

KIC 007198941

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})
007198941-01	OBS	No	0.566445	131.828655	0.1	1.299	13.7	0.0	1.02	6191	0.04	7270.15
007198941-02	OBS	No	0.566433	131.821867	0.5	6.127	10.8	0.0	1.02	6191	0.08	7270.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007198941-01	OBS	FP	0.00	1	0	0	1	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—EPHEM_MATCH
007198941-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—SAME_NTL_PERIOD—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.

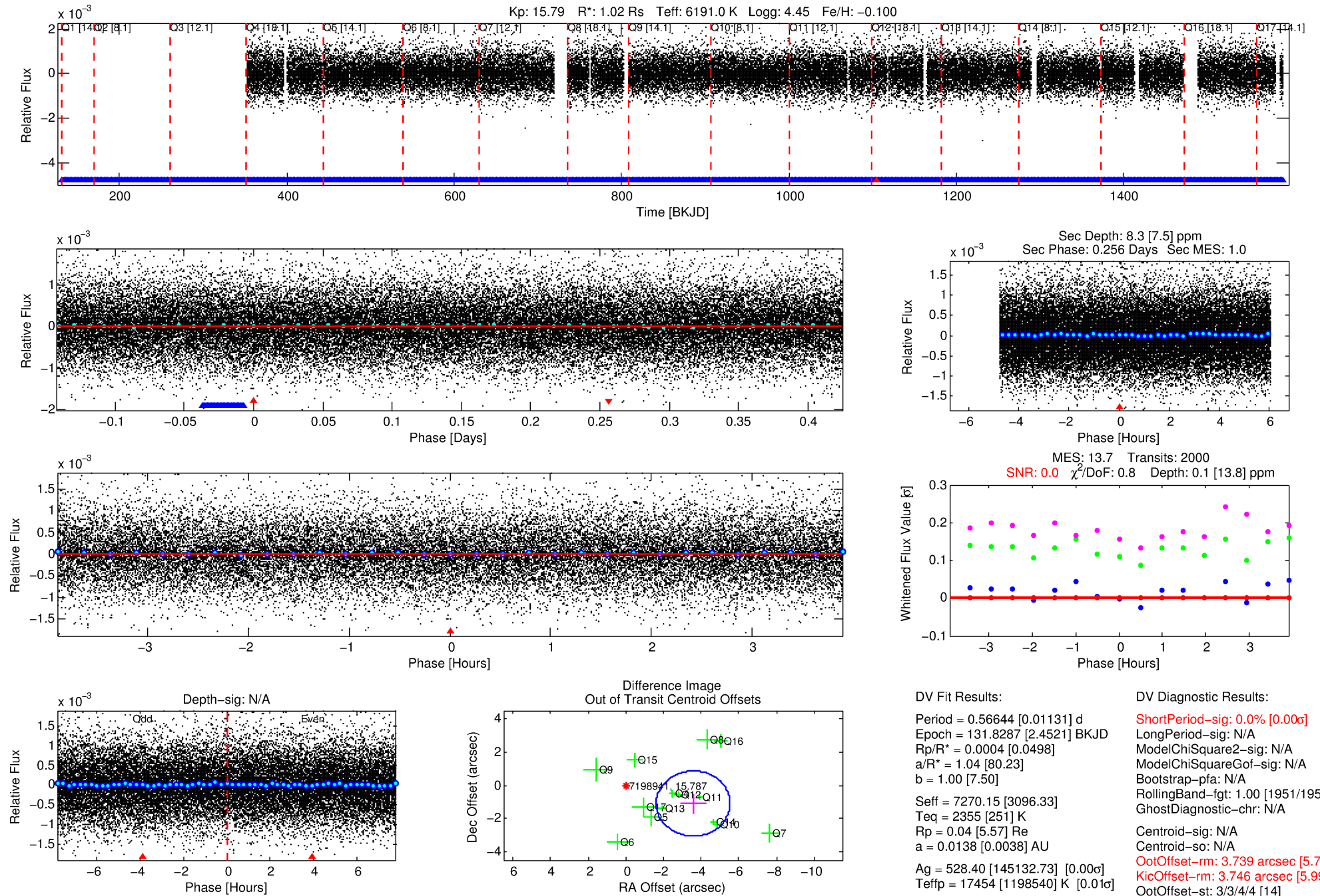
Ephemeris Match Information For 007198941-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007198941-01	7198941	RR-Lyr-pri	7198959	1:1	273.0	56	-40	7.86	15.79	623300.00	Direct-PRF	0	4.71	0.54

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7198941 Candidate: 1 of 2 Period: 0.566 d



DV Fit Results:

Period = 0.56644 [0.01131] d
Epoch = 131.8287 [2.4521] BKJD
Rp/R* = 0.0004 [0.0498]
a/R* = 1.04 [80.23]
b = 1.00 [7.50]
Seff = 7270.15 [3096.33]
Teff = 2355 [251] K
Rp = 0.04 [5.57] Re
a = 0.0138 [0.0038] AU
Ag = 528.40 [145132.73] [0.00σ]
Teffp = 17454 [1198540] K [0.01σ]

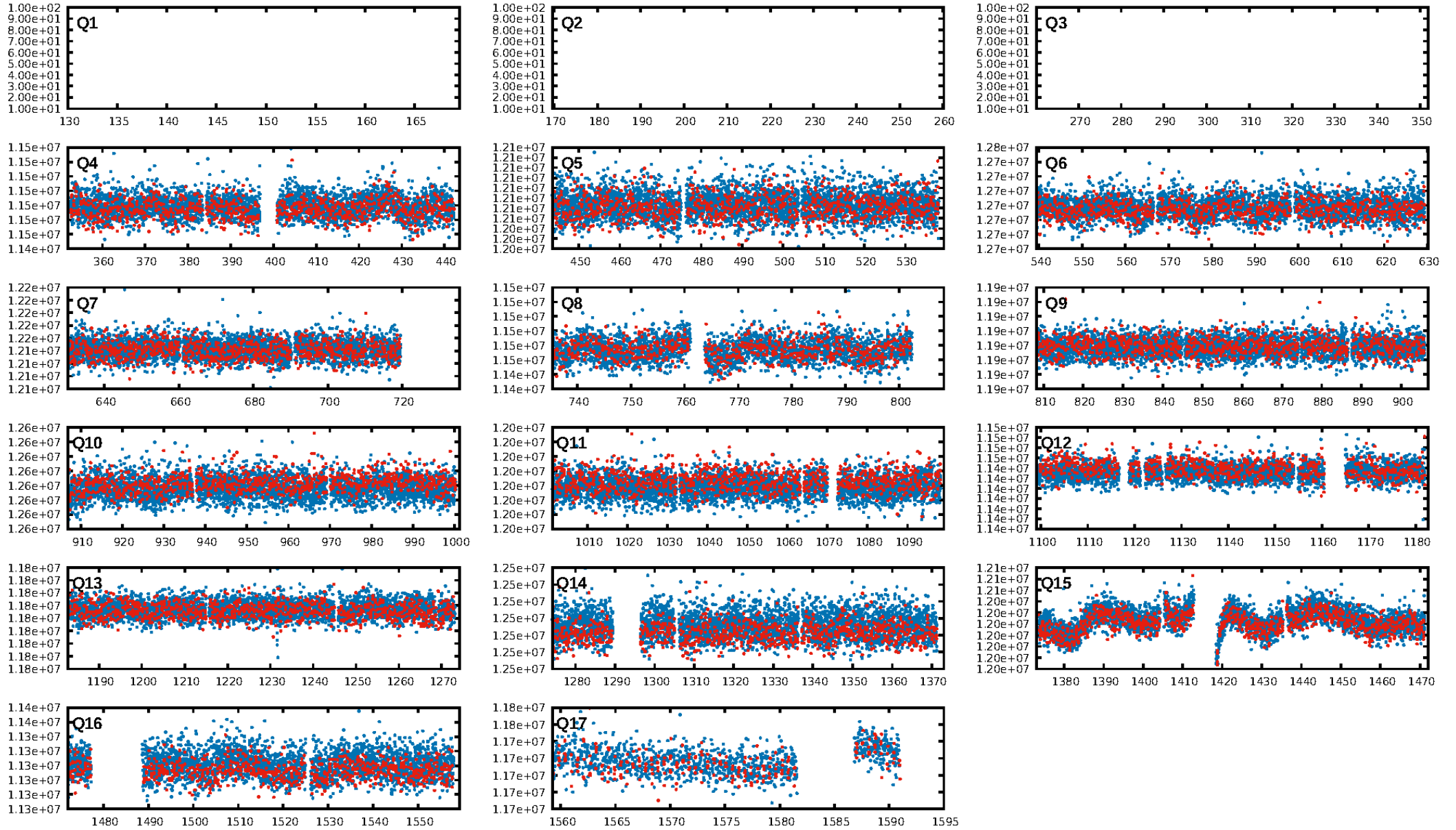
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1951/1952]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 3.739 arcsec [5.71σ]
KicOffset-rm: 3.746 arcsec [5.99σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.00 [0/14]
DiffImageOverlap-fno: 0.00 [0/14]

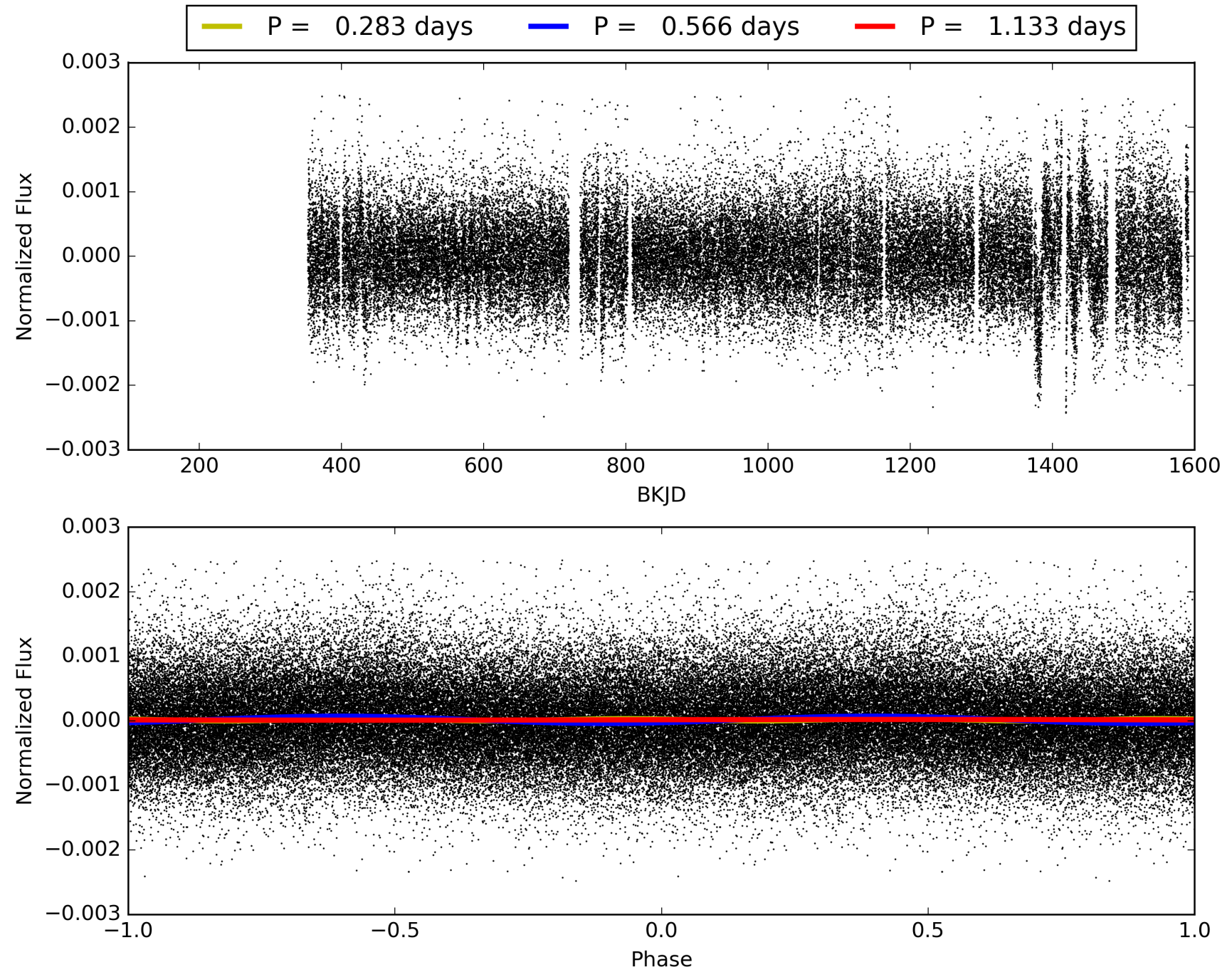
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:44:41 Z

