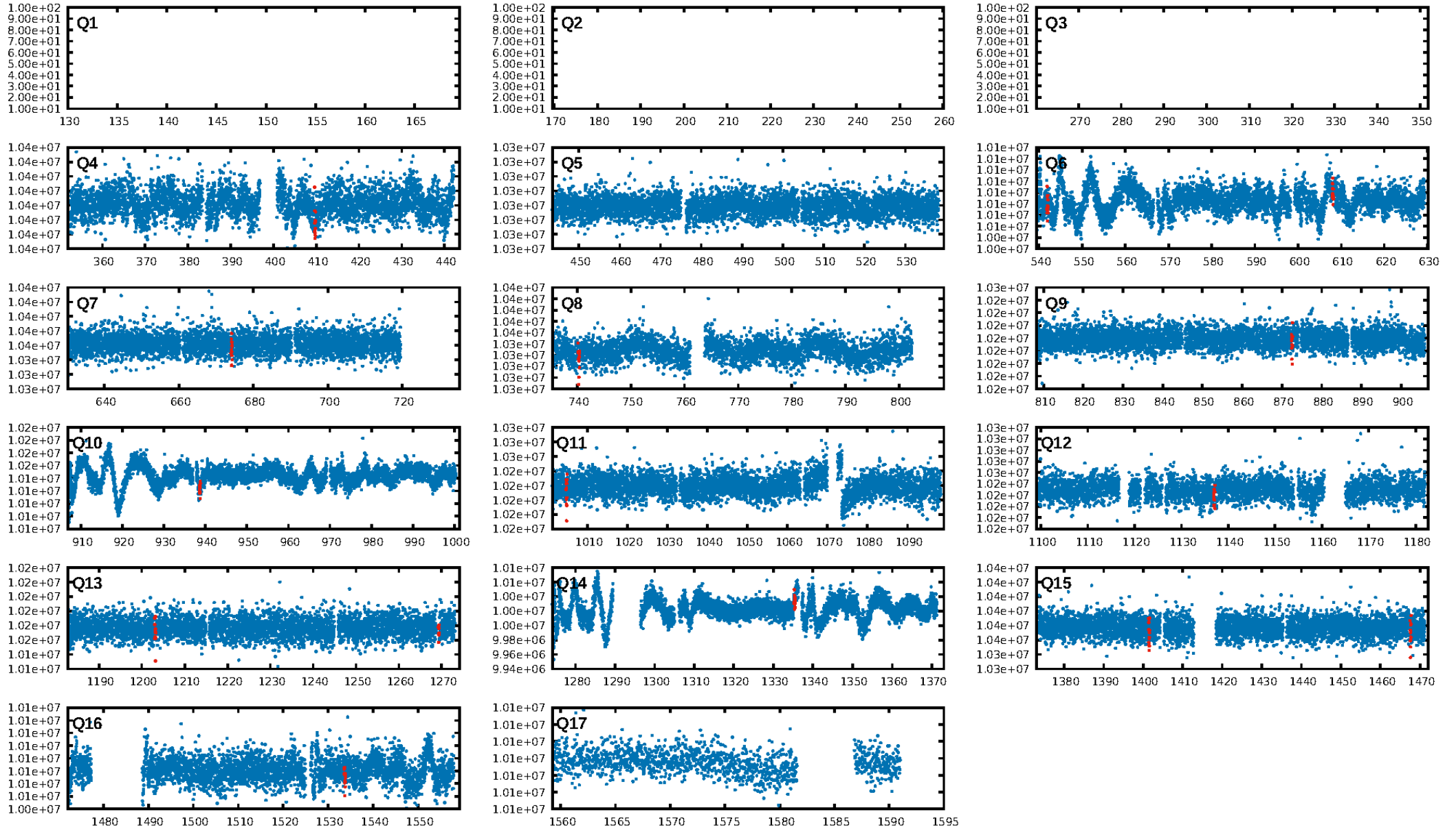
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [237.24 σ]
ModelChiSquare2-sig: 38.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.39e-25
RollingBand-fgt: 0.87 [13/15]
GhostDiagnostic-chr: 0.6937
Centroid-sig: 3.8%
Centroid-so: 2.878 arcsec [2.15 σ]
OotOffset-rm: 3.993 arcsec [7.96 σ]
KicOffset-rm: 4.216 arcsec [7.81 σ]
OotOffset-st: 2/3/2/0 [7]
KicOffset-st: 2/3/2/0 [7]
DiffImageQuality-fgm: 0.86 [6/7]
DiffImageOverlap-fno: 1.00 [10/10]

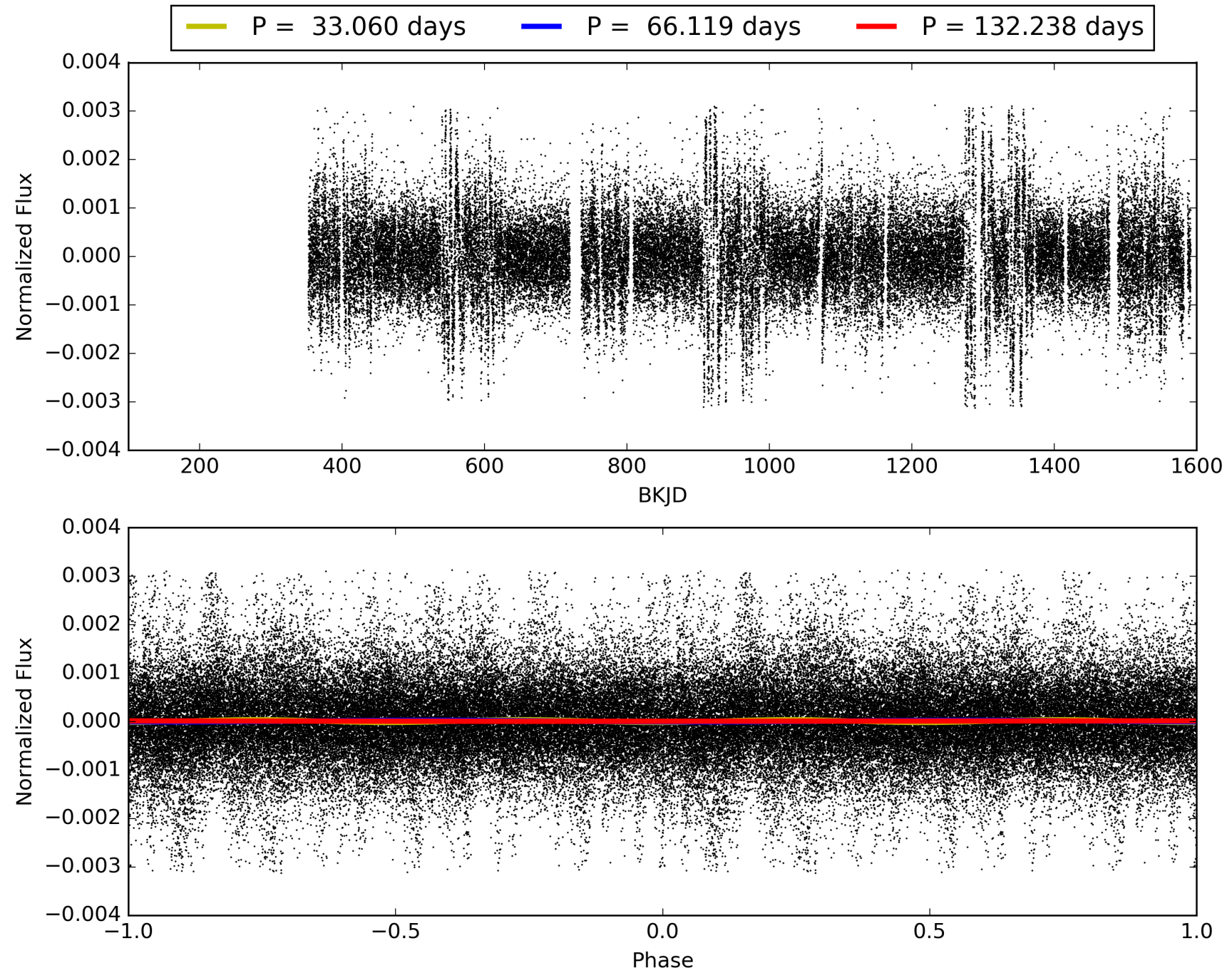
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:01:06 Z

