

KIC 005566636

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})
005566636-01	OBS	No	1.825590	131.851307	95.4	6.965	8.6	8.6	1.26	6623	1.43	2673.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005566636-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

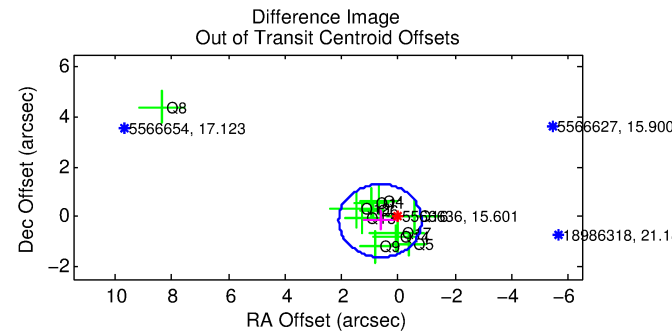
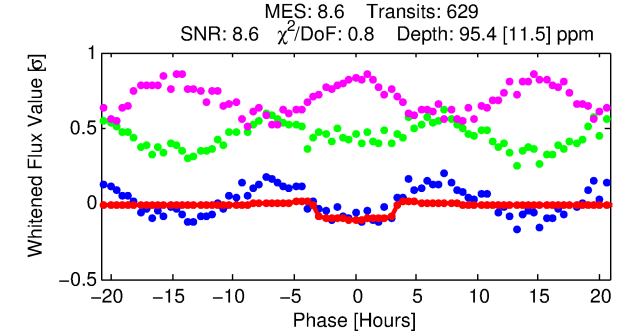
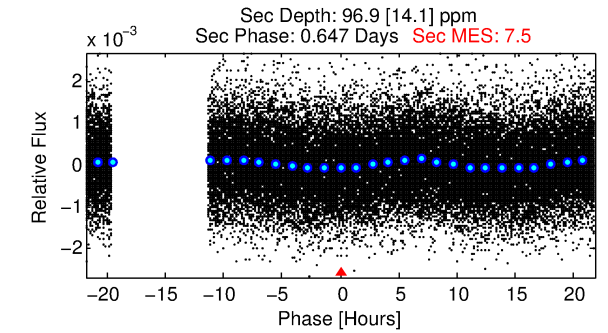
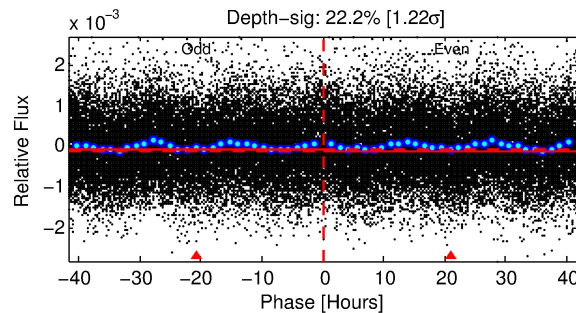
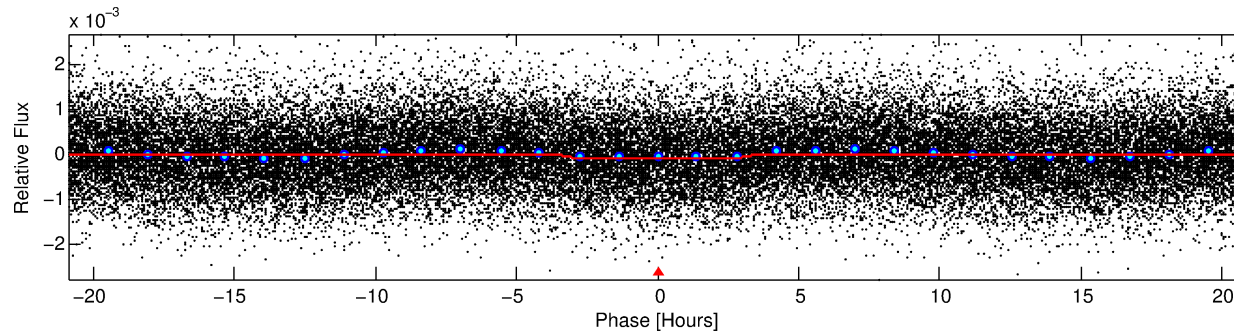
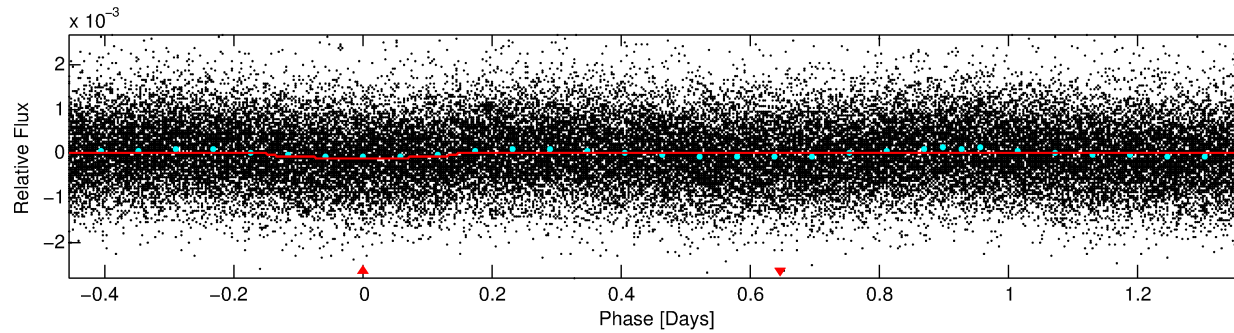
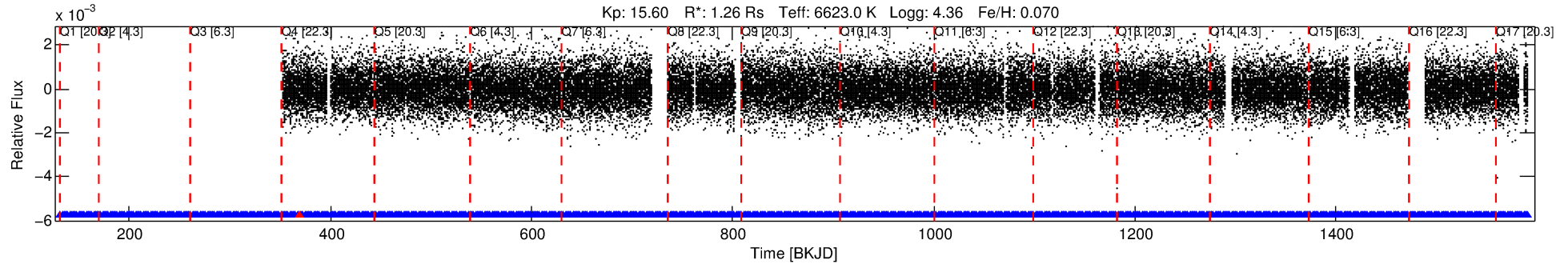
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005566636-01

No Significant Match Found

DV One-Page Summary

KIC: 5566636 Candidate: 1 of 1 Period: 1.826 d



DV Fit Results:

Period = 1.82559 [0.00002] d
Epoch = 131.8513 [0.0073] BKJD
Rp/R* = 0.0104 [0.0033]
a/R* = 1.34 [1.08]
b = 0.89 [0.44]
Seff = 2673.33 [1037.30]
Teq = 1834 [178] K
Rp = 1.42 [0.62] Re
a = 0.0320 [0.0078] AU
Ag = 26.92 [19.88] [1.30 σ]
Teffp = 6457 [1086] K [4.20 σ]

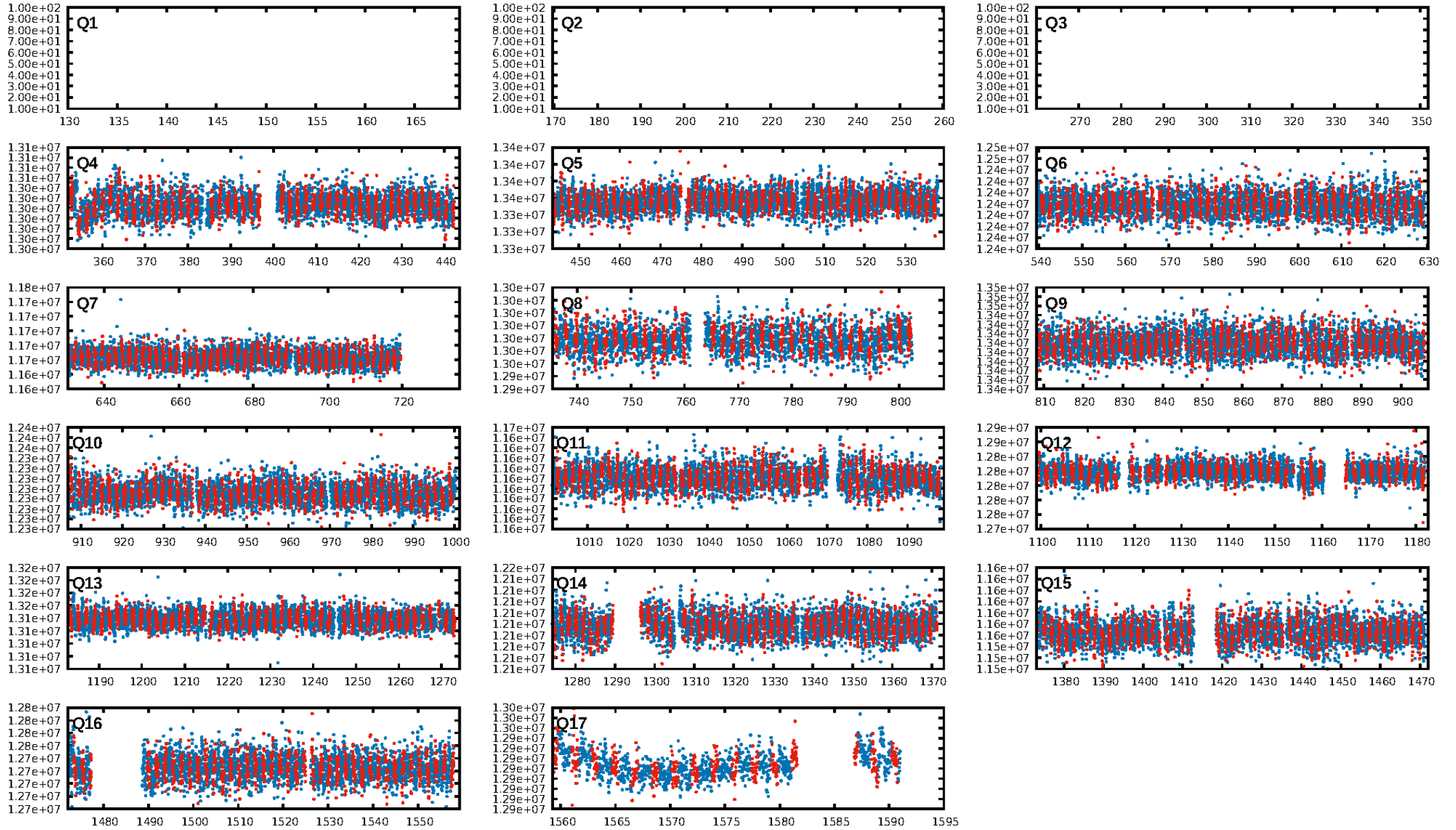
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.15e-15
RollingBand-fgt: 1.00 [612/613]
GhostDiagnostic-chr: 1.317
Centroid-sig: 0.0%
Centroid-so: 3.158 arcsec [3.74 σ]
OotOffset-rm: 0.662 arcsec [1.36 σ]
KicOffset-rm: 0.450 arcsec [0.75 σ]
OotOffset-st: 2/1/4/4 [11]
KicOffset-st: 2/1/4/4 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 1.00 [14/14]

