

KIC 007426877

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})
007426877-01	OBS	No	17.930391	138.157802	24.0	18.236	7.9	9.2	1.20	6387	0.68	109.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007426877-01	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.

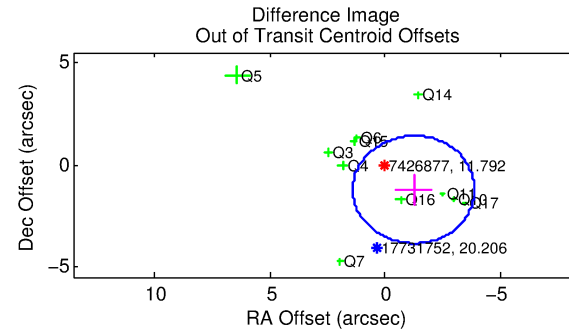
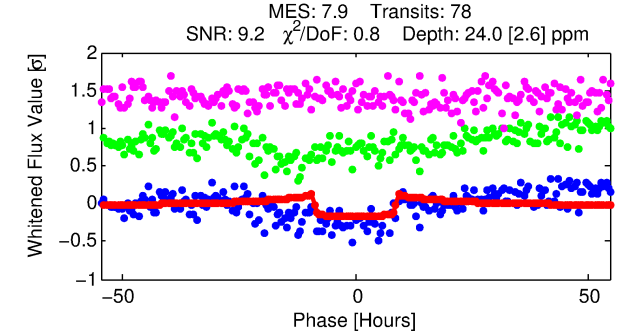
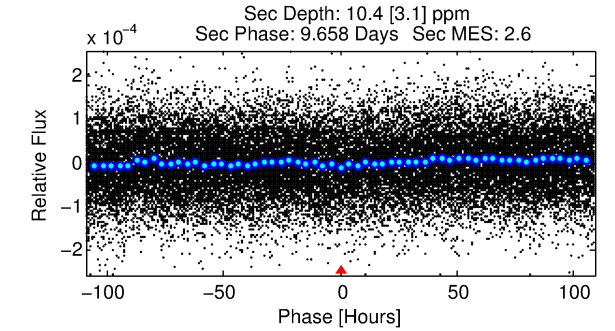
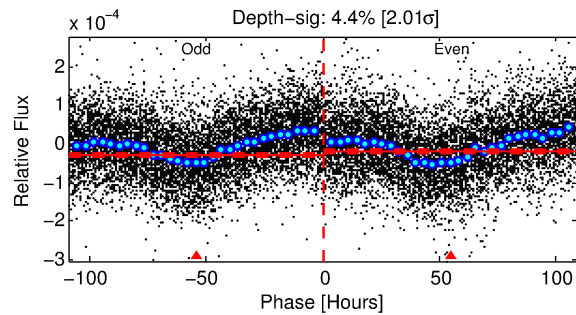
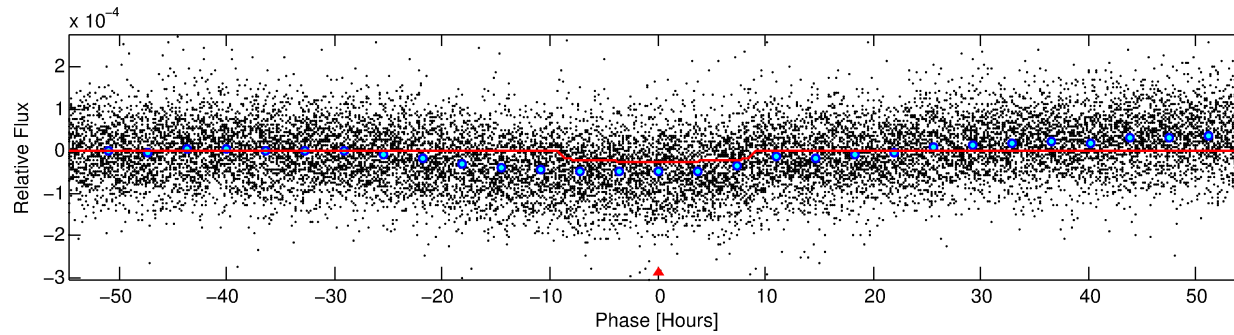
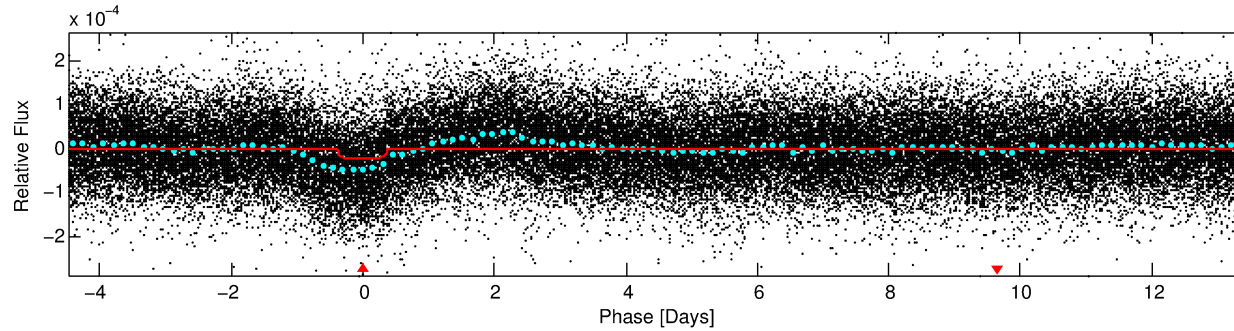
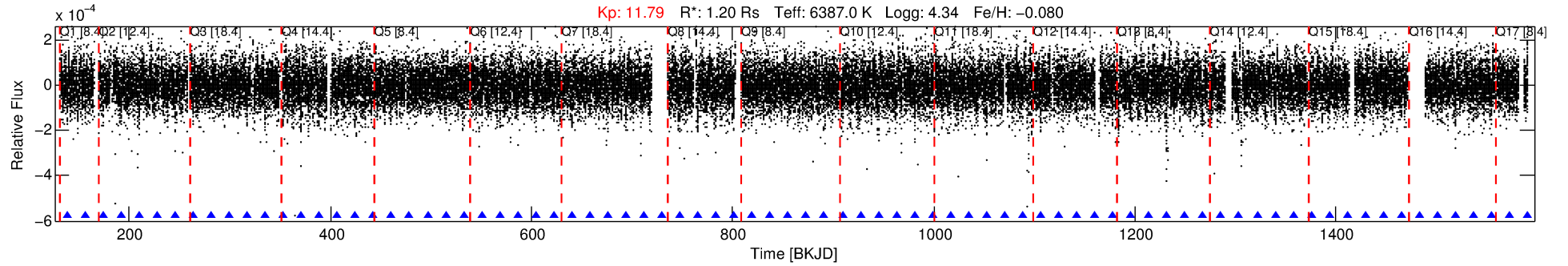
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007426877-01

No Significant Match Found

DV One-Page Summary

KIC: 7426877 Candidate: 1 of 1 Period: 17.930 d



DV Fit Results:

Period = 17.93039 [0.00032] d
Epoch = 138.1578 [0.0149] BKJD
Rp/R* = 0.0052 [0.0006]
a/R* = 3.64 [1.68]
b = 0.89 [0.12]
Seff = 109.12 [32.29]
Teq = 824 [61] K
Rp = 0.68 [0.17] Re
a = 0.1405 [0.0265] AU
Ag = 242.17 [110.93] [2.17 σ]
Teffp = 5027 [481] K [8.67 σ]

