

KIC 005301091

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})
005301091-01	OBS	No	3.297981	131.691242	22.5	21.759	8.2	7.7	1.36	6502	0.65	1397.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005301091-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

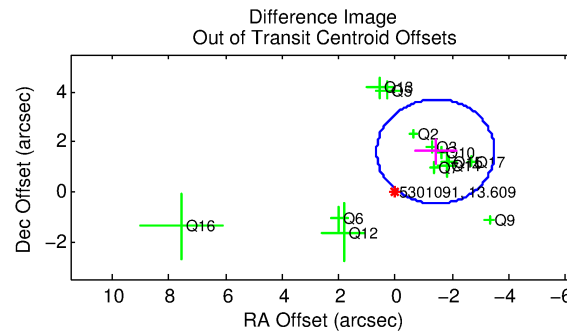
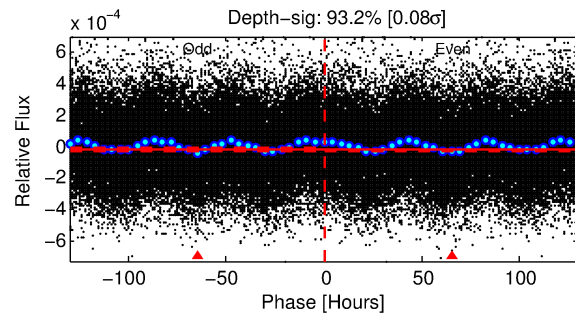
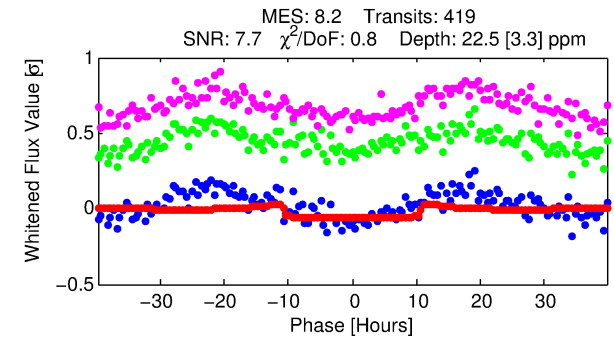
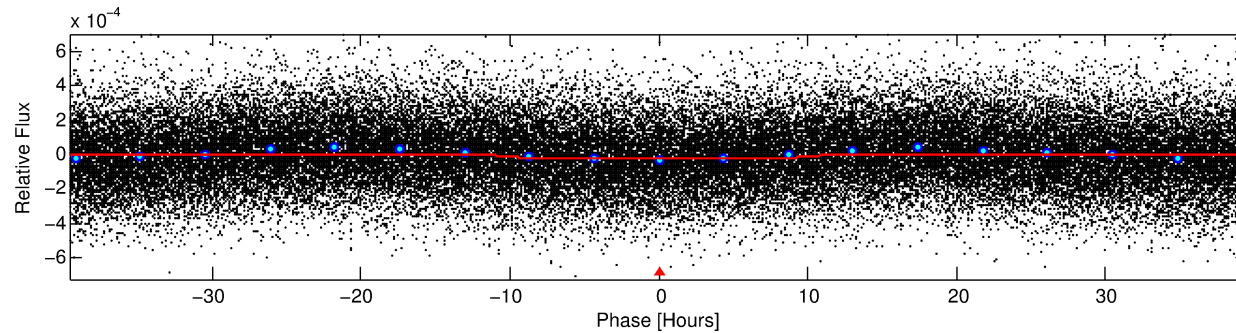
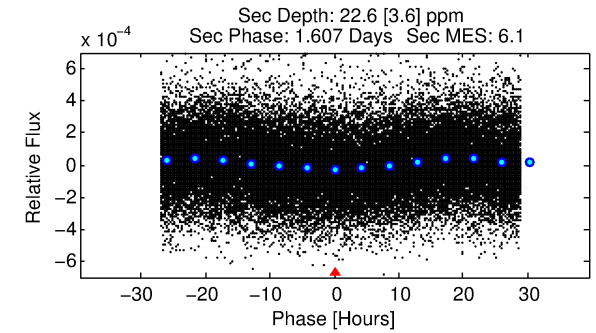
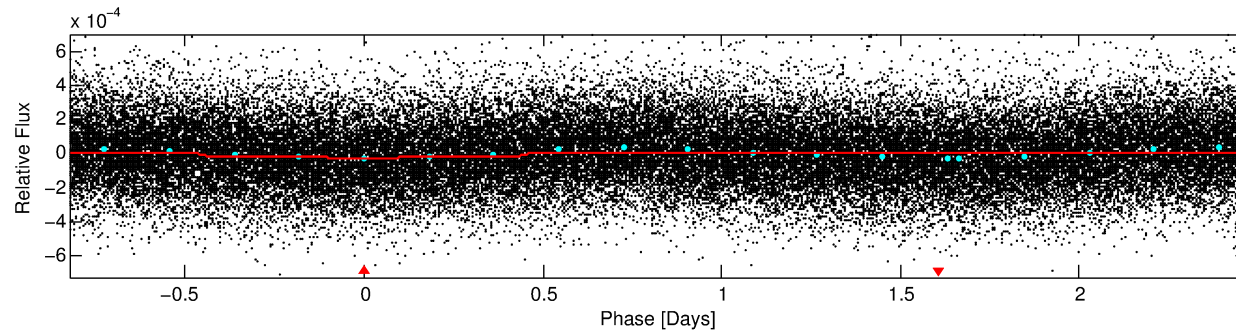
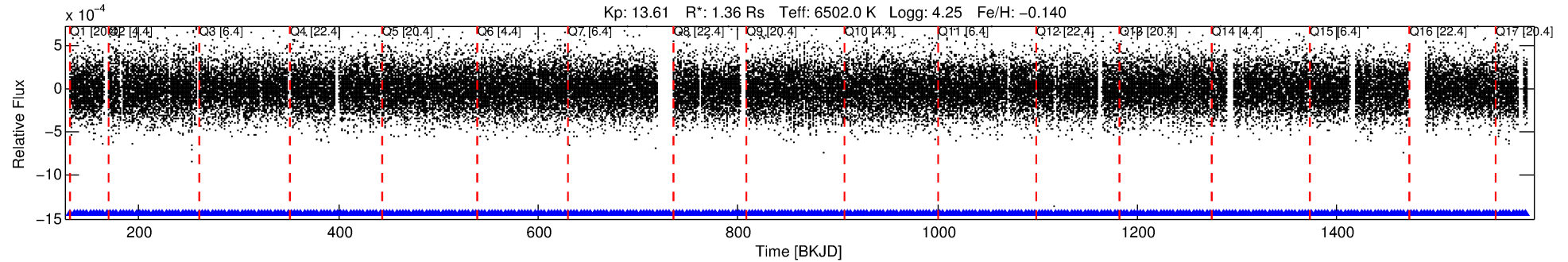
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005301091-01

No Significant Match Found

DV One-Page Summary

KIC: 5301091 Candidate: 1 of 1 Period: 3.298 d



DV Fit Results:

Period = 3.29798 [0.00007] d
Epoch = 131.6912 [0.0133] BKJD
Rp/R* = 0.0044 [0.0038]
a/R* = 1.32 [2.61]
b = 0.00 [1207.00]
Seff = 1397.41 [537.76]
Teq = 1559 [150] K
Rp = 0.65 [0.59] Re
a = 0.0461 [0.0116] AU
Ag = 62.87 [111.62] [0.55σ]
Teffp = 6788 [2960] K [1.76σ]

