

KIC 011817493

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})
011817493-01	OBS	No	72.566599	154.537898	6942.3	2.826	9.8	7.6	0.61	3854	5.47	0.87
011817493-02	OBS	No	0.533384	131.851619	3436.4	1.500	8.6	-1.0	0.61	3854	3.43	611.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011817493-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_KIC_POS
011817493-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

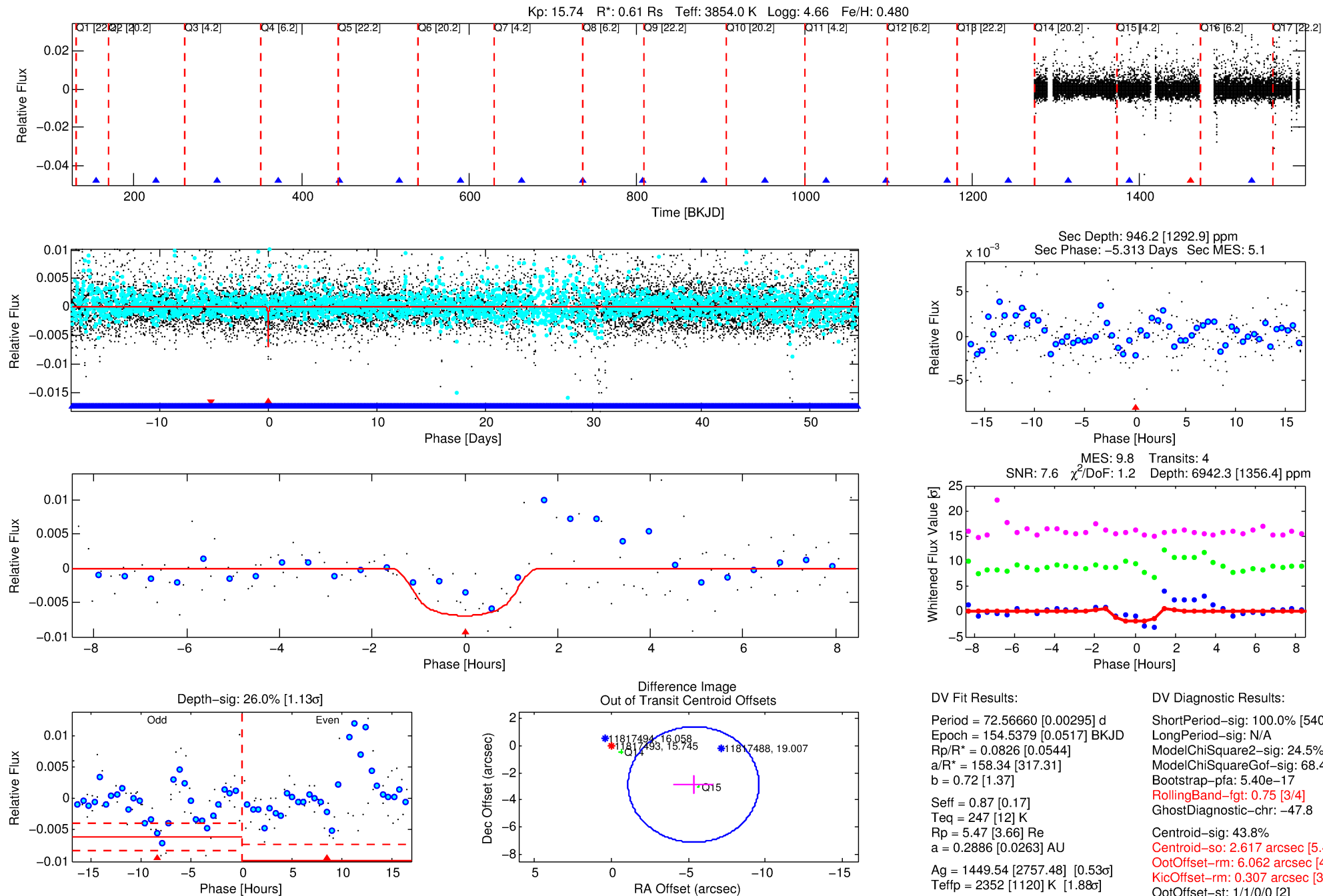
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011817493-01

No Significant Match Found

DV One-Page Summary

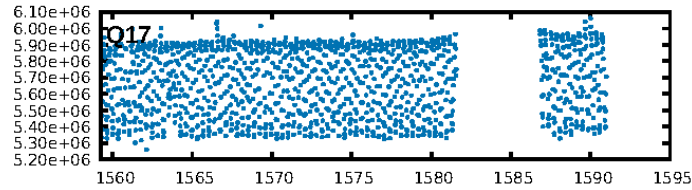
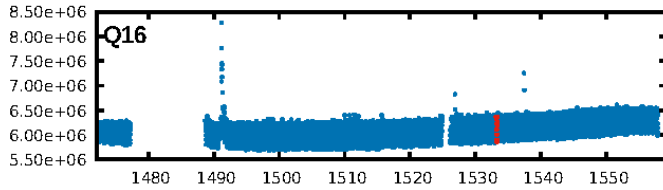
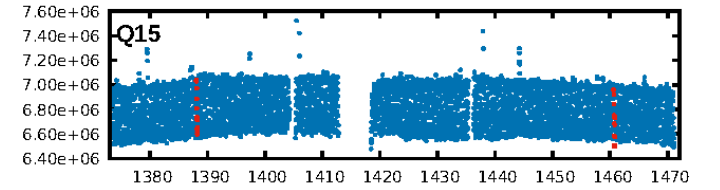
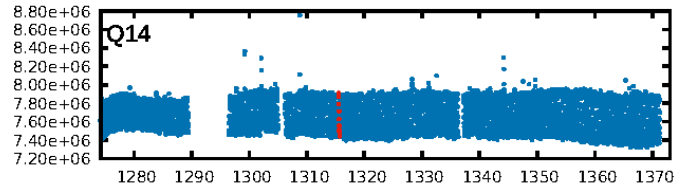
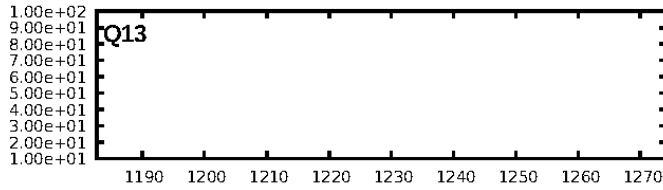
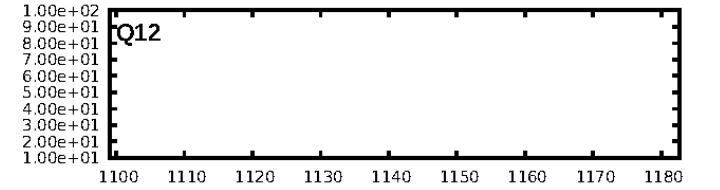
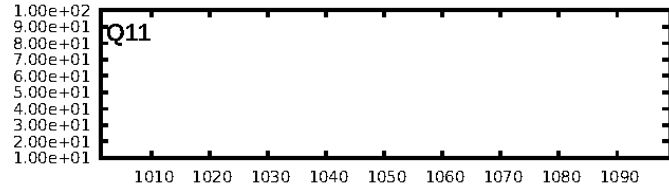
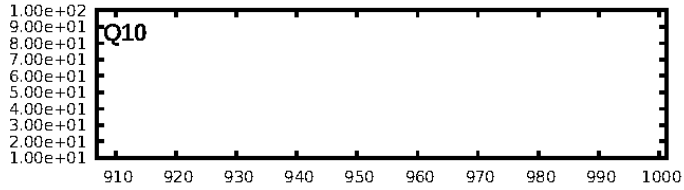
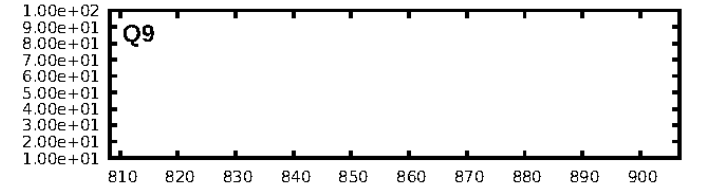
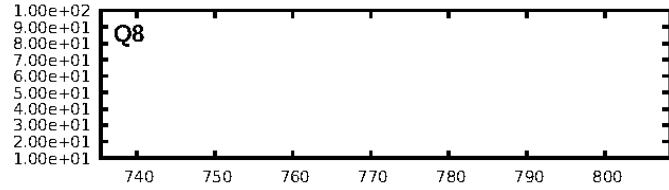
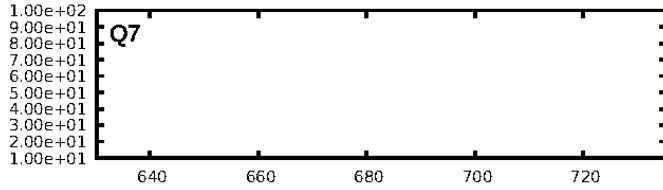
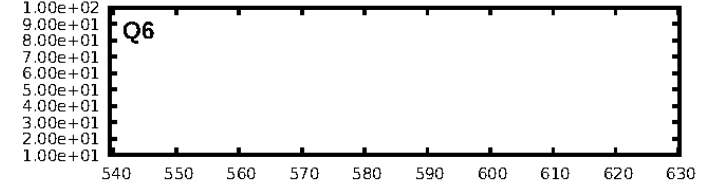
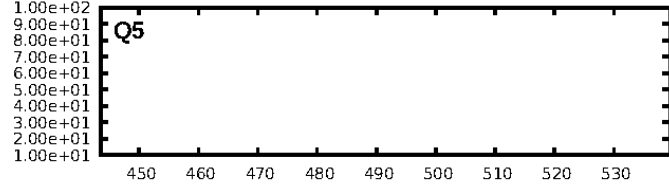
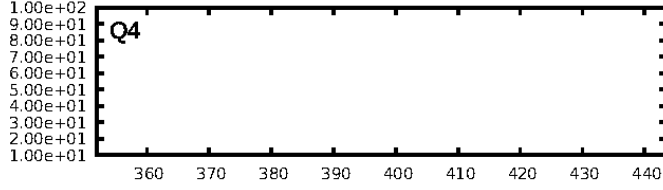
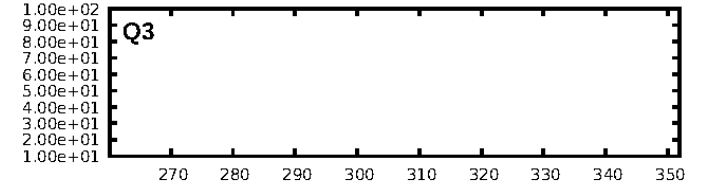
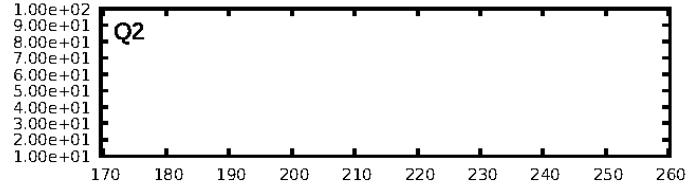
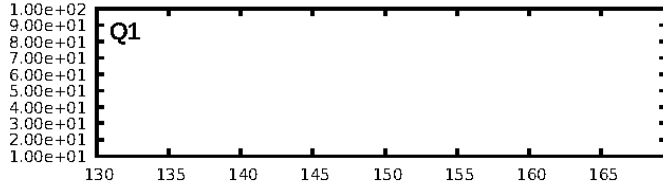
KIC: 11817493 Candidate: 1 of 2 Period: 72.567 d



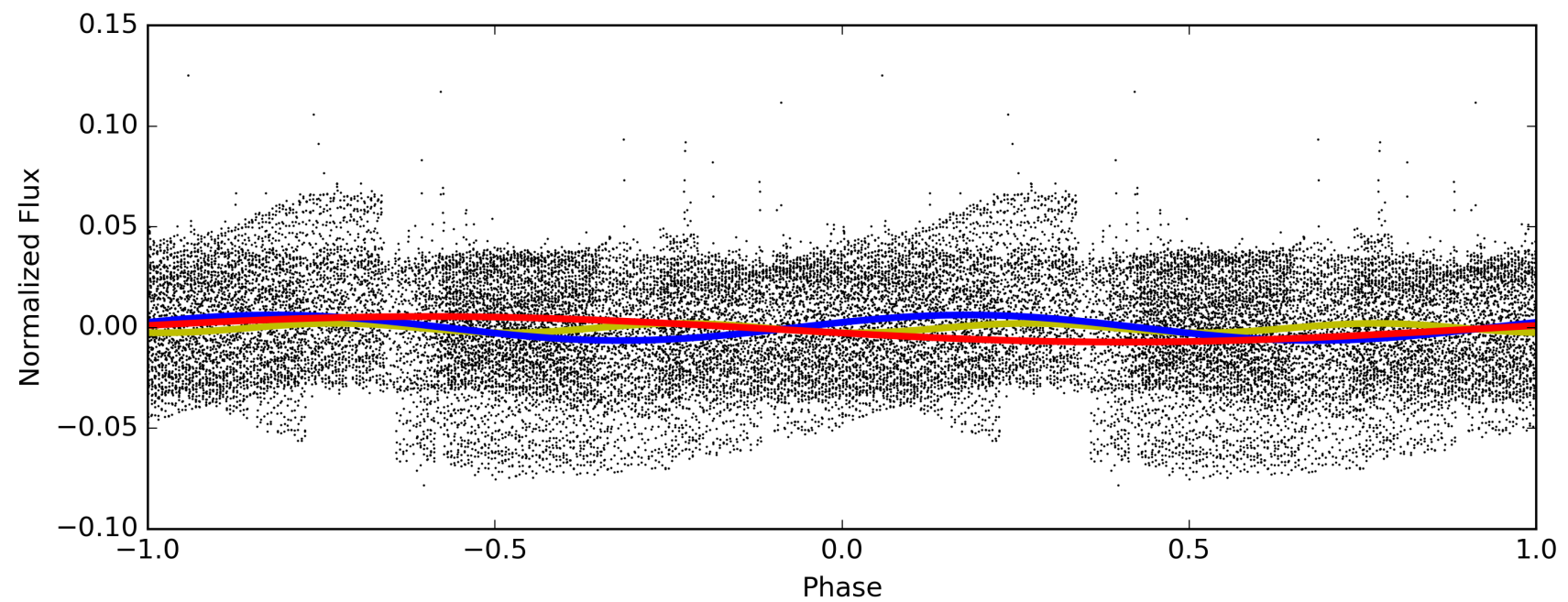
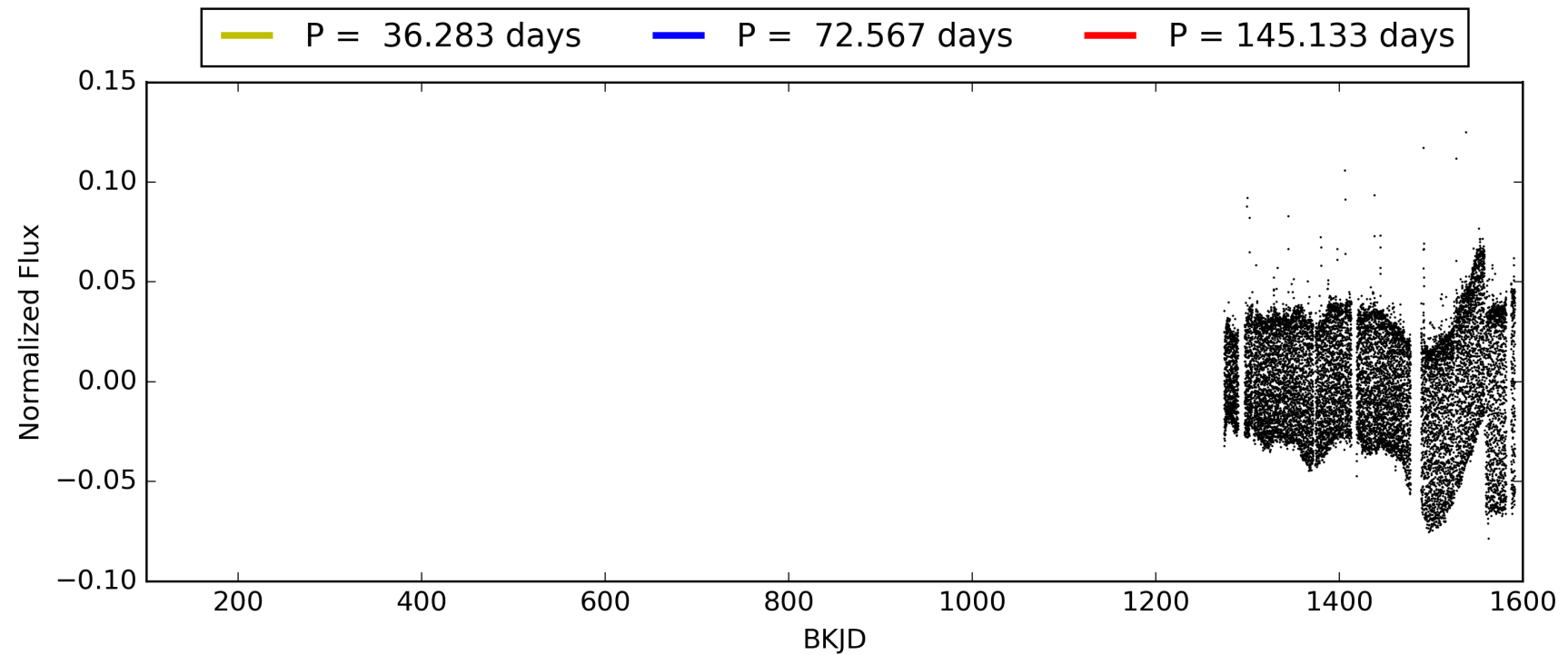
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011817493-01, PDC Light Curves

