

KIC 009229342

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})
009229342-01	OBS	No	0.701317	131.888165	33.5	3.282	10.3	8.1	2.99	8258	1.76	91460.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009229342-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT

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

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

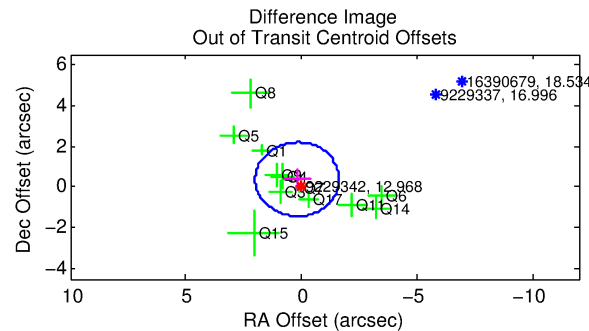
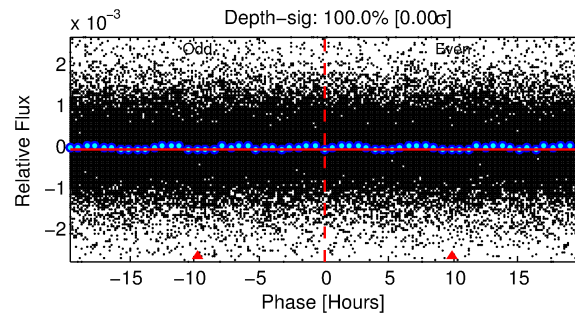
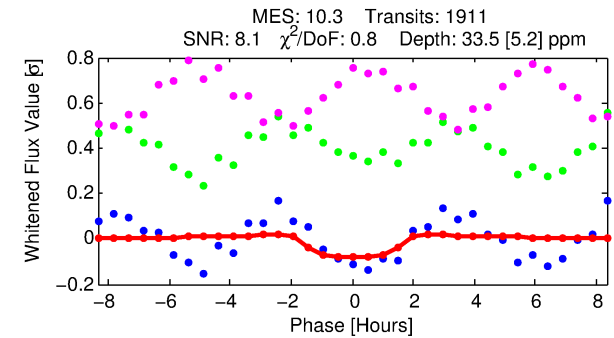
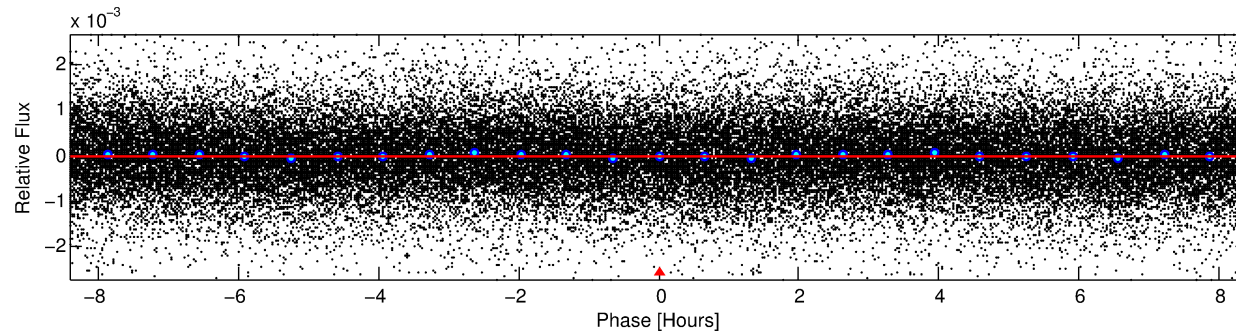
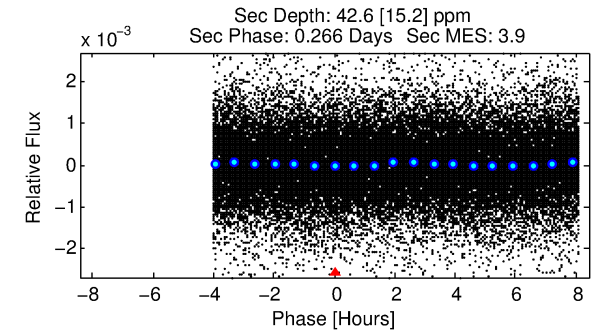
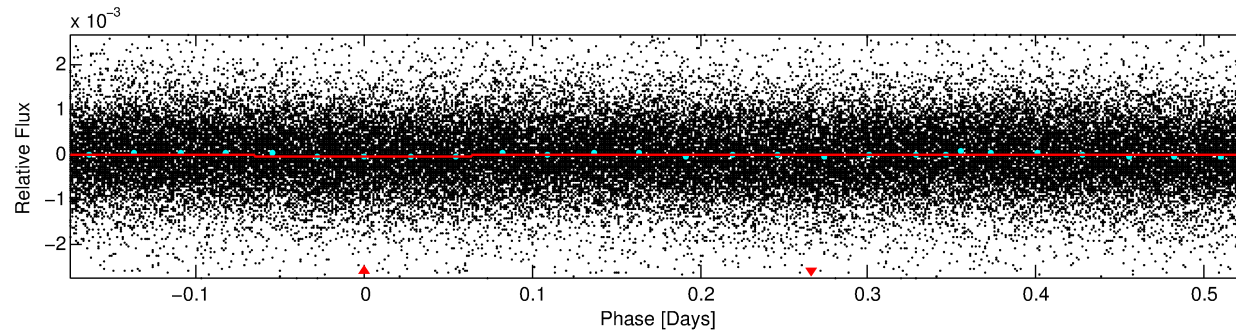
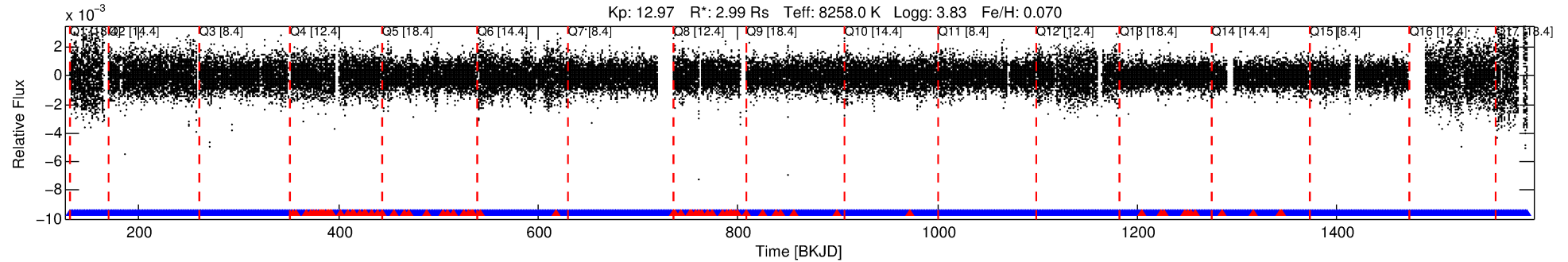
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009229342-01

No Significant Match Found

DV One-Page Summary

KIC: 9229342 Candidate: 1 of 1 Period: 0.701 d



DV Fit Results:

Period = 0.70132 [0.00001] d
Epoch = 131.8882 [0.0046] BKJD
Rp/R* = 0.0054 [0.0051]
a/R* = 1.70 [5.97]
b = 0.30 [16.52]
Seff = 91460.72 [56247.69]
Teq = 4434 [682] K
Rp = 1.76 [1.82] Re
a = 0.0202 [0.0077] AU
Ag = 3.07 [6.18] [0.34σ]
Teffp = 9078 [4383] K [1.05σ]