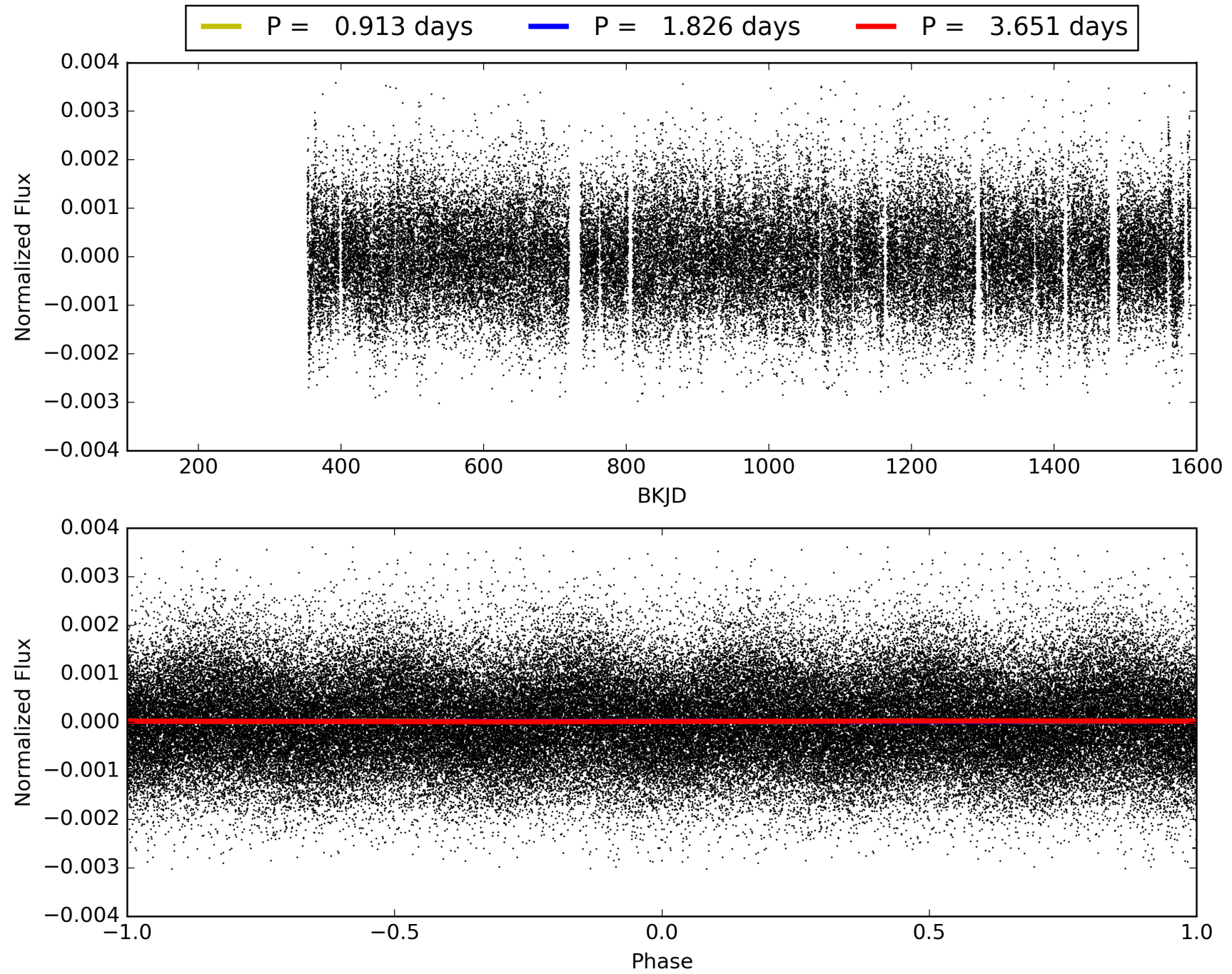
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:51:12 Z

