

KIC 008396660

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})
008396660-01	OBS	4407.01	1.338077	132.342149	17.5	1.650	10.9	12.2	1.32	6355	0.56	3850.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008396660-01	OBS	PC	1.00	0	0	0	0	CENT_SATURATED

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 008396660-01

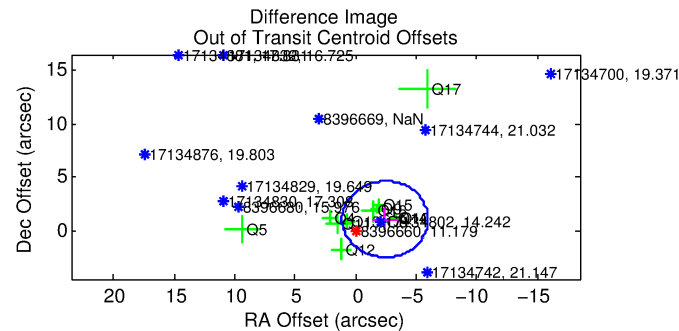
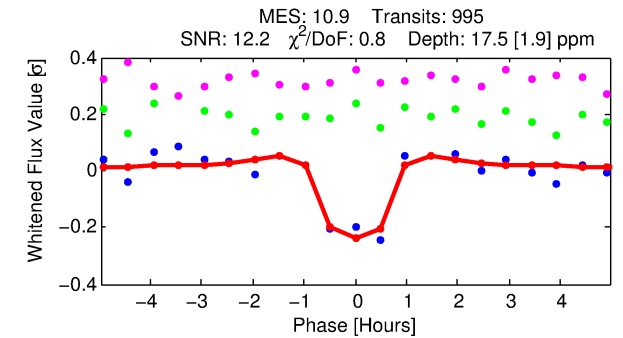
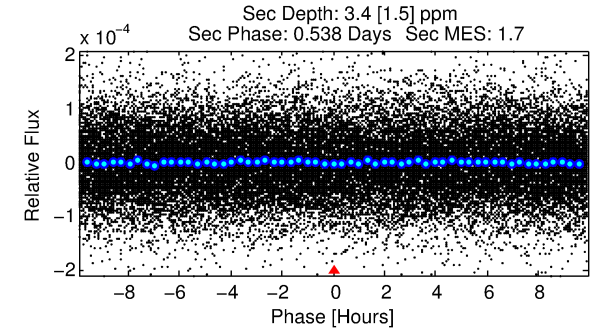
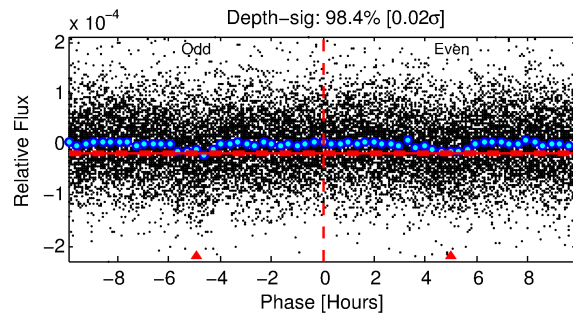
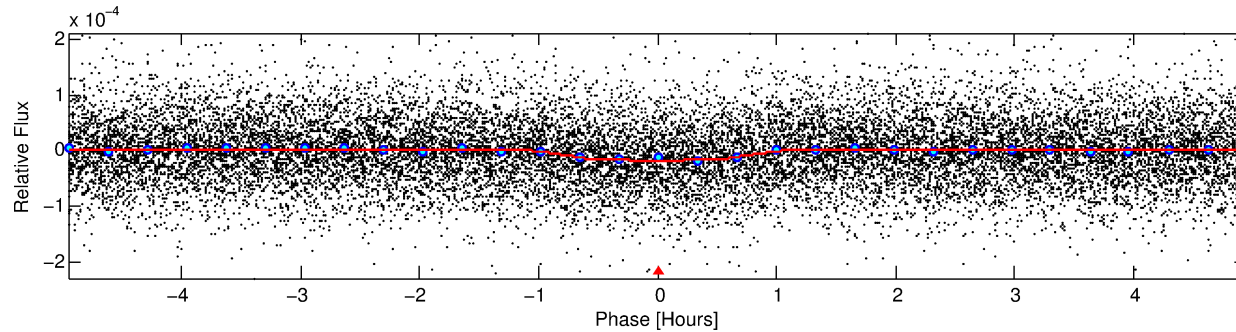
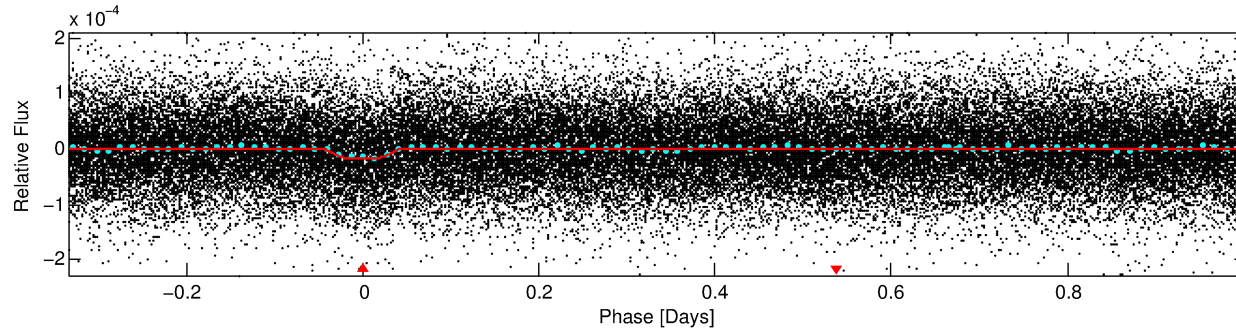
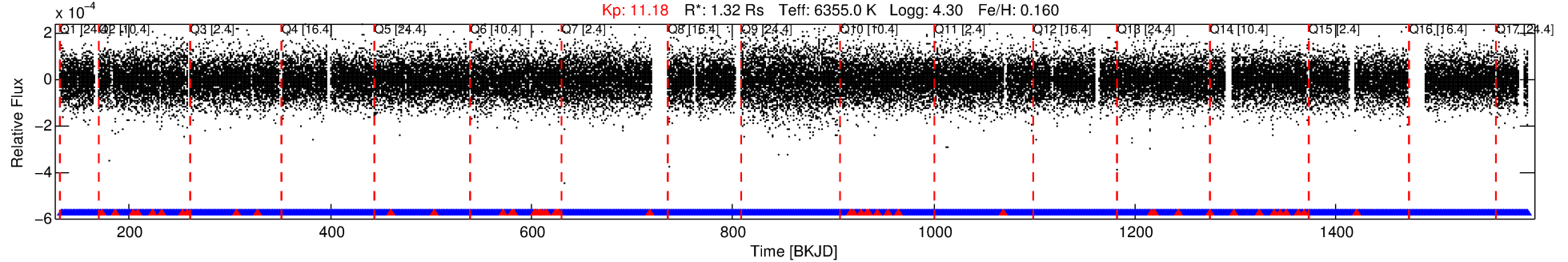
No Significant Match Found

DV One-Page Summary

KIC: 8396660 Candidate: 1 of 1 Period: 1.338 d

KOI: K04407.01 Corr: 0.957

Kp: 11.18 R*: 1.32 Rs Teff: 6355.0 K Logg: 4.30 Fe/H: 0.160



DV Fit Results:

Period = 1.33808 [0.00001] d
Epoch = 132.3421 [0.0017] BKJD
Rp/R* = 0.0039 [0.0012]
a/R* = 5.95 [9.16]
b = 0.31 [4.68]
Seff = 3850.75 [866.86]
Teq = 2009 [113] K
Rp = 0.56 [0.20] Re
a = 0.0257 [0.0036] AU
Ag = 3.93 [3.15] [0.93σ]
Teff = 4374 [851] K [2.76σ]

