

KIC 004277145

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})
004277145-01	OBS	No	561.914915	264.882006	782.4	7.677	7.6	7.6	0.90	5810	2.66	0.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004277145-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—CENT_FEW_DIFFS

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

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

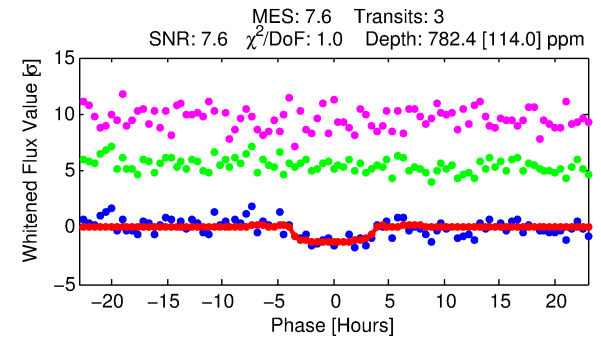
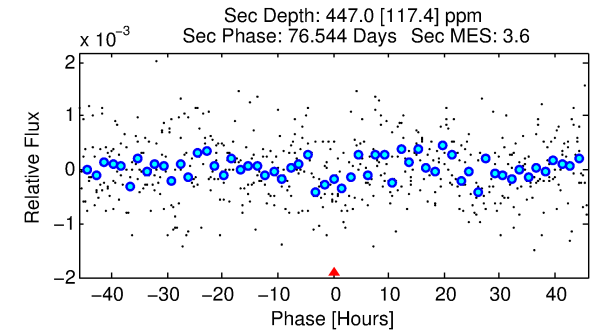
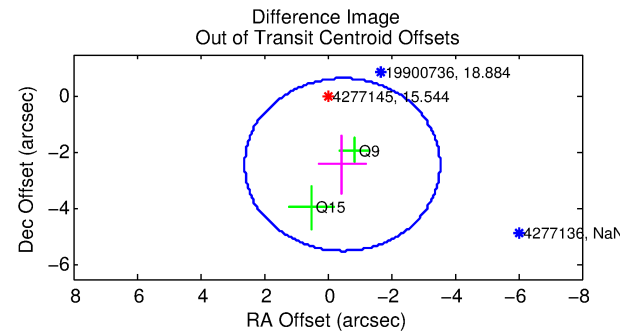
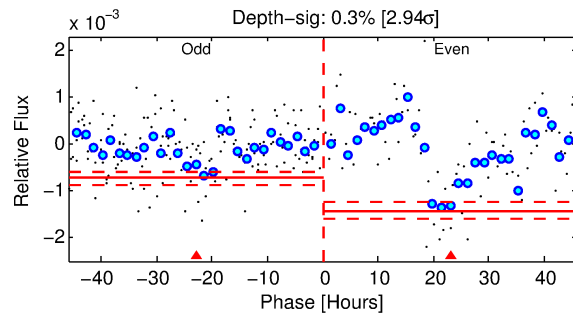
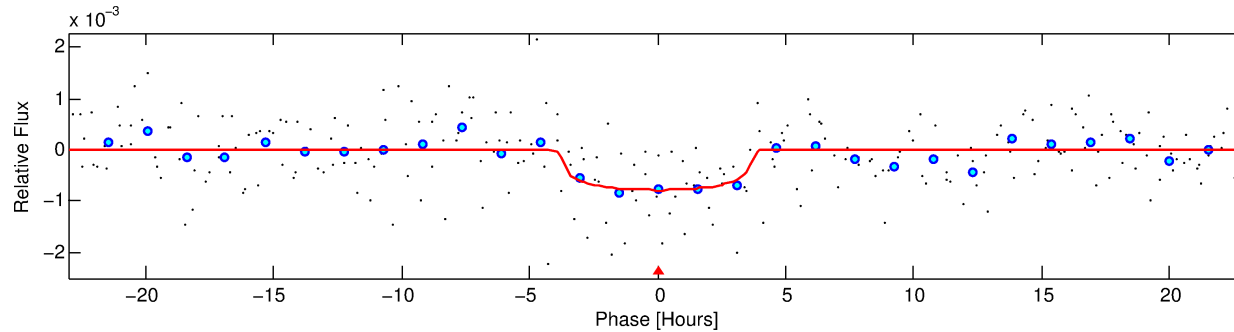
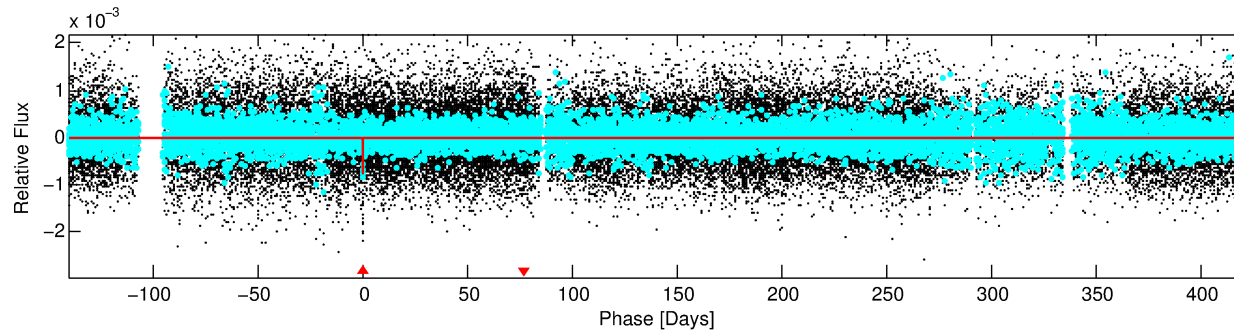
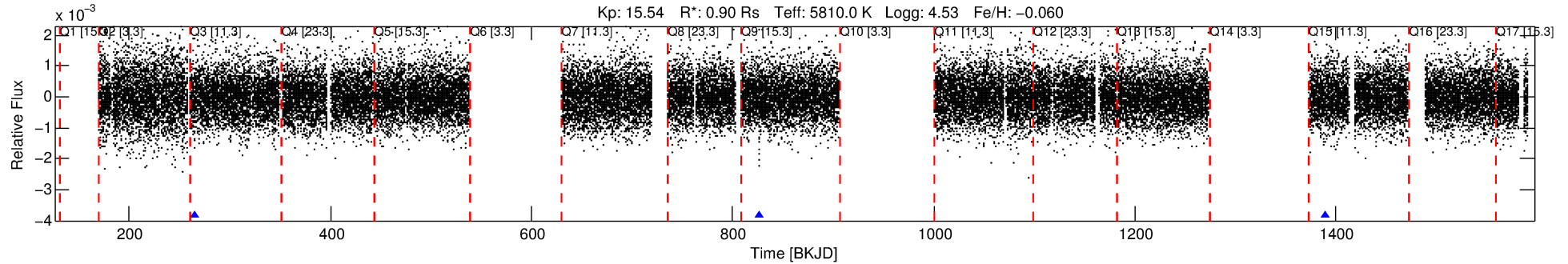
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004277145-01

No Significant Match Found

DV One-Page Summary

KIC: 4277145 Candidate: 1 of 1 Period: 561.915 d



DV Fit Results:

Period = 561.91491 [0.01329] d
Epoch = 264.8820 [0.0182] BKJD
Rp/R* = 0.0271 [0.0191]
a/R* = 436.81 [1364.87]
b = 0.67 [2.62]
Seff = 0.47 [0.19]
Teq = 211 [21] K
Rp = 2.66 [2.04] Re
a = 1.3274 [0.3472] AU
Ag = 61387.28 [91151.35] [0.67 σ]
Teffp = 5131 [1846] K [2.67 σ]

