

KIC 009079915

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})
009079915-01	OBS	7922.01	0.812672	132.212820	33.5	0.959	9.0	10.6	1.24	6636	0.84	7894.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009079915-01	OBS	FP	0.01	0	0	1	0	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.

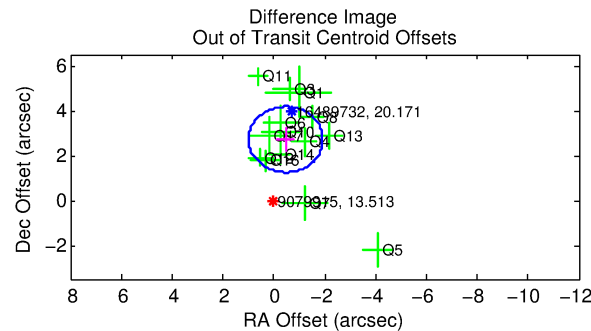
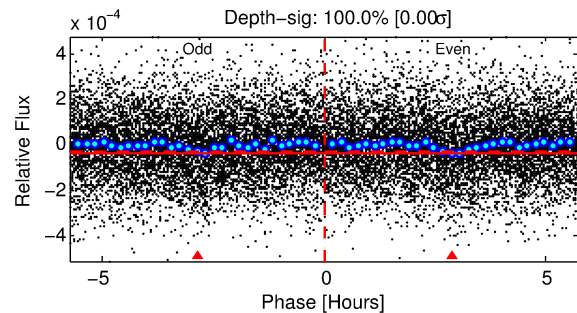
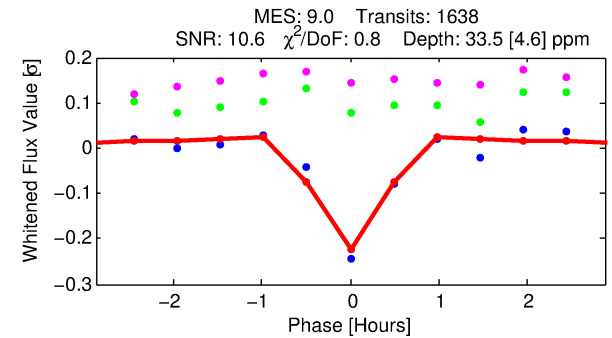
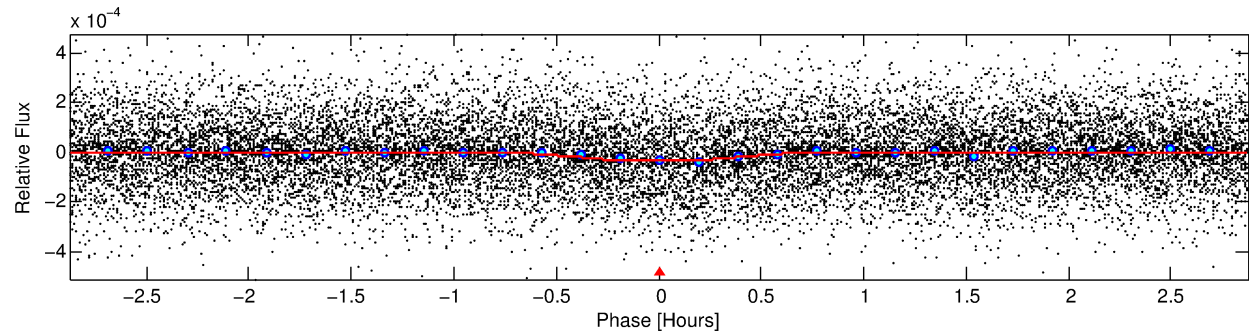
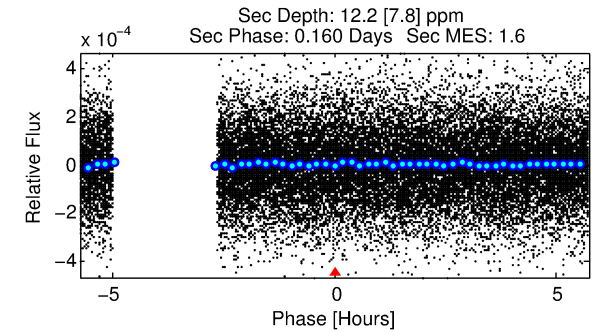
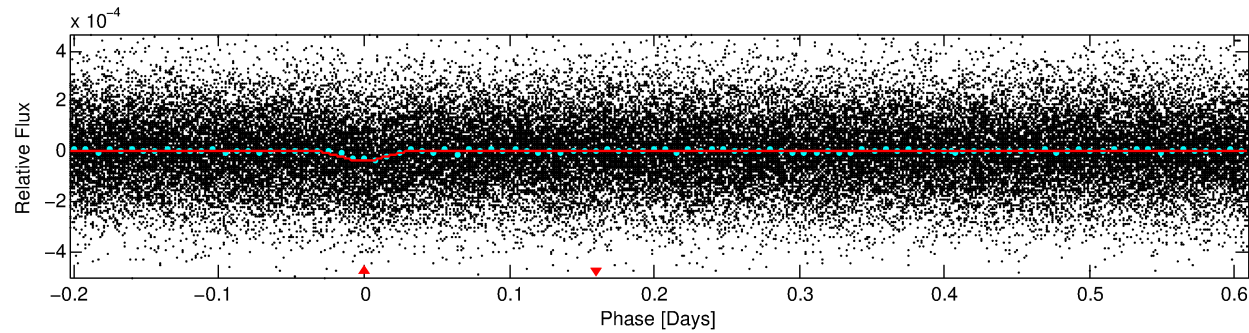
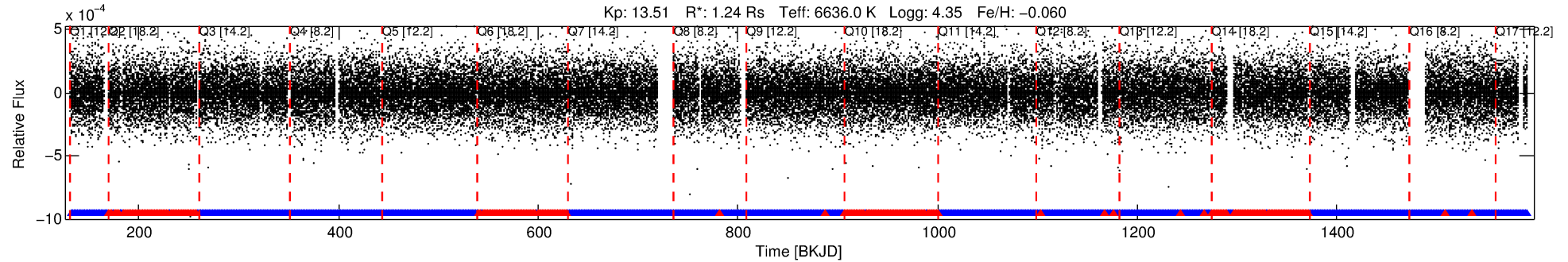
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009079915-01

No Significant Match Found

DV One-Page Summary

KIC: 9079915 Candidate: 1 of 1 Period: 0.813 d



DV Fit Results:

Period = 0.81267 [0.00001] d
Epoch = 132.2128 [0.0015] BKJD
Rp/R* = 0.0062 [0.0013]
a/R* = 3.06 [3.16]
b = 0.90 [0.25]
Seff = 7894.27 [3089.88]
Teq = 2404 [235] K
Rp = 0.84 [0.32] Re
a = 0.0183 [0.0048] AU
Ag = 3.19 [2.68] [0.82σ]
Teffp = 4965 [954] K [2.61σ]

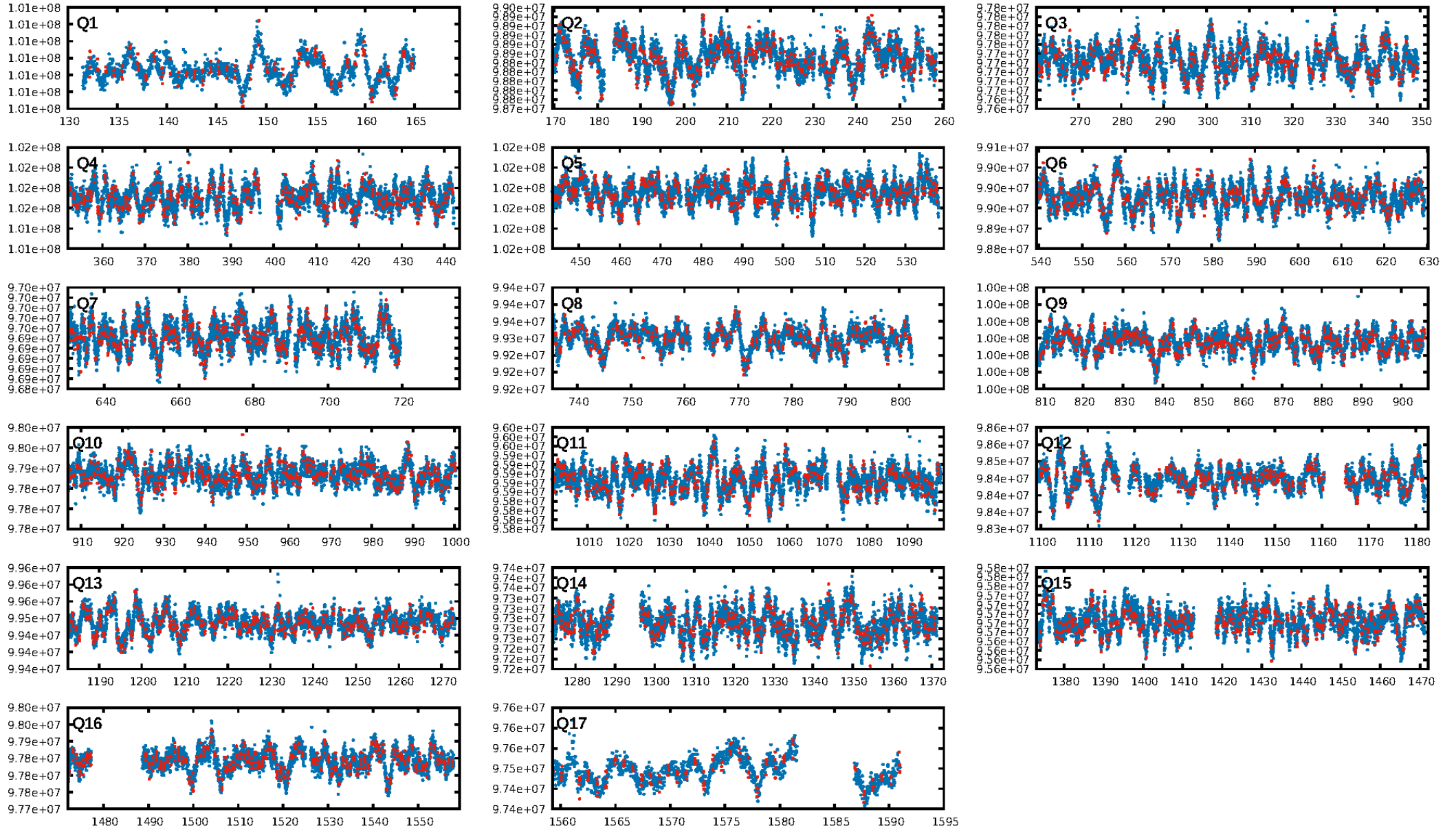
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.38e-19
RollingBand-fgt: 0.74 [1154/1564]
GhostDiagnostic-chr: 1.762
Centroid-sig: 0.0%
Centroid-so: 6.293 arcsec [5.64σ]
OotOffset-rm: 2.748 arcsec [5.63σ]
KicOffset-rm: 3.000 arcsec [6.19σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 1.00 [17/17]

