

KIC 008246781

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})
008246781-01	OBS	1067.01	185.022893	273.185471	43287.3	4.841	958.2	892.7	1.37	6025	40.48	4.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008246781-01	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.

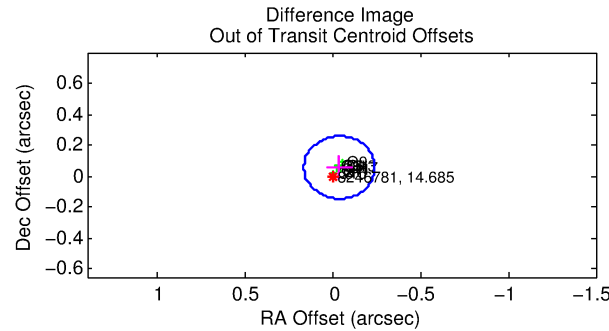
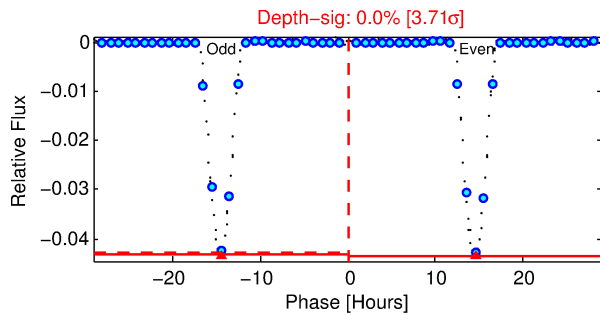
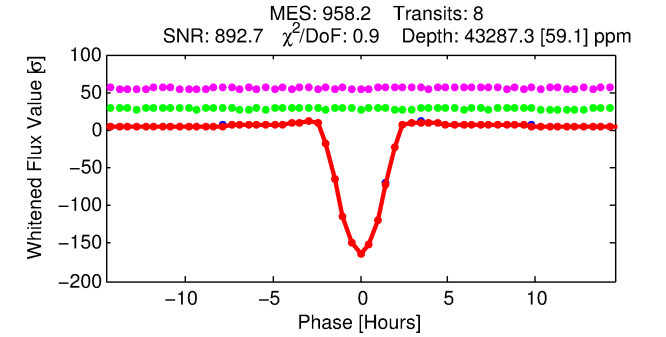
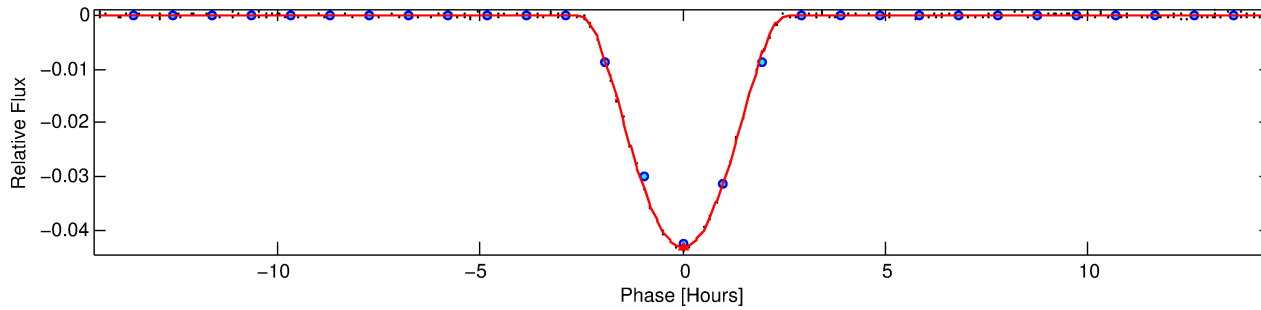
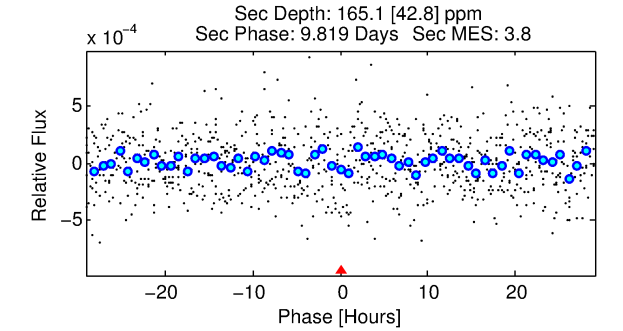
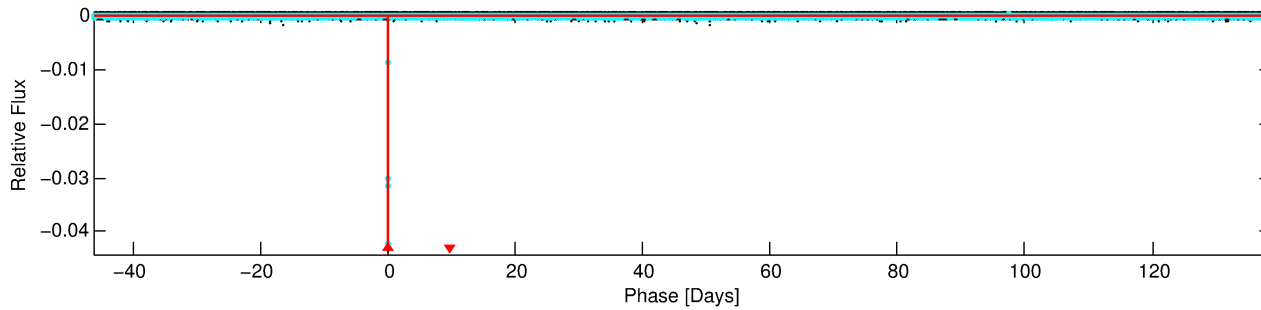
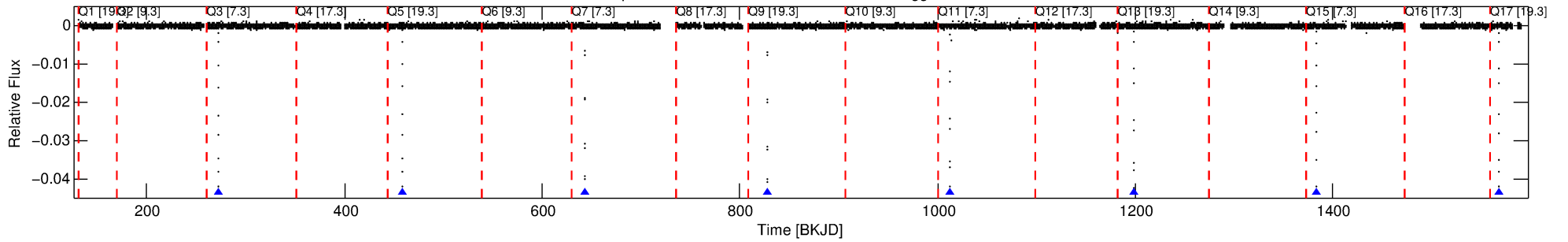
Ephemeris Match Information For 008246781-01

No Significant Match Found

DV One-Page Summary

KIC: 8246781 Candidate: 1 of 1 Period: 185.023 d
KOI: K01067.01 Corr: 1.000

Kp: 14.69 R*: 1.37 Rs Teff: 6025.0 K Logg: 4.24 Fe/H: 0.160



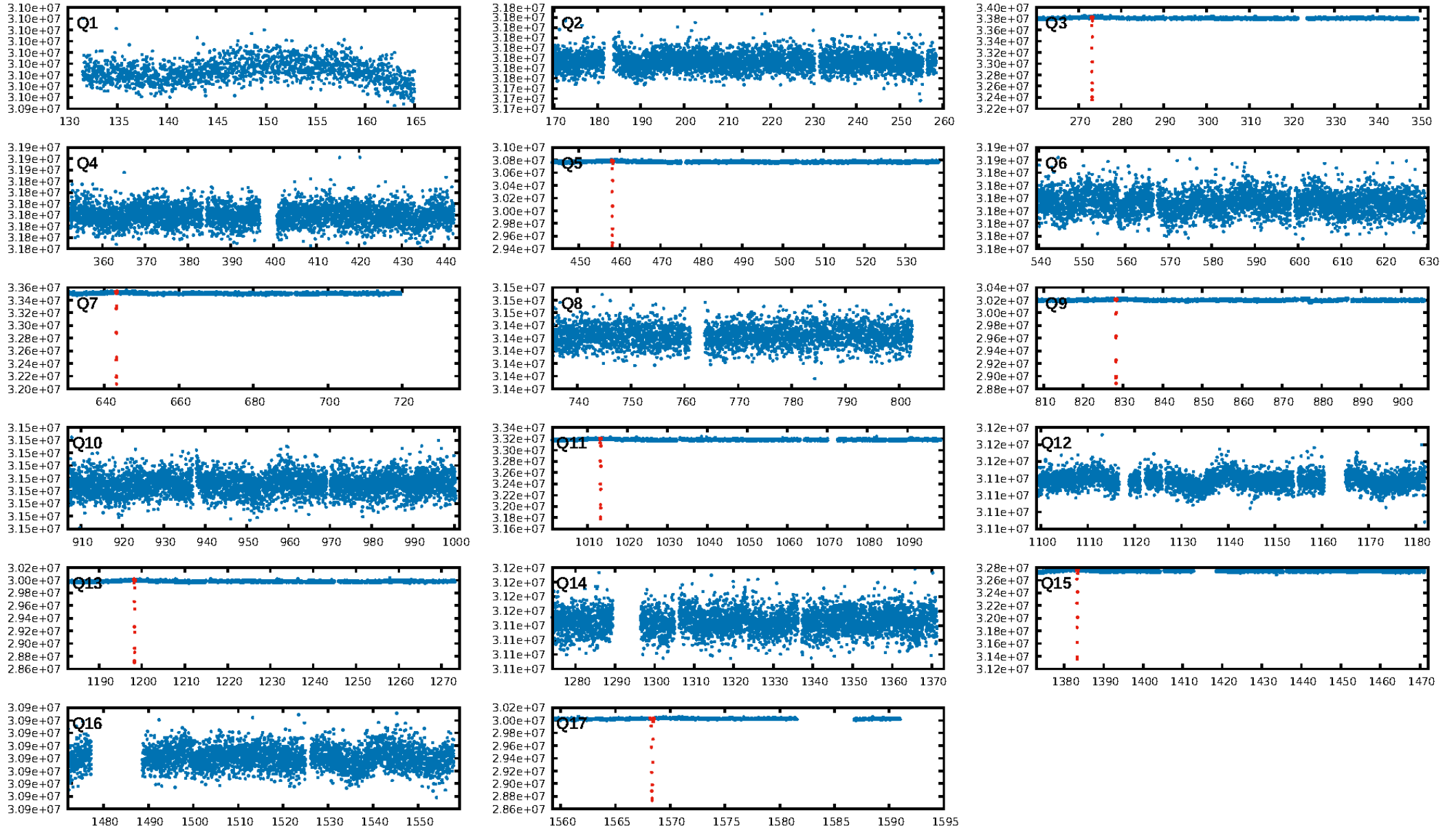
DV Fit Results:

Period = 185.02289 [0.00003] d
Epoch = 273.1855 [0.0001] BKJD
Rp/R* = 0.2714 [0.0116]
a/R* = 257.80 [1.30]
b = 0.91 [0.02]
Seff = 4.90 [1.21]
Teq = 379 [23] K
Rp = 40.48 [7.31] Re
a = 0.6710 [0.1056] AU
Ag = 24.95 [9.08] [2.64σ]
Teffp = 1311 [91] K [9.88σ]

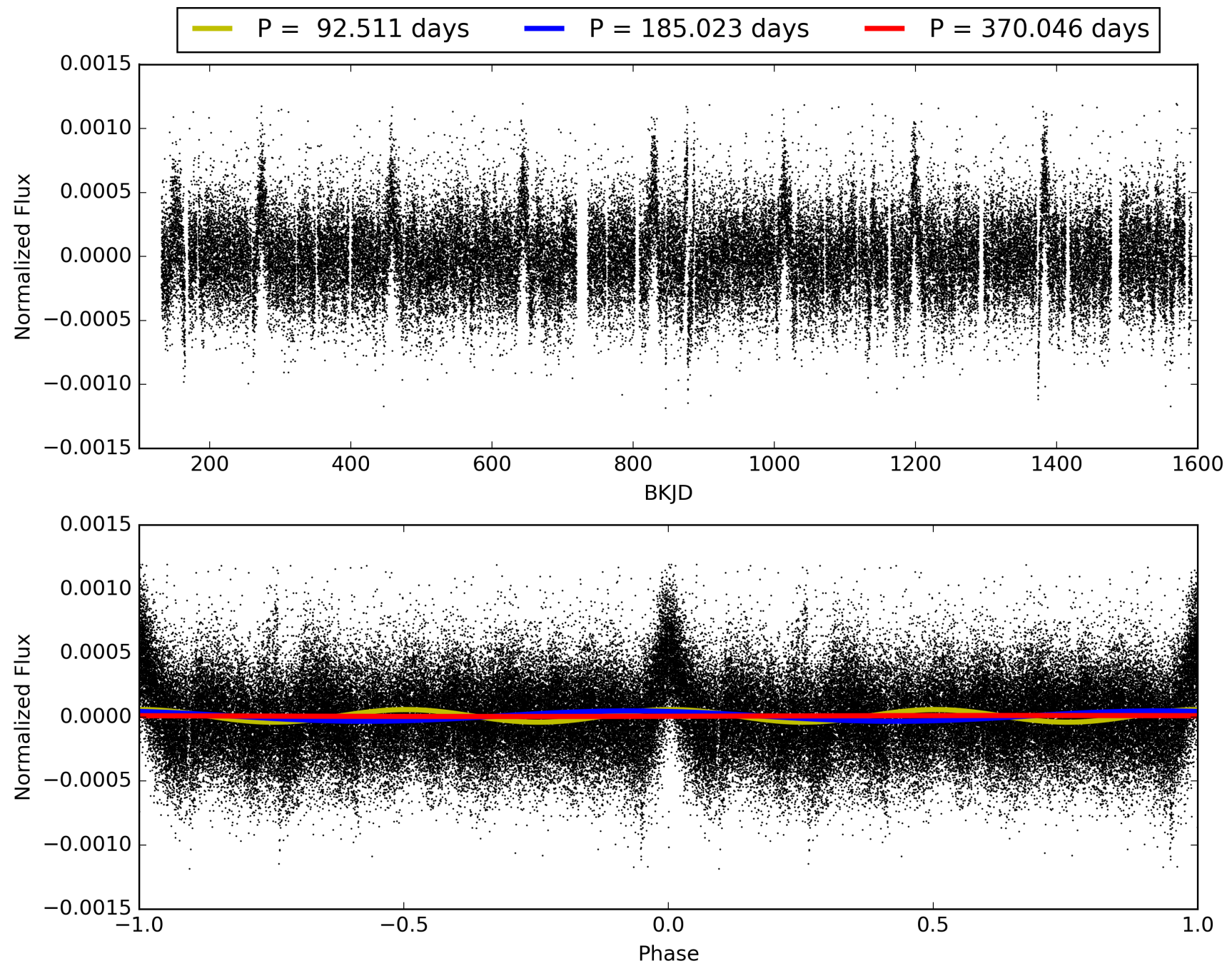
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 98.7%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 5.864
Centroid-sig: 0.0%
Centroid-so: 0.135 arcsec [9.10σ]
OotOffset-rm: 0.068 arcsec [1.01σ]
KicOffset-rm: 0.052 arcsec [0.75σ]
OotOffset-st: 0/4/0/4 [8]
KicOffset-st: 0/4/0/4 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