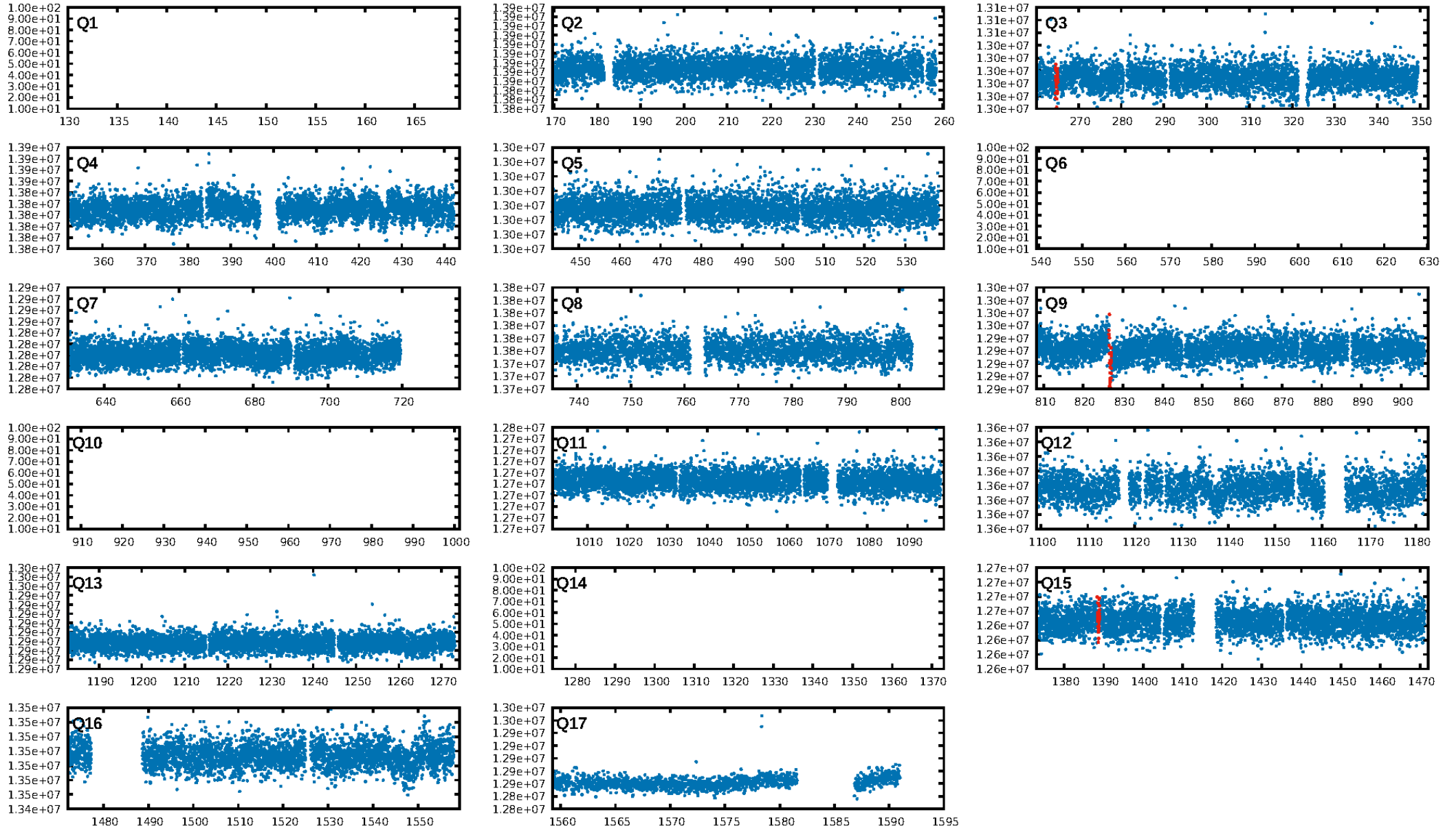
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 91.2%
Bootstrap-pfa: 2.83e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.702
Centroid-sig: 8.7%
Centroid-so: 2.391 arcsec [1.16 σ]
OotOffset-rm: 2.473 arcsec [2.42 σ]
KicOffset-rm: 2.556 arcsec [2.54 σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

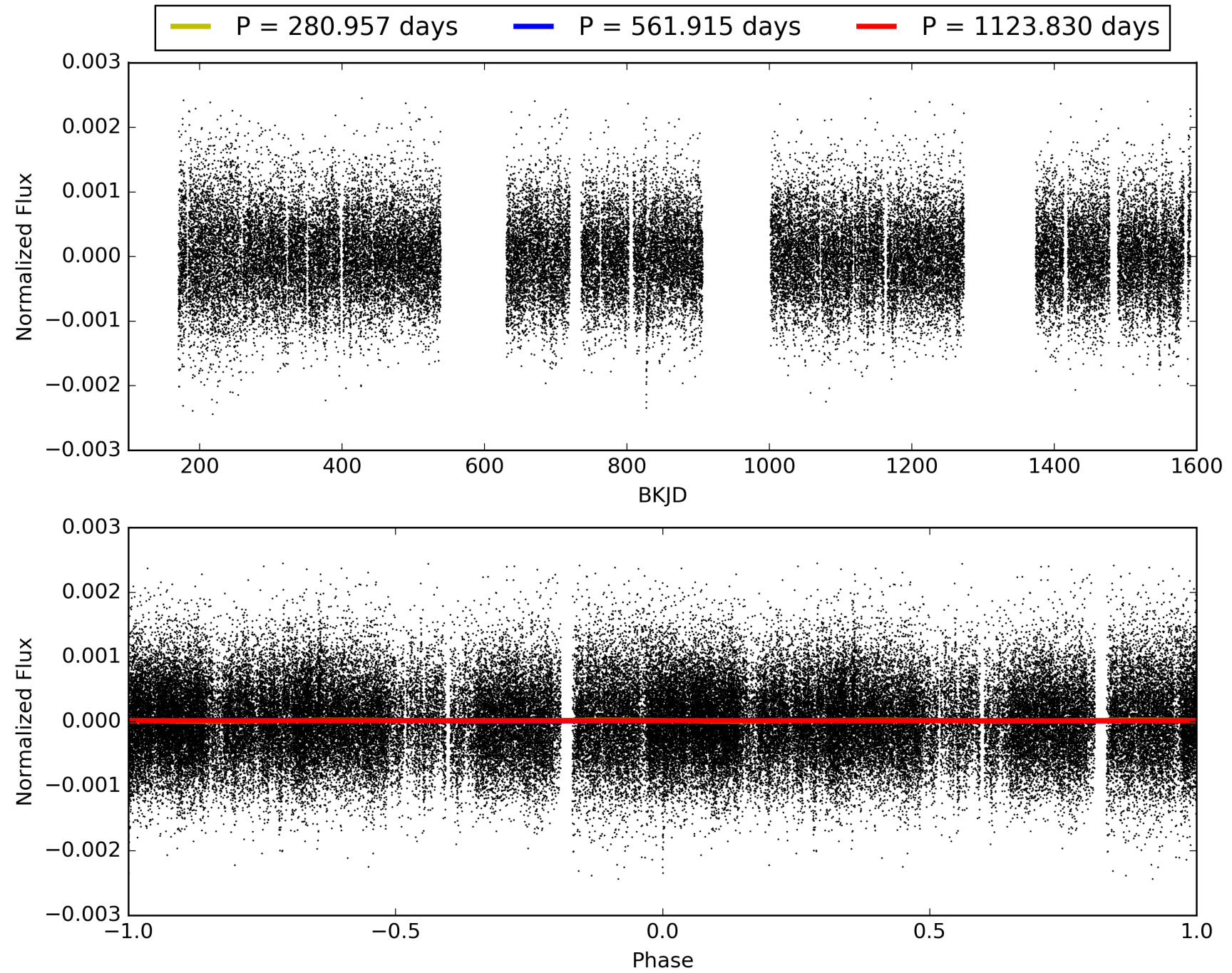
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:16:22 Z