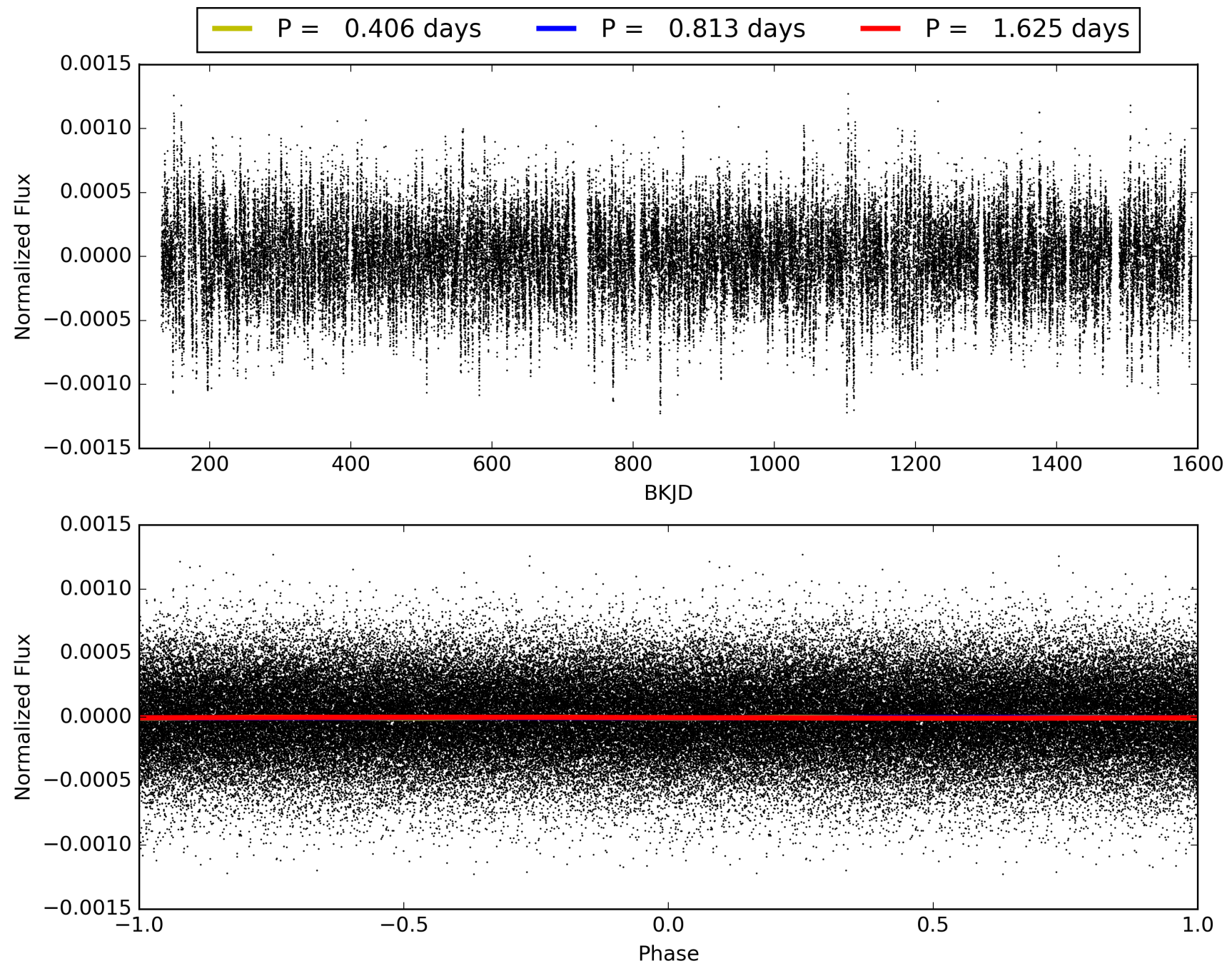
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:19:53 Z

