

KIC 004667875

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})
004667875-01	OBS	No	15.833877	143.319096	271.0	49.193	7.6	12.8	0.78	6452	2.35	68.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004667875-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV

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

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

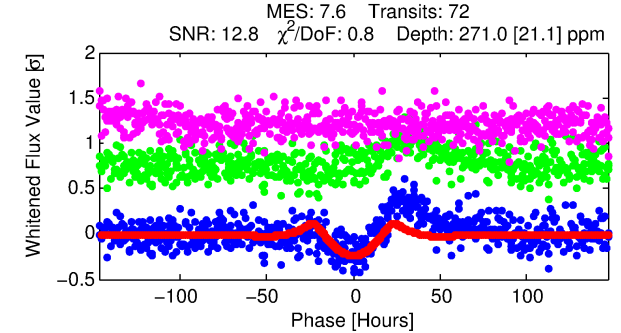
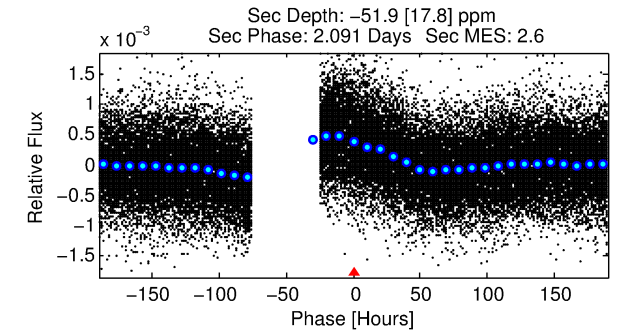
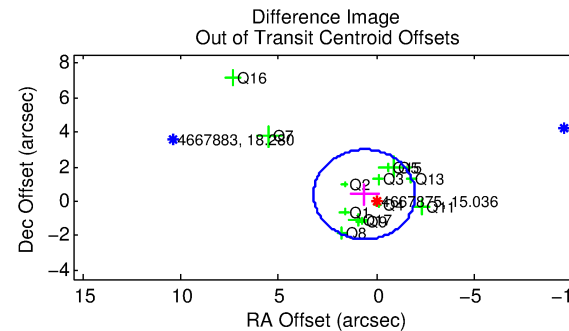
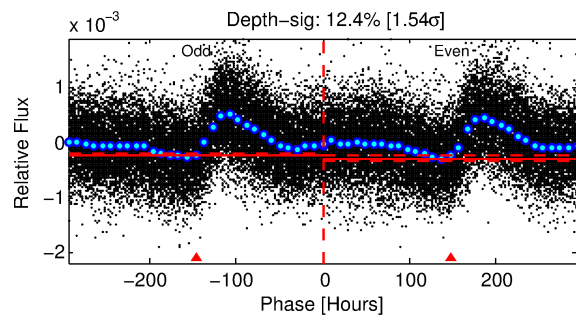
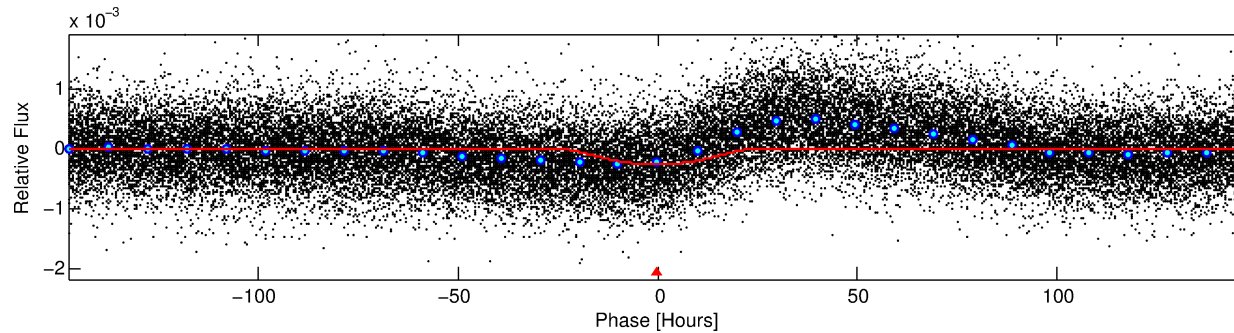
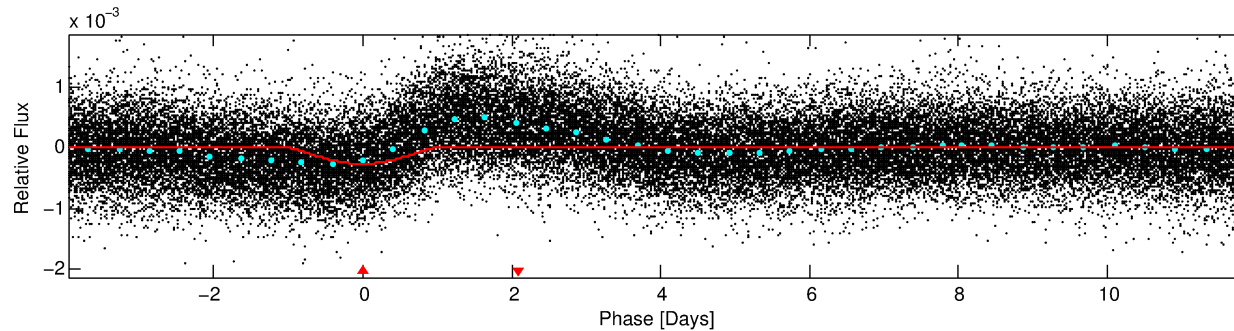
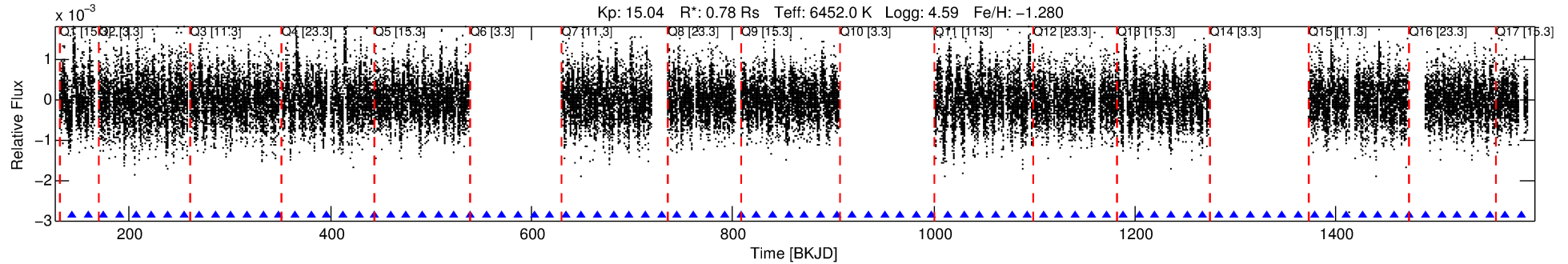
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004667875-01

No Significant Match Found

DV One-Page Summary

KIC: 4667875 Candidate: 1 of 1 Period: 15.834 d



DV Fit Results:

Period = 15.83388 [0.00105] d
Epoch = 143.3191 [0.0560] BKJD
Rp/R* = 0.0276 [0.0242]
a/R* = 1.18 [0.05]
b = 1.00 [0.04]
Seff = 68.07 [23.83]
Teq = 732 [64] K
Rp = 2.35 [2.13] Re
a = 0.1178 [0.0246] AU
Ag = N/A
Teffp = N/A

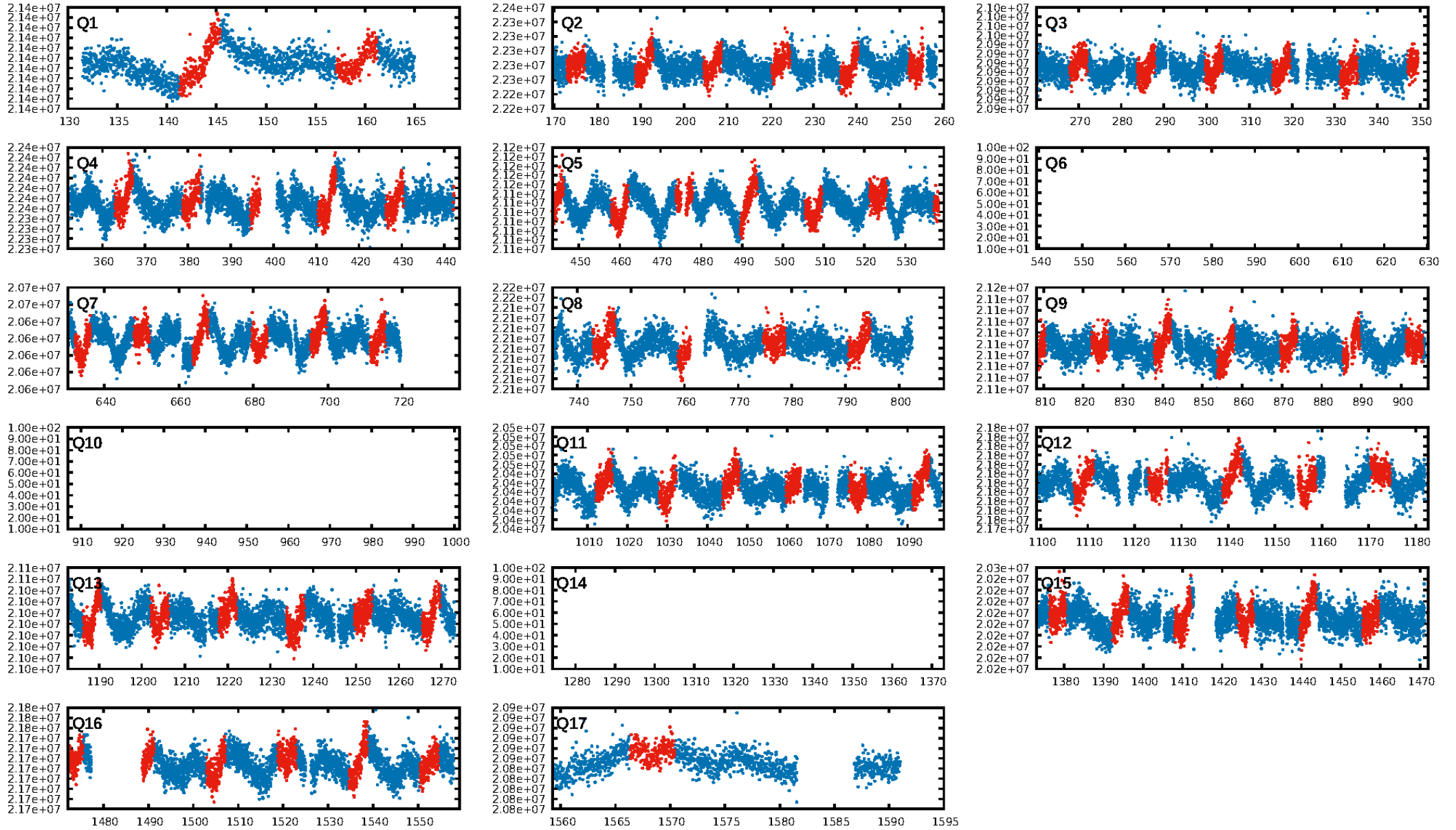
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.07e-14
RollingBand-fgt: 1.00 [69/69]
GhostDiagnostic-chr: 1.701
Centroid-sig: 0.0%
Centroid-so: 1.578 arcsec [3.07 σ]
OotOffset-rm: 0.731 arcsec [0.84 σ]
KicOffset-rm: 0.734 arcsec [0.81 σ]
OotOffset-st: 1/4/3/5 [13]
KicOffset-st: 1/4/3/5 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 1.00 [14/14]

