

KIC 007918688

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})
007918688-01	OBS	No	0.804696	131.968470	37.2	3.594	26.2	8.2	1.43	6798	0.91	11557.71
007918688-02	OBS	No	0.536501	131.667444	221.8	2.000	9.2	-1.0	1.43	6798	2.16	19843.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007918688-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET
007918688-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—CENT_NOFITS

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

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

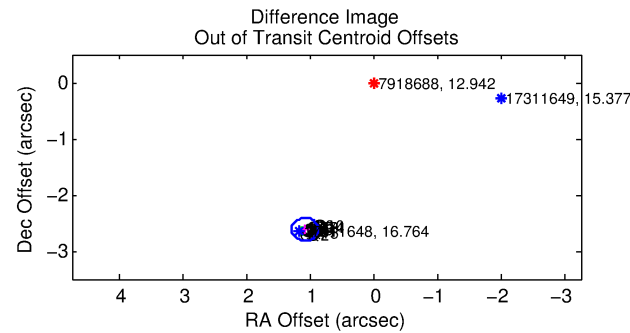
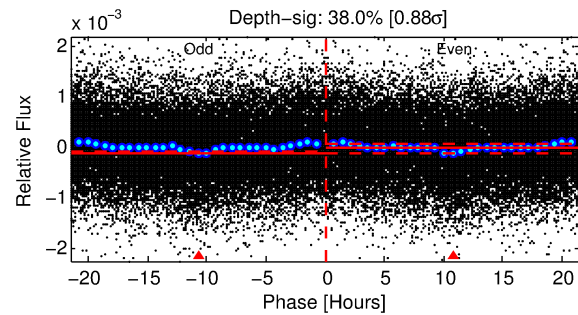
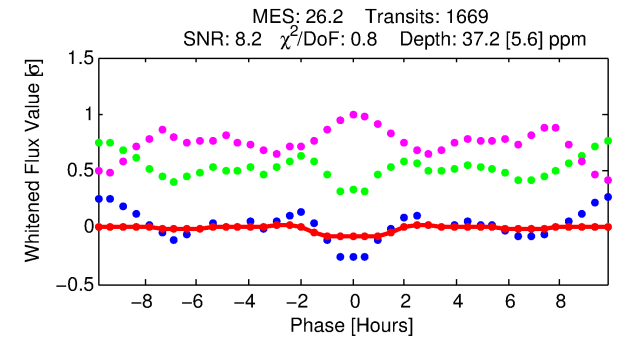
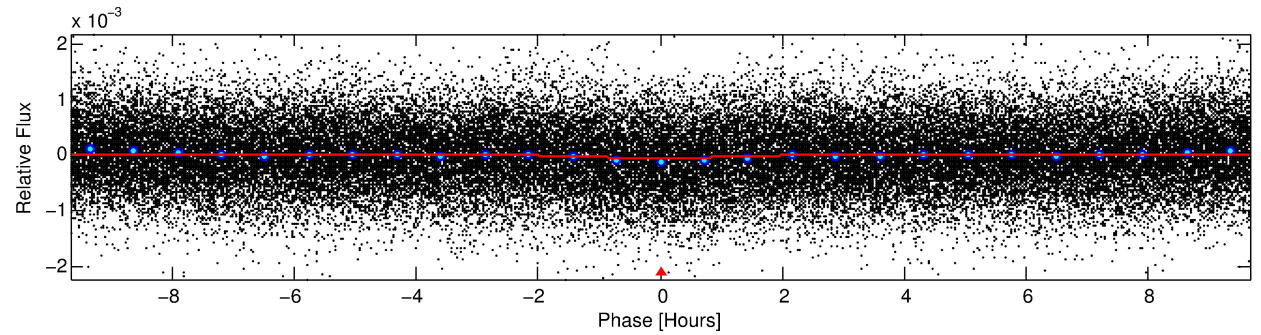
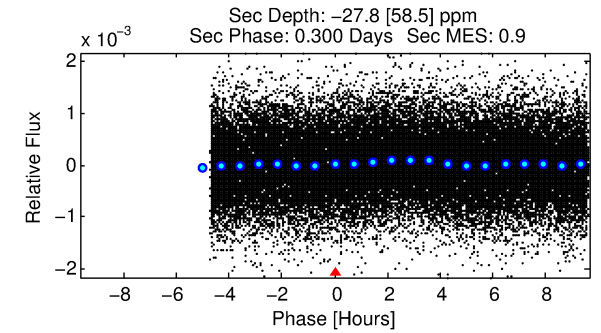
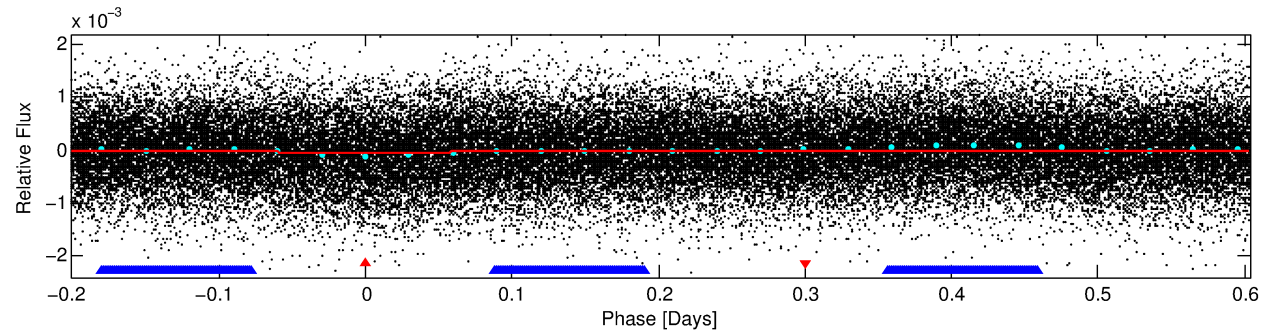
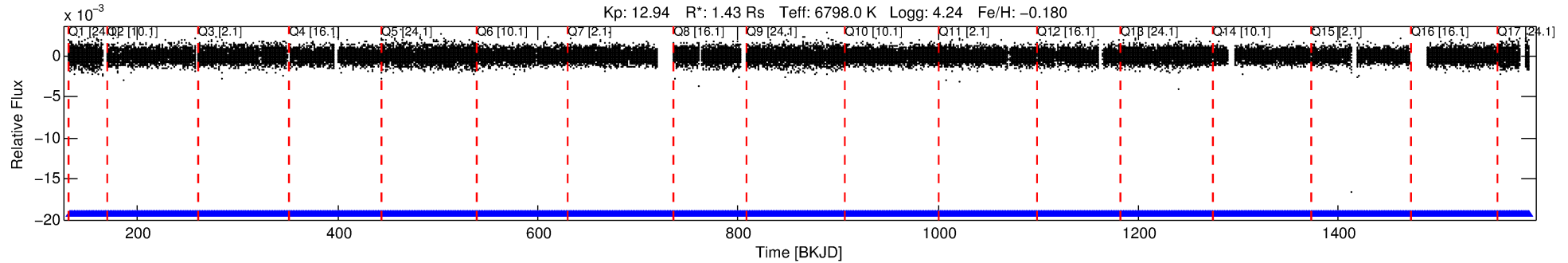
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007918688-01

No Significant Match Found

DV One-Page Summary

KIC: 7918688 Candidate: 1 of 2 Period: 0.805 d



DV Fit Results:

Period = 0.80470 [0.00001] d
Epoch = 131.9685 [0.0047] BKJD
Rp/R* = 0.0058 [0.0031]
a/R* = 1.62 [2.94]
b = 0.56 [3.70]
Seff = 11557.71 [4421.13]
Teq = 2644 [253] K
Rp = 0.91 [0.55] Re
a = 0.0184 [0.0046] AU
Ag = N/A
Teffp = N/A

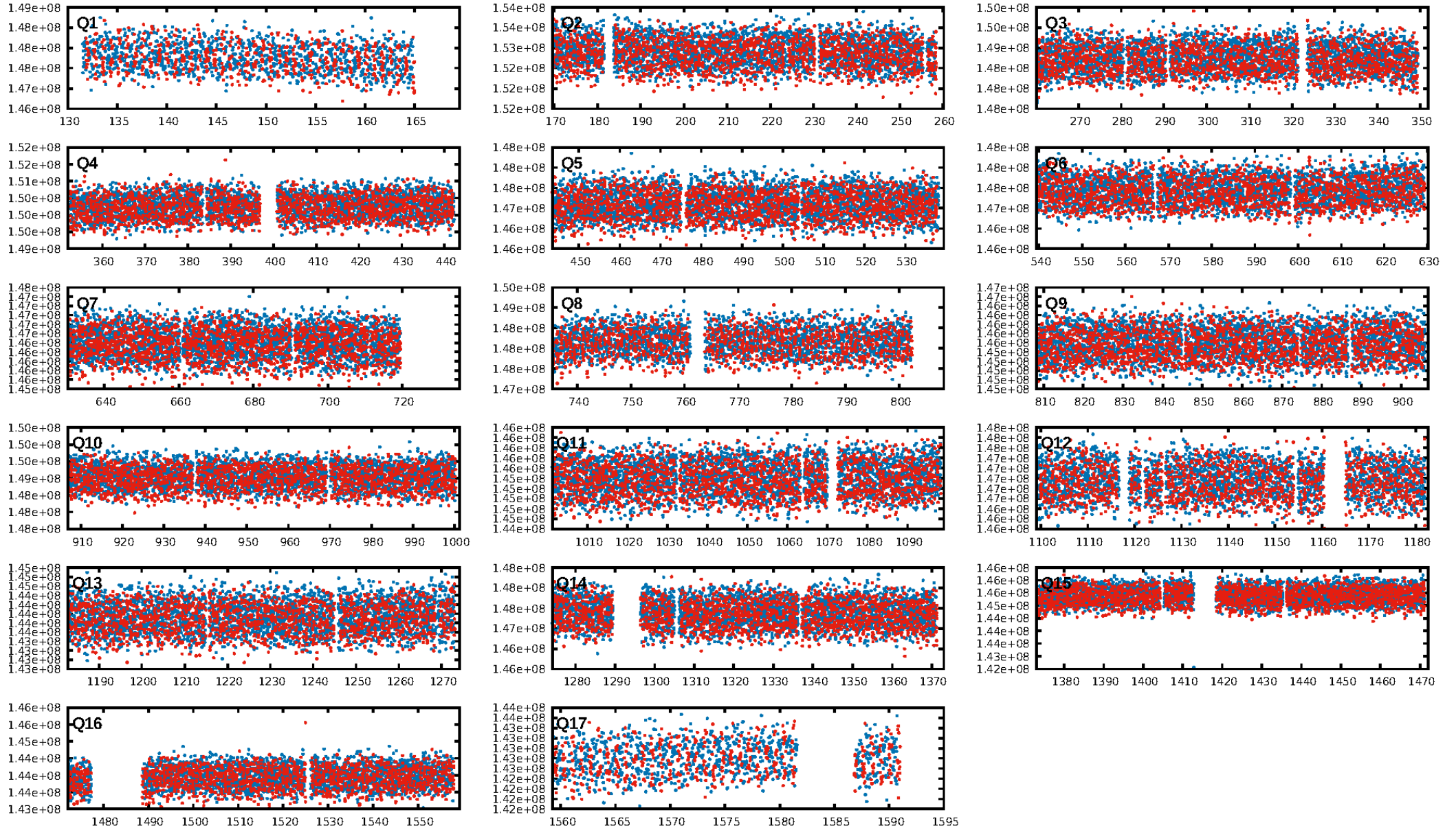
DV Diagnostic Results:

ShortPeriod-sig: 88.2% [1.56σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.31e-137
RollingBand-fgt: 1.00 [1593/1593]
GhostDiagnostic-chr: 1.505
Centroid-sig: 0.0%
Centroid-so: 1.362 arcsec [2.33σ]
OotOffset-rm: 2.831 arcsec [41.21σ]
KicOffset-rm: 2.899 arcsec [41.30σ]
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]

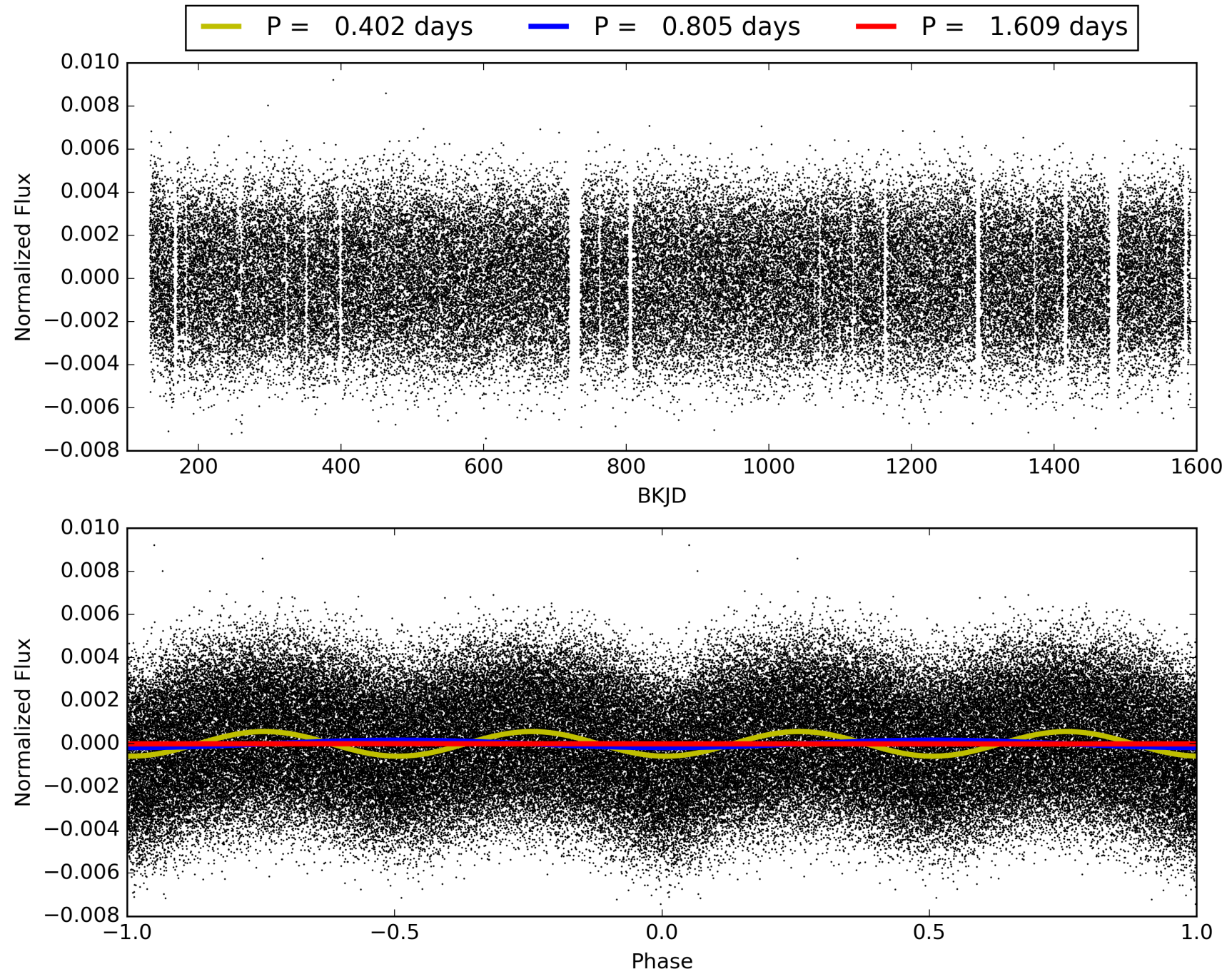
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:13:04 Z

