

KIC 002019076

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})
002019076-01	OBS	3585.01	3.564618	131.861577	79063.3	3.853	2650.4	1256.1	0.89	5891	38.22	470.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002019076-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED

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.

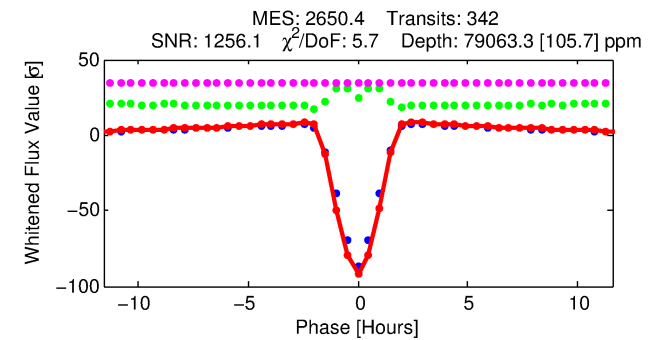
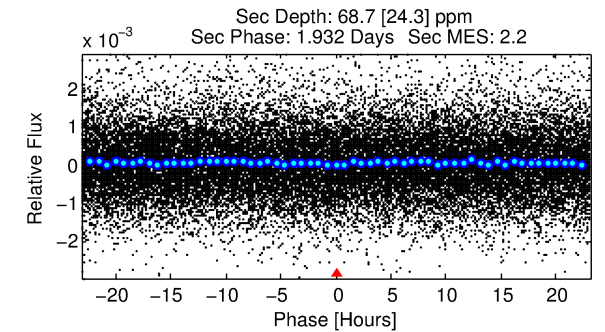
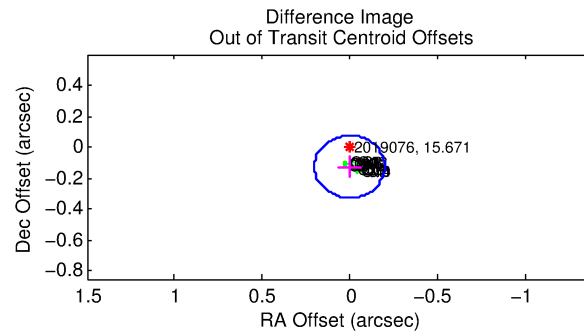
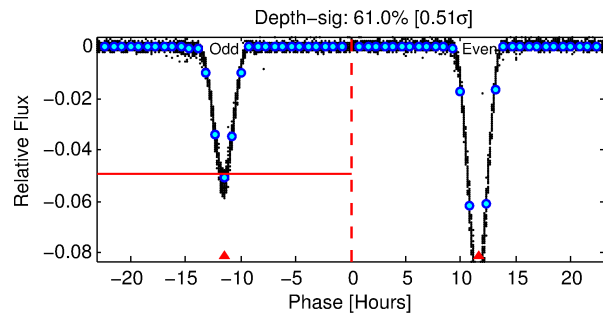
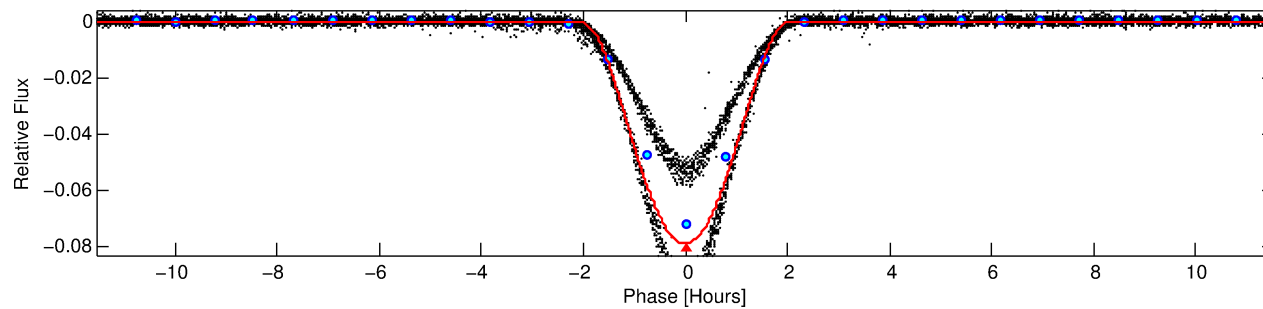
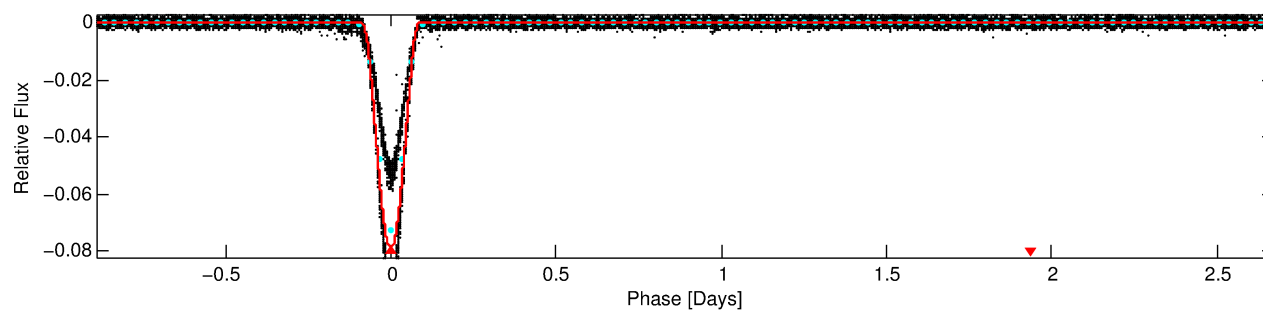
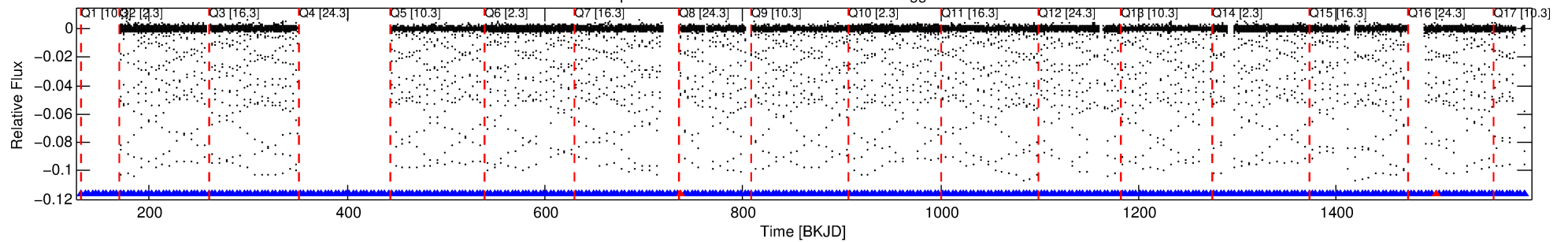
Ephemeris Match Information For 002019076-01

No Significant Match Found

DV One-Page Summary

KIC: 2019076 Candidate: 1 of 1 Period: 3.565 d
KOI: K03585.01 Corr: 0.993

Kp: 15.67 R*: 0.89 Rs Teff: 5891.0 K Logg: 4.45 Fe/H: -0.560



DV Fit Results:

Period = 3.56462 [0.00000] d
Epoch = 131.8616 [0.0001] BKJD
Rp/R* = 0.3927 [0.0342]
a/R* = 7.38 [0.01]
b = 0.94 [0.05]
Seff = 470.48 [158.74]
Teq = 1188 [100] K
Rp = 38.22 [10.44] Re
a = 0.0427 [0.0092] AU
Ag = 0.05 [0.02] [-40.23σ]
Teffp = 856 [89] K [-2.48σ]

