

KIC 010219288

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})
010219288-01	OBS	7993.01	3.381056	132.940571	504.2	8.933	9.7	11.9	59.44	3974	180.40	0.00
010219288-02	OBS	No	3.382057	134.609249	314.8	8.831	8.0	9.5	59.44	3974	144.21	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010219288-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS
010219288-02	OBS	FP	0.00	1	0	0	0	LPP_ALT—SAME_NTL_PERIOD—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.

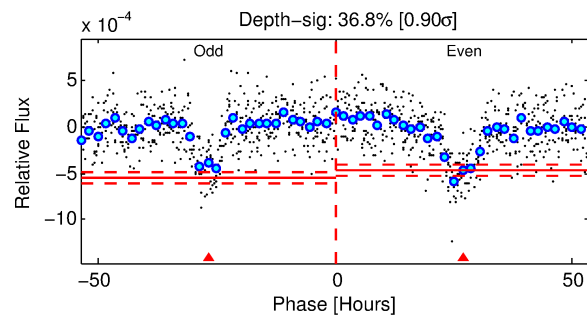
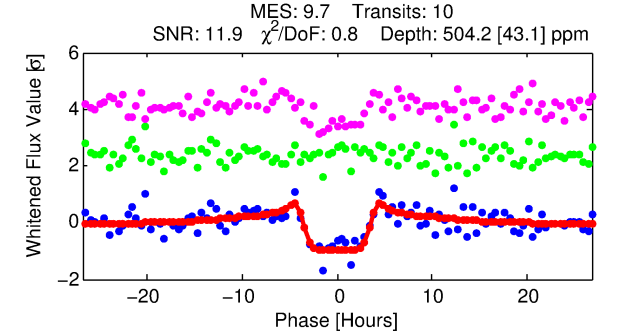
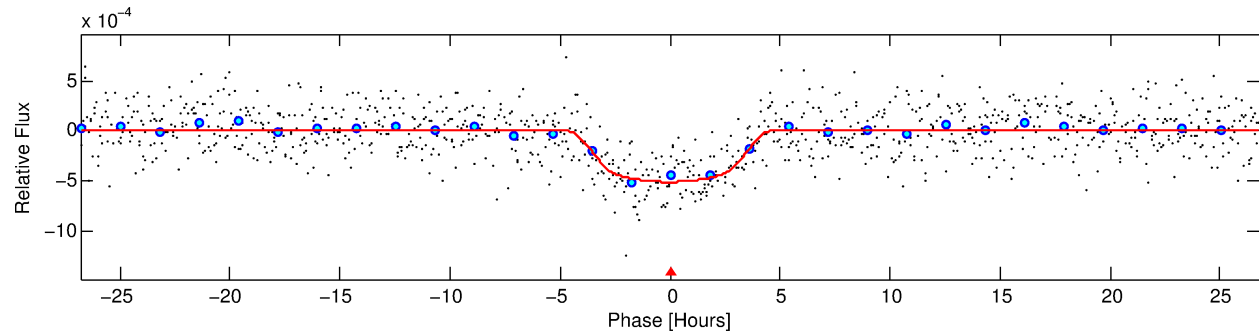
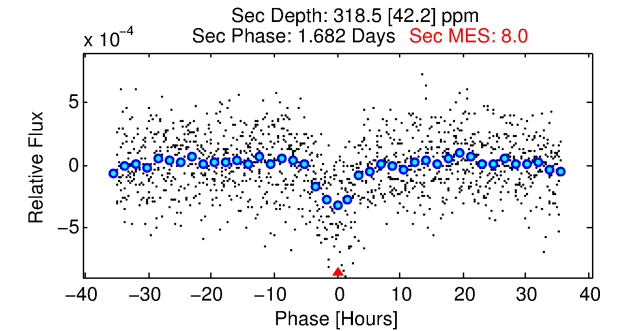
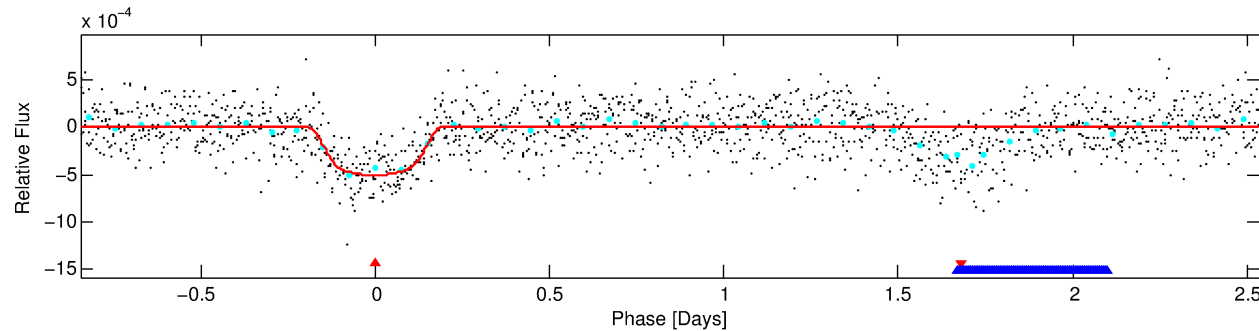
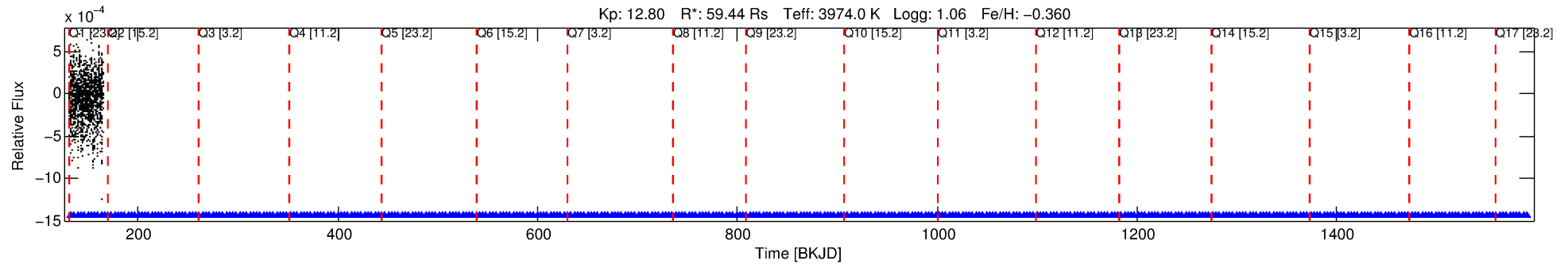
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010219288-01

No Significant Match Found

DV One-Page Summary

KIC: 10219288 Candidate: 1 of 2 Period: 3.381 d



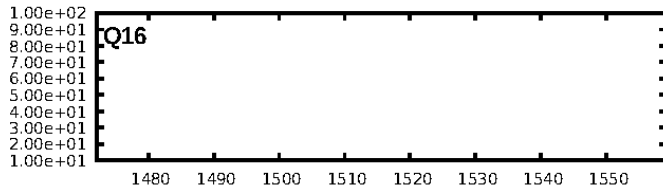
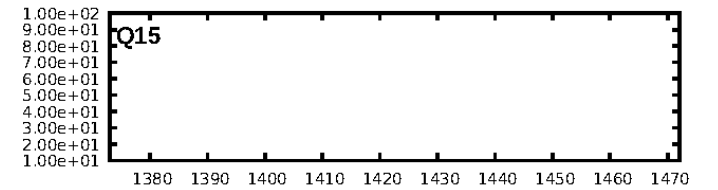
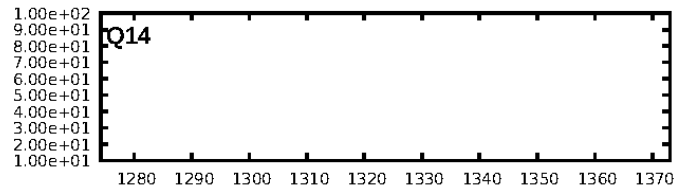
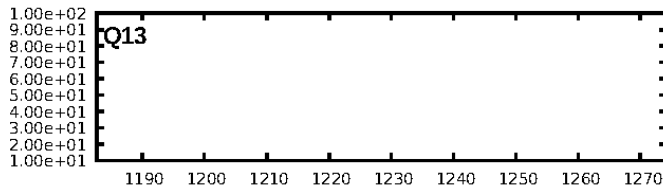
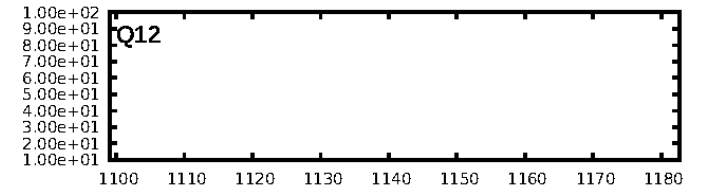
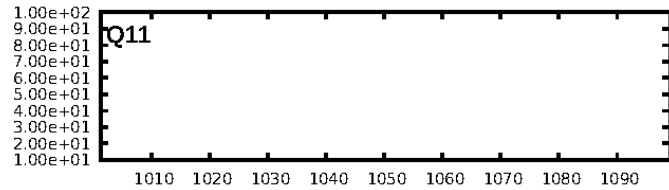
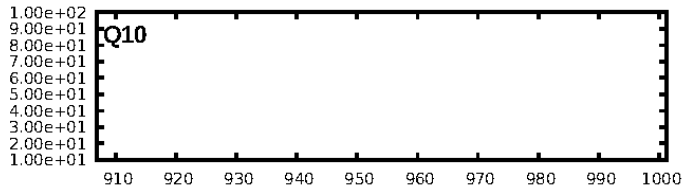
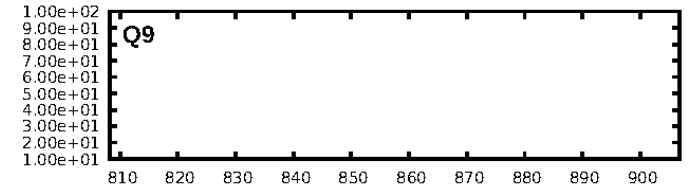
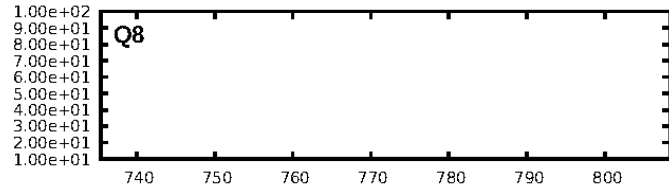
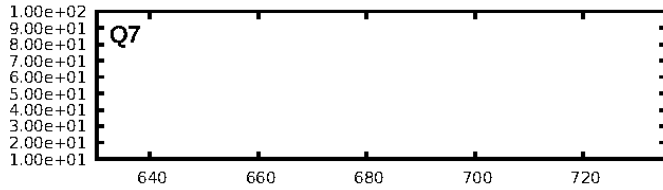
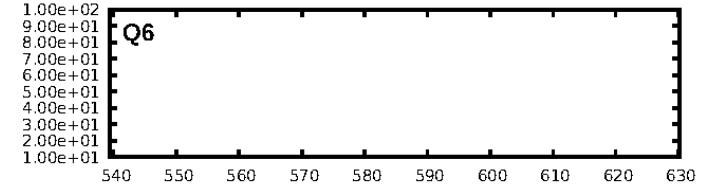
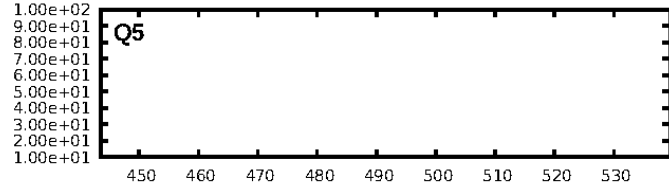
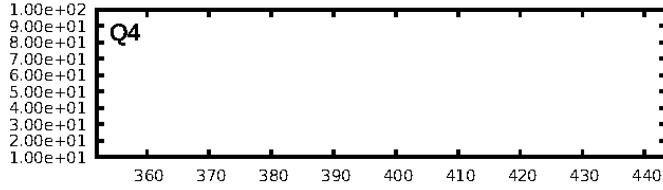
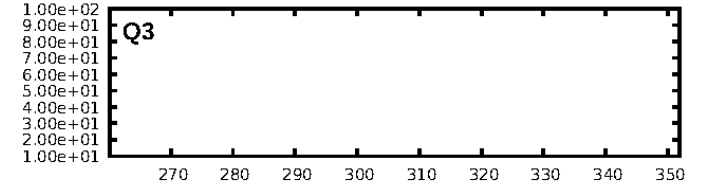
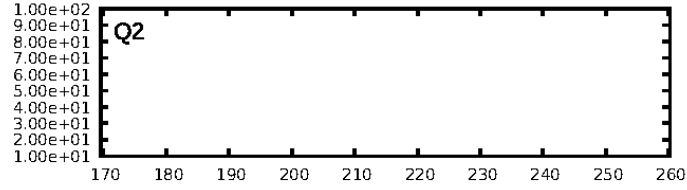
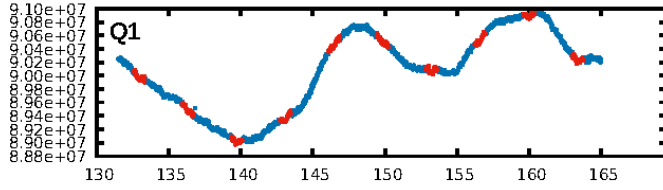
DV Fit Results:

Period = 3.38106 [0.00178] d
Epoch = 132.9406 [0.0096] BKJD
Rp/R* = 0.0278 [0.0018]
a/R* = 1.54 [0.12]
b = 0.94 [0.02]
Seff = N/A
Teq = N/A
Rp = 180.40 [59.87] Re
a = N/A
Ag = N/A
Teffp = N/A

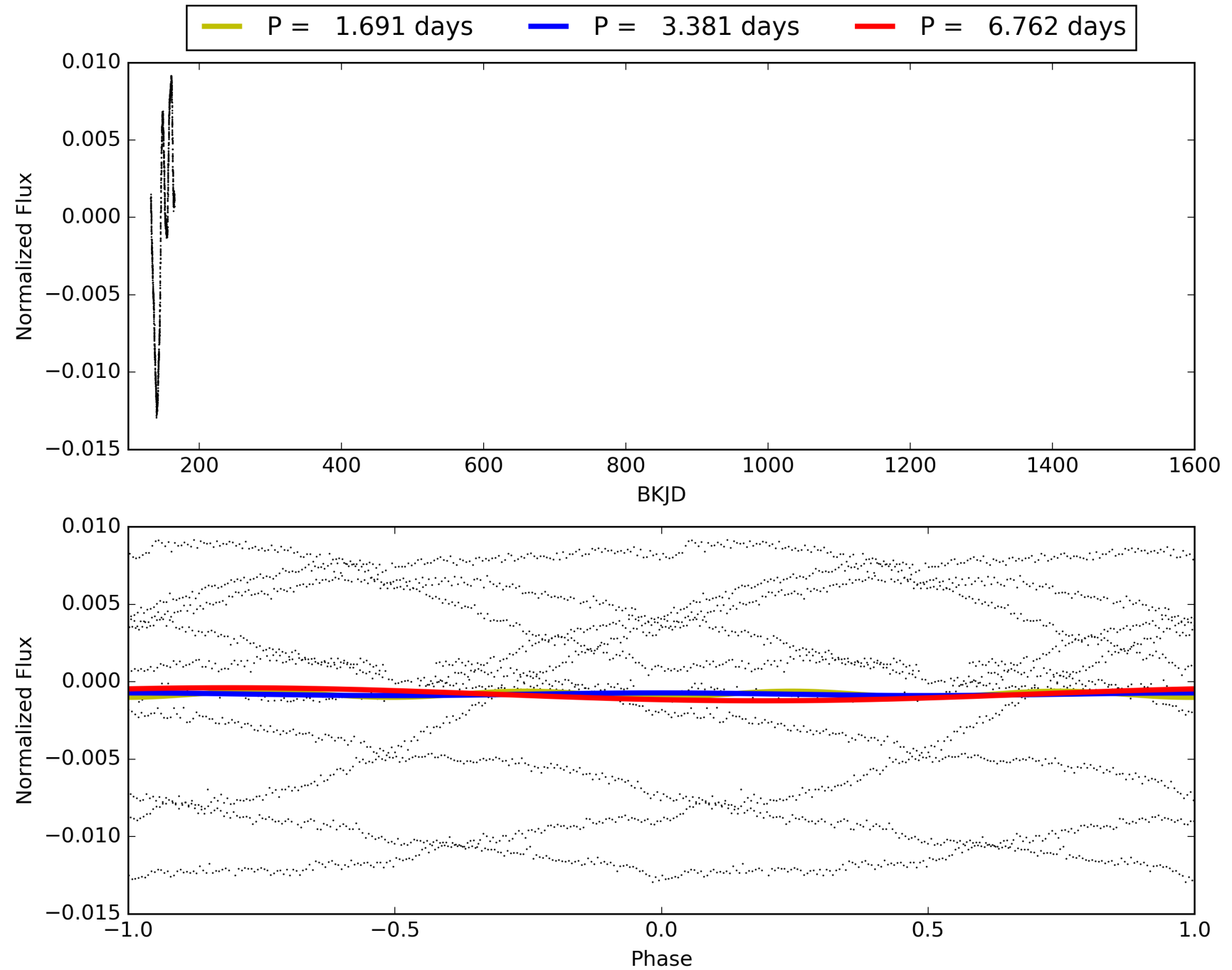
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.2% [0.00σ]
ModelChiSquare2-sig: 94.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.85e-16
RollingBand-fgt: N/A
GhostDiagnostic-chr: 0.953
Centroid-sig: 87.2%
Centroid-so: 1.011 arcsec [1.21σ]
OotOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-rm: N/A
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [1/1]