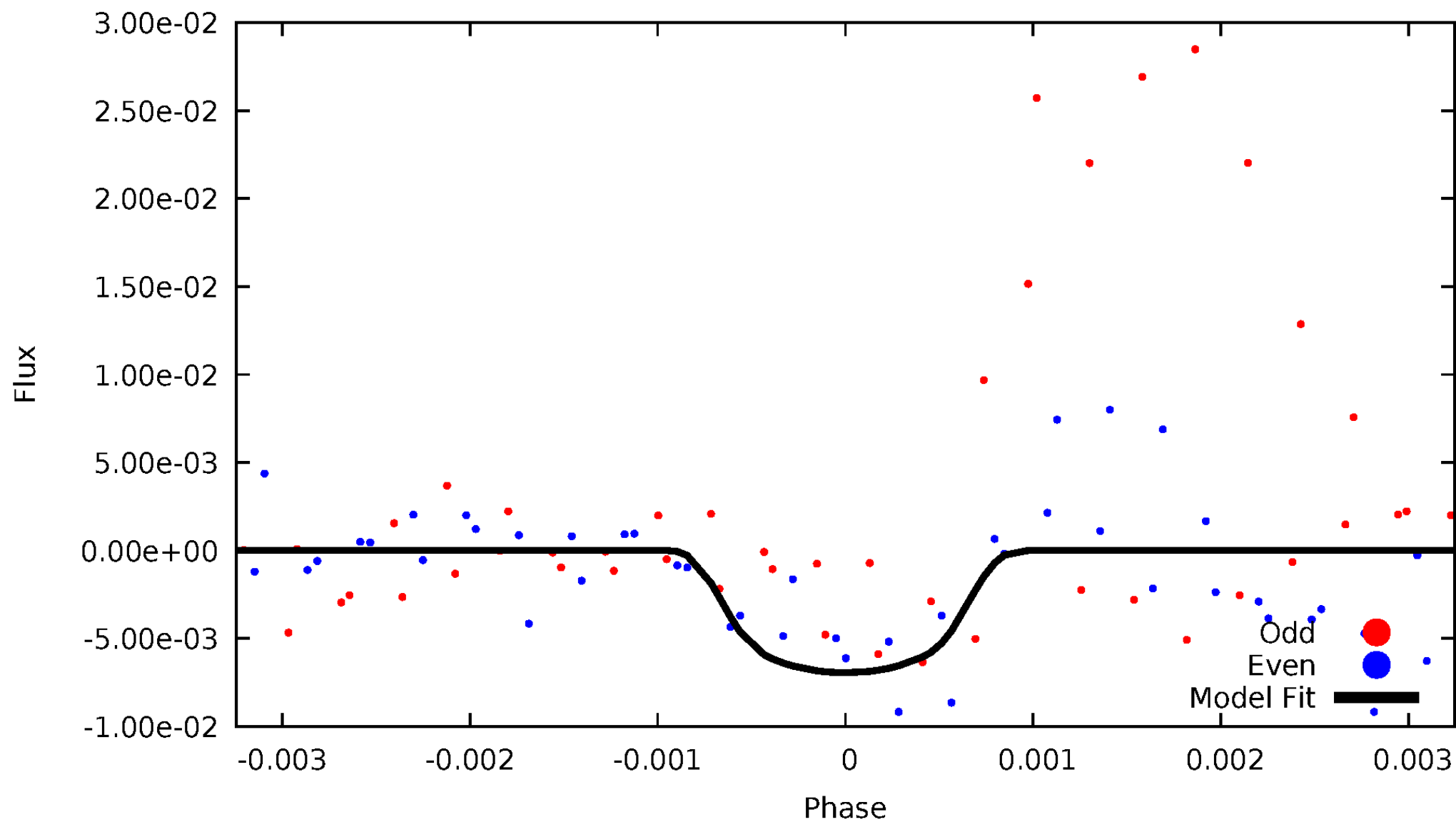


TCE 011817493-01



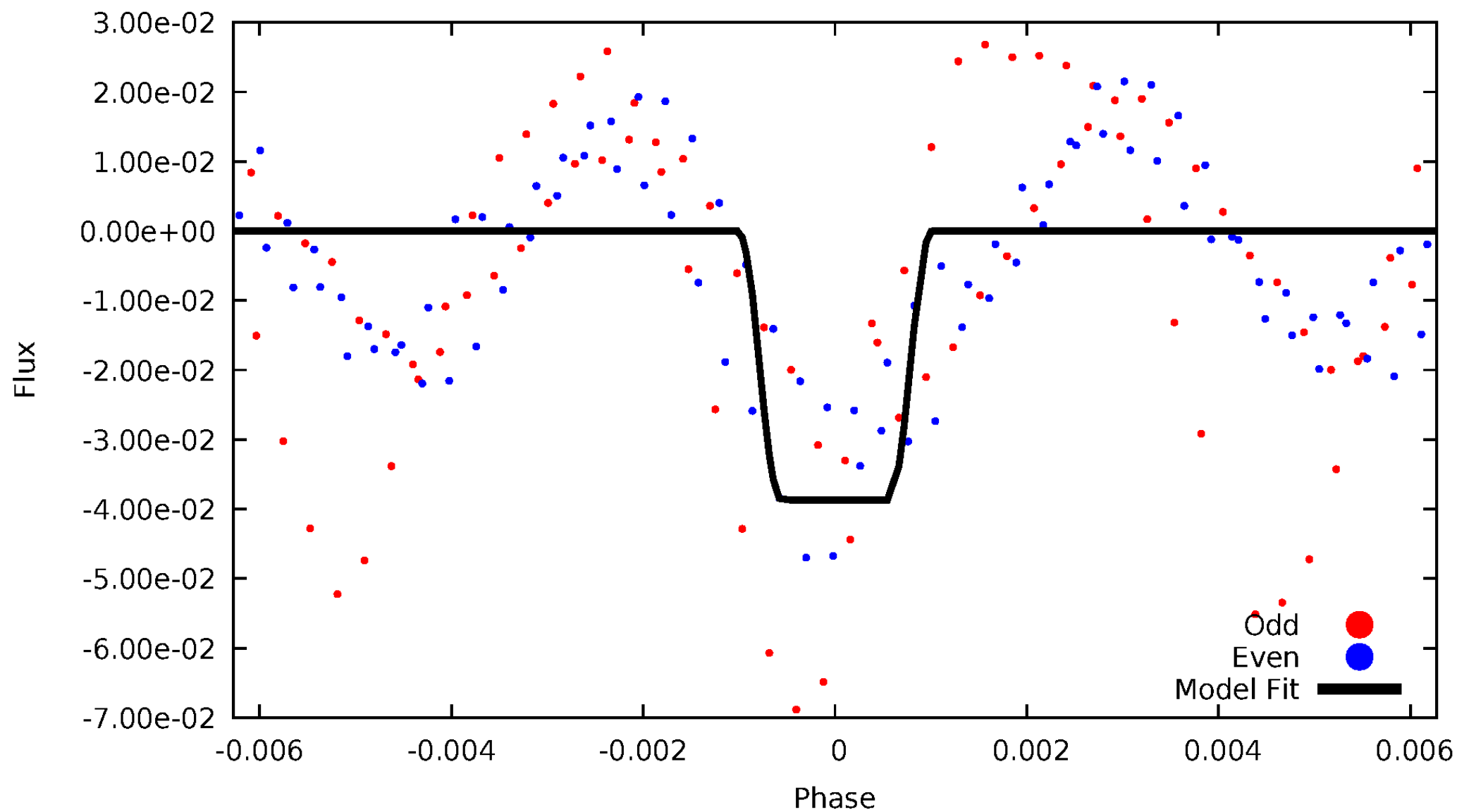
DV Odd/Even

TCE 011817493-01



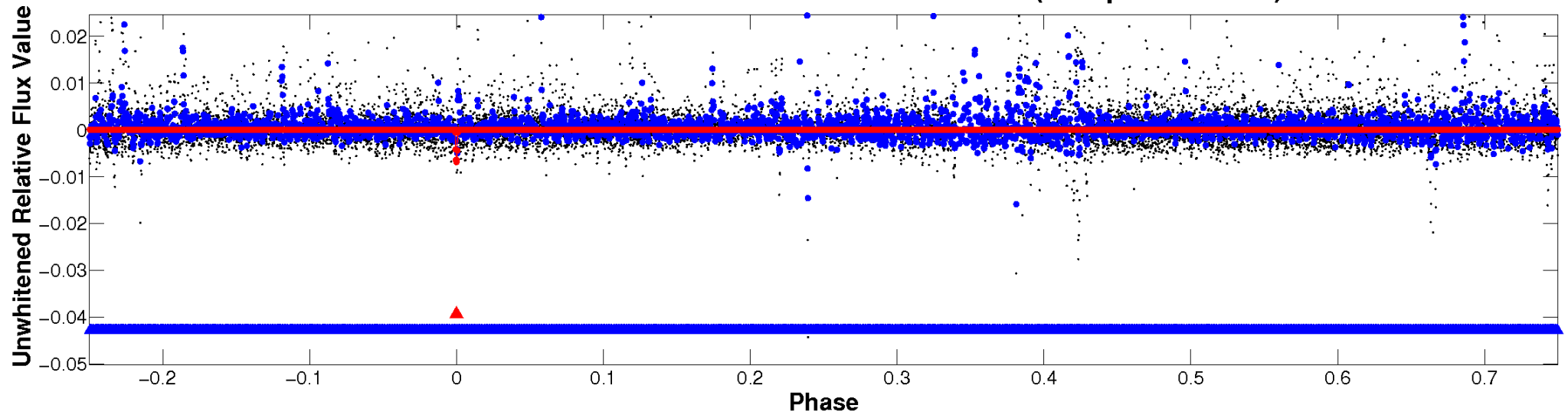
ALT Odd/Even

TCE 011817493-01

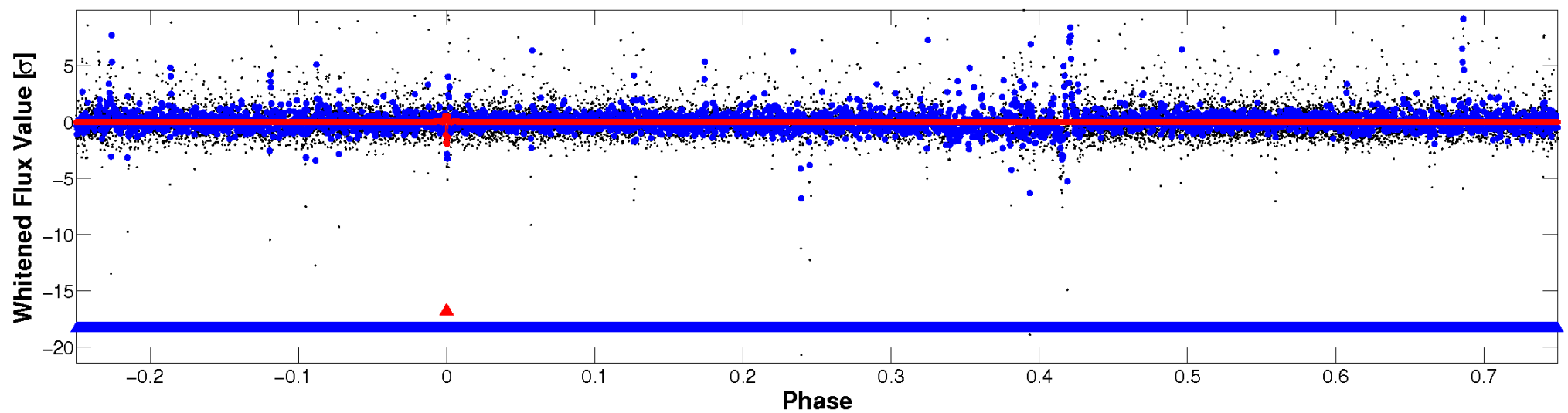


Non-Whitened Vs. Whitened Light Curve

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

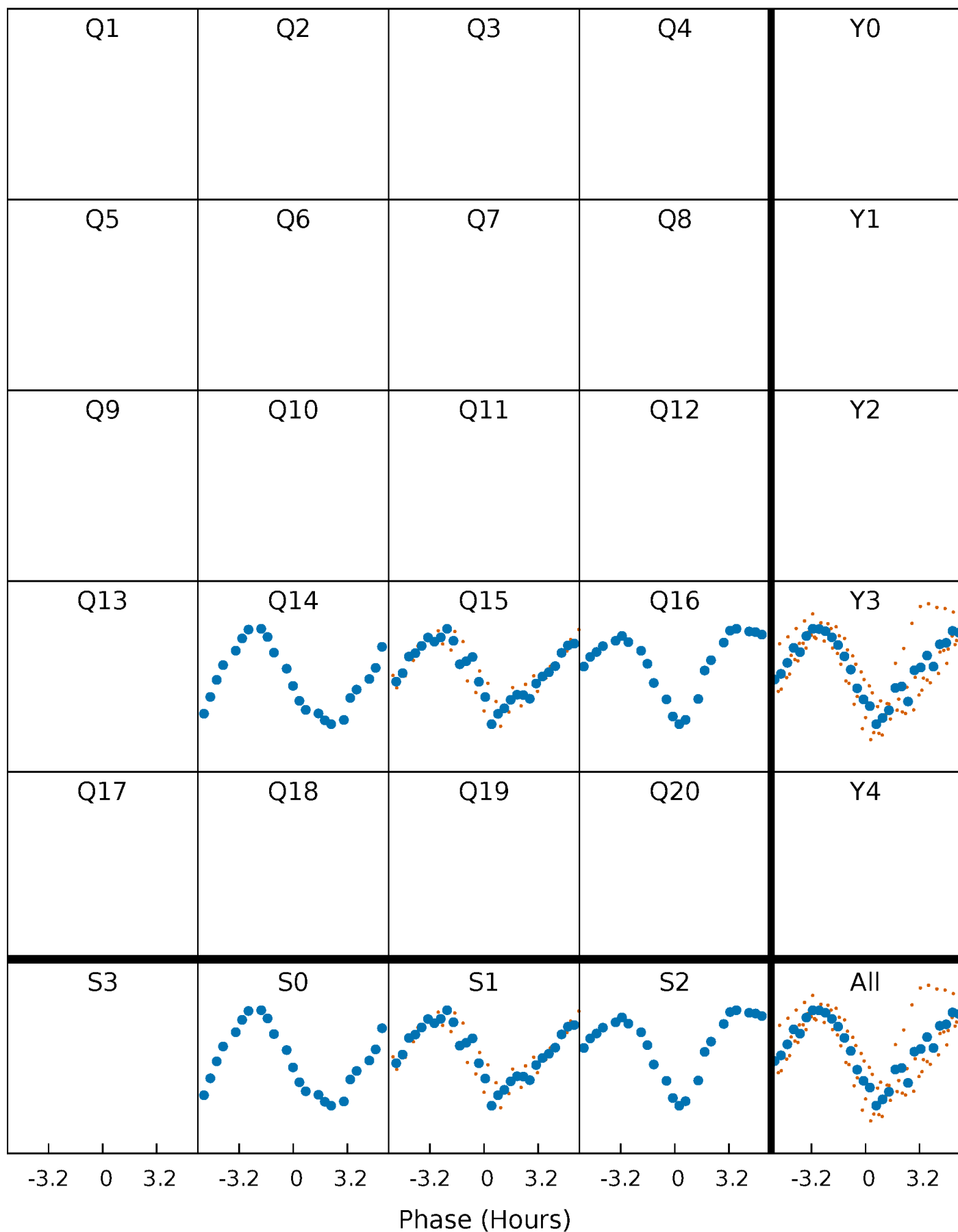


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



