

KIC 003221119

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})
003221119-01	OBS	No	0.947657	132.325938	16.4	2.207	7.8	6.7	0.79	5709	0.37	1925.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003221119-01	OBS	FP	0.00	1	0	0	1	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—EPHEM_MATCH

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.

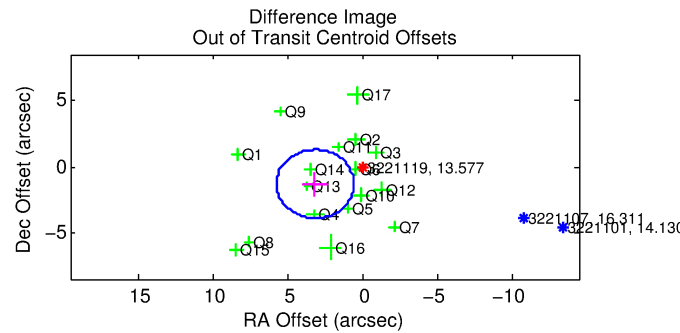
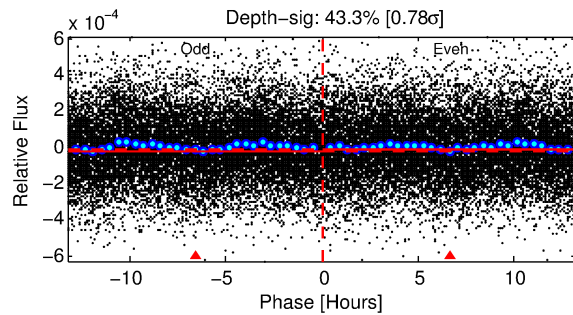
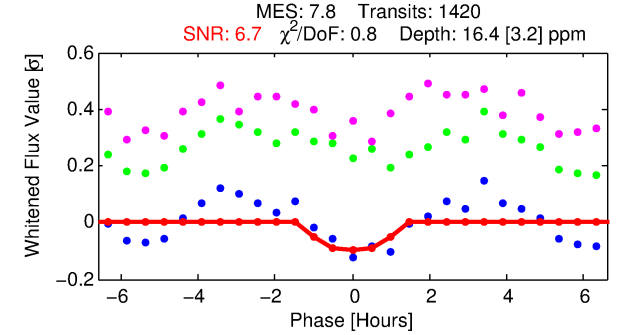
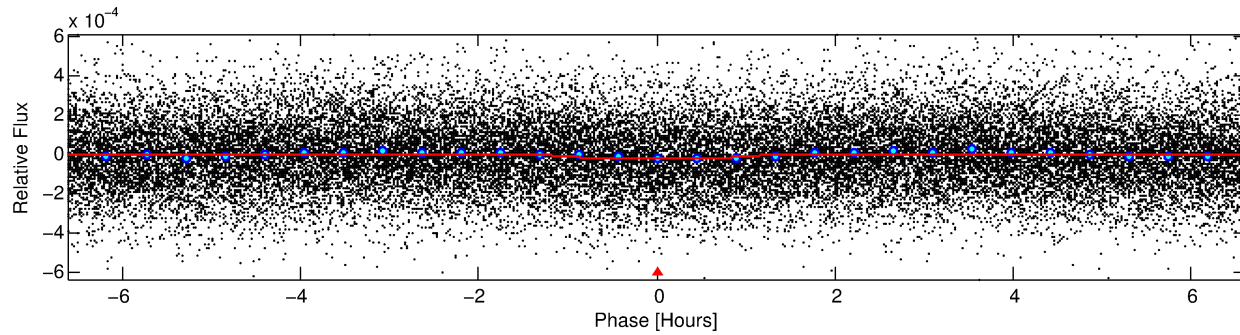
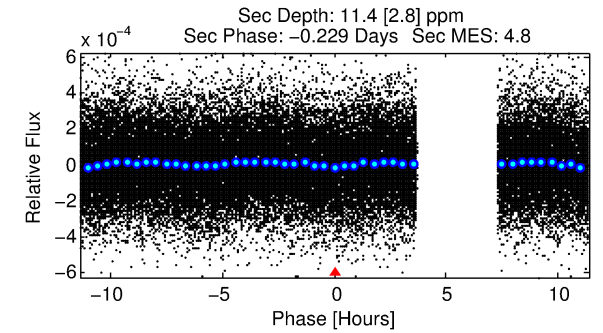
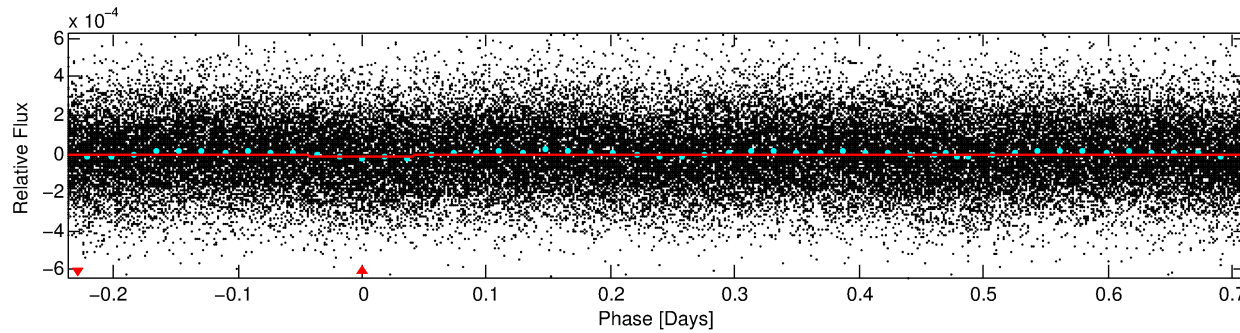
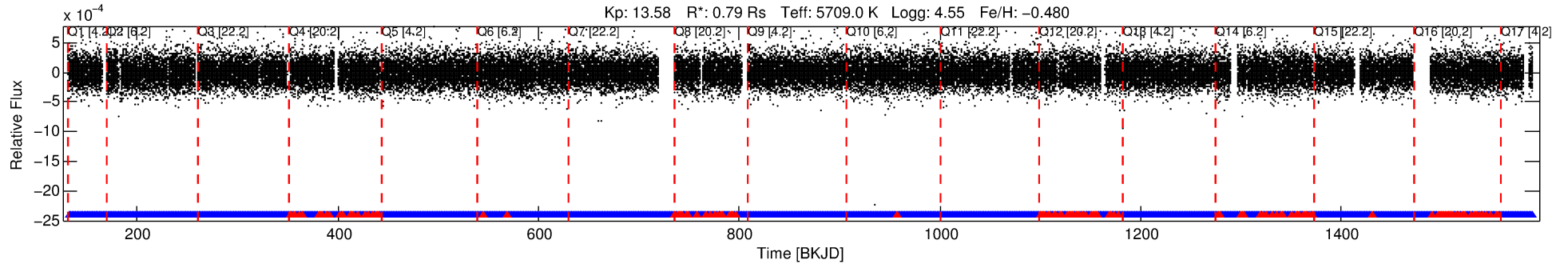
Ephemeris Match Information For 003221119-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
003221119-01	3221119	003221207-pri	3221207	2:1	82.6	15	14	11.97	13.57	22788.00	Direct-PRF	0	0.84	0.61

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 3221119 Candidate: 1 of 1 Period: 0.948 d



DV Fit Results:

Period = 0.94766 [0.00002] d
Epoch = 132.3259 [0.0047] BKJD
Rp/R* = 0.0043 [0.0016]
a/R* = 1.86 [2.32]
b = 0.88 [0.48]
Seff = 1925.08 [563.27]
Teq = 1689 [124] K
Rp = 0.37 [0.16] Re
a = 0.0176 [0.0033] AU
Ag = 14.05 [11.53] [1.13σ]
Teffp = 5056 [988] K [3.38σ]

