

KIC 008278685

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})
008278685-01	OBS	4435.01	10.861371	136.822824	62.4	5.875	9.0	10.0	1.02	6339	0.94	154.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008278685-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

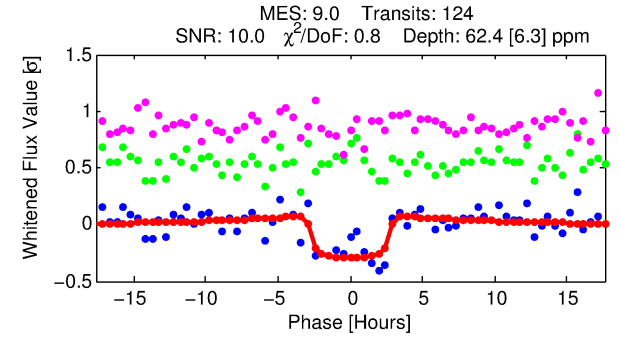
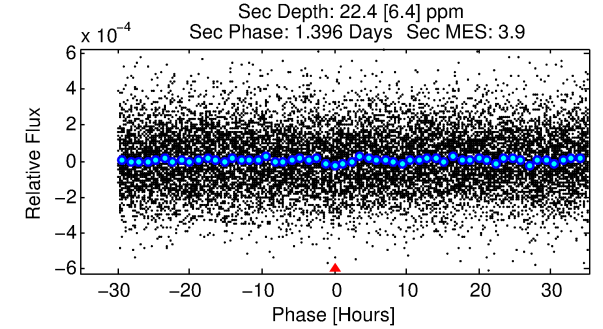
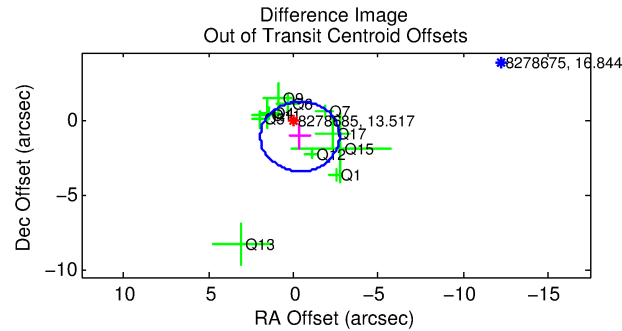
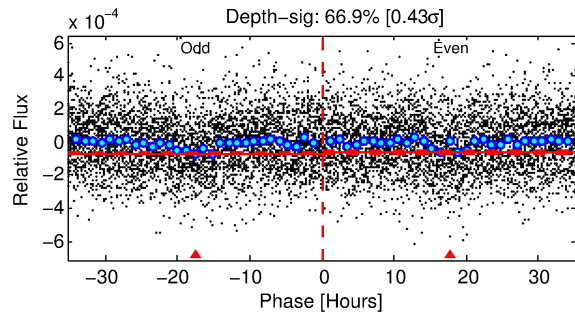
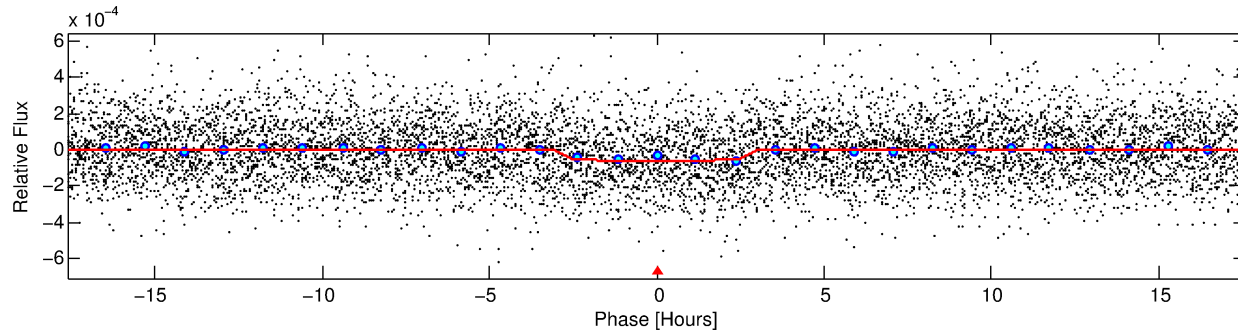
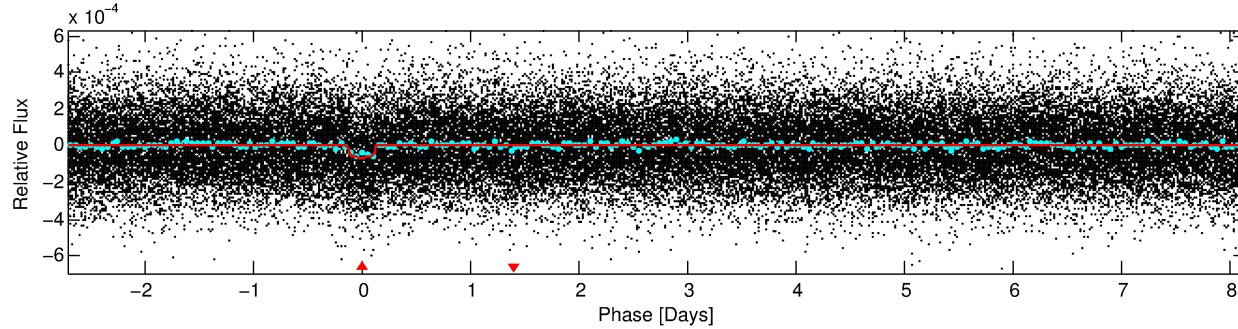
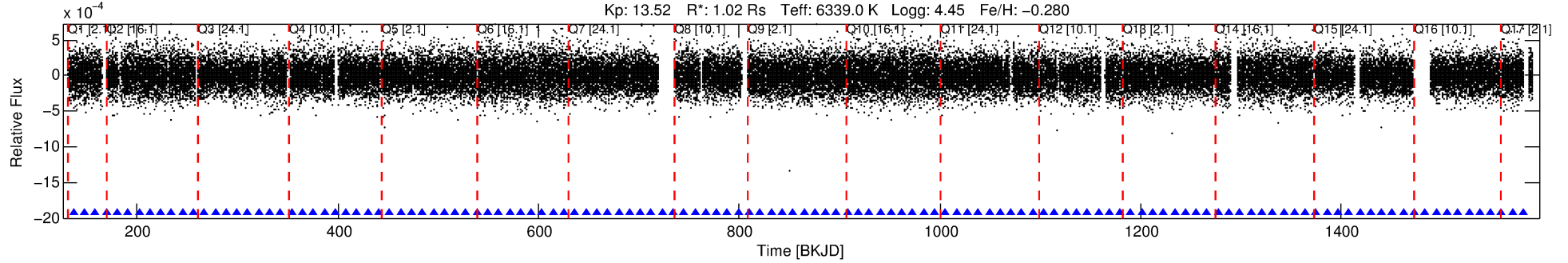
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008278685-01

No Significant Match Found

DV One-Page Summary

KIC: 8278685 Candidate: 1 of 1 Period: 10.861 d
KOI: K04435.01 Corr: 0.978



DV Fit Results:

Period = 10.86137 [0.00012] d
Epoch = 136.8228 [0.0092] BKJD
Rp/R* = 0.0084 [0.0028]
a/R* = 6.64 [1.89]
b = 0.89 [0.41]
Seff = 154.89 [59.31]
Teq = 900 [86] K
Rp = 0.94 [0.41] Re
a = 0.0983 [0.0244] AU
Ag = 136.24 [109.53] [1.23 σ]
Teffp = 4752 [863] K [4.44 σ]

