

KIC 011624191

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})
011624191-01	OBS	No	1.523541	131.577788	165.3	7.505	14.3	13.8	1.46	6942	2.56	5052.80
011624191-02	OBS	No	1.523593	132.314730	143.0	4.757	13.3	14.2	1.46	6942	1.76	5052.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011624191-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_KIC_POS
011624191-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET

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

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

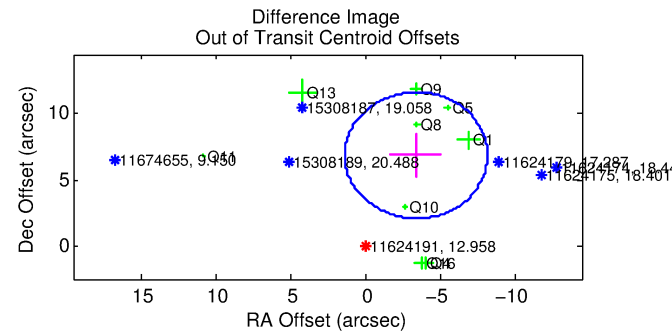
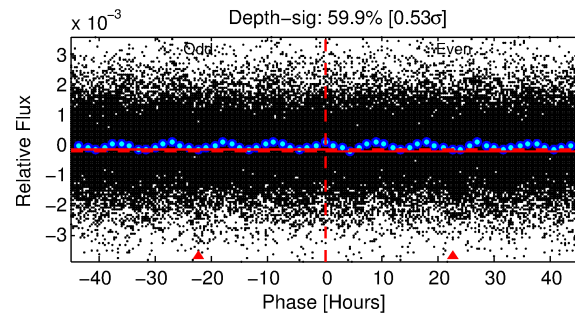
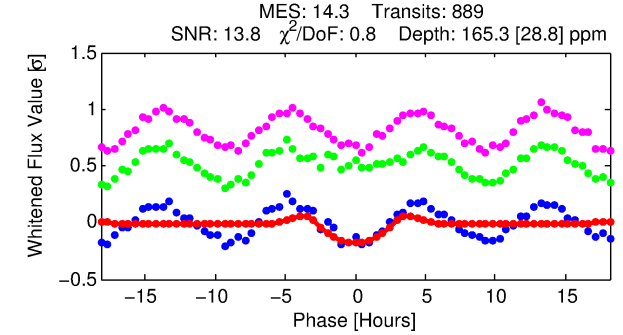
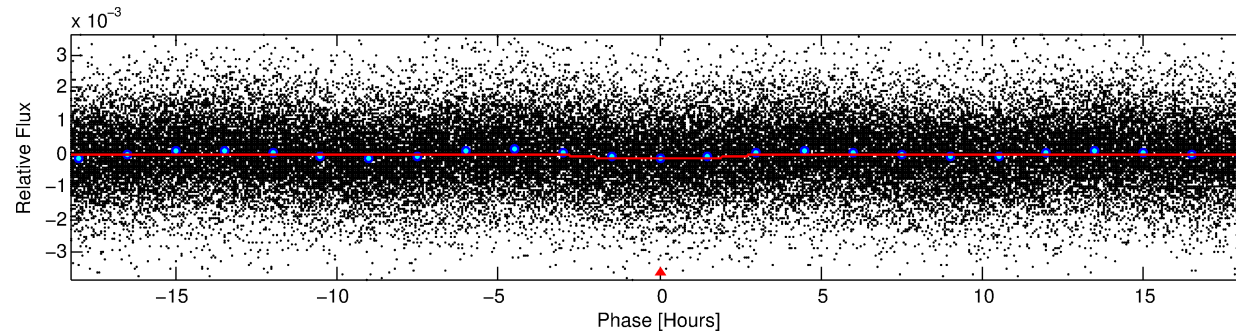
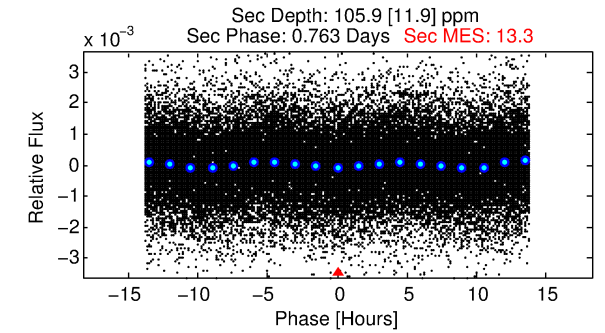
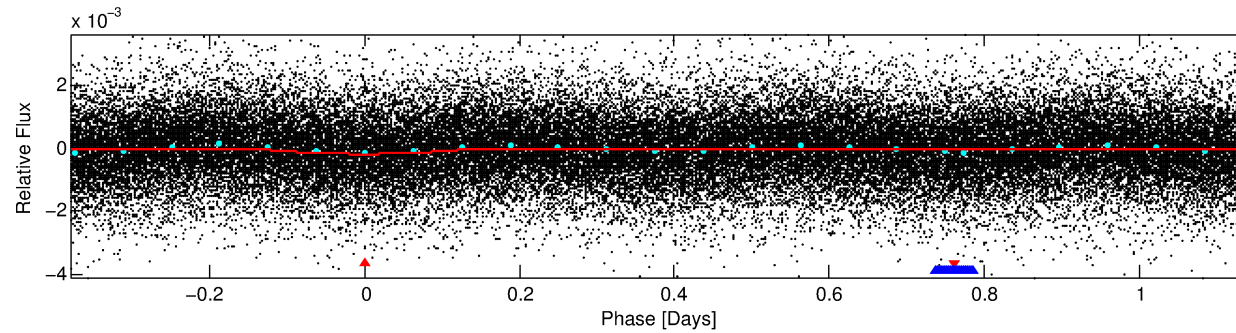
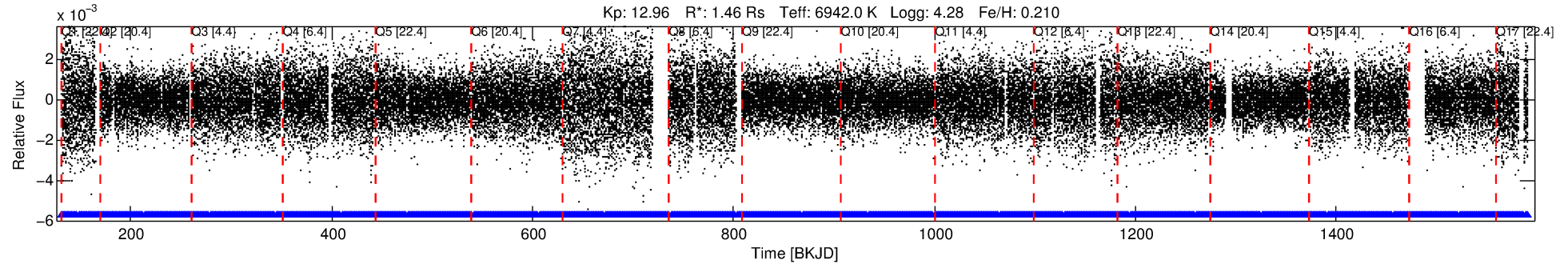
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011624191-01

No Significant Match Found

DV One-Page Summary

KIC: 11624191 Candidate: 1 of 2 Period: 1.524 d



DV Fit Results:

Period = 1.52354 [0.00002] d
Epoch = 131.5778 [0.0067] BKJD
Rp/R* = 0.0161 [0.0023]
a/R* = 1.07 [0.02]
b = 0.99 [0.01]
Seff = 5052.80 [2422.28]
Teq = 2150 [258] K
Rp = 2.56 [1.05] Re
a = 0.0296 [0.0094] AU
Ag = 7.81 [4.24] [1.61σ]
Teffp = 5557 [481] K [6.25σ]

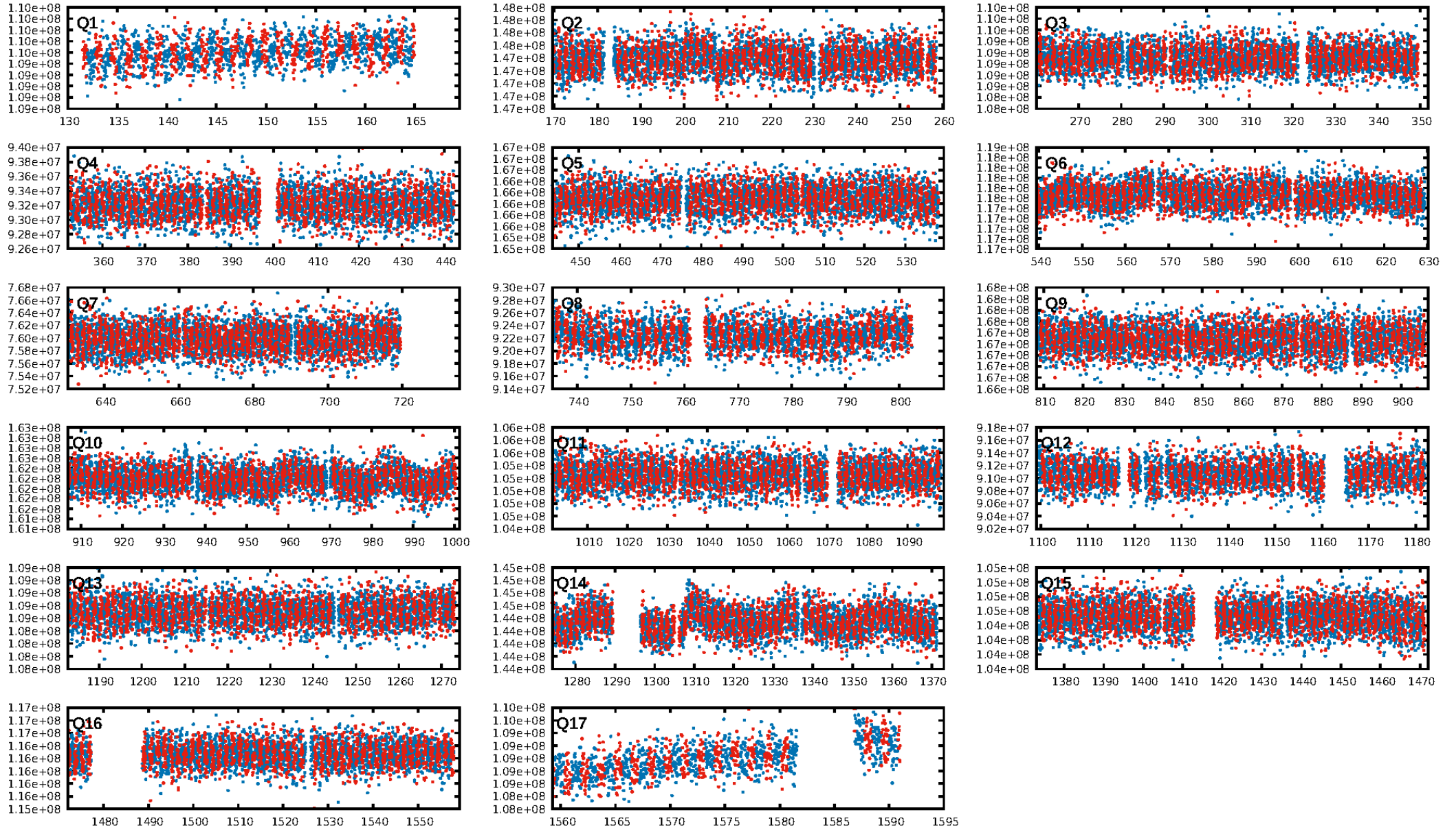
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [848/848]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 7.659 arcsec [4.81σ]
KicOffset-rm: 4.994 arcsec [3.07σ]
OotOffset-st: 1/1/3/4 [9]
KicOffset-st: 1/1/3/4 [9]
DiffImageQuality-fgm: 0.33 [3/9]
DiffImageOverlap-fno: 1.00 [17/17]

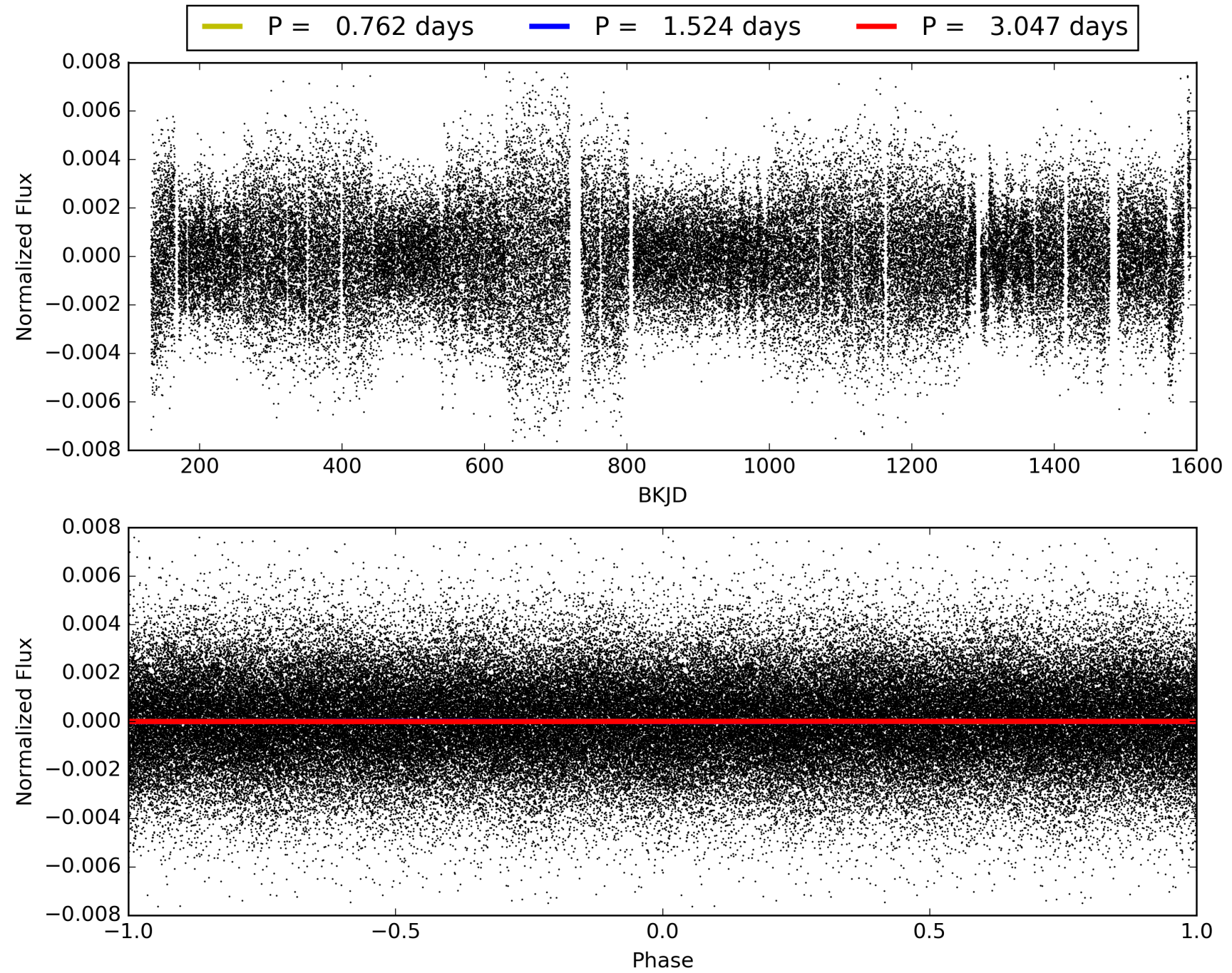
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:09:50 Z