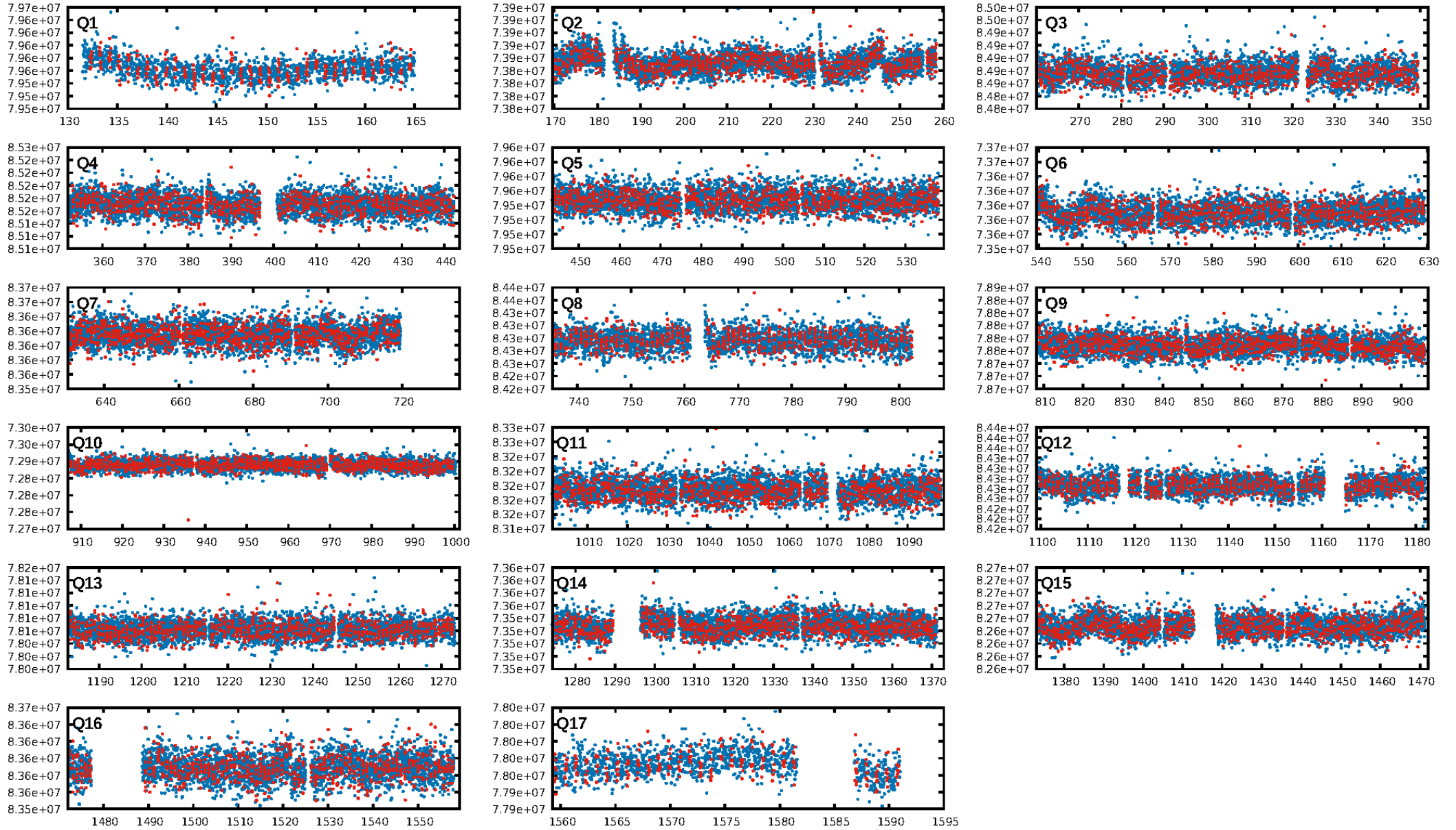
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.45e-16
RollingBand-fgt: 0.90 [1219/1356]
GhostDiagnostic-chr: 1.617
Centroid-sig: 19.4%
Centroid-so: 2.206 arcsec [1.12σ]
OotOffset-rm: 3.400 arcsec [3.93σ]
KicOffset-rm: 3.432 arcsec [3.90σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.18 [3/17]
DiffImageOverlap-fno: 1.00 [17/17]

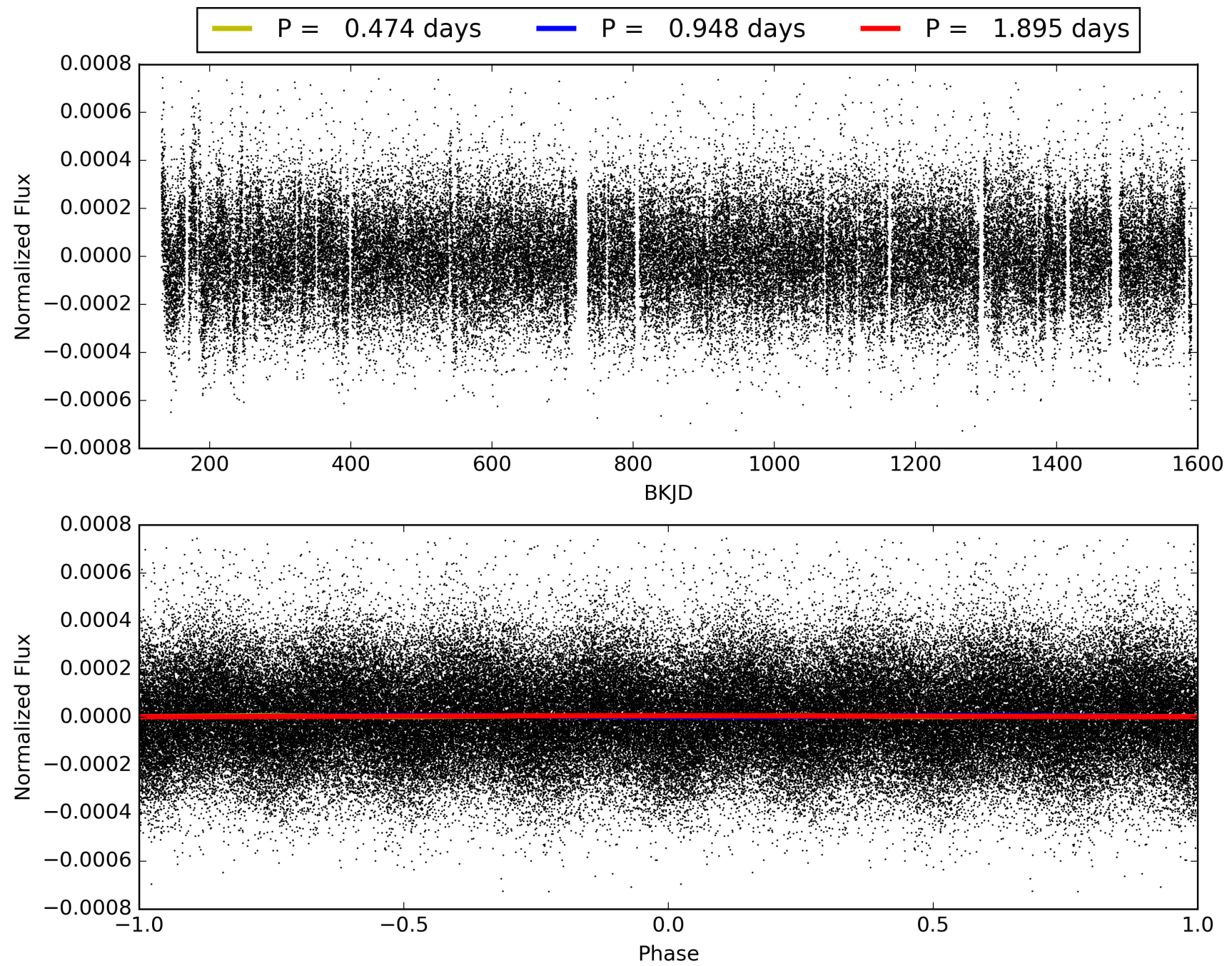
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:08:17 Z

