

KIC 009837267

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})
009837267-01	OBS	No	0.523795	131.760616	10.6	3.445	9.3	6.9	2.76	8199	0.97	110469.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009837267-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

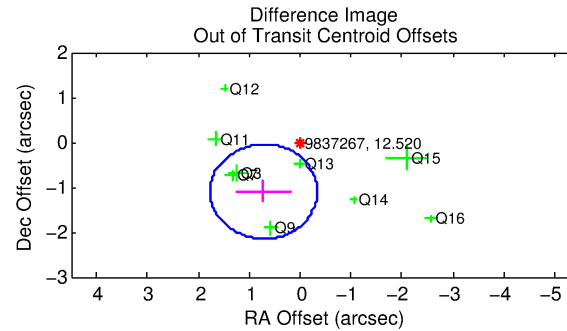
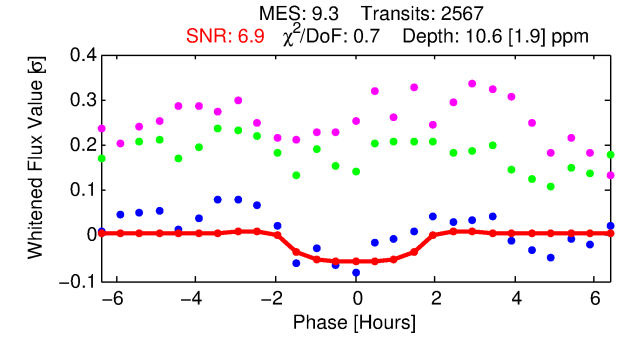
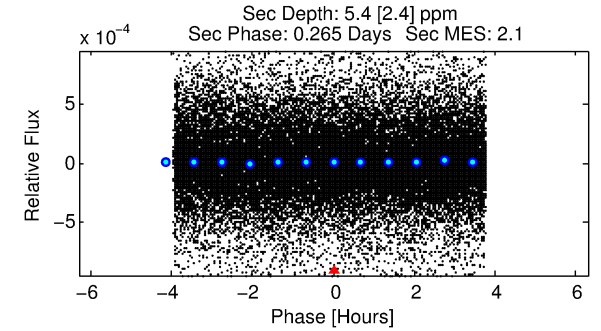
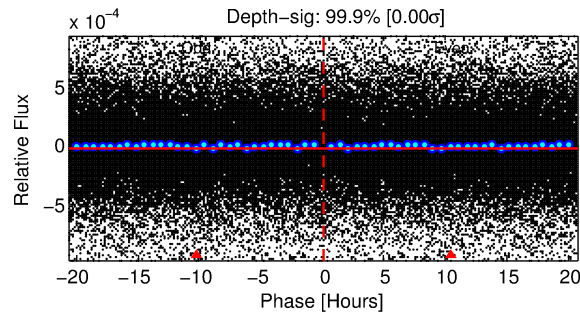
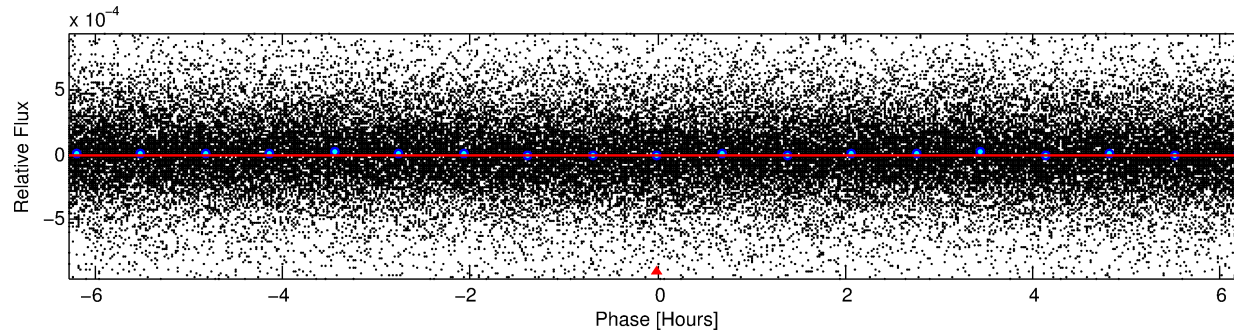
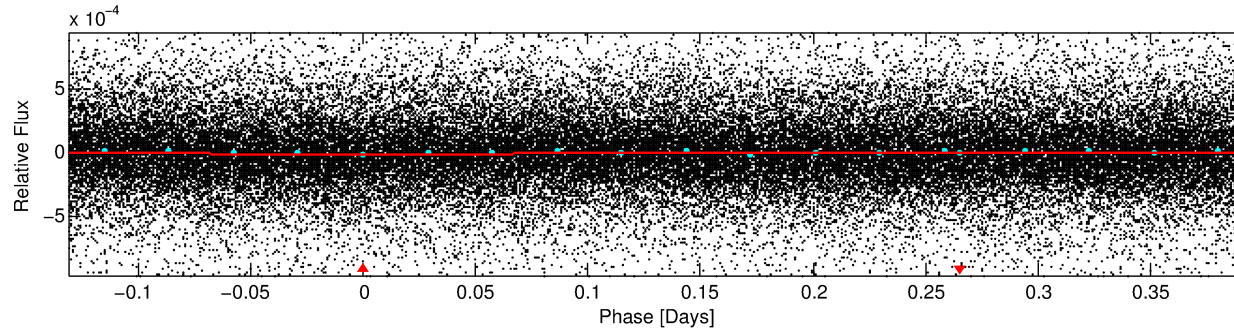
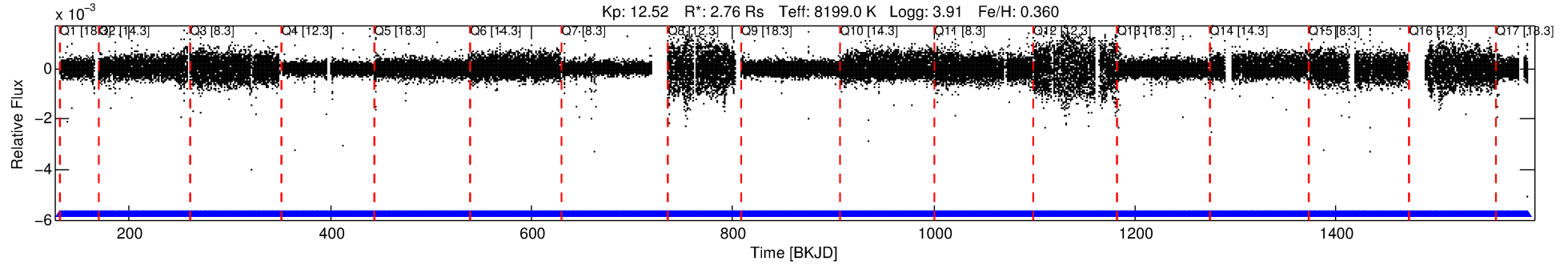
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009837267-01

No Significant Match Found

DV One-Page Summary

KIC: 9837267 Candidate: 1 of 1 Period: 0.524 d



DV Fit Results:

Period = 0.52380 [0.00001] d
Epoch = 131.7606 [0.0058] BKJD
Rp/R* = 0.0032 [0.0017]
a/R* = 1.17 [0.96]
b = 0.73 [2.05]
Seff = 110469.46 [48574.60]
Teq = 4649 [511] K
Rp = 0.97 [0.60] Re
a = 0.0167 [0.0045] AU
Ag = 0.88 [1.08] [-0.11σ]
Teffp = 6958 [2034] K [1.10σ]

