

KIC 006716161

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})
006716161-01	OBS	No	1.330315	132.057119	14.0	2.967	8.8	7.1	2.27	6671	0.99	12208.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006716161-01	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.

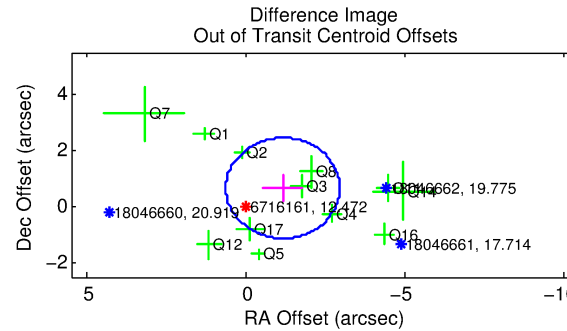
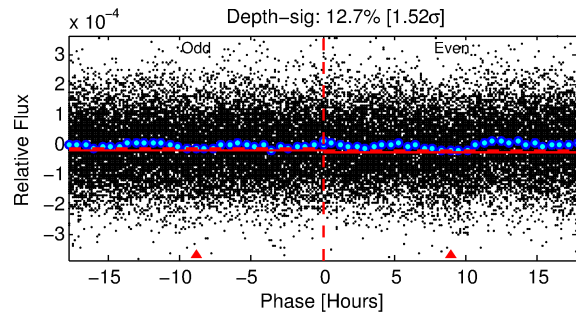
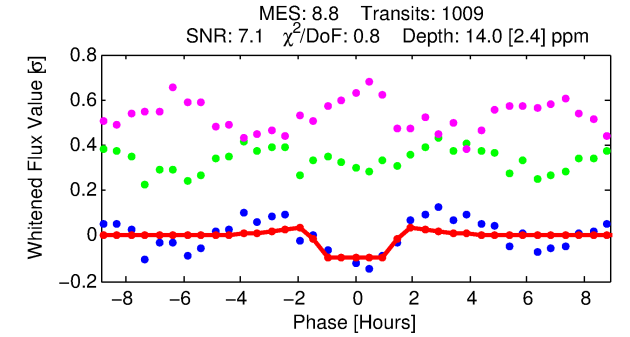
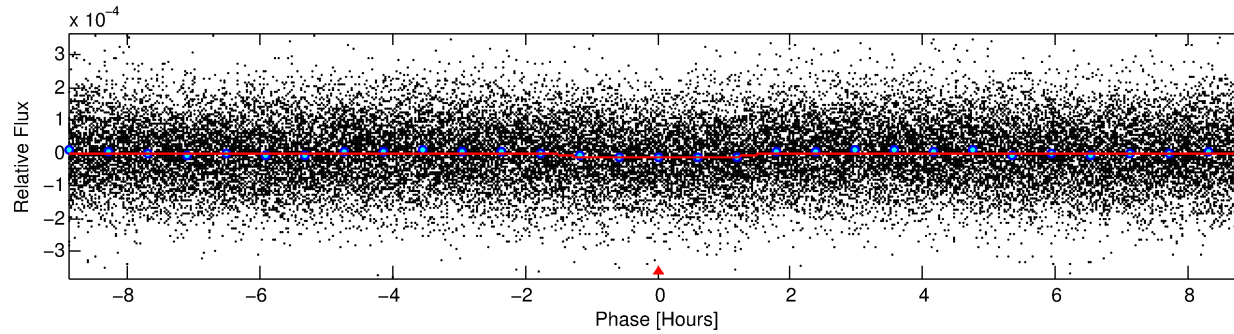
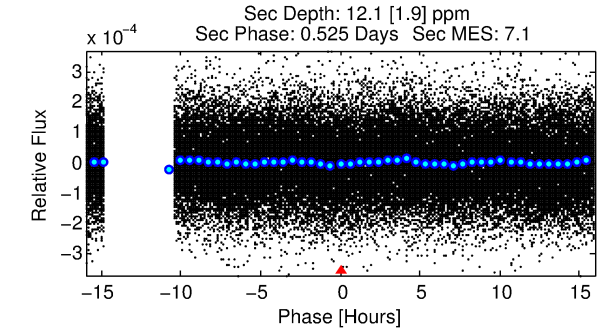
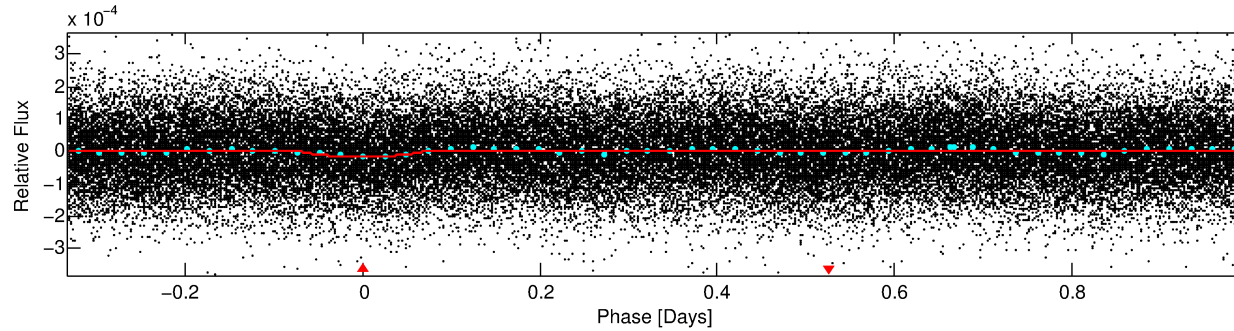
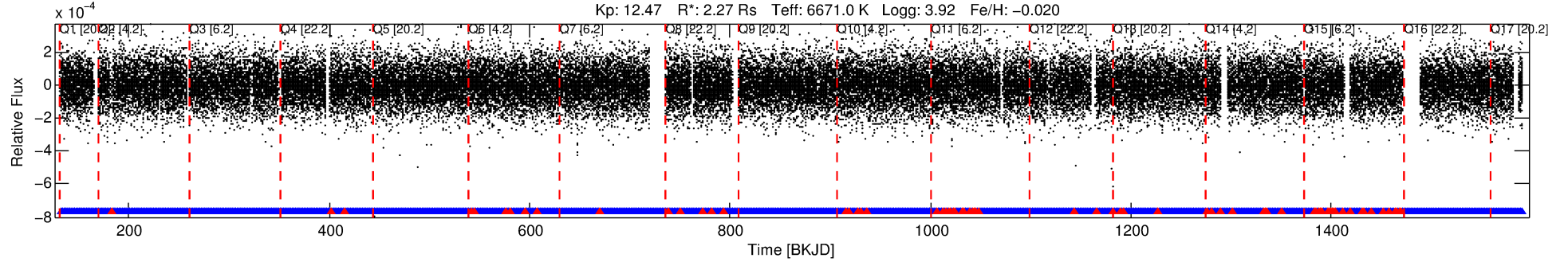
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006716161-01

No Significant Match Found

DV One-Page Summary

KIC: 6716161 Candidate: 1 of 1 Period: 1.330 d



DV Fit Results:

Period = 1.33032 [0.00002] d
Epoch = 132.0571 [0.0040] BKJD
Rp/R* = 0.0040 [0.0012]
a/R* = 1.80 [2.16]
b = 0.90 [0.38]
Seff = 12208.36 [7551.67]
Teq = 2680 [414] K
Rp = 0.99 [0.52] Re
a = 0.0274 [0.0107] AU
Ag = 5.10 [4.42] [0.93σ]
Teffp = 6229 [1001] K [3.28σ]