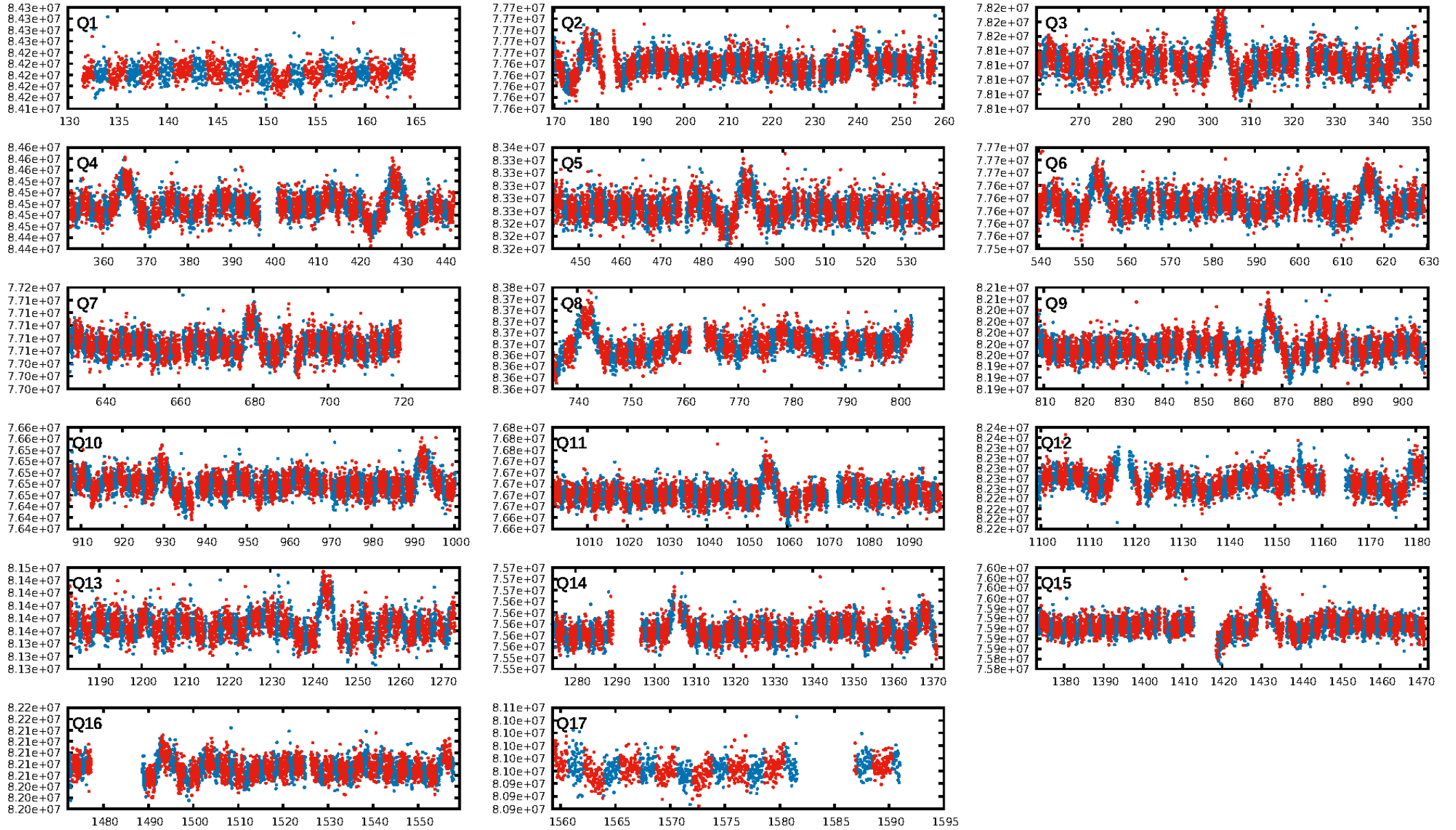
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.14e-18
RollingBand-fgt: 1.00 [400/400]
GhostDiagnostic-chr: 2.341
Centroid-sig: 29.3%
Centroid-so: 0.729 arcsec [0.76σ]
OotOffset-rm: 2.148 arcsec [3.09σ]
KicOffset-rm: 2.076 arcsec [2.99σ]
OotOffset-st: 4/3/2/4 [13]
KicOffset-st: 4/3/2/4 [13]
DiffImageQuality-fgm: 0.46 [6/13]
DiffImageOverlap-fno: 1.00 [17/17]

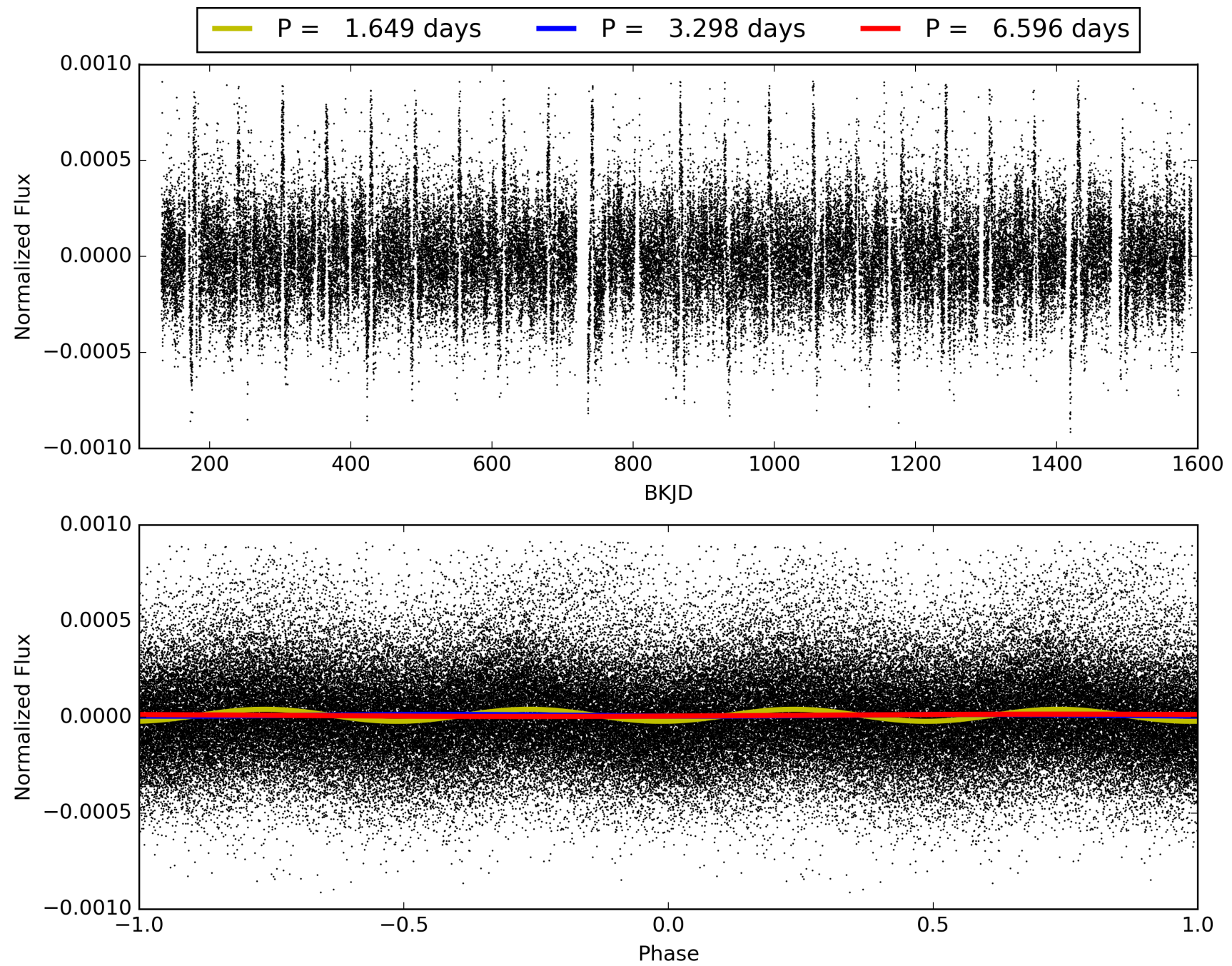
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 07:23:03 Z