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

TCE 009079915-01, PDC Light Curves

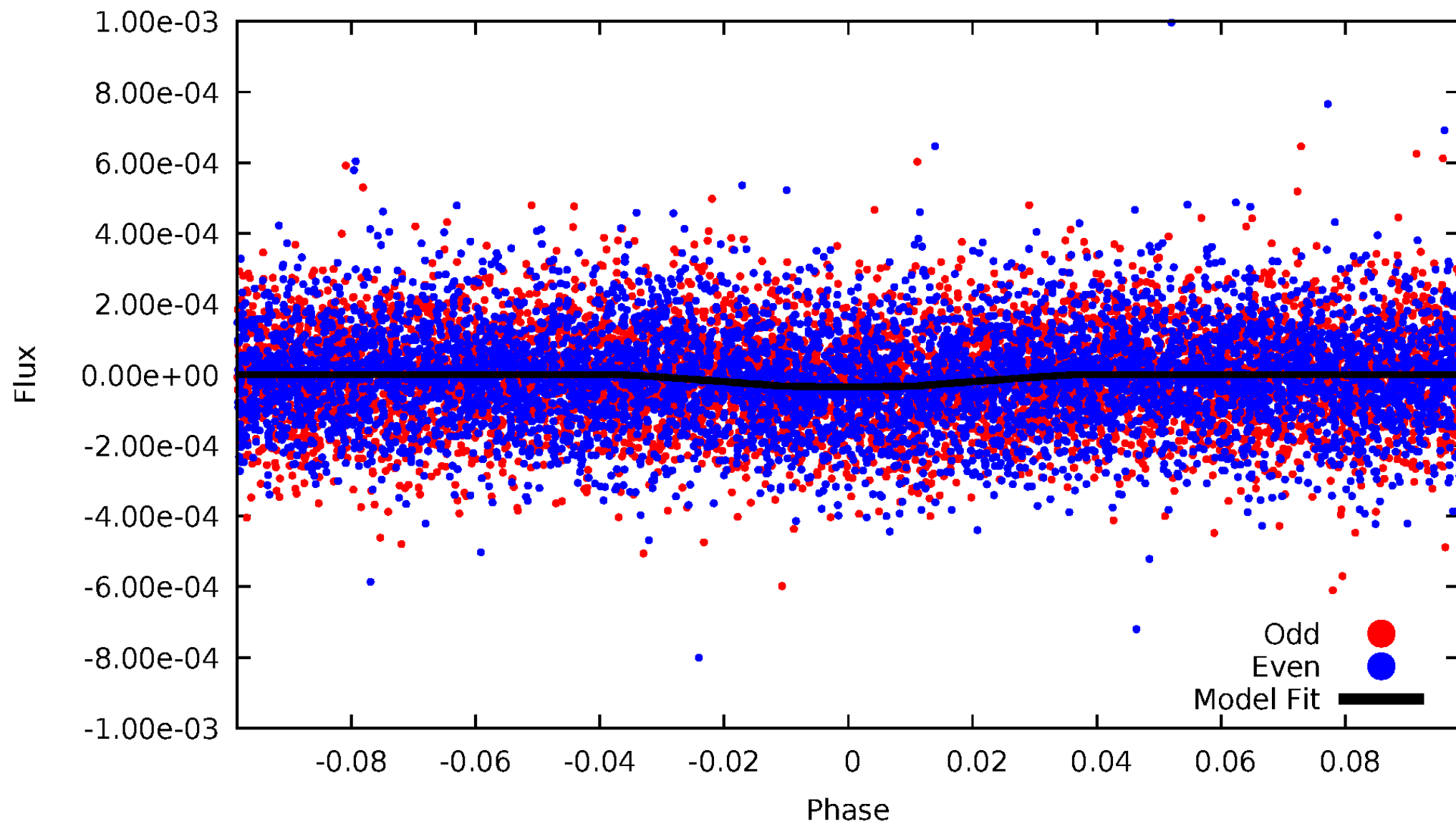


TCE 009079915-01



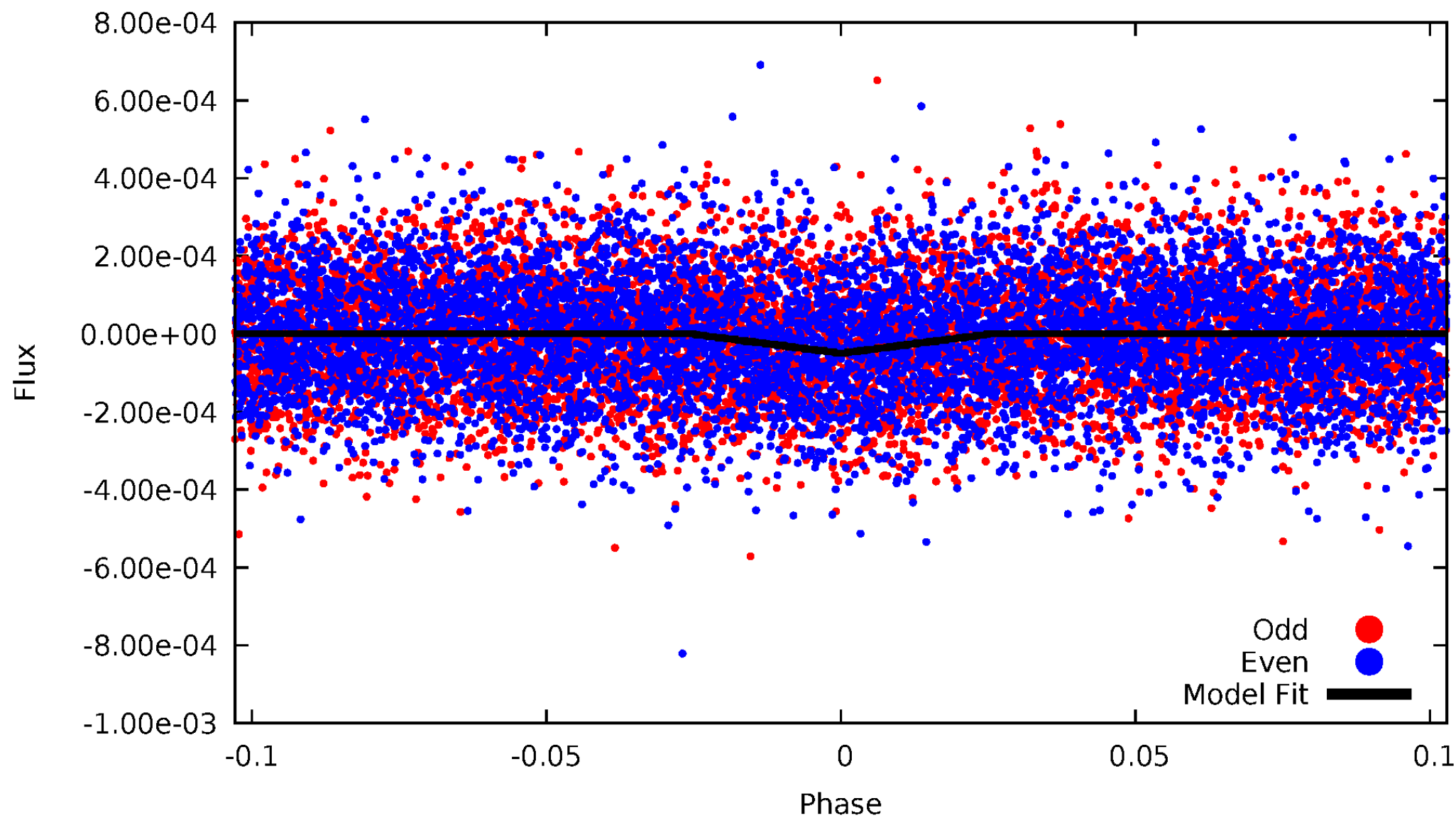
DV Odd/Even

TCE 009079915-01

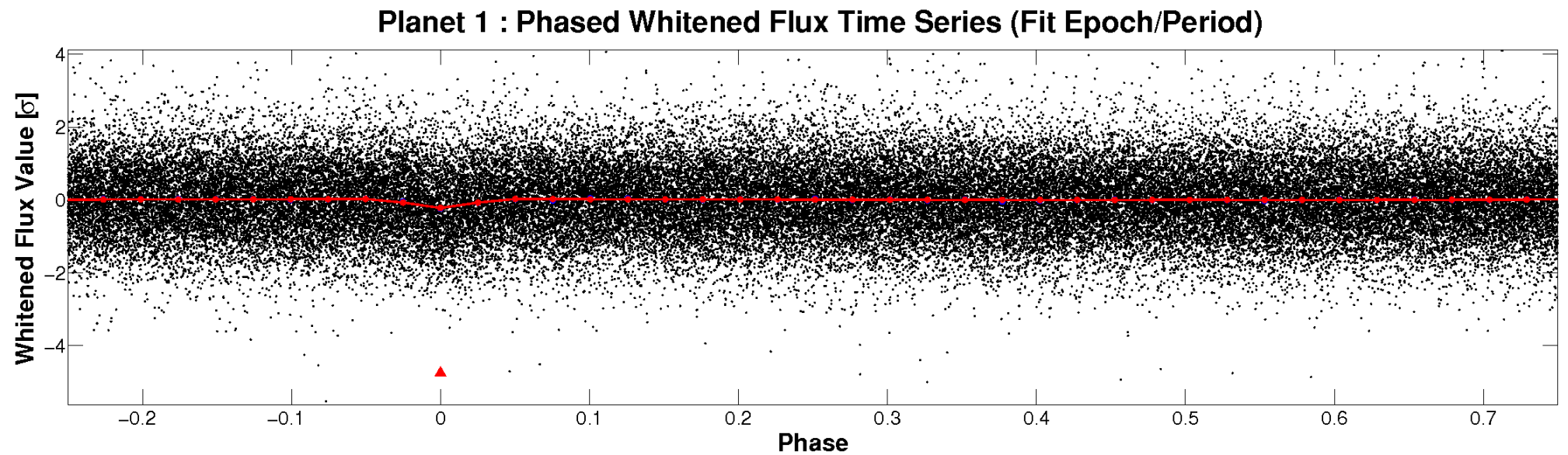
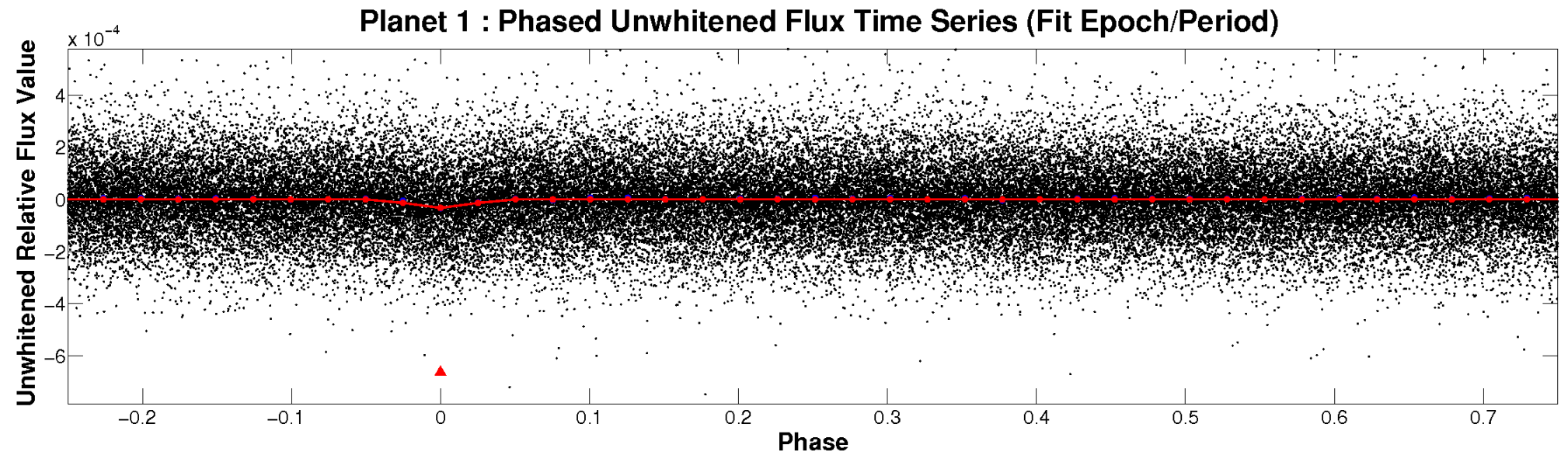