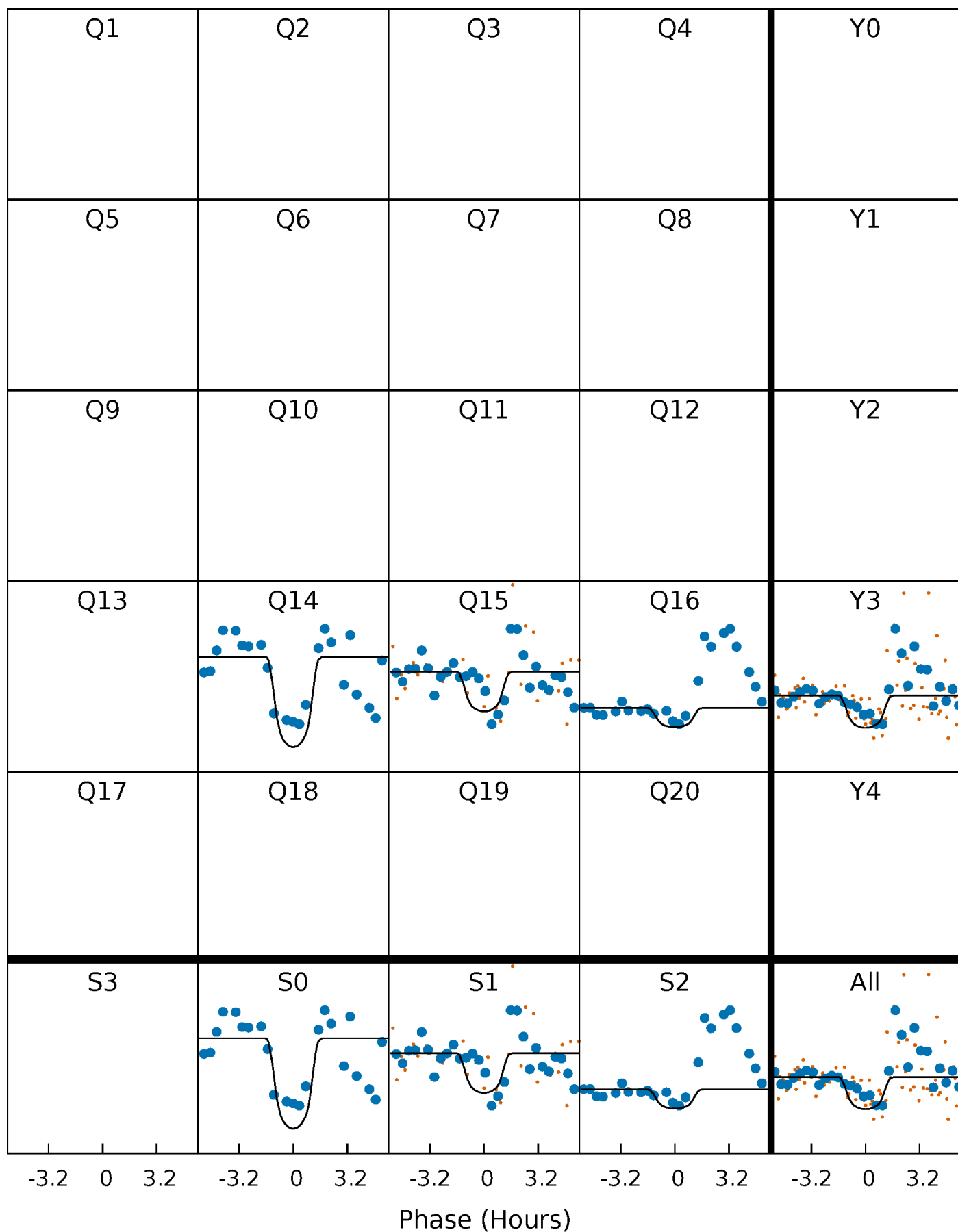
PDC Quarter-Phased Transit Curves

TCE 011817493-01 P= 72.566599 Days $T_0=154.537898$ (BKJD)



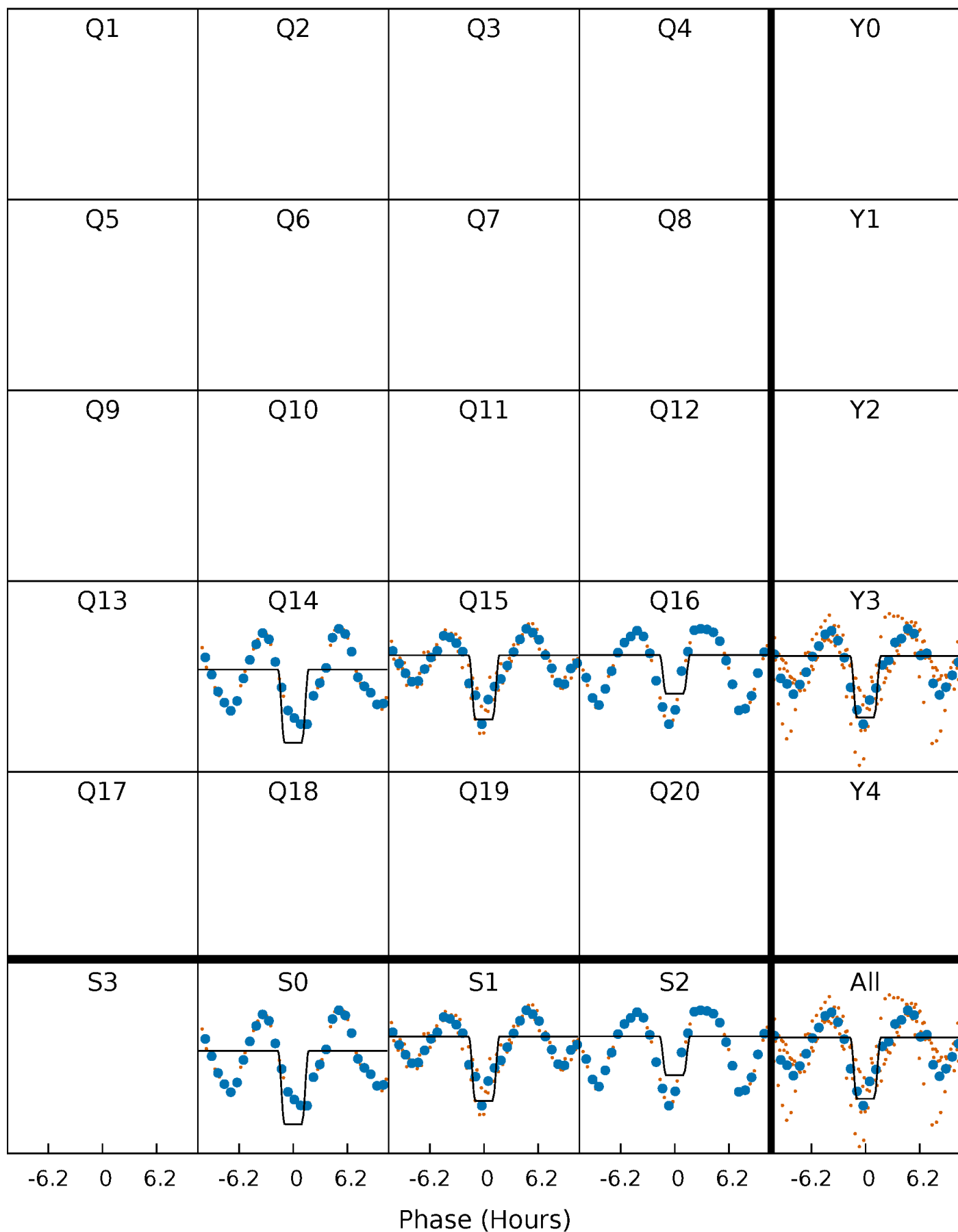
DV Quarter-Phased Transit Curves

TCE 011817493-01 P= 72.566599 Days $T_0=154.537898$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

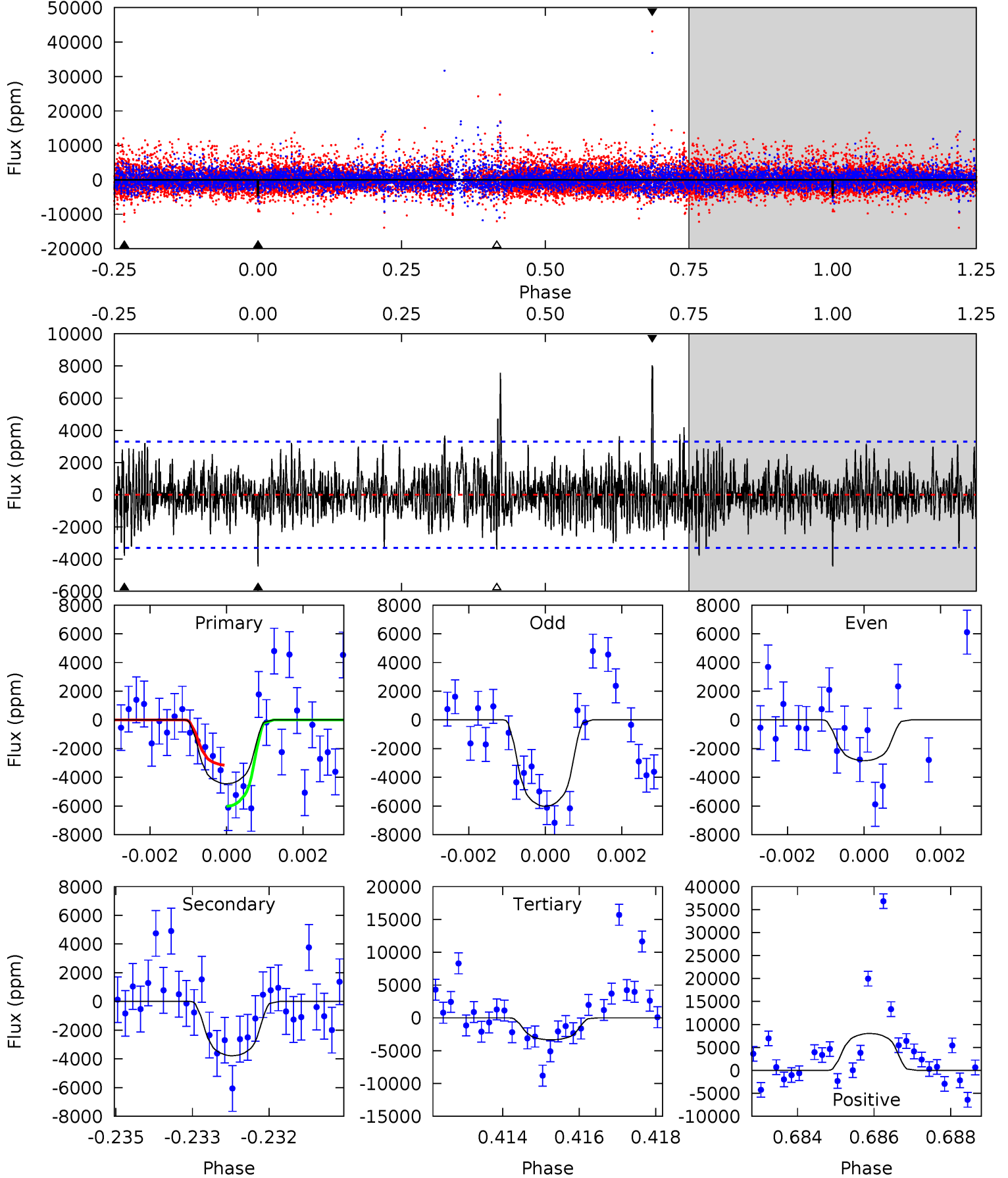
TCE 011817493-01 P= 72.566202 Days $T_0=154.587309$ (BKJD)