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

TCE 005301091-01, PDC Light Curves

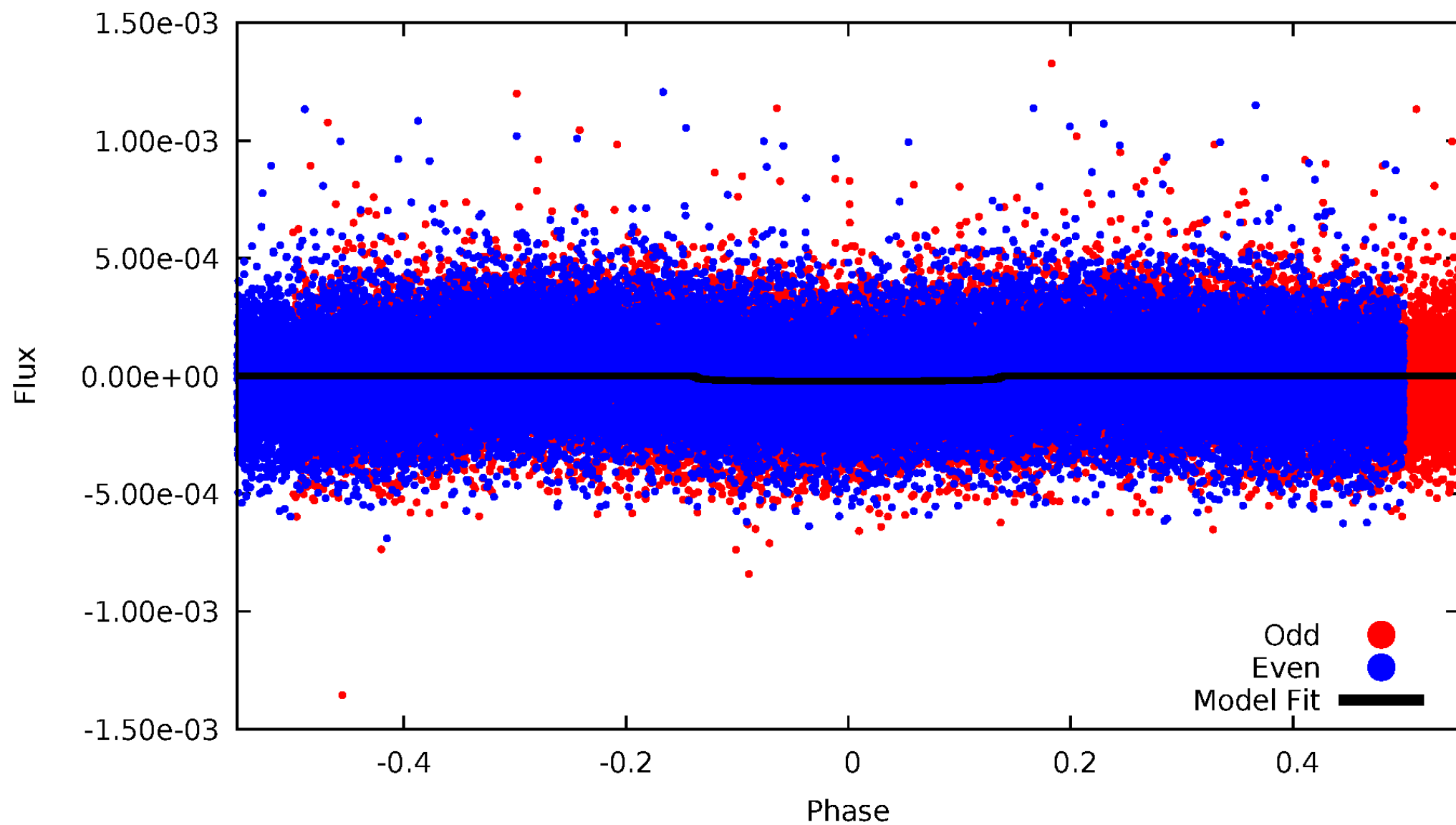


TCE 005301091-01



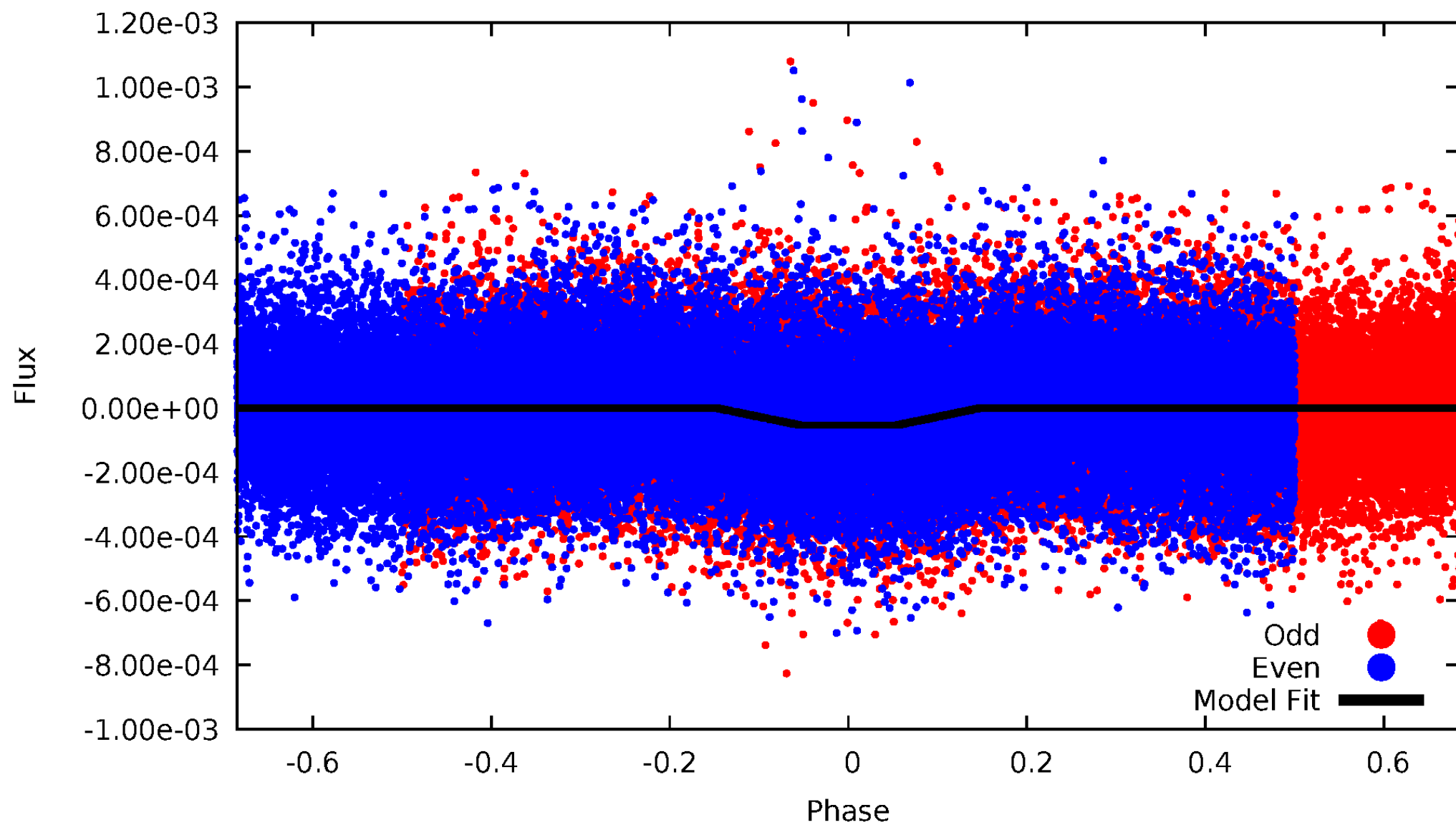
DV Odd/Even

TCE 005301091-01



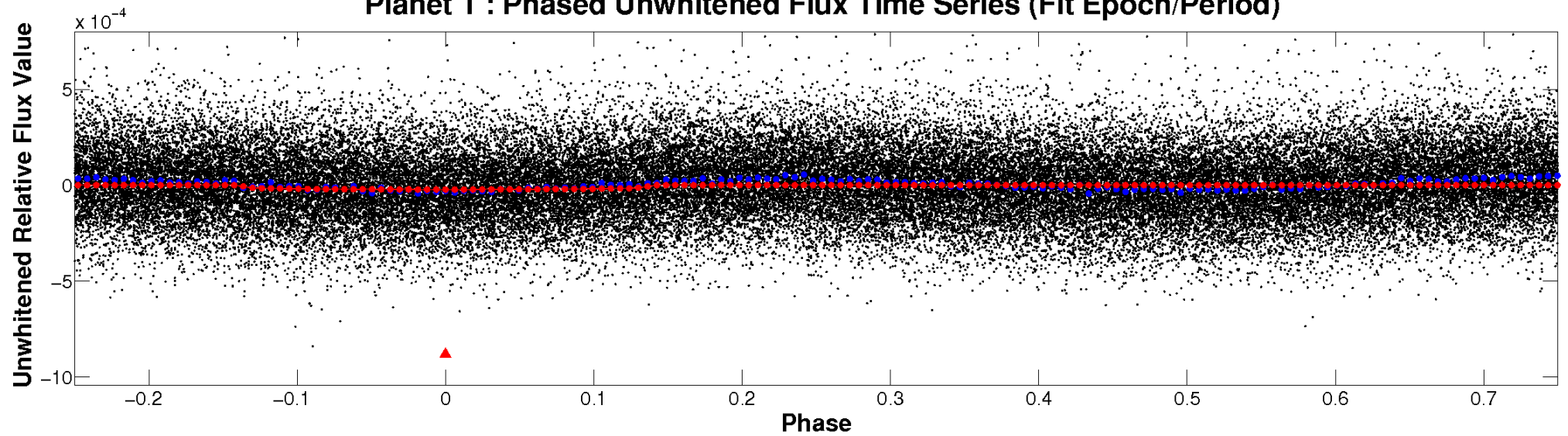
ALT Odd/Even

TCE 005301091-01

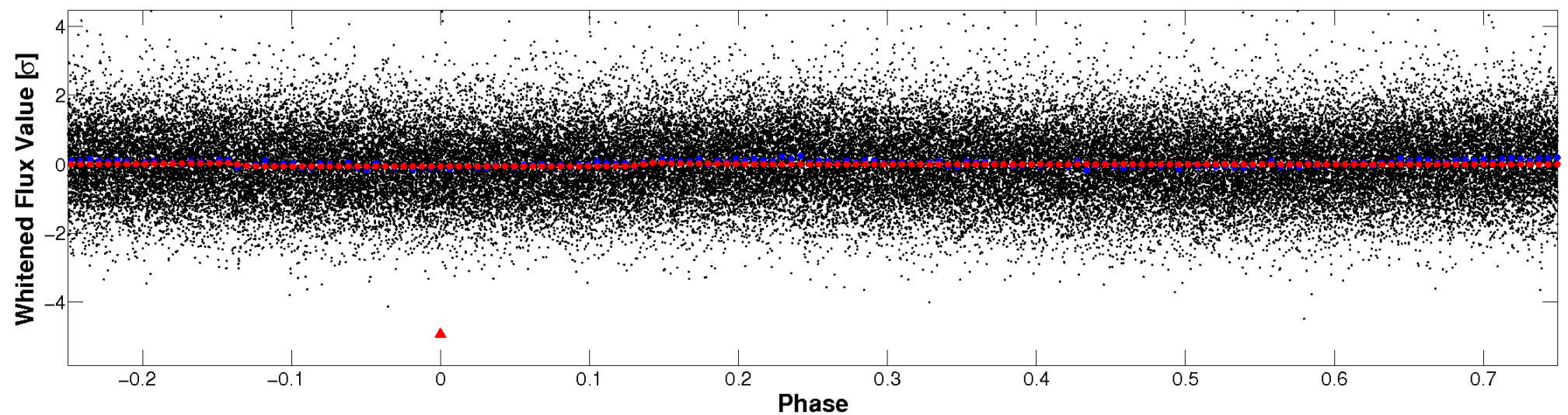


