

KIC 005113146

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})
005113146-01	OBS	5127.01	18.789720	143.823839	39780.4	4.142	685.3	597.1	0.88	6477	27.00	75.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005113146-01	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.

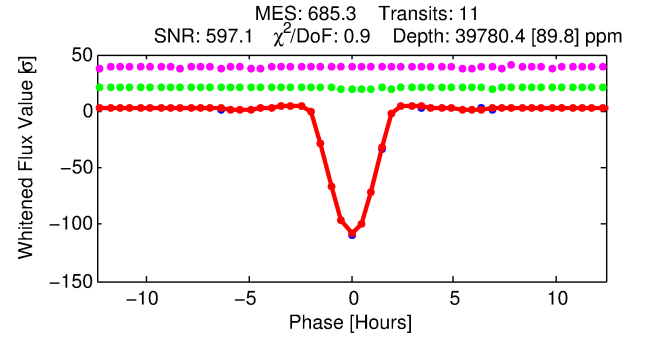
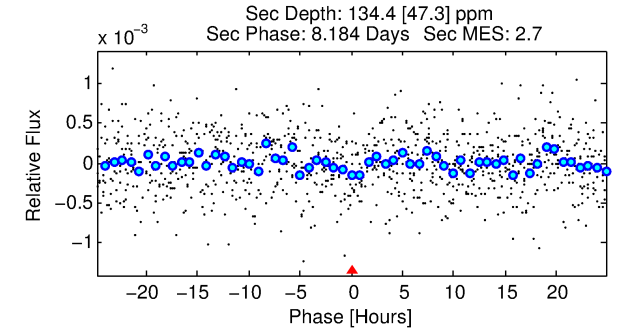
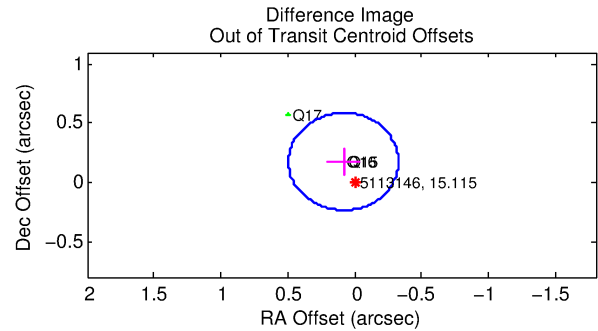
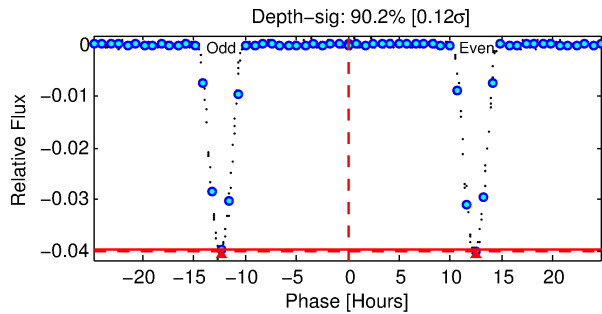
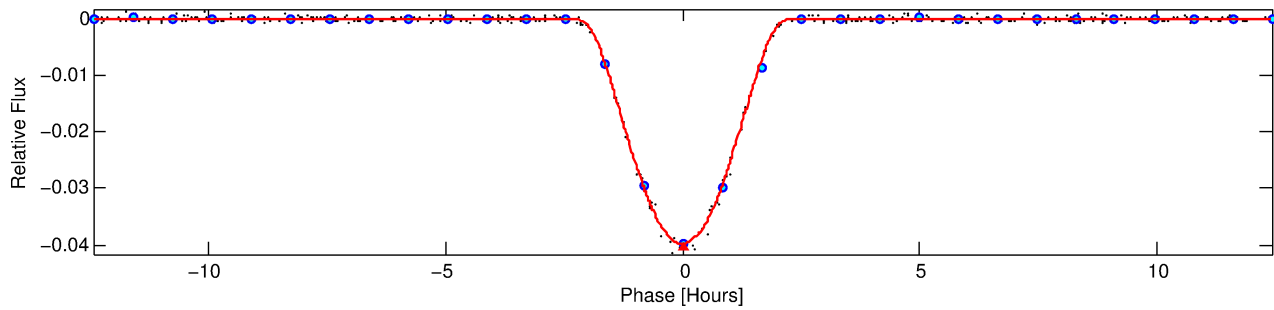
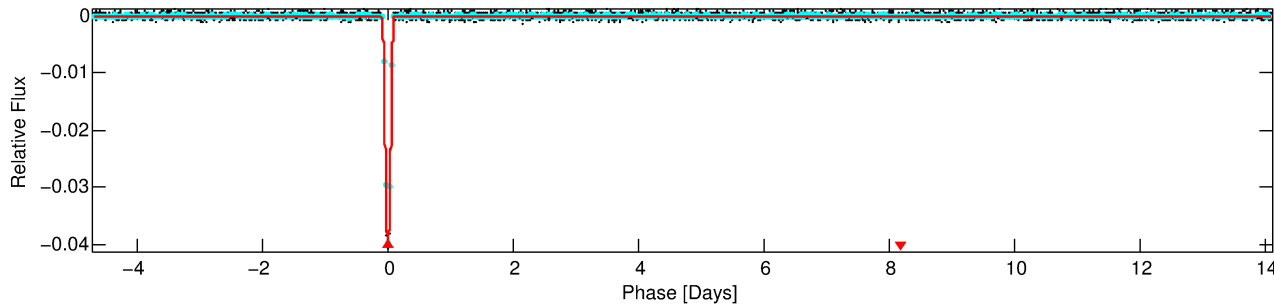
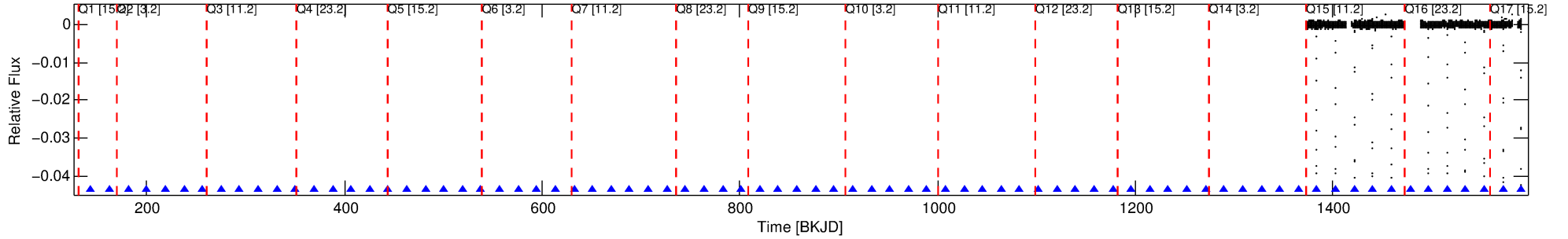
Ephemeris Match Information For 005113146-01

