

KIC 005304456

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})
005304456-01	OBS	No	4.579365	131.904000	90.0	31.244	8.9	10.1	1.18	6516	1.14	686.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005304456-01	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.

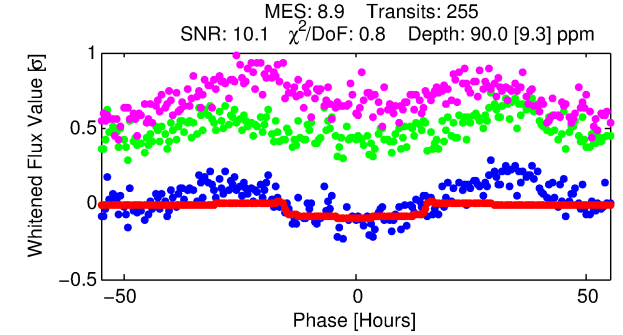
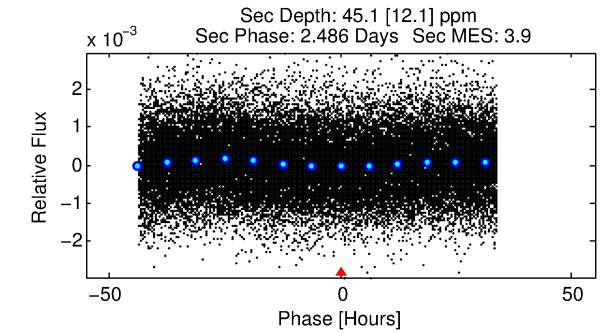
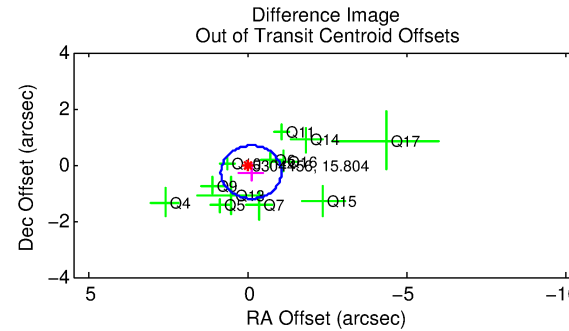
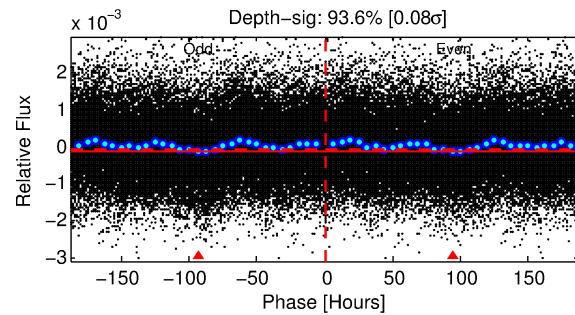
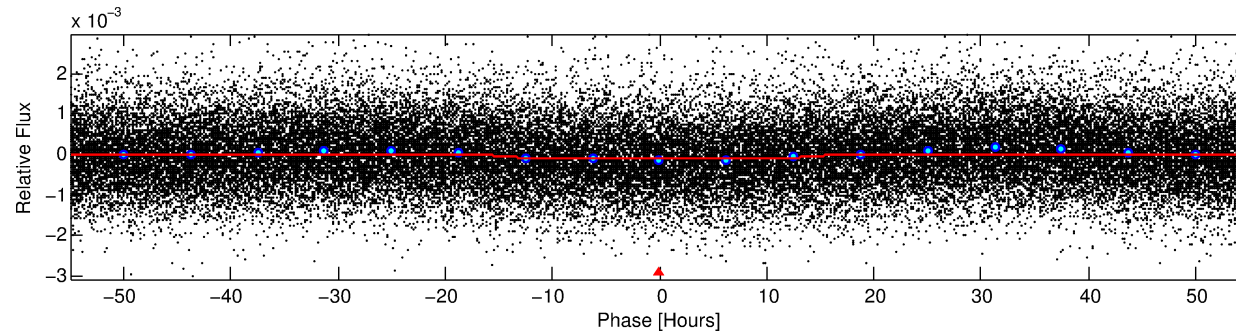
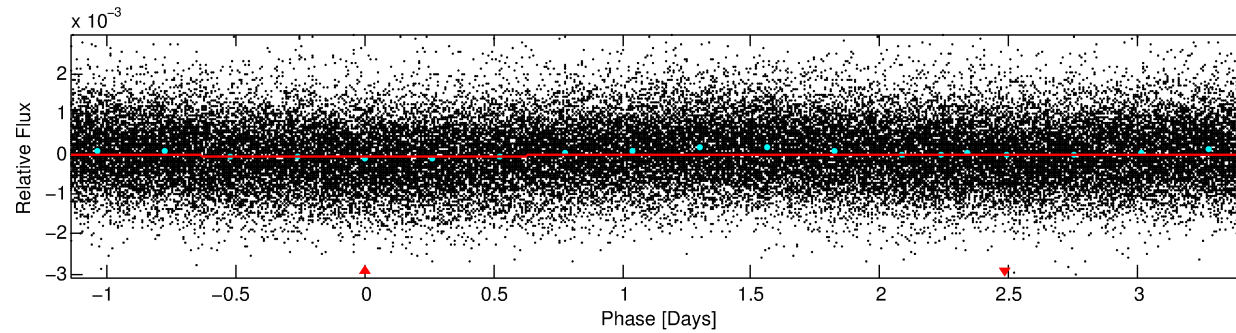
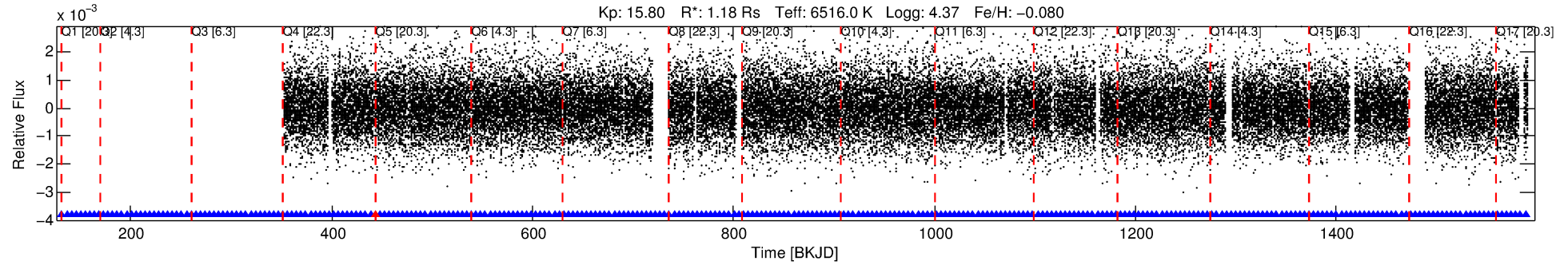
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005304456-01

No Significant Match Found

DV One-Page Summary

KIC: 5304456 Candidate: 1 of 1 Period: 4.579 d



DV Fit Results:

Period = 4.57937 [0.00015] d
Epoch = 131.9040 [0.0263] BKJD
Rp/R* = 0.0089 [0.0060]
a/R* = 1.26 [1.69]
b = 0.38 [8.29]
Seff = 686.12 [249.13]
Teq = 1305 [118] K
Rp = 1.14 [0.85] Re
a = 0.0574 [0.0134] AU
Ag = 62.50 [89.24] [0.69 σ]
Teffp = 5673 [1982] K [2.20 σ]

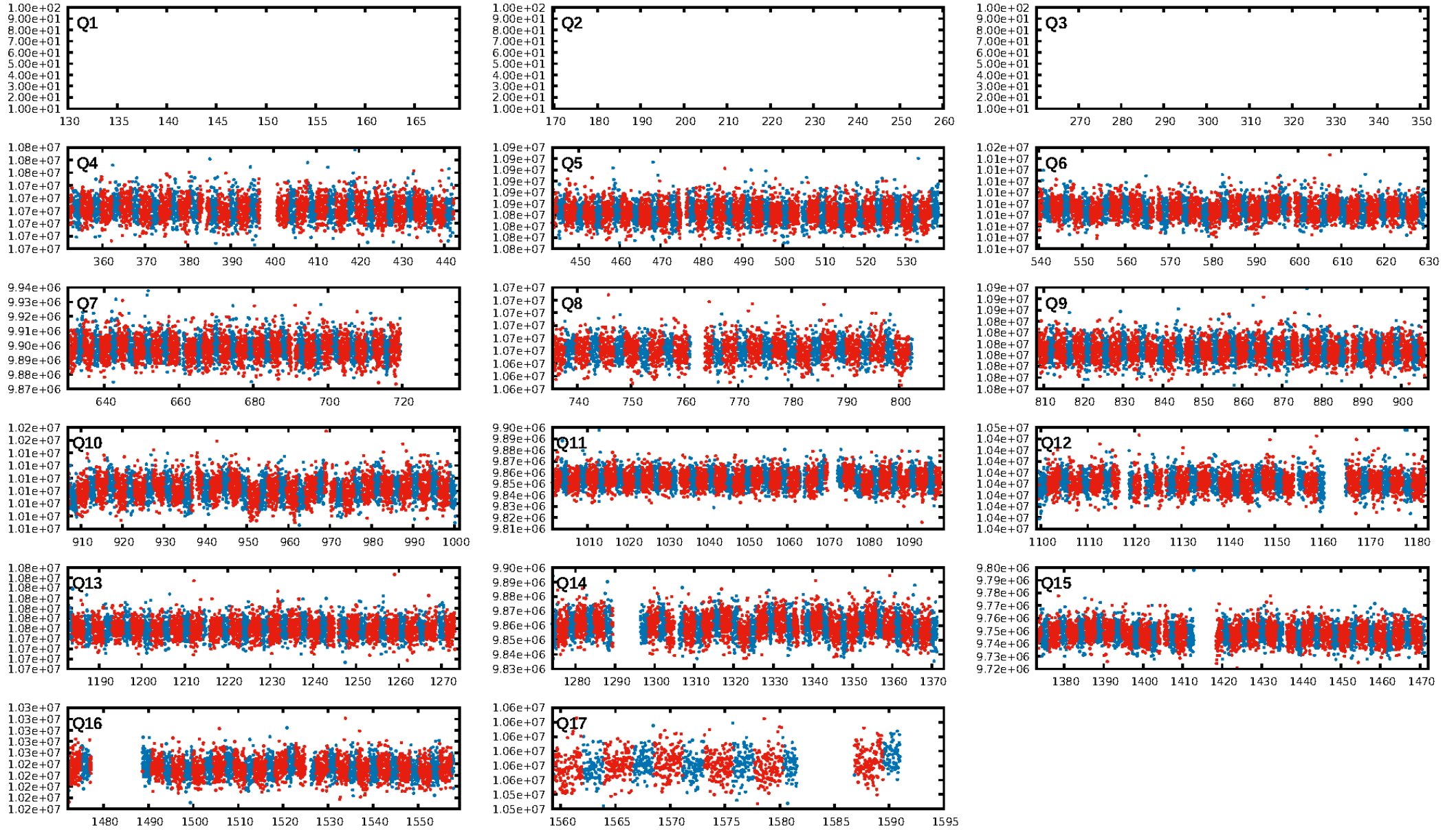
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.94e-26
RollingBand-fgt: 1.00 [248/249]
GhostDiagnostic-chr: 1.51
Centroid-sig: 2.7%
Centroid-so: 1.805 arcsec [1.52 σ]
OotOffset-rm: 0.283 arcsec [0.90 σ]
KicOffset-rm: 0.346 arcsec [1.15 σ]
OotOffset-st: 3/3/2/4 [12]
KicOffset-st: 3/3/2/4 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 1.00 [14/14]

