

KIC 004141376

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})
004141376-01	OBS	0280.01	11.872899	133.404816	343.6	2.538	118.9	121.6	1.04	6147	2.27	131.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004141376-01	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.

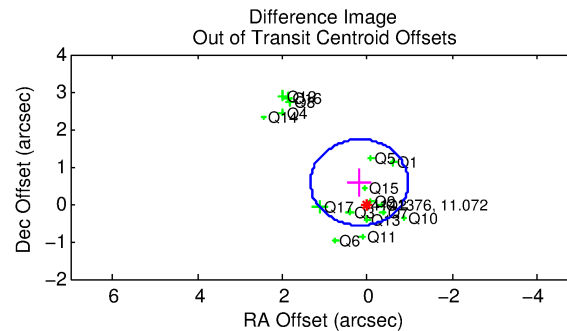
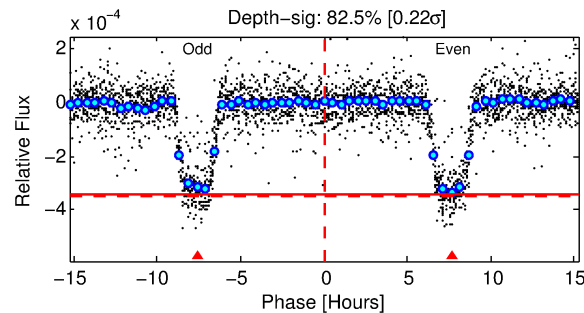
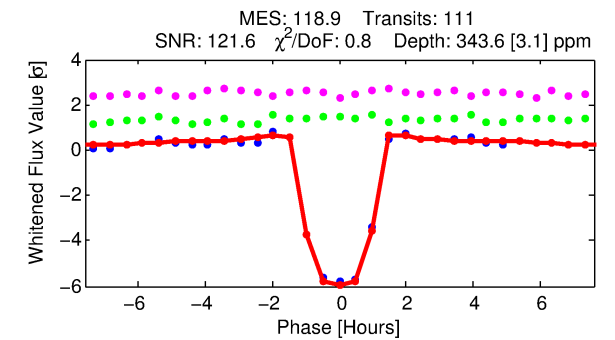
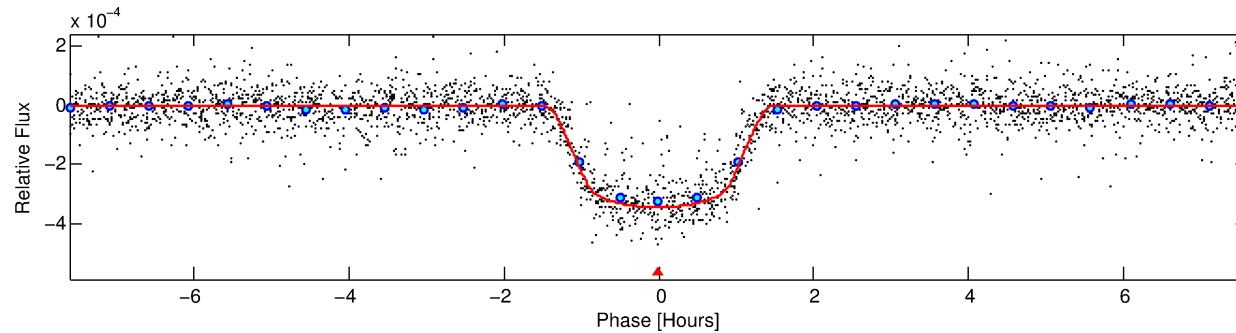
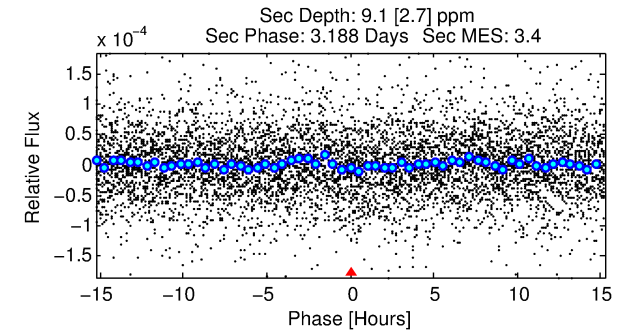
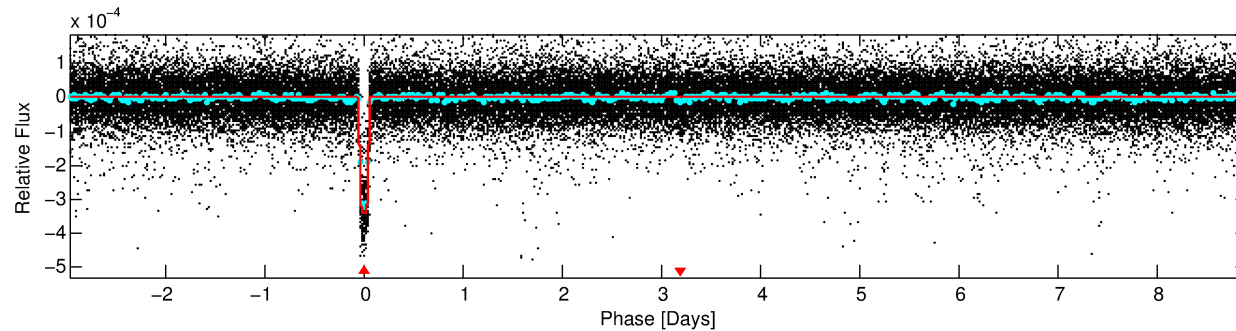
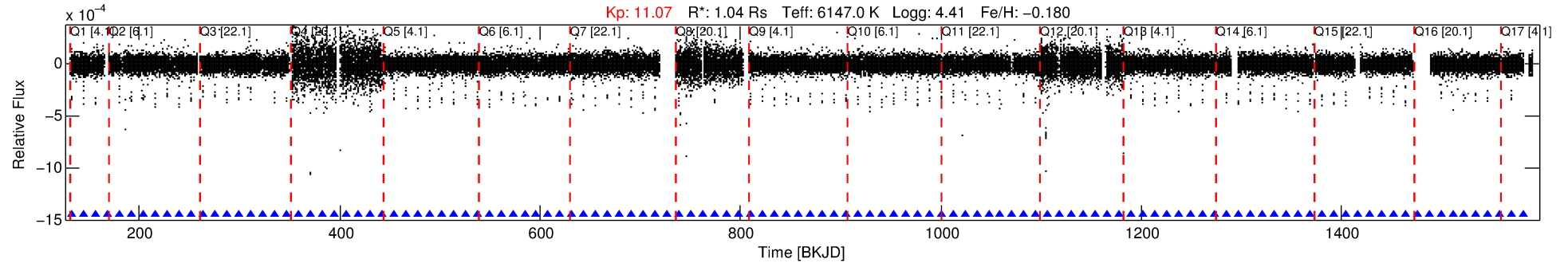
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004141376-01

No Significant Match Found

DV One-Page Summary

KIC: 4141376 Candidate: 1 of 1 Period: 11.873 d
KOI: K00280.01 Corr: 0.966



DV Fit Results:

Period = 11.87290 [0.00001] d
Epoch = 133.4048 [0.0005] BKJD
Rp/R* = 0.0200 [0.0006]
a/R* = 17.18 [2.81]
b = 0.90 [0.04]
Seff = 131.67 [10.71]
Teq = 864 [18] K
Rp = 2.27 [0.13] Re
a = 0.1025 [0.0039] AU
Ag = 10.22 [3.14] [2.94σ]
Teffp = 2388 [184] K [8.26σ]

