

KIC 007694191

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})
007694191-01	OBS	No	1.654376	132.341336	10.1	7.296	9.2	8.8	3.43	8070	1.27	38273.97
007694191-02	OBS	No	620.299712	213.996306	307.1	3.623	9.5	7.3	3.43	8070	6.94	14.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007694191-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
007694191-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

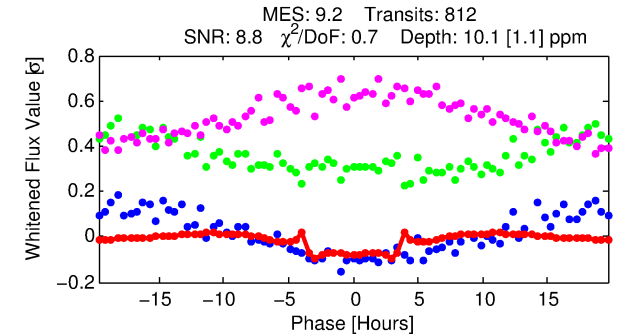
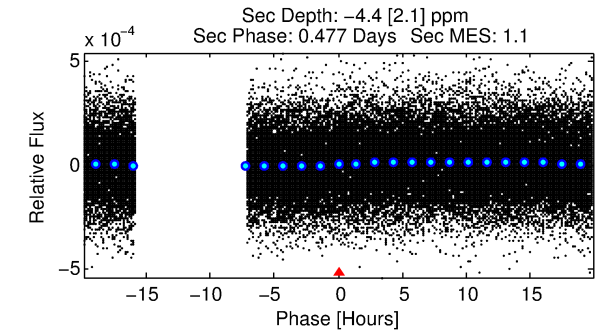
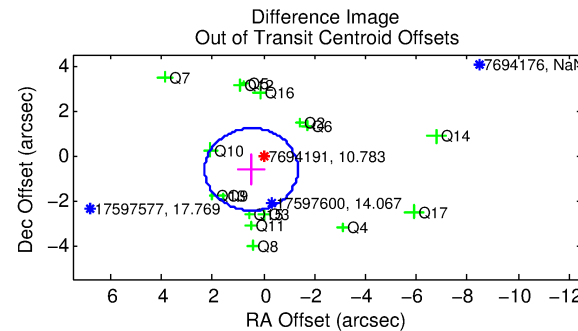
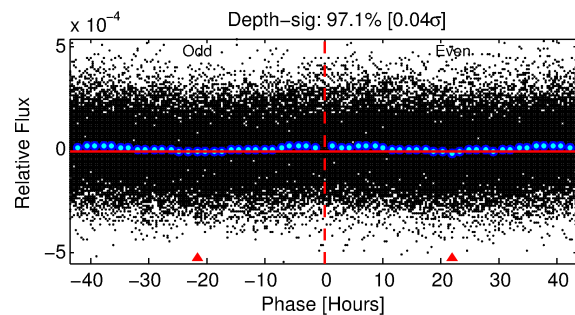
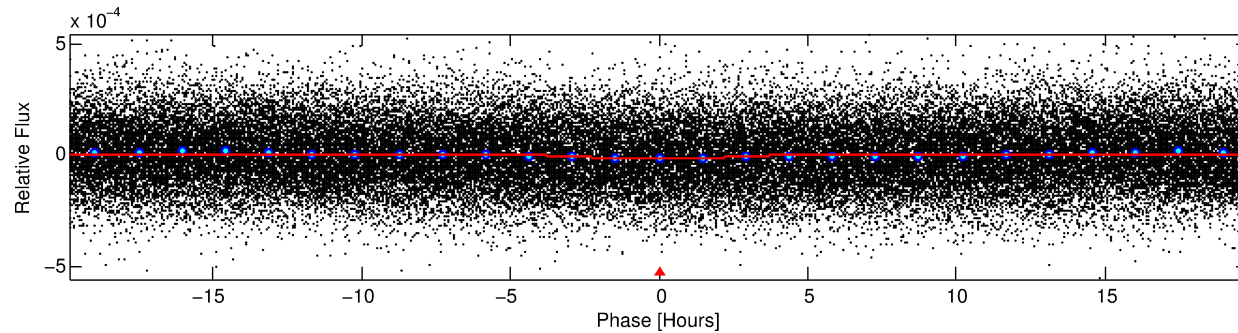
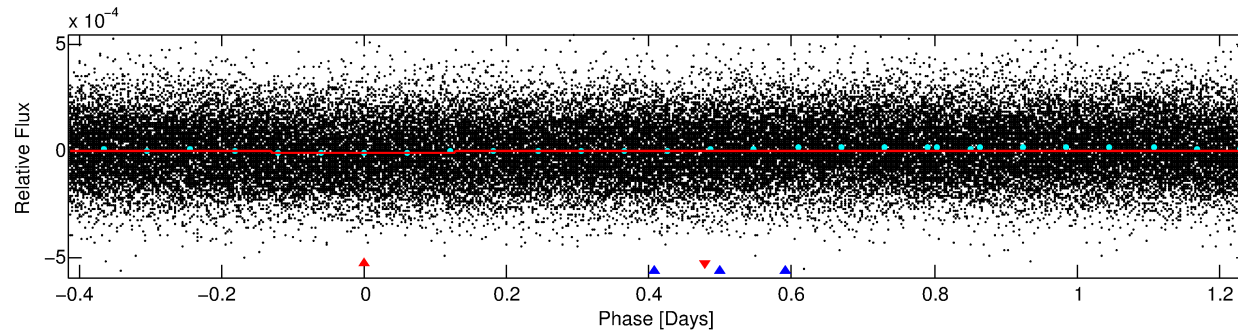
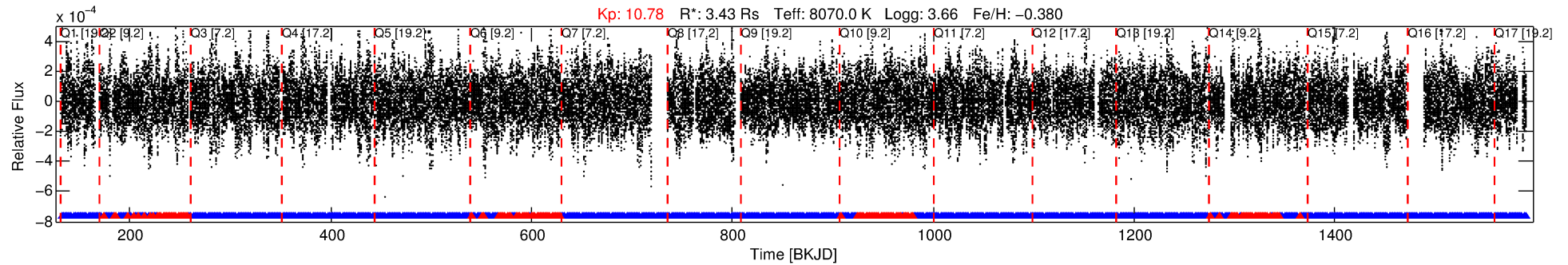
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007694191-01

No Significant Match Found

DV One-Page Summary

KIC: 7694191 Candidate: 1 of 2 Period: 1.654 d



DV Fit Results:

Period = 1.65438 [0.00002] d
Epoch = 132.3413 [0.0032] BKJD
Rp/R* = 0.0034 [0.0005]
a/R* = 1.21 [0.32]
b = 0.90 [0.18]
Seff = 38273.97 [32885.59]
Teq = 3567 [766] K
Rp = 1.27 [0.67] Re
a = 0.0342 [0.0176] AU
Ag = N/A
Teffp = N/A

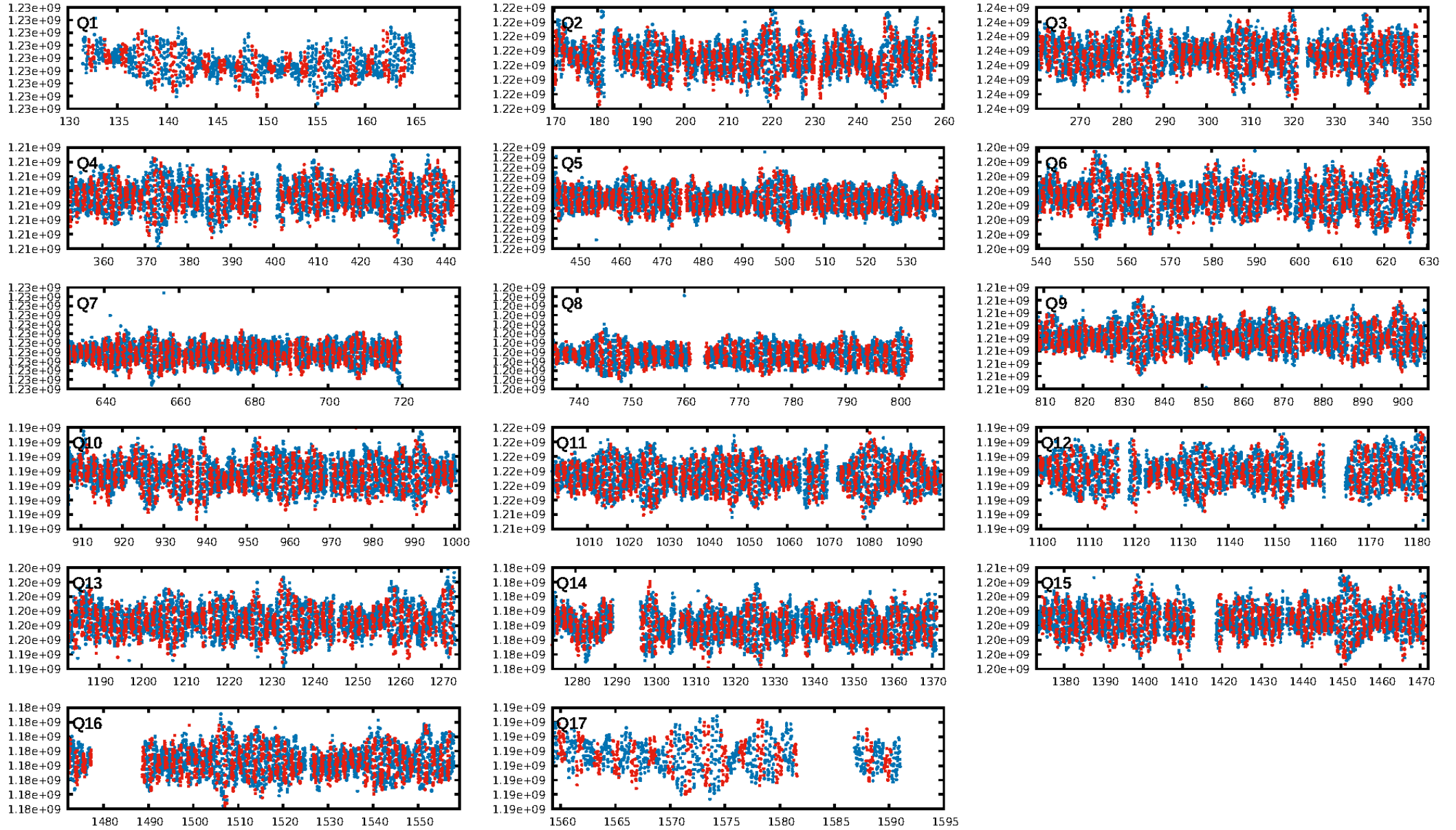
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [1822.68 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.51e-25
RollingBand-fgt: 0.83 [646/776]
GhostDiagnostic-chr: 1.15
Centroid-sig: 3.3%
Centroid-so: 1.711 arcsec [1.62 σ]
OotOffset-rm: 0.788 arcsec [1.29 σ]
KicOffset-rm: 0.361 arcsec [0.56 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.81 [13/16]
DiffImageOverlap-fno: 1.00 [17/17]

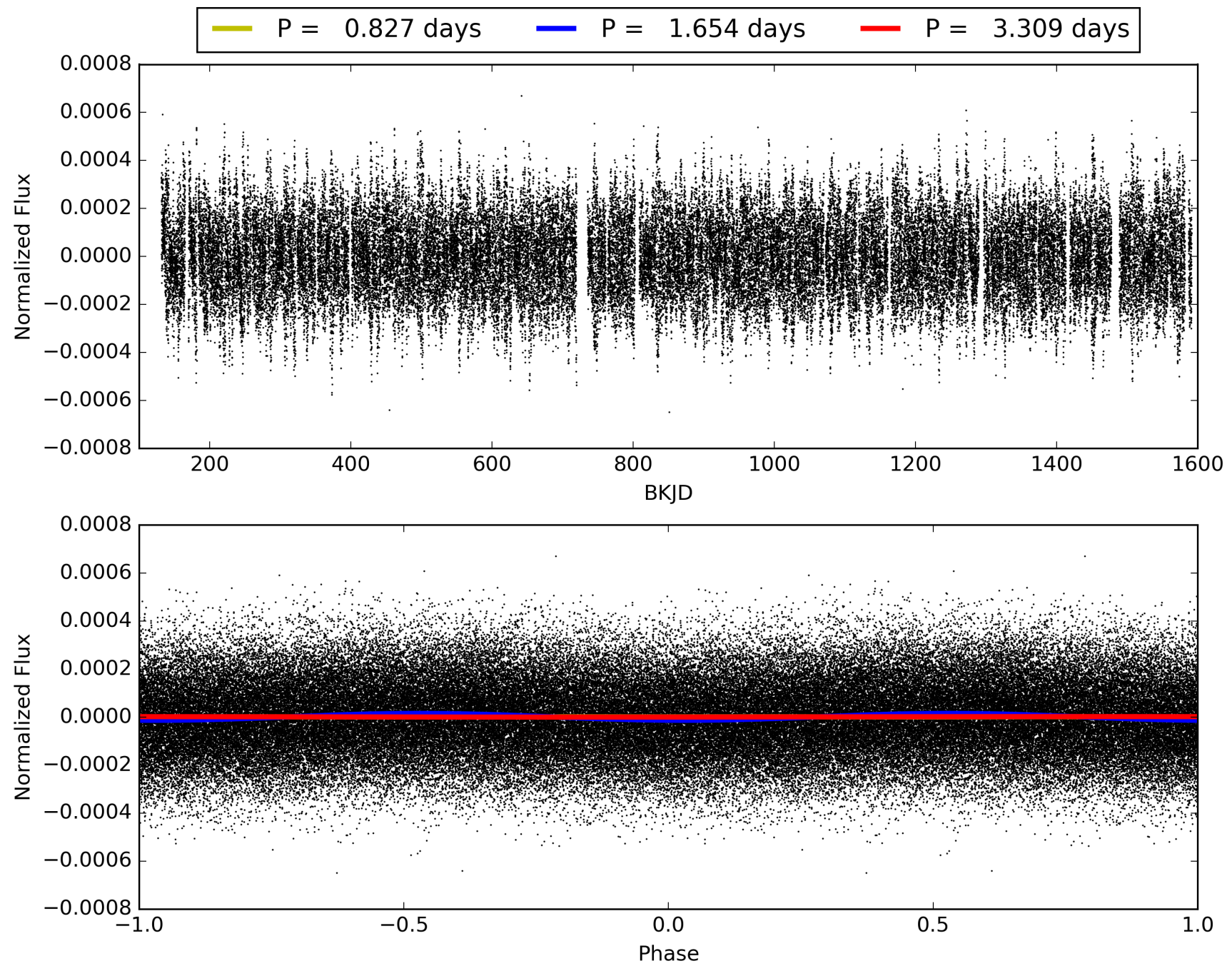
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007694191-01, PDC Light Curves

