

KIC 005428668

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})
005428668-01	OBS	2794.01	0.703401	131.657126	444.1	0.593	16.1	23.9	0.91	5955	1.97	3892.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005428668-01	OBS	FP	0.00	1	0	1	0	MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST

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 005428668-01

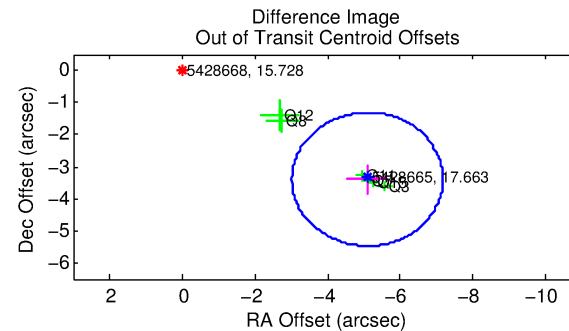
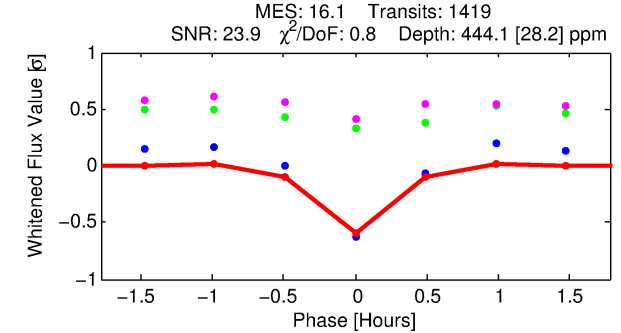
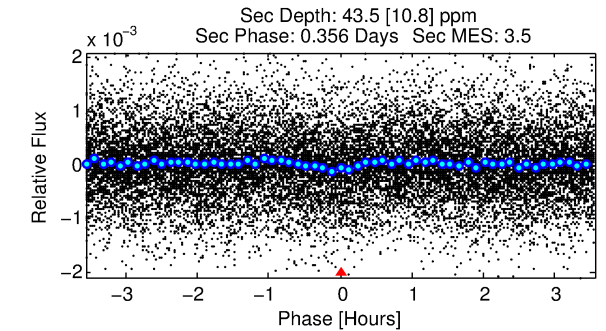
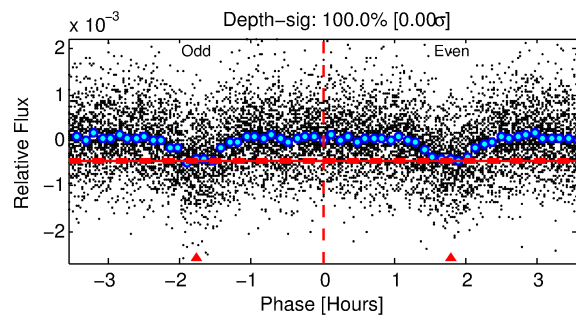
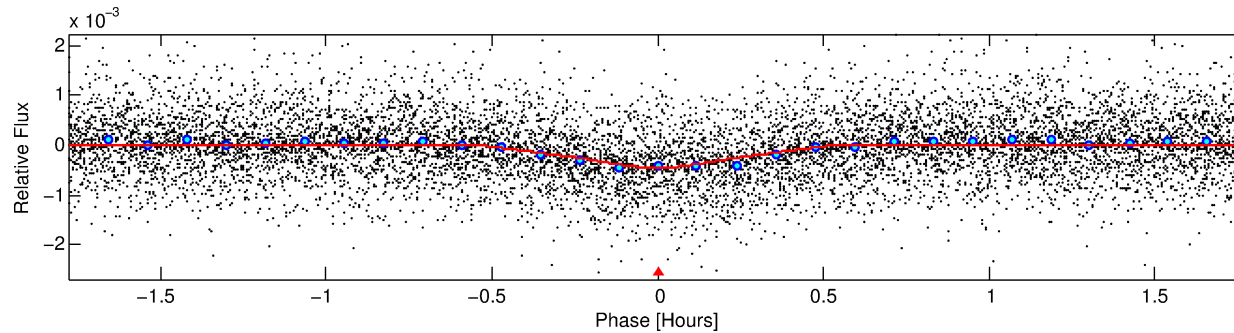
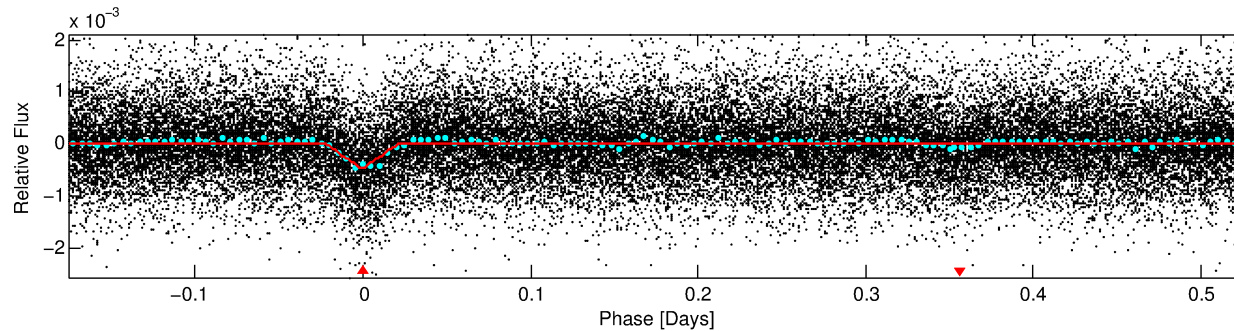
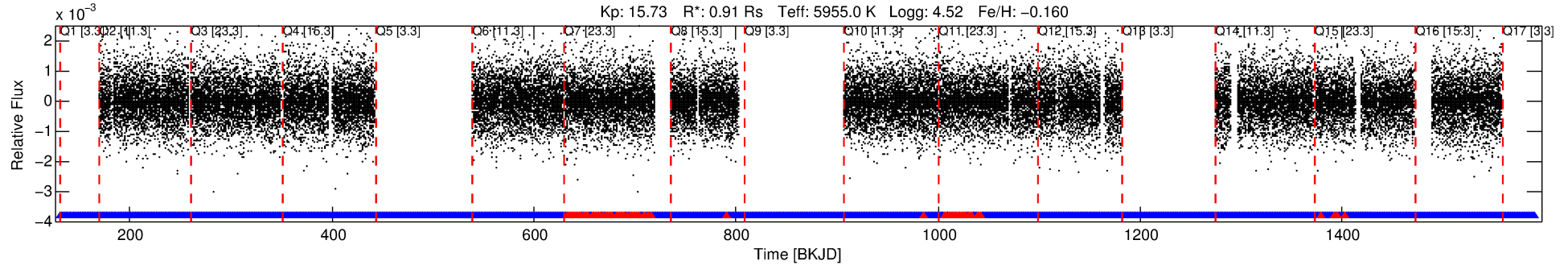
No Significant Match Found

DV One-Page Summary

KIC: 5428668 Candidate: 1 of 1 Period: 0.703 d

KOI: K02794.01 Corr: 0.839

Kp: 15.73 R*: 0.91 Rs Teff: 5955.0 K Logg: 4.52 Fe/H: -0.160



DV Fit Results:

Period = 0.70340 [0.00000] d
Epoch = 131.6571 [0.0005] BKJD
Rp/R* = 0.0199 [0.0094]
a/R* = 9.22 [20.54]
b = 0.10 [22.38]
Seff = 3892.05 [1577.83]
Teq = 2014 [204] K
Rp = 1.97 [1.12] Re
a = 0.0155 [0.0041] AU
Ag = 1.48 [1.56] [0.31σ]
Teffp = 3432 [847] K [1.63σ]