No Significant Match Found

DV One-Page Summary

KIC: 5113146 Candidate: 1 of 1 Period: 18.790 d
KOI: K05127.01 Corr: 0.998

Kp: 15.11 R*: 0.88 Rs Teff: 6477.0 K Logg: 4.44 Fe/H: -1.560



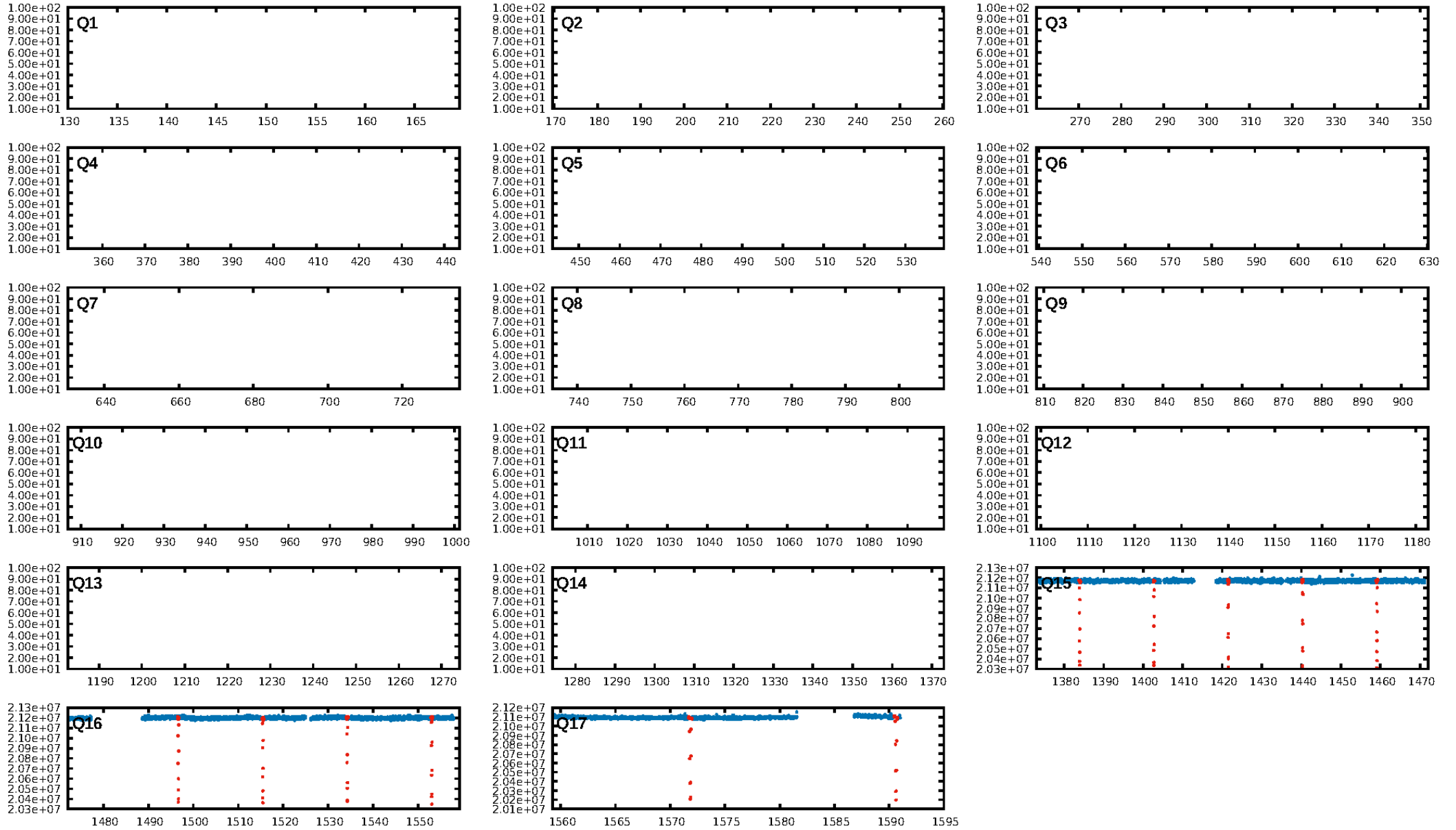
DV Fit Results:

Period = 18.78972 [0.00002] d
Epoch = 143.8238 [0.0014] BKJD
Rp/R* = 0.2799 [0.0248]
a/R* = 29.63 [0.25]
b = 0.95 [0.04]
Seff = 75.76 [23.89]
Teq = 752 [59] K
Rp = 27.00 [5.91] Re
a = 0.1275 [0.0235] AU
Ag = 1.65 [0.80] [0.81σ]
Teffp = 1318 [137] K [3.79σ]

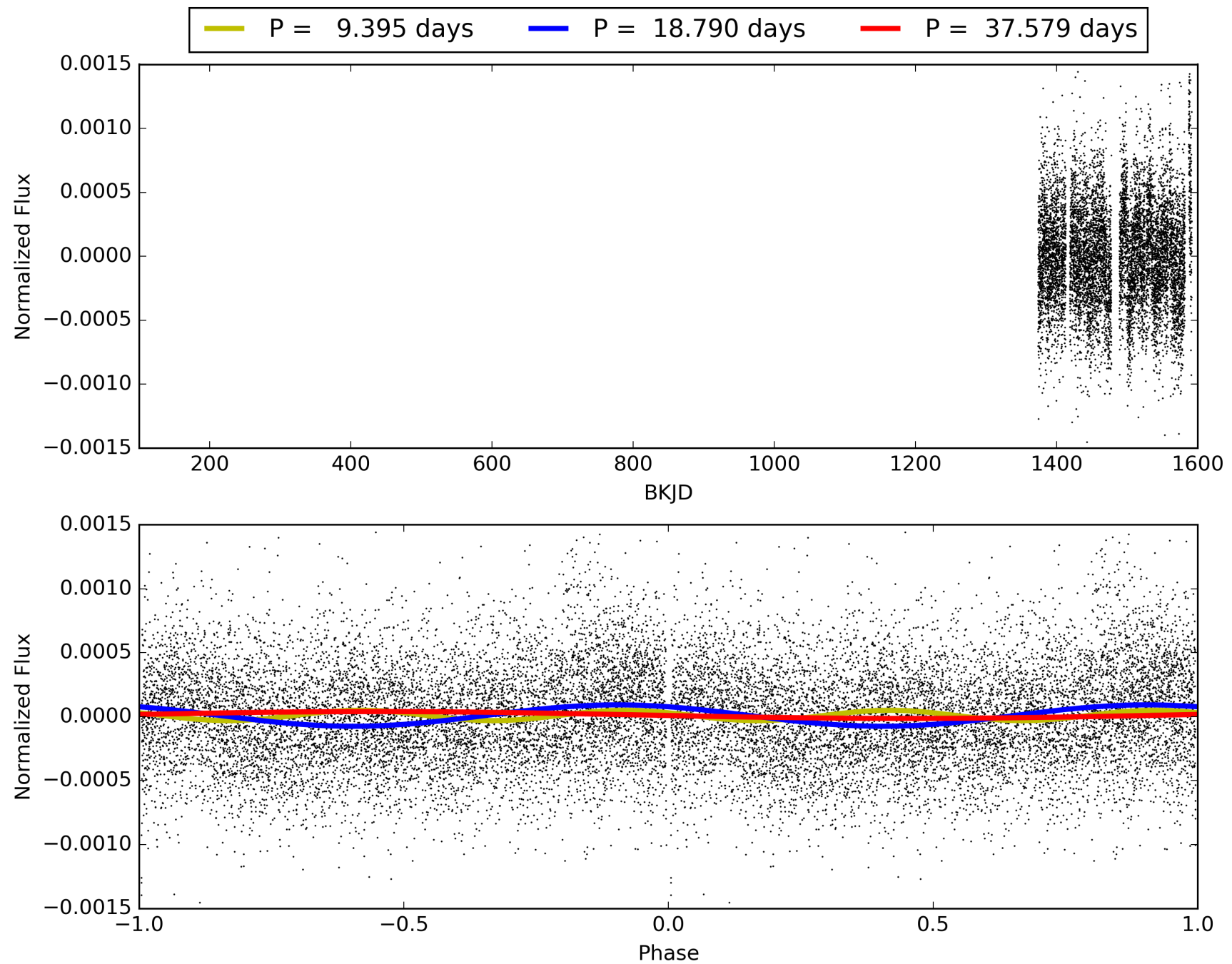
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.1%
ModelChiSquareGof-sig: 73.5%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 7.686
Centroid-sig: 0.0%
Centroid-so: 0.340 arcsec [19.13σ]
OotOffset-rm: 0.196 arcsec [1.43σ]
KicOffset-rm: 0.110 arcsec [1.34σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 005113146-01, PDC Light Curves

