

KIC 004358355

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})
004358355-01	OBS	No	1.698337	133.174418	7.6	9.966	9.0	9.4	2.81	8178	0.82	24554.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004358355-01	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.

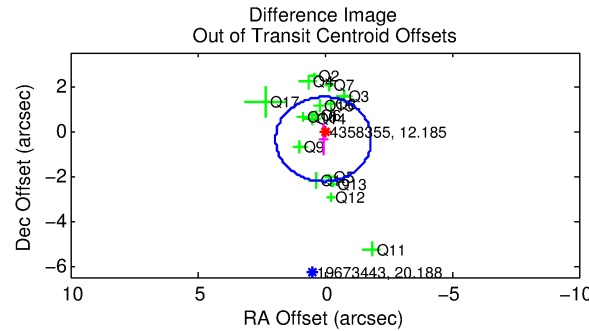
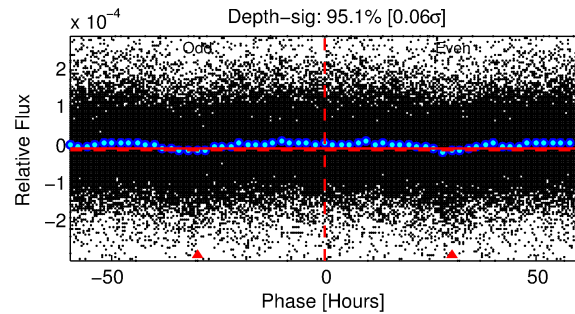
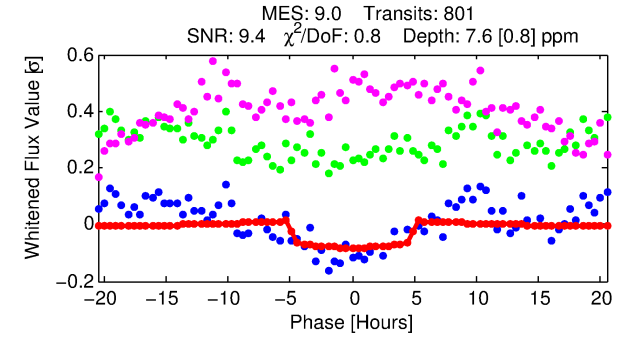
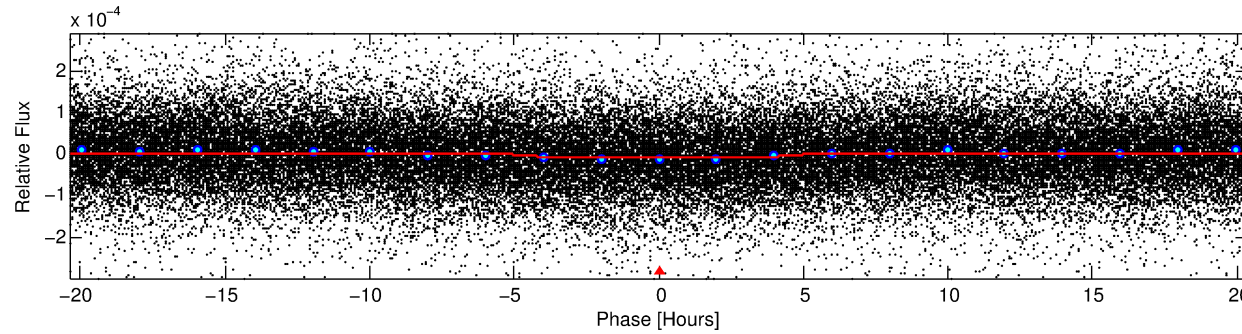
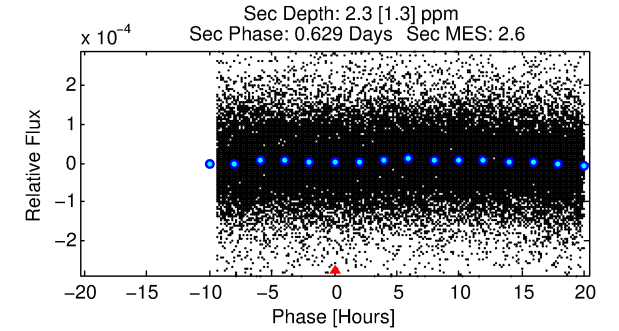
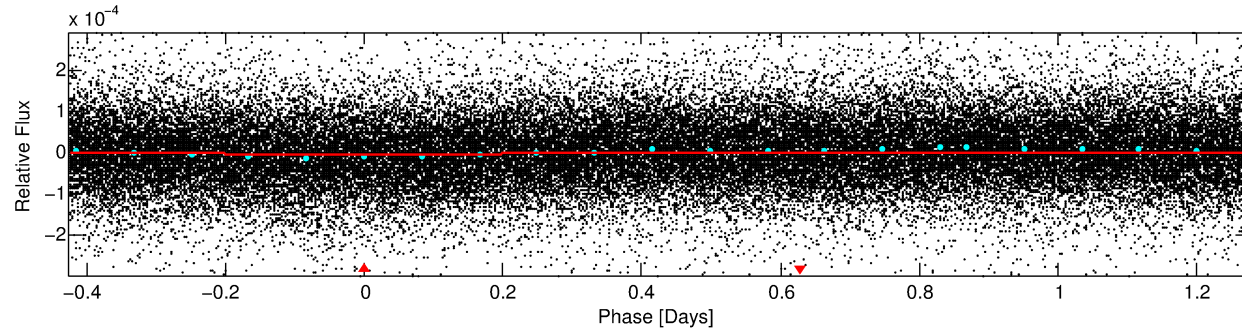
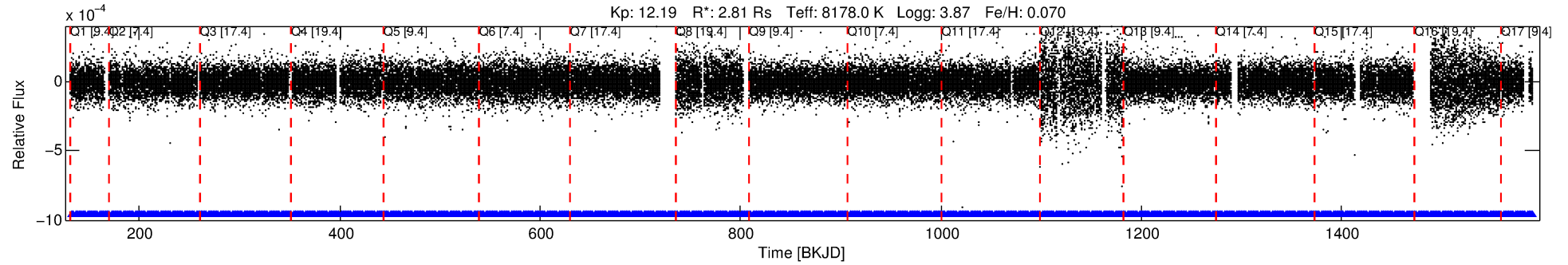
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004358355-01

No Significant Match Found

DV One-Page Summary

KIC: 4358355 Candidate: 1 of 1 Period: 1.698 d



DV Fit Results:

Period = 1.69834 [0.00003] d
Epoch = 133.1744 [0.0087] BKJD
Rp/R* = 0.0027 [0.0009]
a/R* = 1.27 [0.98]
b = 0.66 [1.75]
Seff = 24554.32 [8343.45]
Teq = 3192 [271] K
Rp = 0.82 [0.36] Re
a = 0.0359 [0.0081] AU
Ag = 2.43 [2.33] [0.61σ]
Teffp = 6163 [1383] K [2.11σ]

