

KIC 006310929

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})
006310929-01	OBS	No	3.176027	134.155921	50.1	17.819	8.6	9.0	1.00	6230	0.71	733.16
006310929-02	OBS	No	206.385247	167.538643	14.8	37.941	12.0	0.3	1.00	6230	0.39	2.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006310929-01	OBS	FP	0.00	1	0	0	0	LPP_DV
006310929-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—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.

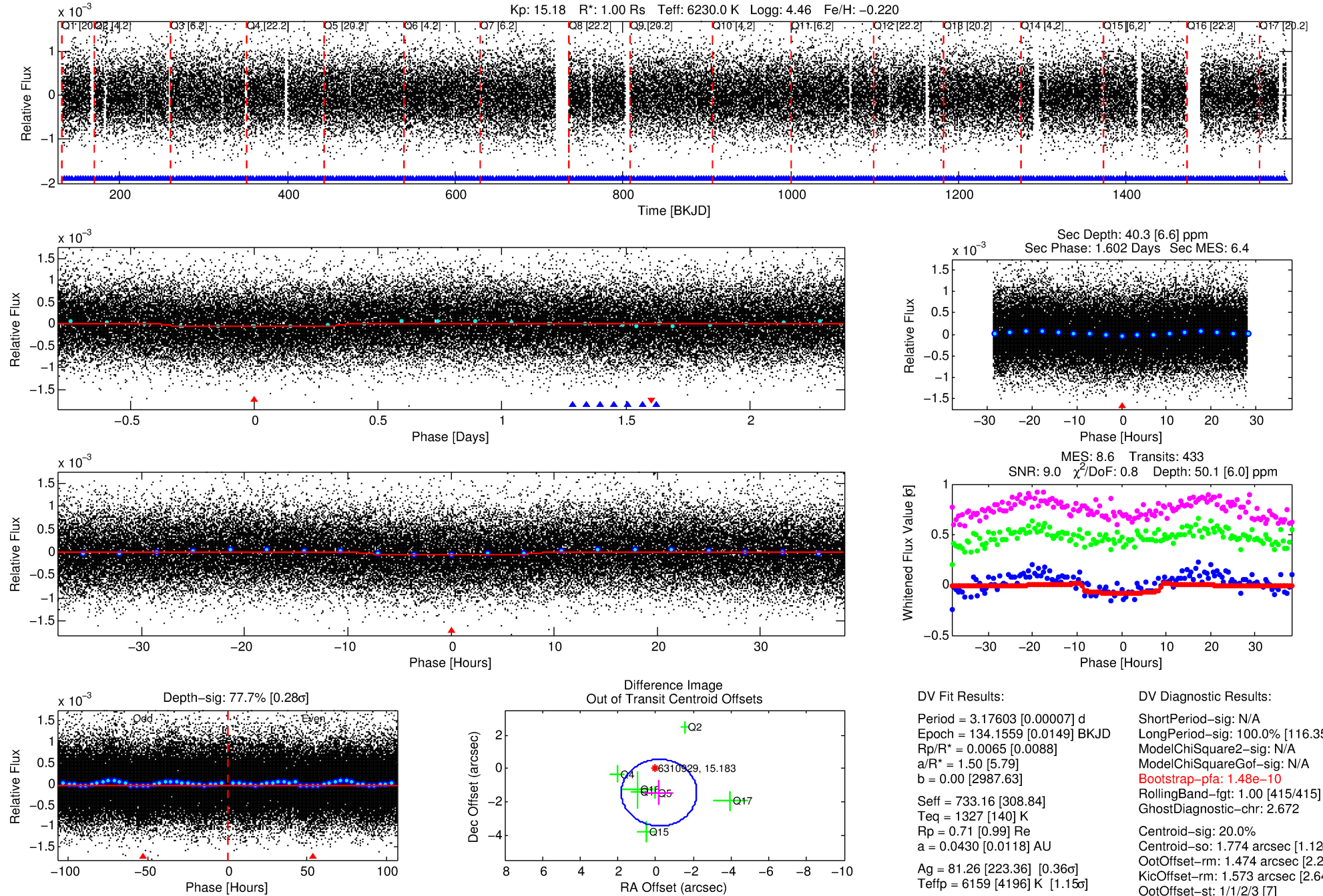
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006310929-01

No Significant Match Found

DV One-Page Summary

KIC: 6310929 Candidate: 1 of 2 Period: 3.176 d



DV Fit Results:

Period = 3.17603 [0.00007] d
Epoch = 134.1559 [0.0149] BKJD
Rp/R* = 0.0065 [0.0088]
a/R* = 1.50 [5.79]
b = 0.00 [2987.63]
Seff = 733.16 [308.84]
Teff = 1327 [140] K
Rp = 0.71 [0.99] Re
a = 0.0430 [0.0118] AU
Ag = 81.26 [223.36] [0.36 σ]
Teffp = 6159 [4196] K [1.15 σ]

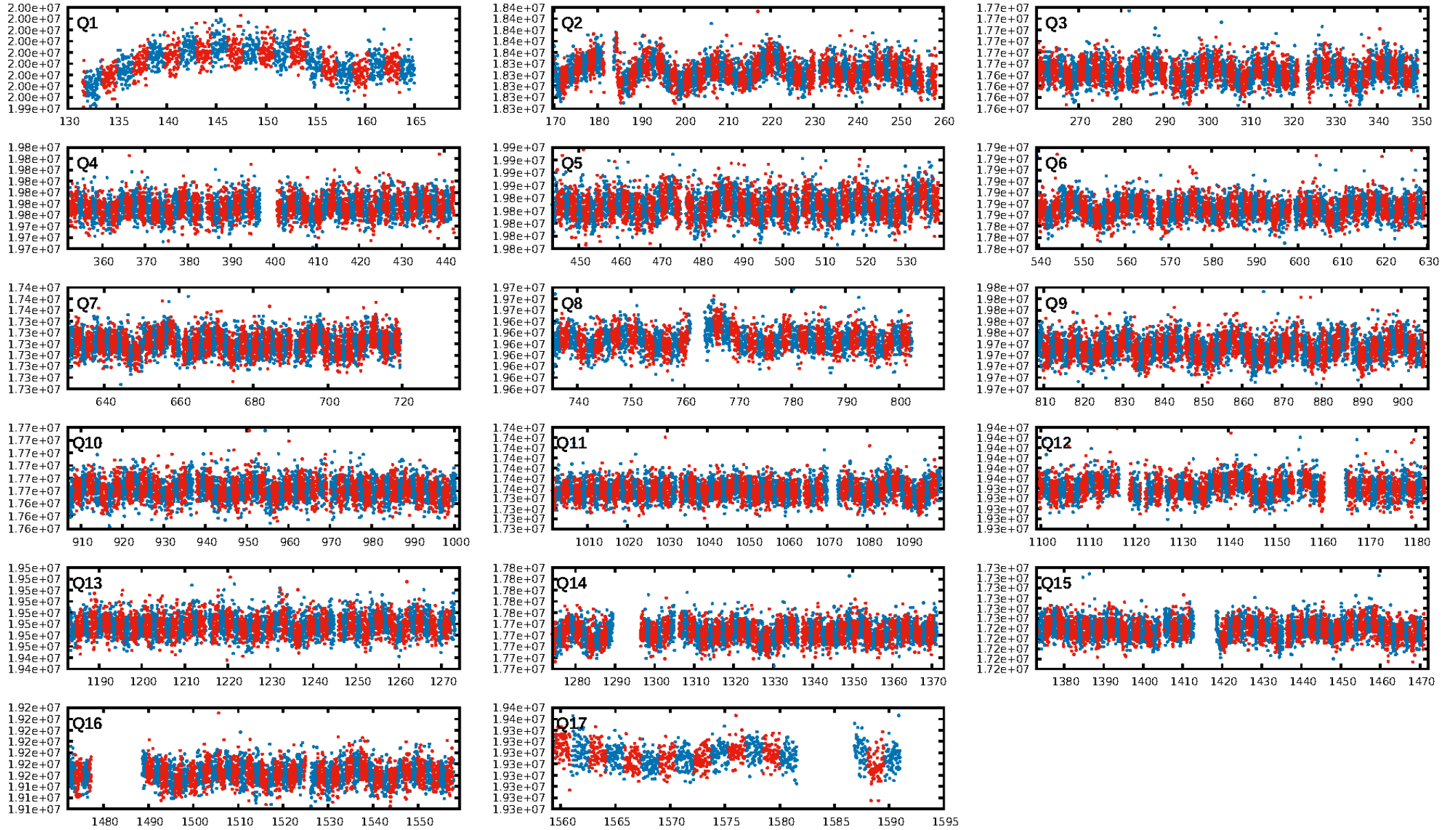
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [116.35 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.48e-10
RollingBand-fgt: 1.00 [415/415]
GhostDiagnostic-chr: 2.672
Centroid-sig: 20.0%
Centroid-so: 1.774 arcsec [1.12 σ]
OotOffset-rm: 1.474 arcsec [2.21 σ]
KicOffset-rm: 1.573 arcsec [2.64 σ]
OotOffset-st: 1/1/2/3 [7]
KicOffset-st: 1/1/2/3 [7]
DiffImageQuality-fgm: 0.71 [5/7]
DiffImageOverlap-fno: 1.00 [17/17]

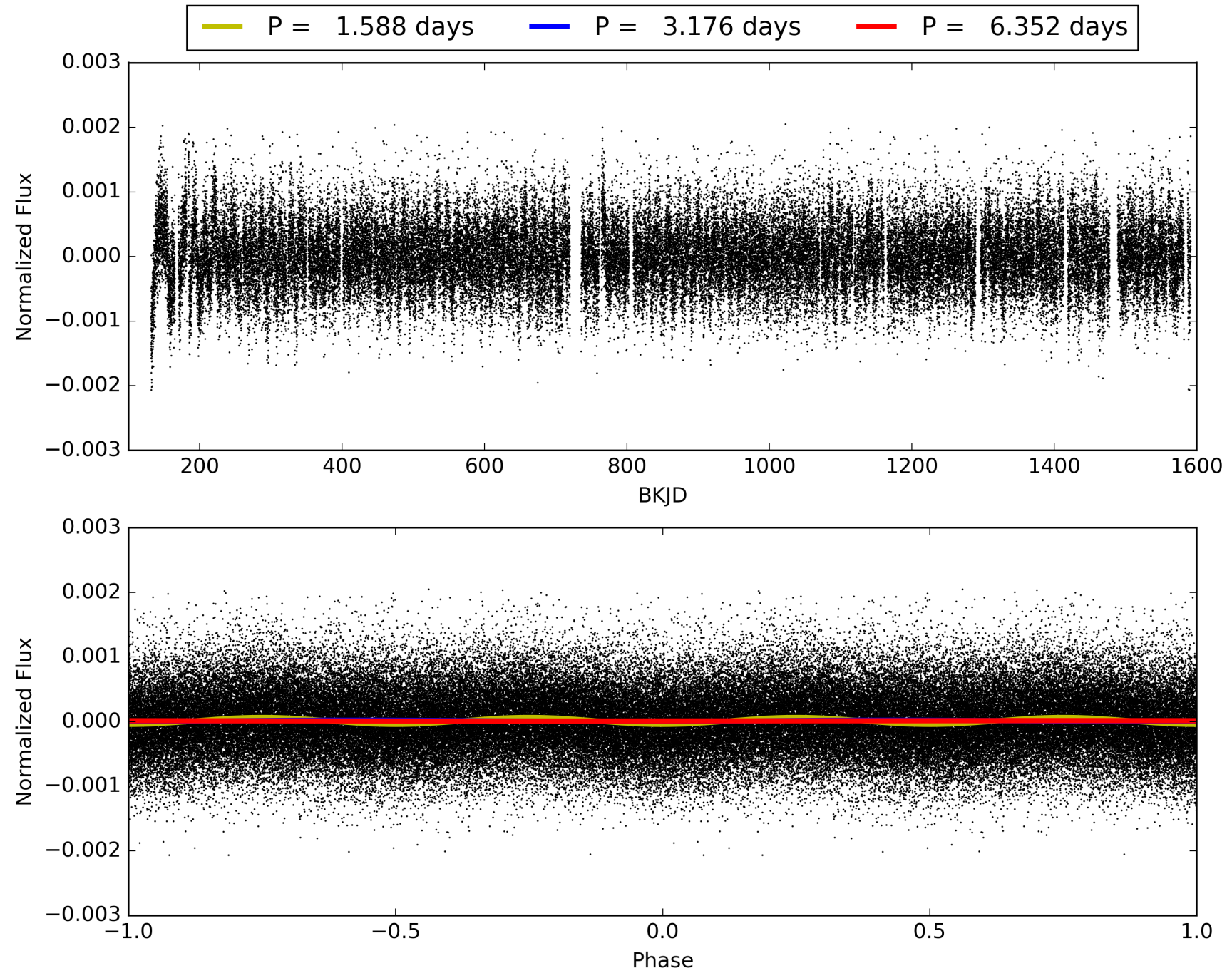
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:49:37 Z