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

TCE 004277145-01, PDC Light Curves

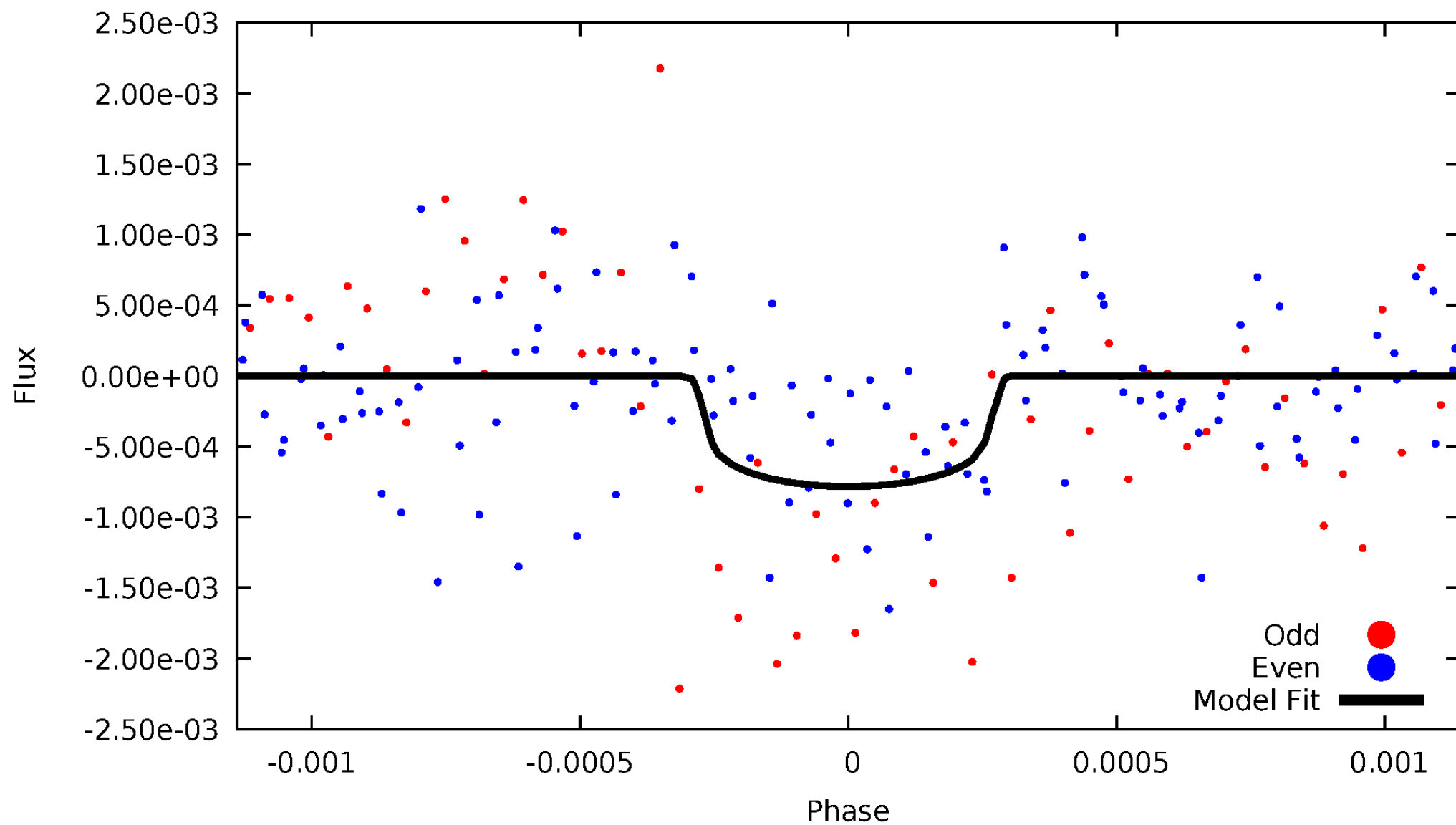


TCE 004277145-01



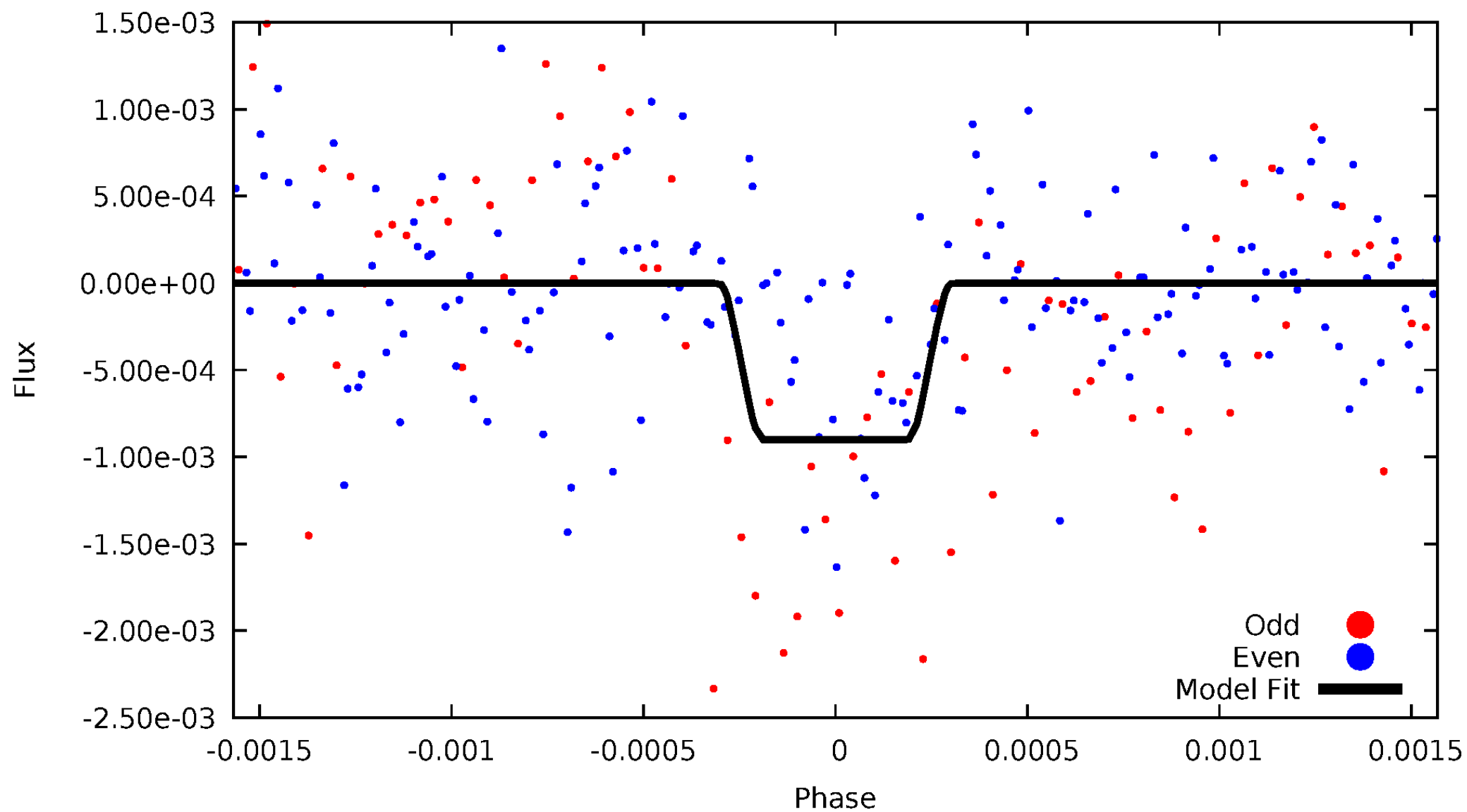
DV Odd/Even

TCE 004277145-01



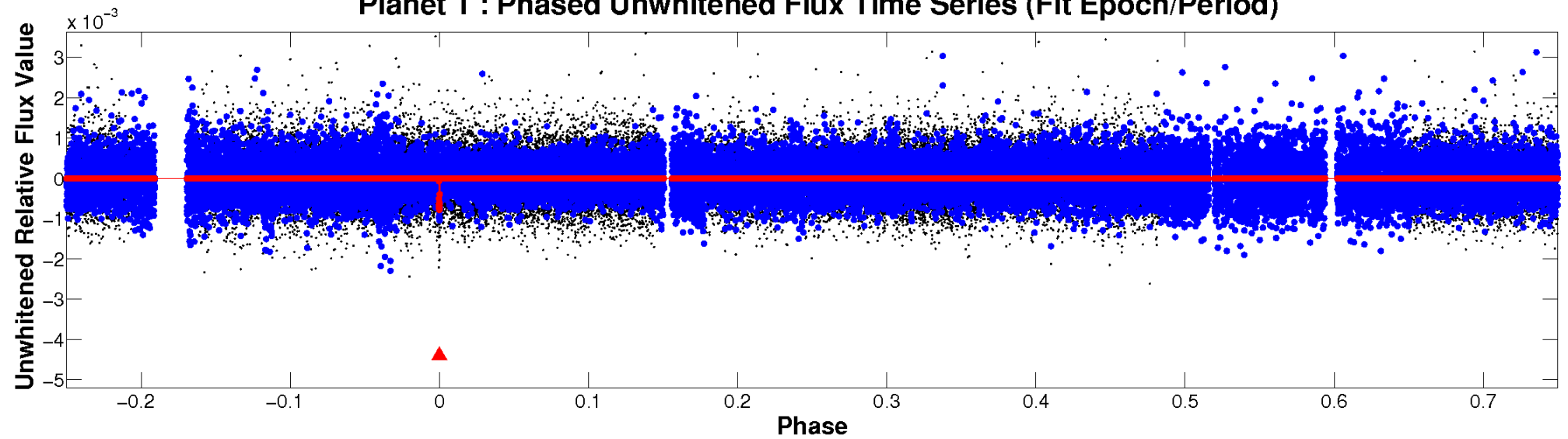
ALT Odd/Even

TCE 004277145-01

