

KIC 006471490

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})
006471490-01	OBS	No	1.023256	131.932672	15.7	1.930	8.7	8.0	2.71	6347	1.26	21647.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006471490-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

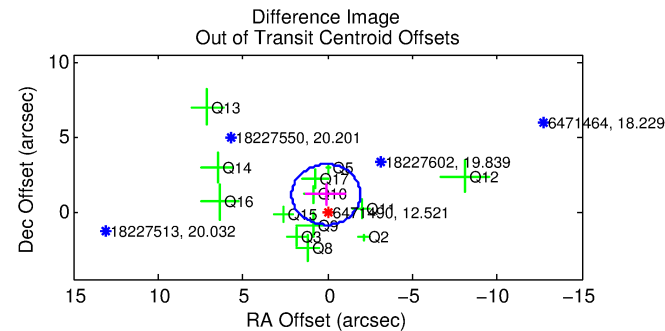
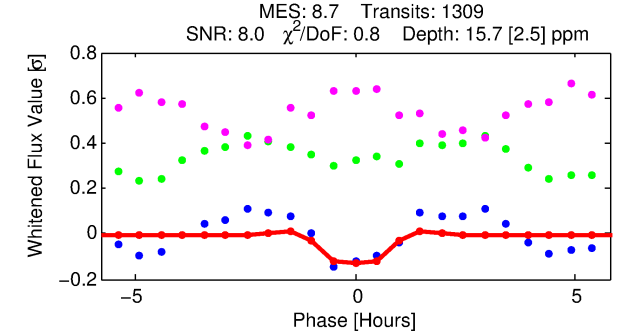
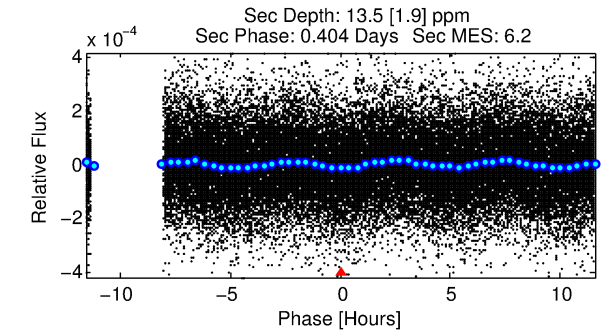
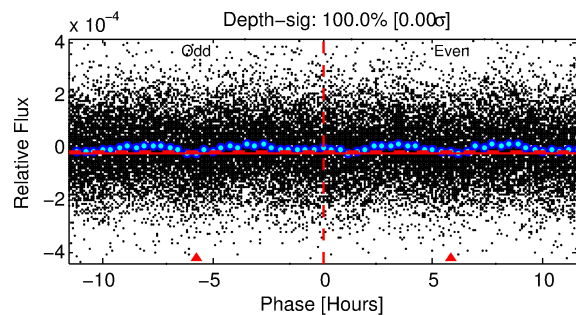
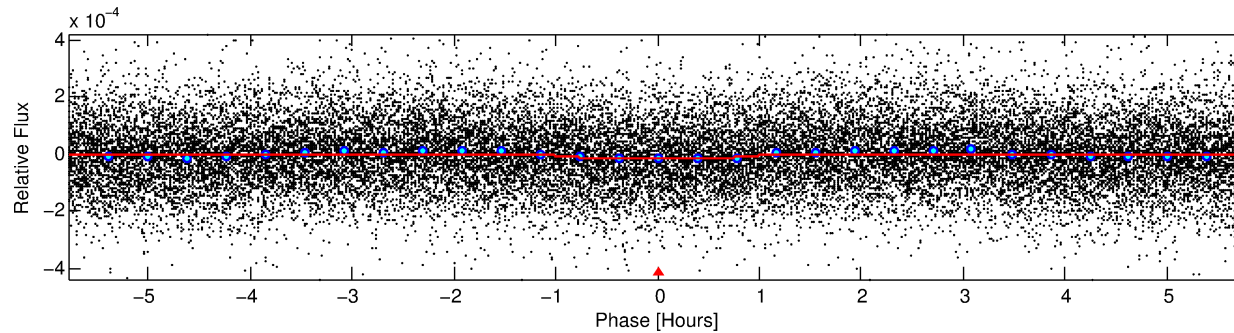
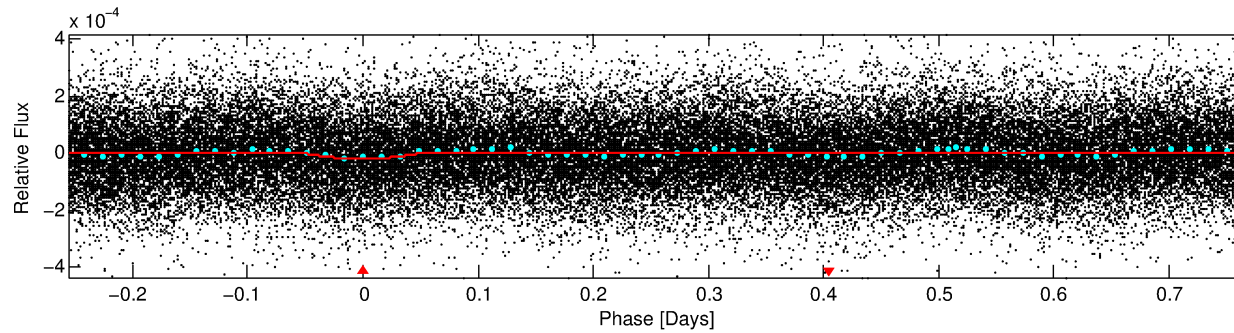
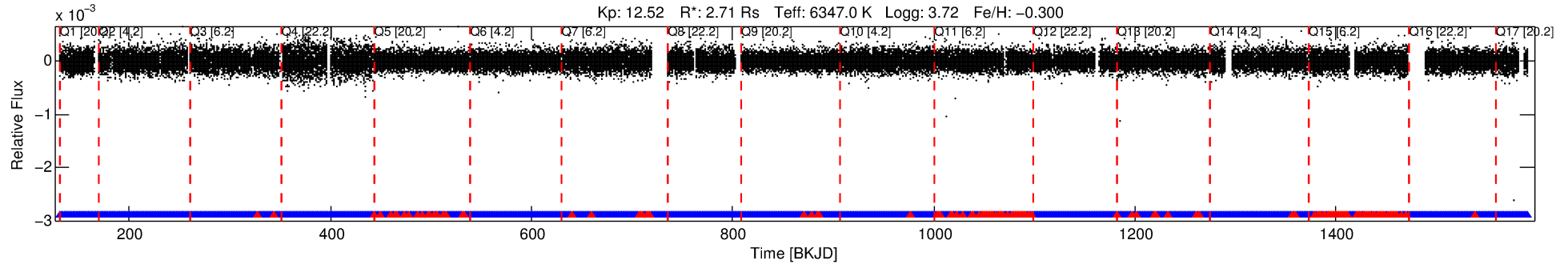
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006471490-01

No Significant Match Found

DV One-Page Summary

KIC: 6471490 Candidate: 1 of 1 Period: 1.023 d



DV Fit Results:

Period = 1.02326 [0.00001] d
Epoch = 131.9327 [0.0031] BKJD
Rp/R* = 0.0043 [0.0010]
a/R* = 2.03 [1.94]
b = 0.90 [0.27]
Seff = 21647.51 [12215.13]
Teq = 3093 [436] K
Rp = 1.26 [0.55] Re
a = 0.0222 [0.0078] AU
Ag = 2.31 [1.70] [0.77σ]
Teffp = 5899 [738] K [3.27σ]

