

KIC 010068919

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})
010068919-01	OBS	3573.01	43.562244	153.270897	50987.9	3.692	1590.9	1464.3	1.22	6411	46.99	35.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010068919-01	OBS	FP	0.00	0	1	0	0	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.

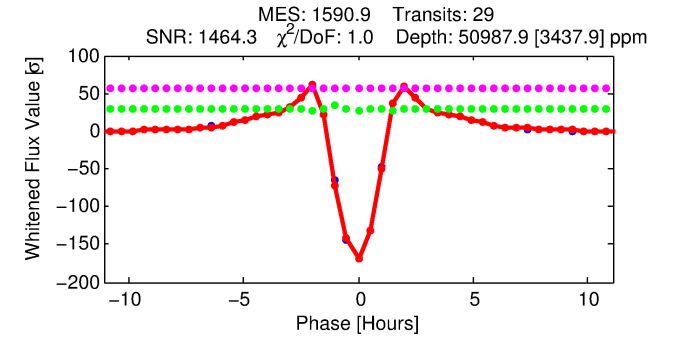
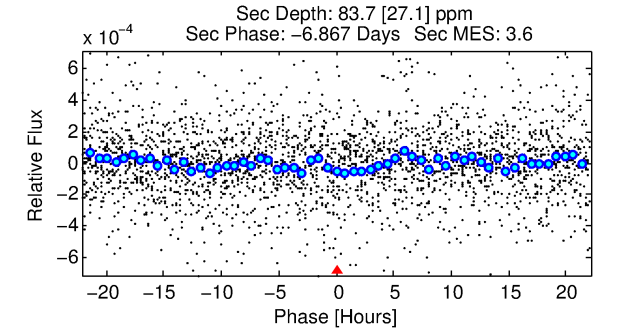
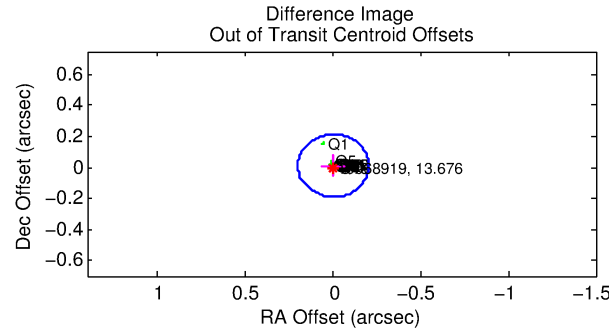
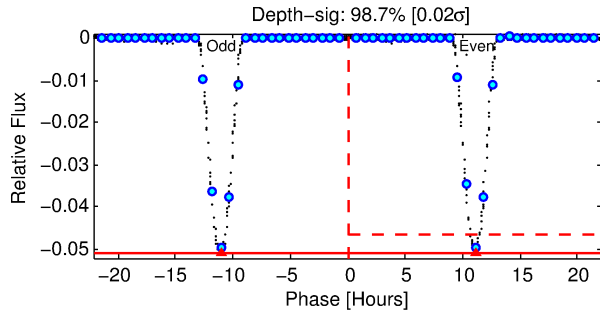
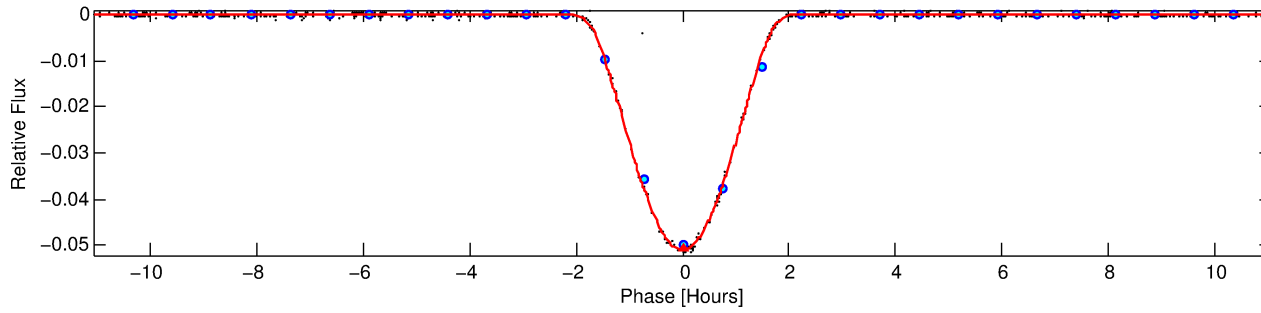
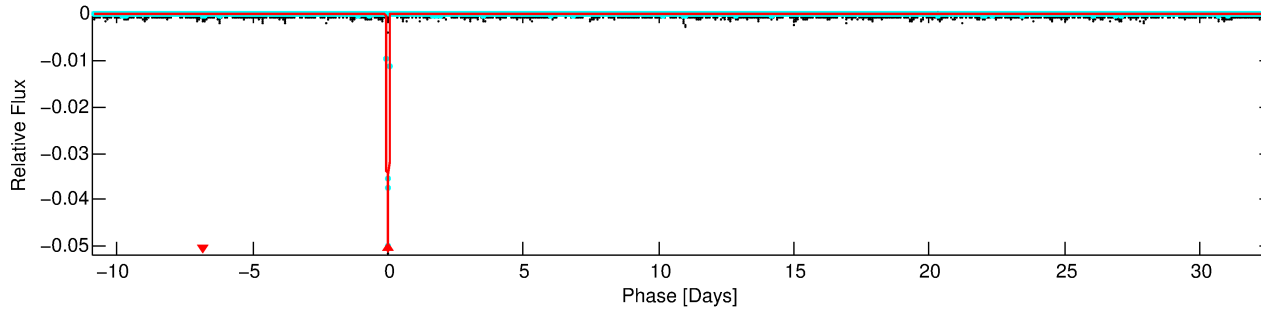
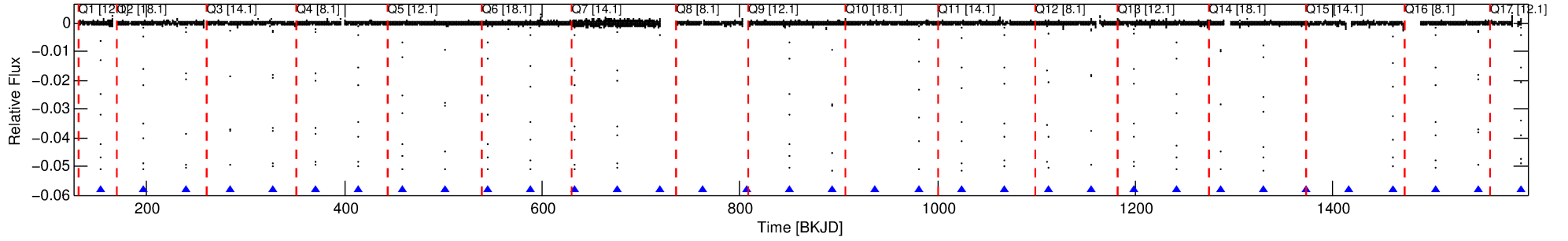
Ephemeris Match Information For 010068919-01

No Significant Match Found

DV One-Page Summary

KIC: 10068919 Candidate: 1 of 1 Period: 43.562 d
KOI: K03573.01 Corr: 0.997

Kp: 13.68 R*: 1.22 Rs Teff: 6411.0 K Logg: 4.31 Fe/H: -0.200



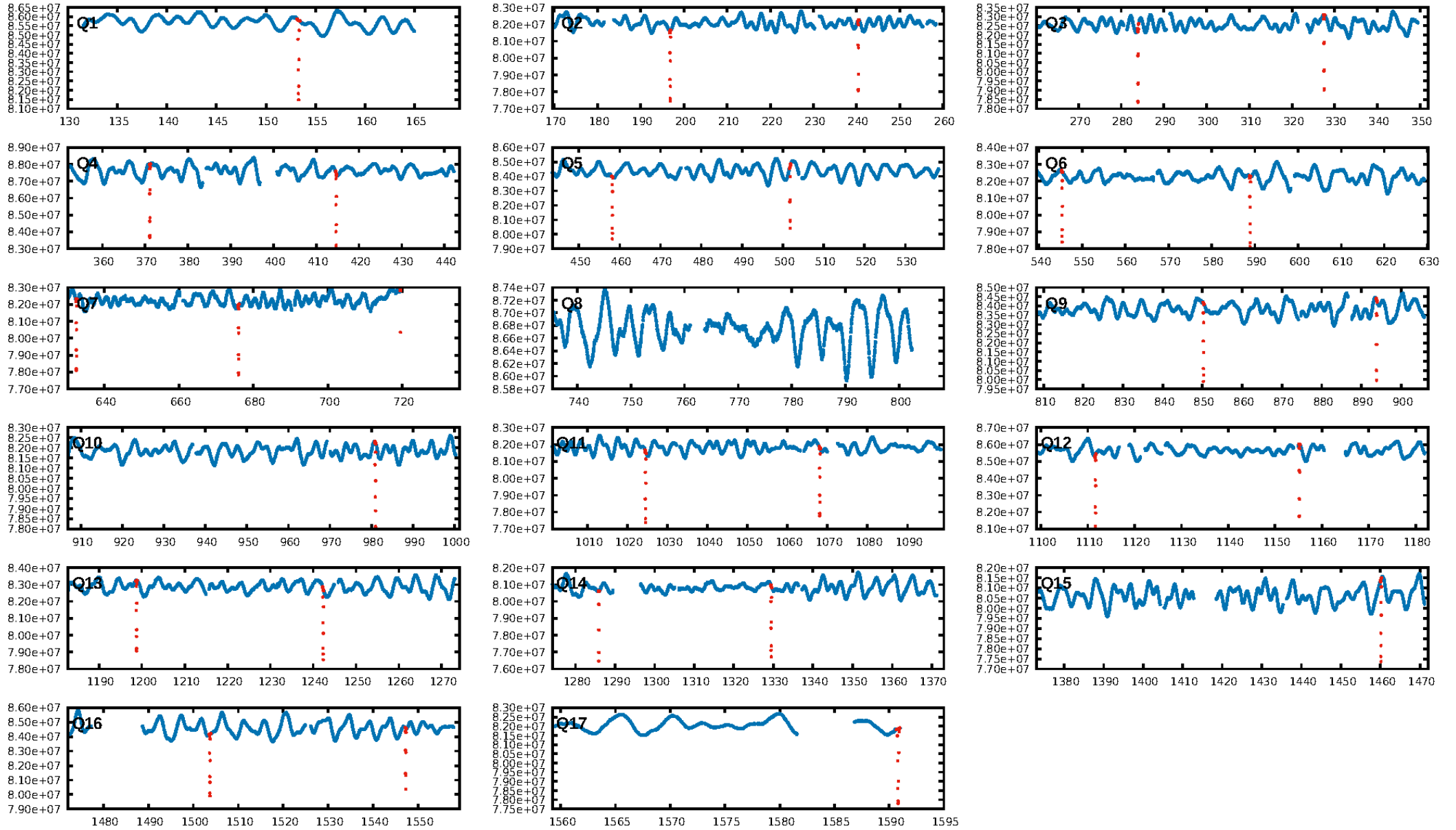
DV Fit Results:

