

KIC 007461963

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})
007461963-01	OBS	No	5.306143	133.281902	27.8	15.000	8.9	-1.0	3.48	8235	1.85	8358.85
007461963-02	OBS	No	5.307546	136.514027	10.7	21.544	10.9	11.2	3.48	8235	1.31	8355.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007461963-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007461963-02	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED

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

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

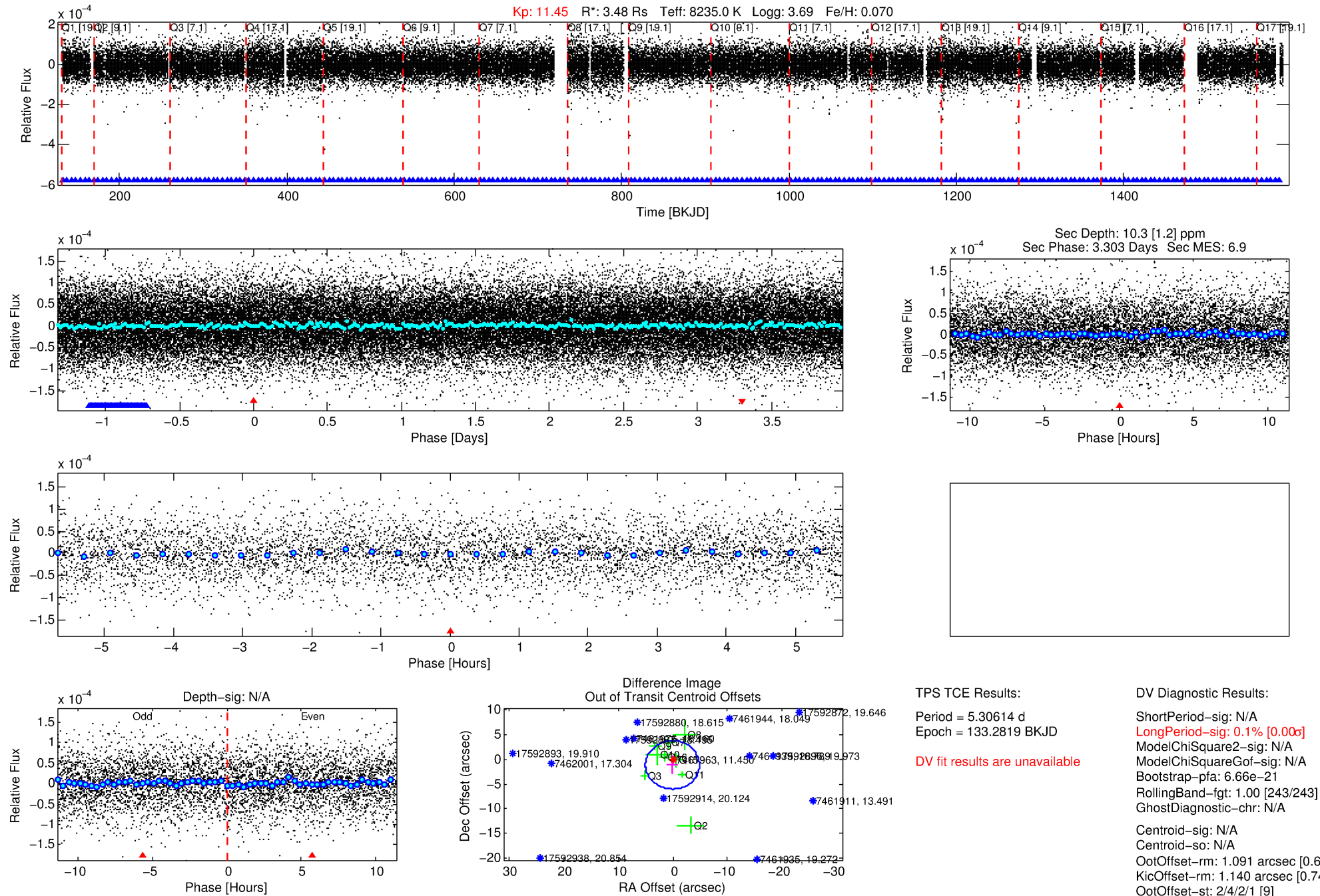
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007461963-01

No Significant Match Found

DV One-Page Summary

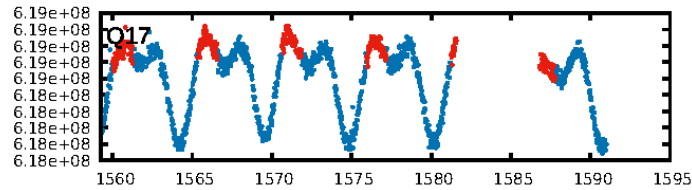
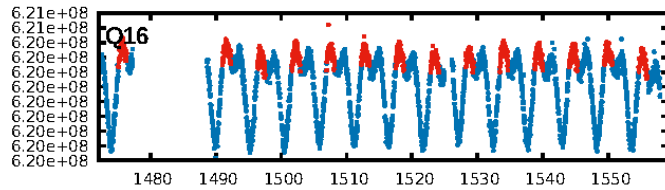
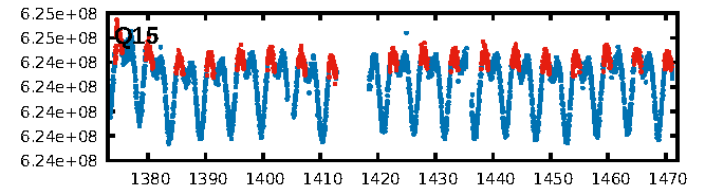
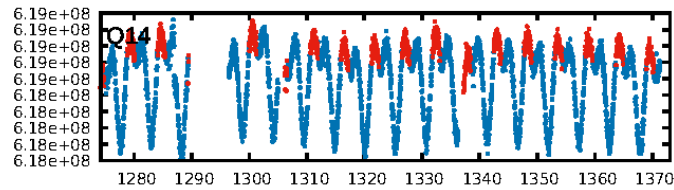
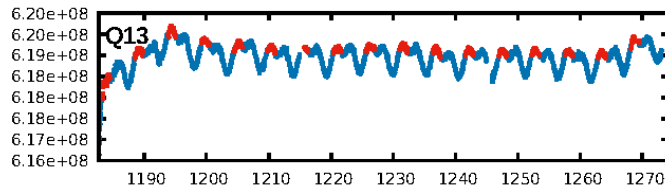
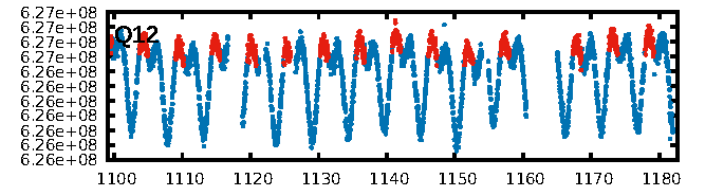
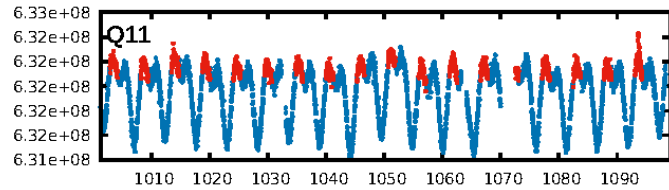
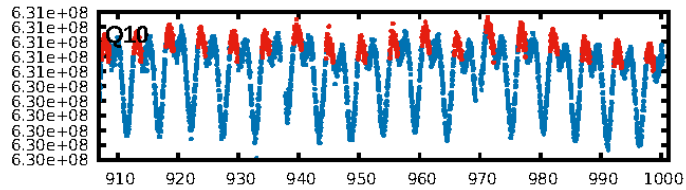
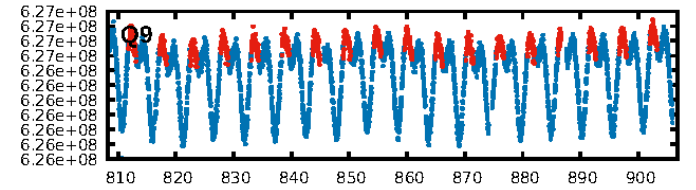
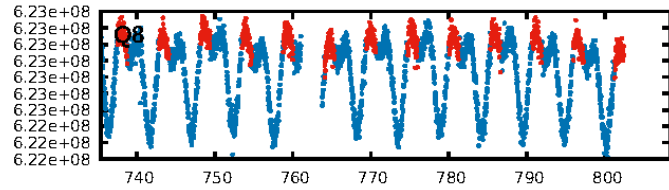
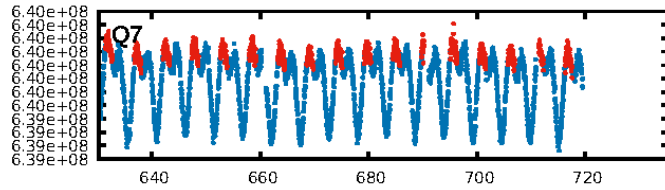
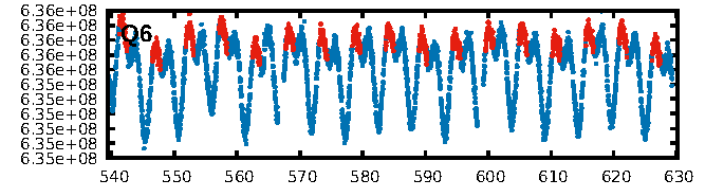
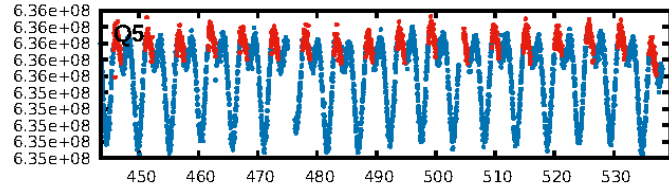
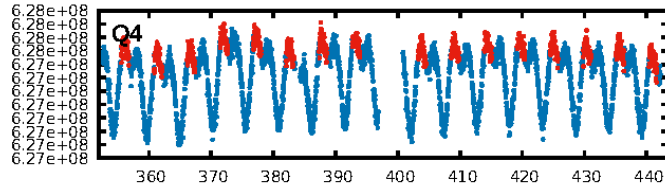
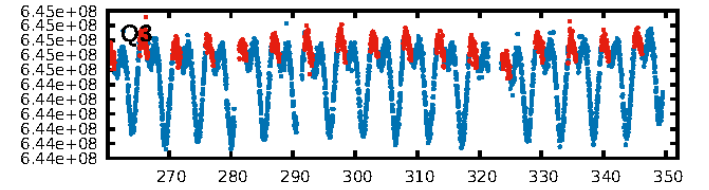
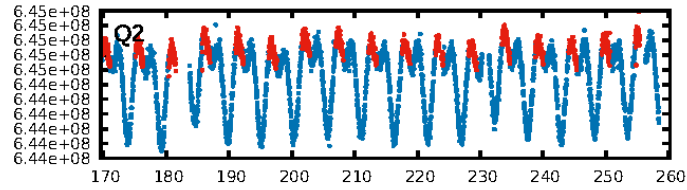
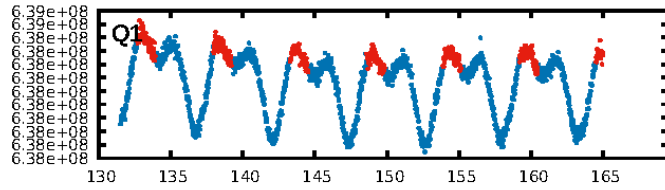
KIC: 7461963 Candidate: 1 of 2 Period: 5.306 d



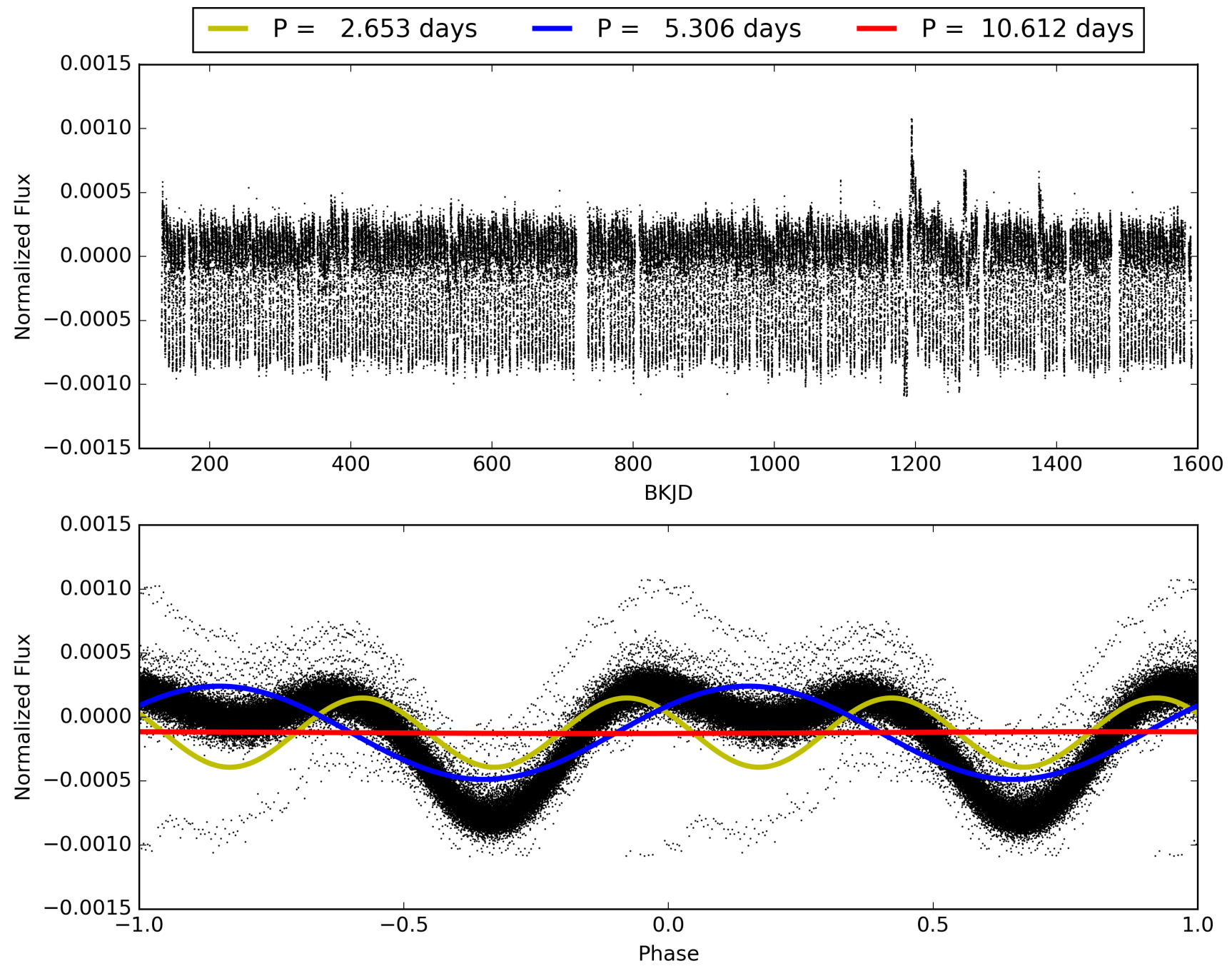
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007461963-01, PDC Light Curves

