

KIC 007830351

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})
007830351-01	OBS	No	5.275844	132.457749	279.0	15.000	7.6	-1.0	1.06	6321	1.77	424.59
007830351-02	OBS	No	255.075110	372.034596	656.4	0.592	15.8	2.9	1.06	6321	3.27	2.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007830351-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
007830351-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—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.

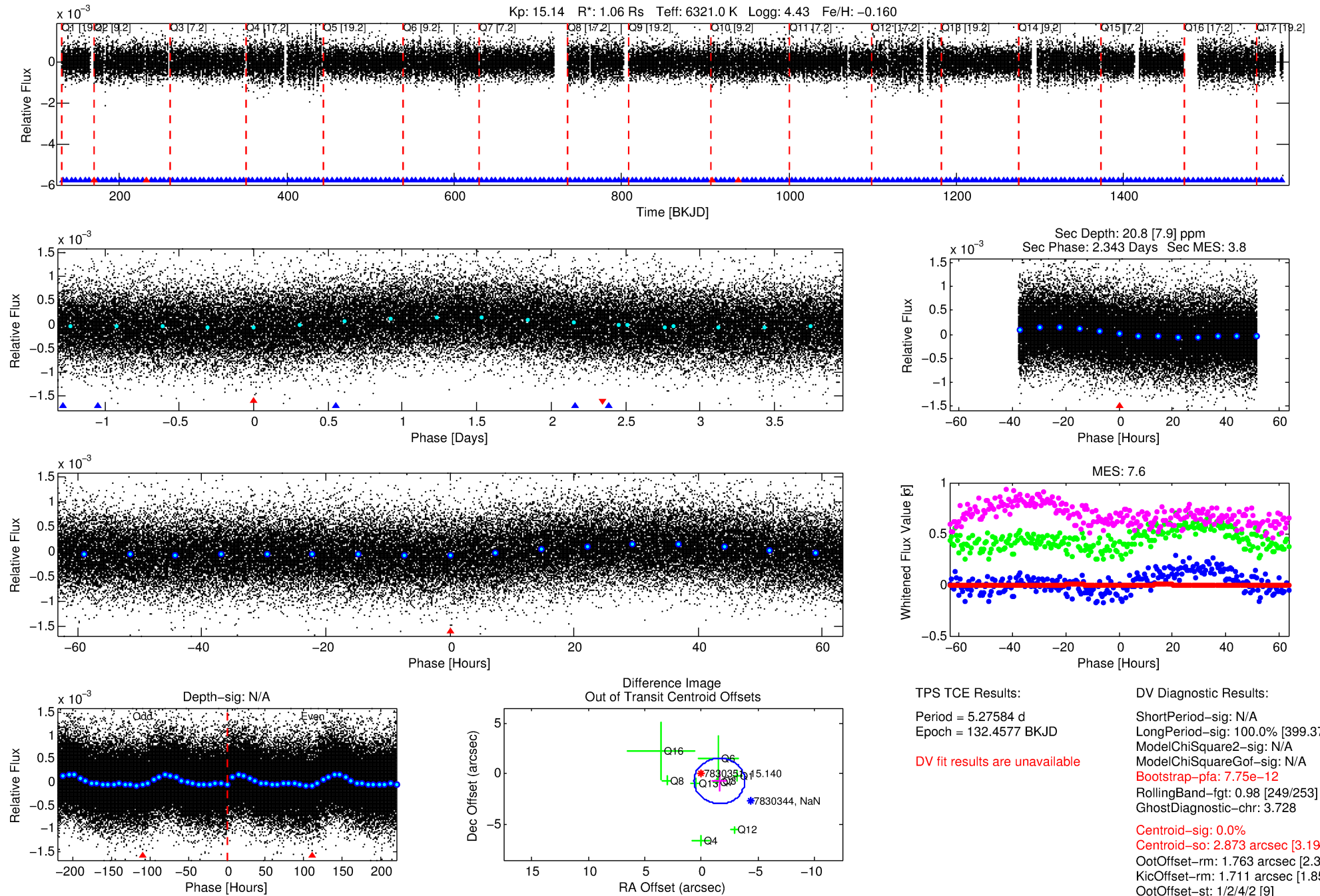
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007830351-01

No Significant Match Found

DV One-Page Summary

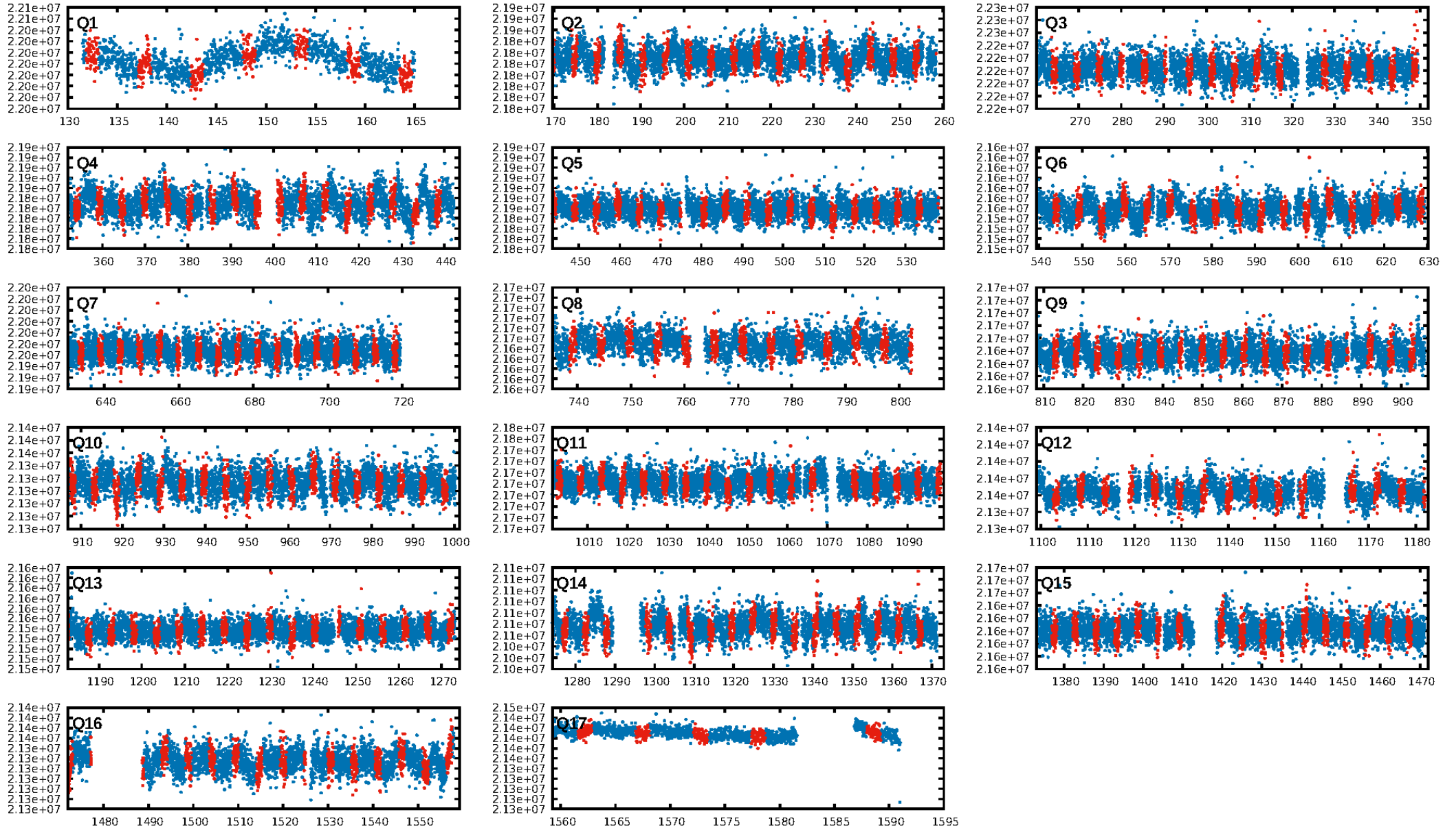
KIC: 7830351 Candidate: 1 of 2 Period: 5.276 d



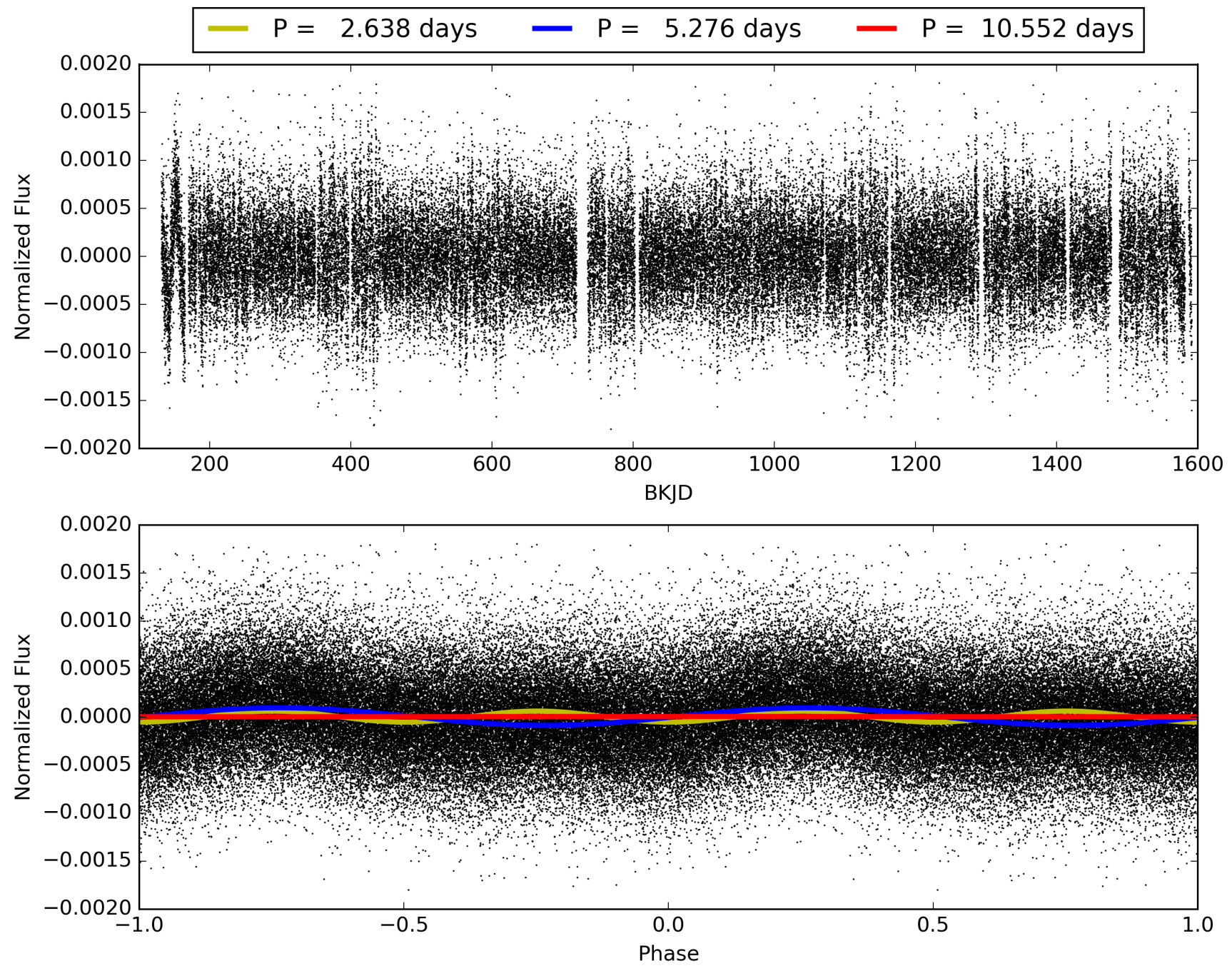
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:23:20 Z