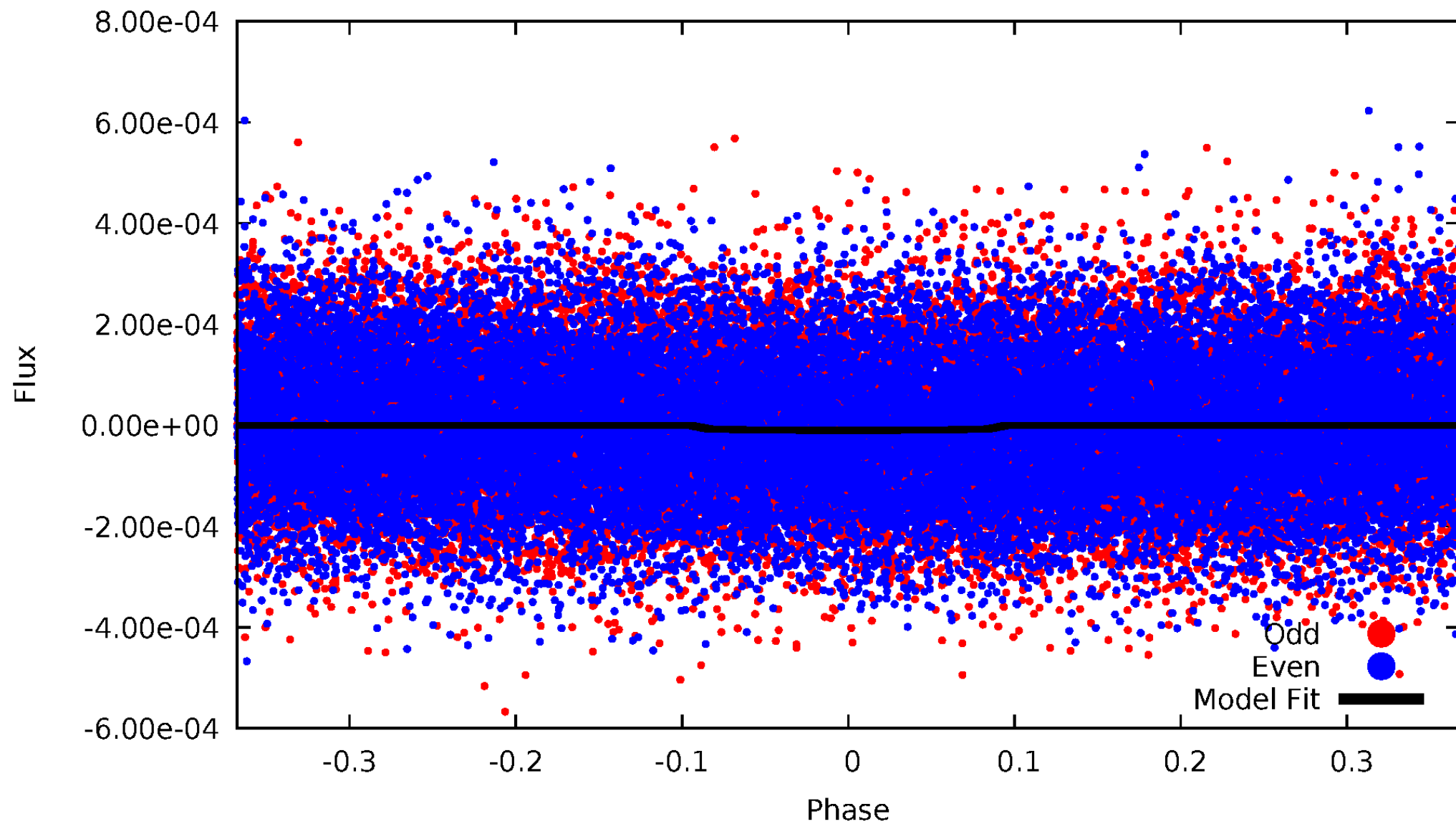


TCE 007694191-01



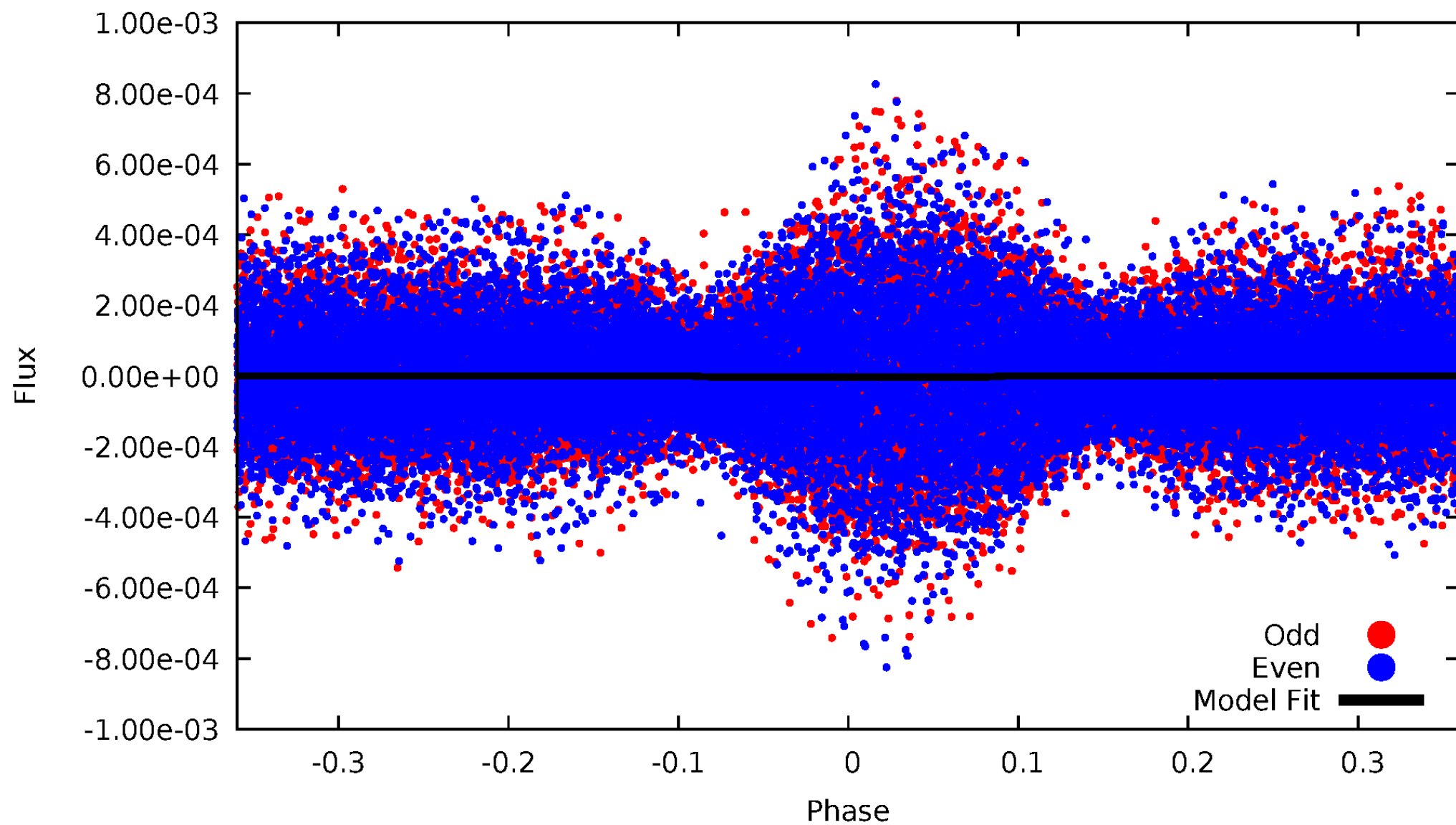
DV Odd/Even

TCE 007694191-01

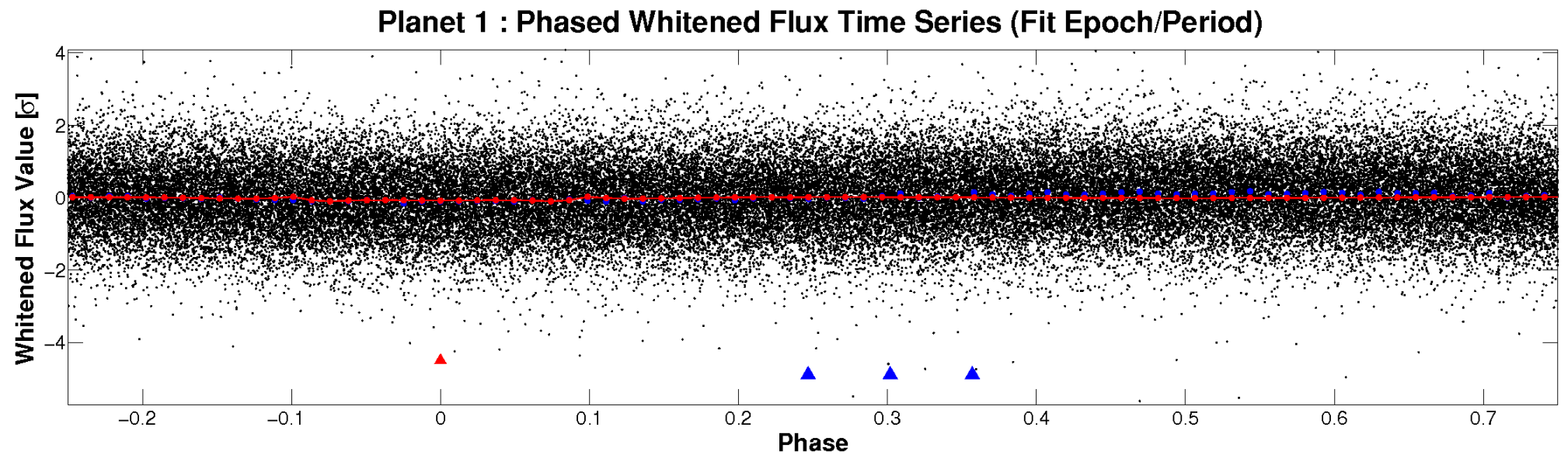
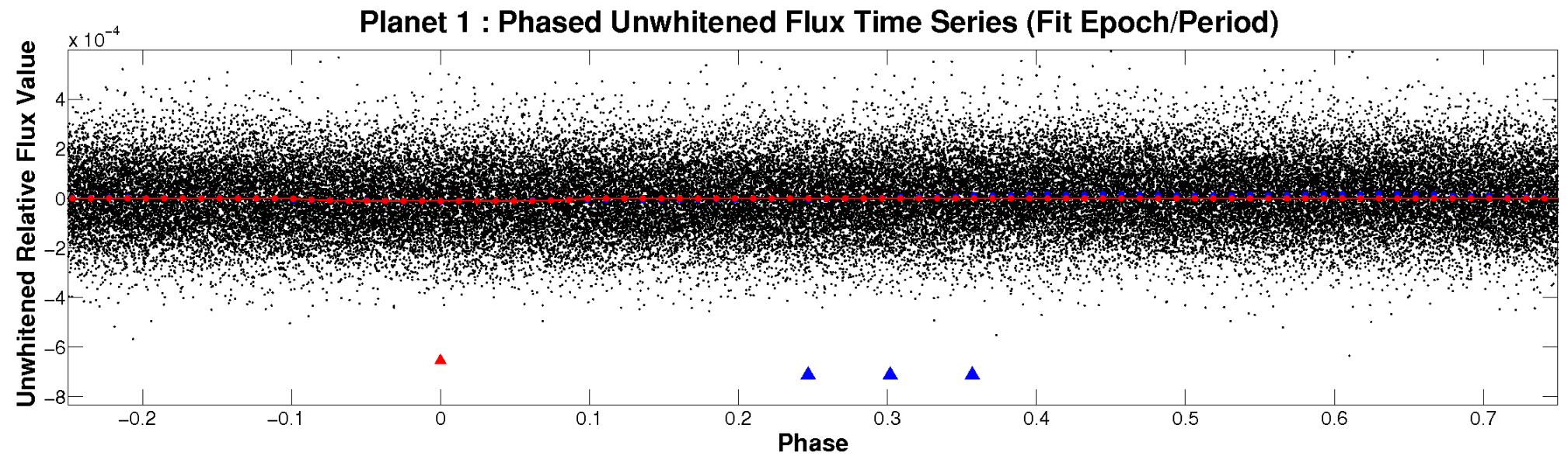


ALT Odd/Even

TCE 007694191-01

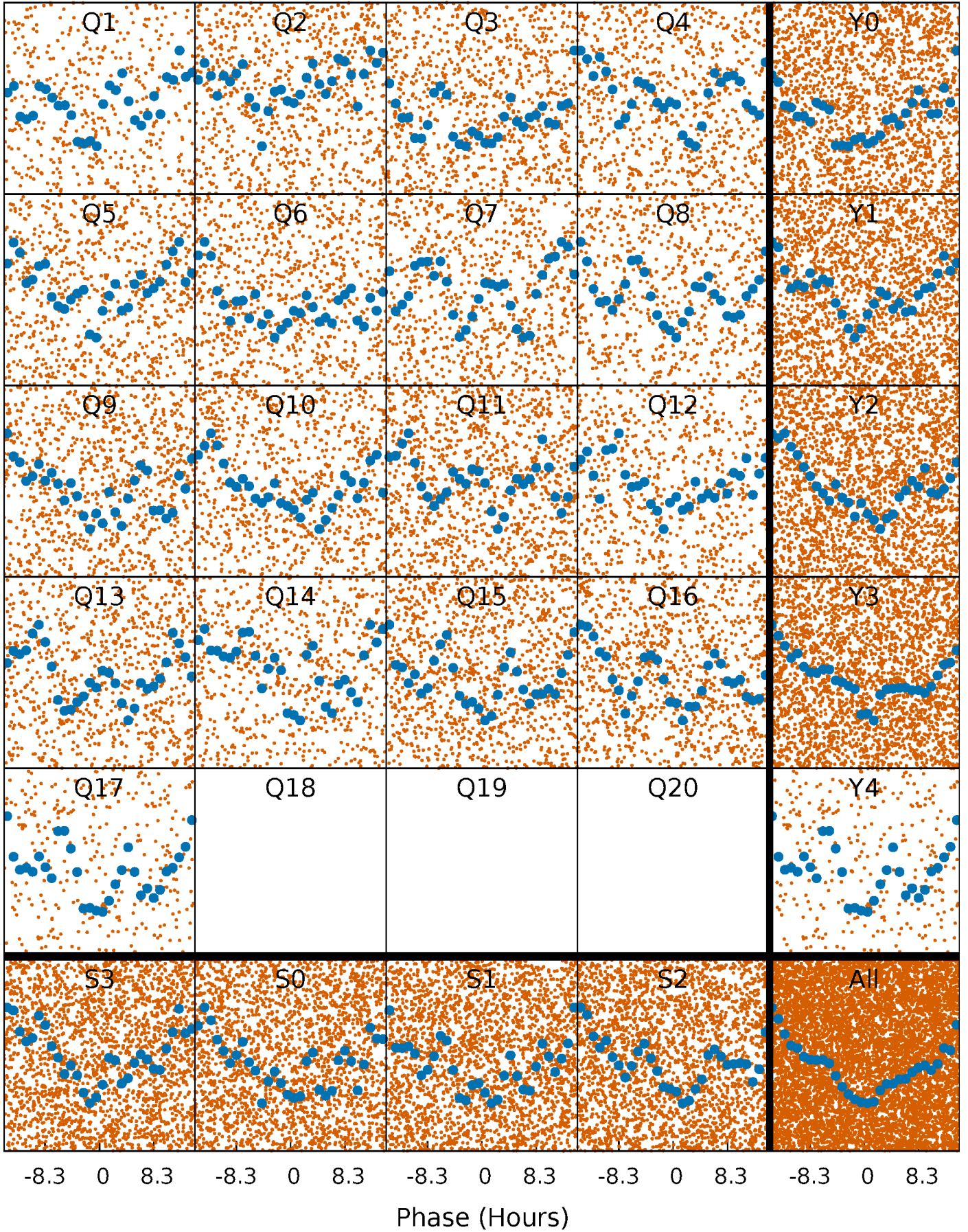


Non-Whitened Vs. Whitened Light Curve



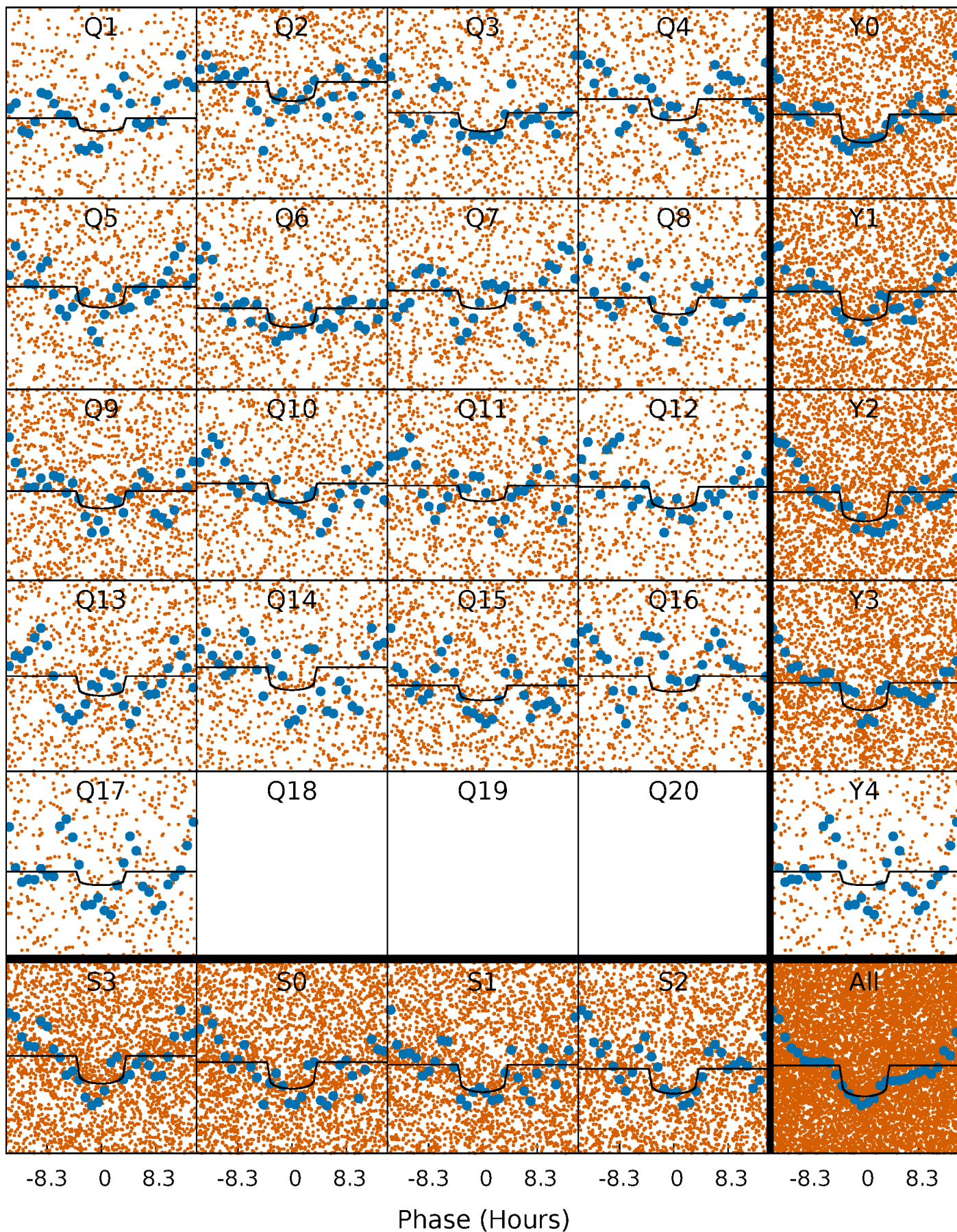
PDC Quarter-Phased Transit Curves

TCE 007694191-01 P= 1.654376 Days $T_0=132.341336$ (BKJD)



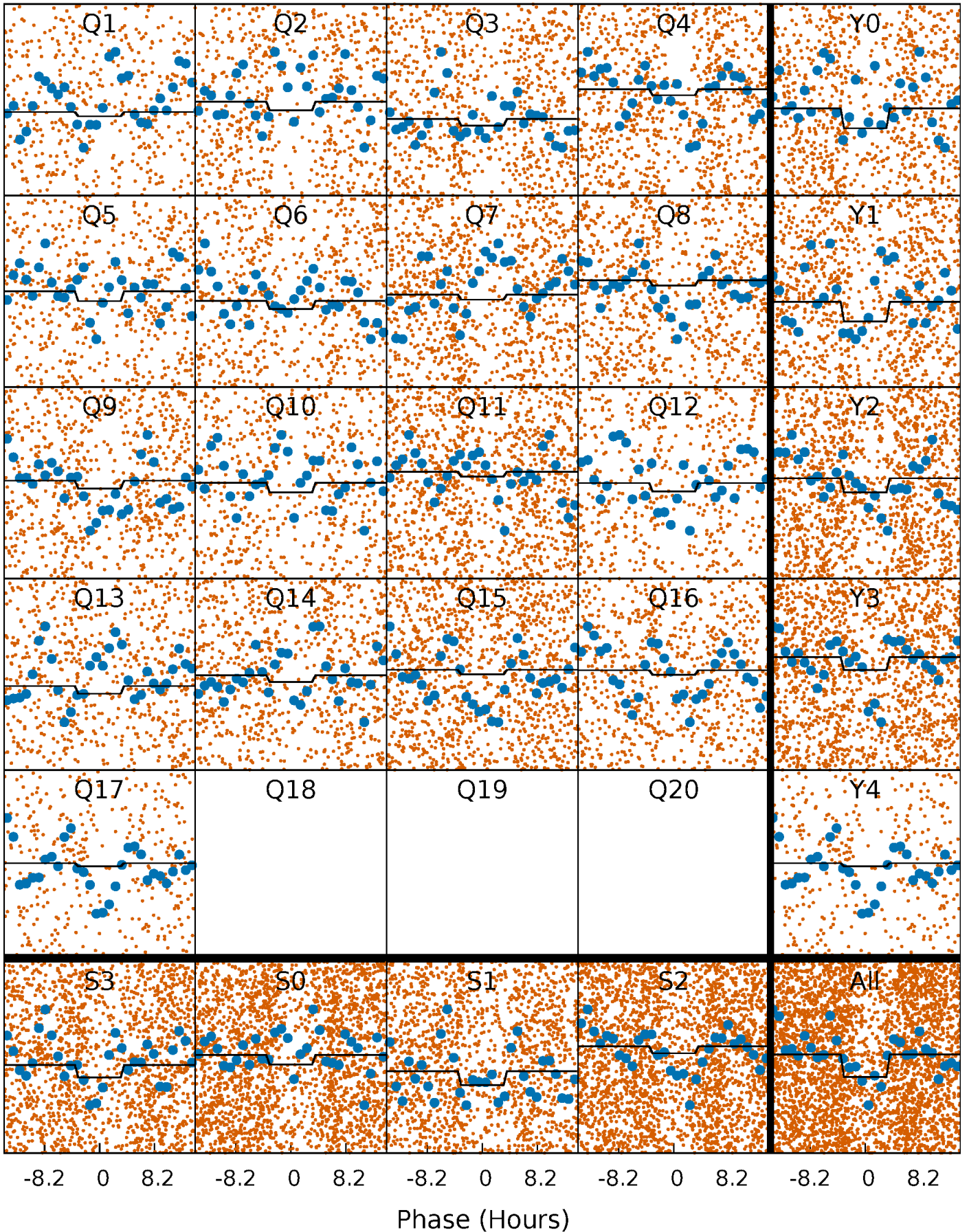
DV Quarter-Phased Transit Curves

TCE 007694191-01 P= 1.654376 Days $T_0=132.341336$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