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

TCE 007918688-01, PDC Light Curves

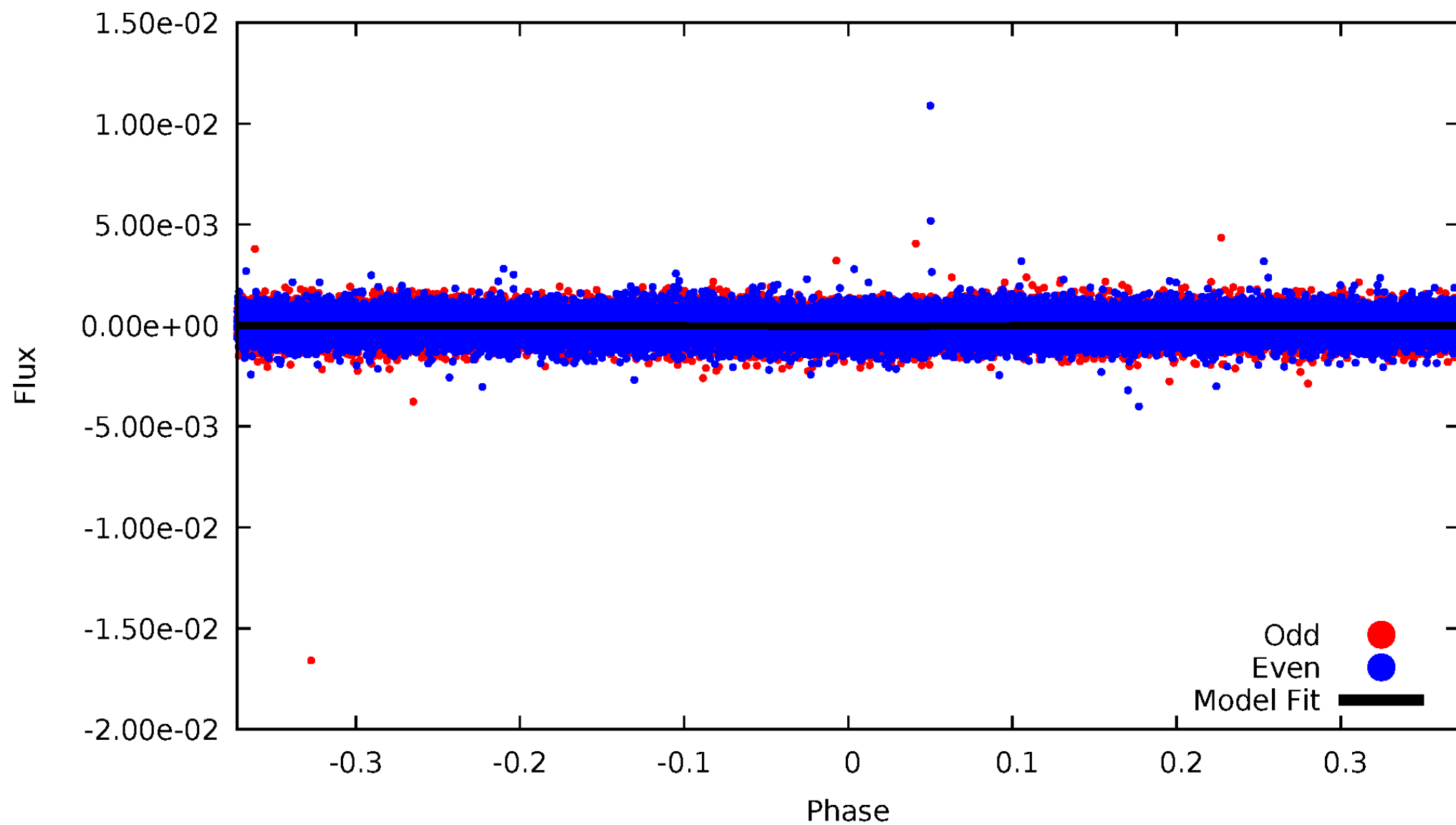


TCE 007918688-01



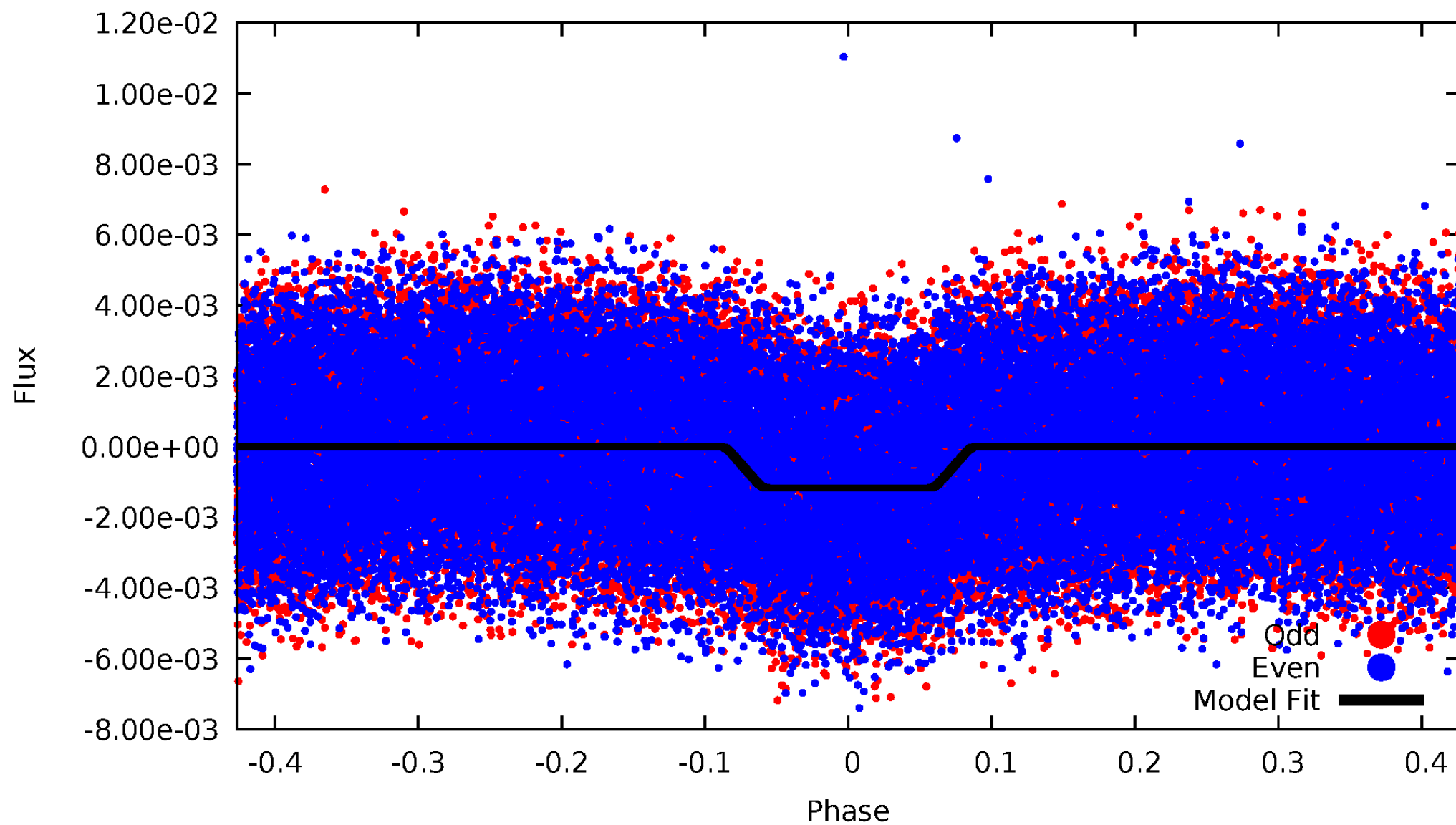
DV Odd/Even

TCE 007918688-01



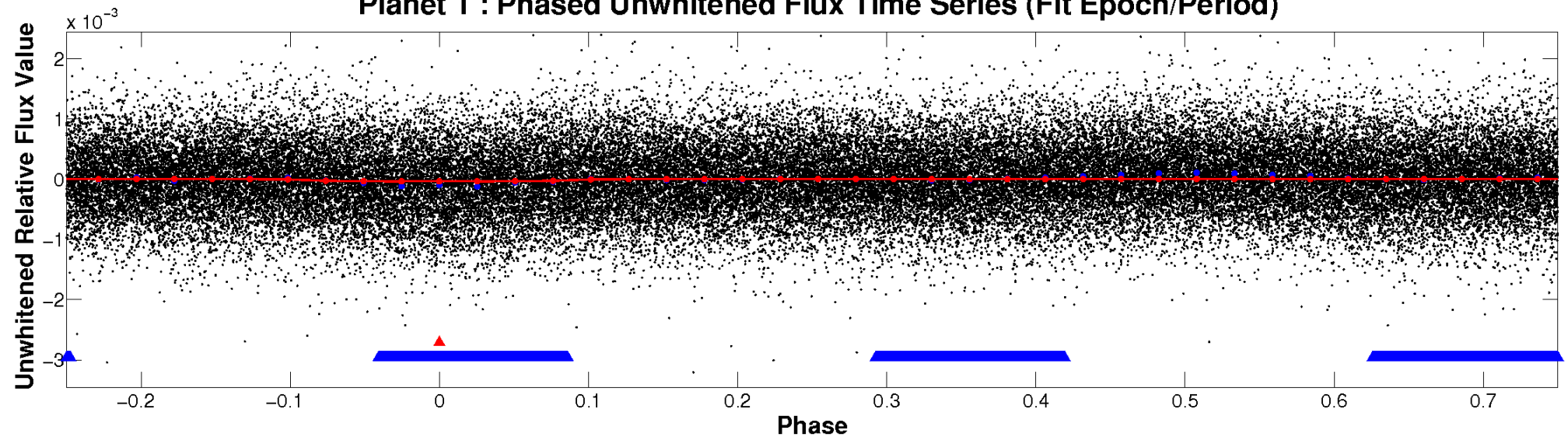
ALT Odd/Even

TCE 007918688-01

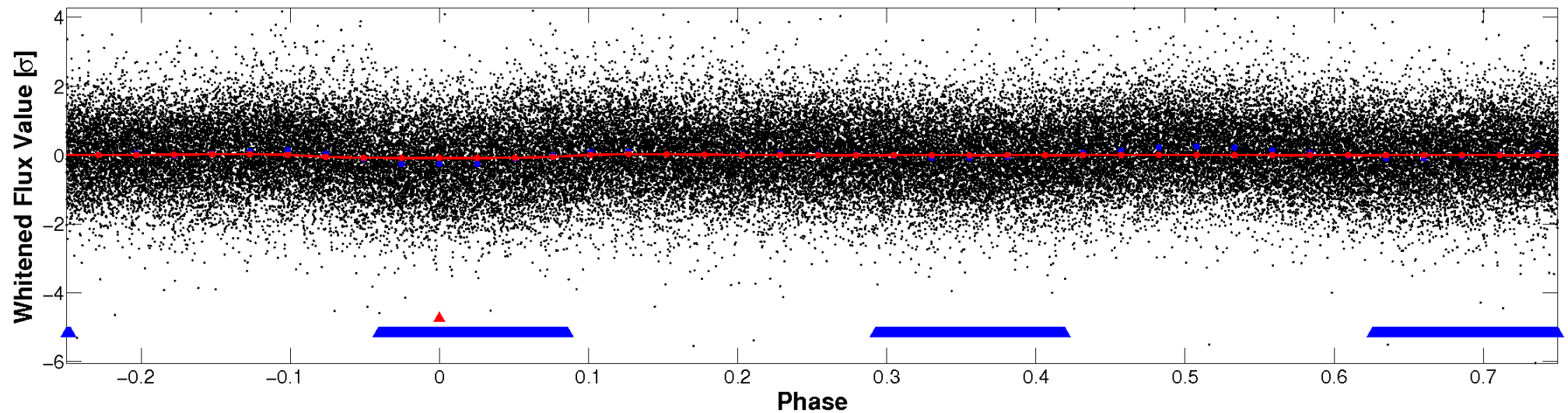


Non-Whitened Vs. Whitened Light Curve

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

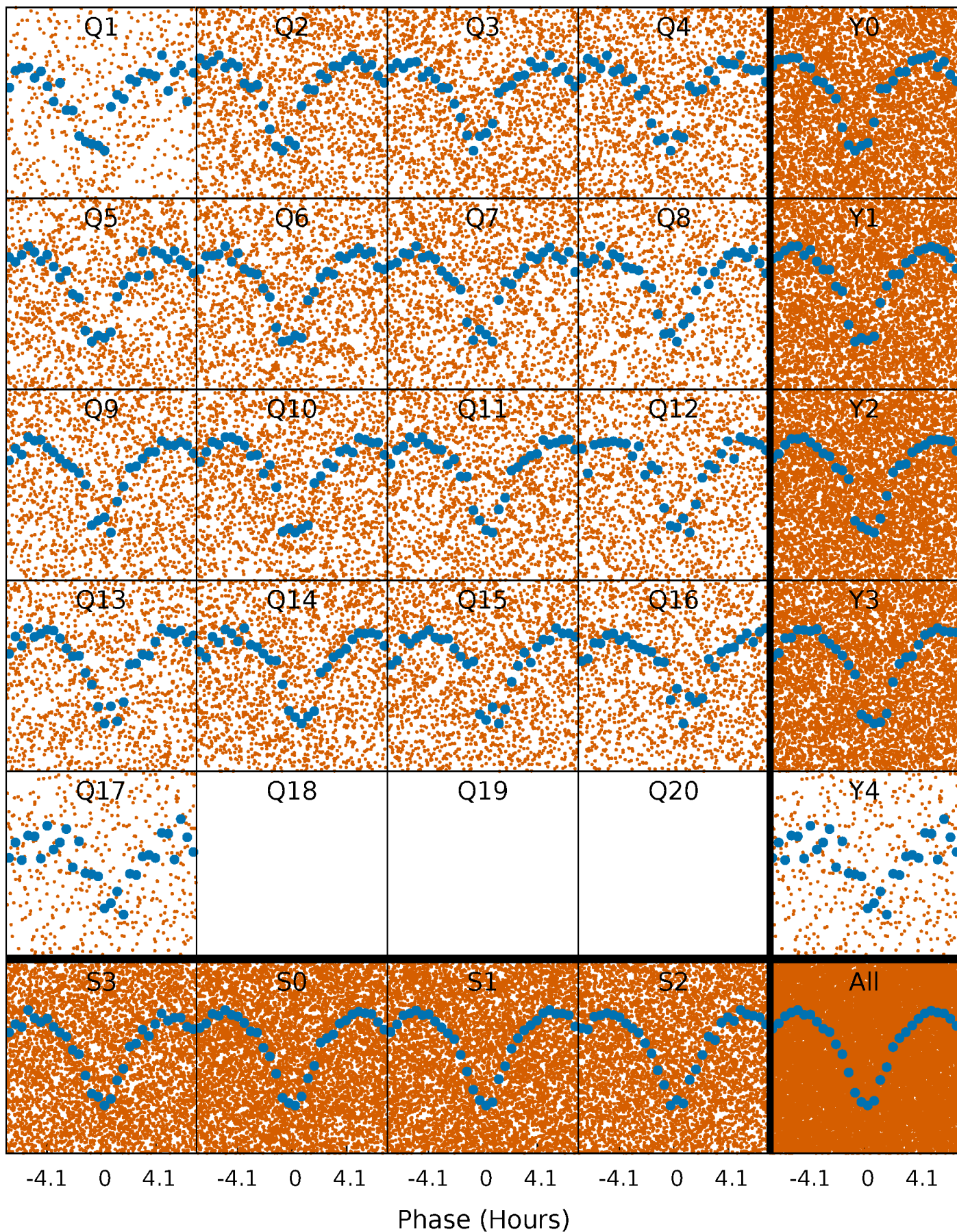