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

TCE 007834712-01, PDC Light Curves

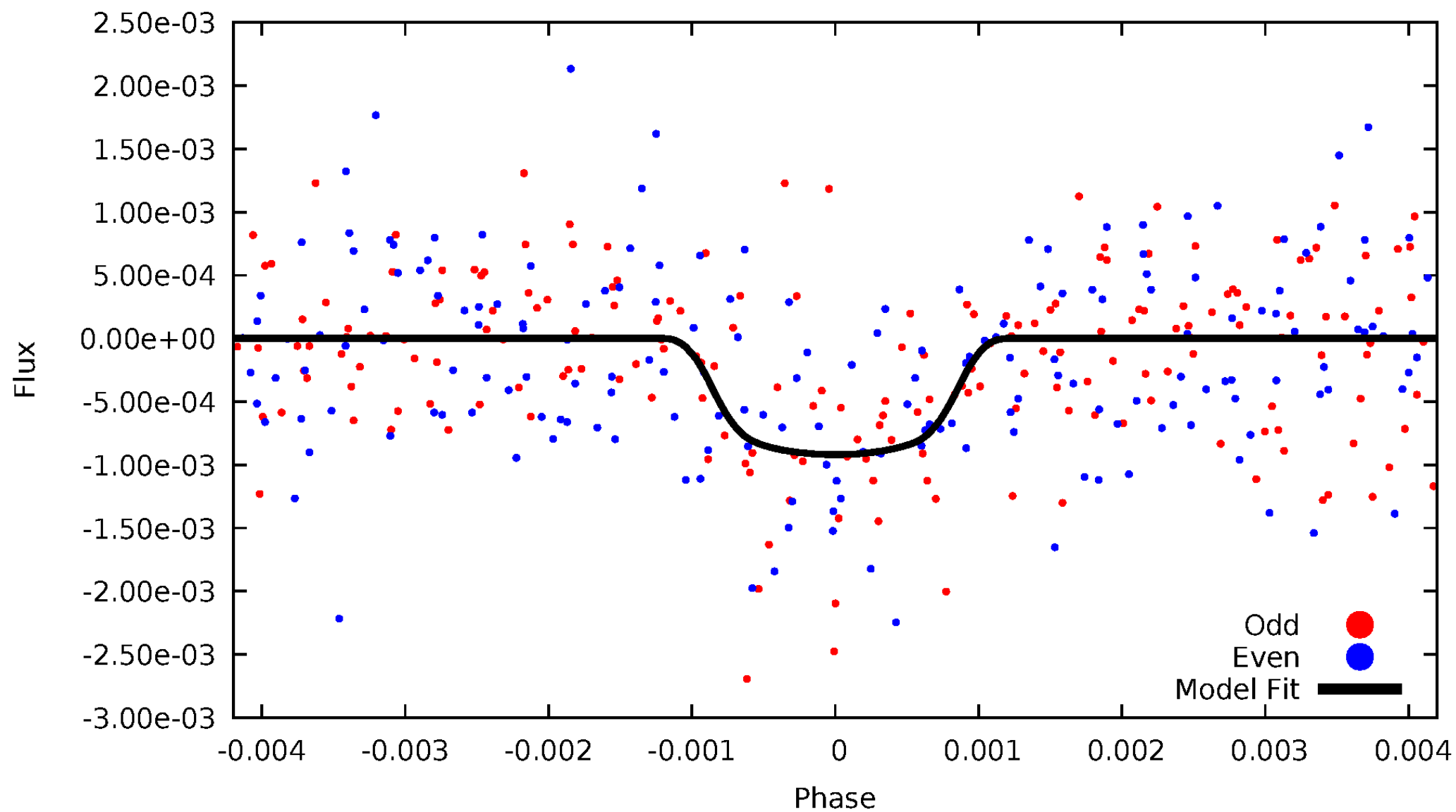


TCE 007834712-01



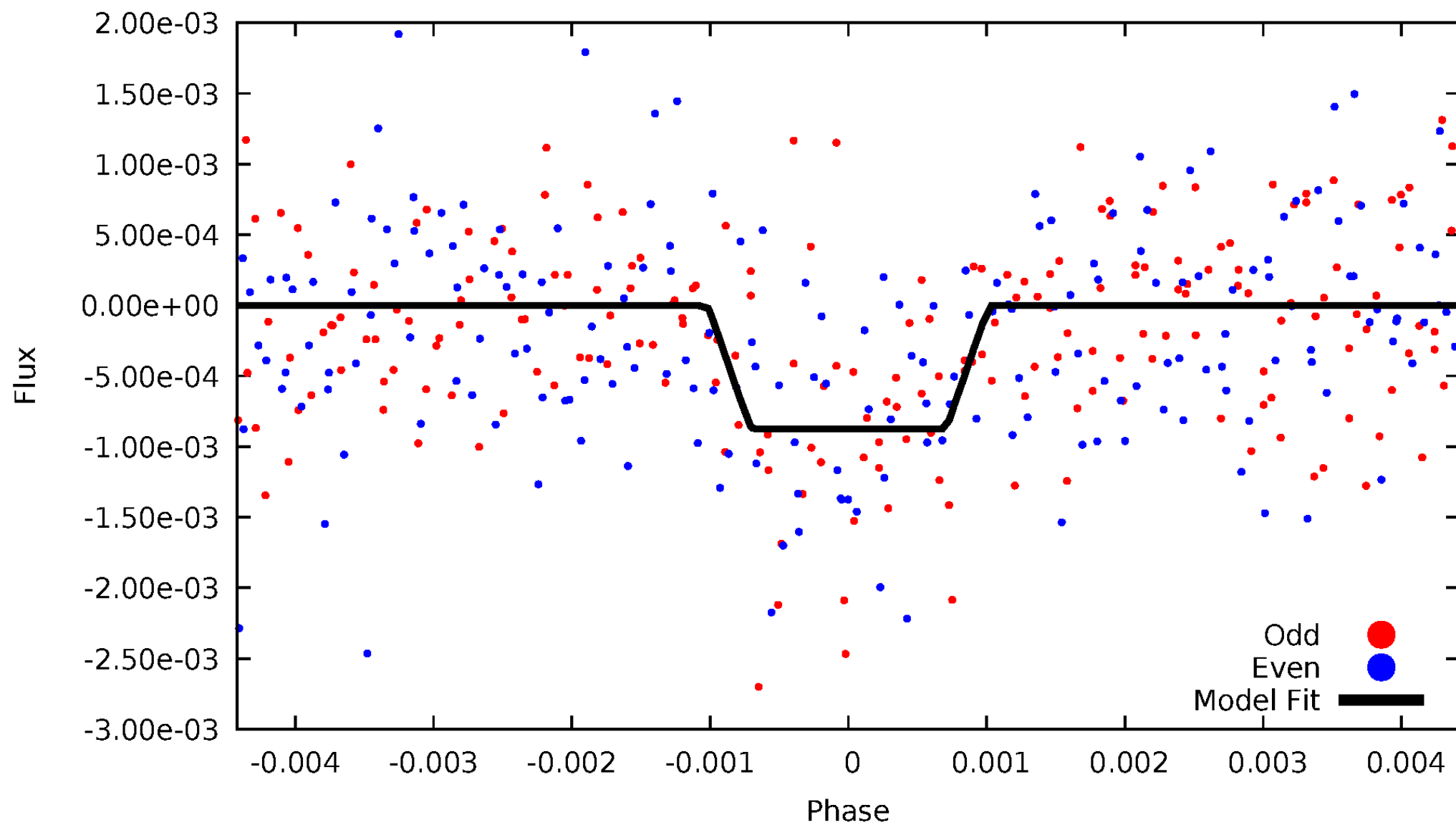
DV Odd/Even

TCE 007834712-01



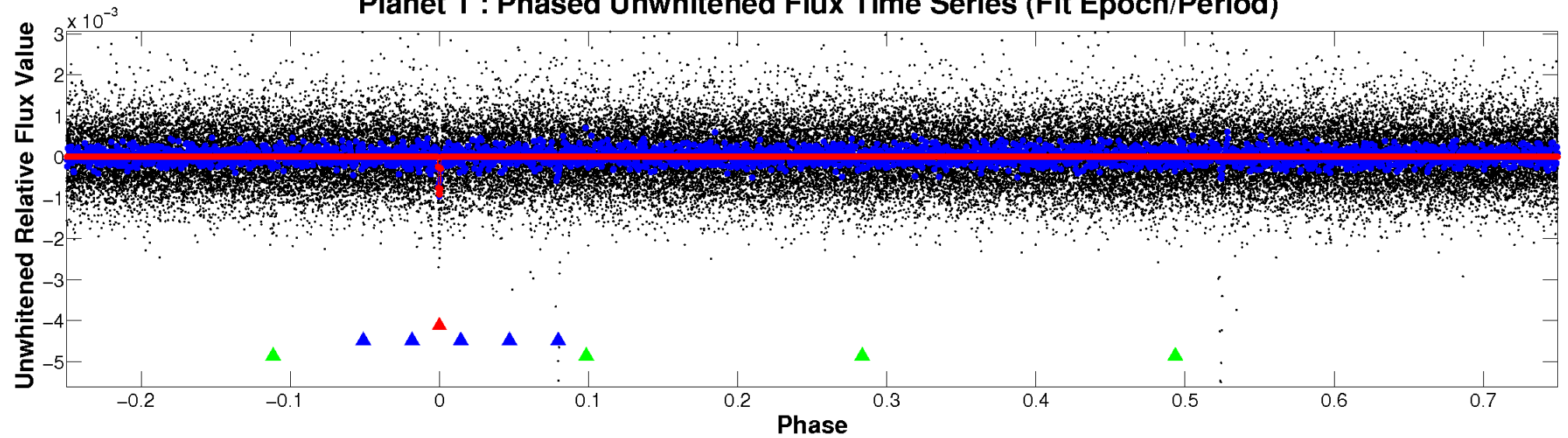
ALT Odd/Even

TCE 007834712-01

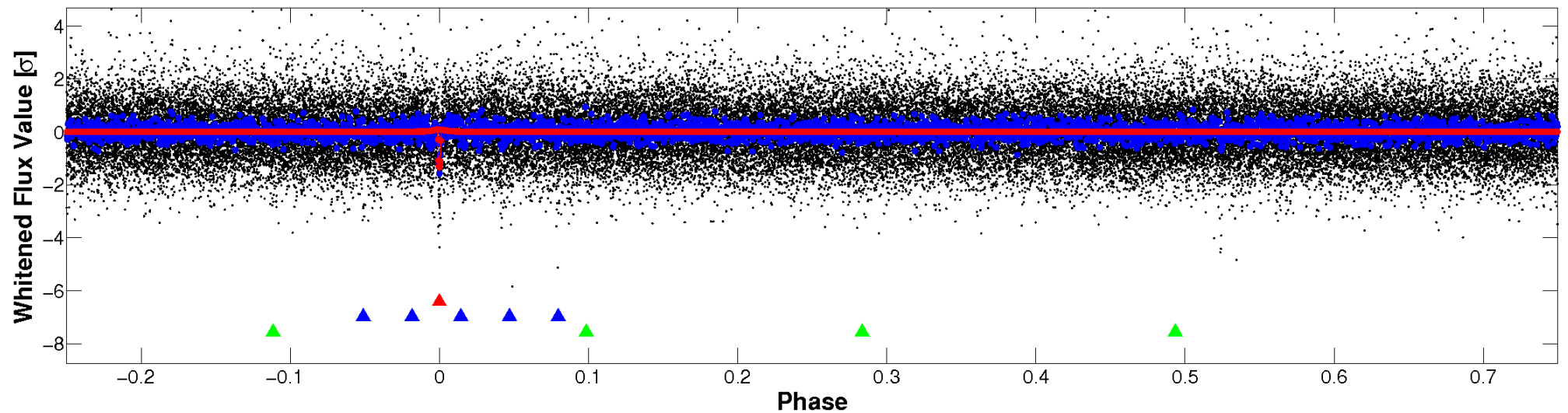