ALT Odd/Even

TCE 009079915-01

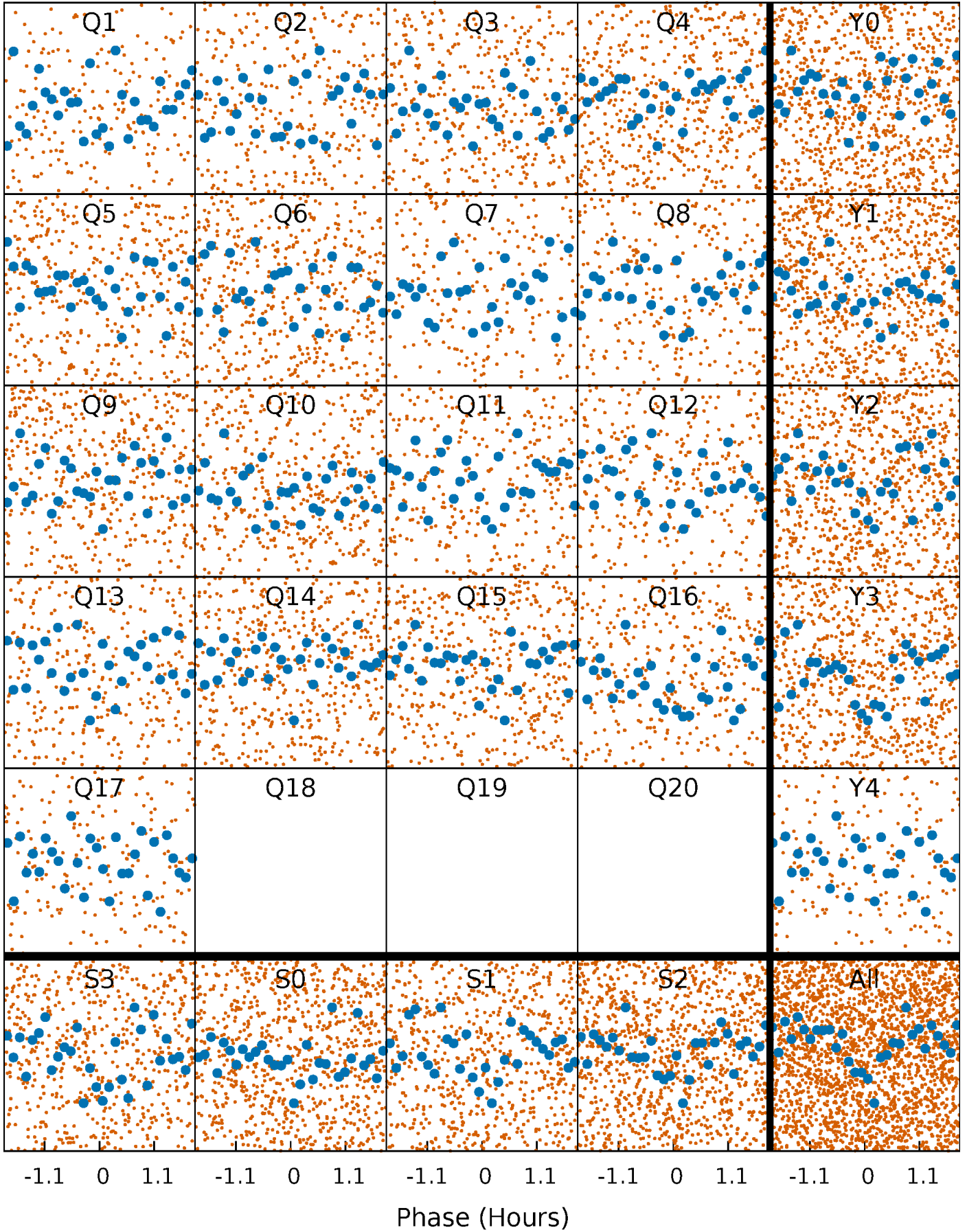


Non-Whitened Vs. Whitened Light Curve



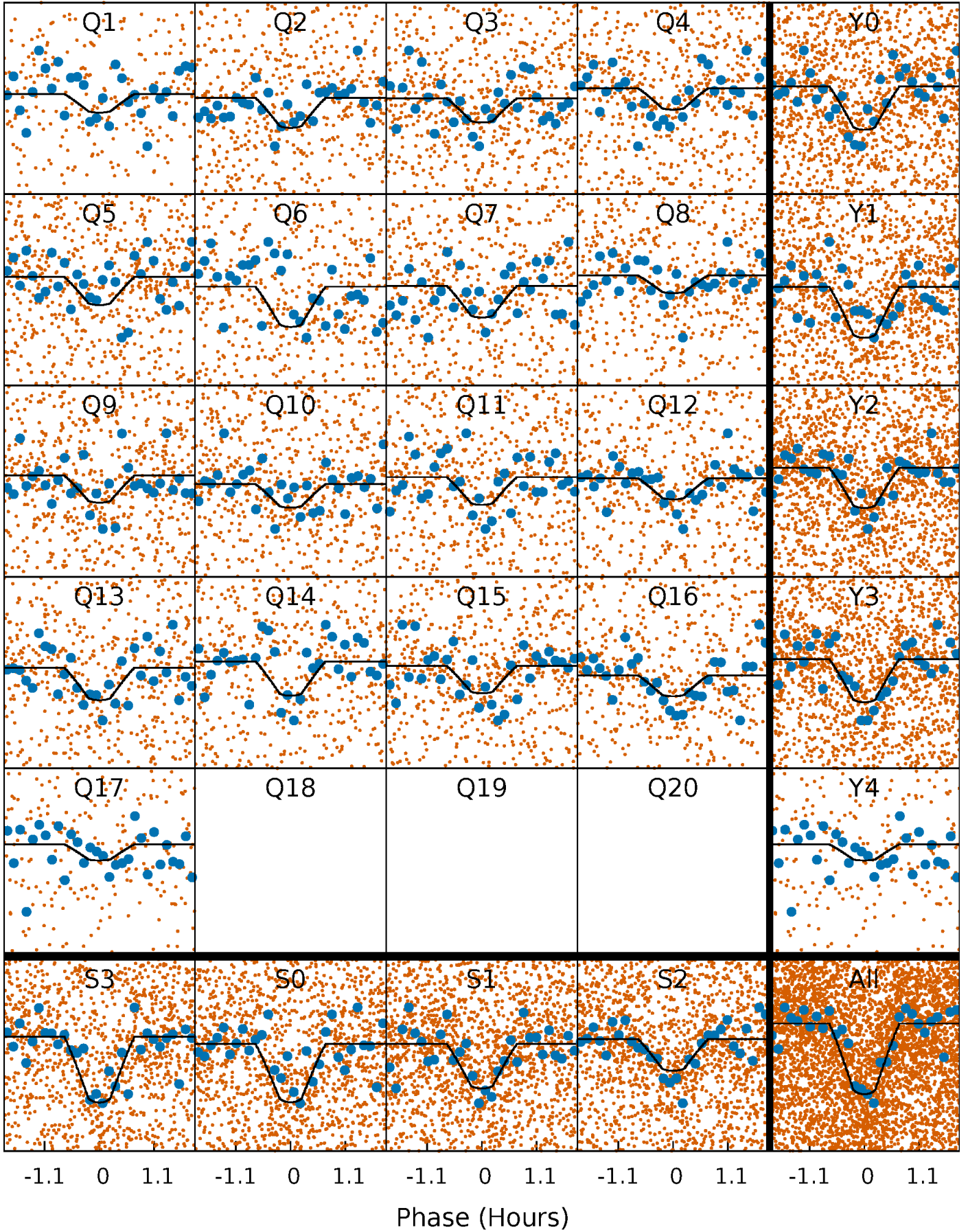
PDC Quarter-Phased Transit Curves

TCE 009079915-01 P= 0.812672 Days $T_0=132.212820$ (BKJD)



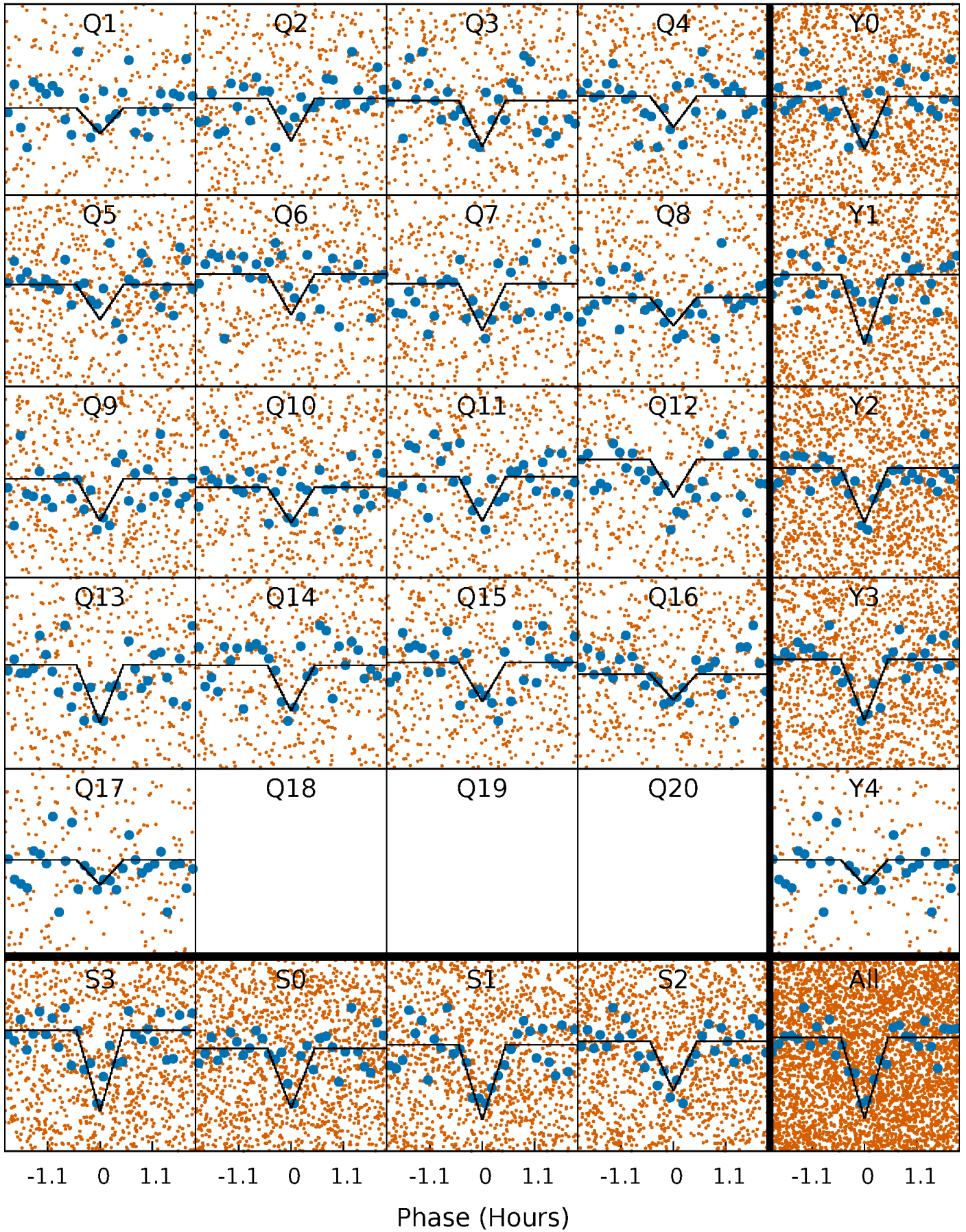
DV Quarter-Phased Transit Curves

TCE 009079915-01 P= 0.812672 Days $T_0=132.212820$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