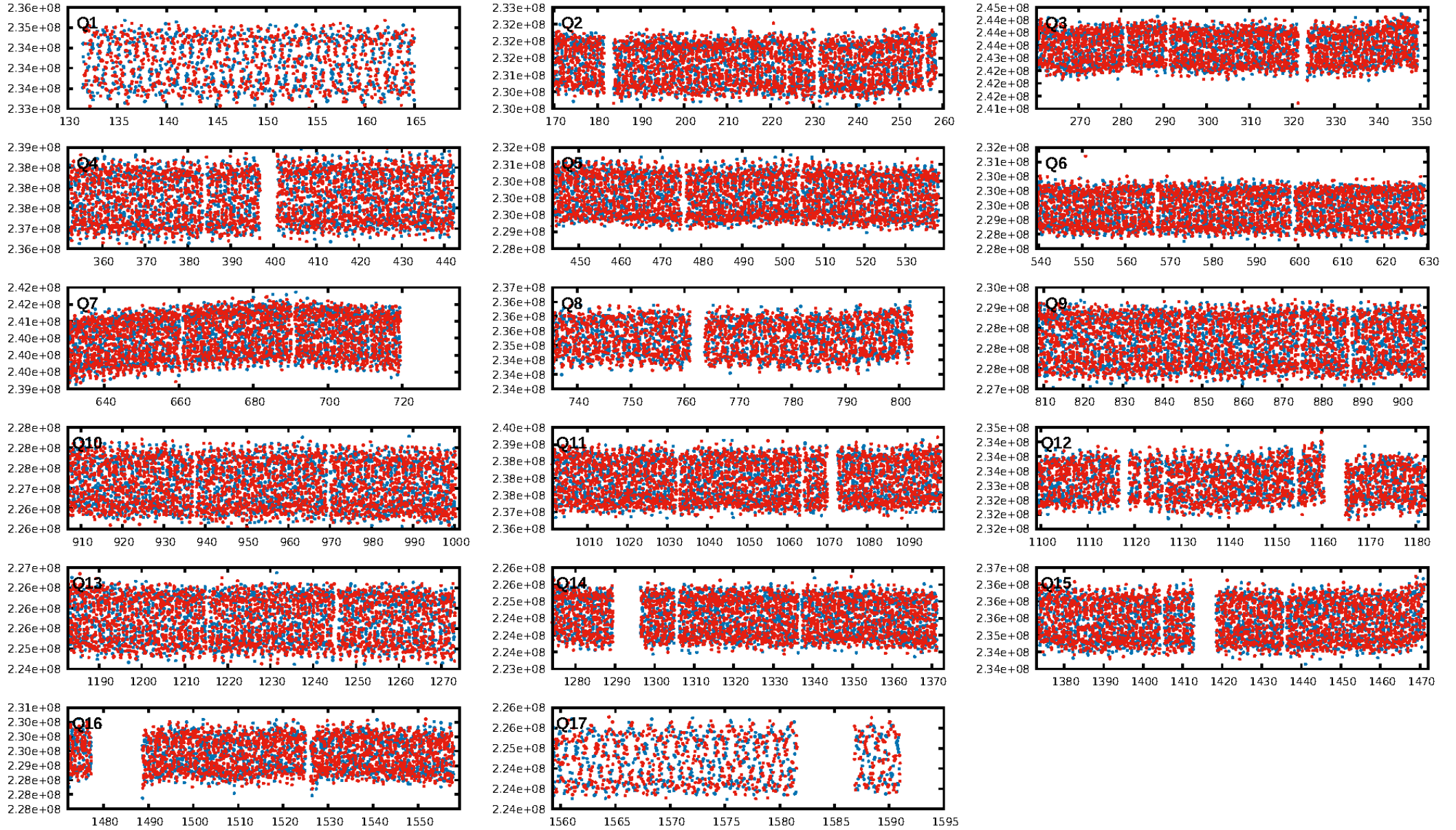
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.15e-13
RollingBand-fgt: 1.00 [2451/2451]
GhostDiagnostic-chr: 0.6812
Centroid-sig: 9.5%
Centroid-so: 1.296 arcsec [1.65σ]
OotOffset-rm: 1.313 arcsec [3.74σ]
KicOffset-rm: 1.157 arcsec [4.37σ]
OotOffset-st: 1/4/2/2 [9]
KicOffset-st: 1/4/2/2 [9]
DiffImageQuality-fgm: 0.78 [7/9]
DiffImageOverlap-fno: 1.00 [17/17]

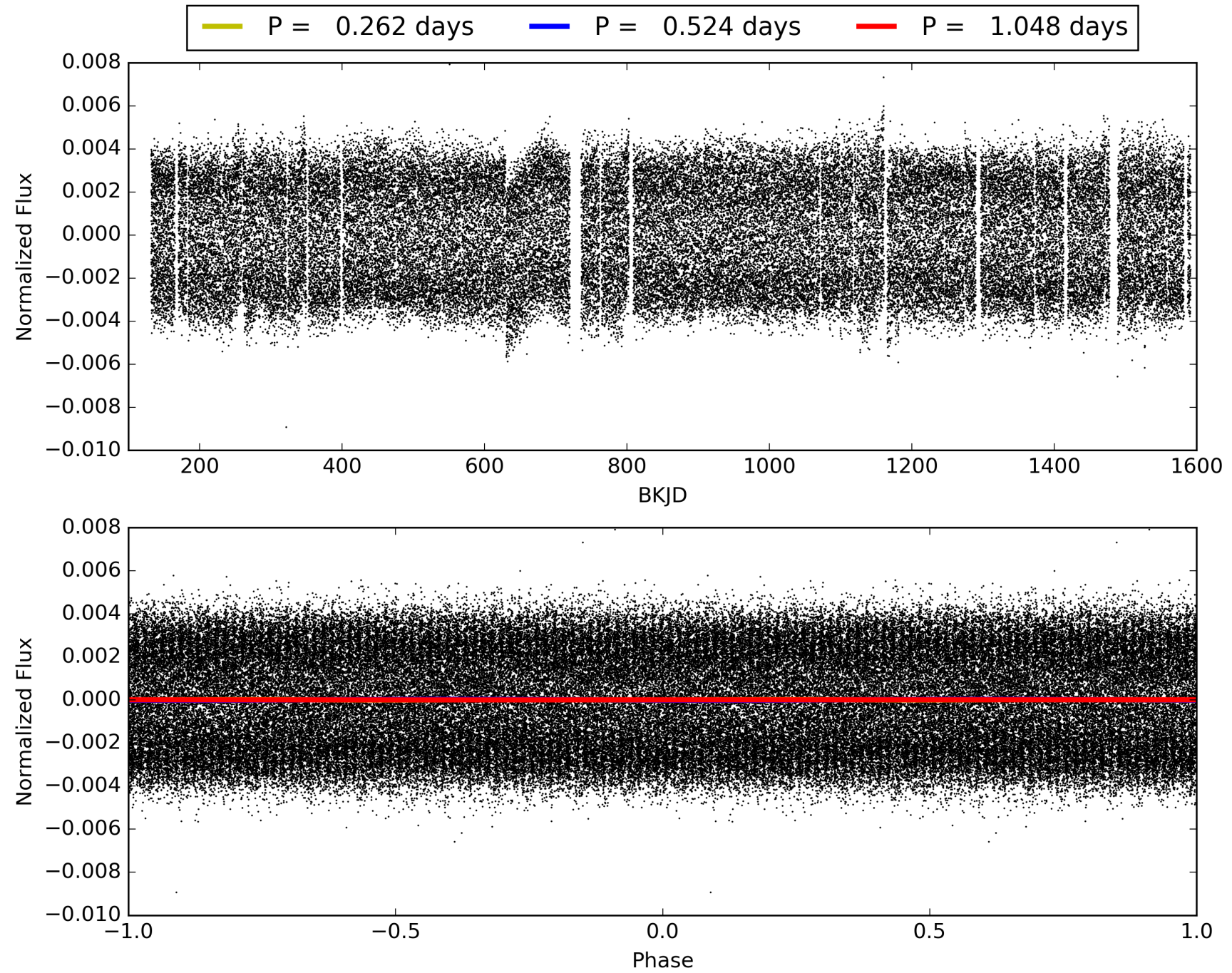
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:12:18 Z