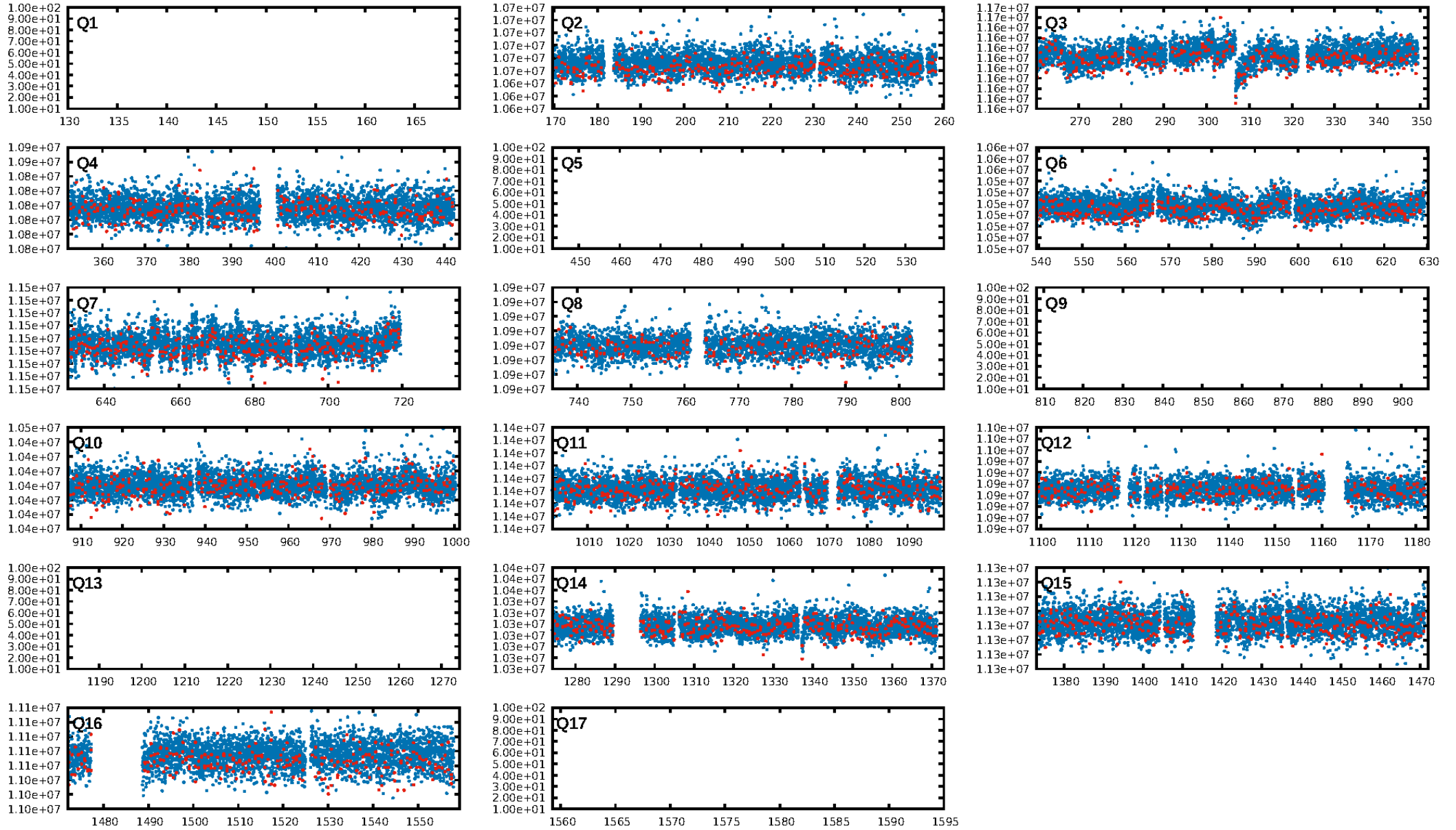
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.67e-55
RollingBand-fgt: 0.94 [1330/1419]
GhostDiagnostic-chr: -0.08387
Centroid-sig: 0.0%
Centroid-so: 8.866 arcsec [18.84σ]
OotOffset-rm: 6.123 arcsec [8.83σ]
KicOffset-rm: 6.144 arcsec [9.71σ]
OotOffset-st: 0/4/2/0 [6]
KicOffset-st: 0/4/2/0 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 1.00 [12/12]

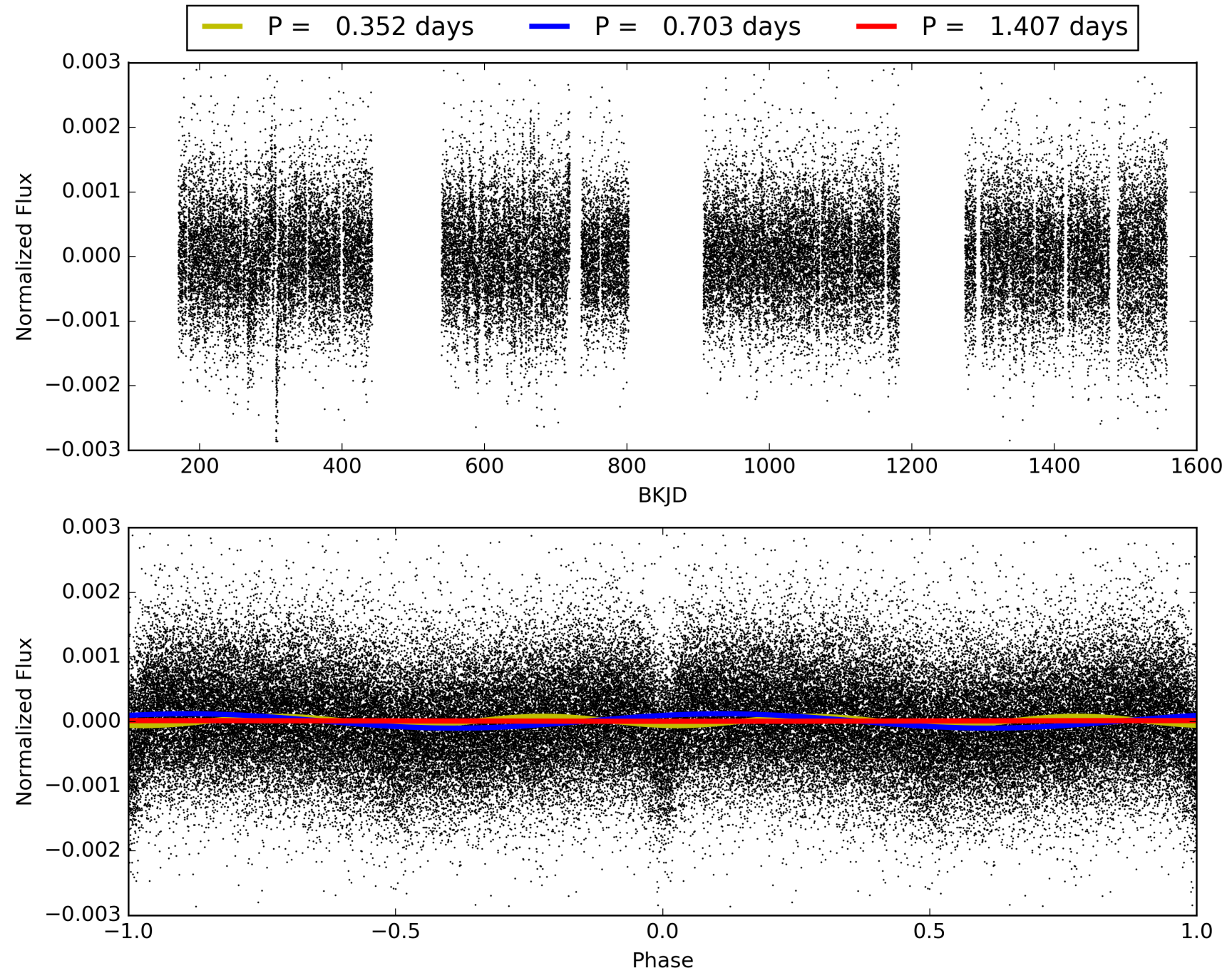
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 02:55:07 Z