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

TCE 011624191-01, PDC Light Curves

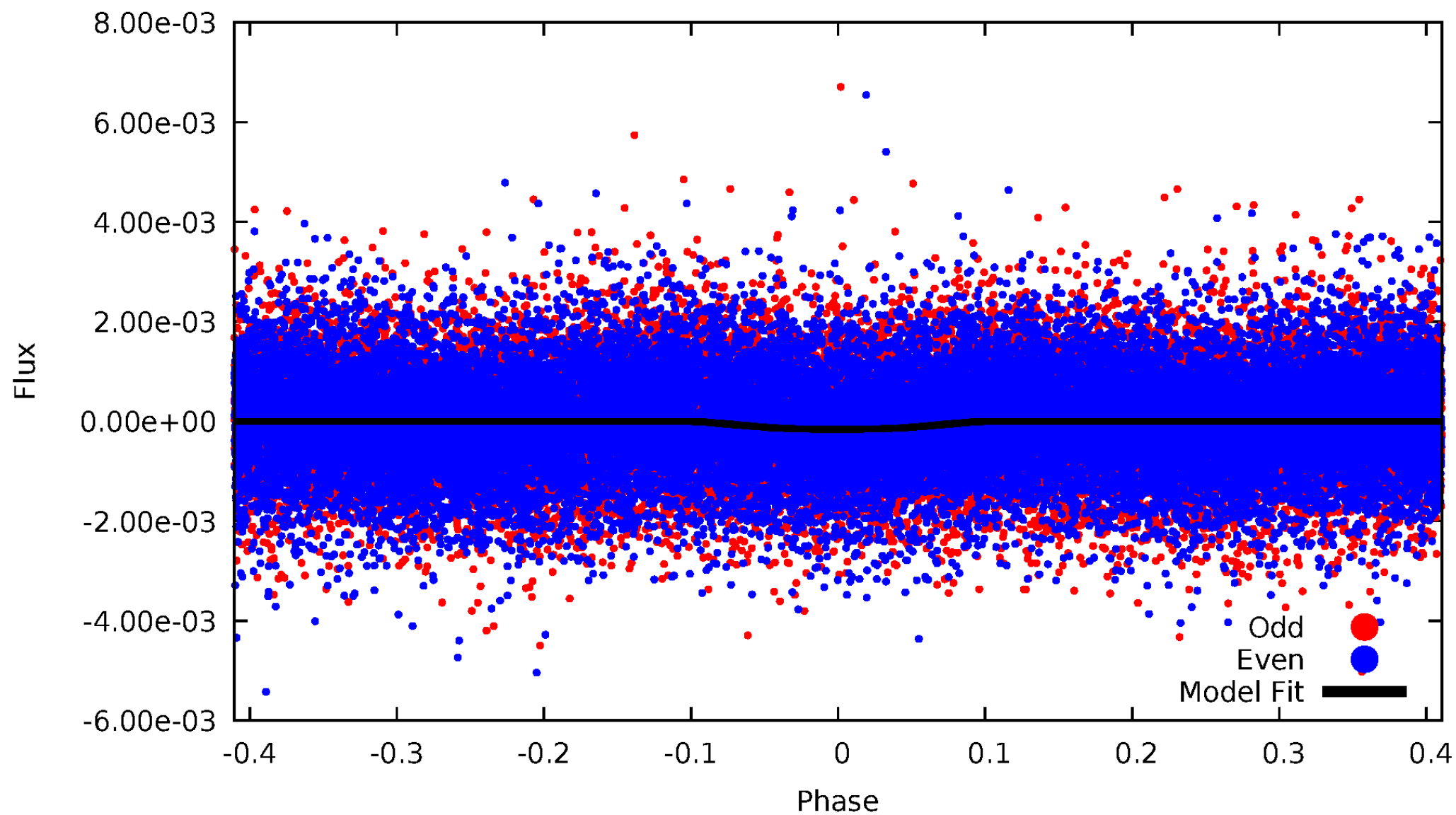


TCE 011624191-01



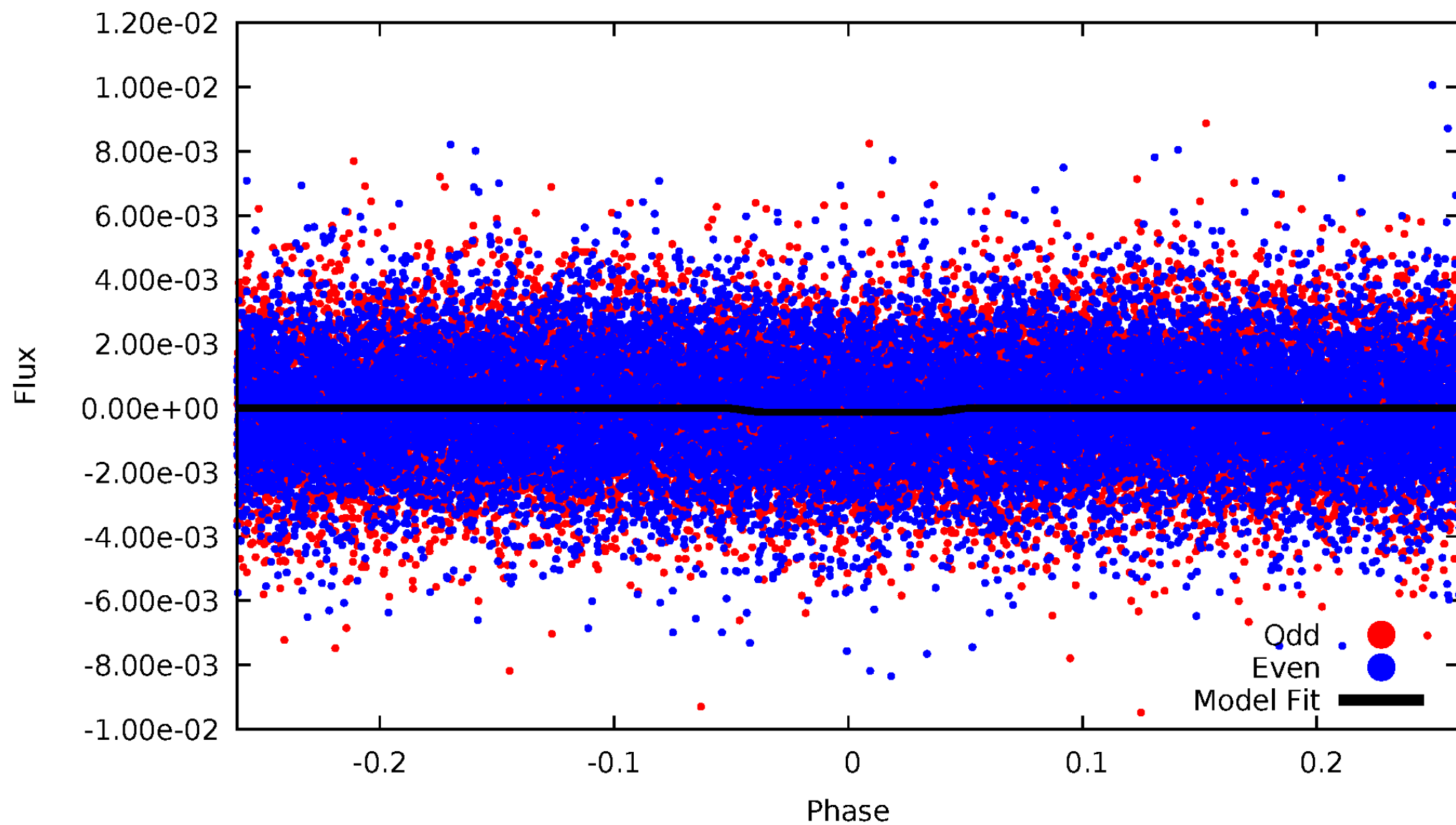
DV Odd/Even

TCE 011624191-01



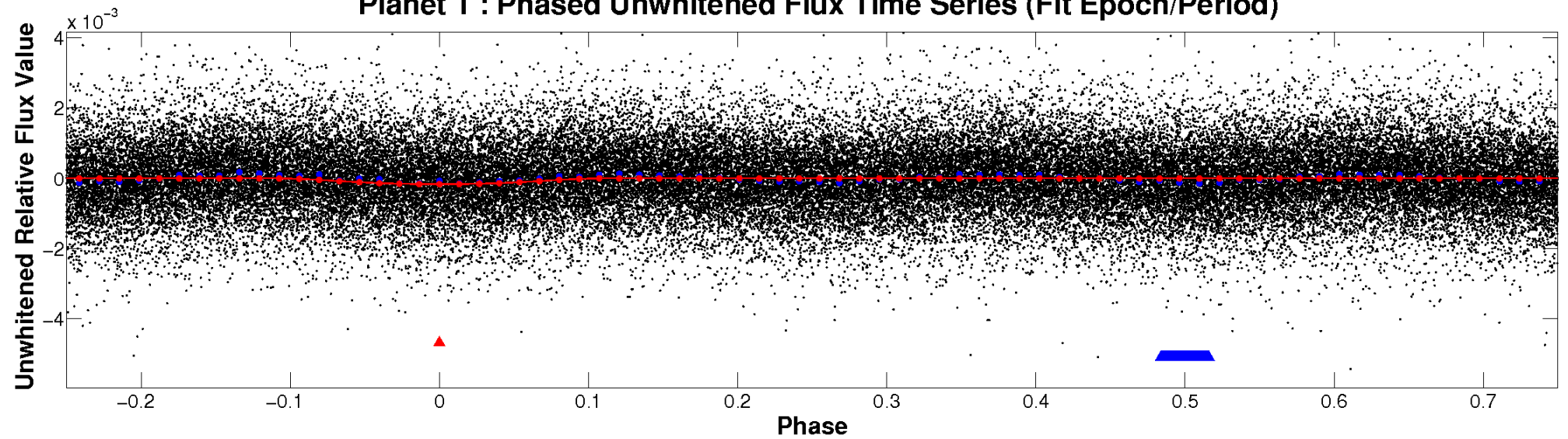
ALT Odd/Even

TCE 011624191-01

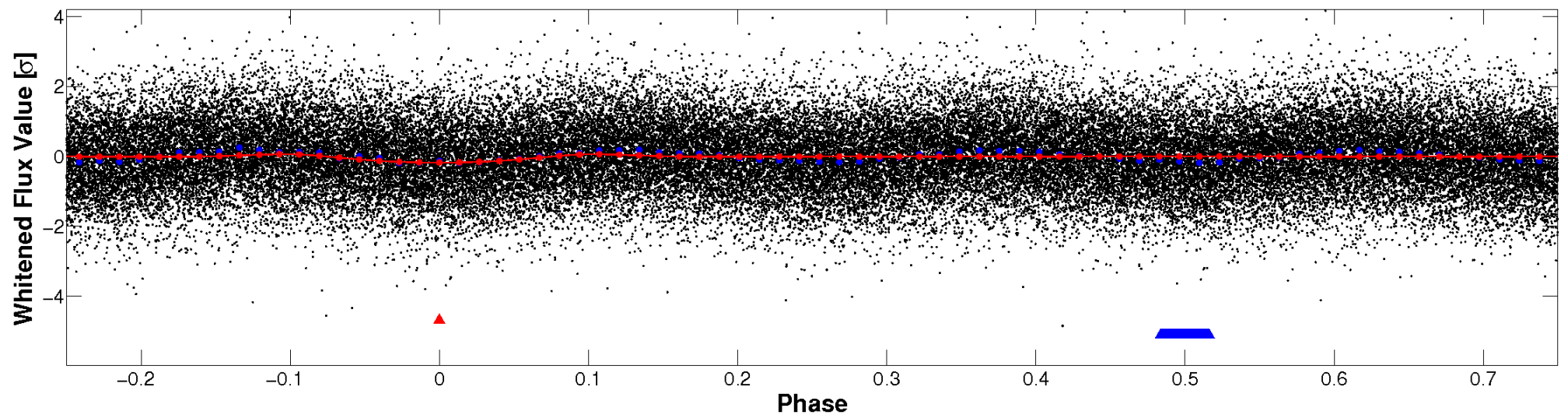


Non-Whitened Vs. Whitened Light Curve

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

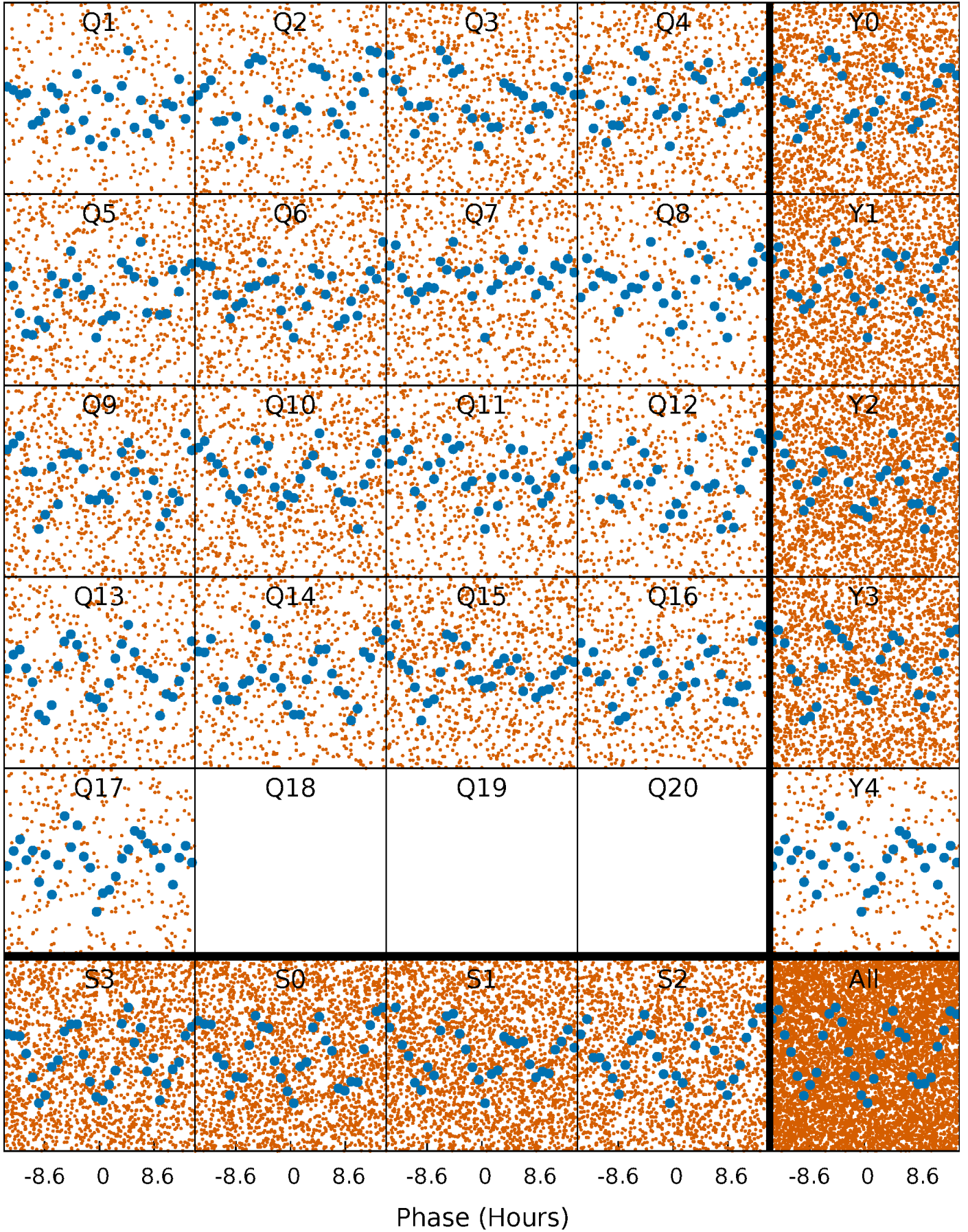


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



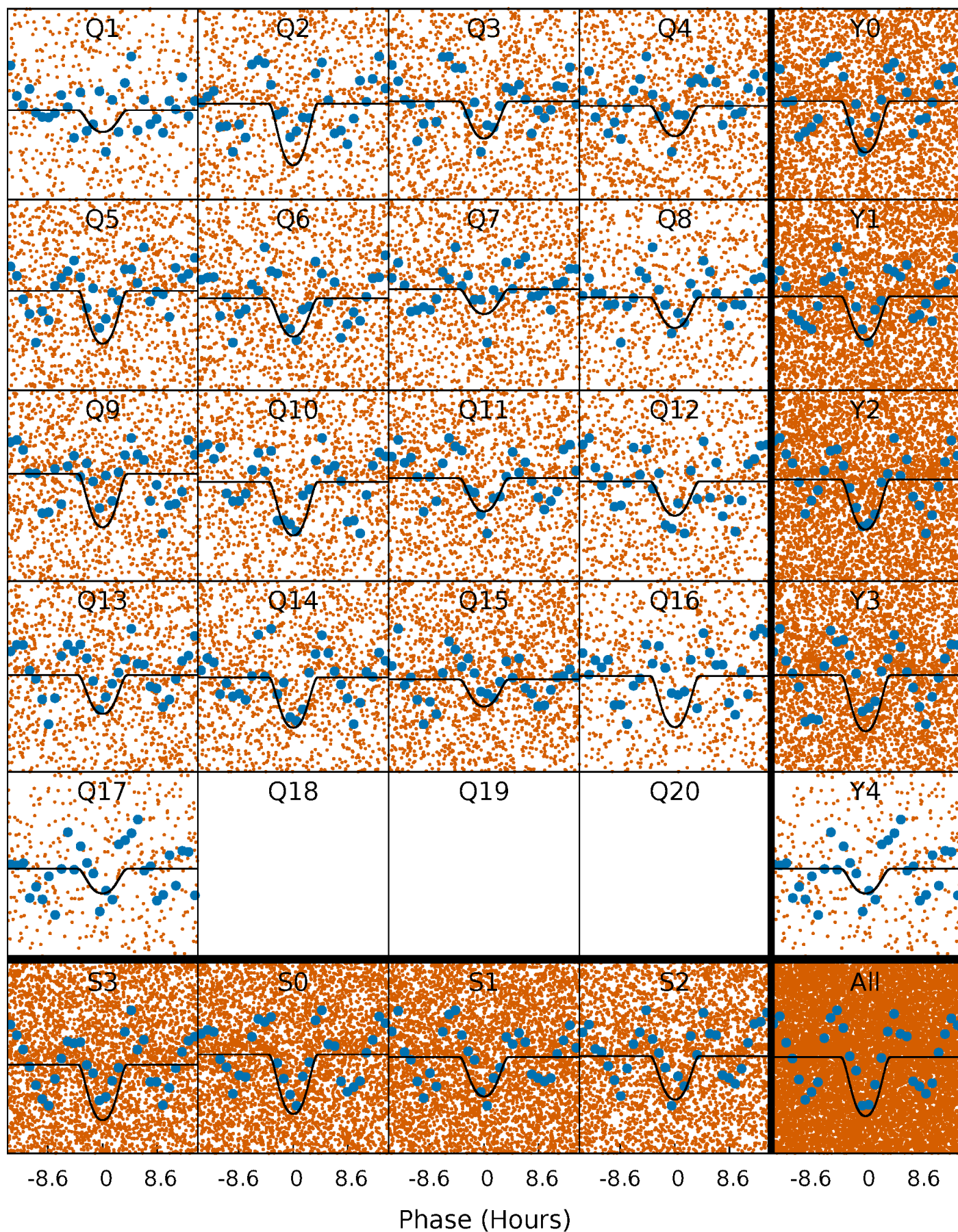
PDC Quarter-Phased Transit Curves

TCE 011624191-01 P= 1.523541 Days $T_0=131.577788$ (BKJD)