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

TCE 003221119-01, PDC Light Curves

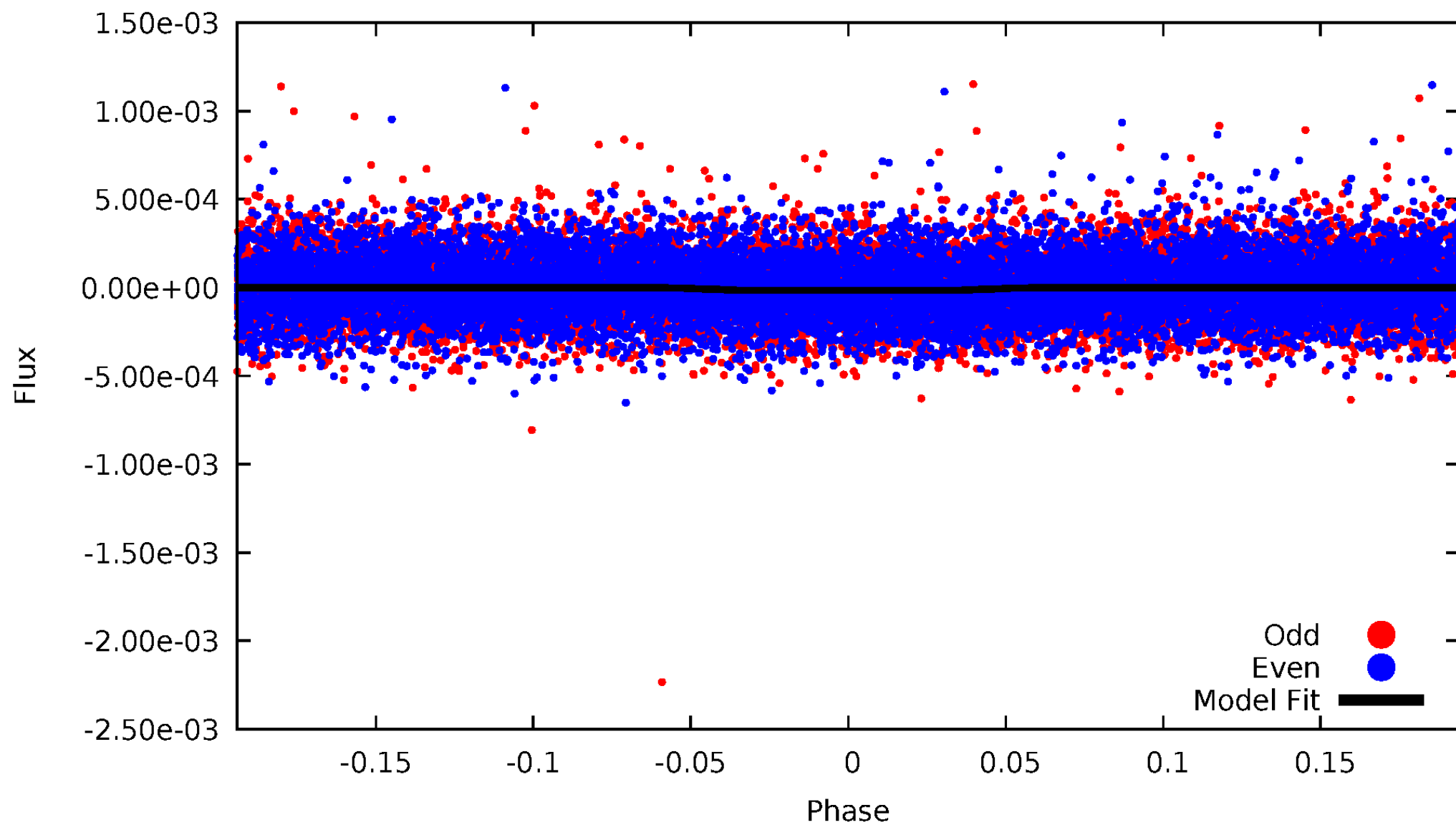


TCE 003221119-01



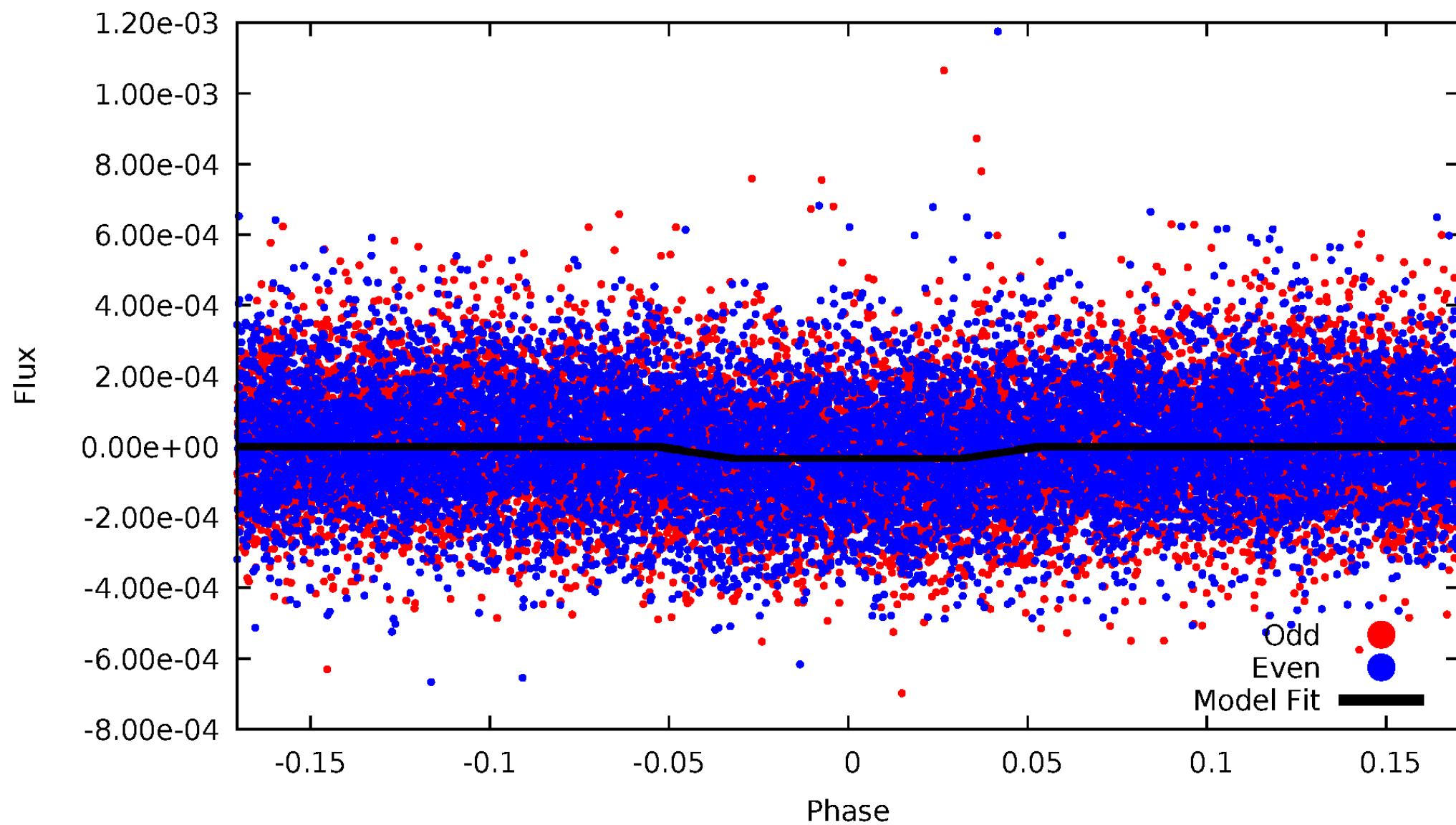
DV Odd/Even

TCE 003221119-01



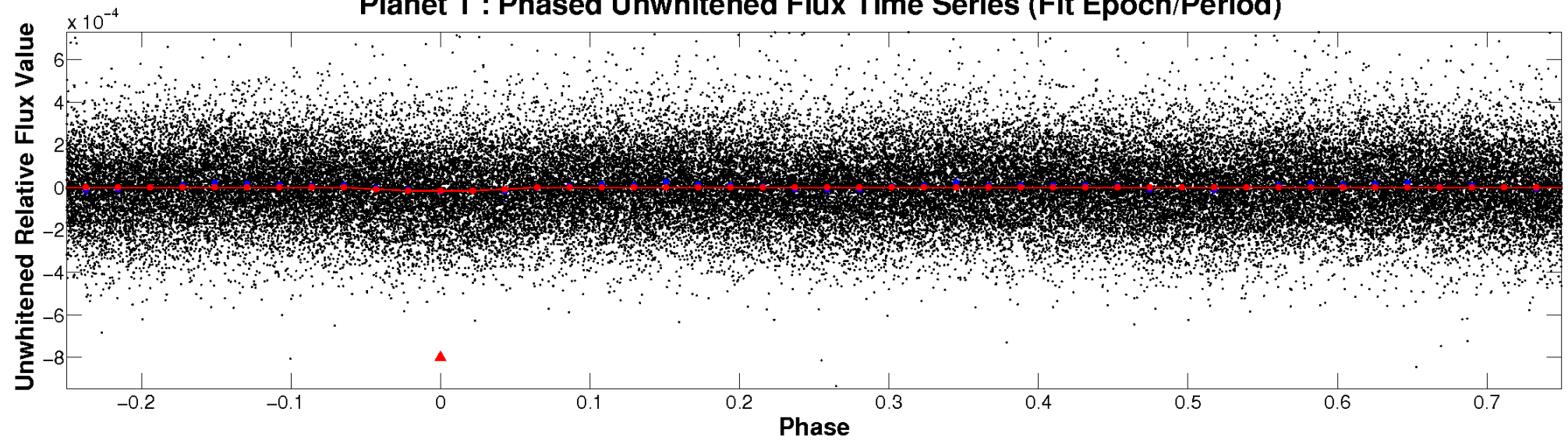
ALT Odd/Even

TCE 003221119-01

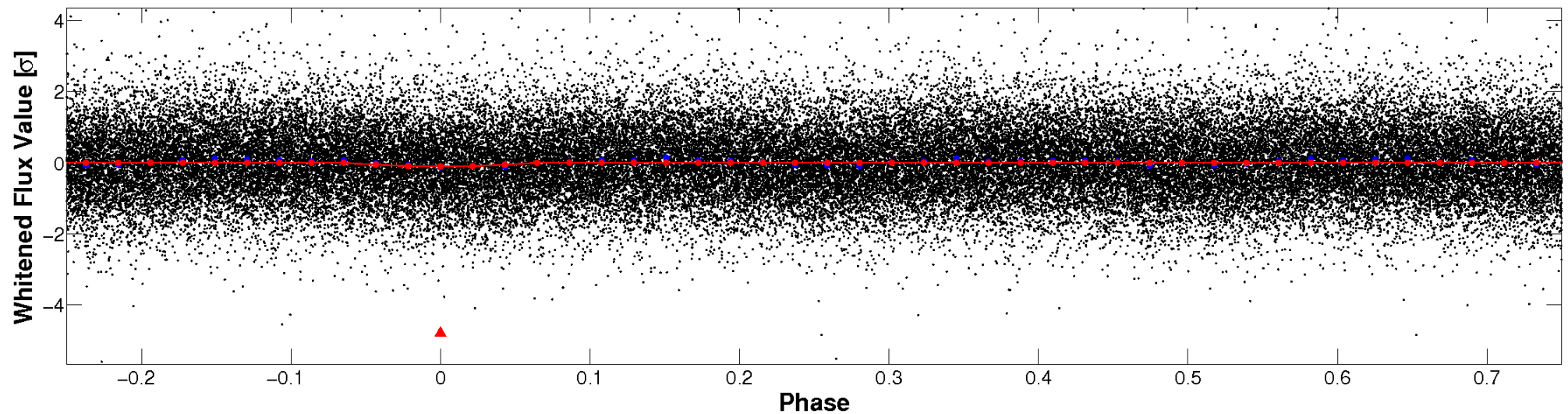