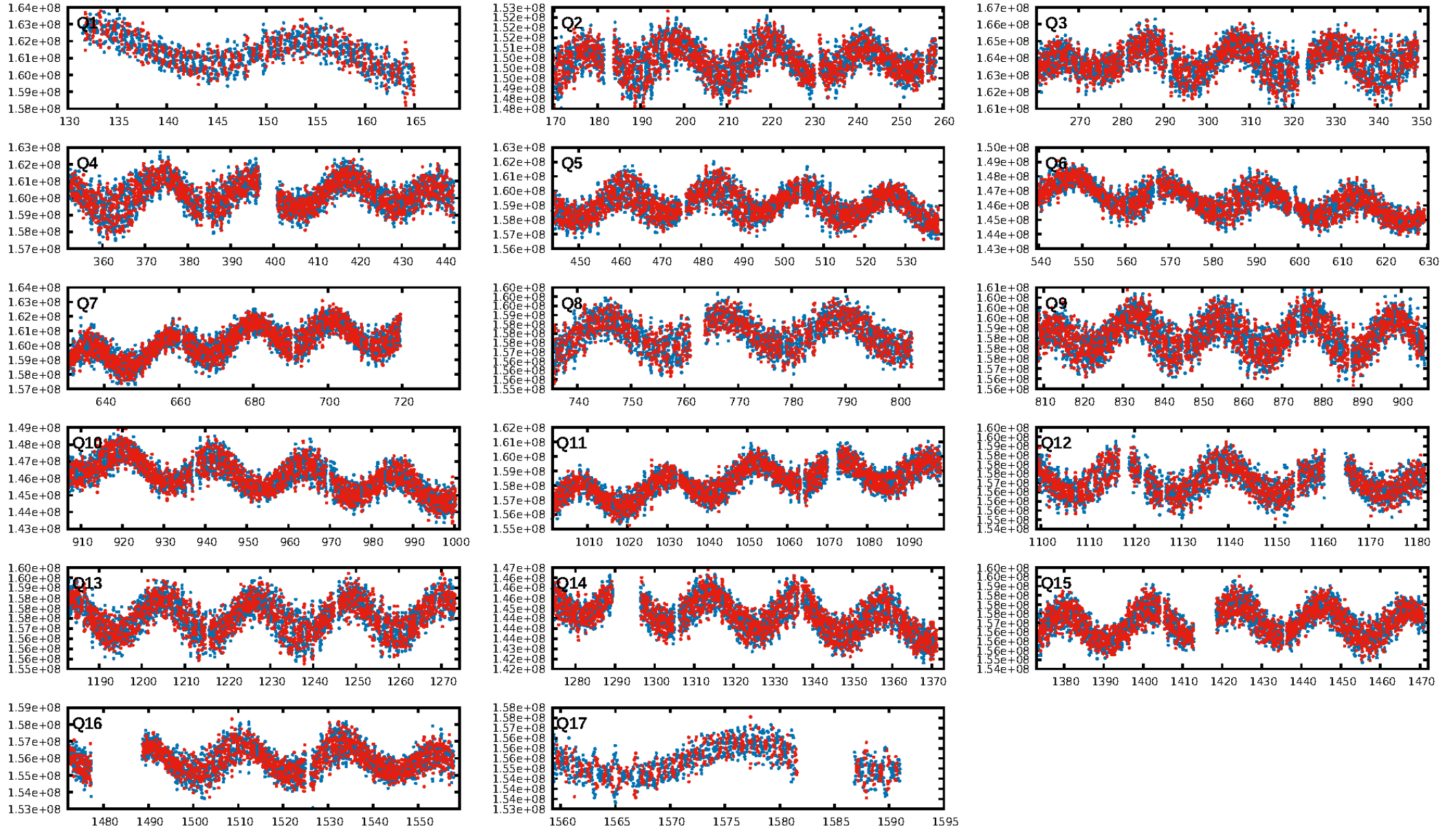
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.85e-30
RollingBand-fgt: 0.96 [1749/1825]
GhostDiagnostic-chr: 0.2674
Centroid-sig: 33.2%
Centroid-so: 0.398 arcsec [1.05σ]
OotOffset-rm: 0.427 arcsec [0.71σ]
OotOffset-st: 2/4/2/4 [12]
KicOffset-rm: 0.616 arcsec [1.09σ]
KicOffset-st: 2/4/2/4 [12]
DiffImageQuality-fgm: 0.42 [5/12]
DiffImageOverlap-fno: 1.00 [17/17]

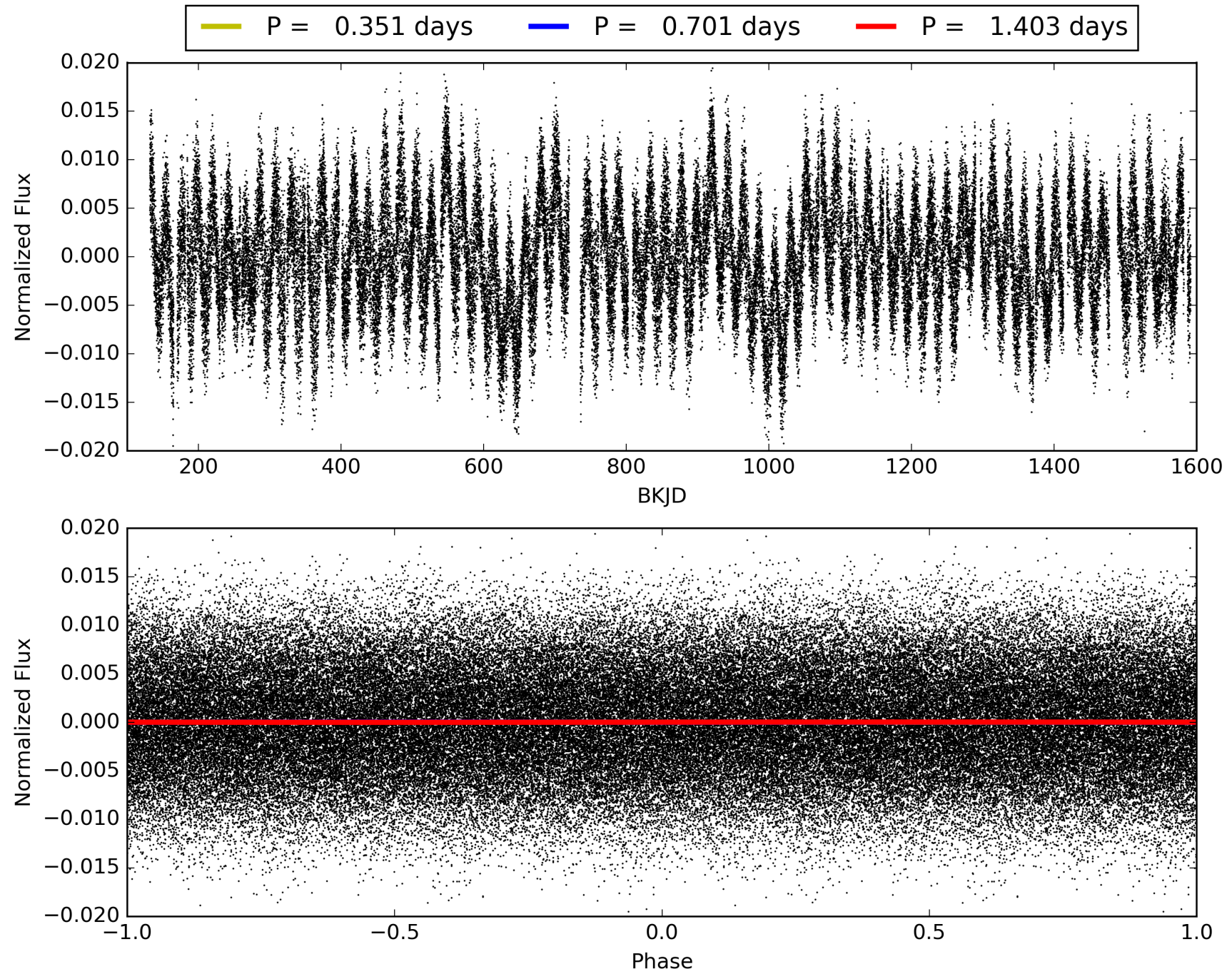
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:26:35 Z