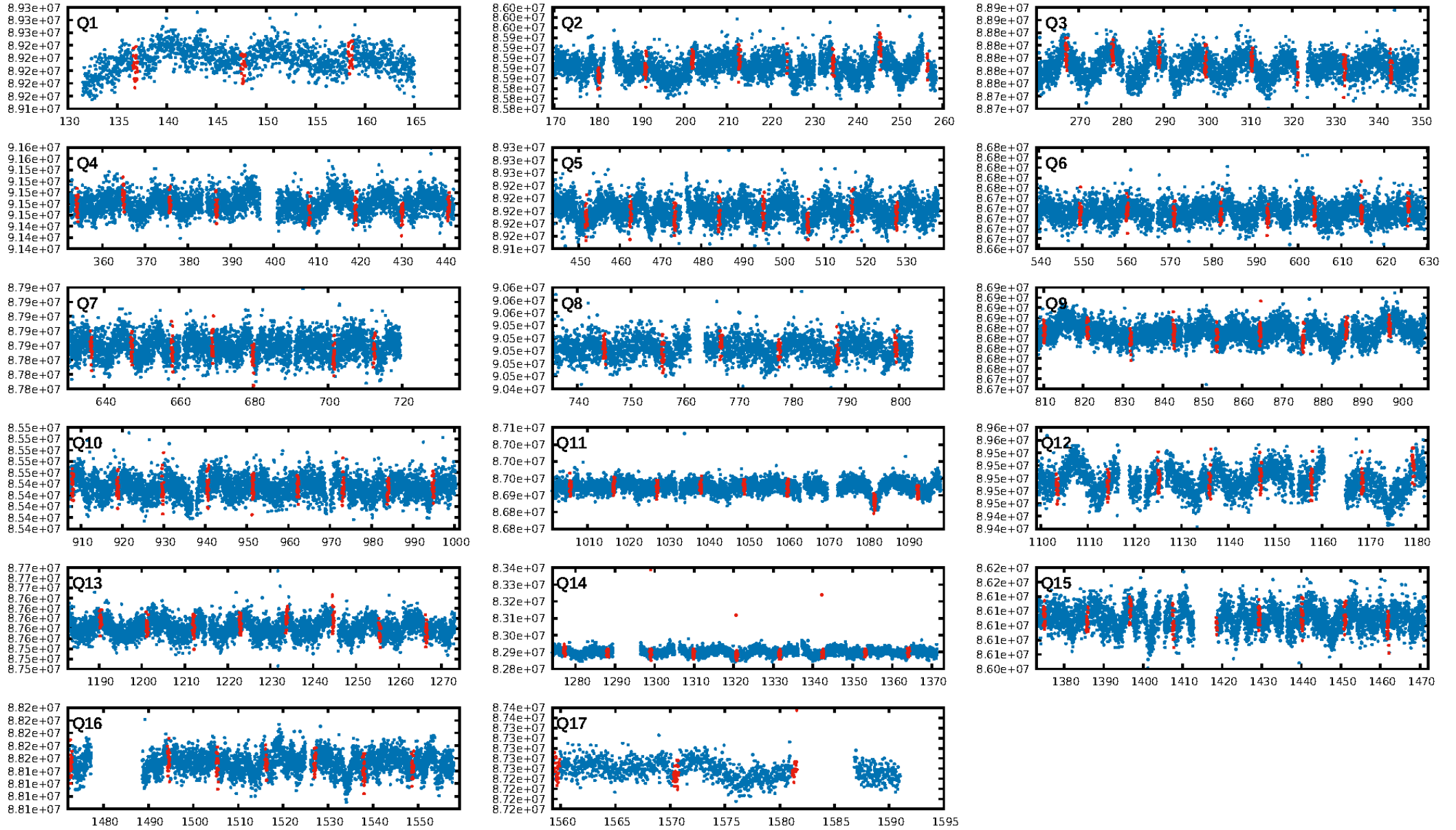
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.07e-19
RollingBand-fgt: 1.00 [118/118]
GhostDiagnostic-chr: 2.257
Centroid-sig: 0.7%
Centroid-so: 1.865 arcsec [1.55 σ]
OotOffset-rm: 1.186 arcsec [1.53 σ]
KicOffset-rm: 1.238 arcsec [1.70 σ]
OotOffset-st: 1/3/2/5 [11]
KicOffset-st: 1/3/2/5 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 1.00 [17/17]

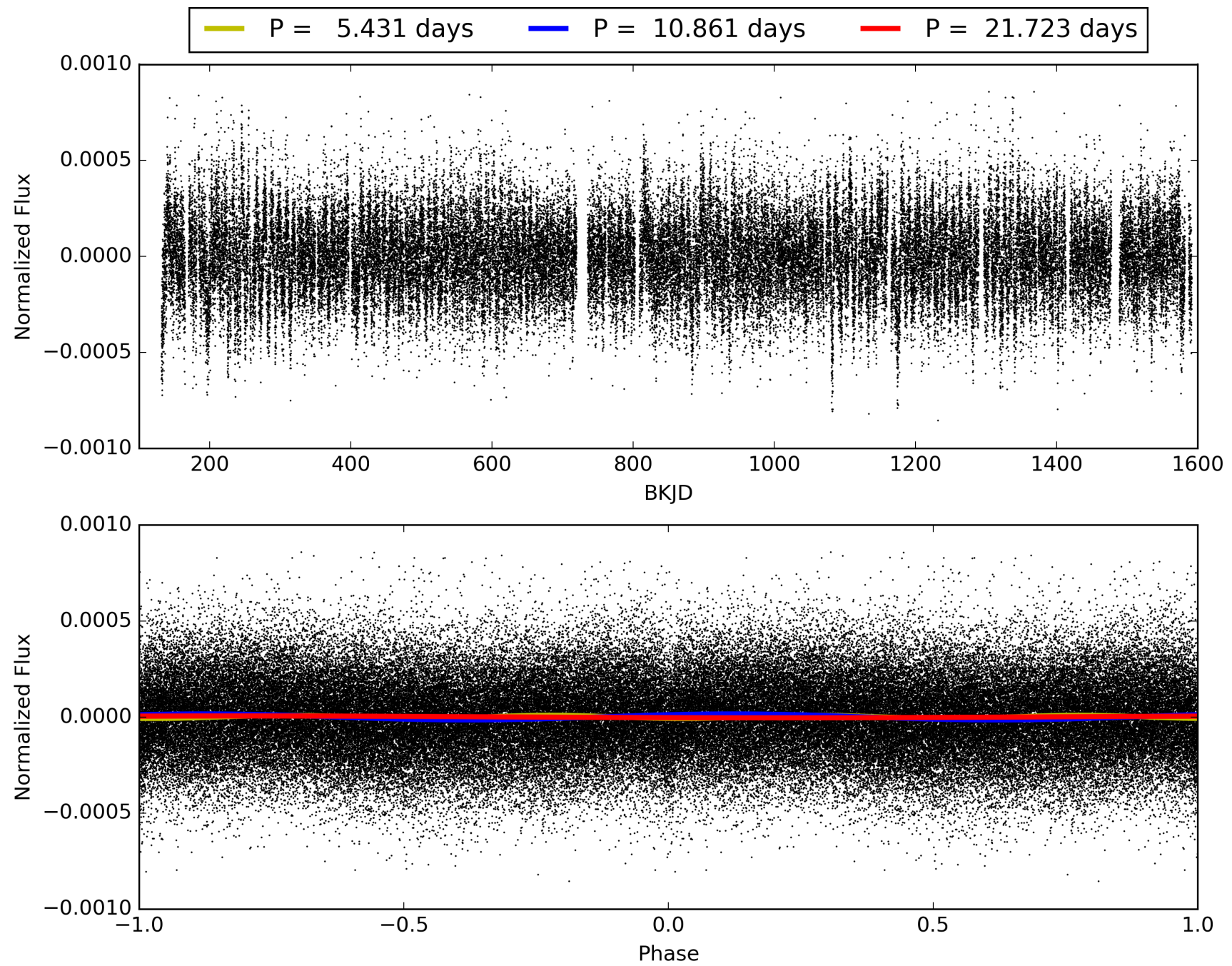
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:14:54 Z