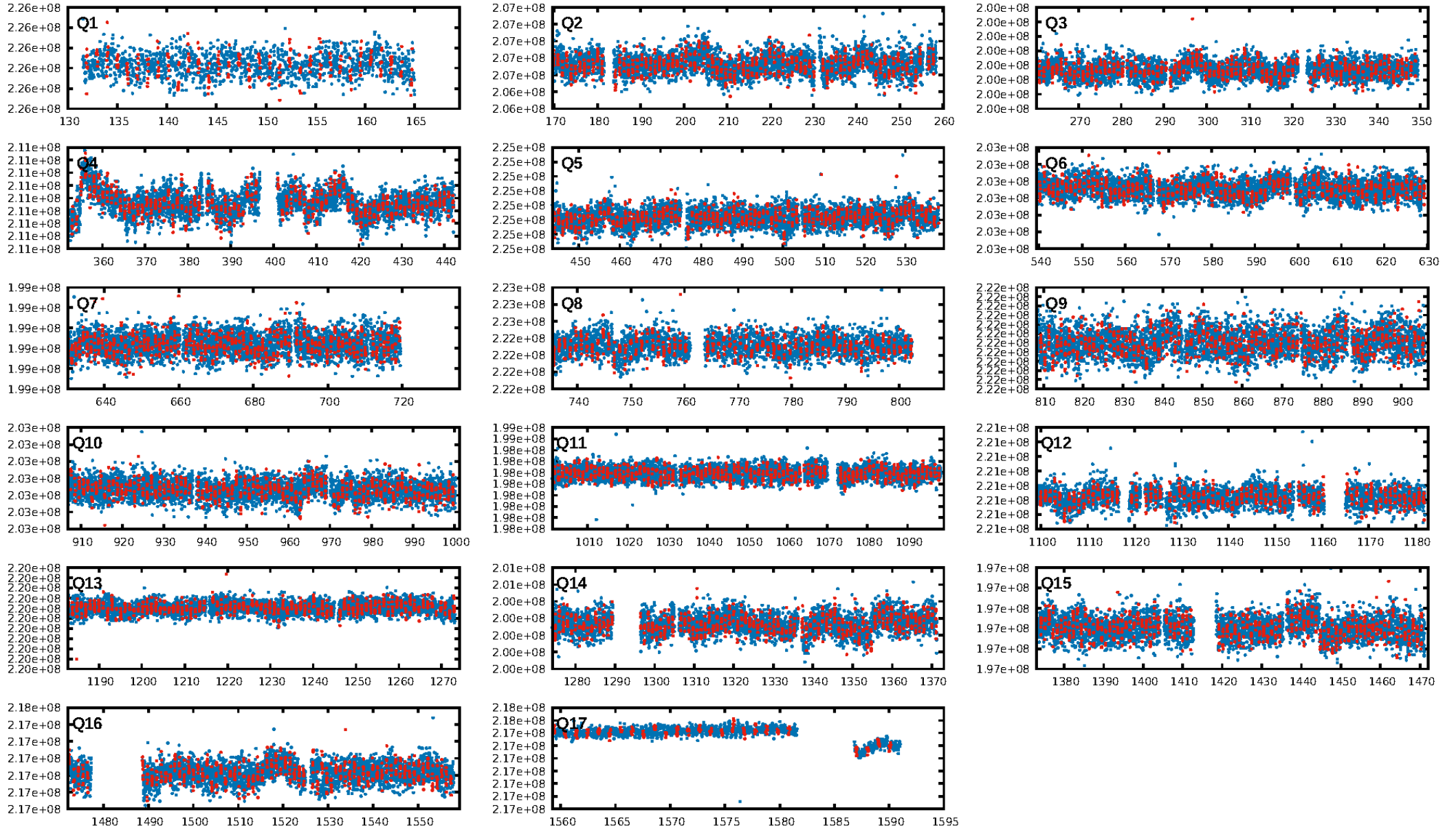
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.05e-18
RollingBand-fgt: 0.88 [1106/1250]
GhostDiagnostic-chr: 3.958
Centroid-sig: 44.4%
Centroid-so: 1.865 arcsec [1.07σ]
OotOffset-rm: 1.139 arcsec [1.69σ]
KicOffset-rm: 0.929 arcsec [1.46σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.38 [5/13]
DiffImageOverlap-fno: 1.00 [17/17]

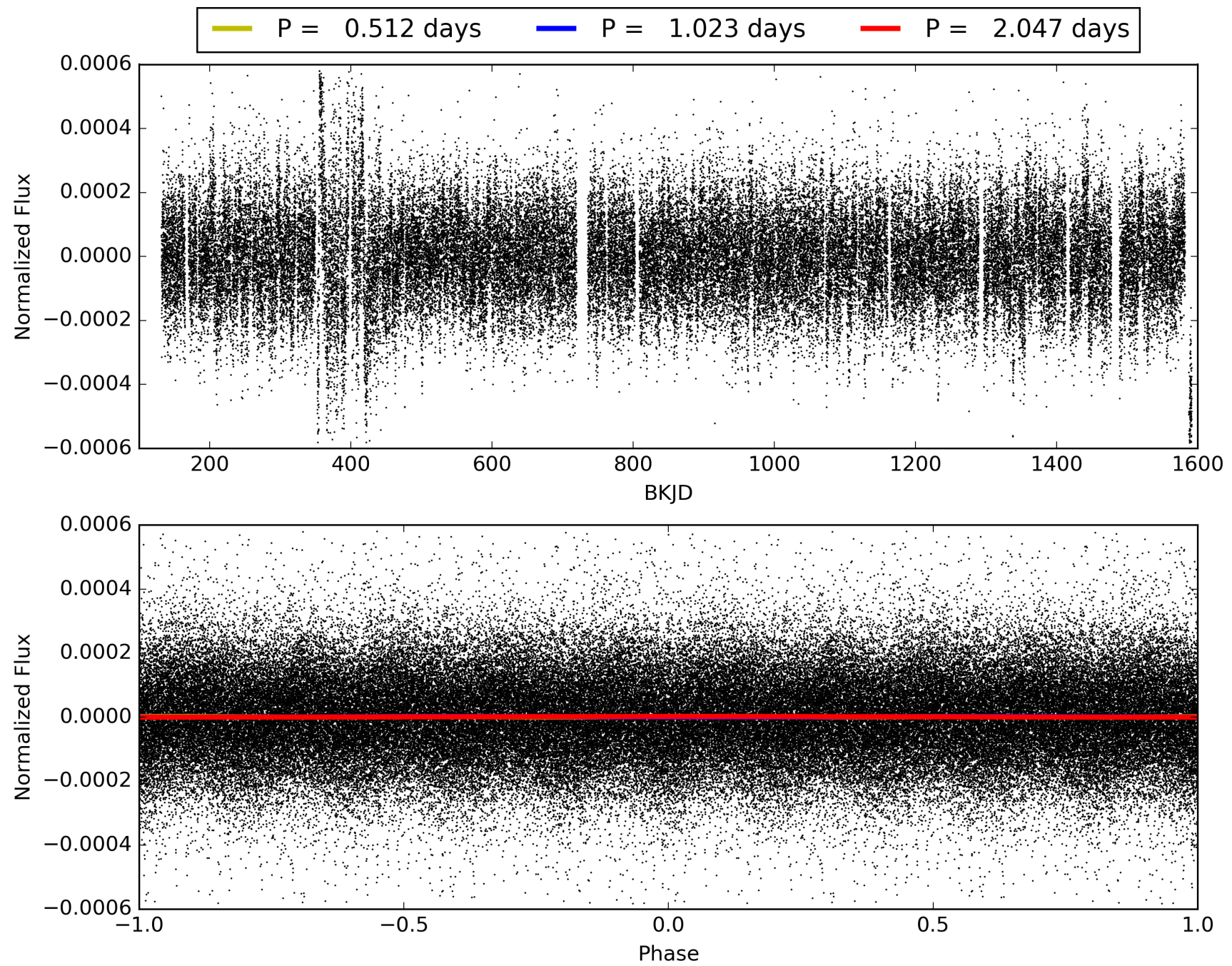
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:14:17 Z

