

KIC 002447697

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})
002447697-01	OBS	No	3.682766	134.528533	39.1	12.664	7.3	6.4	0.88	5650	0.58	322.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002447697-01	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.

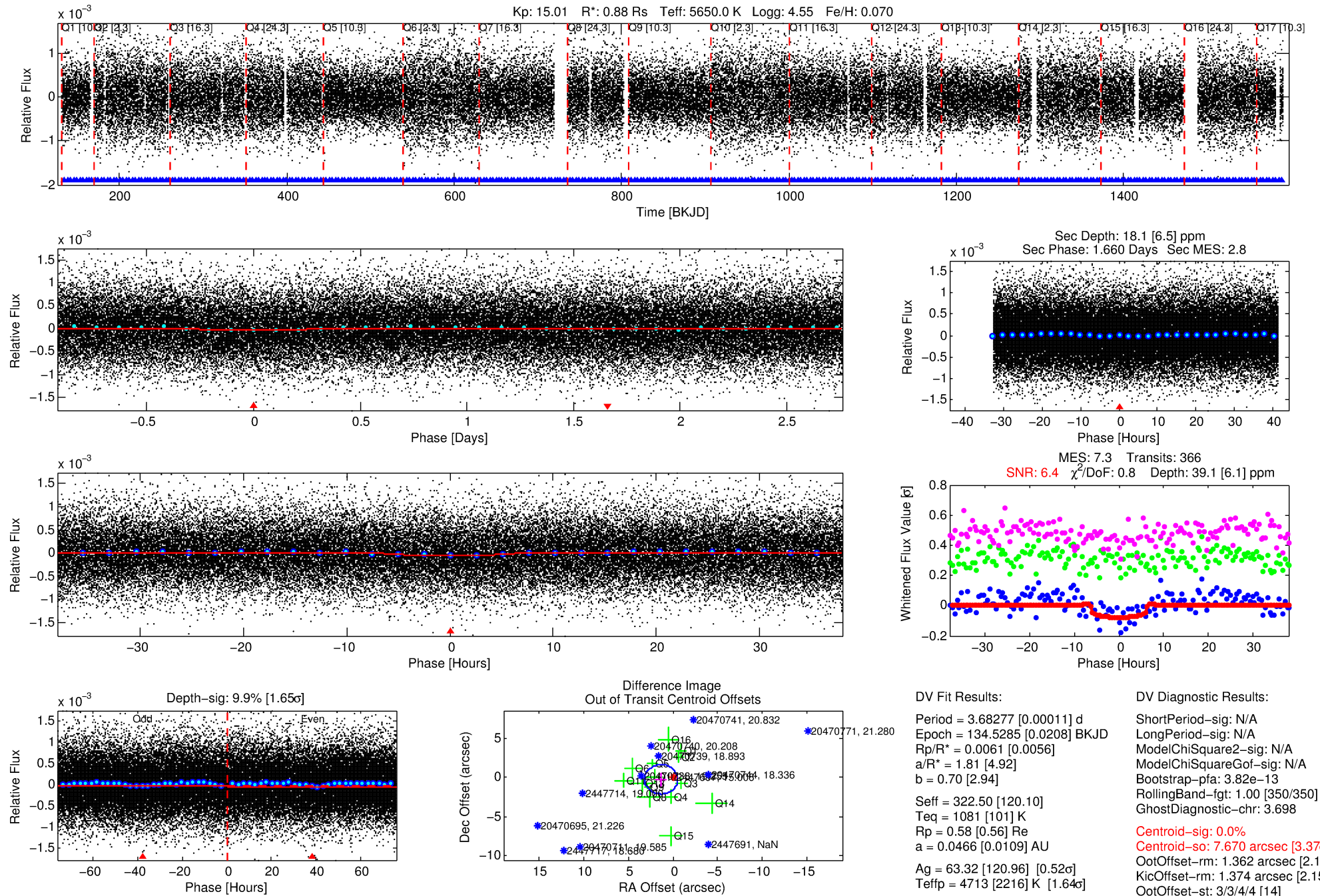
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002447697-01

No Significant Match Found

DV One-Page Summary

KIC: 2447697 Candidate: 1 of 1 Period: 3.683 d



DV Fit Results:

Period = 3.68277 [0.00011] d
Epoch = 134.5285 [0.0208] BKJD
Rp/R* = 0.0061 [0.0056]
a/R* = 1.81 [4.92]
b = 0.70 [2.94]
Seff = 322.50 [120.10]
Teff = 1081 [101] K
Rp = 0.58 [0.56] Re
a = 0.0466 [0.0109] AU
Ag = 63.32 [120.96] [0.52σ]
Teffp = 4713 [2216] K [1.64σ]

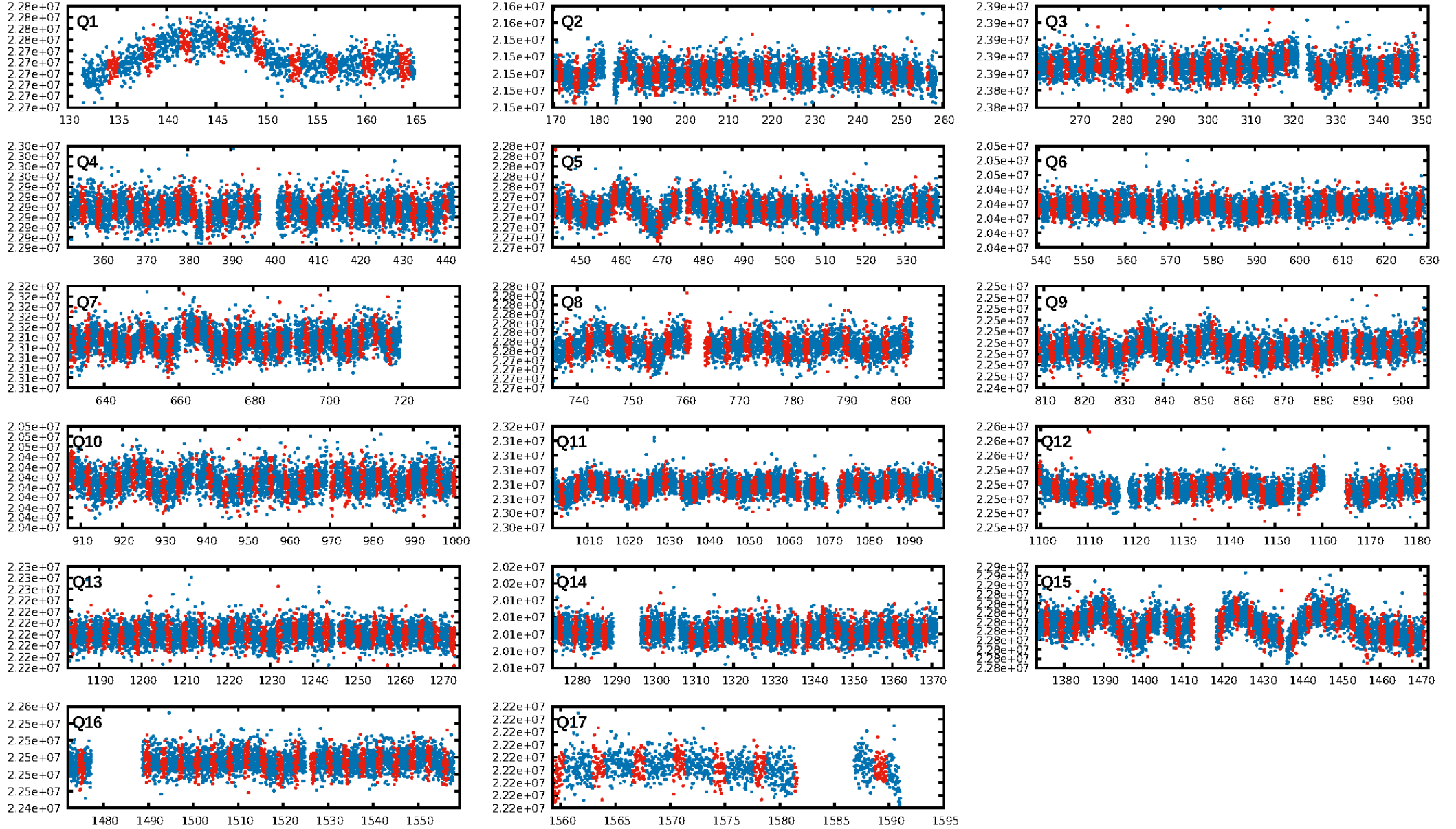
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.82e-13
RollingBand-fgt: 1.00 [350/350]
GhostDiagnostic-chr: 3.698
Centroid-sig: 0.0%
Centroid-so: 7.670 arcsec [3.37σ]
OotOffset-rm: 1.362 arcsec [2.19σ]
KicOffset-rm: 1.374 arcsec [2.15σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.36 [5/14]
DiffImageOverlap-fno: 1.00 [17/17]

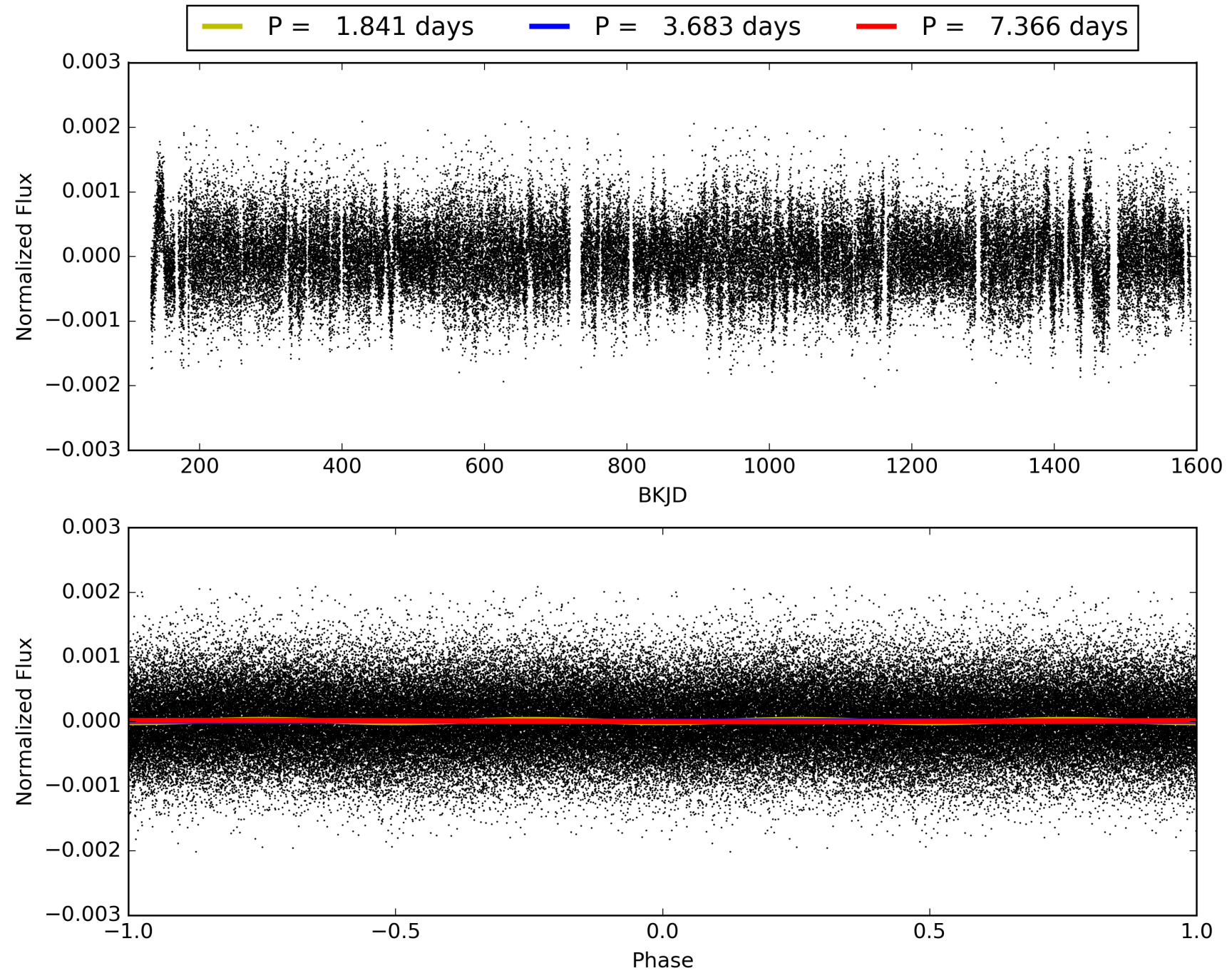
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:13:38 Z