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

TCE 007198941-01, PDC Light Curves

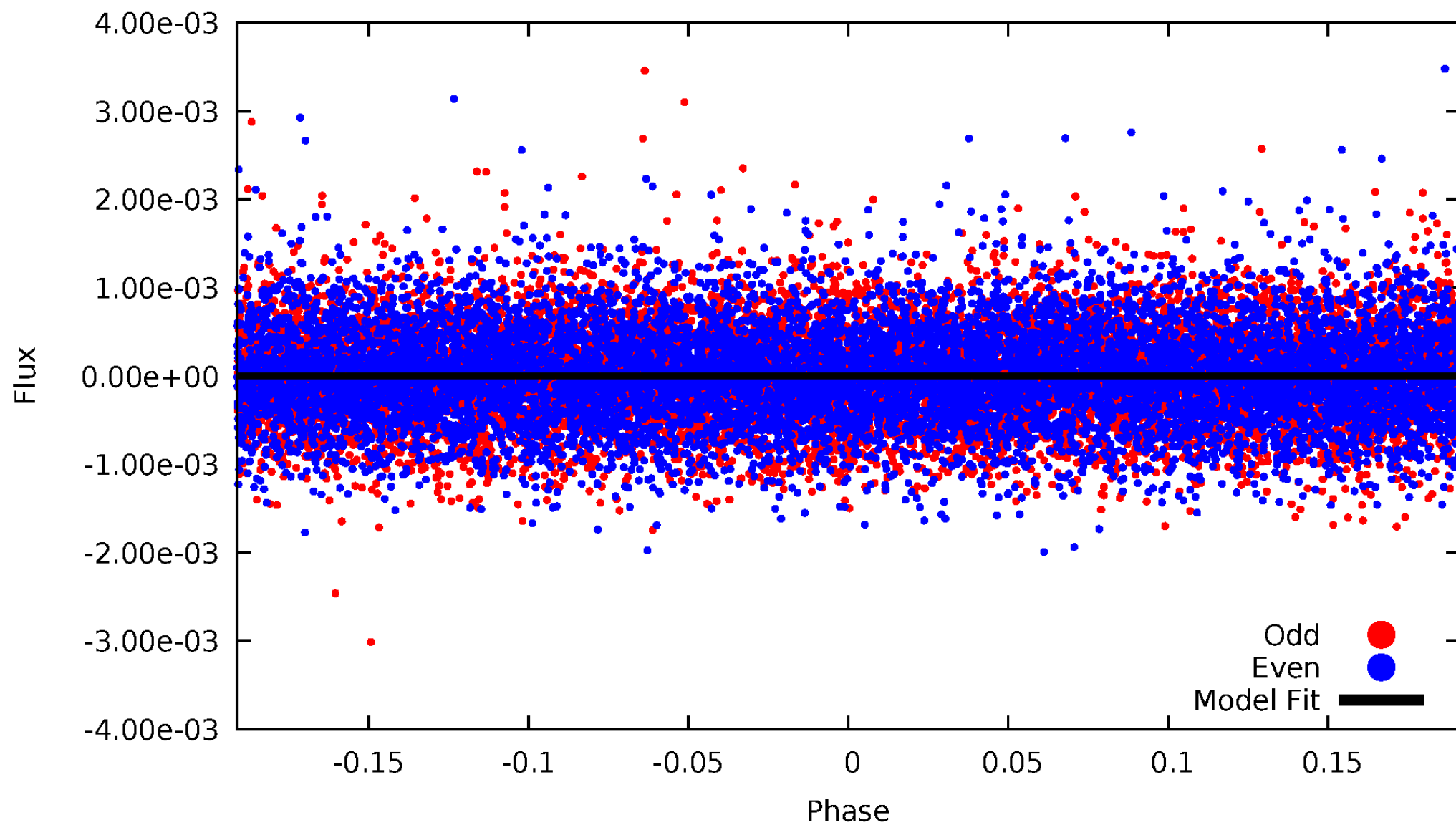


TCE 007198941-01



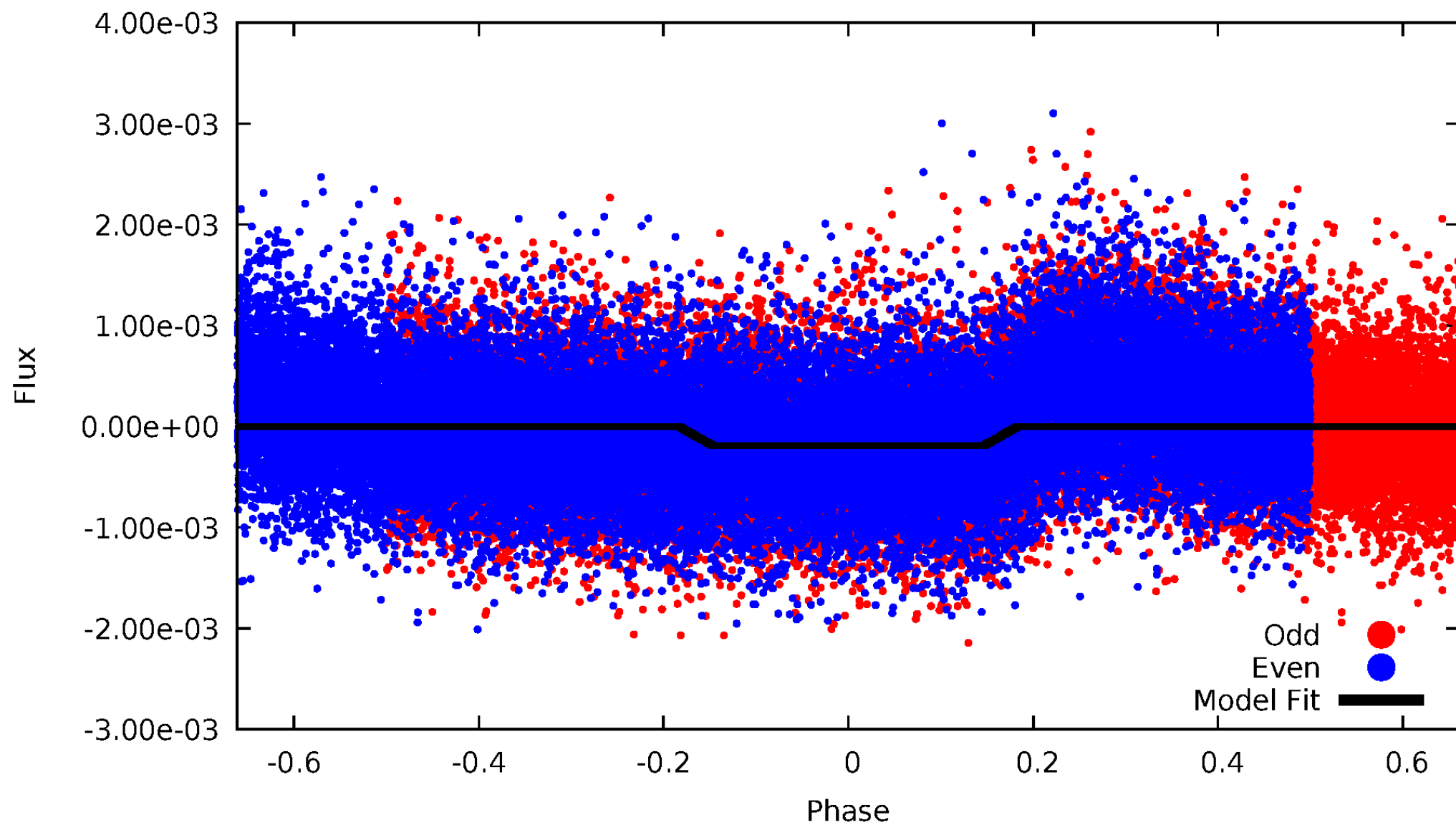
DV Odd/Even

TCE 007198941-01

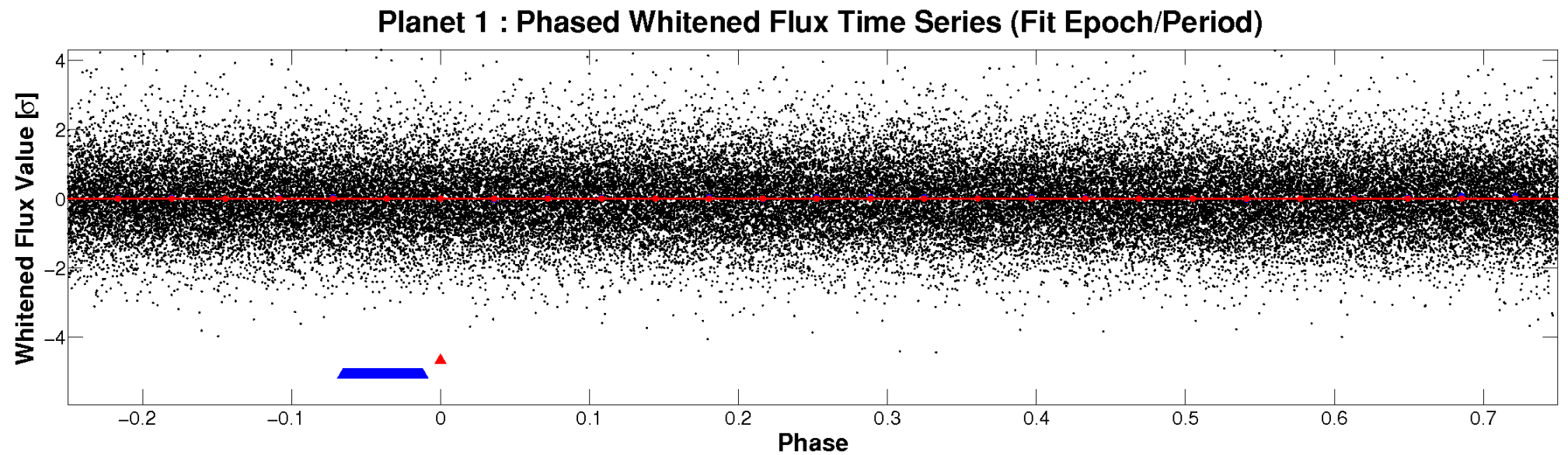
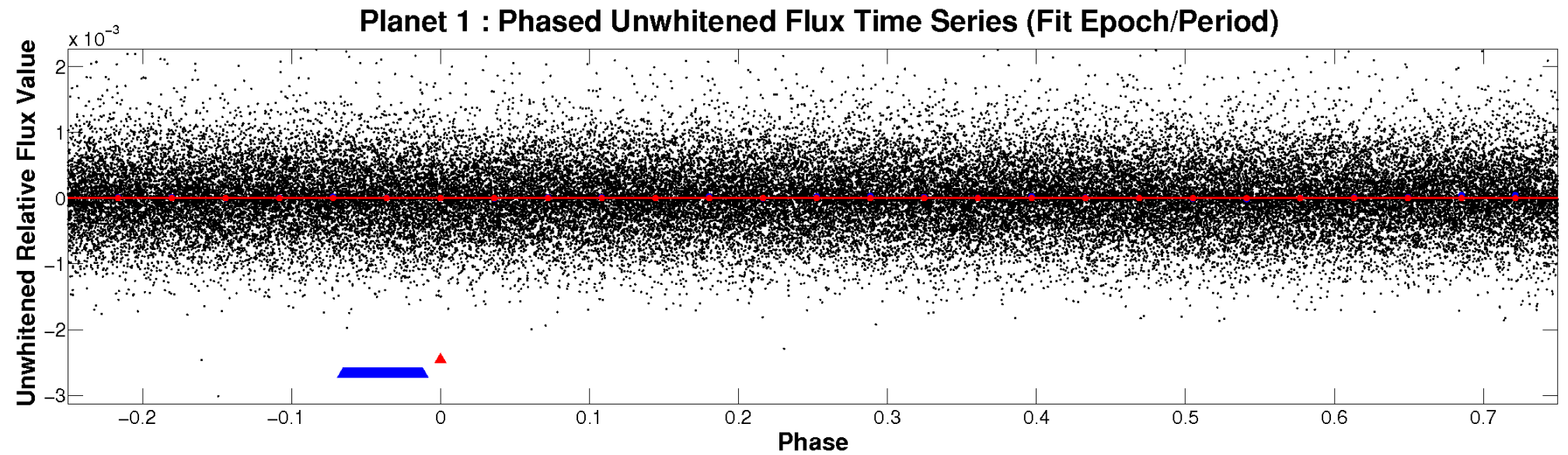


ALT Odd/Even

TCE 007198941-01

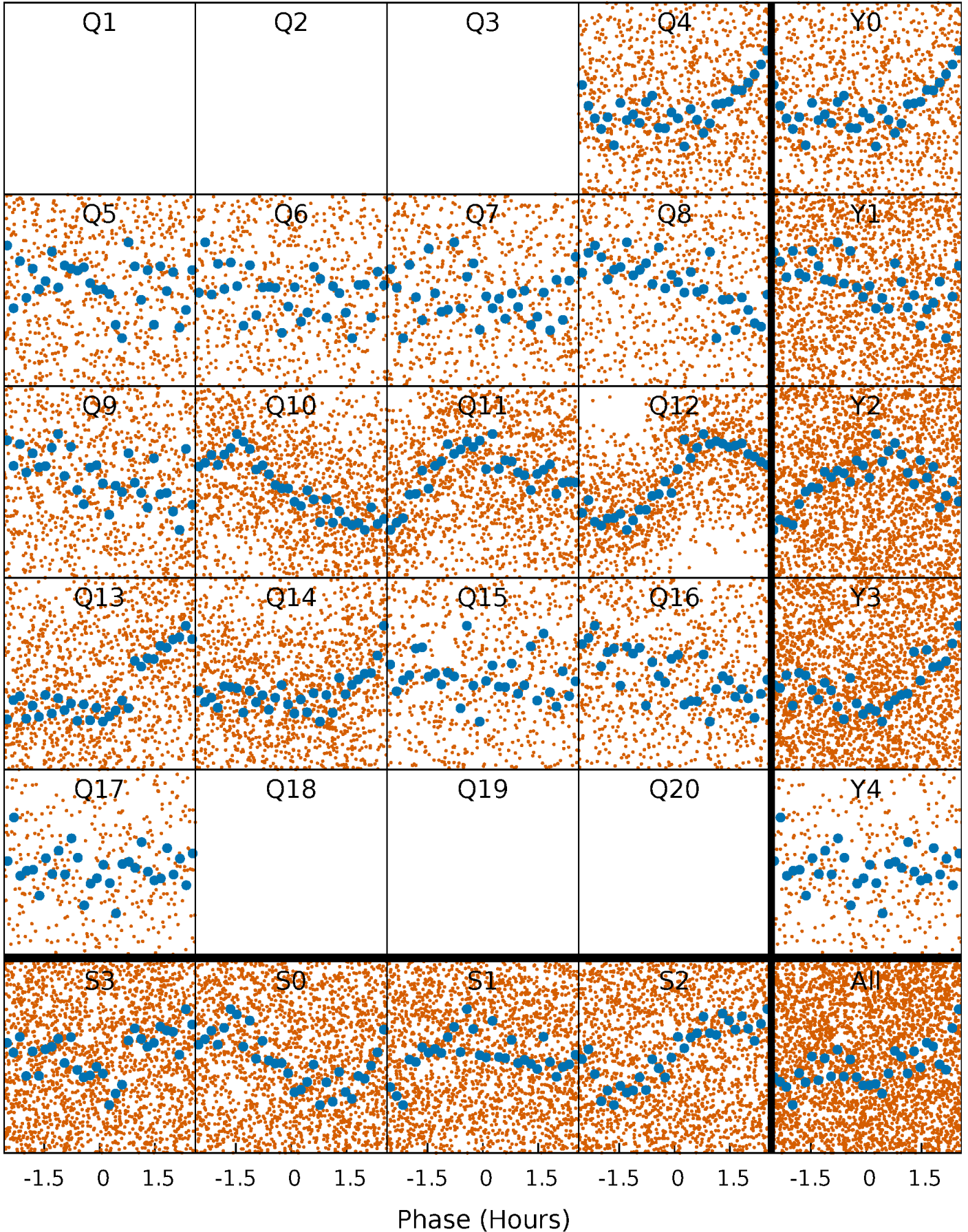


Non-Whitened Vs. Whitened Light Curve



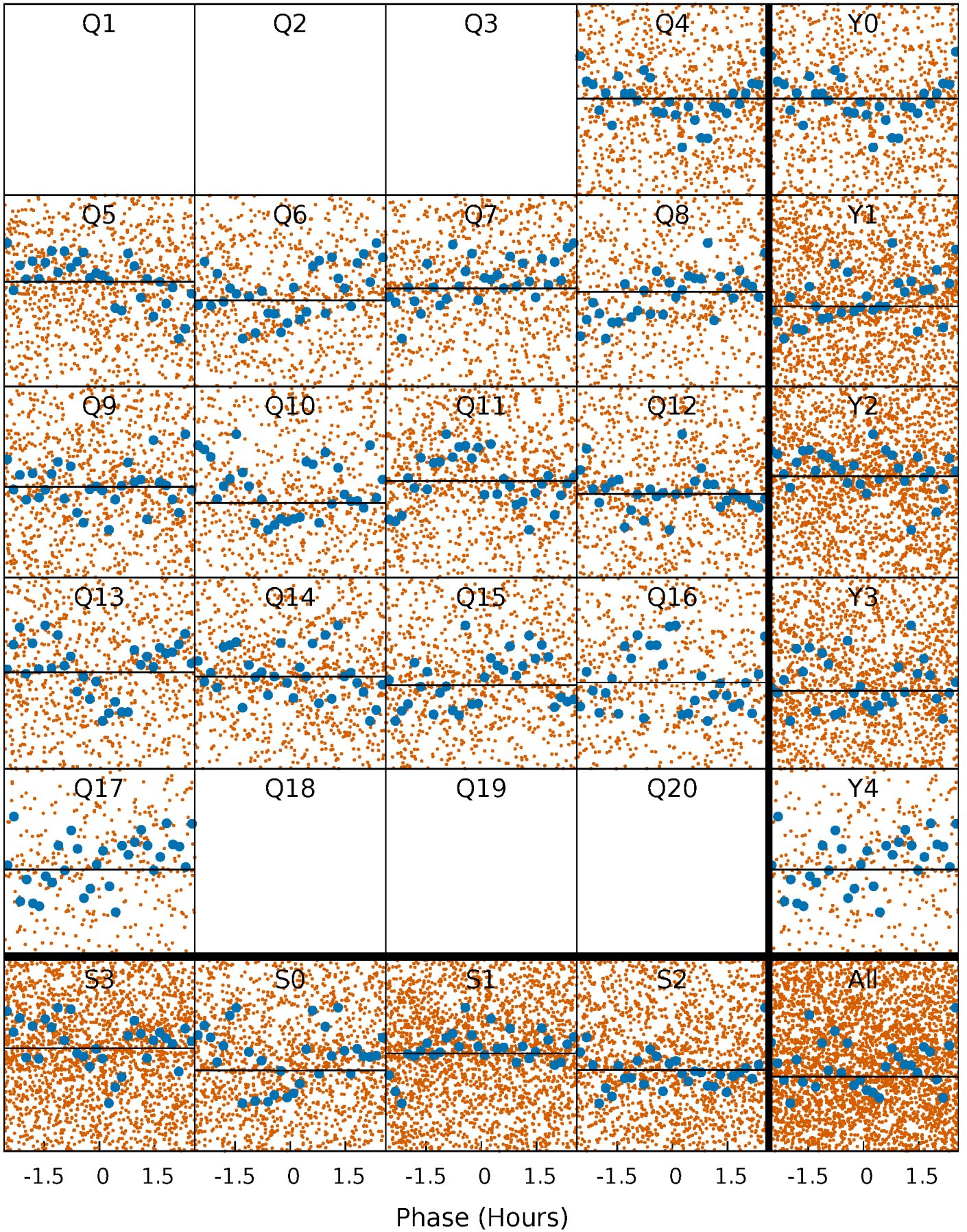
PDC Quarter-Phased Transit Curves

TCE 007198941-01 P= 0.566445 Days $T_0=131.828655$ (BKJD)



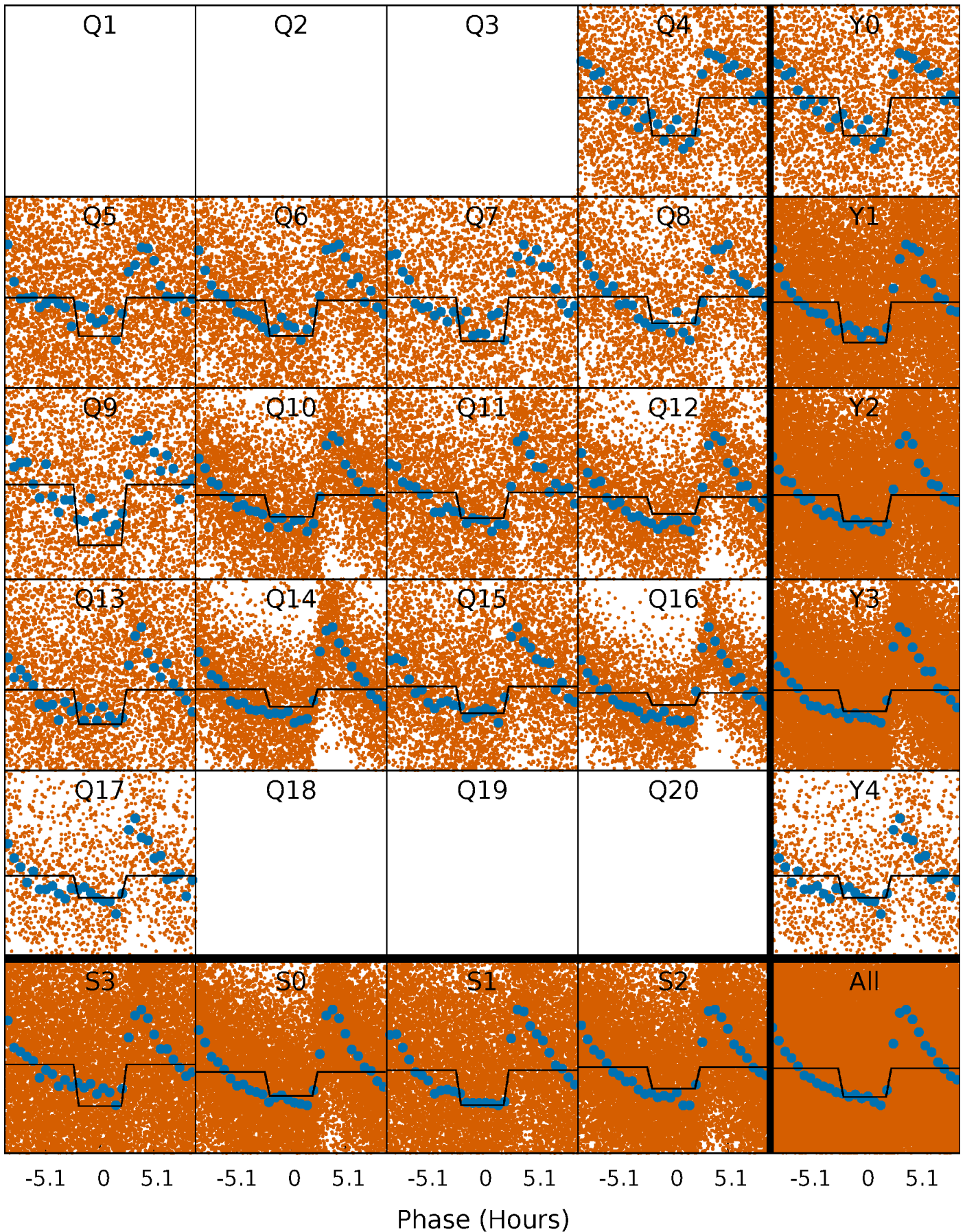
DV Quarter-Phased Transit Curves

TCE 007198941-01 P= 0.566445 Days $T_0=131.828655$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