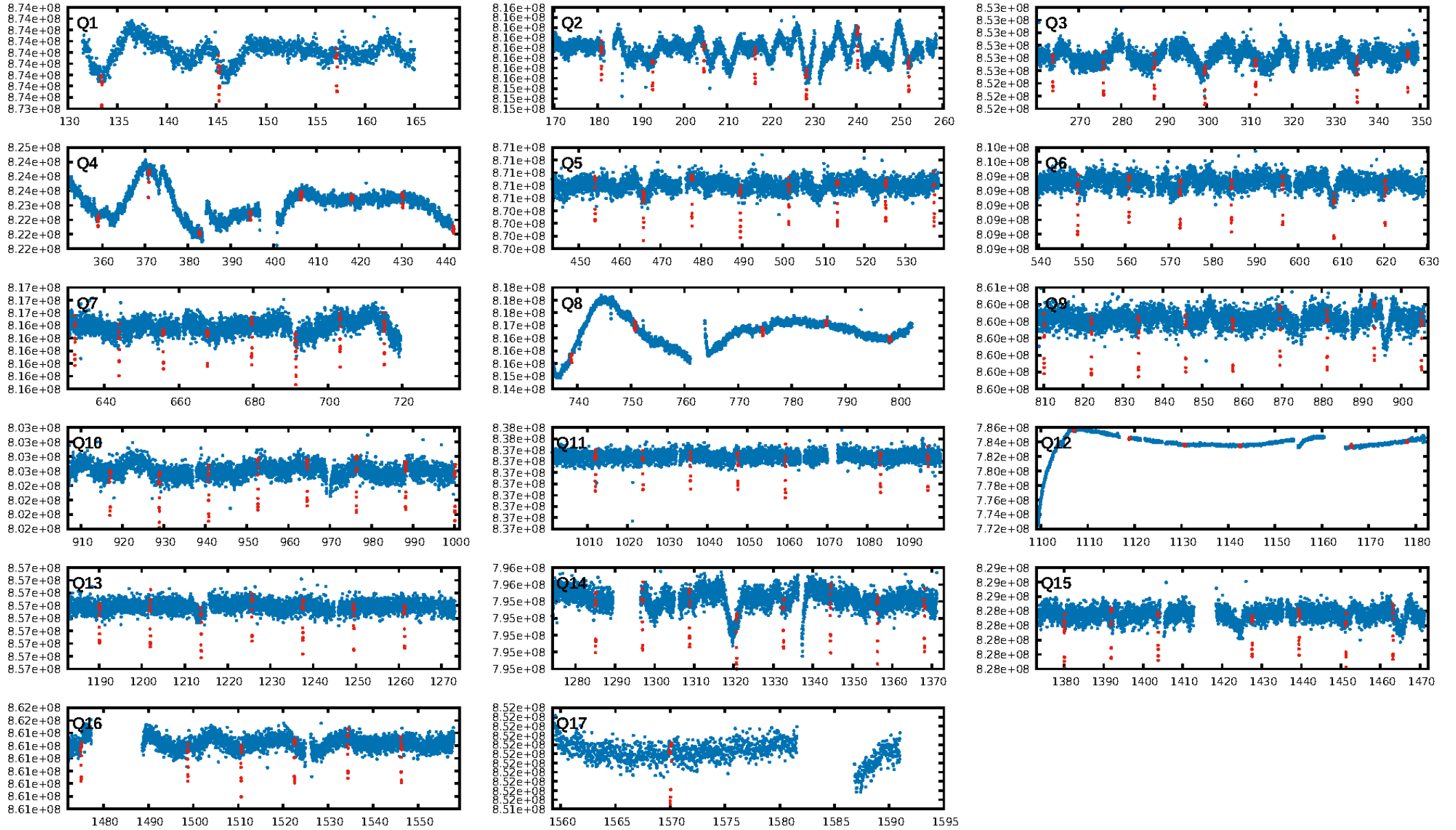
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 17.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [107/107]
GhostDiagnostic-chr: 5.824
Centroid-sig: 1.4%
Centroid-so: 0.838 arcsec [7.36σ]
OotOffset-rm: 0.603 arcsec [1.57σ]
KicOffset-rm: 1.295 arcsec [3.22σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

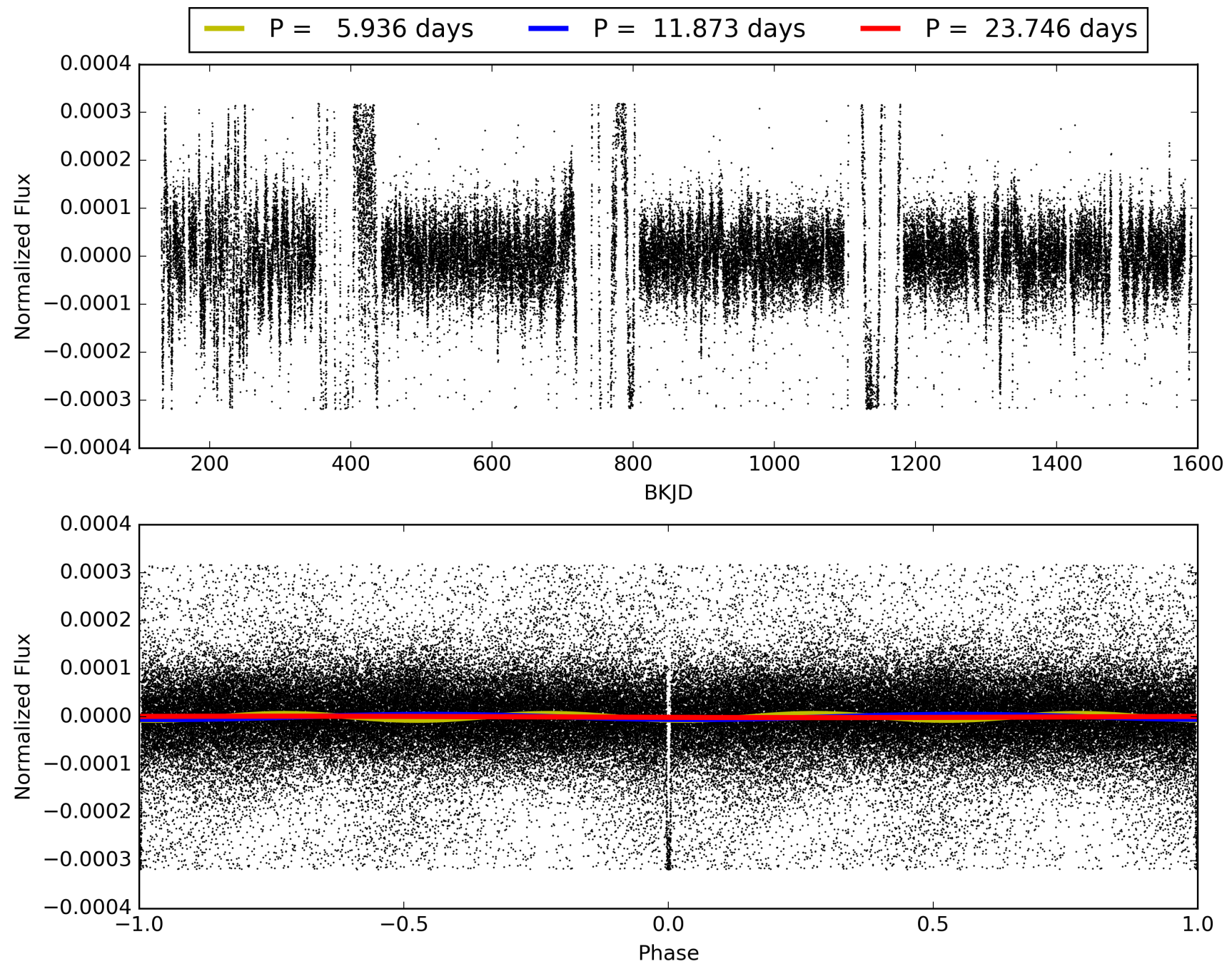
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:16:44 Z