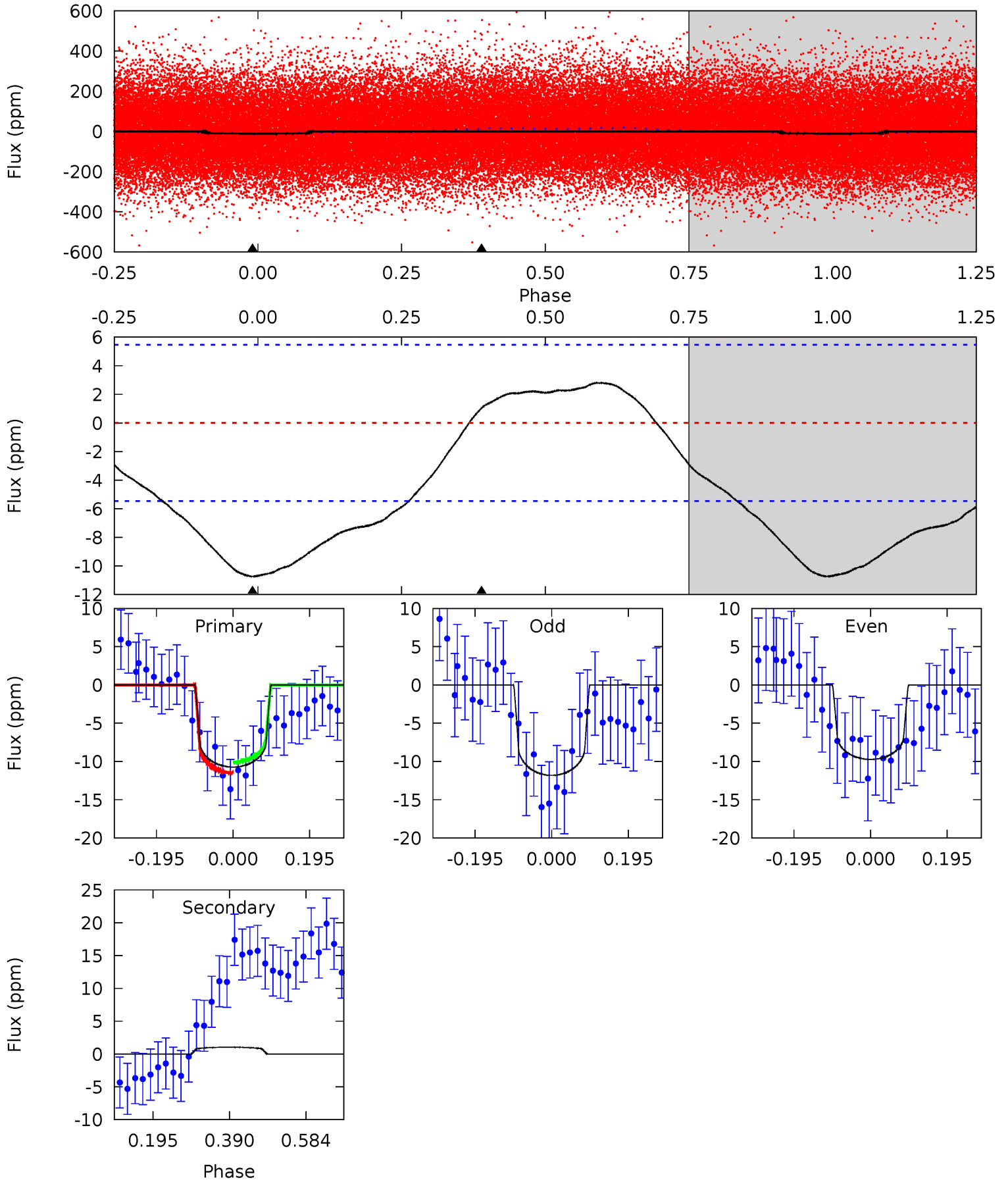
TCE 007694191-01 P= 1.654333 Days $T_0=132.337980$ (BKJD)



DV Model-Shift Uniqueness Test

007694191-01, P = 1.654376 Days, E = 130.686960 Days

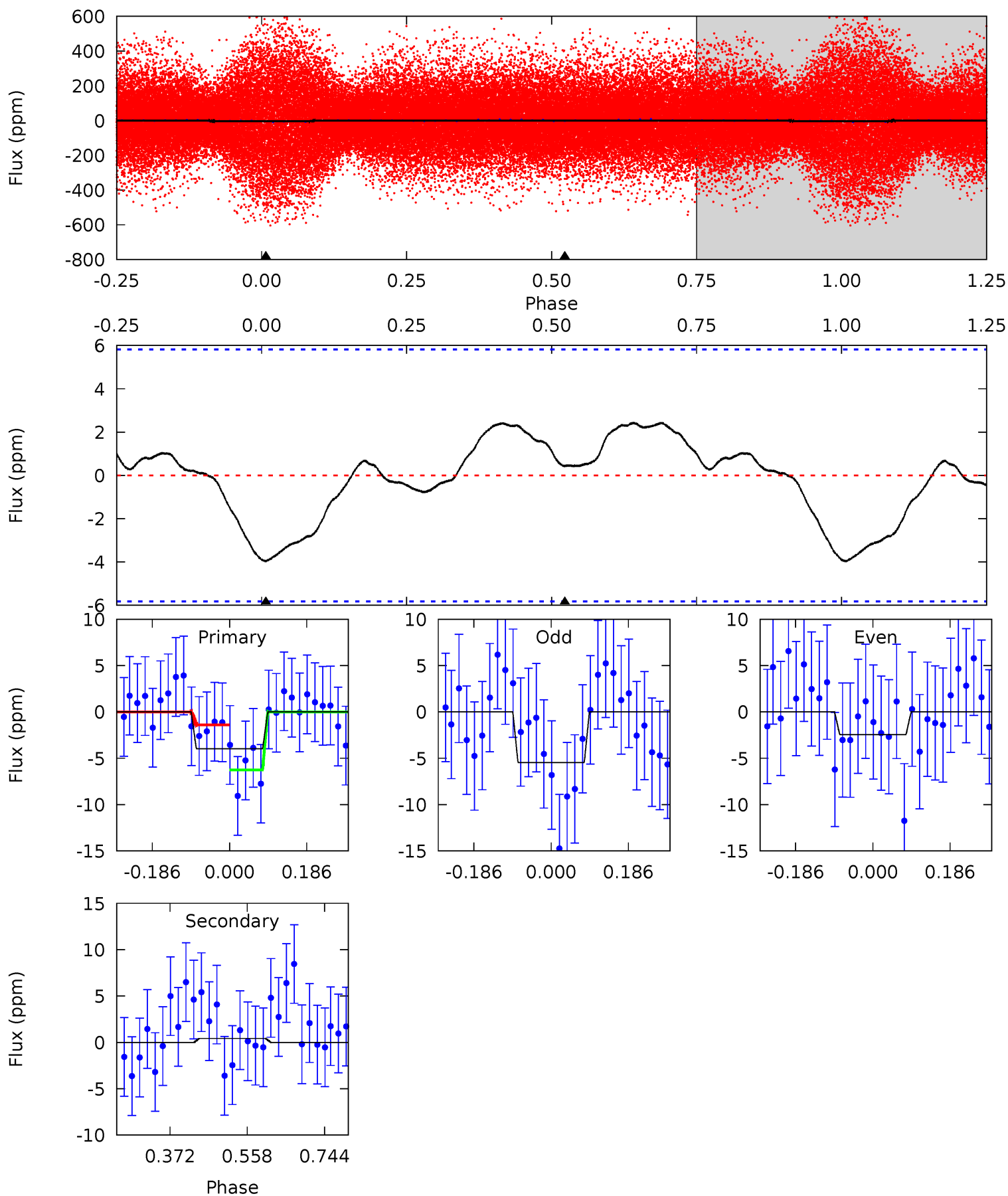
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.69	-0.84	0	0	4.42	1.30	2.23	8.69	8.69	-0.84	-0.84	0.85	0.97	0.21	0.57



Alt Model-Shift Uniqueness Test

007694191-01, P = 1.654333 Days, E = 130.683647 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.02	-0.32	0	0	4.43	1.32	0.60	3.02	3.02	-0.32	-0.32	1.17	0.57	0.38	1.86



Stellar Parameters For KIC 007694191

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8070^{+251}_{-334}	$3.656^{+0.502}_{-0.089}$	$-0.380^{+0.200}_{-0.300}$	$3.428^{+0.586}_{-1.759}$	$1.942^{+0.068}_{-0.476}$	$0.068^{+0.382}_{-0.019}$
	$+3\%/-4\%$	$+14\%/-2\%$	$+53\%/-79\%$	$+17\%/-51\%$	$+4\%/-25\%$	$+562\%/-28\%$
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 007694191-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	1 ± 1	$1.13^{+0.28}_{-0.30}$	4778^{+364}_{-622}	-4887^{+1208}_{-749}	$-0.480^{+0.606}_{-0.776}$
Alt.	0 ± 1	$0.56^{+0.21}_{-0.20}$	4808^{+352}_{-662}	-5333^{+10766}_{-2134}	$-0.810^{+2.504}_{-3.597}$

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

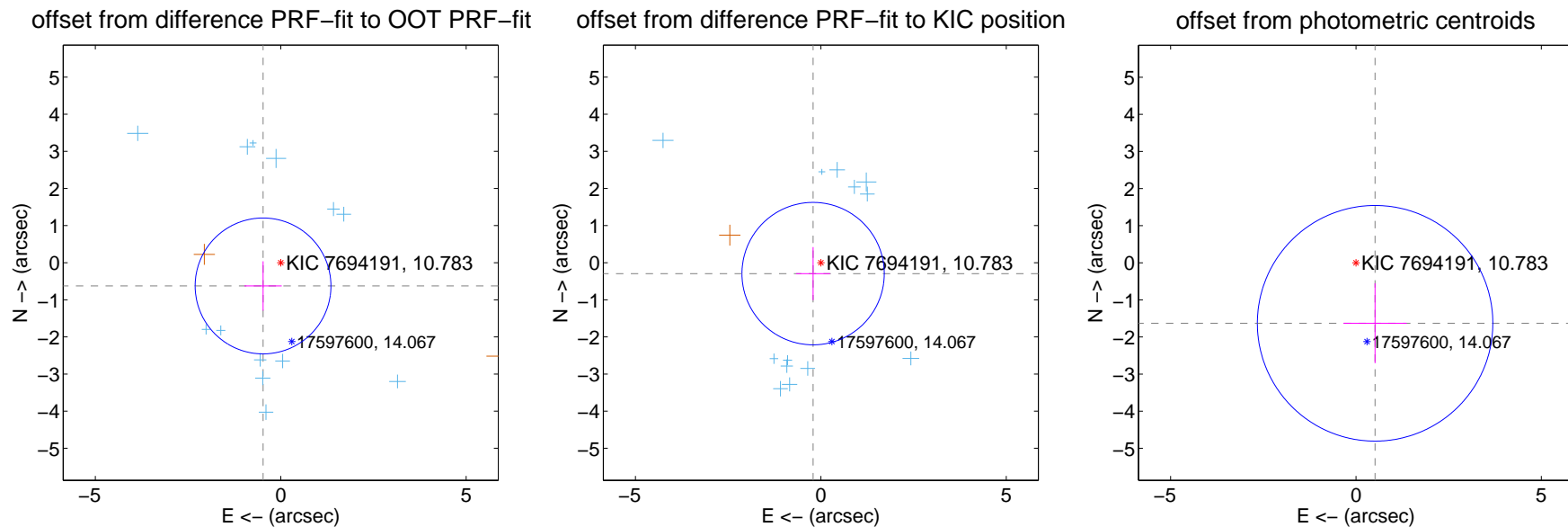
DV Centroid Data

Supplemental centroid analysis for 007694191-01. **Kepler magnitude: 10.78.** Transit SNR 8.78

There are 13 quarters with good PRF difference image offsets

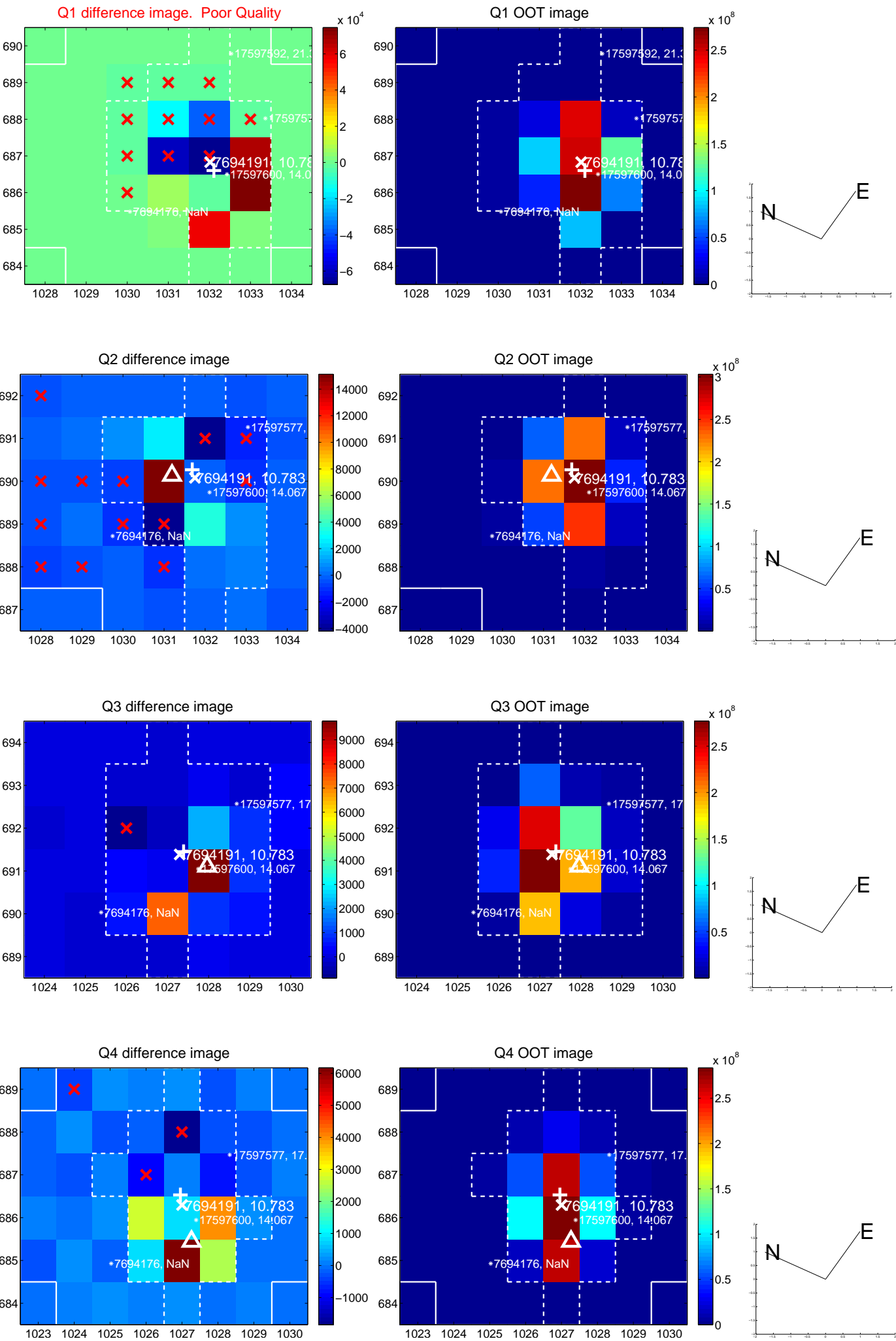
The direct PRF centroid is offset from the target star catalog position by about 1.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.788 ± 0.610	1.29	0.477 ± 0.503	-0.626 ± 0.665
PRF-fit source offset from KIC position	0.361 ± 0.640	0.56	0.209 ± 0.459	-0.294 ± 0.714
photometric centroid source offset	1.71 ± 1.06	1.62	-0.52 ± 0.85	-1.63 ± 1.08