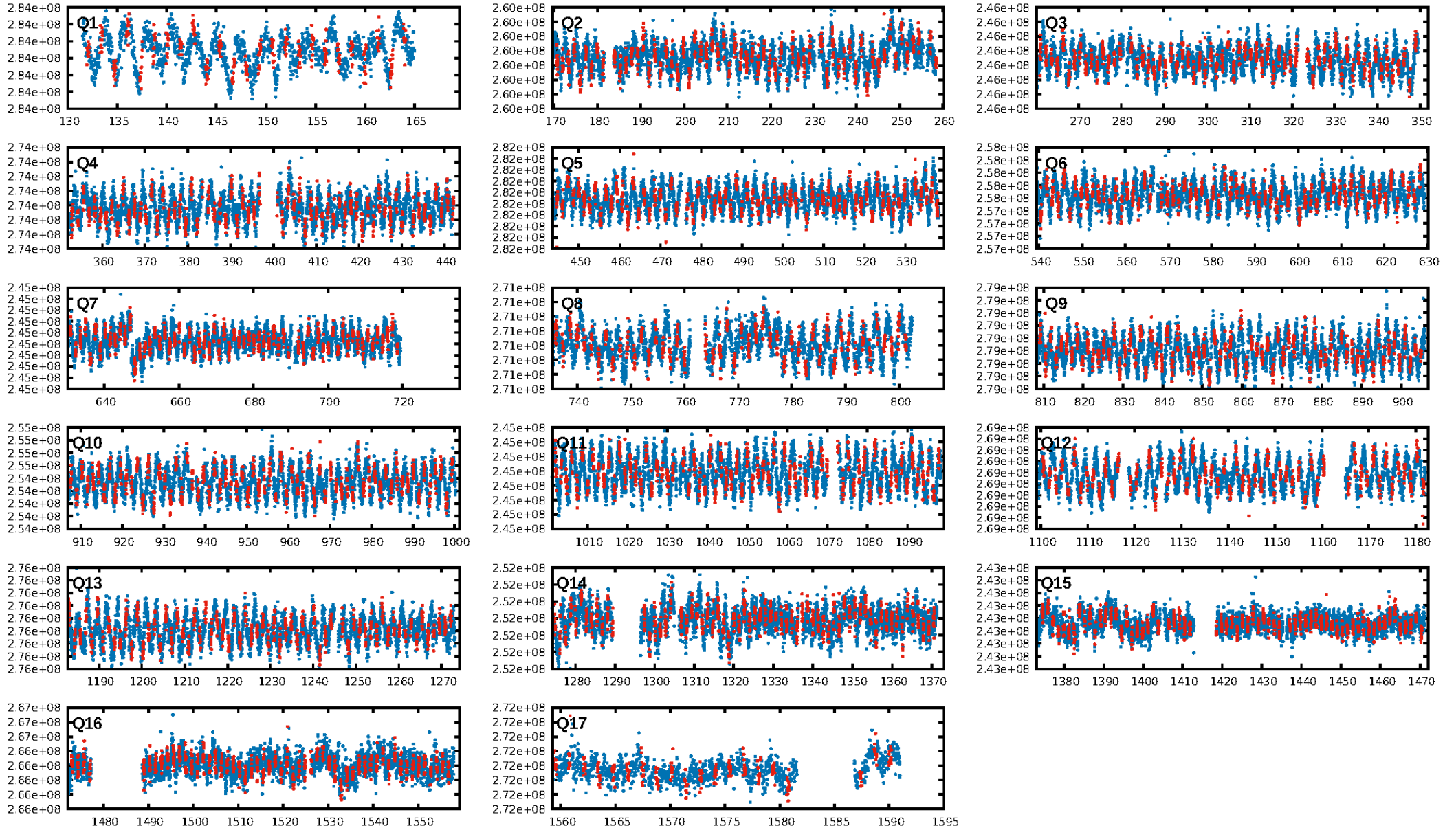
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.26e-16
RollingBand-fgt: 0.92 [891/964]
GhostDiagnostic-chr: -5.437
Centroid-sig: 0.0%
Centroid-so: 5.234 arcsec [4.24σ]
OotOffset-rm: 1.330 arcsec [2.23σ]
KicOffset-rm: 1.384 arcsec [2.28σ]
OotOffset-st: 2/3/4/3 [12]
KicOffset-st: 2/3/4/3 [12]
DiffImageQuality-fgm: 0.58 [7/12]
DiffImageOverlap-fno: 1.00 [17/17]

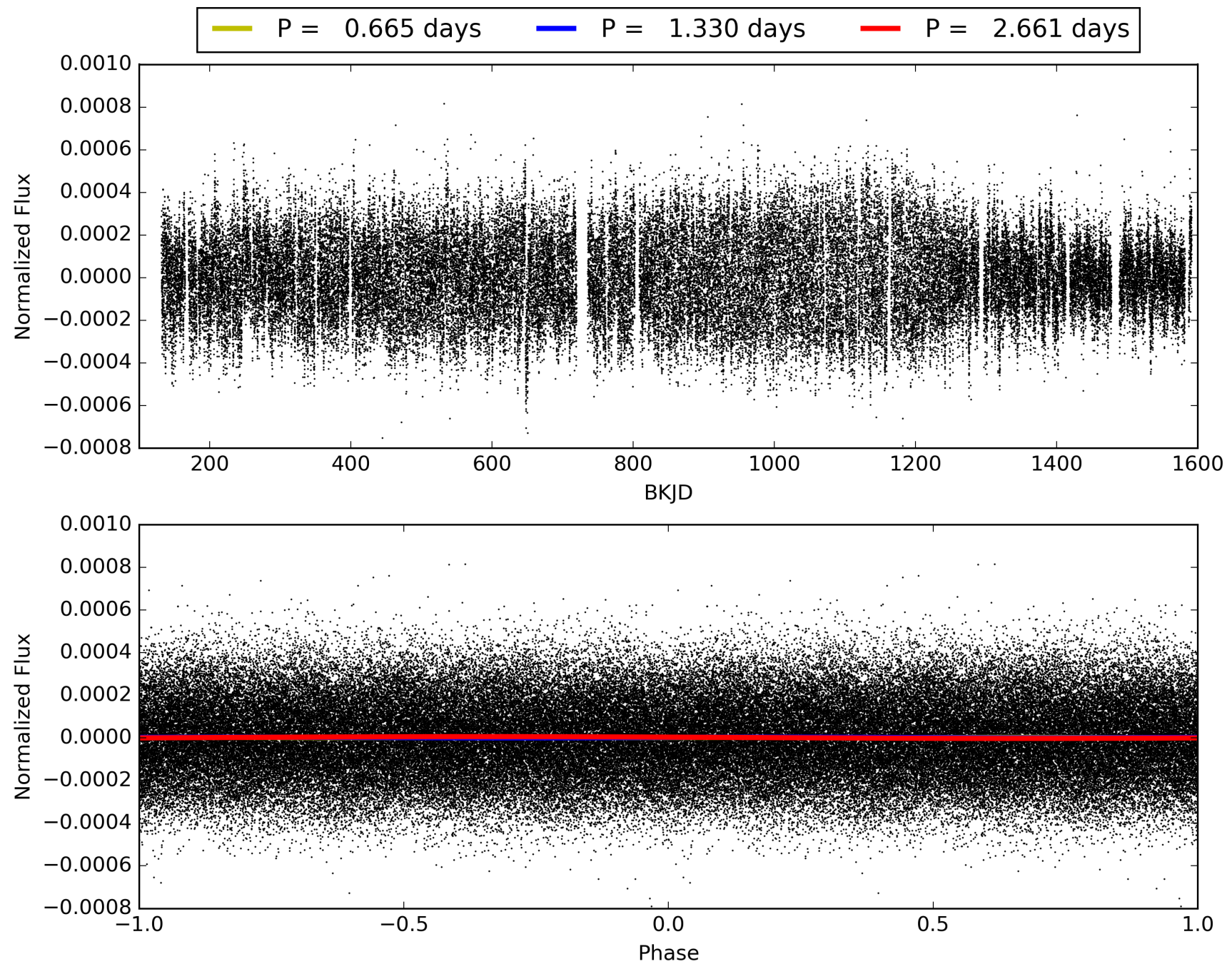
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:27:13 Z