Non-Whitened Vs. Whitened Light Curve

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

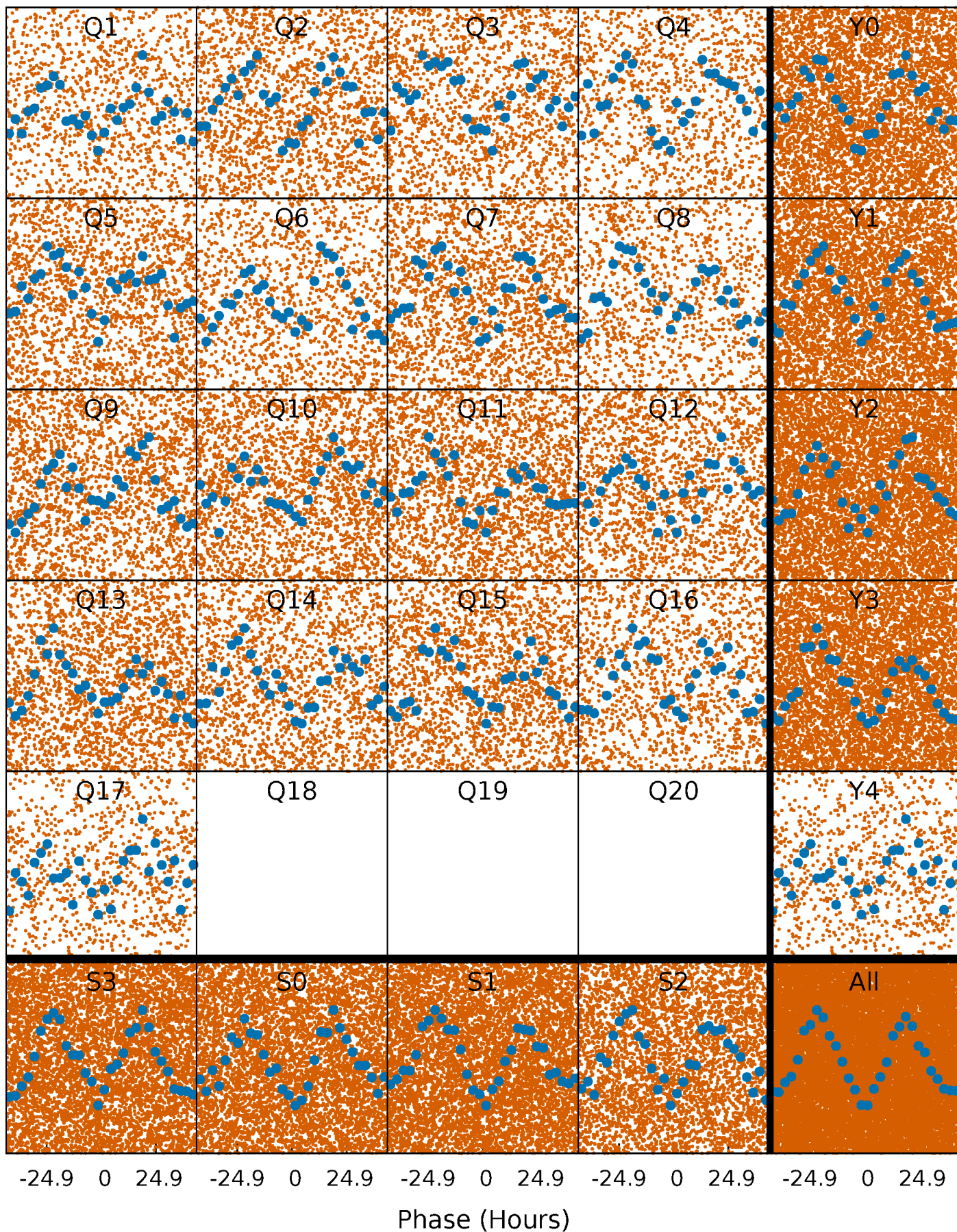


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



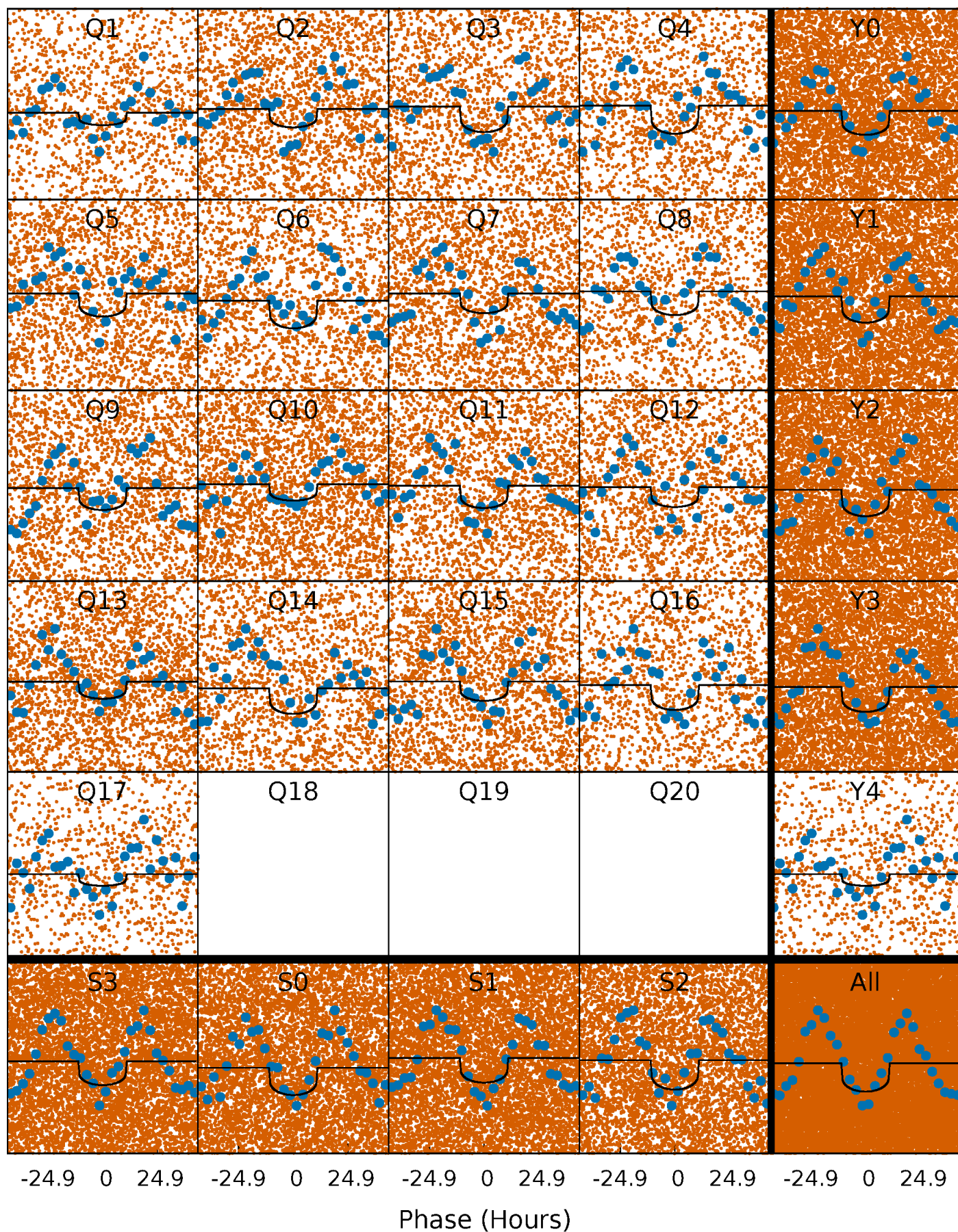
PDC Quarter-Phased Transit Curves

TCE 005301091-01 P= 3.297981 Days $T_0=131.691242$ (BKJD)