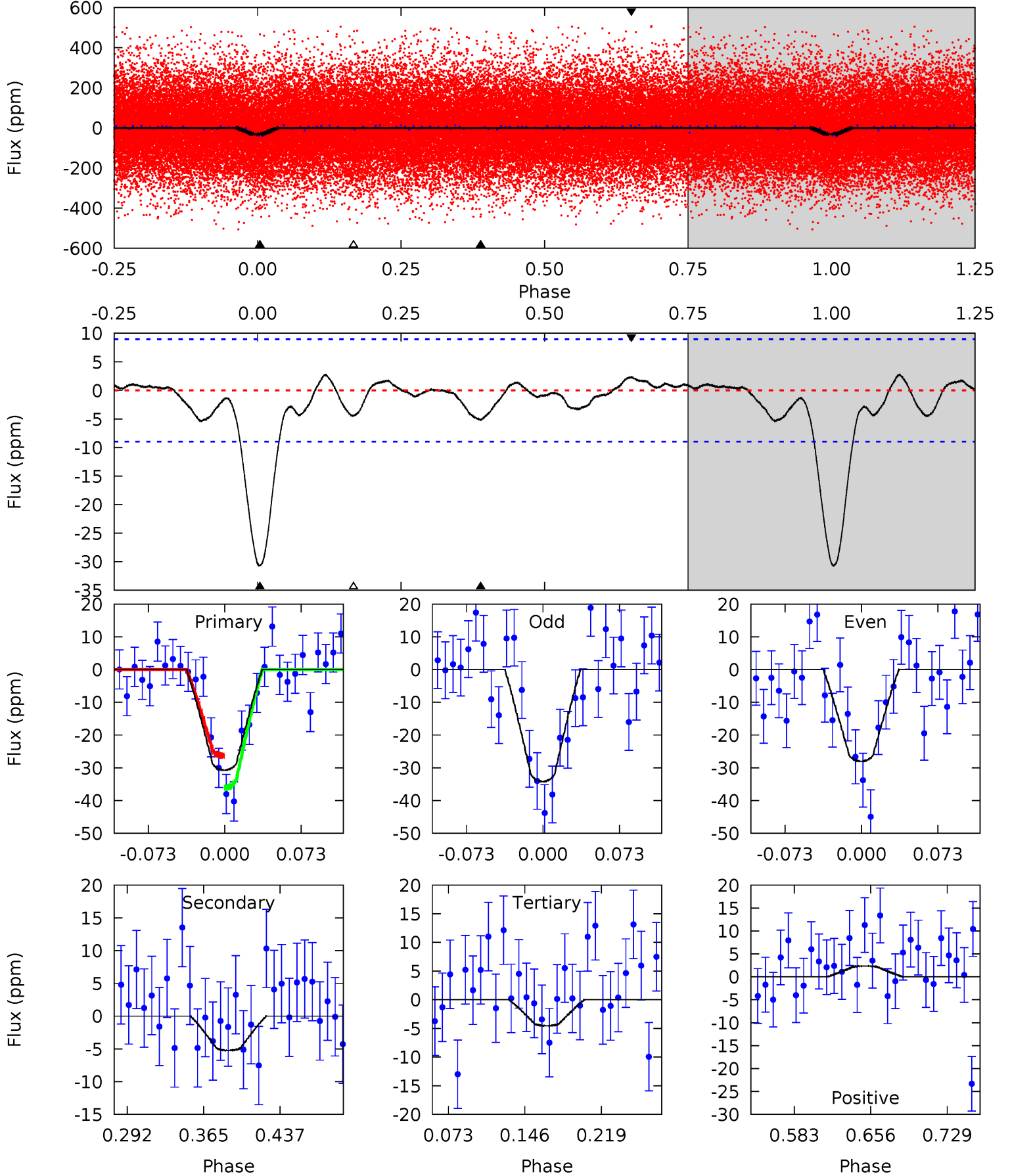
TCE 009079915-01 P= 0.812674 Days $T_0=132.213040$ (BKJD)



DV Model-Shift Uniqueness Test

009079915-01, P = 0.812672 Days, E = 131.400148 Days

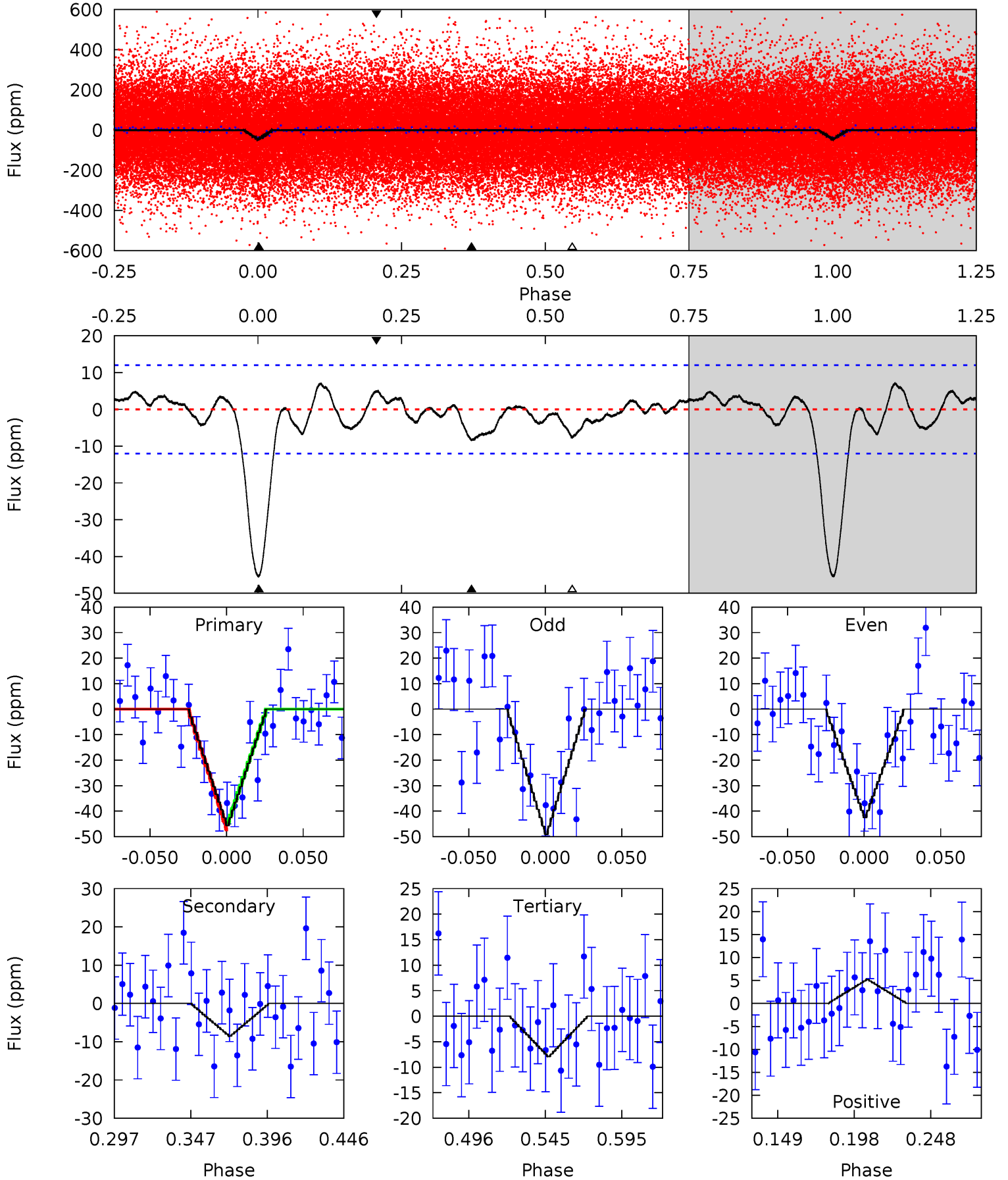
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.9	2.71	2.35	1.21	4.63	1.79	0.97	13.5	14.7	0.36	1.50	1.60	0.95	0.08	2.53



Alt Model-Shift Uniqueness Test

009079915-01, P = 0.812674 Days, E = 131.400366 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.9	3.35	3.10	2.04	4.71	1.96	1.17	14.8	15.8	0.25	1.31	1.28	0.94	0.14	0.54



Stellar Parameters For KIC 009079915

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6636^{+161}_{-221}	$4.349^{+0.065}_{-0.195}$	$-0.060^{+0.250}_{-0.300}$	$1.236^{+0.397}_{-0.132}$	$1.251^{+0.187}_{-0.168}$	$0.933^{+0.259}_{-0.489}$
	+2%/-3%	+1%/-4%	+417%/-500%	+32%/-11%	+15%/-13%	+28%/-52%
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 009079915-01 / KOI 7922.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 2	$0.87^{+0.24}_{-0.20}$	3411^{+266}_{-171}	3994^{+662}_{-534}	$1.177^{+1.143}_{-0.546}$
Alt.	-9 ± 3	$0.98^{+0.24}_{-0.19}$	3427^{+233}_{-184}	4264^{+571}_{-460}	$1.567^{+1.195}_{-0.648}$

