

KIC 005941836

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})
005941836-01	OBS	No	1.695960	131.937004	28.9	7.684	7.3	7.3	1.03	6158	0.65	1750.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005941836-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET

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

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

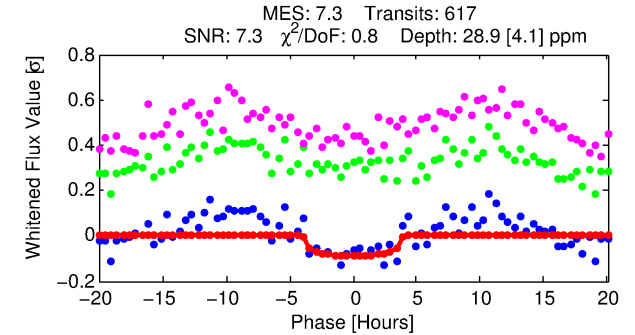
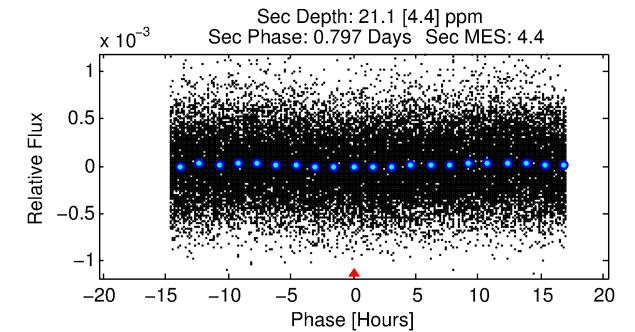
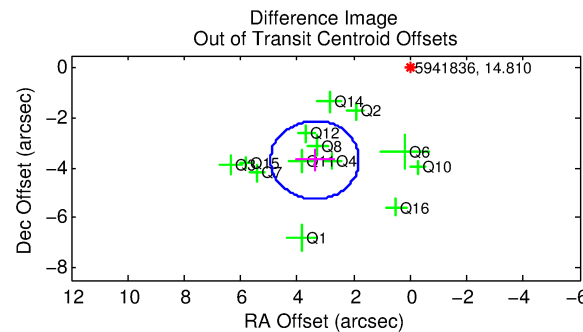
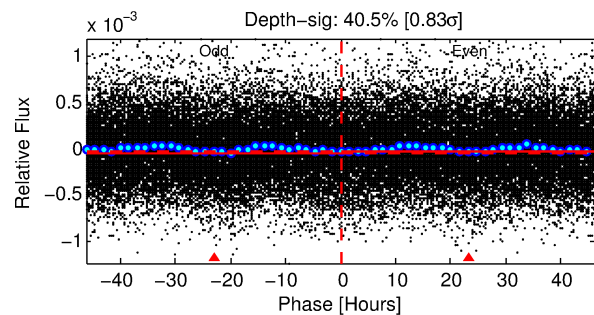
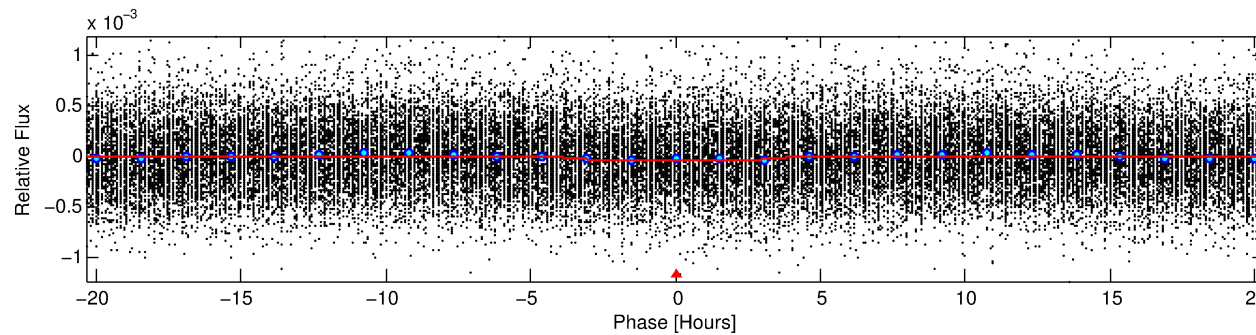
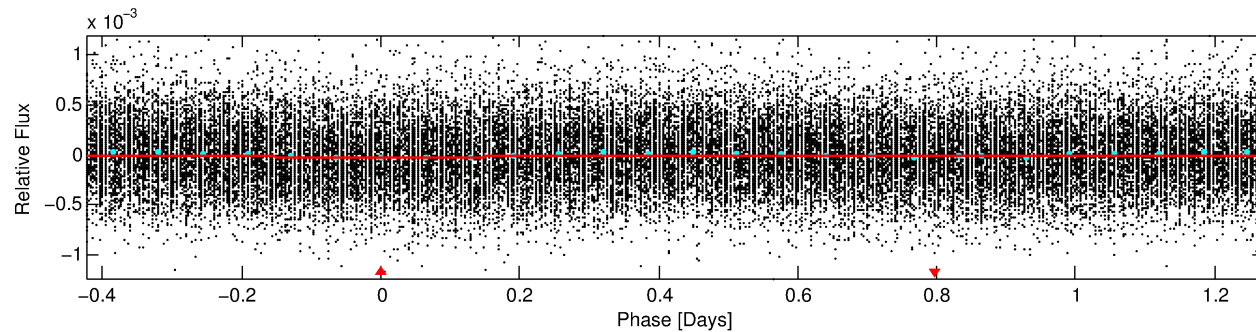
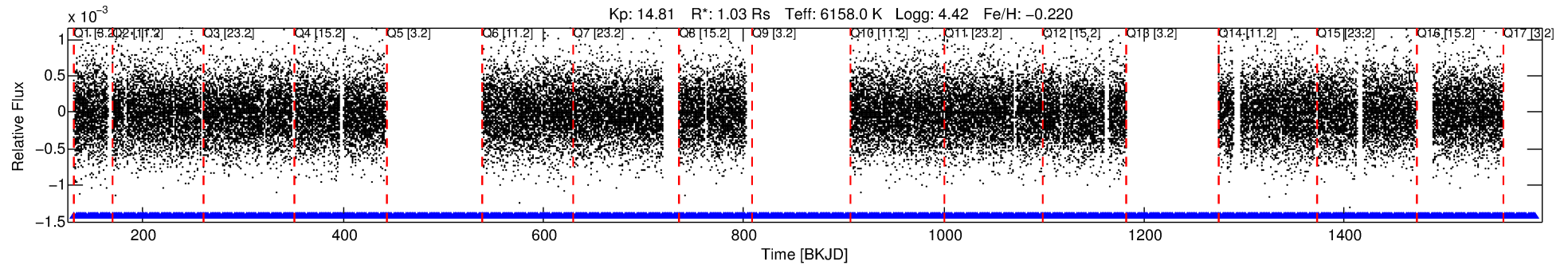
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005941836-01

No Significant Match Found

DV One-Page Summary

KIC: 5941836 Candidate: 1 of 1 Period: 1.696 d



DV Fit Results:

Period = 1.69596 [0.00003] d
Epoch = 131.9370 [0.0109] BKJD
Rp/R* = 0.0058 [0.0035]
a/R* = 1.21 [1.25]
b = 0.90 [0.71]
Seff = 1750.02 [714.15]
Teff = 1649 [168] K
Rp = 0.65 [0.44] Re
a = 0.0279 [0.0074] AU
Ag = 21.47 [27.55] [0.74 σ]
Teffp = 5489 [1690] K [2.26 σ]