TCE 010219288-01, PDC Light Curves

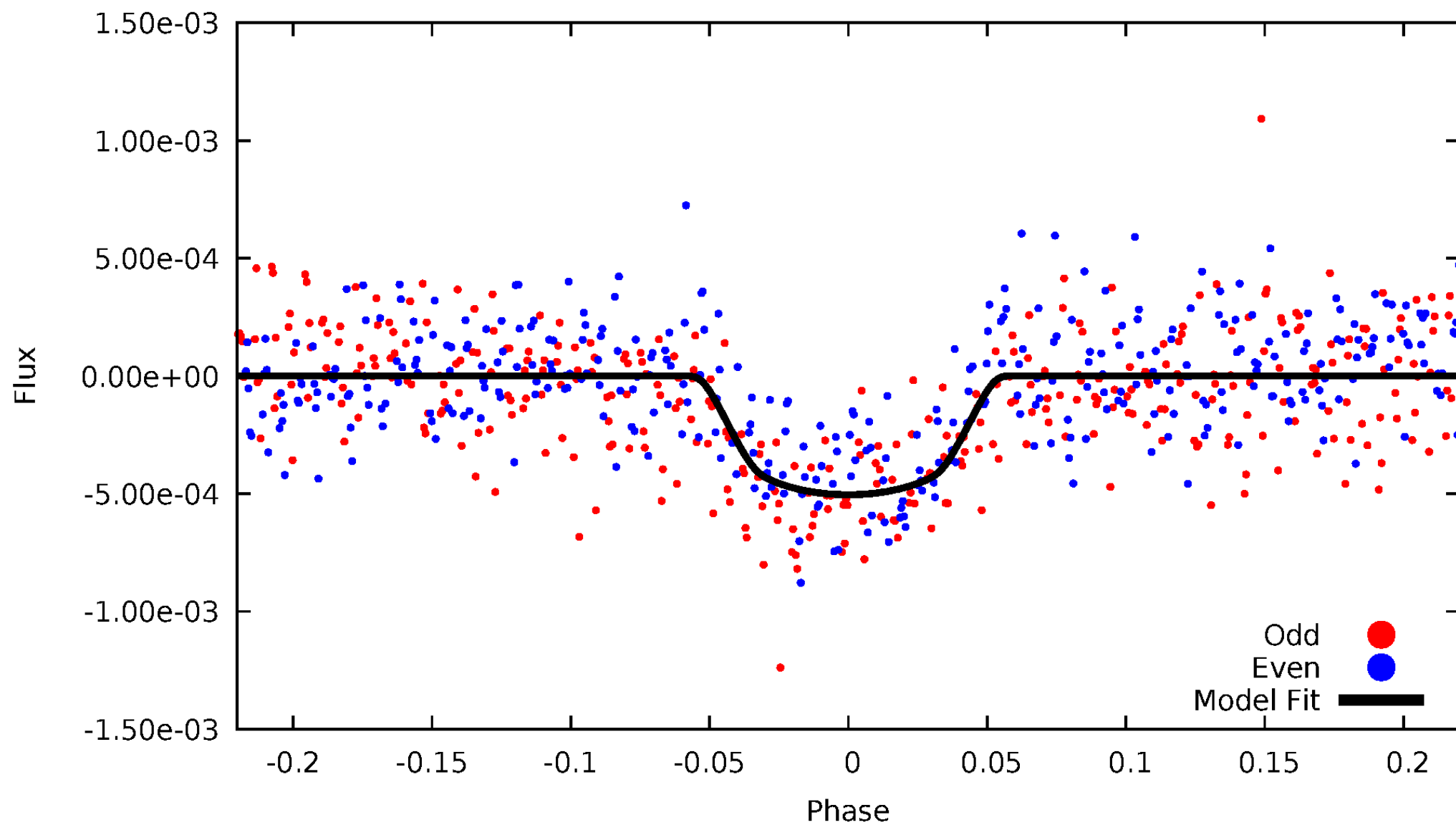


TCE 010219288-01



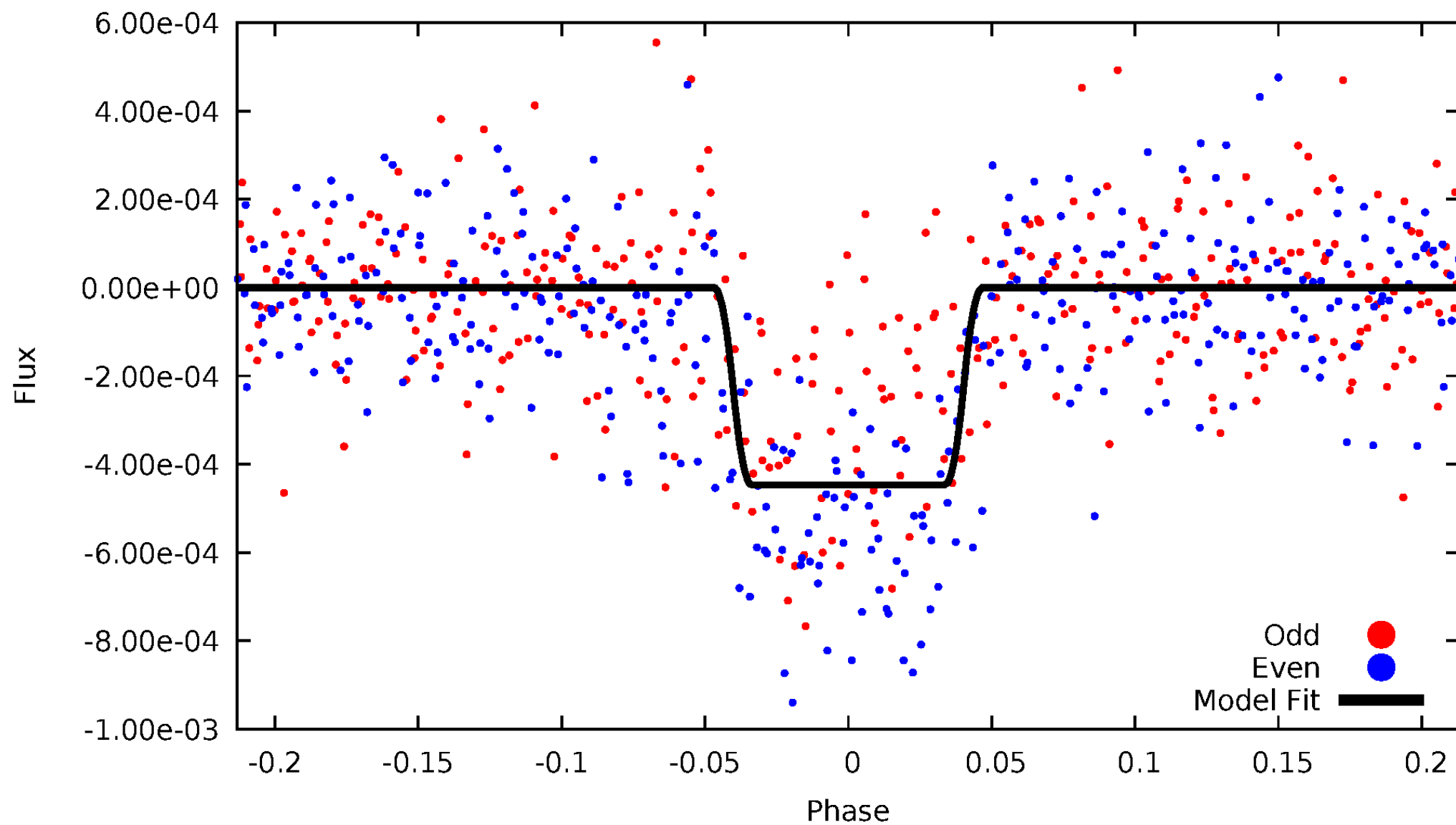
DV Odd/Even

TCE 010219288-01



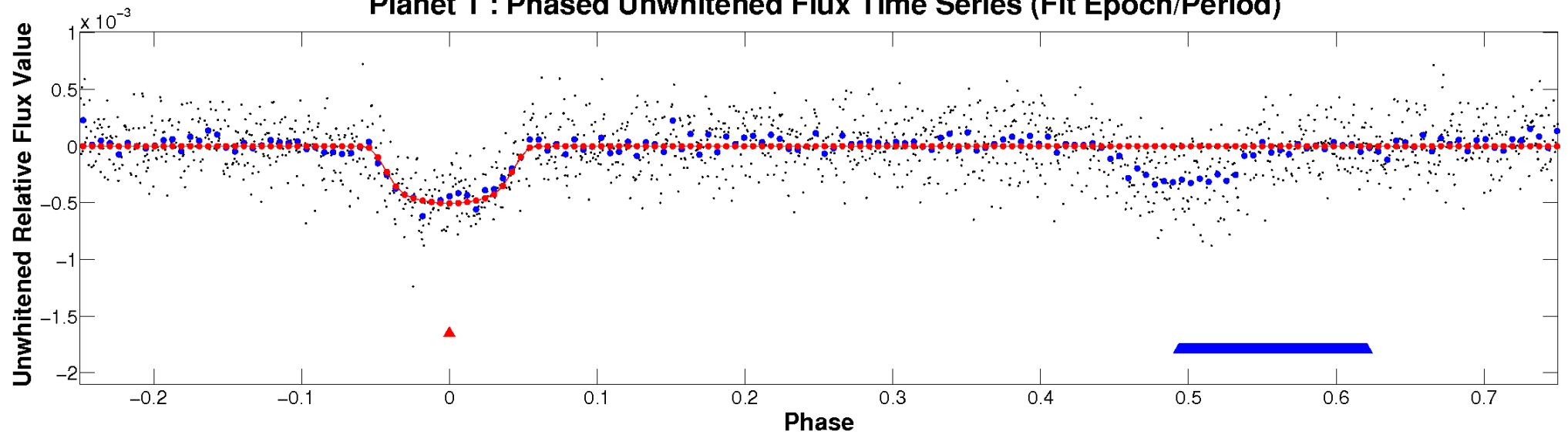
ALT Odd/Even

TCE 010219288-01

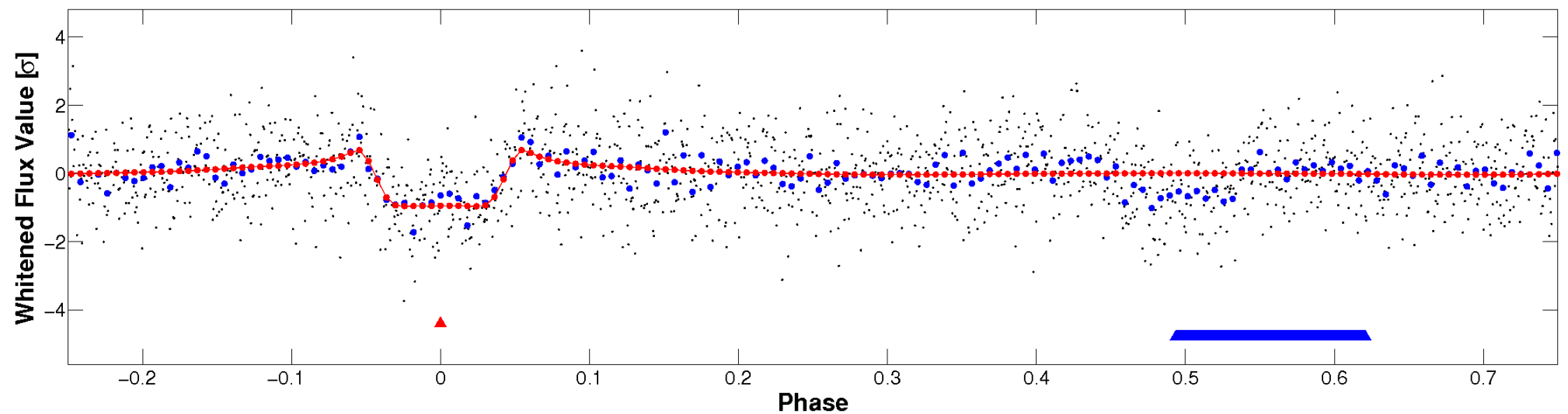


Non-Whitened Vs. Whitened Light Curve

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

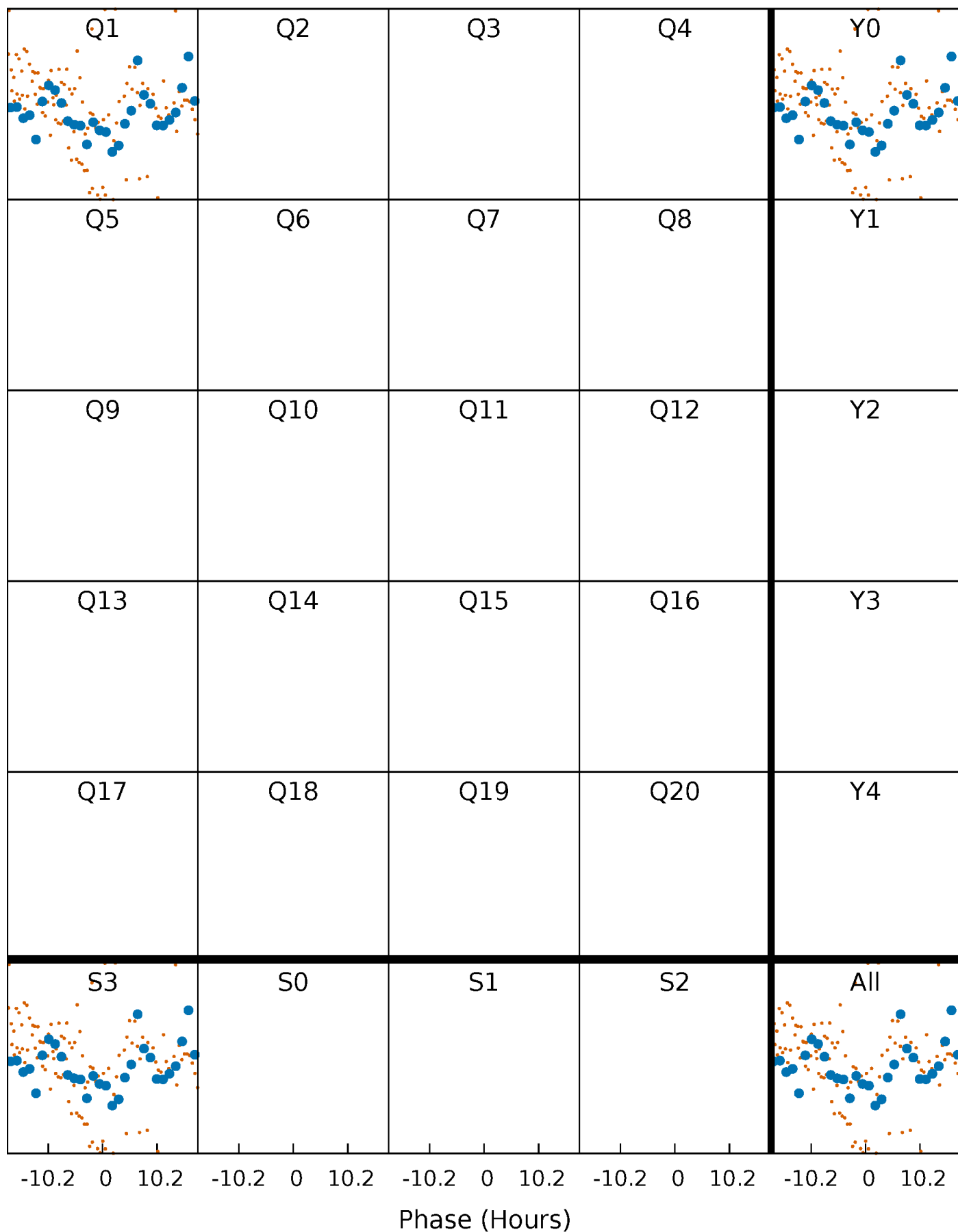


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



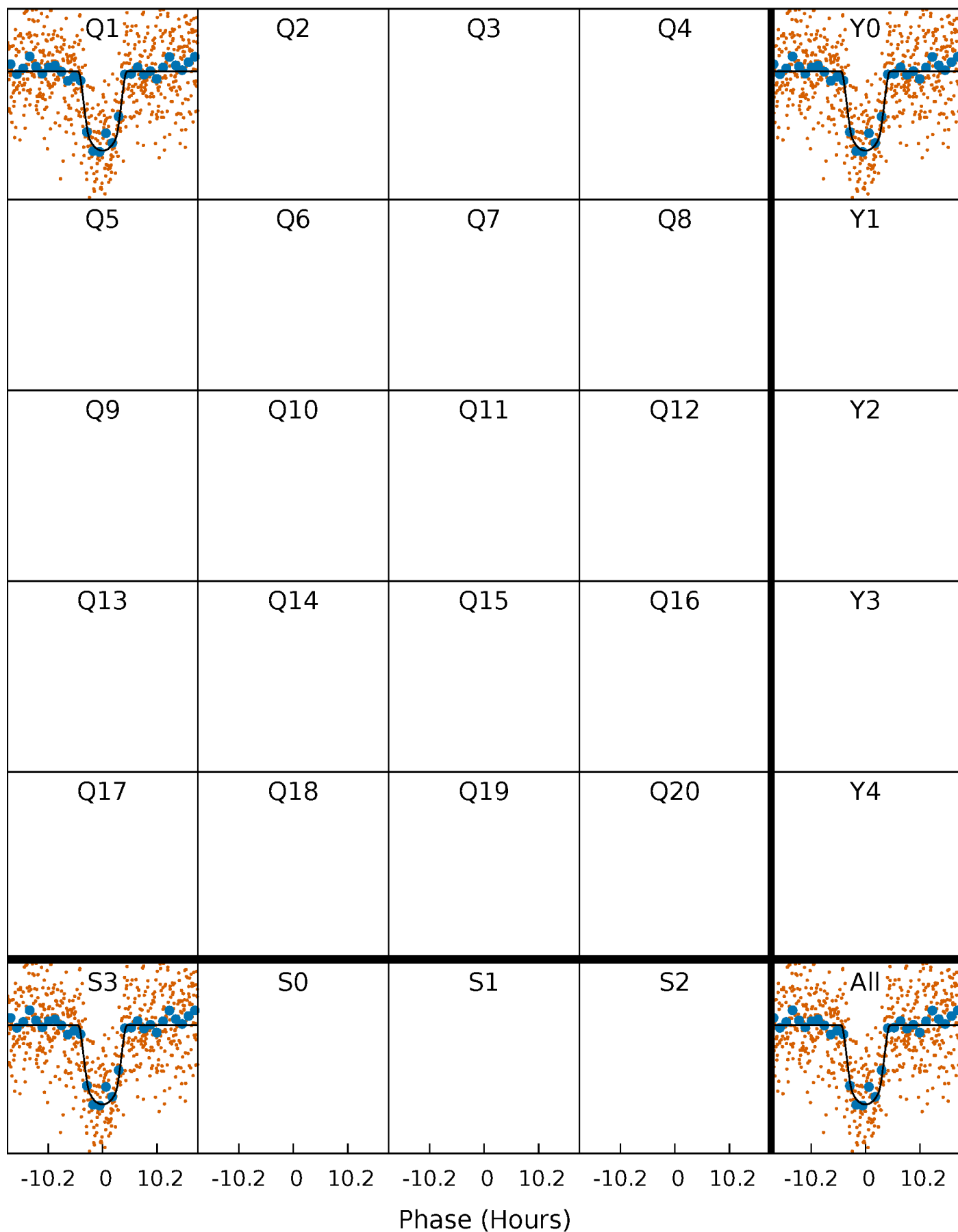
PDC Quarter-Phased Transit Curves

TCE 010219288-01 P= 3.381056 Days $T_0=132.940571$ (BKJD)



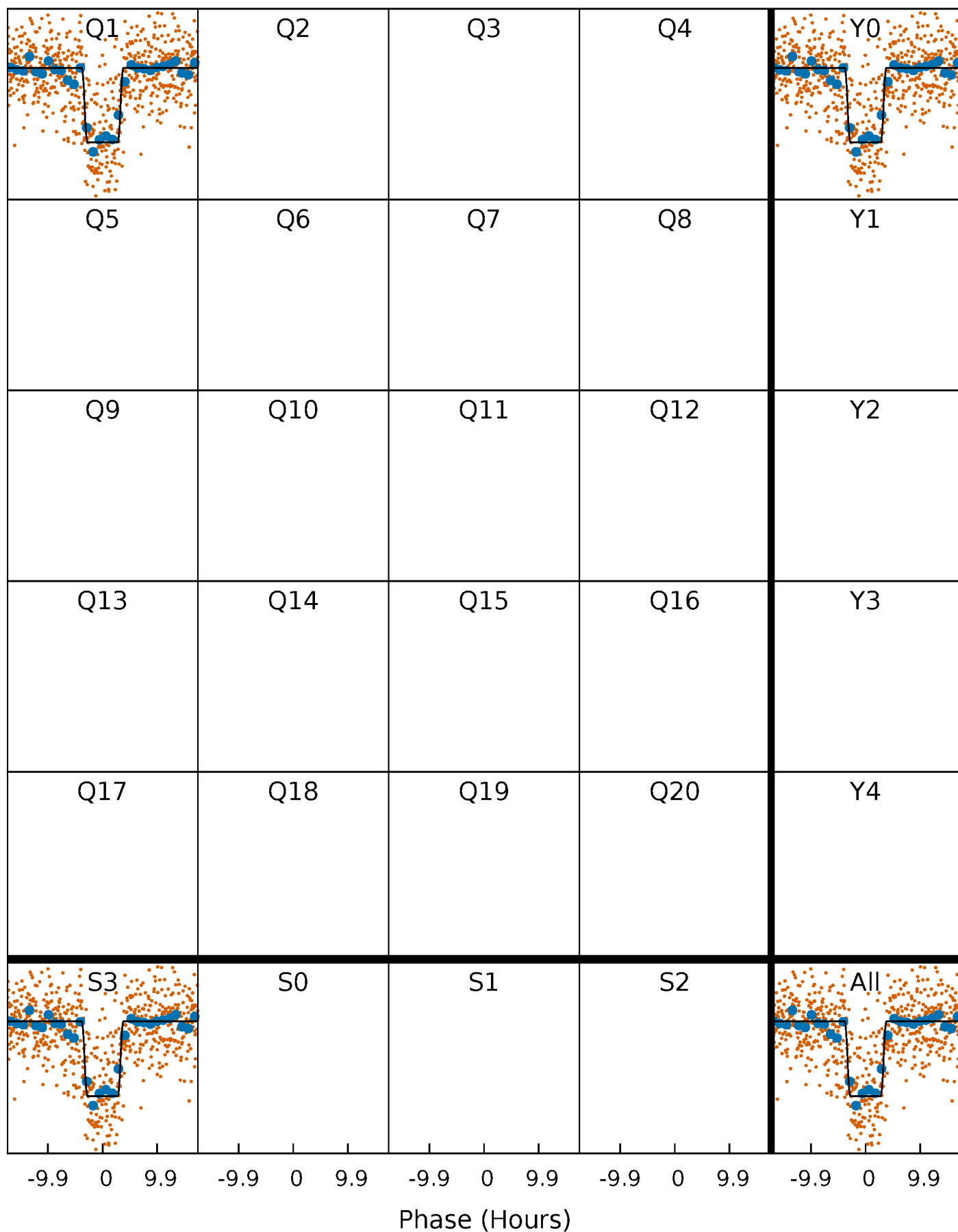
DV Quarter-Phased Transit Curves

TCE 010219288-01 P= 3.381056 Days $T_0=132.940571$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