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

TCE 009837267-01, PDC Light Curves

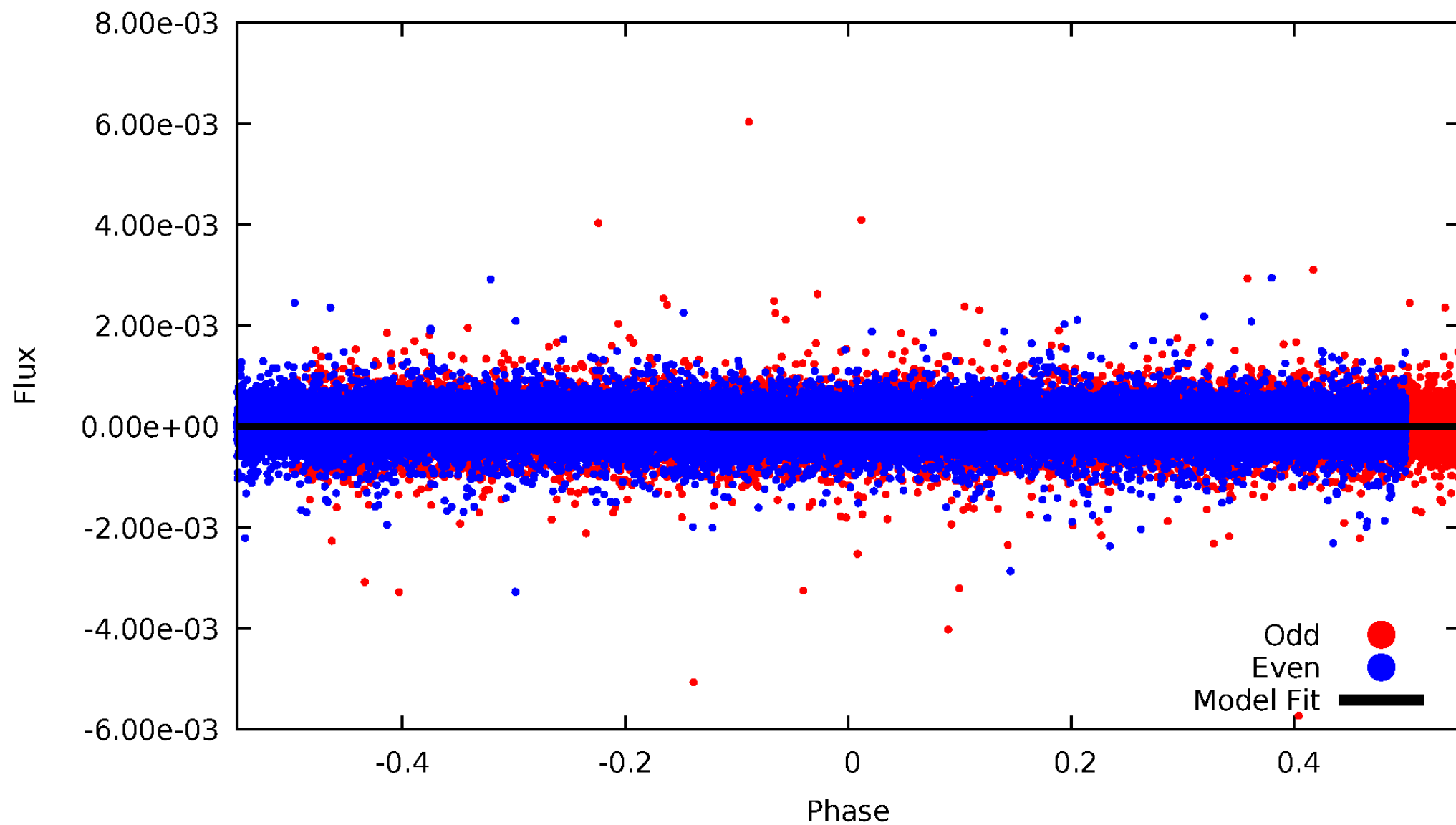


TCE 009837267-01



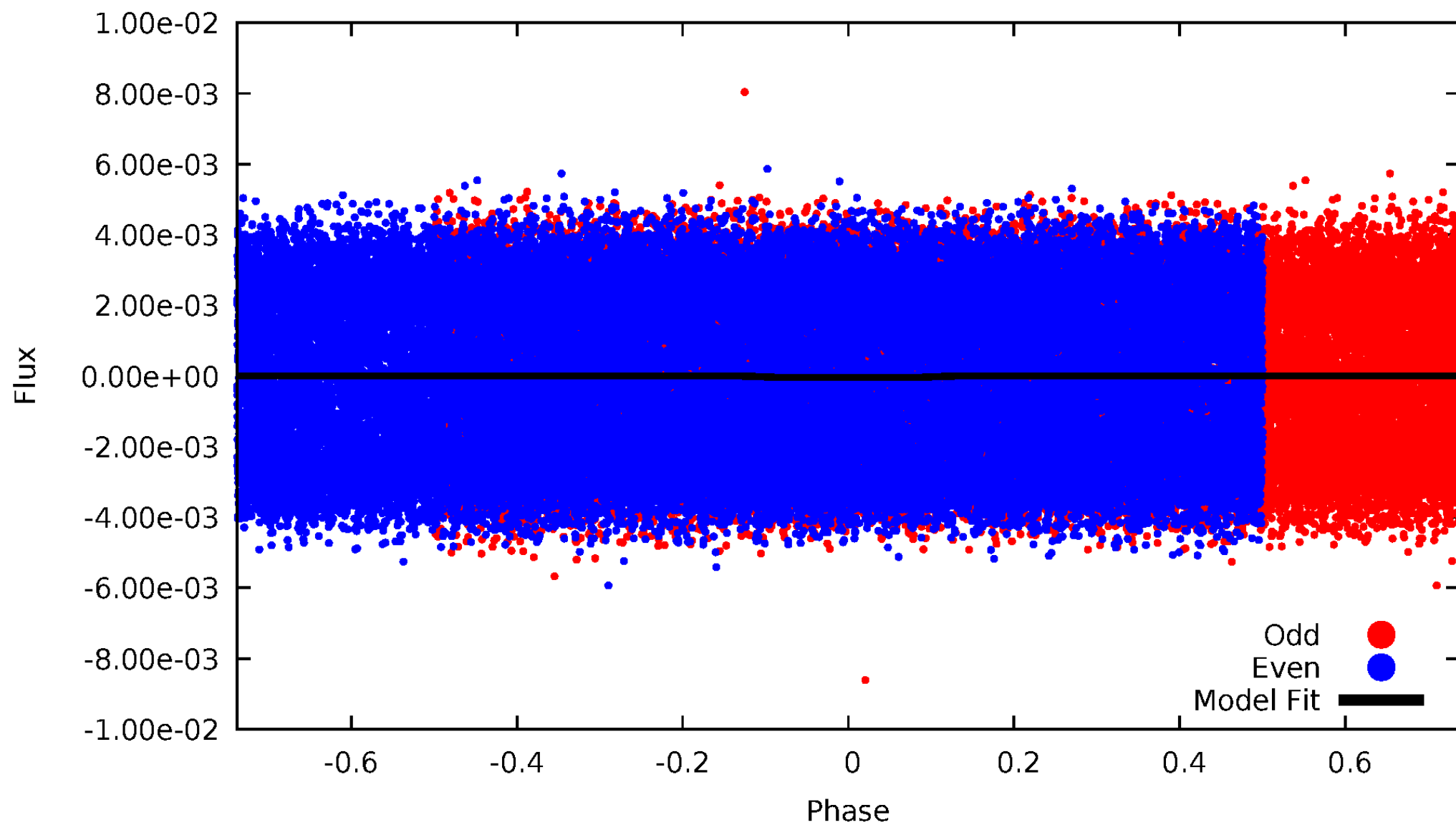
DV Odd/Even

TCE 009837267-01

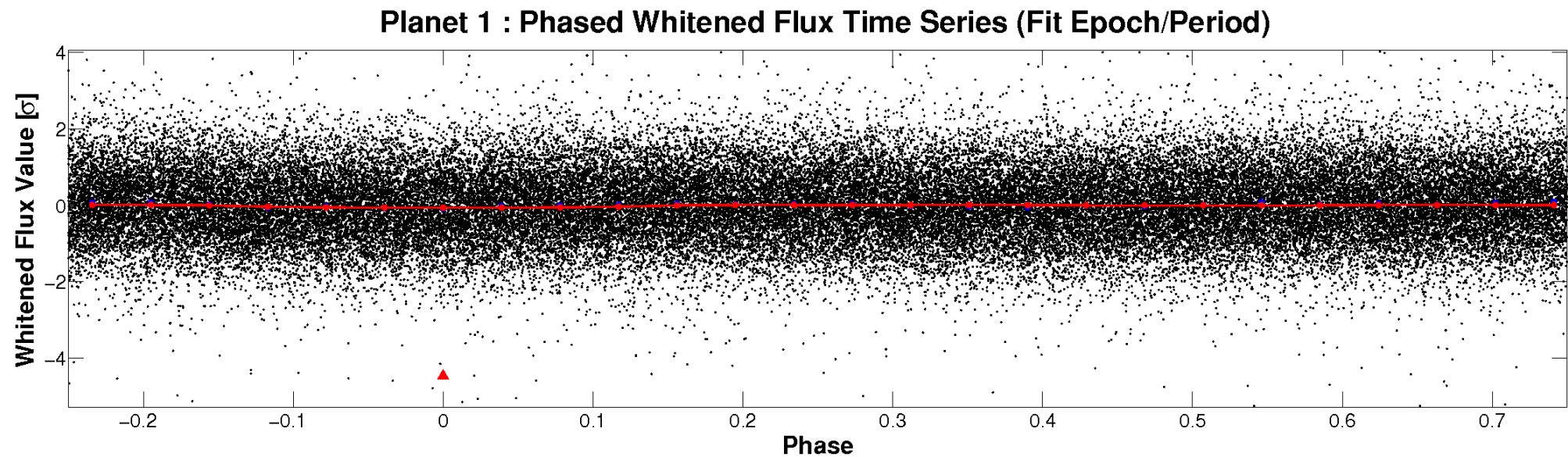
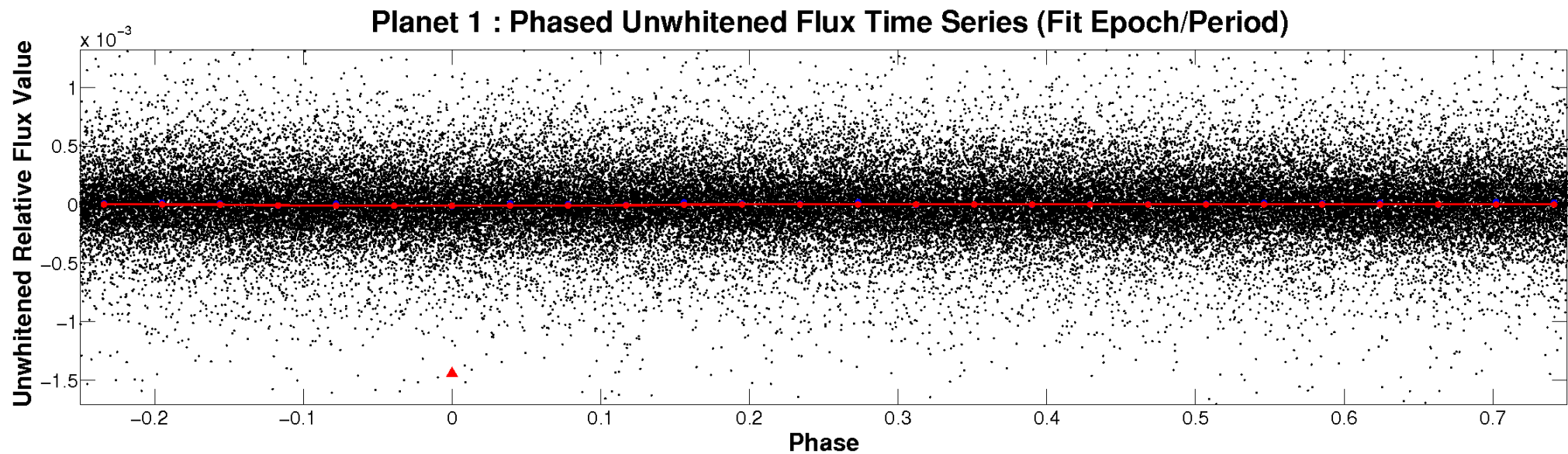