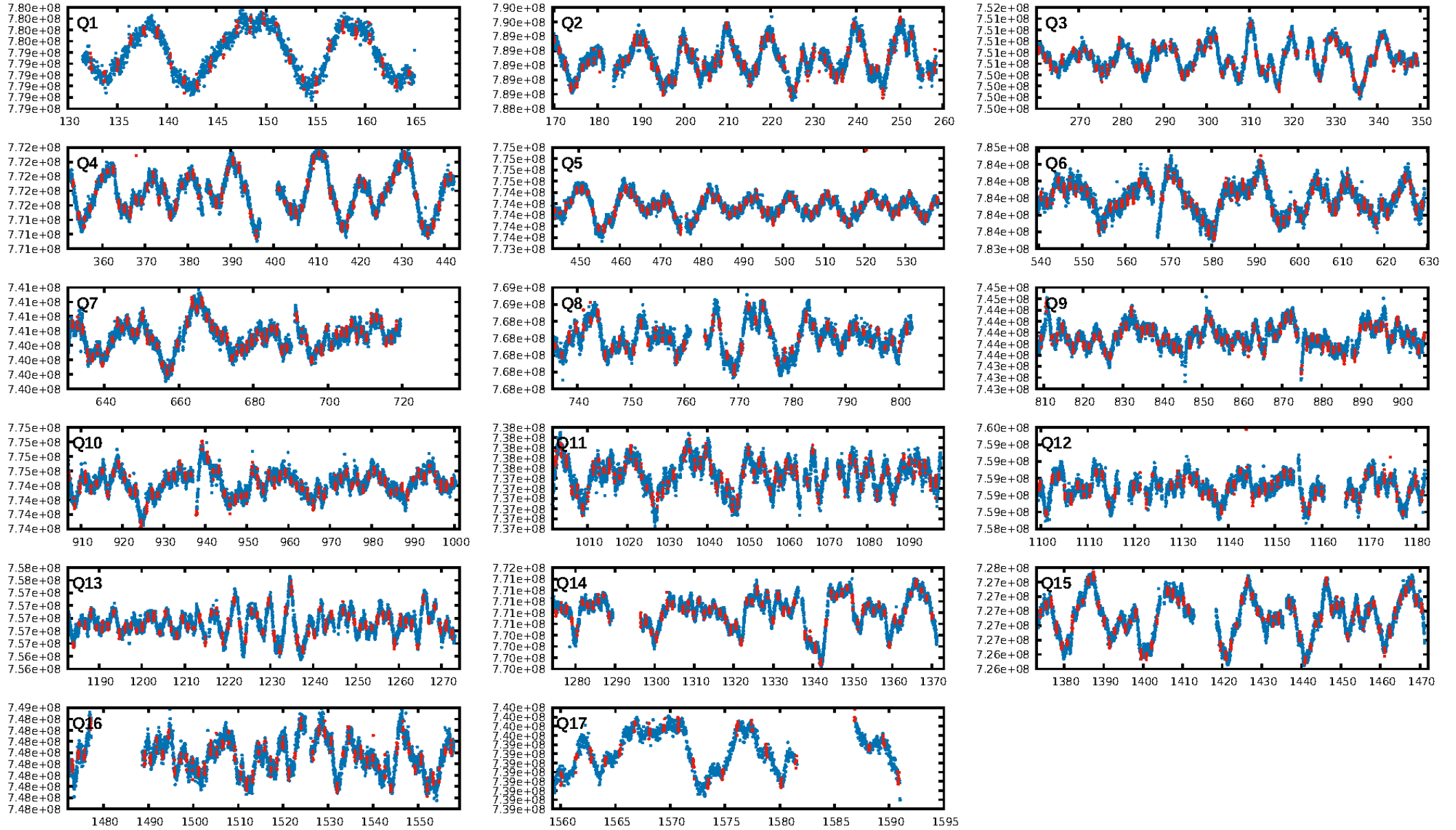
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.54e-26
RollingBand-fgt: 0.95 [903/949]
GhostDiagnostic-chr: 16.35
Centroid-sig: 0.0%
Centroid-so: 3.858 arcsec [3.81σ]
OotOffset-rm: 2.643 arcsec [2.23σ]
KicOffset-rm: 2.442 arcsec [2.19σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 1.00 [17/17]

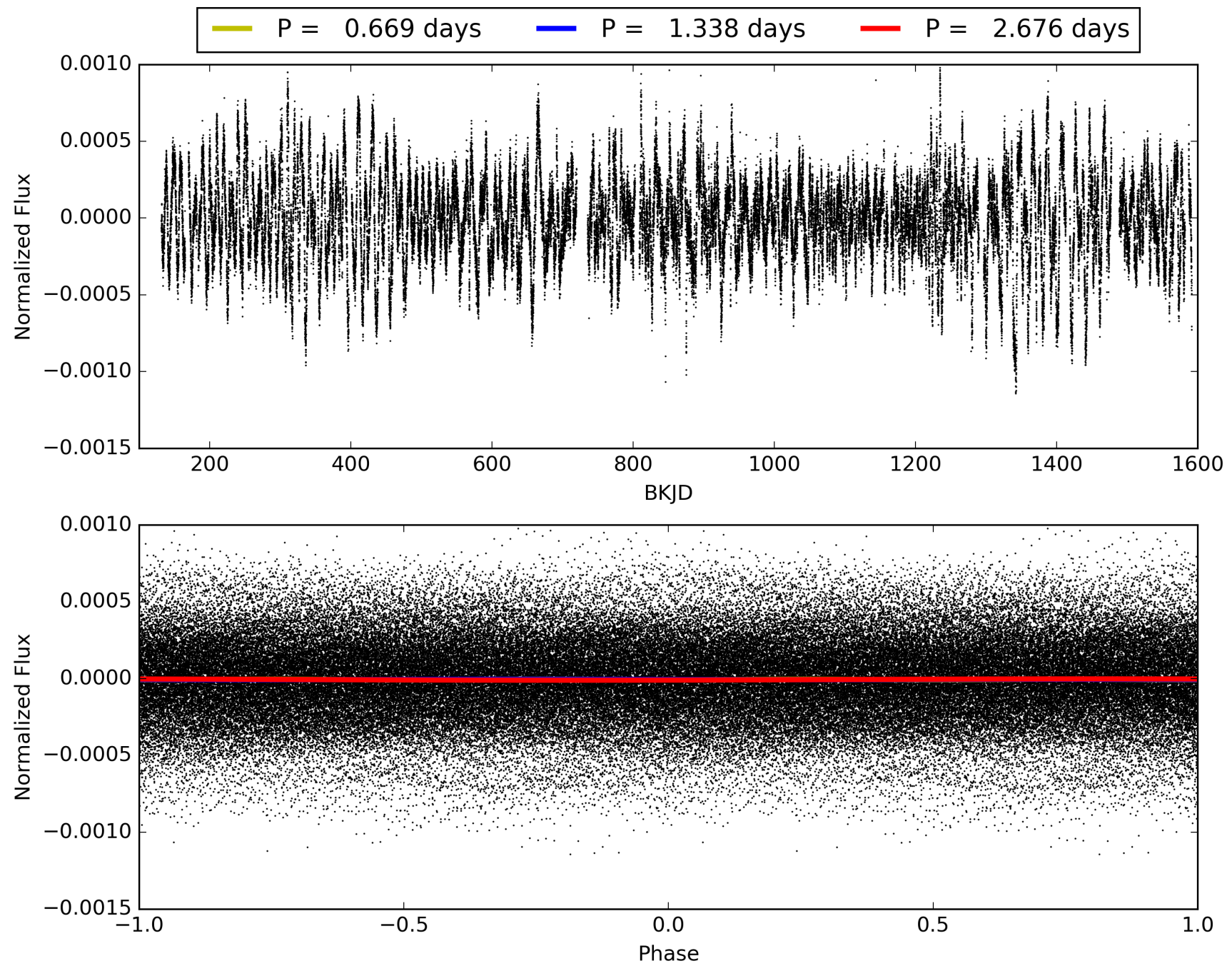
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:39:13 Z