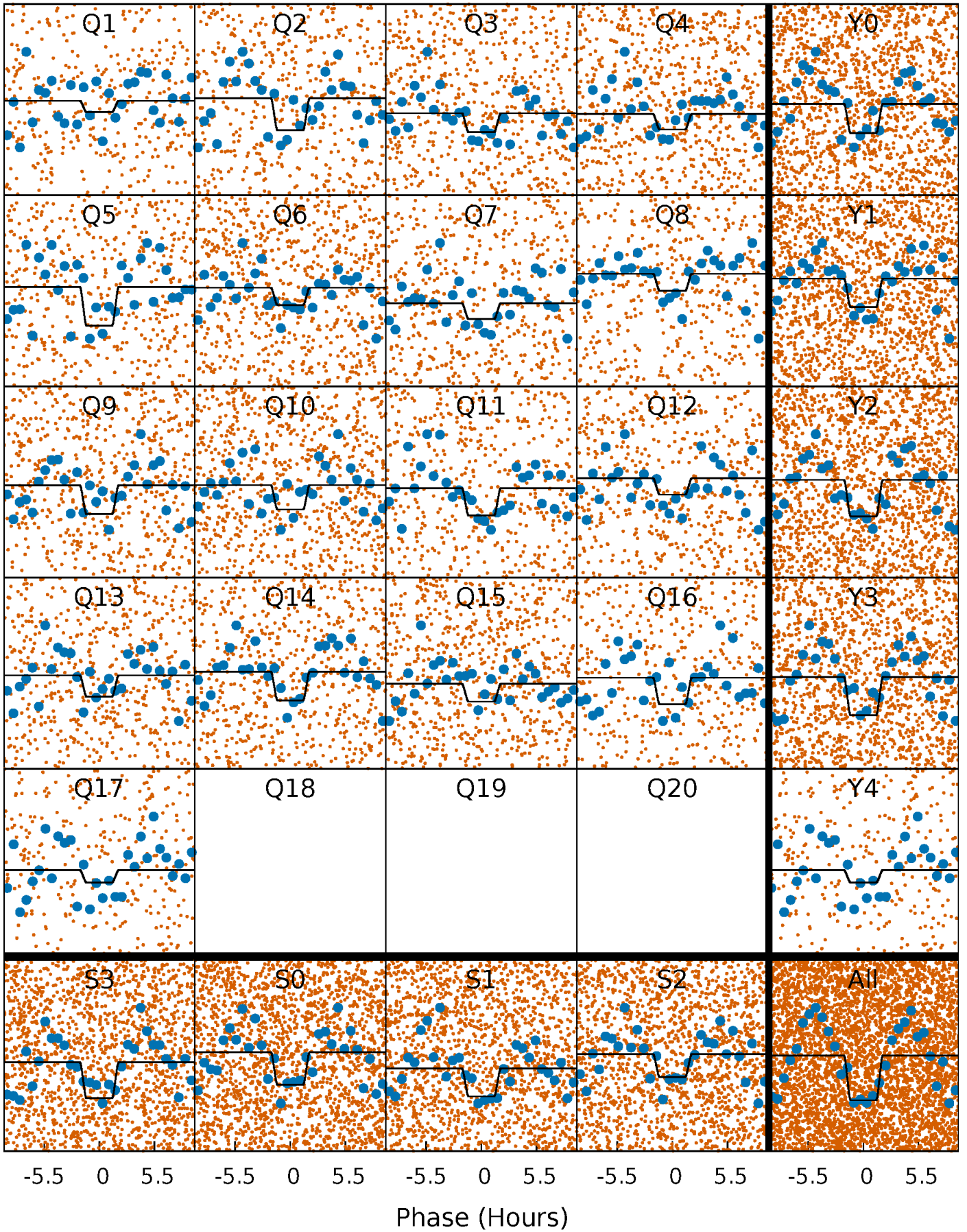
DV Quarter-Phased Transit Curves

TCE 011624191-01 P= 1.523541 Days $T_0=131.577788$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

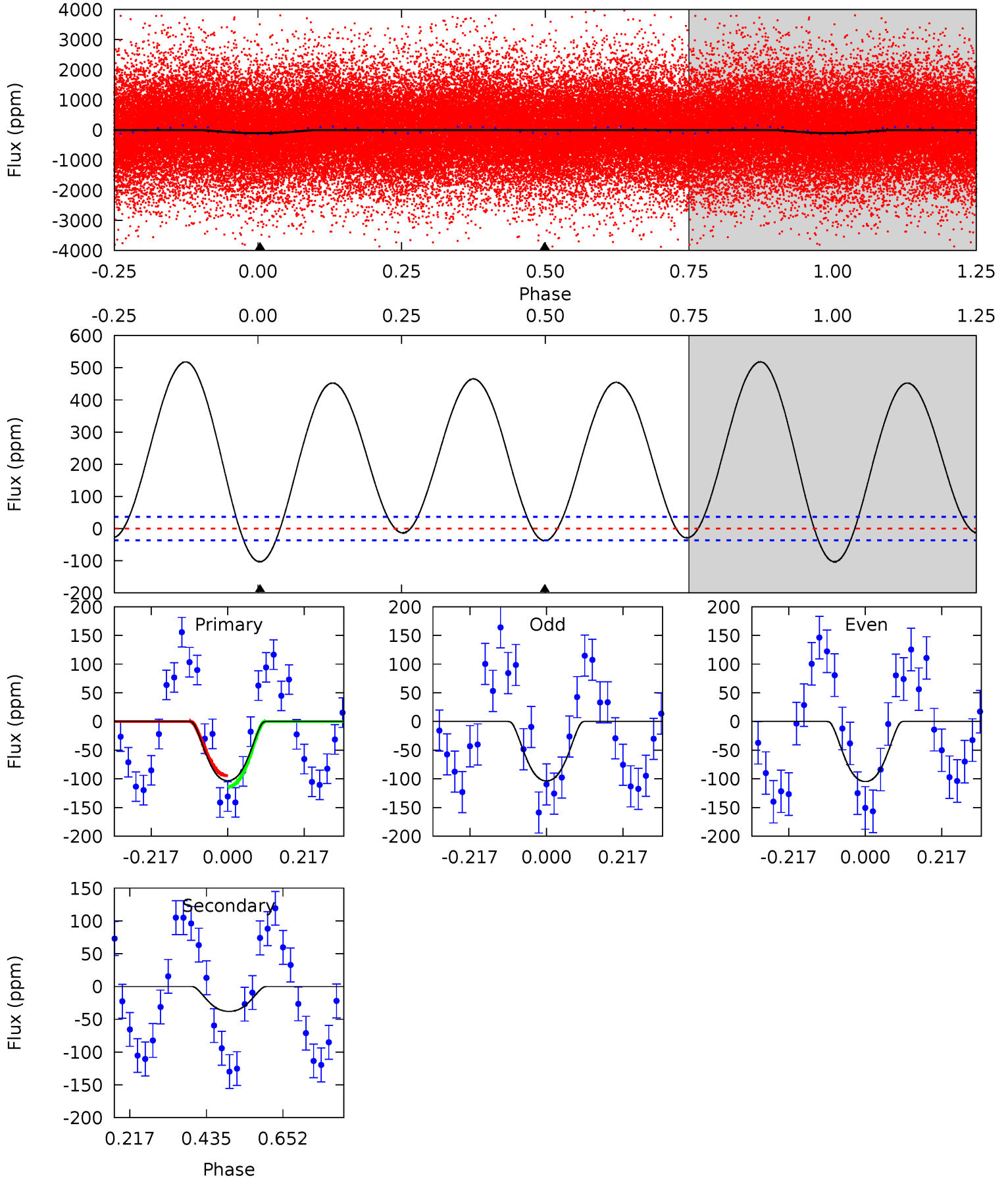
TCE 011624191-01 P= 1.523555 Days $T_0=131.575461$ (BKJD)



DV Model-Shift Uniqueness Test

011624191-01, P = 1.523541 Days, E = 130.054247 Days

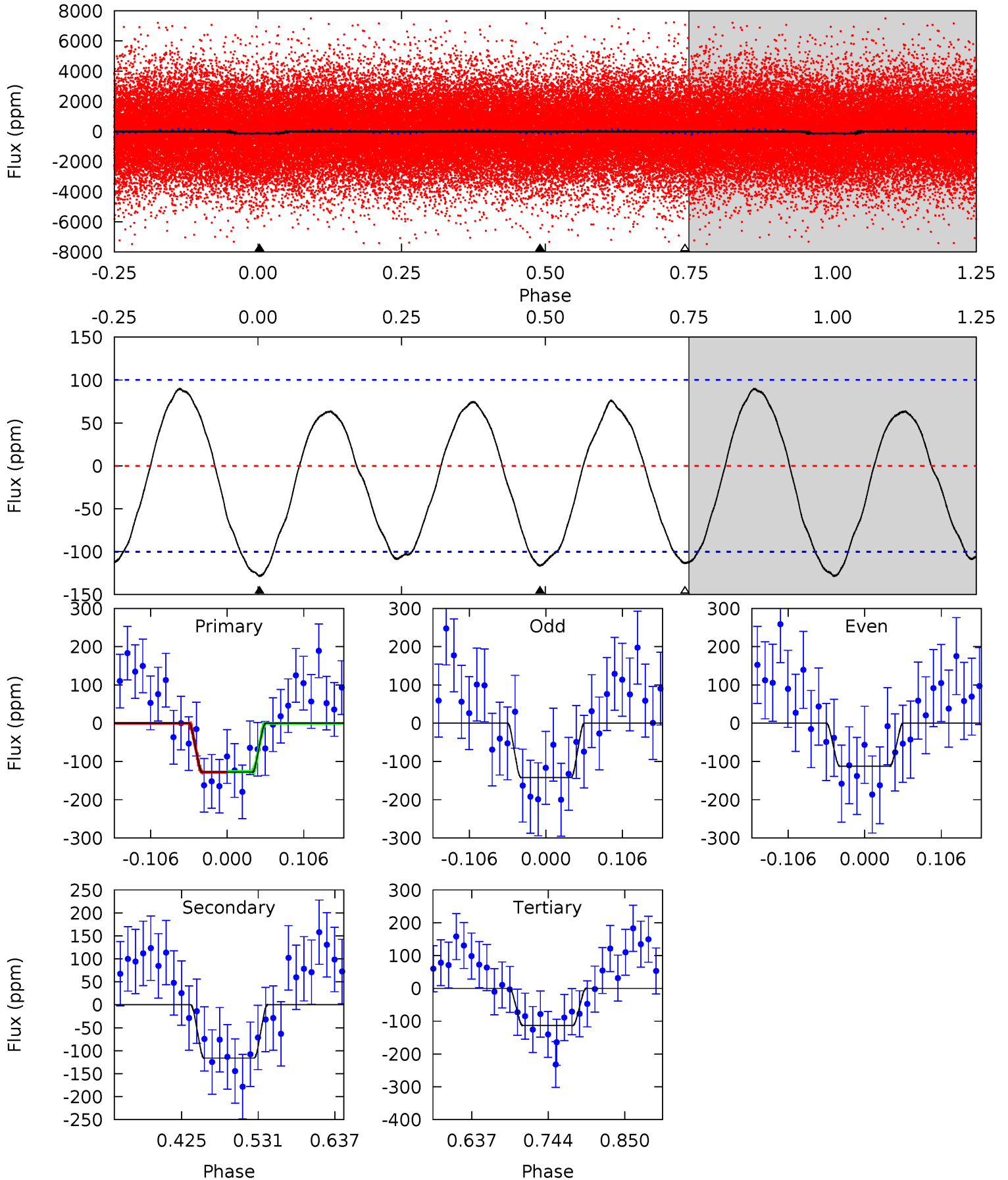
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	4.60	0	0	4.40	1.23	3.21	12.5	12.5	4.60	4.60	0.07	0.84	0.83	1.15



Alt Model-Shift Uniqueness Test

011624191-01, P = 1.523555 Days, E = 130.051906 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.82	5.27	5.14	0	4.55	1.62	3.09	0.68	5.82	0.13	5.27	0.67	1.14	0.41	0.03



Stellar Parameters For KIC 011624191

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6942^{+191}_{-287}	$4.283^{+0.060}_{-0.240}$	$0.210^{+0.150}_{-0.300}$	$1.458^{+0.565}_{-0.176}$	$1.488^{+0.221}_{-0.184}$	$0.675^{+0.174}_{-0.409}$
	+3%/-4%	+1%/-6%	+71%/-143%	+39%/-12%	+15%/-12%	+26%/-61%
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 011624191-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-38 ± 8	$2.68^{+0.63}_{-0.44}$	3071^{+258}_{-164}	4344^{+358}_{-358}	$2.454^{+1.200}_{-0.876}$
Alt.	-116 ± 22	$1.95^{+0.51}_{-0.44}$	3056^{+274}_{-165}	6559^{+1002}_{-656}	14^{+10}_{-5}

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 $A_{obs} \gg 1.0$

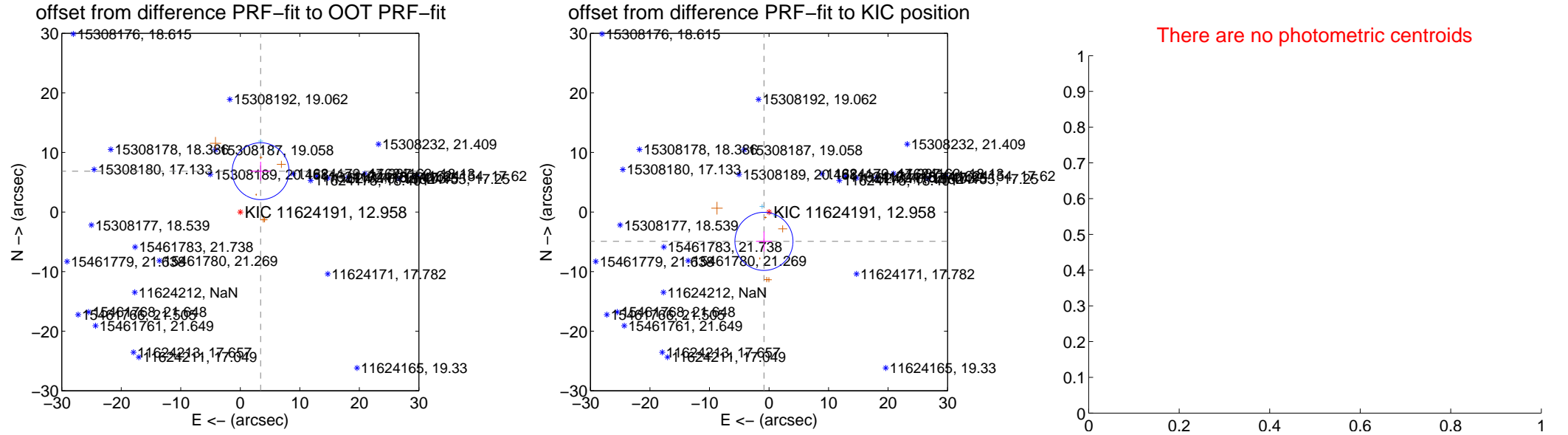
DV Centroid Data

Supplemental centroid analysis for 011624191-01. Kepler magnitude: 12.96. Transit SNR 13.81

There are 3 quarters with good PRF difference image offsets

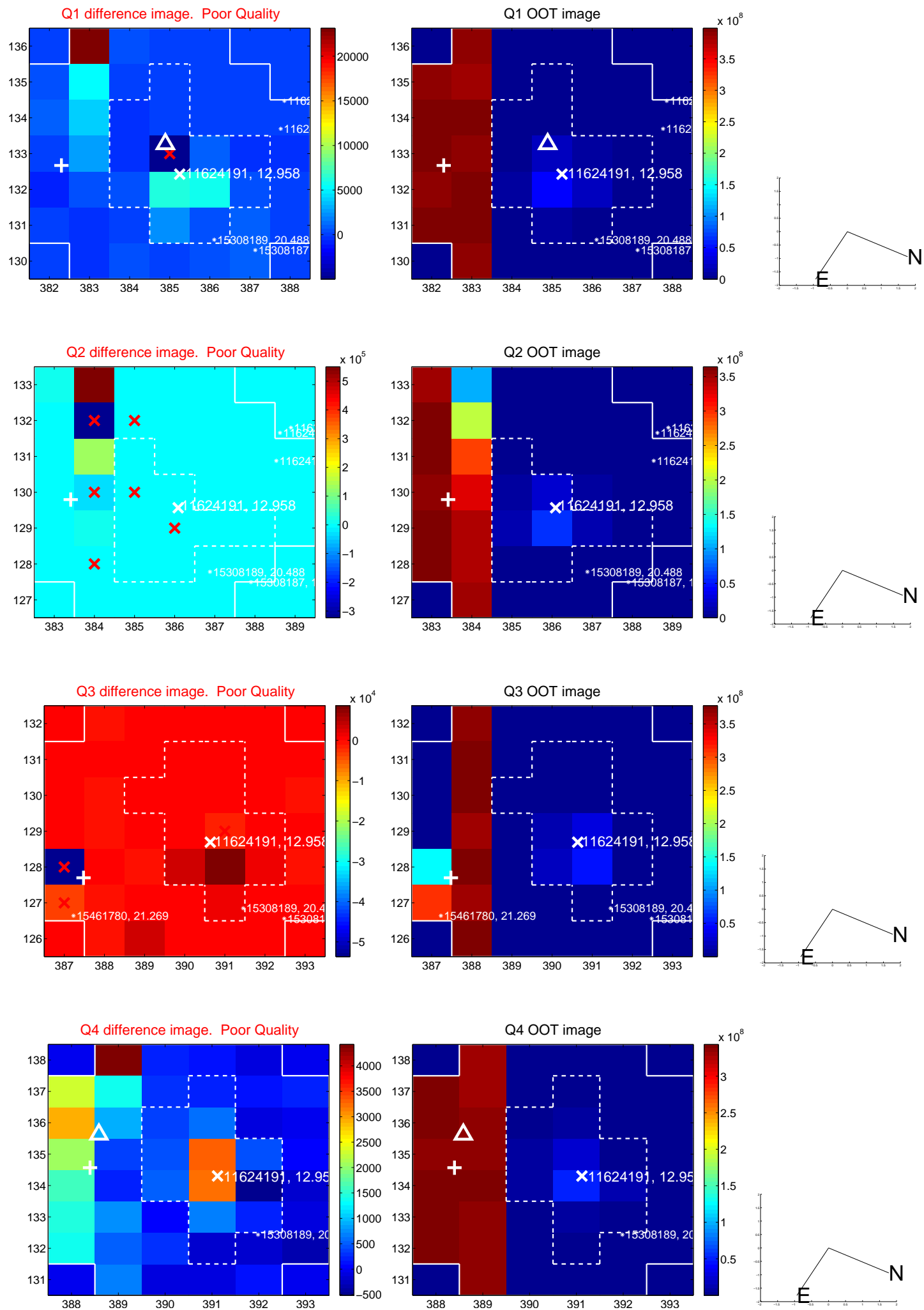
The OOT PRF centroid is offset from the target star catalog position by about 10.89 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.659 ± 1.591	4.81	-3.414 ± 1.710	6.856 ± 1.577
PRF-fit source offset from KIC position	4.994 ± 1.626	3.07	0.851 ± 1.333	-4.921 ± 1.669
photometric centroid source offset	—	—	—	—