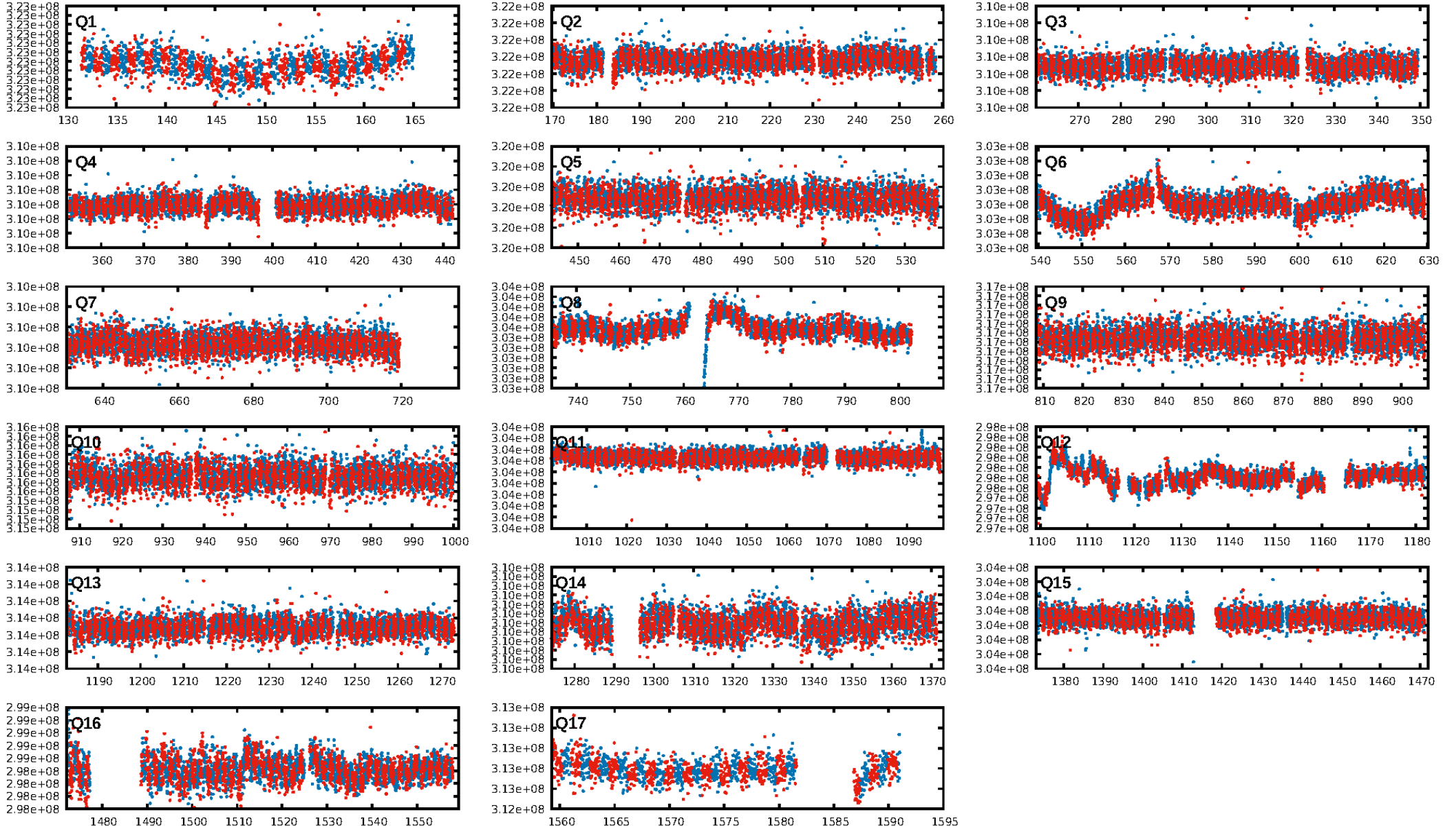
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.84e-15
RollingBand-fgt: 1.00 [765/765]
GhostDiagnostic-chr: 4.015
Centroid-sig: 8.8%
Centroid-so: 1.435 arcsec [1.28σ]
OotOffset-rm: 0.372 arcsec [0.59σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-rm: 0.349 arcsec [0.57σ]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.81 [13/16]
DiffImageOverlap-fno: 1.00 [17/17]

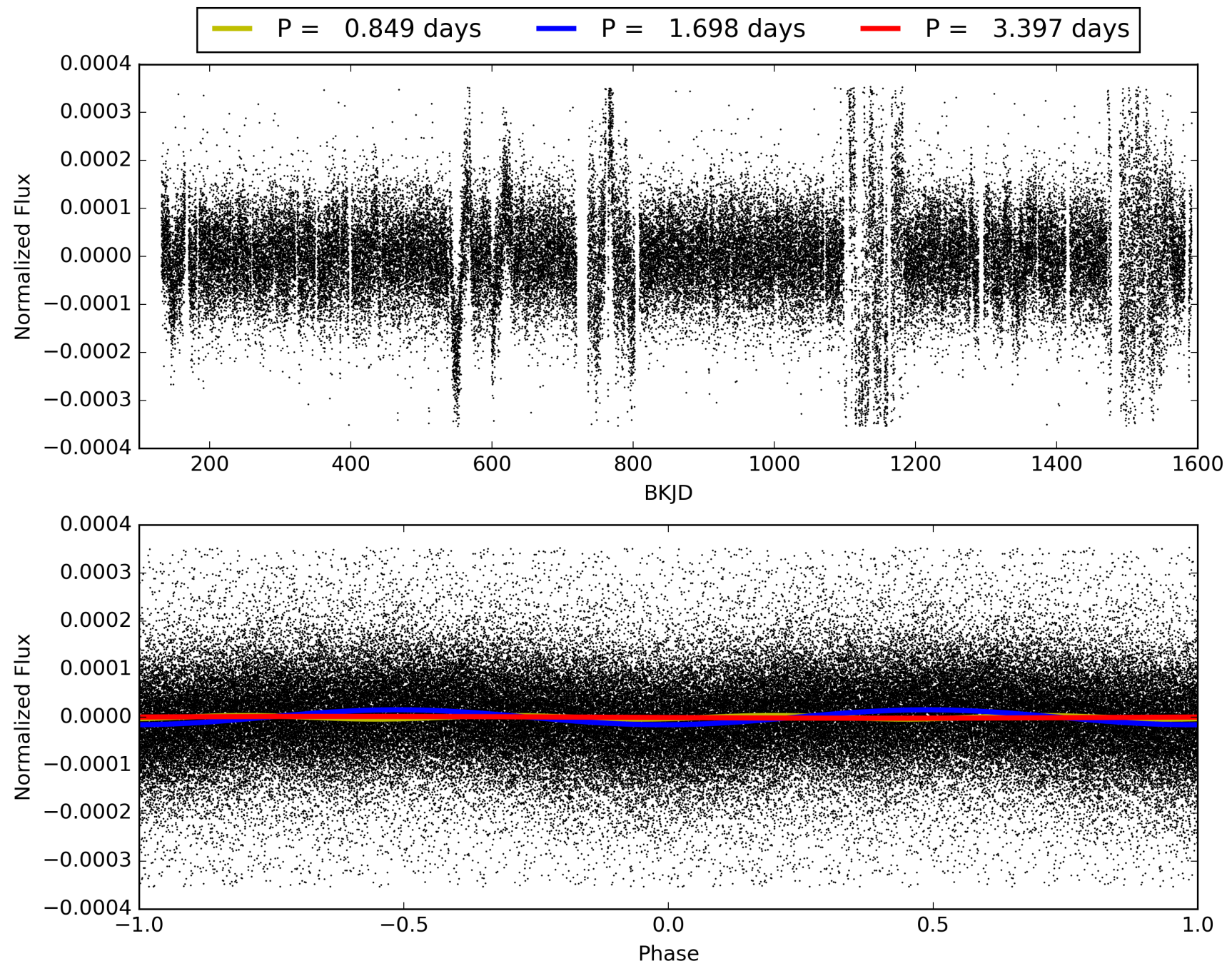
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:37:02 Z