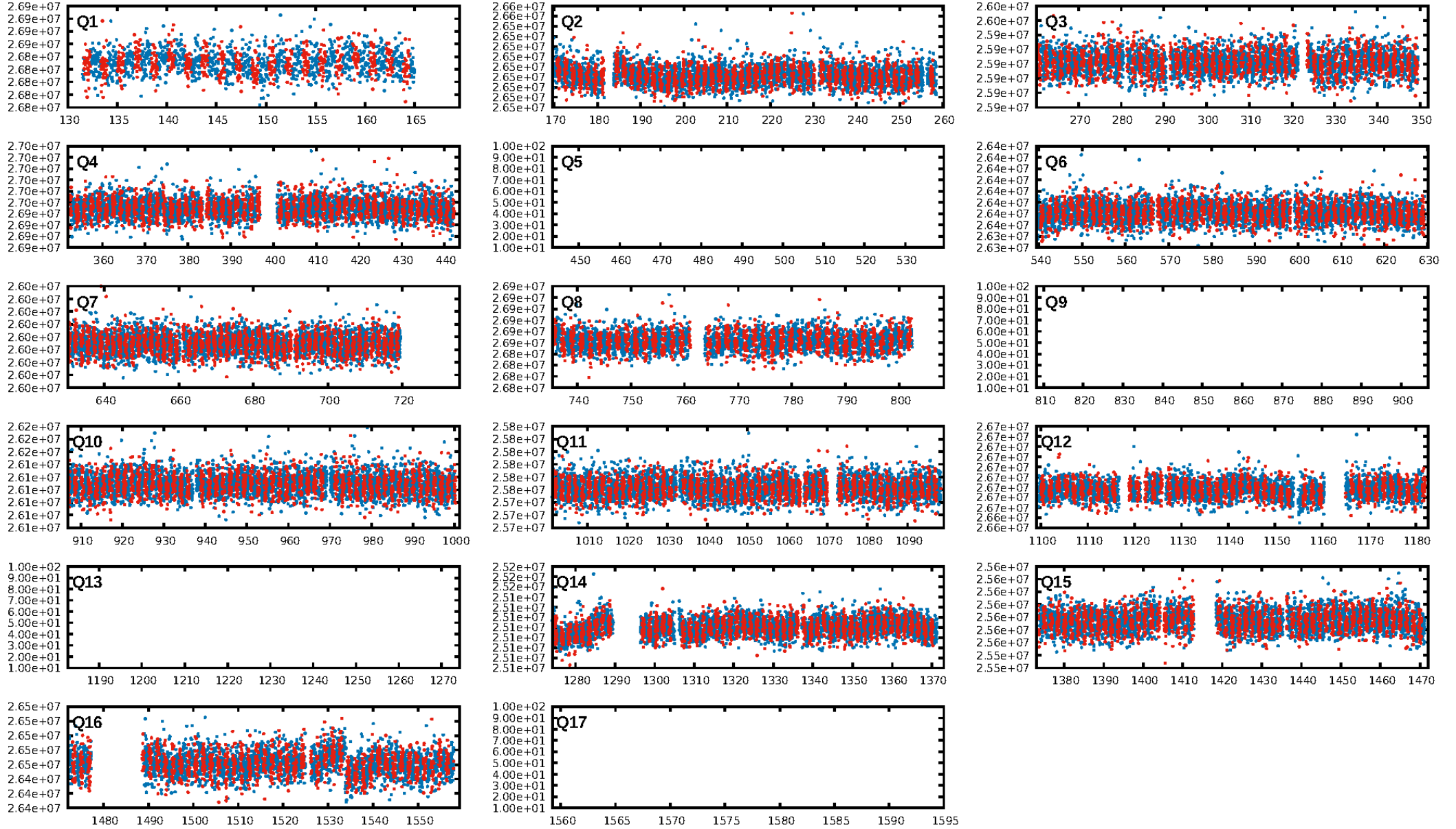
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.06e-13
RollingBand-fgt: 1.00 [597/597]
GhostDiagnostic-chr: 4.164
Centroid-sig: 0.0%
Centroid-so: 7.124 arcsec [3.56 σ]
OotOffset-rm: 5.006 arcsec [9.59 σ]
KicOffset-rm: 4.973 arcsec [9.39 σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 0.08 [1/13]
DiffImageOverlap-fno: 1.00 [13/13]

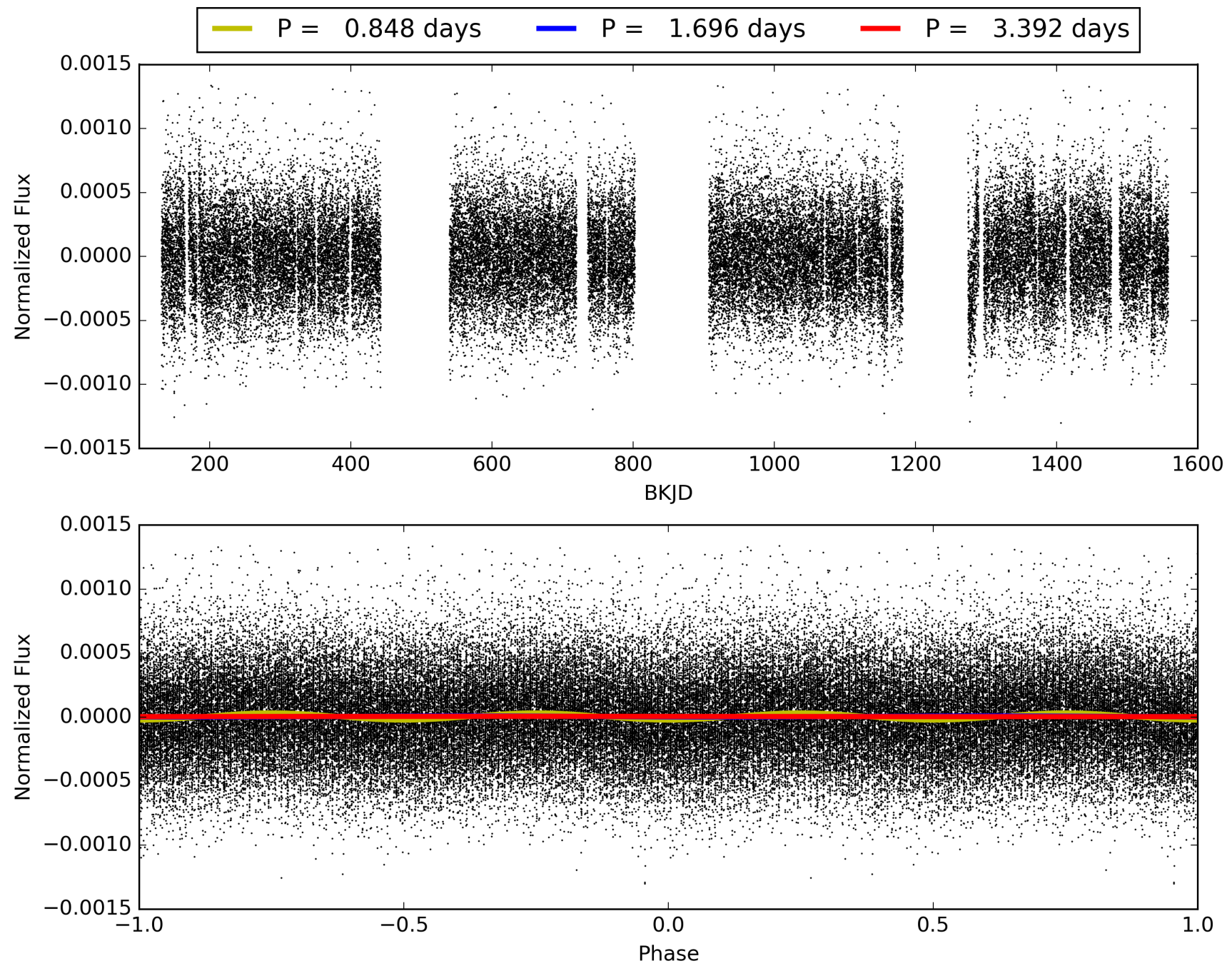
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:46:39 Z

