

KIC 009596739

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})
009596739-01	OBS	No	0.705745	131.916525	0.7	5.994	8.4	0.6	3.19	6635	0.27	49674.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009596739-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—CENT_UNCERTAIN

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

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

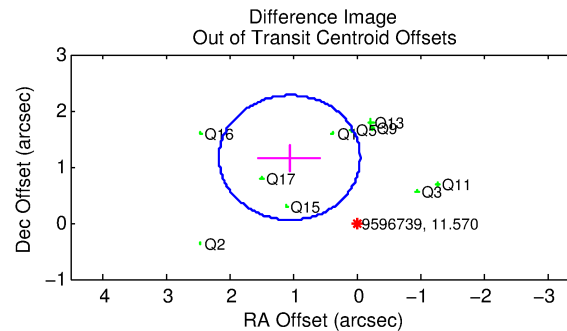
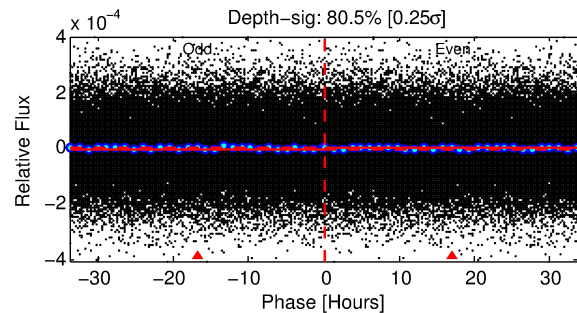
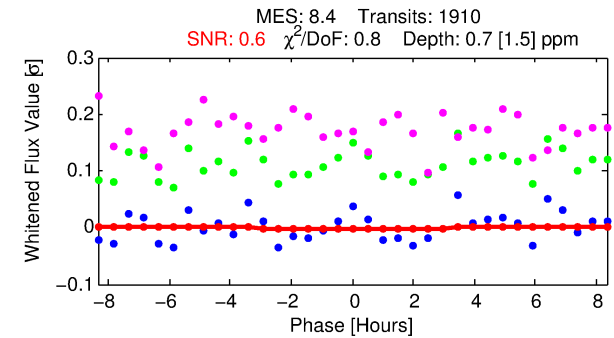
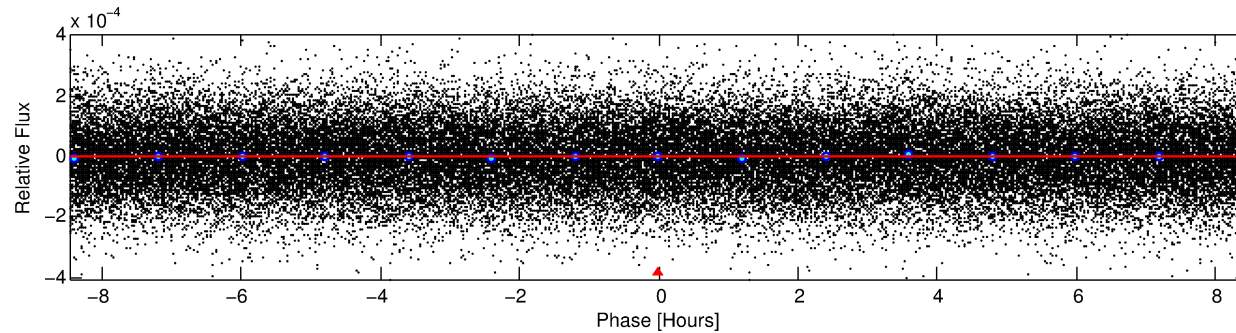
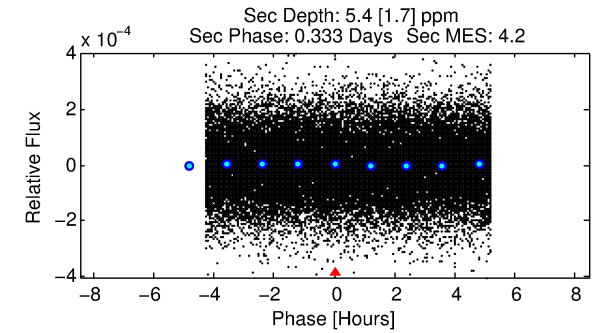
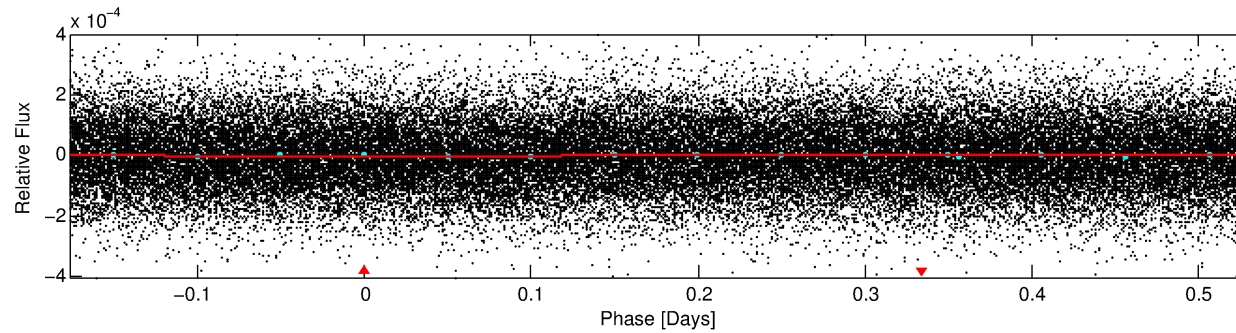
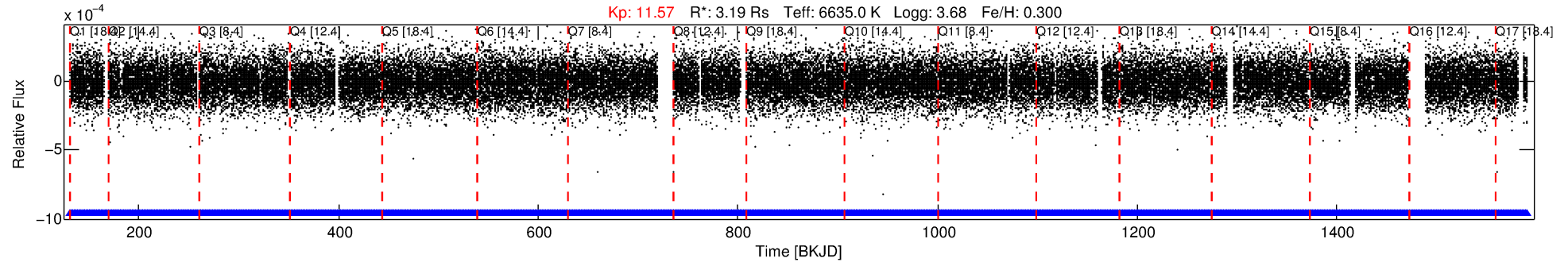
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009596739-01

No Significant Match Found

DV One-Page Summary

KIC: 9596739 Candidate: 1 of 1 Period: 0.706 d



DV Fit Results:

Period = 0.70574 [0.00021] d
Epoch = 131.9165 [0.0701] BKJD
Rp/R* = 0.0008 [0.0077]
a/R* = 1.11 [10.77]
b = 0.32 [153.98]
Seff = 49674.59 [39183.33]
Teq = 3807 [751] K
Rp = 0.27 [2.67] Re
a = 0.0188 [0.0090] AU
Ag = 14.57 [288.70] [0.05σ]
Teffp = 11500 [56914] K [0.14σ]