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



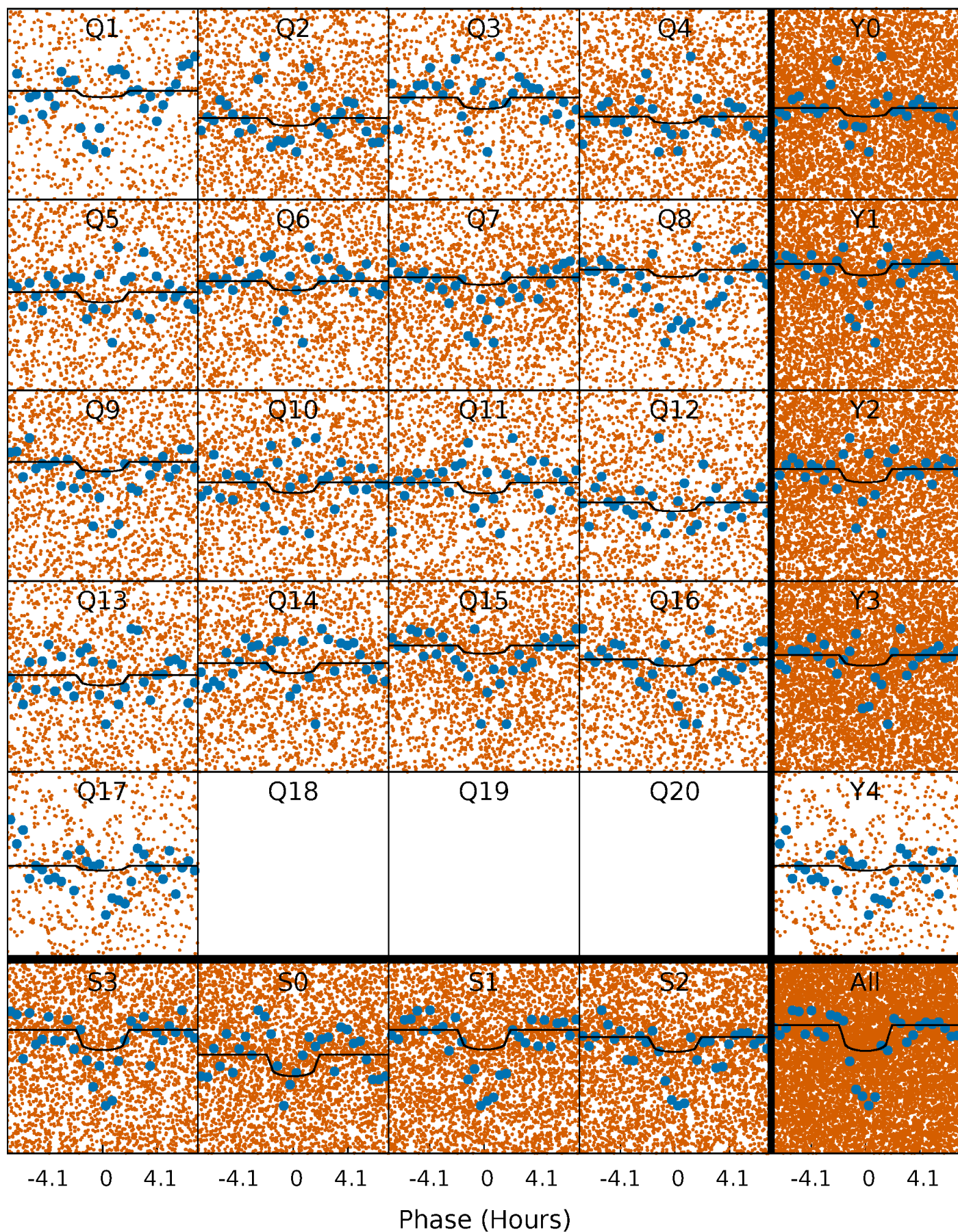
PDC Quarter-Phased Transit Curves

TCE 007918688-01 P= 0.804696 Days $T_0=131.968470$ (BKJD)



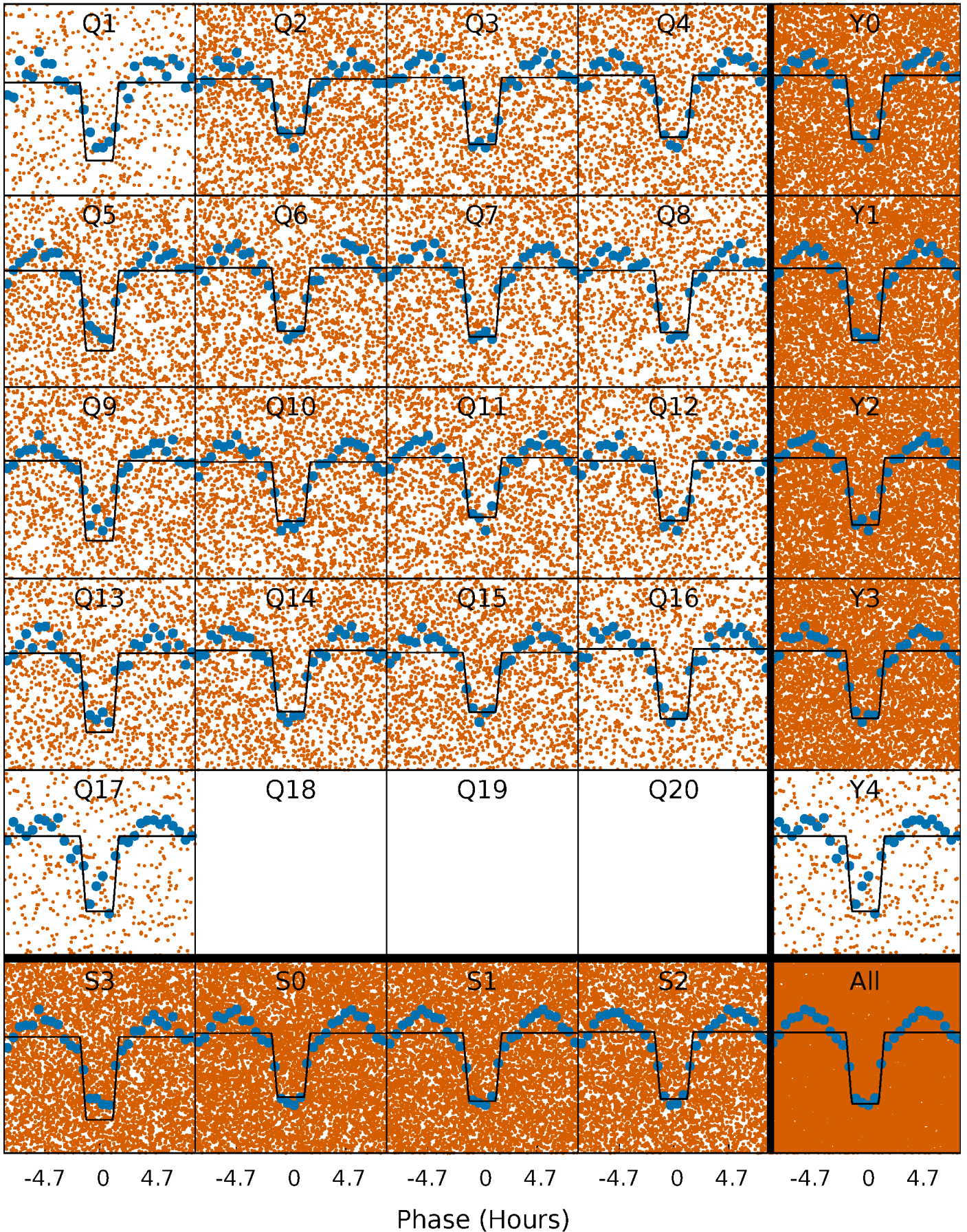
DV Quarter-Phased Transit Curves

TCE 007918688-01 P= 0.804696 Days $T_0=131.968470$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

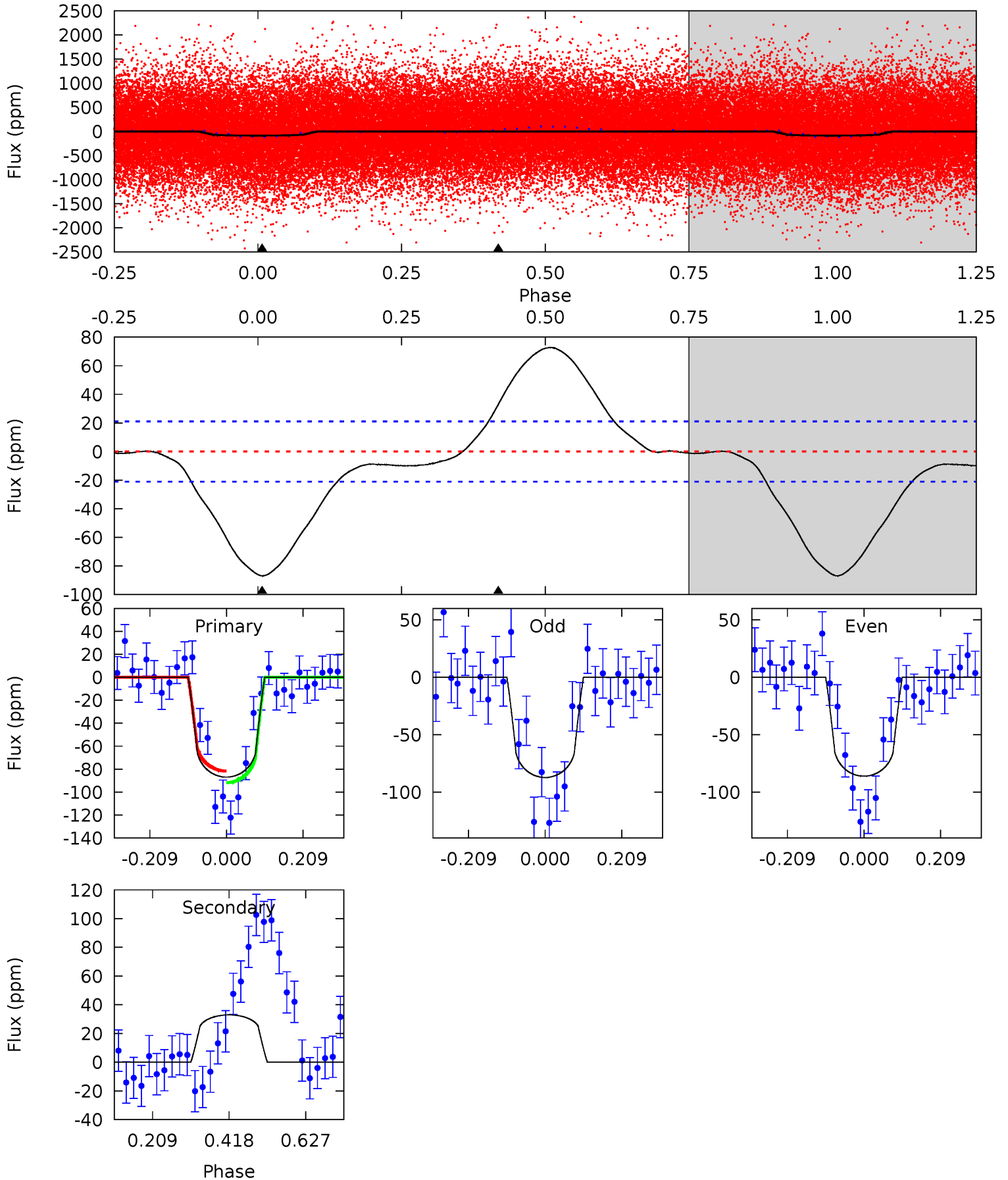
TCE 007918688-01 P= 0.804741 Days $T_0=131.933761$ (BKJD)