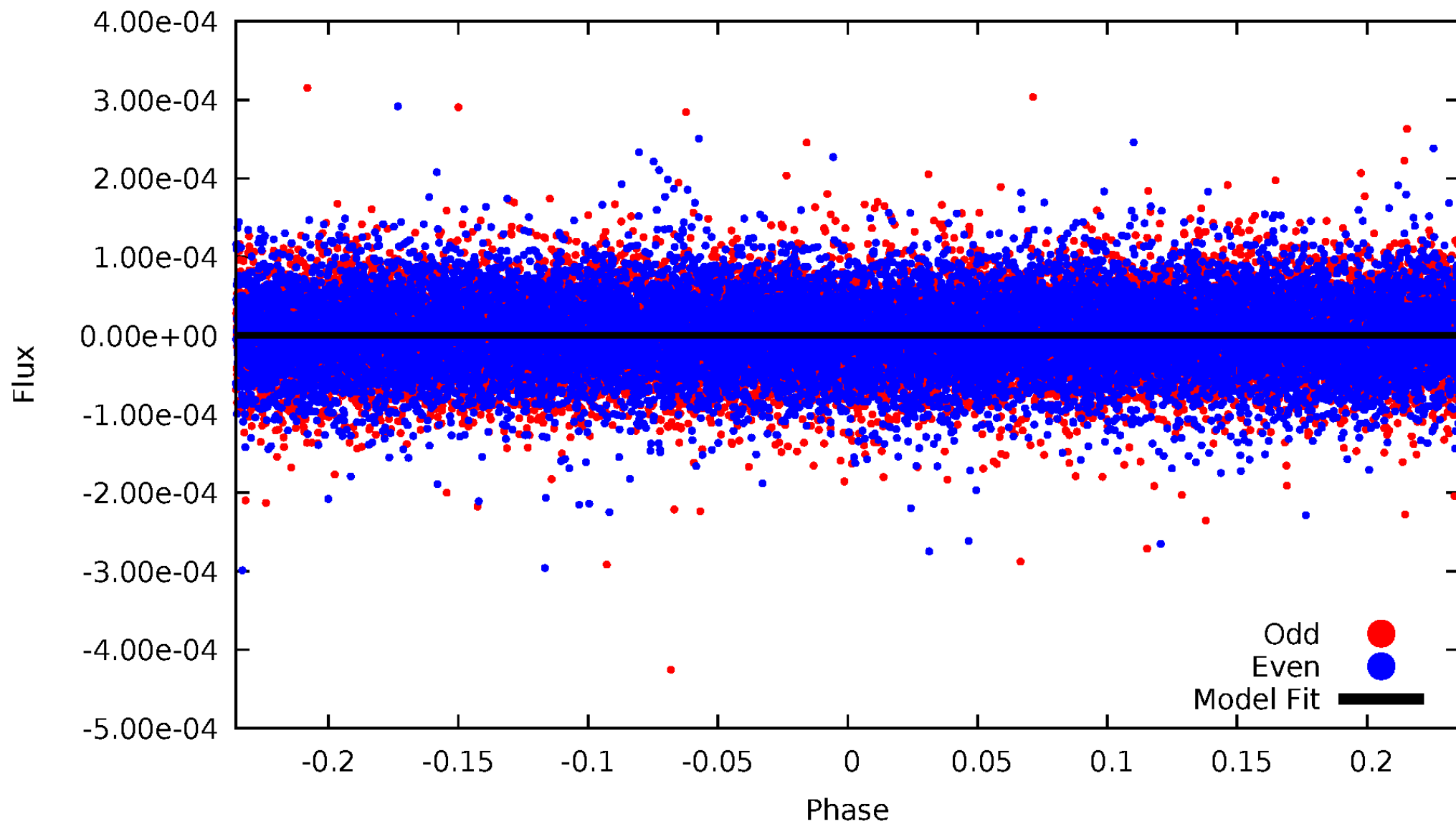


TCE 007461963-01



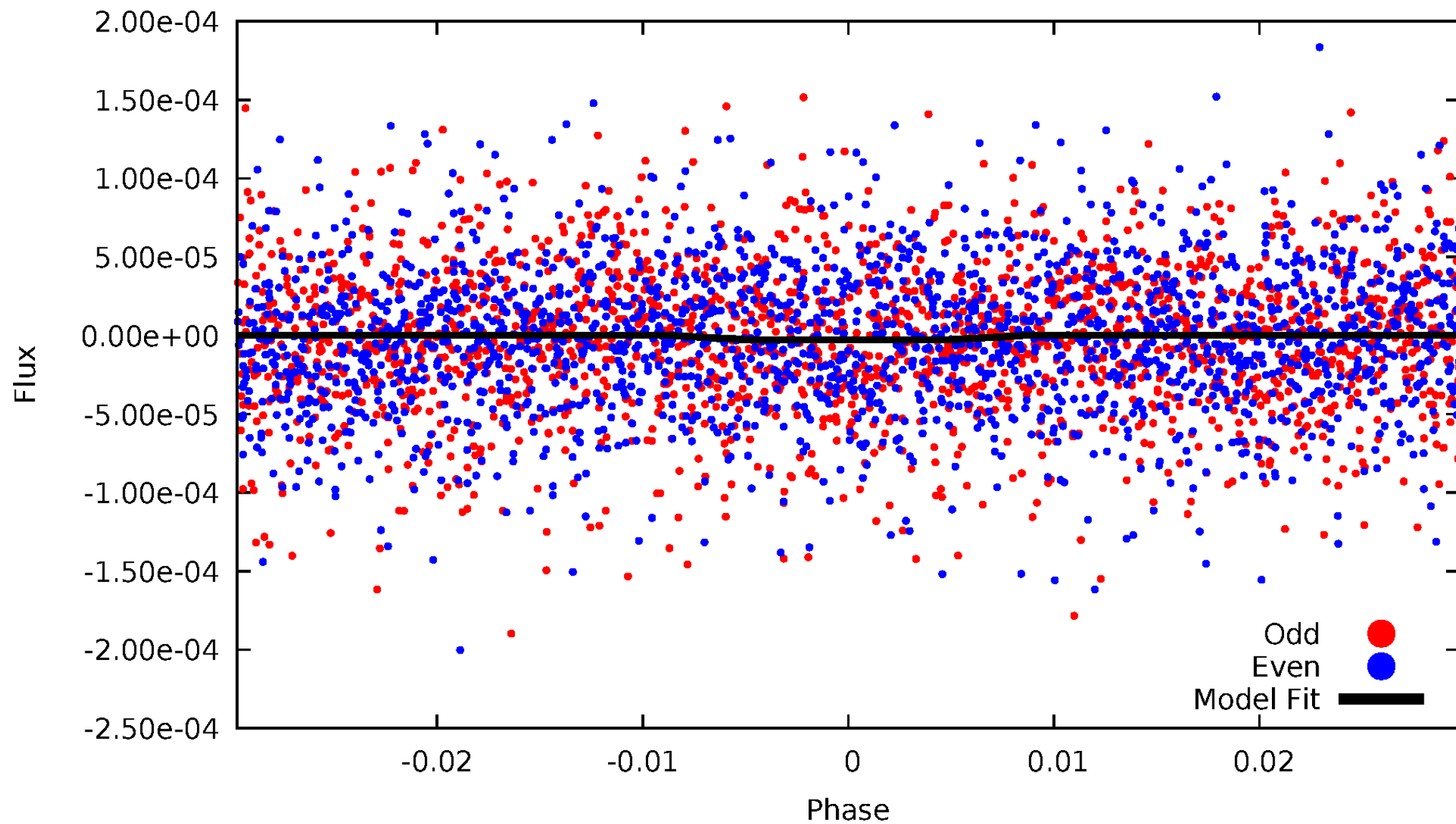
DV Odd/Even

TCE 007461963-01

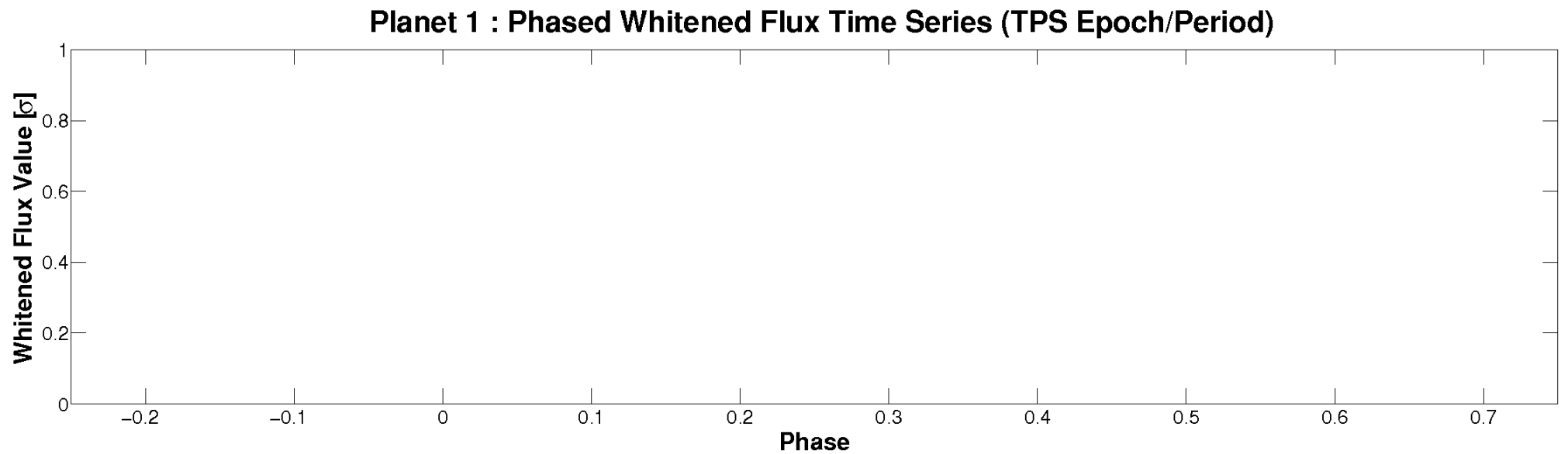
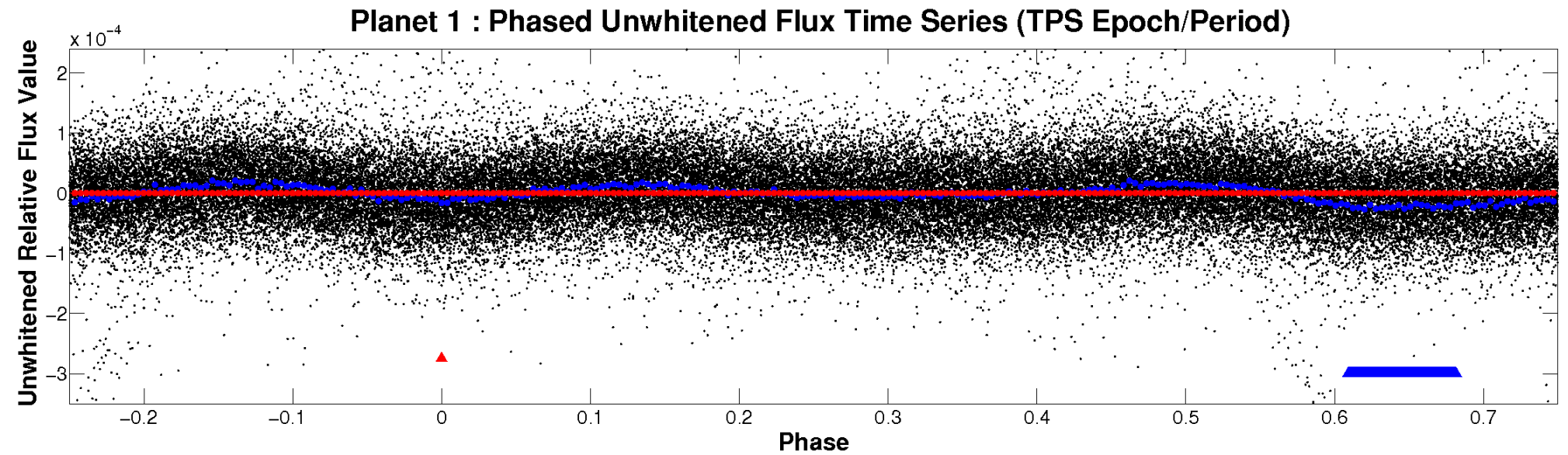


ALT Odd/Even

TCE 007461963-01

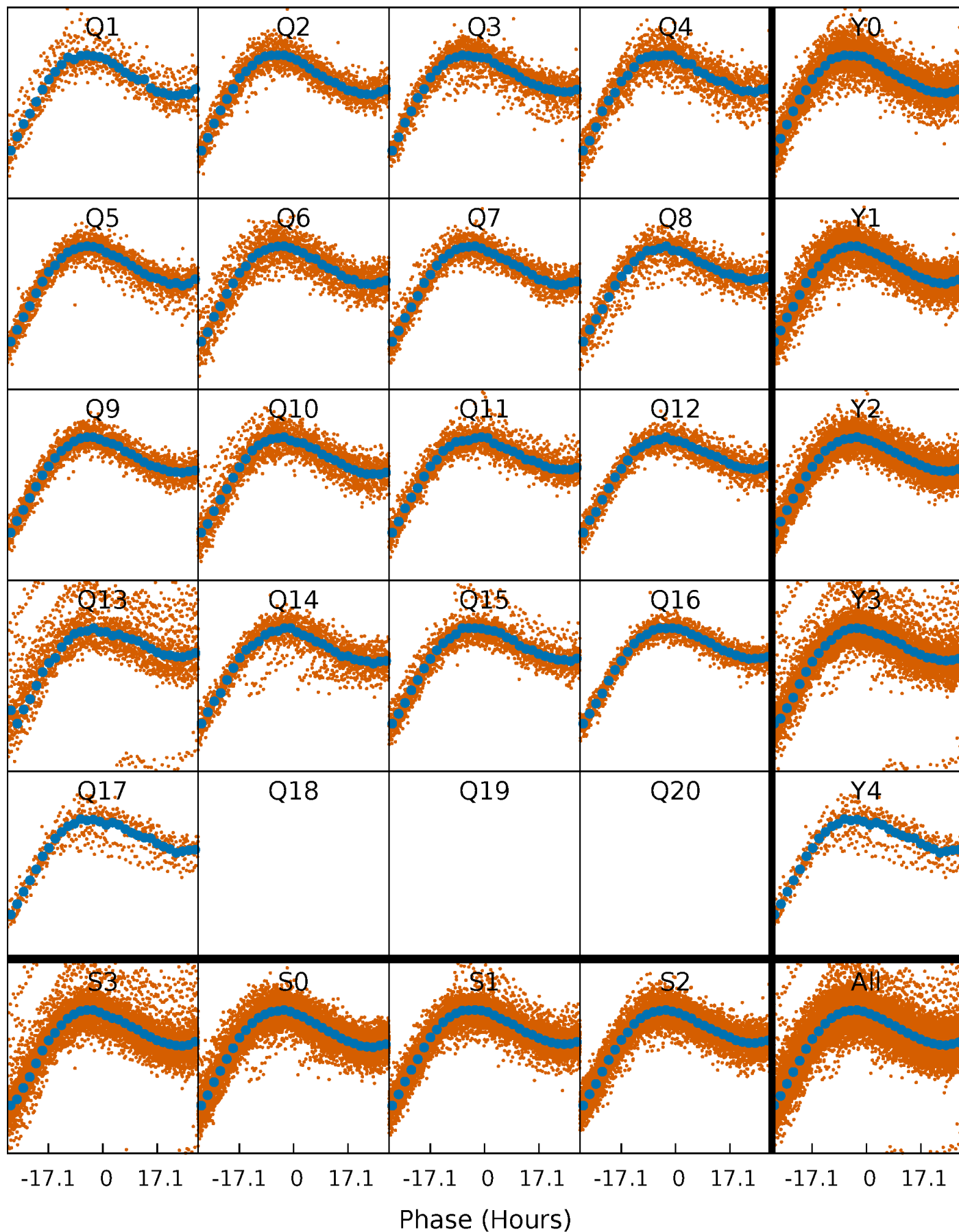


Non-Whitened Vs. Whitened Light Curve



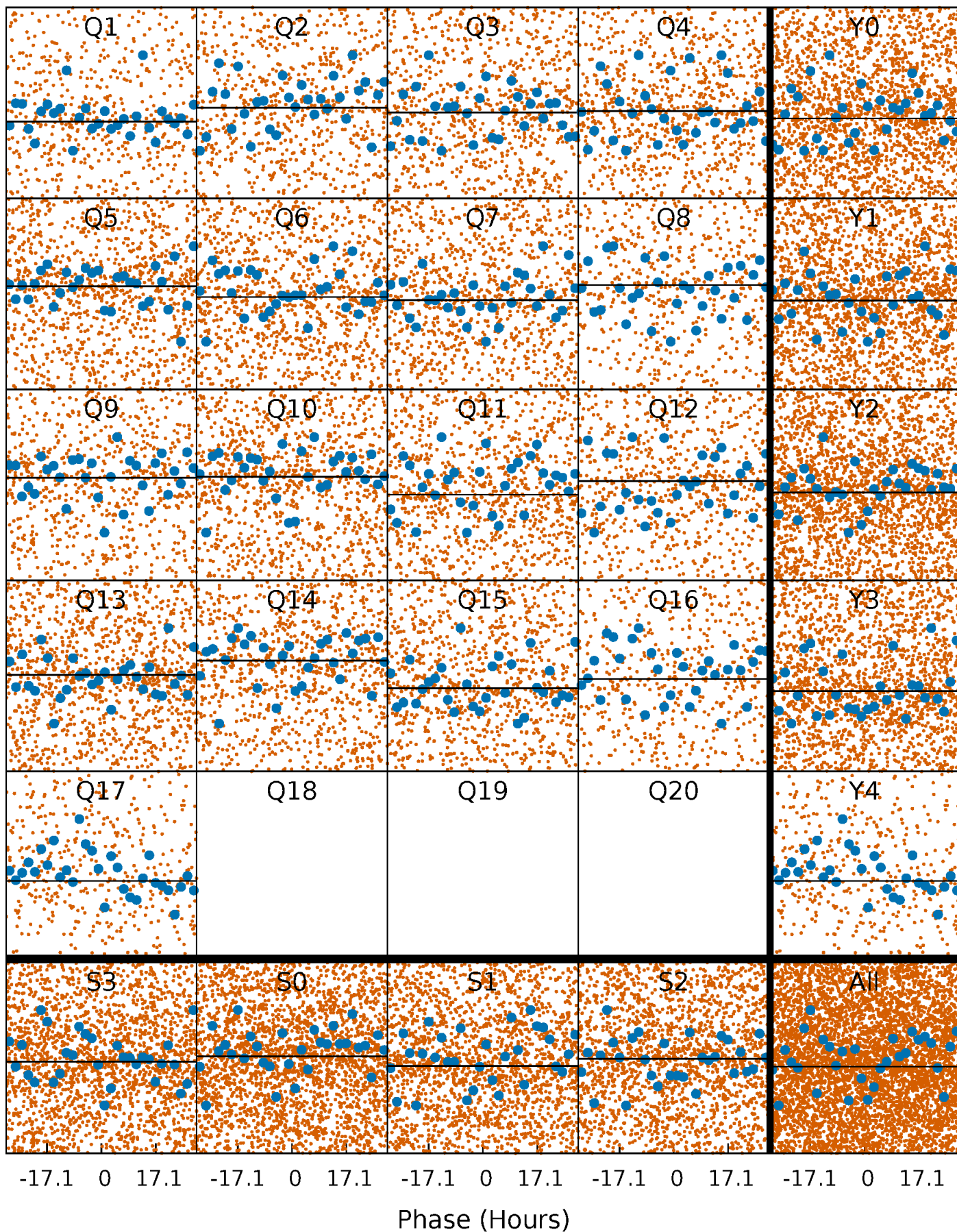
PDC Quarter-Phased Transit Curves

TCE 007461963-01 P= 5.306143 Days $T_0=133.281902$ (BKJD)



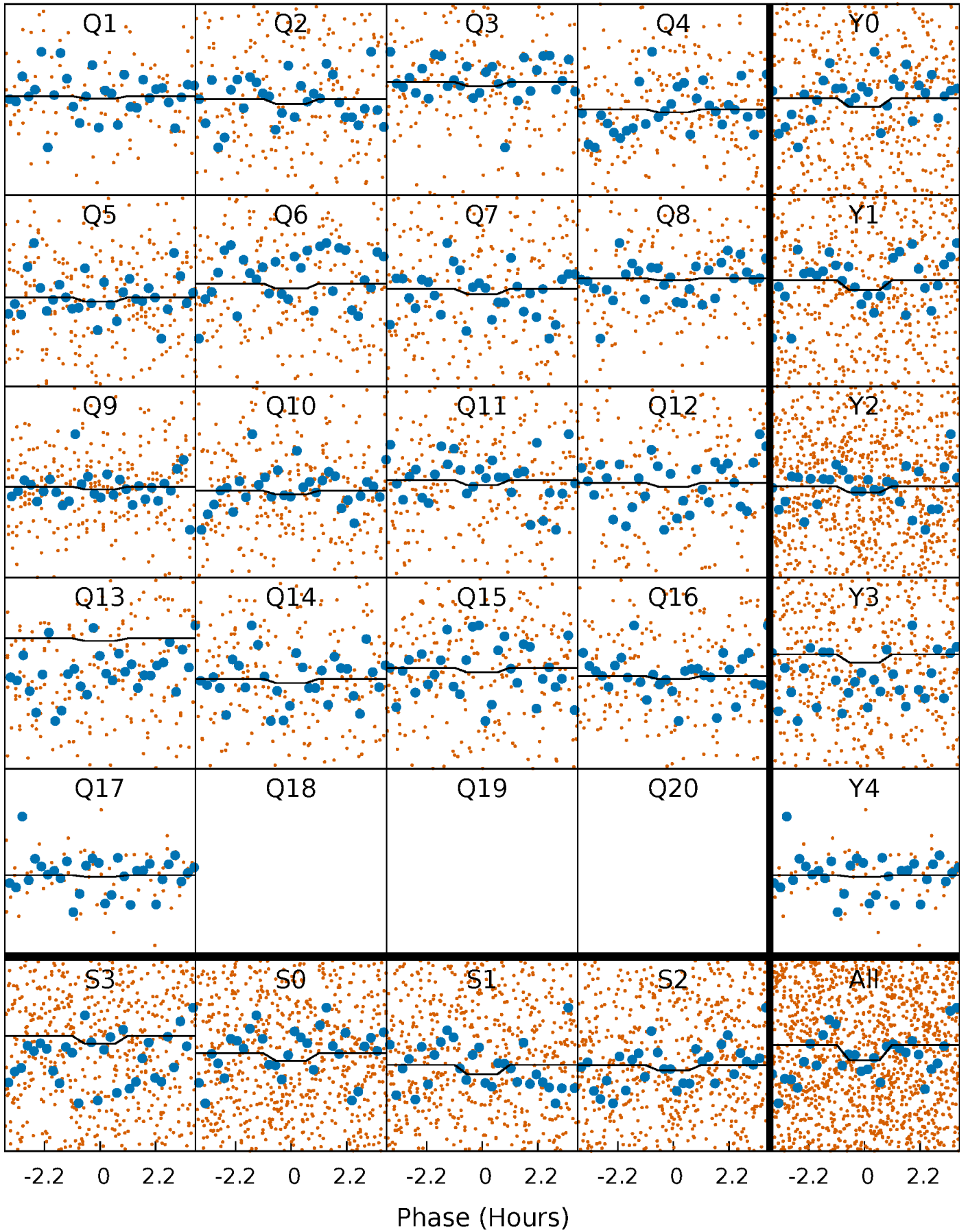
DV Quarter-Phased Transit Curves

TCE 007461963-01 P= 5.306143 Days $T_0=133.281902$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