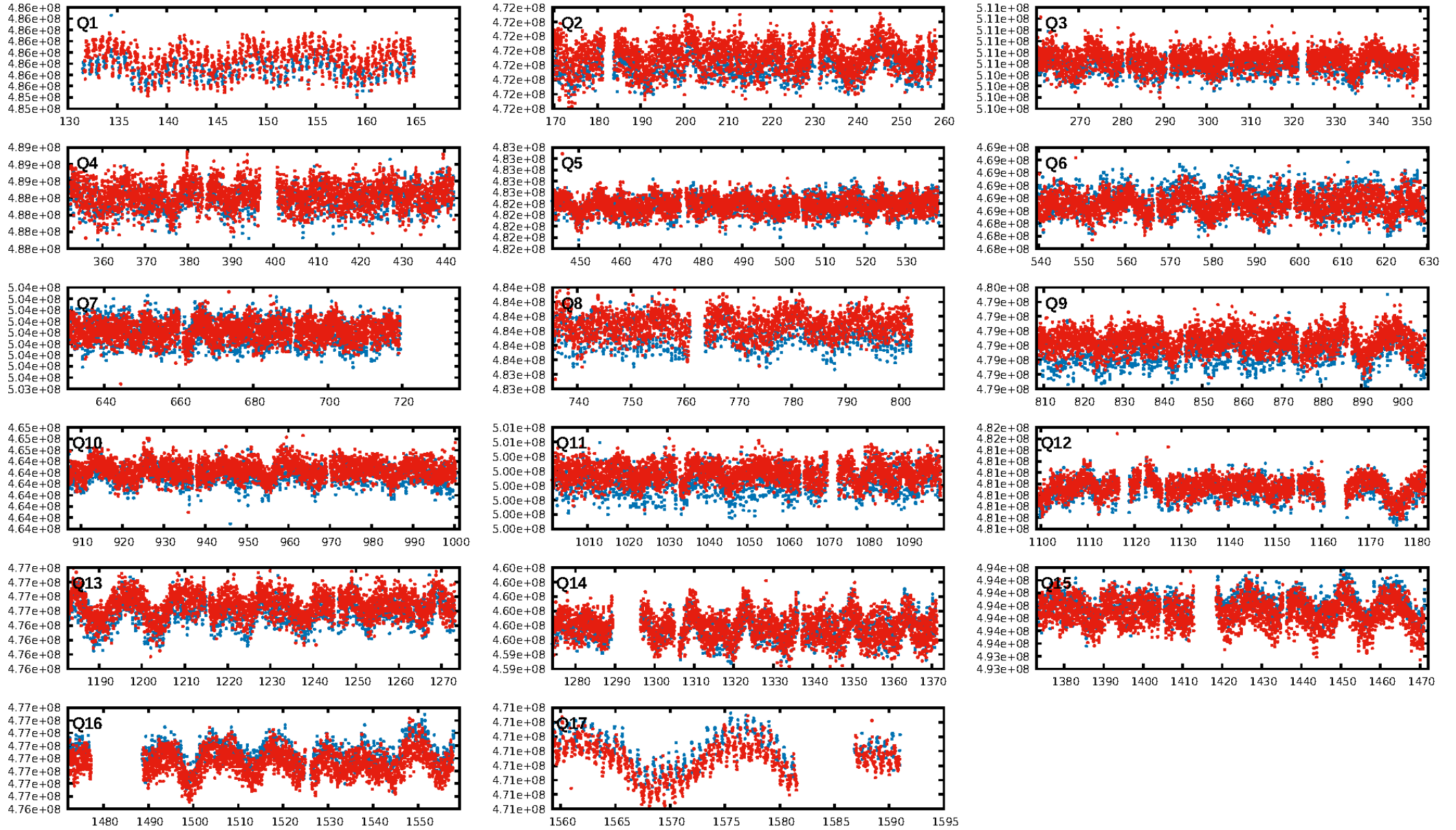
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1824/1824]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.565 arcsec [4.23σ]
KicOffset-rm: 1.614 arcsec [4.29σ]
OotOffset-st: 1/3/1/5 [10]
KicOffset-st: 1/3/1/5 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 1.00 [17/17]

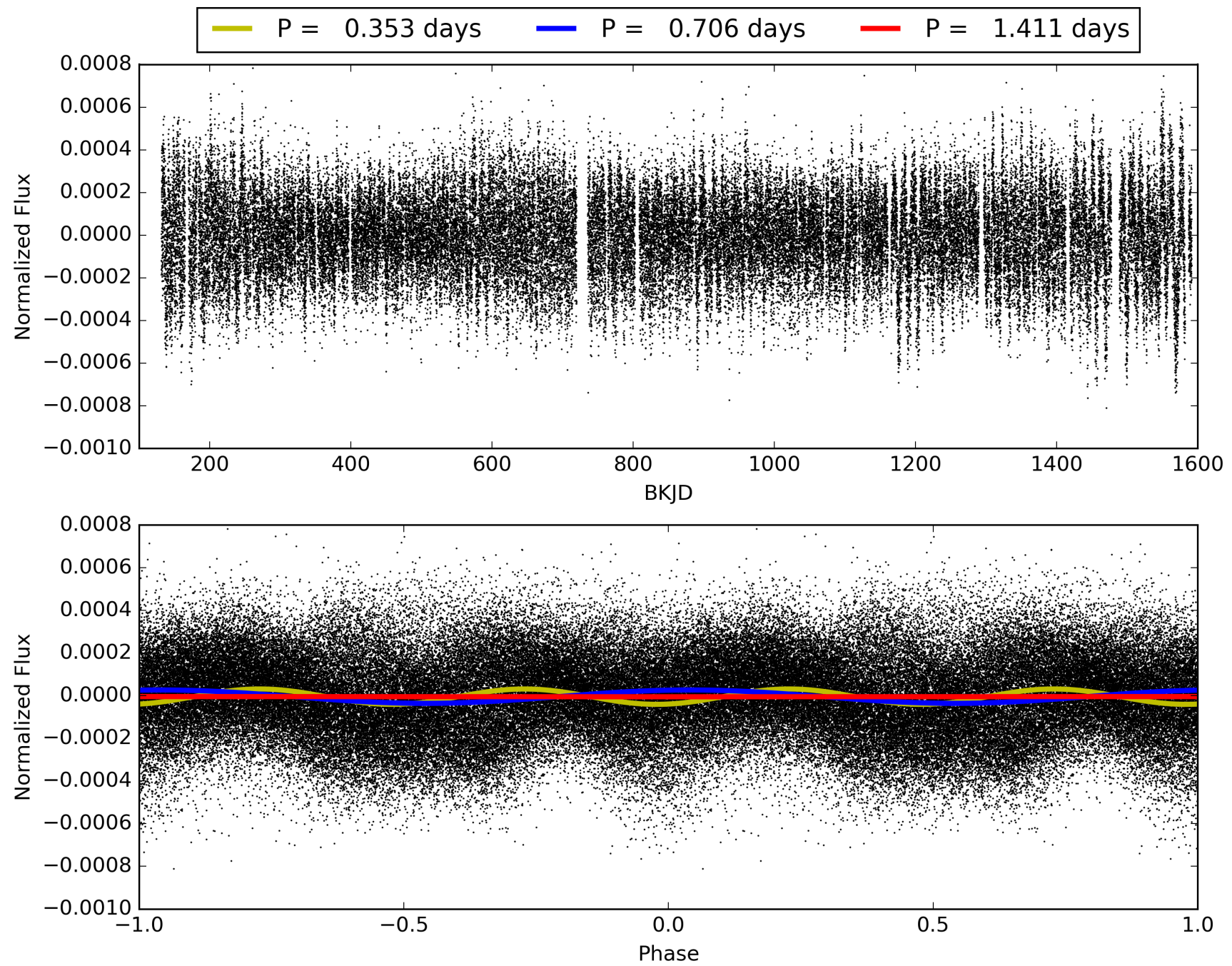
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:44:08 Z