Non-Whitened Vs. Whitened Light Curve

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

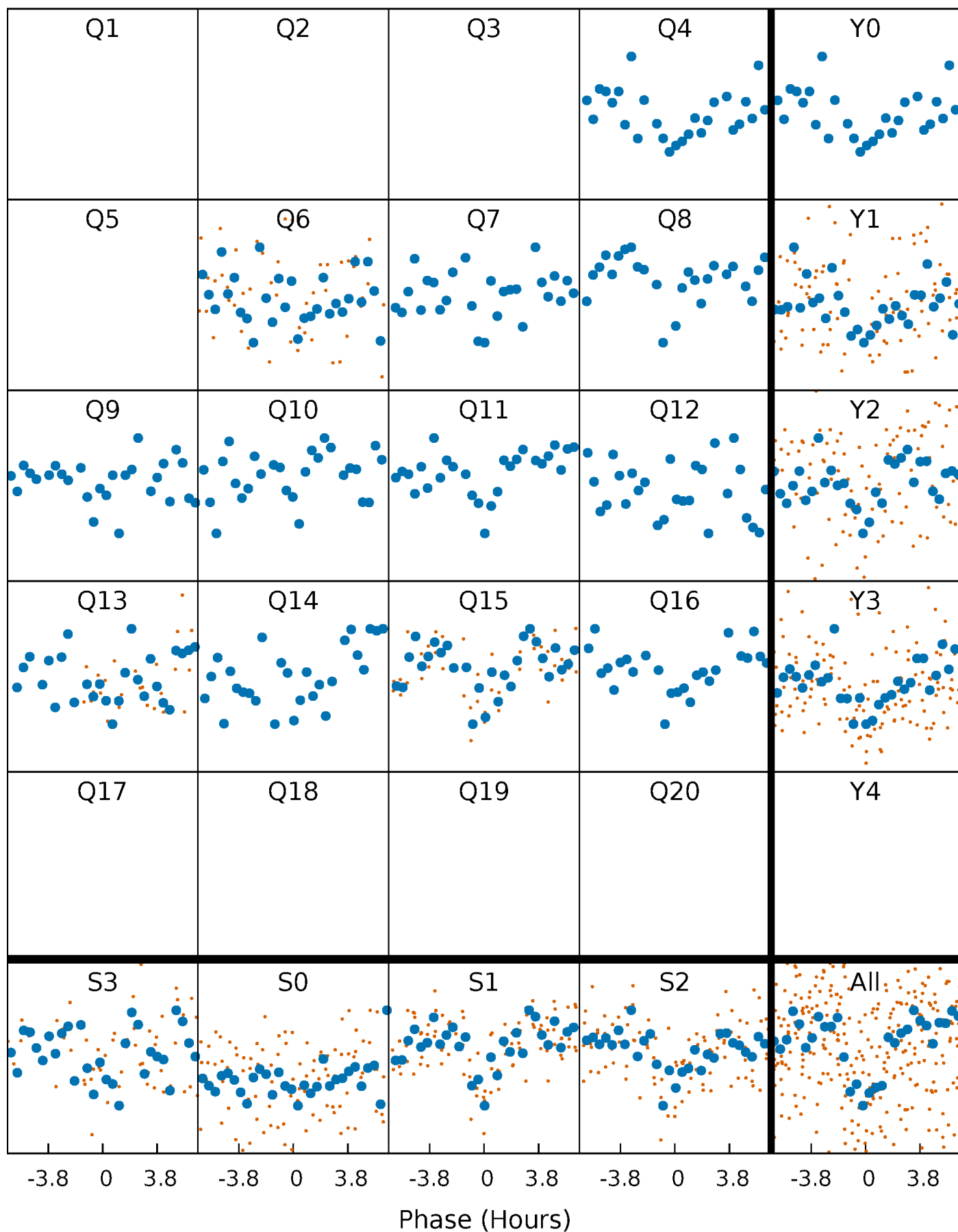


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



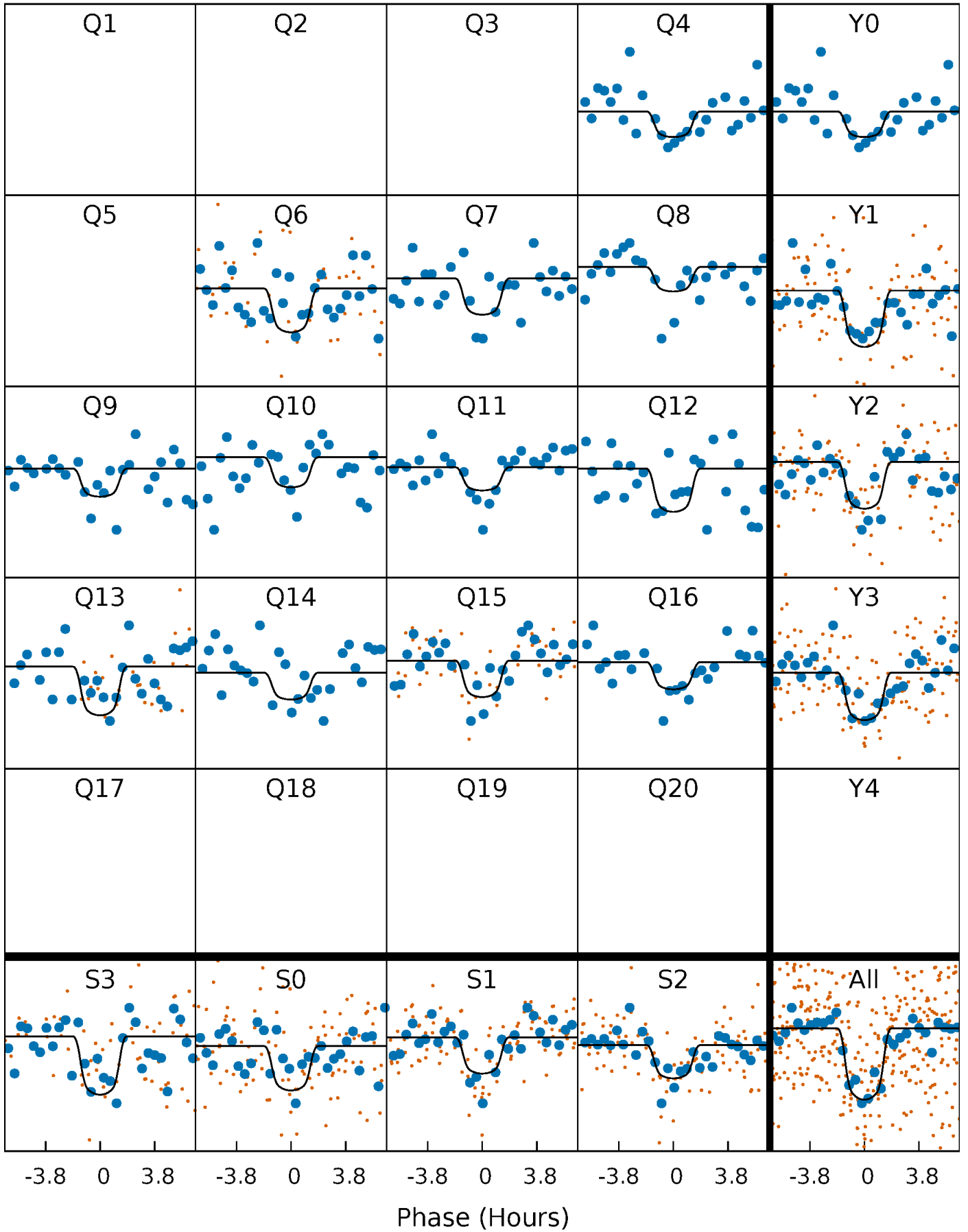
PDC Quarter-Phased Transit Curves

TCE 007834712-01 P= 66.119234 Days $T_0=145.234968$ (BKJD)