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

TCE 004141376-01, PDC Light Curves

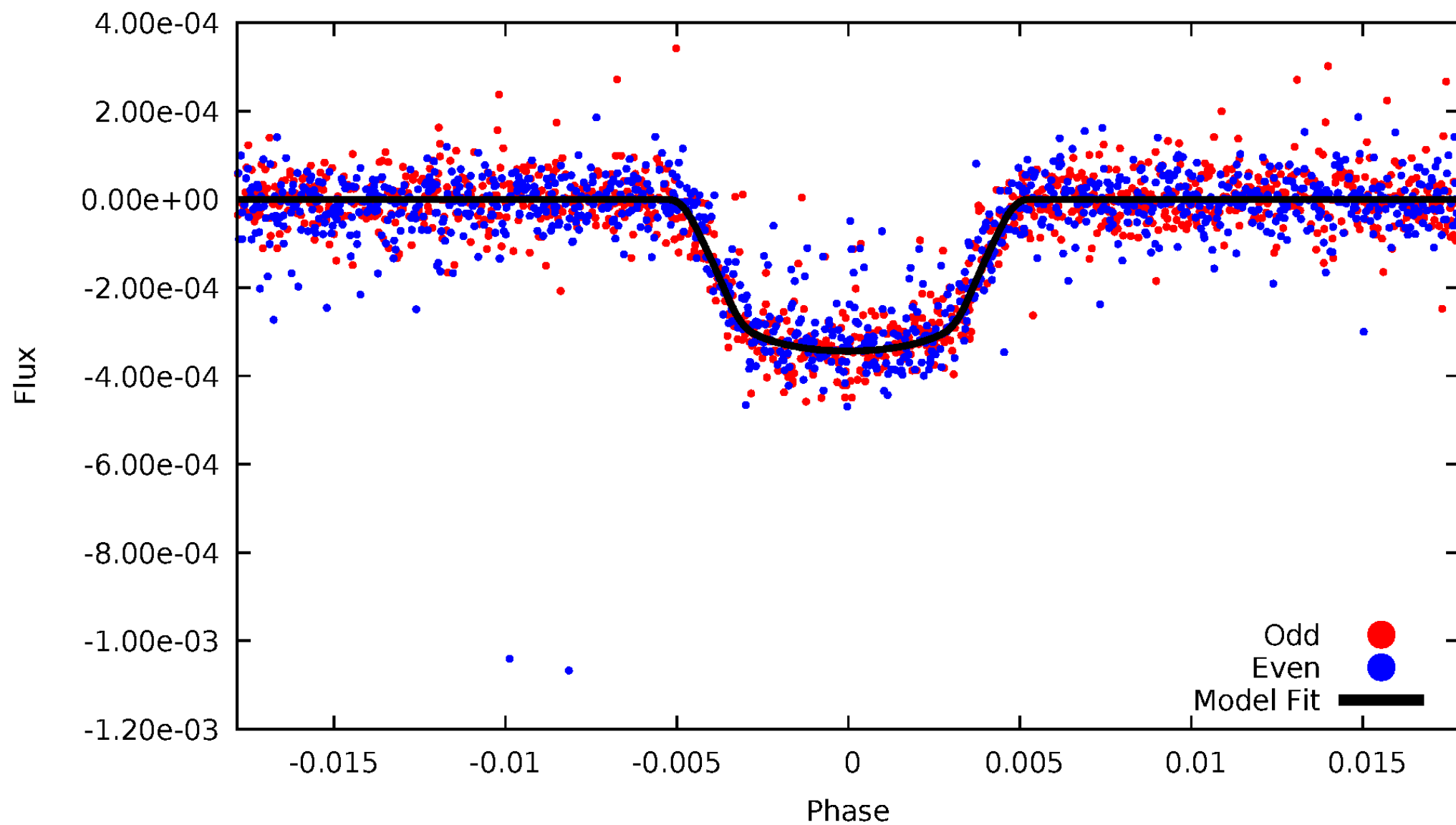


TCE 004141376-01



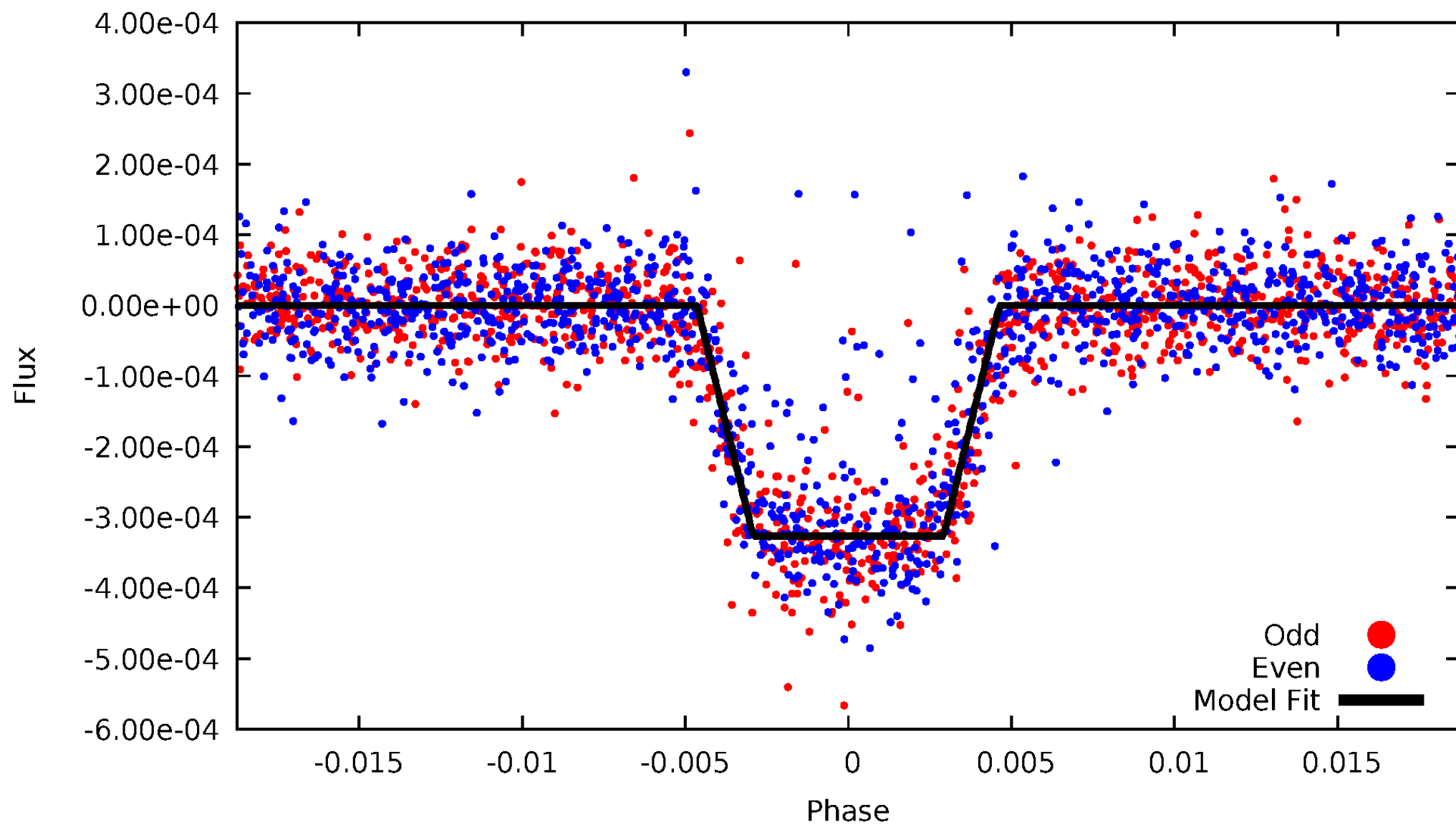
DV Odd/Even

TCE 004141376-01



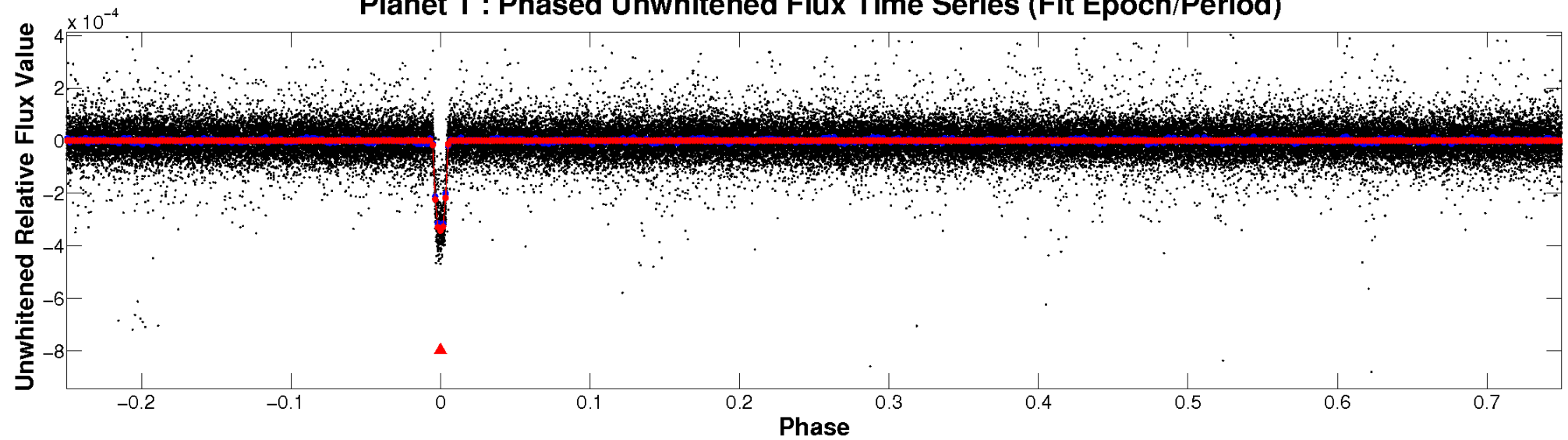
ALT Odd/Even

TCE 004141376-01

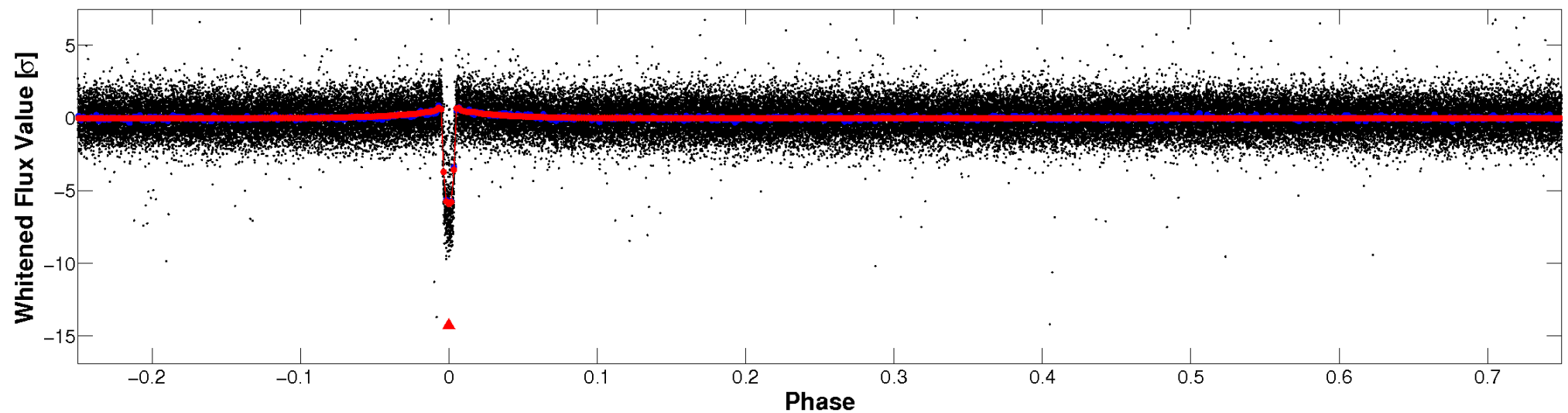