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

TCE 005941836-01, PDC Light Curves

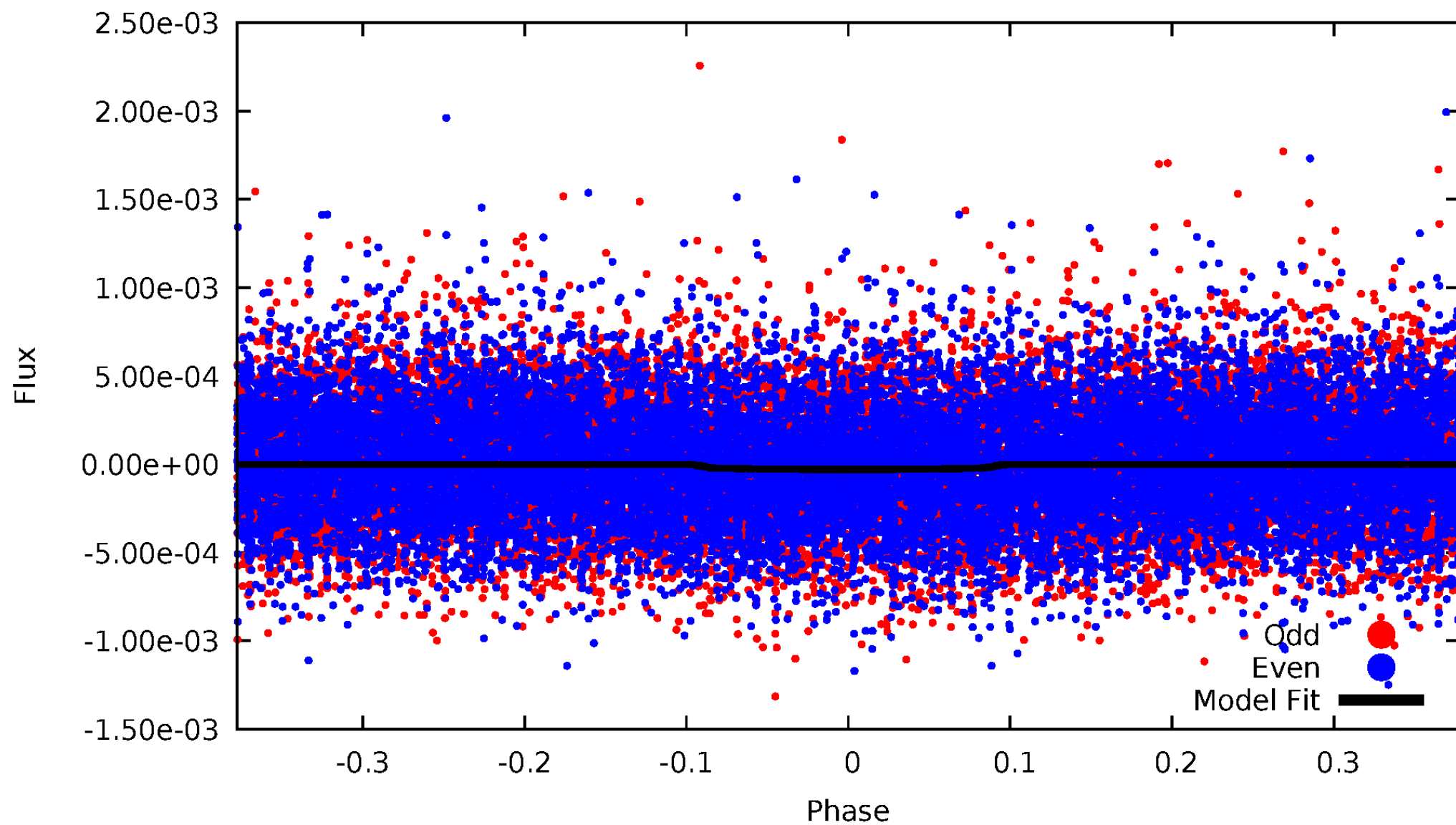


TCE 005941836-01



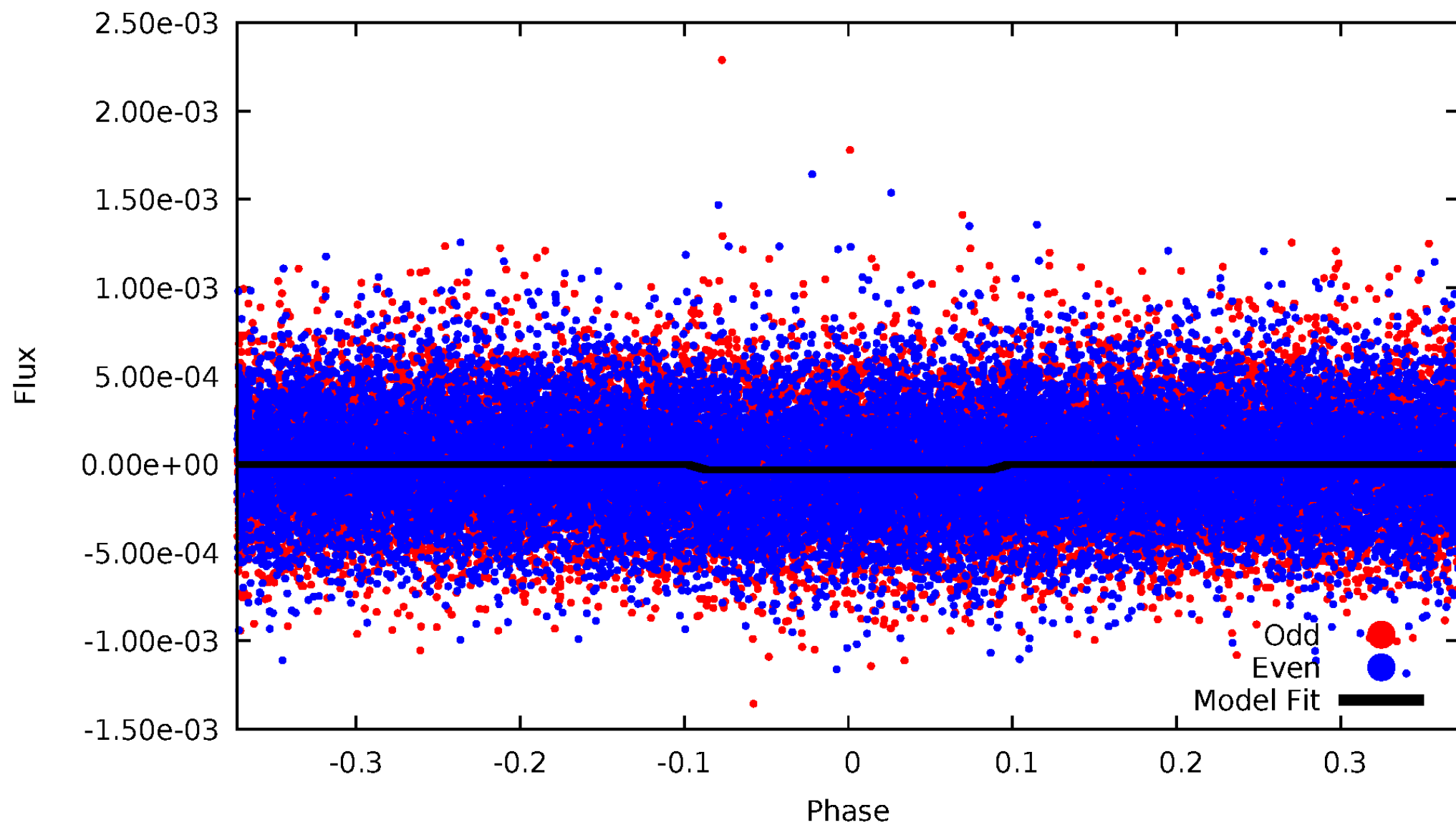
DV Odd/Even

TCE 005941836-01



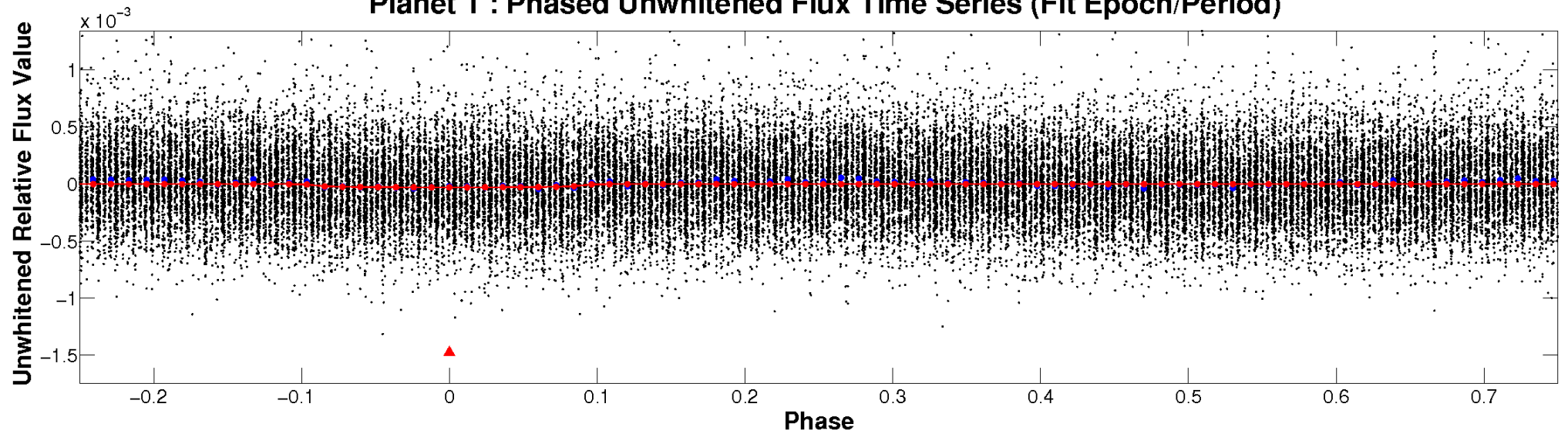
ALT Odd/Even

TCE 005941836-01

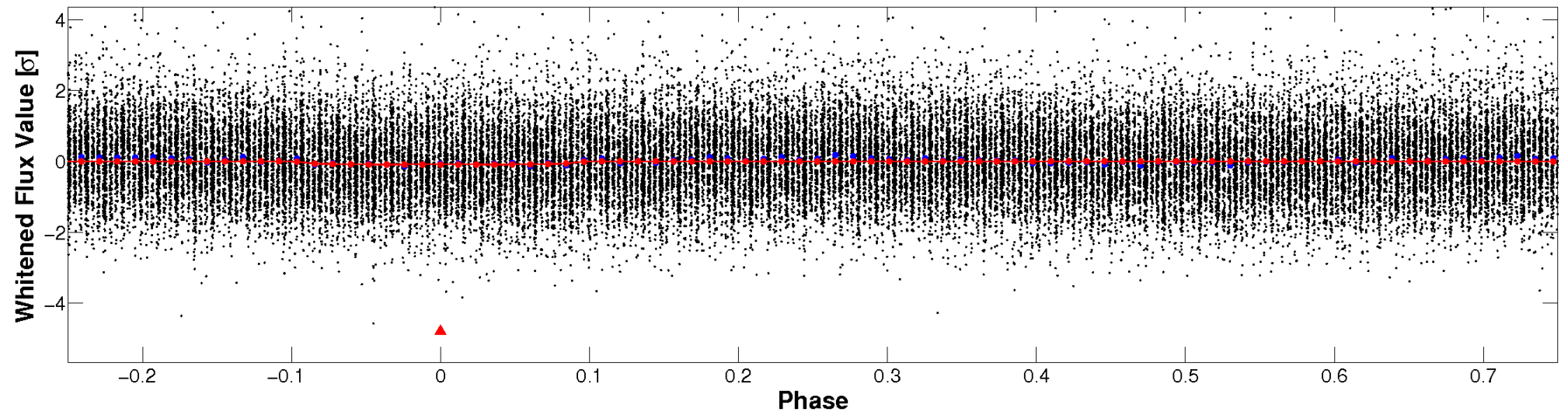