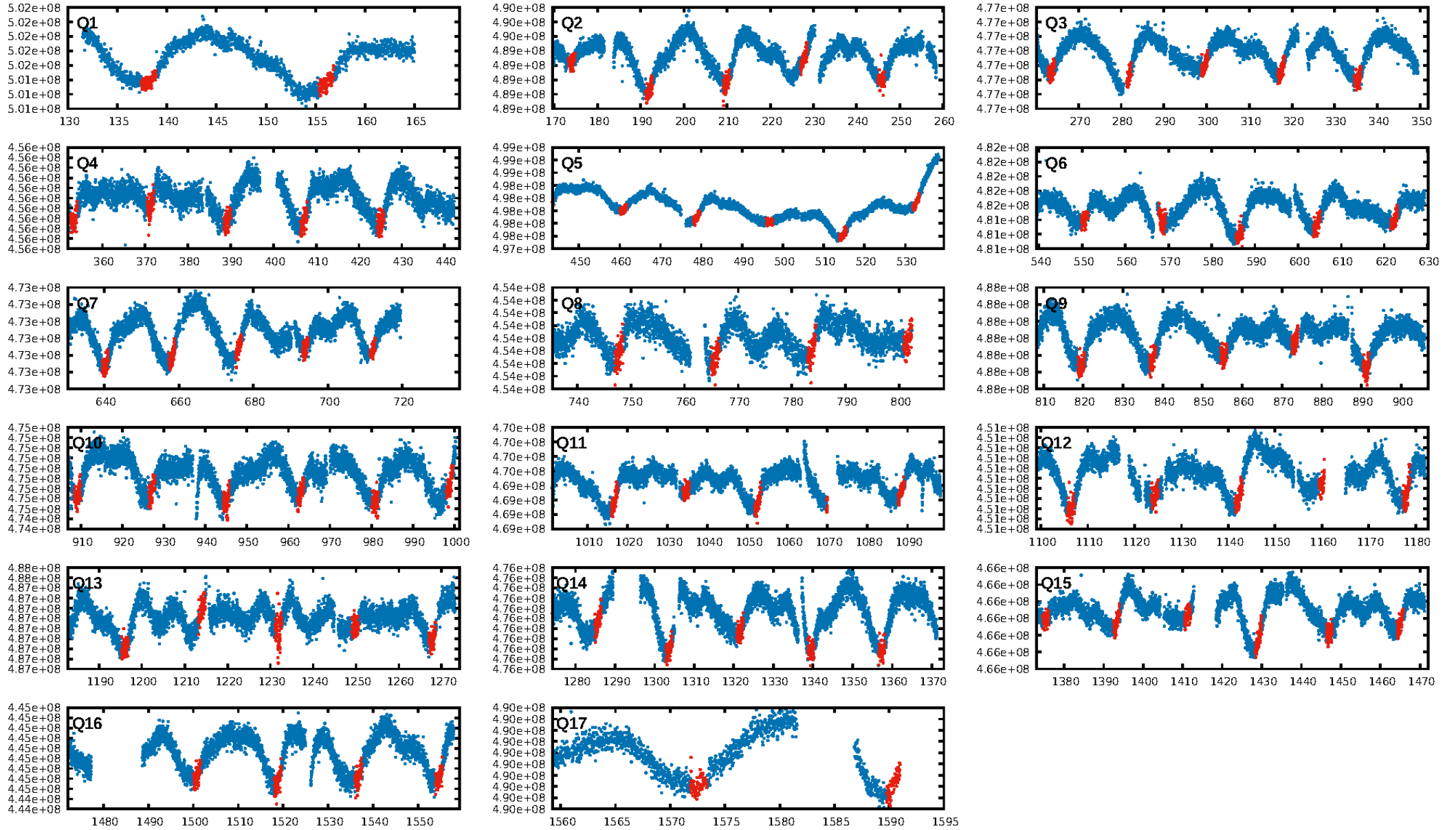
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 75.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.73e-16
RollingBand-fgt: 1.00 [74/74]
GhostDiagnostic-chr: 0.6115
Centroid-sig: 0.0%
Centroid-so: 3.947 arcsec [4.06 σ]
OotOffset-rm: 1.731 arcsec [1.97 σ]
KicOffset-rm: 1.695 arcsec [1.99 σ]
OotOffset-st: 3/4/2/2 [11]
KicOffset-st: 3/4/2/2 [11]
DiffImageQuality-fgm: 0.73 [8/11]
DiffImageOverlap-fno: 1.00 [17/17]

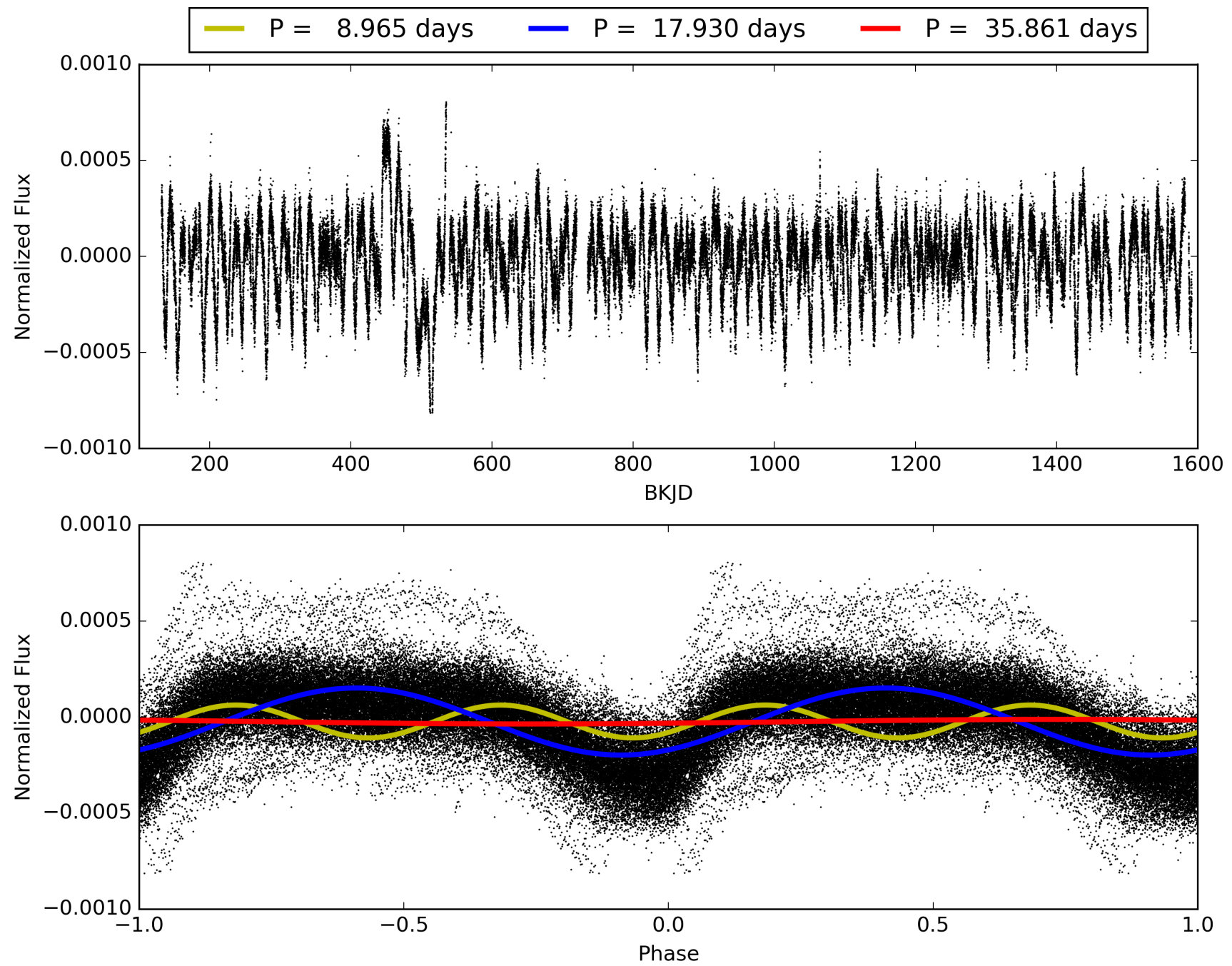
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:34:26 Z