Period = 43.56224 [0.00000] d
Epoch = 153.2709 [0.0000] BKJD
Rp/R* = 0.3541 [0.0219]
a/R* = 82.30 [0.09]
b = 1.00 [0.04]
Seff = 35.90 [14.10]
Teq = 624 [61] K
Rp = 46.99 [15.12] Re
a = 0.2497 [0.0652] AU
Ag = 1.30 [0.66] [0.45σ]
Teffp = 1031 [95] K [3.60σ]

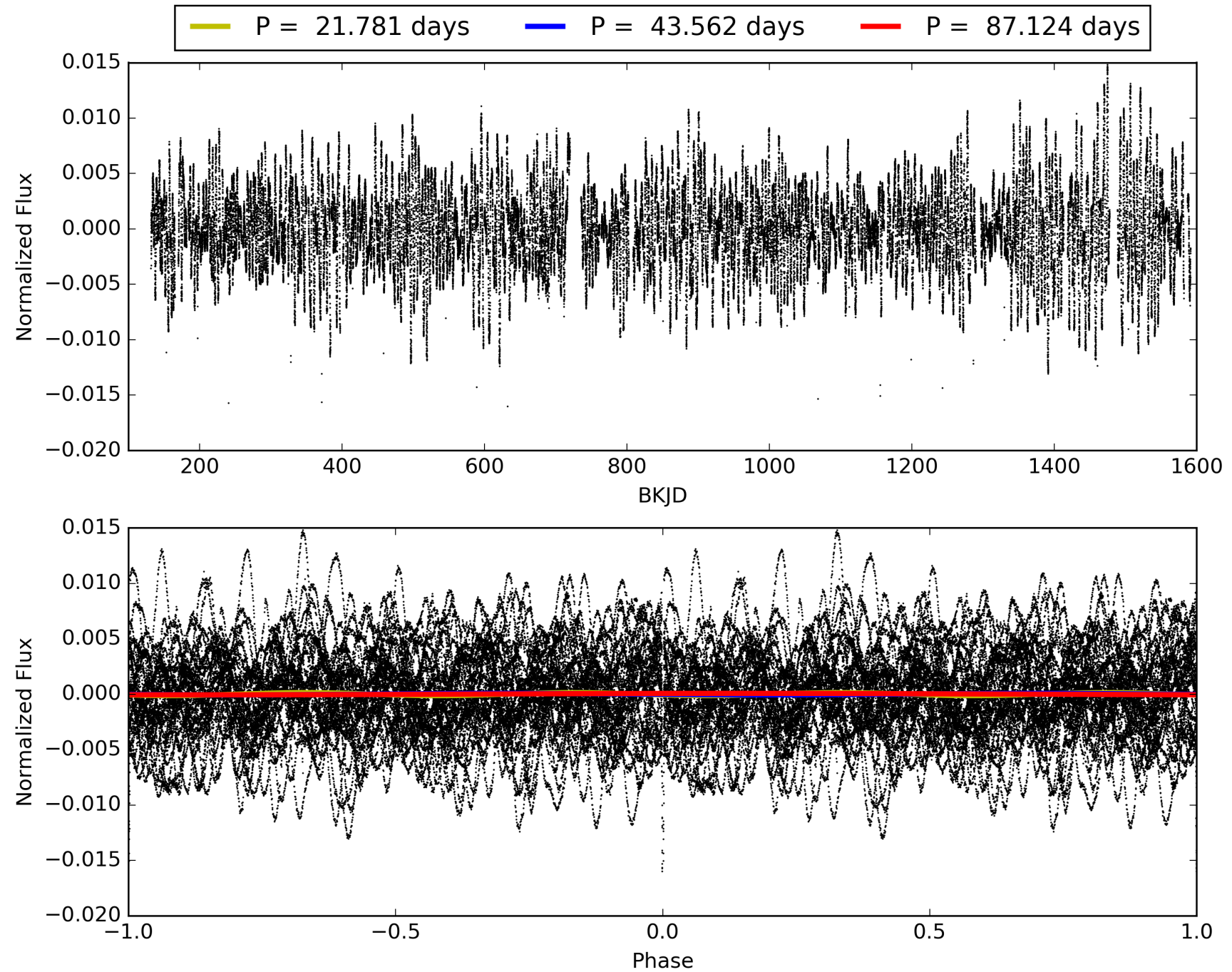
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 58.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [27/27]
GhostDiagnostic-chr: 3.991
Centroid-sig: 0.0%
Centroid-so: 0.160 arcsec [32.87σ]
OotOffset-rm: 0.012 arcsec [0.18σ]
KicOffset-rm: 0.023 arcsec [0.34σ]
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]