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

TCE 007830351-01, PDC Light Curves

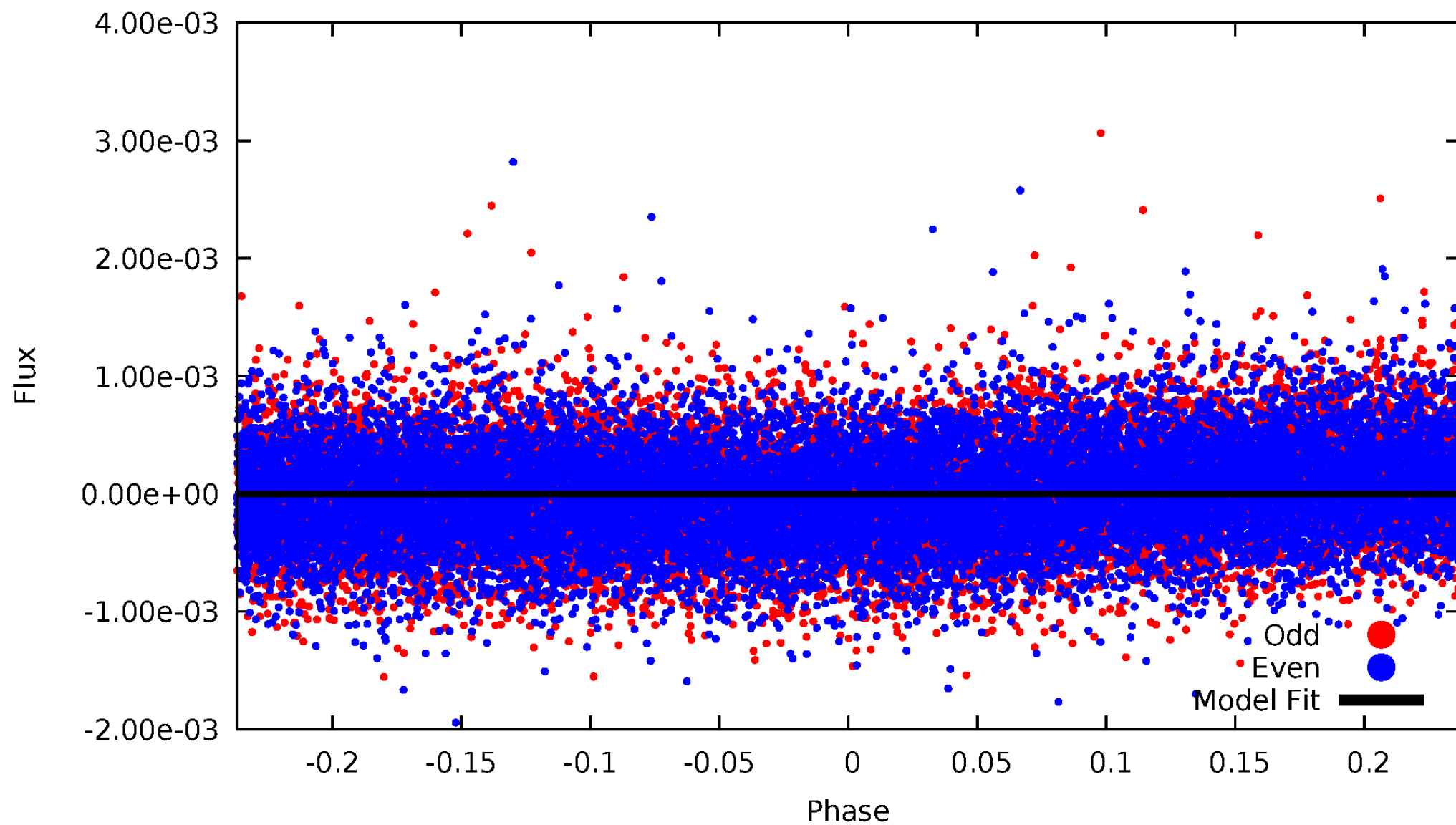


TCE 007830351-01



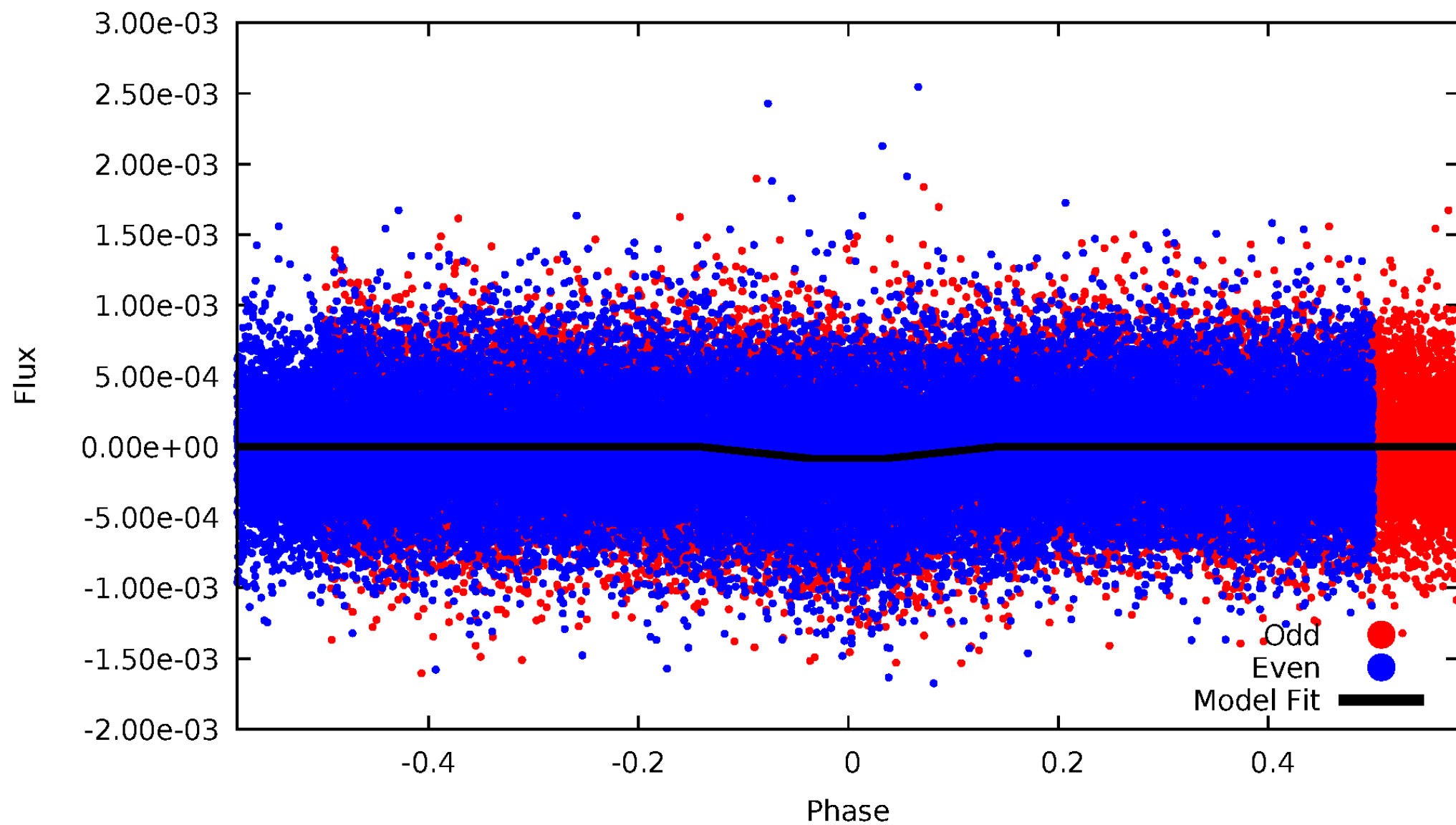
DV Odd/Even

TCE 007830351-01

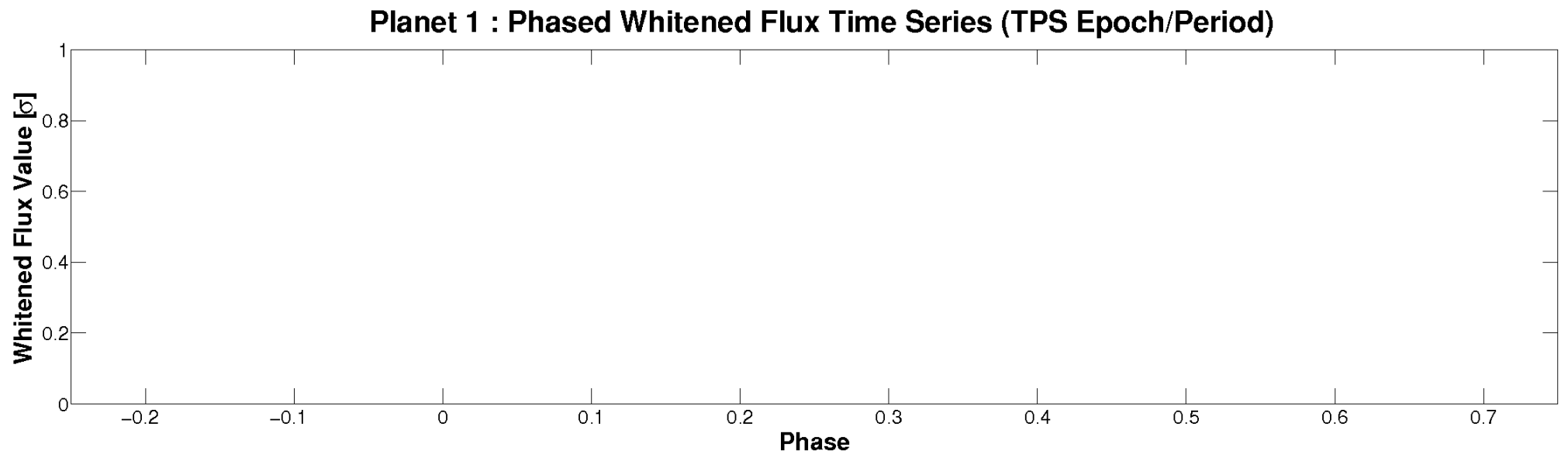
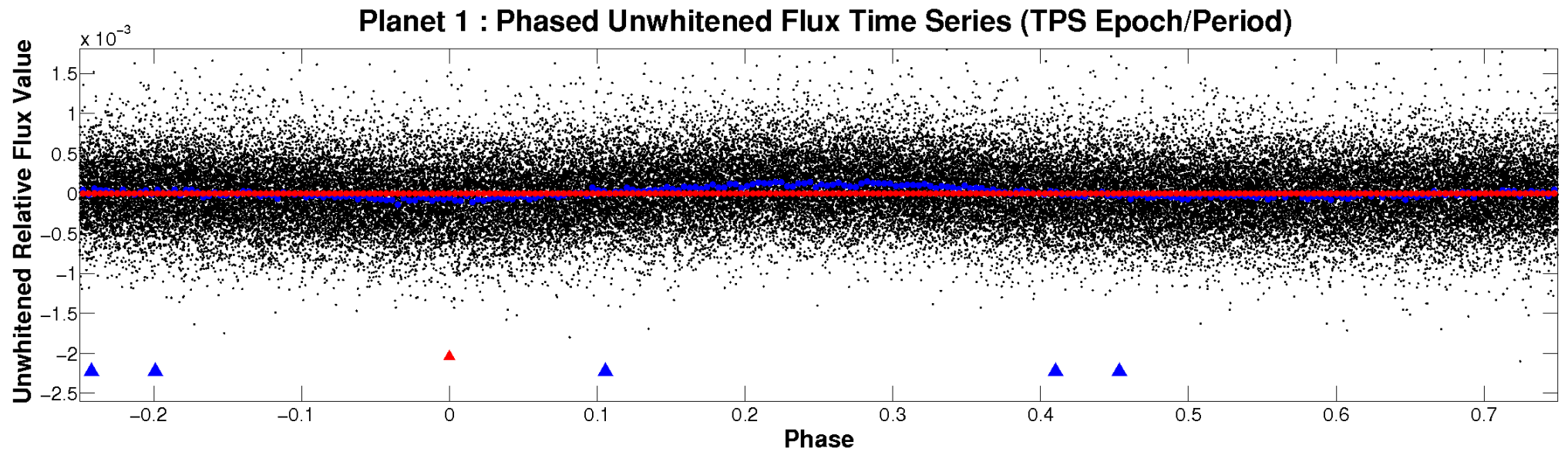


ALT Odd/Even

TCE 007830351-01

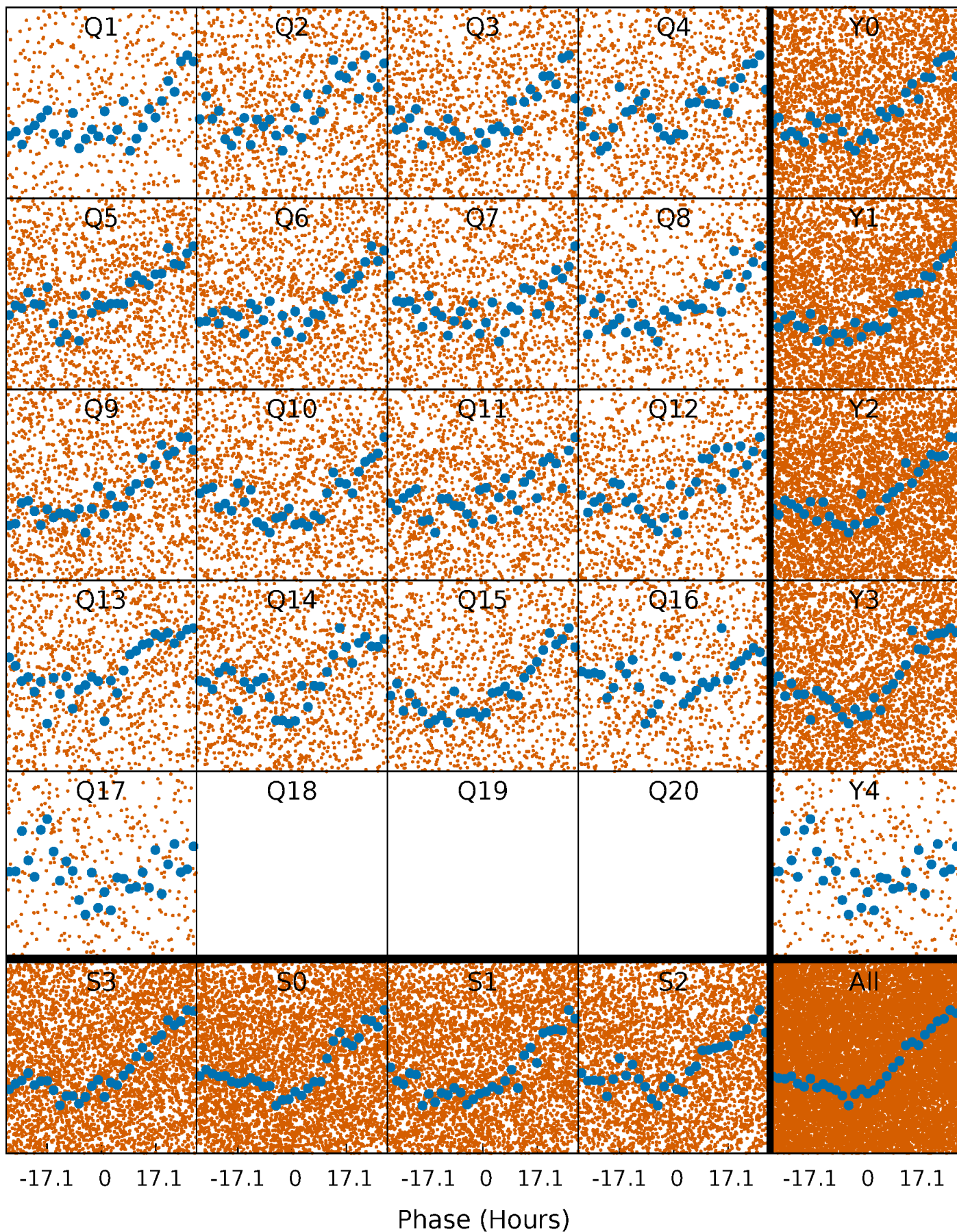


Non-Whitened Vs. Whitened Light Curve



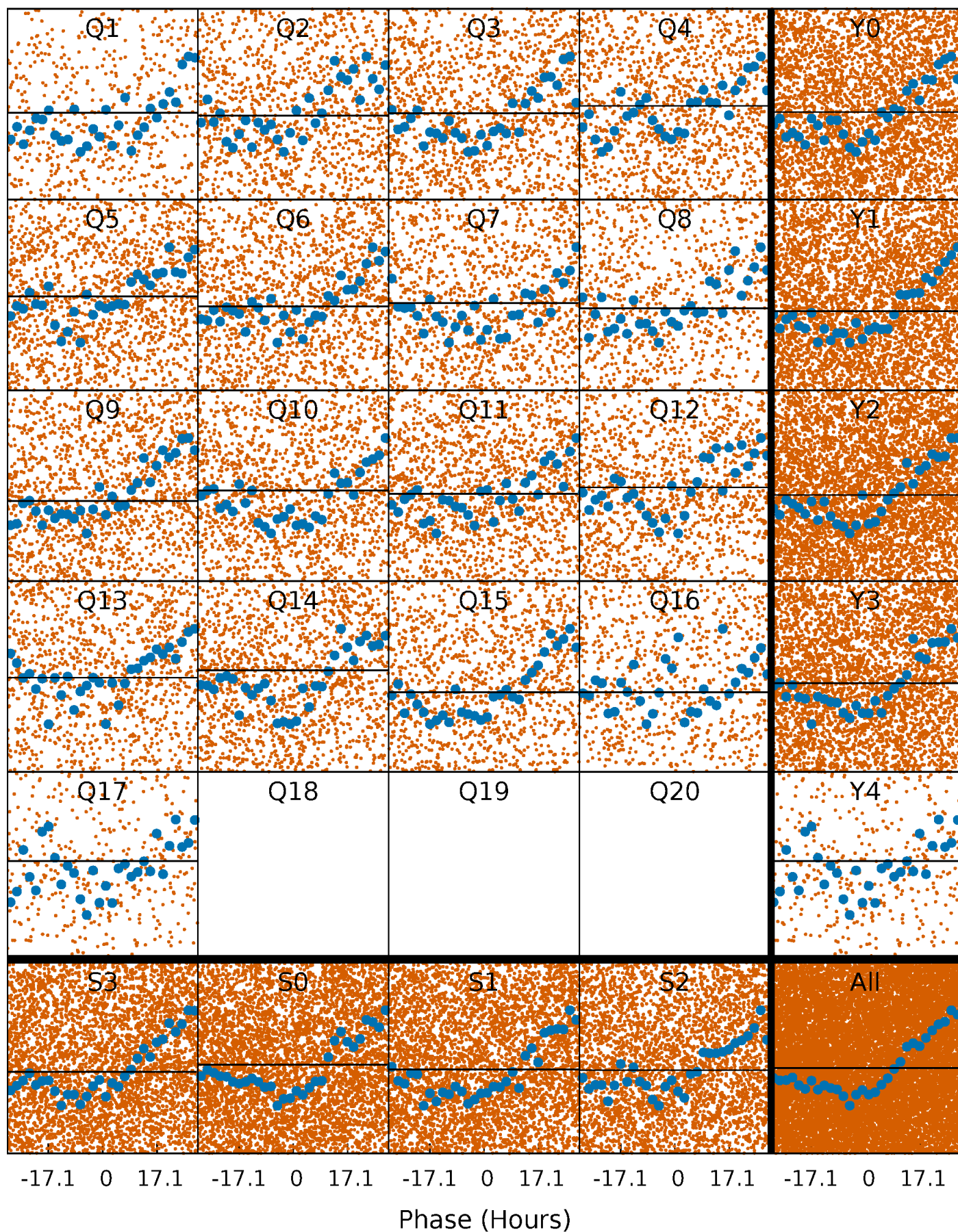
PDC Quarter-Phased Transit Curves

TCE 007830351-01 P= 5.275844 Days $T_0=132.457749$ (BKJD)



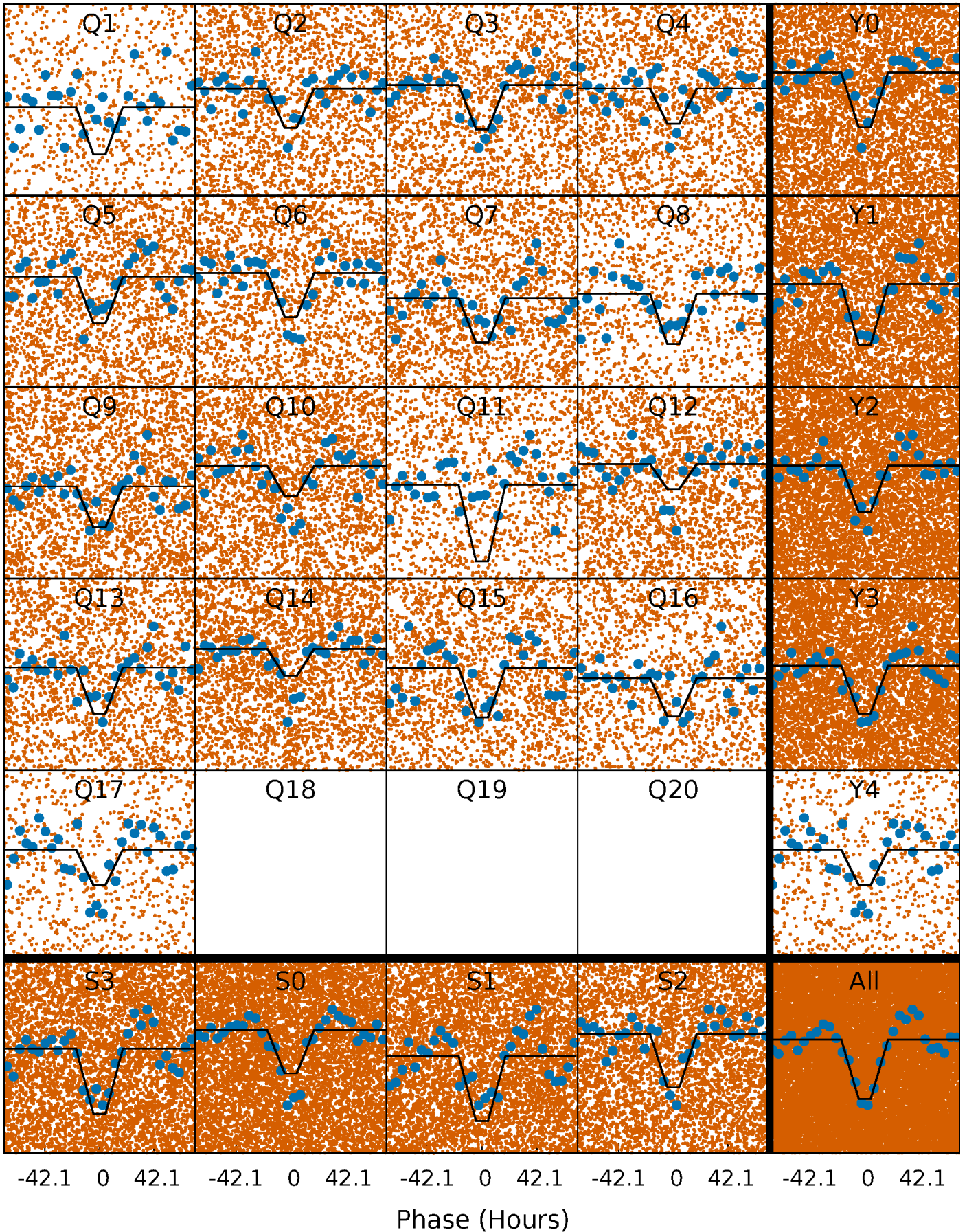
DV Quarter-Phased Transit Curves

TCE 007830351-01 P= 5.275844 Days $T_0=132.457749$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