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

TCE 004358355-01, PDC Light Curves

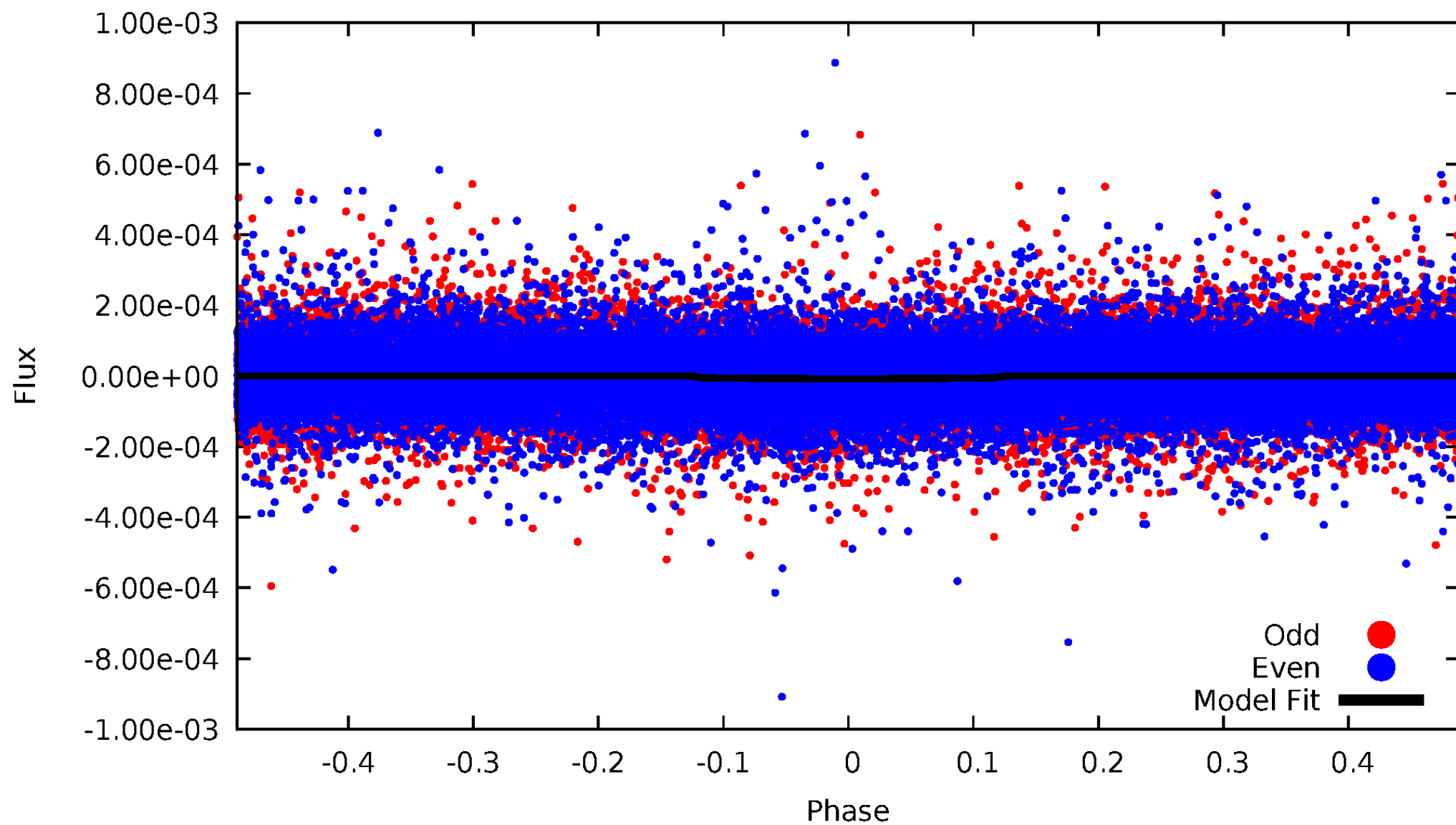


TCE 004358355-01



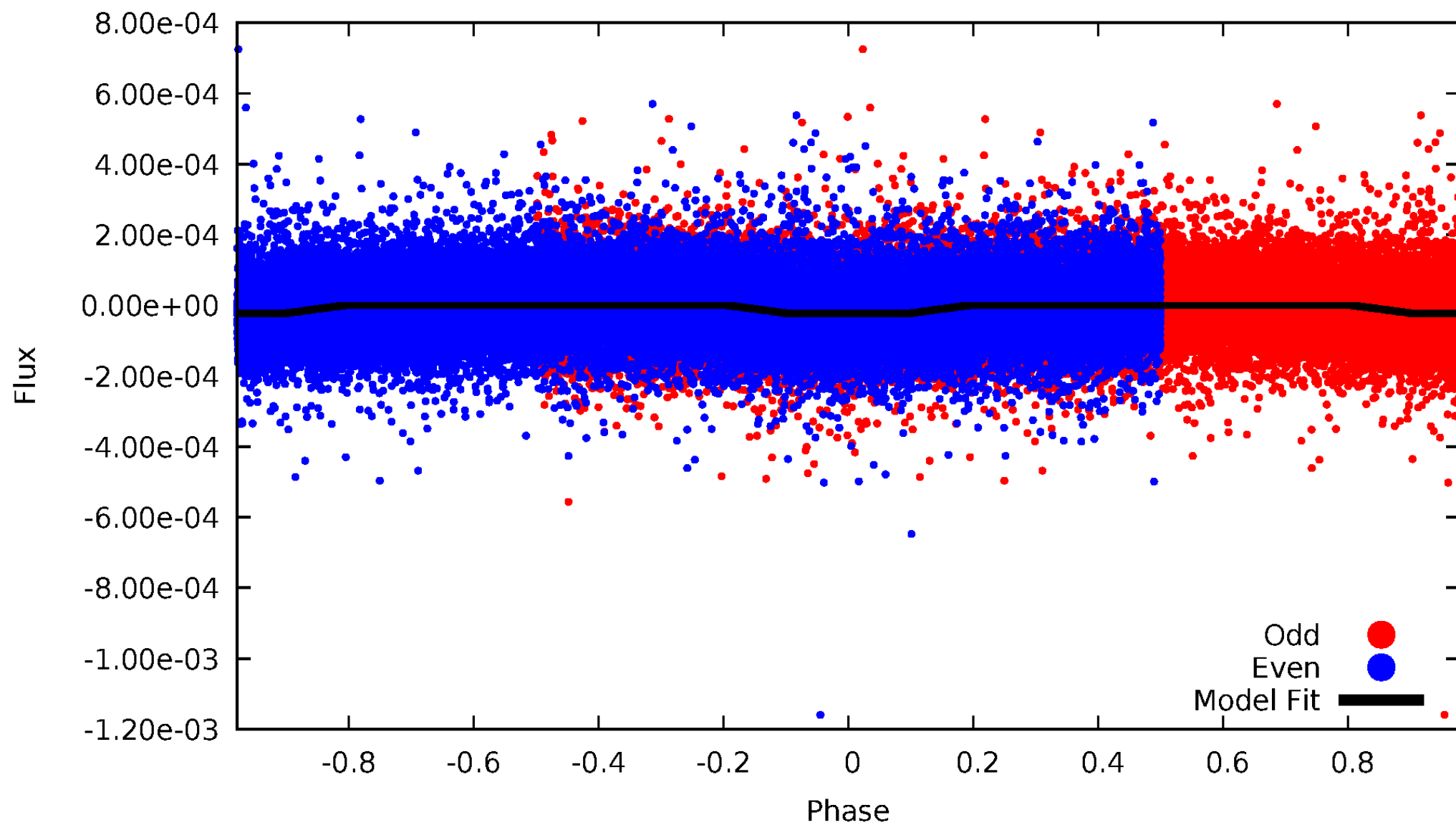
DV Odd/Even

TCE 004358355-01

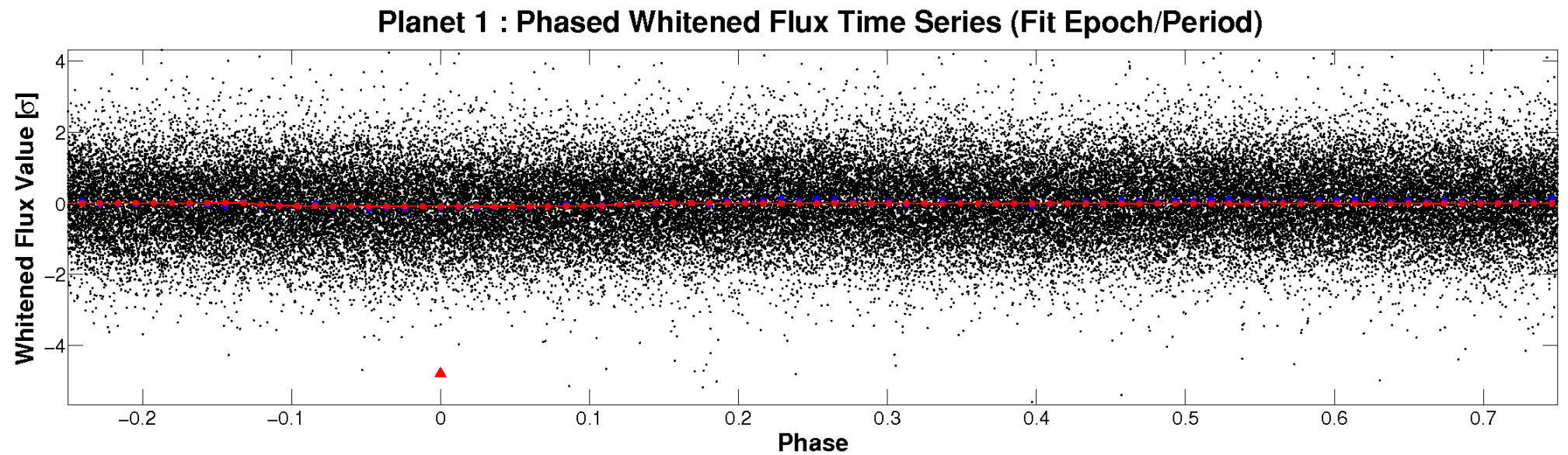
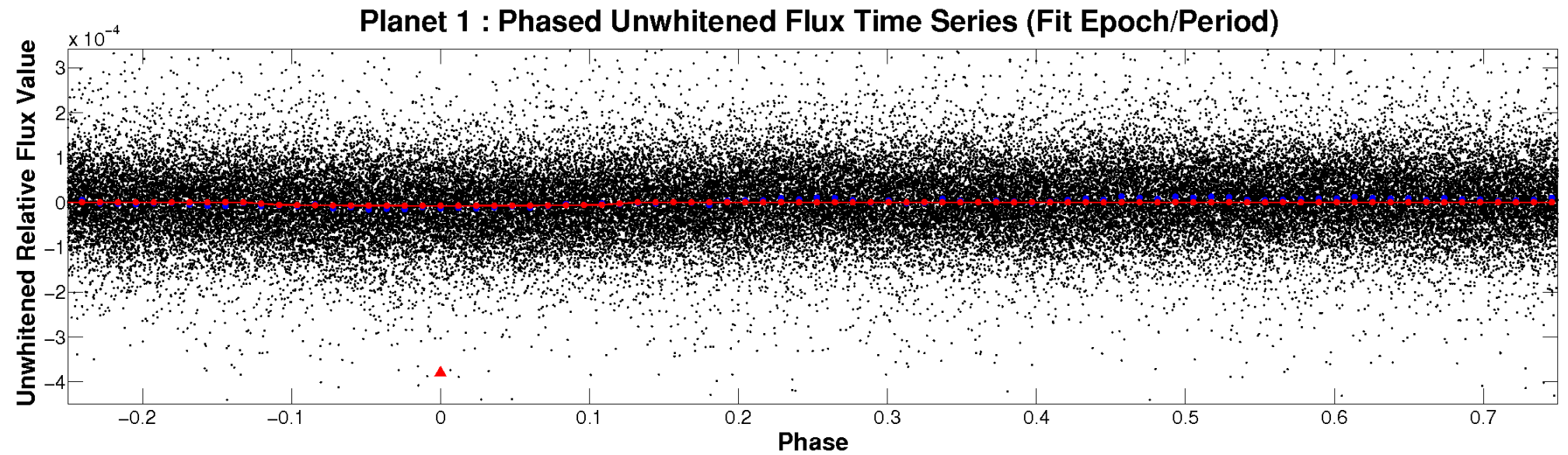