Non-Whitened Vs. Whitened Light Curve

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

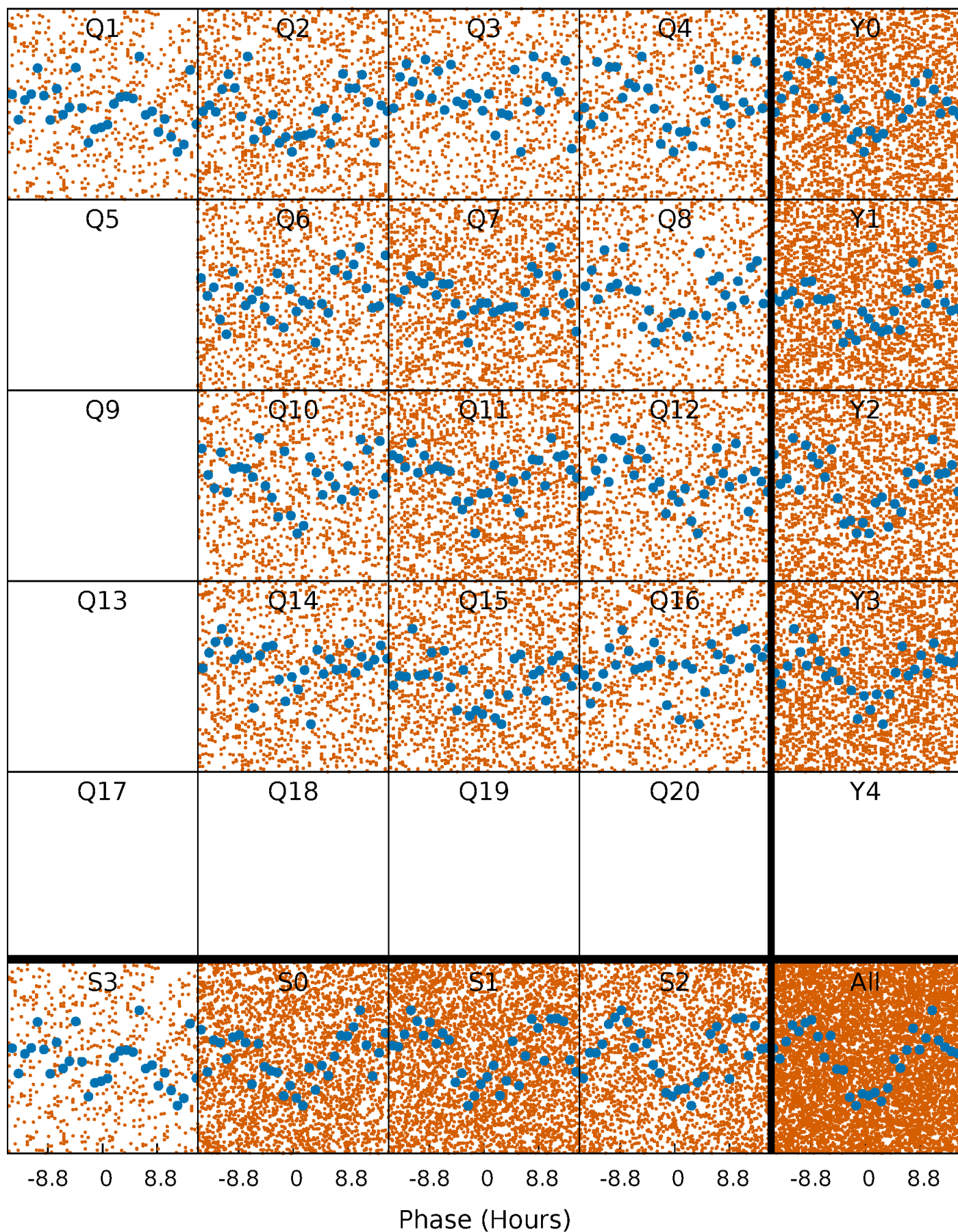


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



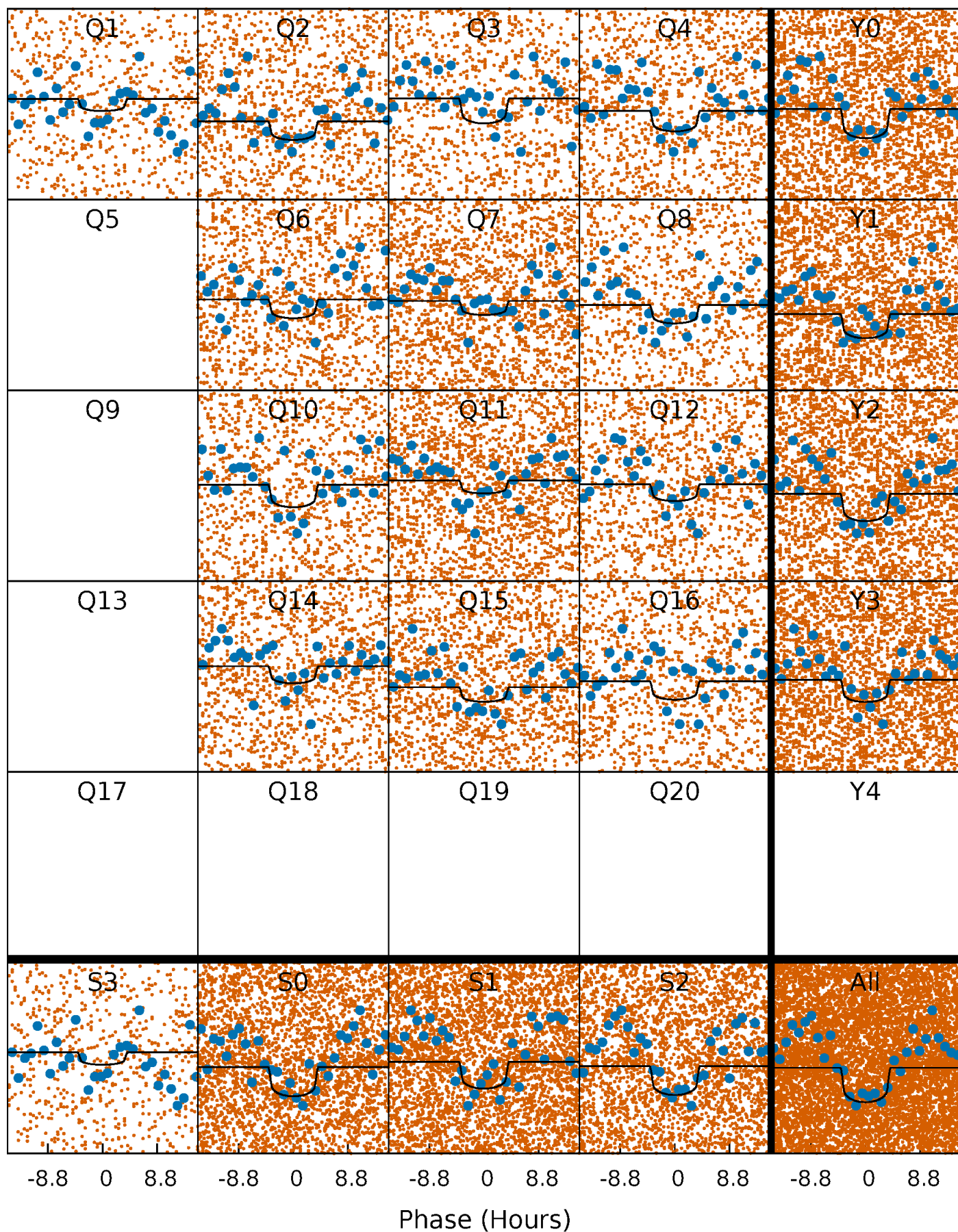
PDC Quarter-Phased Transit Curves

TCE 005941836-01 P= 1.695960 Days $T_0=131.937004$ (BKJD)