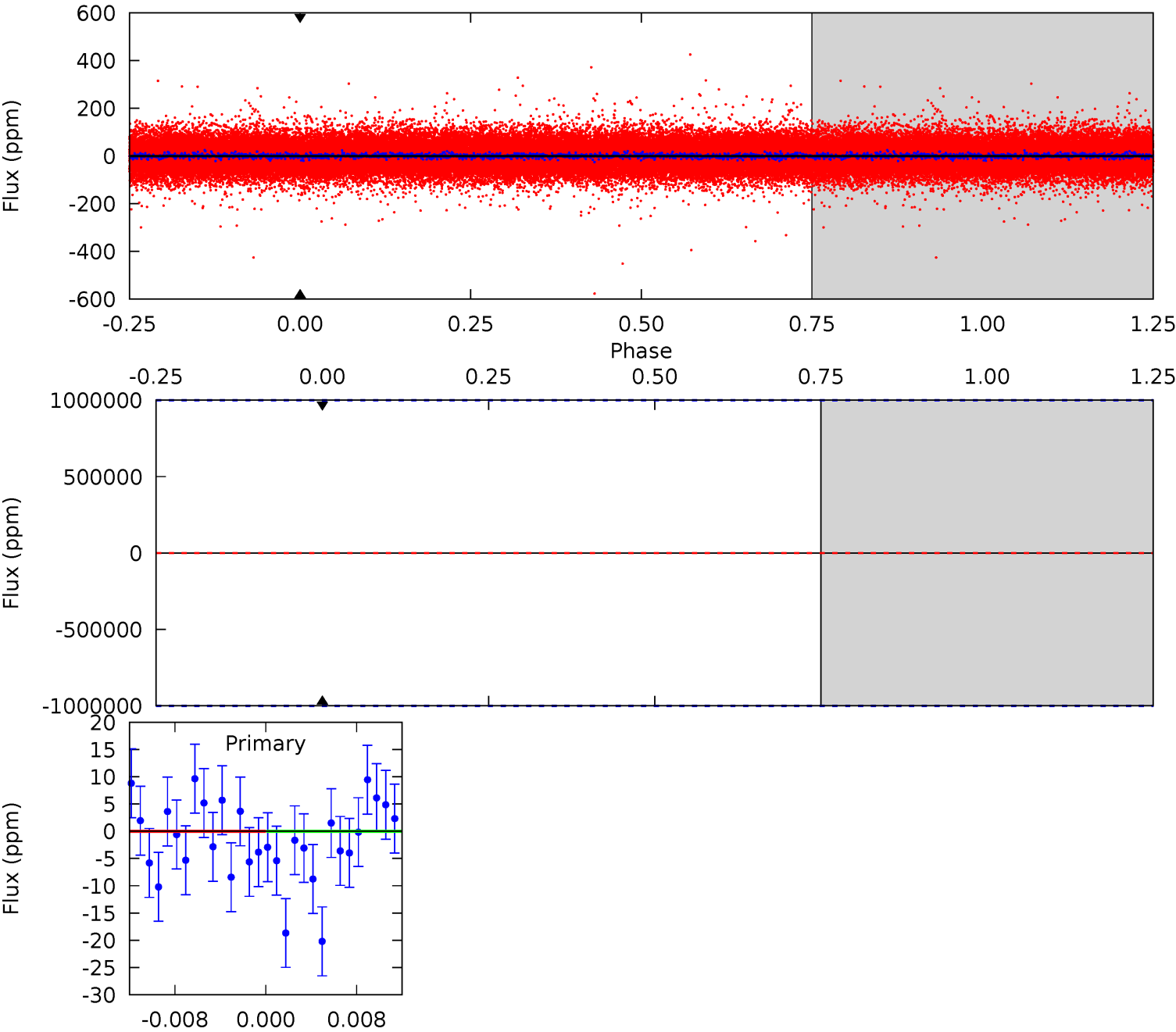
TCE 007461963-01 P= 5.306143 Days $T_0=132.320577$ (BKJD)



DV Model-Shift Uniqueness Test

007461963-01, P = 5.306143 Days, E = 127.975759 Days

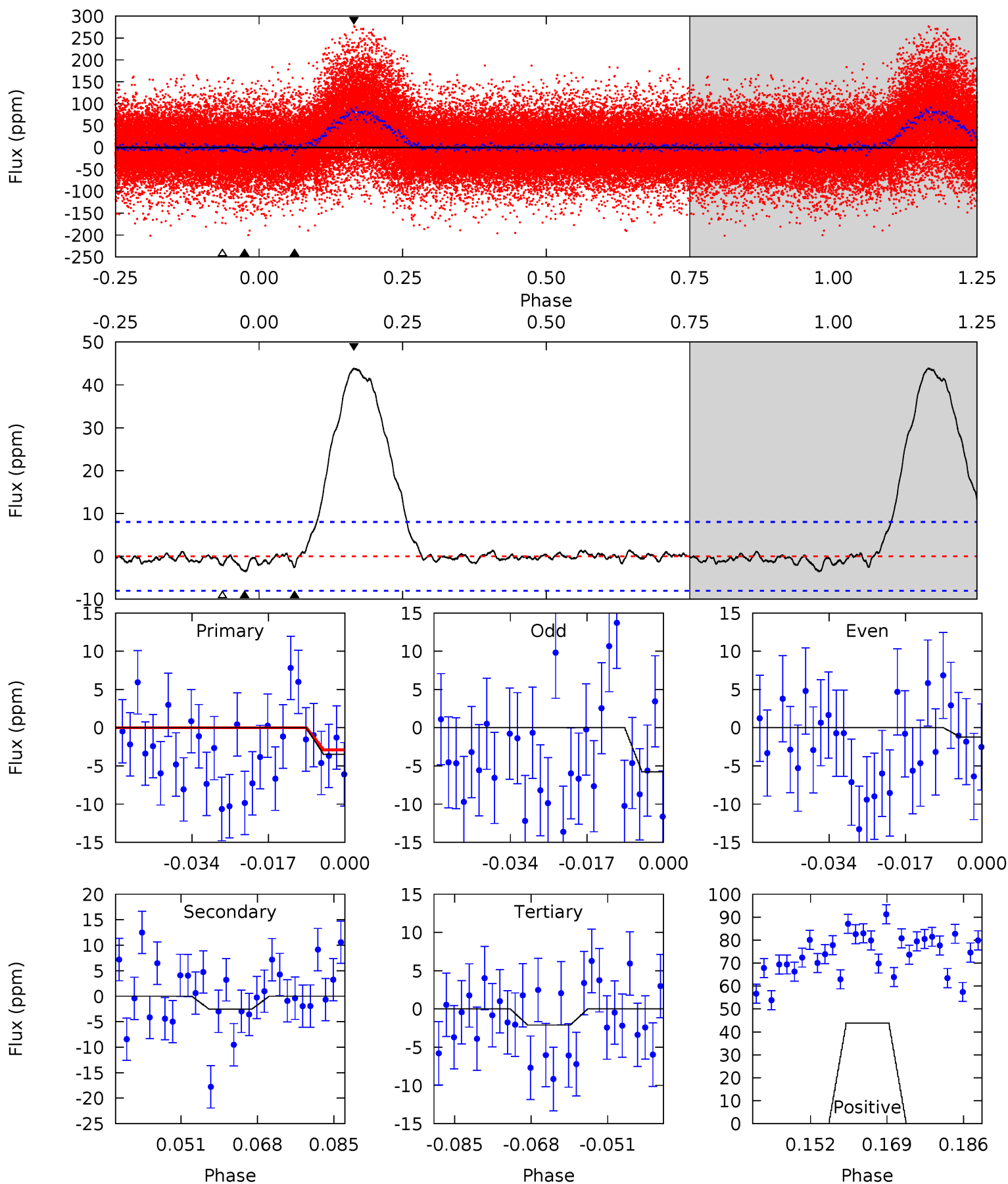
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007461963-01, P = 5.306143 Days, E = 127.014434 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.14	1.56	1.29	26.9	4.92	2.39	7.40	0.85	-24.7	0.27	-25.3	1.40	1.11	0.93	0.36



Stellar Parameters For KIC 007461963

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8235^{+226}_{-388}	$3.694^{+0.427}_{-0.142}$	$0.070^{+0.300}_{-0.400}$	$3.479^{+0.894}_{-1.660}$	$2.181^{+0.362}_{-0.543}$	$0.073^{+0.297}_{-0.030}$
	+3%/-5%	+12%/-4%	+429%/-571%	+26%/-48%	+17%/-25%	+408%/-41%
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 007461963-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$21.99^{+30.34}_{-14.93}$	3295^{+295}_{-383}	-6465^{+76557}_{-44324}	$-9.628^{+1391.956}_{-1036.069}$
Alt.	-3 ± 2	$24.33^{+26.44}_{-17.35}$	3294^{+280}_{-360}	-3137^{+376}_{-204}	$0.012^{+0.123}_{-0.010}$

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

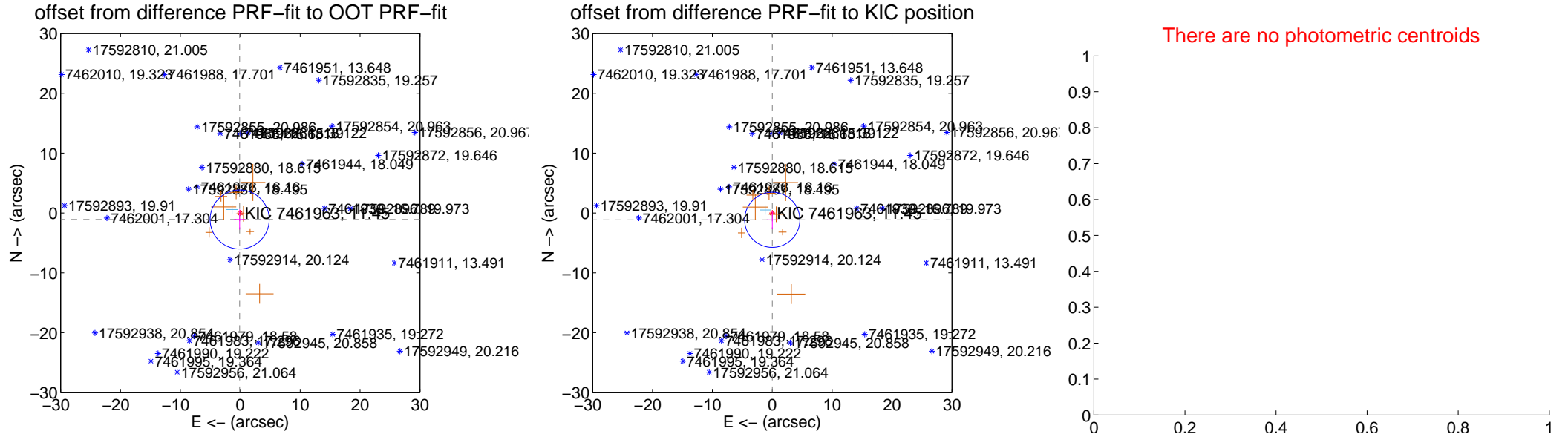
DV Centroid Data

Supplemental centroid analysis for 007461963-01. **Kepler magnitude: 11.45.** Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

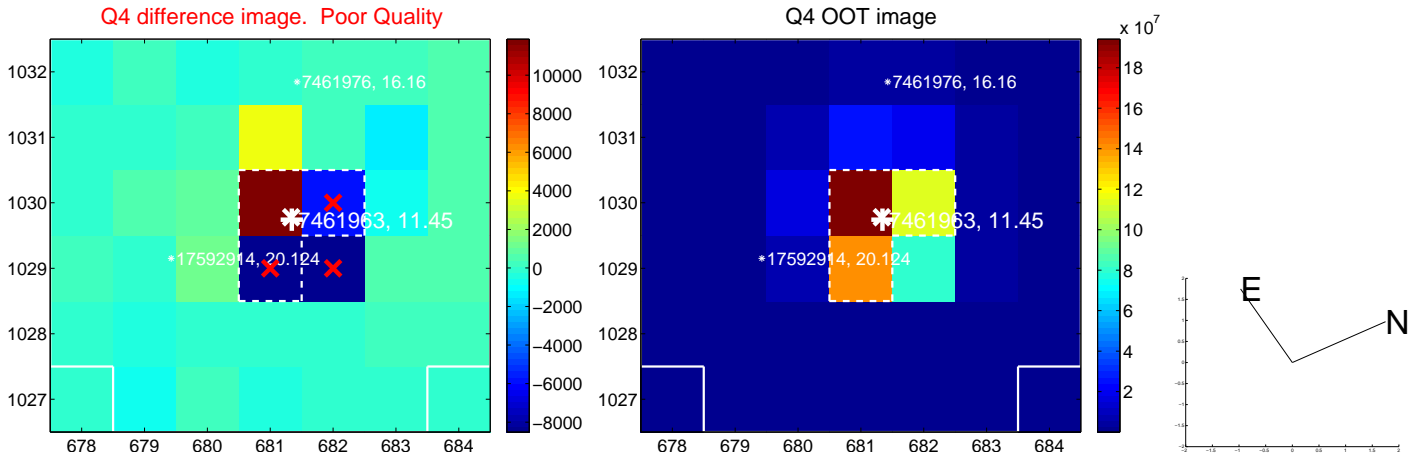
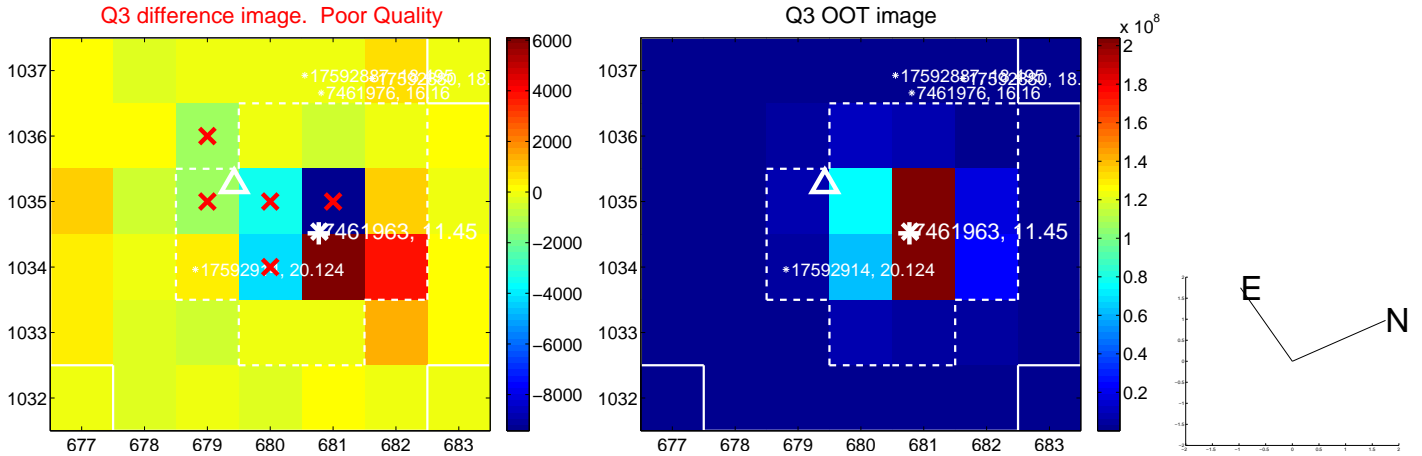
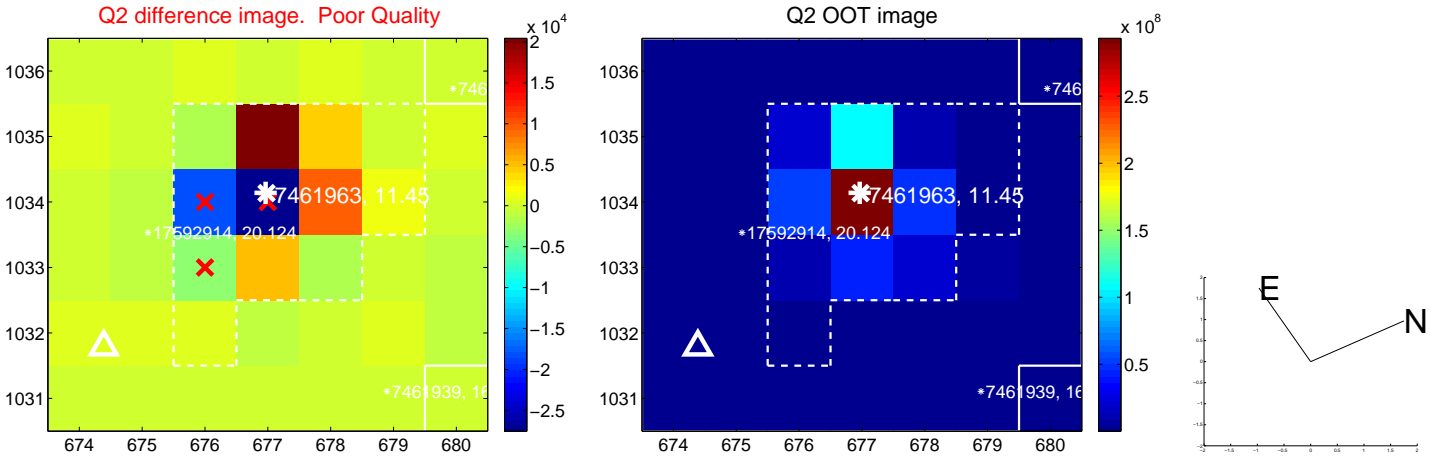
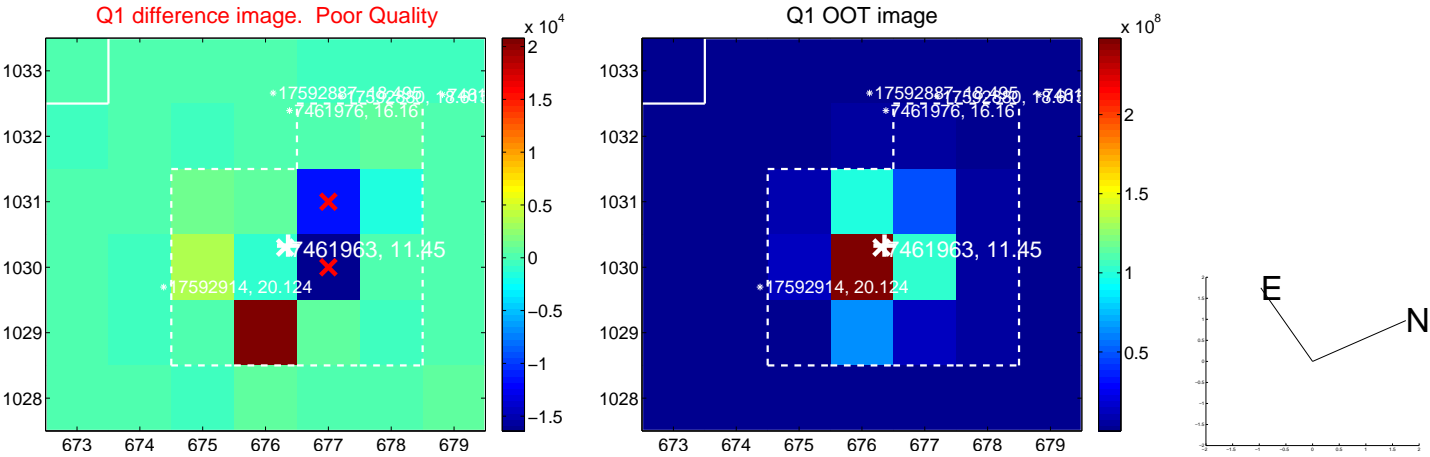
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.091 ± 1.645	0.66	0.104 ± 0.914	-1.086 ± 1.678
PRF-fit source offset from KIC position	1.140 ± 1.536	0.74	-0.000 ± 0.935	-1.140 ± 1.536
photometric centroid source offset	—	—	—	—