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

TCE 009596739-01, PDC Light Curves

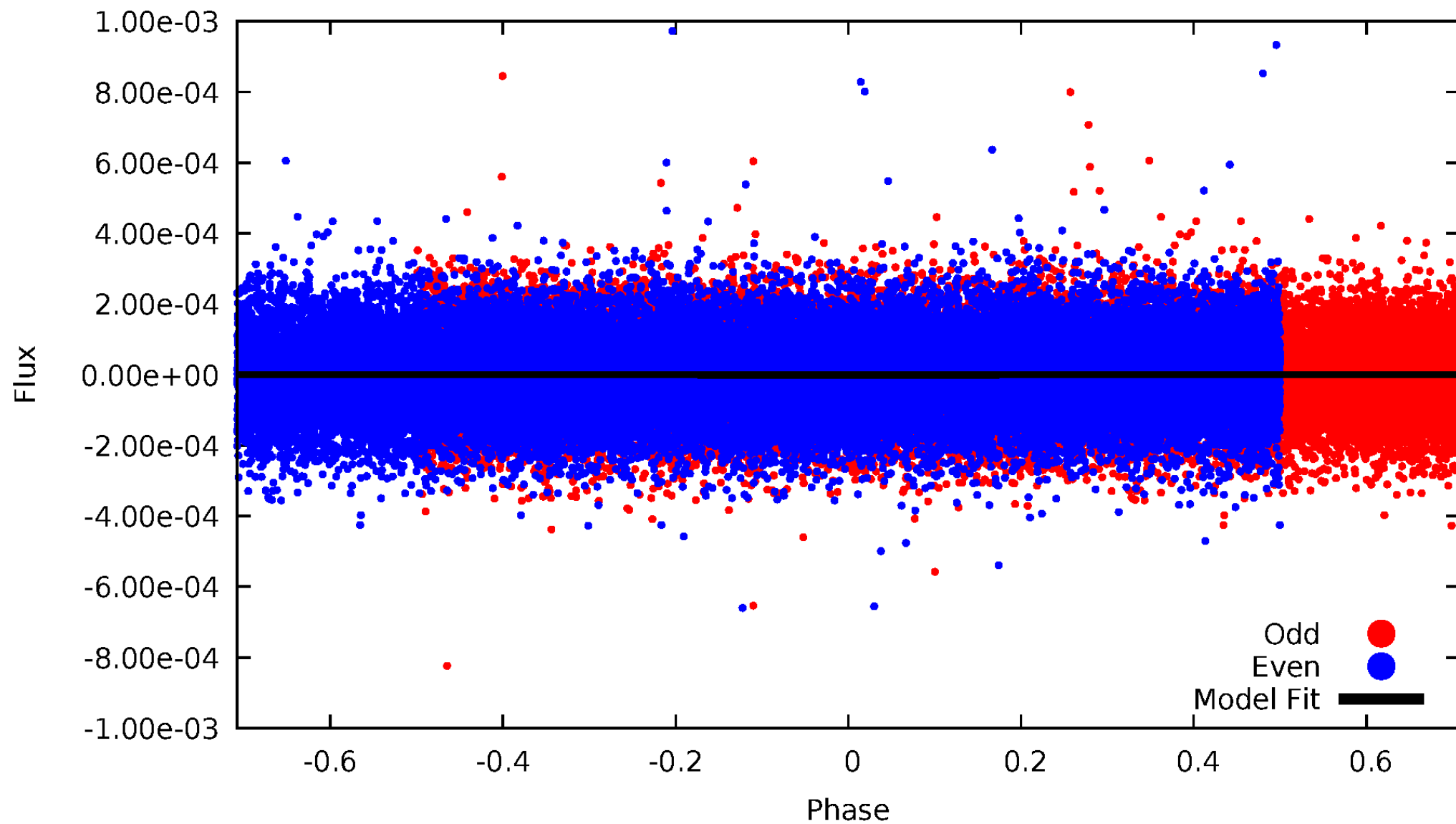


TCE 009596739-01



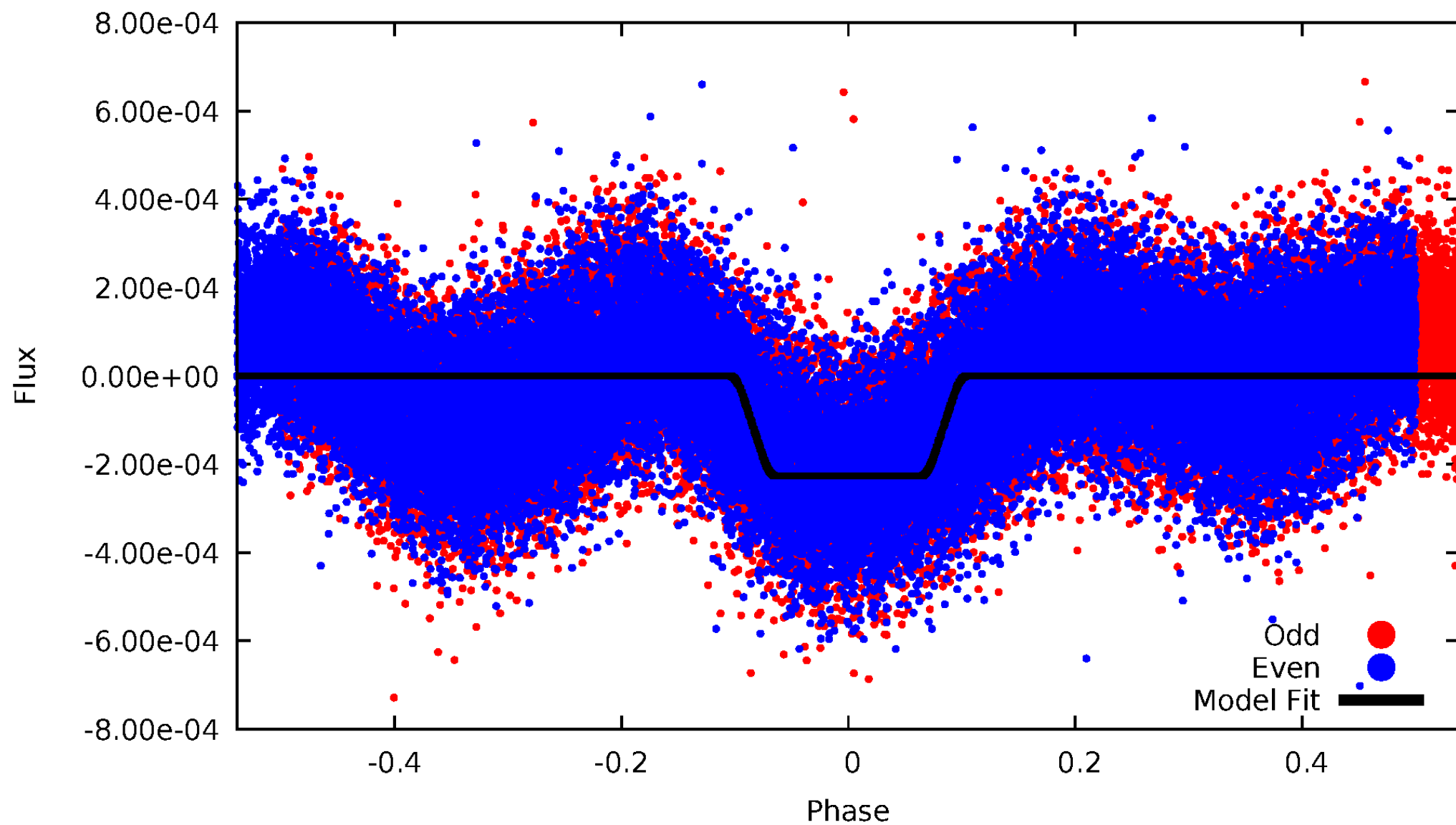
DV Odd/Even

TCE 009596739-01

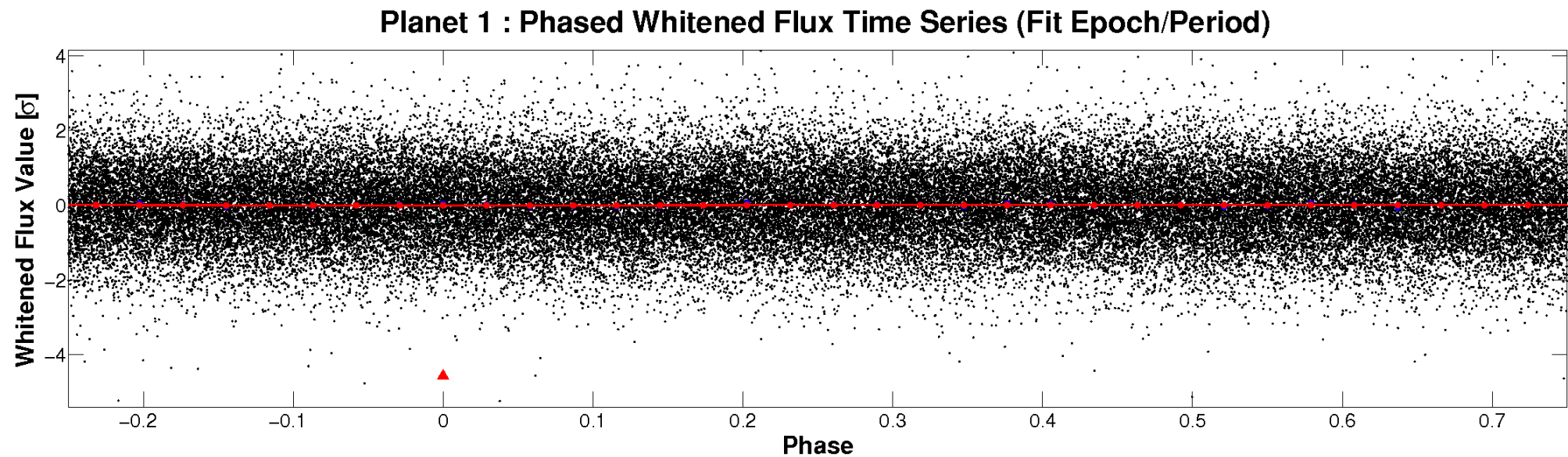
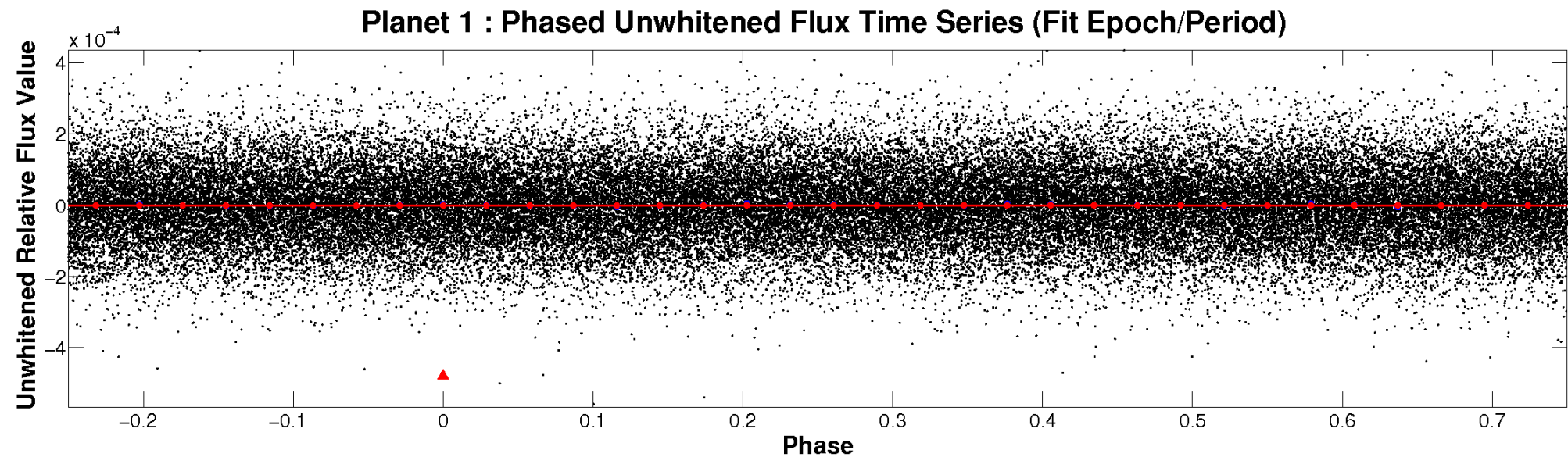