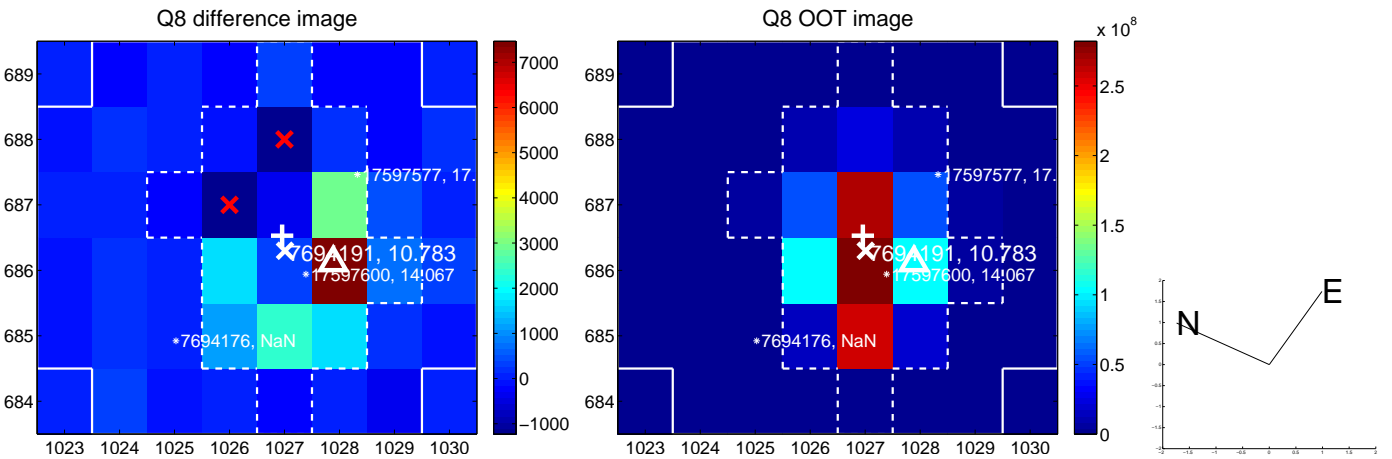
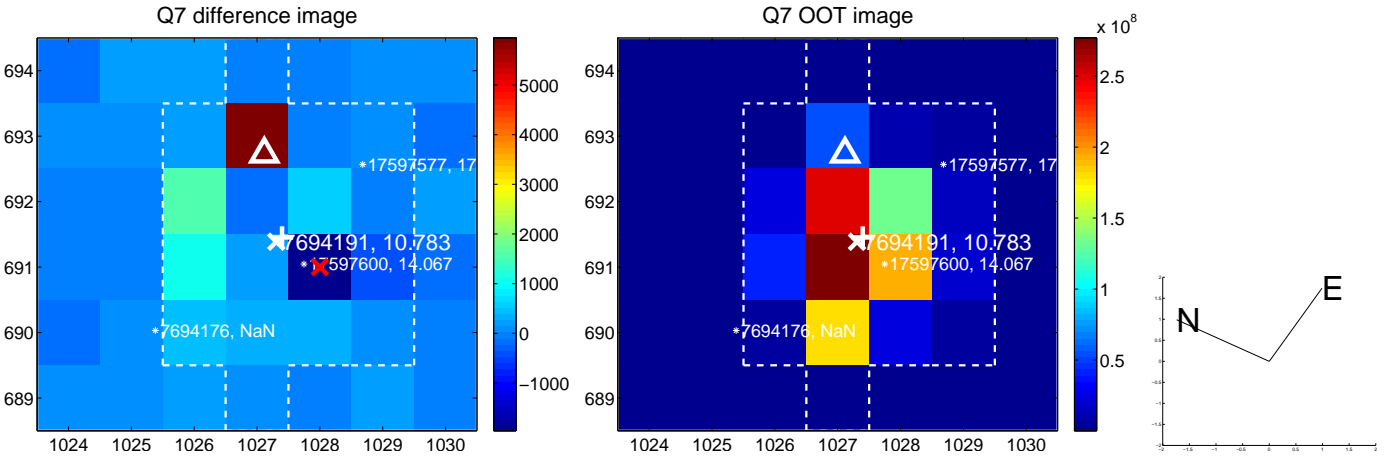
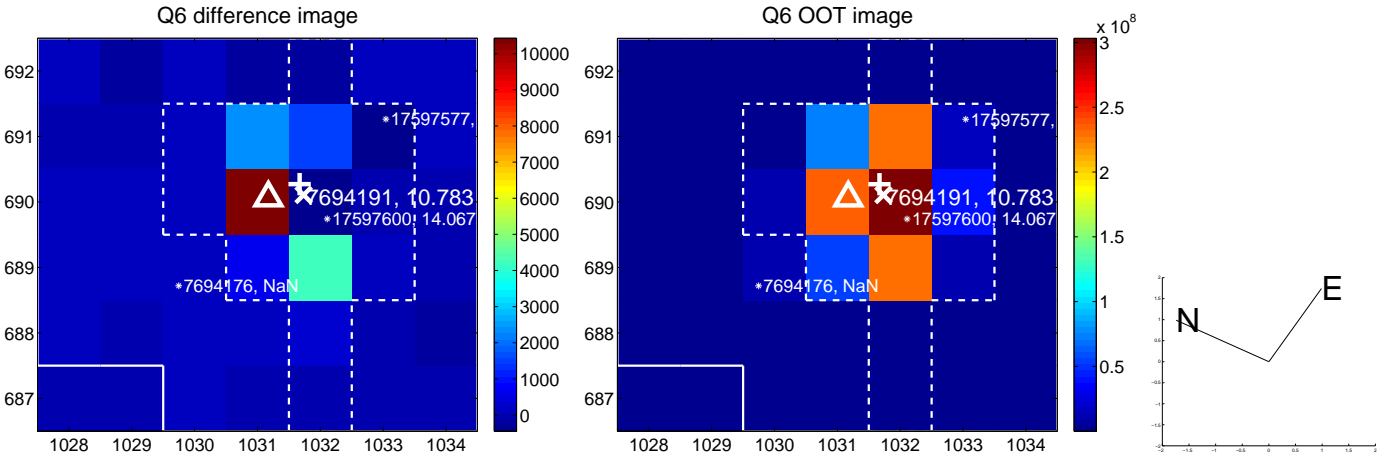
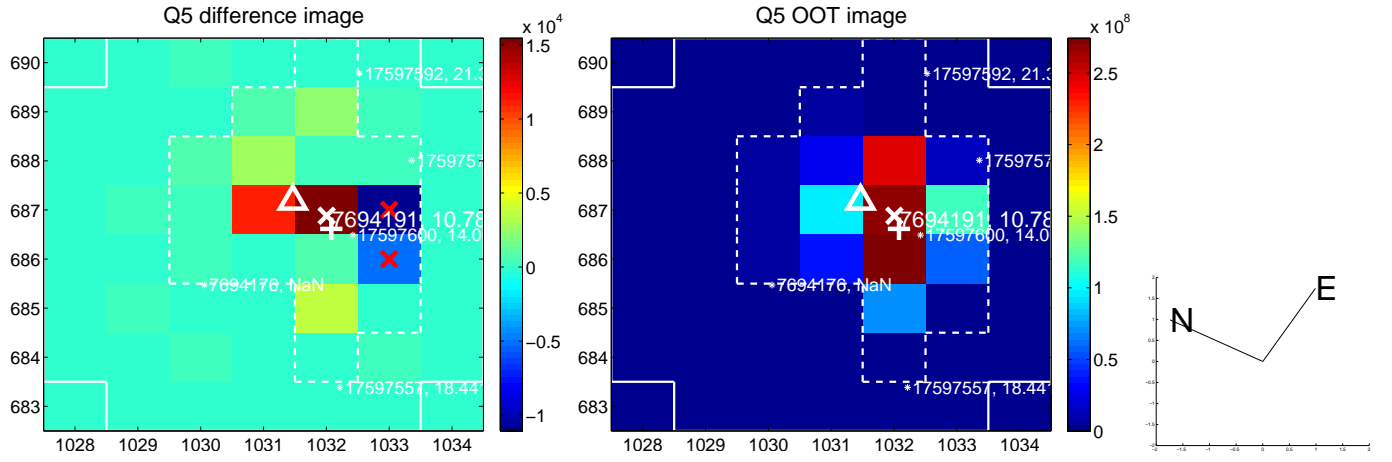


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

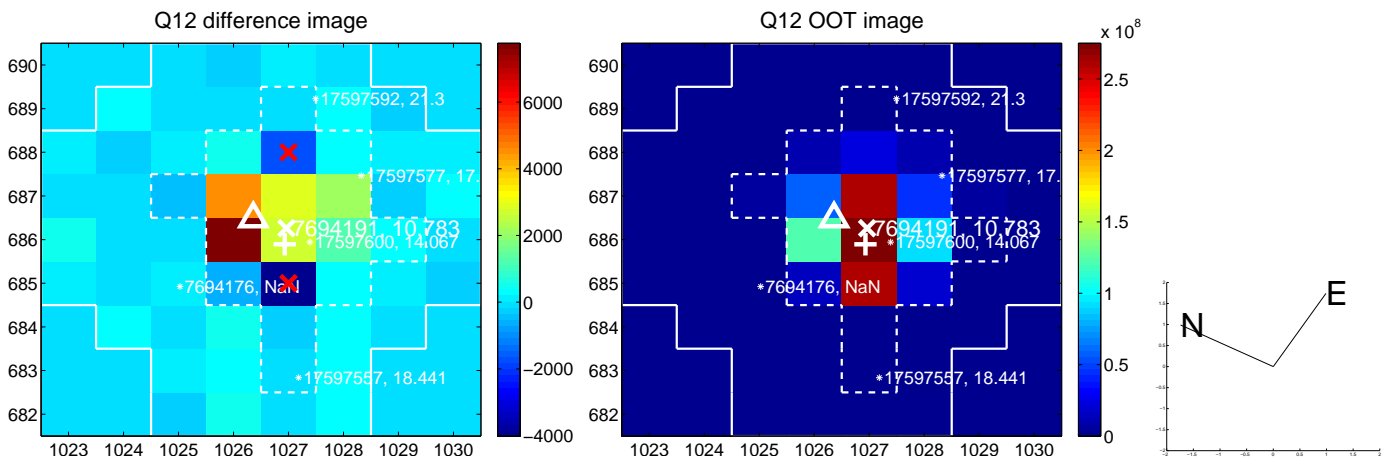
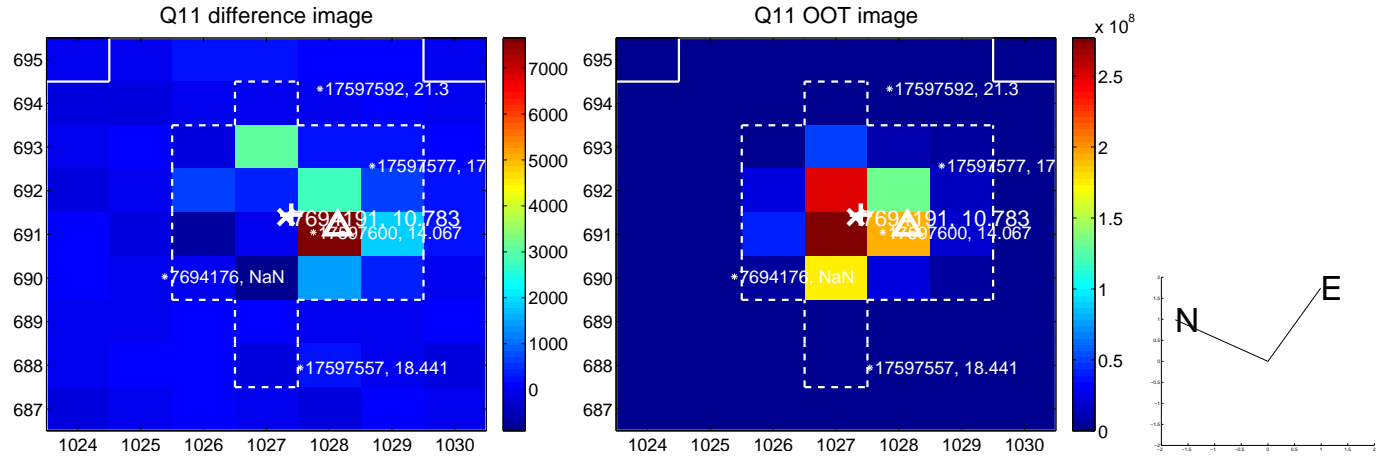
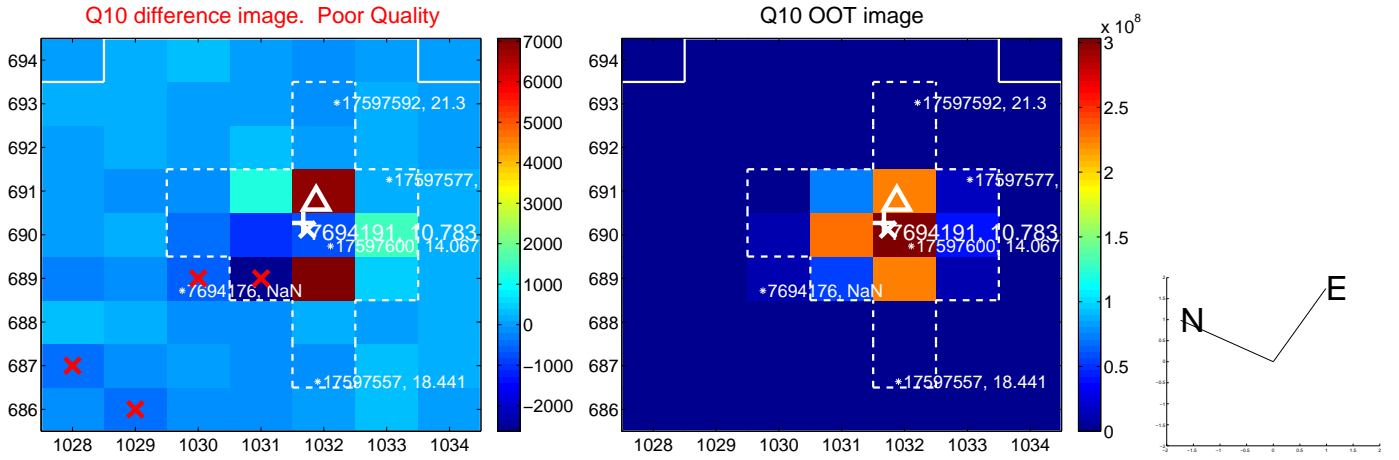
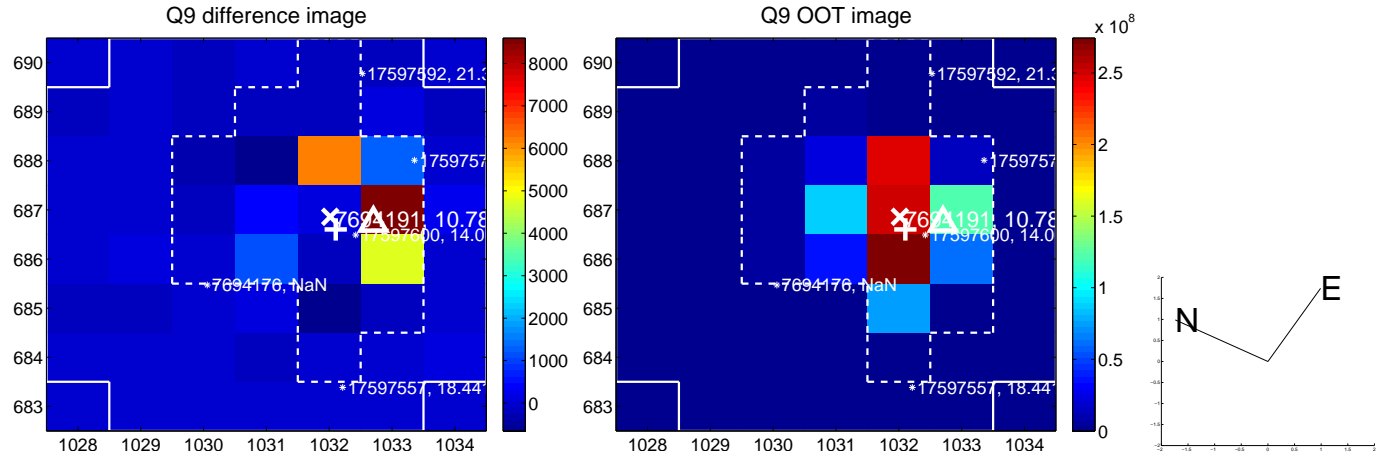
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



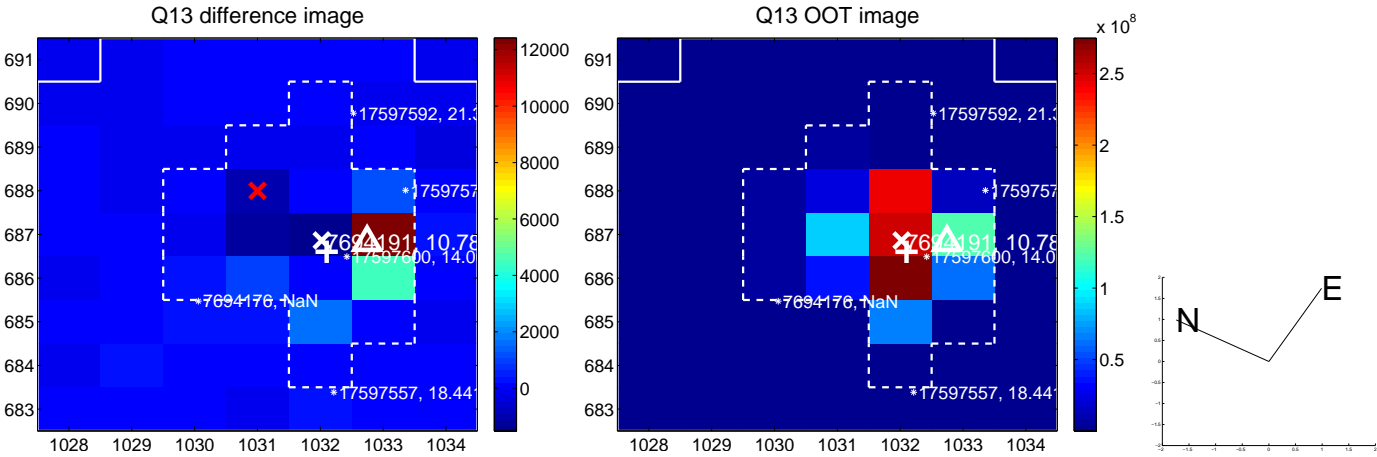
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



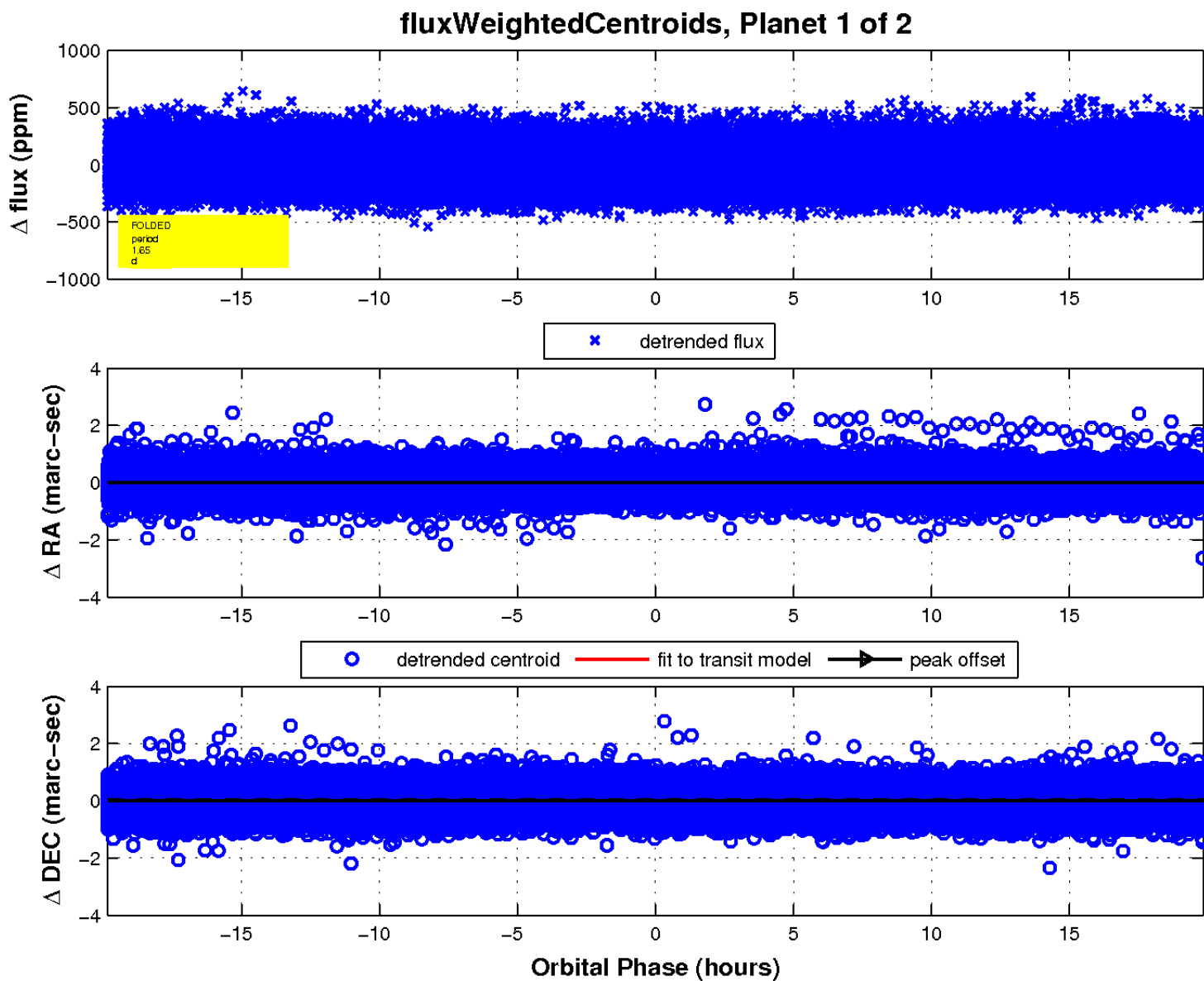
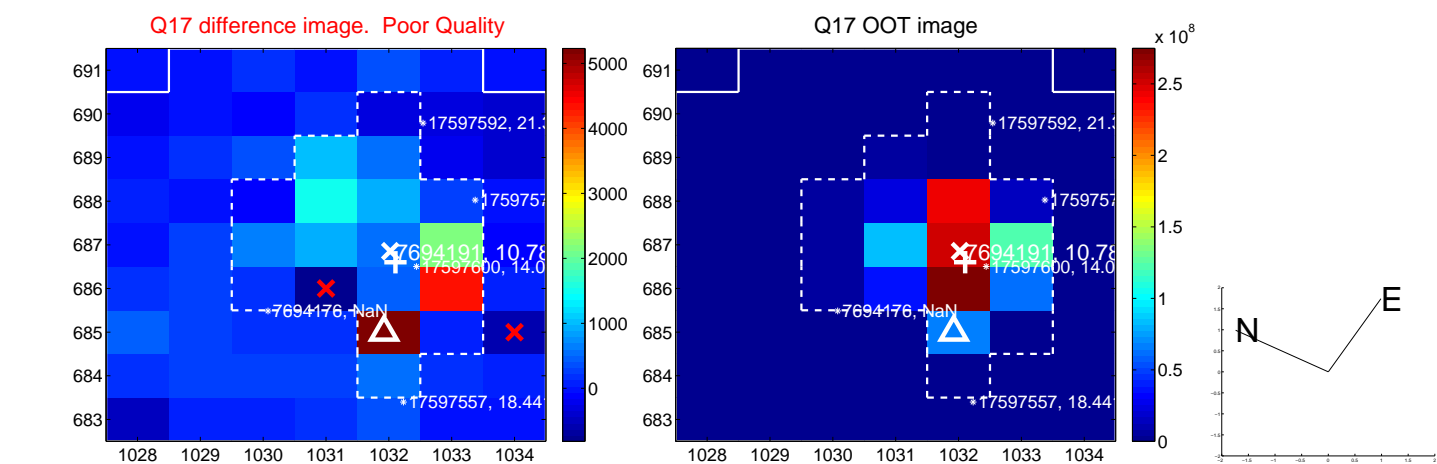
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