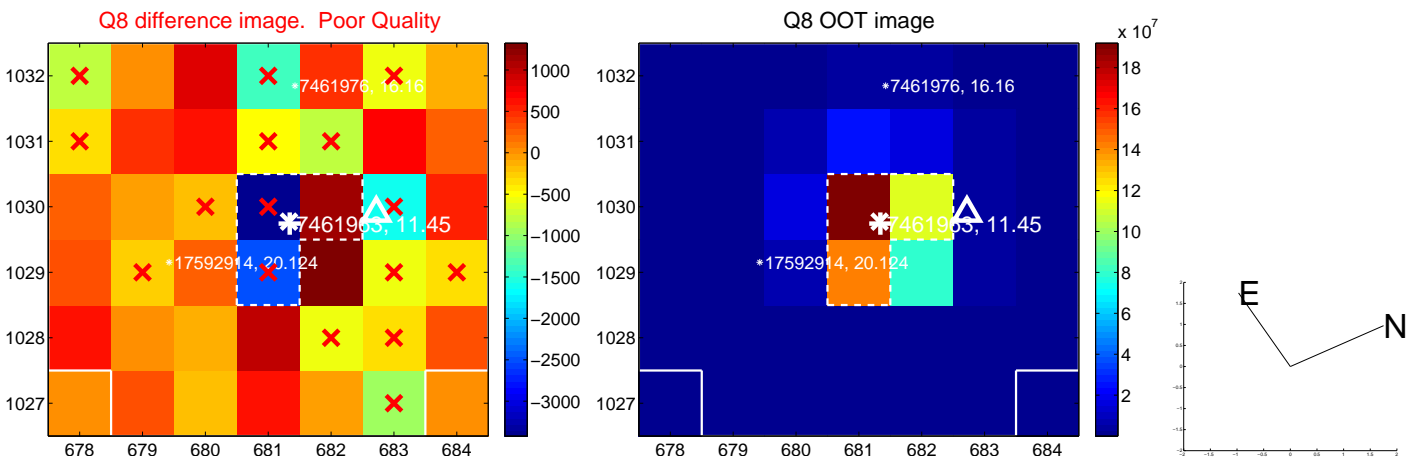
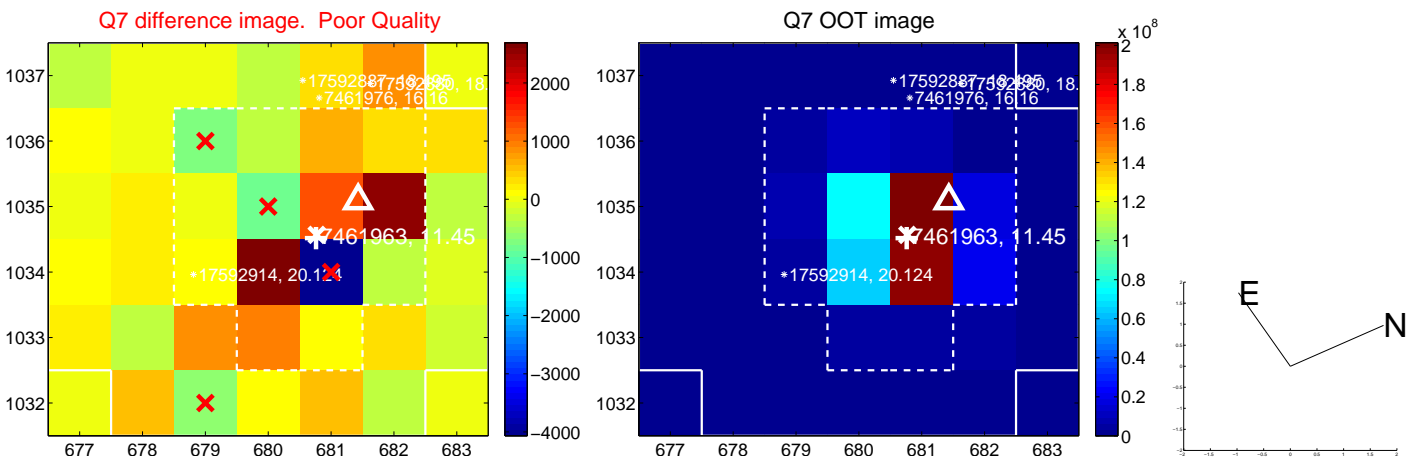
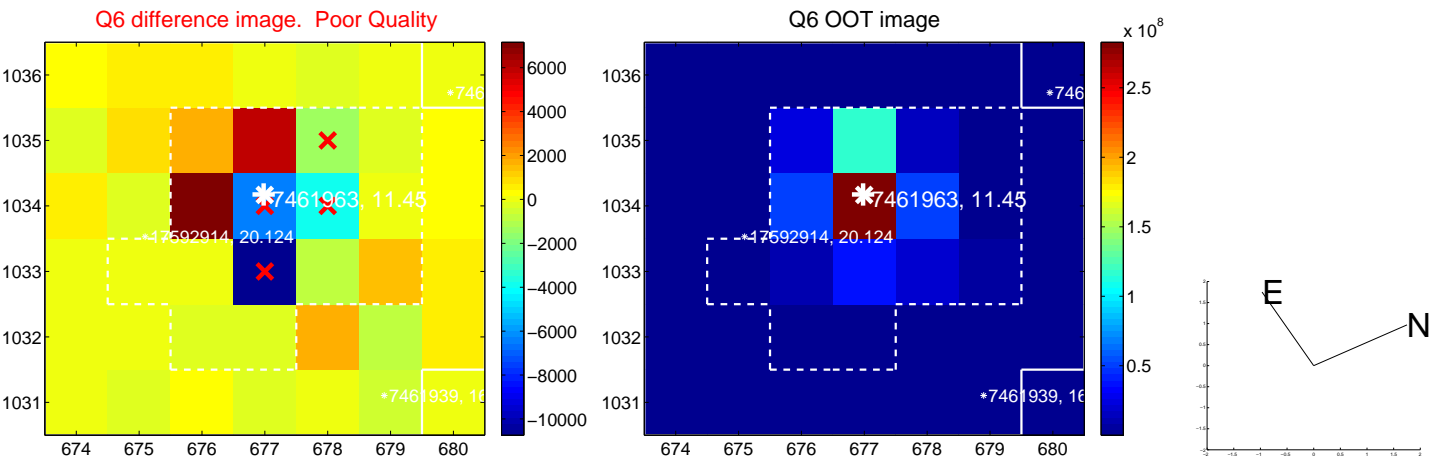
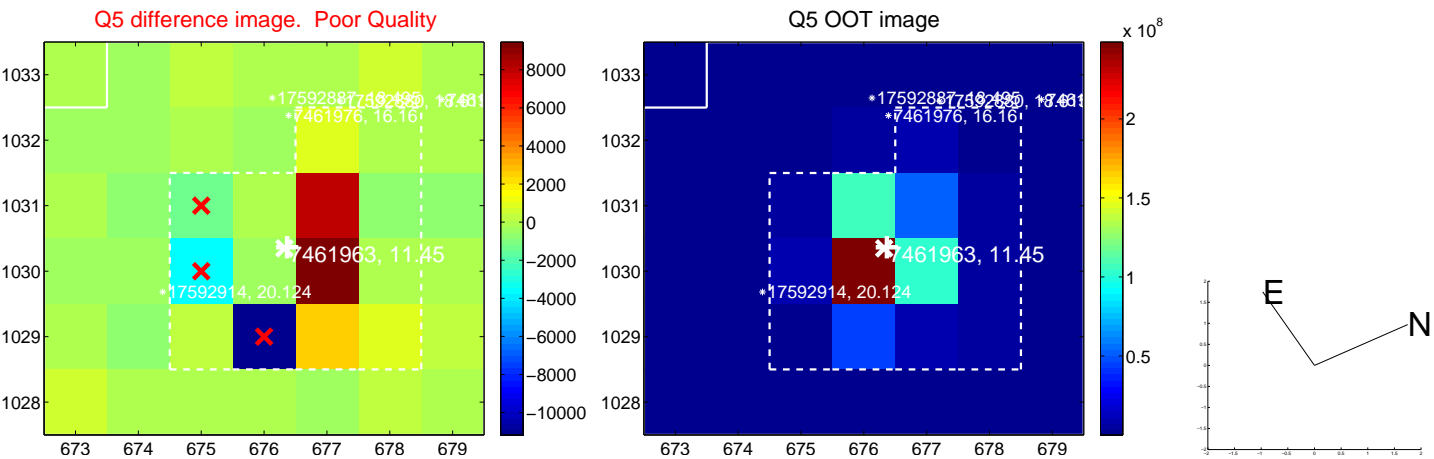


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

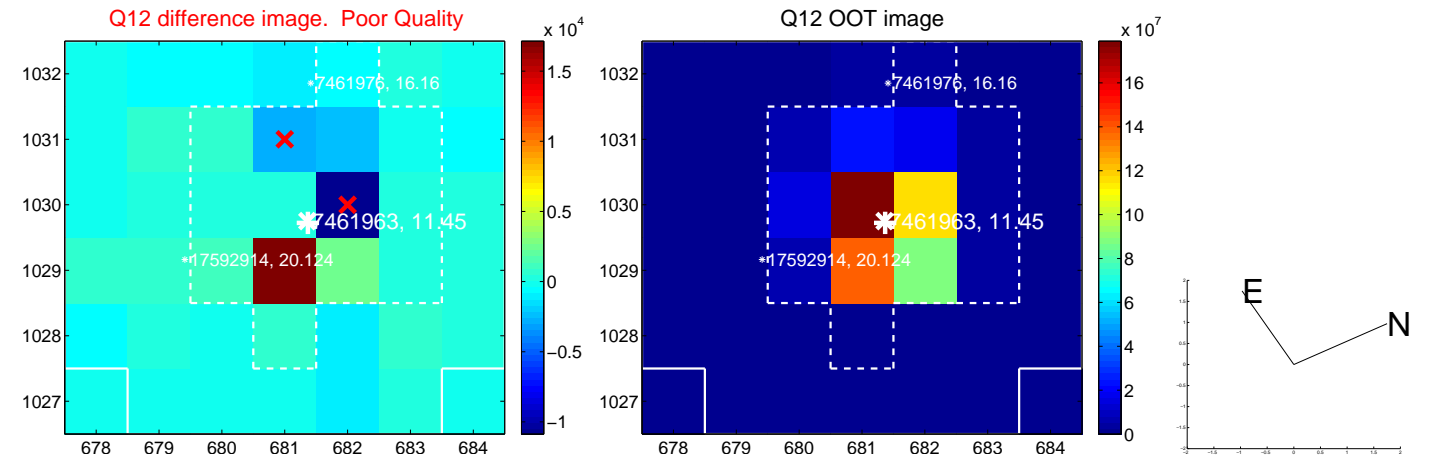
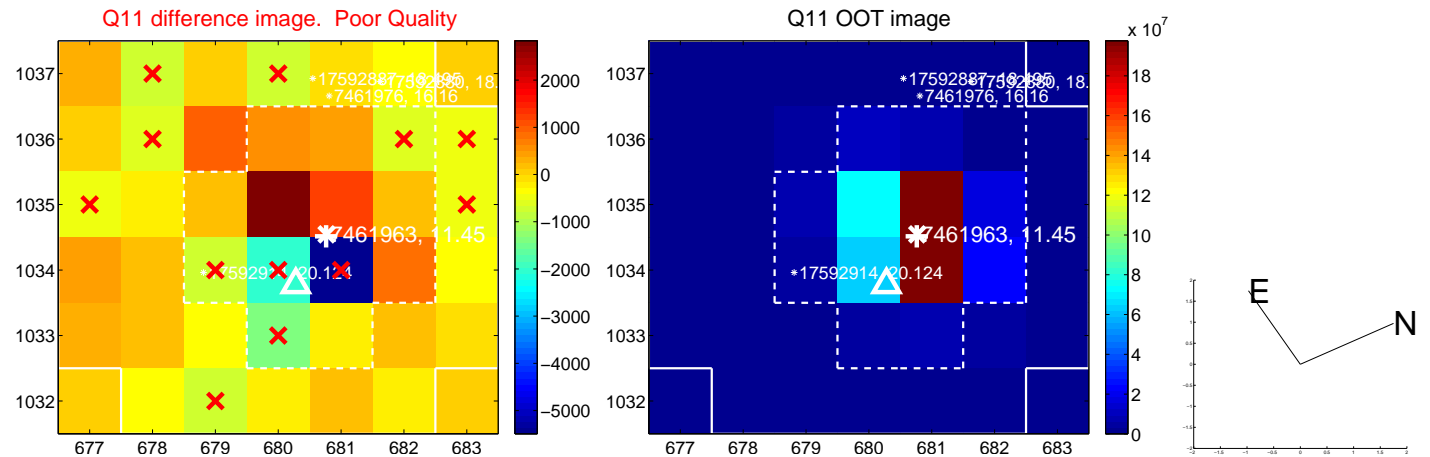
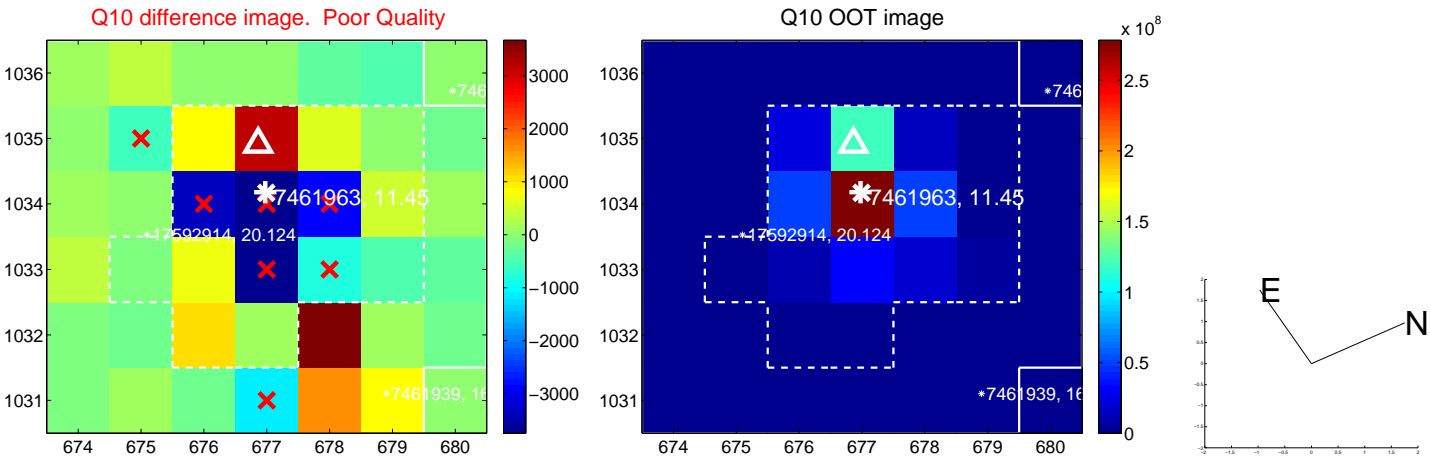
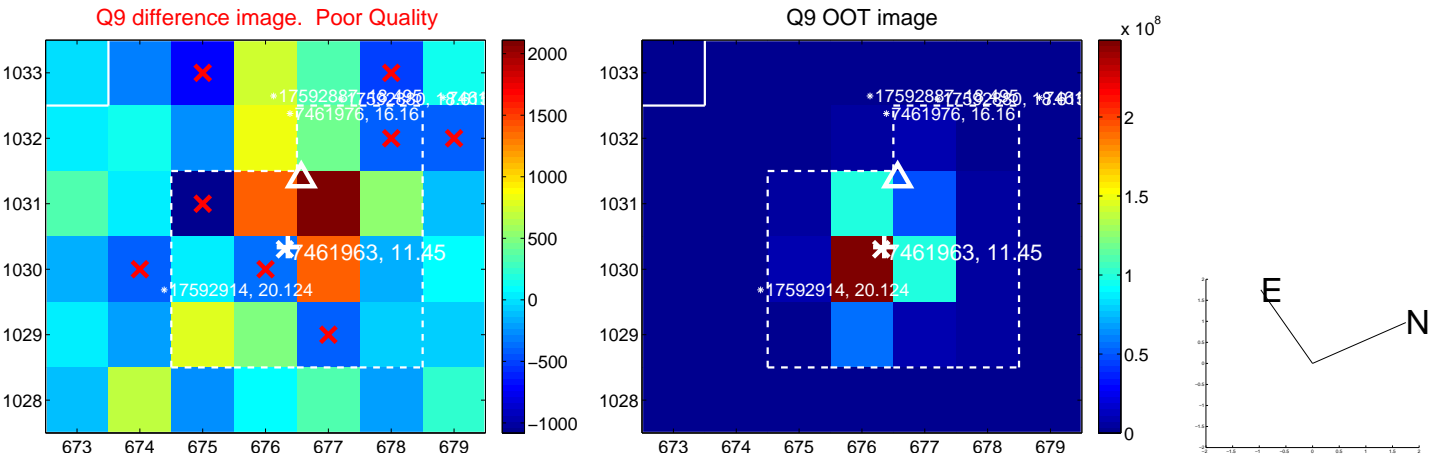
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



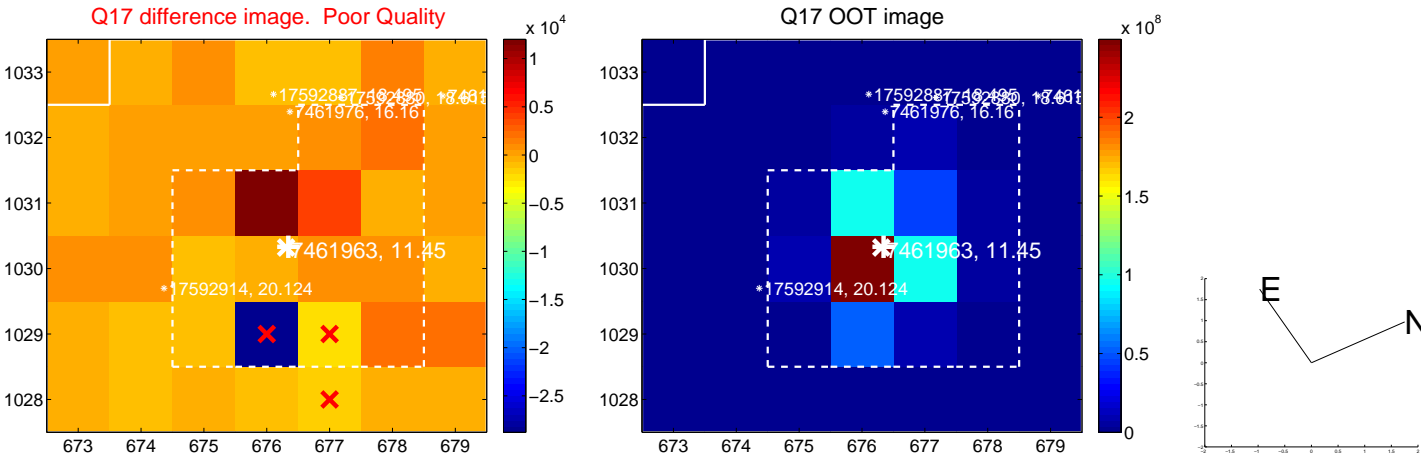
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



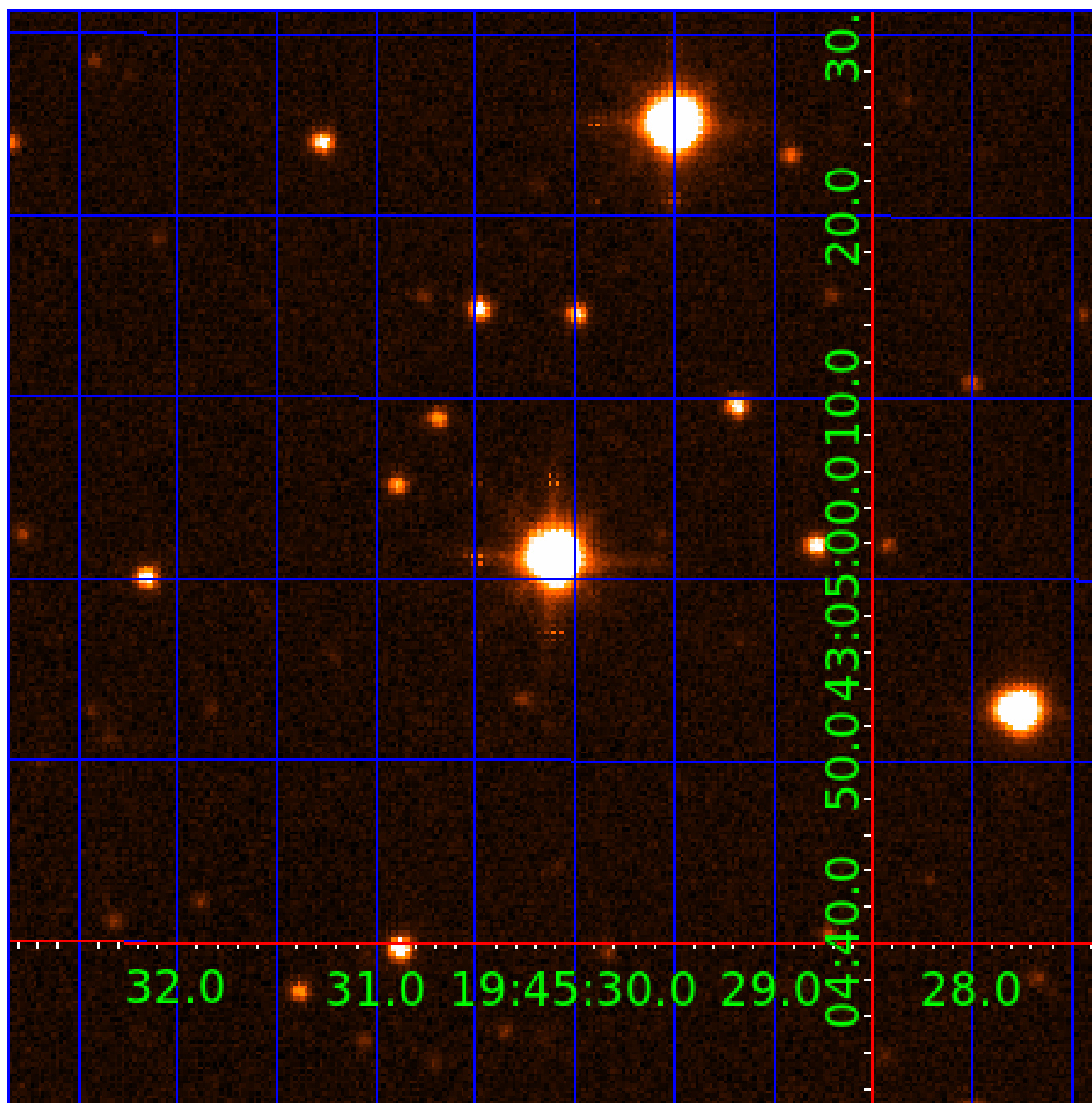
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 007461963

