

KIC 011854593

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})
011854593-01	OBS	No	500.624377	458.175836	1798.0	5.922	13.8	9.3	0.83	5516	3.56	0.41
011854593-02	OBS	No	435.536343	468.384240	1514.7	6.111	15.6	7.8	0.83	5516	3.22	0.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011854593-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011854593-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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.

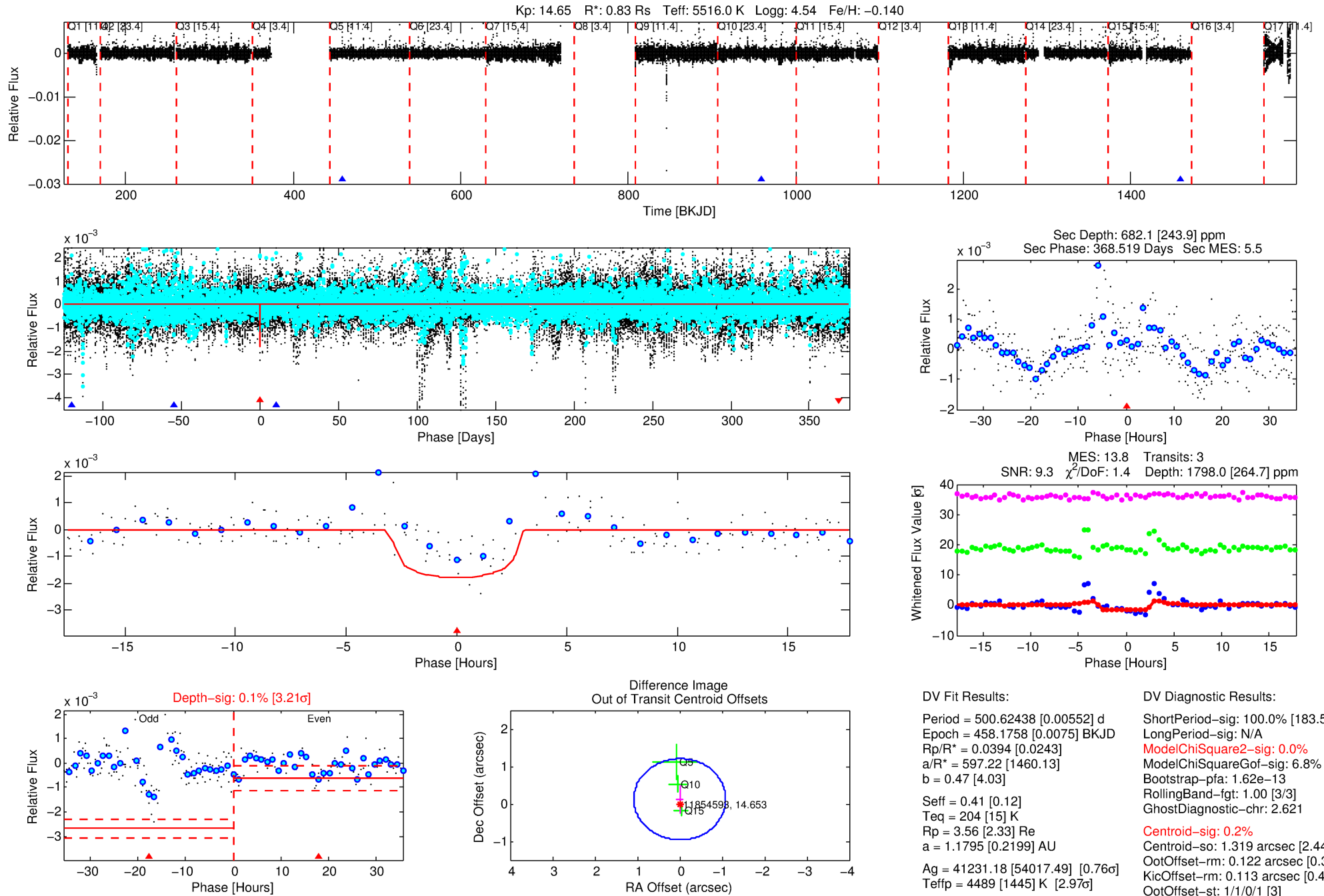
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011854593-01

No Significant Match Found

DV One-Page Summary

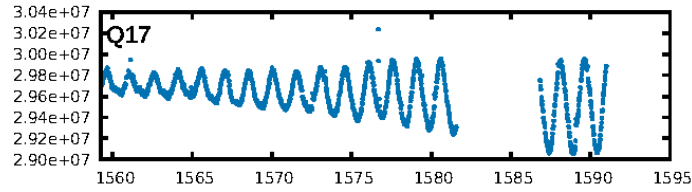
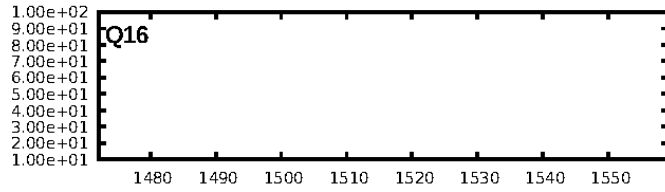
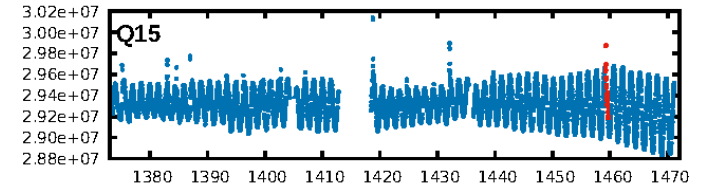
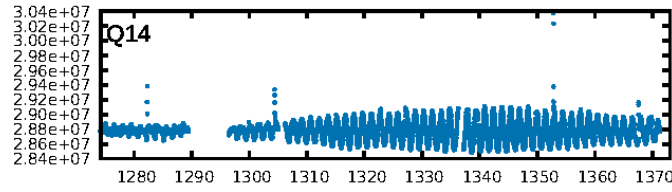
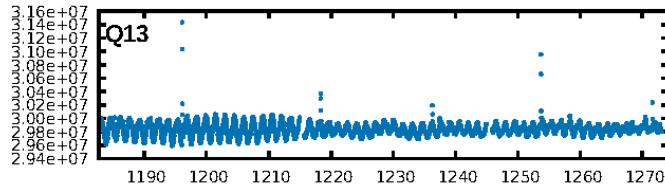
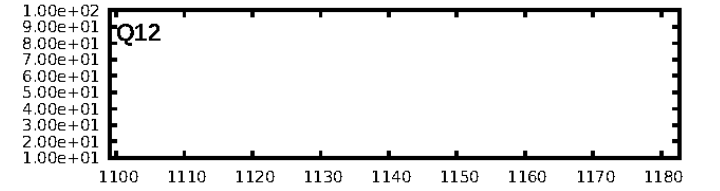
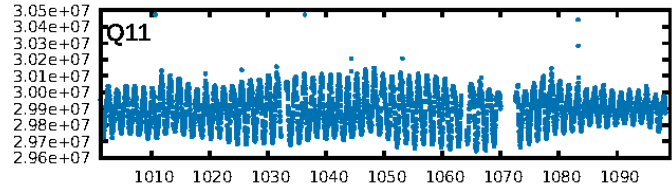
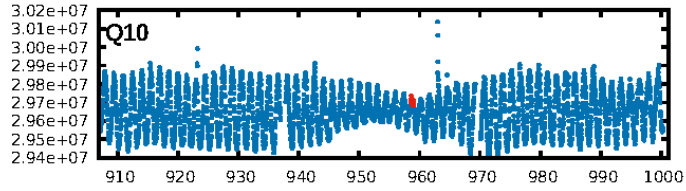
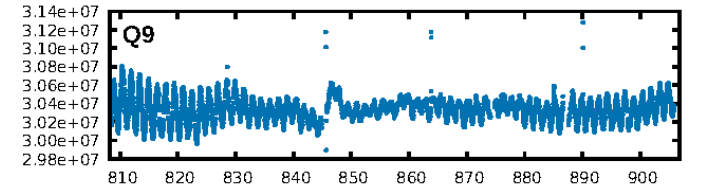
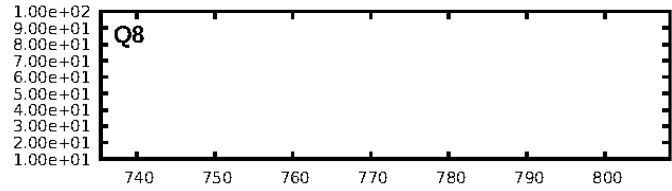
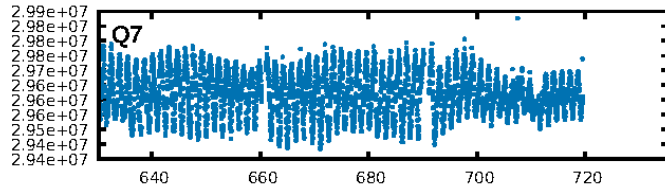
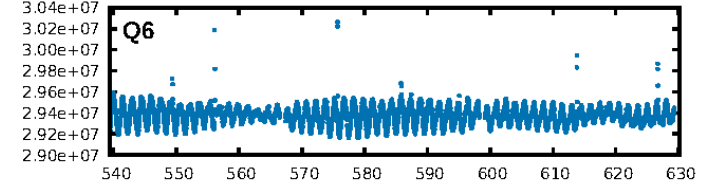
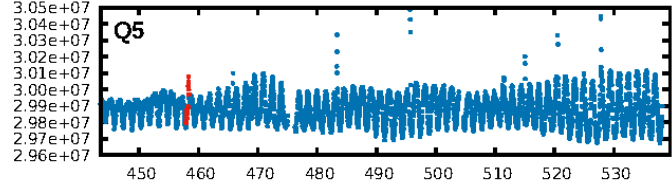
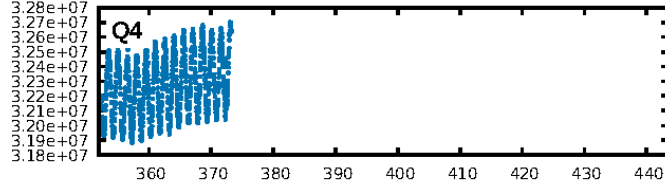
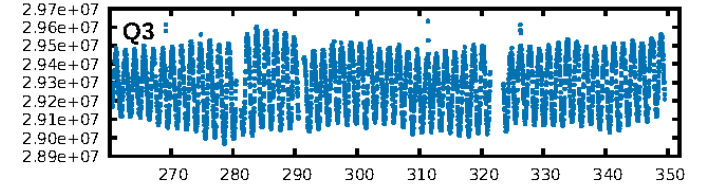
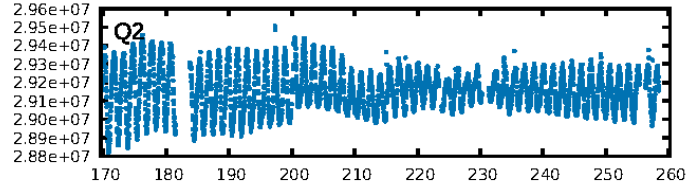
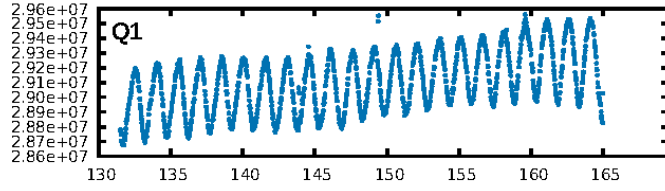
KIC: 11854593 Candidate: 1 of 2 Period: 500.624 d



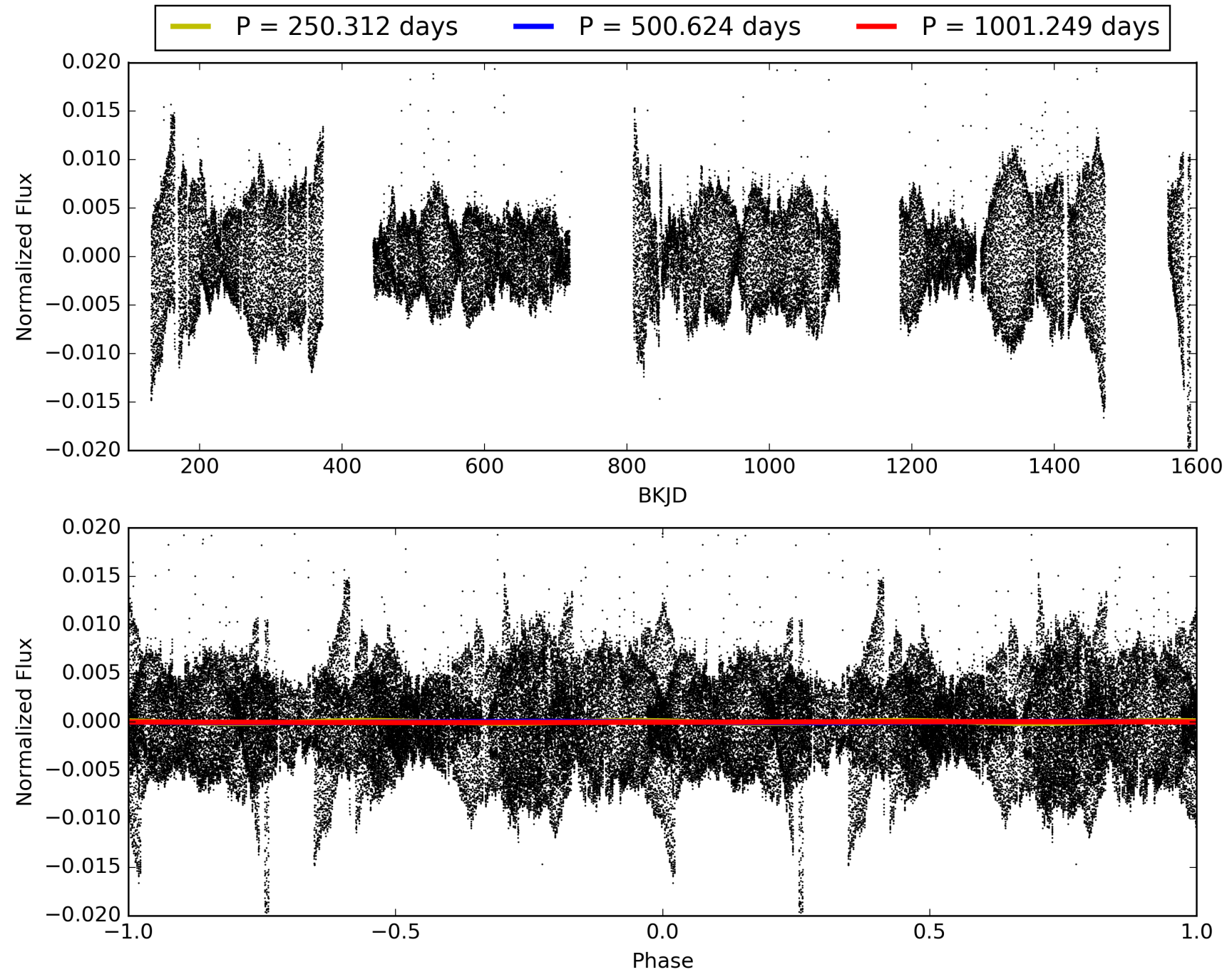
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011854593-01, PDC Light Curves

