

KIC 006181319

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})
006181319-01	OBS	No	582.998685	192.822598	199.8	8.013	7.7	7.6	0.57	4902	0.88	0.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006181319-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—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.

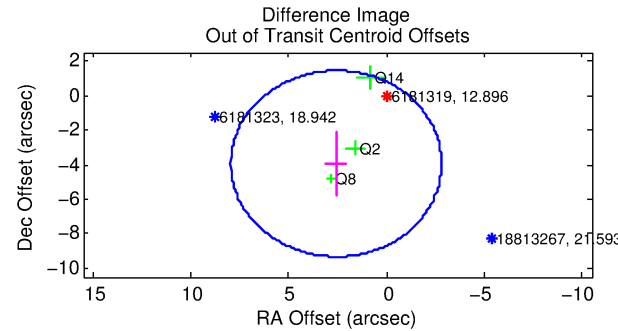
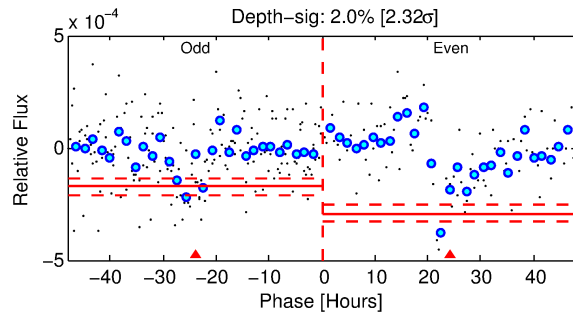
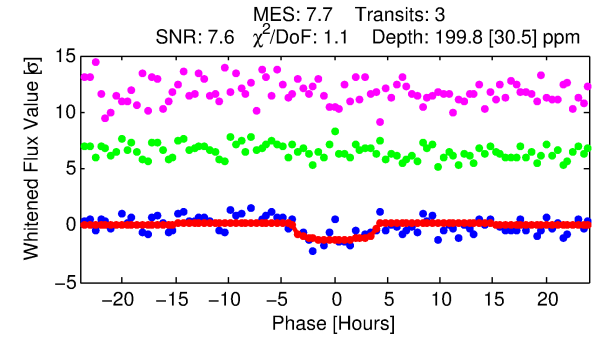
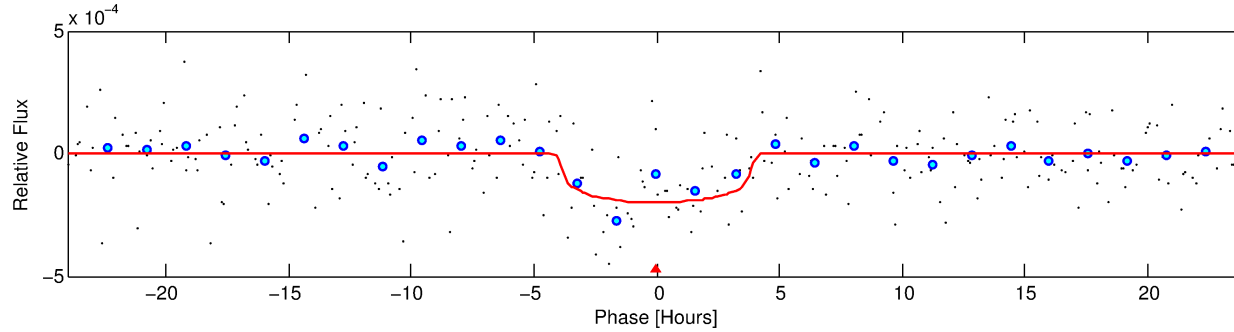
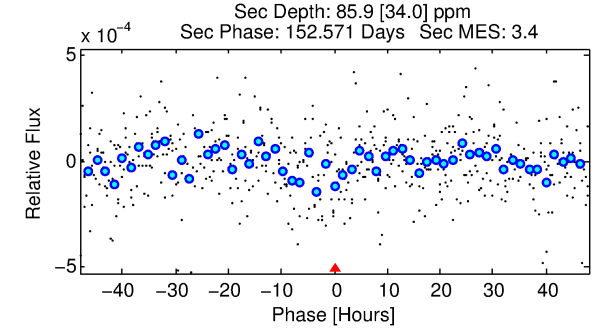
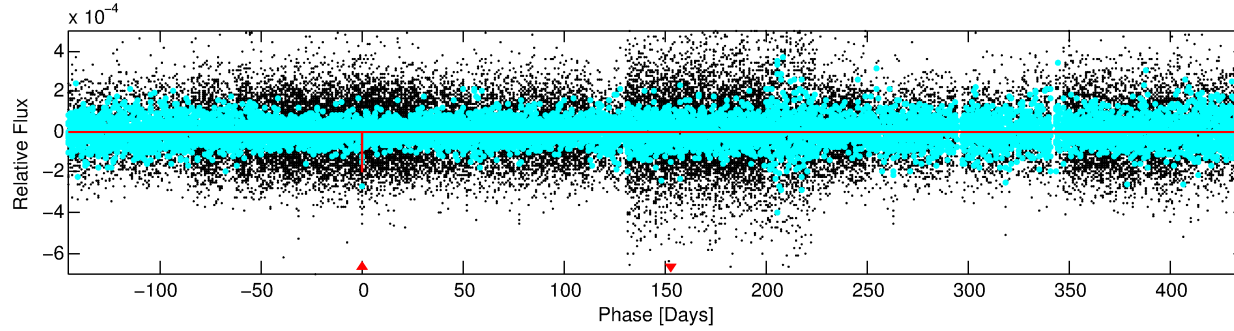
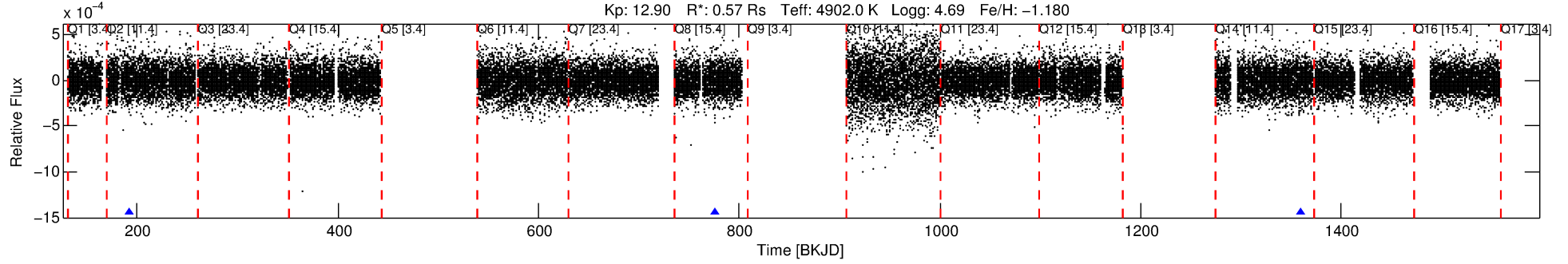
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006181319-01

No Significant Match Found

DV One-Page Summary

KIC: 6181319 Candidate: 1 of 1 Period: 582.999 d



DV Fit Results:

Period = 582.99869 [0.01281] d
Epoch = 192.8226 [0.0175] BKJD
Rp/R* = 0.0142 [0.0209]
a/R* = 366.49 [2238.10]
b = 0.77 [3.26]
Seff = 0.13 [0.02]
Teq = 153 [6] K
Rp = 0.88 [1.29] Re
a = 1.1329 [0.0669] AU
Ag = 78649.10 [233539.51] [0.34 σ]
Teffp = 3961 [2942] K [1.29 σ]

