

KIC 011861572

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})
011861572-01	OBS	No	5.651343	132.498557	28.8	28.379	11.3	8.0	1.91	6686	1.03	1338.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011861572-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

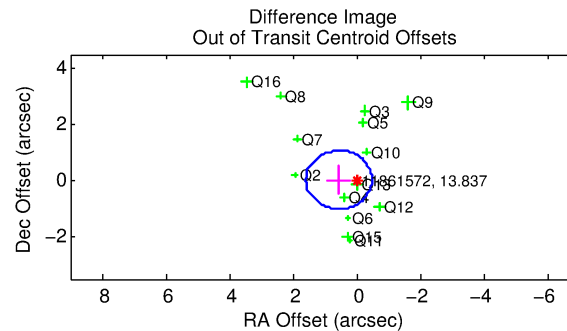
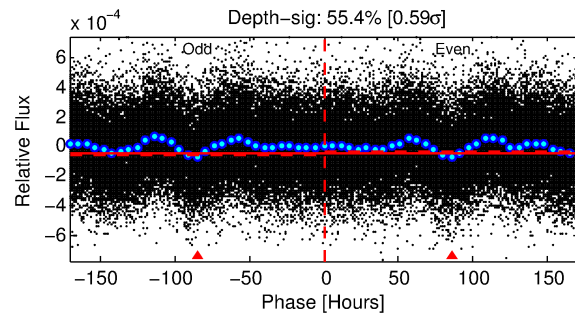
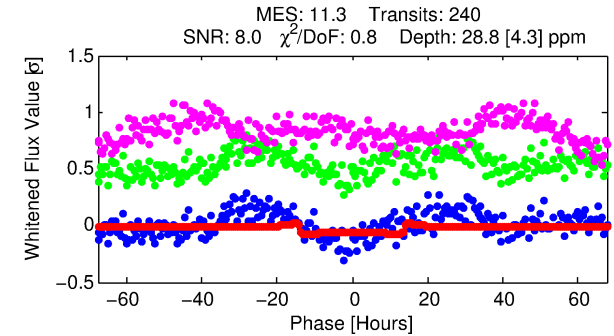
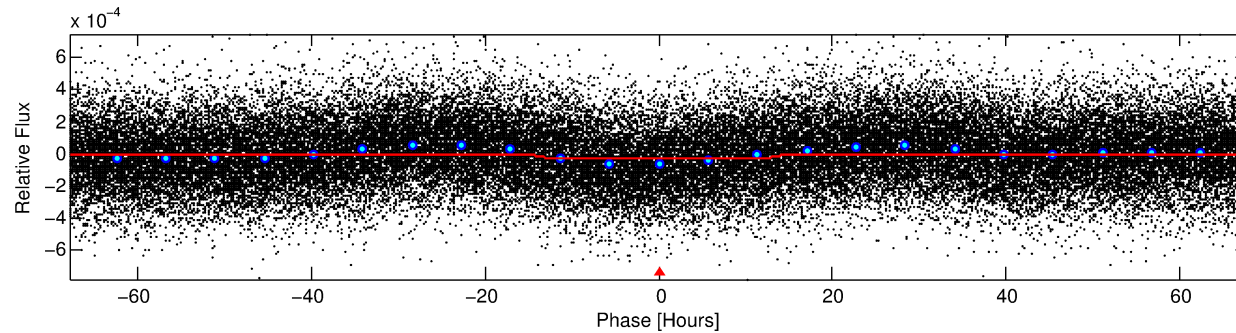
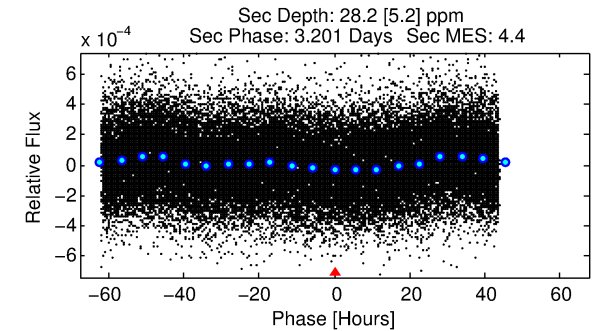
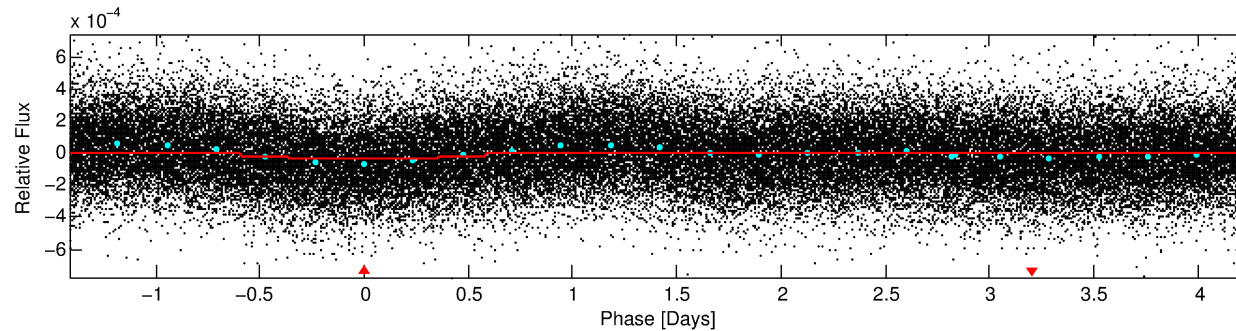
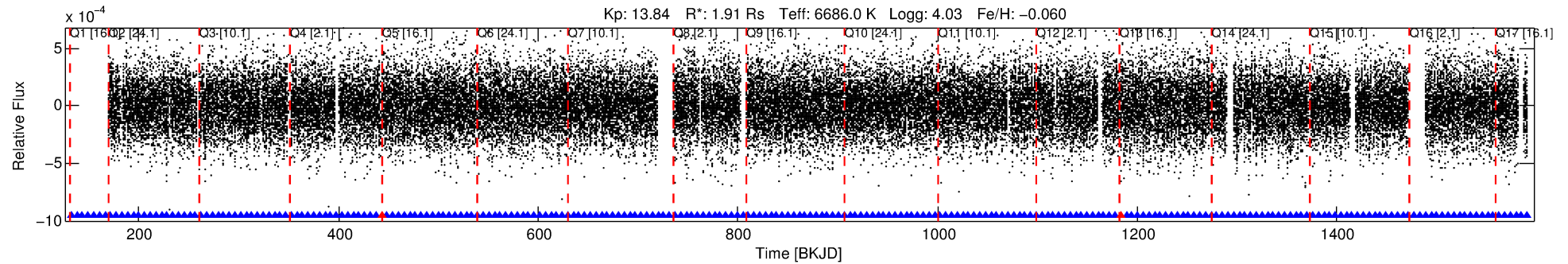
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011861572-01

No Significant Match Found

DV One-Page Summary

KIC: 11861572 Candidate: 1 of 1 Period: 5.651 d



DV Fit Results:

Period = 5.65134 [0.00013] d
Epoch = 132.4986 [0.0166] BKJD
Rp/R* = 0.0050 [0.0049]
a/R* = 1.63 [5.59]
b = 0.16 [33.87]
Seff = 1338.60 [622.78]
Teq = 1542 [179] K
Rp = 1.04 [1.08] Re
a = 0.0700 [0.0198] AU
Ag = 71.00 [145.21] [0.48σ]
Teffp = 6922 [3468] K [1.55σ]