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

TCE 006310929-01, PDC Light Curves

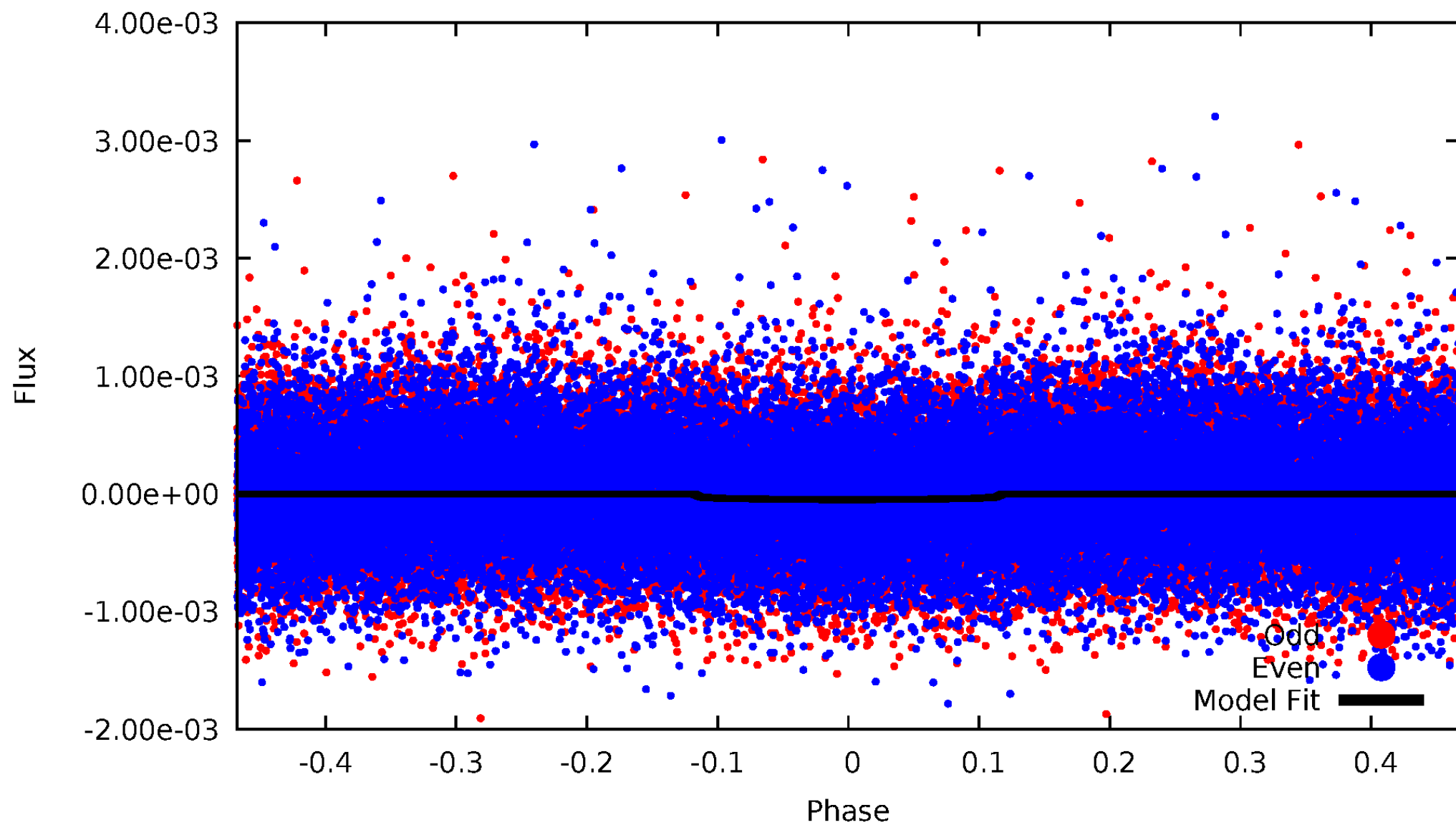


TCE 006310929-01



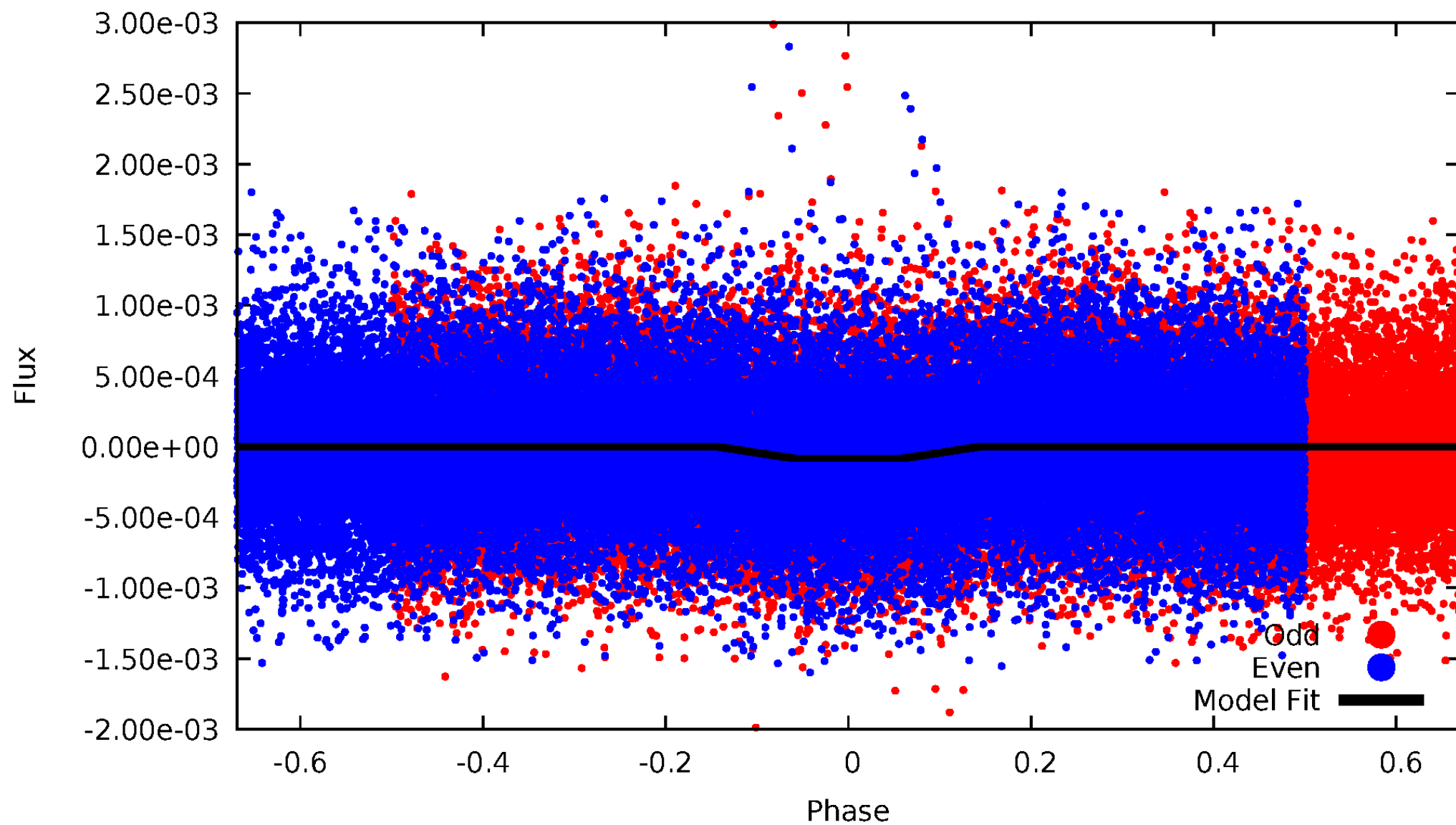
DV Odd/Even

TCE 006310929-01



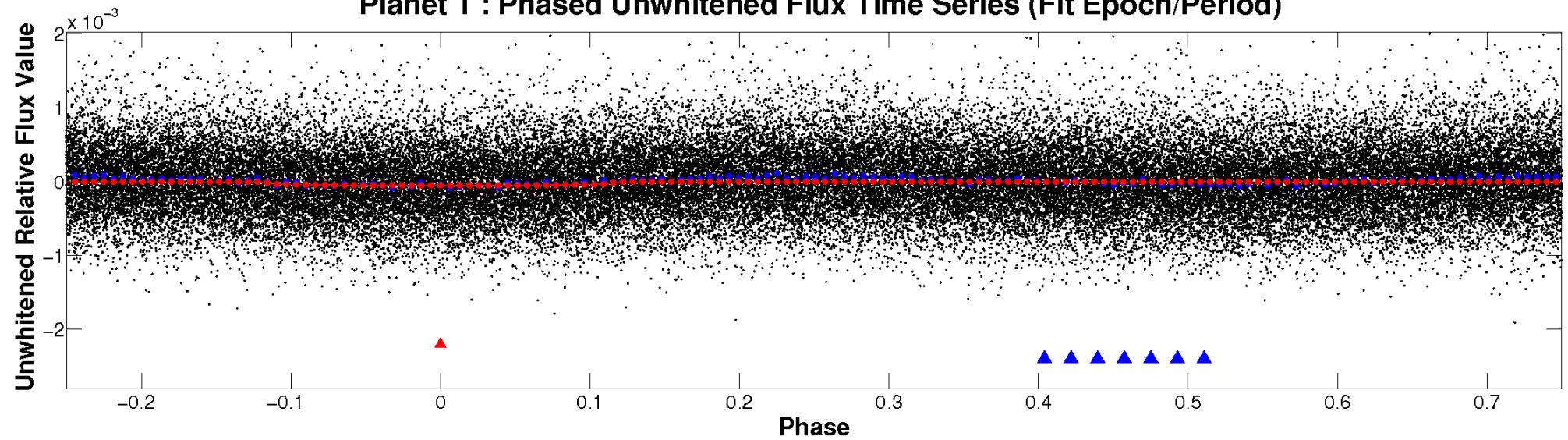
ALT Odd/Even

TCE 006310929-01

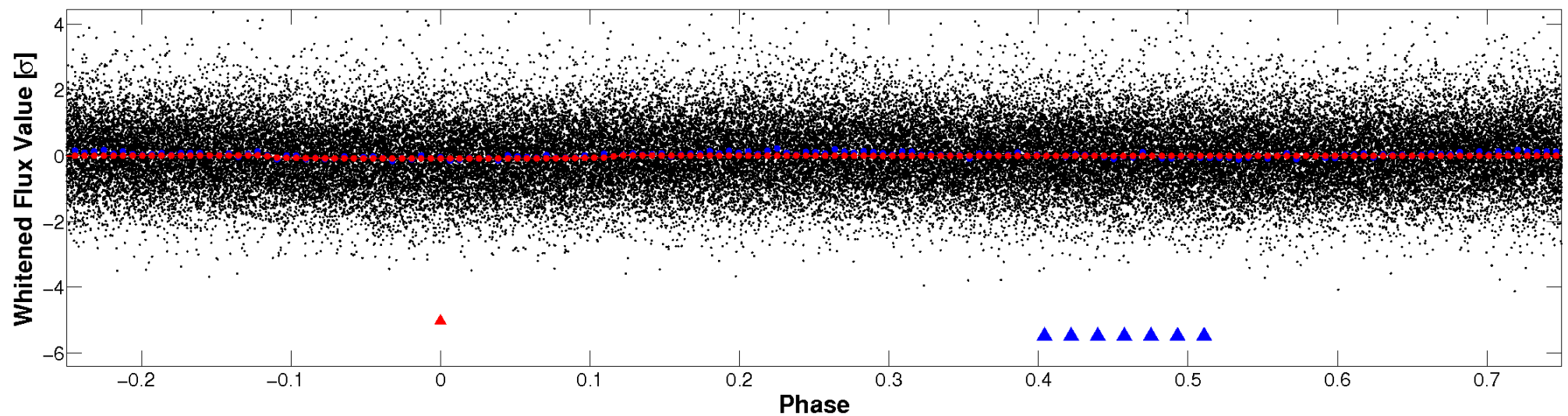


Non-Whitened Vs. Whitened Light Curve

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

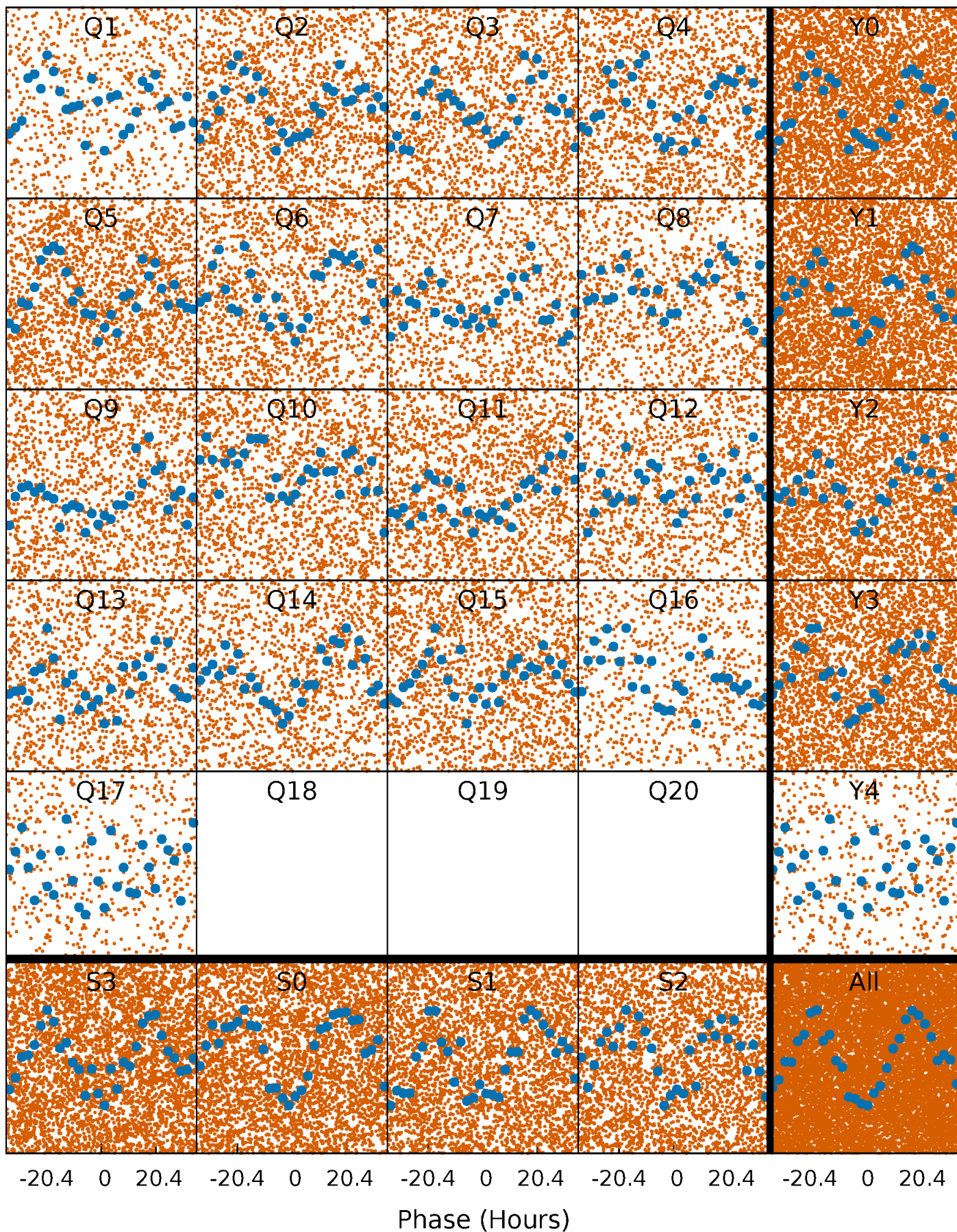


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



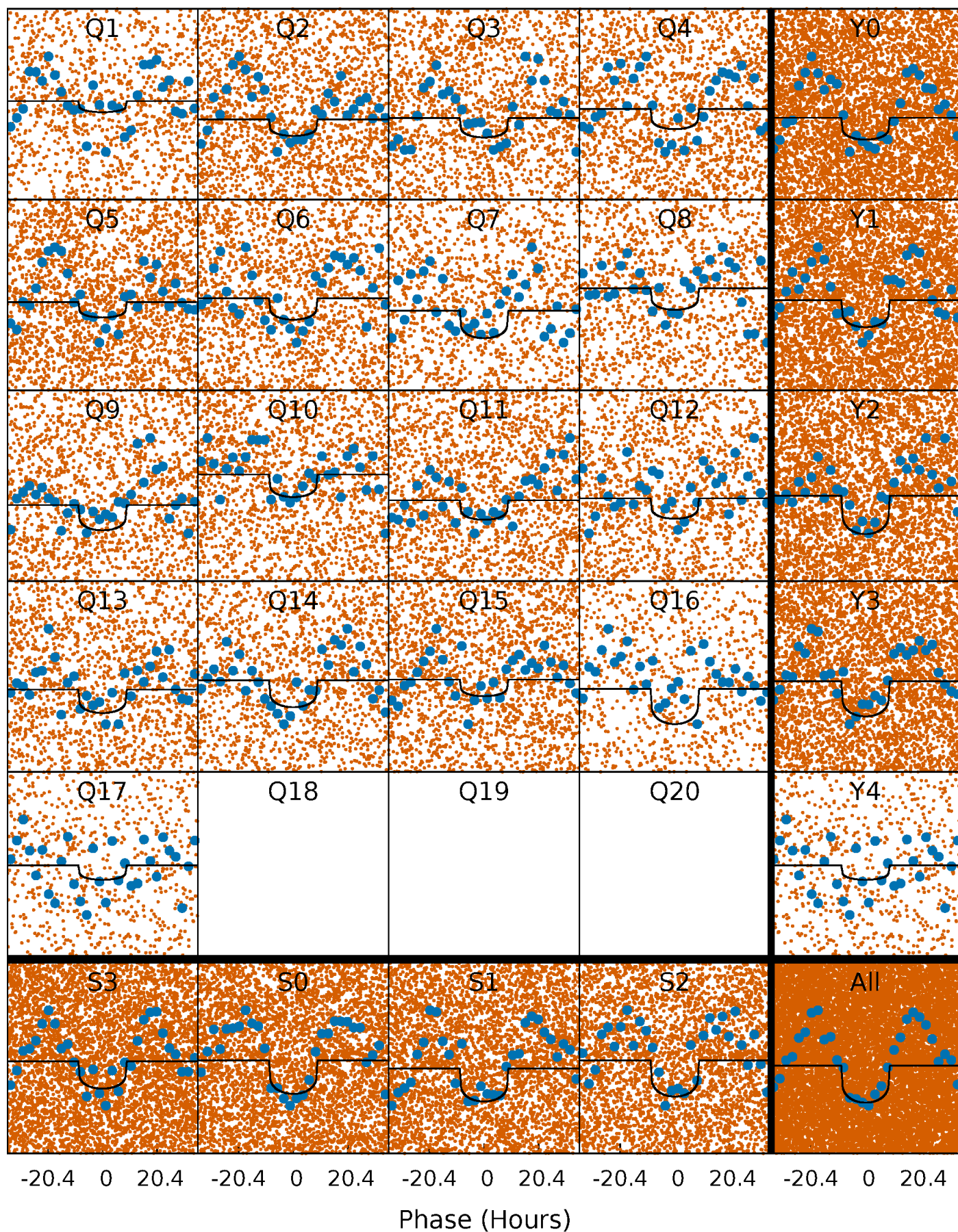
PDC Quarter-Phased Transit Curves

TCE 006310929-01 P= 3.176027 Days $T_0=134.155921$ (BKJD)



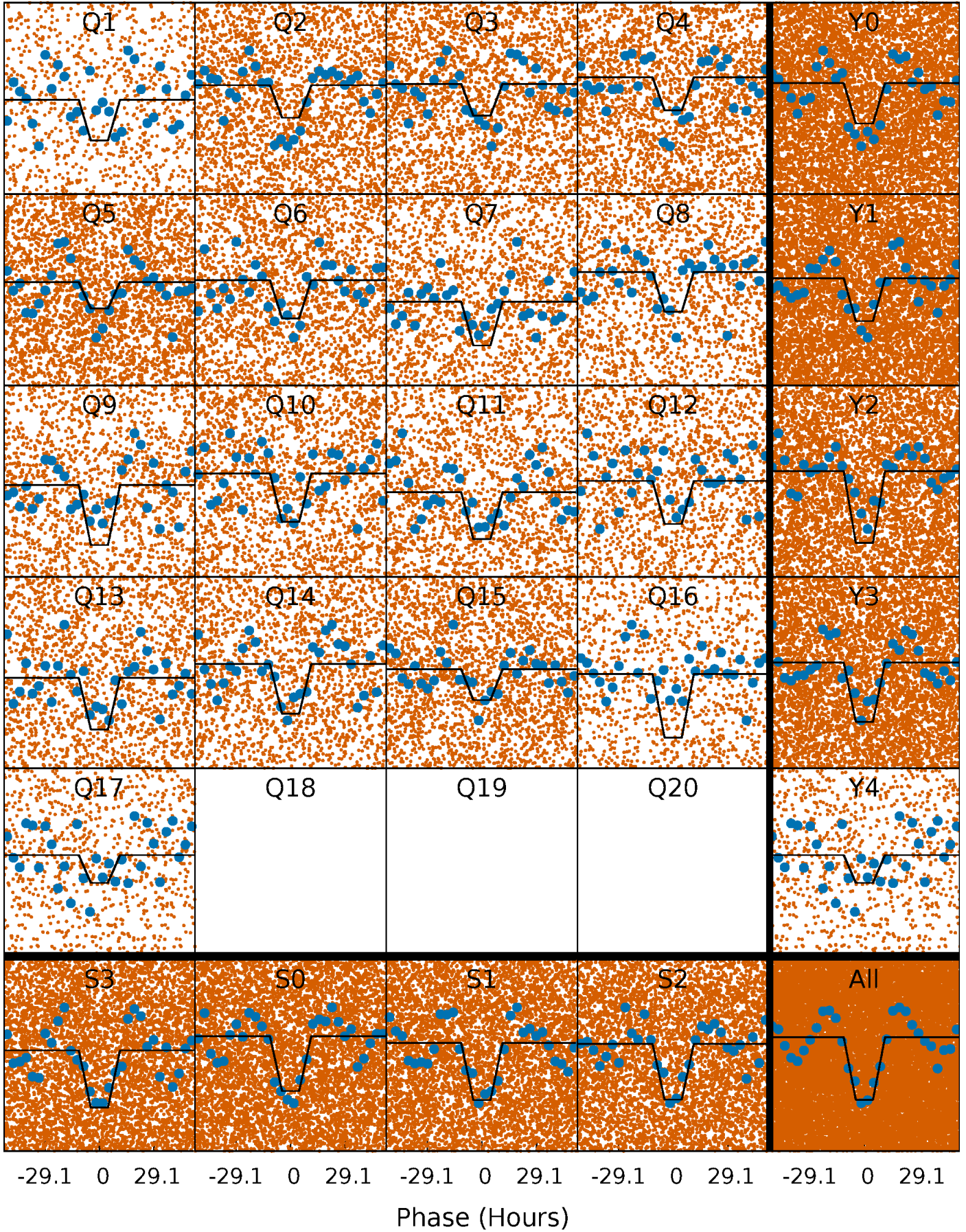
DV Quarter-Phased Transit Curves

TCE 006310929-01 P= 3.176027 Days $T_0=134.155921$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

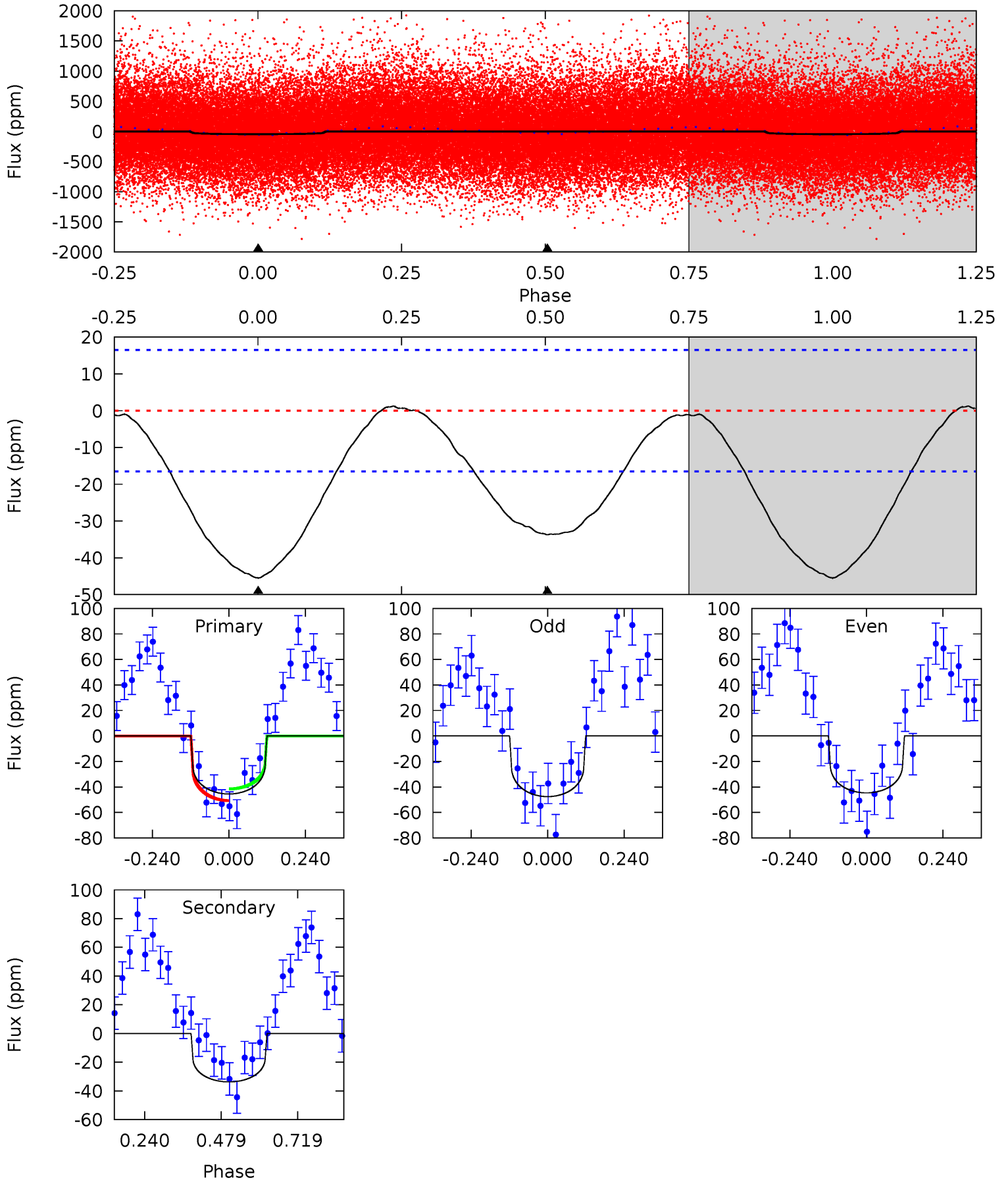
TCE 006310929-01 P= 3.175668 Days $T_0=134.210164$ (BKJD)