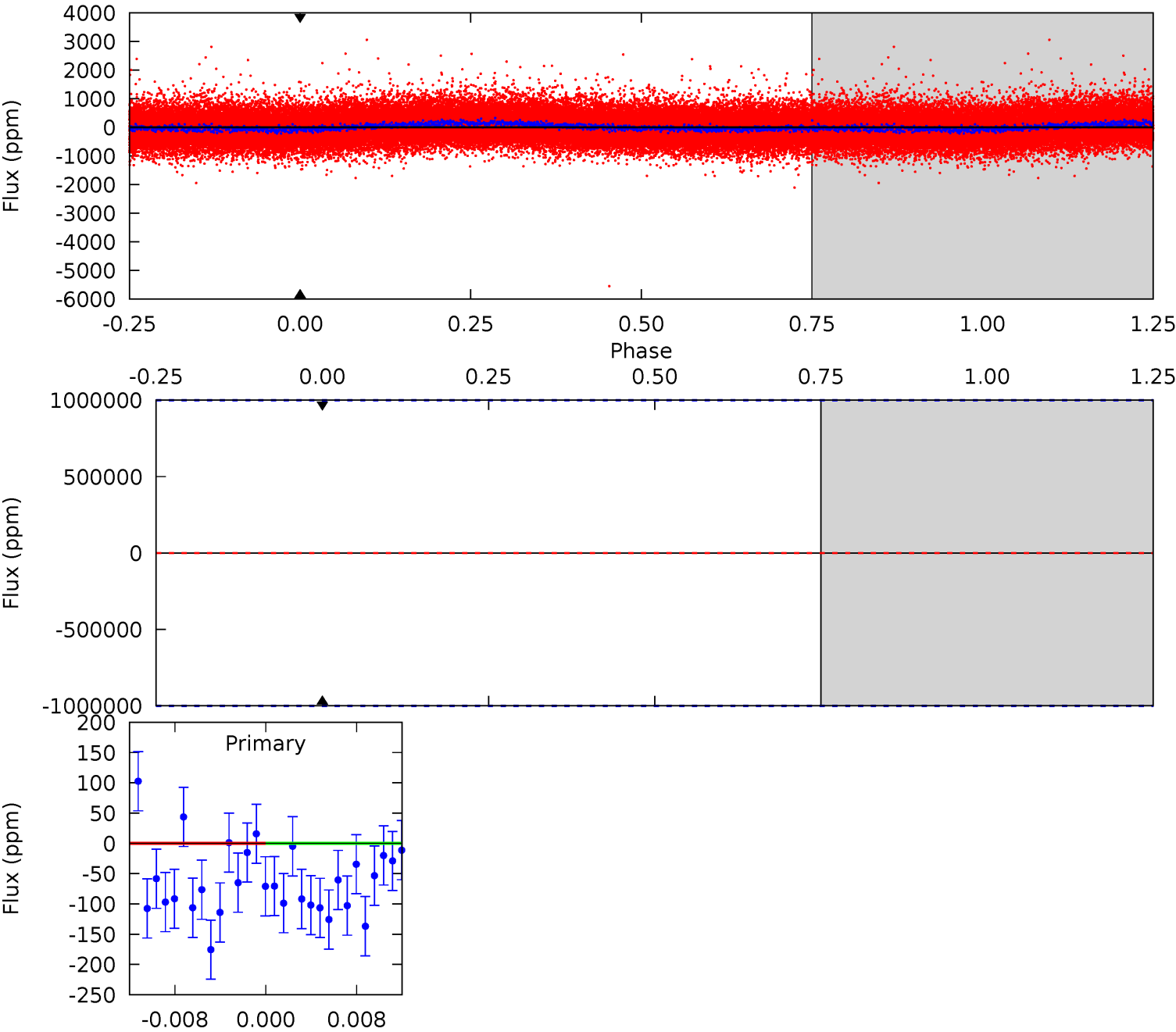
TCE 007830351-01 P= 5.275844 Days $T_0=132.459047$ (BKJD)



DV Model-Shift Uniqueness Test

007830351-01, P = 5.275844 Days, E = 127.181905 Days

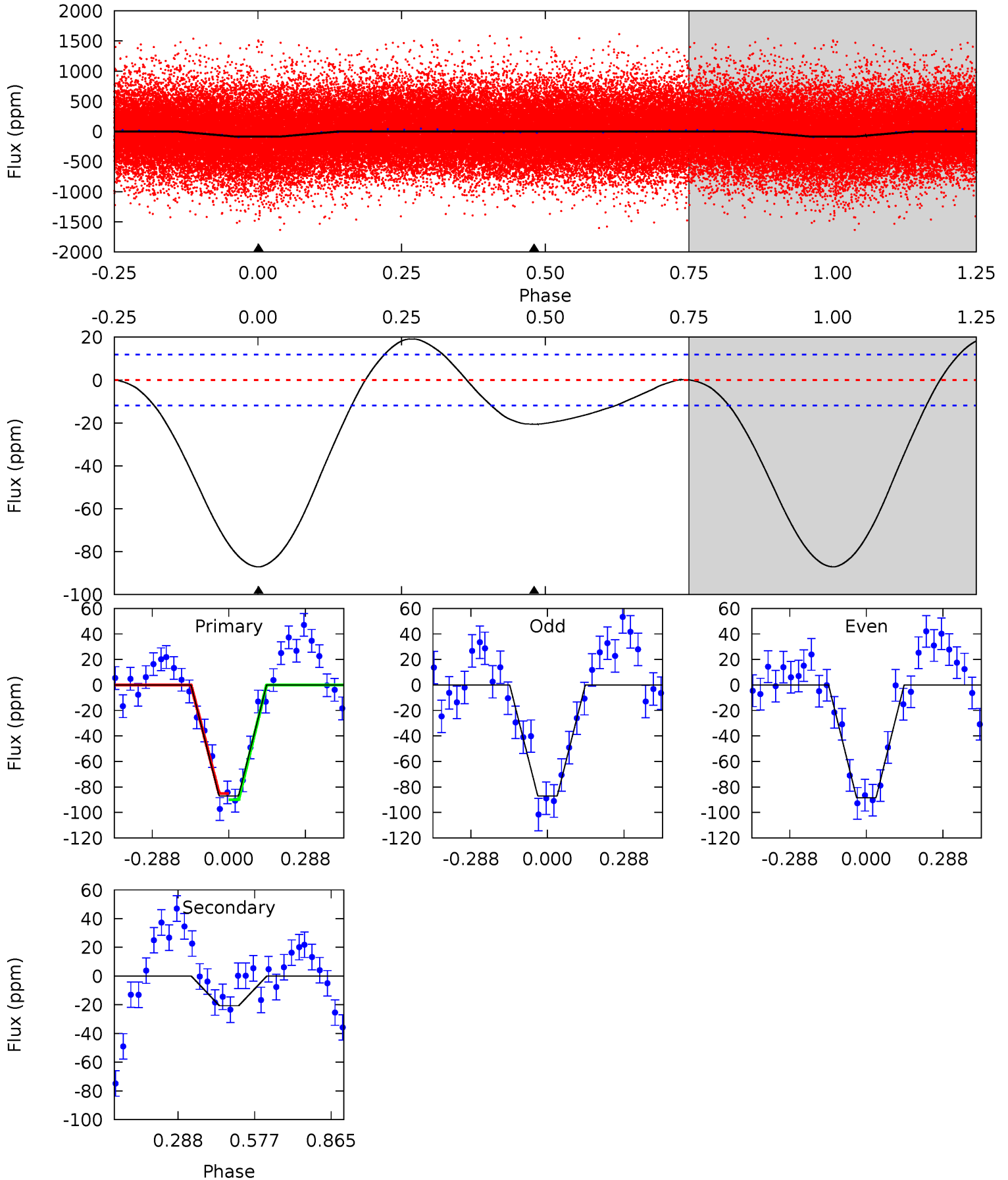
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007830351-01, P = 5.275844 Days, E = 127.183203 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.9	7.54	0	0	4.34	1.06	2.87	31.9	31.9	7.54	7.54	0.25	1.55	0.18	0.87



Stellar Parameters For KIC 007830351

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6321^{+175}_{-219}	$4.434^{+0.056}_{-0.224}$	$-0.160^{+0.250}_{-0.300}$	$1.058^{+0.349}_{-0.116}$	$1.108^{+0.154}_{-0.154}$	$1.317^{+0.384}_{-0.701}$
	+3%/-3%	+1%/-5%	+156%/-188%	+33%/-11%	+14%/-14%	+29%/-53%
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 007830351-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$8.82^{+9.05}_{-5.88}$	1649^{+129}_{-83}	-3580^{+31720}_{-22435}	$-8.807^{+5264.358}_{-4442.806}$
Alt.	-21 ± 3	$8.52^{+8.99}_{-6.18}$	1655^{+131}_{-83}	2262^{+1225}_{-4409}	$0.558^{+7.030}_{-0.426}$

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 $A_{obs} \gg 1.0$

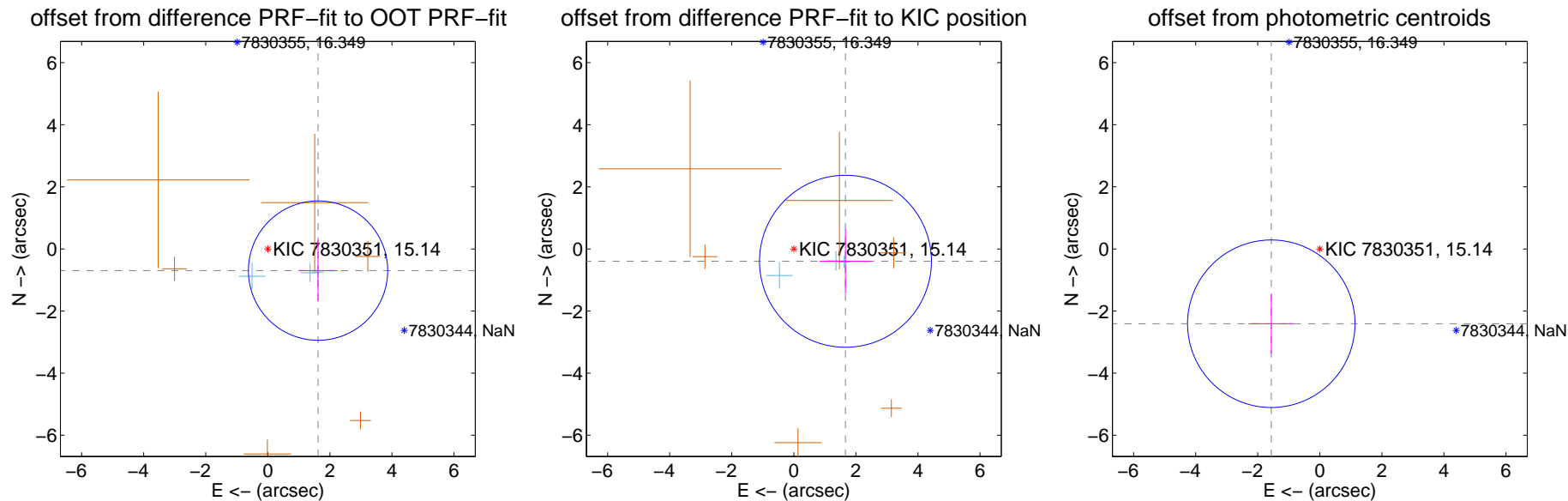
DV Centroid Data

Supplemental centroid analysis for 007830351-01. Kepler magnitude: 15.14. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

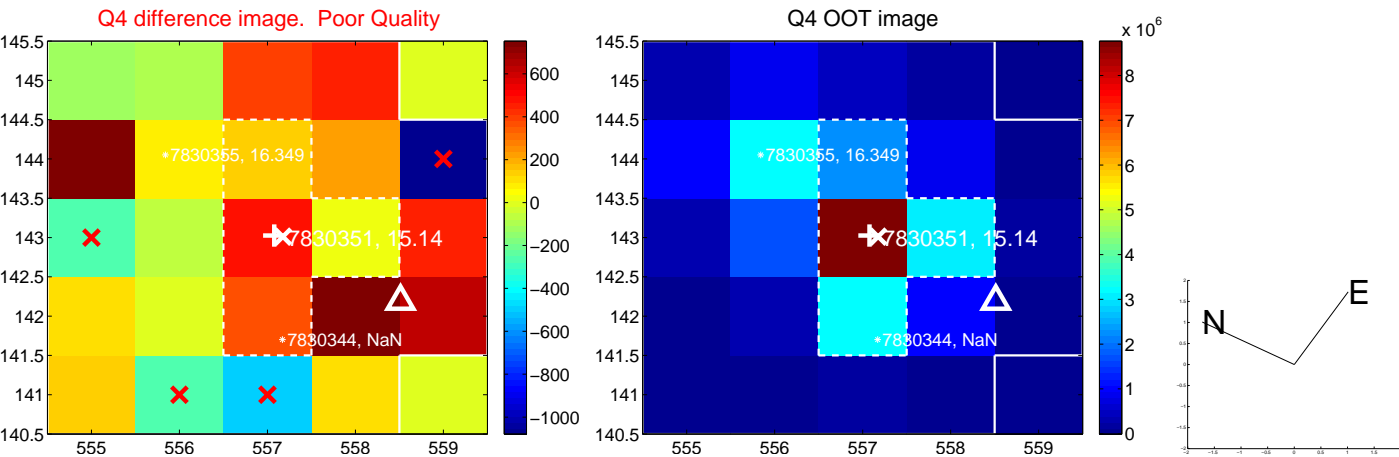
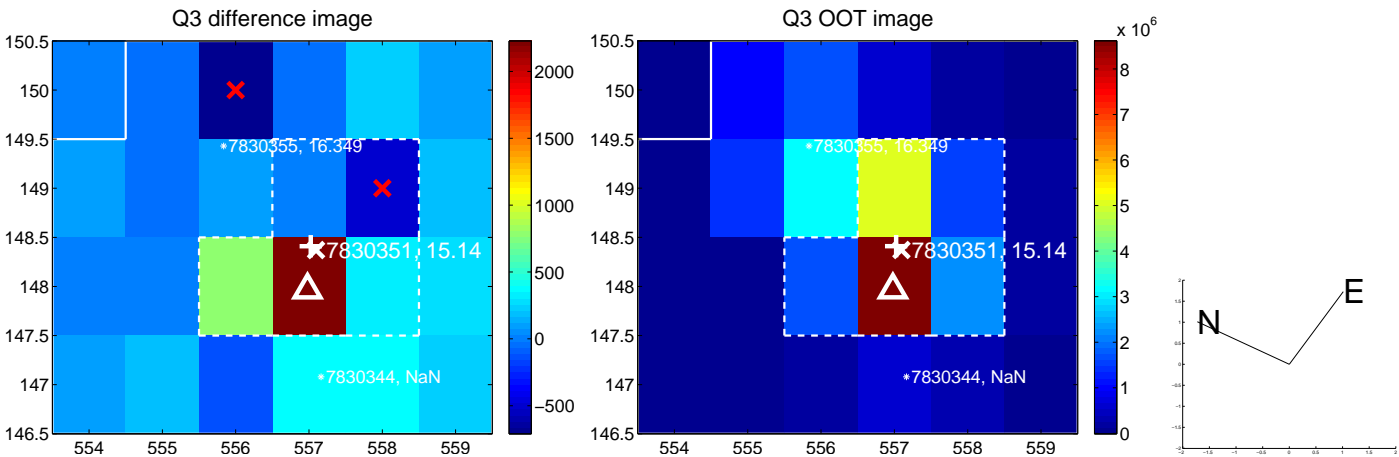
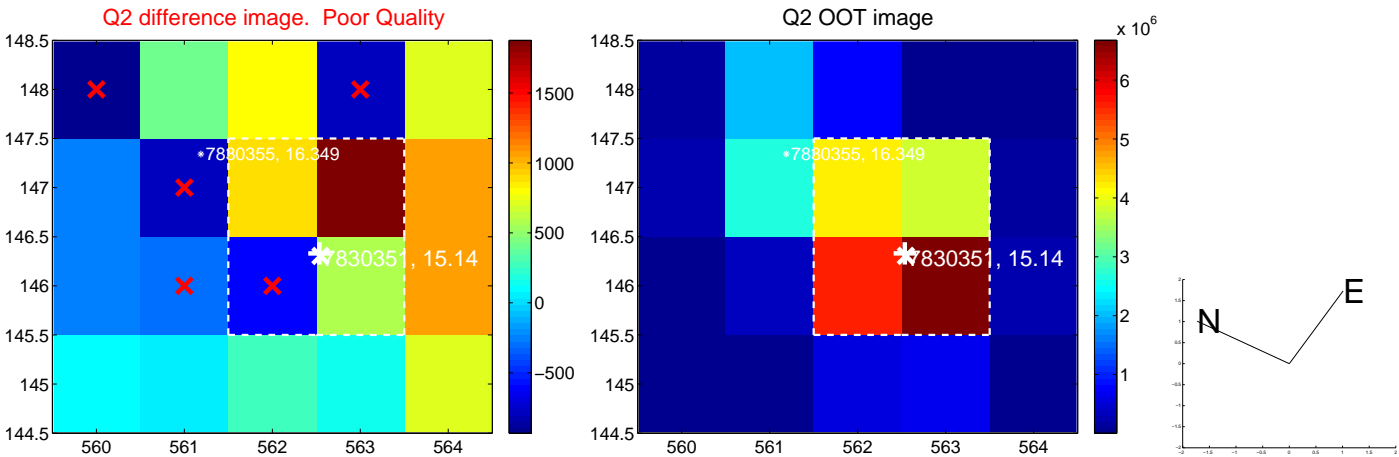
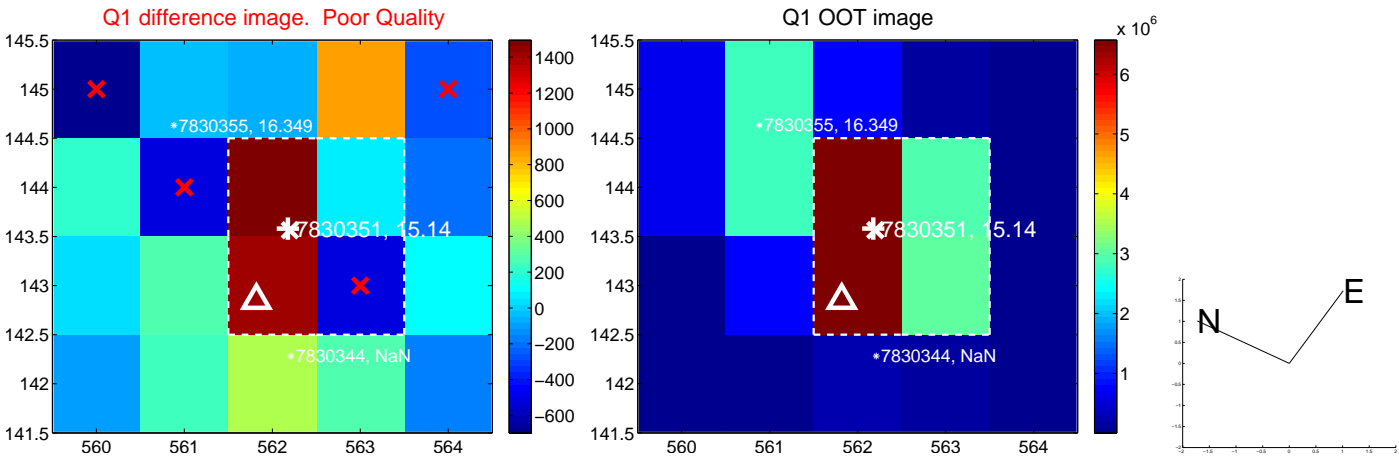
The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.763 ± 0.748	2.36	-1.619 ± 0.623	-0.698 ± 0.992
PRF-fit source offset from KIC position	1.711 ± 0.924	1.85	-1.664 ± 0.837	-0.397 ± 1.033
photometric centroid source offset	2.87 ± 0.90	3.19	1.56 ± 0.73	-2.41 ± 0.96