Non-Whitened Vs. Whitened Light Curve

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

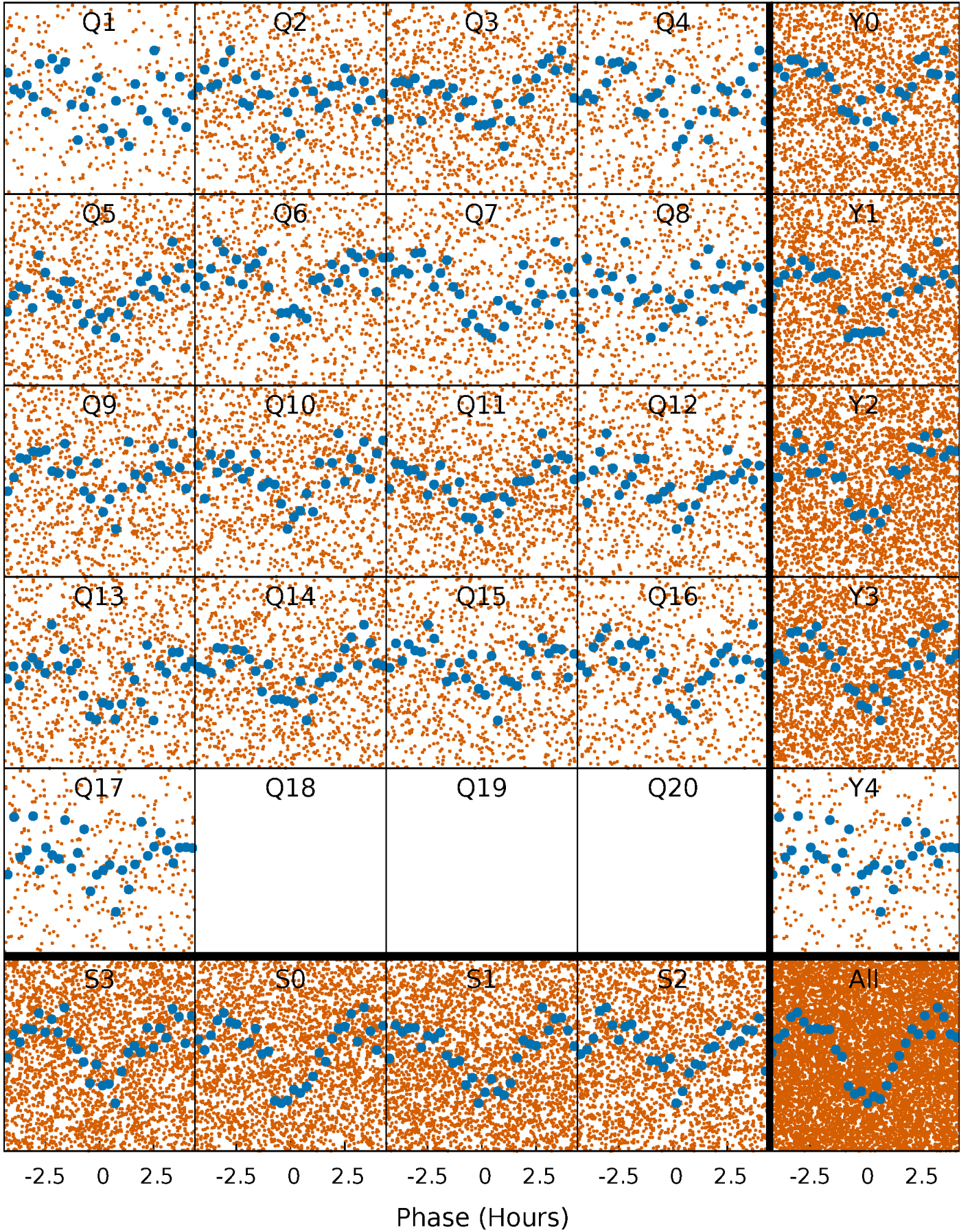


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



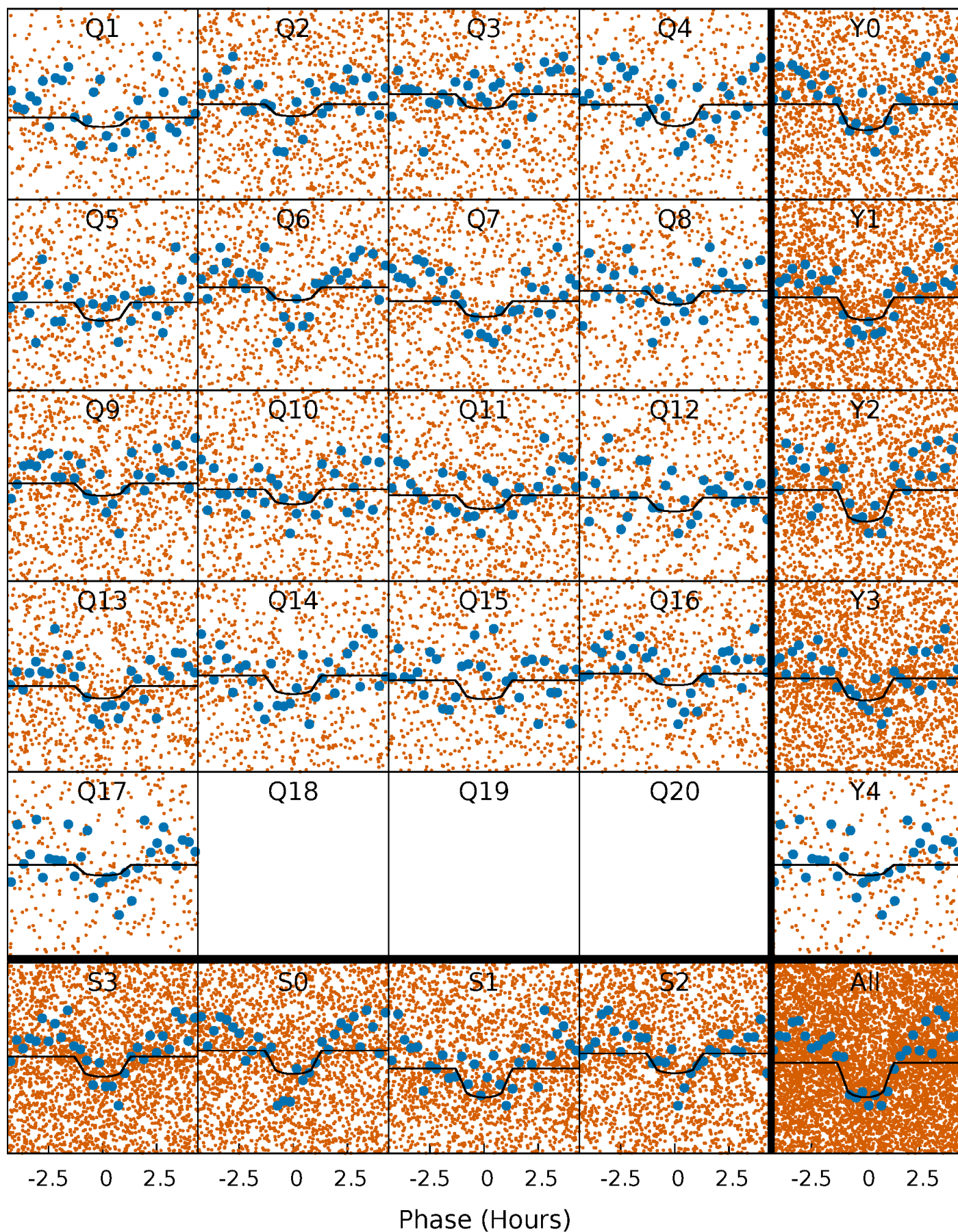
PDC Quarter-Phased Transit Curves

TCE 003221119-01 P= 0.947657 Days $T_0=132.325938$ (BKJD)