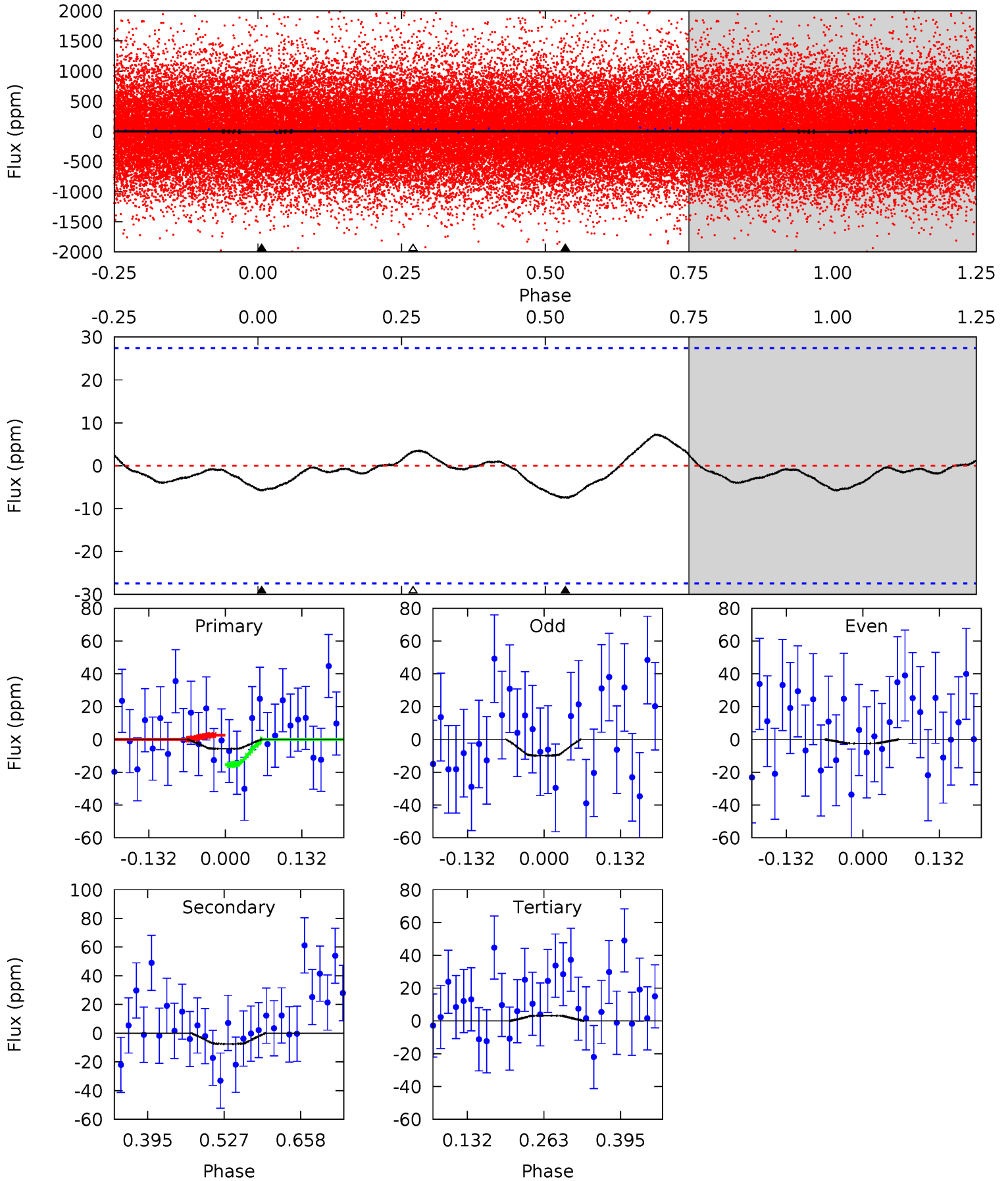
TCE 007198941-01 P= 0.566808 Days $T_0=131.627867$ (BKJD)



DV Model-Shift Uniqueness Test

007198941-01, P = 0.566445 Days, E = 131.828655 Days

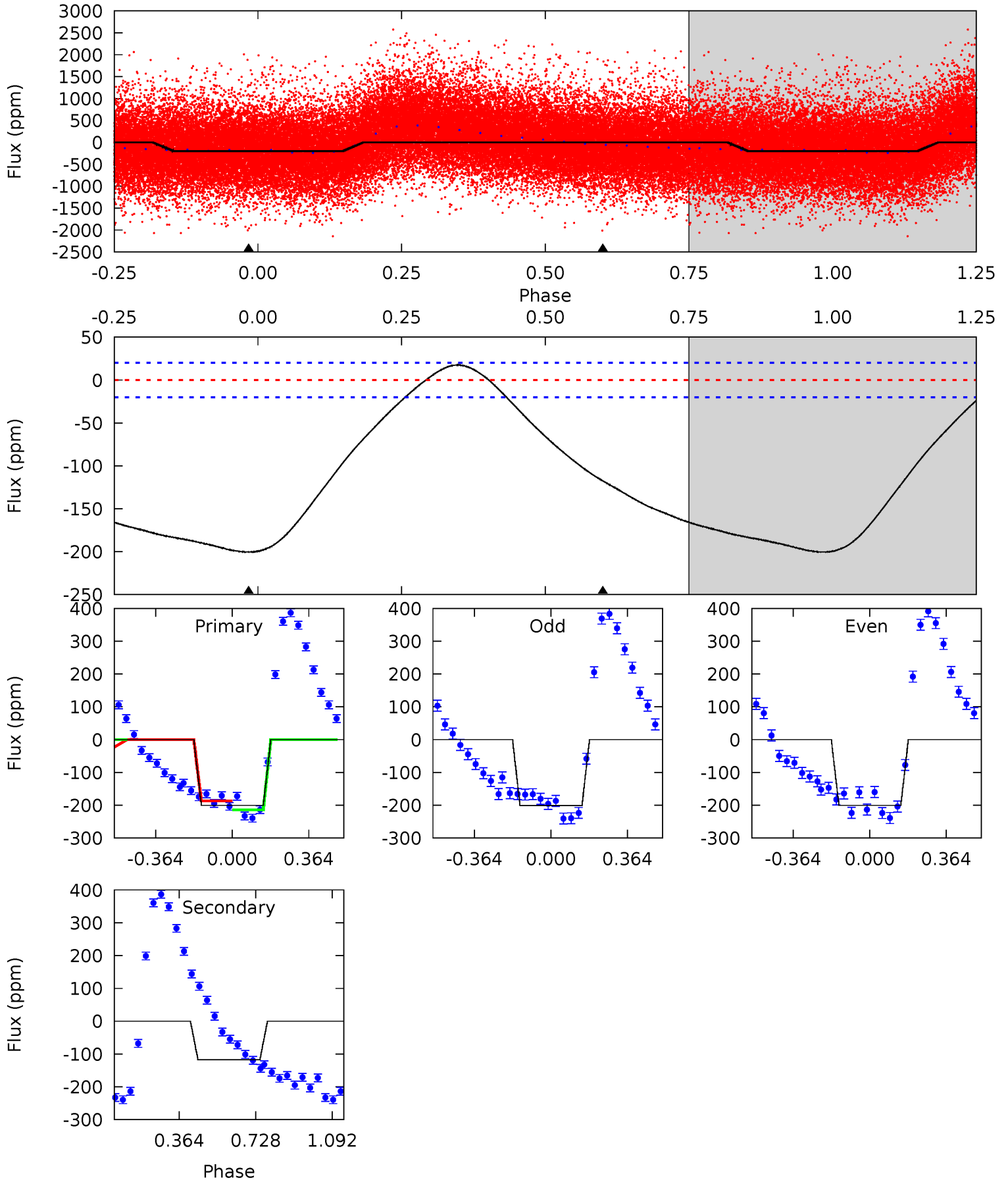
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.95	1.24	-0.52	0	4.51	1.51	0.48	1.47	0.95	1.76	1.24	0.62	-0.53	0.49	1.06



Alt Model-Shift Uniqueness Test

007198941-01, P = 0.566808 Days, E = 131.627867 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.8	25.1	0	0	4.29	0.91	3.06	42.8	42.8	25.1	25.1	0.02	0.99	0.08	3.17



Stellar Parameters For KIC 007198941

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6191^{+193}_{-257}	$4.454^{+0.056}_{-0.210}$	$-0.100^{+0.250}_{-0.300}$	$1.025^{+0.341}_{-0.114}$	$1.088^{+0.151}_{-0.151}$	$1.423^{+0.422}_{-0.771}$
	+3%/-4%	+1%/-5%	+250%/-300%	+33%/-11%	+14%/-14%	+30%/-54%
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 007198941-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-8 ± 6	$3.99^{+4.56}_{-2.71}$	3373^{+243}_{-199}	-3196^{+6251}_{-204}	$0.037^{+0.433}_{-0.034}$
Alt.	-118 ± 5	$4.44^{+4.79}_{-3.13}$	3353^{+276}_{-182}	3310^{+2695}_{-6296}	$0.612^{+6.190}_{-0.468}$

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

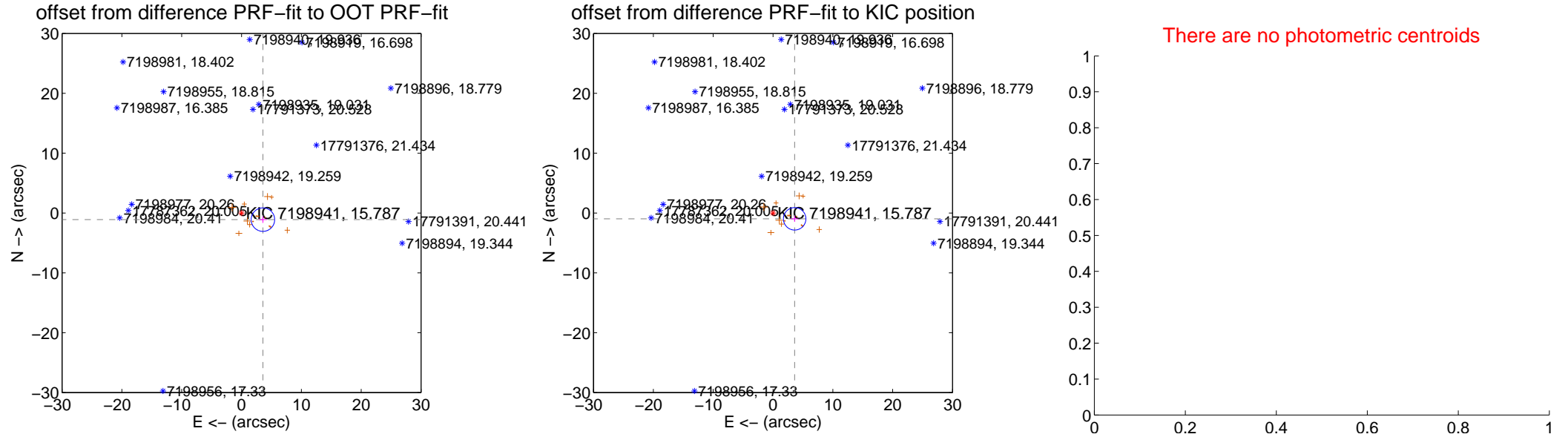
DV Centroid Data

Supplemental centroid analysis for 007198941-01. Kepler magnitude: 15.79. Transit SNR 0.01

There are 0 quarters with good PRF difference image offsets

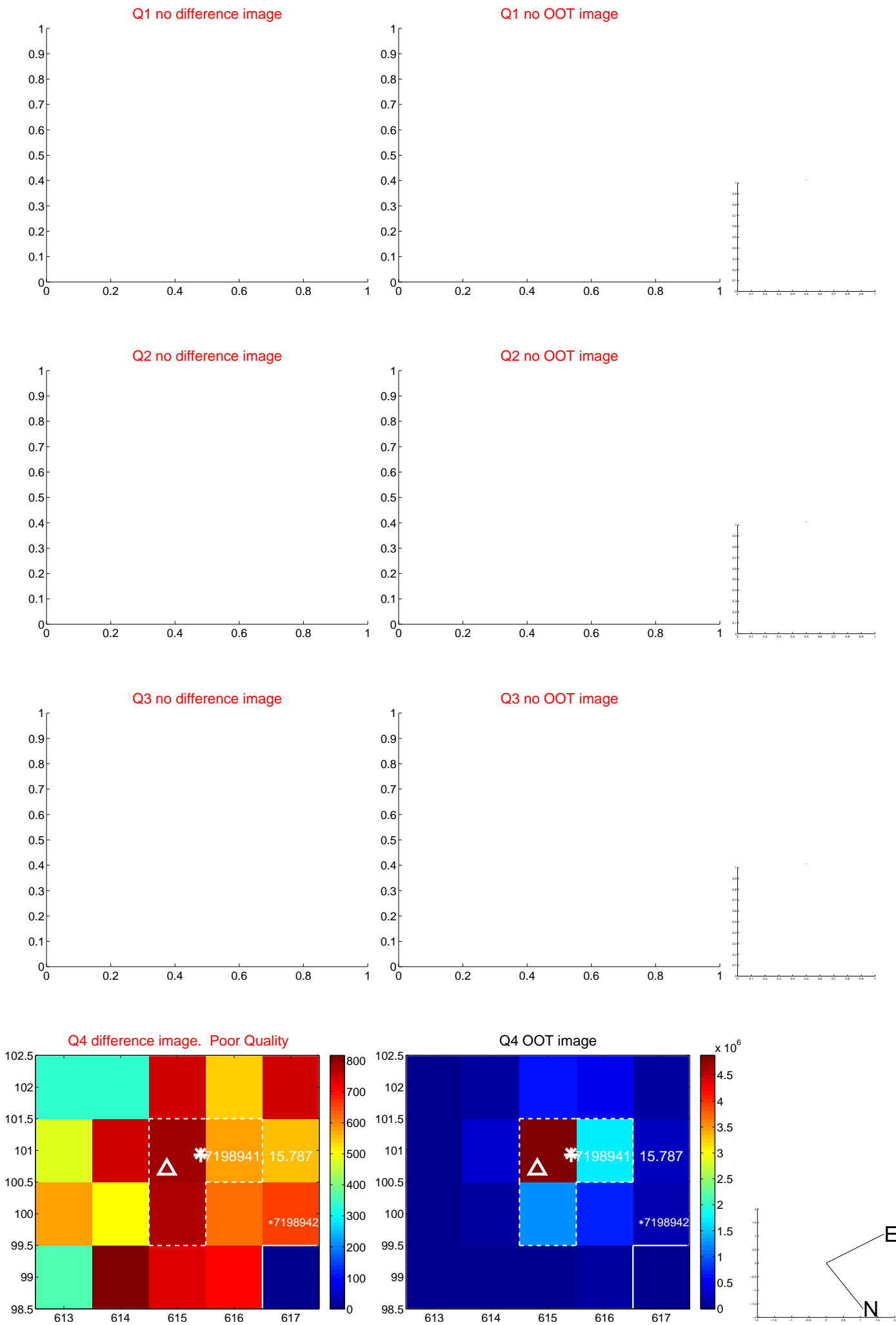
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.739 ± 0.655	5.71	-3.572 ± 0.650	-1.103 ± 0.548
PRF-fit source offset from KIC position	3.746 ± 0.626	5.99	-3.618 ± 0.631	-0.971 ± 0.496
photometric centroid source offset	—	—	—	—