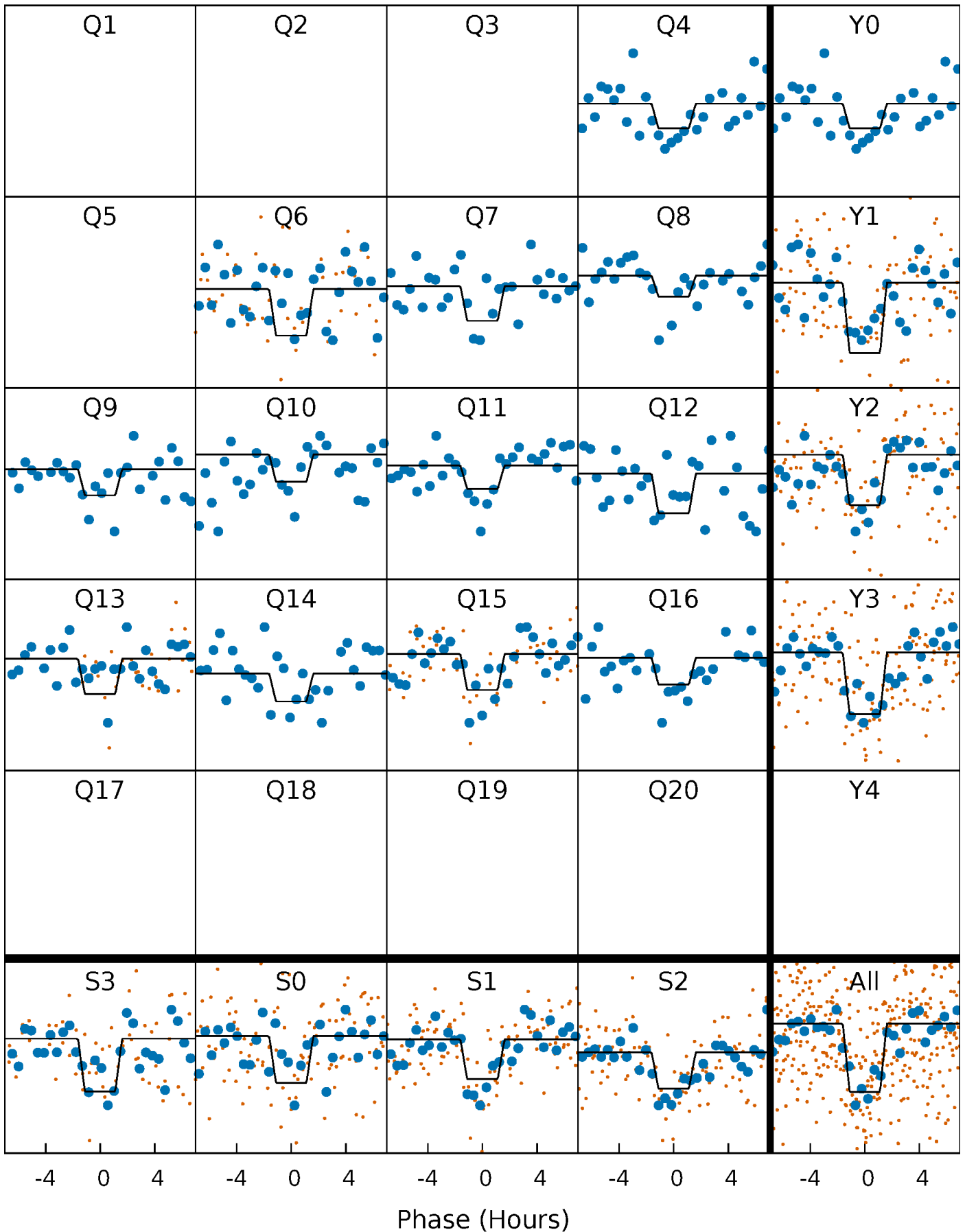
DV Quarter-Phased Transit Curves

TCE 007834712-01 P= 66.119234 Days $T_0=145.234968$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

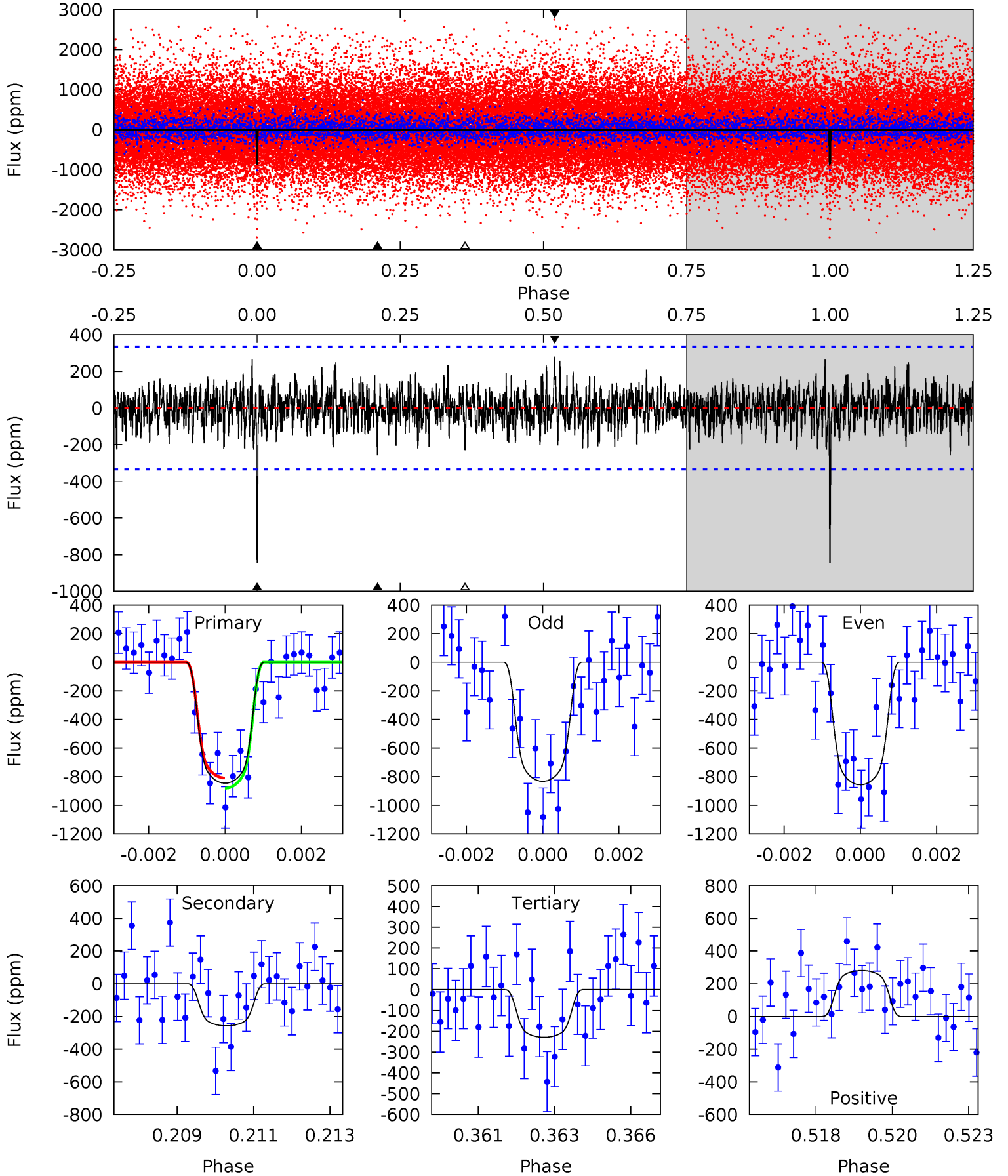
TCE 007834712-01 P= 66.118906 Days $T_0=145.240118$ (BKJD)