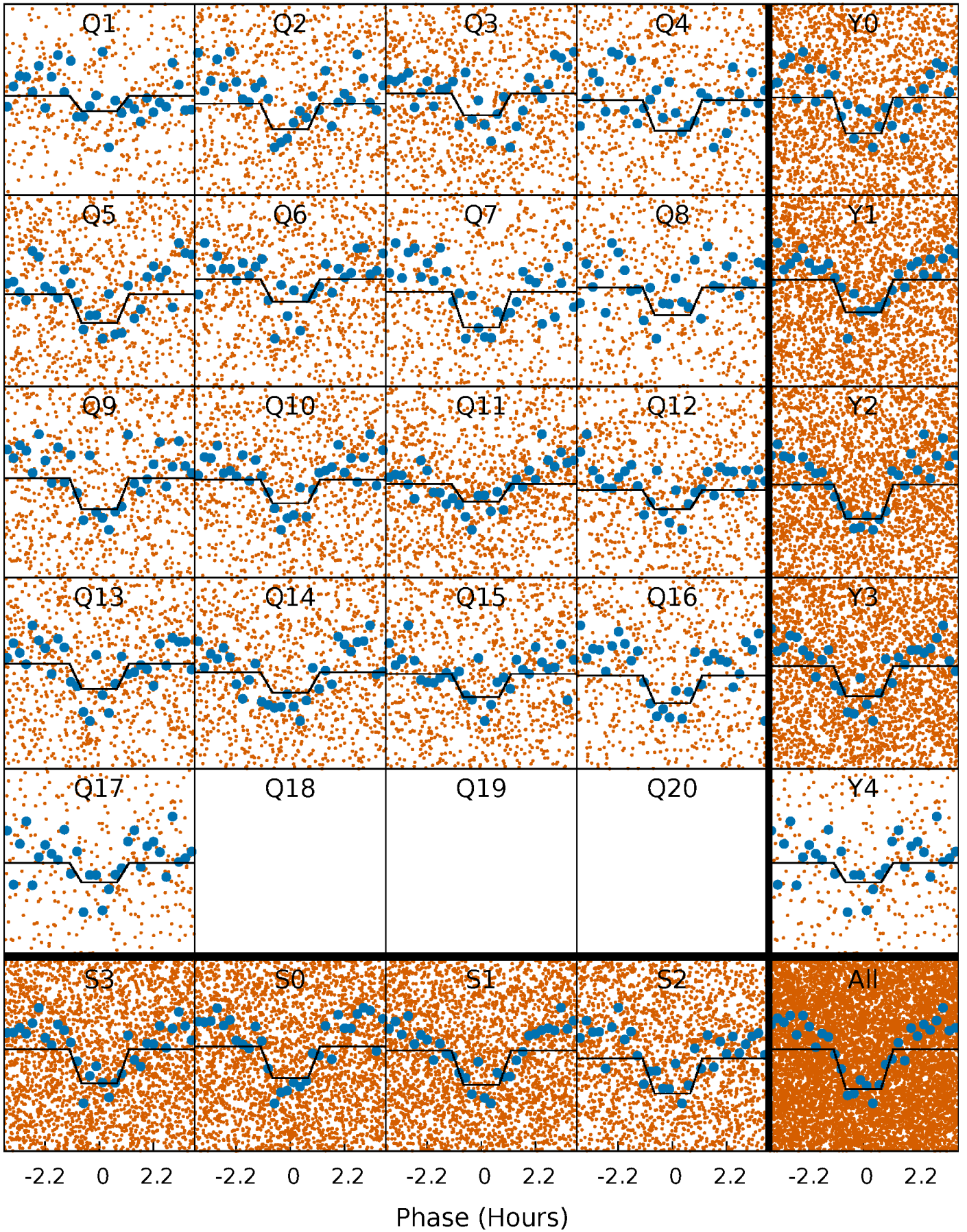
DV Quarter-Phased Transit Curves

TCE 003221119-01 P= 0.947657 Days $T_0=132.325938$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

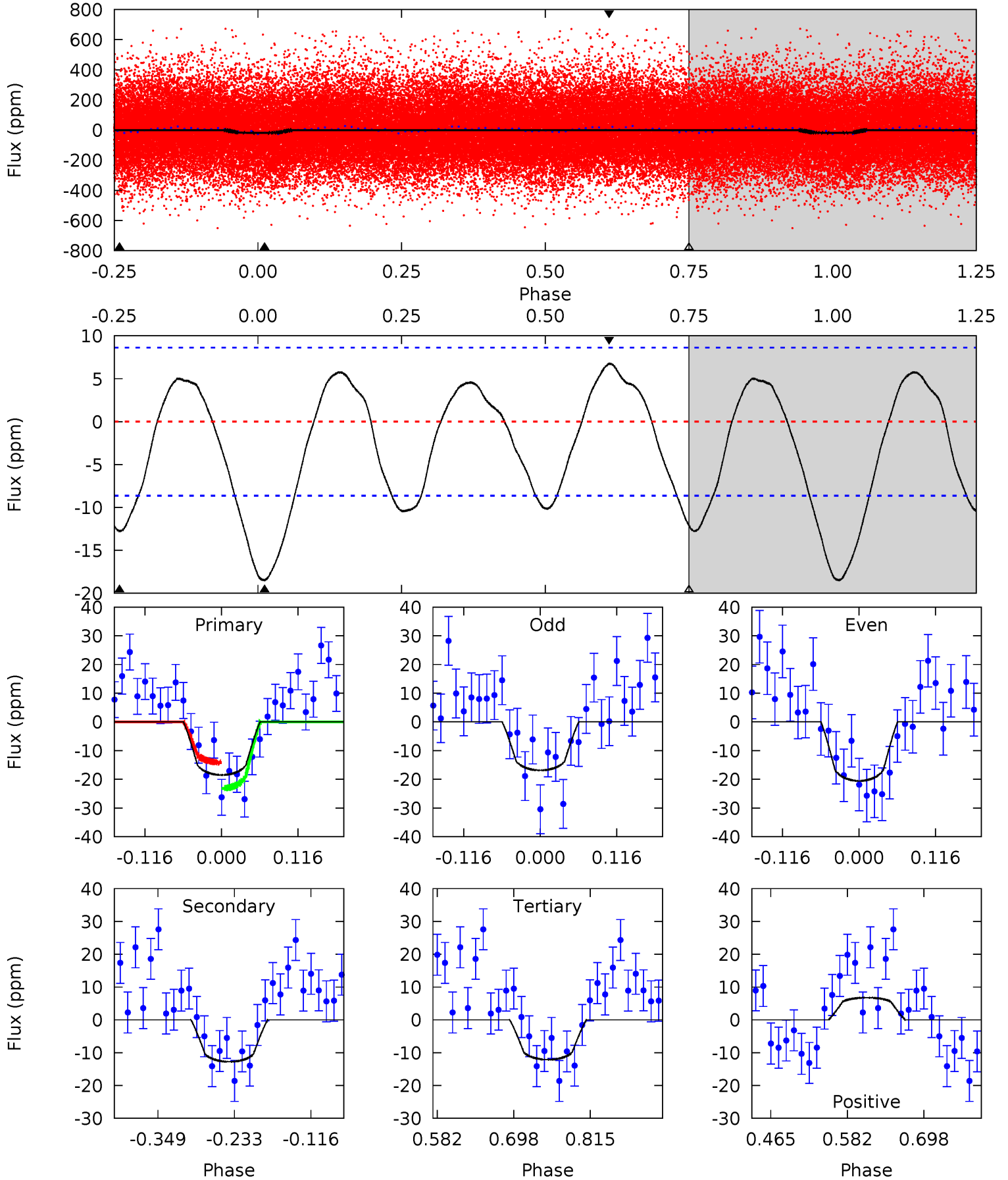
TCE 003221119-01 P= 0.947684 Days $T_0=132.312570$ (BKJD)



DV Model-Shift Uniqueness Test

003221119-01, P = 0.947657 Days, E = 131.378281 Days

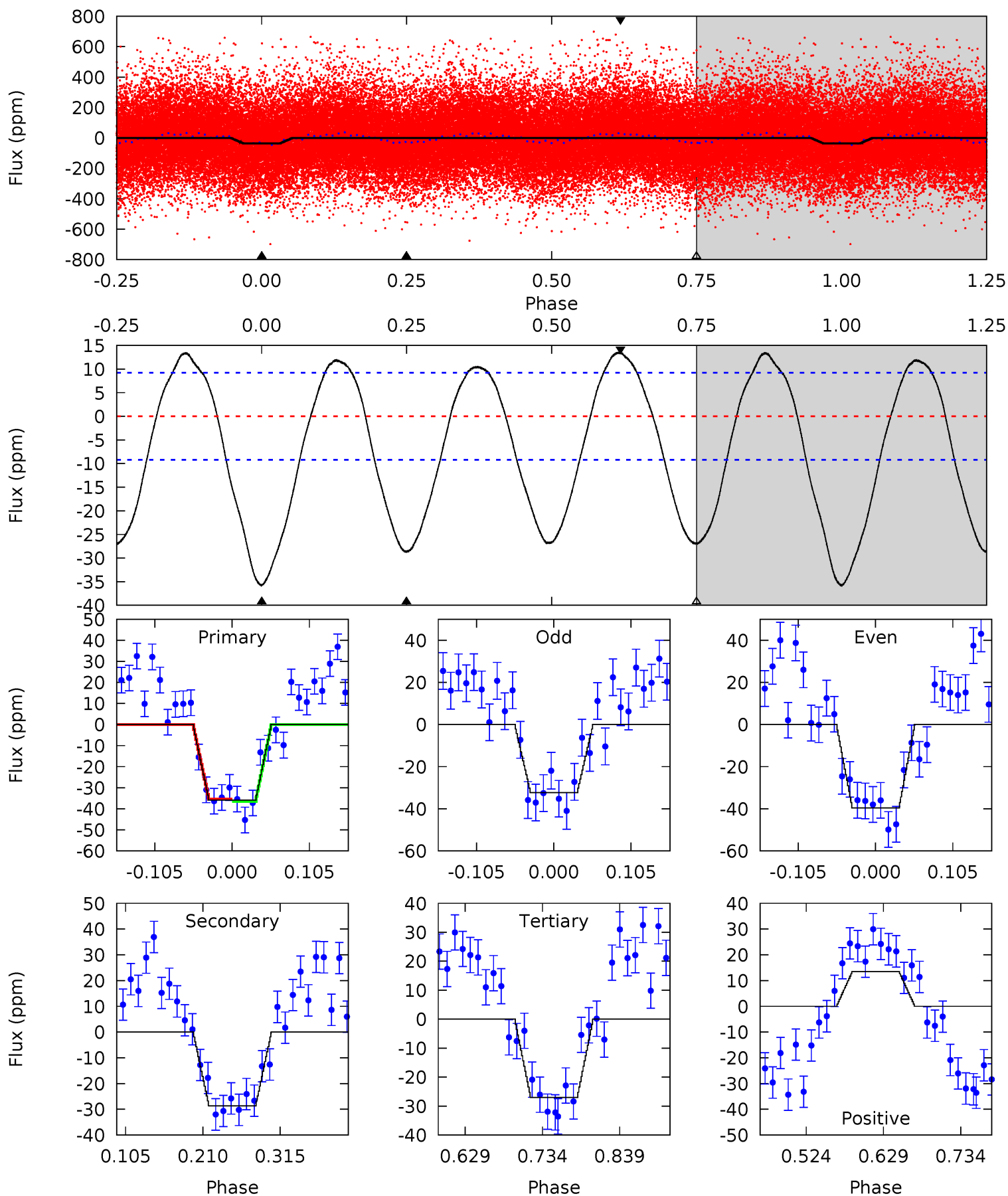
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.73	6.72	6.38	3.56	4.53	1.57	2.97	3.35	6.17	0.34	3.16	0.97	1.25	0.27	2.39