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

TCE 005566636-01, PDC Light Curves

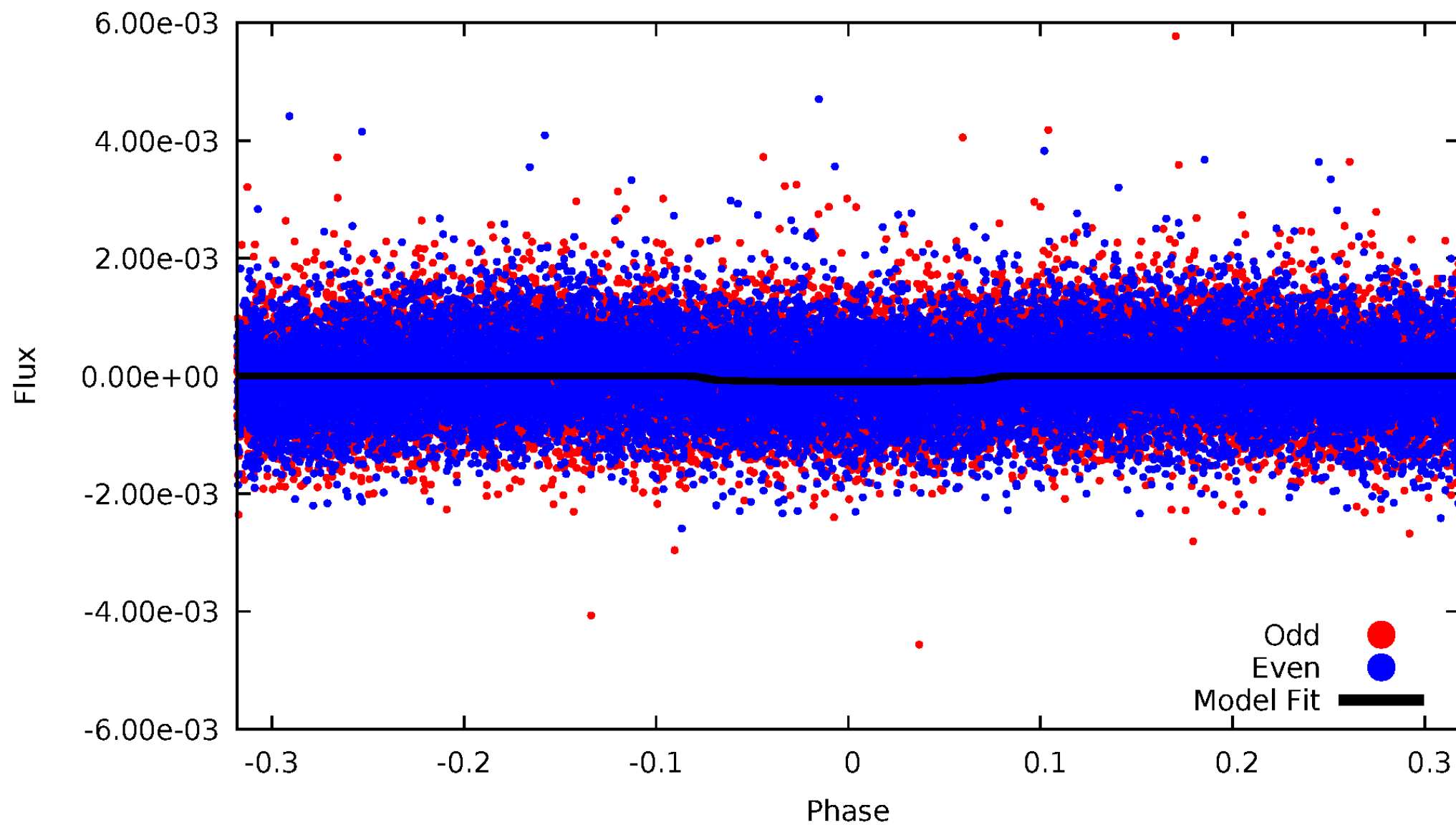


TCE 005566636-01



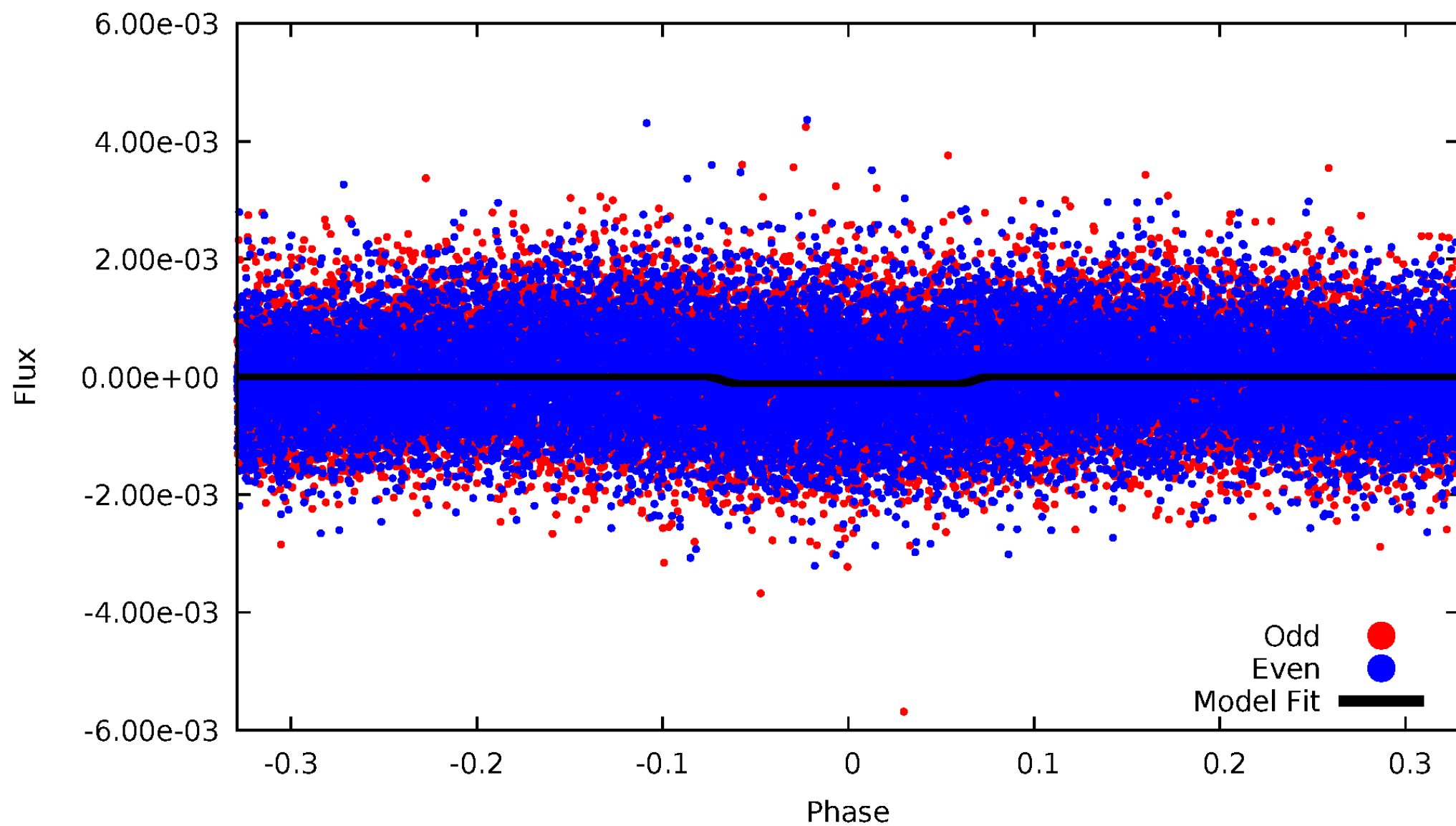
DV Odd/Even

TCE 005566636-01



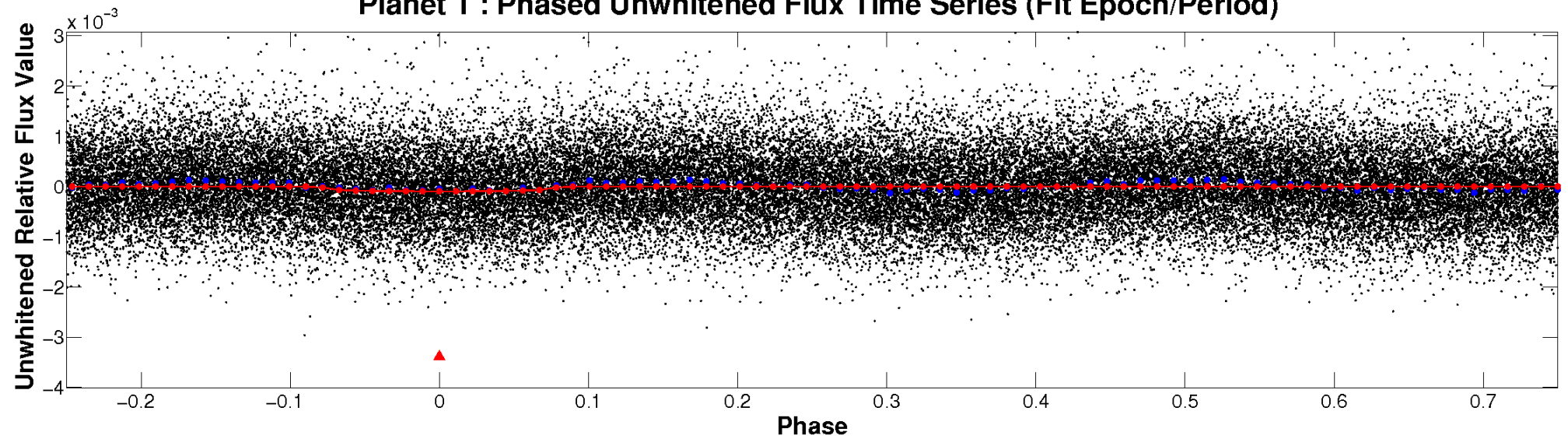
ALT Odd/Even

TCE 005566636-01

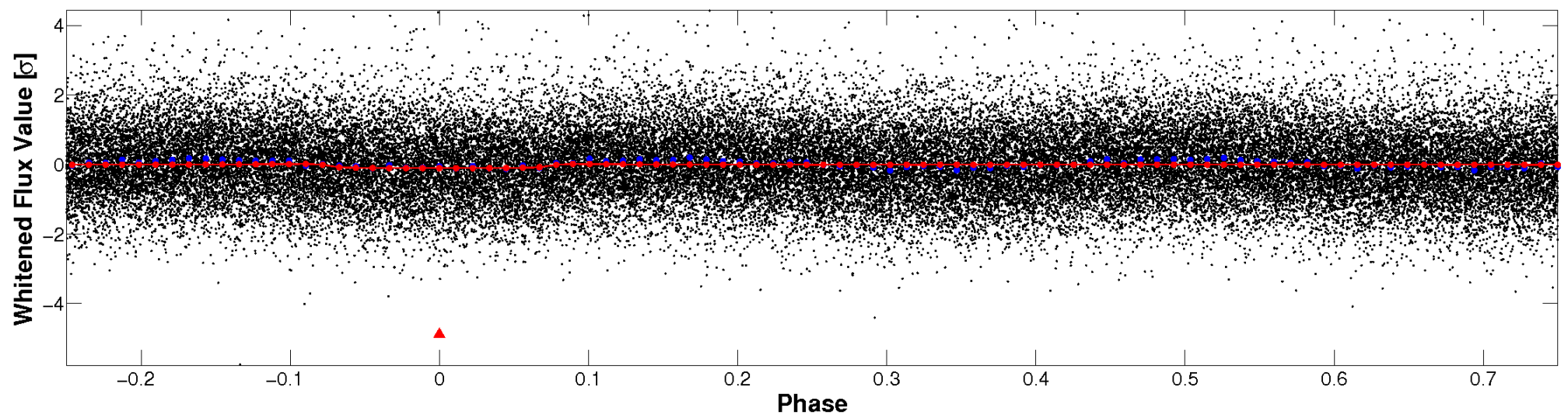


Non-Whitened Vs. Whitened Light Curve

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

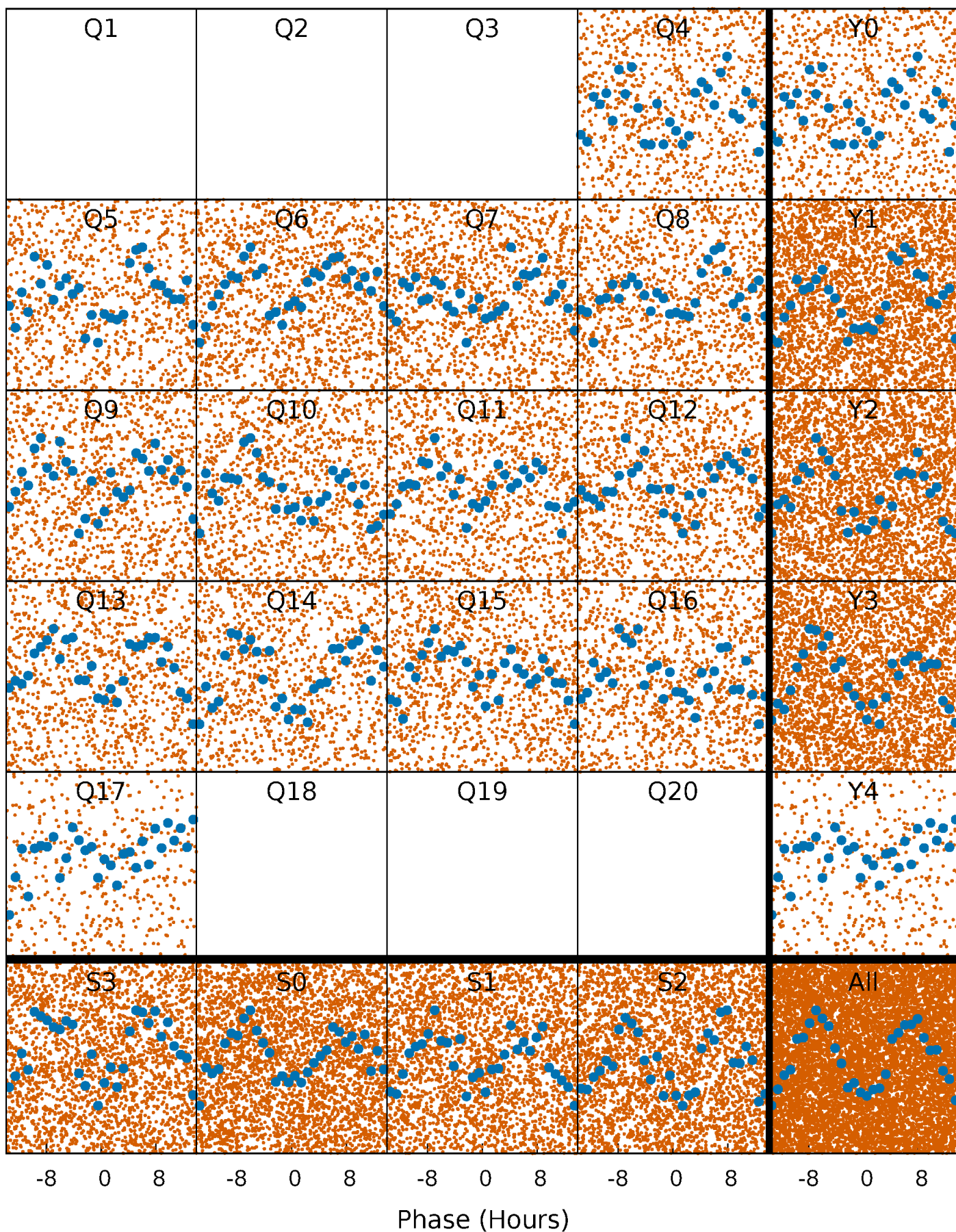