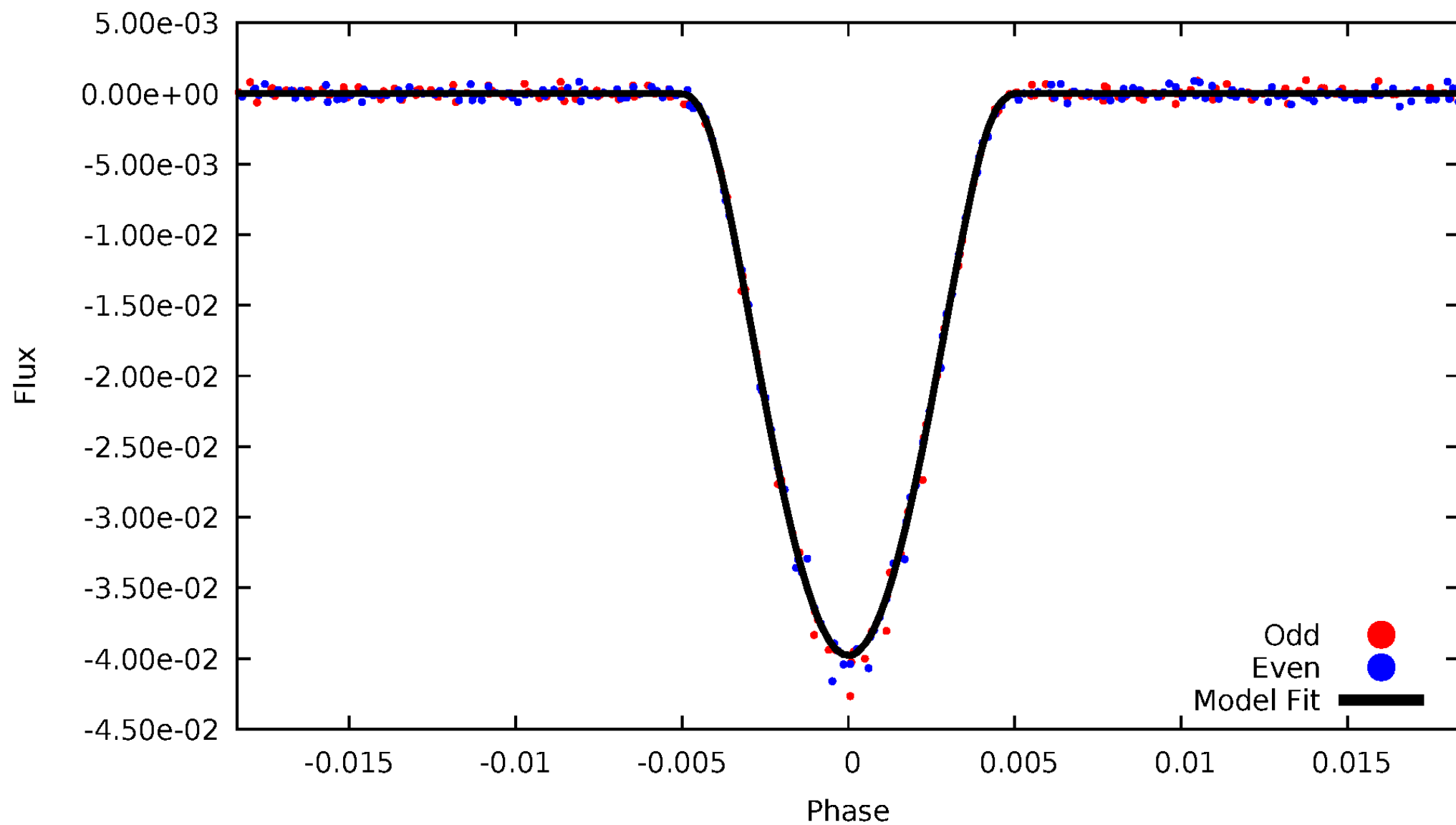


TCE 005113146-01



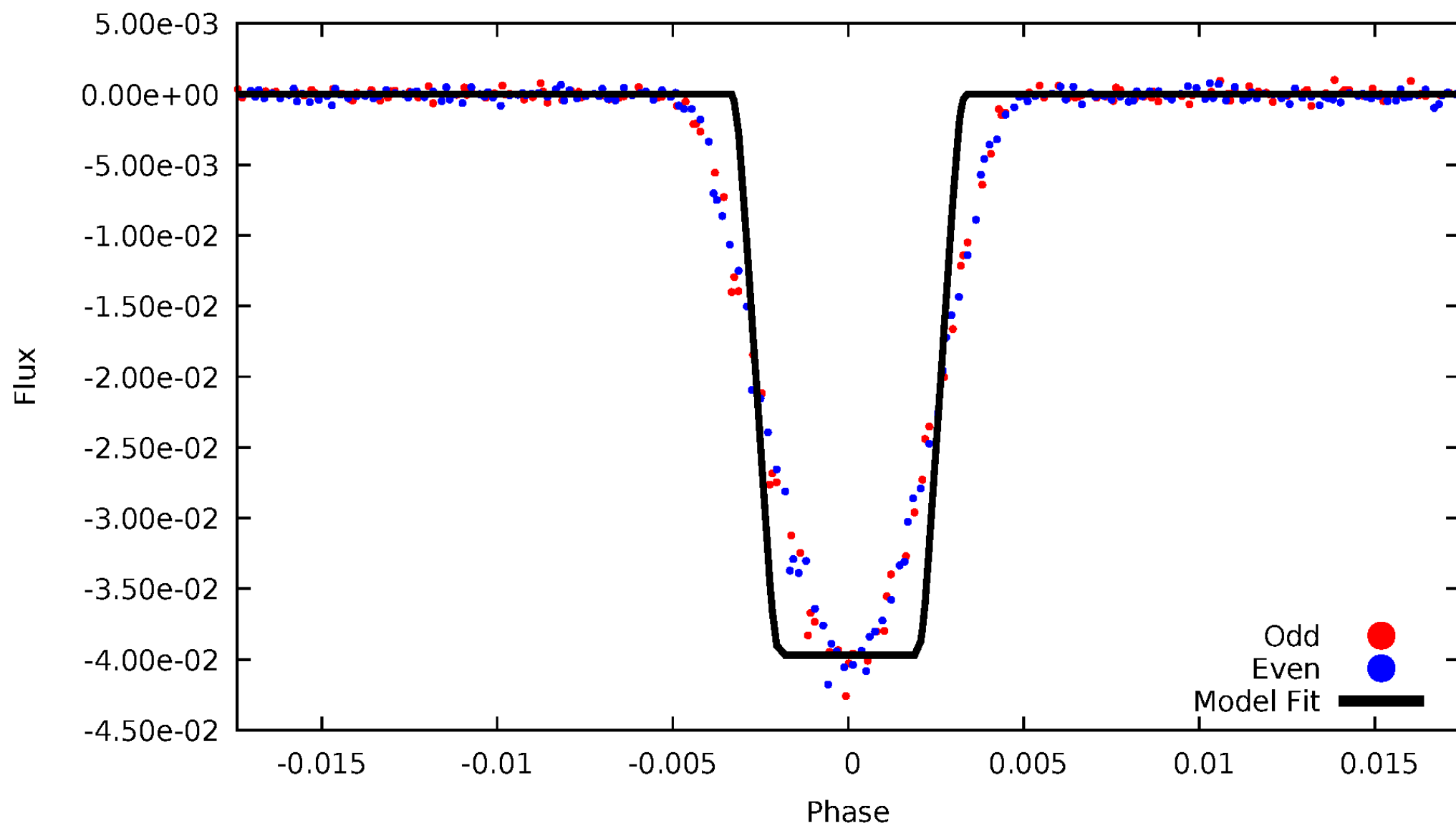
DV Odd/Even

TCE 005113146-01



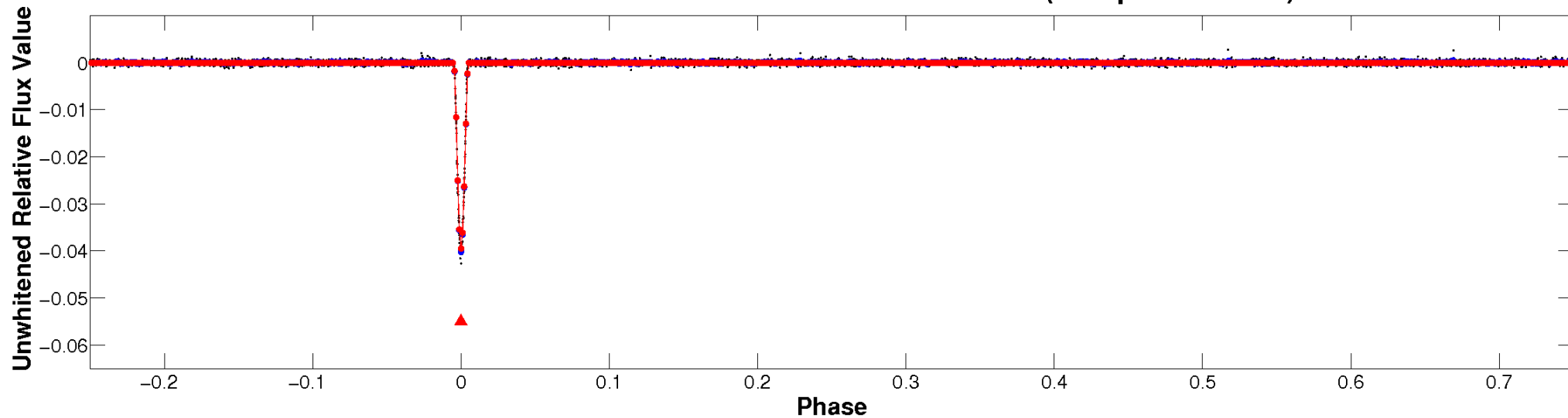
ALT Odd/Even

TCE 005113146-01

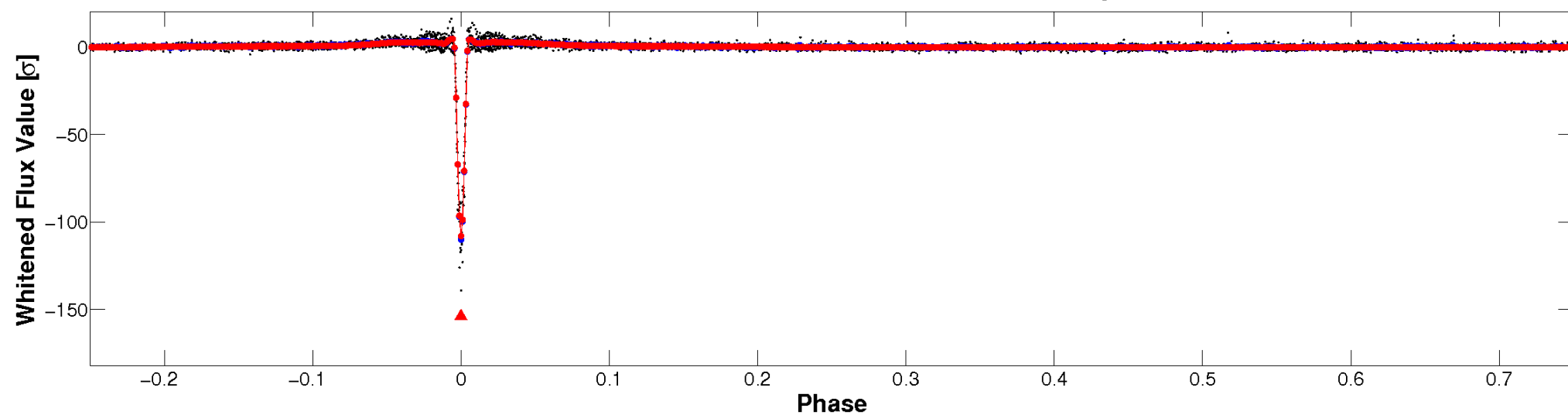


Non-Whitened Vs. Whitened Light Curve