Alt Model-Shift Uniqueness Test

003221119-01, P = 0.947684 Days, E = 131.364886 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.7	14.2	13.3	6.66	4.55	1.62	7.03	4.36	11.0	0.82	7.50	1.81	0.99	0.27	0.27



Stellar Parameters For KIC 003221119

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5709^{+155}_{-155}	$4.550^{+0.053}_{-0.147}$	$-0.480^{+0.300}_{-0.300}$	$0.793^{+0.180}_{-0.077}$	$0.815^{+0.096}_{-0.070}$	$2.299^{+0.617}_{-0.984}$
	+3%/-3%	+1%/-3%	+62%/-62%	+23%/-10%	+12%/-9%	+27%/-43%
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 003221119-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-13 ± 2	$0.38^{+0.15}_{-0.14}$	2392^{+125}_{-99}	5237^{+1276}_{-724}	15^{+22}_{-7}
Alt.	-29 ± 2	$0.53^{+0.15}_{-0.15}$	2395^{+130}_{-101}	5443^{+907}_{-538}	17^{+16}_{-7}

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 $A_{obs} \gg 1.0$

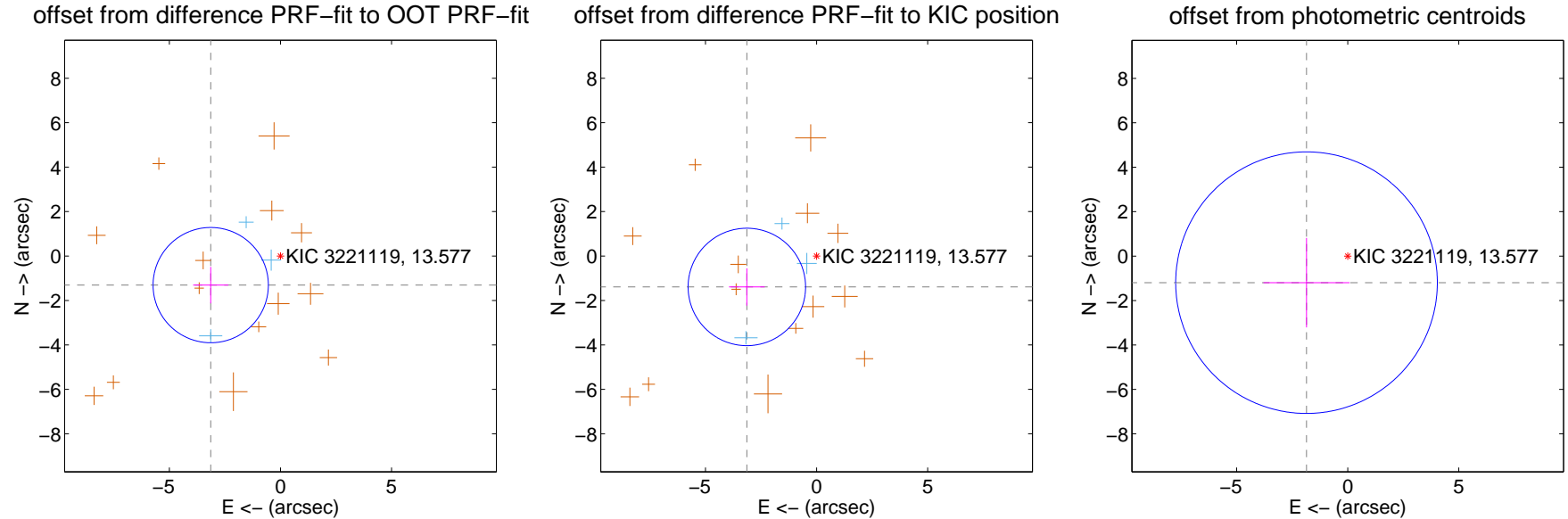
DV Centroid Data

Supplemental centroid analysis for 003221119-01. Kepler magnitude: 13.58. Transit SNR 6.66

There are 3 quarters with good PRF difference image offsets

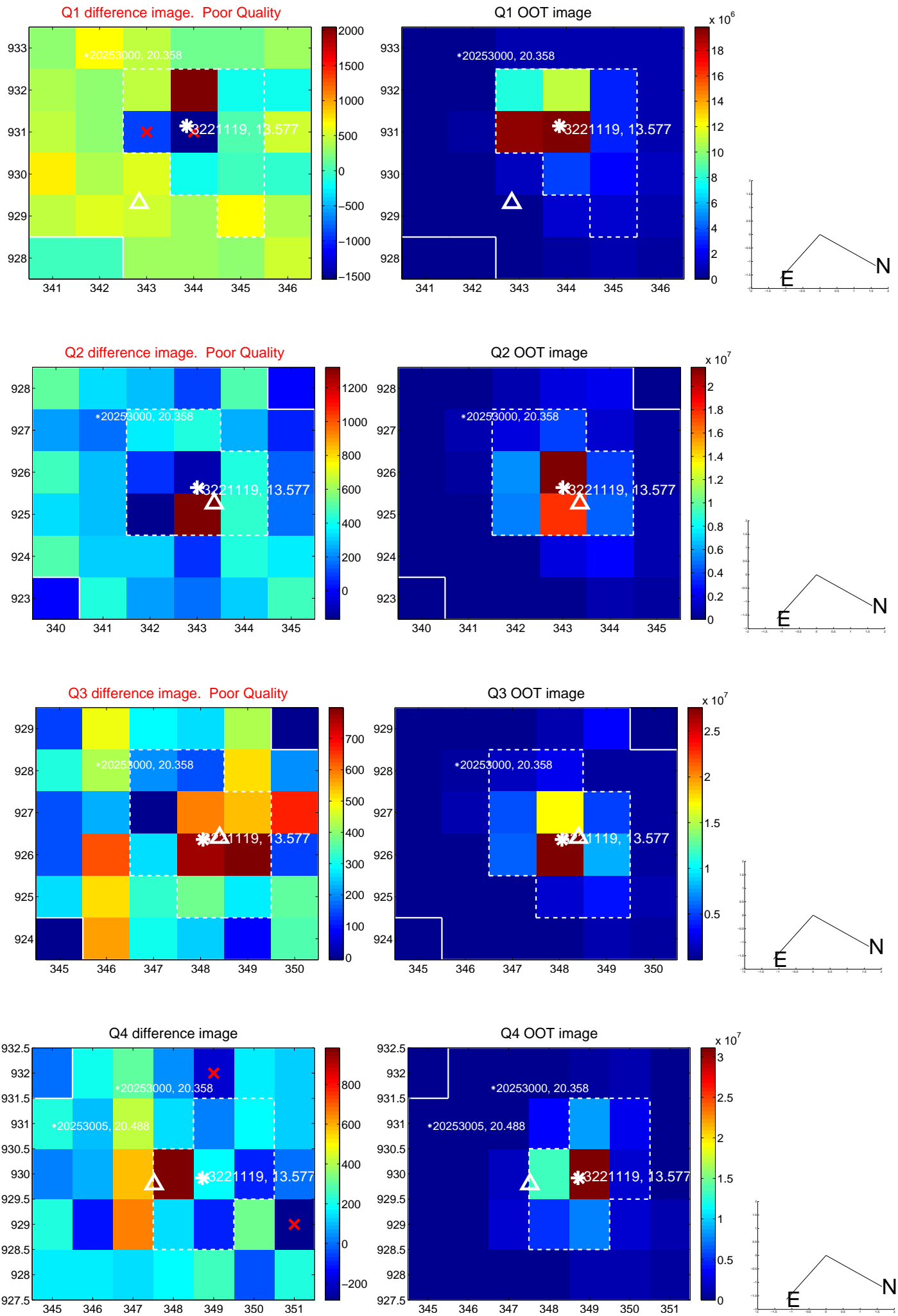
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.400 ± 0.864	3.93	3.138 ± 0.790	-1.309 ± 0.819
PRF-fit source offset from KIC position	3.432 ± 0.881	3.90	3.137 ± 0.804	-1.391 ± 0.839
photometric centroid source offset	2.21 ± 1.96	1.12	1.85 ± 1.94	-1.20 ± 2.01