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

TCE 007426877-01, PDC Light Curves

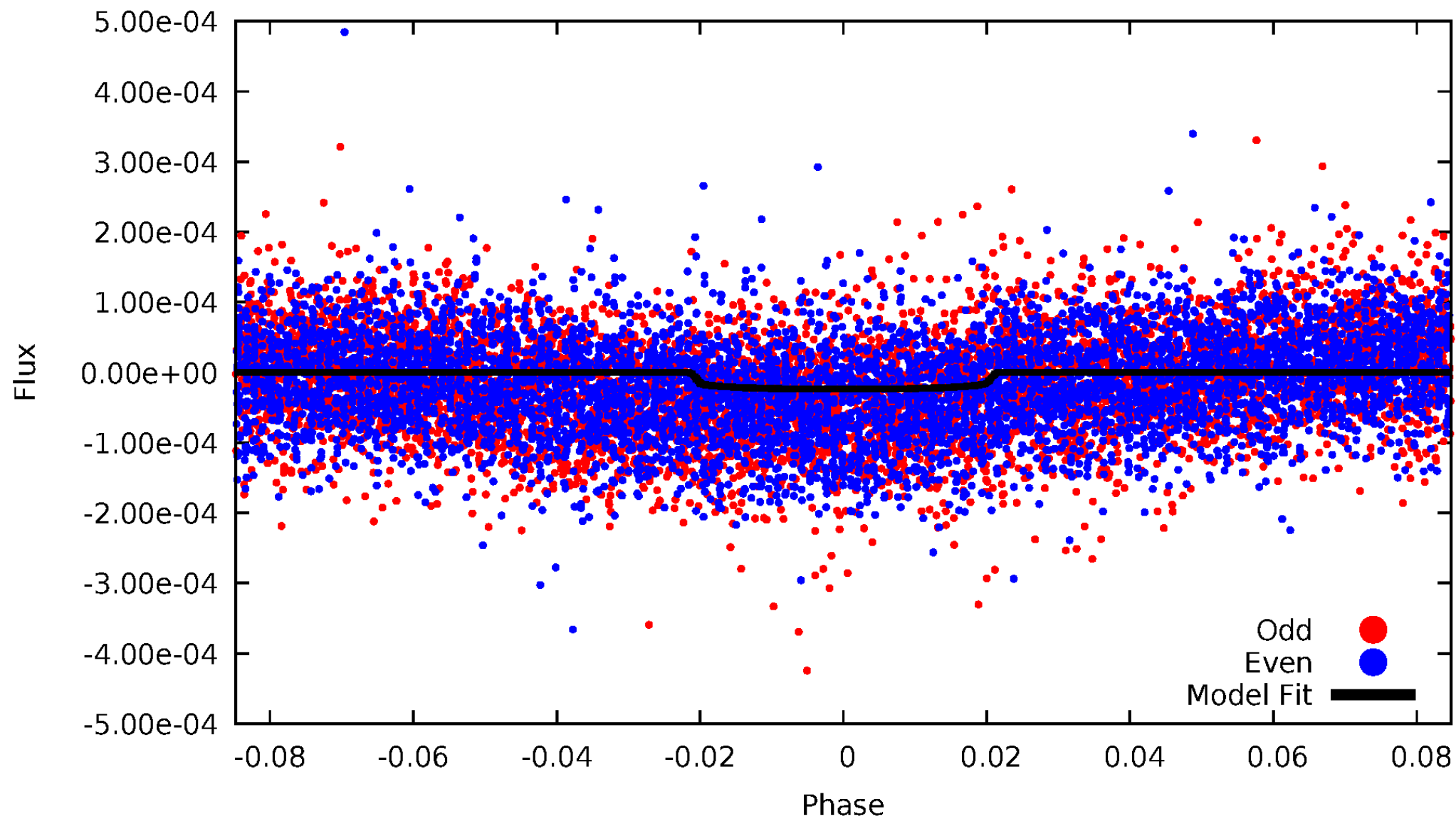


TCE 007426877-01



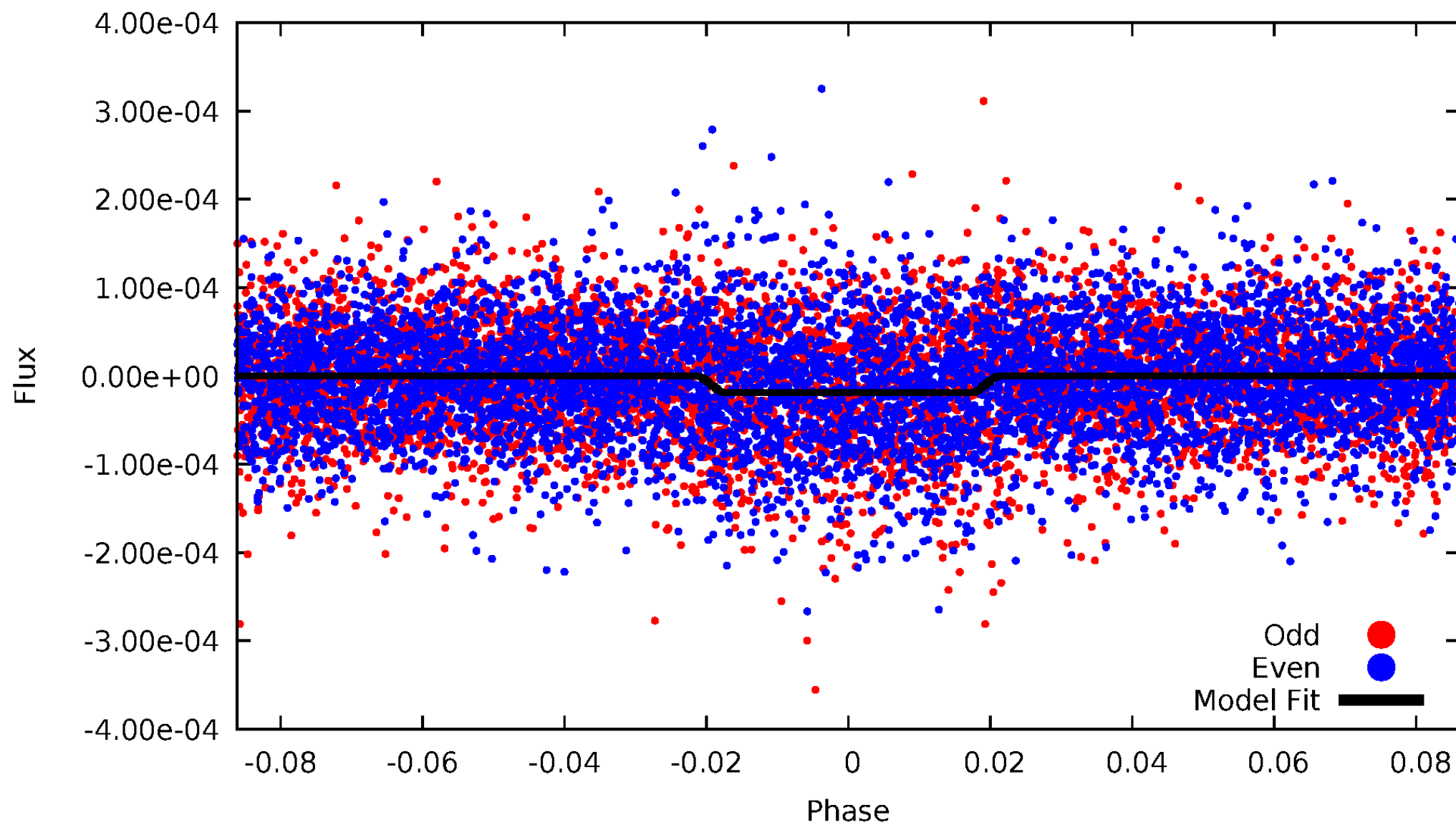
DV Odd/Even

TCE 007426877-01



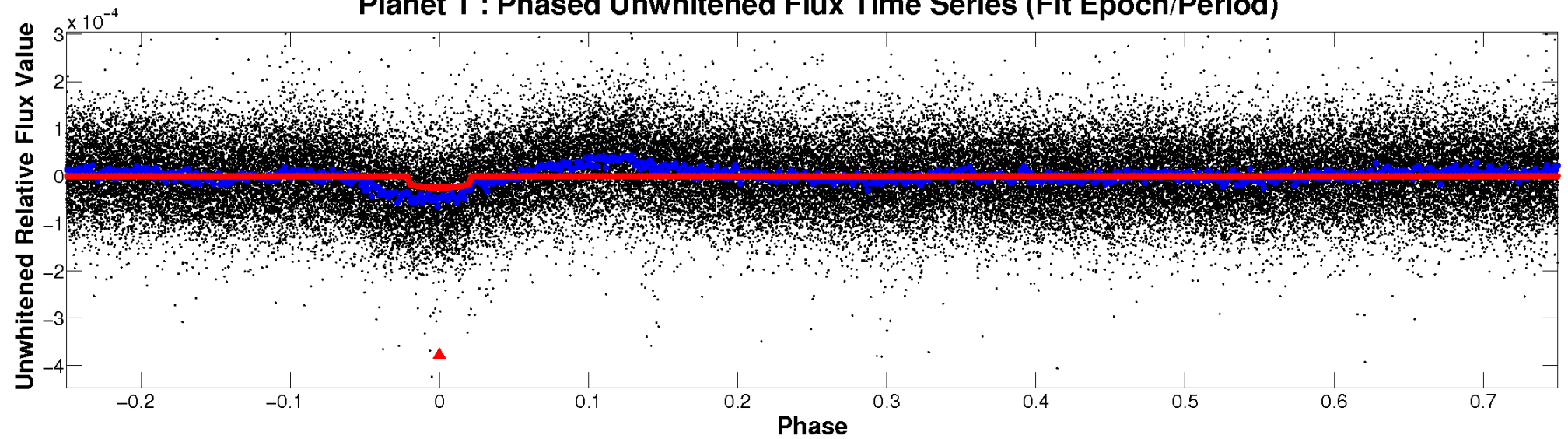
ALT Odd/Even

TCE 007426877-01

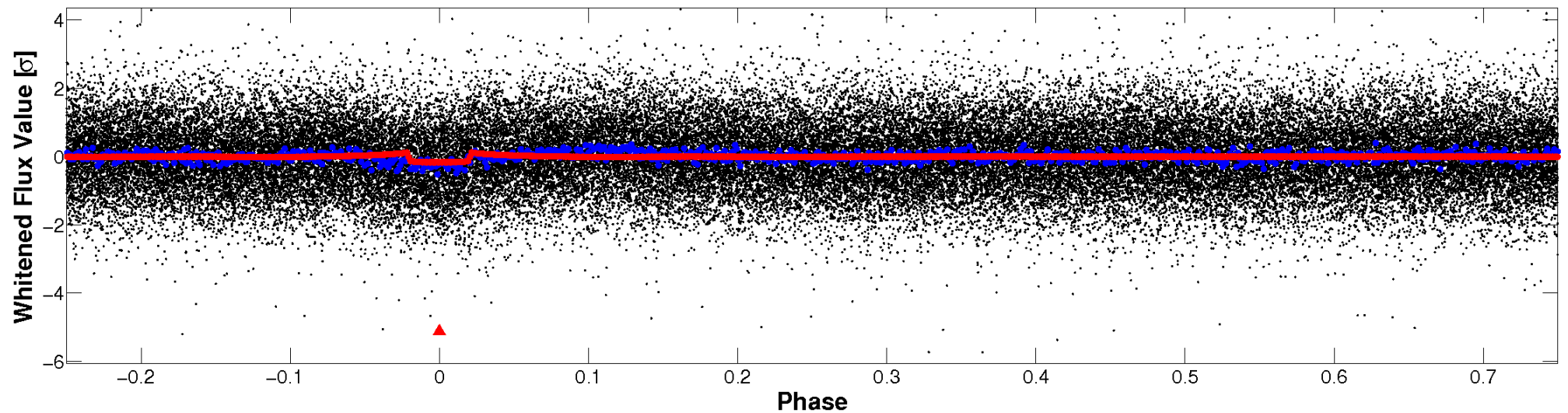


