

KIC 009716628

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})
009716628-01	OBS	No	1.365782	132.812047	4.2	13.666	8.5	4.8	2.60	7839	0.57	25603.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009716628-01	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

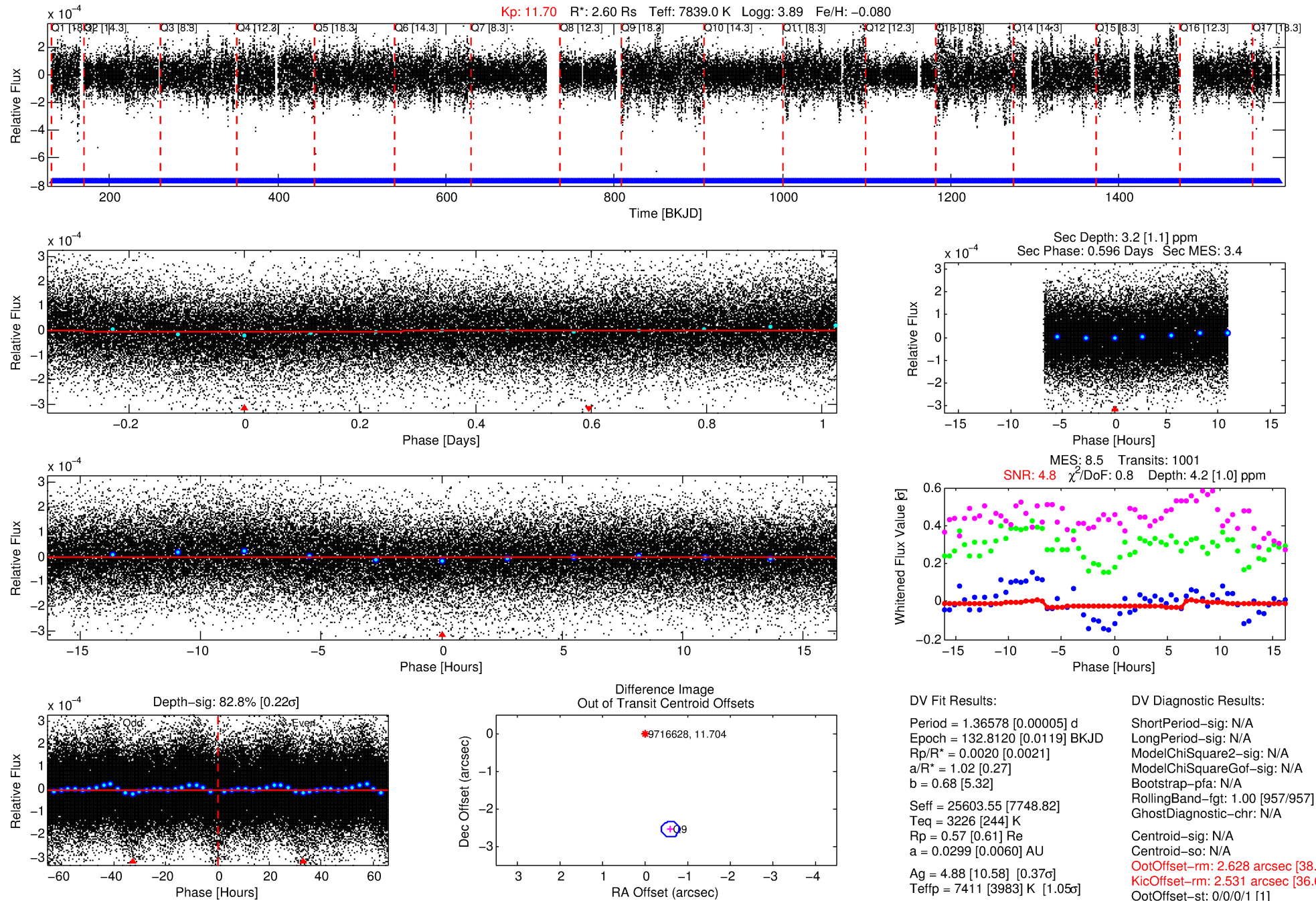
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009716628-01

No Significant Match Found

DV One-Page Summary

KIC: 9716628 Candidate: 1 of 1 Period: 1.366 d



DV Fit Results:

Period = 1.36578 [0.00005] d
Epoch = 132.8120 [0.0119] BKJD
 $R_p/R^* = 0.0020 [0.0021]$
 $a/R^* = 1.02 [0.27]$
 $b = 0.68 [5.32]$
 $\text{Seff} = 25603.55 [7748.82]$
 $T_{\text{eq}} = 3226 [244] \text{ K}$
 $R_p = 0.57 [0.61] R_{\text{e}}$
 $a = 0.0299 [0.0060] \text{ AU}$
 $\text{Ag} = 4.88 [10.58] [0.37\sigma]$
 $T_{\text{eff}} = 7411 [3983] \text{ K} [1.05\sigma]$

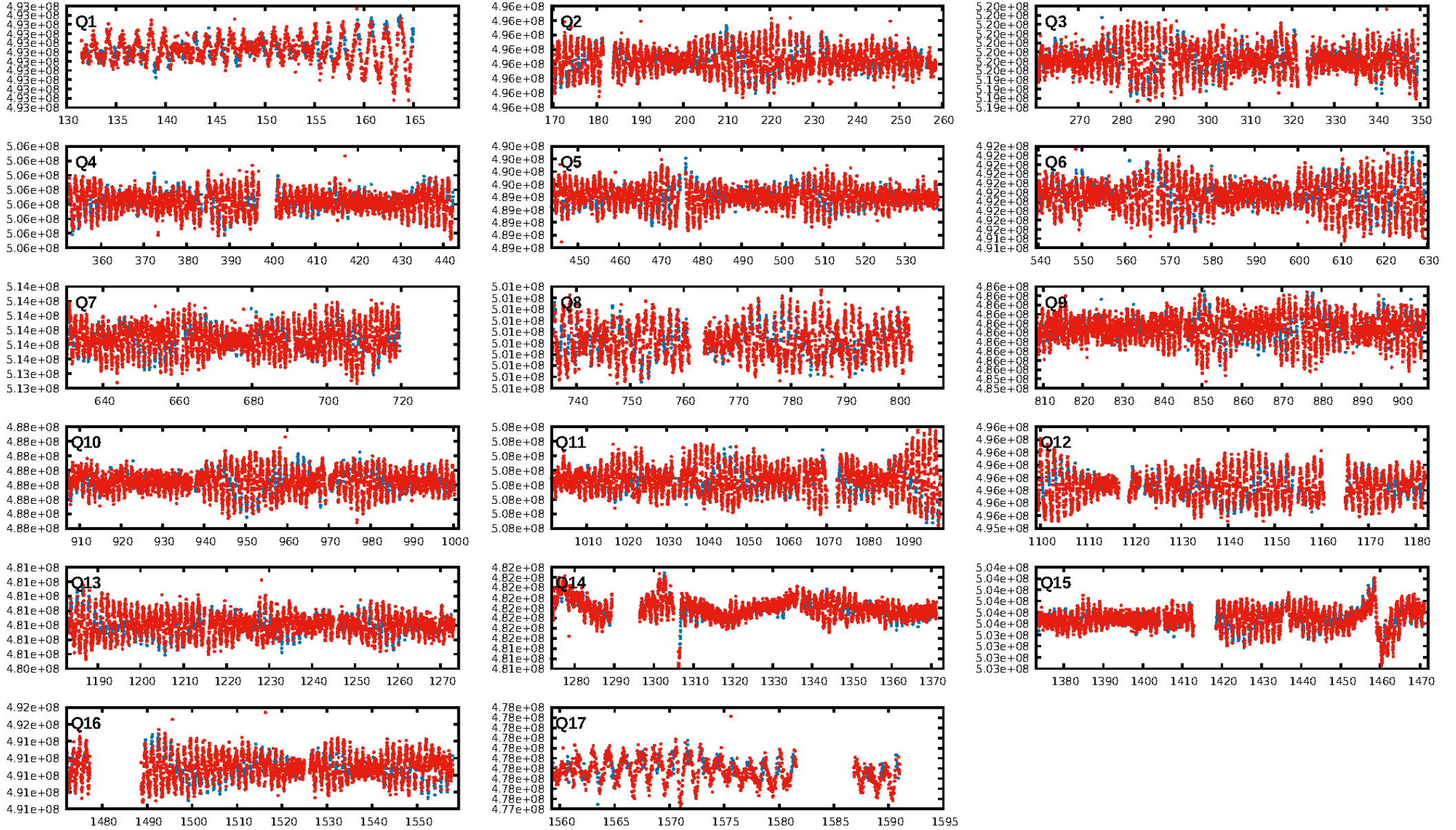
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [957/957]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
 $\text{OotOffset-rm}: 2.628 \text{ arcsec} [38.12\sigma]$
 $\text{KicOffset-rm}: 2.531 \text{ arcsec} [36.69\sigma]$
 $\text{OotOffset-st}: 0/0/0/1 [1]$
 $\text{KicOffset-st}: 0/0/0/1 [1]$
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [17/17]