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

TCE 006471490-01, PDC Light Curves

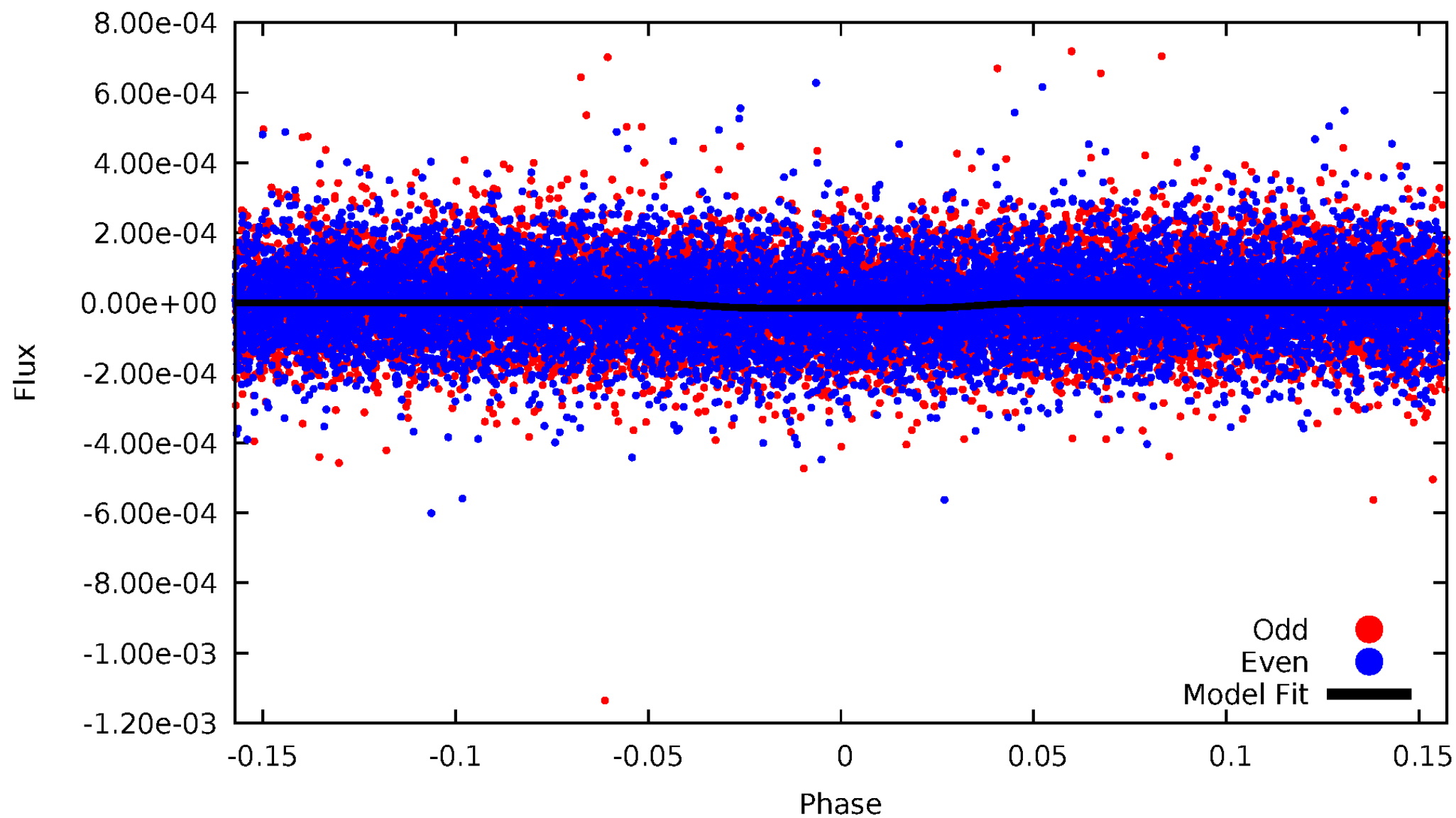


TCE 006471490-01



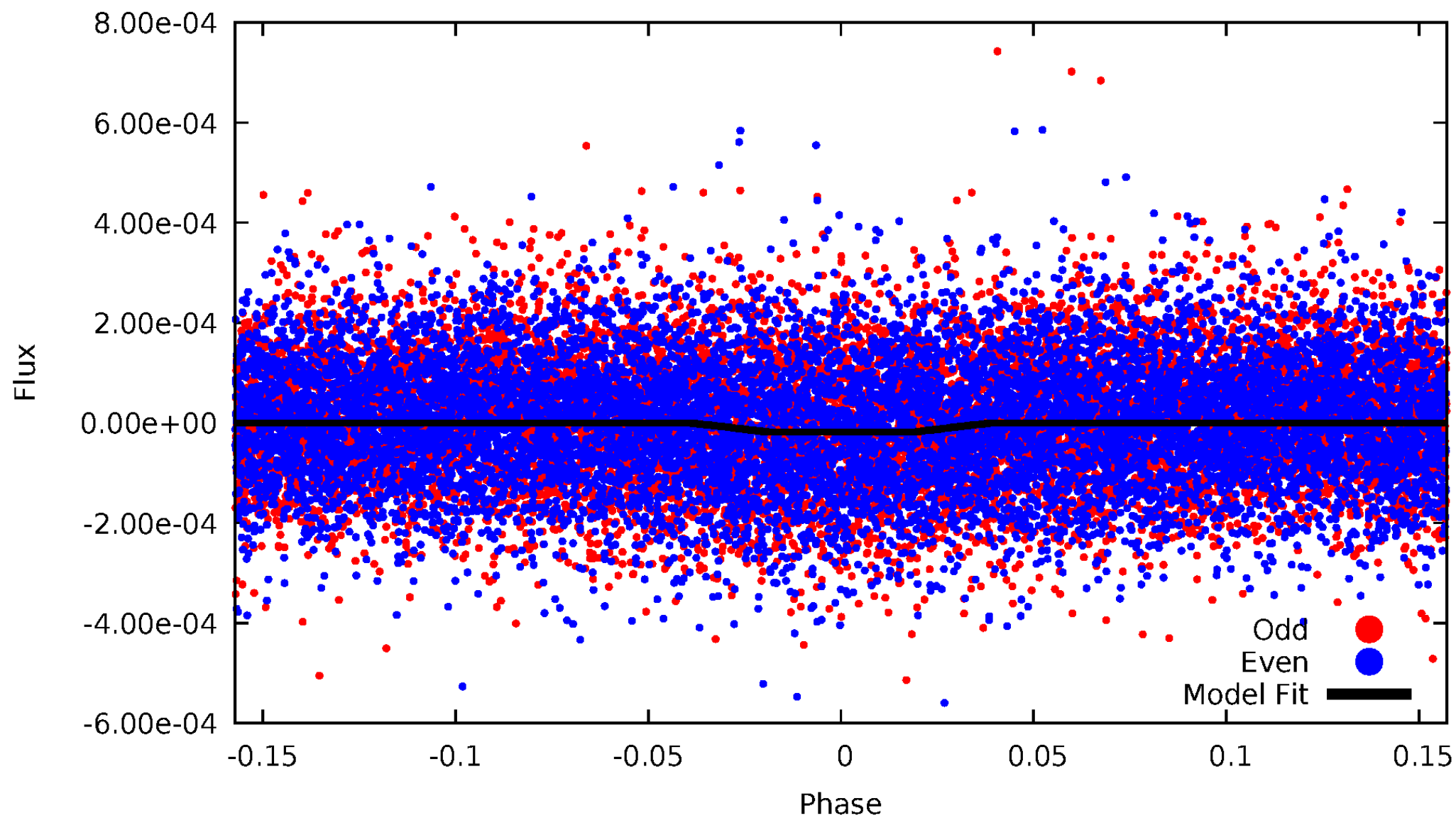
DV Odd/Even

TCE 006471490-01



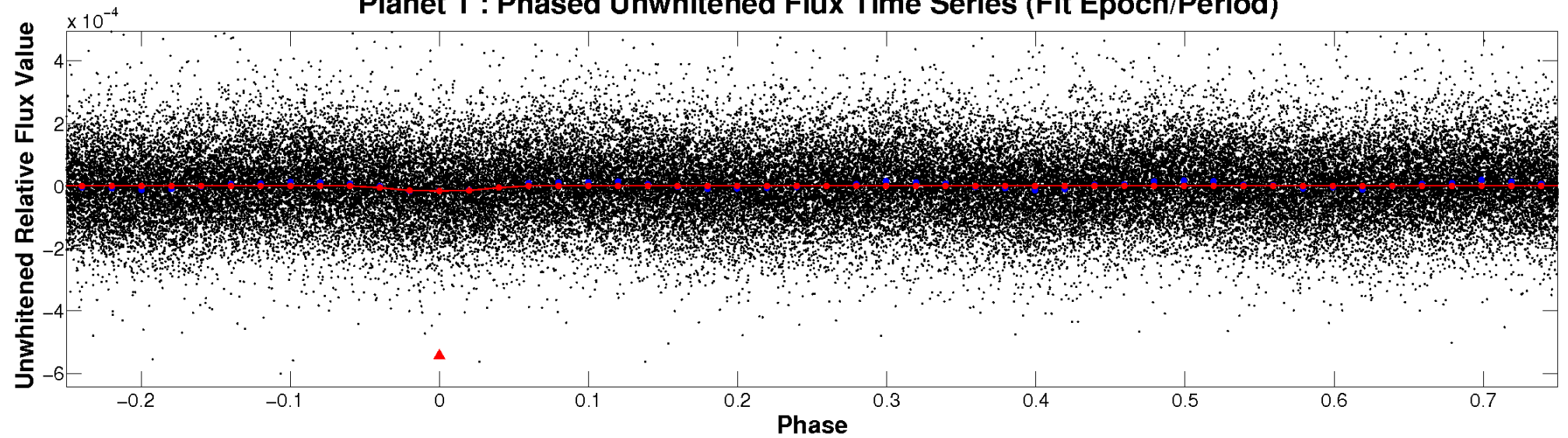
ALT Odd/Even

TCE 006471490-01

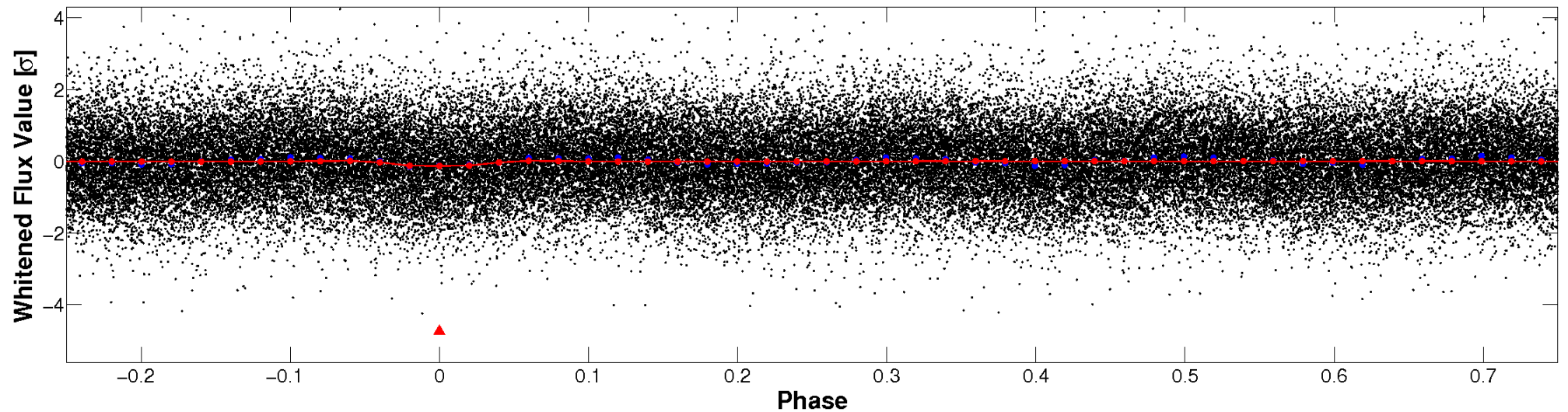