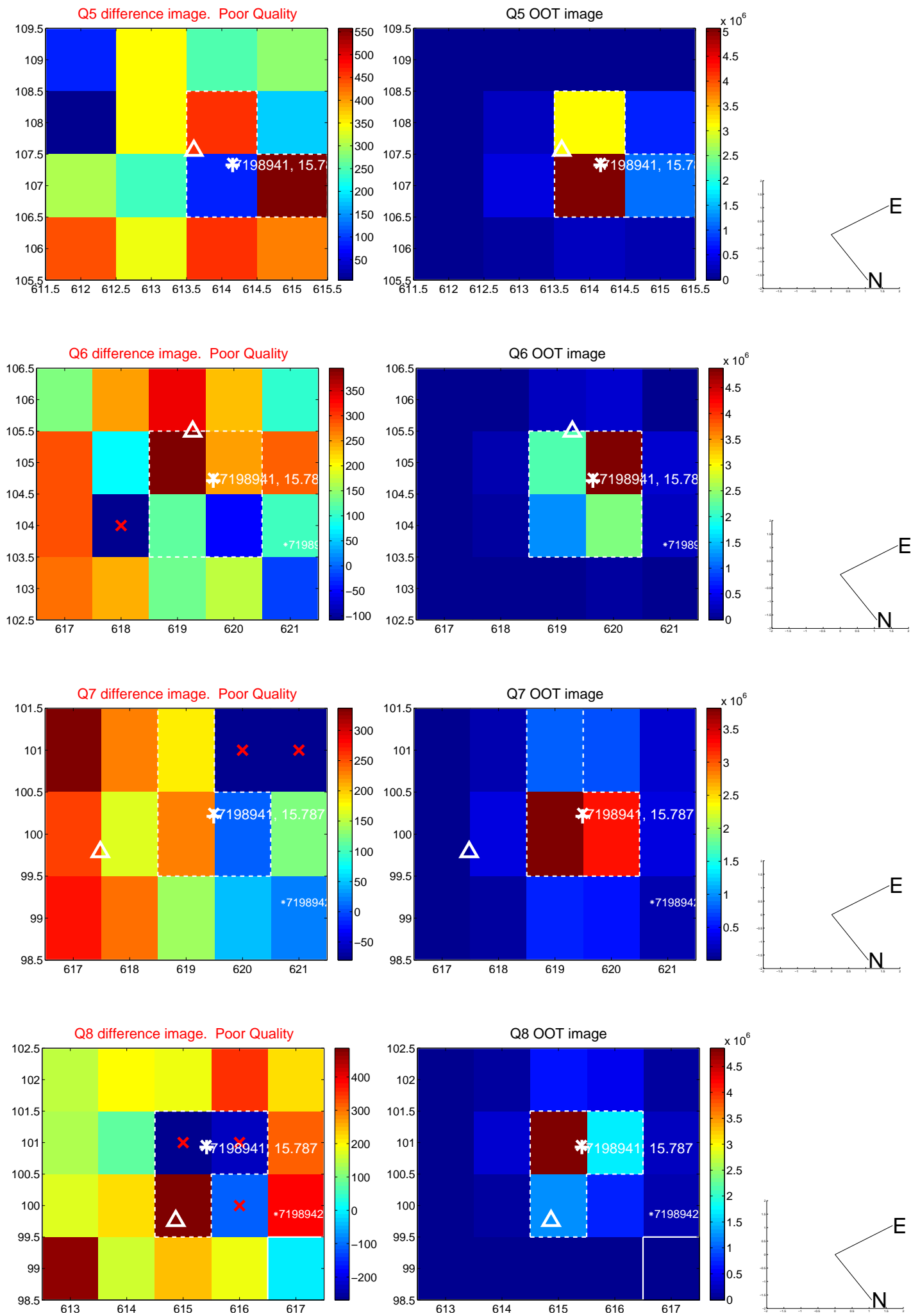


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

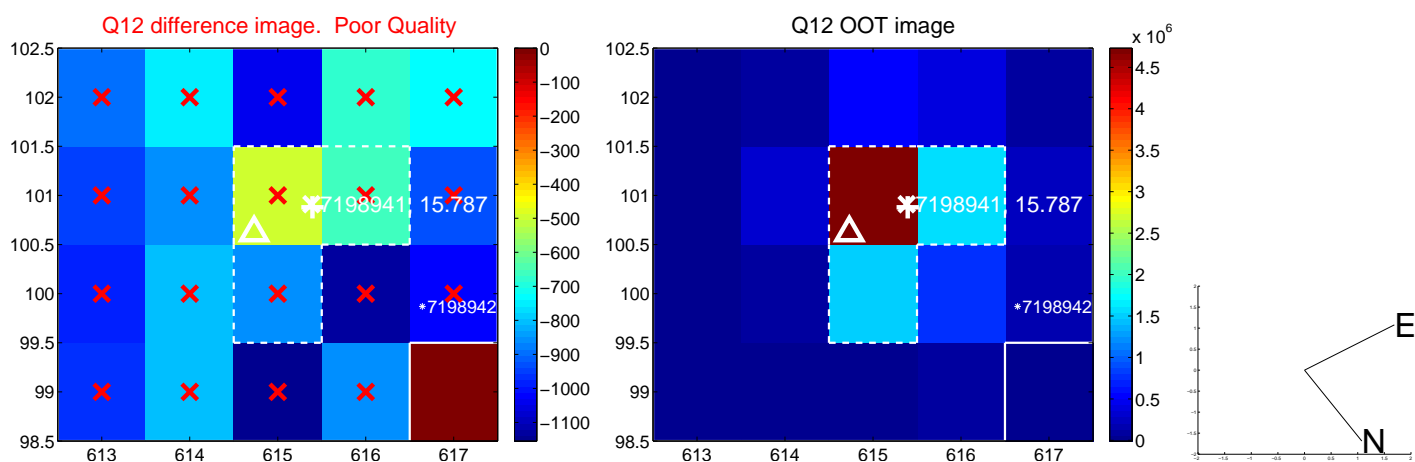
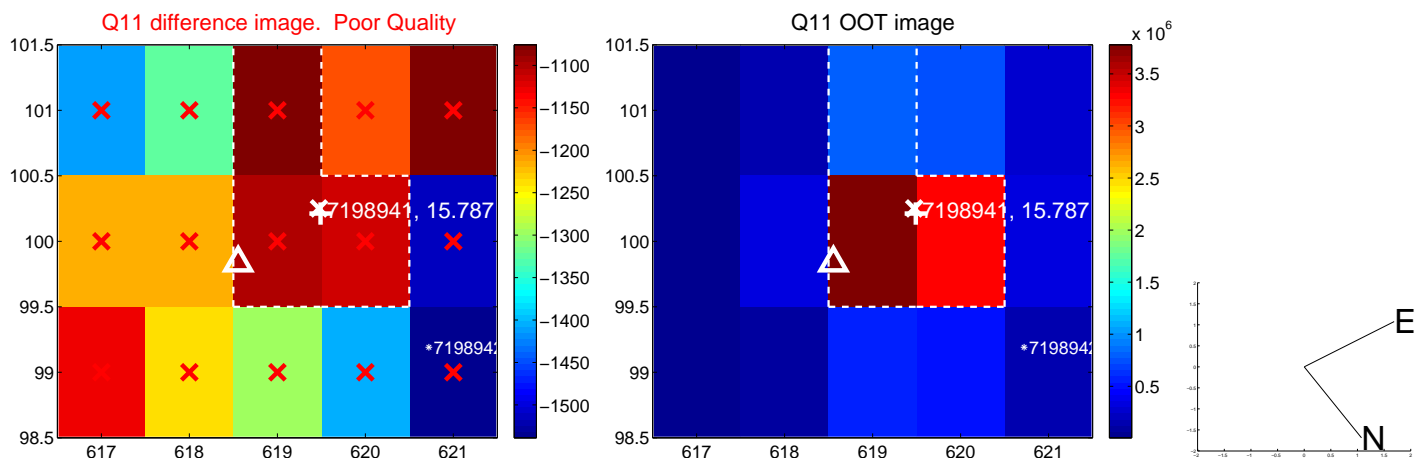
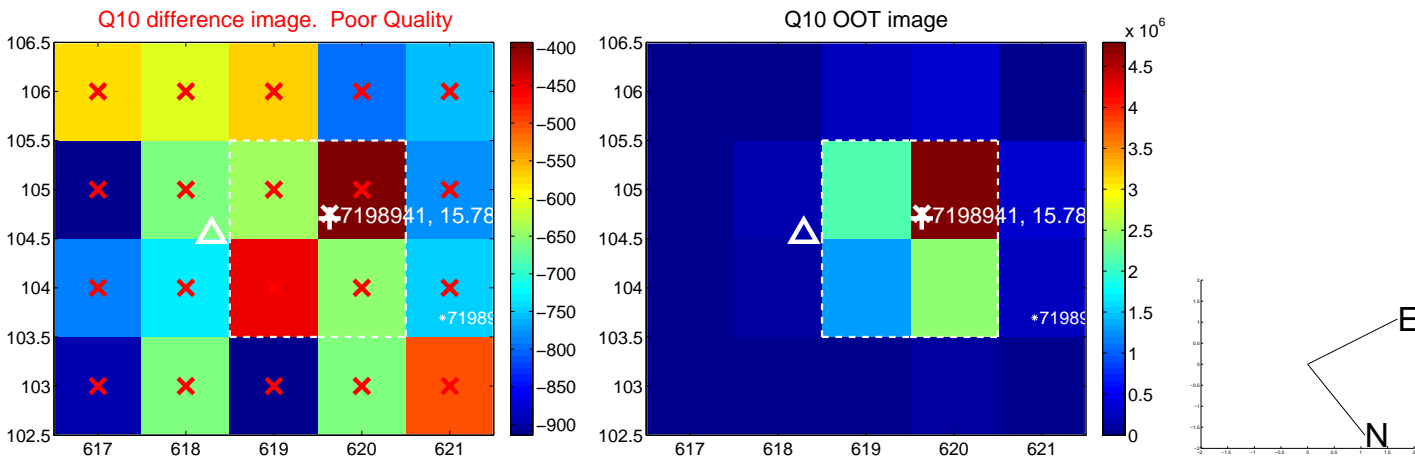
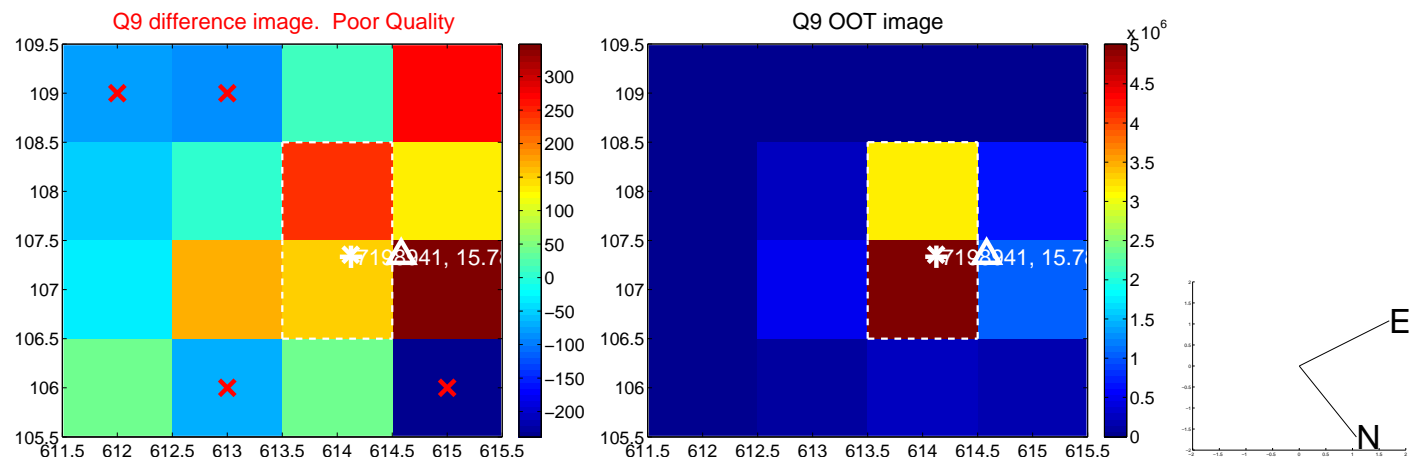
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



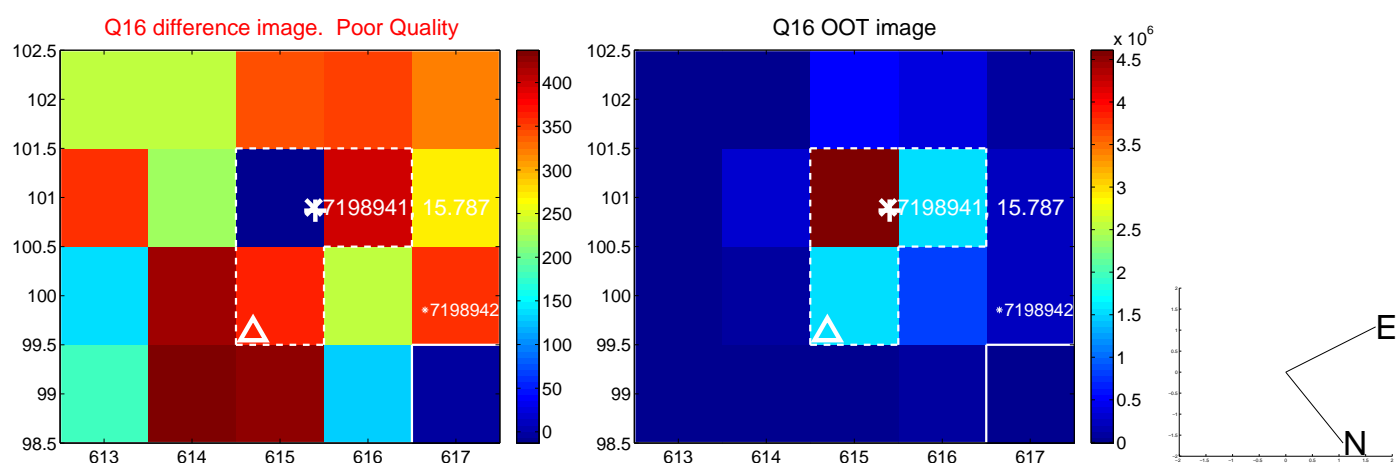
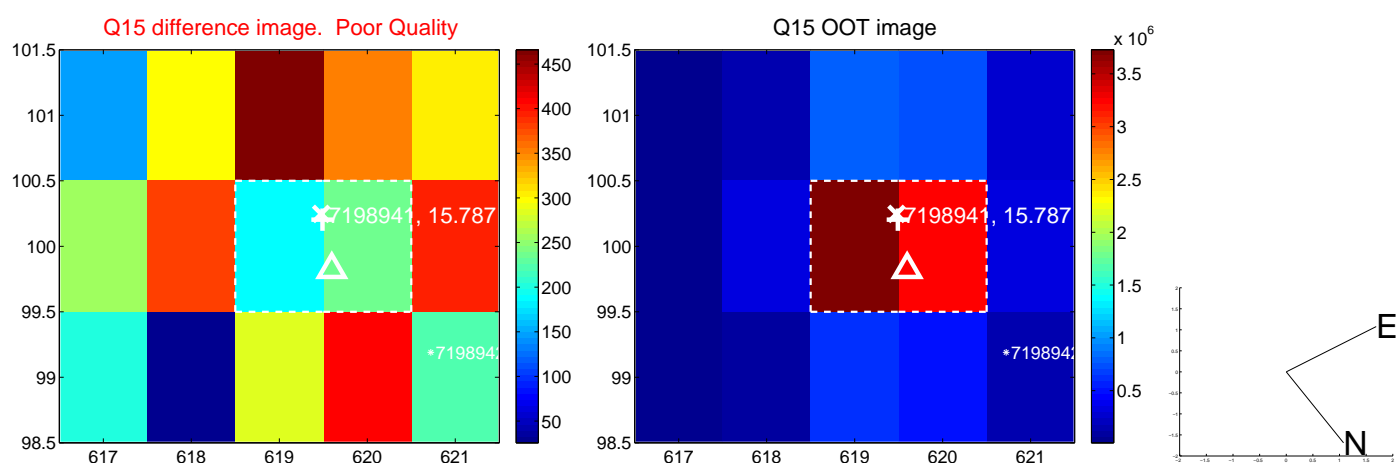
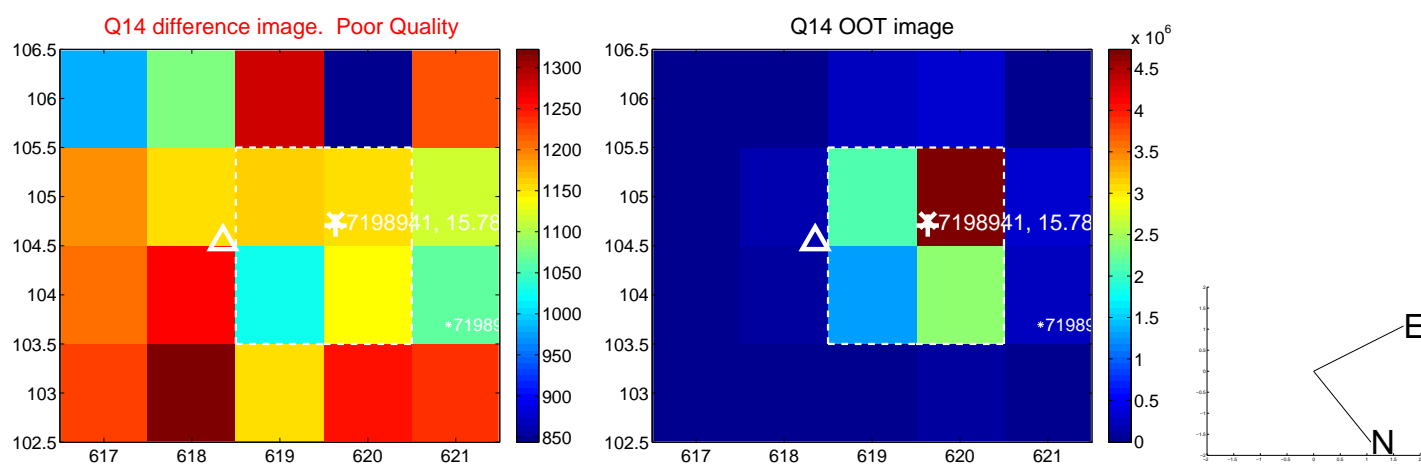
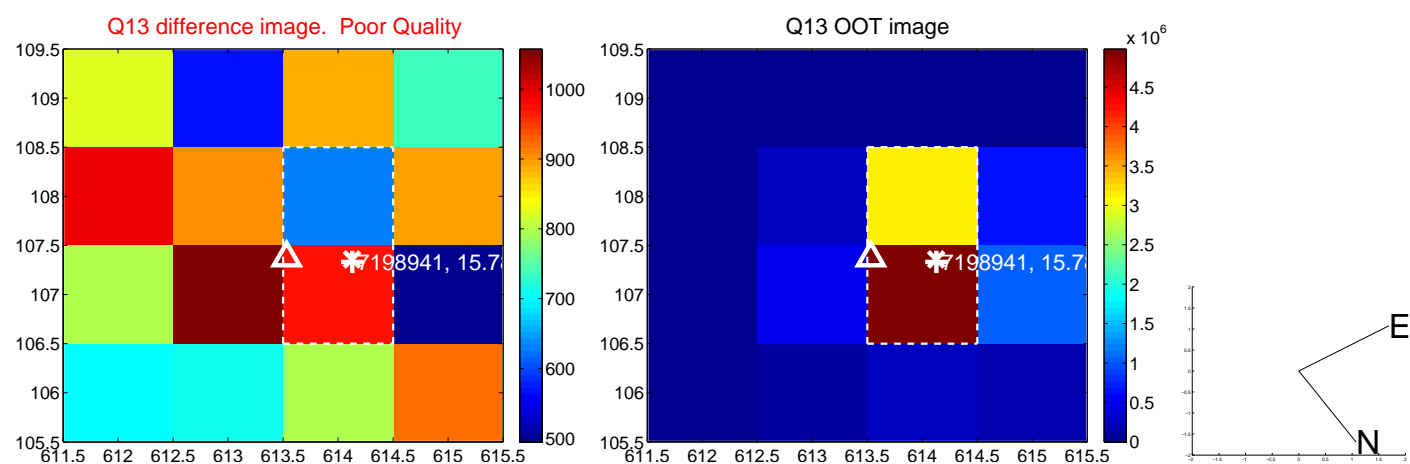
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



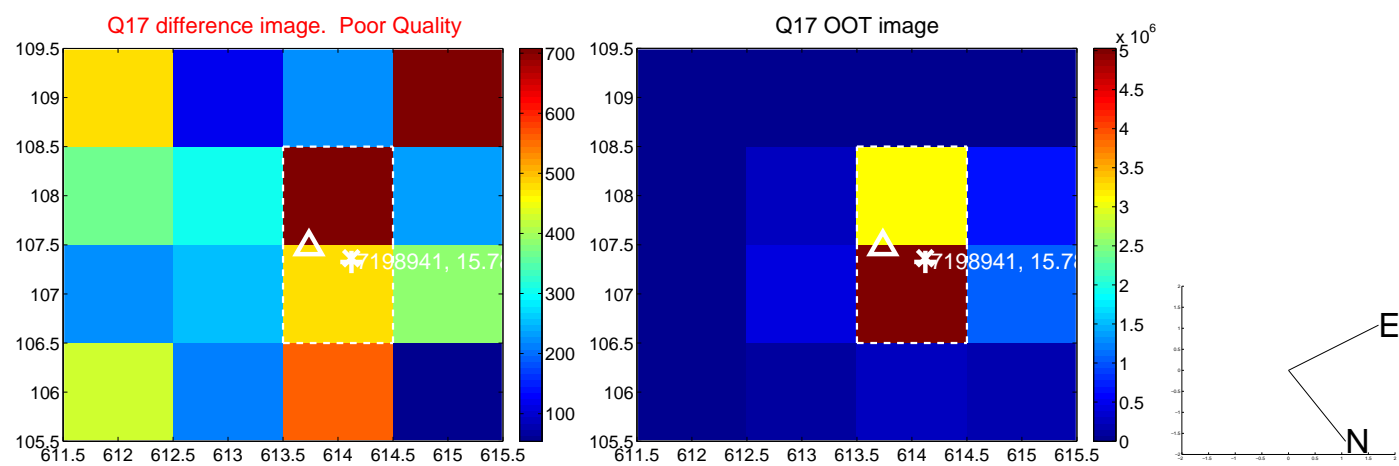
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



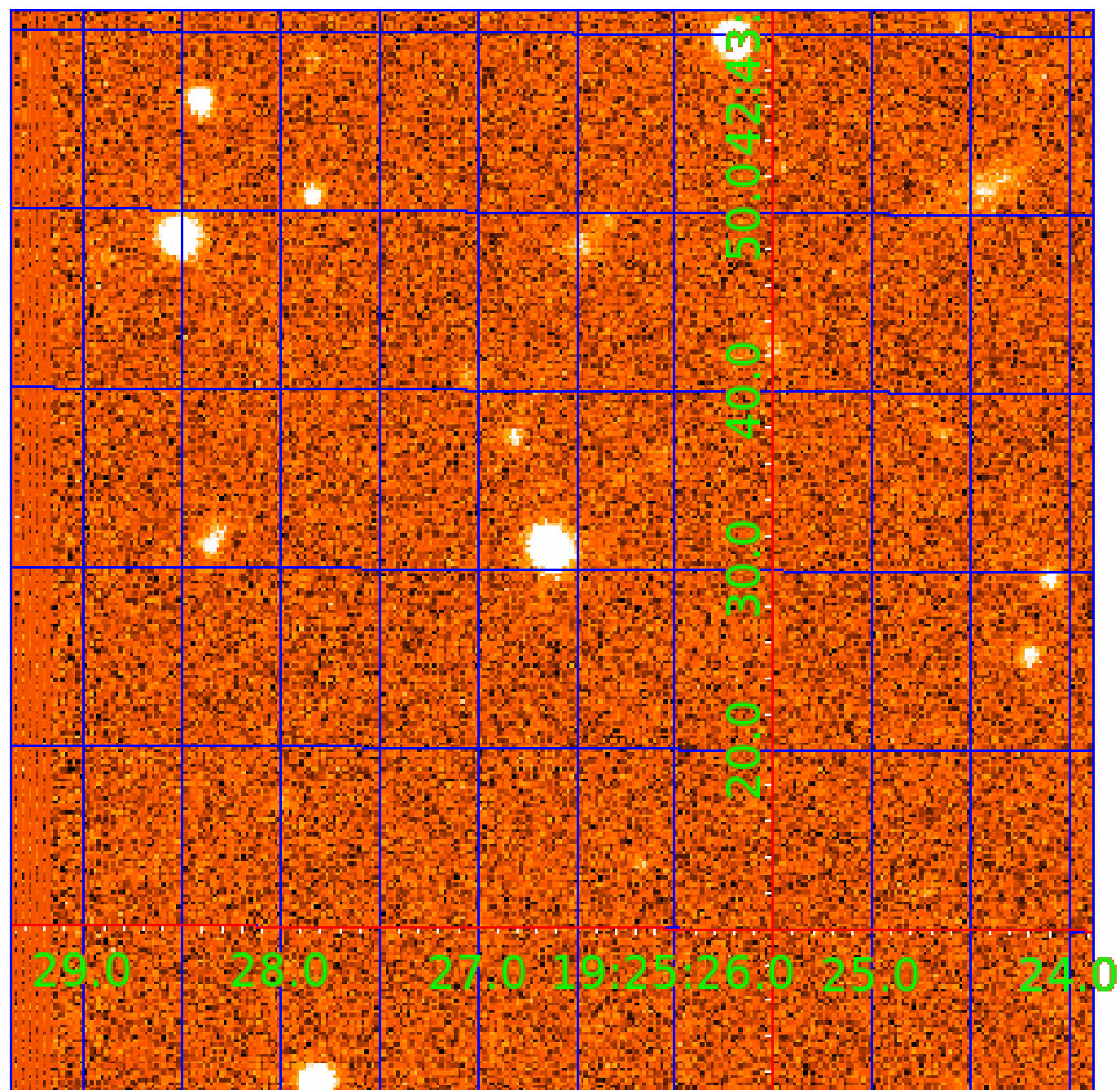
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 007198941