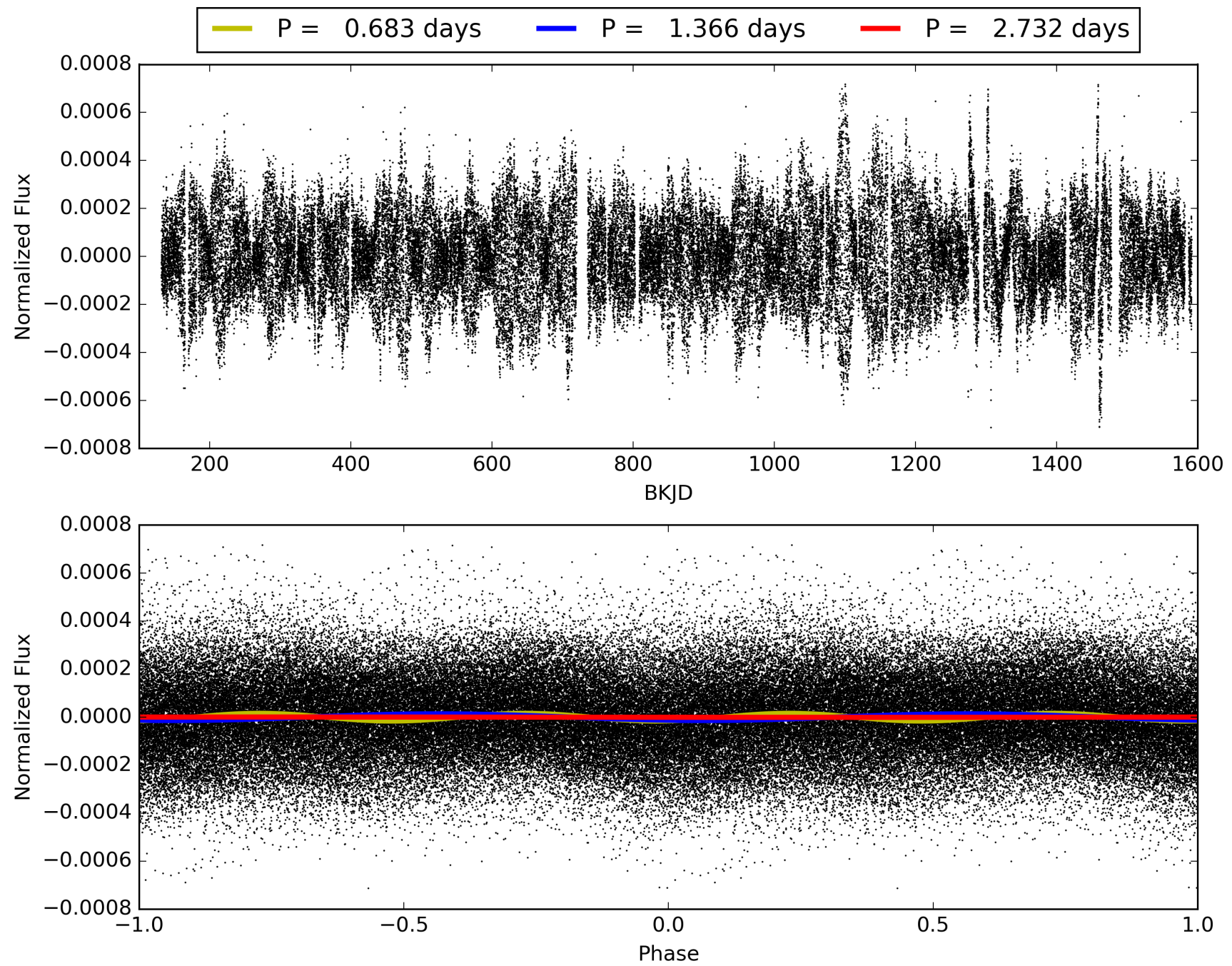
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 17:26:28 Z