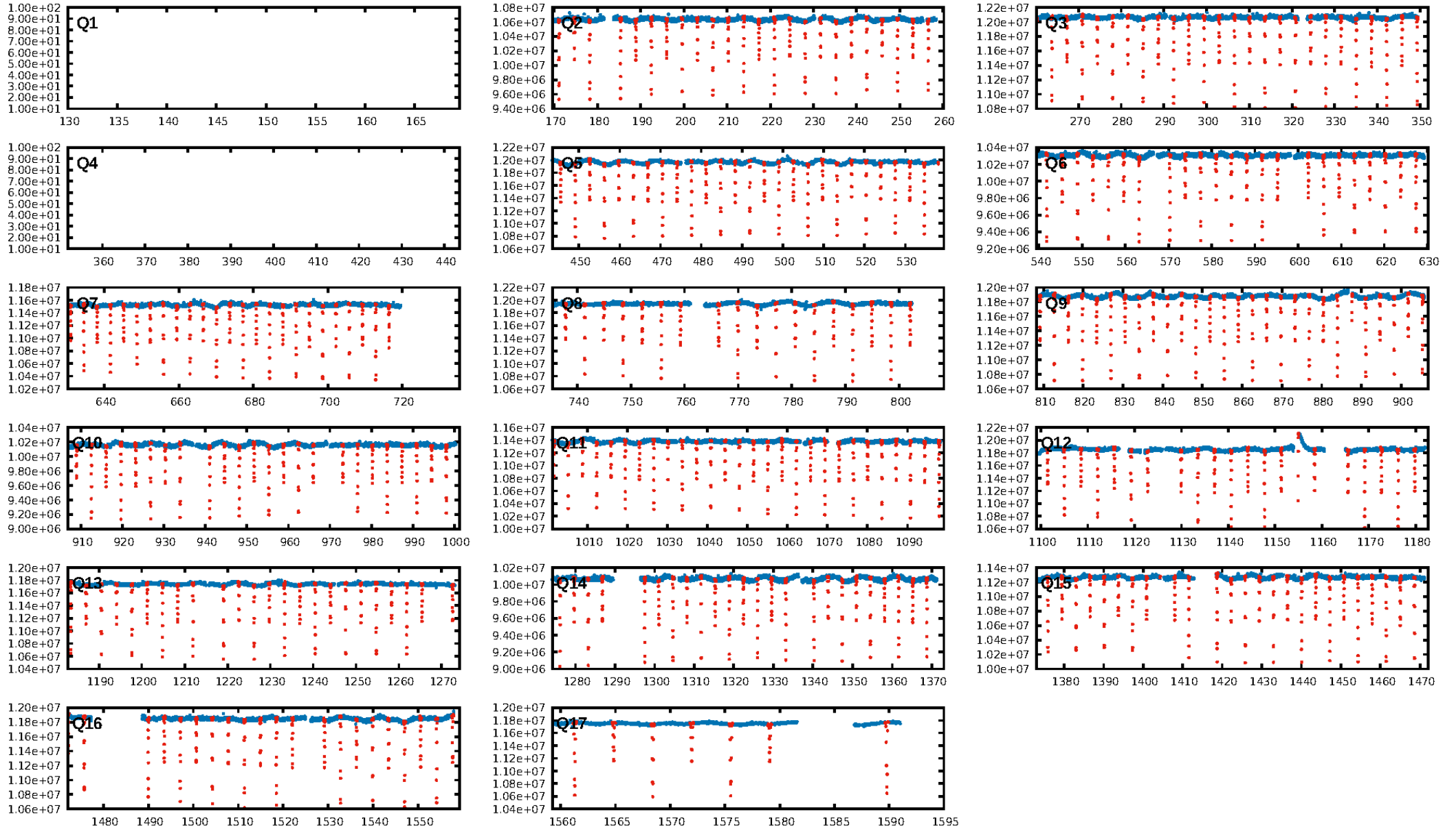
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.99 [333/335]
GhostDiagnostic-chr: 2.595
Centroid-sig: 0.0%
Centroid-so: 1.164 arcsec [276.29σ]
OotOffset-rm: 0.126 arcsec [1.88σ]
KicOffset-rm: 0.335 arcsec [4.88σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 1.00 [15/15]
DiffImageOverlap-fno: 1.00 [15/15]

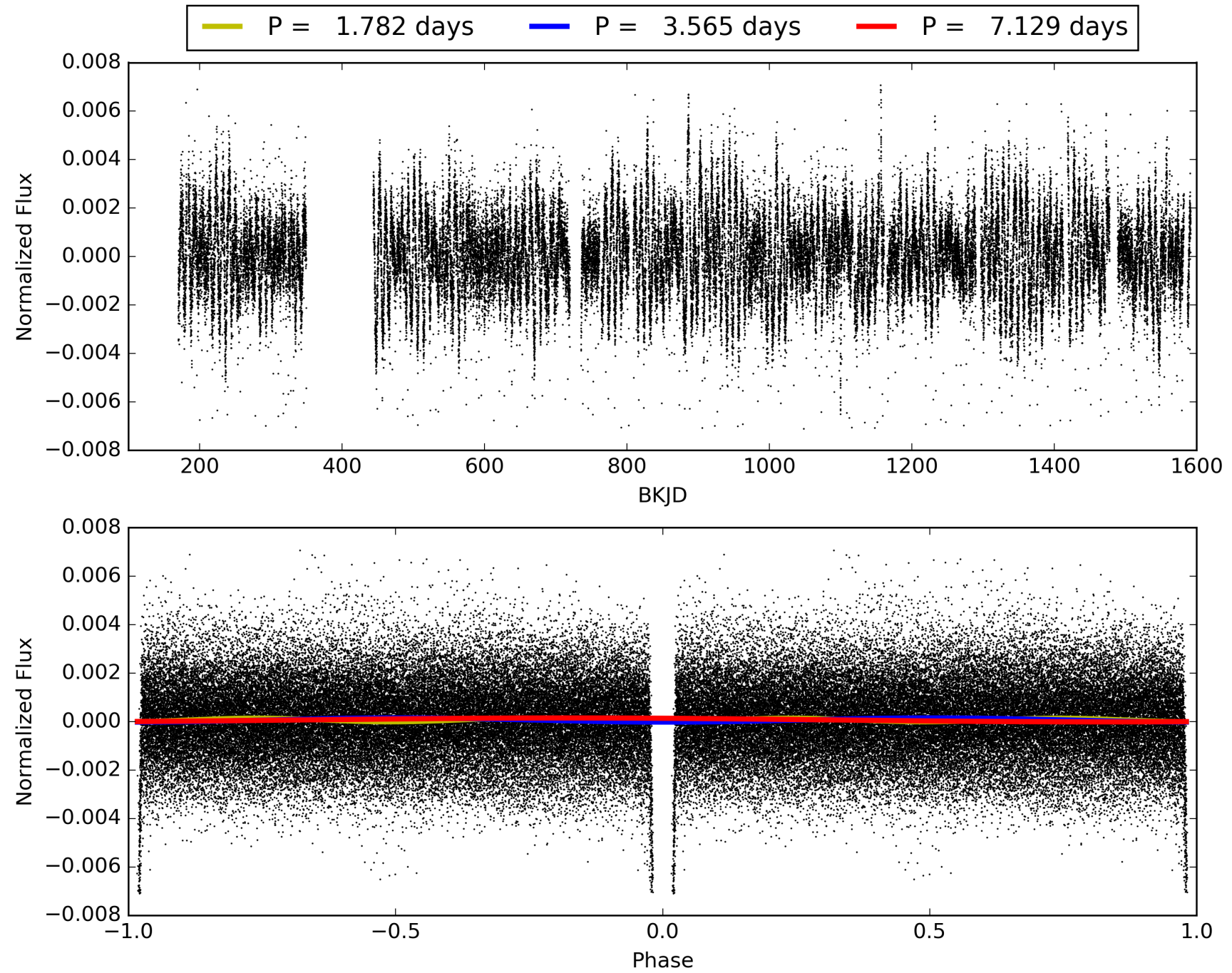
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:54:11 Z