Non-Whitened Vs. Whitened Light Curve

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

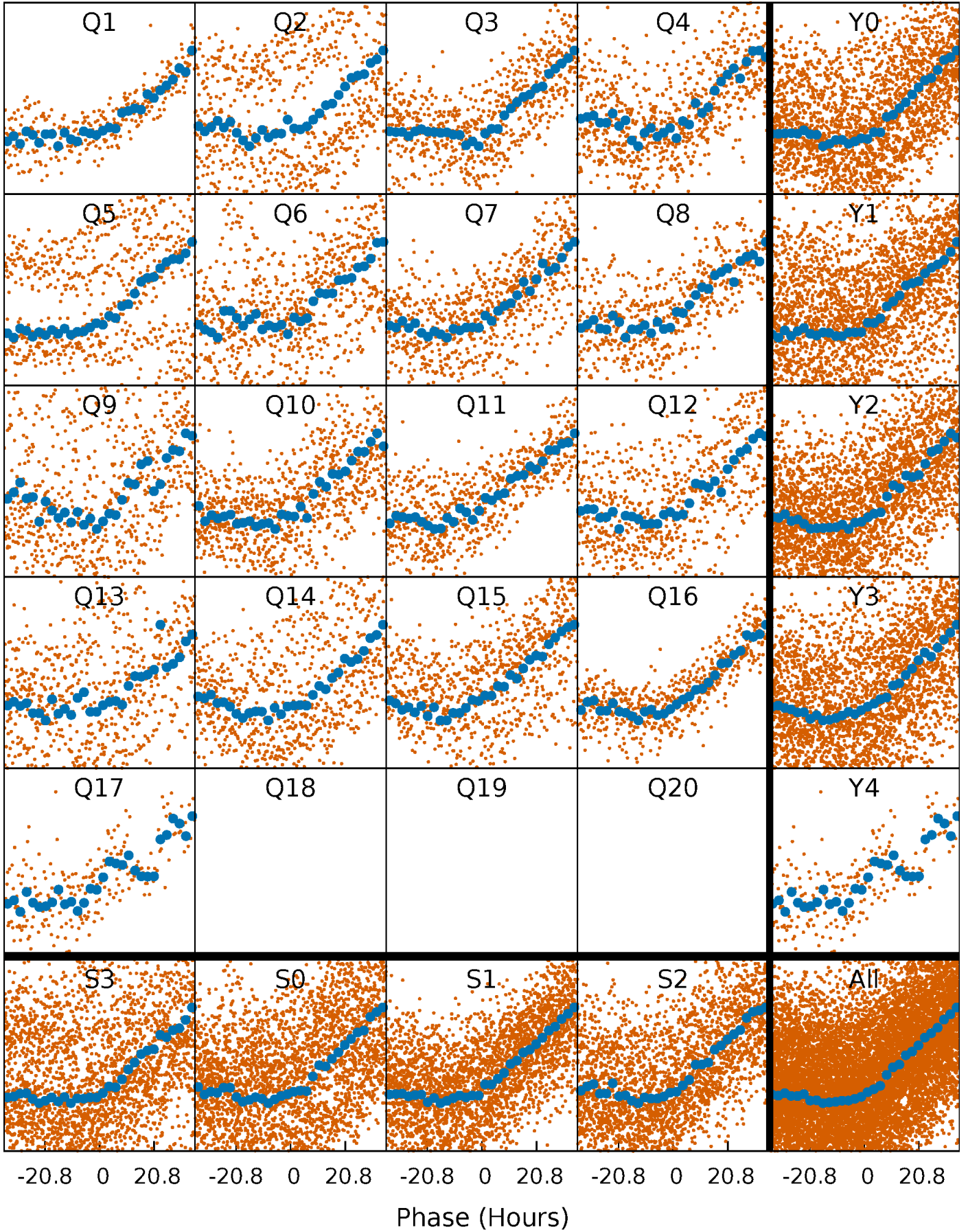


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



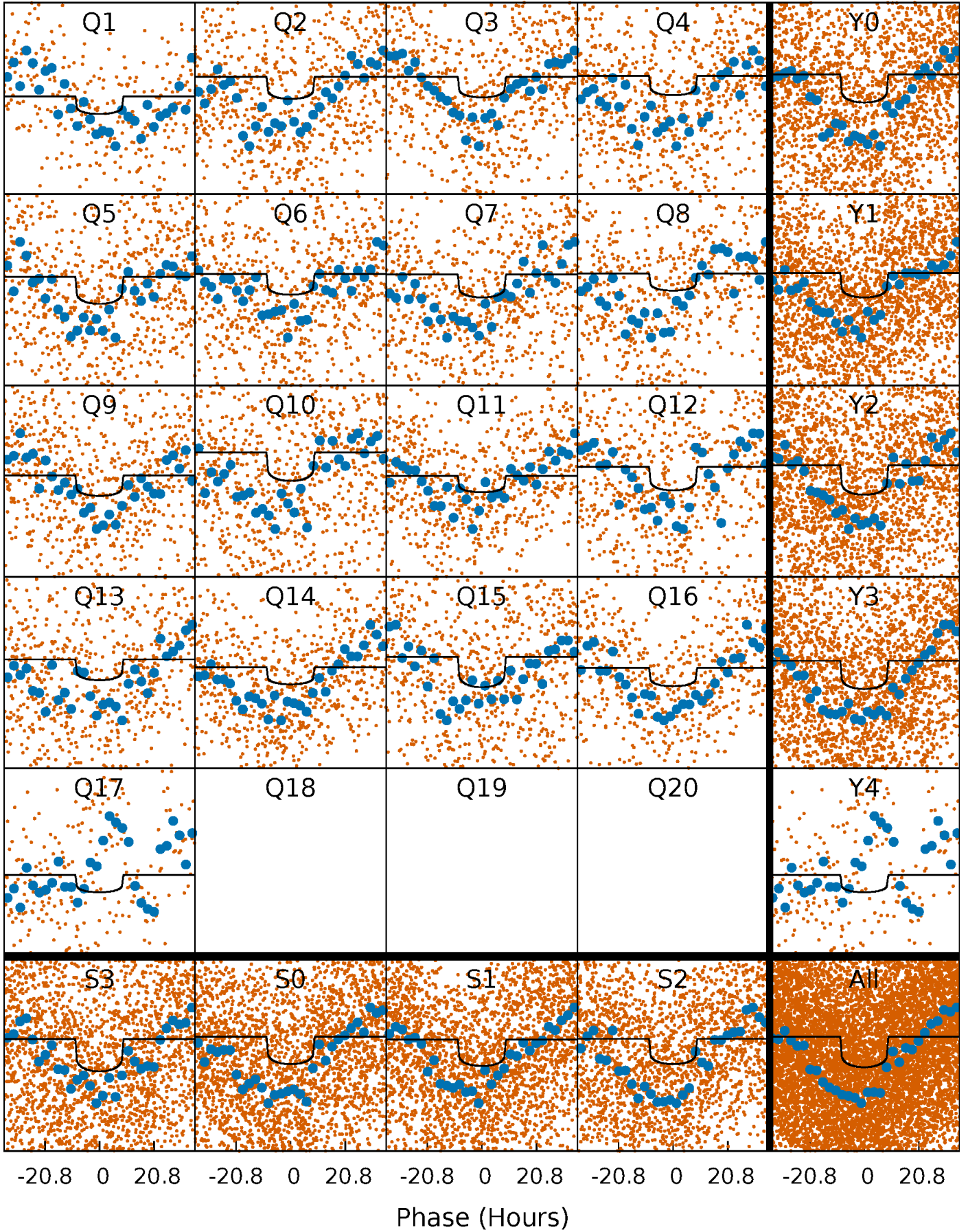
PDC Quarter-Phased Transit Curves

TCE 007426877-01 P= 17.930391 Days $T_0=138.157802$ (BKJD)