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

TCE 002447697-01, PDC Light Curves

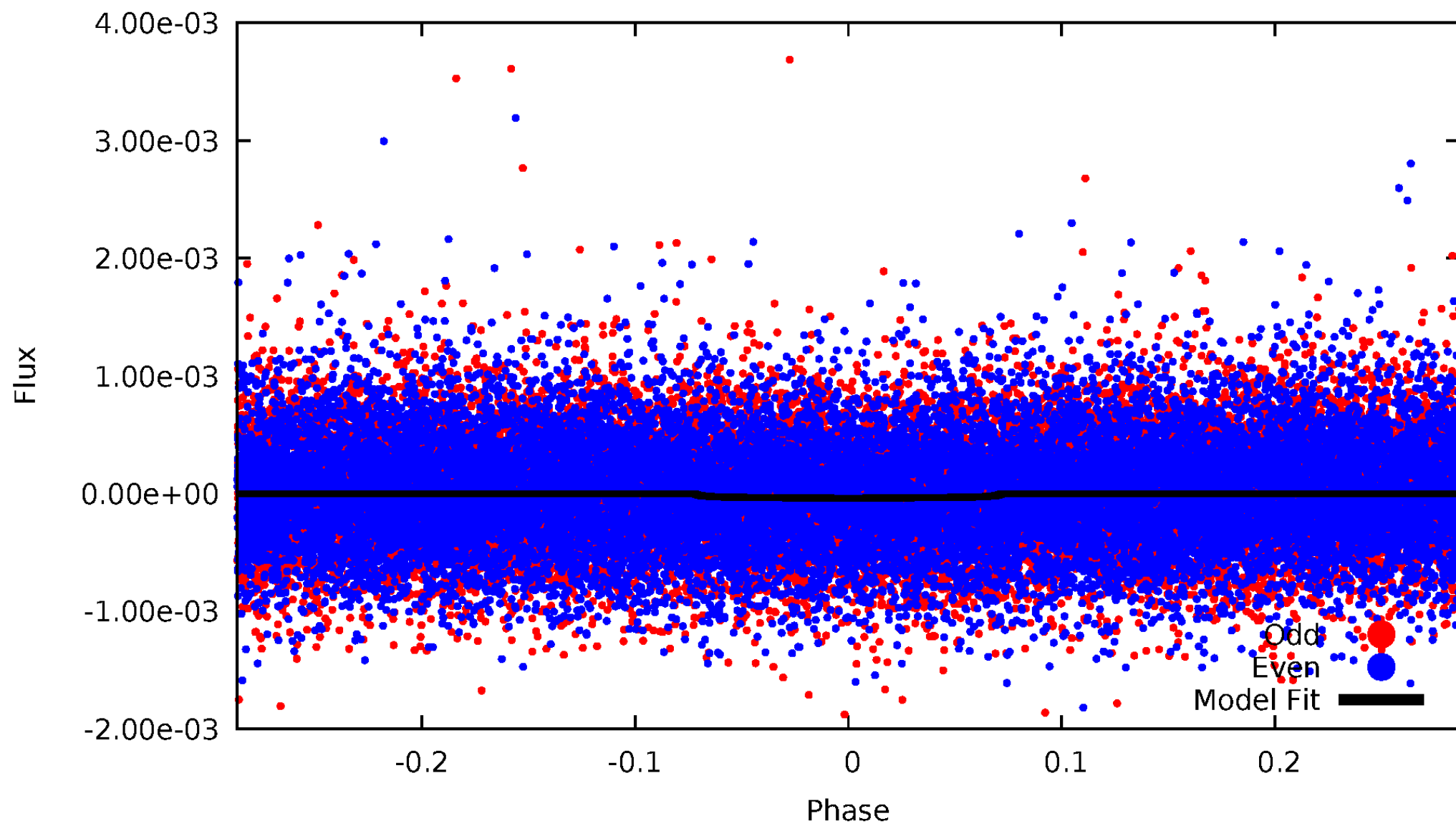


TCE 002447697-01



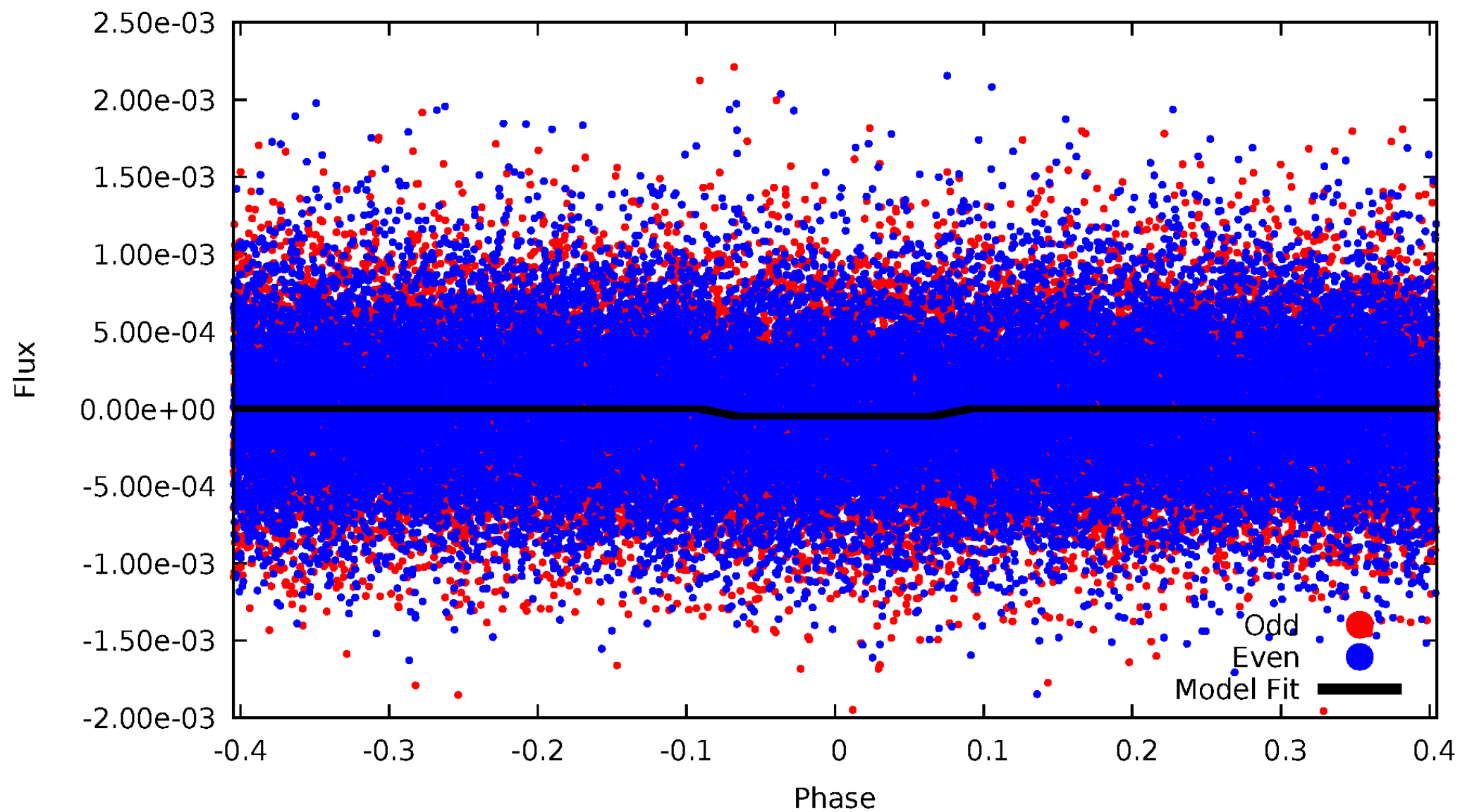
DV Odd/Even

TCE 002447697-01



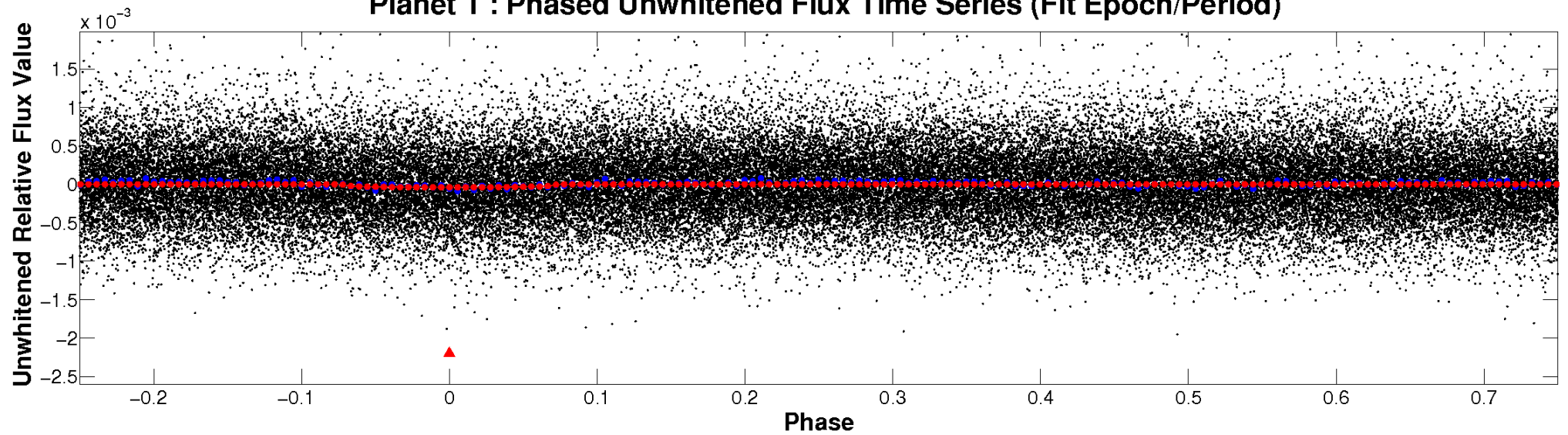
ALT Odd/Even

TCE 002447697-01

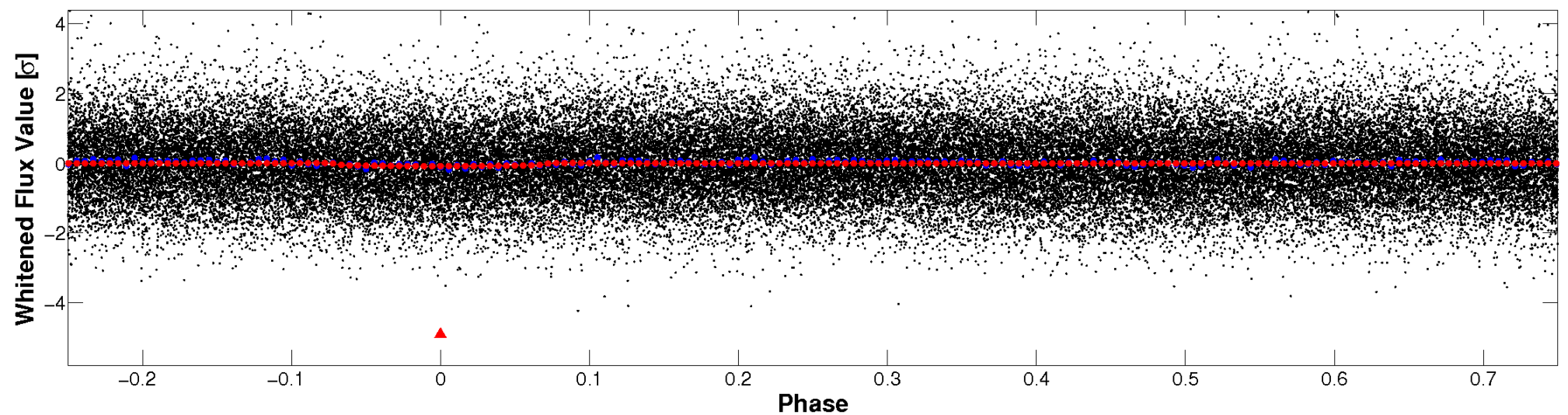