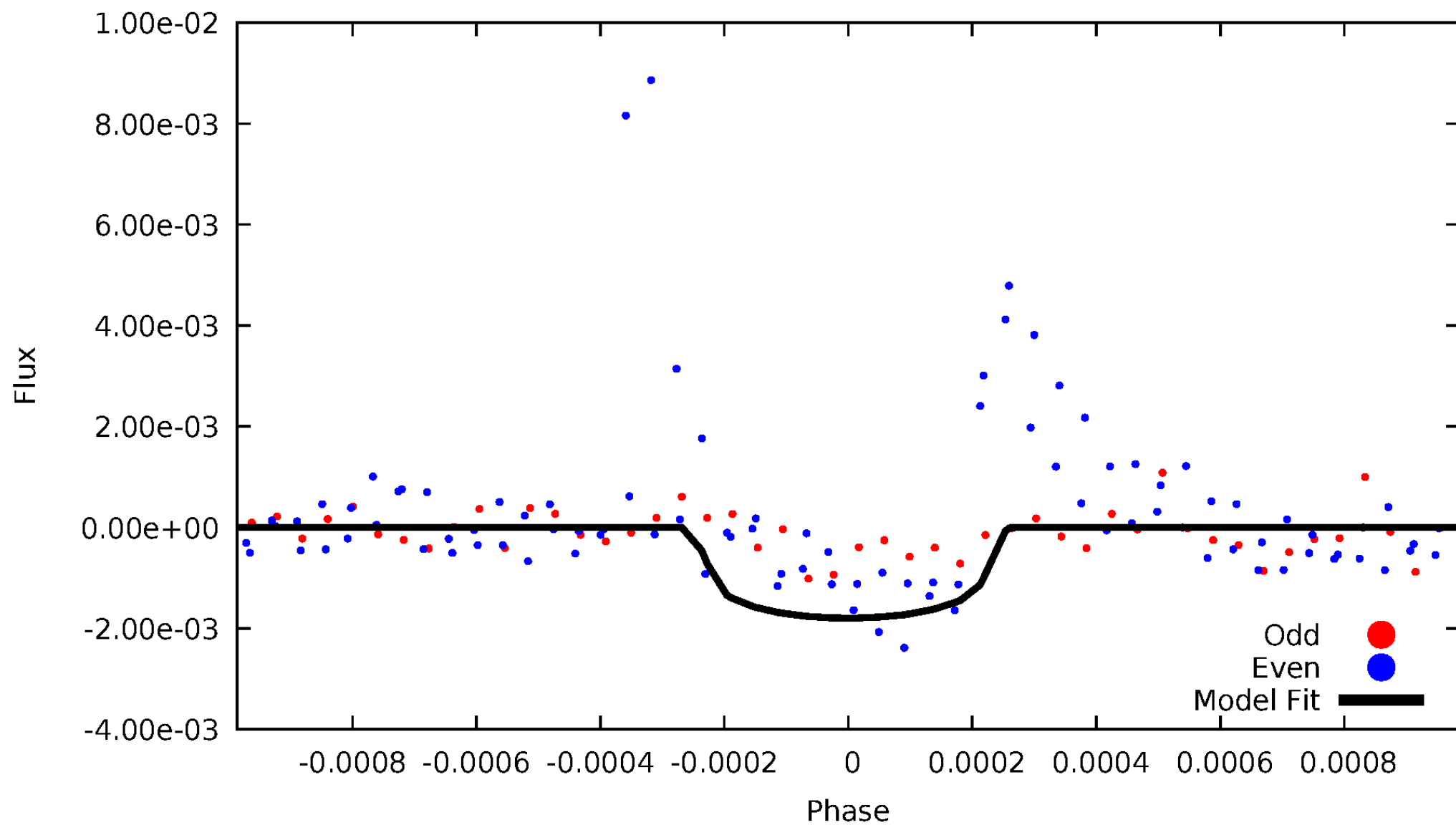


TCE 011854593-01



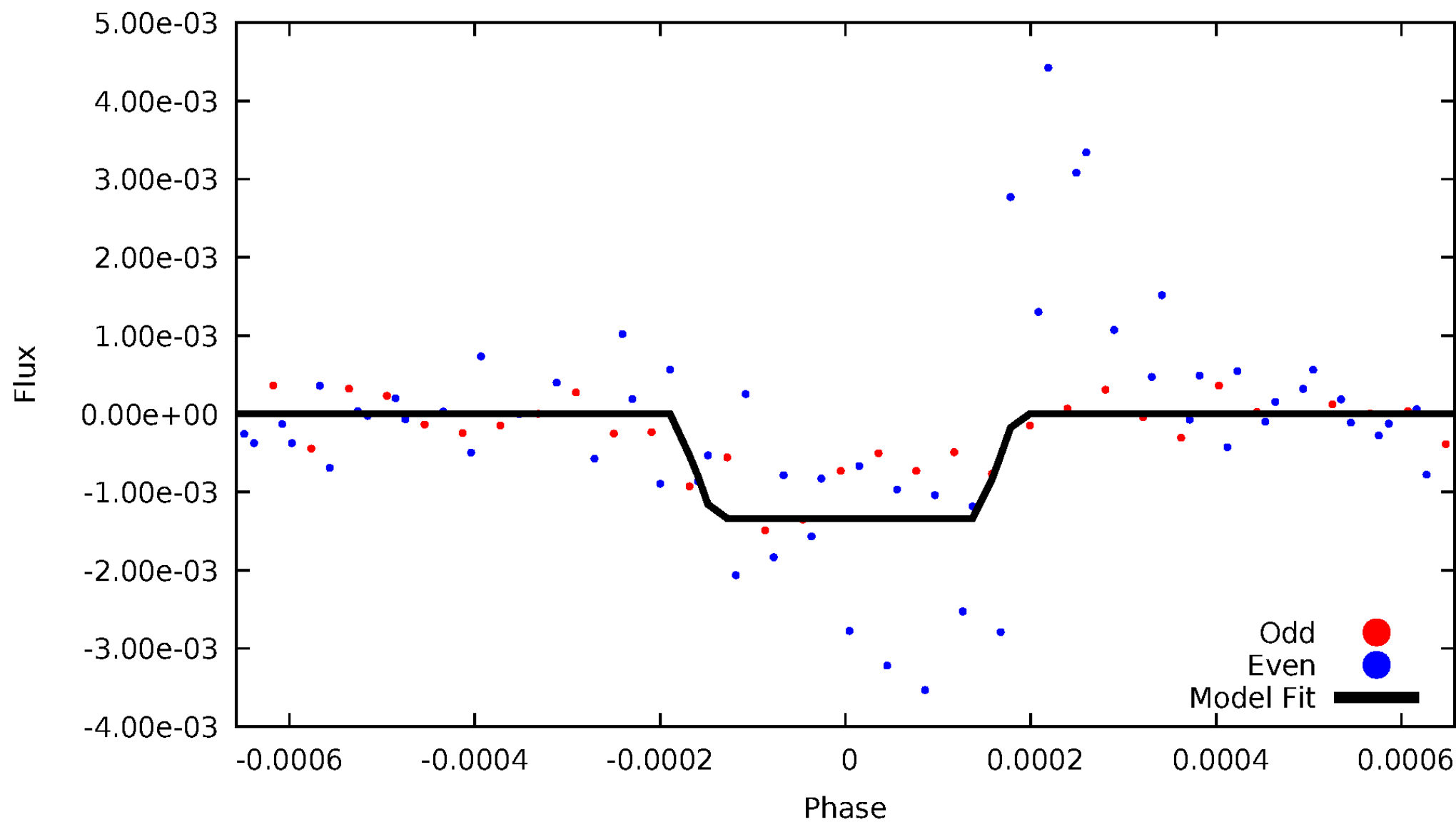
DV Odd/Even

TCE 011854593-01



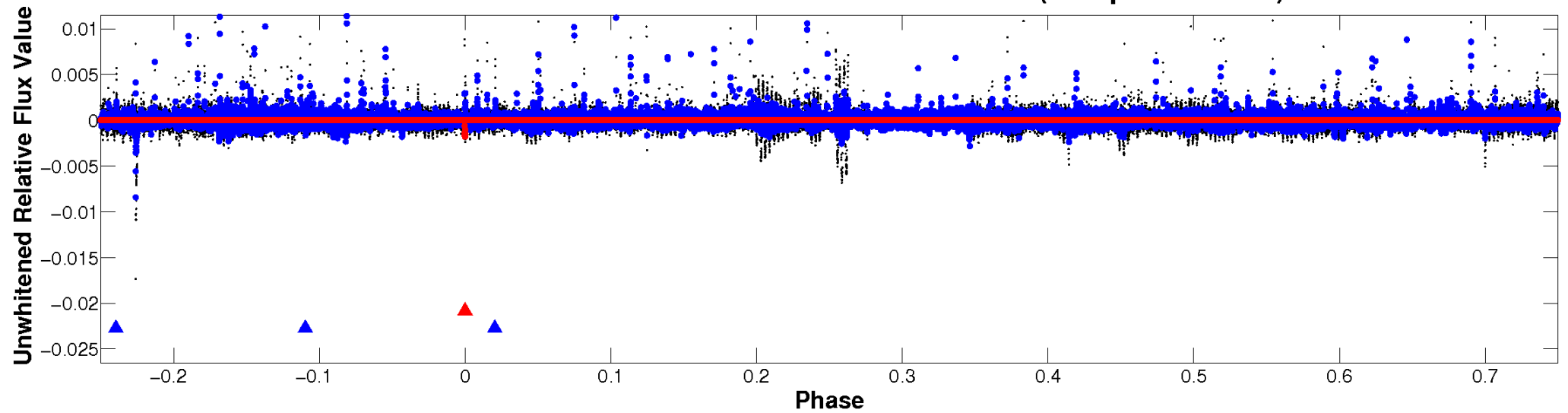
ALT Odd/Even

TCE 011854593-01

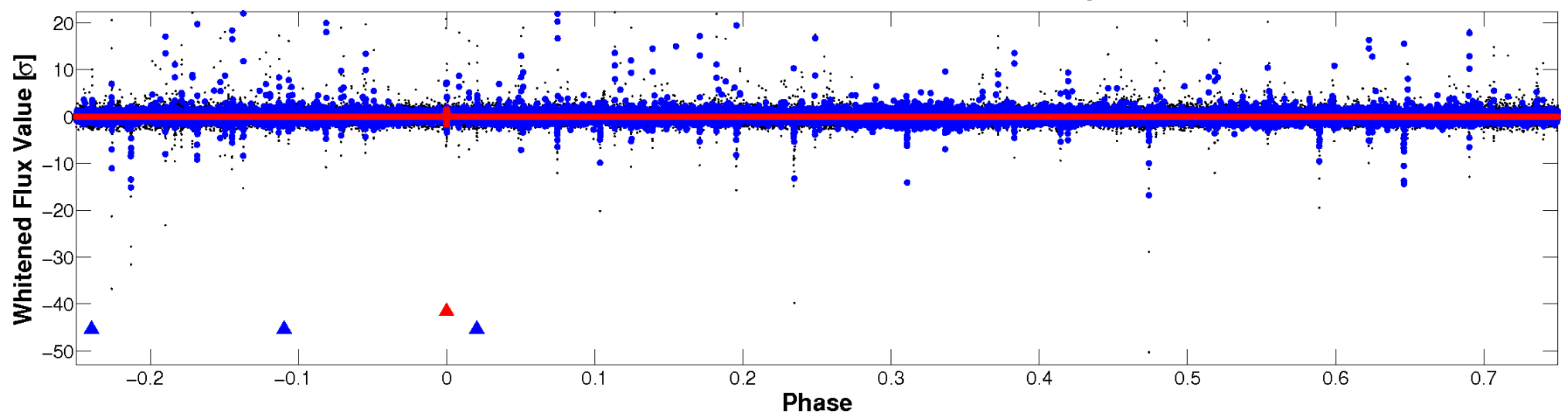


Non-Whitened Vs. Whitened Light Curve

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

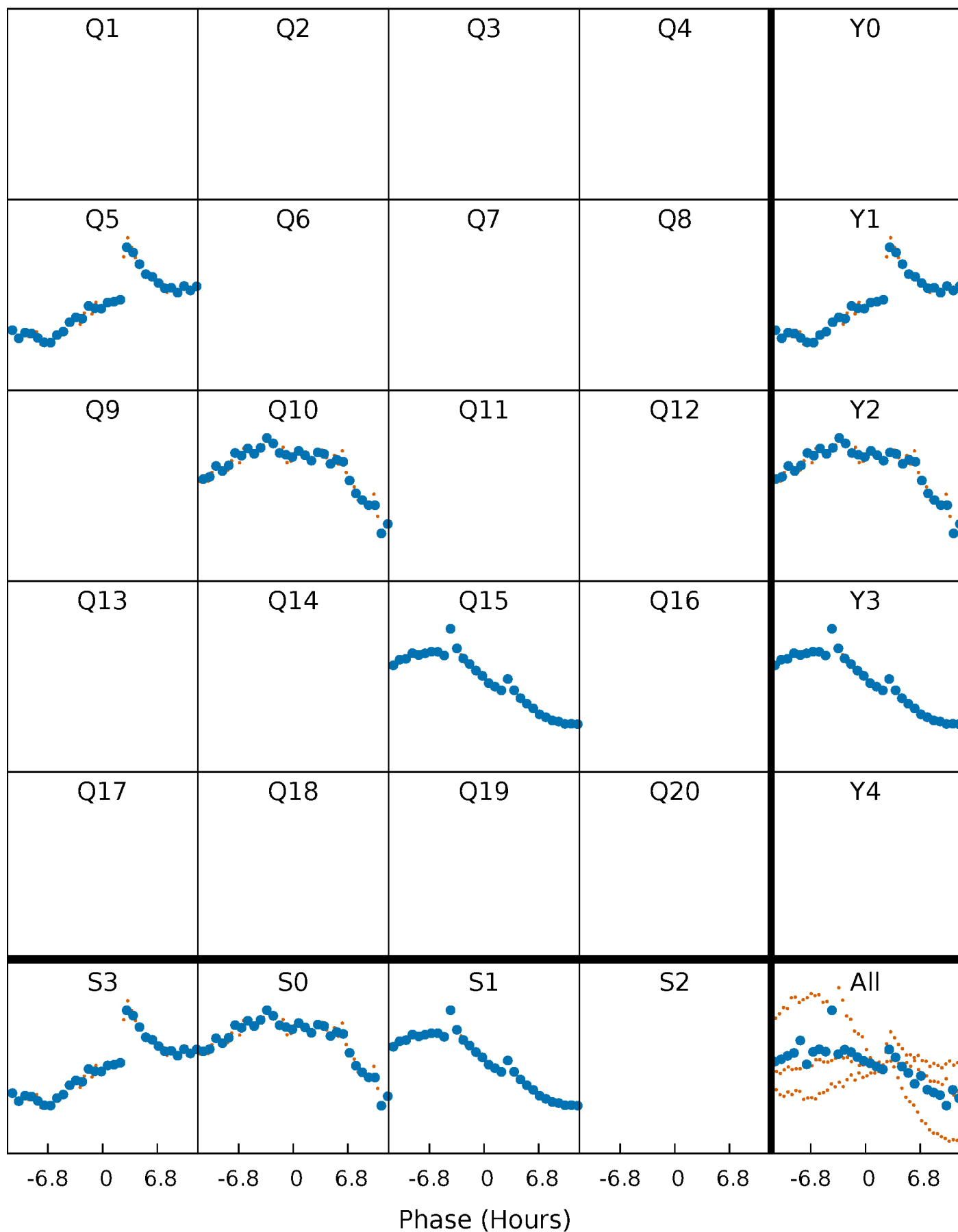


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



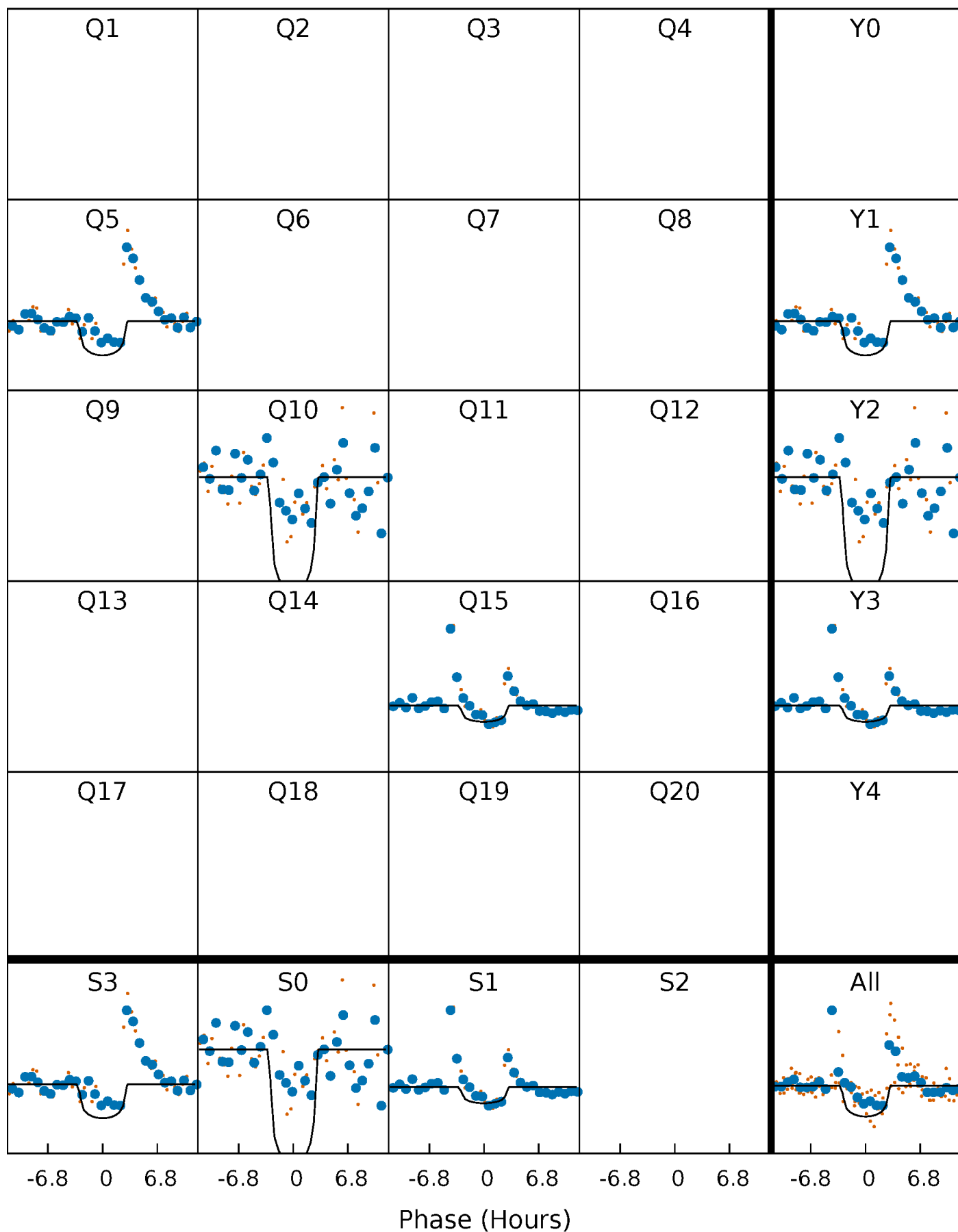
PDC Quarter-Phased Transit Curves

TCE 011854593-01 P=500.624377 Days $T_0=458.175836$ (BKJD)



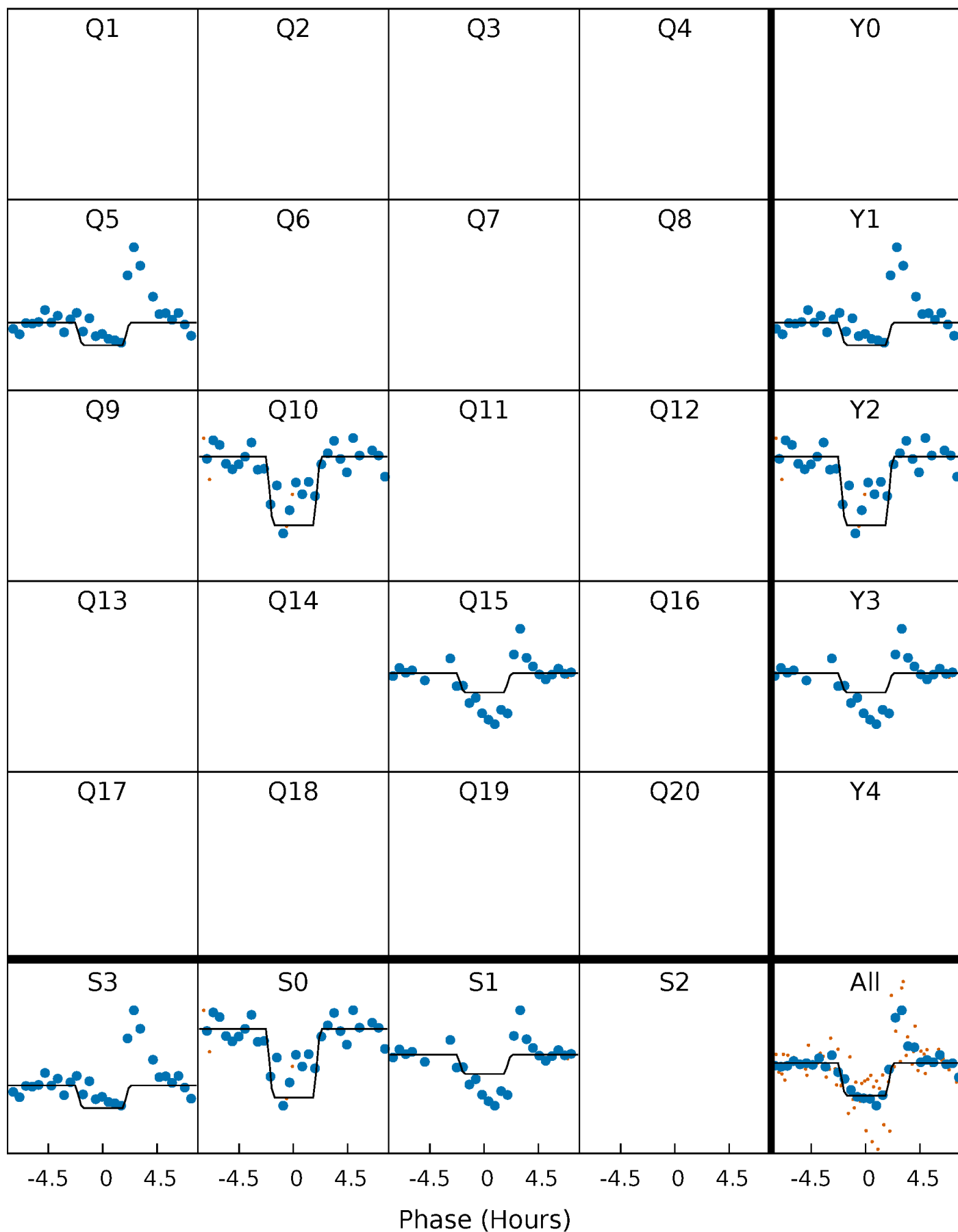
DV Quarter-Phased Transit Curves

TCE 011854593-01 P=500.624377 Days $T_0=458.175836$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

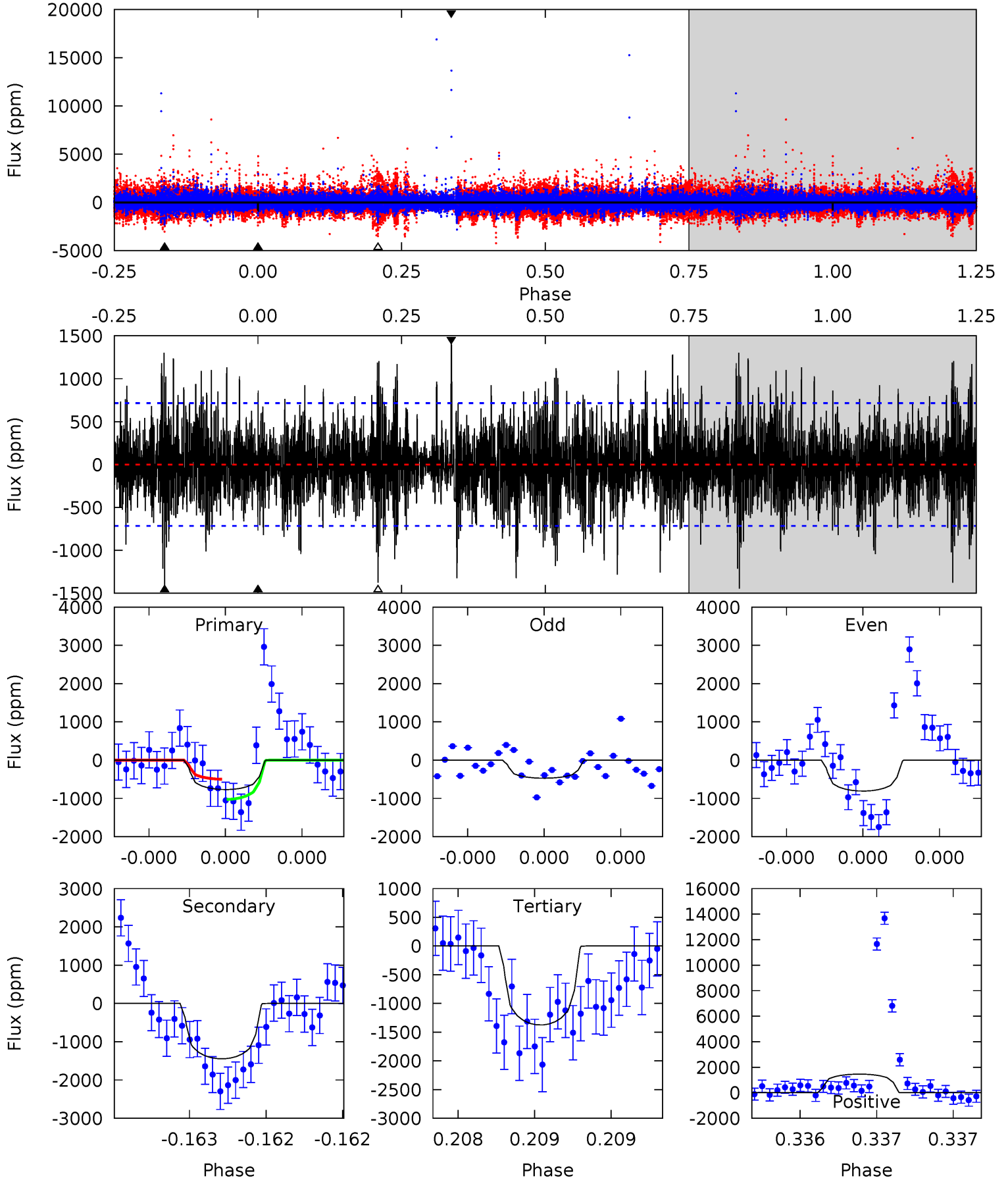
TCE 011854593-01 P=500.615409 Days $T_0=458.195893$ (BKJD)



DV Model-Shift Uniqueness Test

011854593-01, P = 500.624377 Days, E = 458.175836 Days

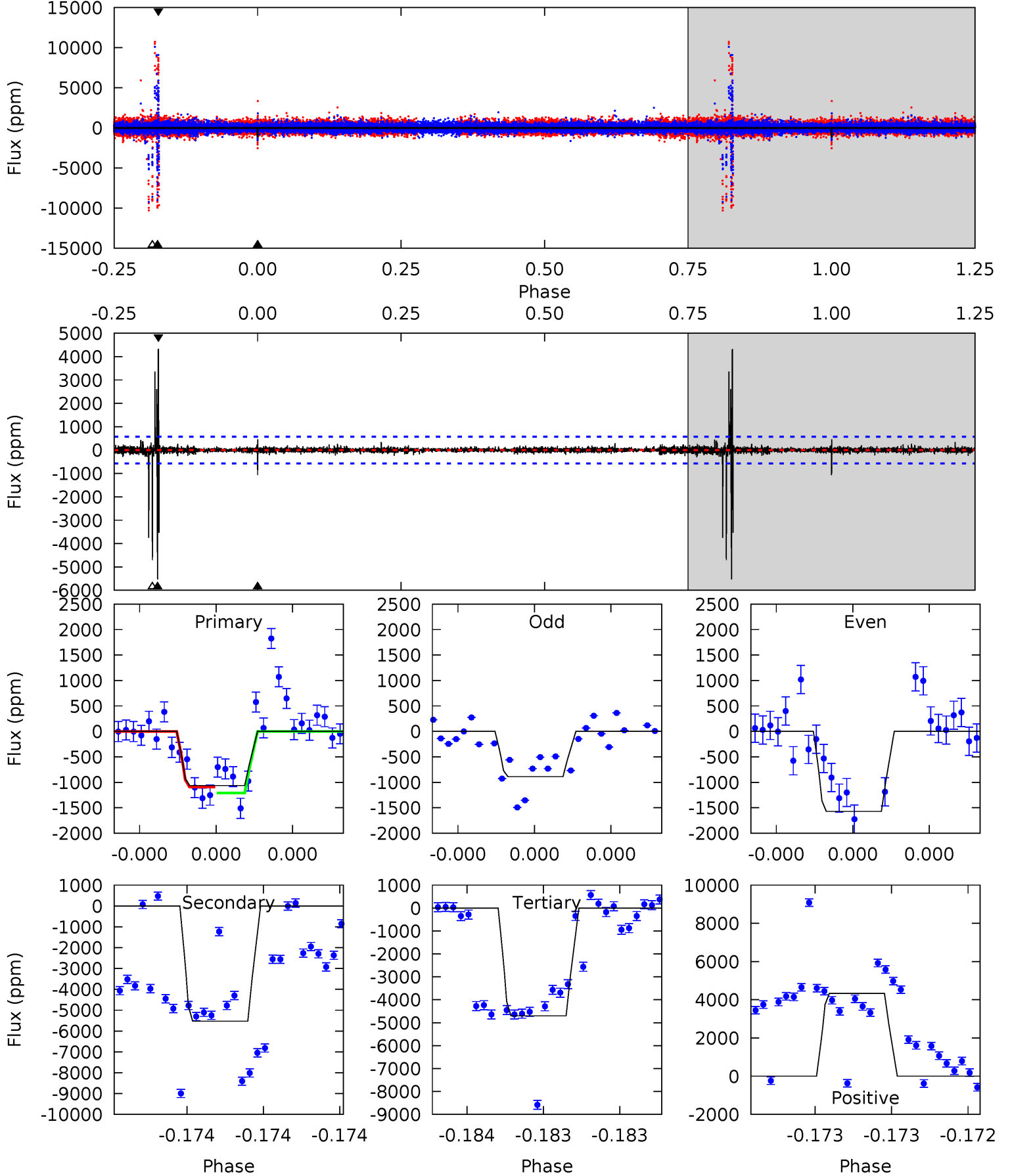
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.99	11.3	10.7	11.4	5.58	3.48	2.77	-4.73	-5.40	0.55	-0.12	1.05	1.11	0.50	2.07



Alt Model-Shift Uniqueness Test

011854593-01, P = 500.615409 Days, E = 458.195893 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	54.6	46.5	42.8	5.63	3.56	2.00	-36.0	-32.3	8.15	11.9	2.16	1.55	0.44	0.60



Stellar Parameters For KIC 011854593

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5516^{+149}_{-149}	$4.544^{+0.048}_{-0.143}$	$-0.140^{+0.300}_{-0.300}$	$0.827^{+0.187}_{-0.080}$	$0.873^{+0.092}_{-0.092}$	$2.174^{+0.536}_{-0.873}$
	+3%/-3%	+1%/-3%	+214%/-214%	+23%/-10%	+11%/-11%	+25%/-40%
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 011854593-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1445 ± 128	$3.78^{+2.25}_{-2.02}$	289^{+15}_{-11}	5371^{+2603}_{-945}	$78706^{+281611}_{-48185}$
Alt.	-5528 ± 101	$3.65^{+2.31}_{-2.11}$	289^{+14}_{-12}	7708^{+6696}_{-1821}	$320383^{+1399119}_{-202331}$