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



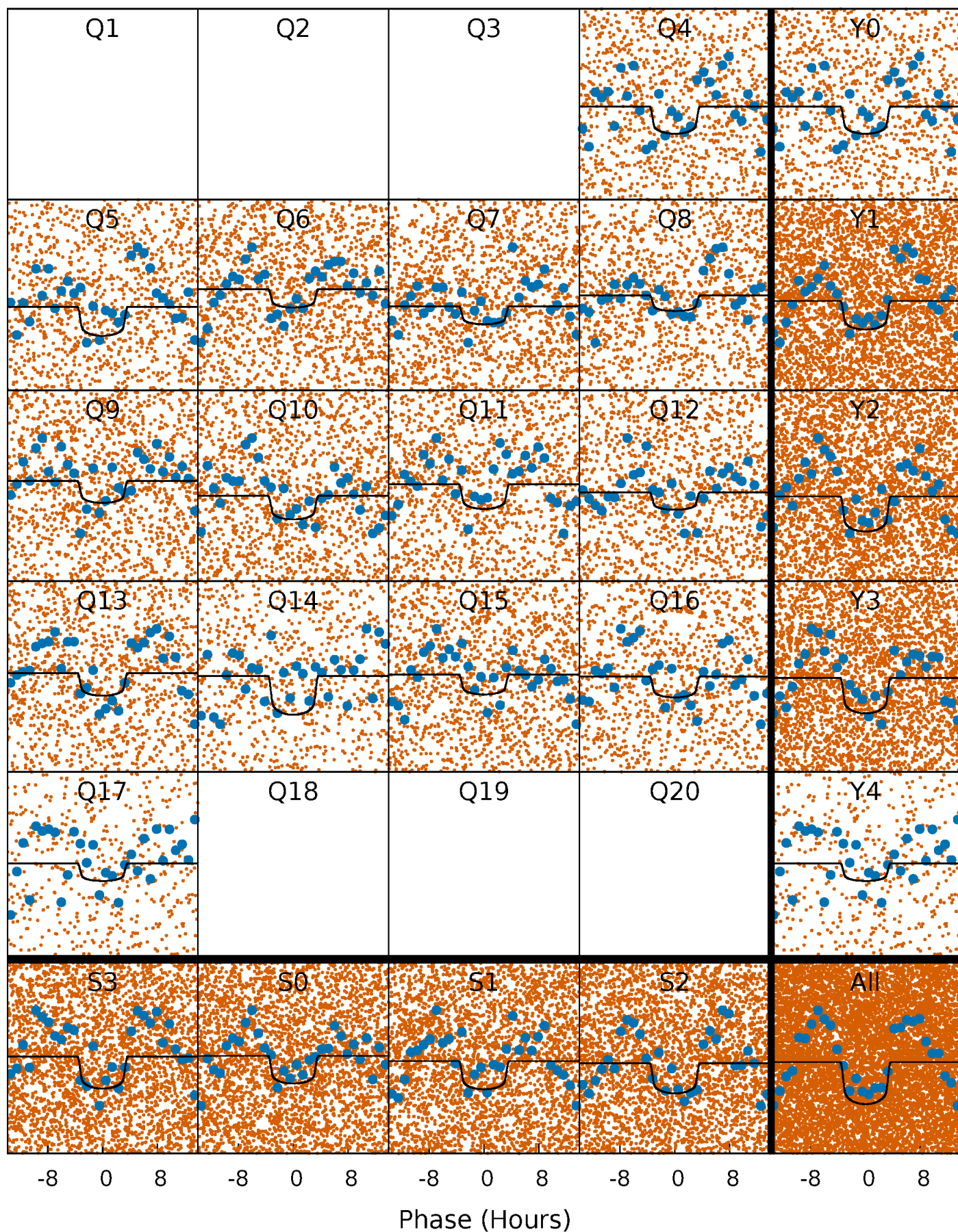
PDC Quarter-Phased Transit Curves

TCE 005566636-01 P= 1.825590 Days $T_0=131.851307$ (BKJD)



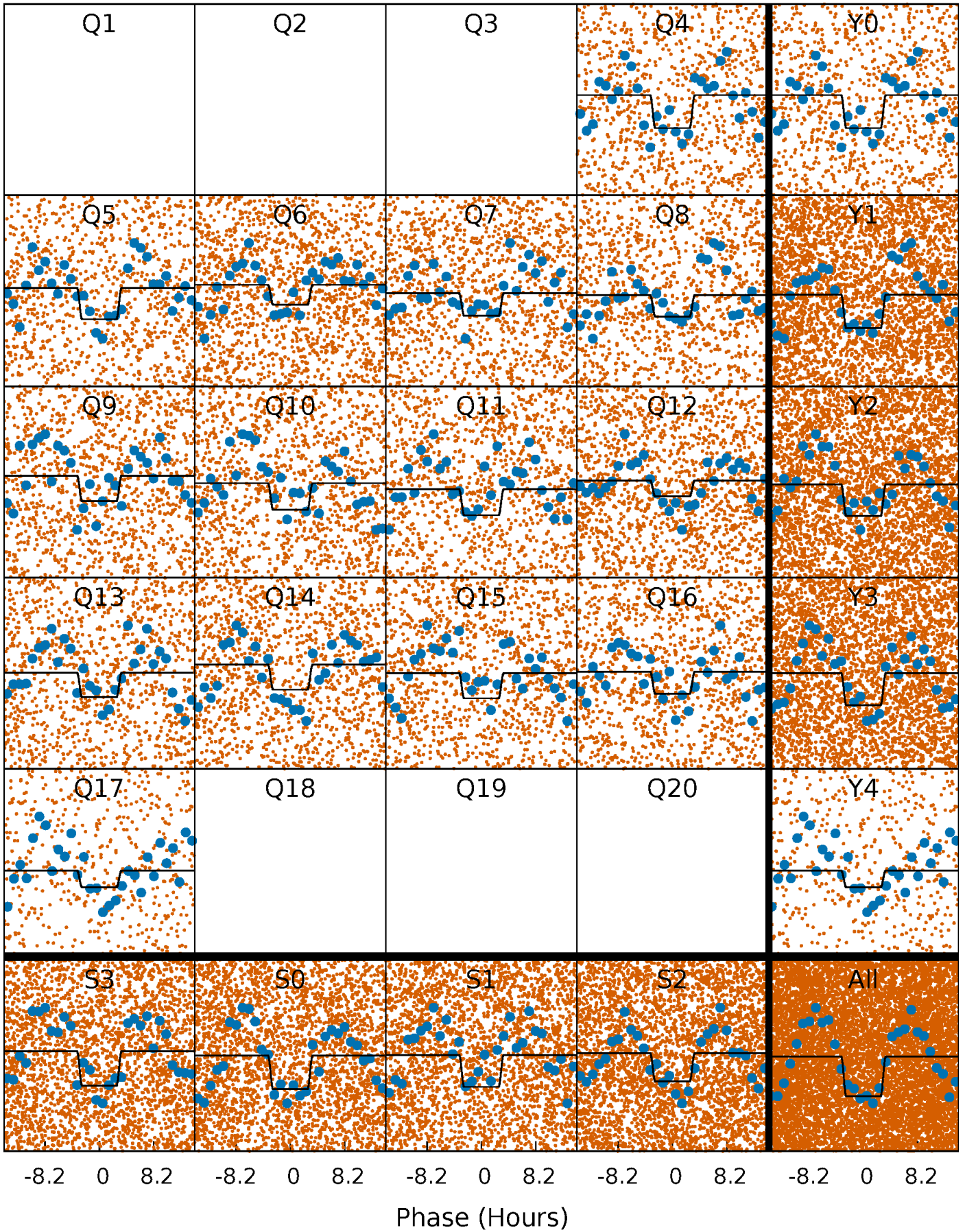
DV Quarter-Phased Transit Curves

TCE 005566636-01 P= 1.825590 Days $T_0=131.851307$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

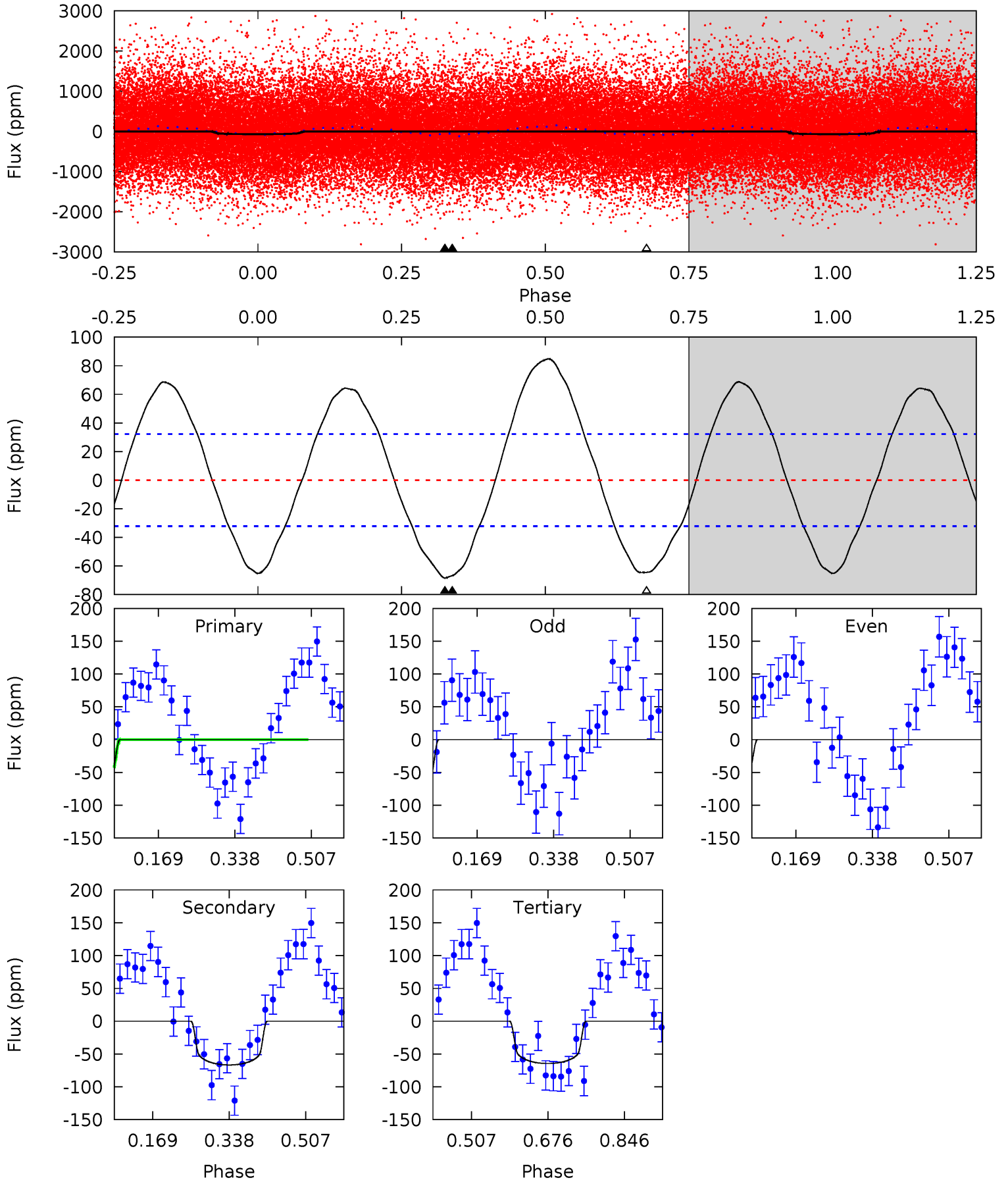
TCE 005566636-01 P= 1.825642 Days $T_0=131.833866$ (BKJD)