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

TCE 008278685-01, PDC Light Curves

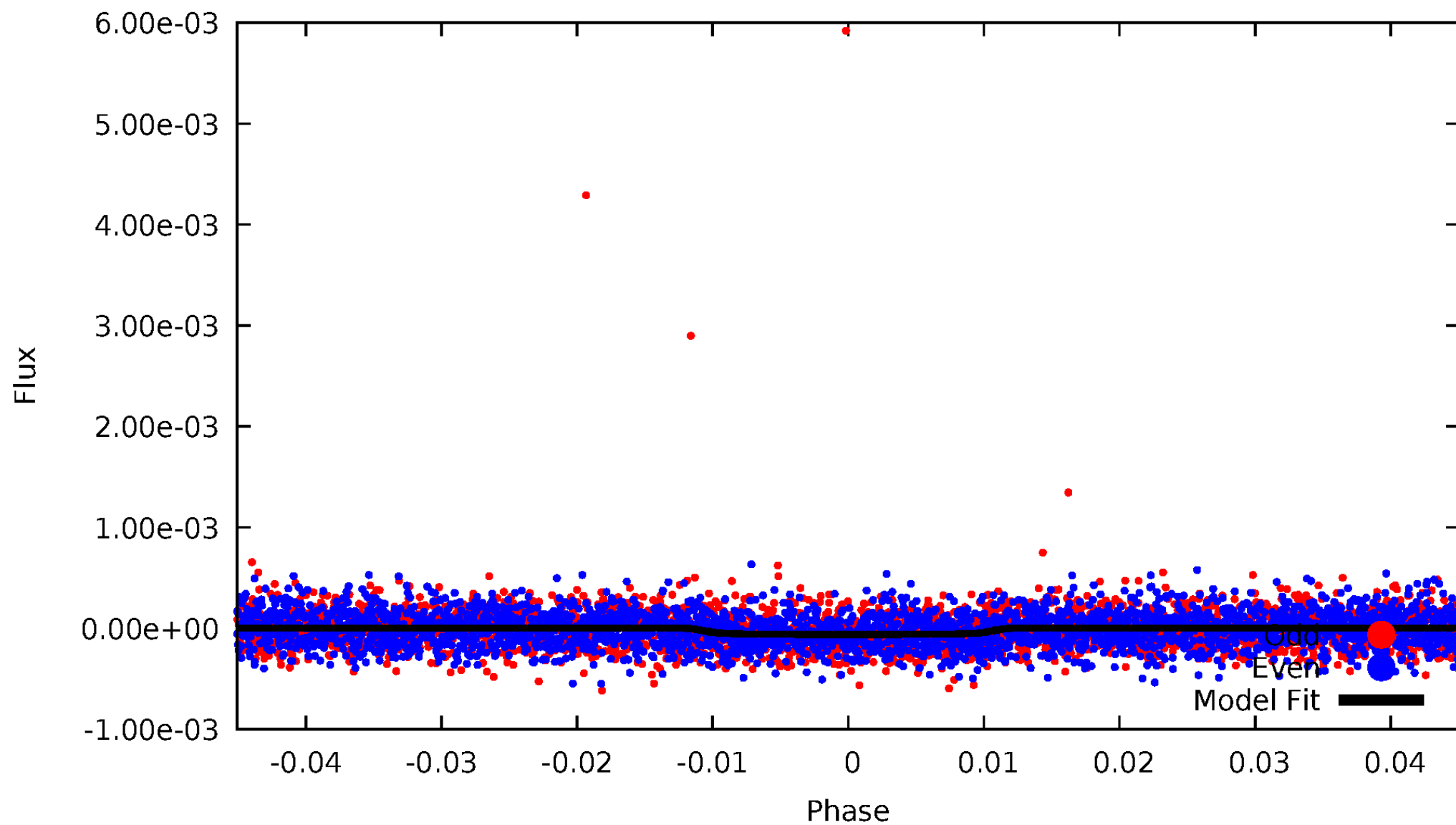


TCE 008278685-01



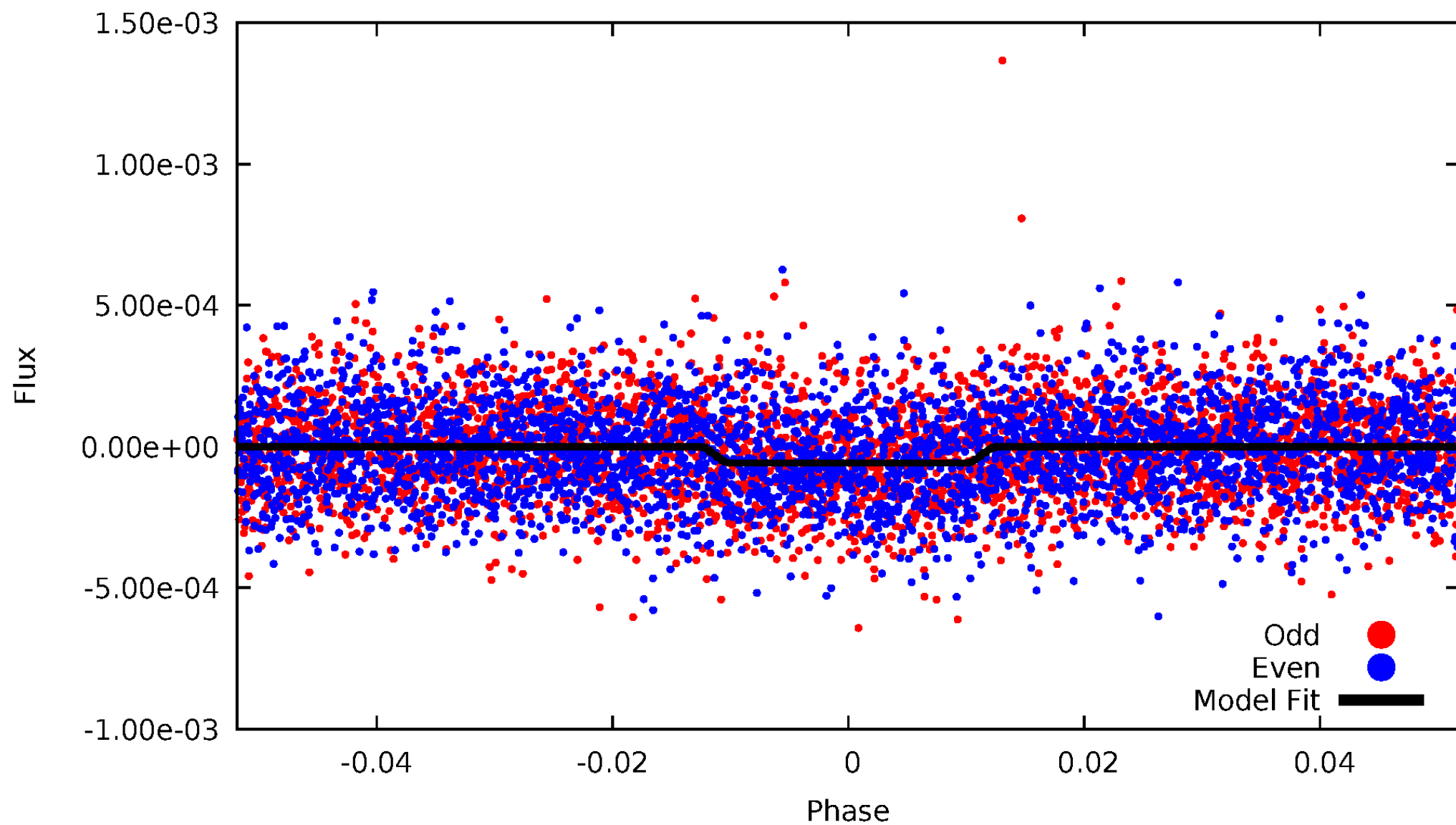
DV Odd/Even

TCE 008278685-01



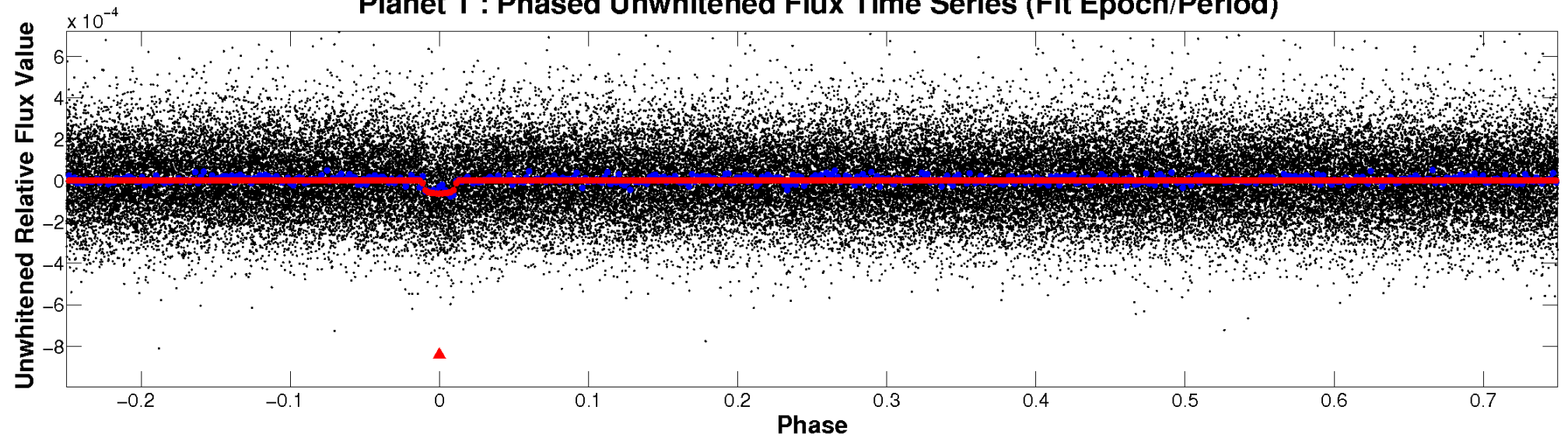
ALT Odd/Even

TCE 008278685-01

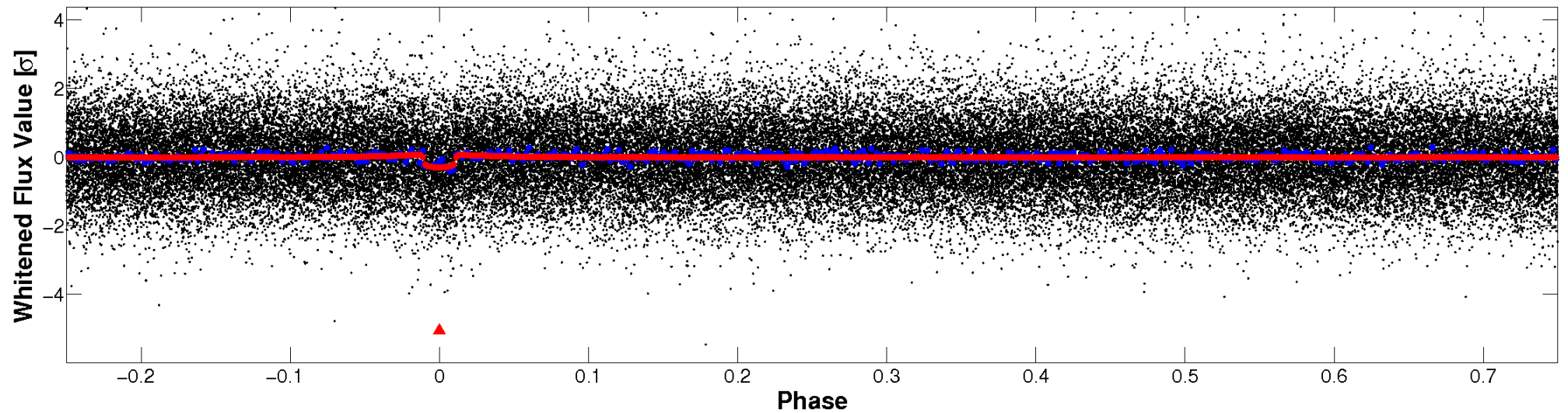


Non-Whitened Vs. Whitened Light Curve

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