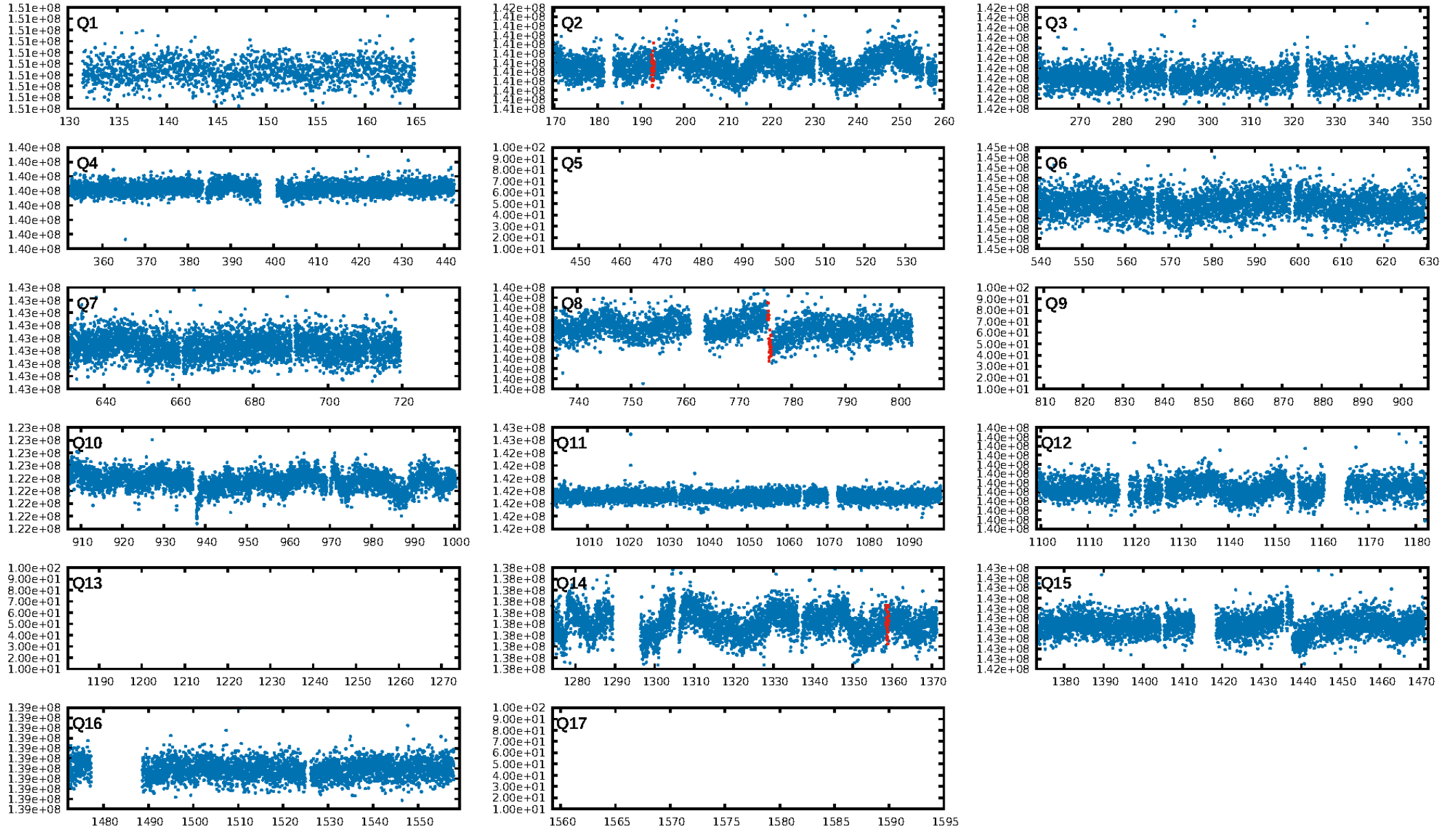
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 10.1%
ModelChiSquareGof-sig: 90.2%
Bootstrap-pfa: 1.43e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -5.841
Centroid-sig: 0.0%
Centroid-so: 6.764 arcsec [2.83 σ]
OotOffset-rm: 4.709 arcsec [2.62 σ]
KicOffset-rm: 4.472 arcsec [2.41 σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

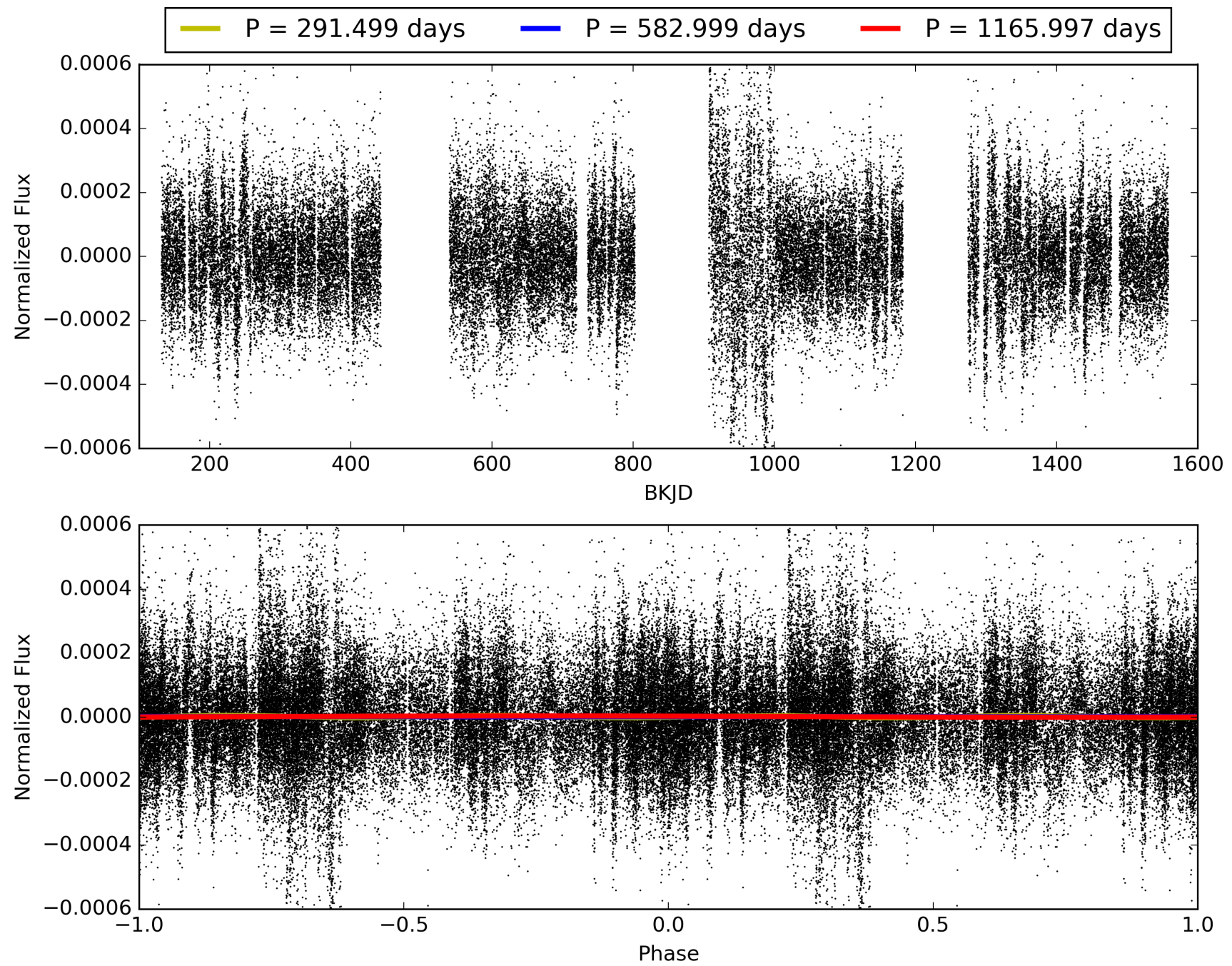
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:29:35 Z