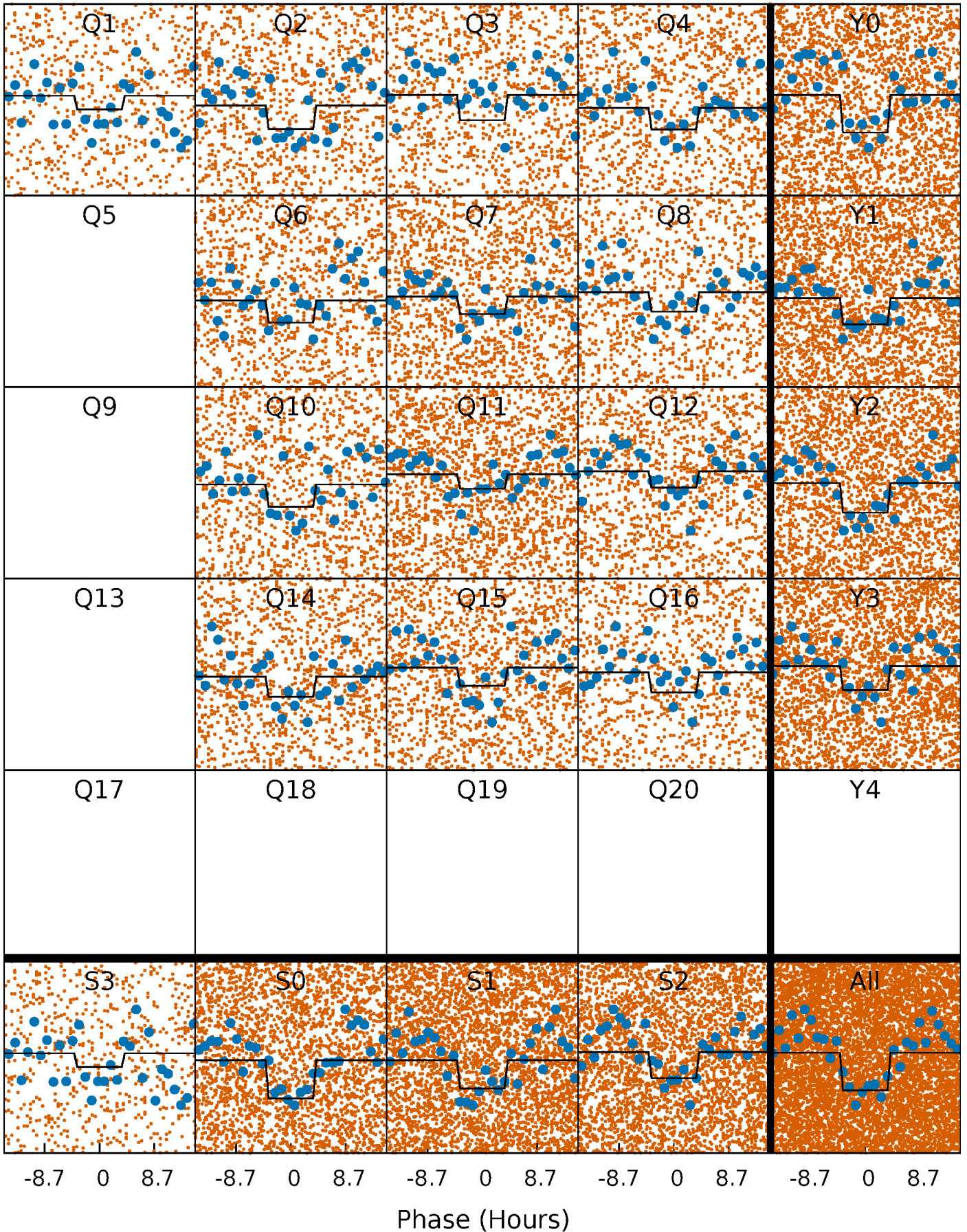
DV Quarter-Phased Transit Curves

TCE 005941836-01 P= 1.695960 Days $T_0=131.937004$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

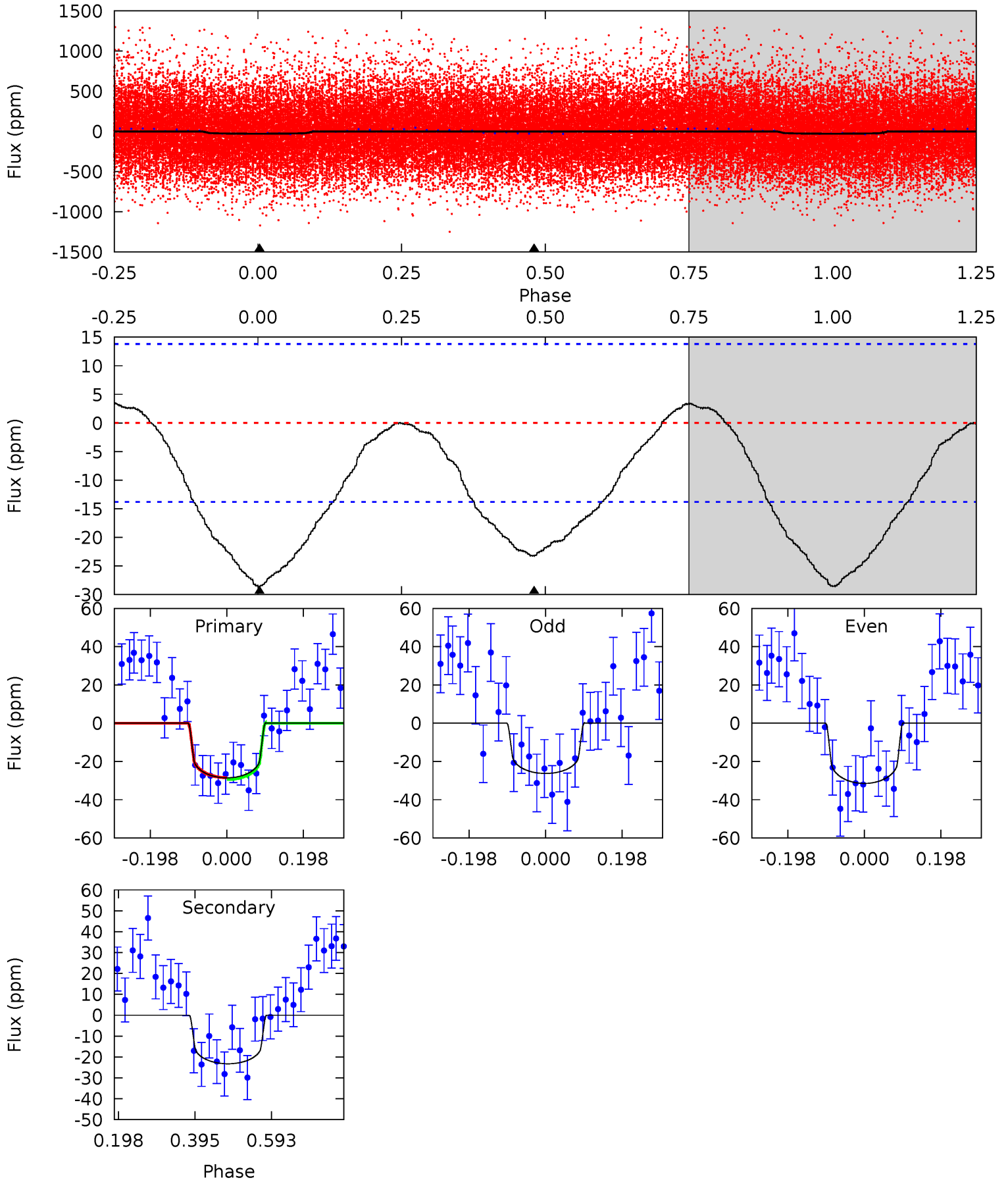
TCE 005941836-01 P= 1.696027 Days $T_0=131.908439$ (BKJD)



DV Model-Shift Uniqueness Test

005941836-01, P = 1.695960 Days, E = 130.241044 Days

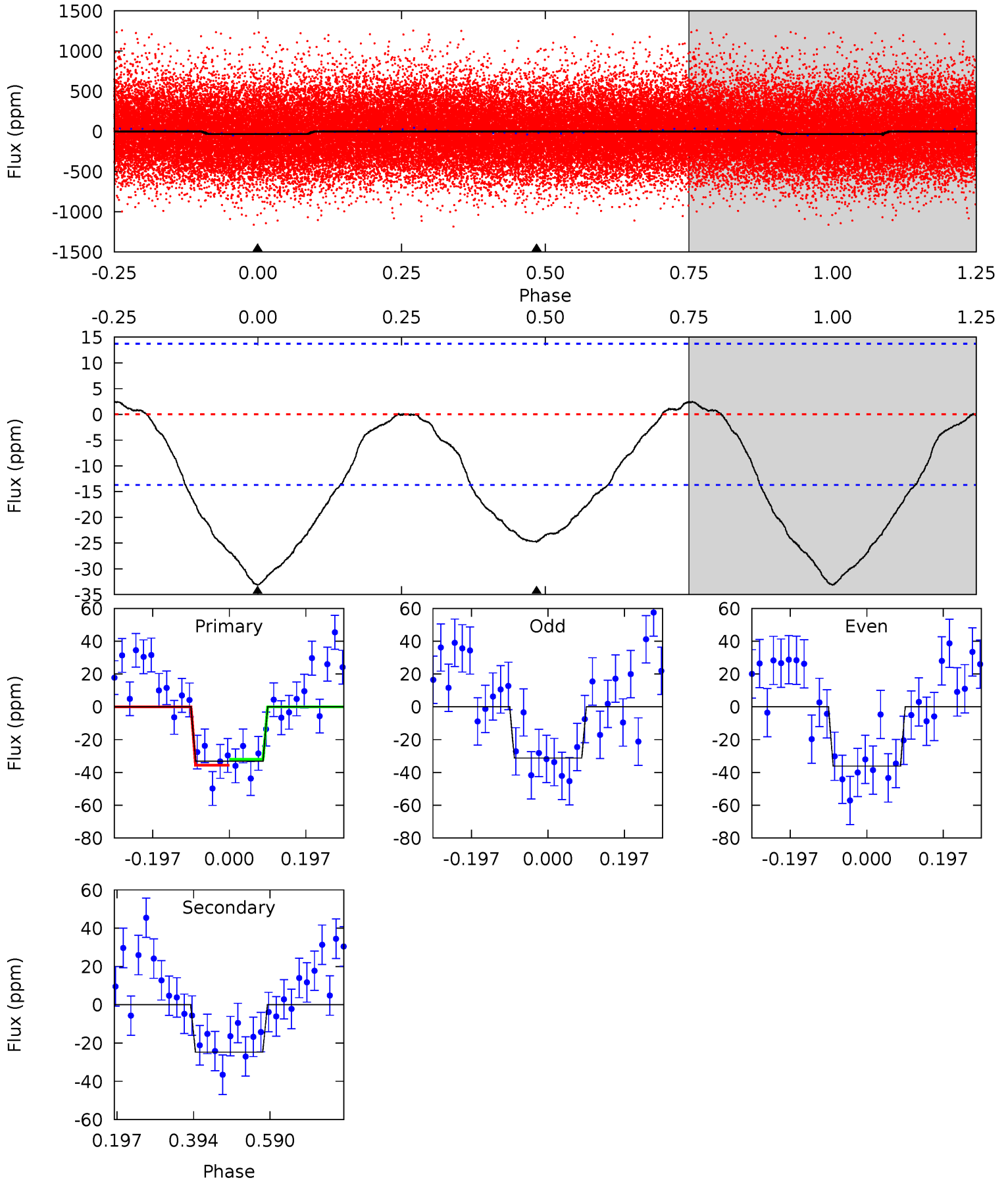
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.15	7.45	0	0	4.42	1.29	0.60	9.15	9.15	7.45	7.45	0.84	0.96	0.11	0.16