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

TCE 002019076-01, PDC Light Curves

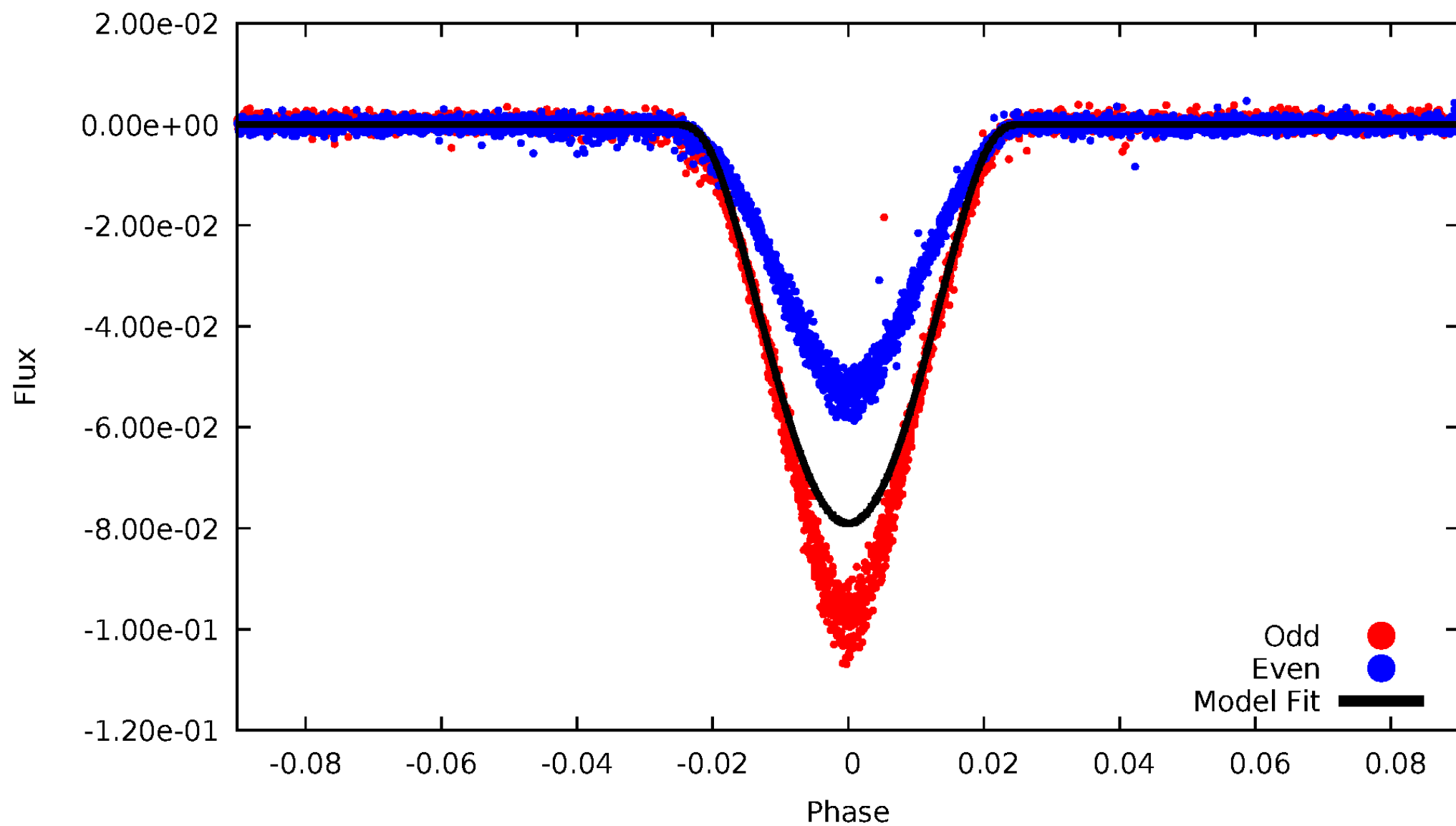


TCE 002019076-01



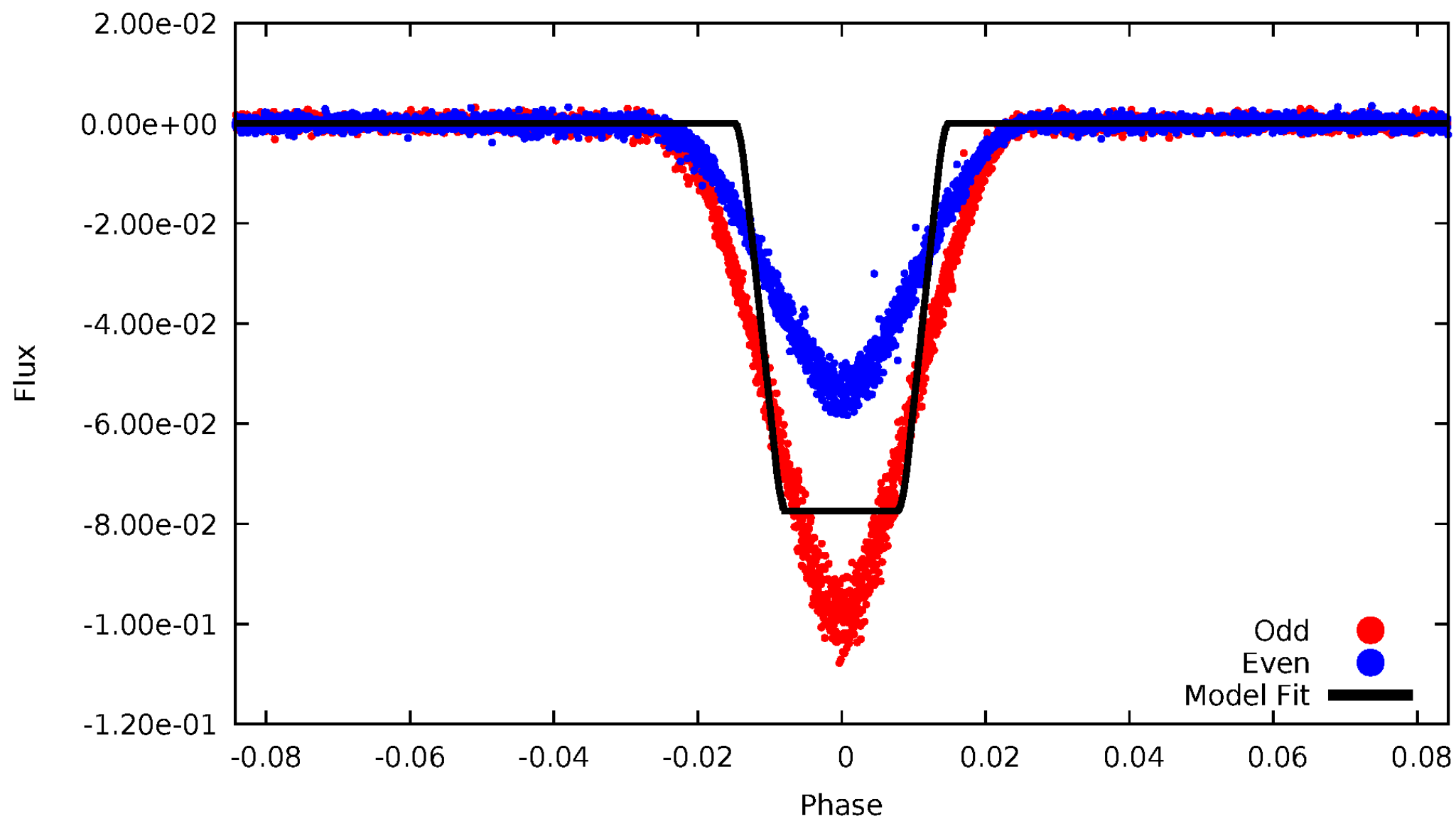
DV Odd/Even

TCE 002019076-01



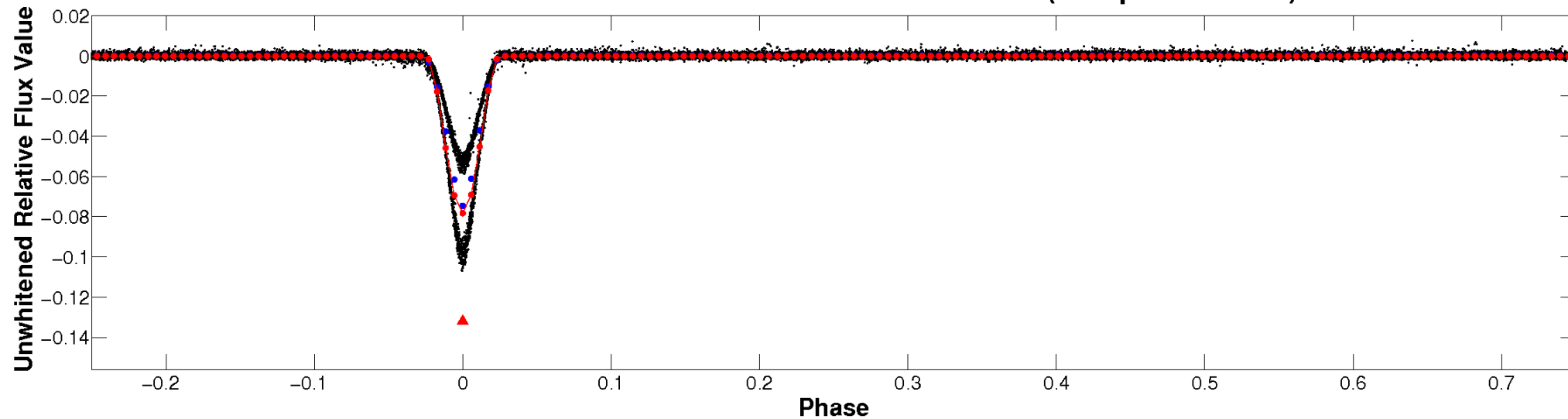
ALT Odd/Even

TCE 002019076-01

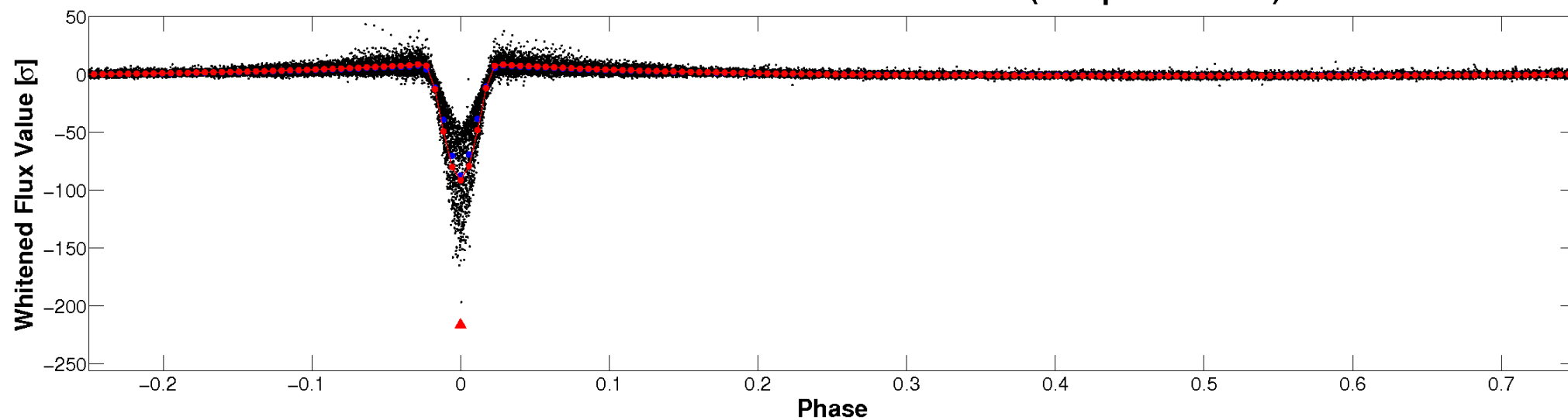