ALT Odd/Even

TCE 009837267-01

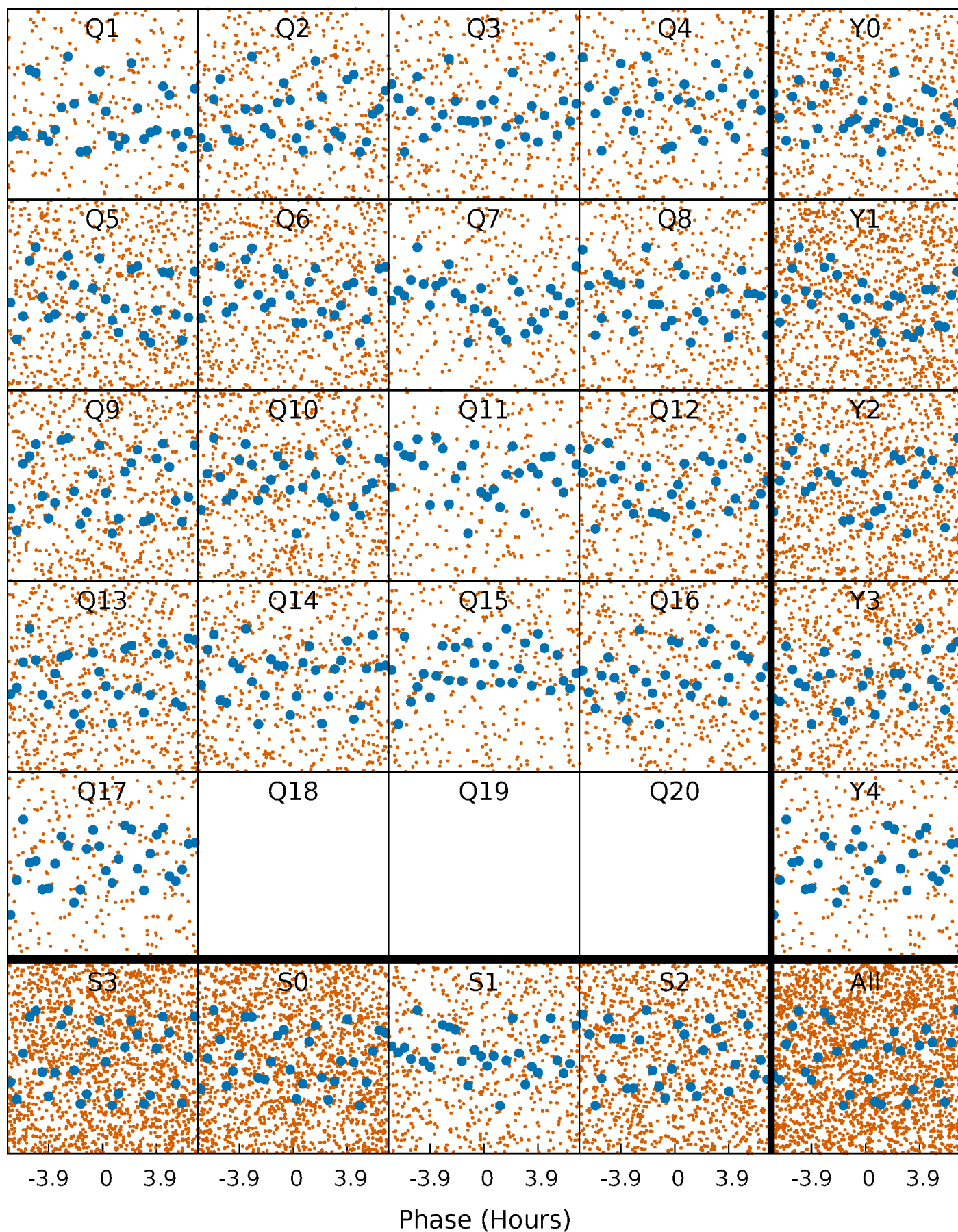


Non-Whitened Vs. Whitened Light Curve



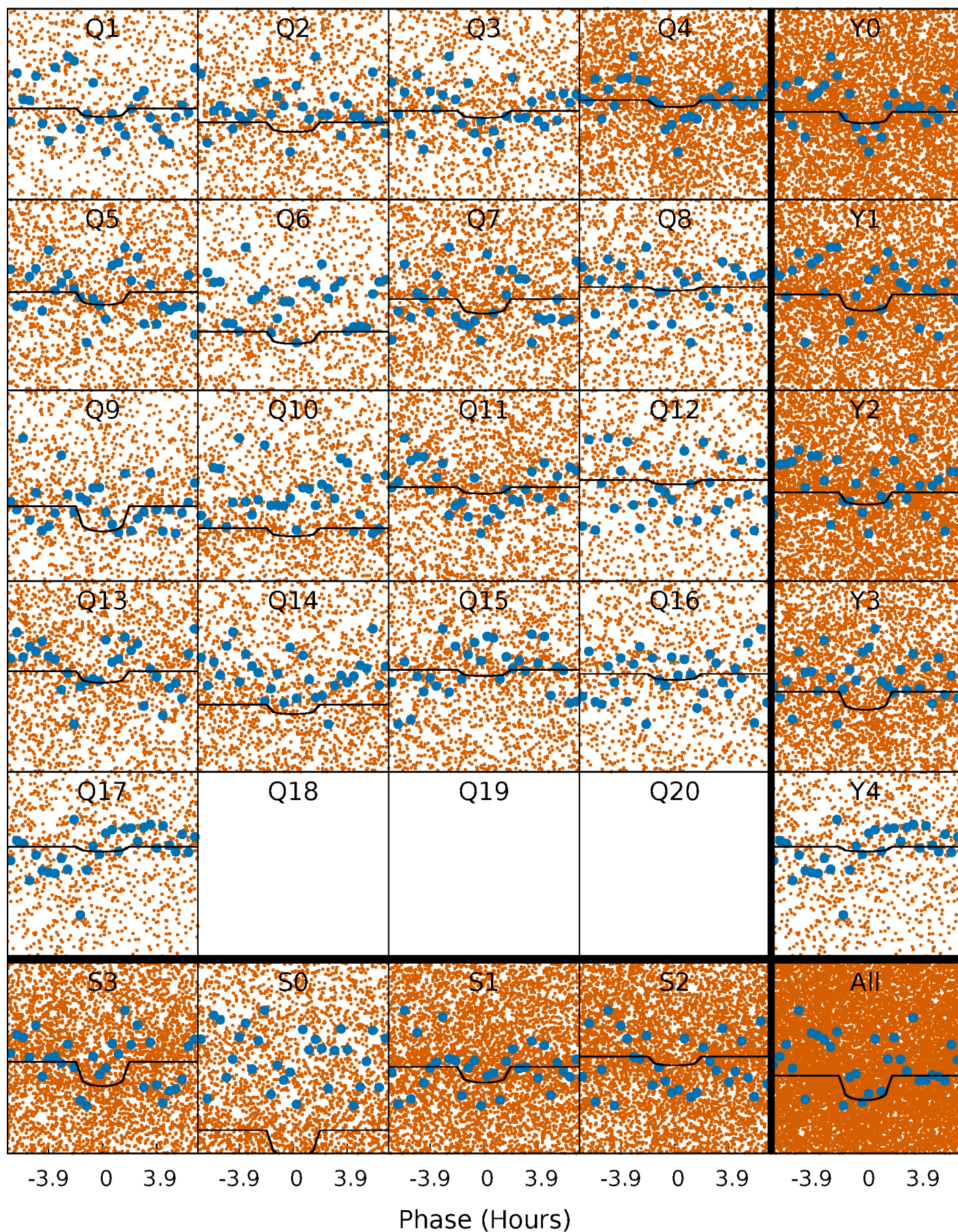
PDC Quarter-Phased Transit Curves

TCE 009837267-01 P= 0.523795 Days $T_0=131.760616$ (BKJD)