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

TCE 006181319-01, PDC Light Curves

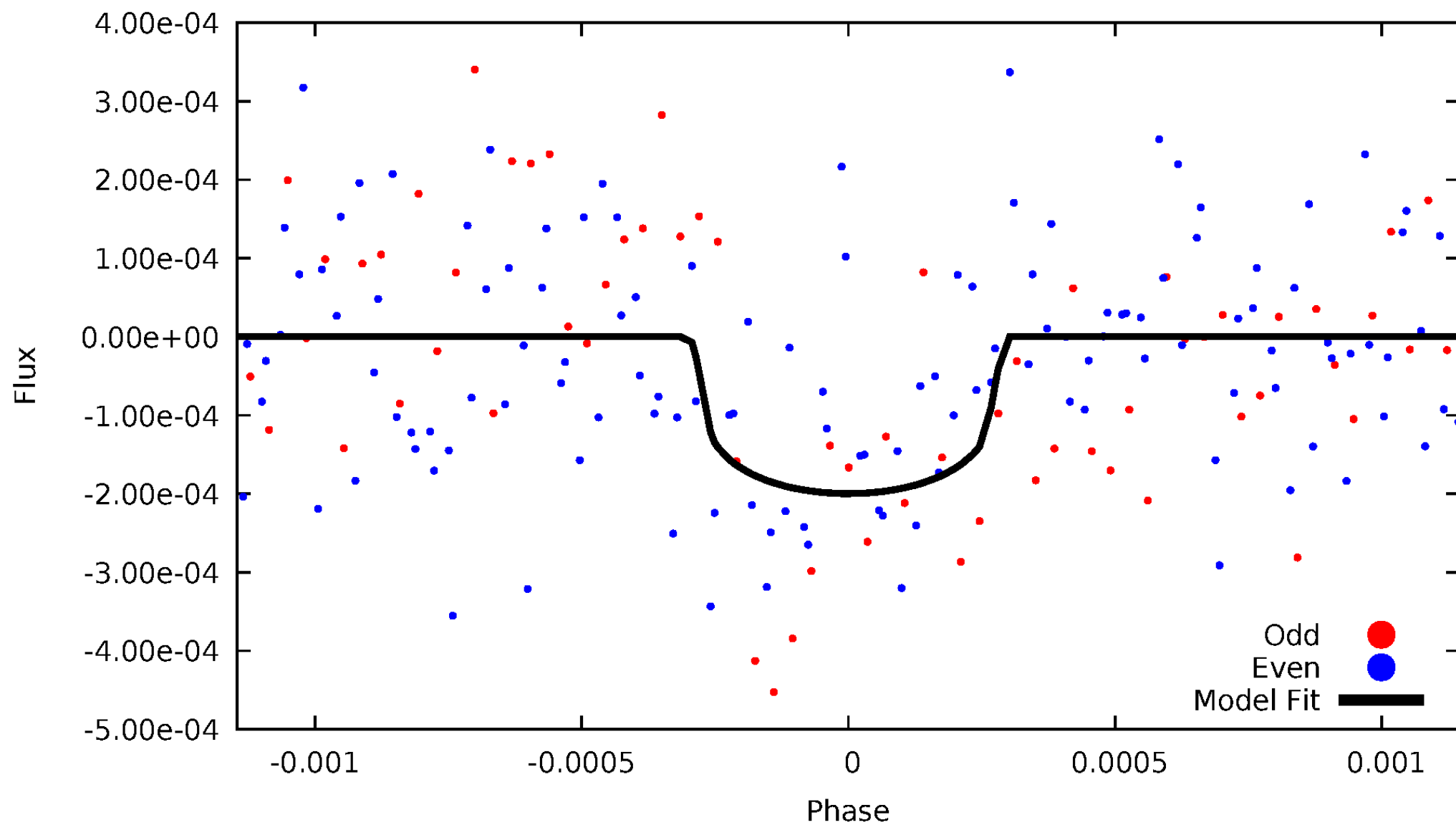


TCE 006181319-01



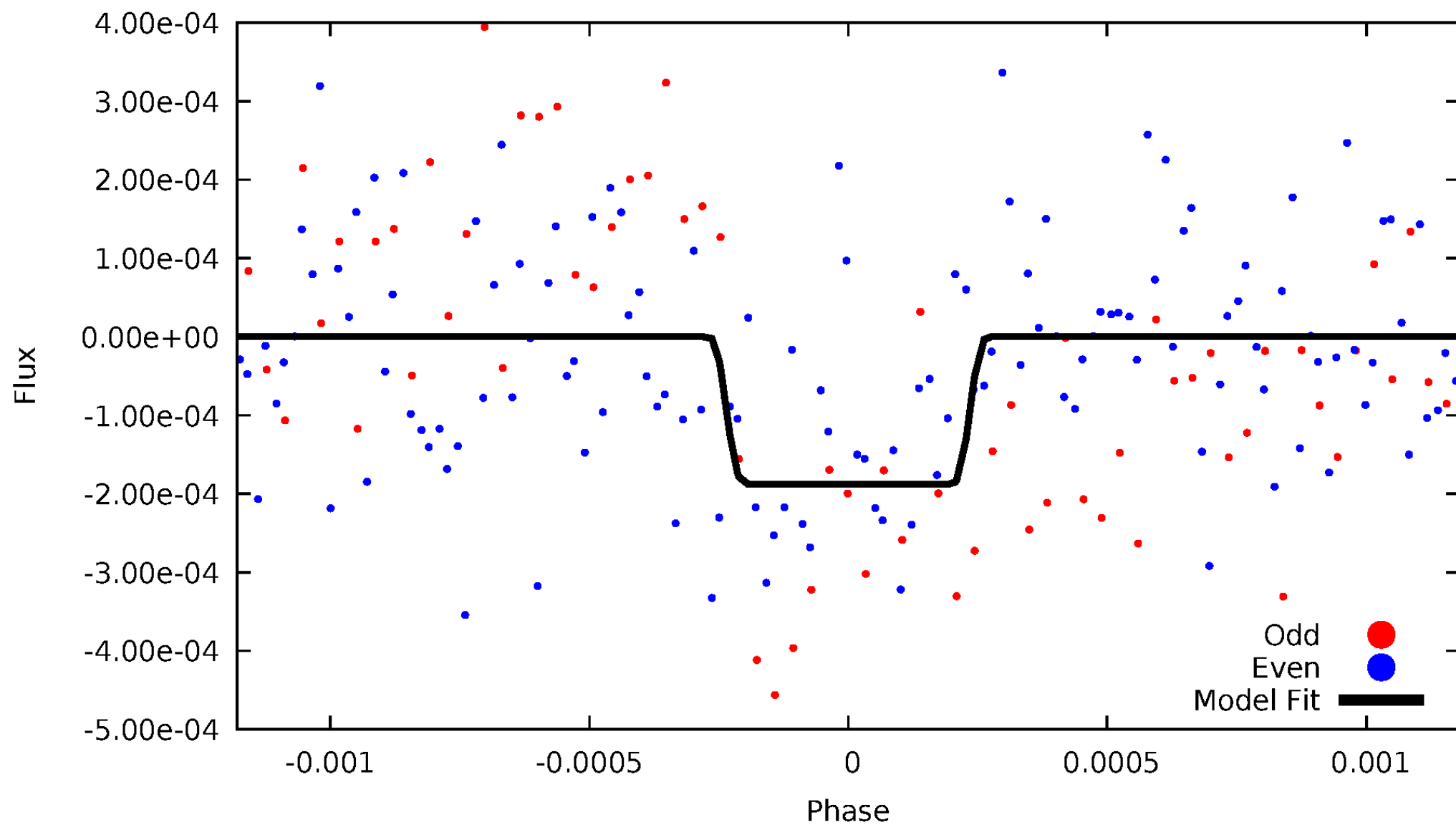
DV Odd/Even

TCE 006181319-01

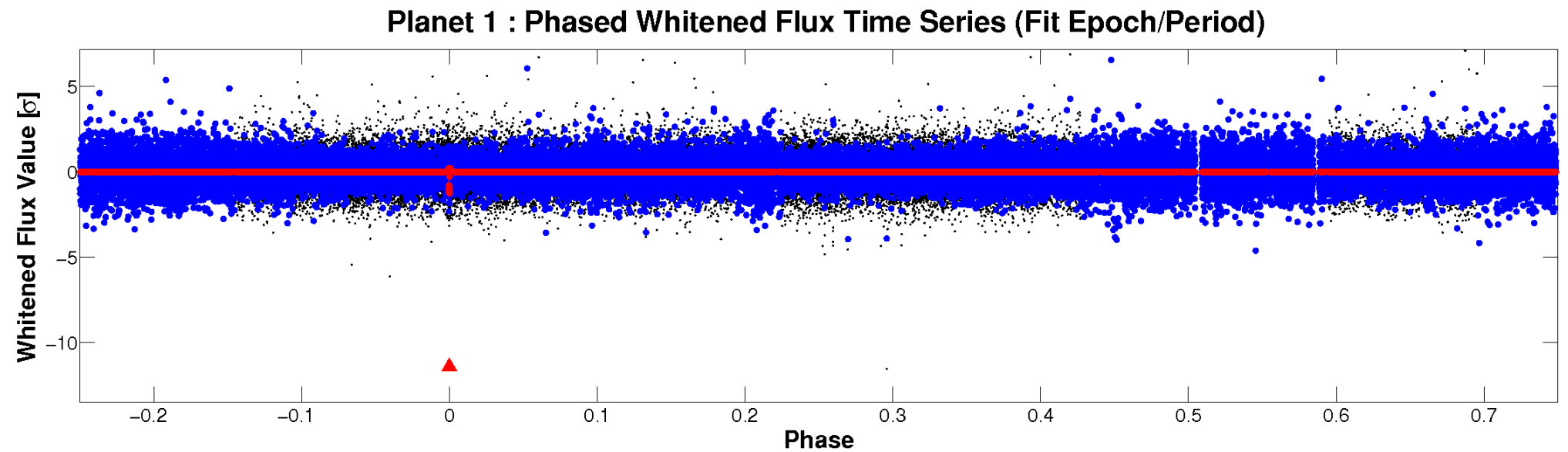