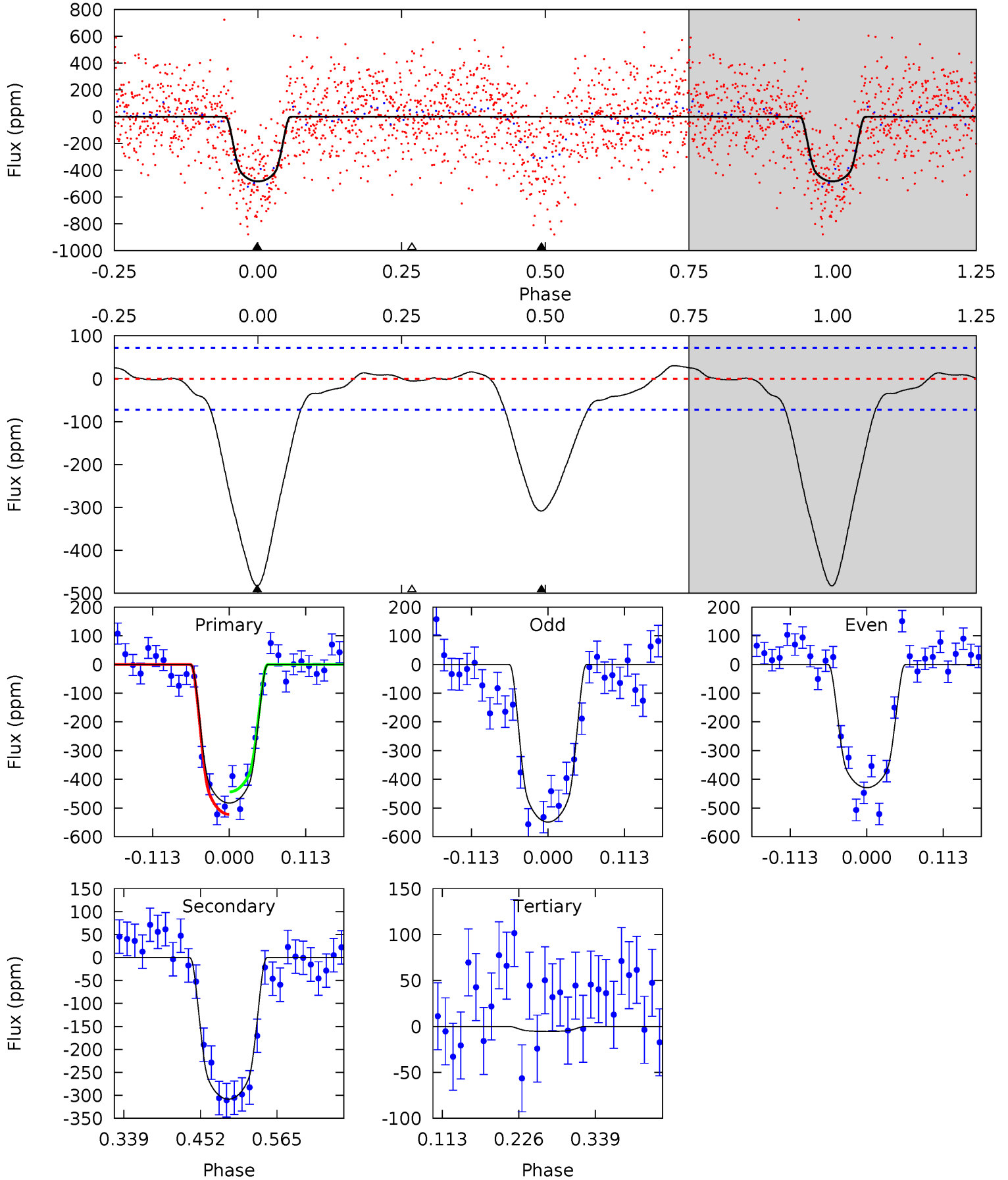
TCE 010219288-01 P= 3.377104 Days $T_0=132.956159$ (BKJD)



DV Model-Shift Uniqueness Test

010219288-01, P = 3.381056 Days, E = 129.559515 Days

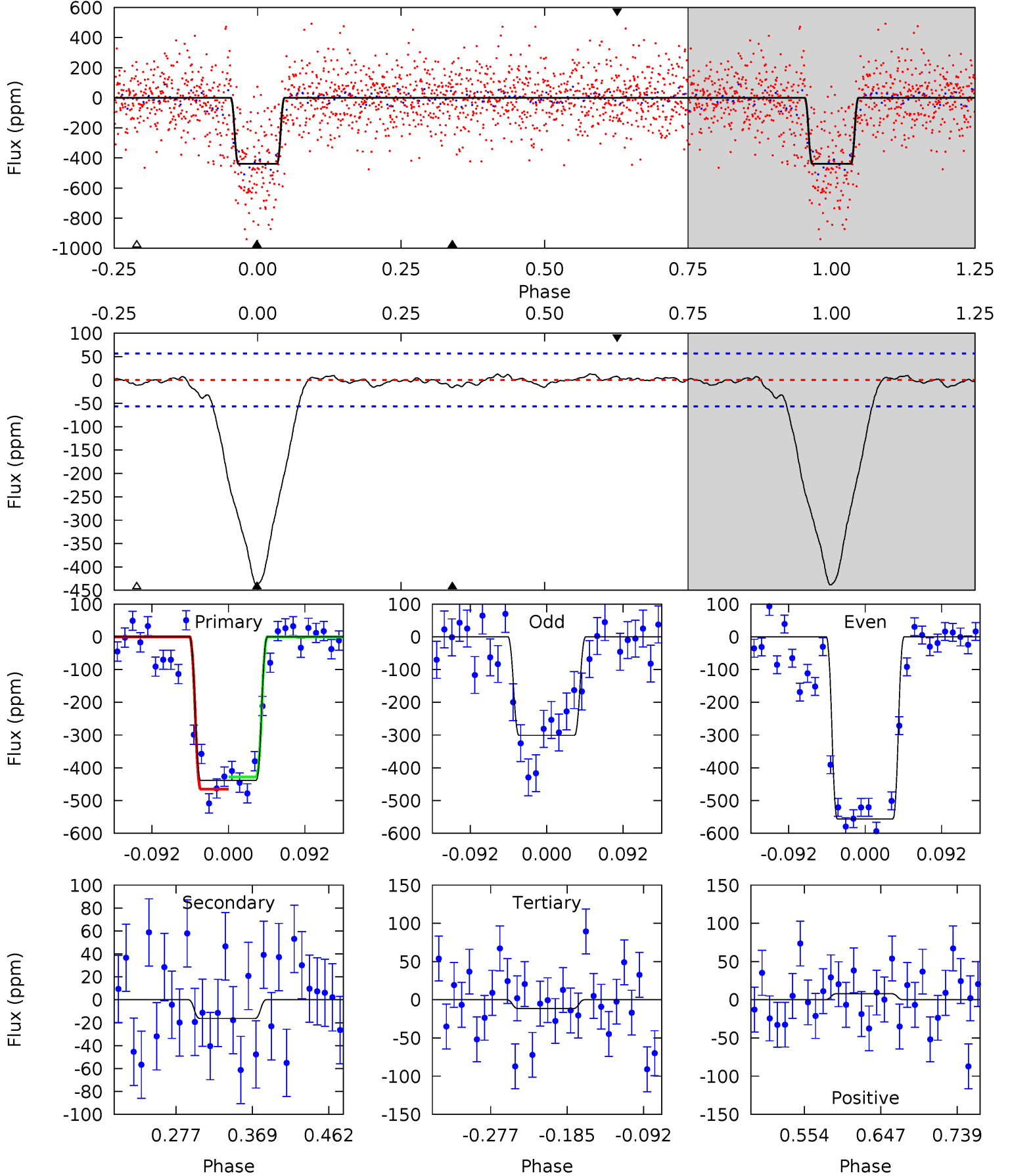
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.3	19.4	0.34	0	4.54	1.58	1.12	30.0	30.3	19.0	19.4	3.76	1.01	0.06	2.45



Alt Model-Shift Uniqueness Test

010219288-01, P = 3.377104 Days, E = 129.579055 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.6	1.32	0.94	0.64	4.58	1.68	0.64	34.6	34.9	0.39	0.68	10.7	0.87	0.03	1.49



Stellar Parameters For KIC 010219288

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3974^{+130}_{-118}	$1.056^{+0.318}_{-0.212}$	$-0.360^{+0.300}_{-0.250}$	$59.437^{+14.085}_{-19.366}$	$1.467^{+0.203}_{-0.439}$	$0.000^{+0.000}_{-0.000}$
	+3%/-3%	+30%/-20%	+83%/-69%	+24%/-33%	+14%/-30%	+204%/-53%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010219288-01 / KOI 7993.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-308 ± 16	$179.75^{+32.65}_{-36.86}$	8433^{+723}_{-768}	-6244^{+612}_{-649}	$0.013^{+0.007}_{-0.004}$
Alt.	-16 ± 12	$133.95^{+26.89}_{-29.11}$	8417^{+692}_{-819}	-6312^{+615}_{-569}	$0.001^{+0.001}_{-0.001}$

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

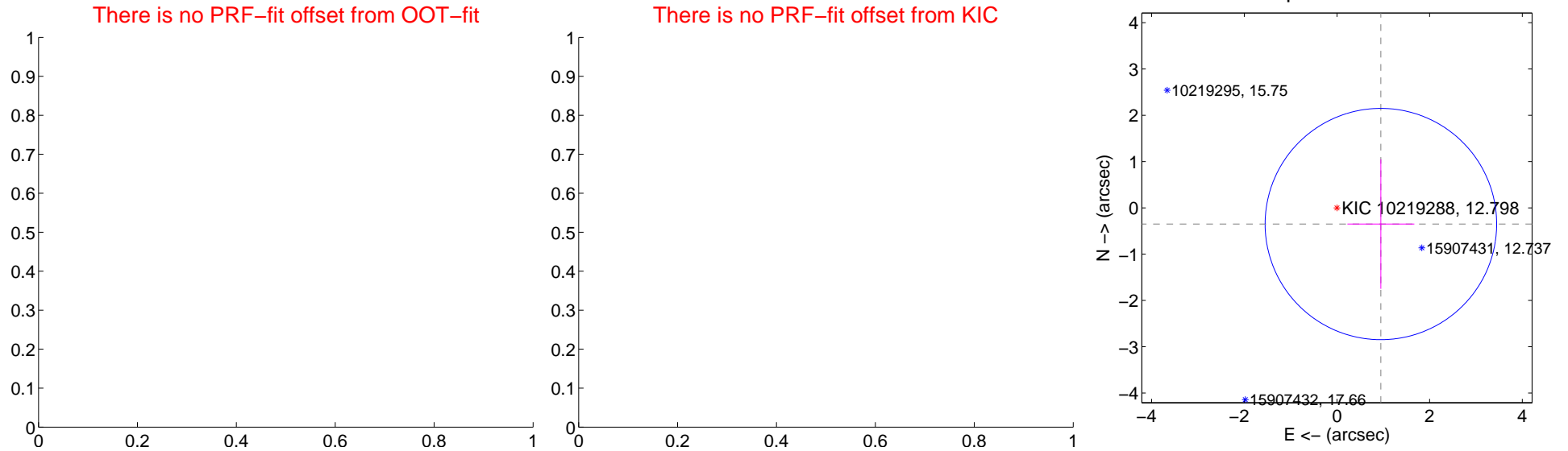
DV Centroid Data

Supplemental centroid analysis for 010219288-01. Kepler magnitude: 12.80. Transit SNR 11.89

There are 0 quarters with good PRF difference image offsets

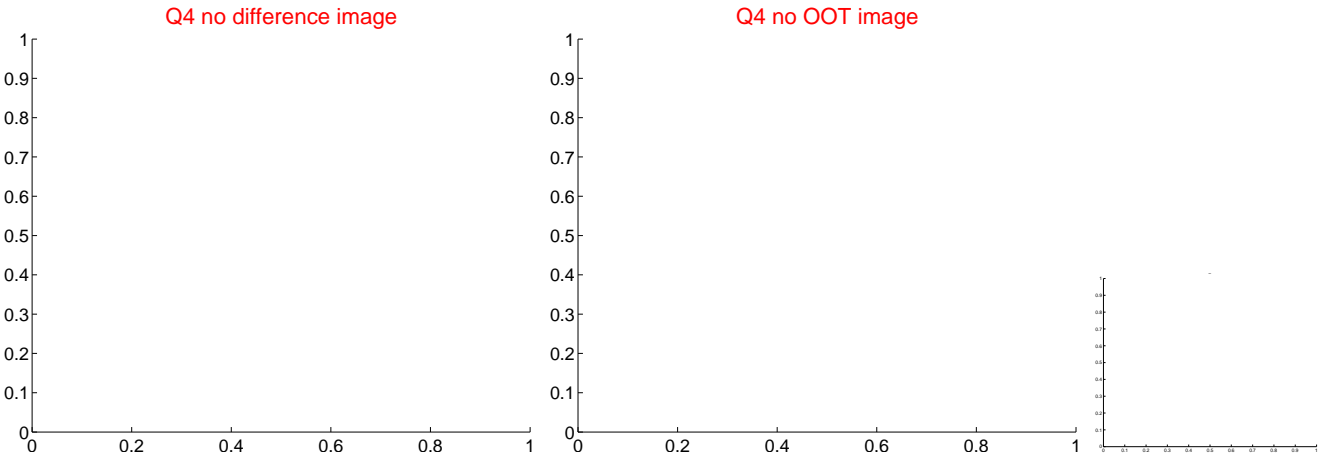
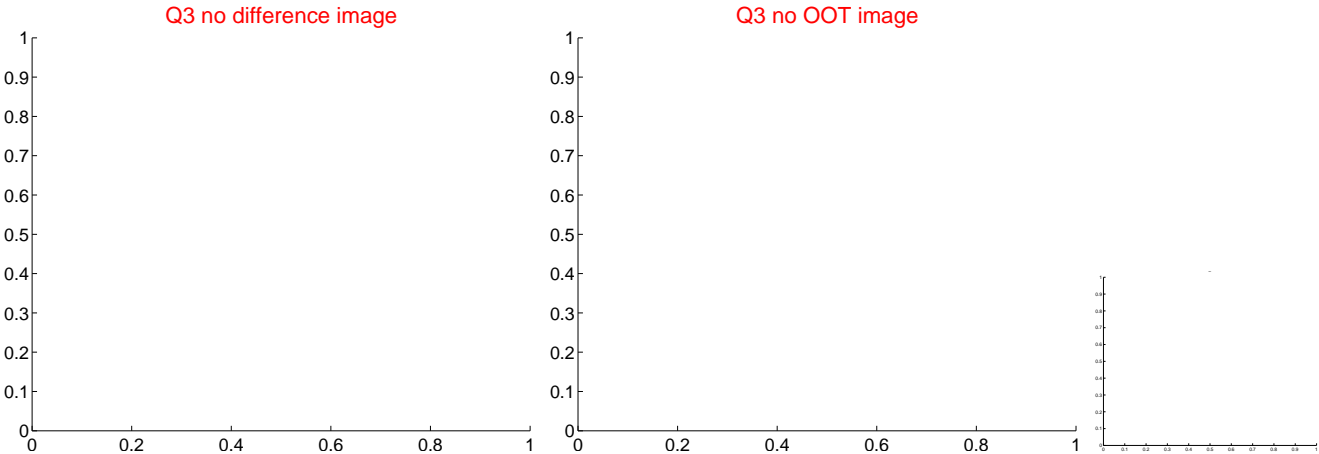
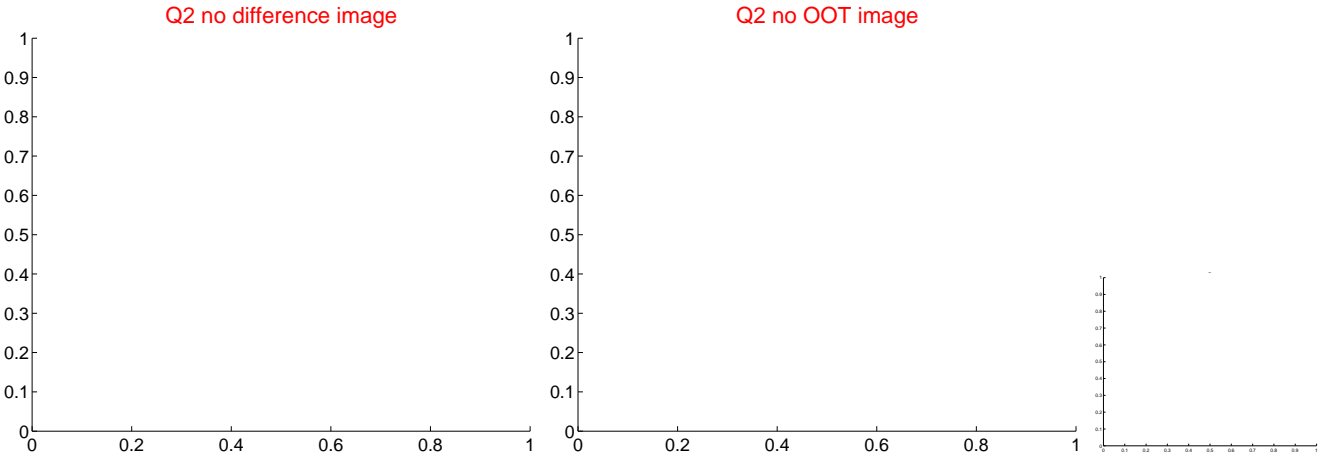
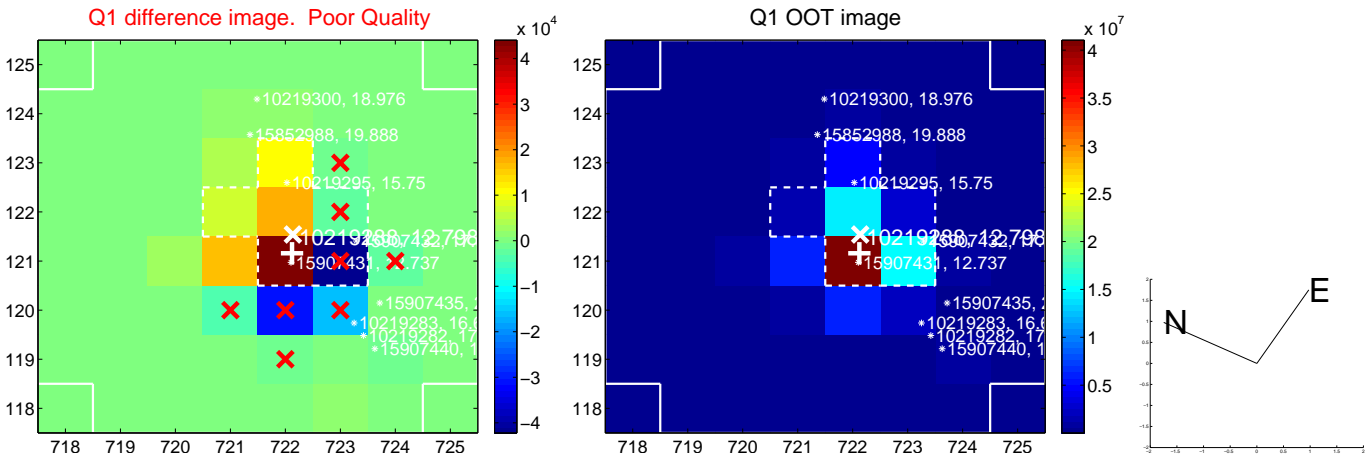
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	1.01 ± 0.83	1.21	-0.95 ± 0.72	-0.35 ± 1.40