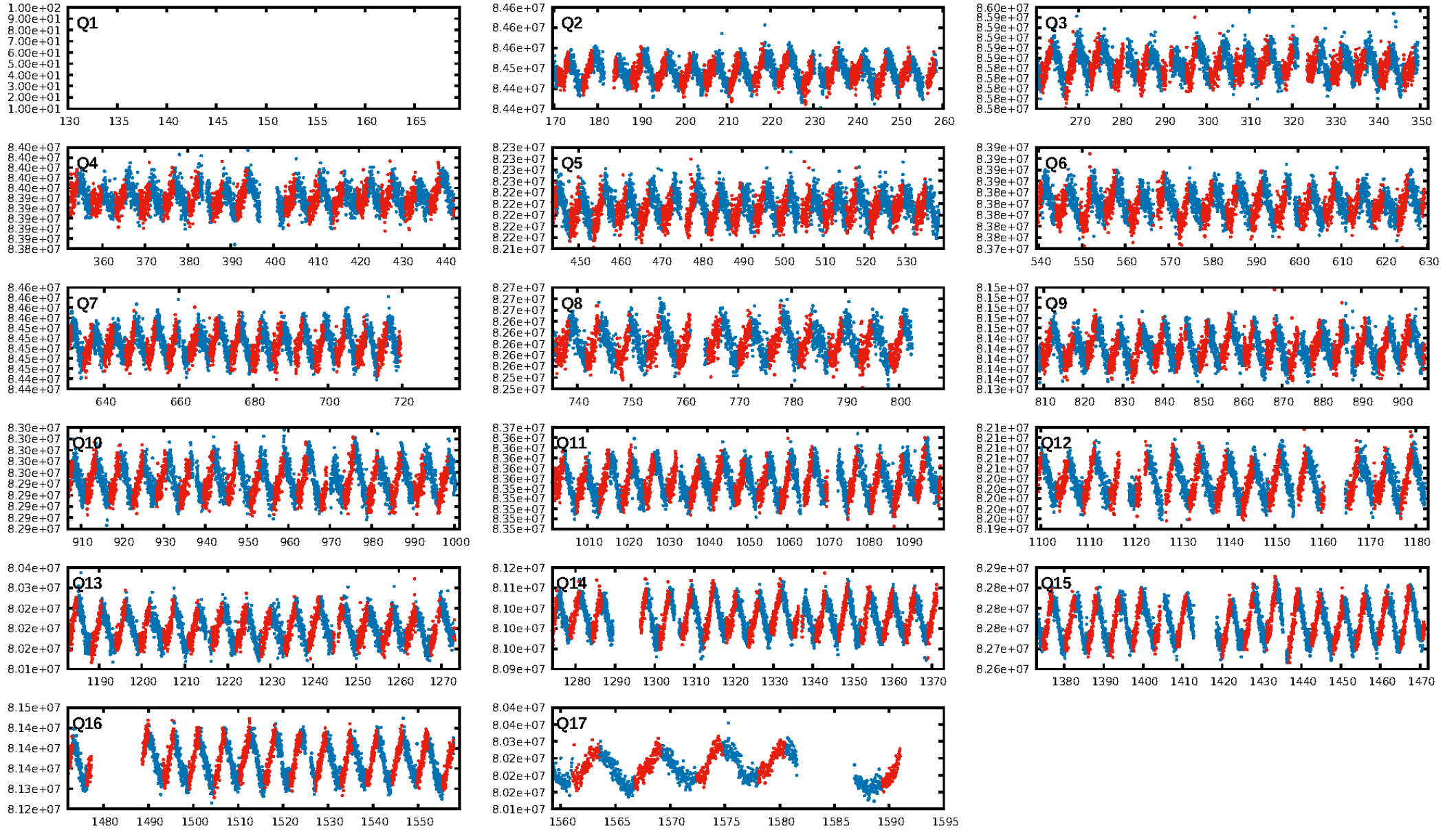
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.18e-28
RollingBand-fgt: 0.99 [233/235]
GhostDiagnostic-chr: 1.006
Centroid-sig: 32.5%
Centroid-so: 0.938 arcsec [0.89σ]
OotOffset-rm: 0.553 arcsec [1.60σ]
OotOffset-st: 3/4/4/3 [14]
KicOffset-rm: 0.528 arcsec [1.51σ]
KicOffset-st: 3/4/4/3 [14]
DiffImageQuality-fgm: 0.71 [10/14]
DiffImageOverlap-fno: 1.00 [16/16]

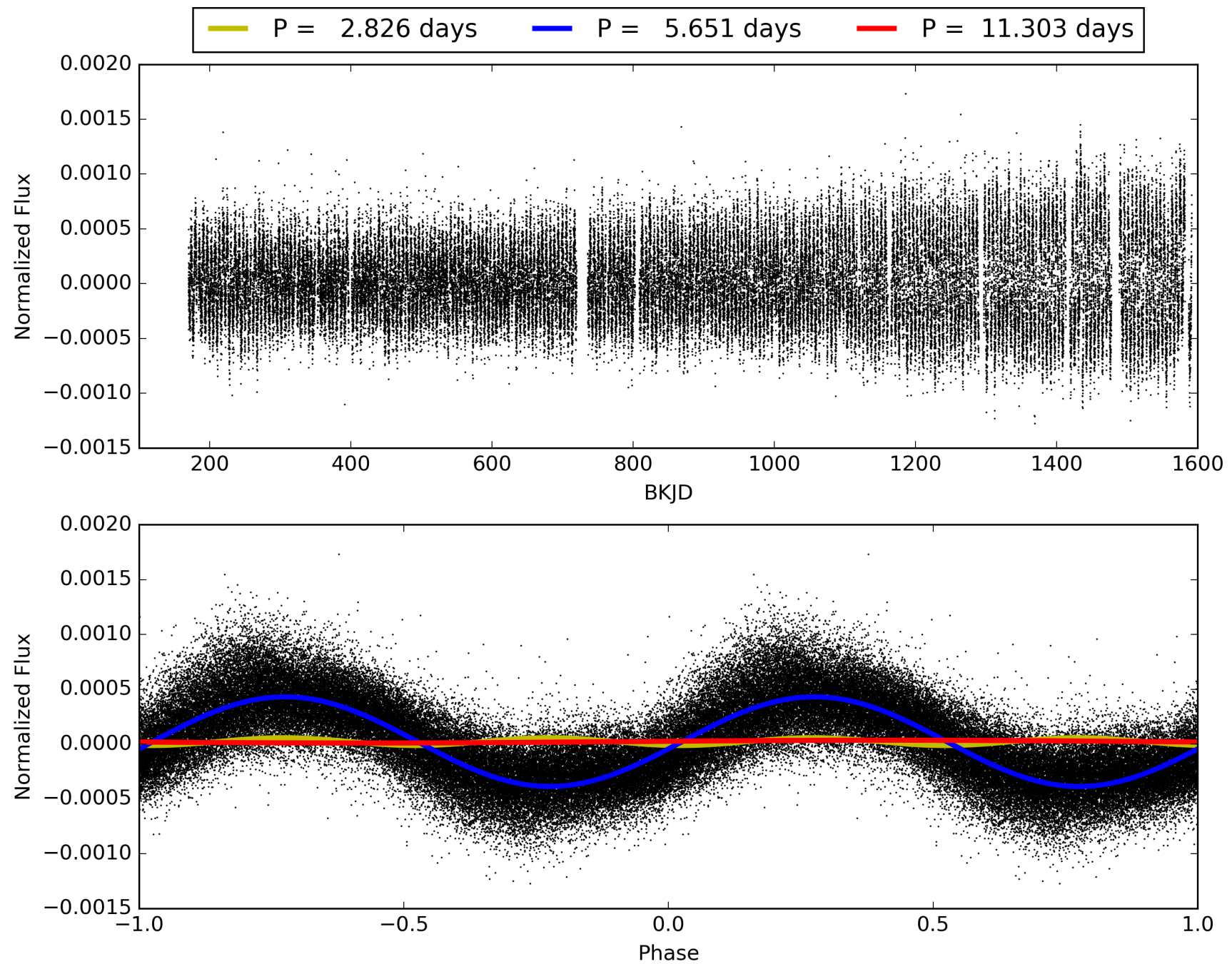
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:52:02 Z