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

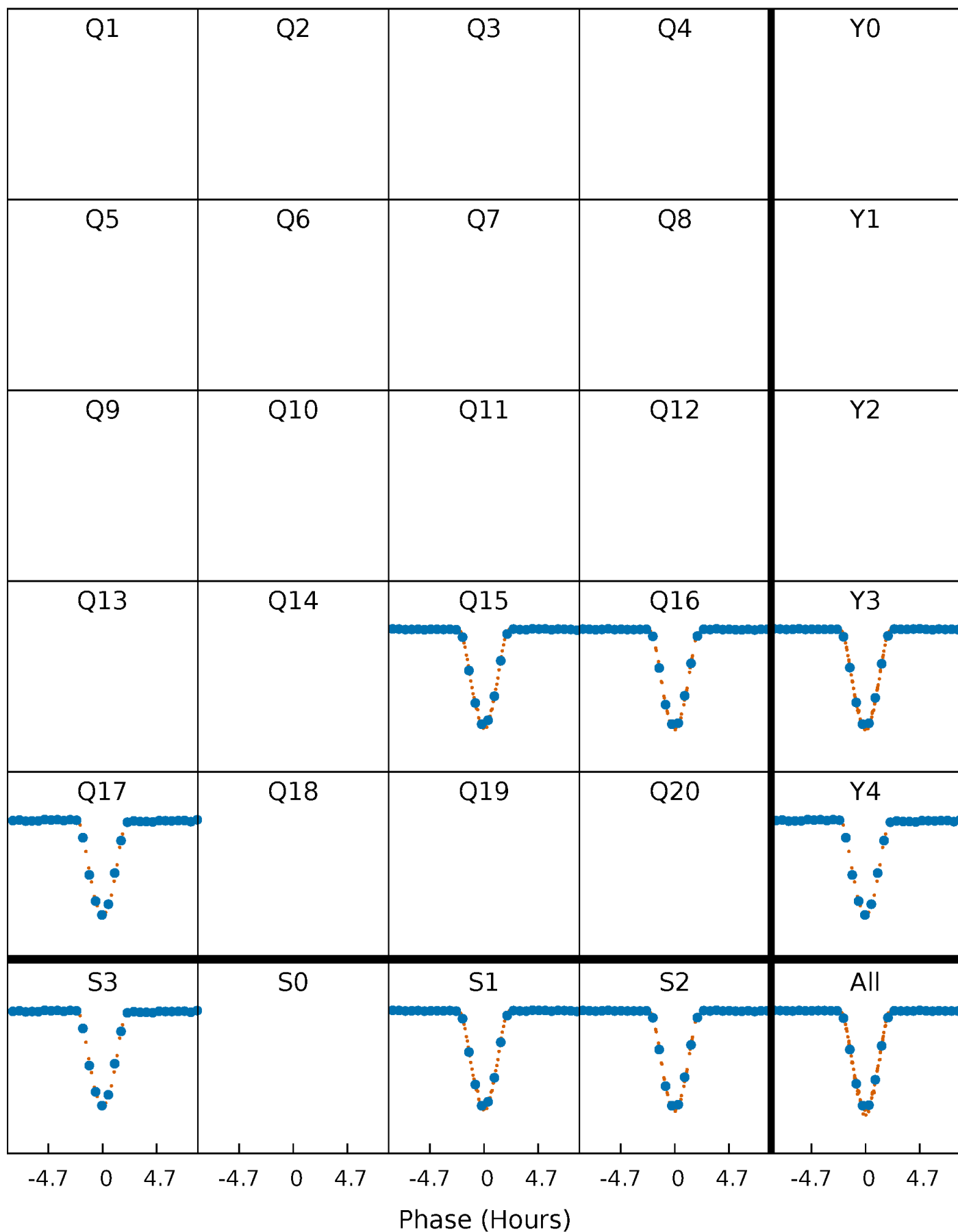


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



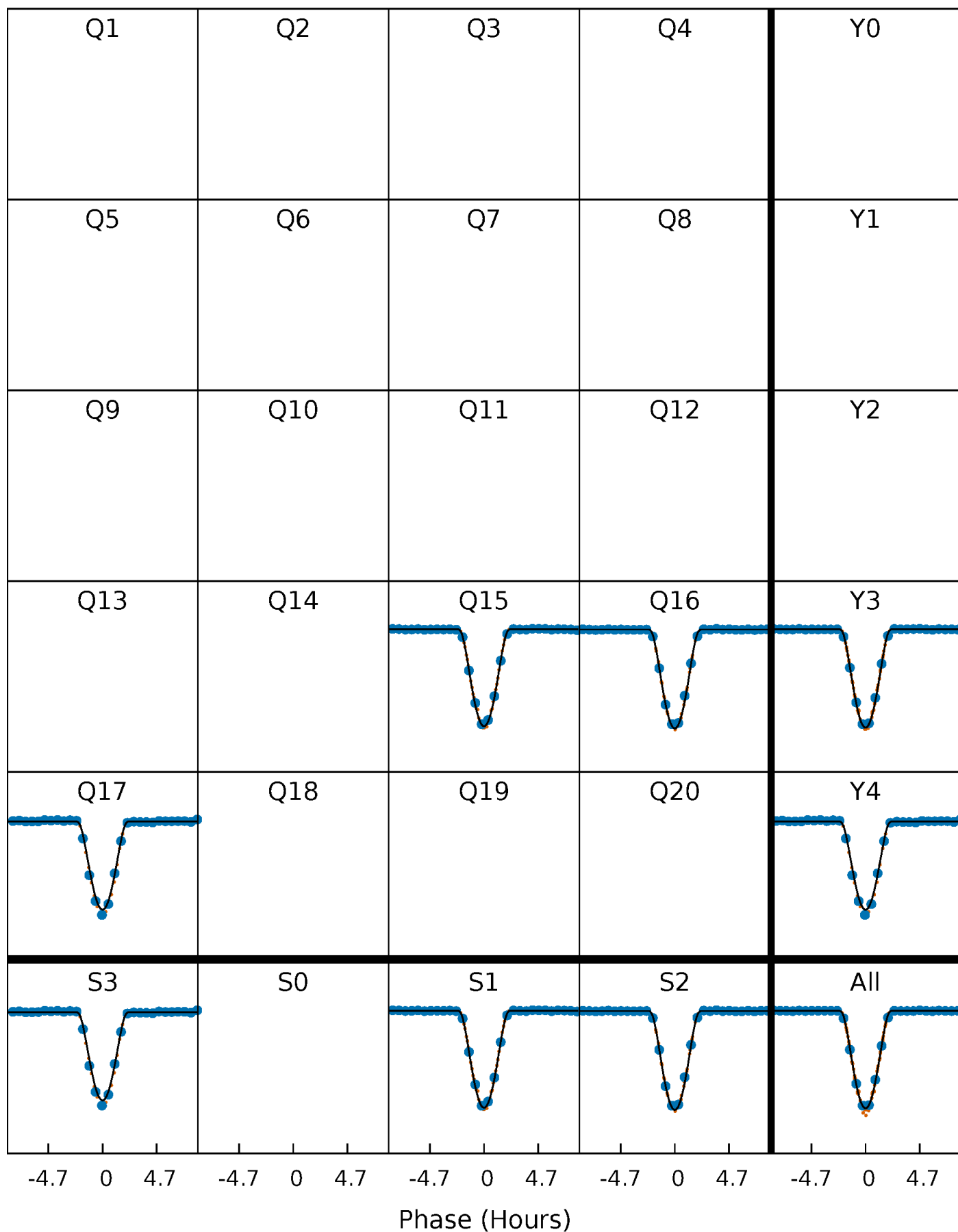
PDC Quarter-Phased Transit Curves

TCE 005113146-01 P= 18.789720 Days $T_0=143.823839$ (BKJD)