DV Model-Shift Uniqueness Test

007918688-01, P = 0.804696 Days, E = 131.163774 Days

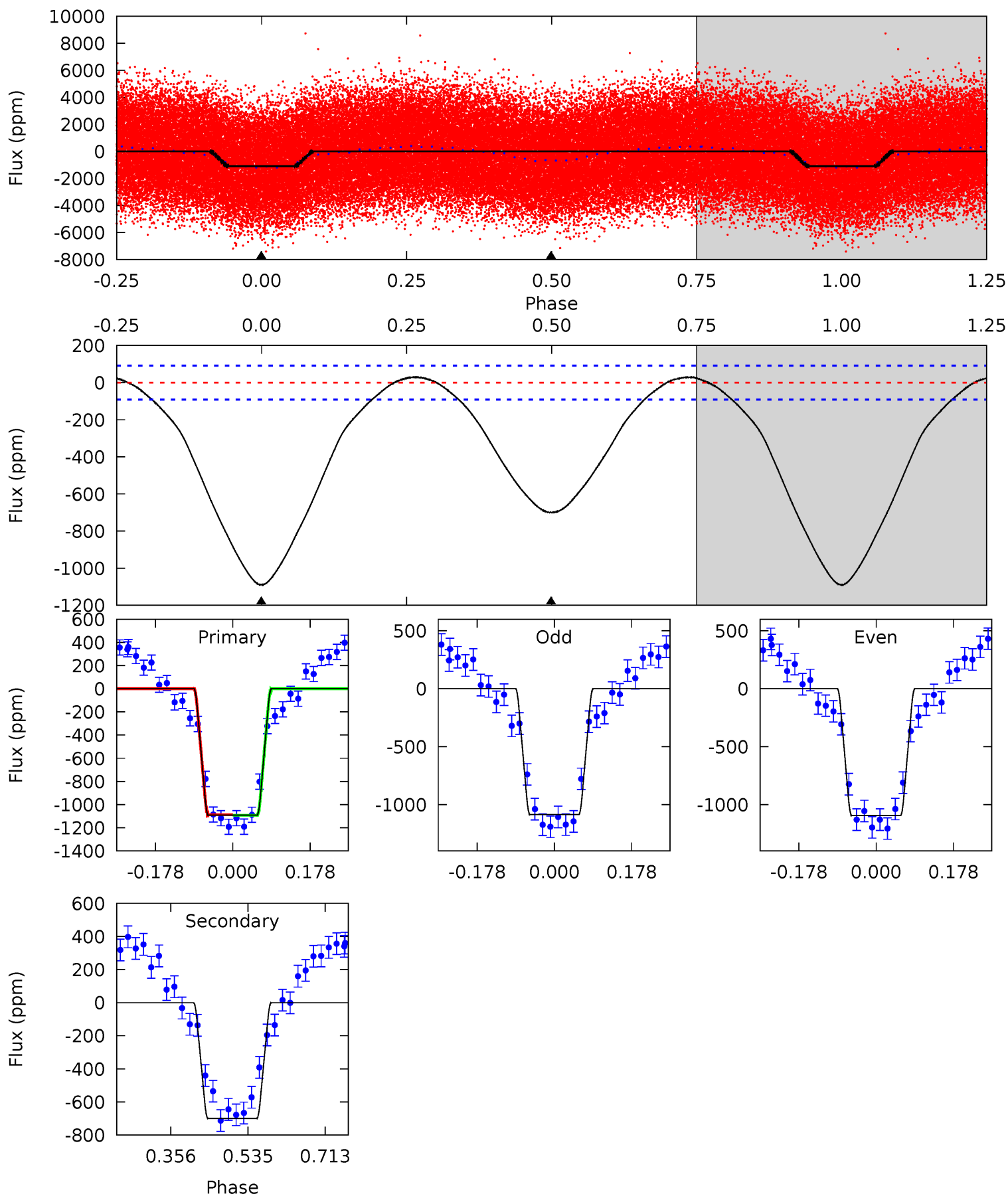
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.1	-6.88	0	0	4.41	1.26	1.08	18.1	18.1	-6.88	-6.88	0.12	0.91	0.46	1.05



Alt Model-Shift Uniqueness Test

007918688-01, P = 0.804741 Days, E = 131.129020 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.7	33.8	0	0	4.44	1.35	2.02	52.7	52.7	33.8	33.8	0.19	1.00	0.03	0.12



Stellar Parameters For KIC 007918688

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6798^{+165}_{-259}	$4.236^{+0.124}_{-0.186}$	$-0.180^{+0.250}_{-0.300}$	$1.432^{+0.438}_{-0.256}$	$1.298^{+0.190}_{-0.209}$	$0.622^{+0.373}_{-0.315}$
	+2%/-4%	+3%/-4%	+139%/-167%	+31%/-18%	+15%/-16%	+60%/-51%
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 007918688-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	33 ± 5	$0.95^{+0.53}_{-0.48}$	3696^{+264}_{-211}	-6694^{+1191}_{-3800}	$-6.725^{+3.855}_{-22.341}$
Alt.	-700 ± 21	$5.38^{+0.99}_{-0.78}$	3680^{+265}_{-213}	5832^{+347}_{-314}	$4.478^{+1.512}_{-1.194}$

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

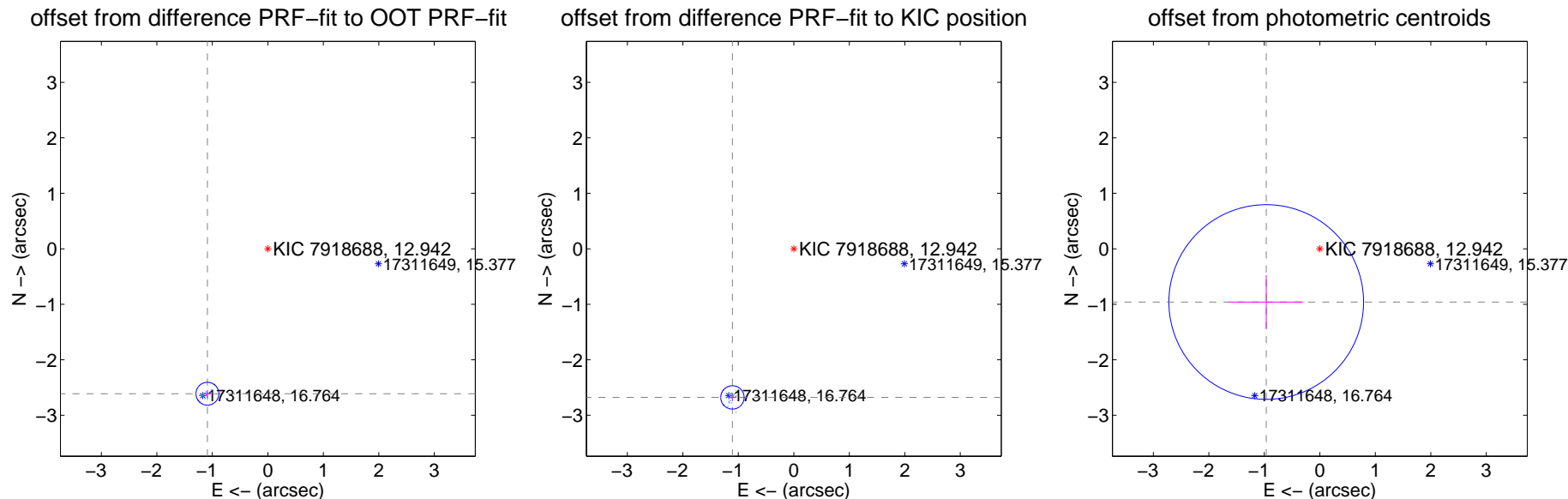
DV Centroid Data

Supplemental centroid analysis for 007918688-01. Kepler magnitude: 12.94. Transit SNR 8.22

There are 17 quarters with good PRF difference image offsets

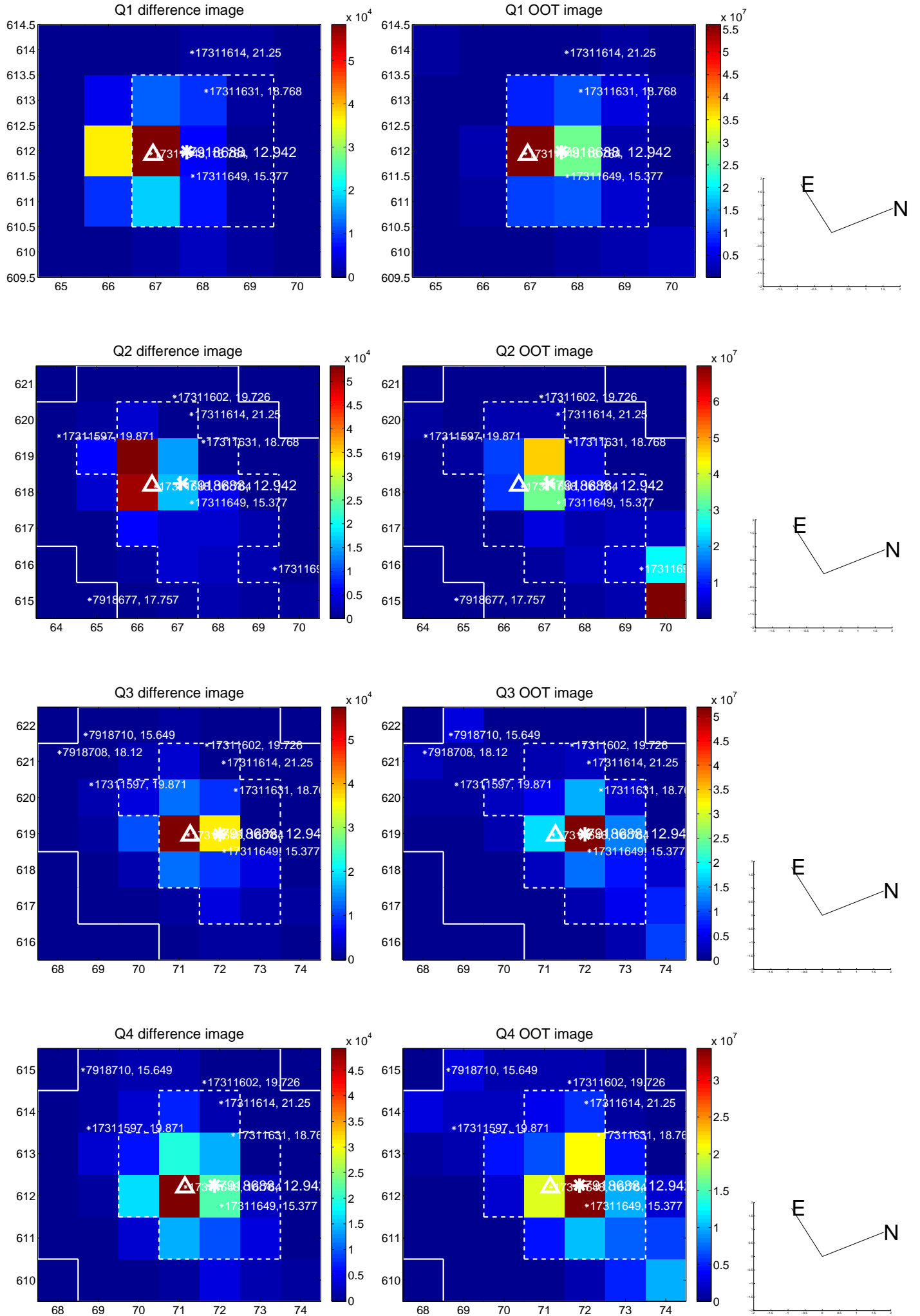
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.831 ± 0.069	41.21	1.089 ± 0.069	-2.613 ± 0.068
PRF-fit source offset from KIC position	2.899 ± 0.070	41.30	1.107 ± 0.068	-2.679 ± 0.070
photometric centroid source offset	1.36 ± 0.58	2.33	0.97 ± 0.67	-0.96 ± 0.49