ALT Odd/Even

TCE 004358355-01

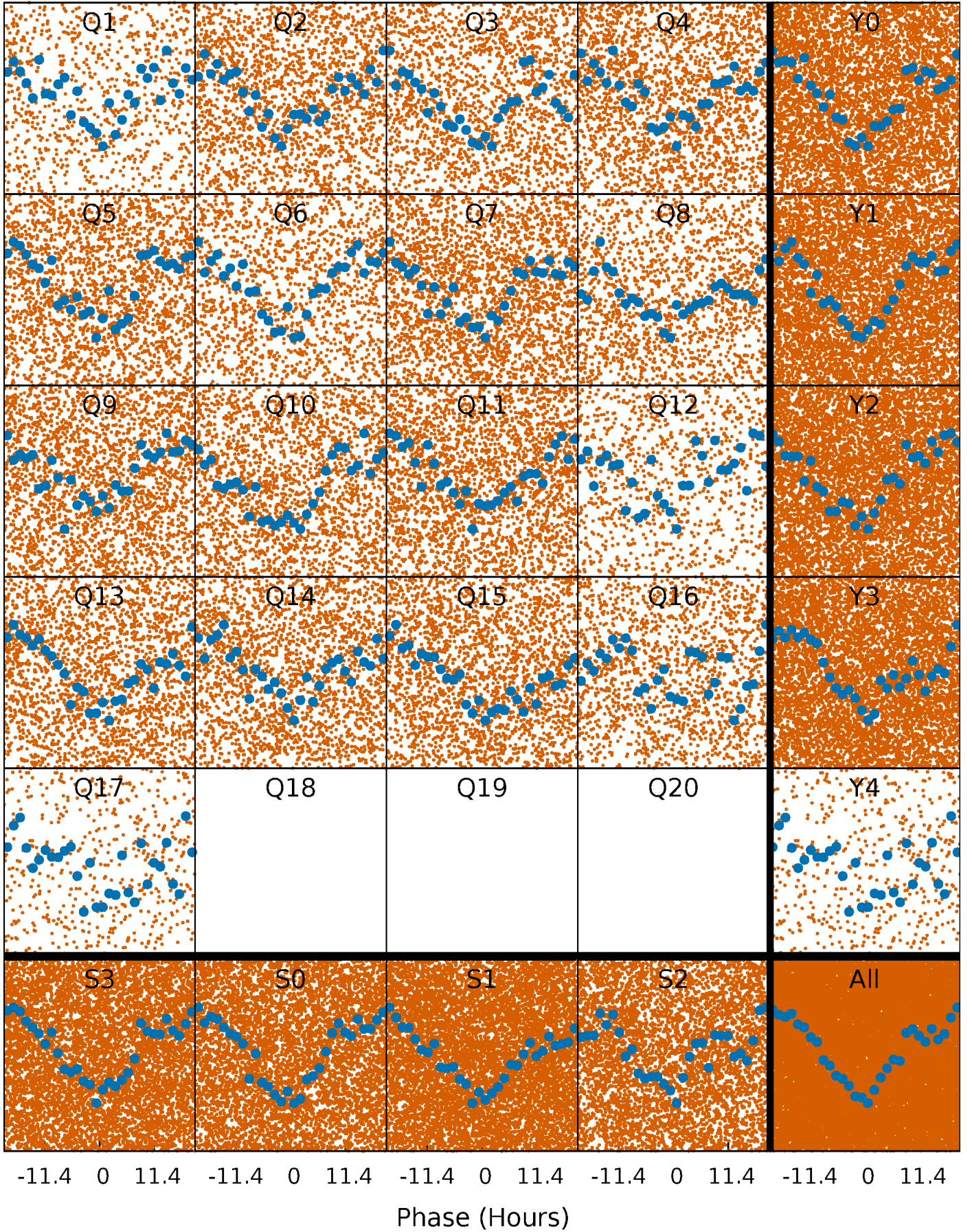


Non-Whitened Vs. Whitened Light Curve



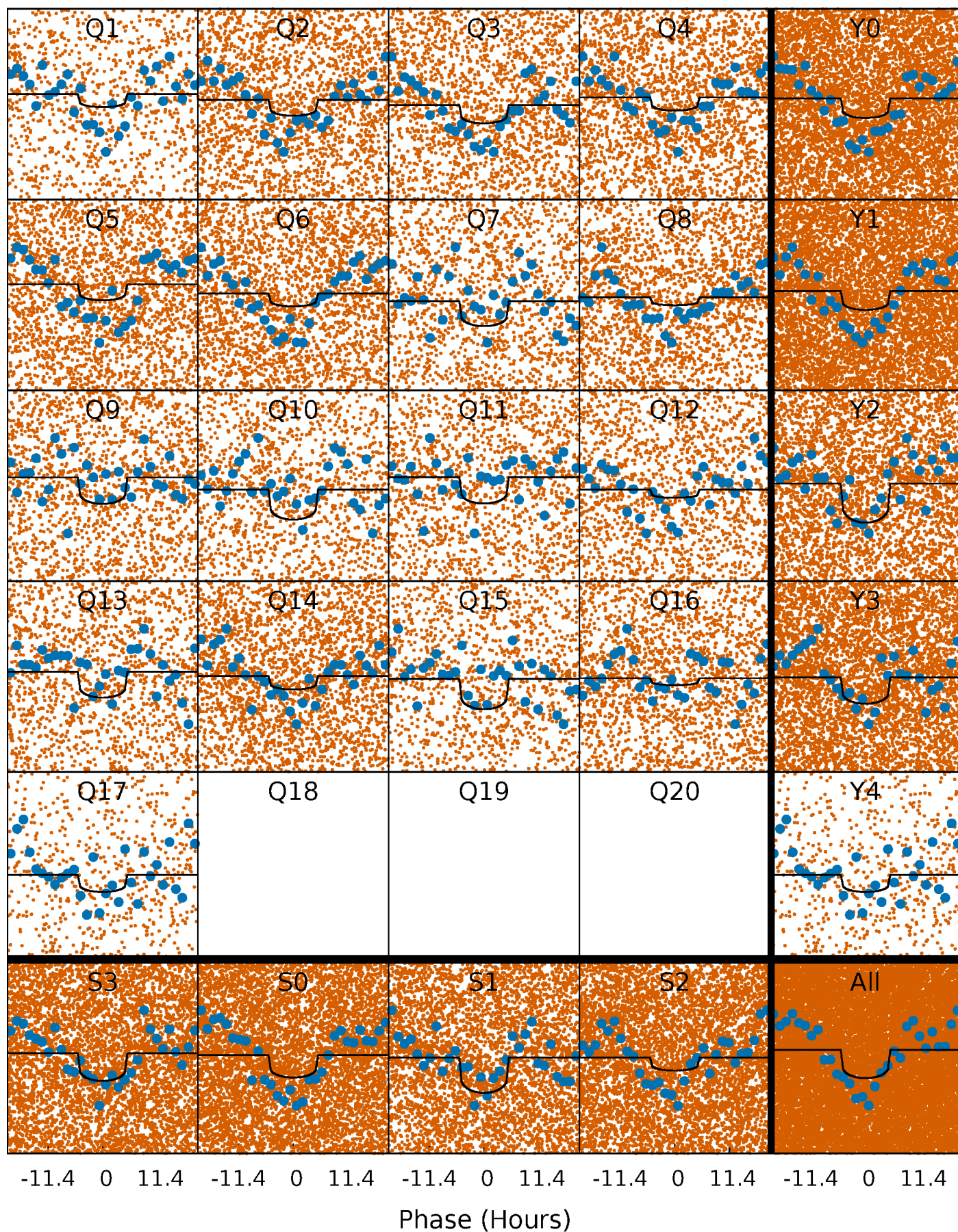
PDC Quarter-Phased Transit Curves

TCE 004358355-01 P= 1.698337 Days $T_0=133.174418$ (BKJD)