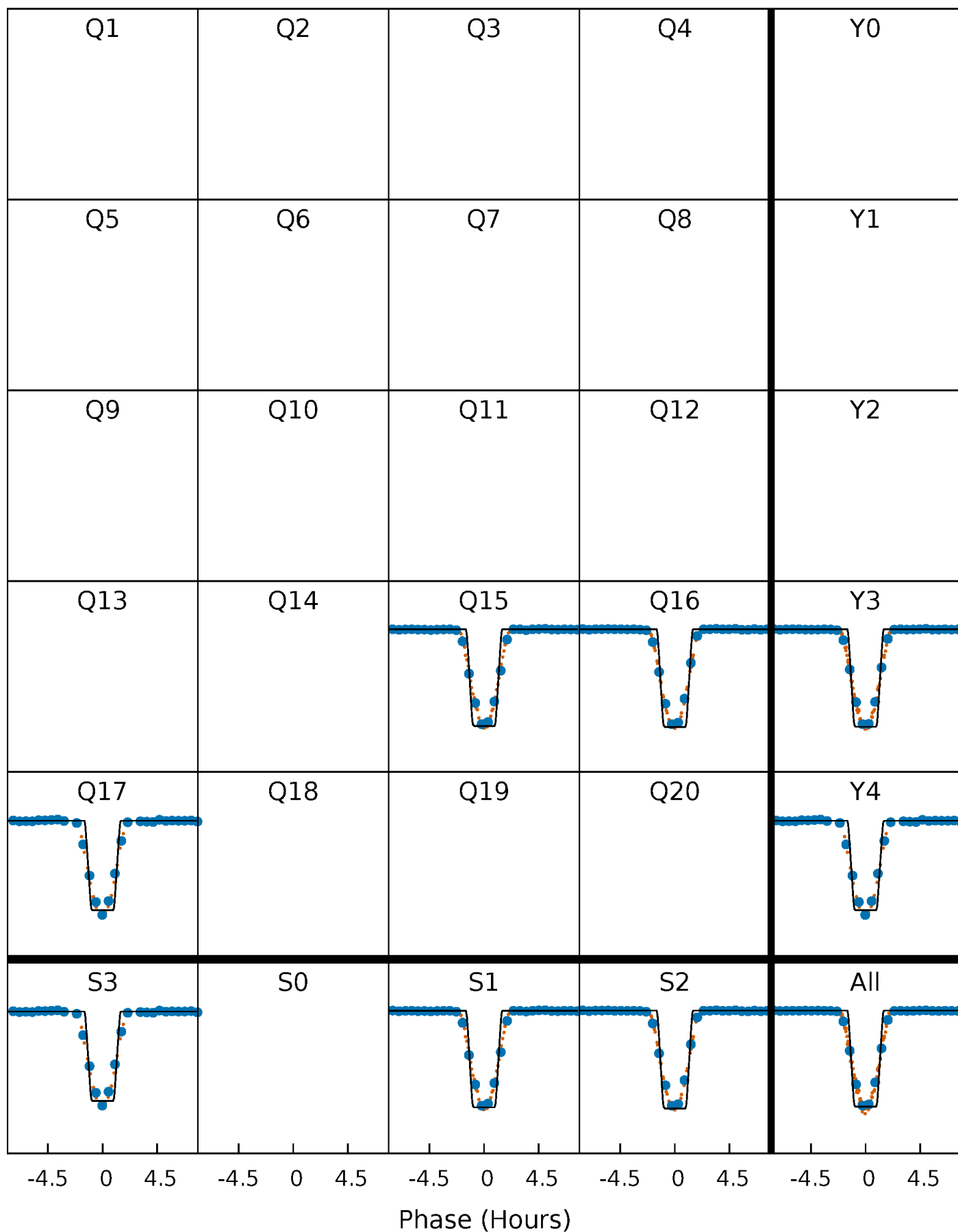
DV Quarter-Phased Transit Curves

TCE 005113146-01 P= 18.789720 Days $T_0=143.823839$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

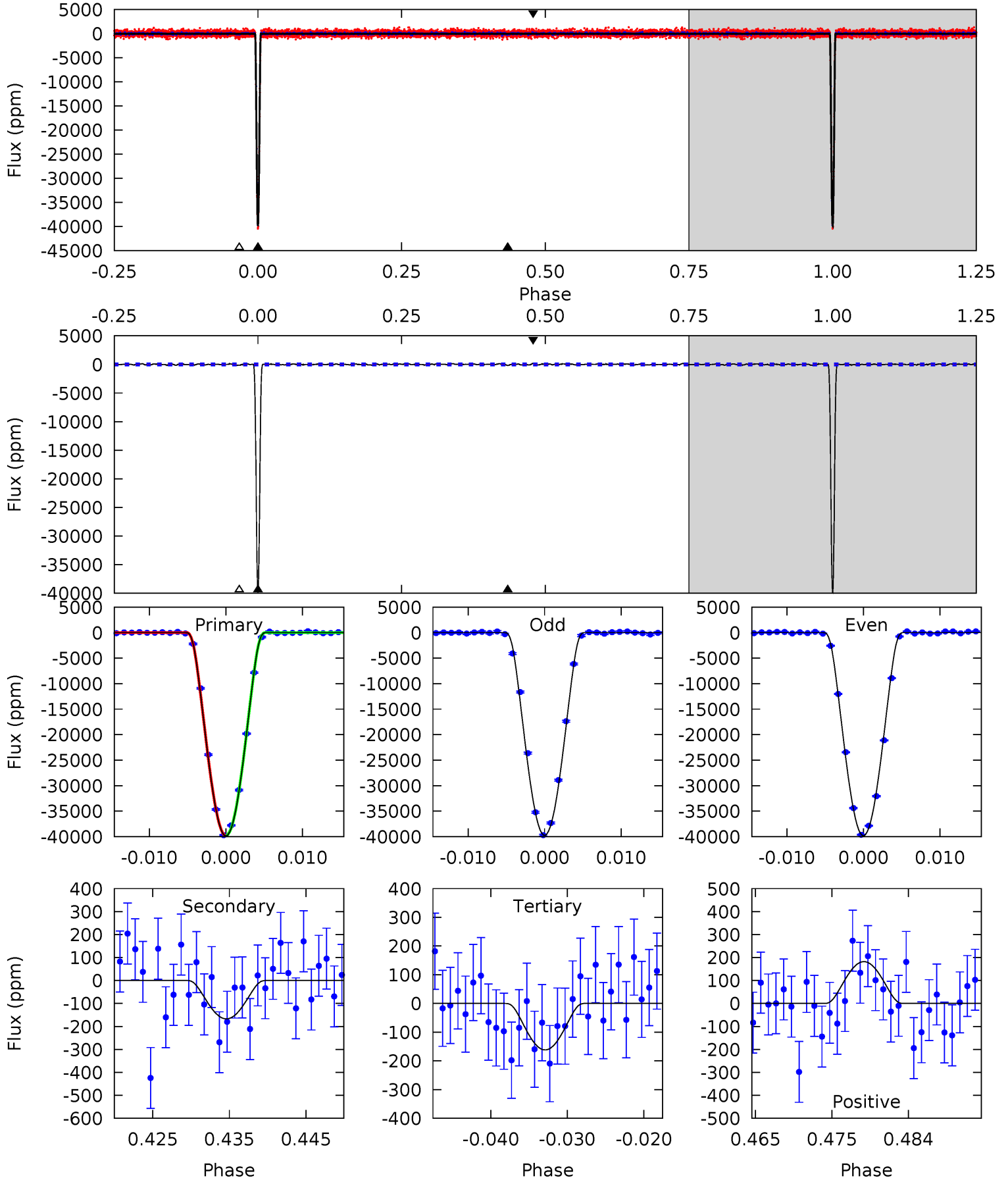
TCE 005113146-01 P= 18.790115 Days $T_0=143.795643$ (BKJD)