DV Model-Shift Uniqueness Test

007834712-01, P = 66.119234 Days, E = 145.234968 Days

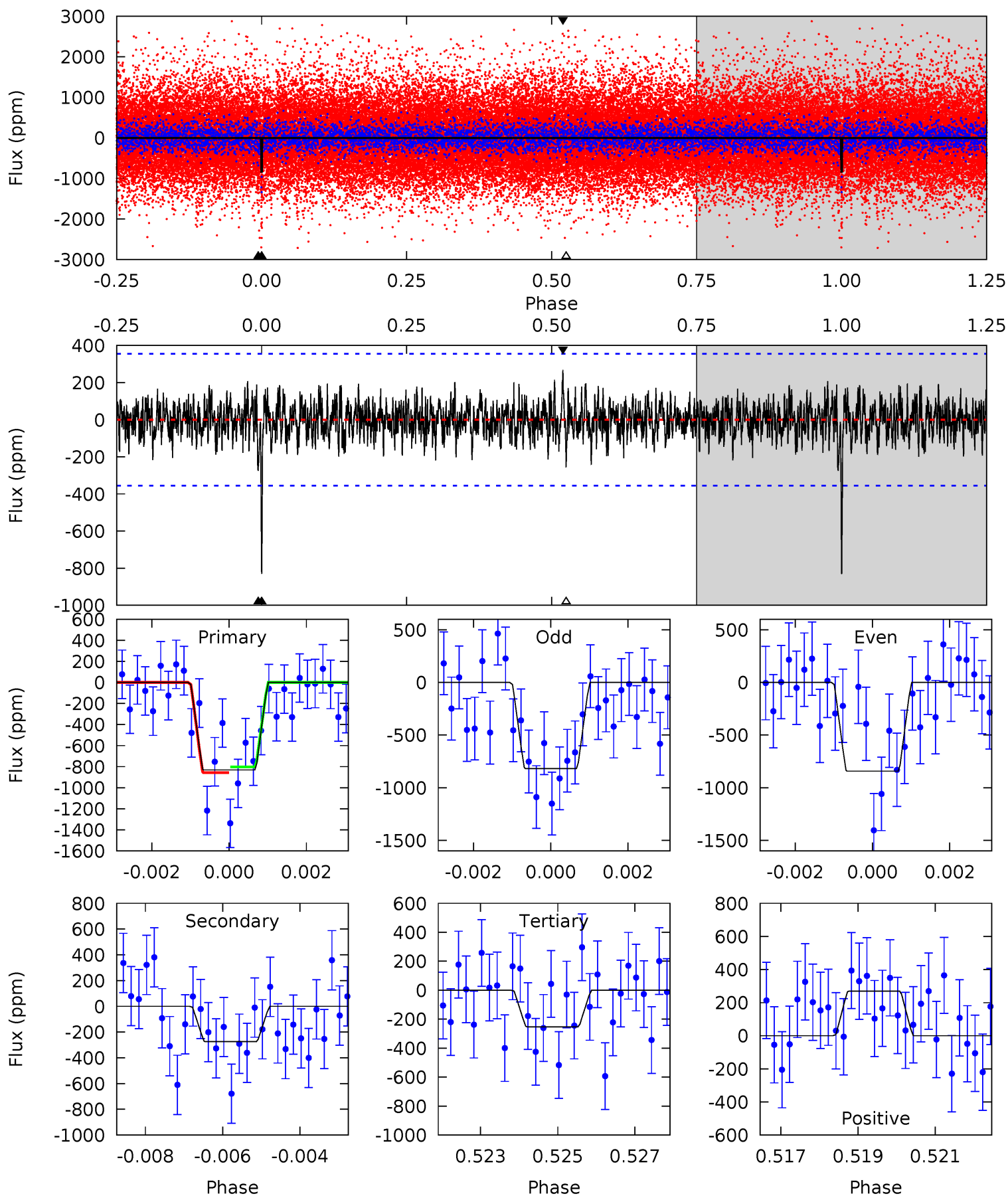
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	4.08	3.63	4.44	5.30	3.04	1.22	9.75	8.94	0.45	-0.36	0.19	0.96	0.25	0.57



Alt Model-Shift Uniqueness Test

007834712-01, P = 66.118906 Days, E = 145.240118 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	4.12	3.78	4.03	5.32	3.08	1.11	8.67	8.42	0.34	0.09	0.19	0.95	0.24	0.41



Stellar Parameters For KIC 007834712

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5828^{+182}_{-203}	$4.462^{+0.050}_{-0.200}$	$0.320^{+0.150}_{-0.300}$	$1.028^{+0.289}_{-0.116}$	$1.116^{+0.112}_{-0.150}$	$1.448^{+0.369}_{-0.711}$
	+3%/-3%	+1%/-4%	+47%/-94%	+28%/-11%	+10%/-13%	+25%/-49%
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 007834712-01 / KOI 7850.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-258 ± 63	$3.99^{+0.90}_{-0.89}$	648^{+44}_{-34}	4275^{+425}_{-355}	988^{+660}_{-393}
Alt.	-275 ± 67	$3.47^{+0.97}_{-0.79}$	644^{+48}_{-32}	4519^{+506}_{-390}	1352^{+1026}_{-559}

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

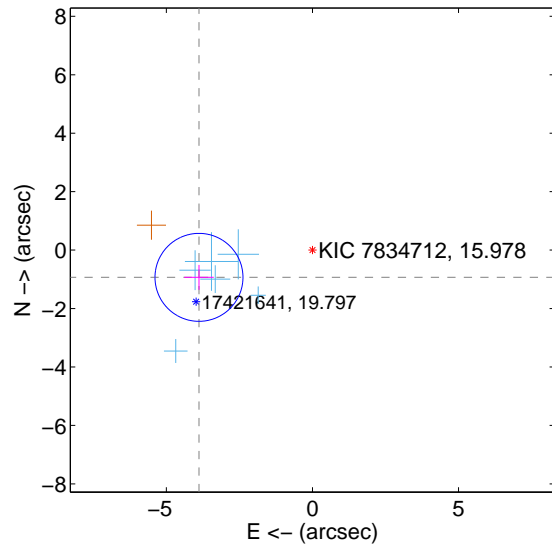
Supplemental centroid analysis for 007834712-01. Kepler magnitude: 15.98. Transit SNR 10.43

There are 6 quarters with good PRF difference image offsets

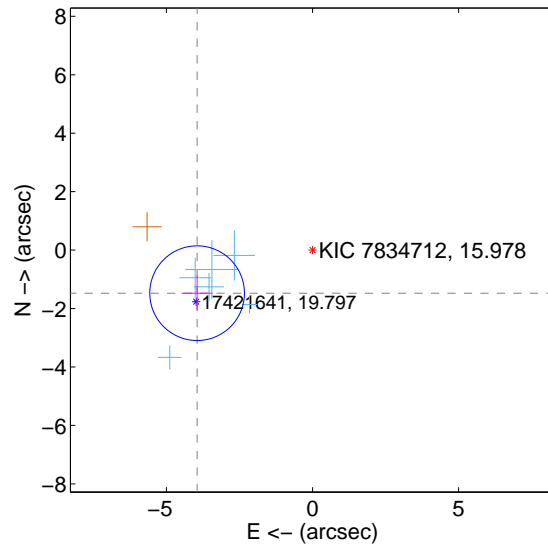
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.993 ± 0.502	7.96	3.883 ± 0.506	-0.933 ± 0.425
PRF-fit source offset from KIC position	4.216 ± 0.540	7.81	3.950 ± 0.531	-1.474 ± 0.598
photometric centroid source offset	2.88 ± 1.34	2.15	1.84 ± 1.25	-2.22 ± 1.40

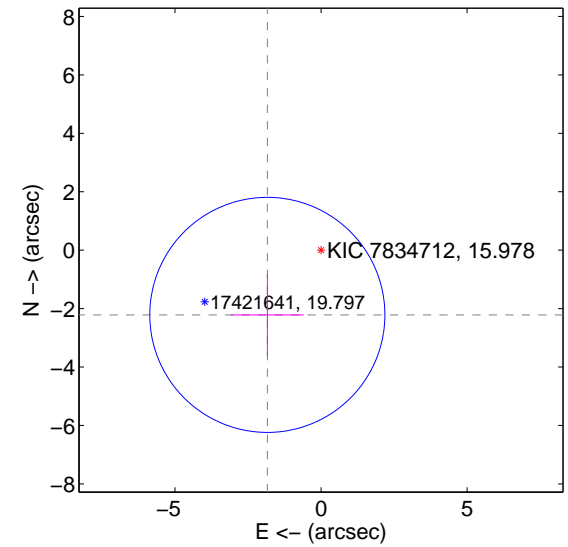
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