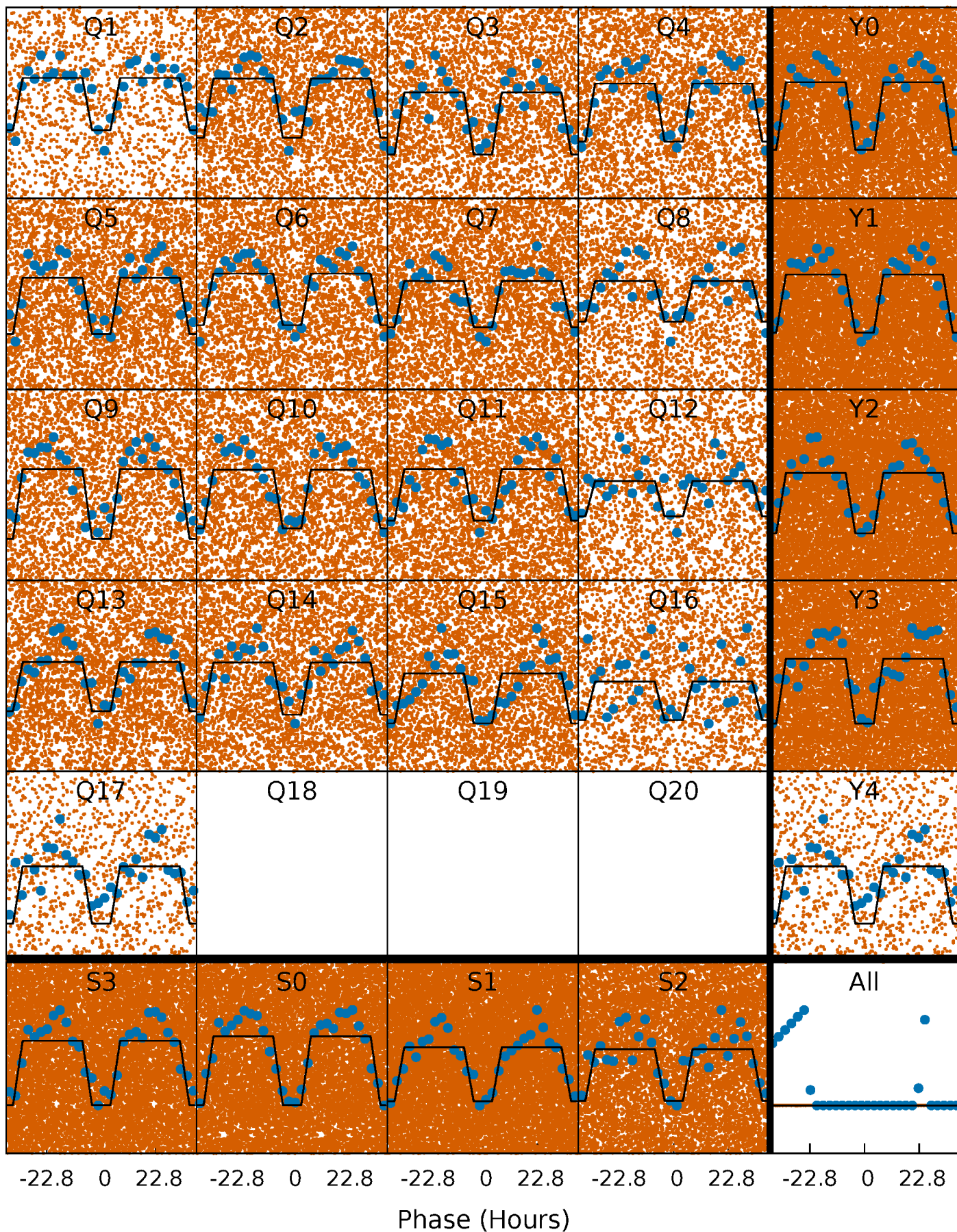
DV Quarter-Phased Transit Curves

TCE 004358355-01 P= 1.698337 Days $T_0=133.174418$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

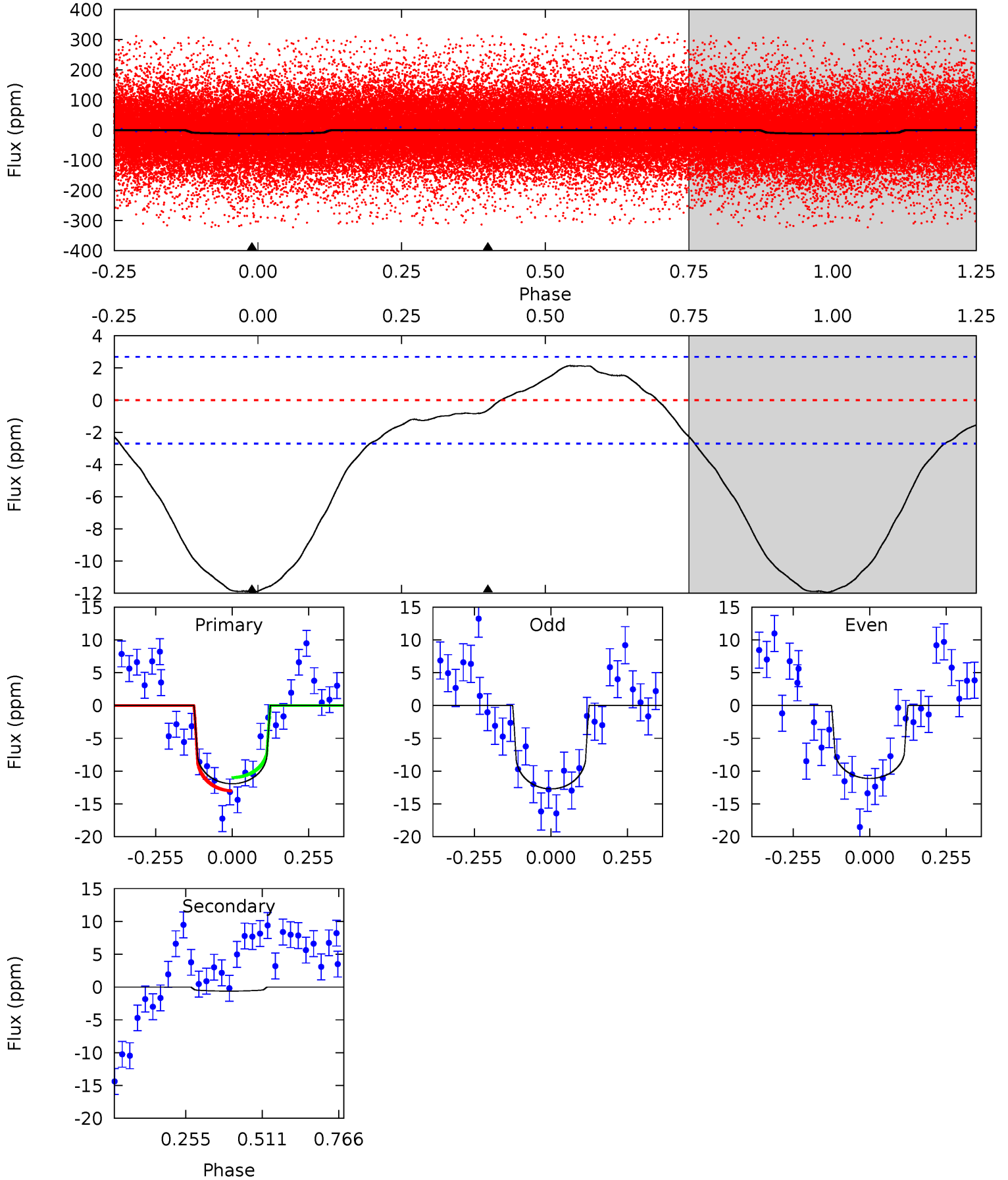
TCE 004358355-01 P= 1.698351 Days $T_0=133.142898$ (BKJD)