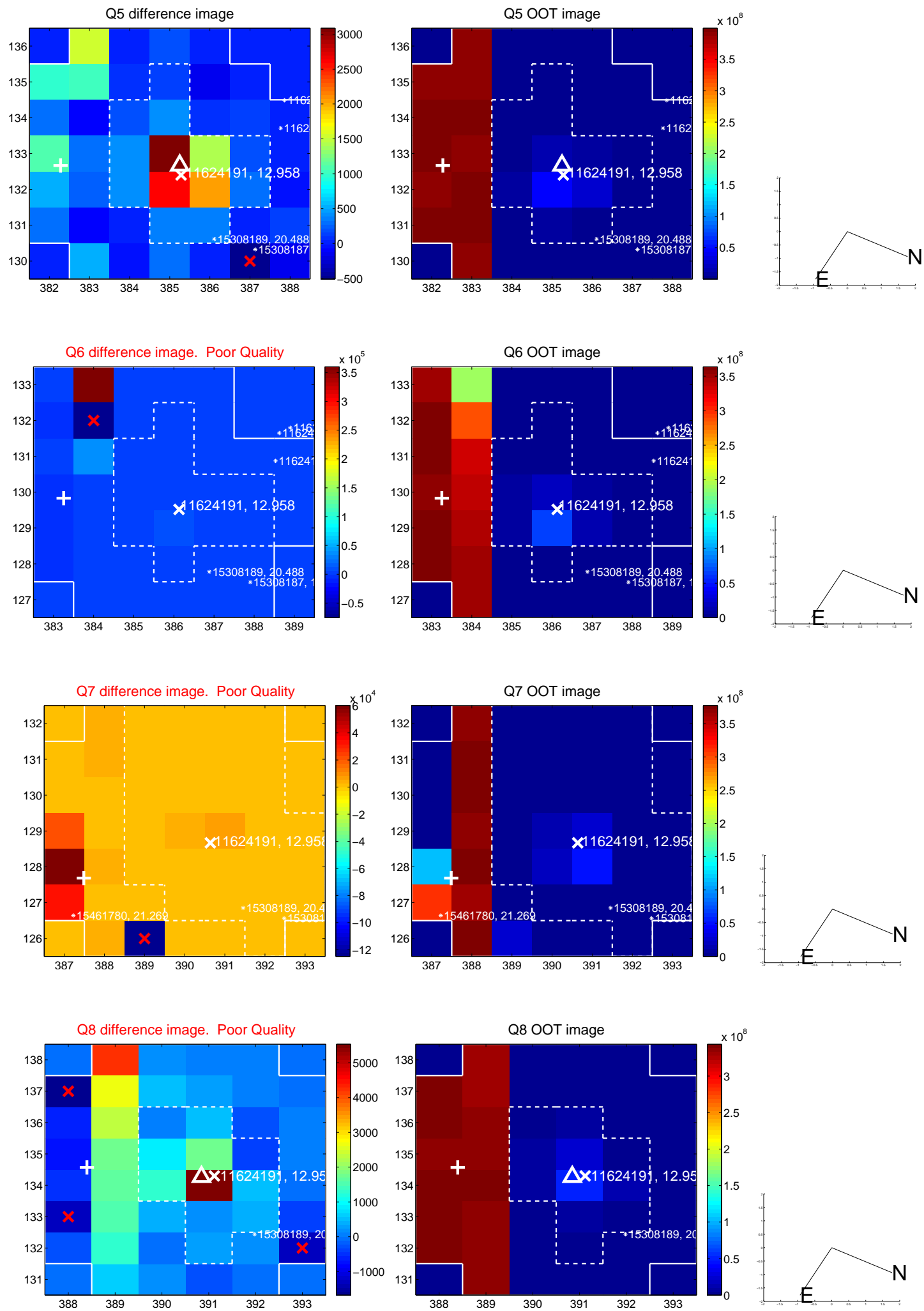


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

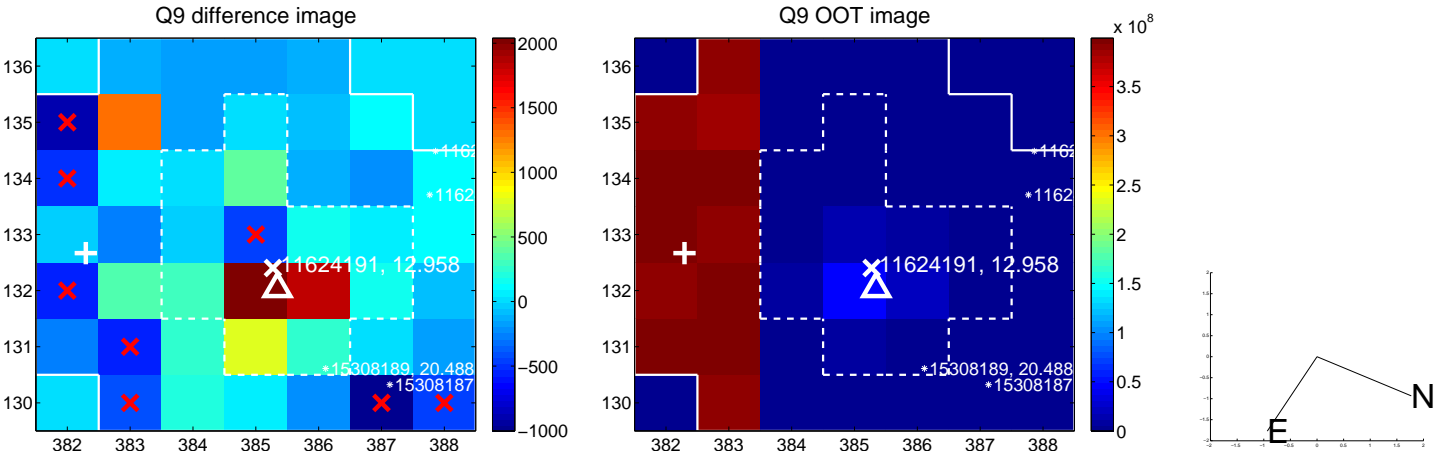
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



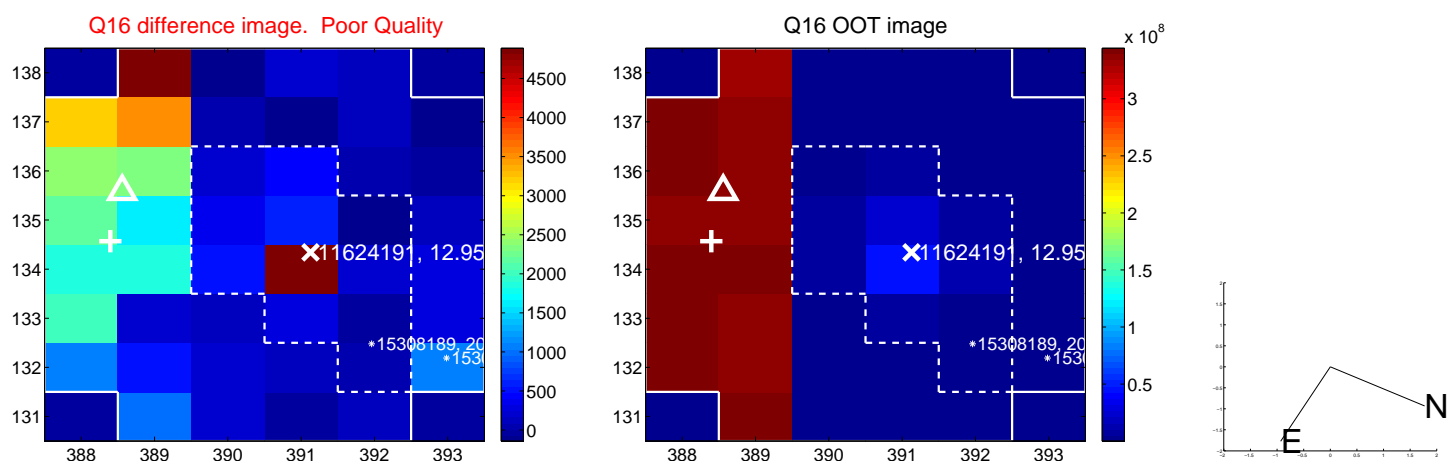
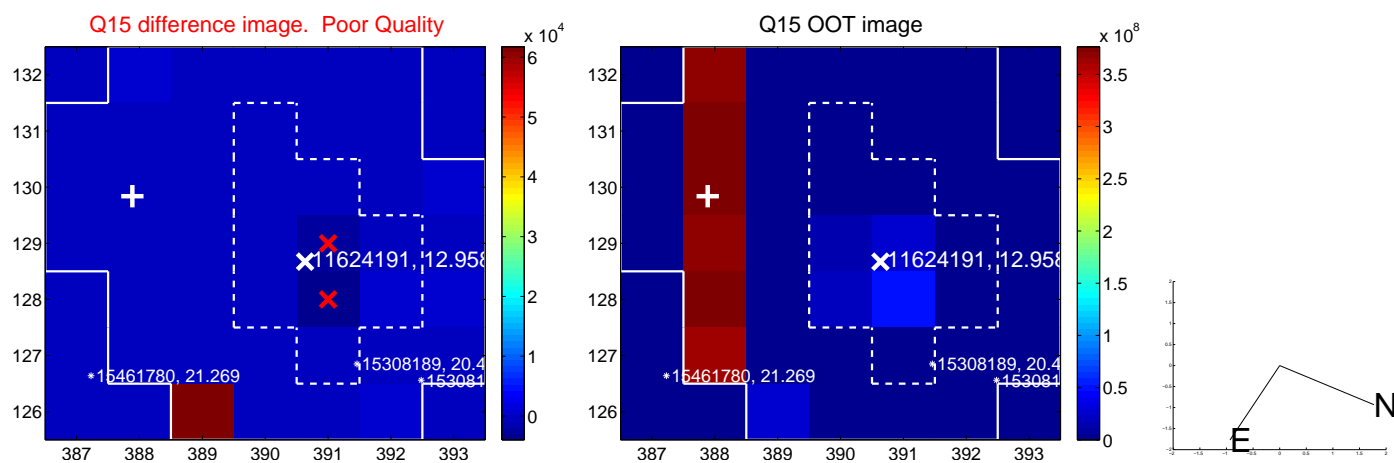
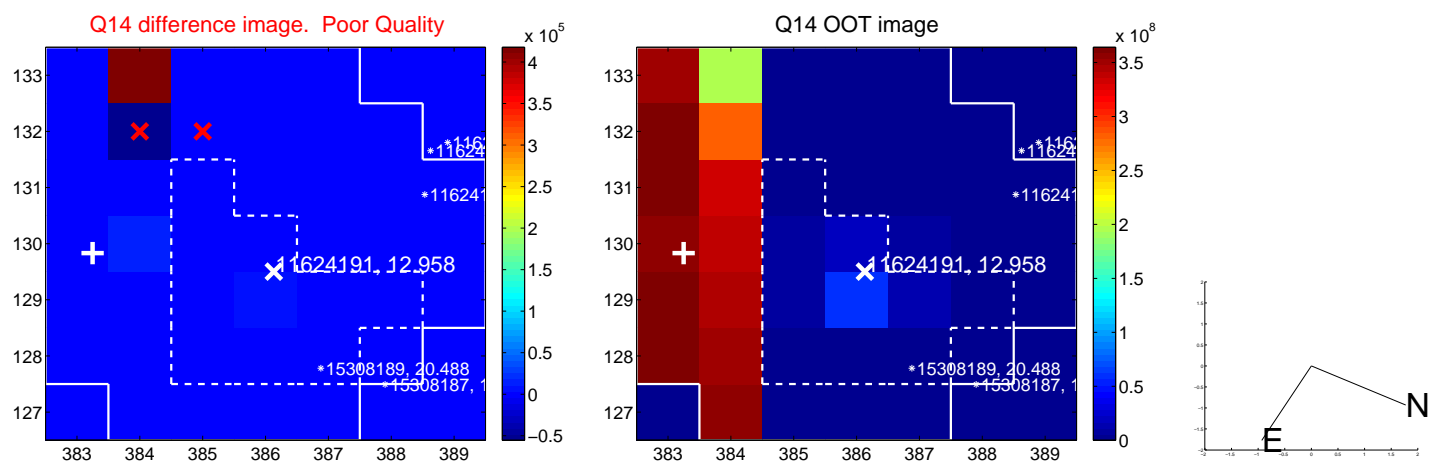
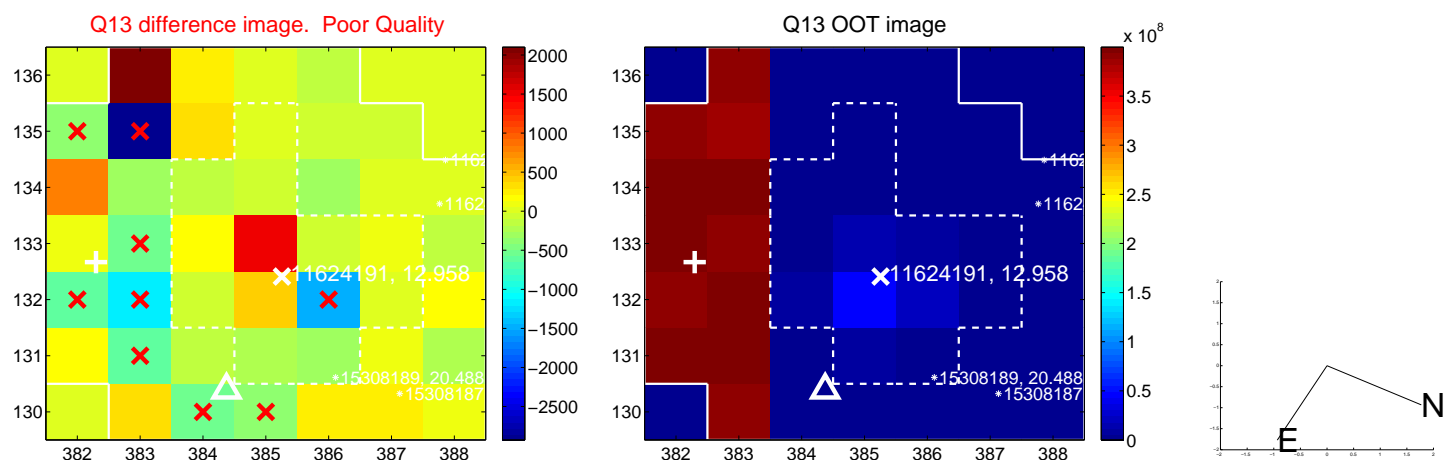
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



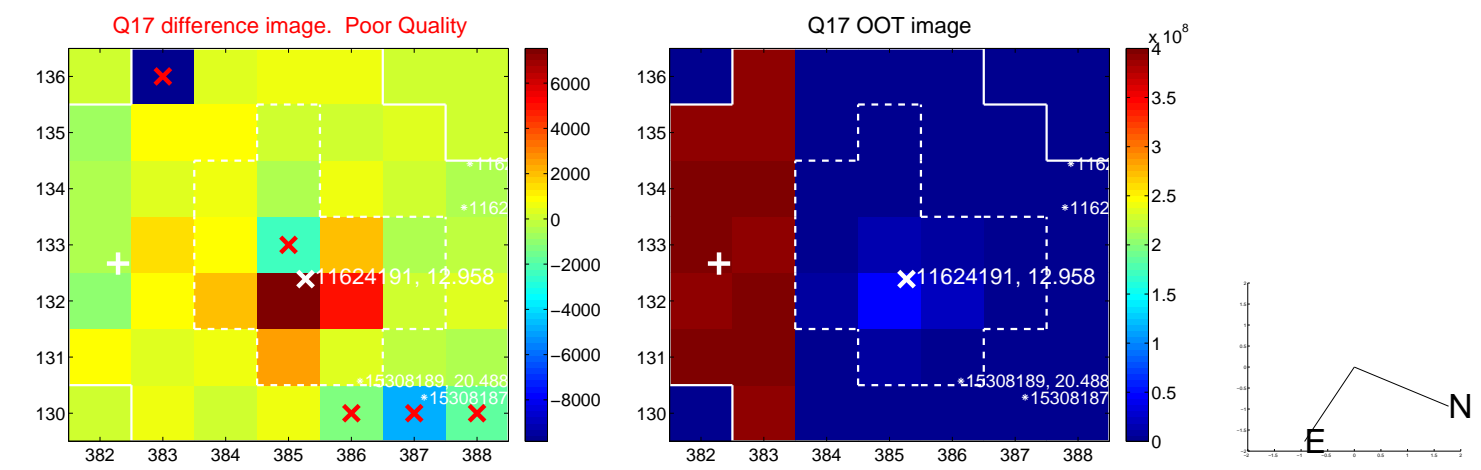
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



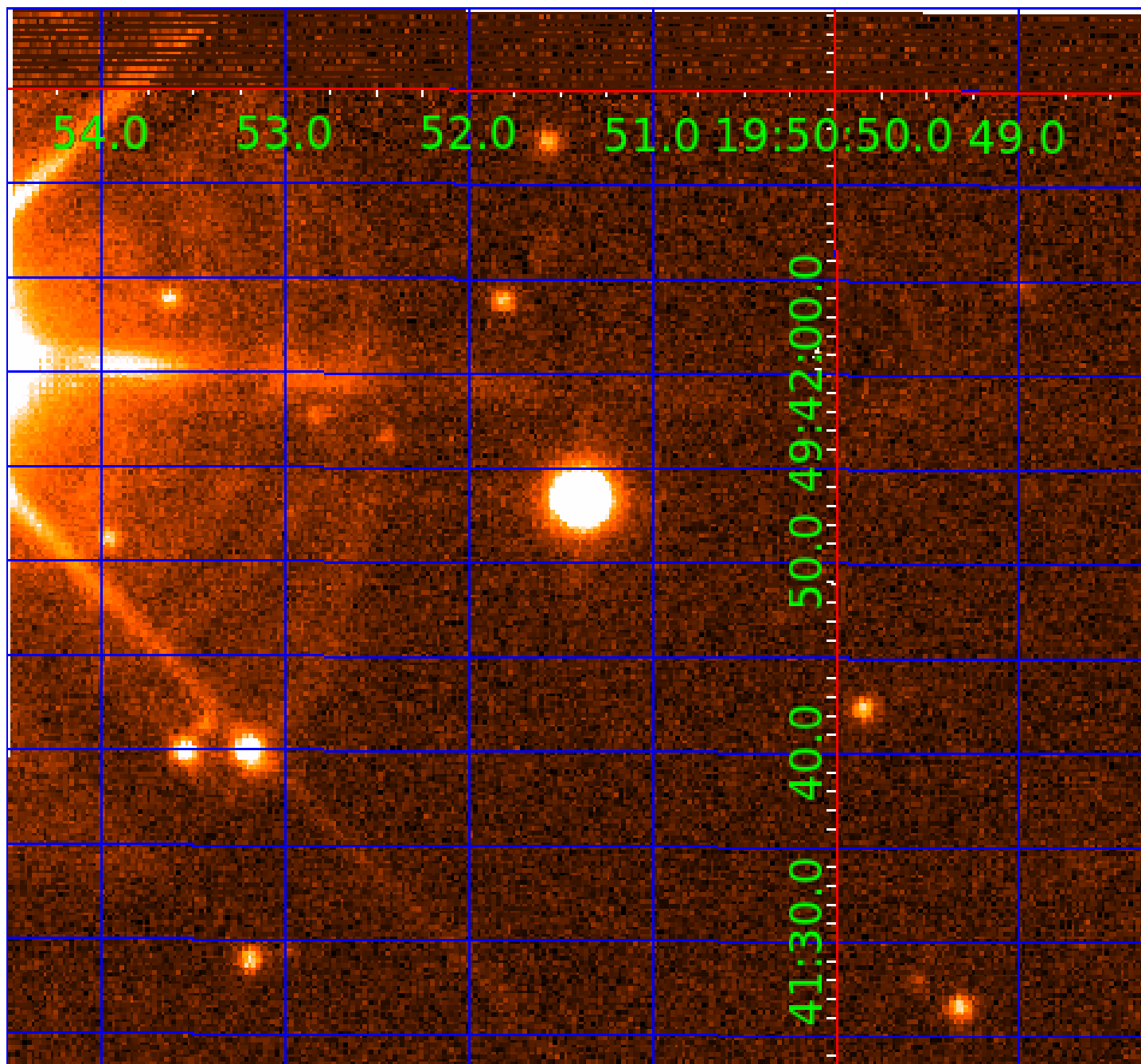
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 011624191