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

TCE 011861572-01, PDC Light Curves

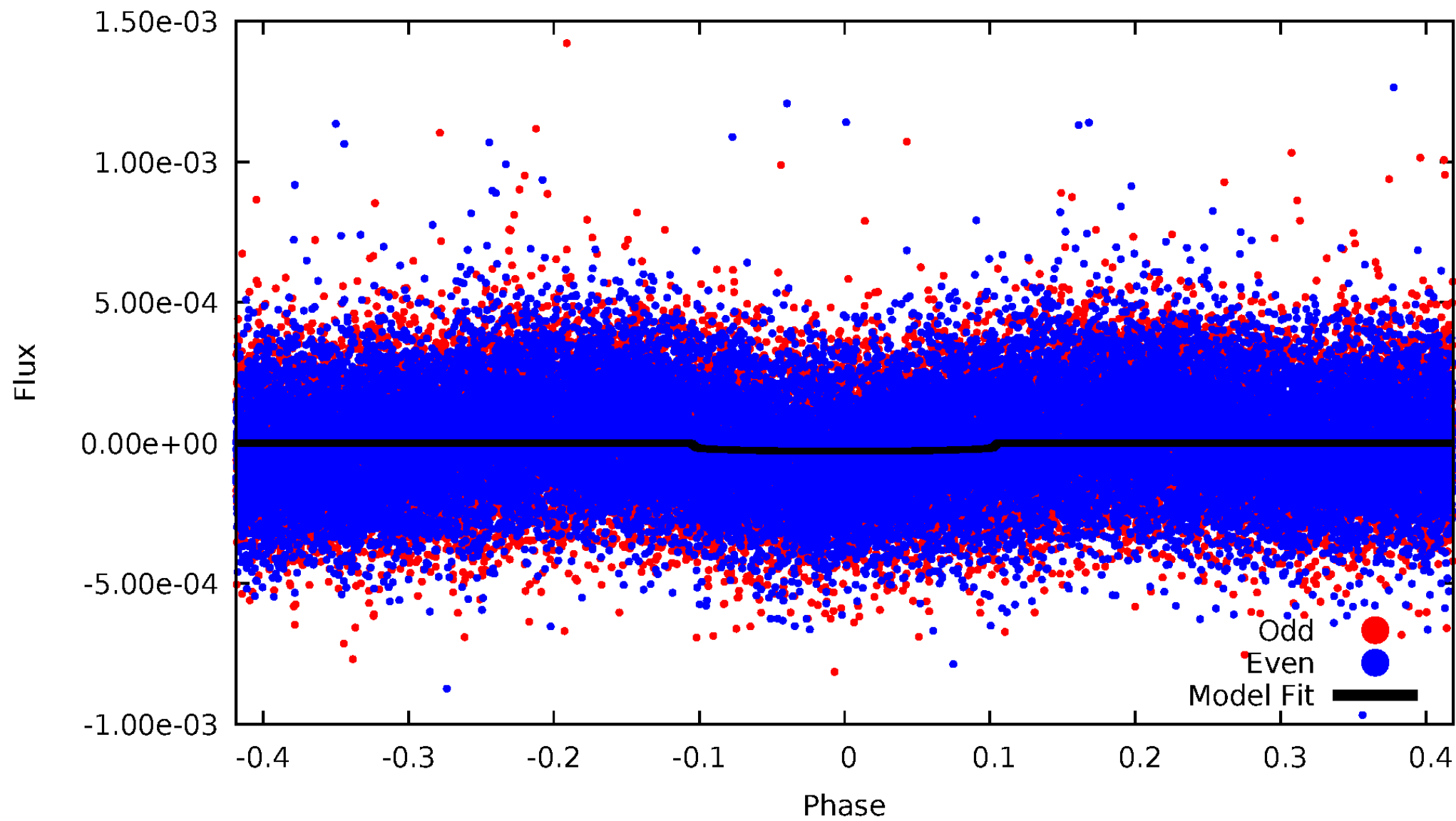


TCE 011861572-01



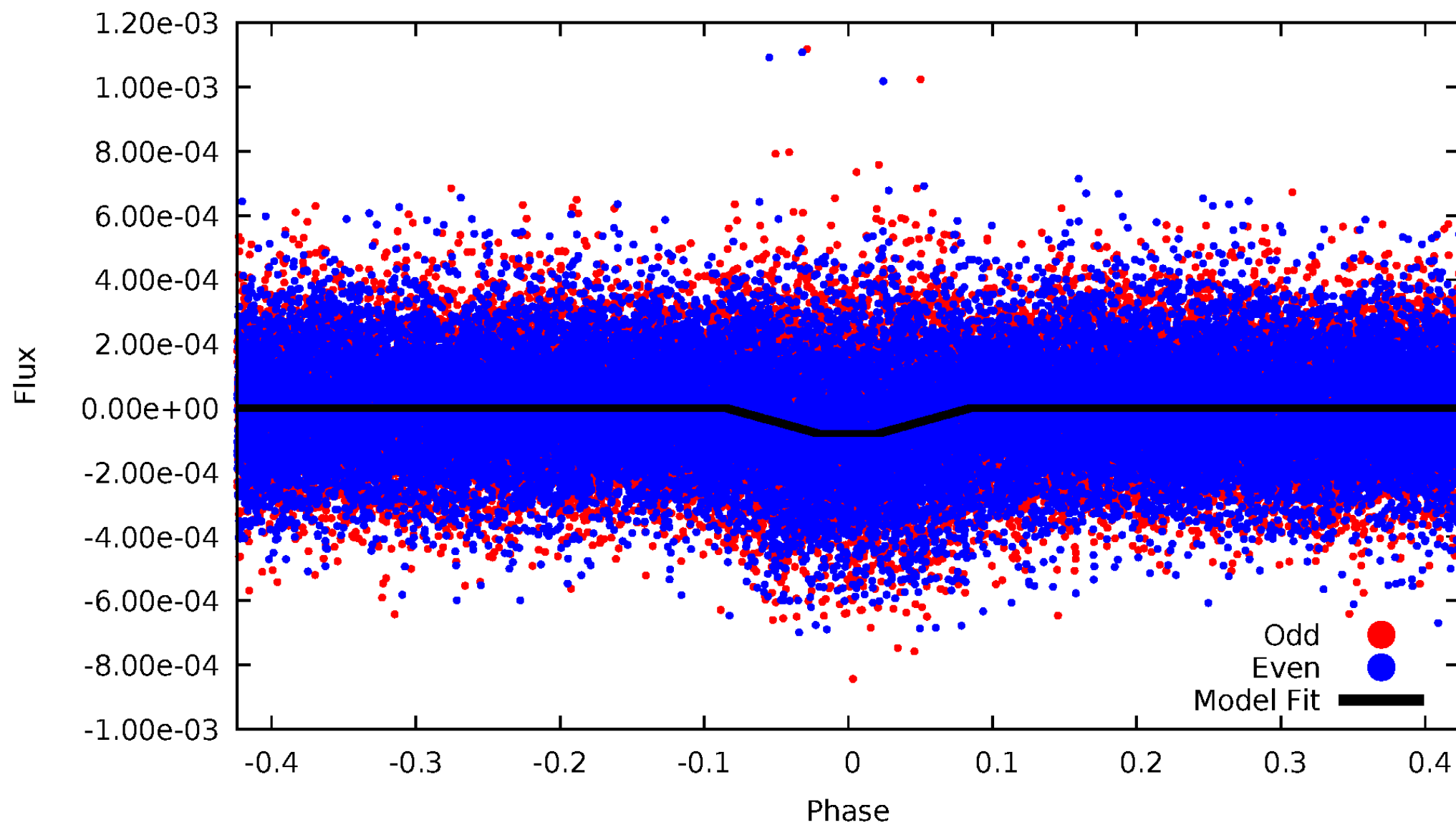
DV Odd/Even

TCE 011861572-01

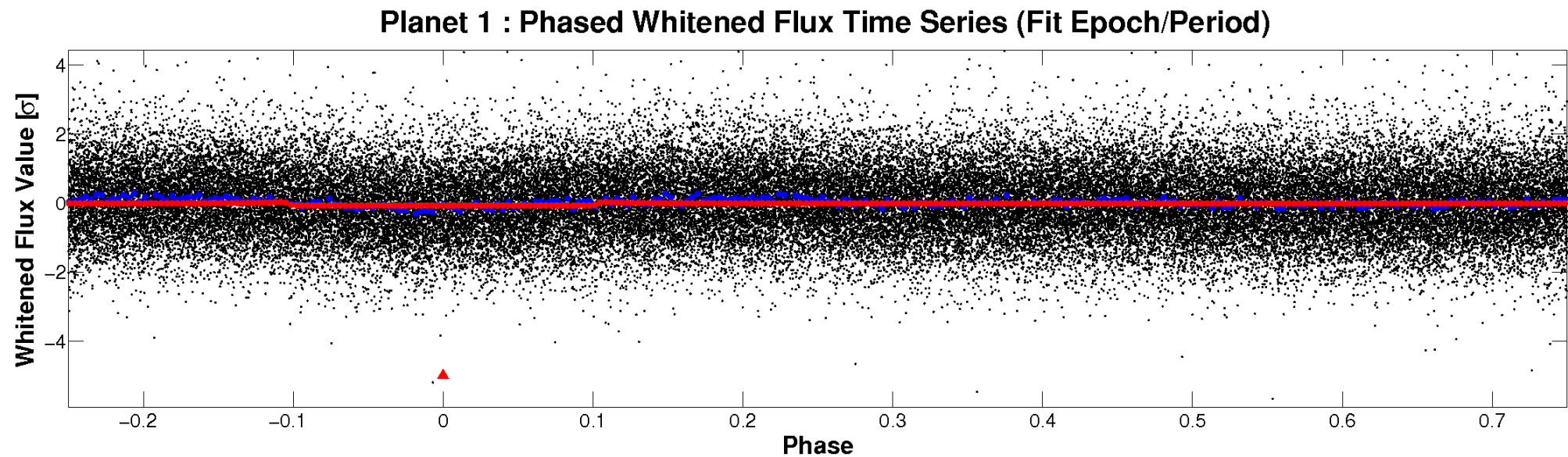
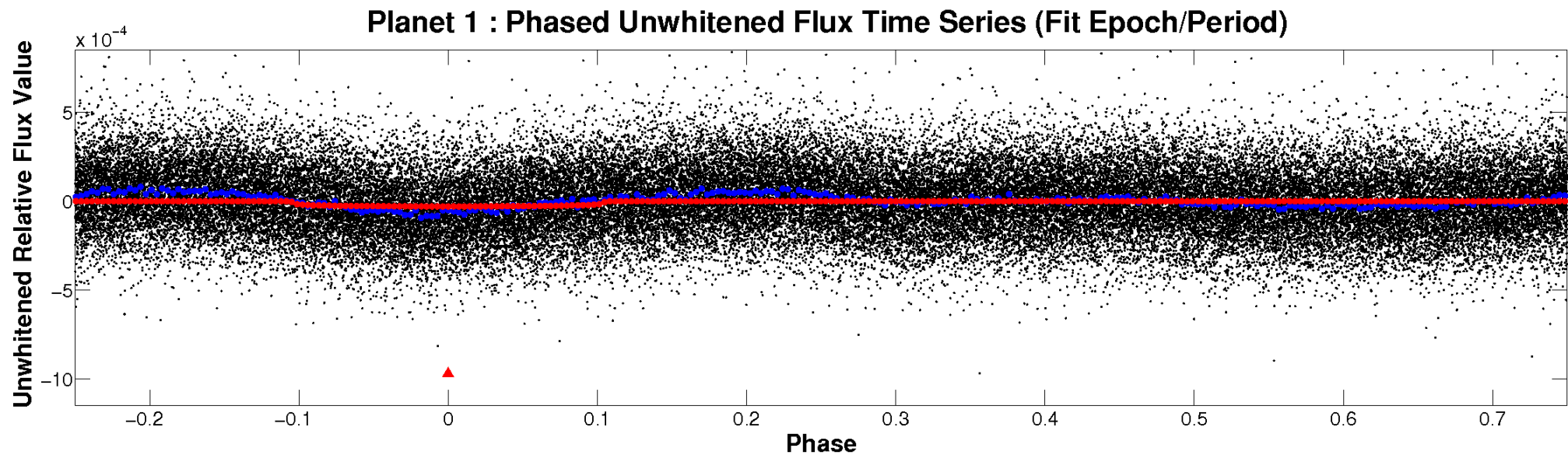