DV Model-Shift Uniqueness Test

011817493-01, P = 72.566599 Days, E = 154.537898 Days

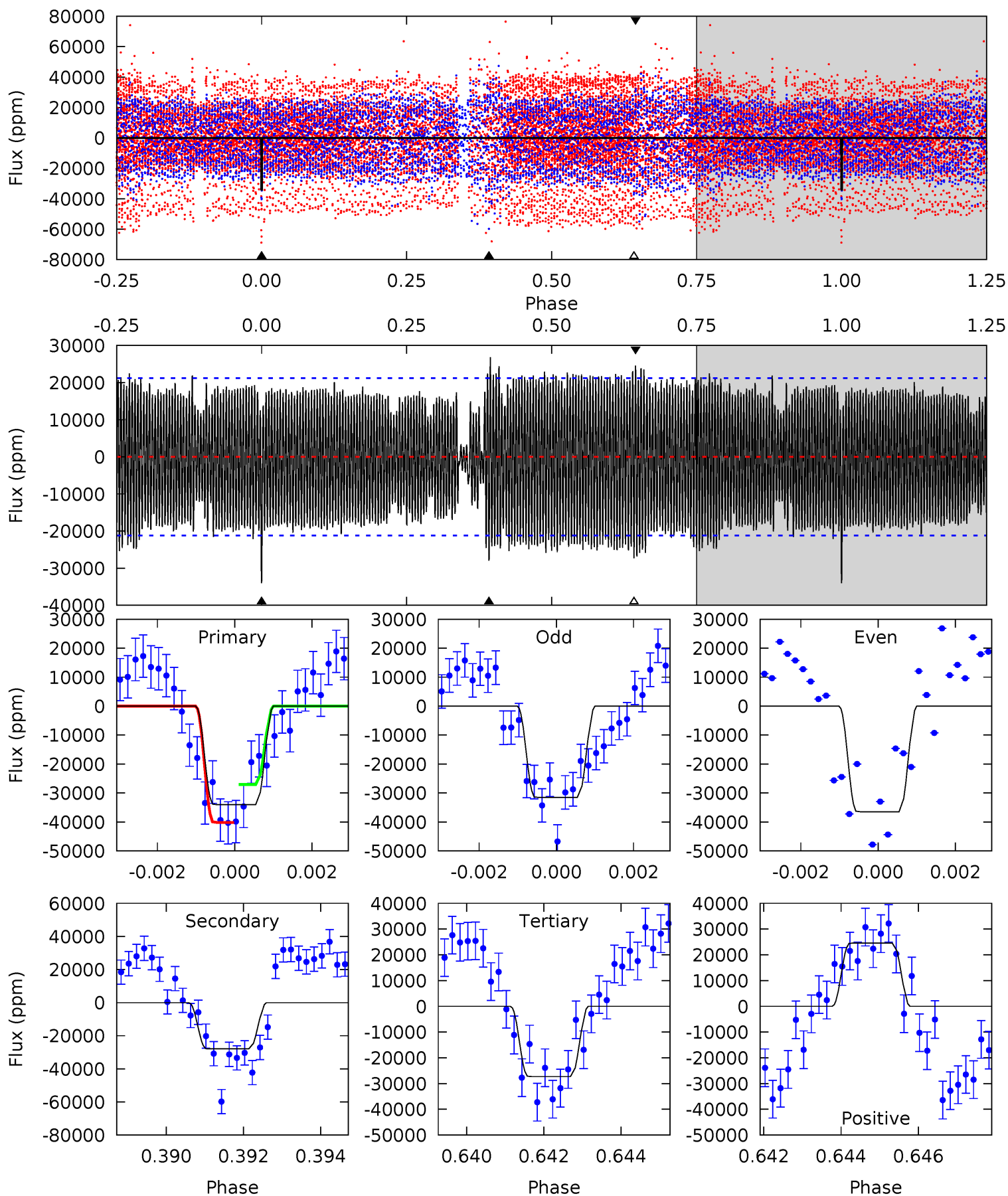
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.22	6.13	5.43	13.0	5.35	3.13	1.87	1.79	-5.80	0.70	-6.88	2.15	1.01	0.64	2.32



Alt Model-Shift Uniqueness Test

011817493-01, P = 72.566202 Days, E = 154.587309 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.54	7.01	6.85	6.17	5.33	3.09	3.48	1.69	2.37	0.17	0.85	0.61	1.08	0.44	1.65



Stellar Parameters For KIC 011817493

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3854^{+120}_{-147}	$4.656^{+0.064}_{-0.020}$	$0.480^{+0.050}_{-0.300}$	$0.607^{+0.028}_{-0.070}$	$0.607^{+0.040}_{-0.060}$	$3.832^{+1.126}_{-0.315}$
	+3%/-4%	+1%/-0%	+10%/-62%	+5%/-12%	+7%/-10%	+29%/-8%
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 011817493-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3787 ± 617	$5.70^{+3.54}_{-3.26}$	342^{+11}_{-14}	3435^{+1174}_{-477}	5207^{+24015}_{-3197}
Alt.	-27945 ± 3984	$12.59^{+3.65}_{-3.49}$	342^{+12}_{-14}	3679^{+421}_{-314}	8265^{+7849}_{-3412}

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

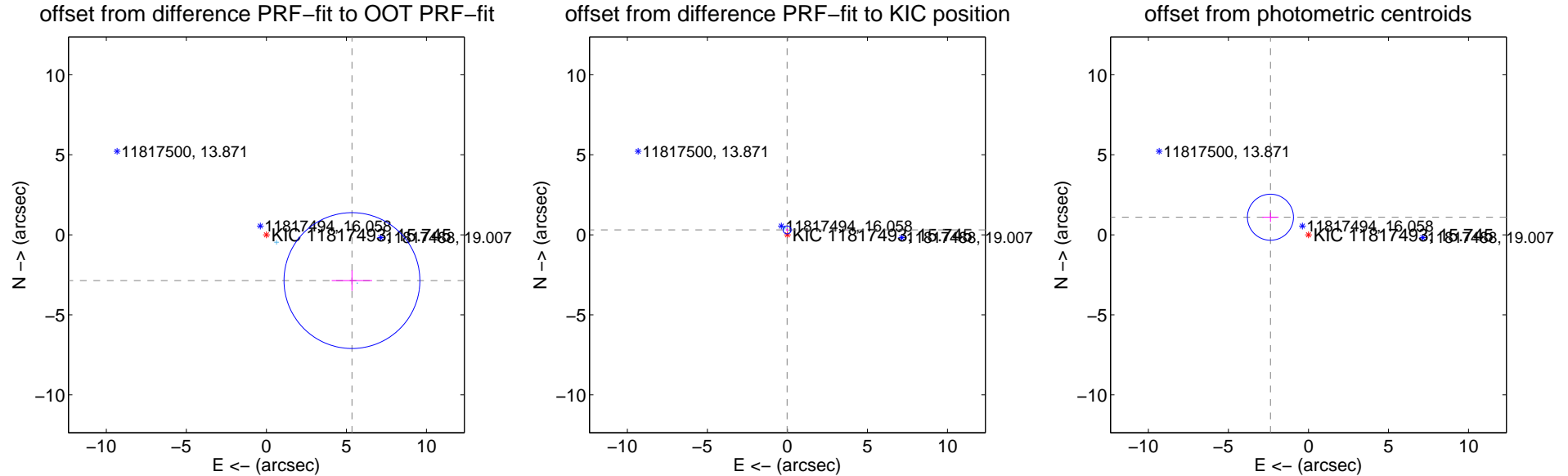
DV Centroid Data

Supplemental centroid analysis for 011817493-01. Kepler magnitude: 15.74. Transit SNR 7.59

There are 3 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 6.49 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.062 ± 1.414	4.29	-5.345 ± 1.262	-2.860 ± 0.643
PRF-fit source offset from KIC position	0.307 ± 0.083	3.68	0.020 ± 0.084	0.306 ± 0.083
photometric centroid source offset	2.62 ± 0.48	5.46	2.37 ± 0.51	1.10 ± 0.30



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.



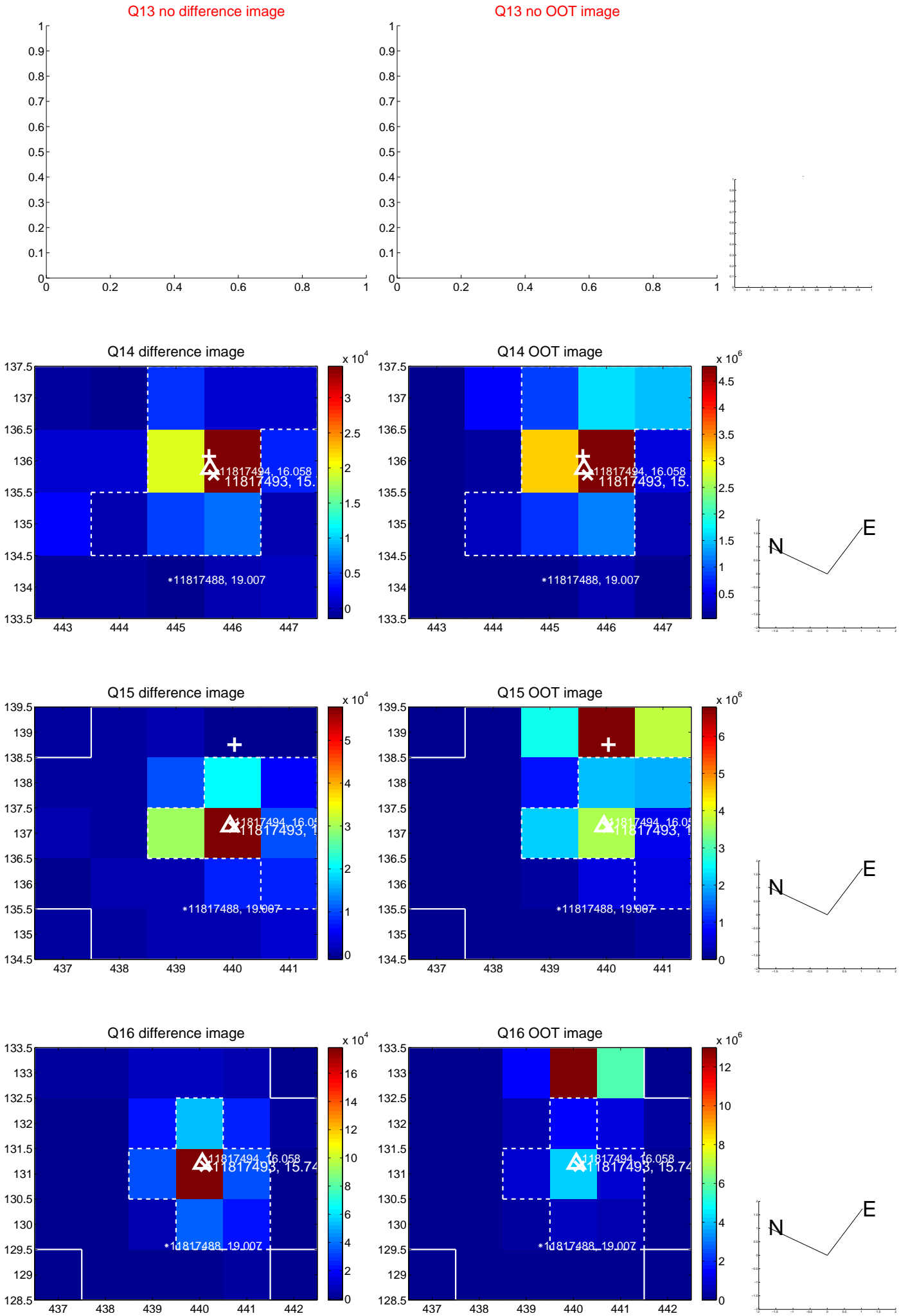
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



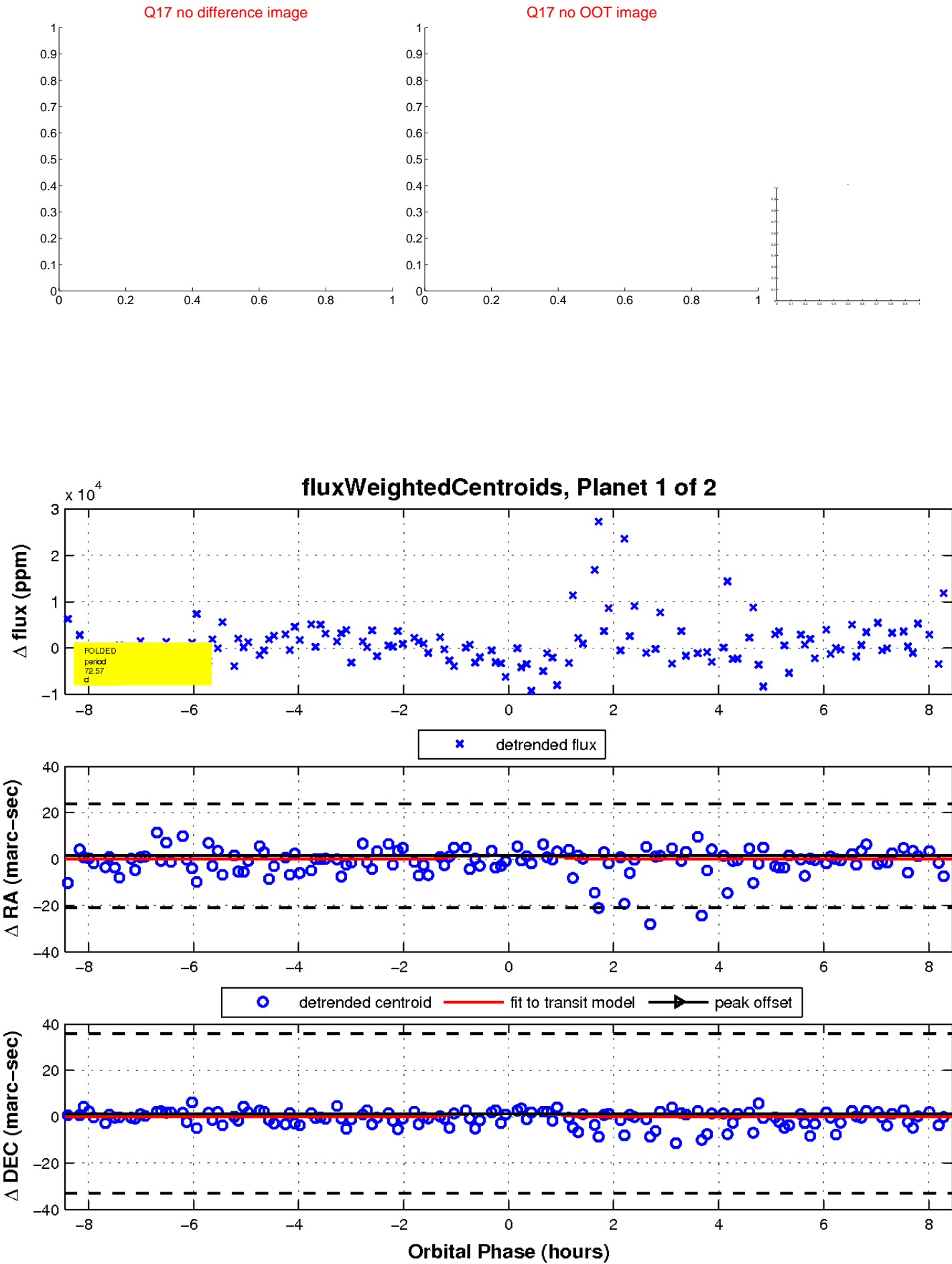
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