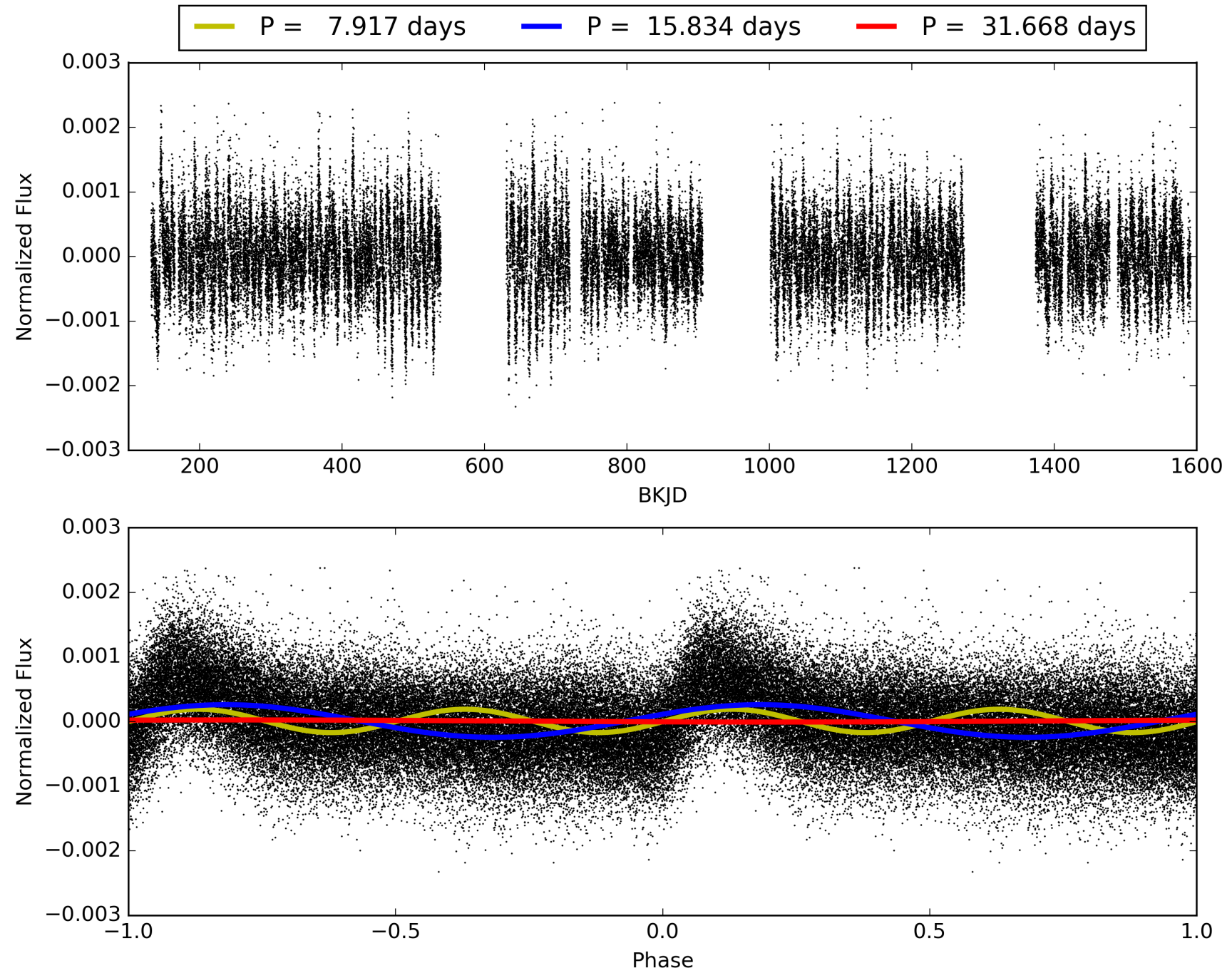
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:18:29 Z