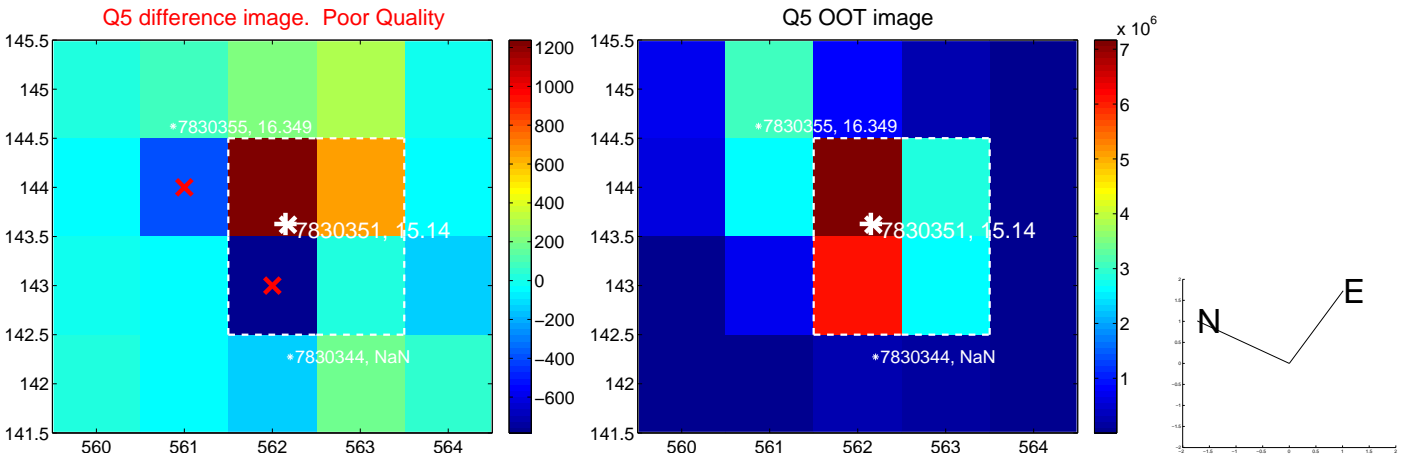


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

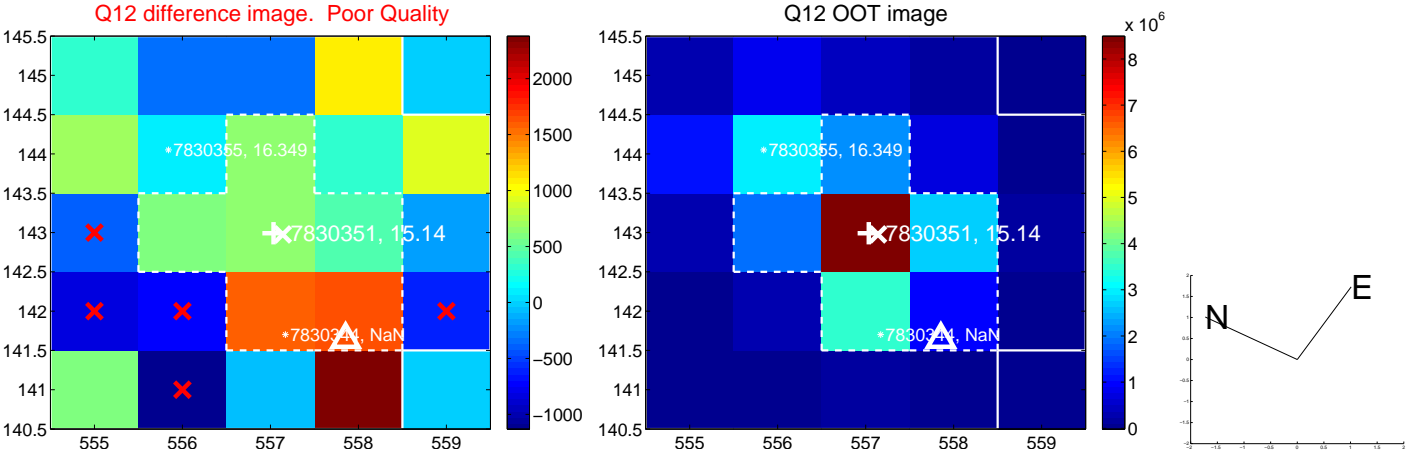
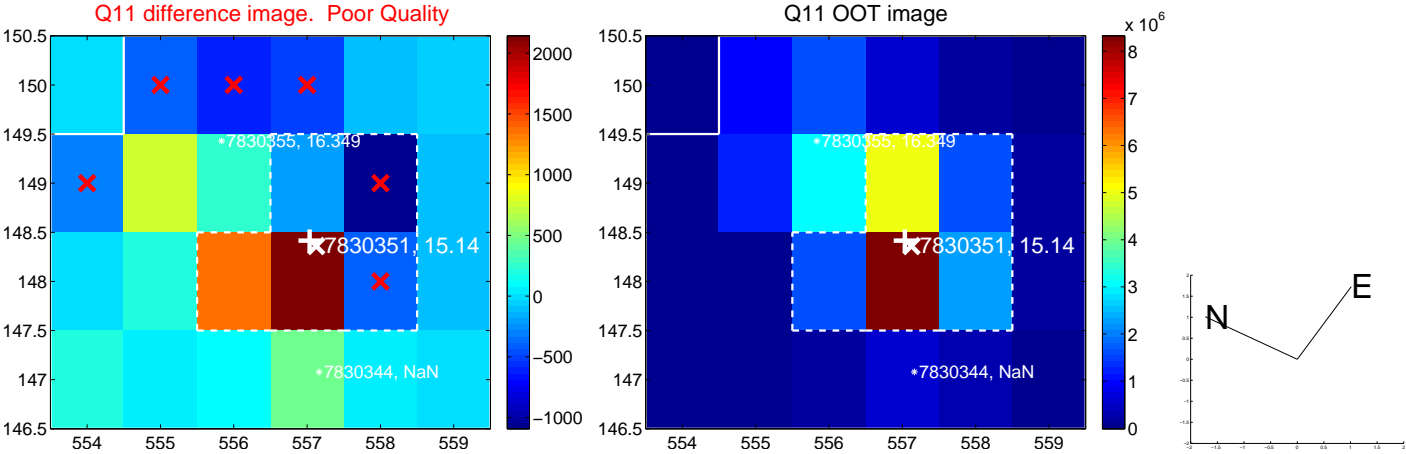
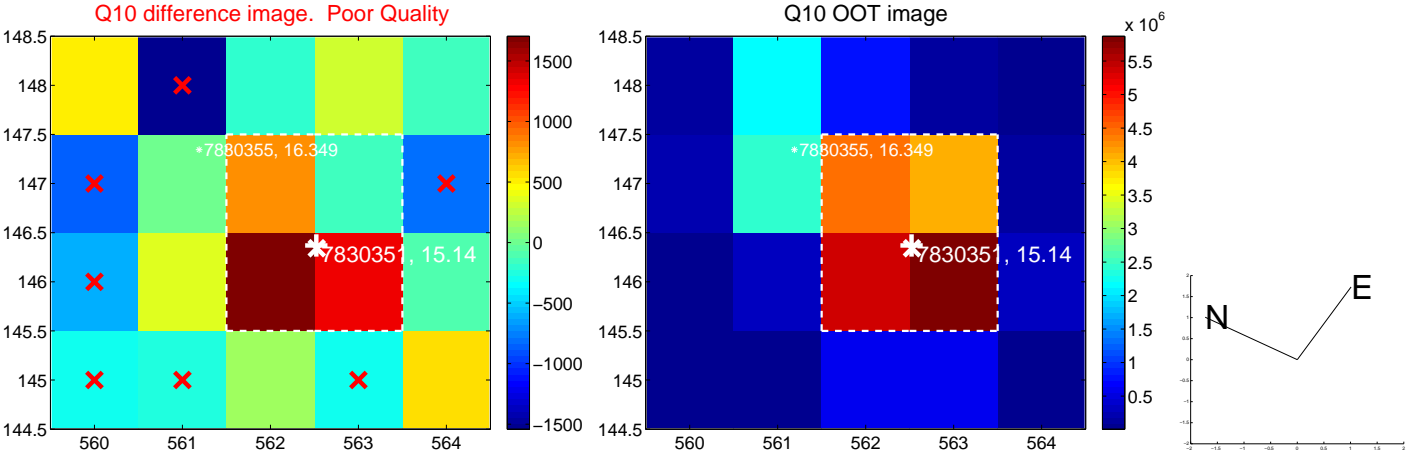
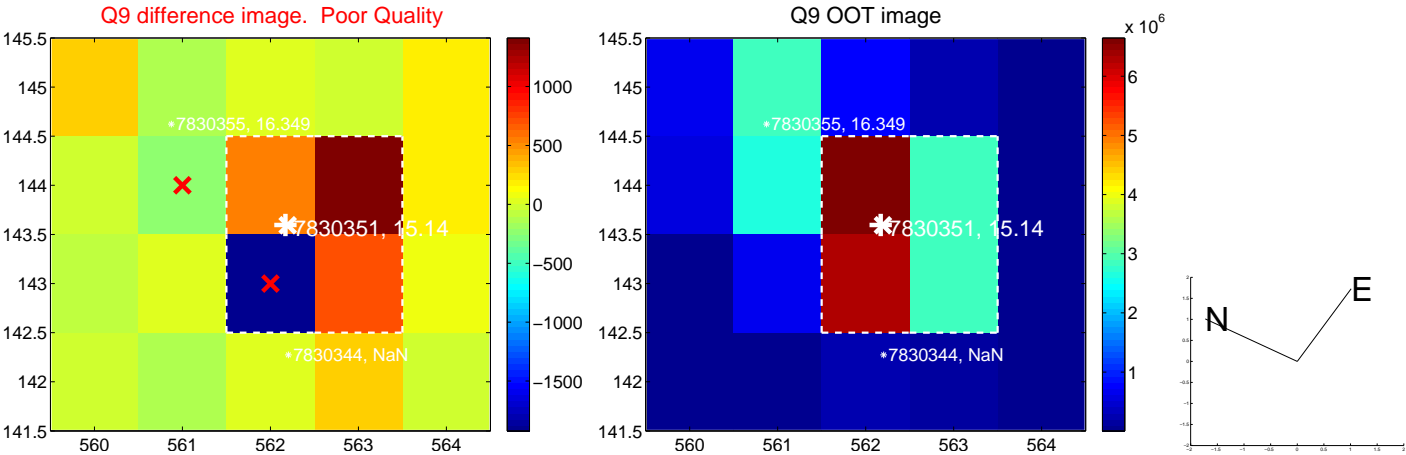
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



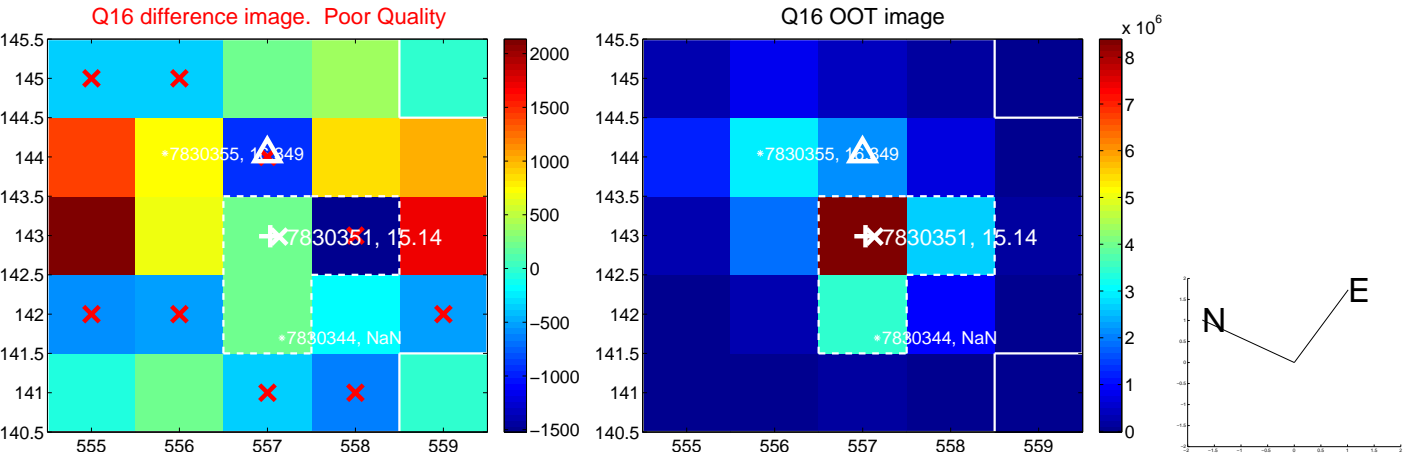
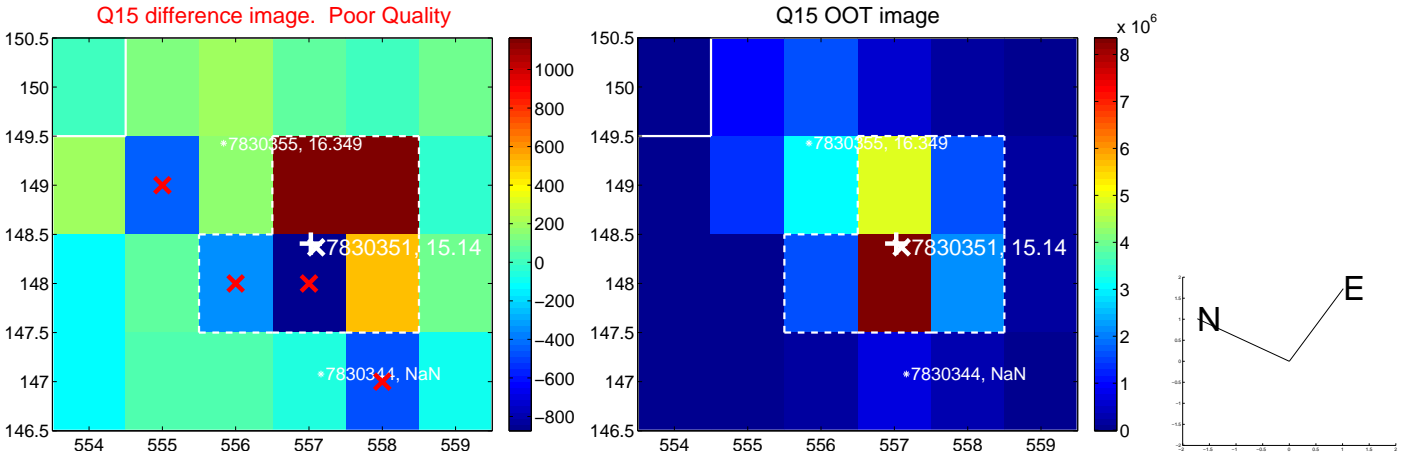
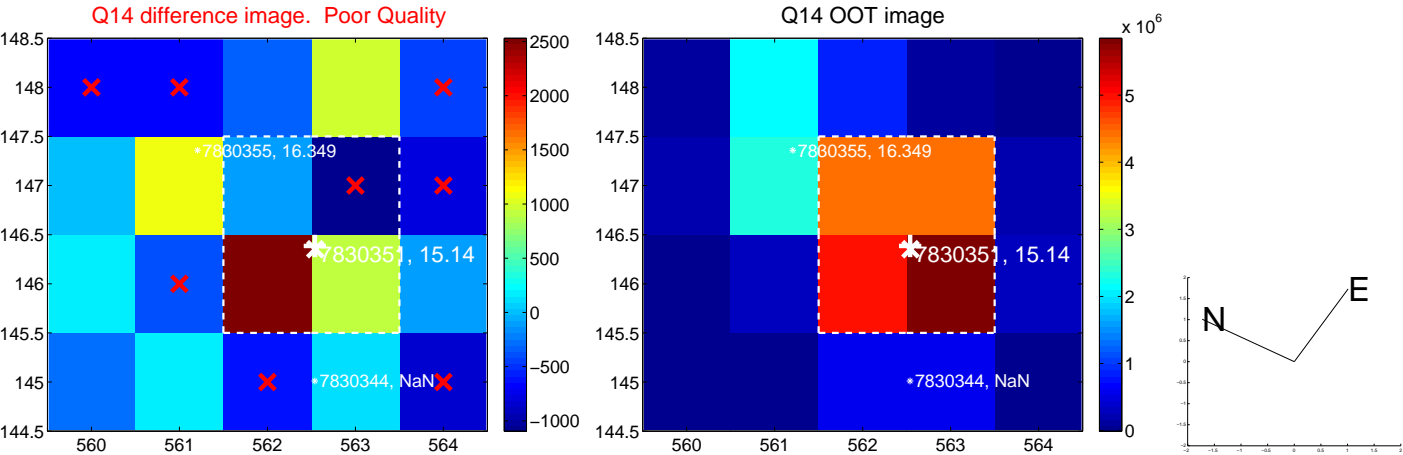
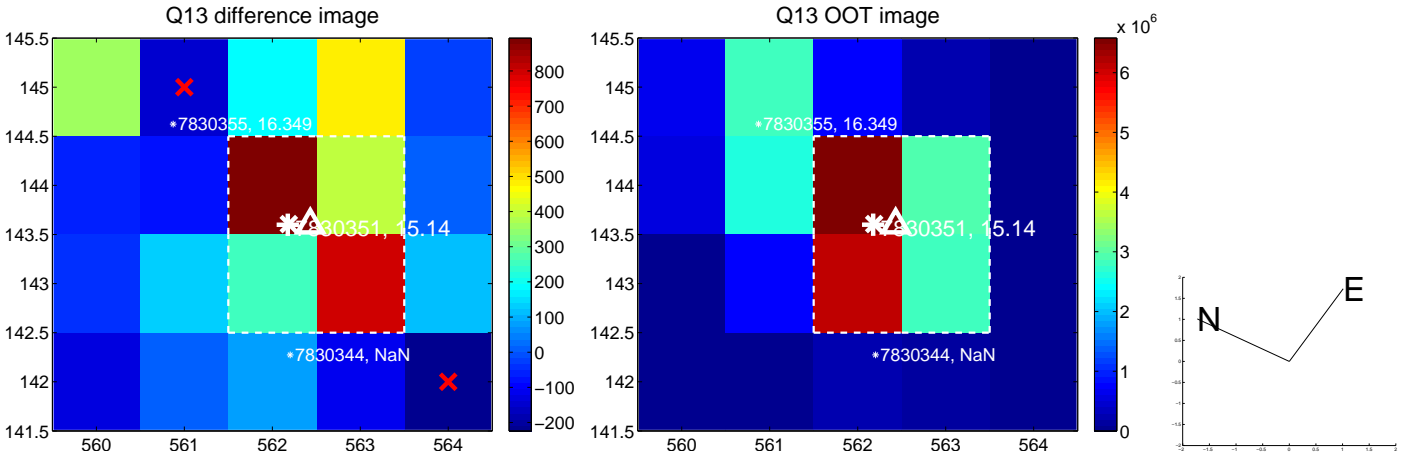
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