DV Model-Shift Uniqueness Test

006310929-01, P = 3.176027 Days, E = 130.979894 Days

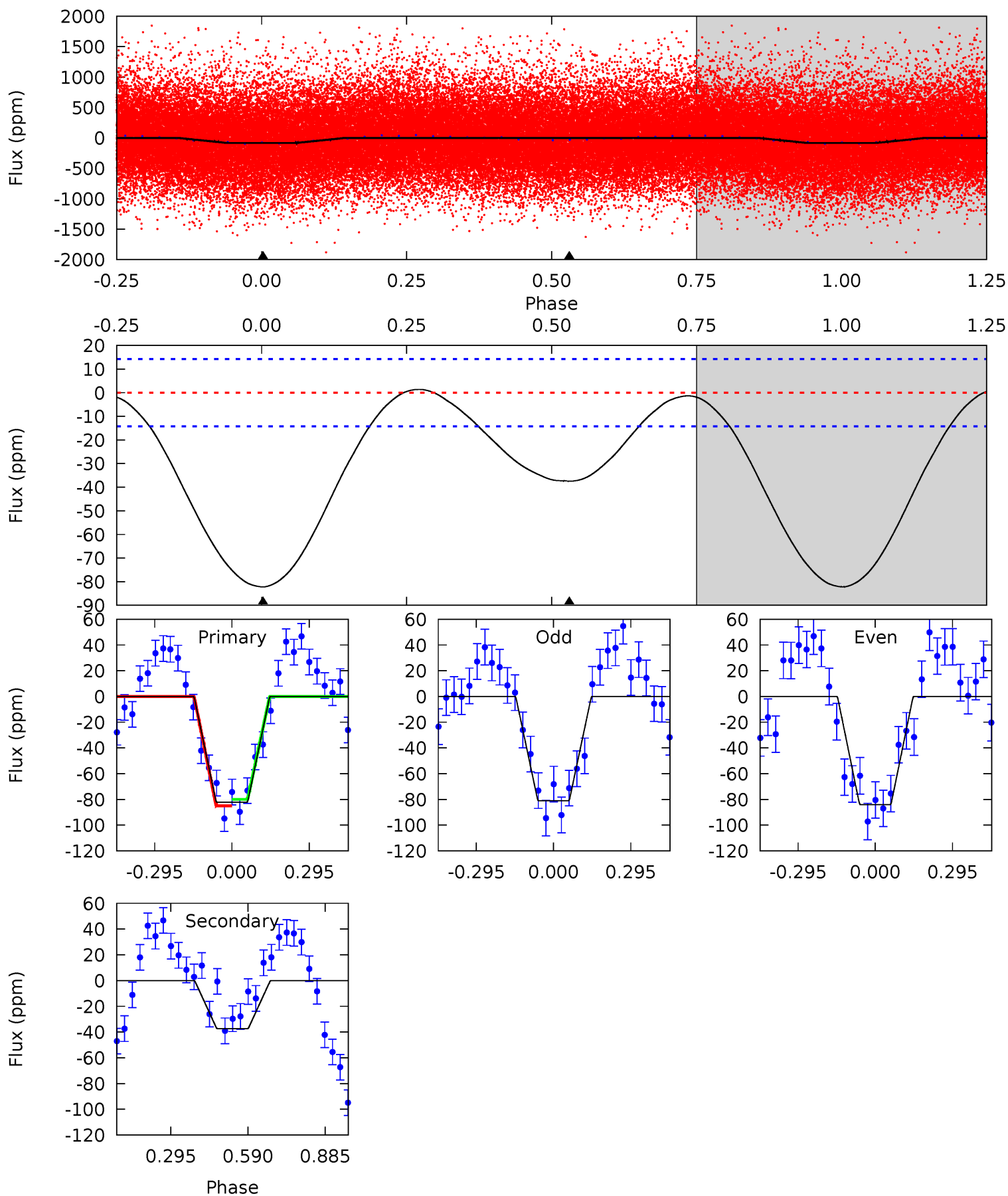
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	8.96	0	0	4.38	1.18	0.25	12.1	12.1	8.96	8.96	0.39	0.76	0.03	1.25



Alt Model-Shift Uniqueness Test

006310929-01, P = 3.175668 Days, E = 131.034496 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.0	11.4	0	0	4.33	1.05	0.65	25.0	25.0	11.4	11.4	0.45	0.99	0.02	0.76



Stellar Parameters For KIC 006310929

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6230^{+197}_{-241}	$4.458^{+0.056}_{-0.210}$	$-0.220^{+0.250}_{-0.300}$	$1.003^{+0.335}_{-0.112}$	$1.047^{+0.144}_{-0.144}$	$1.463^{+0.433}_{-0.790}$
	+3%/-4%	+1%/-5%	+114%/-136%	+33%/-11%	+14%/-14%	+30%/-54%
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 006310929-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-34 ± 4	$1.01^{+0.97}_{-0.64}$	1890^{+143}_{-105}	5142^{+3624}_{-1189}	33^{+207}_{-25}
Alt.	-37 ± 3	$1.24^{+0.89}_{-0.74}$	1899^{+152}_{-101}	4805^{+2857}_{-916}	24^{+119}_{-16}

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

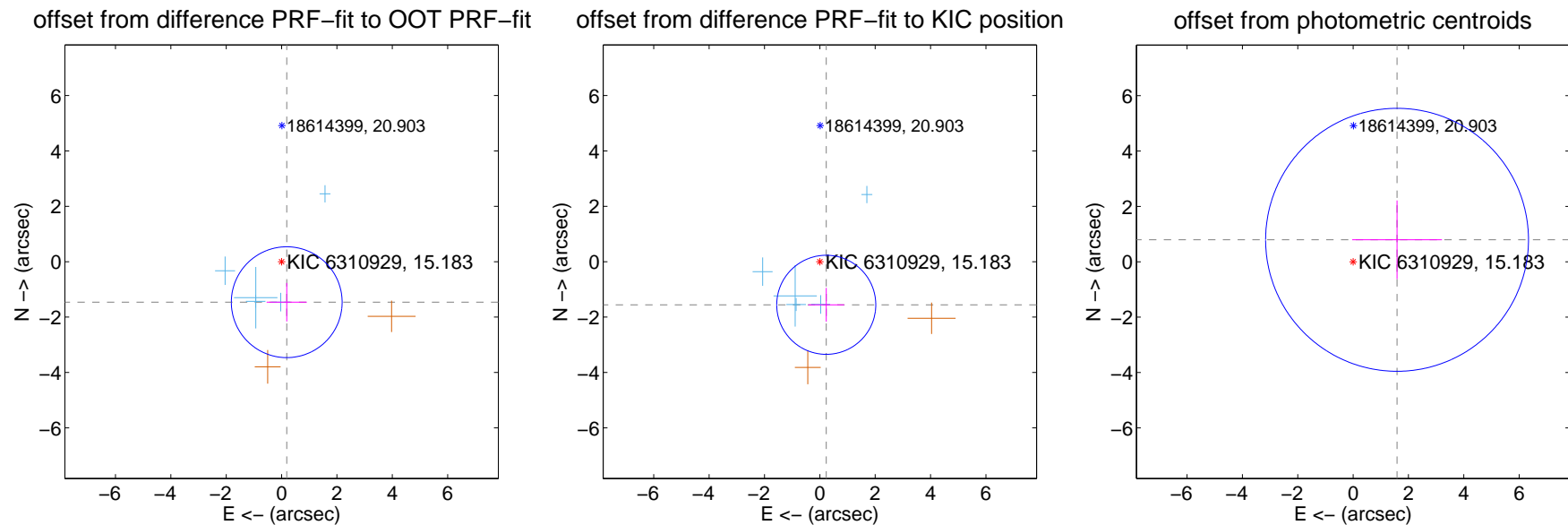
DV Centroid Data

Supplemental centroid analysis for 006310929-01. Kepler magnitude: 15.18. Transit SNR 8.97

There are 5 quarters with good PRF difference image offsets

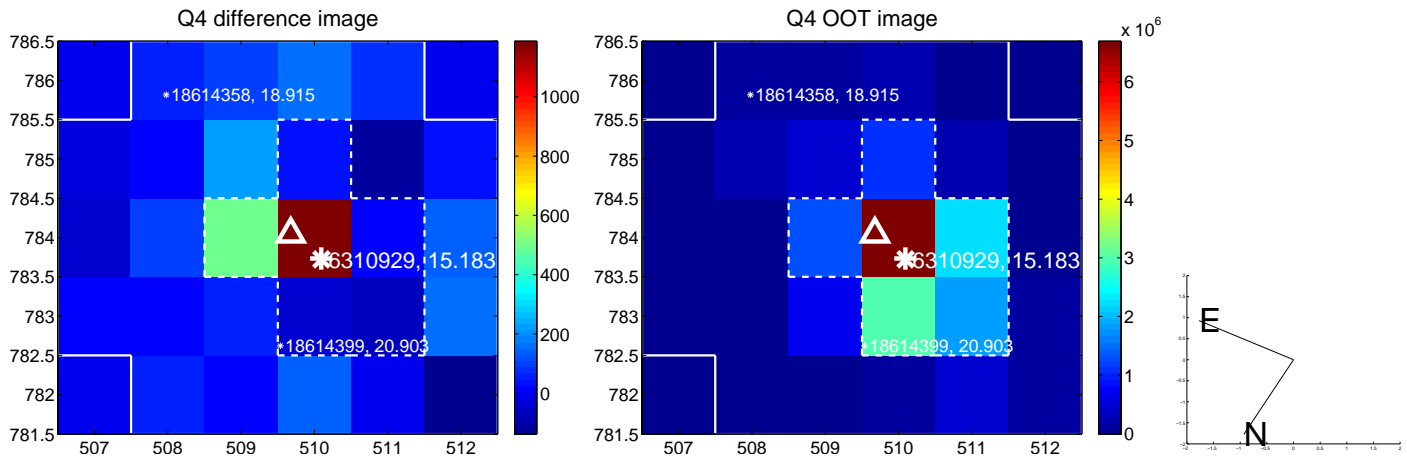
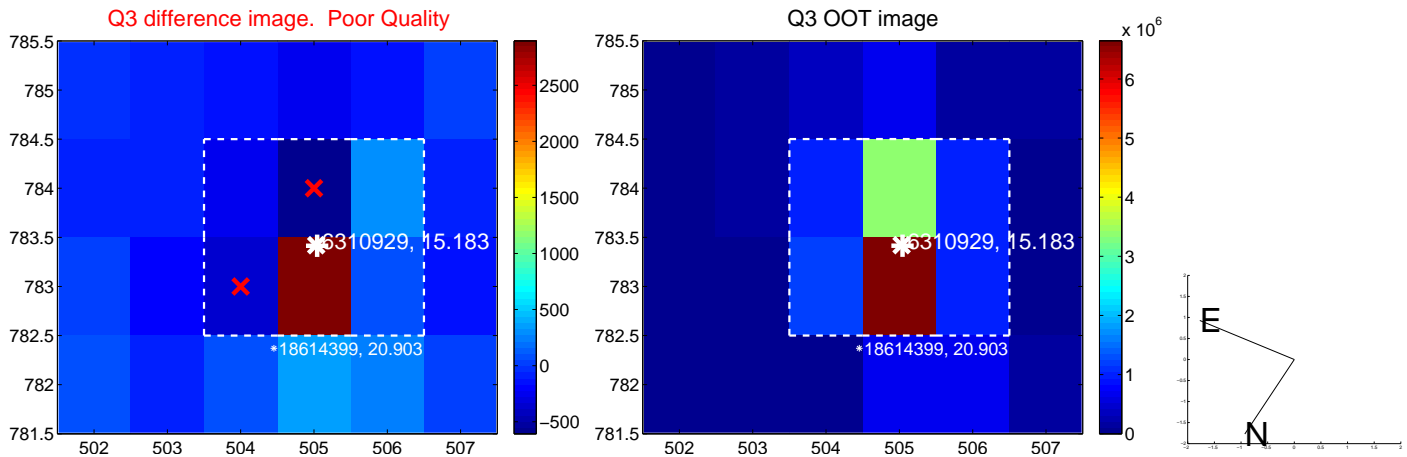
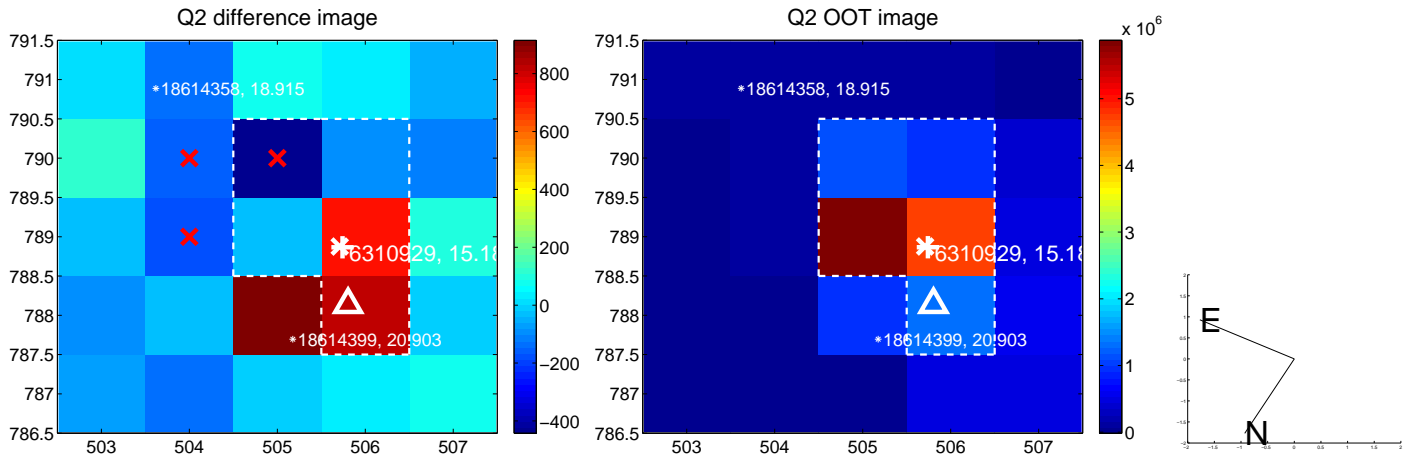
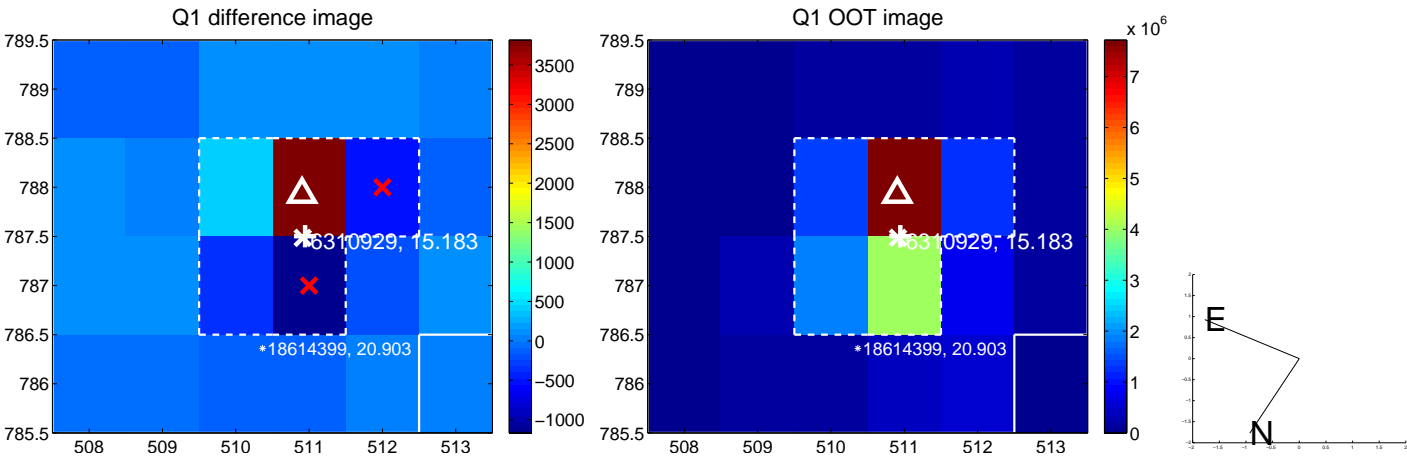
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.474 ± 0.667	2.21	-0.186 ± 0.725	-1.462 ± 0.694
PRF-fit source offset from KIC position	1.573 ± 0.596	2.64	-0.232 ± 0.647	-1.556 ± 0.610
photometric centroid source offset	1.77 ± 1.58	1.12	-1.59 ± 1.62	0.79 ± 1.42