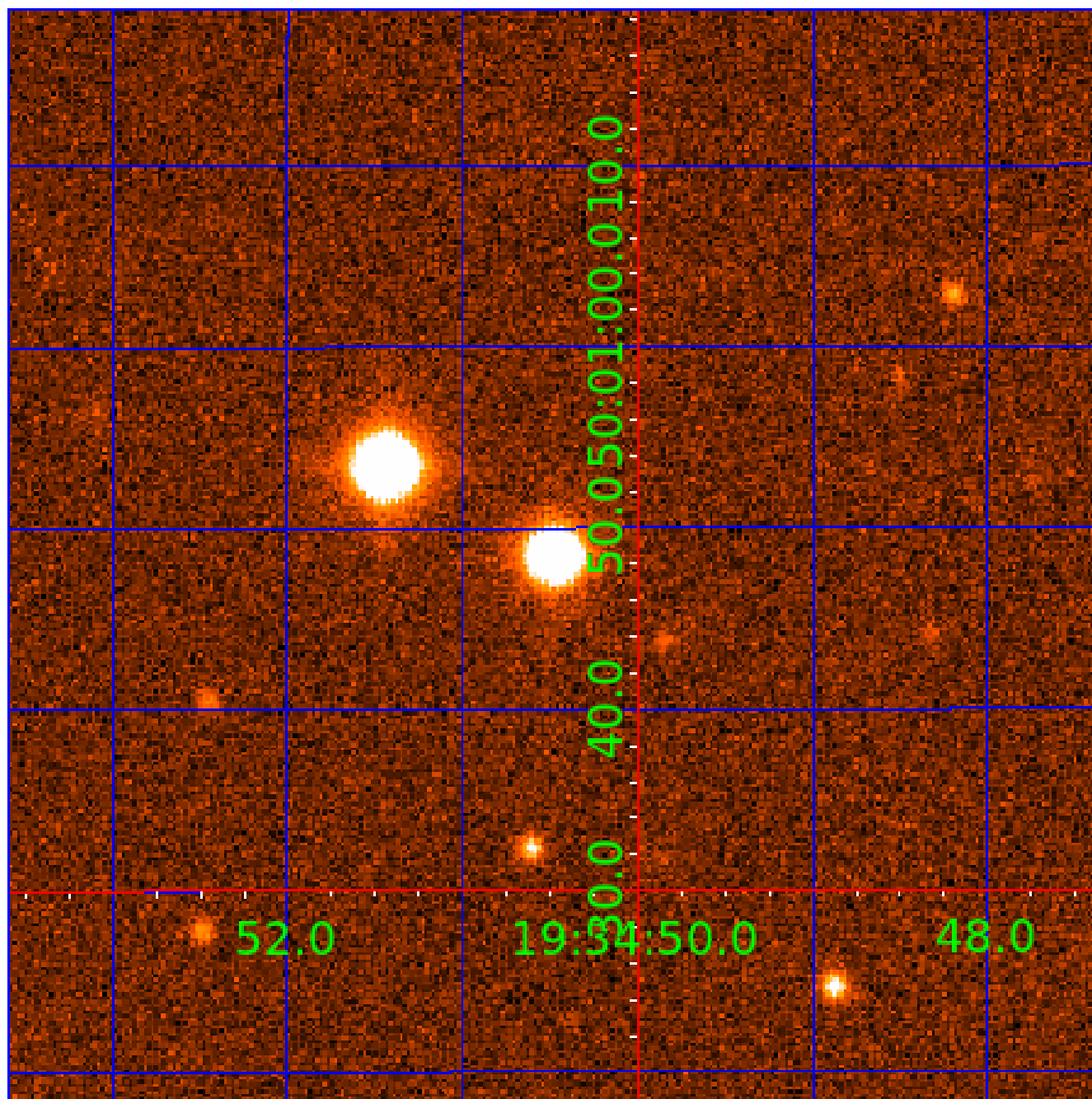


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011817493

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})
011817493-01	OBS	No	72.566599	154.537898	6942.3	2.826	9.8	7.6	0.61	3854	5.47	0.87
011817493-02	OBS	No	0.533384	131.851619	3436.4	1.500	8.6	-1.0	0.61	3854	3.43	611.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011817493-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_KIC_POS
011817493-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

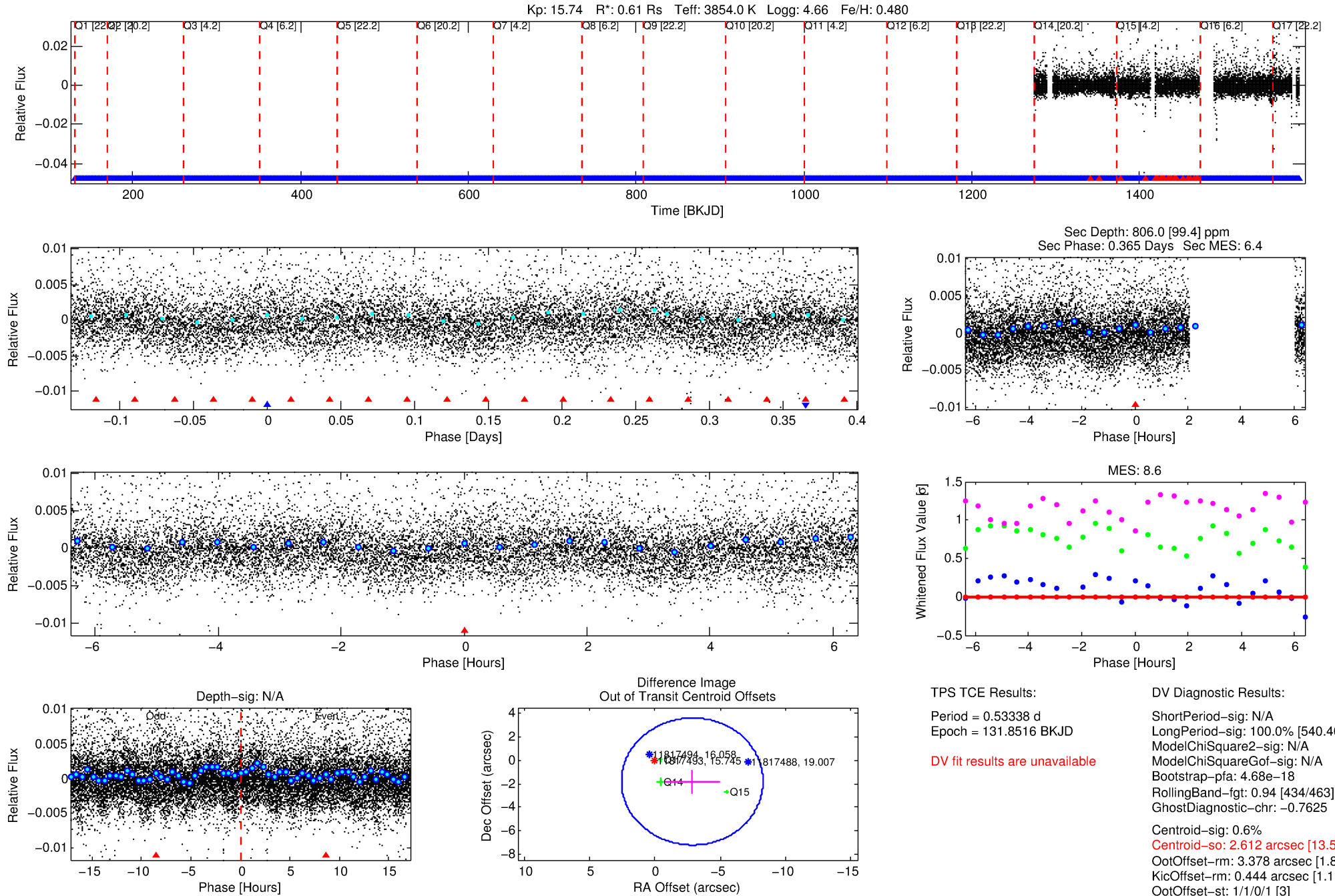
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011817493-02

No Significant Match Found

DV One-Page Summary

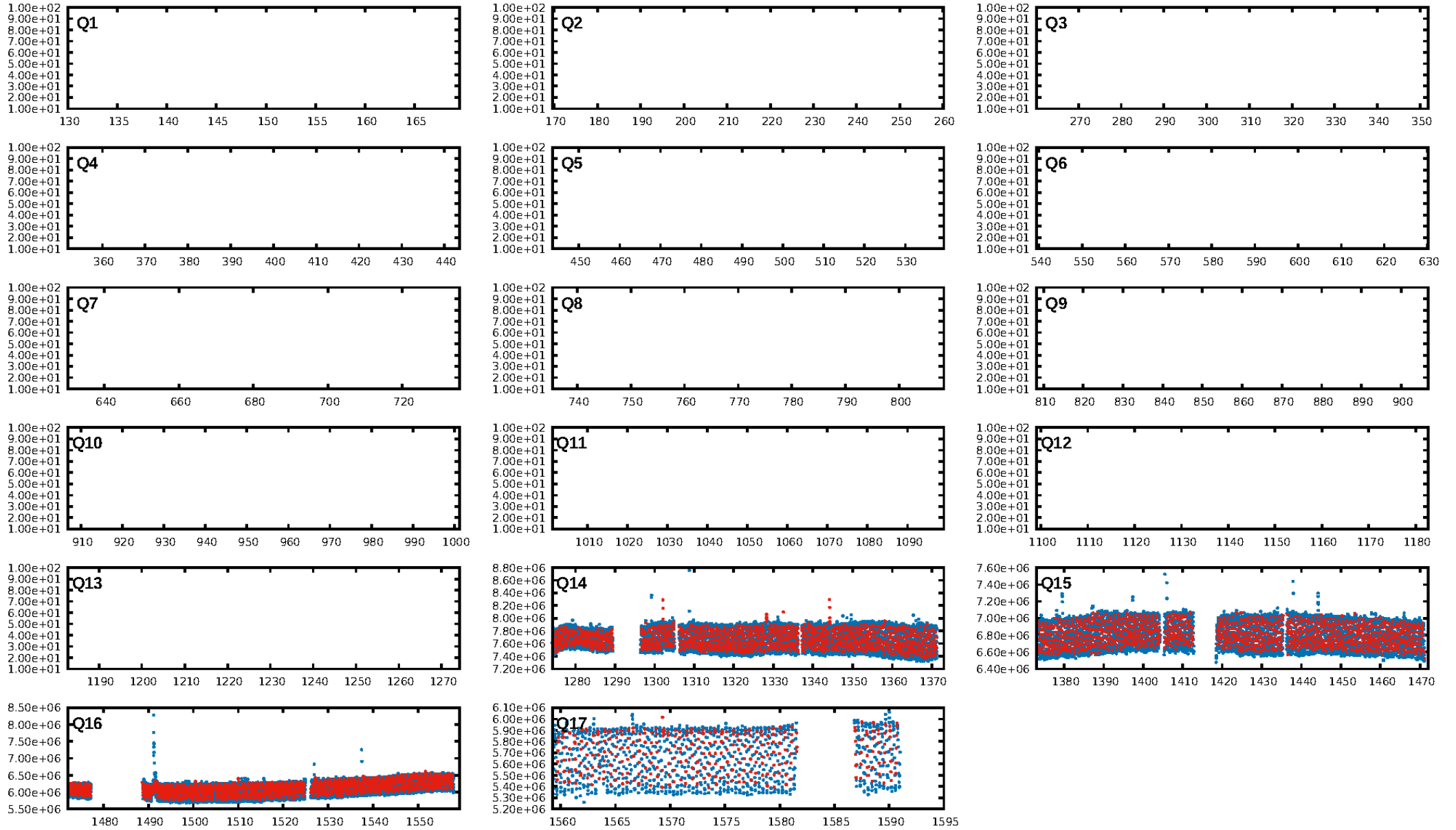
KIC: 11817493 Candidate: 2 of 2 Period: 0.533 d



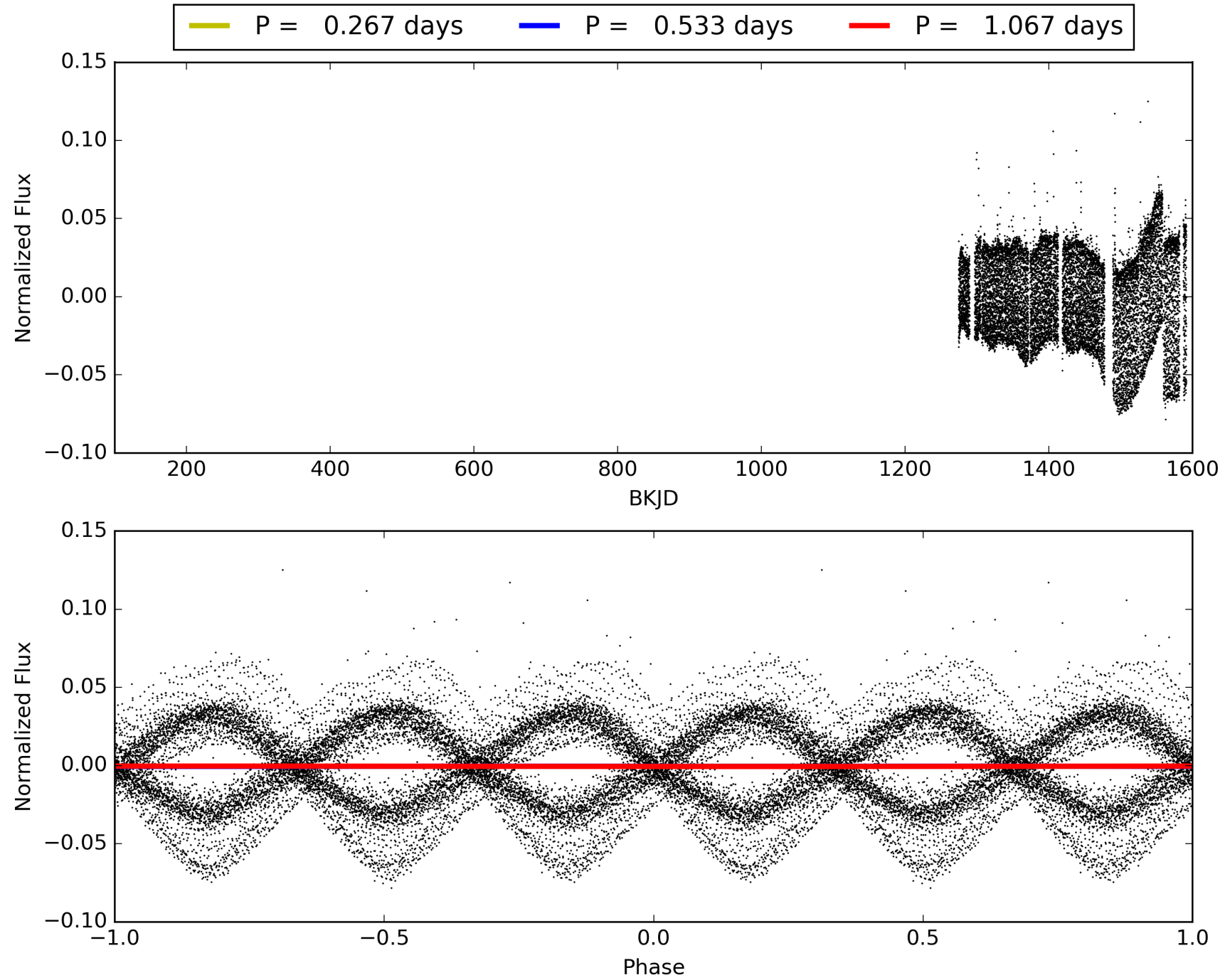
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011817493-02, PDC Light Curves