ALT Odd/Even

TCE 009596739-01

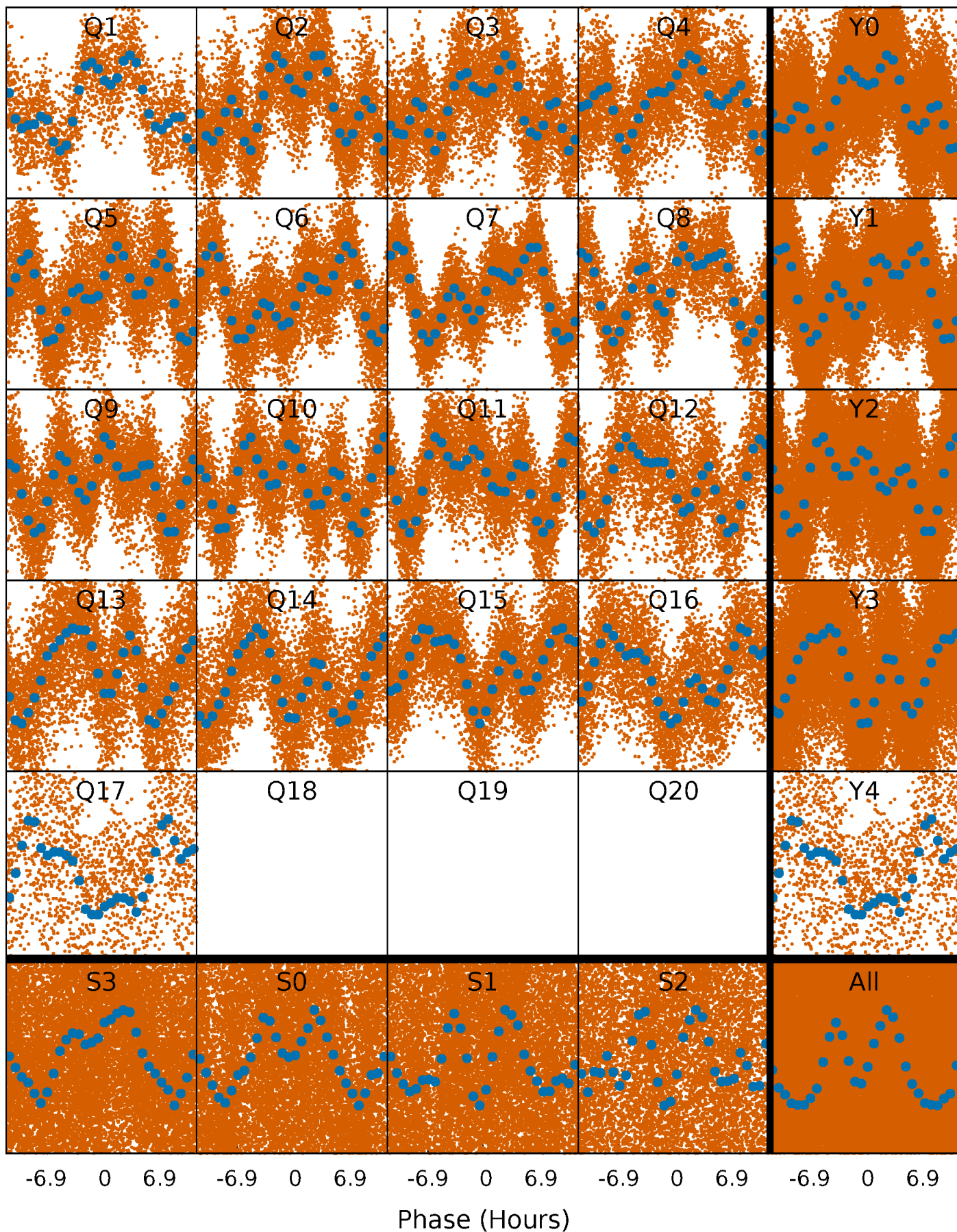


Non-Whitened Vs. Whitened Light Curve



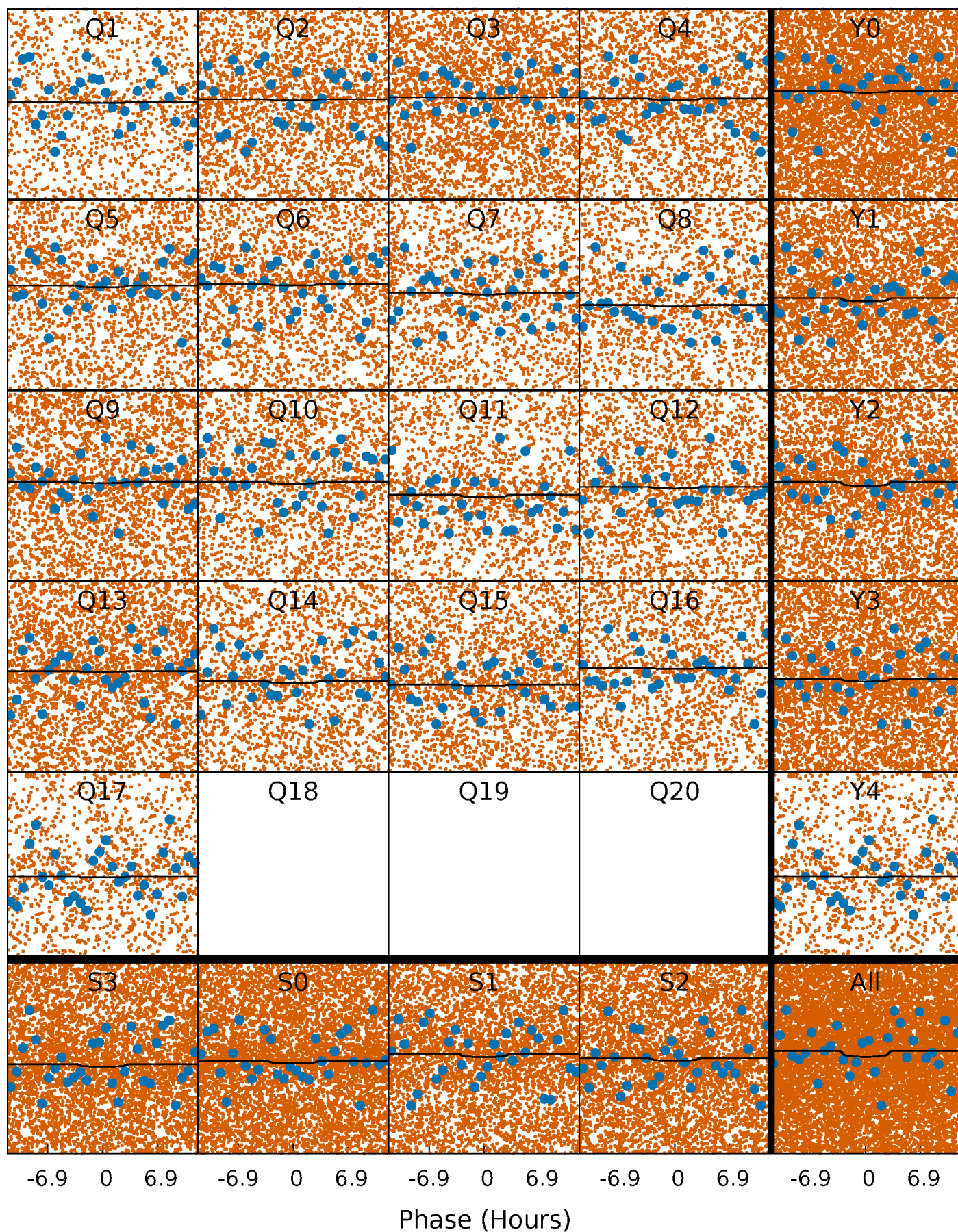
PDC Quarter-Phased Transit Curves

TCE 009596739-01 P= 0.705745 Days $T_0=131.916525$ (BKJD)