DV Model-Shift Uniqueness Test

005113146-01, P = 18.789720 Days, E = 143.823839 Days

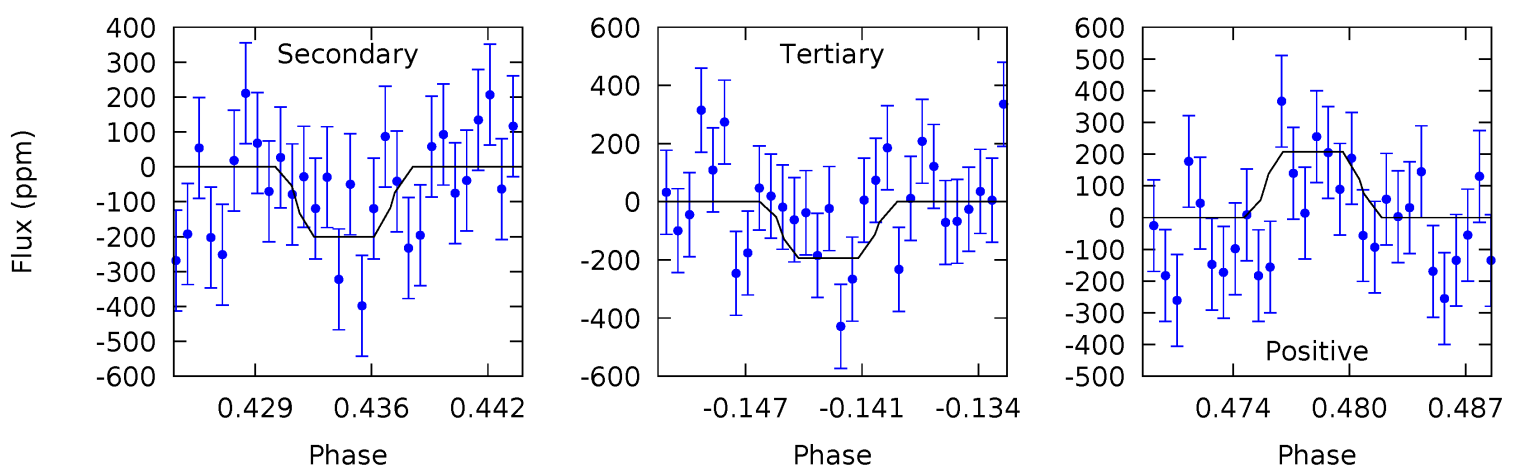
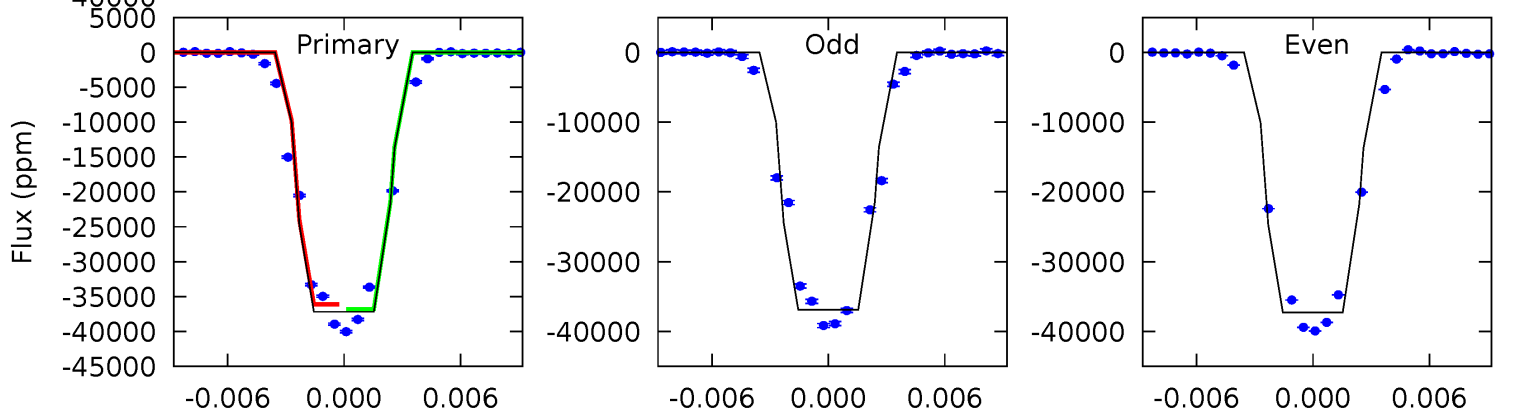
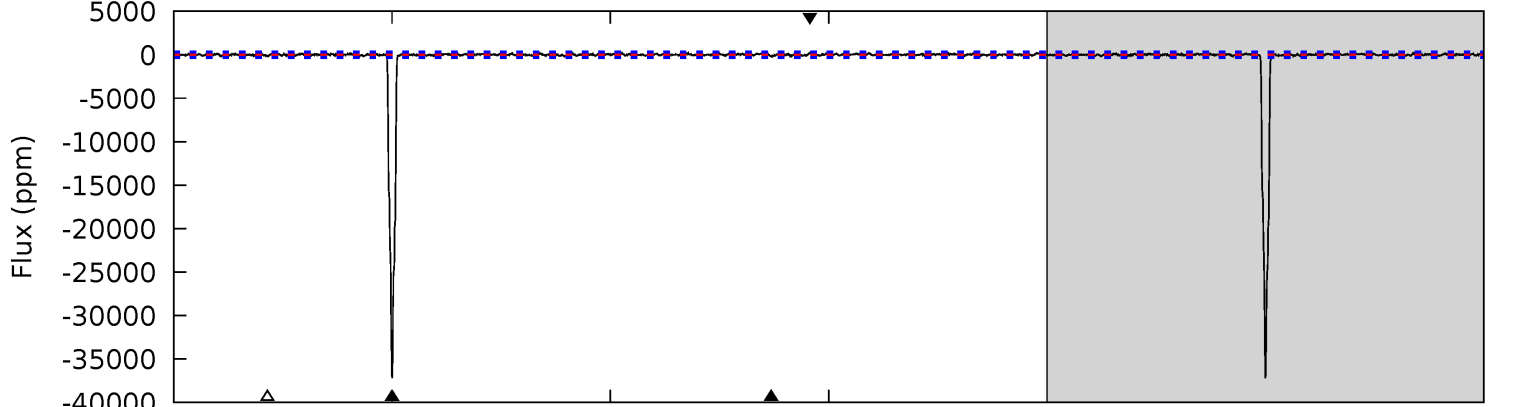
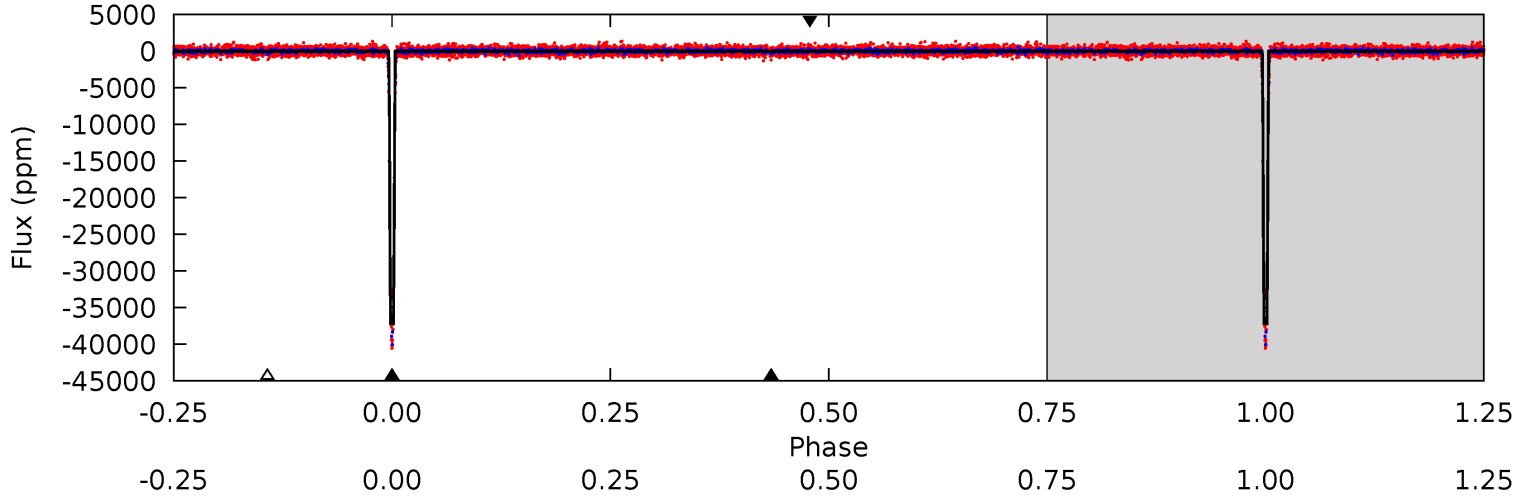
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1083	4.54	4.40	4.95	5.03	2.58	1.43	1079	1078	0.14	-0.41	1.09	1.01	0.00	0.41