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

TCE 008396660-01, PDC Light Curves

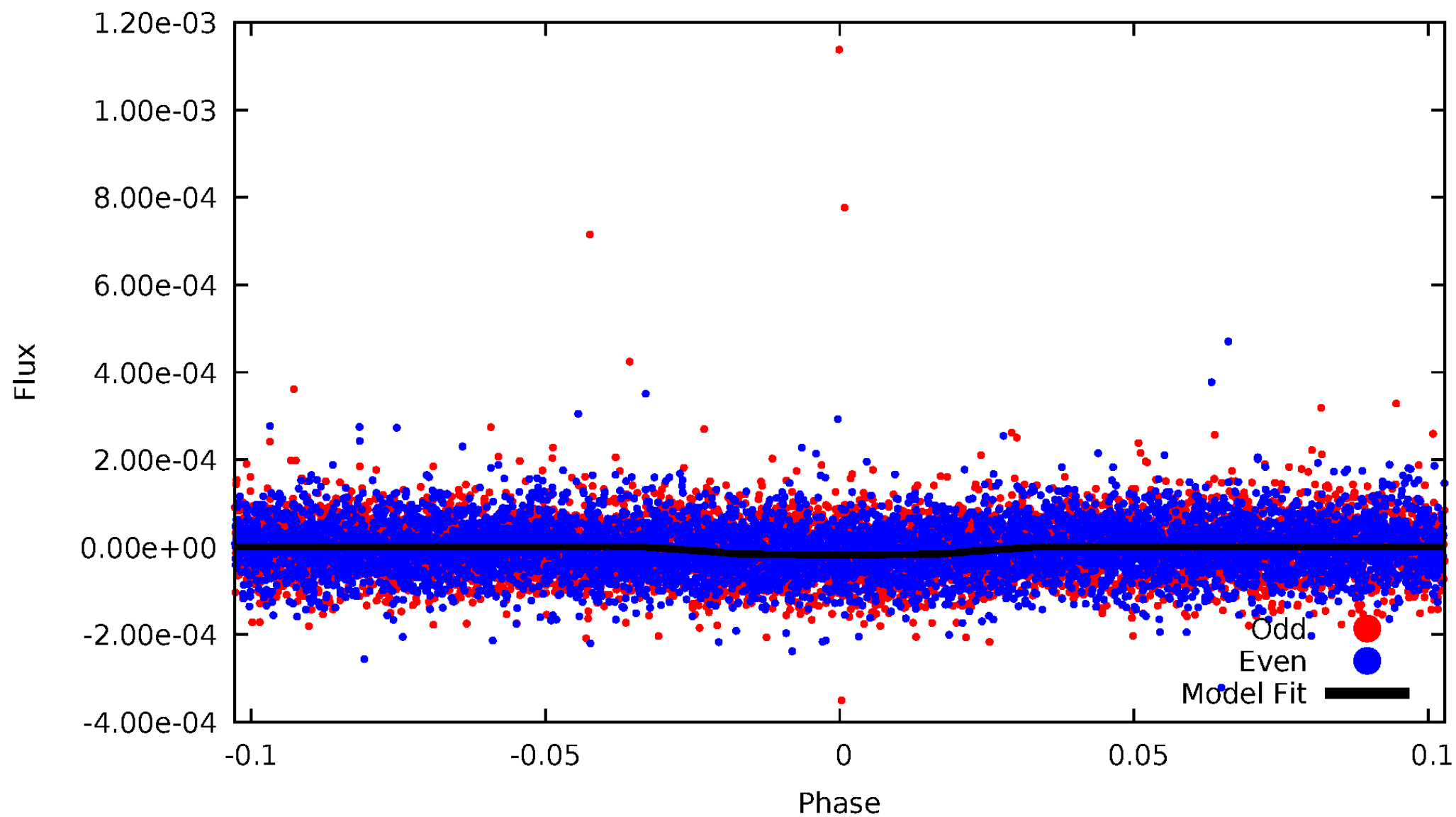


TCE 008396660-01



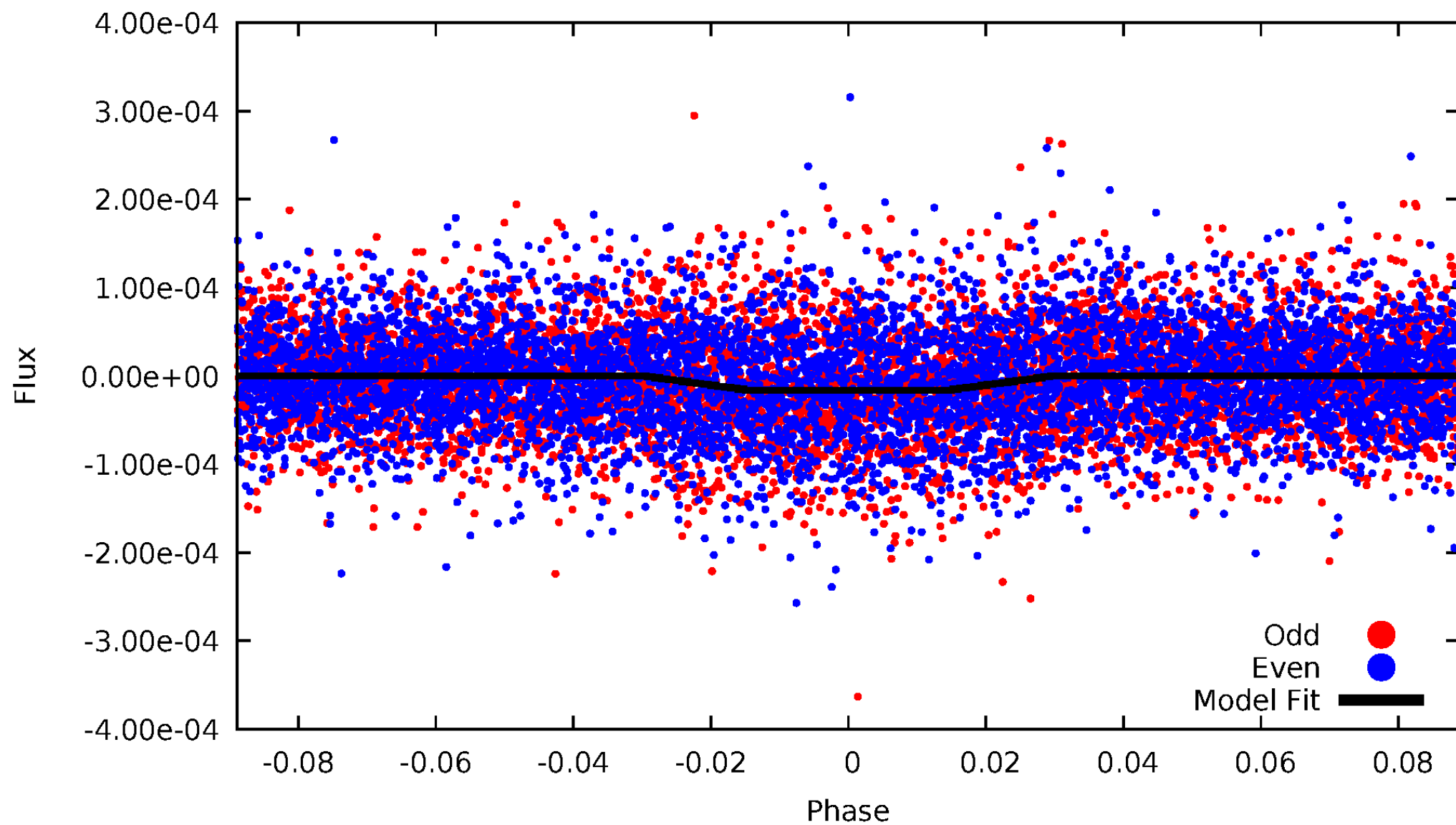
DV Odd/Even

TCE 008396660-01

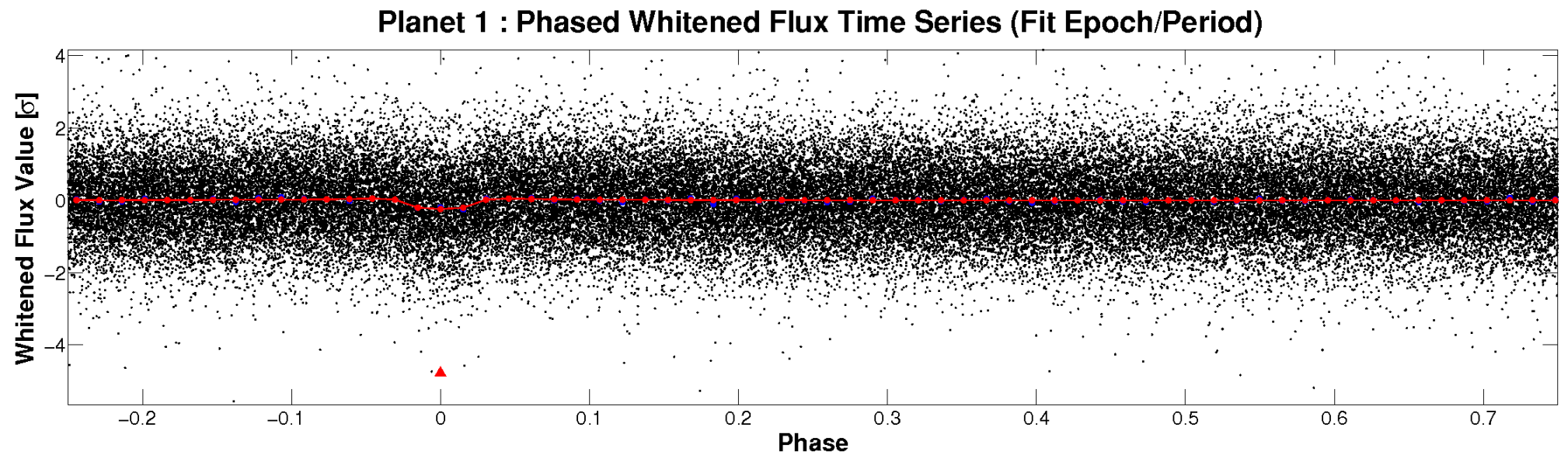
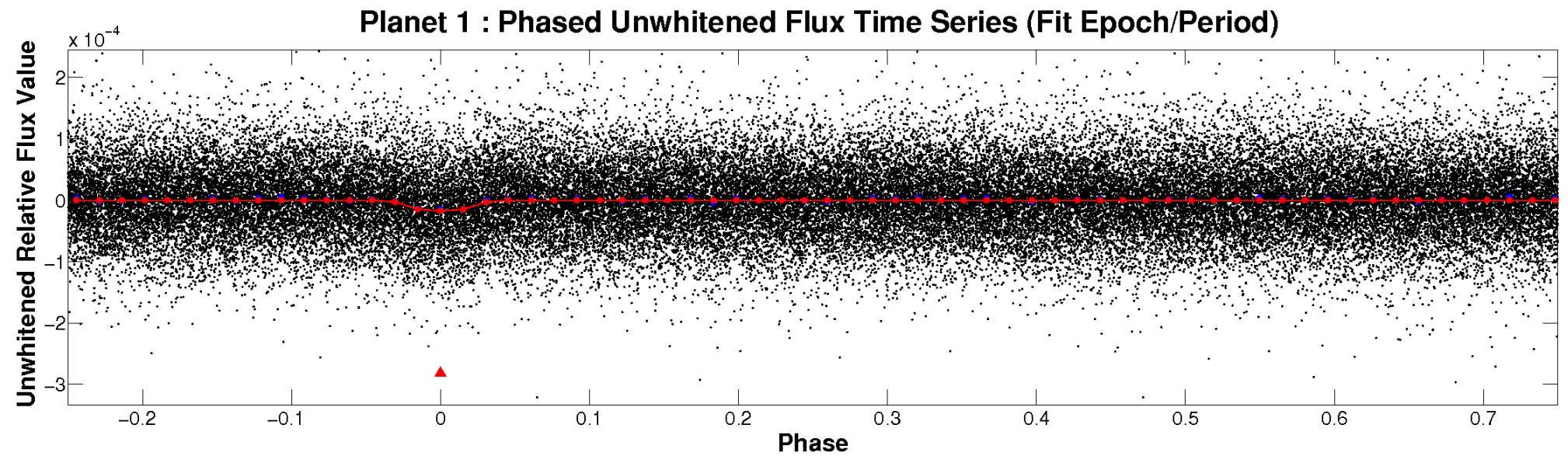