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

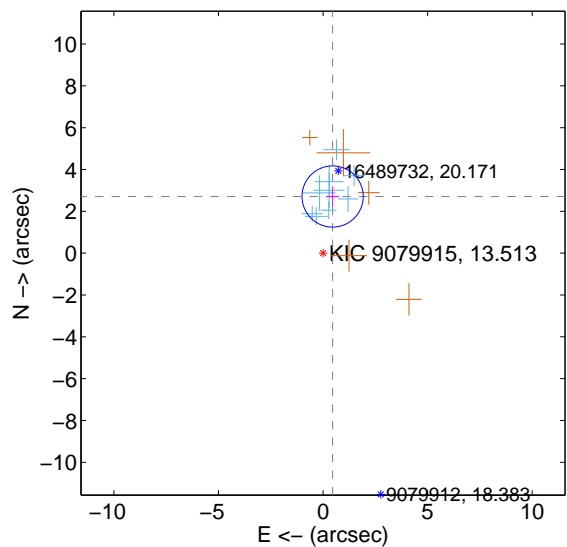
Supplemental centroid analysis for 009079915-01. Kepler magnitude: 13.51. Transit SNR 10.58

There are 9 quarters with good PRF difference image offsets

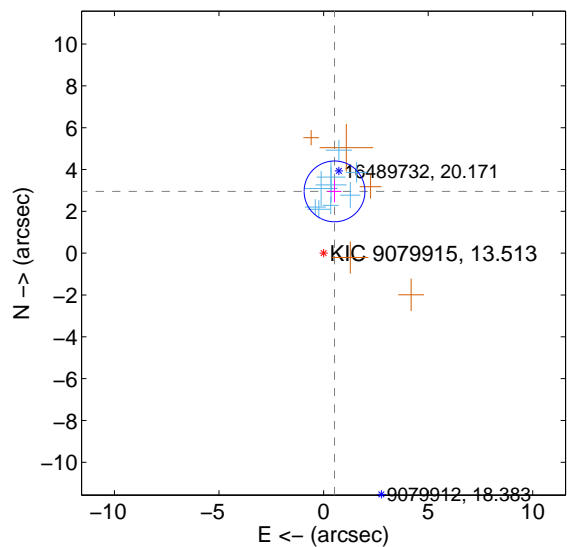
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.748 ± 0.488	5.63	-0.459 ± 0.318	2.710 ± 0.492
PRF-fit source offset from KIC position	3.000 ± 0.485	6.19	-0.523 ± 0.333	2.954 ± 0.523
photometric centroid source offset	6.29 ± 1.12	5.64	-2.67 ± 1.06	5.70 ± 1.13

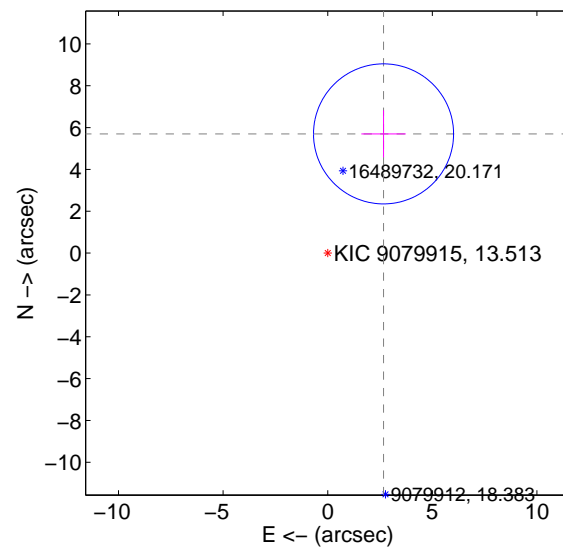
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