Alt Model-Shift Uniqueness Test

005113146-01, P = 18.790115 Days, E = 143.795643 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
639.8	3.45	3.33	3.56	5.11	2.73	1.05	636.5	636.2	0.12	-0.12	3.01	1.00	0.01	0



Stellar Parameters For KIC 005113146

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6477^{+194}_{-214}	$4.439^{+0.135}_{-0.165}$	$-1.560^{+0.350}_{-0.250}$	$0.884^{+0.177}_{-0.118}$	$0.784^{+0.078}_{-0.039}$	$1.596^{+0.922}_{-0.682}$
	+3%/-3%	+3%/-4%	+22%/-16%	+20%/-13%	+10%/-5%	+58%/-43%
Source	KIC0	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 005113146-01 / KOI 5127.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-167 ± 37	$27.29^{+4.47}_{-3.54}$	1053^{+65}_{-59}	2268^{+96}_{-101}	$2.038^{+0.869}_{-0.641}$
Alt.	-200 ± 58	$19.39^{+3.46}_{-2.87}$	1053^{+69}_{-59}	2530^{+136}_{-141}	$4.706^{+2.474}_{-1.765}$

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 $A_{obs} \gg 1.0$

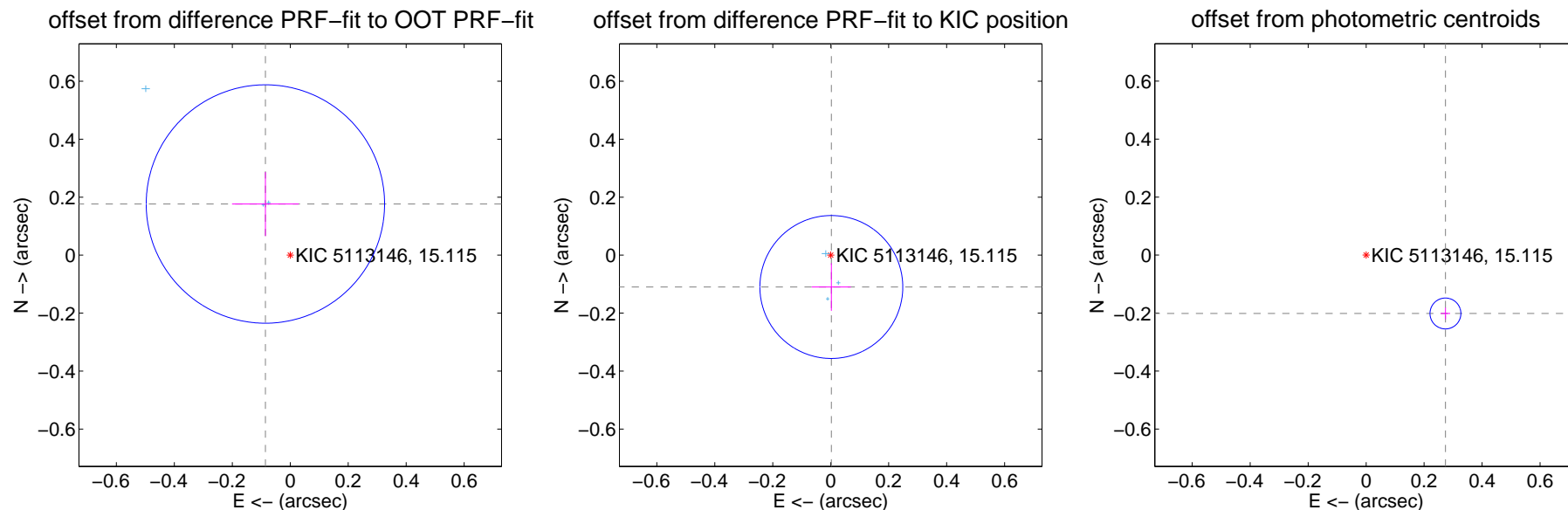
DV Centroid Data

Supplemental centroid analysis for 005113146-01. Kepler magnitude: 15.12. Transit SNR 597.10

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.75 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.196 ± 0.137	1.43	0.086 ± 0.115	0.176 ± 0.110
PRF-fit source offset from KIC position	0.110 ± 0.082	1.34	-0.002 ± 0.067	-0.110 ± 0.082
photometric centroid source offset	0.34 ± 0.02	19.13	-0.27 ± 0.02	-0.20 ± 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.