DV Model-Shift Uniqueness Test

005566636-01, P = 1.825590 Days, E = 131.851307 Days

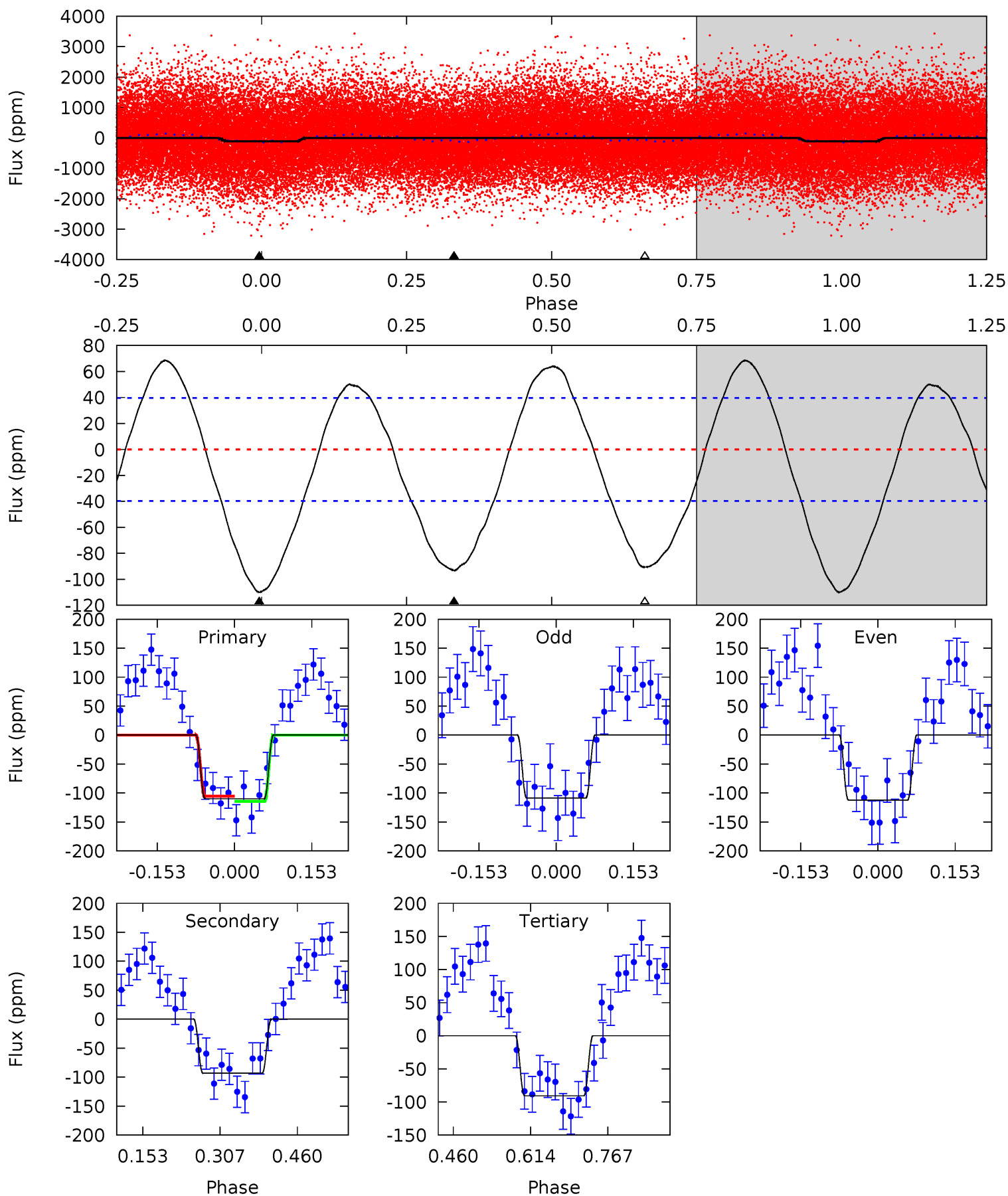
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.46	9.22	8.92	0	4.45	1.38	6.50	0.54	9.46	0.31	9.22	0.92	1.16	0.55	0.36



Alt Model-Shift Uniqueness Test

005566636-01, P = 1.825642 Days, E = 131.833866 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	10.5	10.2	0	4.47	1.43	6.28	2.17	12.4	0.28	10.5	0.19	0.80	0.38	0.51



Stellar Parameters For KIC 005566636

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6623^{+164}_{-281}	$4.355^{+0.062}_{-0.188}$	$0.070^{+0.200}_{-0.350}$	$1.261^{+0.371}_{-0.159}$	$1.317^{+0.150}_{-0.224}$	$0.924^{+0.305}_{-0.451}$
	+2%/-4%	+1%/-4%	+286%/-500%	+29%/-13%	+11%/-17%	+33%/-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 005566636-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-67 ± 7	$1.51^{+0.51}_{-0.47}$	2613^{+180}_{-137}	5791^{+1202}_{-704}	16^{+18}_{-7}
Alt.	-93 ± 9	$1.51^{+0.52}_{-0.49}$	2592^{+196}_{-132}	6255^{+1430}_{-763}	22^{+28}_{-9}

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

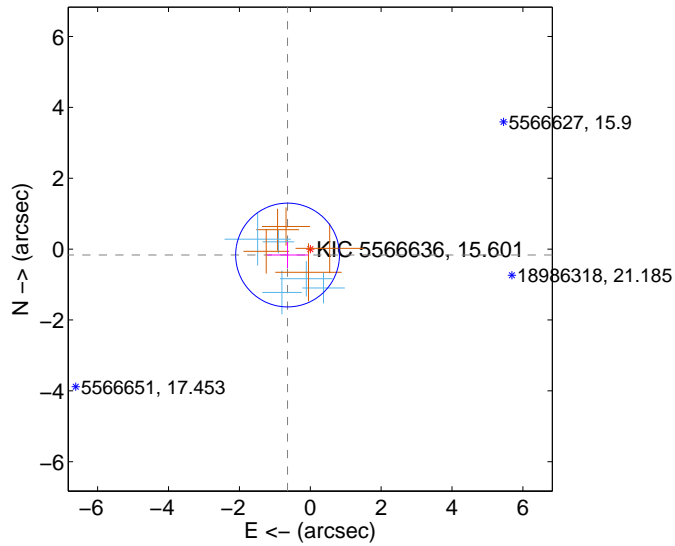
Supplemental centroid analysis for 005566636-01. Kepler magnitude: 15.60. Transit SNR 8.61

There are 5 quarters with good PRF difference image offsets

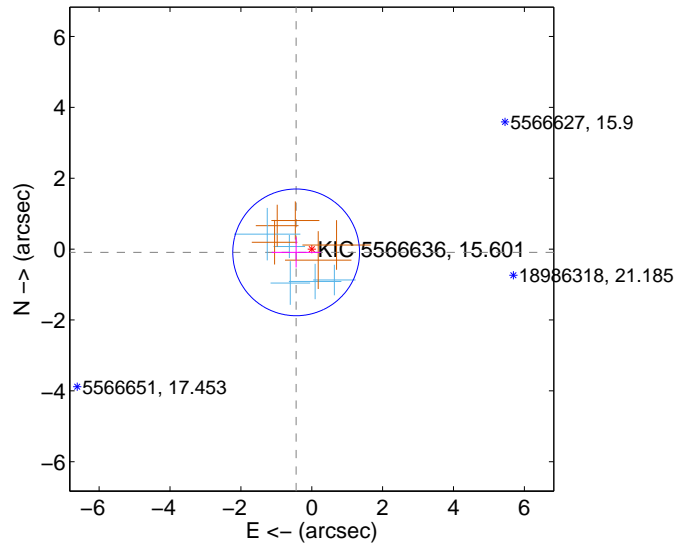
The direct PRF centroid is offset from the target star catalog position by about 0.41 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.662 ± 0.488	1.36	0.641 ± 0.587	-0.167 ± 0.368
PRF-fit source offset from KIC position	0.450 ± 0.596	0.75	0.440 ± 0.689	-0.092 ± 0.427
photometric centroid source offset	3.16 ± 0.84	3.74	3.16 ± 0.84	-0.09 ± 0.79

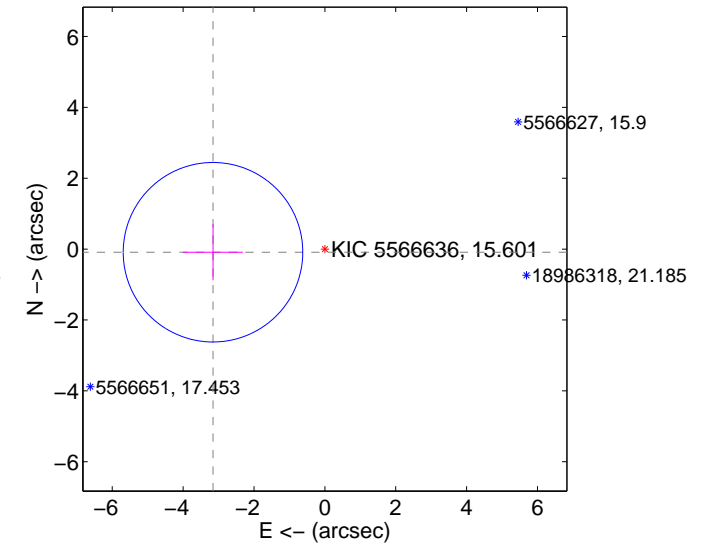
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