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

TCE 004667875-01, PDC Light Curves

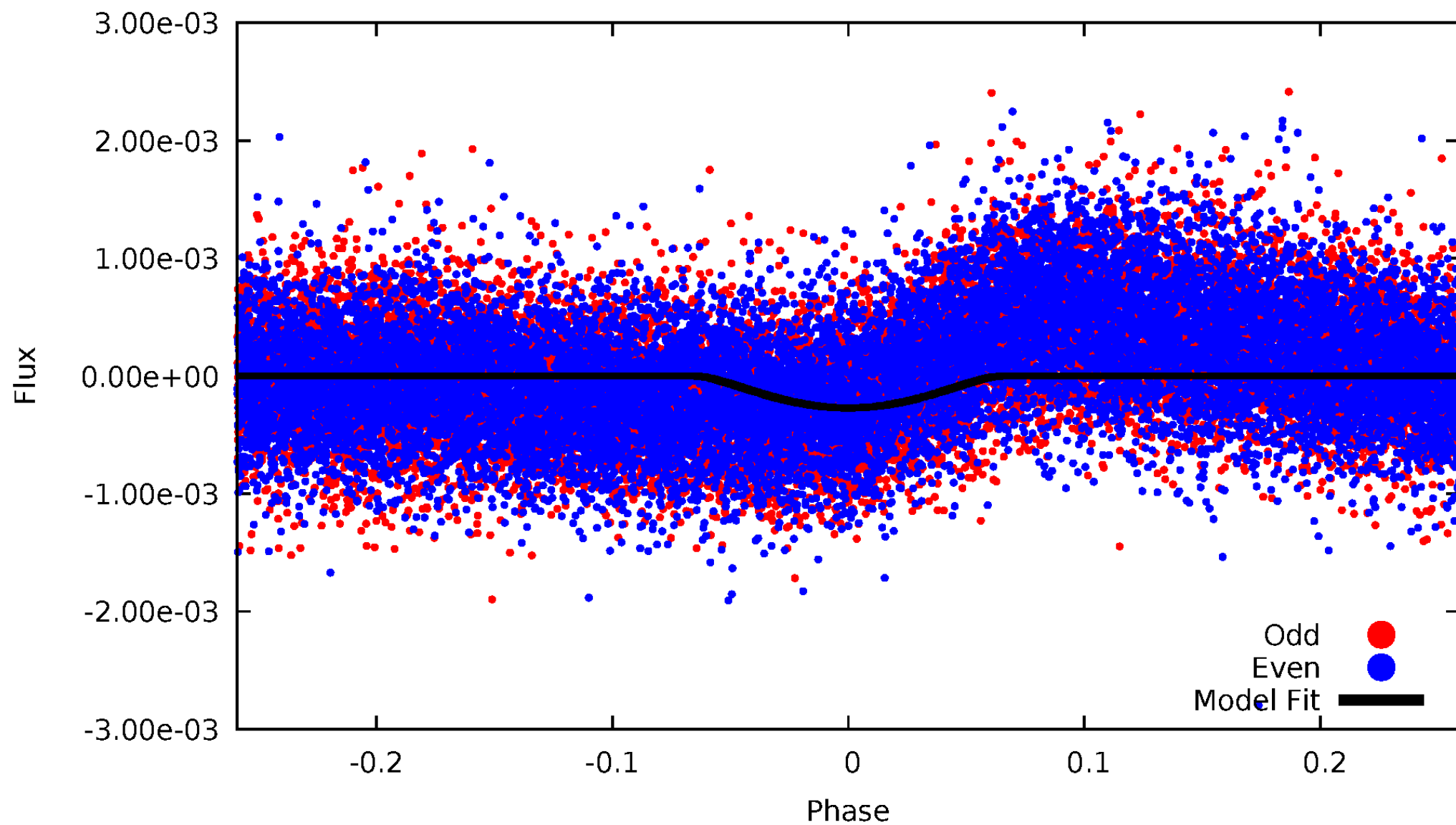


TCE 004667875-01



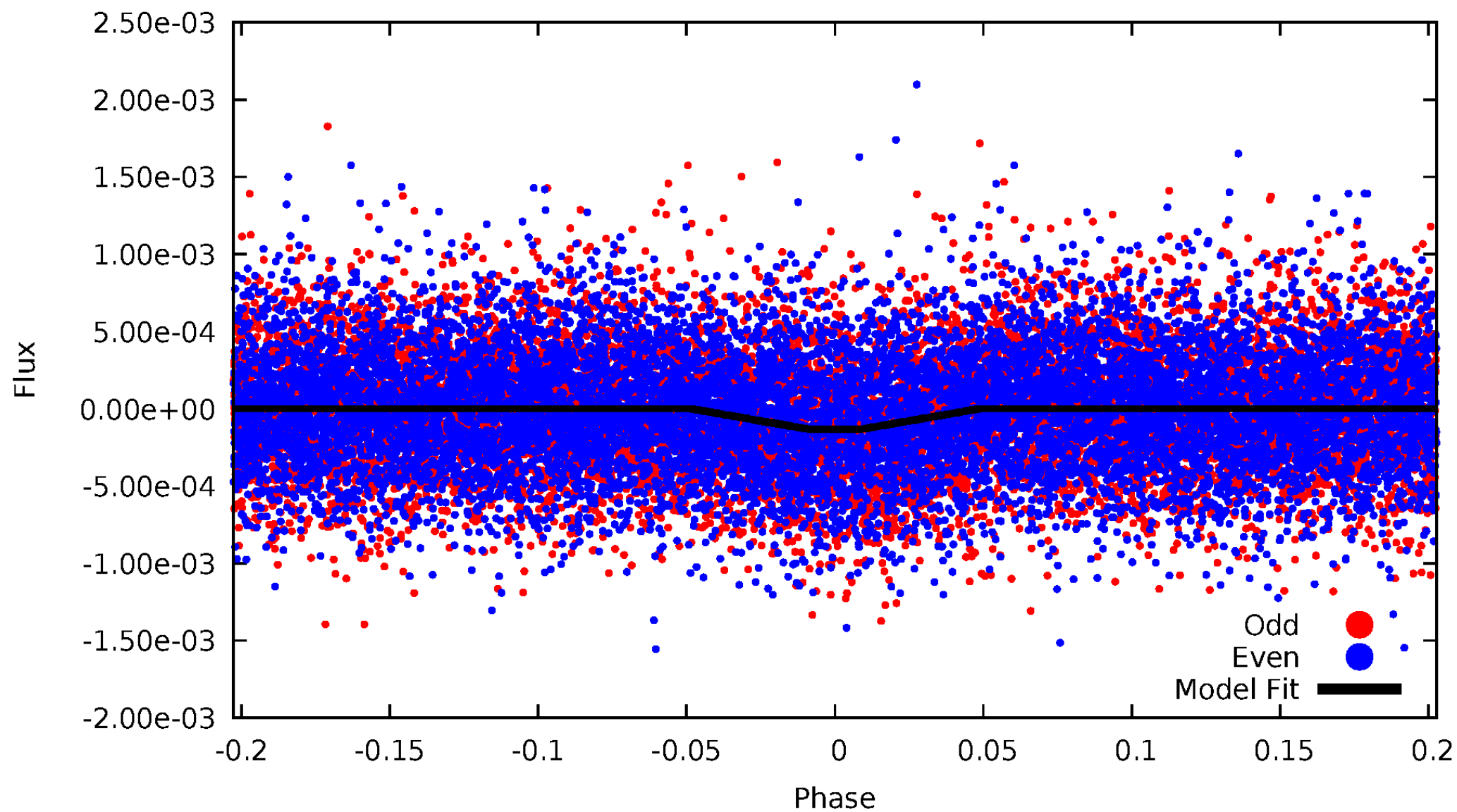
DV Odd/Even

TCE 004667875-01



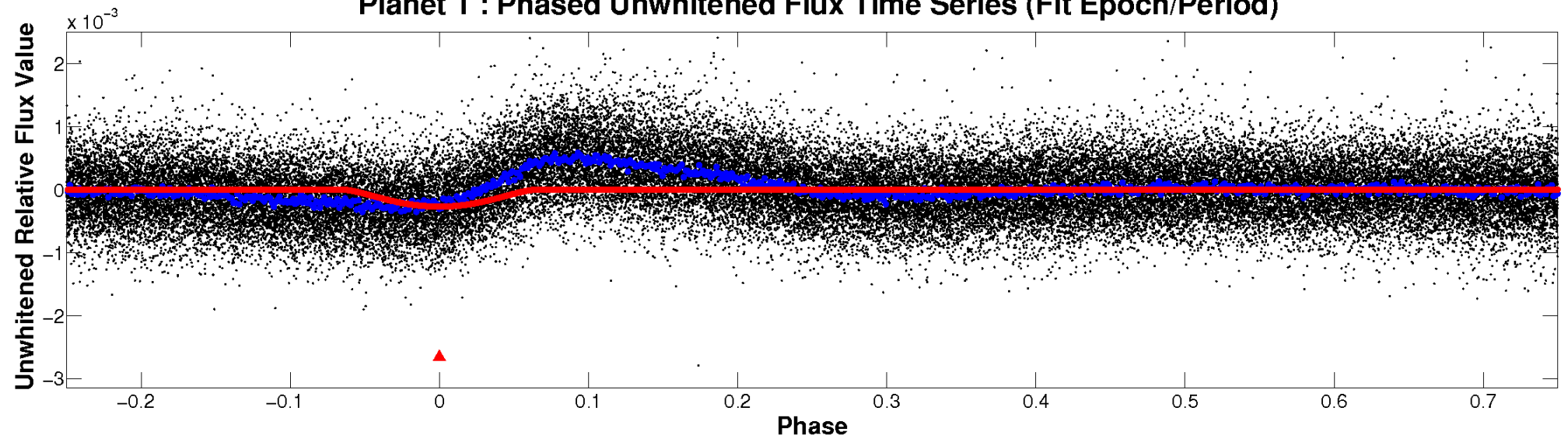
ALT Odd/Even

TCE 004667875-01

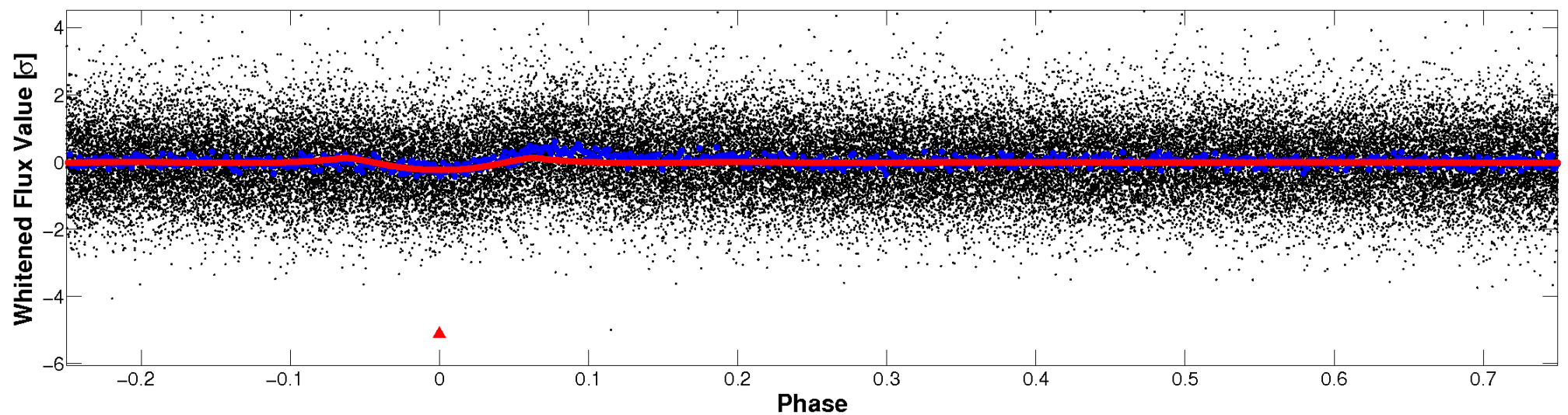


Non-Whitened Vs. Whitened Light Curve

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