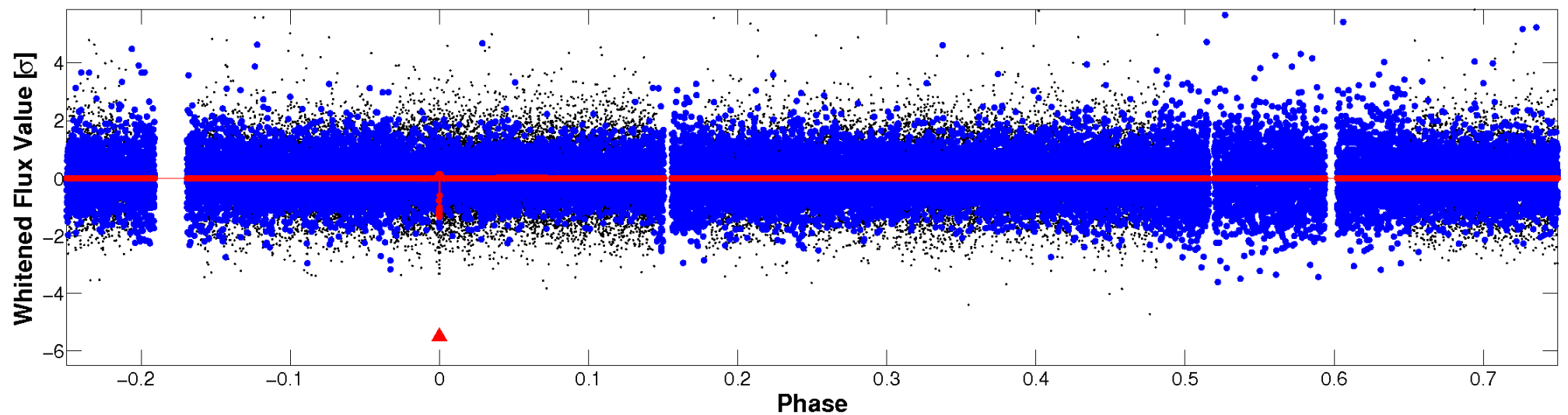


Non-Whitened Vs. Whitened Light Curve

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

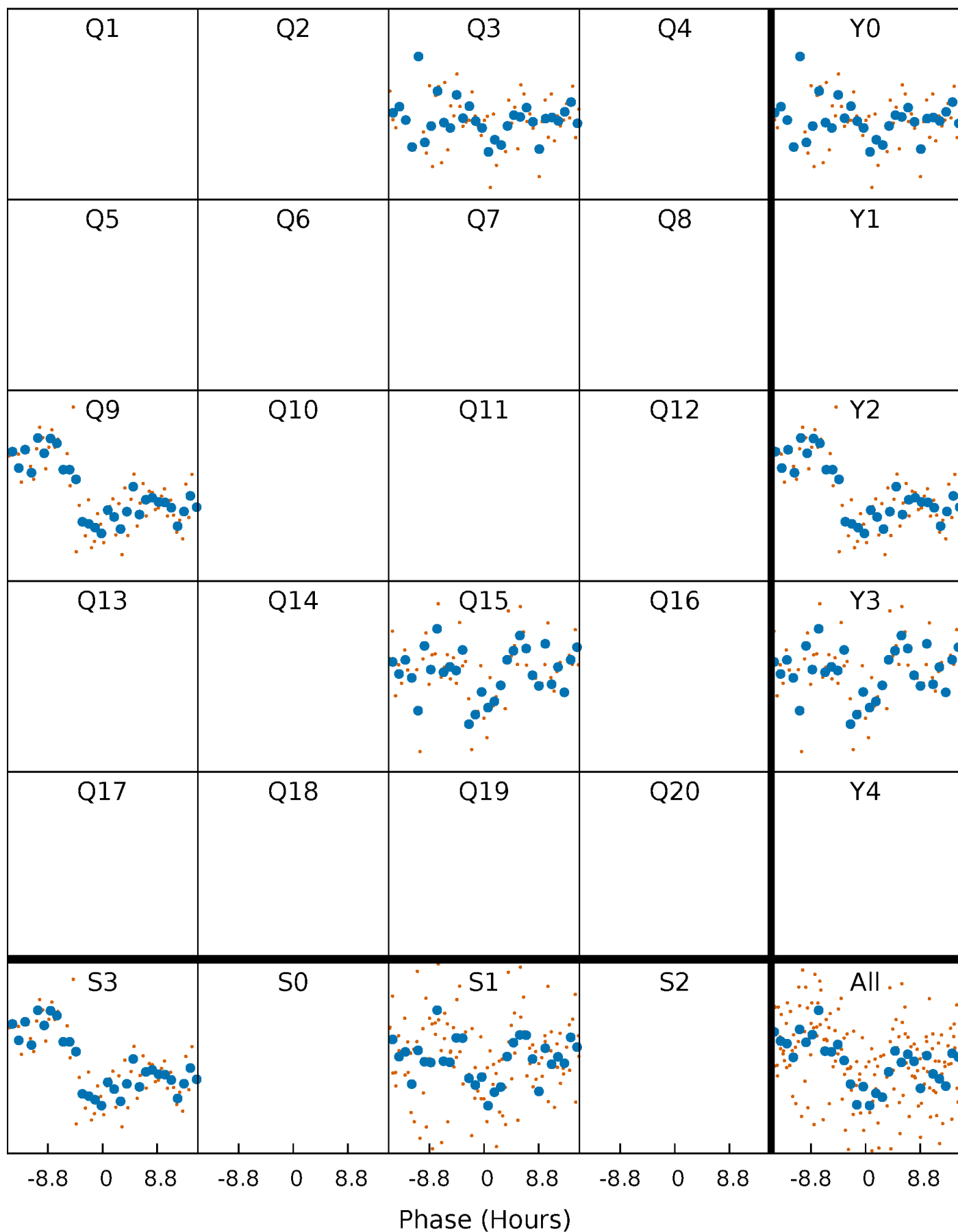


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 004277145-01 P=561.914915 Days $T_0=264.882006$ (BKJD)