ALT Odd/Even

TCE 008396660-01

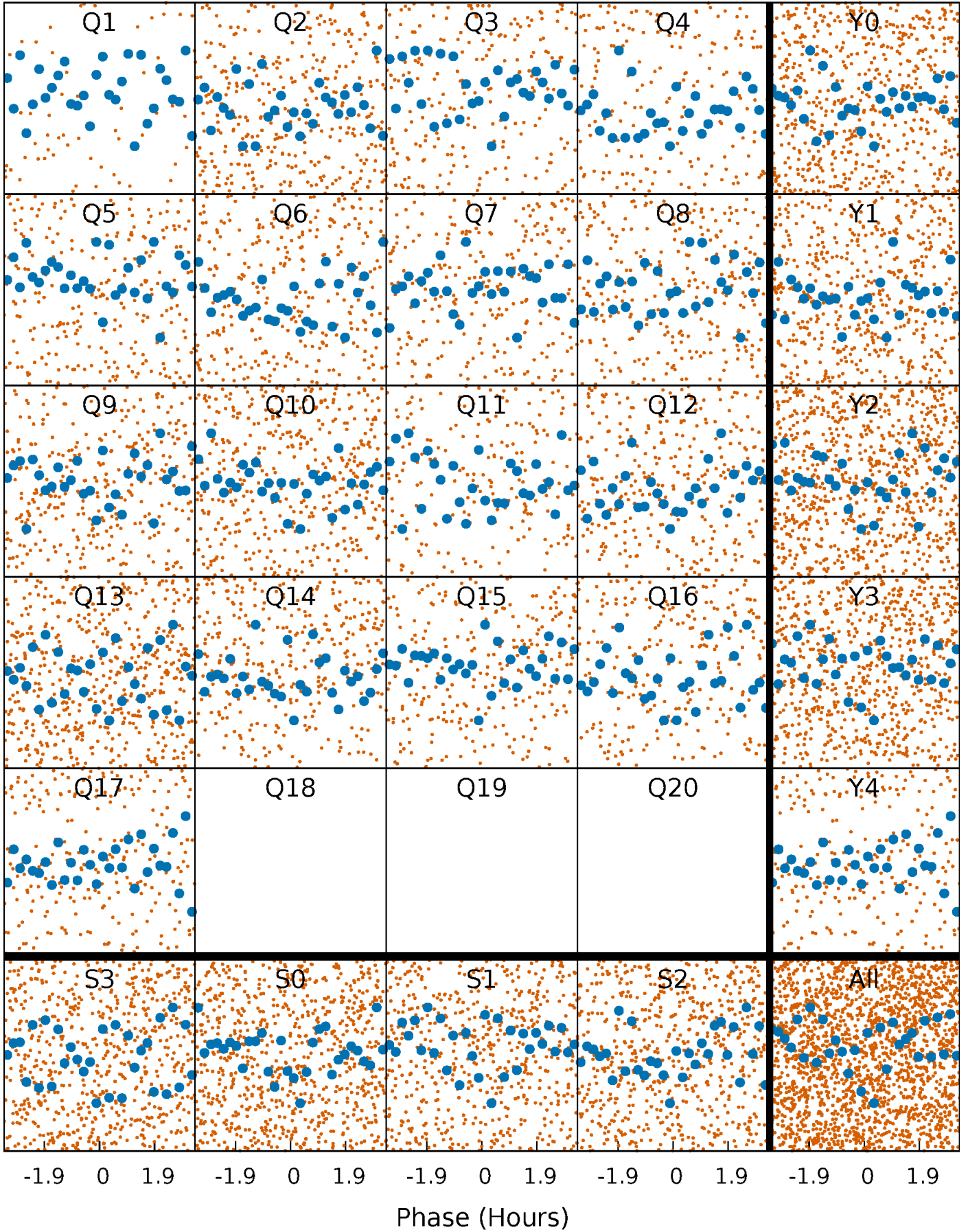


Non-Whitened Vs. Whitened Light Curve



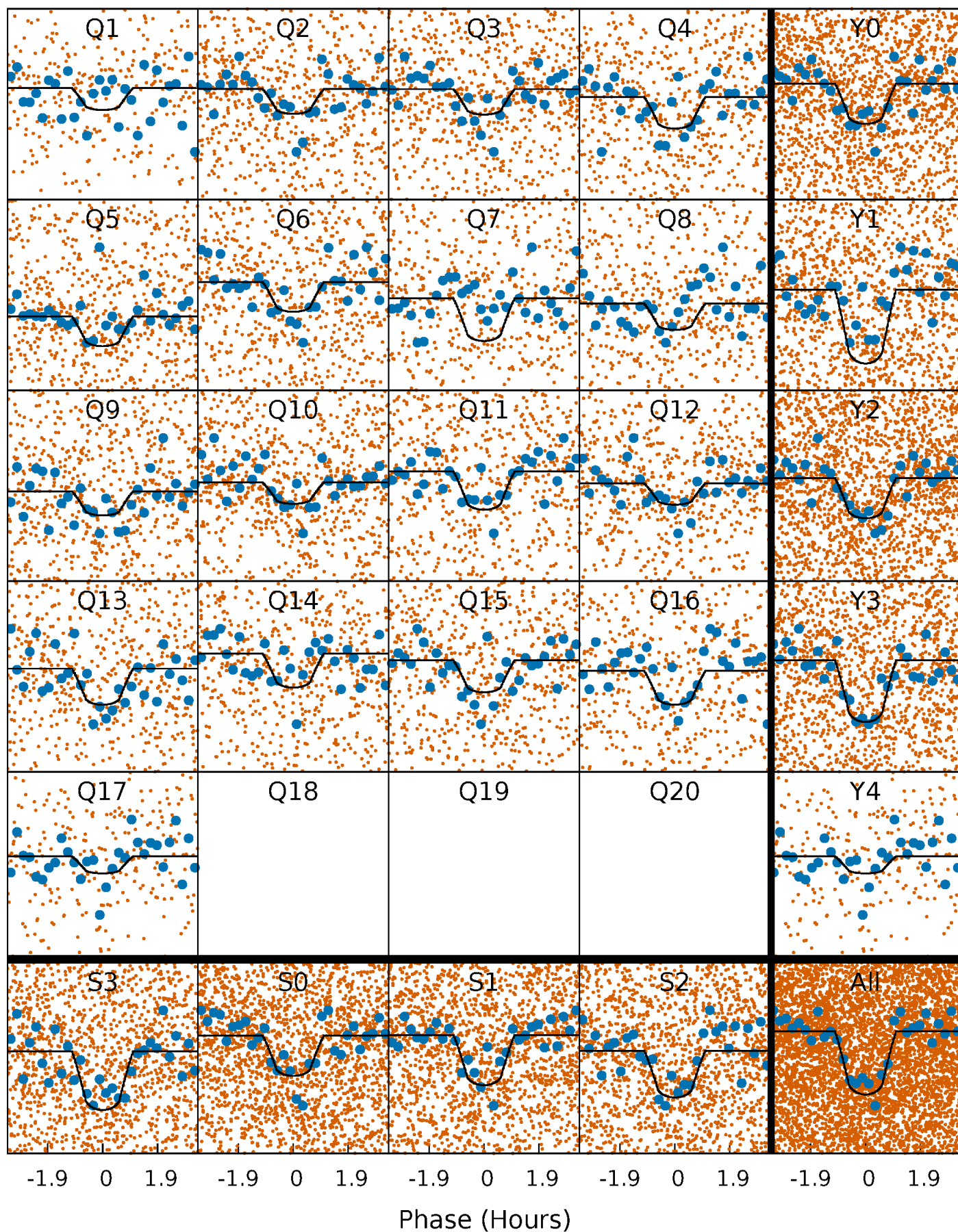
PDC Quarter-Phased Transit Curves

TCE 008396660-01 P= 1.338077 Days $T_0=132.342149$ (BKJD)