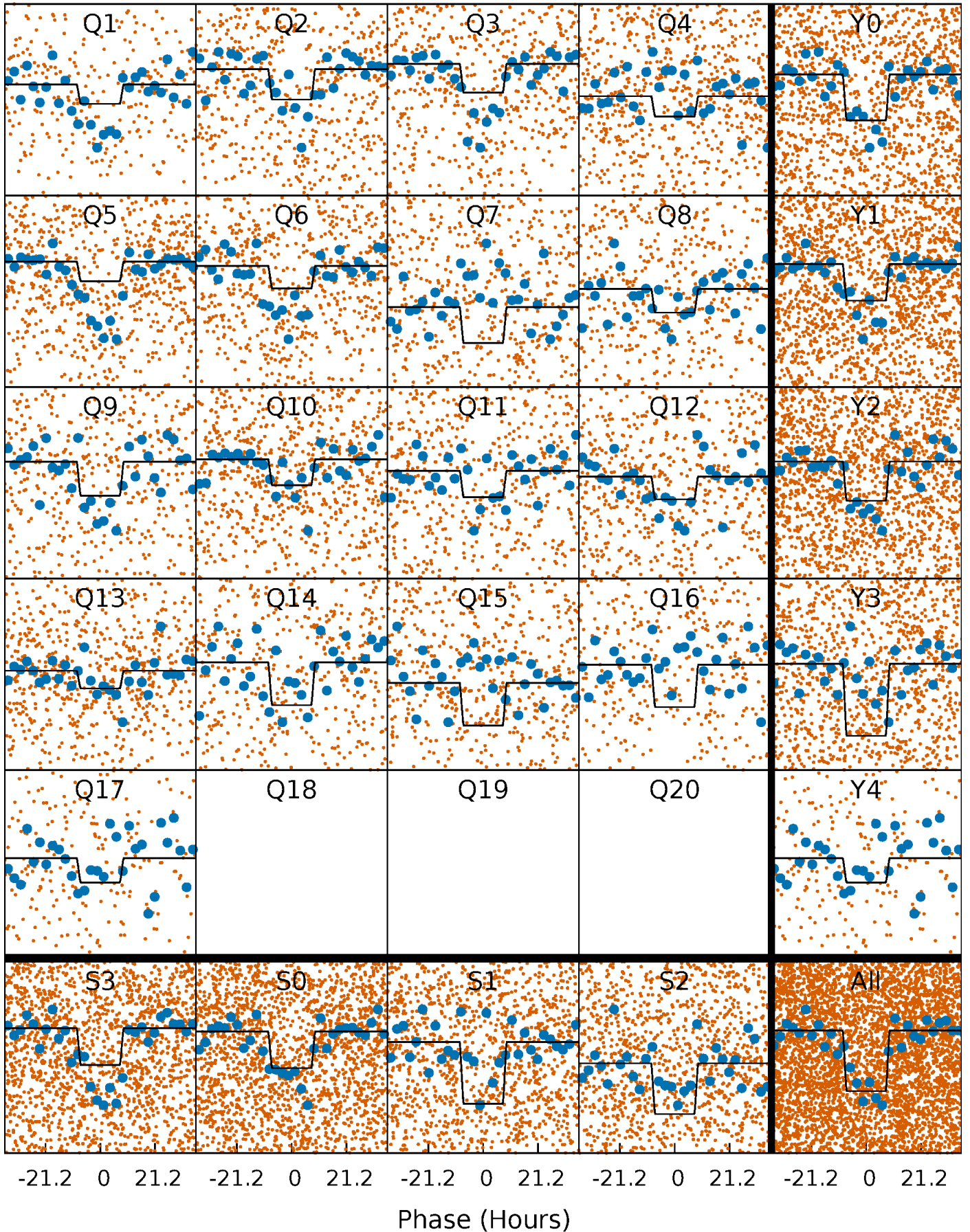
DV Quarter-Phased Transit Curves

TCE 007426877-01 P= 17.930391 Days $T_0=138.157802$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

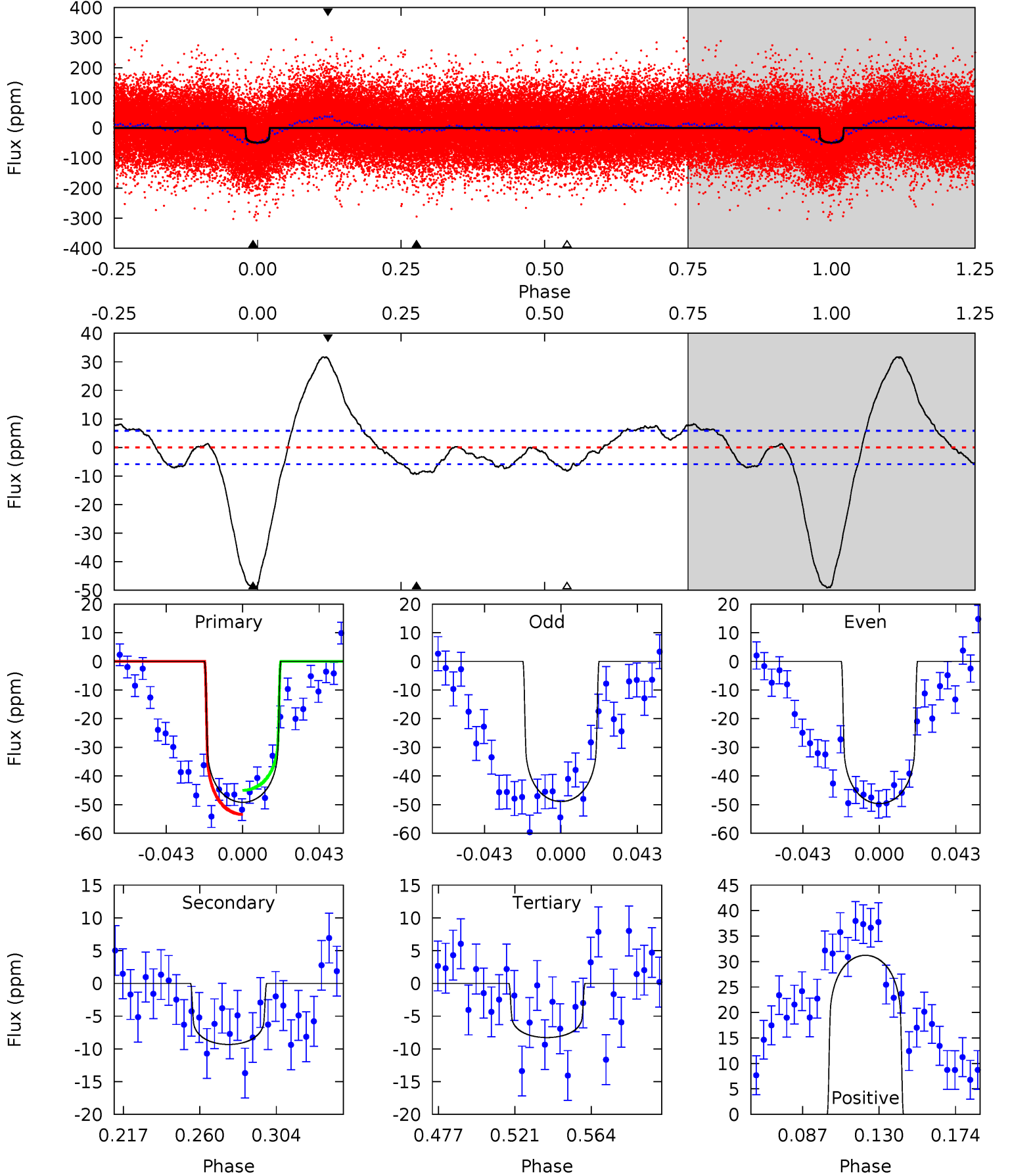
TCE 007426877-01 P= 17.930187 Days $T_0=138.162656$ (BKJD)



DV Model-Shift Uniqueness Test

007426877-01, P = 17.930391 Days, E = 120.227411 Days

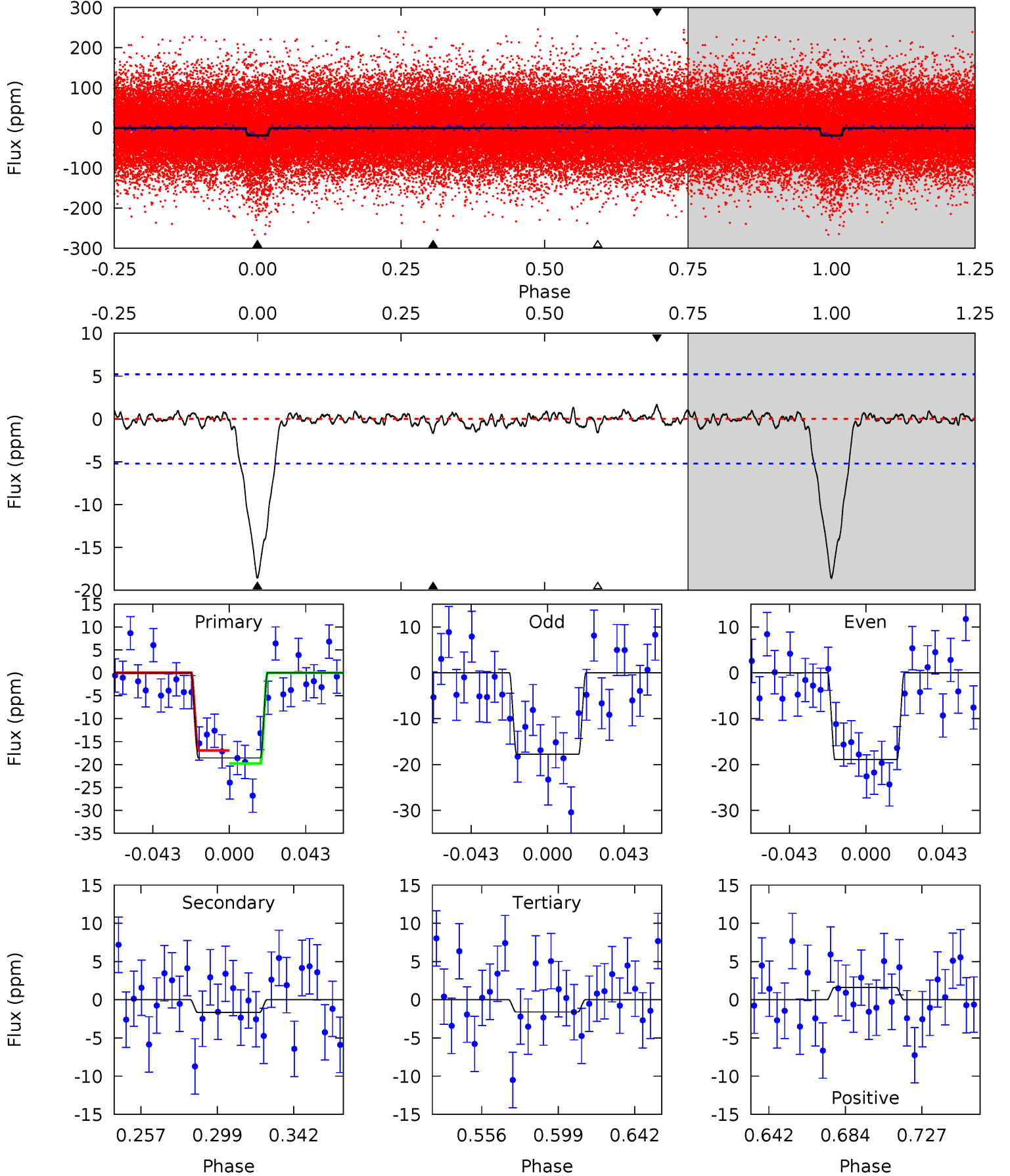
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.6	7.51	6.67	25.2	4.74	2.02	7.44	33.0	14.5	0.85	-17.6	0.29	0.97	0.39	3.38