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

TCE 009716628-01, PDC Light Curves

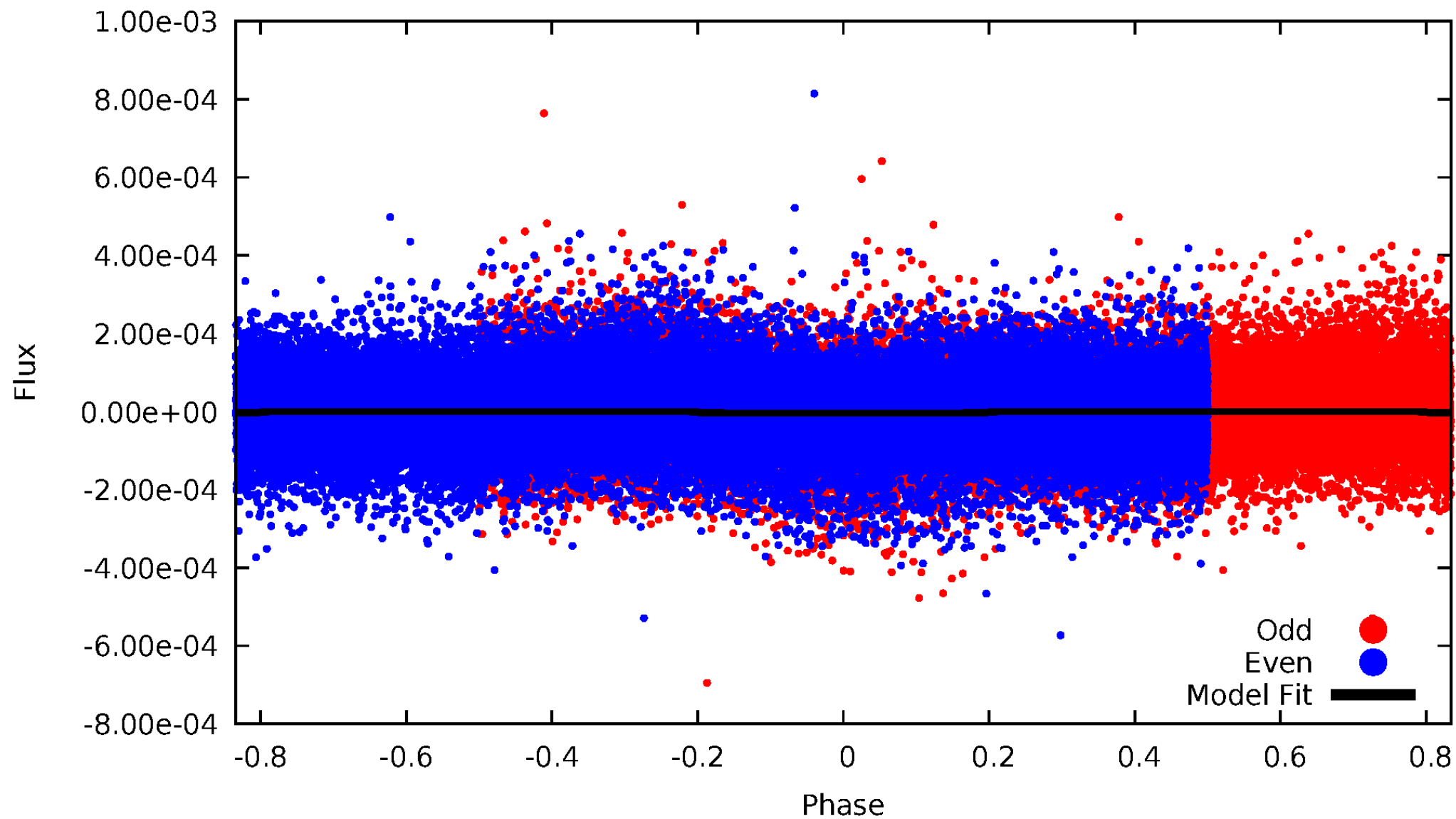


TCE 009716628-01



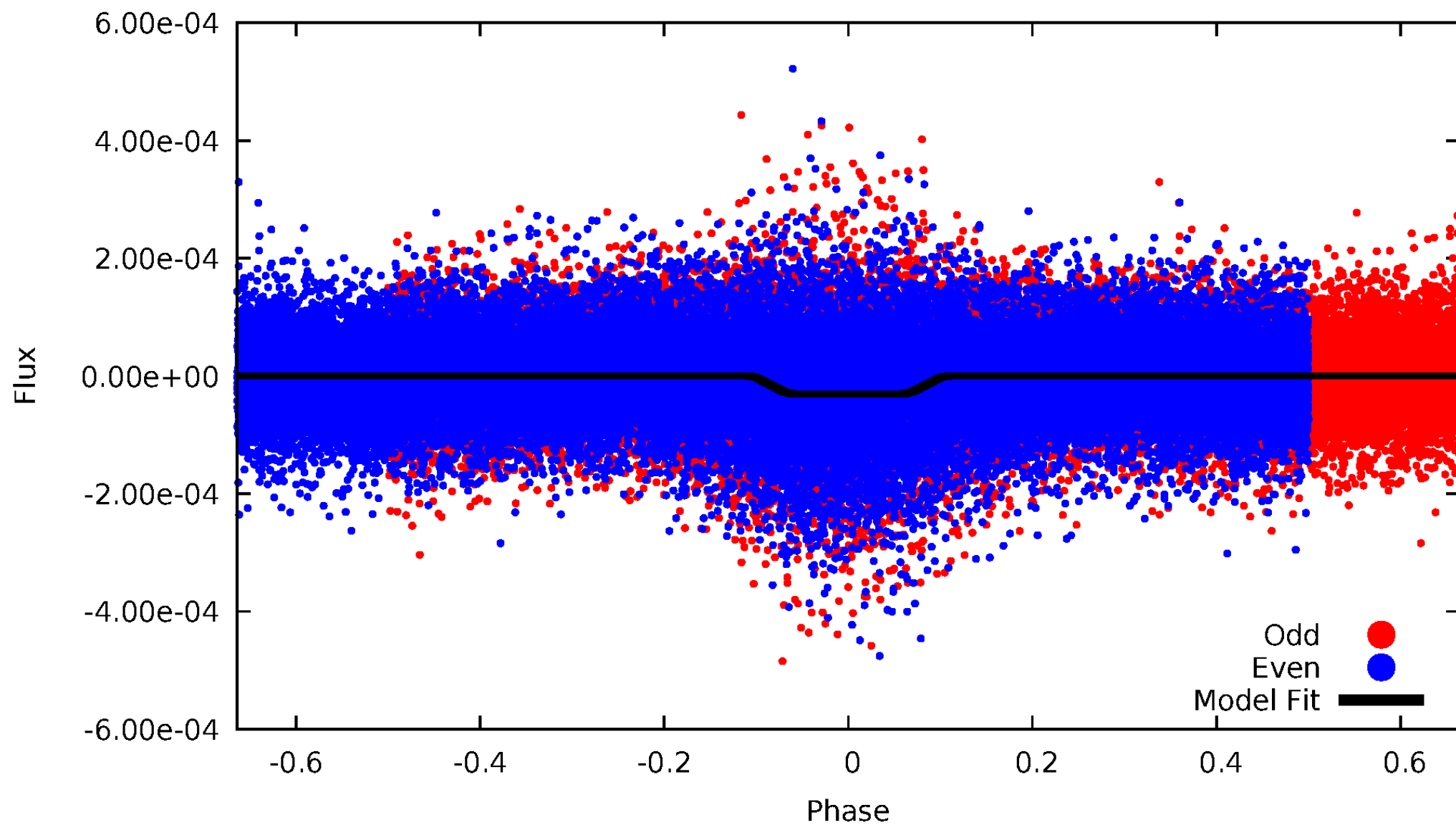
DV Odd/Even

TCE 009716628-01



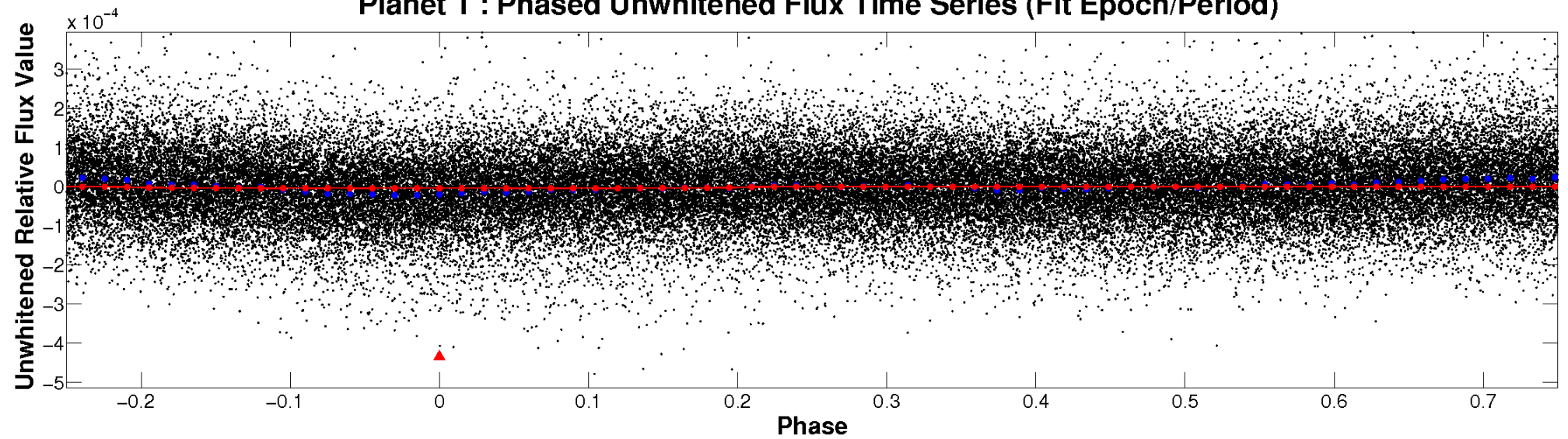
ALT Odd/Even

TCE 009716628-01

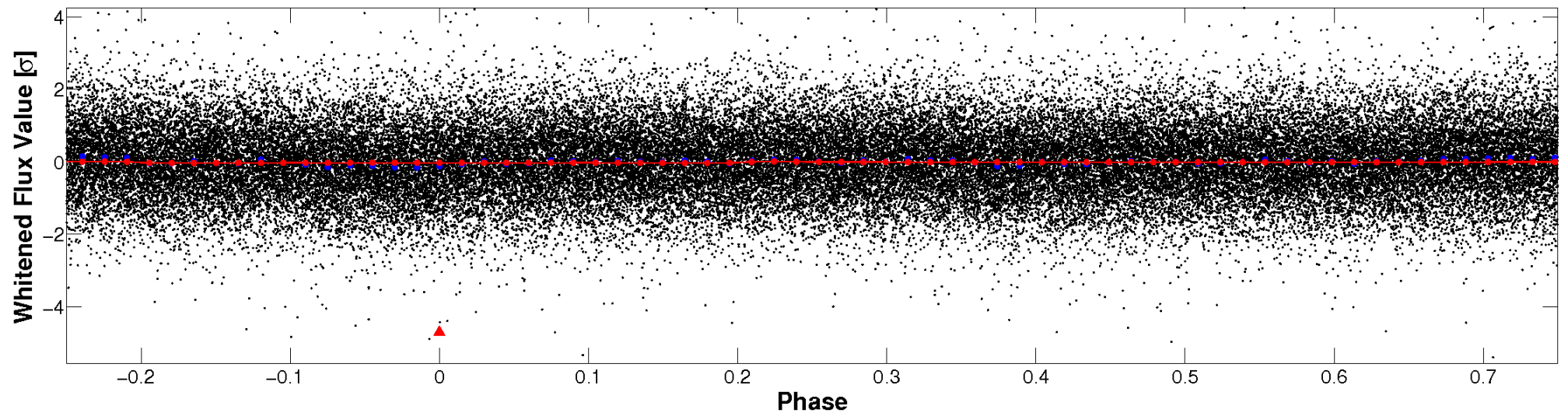


Non-Whitened Vs. Whitened Light Curve

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