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

TCE 009229342-01, PDC Light Curves

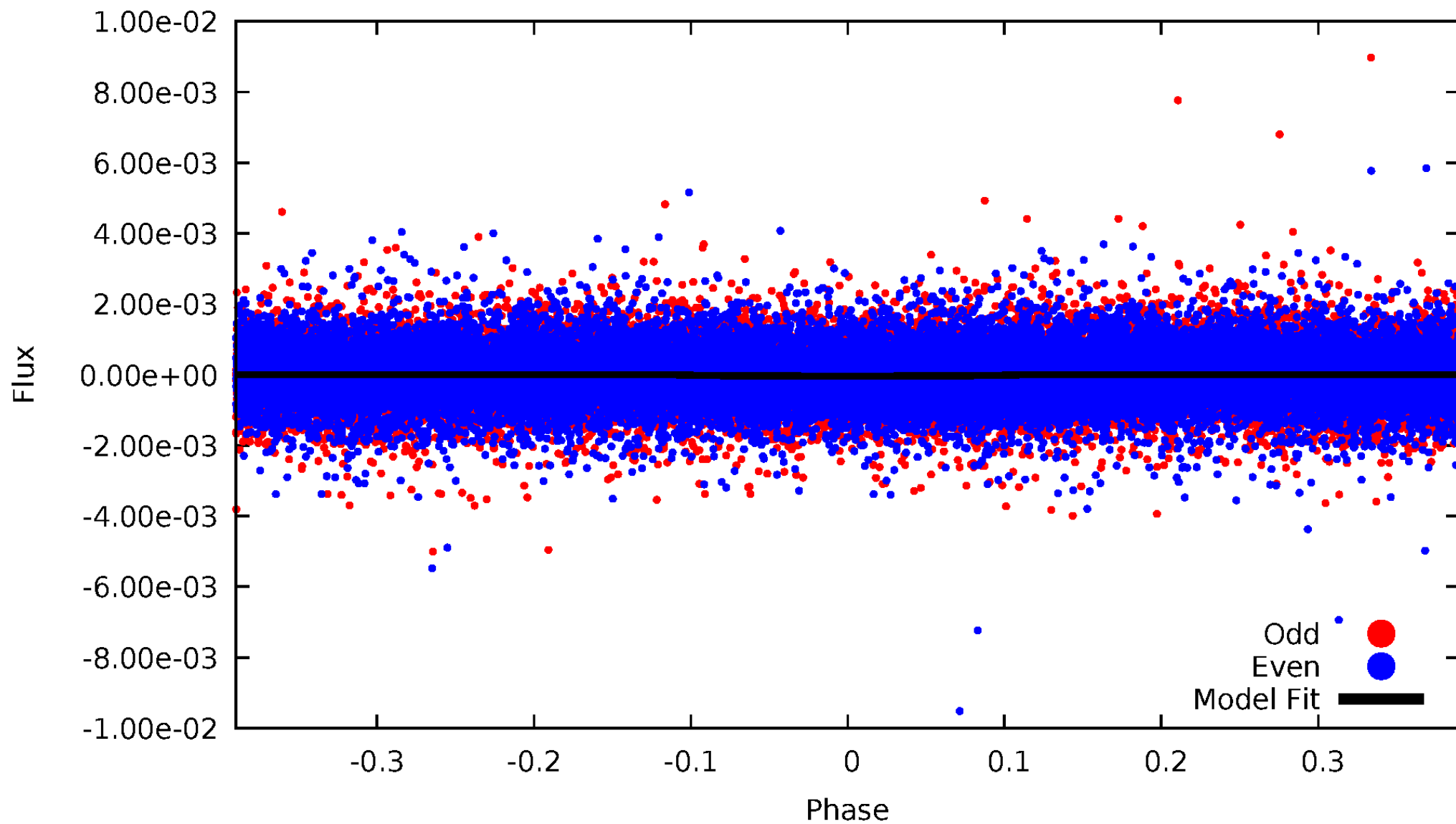


TCE 009229342-01



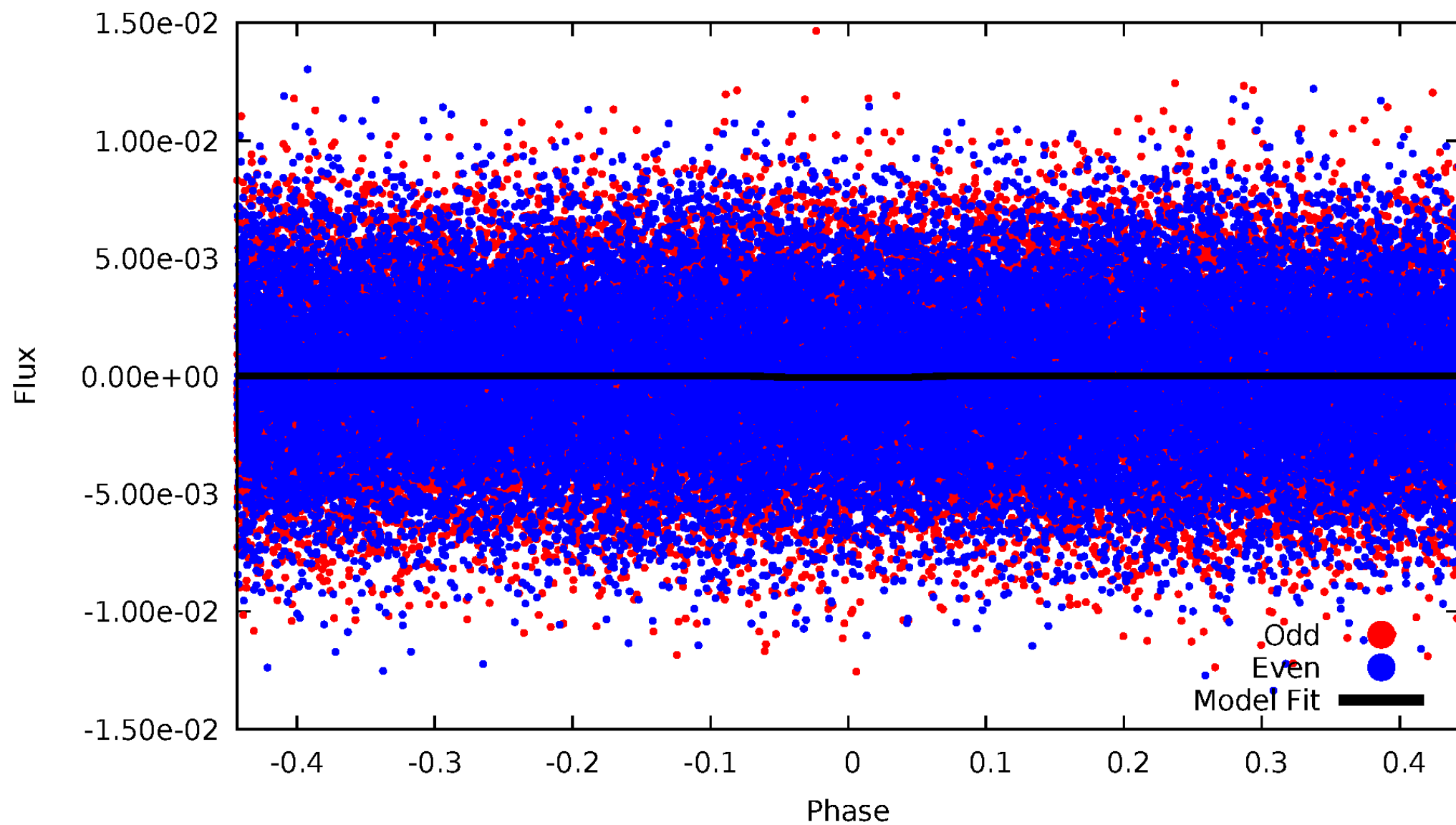
DV Odd/Even

TCE 009229342-01



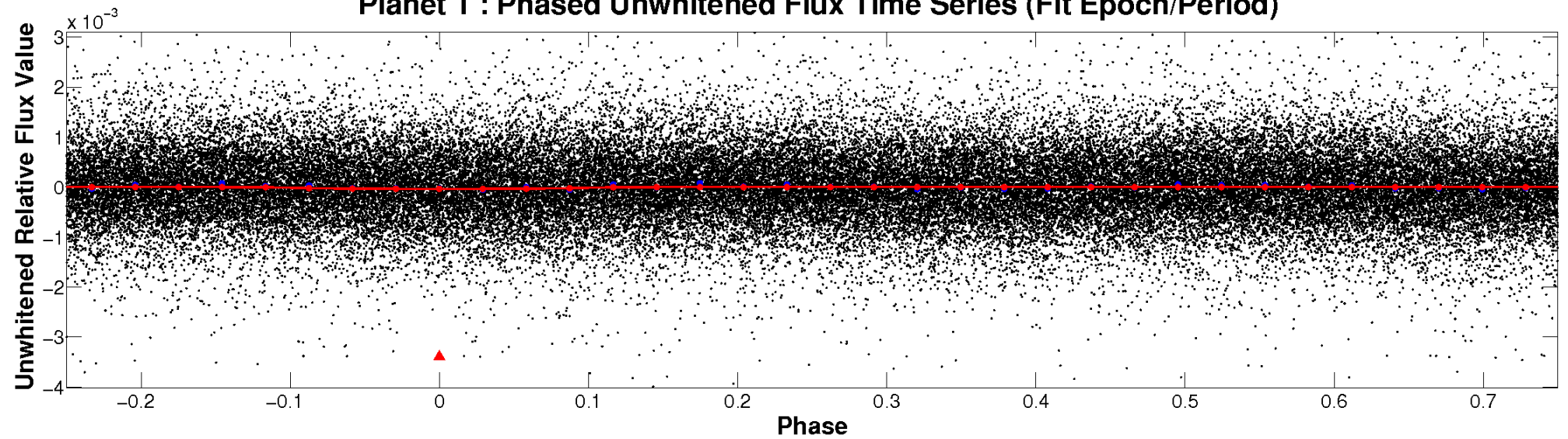
ALT Odd/Even

TCE 009229342-01

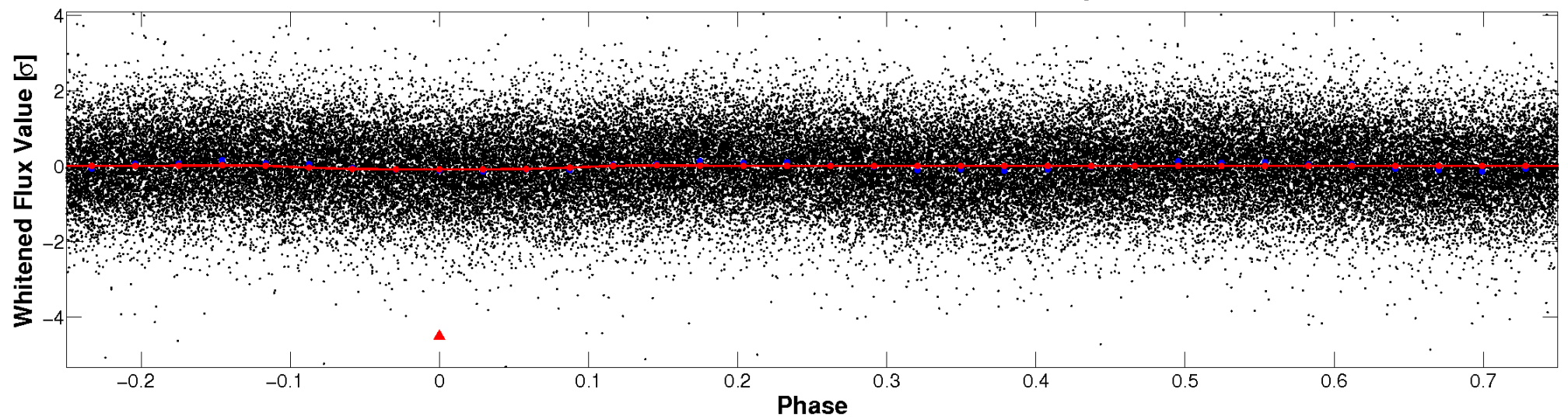