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

TCE 006716161-01, PDC Light Curves

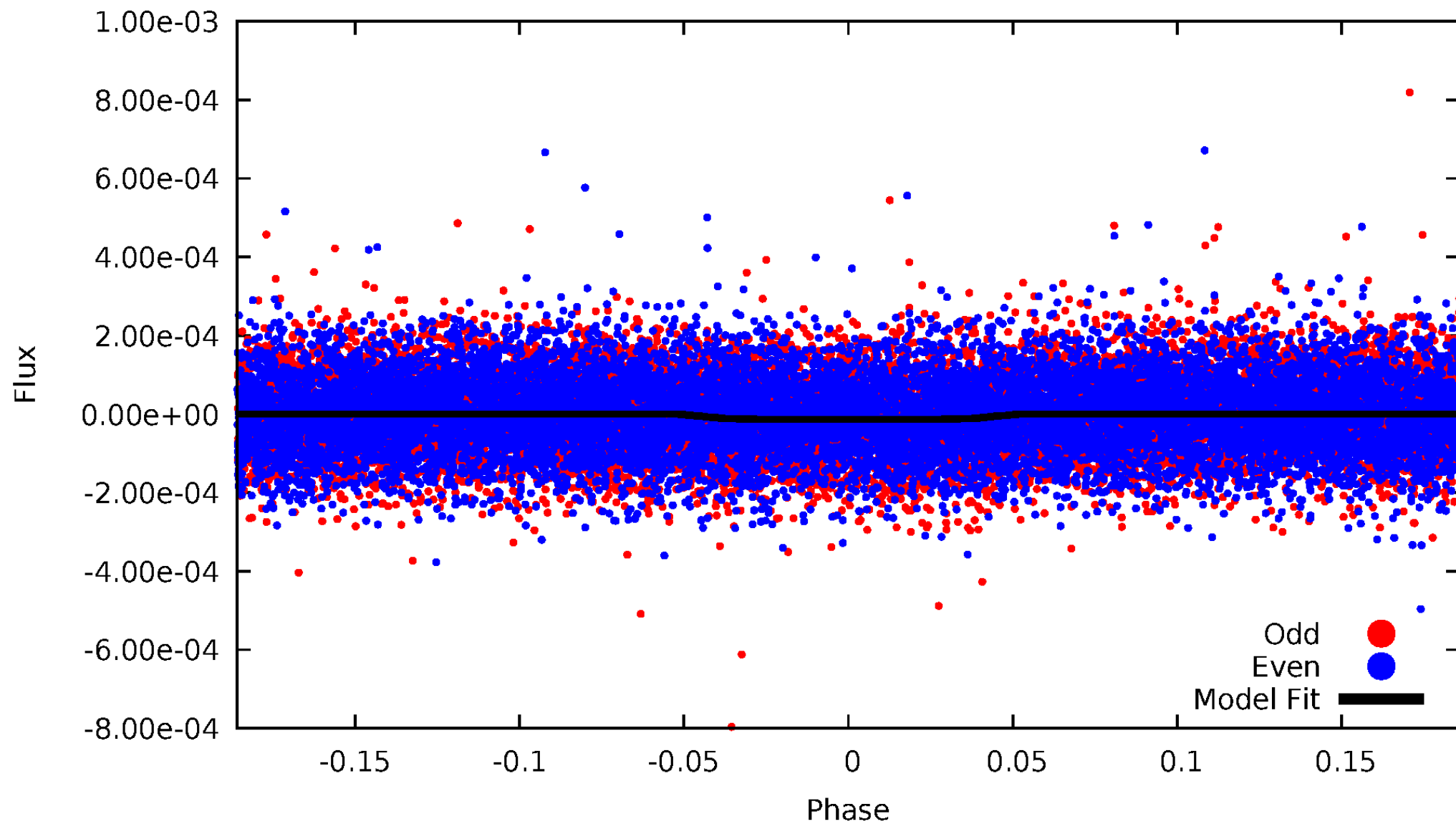


TCE 006716161-01



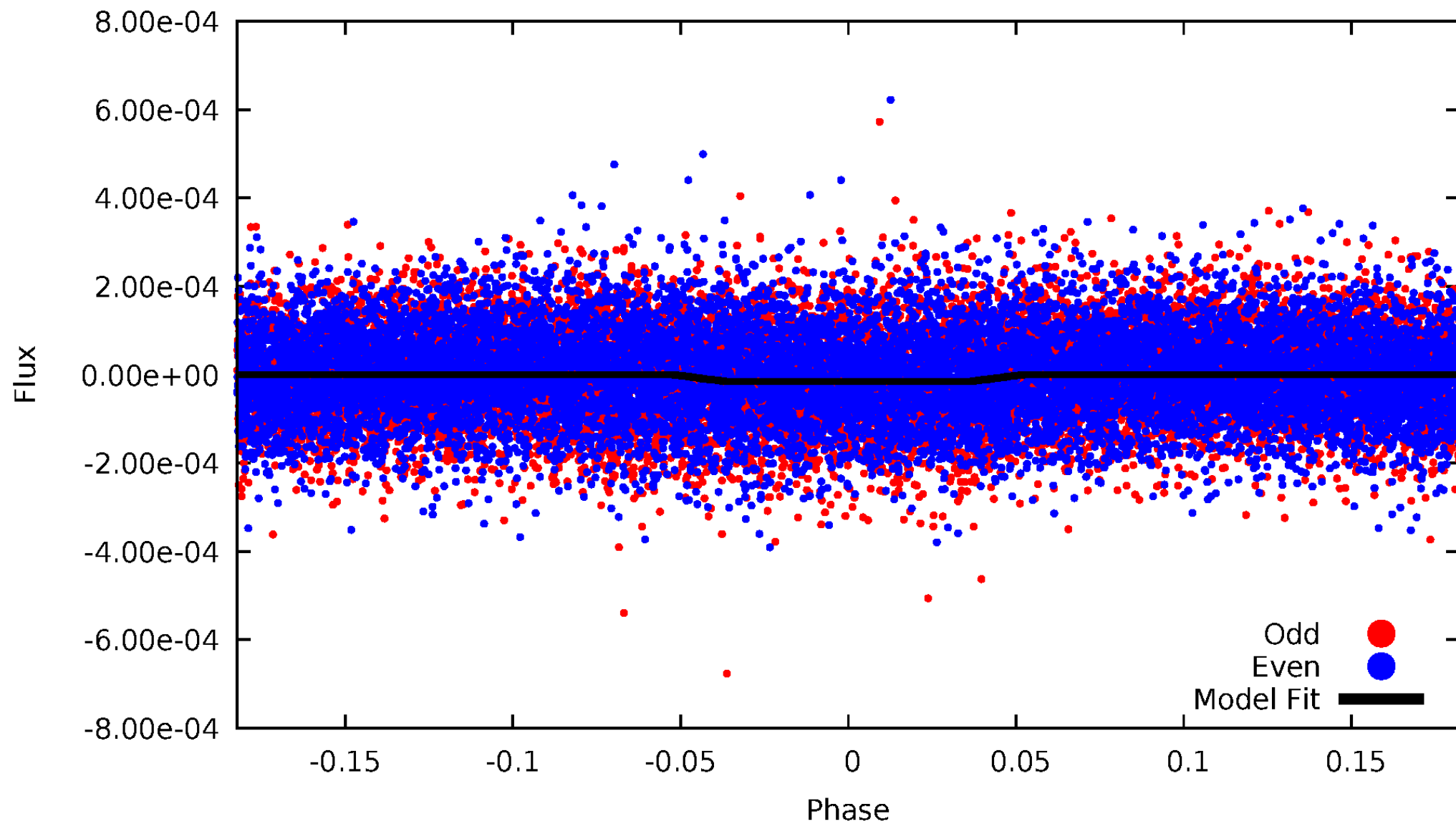
DV Odd/Even

TCE 006716161-01



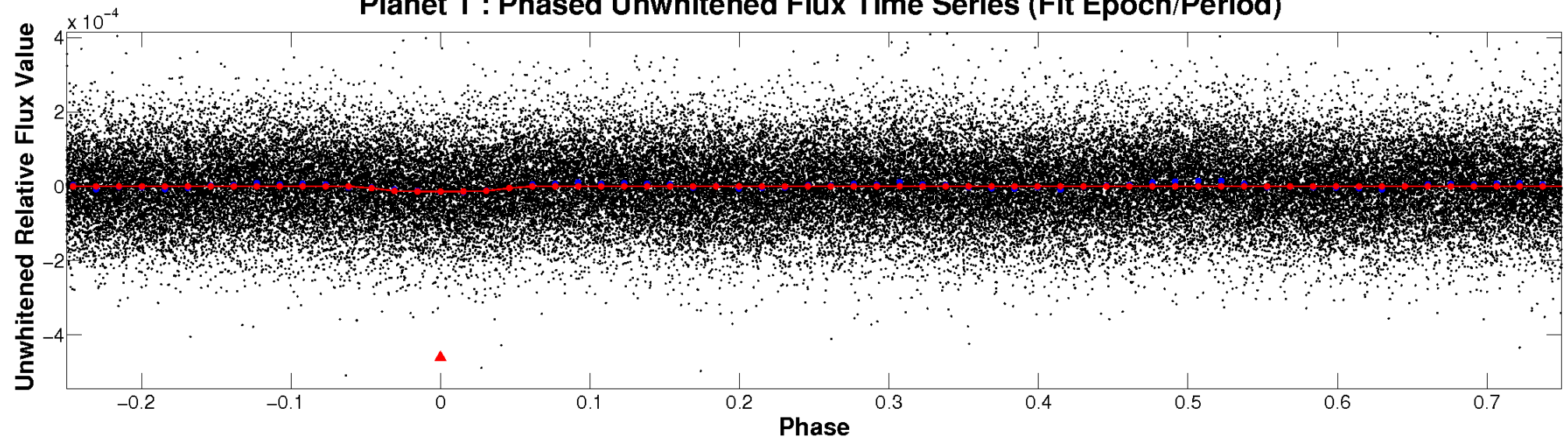
ALT Odd/Even

TCE 006716161-01

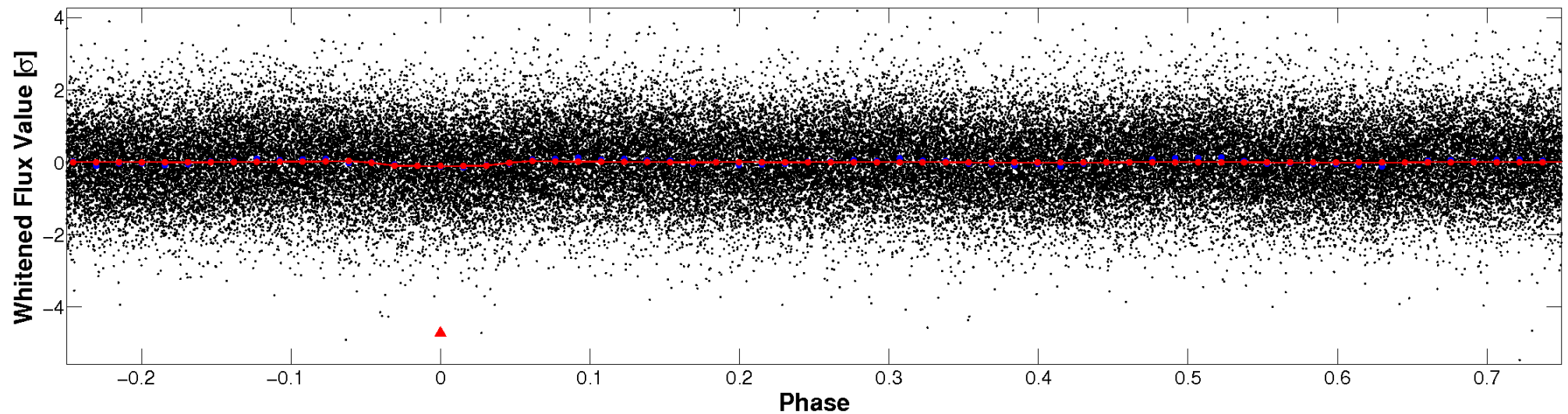