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

TCE 005428668-01, PDC Light Curves

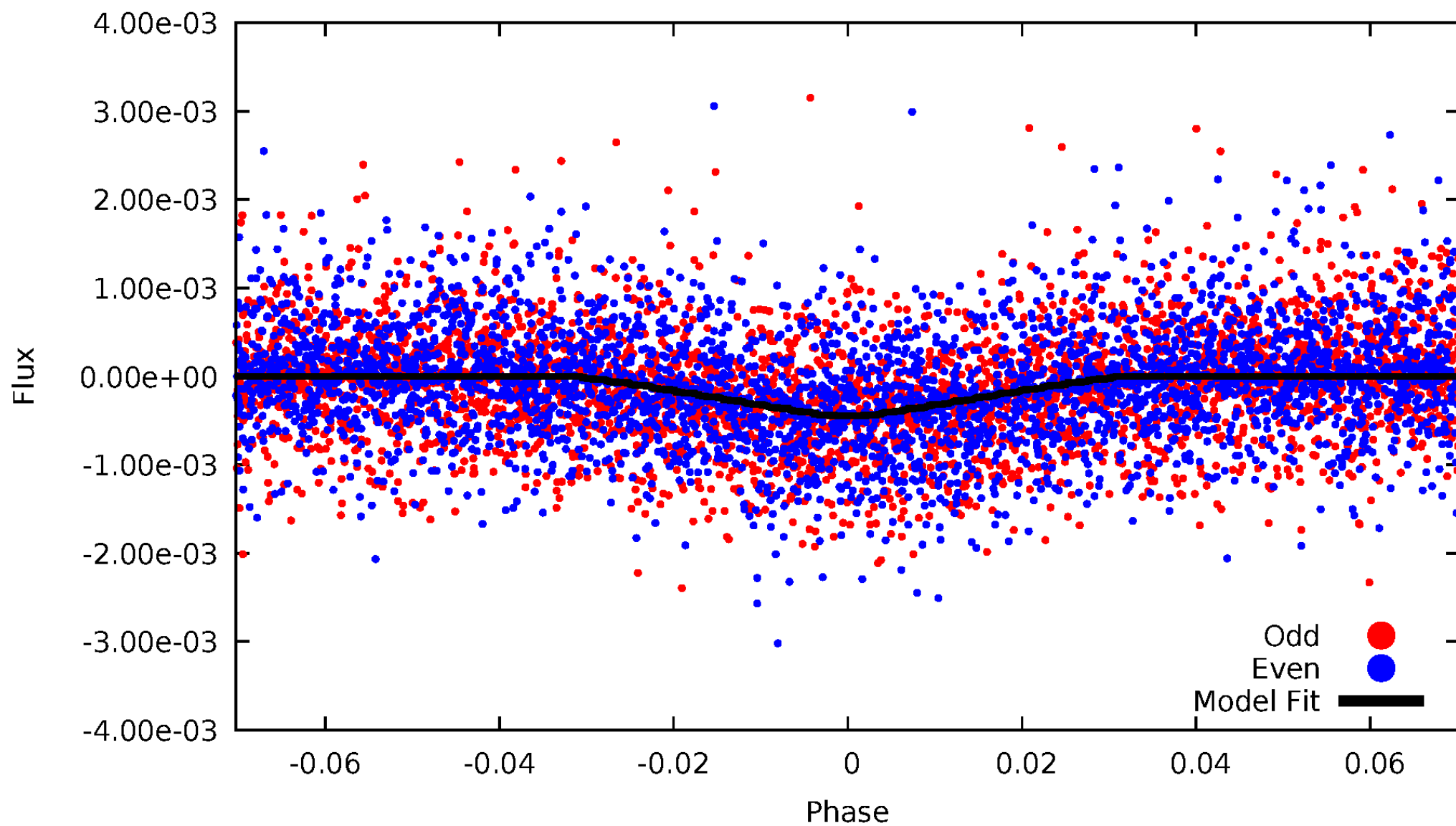


TCE 005428668-01



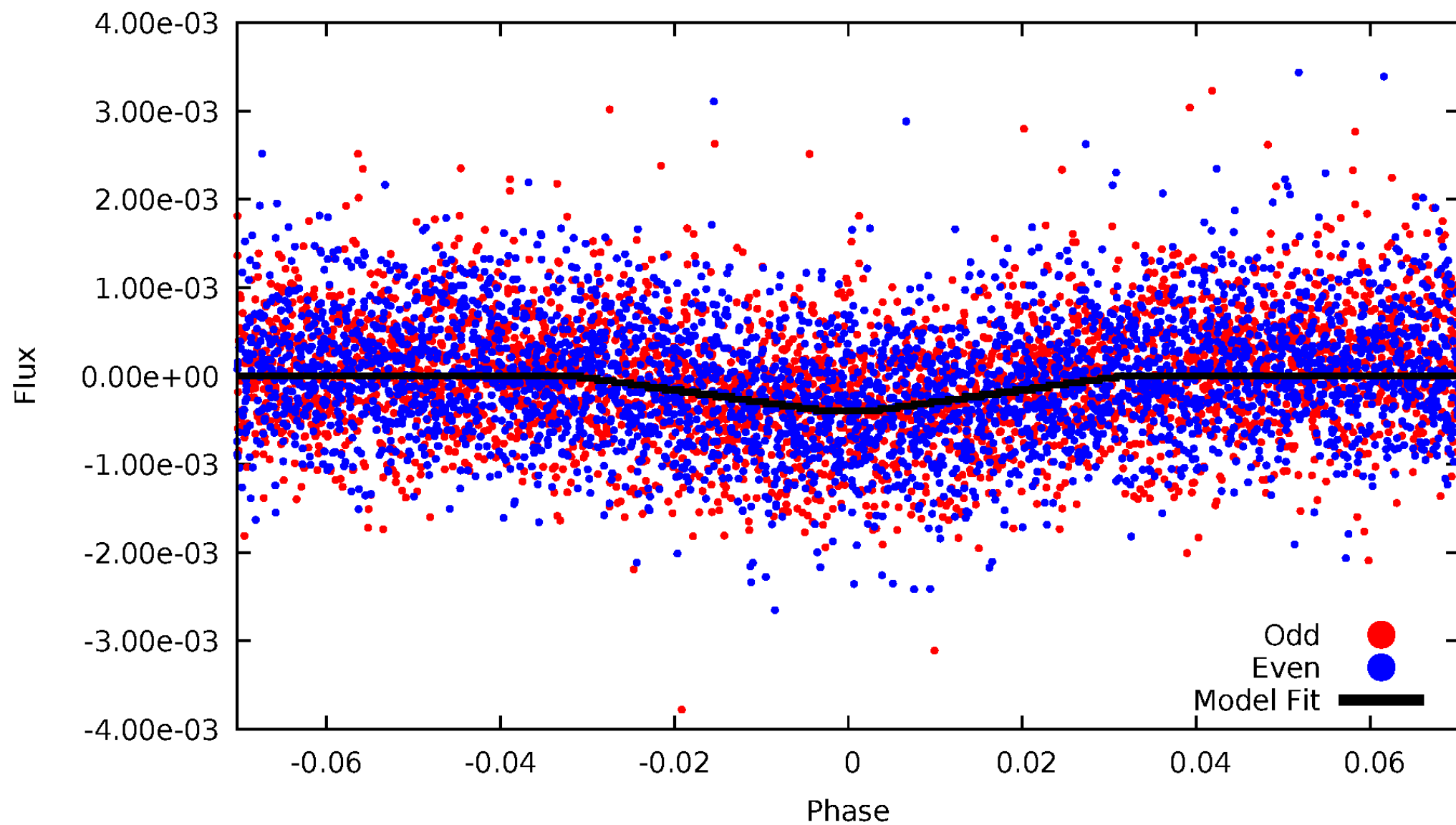
DV Odd/Even

TCE 005428668-01



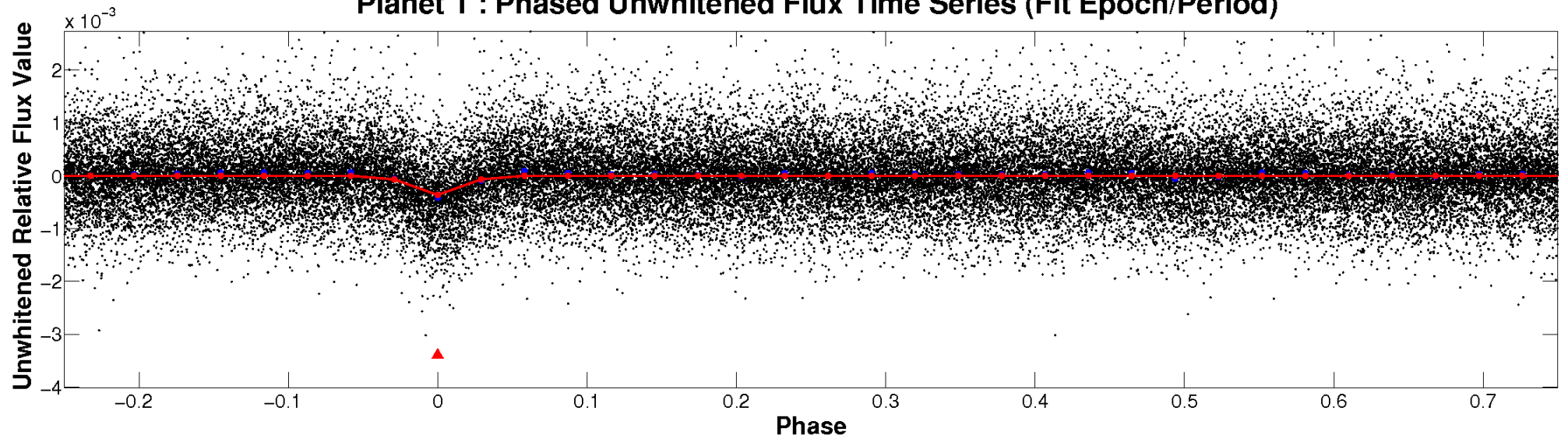
ALT Odd/Even

TCE 005428668-01

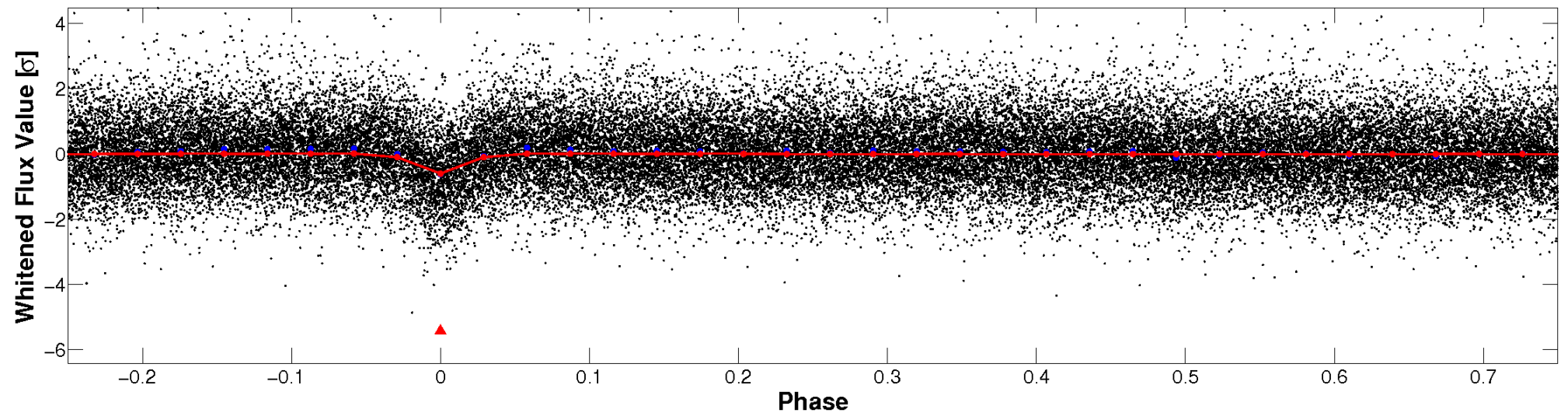