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})
007198941-01	OBS	No	0.566445	131.828655	0.1	1.299	13.7	0.0	1.02	6191	0.04	7270.15
007198941-02	OBS	No	0.566433	131.821867	0.5	6.127	10.8	0.0	1.02	6191	0.08	7270.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007198941-01	OBS	FP	0.00	1	0	0	1	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—EPHEM_MATCH
007198941-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS

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

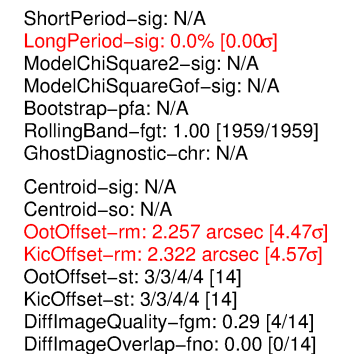
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

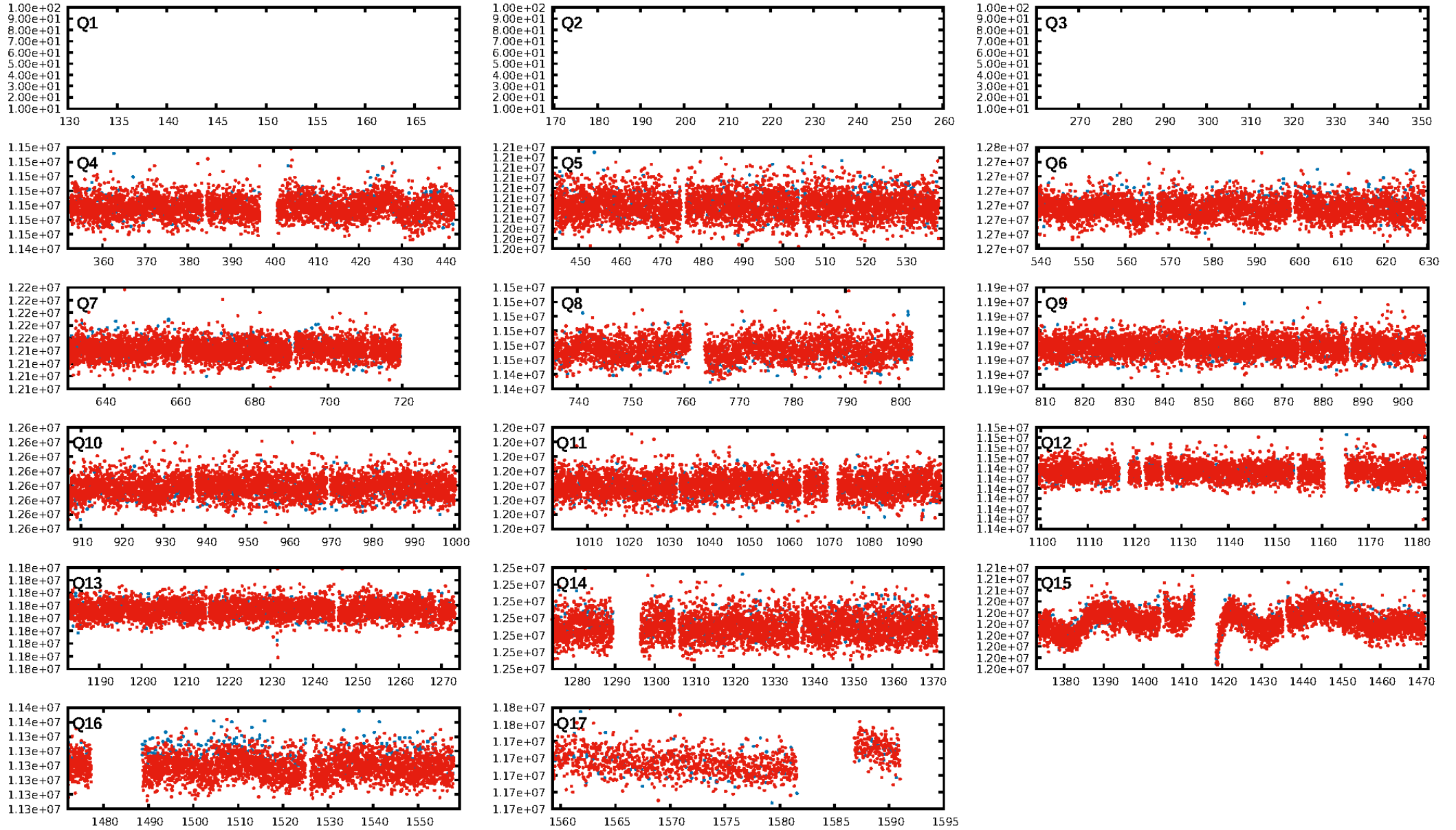
Ephemeris Match Information For 007198941-02

No Significant Match Found

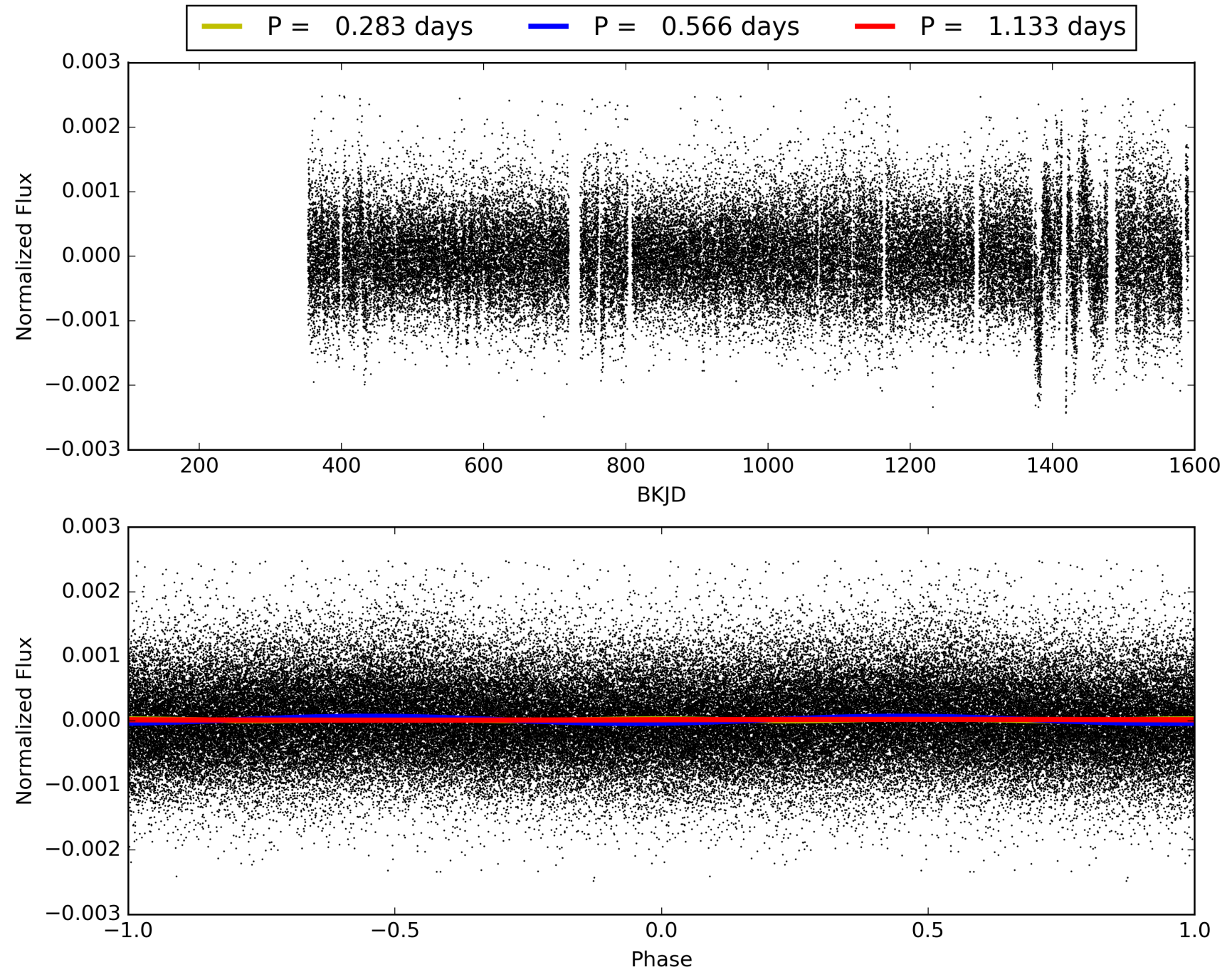
KIC: 7198941 Candidate: 2 of 2 Period: 0.566 d