TCE 010068919-01, PDC Light Curves

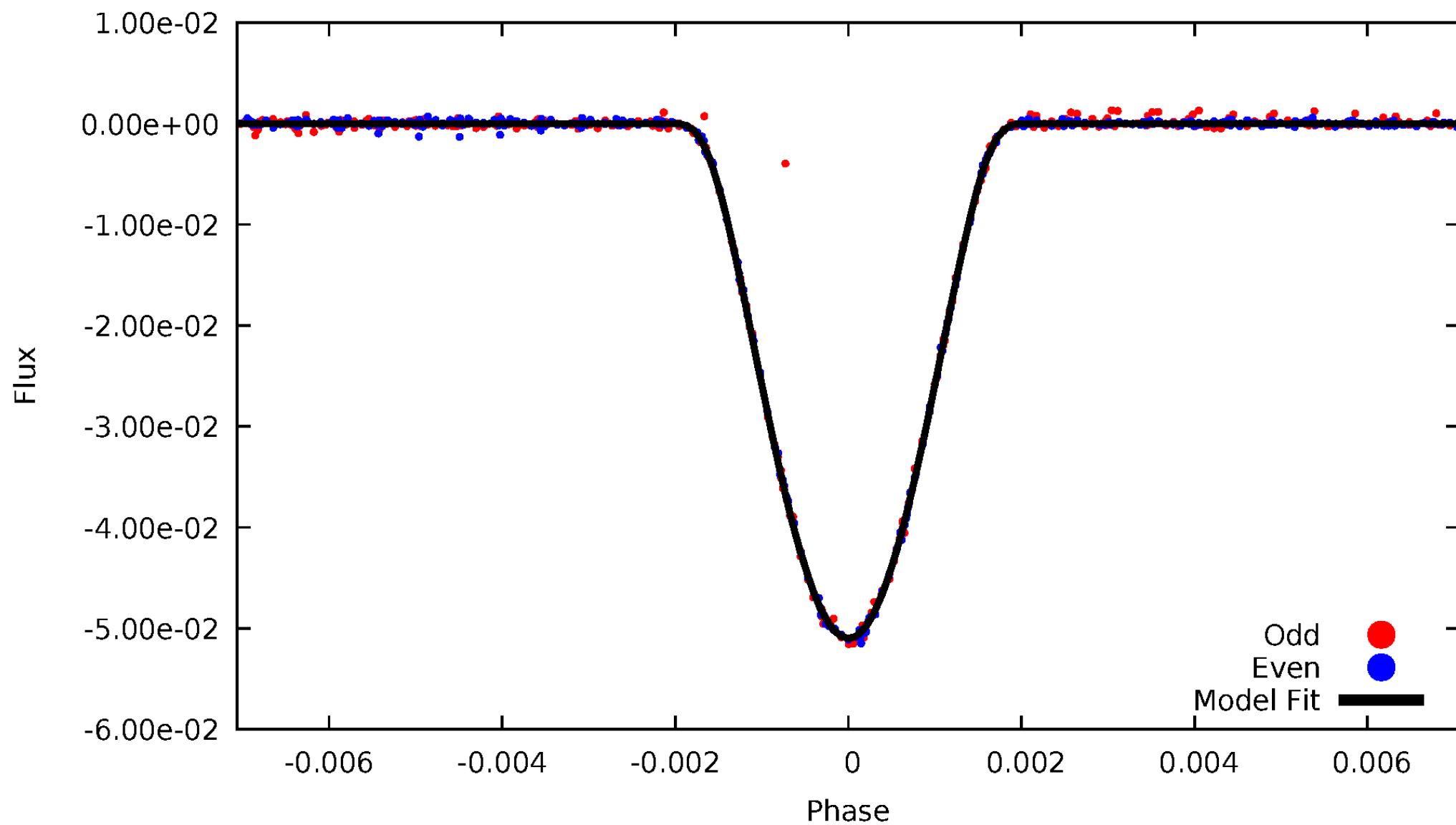


TCE 010068919-01



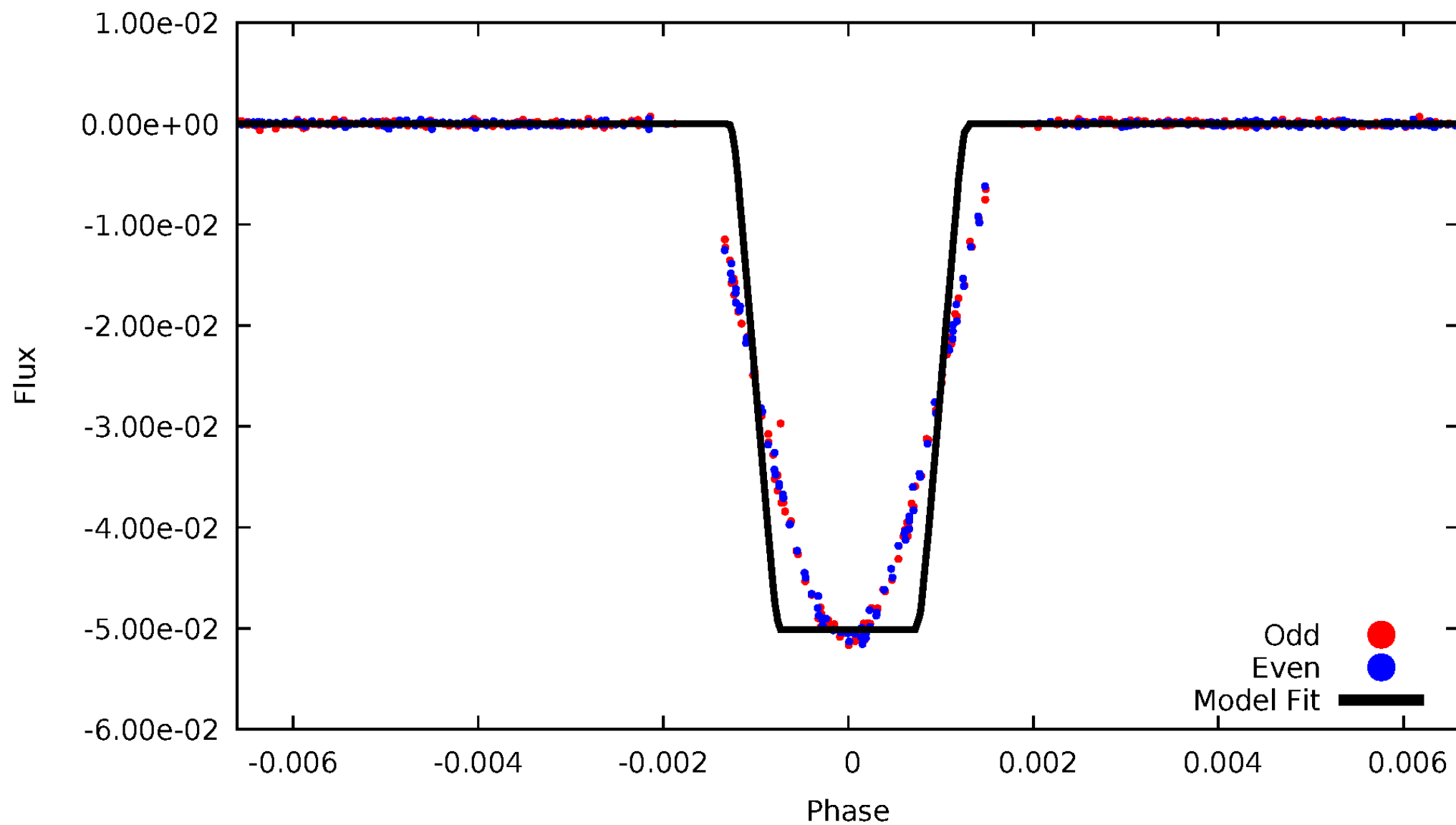
DV Odd/Even

TCE 010068919-01



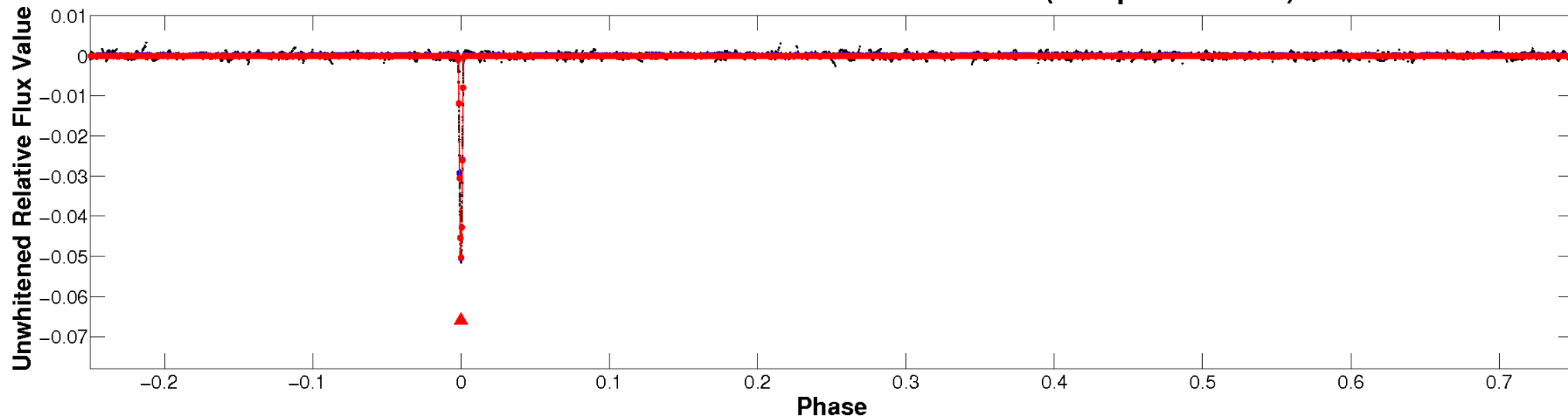
ALT Odd/Even

TCE 010068919-01

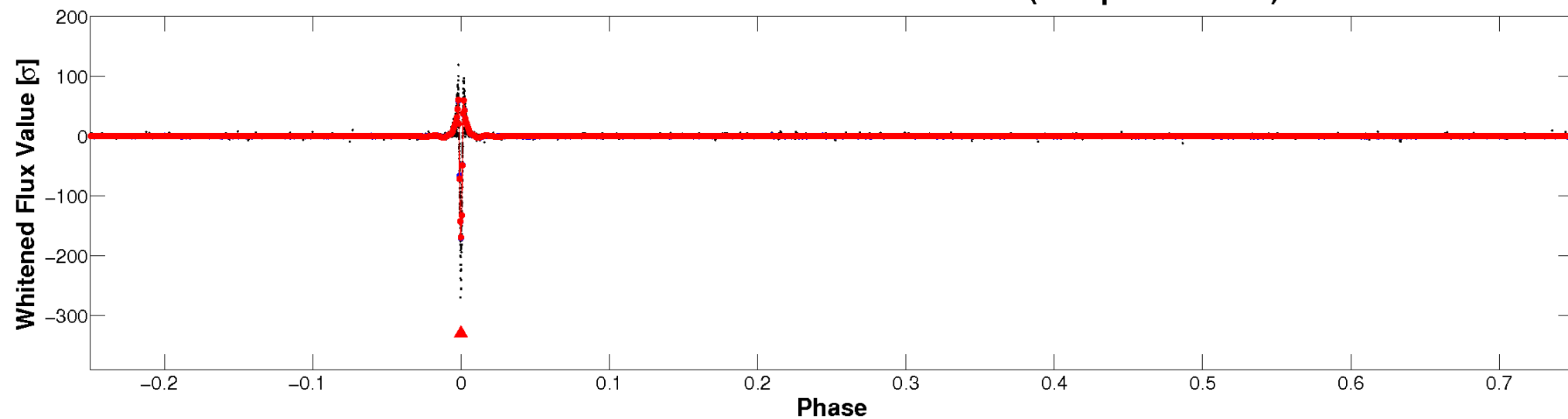


Non-Whitened Vs. Whitened Light Curve

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

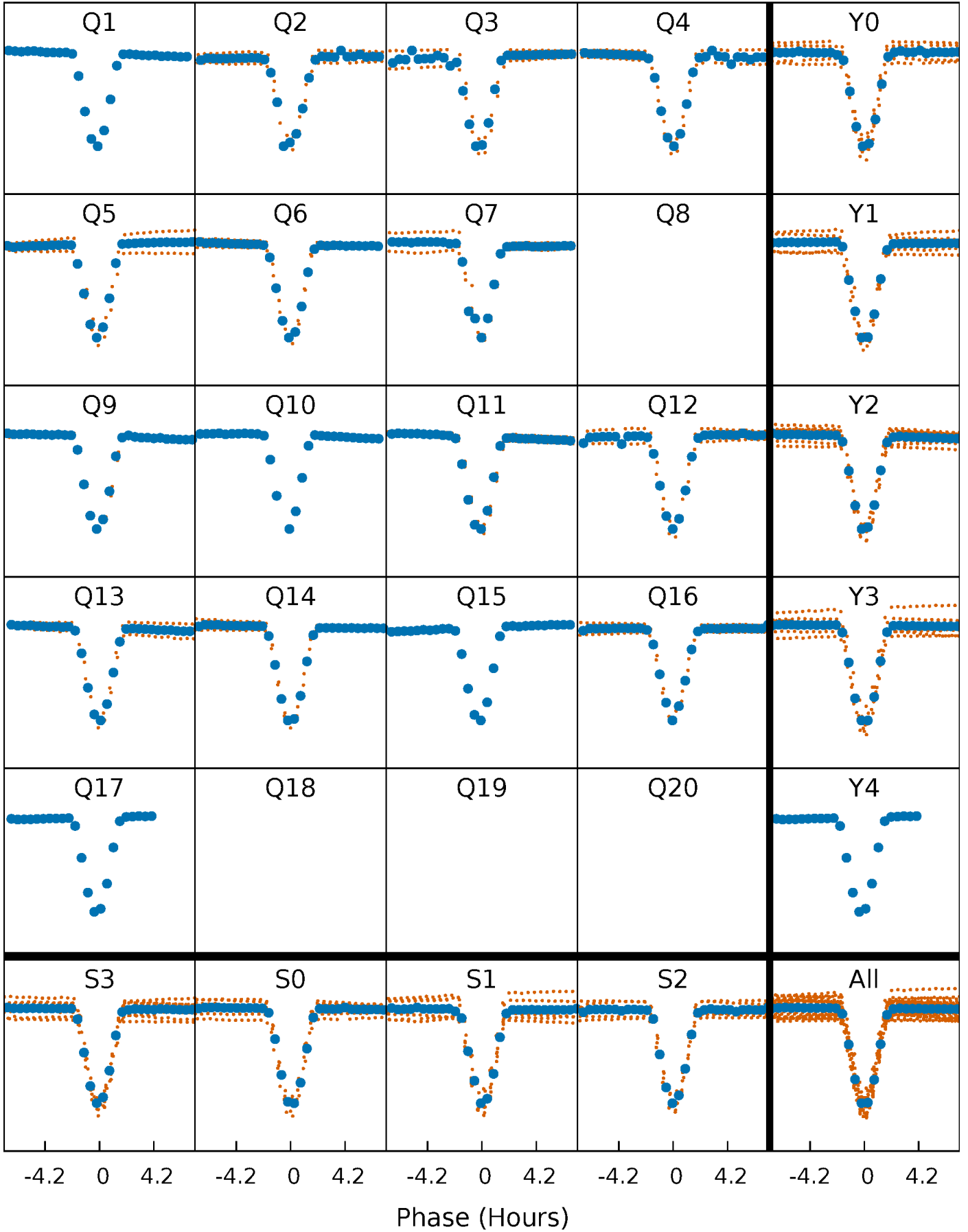