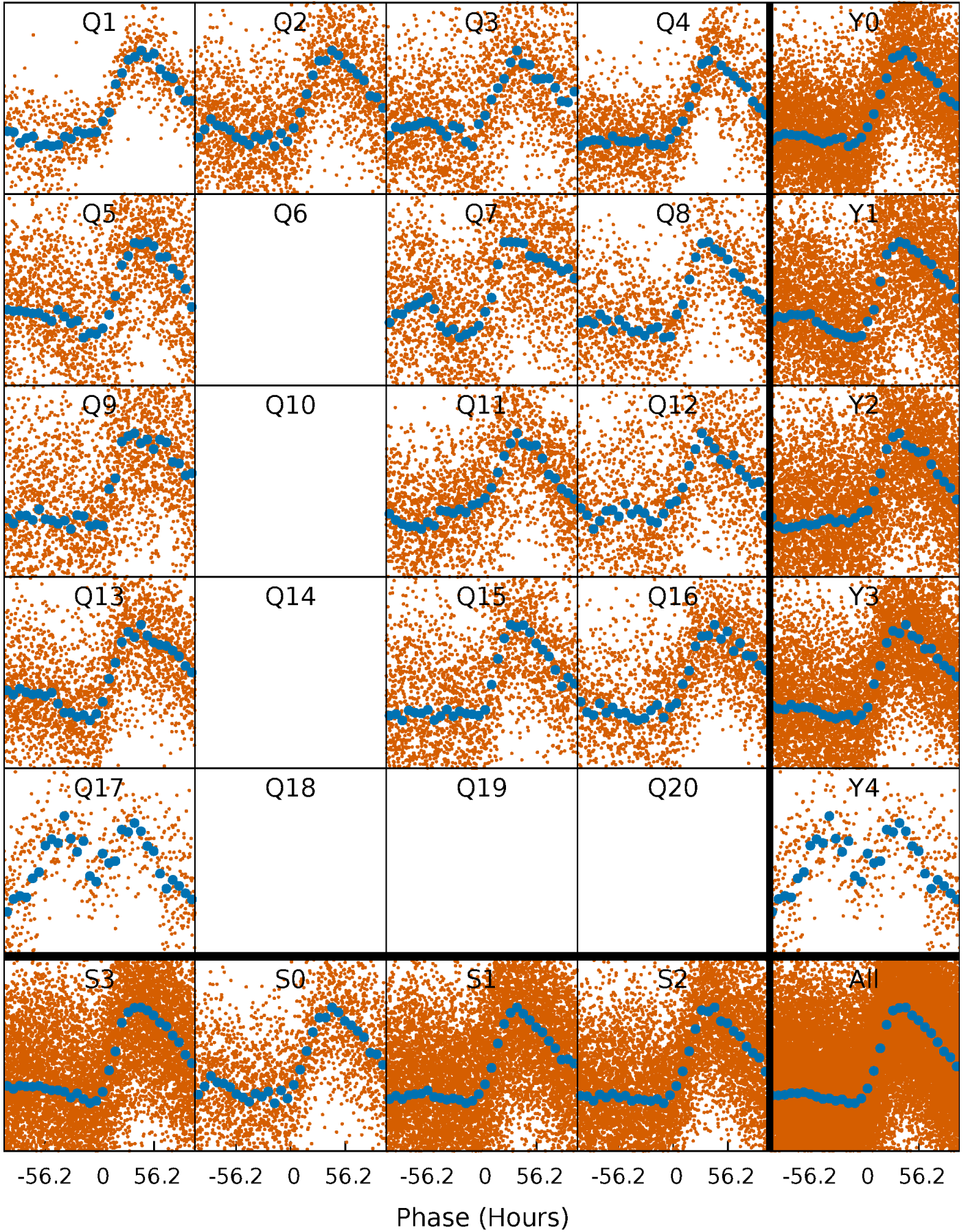


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



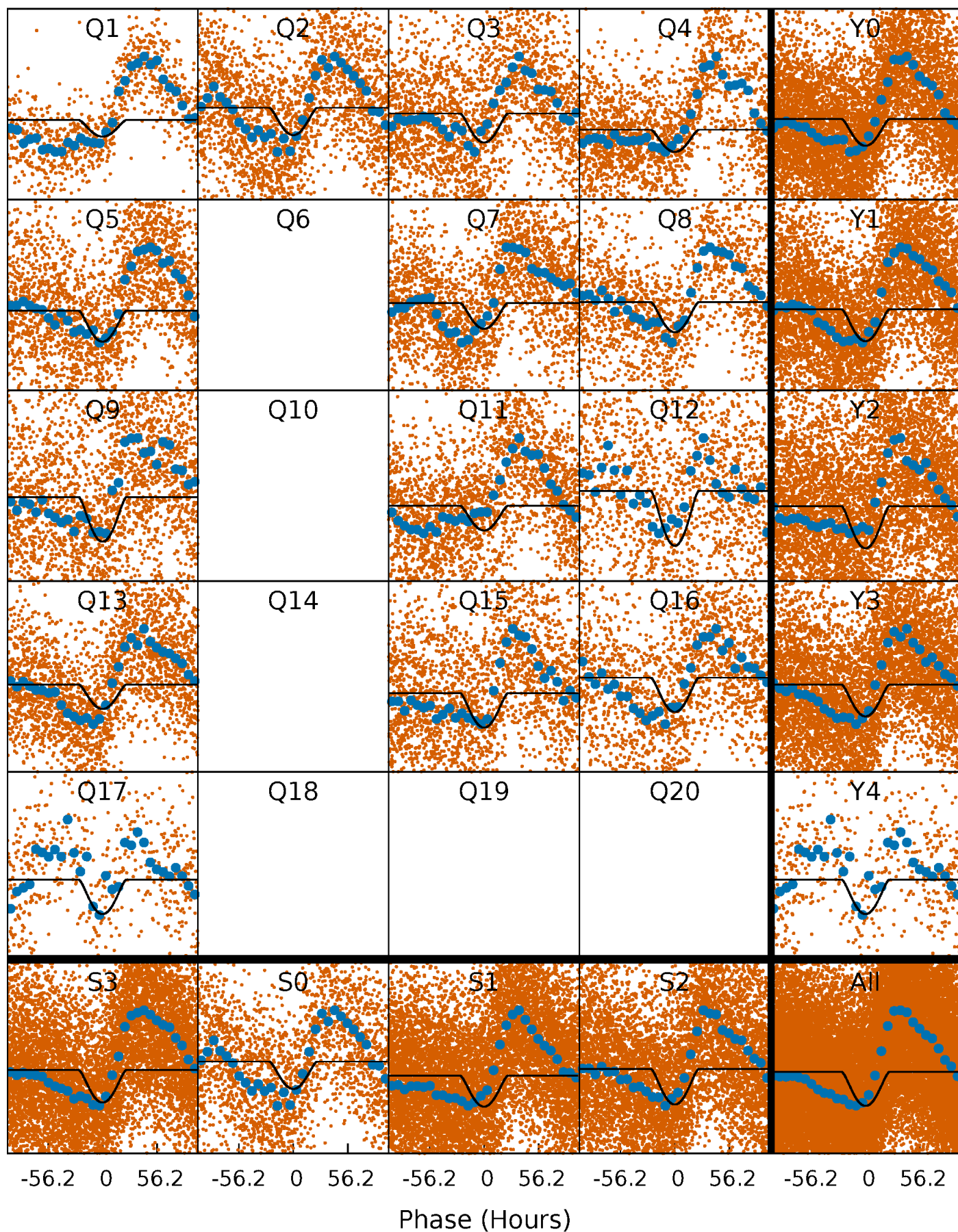
PDC Quarter-Phased Transit Curves

TCE 004667875-01 P= 15.833877 Days $T_0=143.319096$ (BKJD)



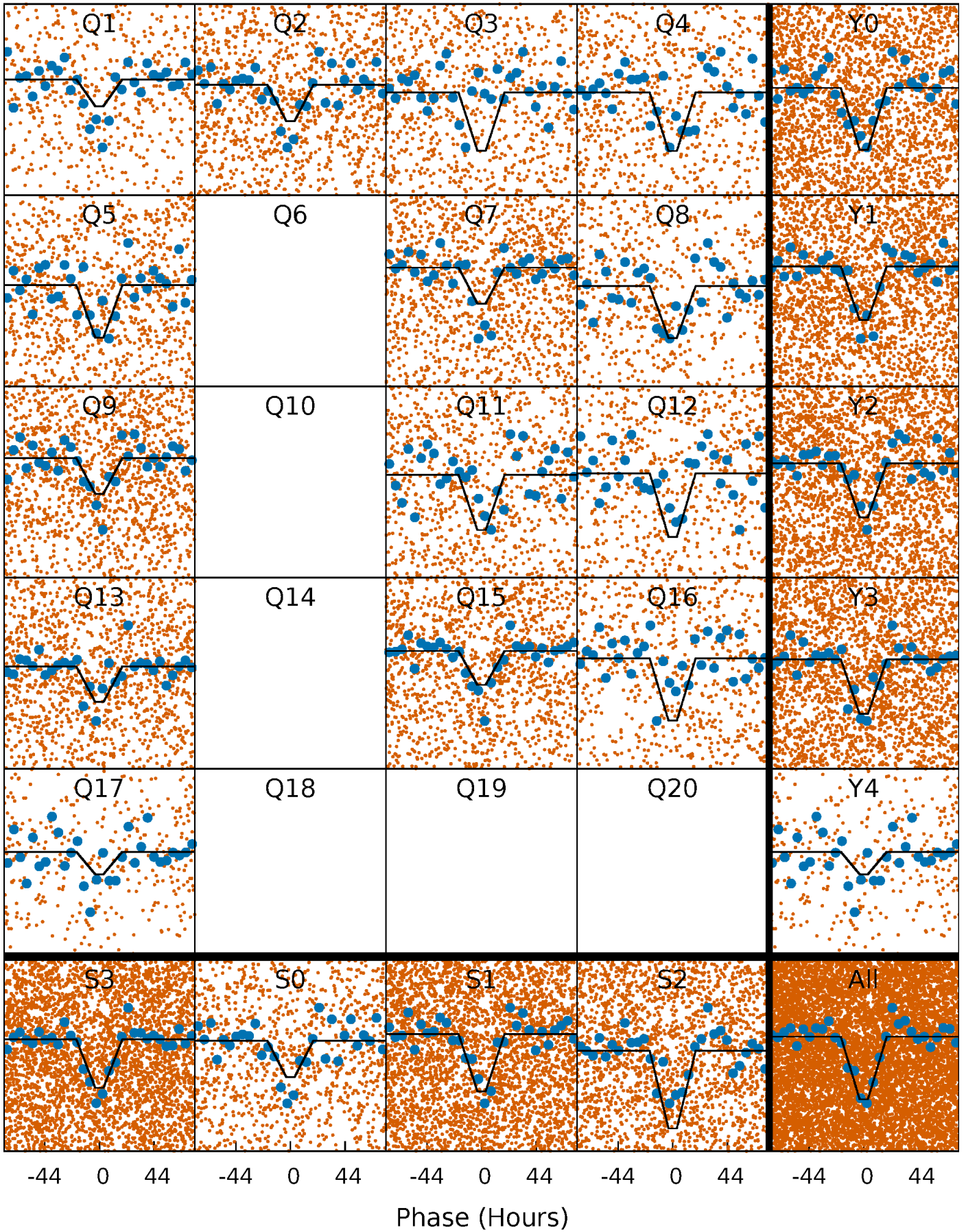
DV Quarter-Phased Transit Curves

TCE 004667875-01 P= 15.833877 Days $T_0=143.319096$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