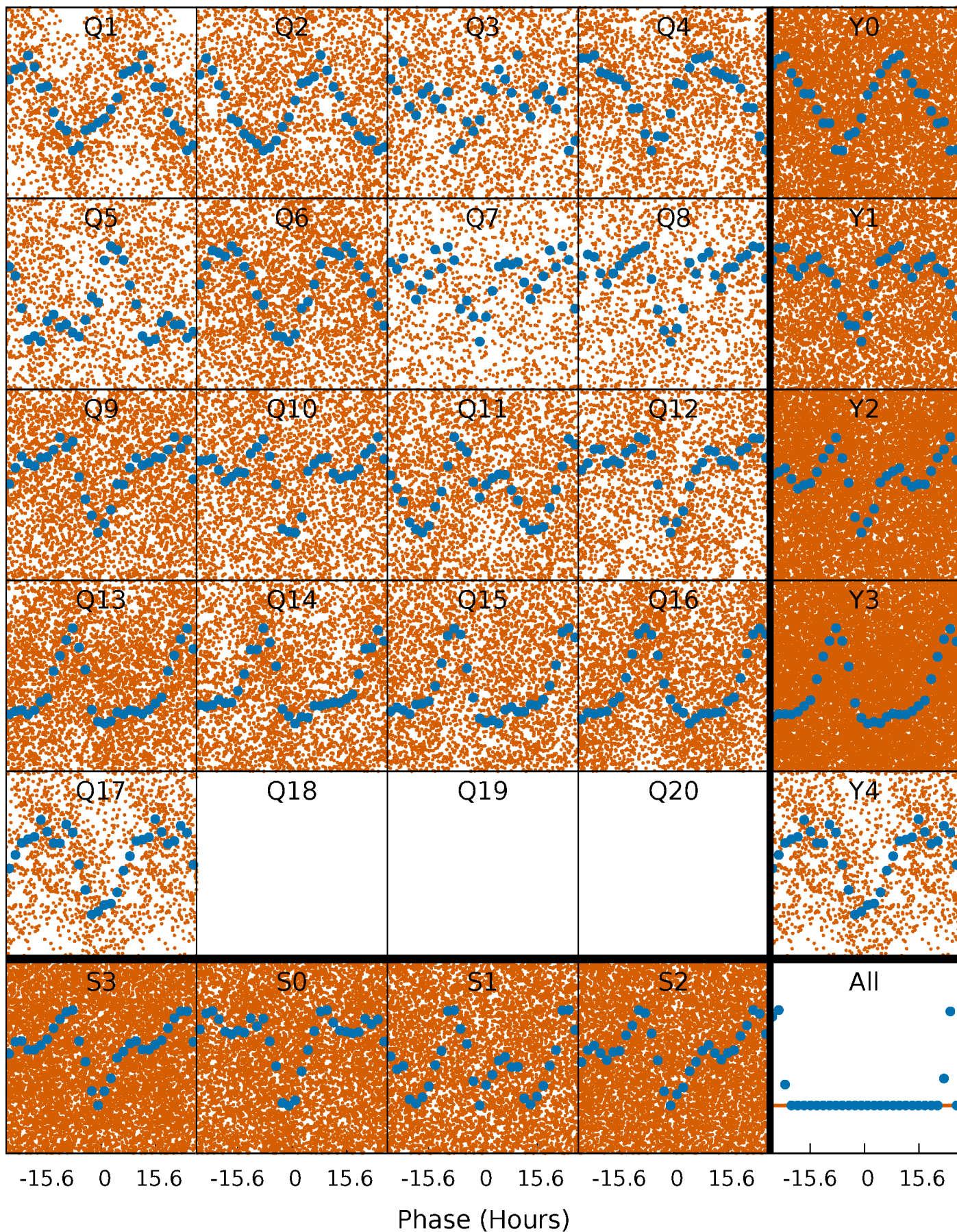


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



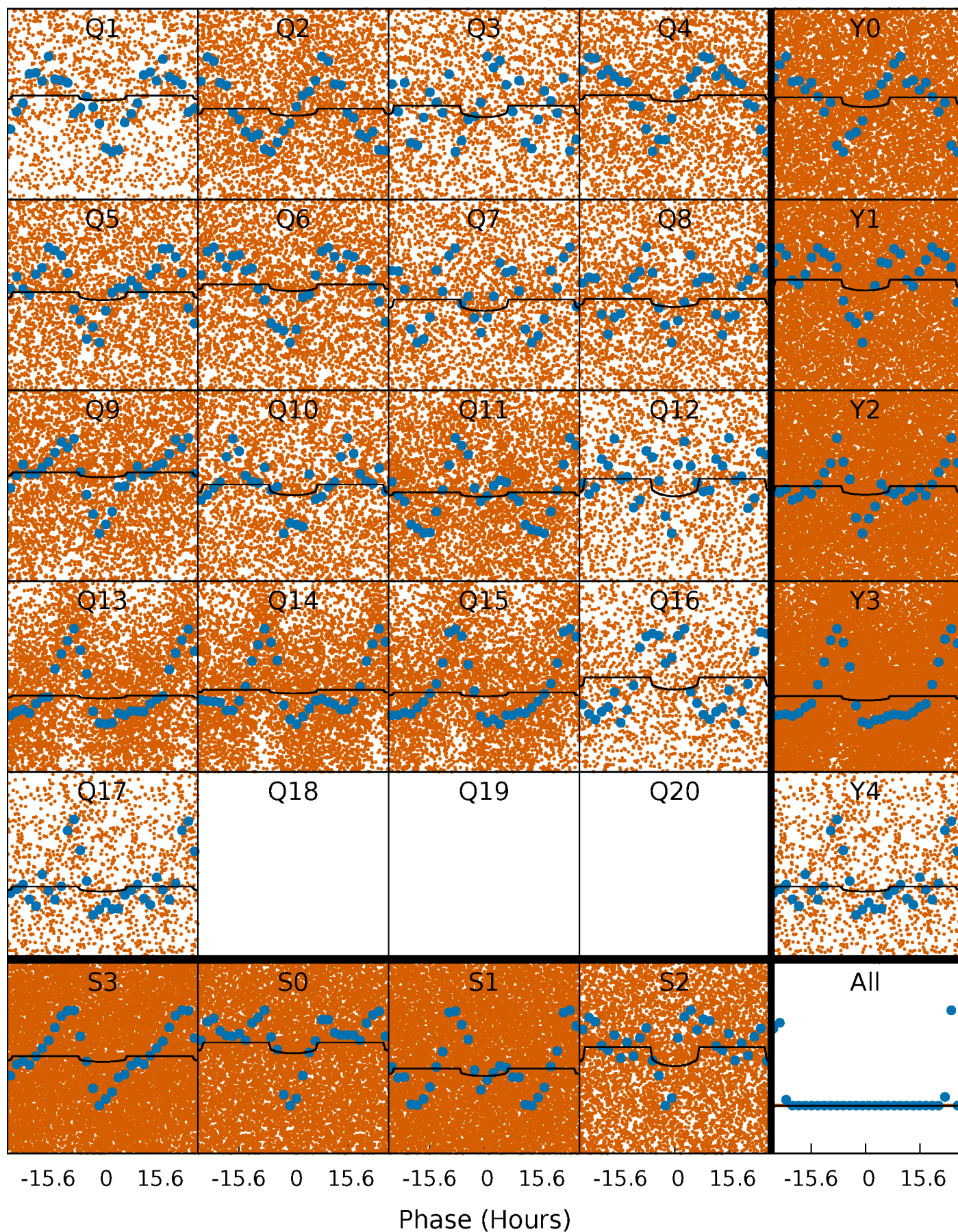
PDC Quarter-Phased Transit Curves

TCE 009716628-01 P= 1.365782 Days $T_0=132.812047$ (BKJD)



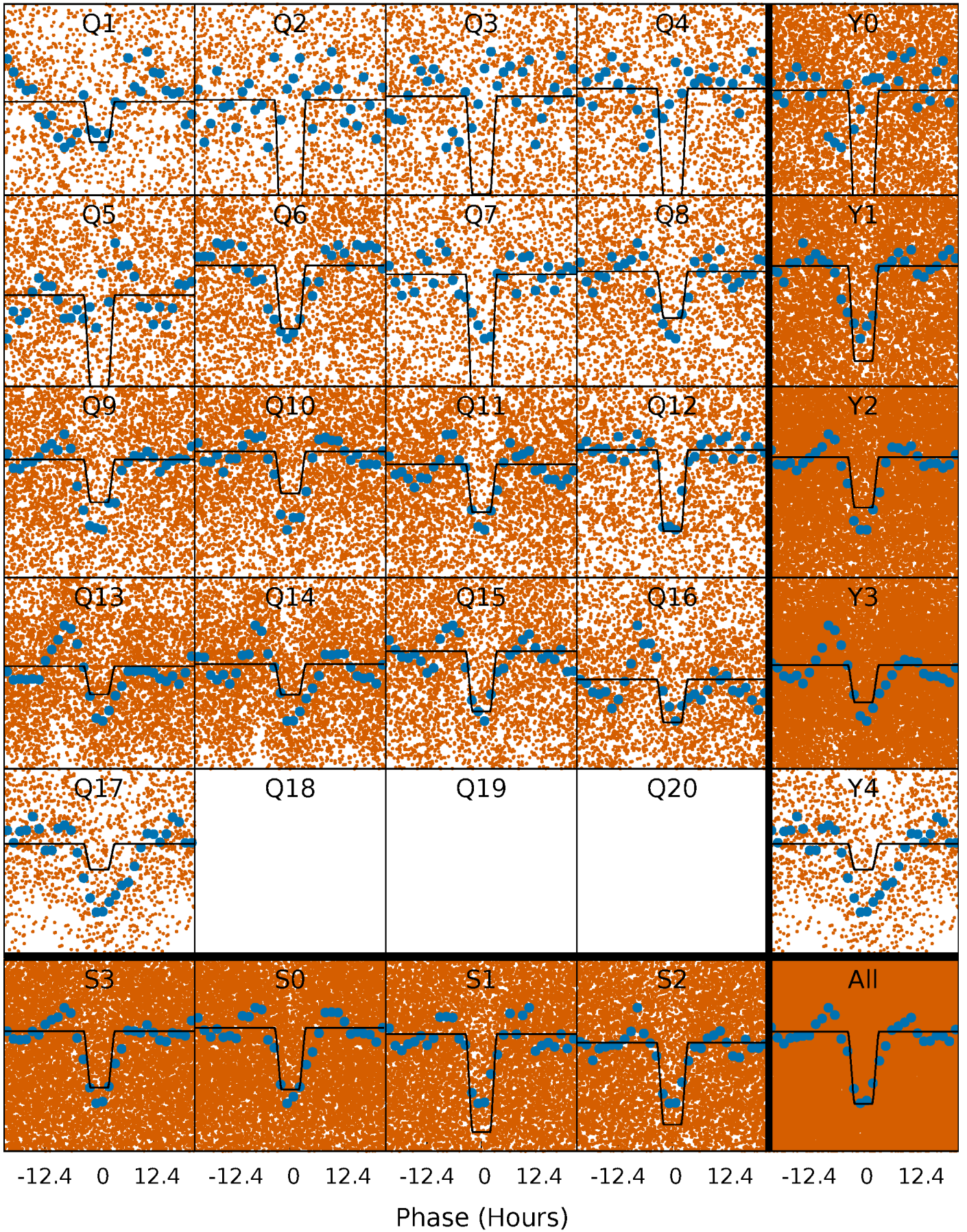
DV Quarter-Phased Transit Curves

TCE 009716628-01 P= 1.365782 Days $T_0=132.812047$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