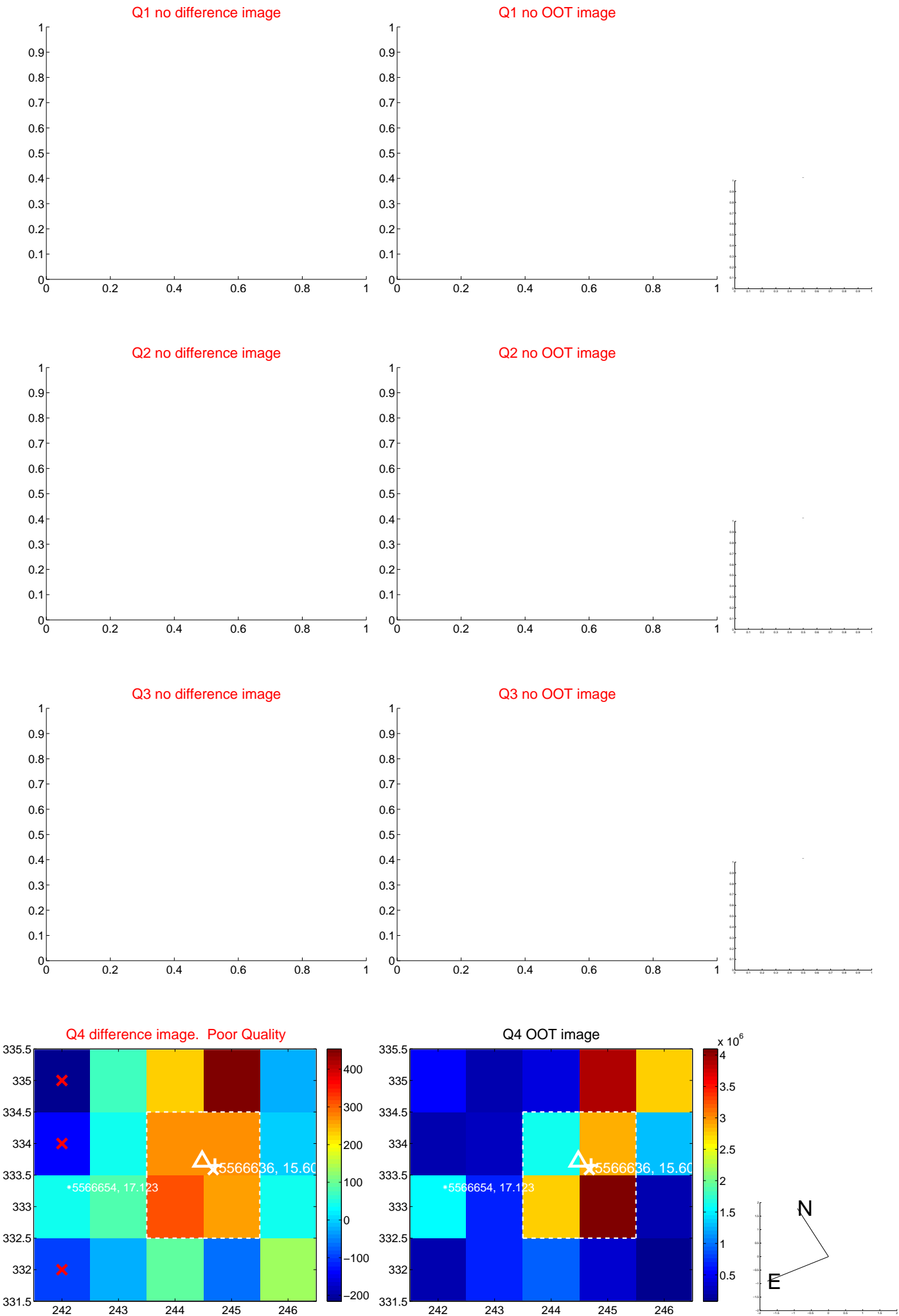


offset from photometric centroids

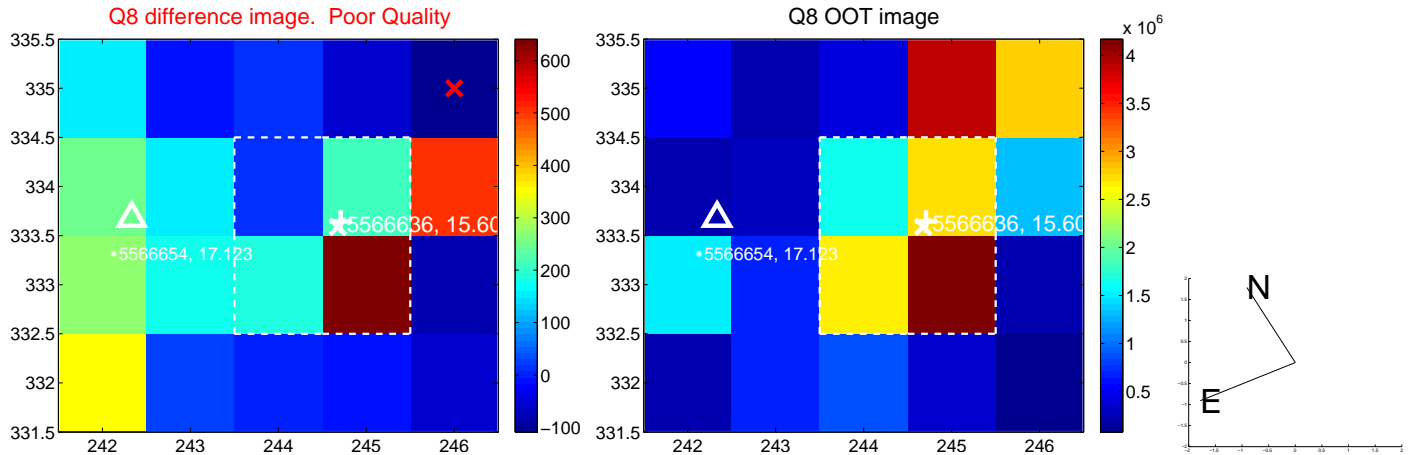
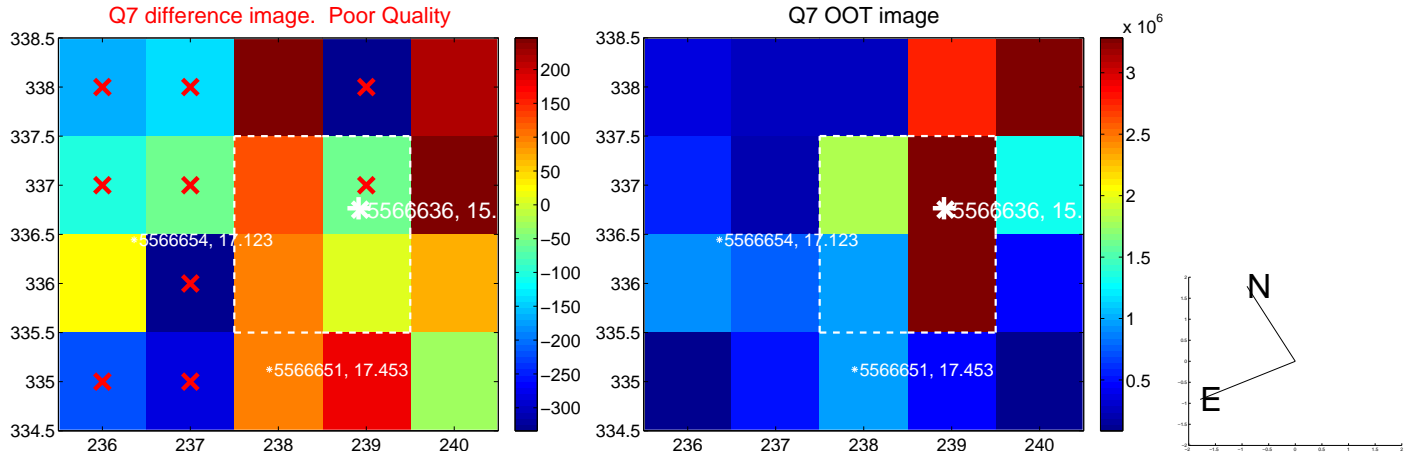
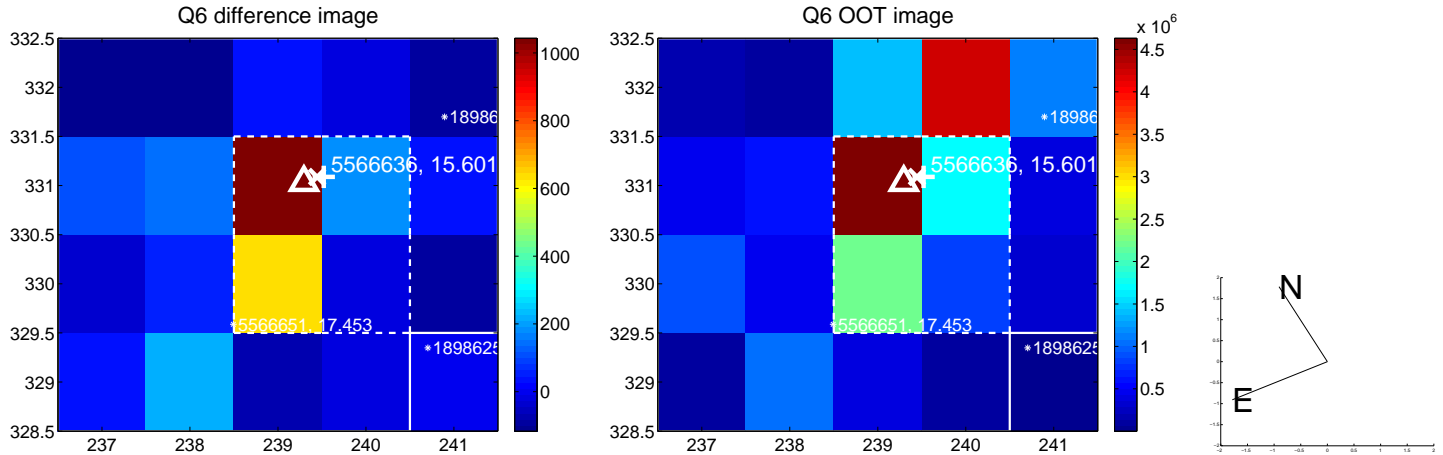
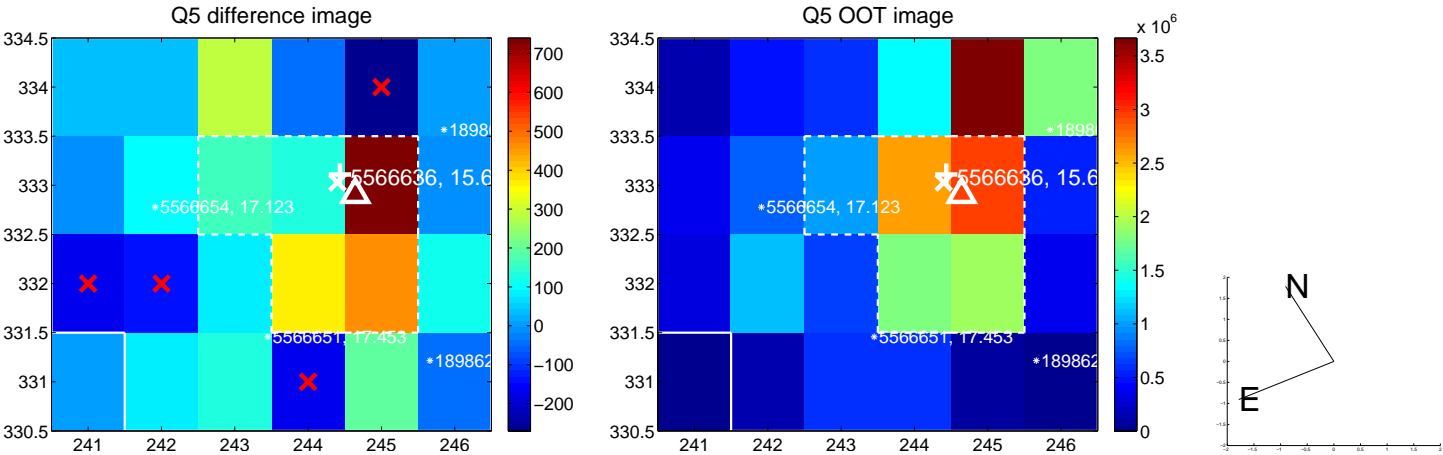