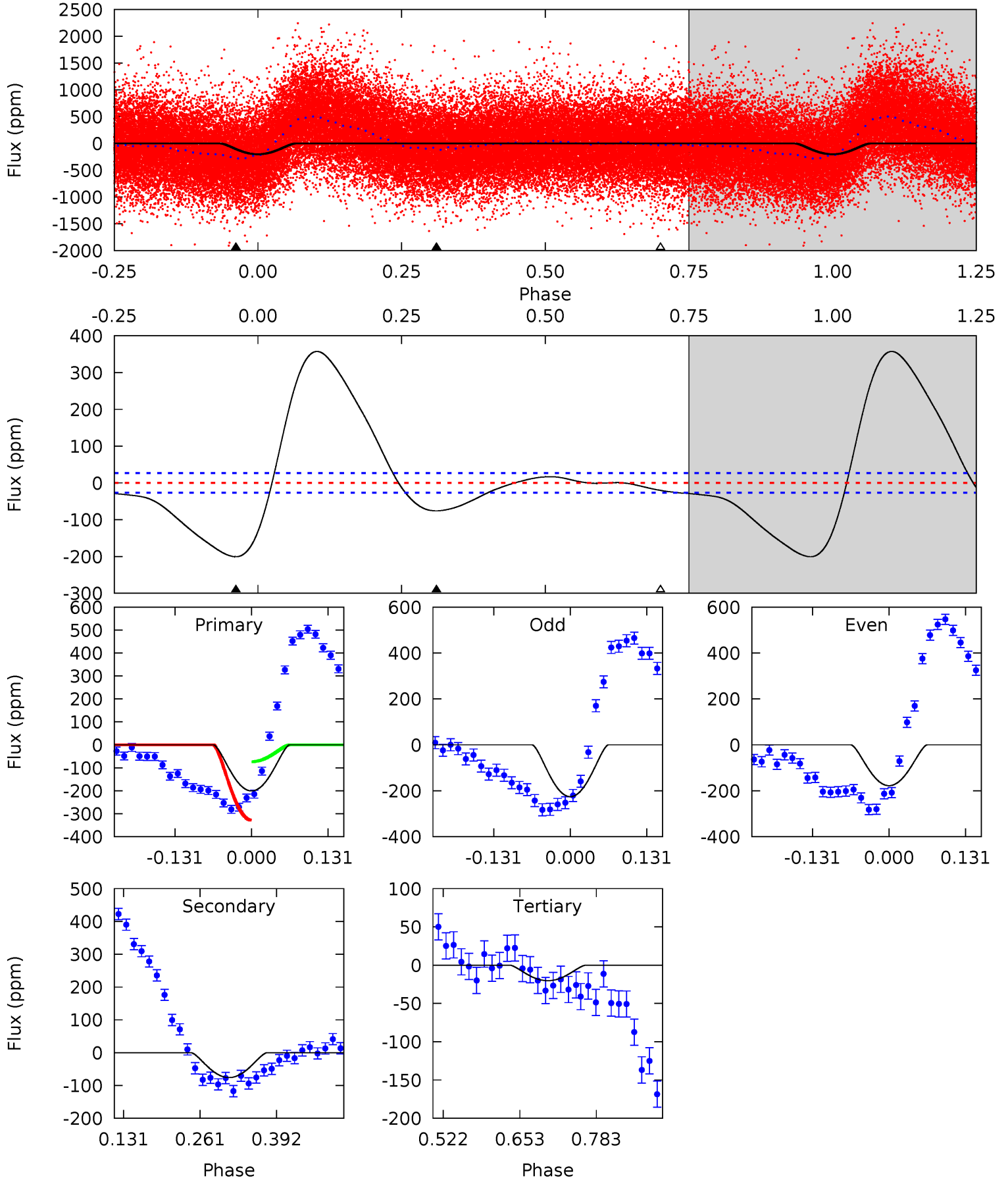
TCE 004667875-01 P= 15.832645 Days $T_0=143.508744$ (BKJD)



DV Model-Shift Uniqueness Test

004667875-01, P = 15.833877 Days, E = 127.485219 Days

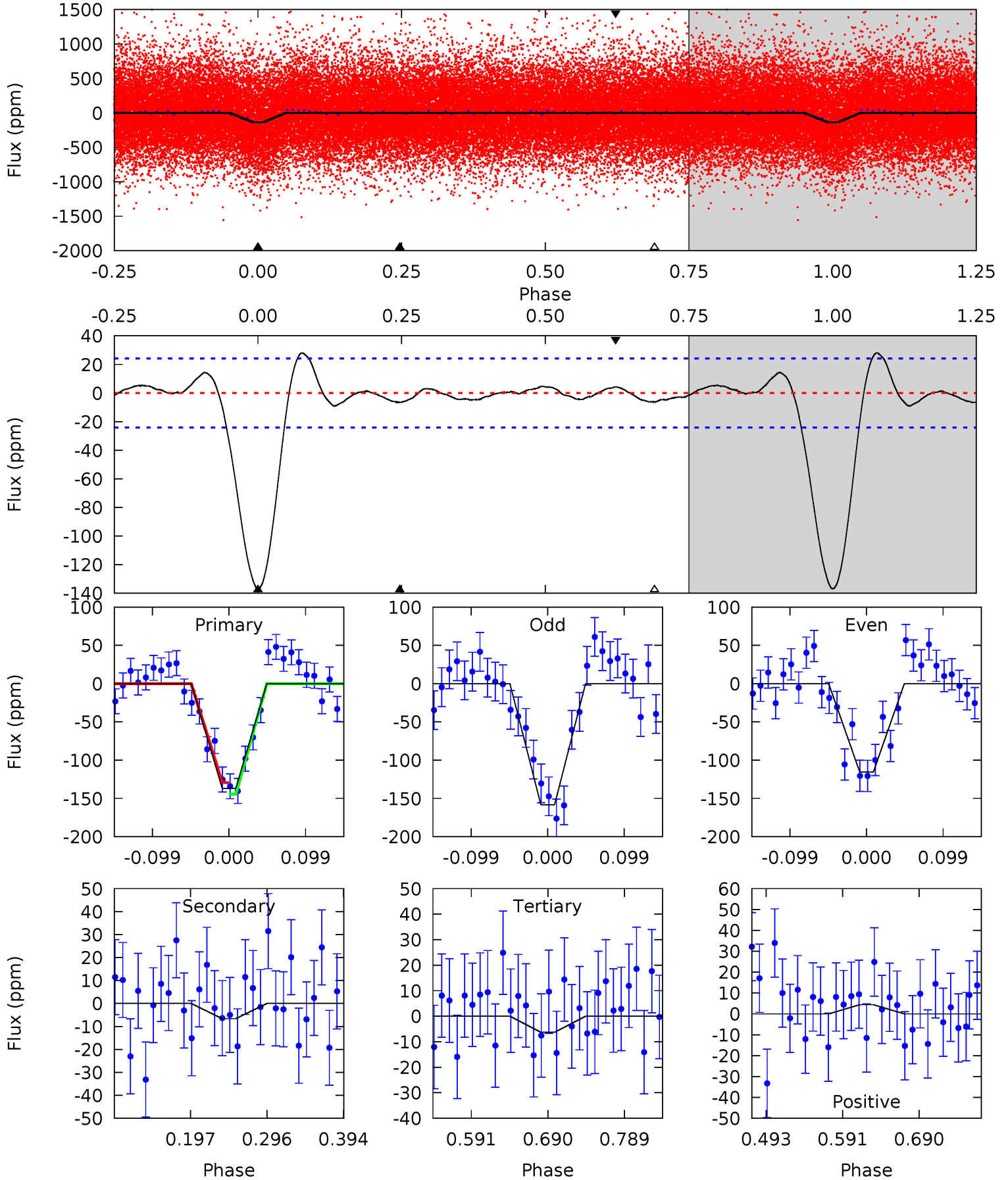
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.1	12.9	3.45	0	4.51	1.51	20.8	30.7	34.1	9.46	12.9	4.05	0.85	0.64	20.9



Alt Model-Shift Uniqueness Test

004667875-01, $P = 15.832645$ Days, $E = 127.676099$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.9	1.25	1.20	0.83	4.57	1.65	0.78	24.7	25.1	0.06	0.42	4.05	1.11	0.17	1.41



Stellar Parameters For KIC 004667875

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6452^{+193}_{-212}	$4.593^{+0.033}_{-0.187}$	$-1.280^{+0.300}_{-0.300}$	$0.780^{+0.177}_{-0.047}$	$0.873^{+0.052}_{-0.092}$	$2.592^{+0.329}_{-1.229}$
	+3%/-3%	+1%/-4%	+23%/-23%	+23%/-6%	+6%/-11%	+13%/-47%
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 004667875-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-76 ± 6	$2.79^{+2.01}_{-1.73}$	1045^{+58}_{-49}	3797^{+1645}_{-636}	76^{+433}_{-52}
Alt.	-7 ± 5	$2.01^{+1.86}_{-1.38}$	1045^{+65}_{-48}	2752^{+1208}_{-712}	$8.967^{+81.418}_{-7.999}$

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 $A_{obs} \gg 1.0$

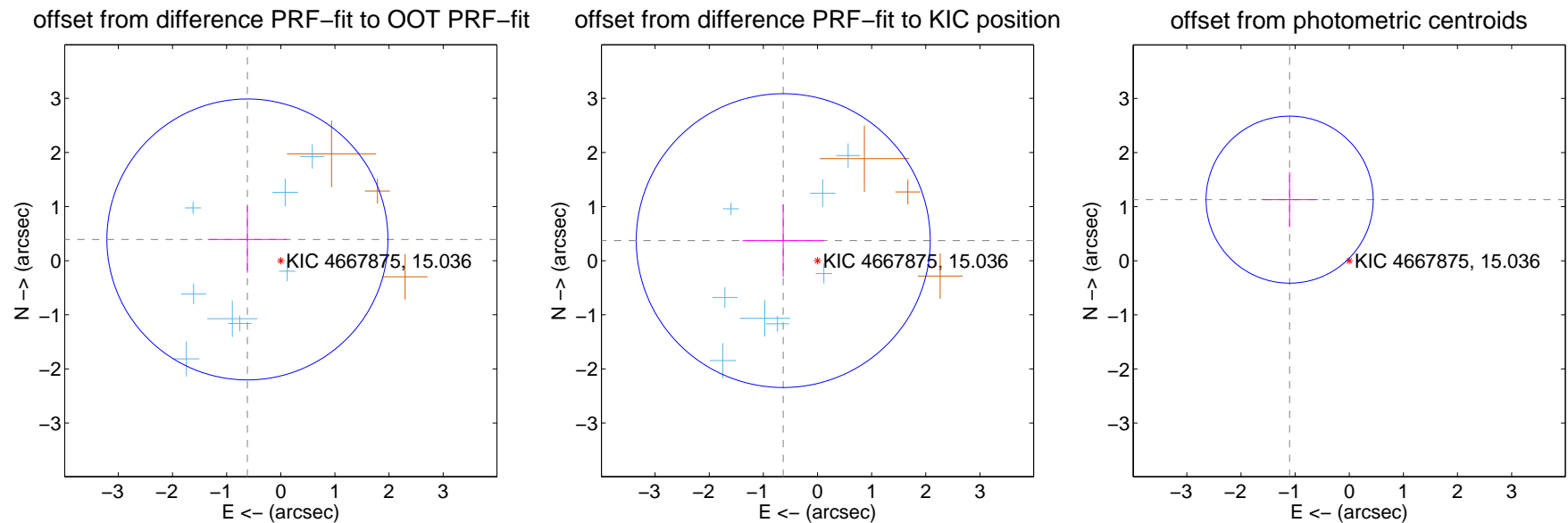
DV Centroid Data

Supplemental centroid analysis for 004667875-01. Kepler magnitude: 15.04. Transit SNR 12.83