Non-Whitened Vs. Whitened Light Curve

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

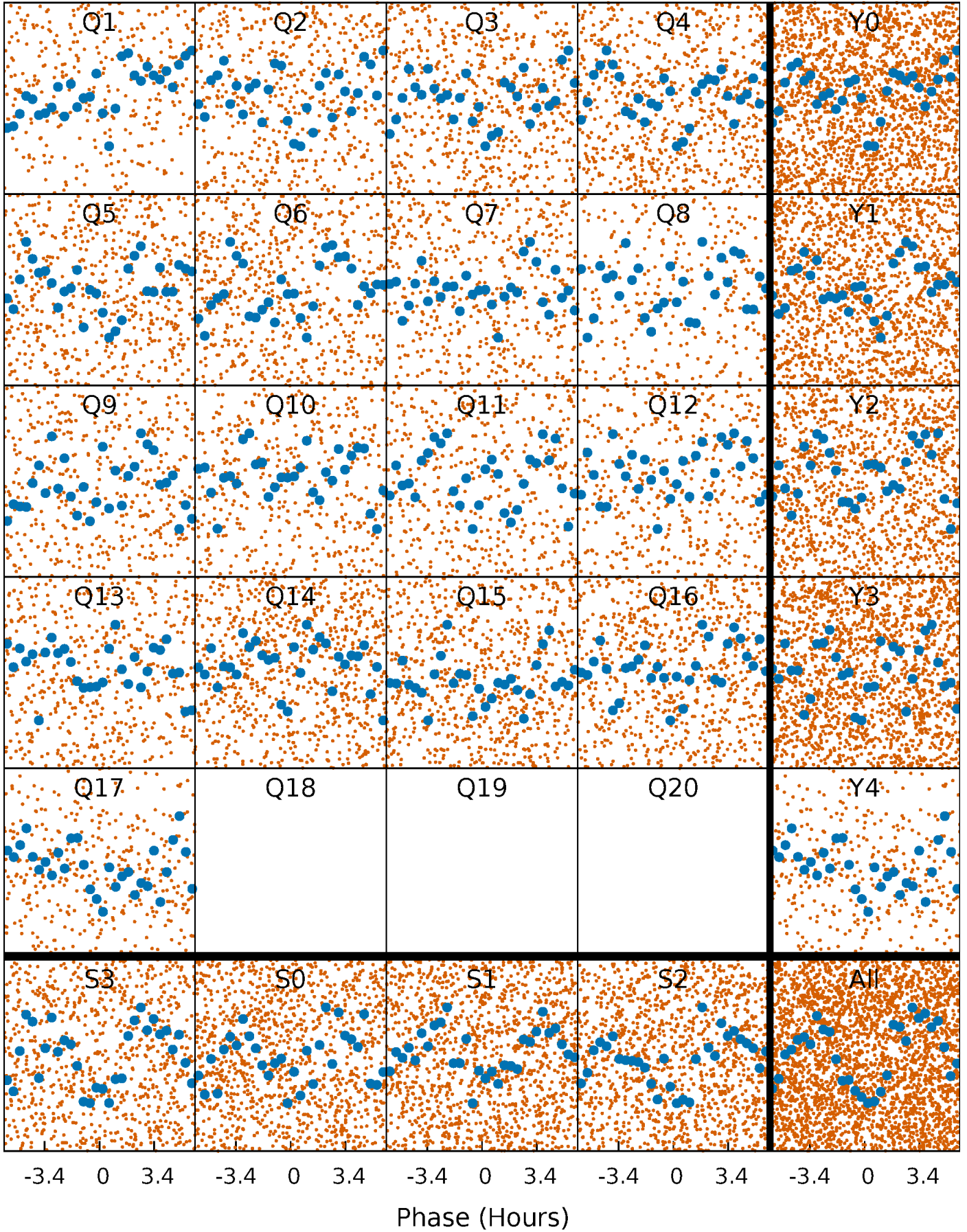


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



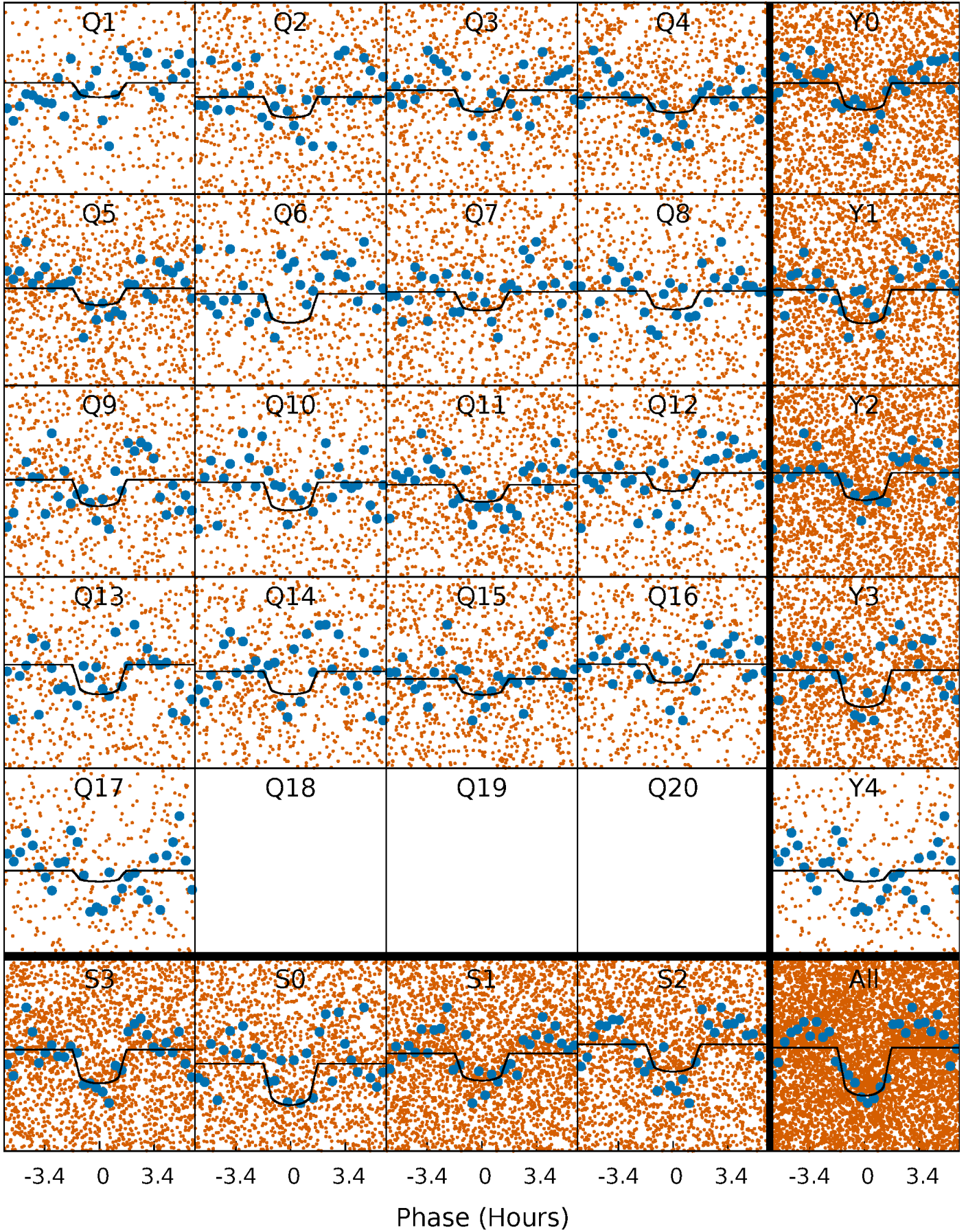
PDC Quarter-Phased Transit Curves

TCE 006716161-01 P= 1.330315 Days $T_0=132.057119$ (BKJD)