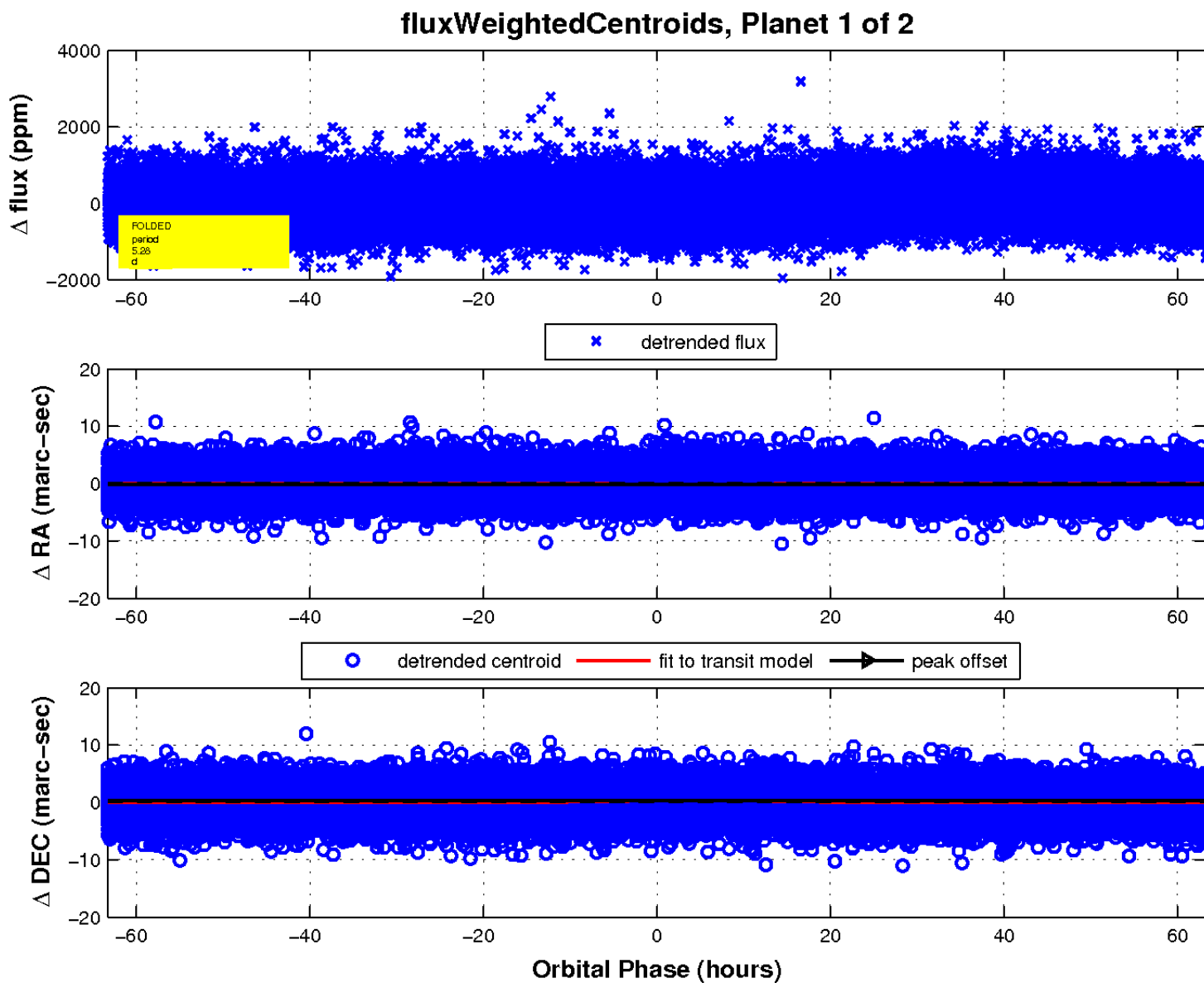
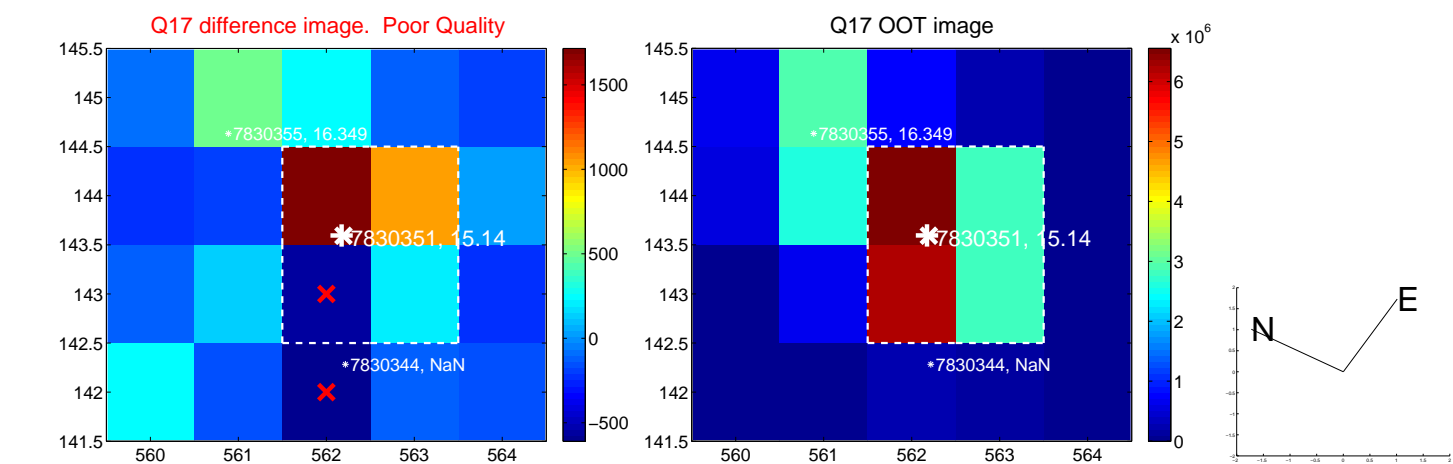
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

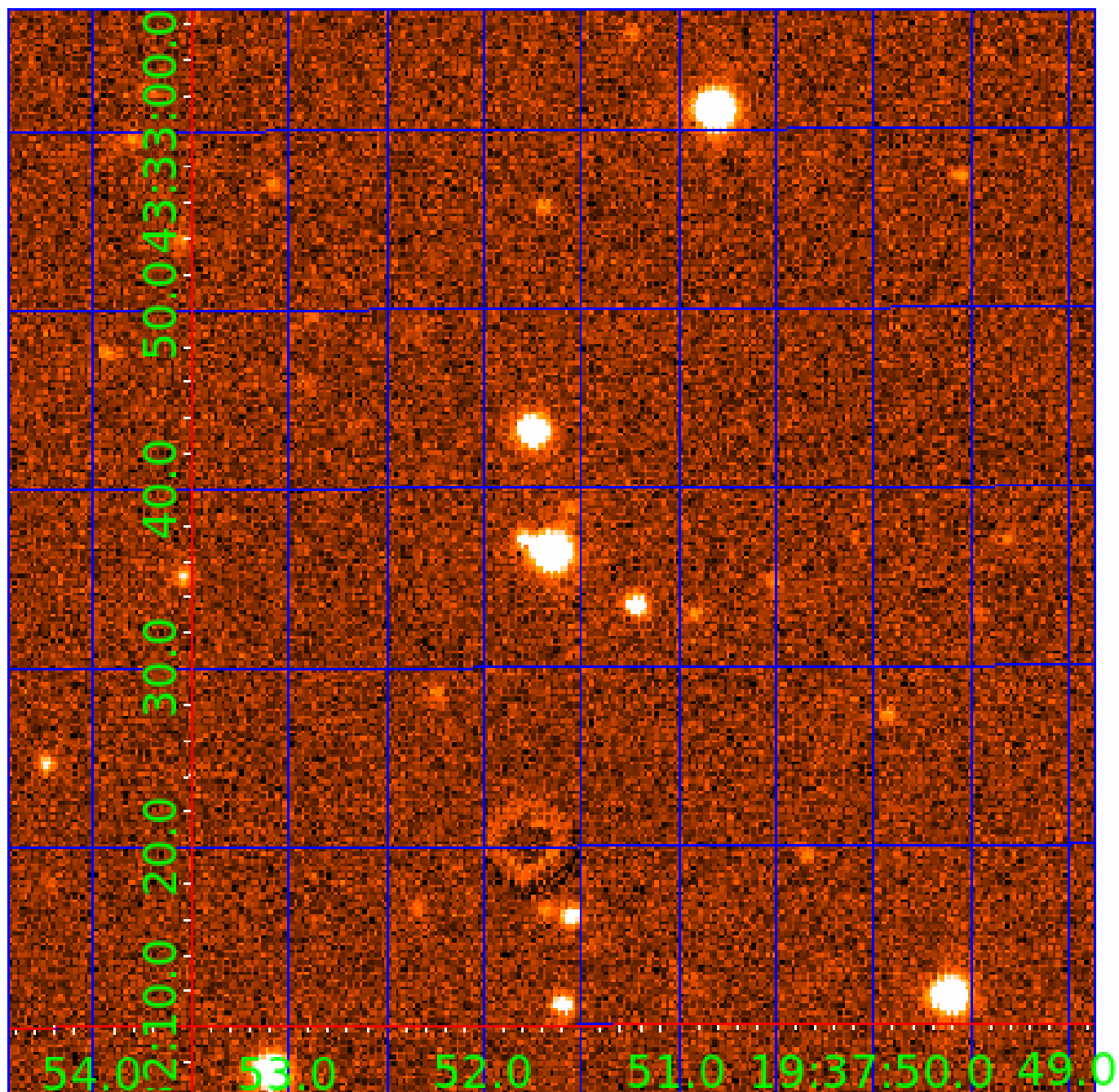


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007830351

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})
007830351-01	OBS	No	5.275844	132.457749	279.0	15.000	7.6	-1.0	1.06	6321	1.77	424.59
007830351-02	OBS	No	255.075110	372.034596	656.4	0.592	15.8	2.9	1.06	6321	3.27	2.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007830351-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
007830351-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—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.

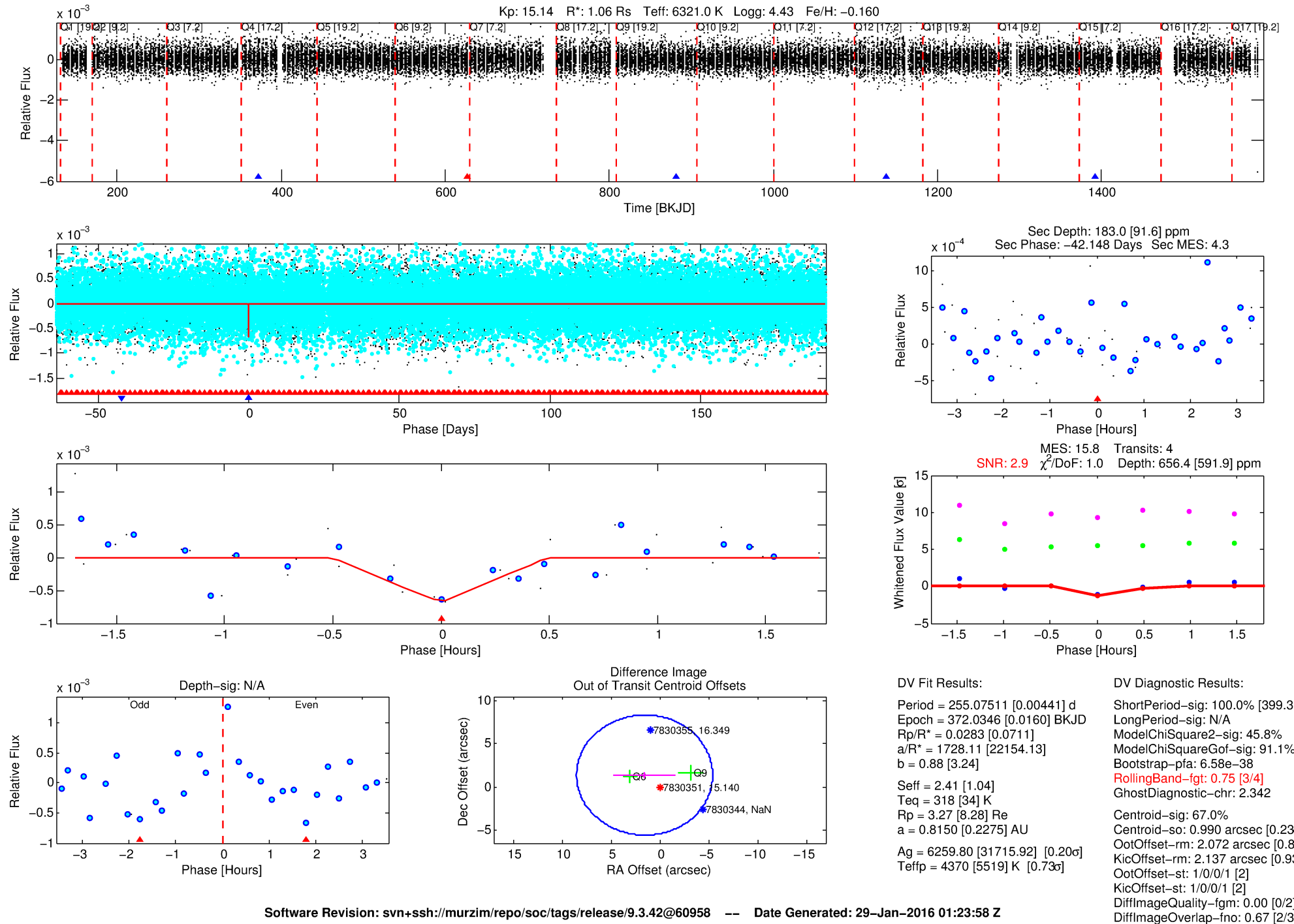
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007830351-02

No Significant Match Found

DV One-Page Summary

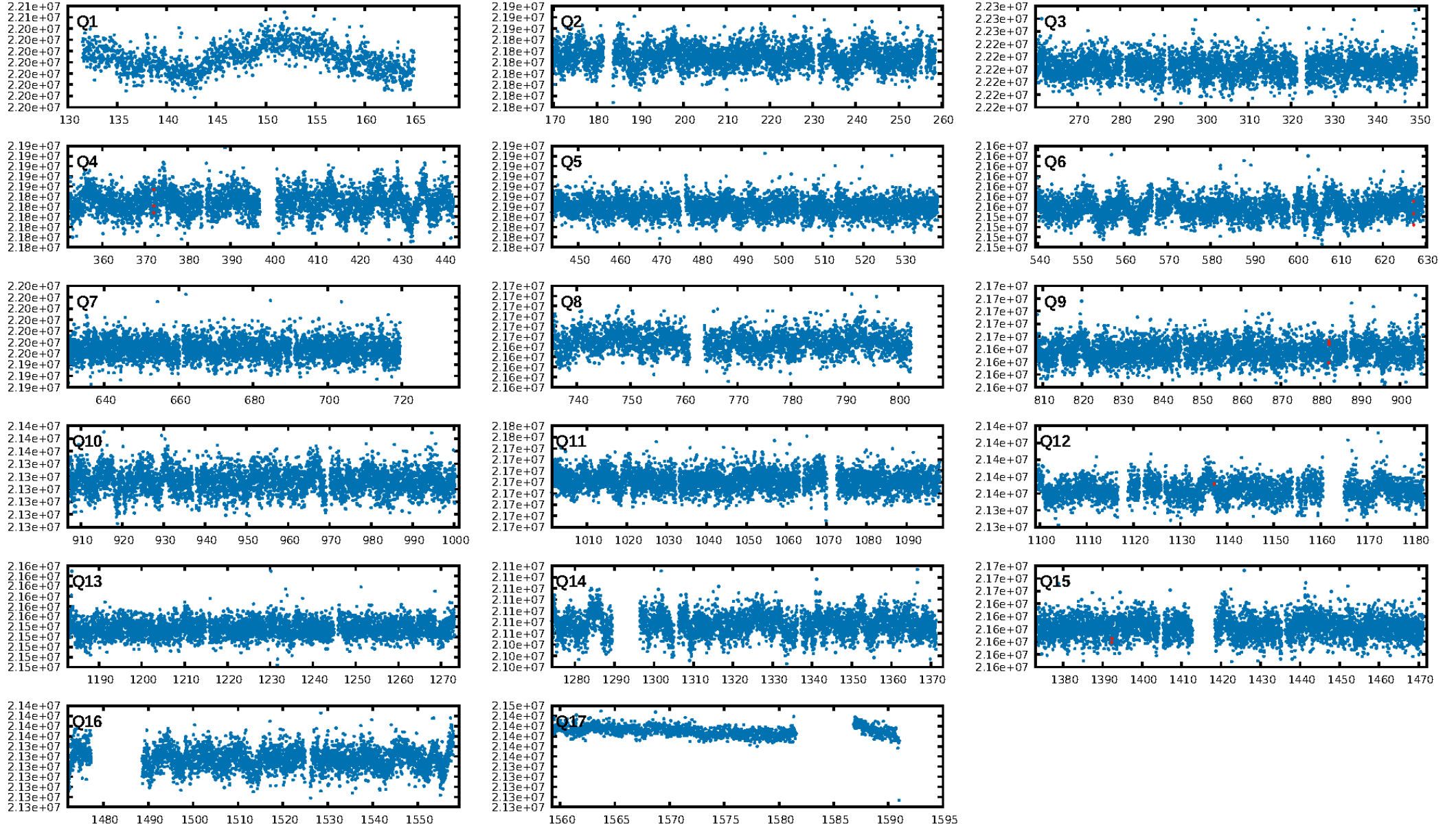
KIC: 7830351 Candidate: 2 of 2 Period: 255.075 d