Non-Whitened Vs. Whitened Light Curve

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

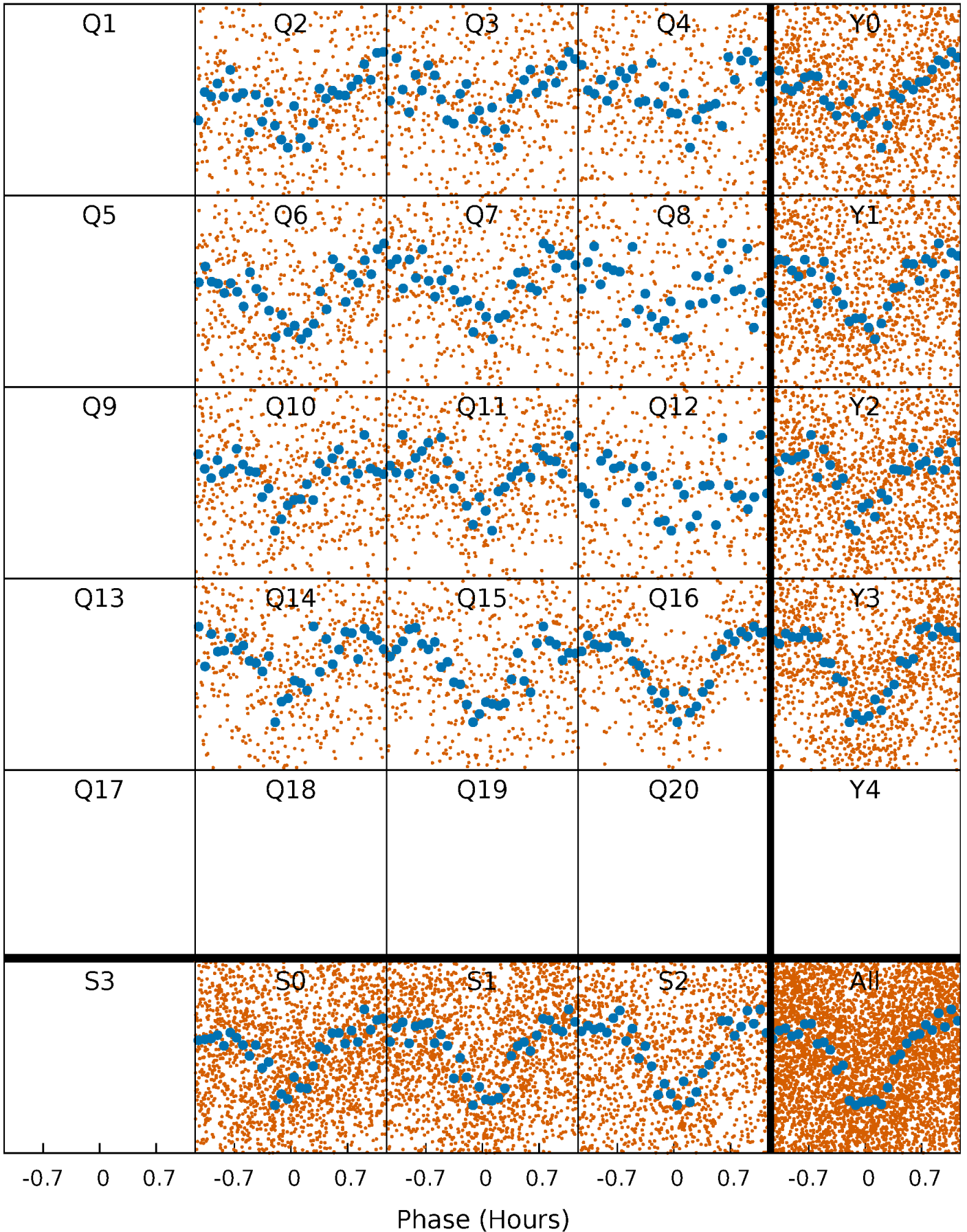


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



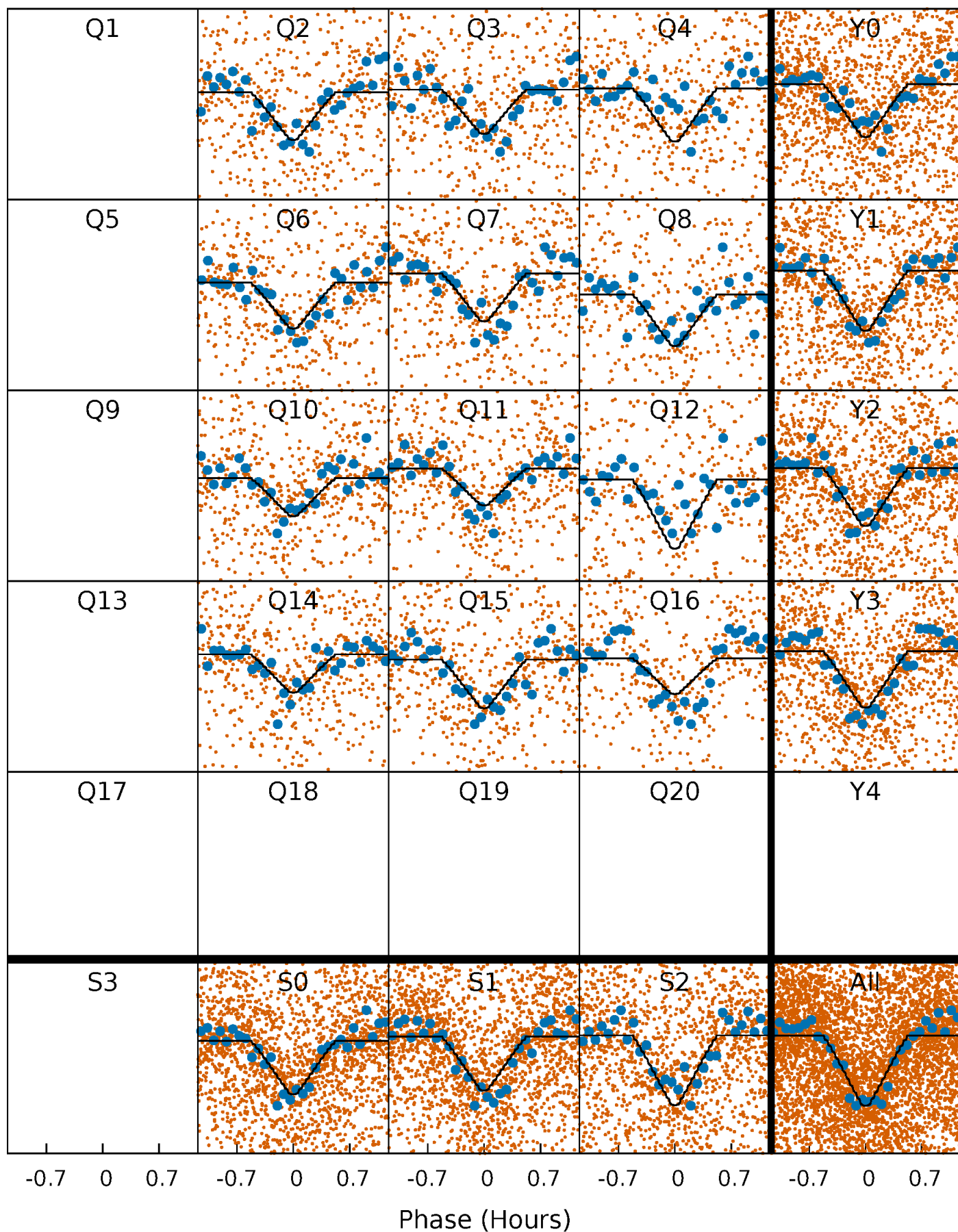
PDC Quarter-Phased Transit Curves

TCE 005428668-01 P= 0.703401 Days $T_0=131.657126$ (BKJD)