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



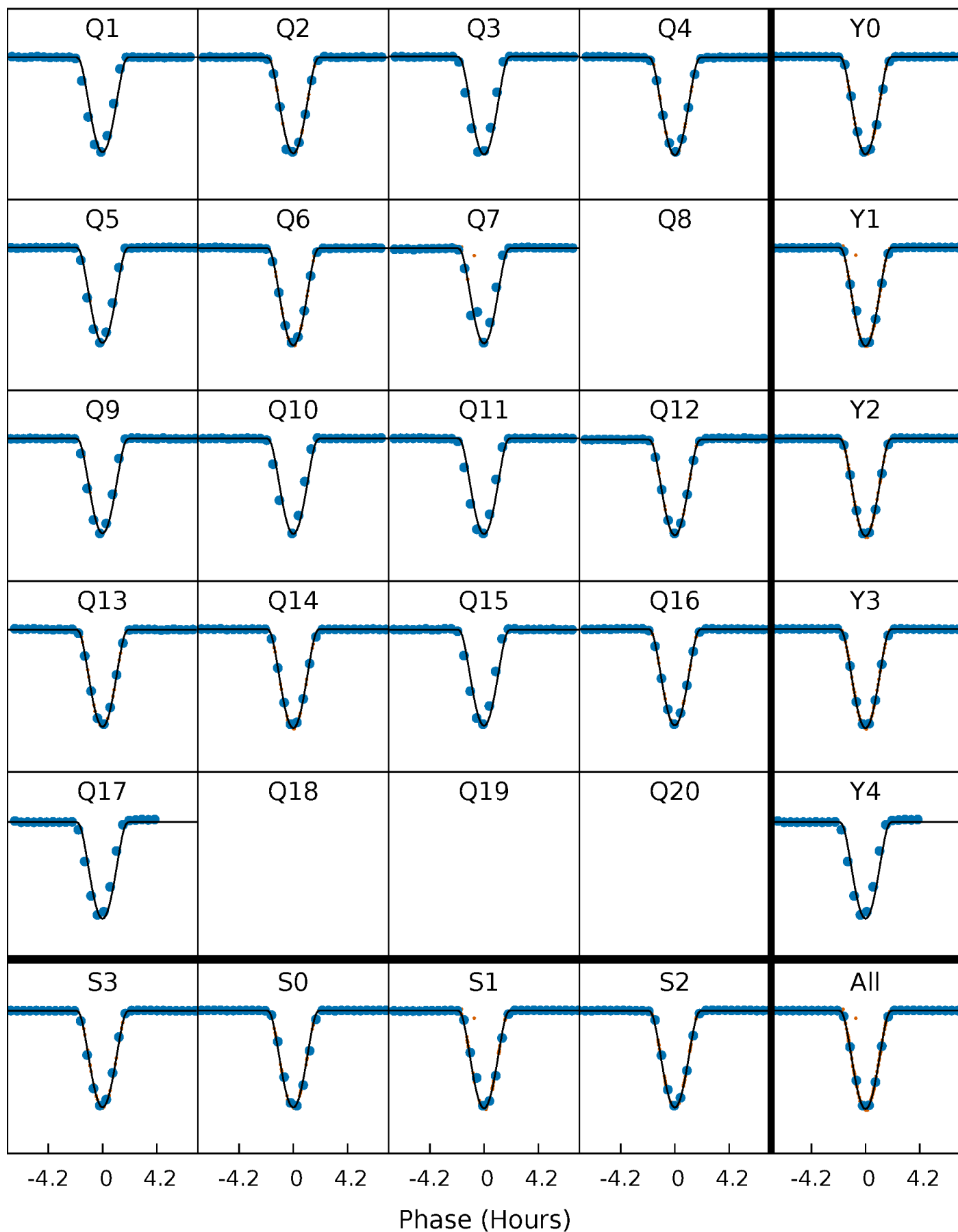
PDC Quarter-Phased Transit Curves

TCE 010068919-01 P= 43.562244 Days $T_0=153.270897$ (BKJD)



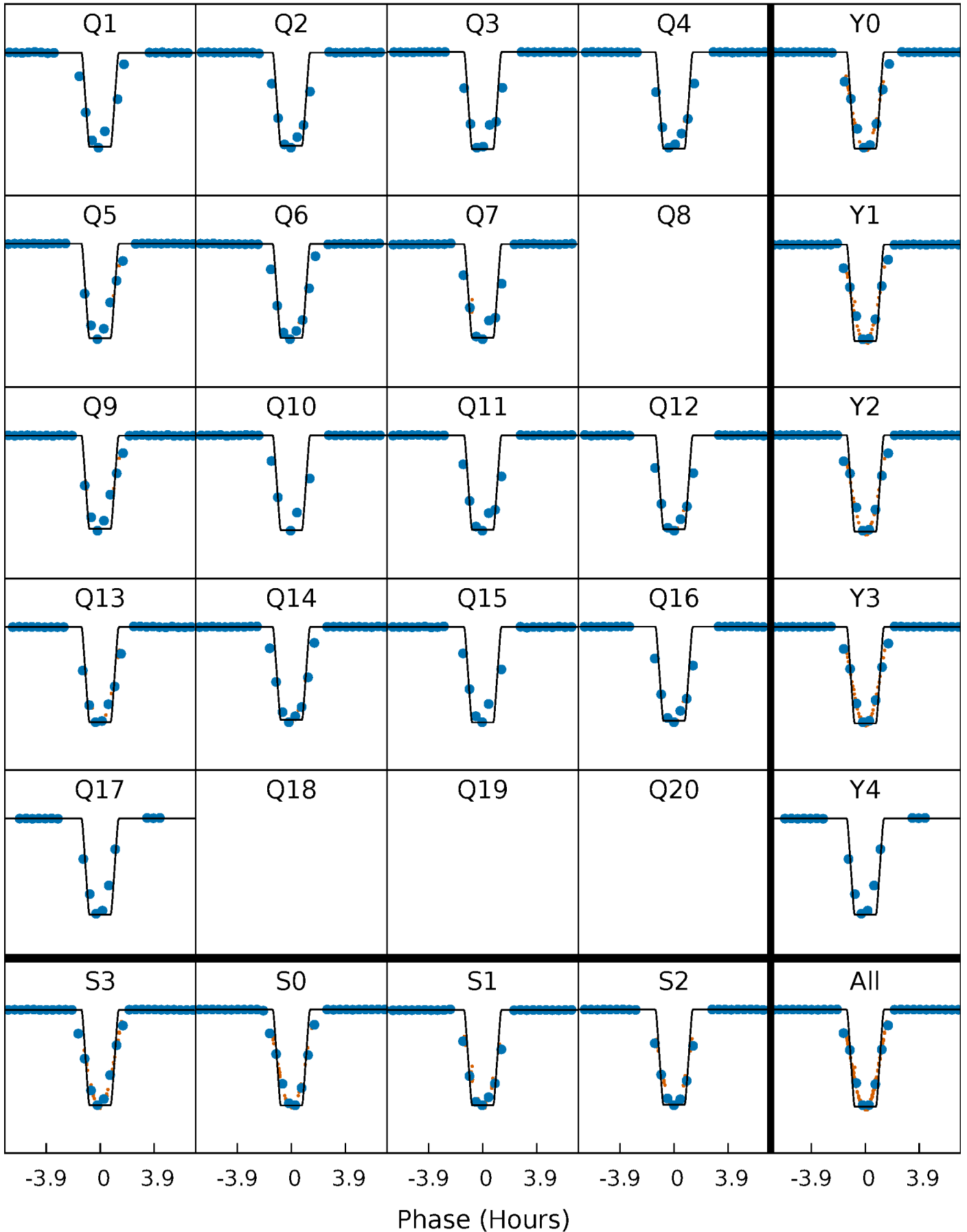
DV Quarter-Phased Transit Curves

TCE 010068919-01 P= 43.562244 Days $T_0=153.270897$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

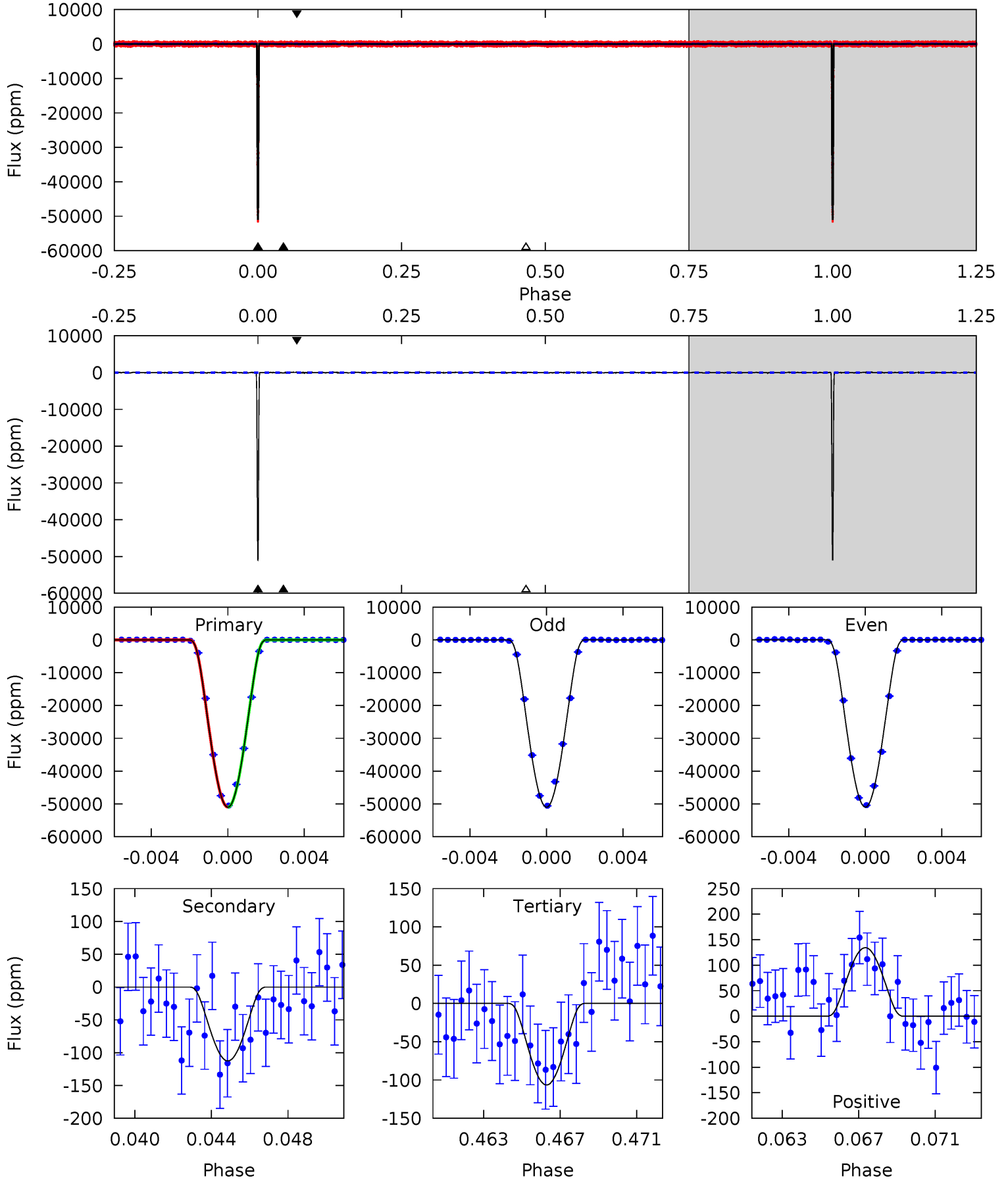
TCE 010068919-01 P= 43.562197 Days $T_0=153.271695$ (BKJD)