Non-Whitened Vs. Whitened Light Curve

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

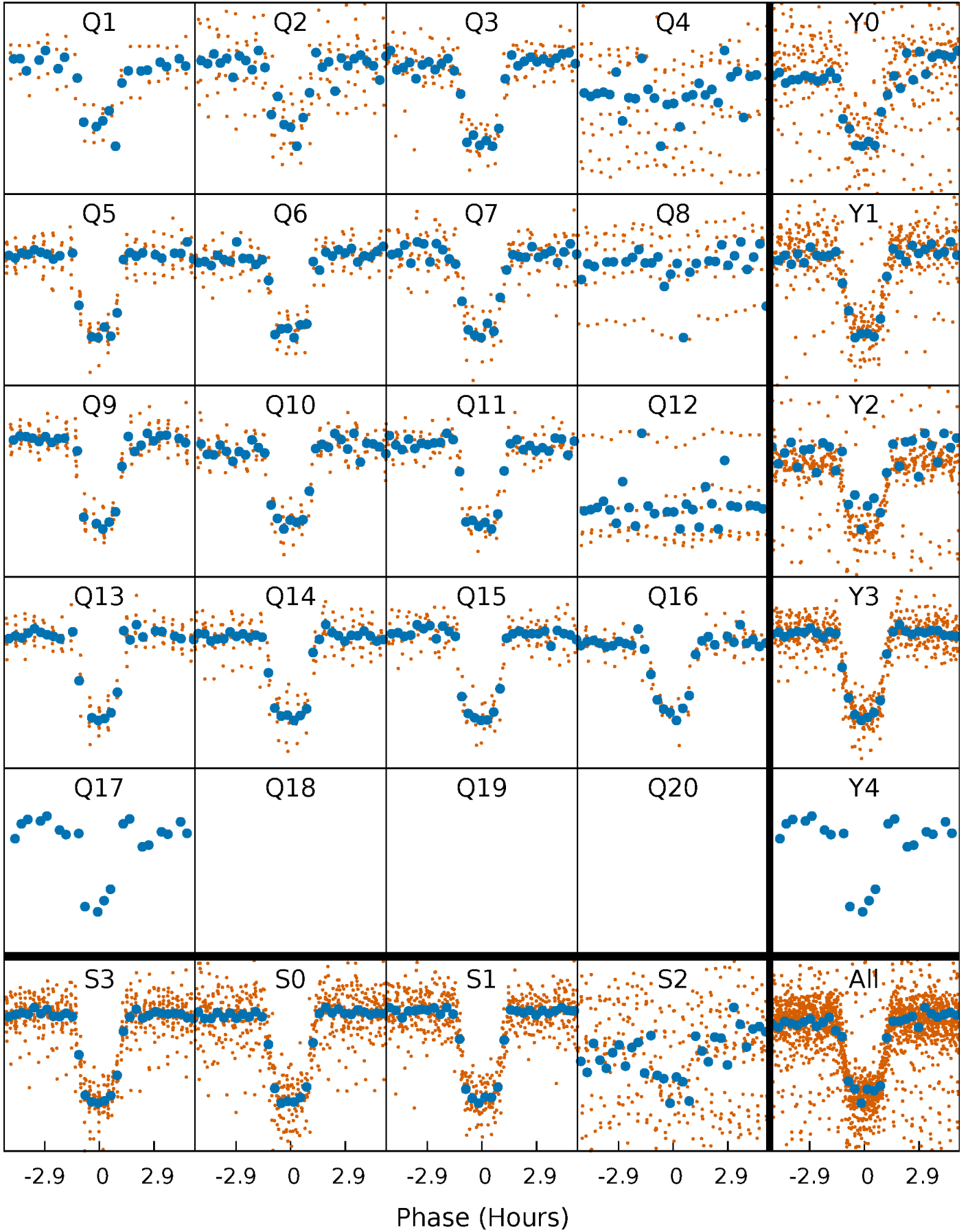


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



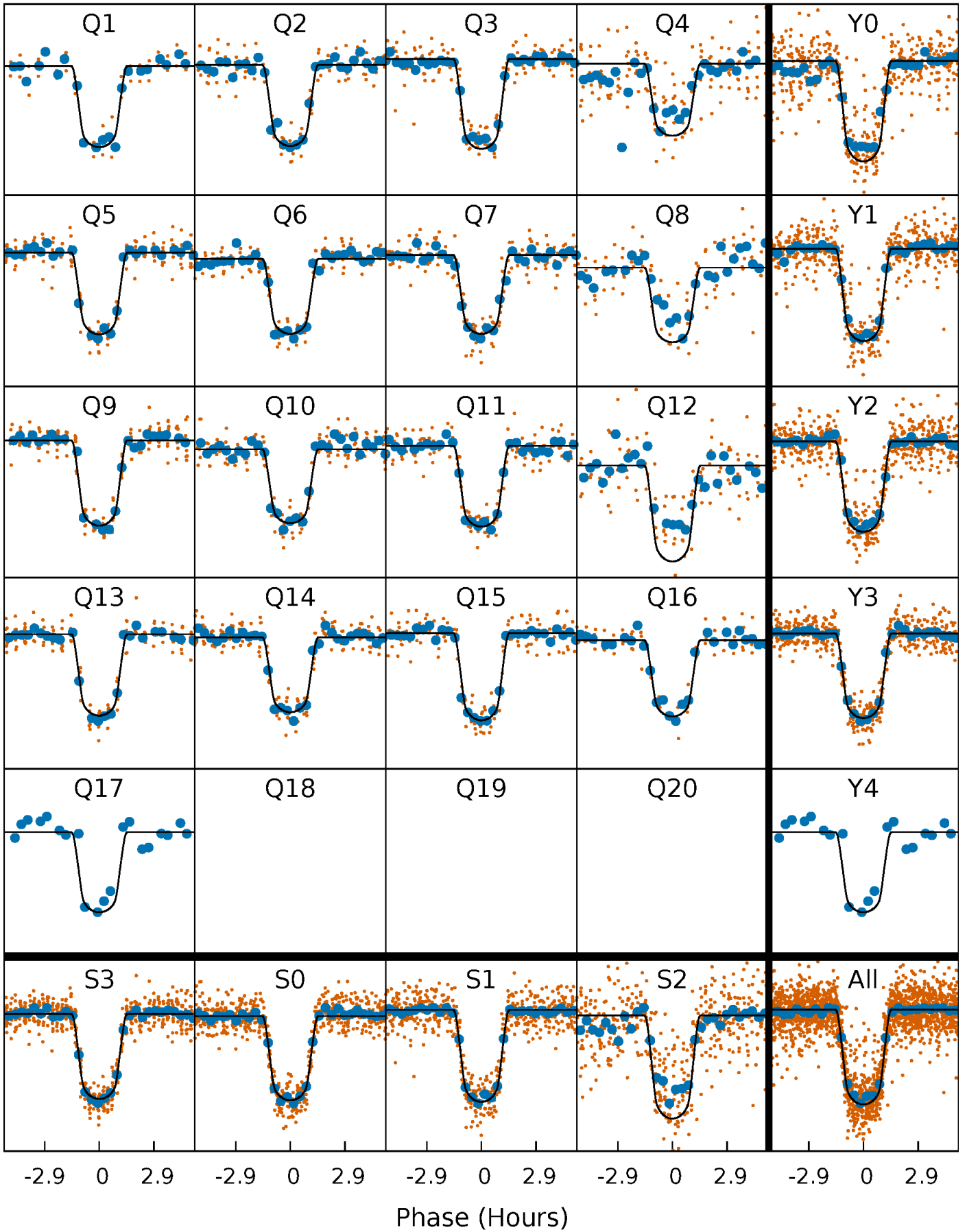
PDC Quarter-Phased Transit Curves

TCE 004141376-01 P= 11.872899 Days $T_0=133.404816$ (BKJD)