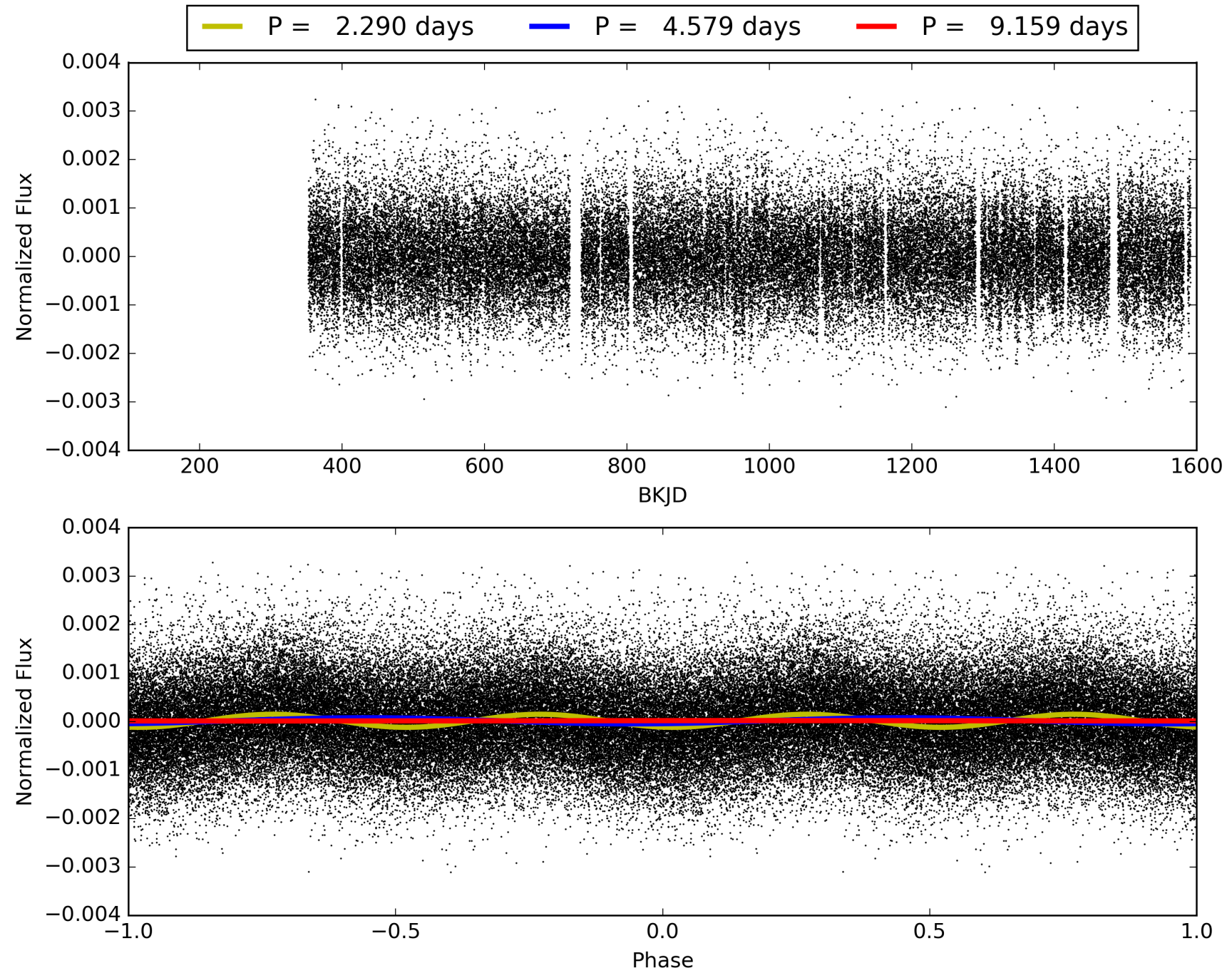
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:55:25 Z