There are 8 quarters with good PRF difference image offsets

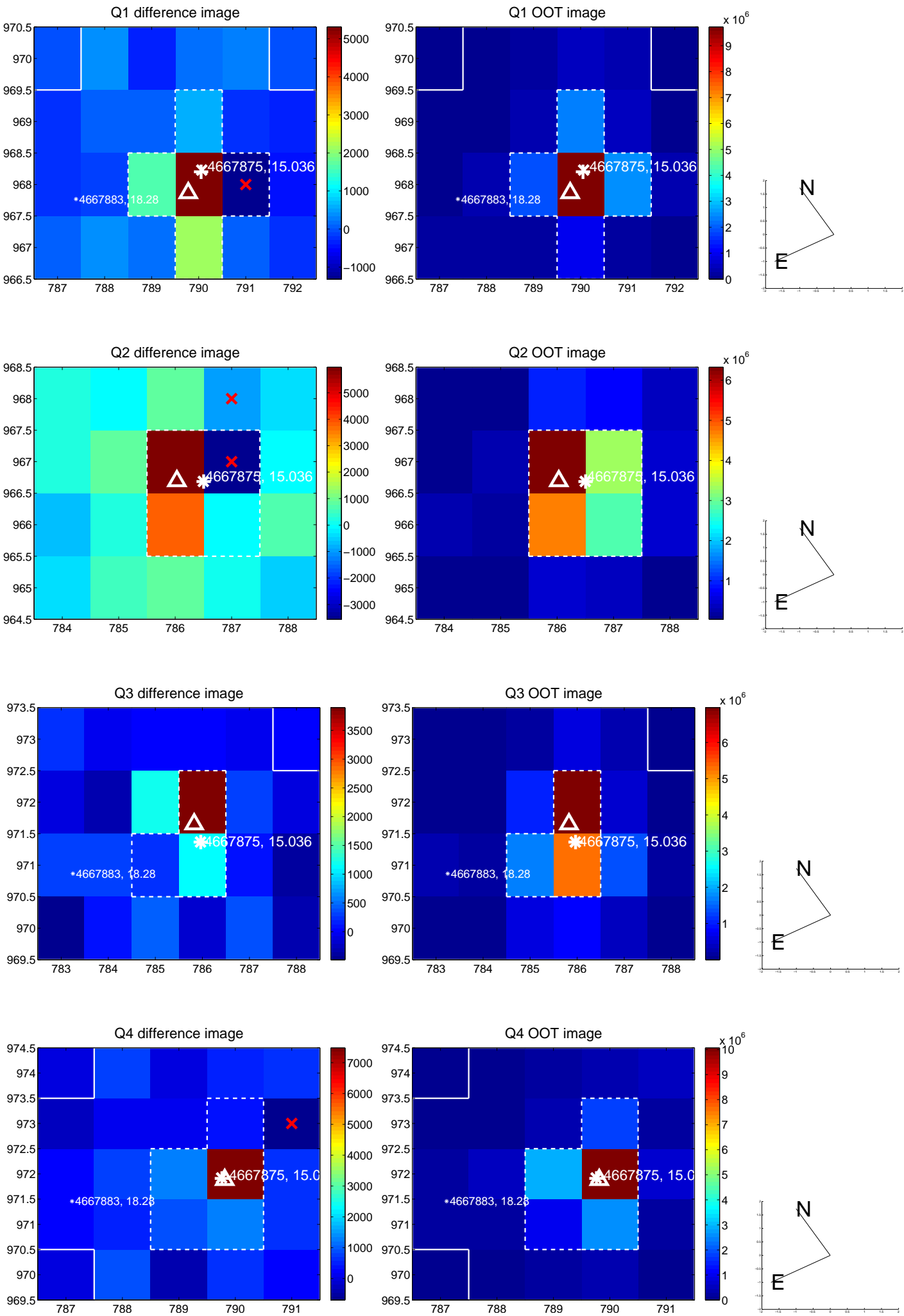
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.731 ± 0.865	0.84	0.616 ± 0.733	0.393 ± 0.617
PRF-fit source offset from KIC position	0.734 ± 0.905	0.81	0.633 ± 0.748	0.371 ± 0.669
photometric centroid source offset	1.58 ± 0.51	3.07	1.10 ± 0.52	1.13 ± 0.51

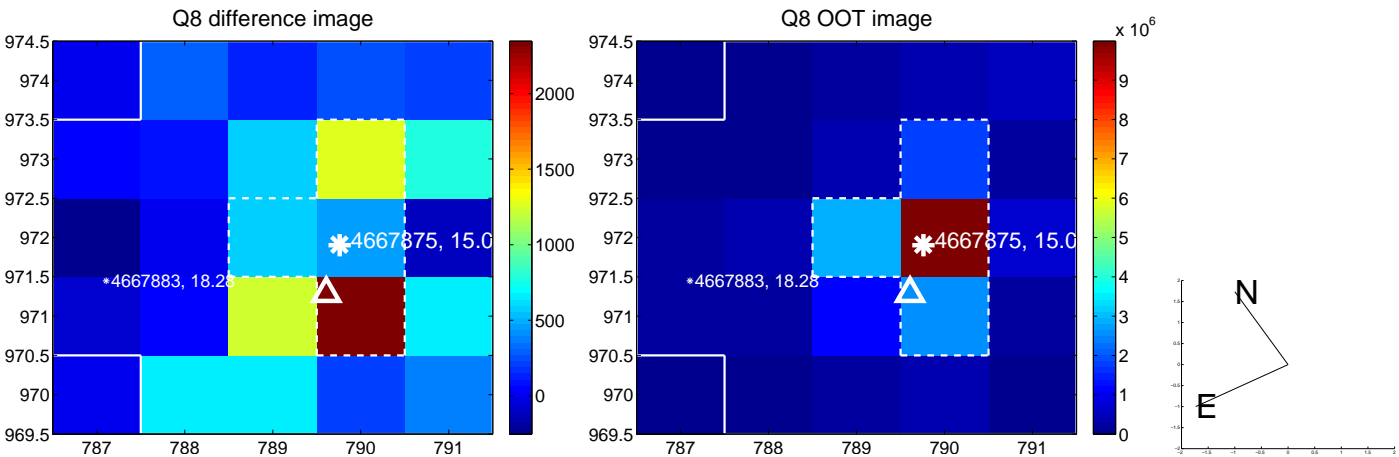
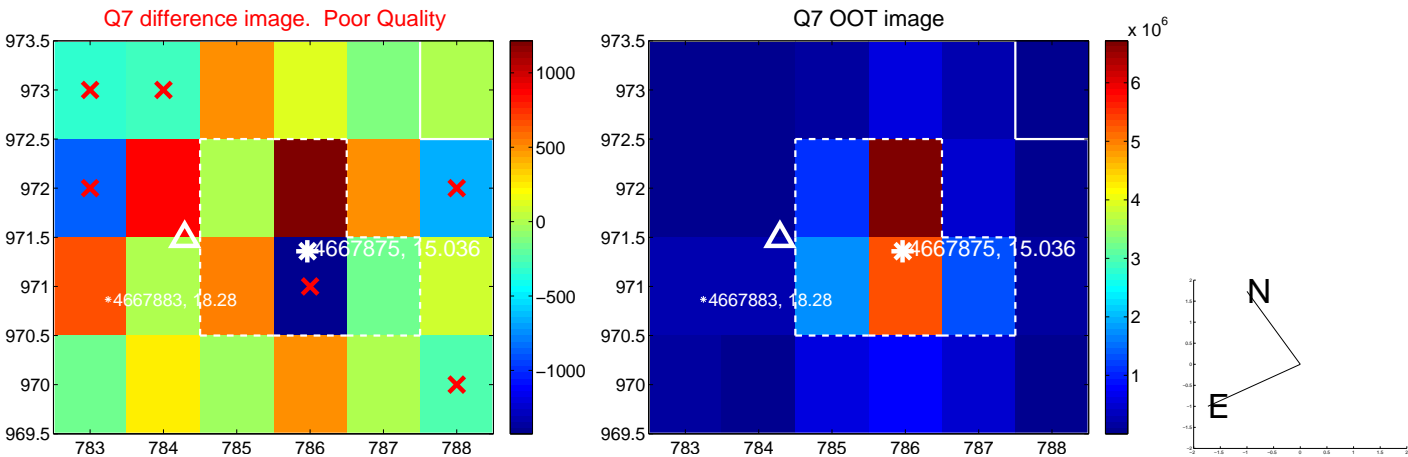
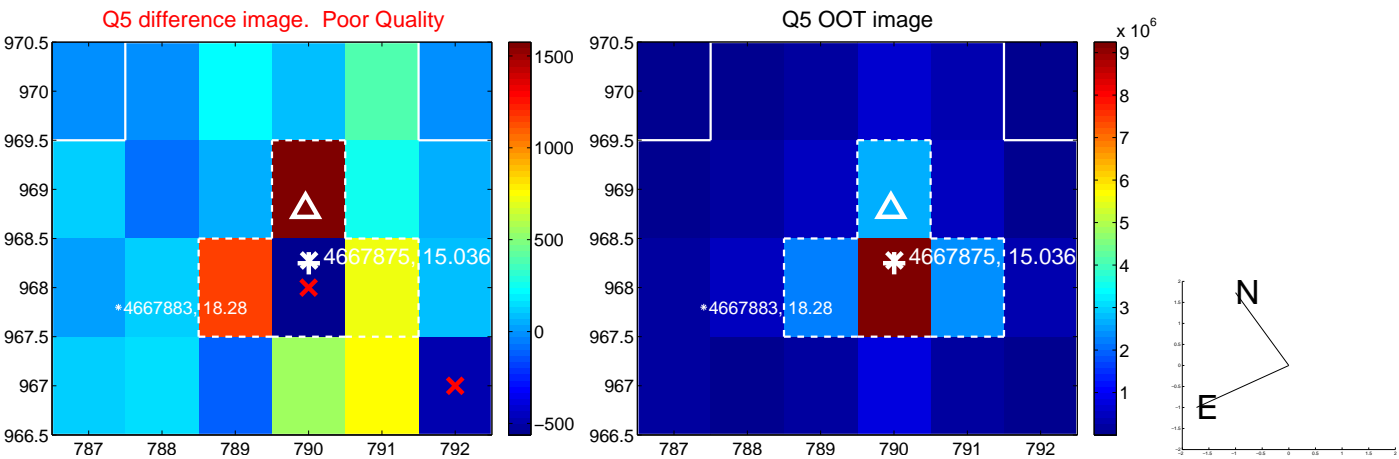