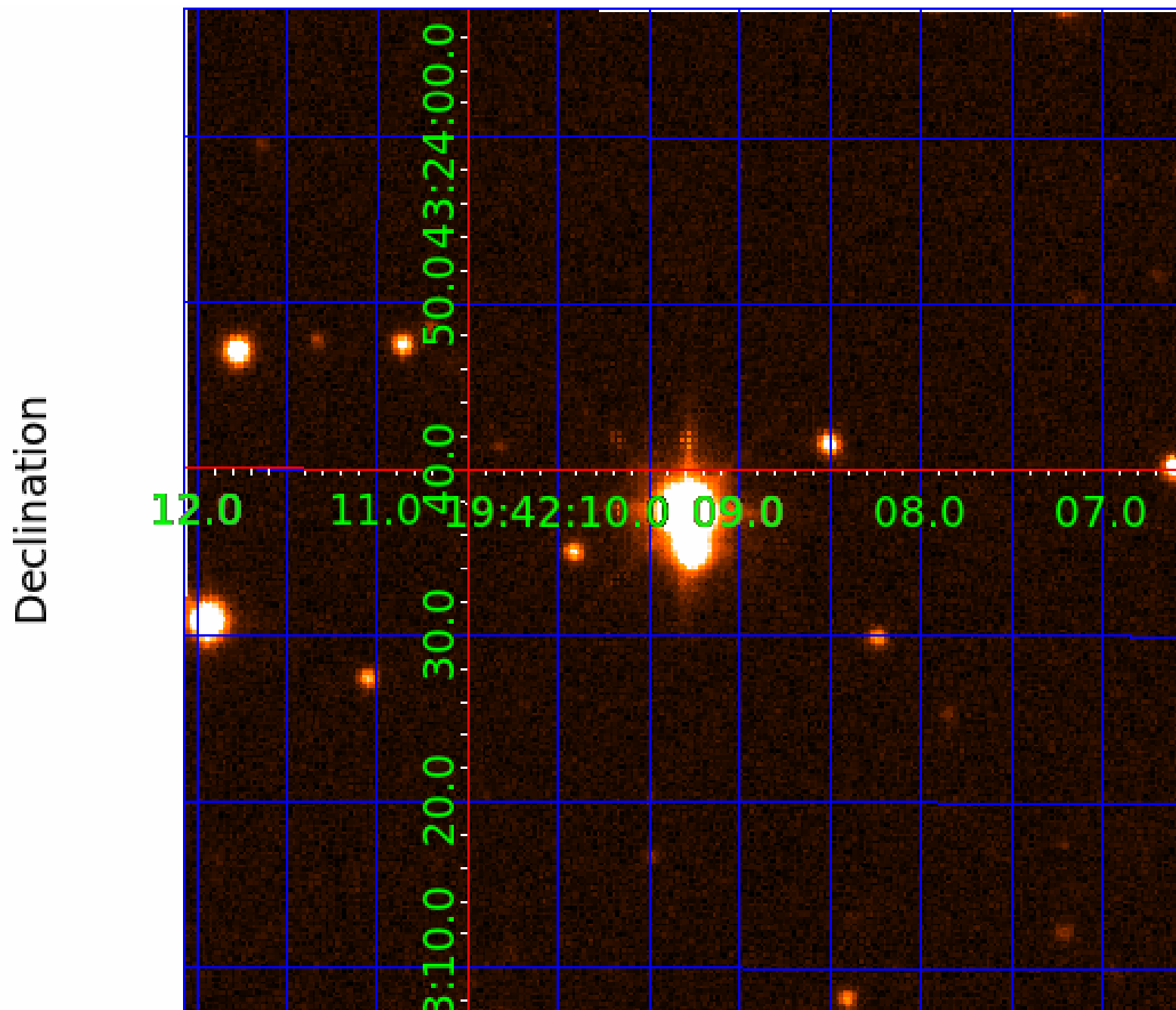
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 007694191

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})
007694191-01	OBS	No	1.654376	132.341336	10.1	7.296	9.2	8.8	3.43	8070	1.27	38273.97
007694191-02	OBS	No	620.299712	213.996306	307.1	3.623	9.5	7.3	3.43	8070	6.94	14.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007694191-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
007694191-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

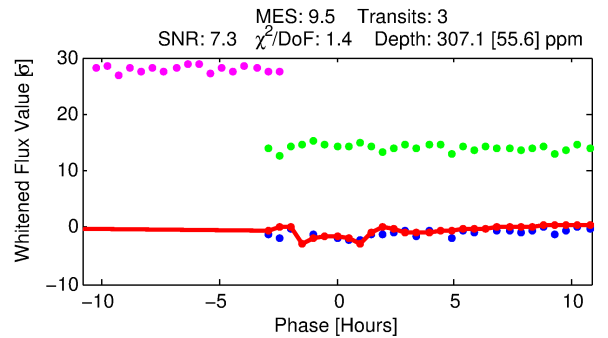
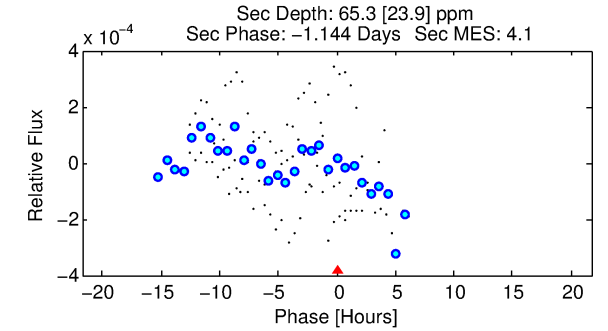
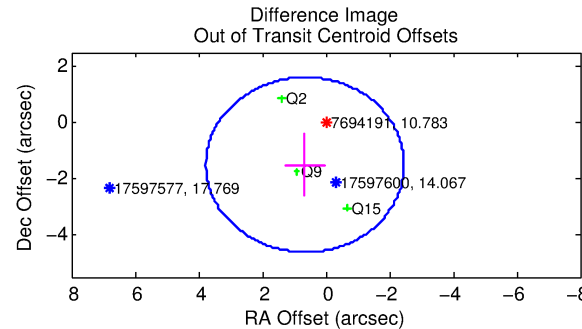
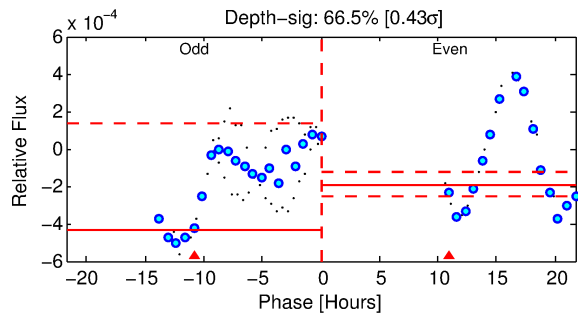
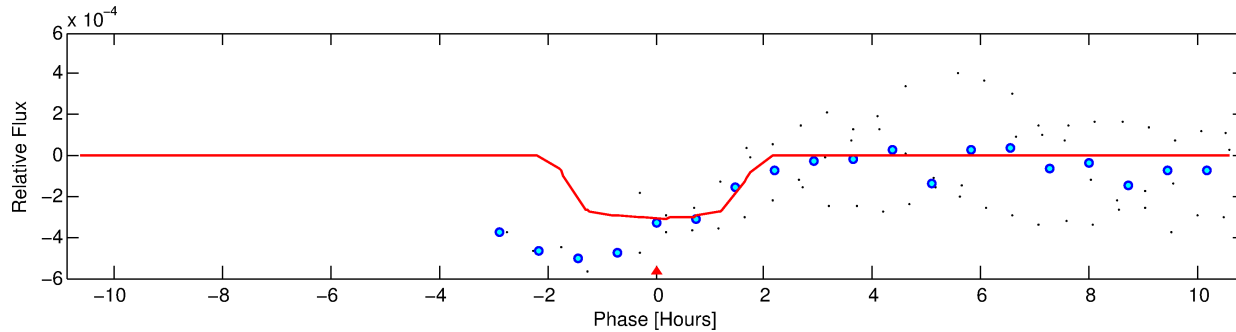
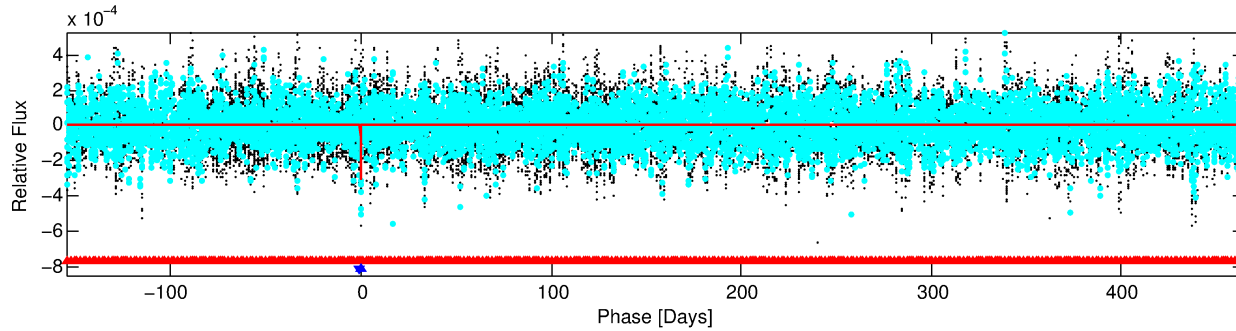
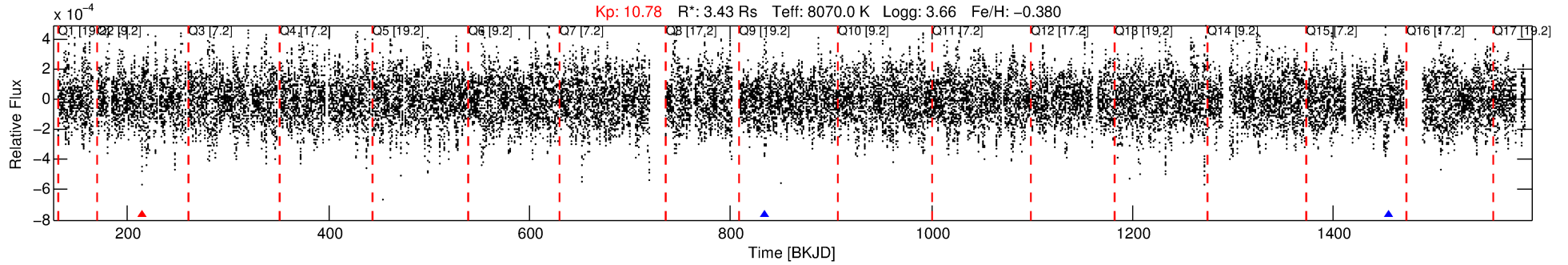
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007694191-02

No Significant Match Found

DV One-Page Summary

KIC: 7694191 Candidate: 2 of 2 Period: 620.300 d



DV Fit Results:

Period = 620.29971 [0.00559] d
Epoch = 213.9963 [0.0054] BKJD
Rp/R* = 0.0185 [0.0320]
a/R* = 657.41 [7017.98]
b = 0.89 [2.64]
Seff = 14.16 [12.16]
Teq = 495 [106] K
Rp = 6.94 [12.49] Re
a = 1.7761 [0.9151] AU
Ag = 2354.82 [8409.77] [0.28 σ]
Teff = 5327 [4627] K [1.04 σ]

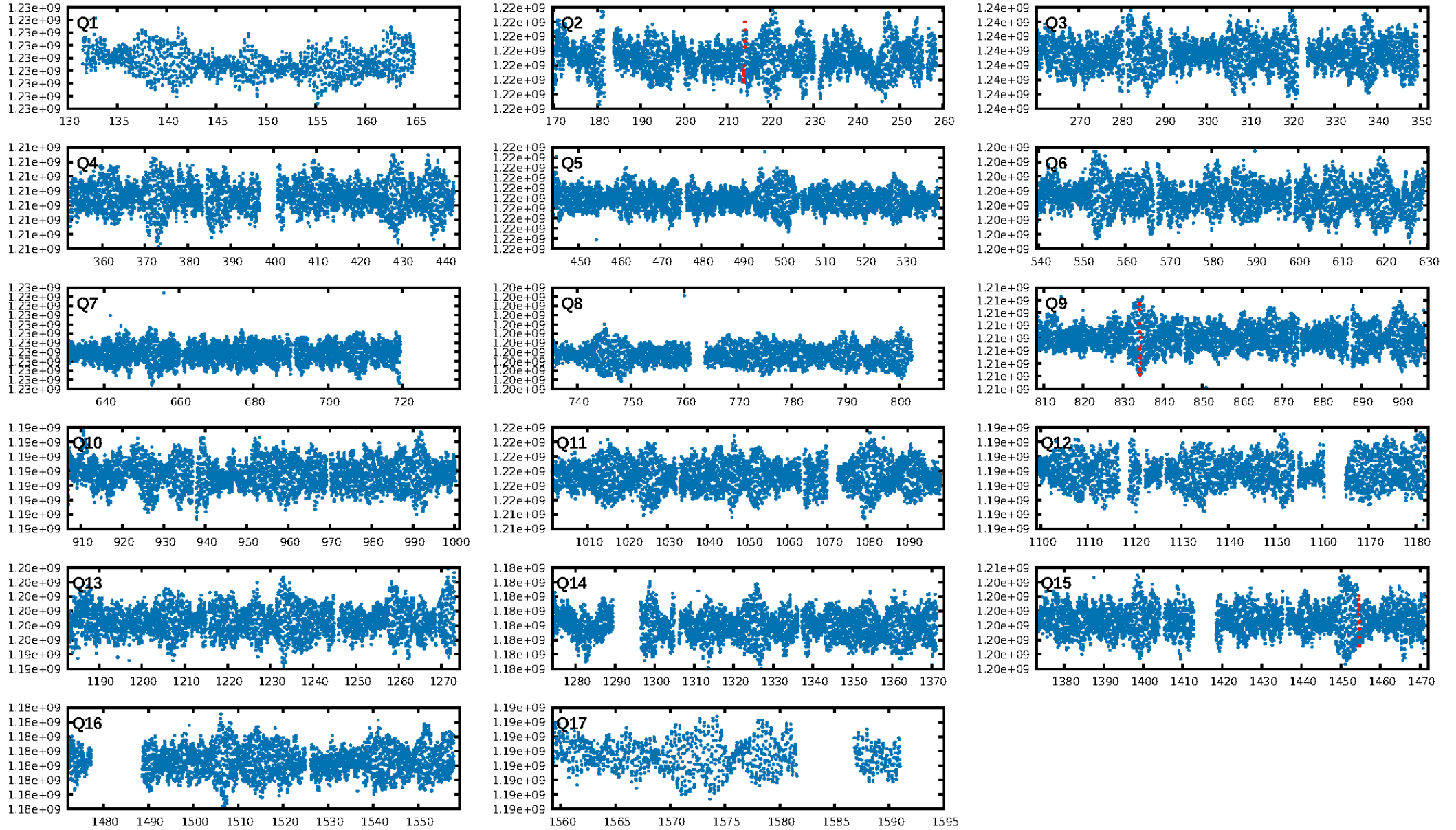
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [1822.68 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 51.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.69e-12
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: -80.63
Centroid-sig: 25.9%
Centroid-so: 0.975 arcsec [1.13 σ]
OotOffset-rm: 1.641 arcsec [1.58 σ]
KicOffset-rm: 1.990 arcsec [1.18 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.33 [1/3]

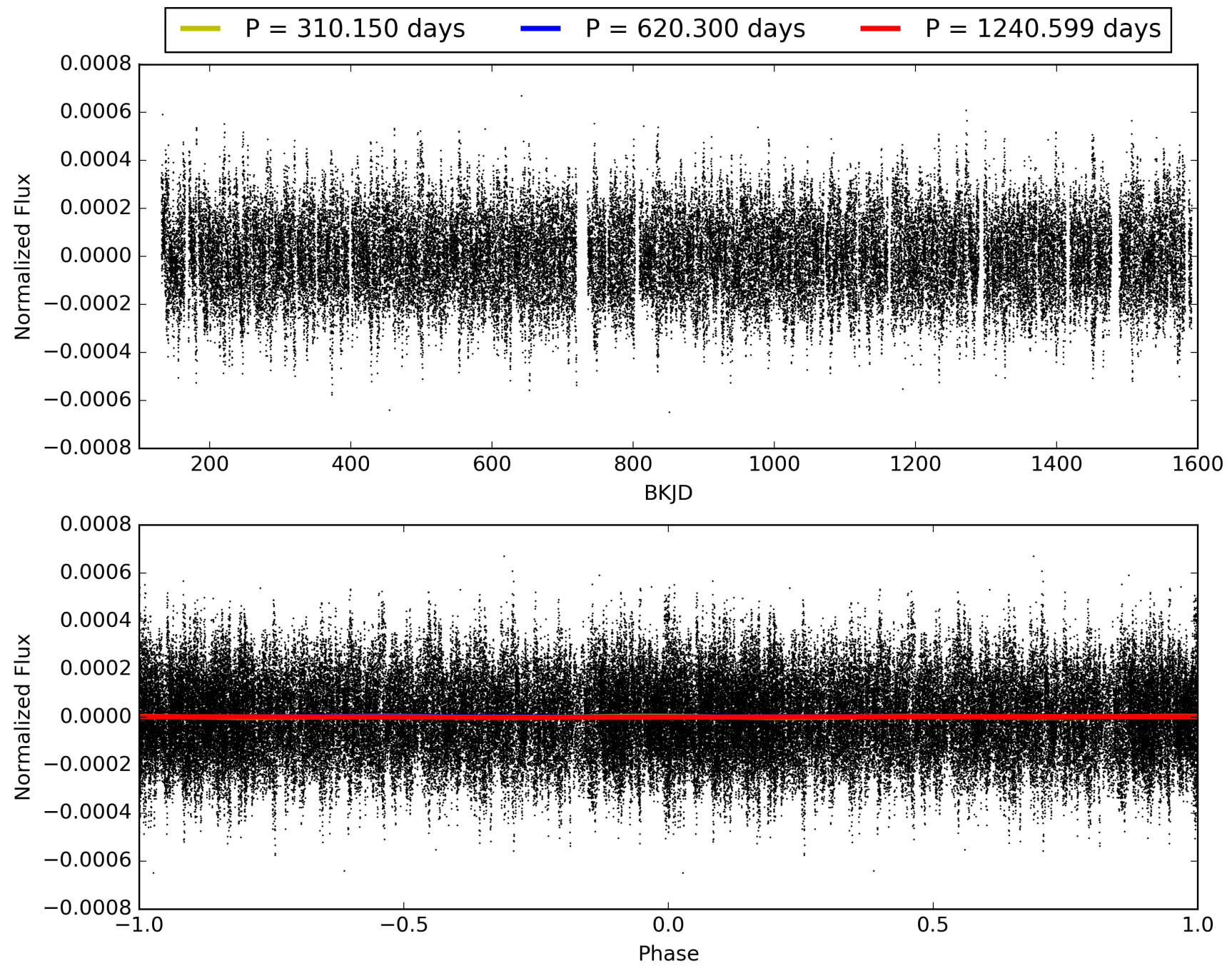
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:18:25 Z