TCE 008246781-01, PDC Light Curves

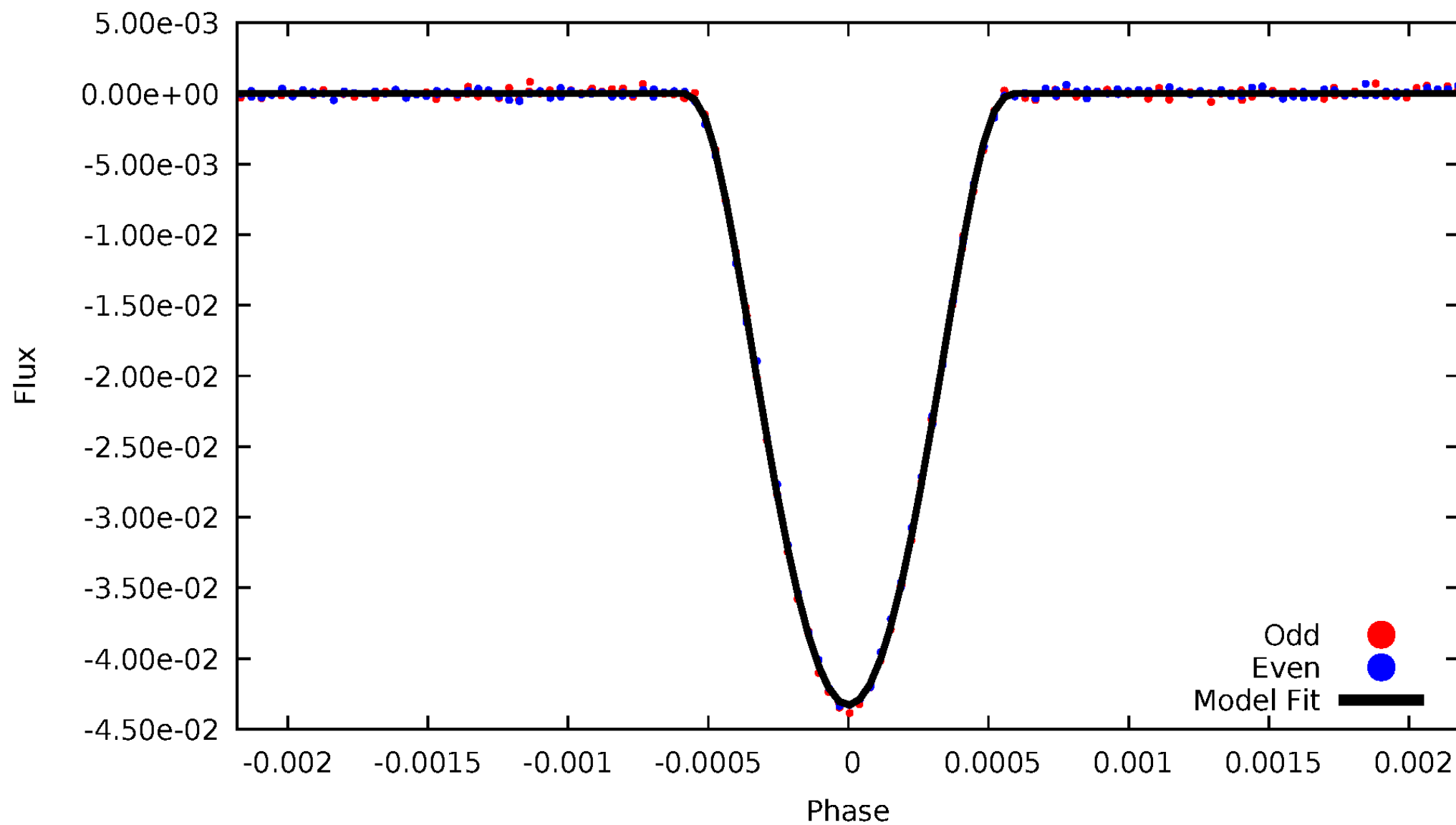


TCE 008246781-01



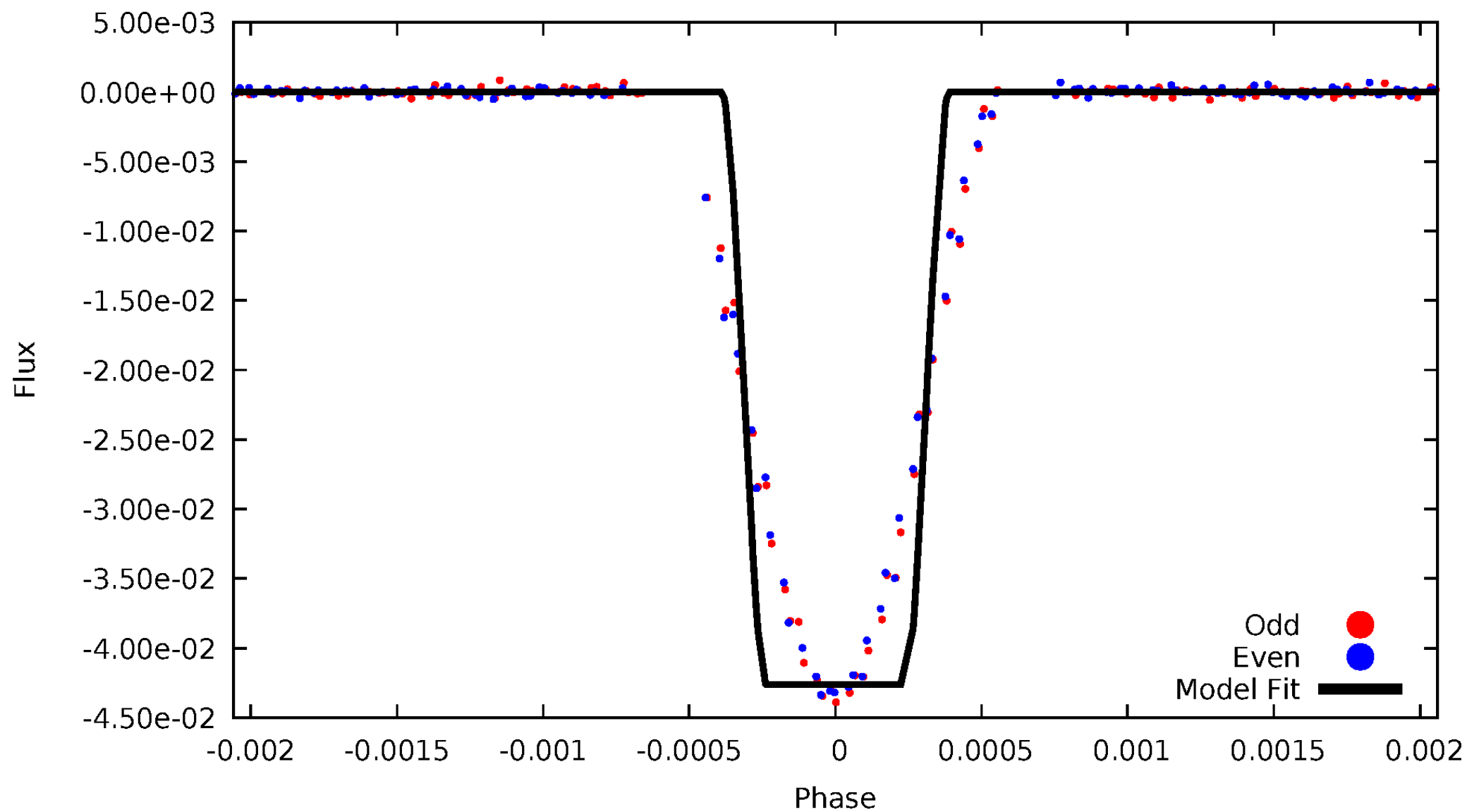
DV Odd/Even

TCE 008246781-01



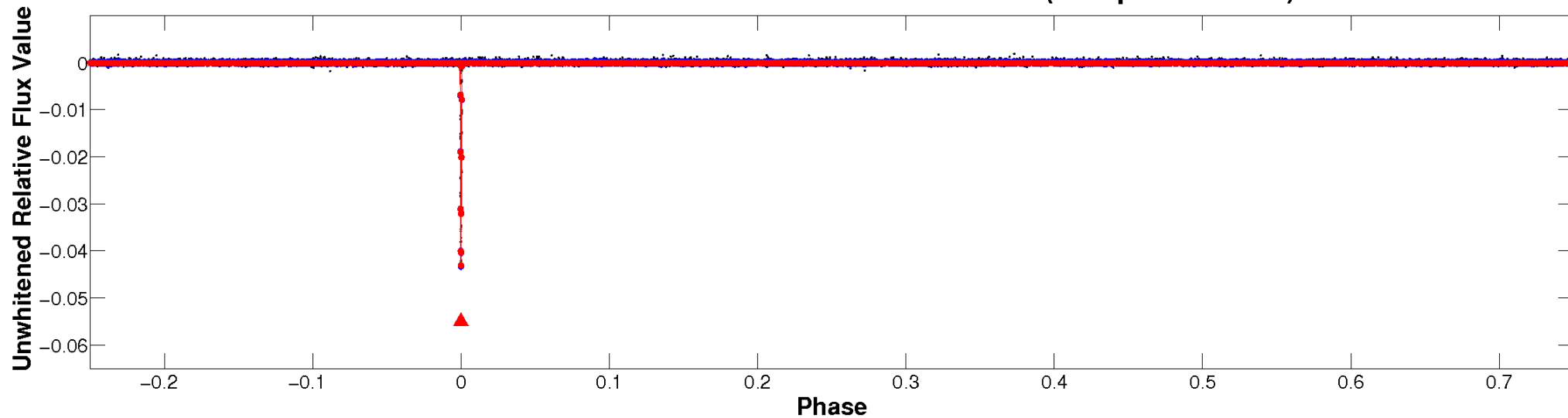
ALT Odd/Even

TCE 008246781-01

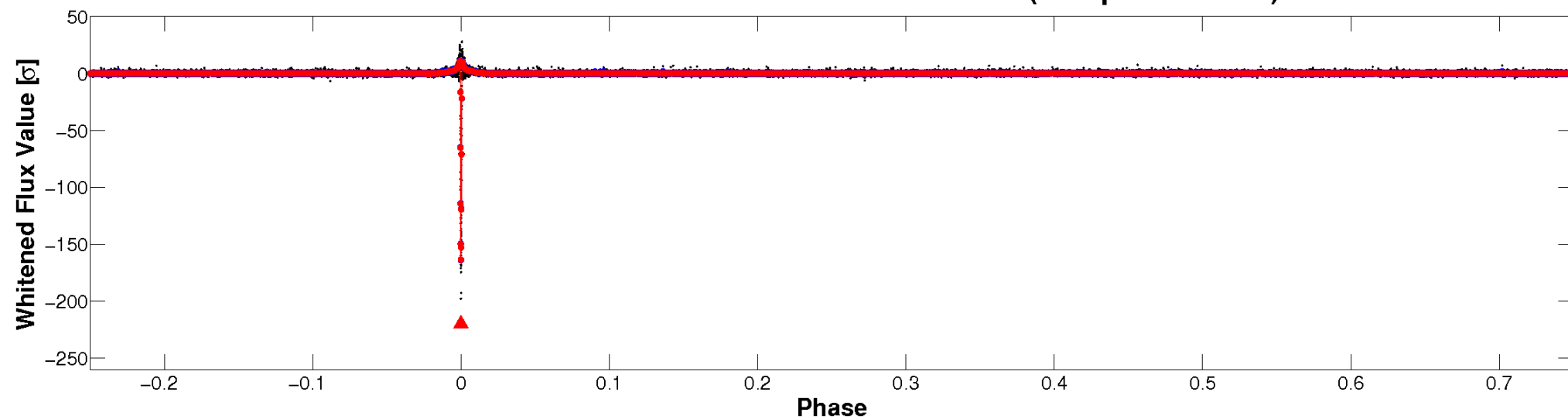


Non-Whitened Vs. Whitened Light Curve

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