DV Model-Shift Uniqueness Test

004358355-01, P = 1.698337 Days, E = 131.476081 Days

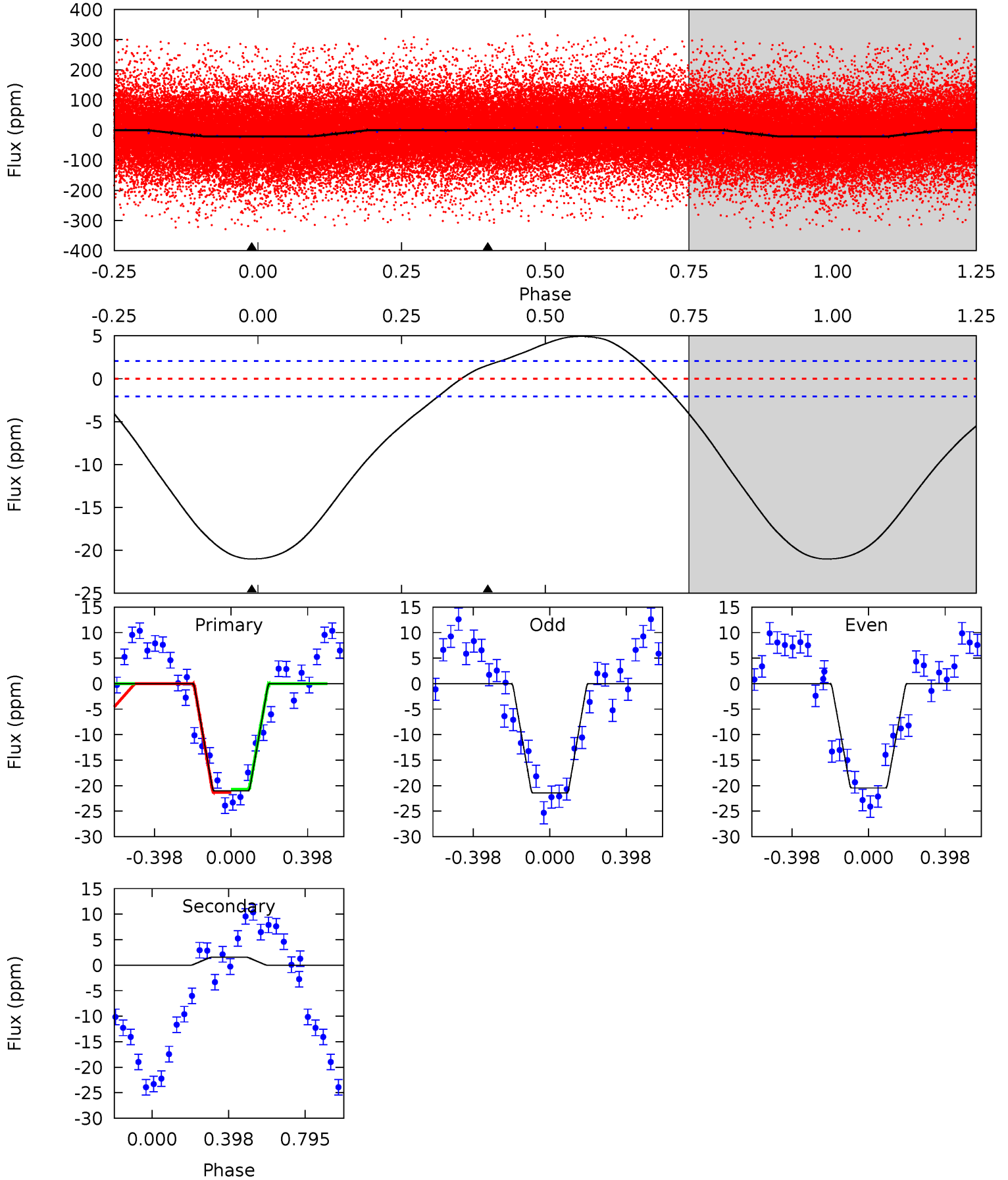
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.3	0.99	0	0	4.36	1.14	1.64	19.3	19.3	0.99	0.99	1.30	1.07	0.15	1.65



Alt Model-Shift Uniqueness Test

004358355-01, P = 1.698351 Days, E = 131.444547 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.4	-3.25	0	0	4.27	0.85	4.19	43.4	43.4	-3.25	-3.25	1.00	0.98	0.19	0.64



Stellar Parameters For KIC 004358355

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8178^{+73}_{-89}	$3.871^{+0.188}_{-0.101}$	$0.070^{+0.050}_{-0.300}$	$2.812^{+0.489}_{-0.734}$	$2.140^{+0.180}_{-0.359}$	$0.136^{+0.152}_{-0.045}$
	+1%/-1%	+5%/-3%	+71%/-429%	+17%/-26%	+8%/-17%	+112%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004358355-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1 ± 1	$0.80^{+0.31}_{-0.31}$	4421^{+219}_{-265}	3805^{+1550}_{-7788}	$0.594^{+1.422}_{-0.629}$
Alt.	2 ± 0	$1.44^{+0.33}_{-0.32}$	4434^{+210}_{-267}	-4668^{+291}_{-356}	$-0.526^{+0.217}_{-0.414}$

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 $A_{obs} \gg 1.0$

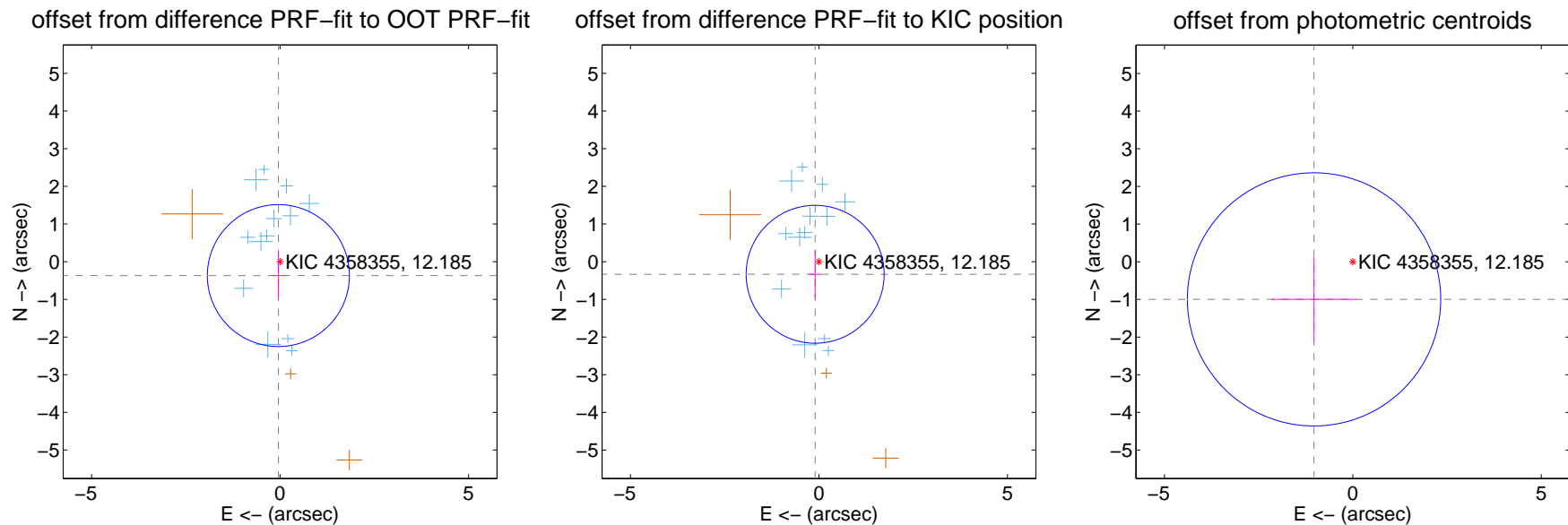
DV Centroid Data

Supplemental centroid analysis for 004358355-01. Kepler magnitude: 12.19. Transit SNR 9.43

There are 13 quarters with good PRF difference image offsets

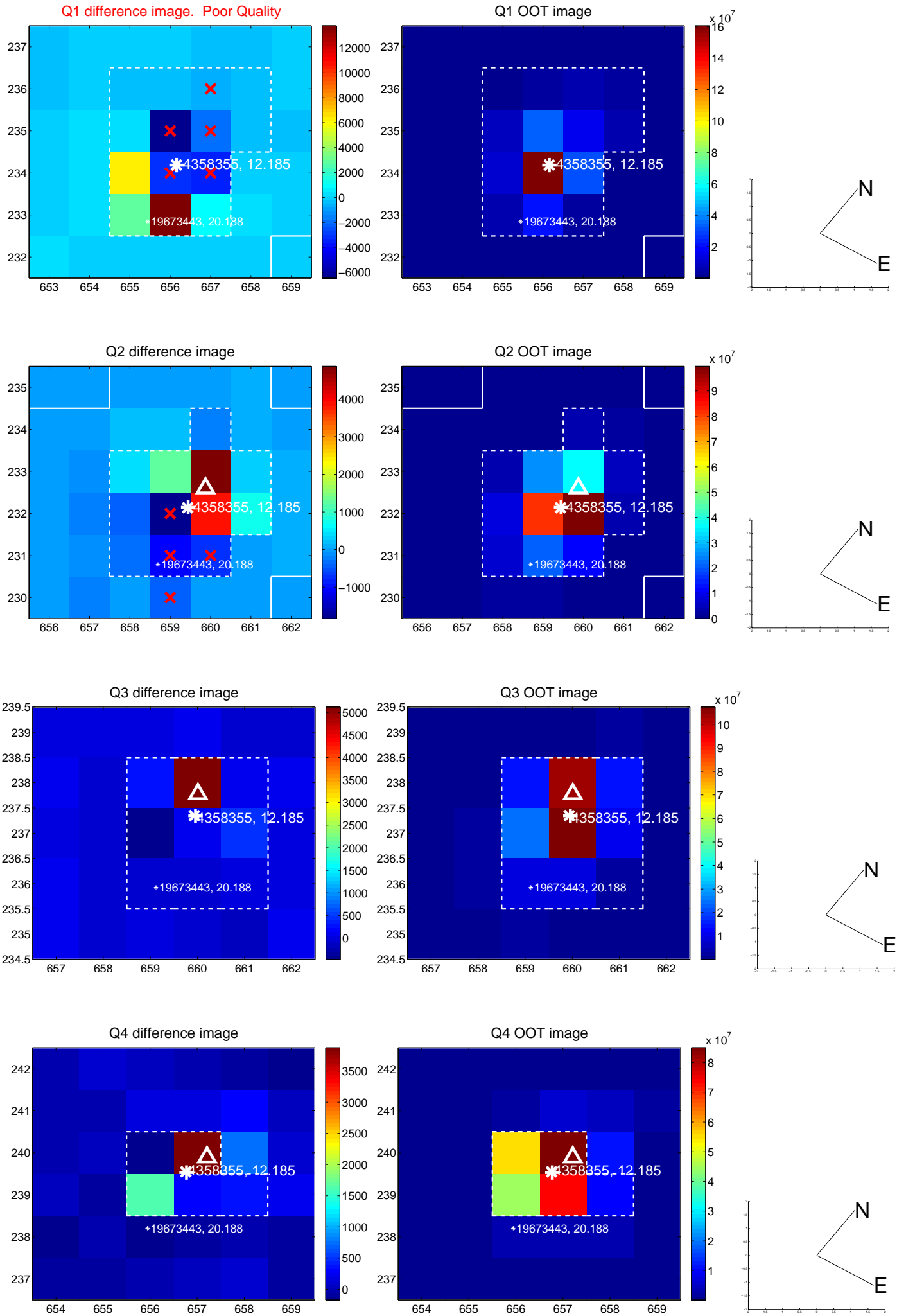
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.372 ± 0.628	0.59	0.046 ± 0.167	-0.369 ± 0.632
PRF-fit source offset from KIC position	0.349 ± 0.610	0.57	0.102 ± 0.161	-0.334 ± 0.636
photometric centroid source offset	1.43 ± 1.12	1.28	1.03 ± 1.13	-1.00 ± 1.12