ALT Odd/Even

TCE 011861572-01

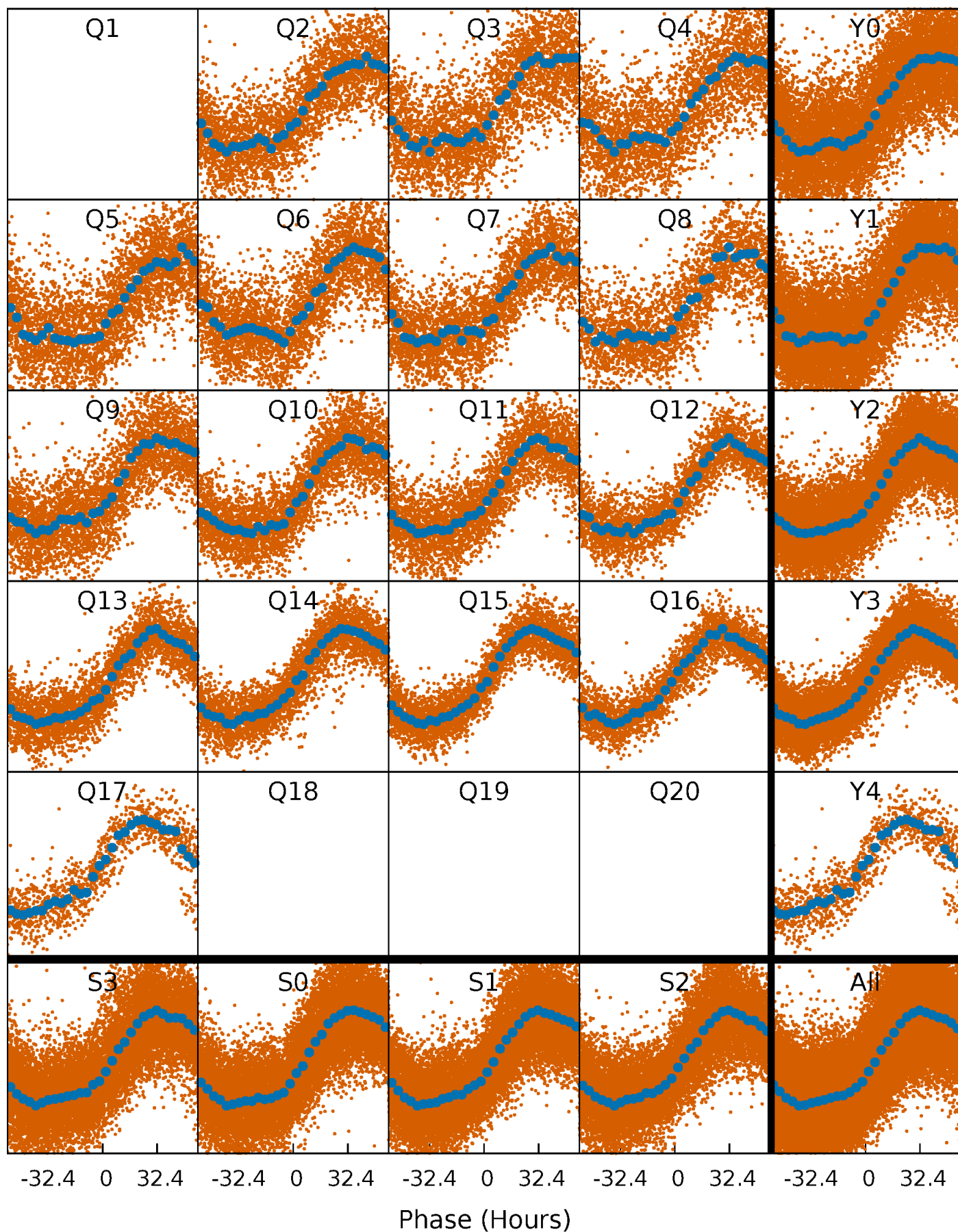


Non-Whitened Vs. Whitened Light Curve



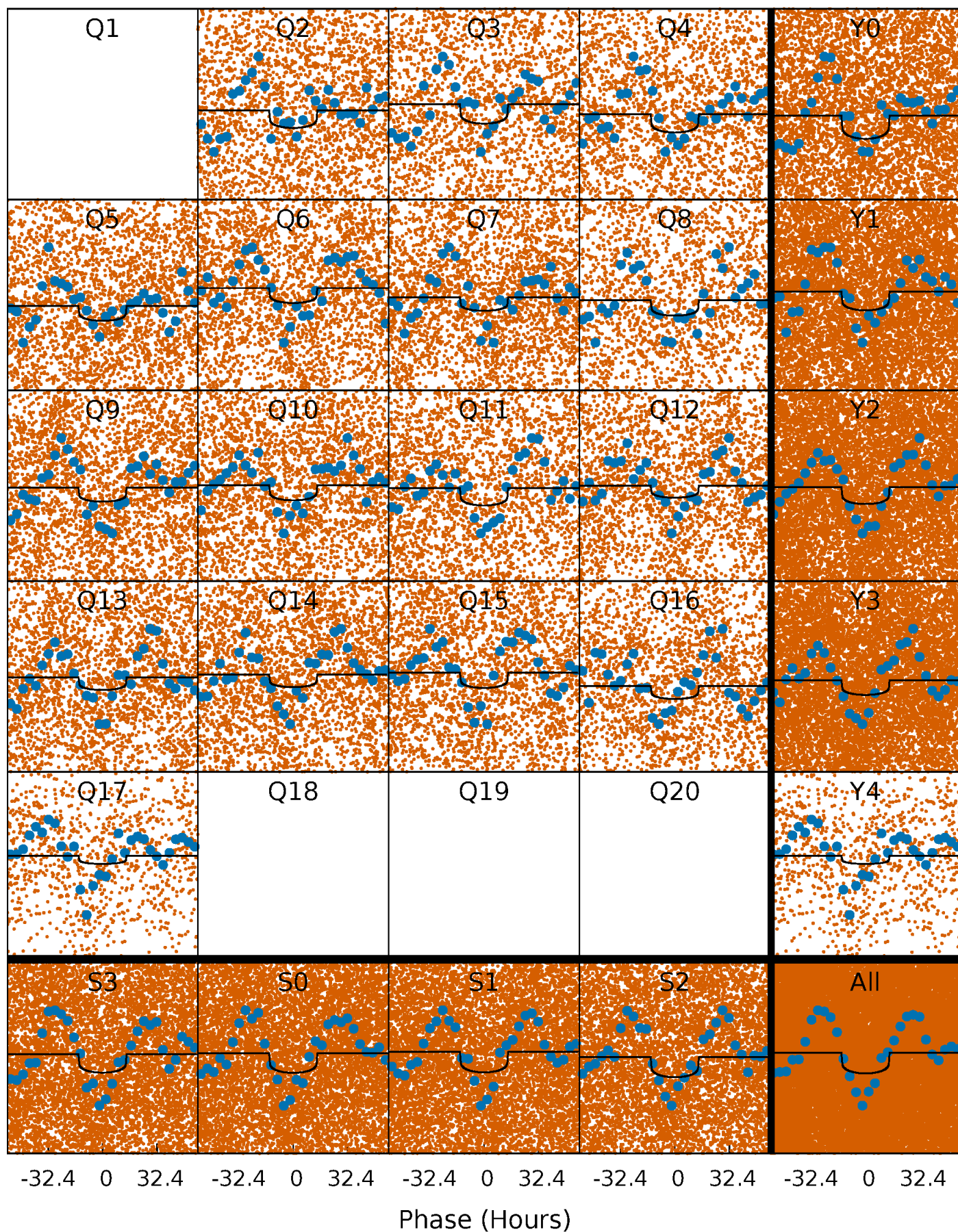
PDC Quarter-Phased Transit Curves

TCE 011861572-01 P= 5.651343 Days $T_0=132.498557$ (BKJD)