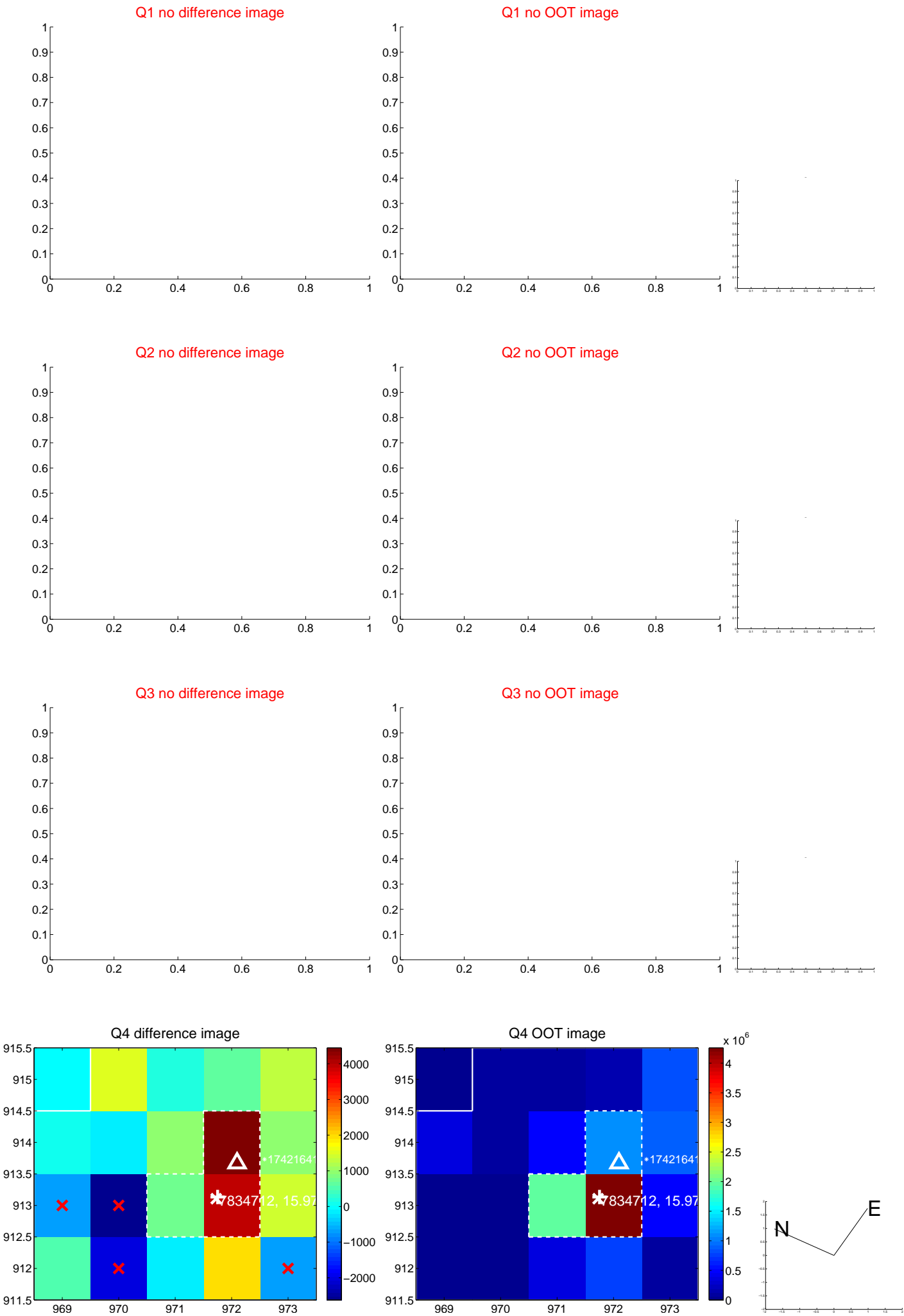


offset from photometric centroids

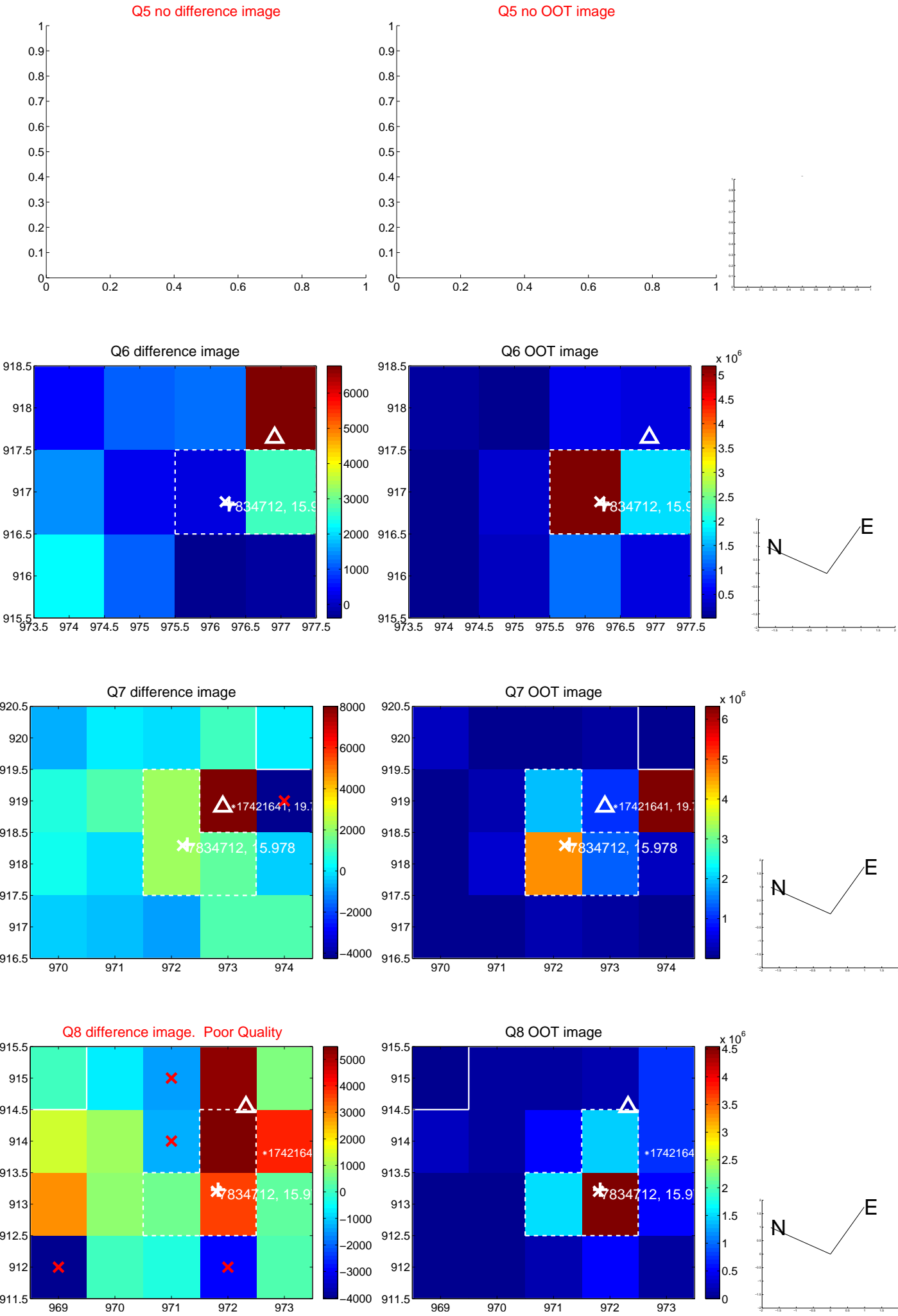


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

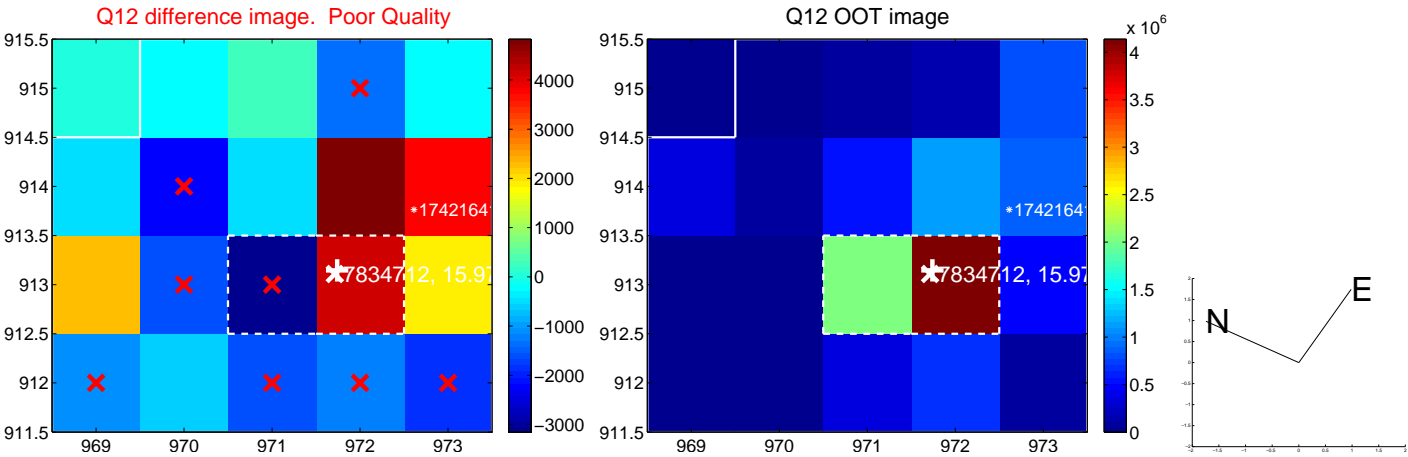