Non-Whitened Vs. Whitened Light Curve

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

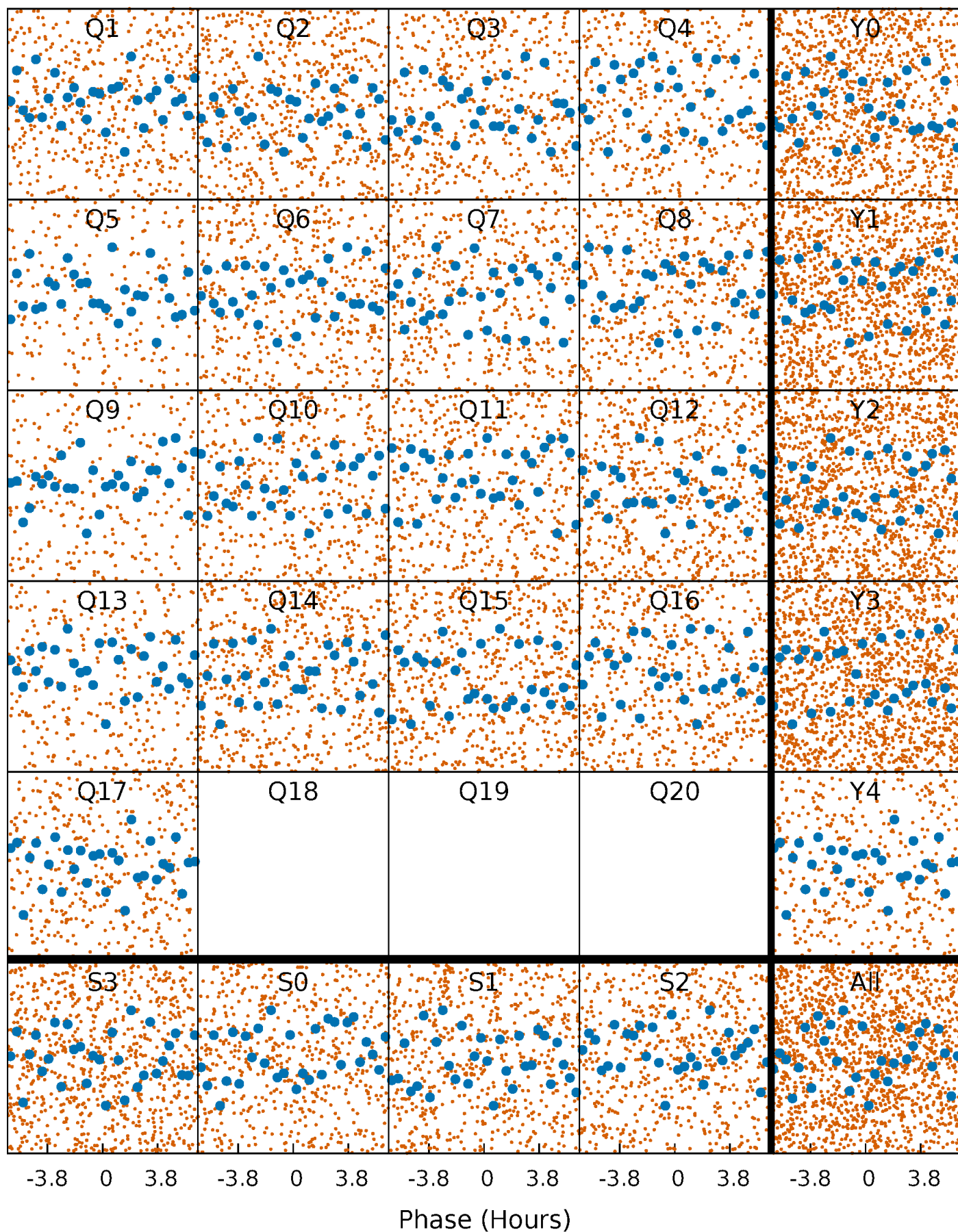


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



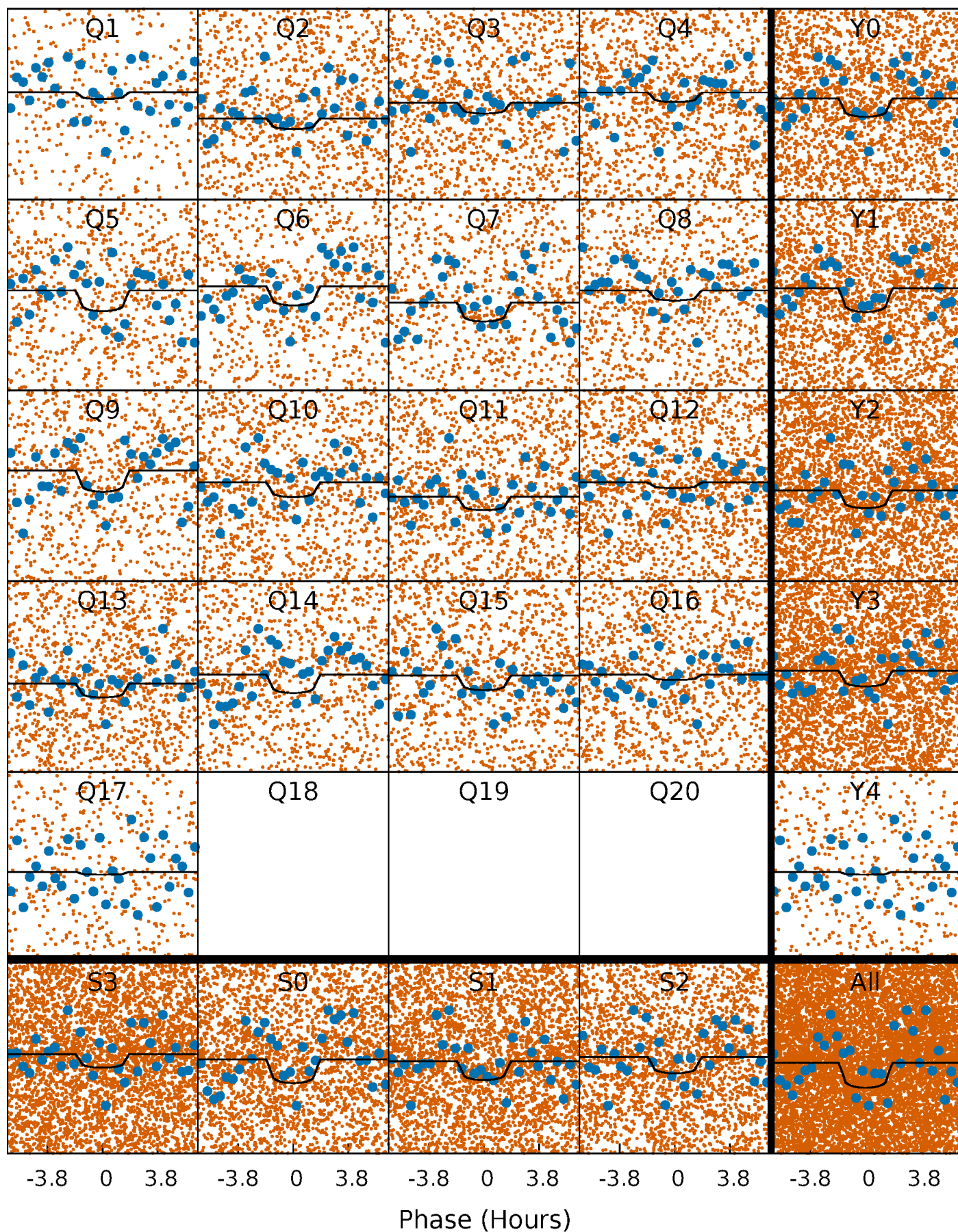
PDC Quarter-Phased Transit Curves

TCE 009229342-01 P= 0.701317 Days $T_0=131.888165$ (BKJD)