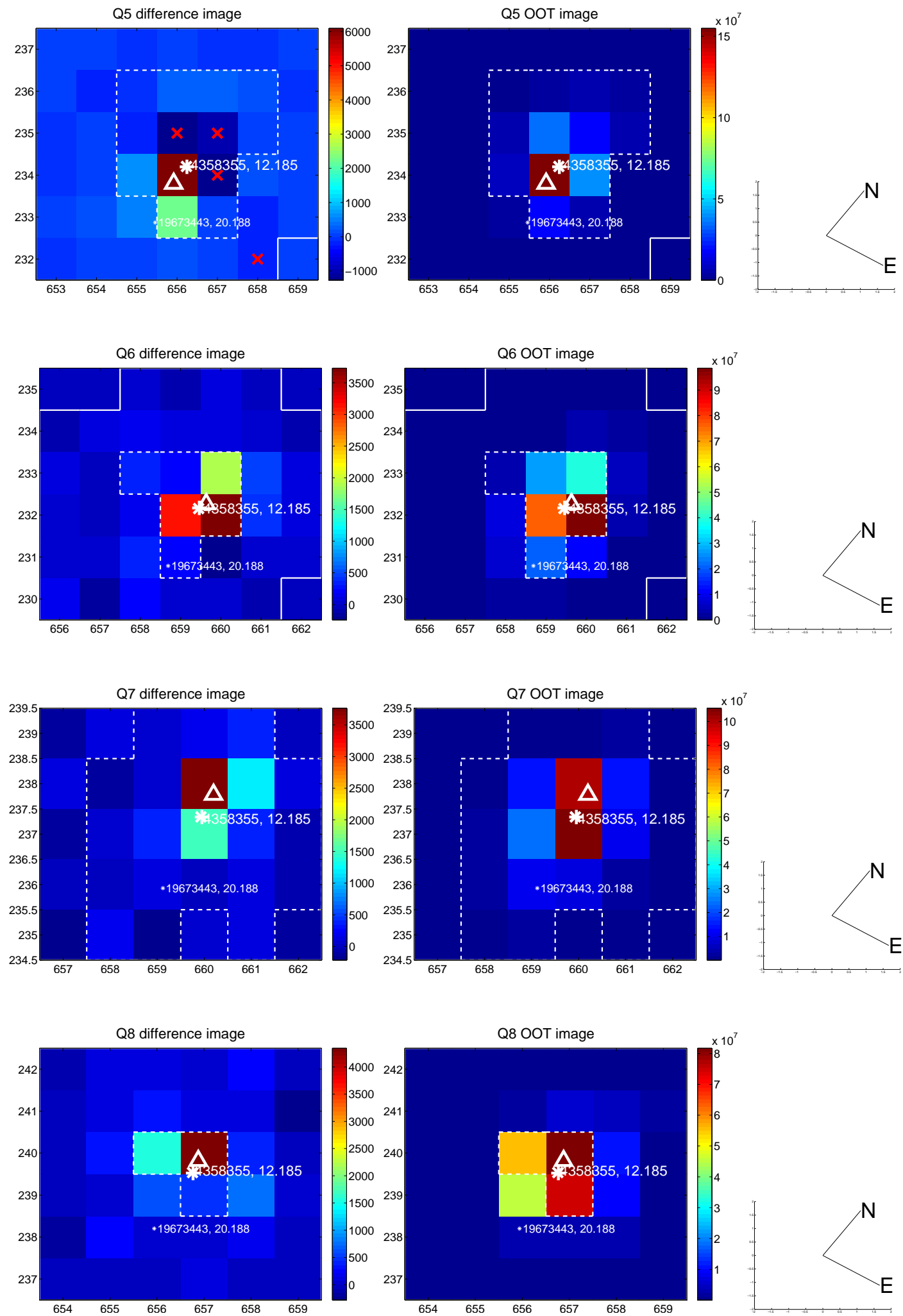


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

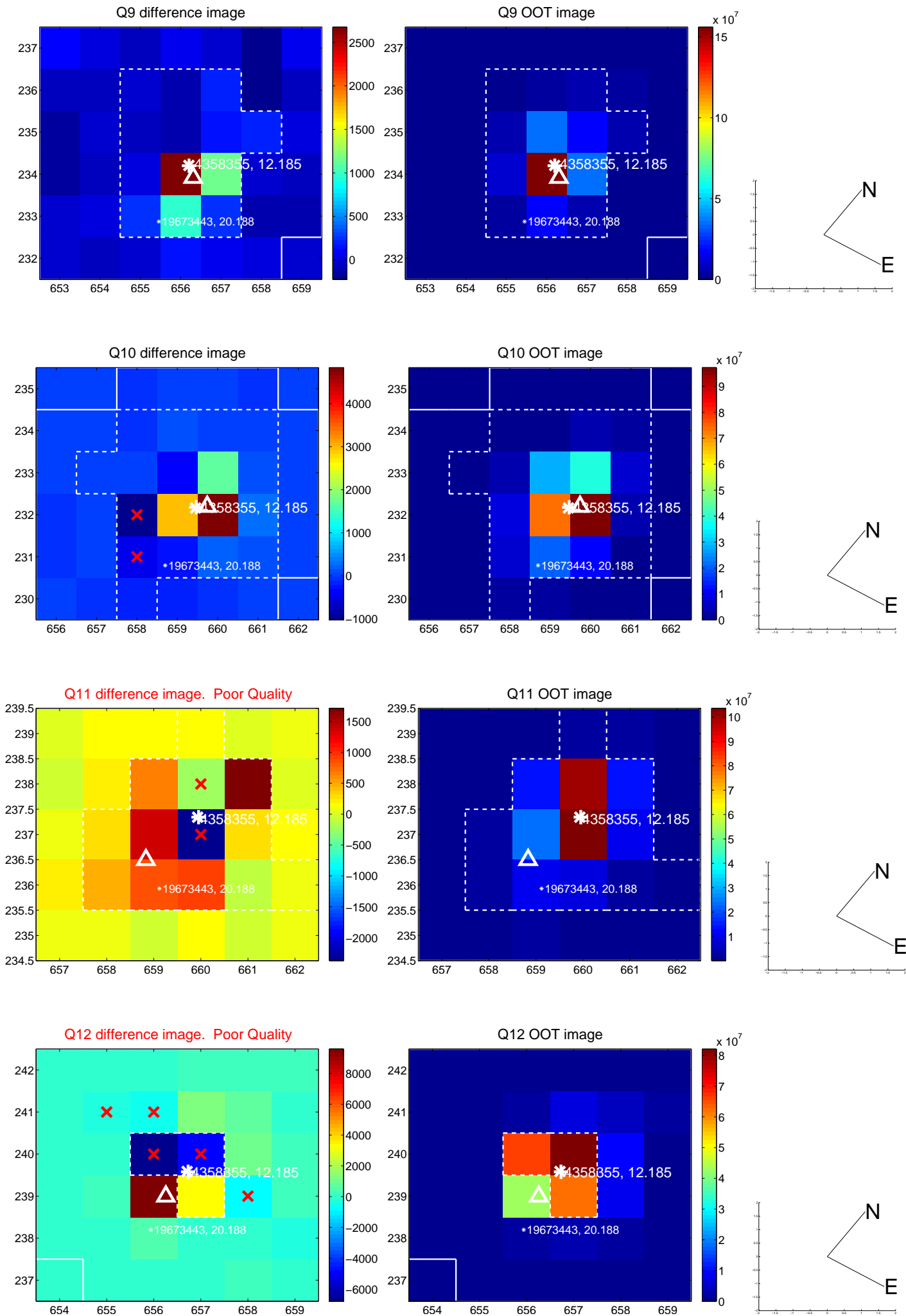
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