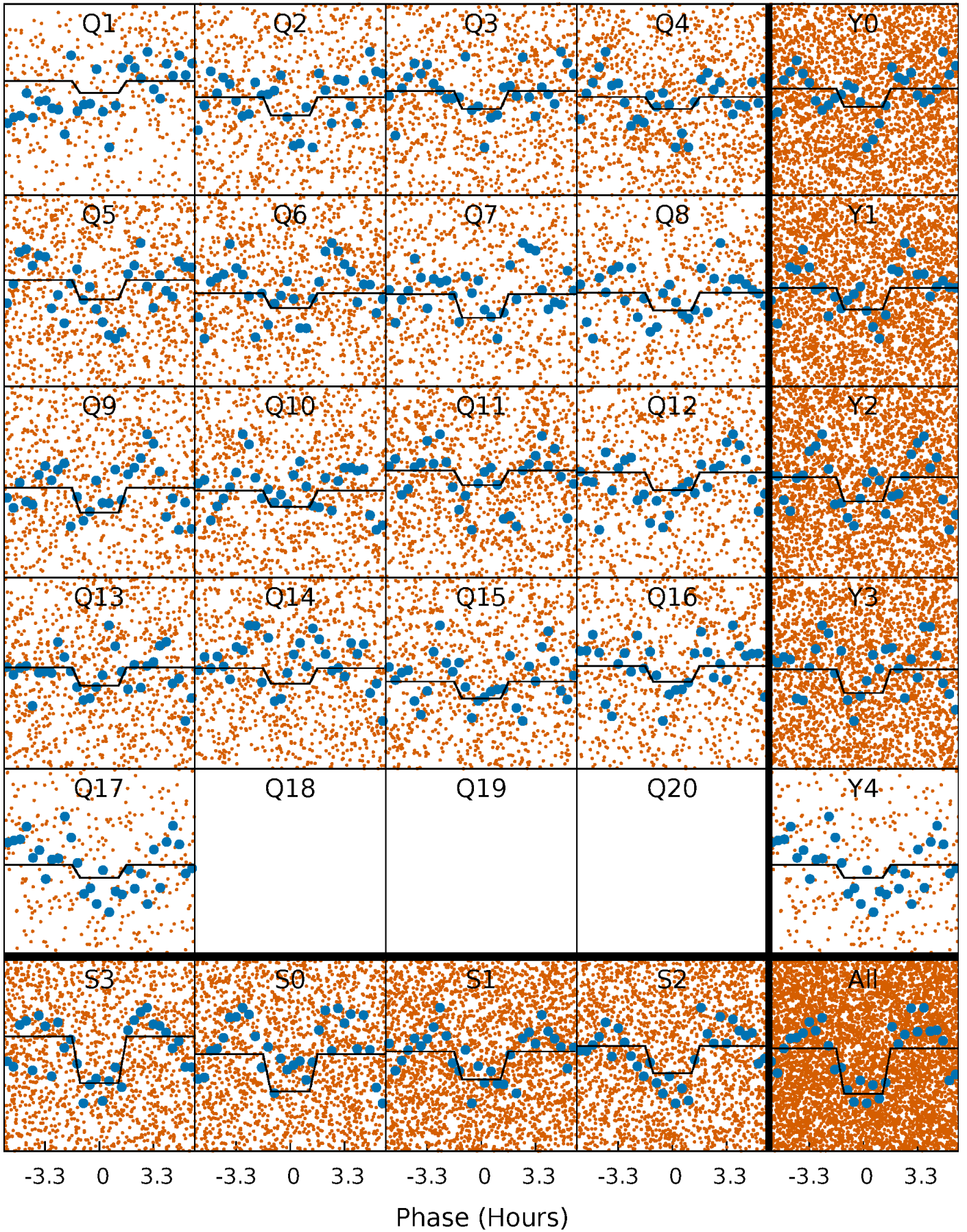
DV Quarter-Phased Transit Curves

TCE 006716161-01 P= 1.330315 Days $T_0=132.057119$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

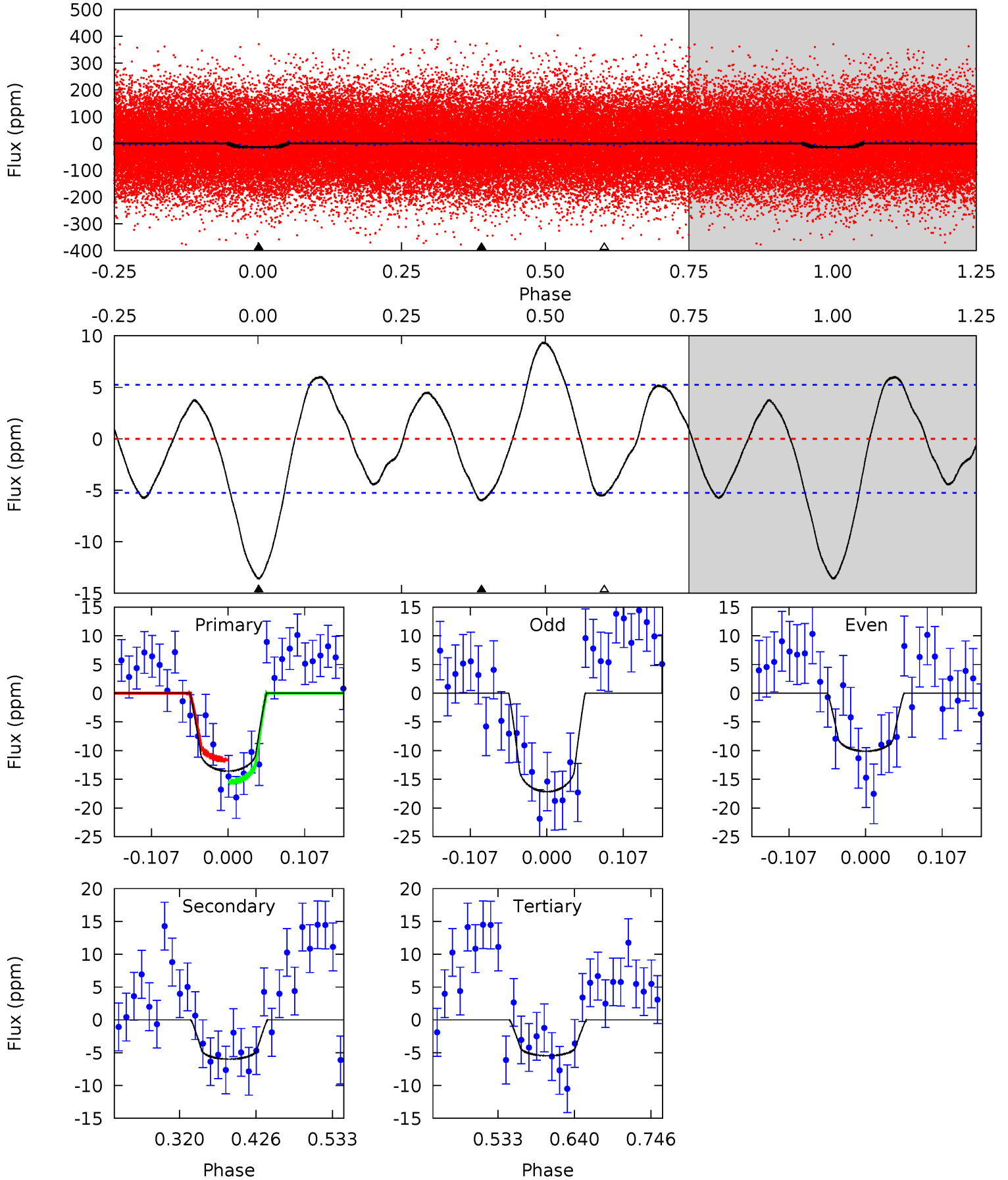
TCE 006716161-01 P= 1.330322 Days $T_0=132.056778$ (BKJD)