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})
011624191-01	OBS	No	1.523541	131.577788	165.3	7.505	14.3	13.8	1.46	6942	2.56	5052.80
011624191-02	OBS	No	1.523593	132.314730	143.0	4.757	13.3	14.2	1.46	6942	1.76	5052.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011624191-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_KIC_POS
011624191-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET

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

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

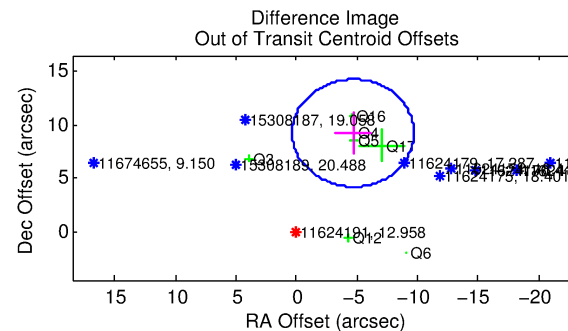
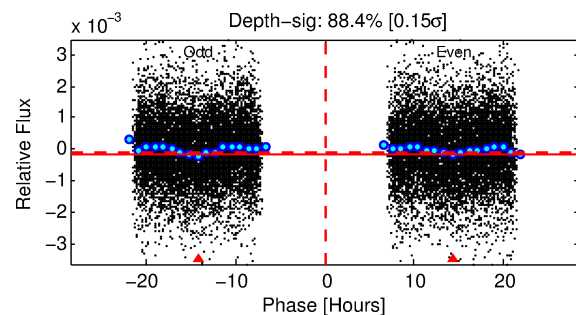
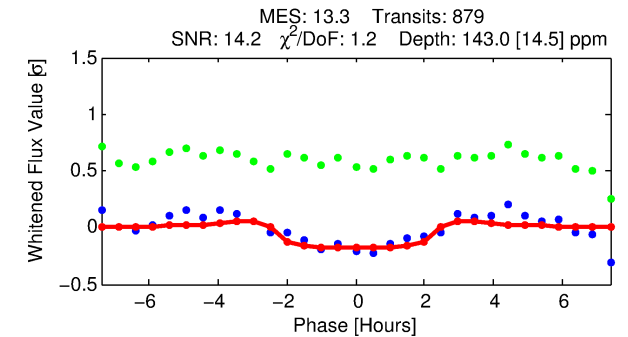
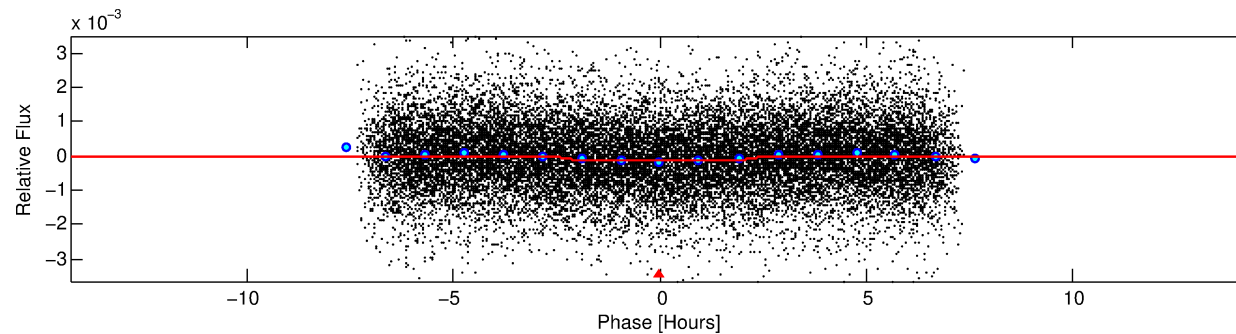
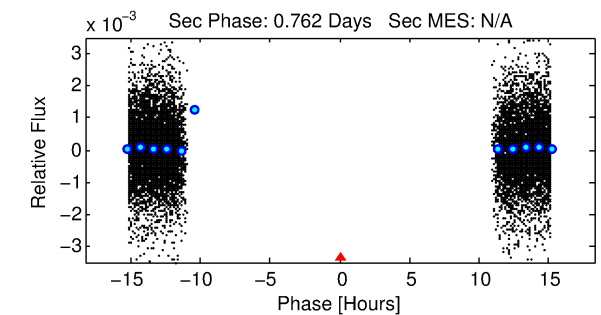
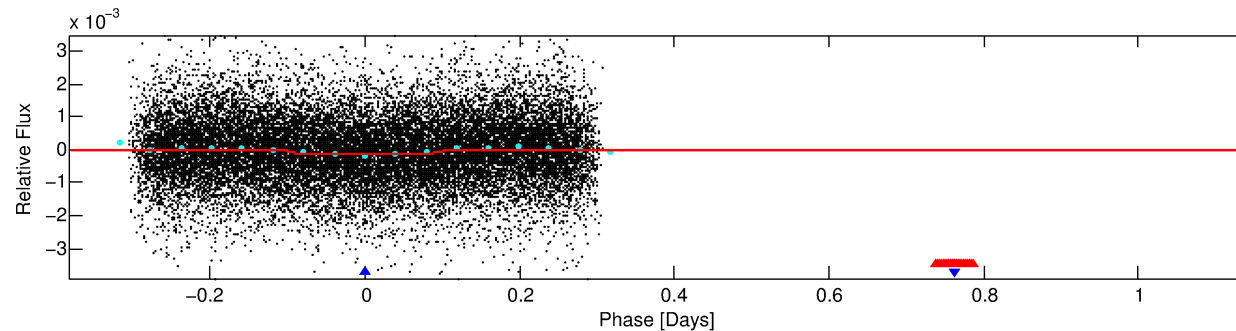
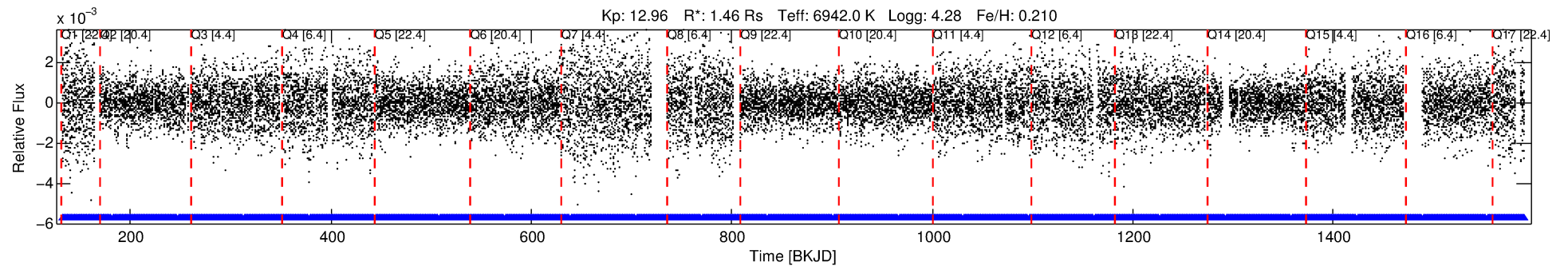
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011624191-02

No Significant Match Found

DV One-Page Summary

KIC: 11624191 Candidate: 2 of 2 Period: 1.524 d



DV Fit Results:

Period = 1.52359 [0.00001] d
Epoch = 132.3147 [0.0042] BKJD
Rp/R* = 0.0111 [0.0115]
a/R* = 2.54 [12.48]
b = 0.02 [372.77]
Seff = 5052.57 [2422.17]
Teq = 2150 [258] K
Rp = 1.76 [1.96] Re
a = 0.0296 [0.0094] AU

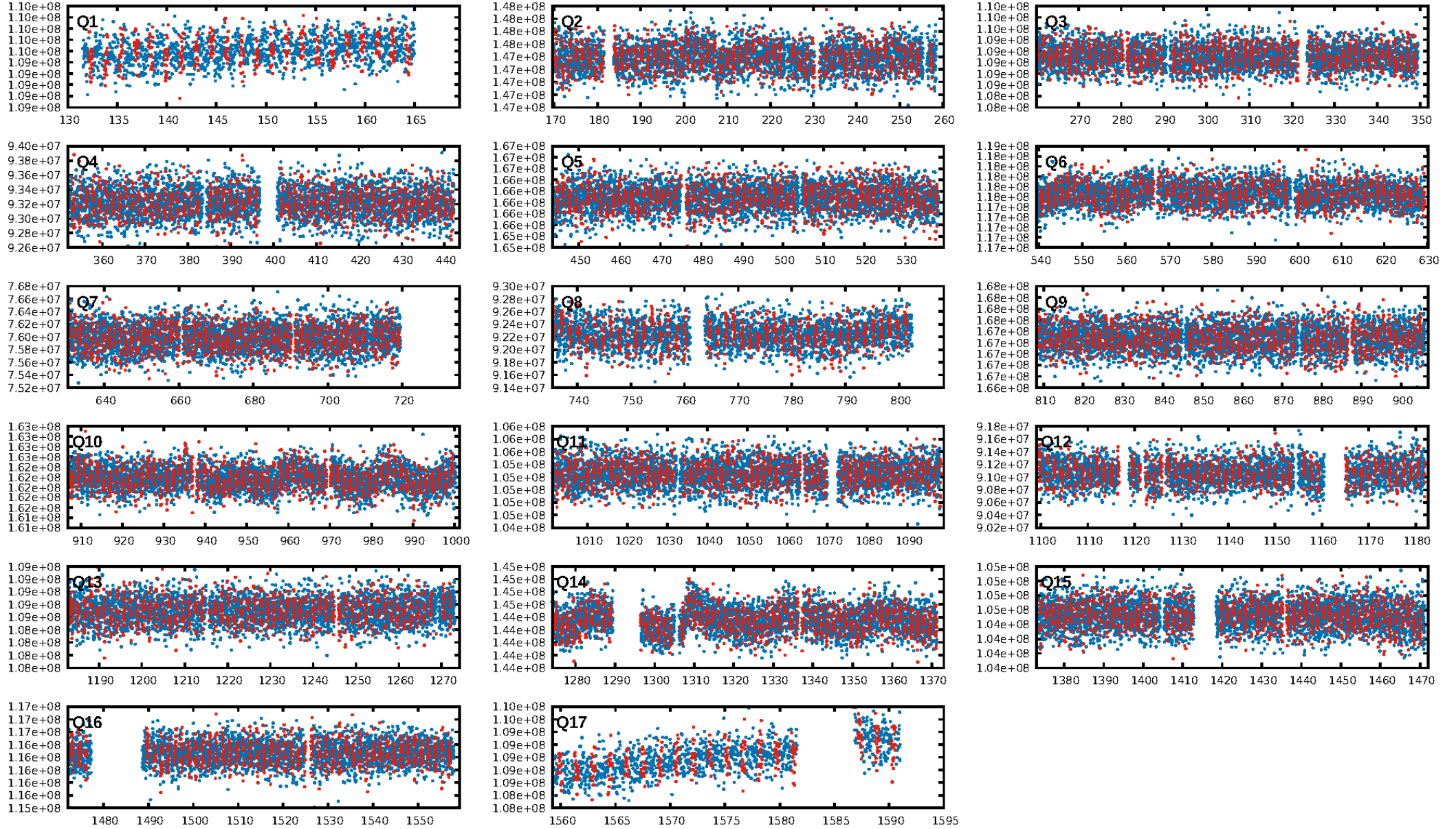
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [839/839]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 10.348 arcsec [6.18 σ]
KicOffset-rm: 0.828 arcsec [0.37 σ]
OotOffset-st: 1/1/3/2 [7]
KicOffset-st: 1/1/3/2 [7]
DiffImageQuality-fgm: 0.29 [2/7]
DiffImageOverlap-fno: 1.00 [17/17]

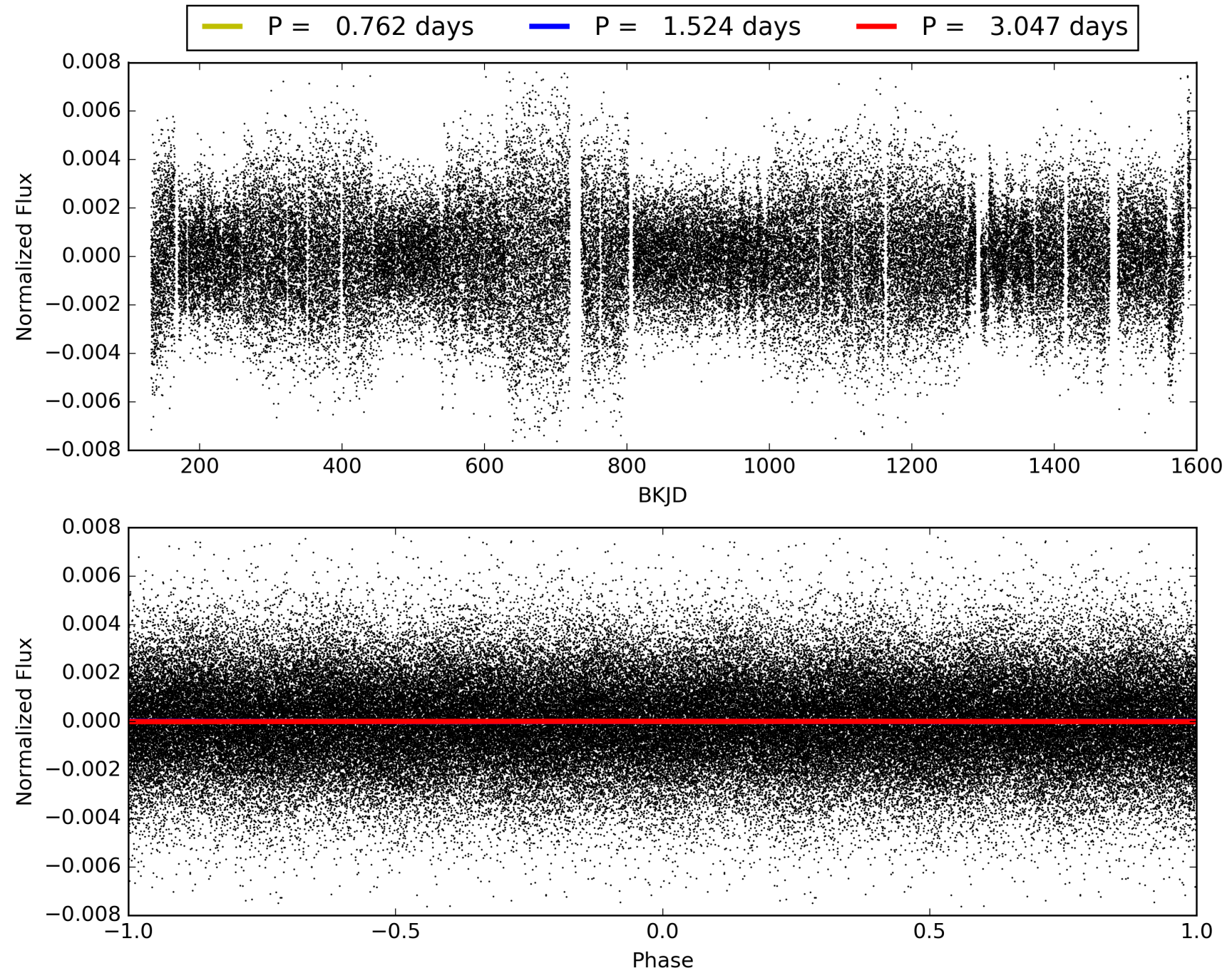
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:10:03 Z