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

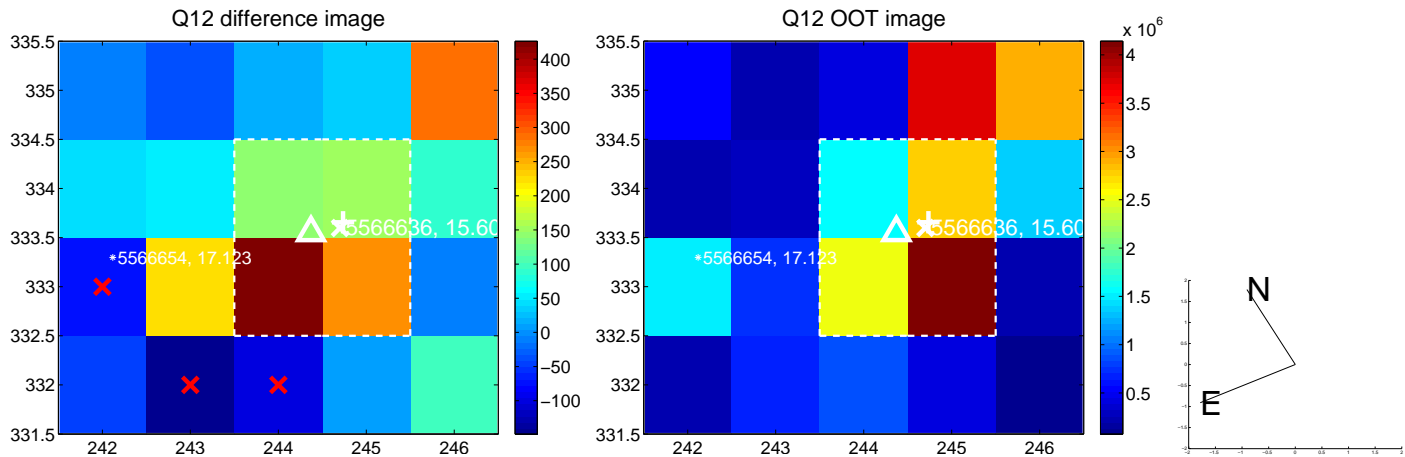
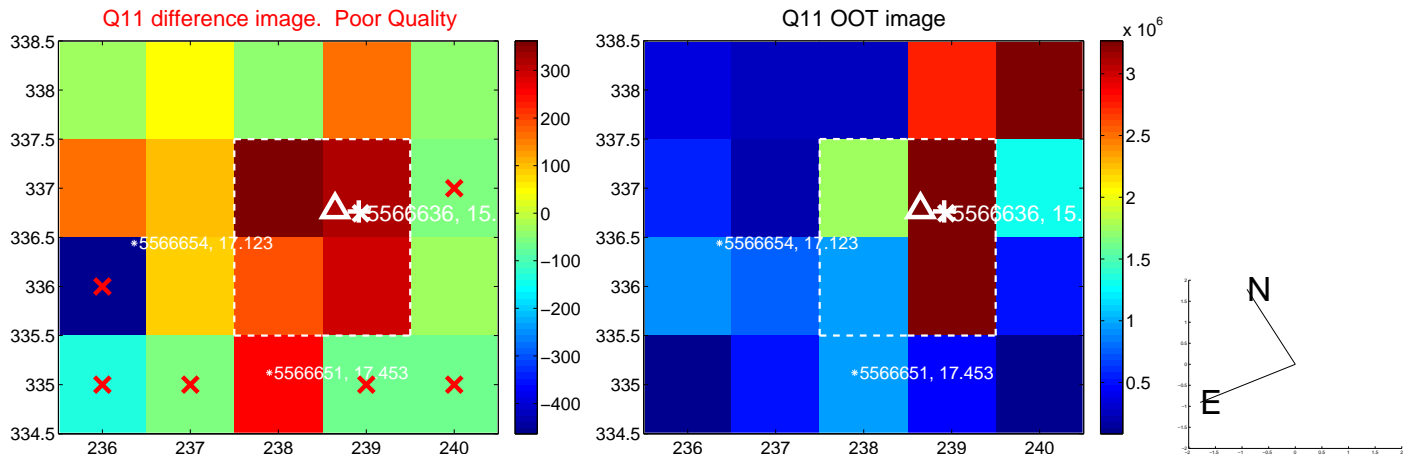
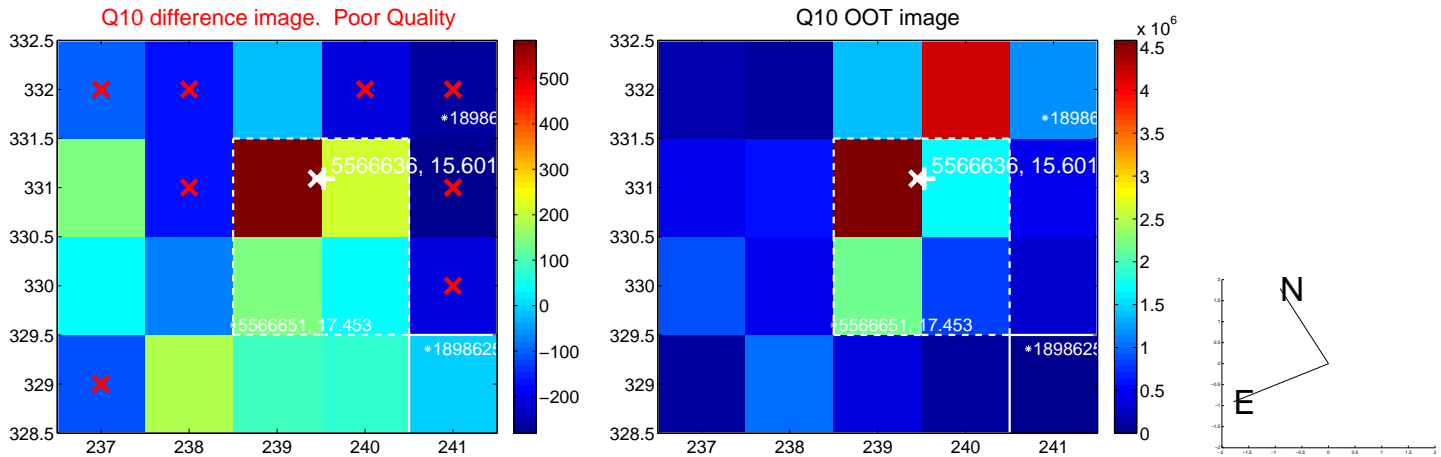
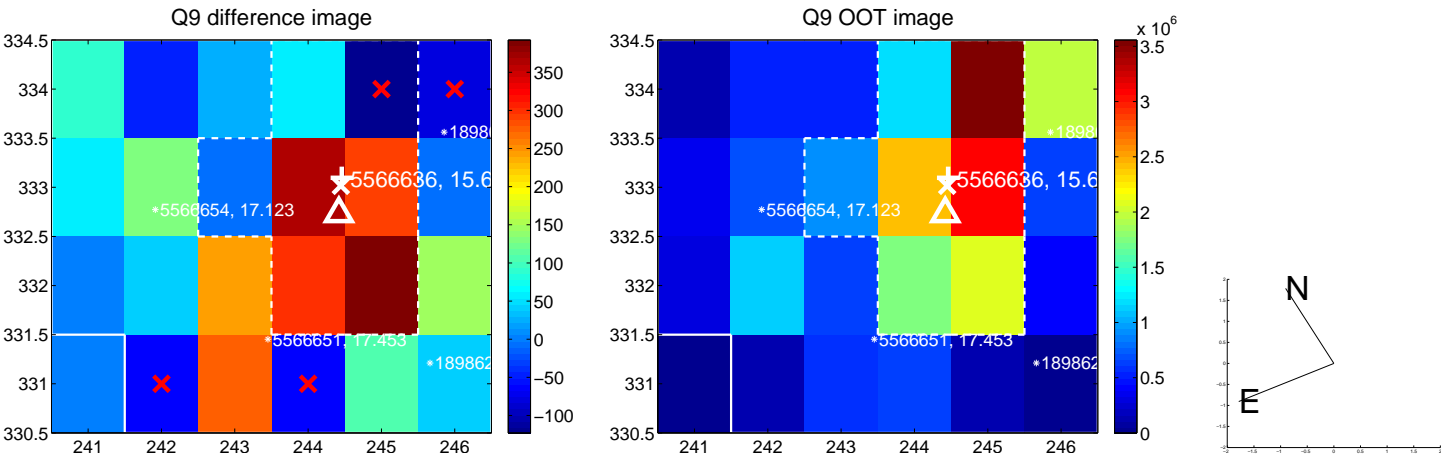
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