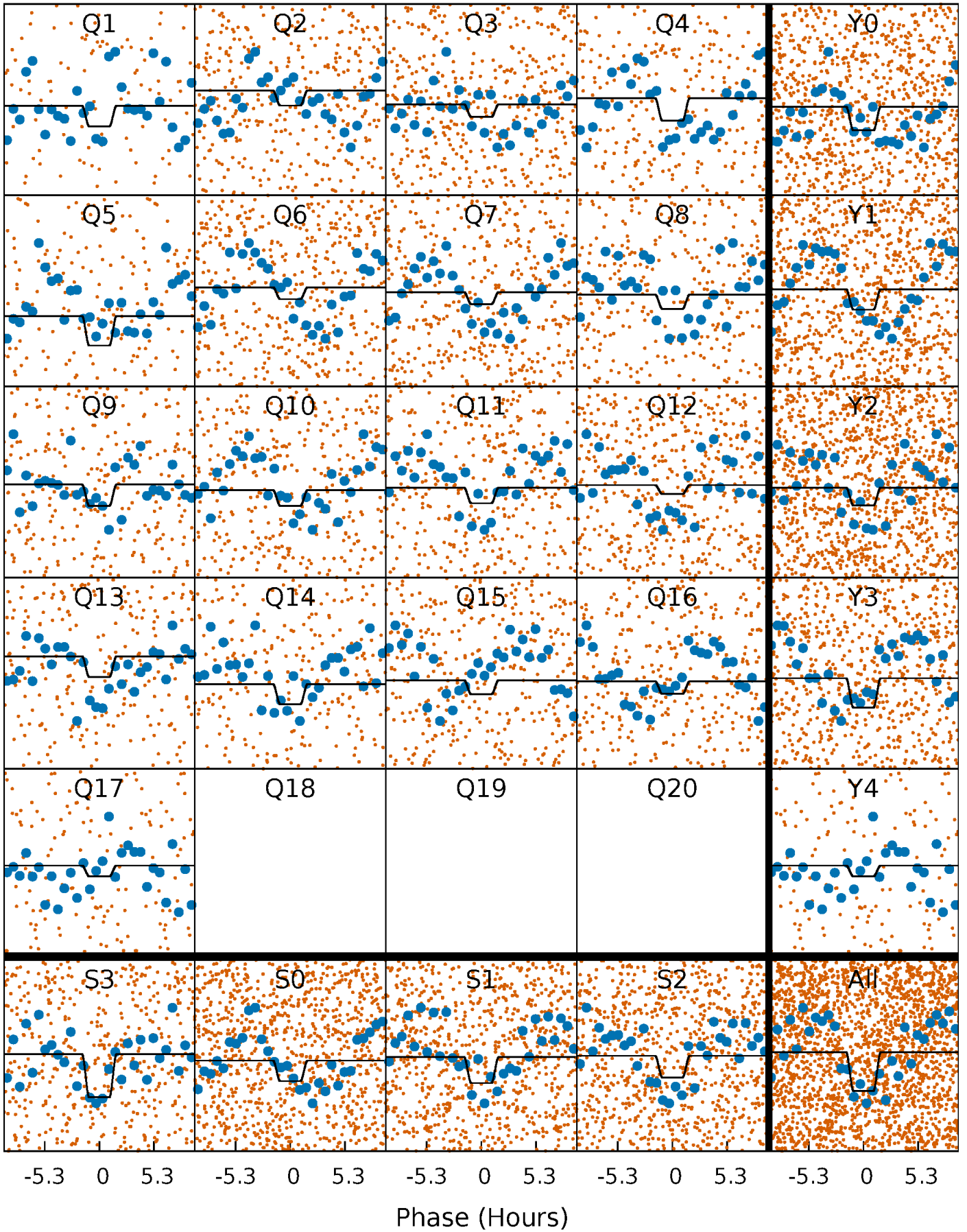
DV Quarter-Phased Transit Curves

TCE 009837267-01 P= 0.523795 Days $T_0=131.760616$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

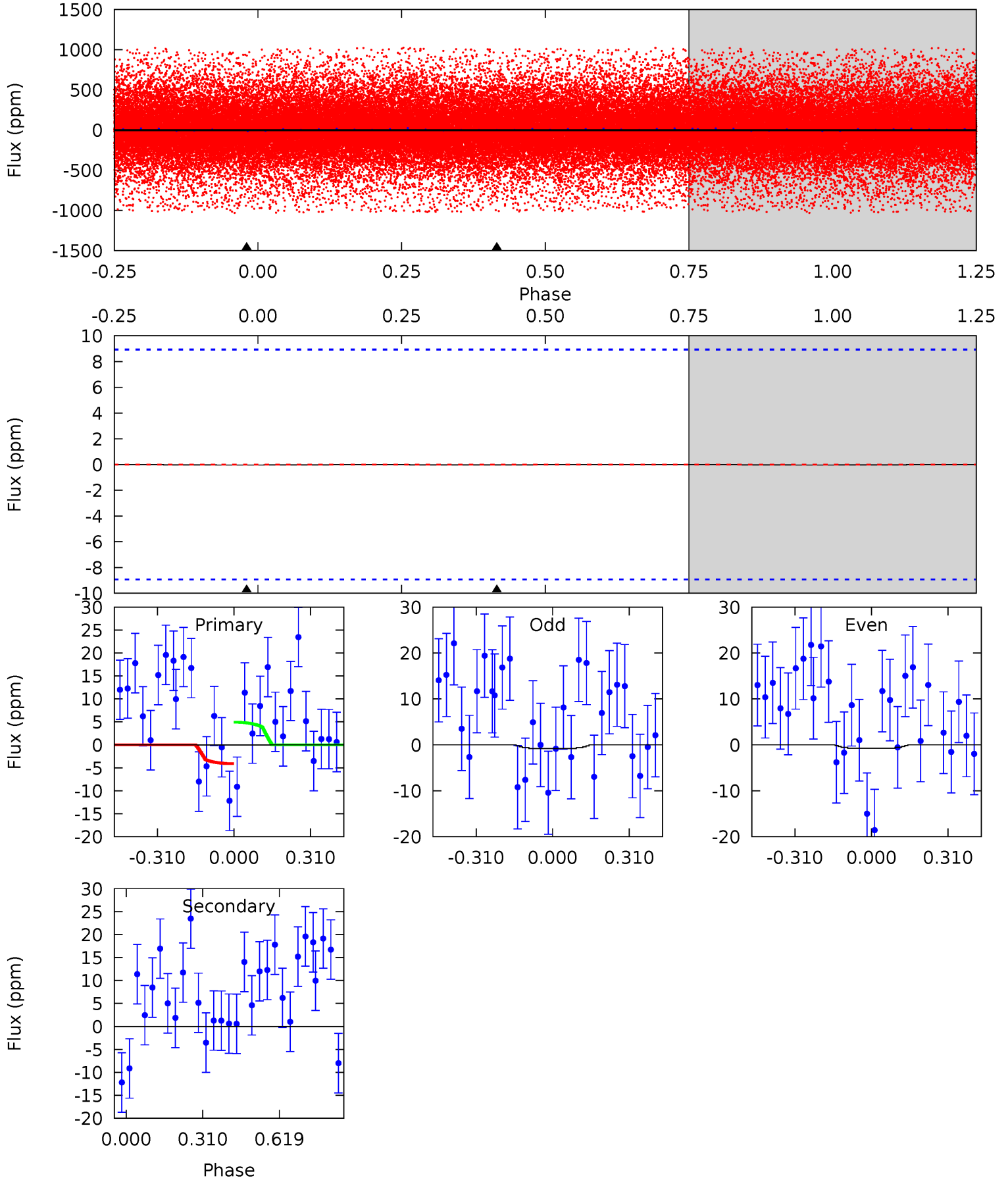
TCE 009837267-01 P= 0.523755 Days $T_0=131.811114$ (BKJD)



DV Model-Shift Uniqueness Test

009837267-01, P = 0.523795 Days, E = 131.236821 Days

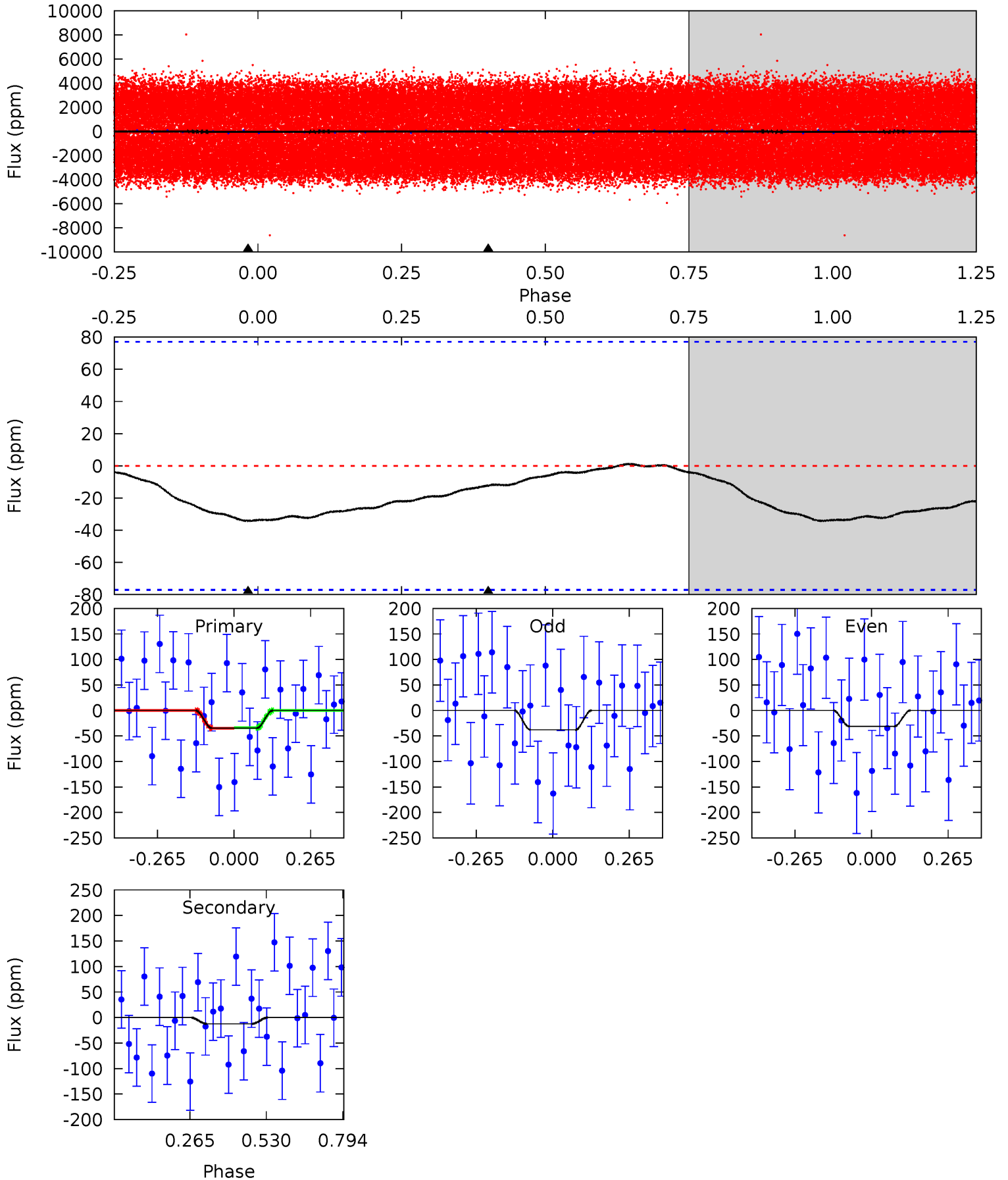
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.02	0.01	0	0	4.32	1.02	0.00	0.02	0.02	0.01	0.01	0.02	1.22	0.03	0.21