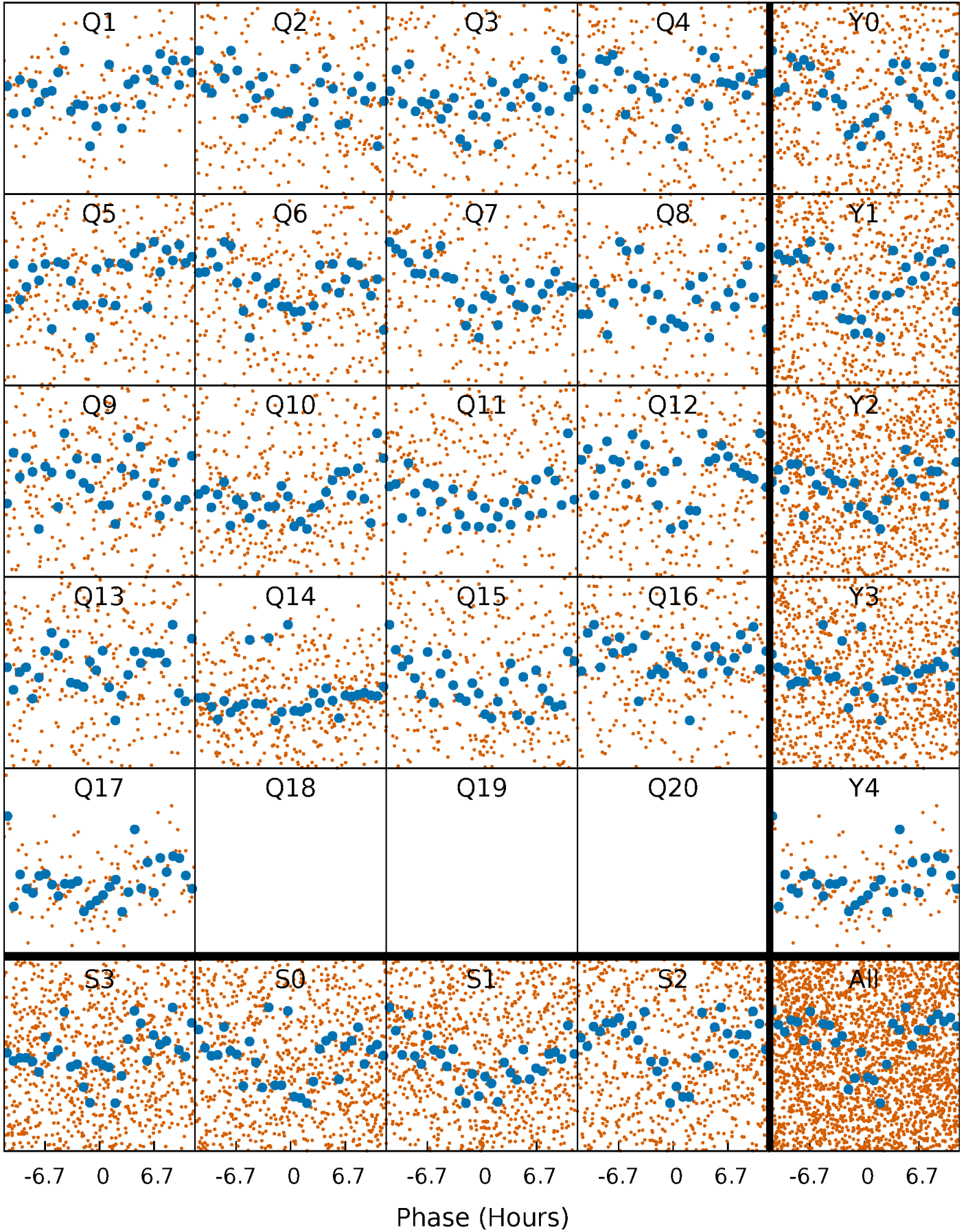


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



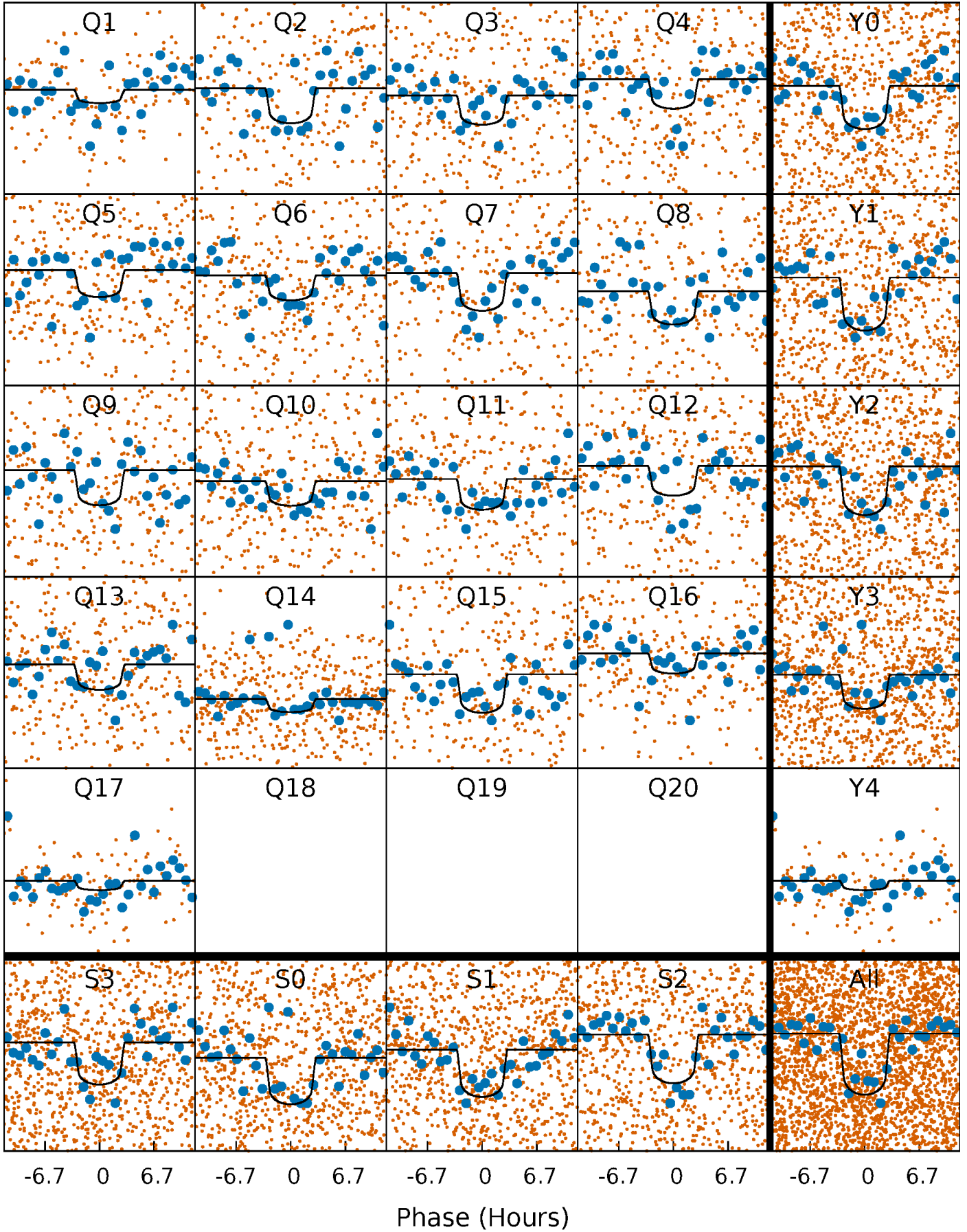
PDC Quarter-Phased Transit Curves

TCE 008278685-01 P= 10.861371 Days $T_0=136.822824$ (BKJD)



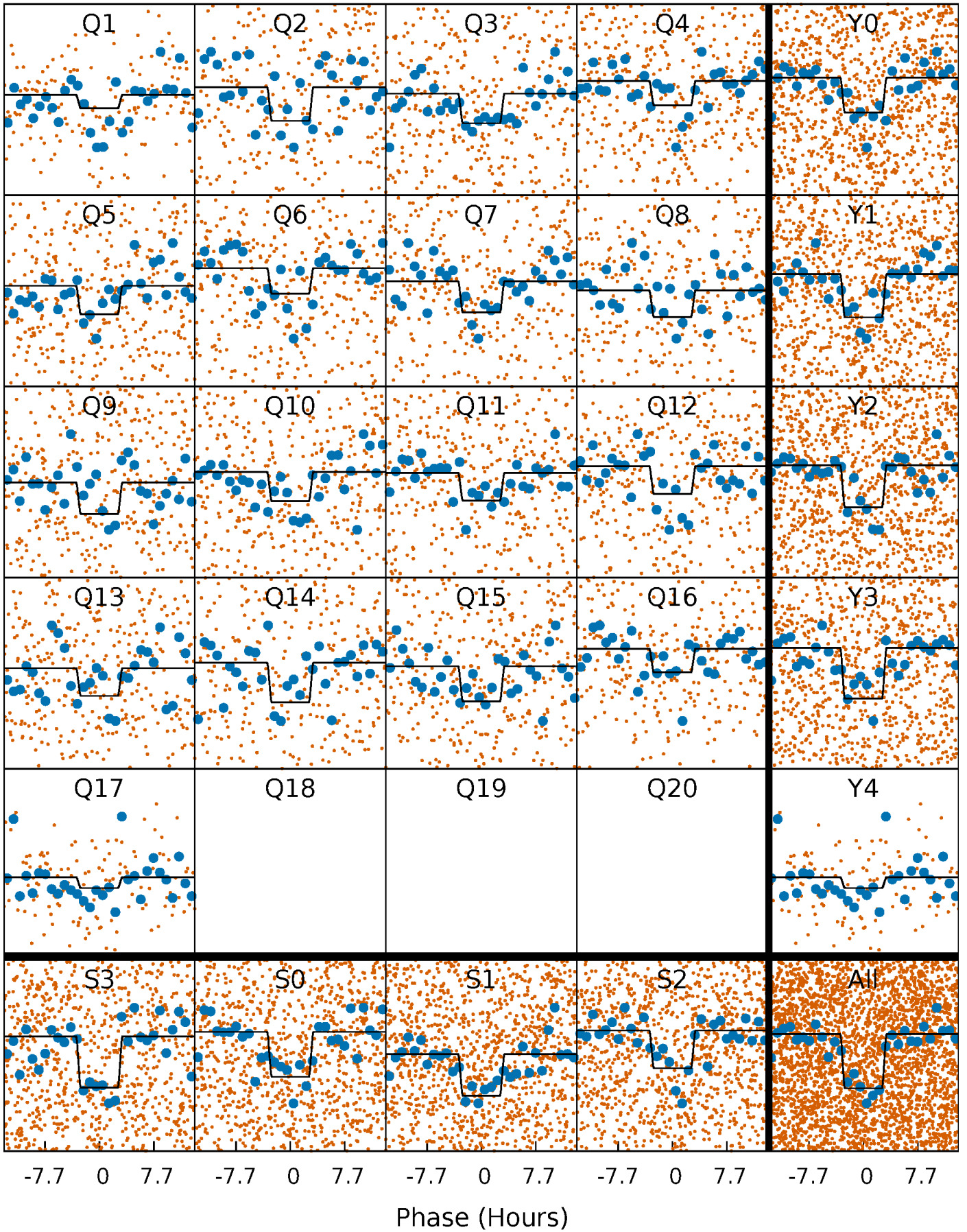
DV Quarter-Phased Transit Curves

TCE 008278685-01 P= 10.861371 Days $T_0=136.822824$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