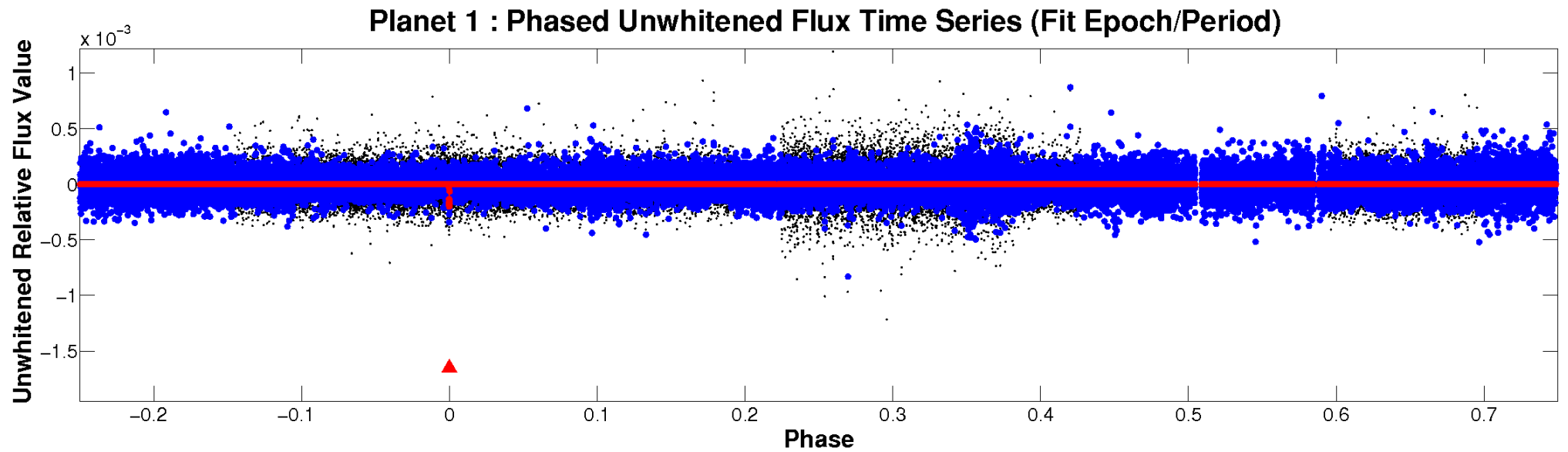


ALT Odd/Even

TCE 006181319-01



Non-Whitened Vs. Whitened Light Curve



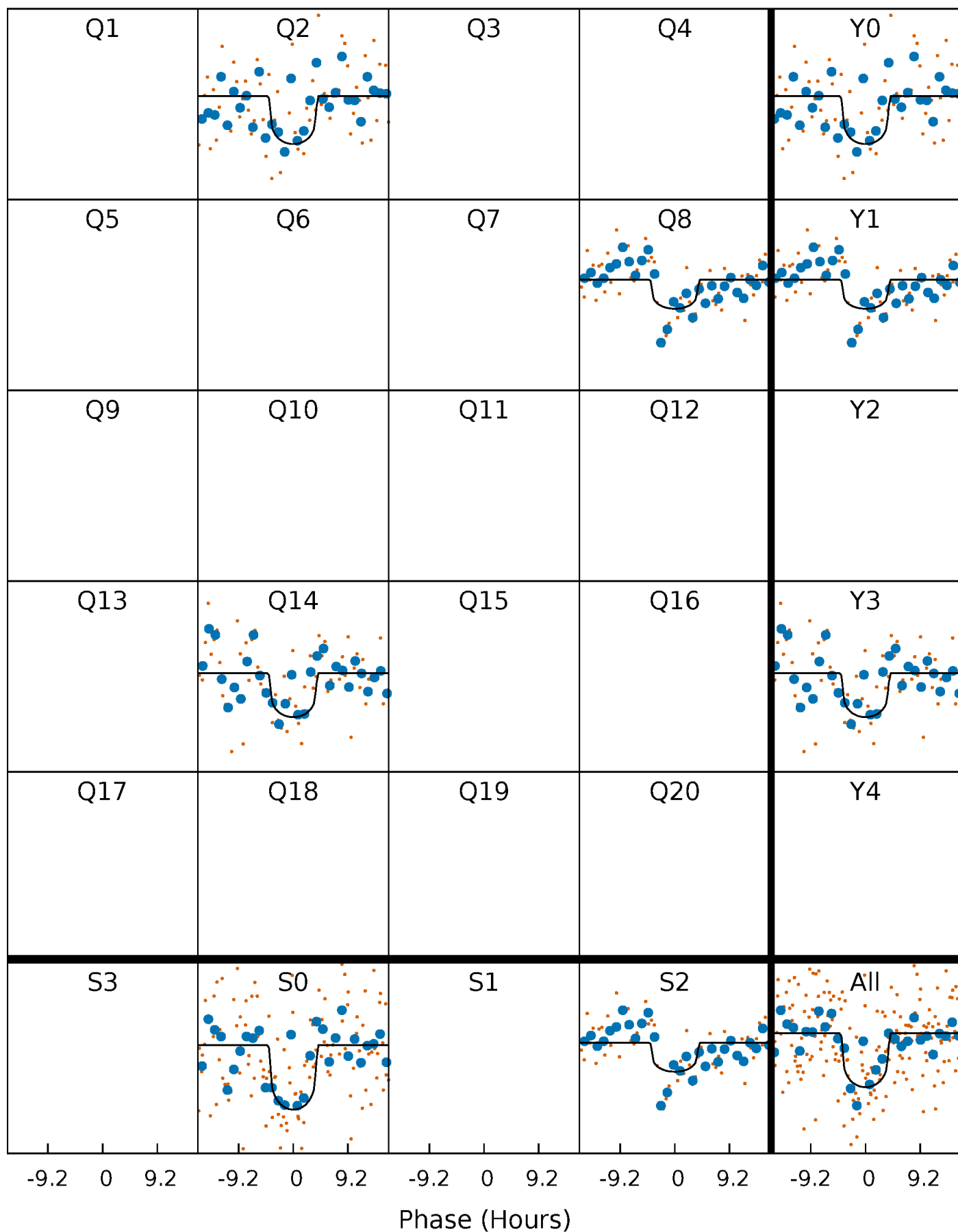
PDC Quarter-Phased Transit Curves

TCE 006181319-01 P=582.998685 Days $T_0=192.822598$ (BKJD)