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

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

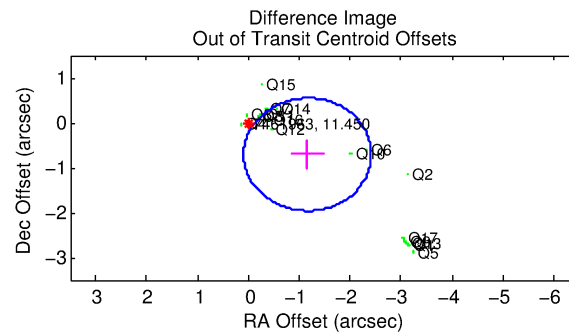
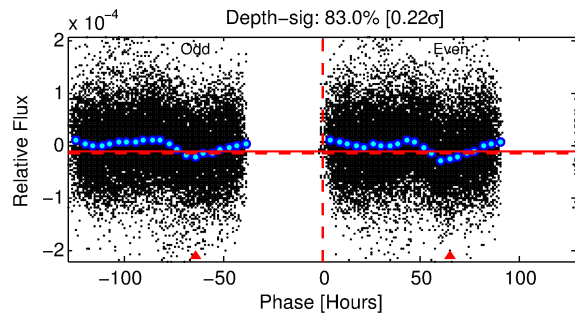
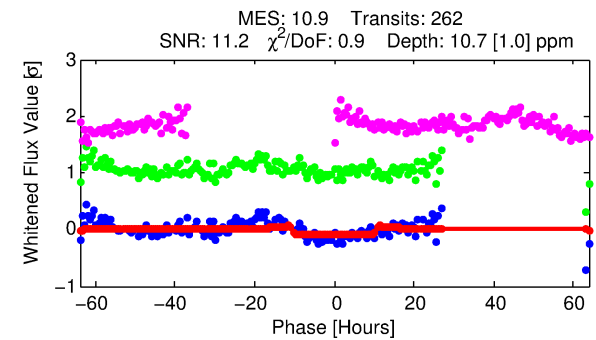
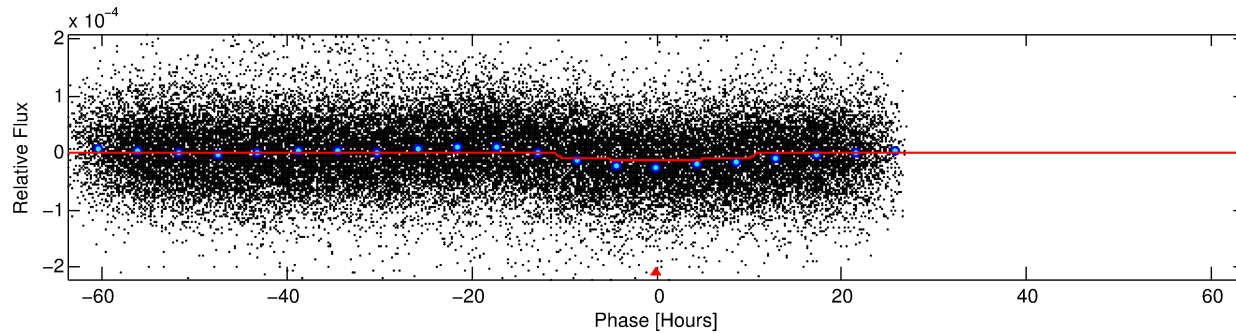
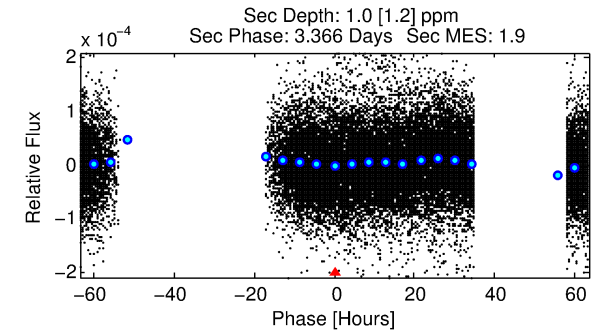
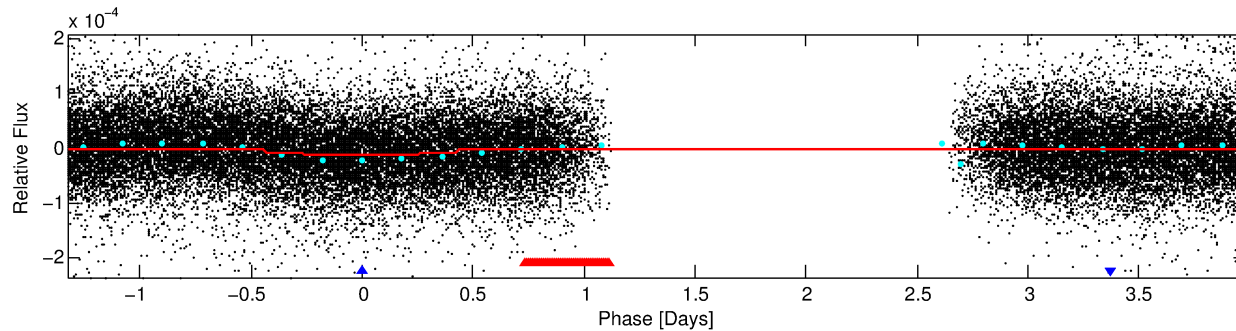
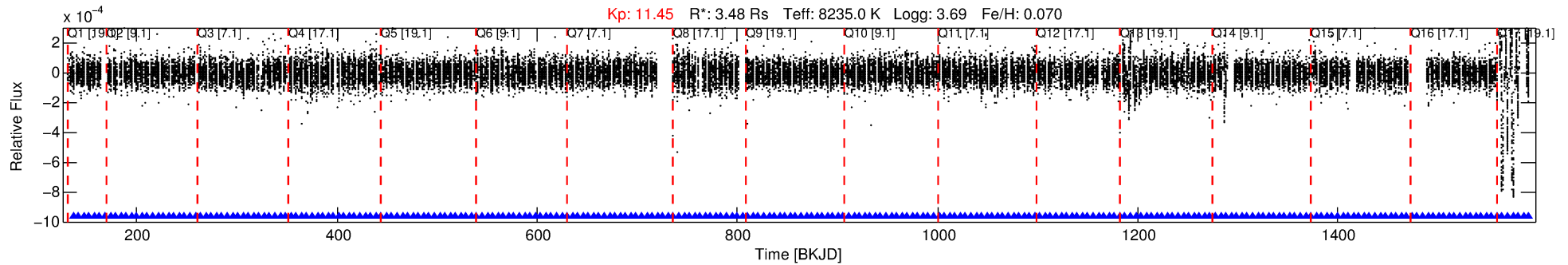
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007461963-02

No Significant Match Found

DV One-Page Summary

KIC: 7461963 Candidate: 2 of 2 Period: 5.308 d



DV Fit Results:

Period = 5.30755 [0.00008] d
Epoch = 136.5140 [0.0110] BKJD
Rp/R* = 0.0035 [0.0003]
a/R* = 1.28 [0.25]
b = 0.89 [0.12]
Seff = 8355.90 [6288.31]
Teff = 2438 [459] K
Rp = 1.32 [0.64] Re
a = 0.0773 [0.0353] AU
Ag = 1.87 [2.61] [0.33σ]
Teffp = 4409 [1328] K [1.40σ]

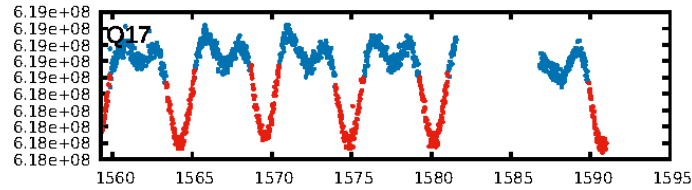
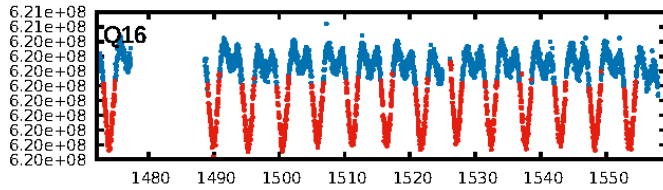
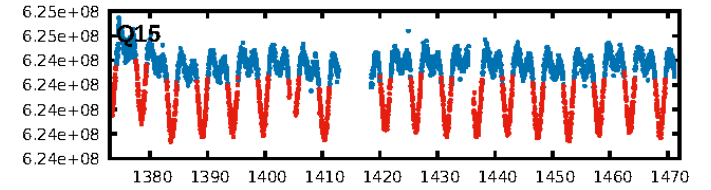
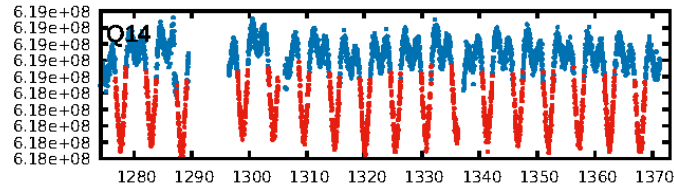
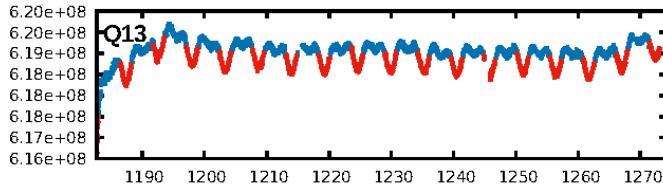
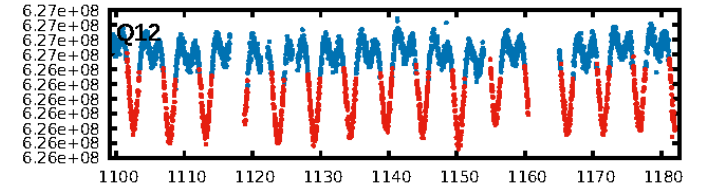
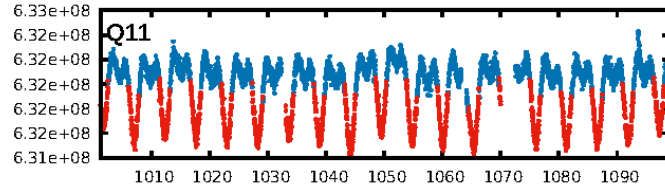
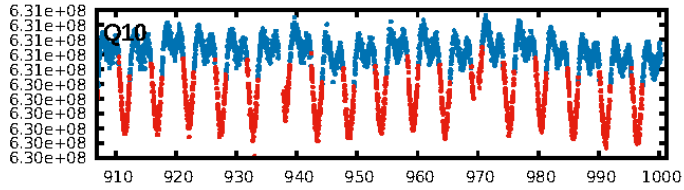
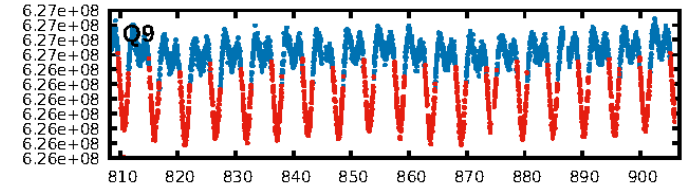
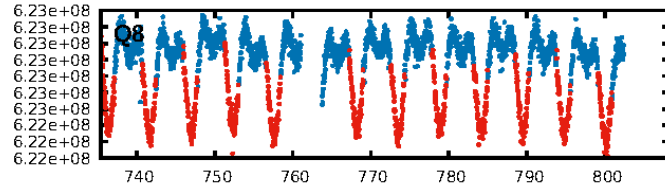
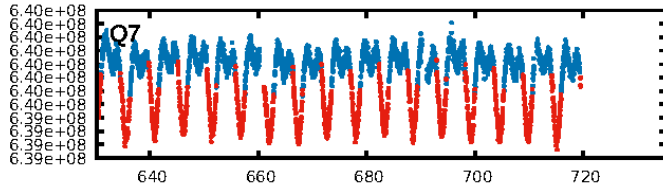
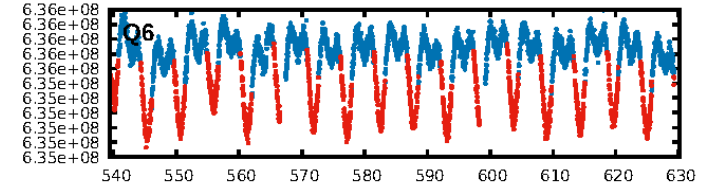
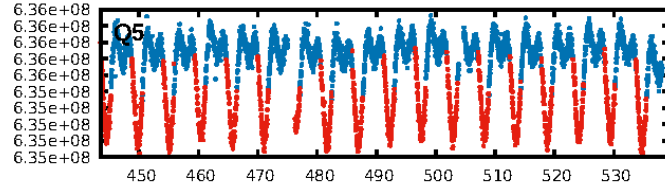
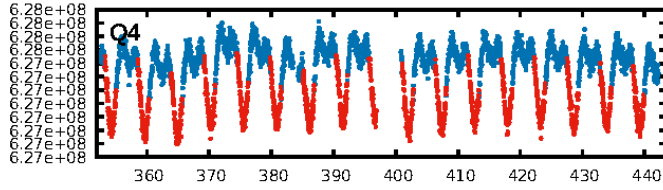
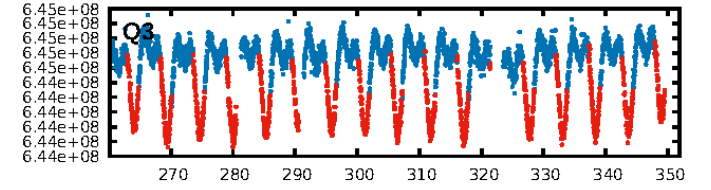
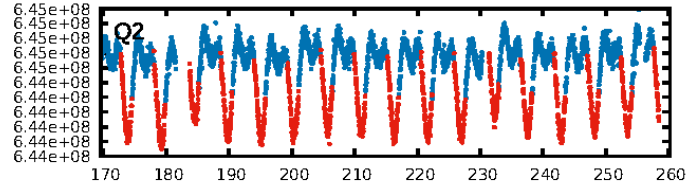
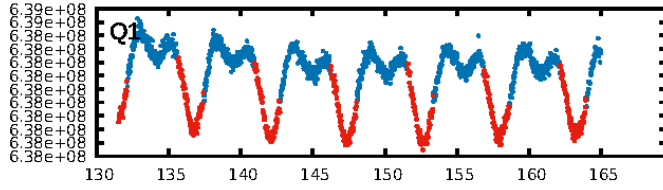
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.19e-30
RollingBand-fgt: 1.00 [249/249]
GhostDiagnostic-chr: 0.5911
Centroid-sig: 0.0%
Centroid-so: 4.137 arcsec [3.86σ]
OotOffset-rm: 1.360 arcsec [3.25σ]
KicOffset-rm: 1.417 arcsec [3.52σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

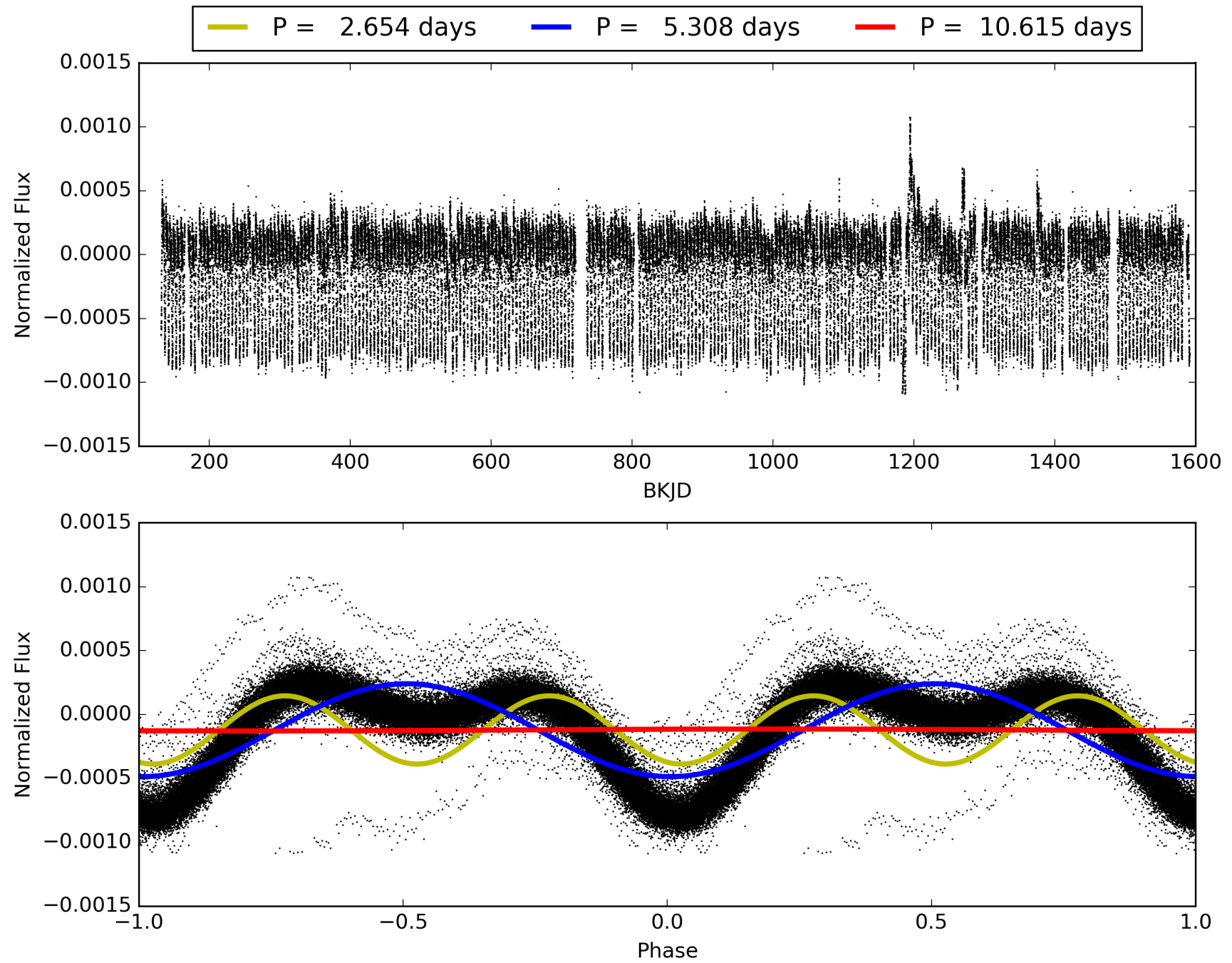
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:16:16 Z