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

TCE 007694191-02, PDC Light Curves

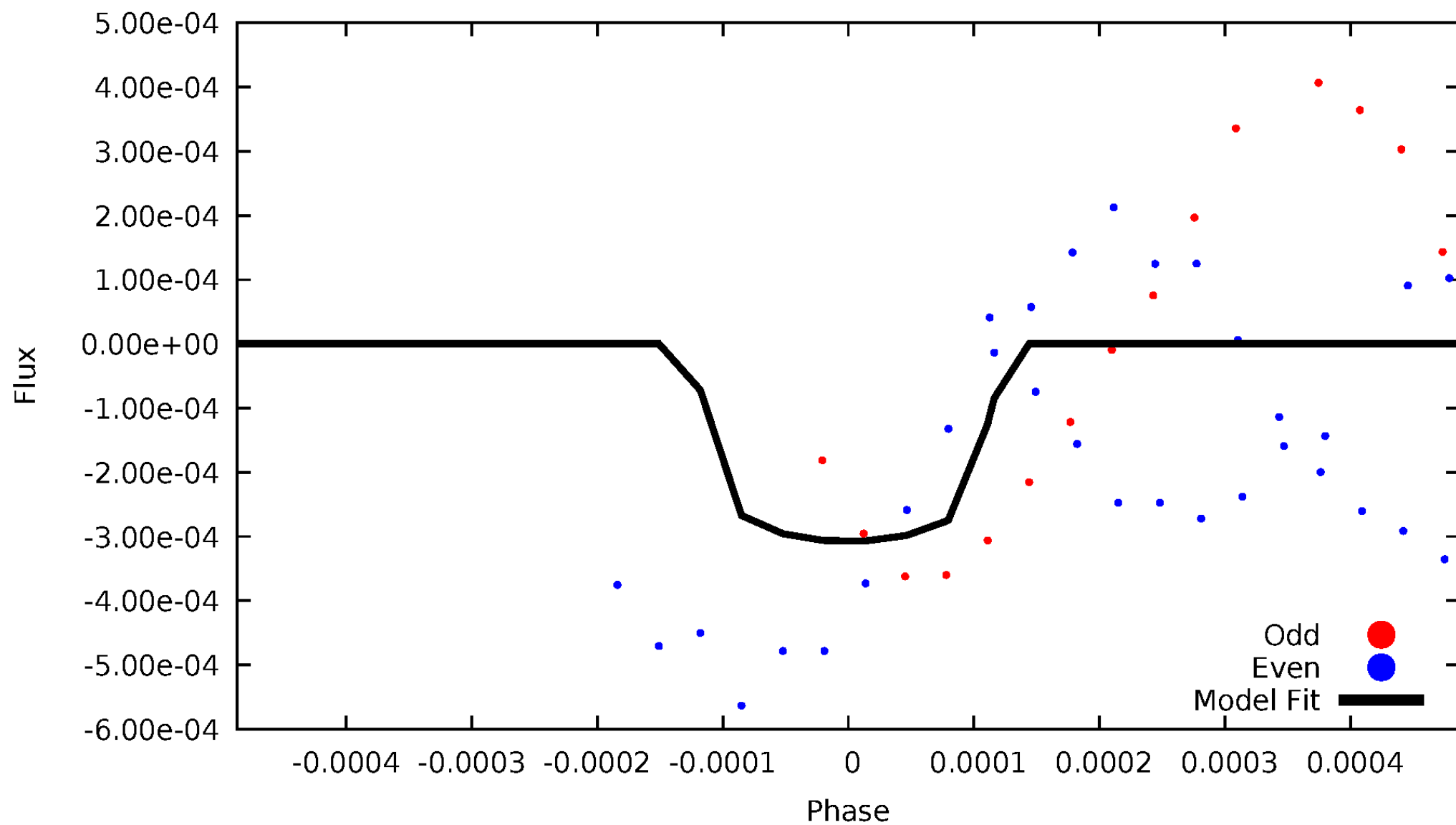


TCE 007694191-02



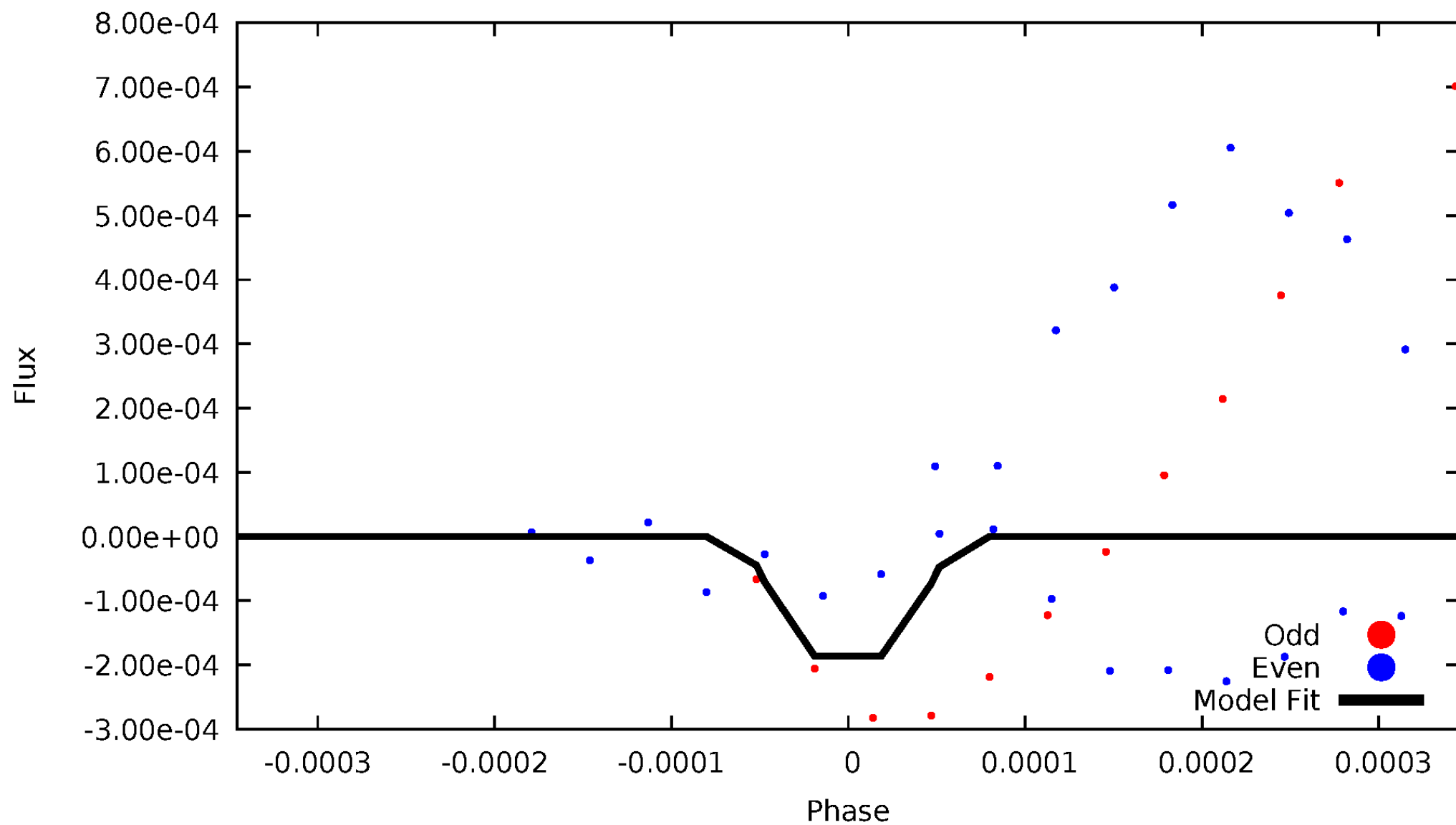
DV Odd/Even

TCE 007694191-02



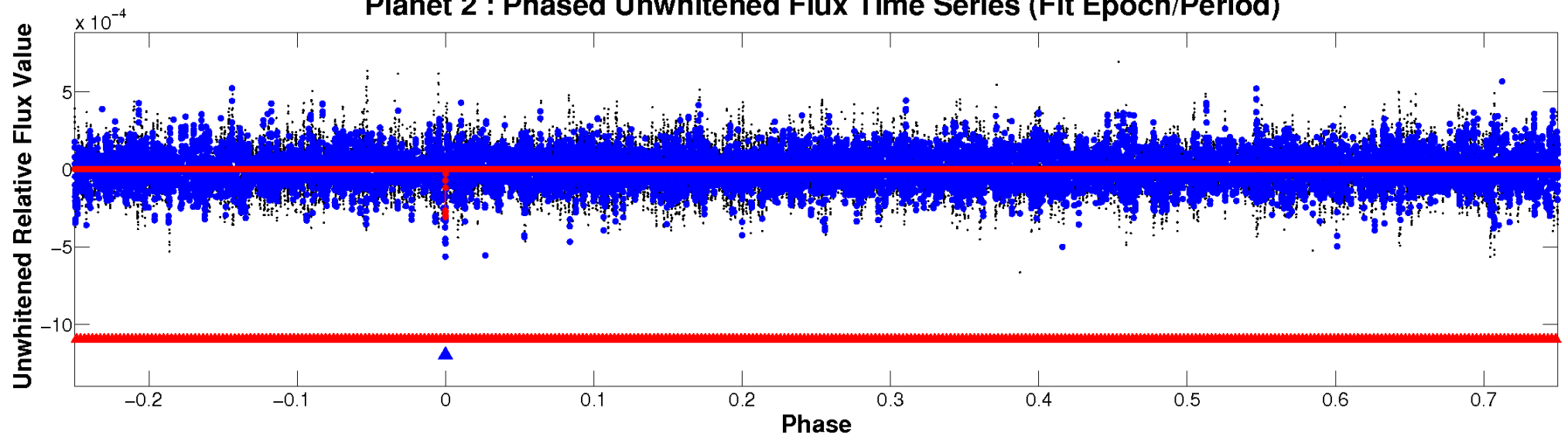
ALT Odd/Even

TCE 007694191-02

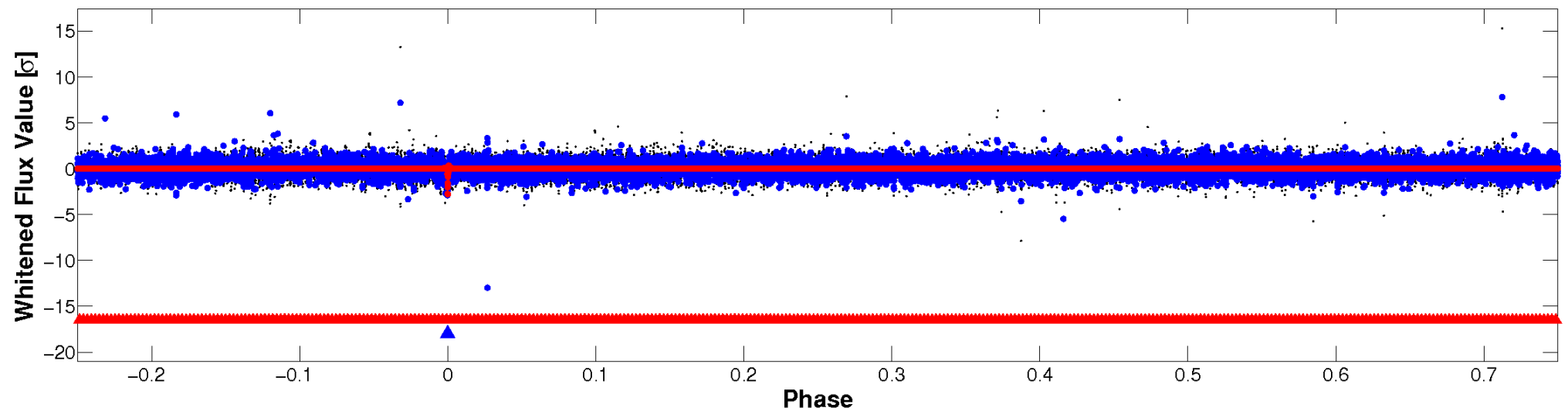


Non-Whitened Vs. Whitened Light Curve

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

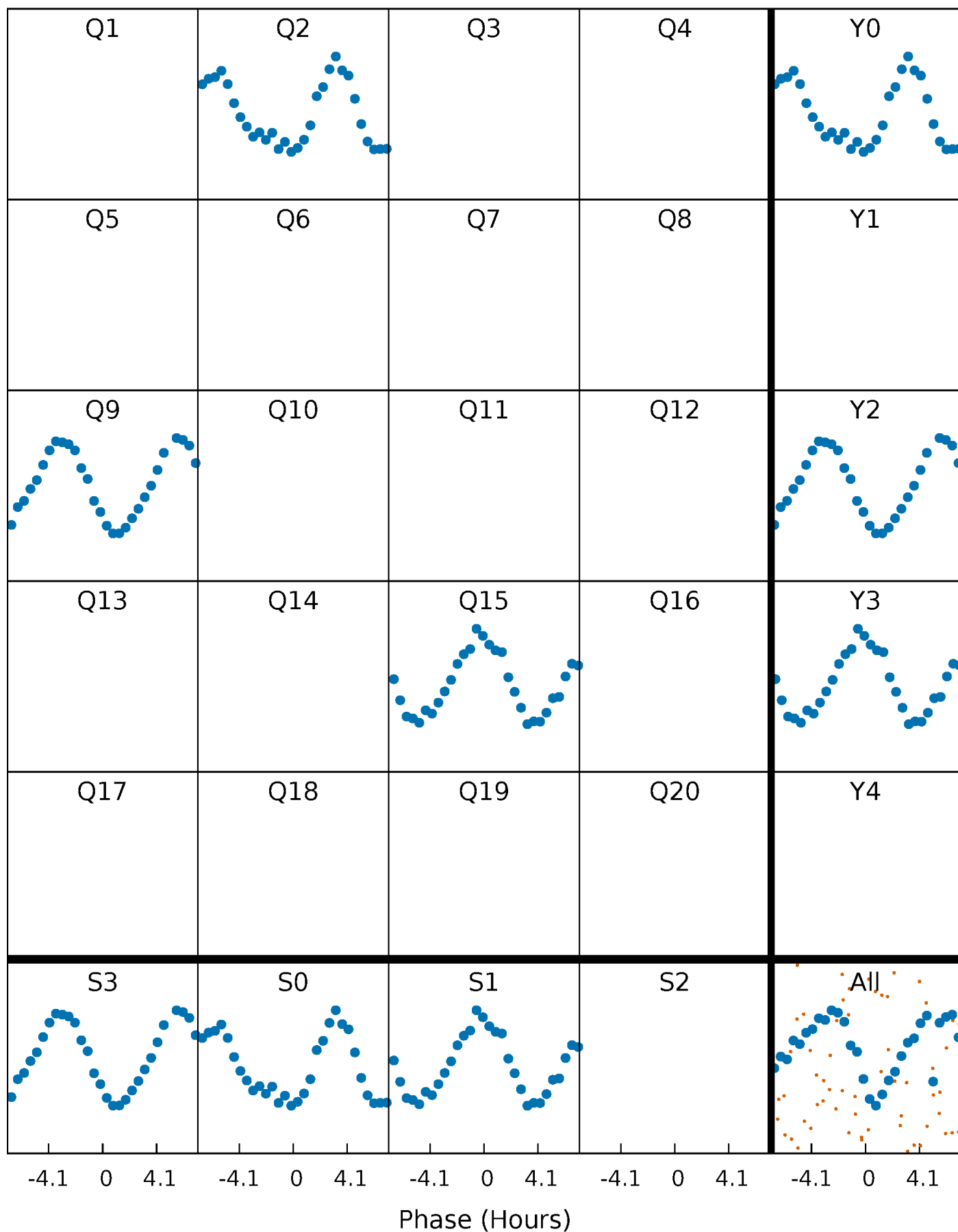


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



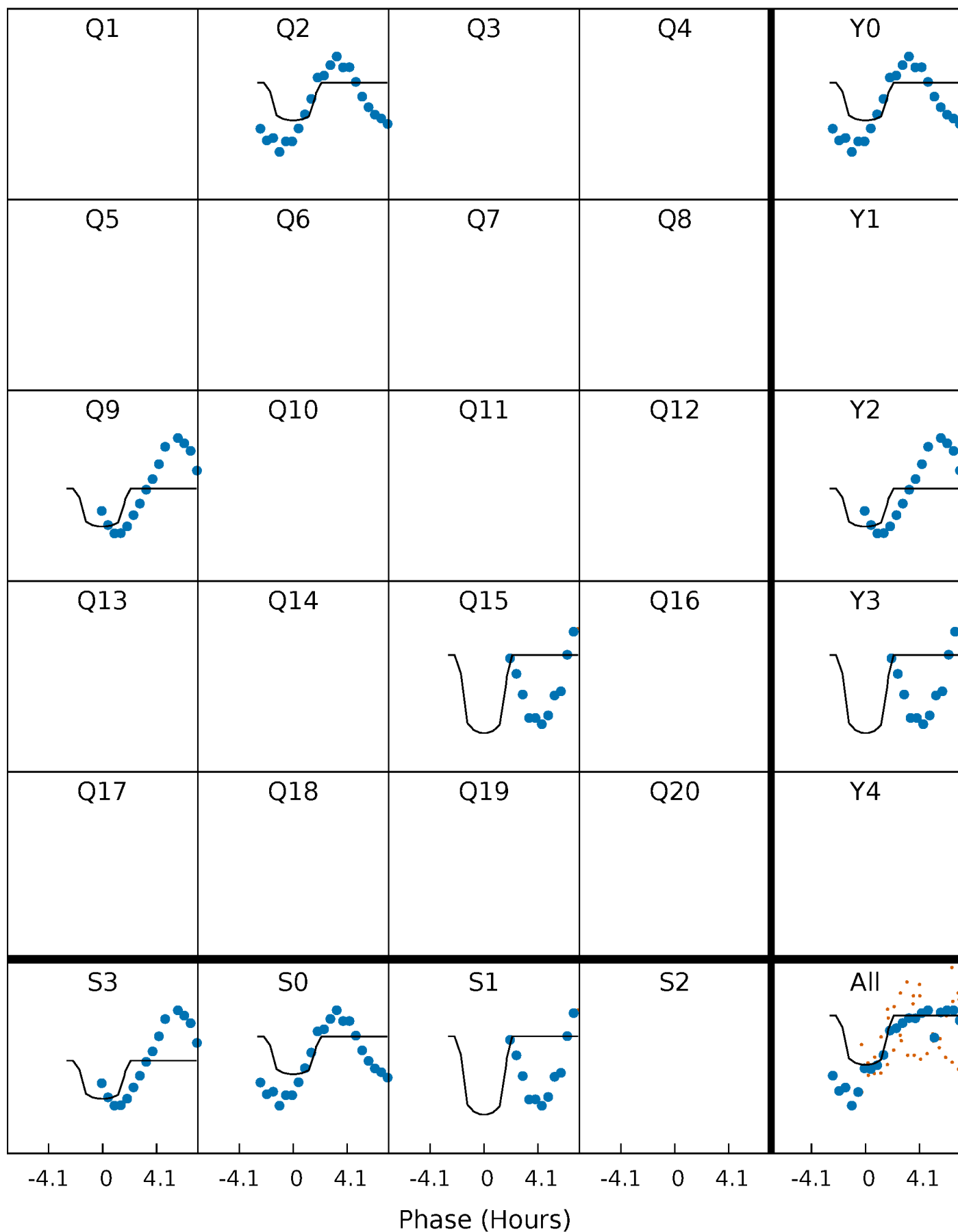
PDC Quarter-Phased Transit Curves

TCE 007694191-02 P=620.299712 Days $T_0=213.996306$ (BKJD)