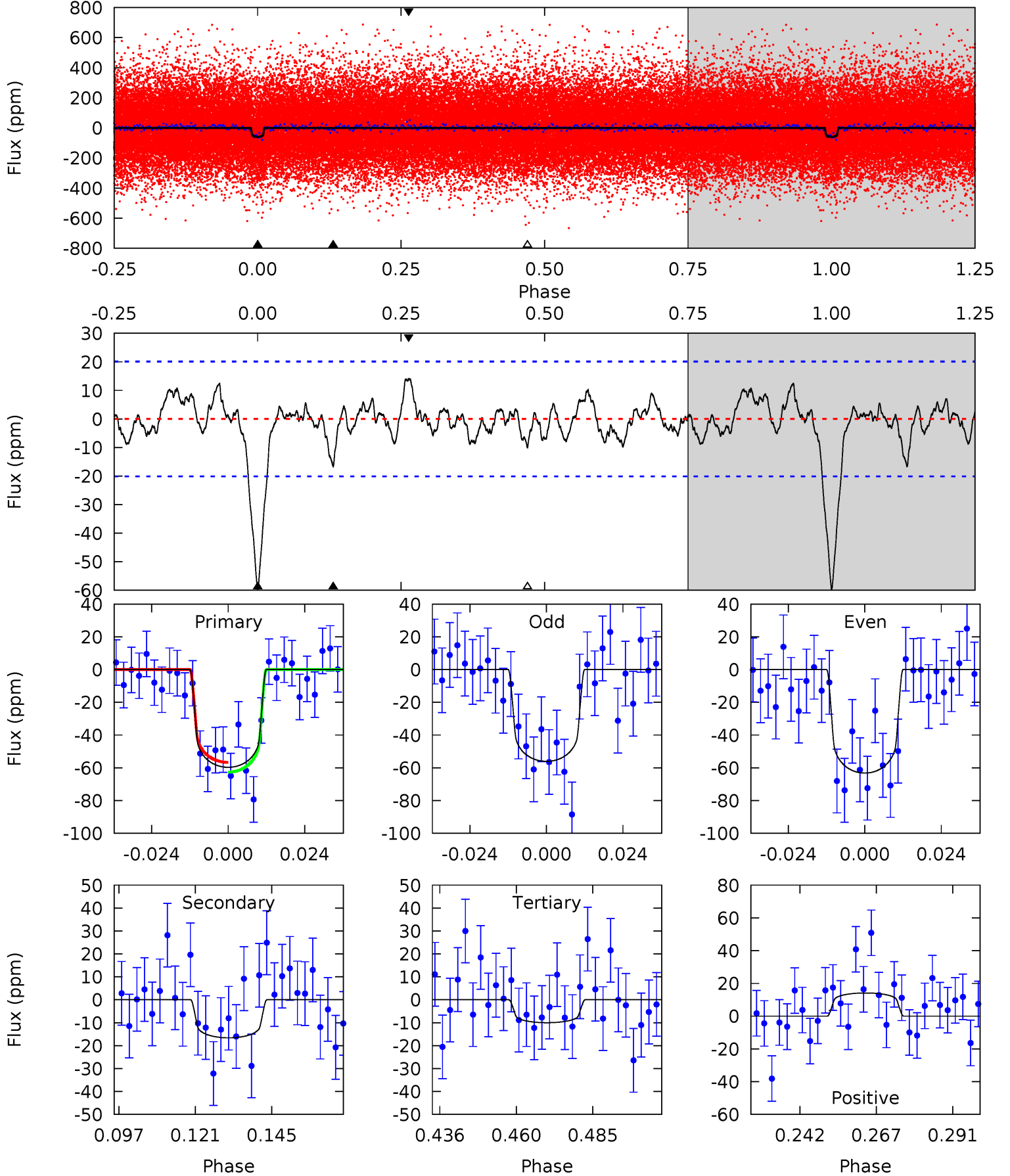
TCE 008278685-01 P= 10.861949 Days $T_0=136.780300$ (BKJD)



DV Model-Shift Uniqueness Test

008278685-01, $P = 10.861371$ Days, $E = 125.961453$ Days

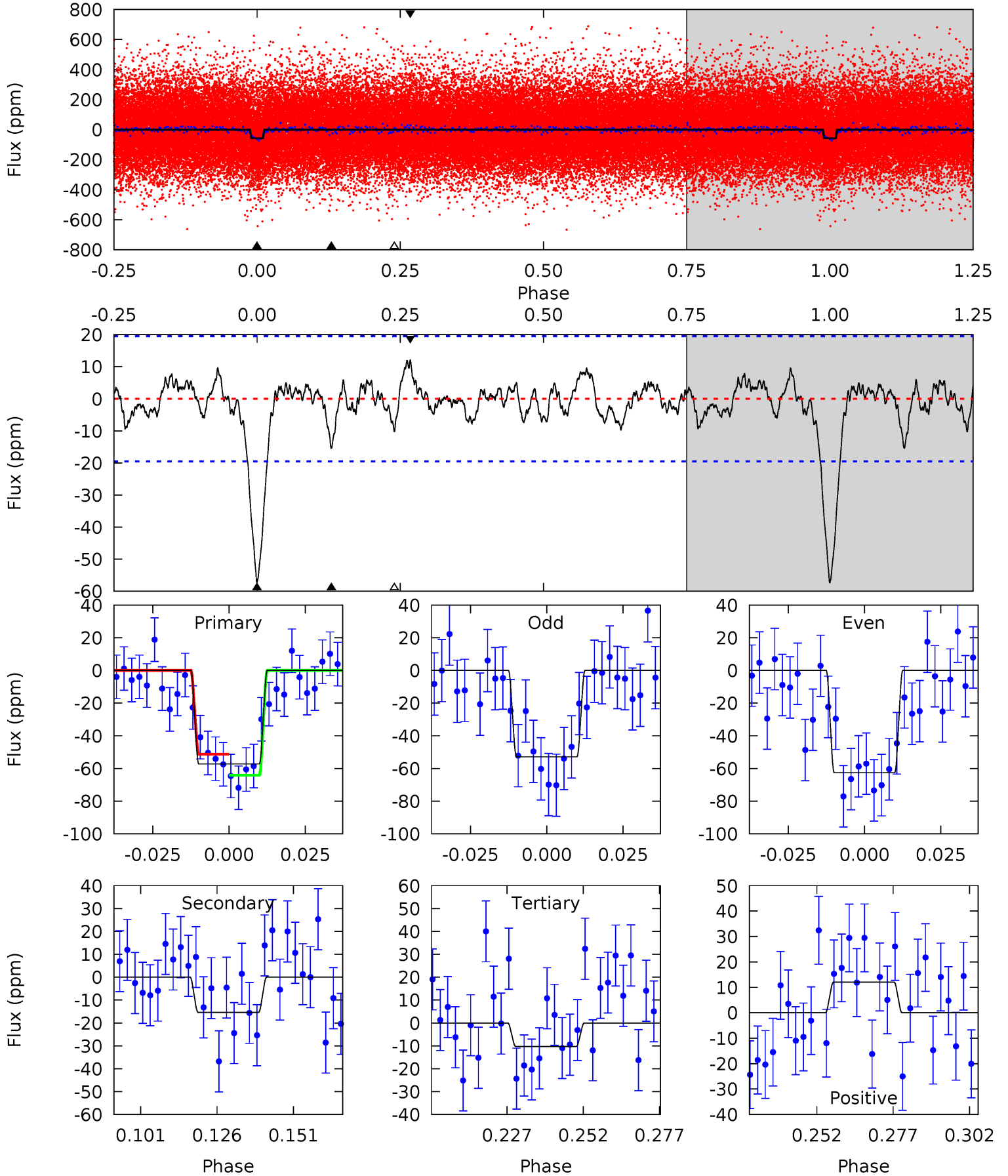
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	4.01	2.41	3.42	4.85	2.25	1.17	12.0	11.0	1.59	0.59	0.87	0.82	0.19	0.72



Alt Model-Shift Uniqueness Test

008278685-01, $P = 10.861949$ Days, $E = 125.918351$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	3.81	2.55	3.00	4.85	2.24	1.03	11.7	11.2	1.26	0.82	1.20	0.93	0.17	1.61



Stellar Parameters For KIC 008278685

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6339^{+141}_{-189}	$4.454^{+0.062}_{-0.200}$	$-0.280^{+0.250}_{-0.300}$	$1.017^{+0.298}_{-0.106}$	$1.069^{+0.143}_{-0.143}$	$1.432^{+0.377}_{-0.719}$
	+2%/-3%	+1%/-4%	+89%/-107%	+29%/-10%	+13%/-13%	+26%/-50%
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 008278685-01 / KOI 4435.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-17 ± 4	$0.95^{+0.37}_{-0.32}$	1281^{+85}_{-62}	4569^{+920}_{-507}	93^{+124}_{-45}
Alt.	-15 ± 4	$0.90^{+0.37}_{-0.34}$	1279^{+96}_{-58}	4646^{+1132}_{-584}	100^{+182}_{-55}