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

TCE 011624191-02, PDC Light Curves

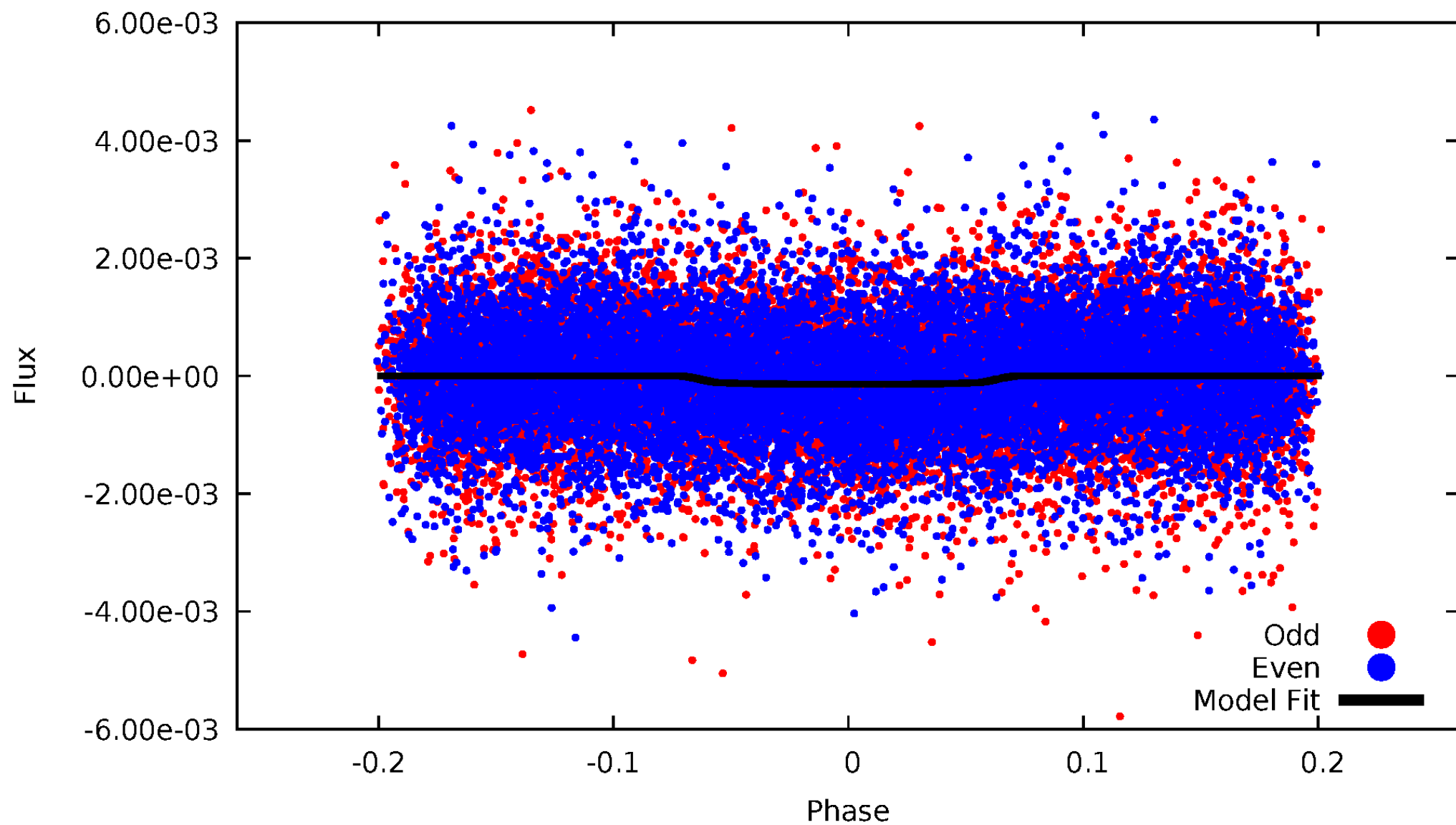


TCE 011624191-02



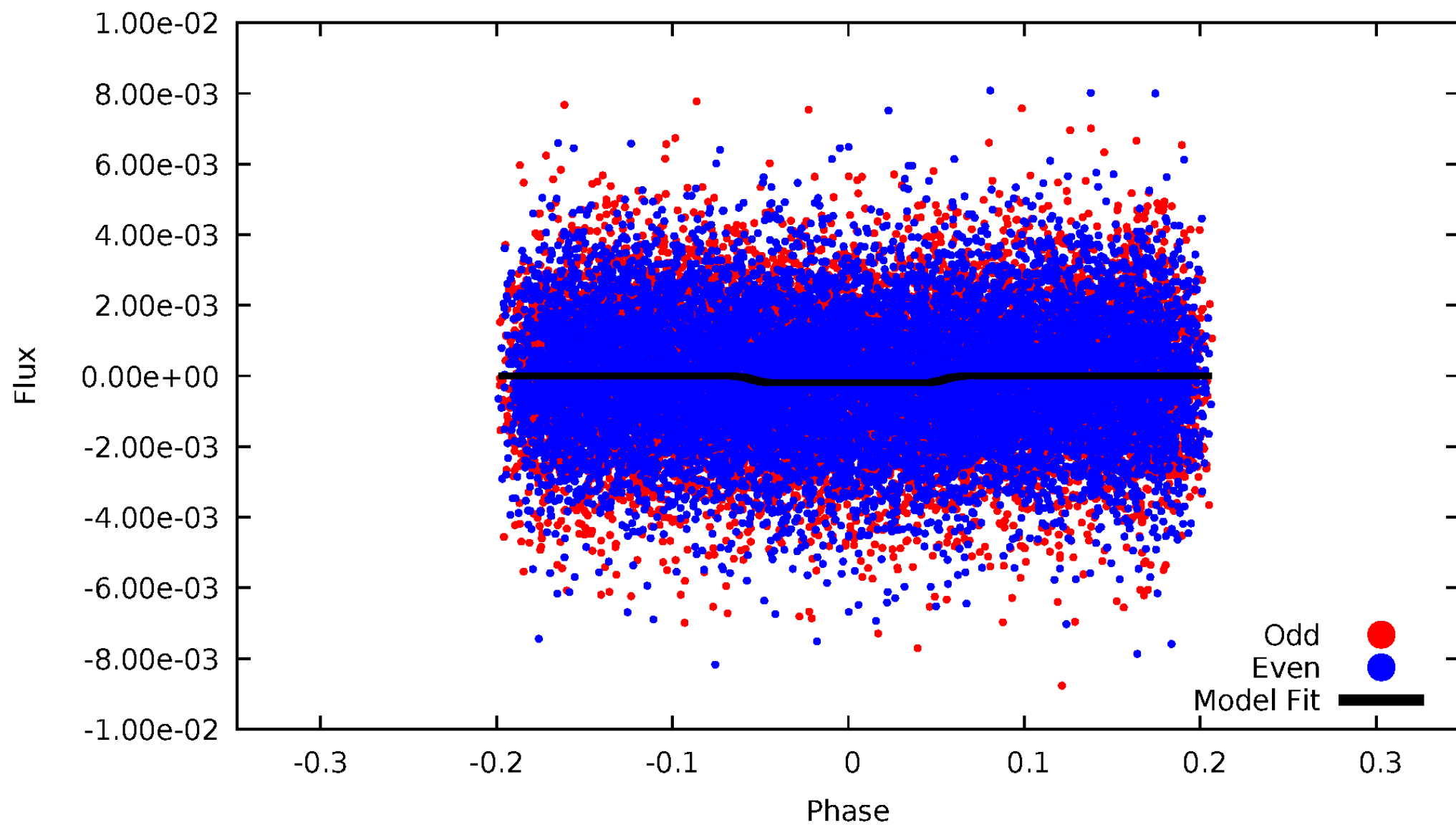
DV Odd/Even

TCE 011624191-02



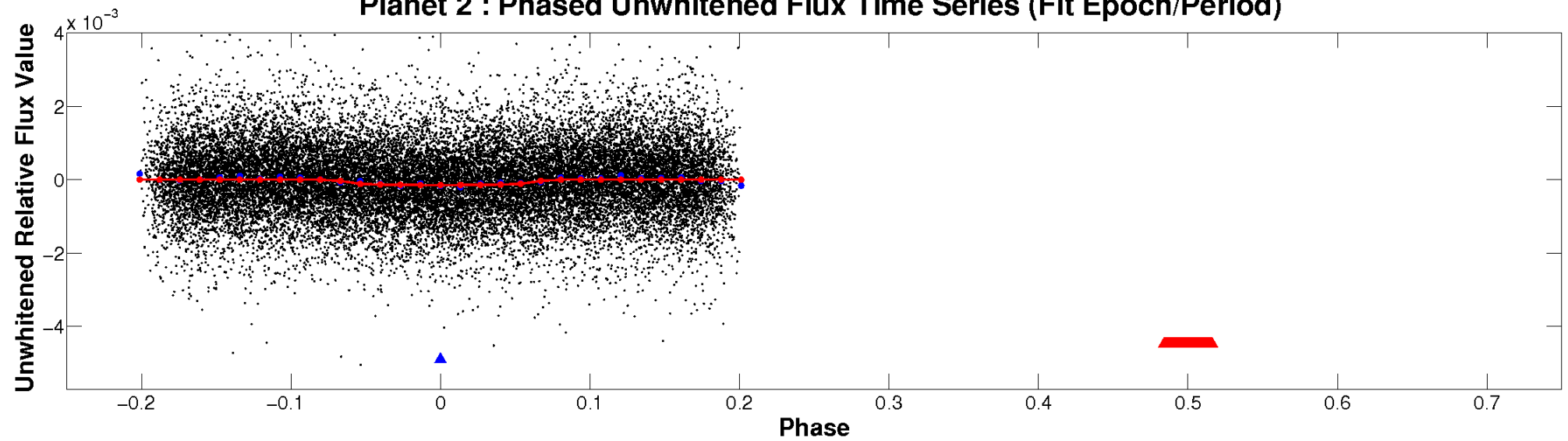
ALT Odd/Even

TCE 011624191-02

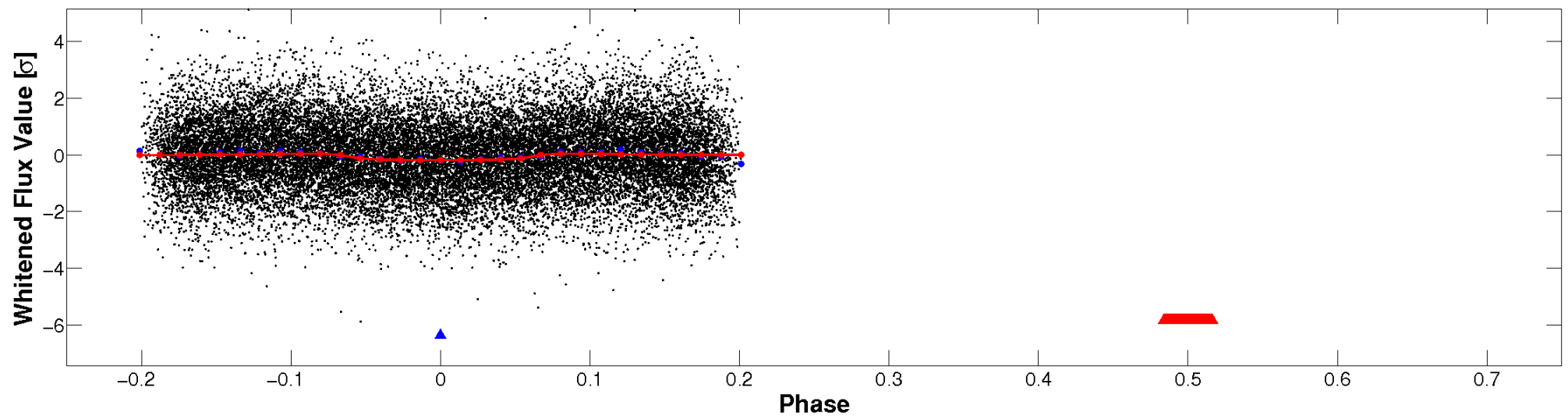


Non-Whitened Vs. Whitened Light Curve

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

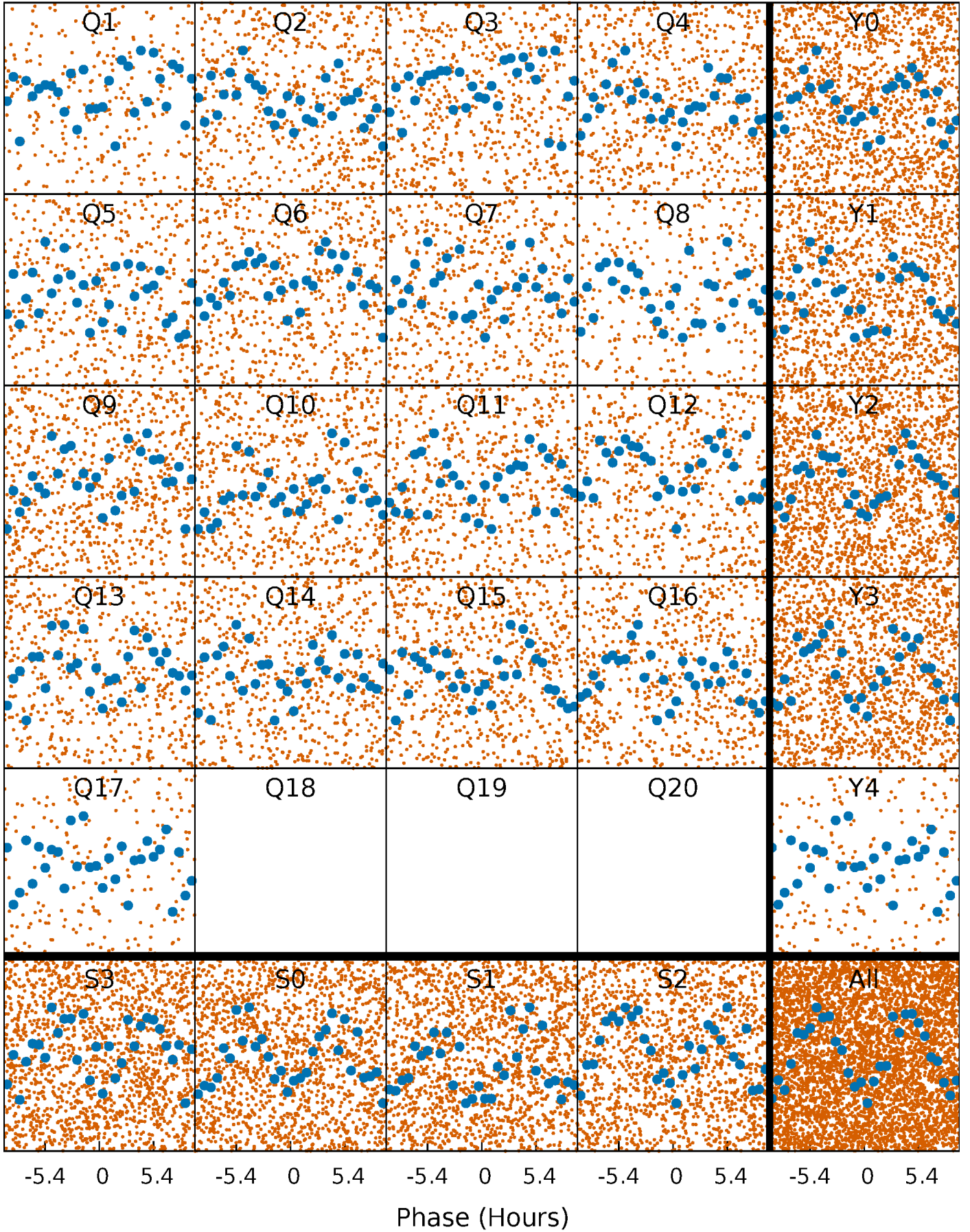


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



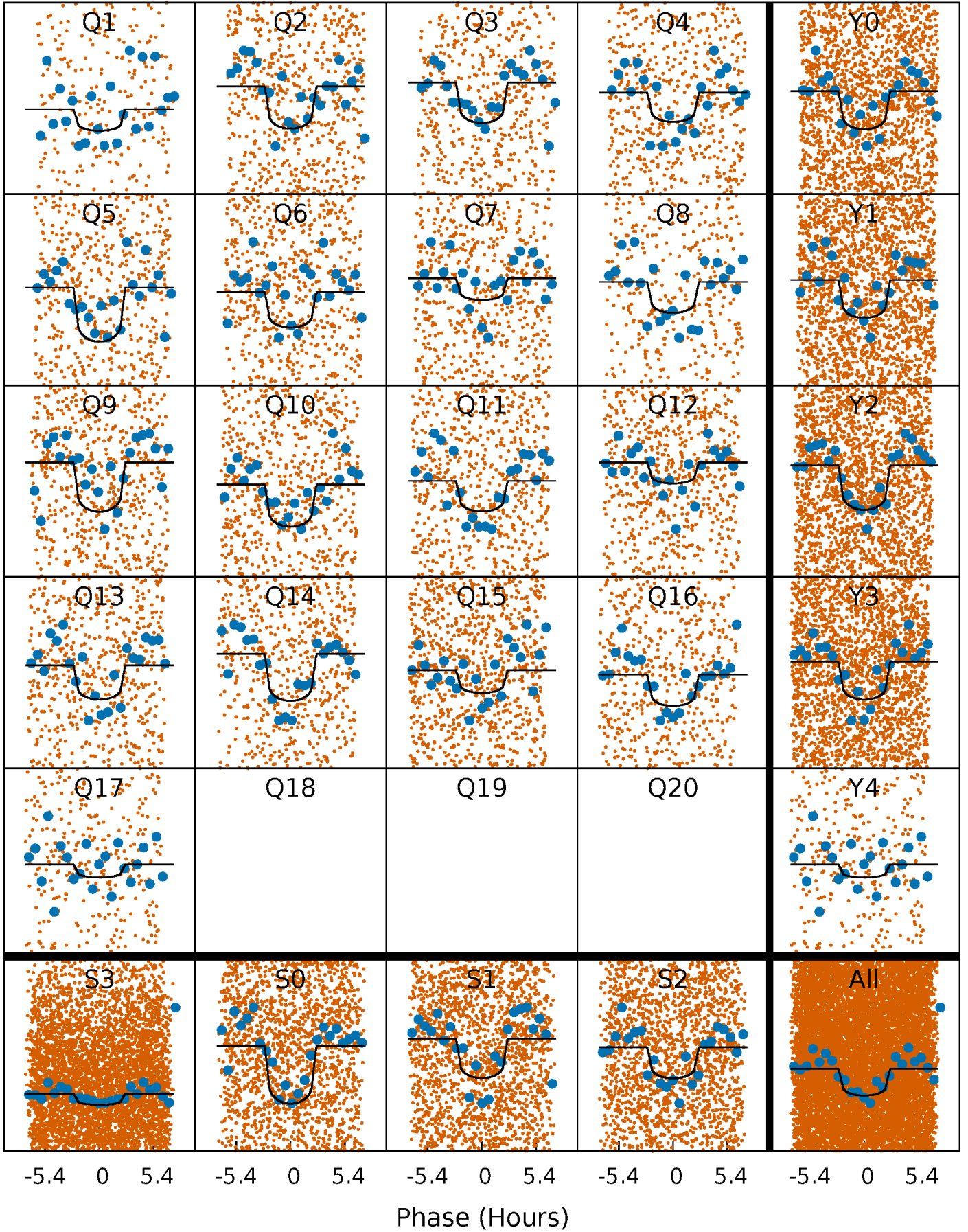
PDC Quarter-Phased Transit Curves

TCE 011624191-02 P= 1.523593 Days $T_0=132.314730$ (BKJD)