Non-Whitened Vs. Whitened Light Curve

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

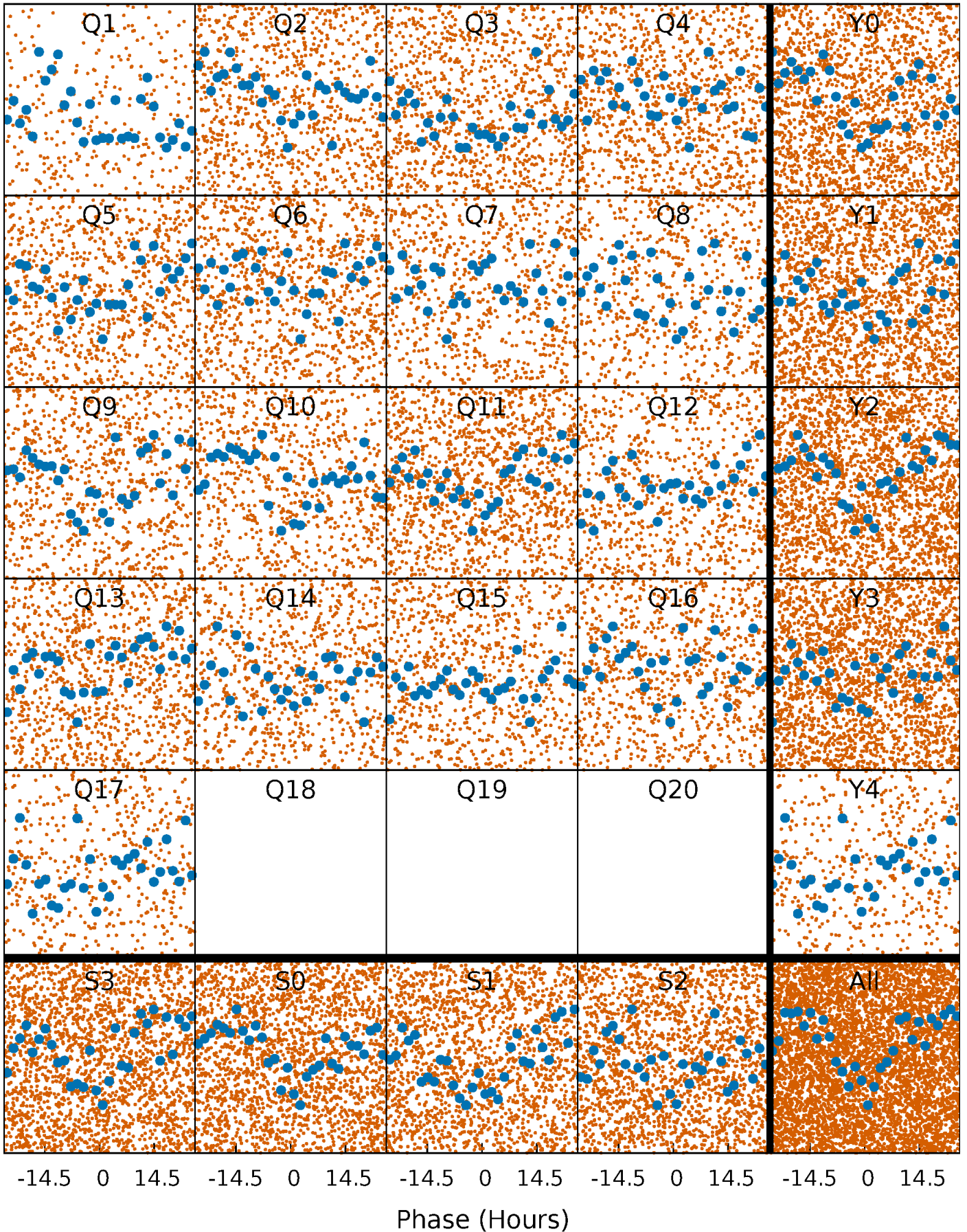


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



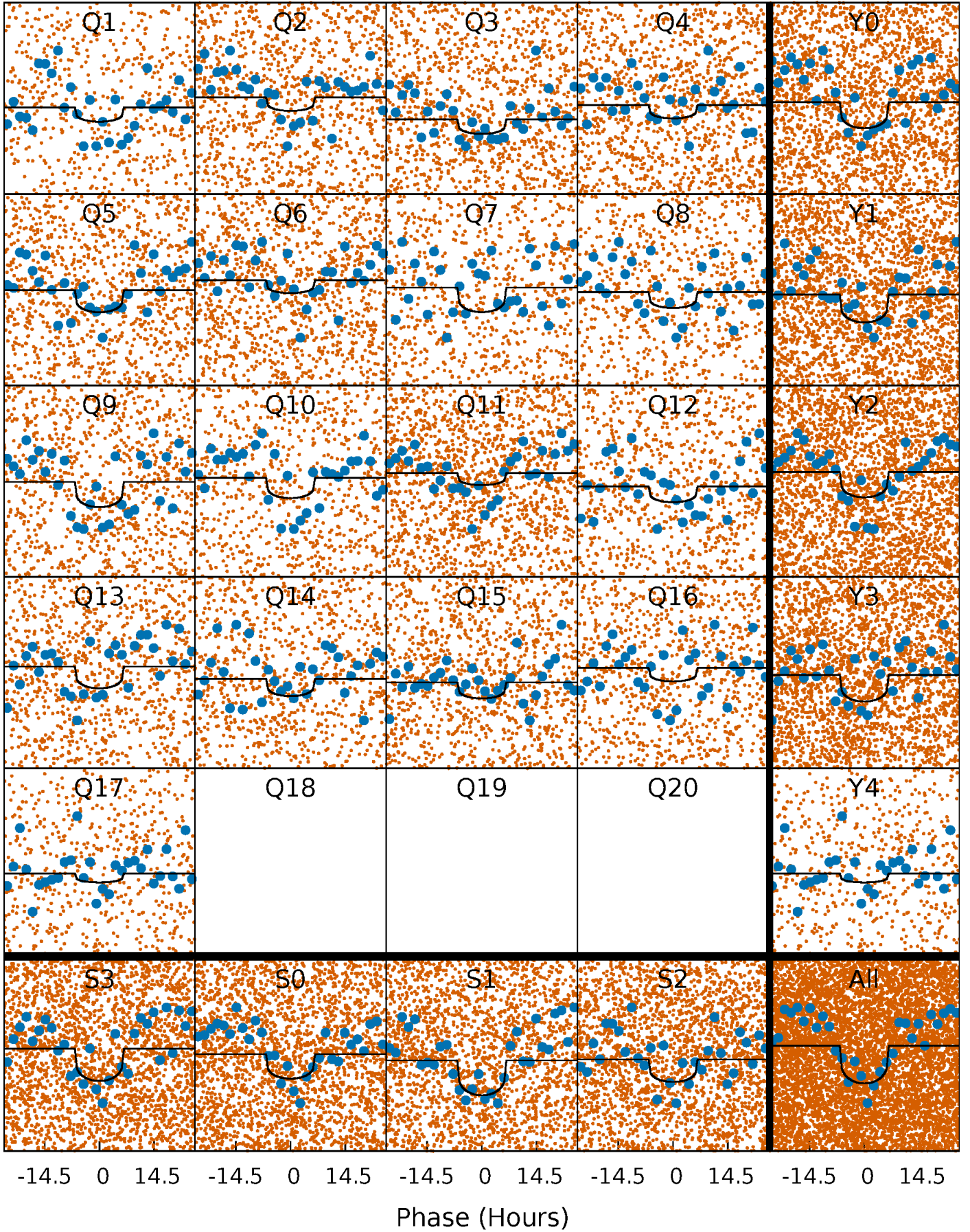
PDC Quarter-Phased Transit Curves

TCE 002447697-01 P= 3.682766 Days $T_0=134.528533$ (BKJD)