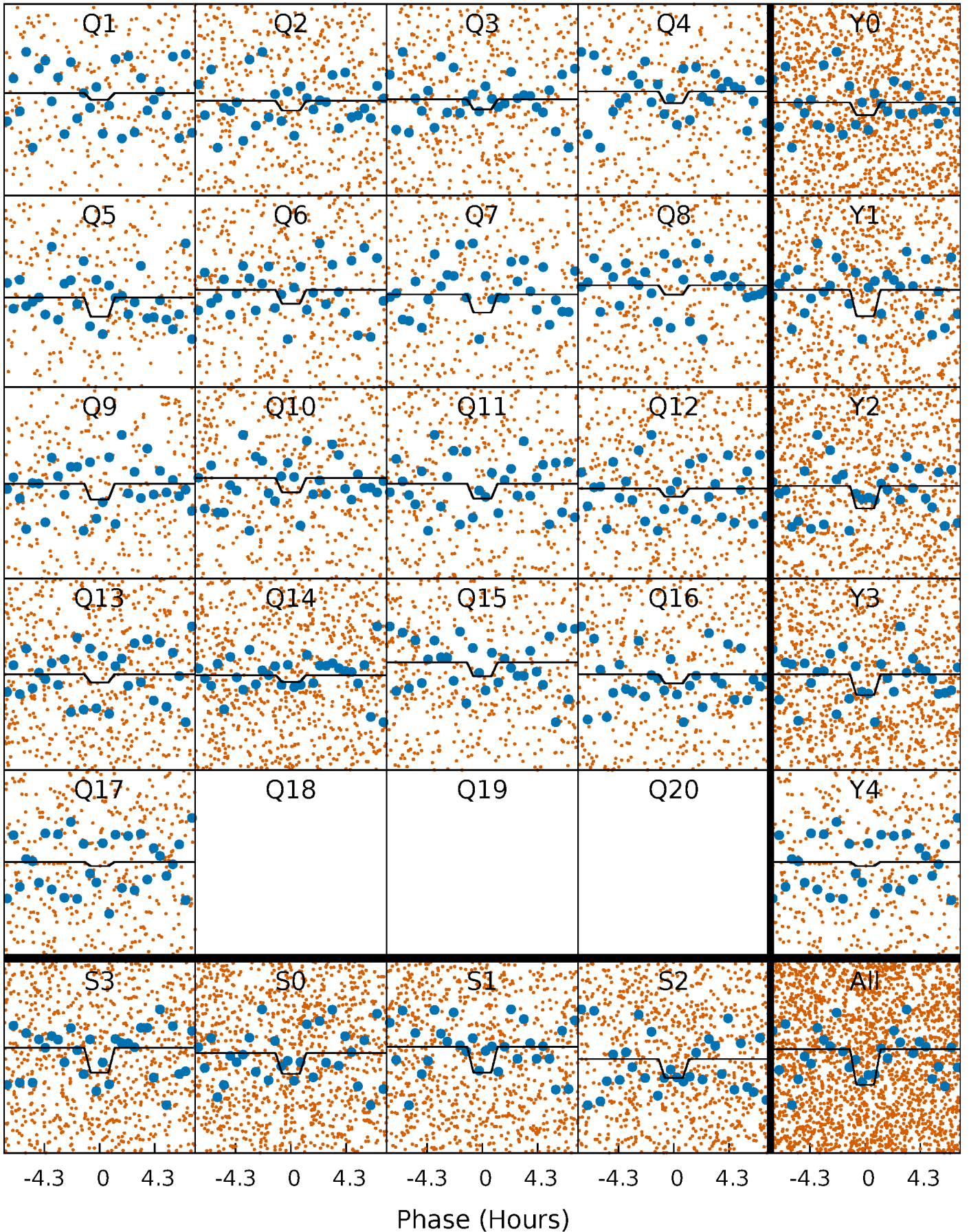
DV Quarter-Phased Transit Curves

TCE 009229342-01 P= 0.701317 Days $T_0=131.888165$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

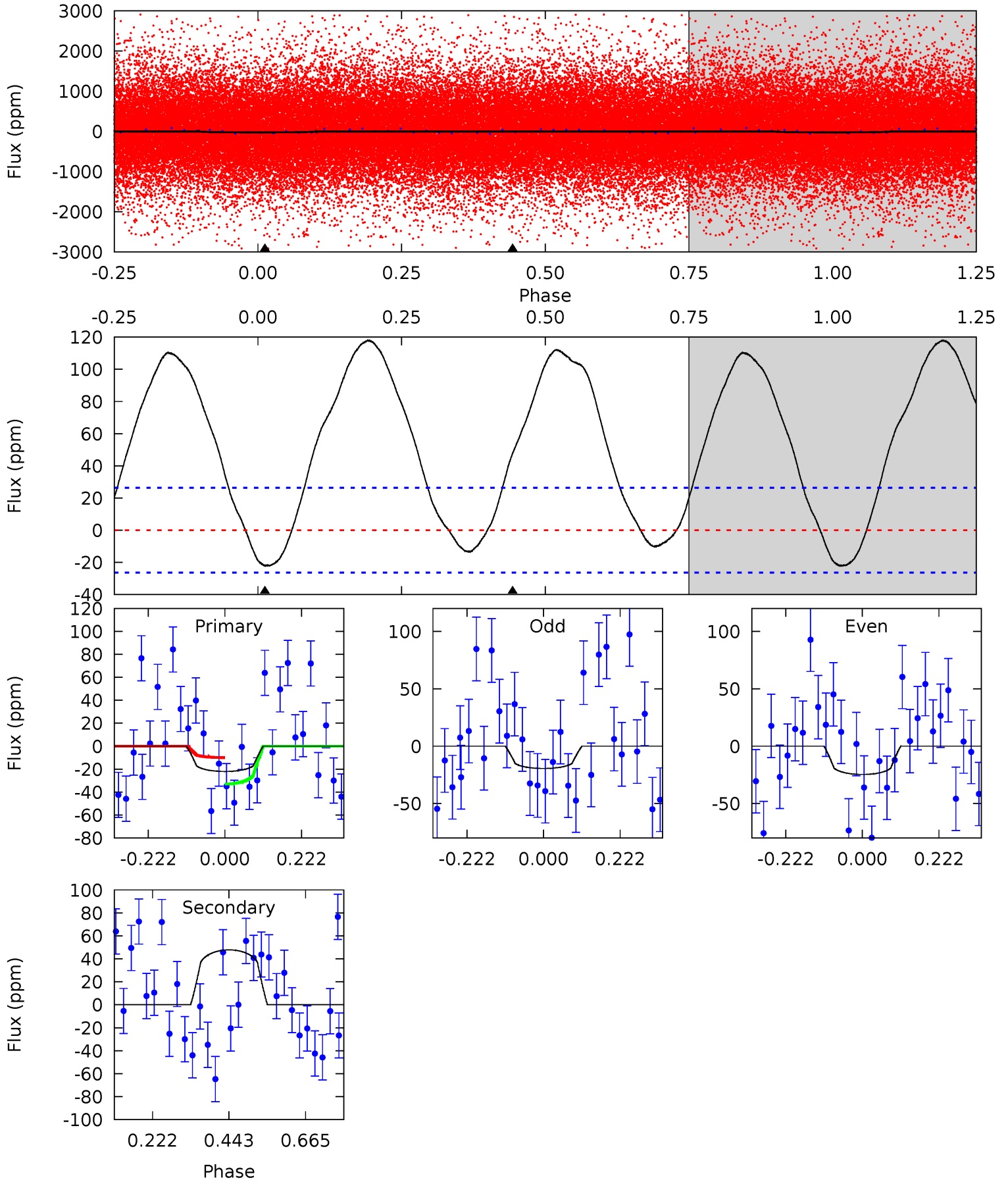
TCE 009229342-01 P= 0.701332 Days $T_0=131.885482$ (BKJD)



DV Model-Shift Uniqueness Test

009229342-01, P = 0.701317 Days, E = 131.186848 Days

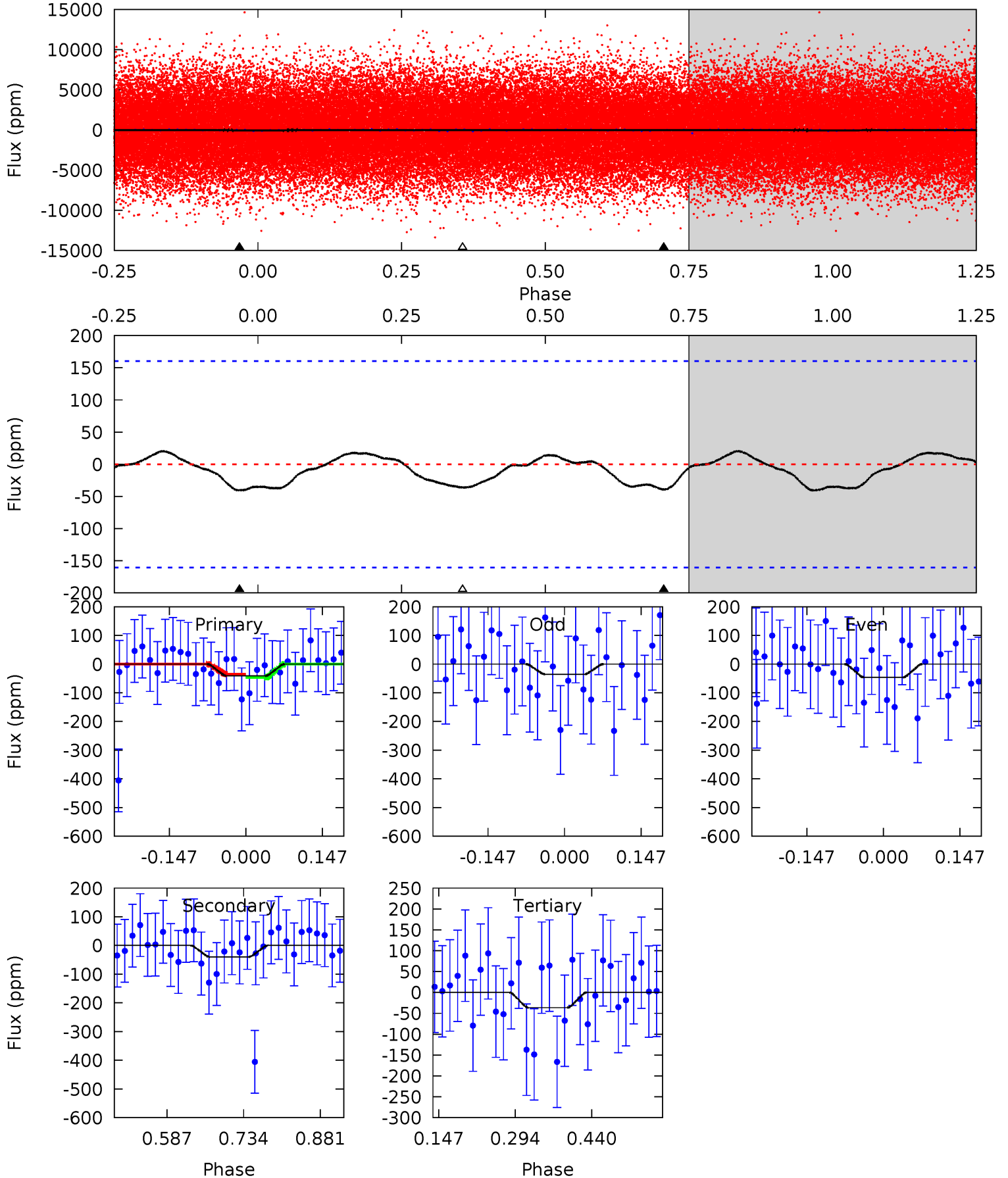
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.68	-7.98	0	0	4.39	1.22	4.11	3.68	3.68	-7.98	-7.98	0.43	1.21	0.84	1.89