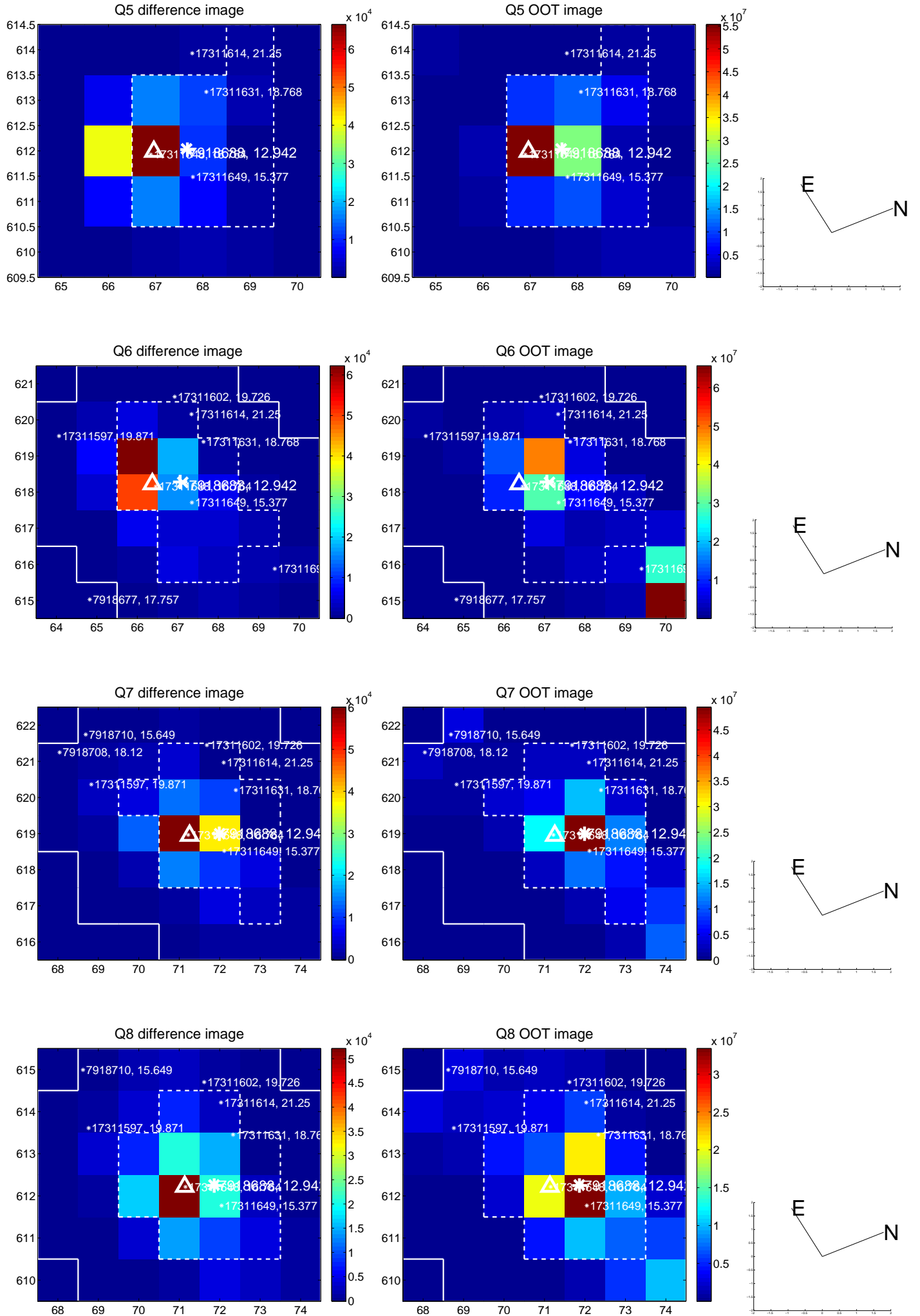


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

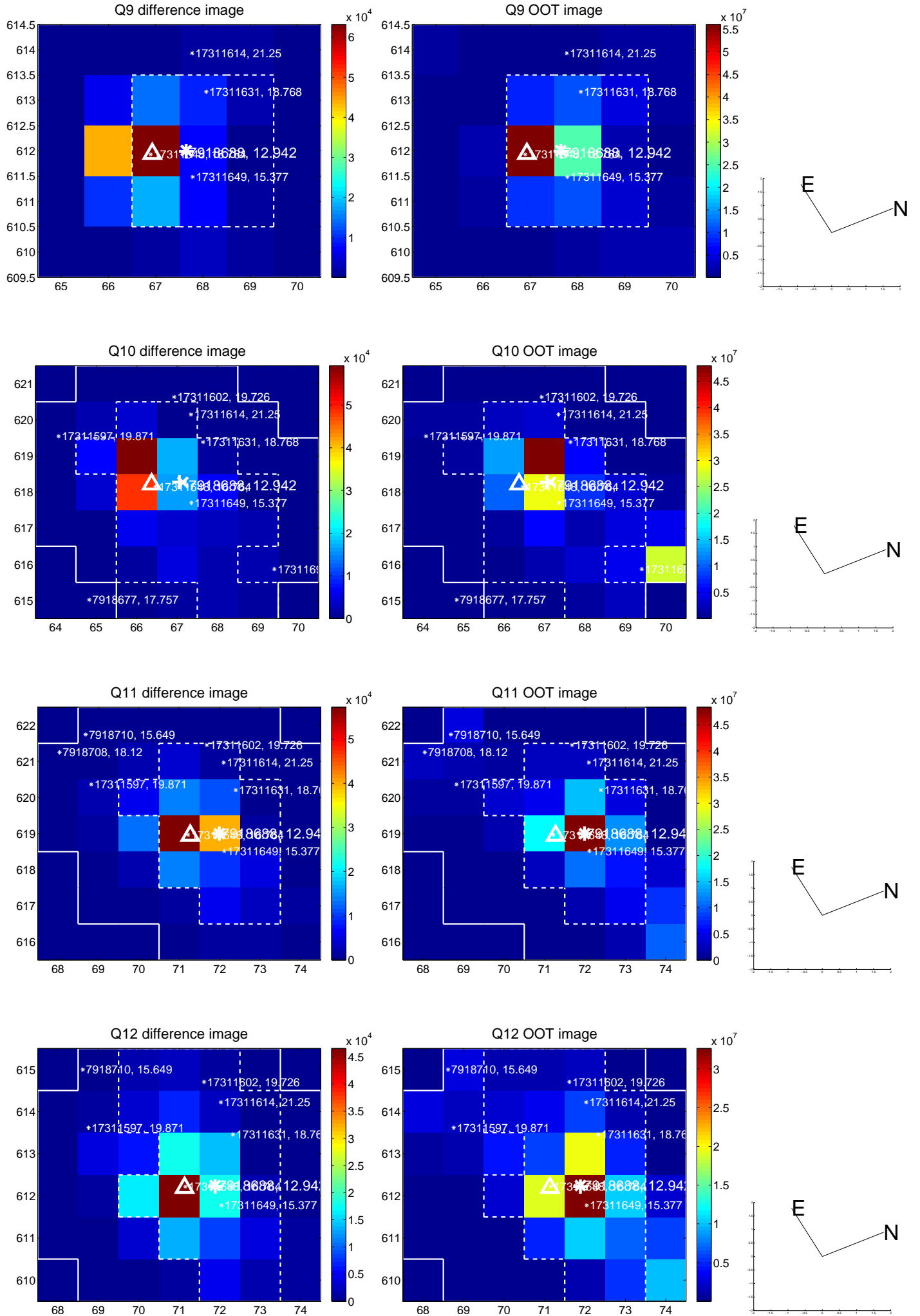
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