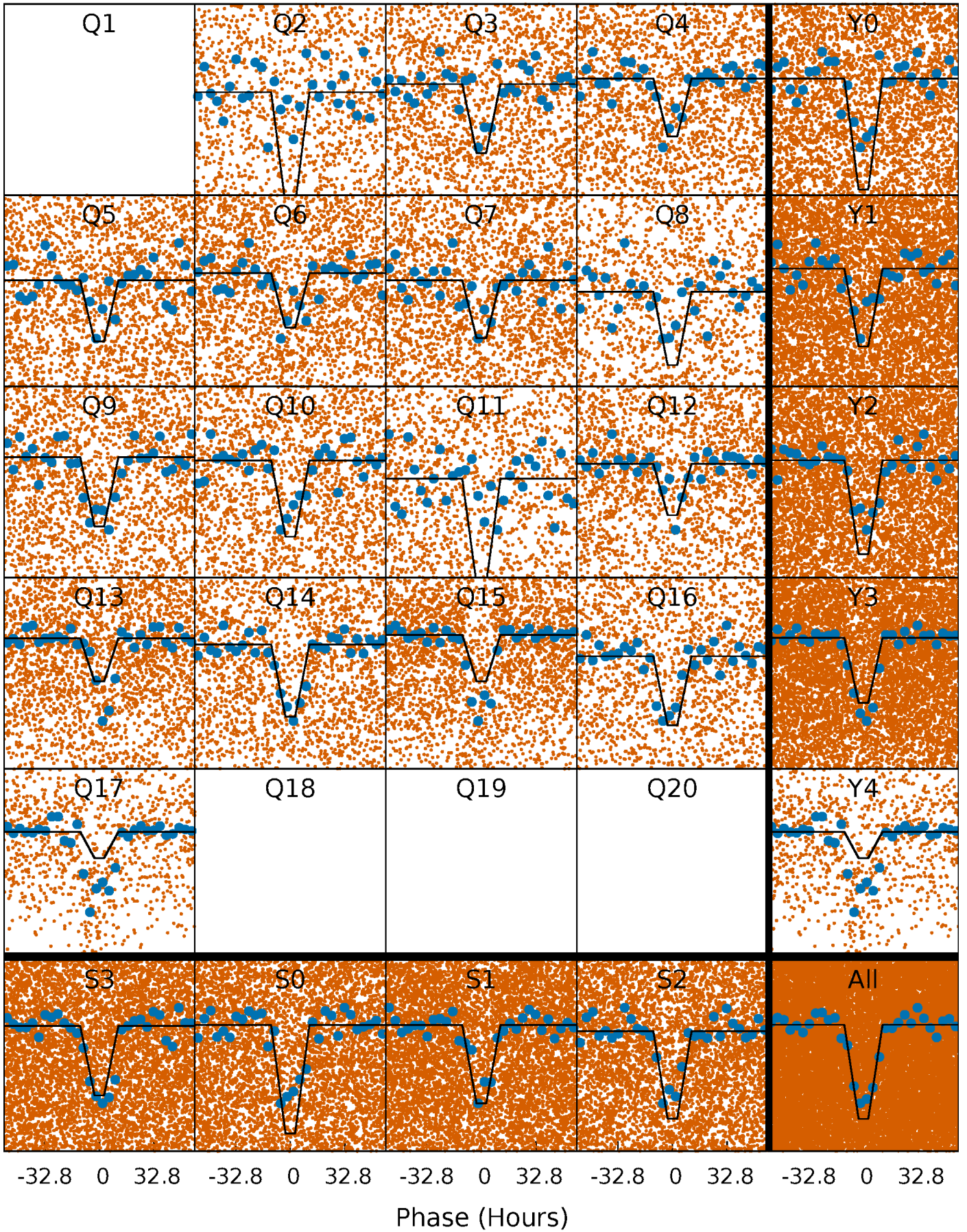
DV Quarter-Phased Transit Curves

TCE 011861572-01 P= 5.651343 Days $T_0=132.498557$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

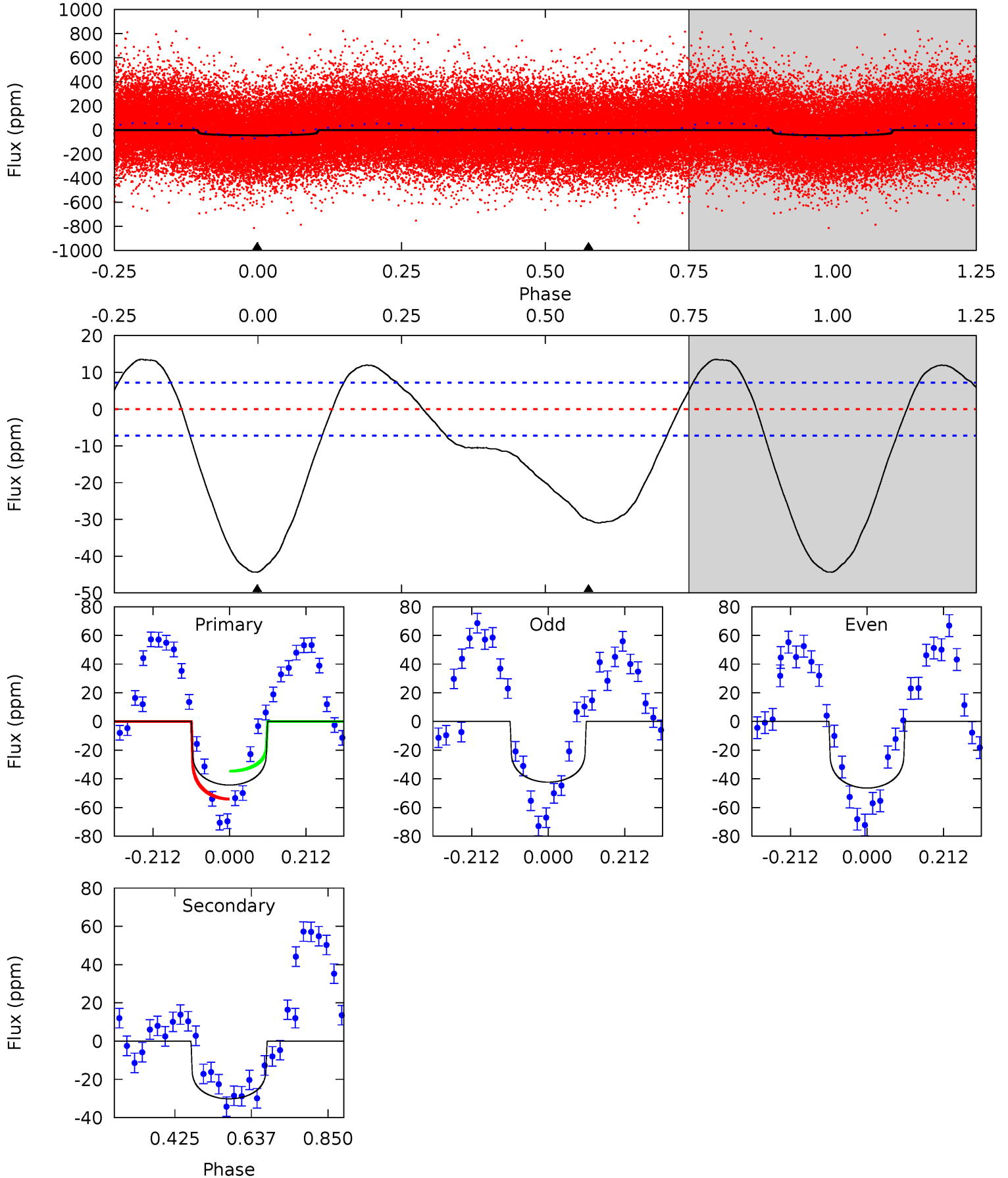
TCE 011861572-01 P= 5.650708 Days $T_0=132.496644$ (BKJD)