Alt Model-Shift Uniqueness Test

009229342-01, P = 0.701332 Days, E = 131.184150 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.14	1.11	1.02	0	4.48	1.45	0.49	0.12	1.14	0.09	1.11	0.15	1.09	0.34	0.16



Stellar Parameters For KIC 009229342

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8258^{+228}_{-370}	$3.834^{+0.338}_{-0.135}$	$0.070^{+0.250}_{-0.450}$	$2.986^{+0.828}_{-1.242}$	$2.218^{+0.290}_{-0.629}$	$0.117^{+0.294}_{-0.049}$
	+3%/-4%	+9%/-4%	+357%/-643%	+28%/-42%	+13%/-28%	+250%/-41%
Source	KIC0	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 009229342-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	48 ± 6	$1.84^{+1.65}_{-1.11}$	6077^{+478}_{-651}	-9162^{+2427}_{-10754}	$-3.060^{+2.220}_{-15.417}$
Alt.	-40 ± 36	$2.37^{+1.79}_{-1.32}$	6005^{+505}_{-642}	6233^{+5306}_{-10822}	$1.285^{+5.167}_{-1.209}$

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 $A_{\text{obs}} \gg 1.0$

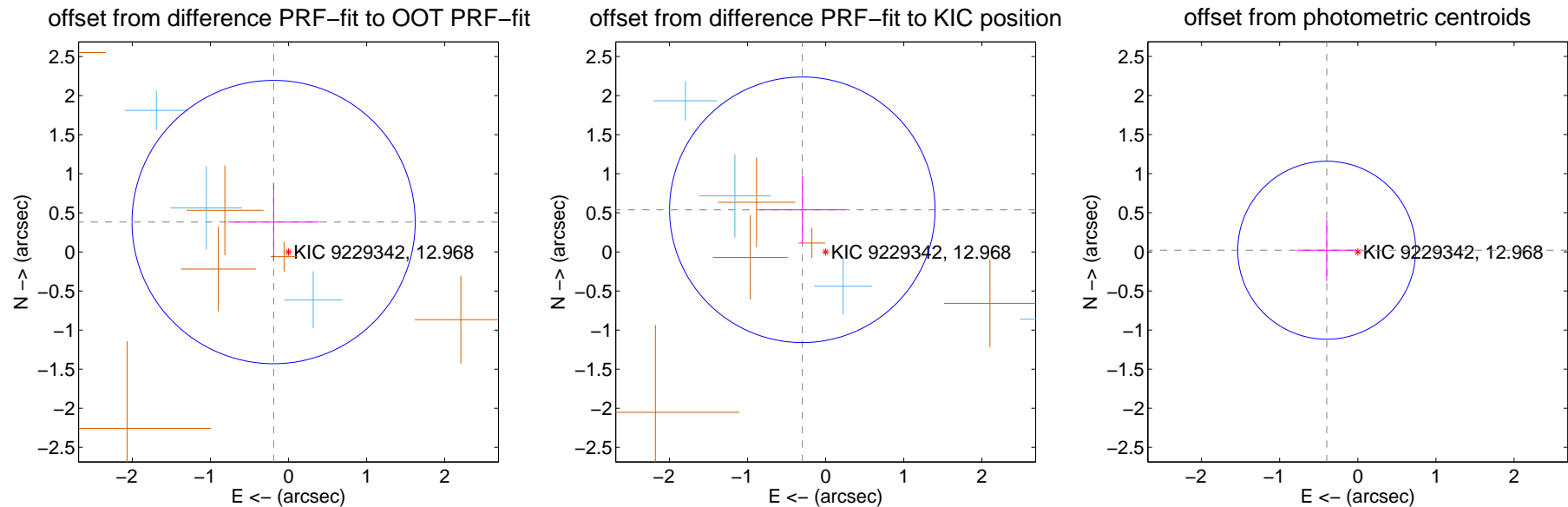
DV Centroid Data

Supplemental centroid analysis for 009229342-01. Kepler magnitude: 12.97. Transit SNR 8.09

There are 5 quarters with good PRF difference image offsets

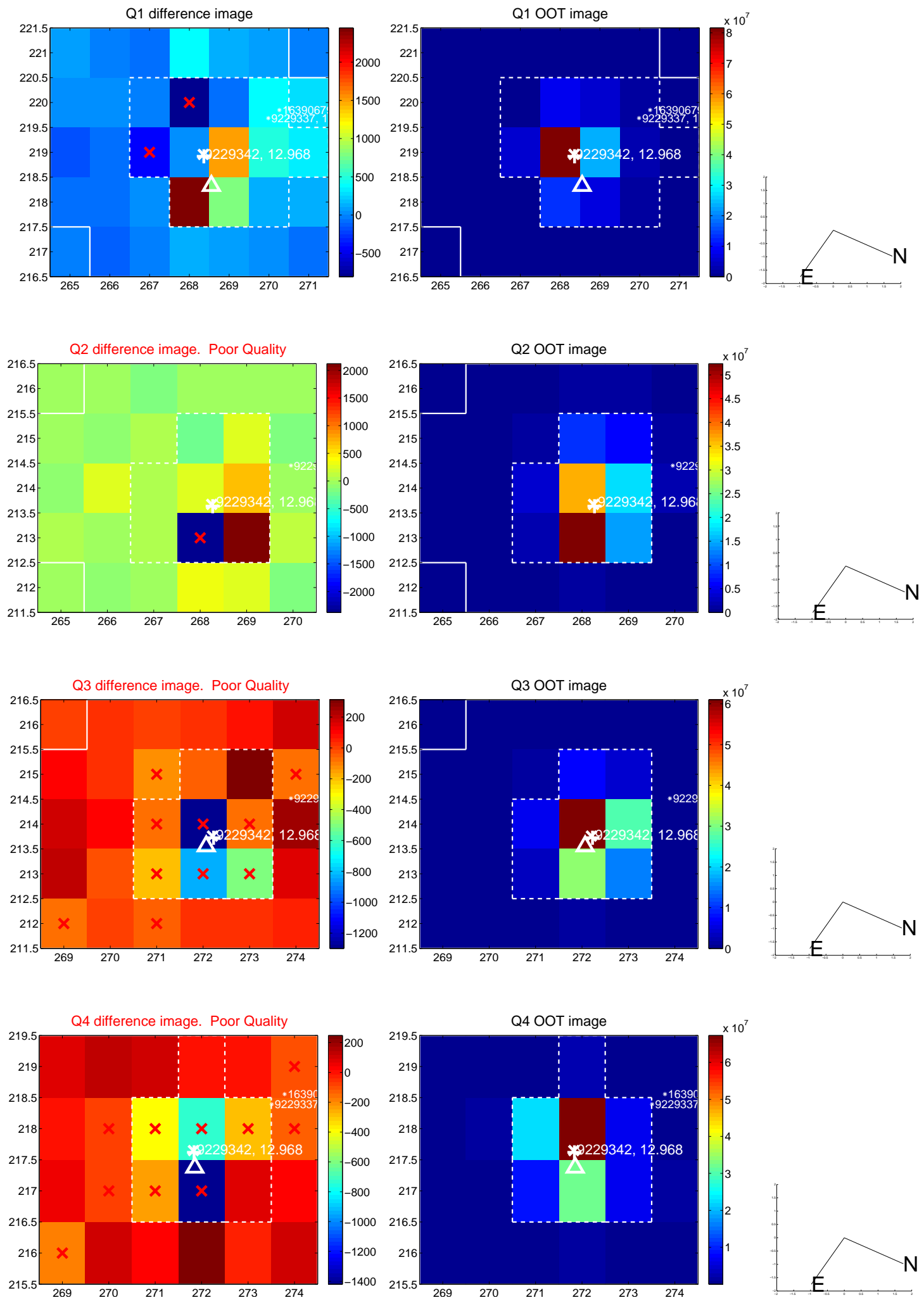
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.427 ± 0.604	0.71	0.191 ± 0.579	0.382 ± 0.497
PRF-fit source offset from KIC position	0.616 ± 0.566	1.09	0.299 ± 0.541	0.539 ± 0.430
photometric centroid source offset	0.40 ± 0.38	1.05	0.40 ± 0.38	0.02 ± 0.40