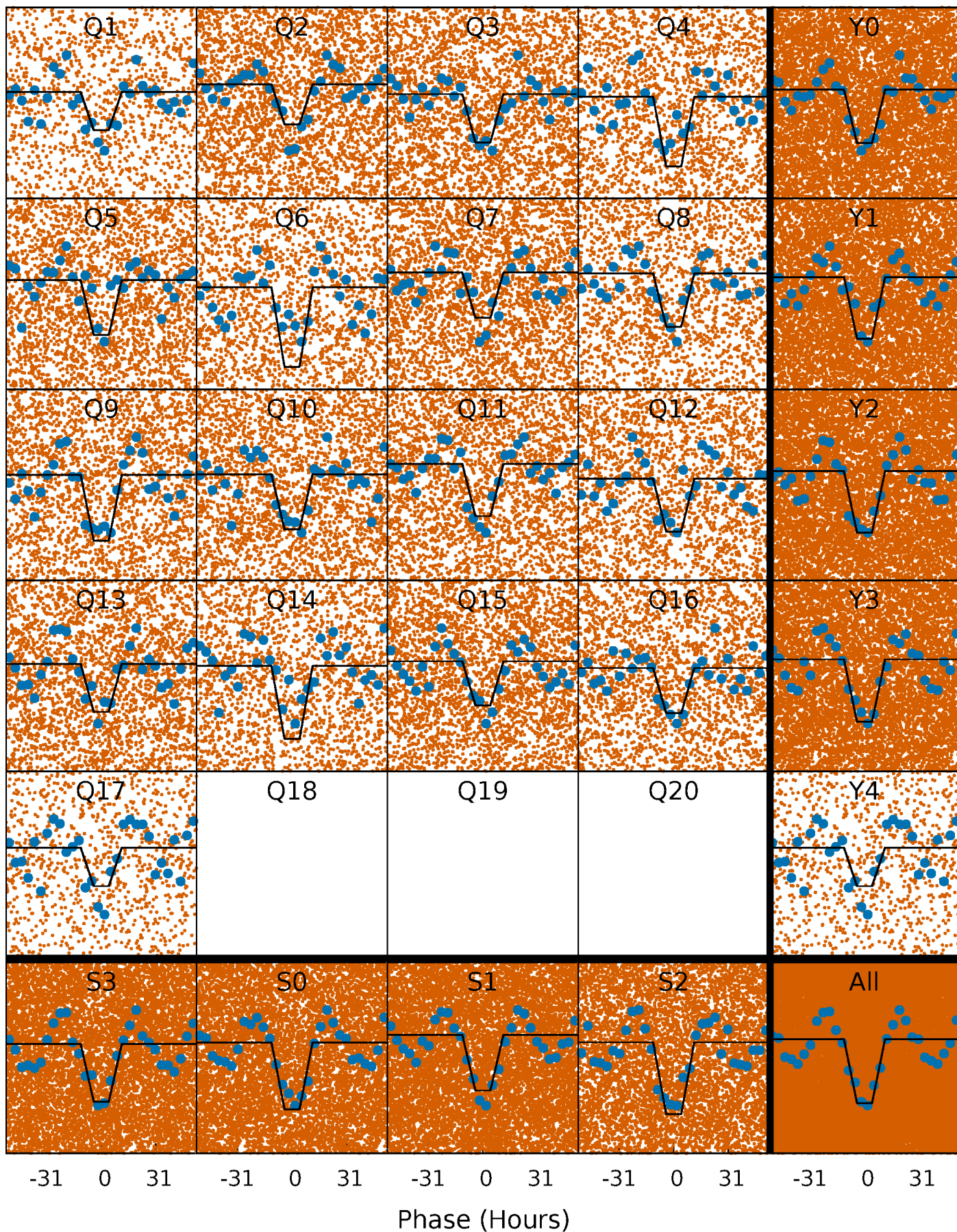
DV Quarter-Phased Transit Curves

TCE 005301091-01 P= 3.297981 Days $T_0=131.691242$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

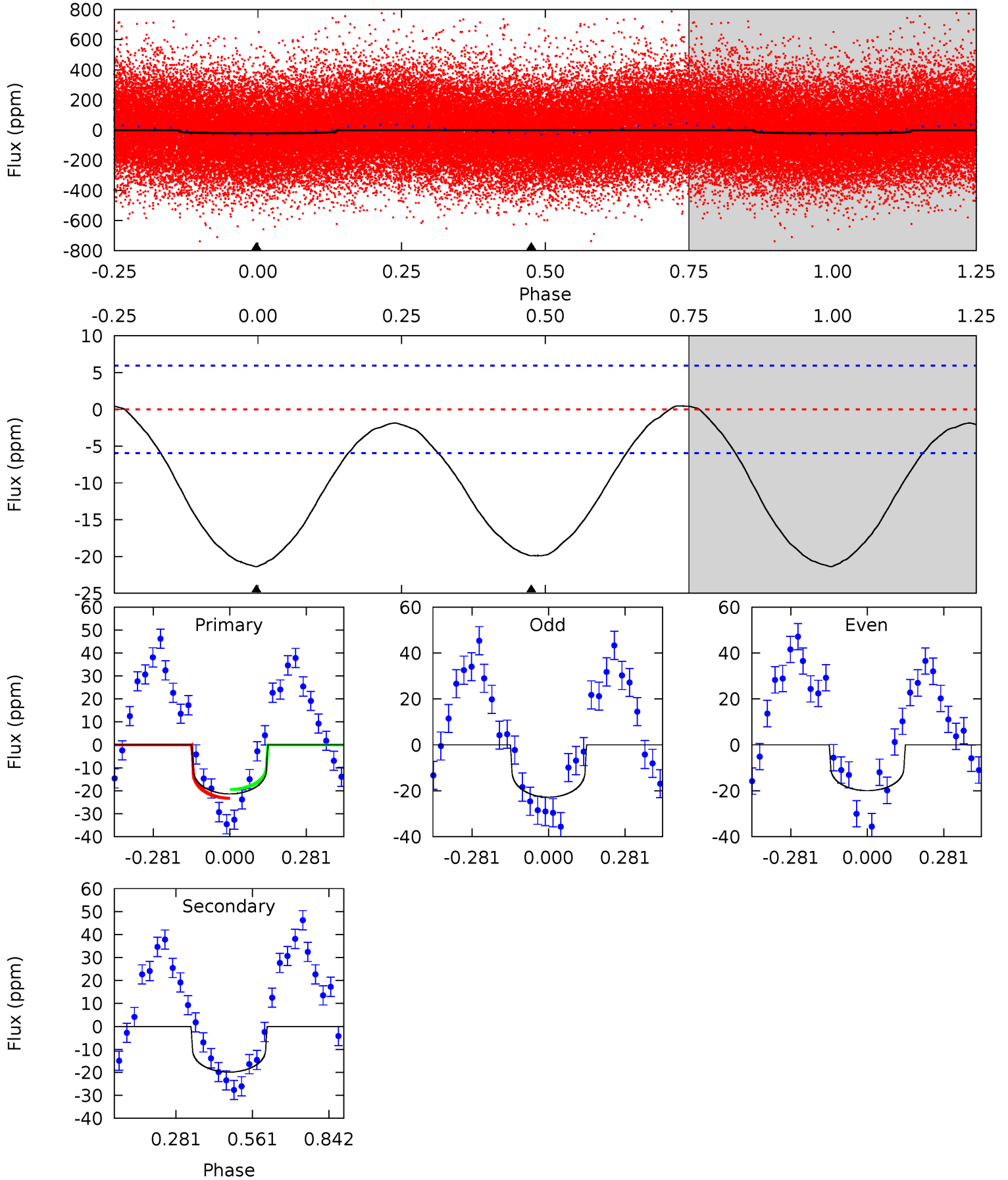
TCE 005301091-01 P= 3.298188 Days $T_0=131.616489$ (BKJD)



DV Model-Shift Uniqueness Test

005301091-01, P = 3.297981 Days, E = 128.393261 Days

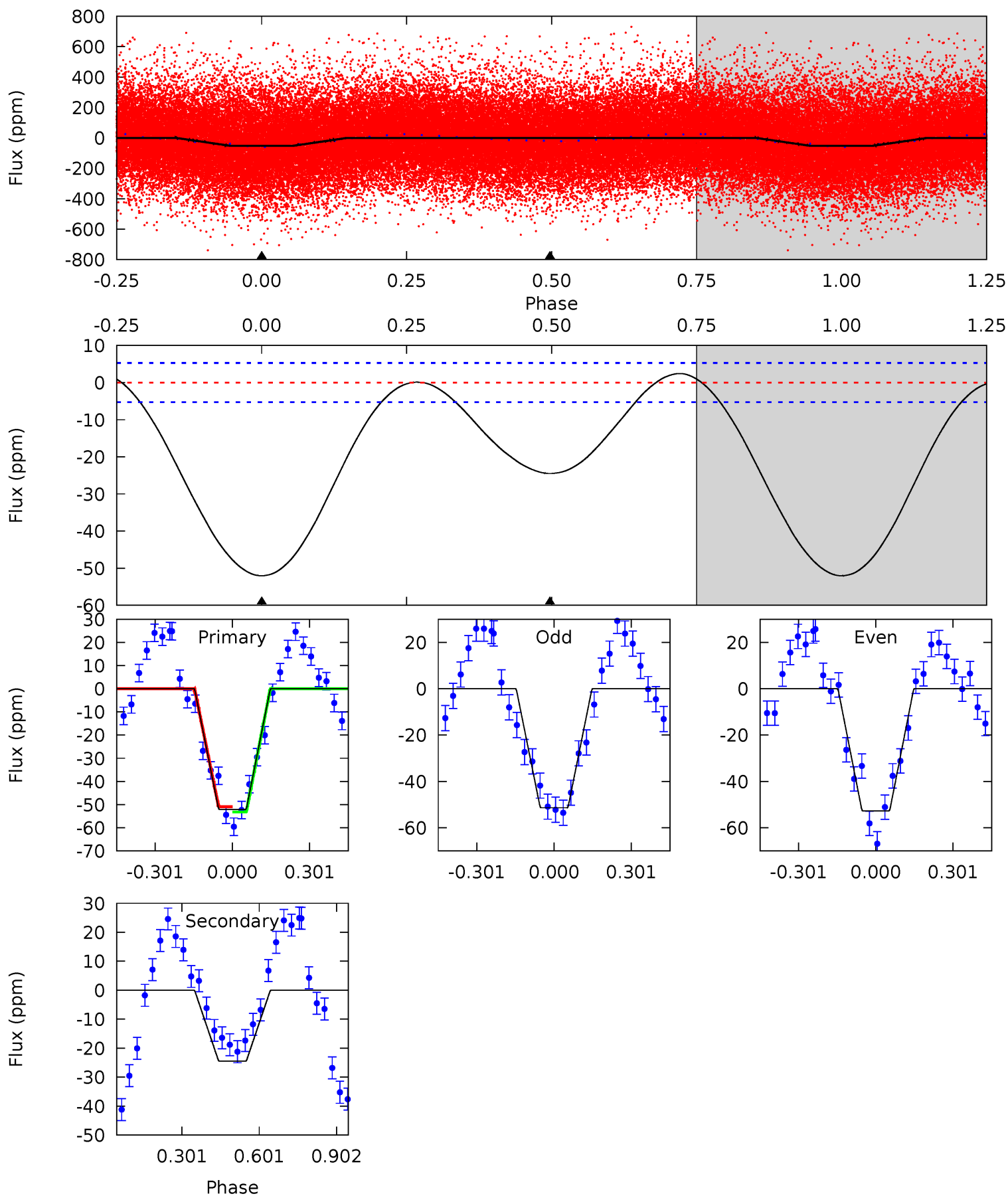
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.6	14.6	0	0	4.34	1.08	0.73	15.6	15.6	14.6	14.6	1.06	1.13	0.02	1.43