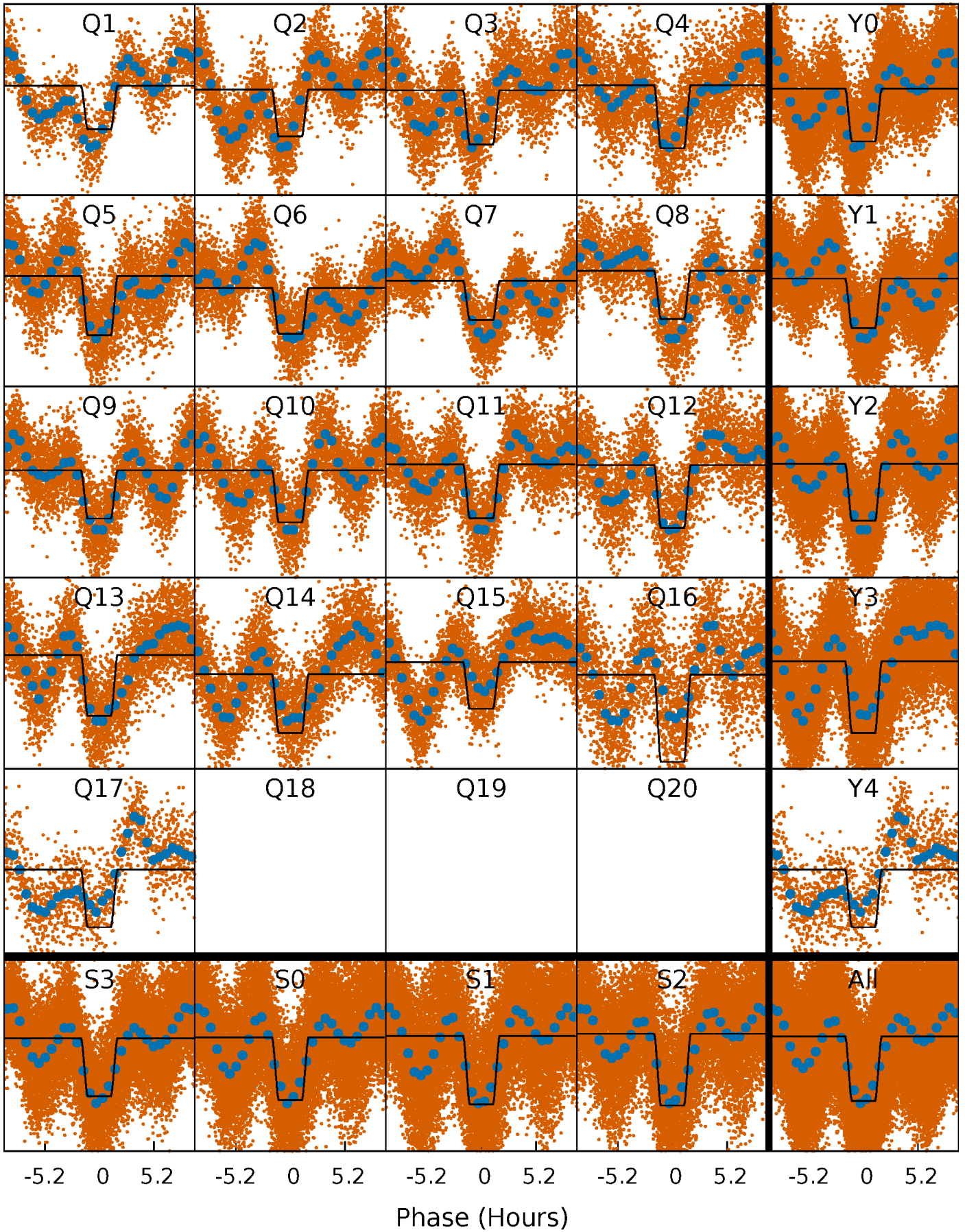
DV Quarter-Phased Transit Curves

TCE 009596739-01 P= 0.705745 Days $T_0=131.916525$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

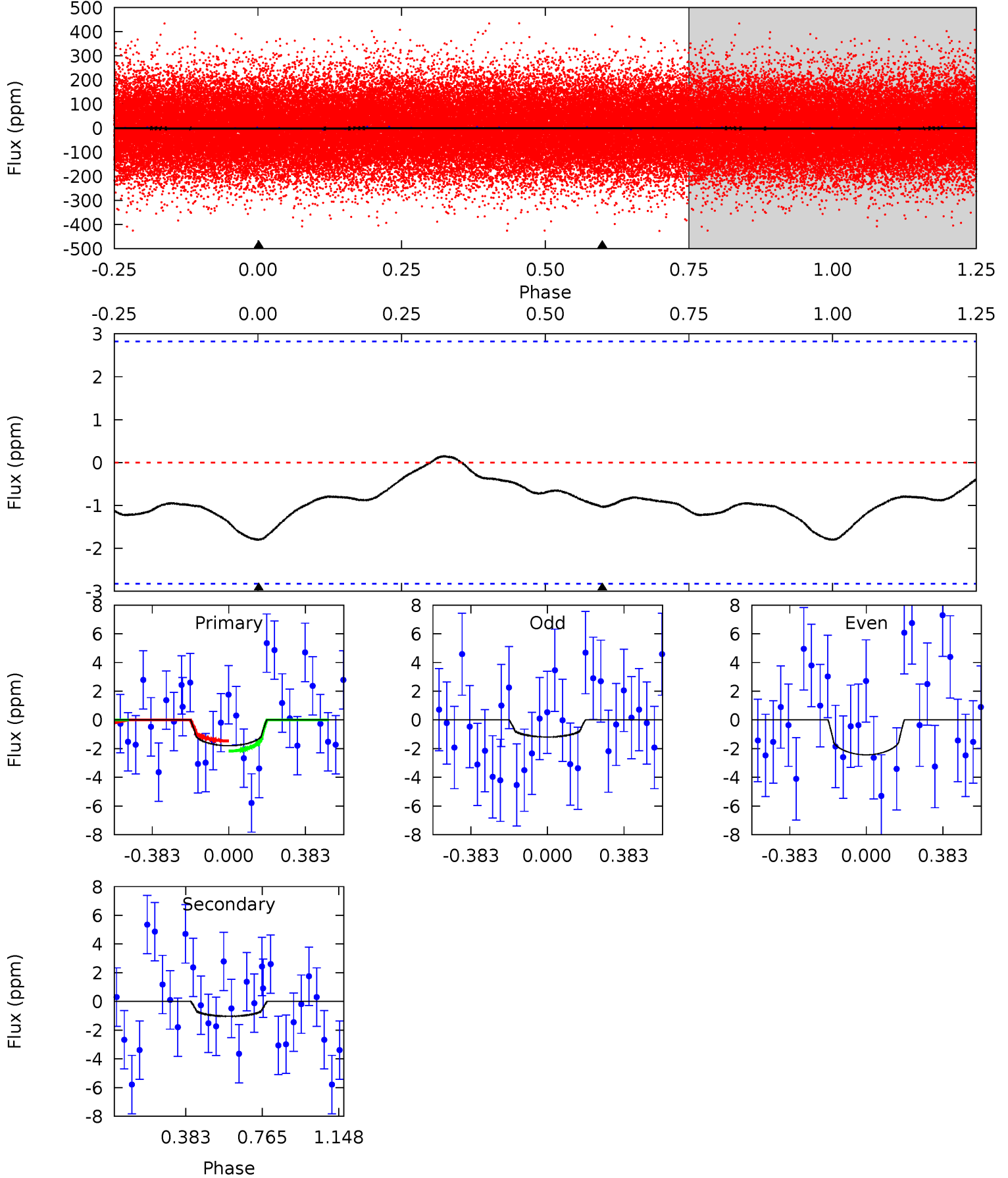
TCE 009596739-01 P= 0.705578 Days $T_0=131.743671$ (BKJD)