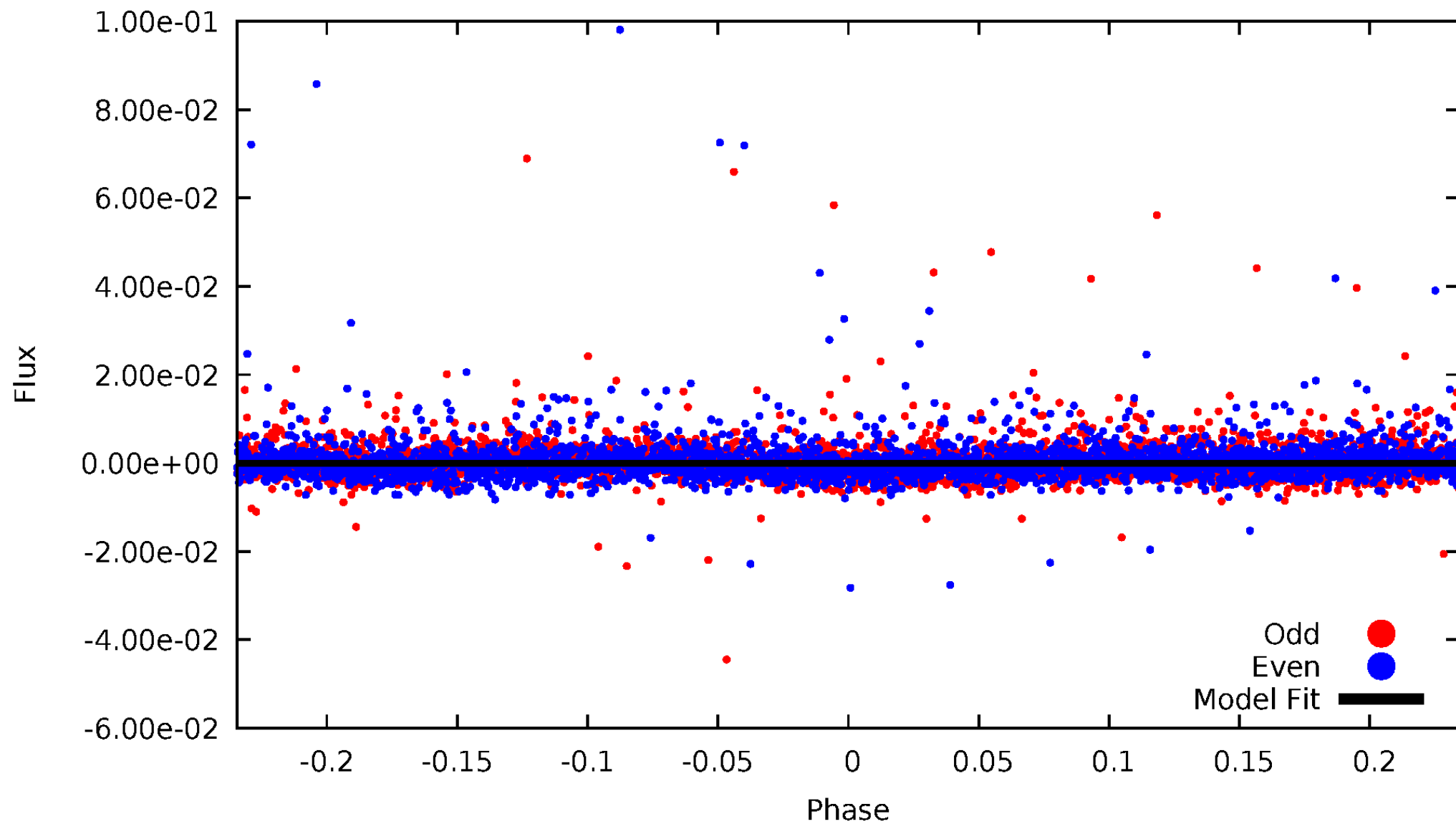


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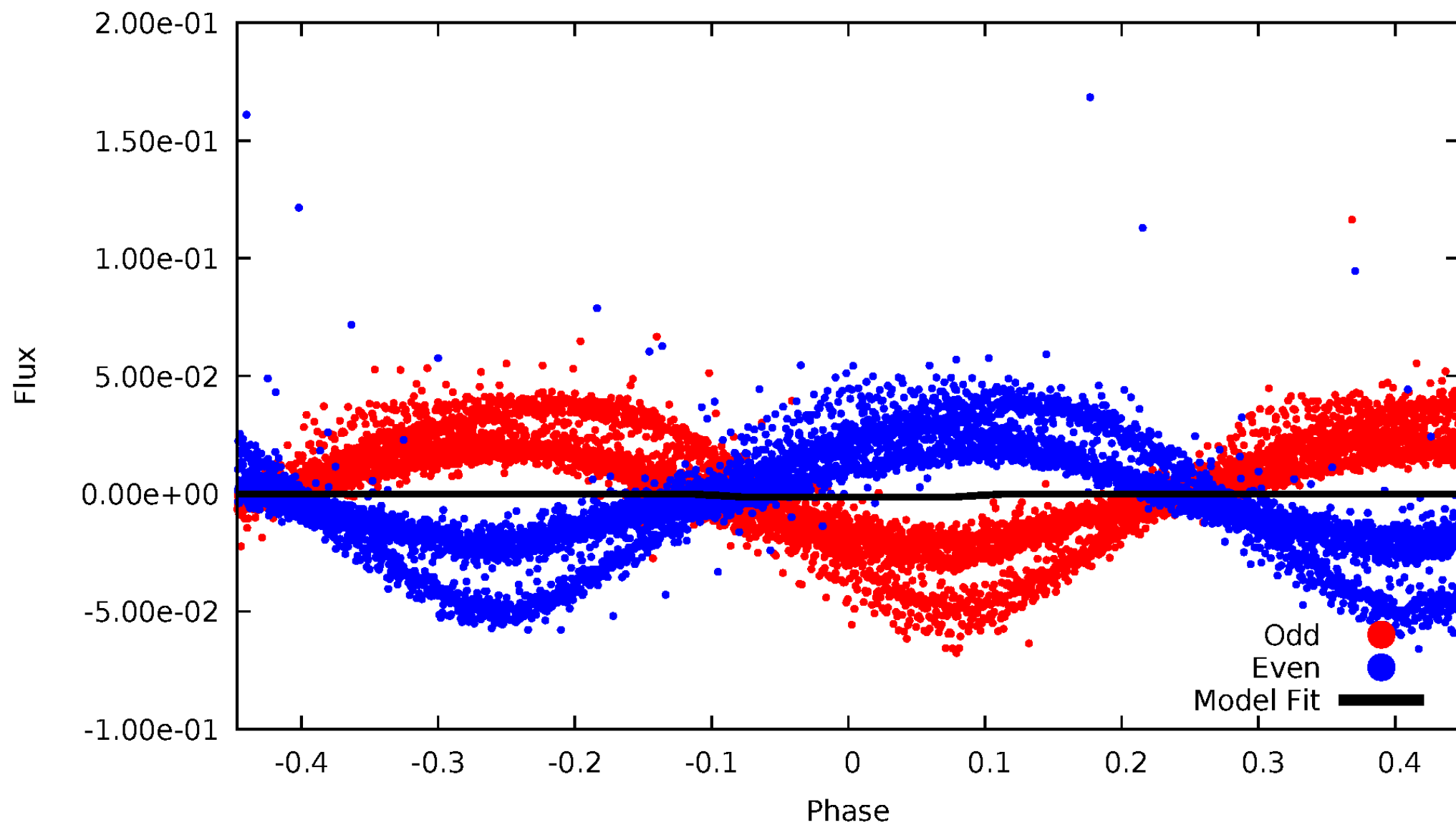
DV Odd/Even