DV Model-Shift Uniqueness Test

011861572-01, P = 5.651343 Days, E = 132.498557 Days

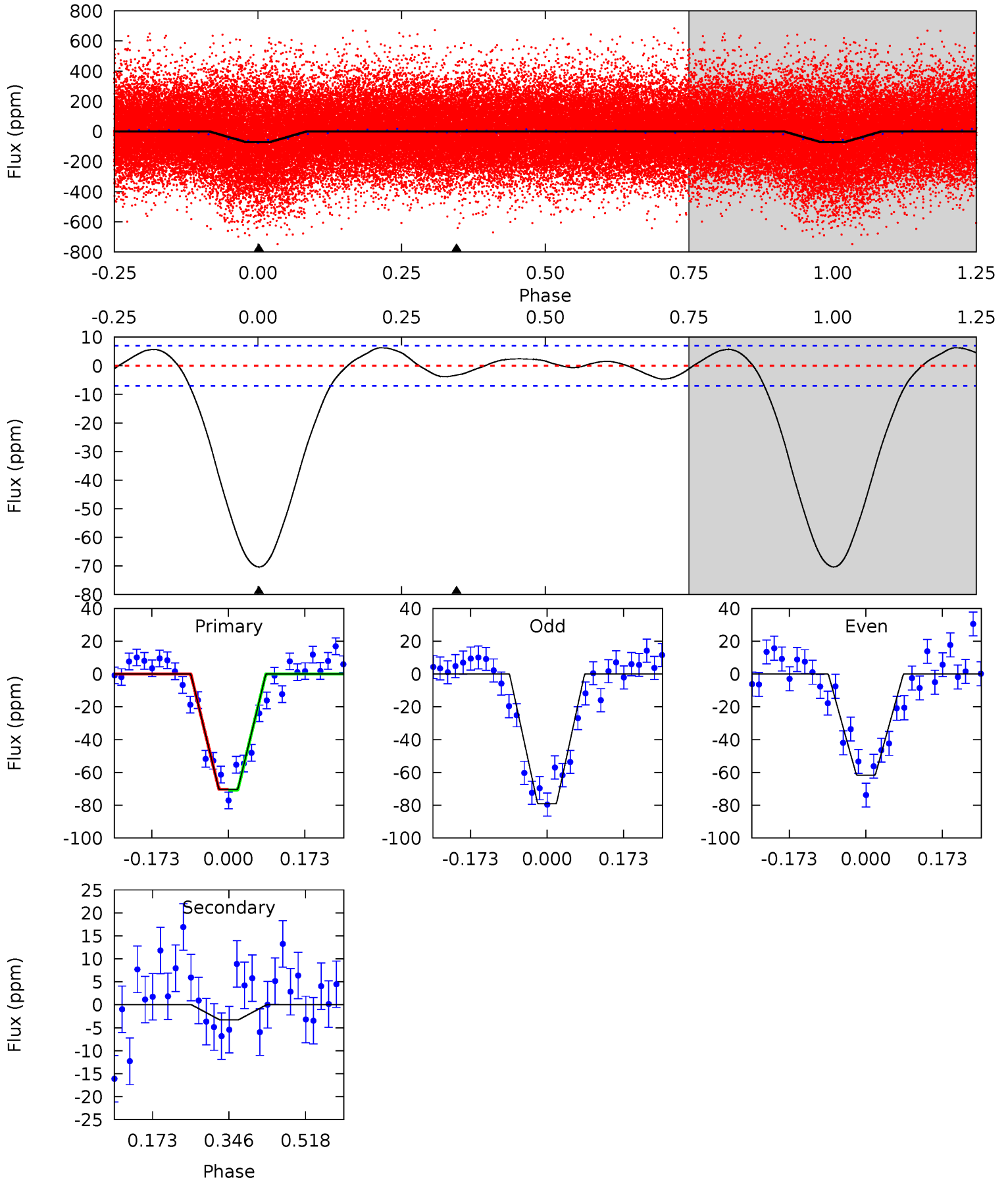
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.1	18.4	0	0	4.40	1.25	4.20	27.1	27.1	18.4	18.4	1.25	1.11	0.23	5.88



Alt Model-Shift Uniqueness Test

011861572-01, P = 5.650708 Days, E = 132.496644 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.6	2.08	0	0	4.45	1.36	1.78	44.6	44.6	2.08	2.08	5.54	1.19	0.08	0.16



Stellar Parameters For KIC 011861572

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6686^{+189}_{-259}	$4.030^{+0.252}_{-0.168}$	$-0.060^{+0.250}_{-0.300}$	$1.914^{+0.594}_{-0.594}$	$1.436^{+0.196}_{-0.294}$	$0.288^{+0.468}_{-0.137}$
	+3%/-4%	+6%/-4%	+417%/-500%	+31%/-31%	+14%/-20%	+162%/-47%
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 011861572-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-30 ± 2	$1.21^{+1.04}_{-0.76}$	2131^{+178}_{-183}	6325^{+5541}_{-1543}	55^{+354}_{-39}
Alt.	-3 ± 2	$1.78^{+1.20}_{-0.88}$	2123^{+177}_{-183}	3365^{+1066}_{-669}	$2.495^{+8.353}_{-1.765}$

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

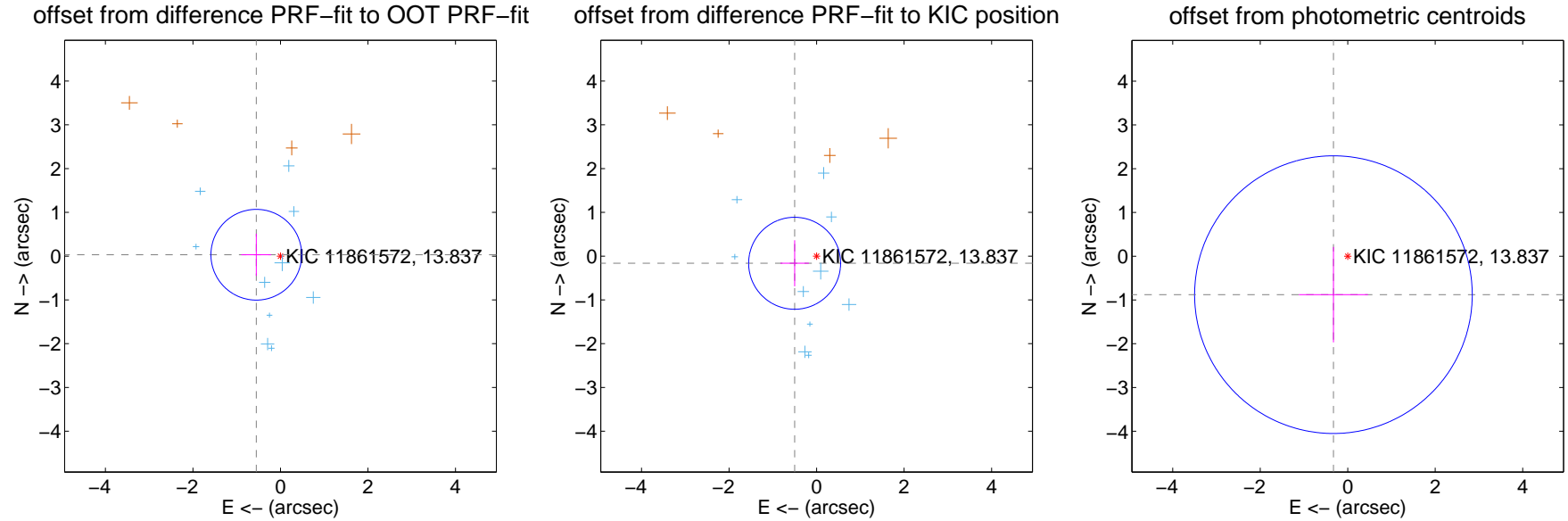
DV Centroid Data

Supplemental centroid analysis for 011861572-01. Kepler magnitude: 13.84. Transit SNR 7.98

There are 10 quarters with good PRF difference image offsets

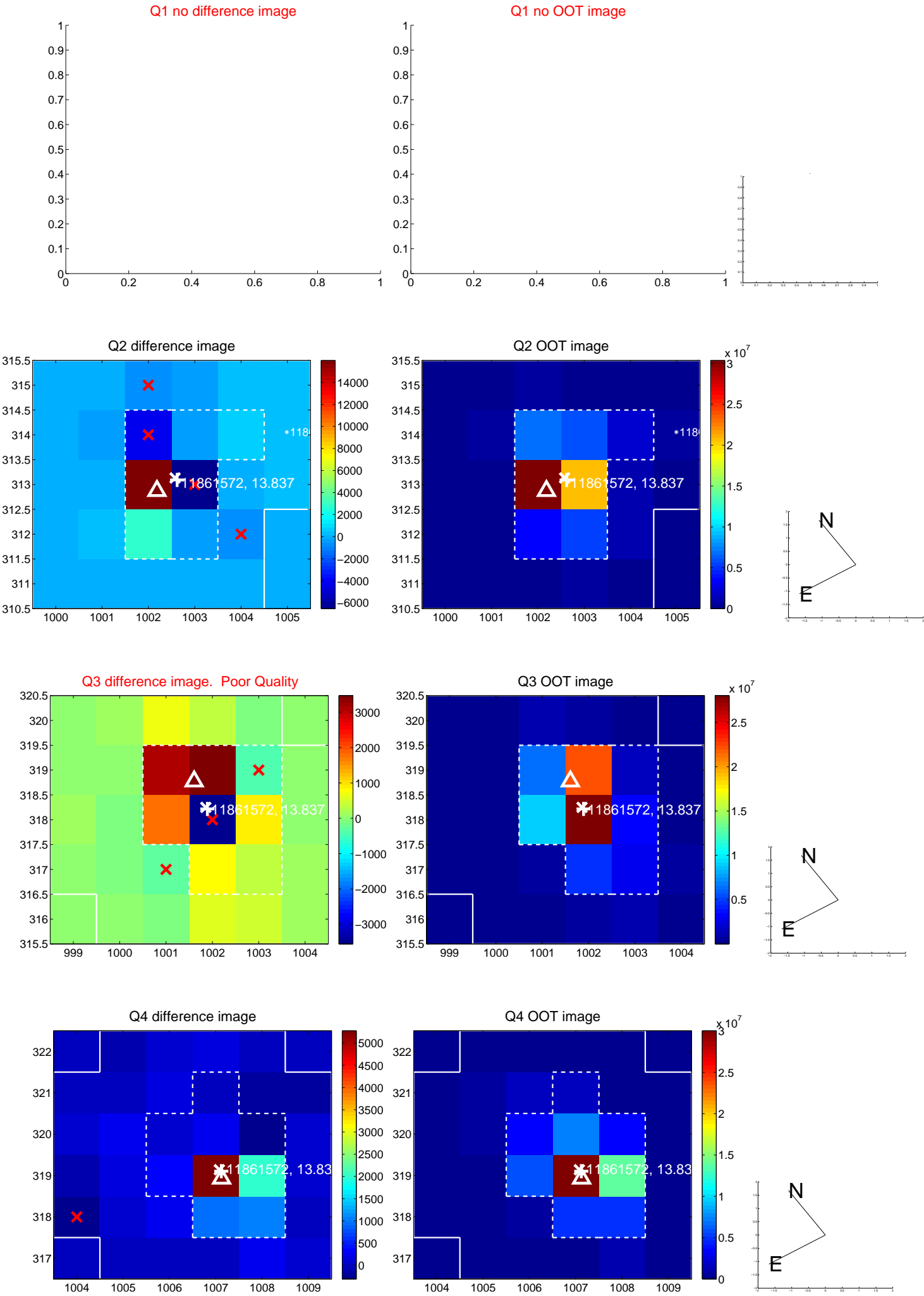
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.553 ± 0.346	1.60	0.552 ± 0.342	0.032 ± 0.481
PRF-fit source offset from KIC position	0.528 ± 0.350	1.51	0.502 ± 0.326	-0.163 ± 0.526
photometric centroid source offset	0.94 ± 1.06	0.89	0.33 ± 0.79	-0.88 ± 1.09