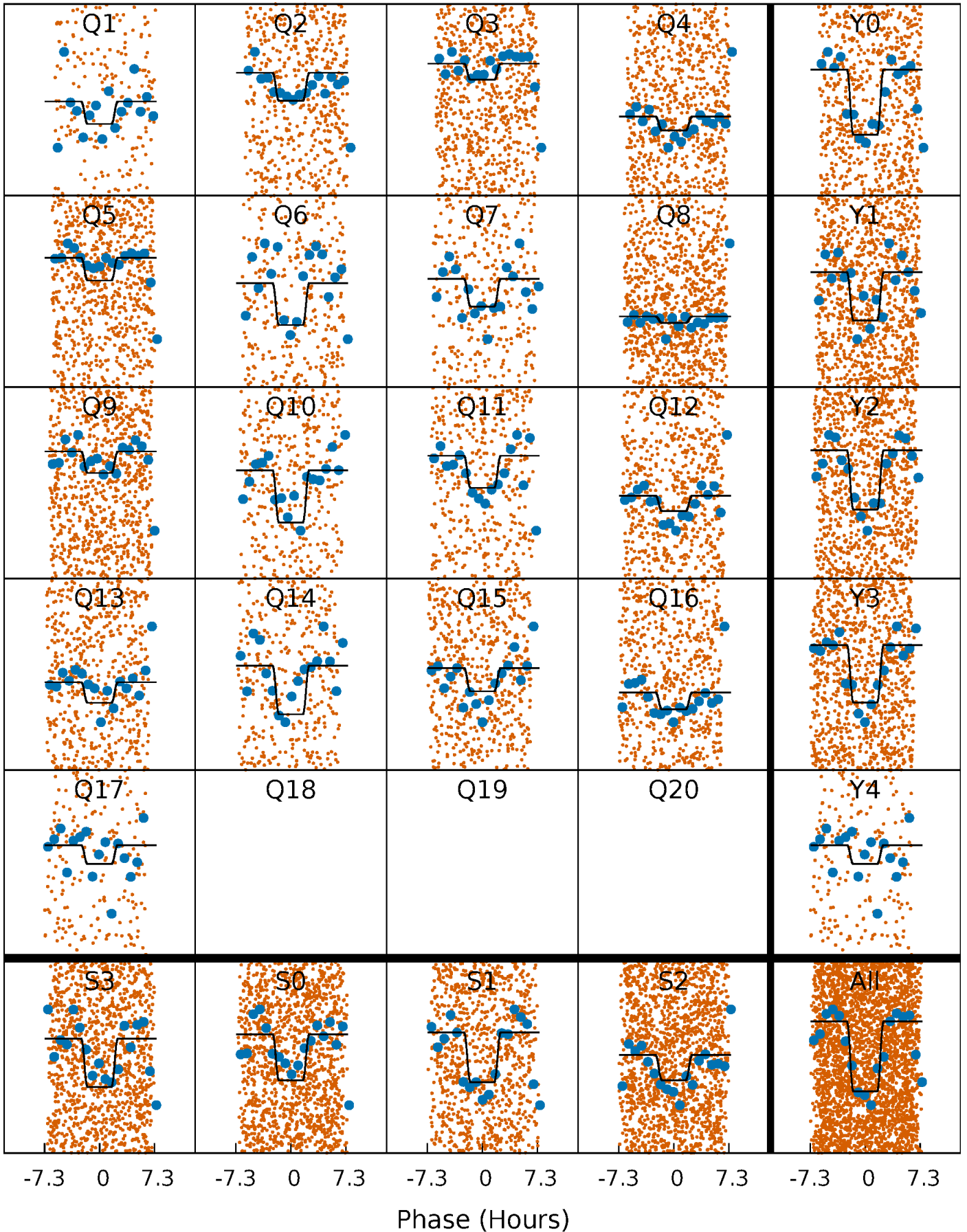
DV Quarter-Phased Transit Curves

TCE 011624191-02 P= 1.523593 Days $T_0=132.314730$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

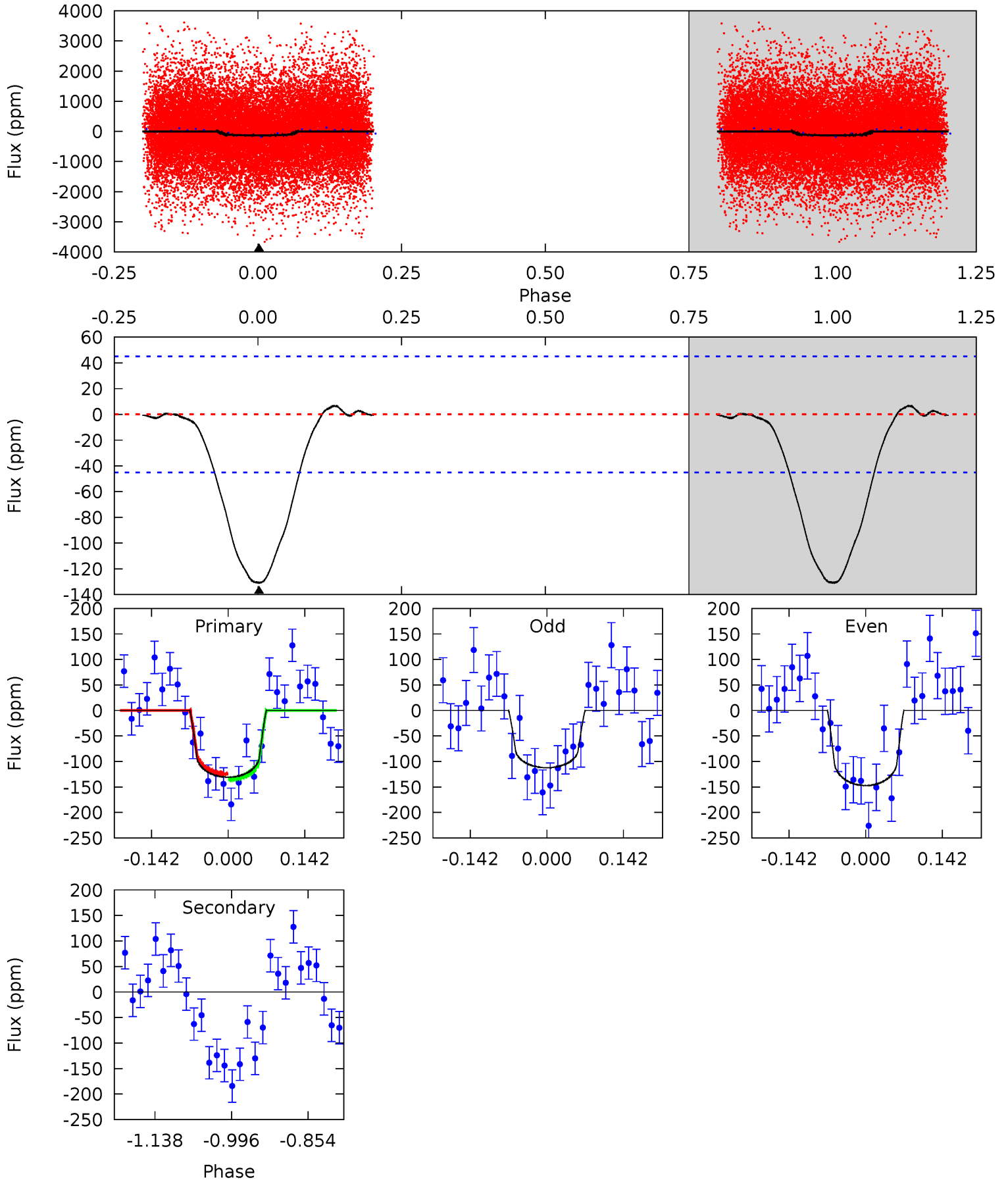
TCE 011624191-02 P= 1.523599 Days $T_0=132.306499$ (BKJD)



DV Model-Shift Uniqueness Test

011624191-02, P = 1.523593 Days, E = 130.791137 Days

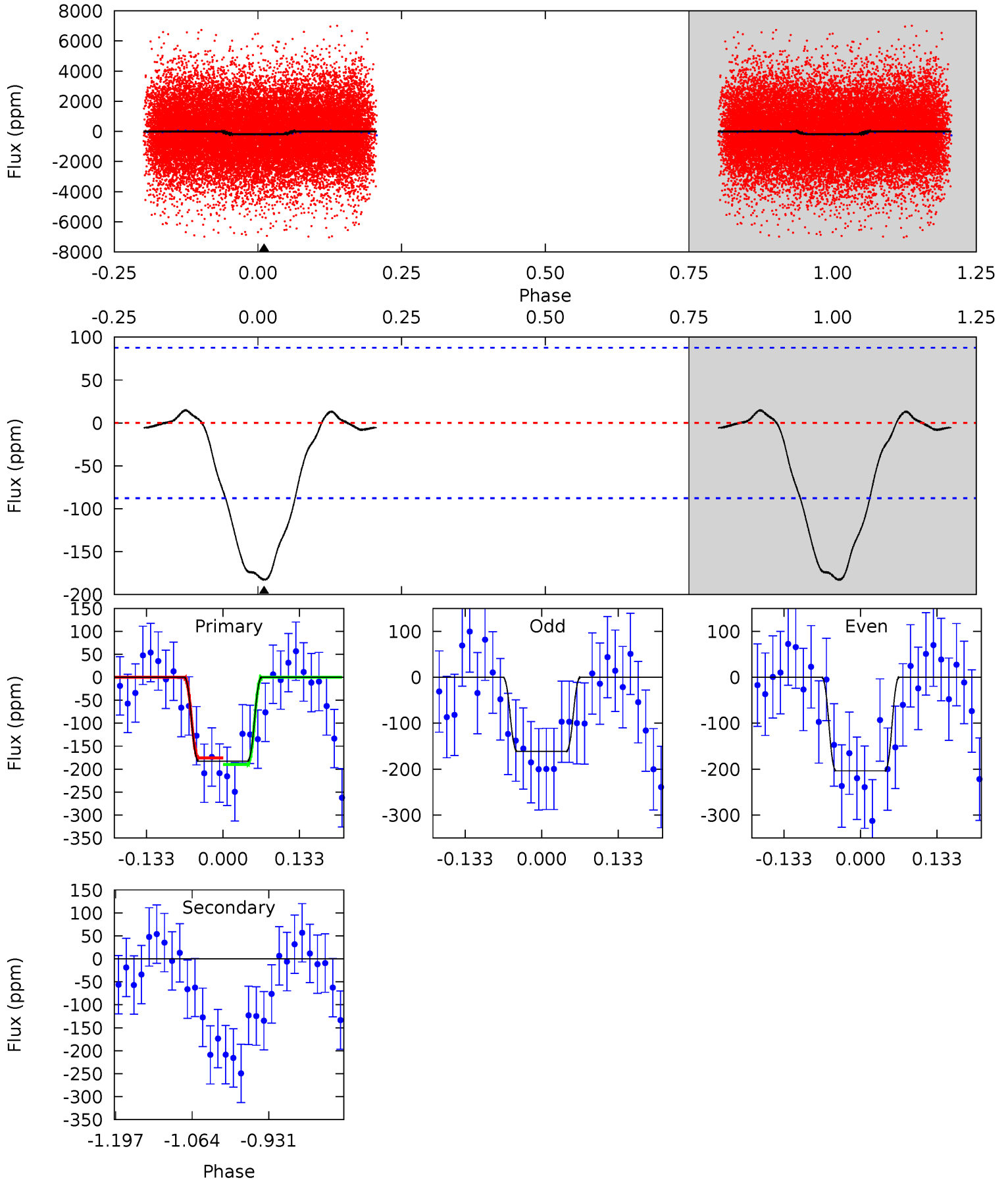
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	0	0	0	4.49	1.47	0.15	13.0	13.0	0	0	1.75	1.08	0.05	0.53



Alt Model-Shift Uniqueness Test

011624191-02, P = 1.523599 Days, E = 130.782900 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.38	0	0	0	4.50	1.50	0.32	9.38	9.38	0	0	1.10	1.13	0.07	0.36



Stellar Parameters For KIC 011624191

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6942^{+191}_{-287}	$4.283^{+0.060}_{-0.240}$	$0.210^{+0.150}_{-0.300}$	$1.458^{+0.565}_{-0.176}$	$1.488^{+0.221}_{-0.184}$	$0.675^{+0.174}_{-0.409}$
	+3%/-4%	+1%/-6%	+71%/-143%	+39%/-12%	+15%/-12%	+26%/-61%
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 011624191-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 10	$2.33^{+1.82}_{-1.42}$	3061^{+289}_{-158}	-3135^{+7018}_{-925}	$0.008^{+1.331}_{-1.130}$
Alt.	0 ± 19	$2.75^{+1.77}_{-1.65}$	3066^{+256}_{-157}	-3208^{+7179}_{-1191}	$-0.053^{+1.689}_{-1.898}$

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 $A_{obs} \gg 1.0$

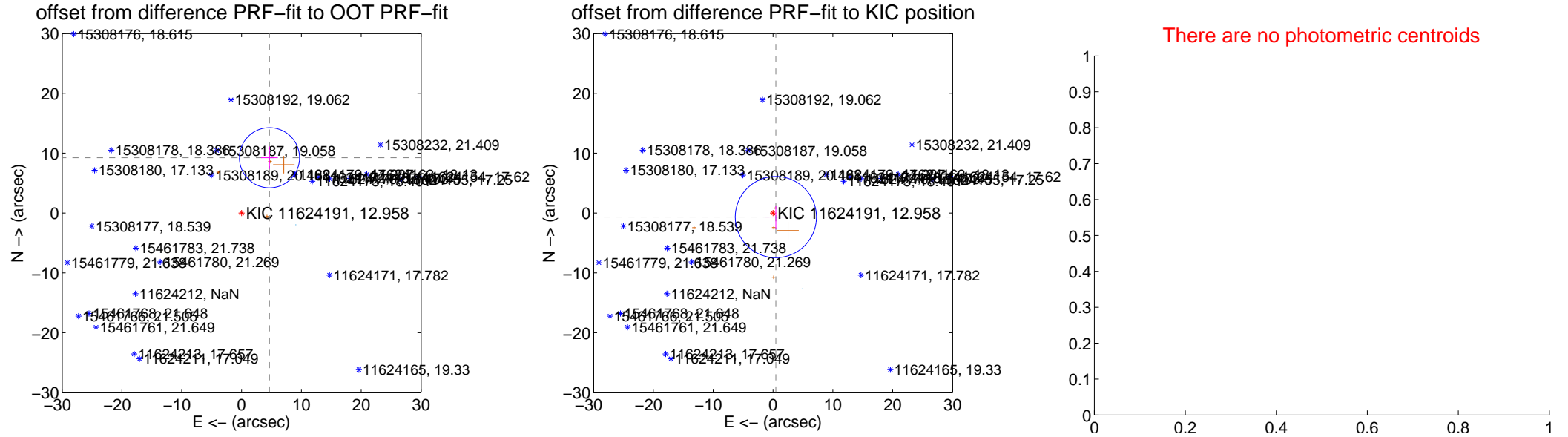
DV Centroid Data

Supplemental centroid analysis for 011624191-02. Kepler magnitude: 12.96. Transit SNR 14.21

There are 2 quarters with good PRF difference image offsets

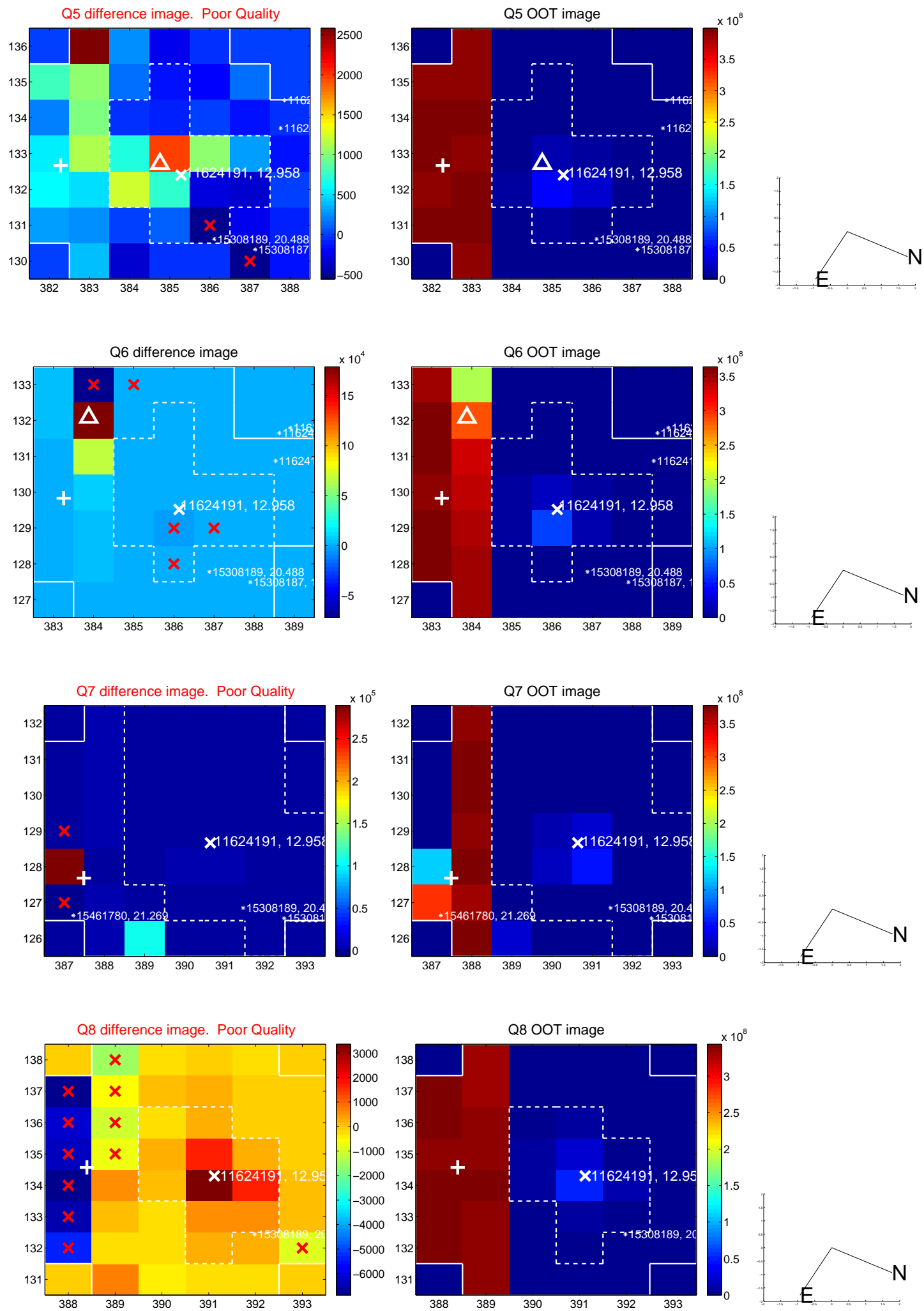
The OOT PRF centroid is offset from the target star catalog position by about 11.91 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	10.348 ± 1.675	6.18	-4.668 ± 1.400	9.235 ± 1.880
PRF-fit source offset from KIC position	0.828 ± 2.261	0.37	-0.476 ± 1.864	-0.678 ± 1.933
photometric centroid source offset	—	—	—	—