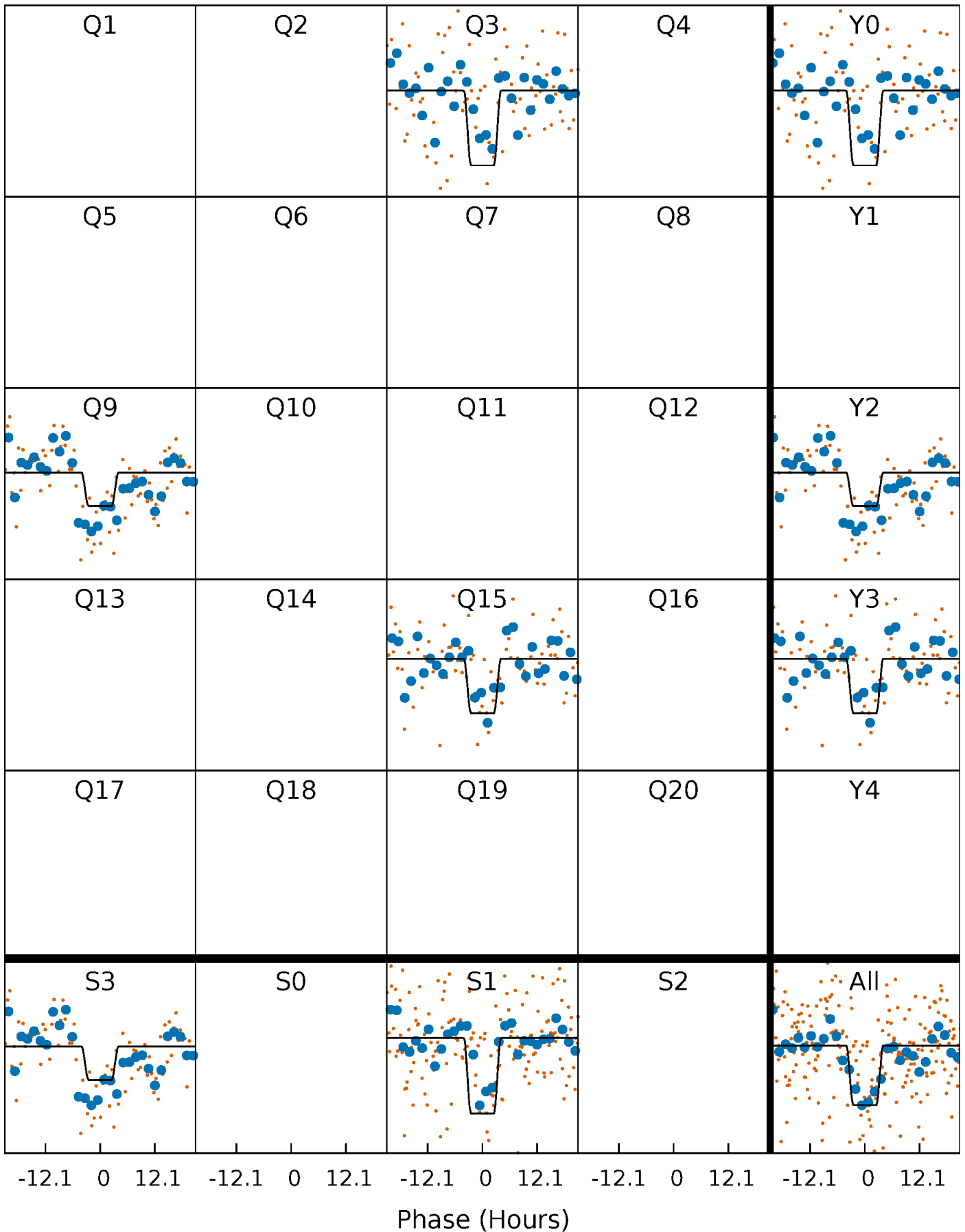
DV Quarter-Phased Transit Curves

TCE 004277145-01 P=561.914915 Days $T_0=264.882006$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

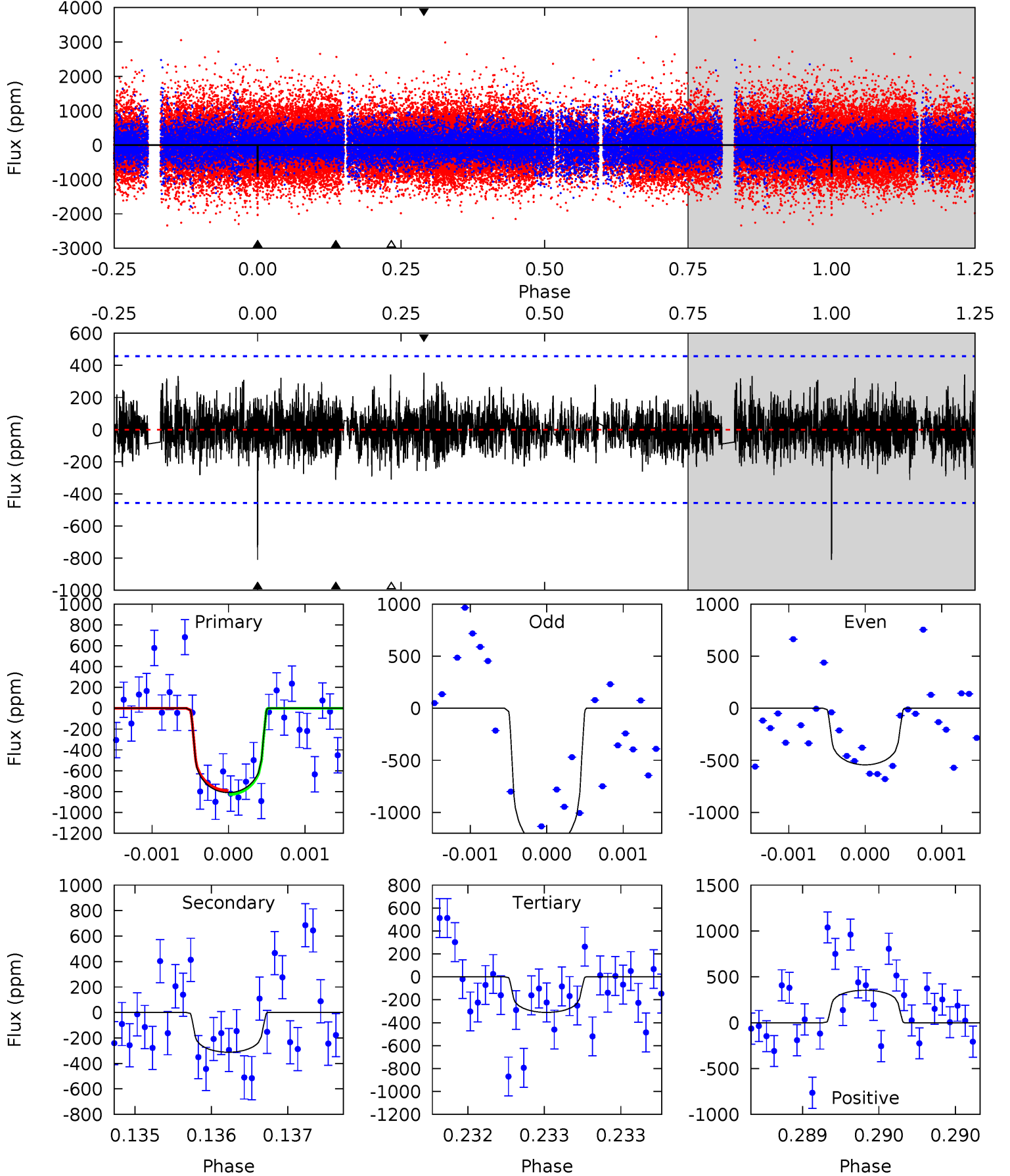
TCE 004277145-01 P=561.875222 Days $T_0=264.923360$ (BKJD)