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

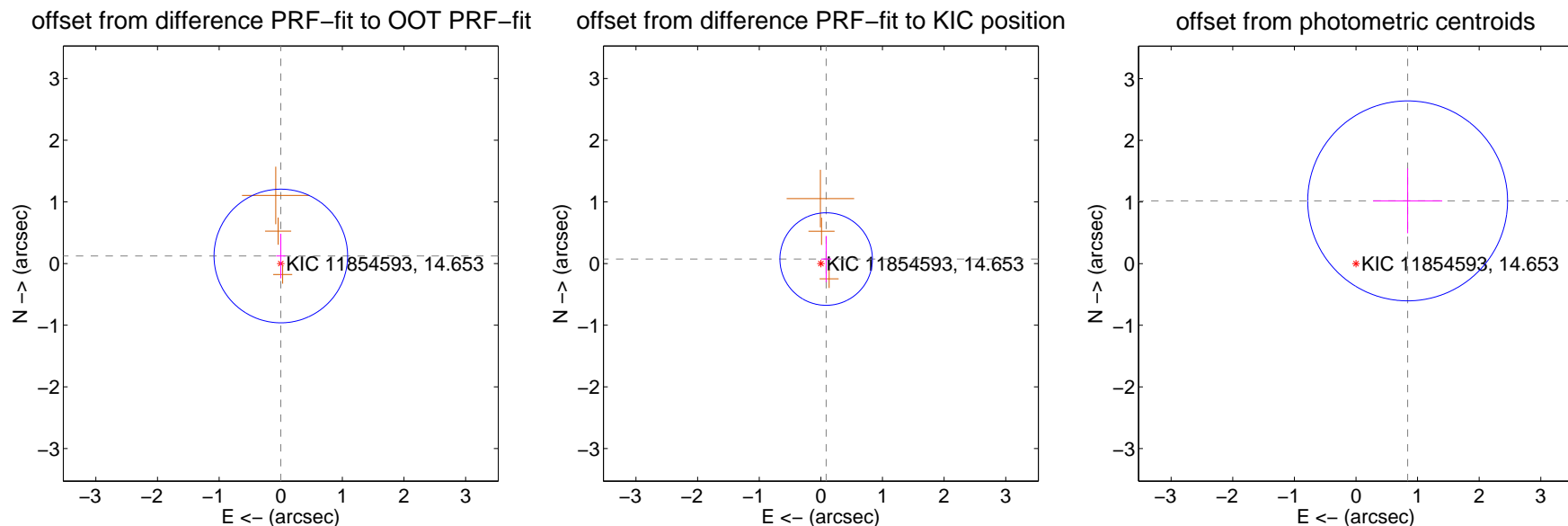
DV Centroid Data

Supplemental centroid analysis for 011854593-01. Kepler magnitude: 14.65. Transit SNR 9.34

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.122 ± 0.361	0.34	-0.001 ± 0.074	0.122 ± 0.361
PRF-fit source offset from KIC position	0.113 ± 0.250	0.45	-0.086 ± 0.082	0.073 ± 0.374
photometric centroid source offset	1.32 ± 0.54	2.44	-0.84 ± 0.56	1.02 ± 0.53

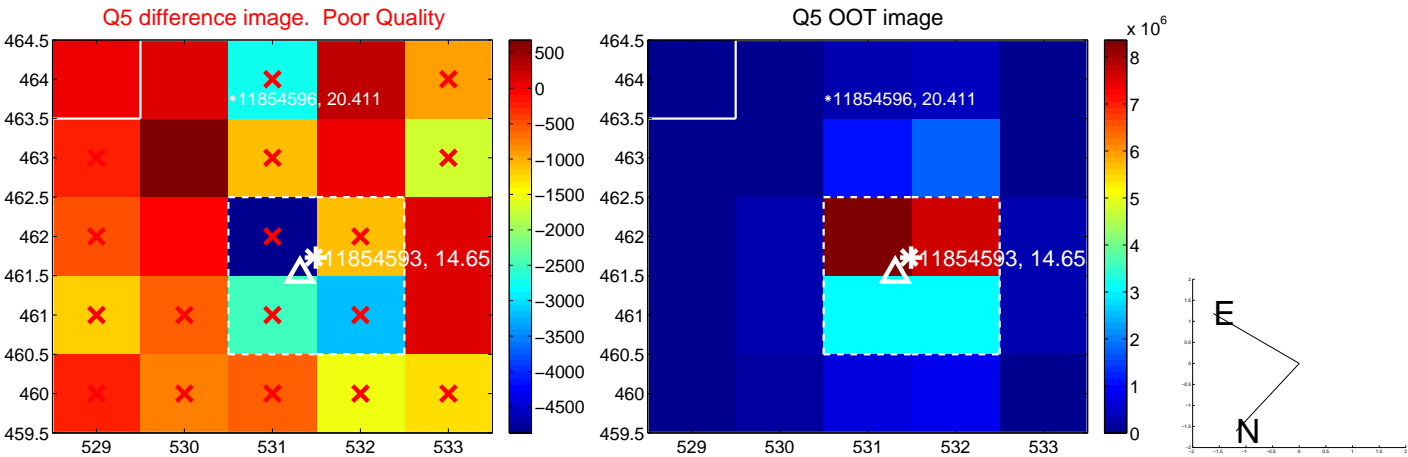


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

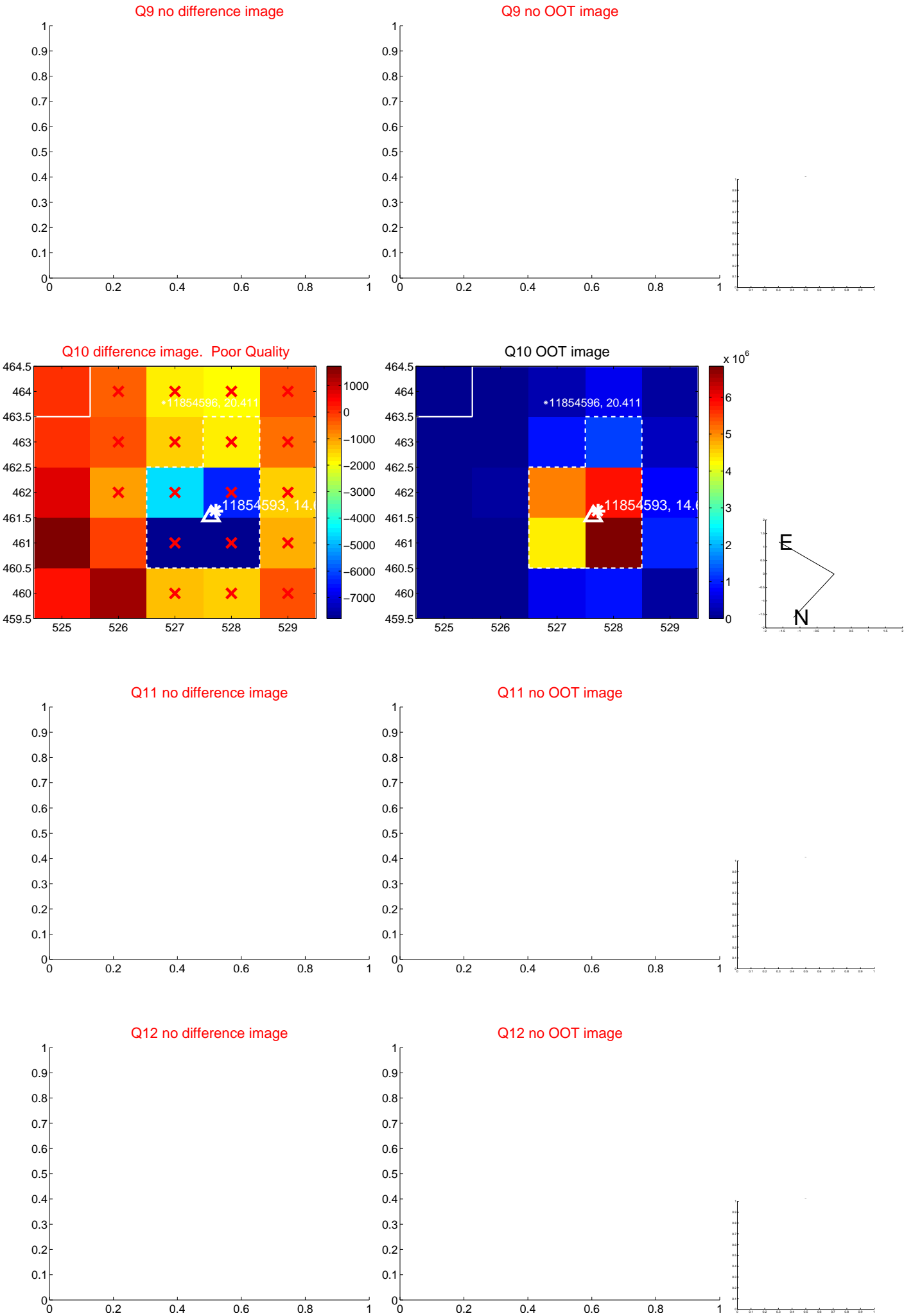
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



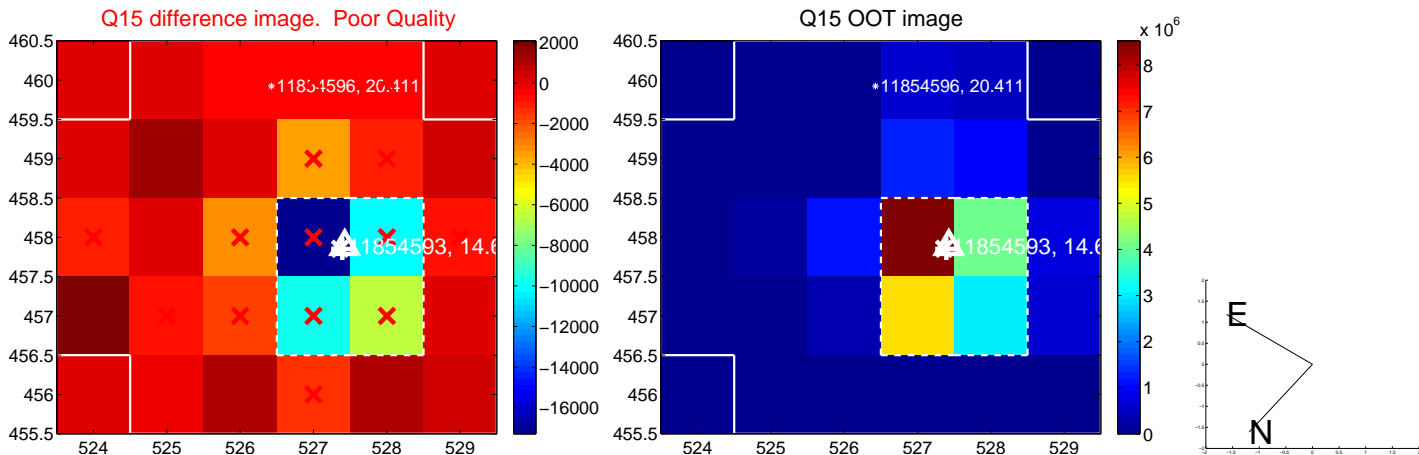
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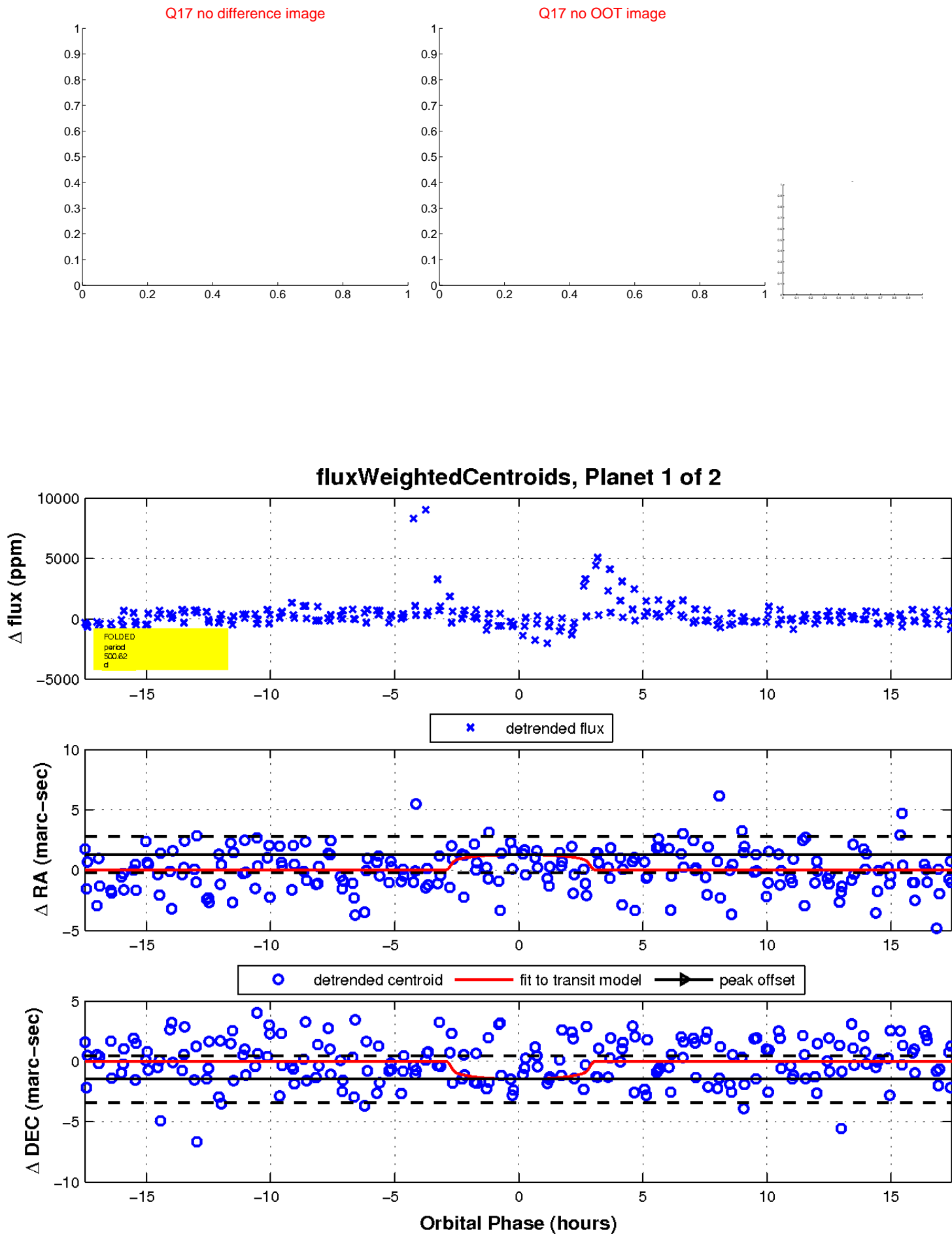
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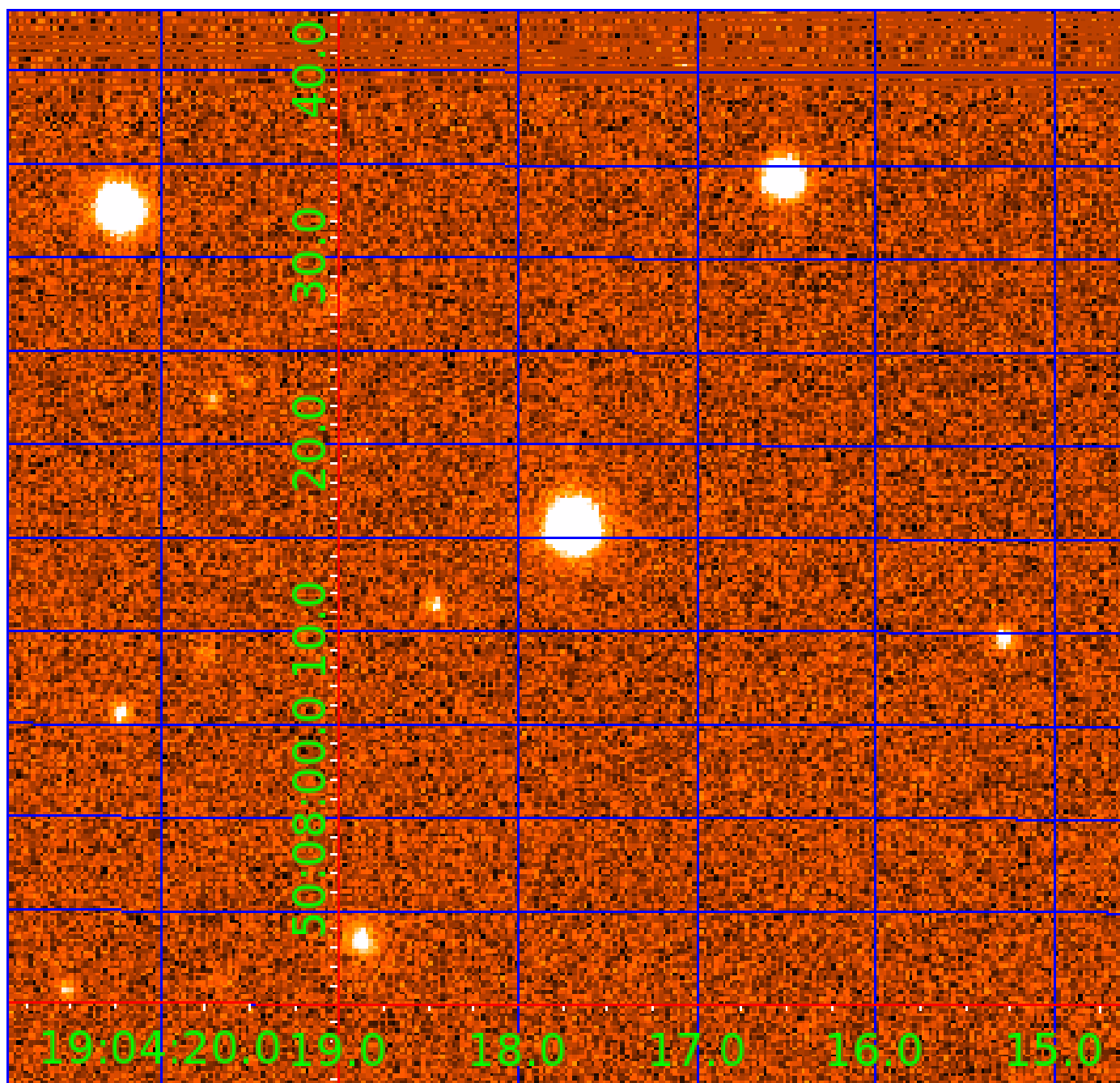


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011854593

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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011854593-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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.