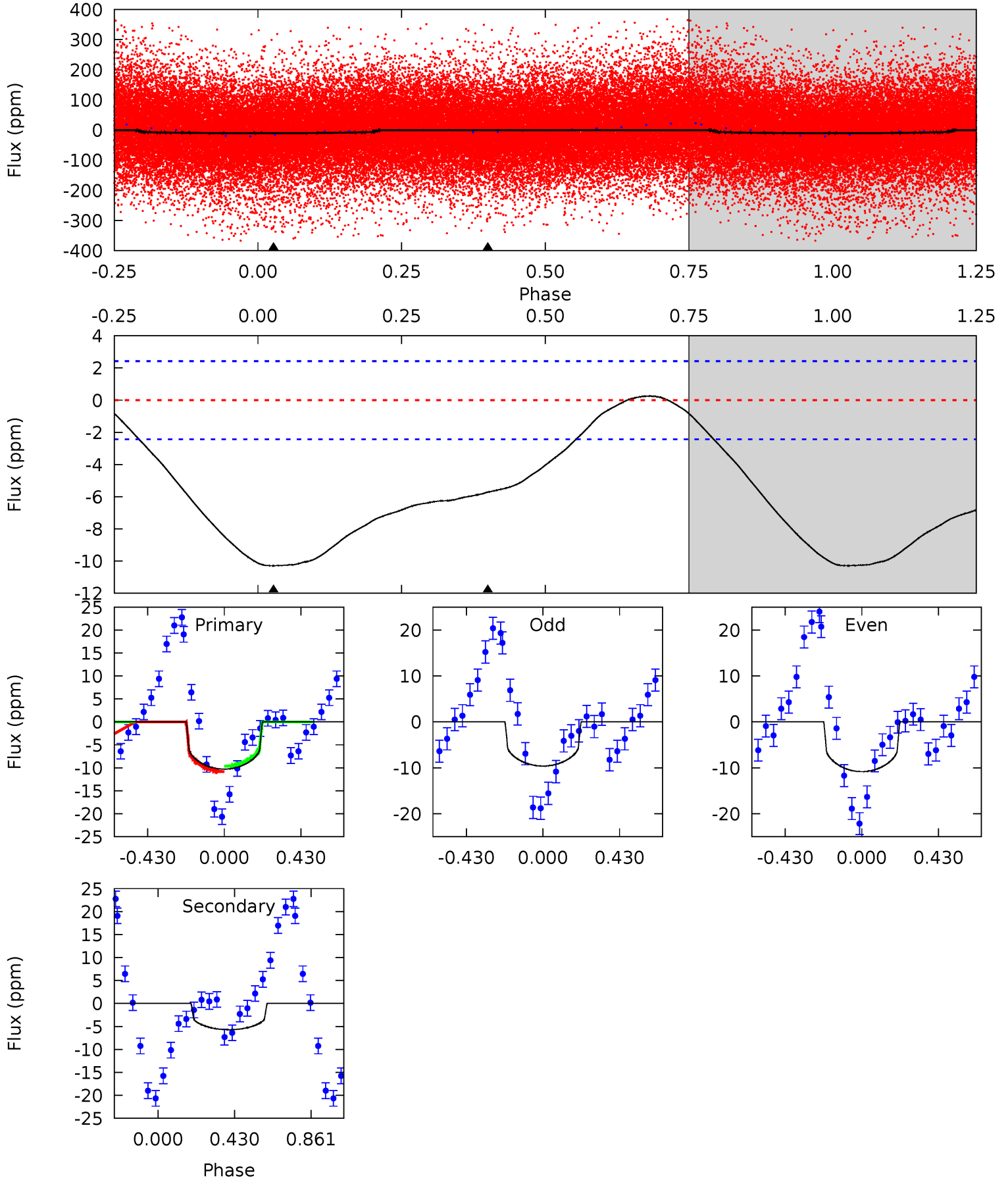
TCE 009716628-01 P= 1.365705 Days $T_0=132.821583$ (BKJD)



DV Model-Shift Uniqueness Test

009716628-01, P = 1.365782 Days, E = 131.446265 Days

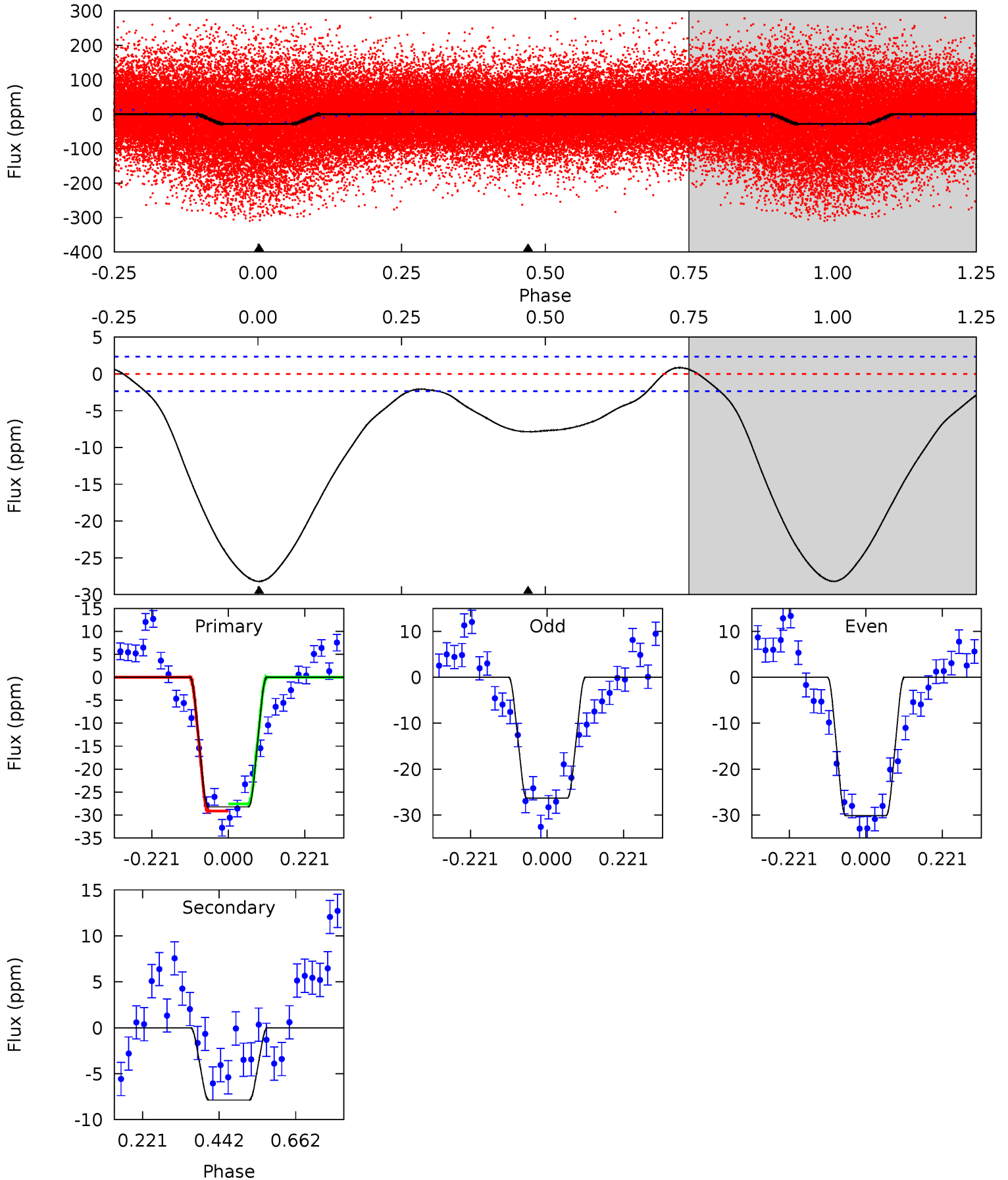
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.0	10.0	0	0	4.25	0.79	0.83	18.0	18.0	10.0	10.0	1.07	1.46	0.02	1.11