DV Model-Shift Uniqueness Test

004277145-01, P = 561.914915 Days, E = 264.882006 Days

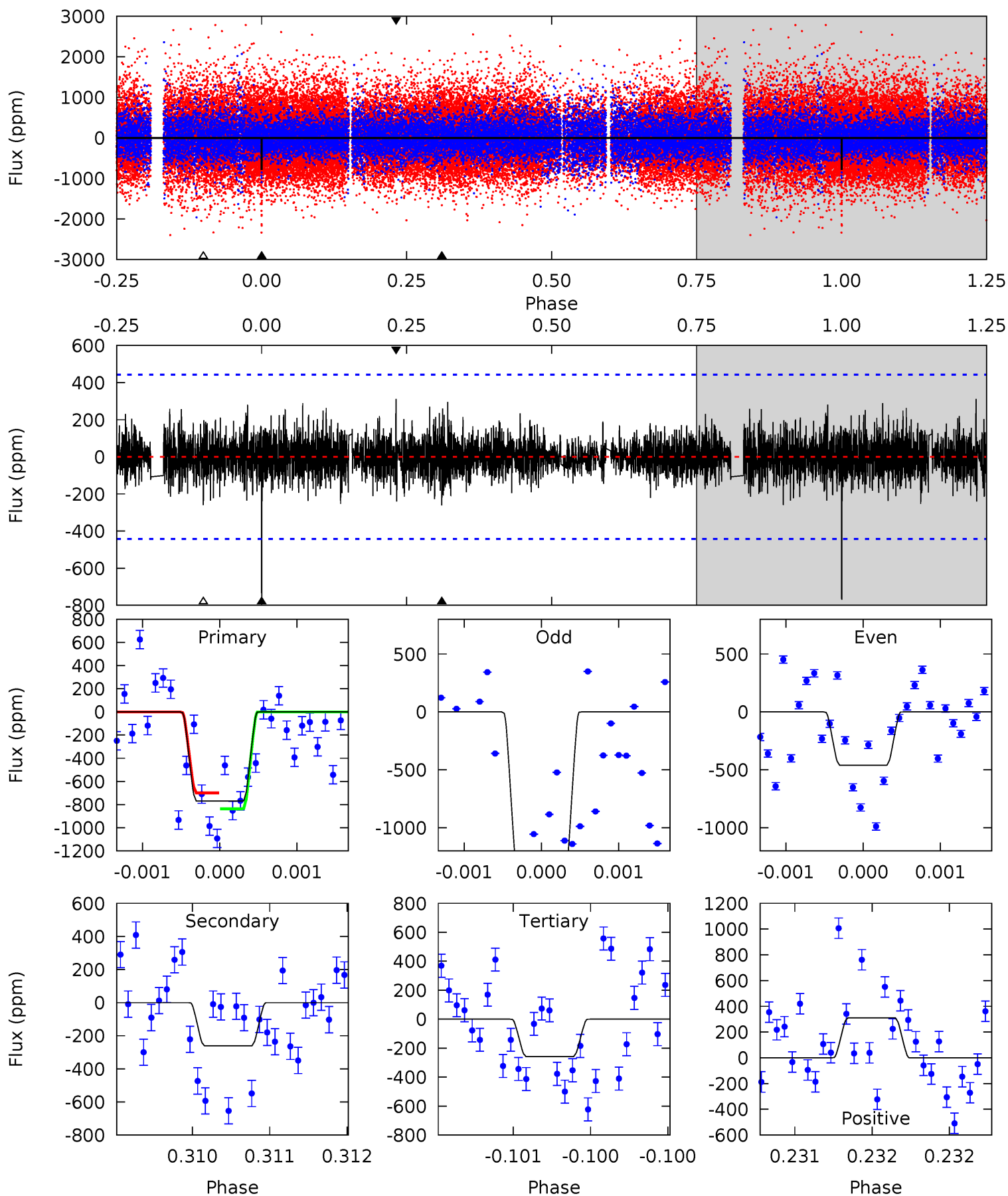
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.82	3.78	3.77	4.29	5.55	3.44	1.12	6.06	5.53	0.01	-0.51	4.64	1.22	0.30	0.23



Alt Model-Shift Uniqueness Test

004277145-01, P = 561.875222 Days, E = 264.923360 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.62	3.27	3.24	3.89	5.54	3.42	0.95	6.38	5.73	0.03	-0.62	5.54	1.43	0.29	0.85



Stellar Parameters For KIC 004277145

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5810^{+157}_{-175}	$4.526^{+0.037}_{-0.213}$	$-0.060^{+0.300}_{-0.300}$	$0.898^{+0.275}_{-0.092}$	$0.989^{+0.116}_{-0.127}$	$1.920^{+0.399}_{-1.017}$
	+3%/-3%	+1%/-5%	+500%/-500%	+31%/-10%	+12%/-13%	+21%/-53%
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 004277145-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-312 ± 82	$3.06^{+1.81}_{-1.65}$	302^{+22}_{-14}	4587^{+2086}_{-753}	$29790^{+115719}_{-18404}$
Alt.	-261 ± 80	$3.33^{+1.89}_{-1.72}$	302^{+22}_{-13}	4310^{+1490}_{-642}	21670^{+65074}_{-13053}