Alt Model-Shift Uniqueness Test

007426877-01, $P = 17.930187$ Days, $E = 120.232469$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	1.50	1.46	1.46	4.74	2.03	0.47	15.4	15.4	0.05	0.04	0.53	1.08	0.08	1.30



Stellar Parameters For KIC 007426877

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6387^{+144}_{-176}	$4.339^{+0.081}_{-0.150}$	$-0.080^{+0.250}_{-0.300}$	$1.202^{+0.270}_{-0.145}$	$1.147^{+0.144}_{-0.144}$	$0.931^{+0.325}_{-0.398}$
	+2%/-3%	+2%/-3%	+312%/-375%	+22%/-12%	+13%/-13%	+35%/-43%
Source	PHO1	FLK73	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 007426877-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-9 ± 1	$0.69^{+0.11}_{-0.09}$	1158^{+62}_{-50}	4953^{+290}_{-246}	207^{+72}_{-55}
Alt.	-2 ± 1	$0.57^{+0.10}_{-0.08}$	1161^{+63}_{-47}	3818^{+421}_{-591}	51^{+43}_{-34}

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

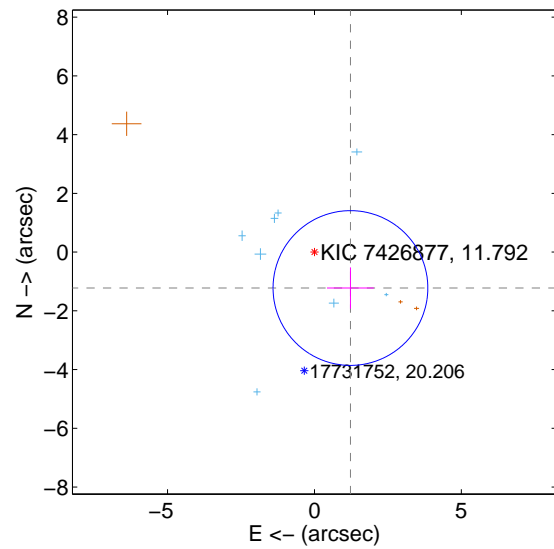
Supplemental centroid analysis for 007426877-01. **Kepler magnitude: 11.79.** Transit SNR 9.17

There are 8 quarters with good PRF difference image offsets

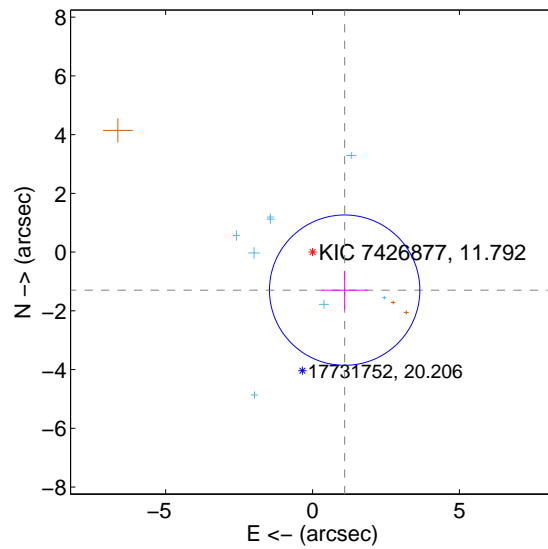
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.731 ± 0.878	1.97	-1.225 ± 0.797	-1.223 ± 0.704
PRF-fit source offset from KIC position	1.695 ± 0.853	1.99	-1.094 ± 0.778	-1.295 ± 0.657
photometric centroid source offset	3.95 ± 0.97	4.06	2.13 ± 0.91	-3.32 ± 1.00

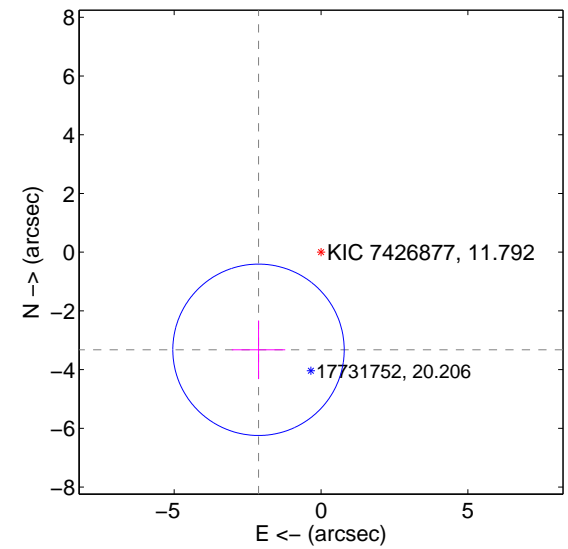
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