Non-Whitened Vs. Whitened Light Curve

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

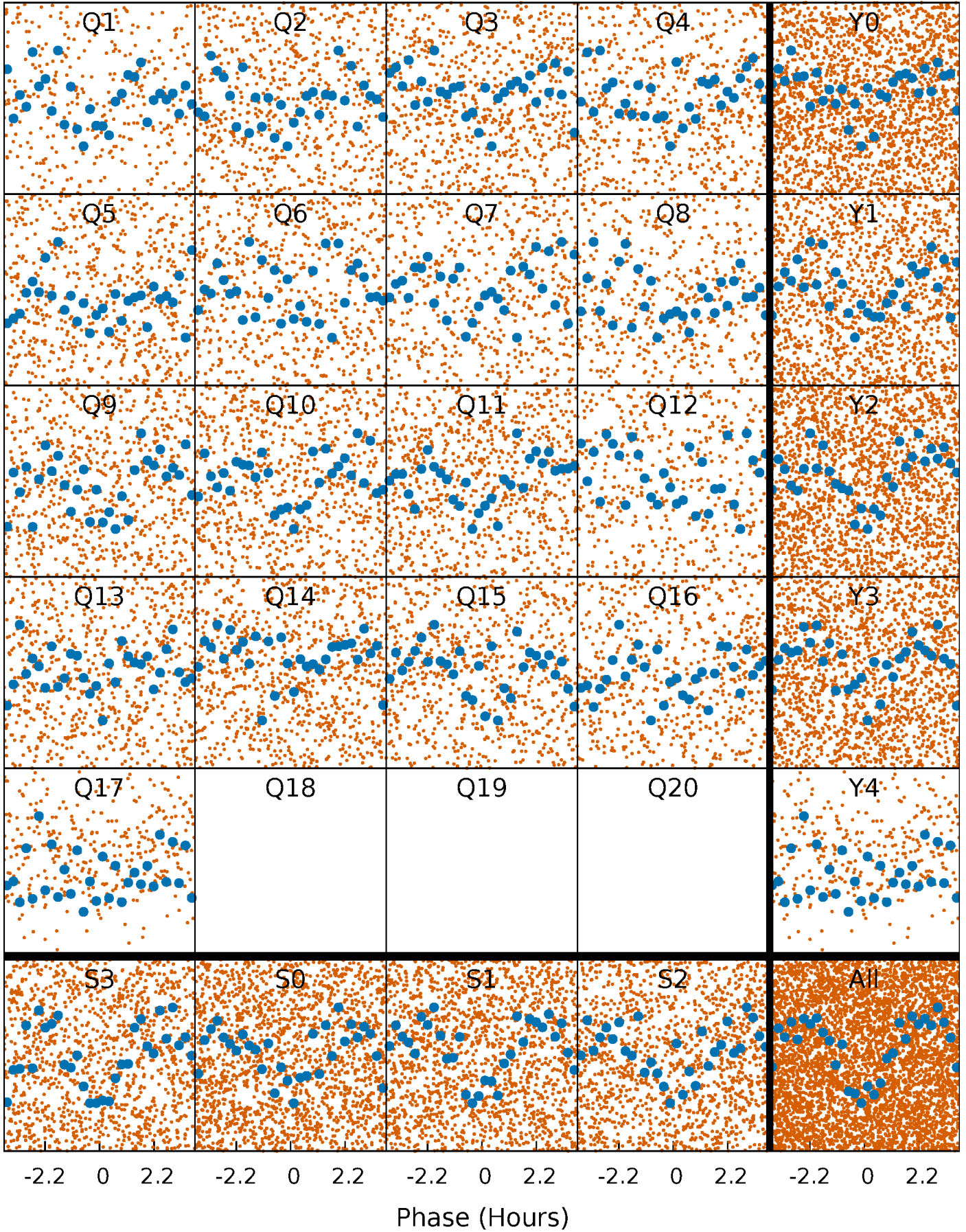


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



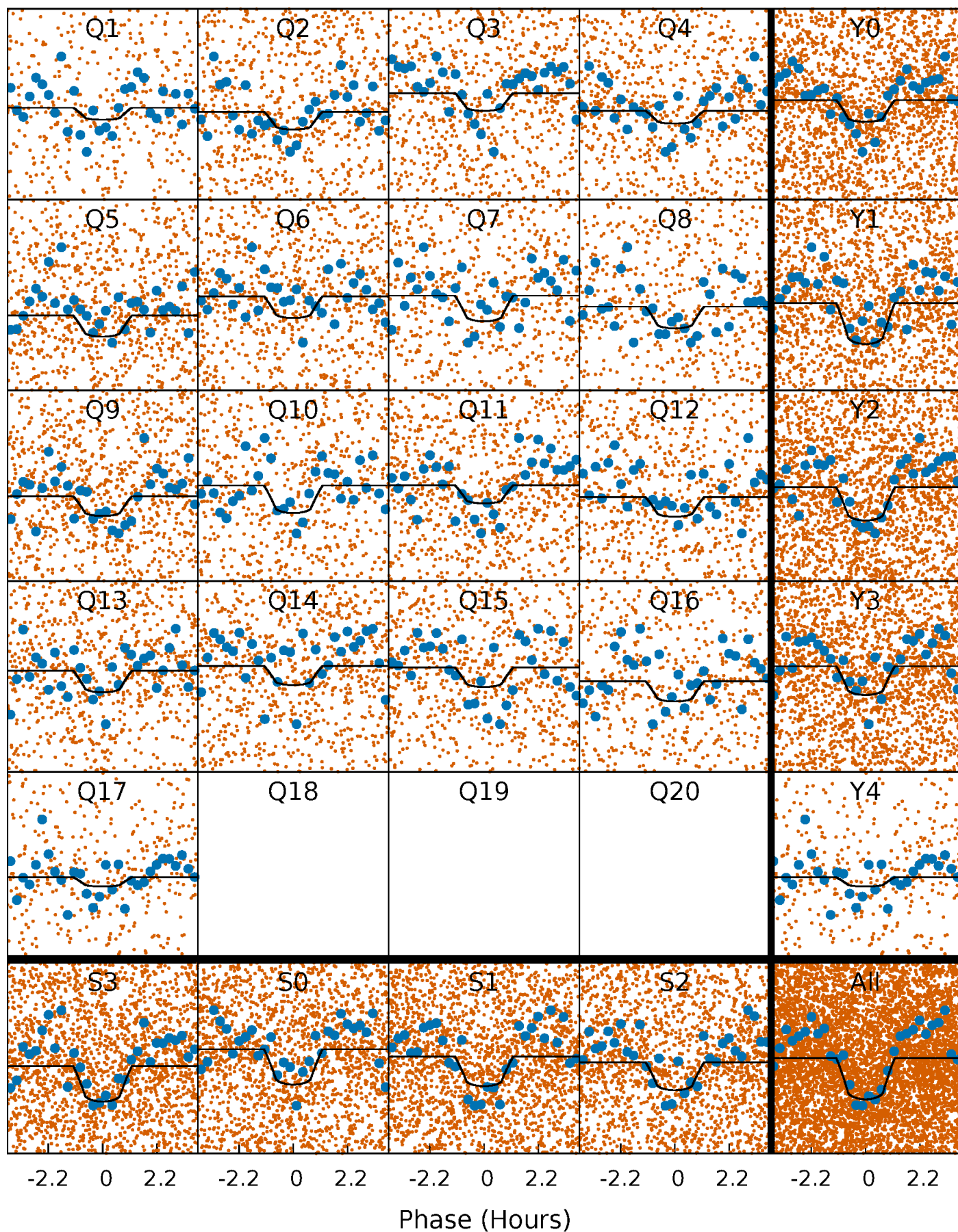
PDC Quarter-Phased Transit Curves

TCE 006471490-01 P= 1.023256 Days $T_0=131.932672$ (BKJD)