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 $A_{obs} \gg 1.0$

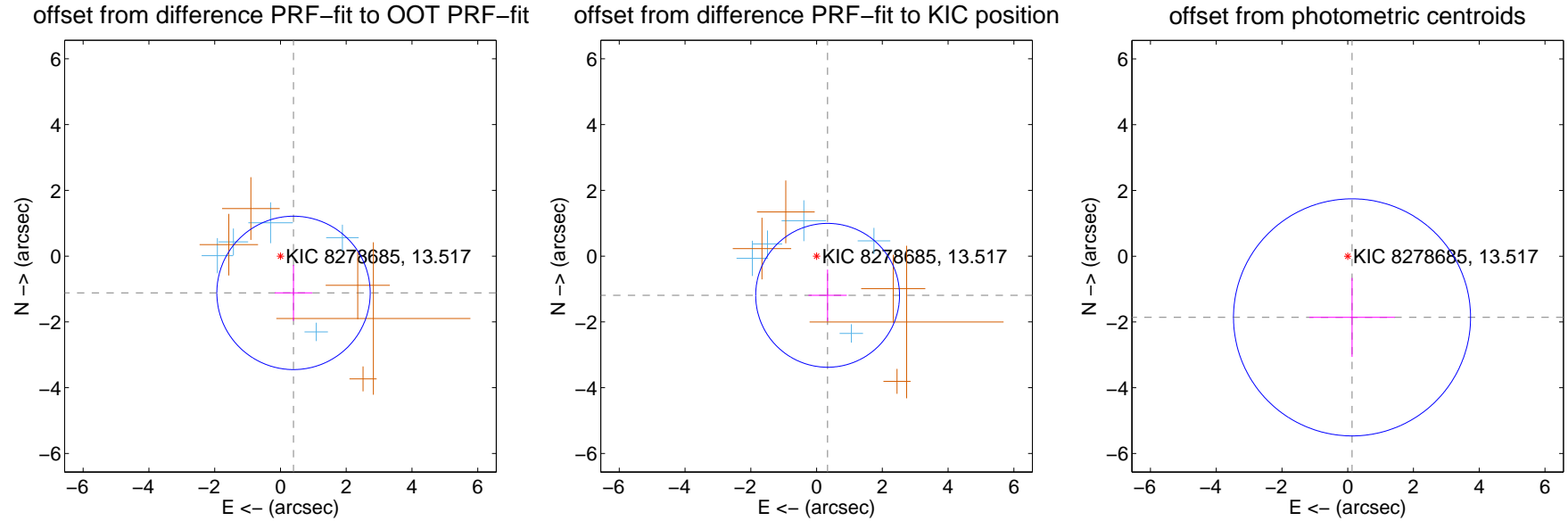
DV Centroid Data

Supplemental centroid analysis for 008278685-01. Kepler magnitude: 13.52. Transit SNR 10.01

There are 5 quarters with good PRF difference image offsets

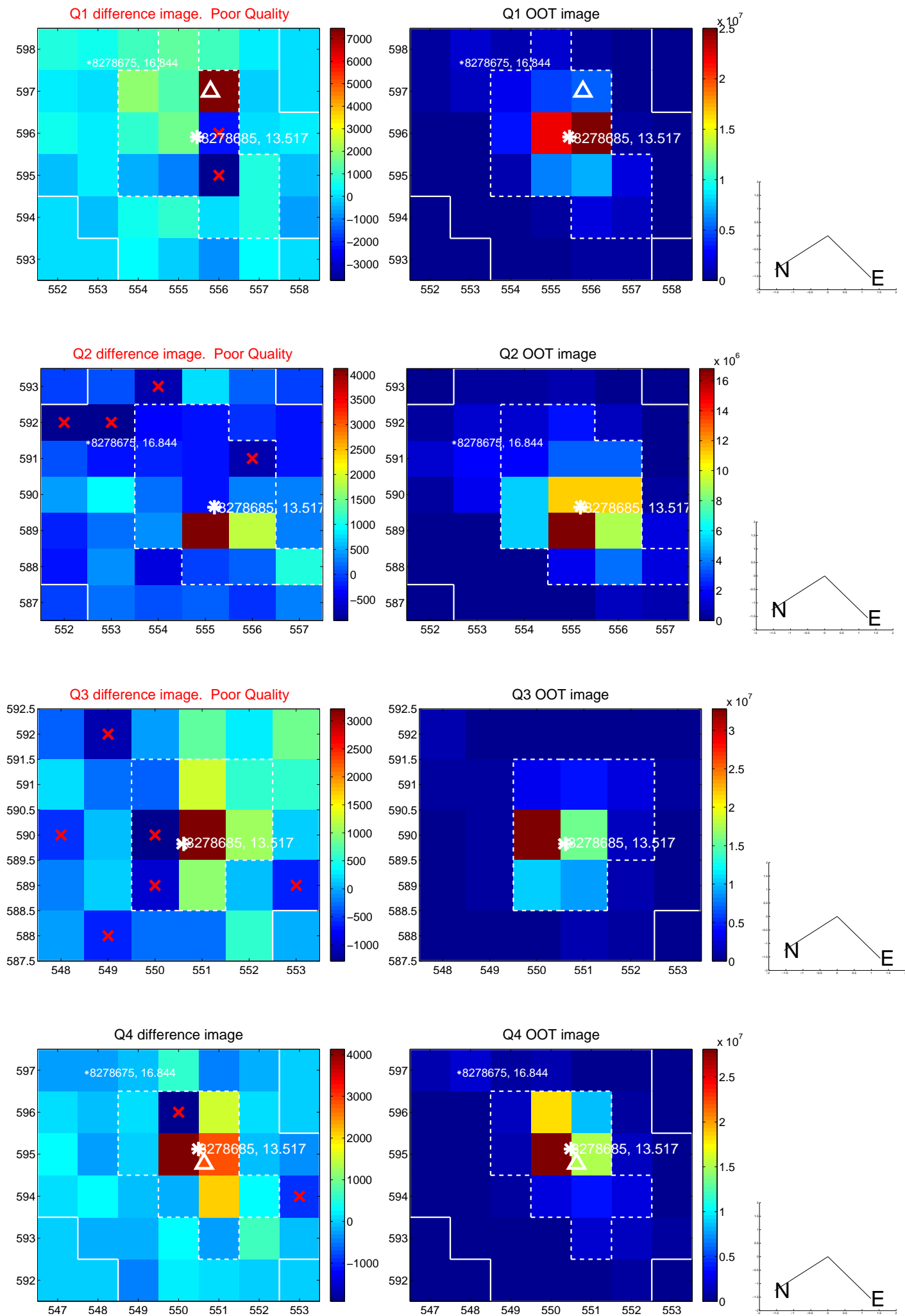
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.186 ± 0.777	1.53	-0.398 ± 0.571	-1.118 ± 0.850
PRF-fit source offset from KIC position	1.238 ± 0.729	1.70	-0.335 ± 0.583	-1.192 ± 0.783
photometric centroid source offset	1.86 ± 1.20	1.55	-0.13 ± 1.30	-1.86 ± 1.20