TCE 011817493-02



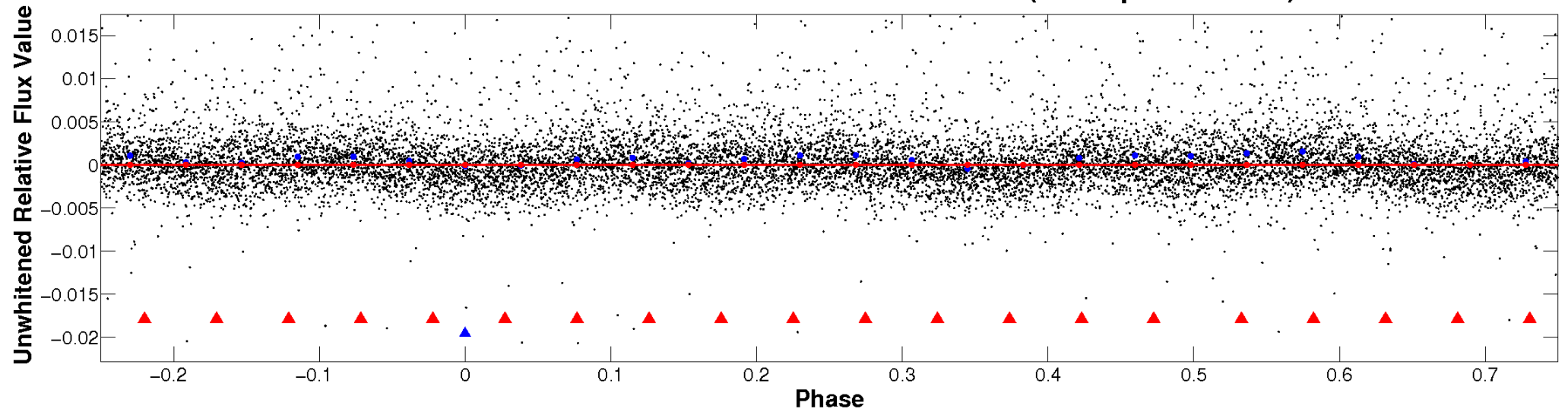
ALT Odd/Even

TCE 011817493-02

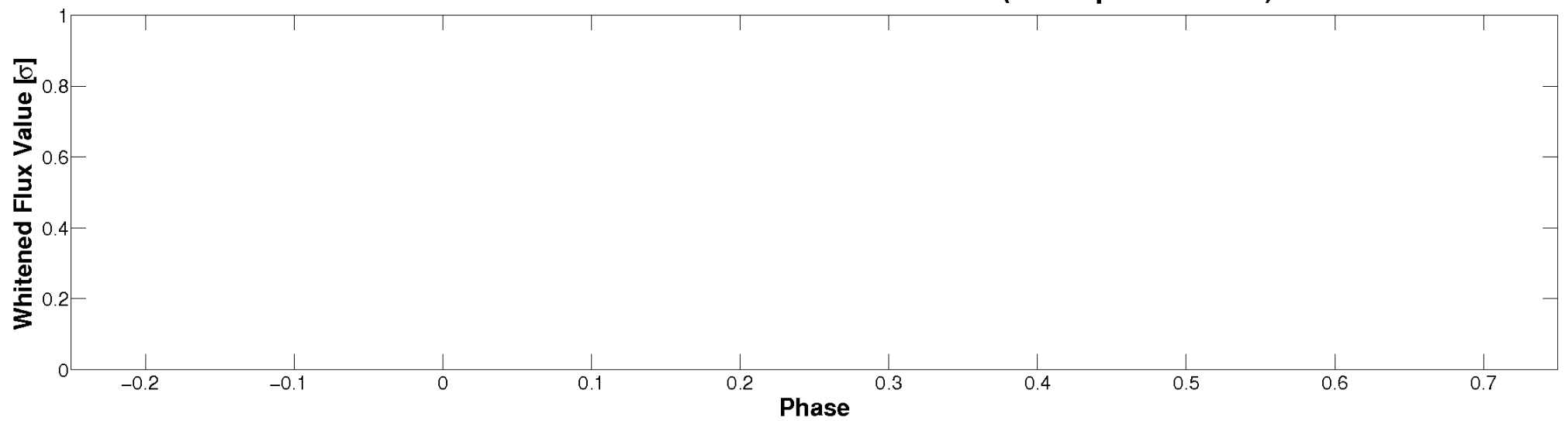


Non-Whitened Vs. Whitened Light Curve

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

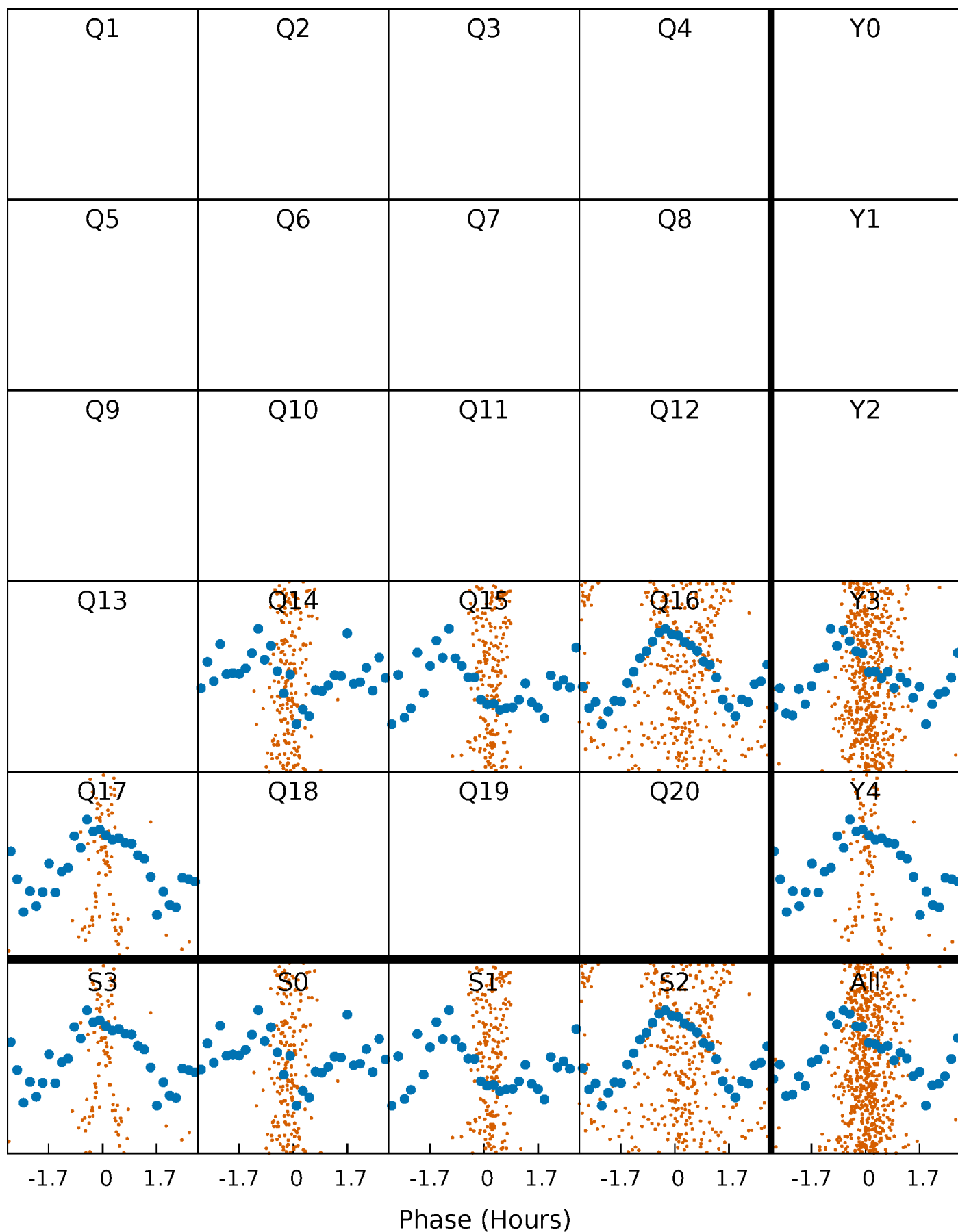


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



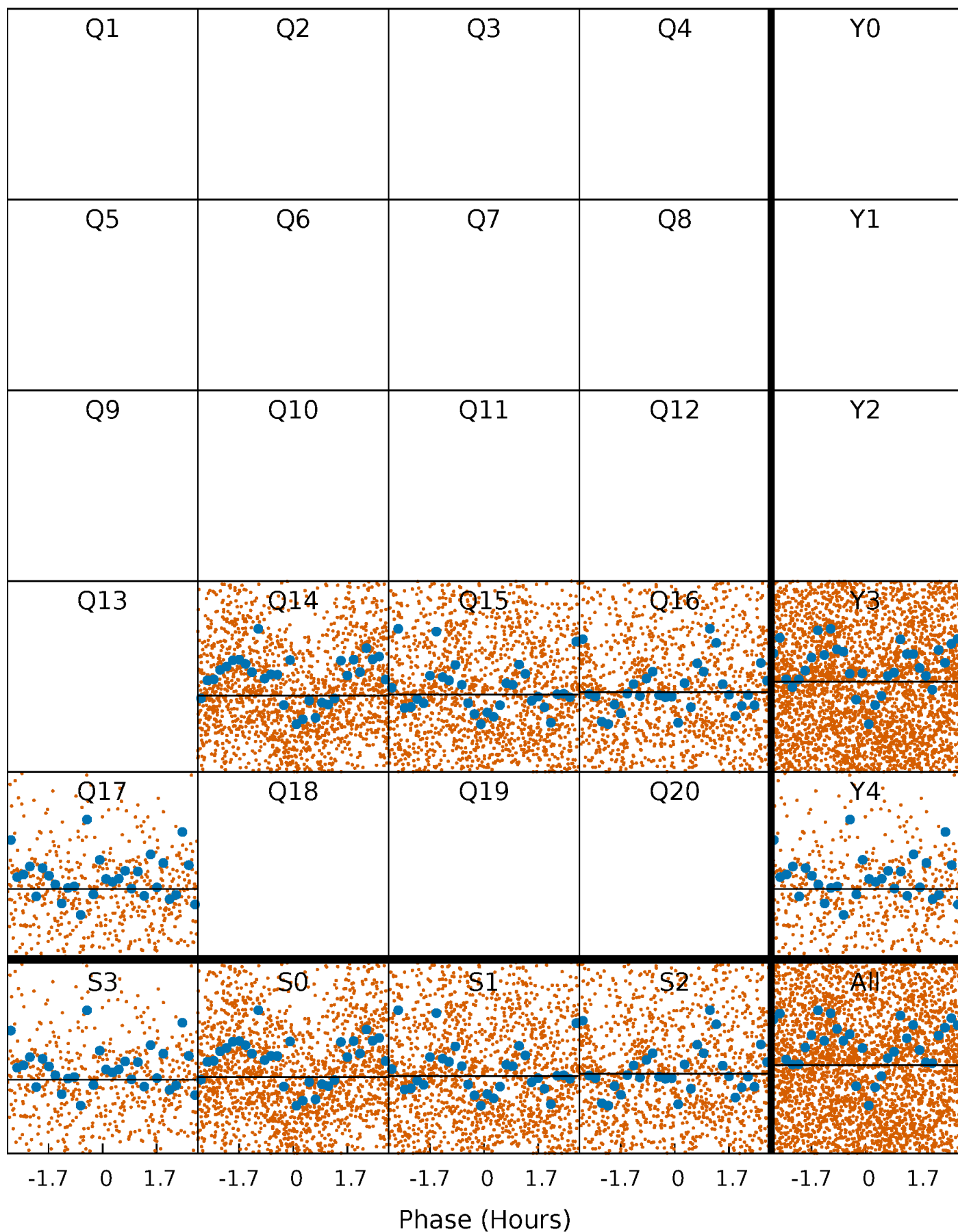
PDC Quarter-Phased Transit Curves

TCE 011817493-02 P= 0.533384 Days $T_0=131.851619$ (BKJD)



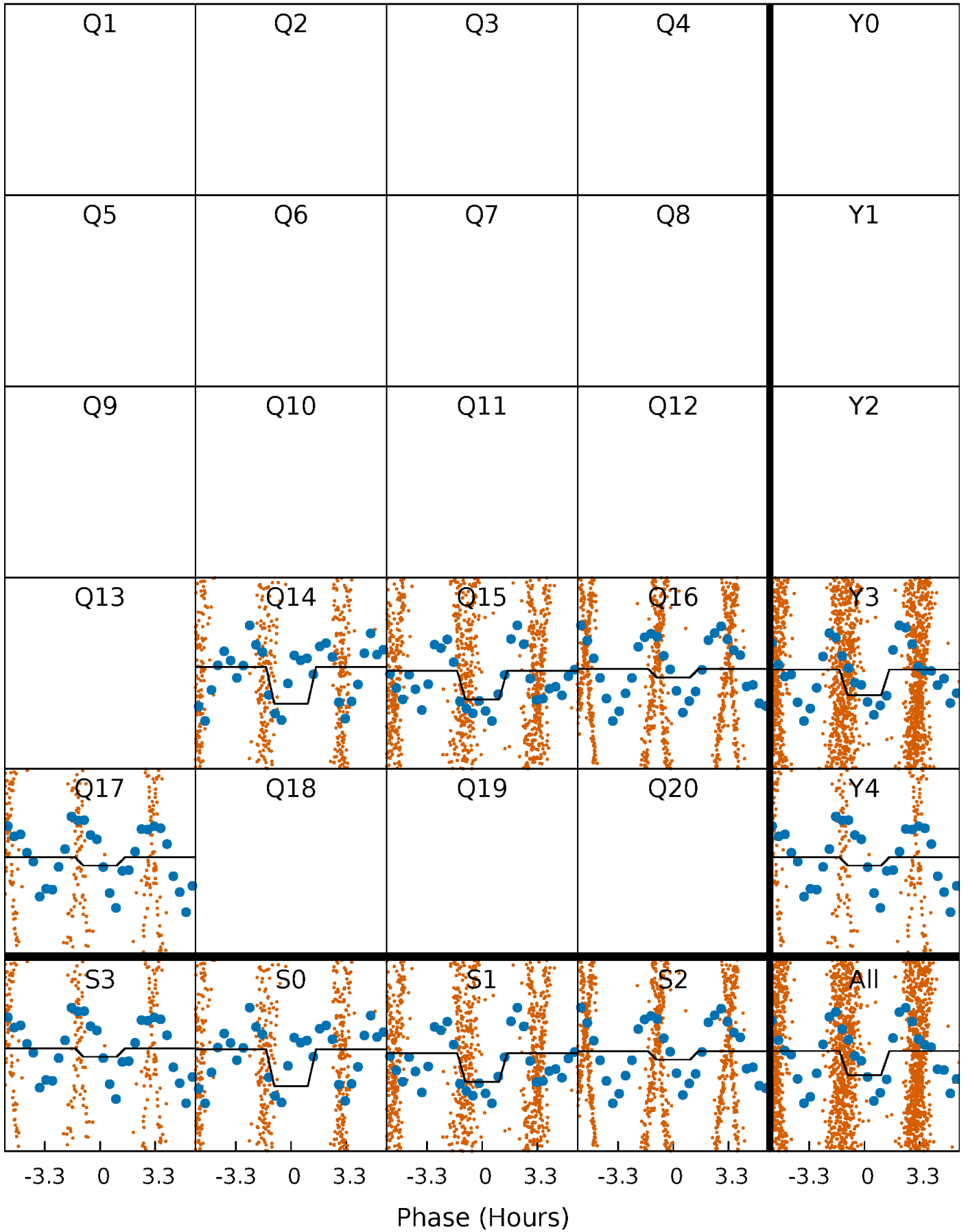
DV Quarter-Phased Transit Curves

TCE 011817493-02 P= 0.533384 Days $T_0=131.851619$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

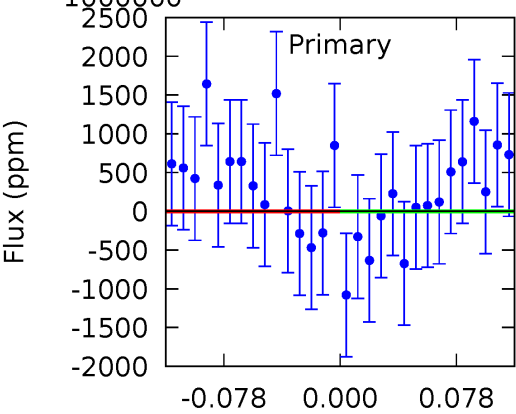
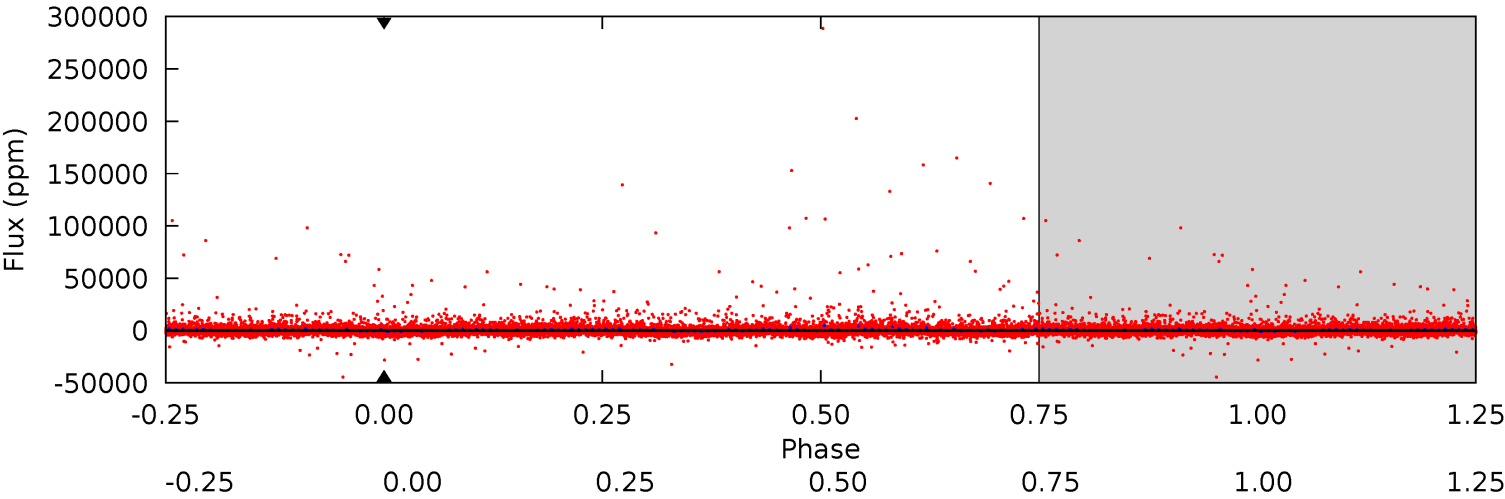
TCE 011817493-02 P= 0.533384 Days $T_0=131.902905$ (BKJD)



DV Model-Shift Uniqueness Test

011817493-02, P = 0.533384 Days, E = 131.851619 Days

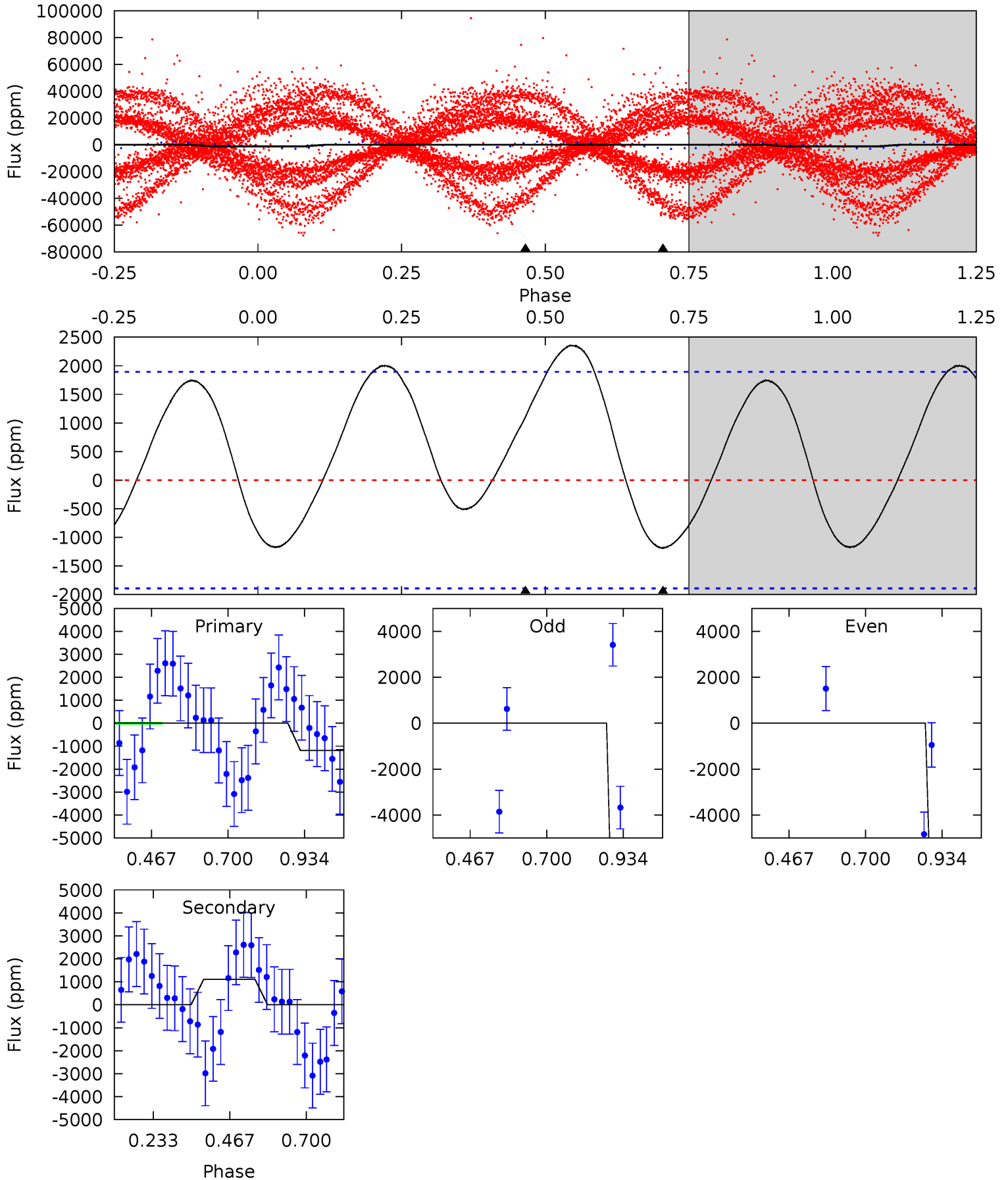
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011817493-02, P = 0.533384 Days, E = 131.902905 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.75	-2.56	0	0	4.38	1.19	2.52	2.75	2.75	-2.56	-2.56	2.35	0.22	0.66	5.51