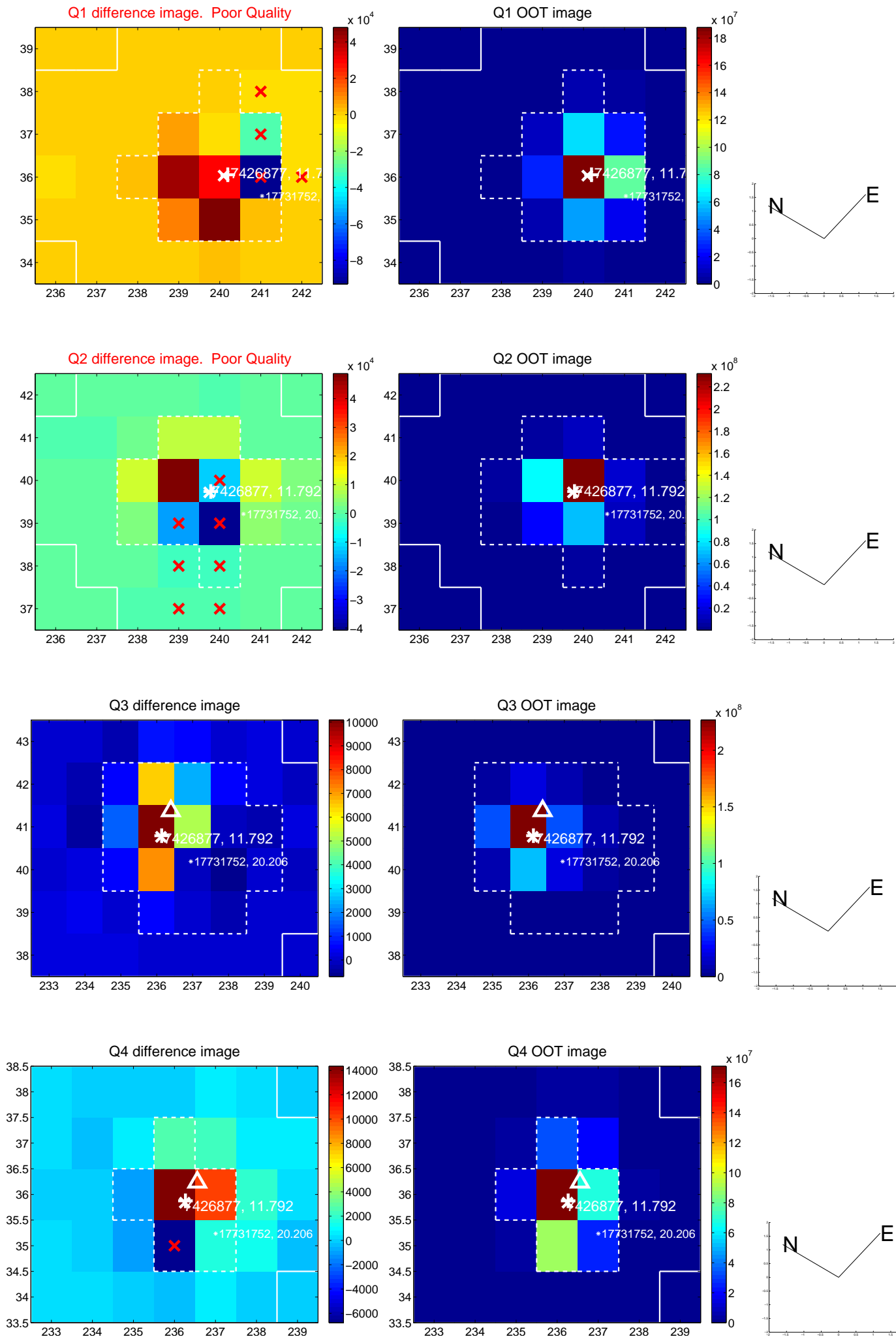


offset from photometric centroids

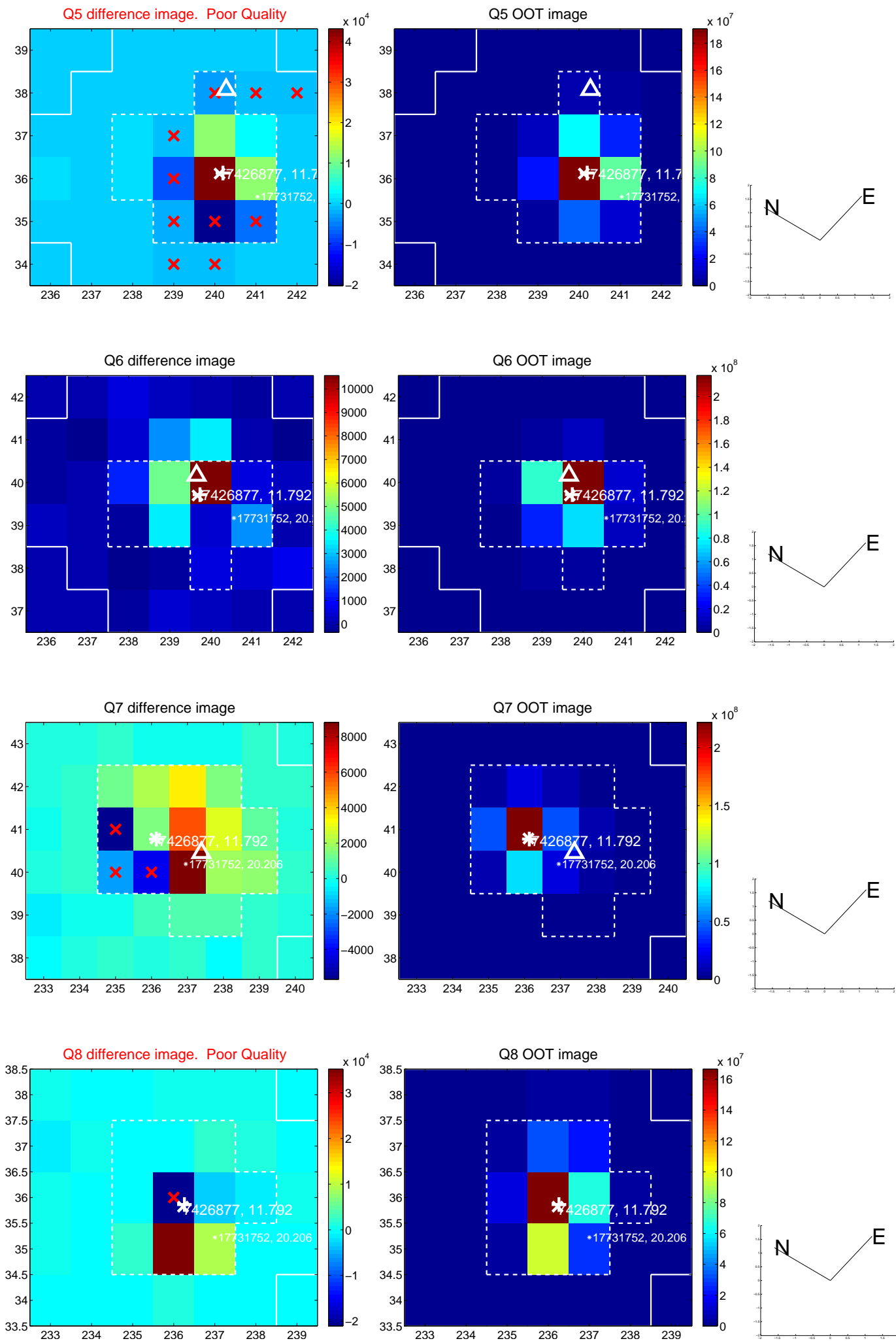


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

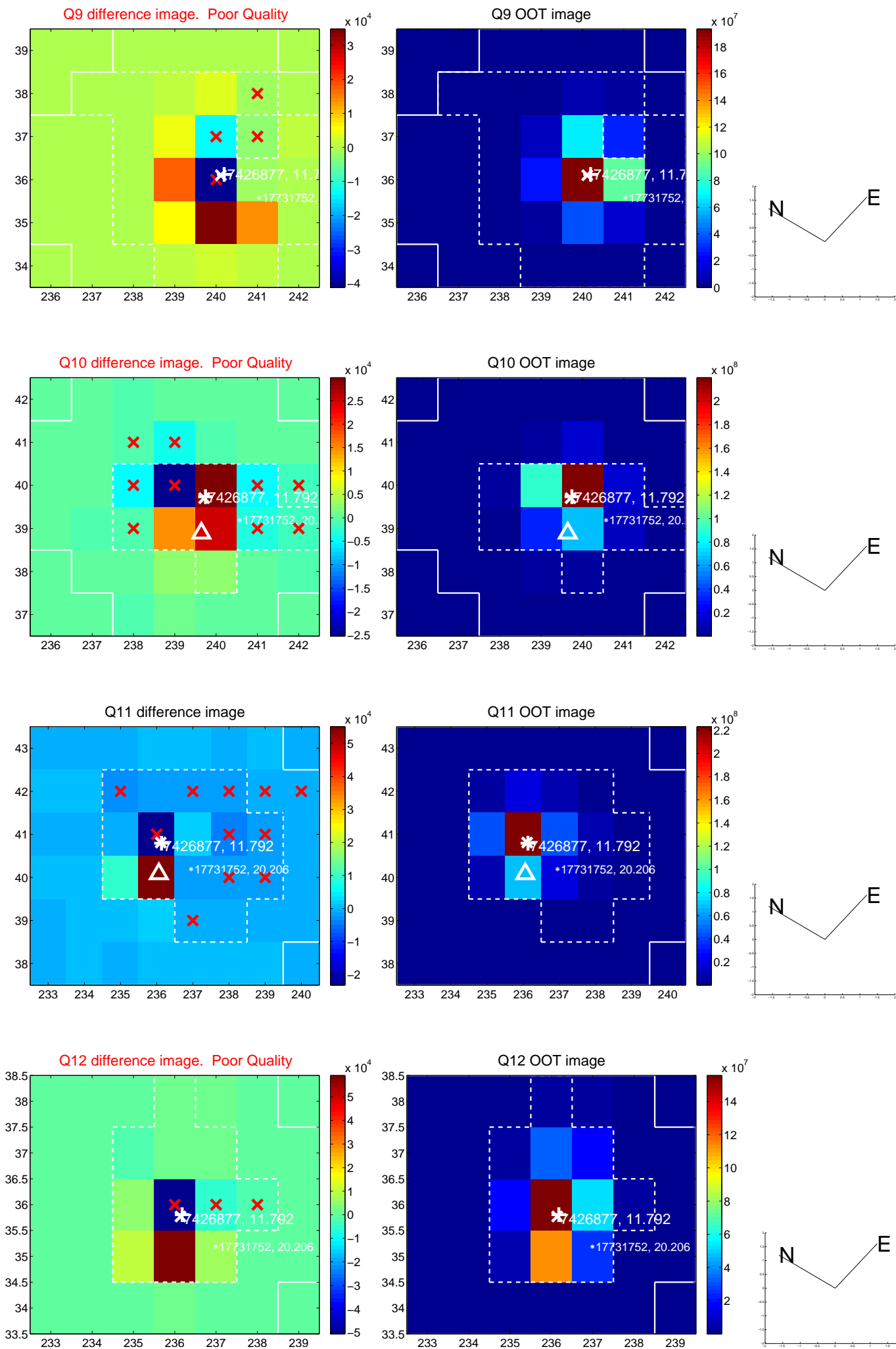
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