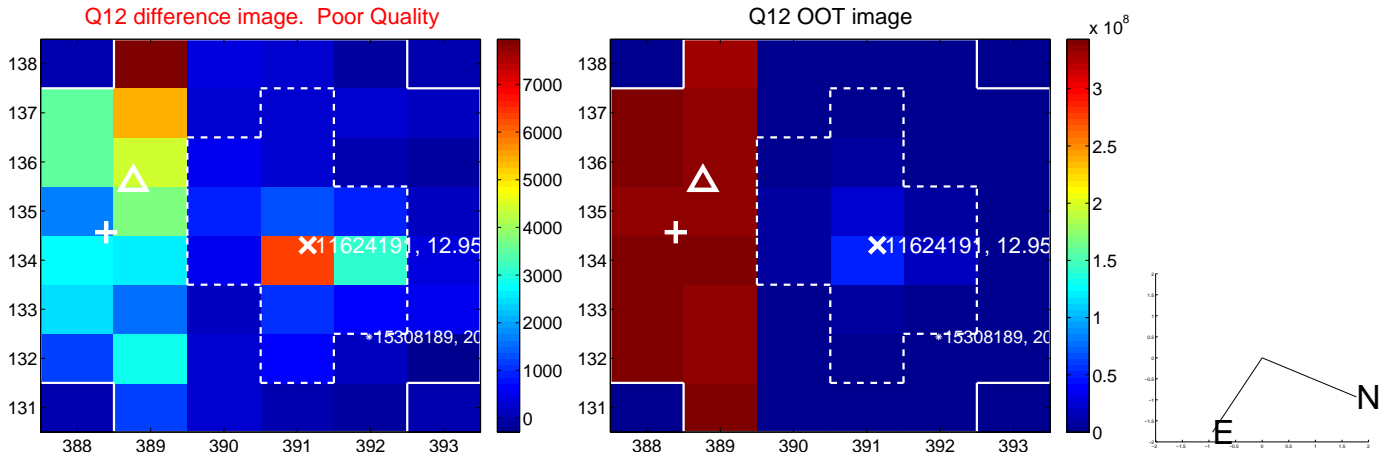
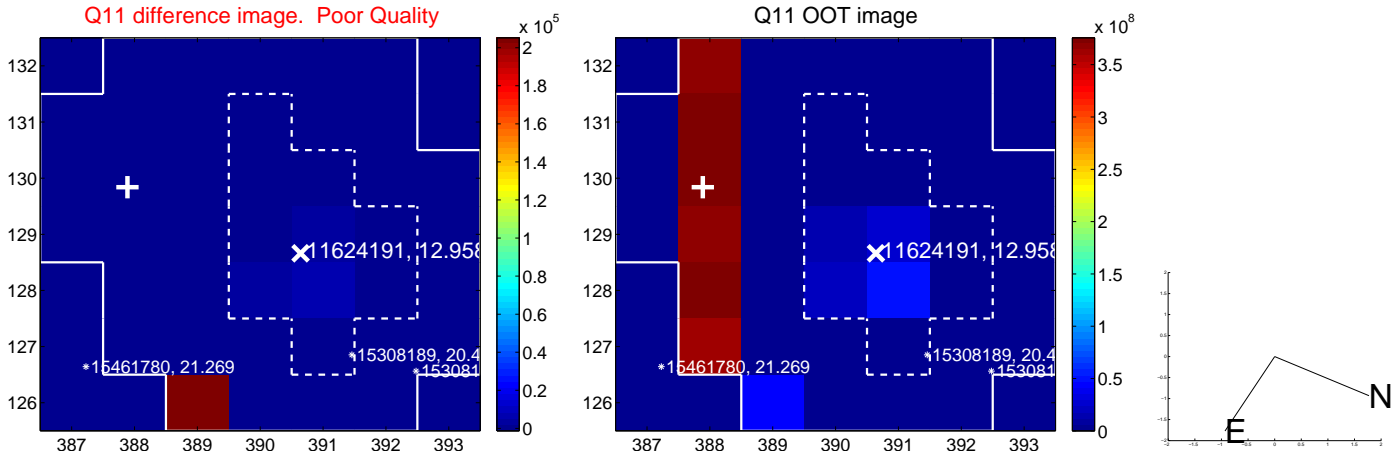
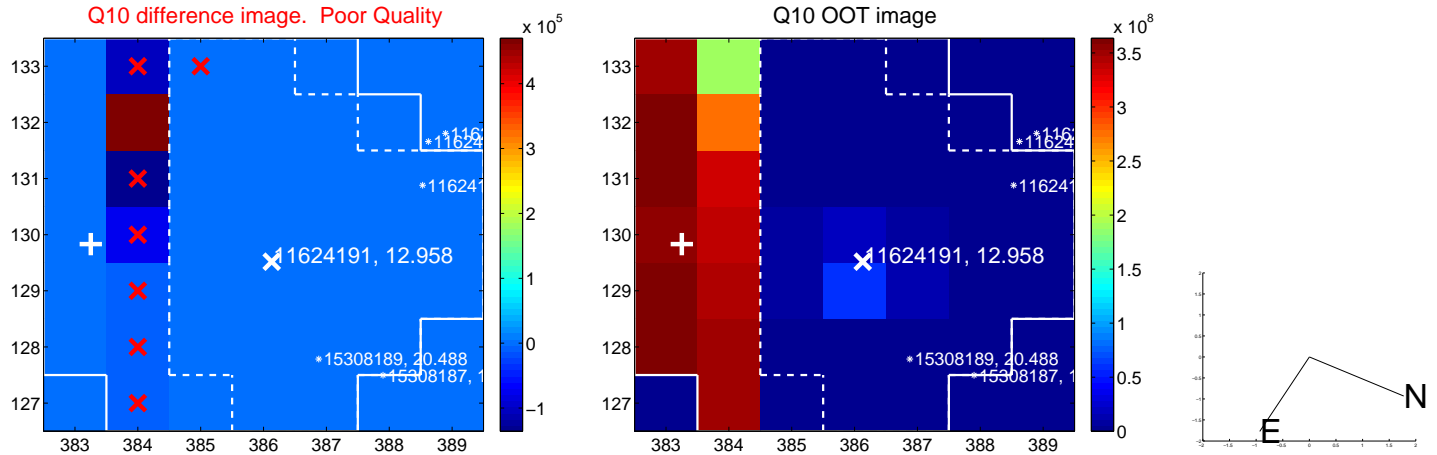
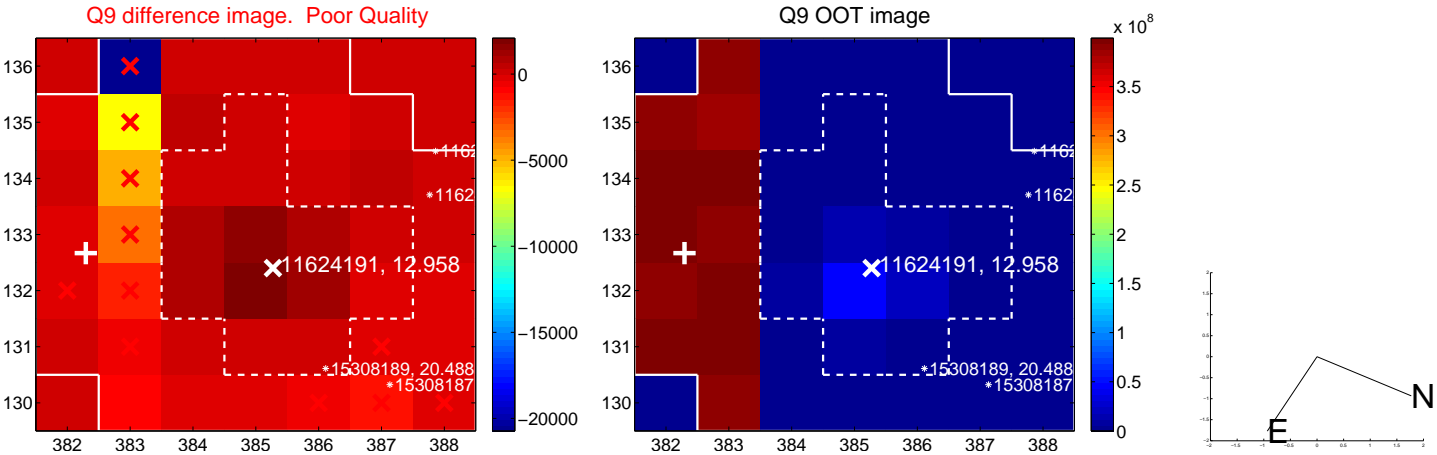


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

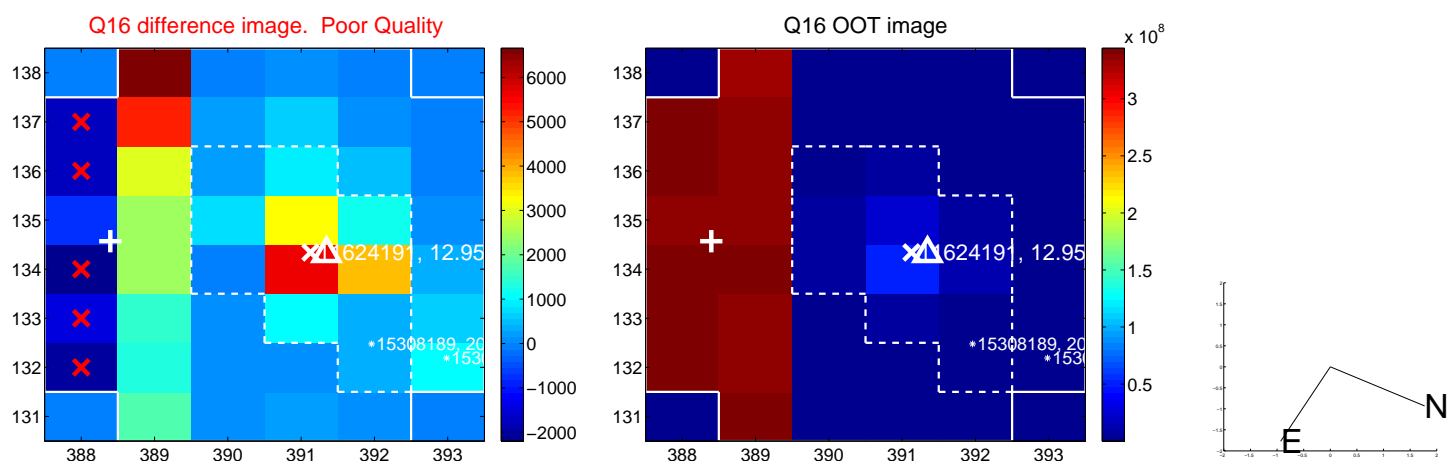
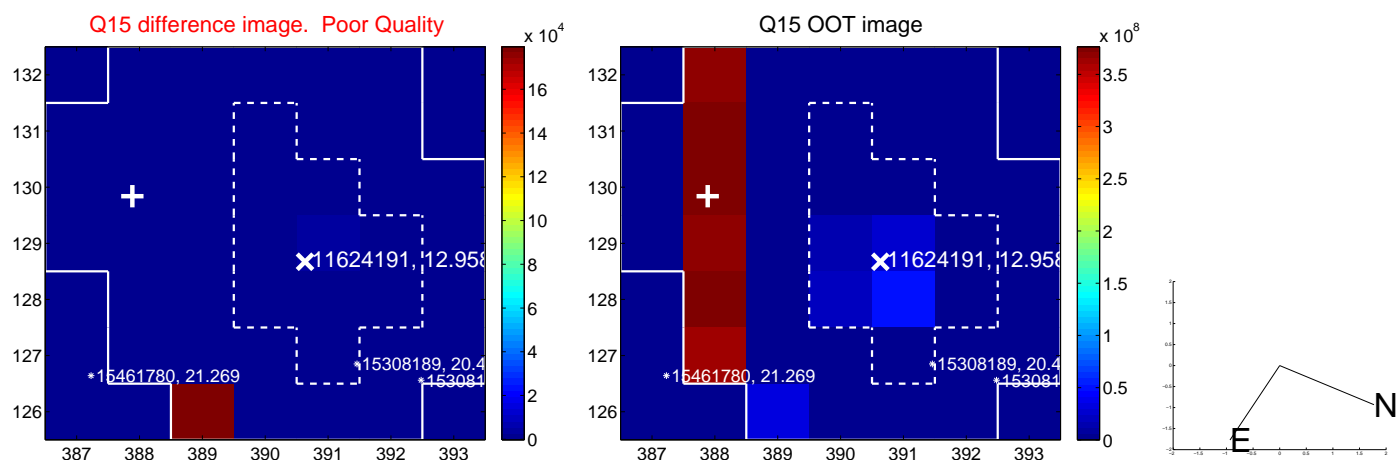
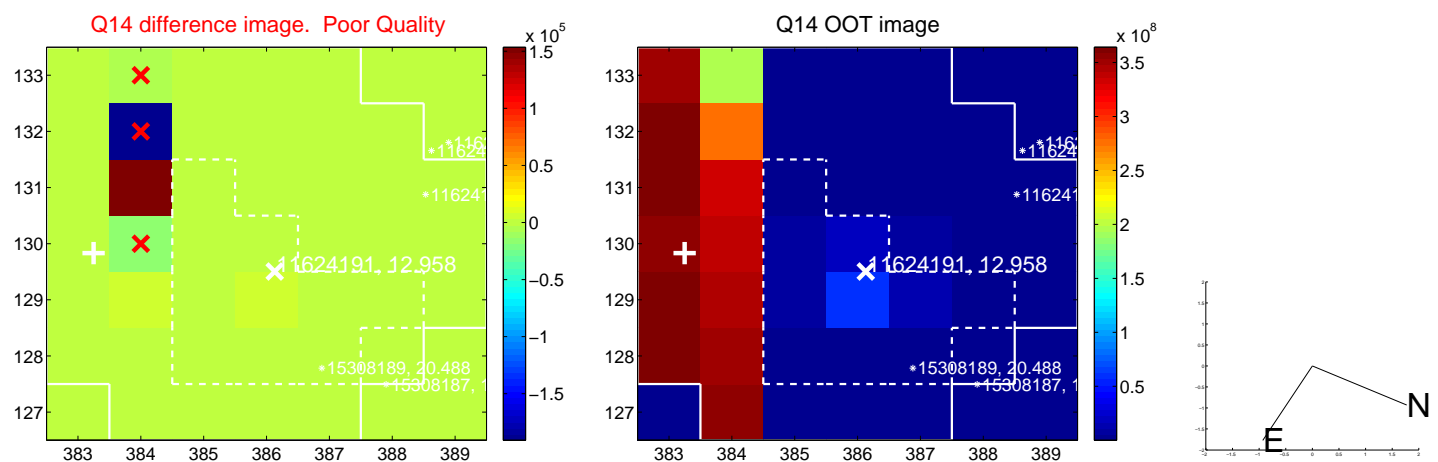
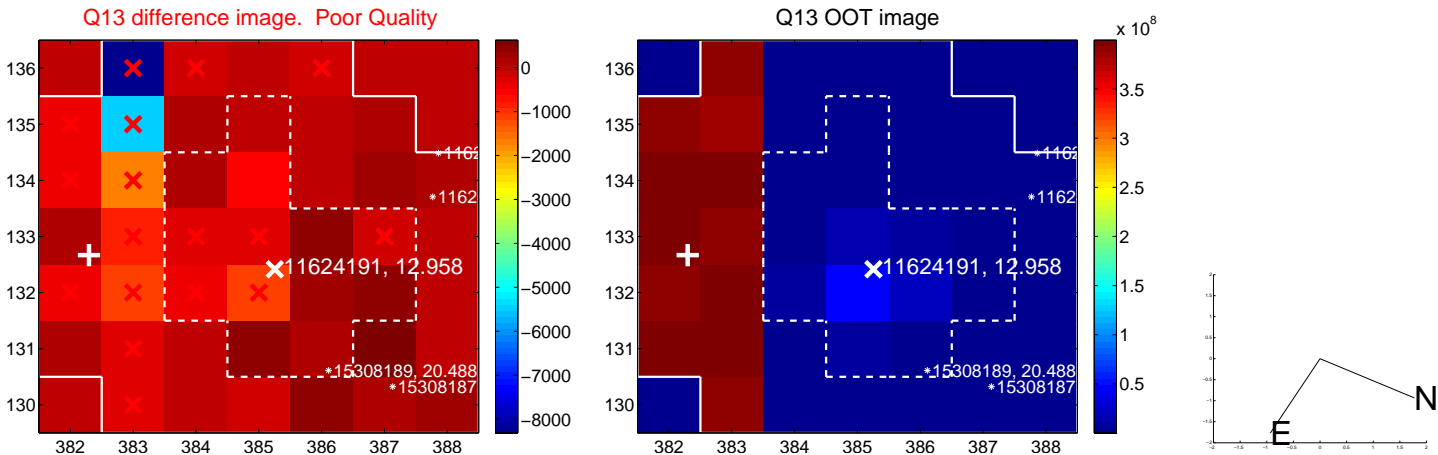
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



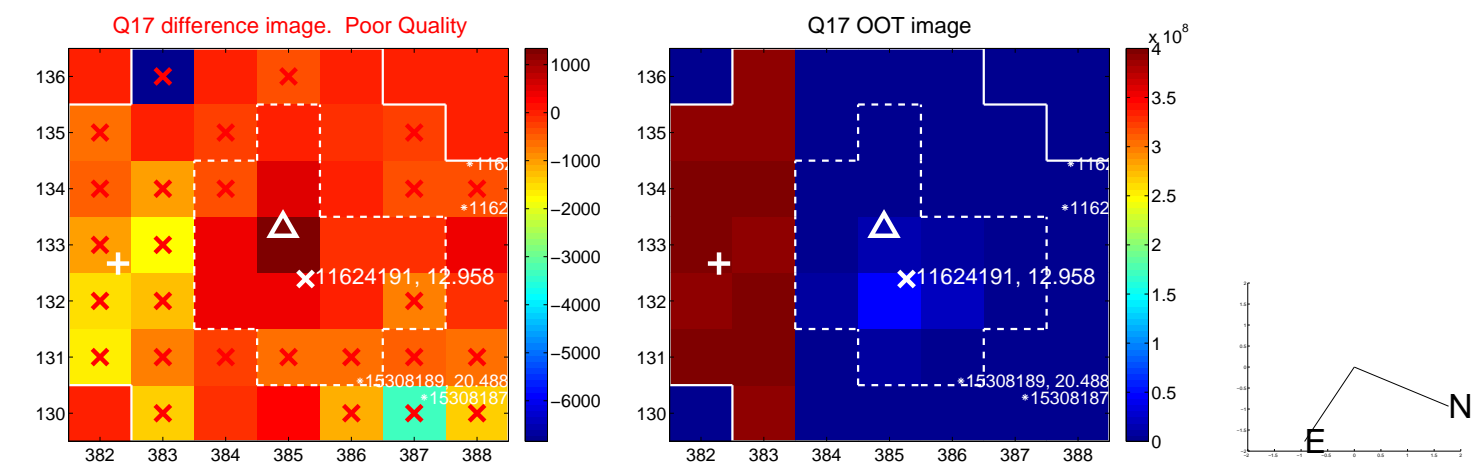
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



folded centroid time series figure for this object.

UKIRT Image

Declination