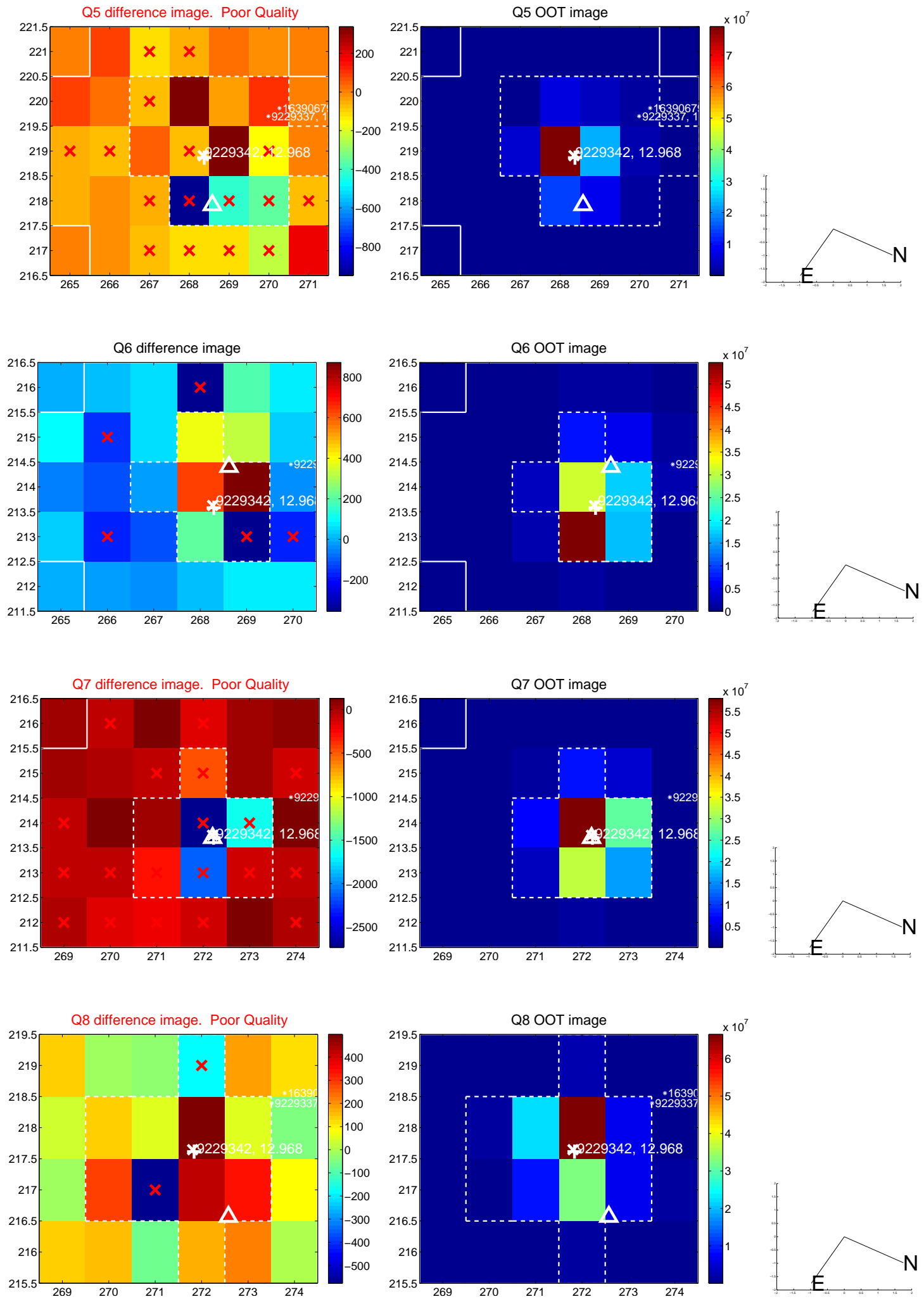


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

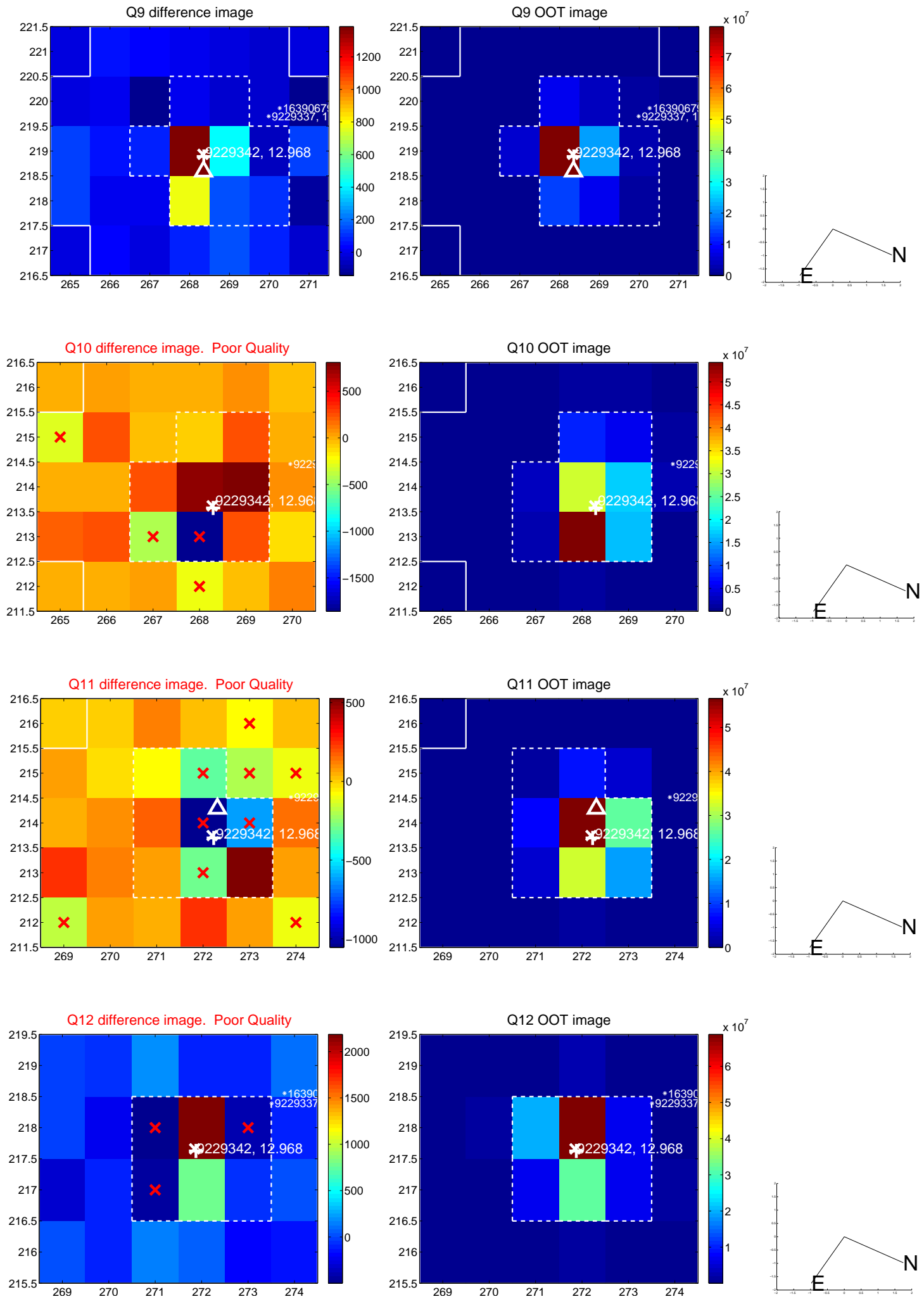
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