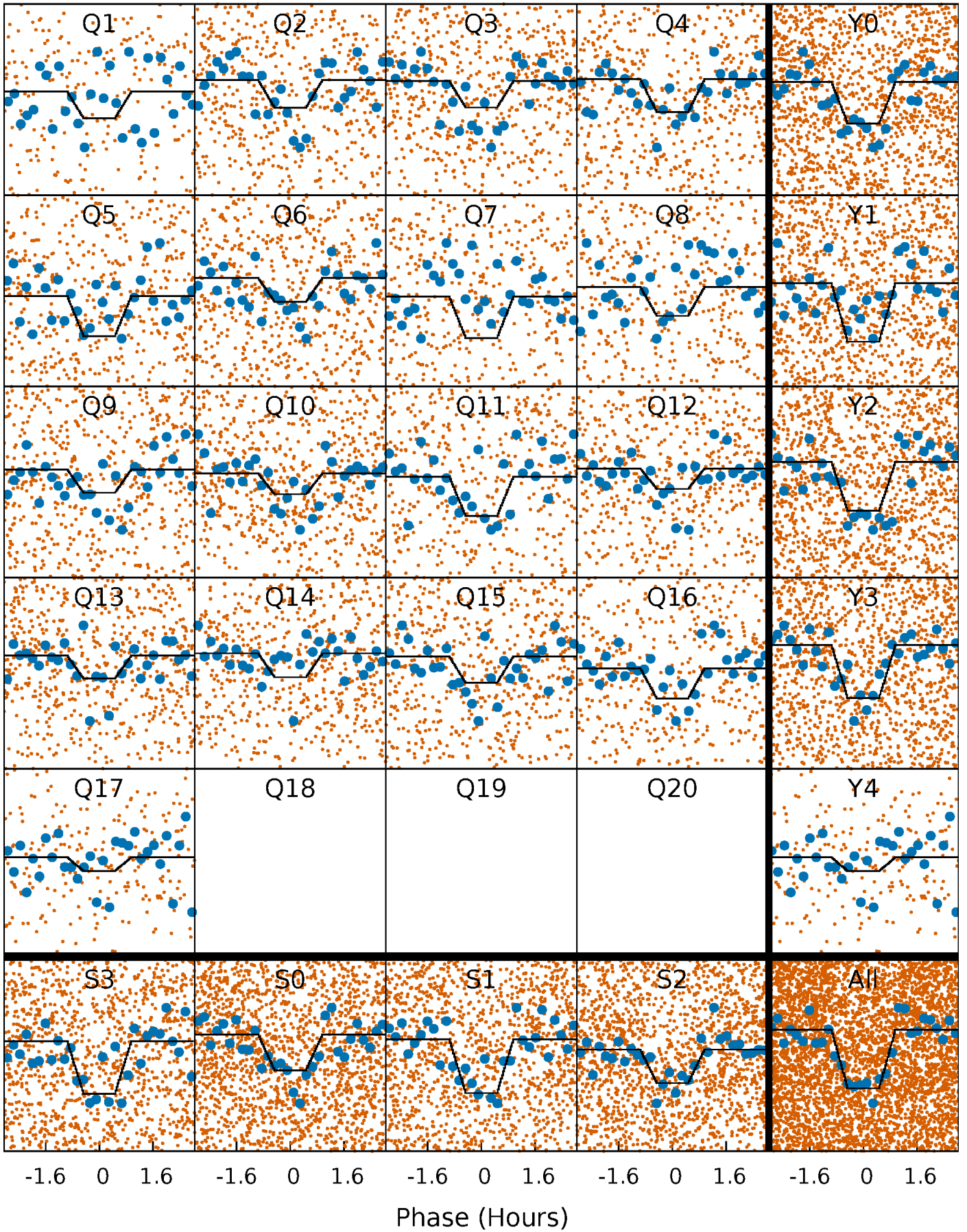
DV Quarter-Phased Transit Curves

TCE 008396660-01 P= 1.338077 Days $T_0=132.342149$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

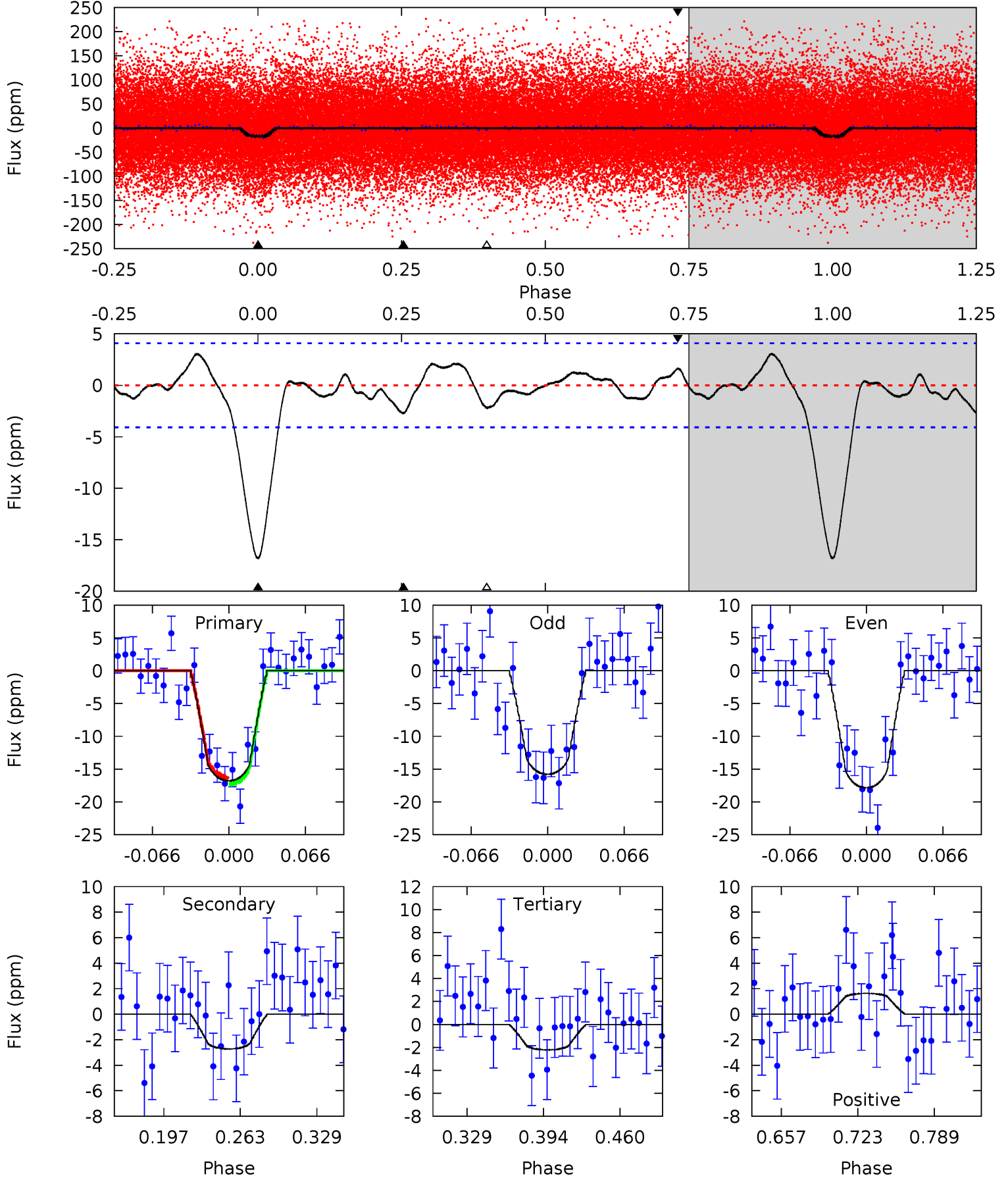
TCE 008396660-01 P= 1.338078 Days $T_0=132.340688$ (BKJD)