DV Model-Shift Uniqueness Test

010068919-01, P = 43.562244 Days, E = 109.708653 Days

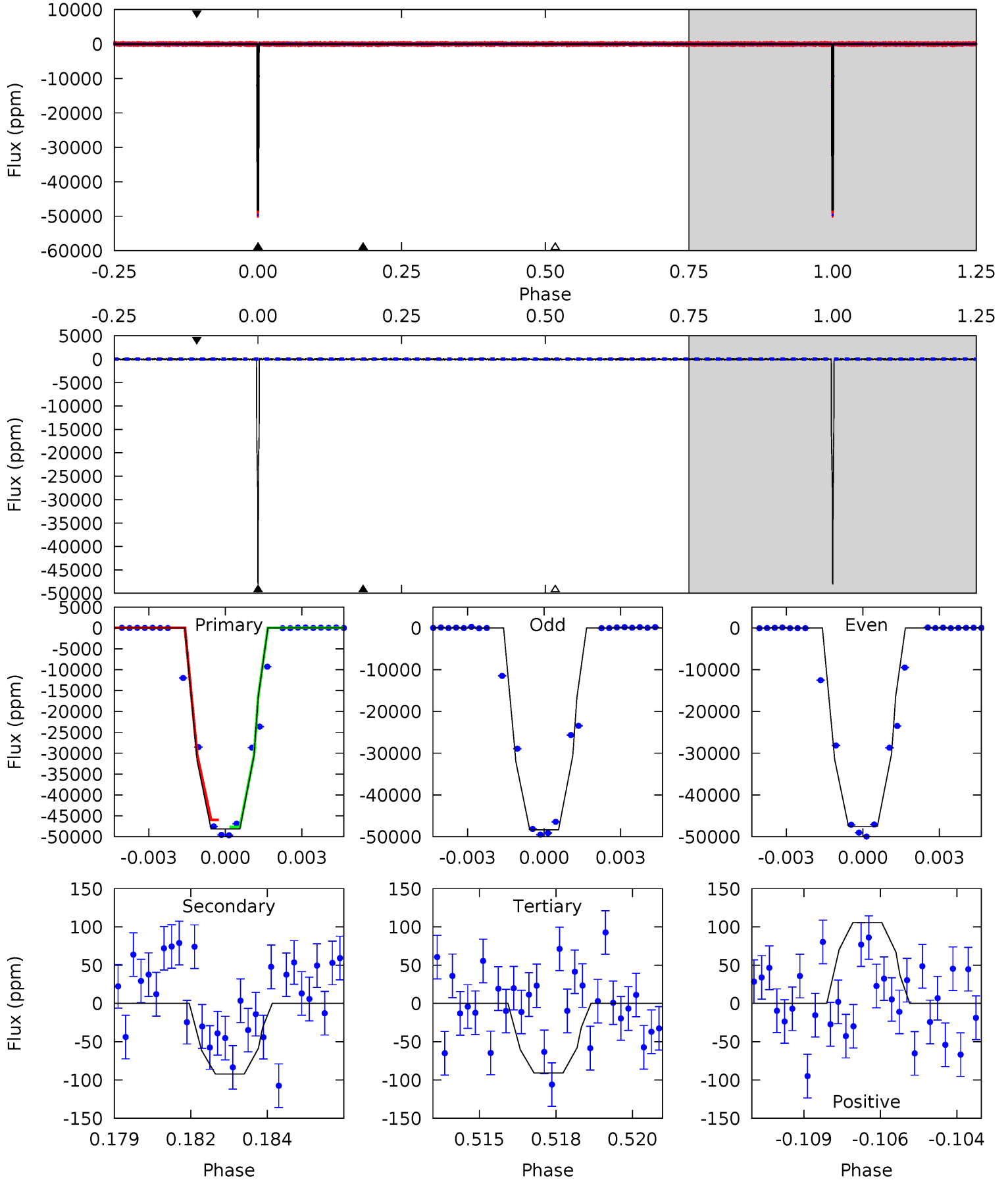
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3449	7.61	7.20	9.08	5.20	2.88	2.59	3442	3440	0.41	-1.47	1.10	0.97	0.00	1.06



Alt Model-Shift Uniqueness Test

010068919-01, P = 43.562197 Days, E = 109.709498 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1863	3.57	3.52	4.10	5.28	3.02	1.26	1860	1859	0.05	-0.52	14.9	1.00	0.00	0



Stellar Parameters For KIC 010068919

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6411^{+162}_{-194}	$4.307^{+0.108}_{-0.201}$	$-0.200^{+0.250}_{-0.300}$	$1.216^{+0.384}_{-0.192}$	$1.091^{+0.177}_{-0.129}$	$0.856^{+0.432}_{-0.458}$
	+3%/-3%	+3%/-5%	+125%/-150%	+32%/-16%	+16%/-12%	+50%/-54%
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 010068919-01 / KOI 3573.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-113 ± 15	$47.59^{+8.47}_{-5.28}$	881^{+60}_{-52}	2046^{+50}_{-55}	$1.661^{+0.553}_{-0.419}$
Alt.	-92 ± 26	$30.14^{+5.53}_{-4.06}$	883^{+65}_{-56}	2239^{+95}_{-108}	$3.425^{+1.672}_{-1.312}$

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 $A_{obs} \gg 1.0$

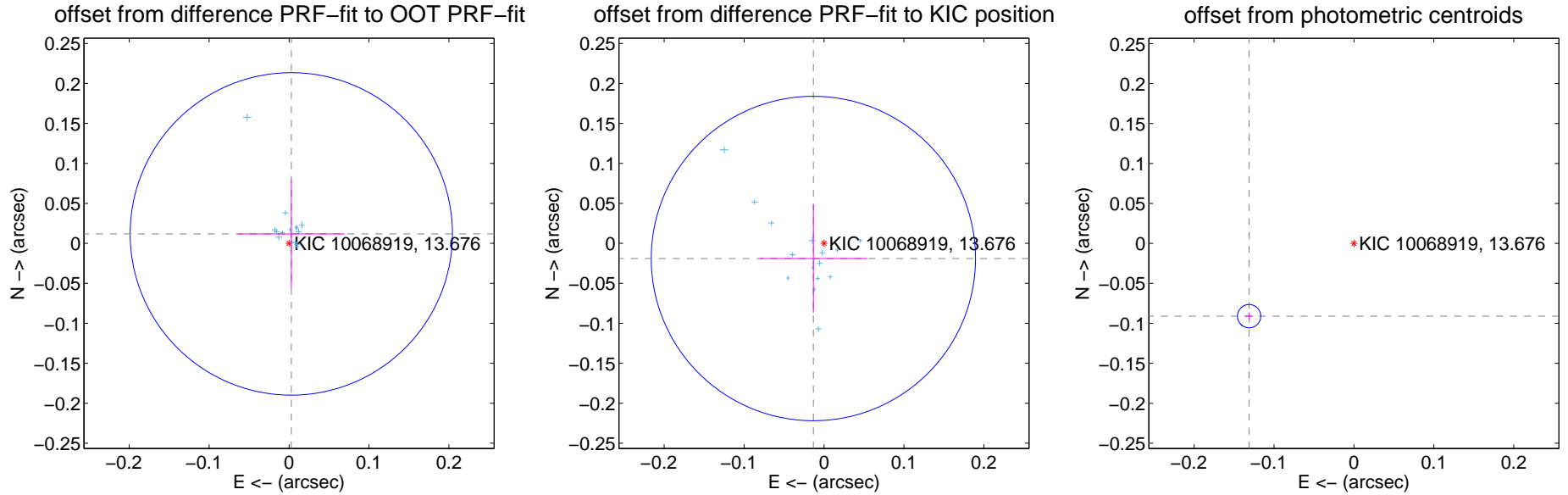
DV Centroid Data

Supplemental centroid analysis for 010068919-01. Kepler magnitude: 13.68. Transit SNR 1464.30