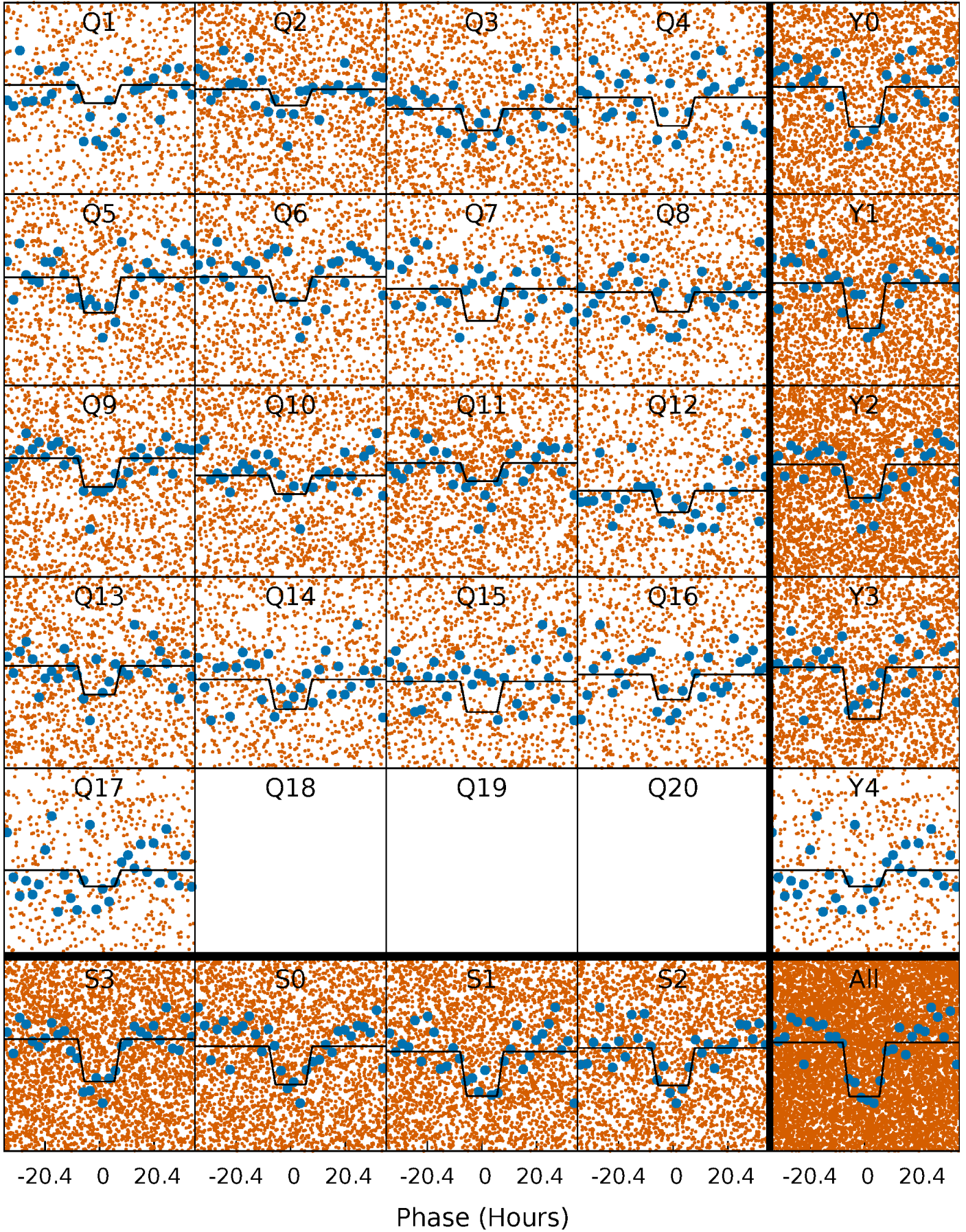
DV Quarter-Phased Transit Curves

TCE 002447697-01 P= 3.682766 Days $T_0=134.528533$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

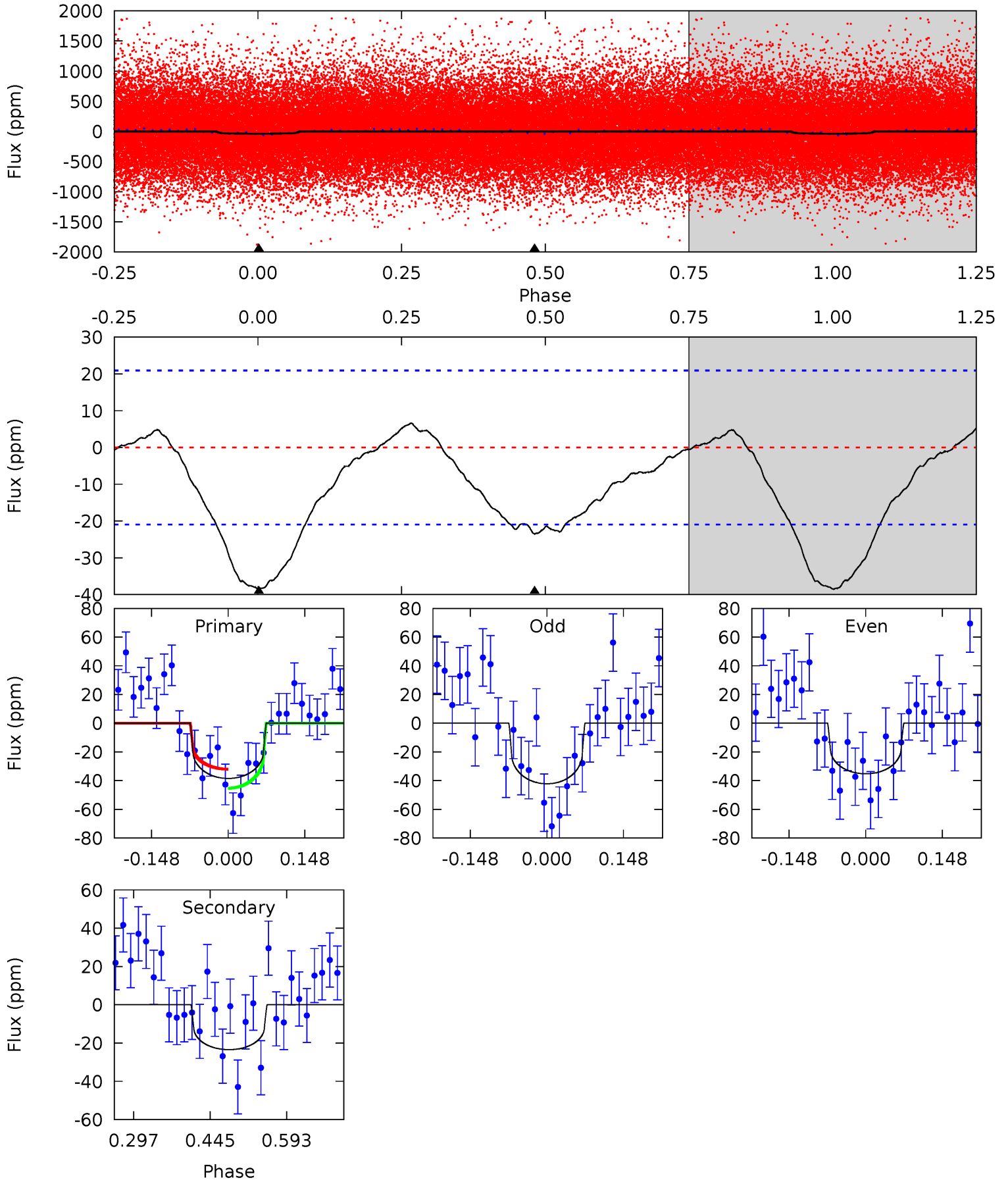
TCE 002447697-01 P= 3.682447 Days $T_0=134.552834$ (BKJD)



DV Model-Shift Uniqueness Test

002447697-01, P = 3.682766 Days, E = 130.845767 Days

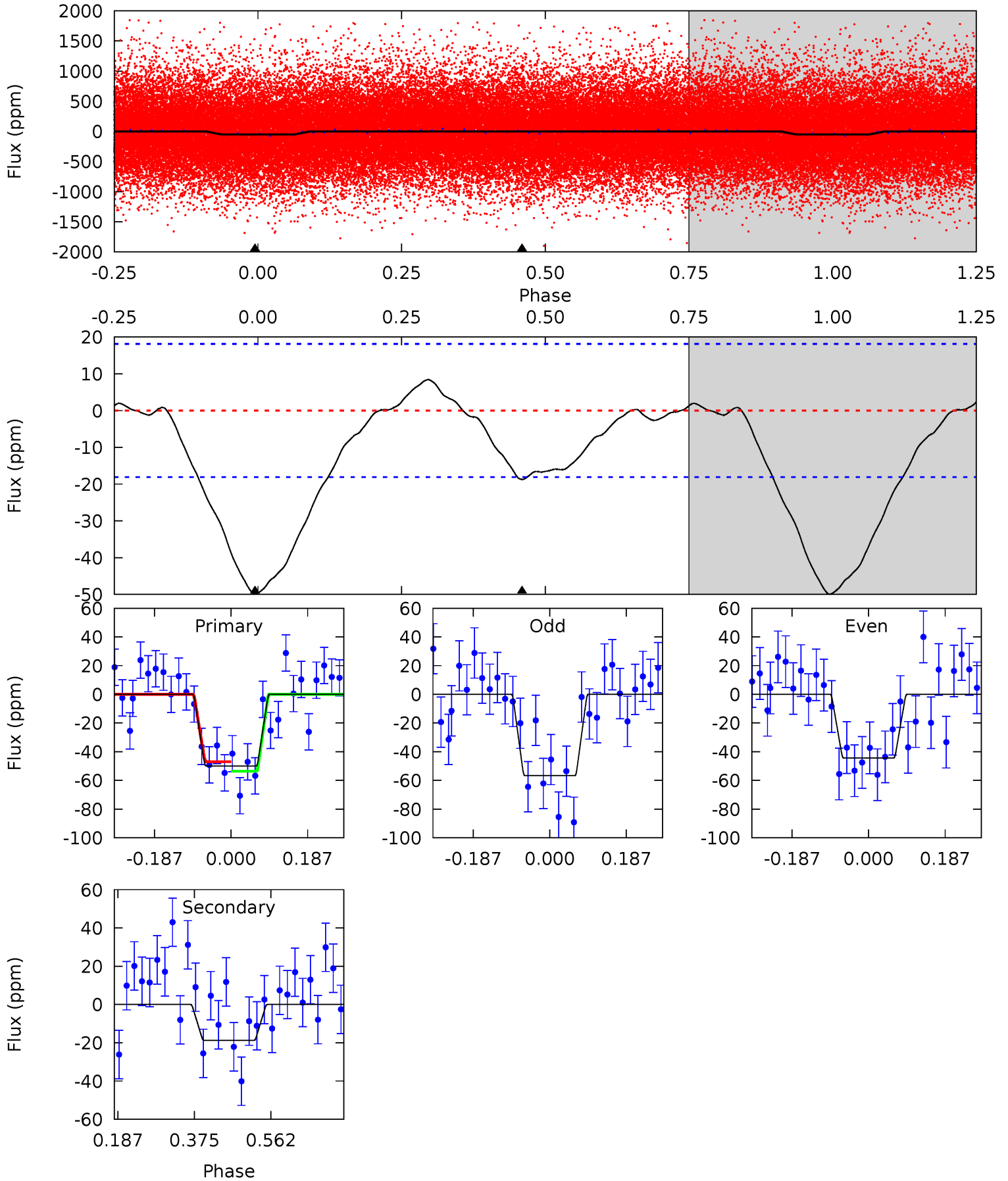
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.24	5.02	0	0	4.48	1.45	0.89	8.24	8.24	5.02	5.02	0.74	0.76	0.15	1.42



Alt Model-Shift Uniqueness Test

002447697-01, P = 3.682447 Days, E = 130.870387 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	4.58	0	0	4.43	1.32	0.47	12.2	12.2	4.58	4.58	1.51	0.98	0.14	0.83