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

TCE 005304456-01, PDC Light Curves

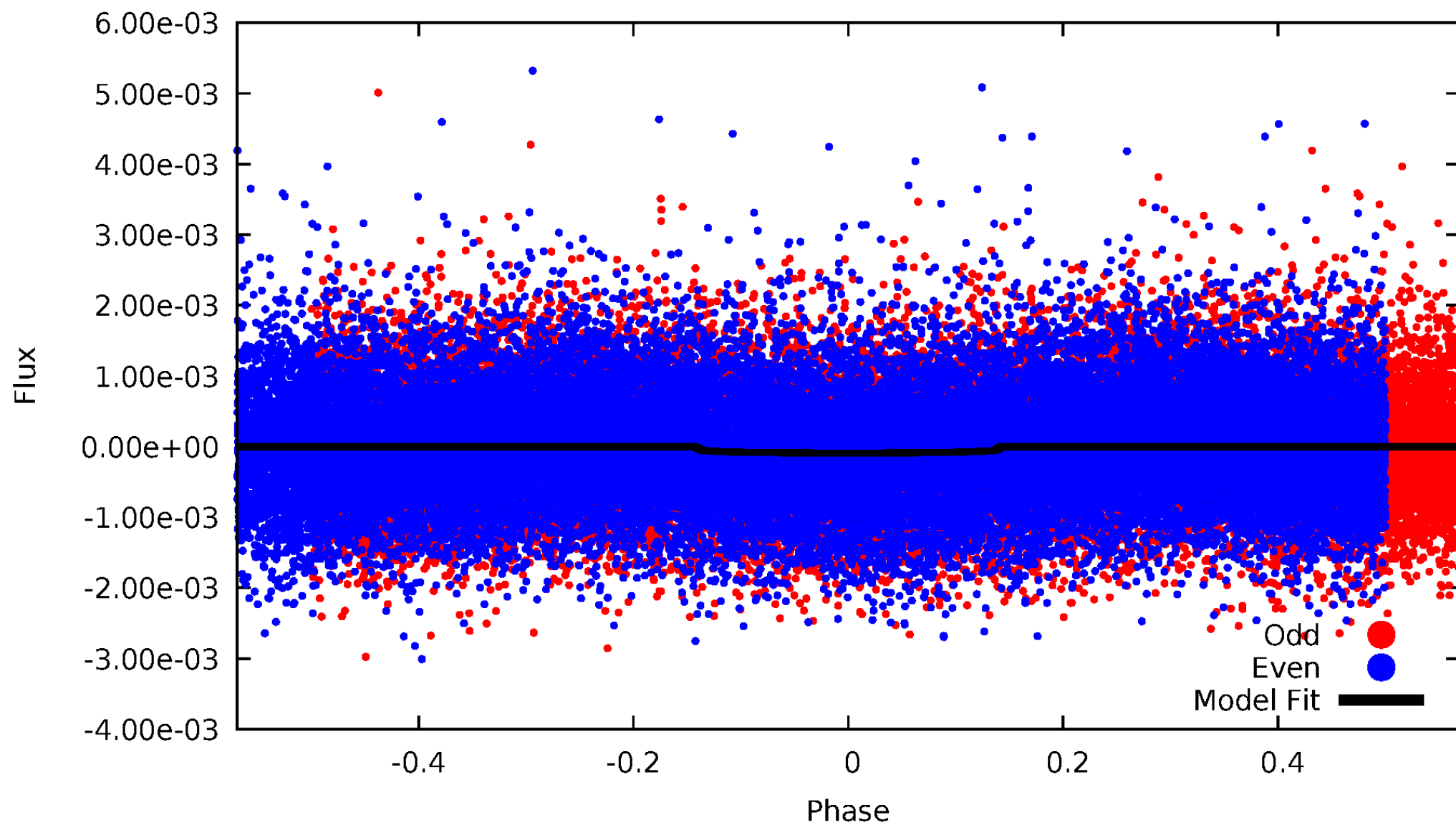


TCE 005304456-01



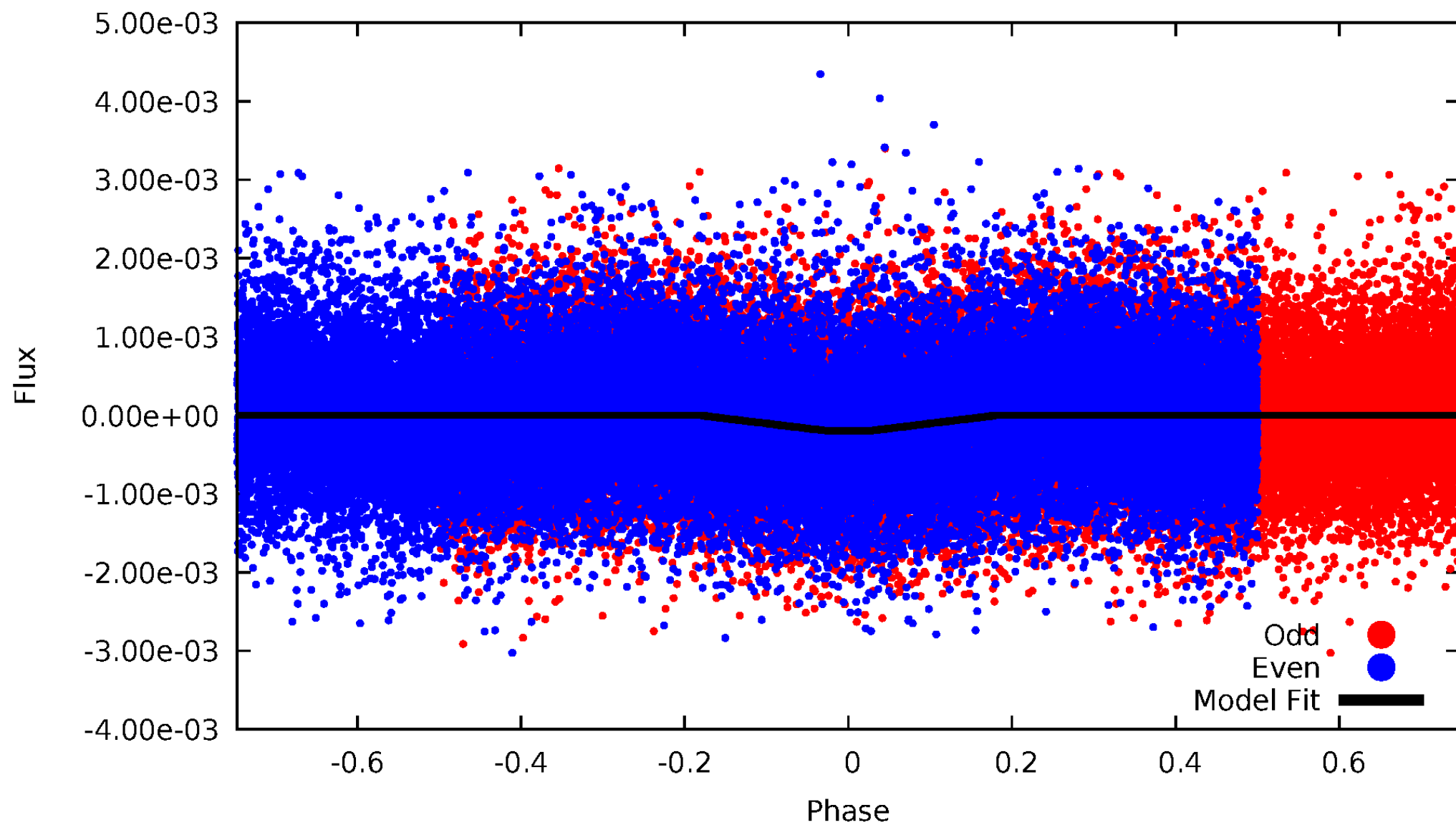
DV Odd/Even

TCE 005304456-01



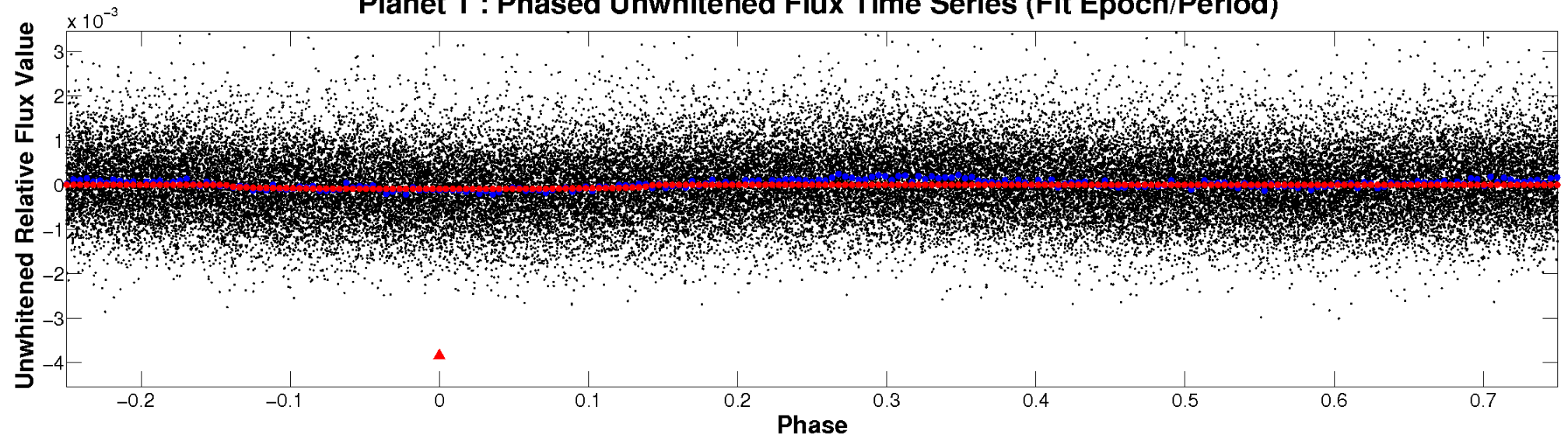
ALT Odd/Even

TCE 005304456-01

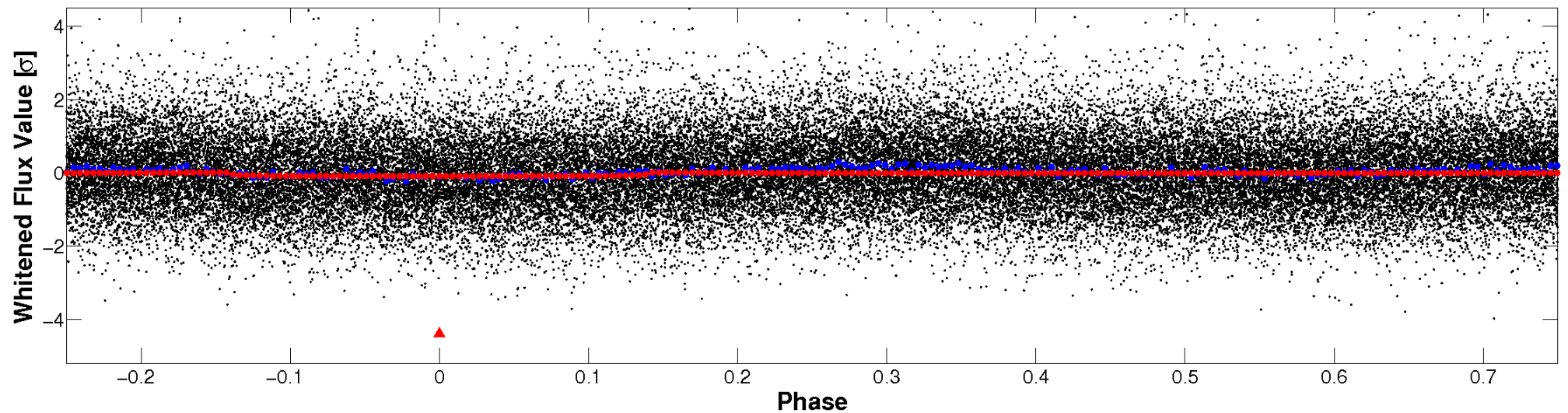


Non-Whitened Vs. Whitened Light Curve

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