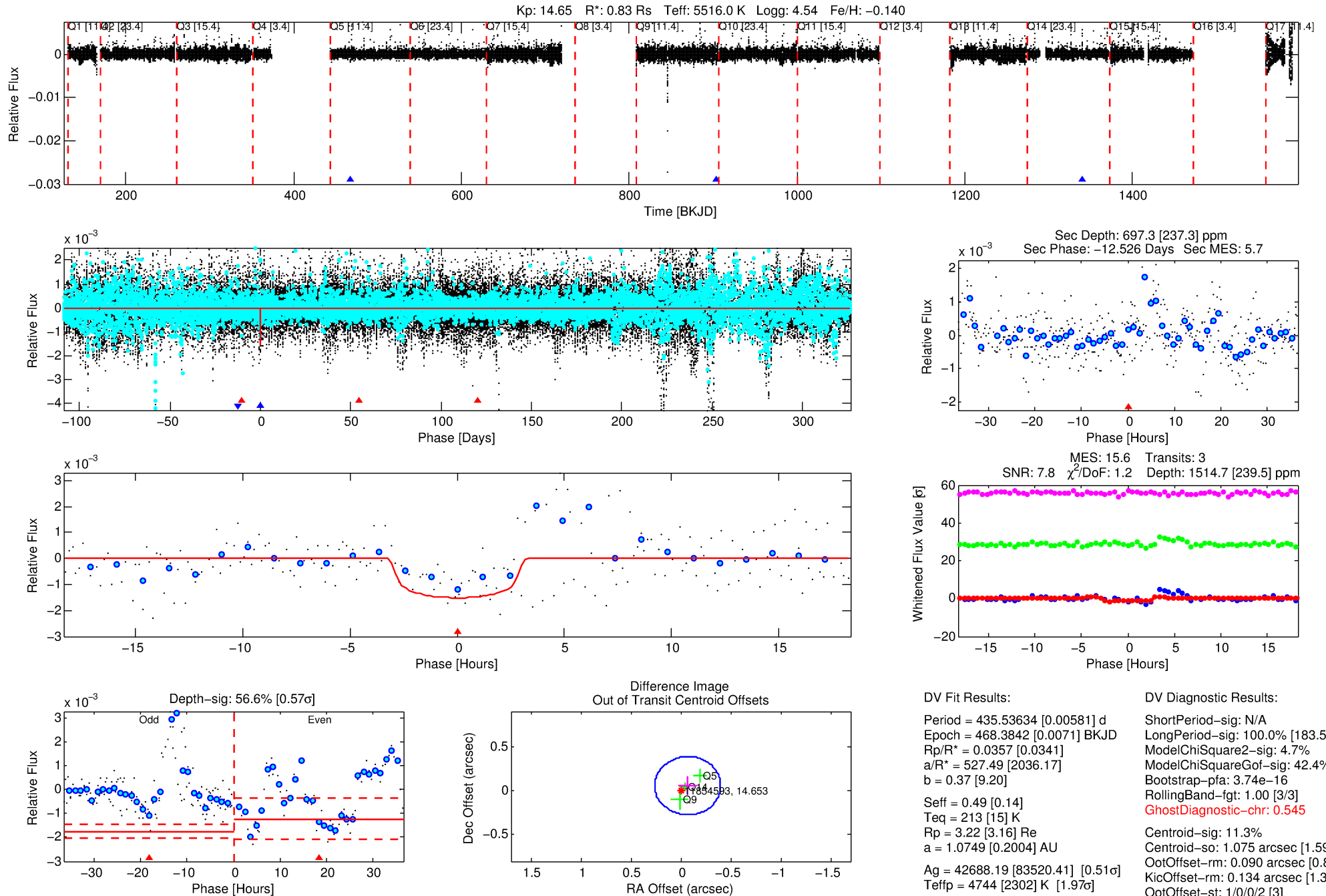
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011854593-02

No Significant Match Found

DV One-Page Summary

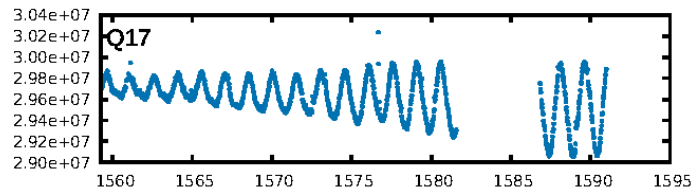
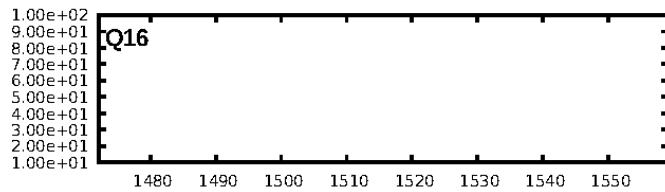
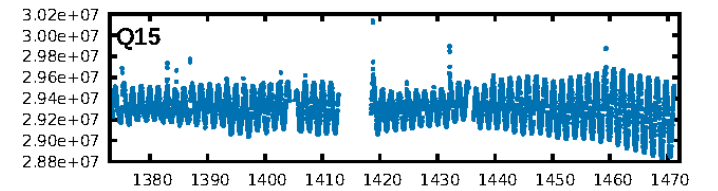
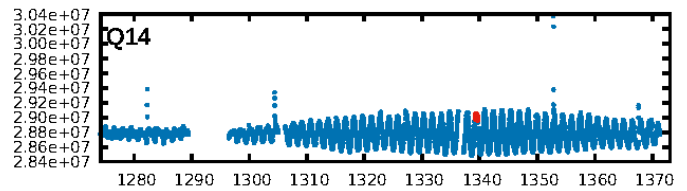
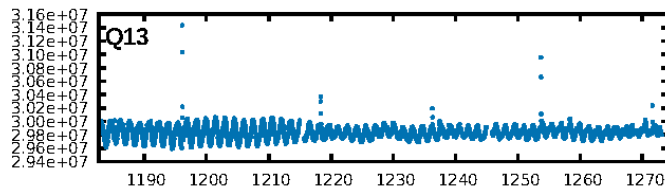
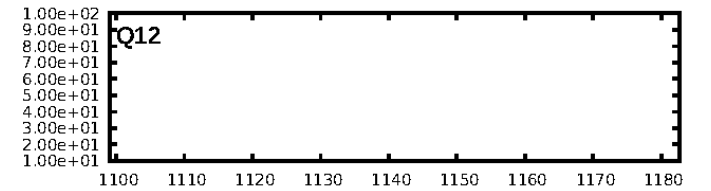
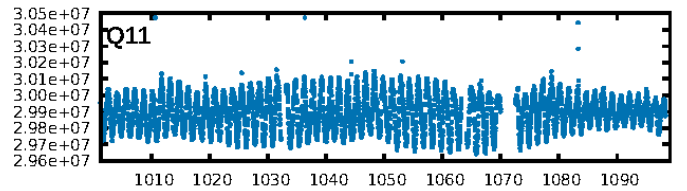
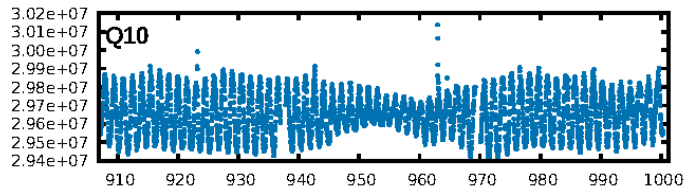
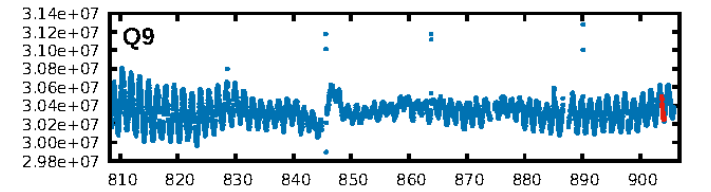
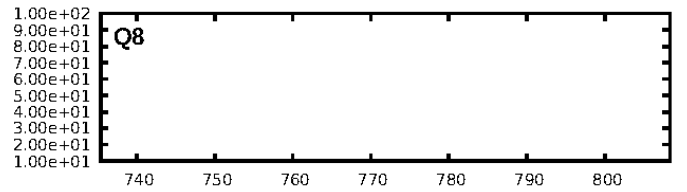
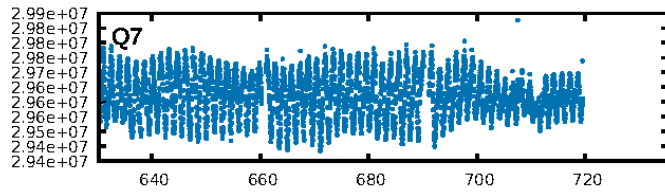
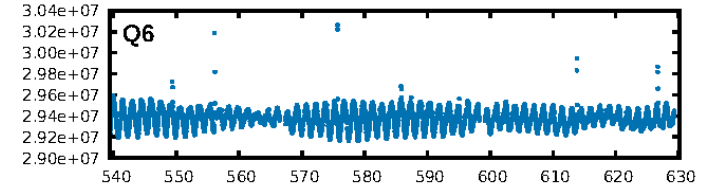
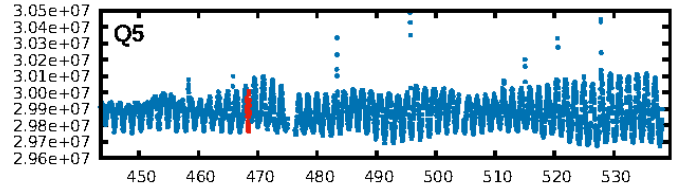
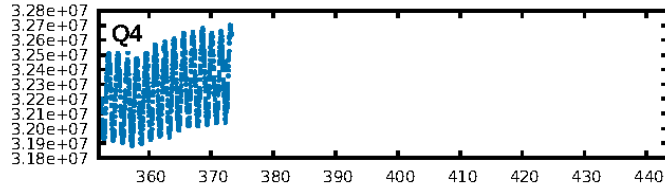
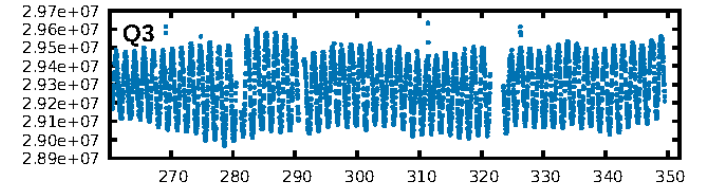
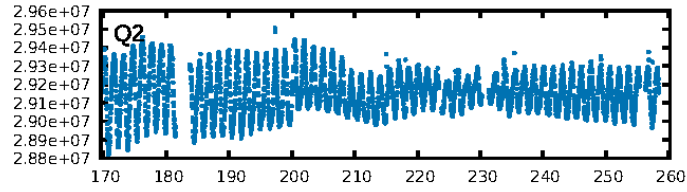
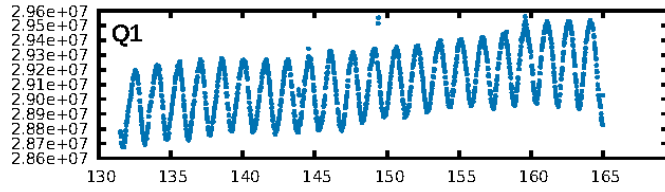
KIC: 11854593 Candidate: 2 of 2 Period: 435.536 d



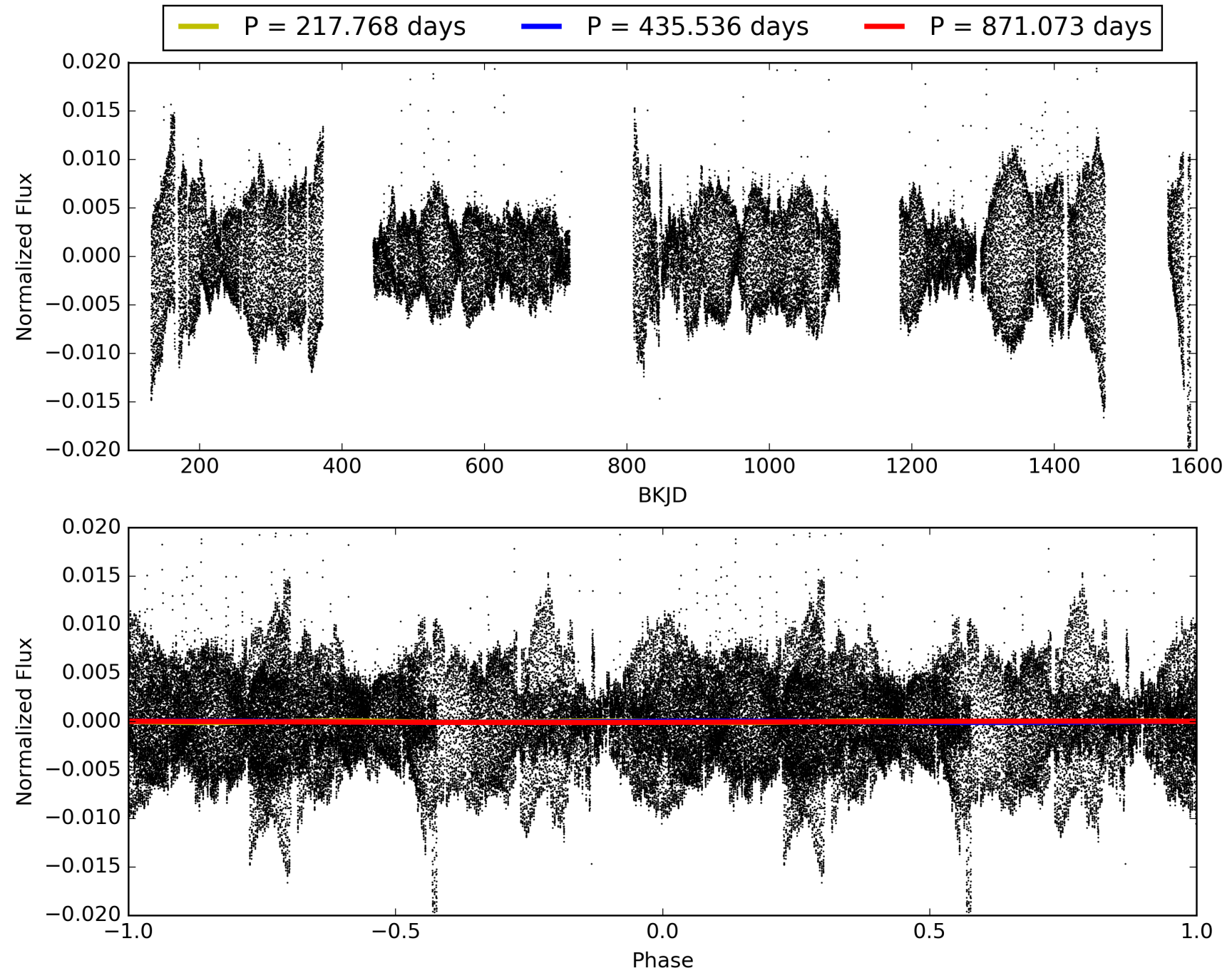
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 13:22:01 Z