Stellar Parameters For KIC 002447697

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5650^{+152}_{-169}	$4.551^{+0.033}_{-0.198}$	$0.070^{+0.250}_{-0.300}$	$0.876^{+0.235}_{-0.073}$	$0.993^{+0.083}_{-0.125}$	$2.083^{+0.380}_{-1.020}$
	+3%/-3%	+1%/-4%	+357%/-429%	+27%/-8%	+8%/-13%	+18%/-49%
Source	PHO1	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 002447697-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-23 ± 5	$0.68^{+0.54}_{-0.43}$	1549^{+105}_{-72}	4840^{+3258}_{-946}	58^{+365}_{-41}
Alt.	-19 ± 4	$0.78^{+0.58}_{-0.45}$	1553^{+101}_{-66}	4417^{+2159}_{-774}	35^{+170}_{-23}

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

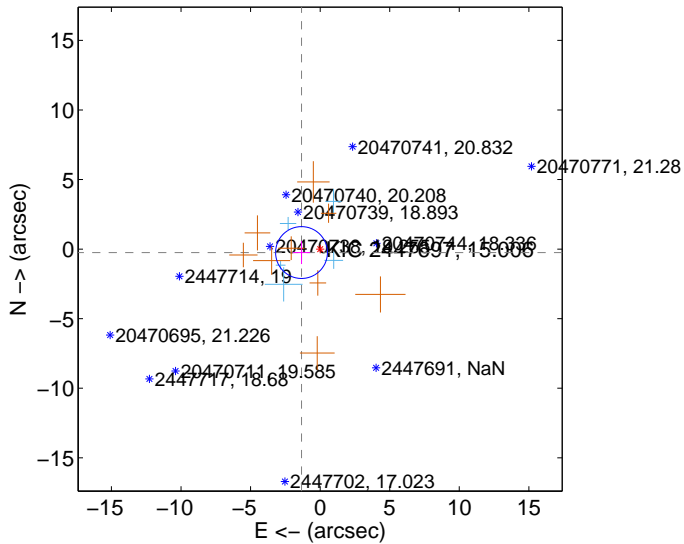
Supplemental centroid analysis for 002447697-01. Kepler magnitude: 15.01. Transit SNR 6.44

There are 5 quarters with good PRF difference image offsets

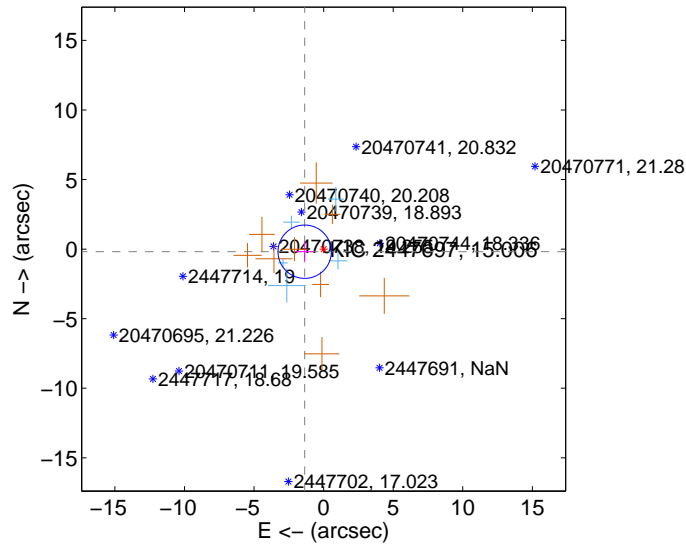
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.362 ± 0.621	2.19	1.339 ± 0.622	-0.248 ± 0.830
PRF-fit source offset from KIC position	1.374 ± 0.639	2.15	1.361 ± 0.648	-0.189 ± 0.754
photometric centroid source offset	7.67 ± 2.28	3.37	7.59 ± 2.28	-1.13 ± 1.80

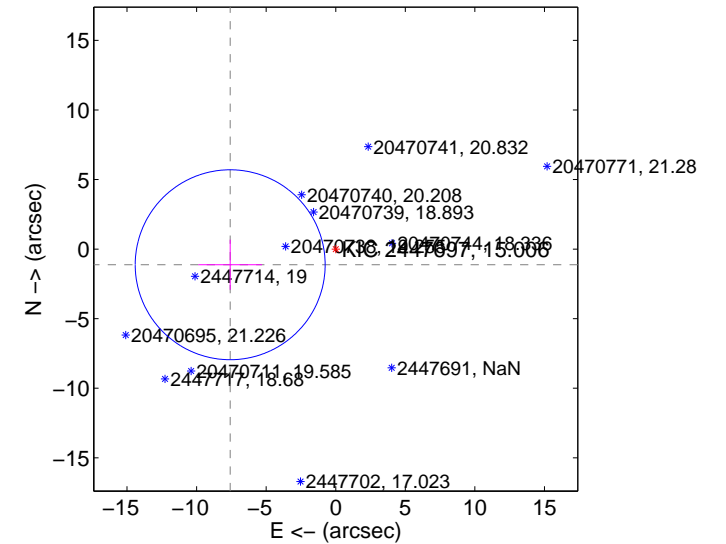
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

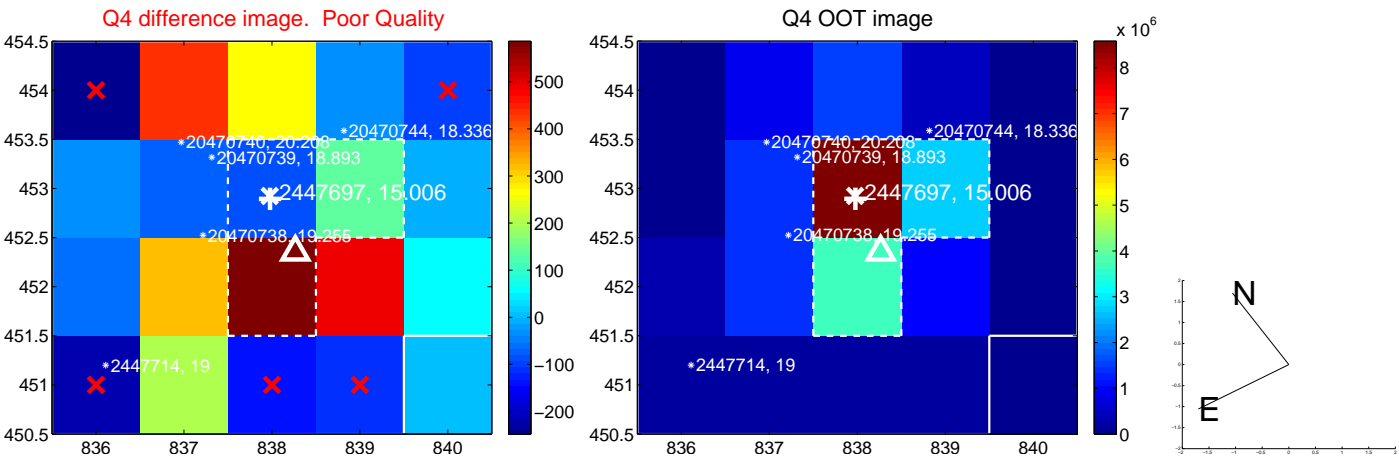
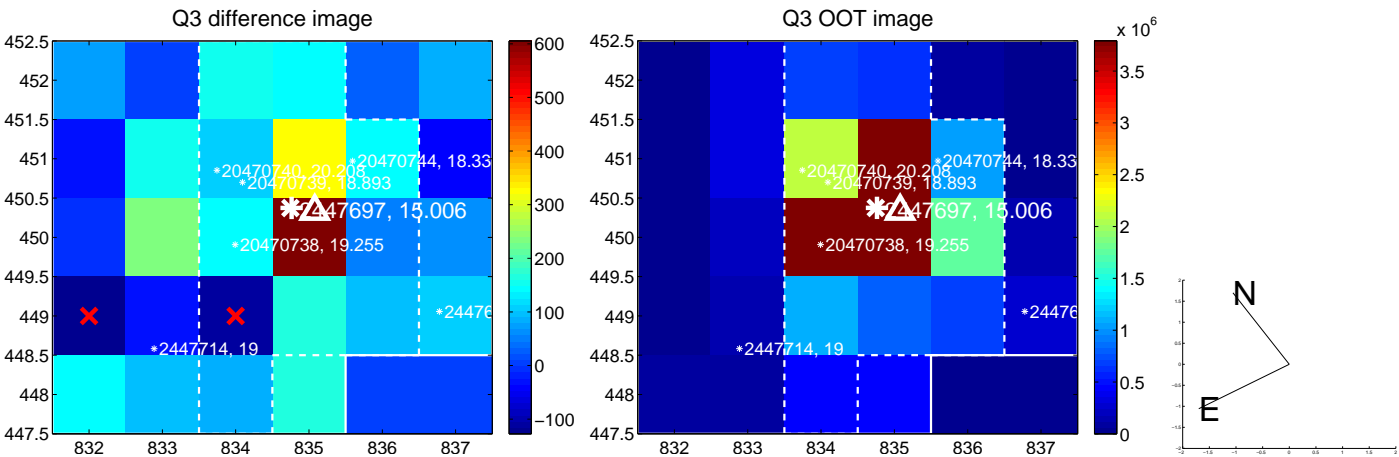
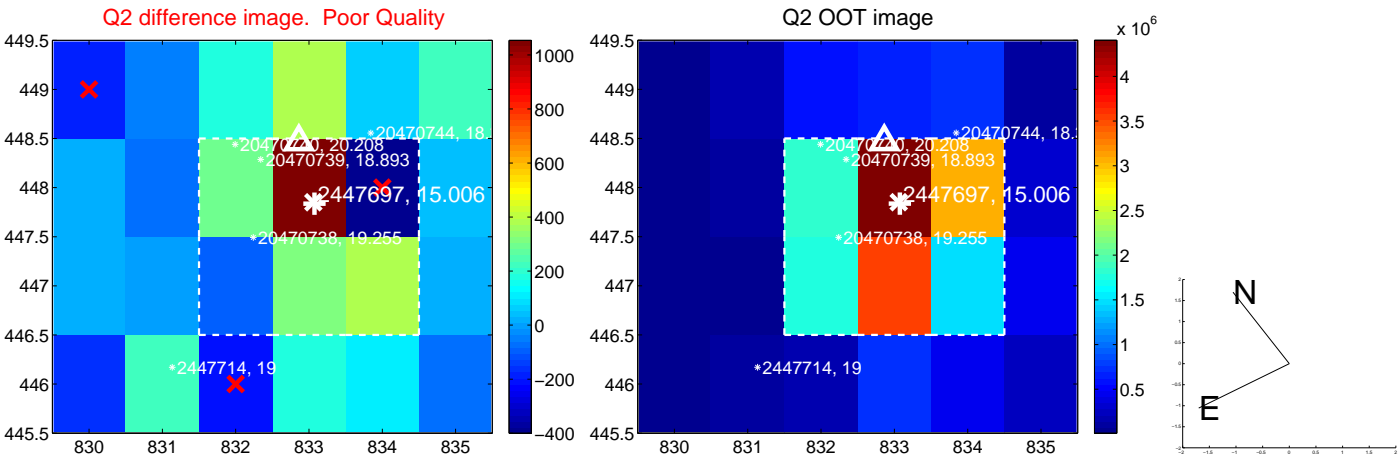
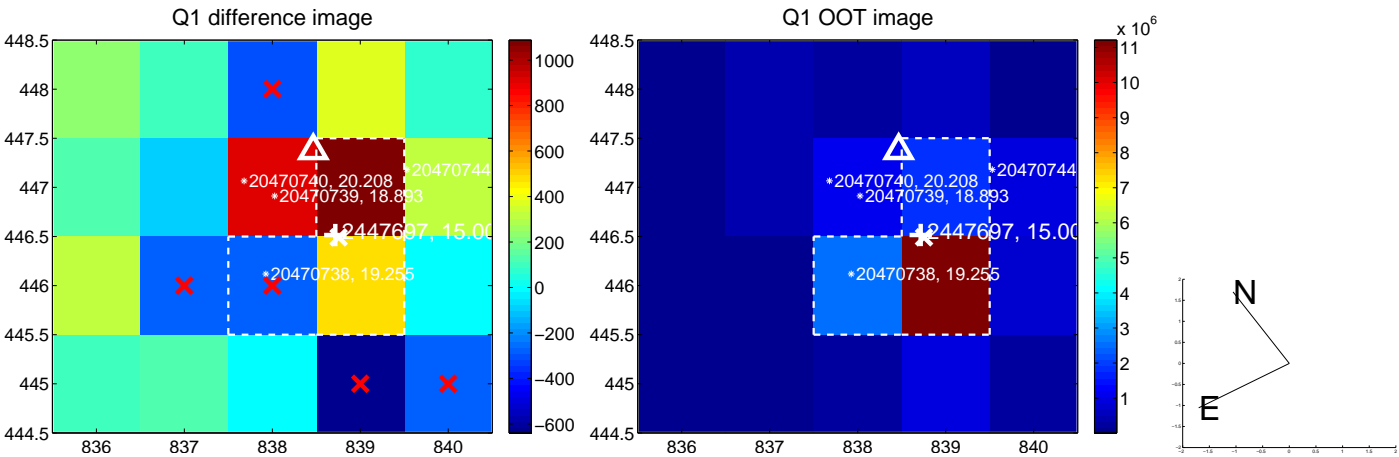