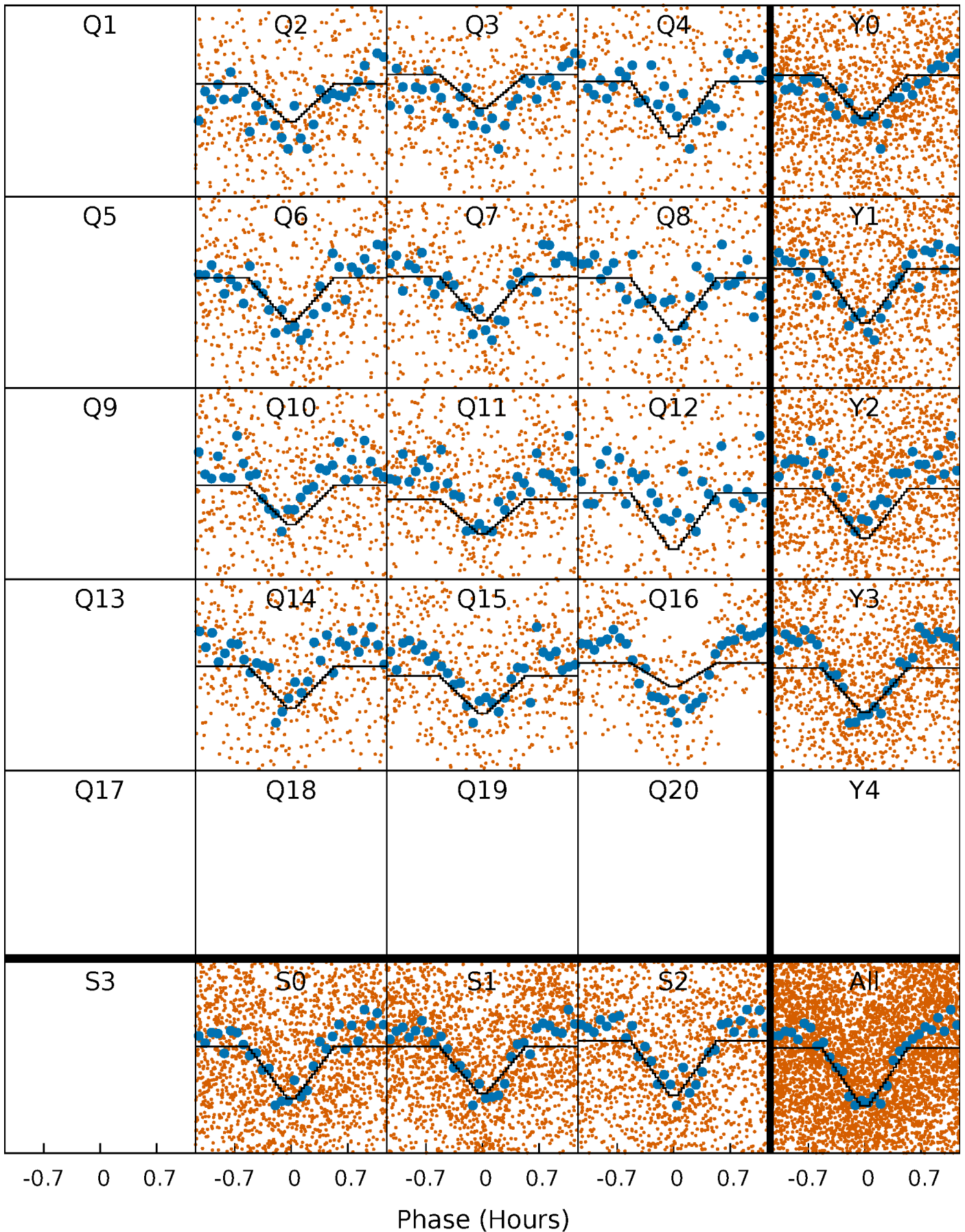
DV Quarter-Phased Transit Curves

TCE 005428668-01 P= 0.703401 Days $T_0=131.657126$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

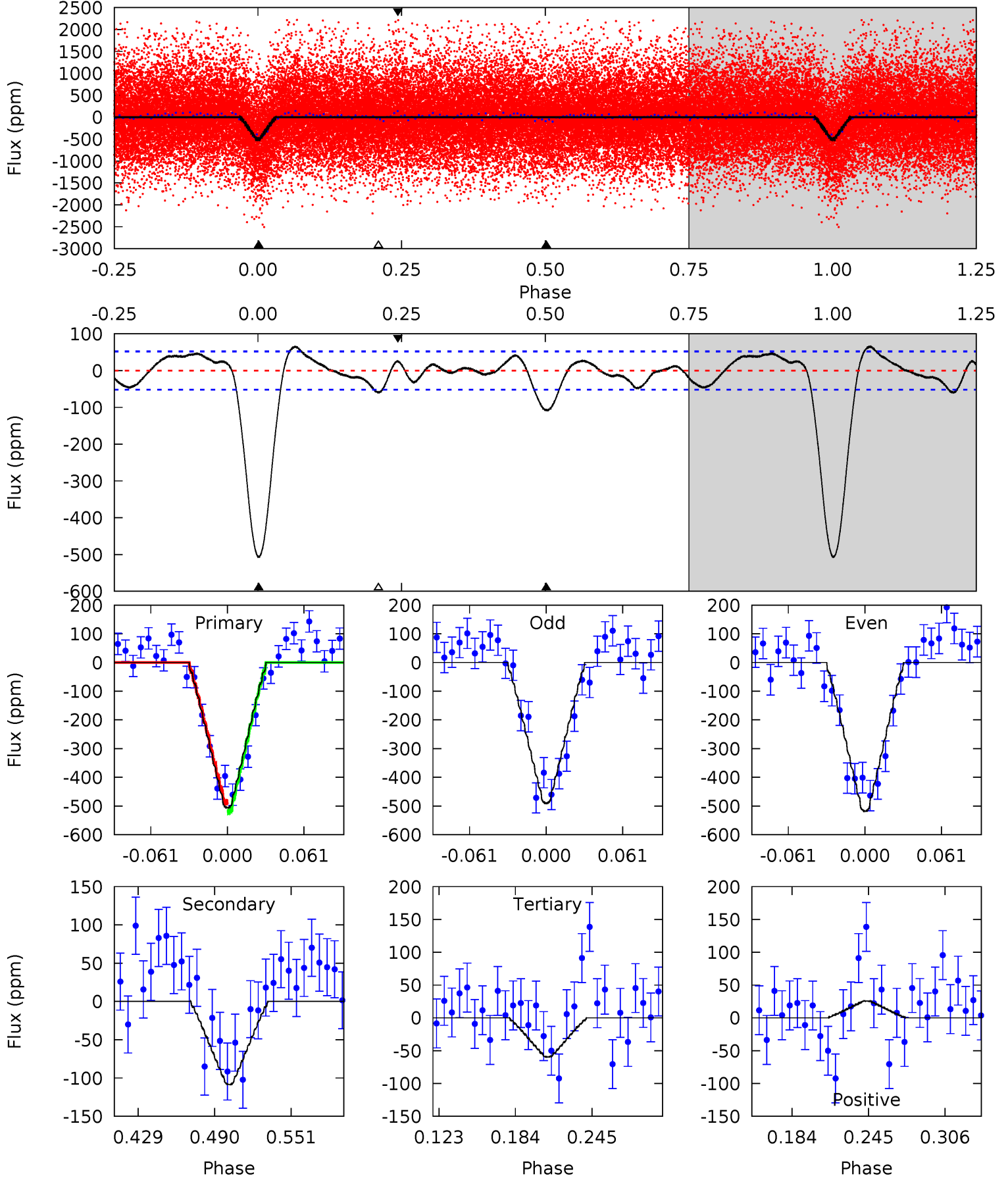
TCE 005428668-01 P= 0.703401 Days $T_0=131.657111$ (BKJD)