DV Model-Shift Uniqueness Test

008396660-01, P = 1.338077 Days, E = 131.004072 Days

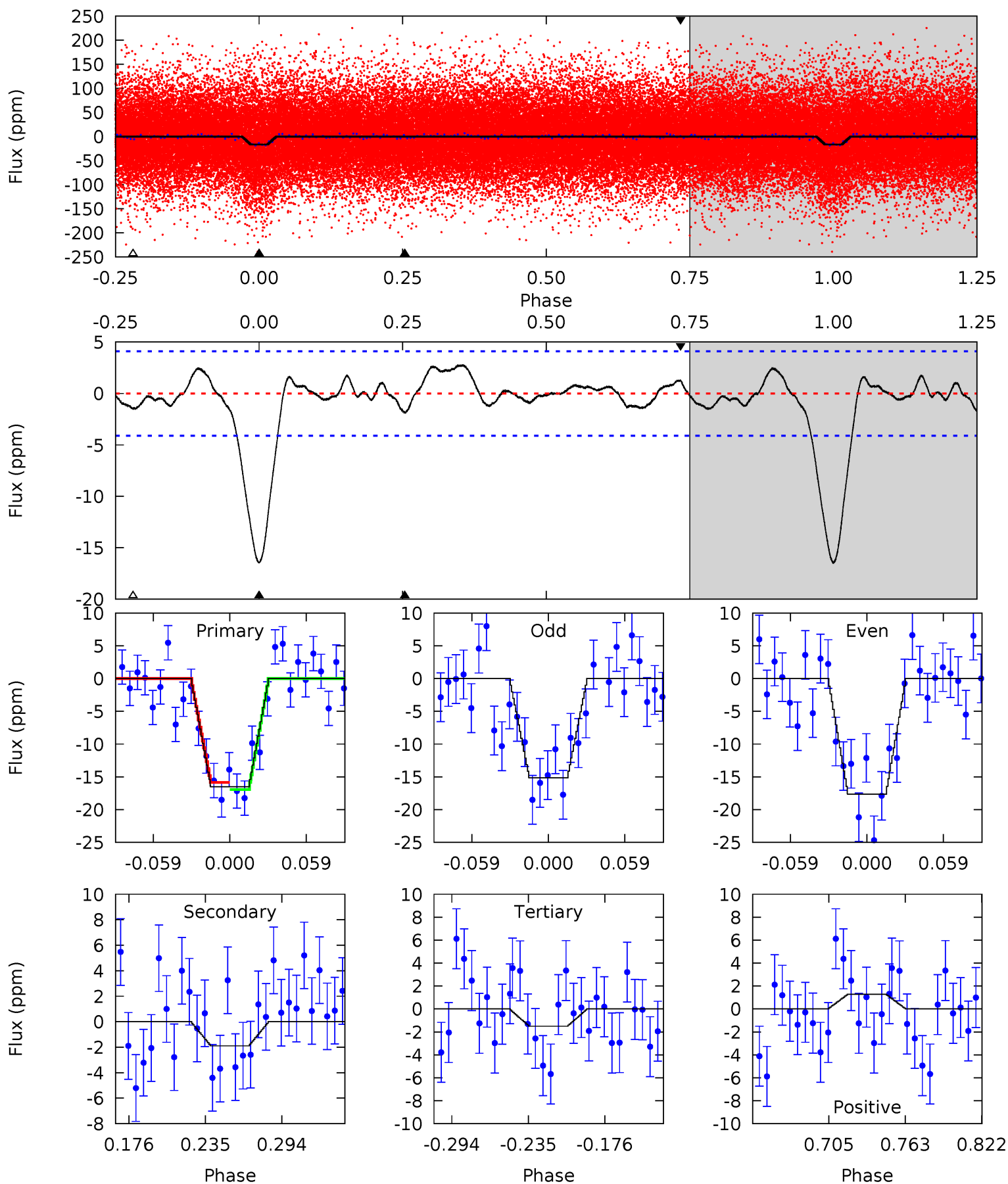
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.1	3.10	2.53	1.86	4.65	1.84	1.25	16.6	17.3	0.58	1.24	1.19	1.00	0.15	0.53



Alt Model-Shift Uniqueness Test

008396660-01, P = 1.338078 Days, E = 131.002610 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.8	2.16	1.72	1.47	4.68	1.89	1.17	17.1	17.3	0.44	0.70	1.41	0.97	0.14	0.62



Stellar Parameters For KIC 008396660

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6355^{+115}_{-127}	$4.299^{+0.063}_{-0.117}$	$0.160^{+0.150}_{-0.200}$	$1.319^{+0.217}_{-0.144}$	$1.269^{+0.090}_{-0.117}$	$0.780^{+0.212}_{-0.263}$
	+2%/-2%	+1%/-3%	+94%/-125%	+16%/-11%	+7%/-9%	+27%/-34%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 008396660-01 / KOI 4407.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3 ± 1	$0.57^{+0.19}_{-0.17}$	2835^{+124}_{-96}	4260^{+727}_{-545}	$2.936^{+3.145}_{-1.460}$
Alt.	-2 ± 1	$0.58^{+0.19}_{-0.17}$	2825^{+126}_{-105}	3856^{+709}_{-678}	$1.857^{+2.322}_{-1.126}$

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

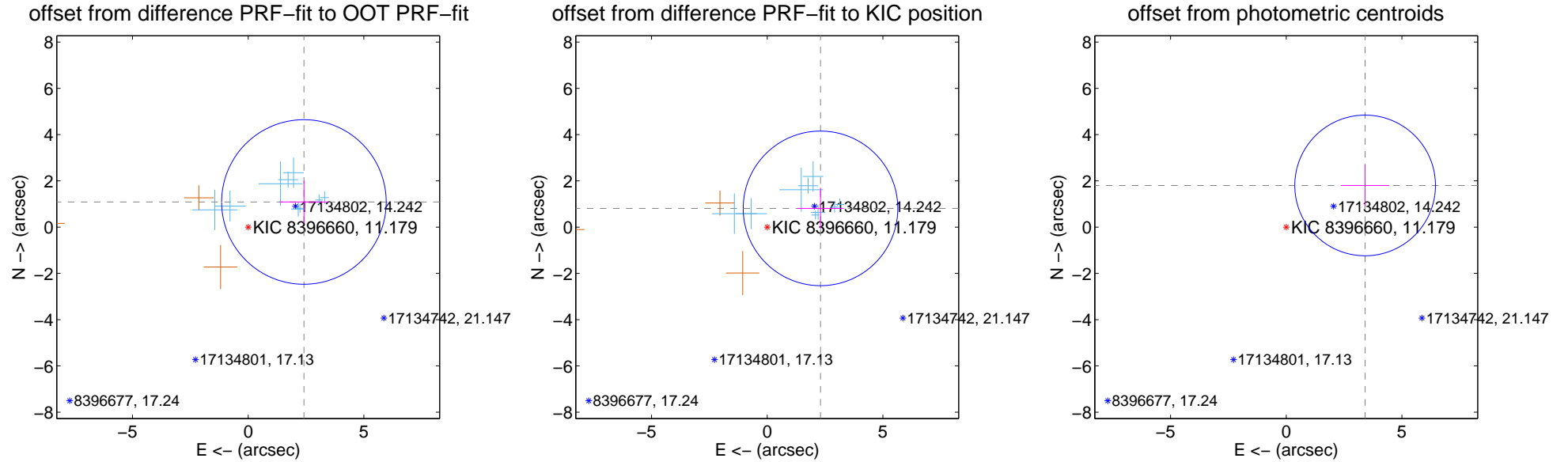
DV Centroid Data

Supplemental centroid analysis for 008396660-01. **Kepler magnitude: 11.18.** Transit SNR 12.19