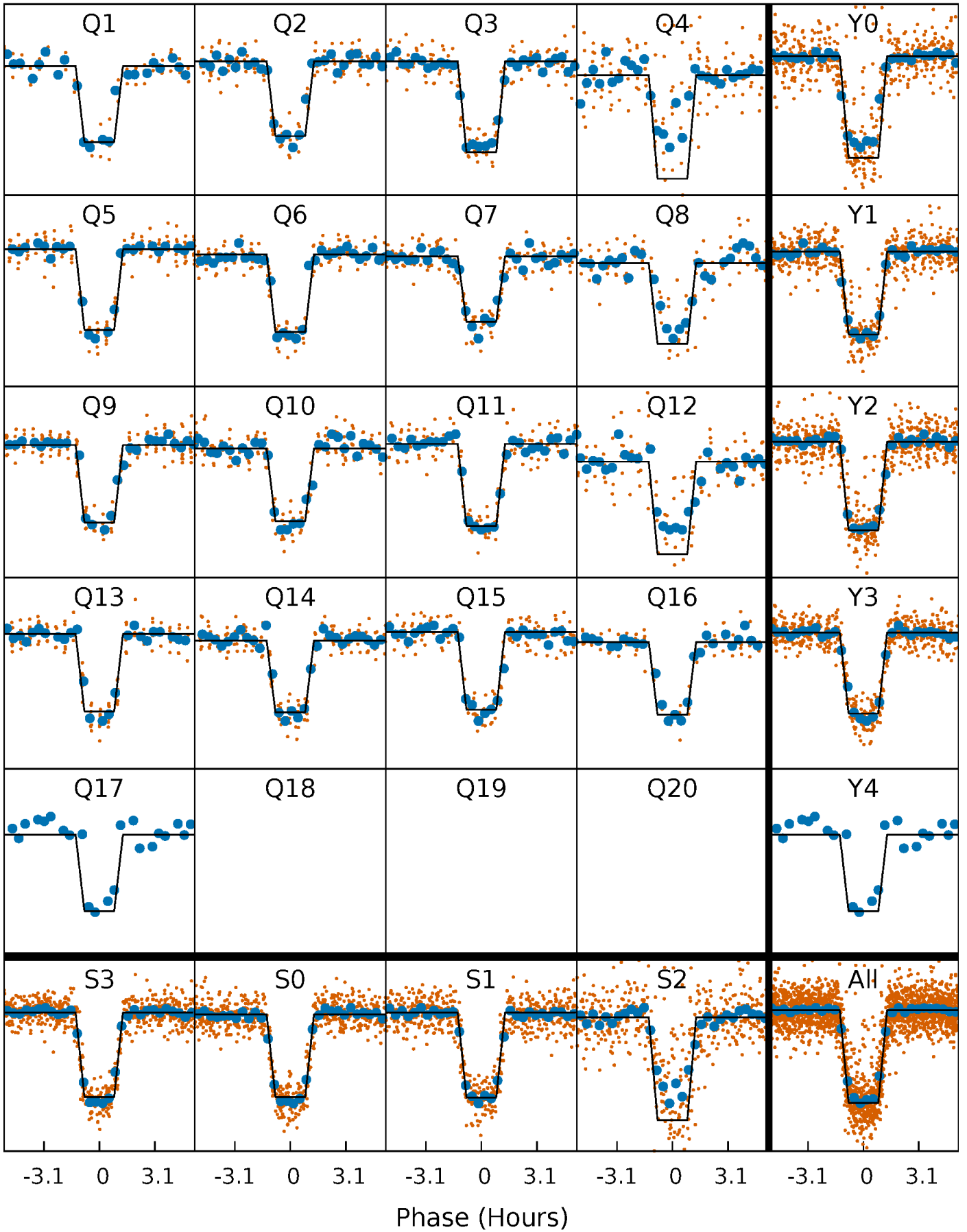
DV Quarter-Phased Transit Curves

TCE 004141376-01 P= 11.872899 Days $T_0=133.404816$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

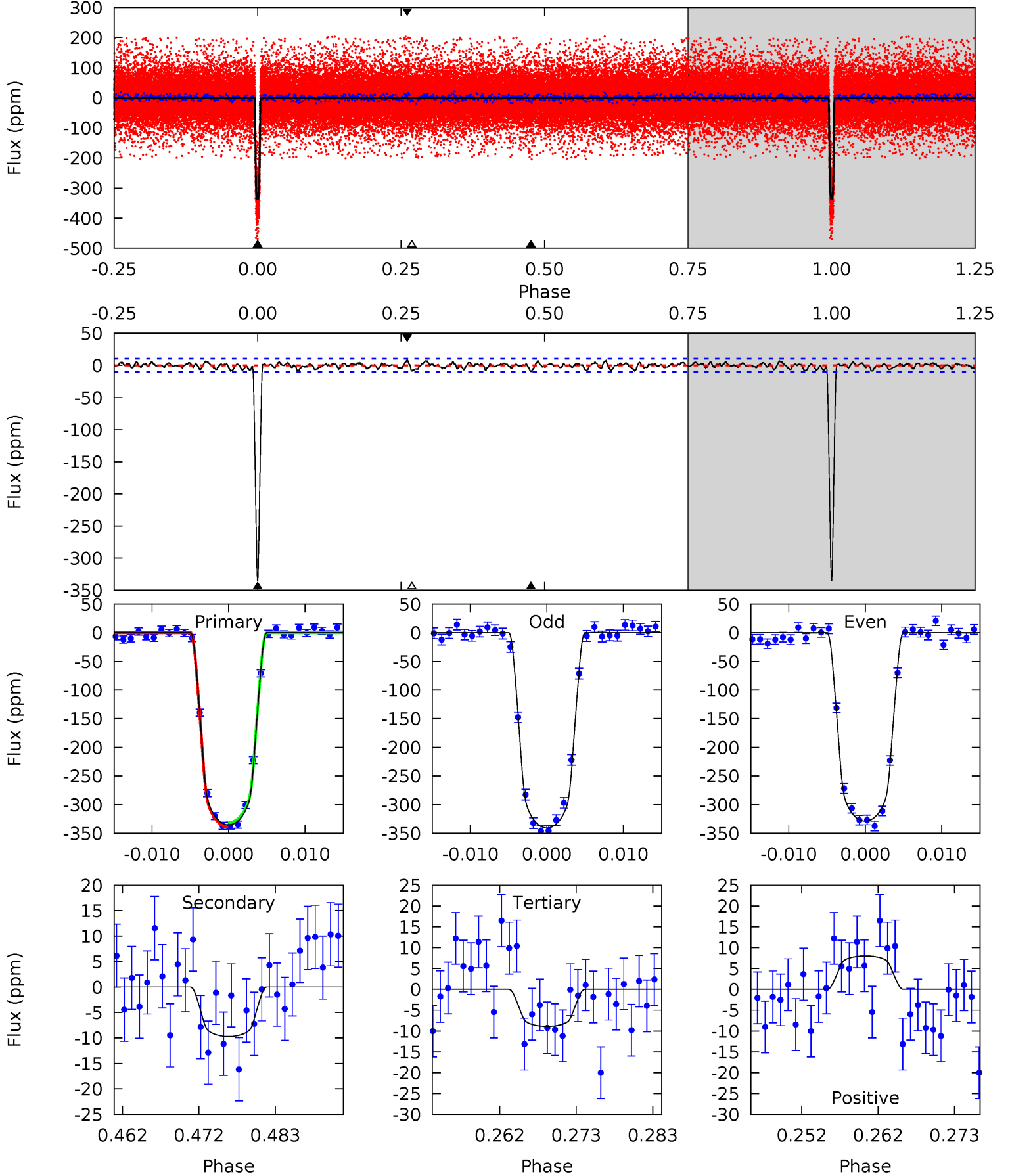
TCE 004141376-01 P= 11.872823 Days $T_0=133.409492$ (BKJD)



DV Model-Shift Uniqueness Test

004141376-01, $P = 11.872899$ Days, $E = 121.531917$ Days

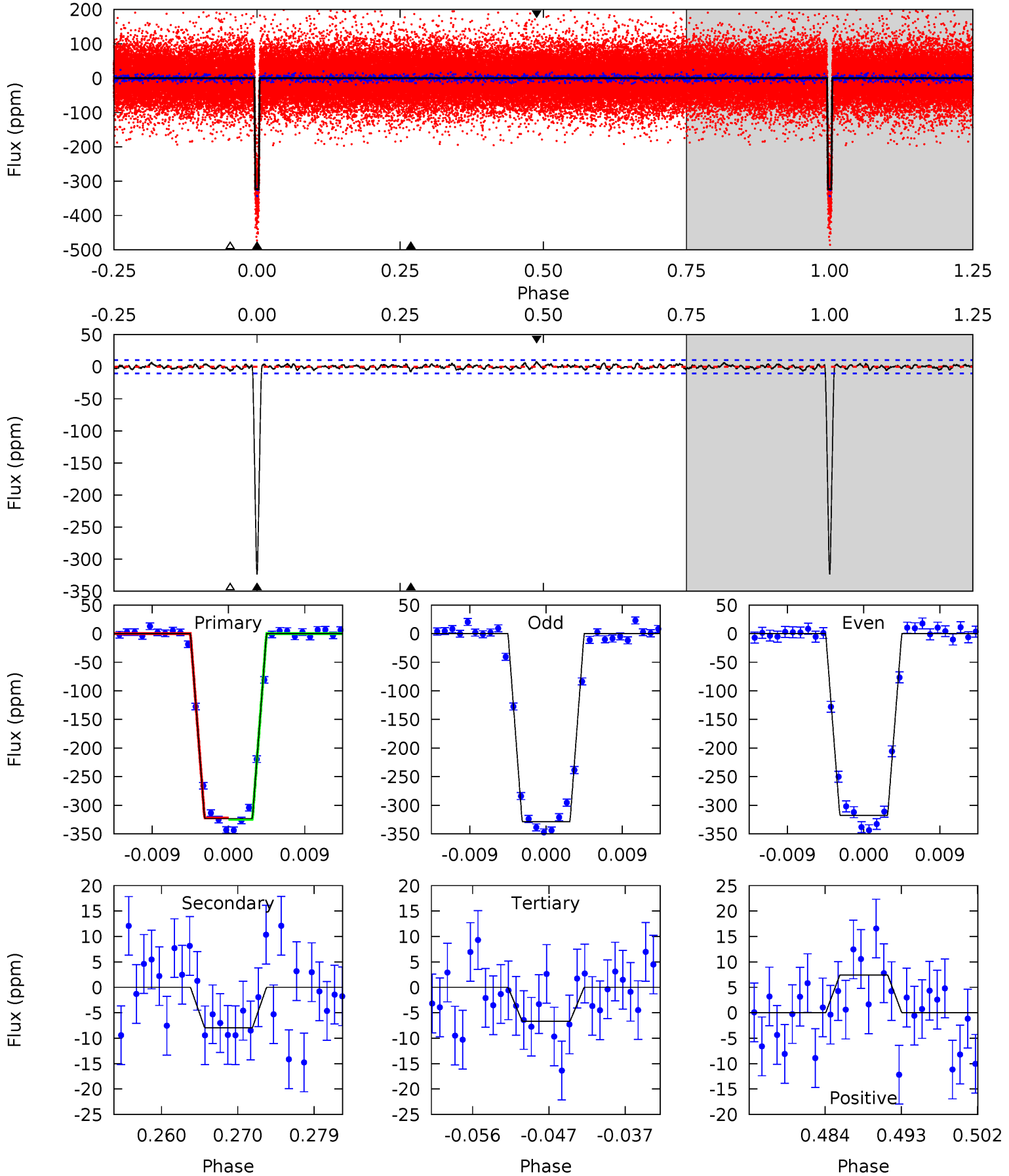
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
163.5	4.74	4.34	3.92	5.02	2.56	1.47	159.2	159.6	0.40	0.82	2.90	0.95	0.02	1.86