offset from photometric centroids

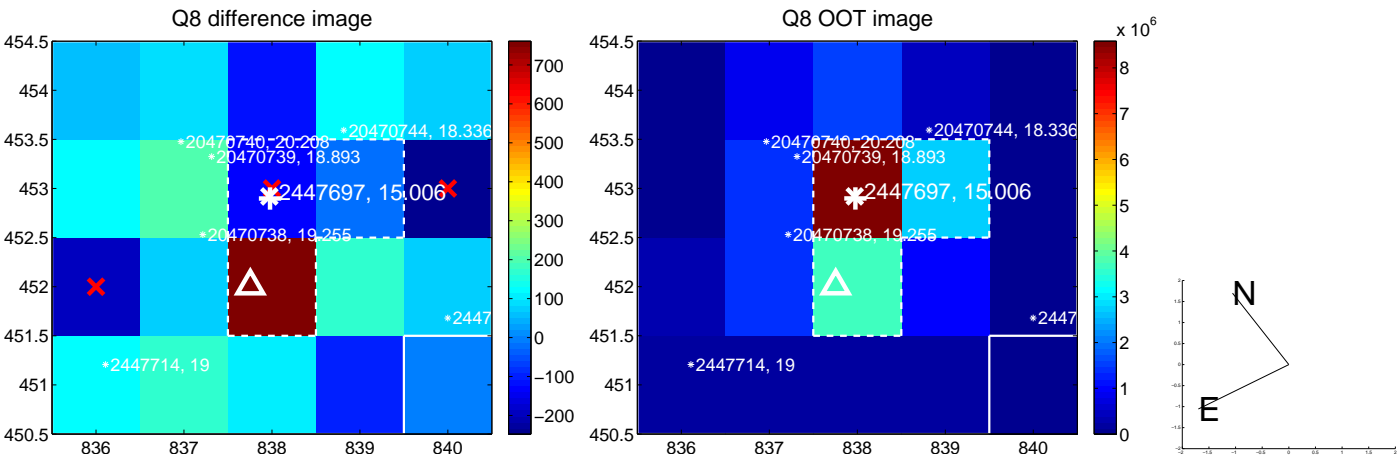
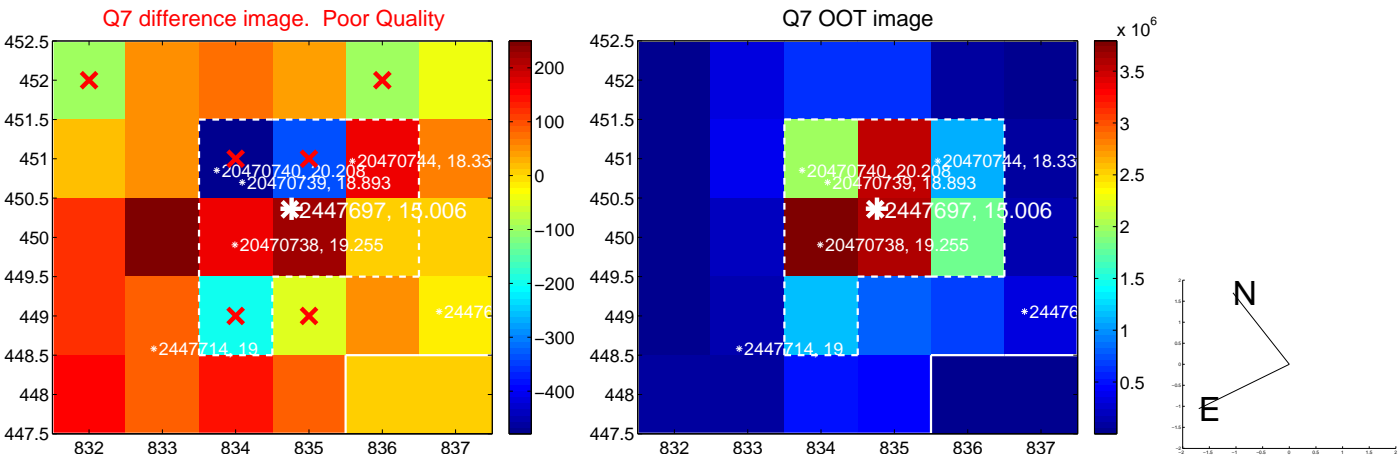
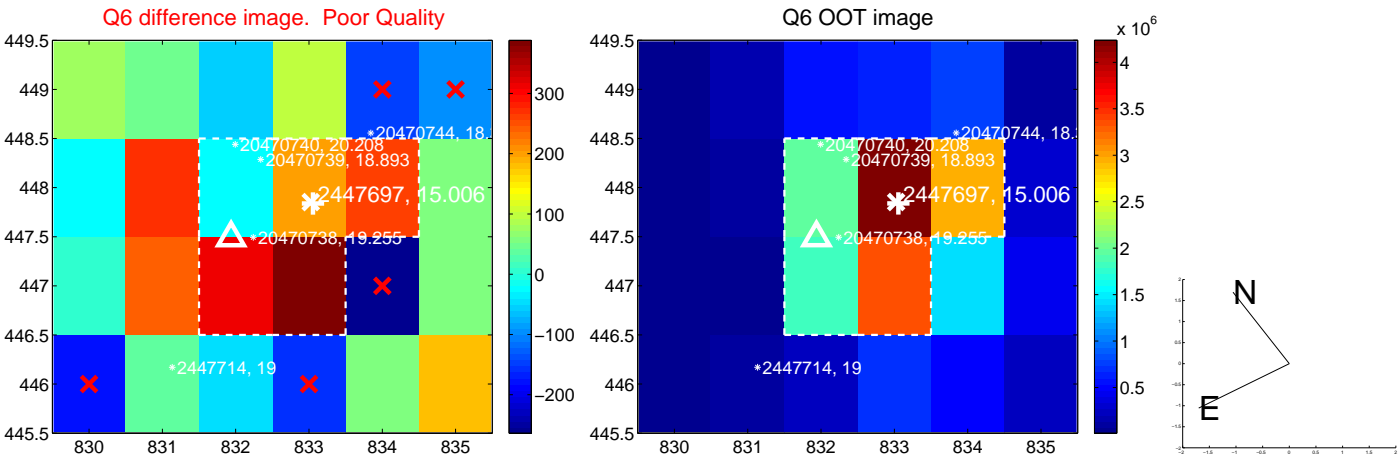
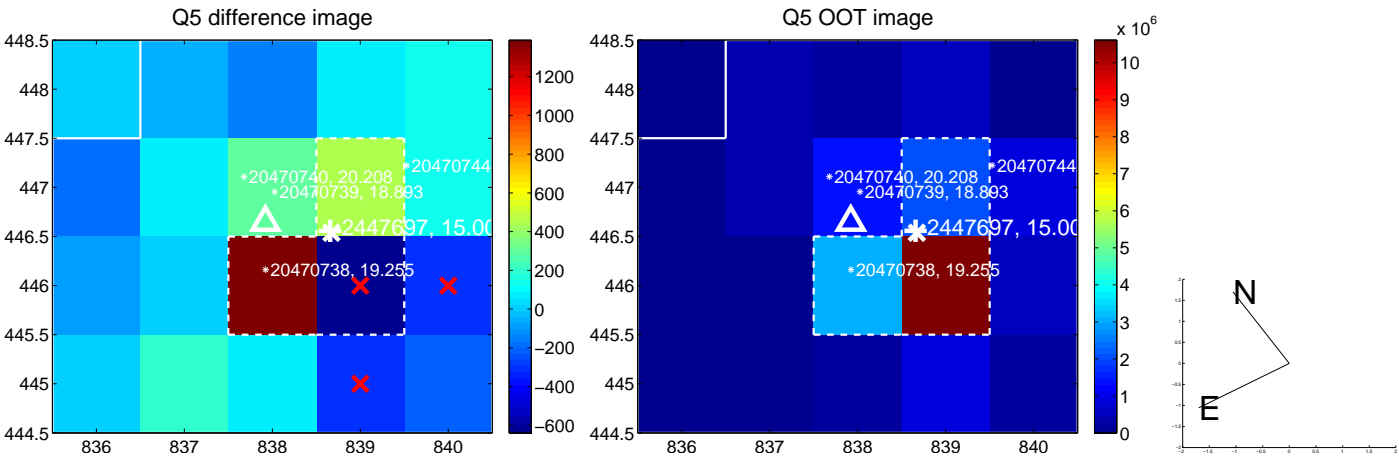