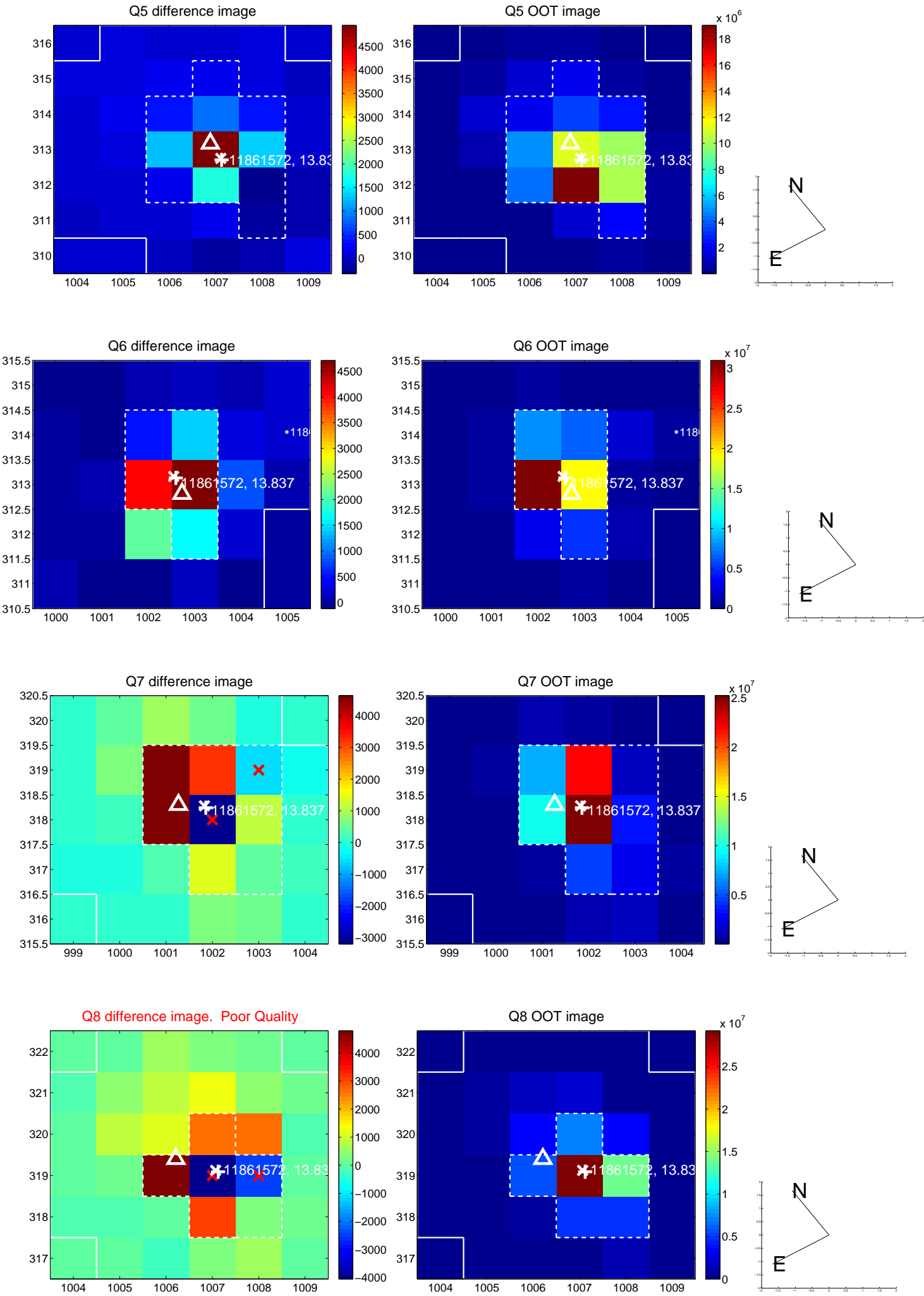


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

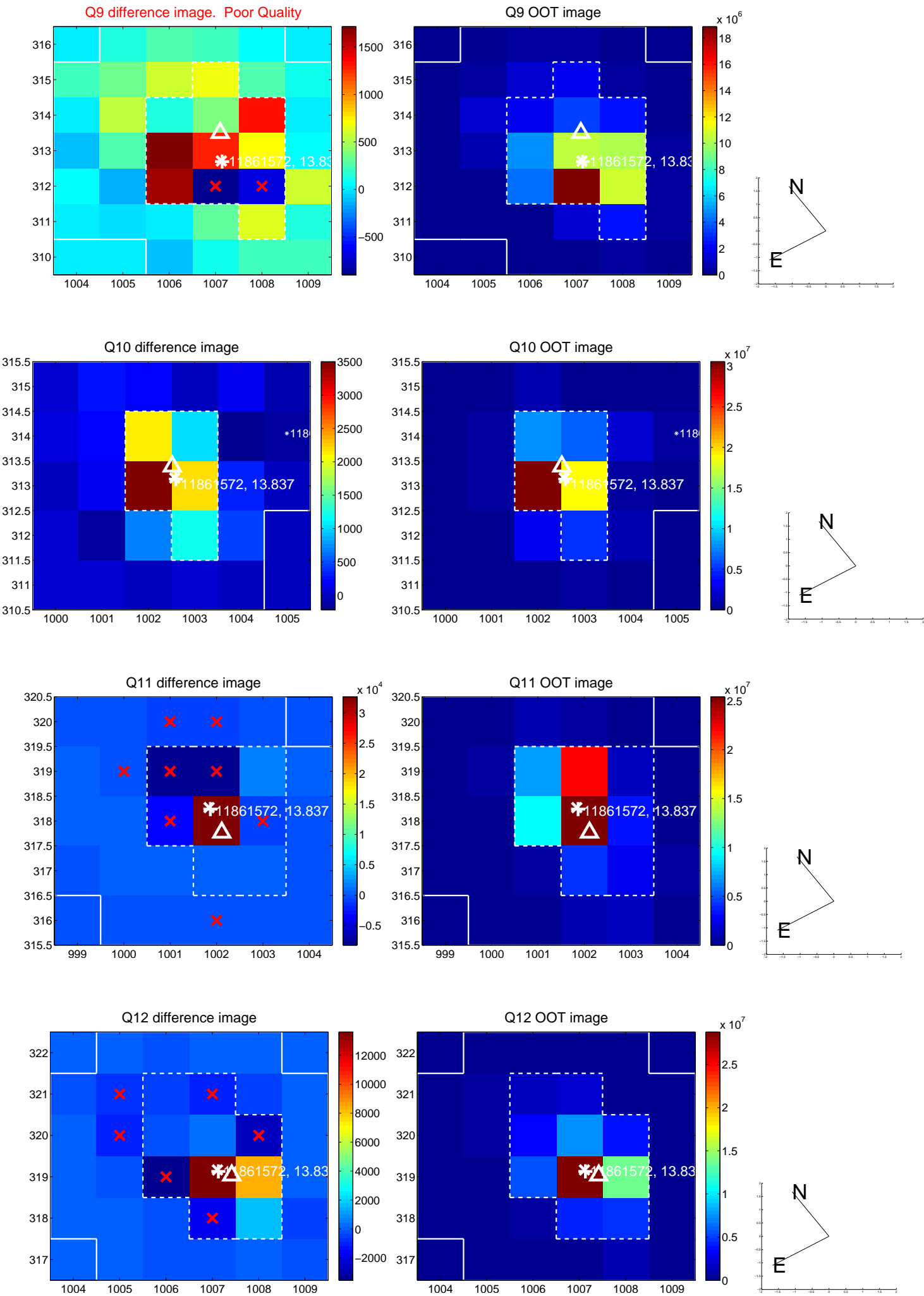
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