Alt Model-Shift Uniqueness Test

009837267-01, P = 0.523755 Days, E = 131.287359 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.95	0.70	0	0	4.36	1.12	0.06	1.95	1.95	0.70	0.70	0.19	0.98	0.04	0.02



Stellar Parameters For KIC 009837267

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8199^{+261}_{-359}	$3.911^{+0.225}_{-0.184}$	$0.360^{+0.050}_{-0.550}$	$2.756^{+0.861}_{-0.861}$	$2.254^{+0.290}_{-0.497}$	$0.152^{+0.214}_{-0.078}$
	+3%/-4%	+6%/-5%	+14%/-153%	+31%/-31%	+13%/-22%	+141%/-51%
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 009837267-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-0 ± 2	$0.93^{+0.53}_{-0.47}$	6453^{+540}_{-561}	-5231^{+9765}_{-1294}	$-0.004^{+0.508}_{-0.456}$
Alt.	-12 ± 18	$1.92^{+0.64}_{-0.60}$	6488^{+567}_{-550}	4598^{+2605}_{-10601}	$0.455^{+0.984}_{-0.686}$

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

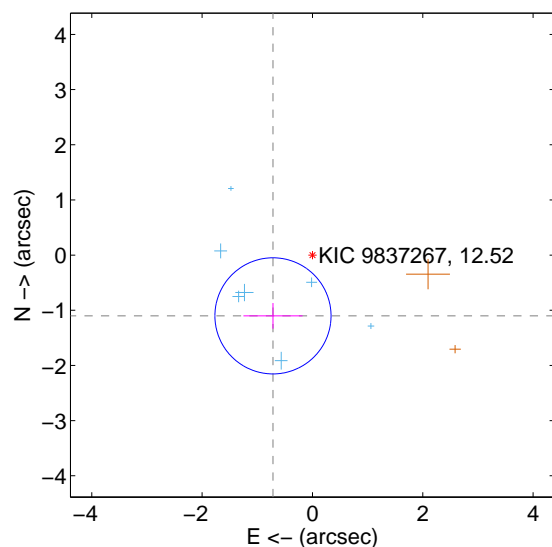
Supplemental centroid analysis for 009837267-01. Kepler magnitude: 12.52. Transit SNR 6.93

There are 7 quarters with good PRF difference image offsets

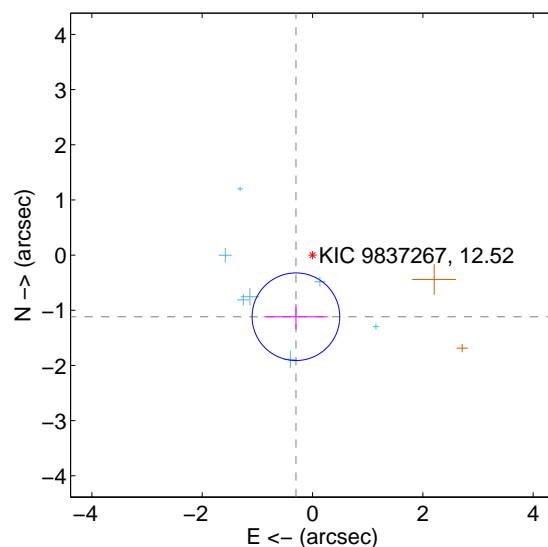
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.313 ± 0.351	3.74	0.715 ± 0.536	-1.101 ± 0.232
PRF-fit source offset from KIC position	1.157 ± 0.265	4.37	0.301 ± 0.575	-1.117 ± 0.226
photometric centroid source offset	1.30 ± 0.79	1.65	-1.28 ± 0.78	-0.17 ± 0.90

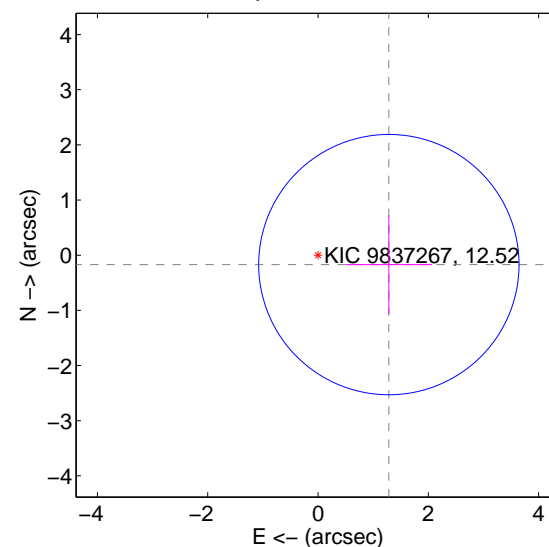
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