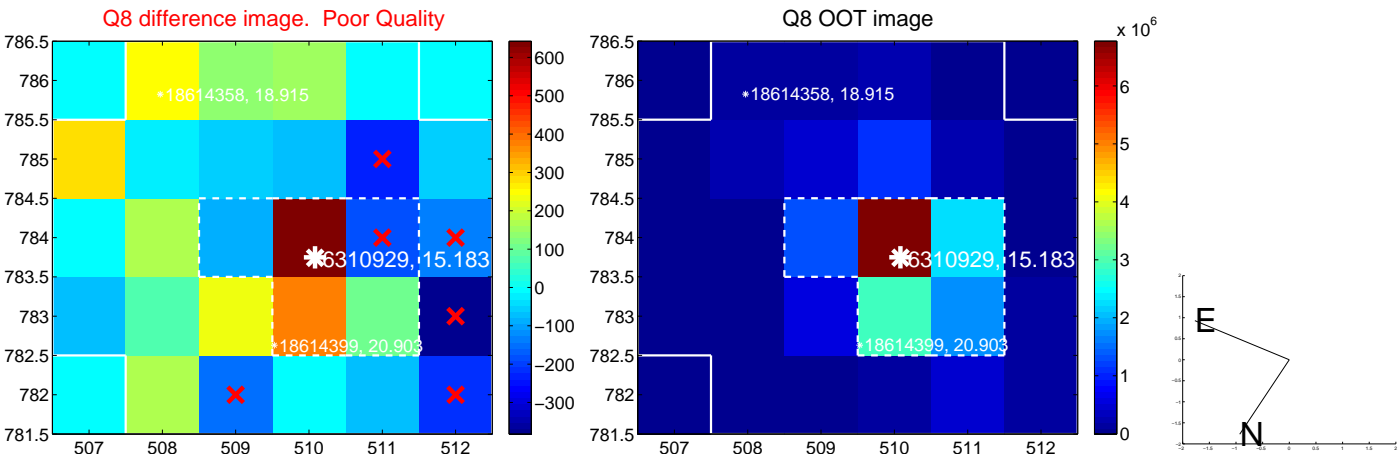
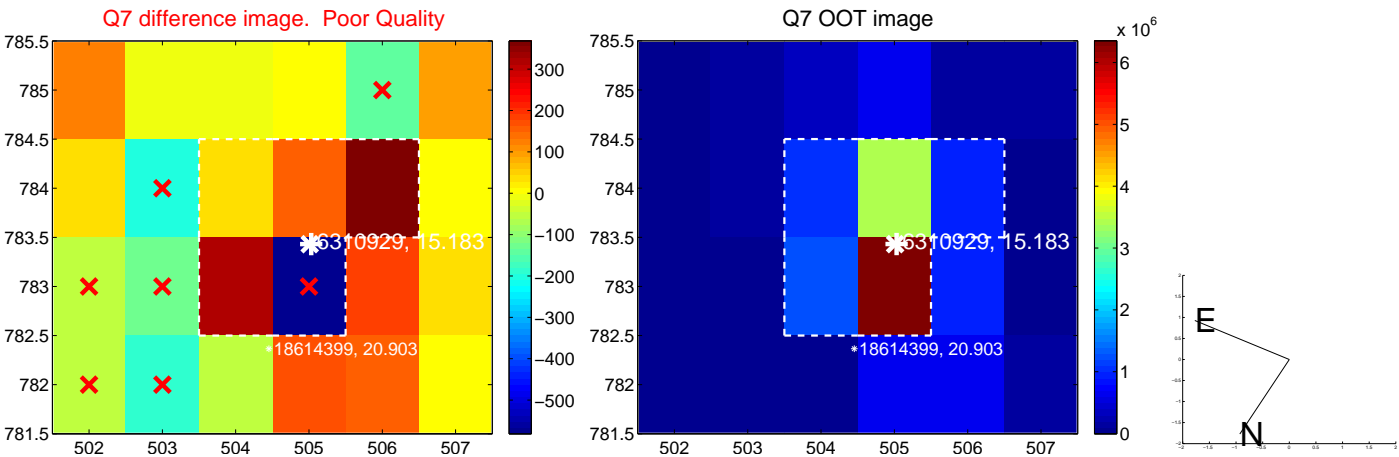
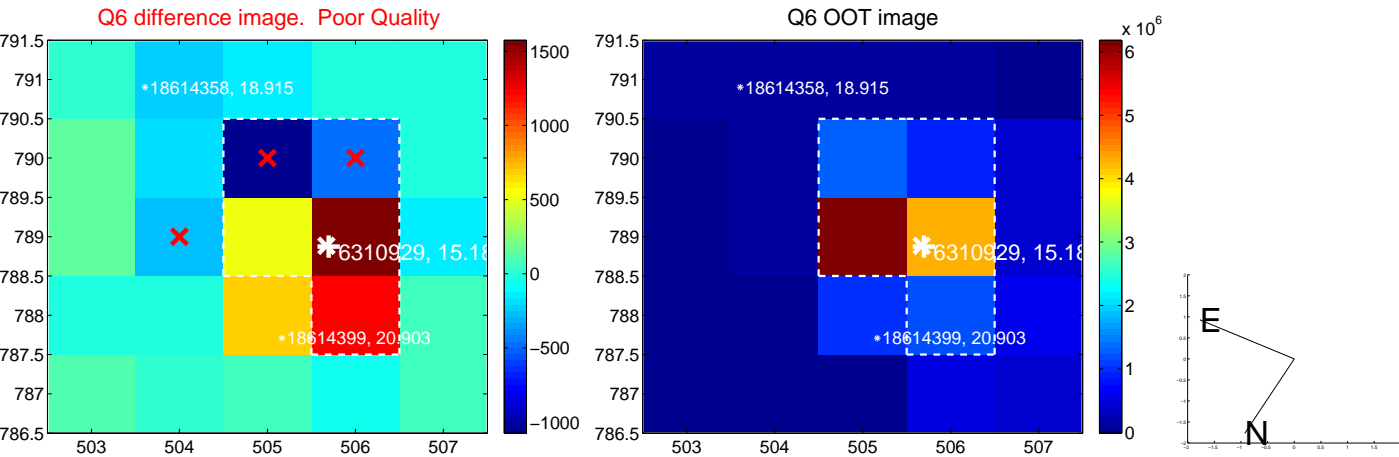
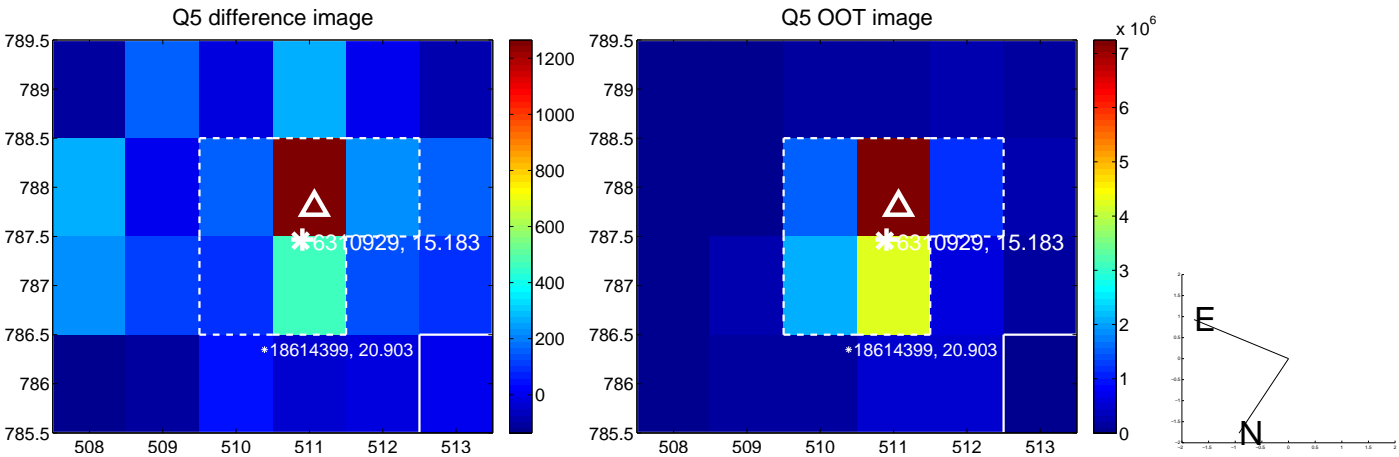


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

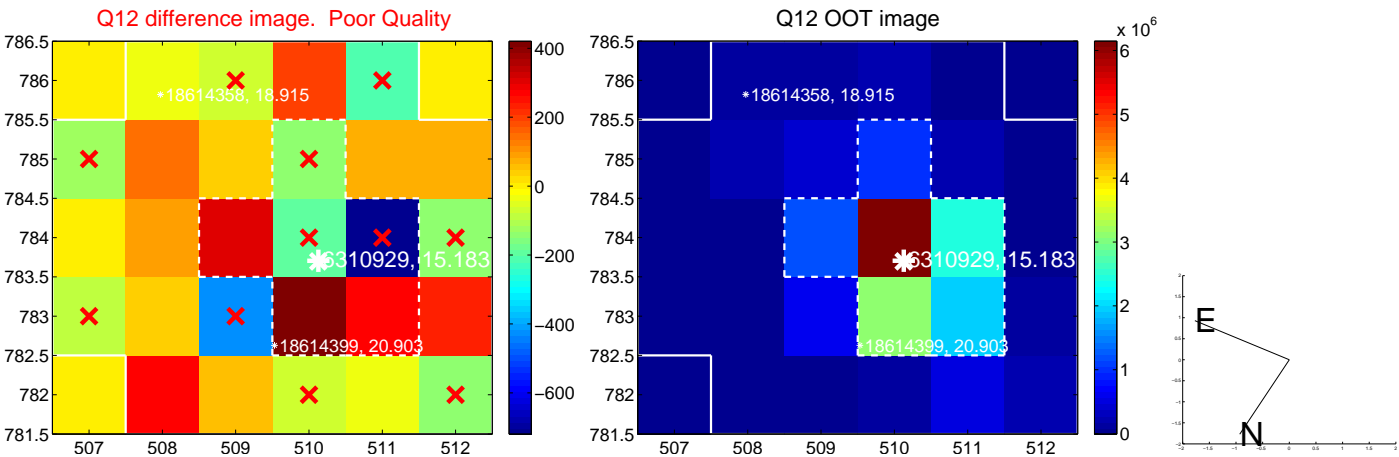
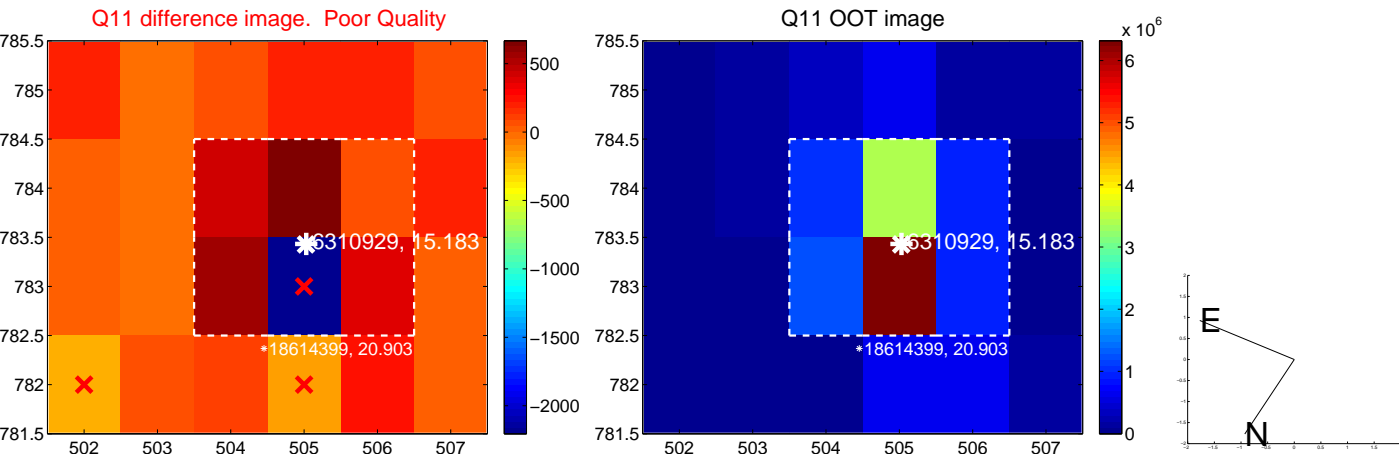
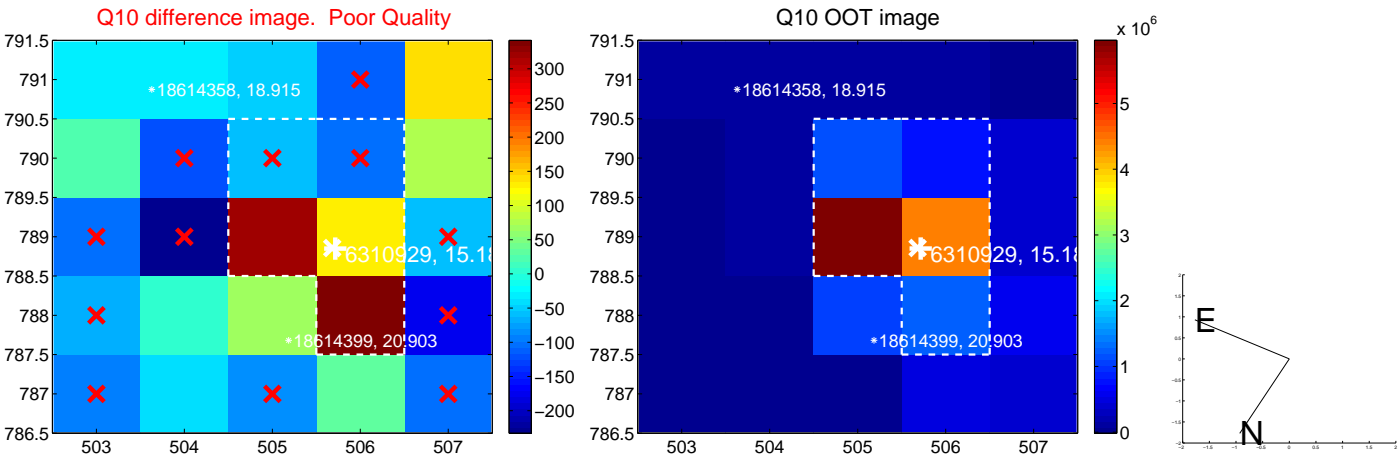
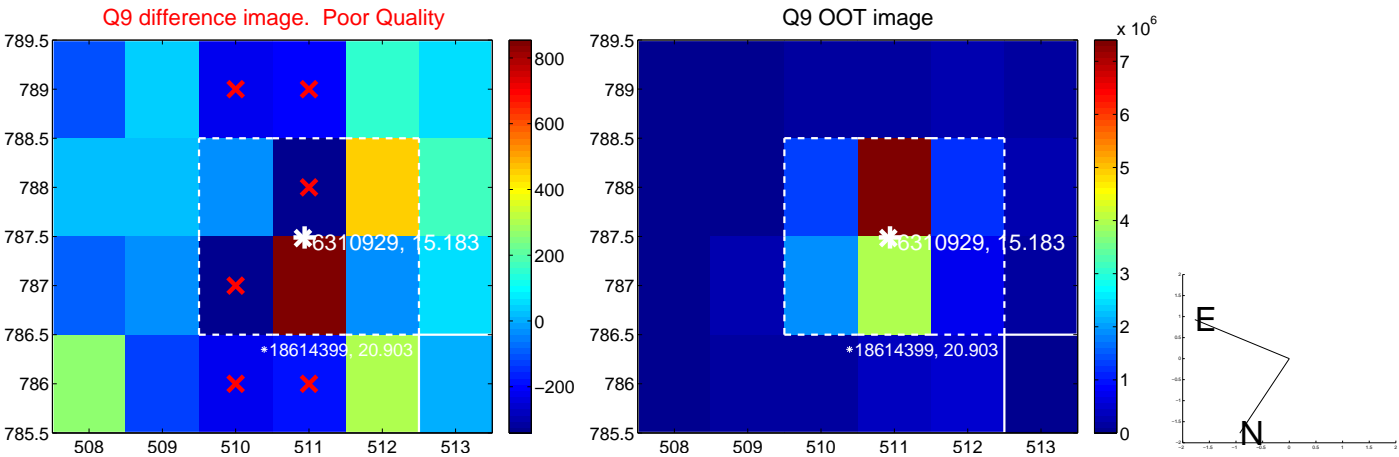
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



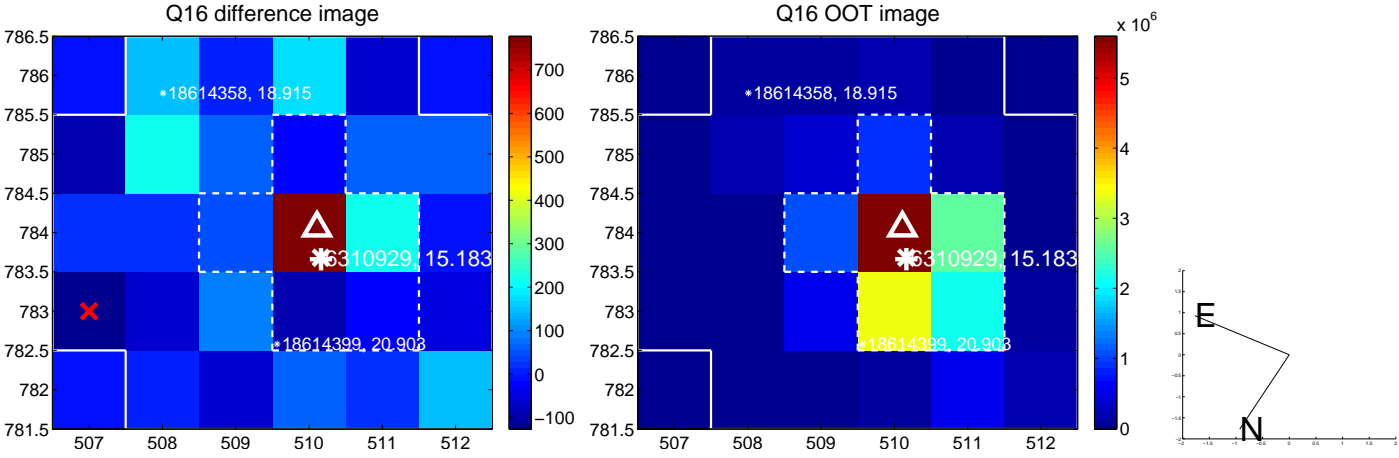
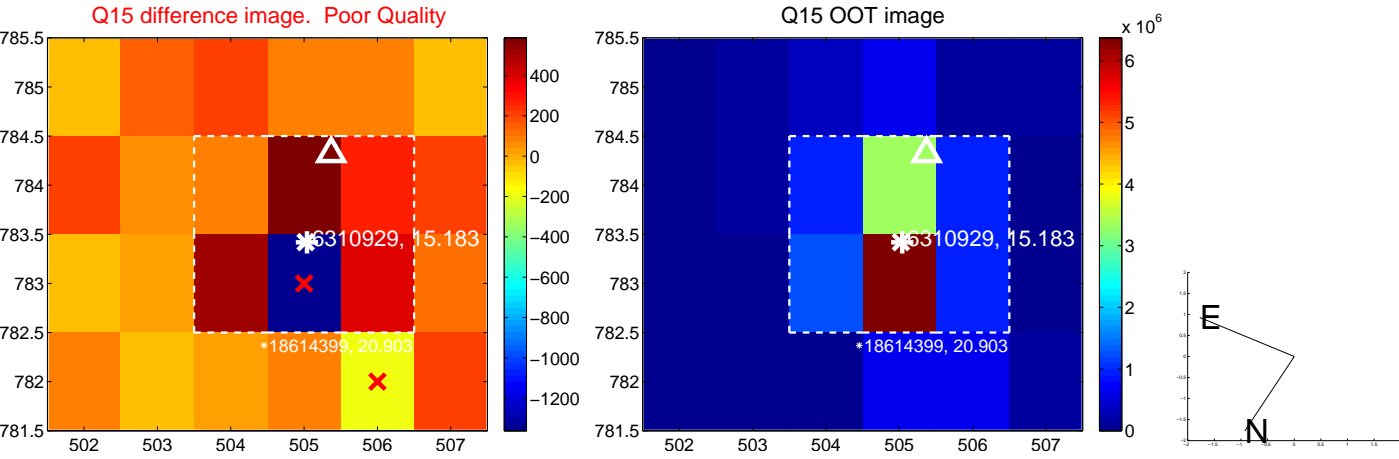
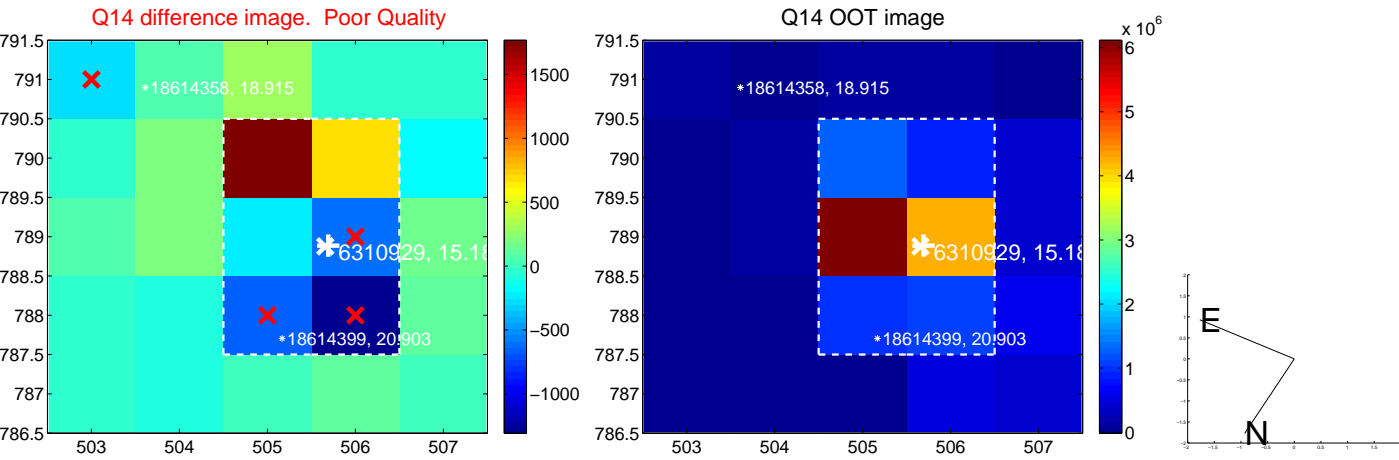
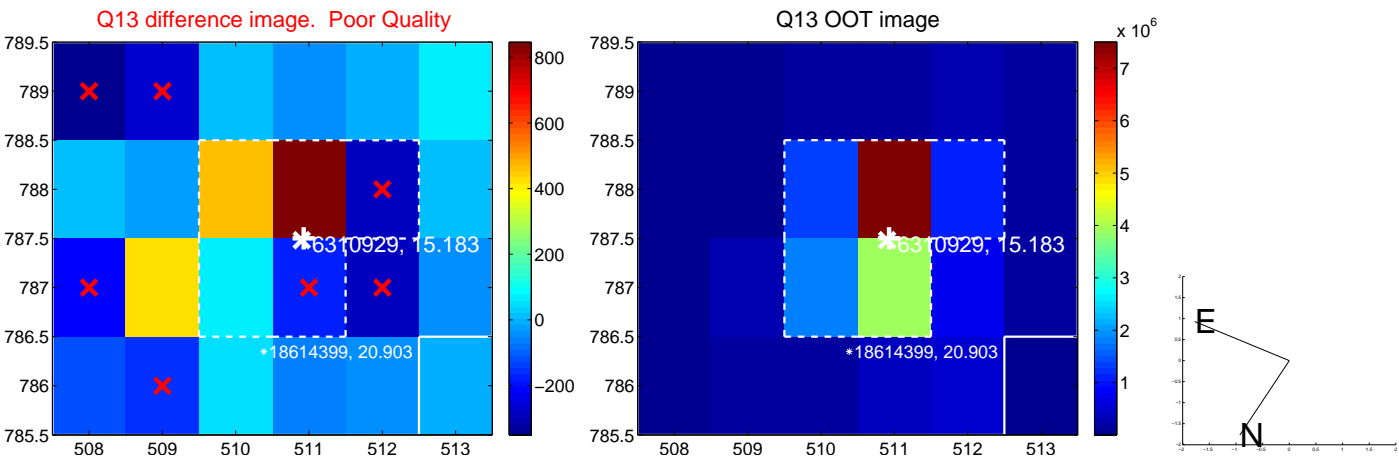
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