Non-Whitened Vs. Whitened Light Curve

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

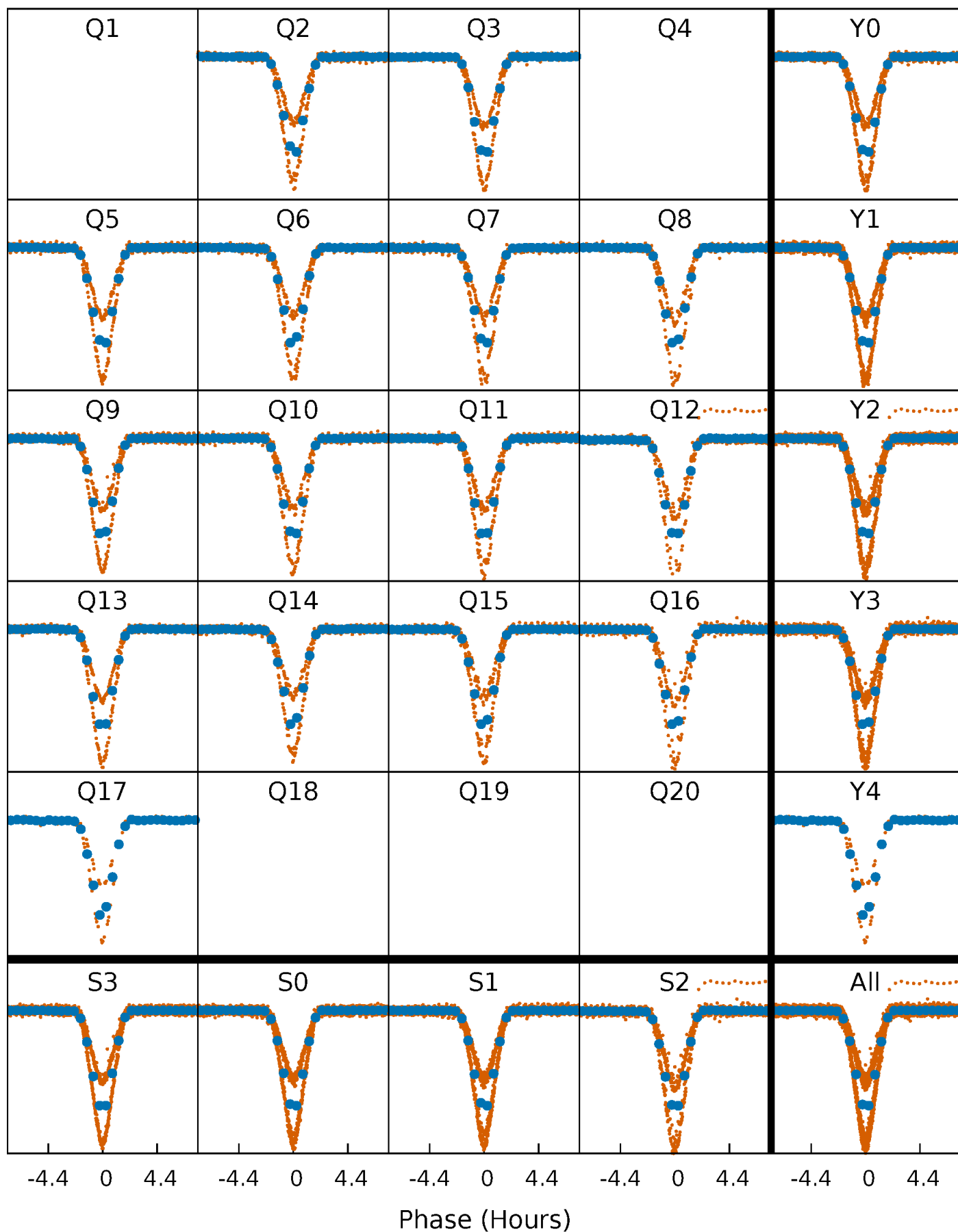


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



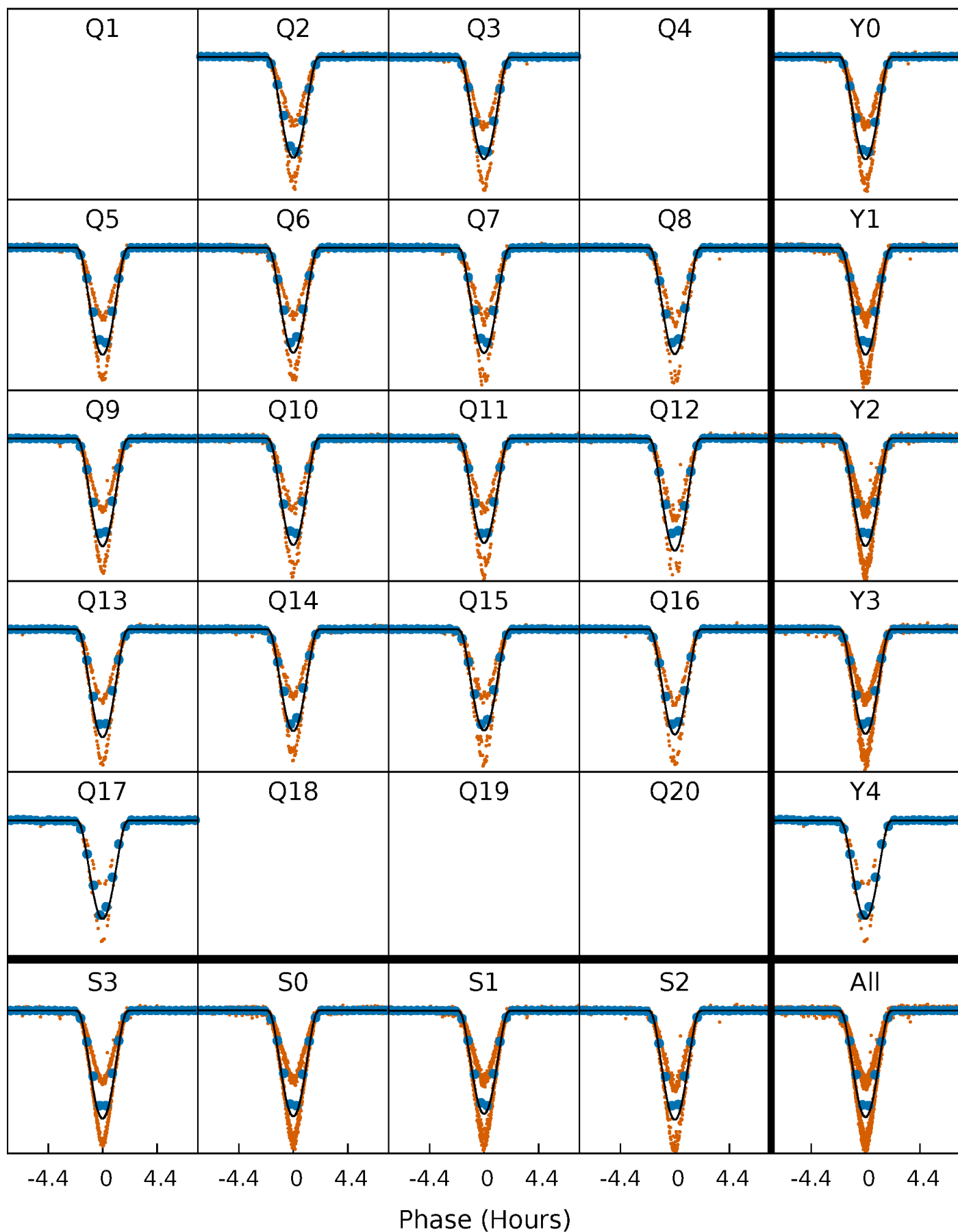
PDC Quarter-Phased Transit Curves

TCE 002019076-01 P= 3.564618 Days $T_0=131.861577$ (BKJD)