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

TCE 007461963-02, PDC Light Curves

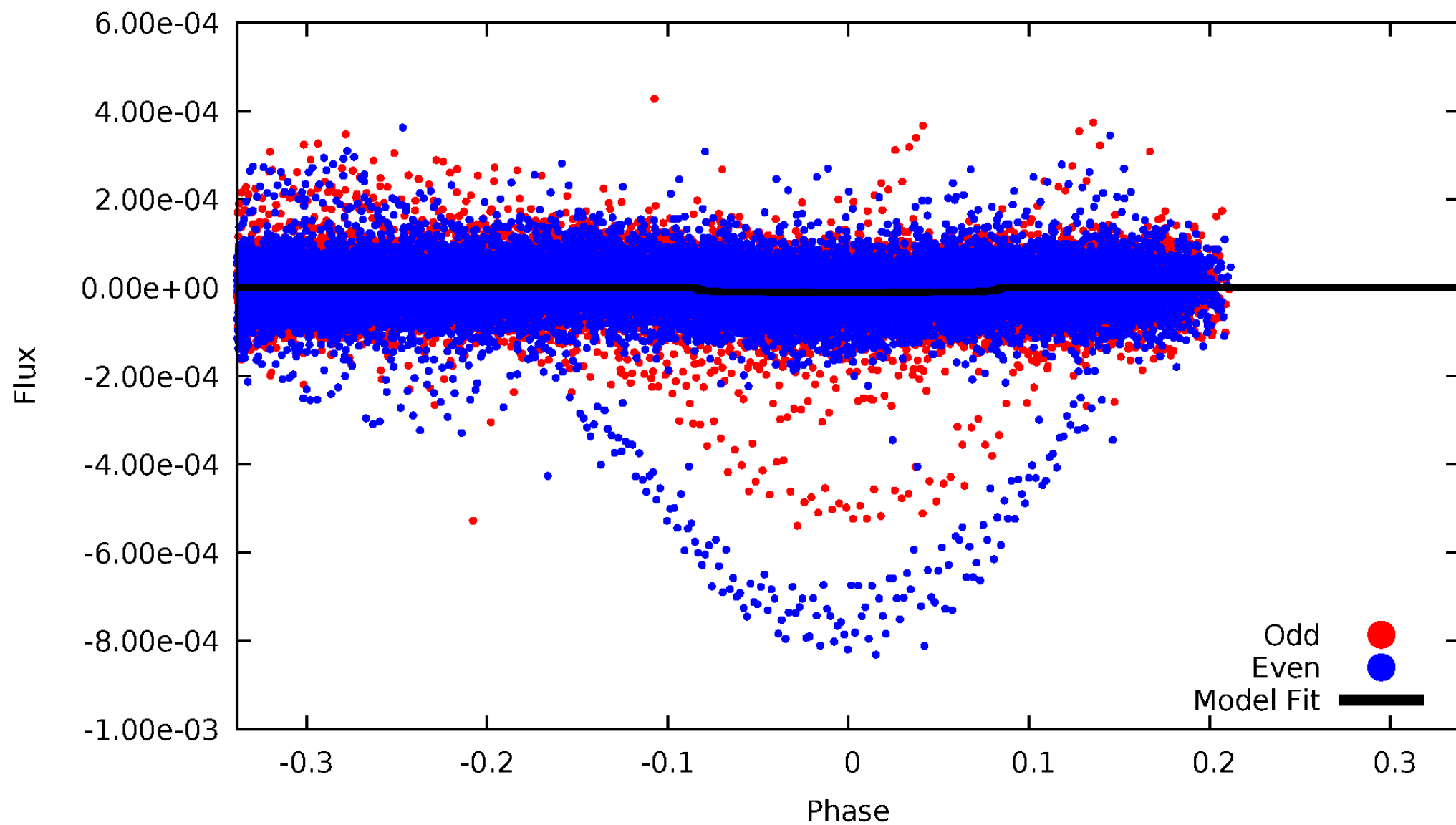


TCE 007461963-02



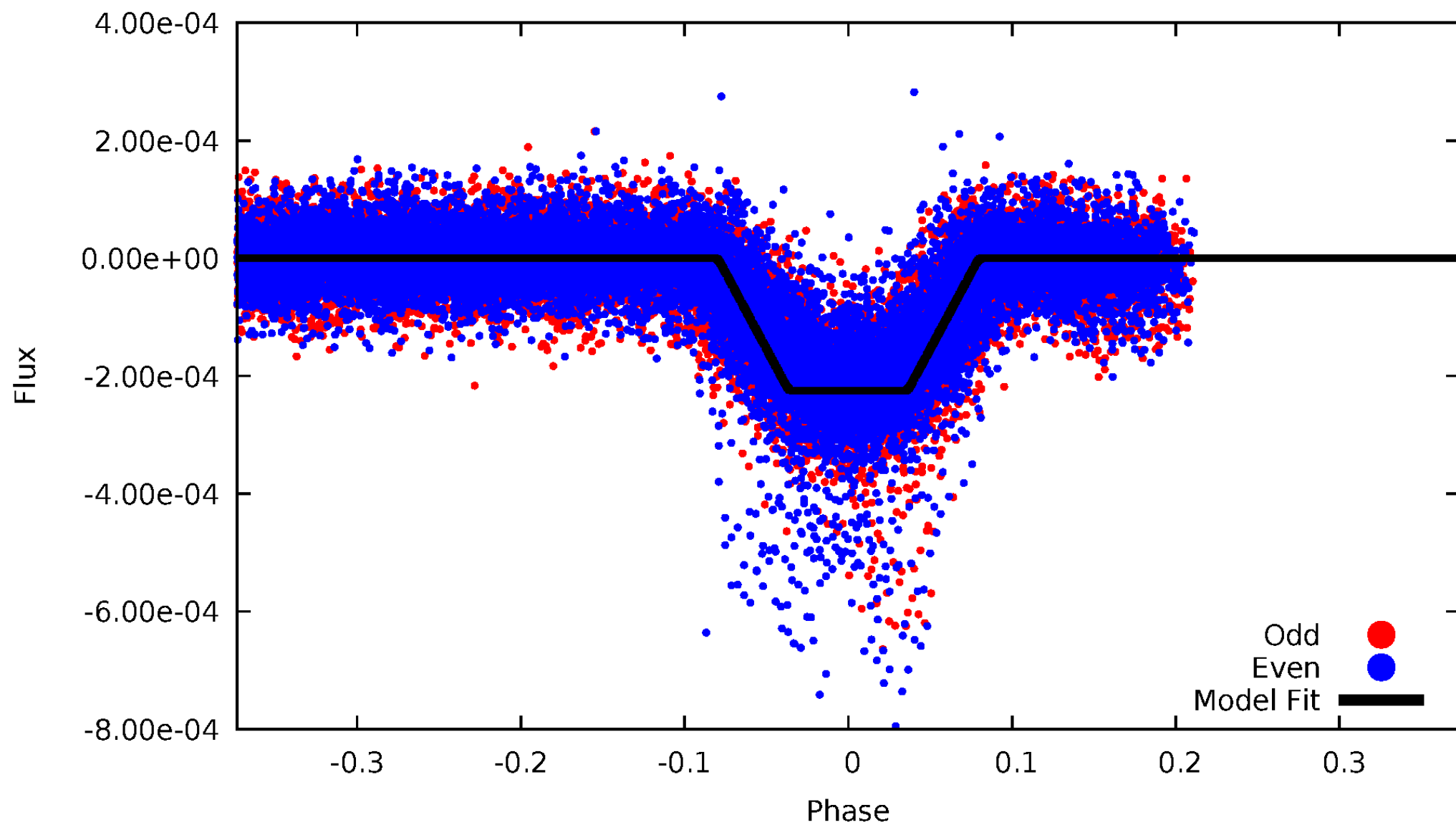
DV Odd/Even

TCE 007461963-02



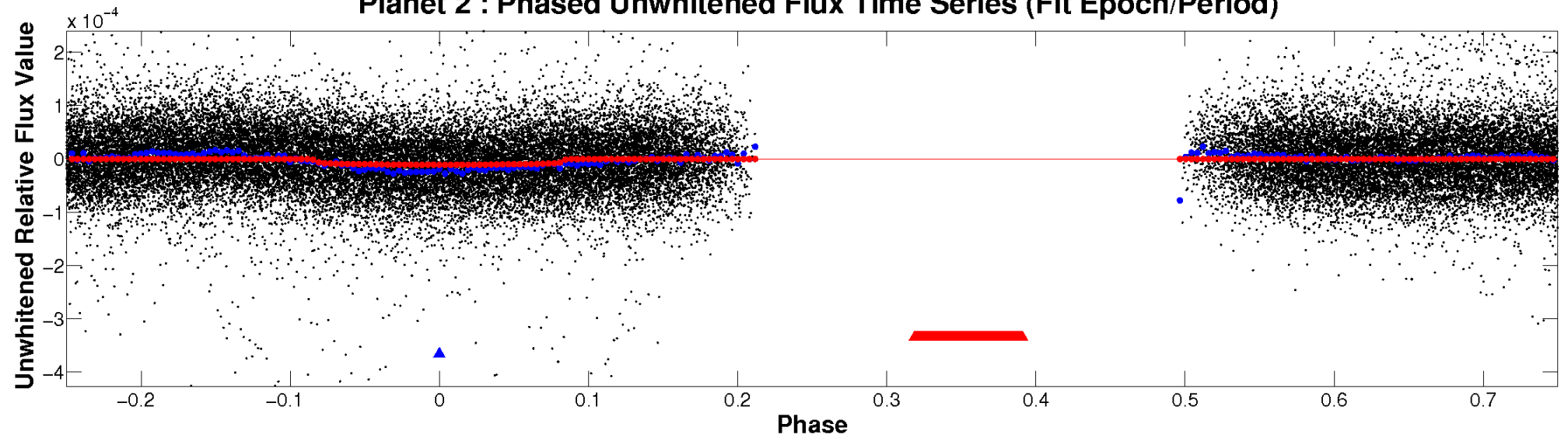
ALT Odd/Even

TCE 007461963-02

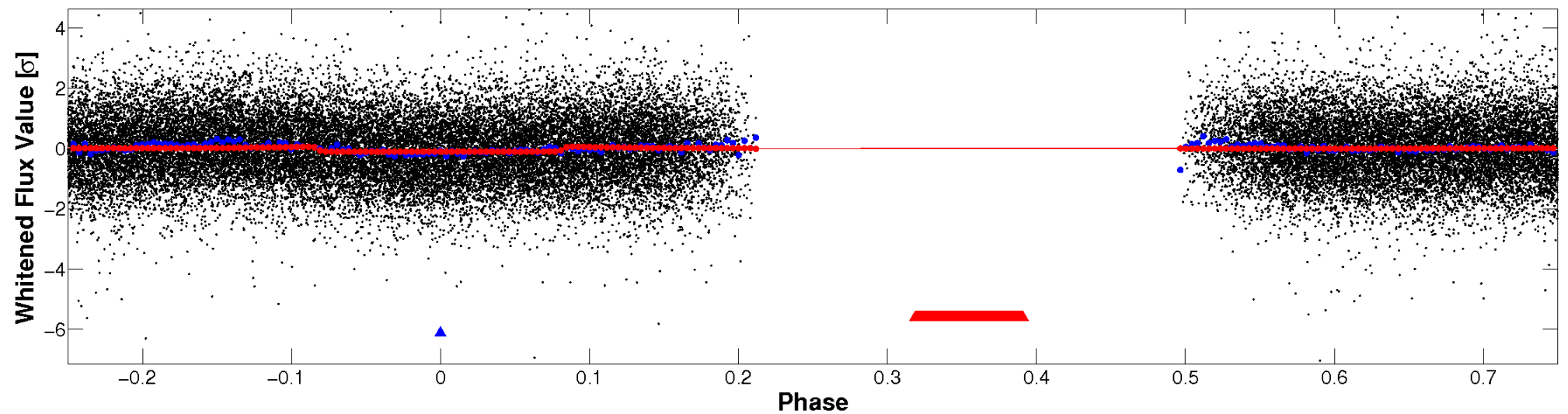


Non-Whitened Vs. Whitened Light Curve

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

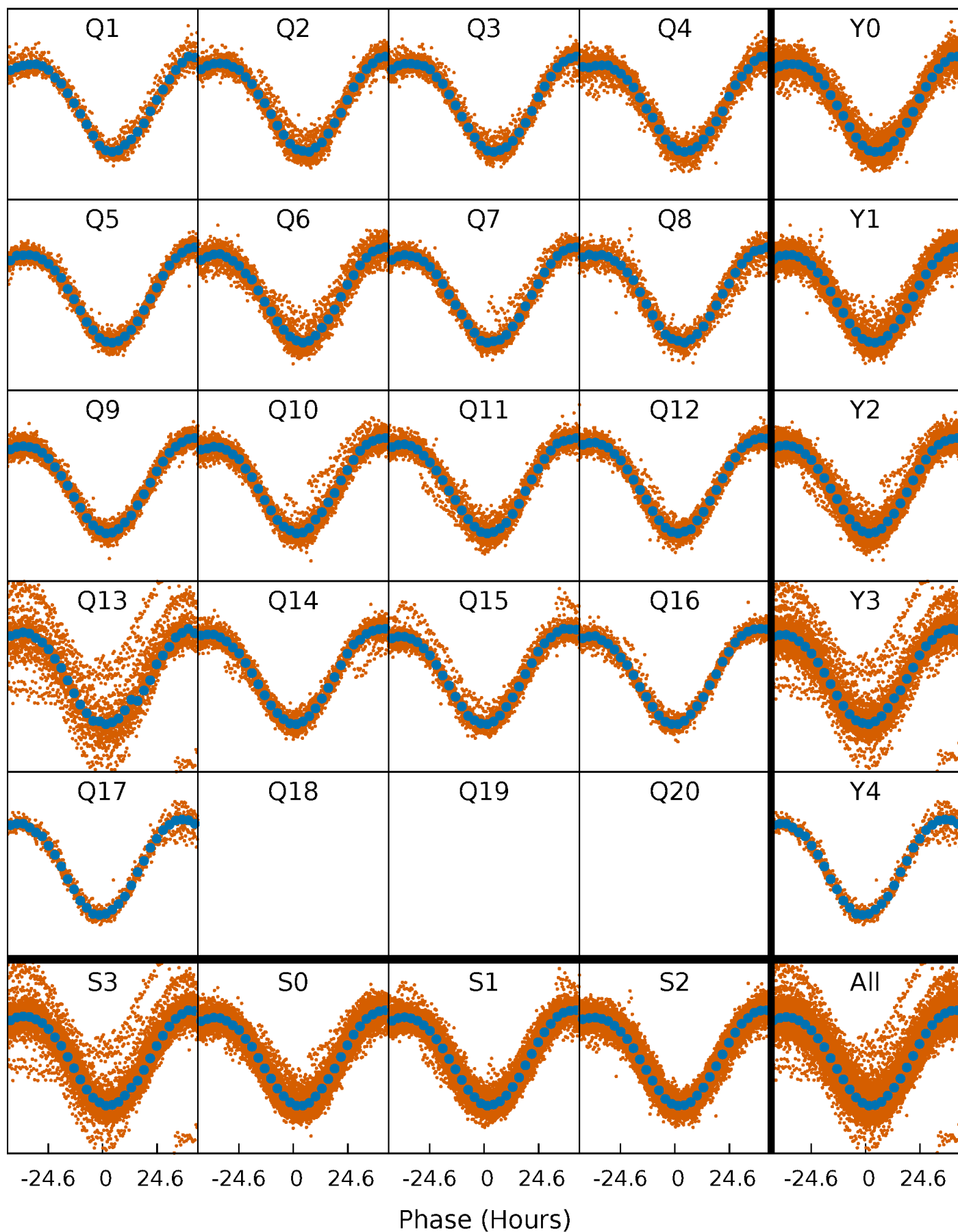


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



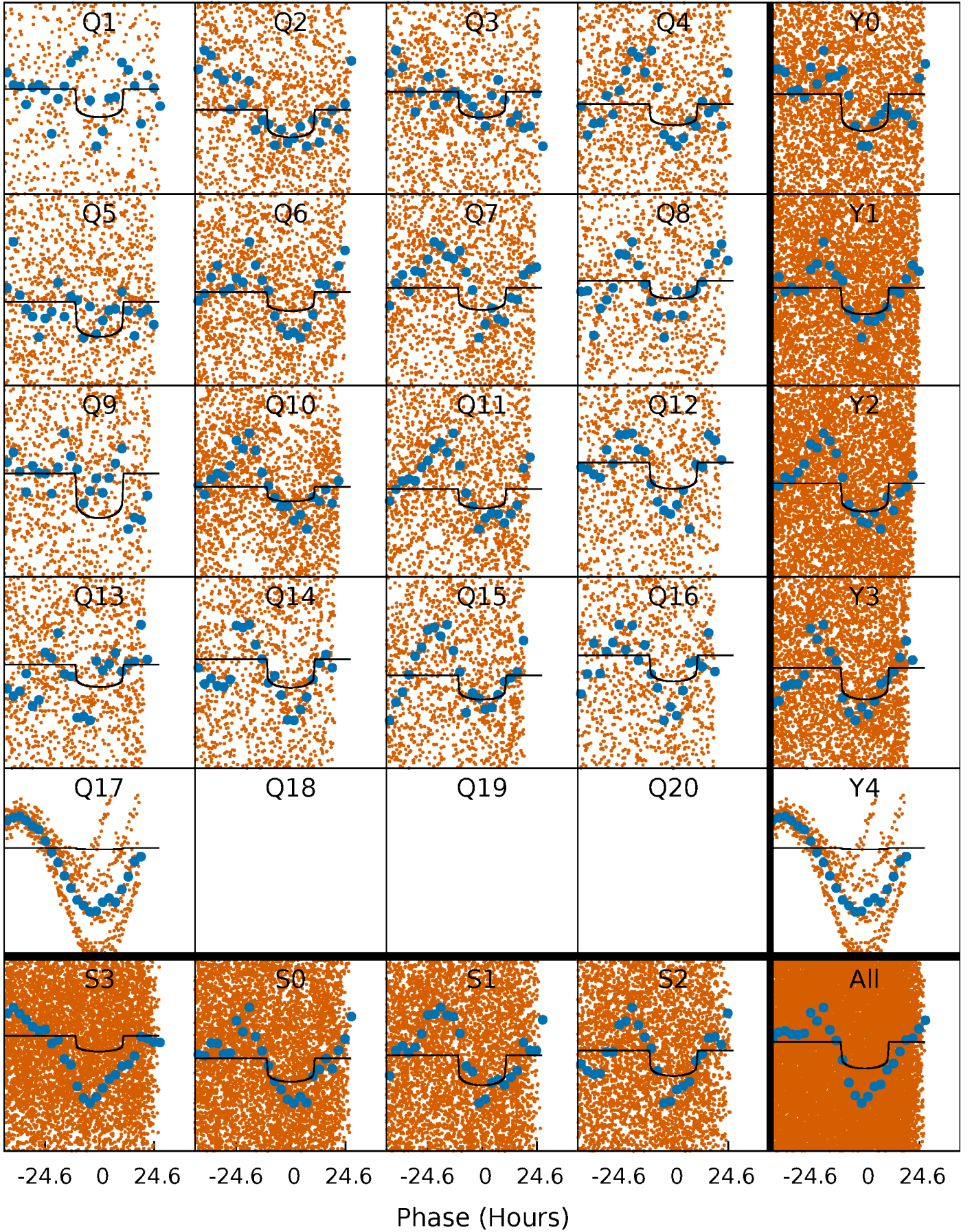
PDC Quarter-Phased Transit Curves

TCE 007461963-02 P= 5.307546 Days $T_0=136.514027$ (BKJD)