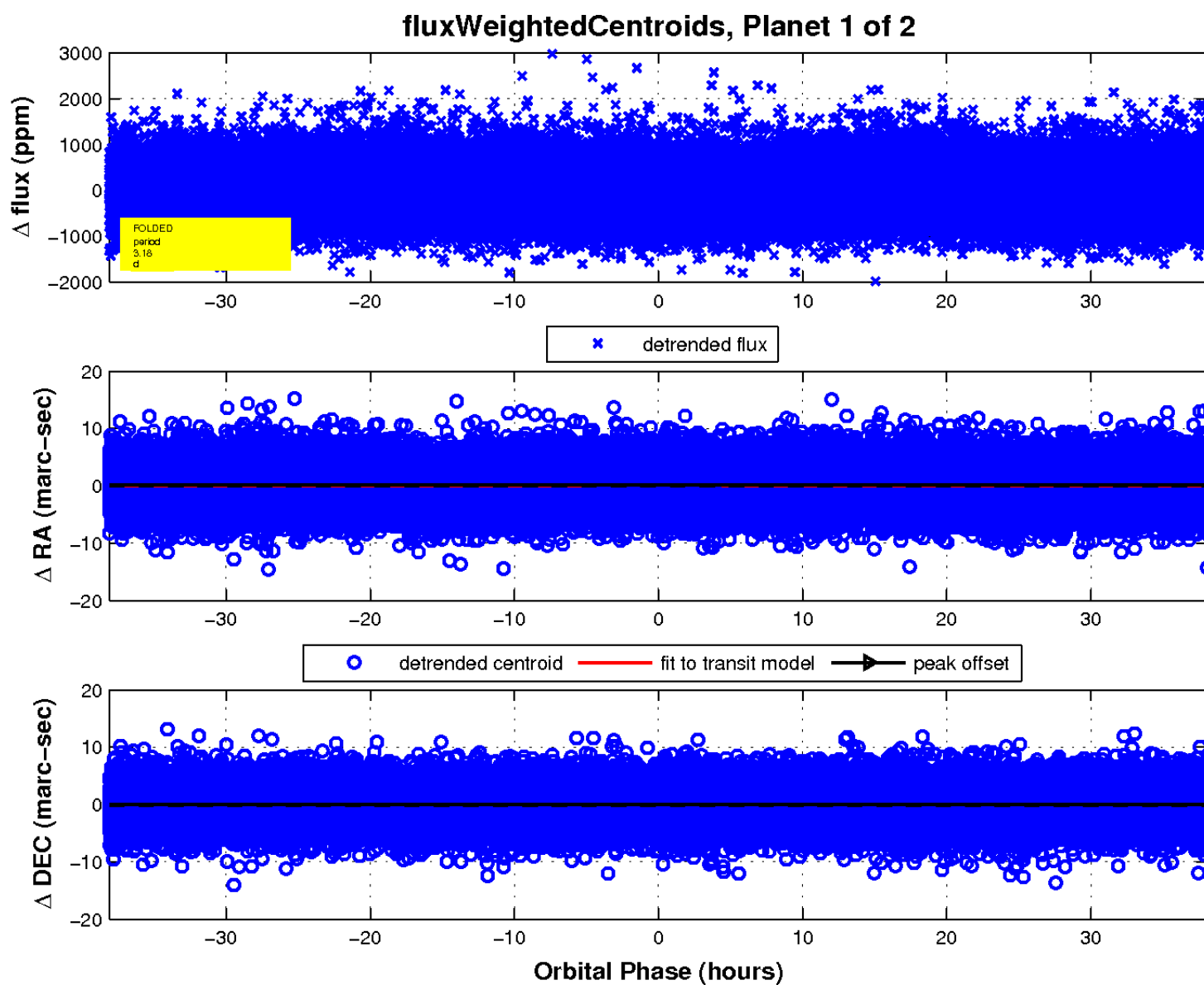
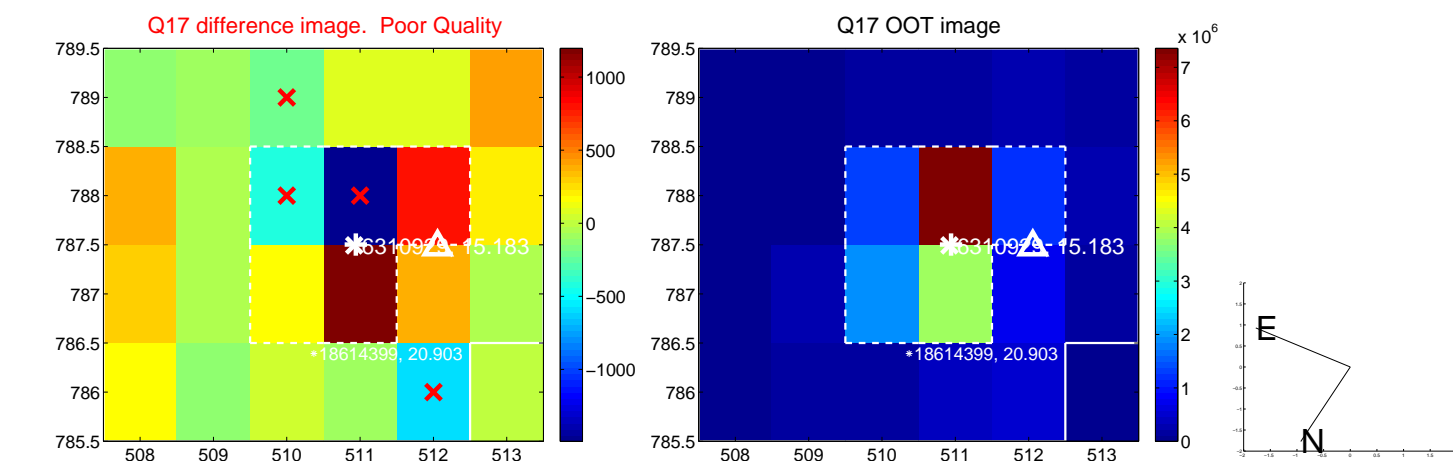
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

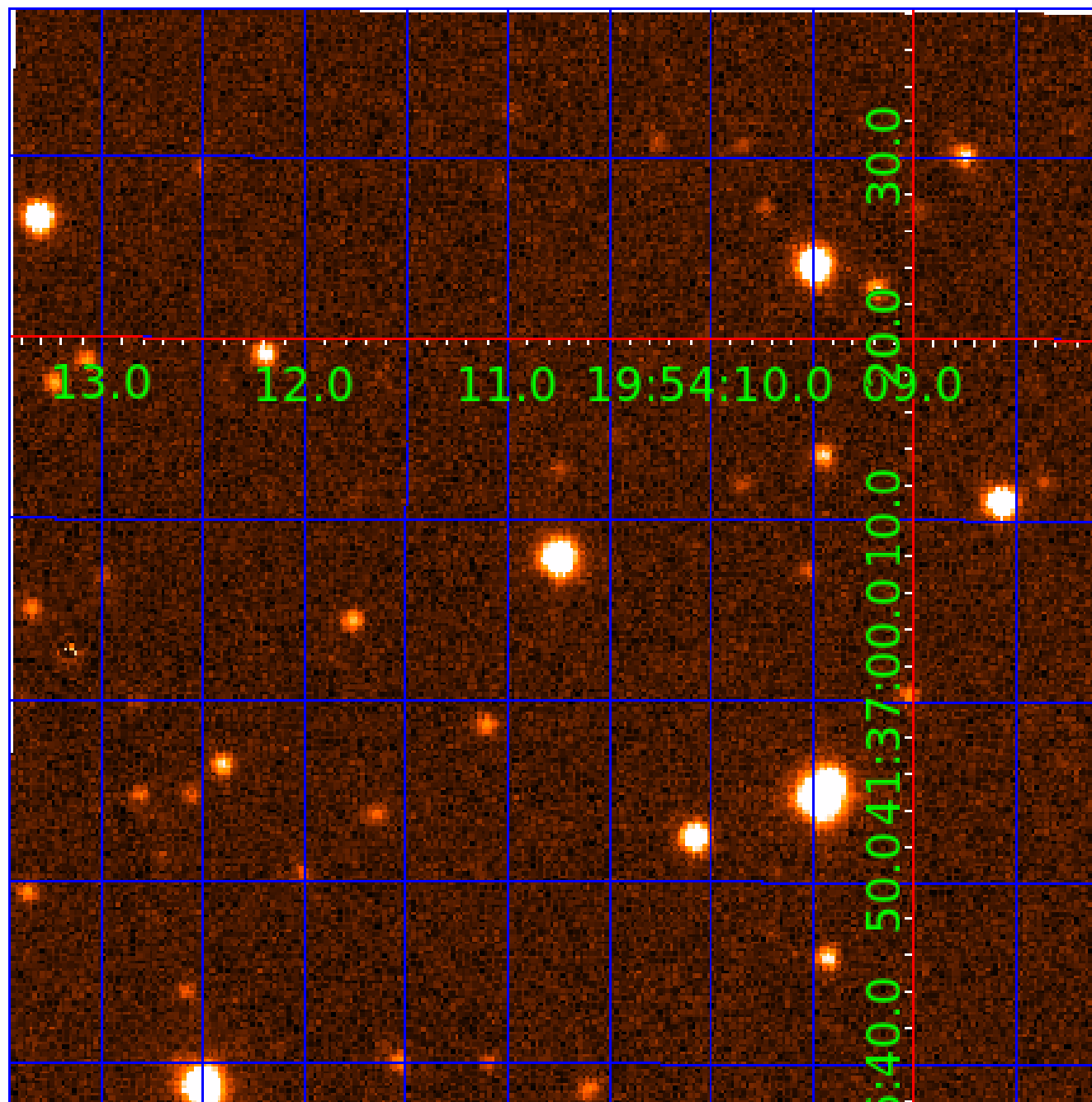


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006310929

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})
006310929-01	OBS	No	3.176027	134.155921	50.1	17.819	8.6	9.0	1.00	6230	0.71	733.16
006310929-02	OBS	No	206.385247	167.538643	14.8	37.941	12.0	0.3	1.00	6230	0.39	2.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006310929-01	OBS	FP	0.00	1	0	0	0	LPP_DV
006310929-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—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.

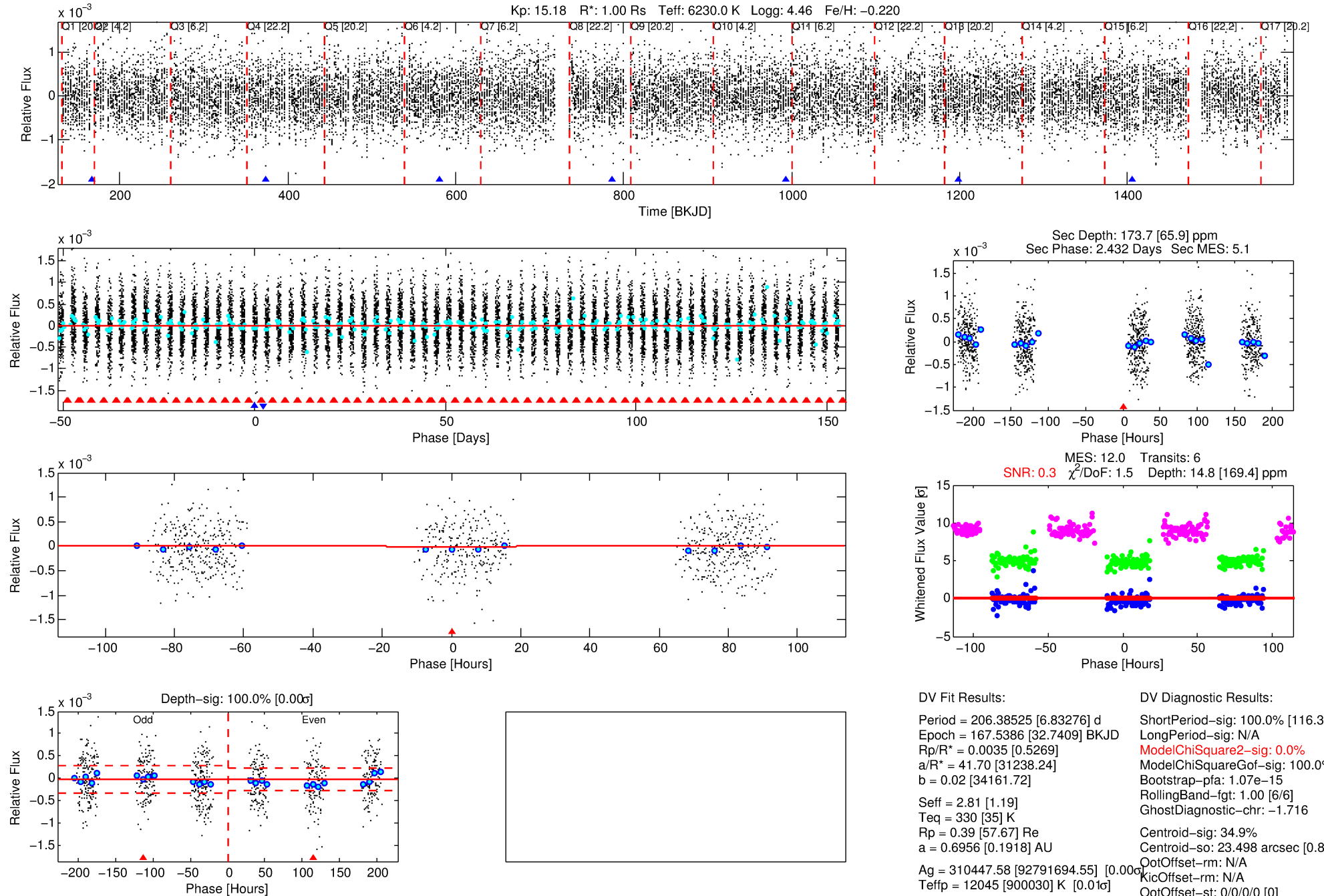
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006310929-02

No Significant Match Found

DV One-Page Summary

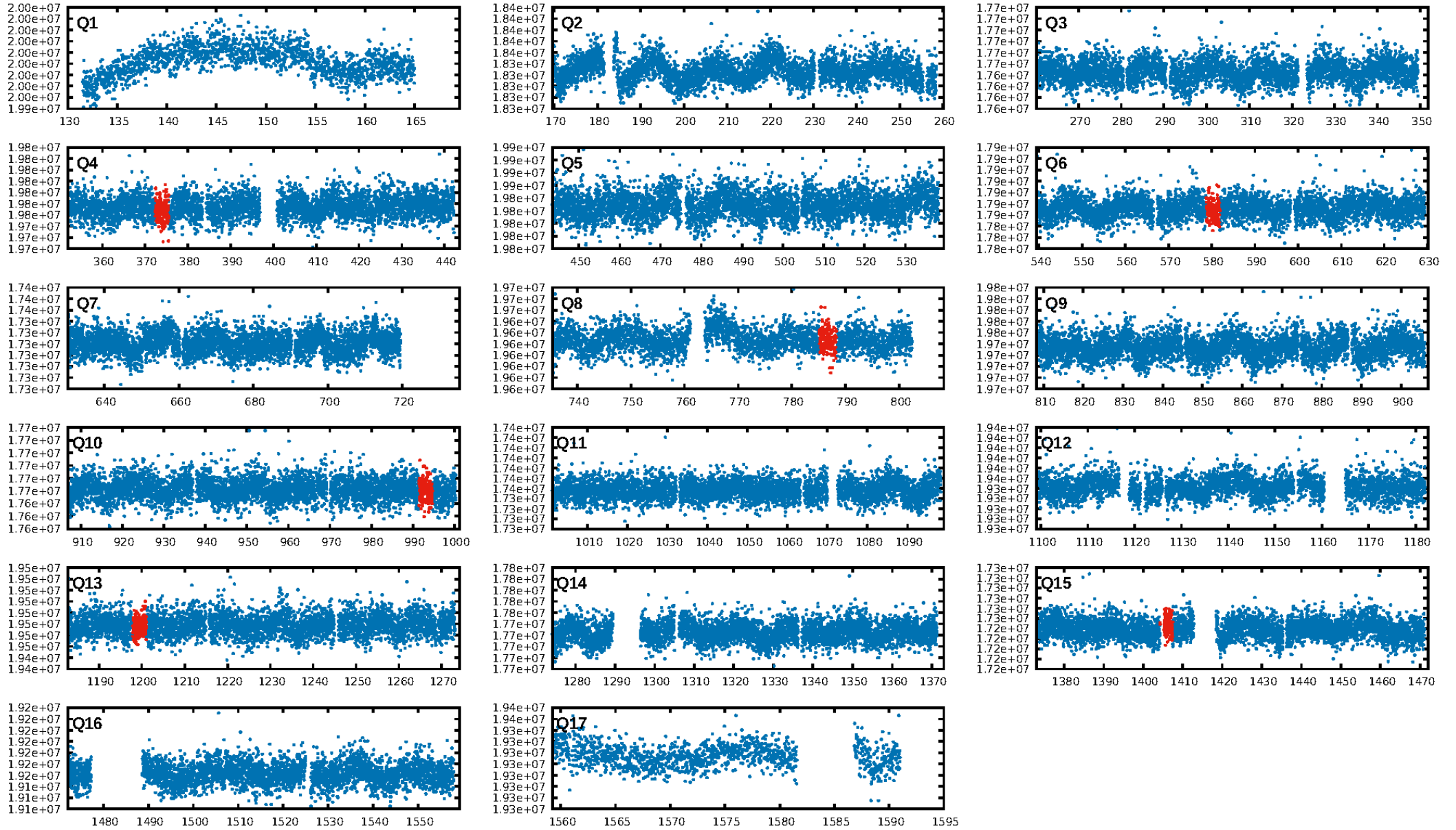
KIC: 6310929 Candidate: 2 of 2 Period: 206.385 d