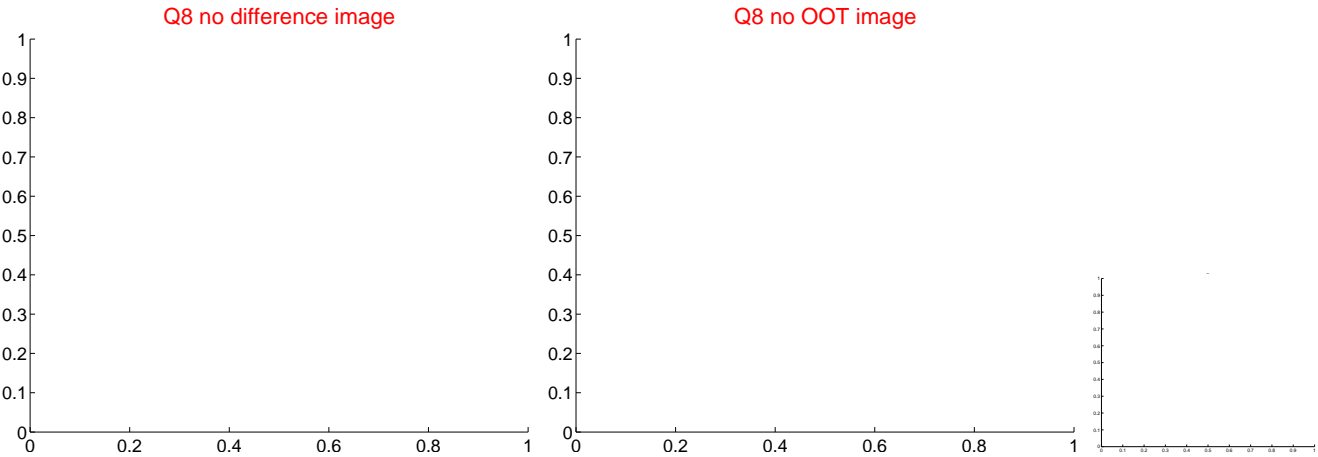
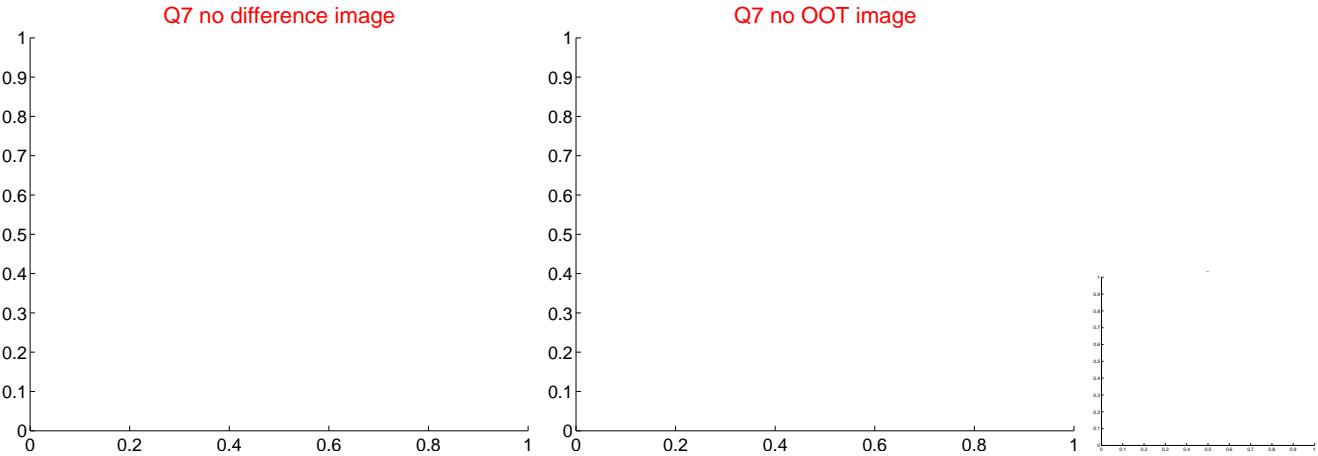
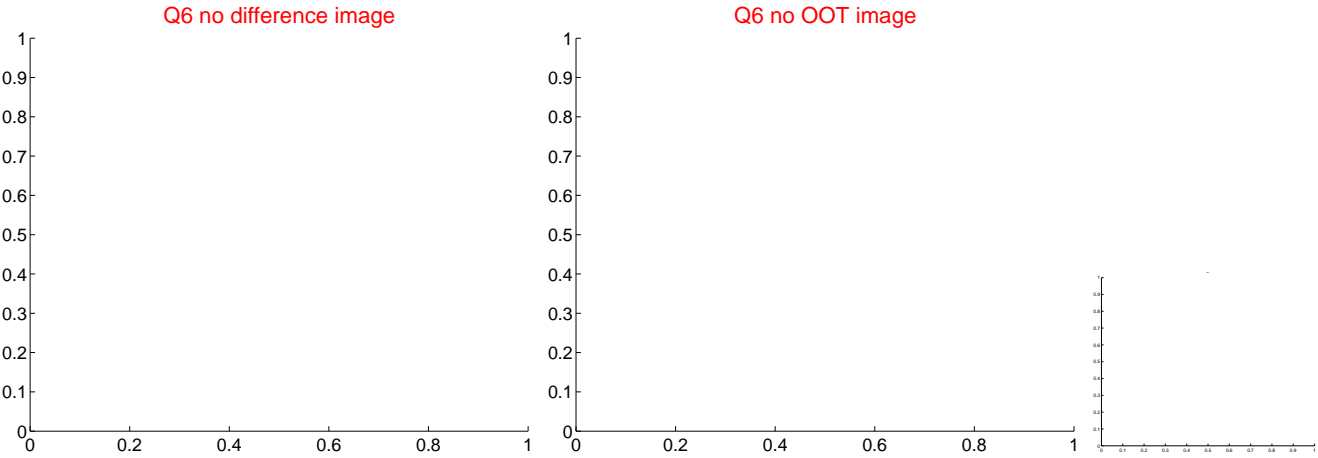
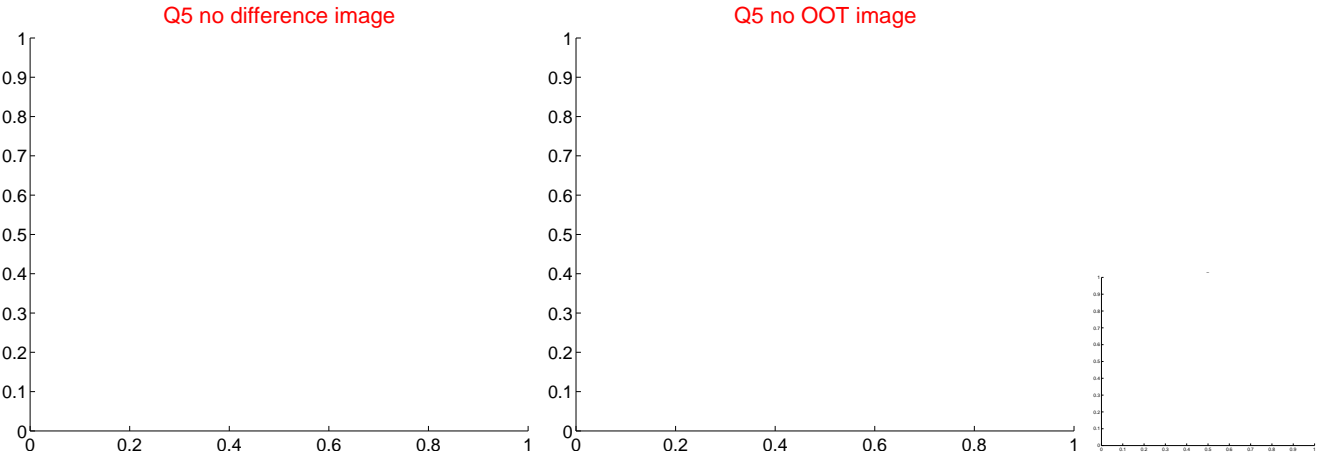


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



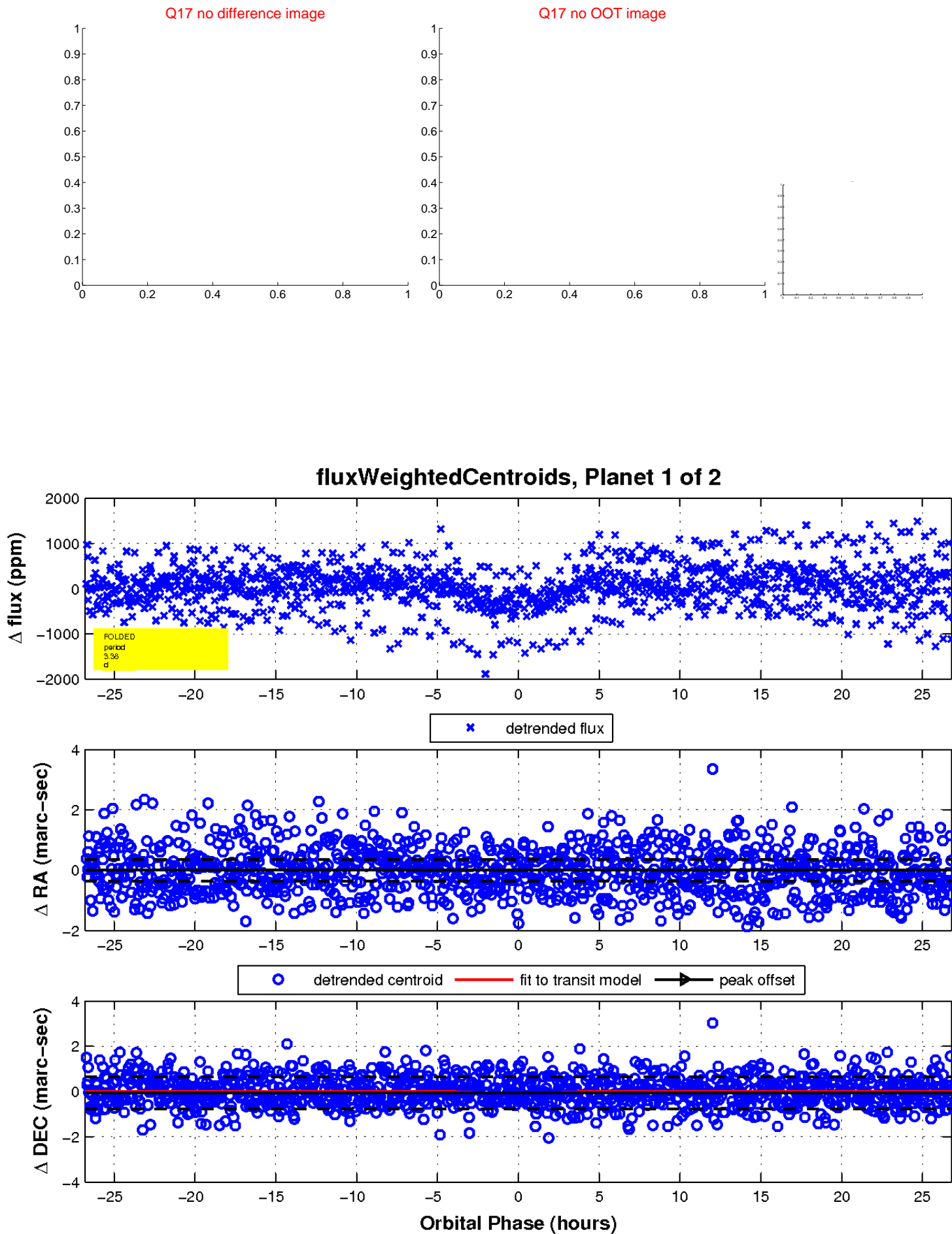
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

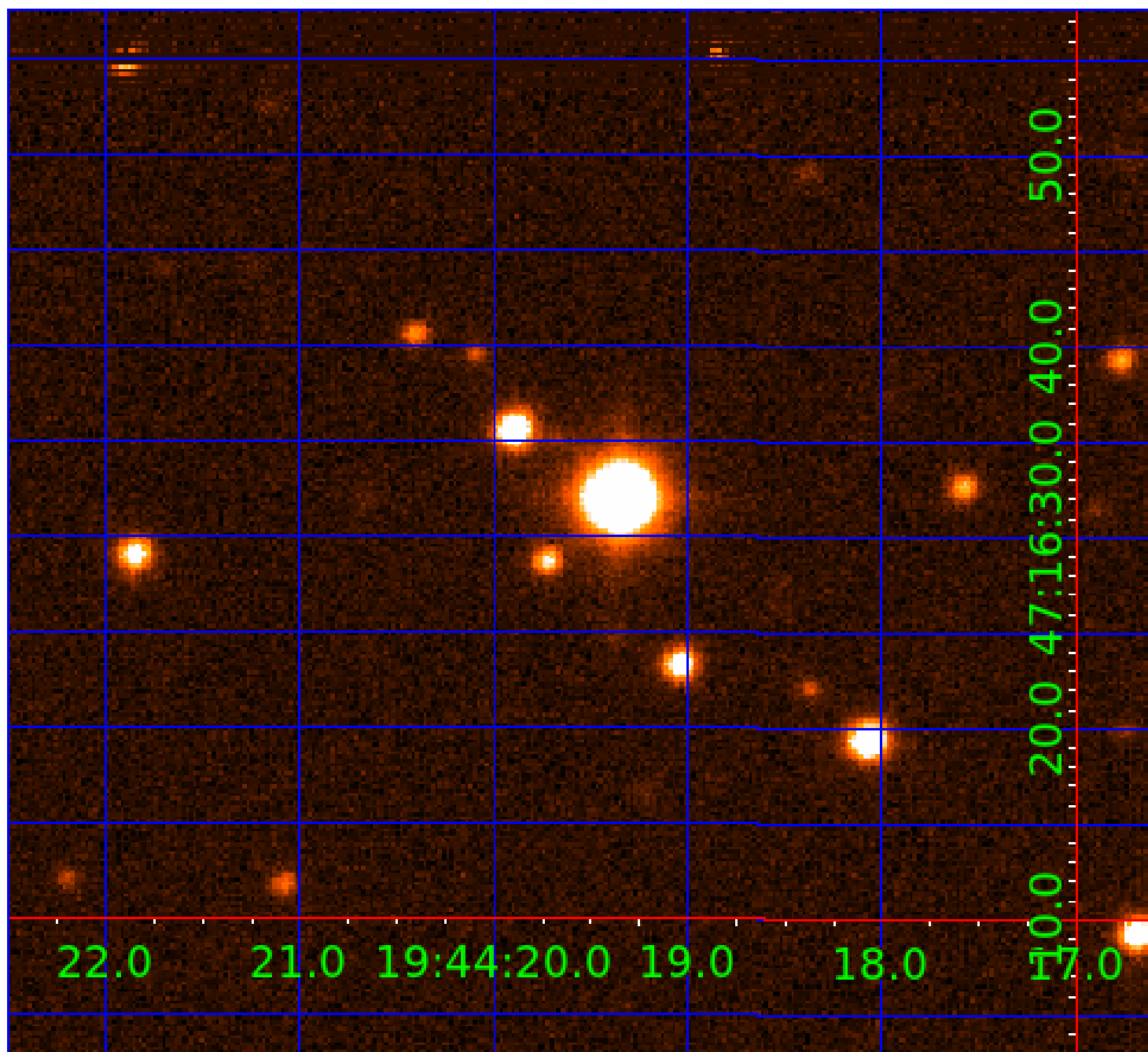


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010219288

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010219288-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS
010219288-02	OBS	FP	0.00	1	0	0	0	LPP_ALT—SAME_NTL_PERIOD—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.