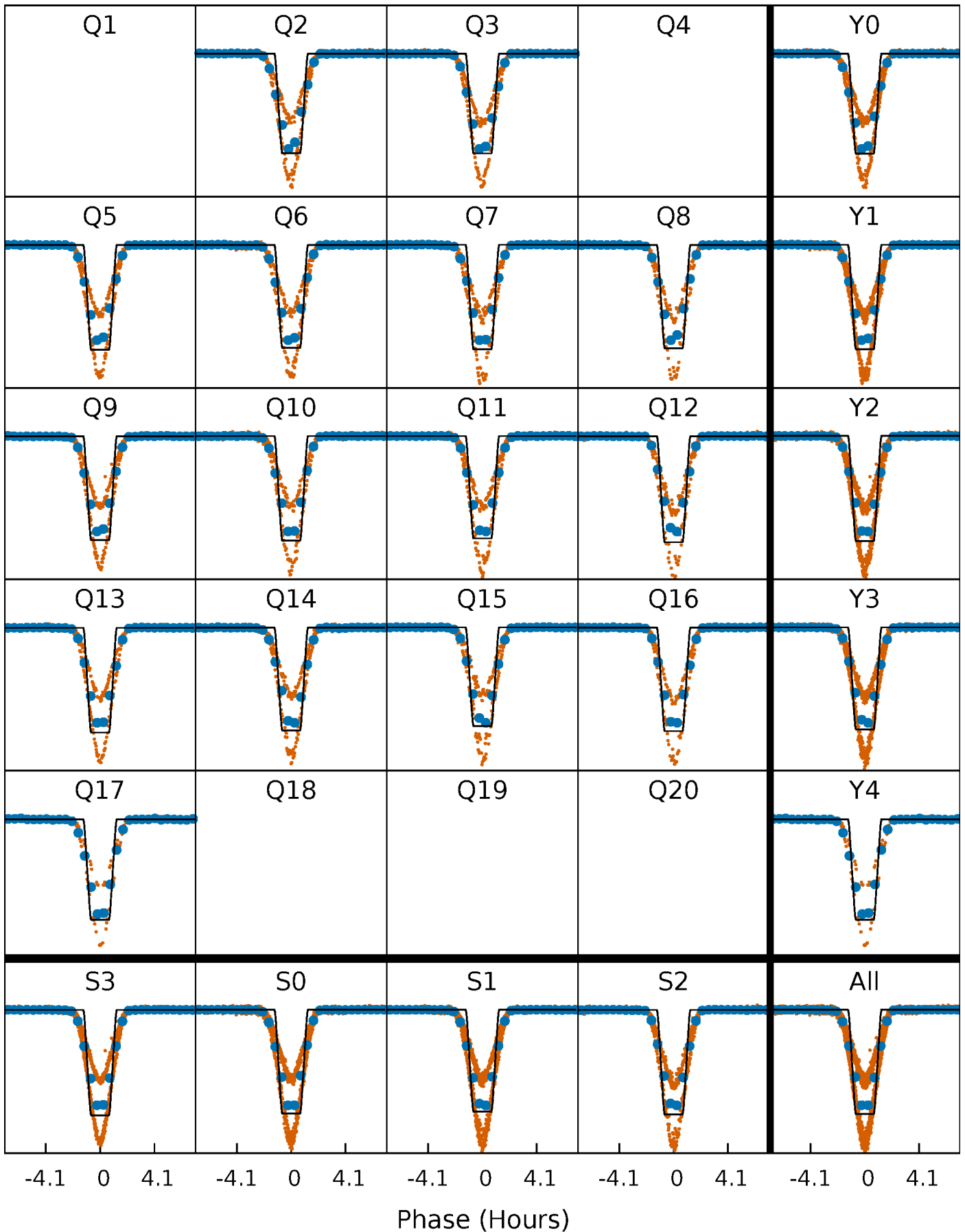
DV Quarter-Phased Transit Curves

TCE 002019076-01 P= 3.564618 Days $T_0=131.861577$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

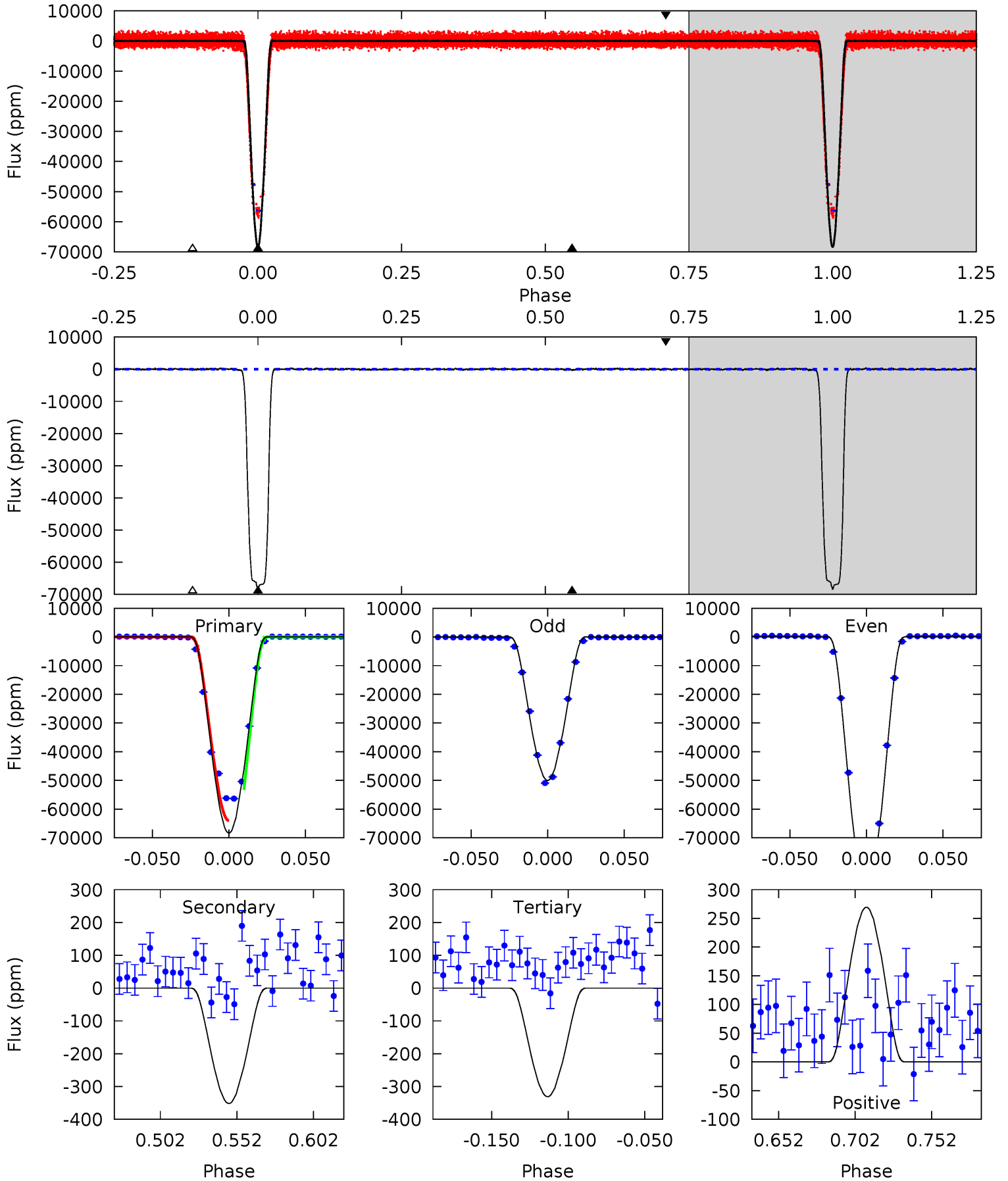
TCE 002019076-01 P= 3.564604 Days $T_0=131.864521$ (BKJD)



DV Model-Shift Uniqueness Test

002019076-01, P = 3.564618 Days, E = 131.861577 Days

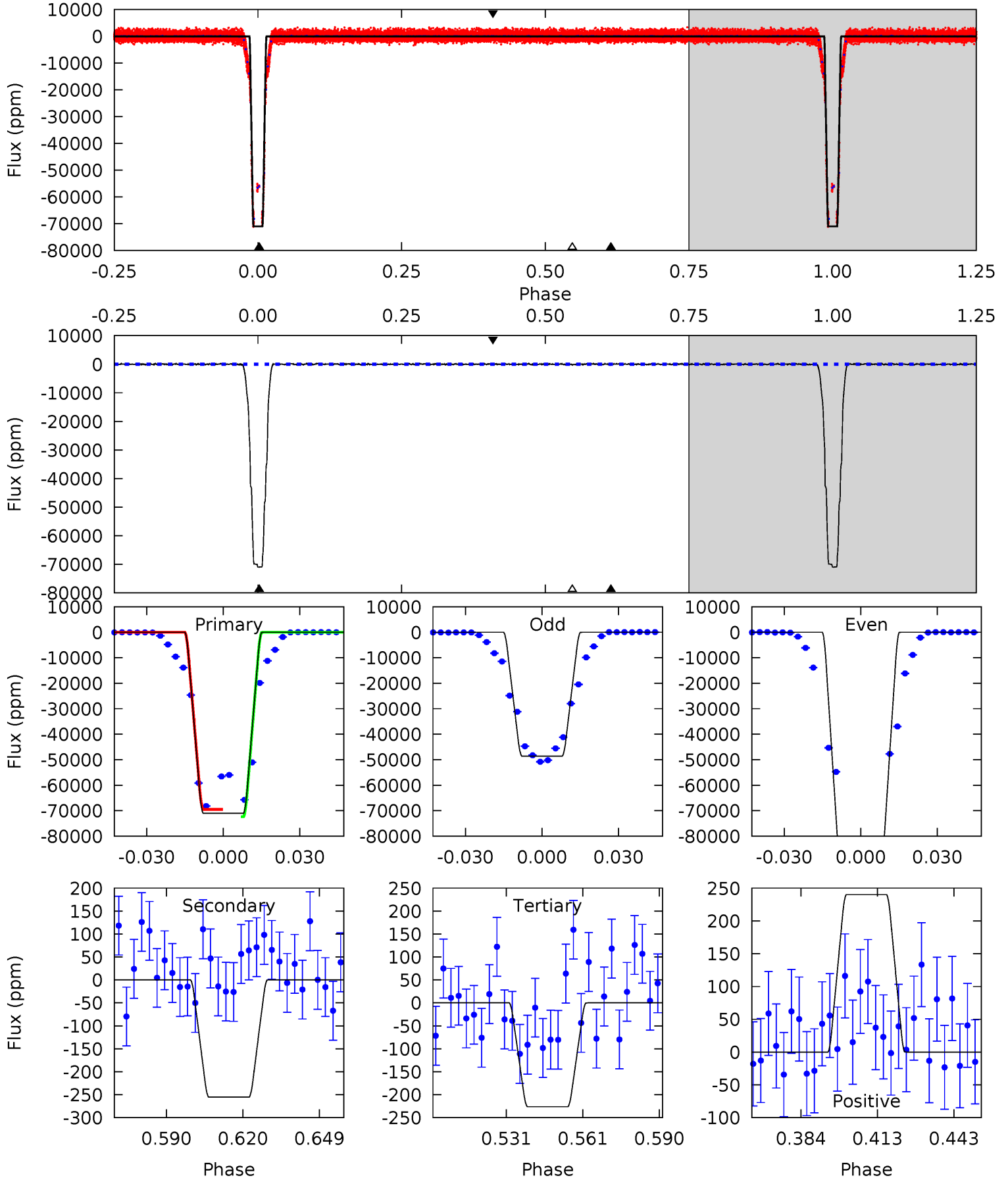
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2699	13.9	13.1	10.6	4.71	1.96	3.92	2686	2688	0.82	3.25	1220	1.26	0.01	0