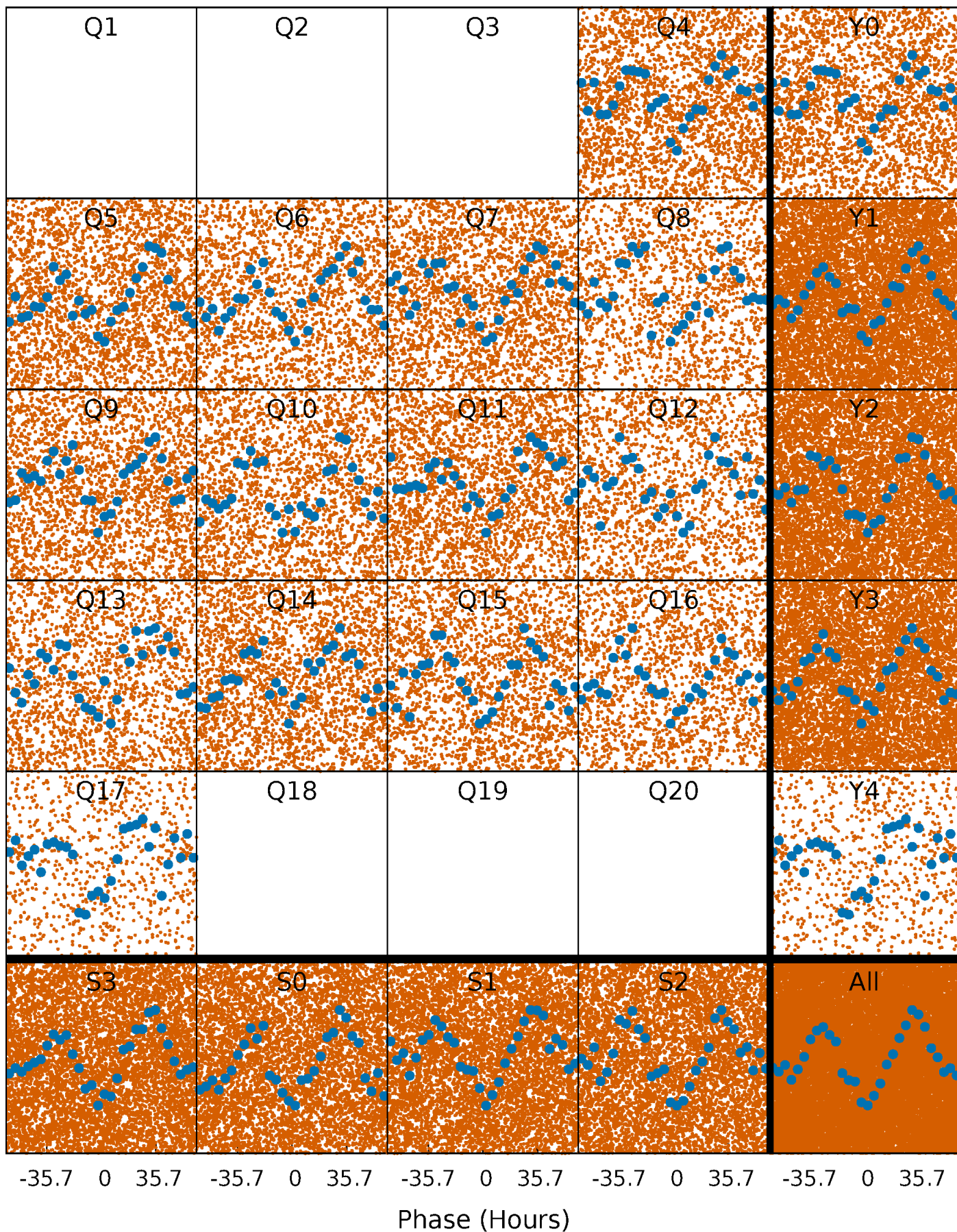


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



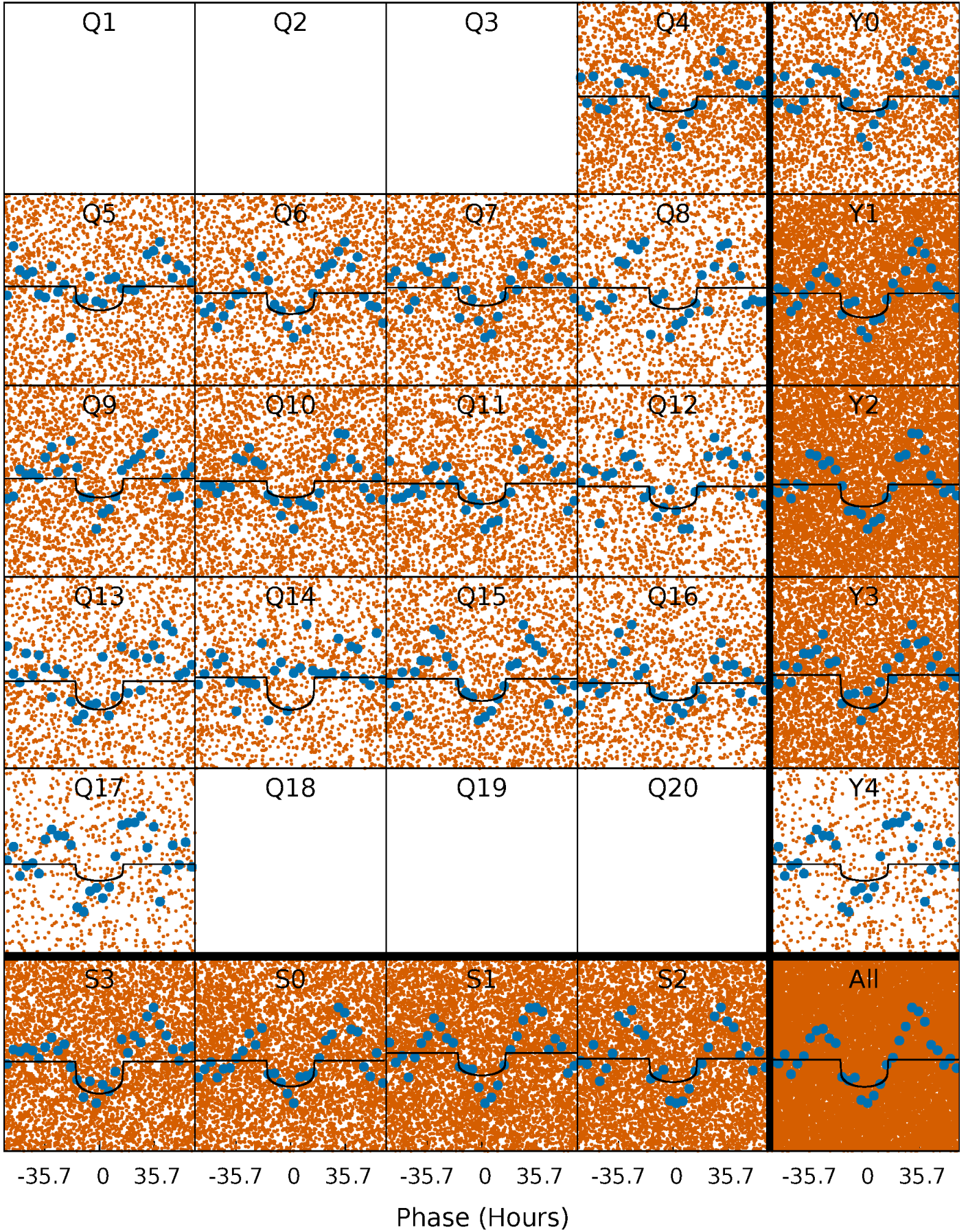
PDC Quarter-Phased Transit Curves

TCE 005304456-01 P= 4.579365 Days $T_0=131.904000$ (BKJD)



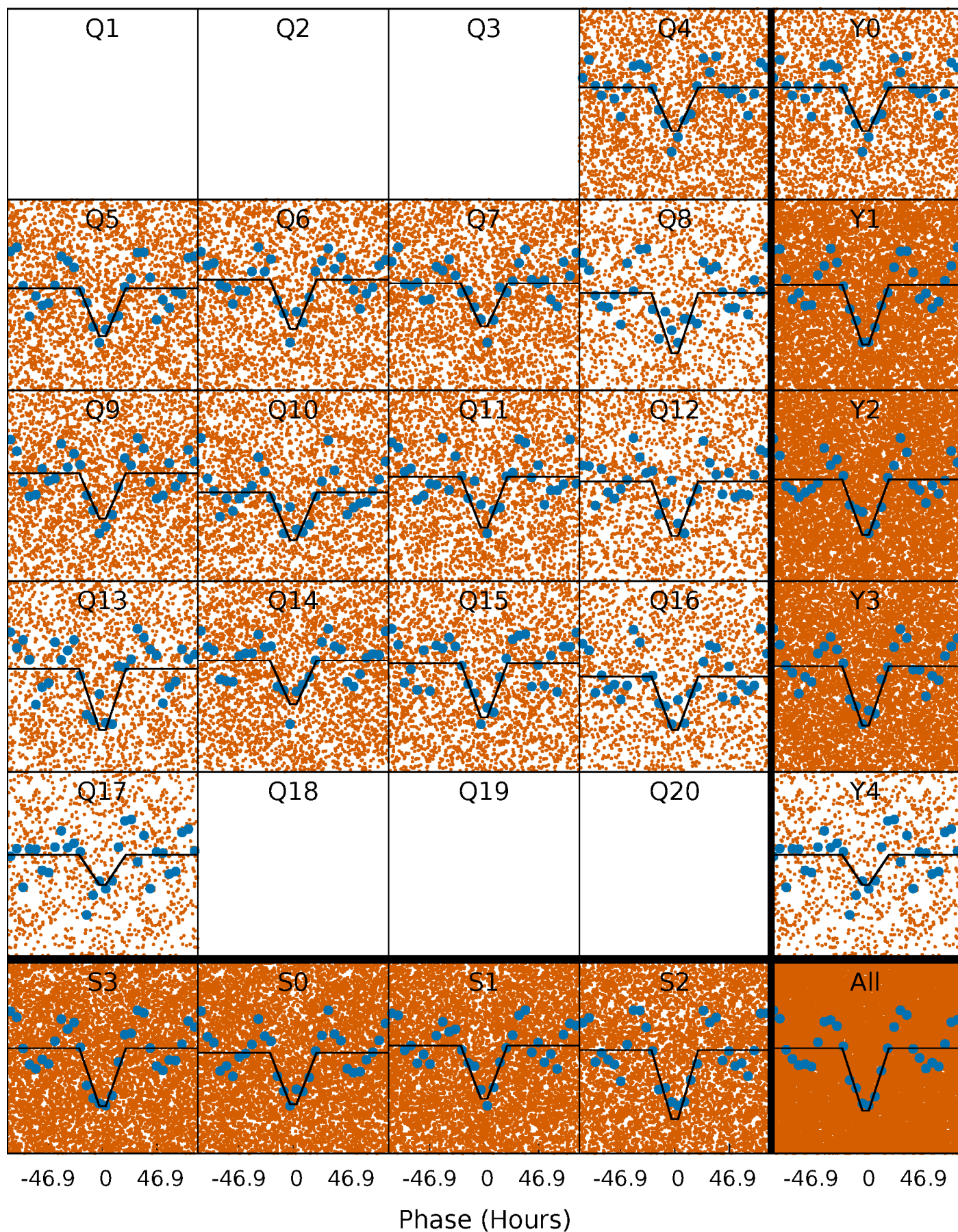
DV Quarter-Phased Transit Curves

TCE 005304456-01 P= 4.579365 Days $T_0=131.904000$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