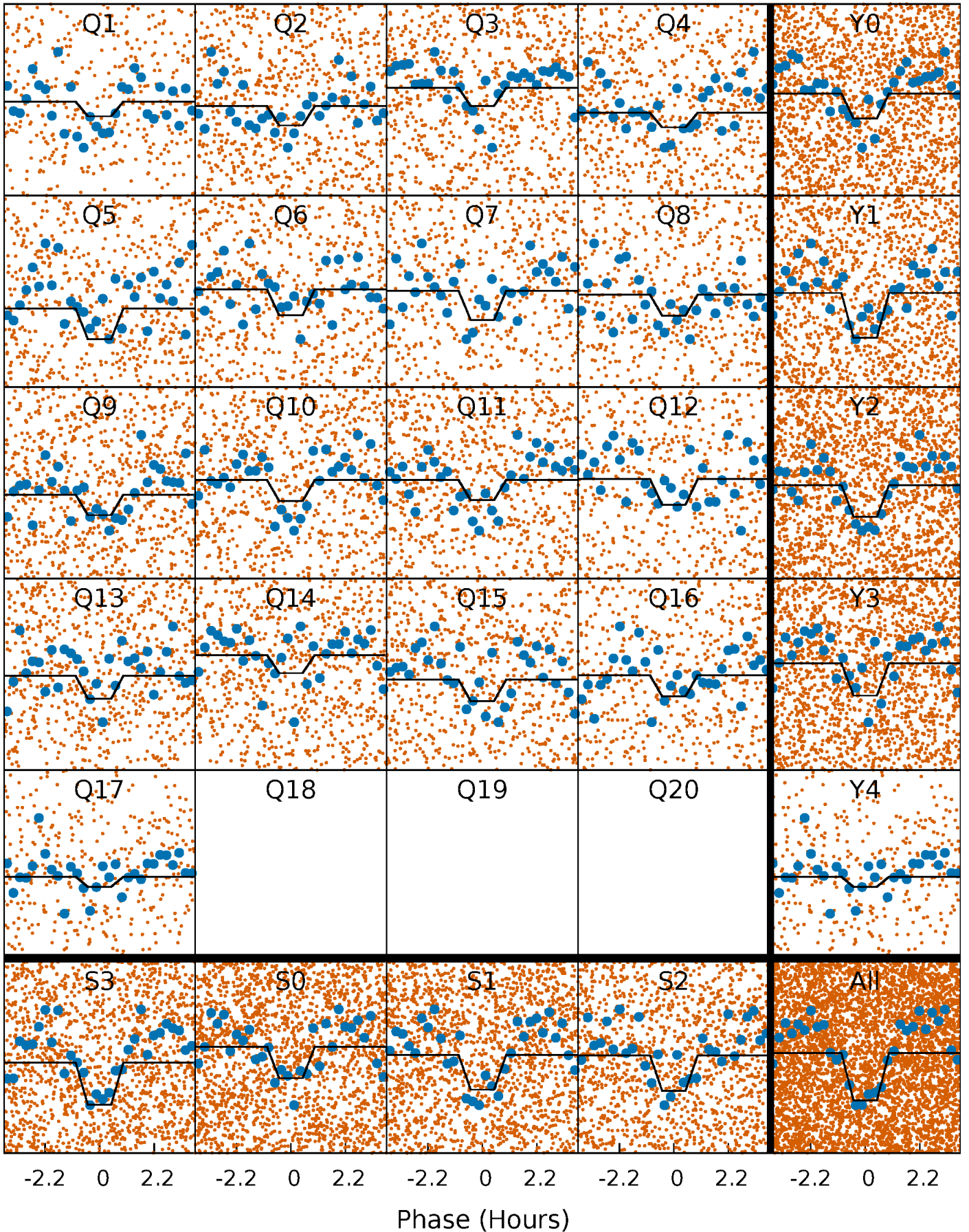
DV Quarter-Phased Transit Curves

TCE 006471490-01 P= 1.023256 Days $T_0=131.932672$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

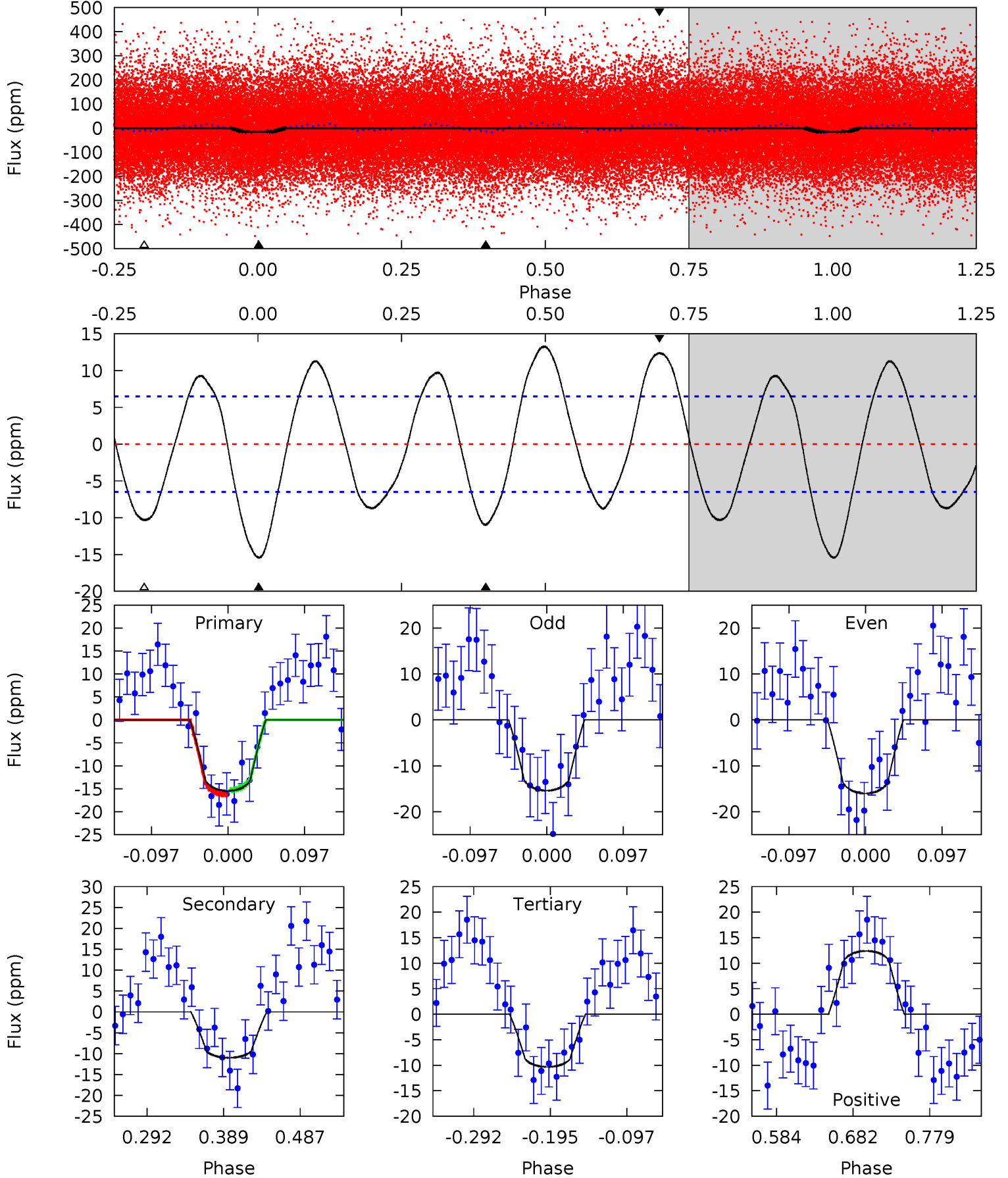
TCE 006471490-01 P= 1.023256 Days $T_0=131.932672$ (BKJD)



DV Model-Shift Uniqueness Test

006471490-01, P = 1.023256 Days, E = 130.909416 Days

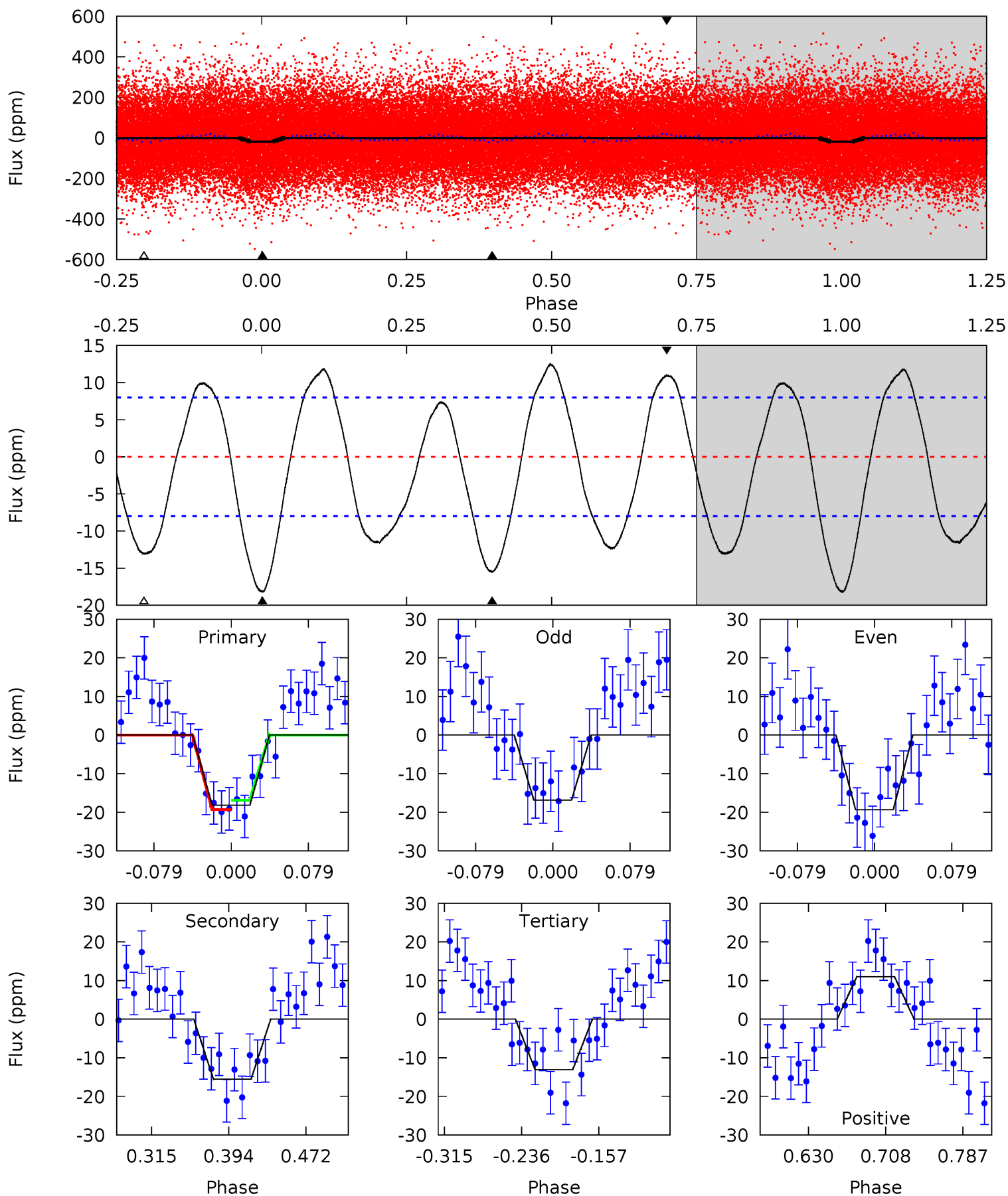
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	7.74	7.27	8.73	4.57	1.66	5.19	3.61	2.16	0.47	-0.99	0.22	0.87	0.46	0.31