Alt Model-Shift Uniqueness Test

009716628-01, P = 1.365705 Days, E = 131.455878 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.8	14.7	0	0	4.40	1.22	3.26	52.8	52.8	14.7	14.7	3.56	1.18	0.03	1.44



Stellar Parameters For KIC 009716628

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7839^{+70}_{-86}	$3.889^{+0.168}_{-0.072}$	$-0.080^{+0.100}_{-0.150}$	$2.602^{+0.255}_{-0.594}$	$1.914^{+0.027}_{-0.226}$	$0.153^{+0.145}_{-0.036}$
	+1%/-1%	+4%/-2%	+125%/-188%	+10%/-23%	+1%/-12%	+94%/-23%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 009716628-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-6 ± 1	$0.67^{+0.54}_{-0.41}$	4500^{+136}_{-247}	7513^{+8565}_{-2030}	$6.041^{+32.999}_{-4.134}$
Alt.	-8 ± 1	$1.48^{+0.61}_{-0.65}$	4476^{+161}_{-240}	5296^{+1914}_{-870}	$1.699^{+3.903}_{-0.823}$

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 $A_{obs} \gg 1.0$

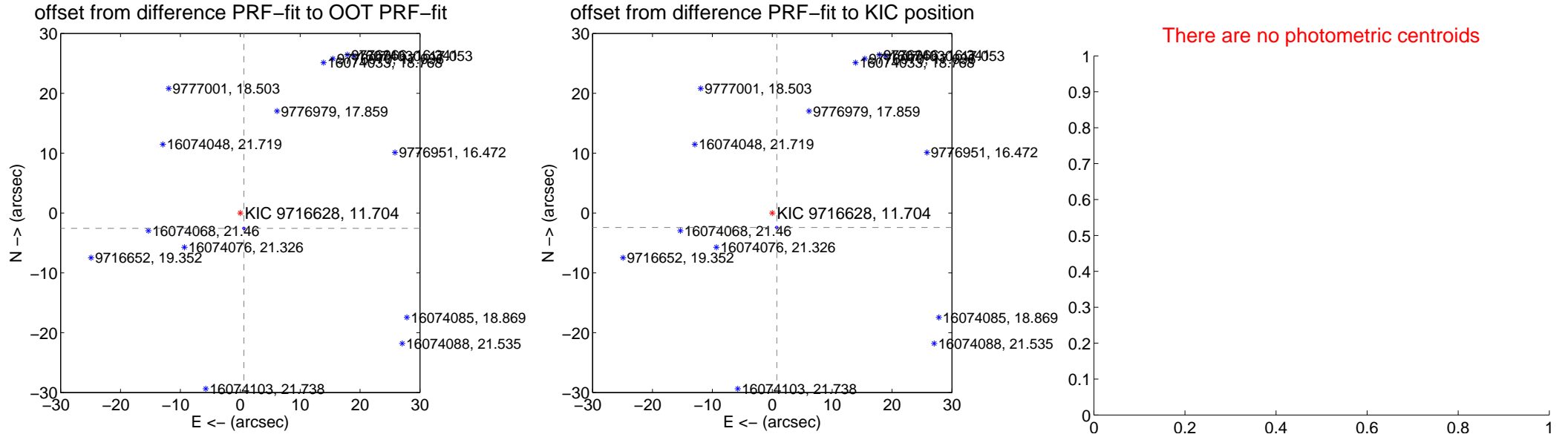
DV Centroid Data

Supplemental centroid analysis for 009716628-01. **Kepler magnitude: 11.70.** Transit SNR 4.78

There are 0 quarters with good PRF difference image offsets

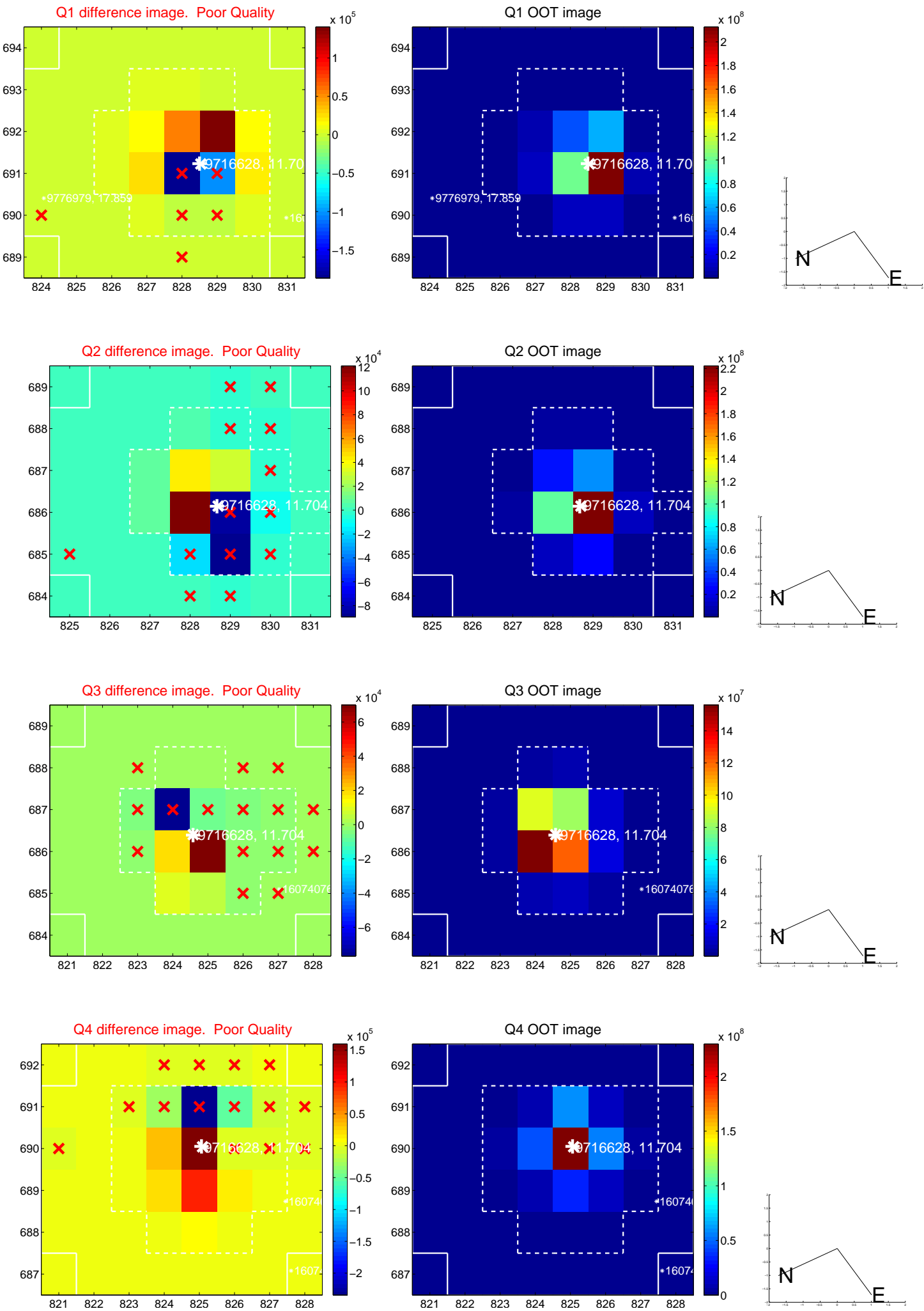
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.628 ± 0.069	38.12	-0.600 ± 0.071	-2.558 ± 0.069
PRF-fit source offset from KIC position	2.531 ± 0.069	36.69	-0.753 ± 0.071	-2.416 ± 0.069
photometric centroid source offset	—	—	—	—