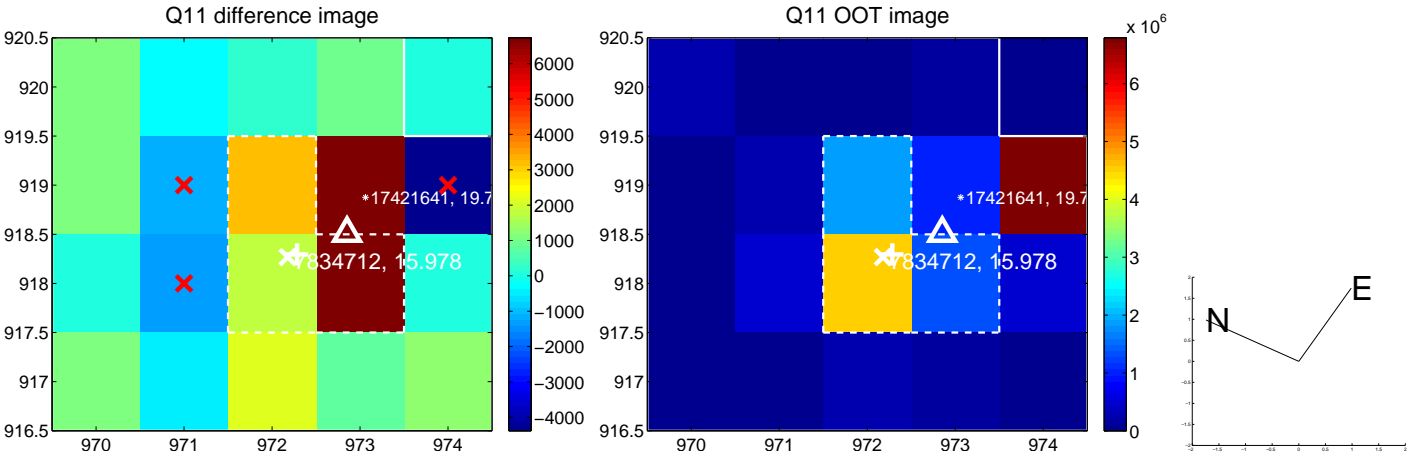
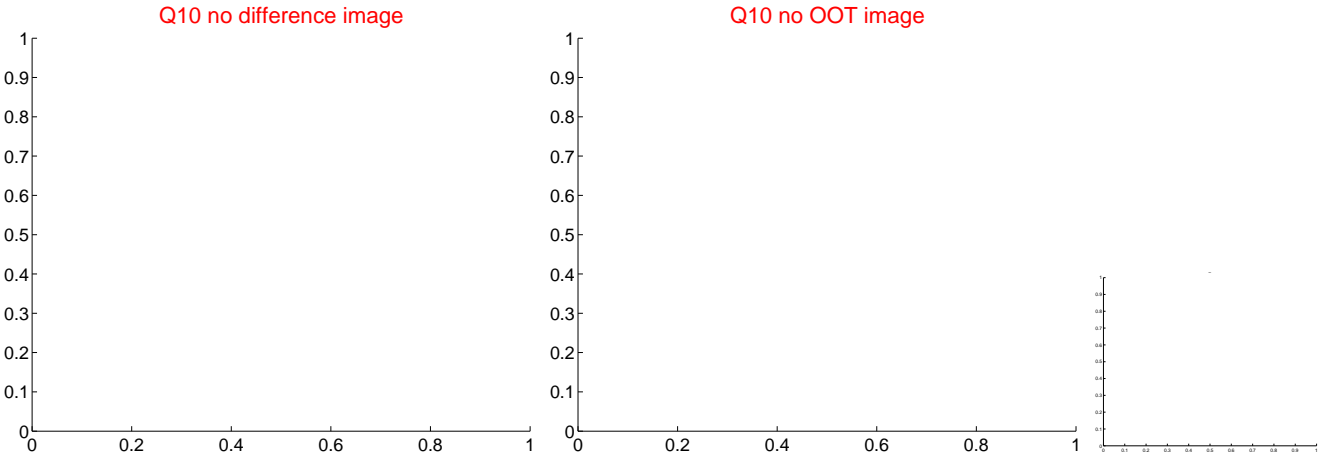
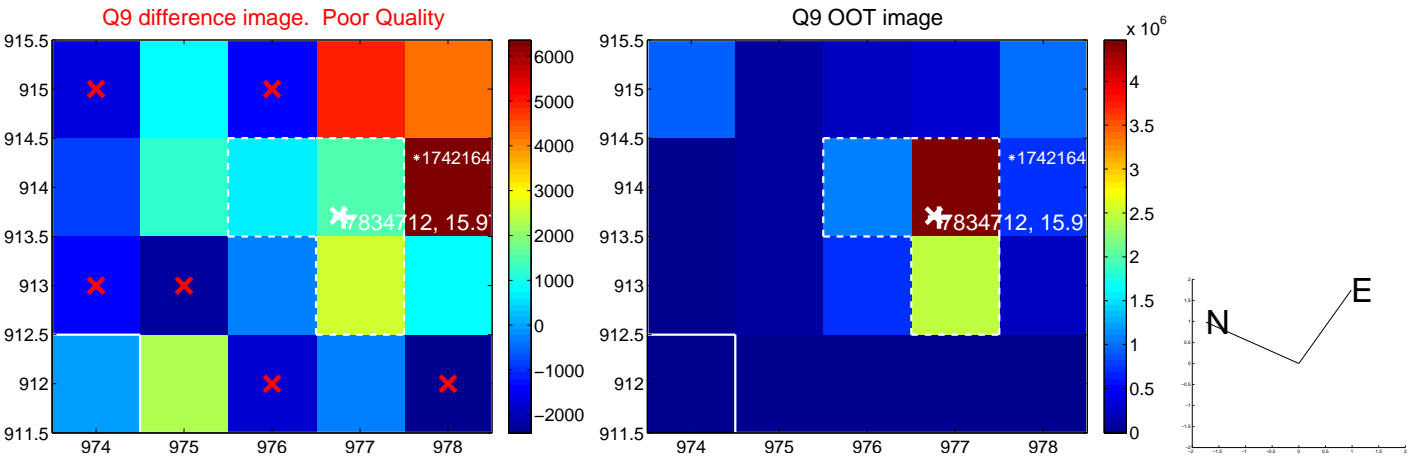
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