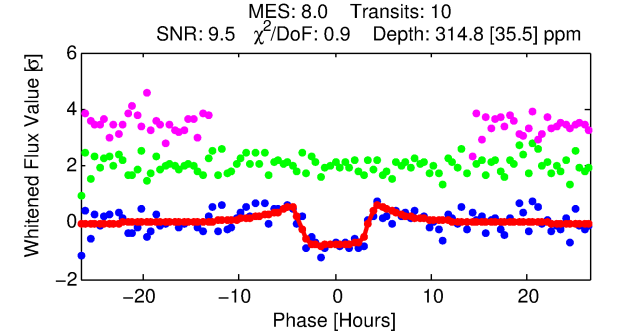
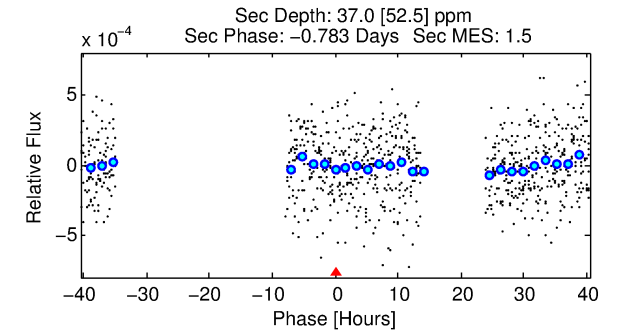
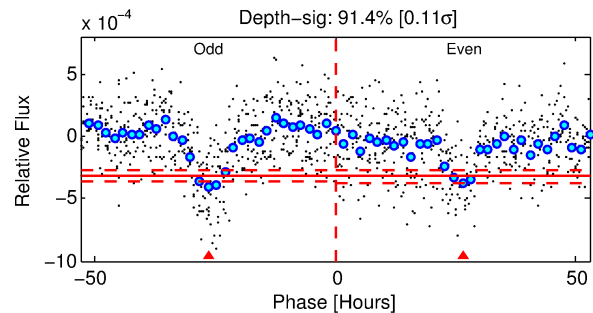
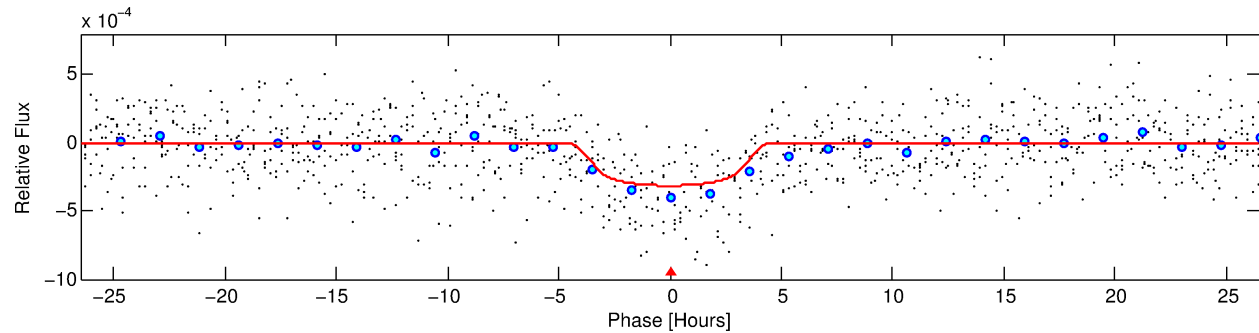
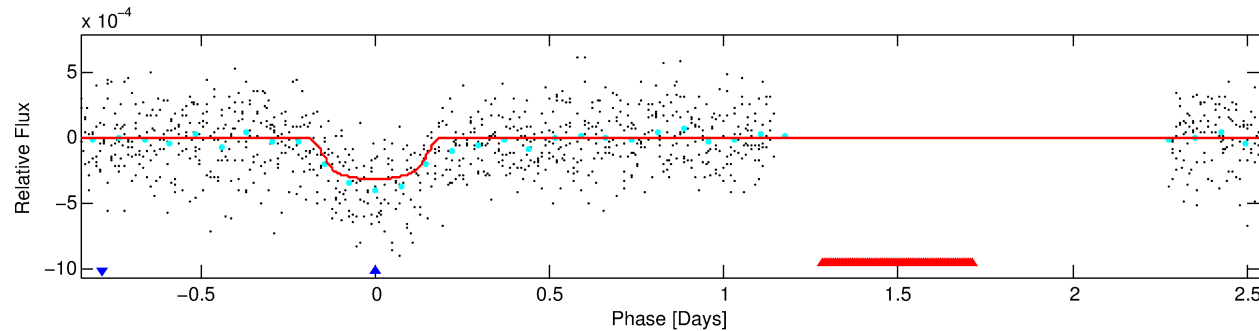
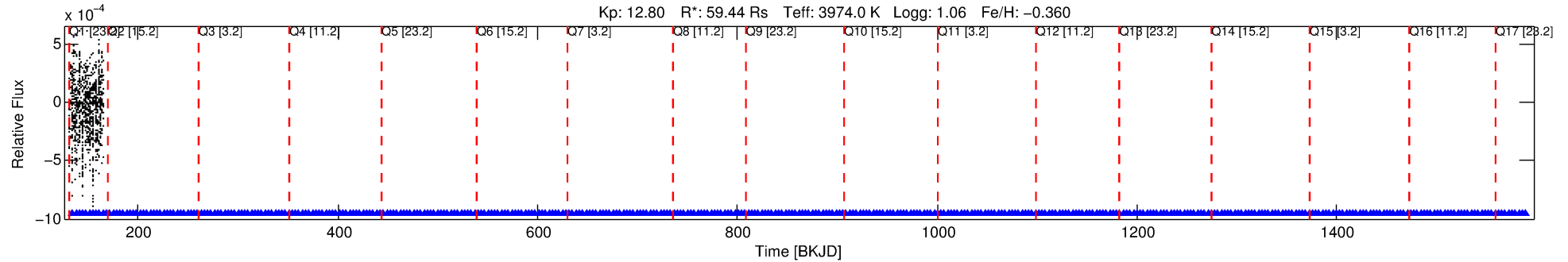
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010219288-02

No Significant Match Found

DV One-Page Summary

KIC: 10219288 Candidate: 2 of 2 Period: 3.382 d



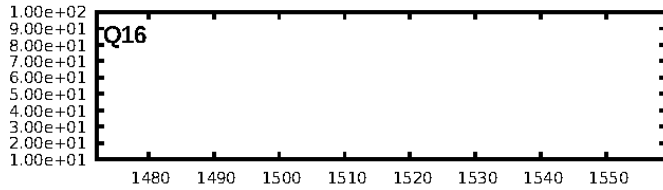
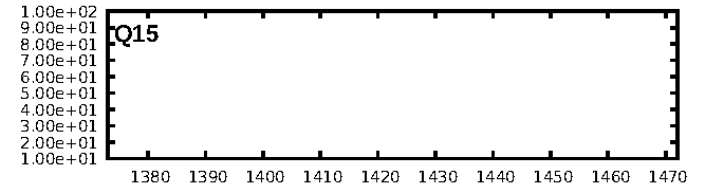
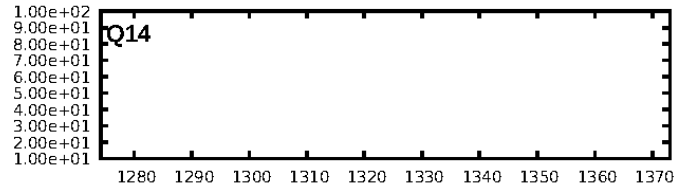
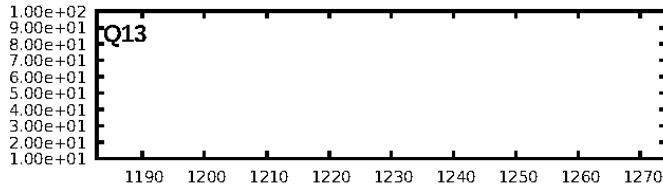
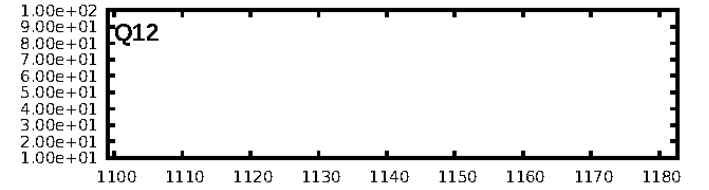
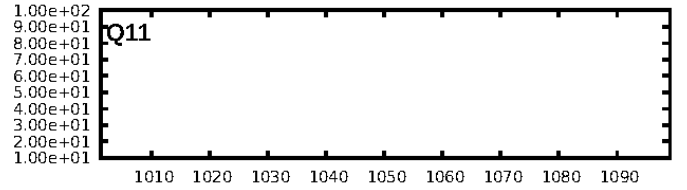
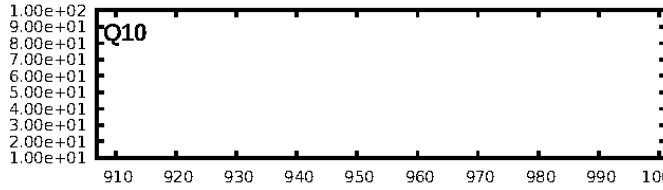
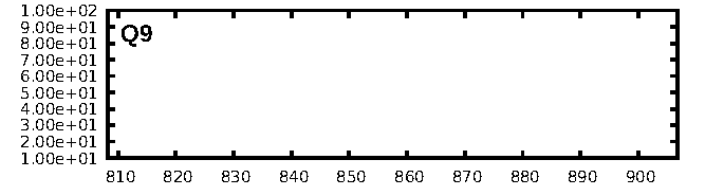
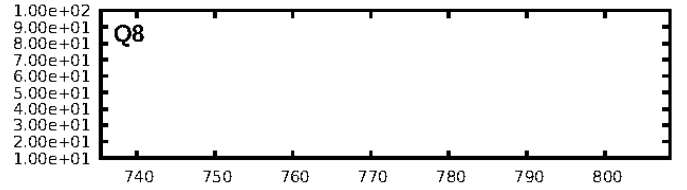
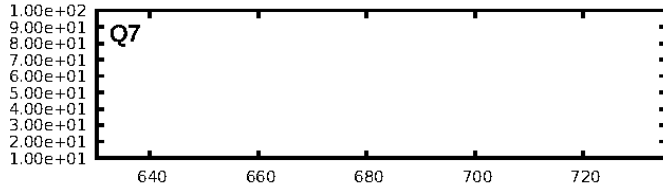
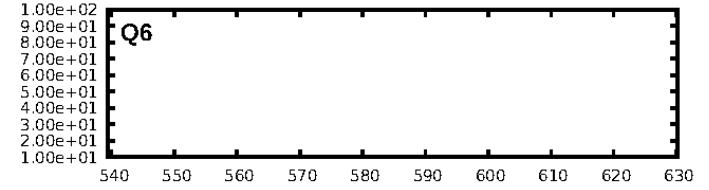
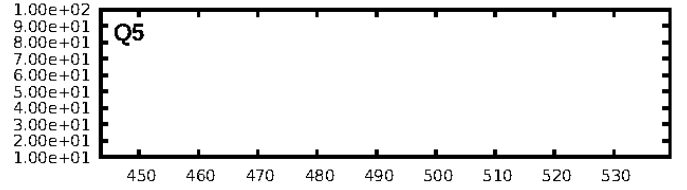
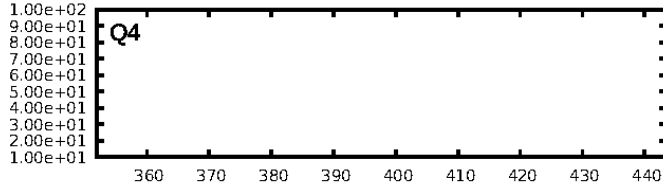
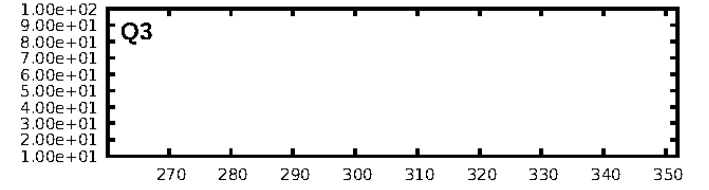
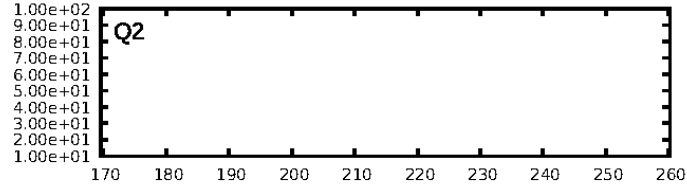
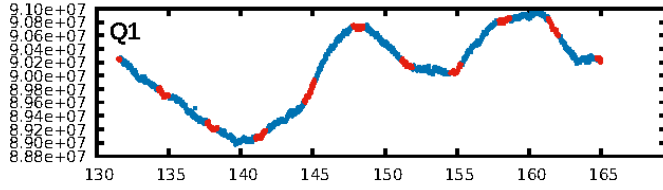
DV Fit Results:

Period = 3.38206 [0.00263] d
Epoch = 134.6092 [0.0133] BKJD
Rp/R* = 0.0222 [0.0021]
a/R* = 1.49 [0.20]
b = 0.95 [0.03]
Seff = N/A
Teq = N/A
Rp = 144.20 [48.92] Re
a = N/A
Ag = N/A
Teffp = N/A

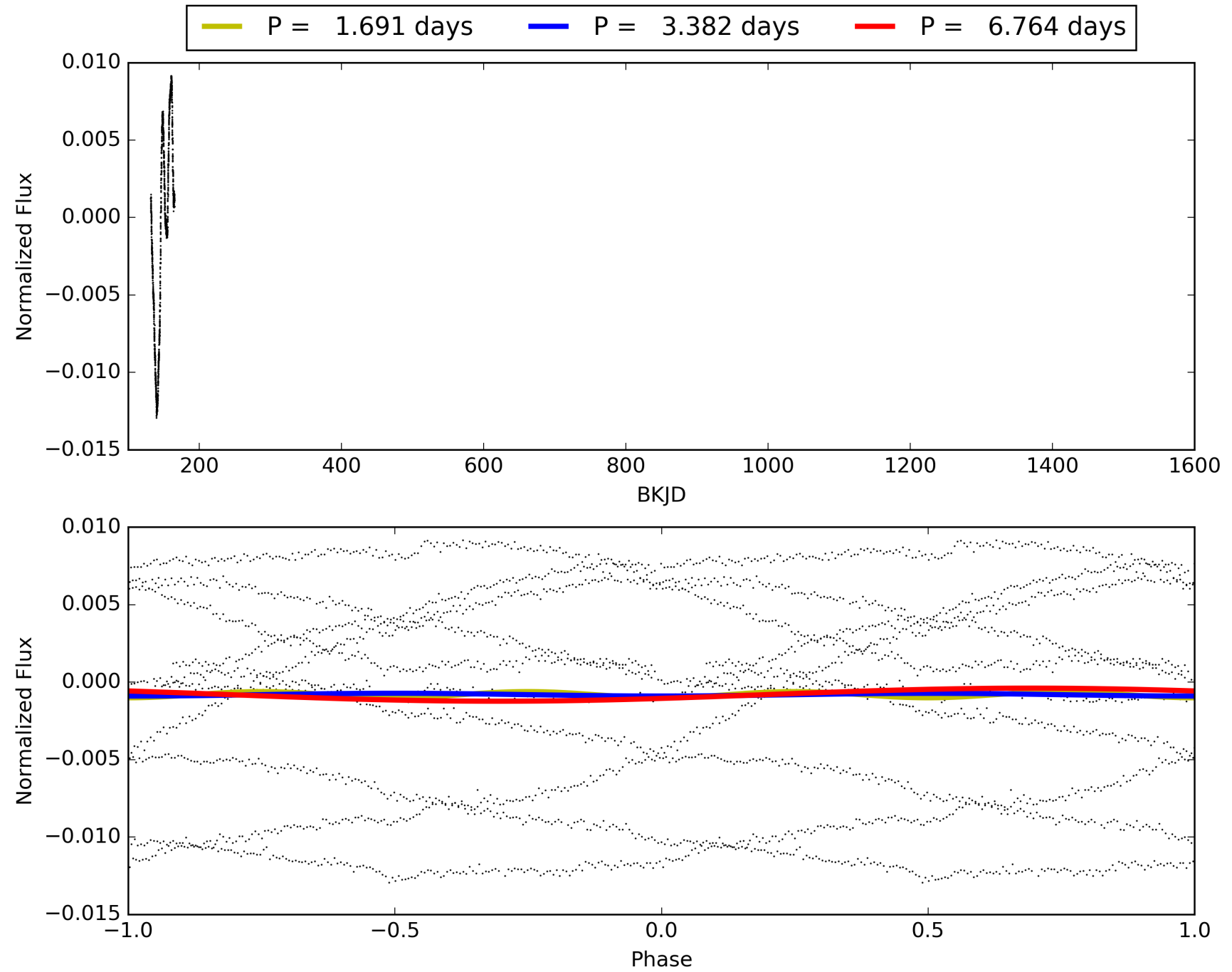
DV Diagnostic Results:

ShortPeriod-sig: 0.2% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 65.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.59e-12
RollingBand-fgt: N/A
GhostDiagnostic-chr: 1.847
Centroid-sig: 2.3%
Centroid-so: 1.440 arcsec [1.03 σ]
OotOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-rm: N/A
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [1/1]