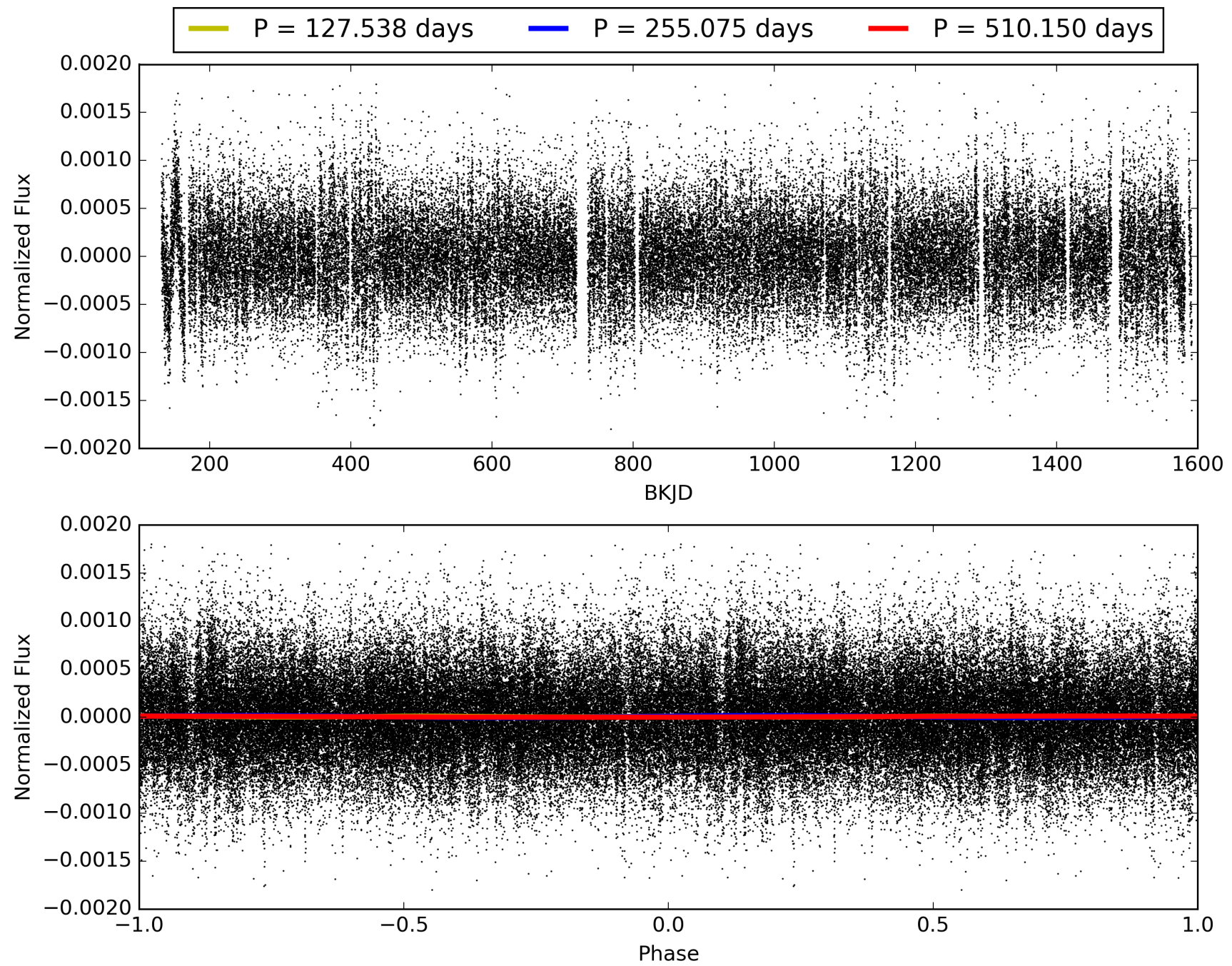
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:23:58 Z