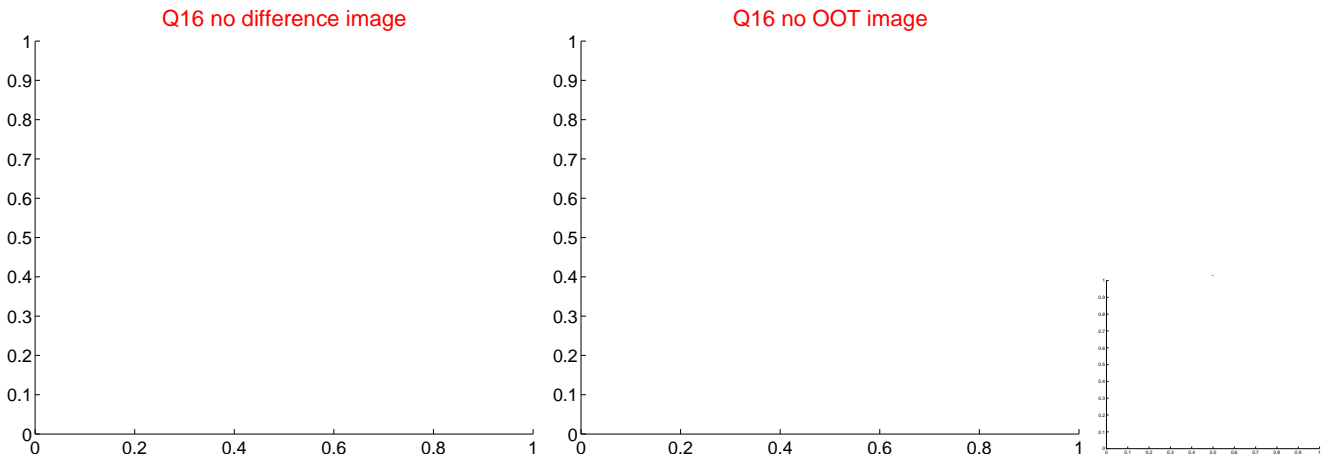
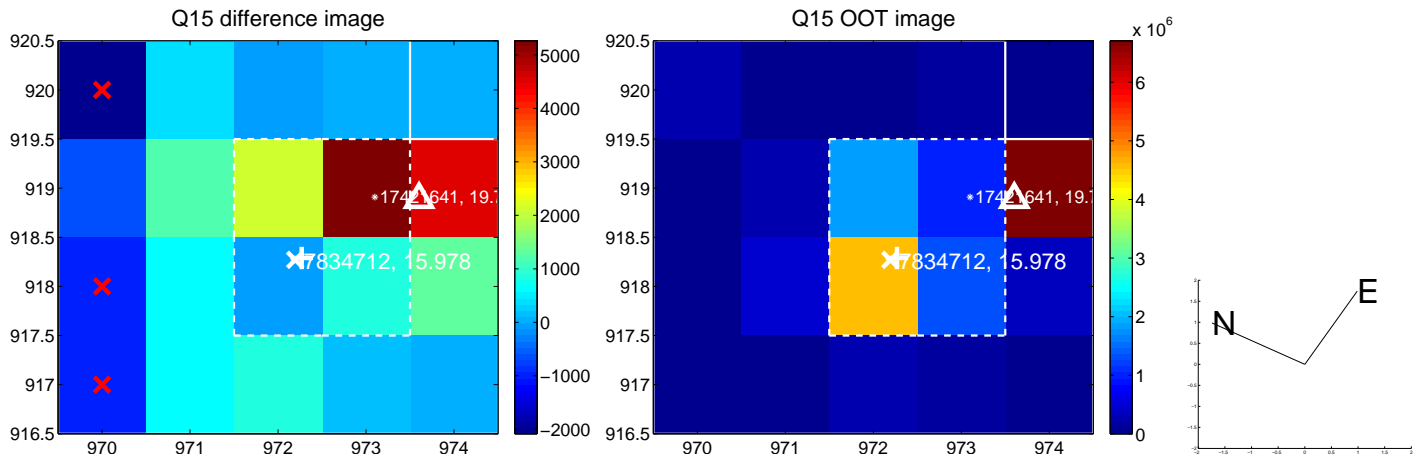
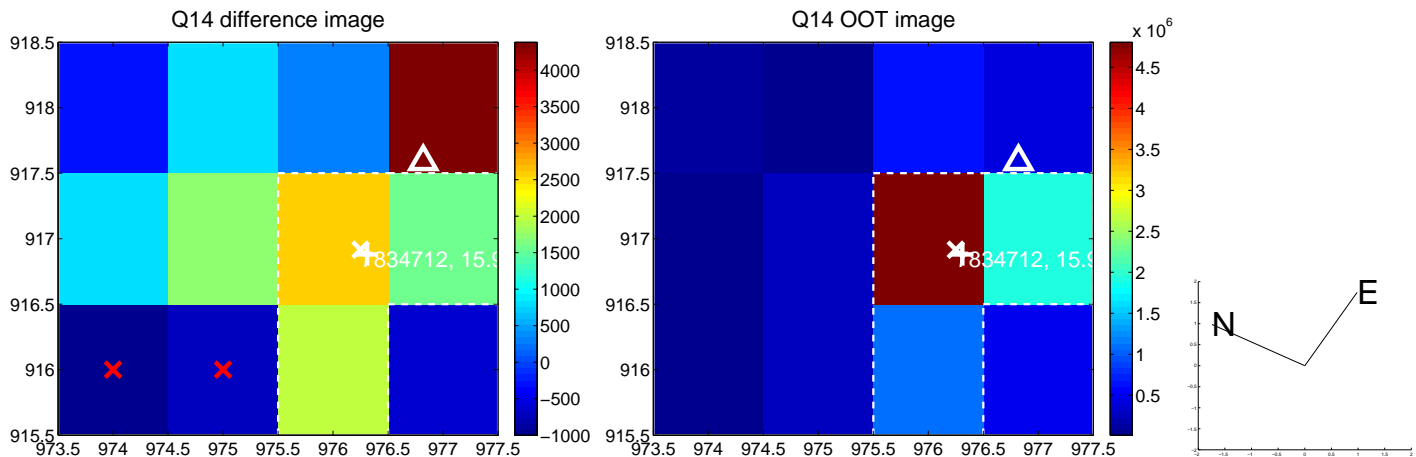
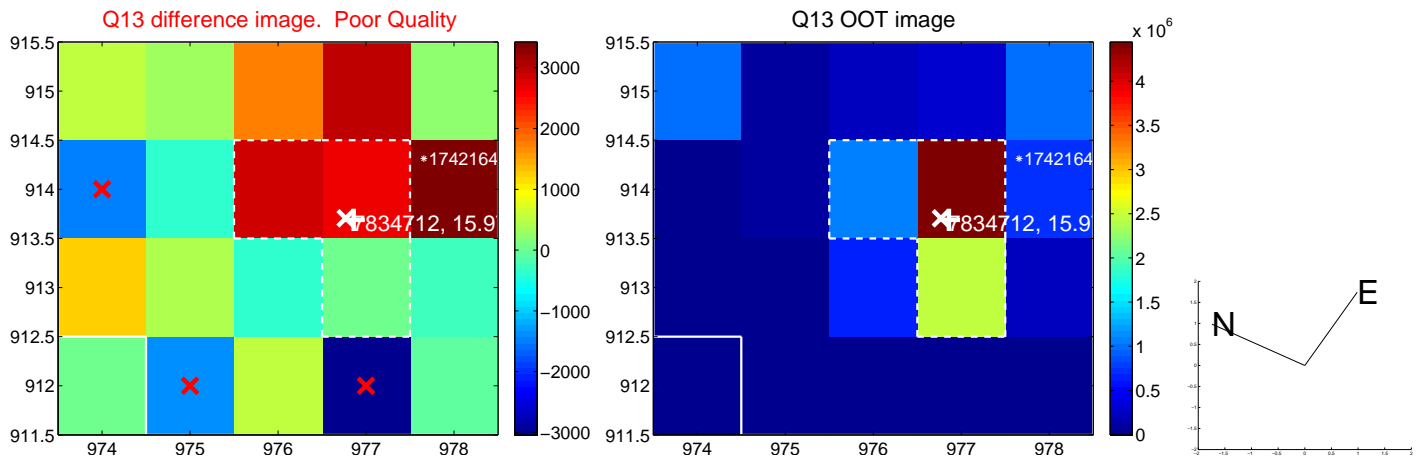
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



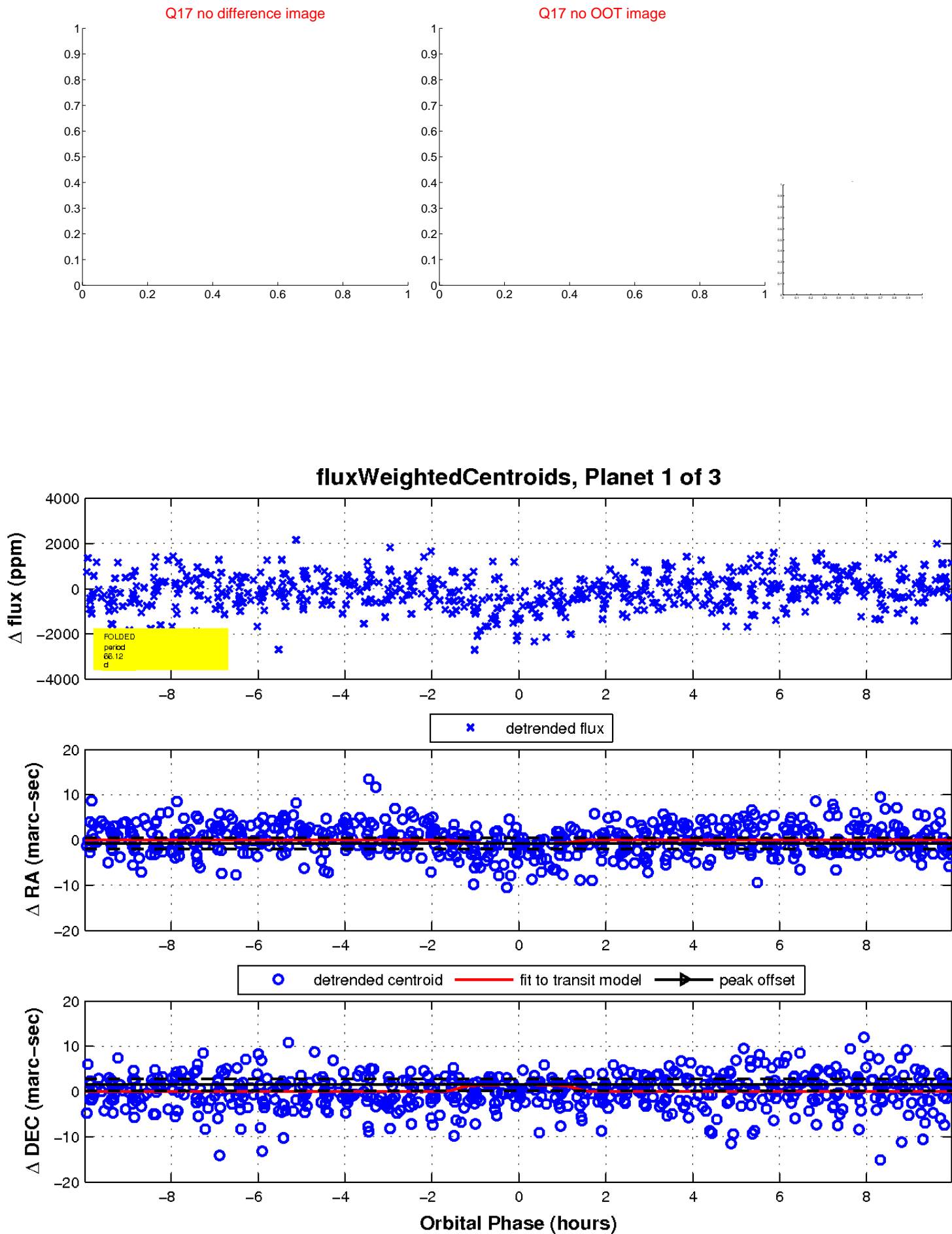
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