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

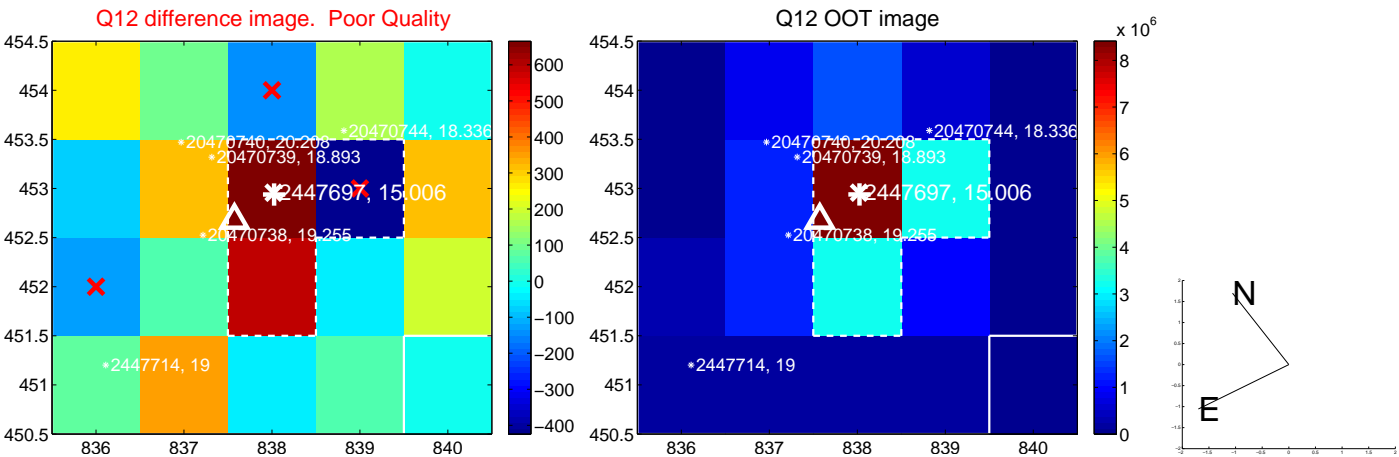
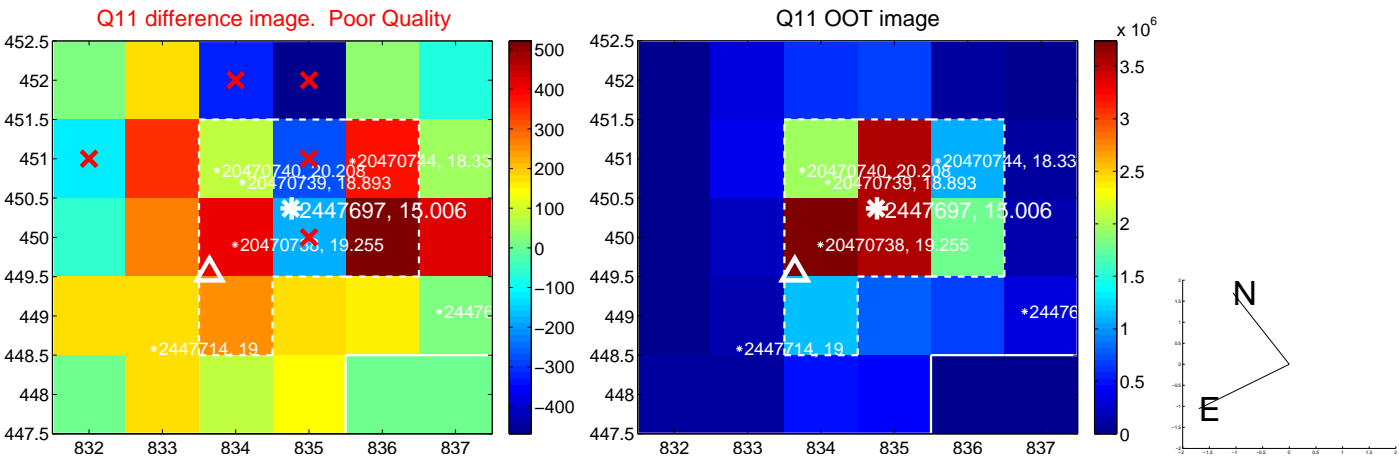
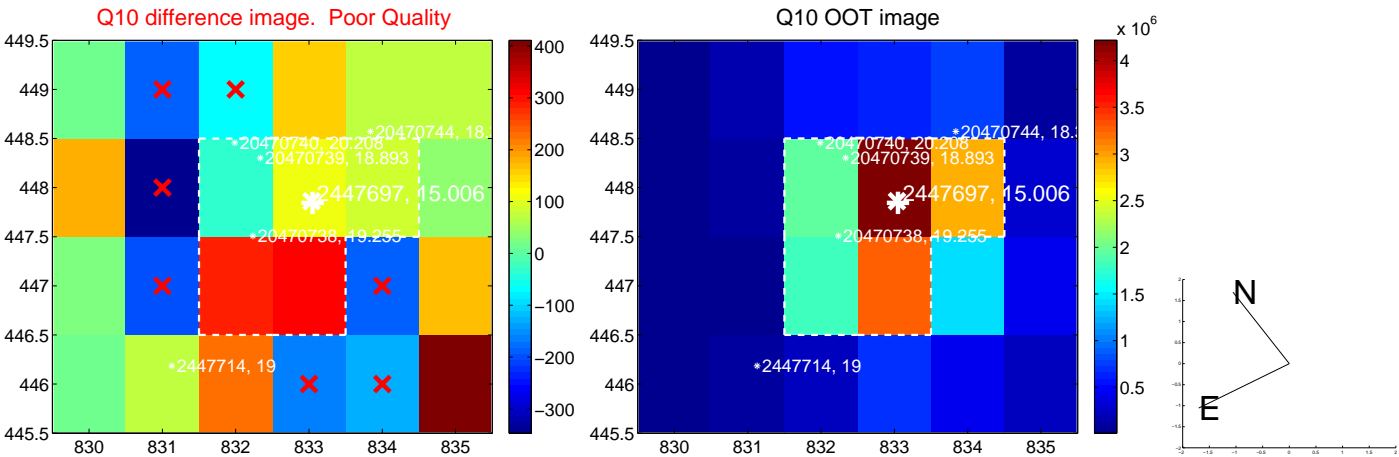
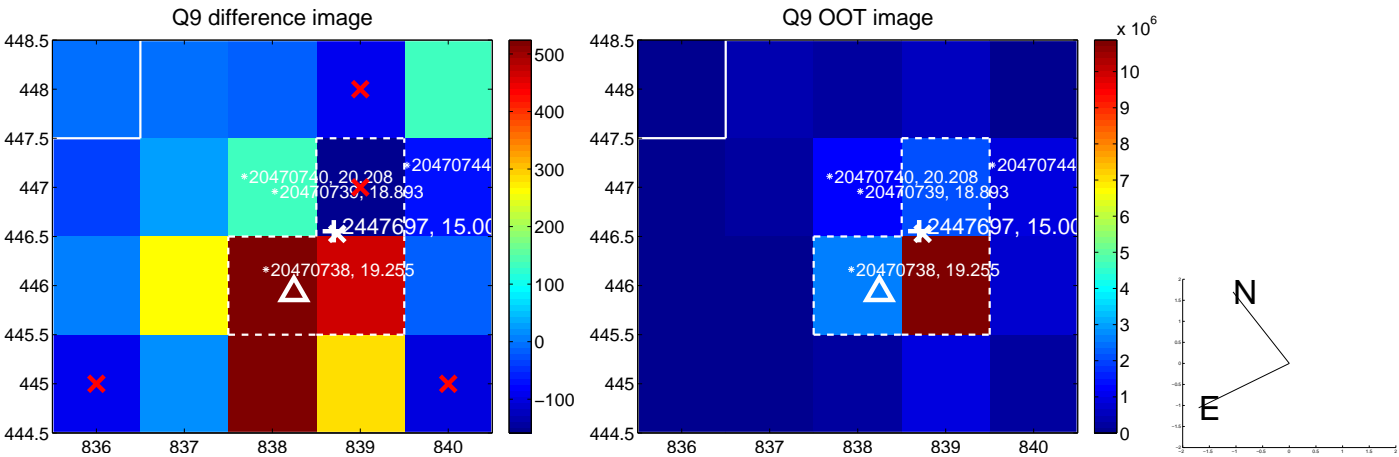
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