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 $A_{obs} \gg 1.0$

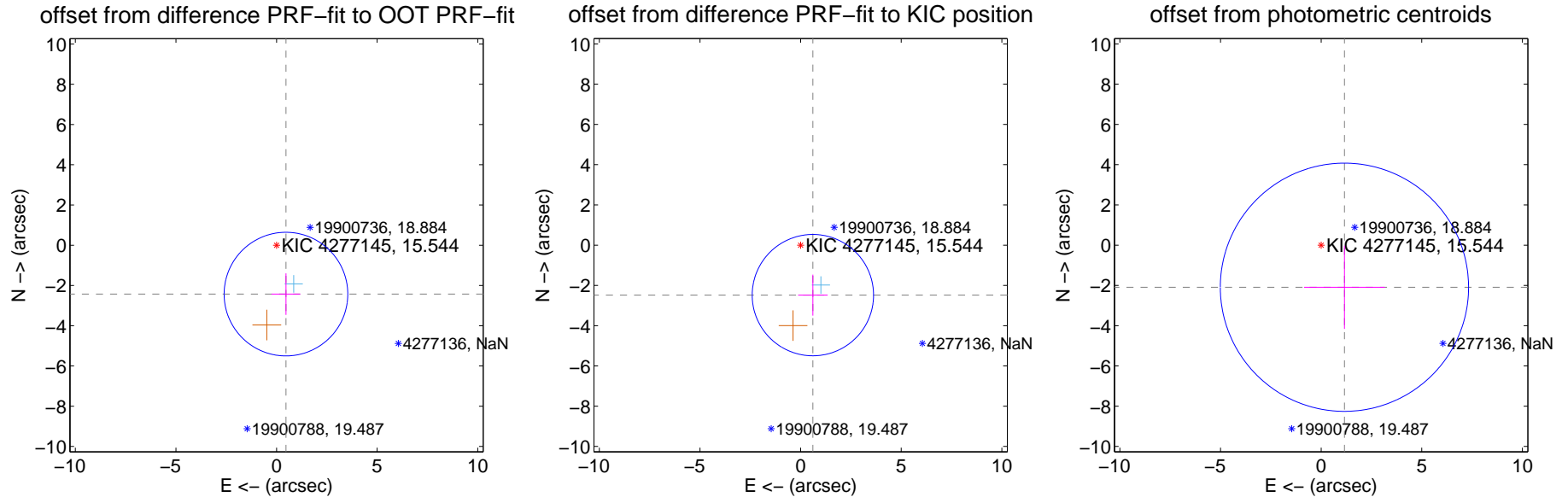
DV Centroid Data

Supplemental centroid analysis for 004277145-01. Kepler magnitude: 15.54. Transit SNR 7.59

There are 1 quarters with good PRF difference image offsets

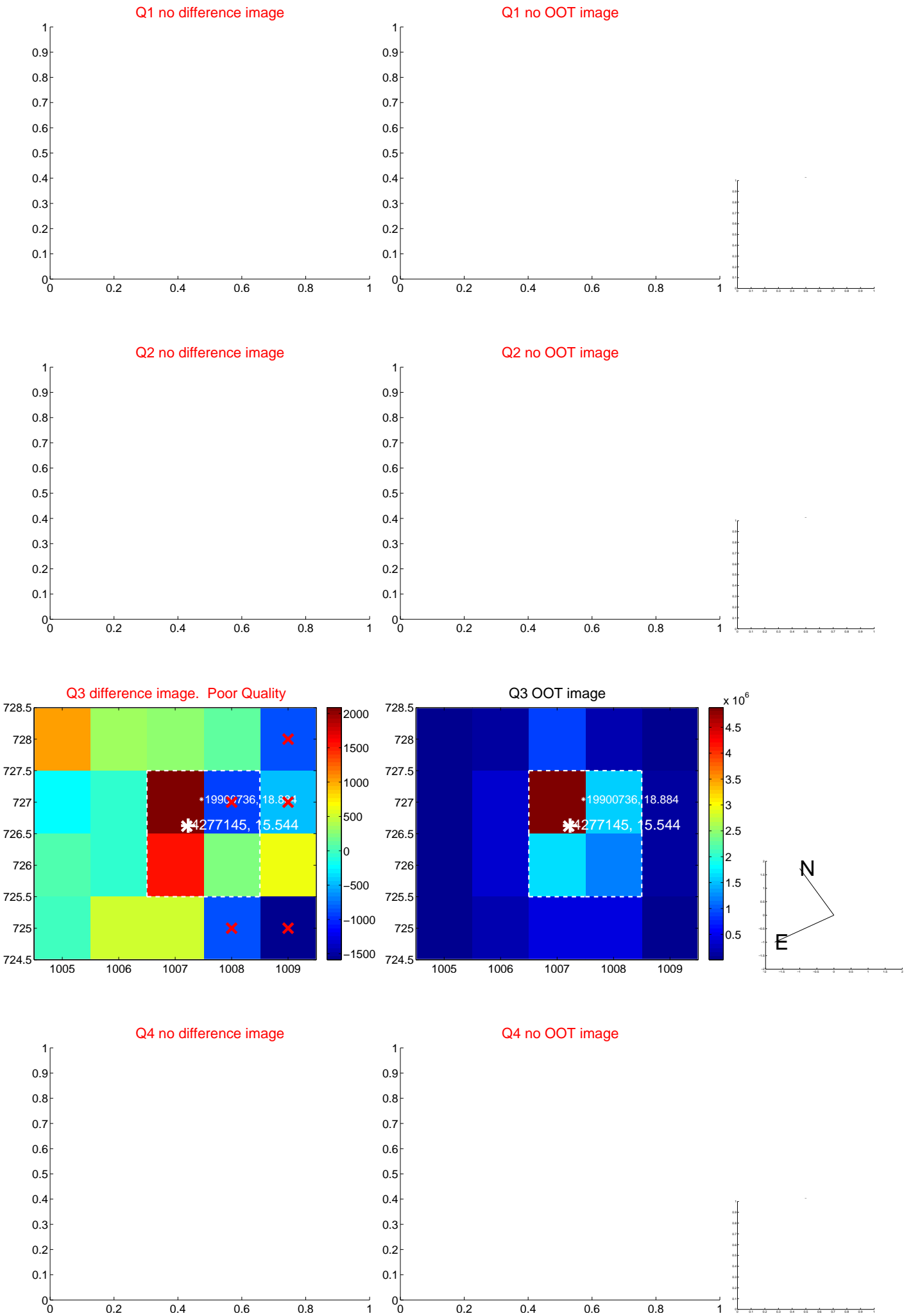
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.473 ± 1.024	2.42	-0.467 ± 0.711	-2.429 ± 1.034
PRF-fit source offset from KIC position	2.556 ± 1.005	2.54	-0.610 ± 0.735	-2.482 ± 1.019
photometric centroid source offset	2.39 ± 2.06	1.16	-1.16 ± 2.00	-2.09 ± 2.07



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.

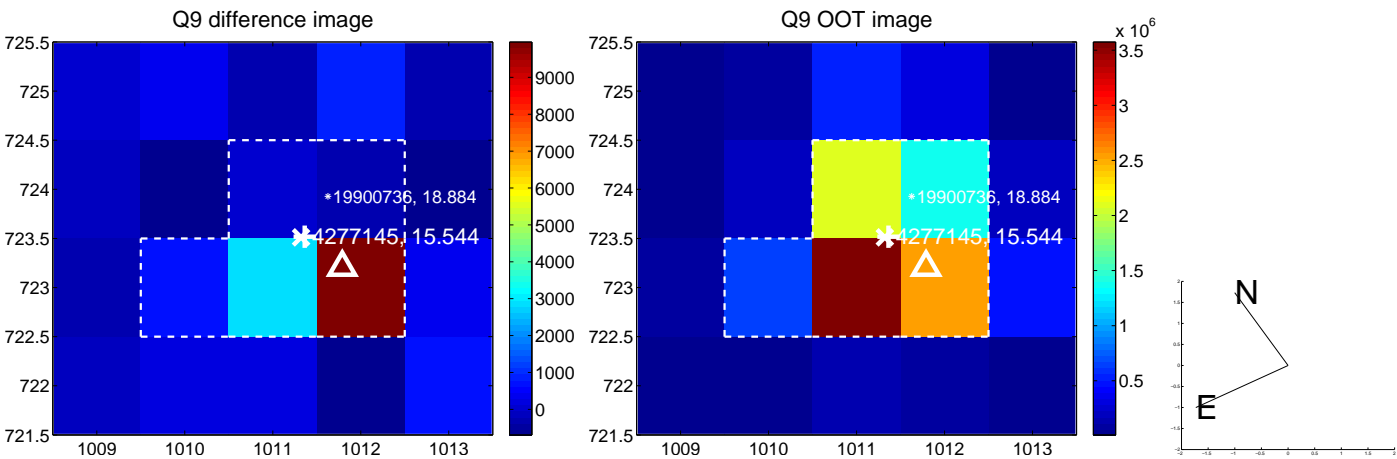
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