DV Model-Shift Uniqueness Test

009596739-01, P = 0.705745 Days, E = 131.210780 Days

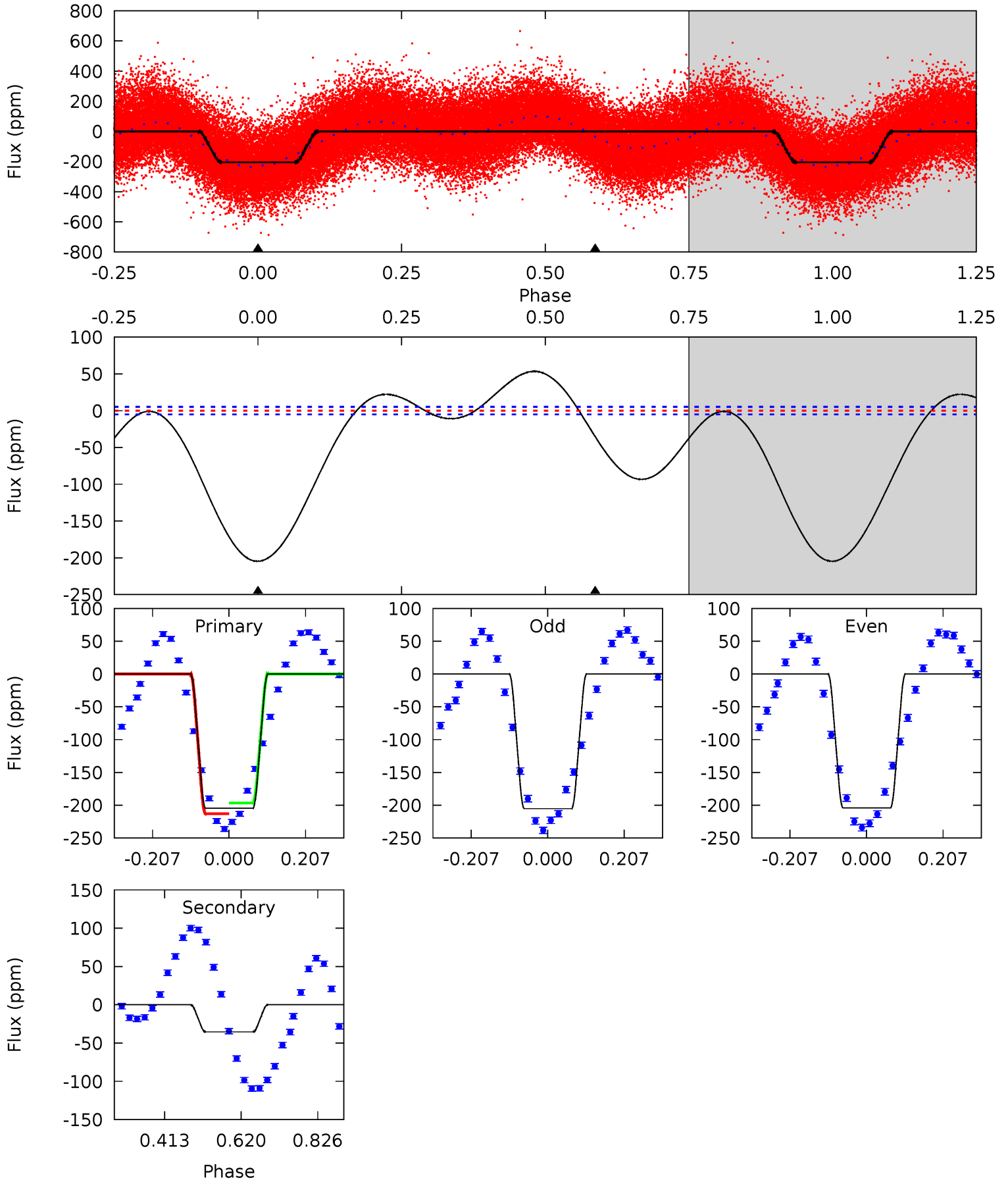
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.73	1.57	0	0	4.27	0.87	0.25	2.73	2.73	1.57	1.57	0.94	26.8	0.08	0.53



Alt Model-Shift Uniqueness Test

009596739-01, P = 0.705578 Days, E = 131.038093 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
176.5	30.5	0	0	4.41	1.26	10.6	176.5	176.5	30.5	30.5	0.41	1.00	0.21	6.94



Stellar Parameters For KIC 009596739

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6635^{+186}_{-256}	$3.684^{+0.456}_{-0.085}$	$0.300^{+0.100}_{-0.350}$	$3.185^{+0.524}_{-1.573}$	$1.788^{+0.176}_{-0.441}$	$0.078^{+0.392}_{-0.021}$
	+3%/-4%	+12%/-2%	+33%/-117%	+16%/-49%	+10%/-25%	+503%/-27%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 009596739-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1±1	$1.69^{+1.90}_{-1.21}$	5131^{+380}_{-609}	-4063^{+8727}_{-460}	$0.059^{+0.767}_{-0.051}$
Alt.	-35±1	$4.59^{+2.72}_{-2.32}$	5106^{+369}_{-629}	2983^{+2324}_{-7005}	$0.331^{+1.027}_{-0.201}$

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 $A_{obs} \gg 1.0$

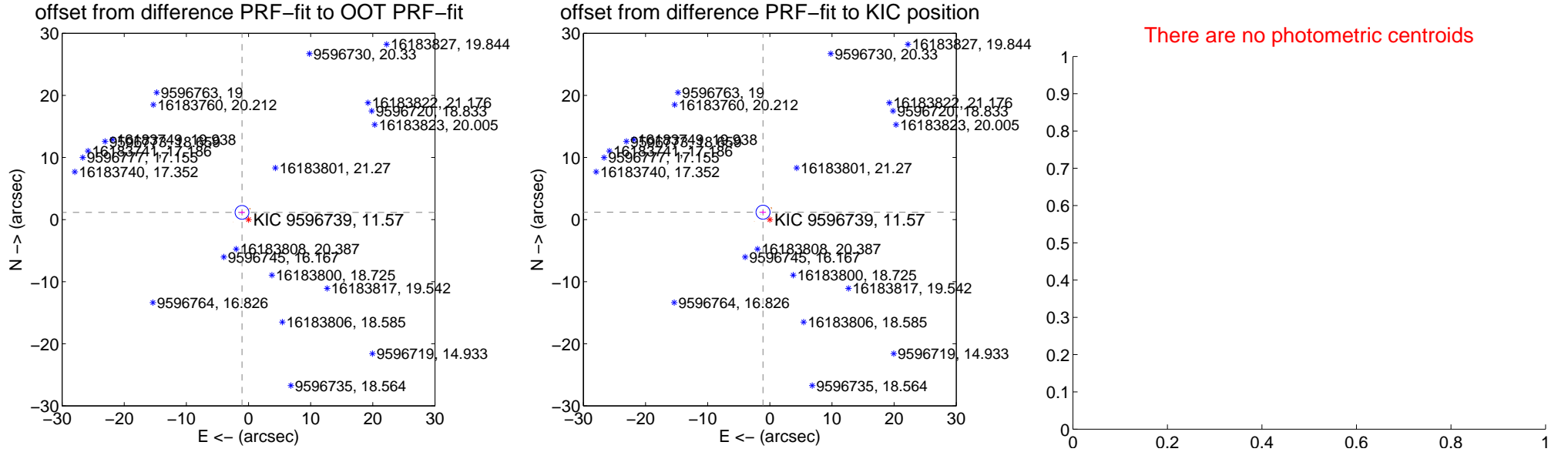
DV Centroid Data

Supplemental centroid analysis for 009596739-01. **Kepler magnitude: 11.57.** Transit SNR 0.55