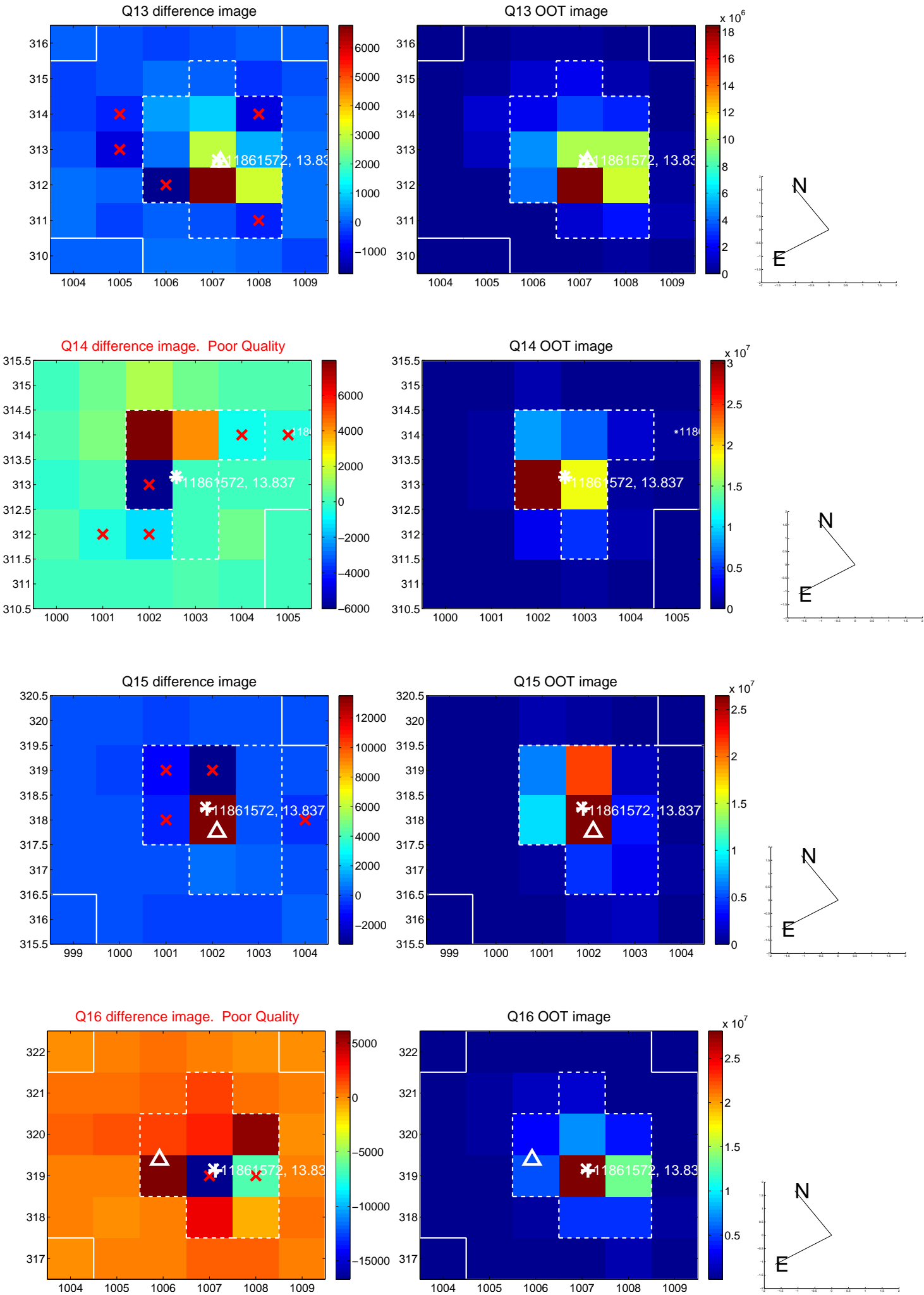
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



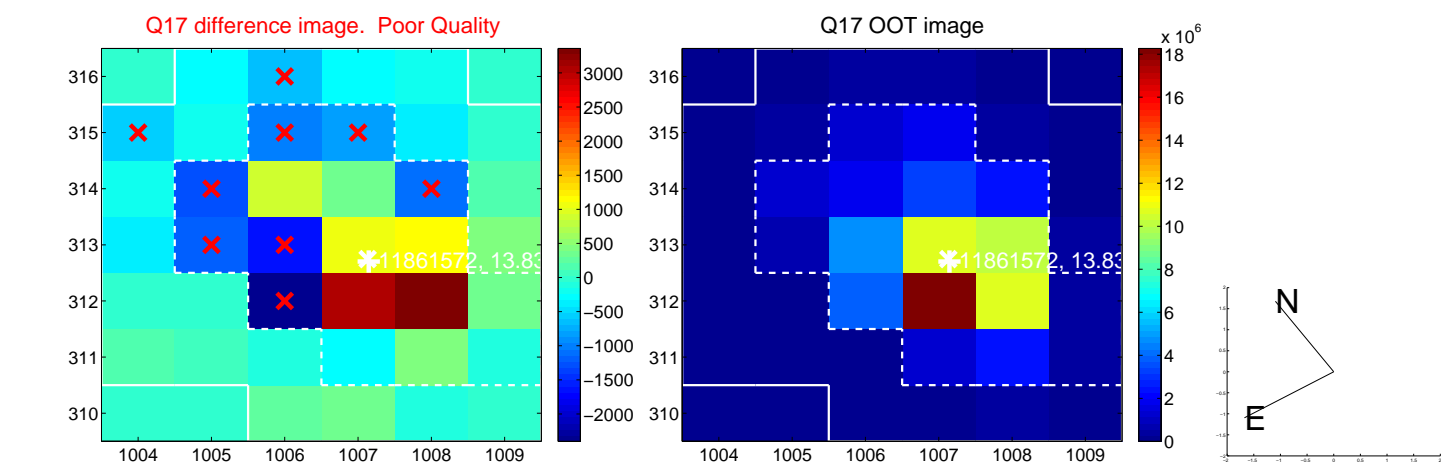
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



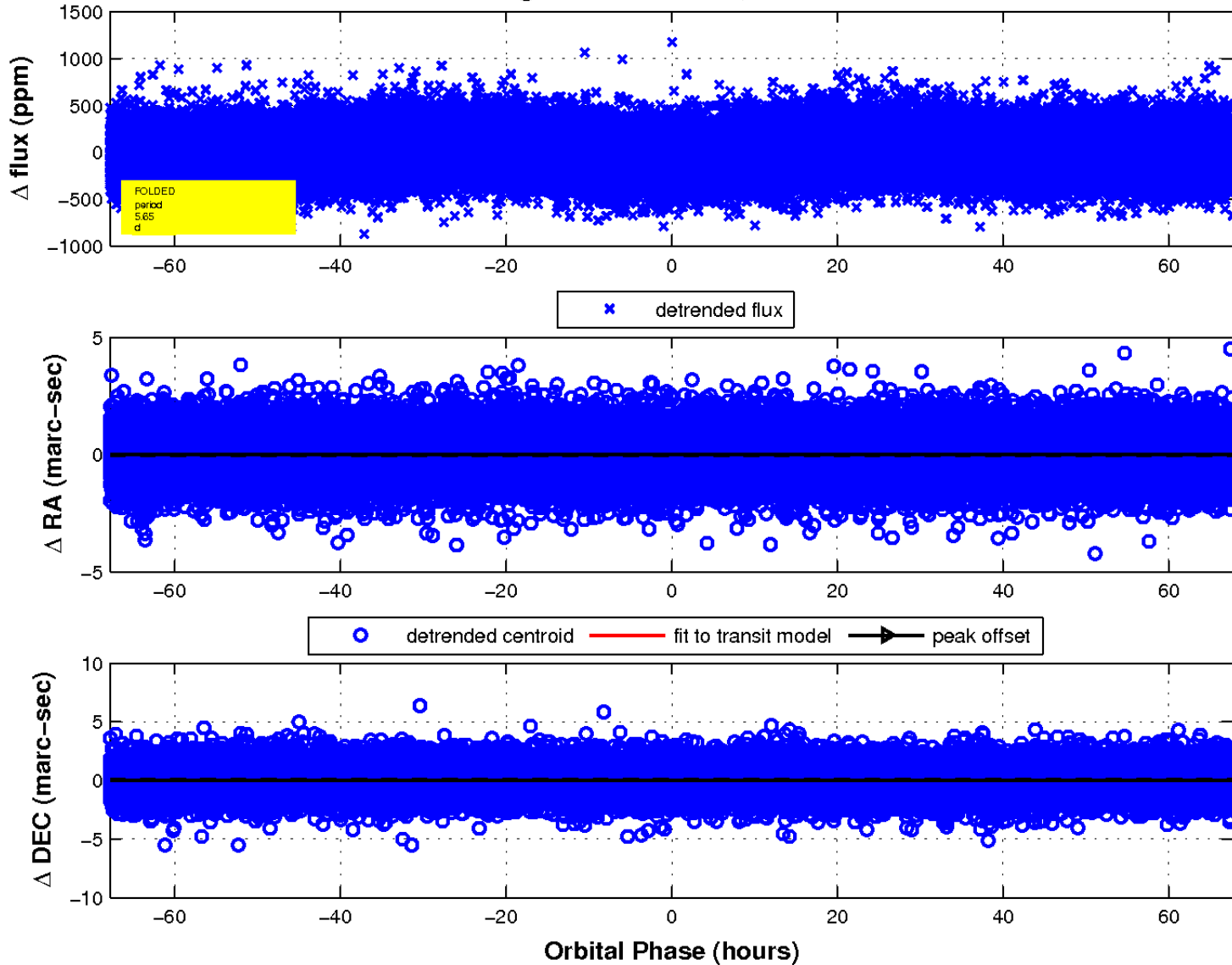
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