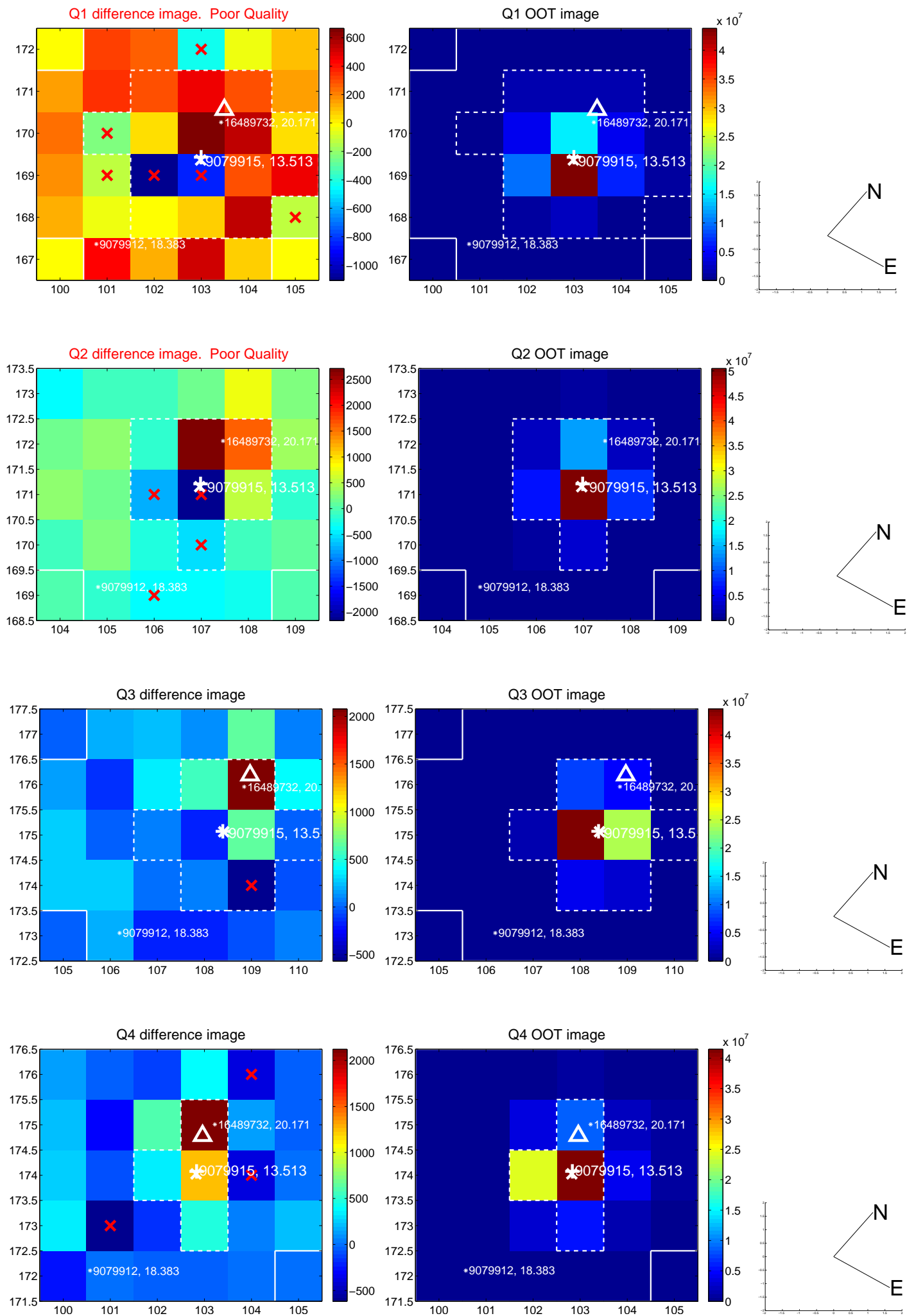


offset from photometric centroids

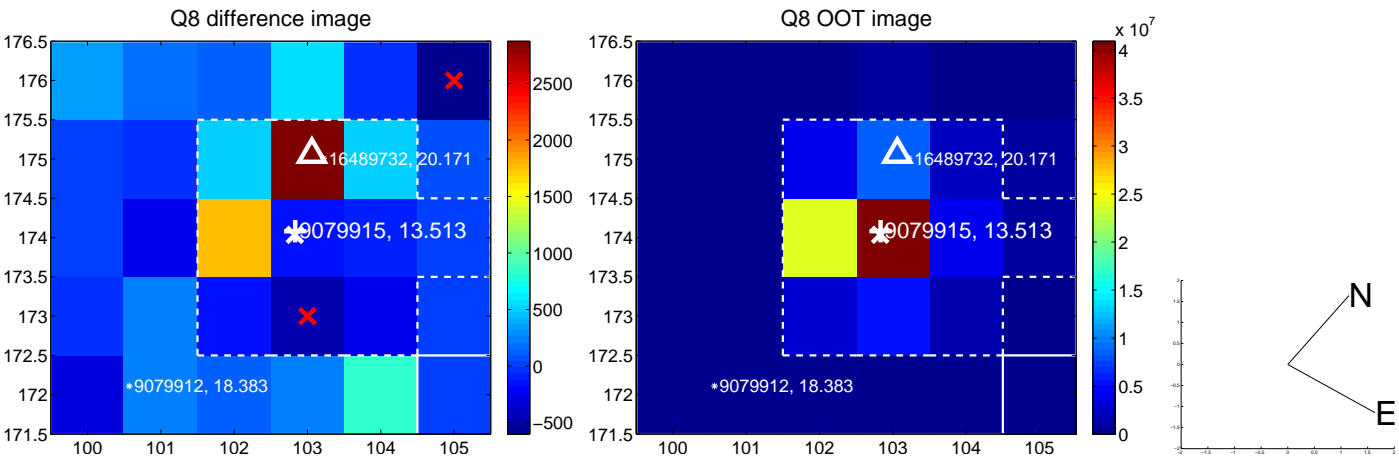
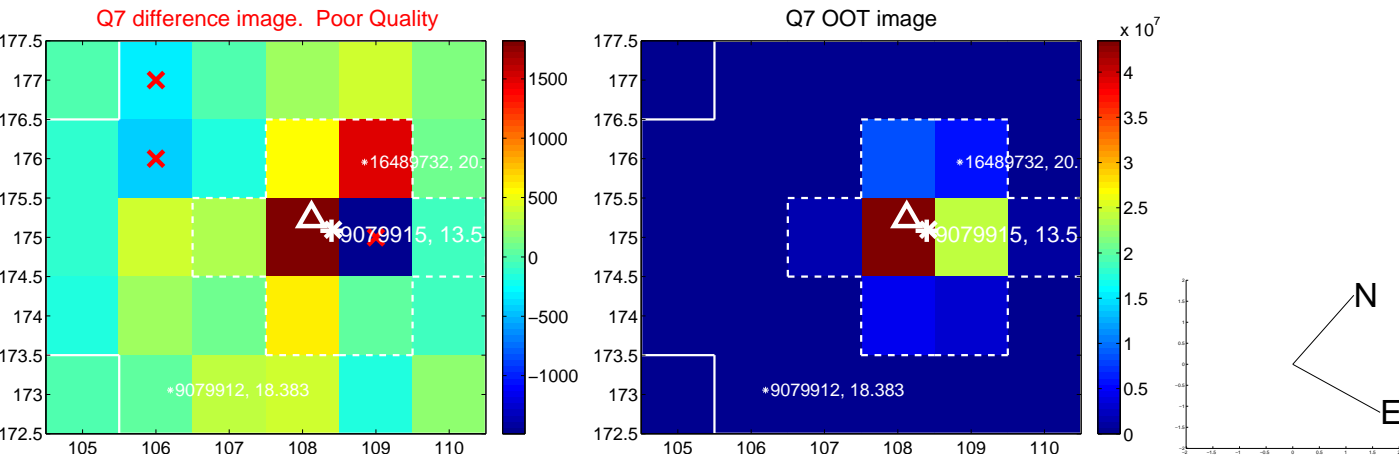
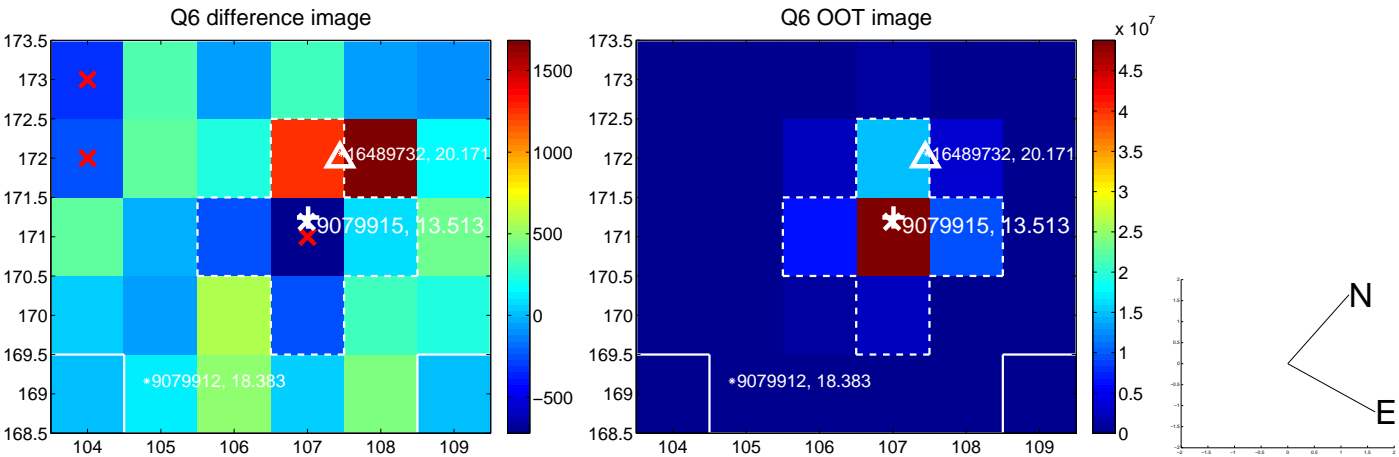
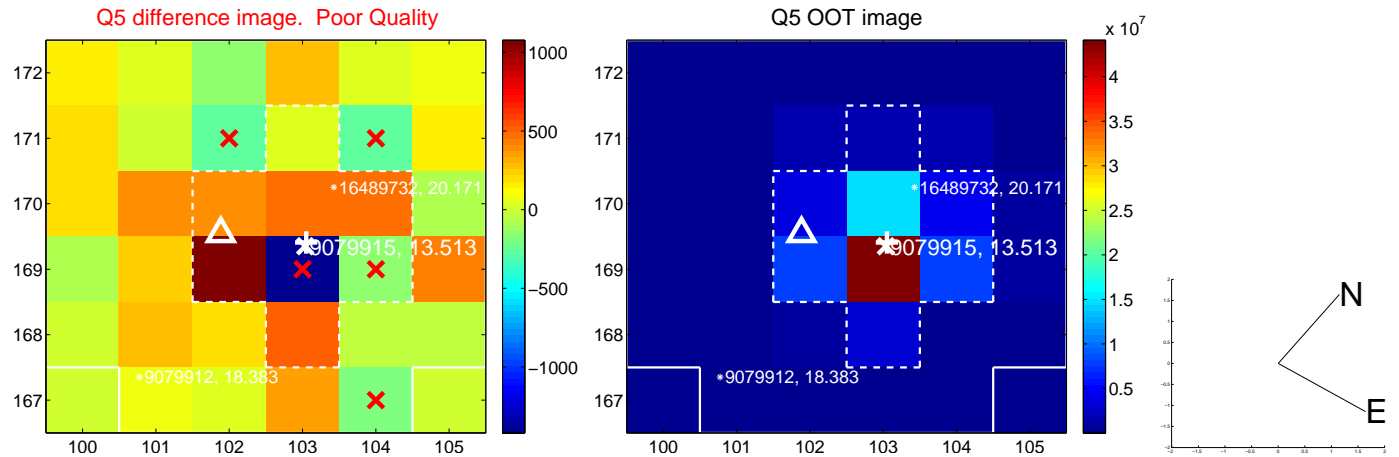


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

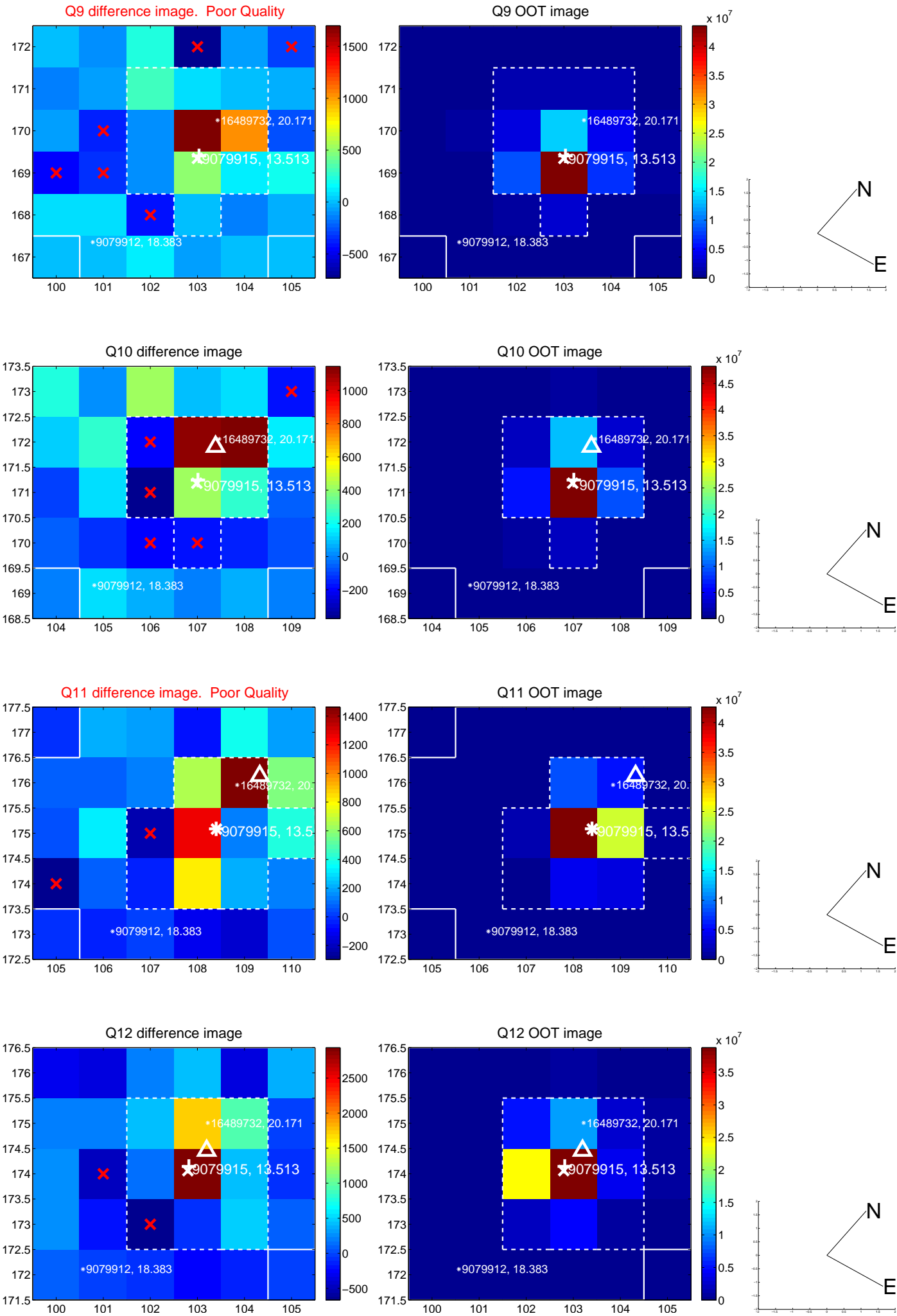
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