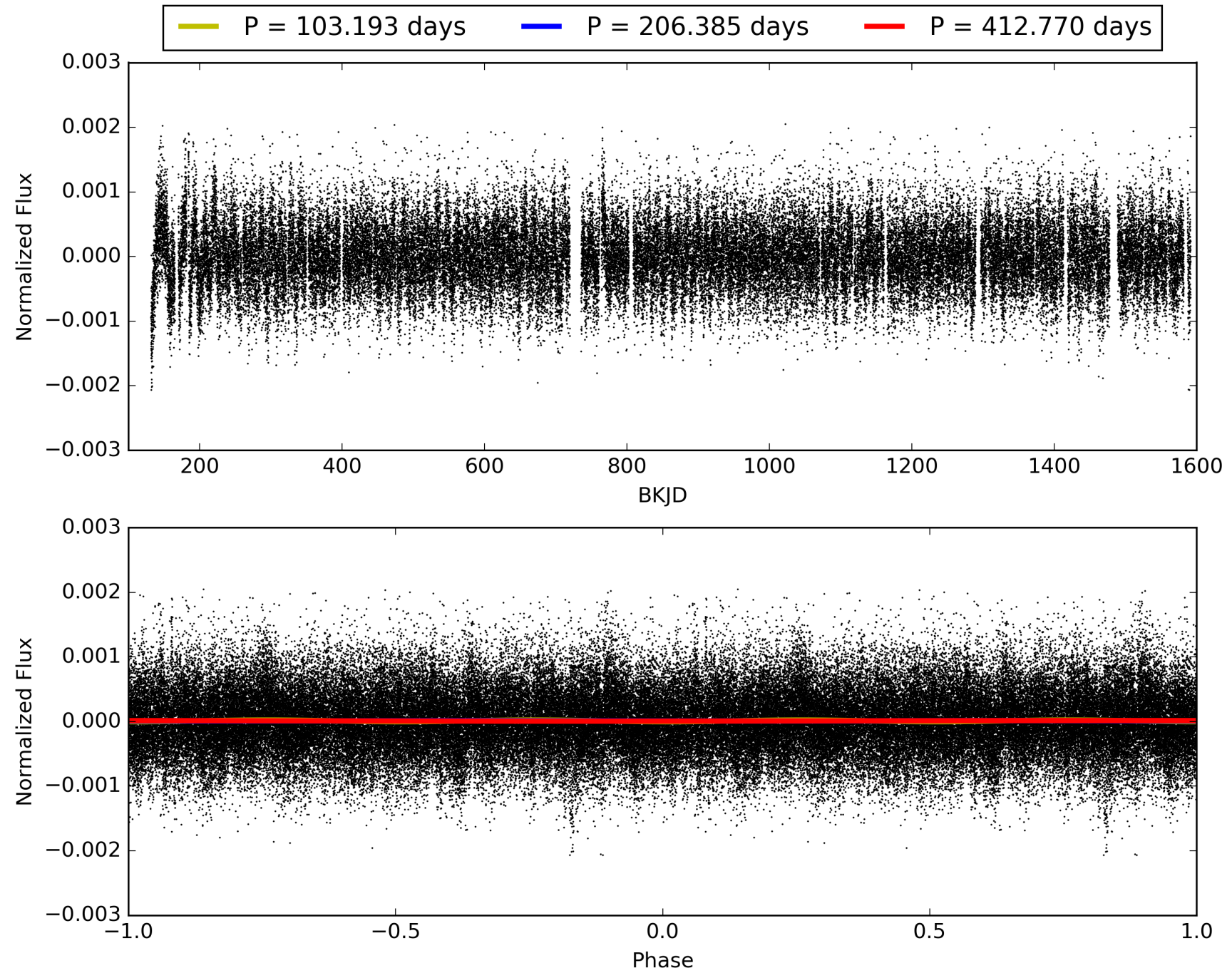
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:49:48 Z

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

TCE 006310929-02, PDC Light Curves

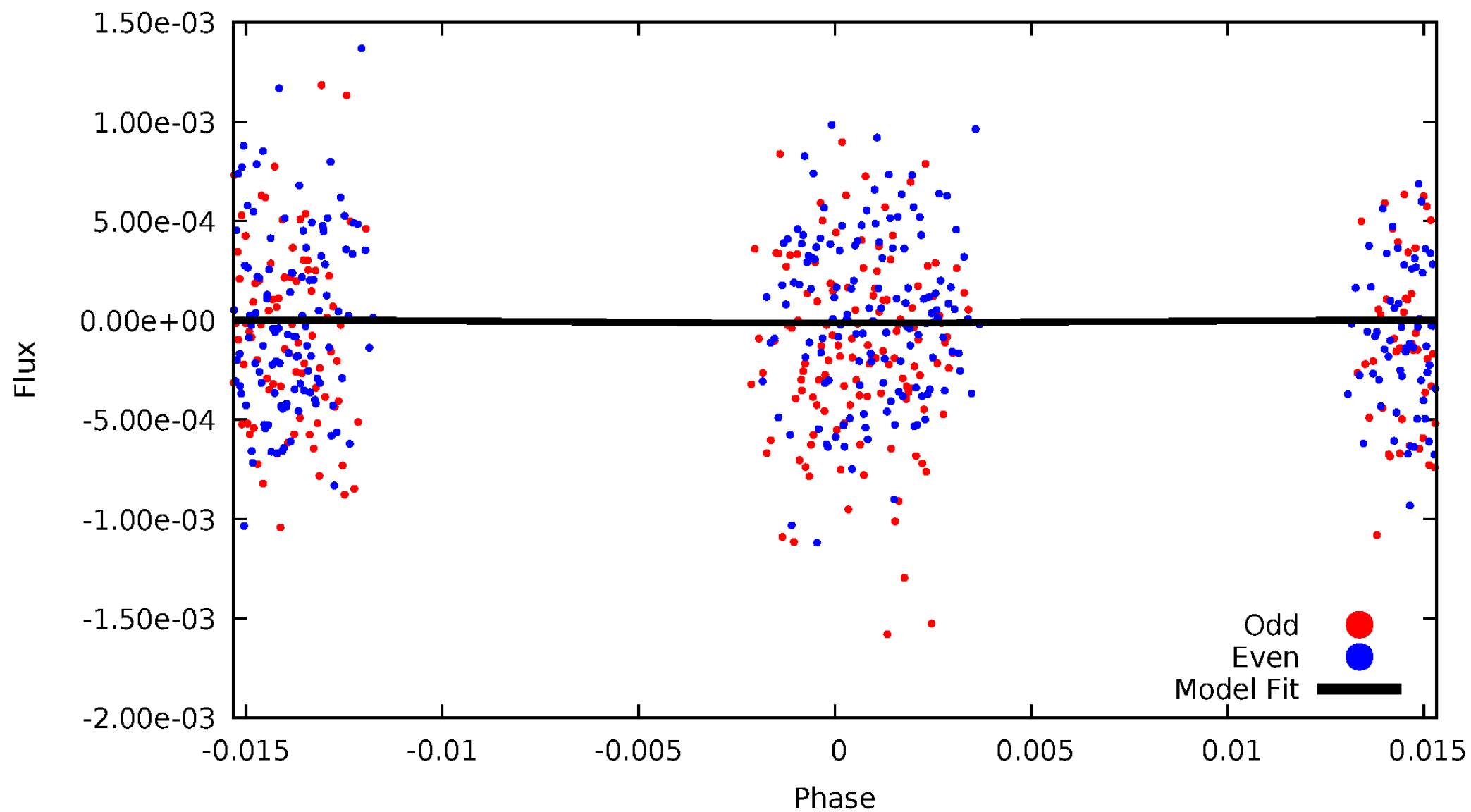


TCE 006310929-02



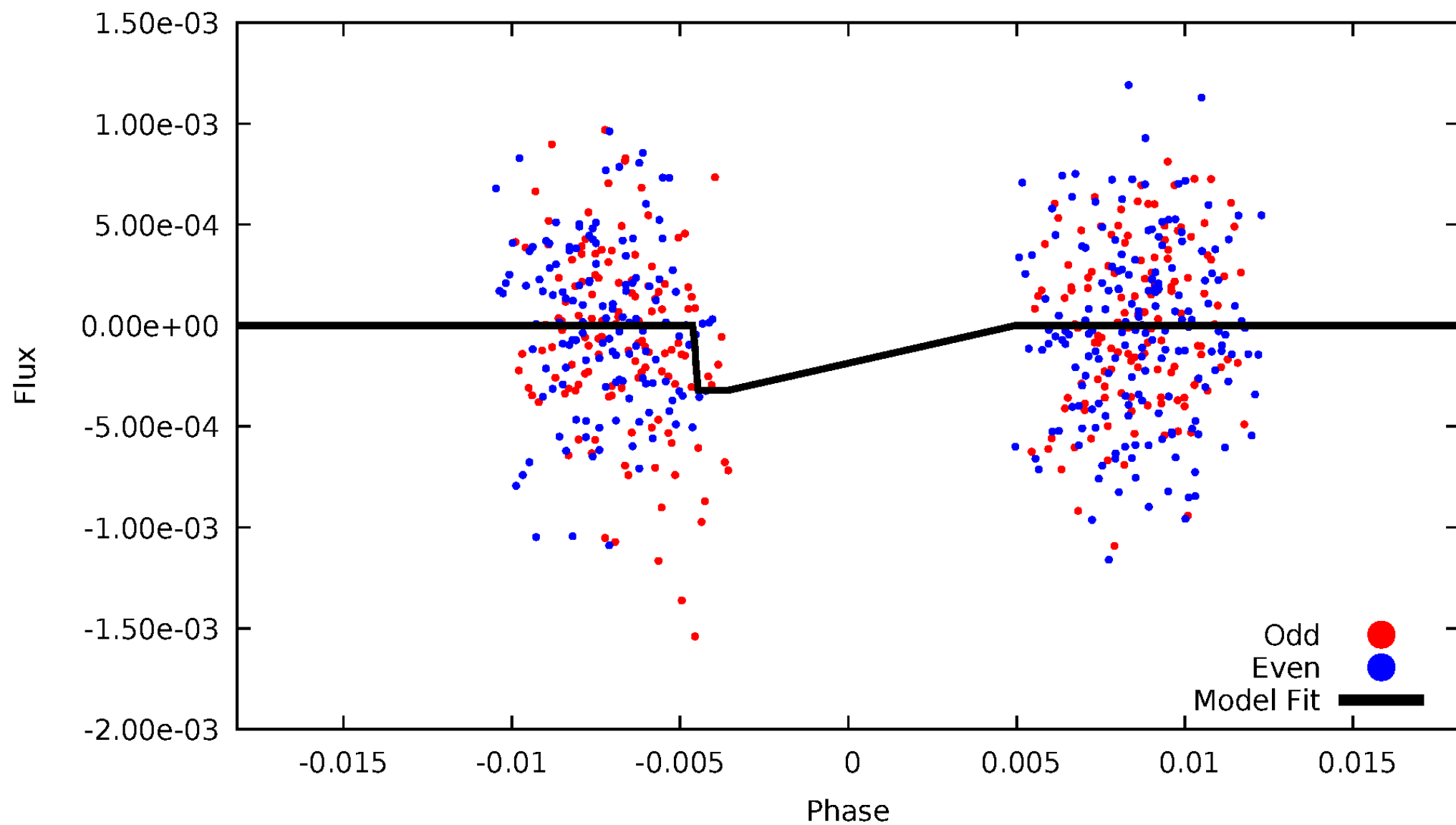
DV Odd/Even

TCE 006310929-02



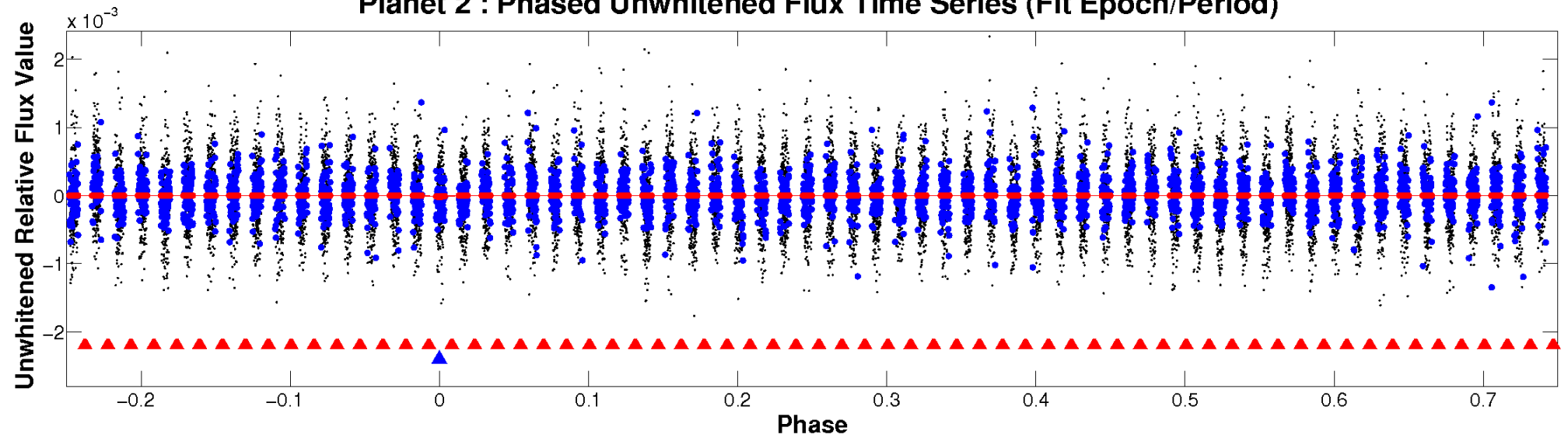
ALT Odd/Even

TCE 006310929-02

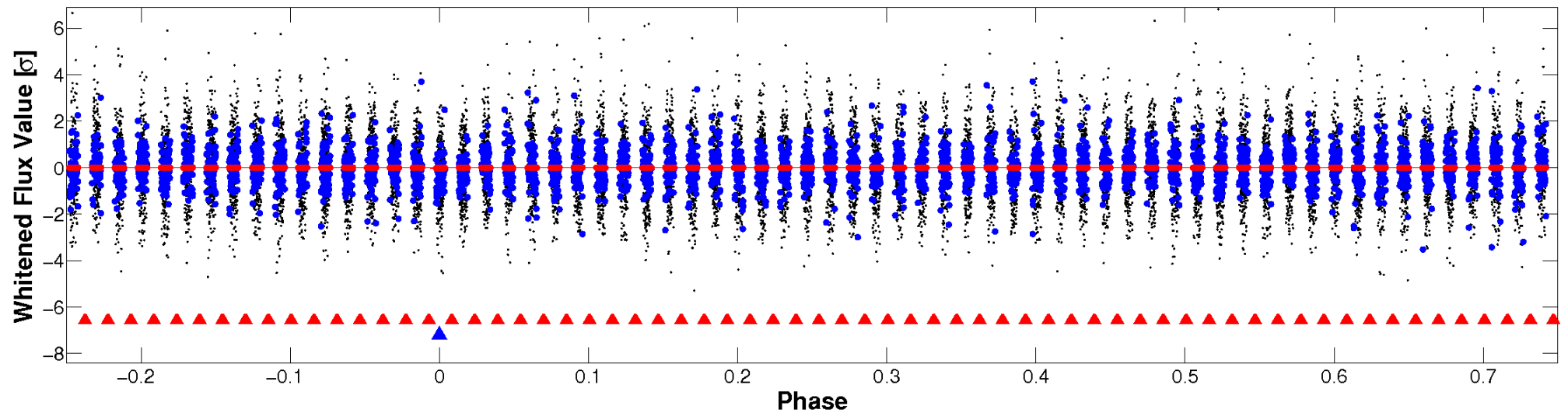


Non-Whitened Vs. Whitened Light Curve

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

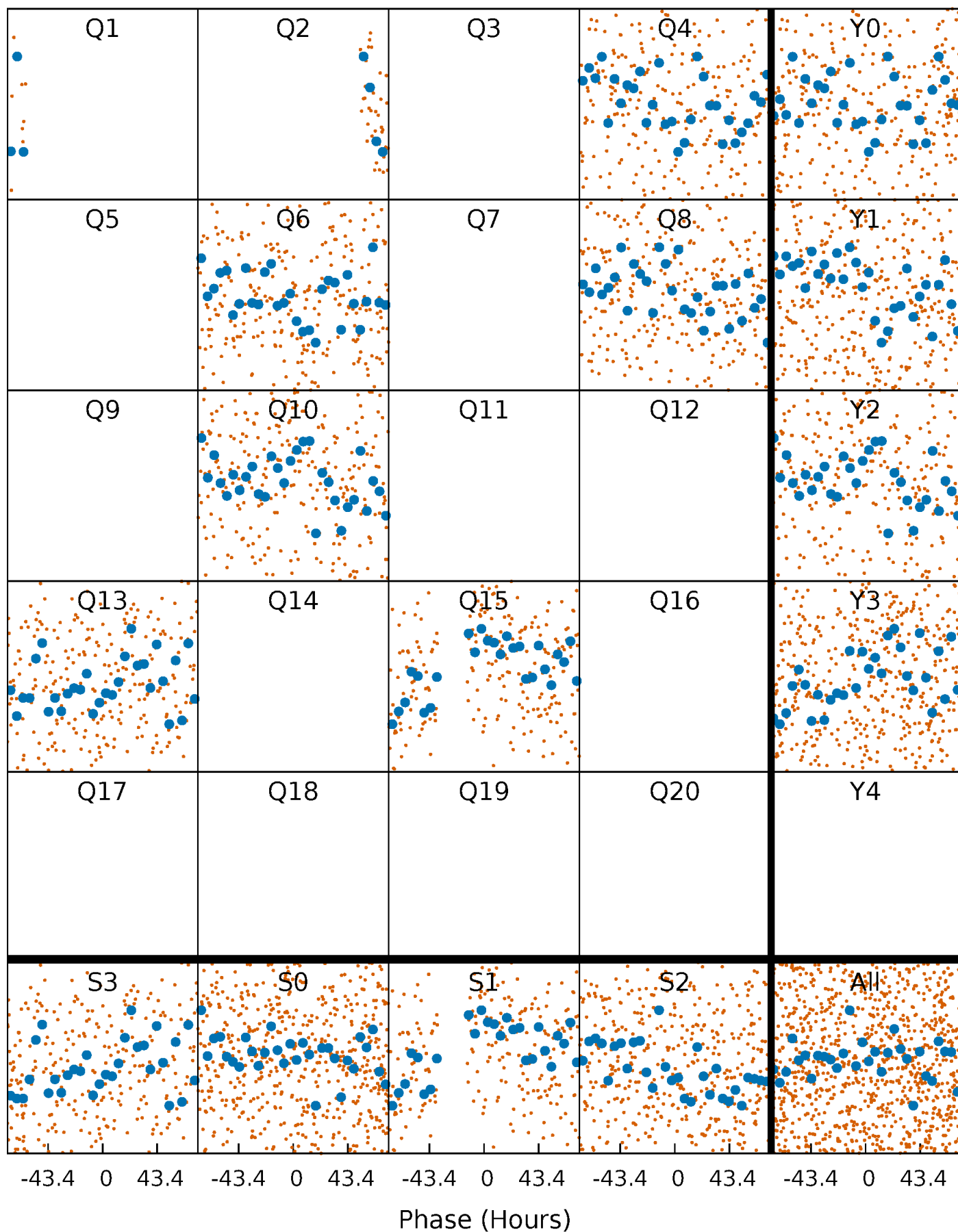


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



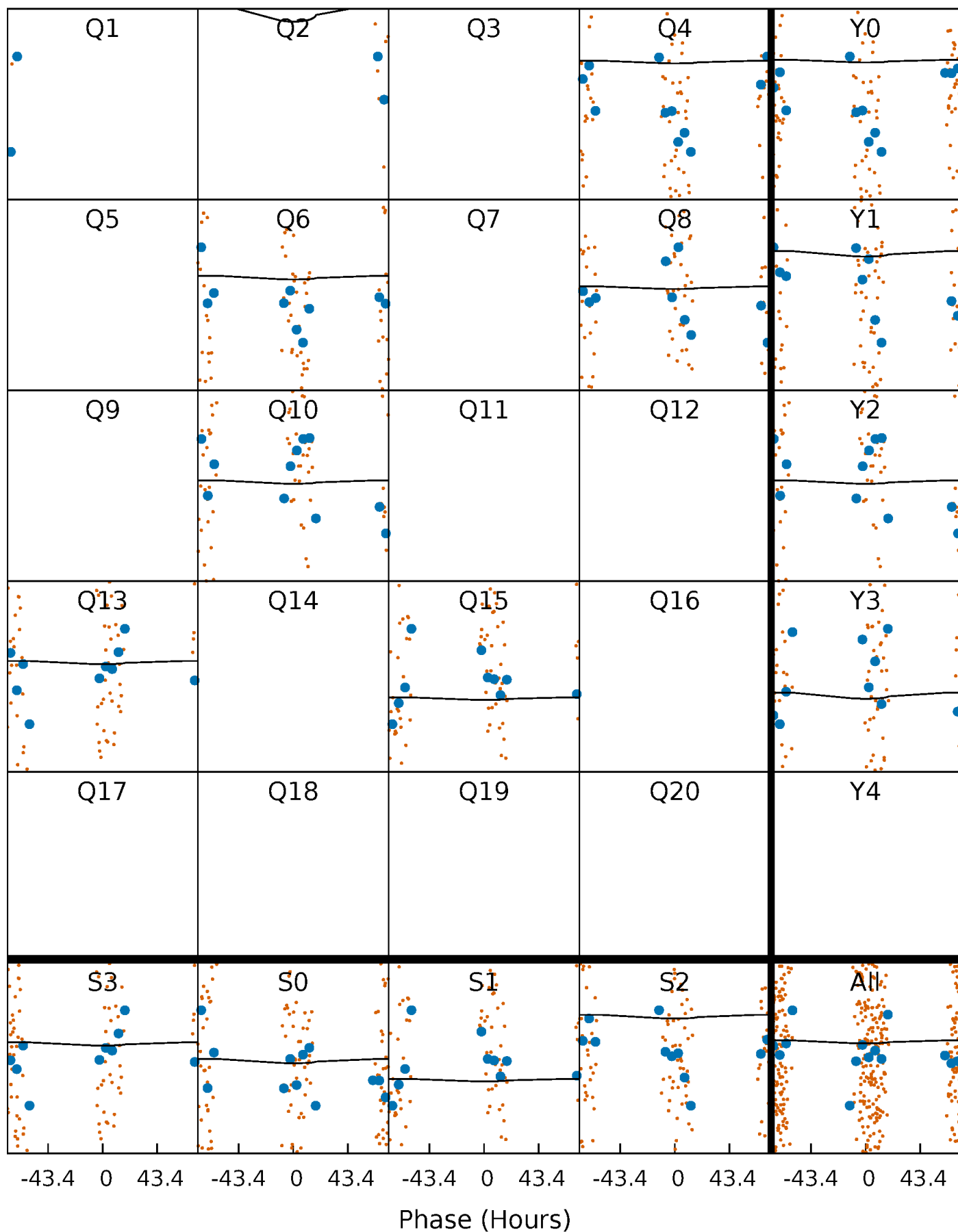
PDC Quarter-Phased Transit Curves

TCE 006310929-02 P=206.385247 Days $T_0=167.538643$ (BKJD)