There are 3 quarters with good PRF difference image offsets

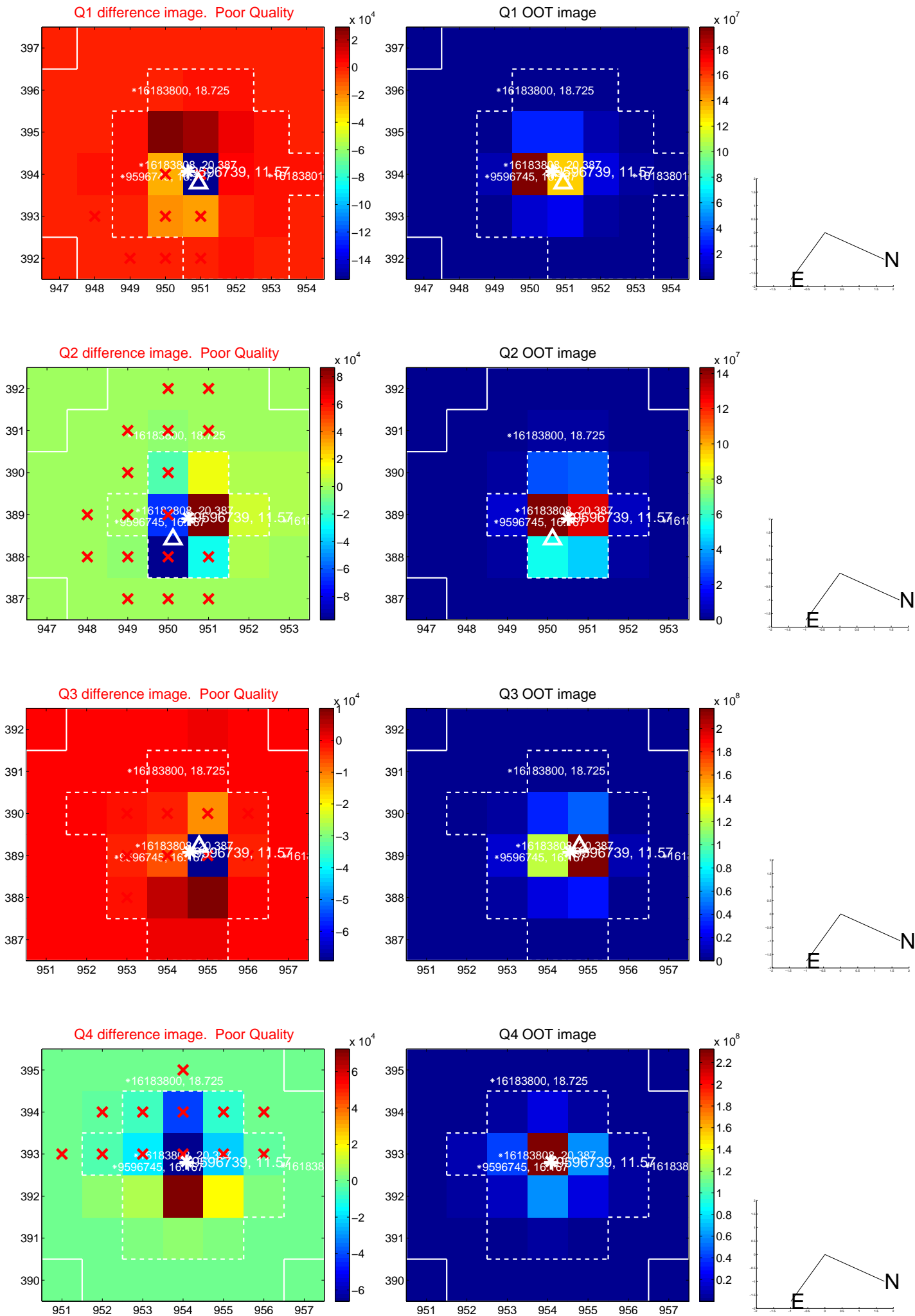
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.565 ± 0.370	4.23	1.050 ± 0.487	1.161 ± 0.235
PRF-fit source offset from KIC position	1.614 ± 0.376	4.29	1.095 ± 0.480	1.185 ± 0.256
photometric centroid source offset	—	—	—	—