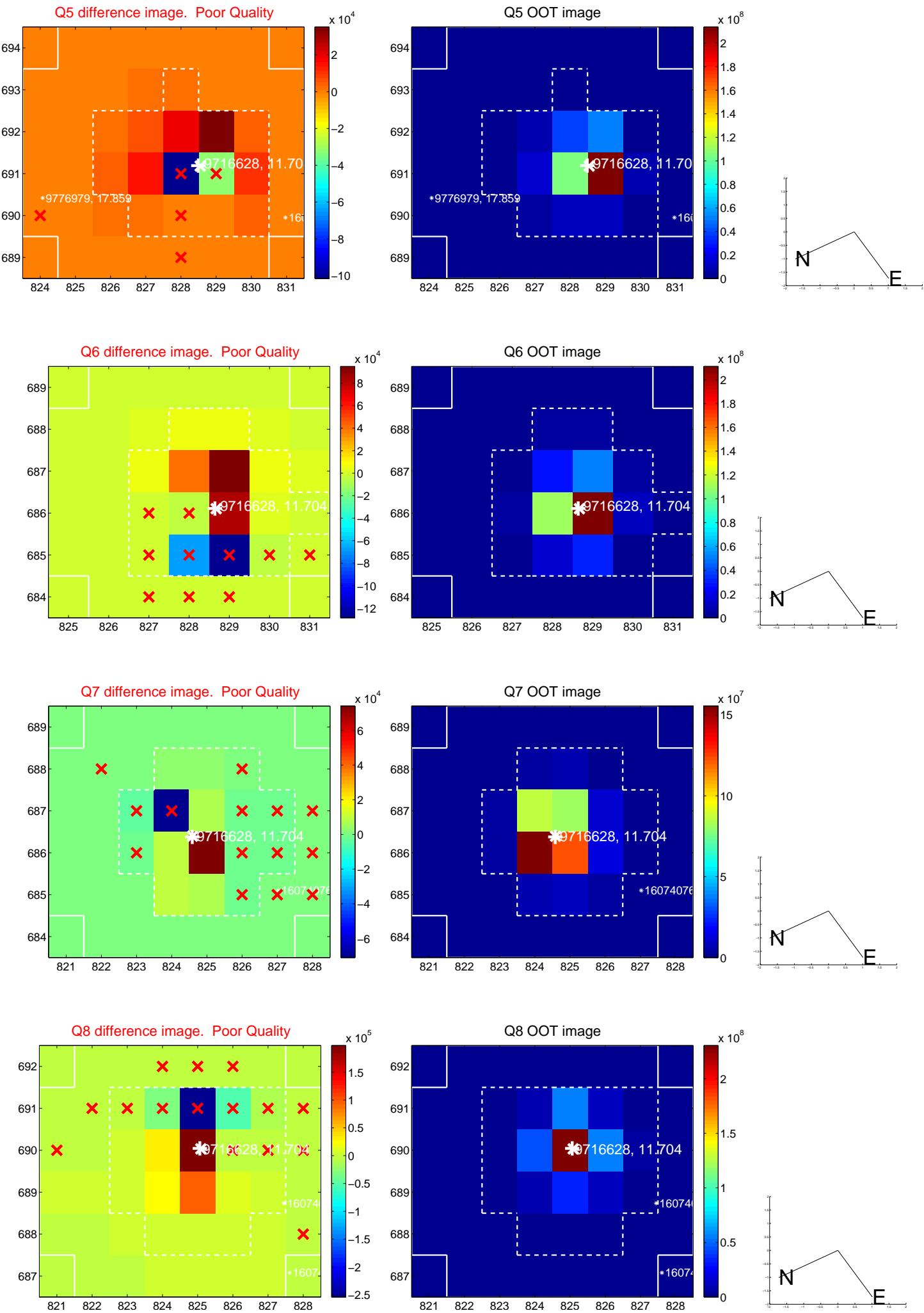


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

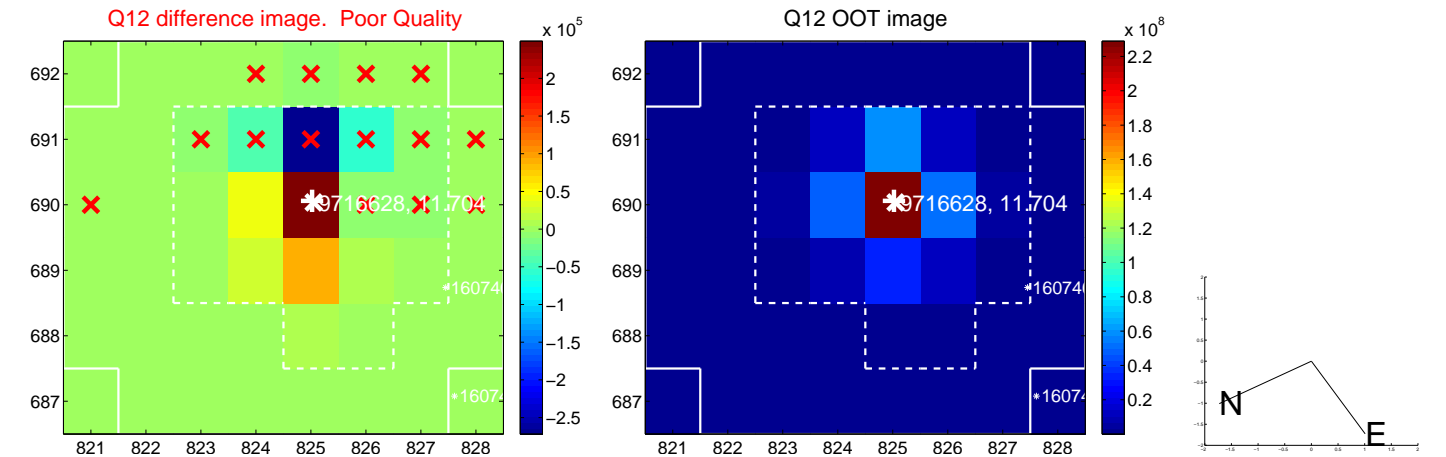
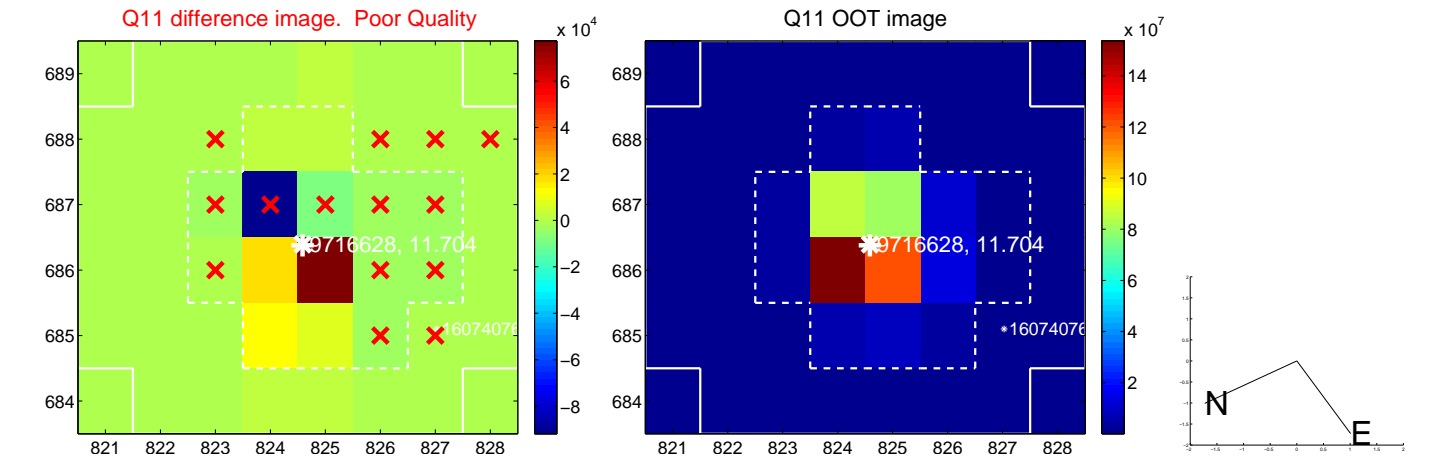
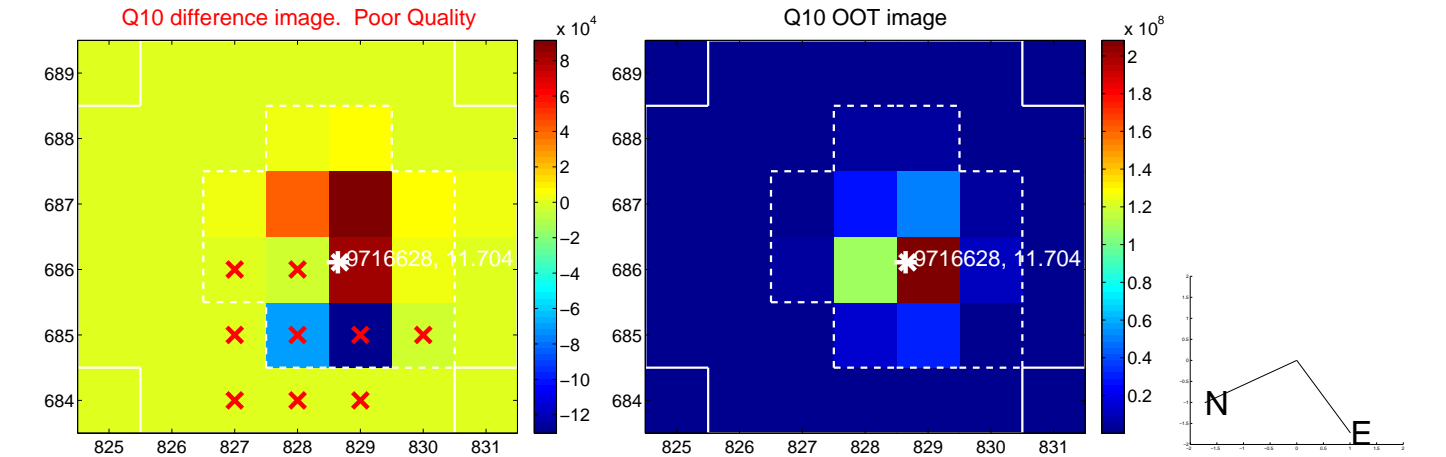
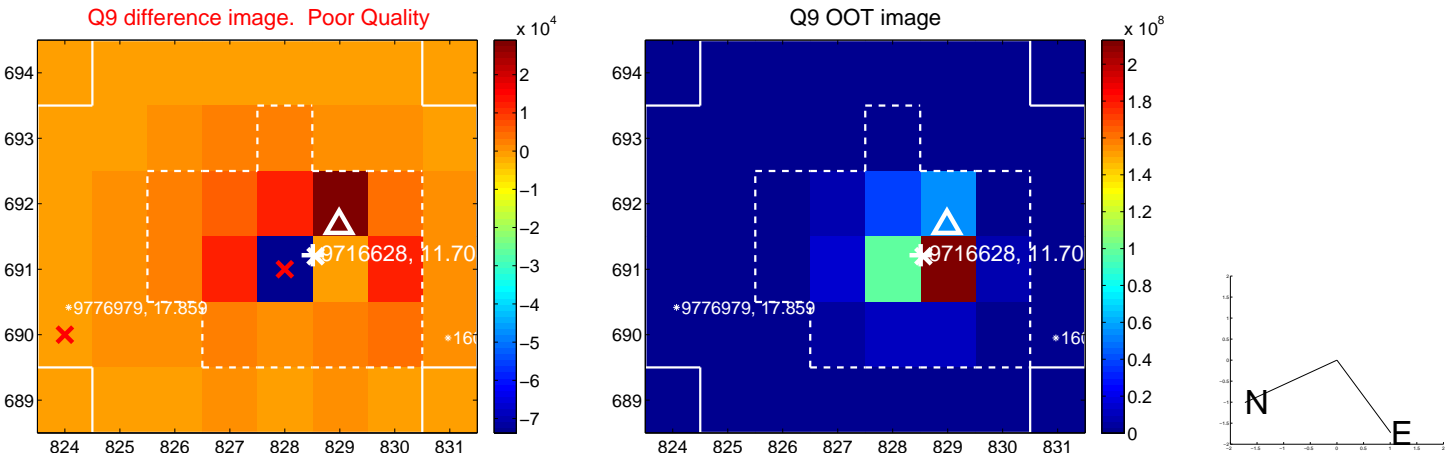
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