TCE 010219288-02, PDC Light Curves

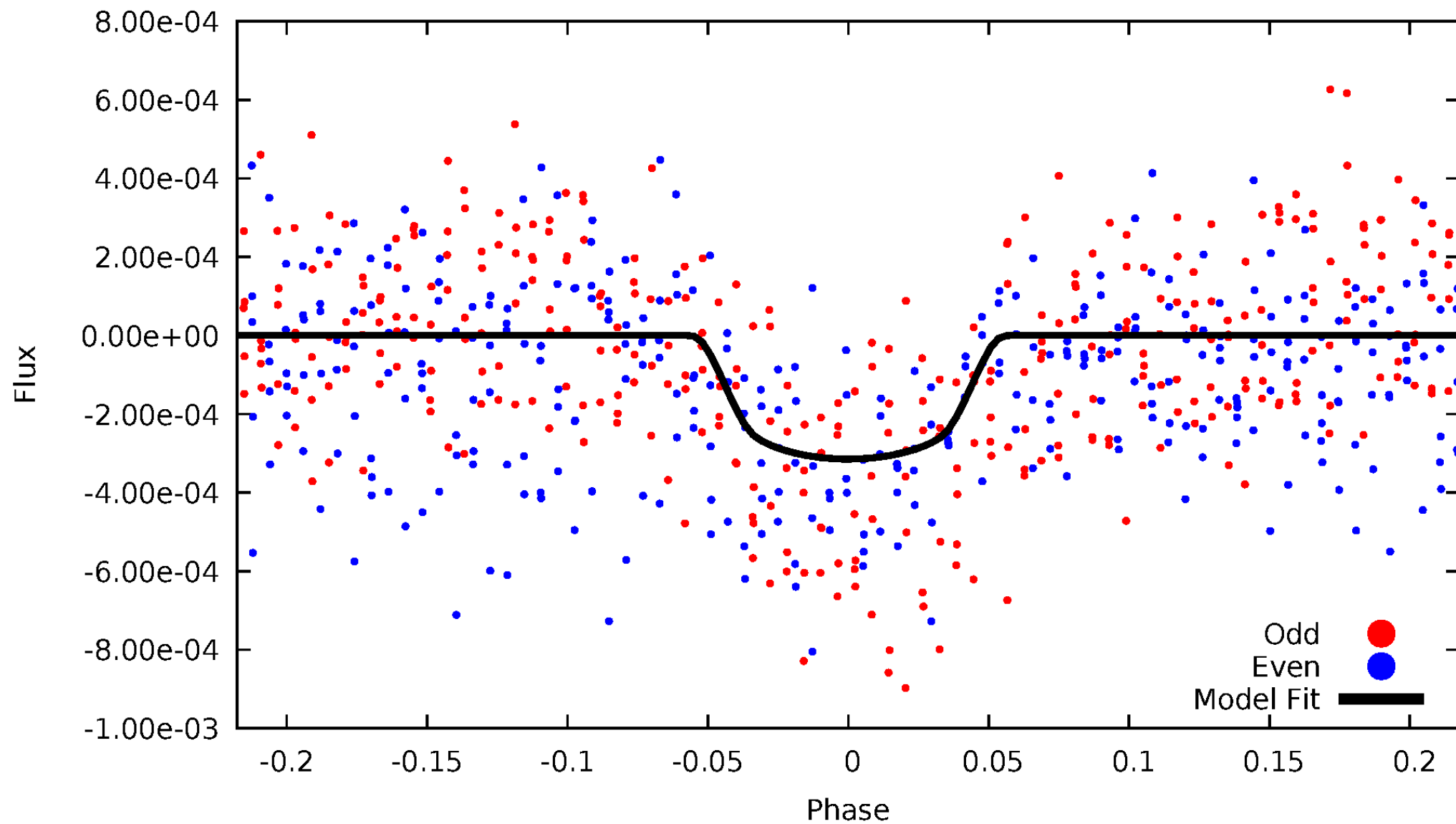


TCE 010219288-02



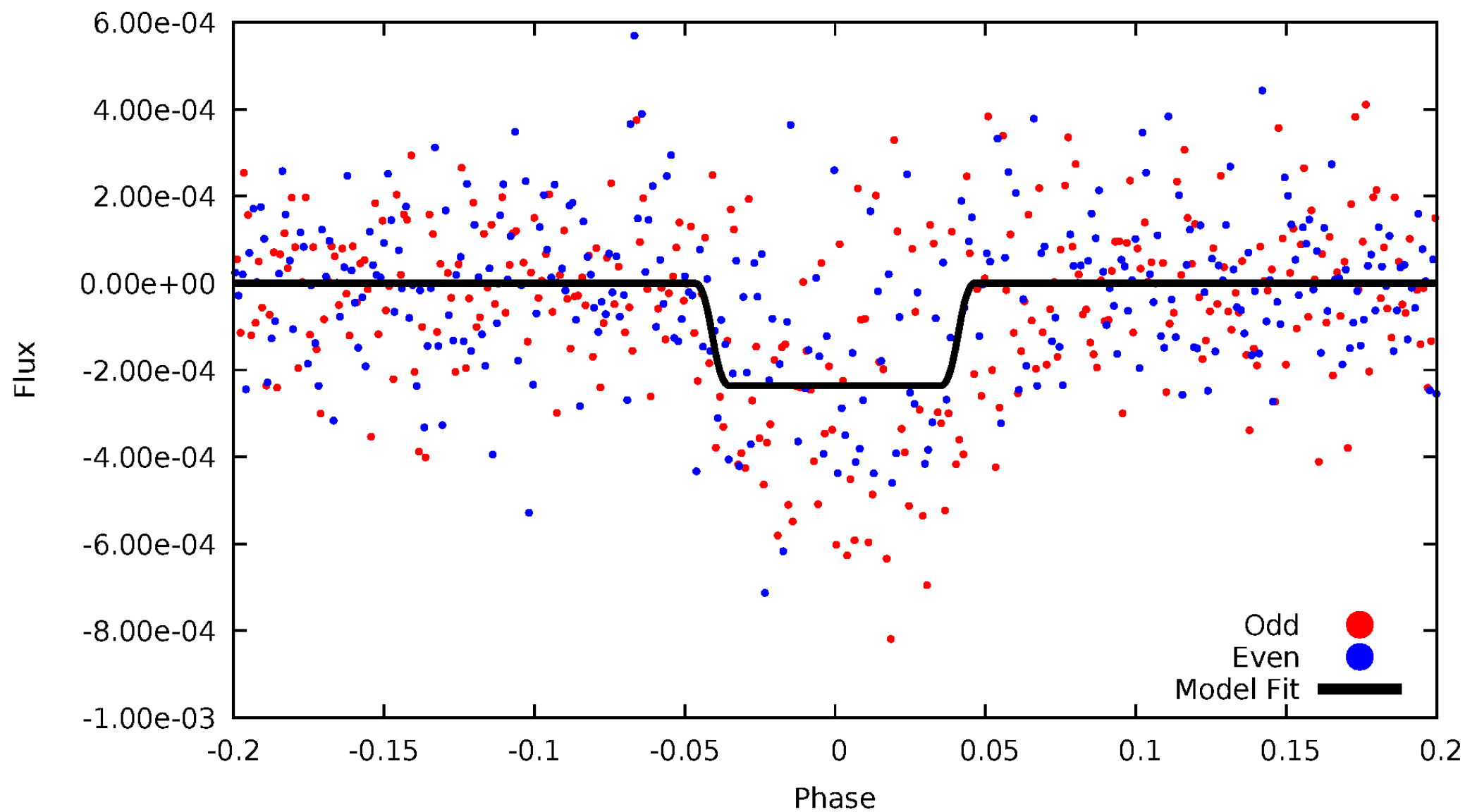
DV Odd/Even

TCE 010219288-02



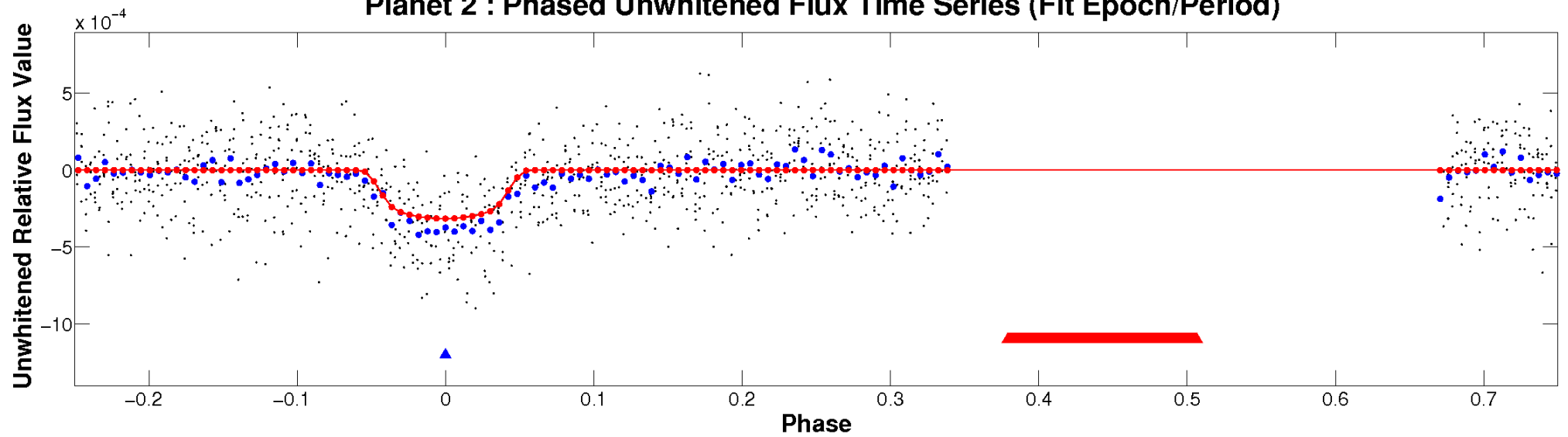
ALT Odd/Even

TCE 010219288-02

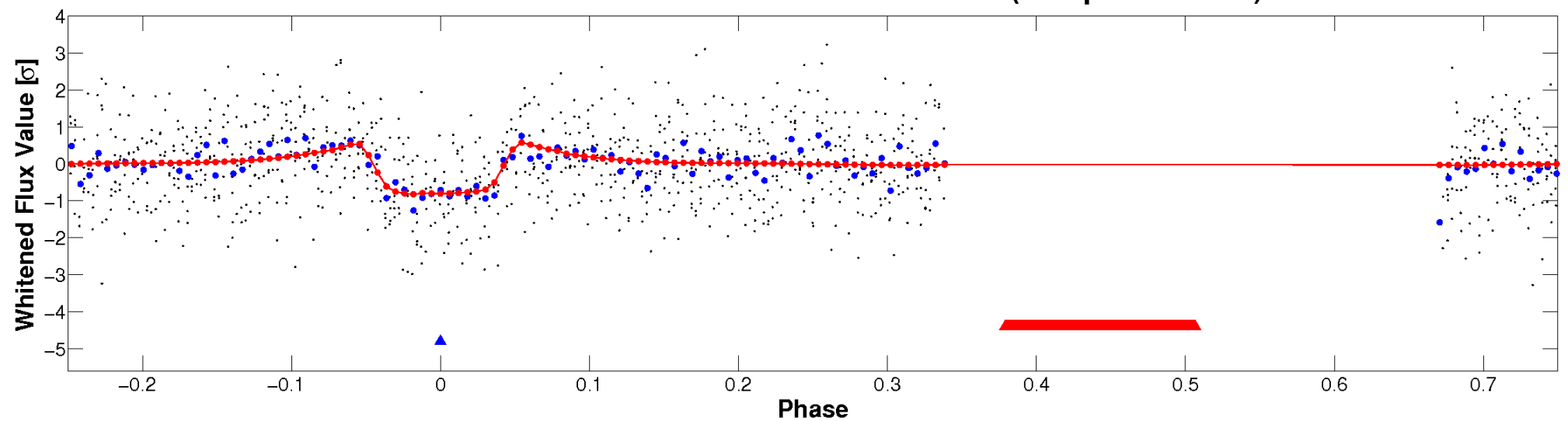


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

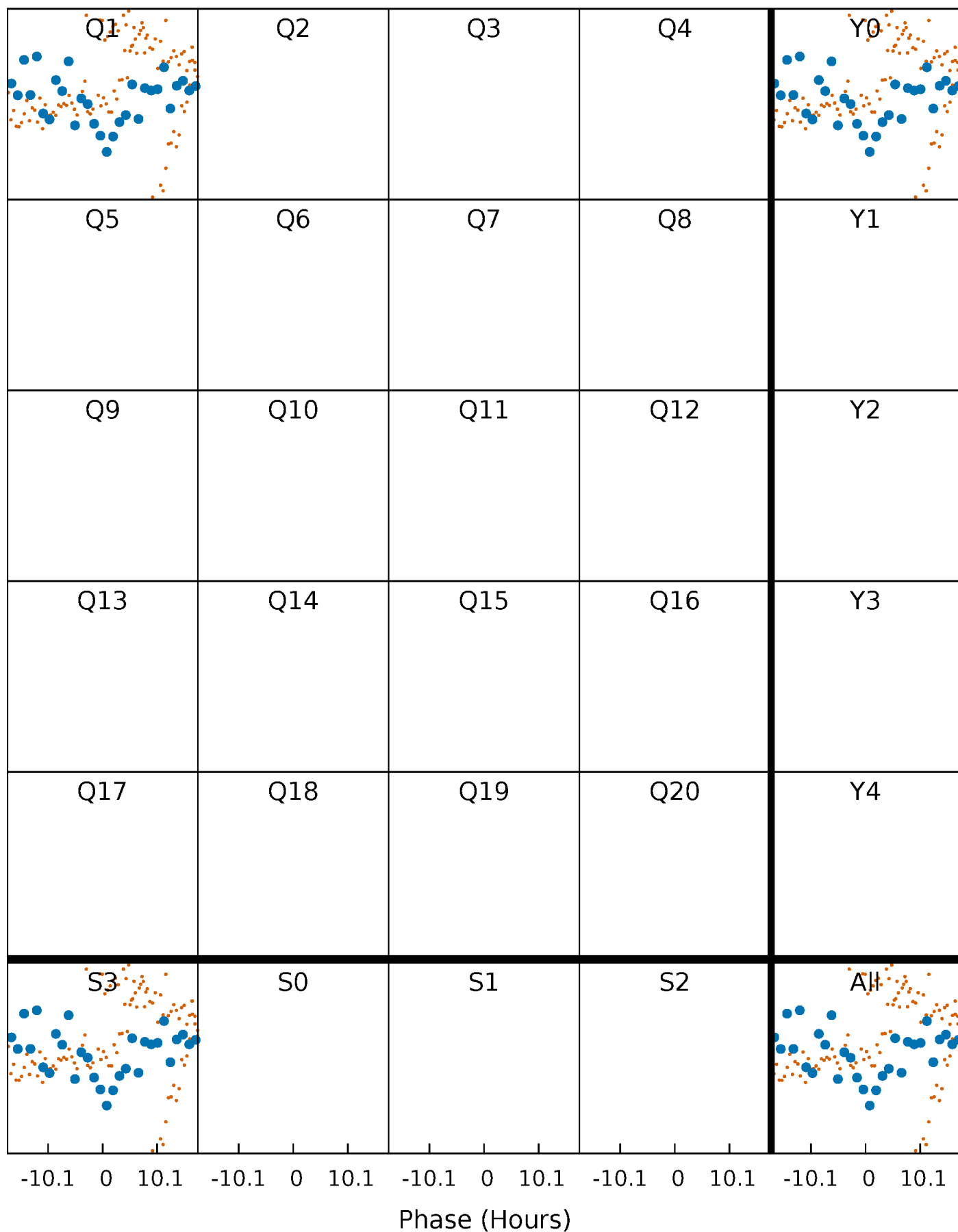


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



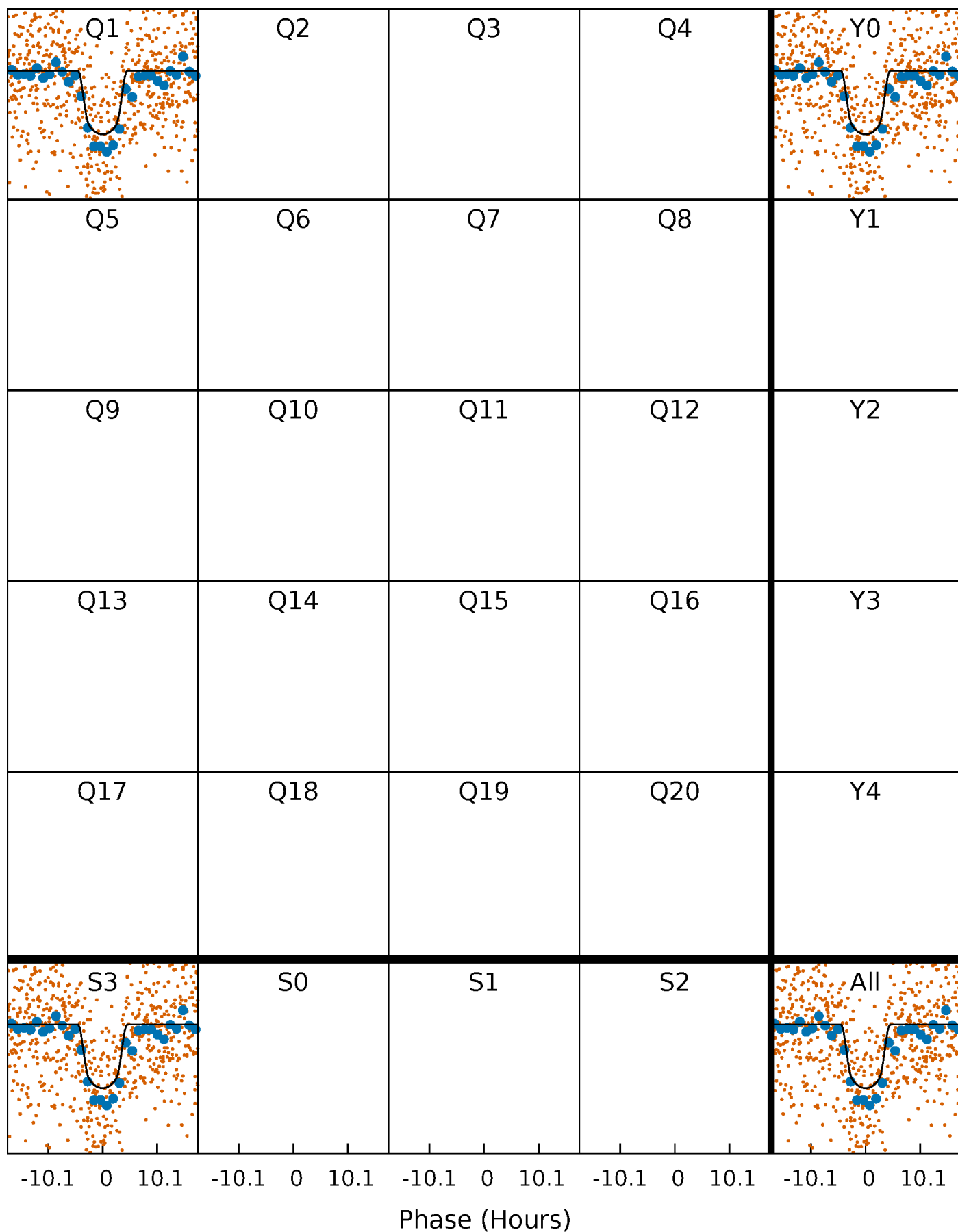
PDC Quarter-Phased Transit Curves

TCE 010219288-02 $P = 3.382057$ Days $T_0 = 134.609249$ (BKJD)



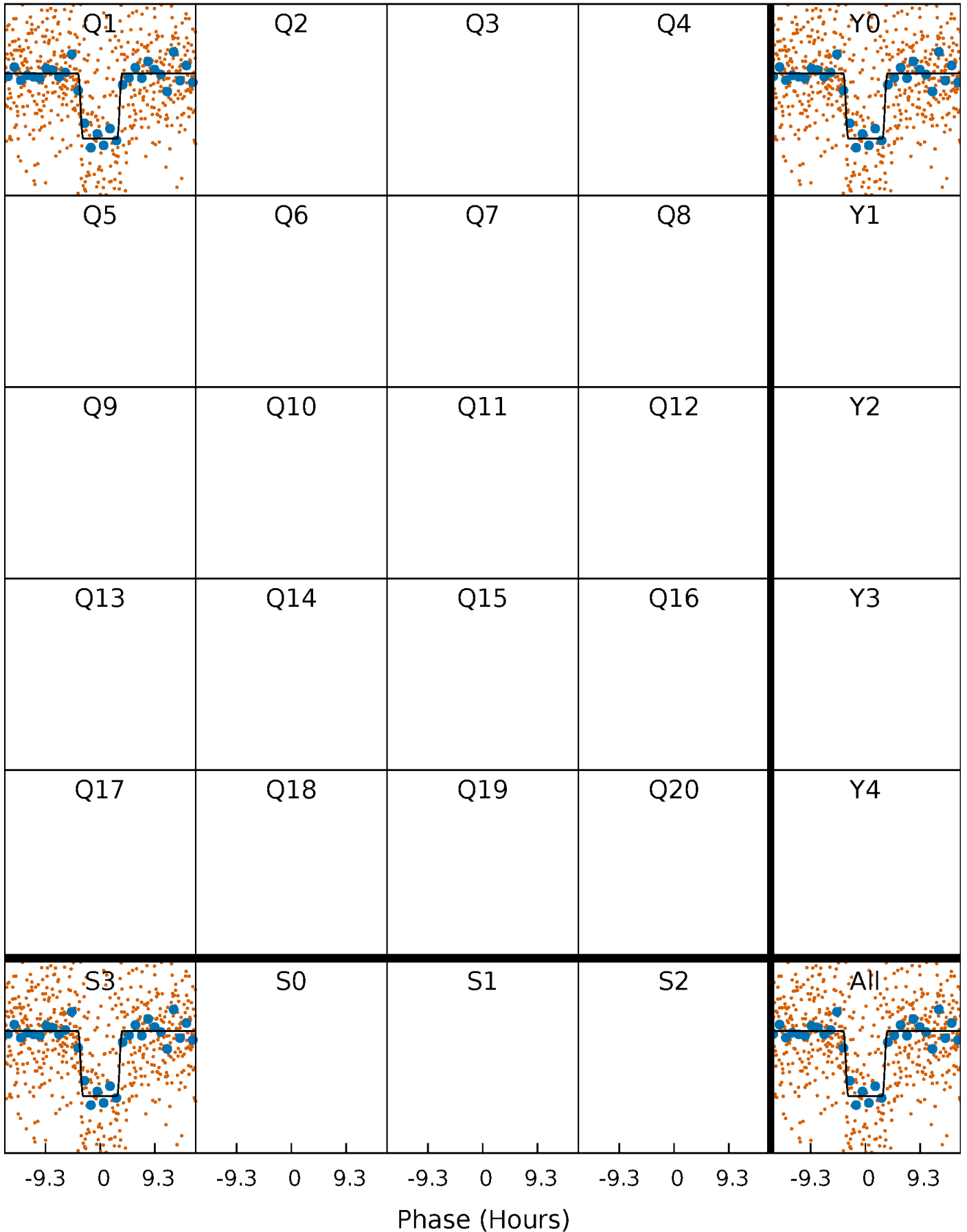
DV Quarter-Phased Transit Curves

TCE 010219288-02 $P = 3.382057$ Days $T_0 = 134.609249$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