Stellar Parameters For KIC 011817493

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3854^{+120}_{-147}	$4.656^{+0.064}_{-0.020}$	$0.480^{+0.050}_{-0.300}$	$0.607^{+0.028}_{-0.070}$	$0.607^{+0.040}_{-0.060}$	$3.832^{+1.126}_{-0.315}$
	+3%/-4%	+1%/-0%	+10%/-62%	+5%/-12%	+7%/-10%	+29%/-8%
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 011817493-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$5.90^{+5.90}_{-4.09}$	1752^{+60}_{-65}	2995^{+4935}_{-10442}	$3.559^{+399.479}_{-323.992}$
Alt.	1104 ± 432	$5.47^{+5.22}_{-3.74}$	1751^{+71}_{-74}	-2924^{+404}_{-1211}	$-2.339^{+1.797}_{-19.952}$

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

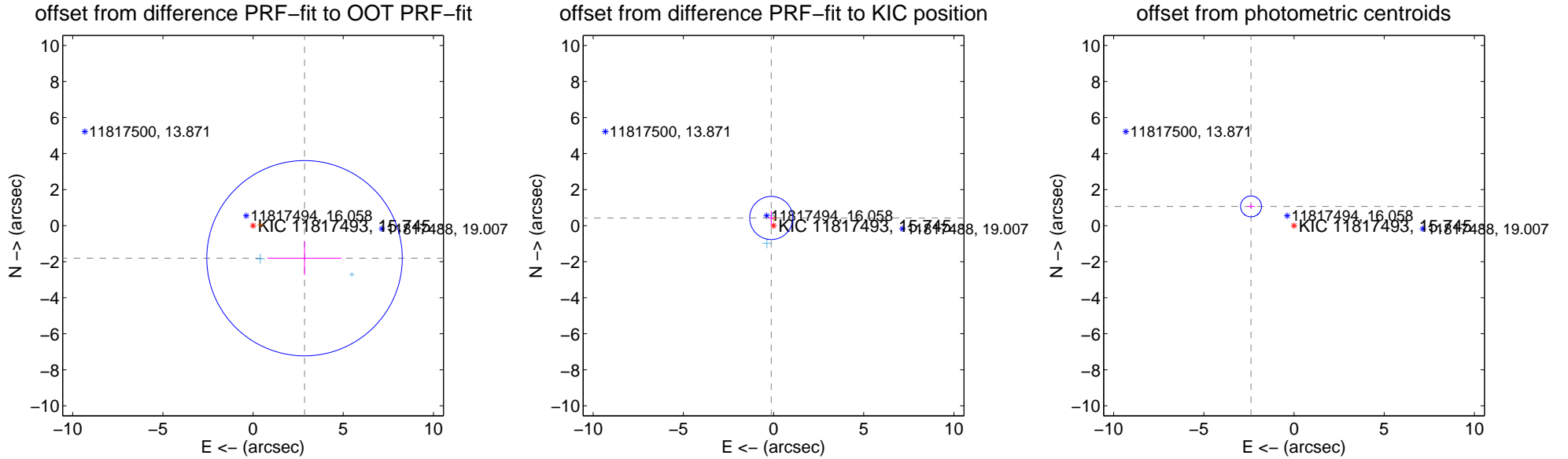
DV Centroid Data

Supplemental centroid analysis for 011817493-02. Kepler magnitude: 15.74. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.52 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.378 ± 1.807	1.87	-2.854 ± 2.054	-1.808 ± 0.940
PRF-fit source offset from KIC position	0.444 ± 0.399	1.11	0.127 ± 0.151	0.426 ± 0.394
photometric centroid source offset	2.61 ± 0.19	13.52	2.38 ± 0.20	1.07 ± 0.13



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.



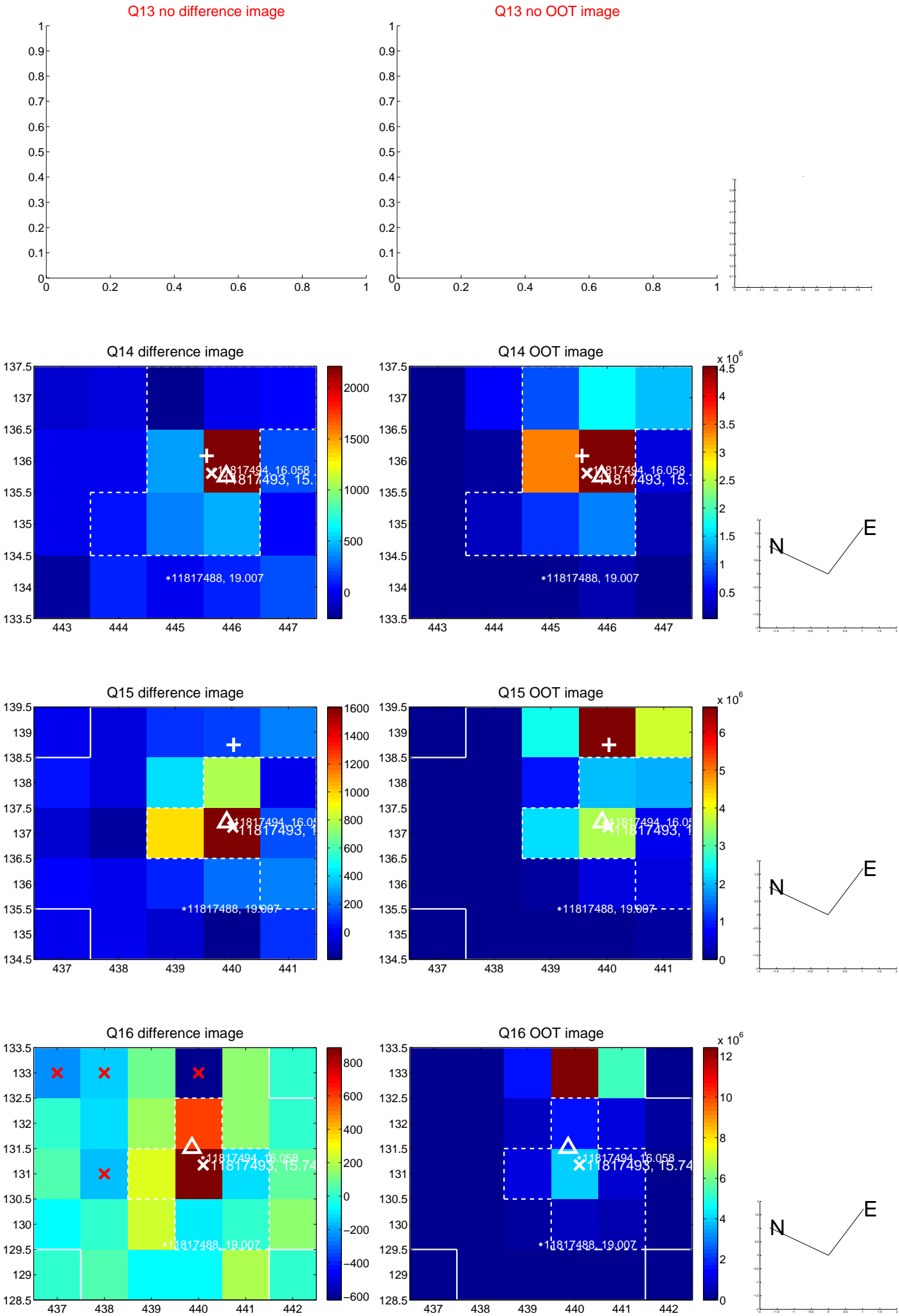
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



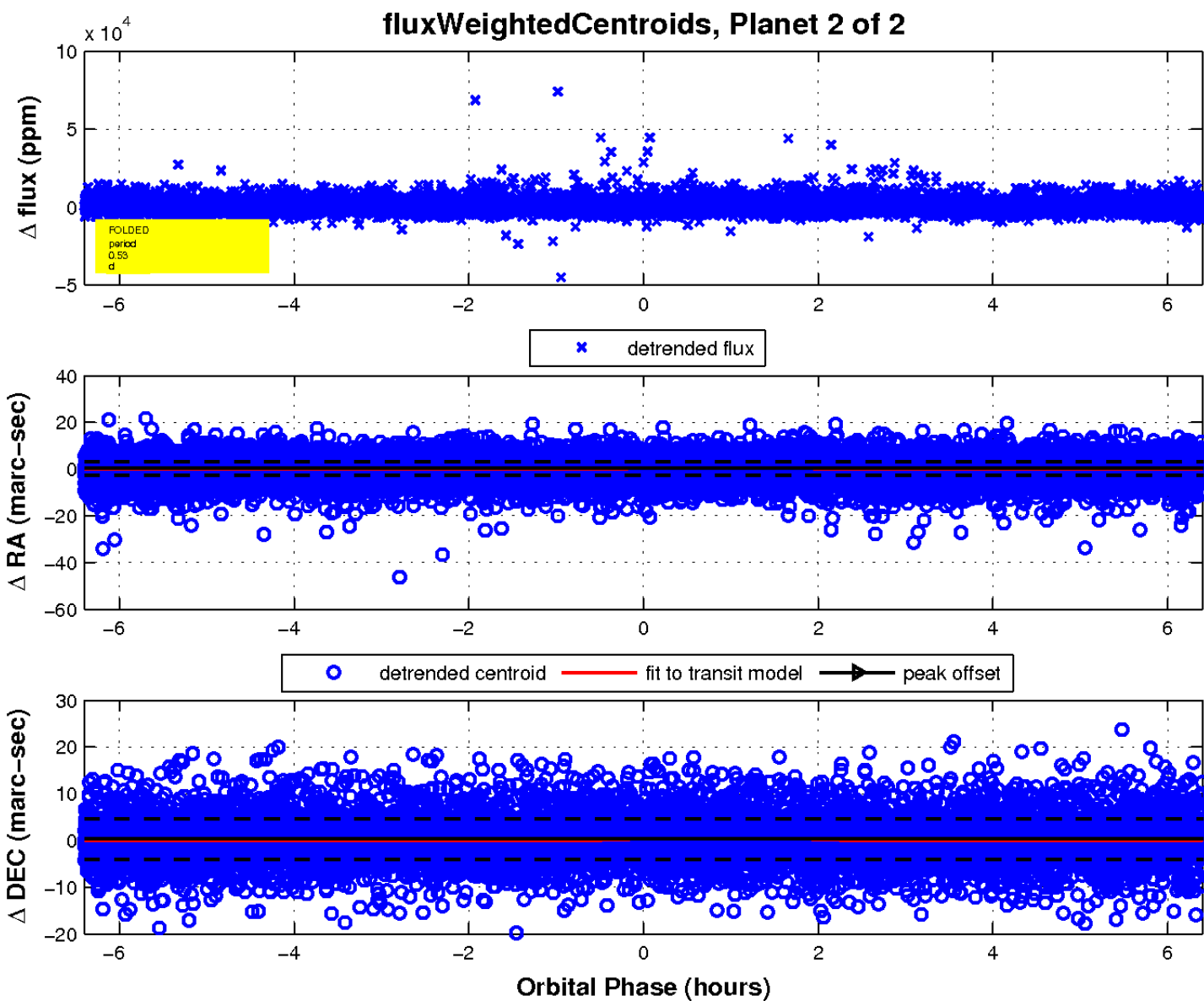
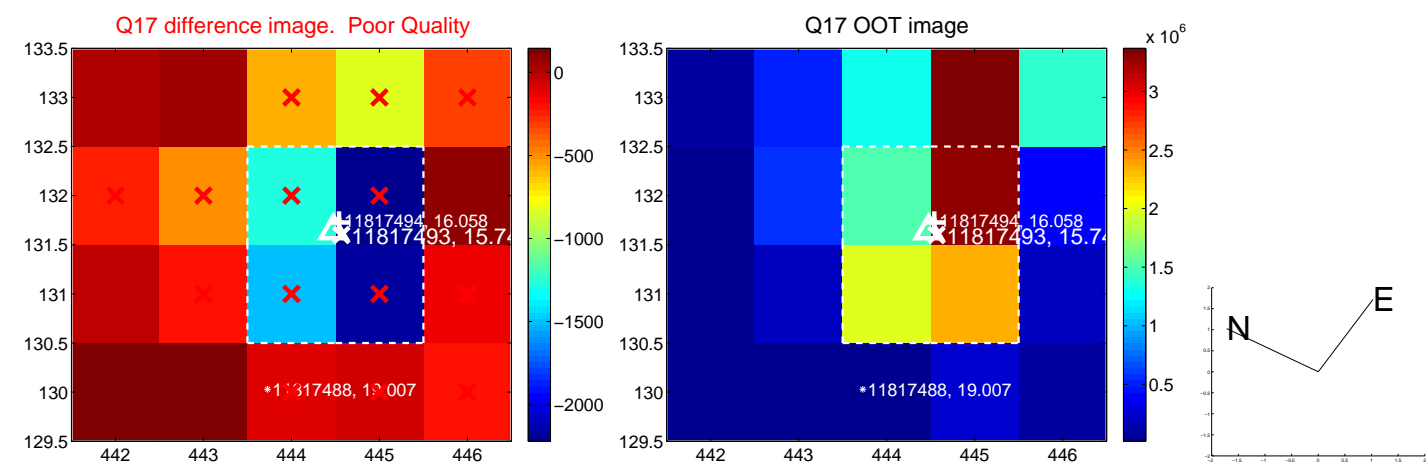
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