Alt Model-Shift Uniqueness Test

005301091-01, P = 3.298188 Days, E = 128.318301 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.7	20.1	0	0	4.33	1.04	1.16	42.7	42.7	20.1	20.1	0.54	1.14	0.05	0.91



Stellar Parameters For KIC 005301091

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6502^{+181}_{-227}	$4.249^{+0.144}_{-0.192}$	$-0.140^{+0.250}_{-0.300}$	$1.361^{+0.417}_{-0.278}$	$1.200^{+0.188}_{-0.188}$	$0.670^{+0.430}_{-0.355}$
	+3%/-3%	+3%/-5%	+179%/-214%	+31%/-20%	+16%/-16%	+64%/-53%
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 005301091-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-20 ± 1	$0.75^{+0.59}_{-0.45}$	2191^{+170}_{-139}	6159^{+4390}_{-1438}	43^{+202}_{-30}
Alt.	-24 ± 1	$1.10^{+0.63}_{-0.49}$	2185^{+164}_{-138}	5357^{+1946}_{-899}	23^{+56}_{-13}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

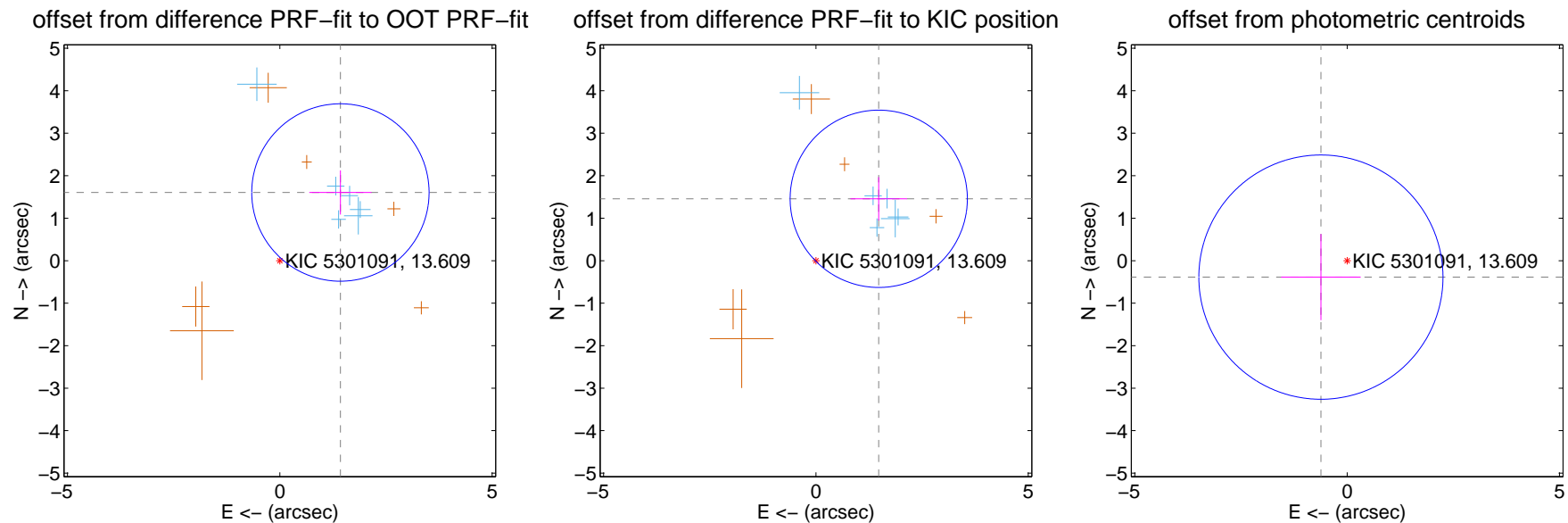
DV Centroid Data

Supplemental centroid analysis for 005301091-01. Kepler magnitude: 13.61. Transit SNR 7.71

There are 6 quarters with good PRF difference image offsets

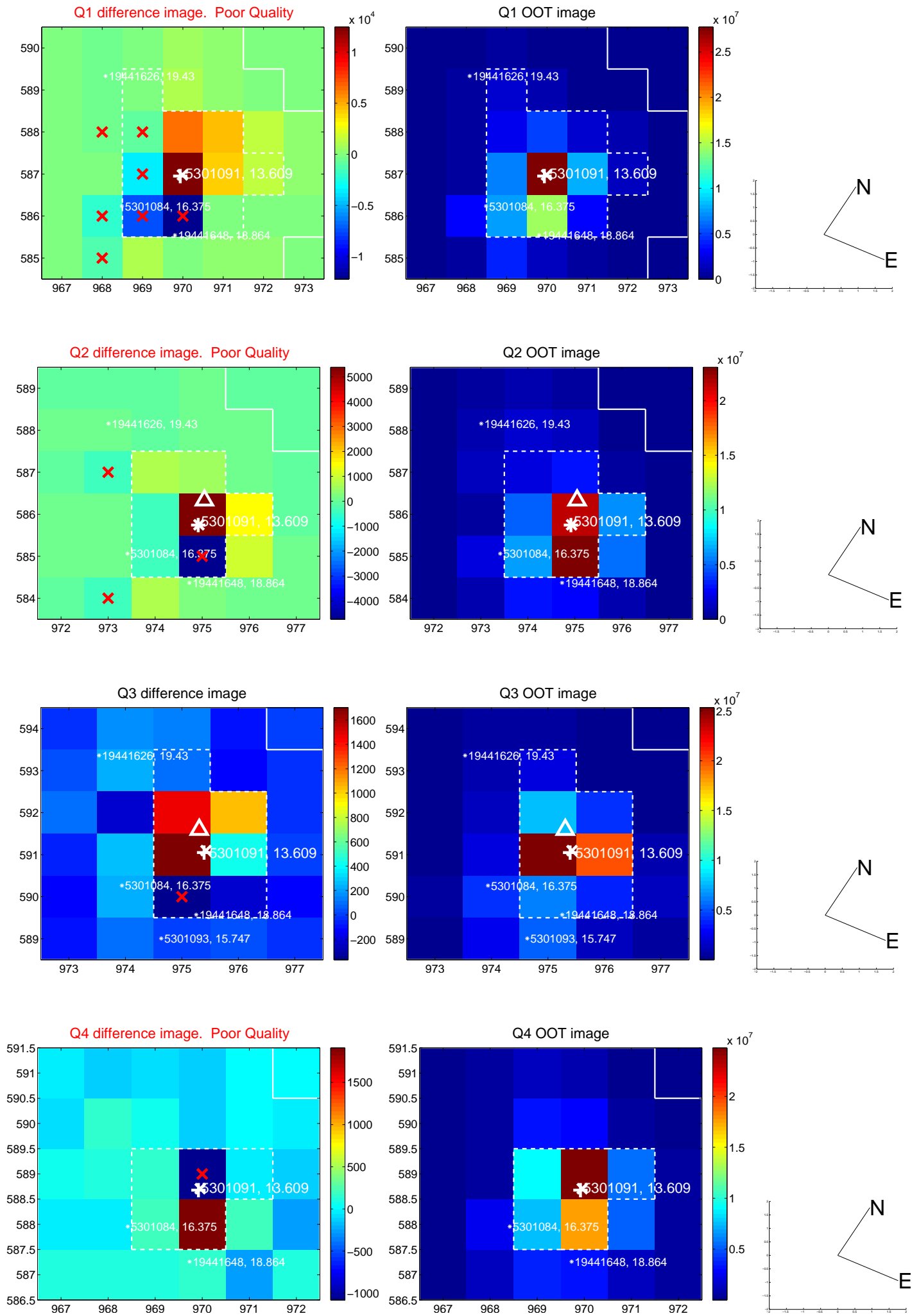
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.148 \pm 0.696	3.09	-1.427 \pm 0.733	1.605 \pm 0.519
PRF-fit source offset from KIC position	2.076 \pm 0.695	2.99	-1.479 \pm 0.665	1.457 \pm 0.510
photometric centroid source offset	0.73 \pm 0.96	0.76	0.62 \pm 0.94	-0.39 \pm 1.01