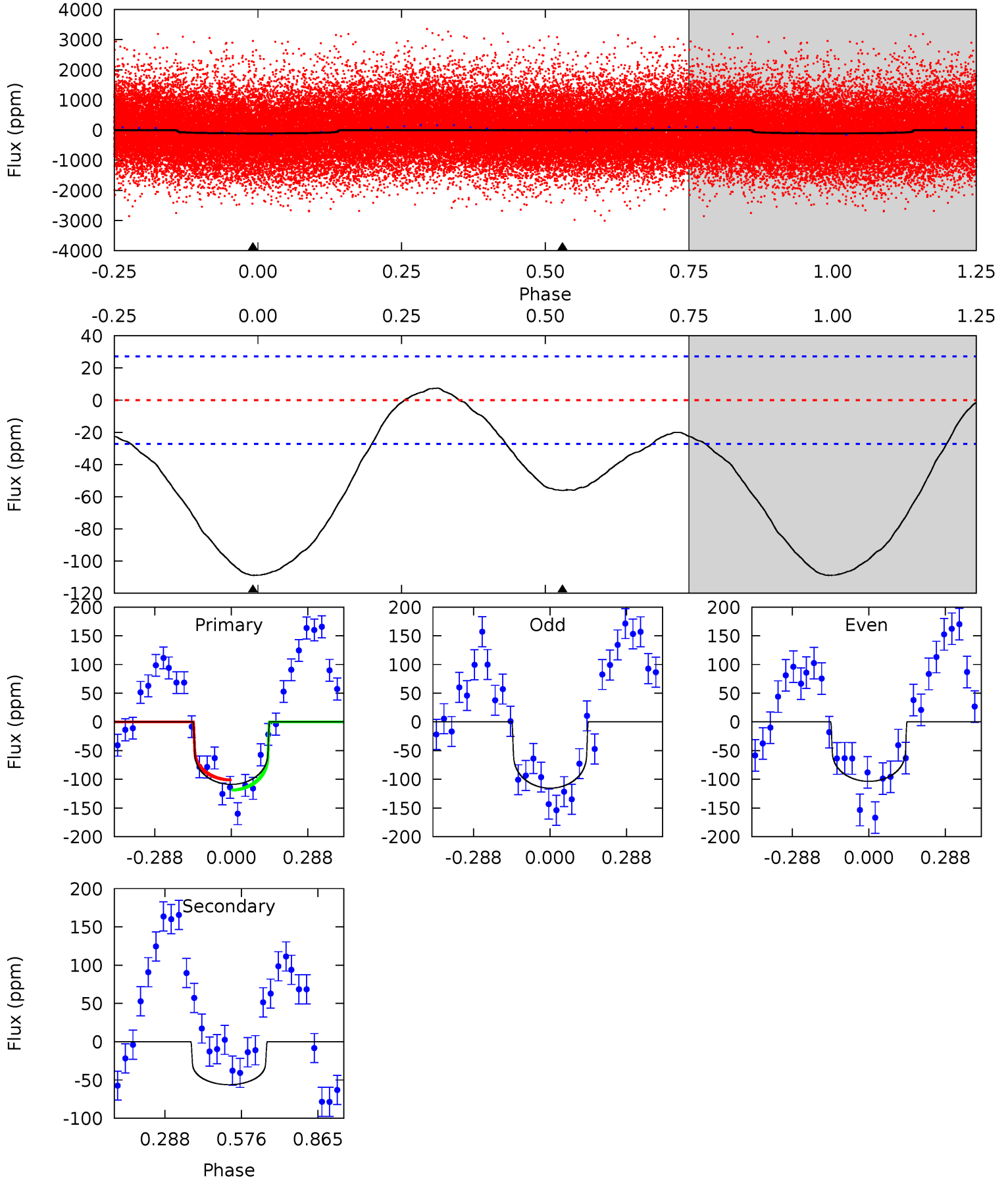
TCE 005304456-01 P= 4.578947 Days $T_0=132.069386$ (BKJD)



DV Model-Shift Uniqueness Test

005304456-01, P = 4.579365 Days, E = 131.904000 Days

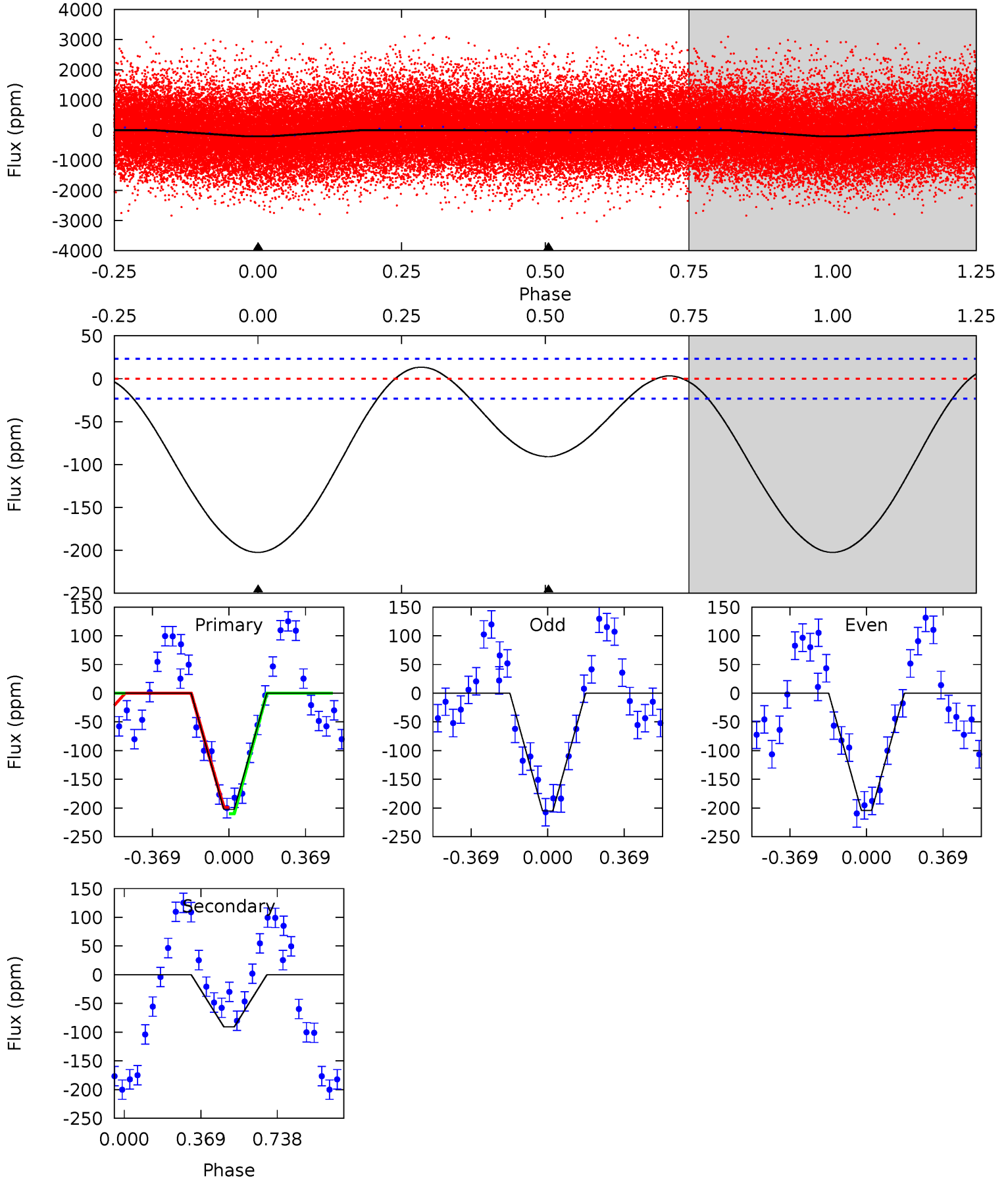
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.4	8.97	0	0	4.34	1.06	1.54	17.4	17.4	8.97	8.97	0.96	0.91	0.06	1.43



Alt Model-Shift Uniqueness Test

005304456-01, P = 4.578947 Days, E = 132.069386 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.3	16.7	0	0	4.28	0.90	1.59	37.3	37.3	16.7	16.7	0.08	1.04	0.06	1.03



Stellar Parameters For KIC 005304456

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6516^{+180}_{-248}	$4.372^{+0.075}_{-0.175}$	$-0.080^{+0.250}_{-0.300}$	$1.183^{+0.339}_{-0.145}$	$1.205^{+0.164}_{-0.164}$	$1.024^{+0.333}_{-0.491}$
	+3%/-4%	+2%/-4%	+312%/-375%	+29%/-12%	+14%/-14%	+32%/-48%
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 005304456-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-56 ± 6	$1.29^{+0.83}_{-0.73}$	1844^{+125}_{-103}	5700^{+3215}_{-1130}	60^{+239}_{-37}
Alt.	-91 ± 5	$1.88^{+0.93}_{-0.82}$	1842^{+116}_{-99}	5327^{+1737}_{-802}	45^{+96}_{-25}

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 $A_{\text{obs}} \gg 1.0$

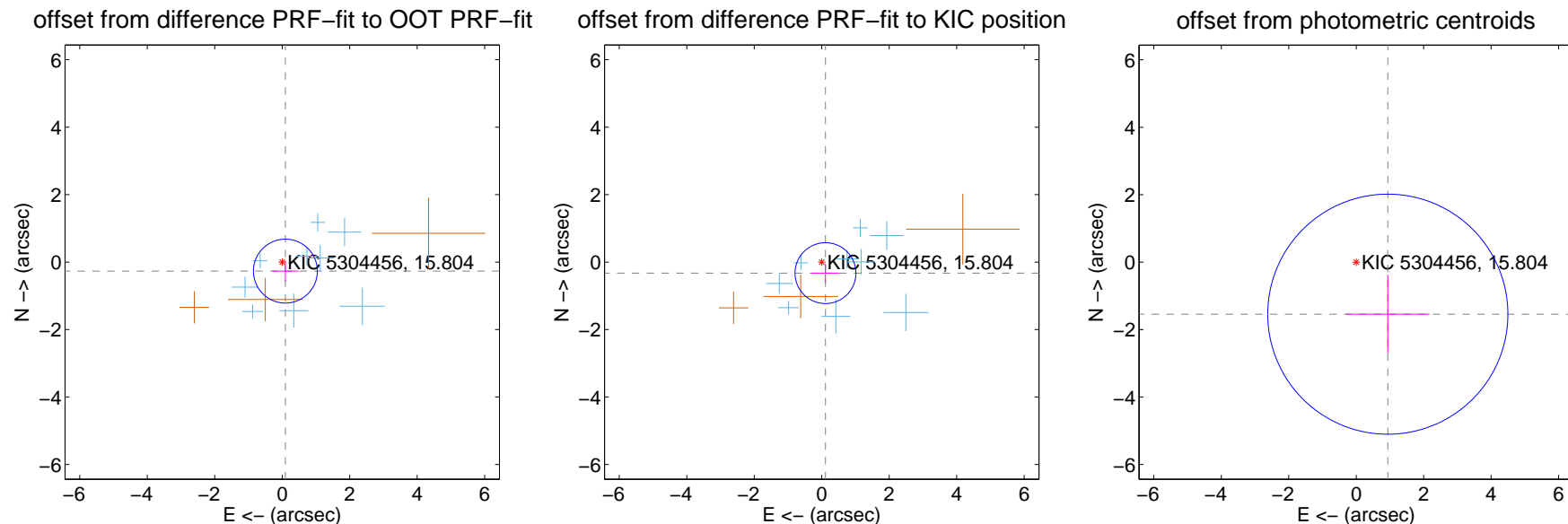
DV Centroid Data

Supplemental centroid analysis for 005304456-01. Kepler magnitude: 15.80. Transit SNR 10.12