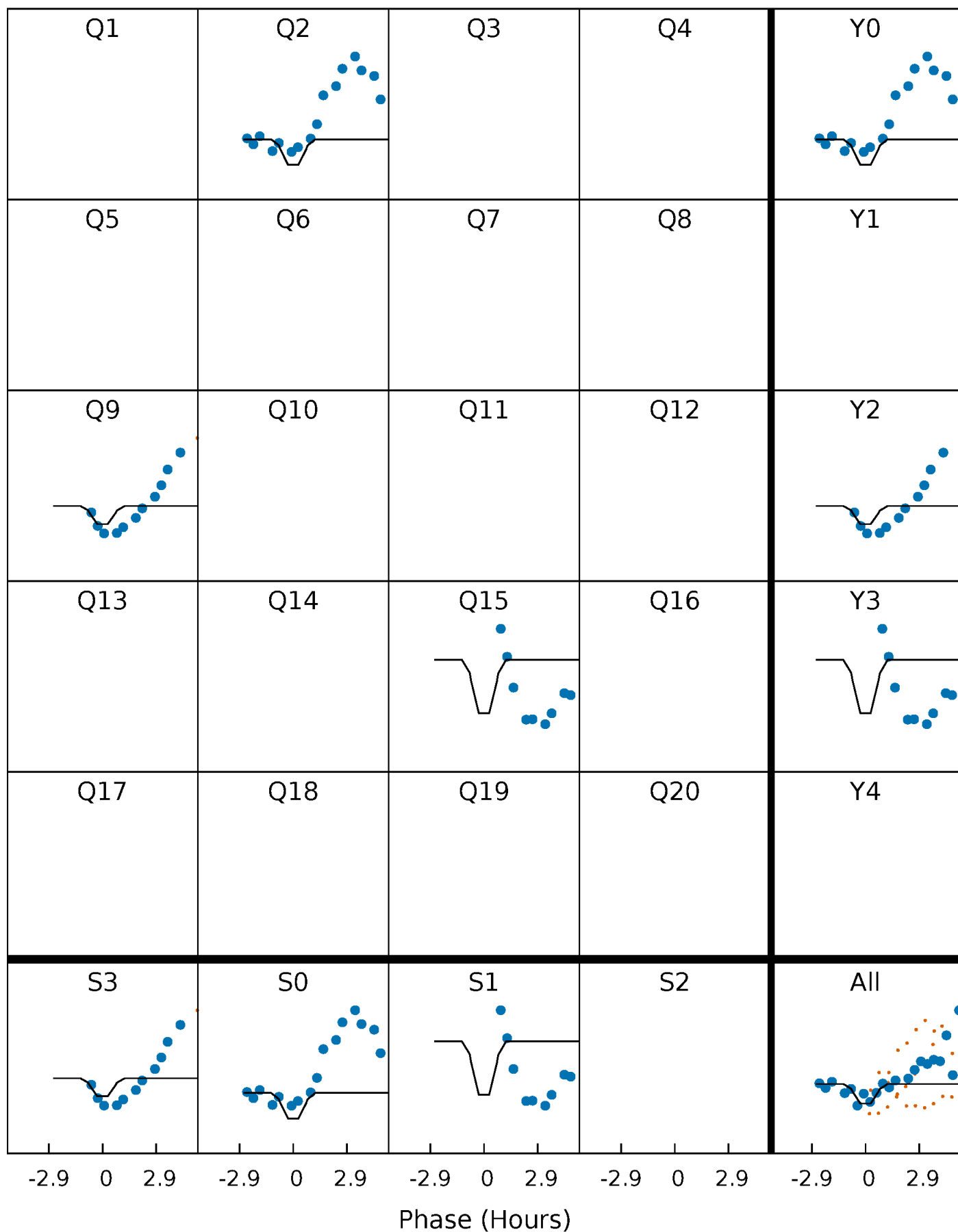
DV Quarter-Phased Transit Curves

TCE 007694191-02 P=620.299712 Days $T_0=213.996306$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

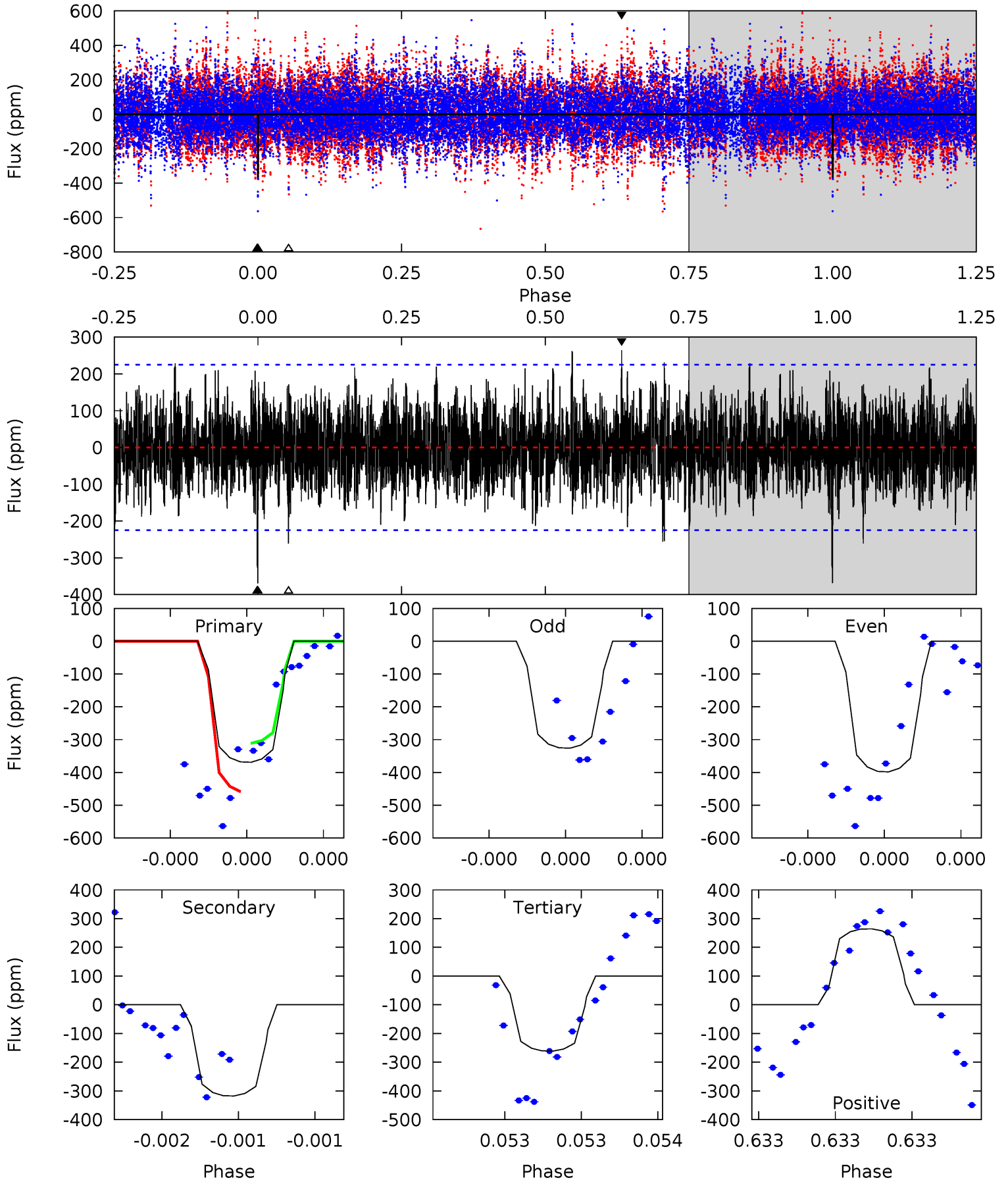
TCE 007694191-02 P=620.322015 Days $T_0=213.993362$ (BKJD)



DV Model-Shift Uniqueness Test

007694191-02, P = 620.299712 Days, E = 213.996306 Days

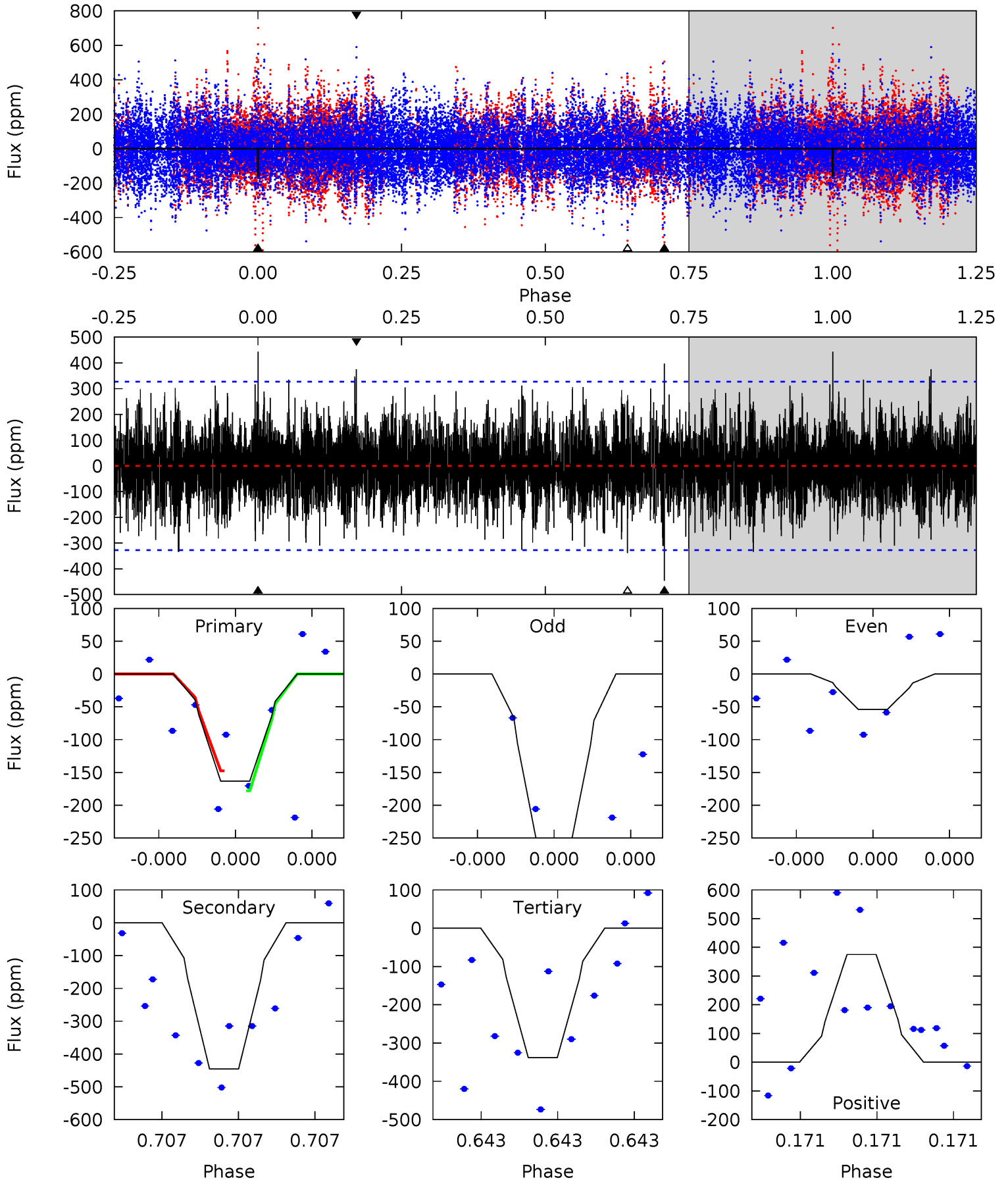
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.35	8.05	6.62	6.70	5.70	3.68	1.78	2.73	2.65	1.43	1.35	0.91	1.00	0.42	1.76



Alt Model-Shift Uniqueness Test

007694191-02, P = 620.322015 Days, E = 213.993362 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.92	7.96	6.04	6.70	5.85	3.89	1.75	-3.12	-3.79	1.92	1.26	2.16	1.00	0.50	0.26



Stellar Parameters For KIC 007694191

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8070^{+251}_{-334}	$3.656^{+0.502}_{-0.089}$	$-0.380^{+0.200}_{-0.300}$	$3.428^{+0.586}_{-1.759}$	$1.942^{+0.068}_{-0.476}$	$0.068^{+0.382}_{-0.019}$
	+3%/-4%	+14%/-2%	+53%/-79%	+17%/-51%	+4%/-25%	+562%/-28%
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 007694191-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-318 ± 39	$9.27^{+8.91}_{-6.40}$	667^{+50}_{-91}	6122^{+6754}_{-1525}	6092^{+58575}_{-4440}
Alt.	-445 ± 56	$9.14^{+9.19}_{-6.41}$	660^{+56}_{-74}	6786^{+9016}_{-1861}	9084^{+82821}_{-6917}

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 $A_{obs} \gg 1.0$

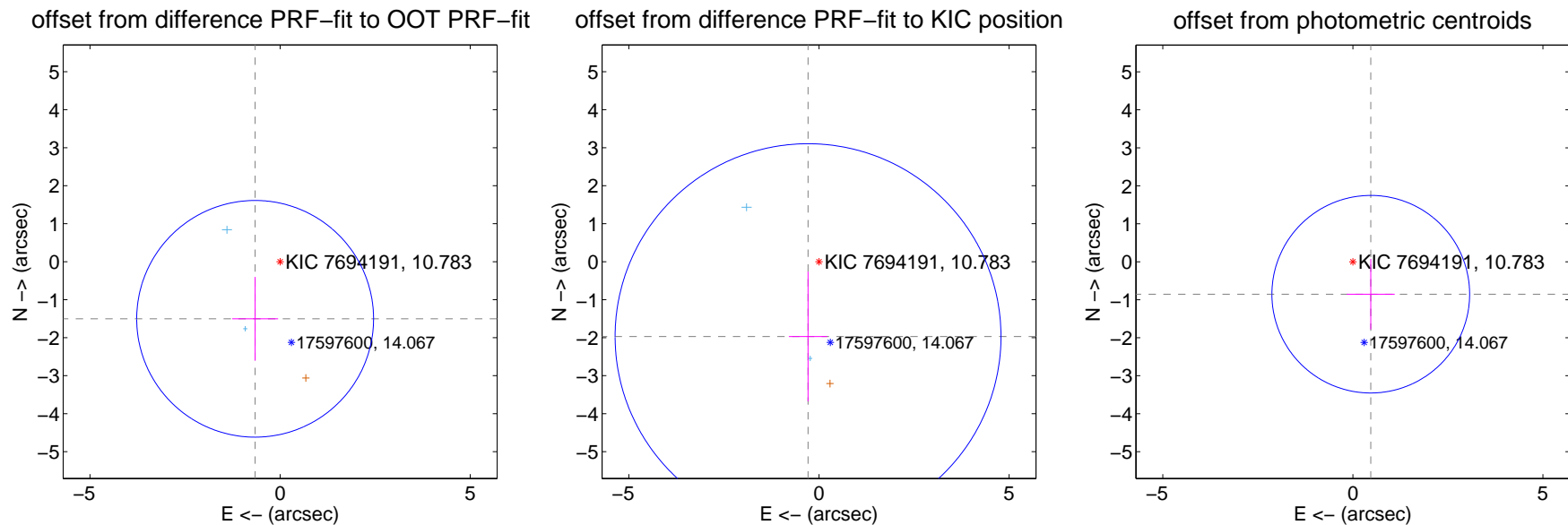
DV Centroid Data

Supplemental centroid analysis for 007694191-02. **Kepler magnitude: 10.78.** Transit SNR 7.35