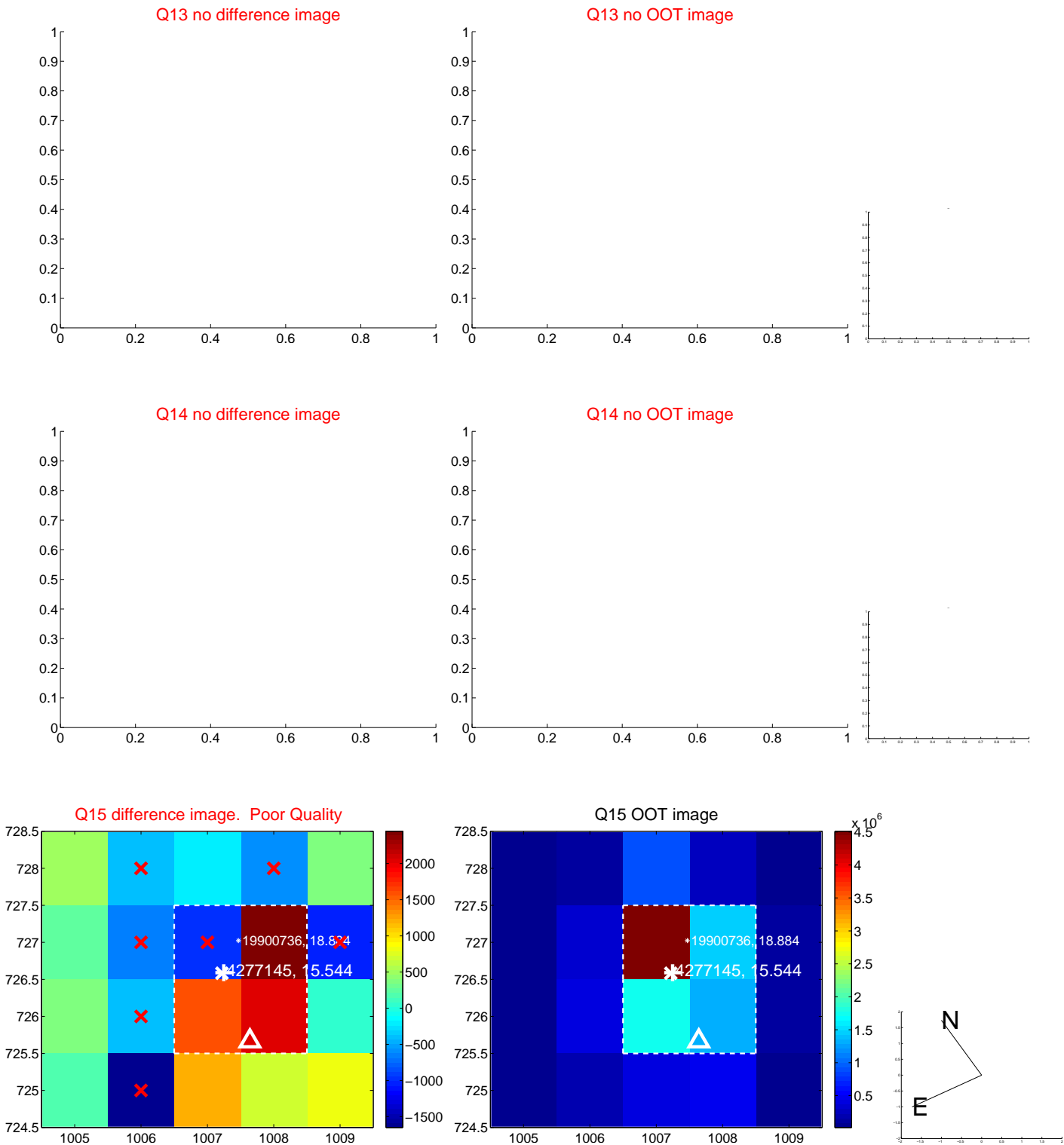
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



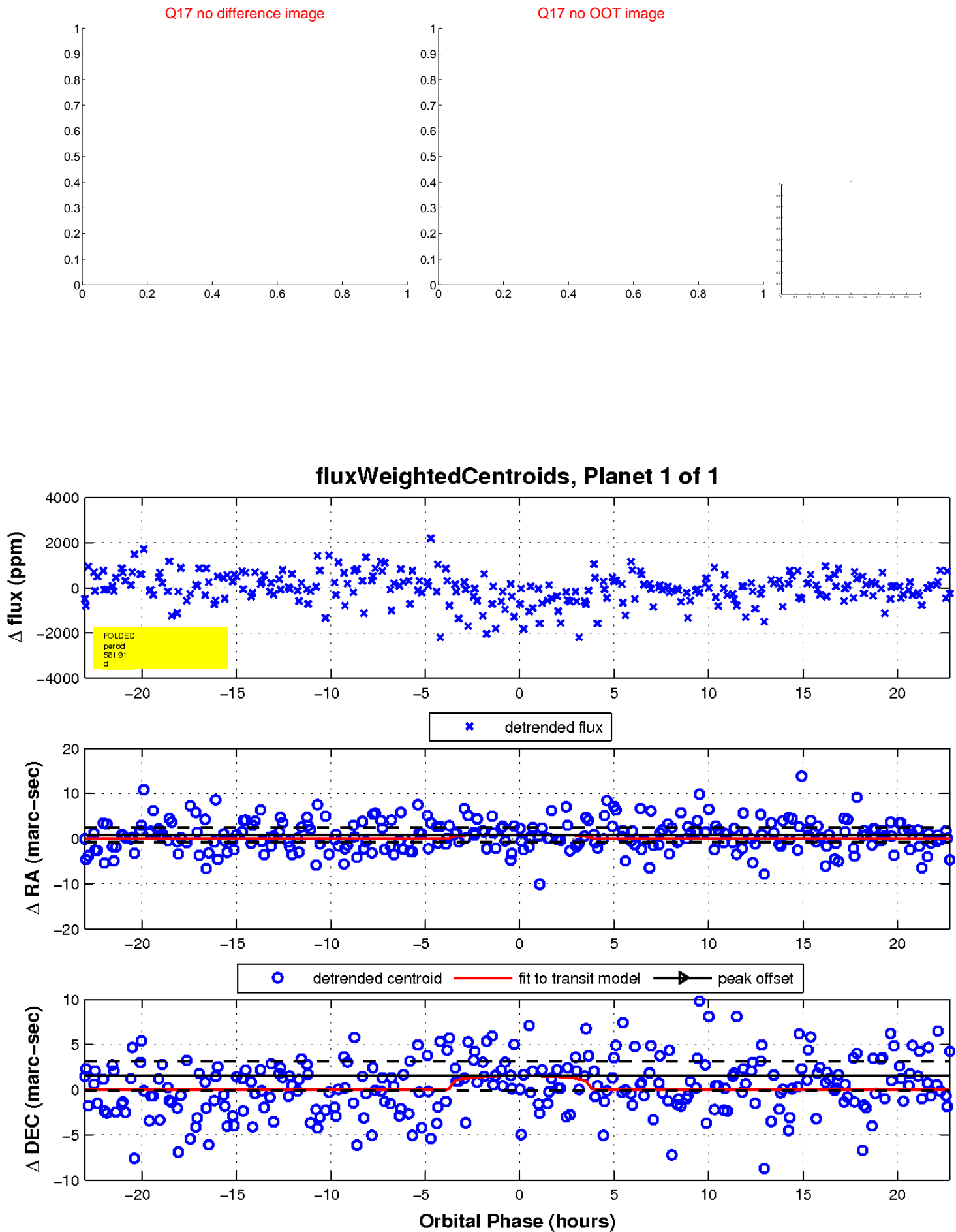
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

Declination