Alt Model-Shift Uniqueness Test

006471490-01, P = 1.023256 Days, E = 130.909416 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	8.95	7.54	6.36	4.61	1.76	4.91	2.96	4.14	1.41	2.59	0.73	1.05	0.41	0.71



Stellar Parameters For KIC 006471490

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6347^{+194}_{-194}	$3.716^{+0.320}_{-0.080}$	$-0.300^{+0.350}_{-0.250}$	$2.706^{+0.434}_{-1.012}$	$1.389^{+0.238}_{-0.291}$	$0.099^{+0.236}_{-0.031}$
	+3%/-3%	+9%/-2%	+117%/-83%	+16%/-37%	+17%/-21%	+239%/-31%
Source	PHO1	FLK73	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 006471490-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-11 ± 1	$1.18^{+0.36}_{-0.32}$	4234^{+231}_{-374}	5414^{+882}_{-607}	$2.141^{+2.037}_{-0.868}$
Alt.	-15 ± 2	$1.17^{+0.34}_{-0.33}$	4209^{+290}_{-366}	5982^{+1021}_{-685}	$3.128^{+3.015}_{-1.208}$

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 $A_{obs} \gg 1.0$

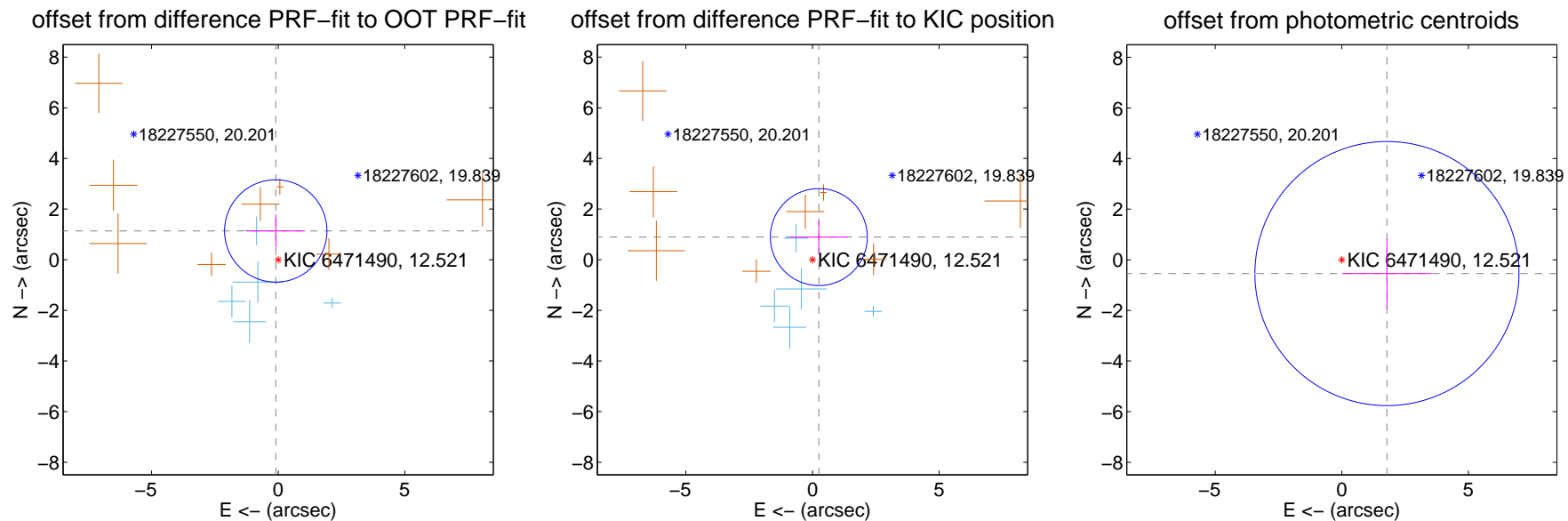
DV Centroid Data

Supplemental centroid analysis for 006471490-01. Kepler magnitude: 12.52. Transit SNR 8.02

There are 5 quarters with good PRF difference image offsets

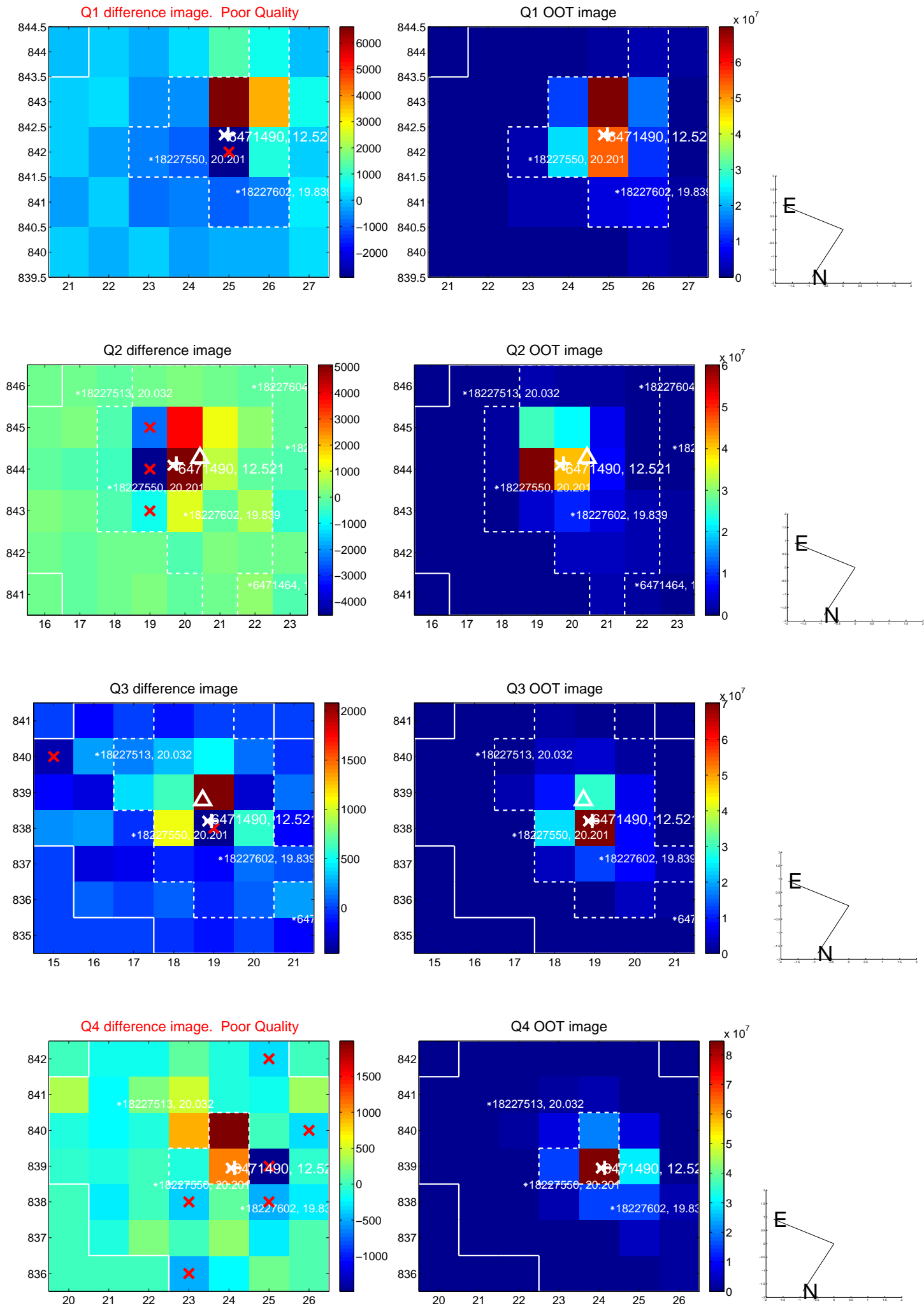
The direct PRF centroid is offset from the target star catalog position by about 0.51 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.139 ± 0.674	1.69	0.095 ± 1.158	1.135 ± 0.647
PRF-fit source offset from KIC position	0.929 ± 0.638	1.46	-0.252 ± 1.145	0.895 ± 0.652
photometric centroid source offset	1.86 ± 1.74	1.07	-1.78 ± 1.77	-0.54 ± 1.39