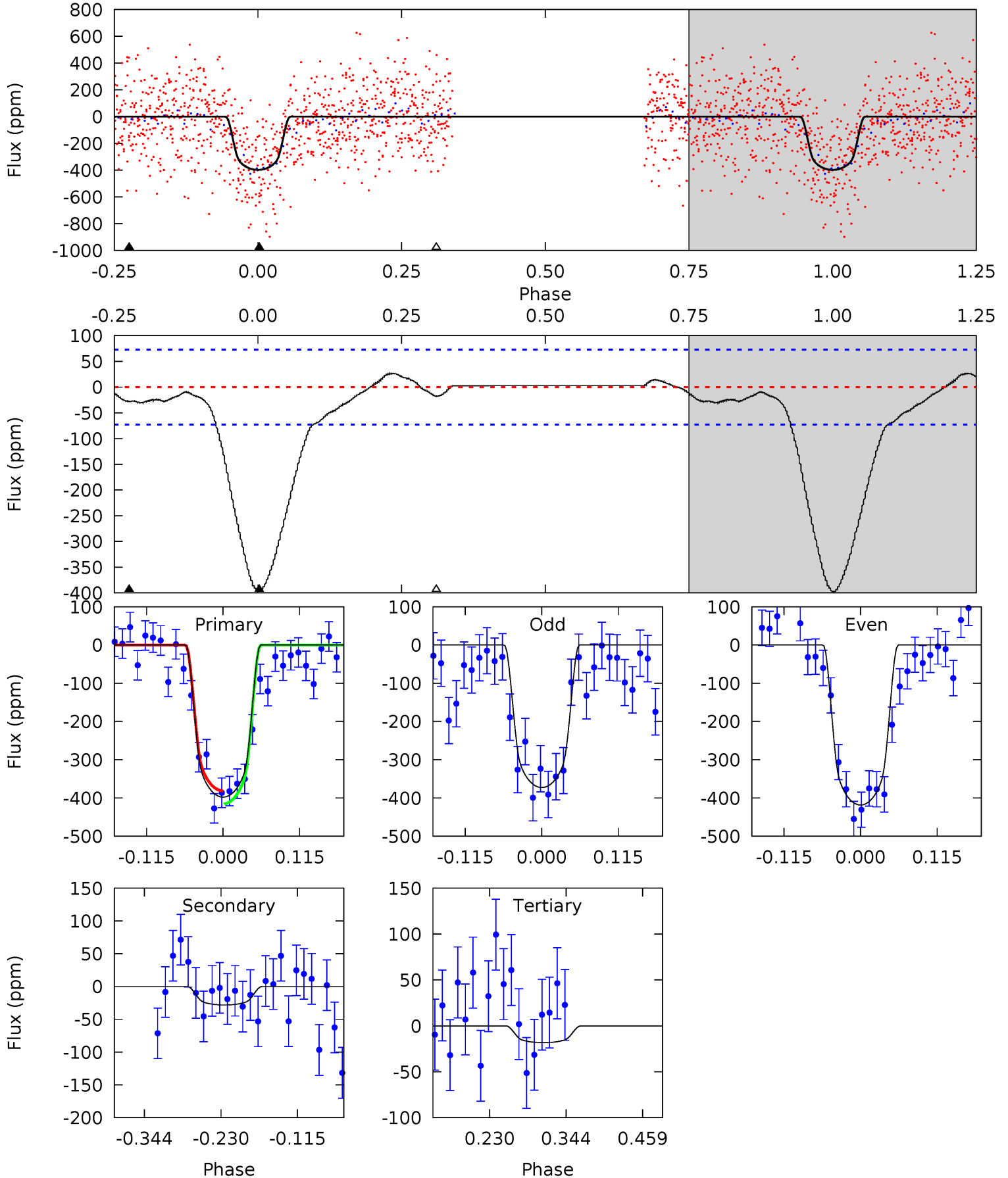
TCE 010219288-02 P= 3.386070 Days $T_0=134.596097$ (BKJD)



DV Model-Shift Uniqueness Test

010219288-02, P = 3.382057 Days, E = 131.227192 Days

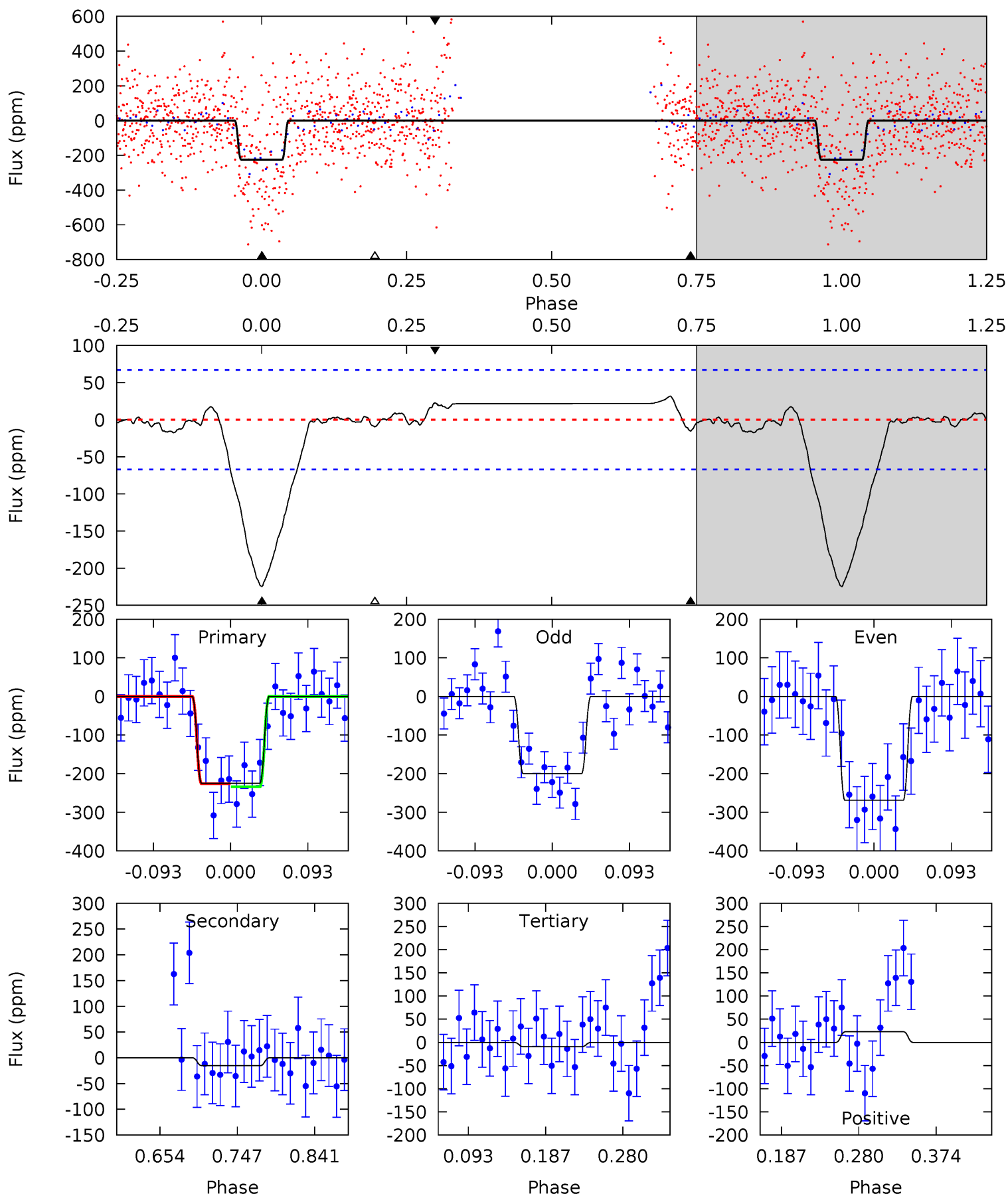
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.8	1.76	1.14	0	4.54	1.58	1.20	23.6	24.8	0.62	1.76	1.35	1.16	0.06	1.02



Alt Model-Shift Uniqueness Test

010219288-02, P = 3.386070 Days, E = 131.210027 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.4	1.05	0.65	1.56	4.58	1.68	0.63	14.7	13.8	0.40	-0.51	2.35	0.90	0.12	0.31



Stellar Parameters For KIC 010219288

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3974^{+130}_{-118}	$1.056^{+0.318}_{-0.212}$	$-0.360^{+0.300}_{-0.250}$	$59.437^{+14.085}_{-19.366}$	$1.467^{+0.203}_{-0.439}$	$0.000^{+0.000}_{-0.000}$
	+3%/-3%	+30%/-20%	+83%/-69%	+24%/-33%	+14%/-30%	+204%/-53%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010219288-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-28 ± 16	$143.05^{+28.79}_{-30.17}$	8454^{+718}_{-796}	-6334^{+616}_{-626}	$0.002^{+0.002}_{-0.001}$
Alt.	-15 ± 15	$96.72^{+21.87}_{-21.36}$	8413^{+669}_{-793}	-6304^{+610}_{-598}	$0.002^{+0.003}_{-0.002}$

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

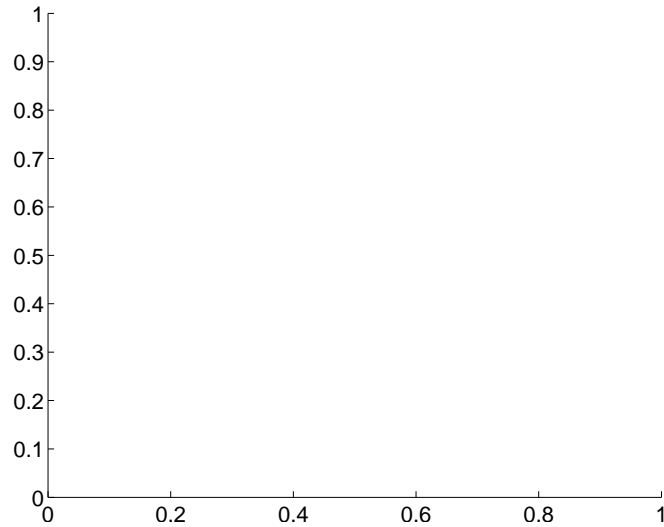
Supplemental centroid analysis for 010219288-02. Kepler magnitude: 12.80. Transit SNR 9.47

There are 0 quarters with good PRF difference image offsets

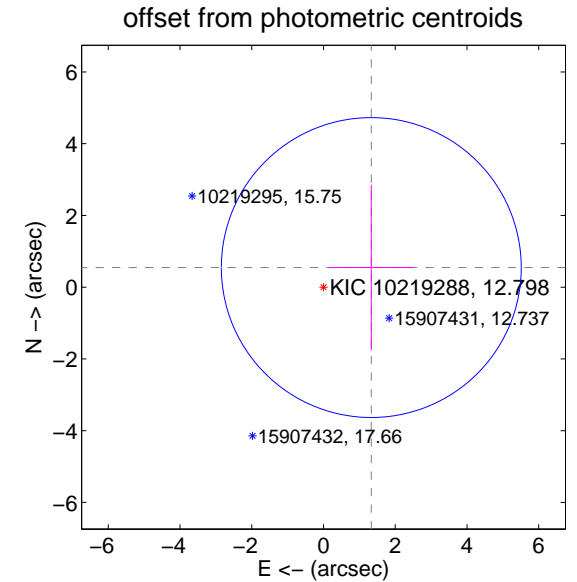
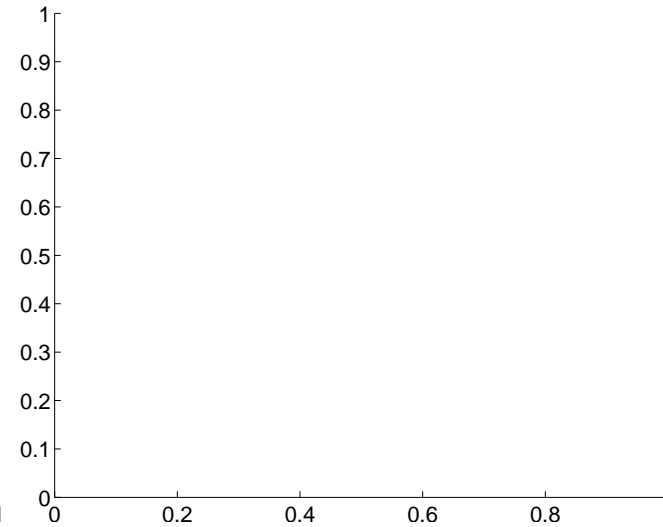
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	1.44 ± 1.39	1.03	-1.33 ± 1.17	0.55 ± 2.30

There is no PRF-fit offset from OOT-fit

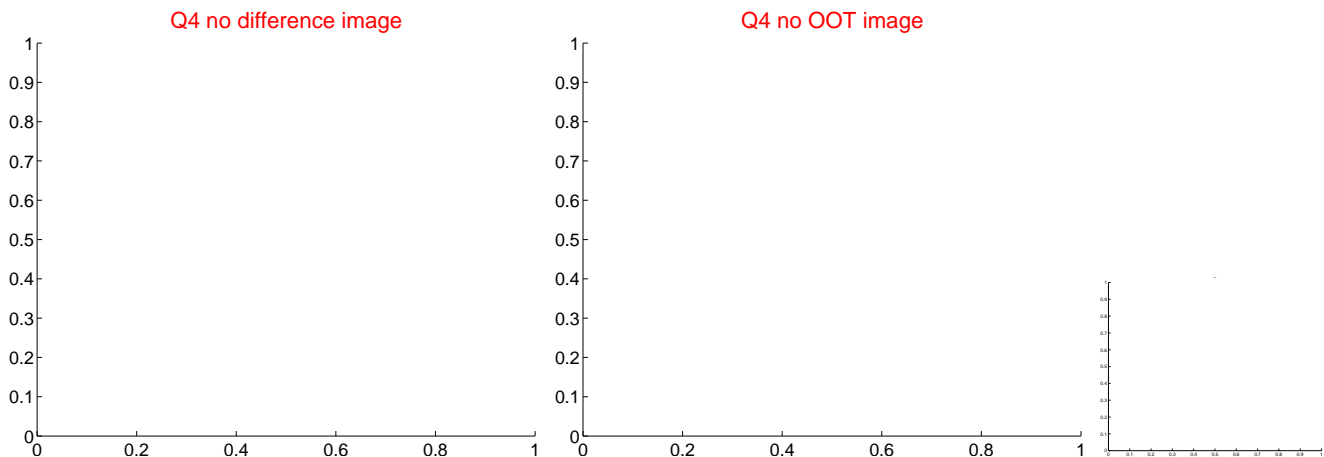
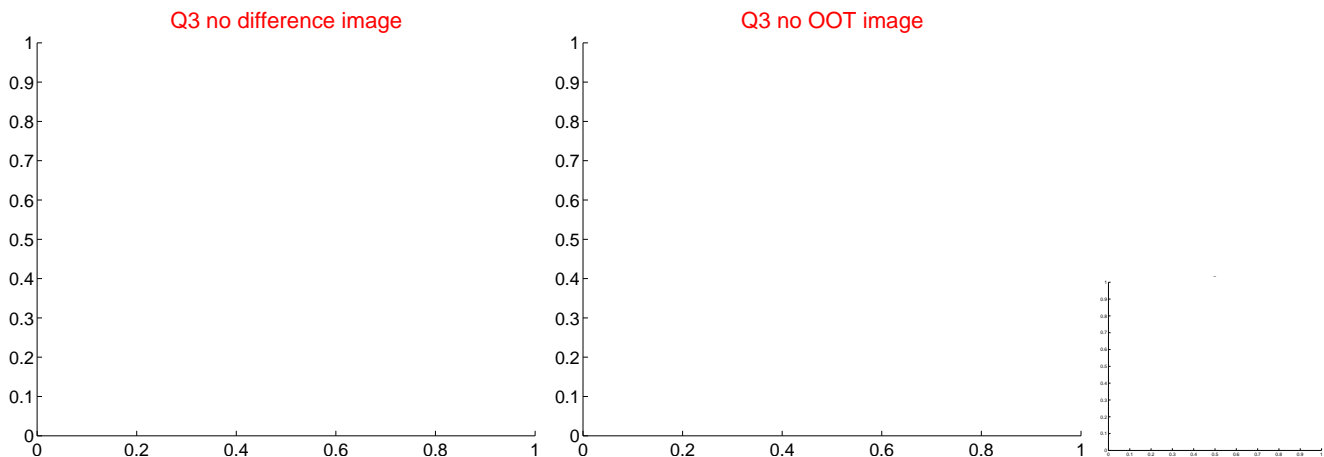
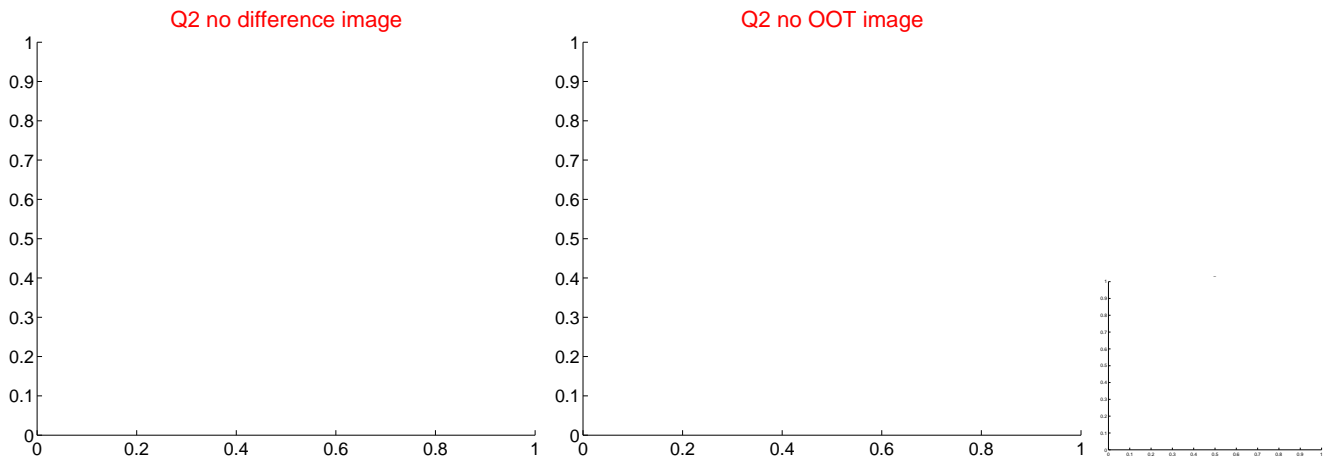
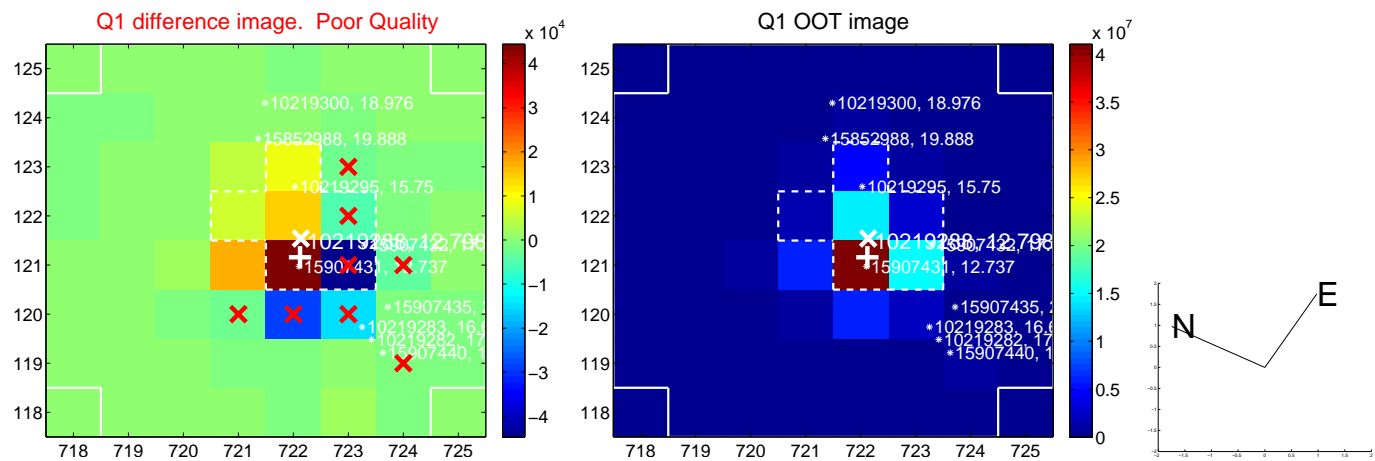