DV Model-Shift Uniqueness Test

005428668-01, P = 0.703401 Days, E = 131.657126 Days

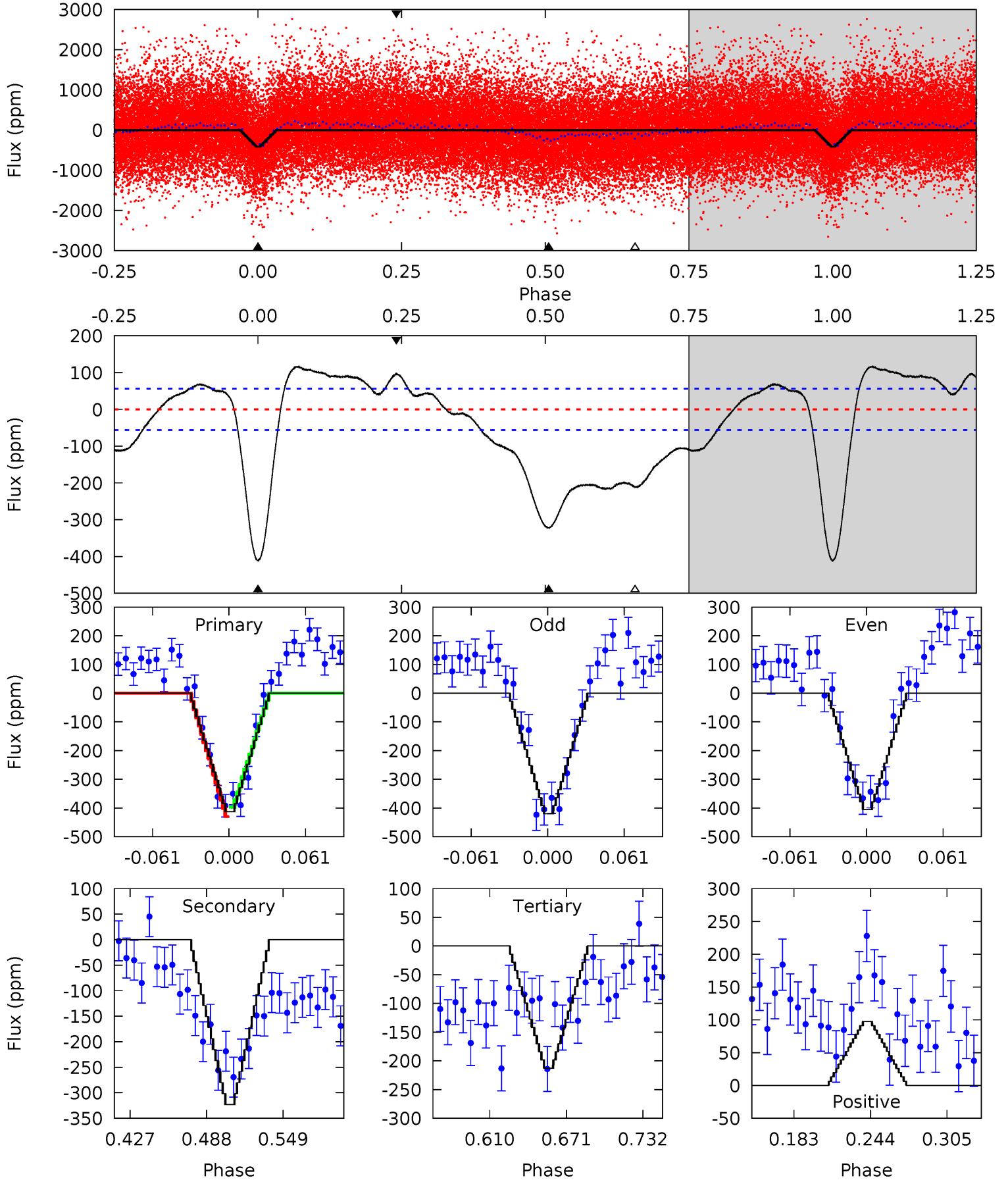
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.6	9.77	5.37	2.32	4.67	1.87	2.39	40.2	43.3	4.39	7.45	1.25	1.06	0.11	1.54



Alt Model-Shift Uniqueness Test

005428668-01, P = 0.703401 Days, E = 131.657111 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.2	26.8	17.6	8.07	4.67	1.87	8.73	16.6	26.1	9.17	18.7	0.62	0.97	0.22	1.36



Stellar Parameters For KIC 005428668

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5955^{+179}_{-179}	$4.520^{+0.037}_{-0.213}$	$-0.160^{+0.300}_{-0.300}$	$0.910^{+0.283}_{-0.089}$	$0.999^{+0.132}_{-0.132}$	$1.869^{+0.382}_{-0.975}$
	+3%/-3%	+1%/-5%	+188%/-188%	+31%/-10%	+13%/-13%	+20%/-52%
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 005428668-01 / KOI 2794.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-109±11	$2.09^{+0.98}_{-0.97}$	2889^{+202}_{-128}	4454^{+1378}_{-684}	$3.210^{+7.579}_{-1.704}$
Alt.	-323±12	$2.11^{+1.04}_{-0.96}$	2896^{+191}_{-137}	5572^{+2122}_{-860}	$9.032^{+22.790}_{-4.736}$

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 $A_{obs} \gg 1.0$

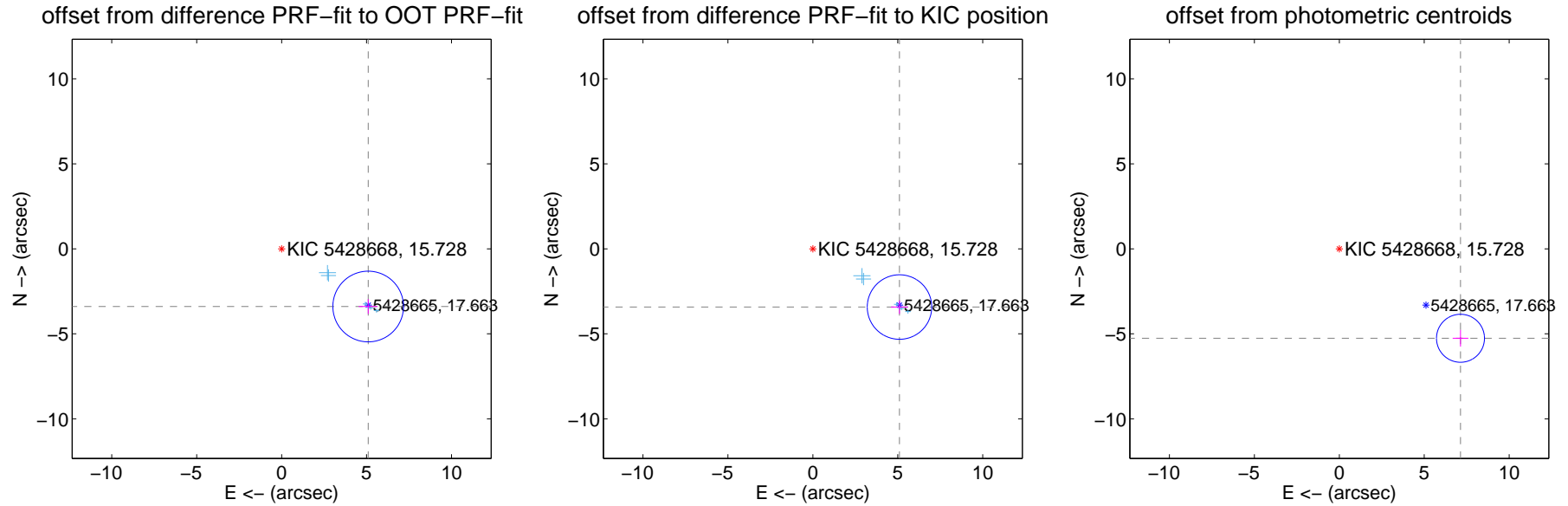
DV Centroid Data

Supplemental centroid analysis for 005428668-01. Kepler magnitude: 15.73. Transit SNR 23.85