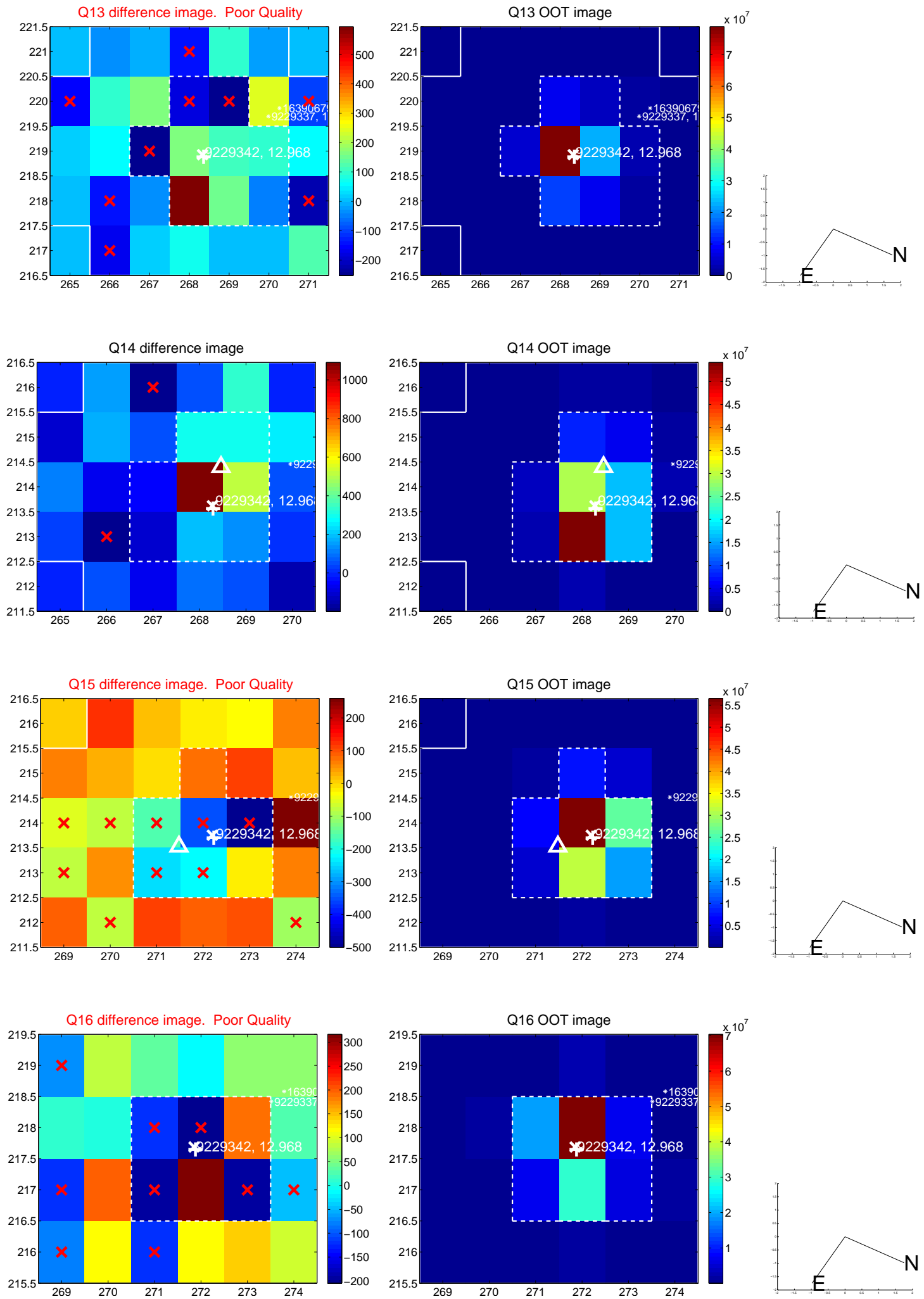
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



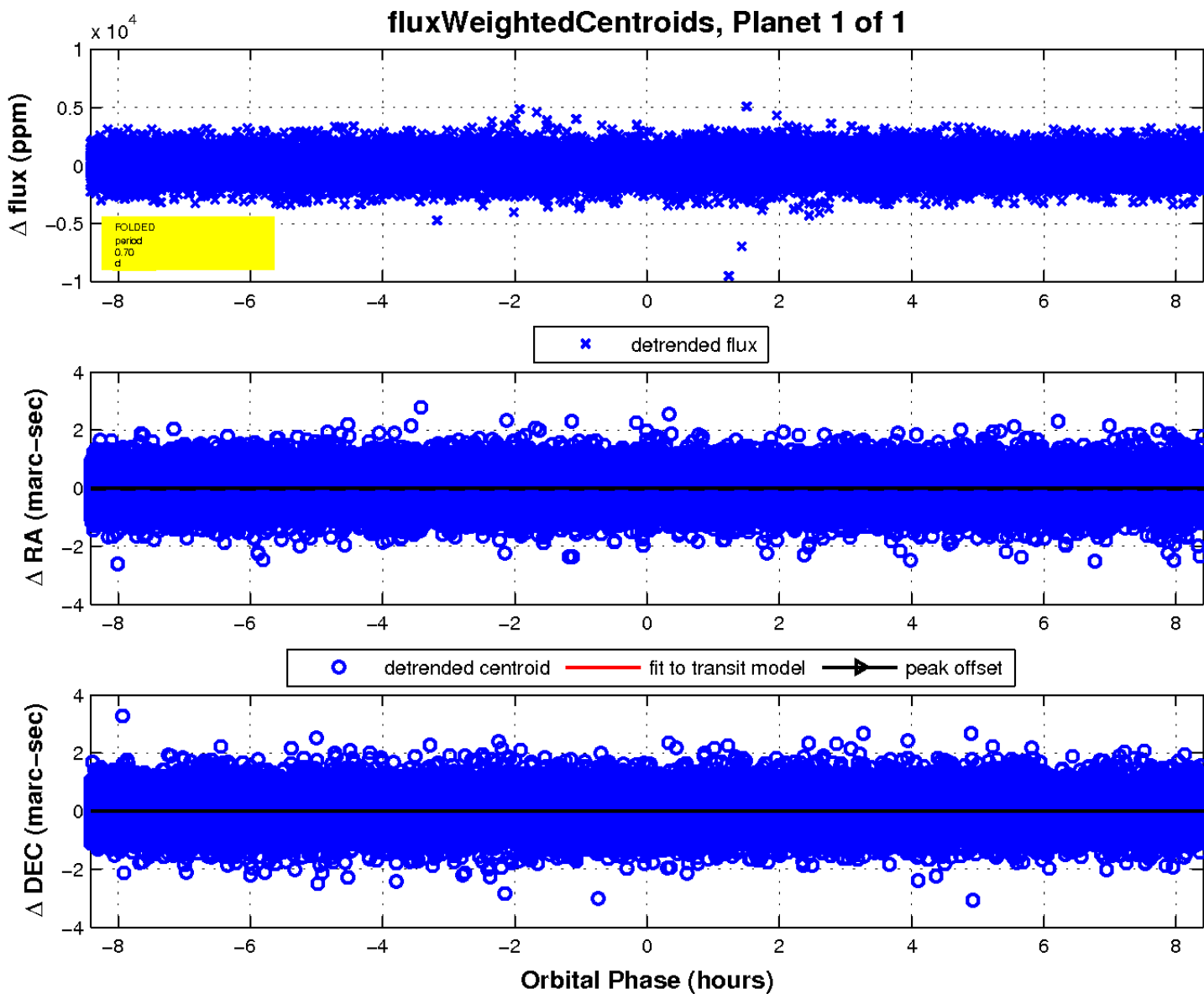
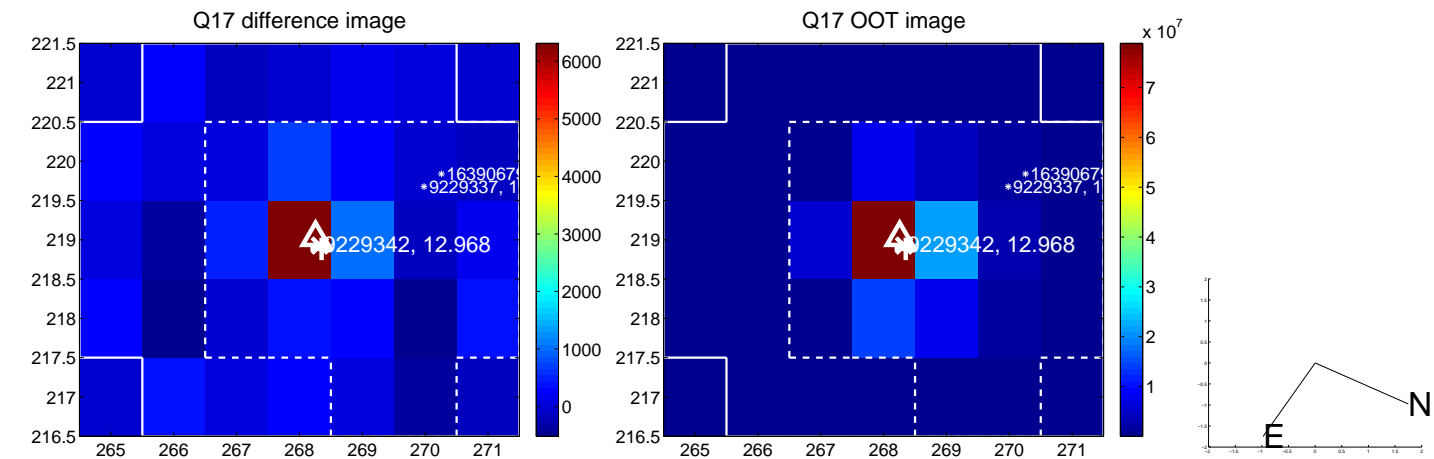
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