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

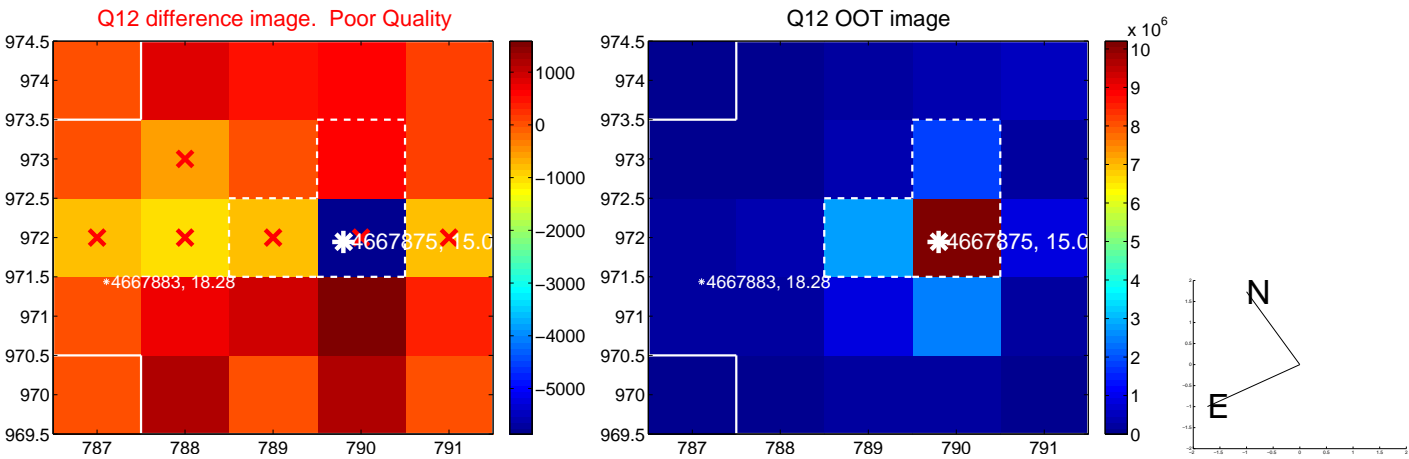
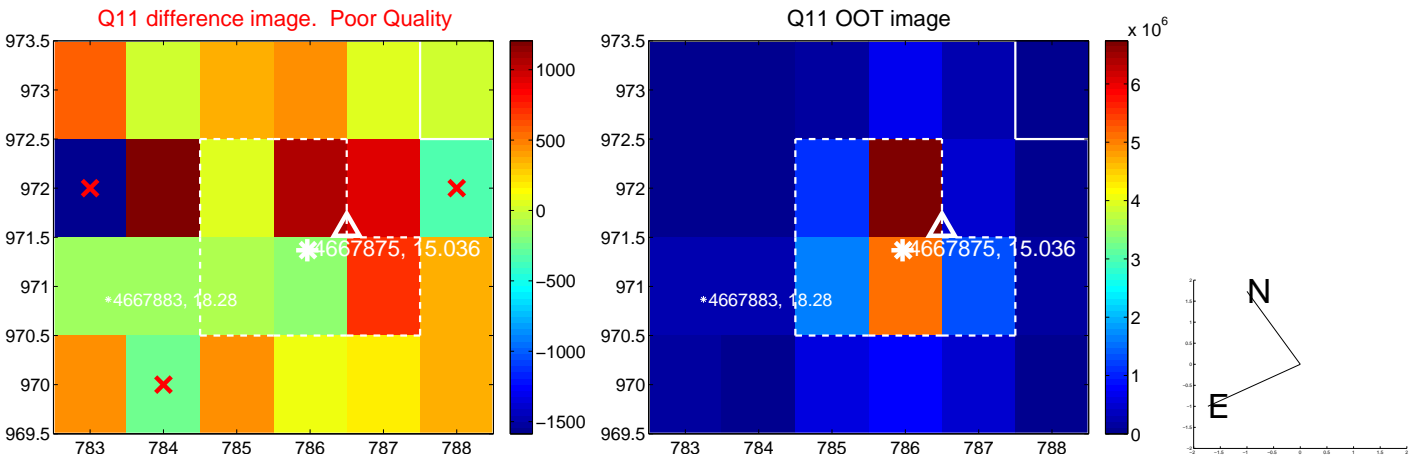
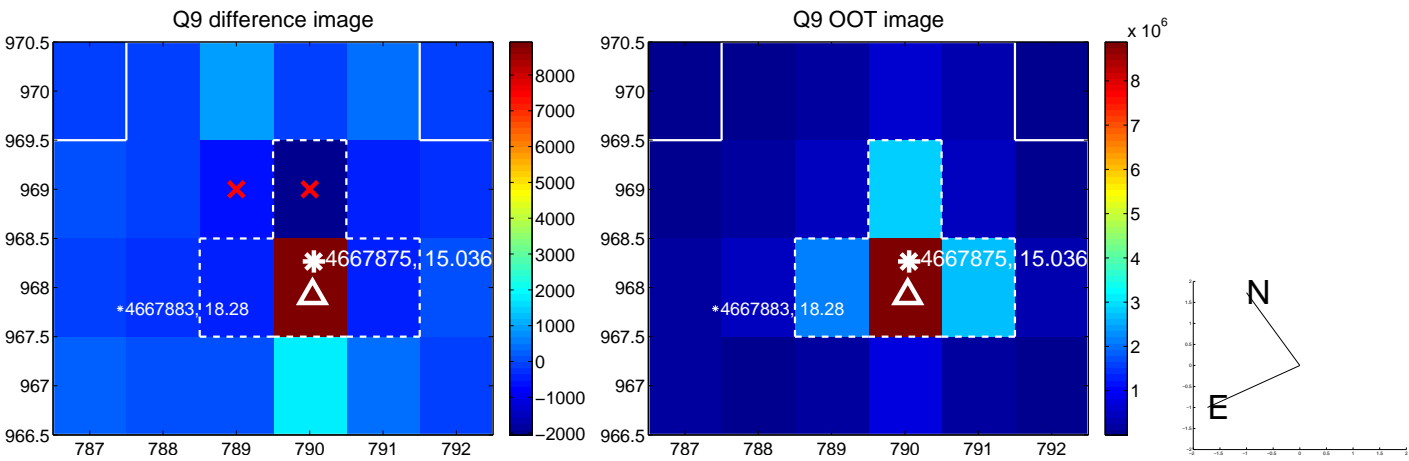
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