There are 6 quarters with good PRF difference image offsets

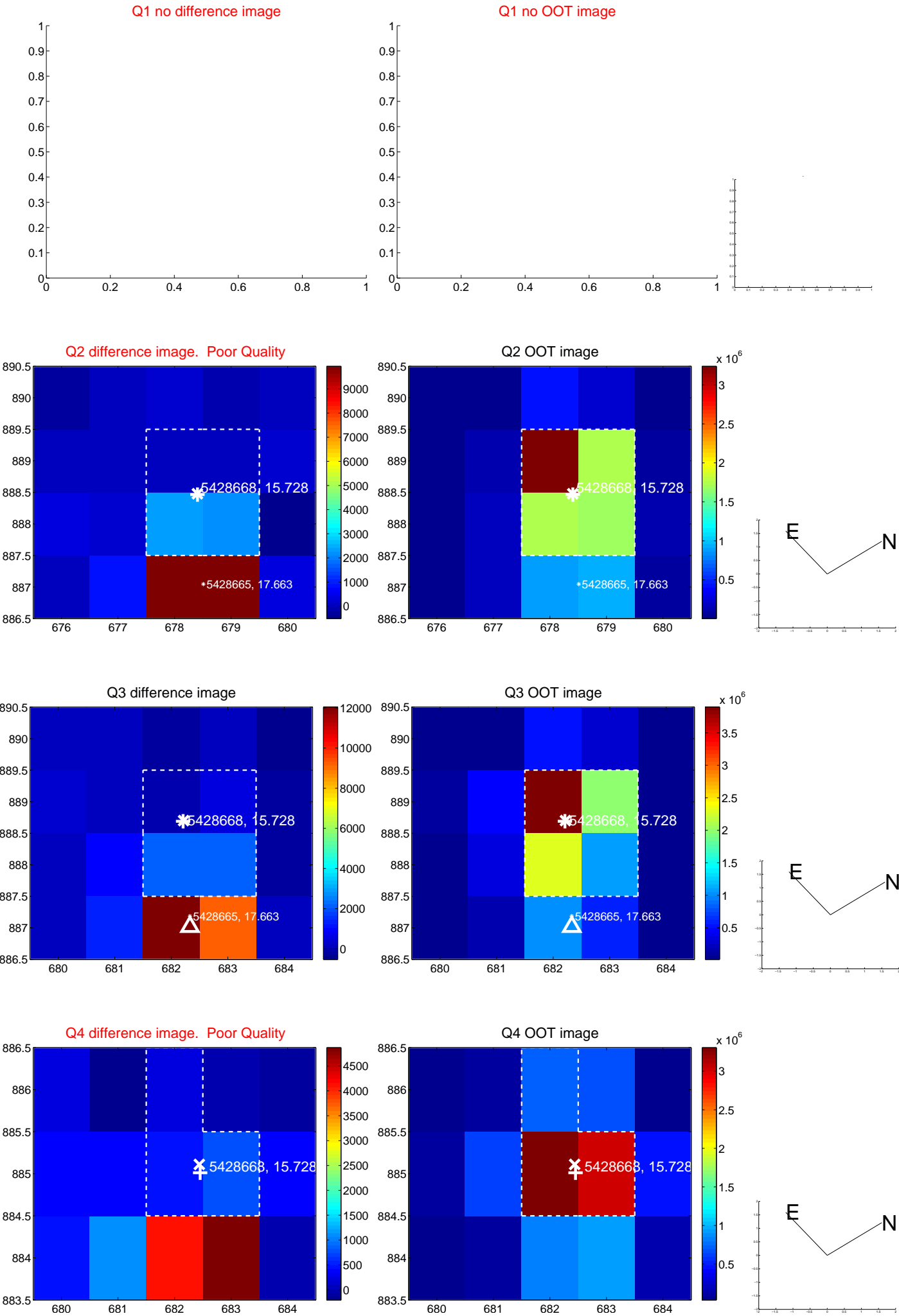
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.123 ± 0.693	8.83	-5.096 ± 0.550	-3.394 ± 0.430
PRF-fit source offset from KIC position	6.144 ± 0.633	9.71	-5.101 ± 0.498	-3.425 ± 0.399
photometric centroid source offset	8.87 ± 0.47	18.84	-7.13 ± 0.46	-5.26 ± 0.49

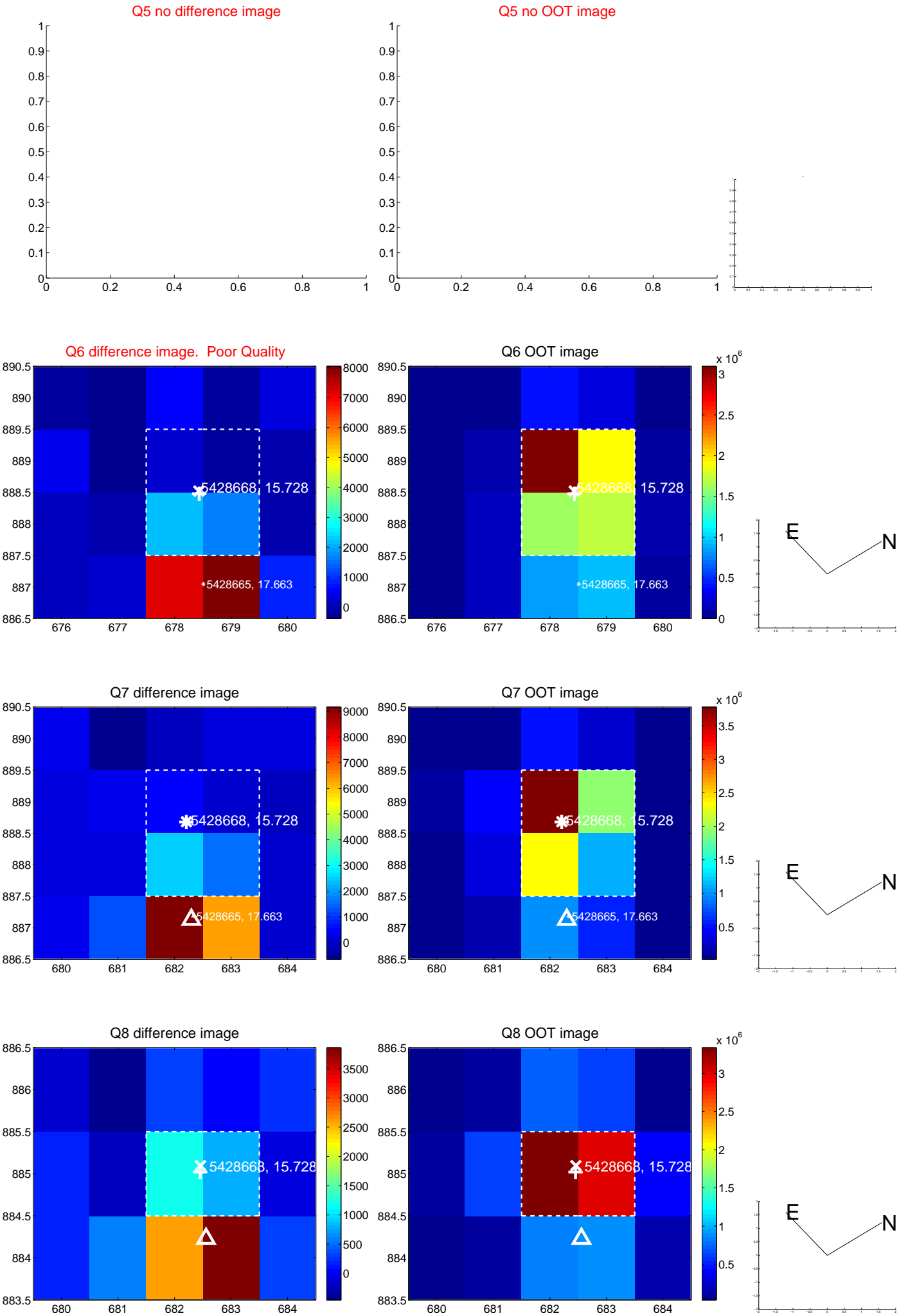


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000 are from the UKIRT catalog.

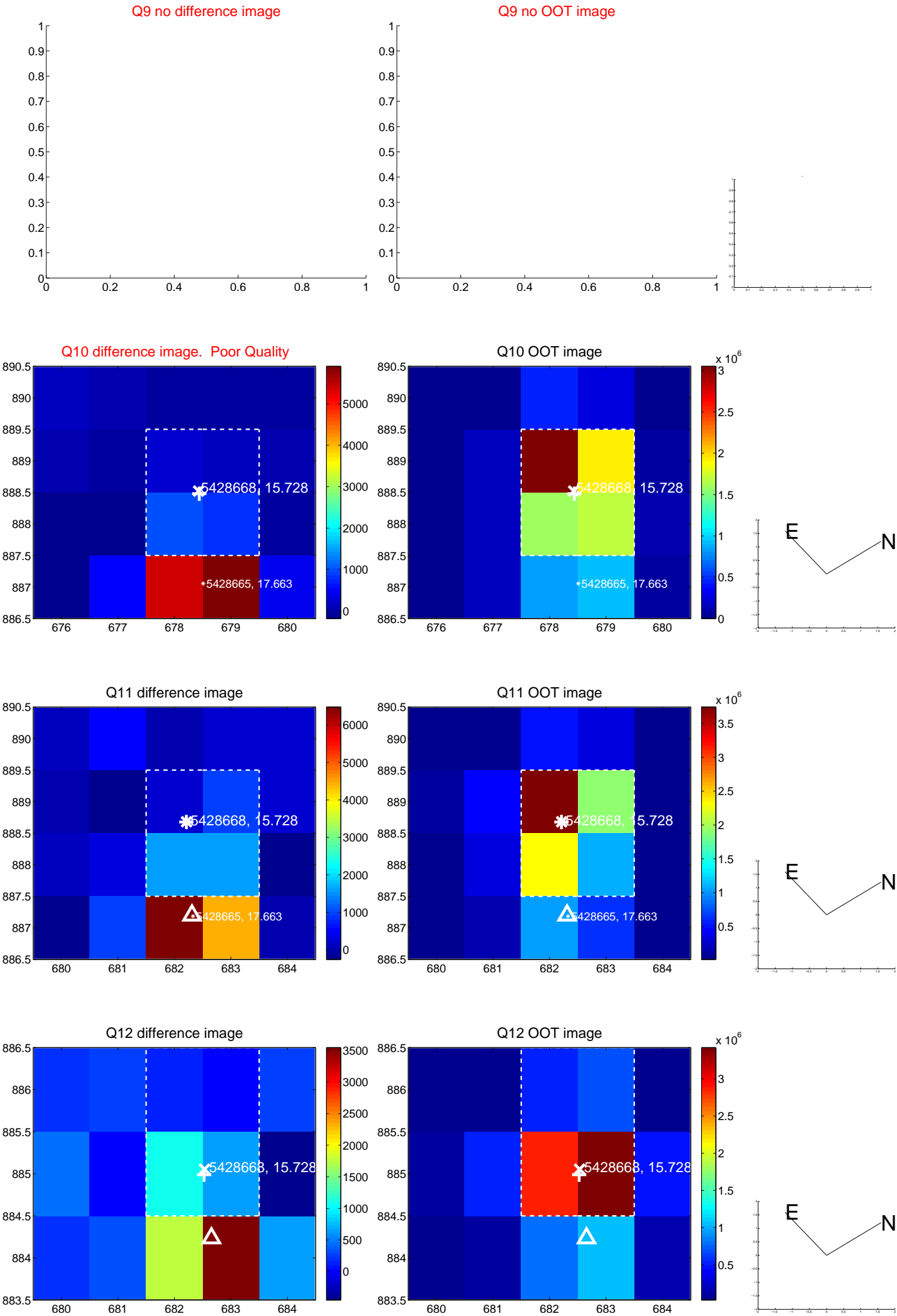
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