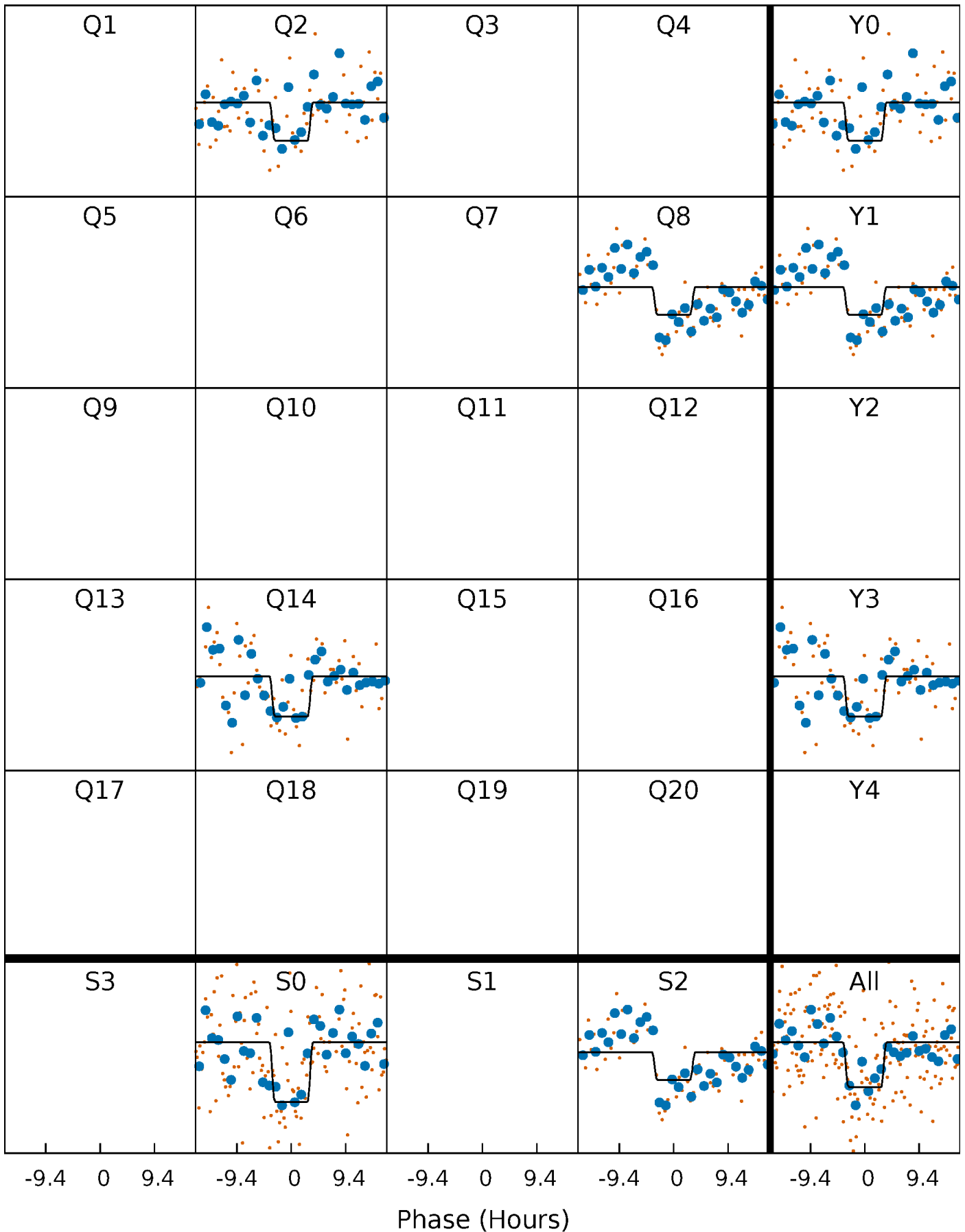
DV Quarter-Phased Transit Curves

TCE 006181319-01 P=582.998685 Days $T_0=192.822598$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

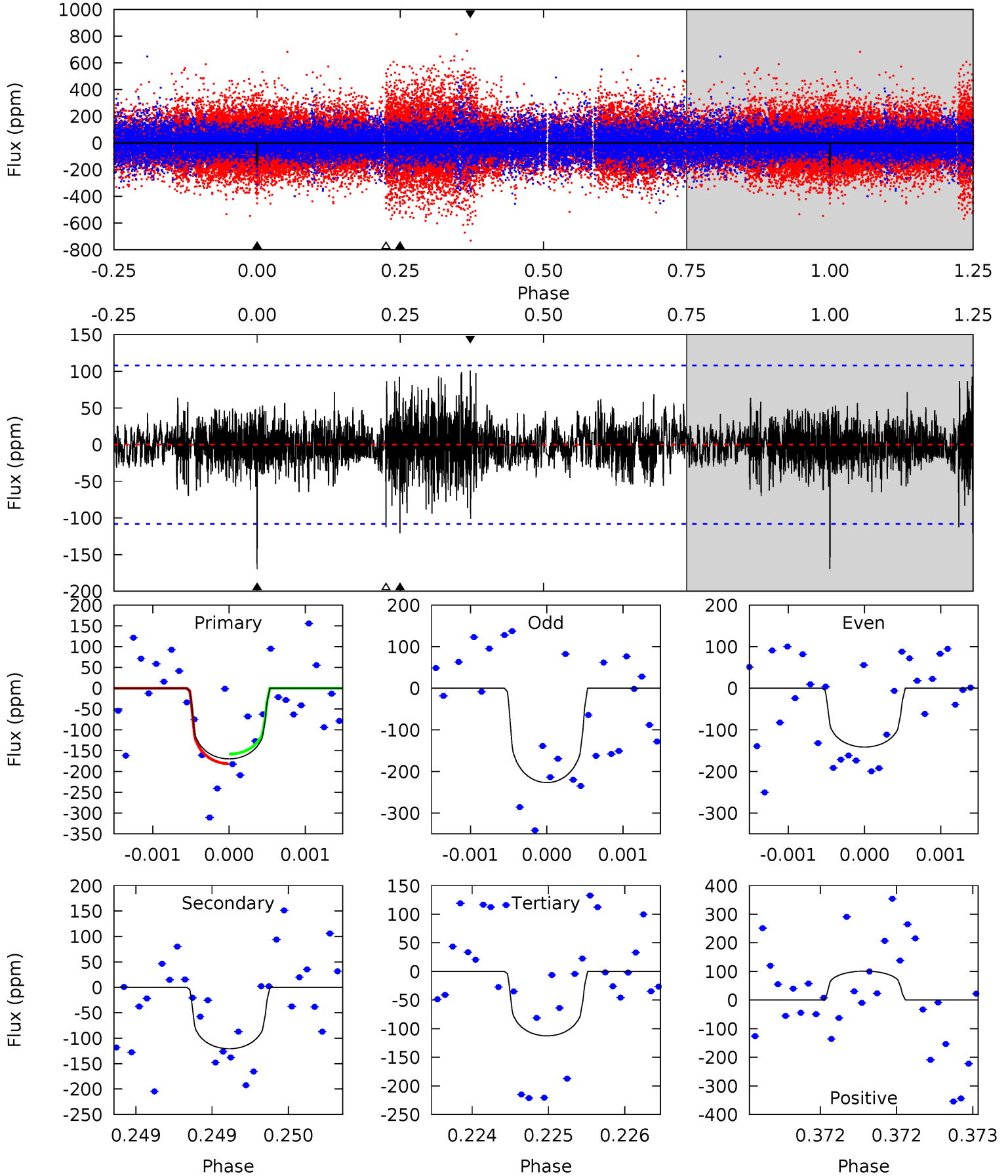
TCE 006181319-01 P=582.996711 Days $T_0=192.825733$ (BKJD)



DV Model-Shift Uniqueness Test

006181319-01, P = 582.998685 Days, E = 192.822598 Days

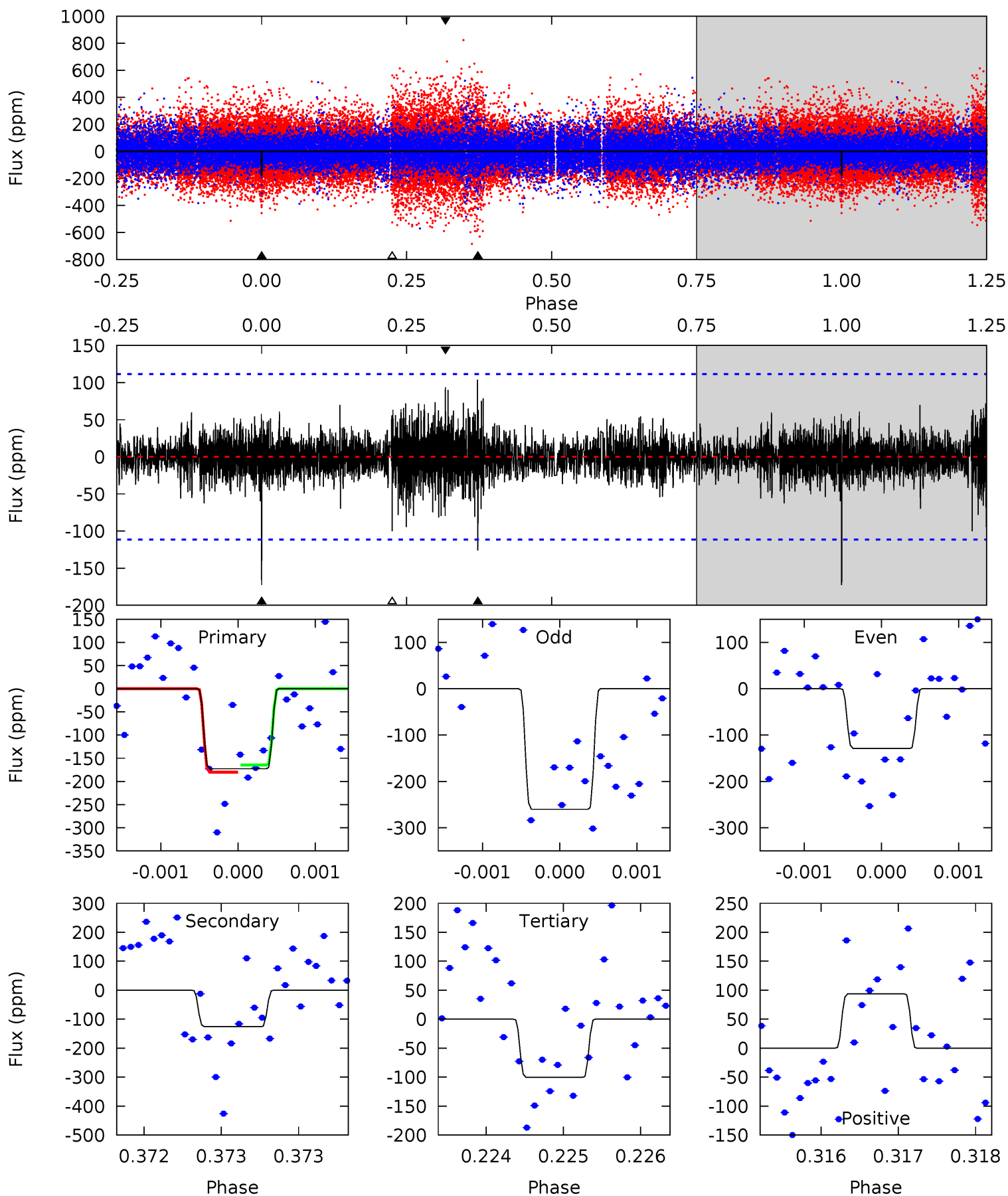
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.73	6.21	5.79	5.20	5.55	3.45	1.21	2.95	3.53	0.42	1.01	1.93	1.16	0.37	0.60