There are 9 quarters with good PRF difference image offsets

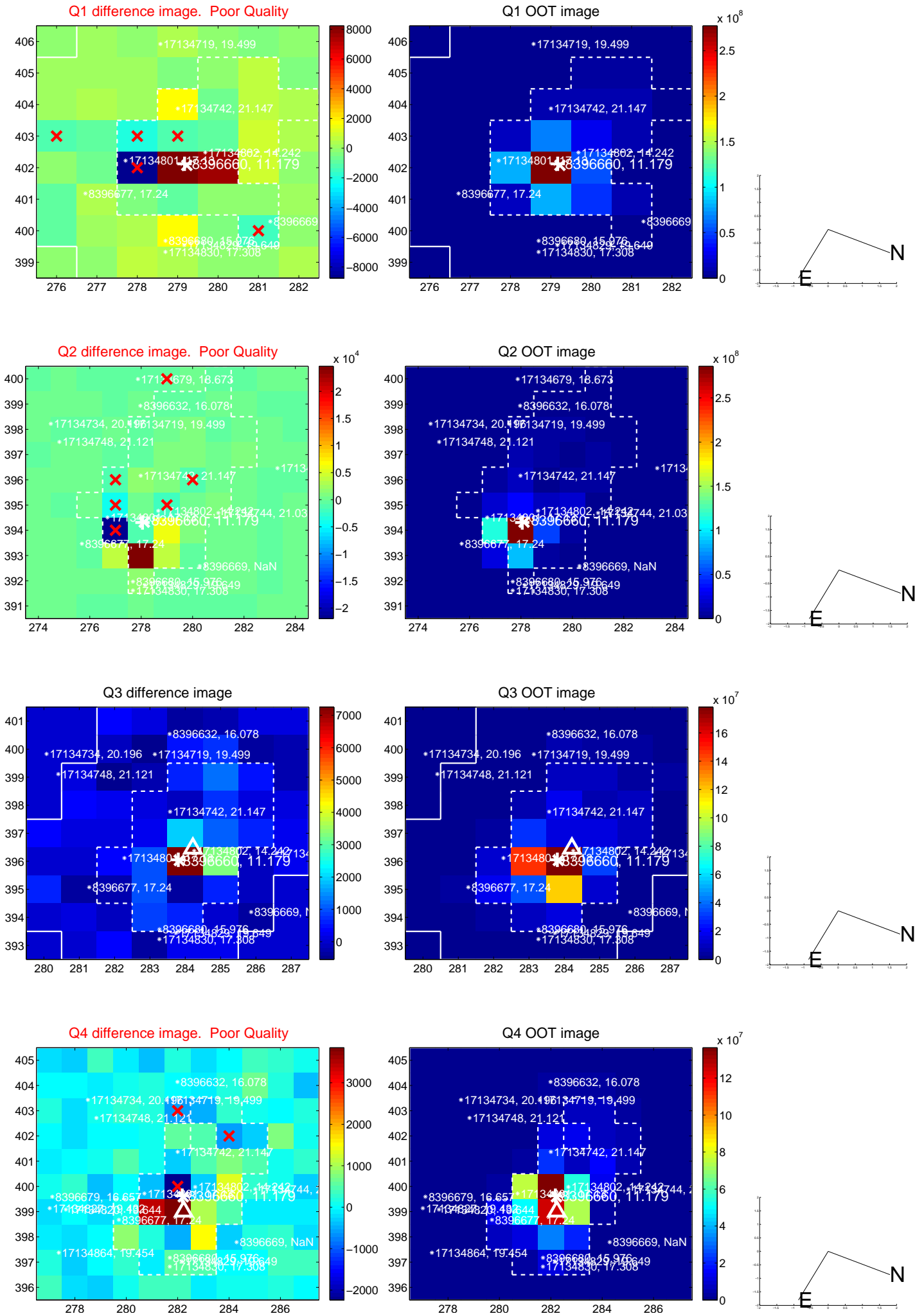
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.643 ± 1.186	2.23	-2.409 ± 1.047	1.087 ± 0.918
PRF-fit source offset from KIC position	2.442 ± 1.114	2.19	-2.304 ± 1.003	0.811 ± 0.890
photometric centroid source offset	3.86 ± 1.01	3.81	-3.41 ± 1.04	1.80 ± 0.91