DV Model-Shift Uniqueness Test

006716161-01, P = 1.330315 Days, E = 130.726804 Days

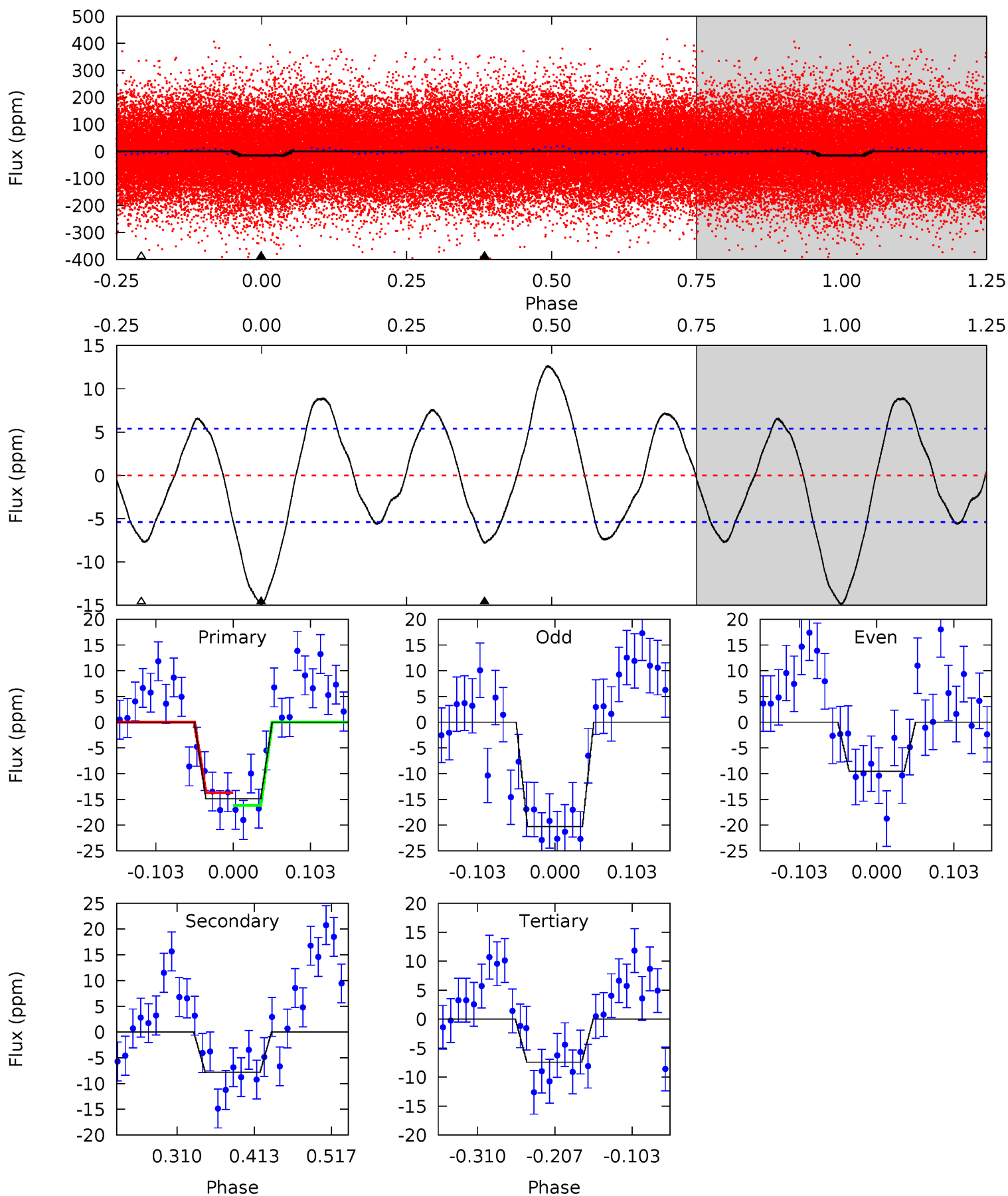
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	5.19	4.74	0	4.55	1.61	3.40	7.03	11.8	0.45	5.19	3.05	0.92	0.41	1.67



Alt Model-Shift Uniqueness Test

006716161-01, P = 1.330322 Days, E = 130.726456 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	6.57	6.26	0	4.56	1.63	4.63	6.29	12.5	0.31	6.57	4.45	1.07	0.46	1.02



Stellar Parameters For KIC 006716161

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6671^{+186}_{-255}	$3.915^{+0.343}_{-0.147}$	$-0.020^{+0.250}_{-0.300}$	$2.272^{+0.601}_{-0.976}$	$1.548^{+0.190}_{-0.354}$	$0.186^{+0.522}_{-0.082}$
	+3%/-4%	+9%/-4%	+1250%/-1500%	+26%/-43%	+12%/-23%	+281%/-44%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006716161-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-6 ± 1	$0.93^{+0.38}_{-0.29}$	3678^{+300}_{-363}	5033^{+1108}_{-608}	$2.734^{+3.283}_{-1.344}$
Alt.	-8 ± 1	$0.88^{+0.35}_{-0.29}$	3666^{+292}_{-404}	5564^{+1242}_{-723}	$4.081^{+5.124}_{-1.990}$

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 $A_{obs} \gg 1.0$

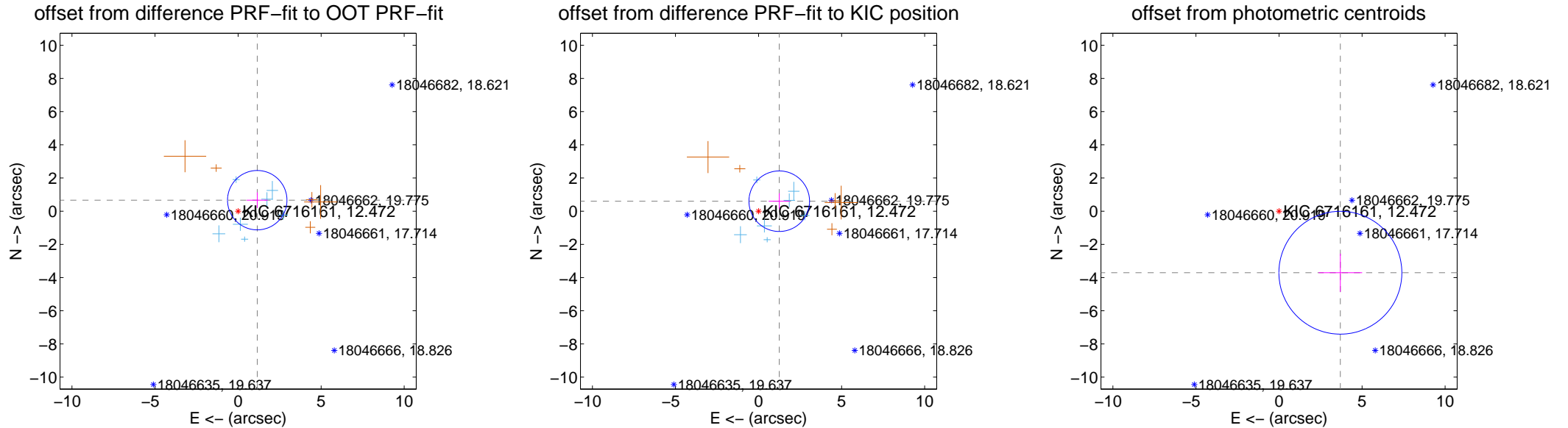
DV Centroid Data

Supplemental centroid analysis for 006716161-01. Kepler magnitude: 12.47. Transit SNR 7.12

There are 7 quarters with good PRF difference image offsets

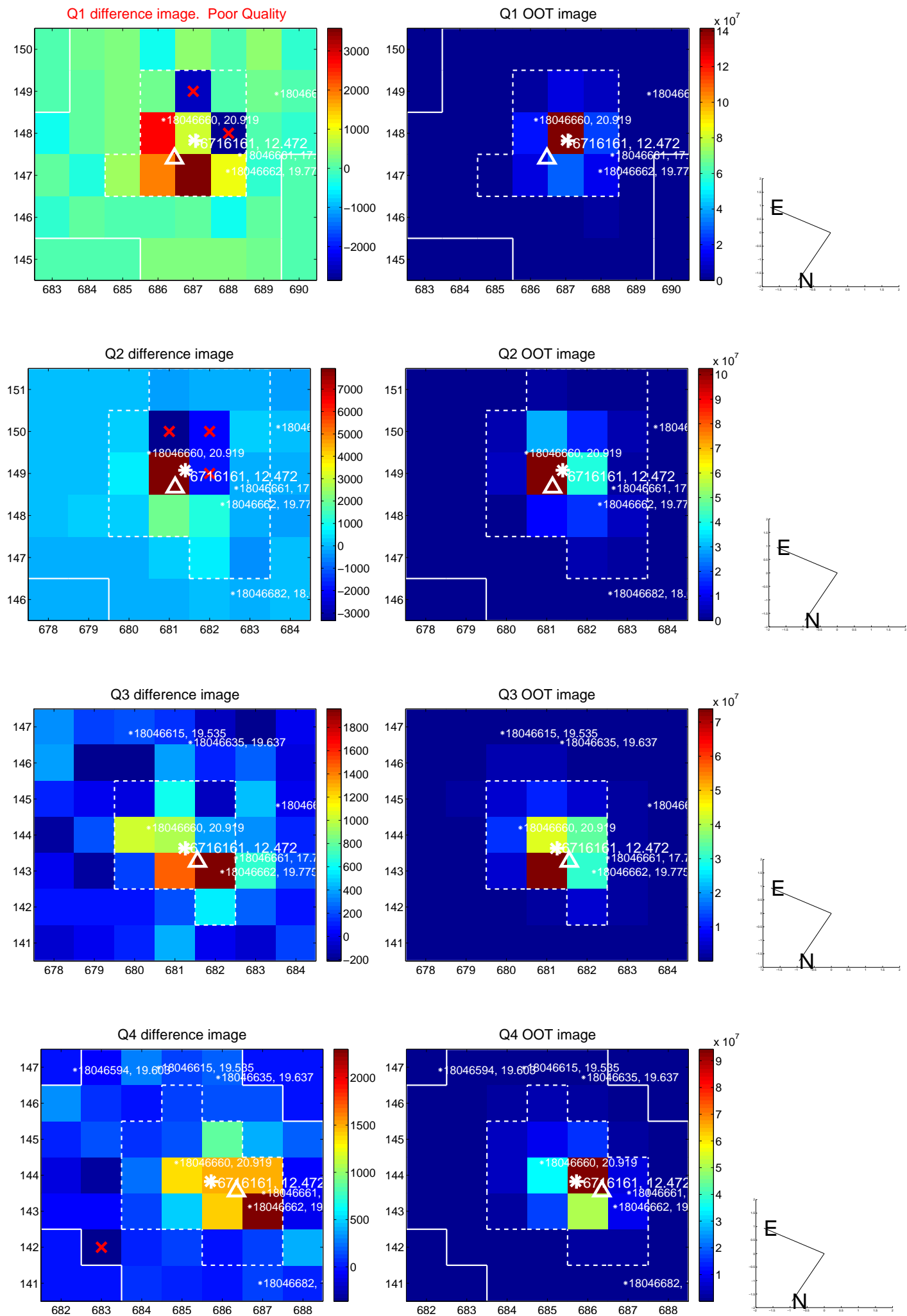
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.330 ± 0.596	2.23	-1.154 ± 0.633	0.663 ± 0.470
PRF-fit source offset from KIC position	1.384 ± 0.608	2.28	-1.246 ± 0.635	0.602 ± 0.477
photometric centroid source offset	5.23 ± 1.23	4.24	-3.69 ± 1.31	-3.71 ± 1.15