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

TCE 007830351-02, PDC Light Curves

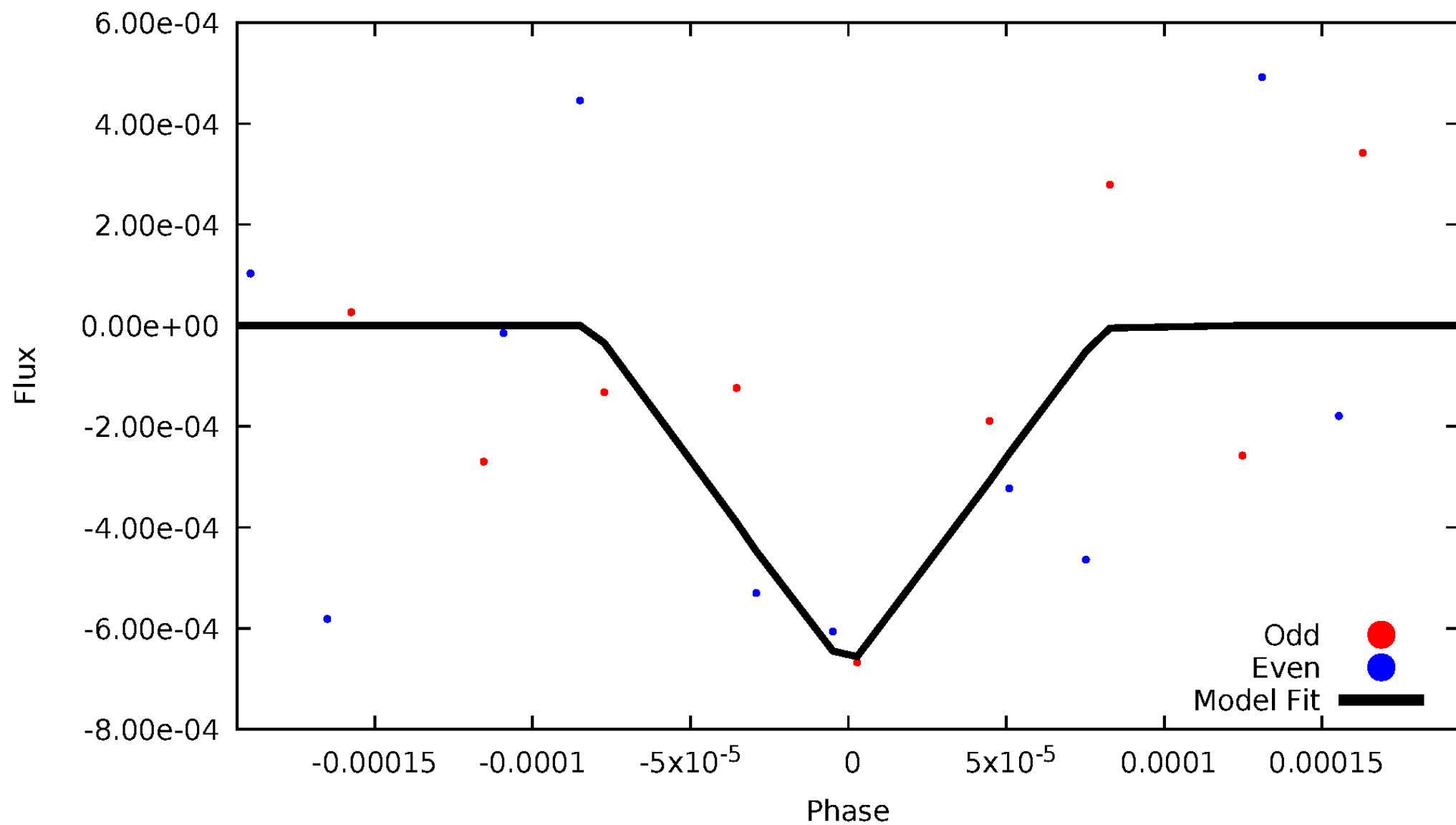


TCE 007830351-02



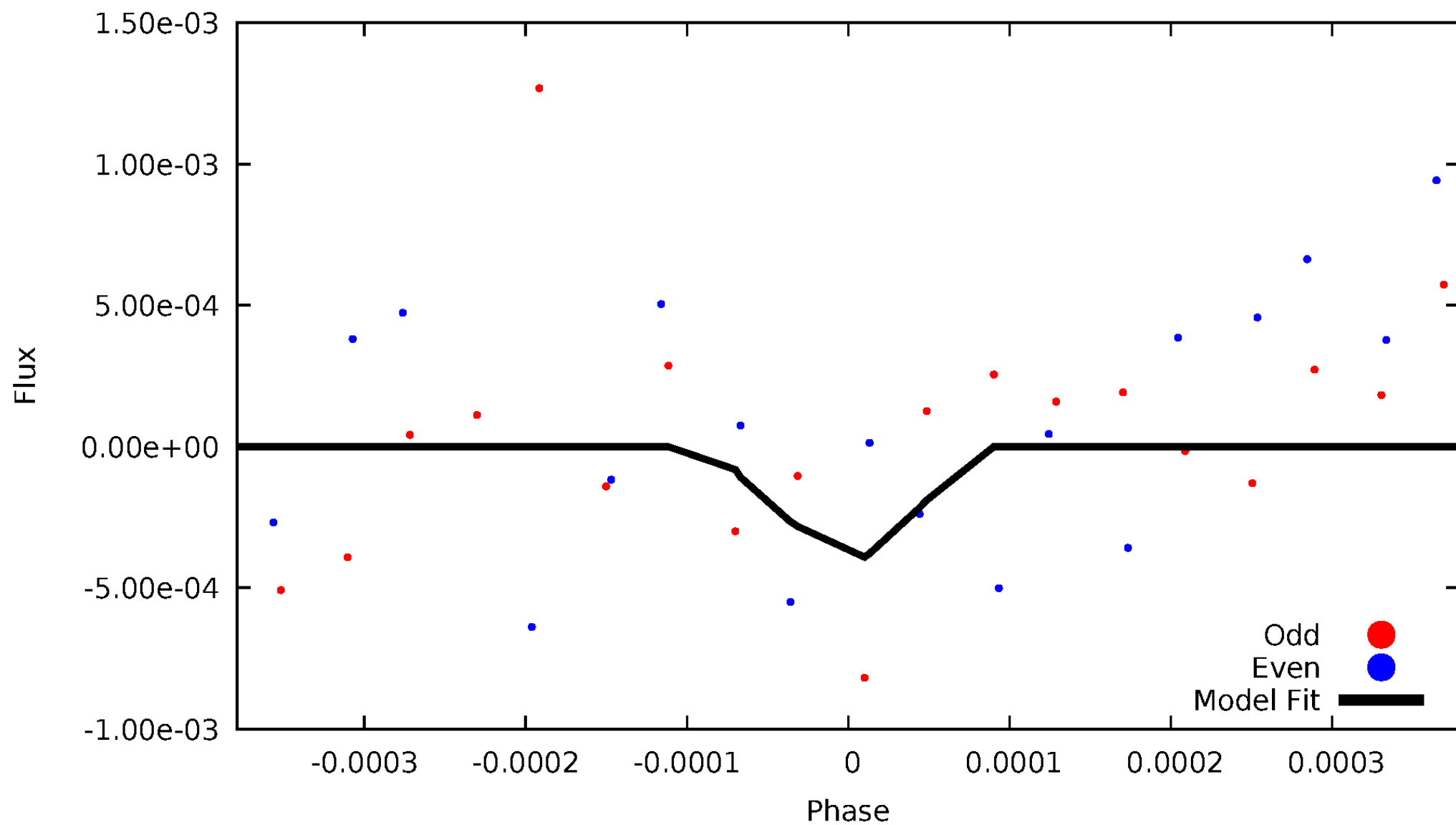
DV Odd/Even

TCE 007830351-02



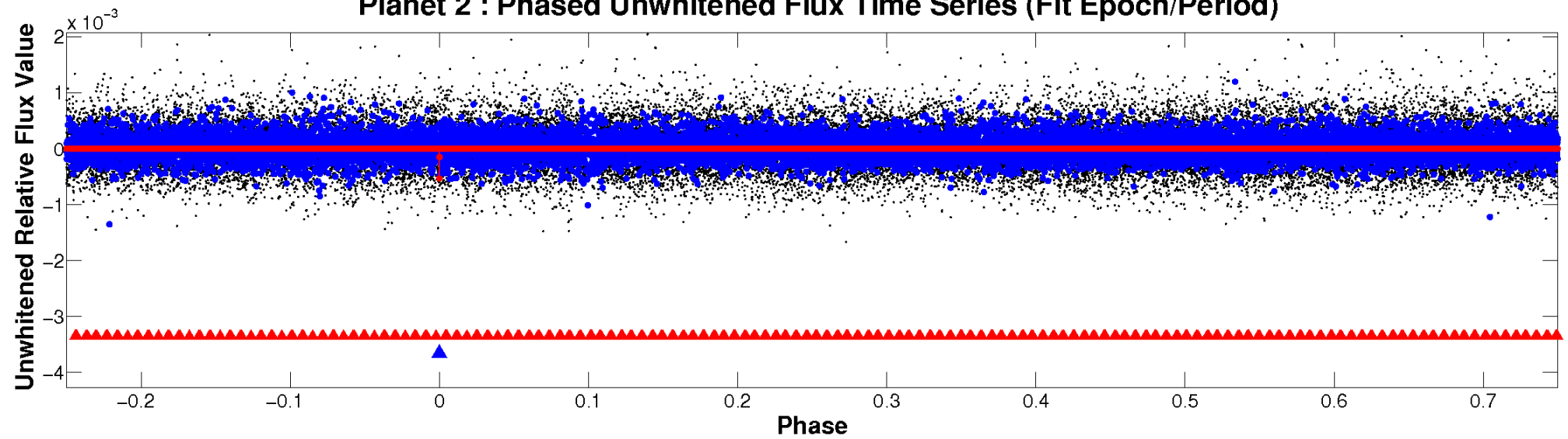
ALT Odd/Even

TCE 007830351-02

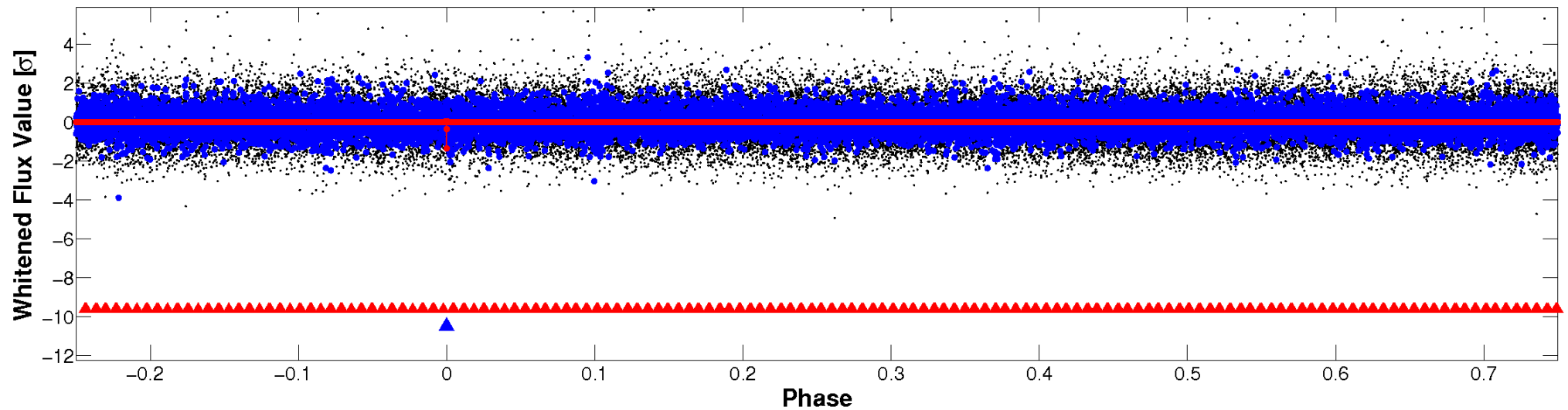


Non-Whitened Vs. Whitened Light Curve

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

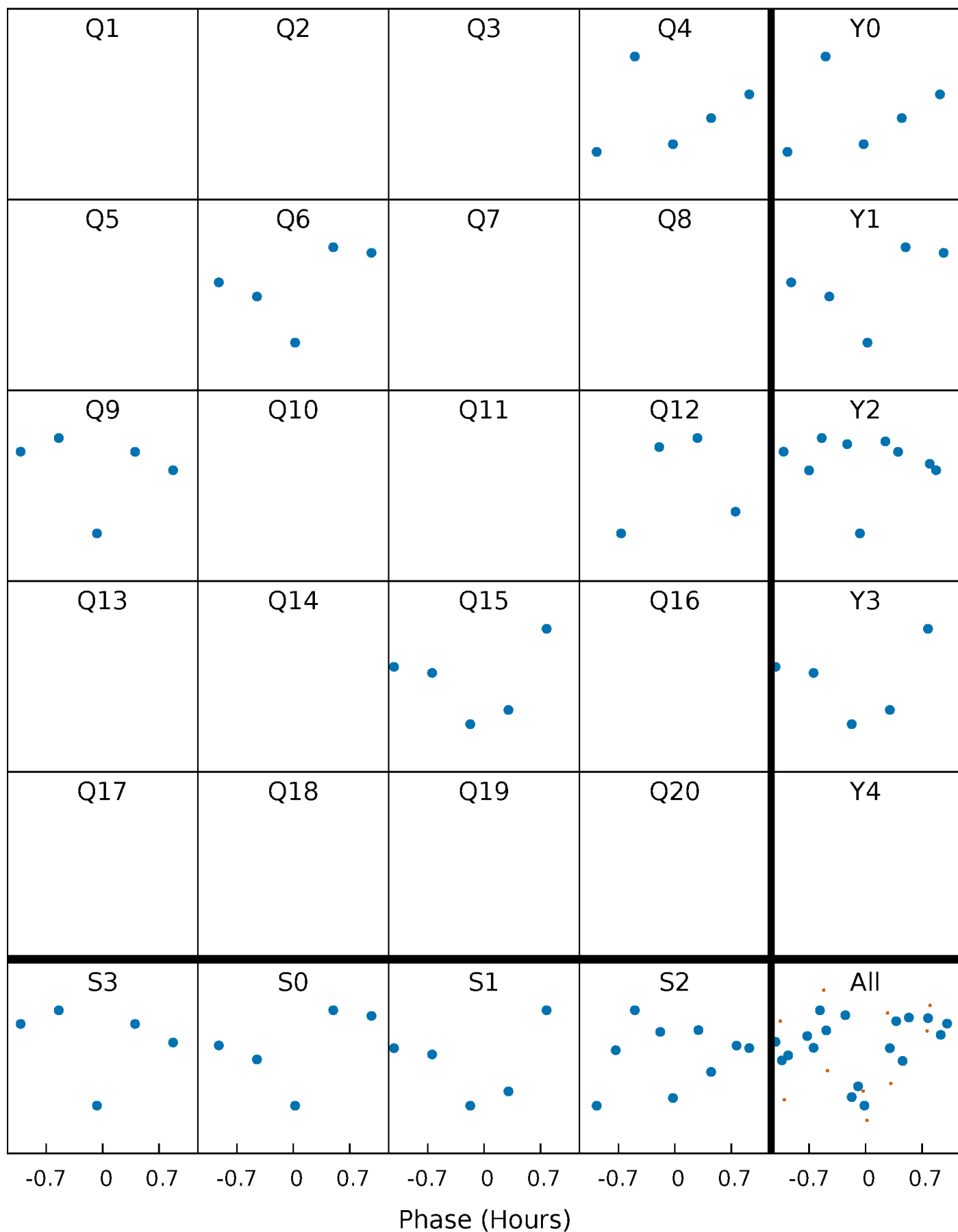


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



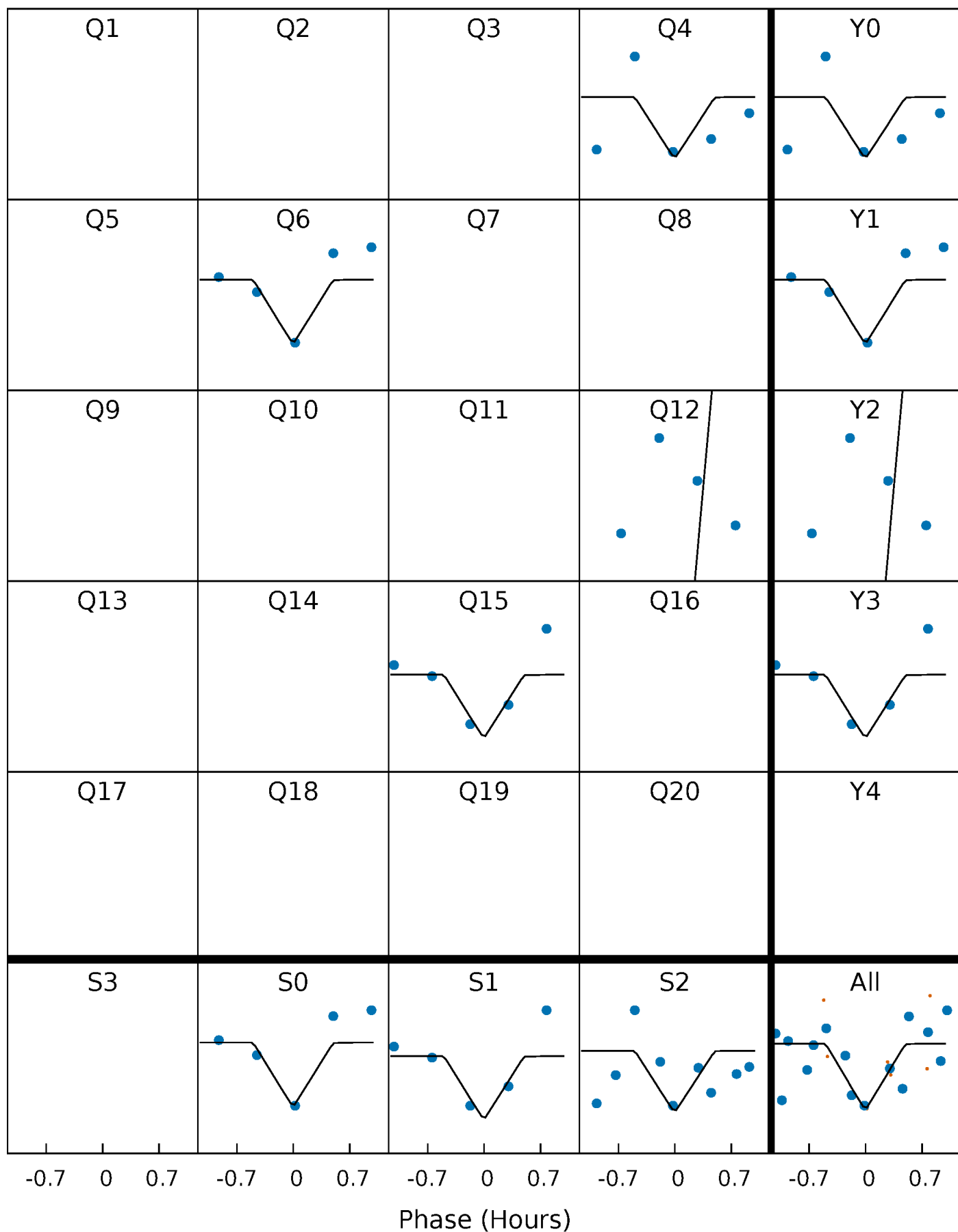
PDC Quarter-Phased Transit Curves

TCE 007830351-02 P=255.075110 Days $T_0=372.034596$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007830351-02 P=255.075110 Days $T_0=372.034596$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

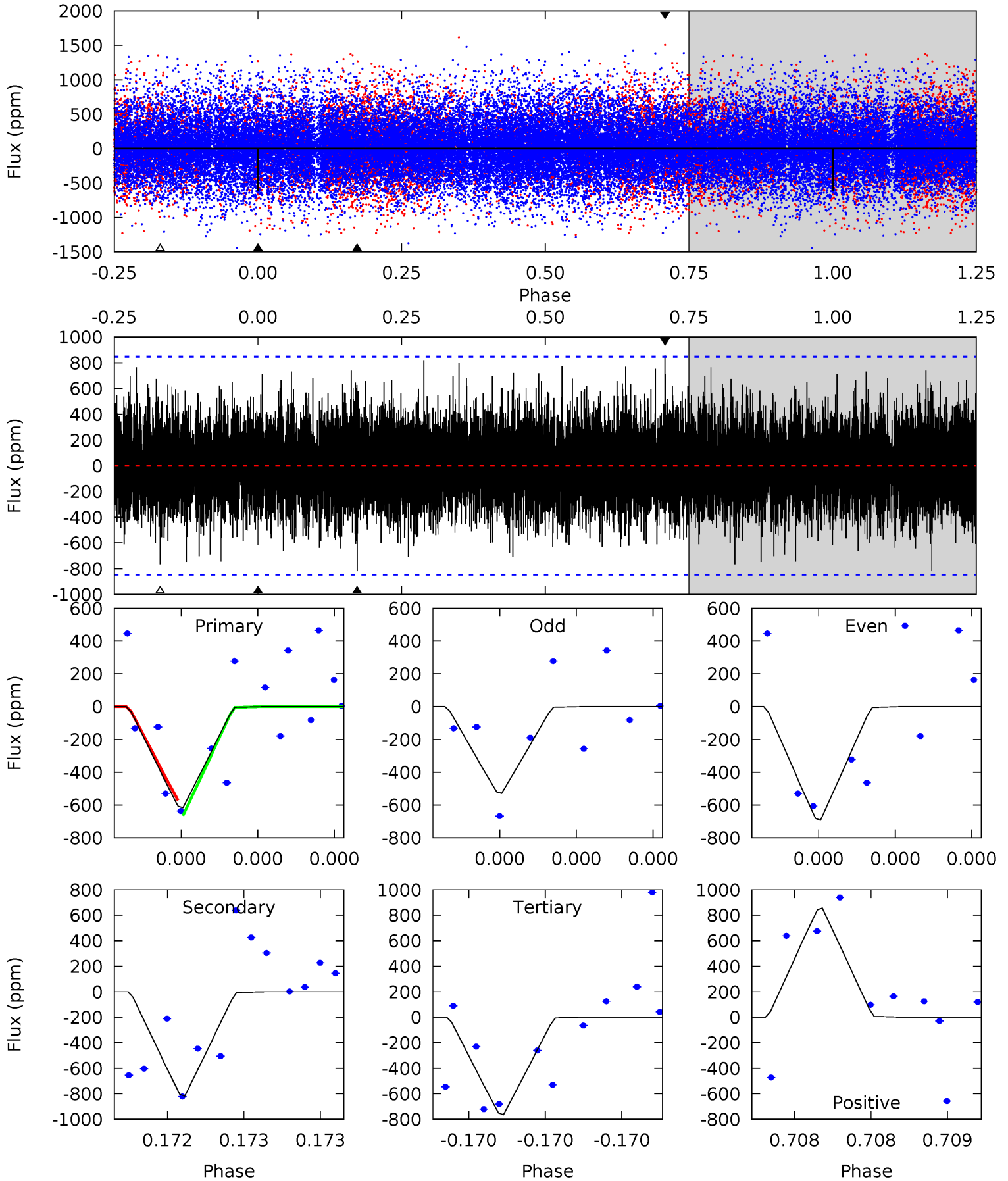
TCE 007830351-02 P=255.065318 Days $T_0=372.042531$ (BKJD)



DV Model-Shift Uniqueness Test

007830351-02, P = 255.075110 Days, E = 116.959486 Days

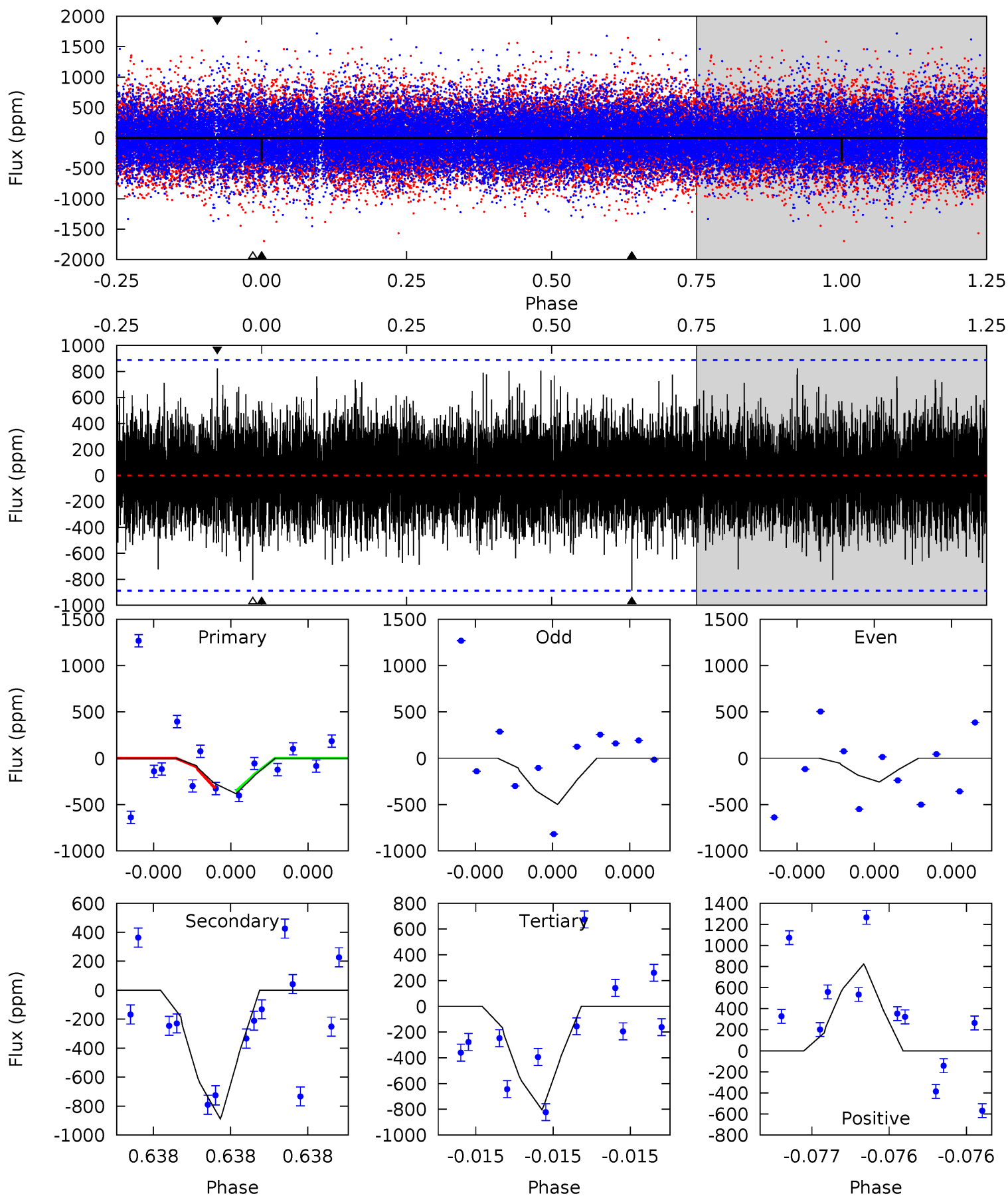
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.24	5.63	5.25	5.89	5.82	3.85	1.31	-1.01	-1.65	0.38	-0.26	0.53	0.91	0.51	0.31



Alt Model-Shift Uniqueness Test

007830351-02, P = 255.065318 Days, E = 116.977213 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.48	5.78	5.23	5.36	5.77	3.78	1.28	-2.74	-2.88	0.55	0.42	0.79	1.10	0.48	0.10



Stellar Parameters For KIC 007830351

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6321^{+175}_{-219}	$4.434^{+0.056}_{-0.224}$	$-0.160^{+0.250}_{-0.300}$	$1.058^{+0.349}_{-0.116}$	$1.108^{+0.154}_{-0.154}$	$1.317^{+0.384}_{-0.701}$
	+3%/-3%	+1%/-5%	+156%/-188%	+33%/-11%	+14%/-14%	+29%/-53%
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 007830351-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-818 ± 145	$7.24^{+7.65}_{-4.95}$	454^{+32}_{-22}	4498^{+3472}_{-949}	5384^{+52372}_{-4098}
Alt.	-889 ± 154	$6.70^{+6.50}_{-4.32}$	453^{+35}_{-22}	4787^{+3167}_{-1095}	7272^{+47863}_{-5484}

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

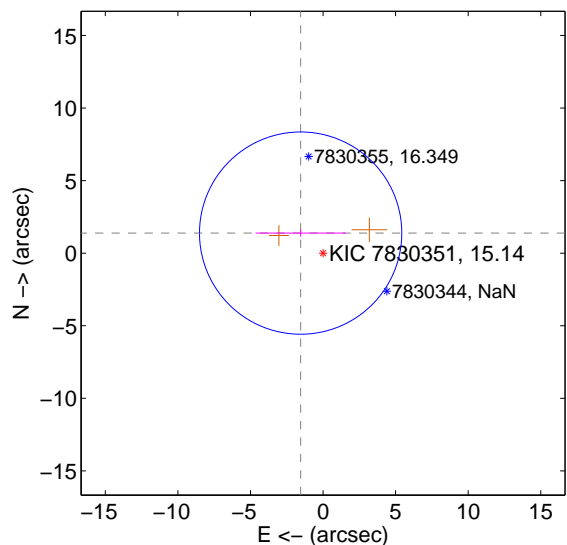
Supplemental centroid analysis for 007830351-02. Kepler magnitude: 15.14. Transit SNR 2.88

There are 0 quarters with good PRF difference image offsets

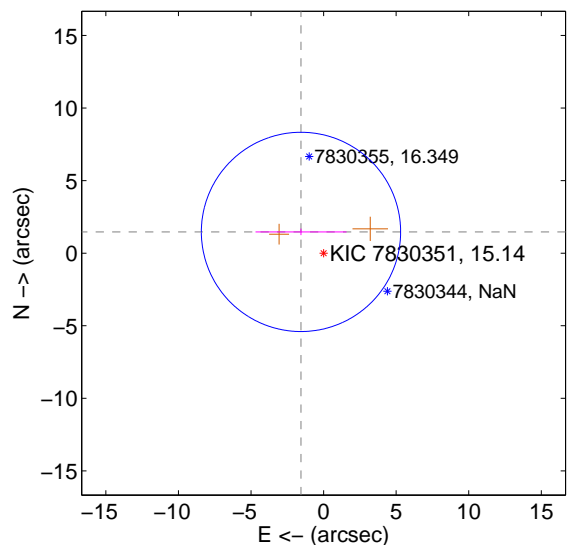
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.072 ± 2.322	0.89	1.543 ± 3.110	1.382 ± 0.238
PRF-fit source offset from KIC position	2.137 ± 2.288	0.93	1.556 ± 3.135	1.465 ± 0.223
photometric centroid source offset	0.99 ± 4.30	0.23	0.72 ± 3.97	-0.68 ± 4.64

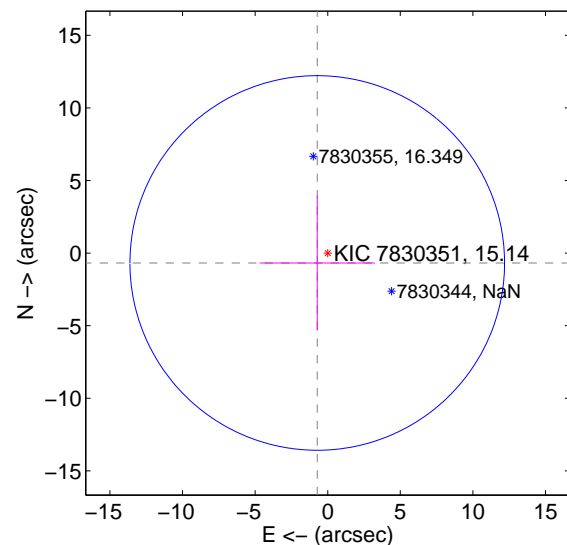
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