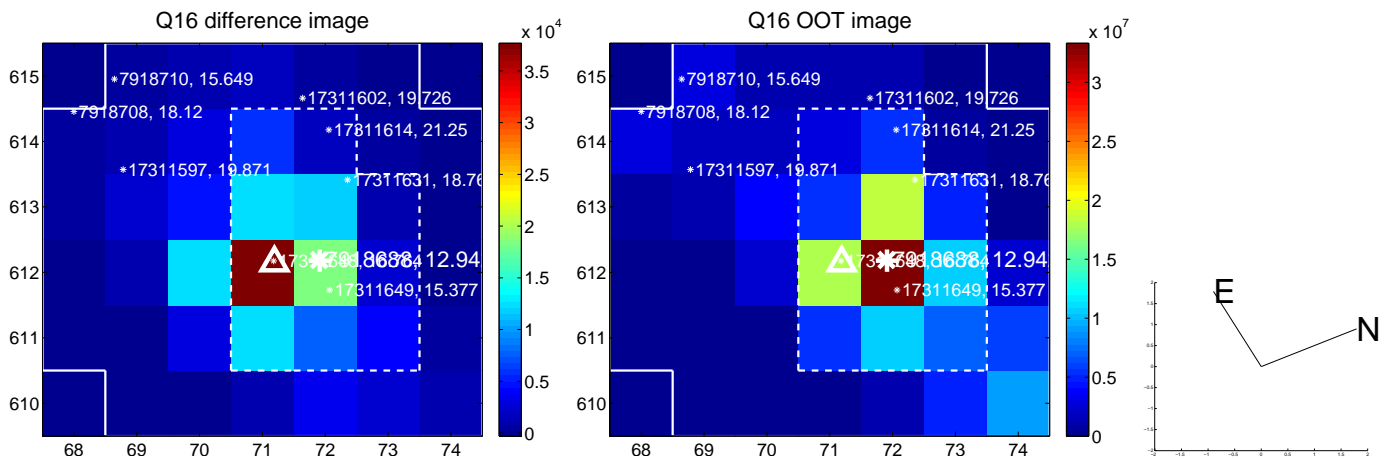
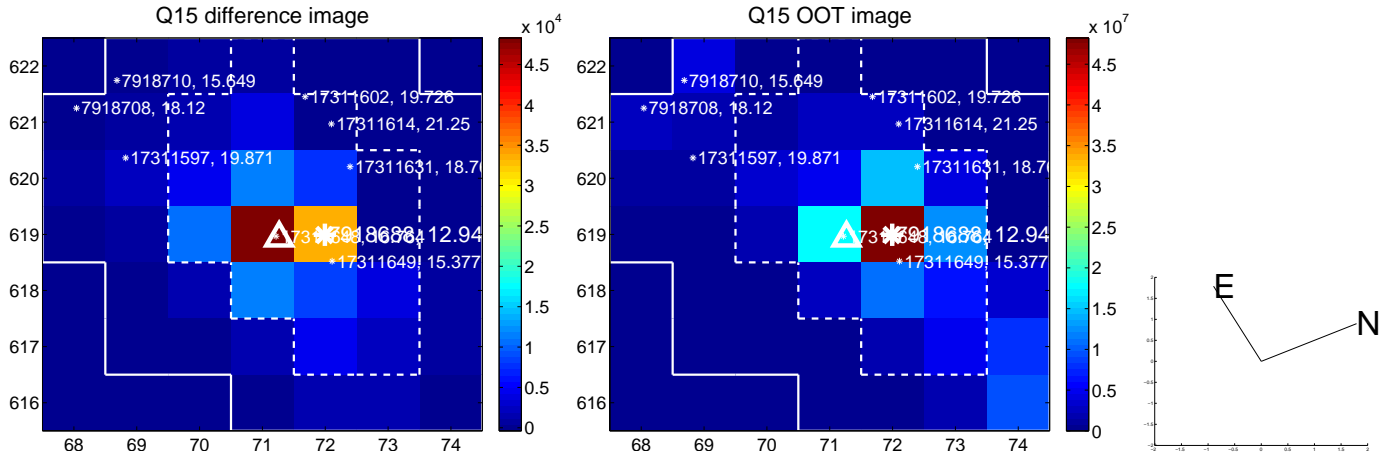
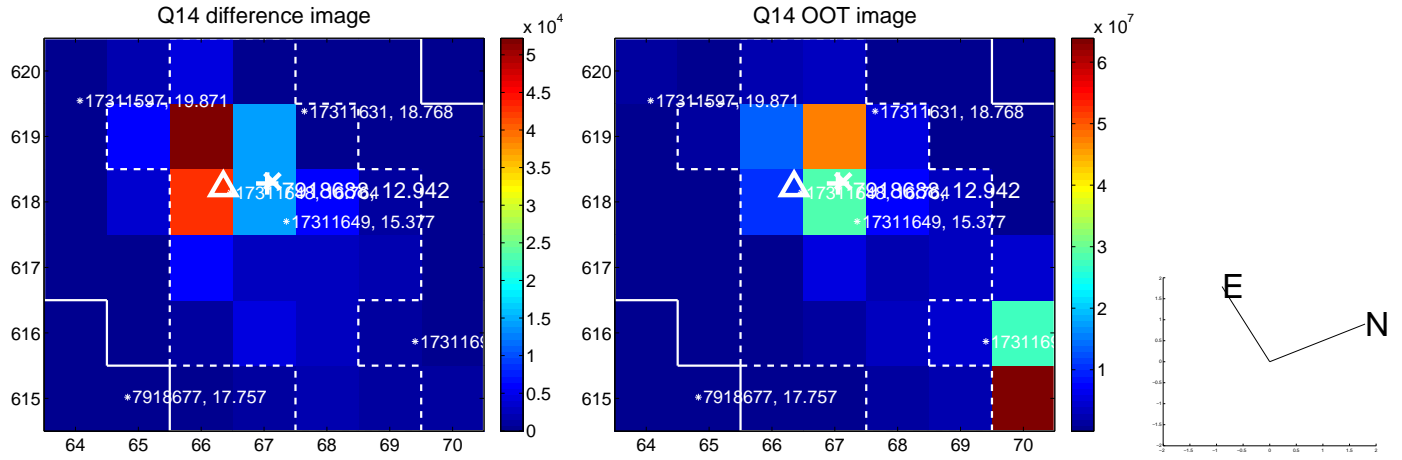
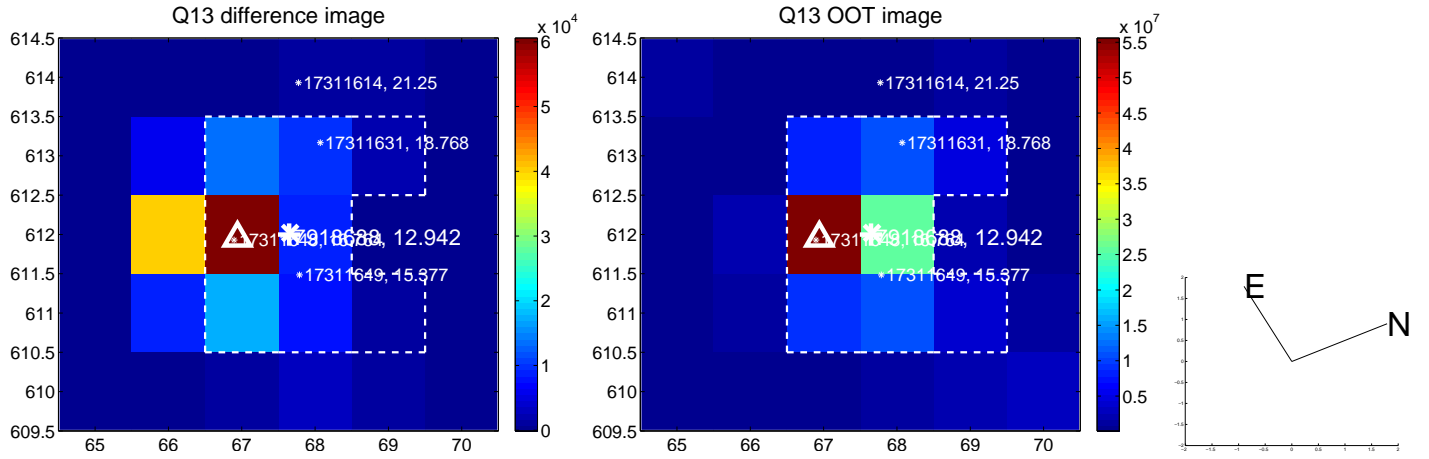
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



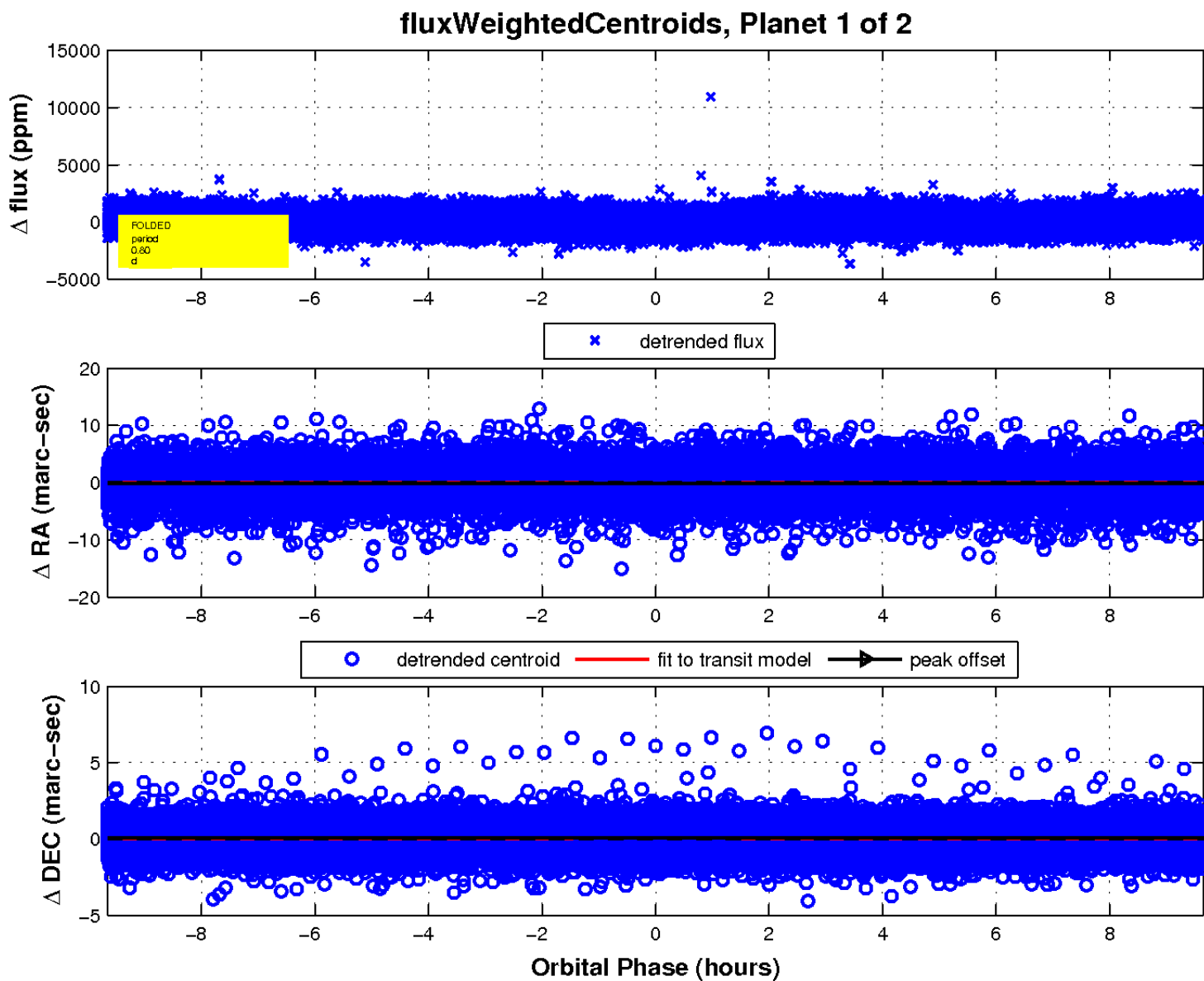
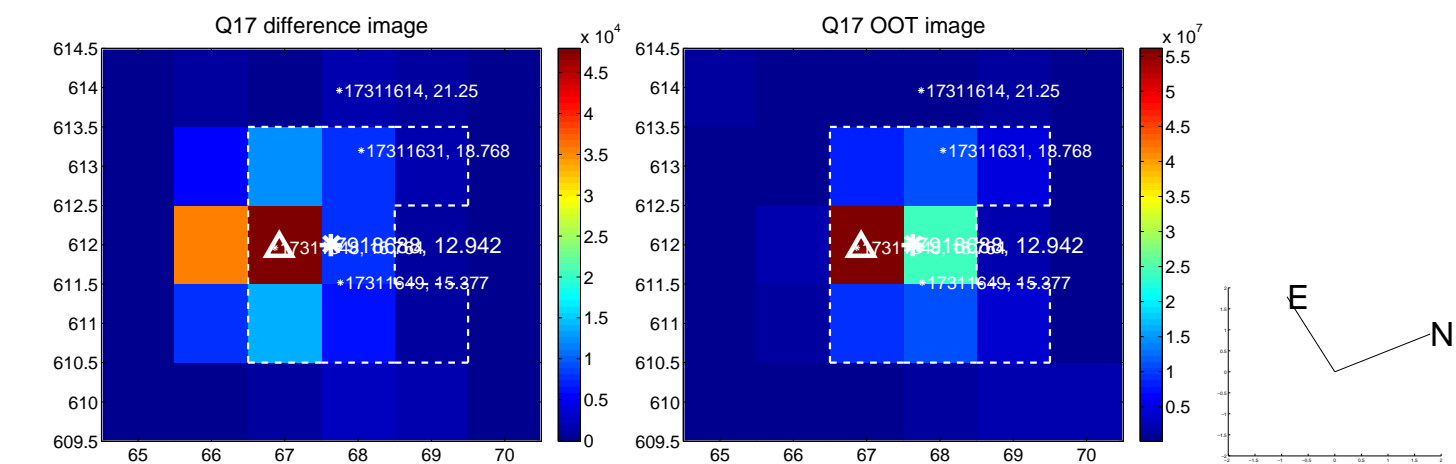
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