There is no PRF-fit offset from KIC

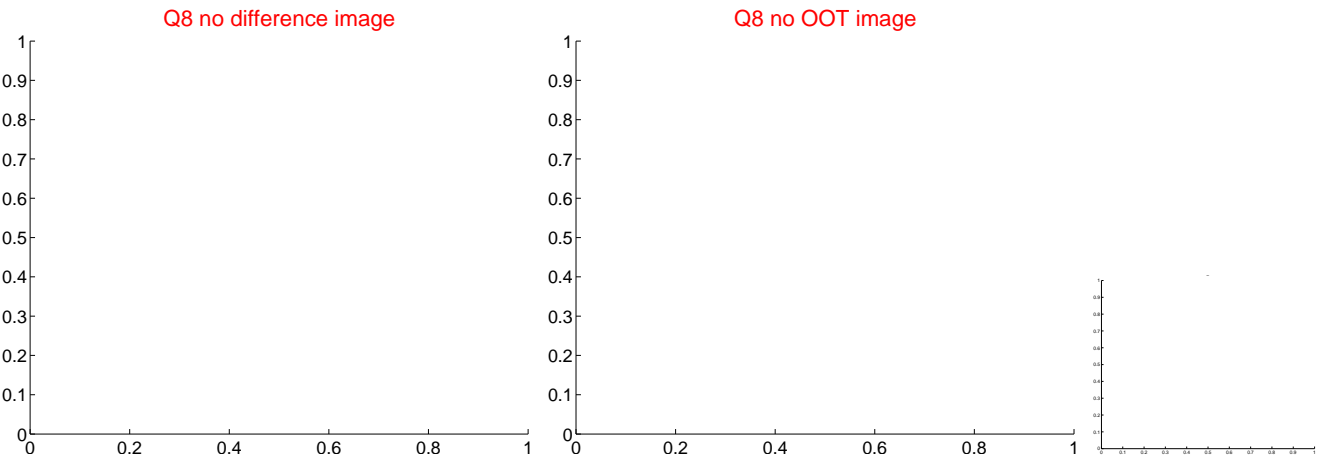
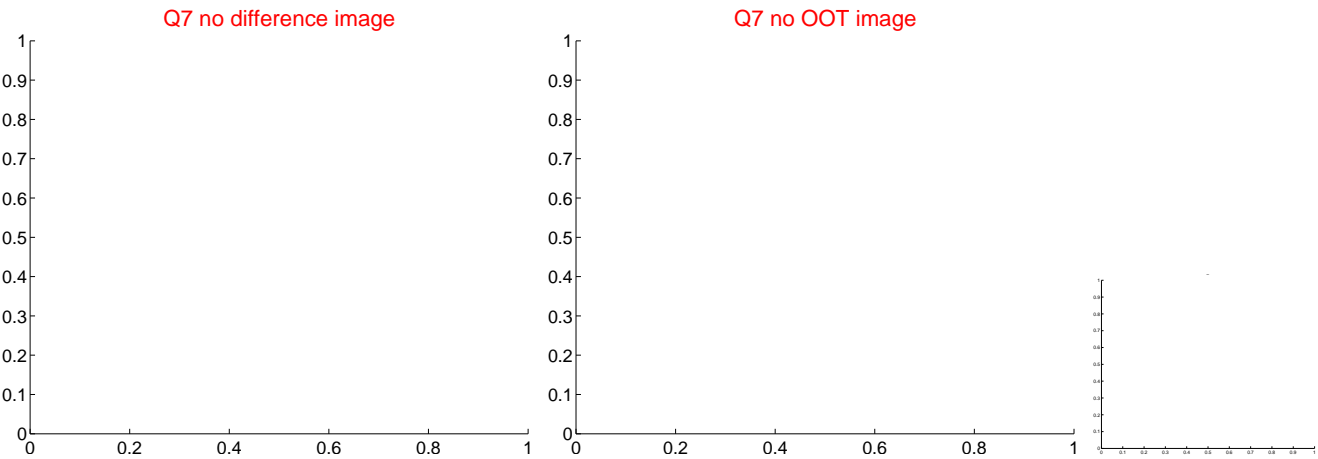
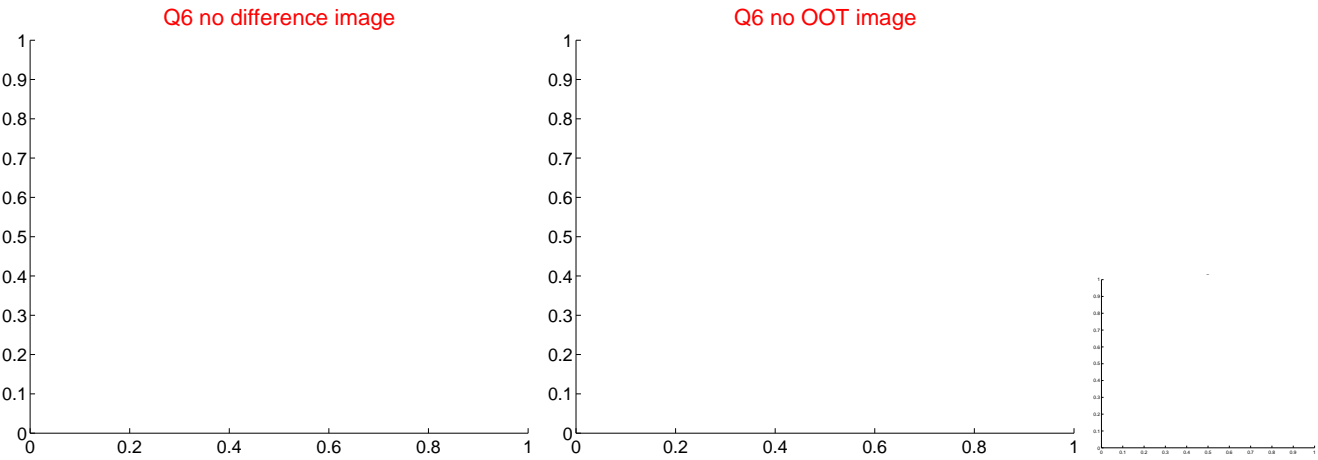
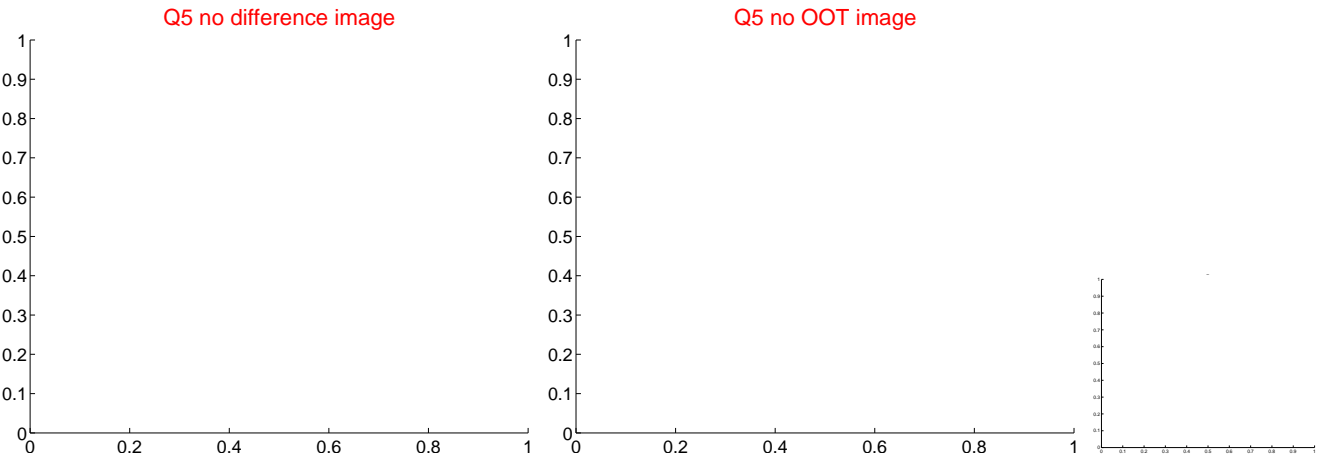


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

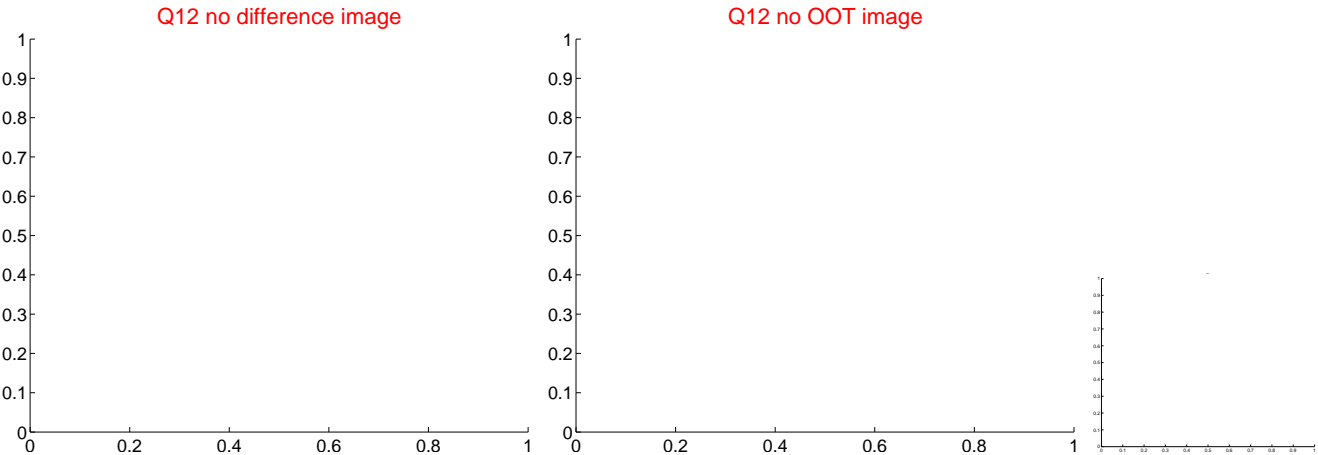
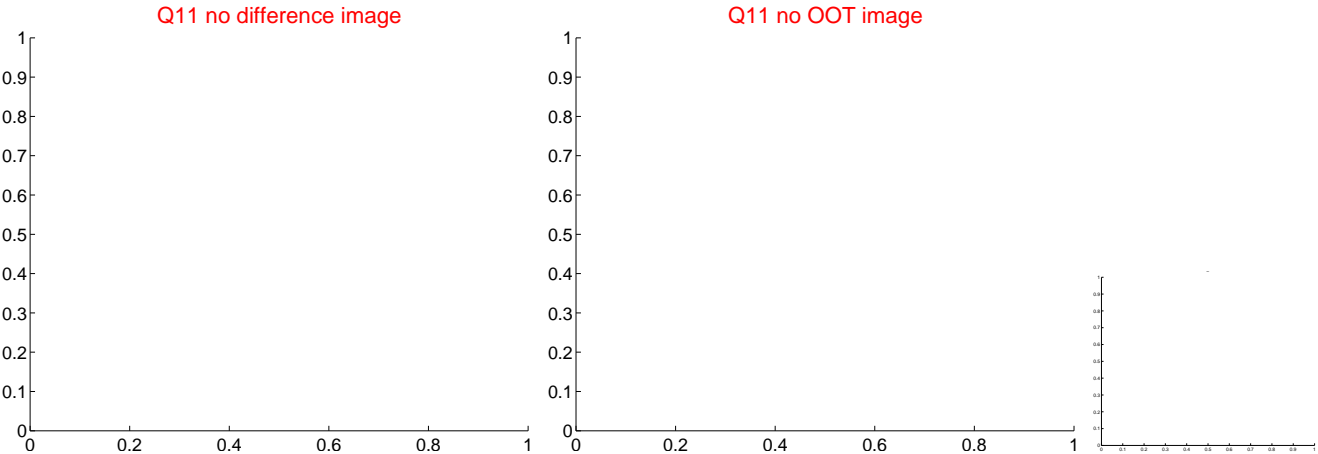
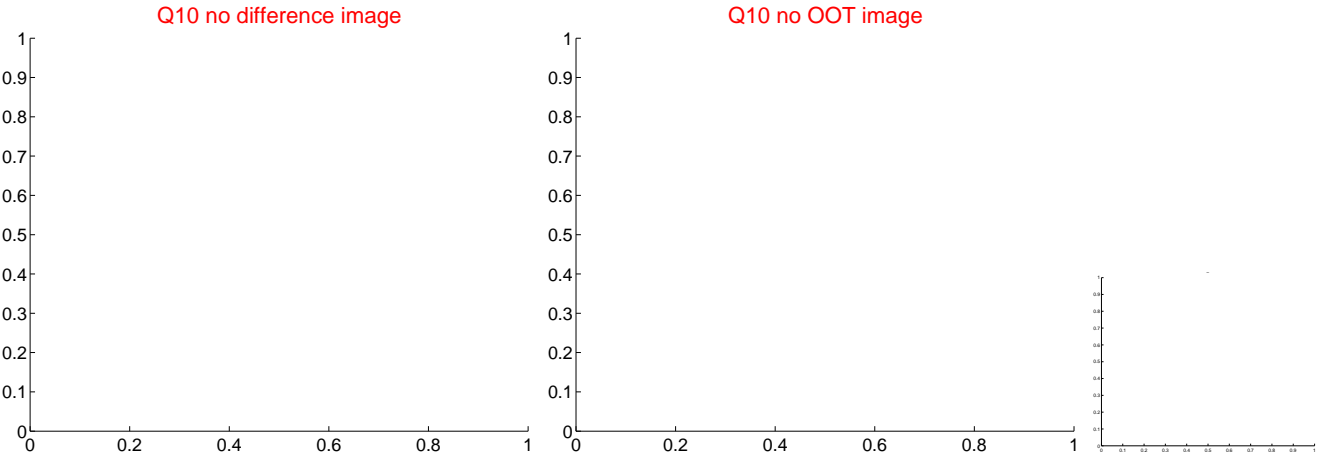
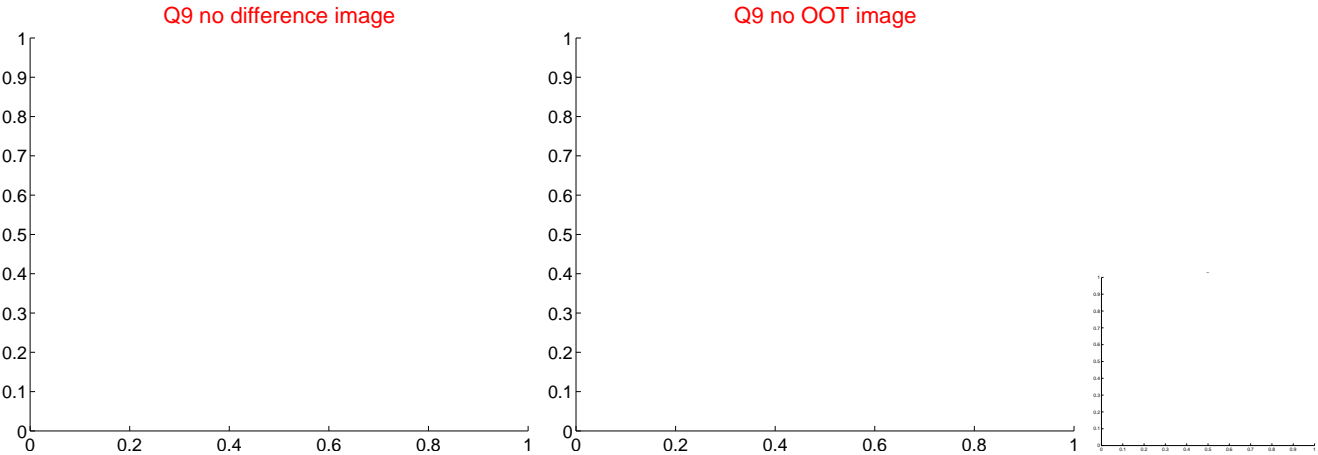
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



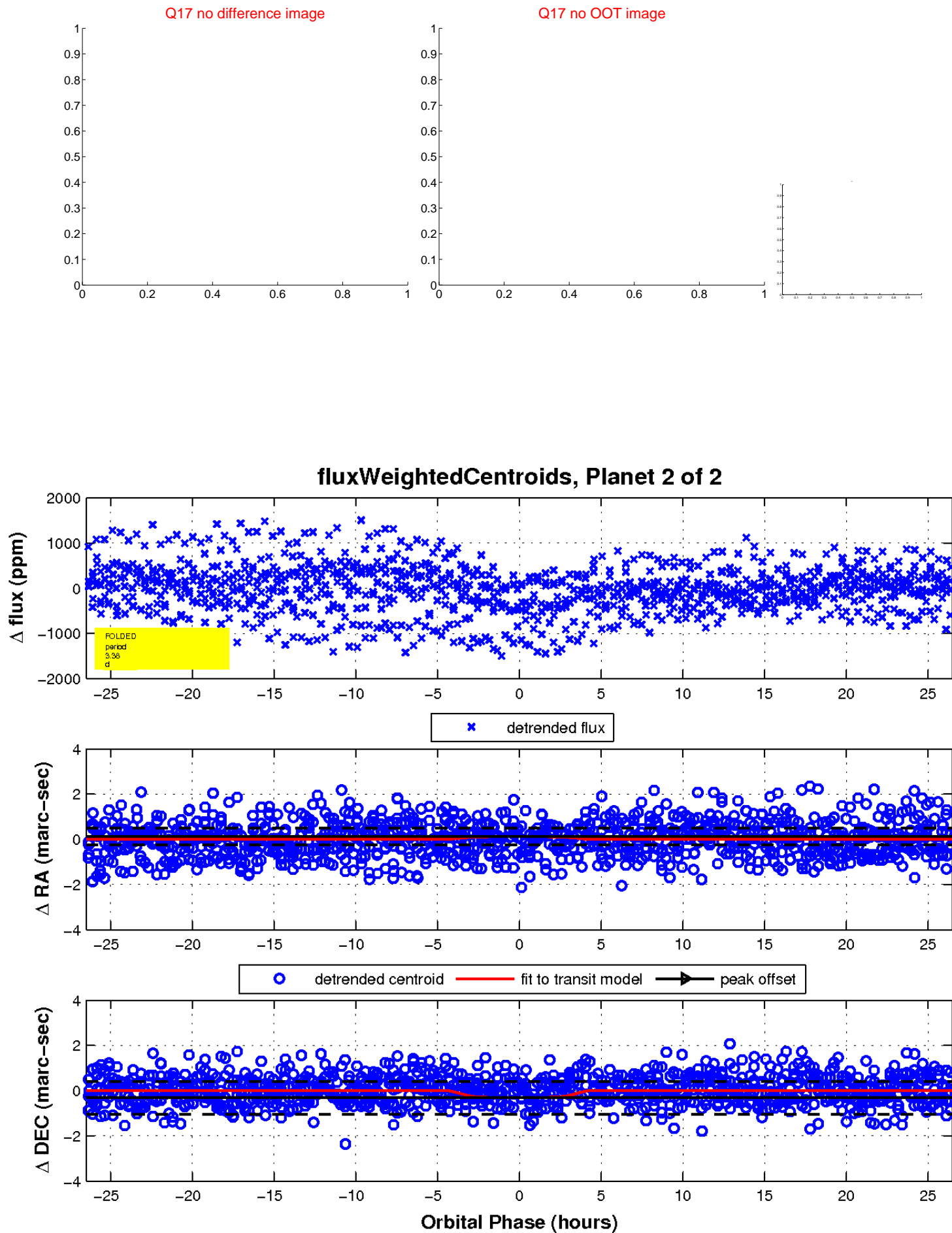
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