There are 2 quarters with good PRF difference image offsets

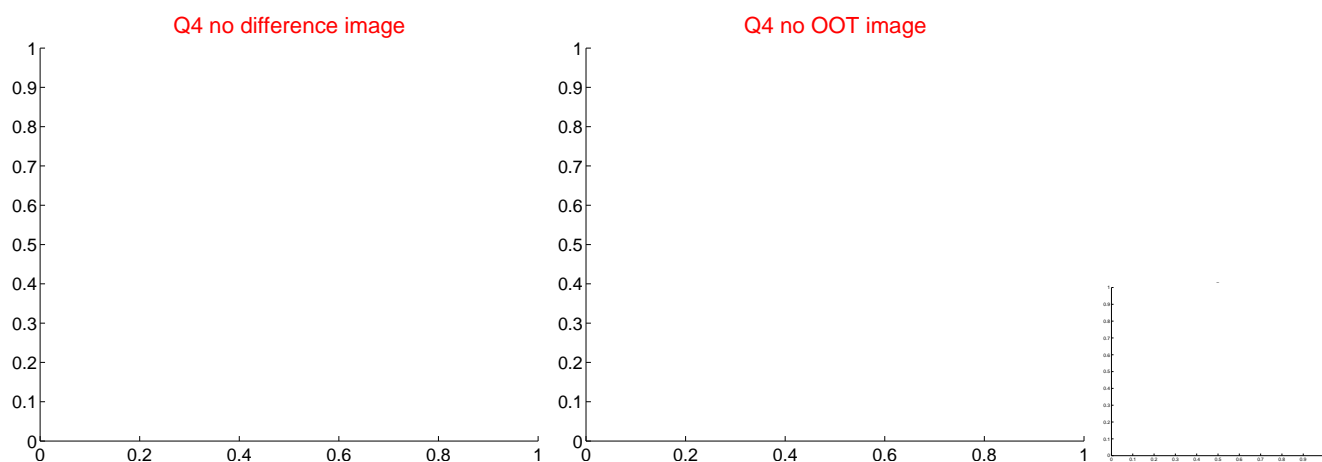
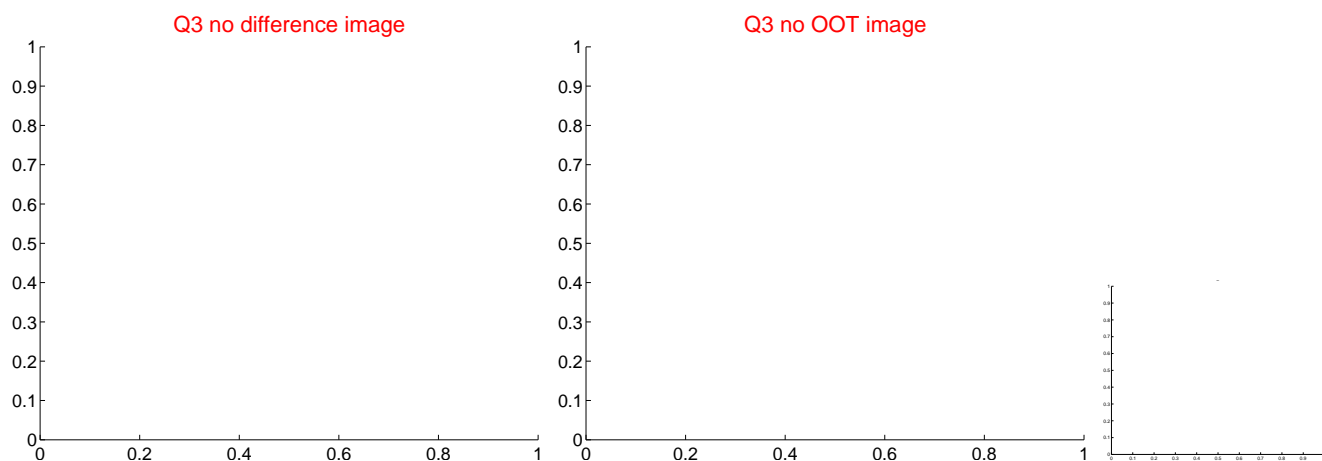
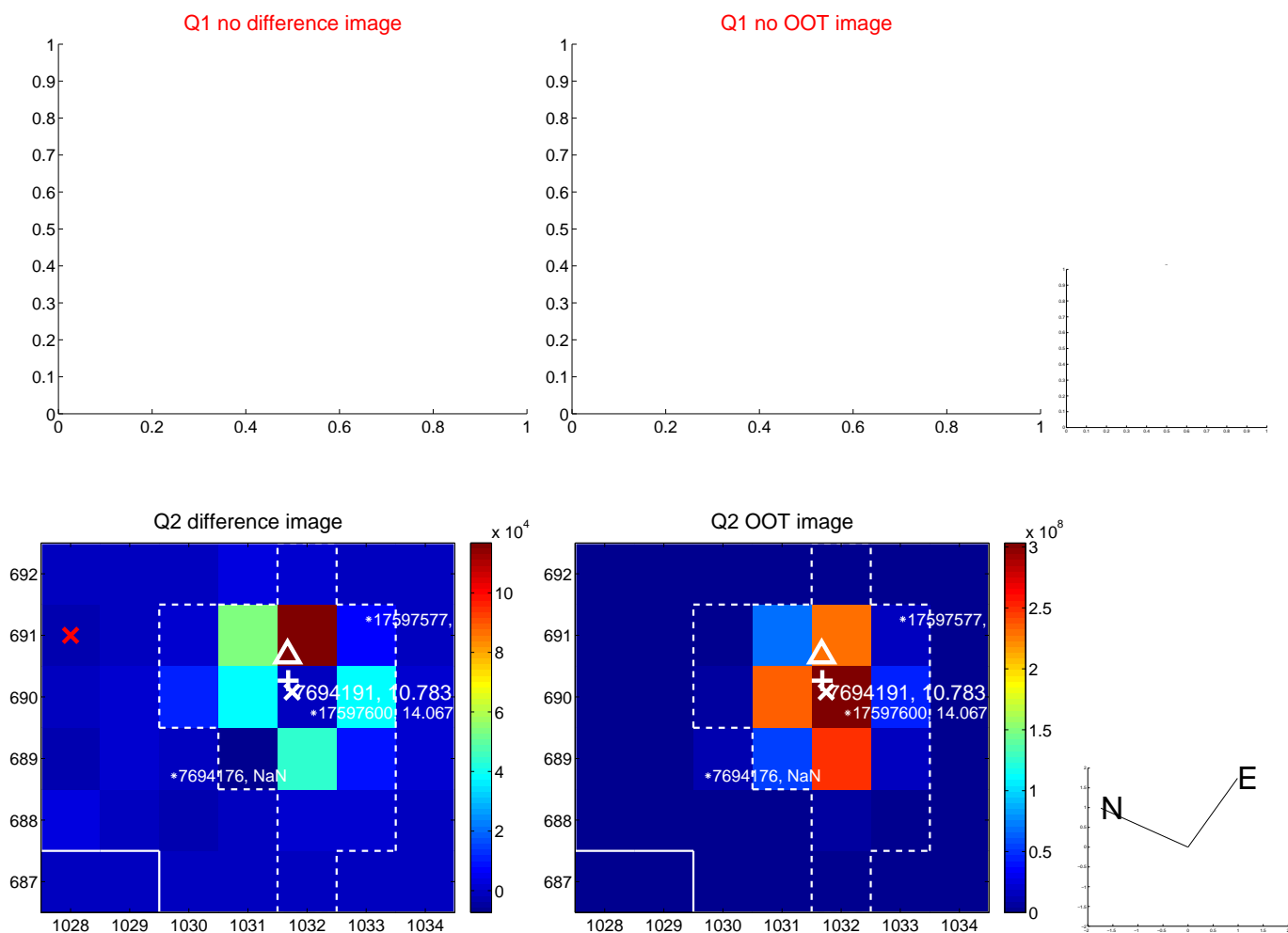
The direct PRF centroid is offset from the target star catalog position by about 0.41 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.641 ± 1.038	1.58	0.657 ± 0.604	-1.503 ± 1.102
PRF-fit source offset from KIC position	1.990 ± 1.691	1.18	0.287 ± 0.505	-1.969 ± 1.708
photometric centroid source offset	0.98 ± 0.87	1.13	-0.47 ± 0.63	-0.85 ± 0.93



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.

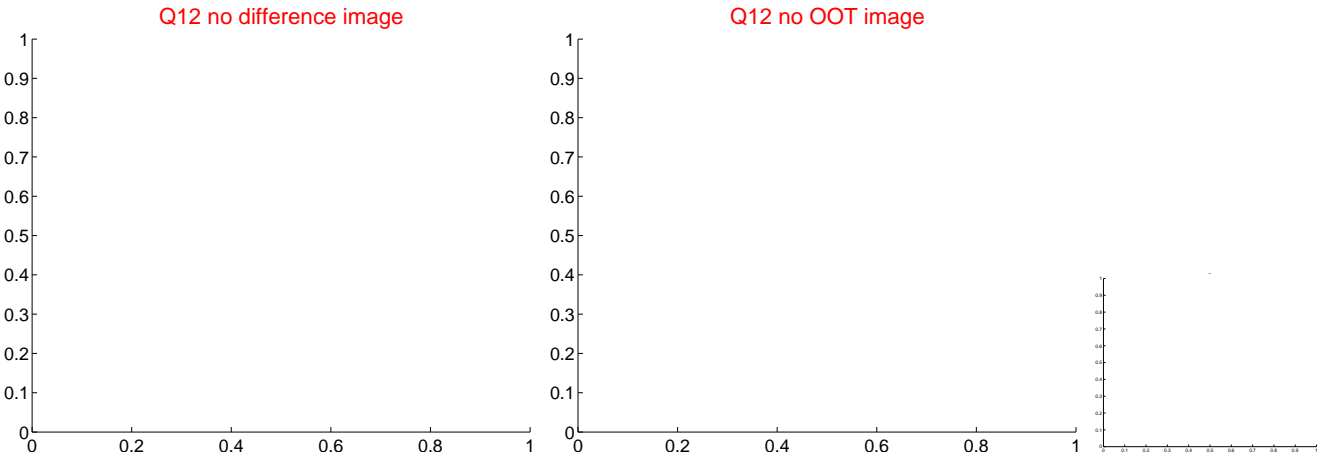
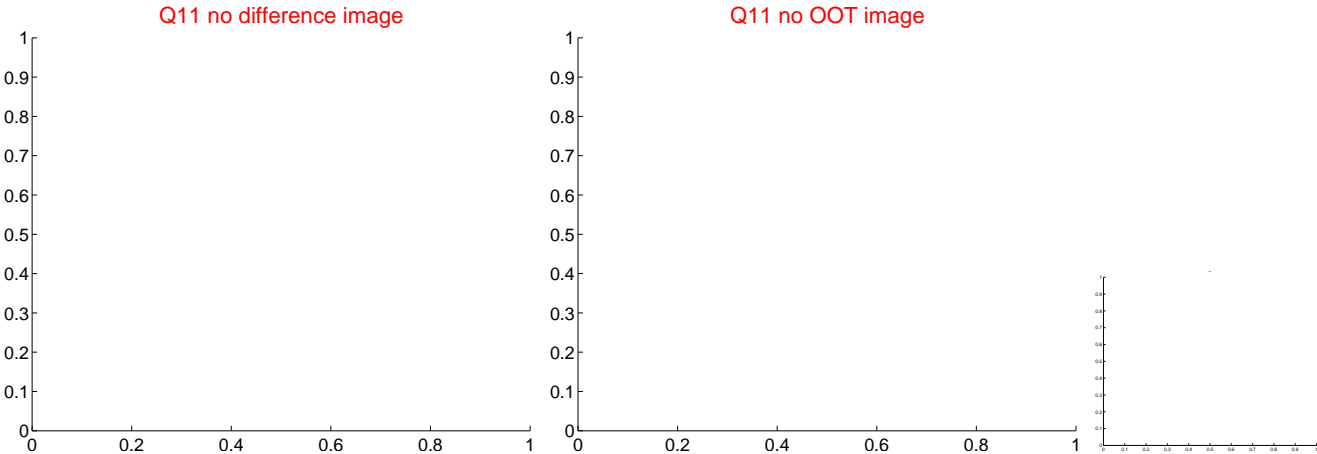
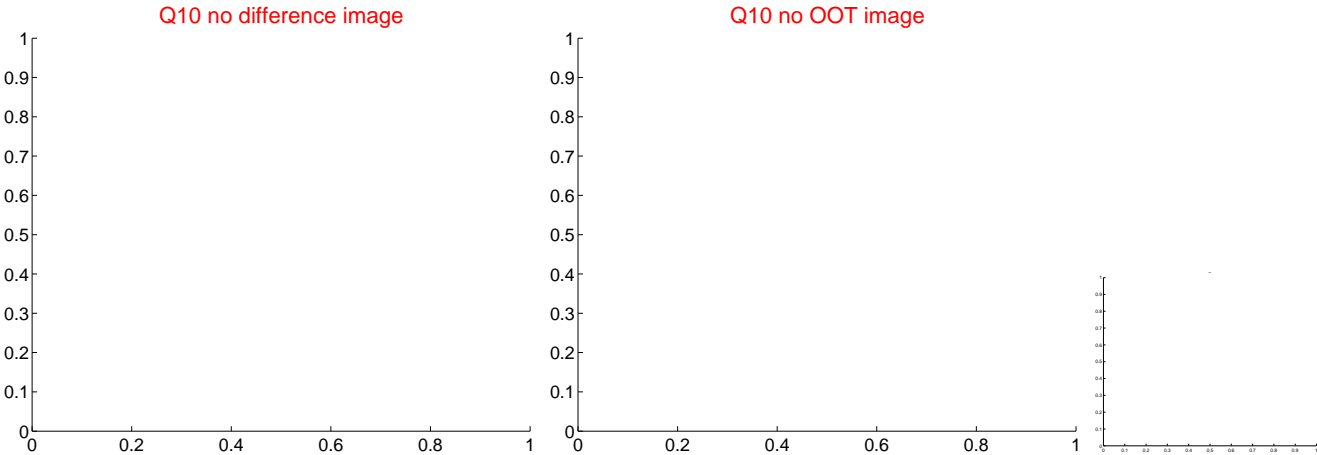
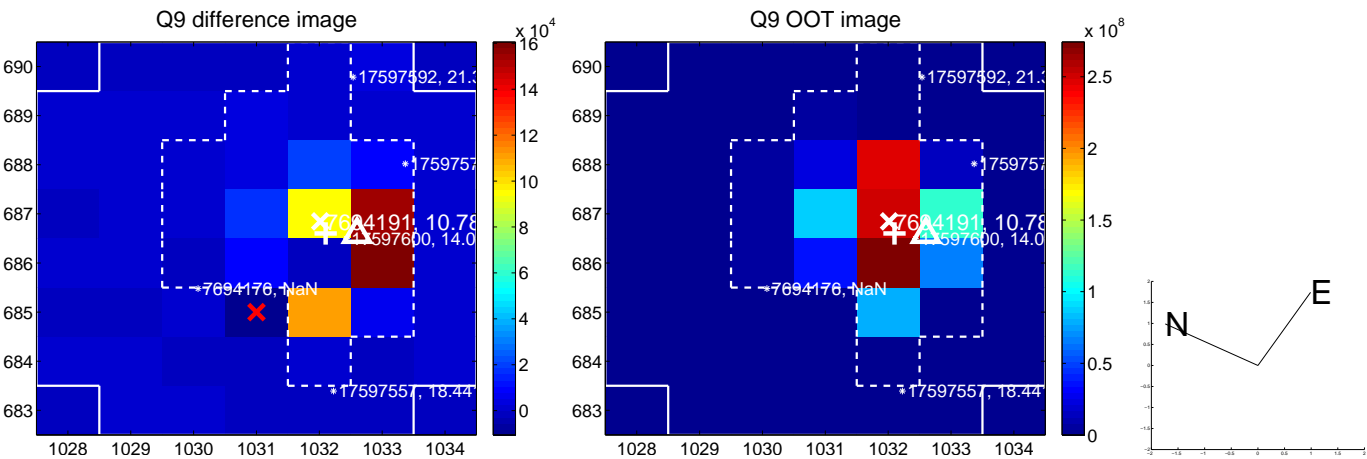
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



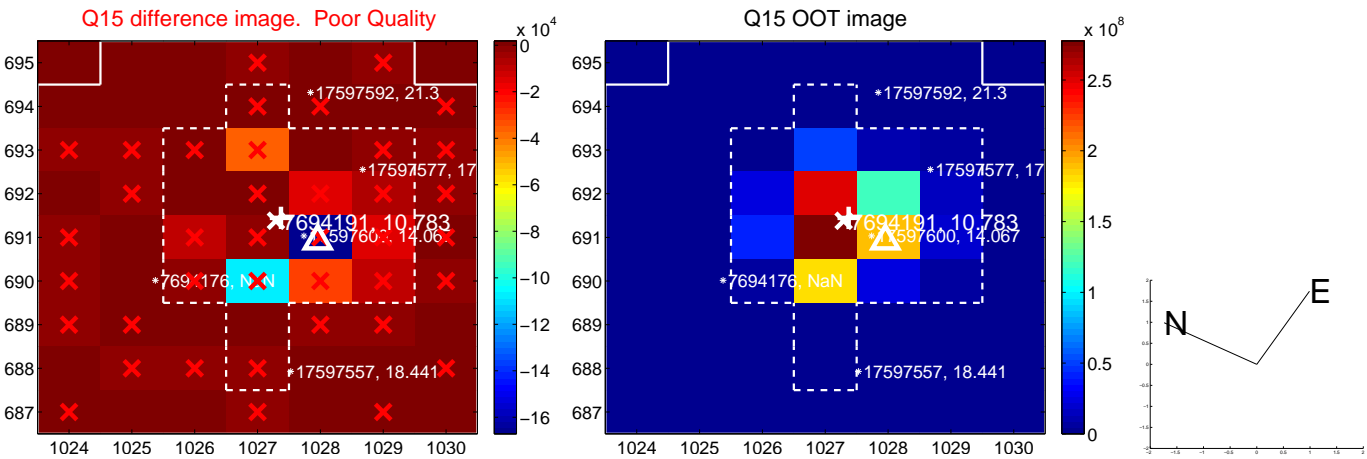
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



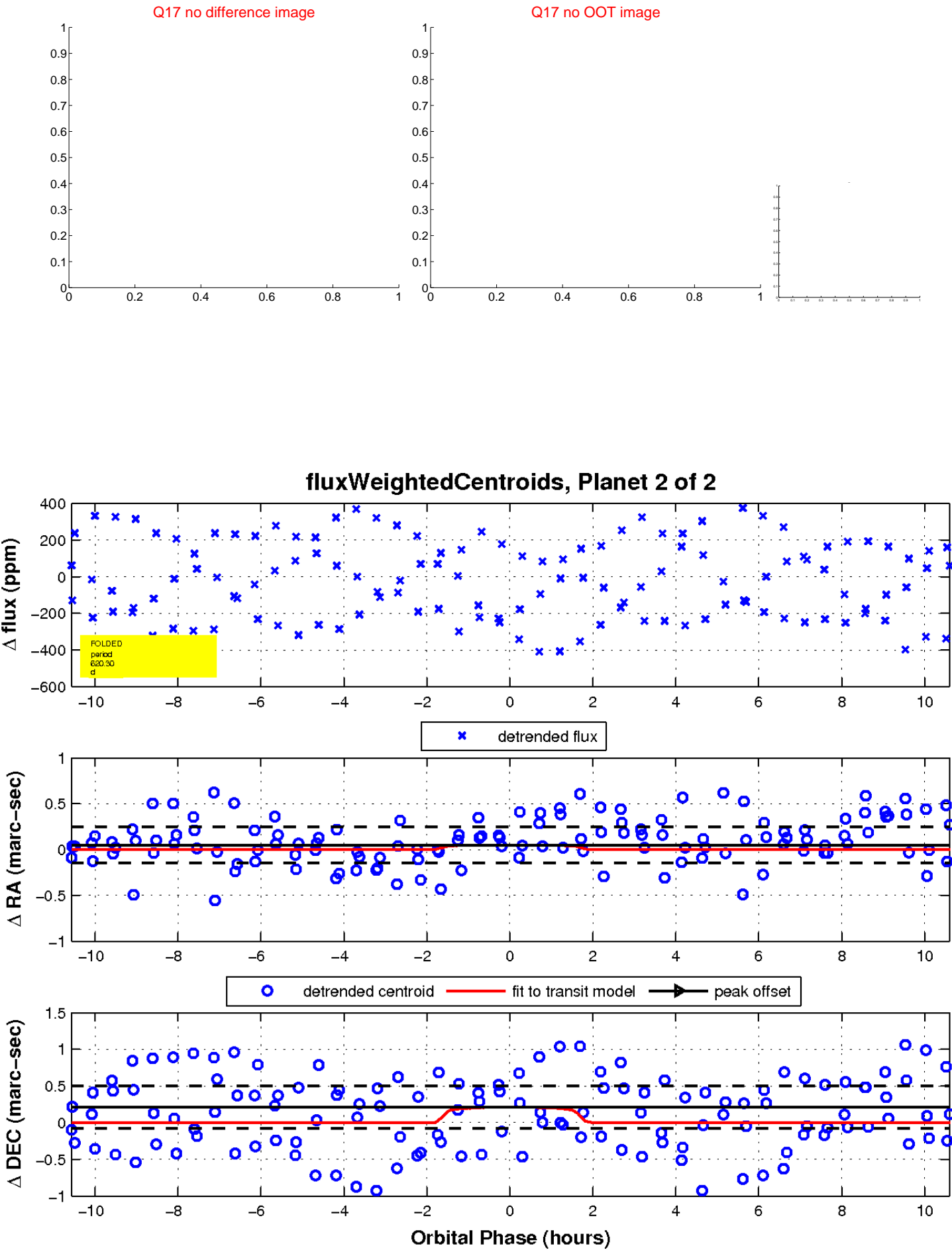
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