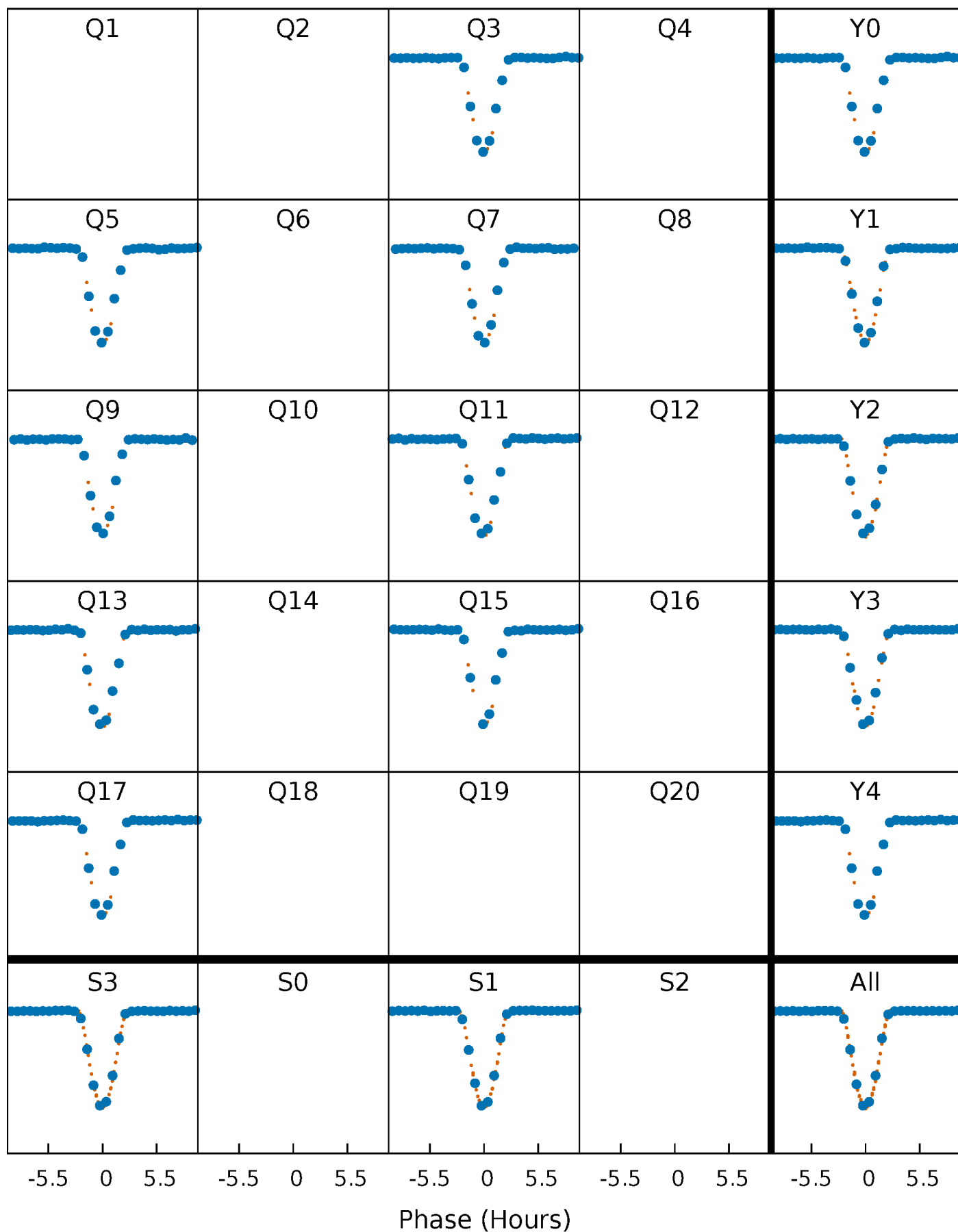


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



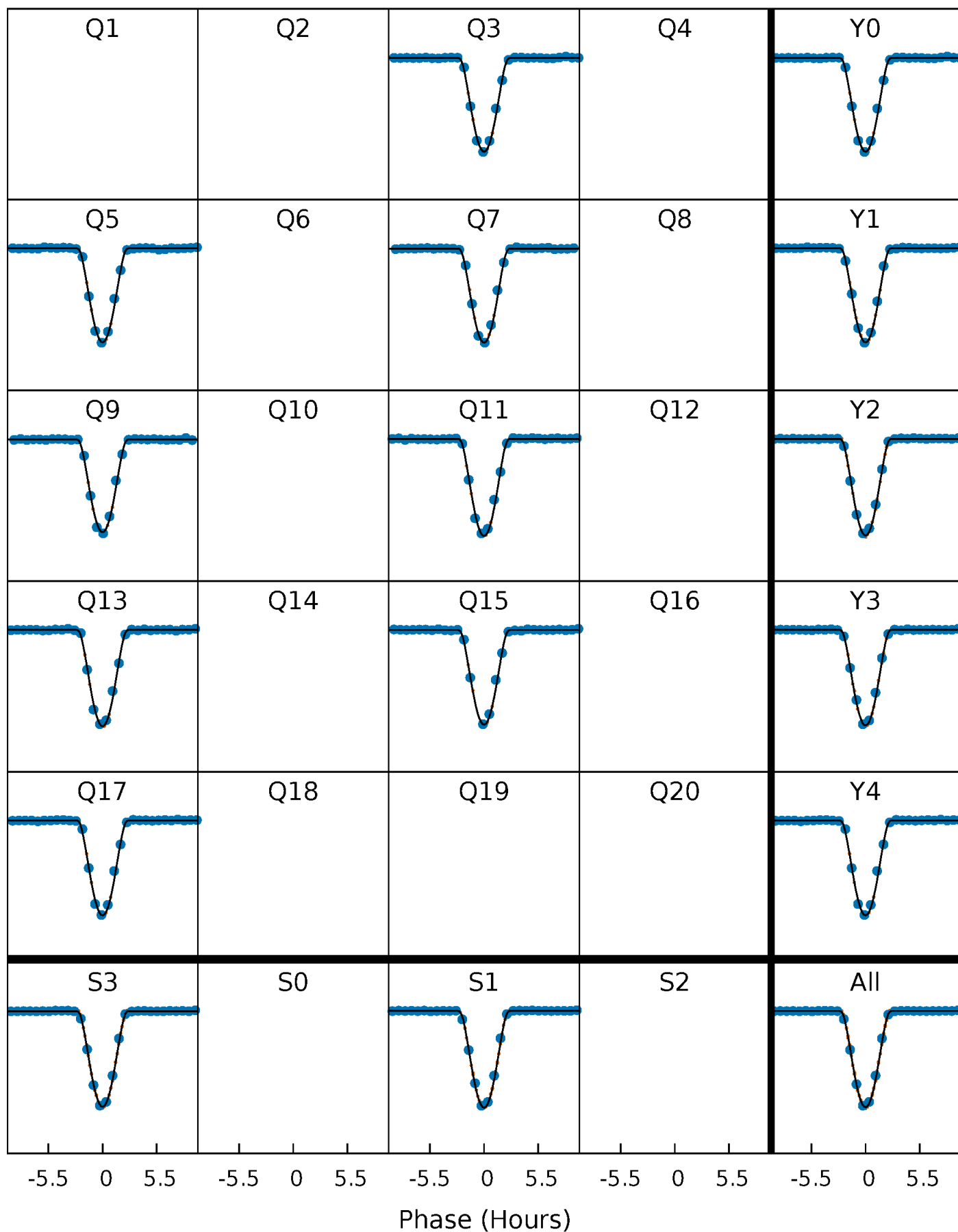
PDC Quarter-Phased Transit Curves

TCE 008246781-01 P=185.022893 Days $T_0=273.185471$ (BKJD)



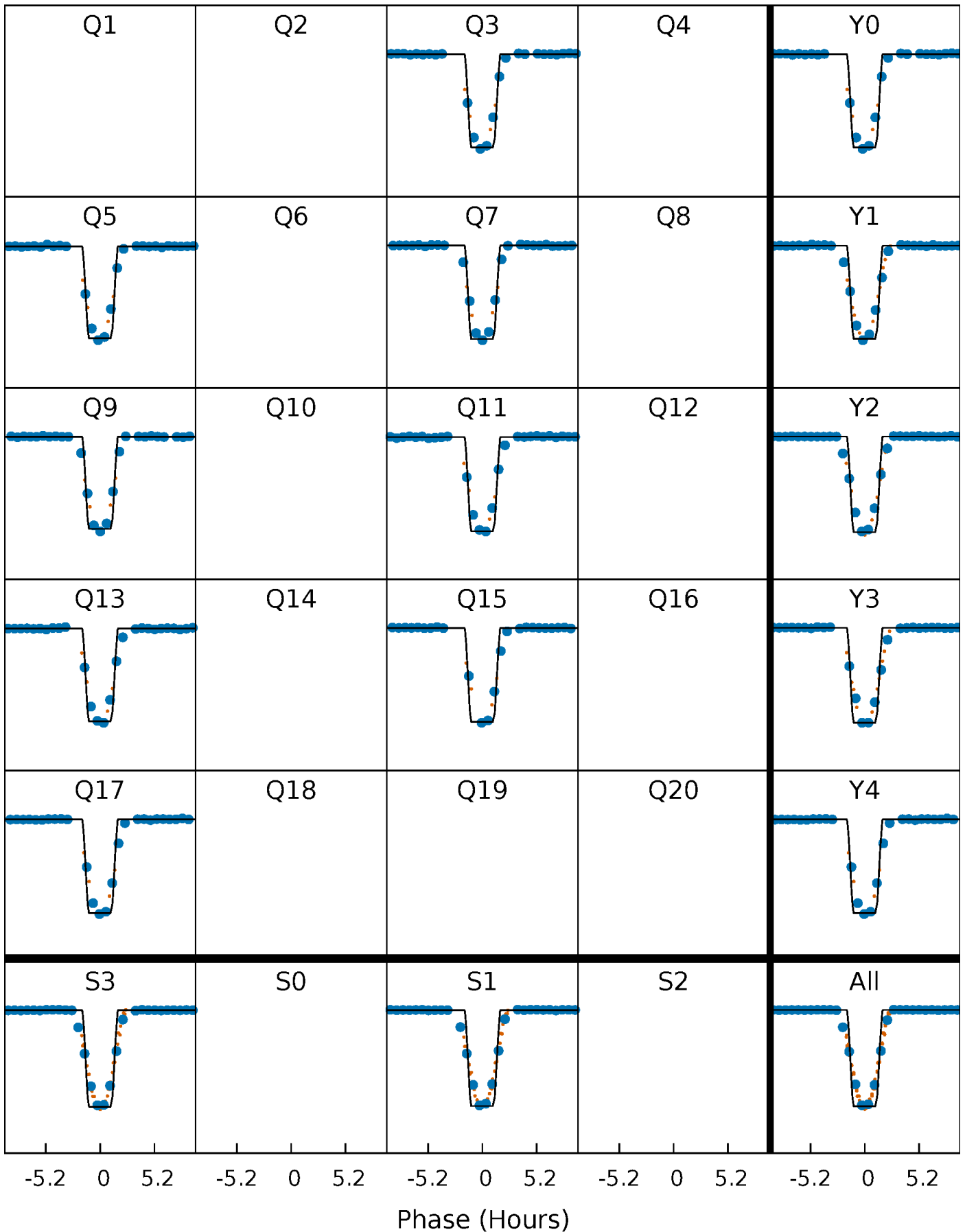
DV Quarter-Phased Transit Curves

TCE 008246781-01 P=185.022893 Days $T_0=273.185471$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