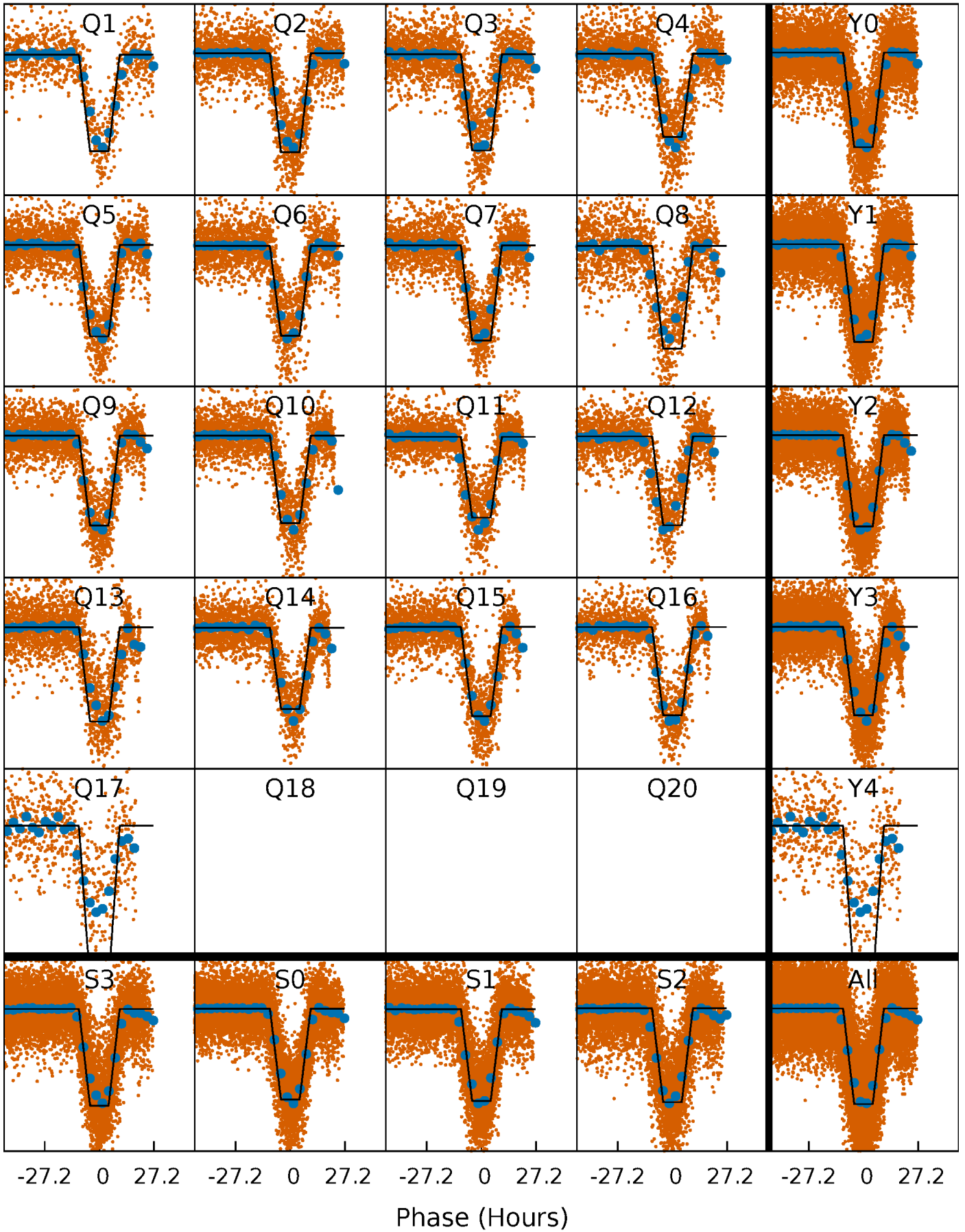
DV Quarter-Phased Transit Curves

TCE 007461963-02 P= 5.307546 Days $T_0=136.514027$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

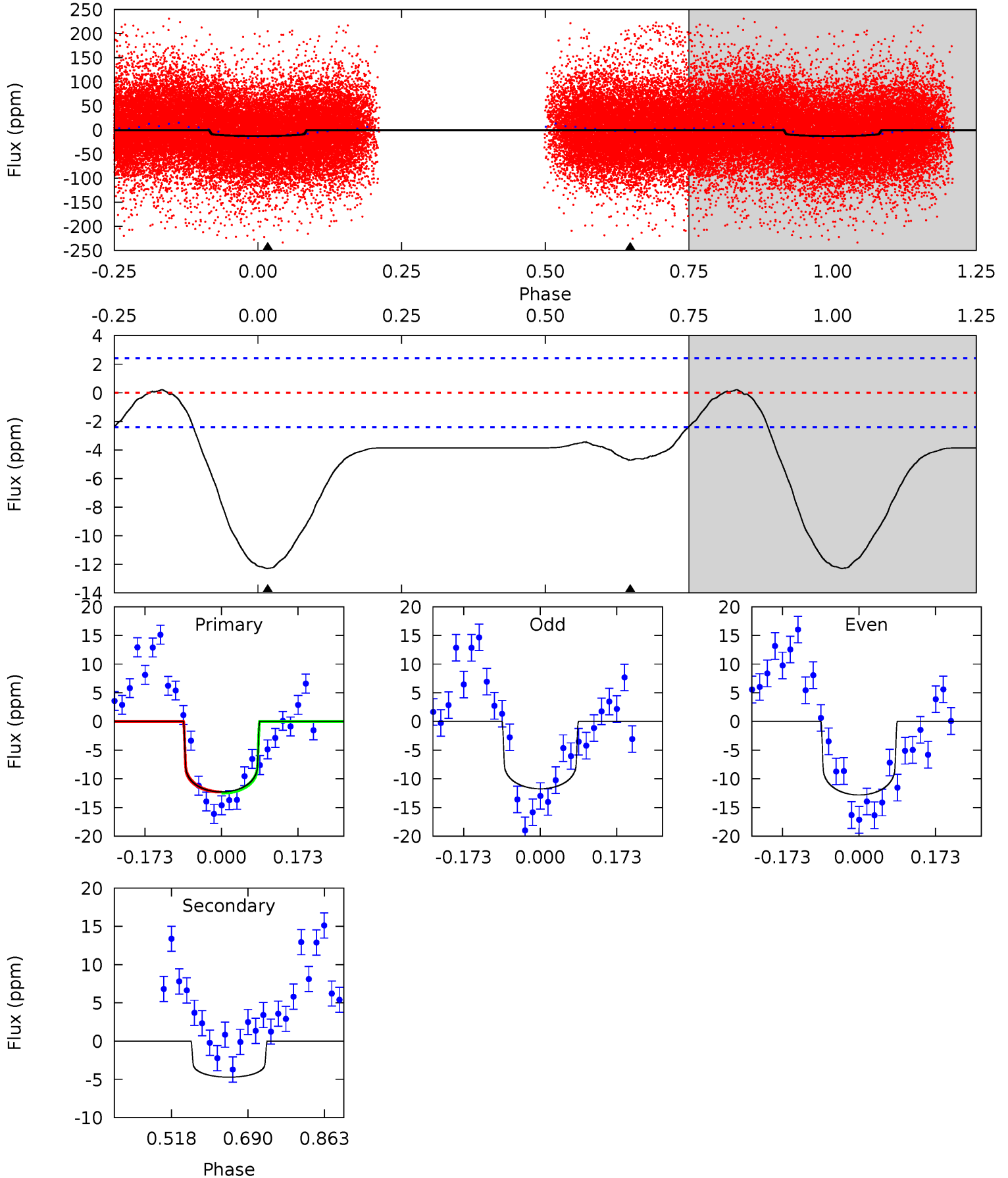
TCE 007461963-02 P= 5.307501 Days $T_0=136.515847$ (BKJD)



DV Model-Shift Uniqueness Test

007461963-02, P = 5.307546 Days, E = 131.206481 Days

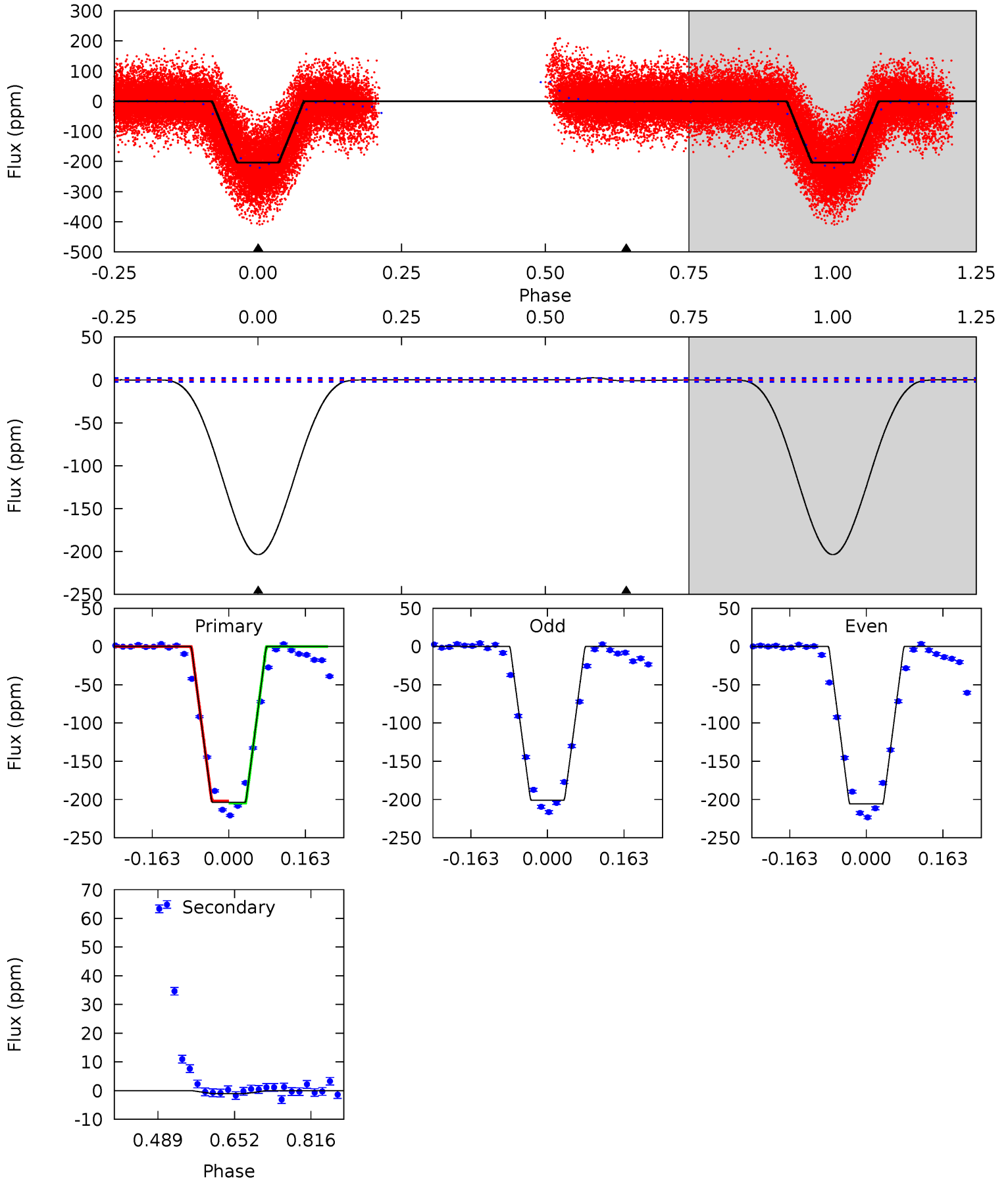
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.6	8.69	0	0	4.45	1.36	2.72	22.6	22.6	8.69	8.69	1.02	1.74	0.02	0.18



Alt Model-Shift Uniqueness Test

007461963-02, P = 5.307501 Days, E = 131.208346 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
449.9	2.28	0	0	4.46	1.39	0.51	449.9	449.9	2.28	2.28	5.33	1.07	0.01	2.95



Stellar Parameters For KIC 007461963

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8235^{+226}_{-388}	$3.694^{+0.427}_{-0.142}$	$0.070^{+0.300}_{-0.400}$	$3.479^{+0.894}_{-1.660}$	$2.181^{+0.362}_{-0.543}$	$0.073^{+0.297}_{-0.030}$
	+3%/-5%	+12%/-4%	+429%/-571%	+26%/-48%	+17%/-25%	+408%/-41%
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 007461963-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5 ± 1	$1.26^{+0.27}_{-0.30}$	3314^{+278}_{-366}	6235^{+417}_{-410}	$9.914^{+6.295}_{-3.256}$
Alt.	-1 ± 0	$5.51^{+0.87}_{-1.44}$	3299^{+282}_{-426}	-2996^{+445}_{-218}	$0.115^{+0.093}_{-0.051}$

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

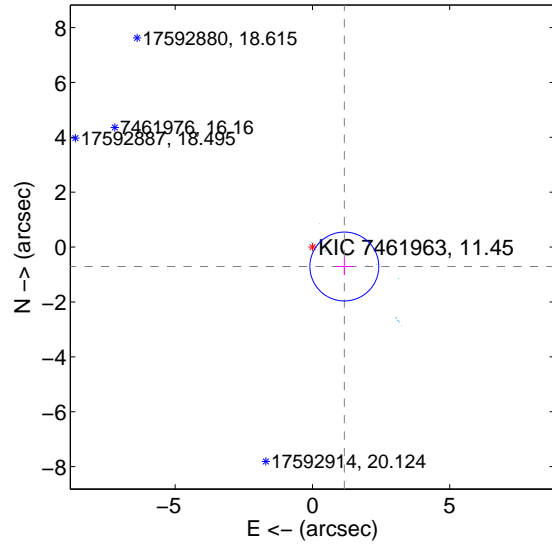
Supplemental centroid analysis for 007461963-02. **Kepler magnitude: 11.45.** Transit SNR 11.19

There are 17 quarters with good PRF difference image offsets

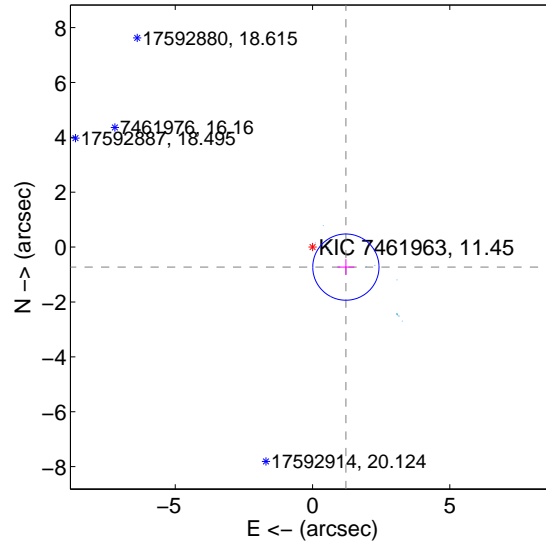
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.360 ± 0.418	3.25	-1.162 ± 0.317	-0.707 ± 0.310
PRF-fit source offset from KIC position	1.417 ± 0.402	3.52	-1.215 ± 0.309	-0.729 ± 0.288
photometric centroid source offset	4.14 ± 1.07	3.86	-3.09 ± 1.13	-2.75 ± 0.98

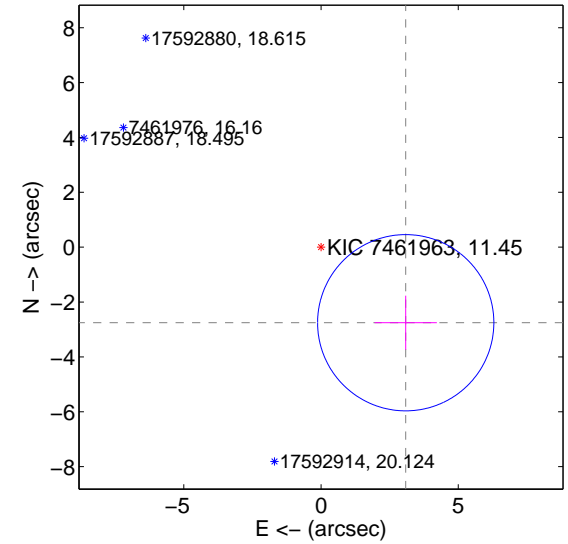
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