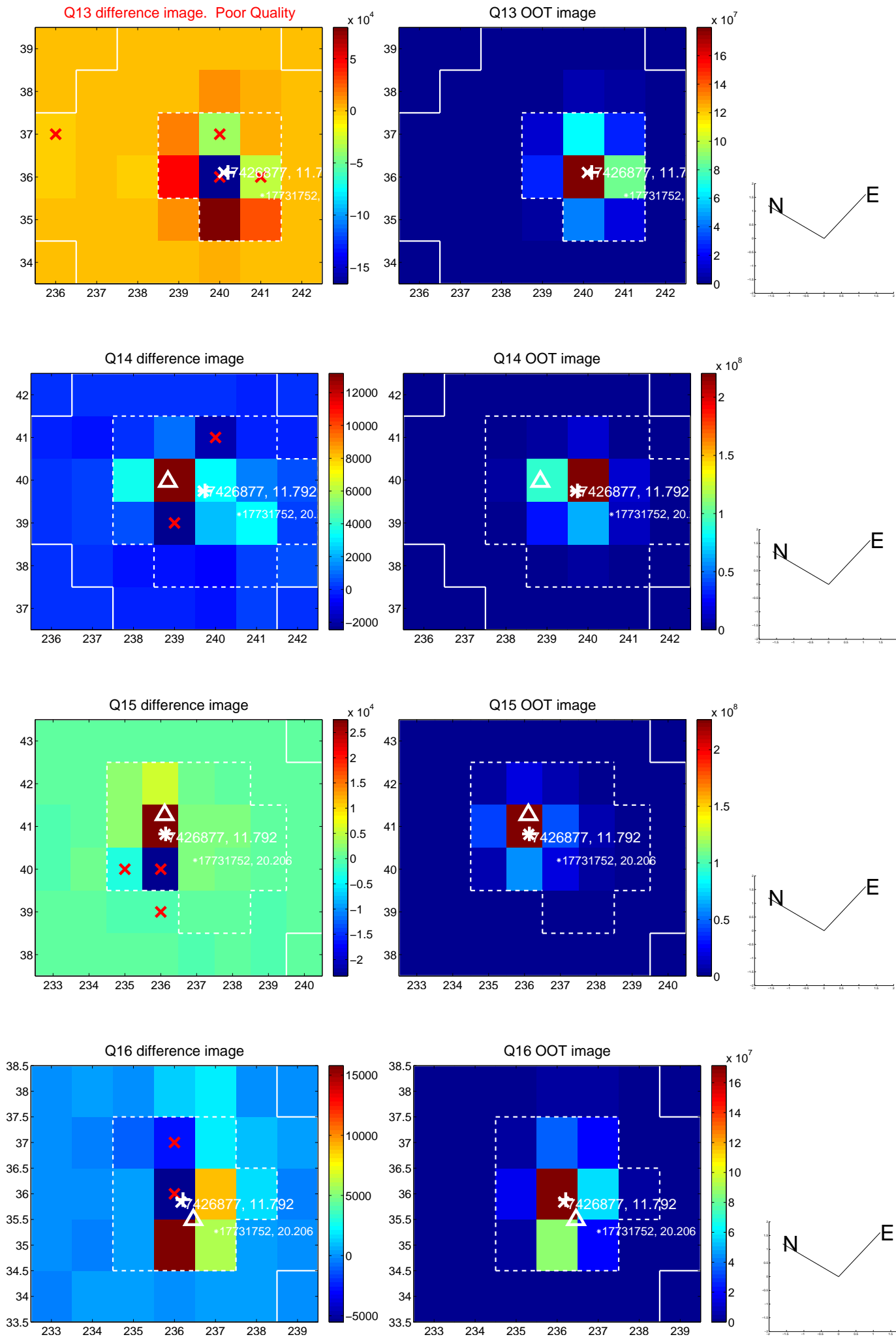
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



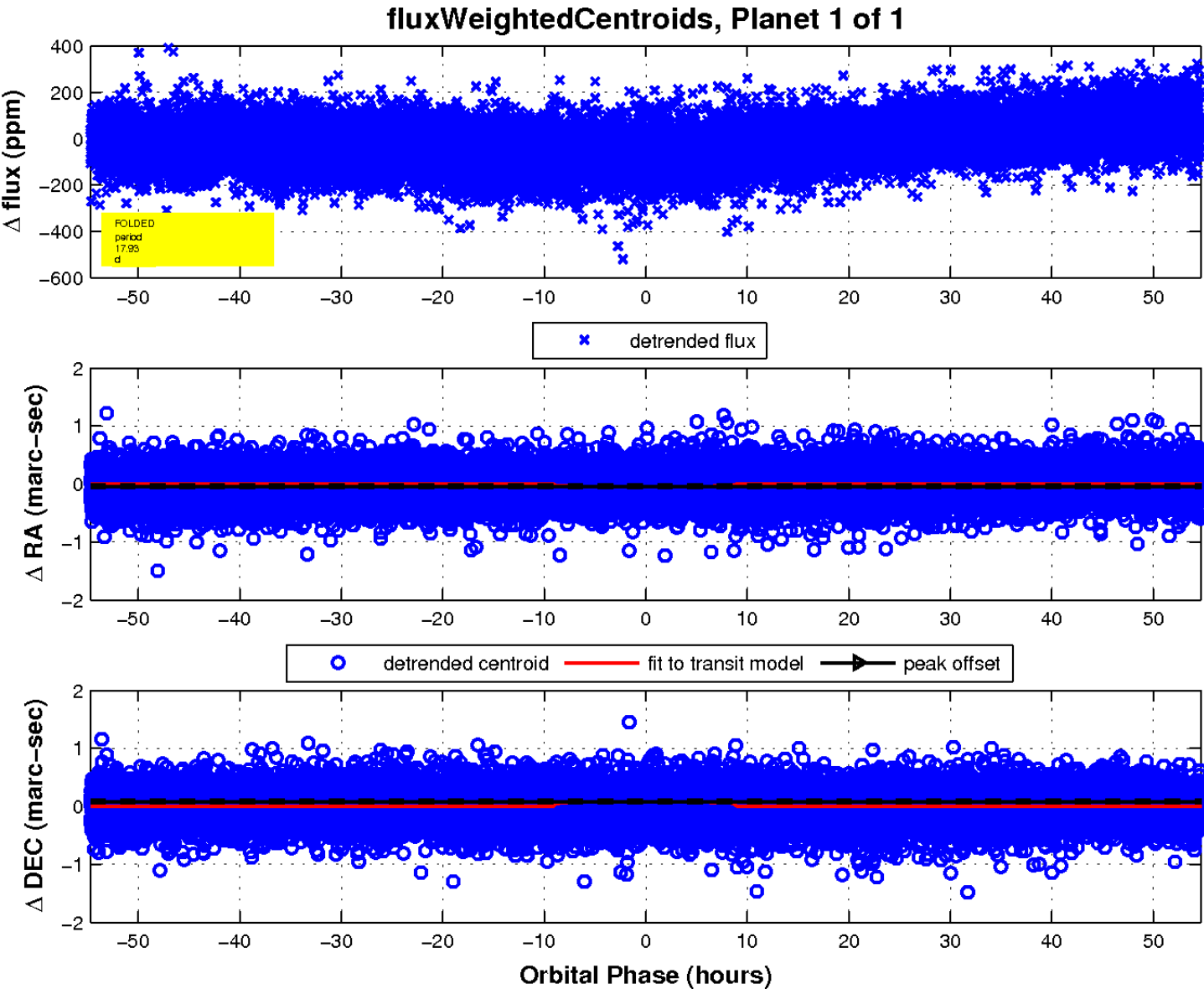
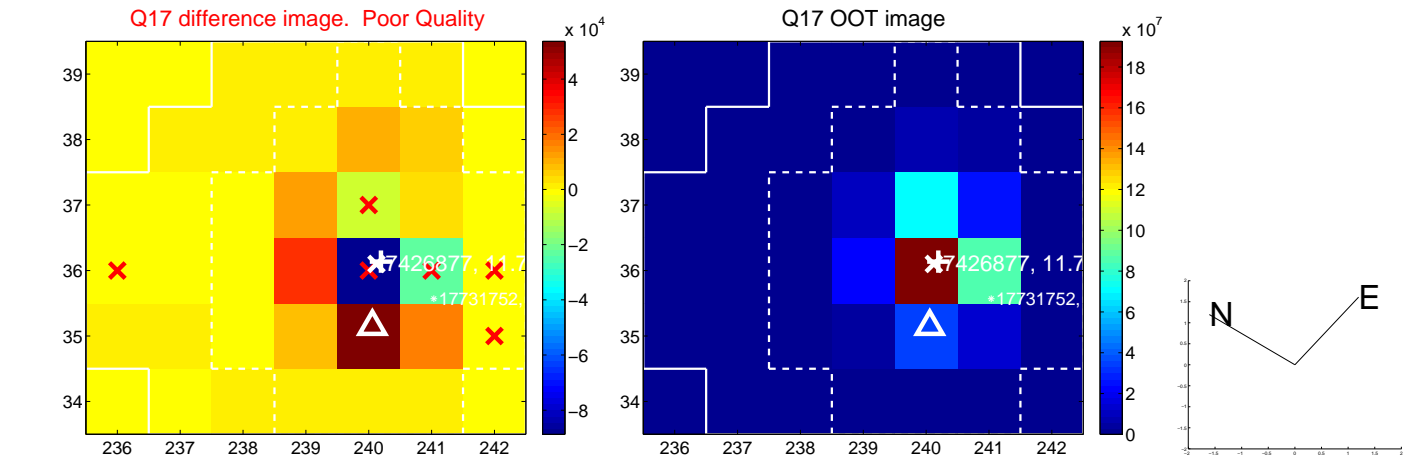
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