Alt Model-Shift Uniqueness Test

005941836-01, P = 1.696027 Days, E = 130.212412 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	7.98	0	0	4.42	1.29	0.48	10.7	10.7	7.98	7.98	0.79	0.94	0.07	0.58



Stellar Parameters For KIC 005941836

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6158^{+187}_{-205}	$4.417^{+0.084}_{-0.210}$	$-0.220^{+0.250}_{-0.350}$	$1.029^{+0.327}_{-0.140}$	$1.005^{+0.148}_{-0.121}$	$1.301^{+0.496}_{-0.694}$
	+3%/-3%	+2%/-5%	+114%/-159%	+32%/-14%	+15%/-12%	+38%/-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 005941836-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-23 ± 3	$0.71^{+0.43}_{-0.37}$	2339^{+173}_{-120}	5500^{+2355}_{-996}	20^{+59}_{-13}
Alt.	-25 ± 3	$0.71^{+0.43}_{-0.37}$	2343^{+182}_{-123}	5540^{+2827}_{-985}	21^{+72}_{-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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

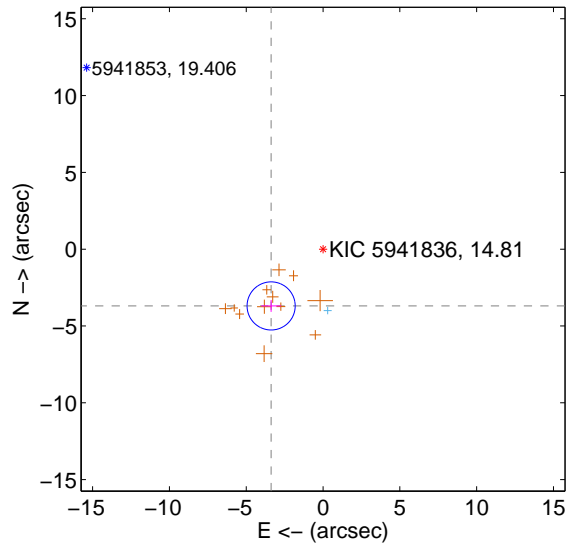
Supplemental centroid analysis for 005941836-01. Kepler magnitude: 14.81. Transit SNR 7.31

There are 1 quarters with good PRF difference image offsets

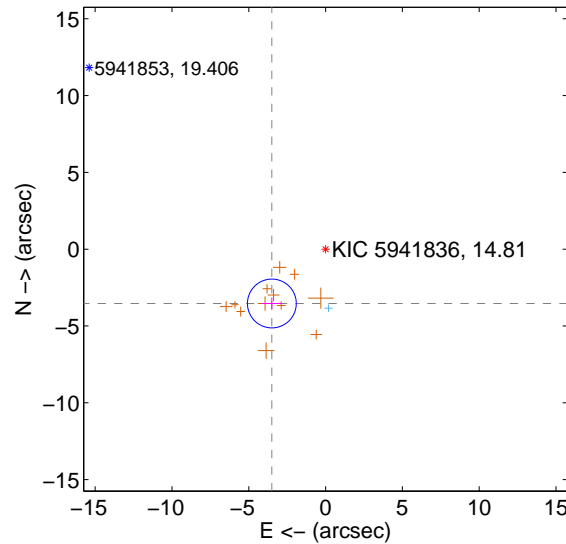
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.006 ± 0.522	9.59	3.379 ± 0.646	-3.694 ± 0.389
PRF-fit source offset from KIC position	4.973 ± 0.529	9.39	3.497 ± 0.646	-3.536 ± 0.383
photometric centroid source offset	7.12 ± 2.00	3.56	2.97 ± 2.02	-6.47 ± 2.00

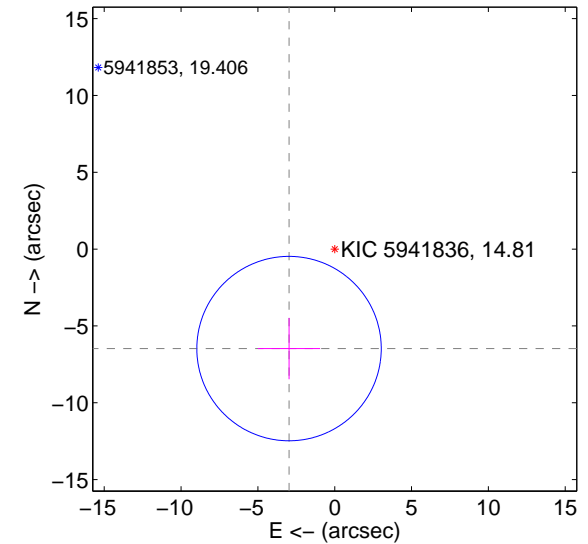
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

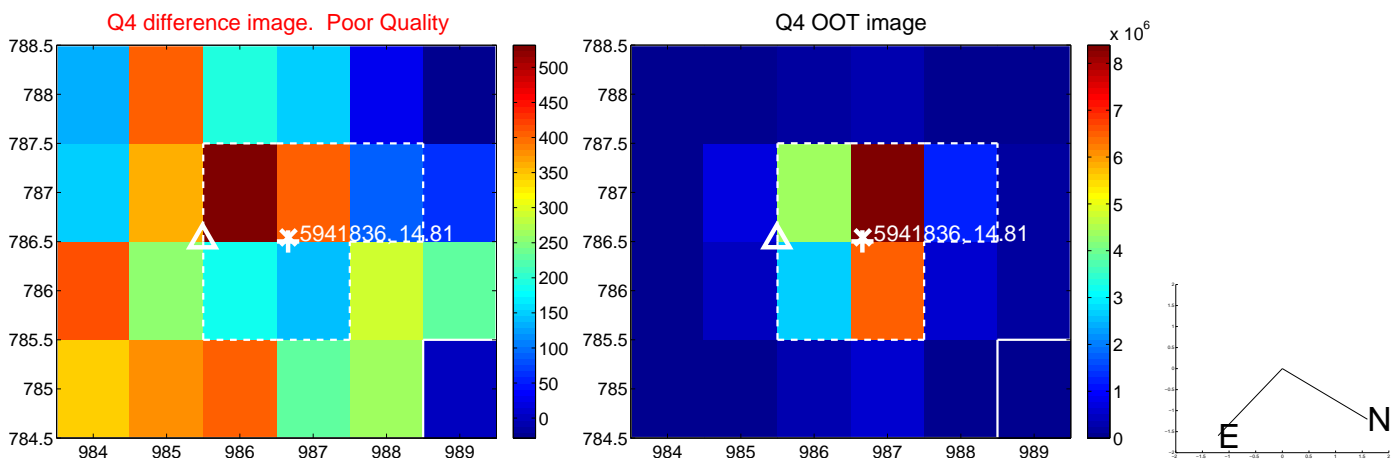
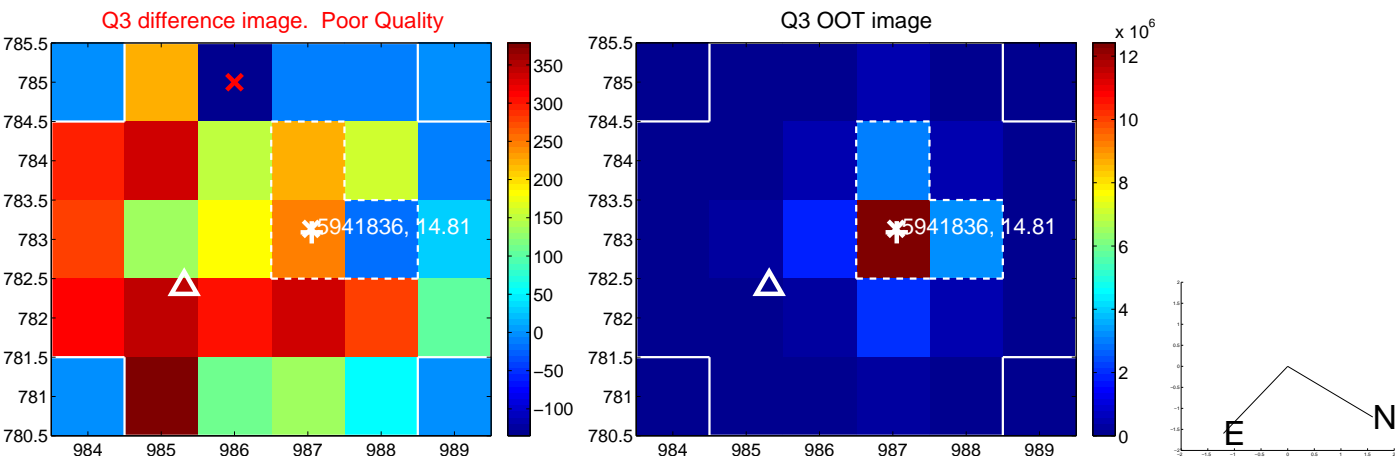
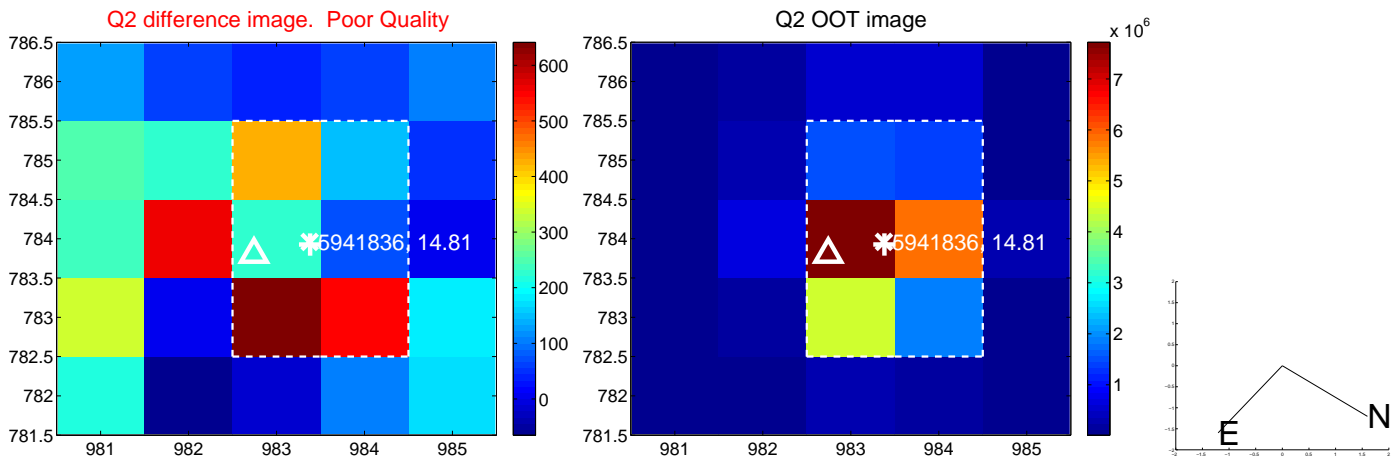
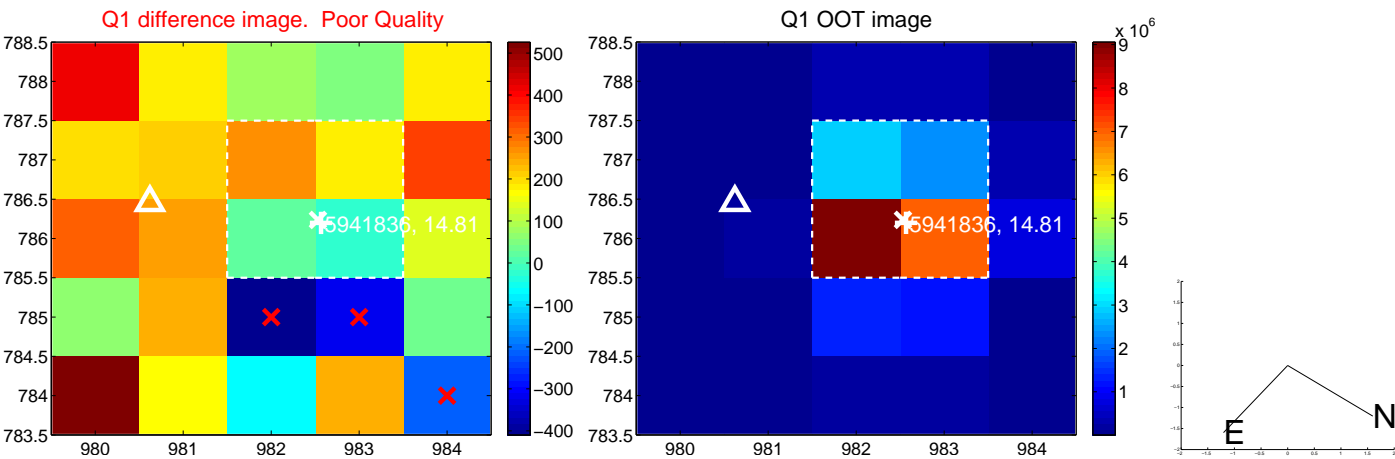