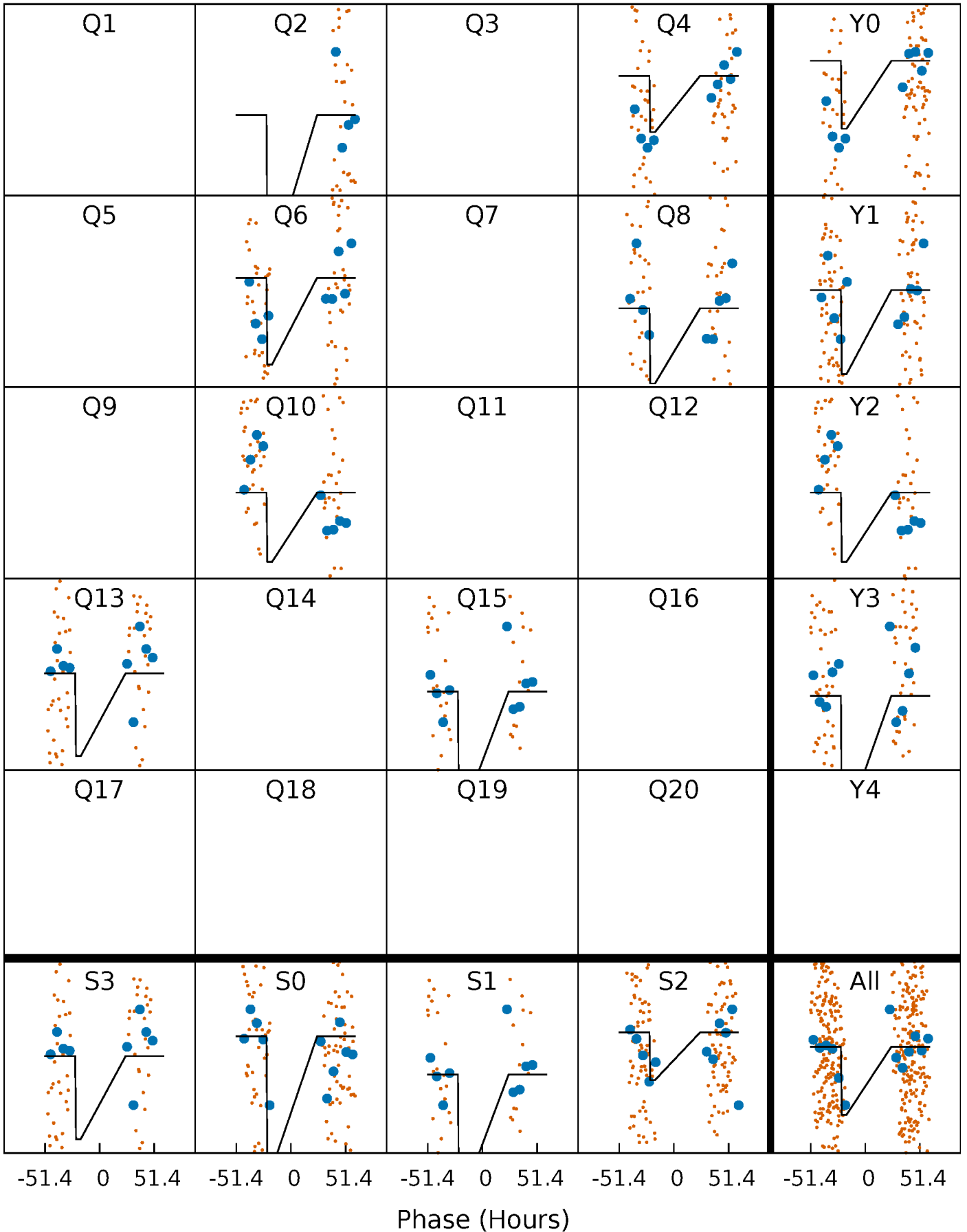
DV Quarter-Phased Transit Curves

TCE 006310929-02 P=206.385247 Days $T_0=167.538643$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

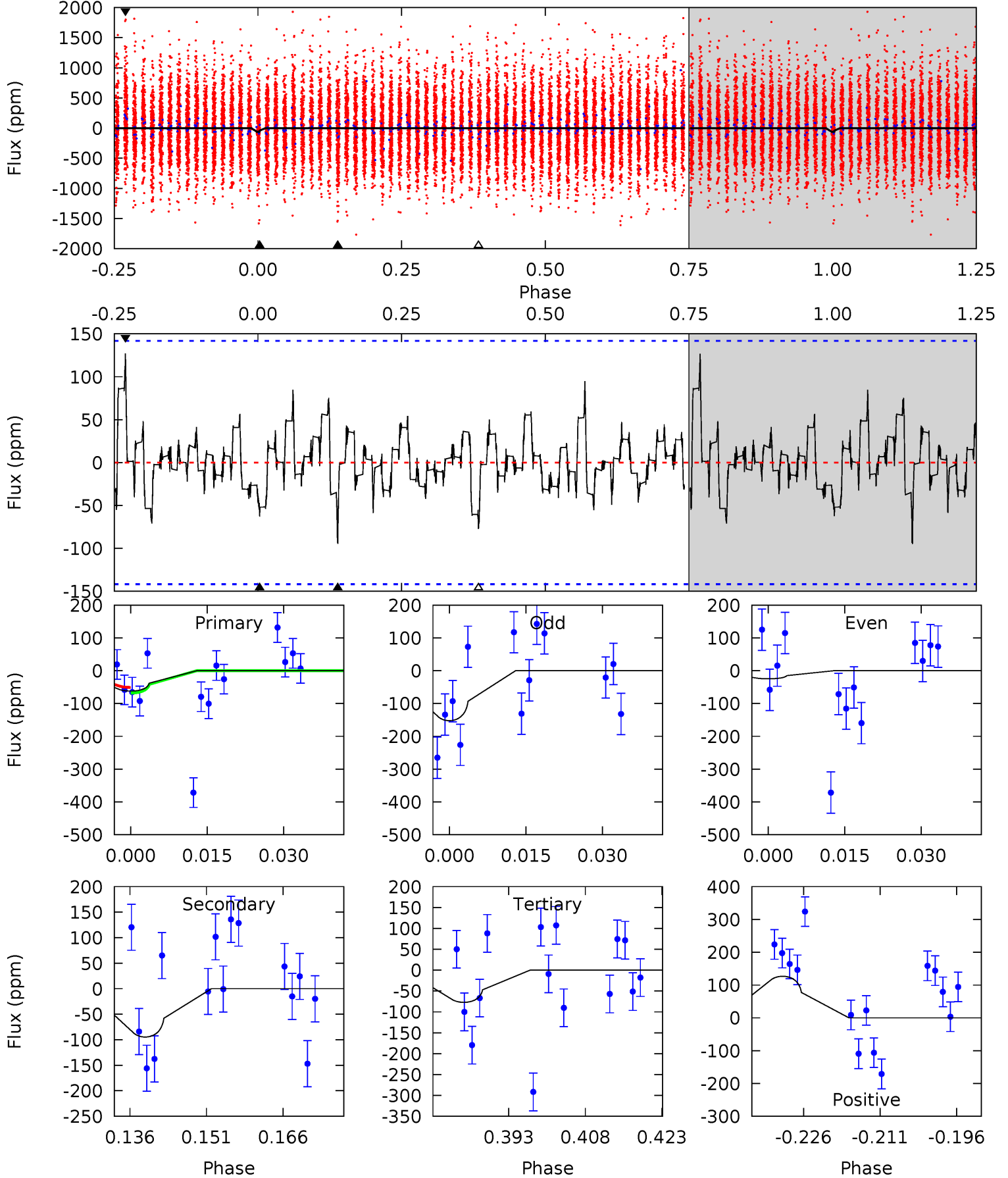
TCE 006310929-02 P=206.542425 Days $T_0=168.598068$ (BKJD)



DV Model-Shift Uniqueness Test

006310929-02, P = 206.385247 Days, E = 167.538643 Days

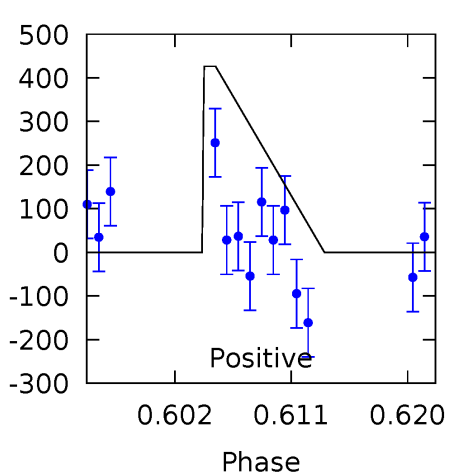
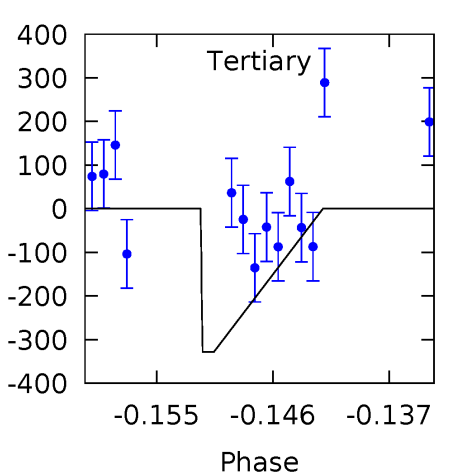
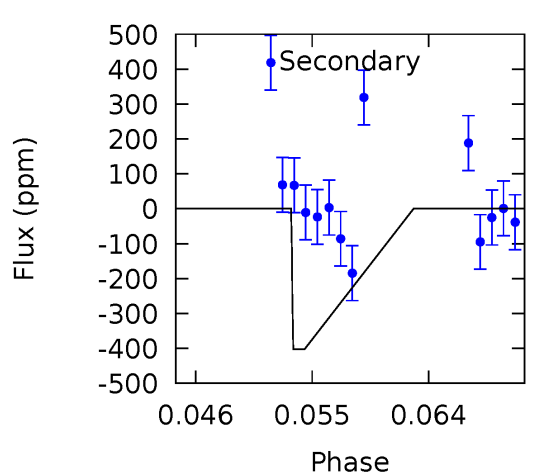
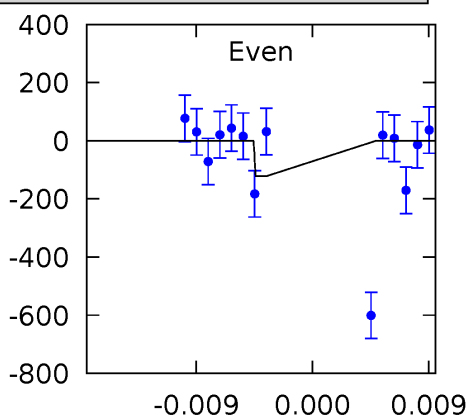
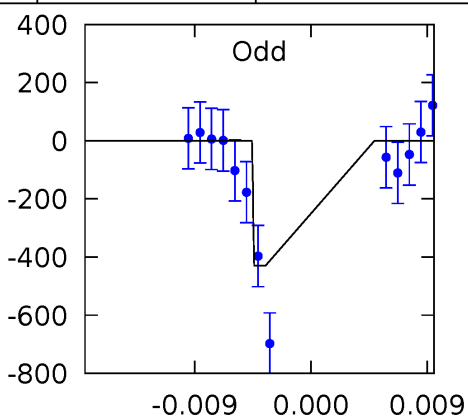
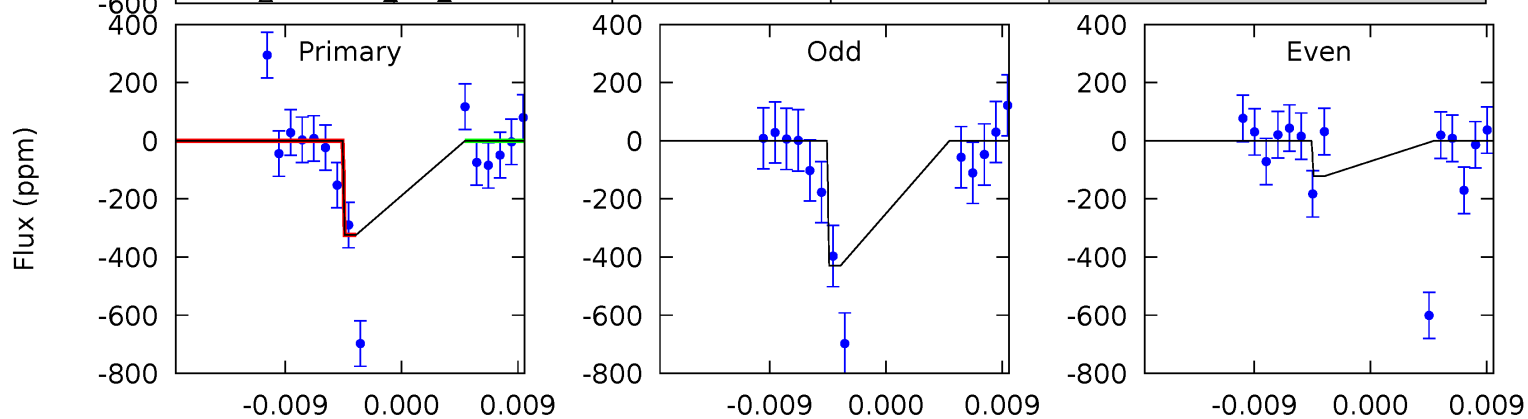
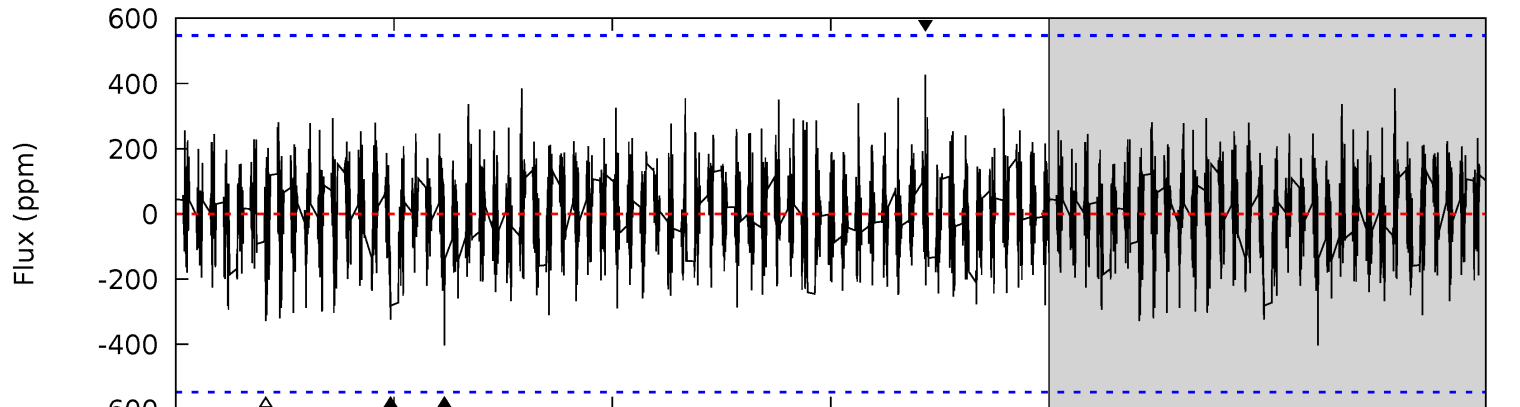
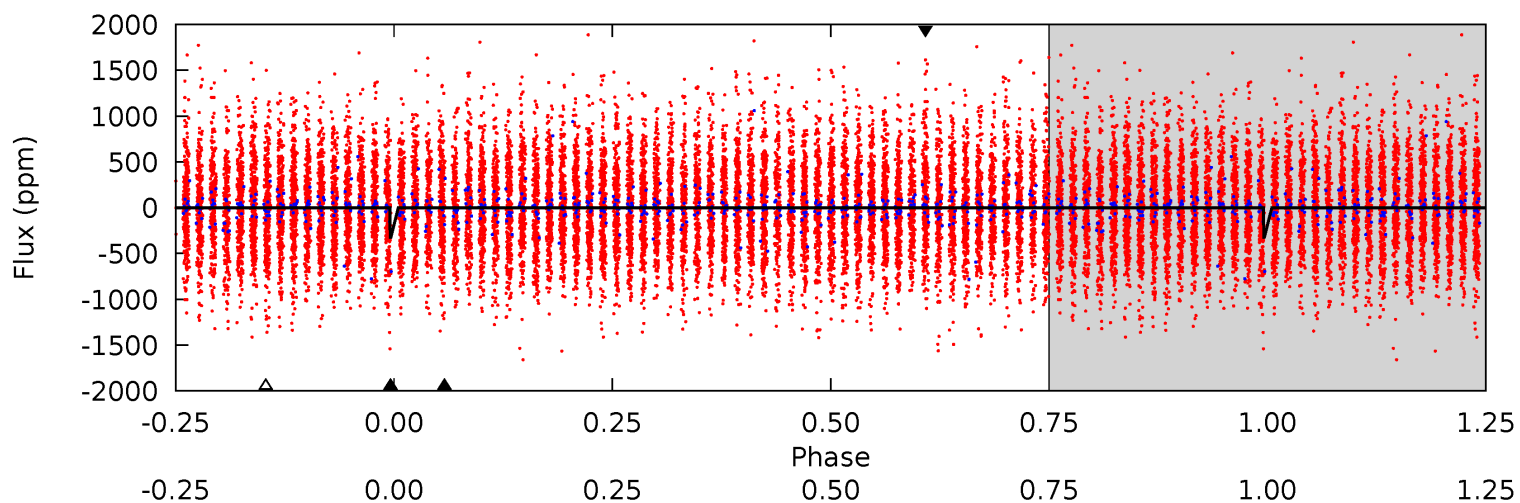
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.17	3.30	2.69	4.42	4.95	2.43	1.00	-0.52	-2.25	0.61	-1.12	2.23	2.04	0.57	0.28



Alt Model-Shift Uniqueness Test

006310929-02, P = 206.542425 Days, E = 168.598068 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.99	3.71	3.03	3.94	5.04	2.61	0.92	-0.04	-0.95	0.69	-0.22	1.36	0	0.51	0