There are 15 quarters with good PRF difference image offsets

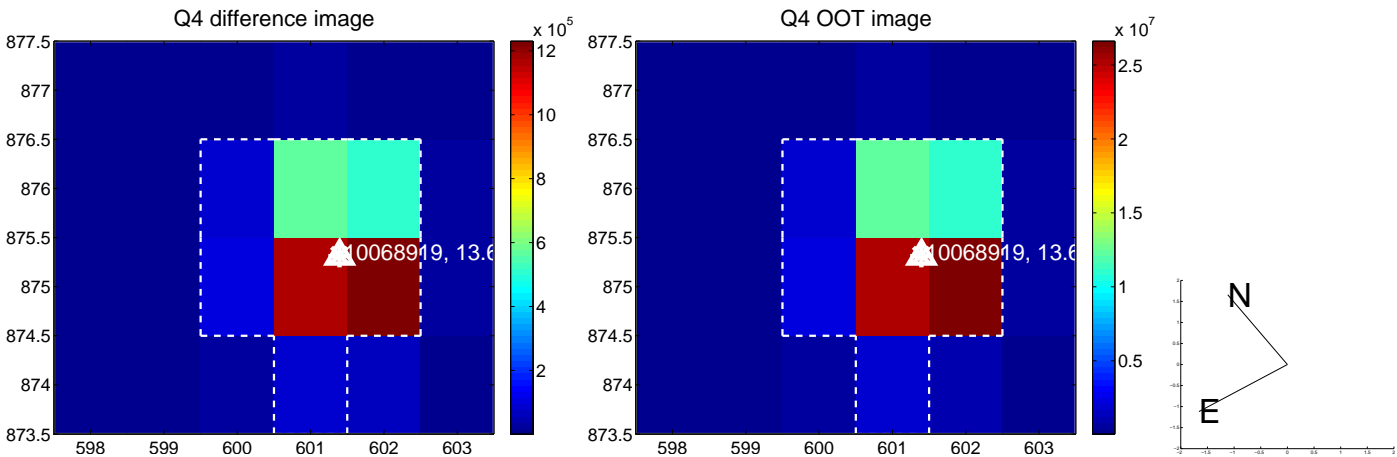
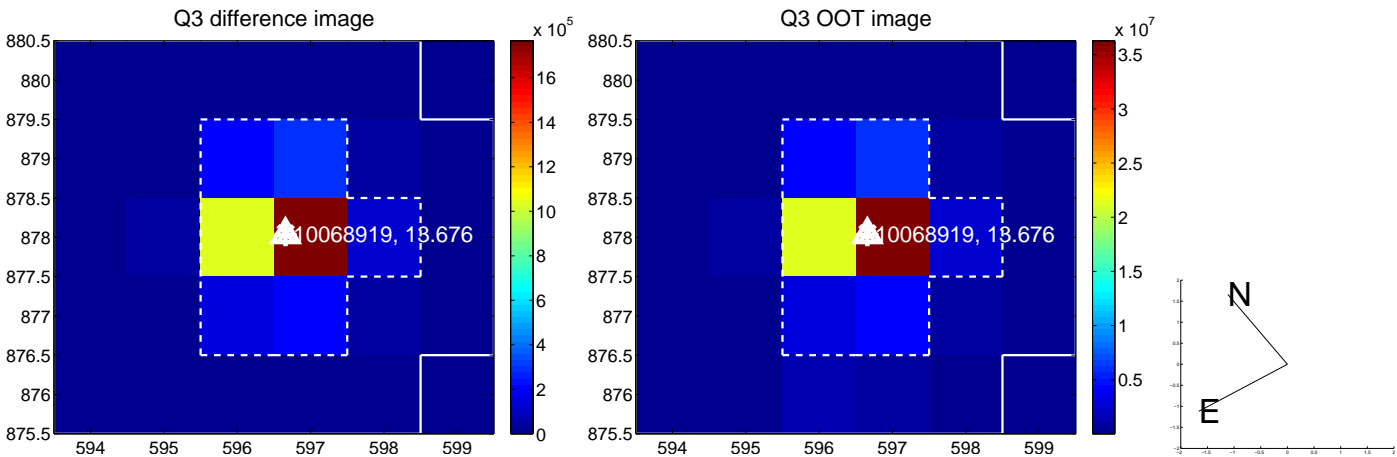
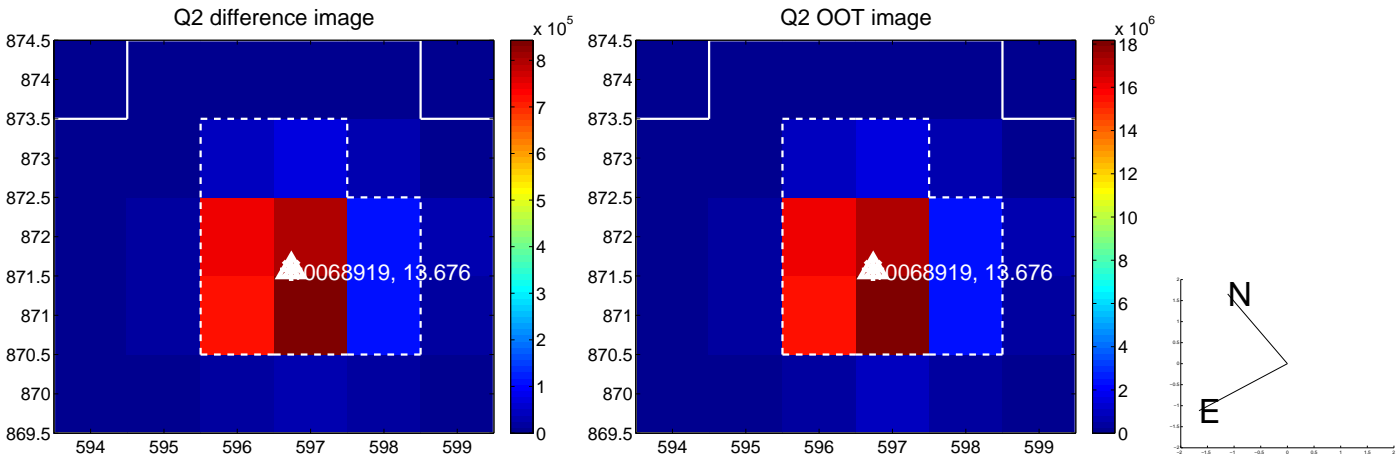
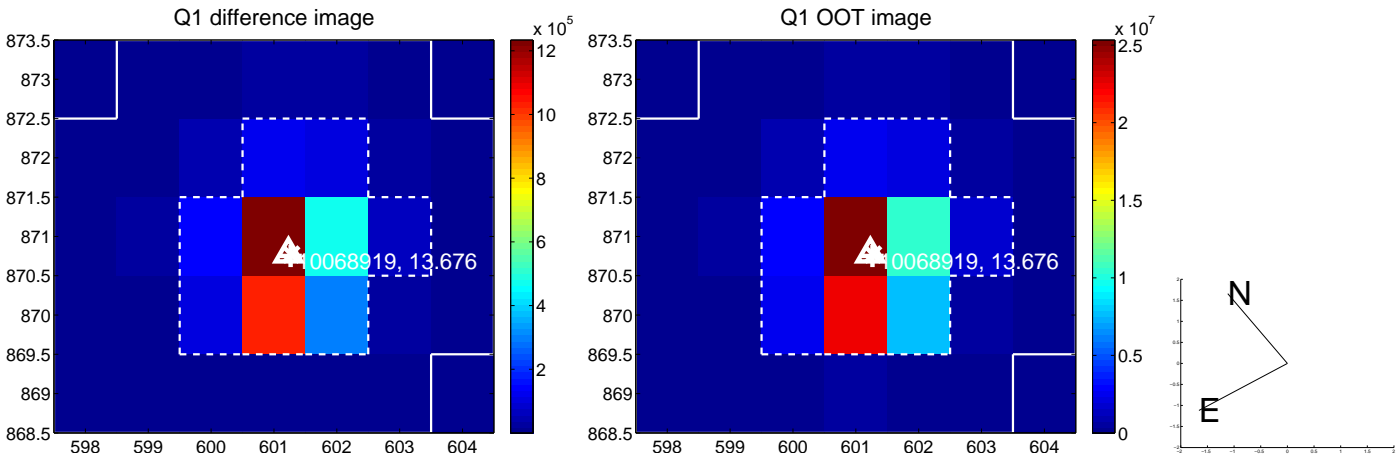
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.012 ± 0.067	0.18	-0.003 ± 0.067	0.012 ± 0.067
PRF-fit source offset from KIC position	0.023 ± 0.068	0.34	0.013 ± 0.067	-0.019 ± 0.068
photometric centroid source offset	0.16 ± 0.00	32.87	0.13 ± 0.01	-0.09 ± 0.00

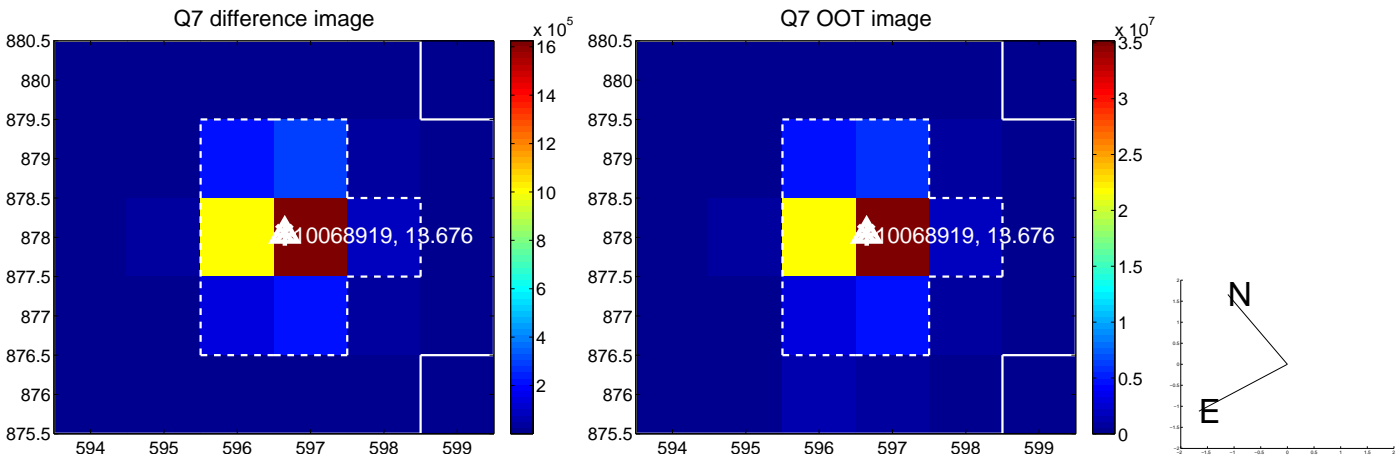
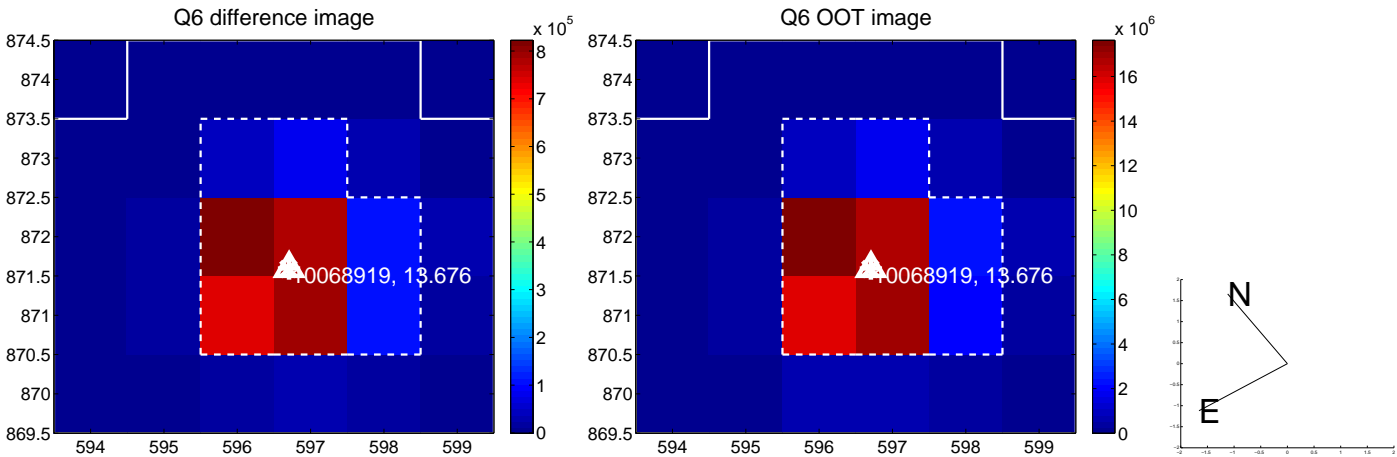
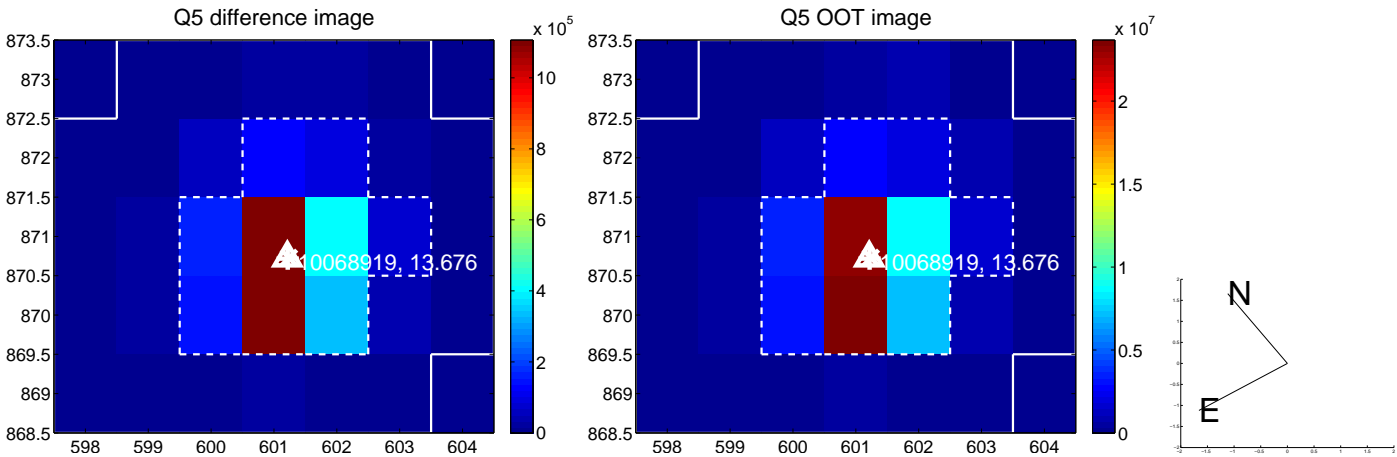