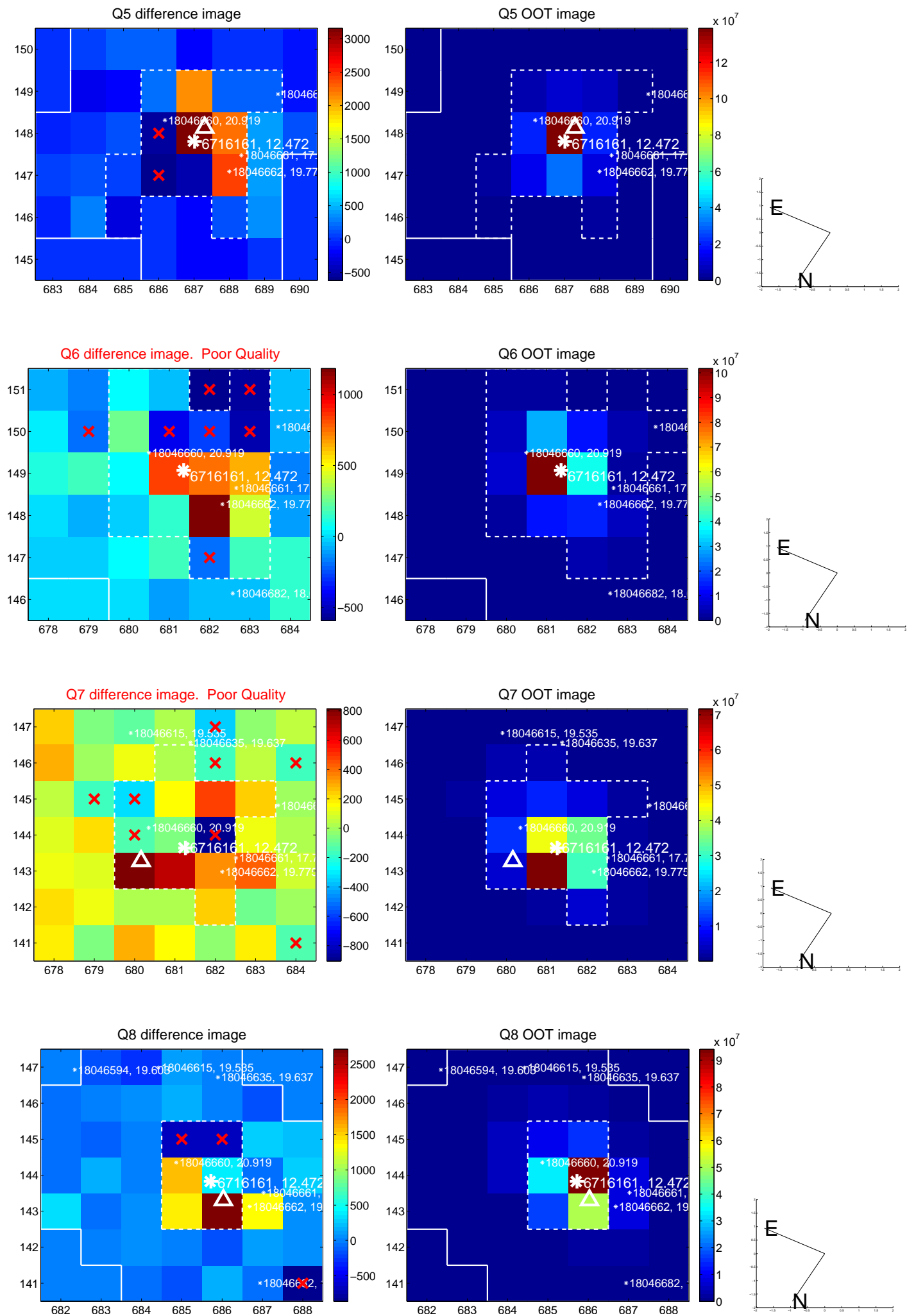


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

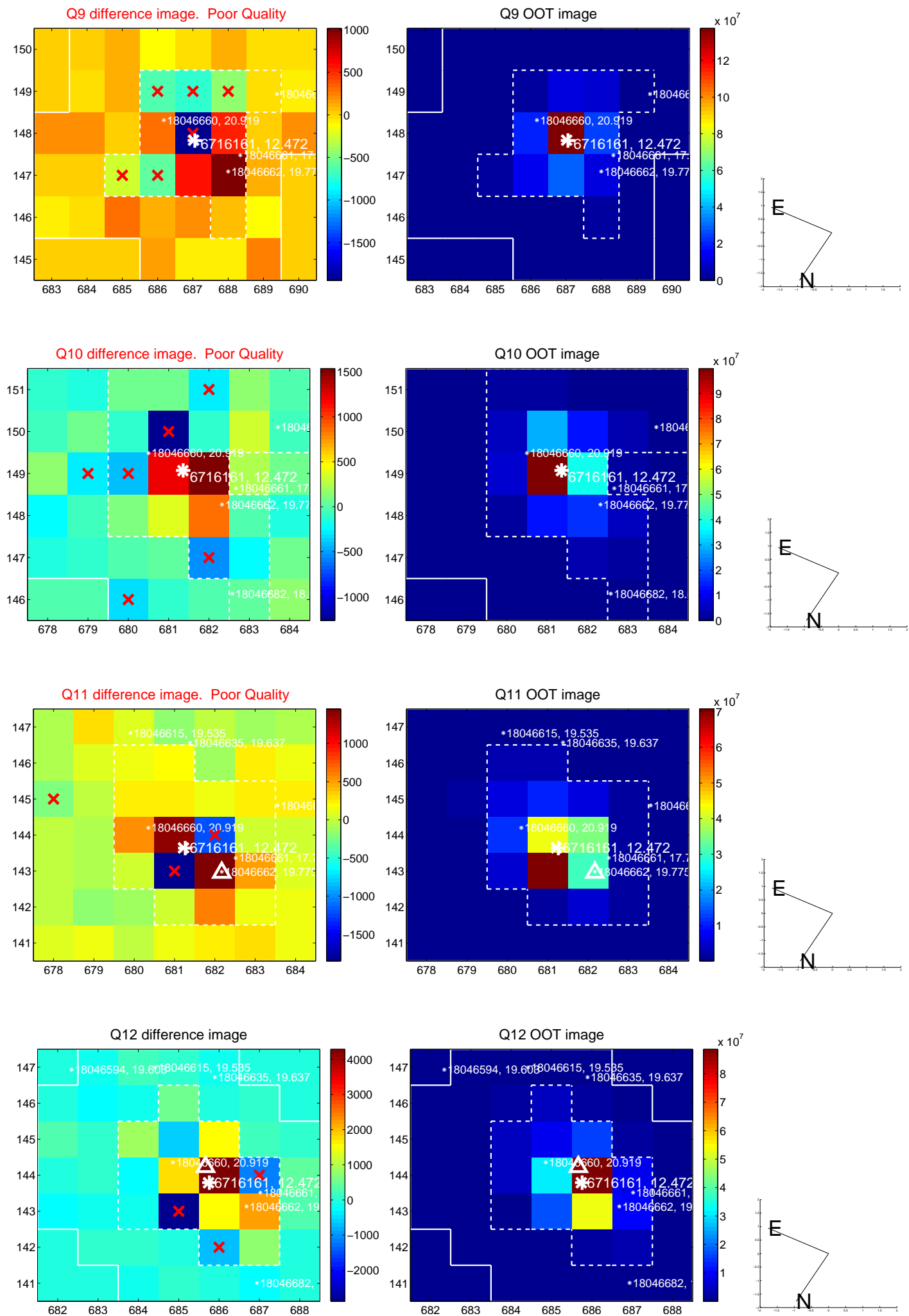
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