Stellar Parameters For KIC 006310929

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6230^{+197}_{-241}	$4.458^{+0.056}_{-0.210}$	$-0.220^{+0.250}_{-0.300}$	$1.003^{+0.335}_{-0.112}$	$1.047^{+0.144}_{-0.144}$	$1.463^{+0.433}_{-0.790}$
	+3%/-4%	+1%/-5%	+114%/-136%	+33%/-11%	+14%/-14%	+30%/-54%
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 006310929-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-95 ± 29	$37.20^{+44.58}_{-26.75}$	472^{+36}_{-27}	2068^{+685}_{-320}	18^{+198}_{-15}
Alt.	-403 ± 108	$43.38^{+46.98}_{-30.67}$	472^{+35}_{-27}	2334^{+855}_{-341}	55^{+508}_{-43}

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

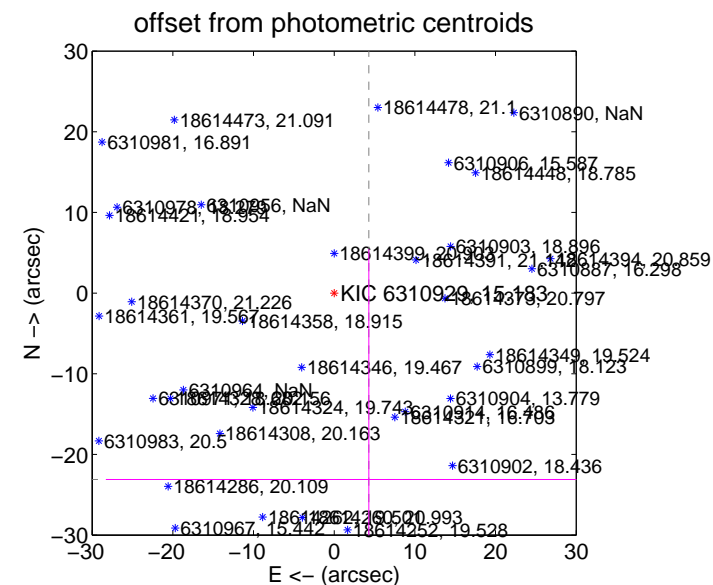
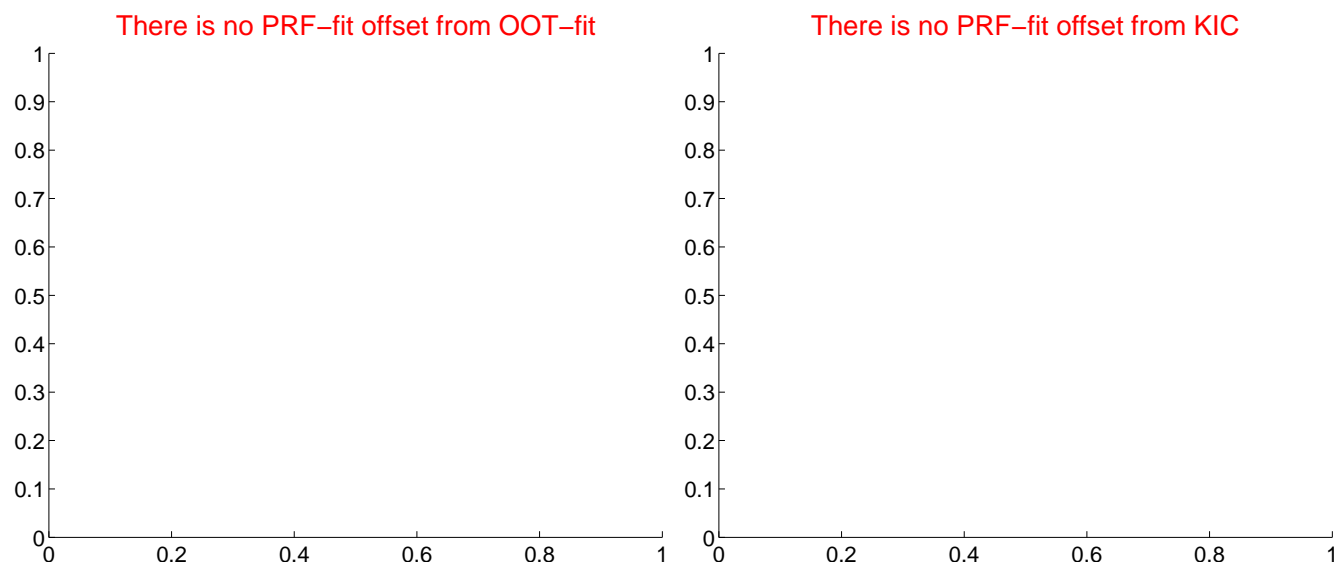
DV Centroid Data

Supplemental centroid analysis for 006310929-02. Kepler magnitude: 15.18. Transit SNR 0.32

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	23.50 ± 28.70	0.82	-4.30 ± 32.61	-23.10 ± 28.55

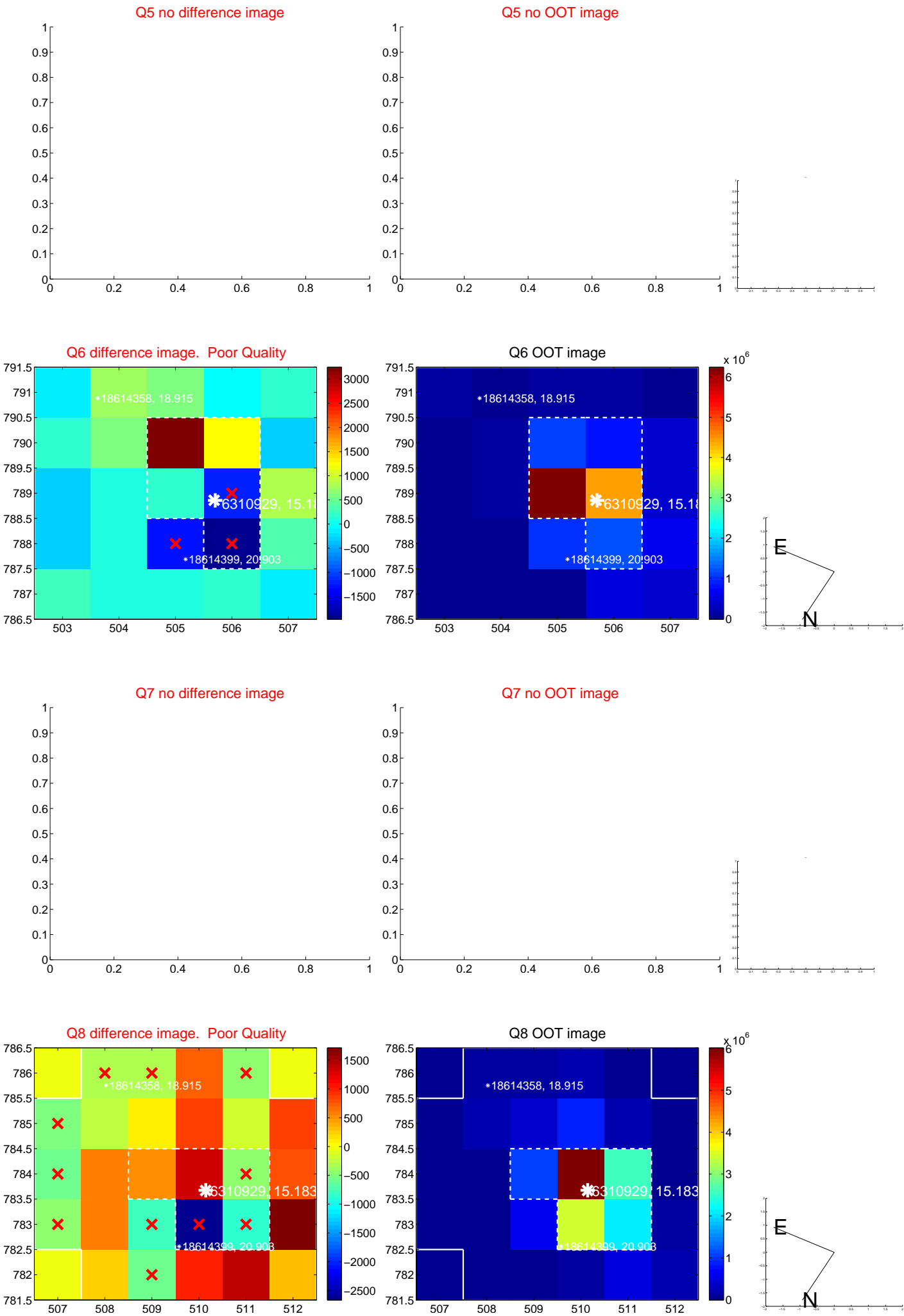


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

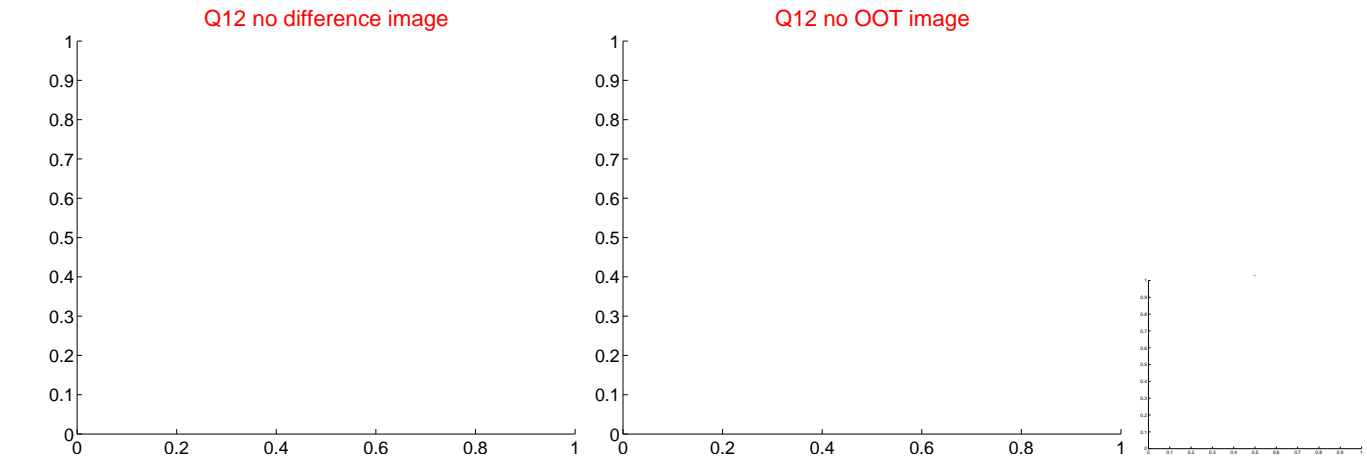
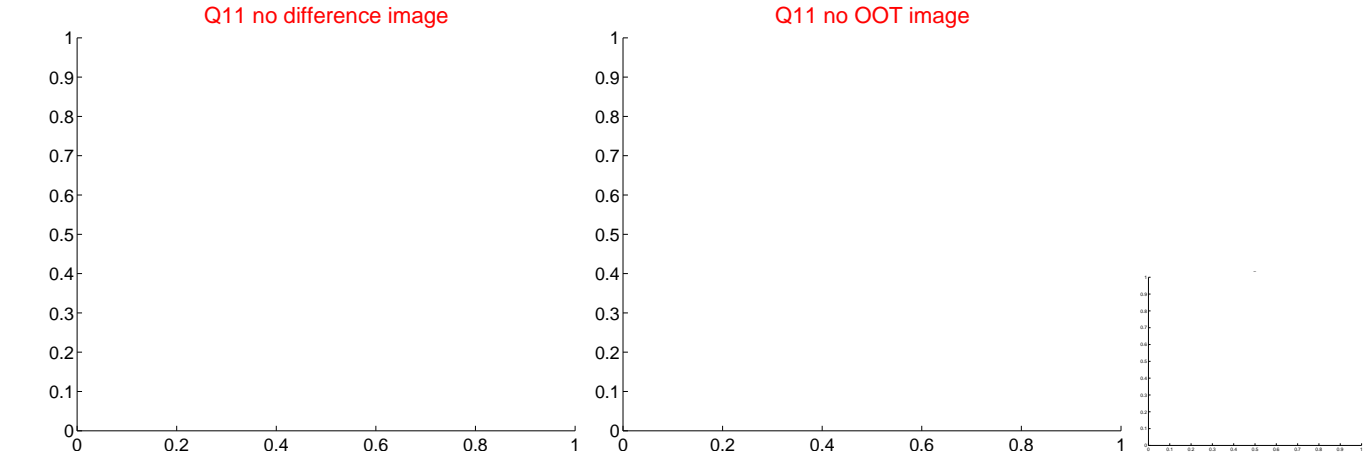
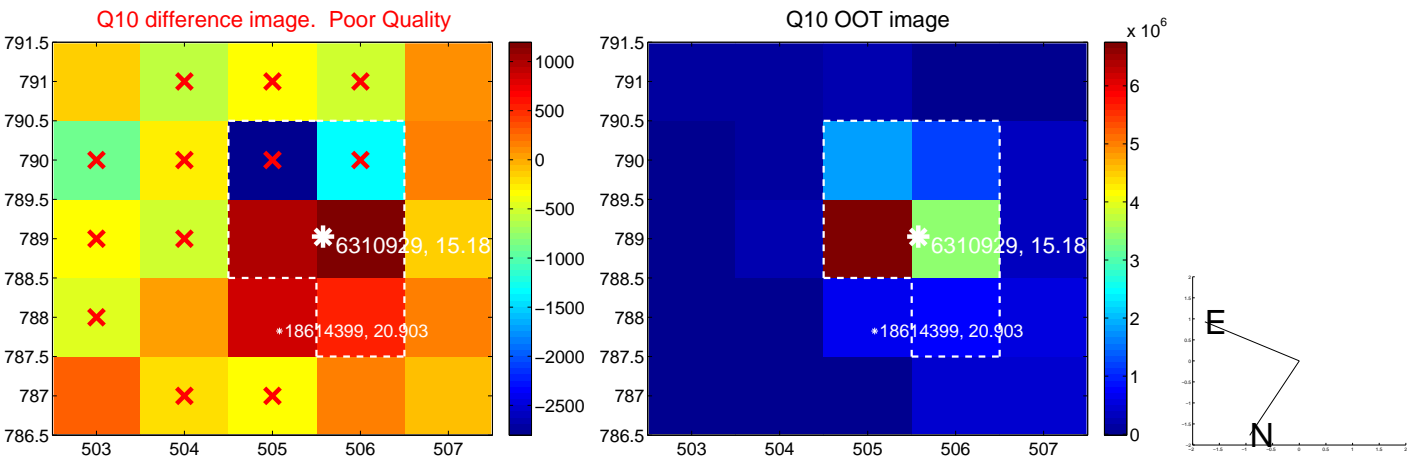
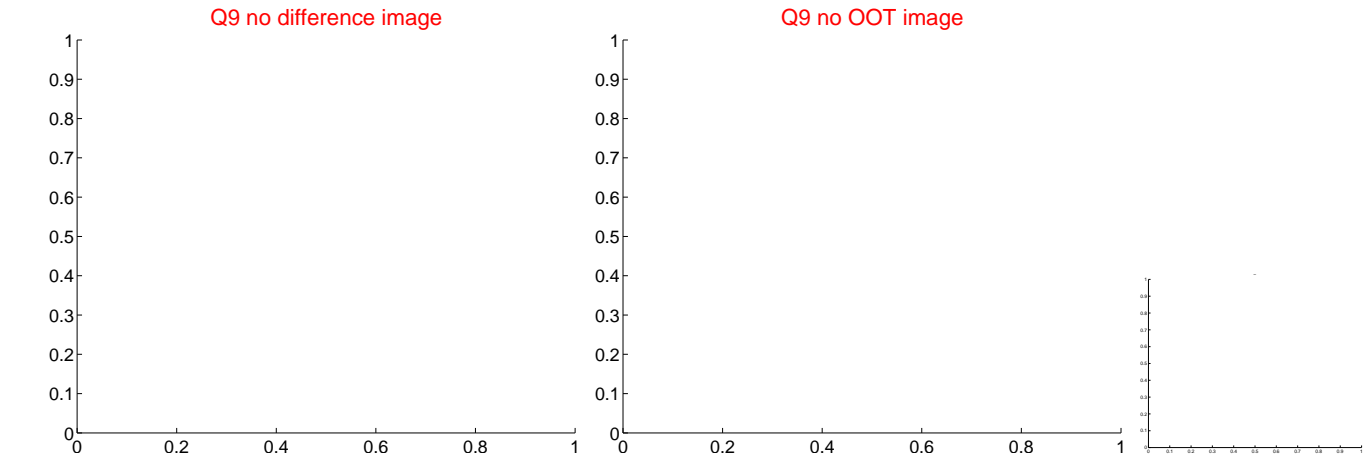
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



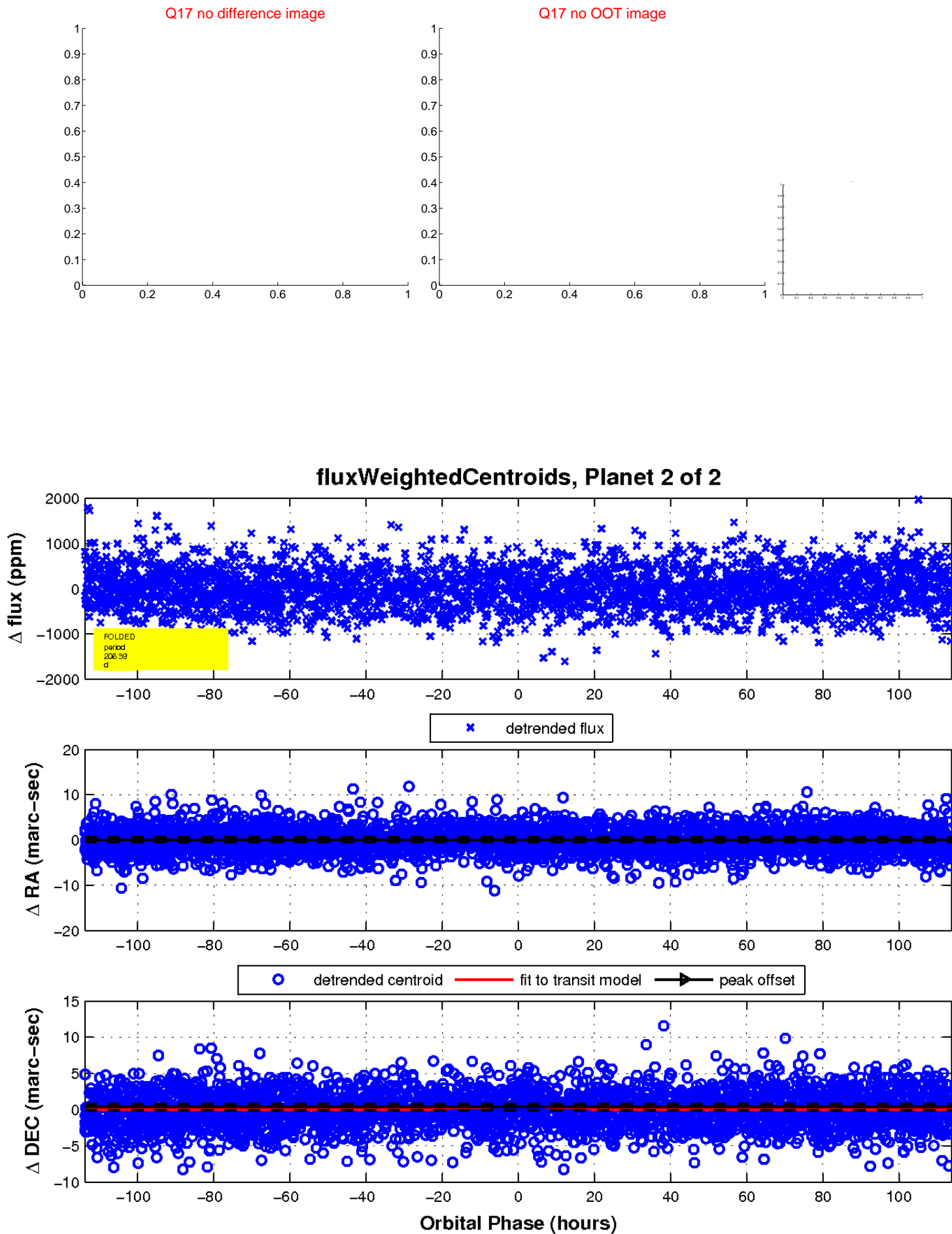
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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UKIRT Image

Declination