TCE 007198941-02, PDC Light Curves

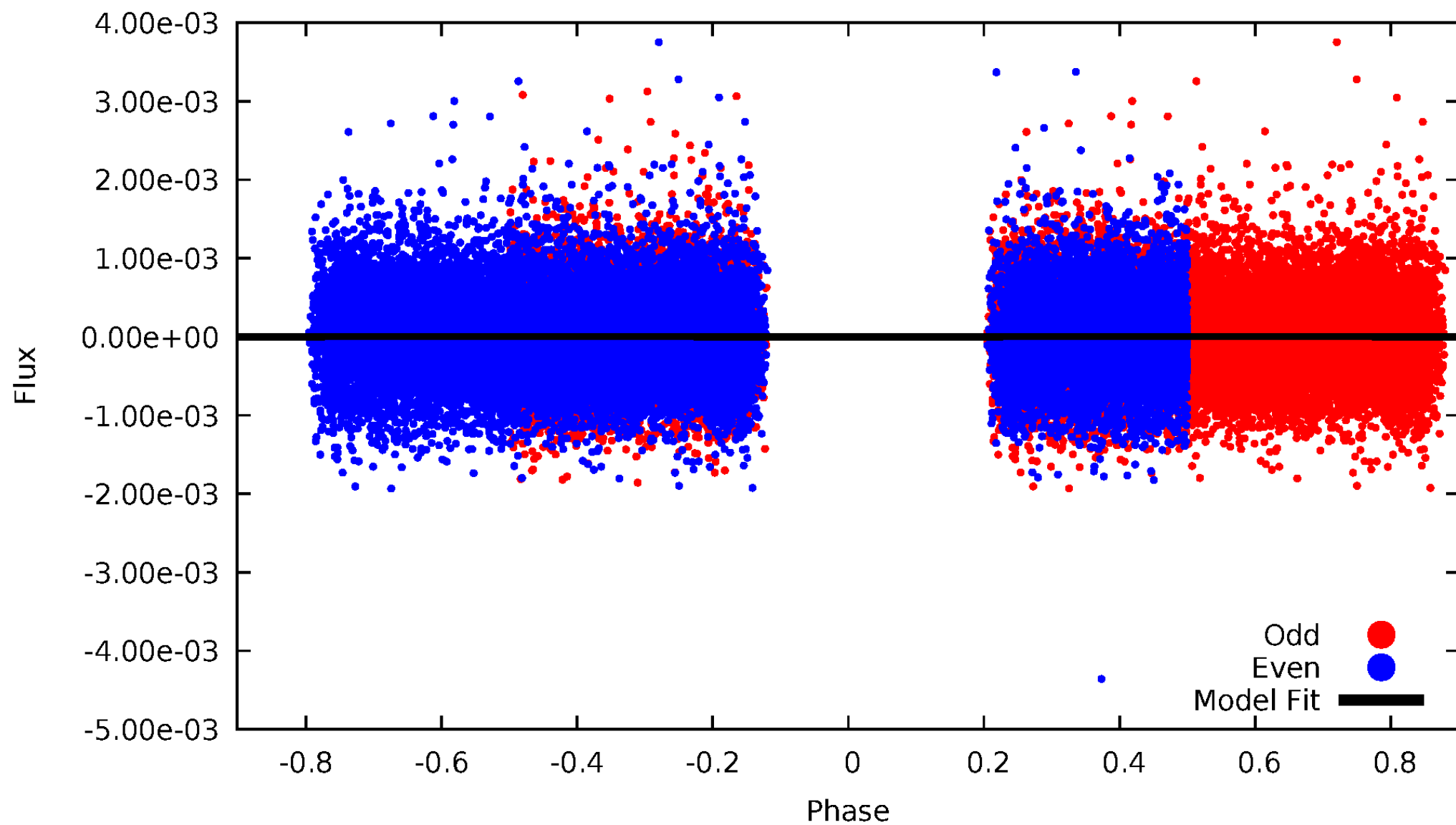


TCE 007198941-02



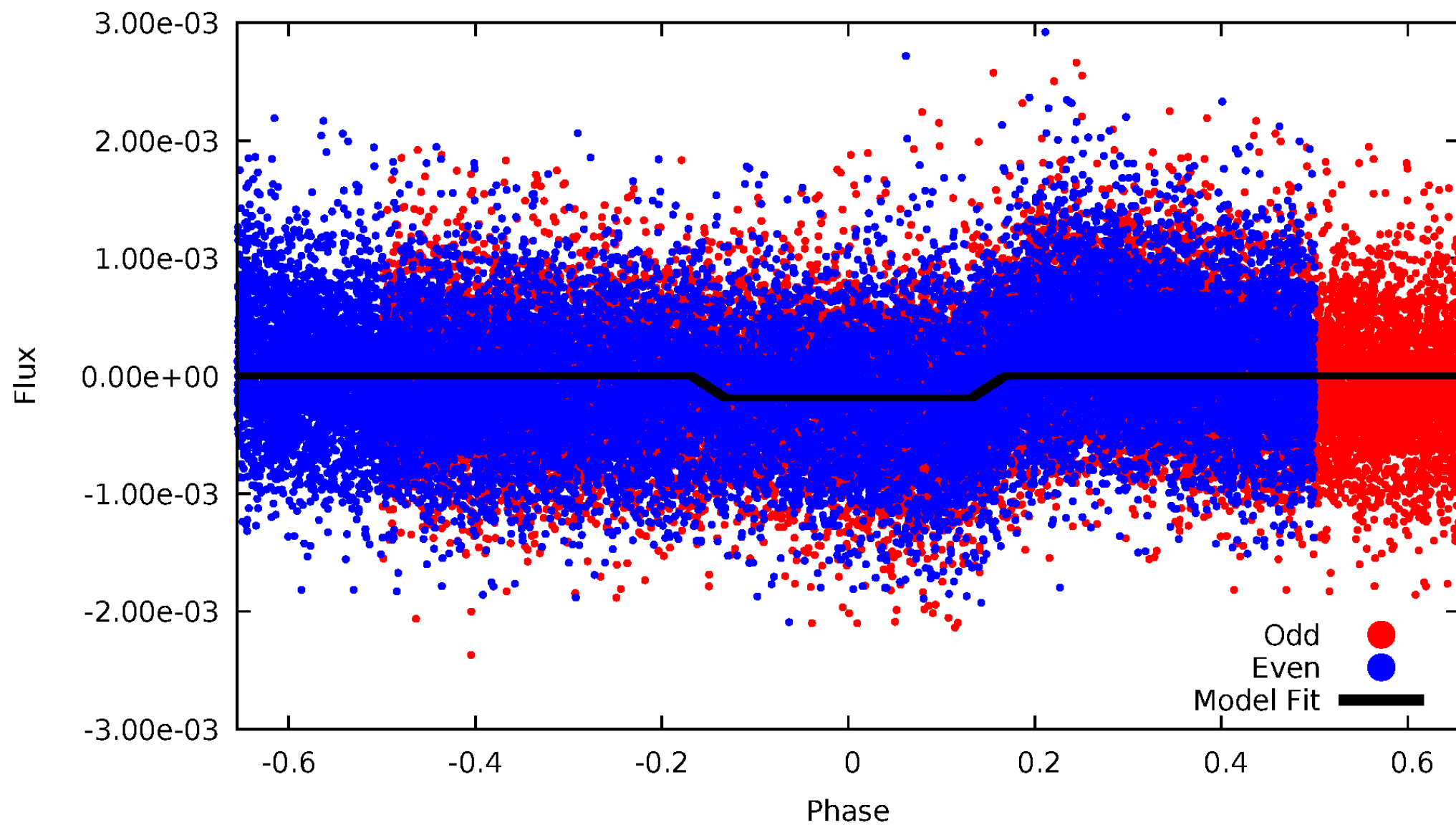
DV Odd/Even

TCE 007198941-02



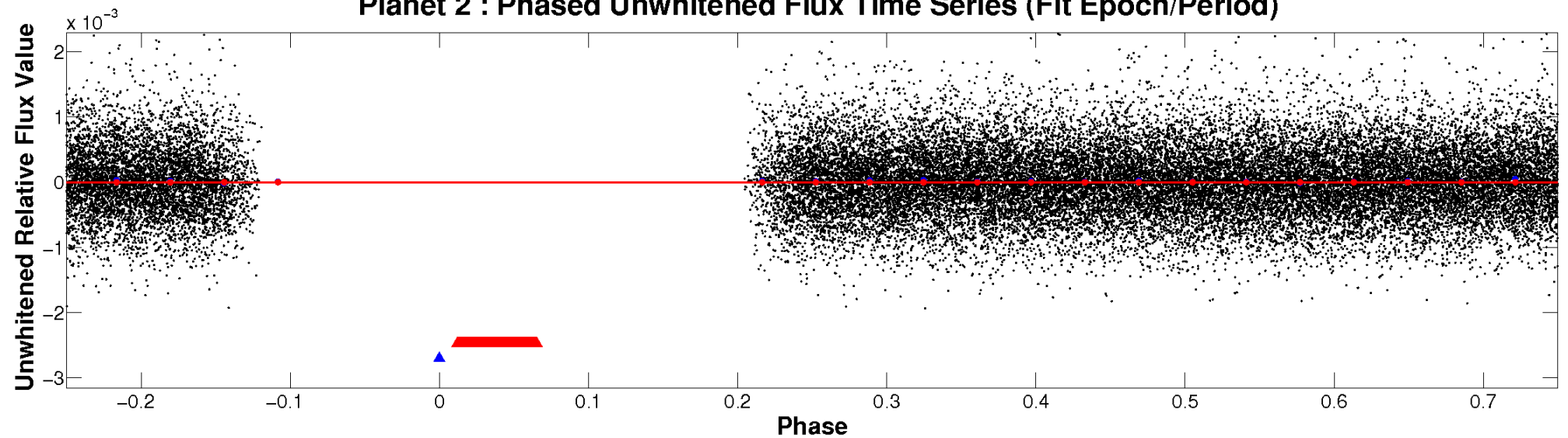
ALT Odd/Even

TCE 007198941-02

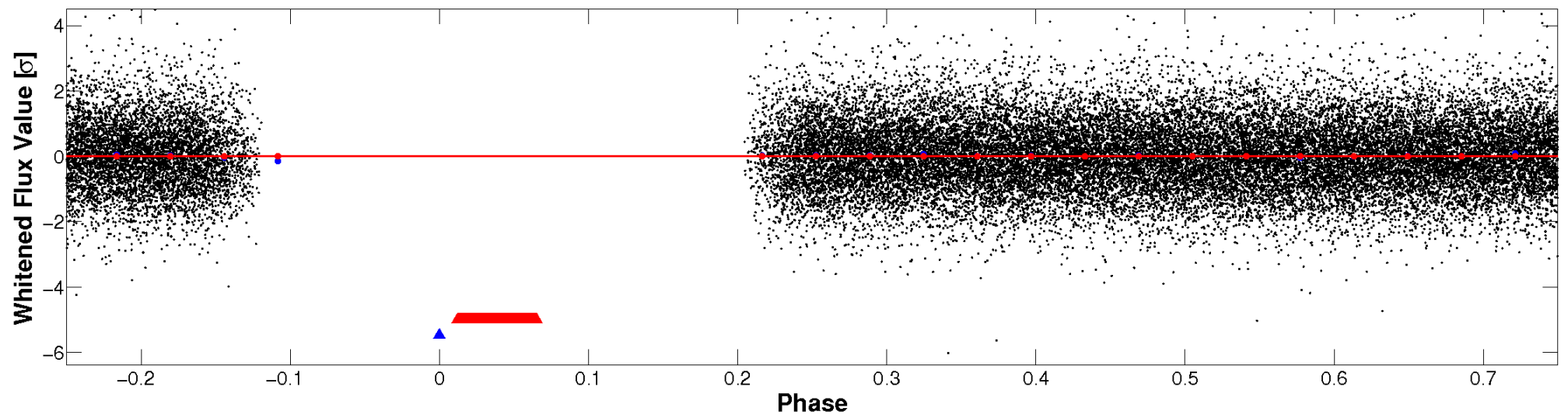


Non-Whitened Vs. Whitened Light Curve

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

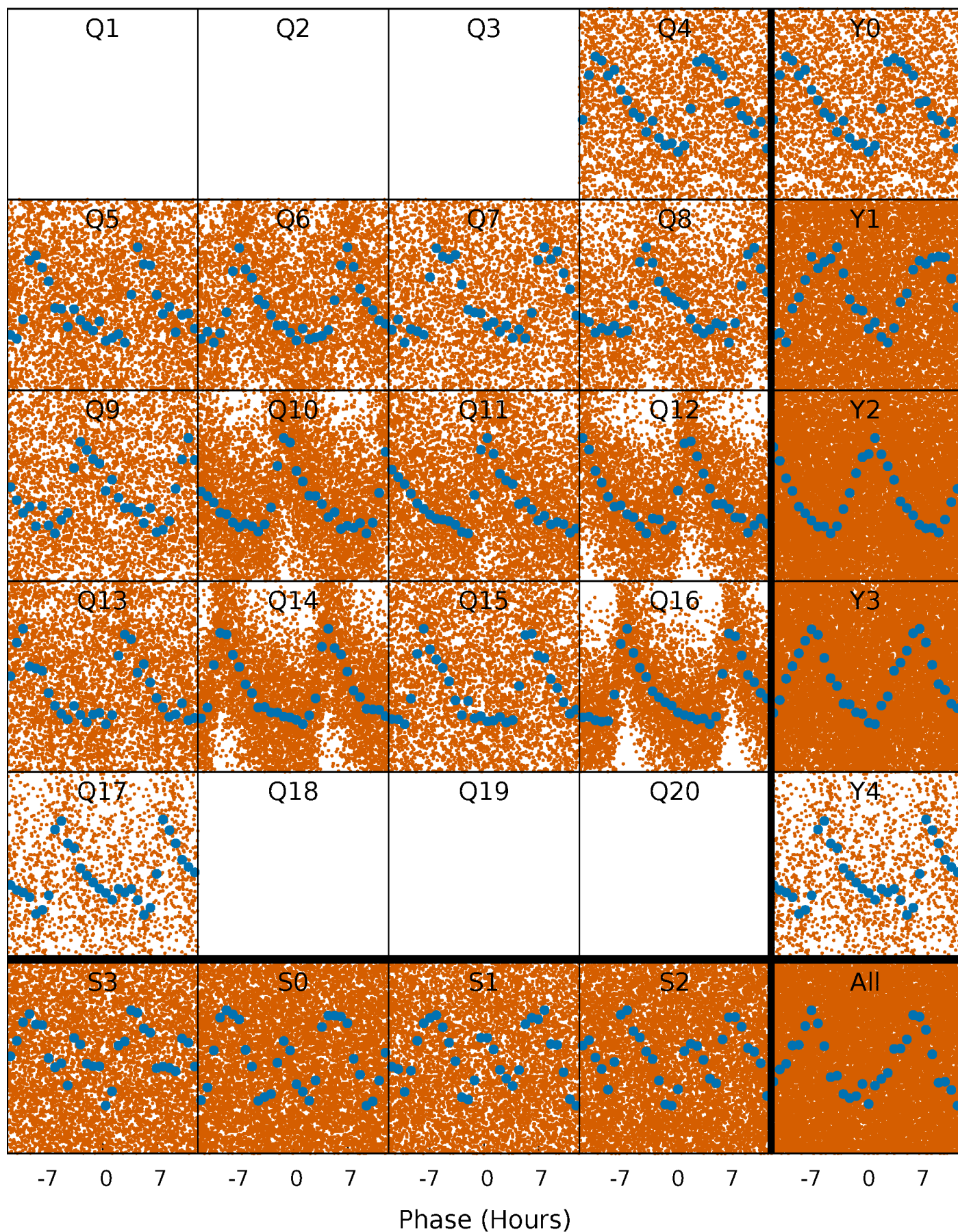


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



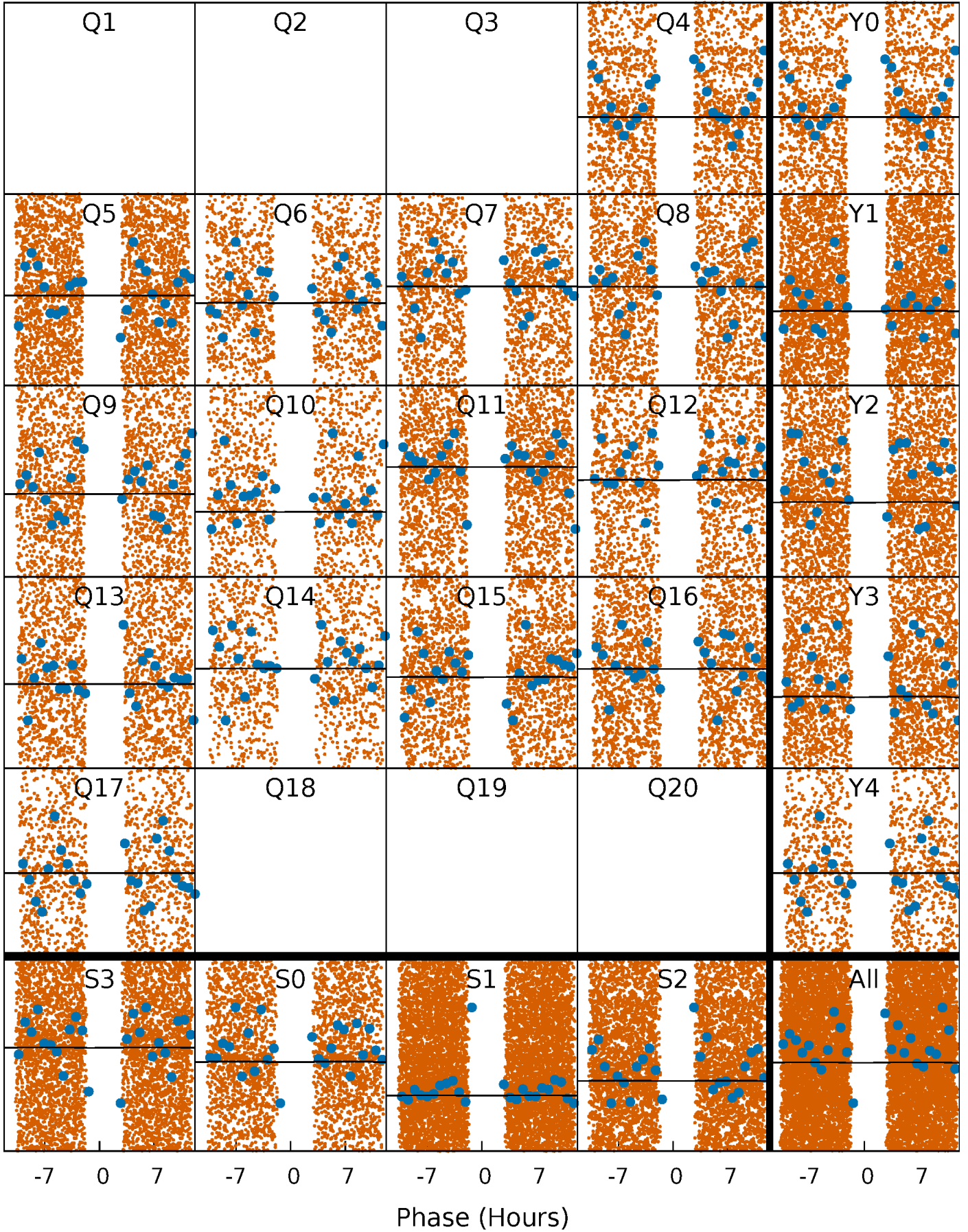
PDC Quarter-Phased Transit Curves

TCE 007198941-02 P= 0.566433 Days $T_0=131.821867$ (BKJD)



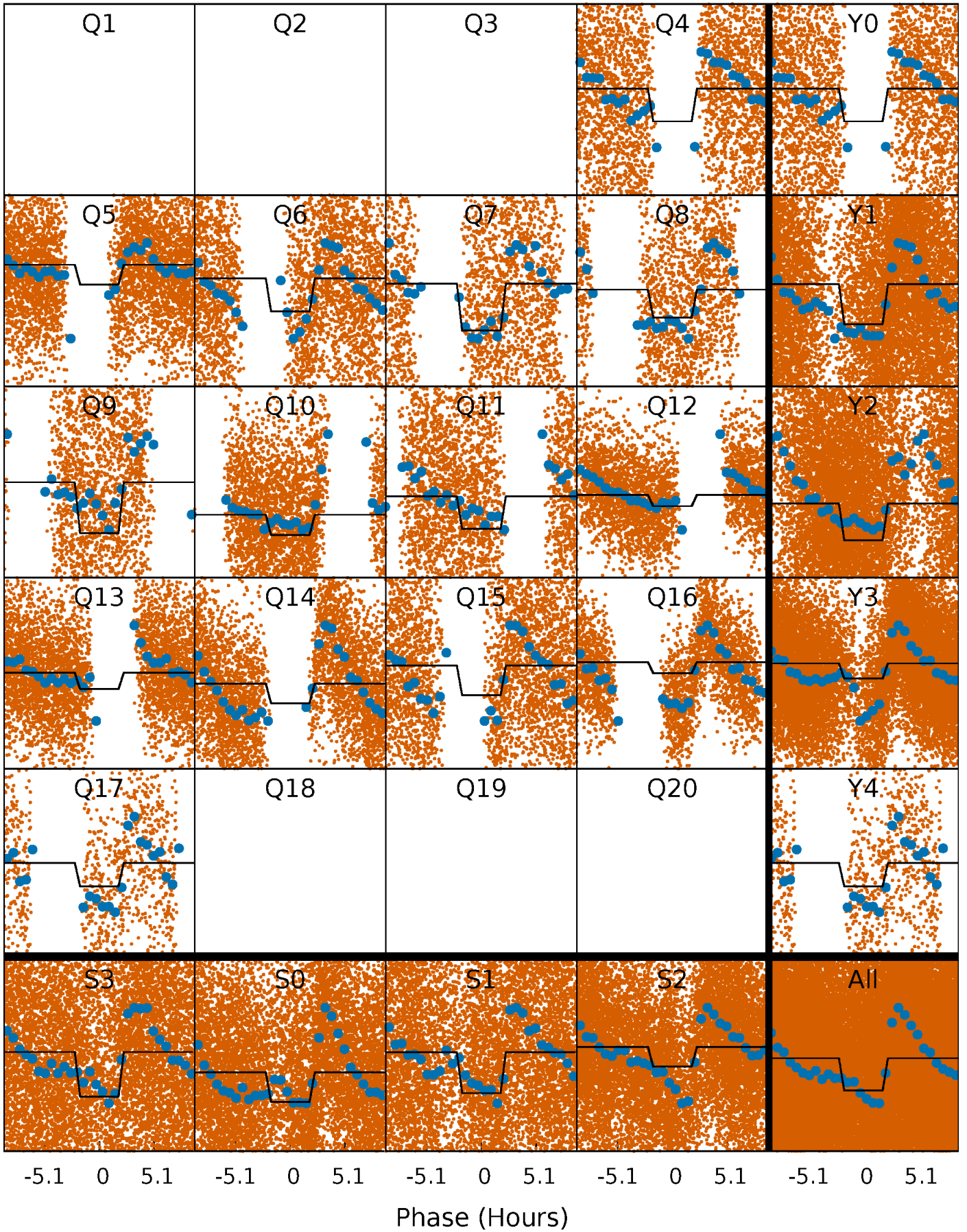
DV Quarter-Phased Transit Curves

TCE 007198941-02 P= 0.566433 Days $T_0=131.821867$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

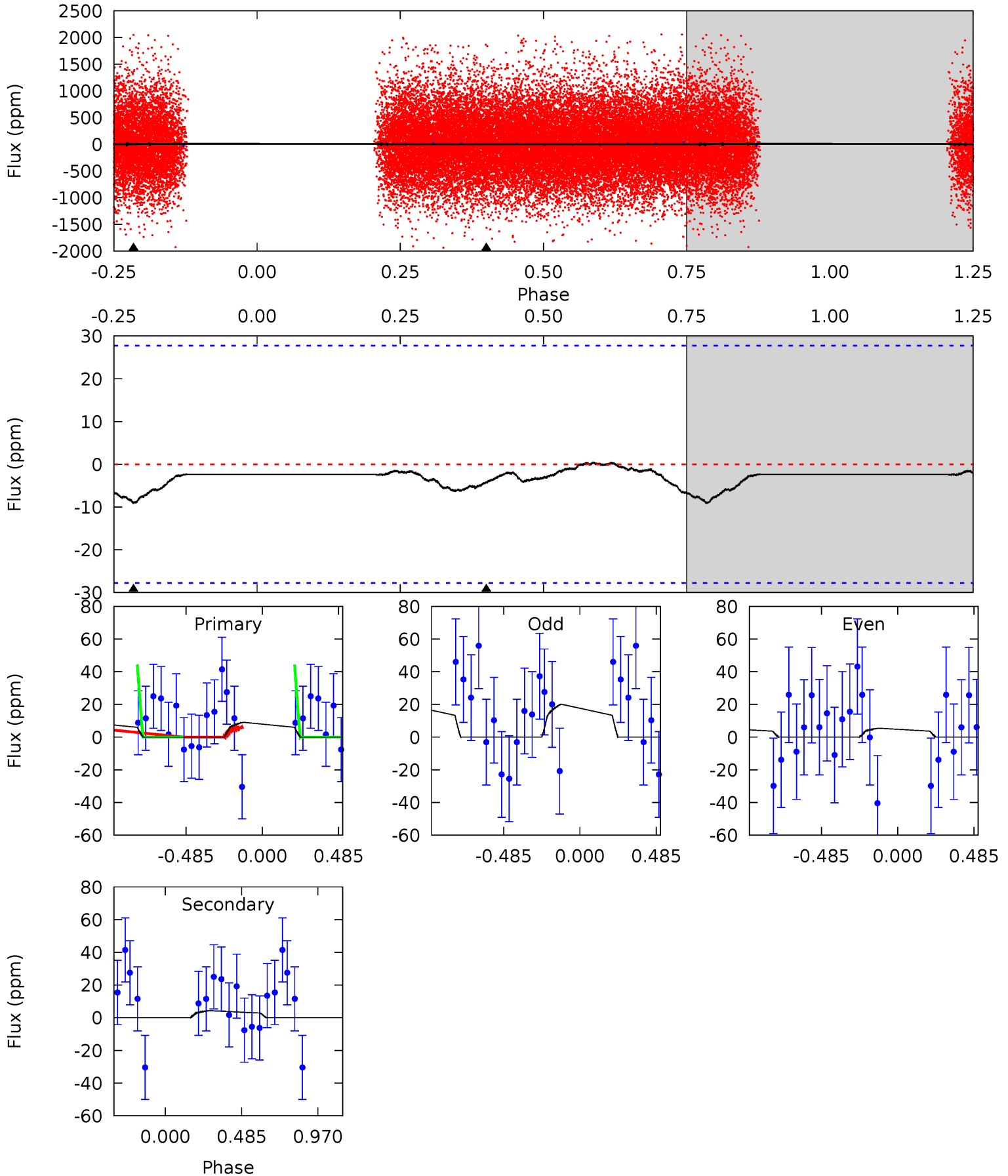
TCE 007198941-02 P= 0.566803 Days $T_0=131.646040$ (BKJD)