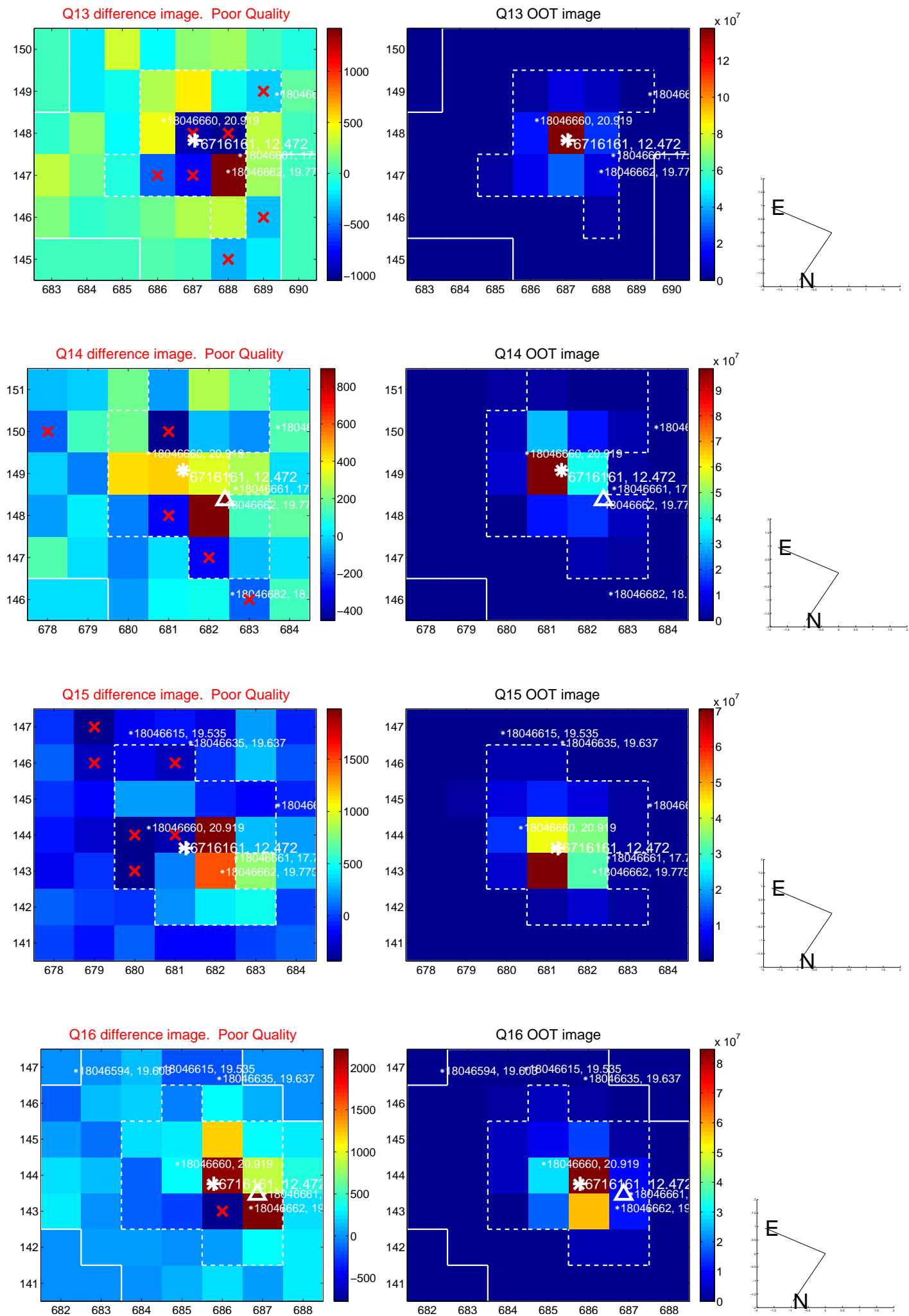
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



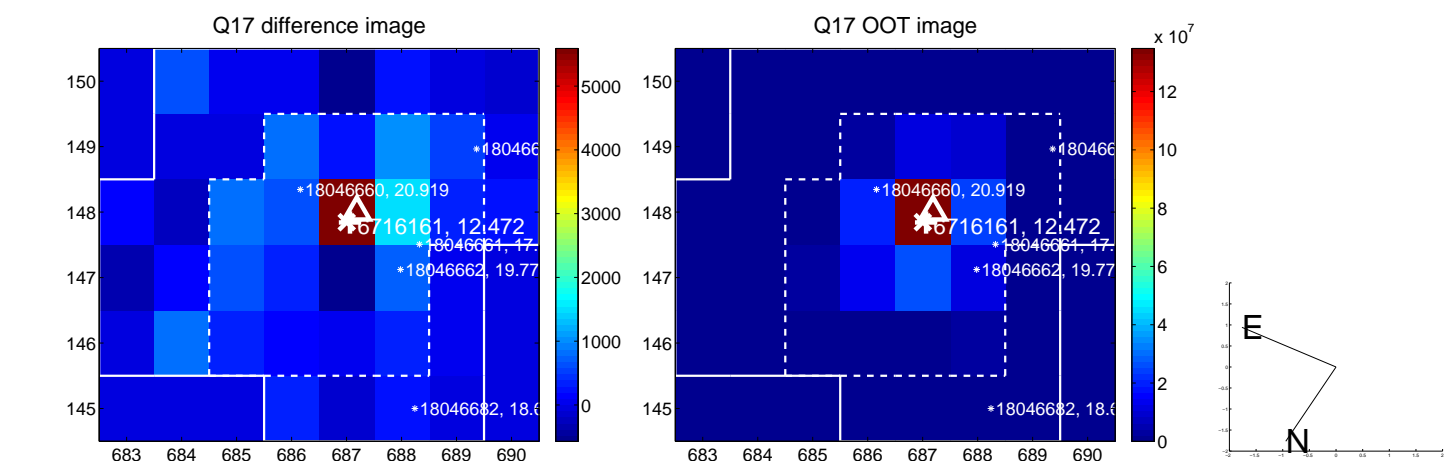
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



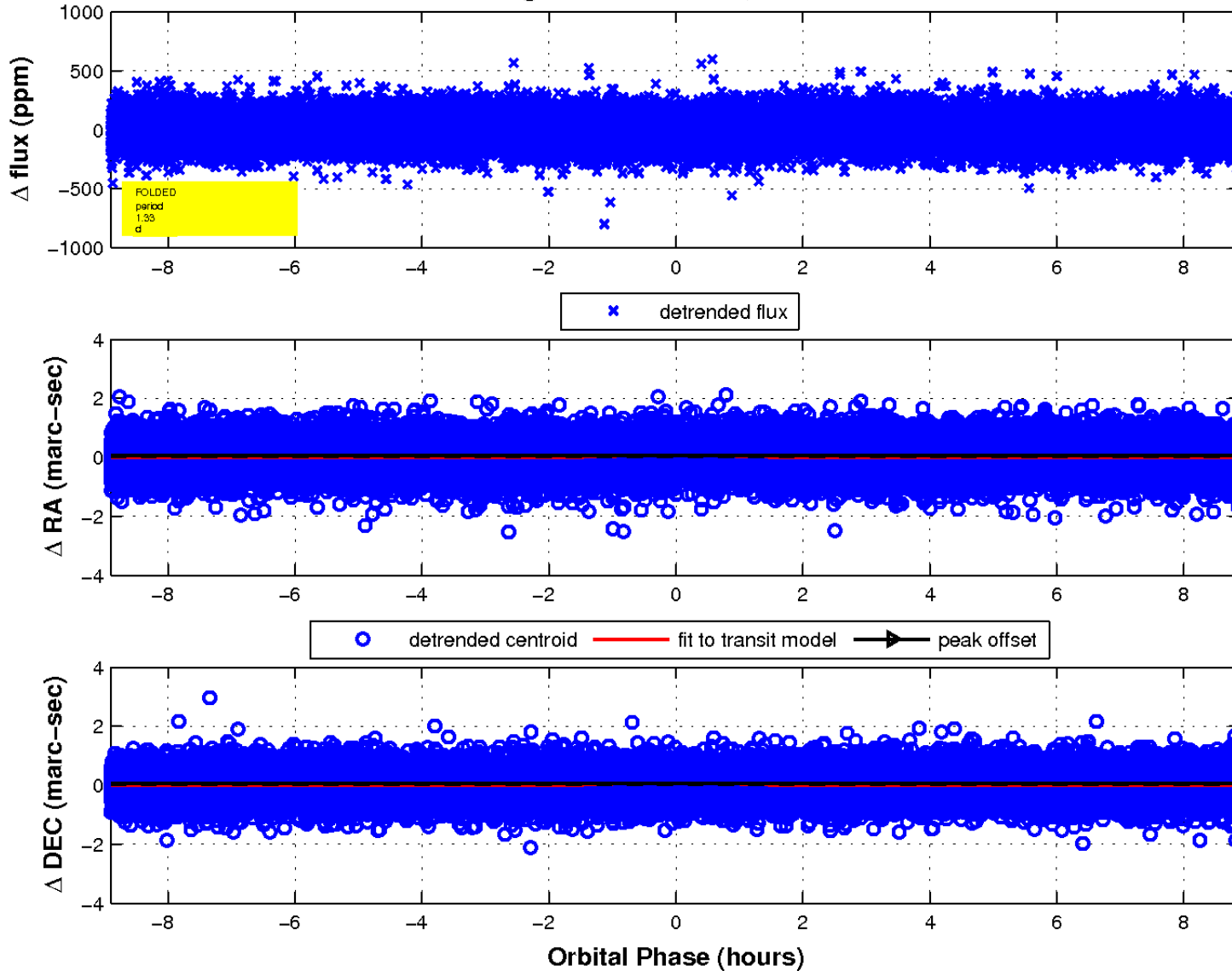
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