There are 9 quarters with good PRF difference image offsets

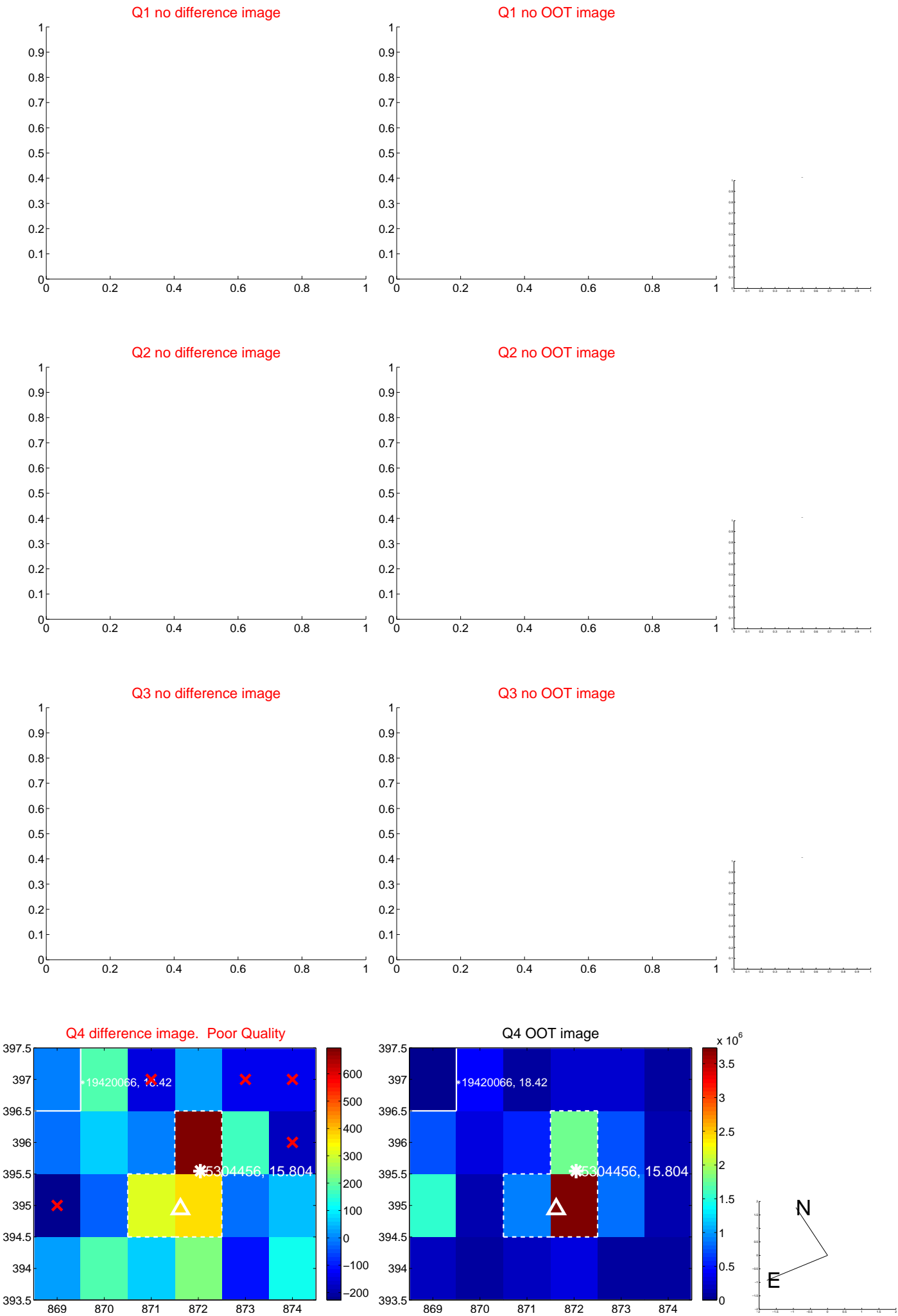
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.283 ± 0.316	0.90	-0.094 ± 0.390	-0.267 ± 0.305
PRF-fit source offset from KIC position	0.346 ± 0.301	1.15	-0.111 ± 0.403	-0.327 ± 0.287
photometric centroid source offset	1.80 ± 1.19	1.52	-0.94 ± 1.24	-1.54 ± 1.17

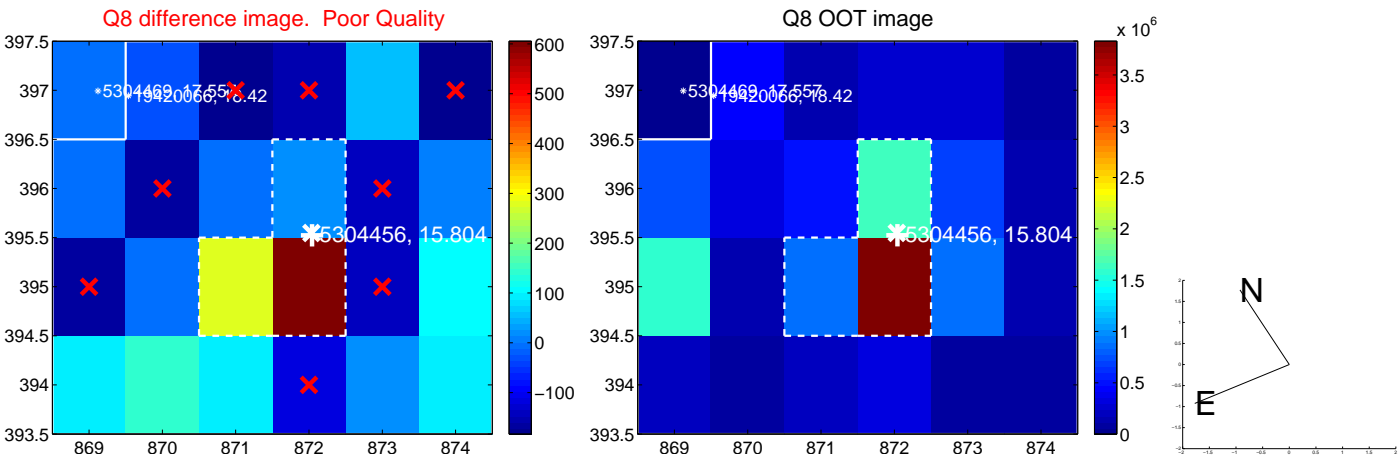
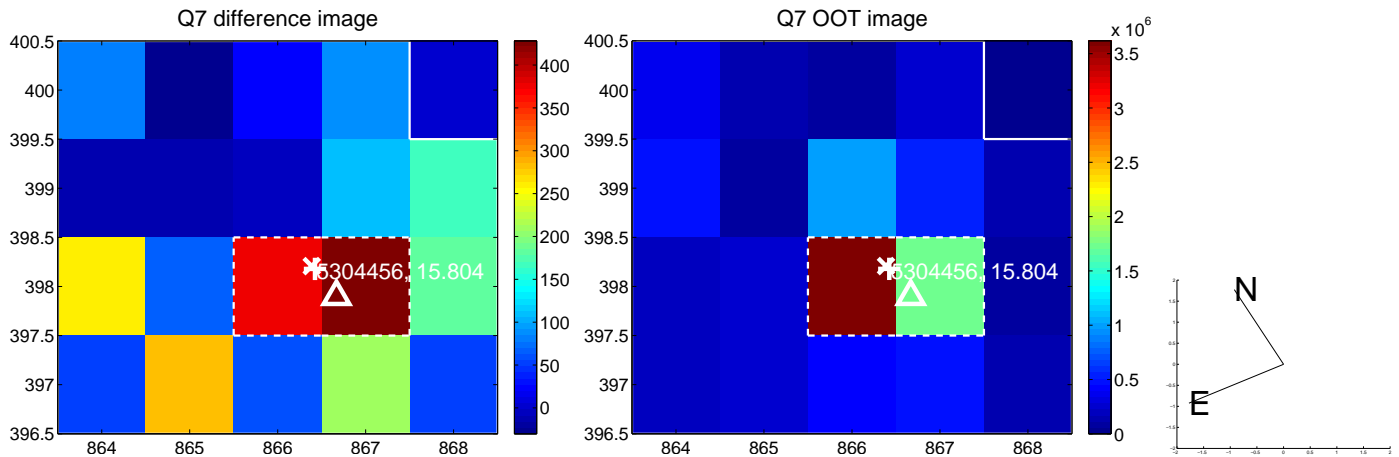
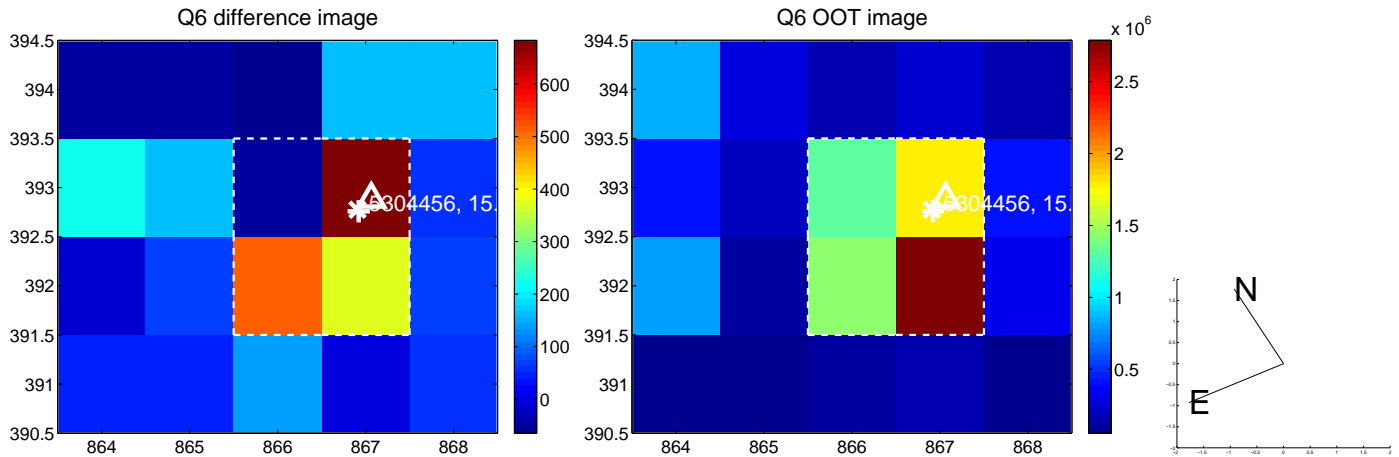
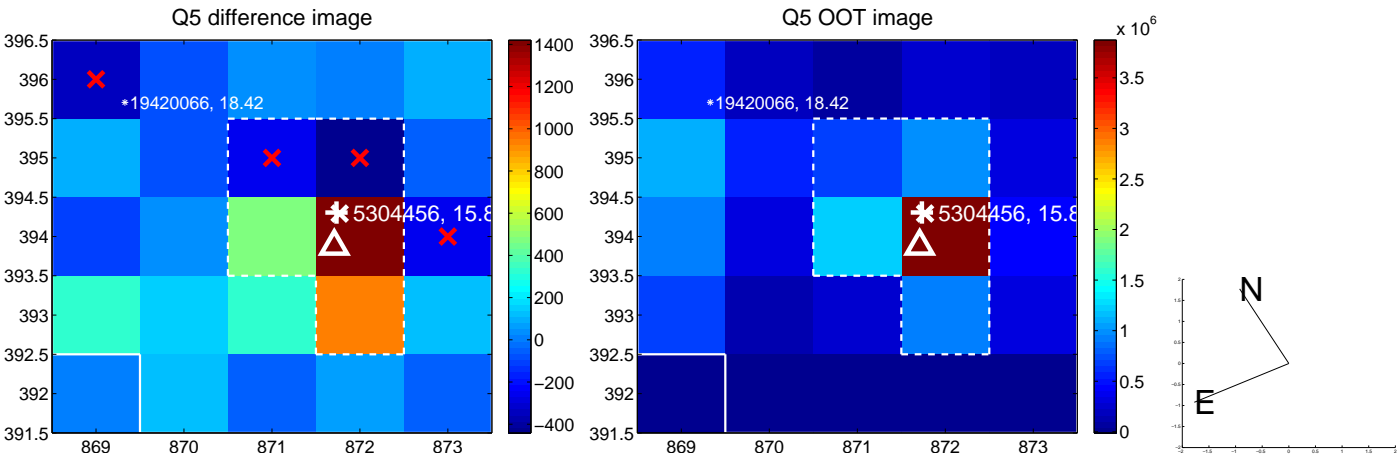