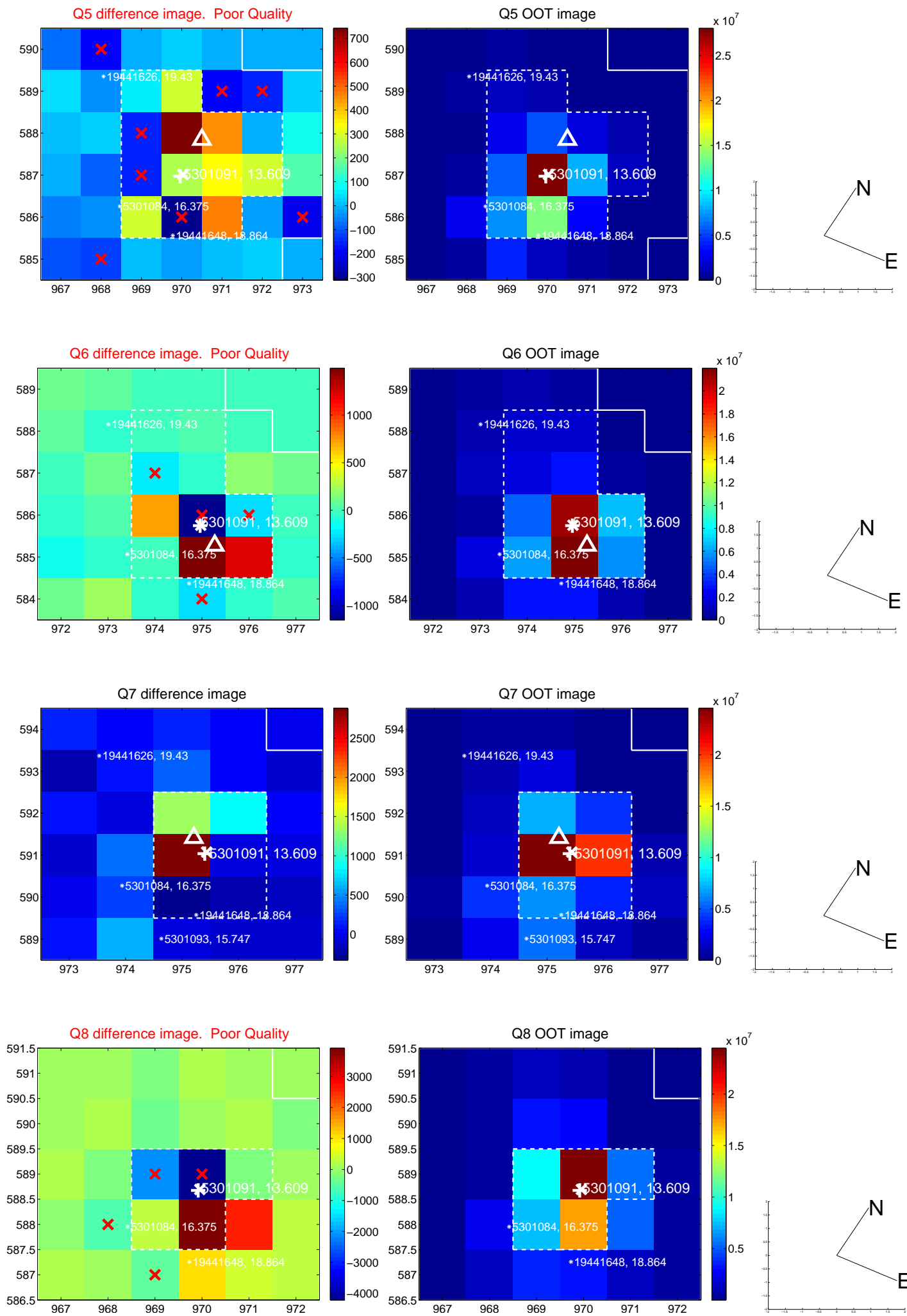


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

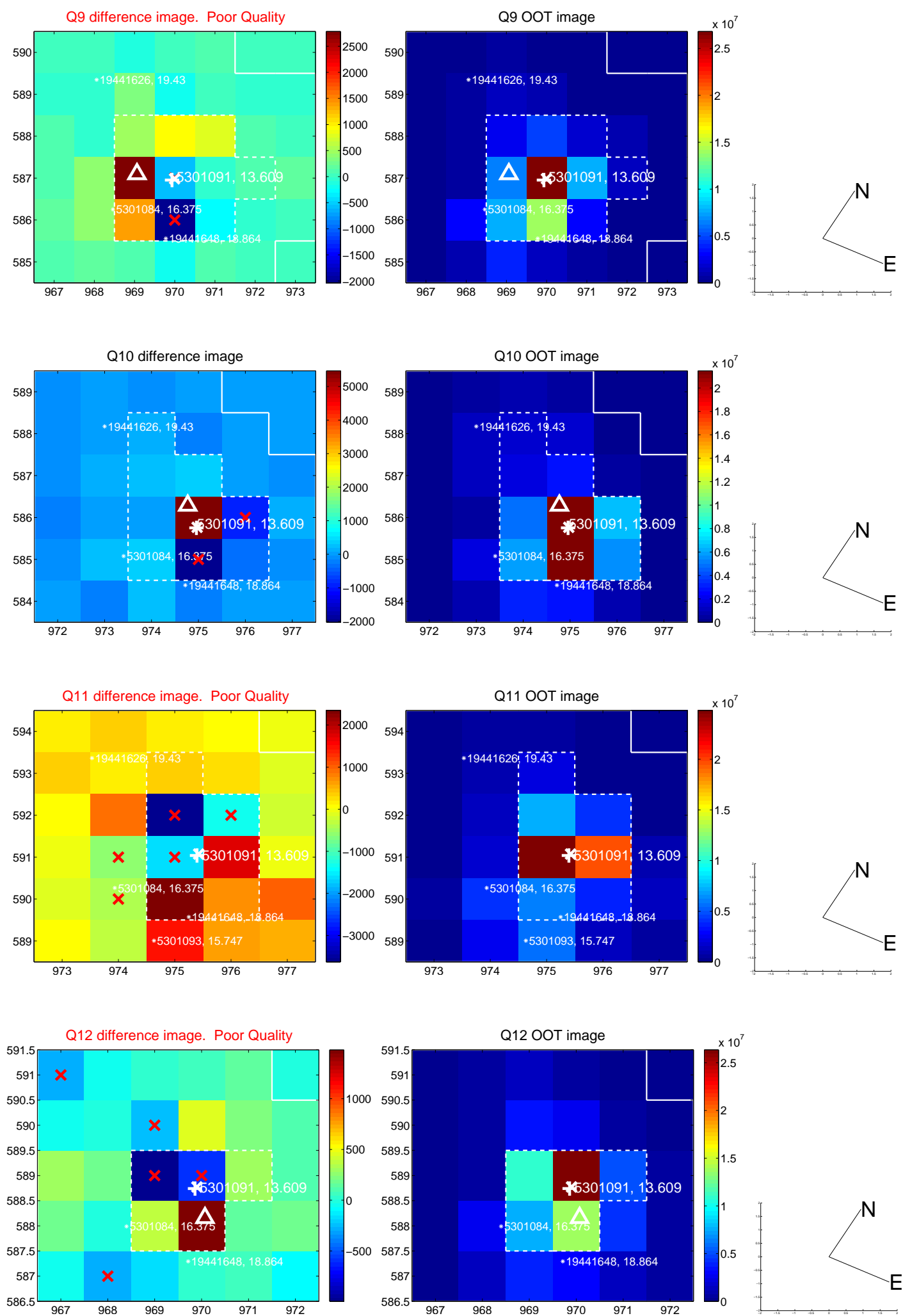
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