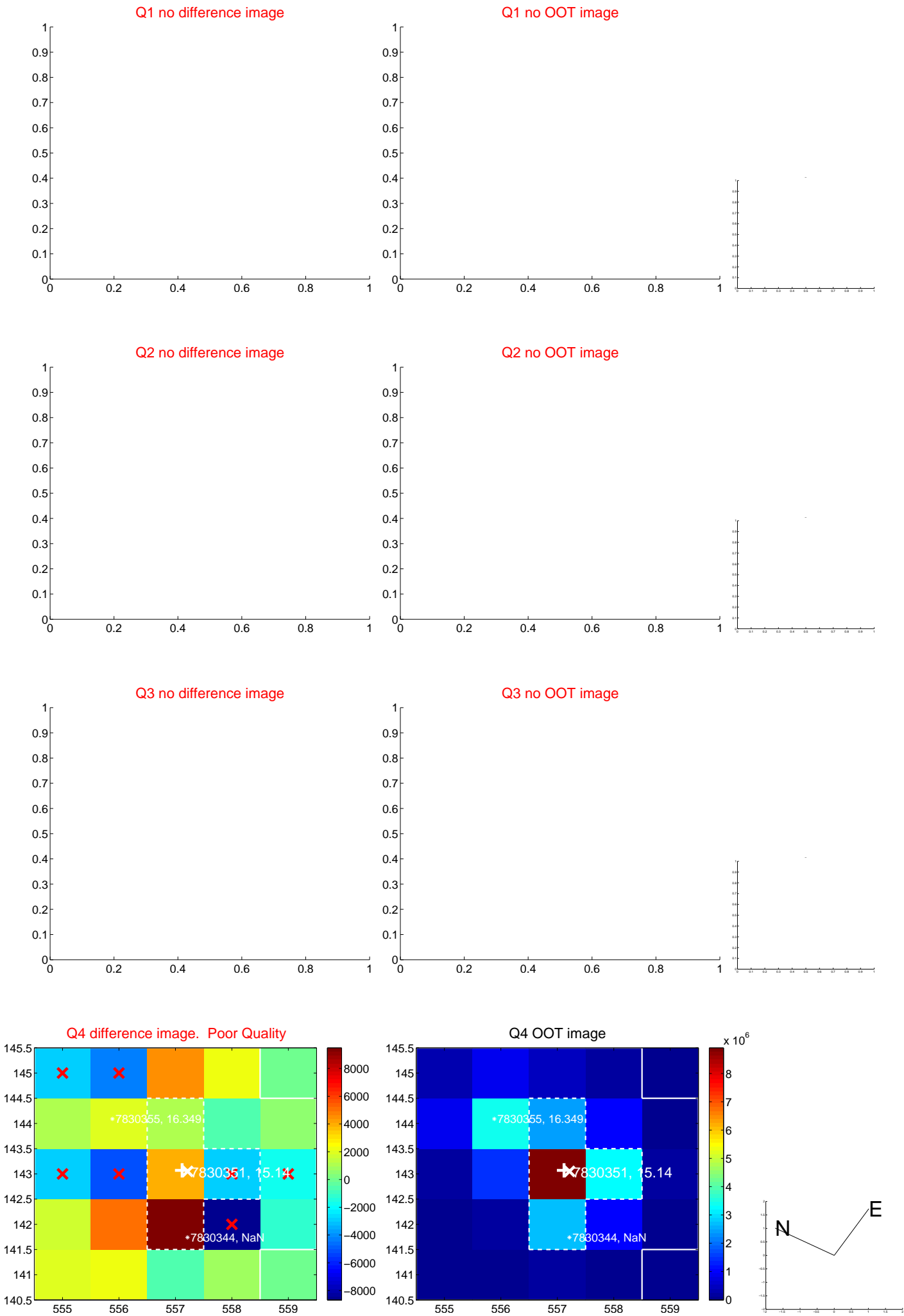


offset from photometric centroids

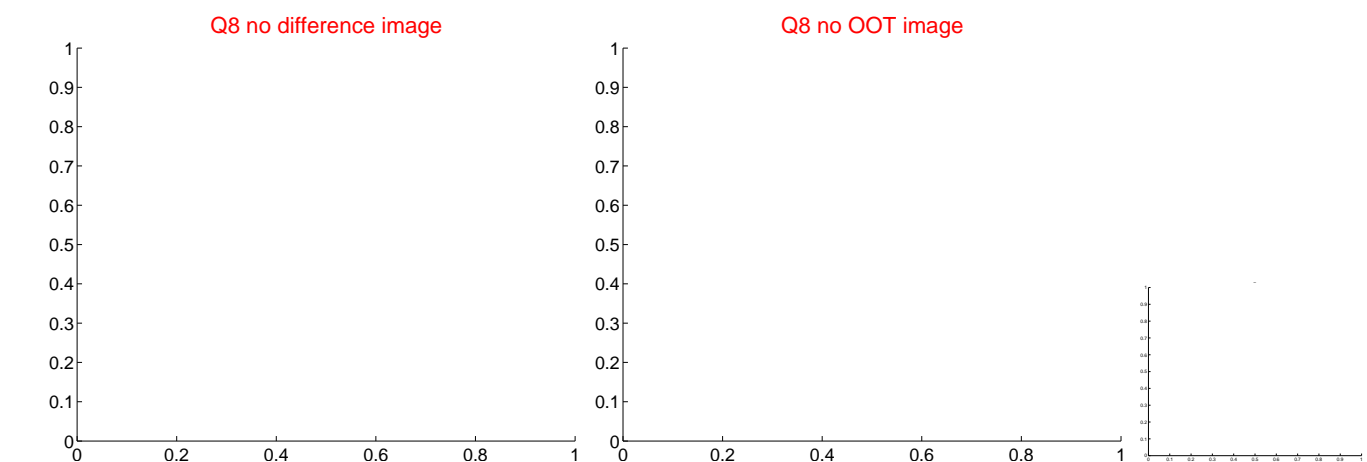
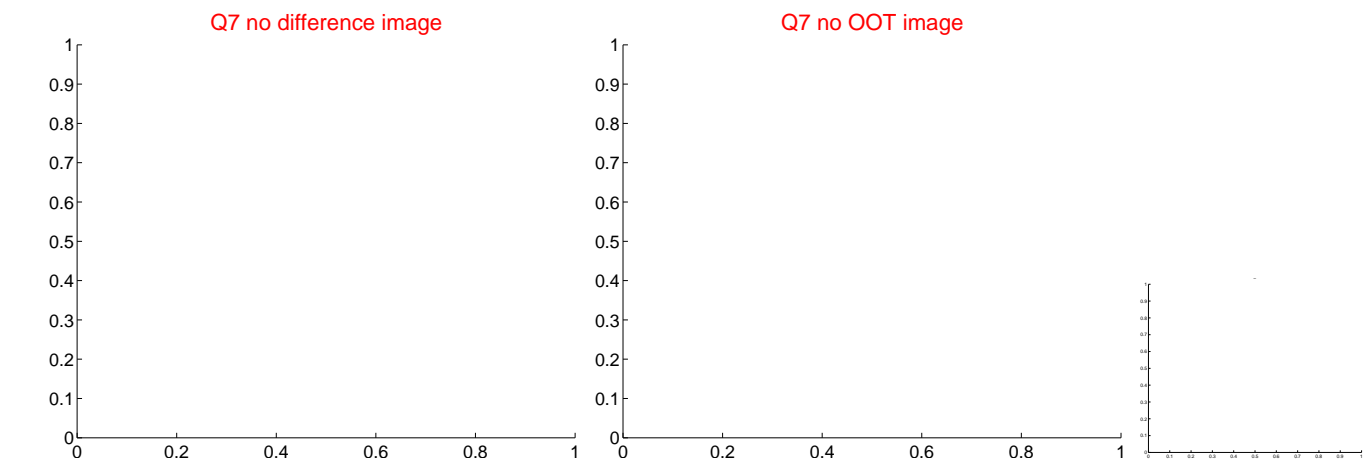
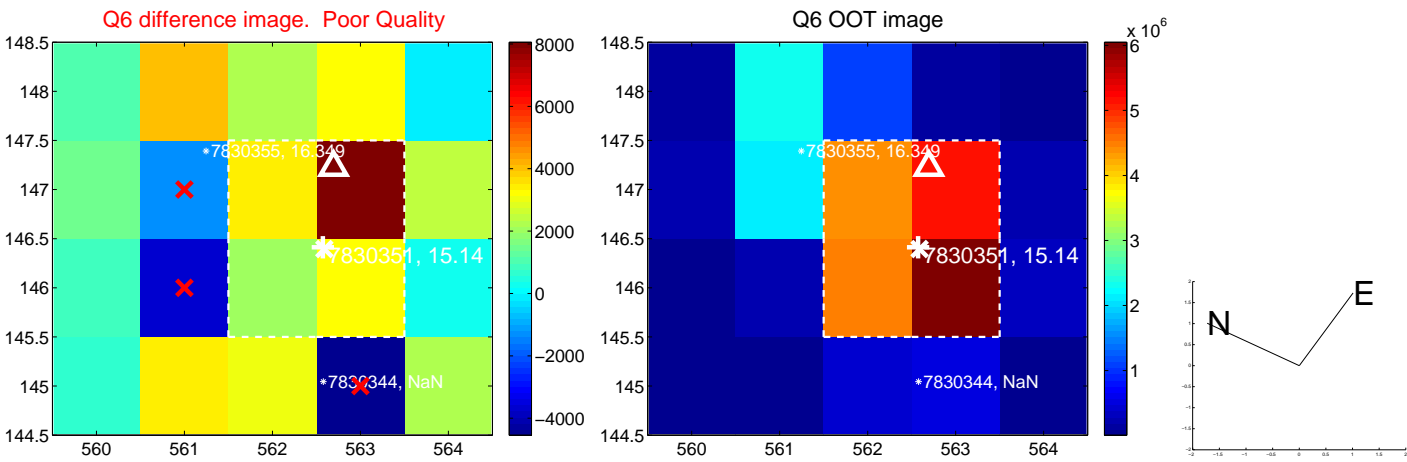
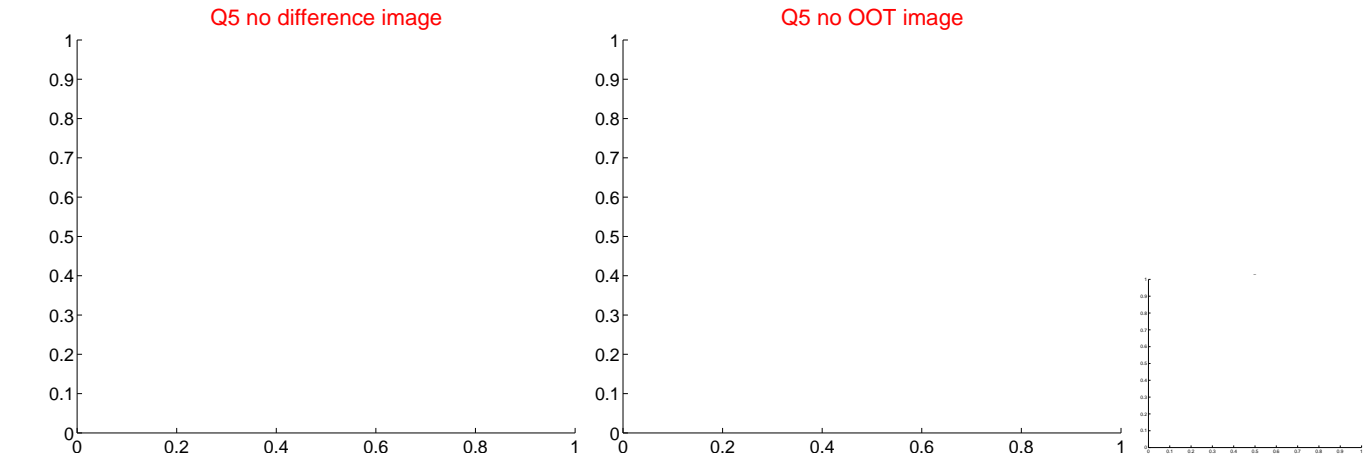


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

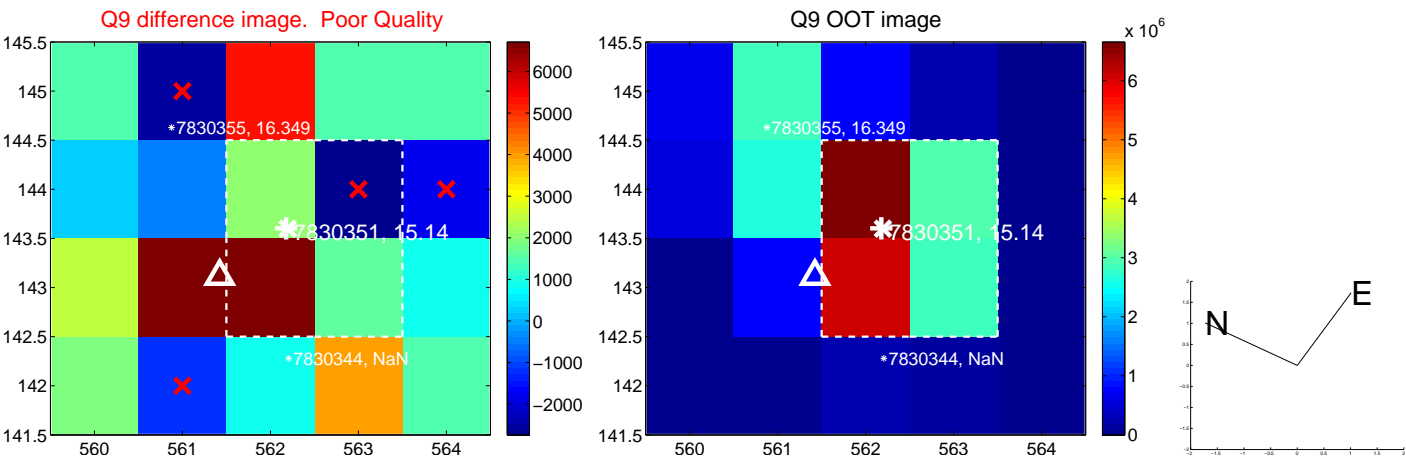
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



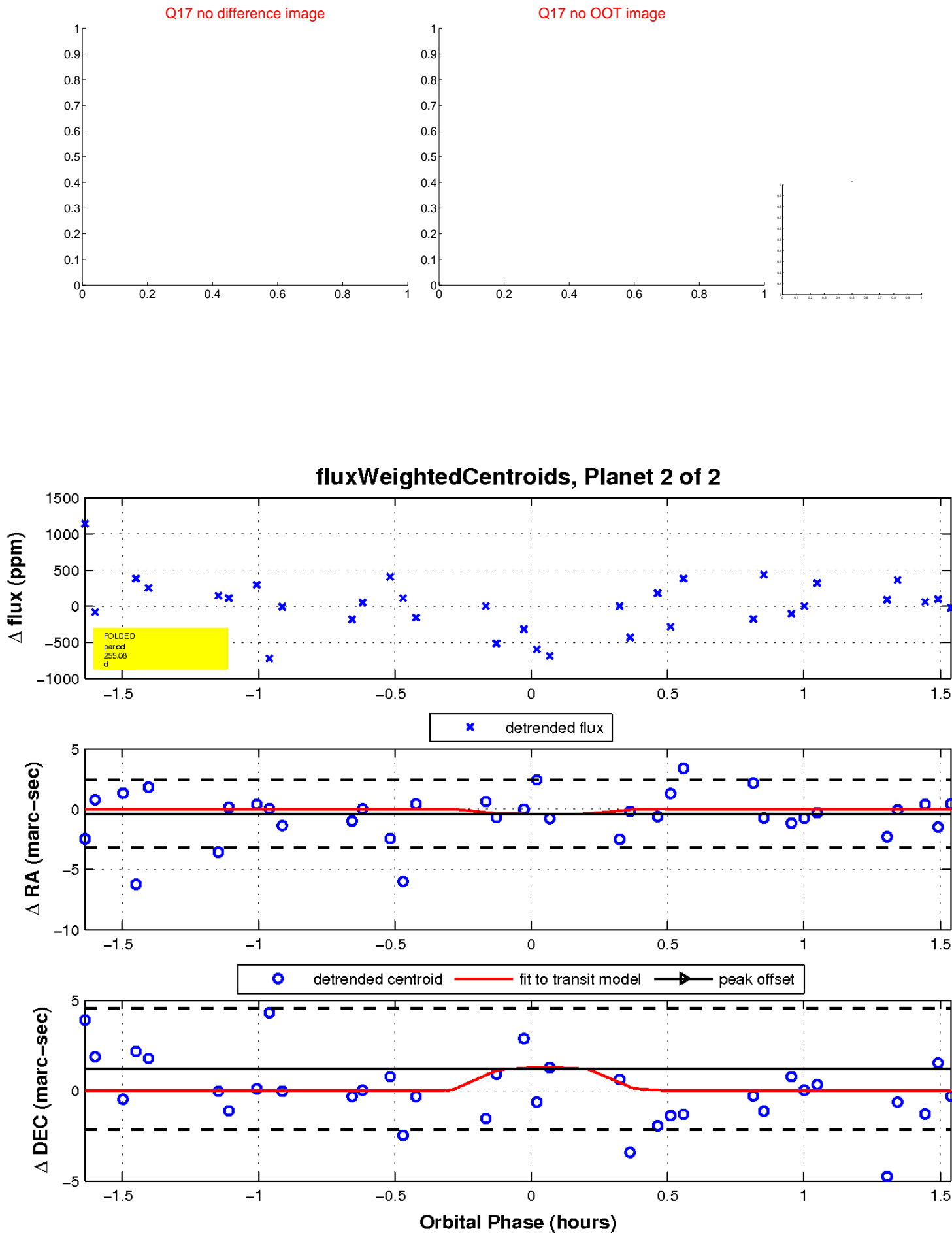
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