DV Model-Shift Uniqueness Test

007198941-02, P = 0.566433 Days, E = 131.821867 Days

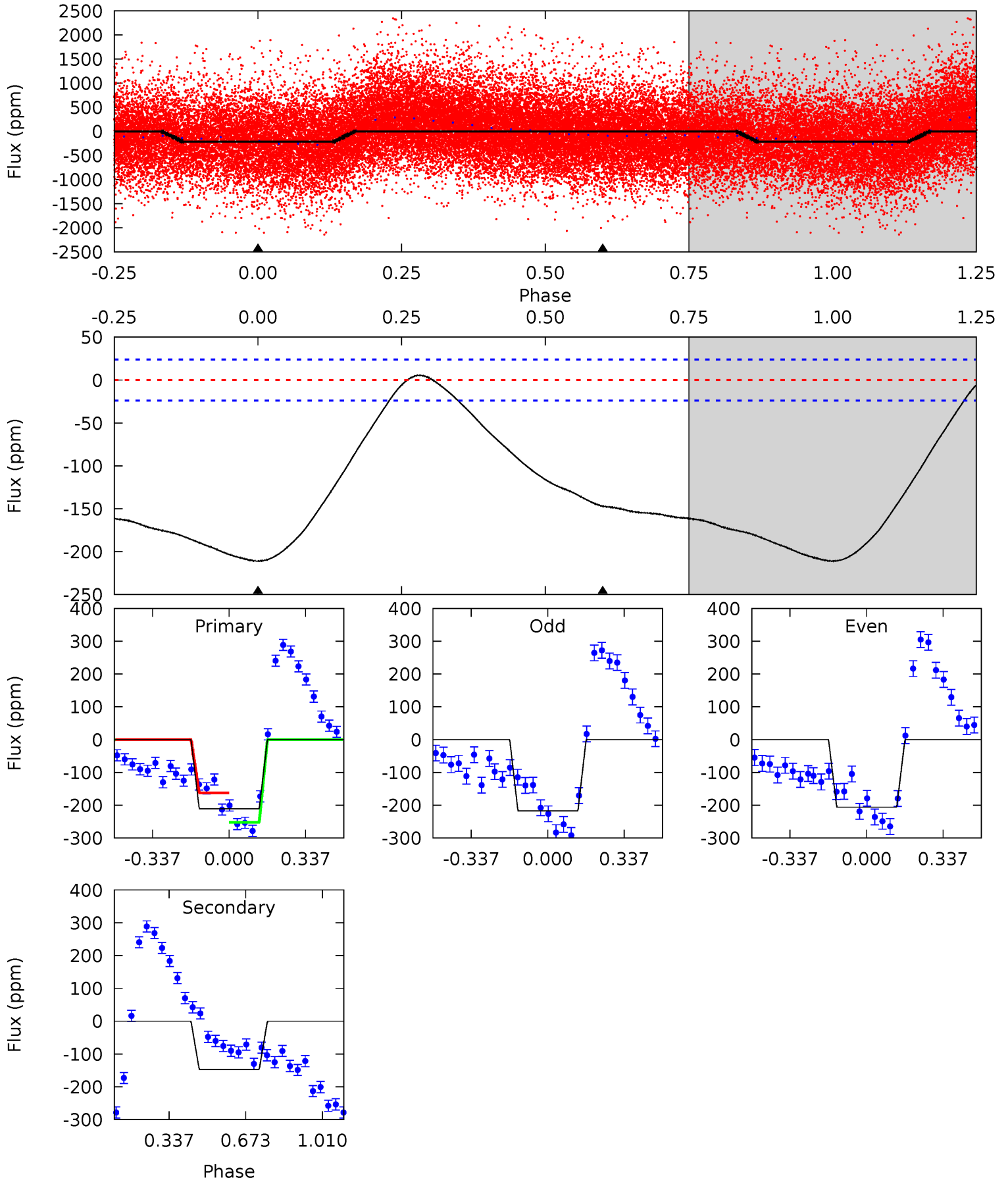
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.38	0.66	0	0	4.22	0.70	0.13	1.38	1.38	0.66	0.66	1.14	1.27	0.04	2.08



Alt Model-Shift Uniqueness Test

007198941-02, P = 0.566803 Days, E = 131.646040 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.8	26.4	0	0	4.30	0.96	1.43	37.8	37.8	26.4	26.4	1.02	1.15	0.03	8.36



Stellar Parameters For KIC 007198941

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6191^{+193}_{-257}	$4.454^{+0.056}_{-0.210}$	$-0.100^{+0.250}_{-0.300}$	$1.025^{+0.341}_{-0.114}$	$1.088^{+0.151}_{-0.151}$	$1.423^{+0.422}_{-0.771}$
	+3%/-4%	+1%/-5%	+250%/-300%	+33%/-11%	+14%/-14%	+30%/-54%
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 007198941-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4 ± 7	$6.10^{+6.75}_{-4.25}$	3355^{+249}_{-173}	-3273^{+229}_{-176}	$0.007^{+0.098}_{-0.011}$
Alt.	-147 ± 6	$6.62^{+6.87}_{-4.78}$	3354^{+253}_{-200}	2614^{+2733}_{-5767}	$0.355^{+4.119}_{-0.274}$

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 $A_{obs} \gg 1.0$

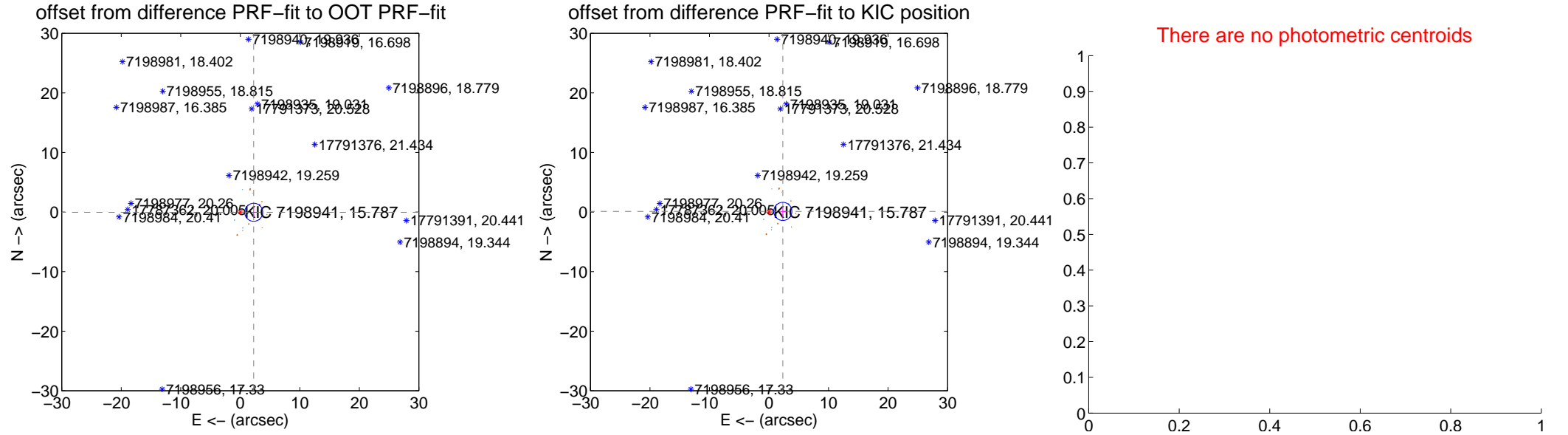
DV Centroid Data

Supplemental centroid analysis for 007198941-02. Kepler magnitude: 15.79. Transit SNR 0.05

There are 4 quarters with good PRF difference image offsets

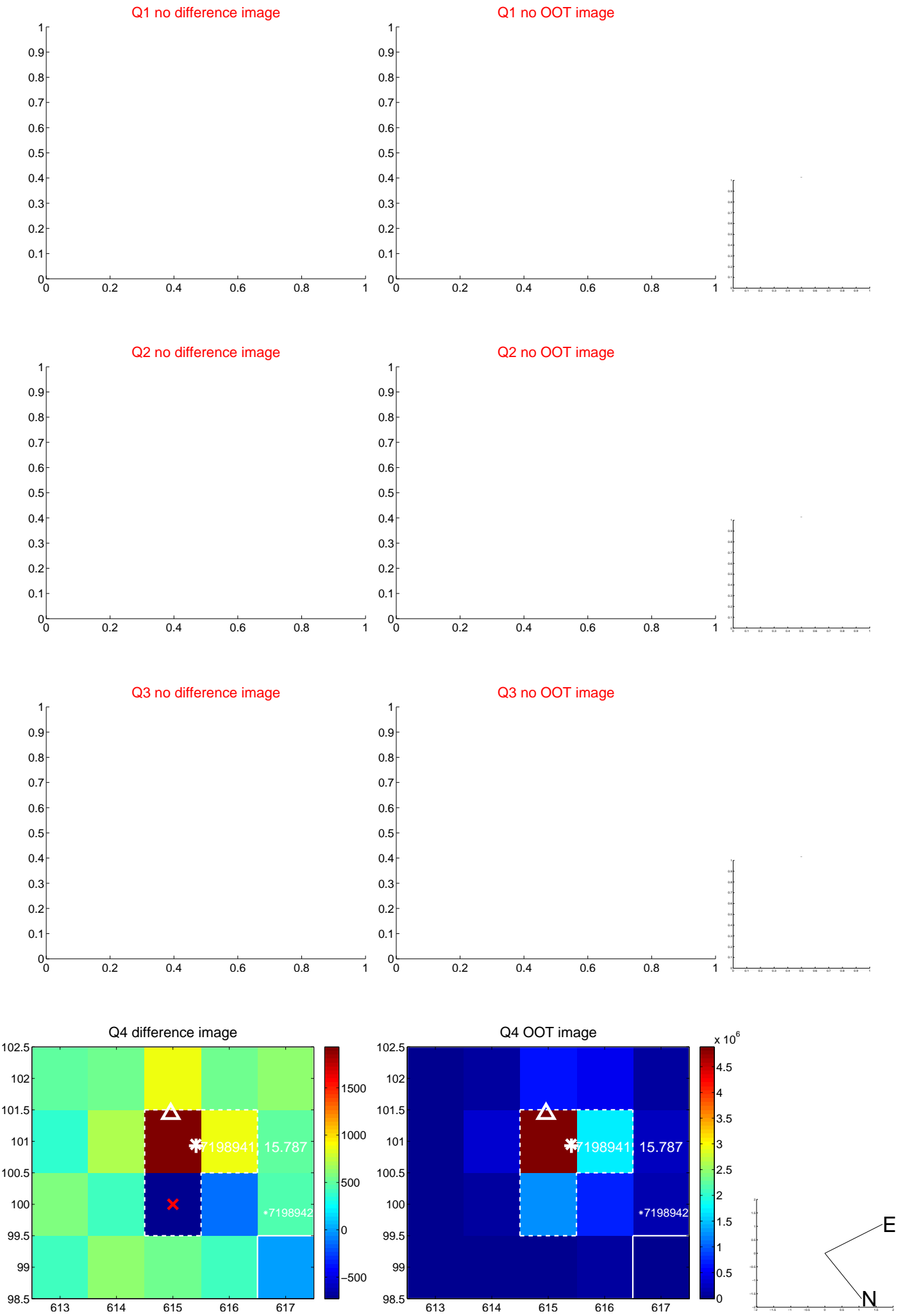
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.257 ± 0.505	4.47	-2.256 ± 0.505	-0.043 ± 0.842
PRF-fit source offset from KIC position	2.322 ± 0.508	4.57	-2.320 ± 0.507	0.105 ± 0.838
photometric centroid source offset	—	—	—	—

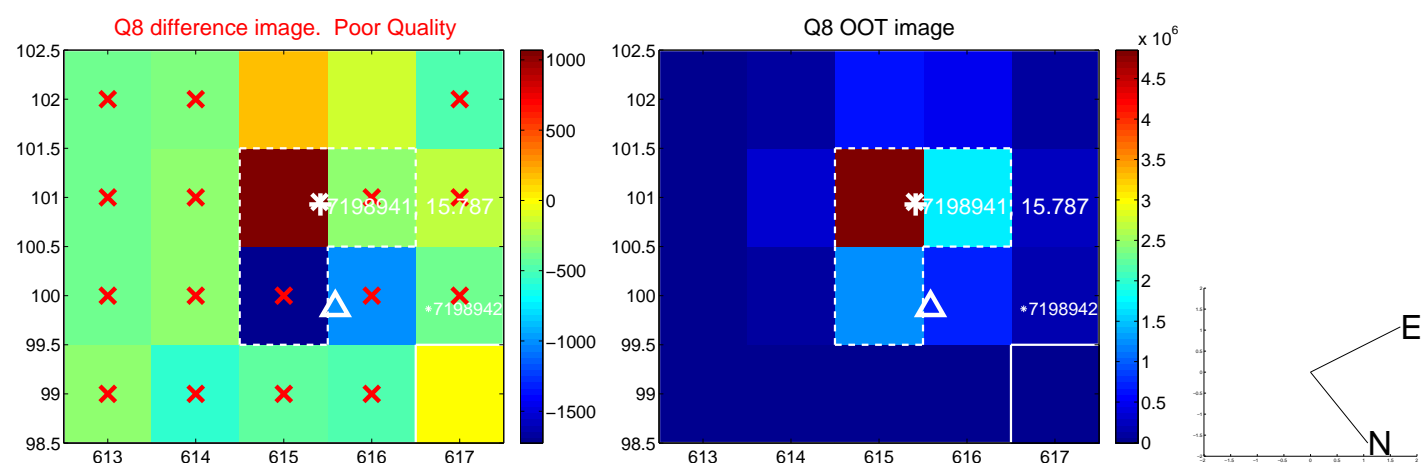
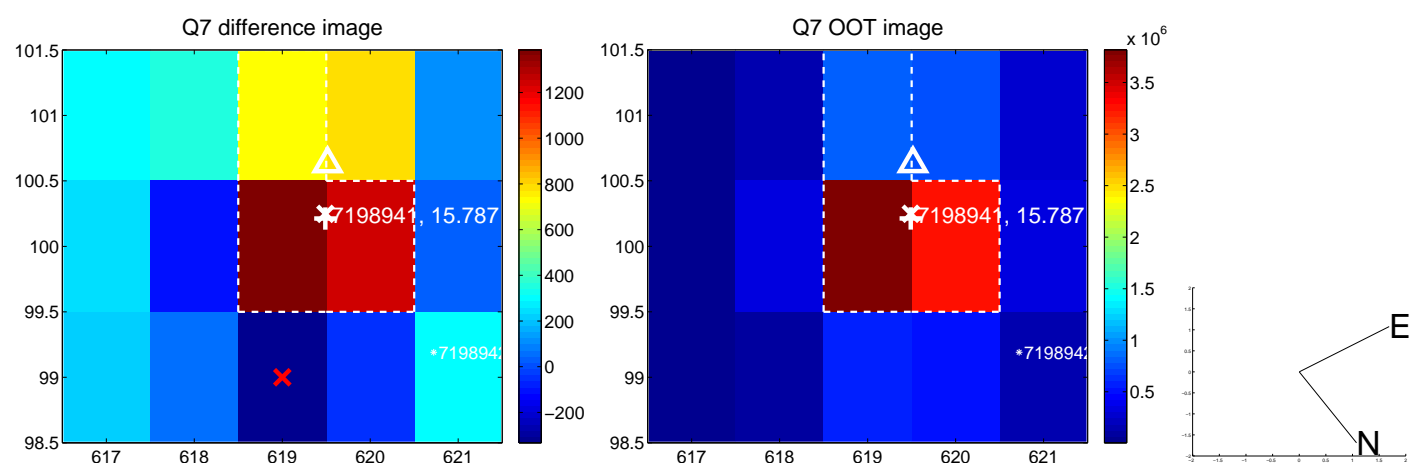
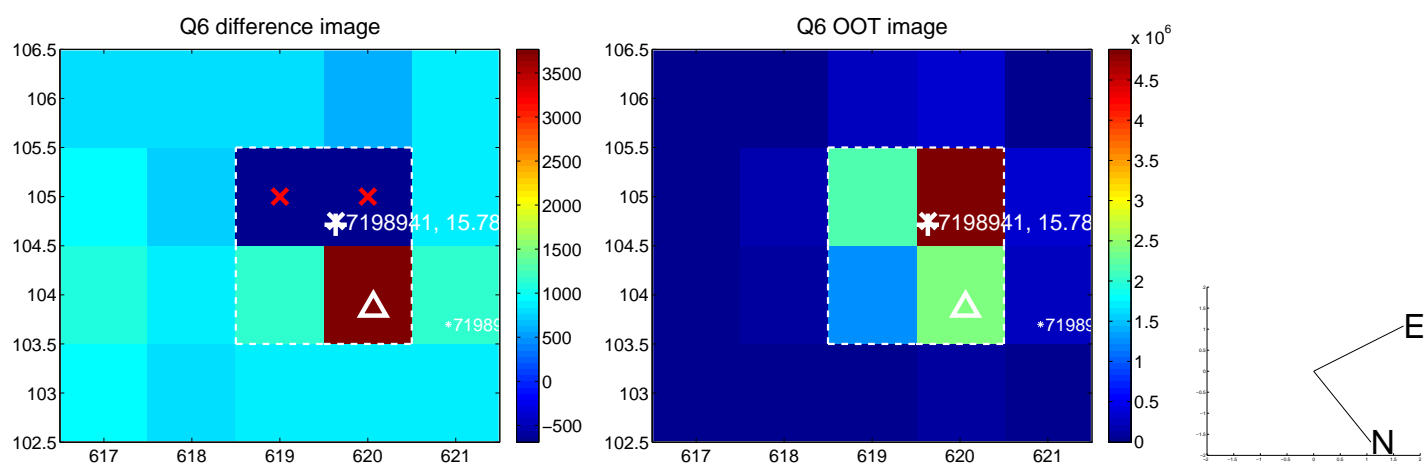
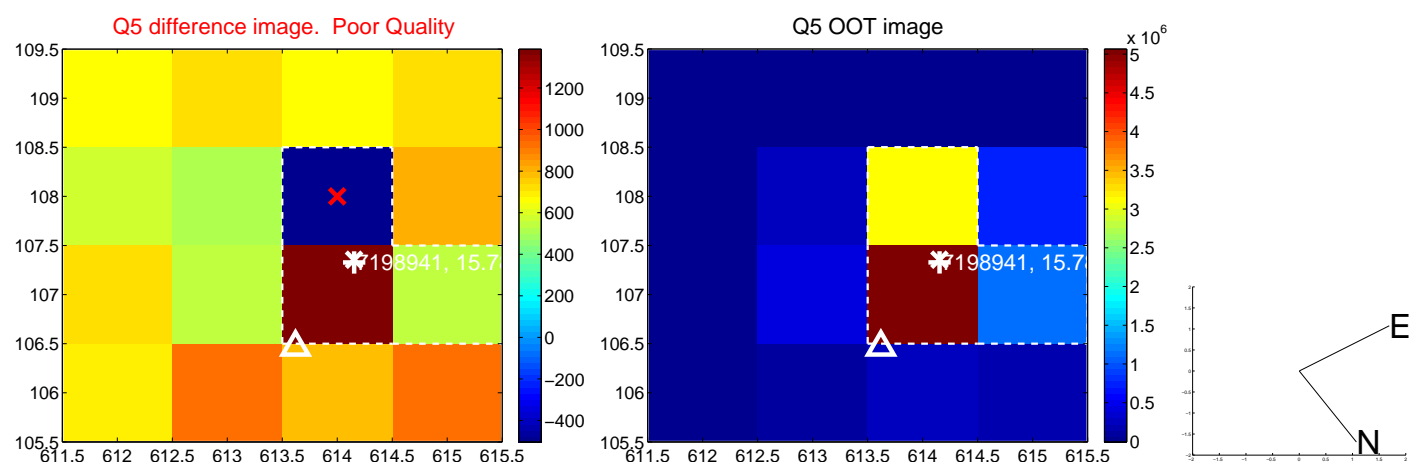