offset from photometric centroids

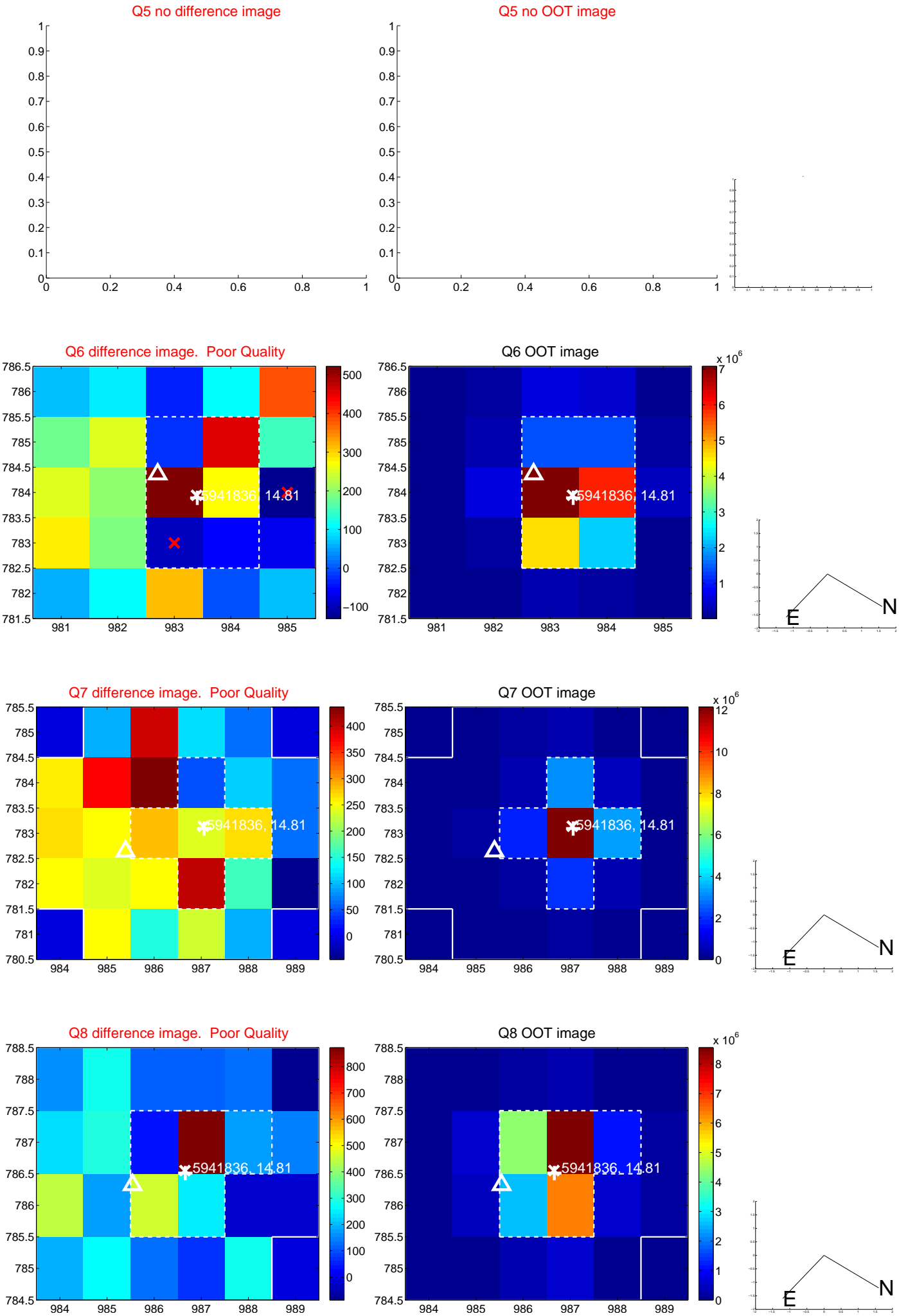


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

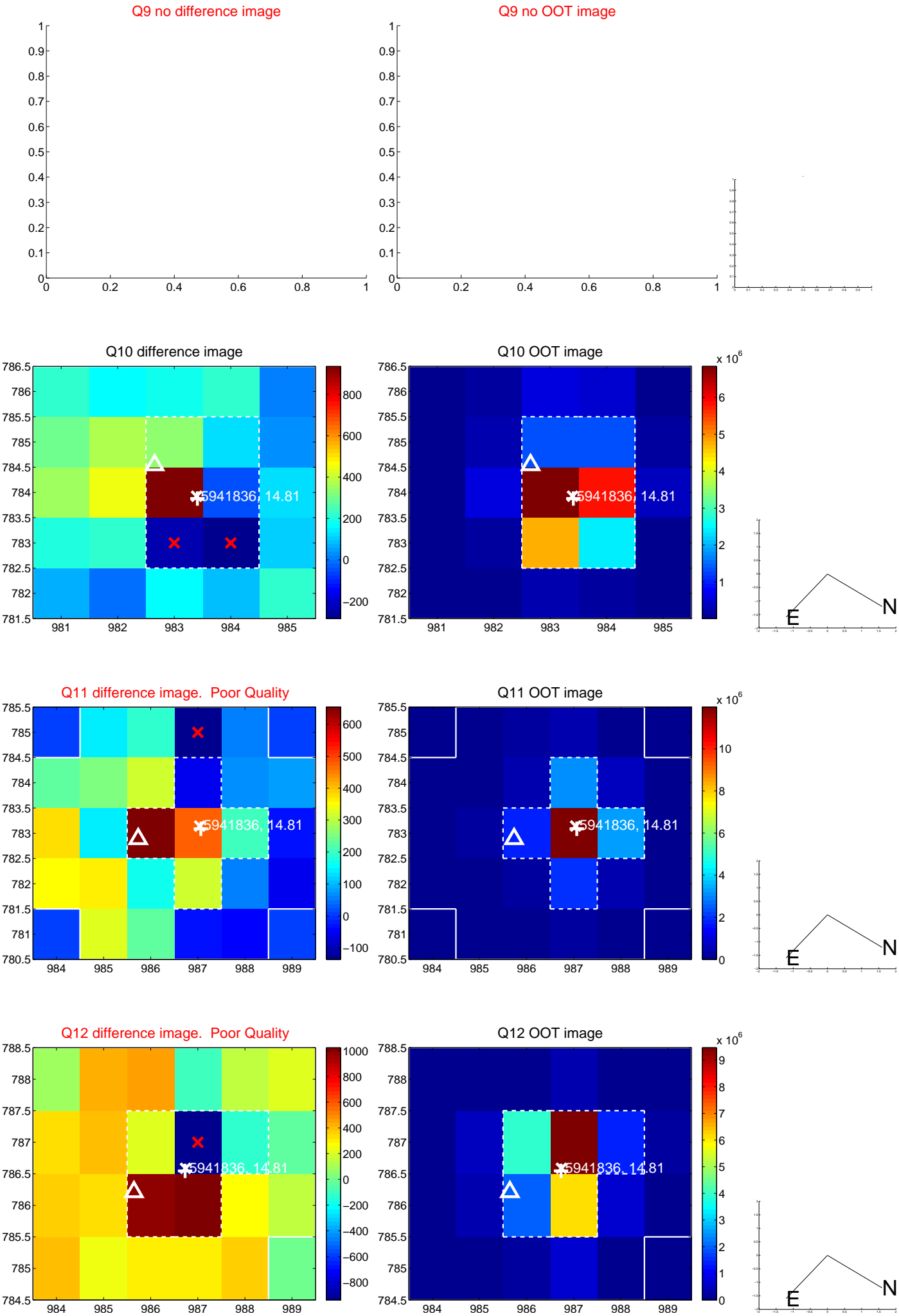
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