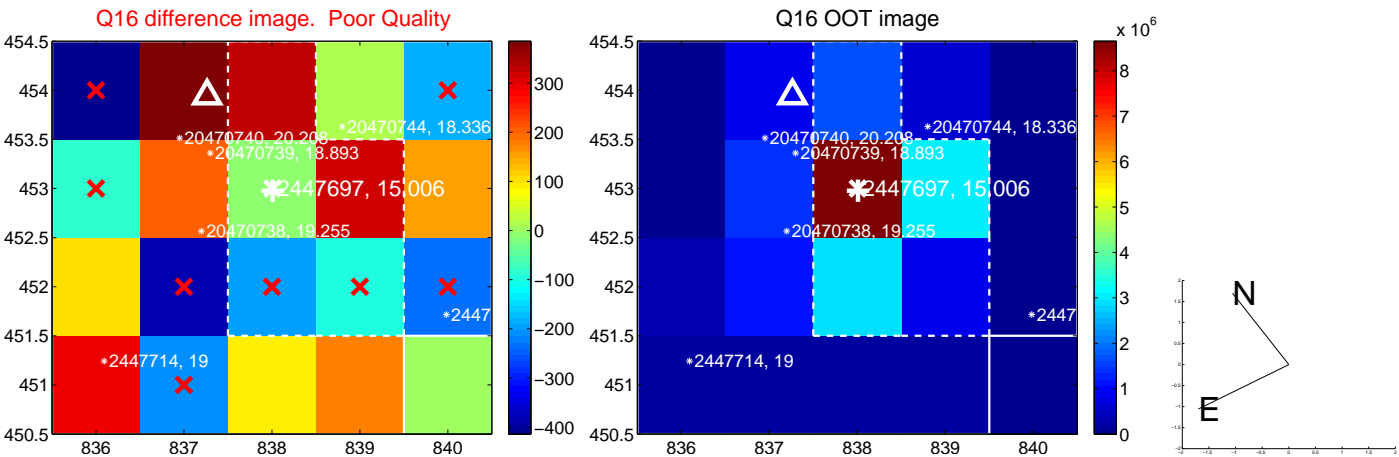
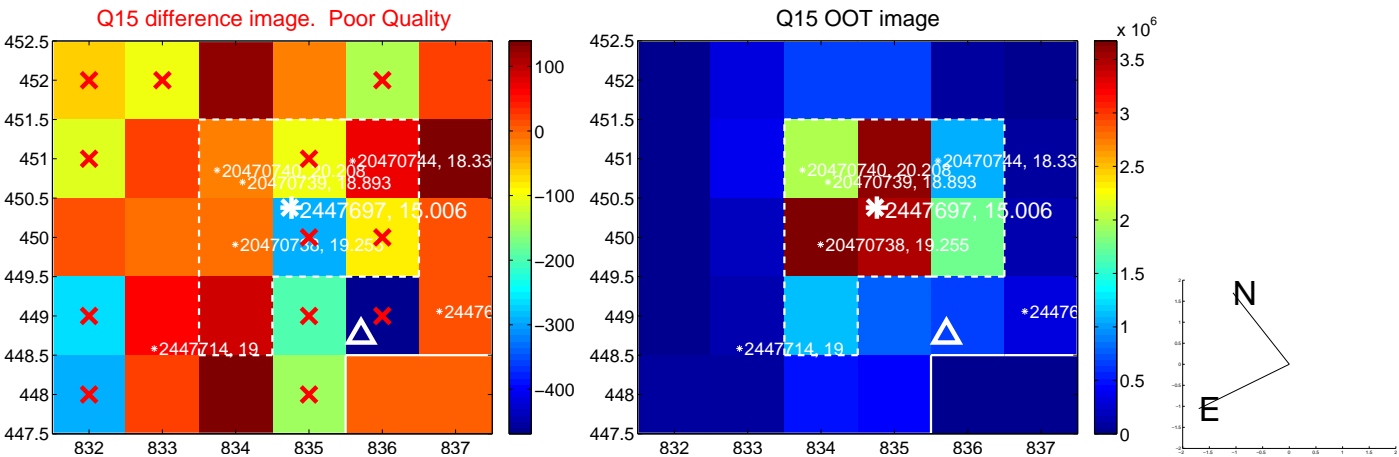
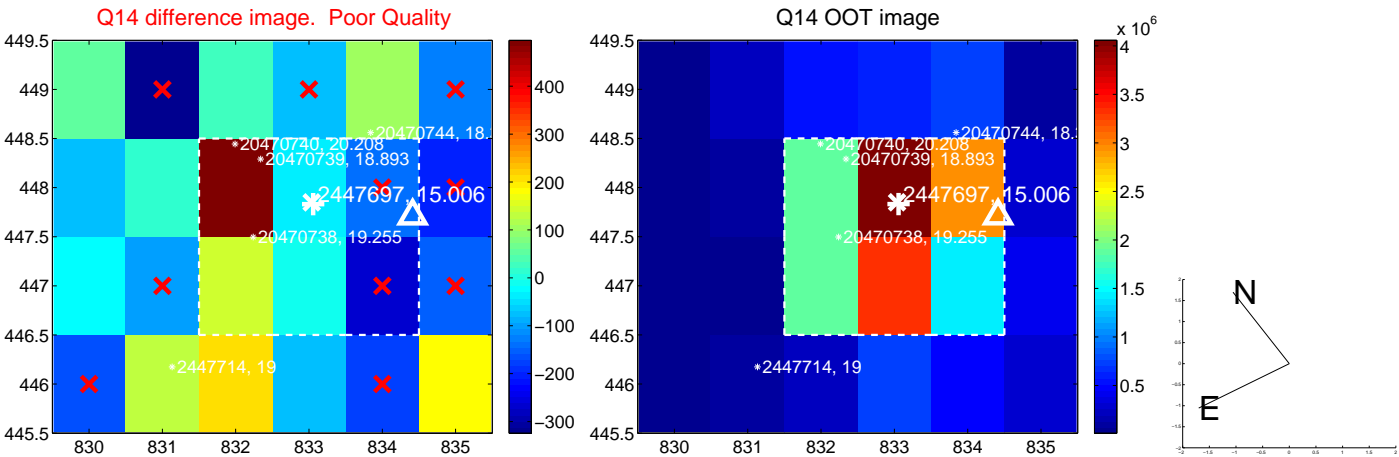
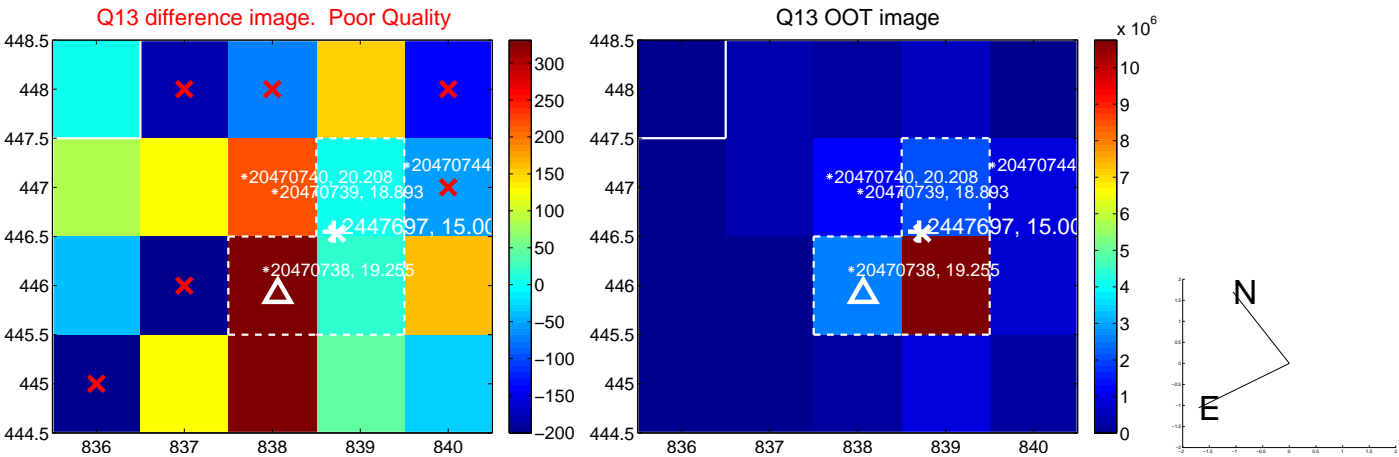
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



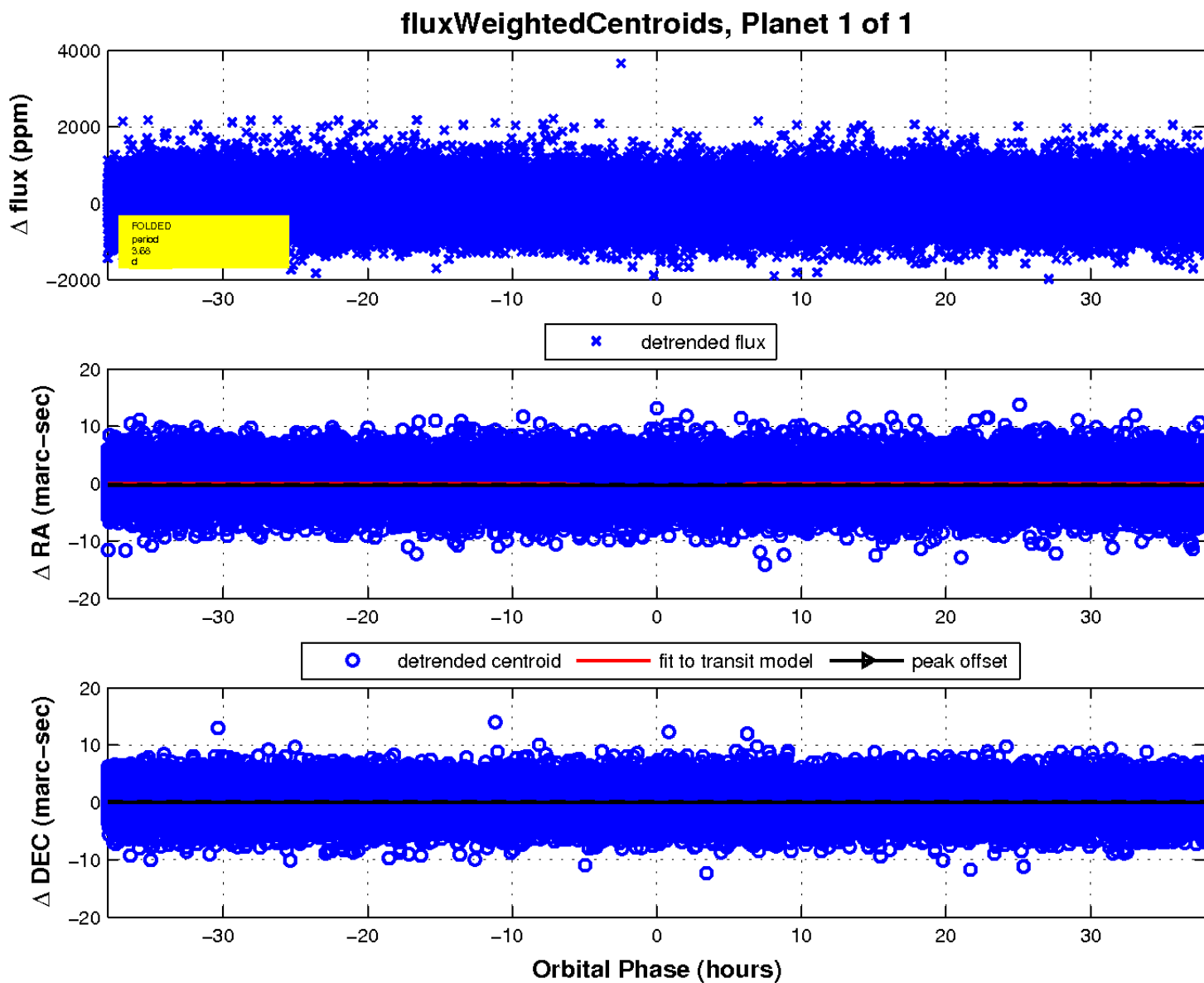
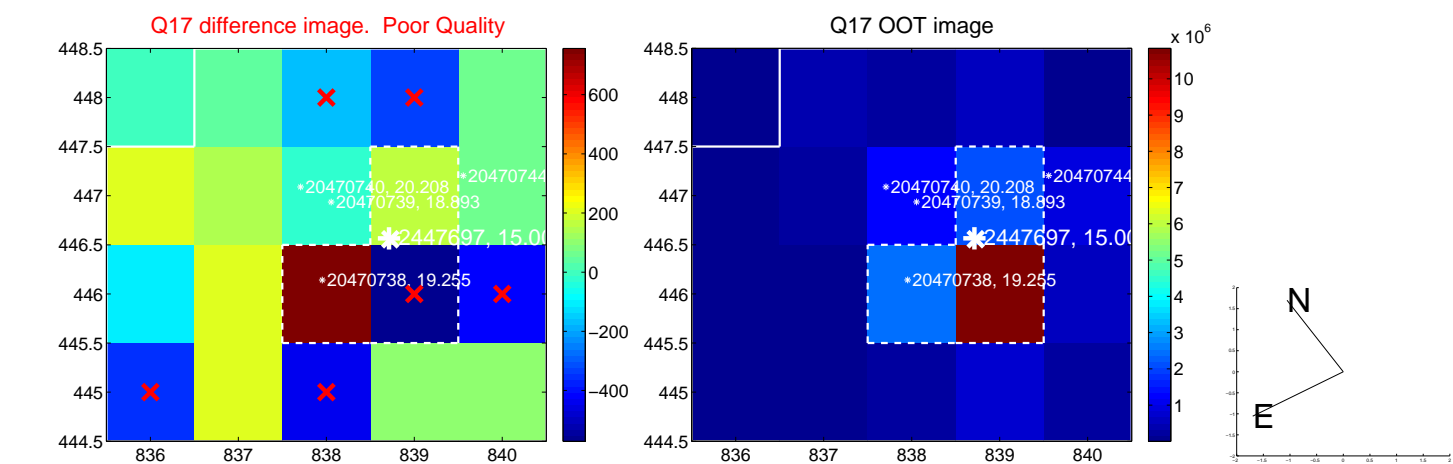
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