Alt Model-Shift Uniqueness Test

004141376-01, $P = 11.872823$ Days, $E = 121.536669$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
157.7	3.87	3.25	3.63	5.04	2.60	1.13	154.4	154.0	0.62	0.24	2.65	0.95	0.02	0.67



Stellar Parameters For KIC 004141376

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6147^{+73}_{-92}	$4.412^{+0.030}_{-0.027}$	$-0.180^{+0.150}_{-0.150}$	$1.040^{+0.047}_{-0.047}$	$1.014^{+0.066}_{-0.059}$	$1.272^{+0.139}_{-0.126}$
	+1%/-1%	+1%/-1%	+83%/-83%	+5%/-5%	+7%/-6%	+11%/-10%
Source	SPE72	AST69	SPE72	DSEP		

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

Secondary Eclipse Parameters for KIC 004141376-01 / KOI 0280.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10 ± 2	$2.26^{+0.10}_{-0.09}$	1205^{+20}_{-23}	3060^{+102}_{-108}	11^{+2}_{-2}
Alt.	-8 ± 2	$2.05^{+0.10}_{-0.10}$	1206^{+19}_{-23}	3058^{+107}_{-150}	11^{+3}_{-3}

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

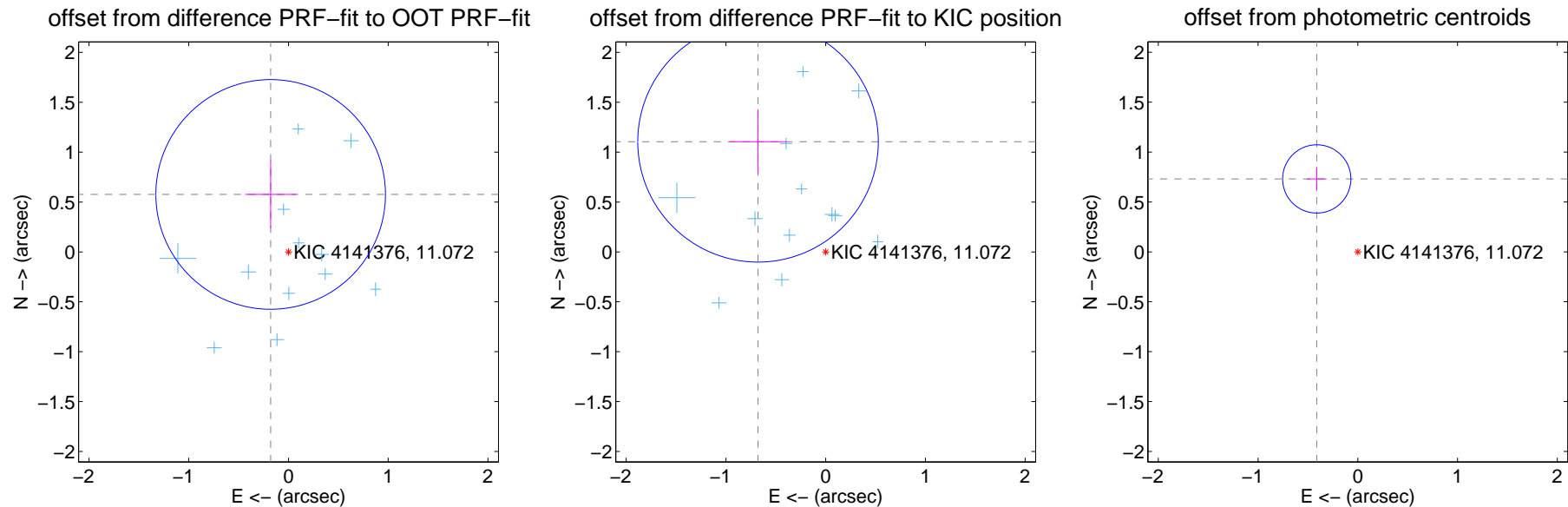
DV Centroid Data

Supplemental centroid analysis for 004141376-01. **Kepler magnitude: 11.07.** Transit SNR 121.57

There are 17 quarters with good PRF difference image offsets

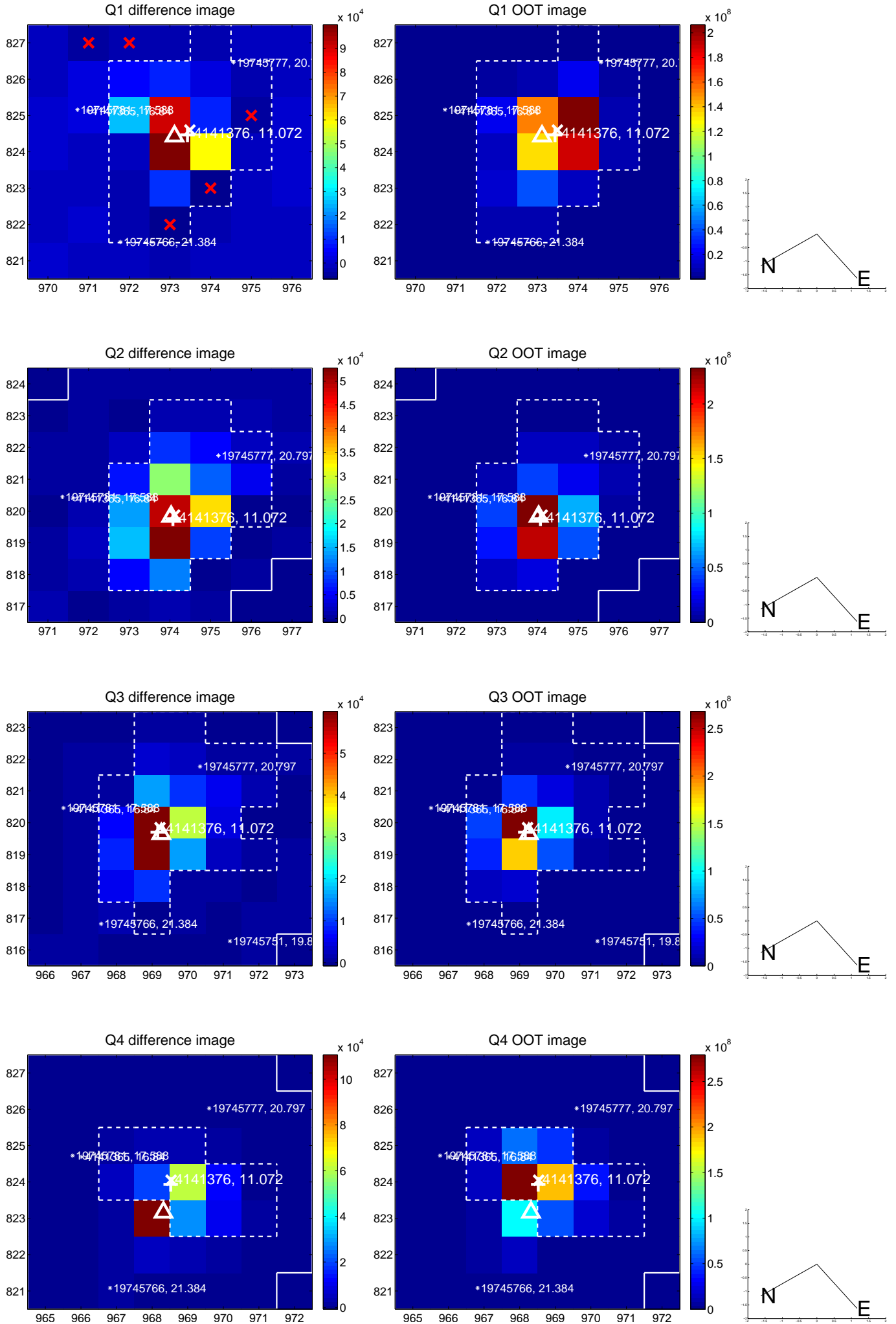
The direct PRF centroid is offset from the target star catalog position by about 0.72 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.603 ± 0.384	1.57	0.179 ± 0.256	0.576 ± 0.340
PRF-fit source offset from KIC position	1.295 ± 0.402	3.22	0.678 ± 0.288	1.104 ± 0.324
photometric centroid source offset	0.84 ± 0.11	7.36	0.41 ± 0.10	0.73 ± 0.12