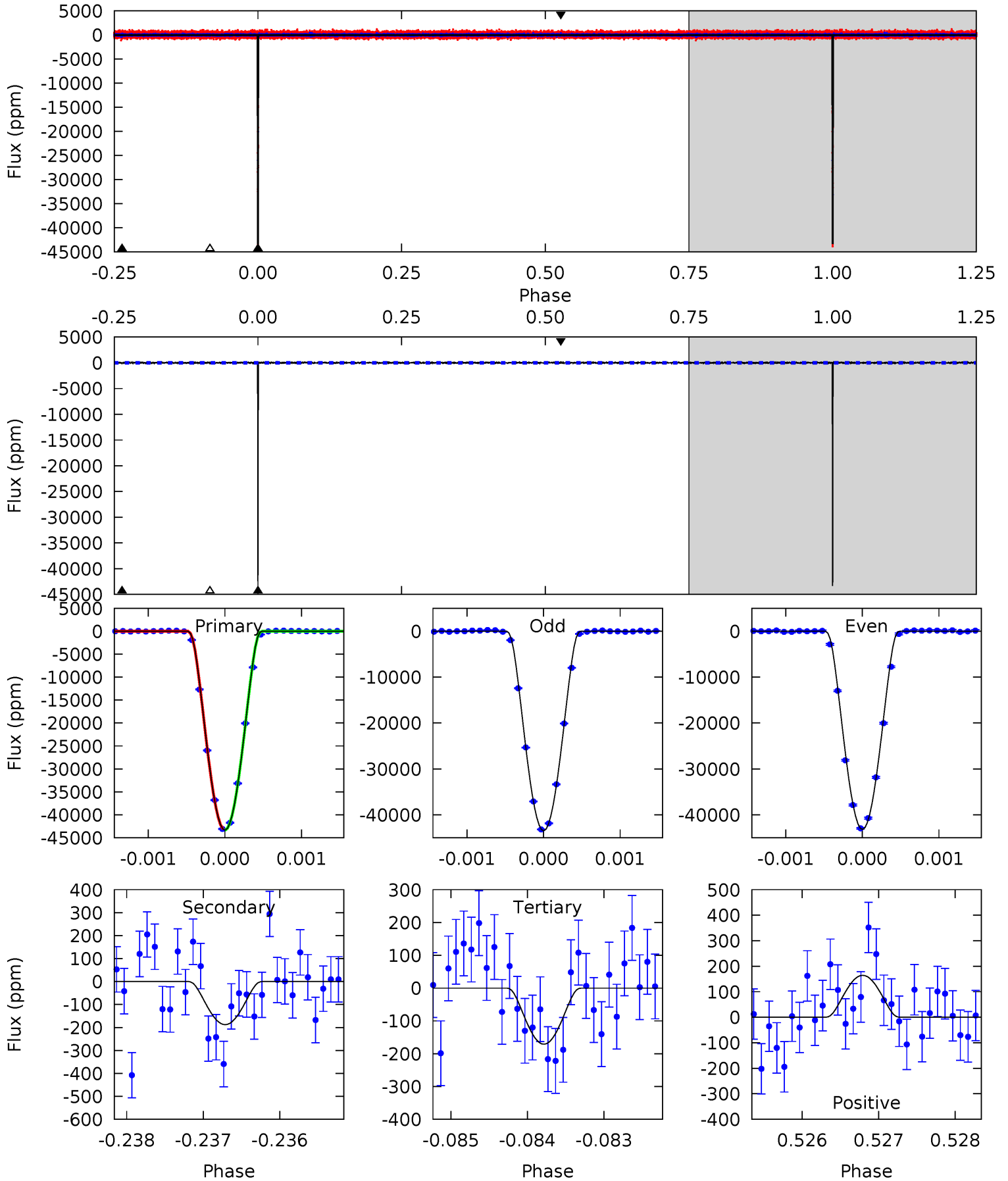
TCE 008246781-01 P=185.021894 Days $T_0=273.188831$ (BKJD)



DV Model-Shift Uniqueness Test

008246781-01, P = 185.022893 Days, E = 88.162578 Days

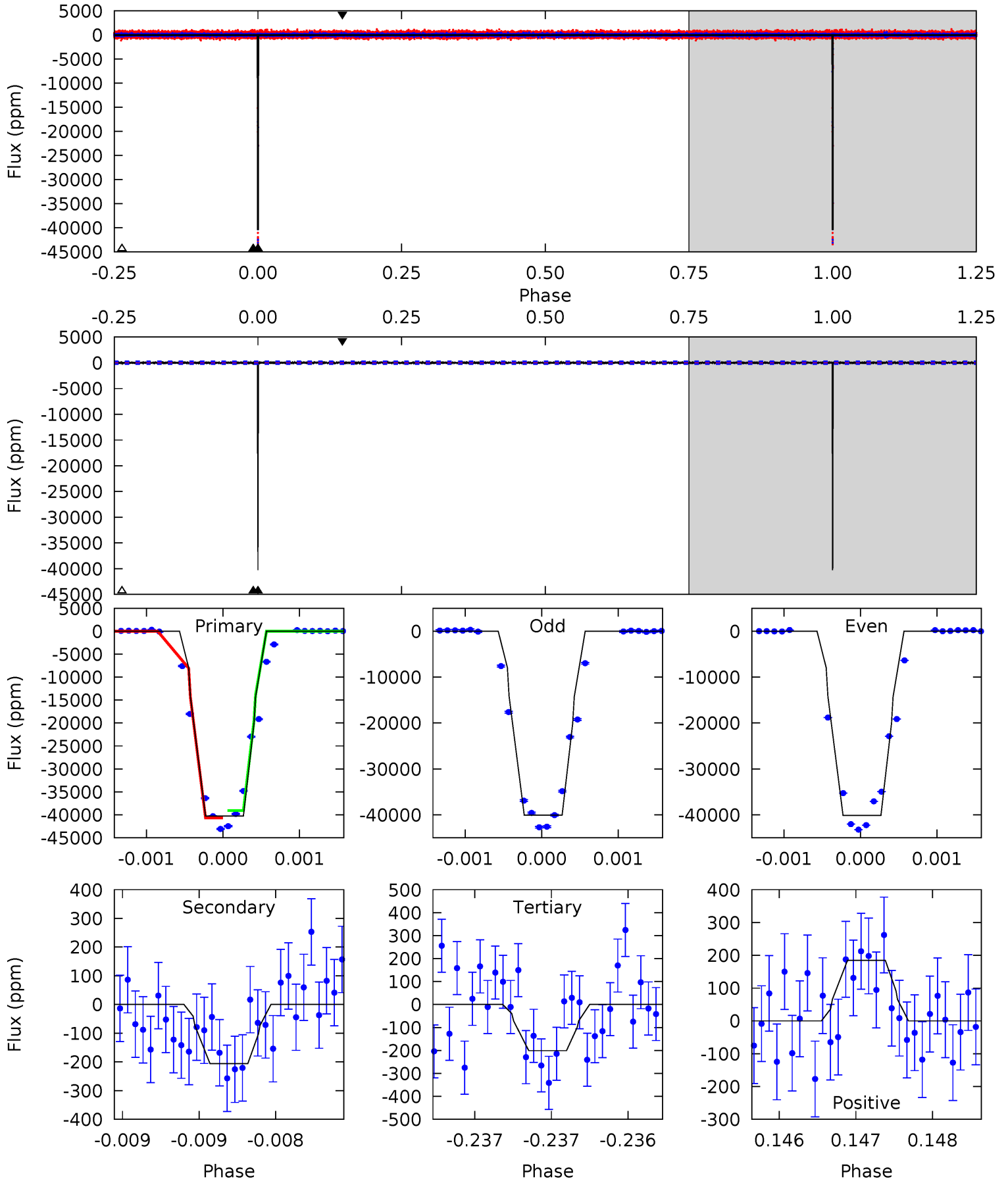
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1583	6.86	6.25	6.00	5.42	3.24	1.59	1576	1577	0.61	0.85	5.38	1.00	0.00	4.08