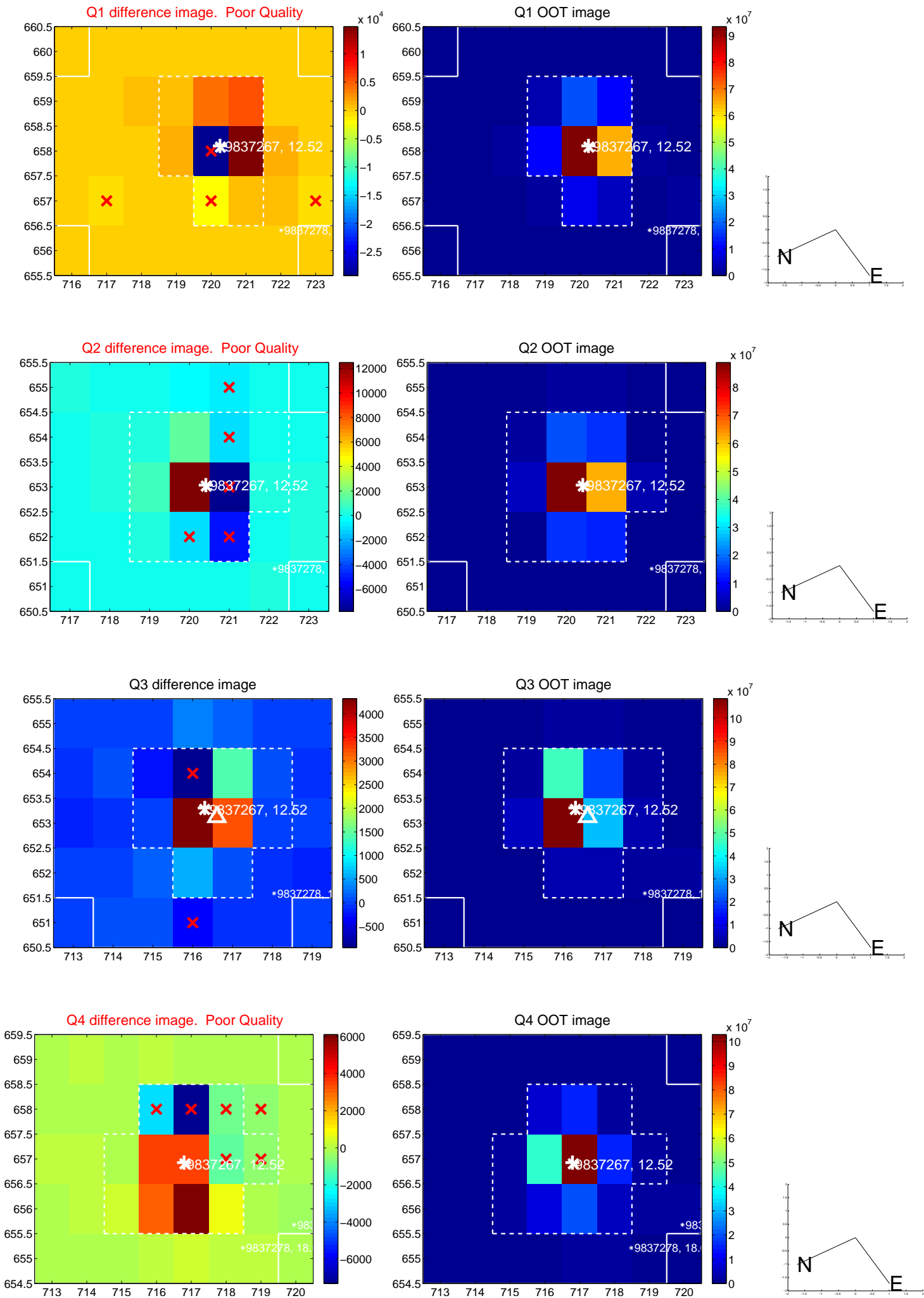


offset from photometric centroids

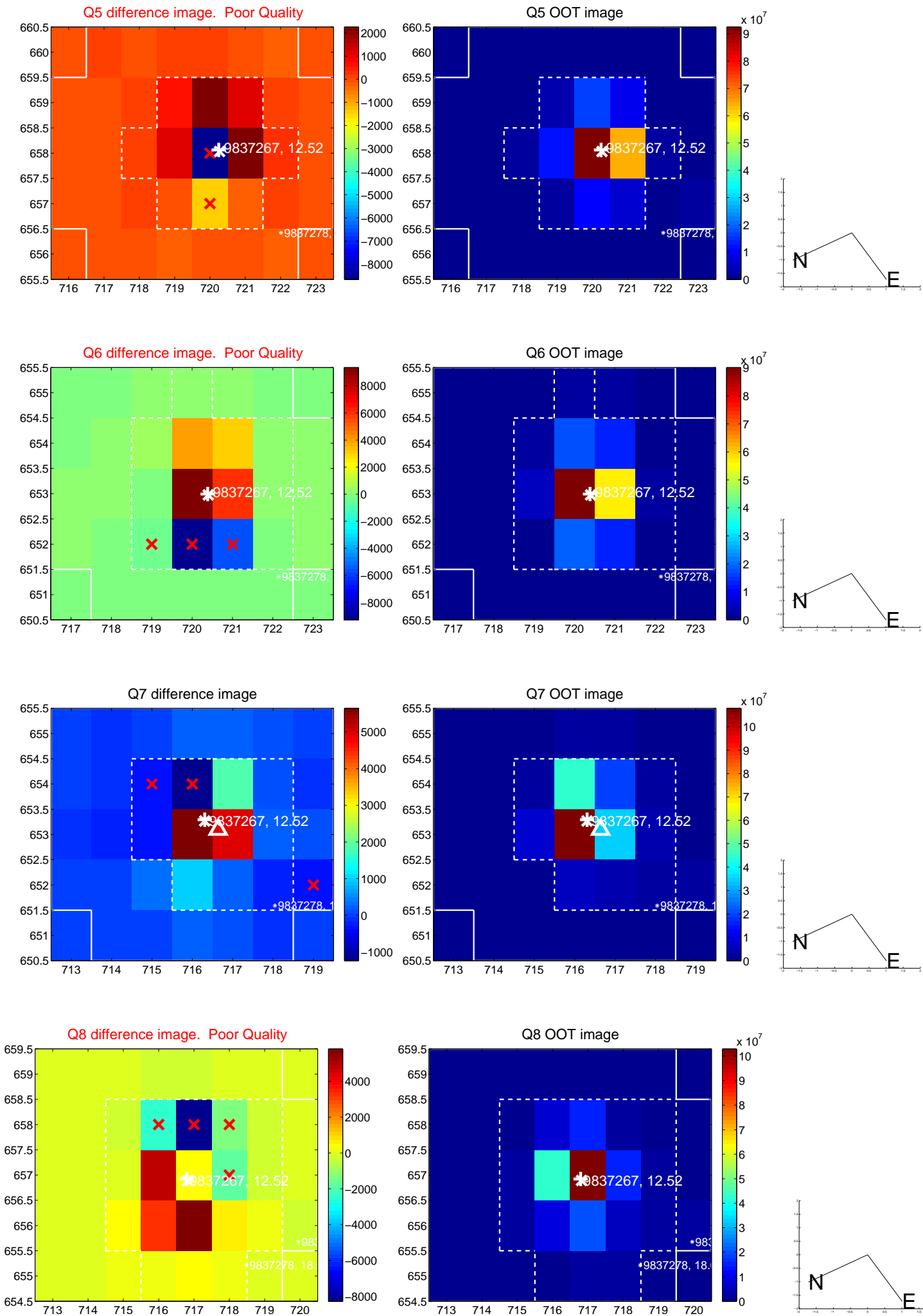


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

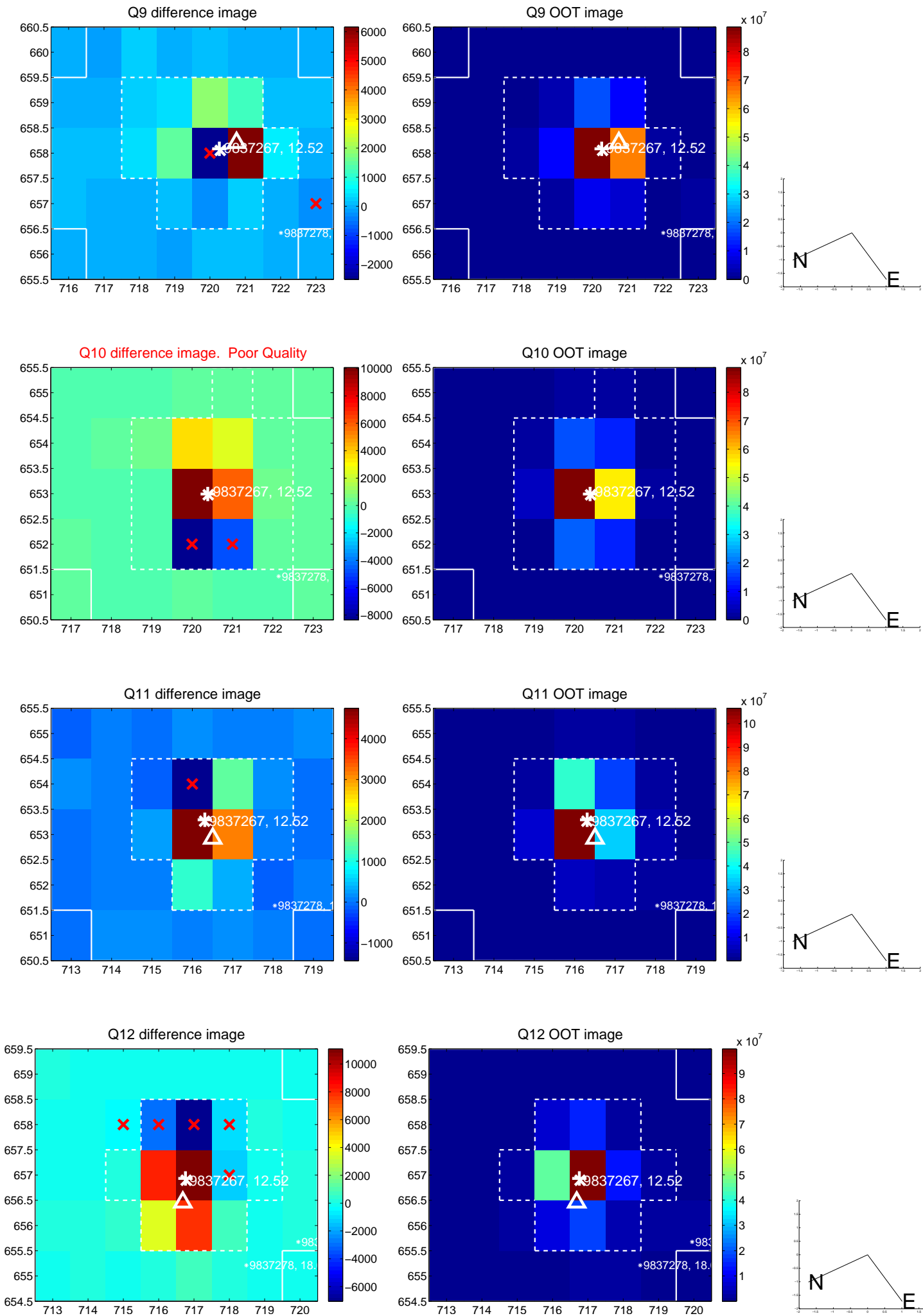
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