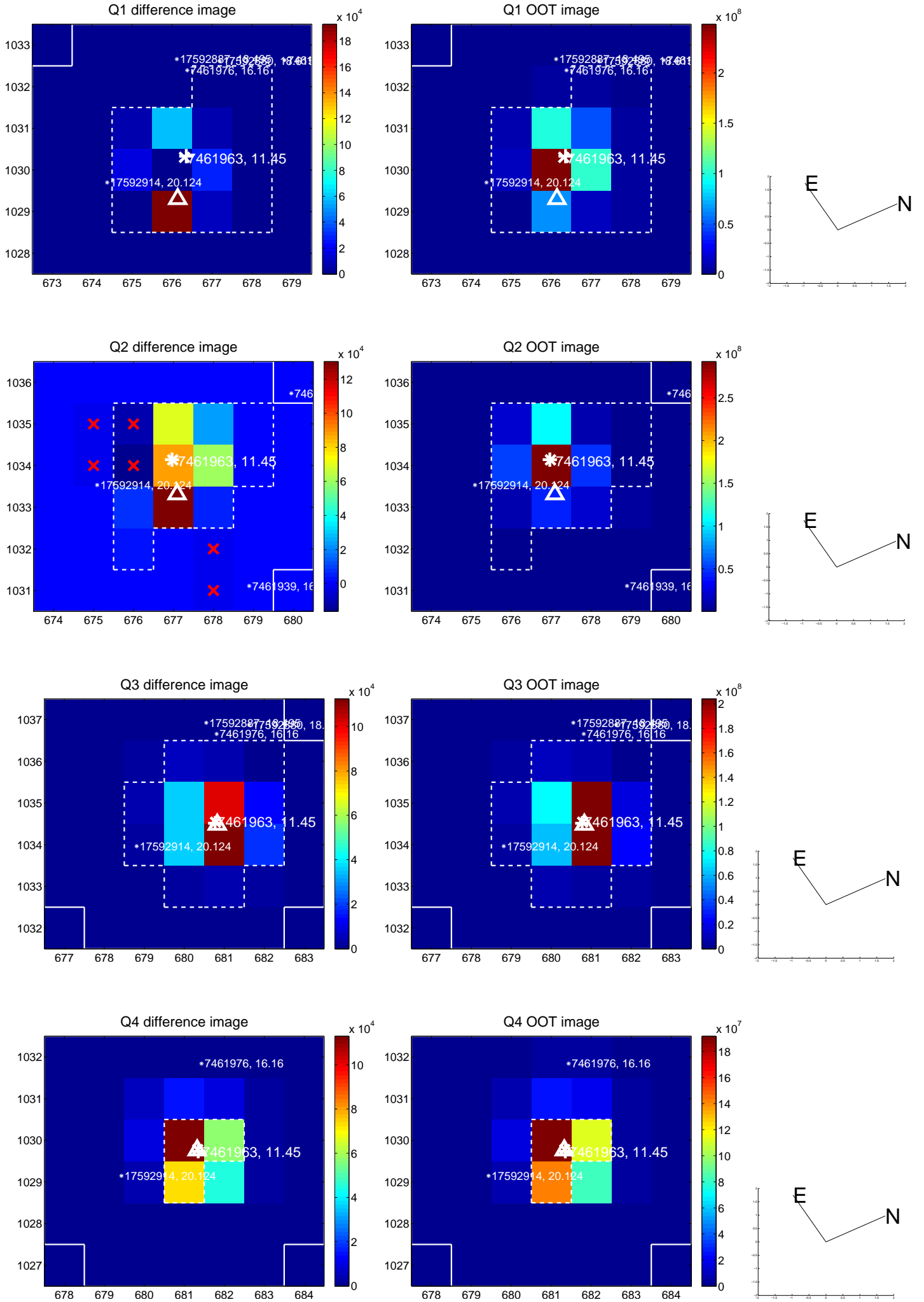


offset from photometric centroids

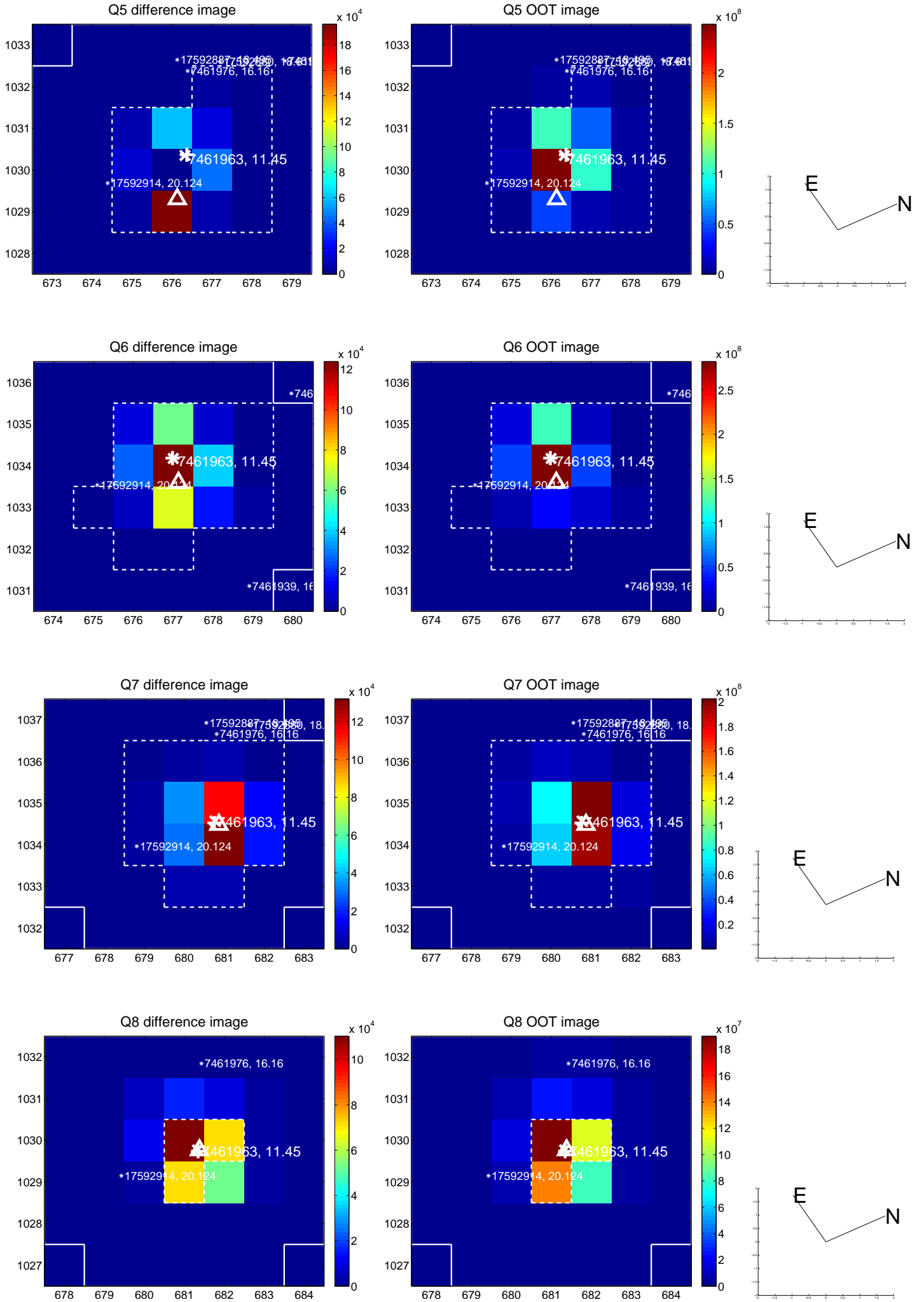


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

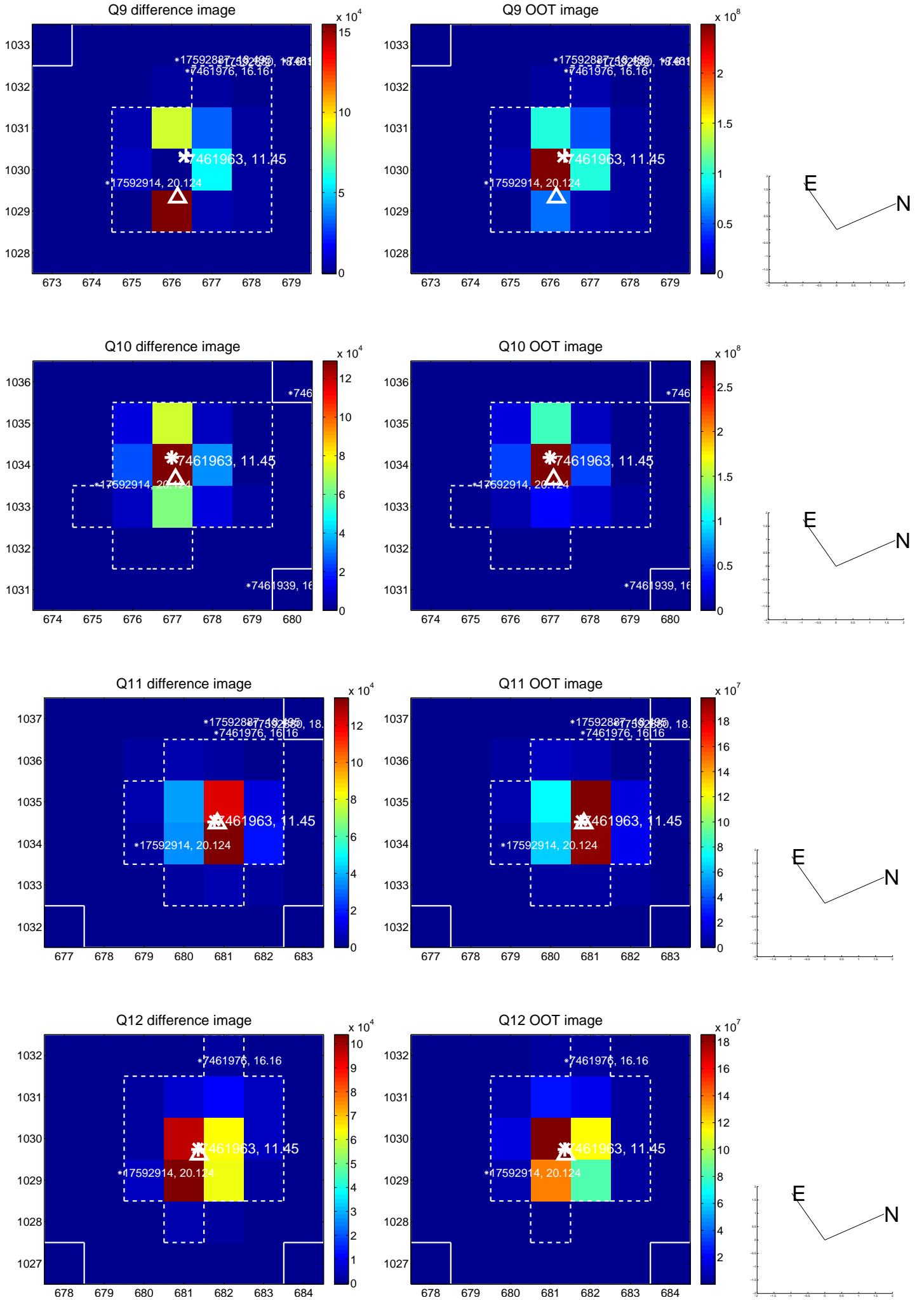
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



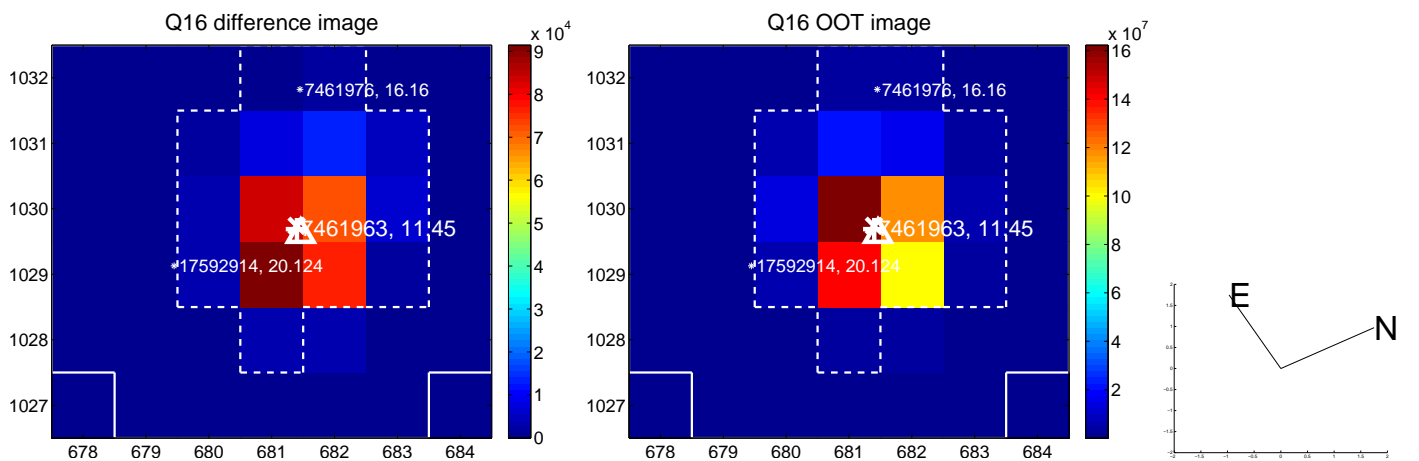
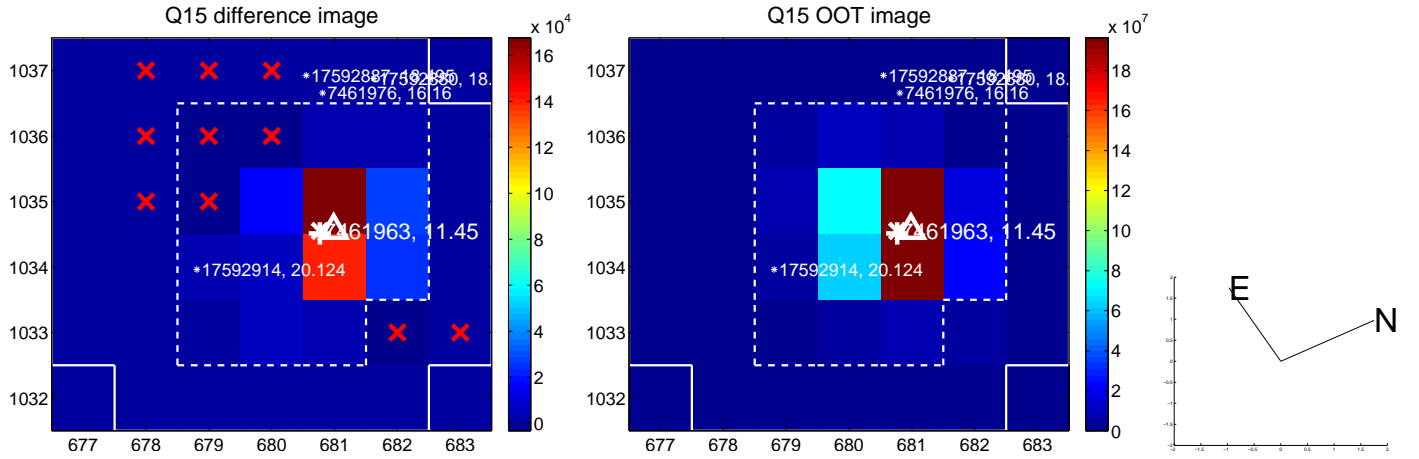
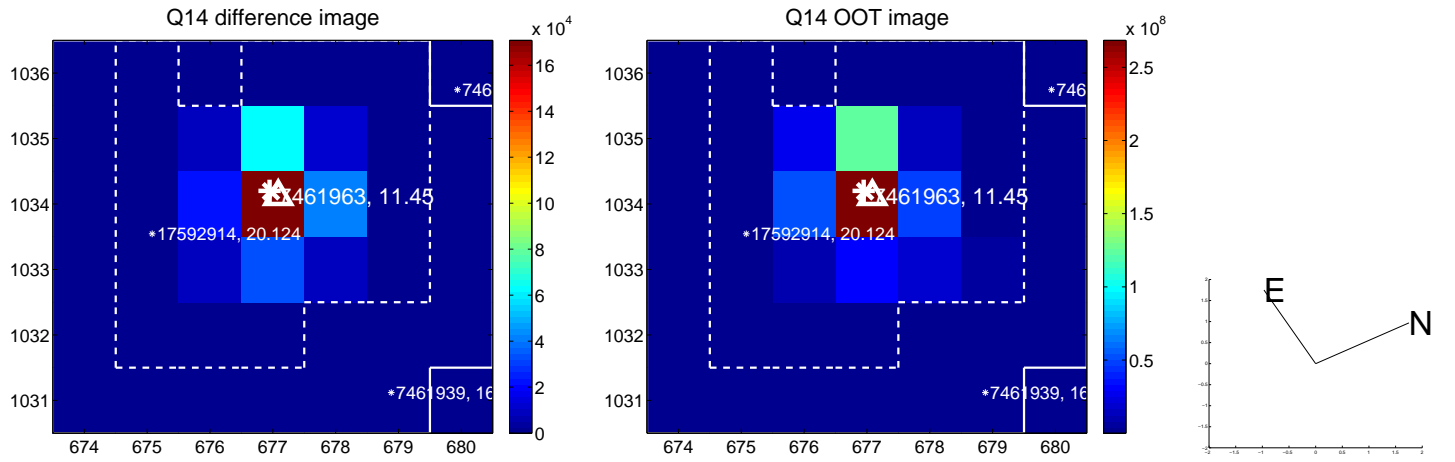
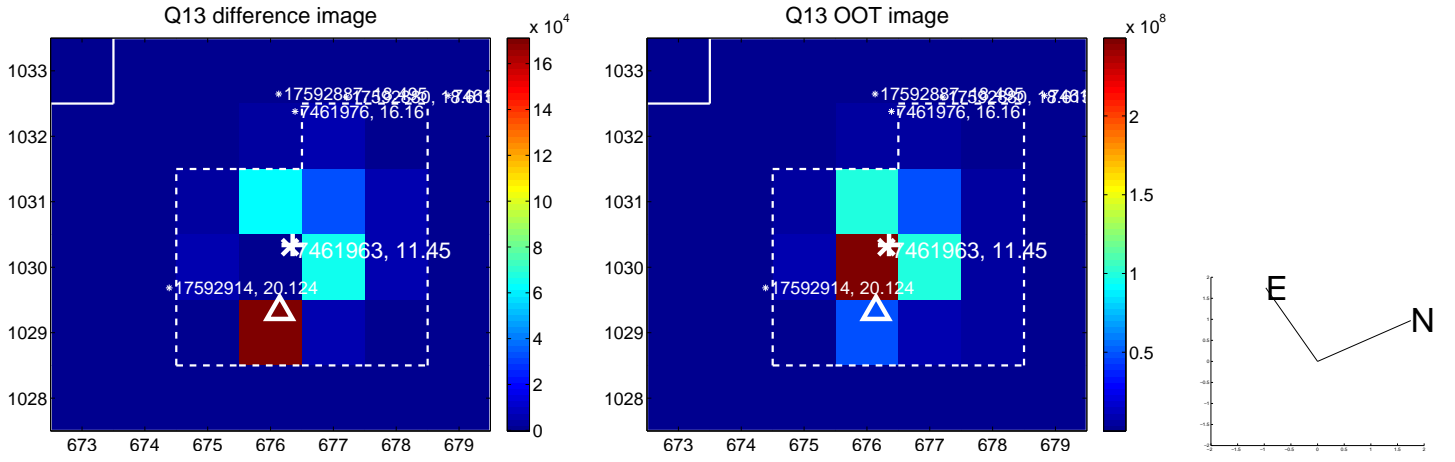
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



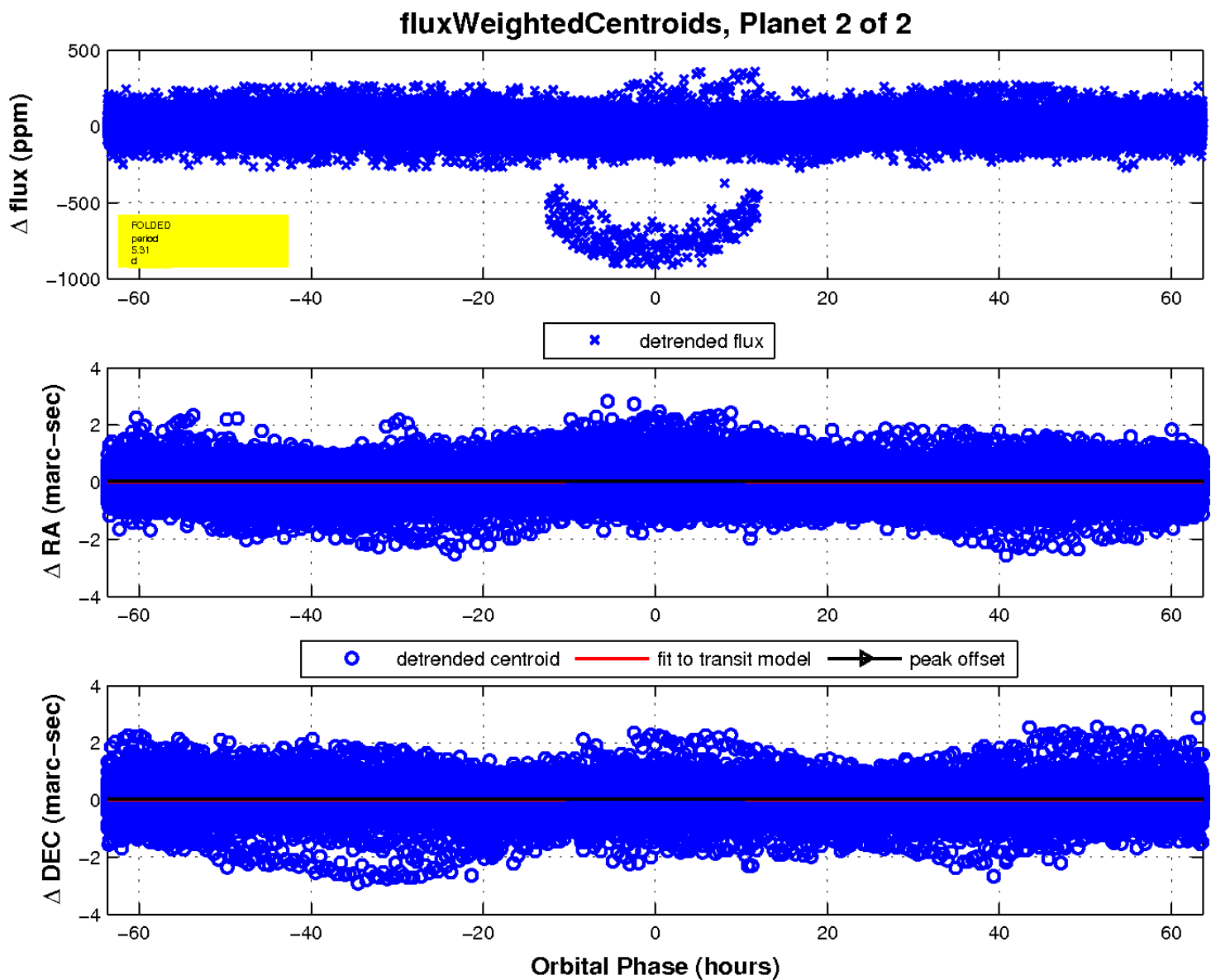
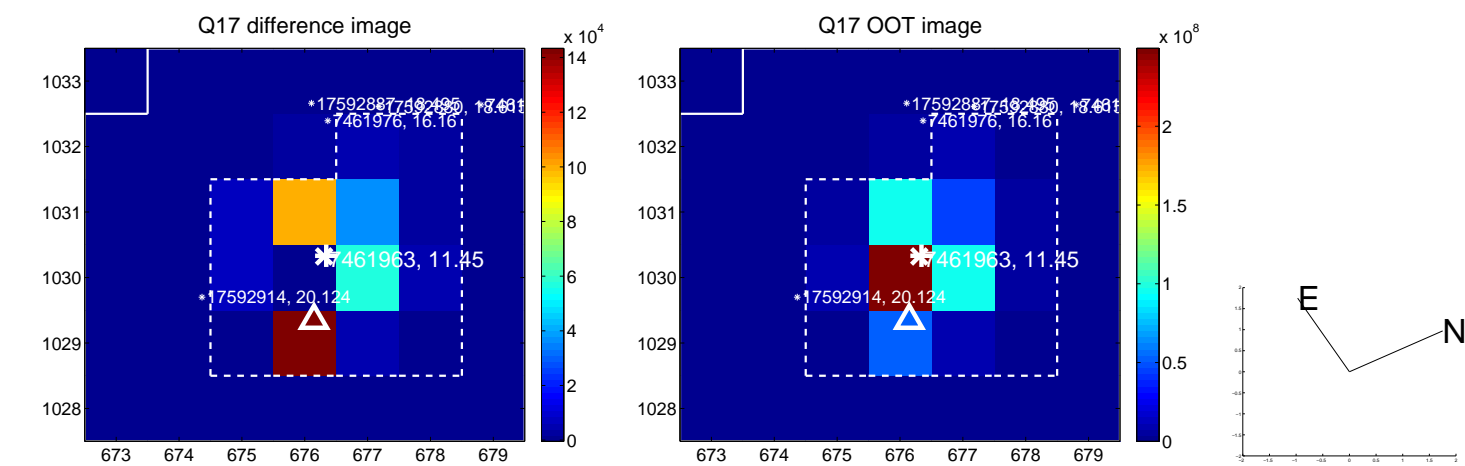
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