Alt Model-Shift Uniqueness Test

008246781-01, P = 185.021894 Days, E = 88.166937 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
918.4	4.70	4.58	4.22	5.50	3.36	2.50	913.8	914.2	0.12	0.49	0.84	1.00	0.00	17.4



Stellar Parameters For KIC 008246781

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6025^{+78}_{-84}	$4.237^{+0.137}_{-0.125}$	$0.160^{+0.150}_{-0.150}$	$1.367^{+0.240}_{-0.240}$	$1.180^{+0.073}_{-0.105}$	$0.650^{+0.429}_{-0.221}$
	+1%/-1%	+3%/-3%	+94%/-94%	+18%/-18%	+6%/-9%	+66%/-34%
Source	SPE90	SPE90	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008246781-01 / KOI 1067.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-188 ± 27	$40.51^{+4.77}_{-4.26}$	532^{+26}_{-27}	2282^{+45}_{-53}	28^{+8}_{-7}
Alt.	-206 ± 44	$30.80^{+3.46}_{-3.37}$	530^{+25}_{-25}	2458^{+71}_{-79}	54^{+18}_{-15}

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

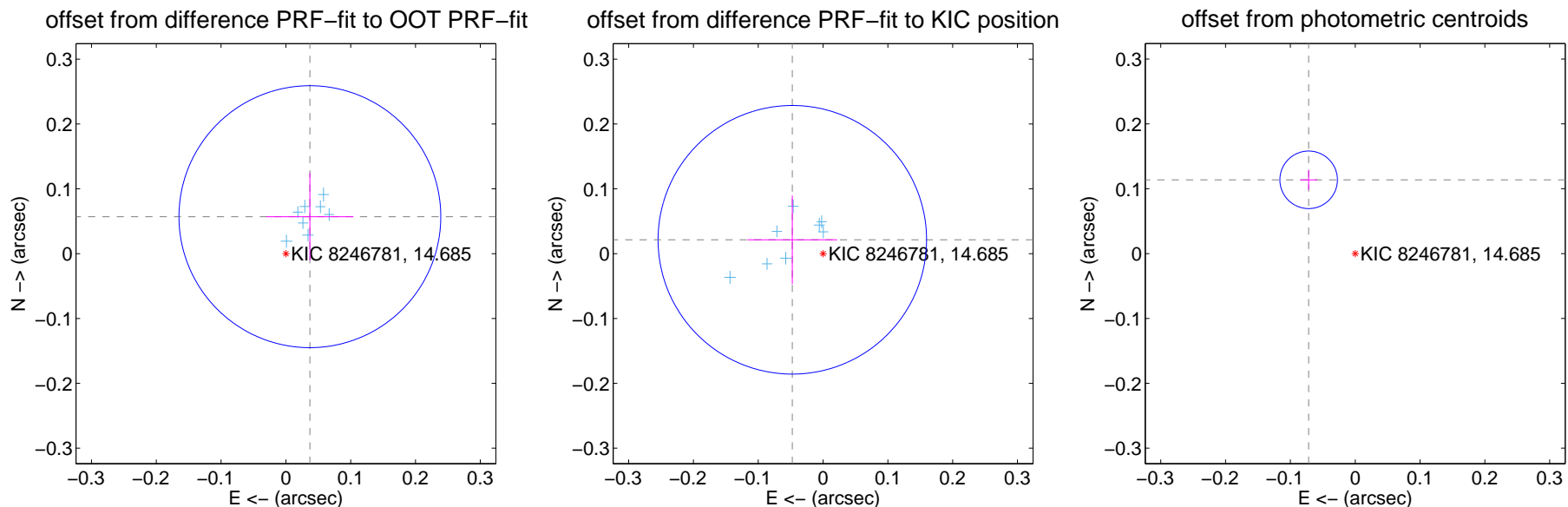
DV Centroid Data

Supplemental centroid analysis for 008246781-01. Kepler magnitude: 14.69. Transit SNR 892.68

There are 8 quarters with good PRF difference image offsets

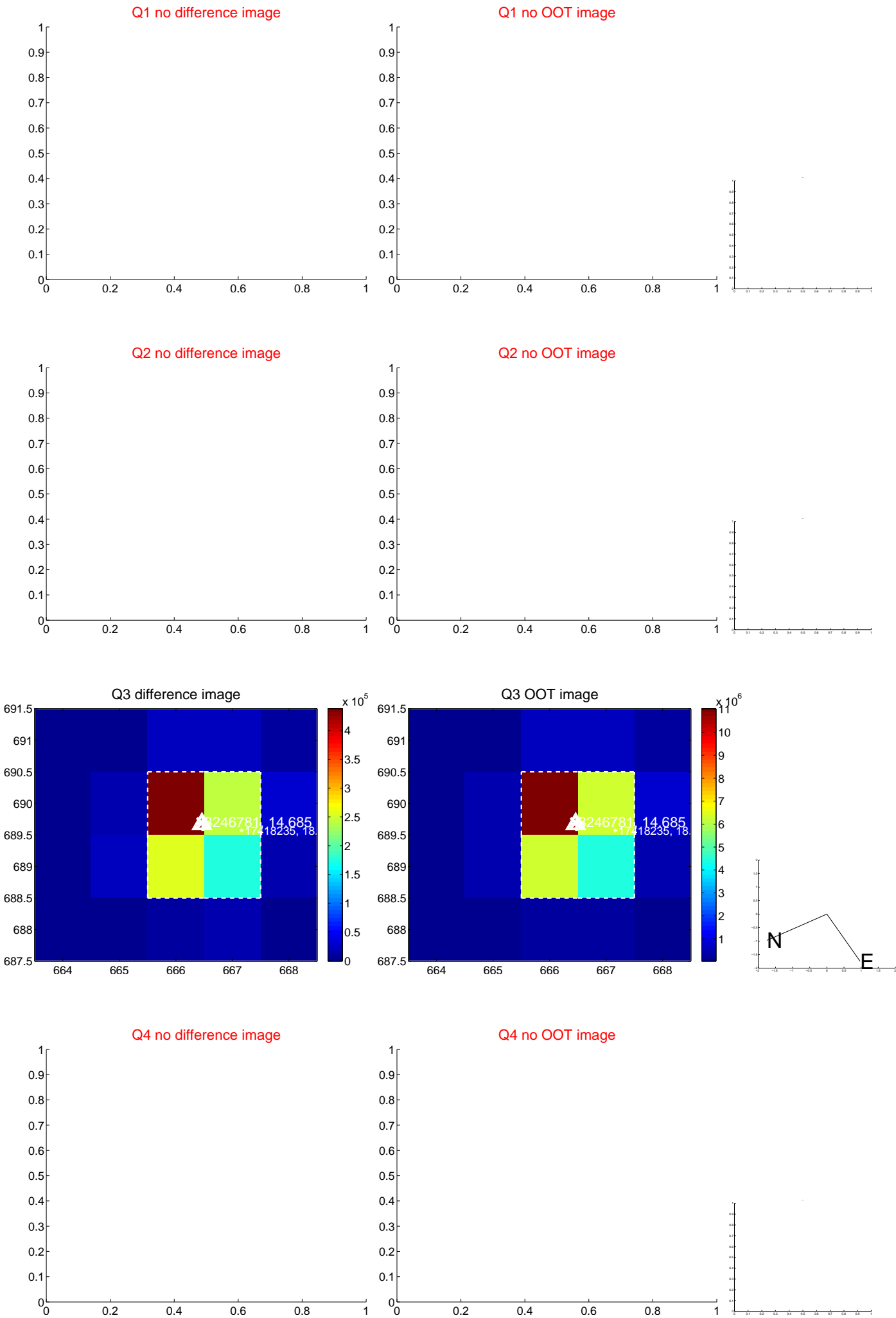
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.068 ± 0.067	1.01	-0.037 ± 0.067	0.057 ± 0.067
PRF-fit source offset from KIC position	0.052 ± 0.069	0.75	0.047 ± 0.069	0.021 ± 0.068
photometric centroid source offset	0.13 ± 0.01	9.10	0.07 ± 0.01	0.11 ± 0.02