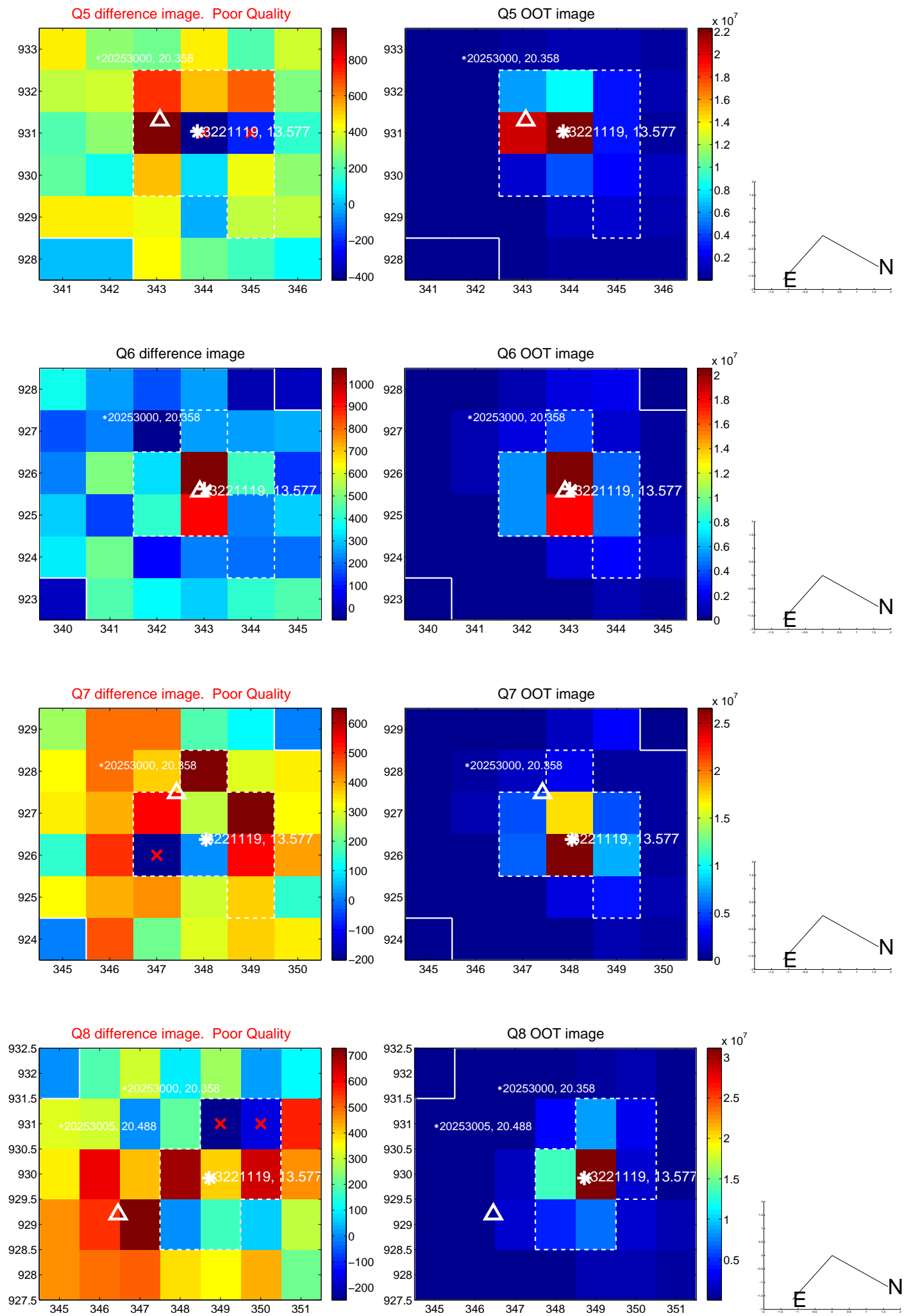


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

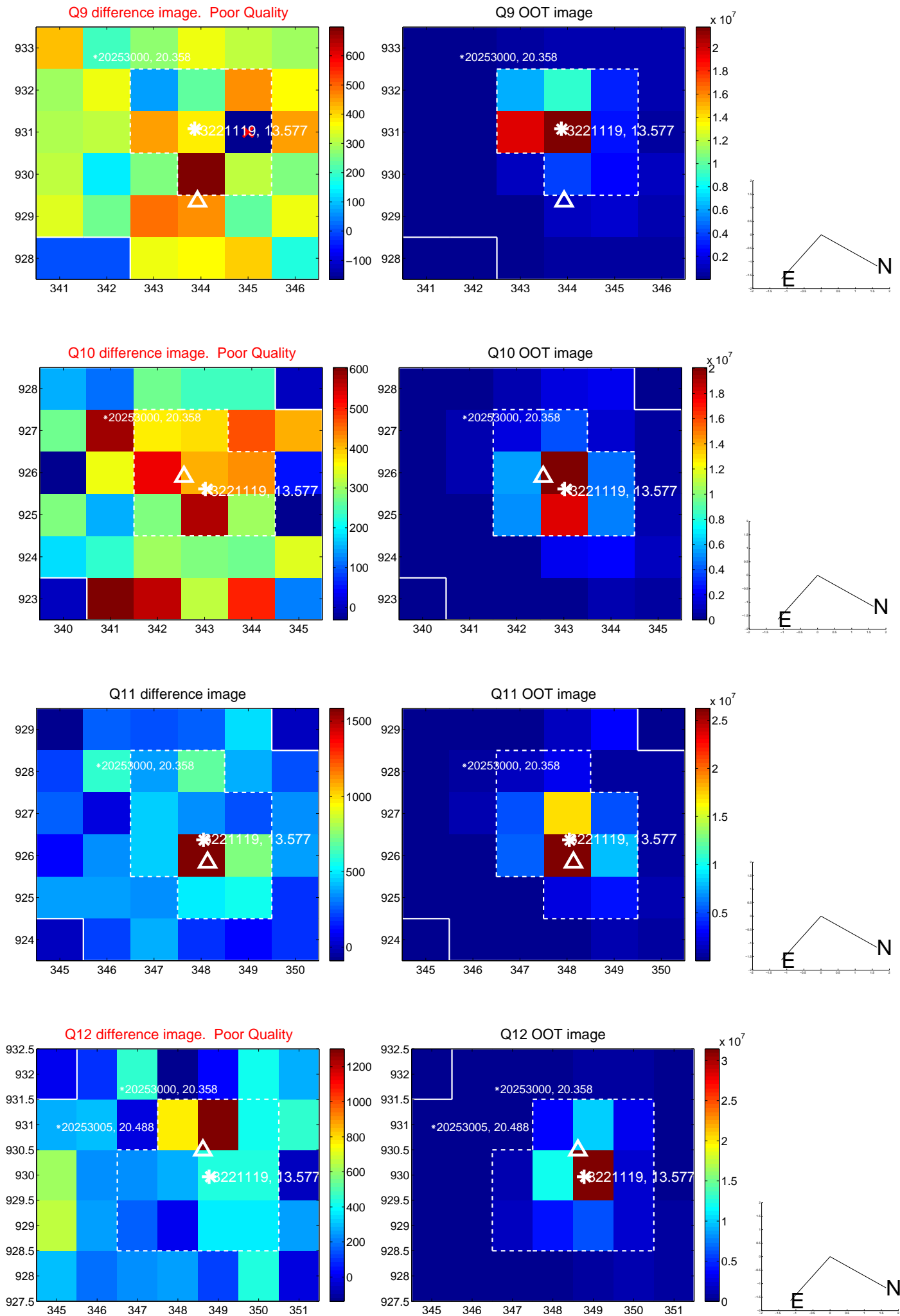
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