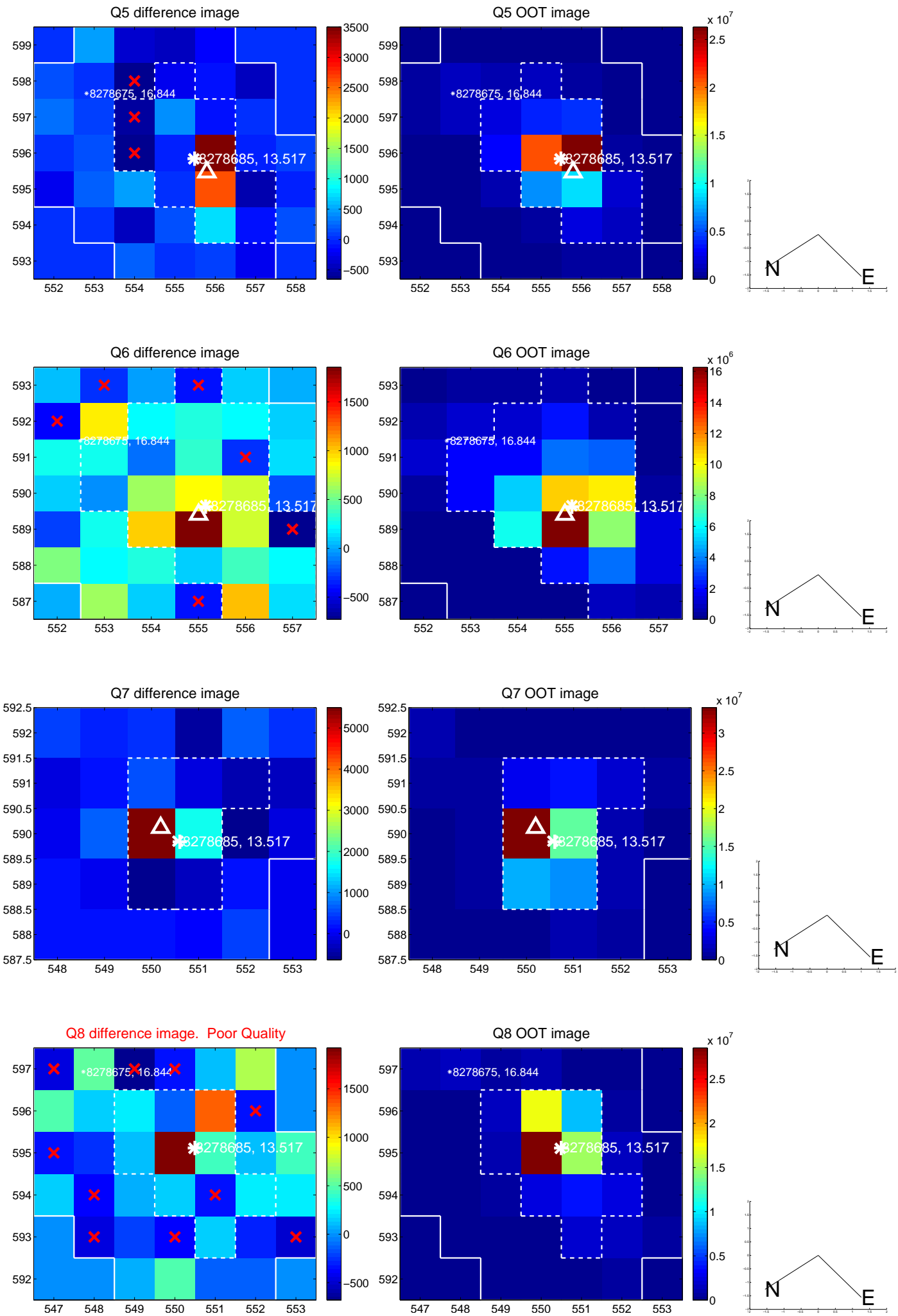


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

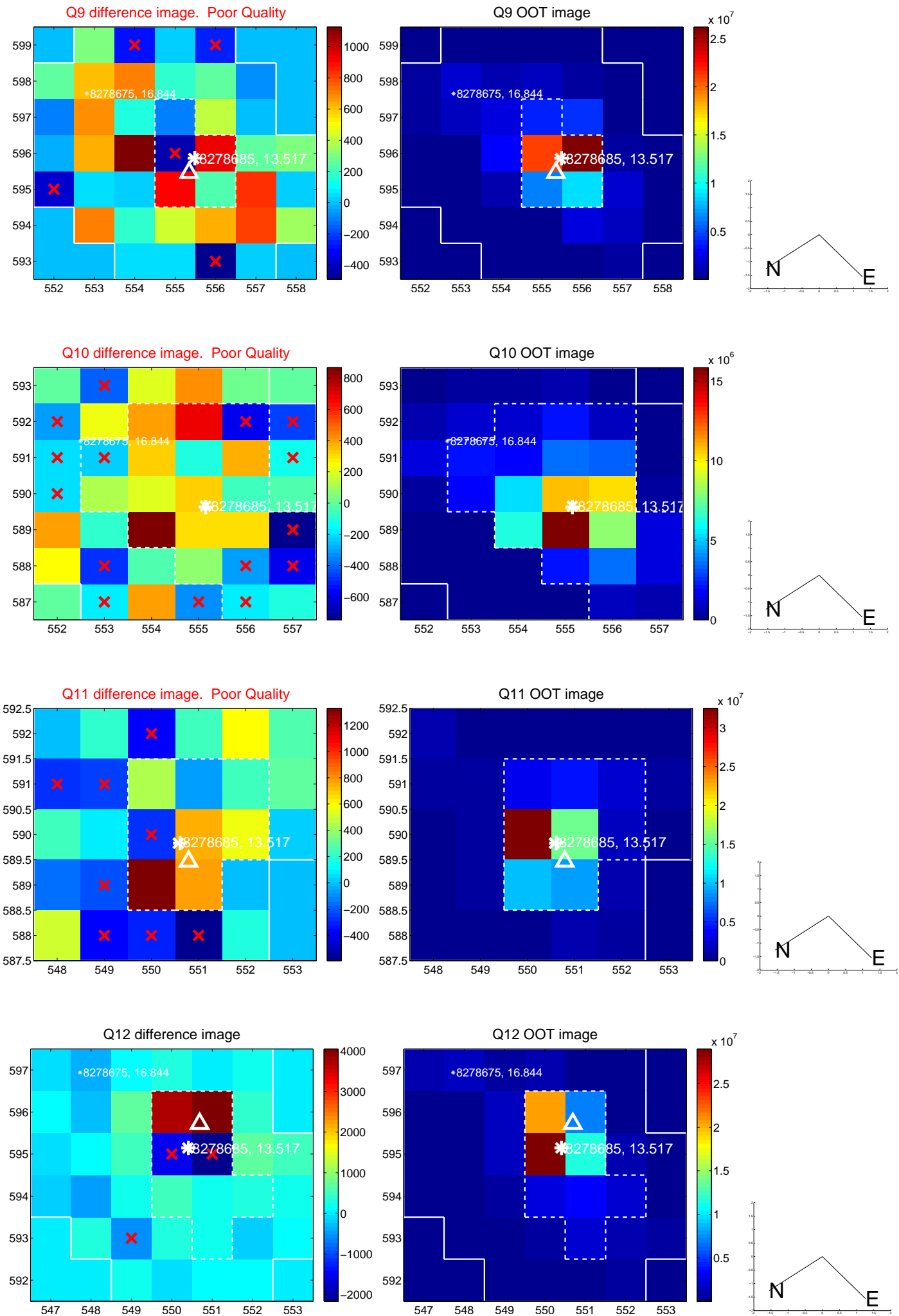
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



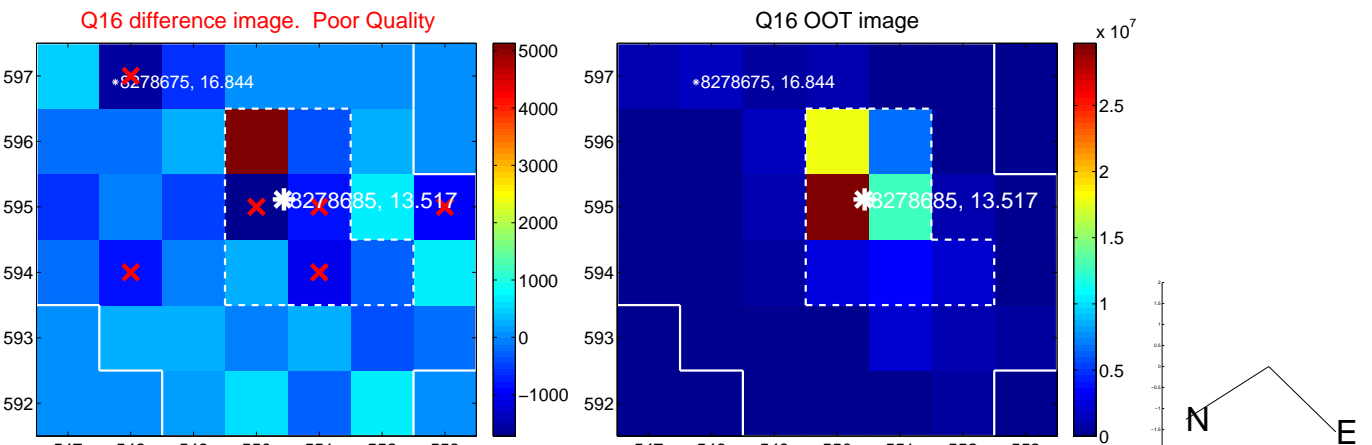
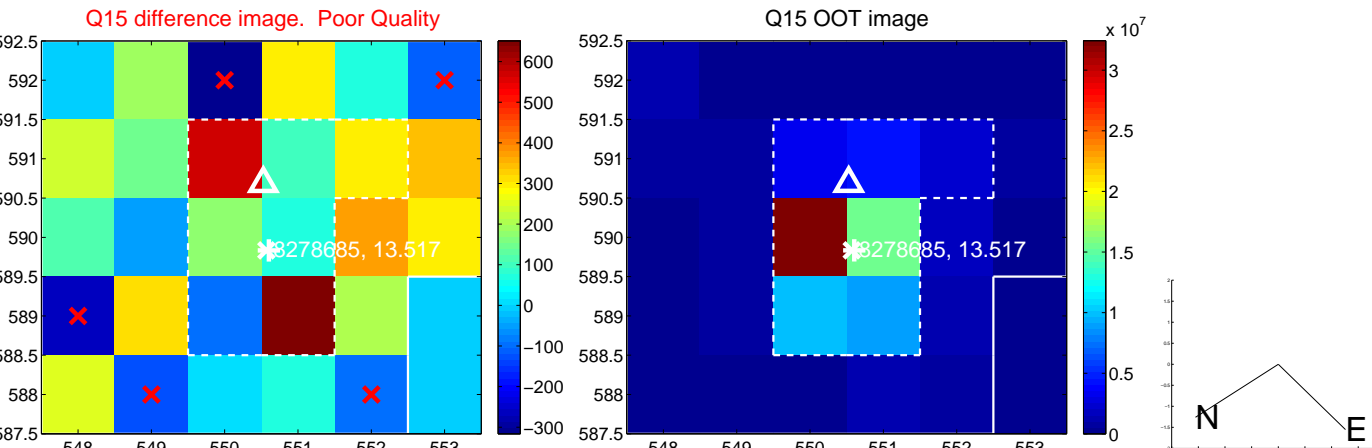
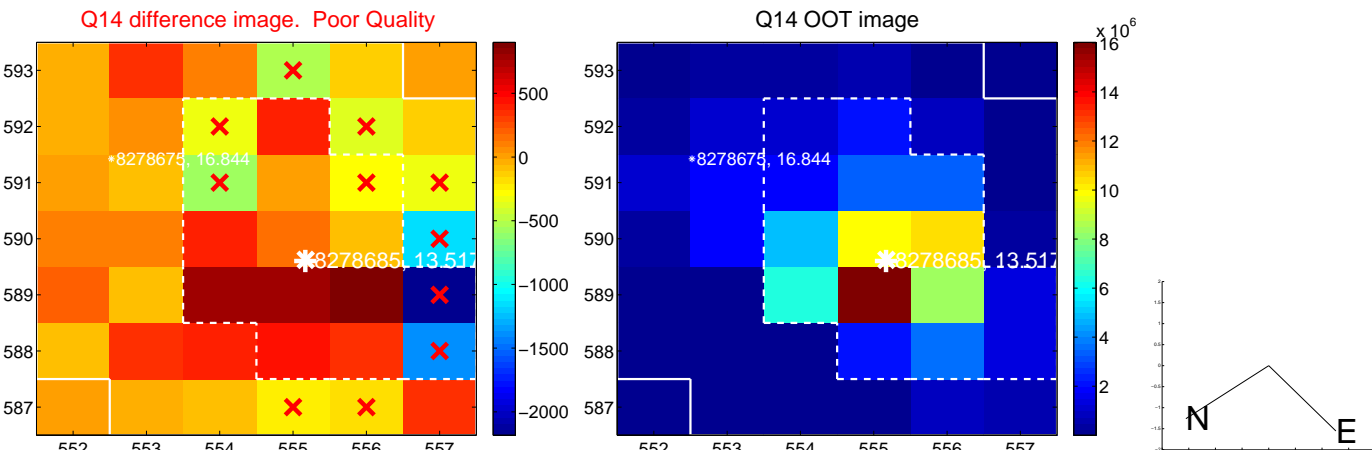
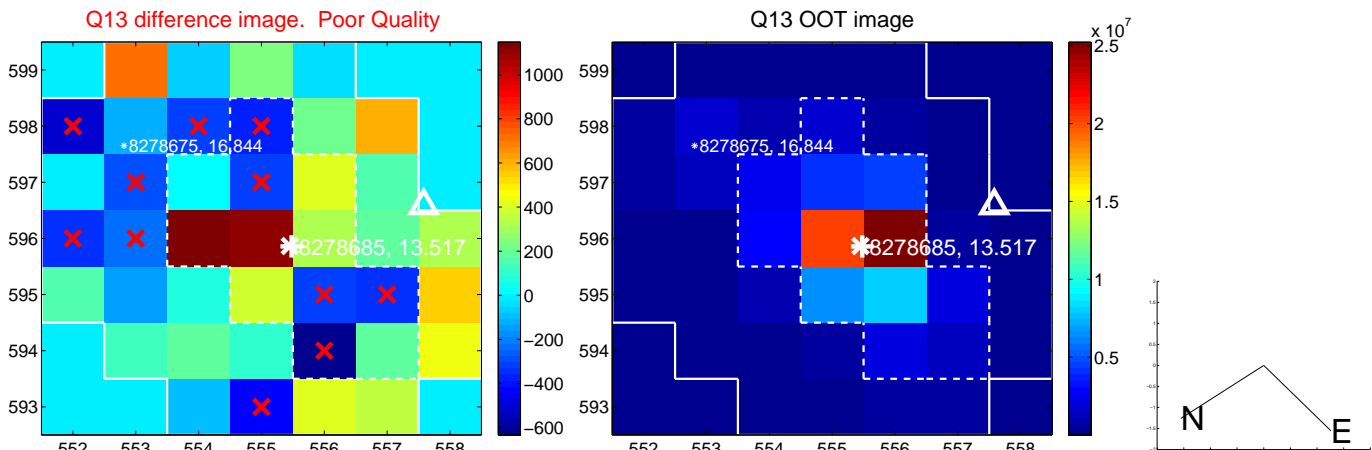
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