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TCE 011854593-02, PDC Light Curves

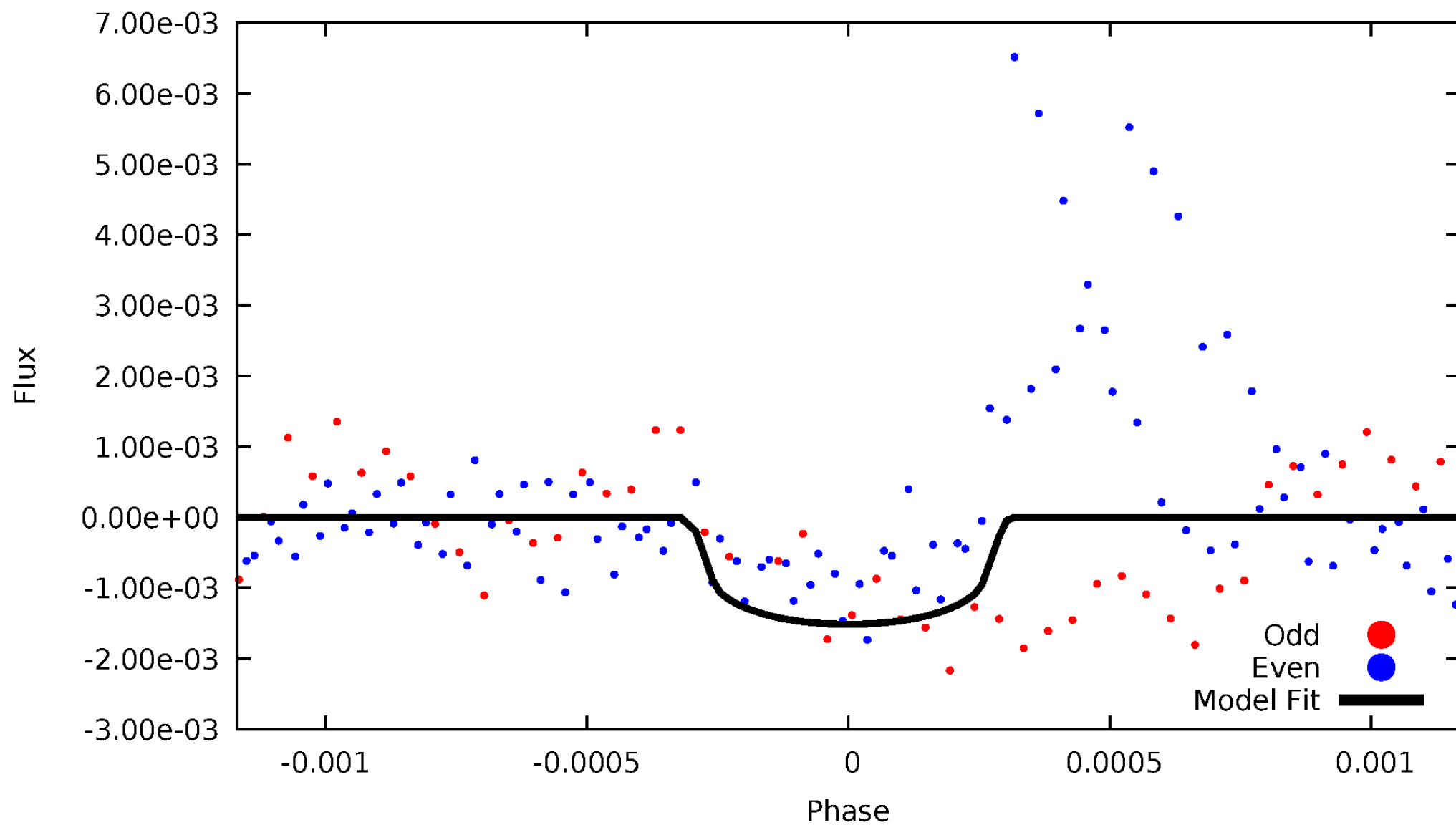


TCE 011854593-02



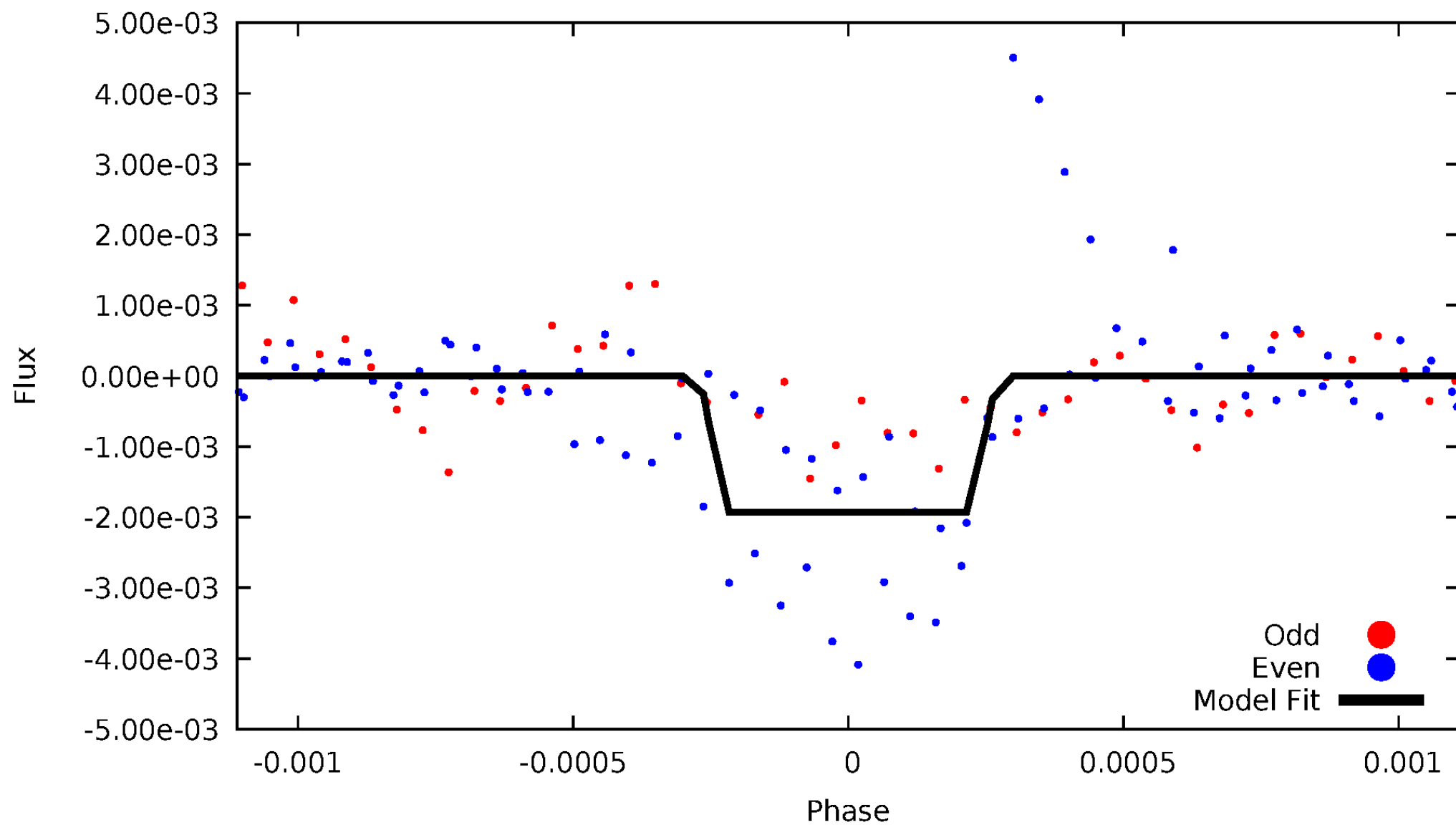
DV Odd/Even

TCE 011854593-02



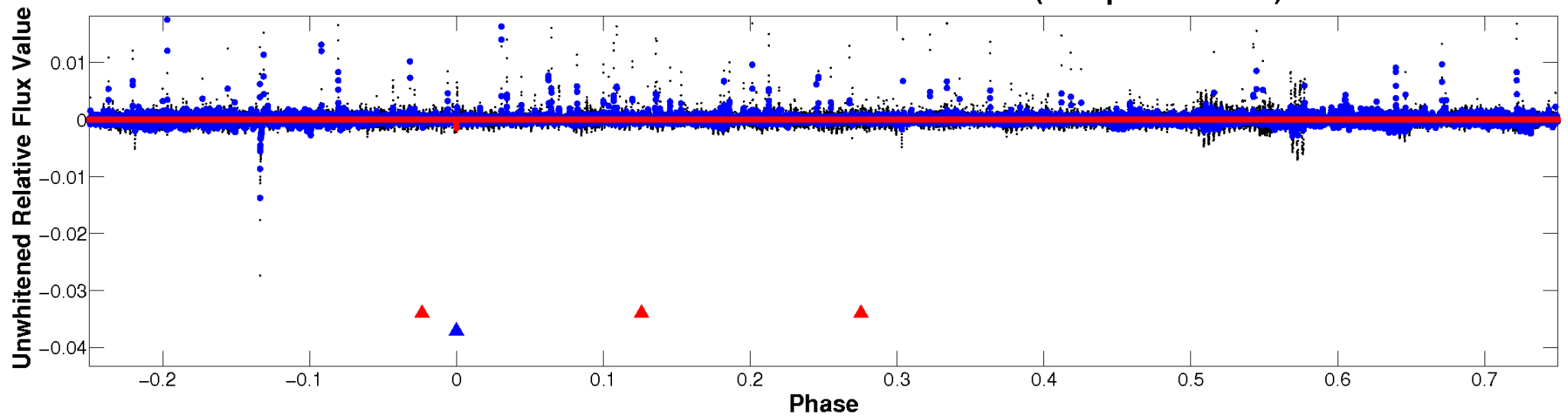
ALT Odd/Even

TCE 011854593-02

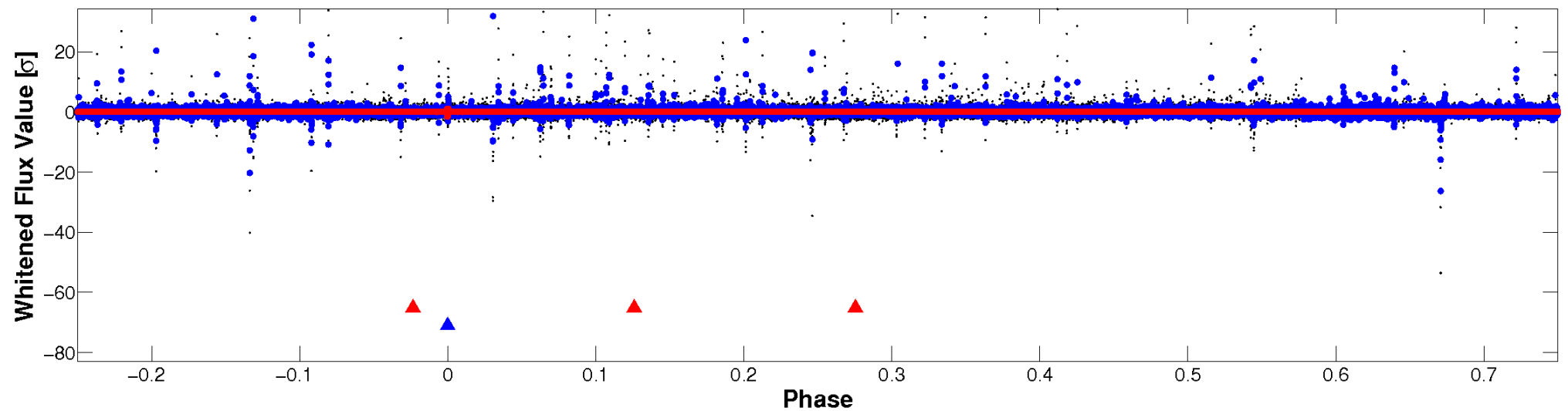


Non-Whitened Vs. Whitened Light Curve

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

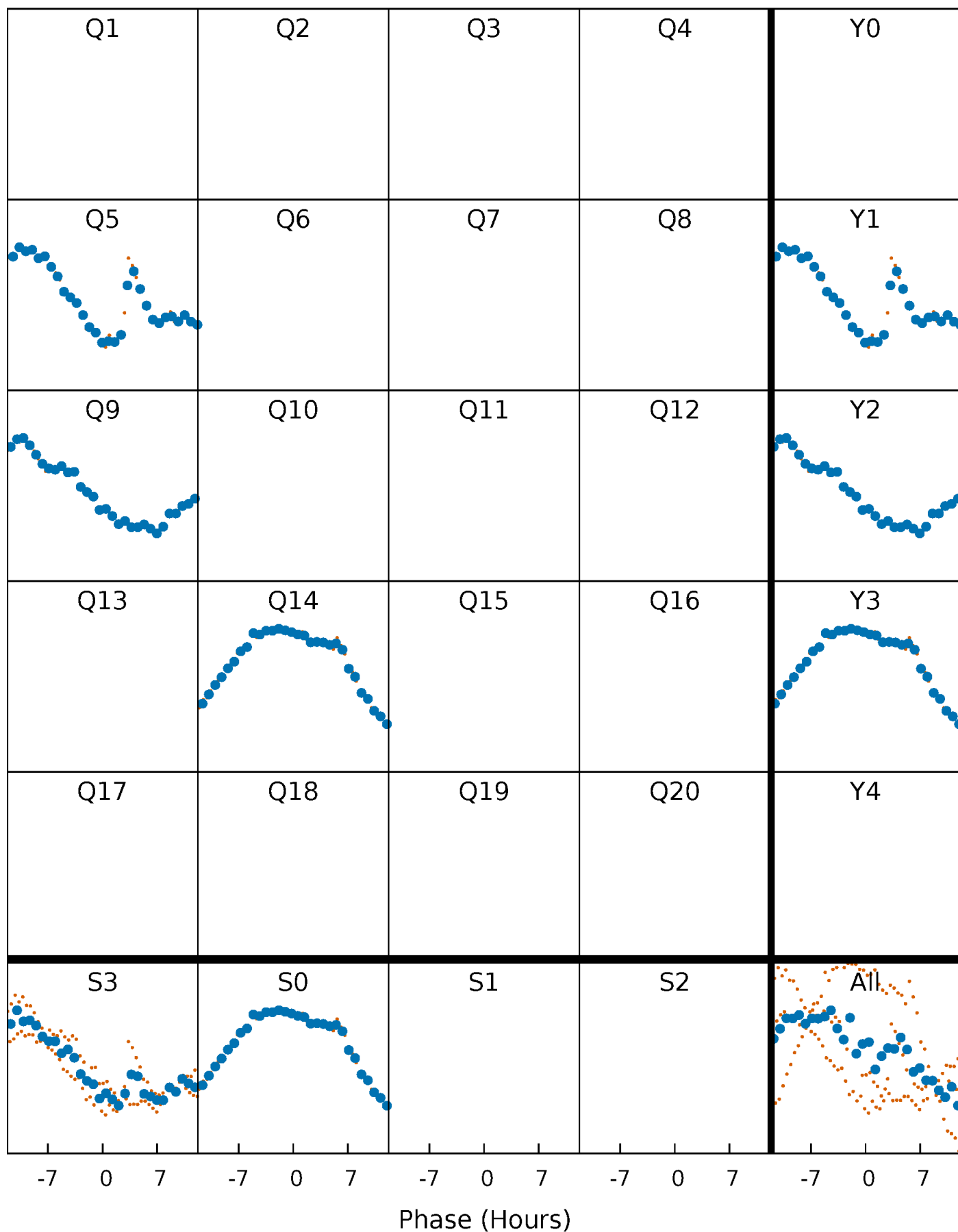


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



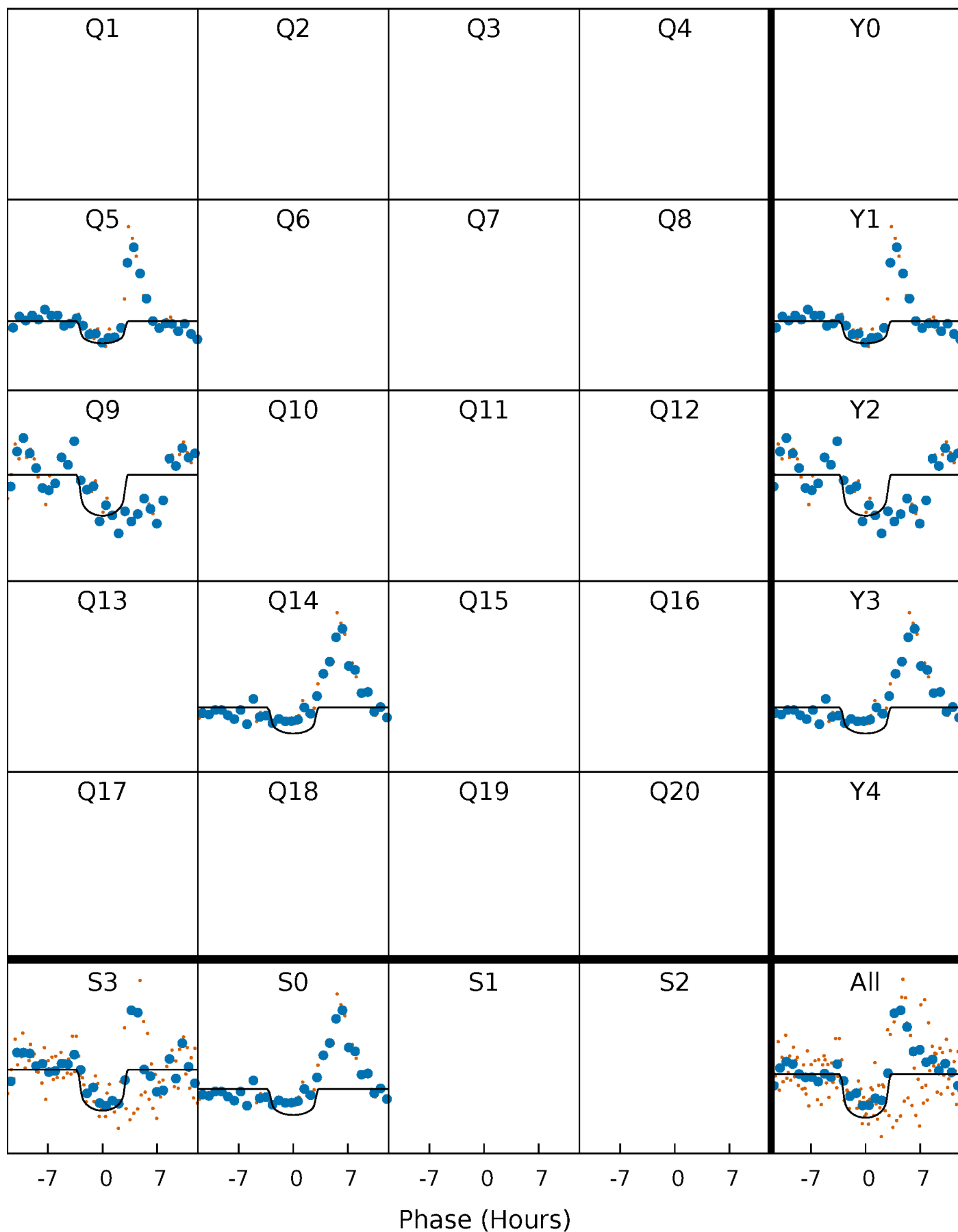
PDC Quarter-Phased Transit Curves