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

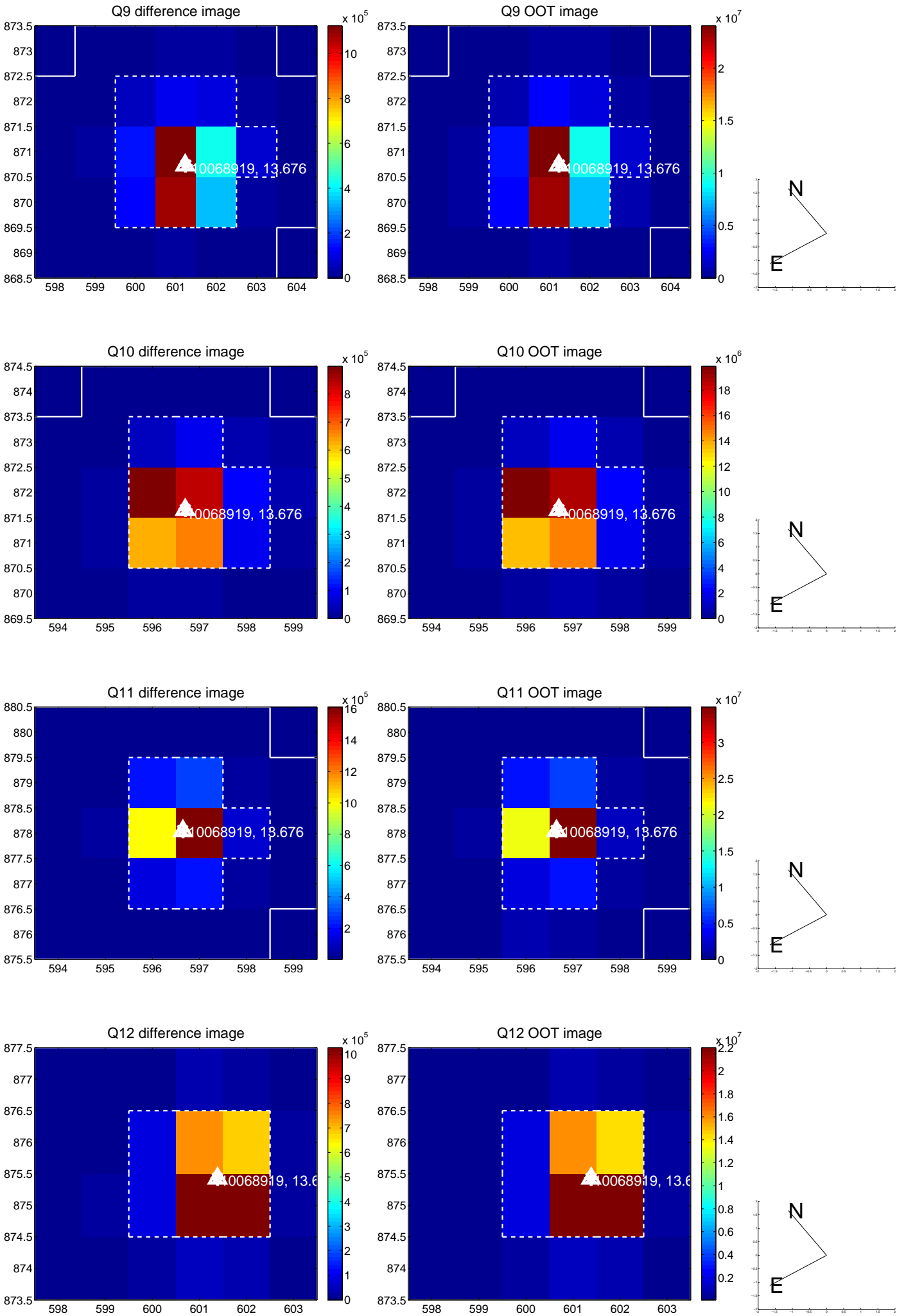
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