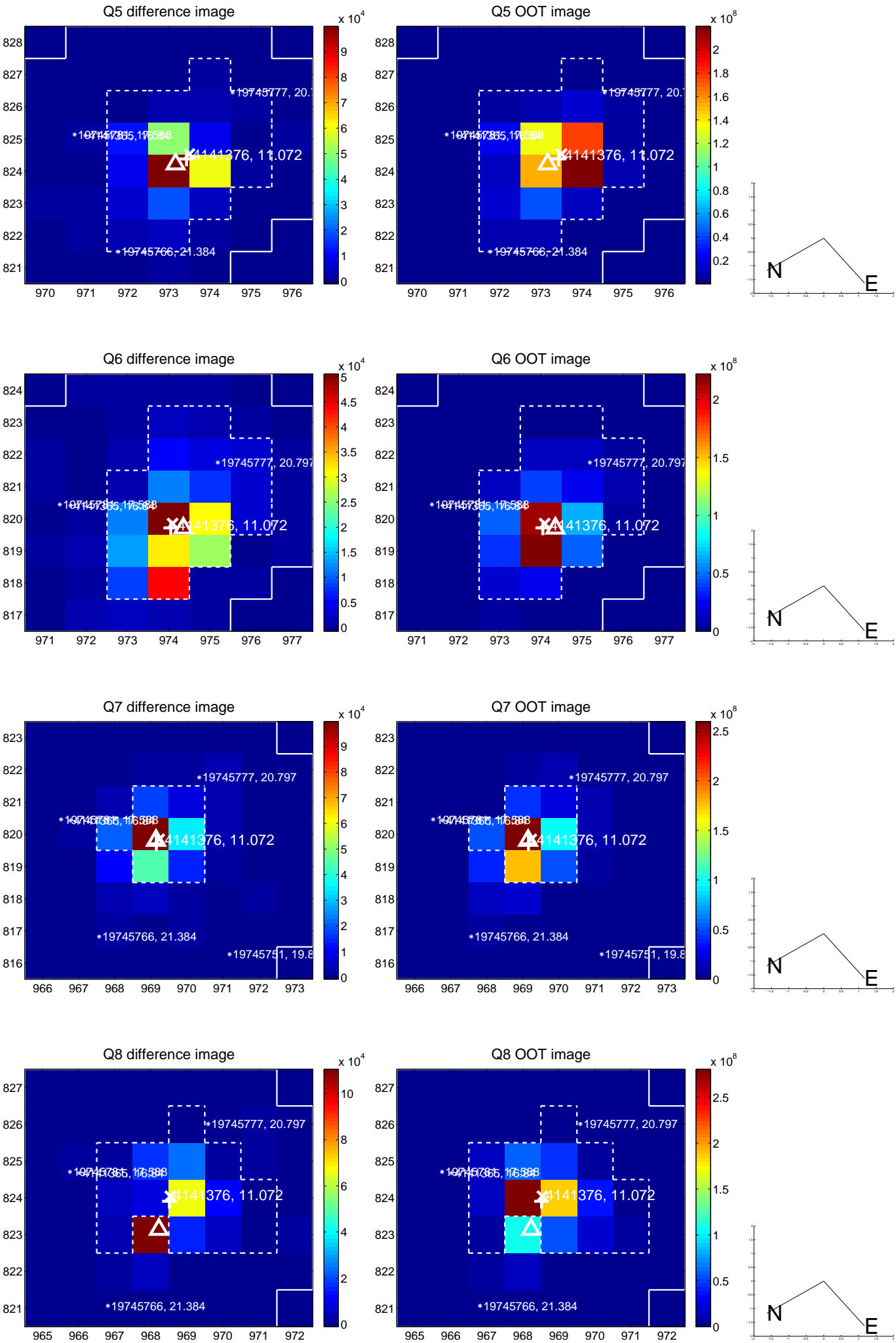


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

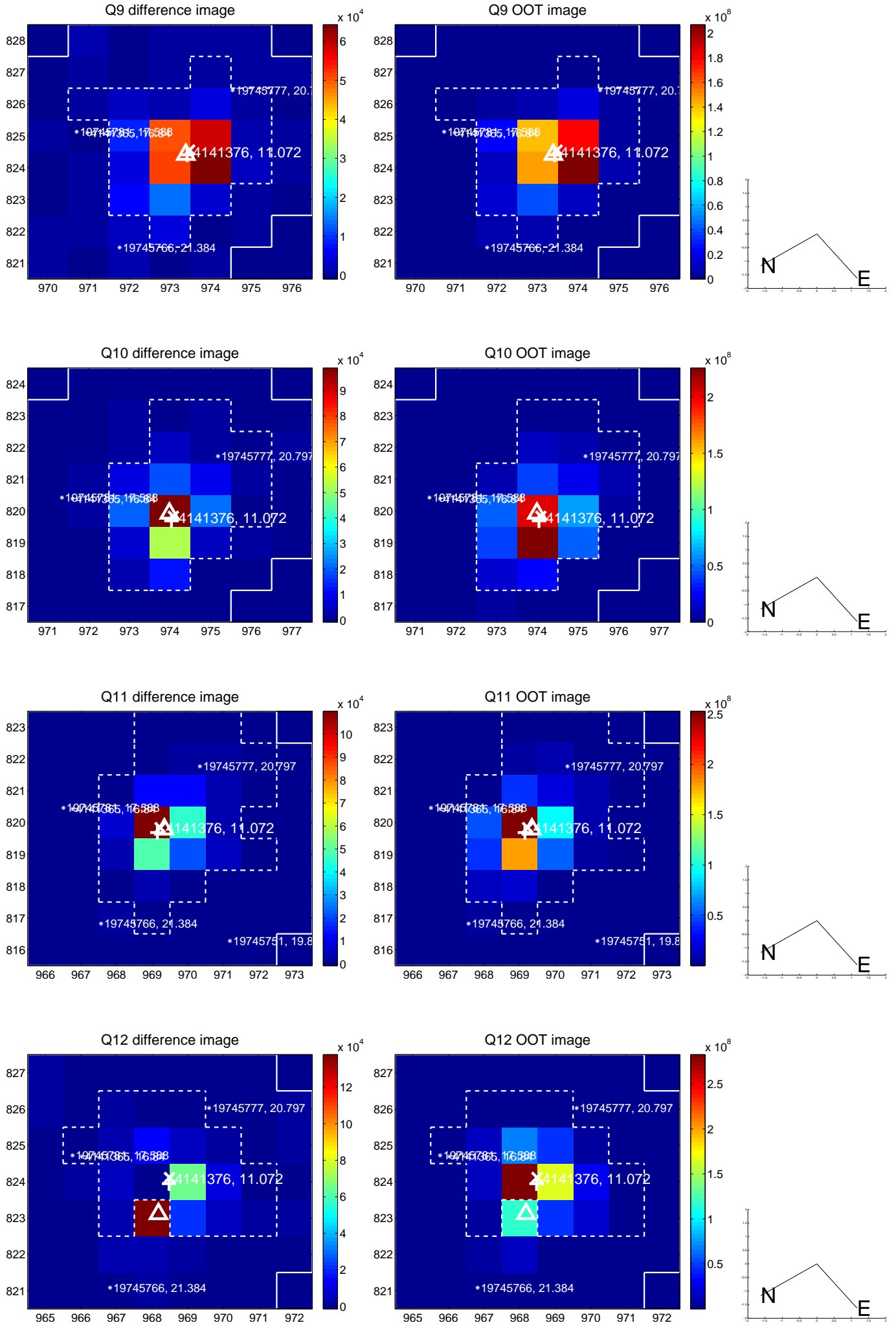
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