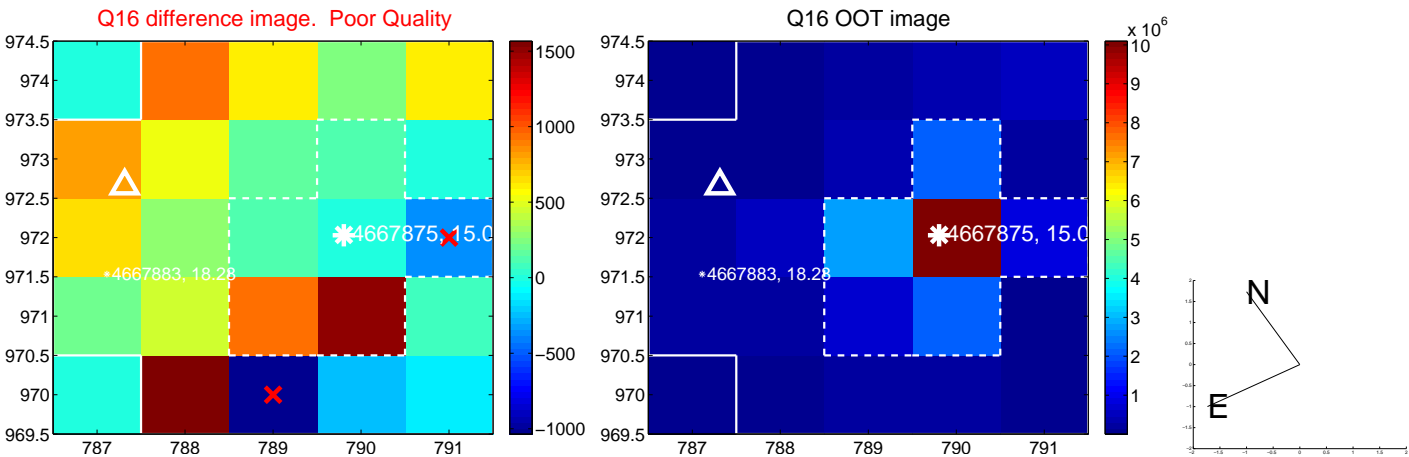
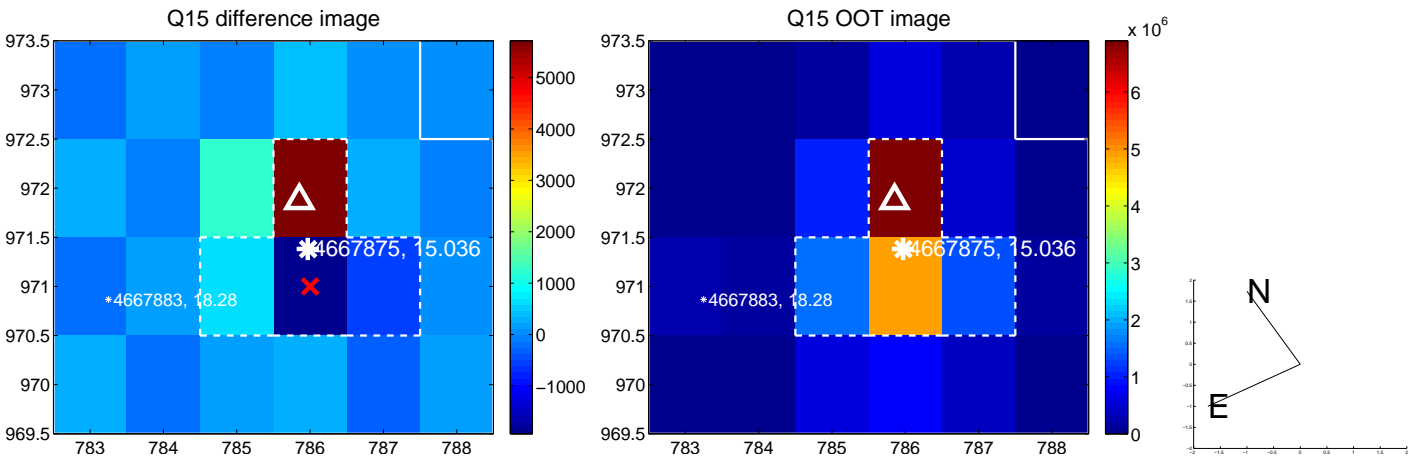
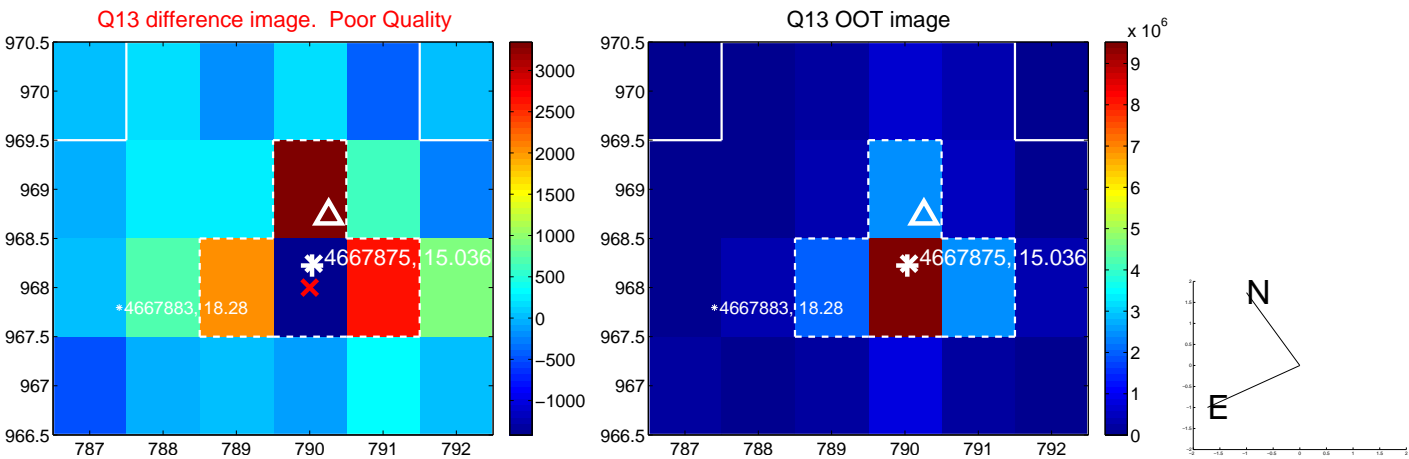
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



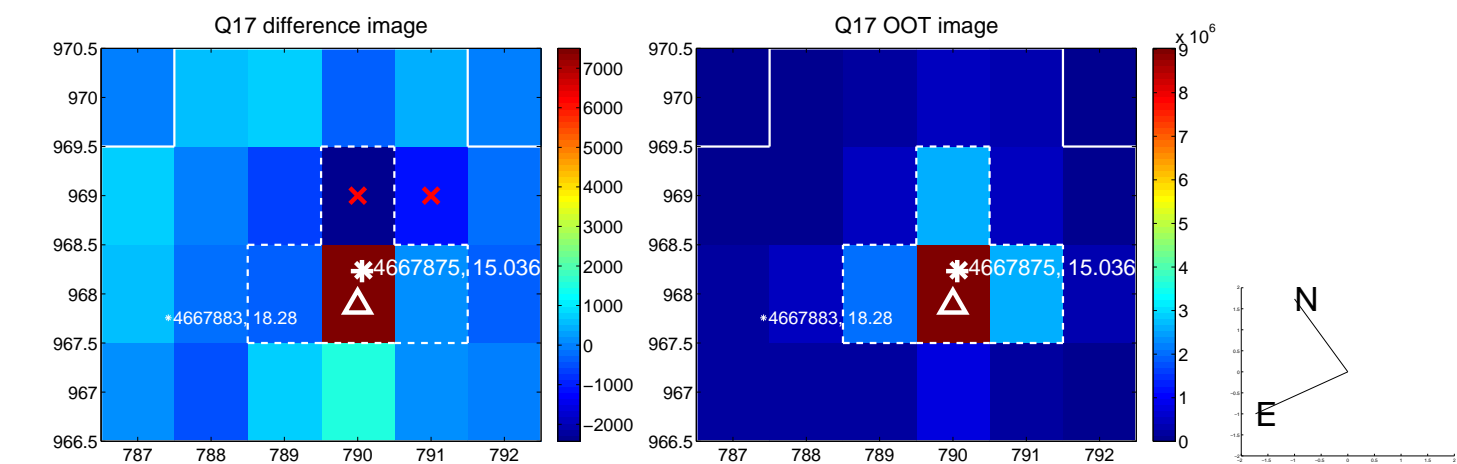
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



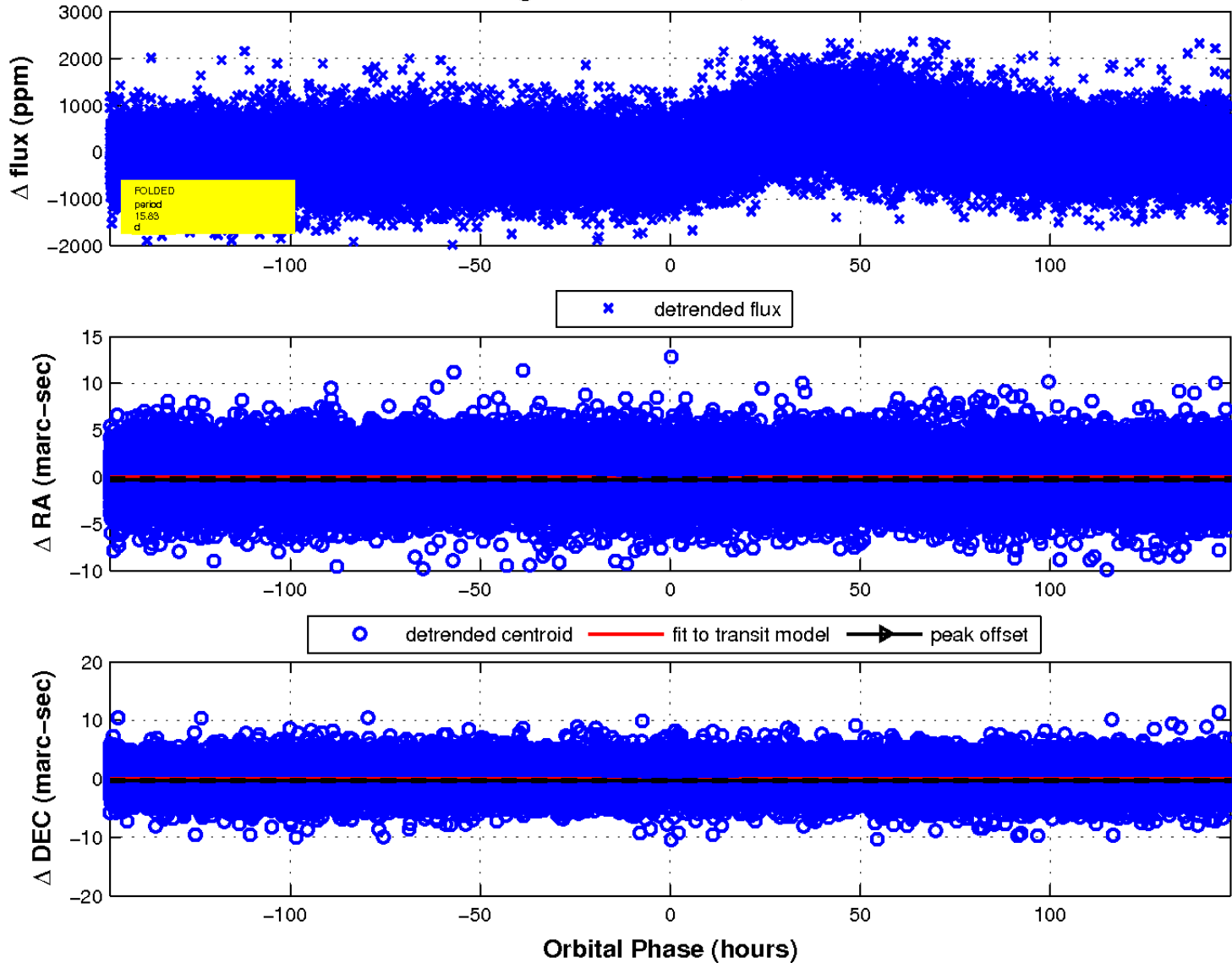
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