TCE 011854593-02 $P=435.536343$ Days $T_0=468.384240$ (BKJD)



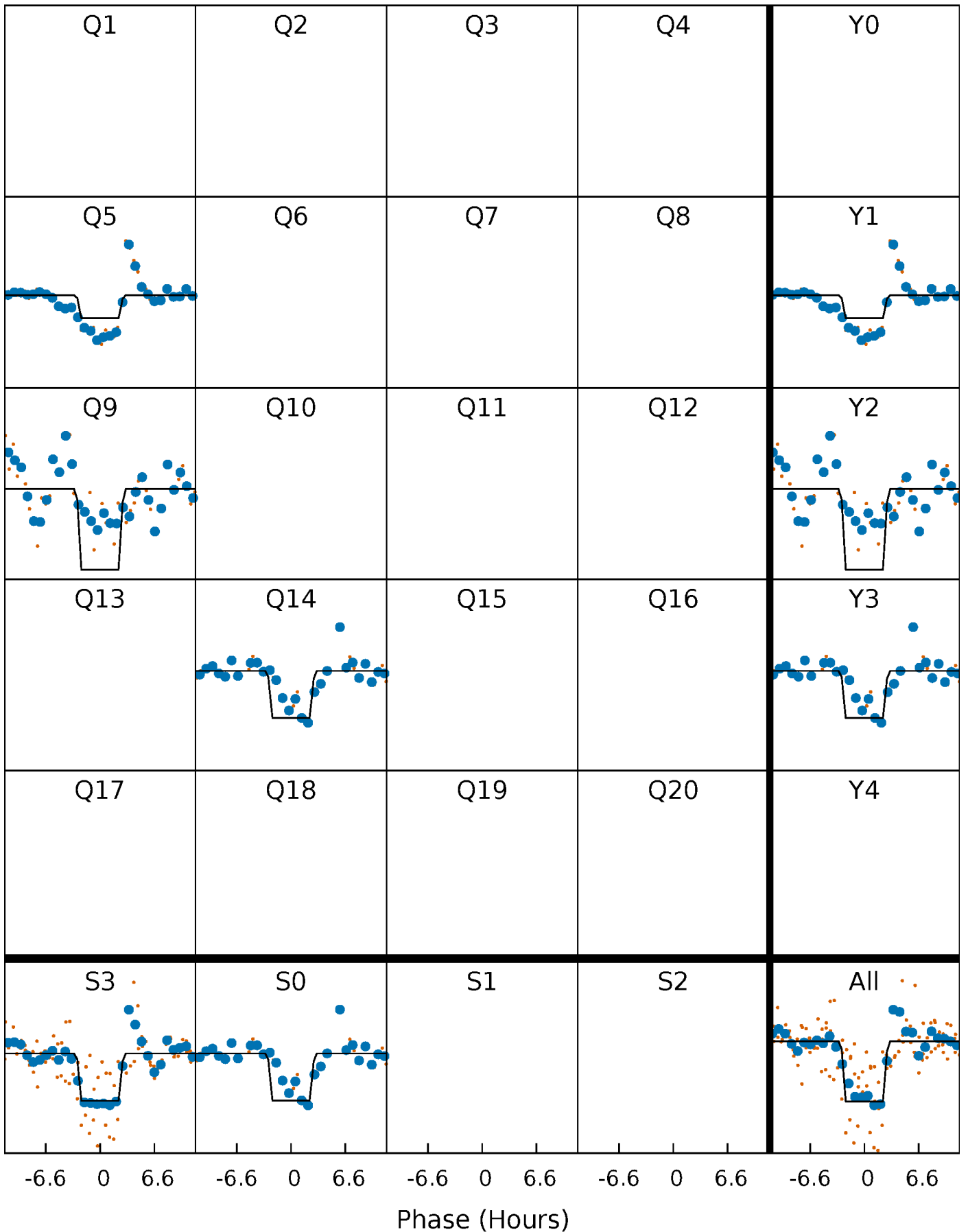
DV Quarter-Phased Transit Curves

TCE 011854593-02 $P=435.536343$ Days $T_0=468.384240$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

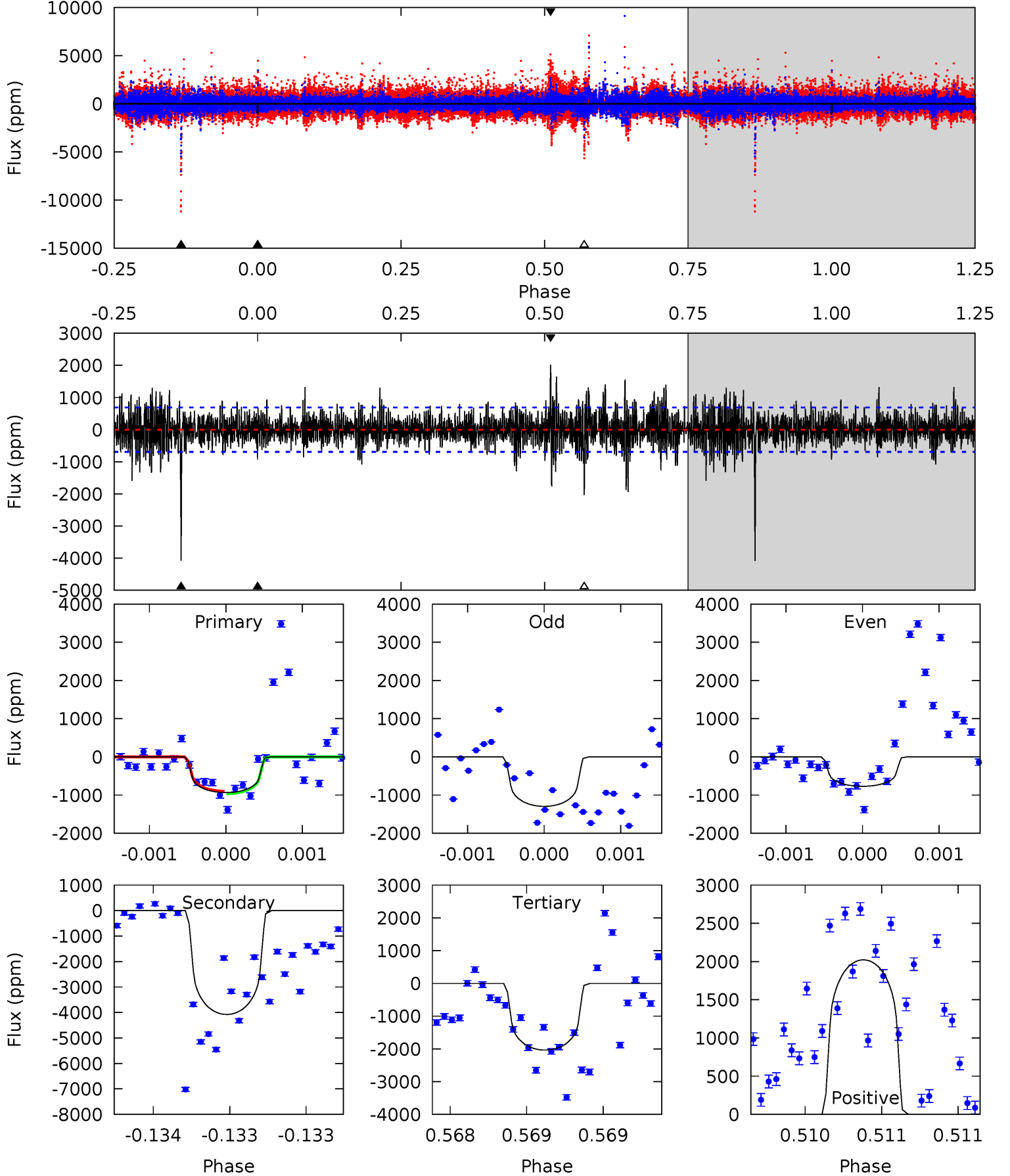
TCE 011854593-02 P=435.541331 Days $T_0=468.392158$ (BKJD)



DV Model-Shift Uniqueness Test

011854593-02, P = 435.536343 Days, E = 32.847897 Days

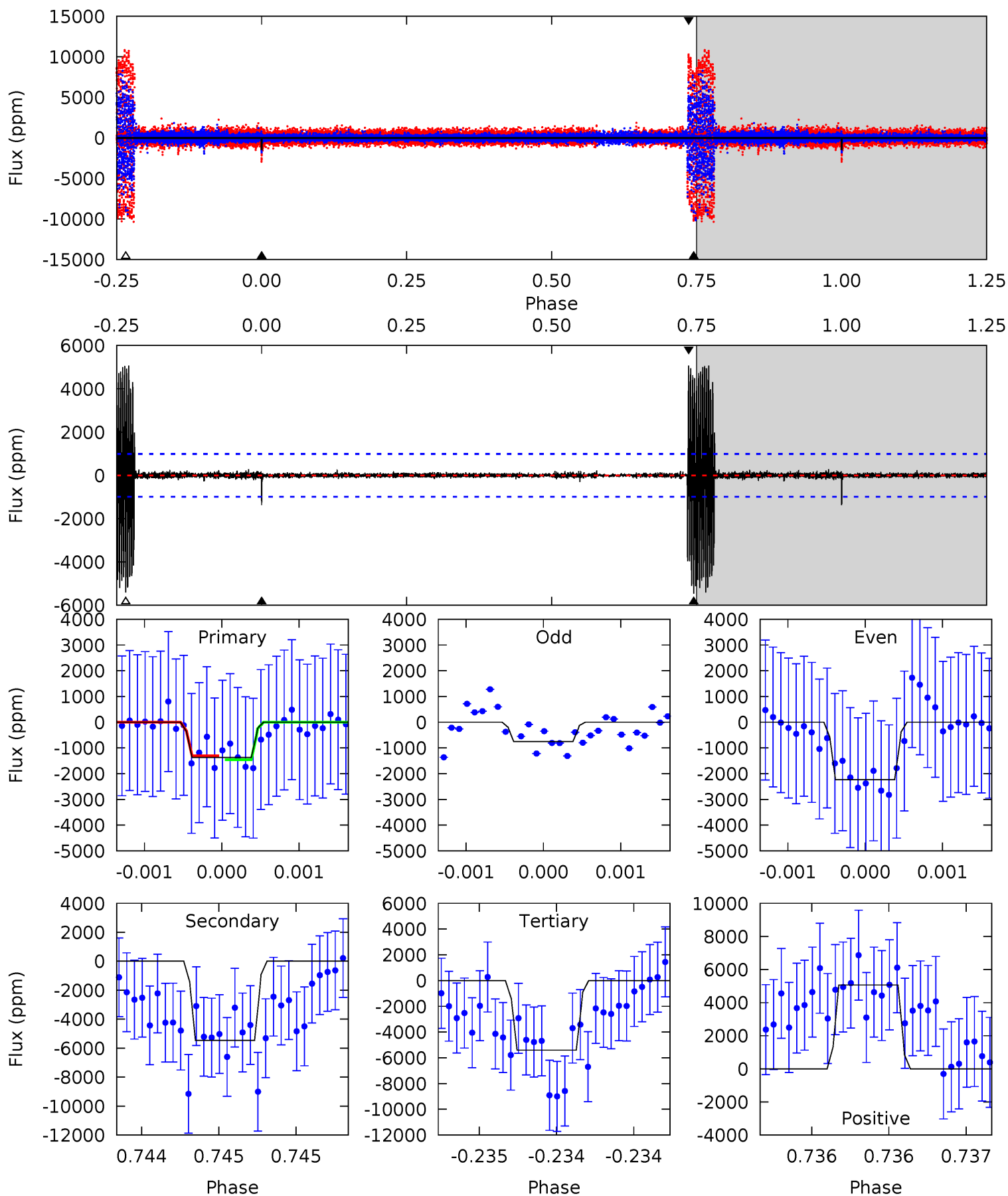
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.48	32.6	16.3	16.2	5.54	3.43	3.04	-8.82	-8.70	16.3	16.4	1.62	1.01	0.33	0.25