Alt Model-Shift Uniqueness Test

002019076-01, P = 3.564604 Days, E = 131.864521 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1314	4.73	4.19	4.44	4.81	2.18	1.41	1310	1310	0.54	0.29	667.1	0.91	0.00	0



Stellar Parameters For KIC 002019076

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5891^{+177}_{-195}	$4.450^{+0.112}_{-0.168}$	$-0.560^{+0.300}_{-0.300}$	$0.892^{+0.231}_{-0.124}$	$0.818^{+0.103}_{-0.063}$	$1.621^{+0.823}_{-0.742}$
	+3%/-3%	+3%/-4%	+54%/-54%	+26%/-14%	+13%/-8%	+51%/-46%
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 002019076-01 / KOI 3585.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-352 ± 25	$38.54^{+5.83}_{-5.01}$	1660^{+111}_{-85}	-1925^{+3514}_{-194}	$0.236^{+0.073}_{-0.060}$
Alt.	-255 ± 54	$27.74^{+5.44}_{-4.28}$	1664^{+108}_{-91}	1802^{+342}_{-3824}	$0.330^{+0.150}_{-0.112}$

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

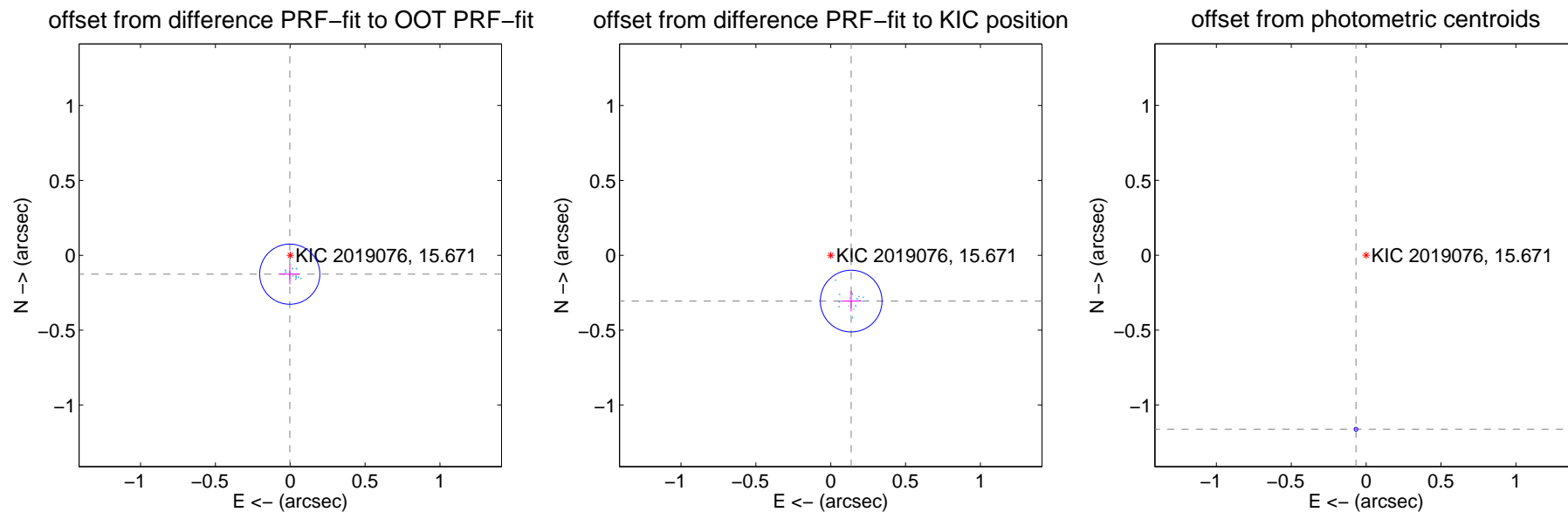
DV Centroid Data

Supplemental centroid analysis for 002019076-01. Kepler magnitude: 15.67. Transit SNR 1256.10

There are 15 quarters with good PRF difference image offsets

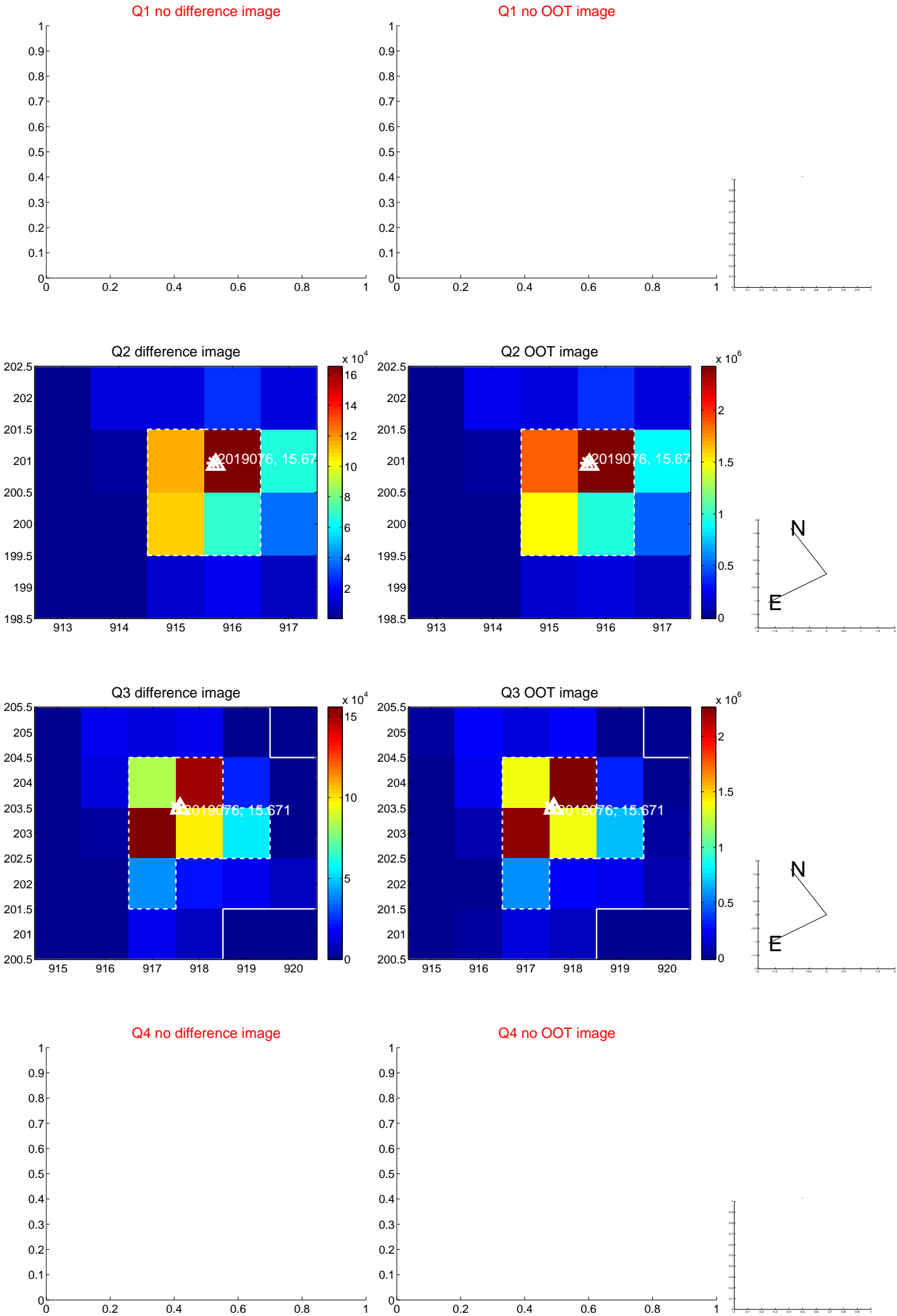
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.126 ± 0.067	1.88	0.003 ± 0.067	-0.126 ± 0.067
PRF-fit source offset from KIC position	0.335 ± 0.069	4.88	-0.137 ± 0.069	-0.306 ± 0.068
photometric centroid source offset	1.16 ± 0.00	276.29	0.07 ± 0.00	-1.16 ± 0.00