Alt Model-Shift Uniqueness Test

006181319-01, P = 582.996711 Days, E = 192.825733 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.62	6.29	5.01	4.68	5.56	3.47	1.00	3.61	3.95	1.28	1.61	2.92	1.24	0.38	0.39



Stellar Parameters For KIC 006181319

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4902^{+147}_{-132}	$4.687^{+0.052}_{-0.028}$	$-1.180^{+0.300}_{-0.300}$	$0.567^{+0.037}_{-0.037}$	$0.569^{+0.041}_{-0.021}$	$4.407^{+0.868}_{-0.498}$
	+3%/-3%	+1%/-1%	+25%/-25%	+7%/-7%	+7%/-4%	+20%/-11%
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 006181319-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-121 ± 19	$1.28^{+1.19}_{-0.85}$	213^{+7}_{-7}	3870^{+2135}_{-736}	$51722^{+417099}_{-37584}$
Alt.	-126 ± 20	$1.25^{+1.07}_{-0.82}$	213^{+8}_{-7}	3910^{+2249}_{-713}	$58013^{+409786}_{-41380}$

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

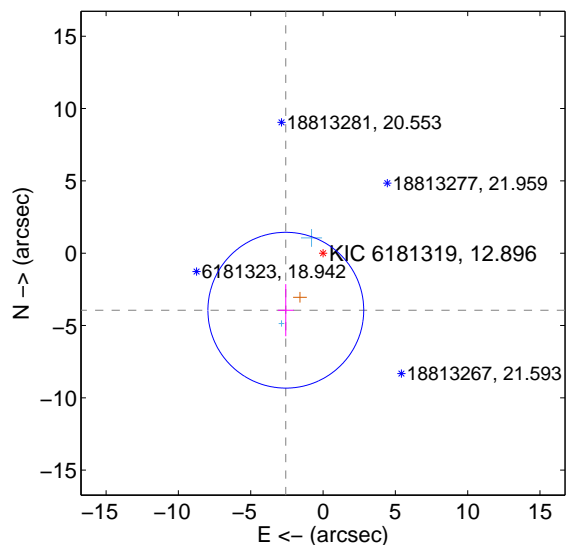
Supplemental centroid analysis for 006181319-01. Kepler magnitude: 12.90. Transit SNR 7.58

There are 2 quarters with good PRF difference image offsets

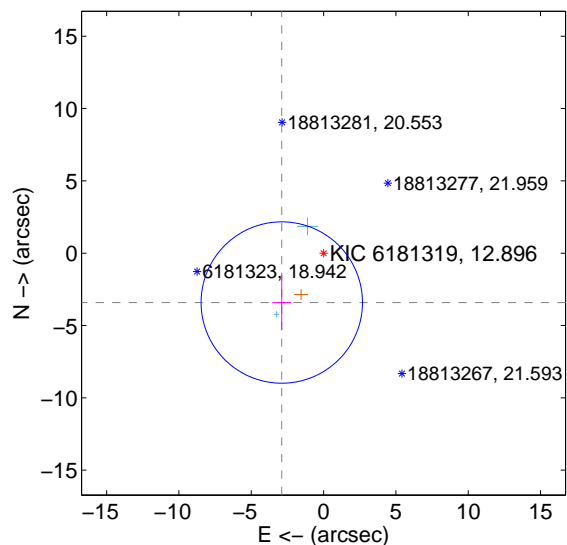
The direct PRF centroid is offset from the target star catalog position by about 0.85 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.709 ± 1.795	2.62	2.573 ± 0.542	-3.943 ± 1.802
PRF-fit source offset from KIC position	4.472 ± 1.859	2.41	2.890 ± 0.656	-3.413 ± 1.904
photometric centroid source offset	6.76 ± 2.39	2.83	5.72 ± 2.45	-3.62 ± 2.25

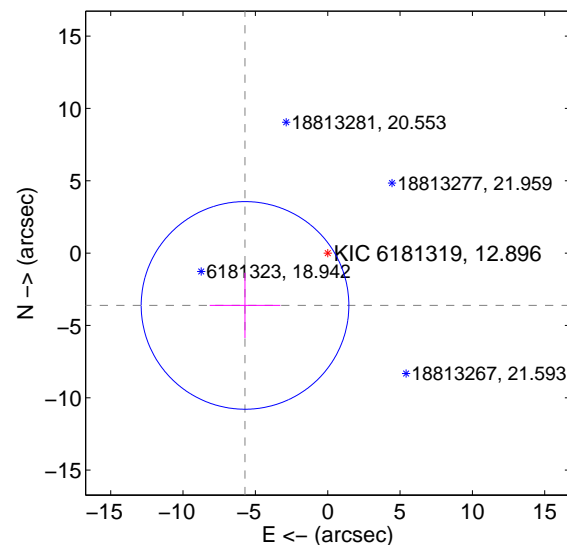
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