Alt Model-Shift Uniqueness Test

011854593-02, P = 435.541331 Days, E = 32.850827 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.73	30.7	30.4	28.5	5.55	3.45	3.41	-22.7	-20.8	0.34	2.21	5.44	1.34	0.48	0.39



Stellar Parameters For KIC 011854593

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5516^{+149}_{-149}	$4.544^{+0.048}_{-0.143}$	$-0.140^{+0.300}_{-0.300}$	$0.827^{+0.187}_{-0.080}$	$0.873^{+0.092}_{-0.092}$	$2.174^{+0.536}_{-0.873}$
	+3%/-3%	+1%/-3%	+214%/-214%	+23%/-10%	+11%/-11%	+25%/-40%
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 011854593-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4076 ± 125	$3.92^{+3.00}_{-2.35}$	303^{+17}_{-13}	6769^{+6079}_{-1601}	$166981^{+849538}_{-113910}$
Alt.	-5462 ± 178	$4.46^{+3.19}_{-2.74}$	303^{+16}_{-14}	6874^{+6191}_{-1551}	$173153^{+959697}_{-114225}$

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

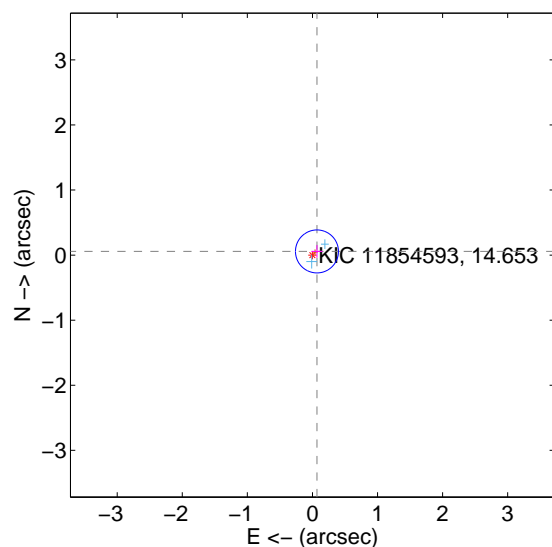
Supplemental centroid analysis for 011854593-02. Kepler magnitude: 14.65. Transit SNR 7.84

There are 2 quarters with good PRF difference image offsets

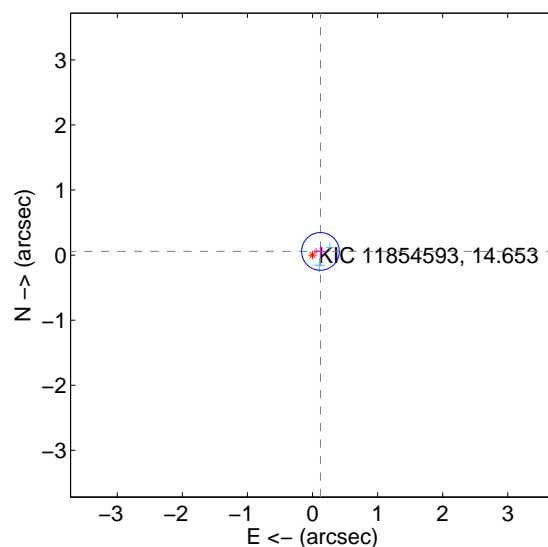
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.090 ± 0.110	0.81	-0.069 ± 0.086	0.056 ± 0.098
PRF-fit source offset from KIC position	0.134 ± 0.096	1.39	-0.122 ± 0.097	0.056 ± 0.092
photometric centroid source offset	1.07 ± 0.67	1.59	-0.57 ± 0.68	0.91 ± 0.67

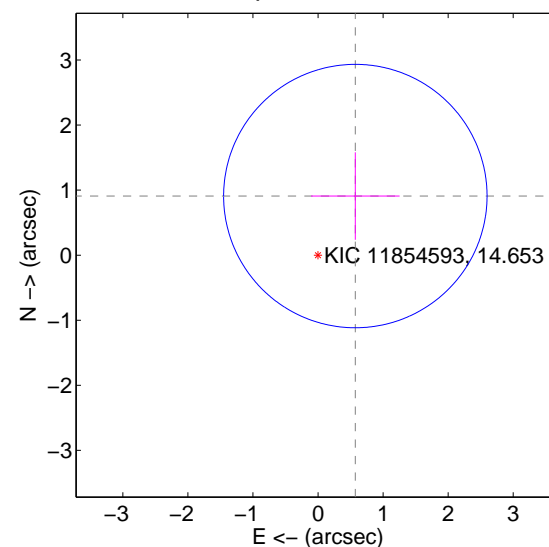
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

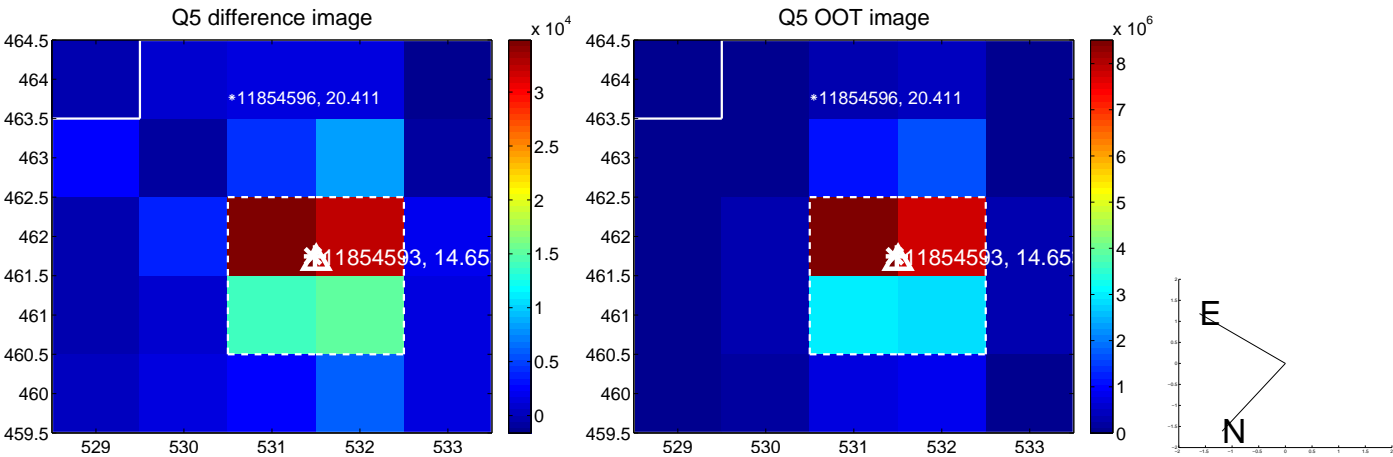


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

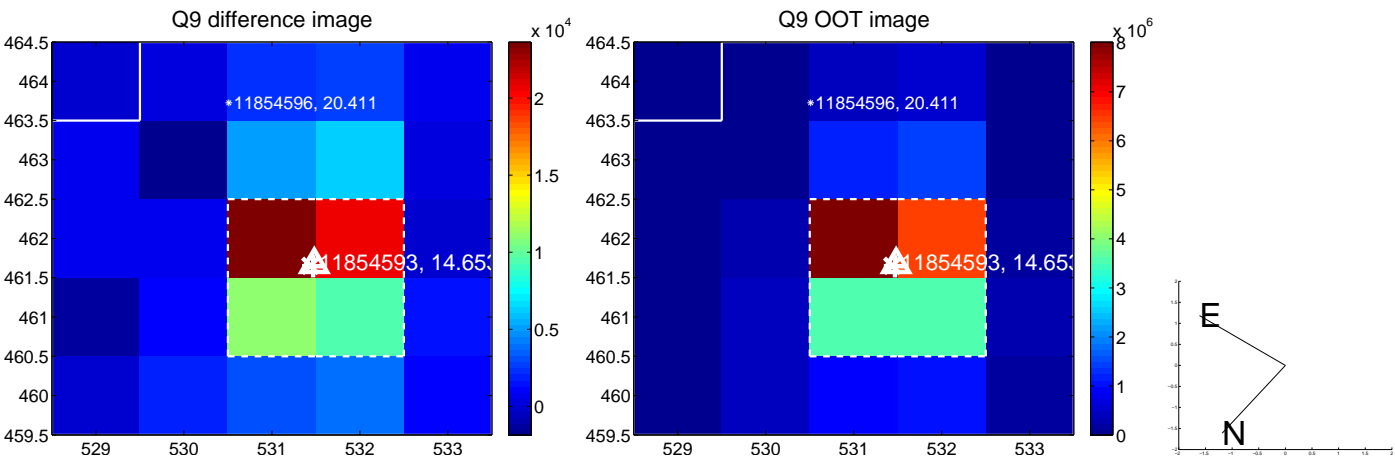
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



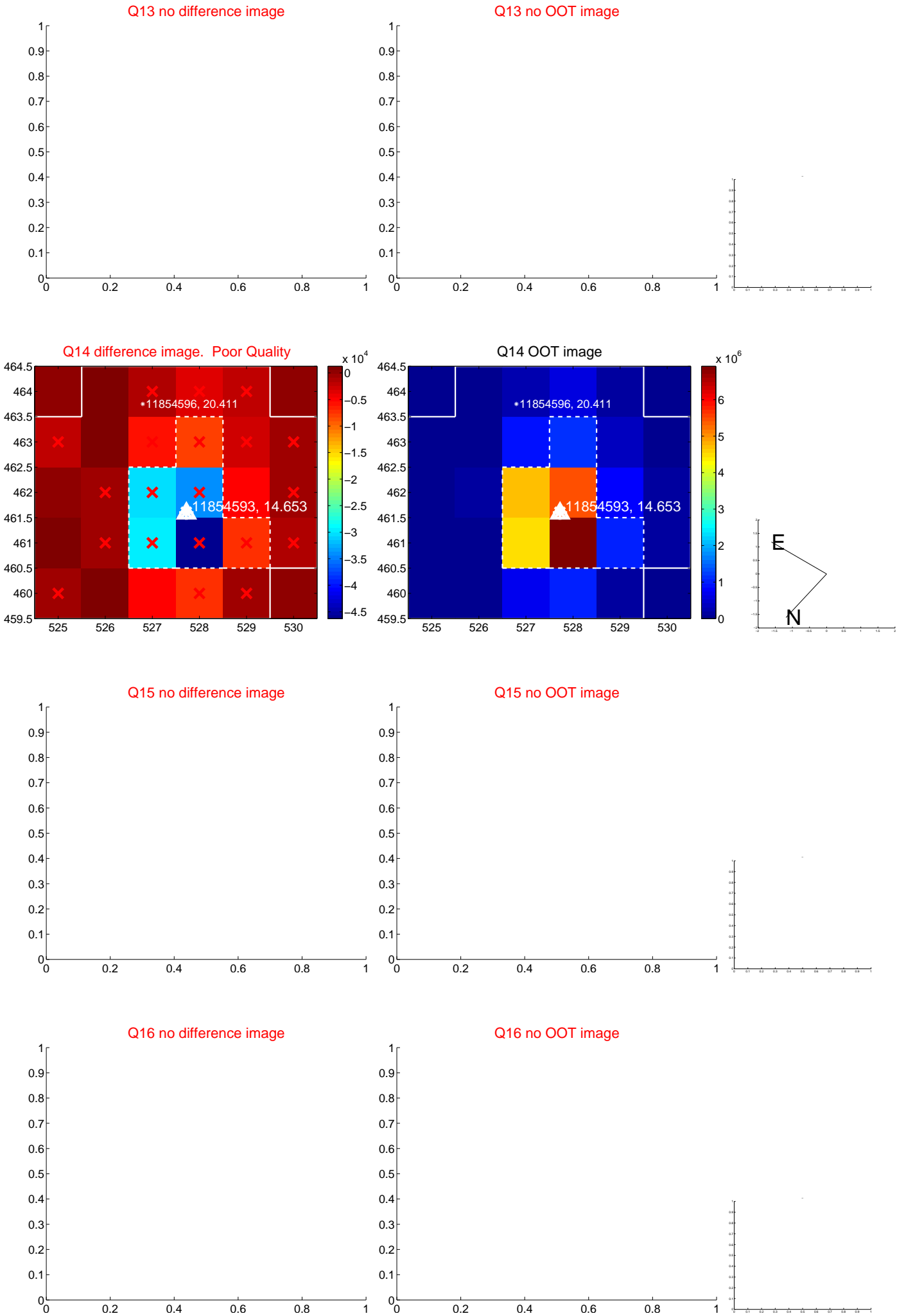
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



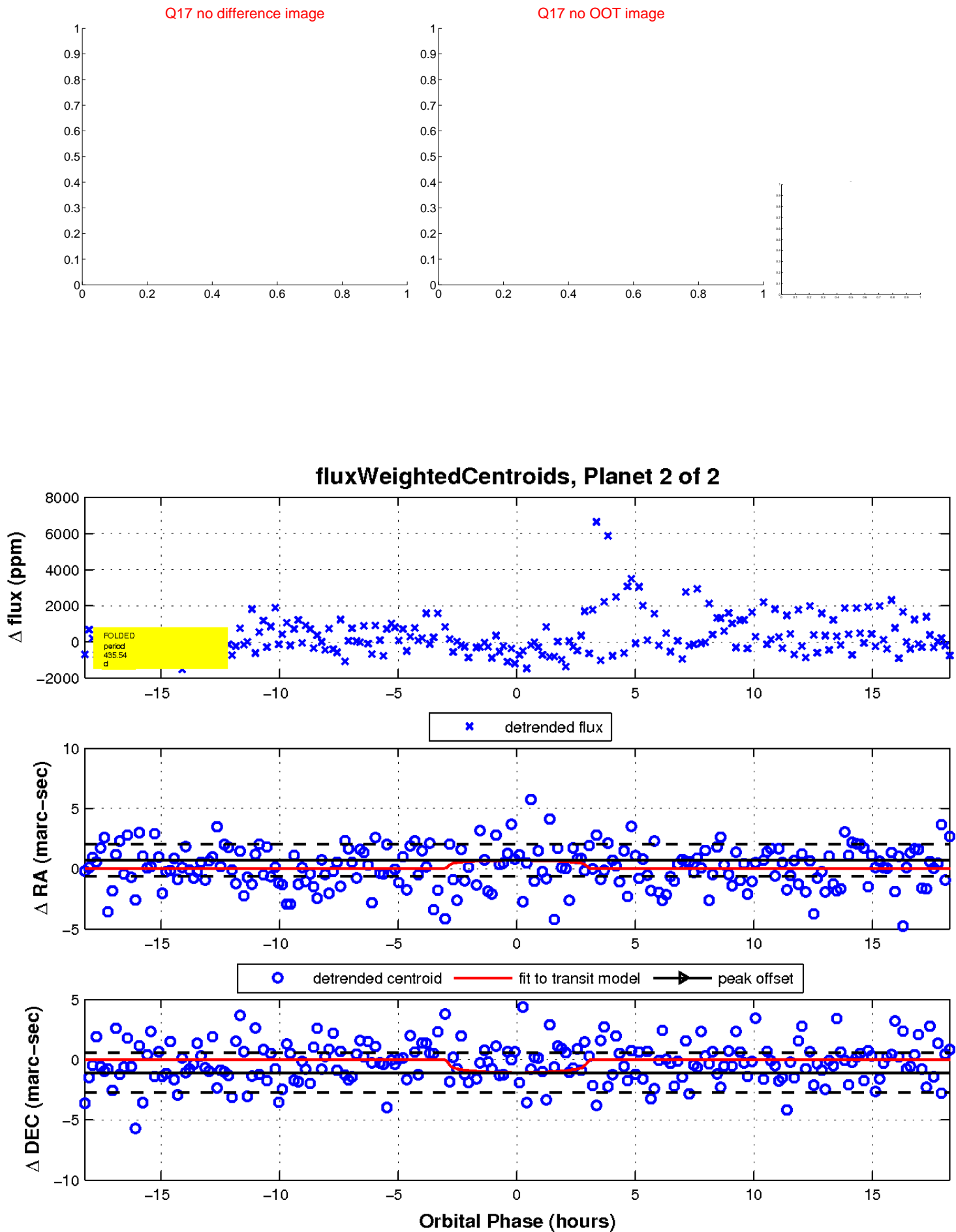
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