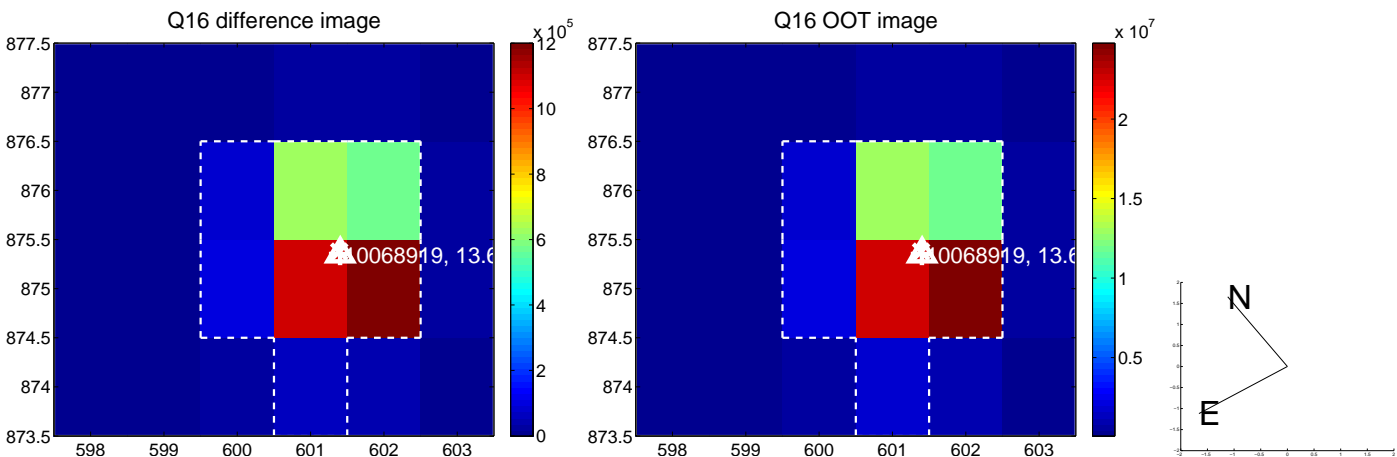
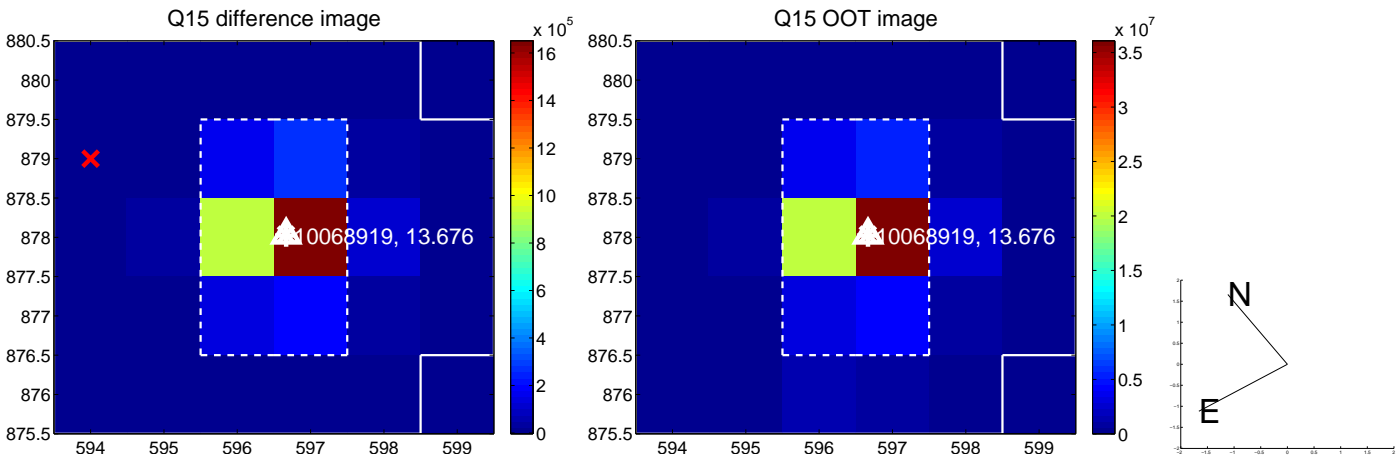
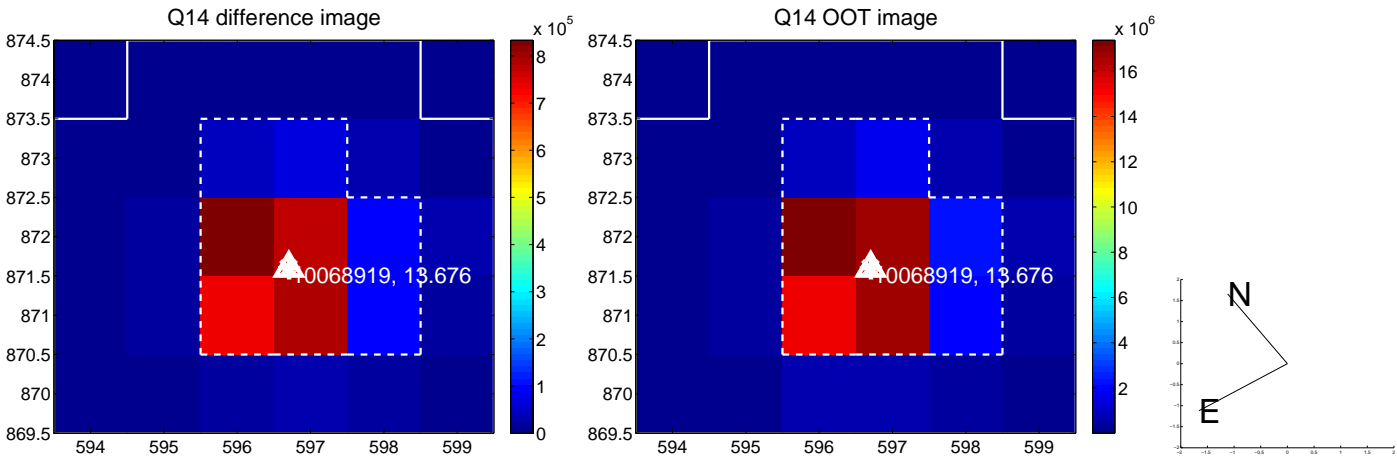
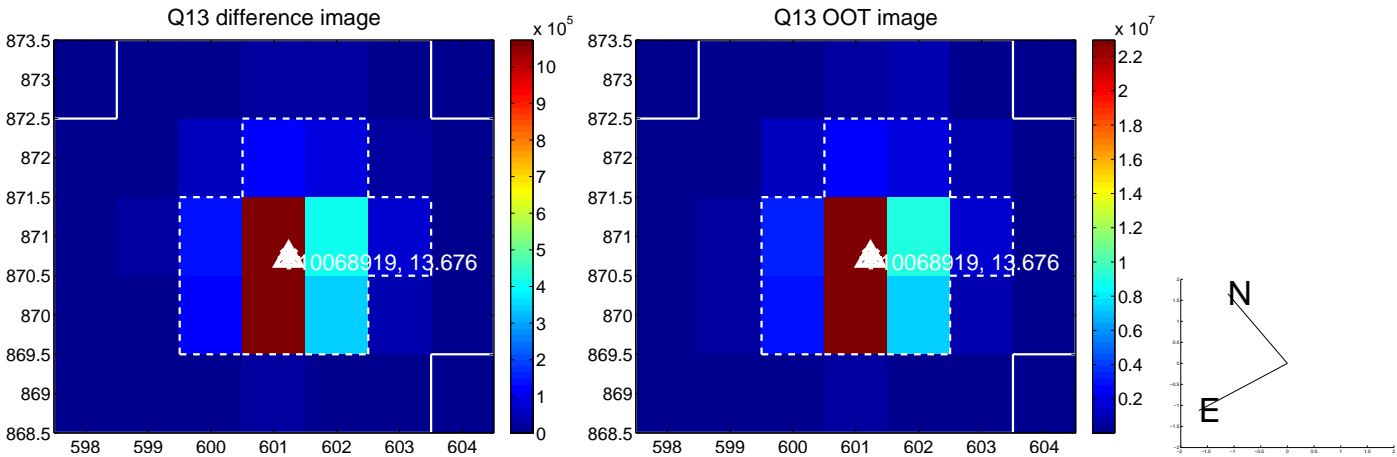
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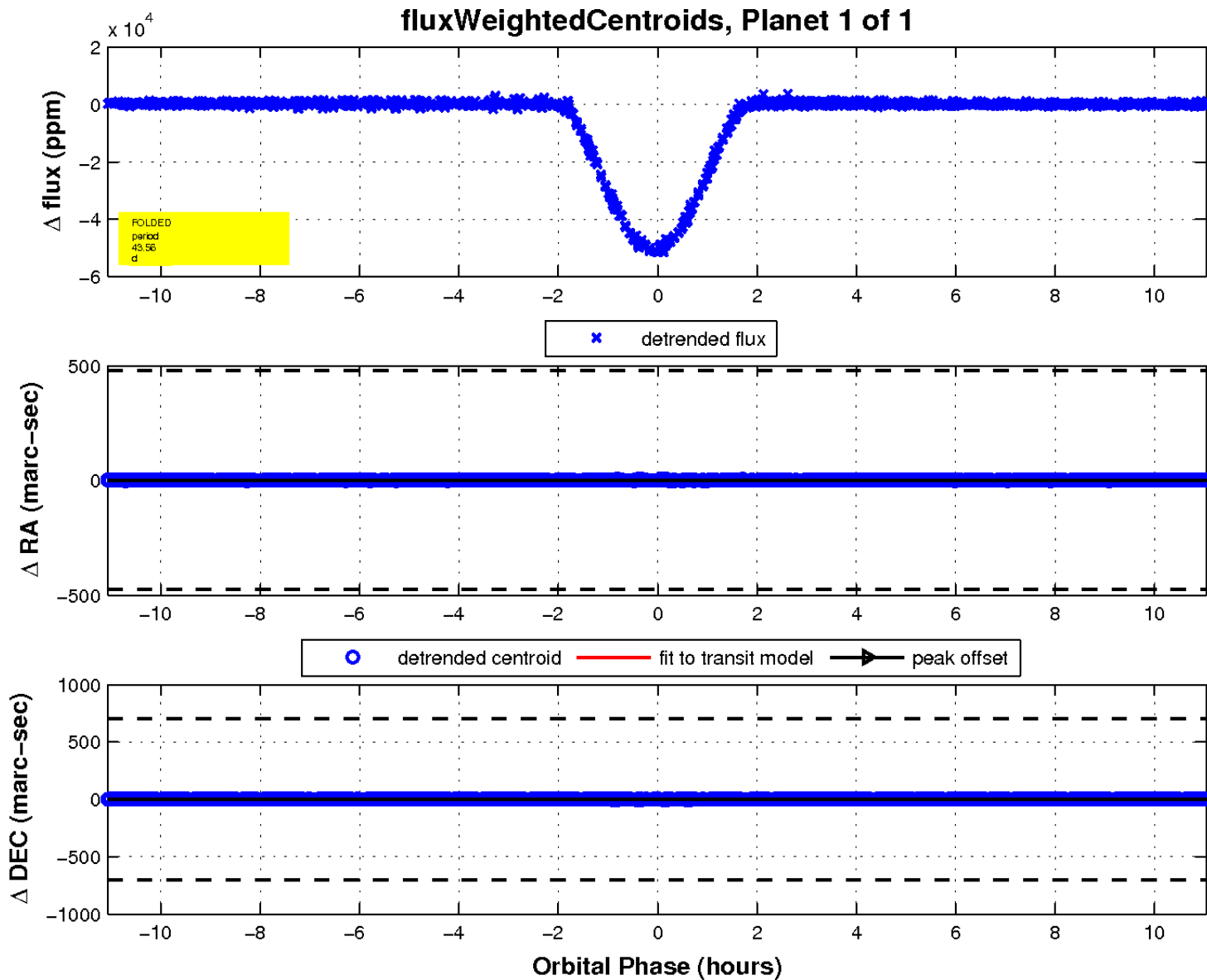
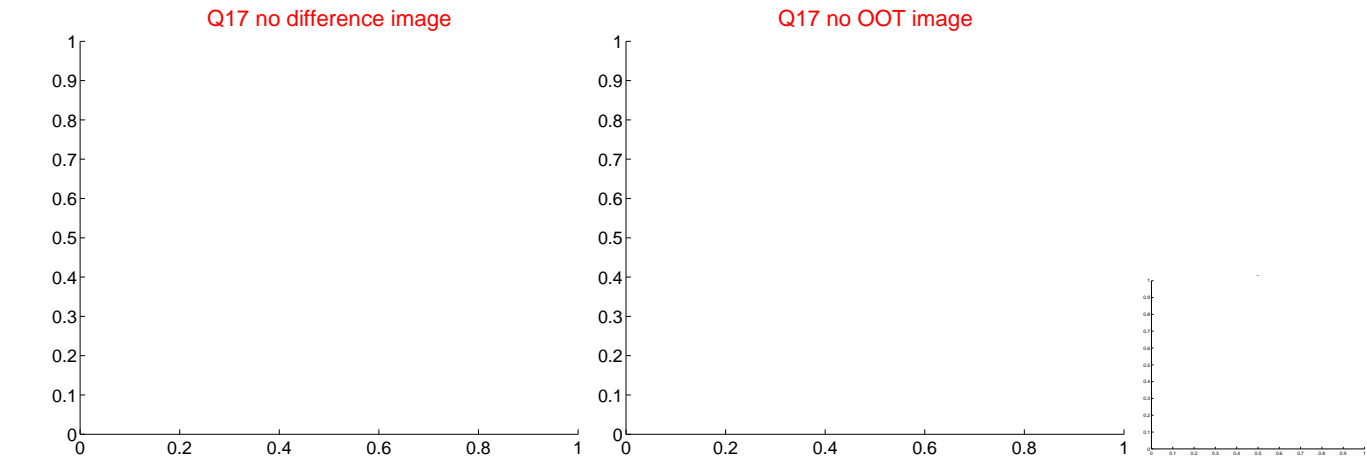
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UKIRT Image

Declination