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

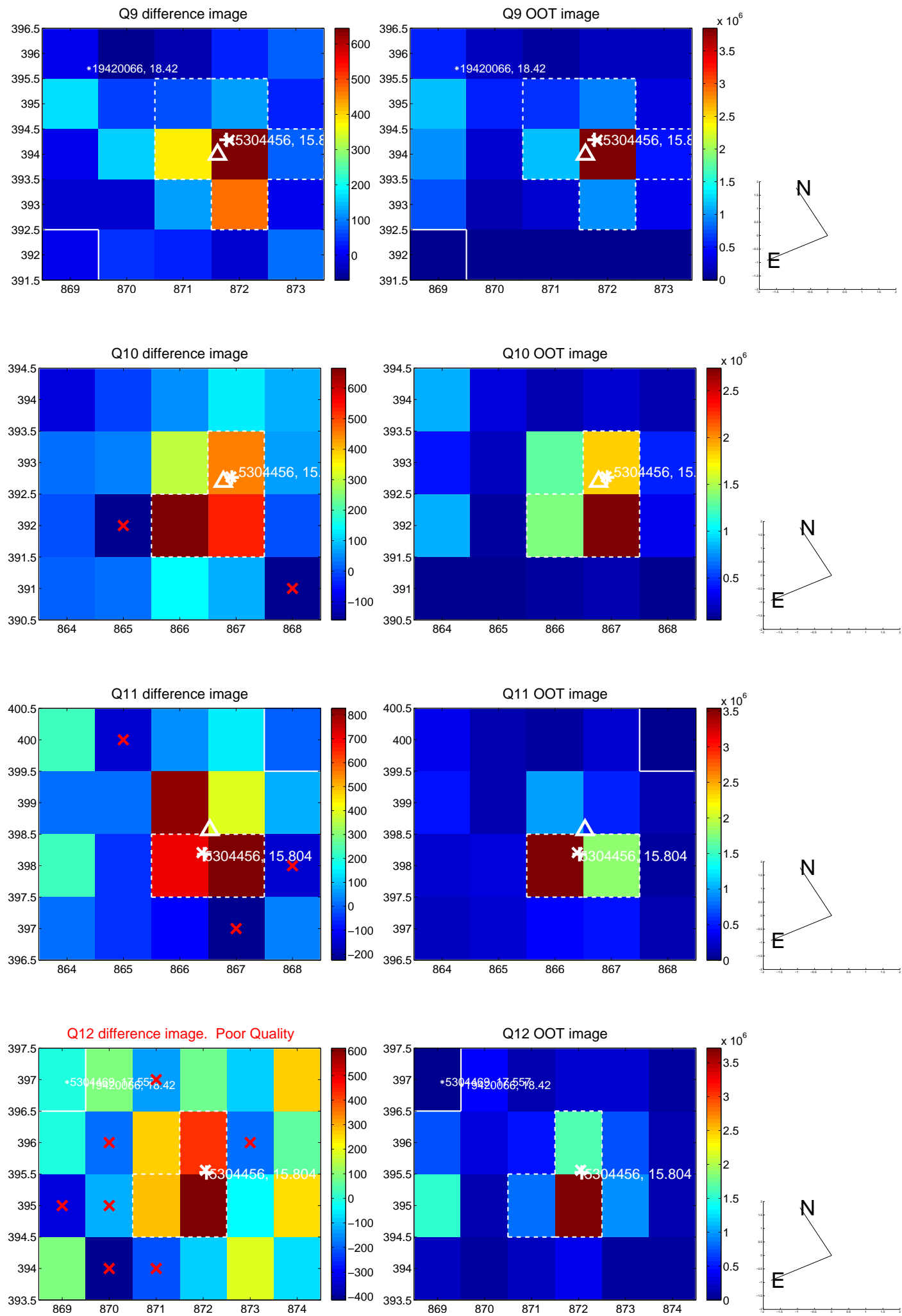
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