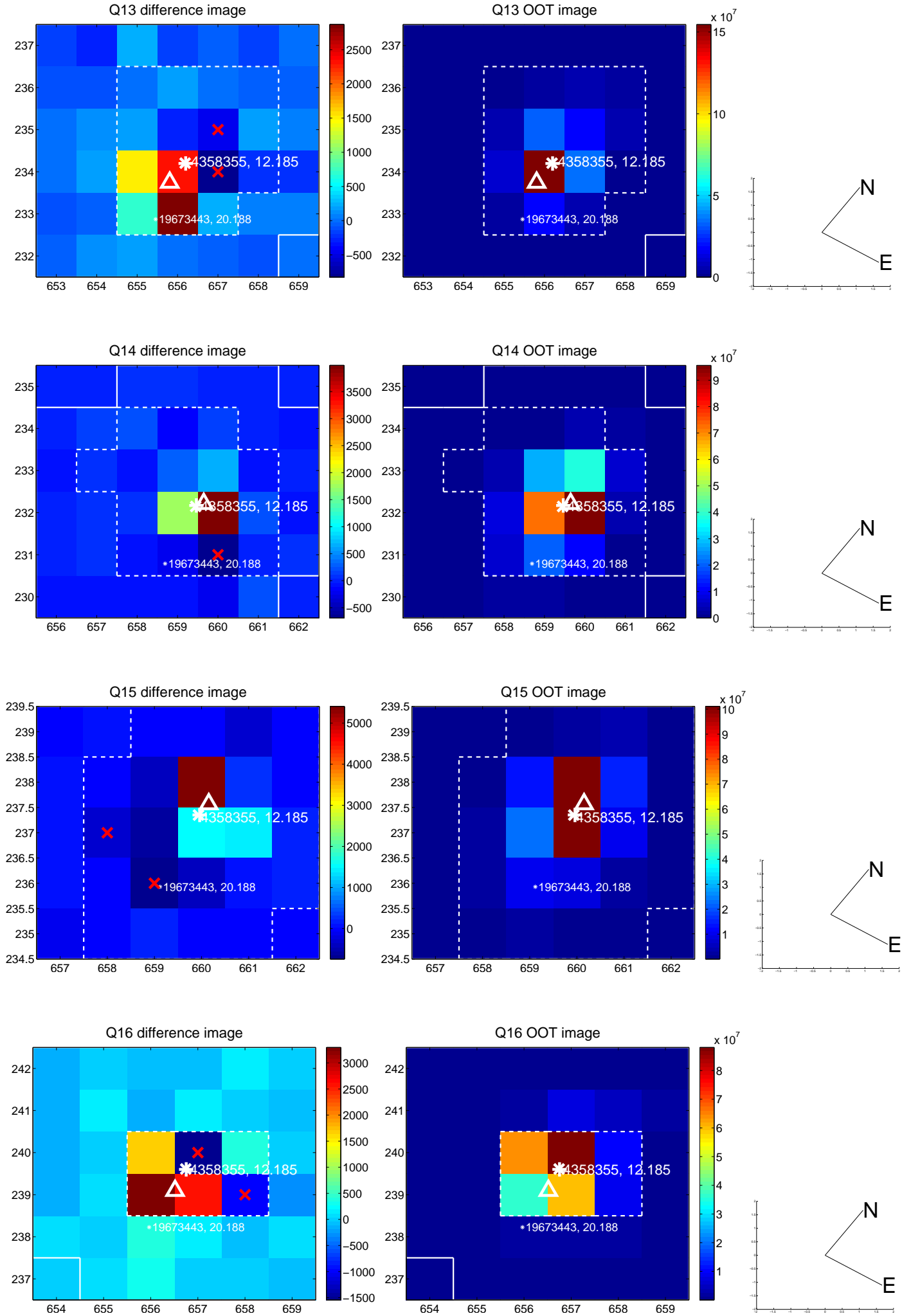
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



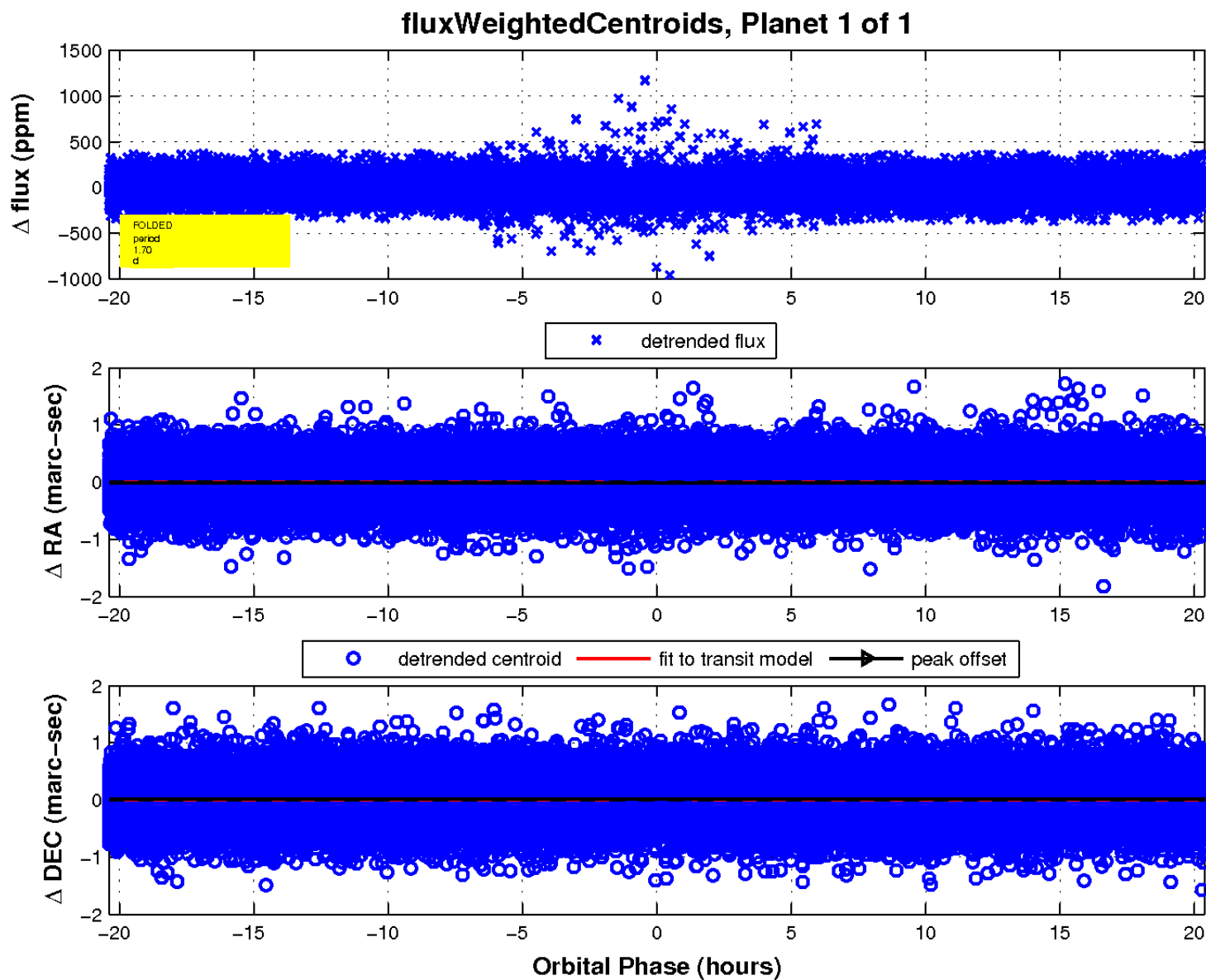
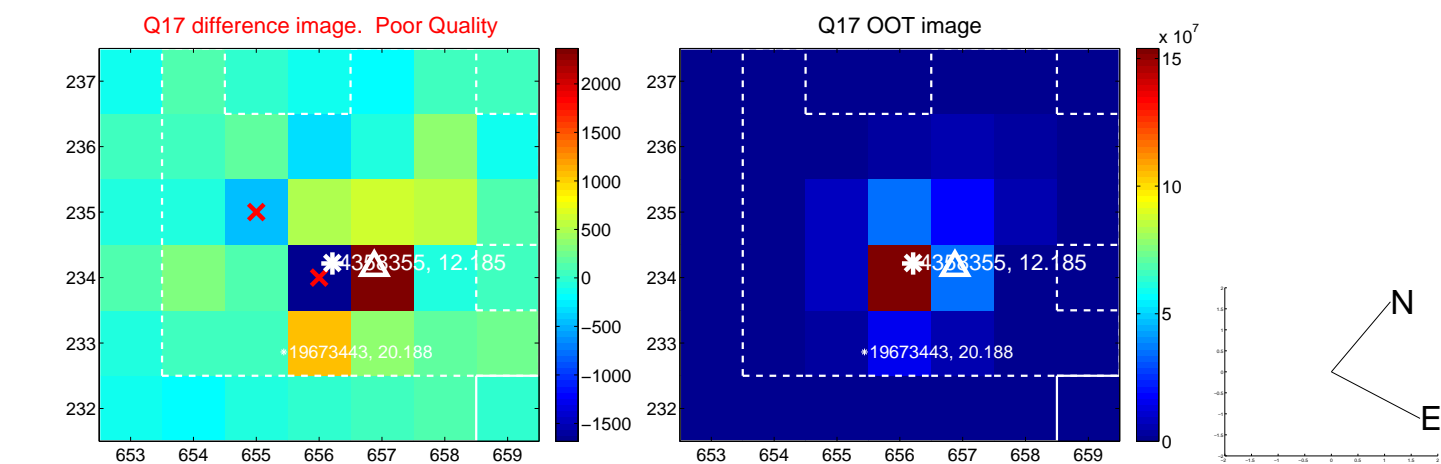
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