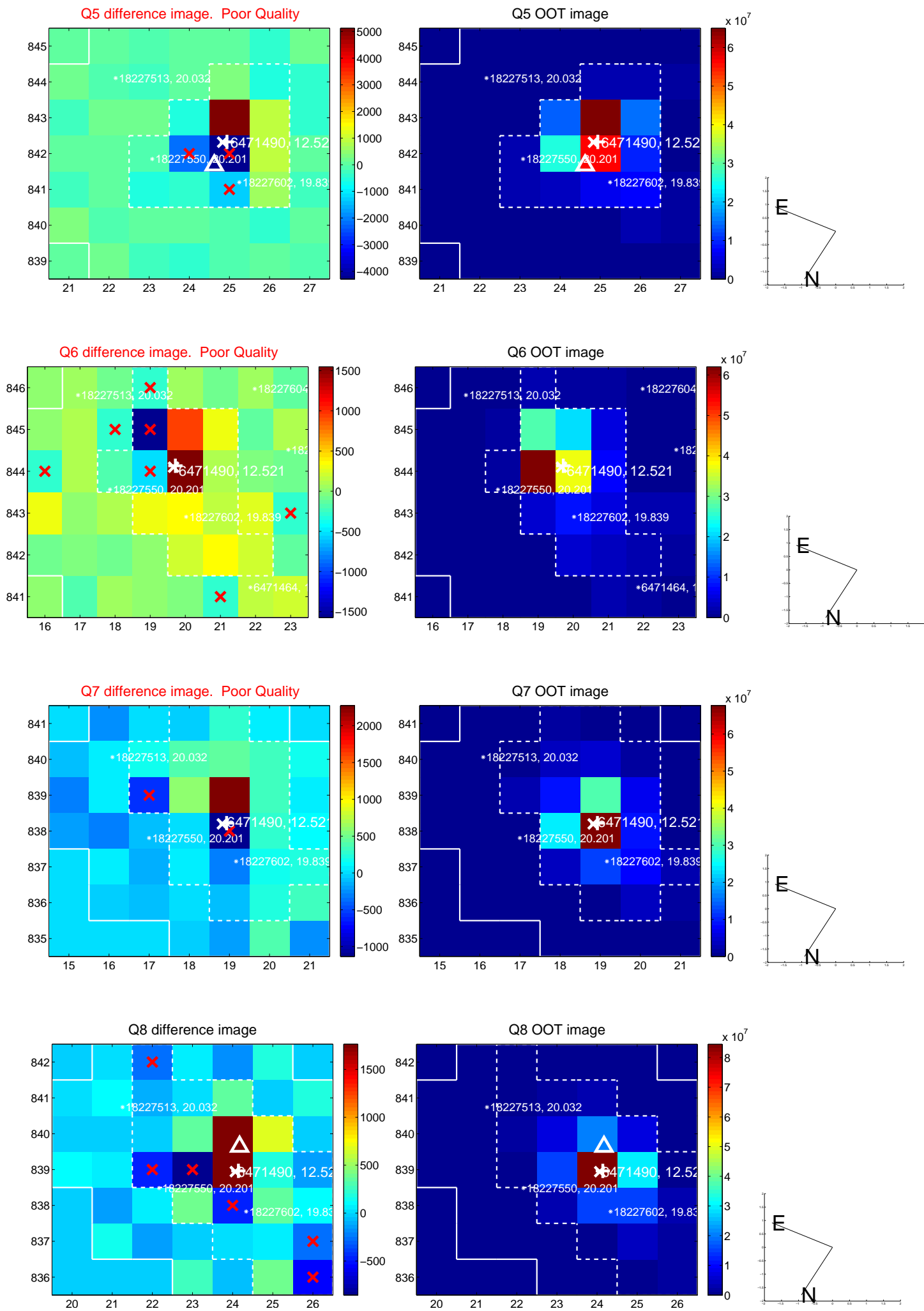


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

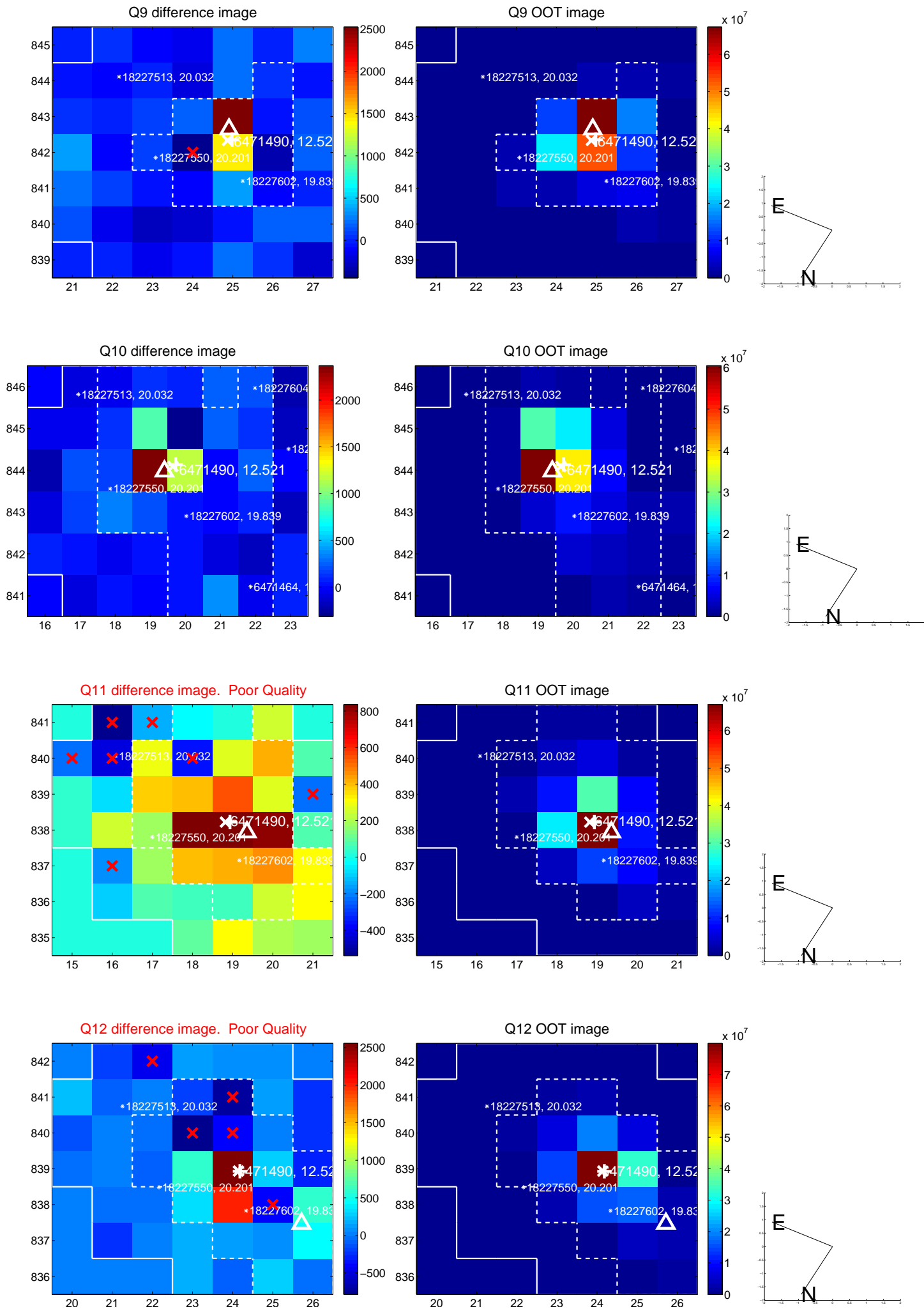
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