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

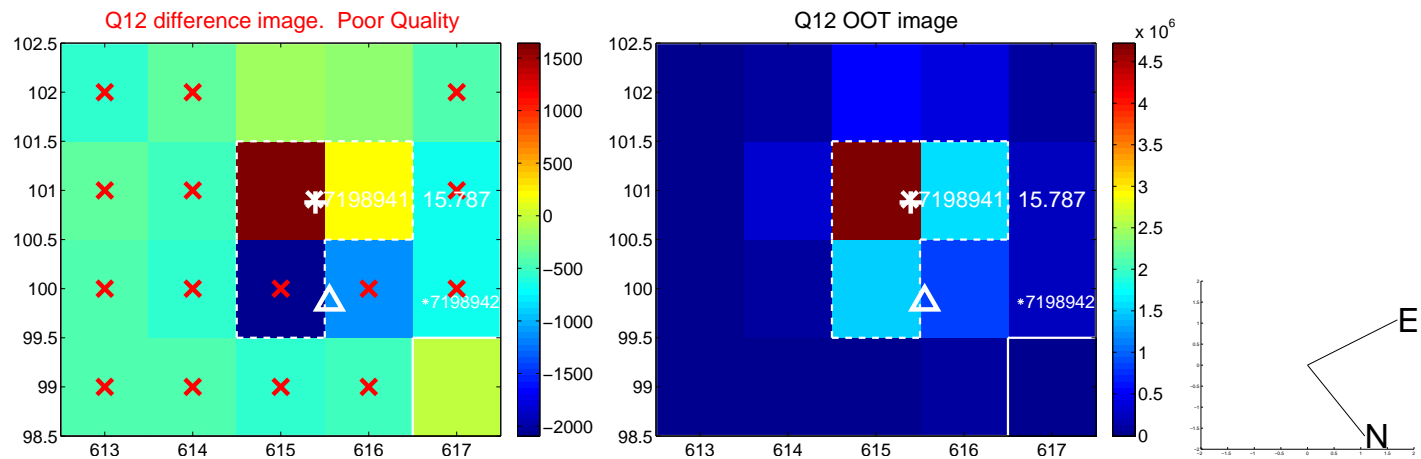
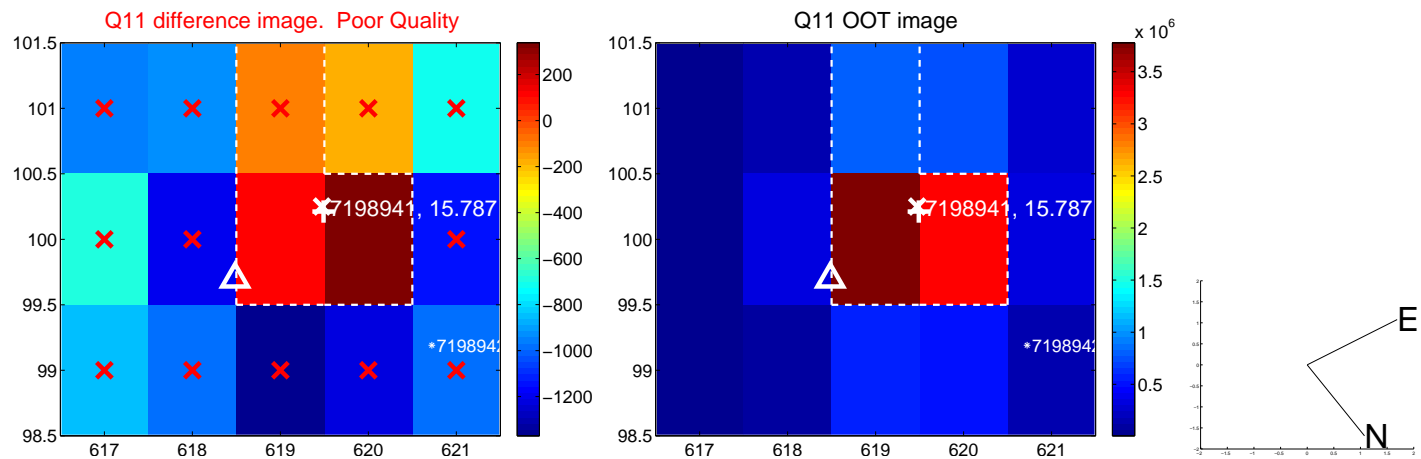
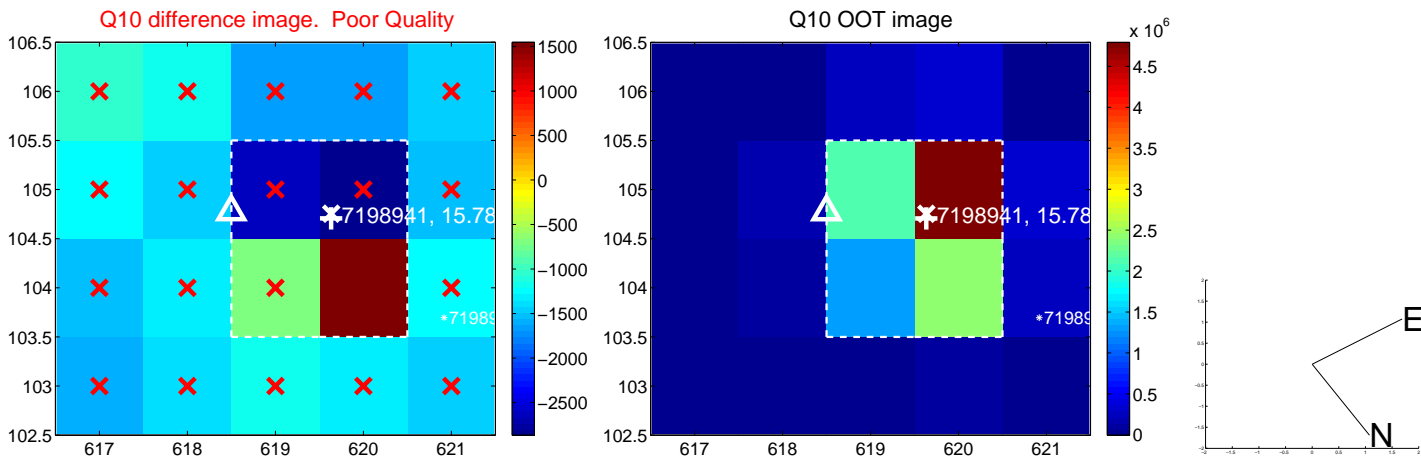
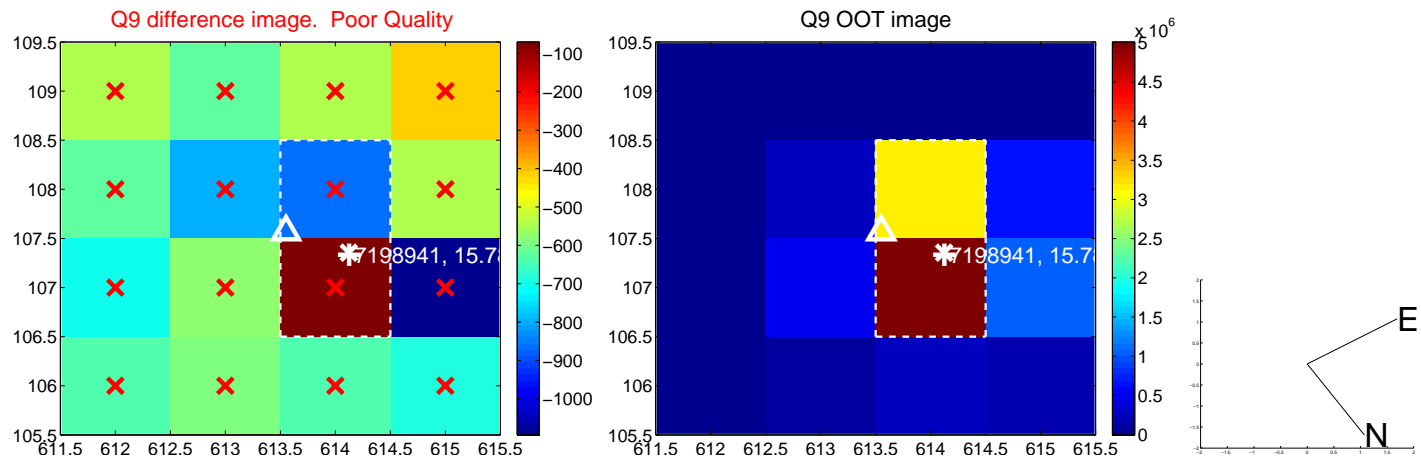
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



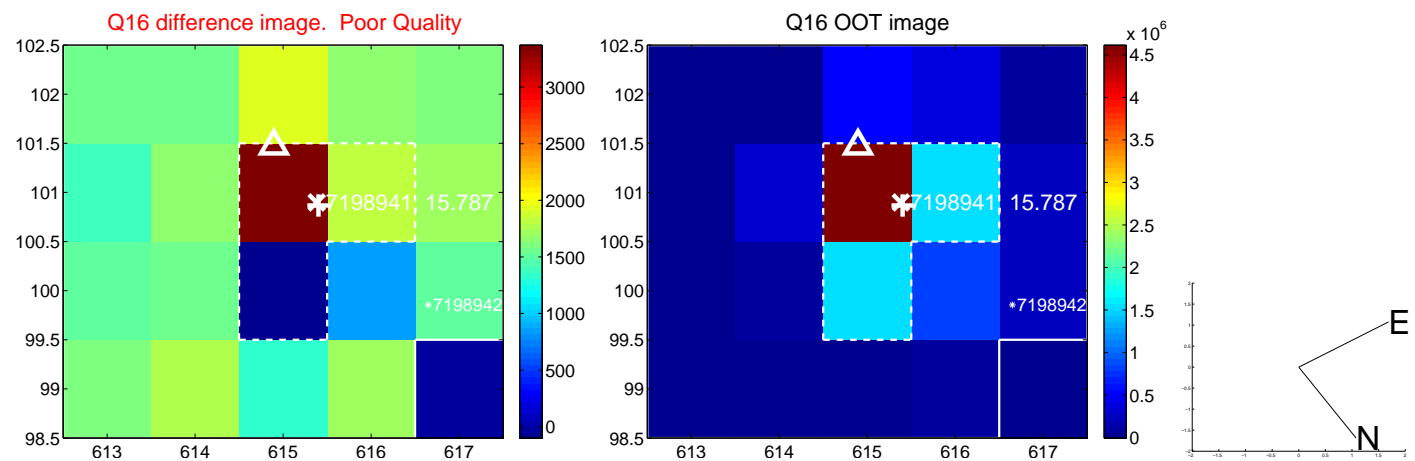
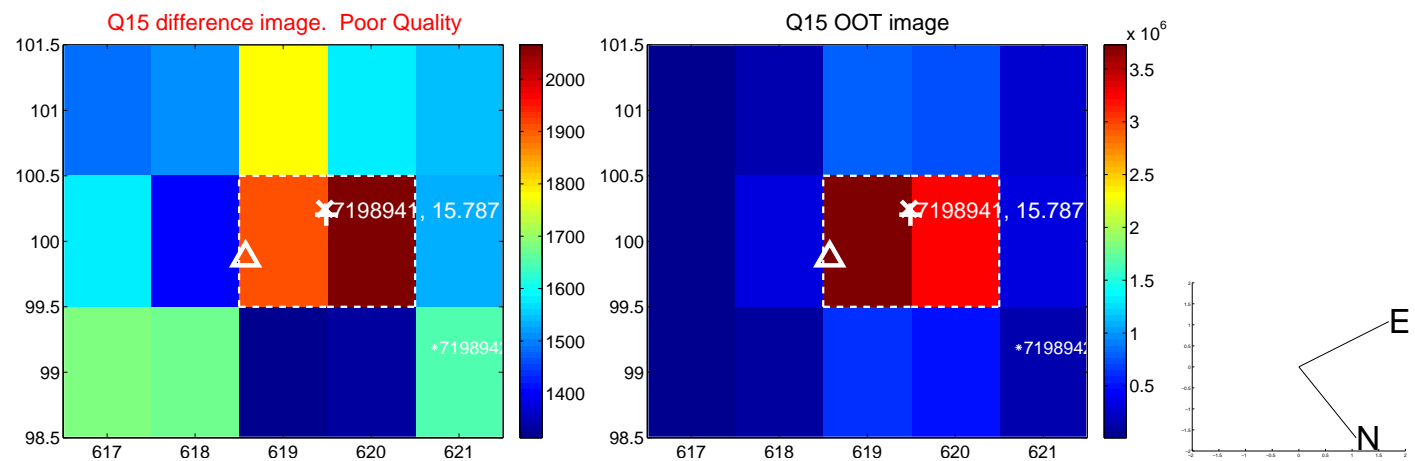
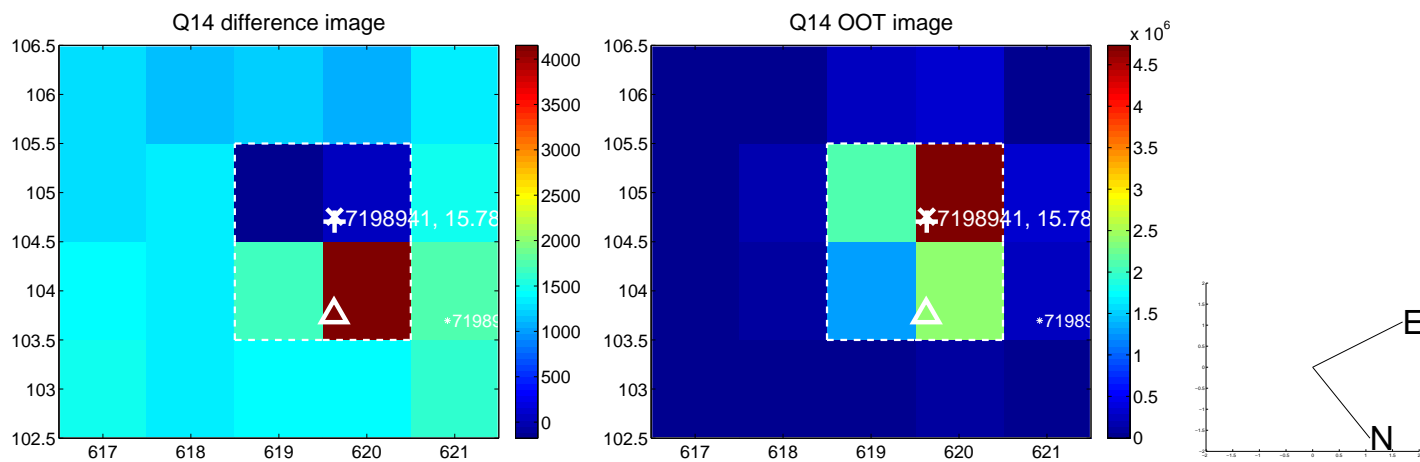
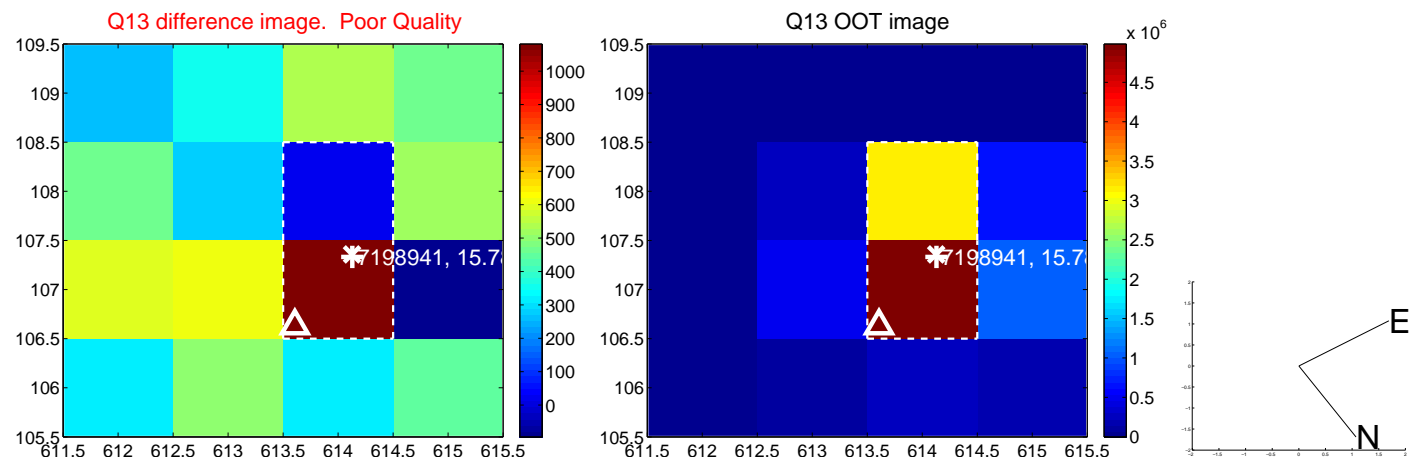
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



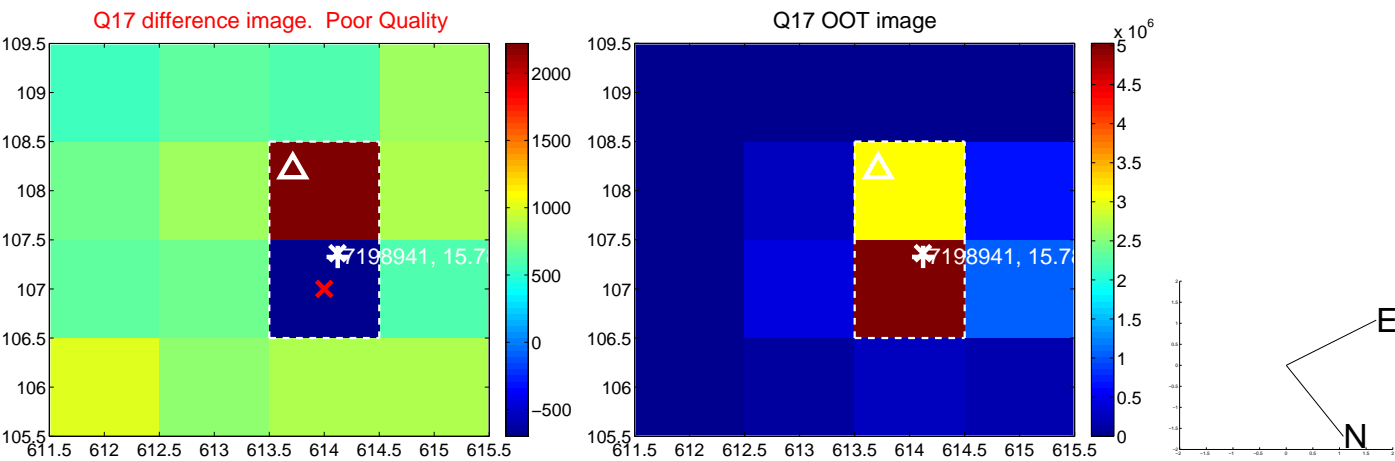
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



white \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