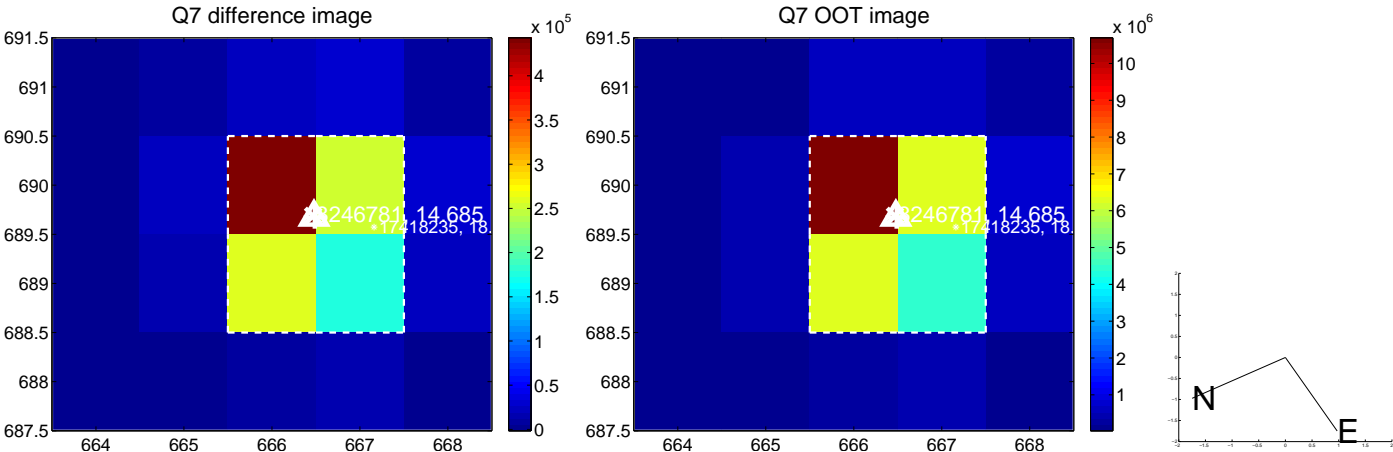
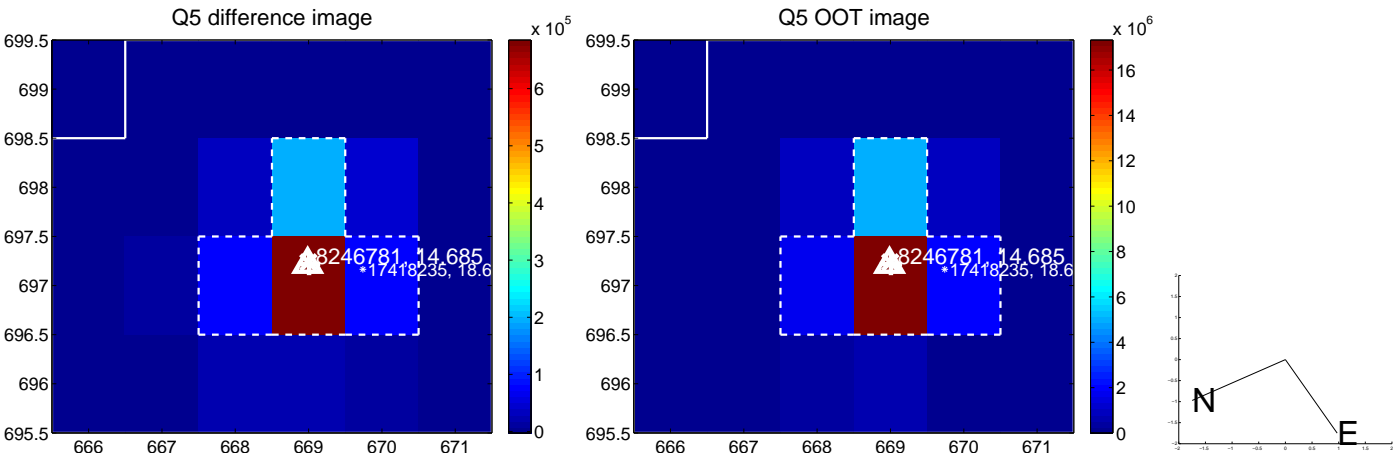


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

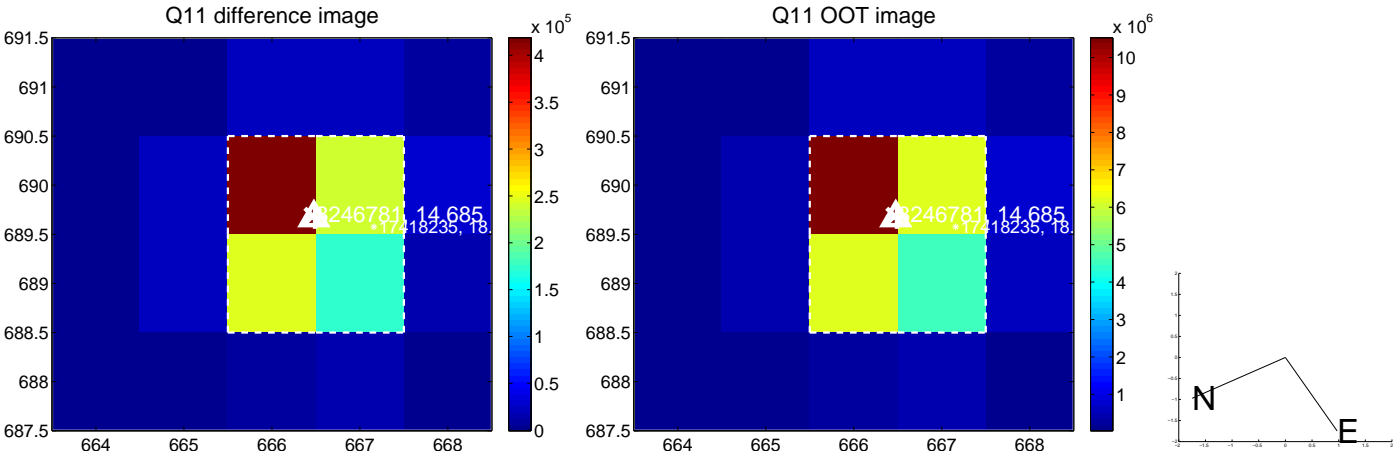
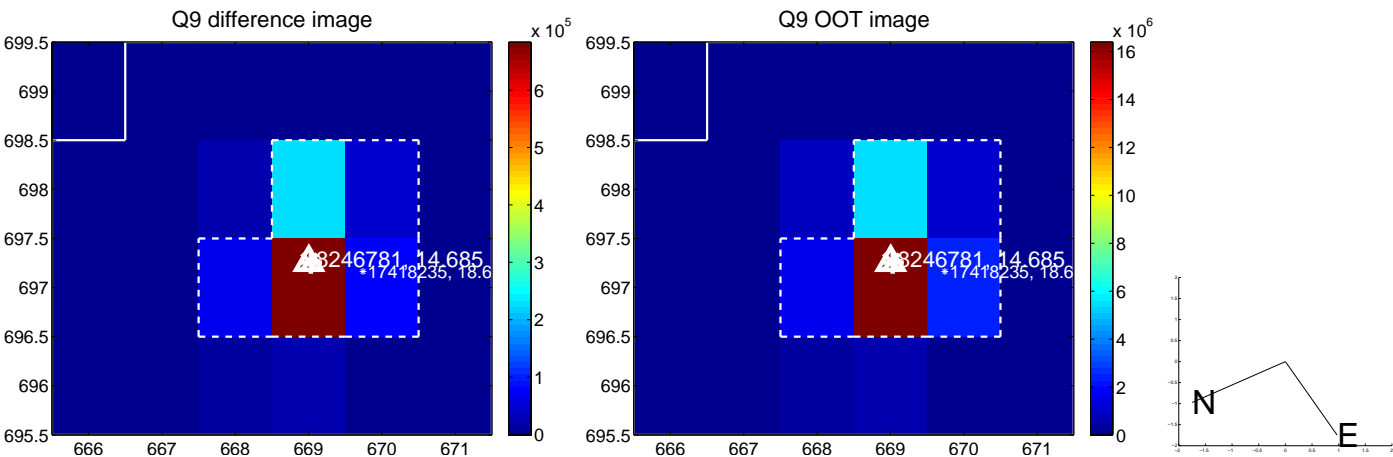
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