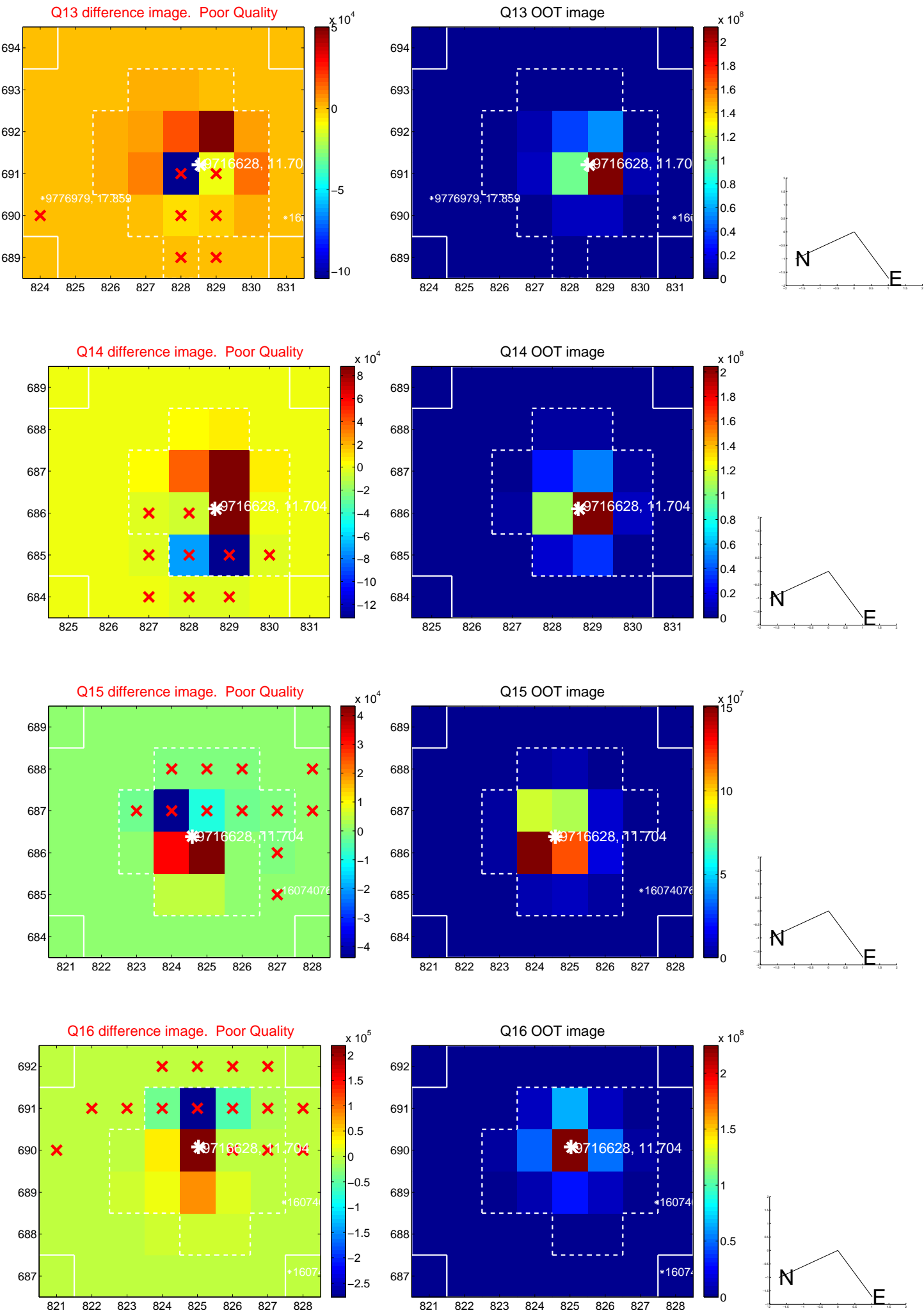
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



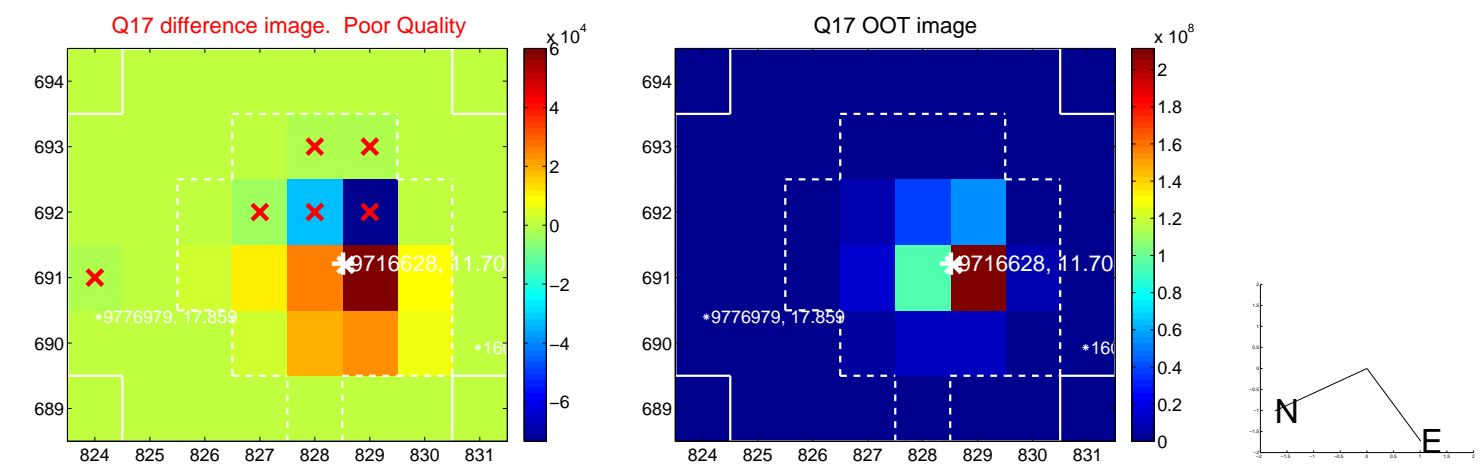
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

Declination