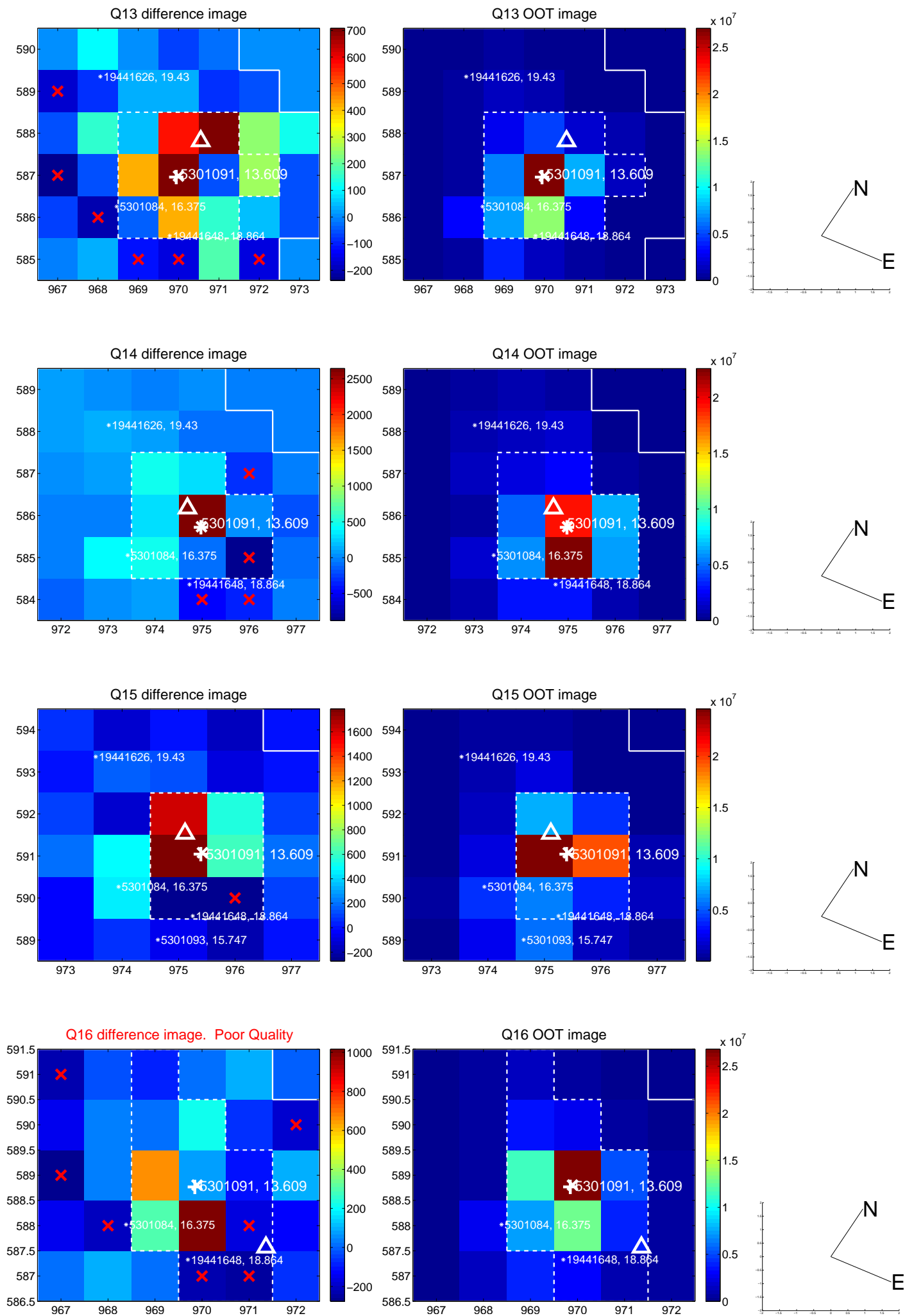
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



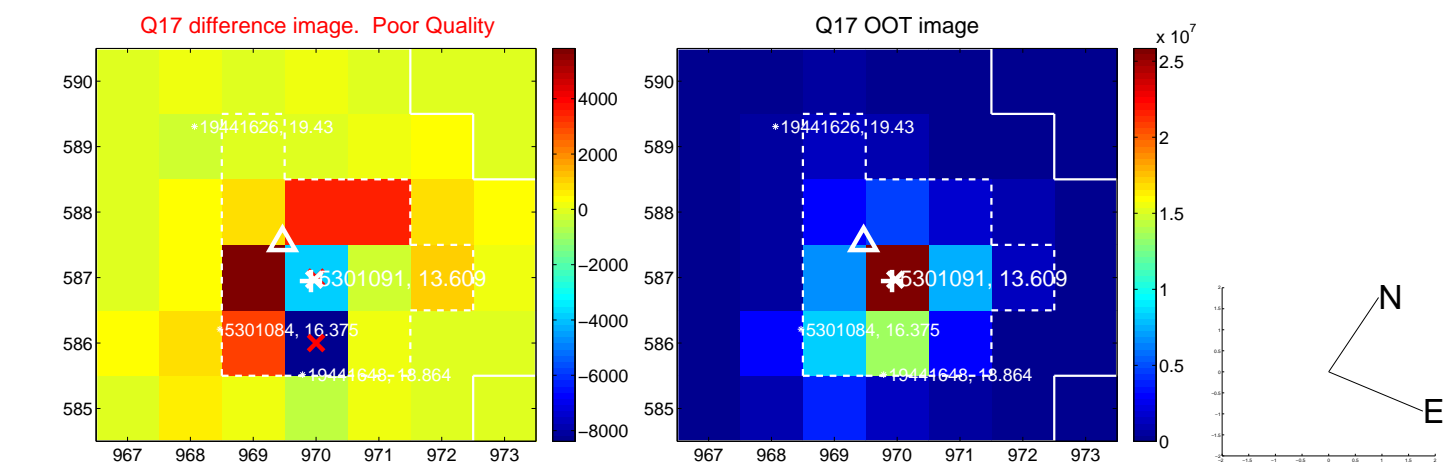
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



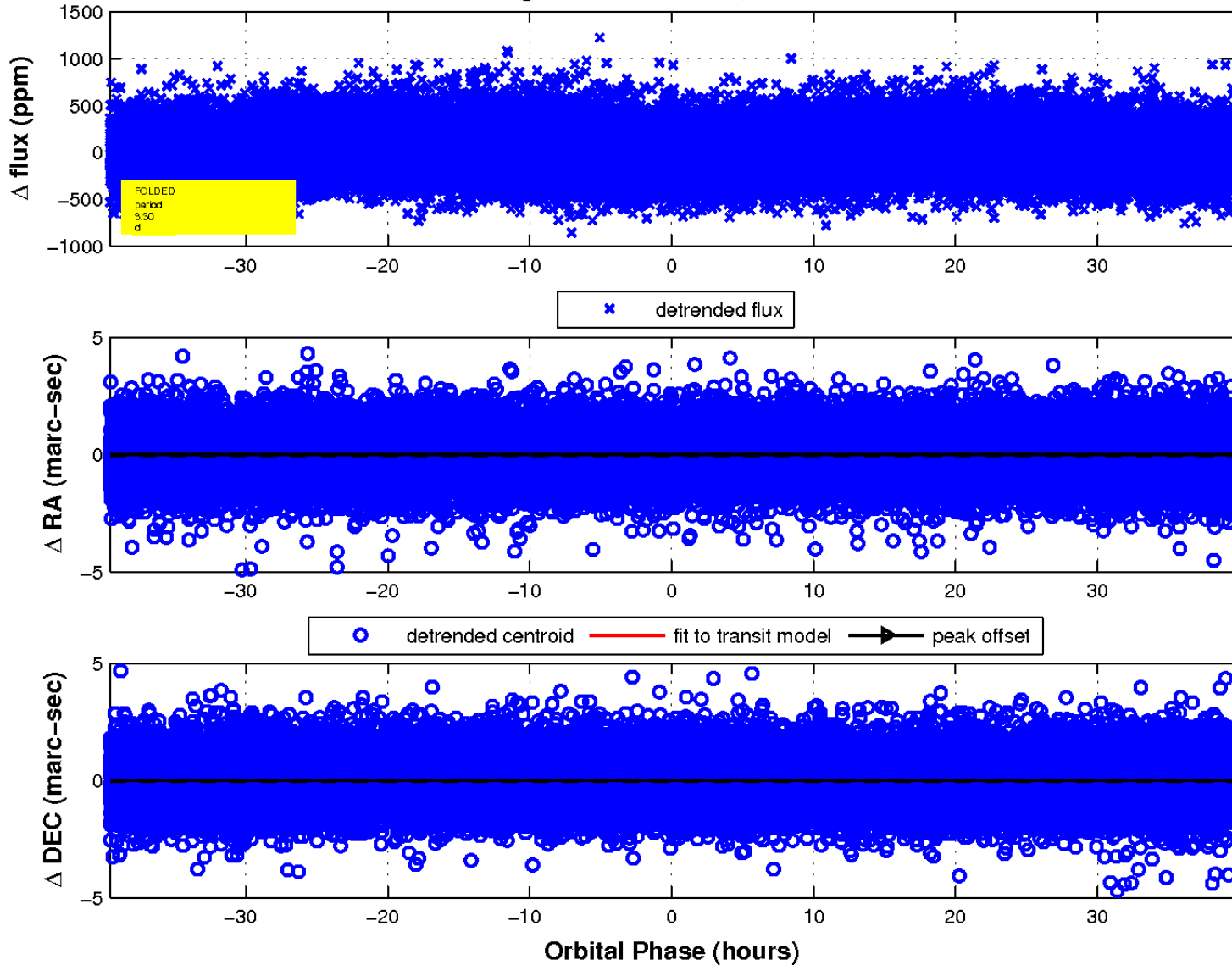
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