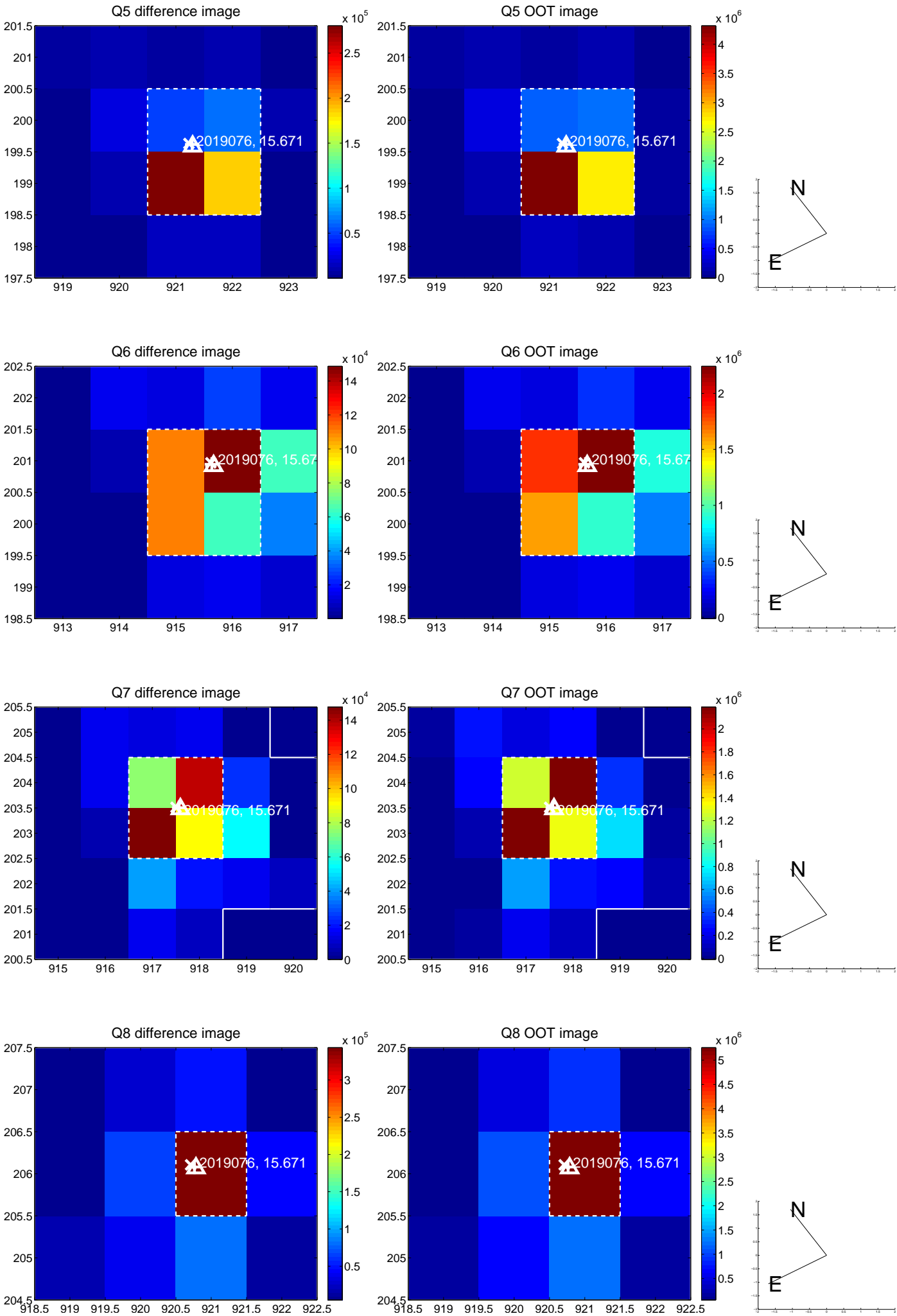


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

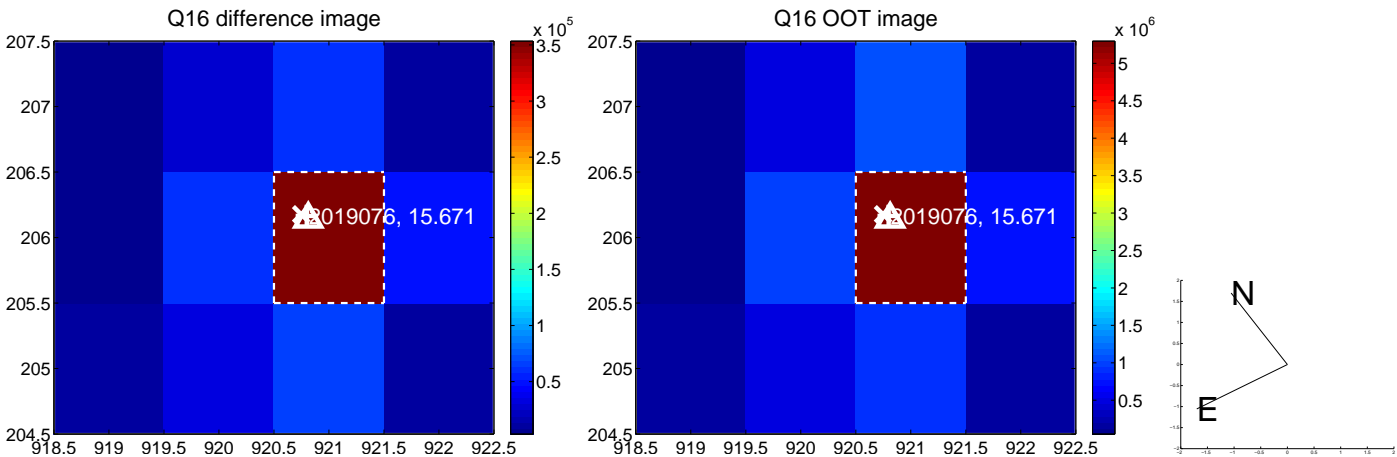
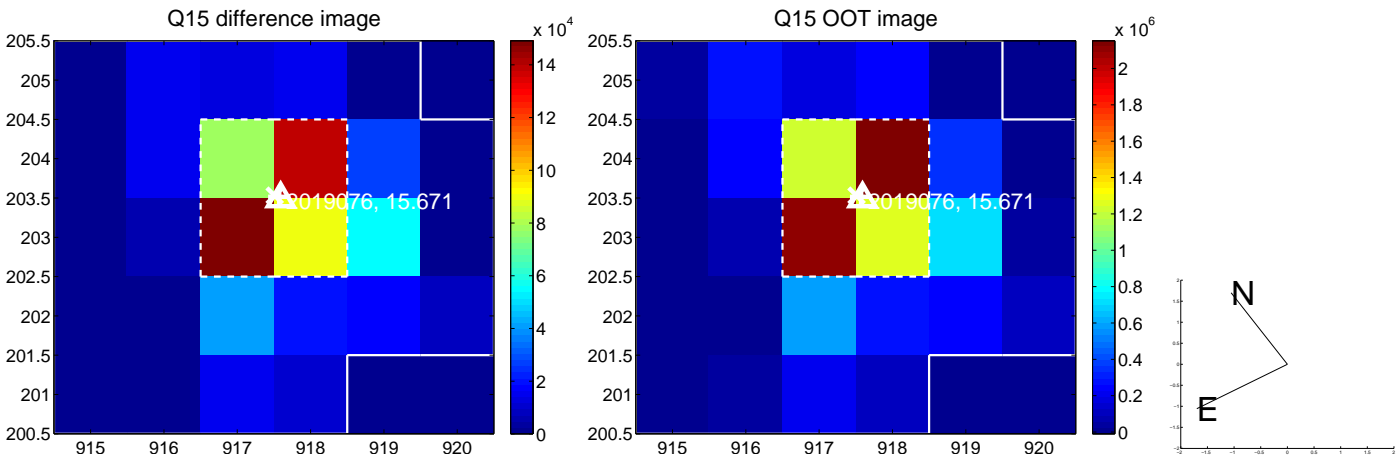
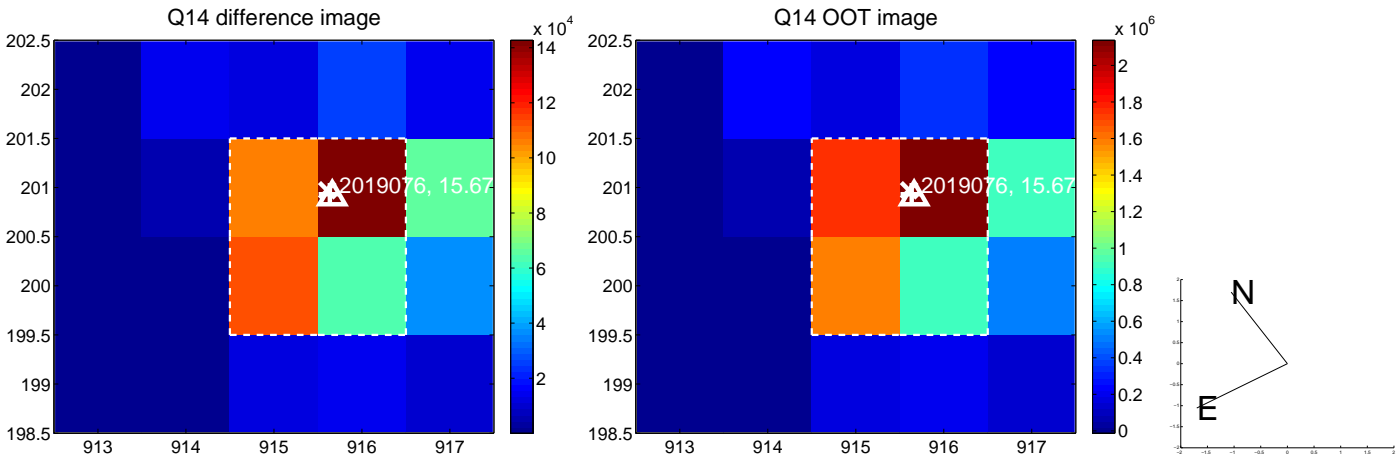
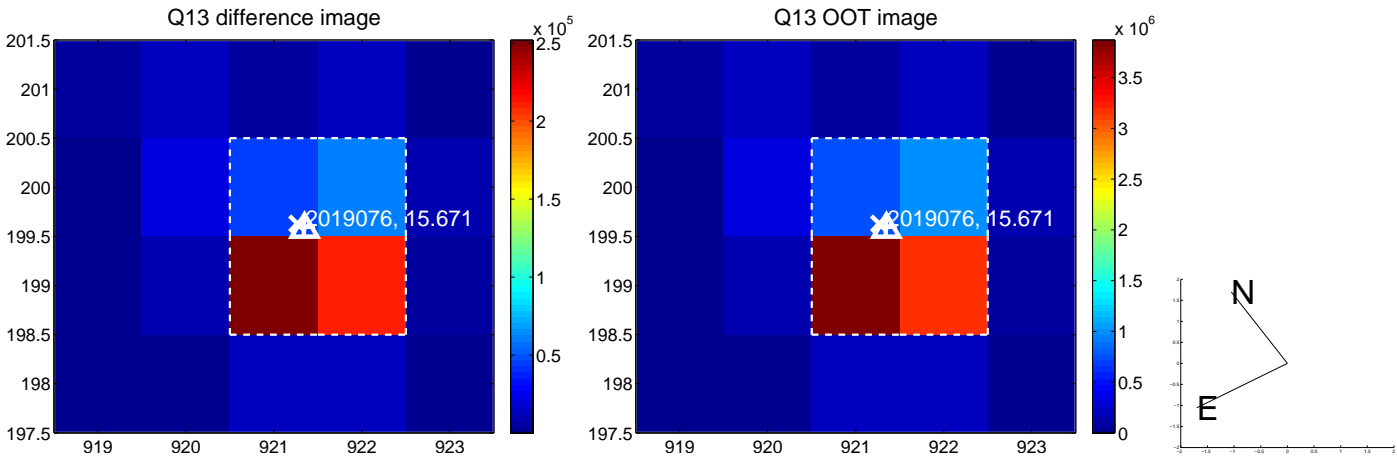
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