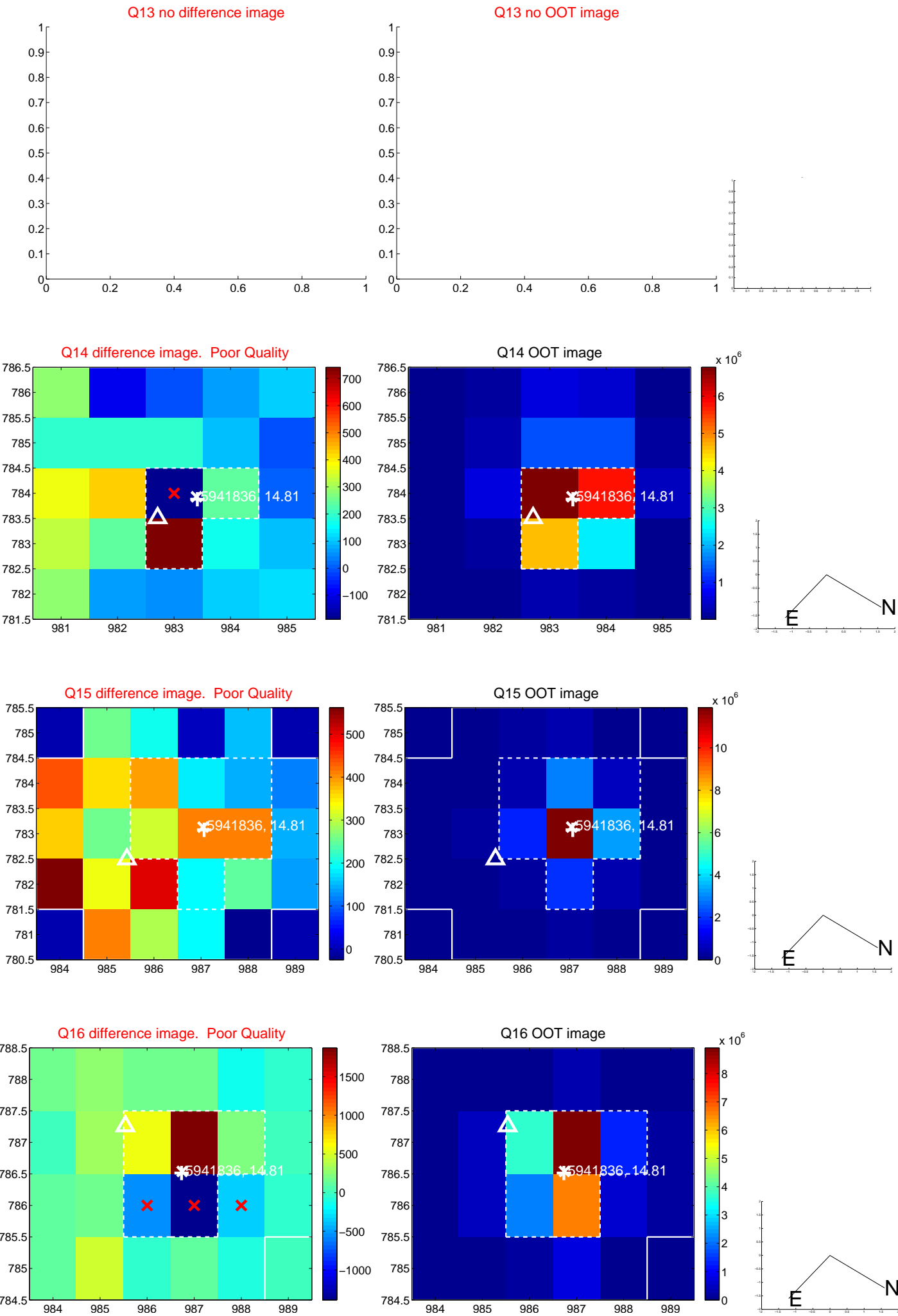
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



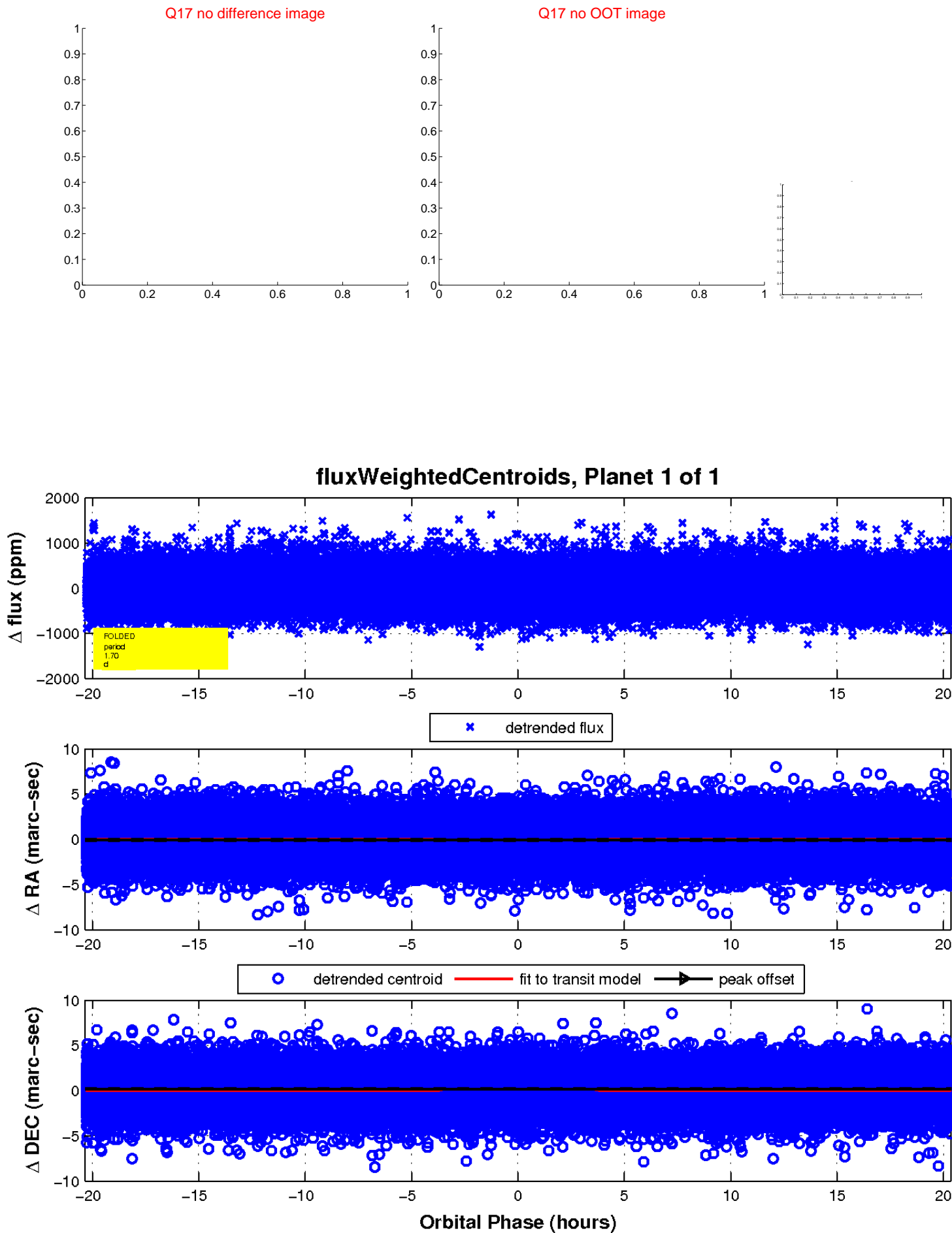
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