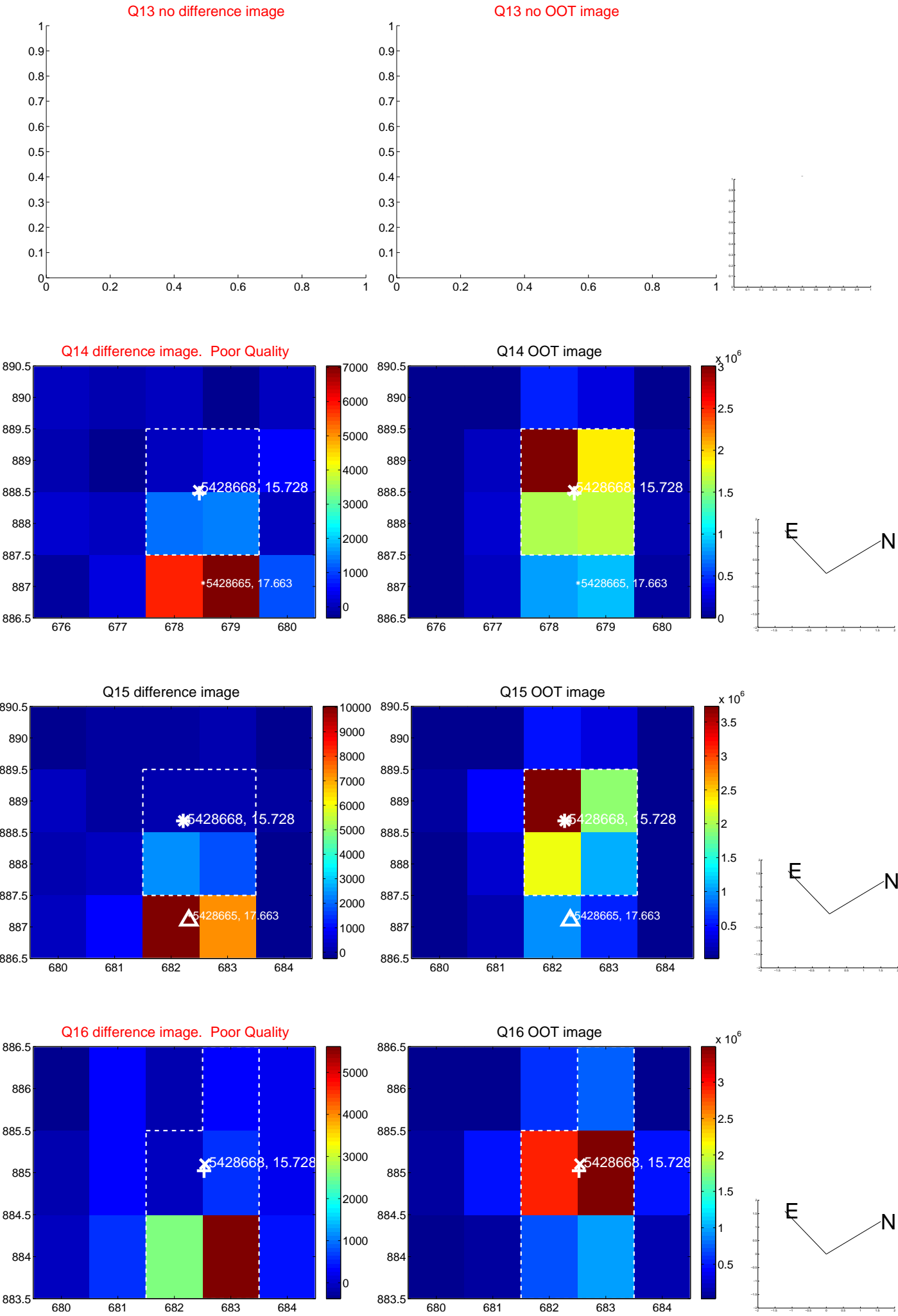
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



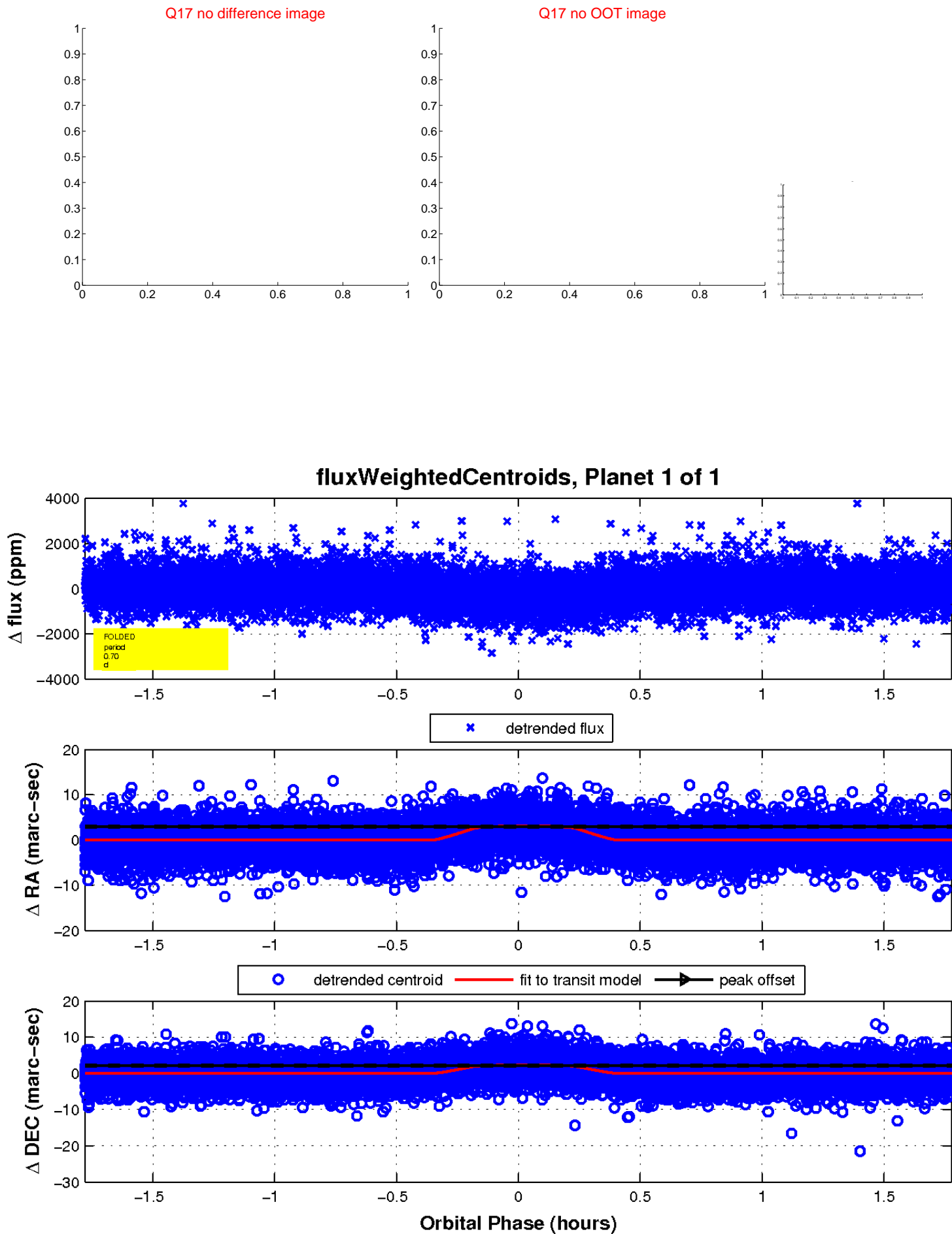
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