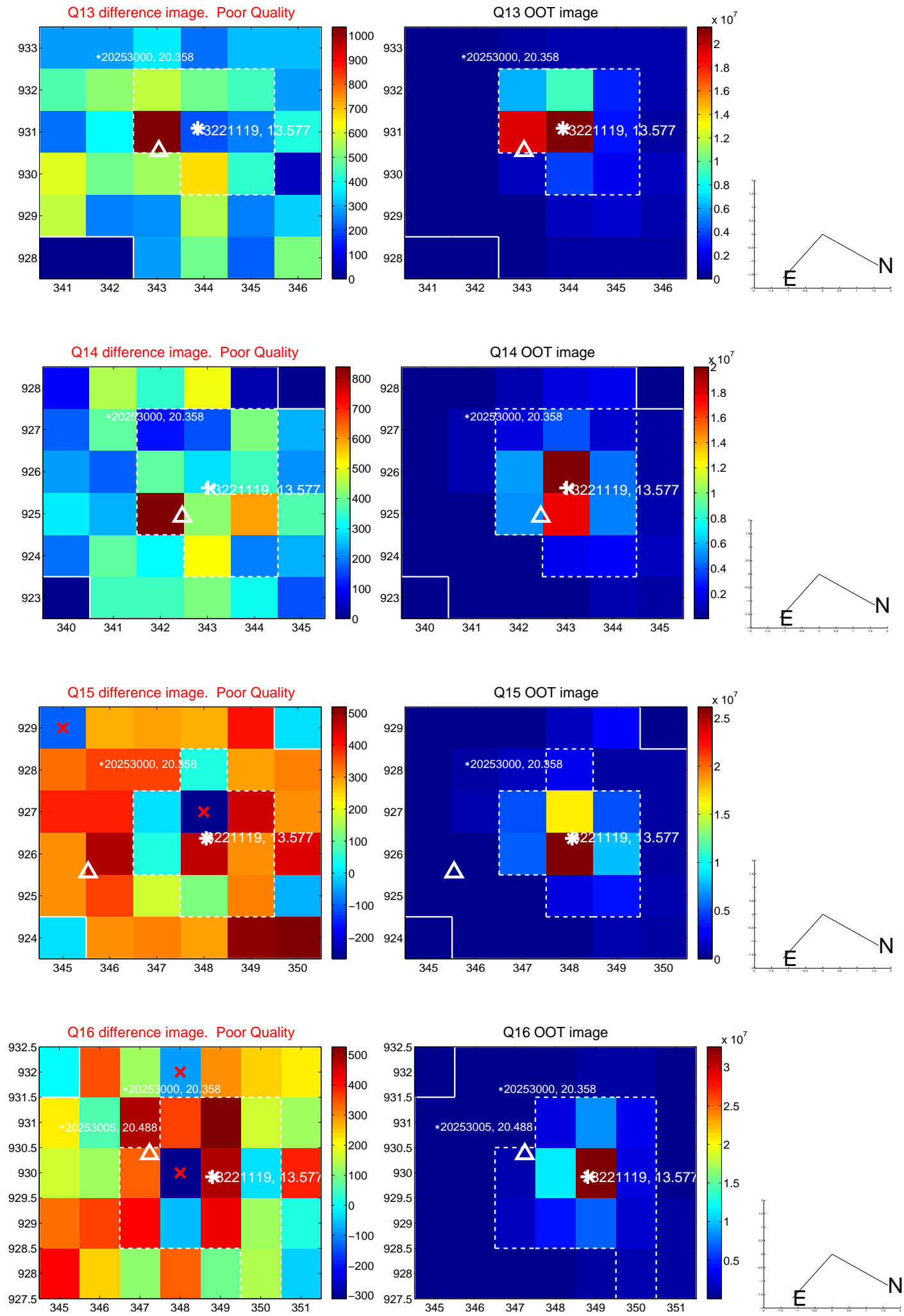
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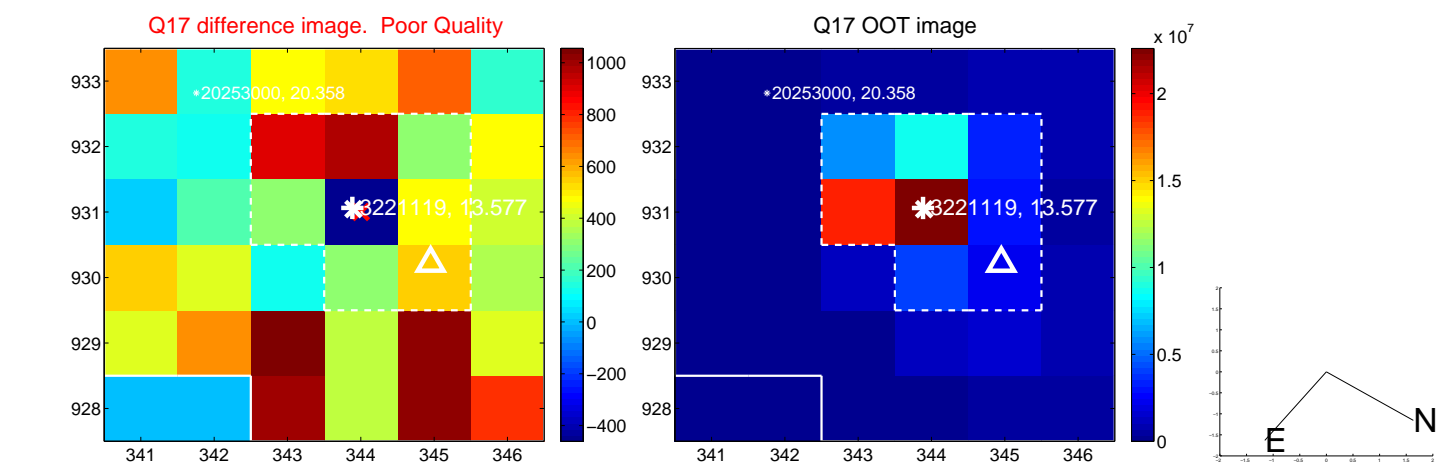
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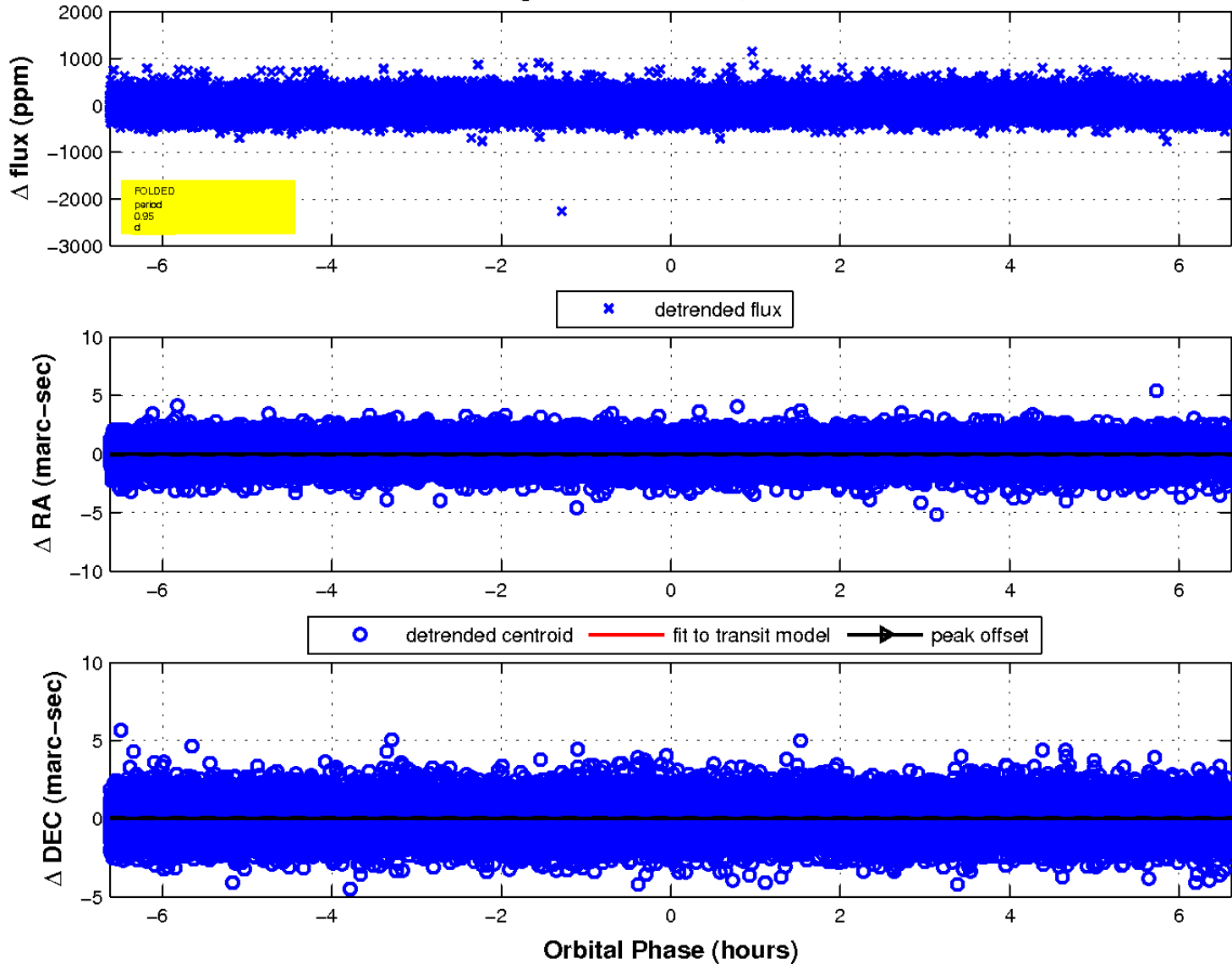
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