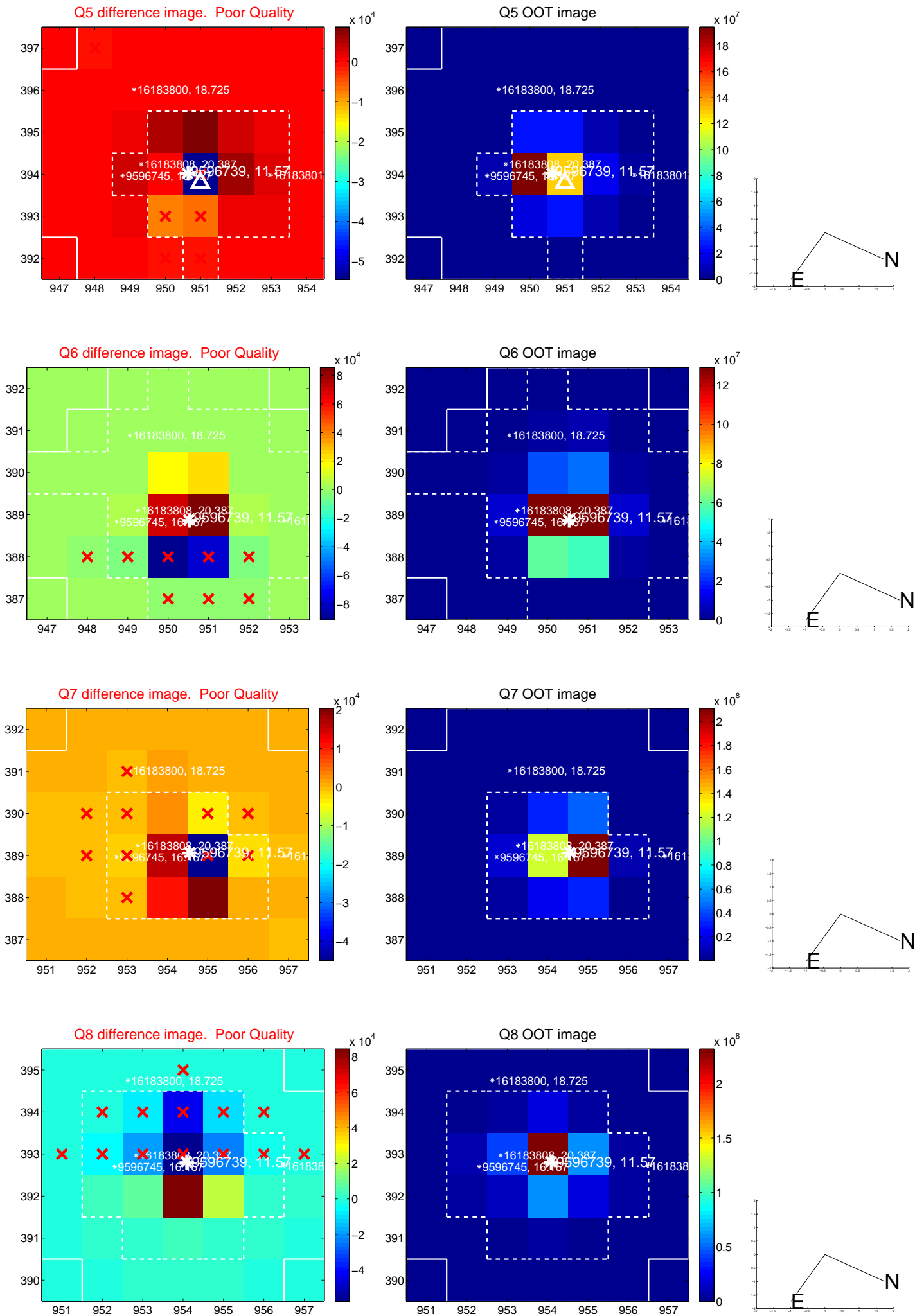


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

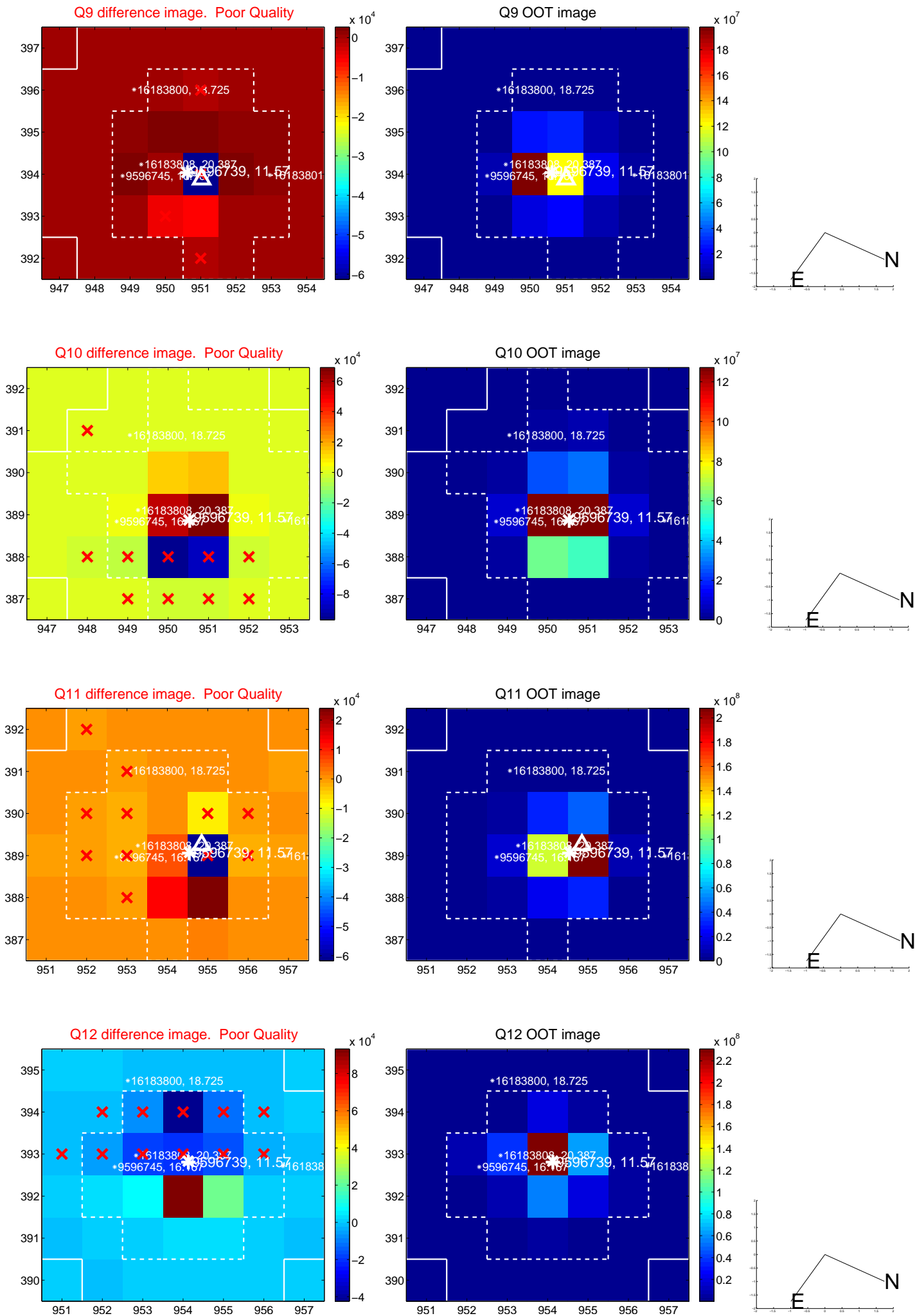
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



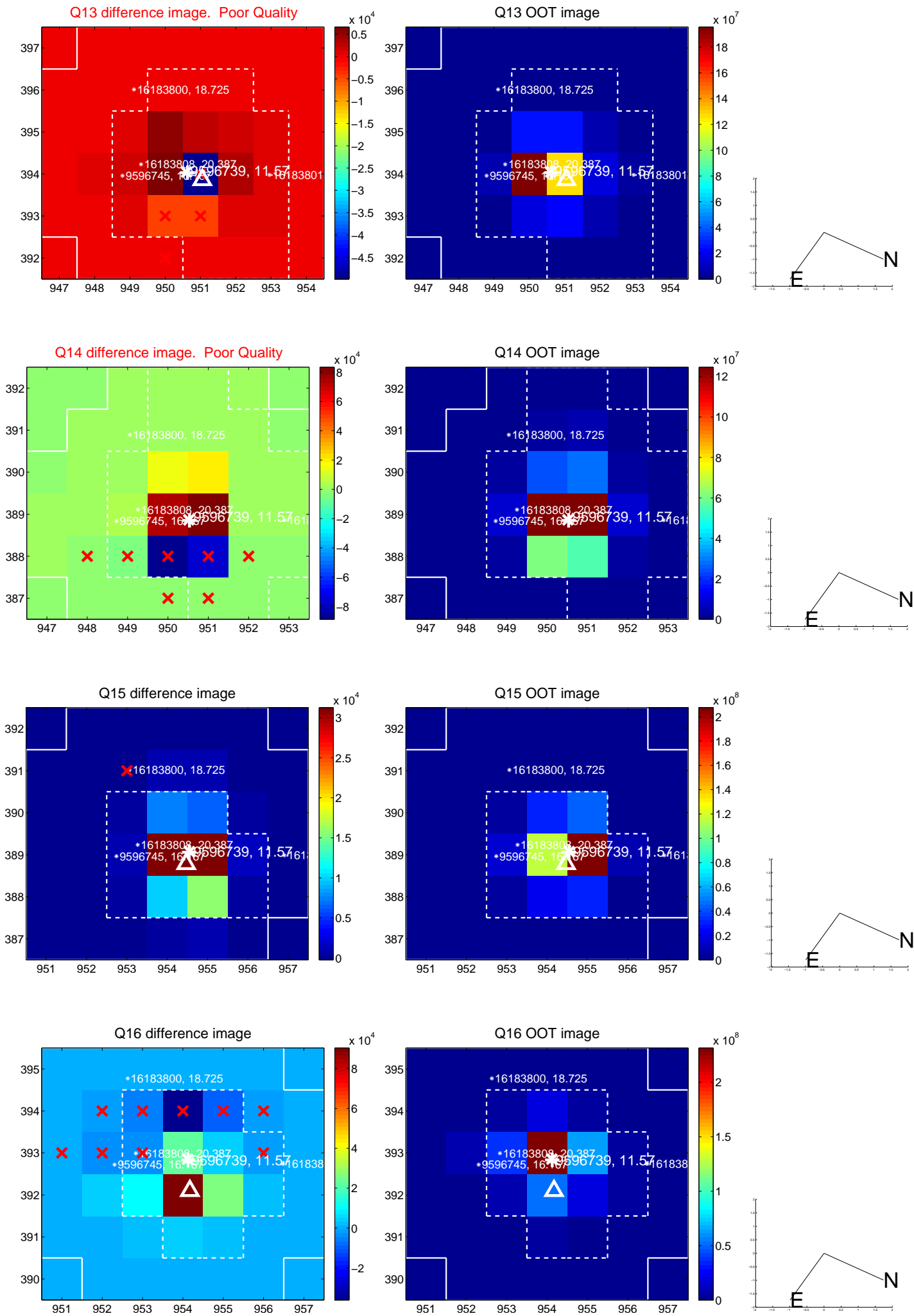
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



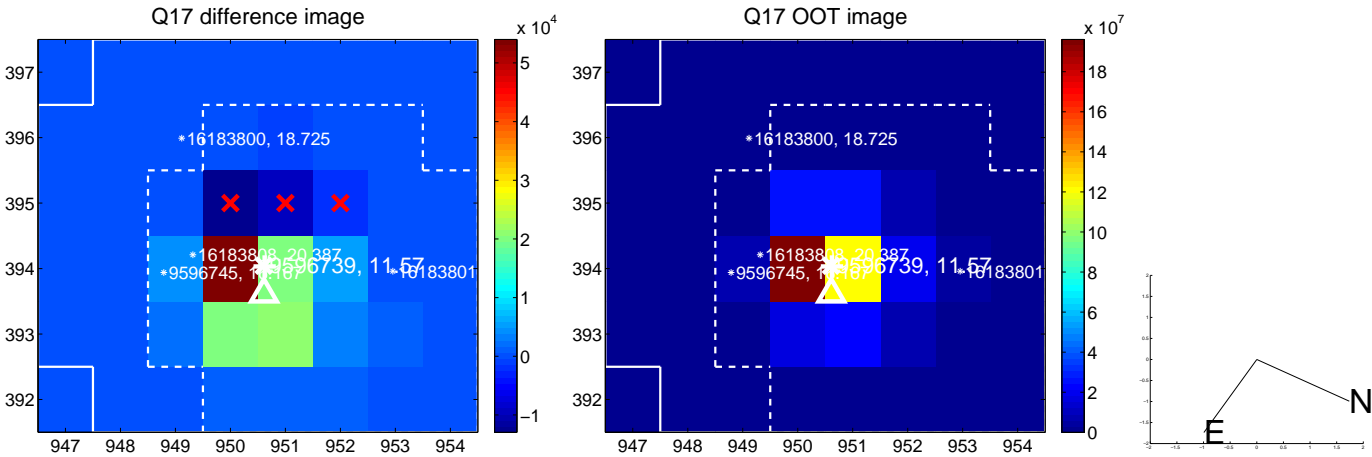
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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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