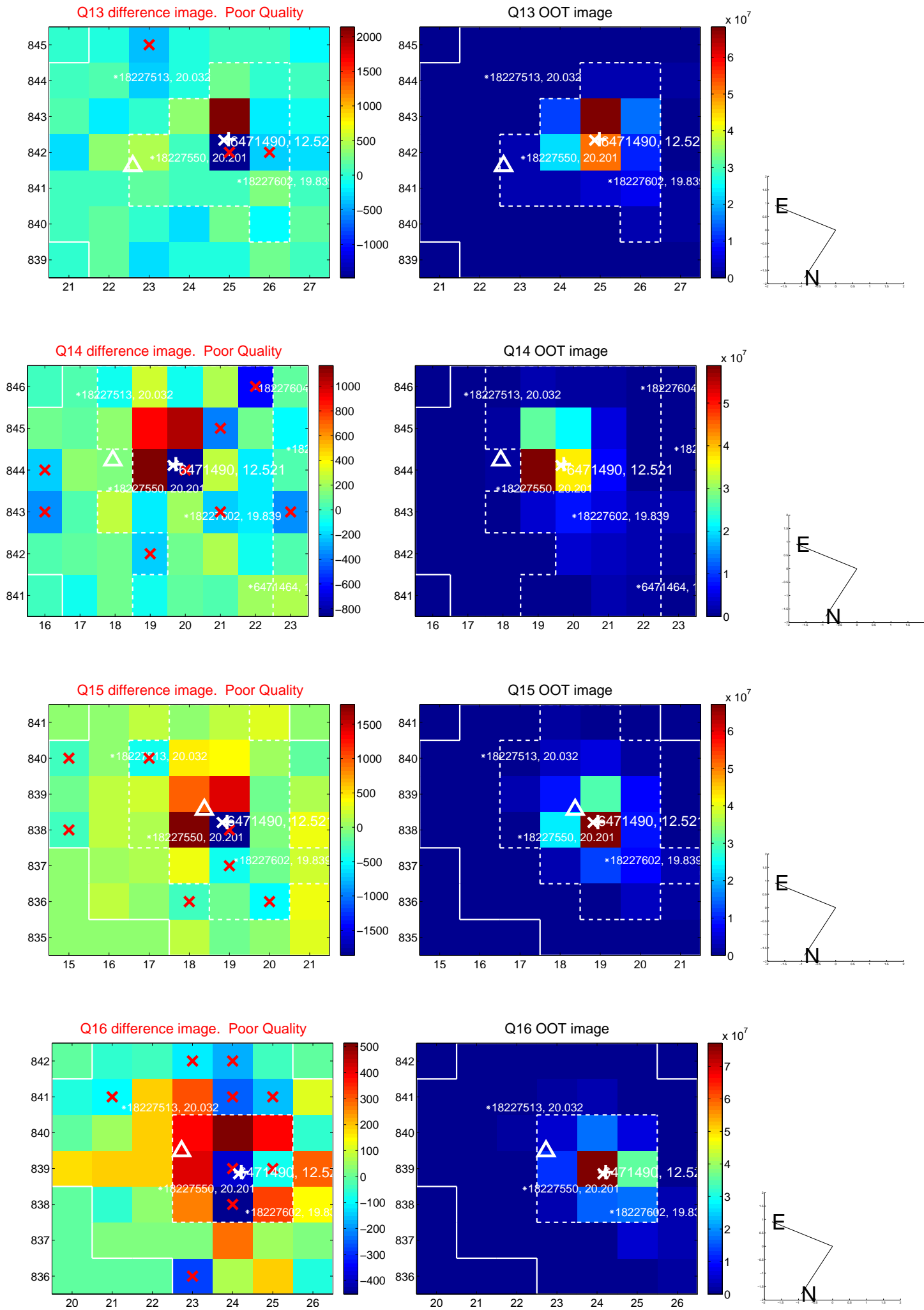
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



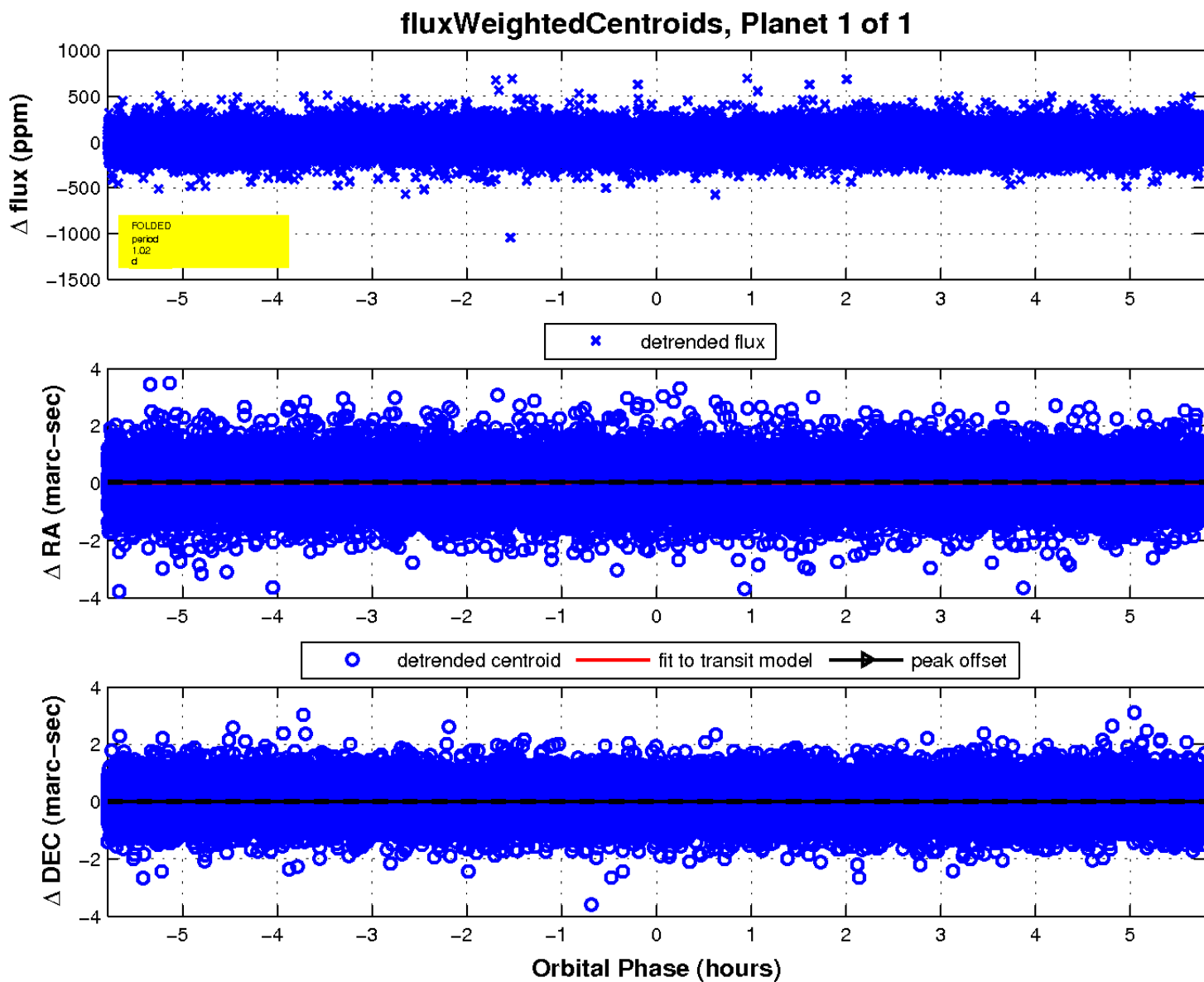
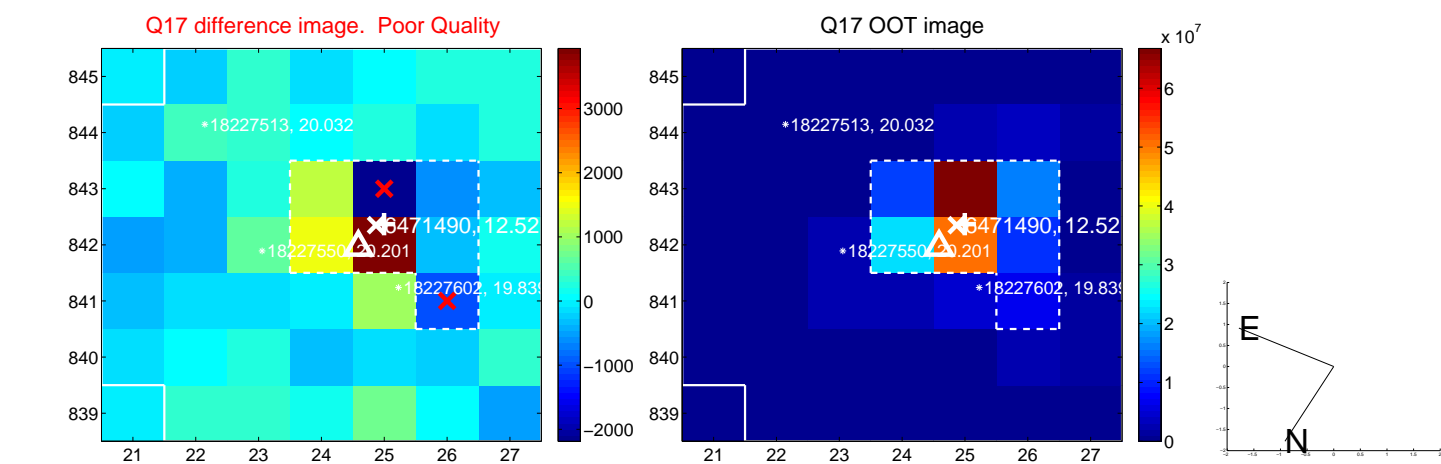
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