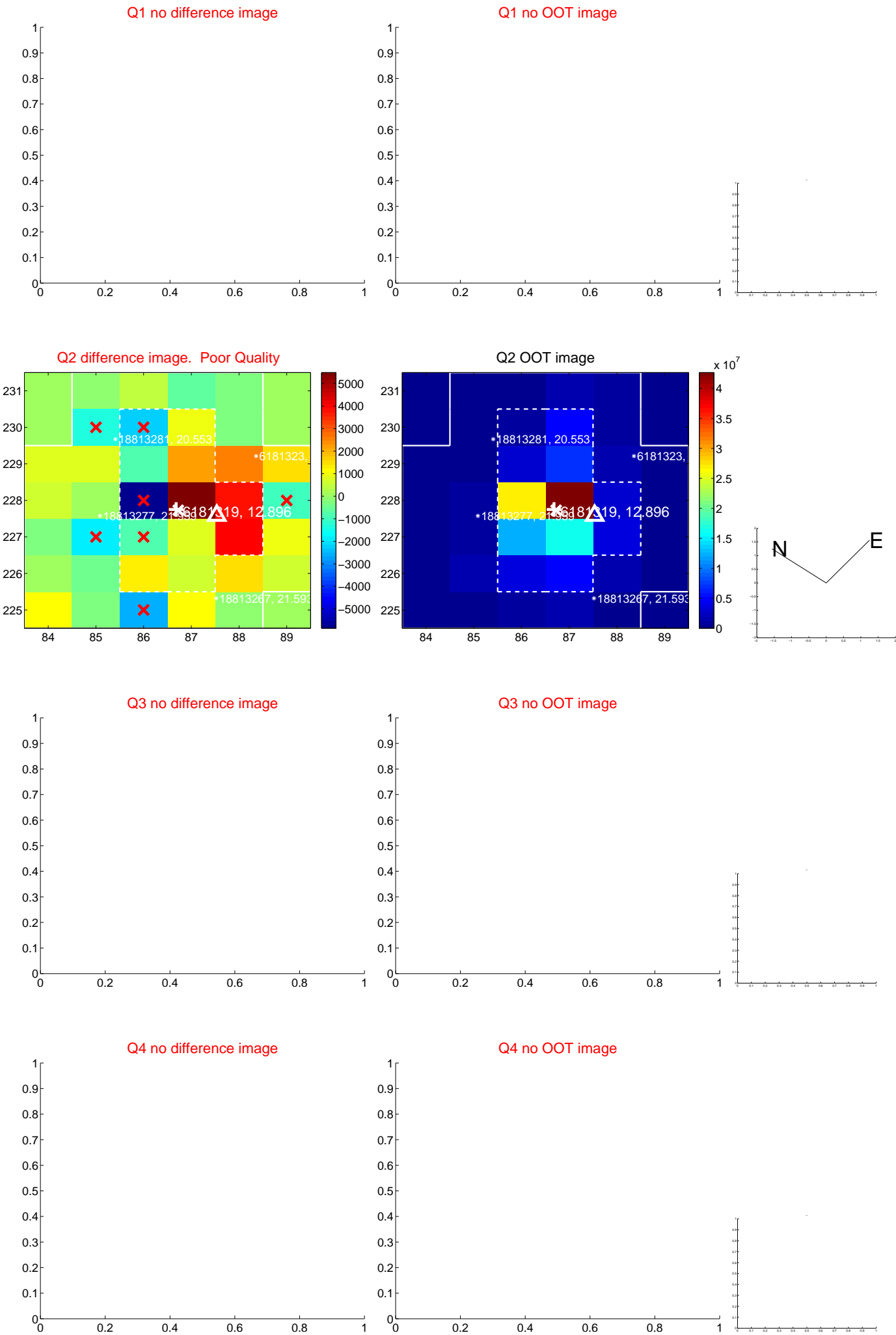


offset from photometric centroids

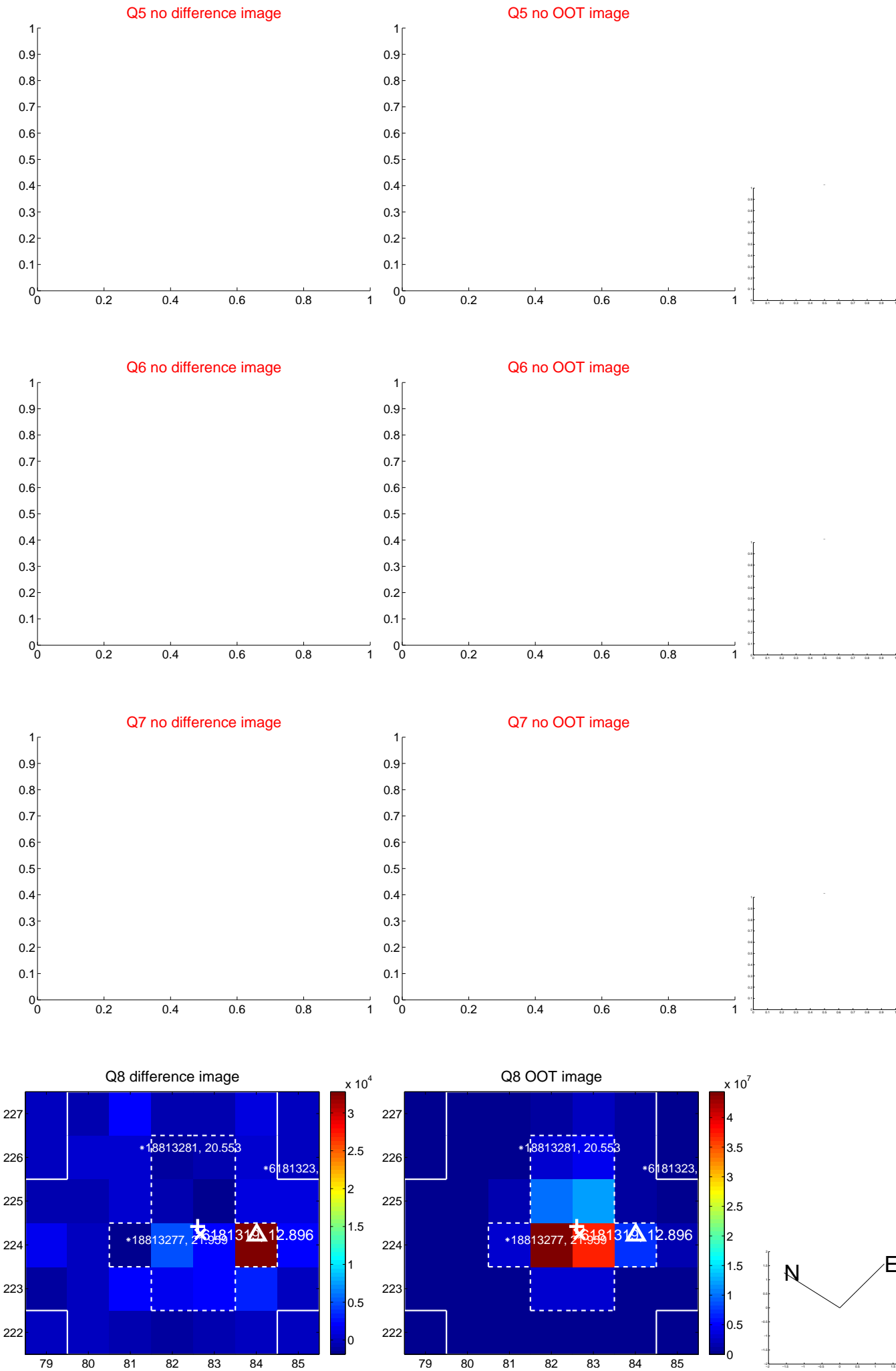


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



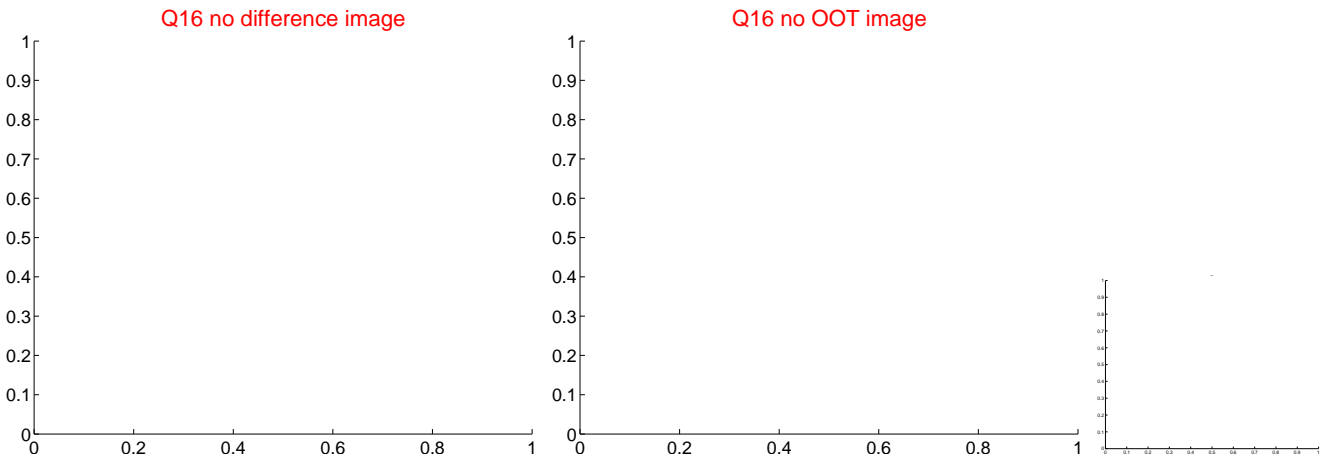