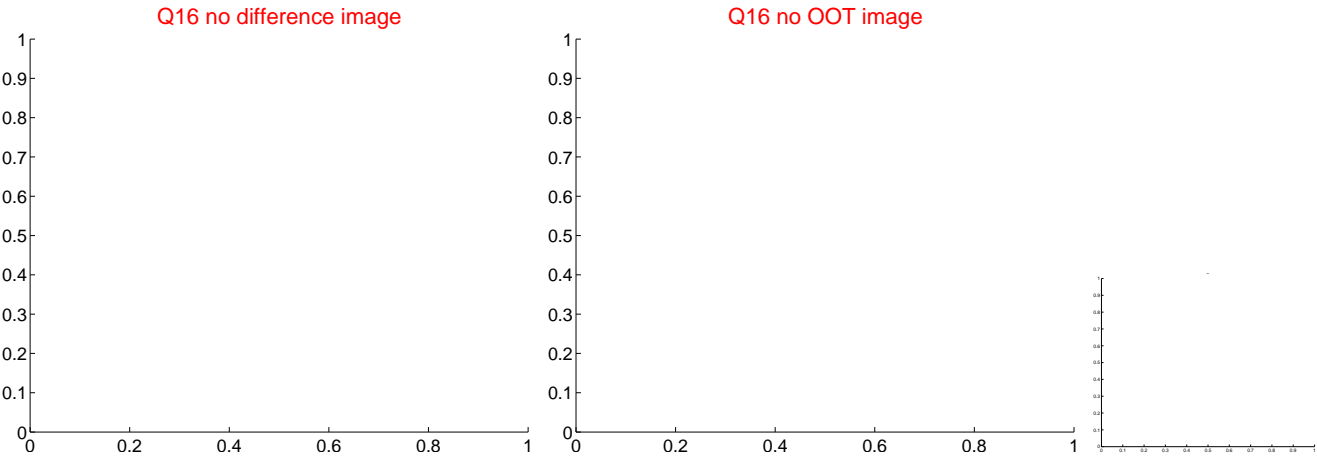
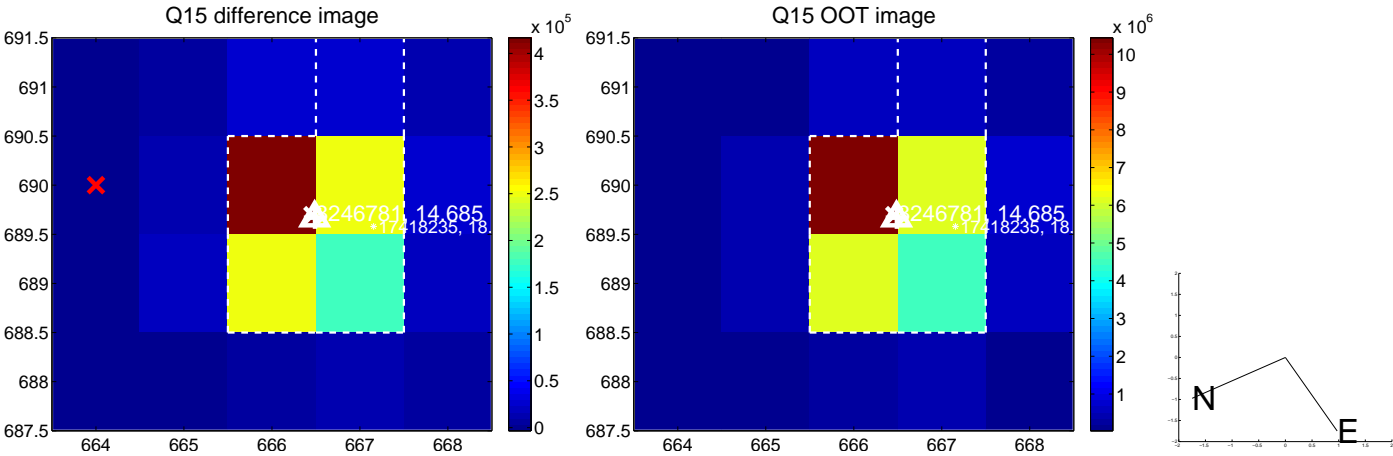
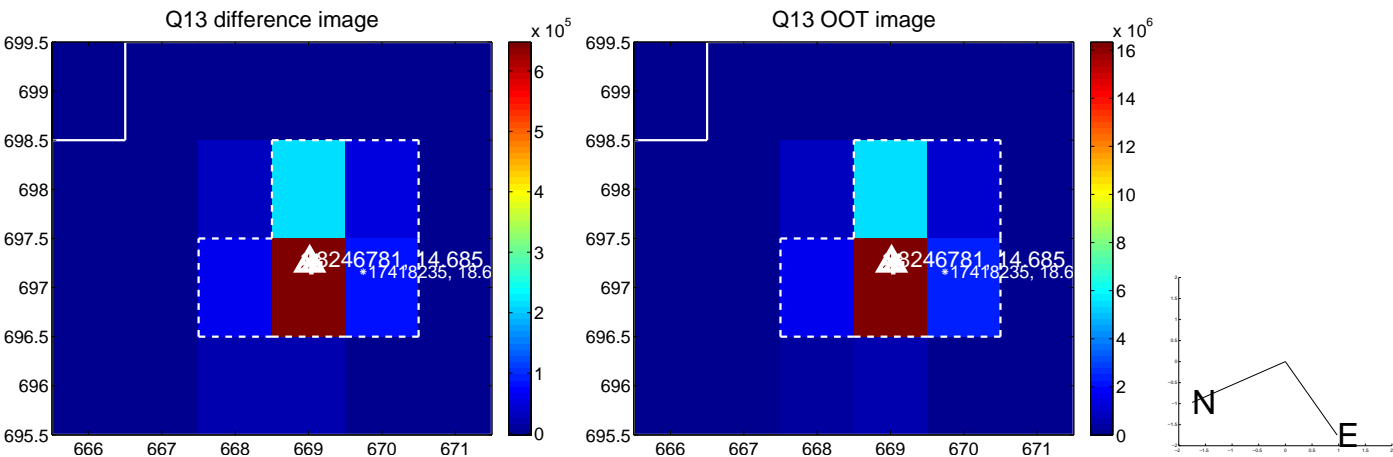
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



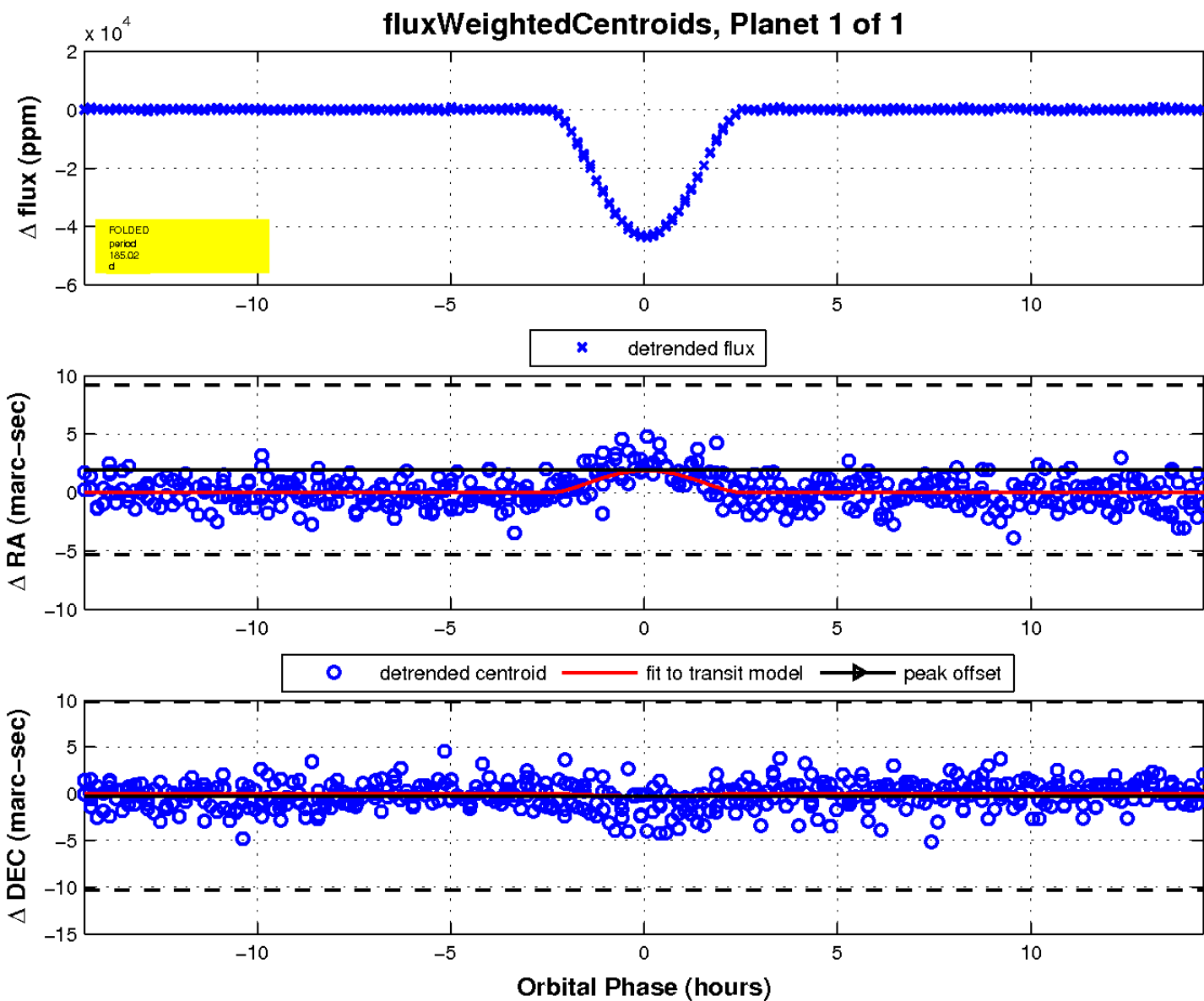
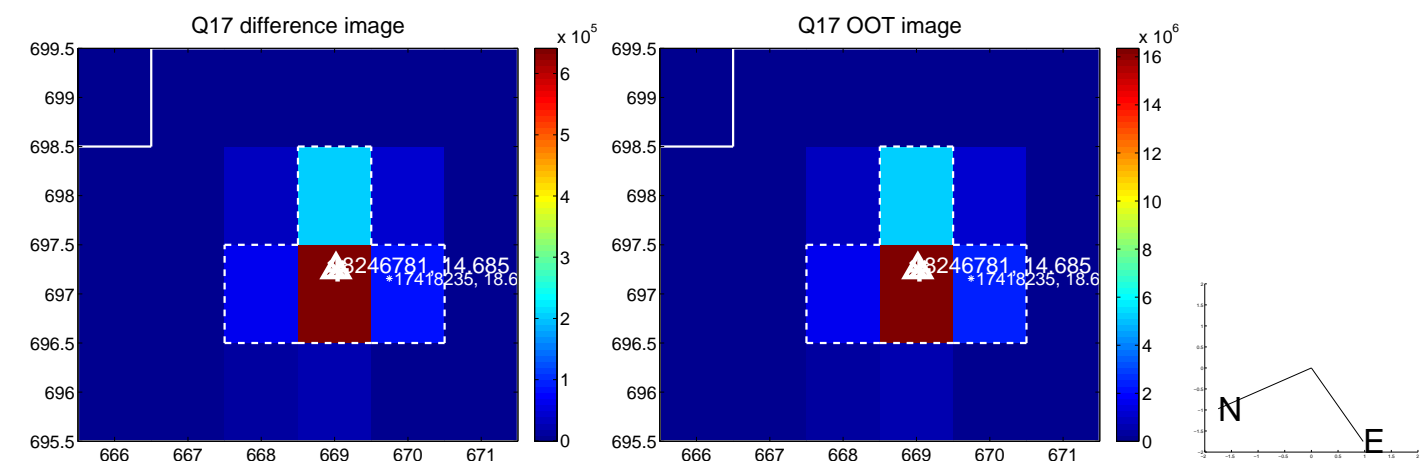
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UKIRT Image

Declination