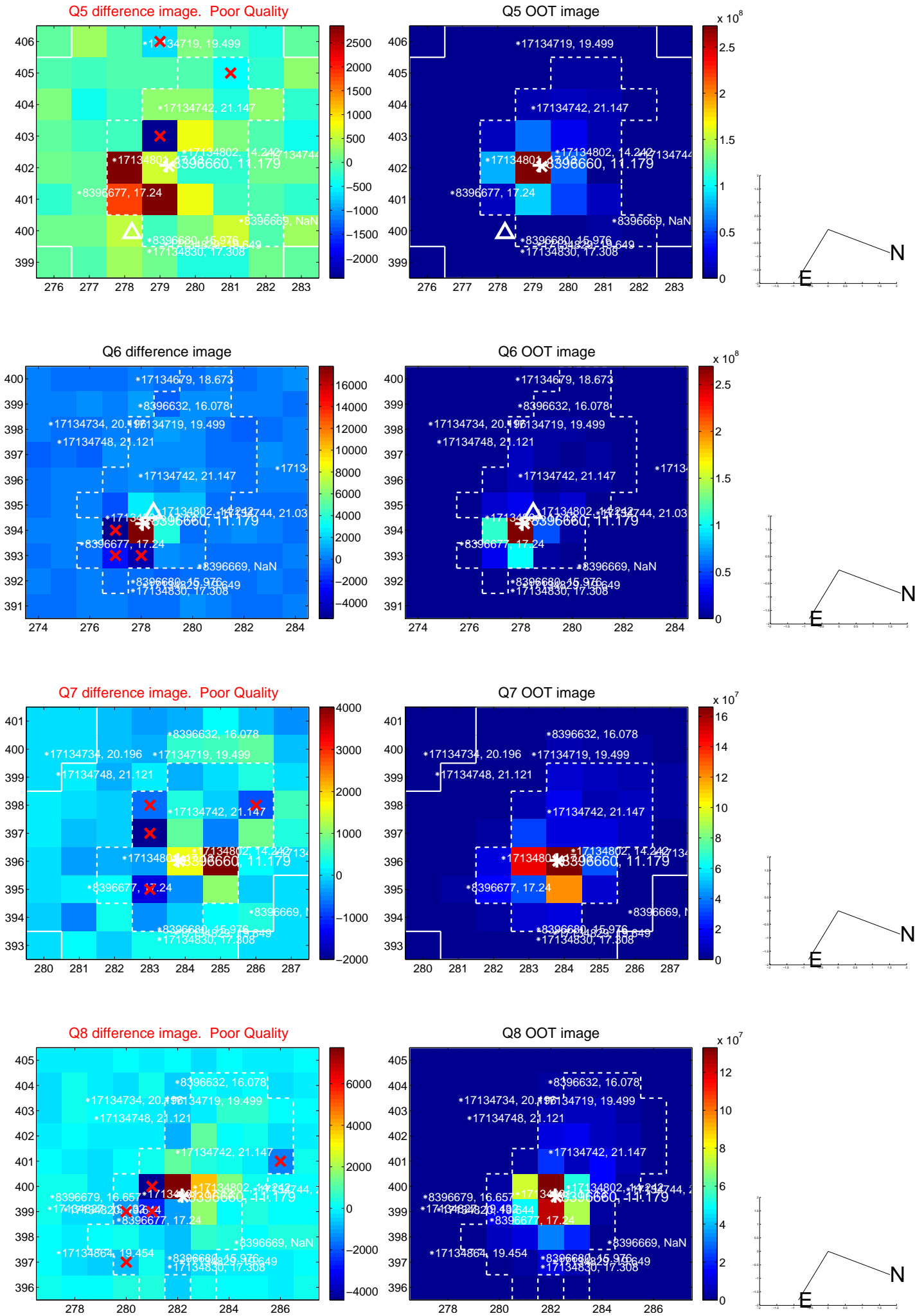


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

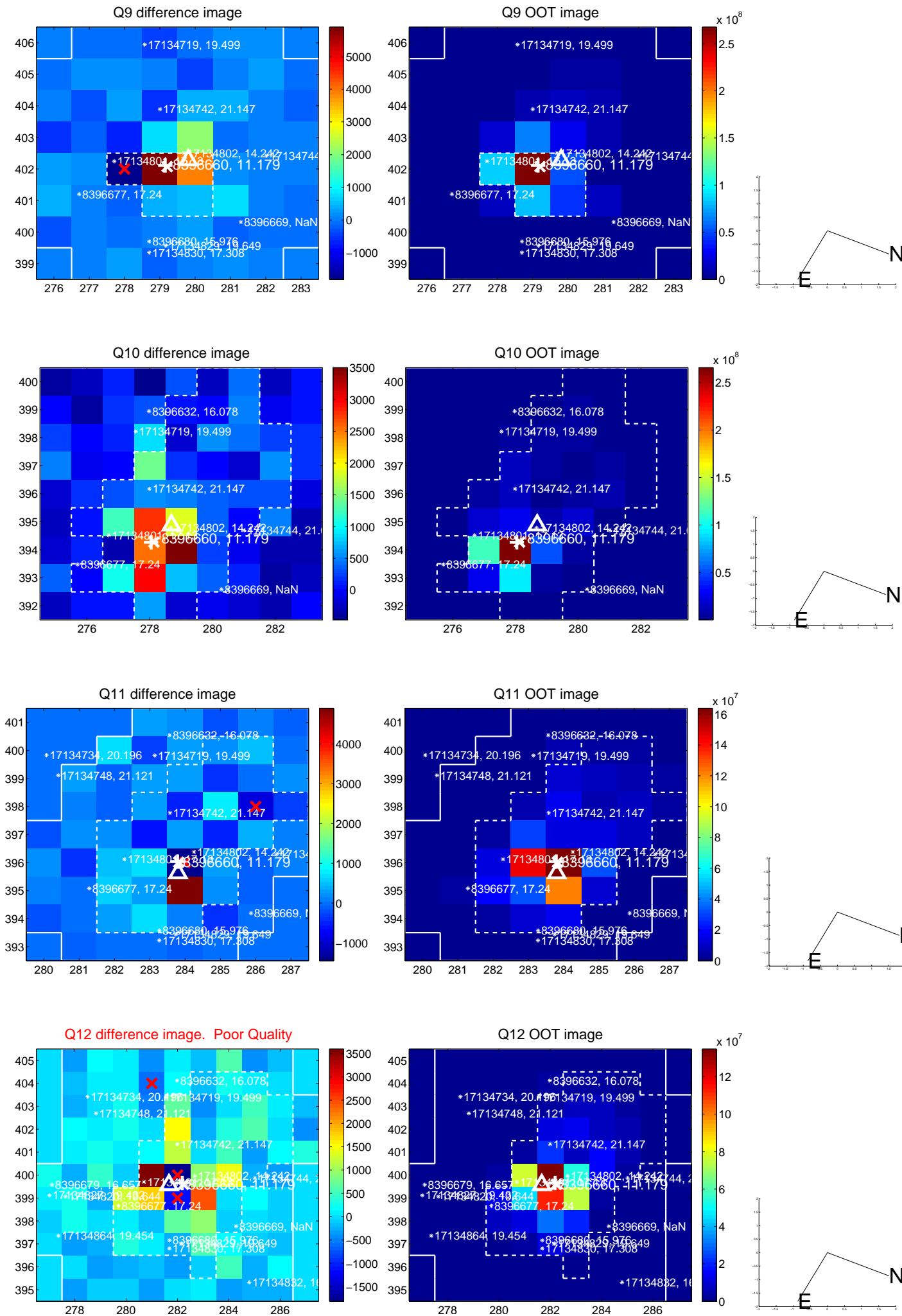
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



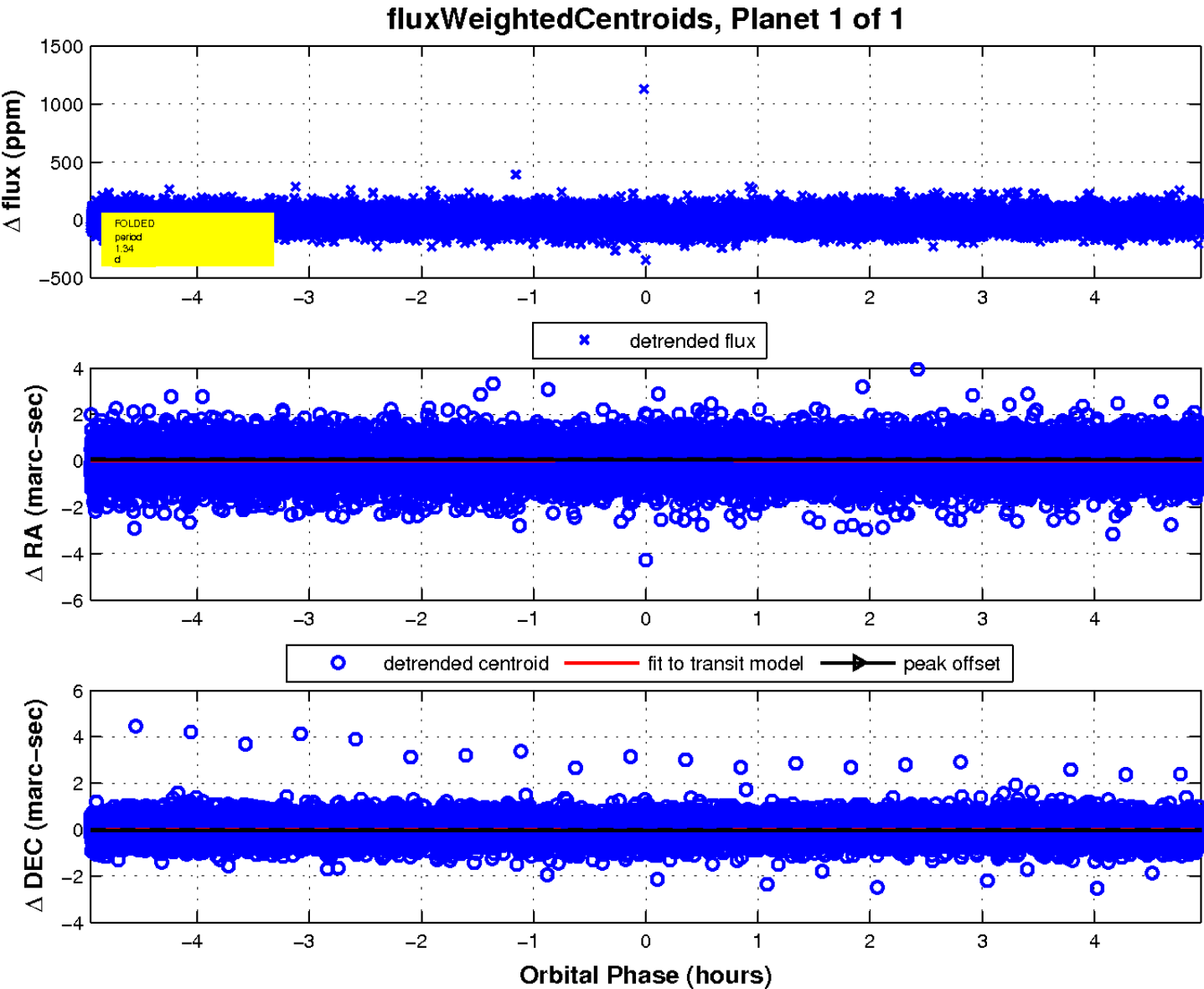
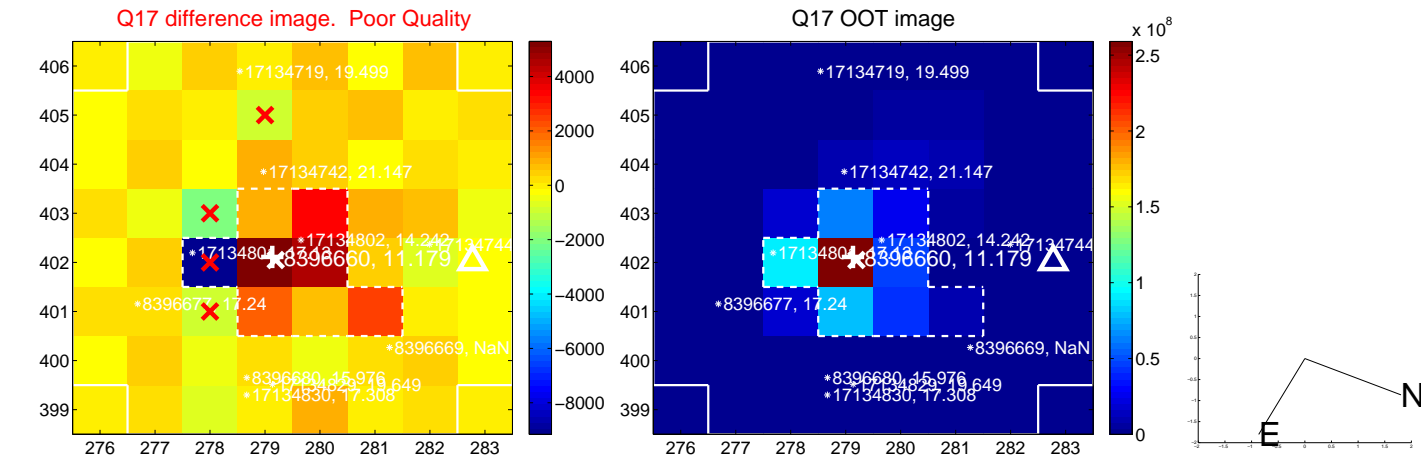
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



UKIRT Image