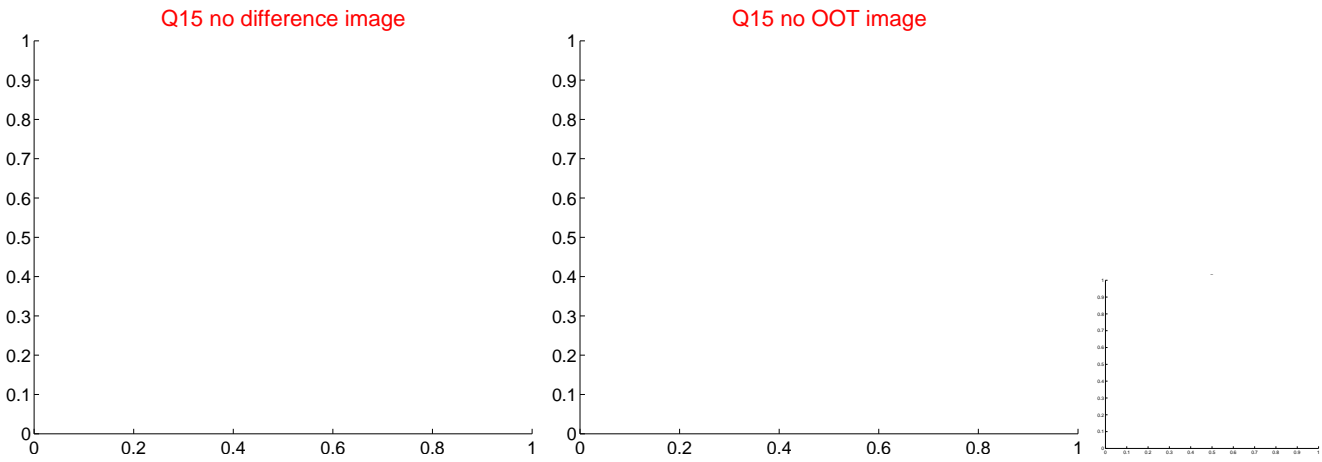
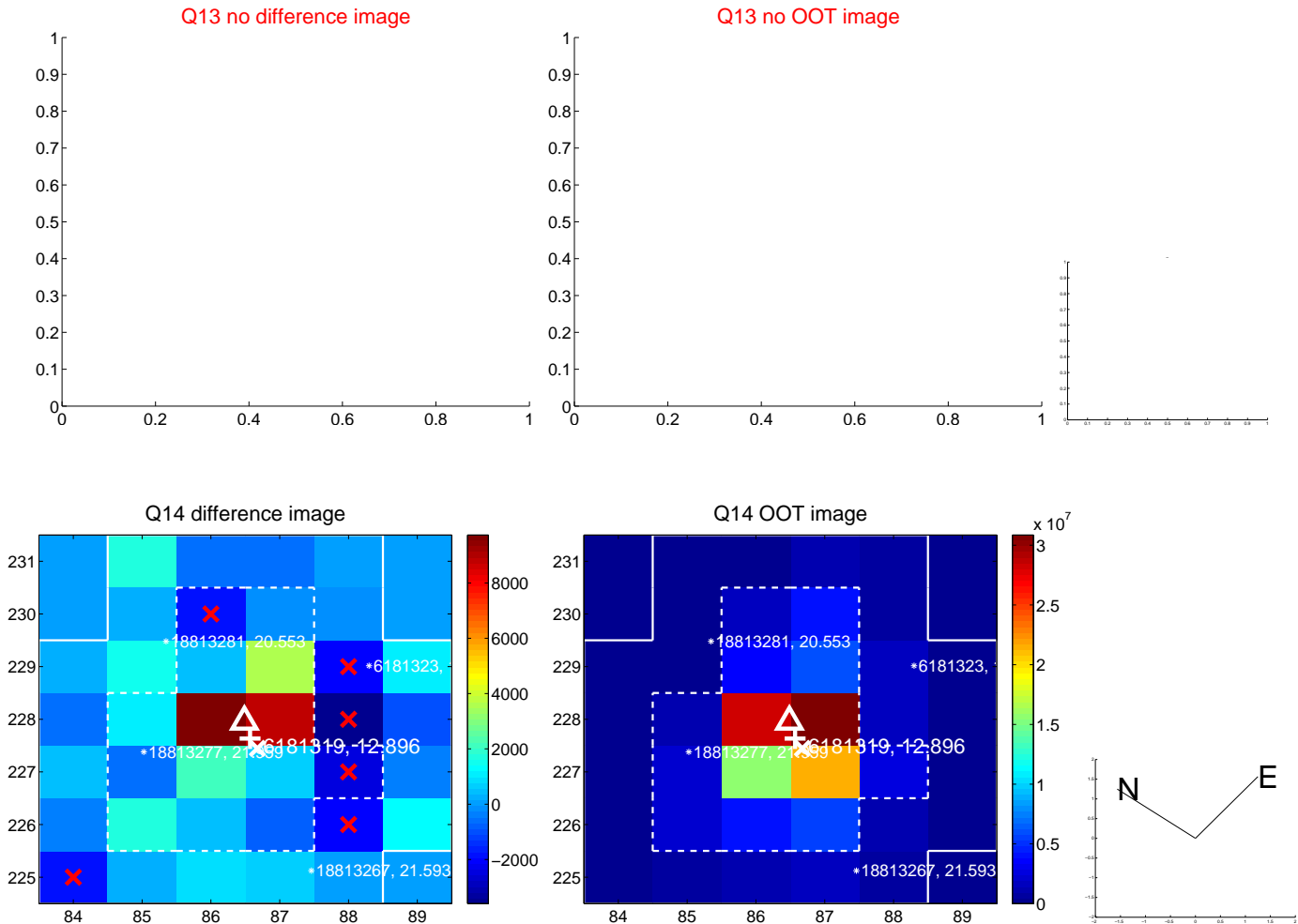
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



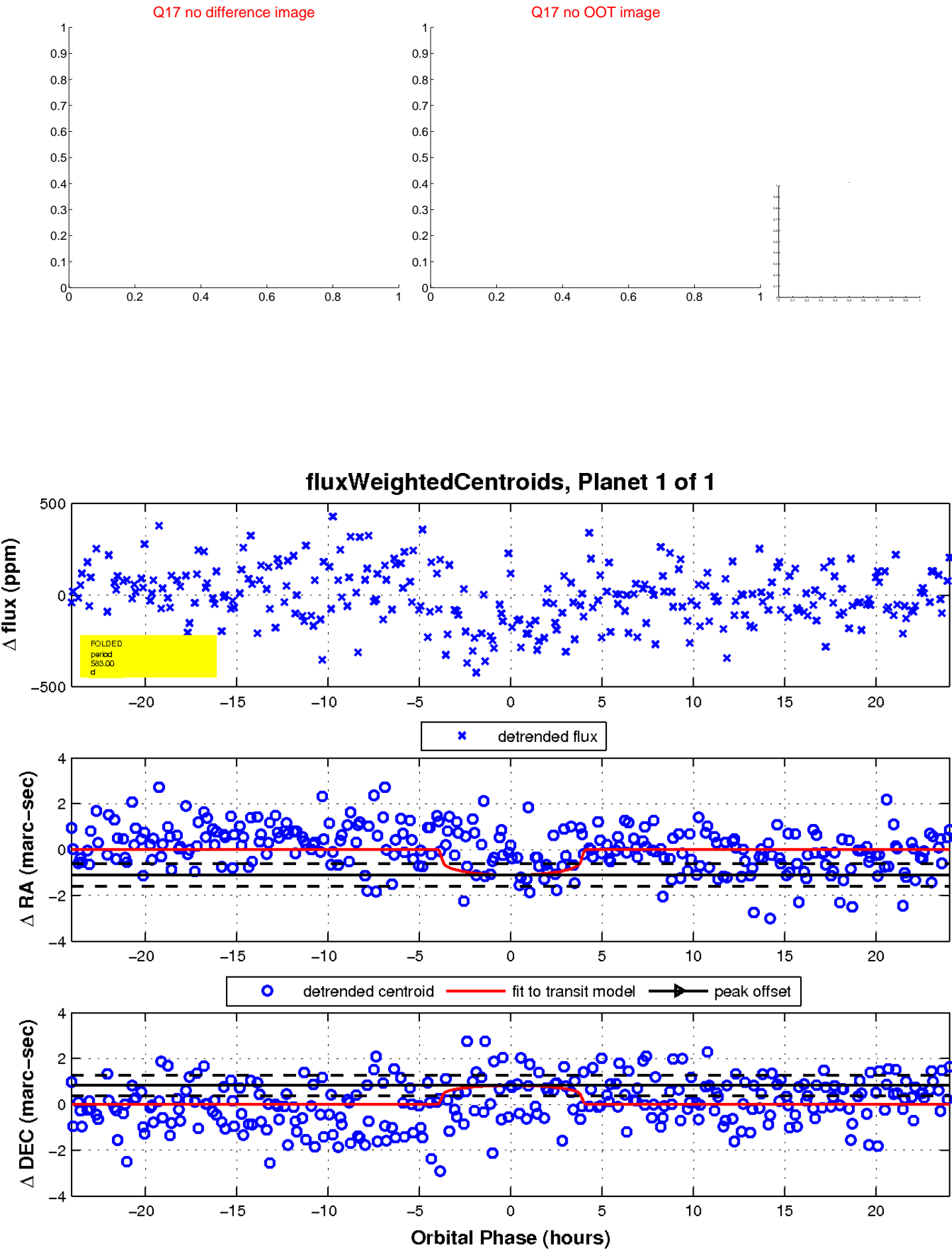
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