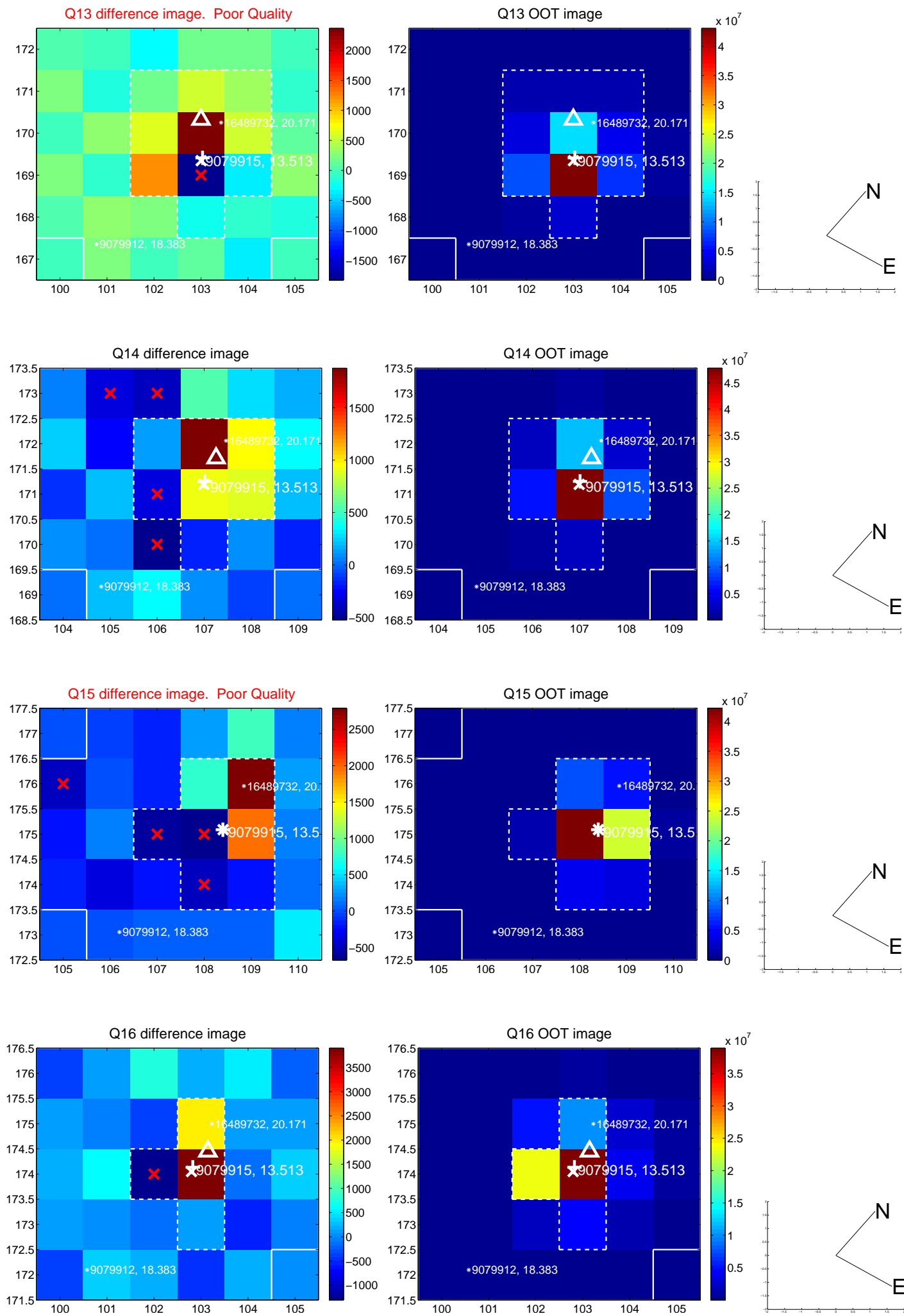
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



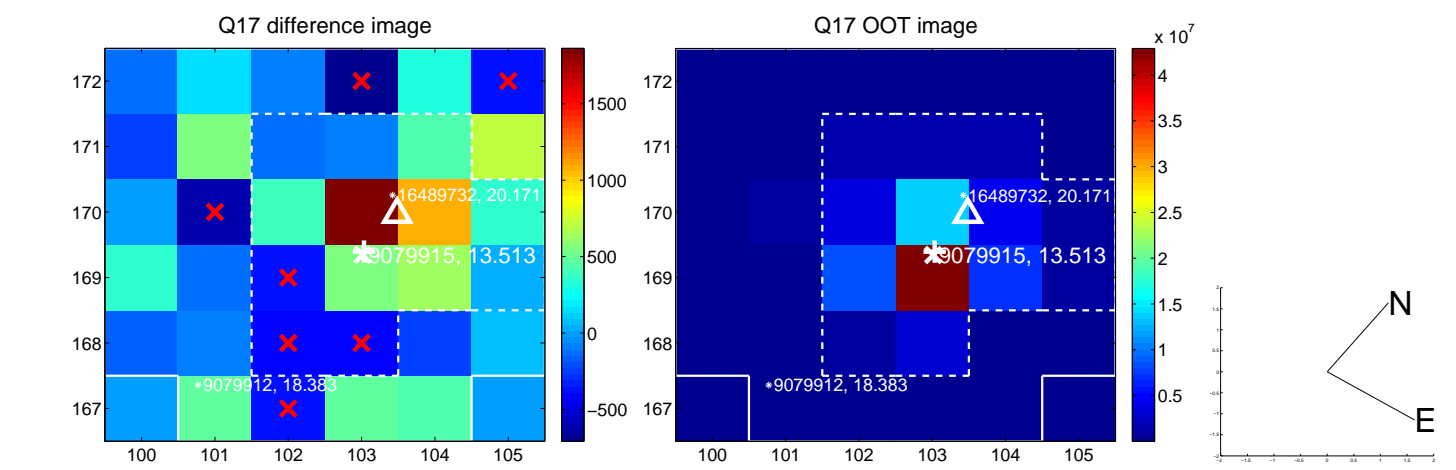
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



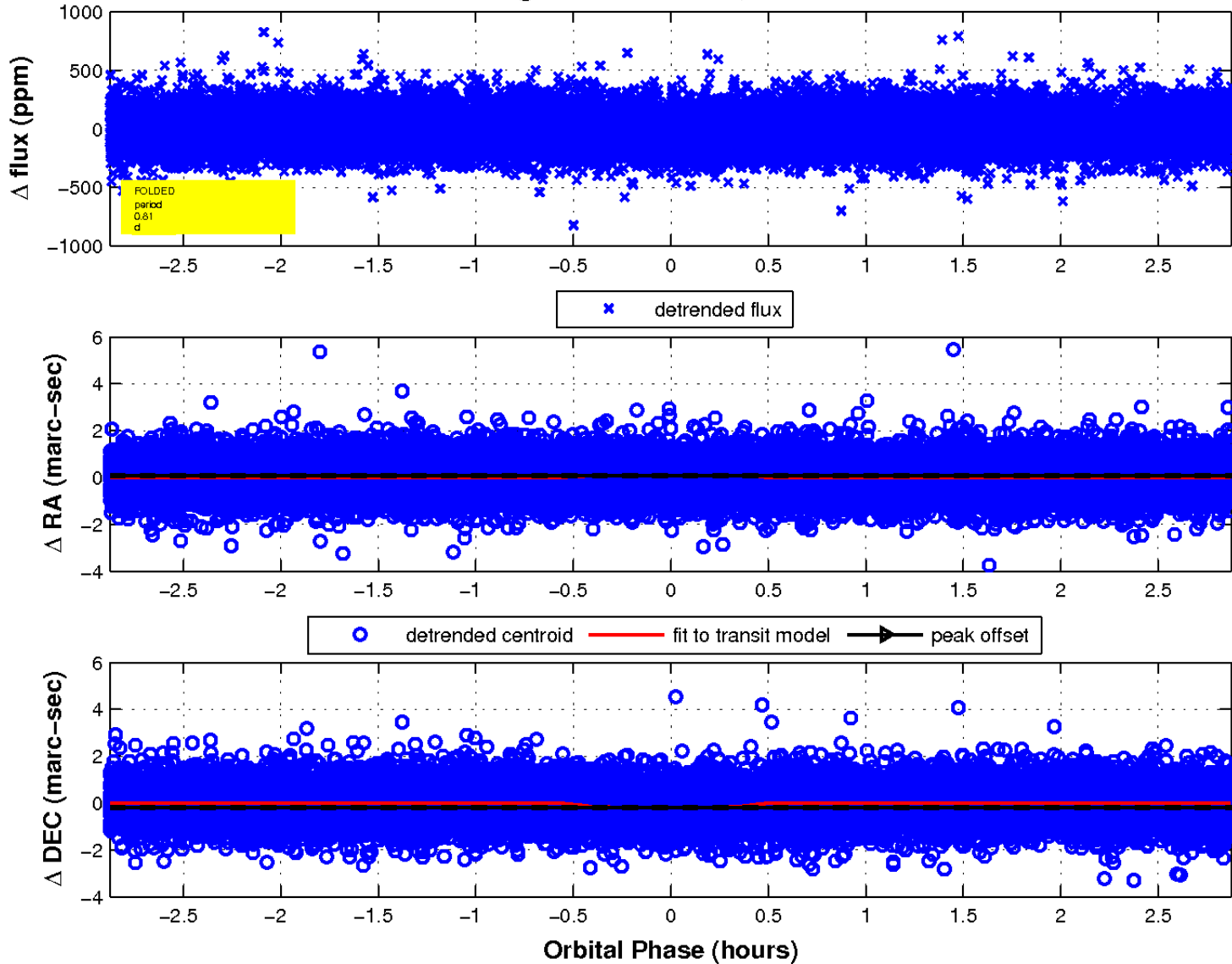
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