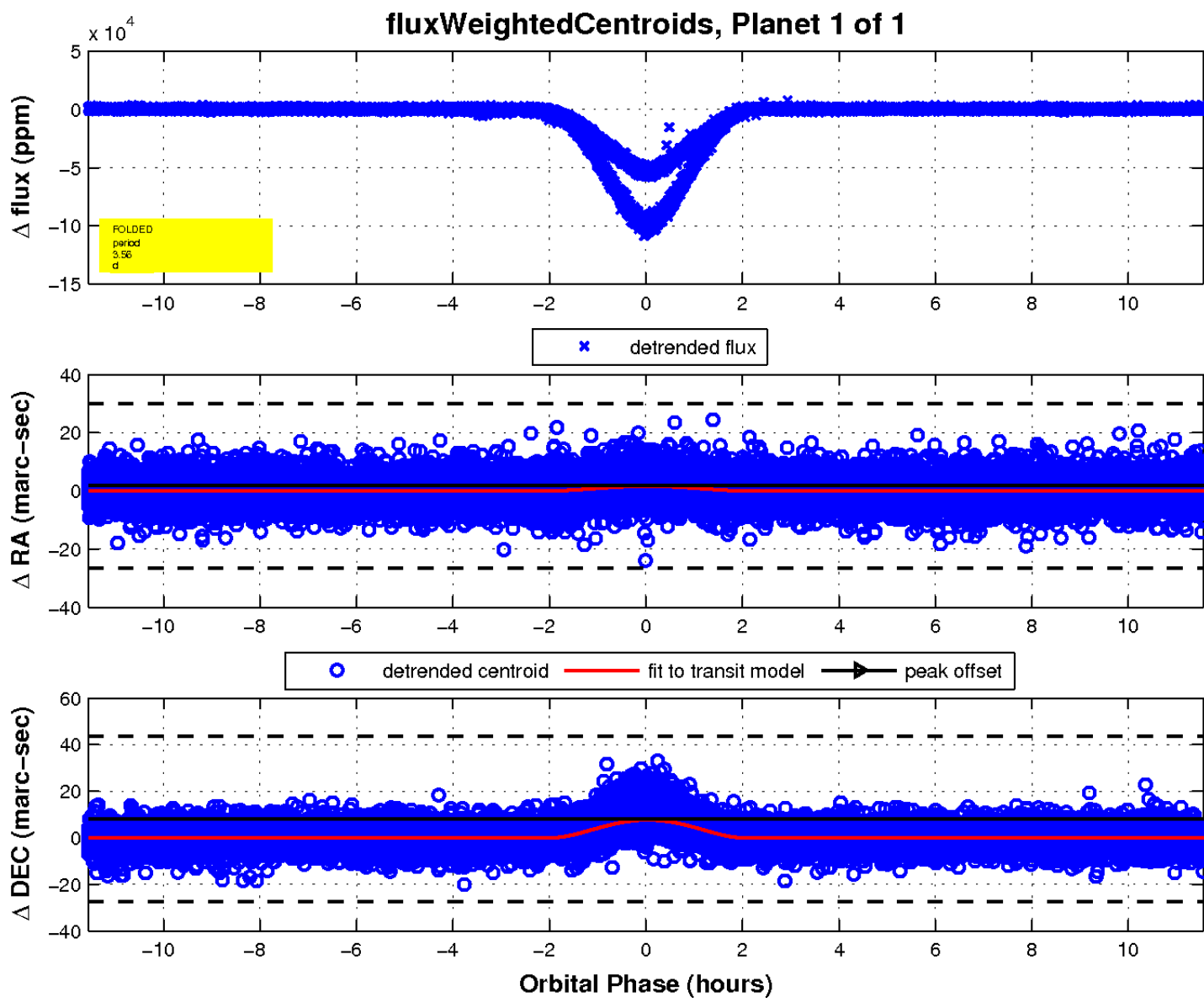
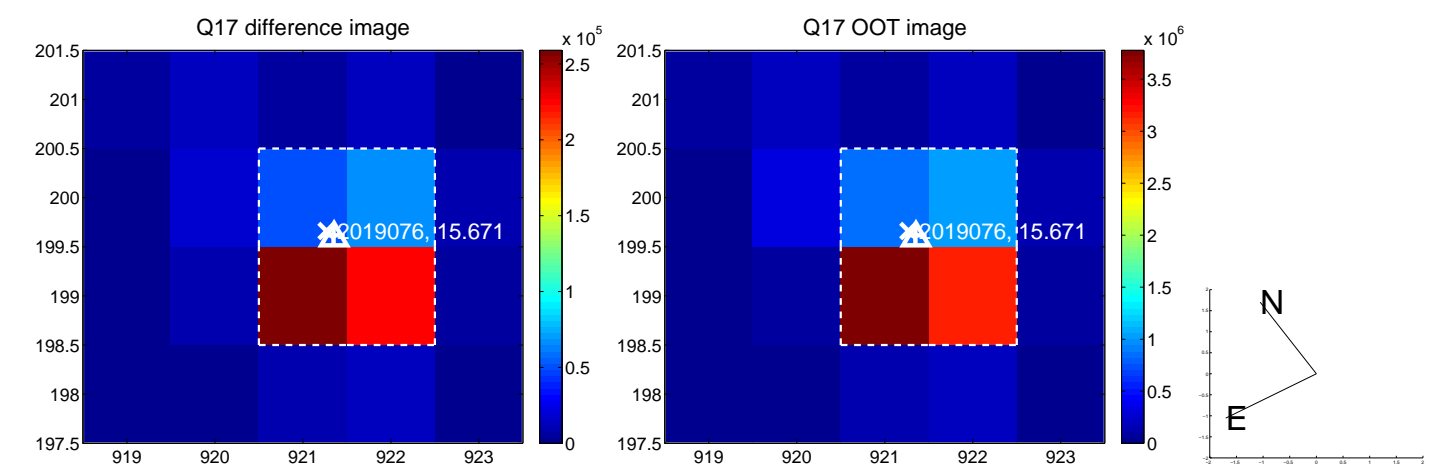
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