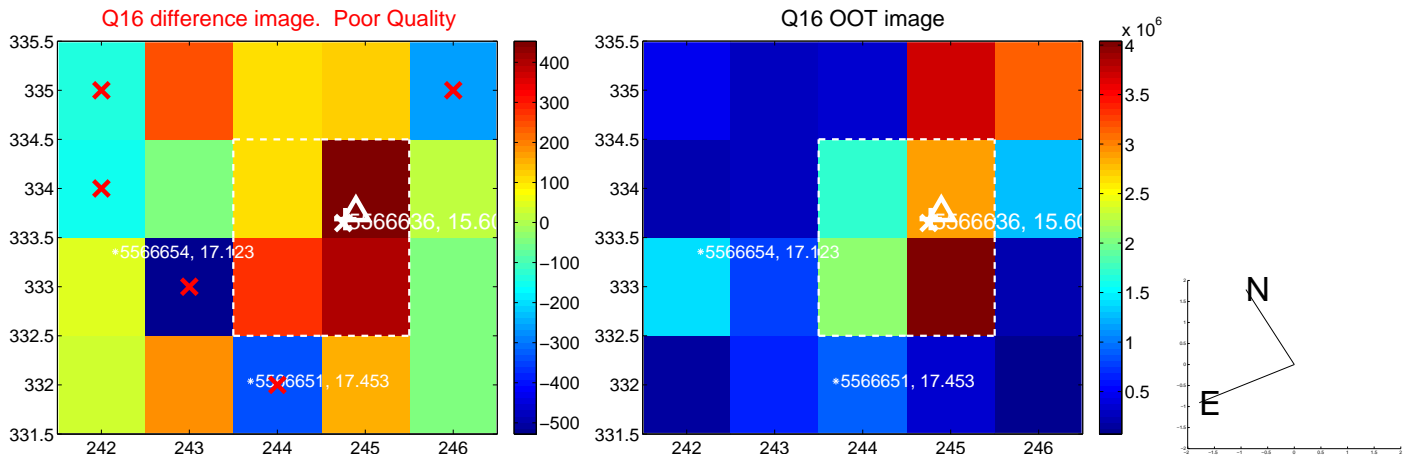
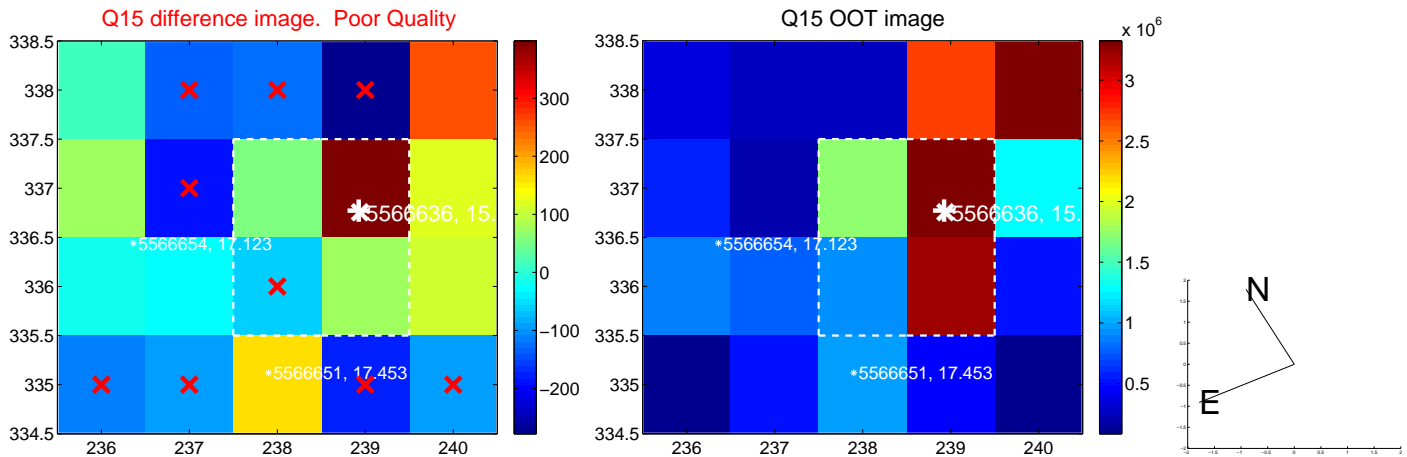
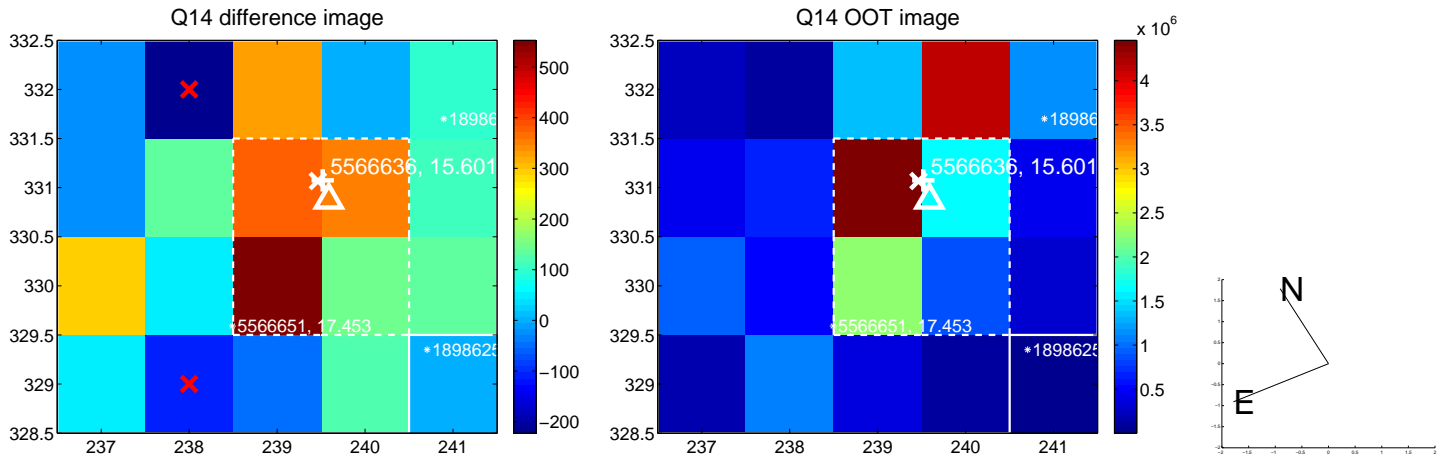
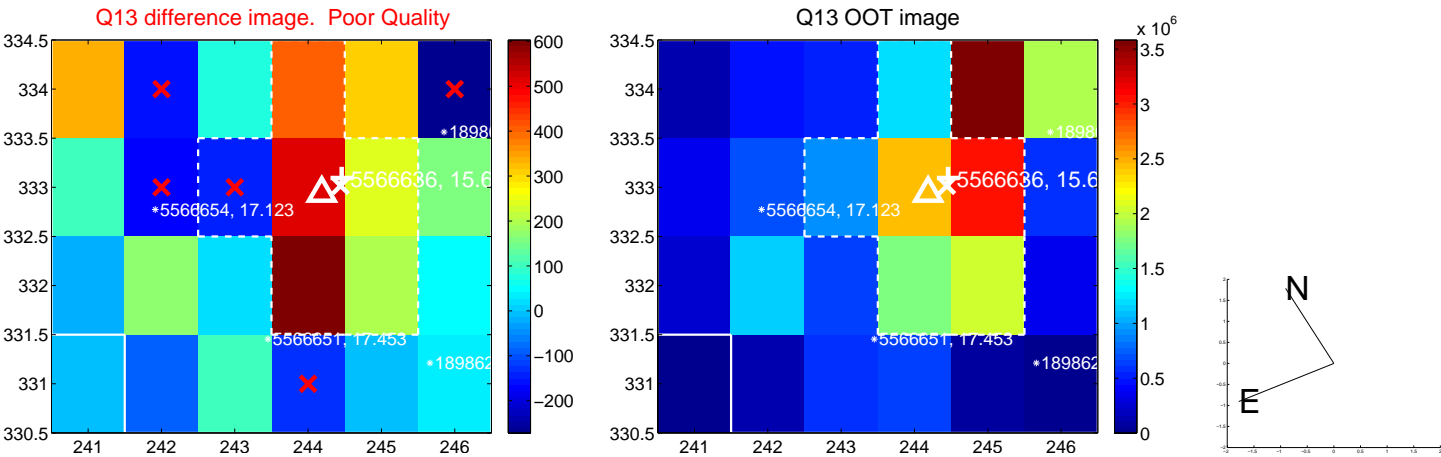
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



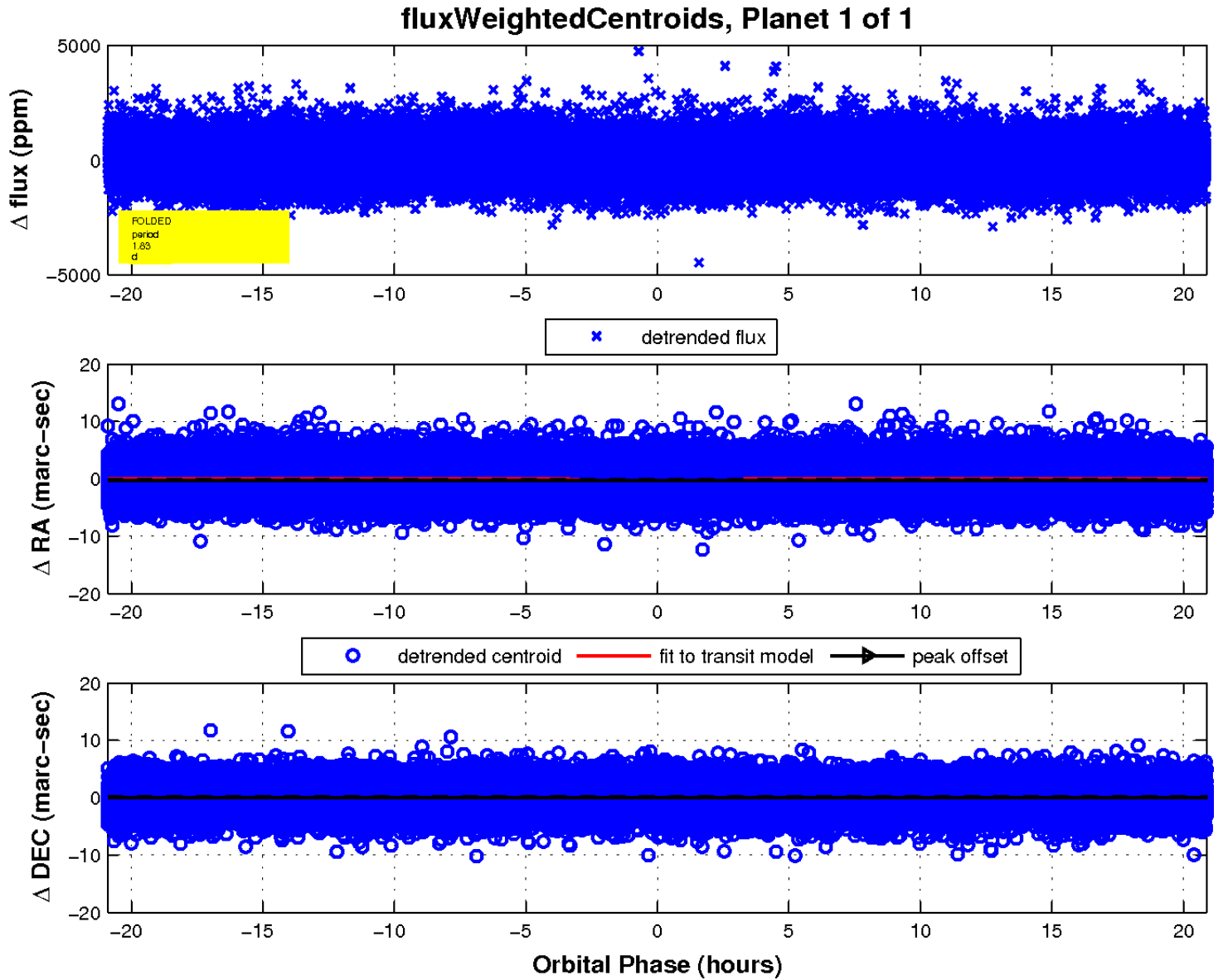
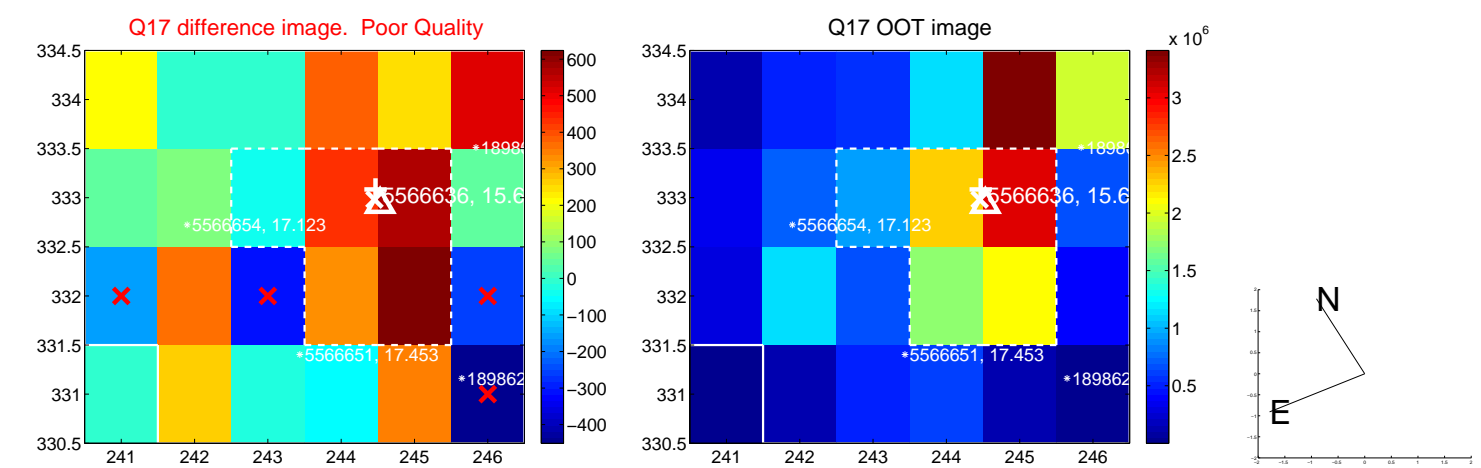
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