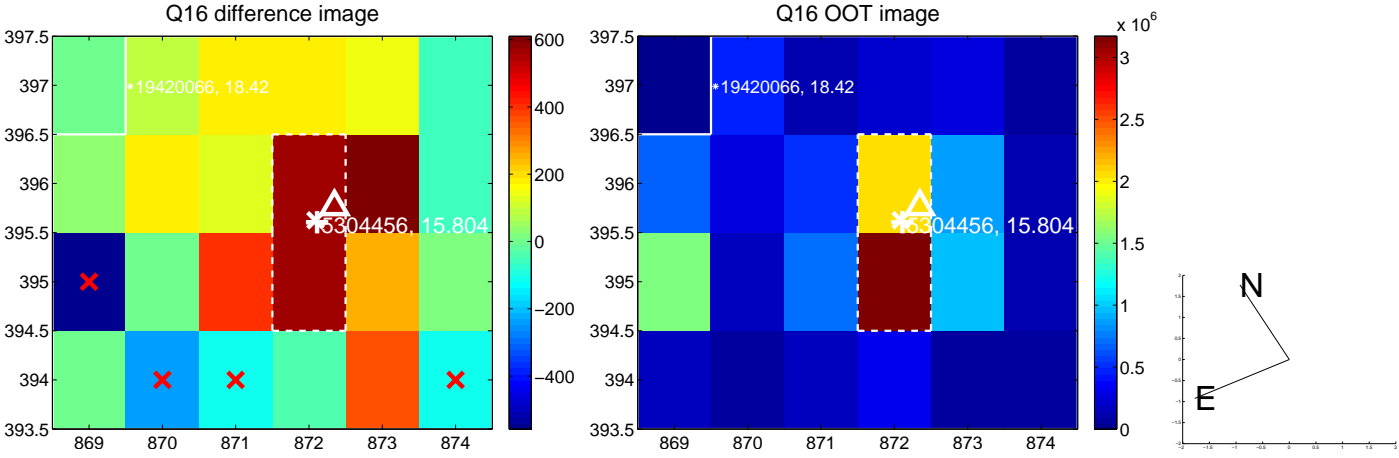
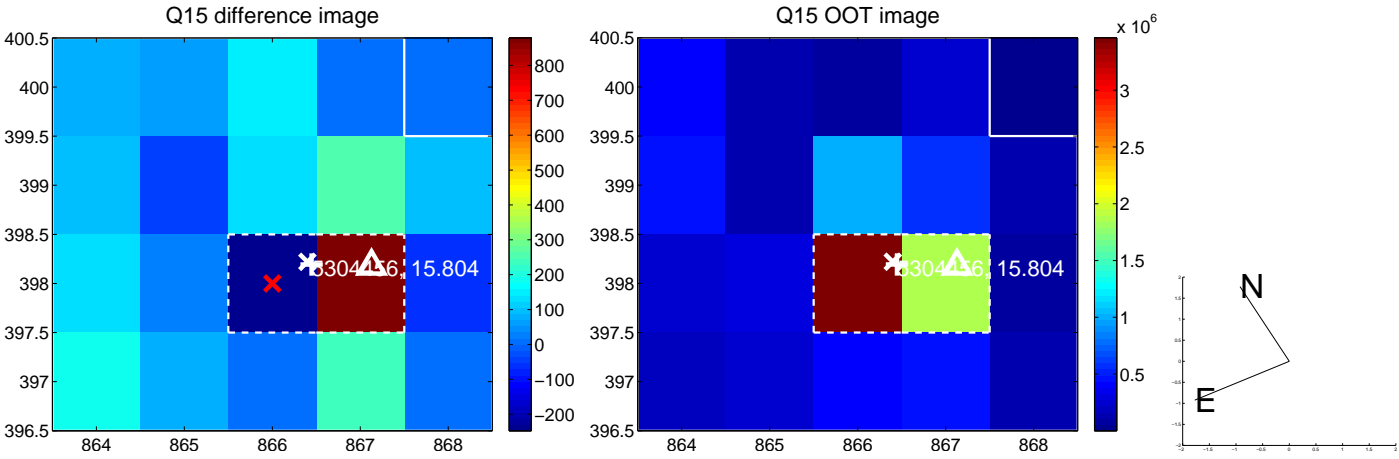
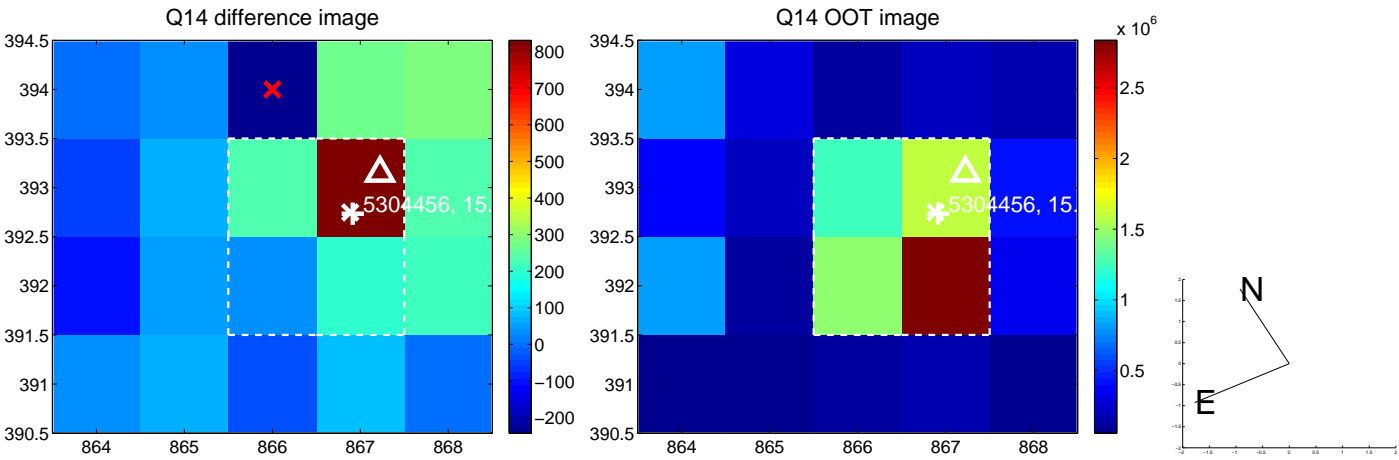
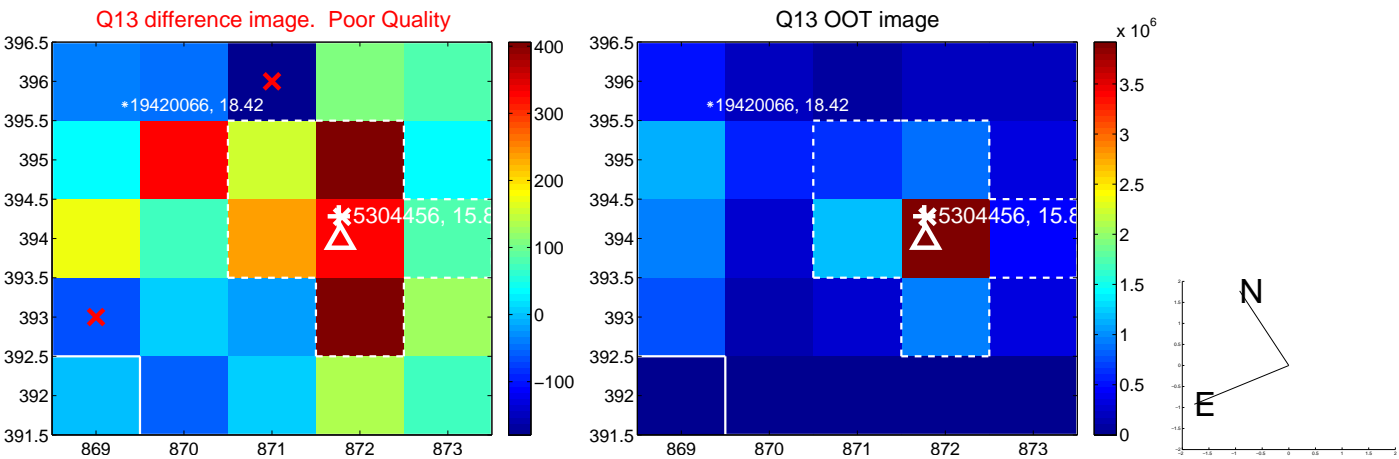
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



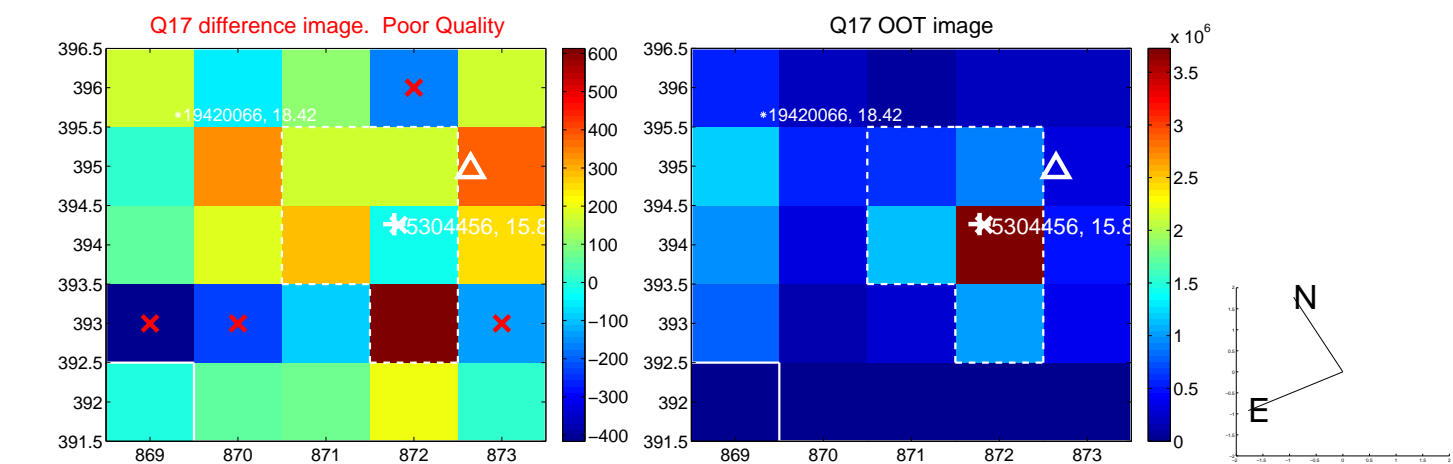
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



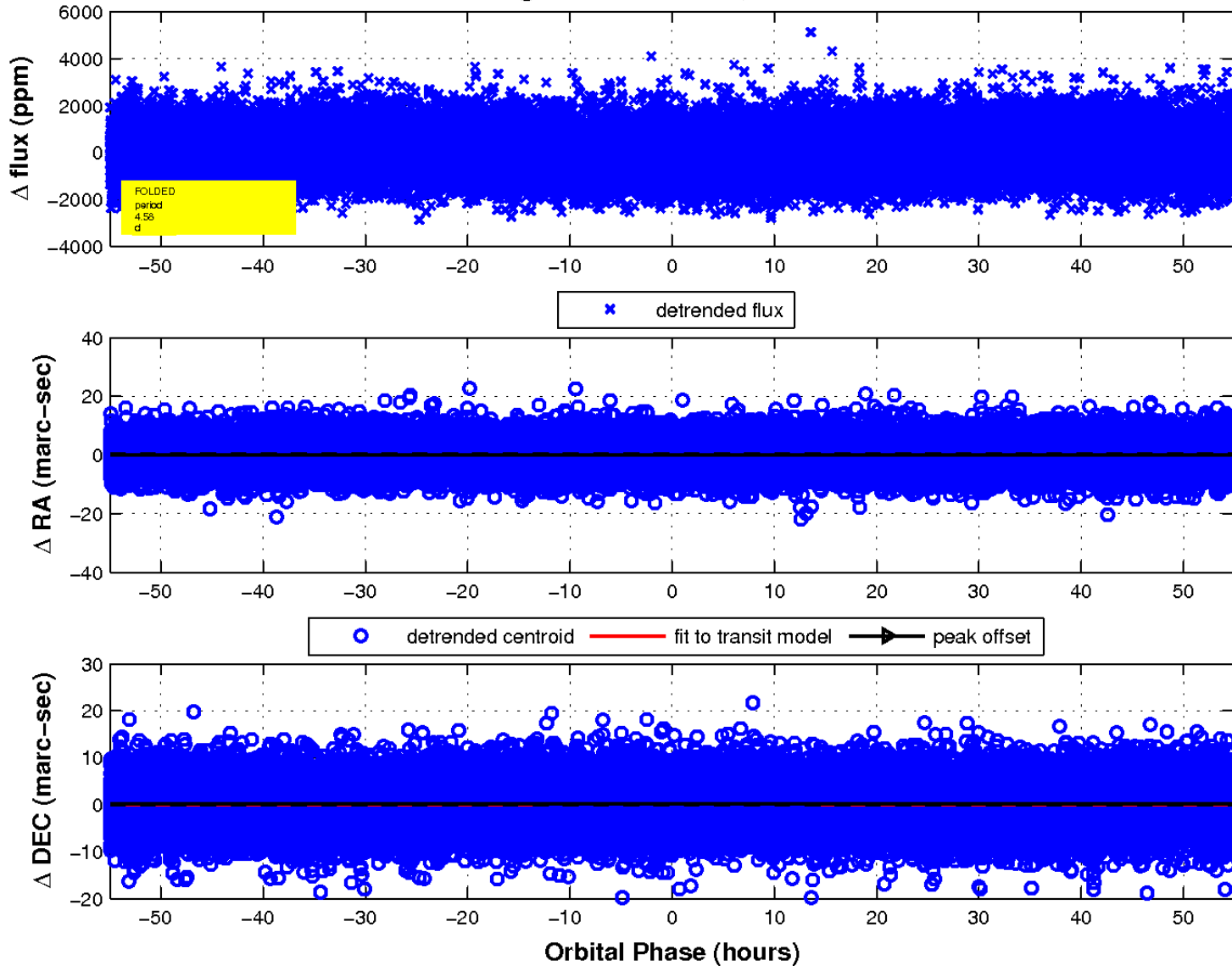
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