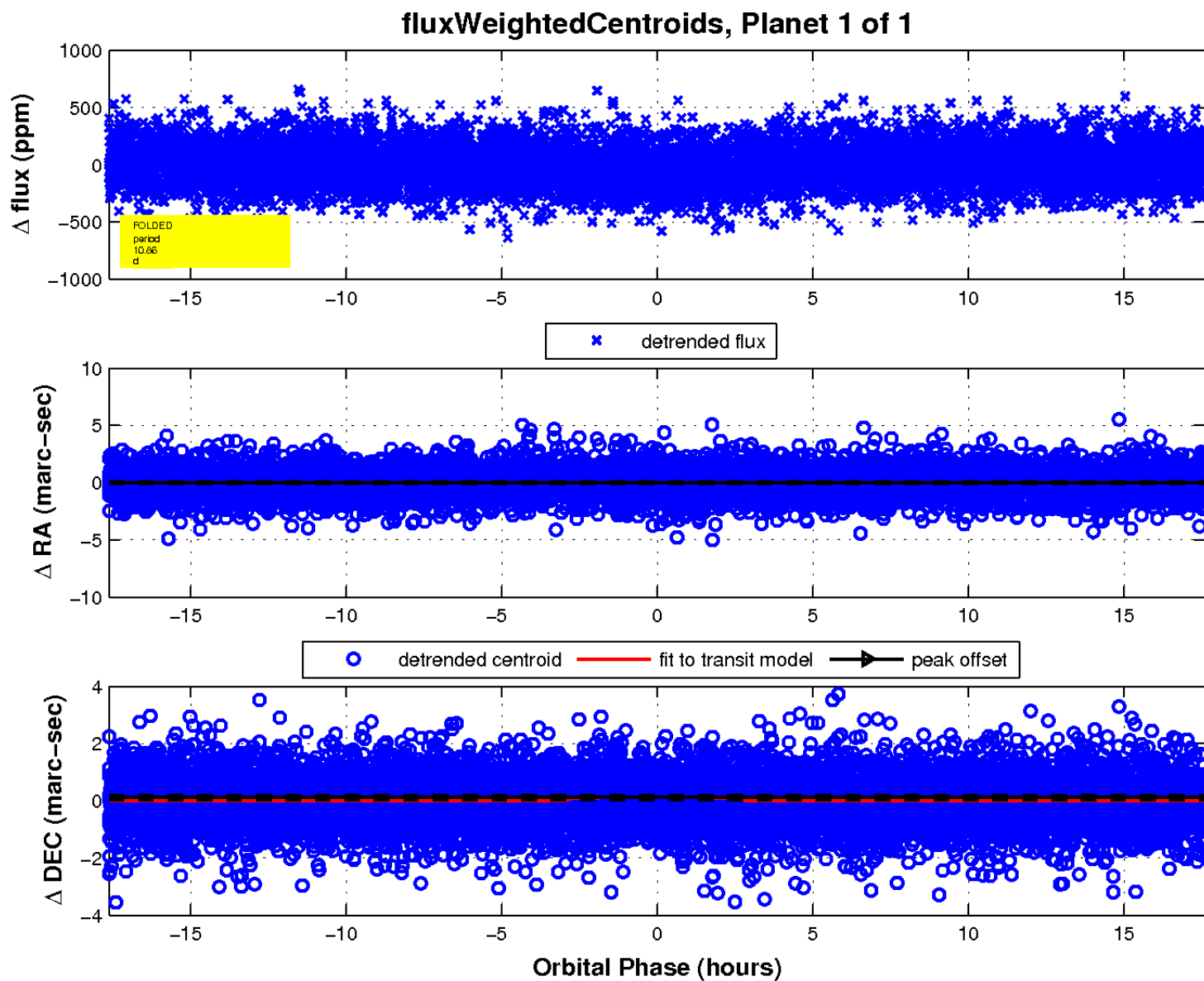
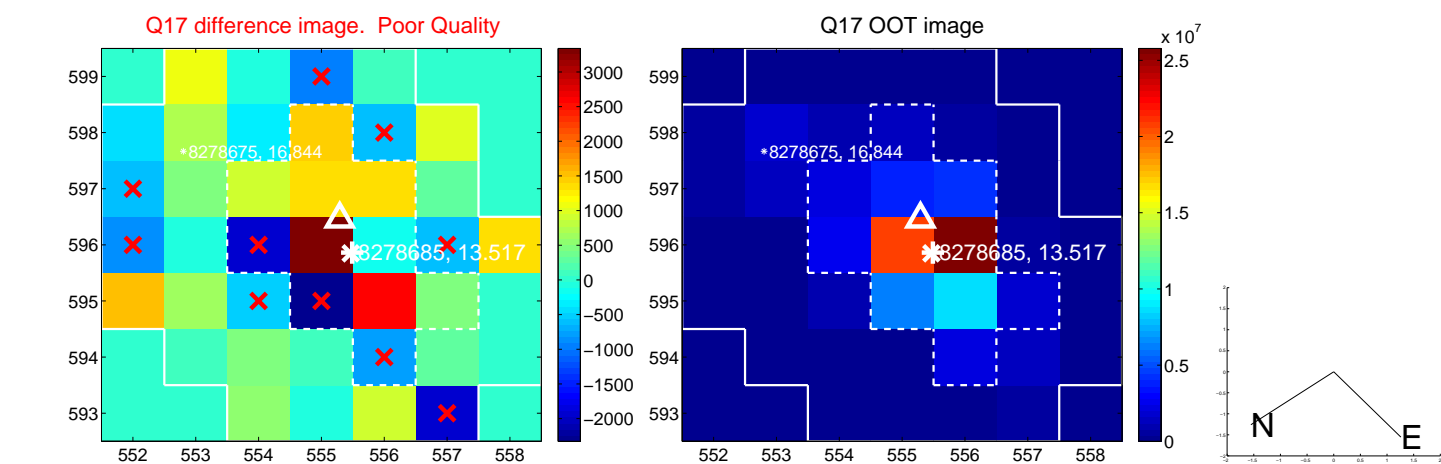
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