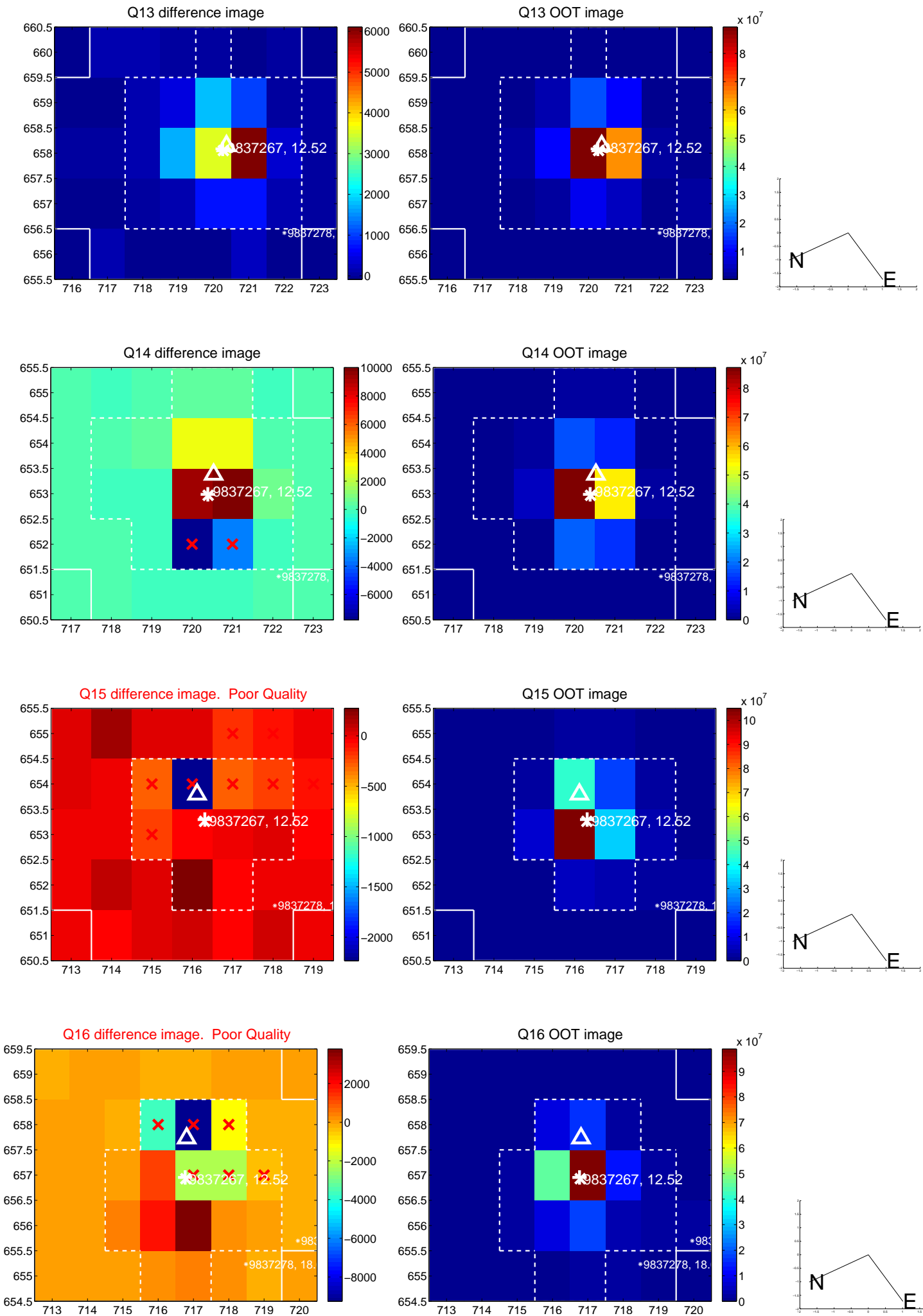
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



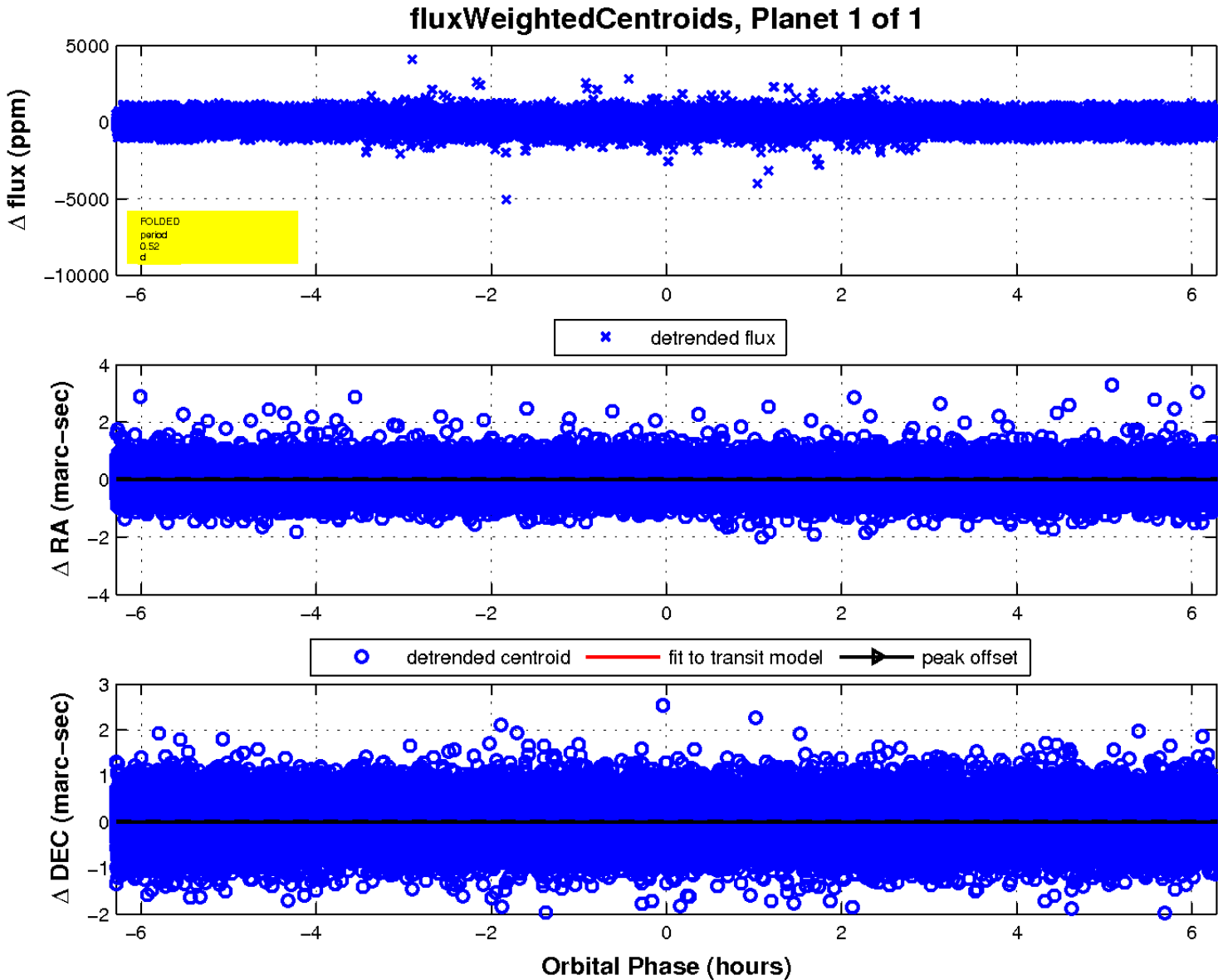
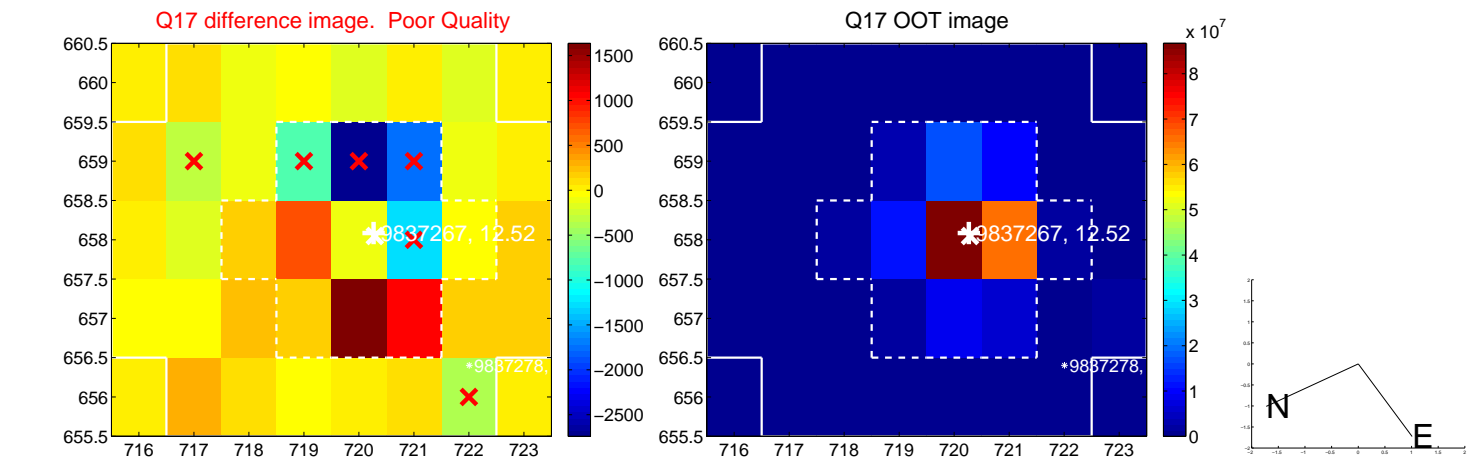
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