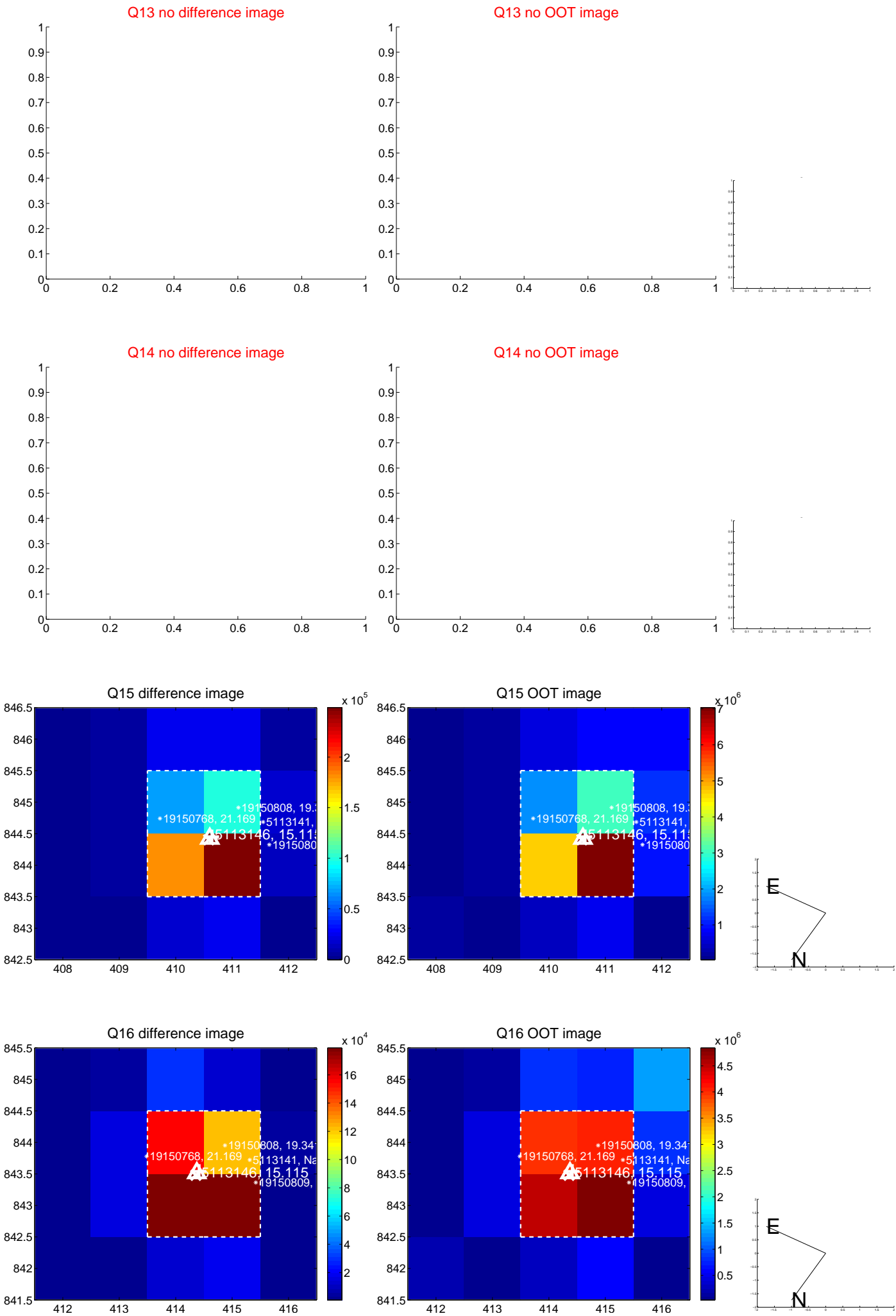
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



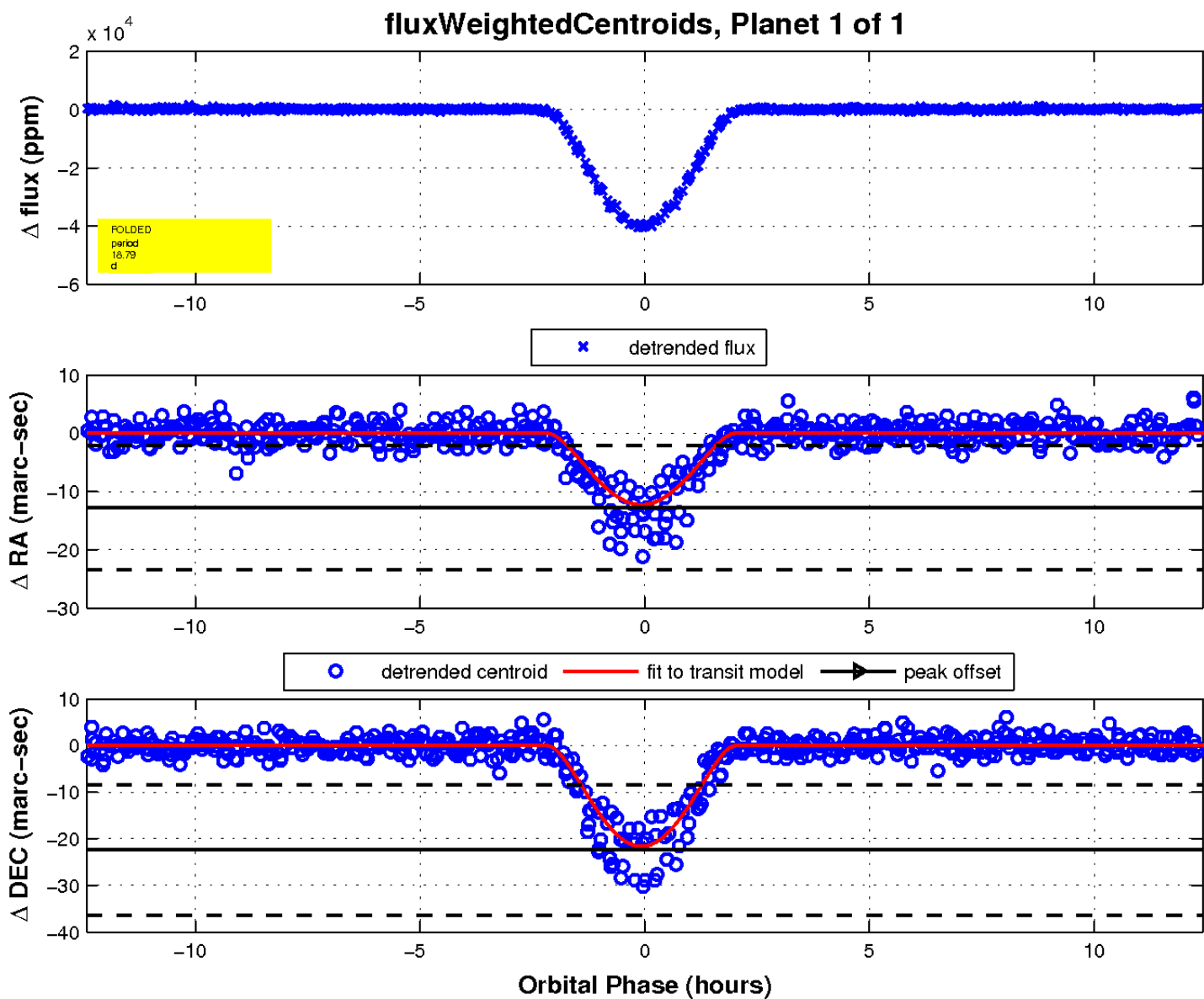
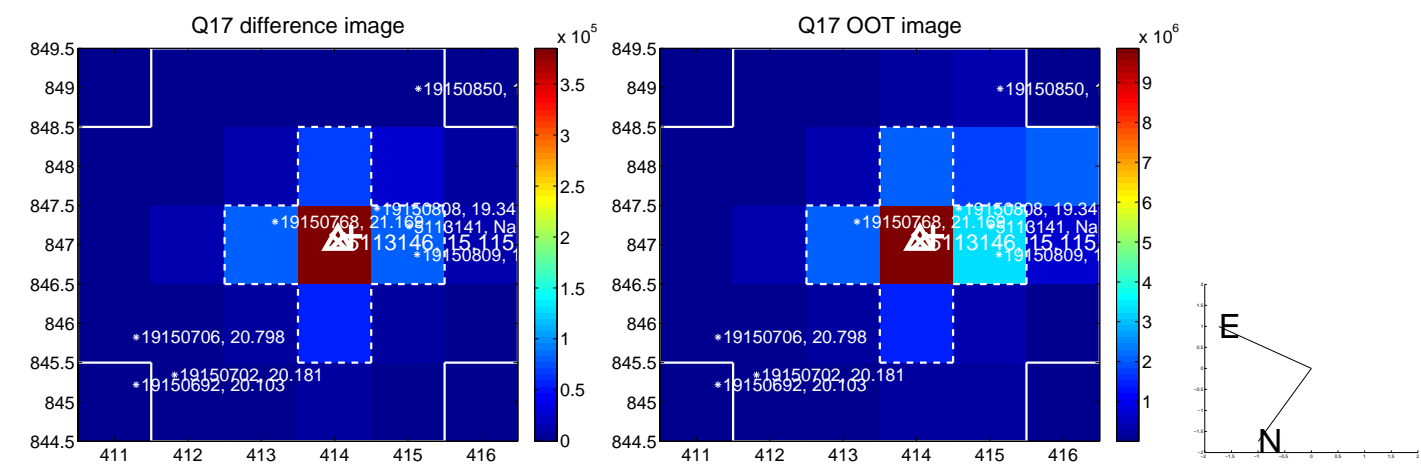
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UKIRT Image