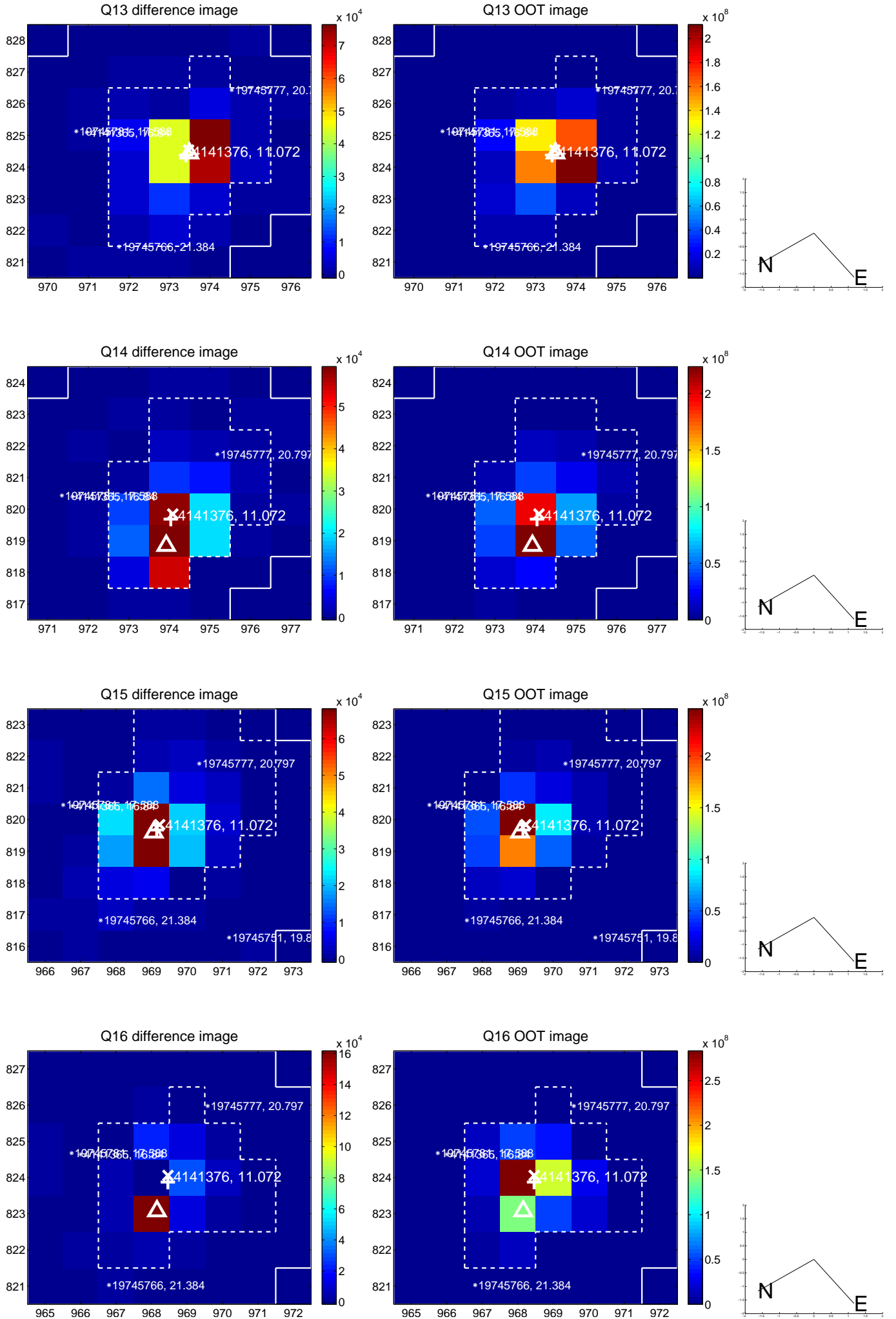
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



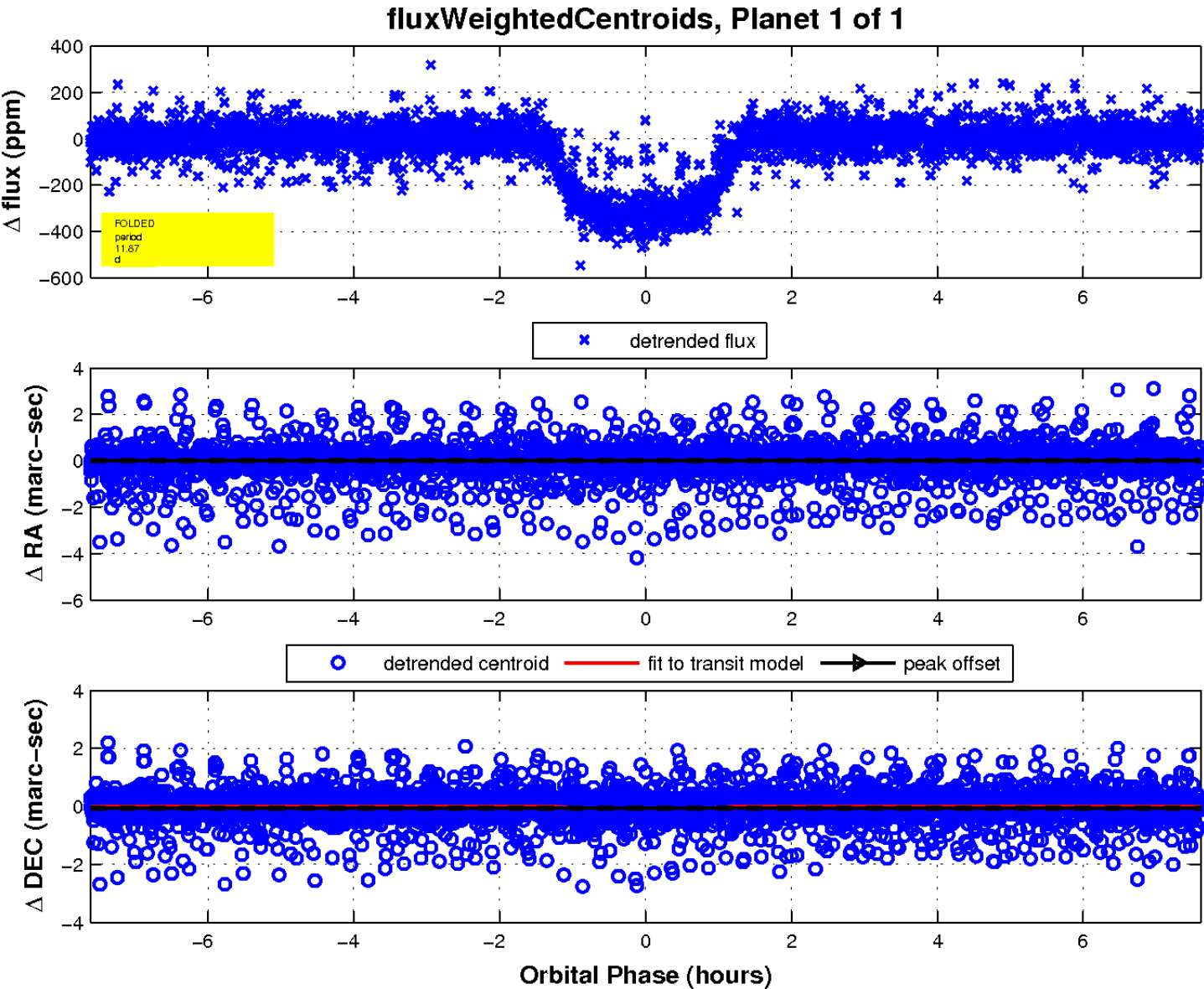
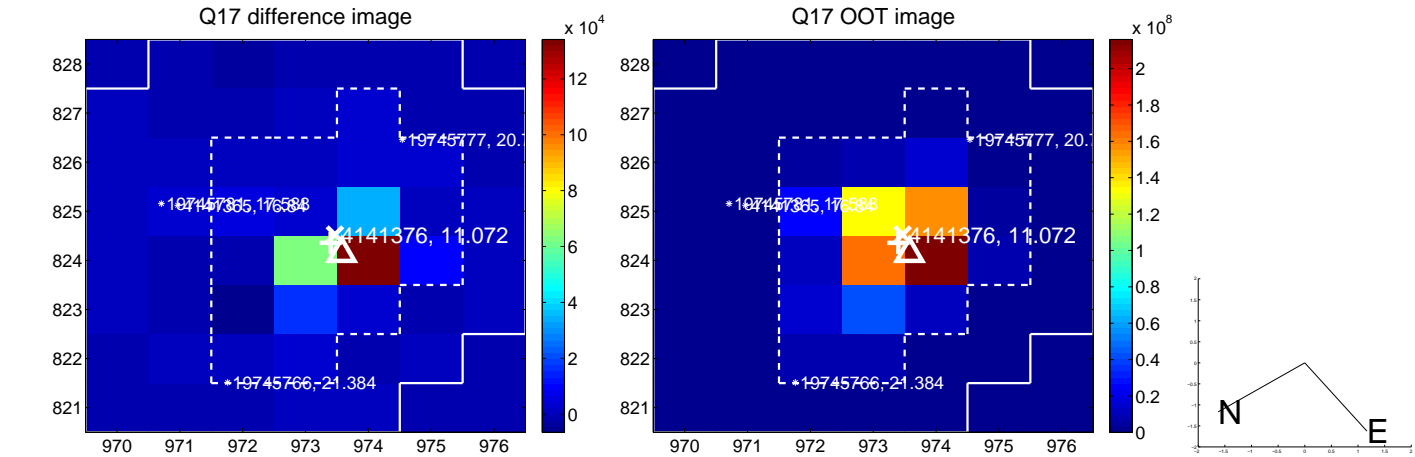
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