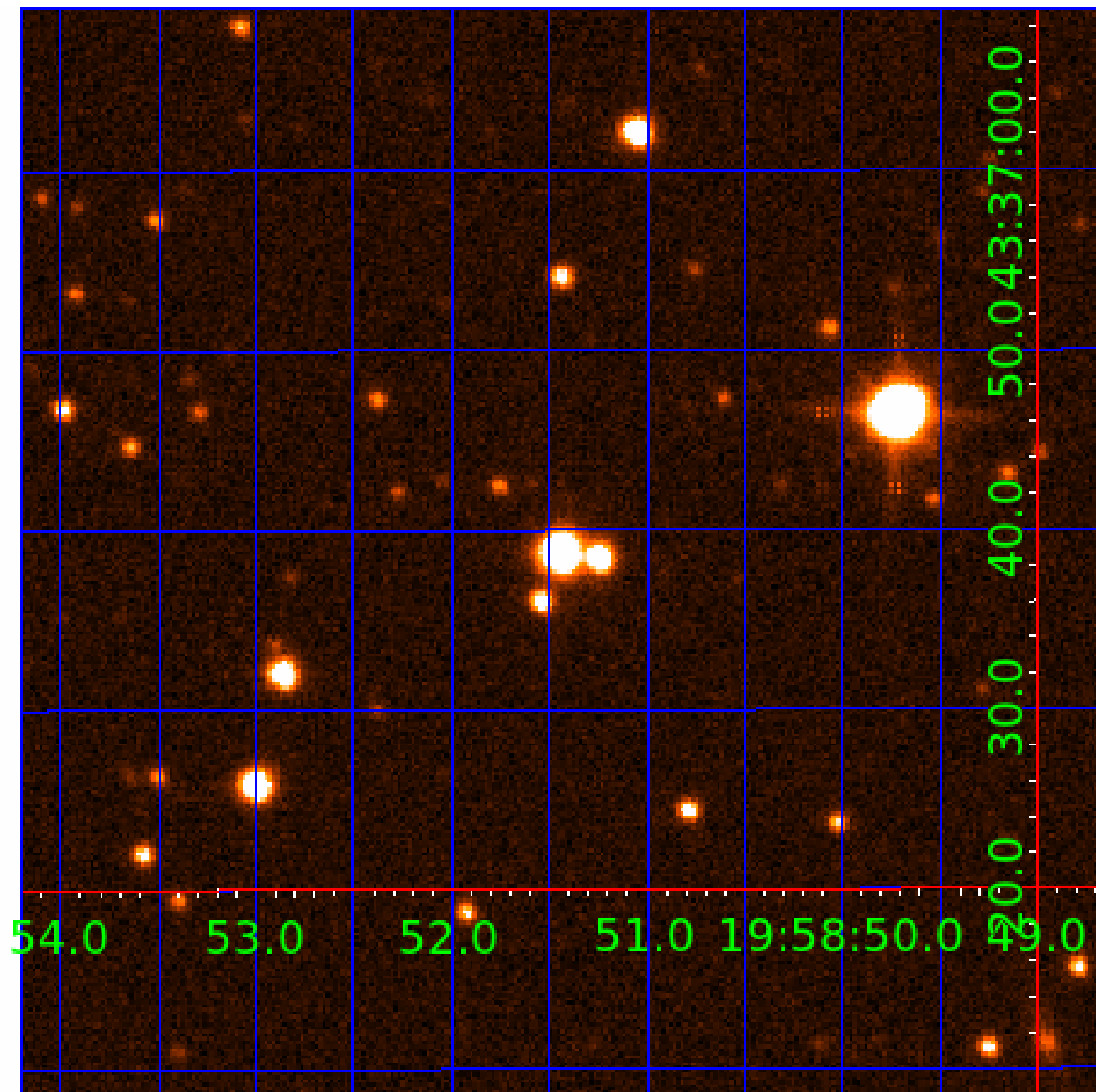


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007918688

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})
007918688-01	OBS	No	0.804696	131.968470	37.2	3.594	26.2	8.2	1.43	6798	0.91	11557.71
007918688-02	OBS	No	0.536501	131.667444	221.8	2.000	9.2	-1.0	1.43	6798	2.16	19843.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007918688-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET
007918688-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—CENT_NOFITS

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

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

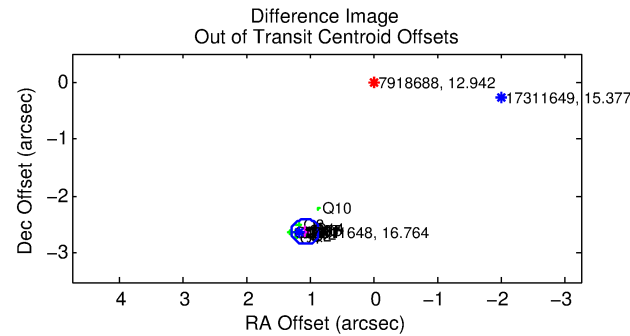
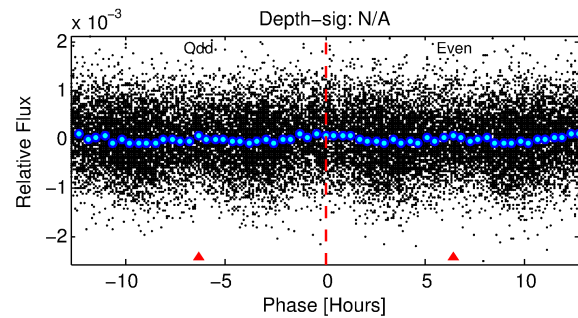
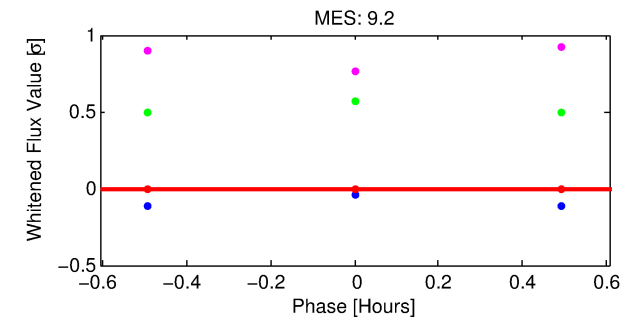
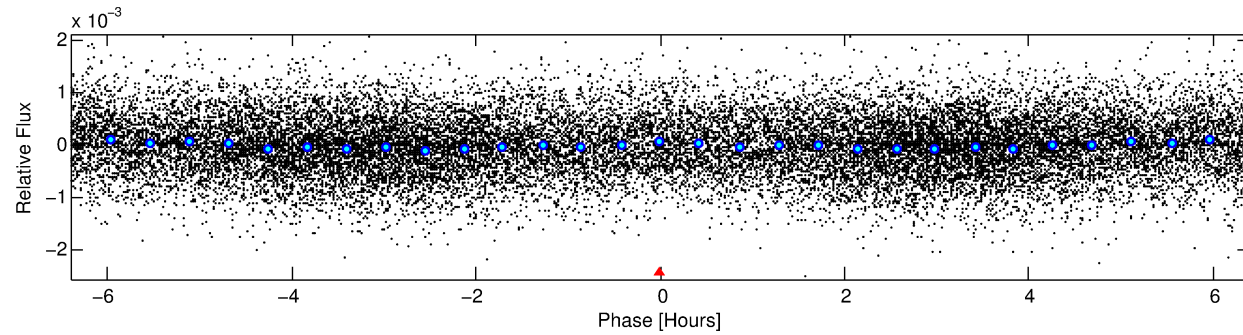
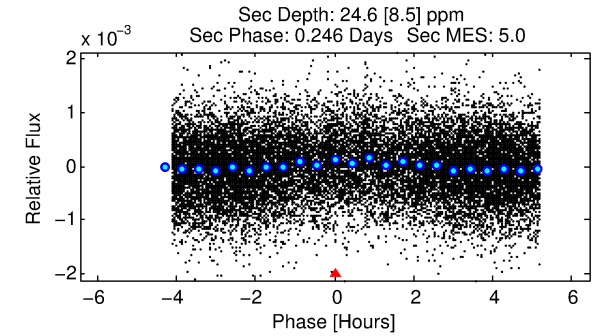
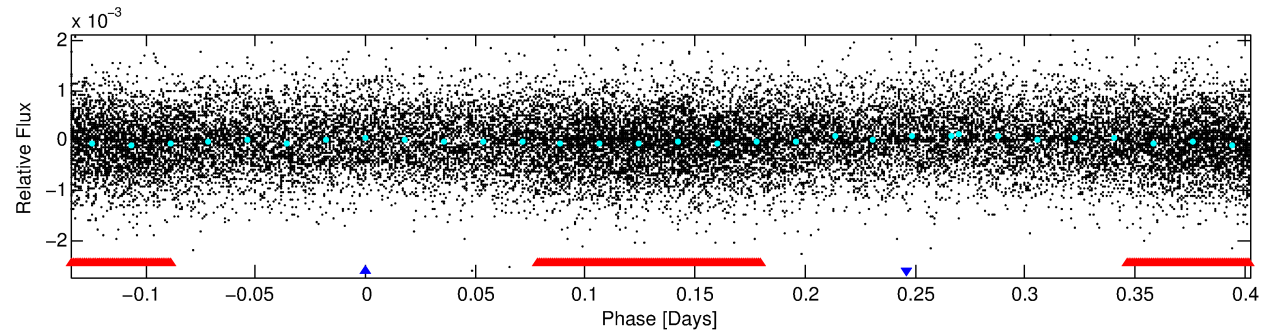
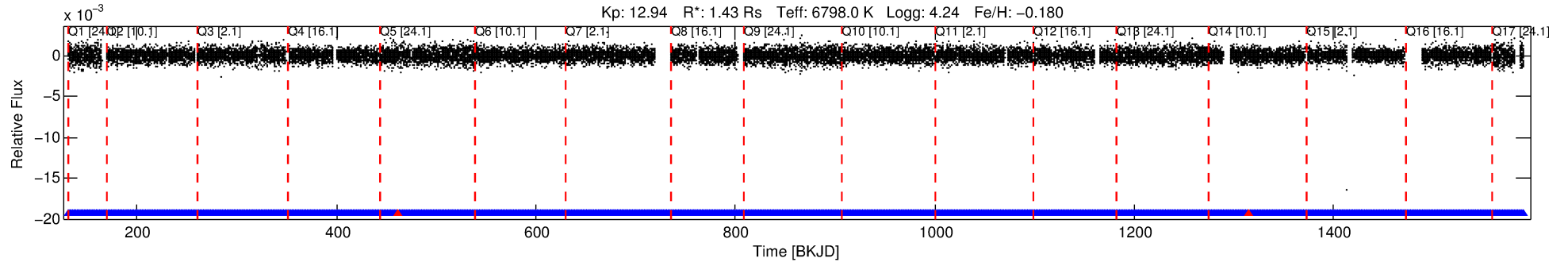
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007918688-02

No Significant Match Found

DV One-Page Summary

KIC: 7918688 Candidate: 2 of 2 Period: 0.537 d



TPS TCE Results:

Period = 0.53650 d
Epoch = 131.6674 BKJD

DV fit results are unavailable

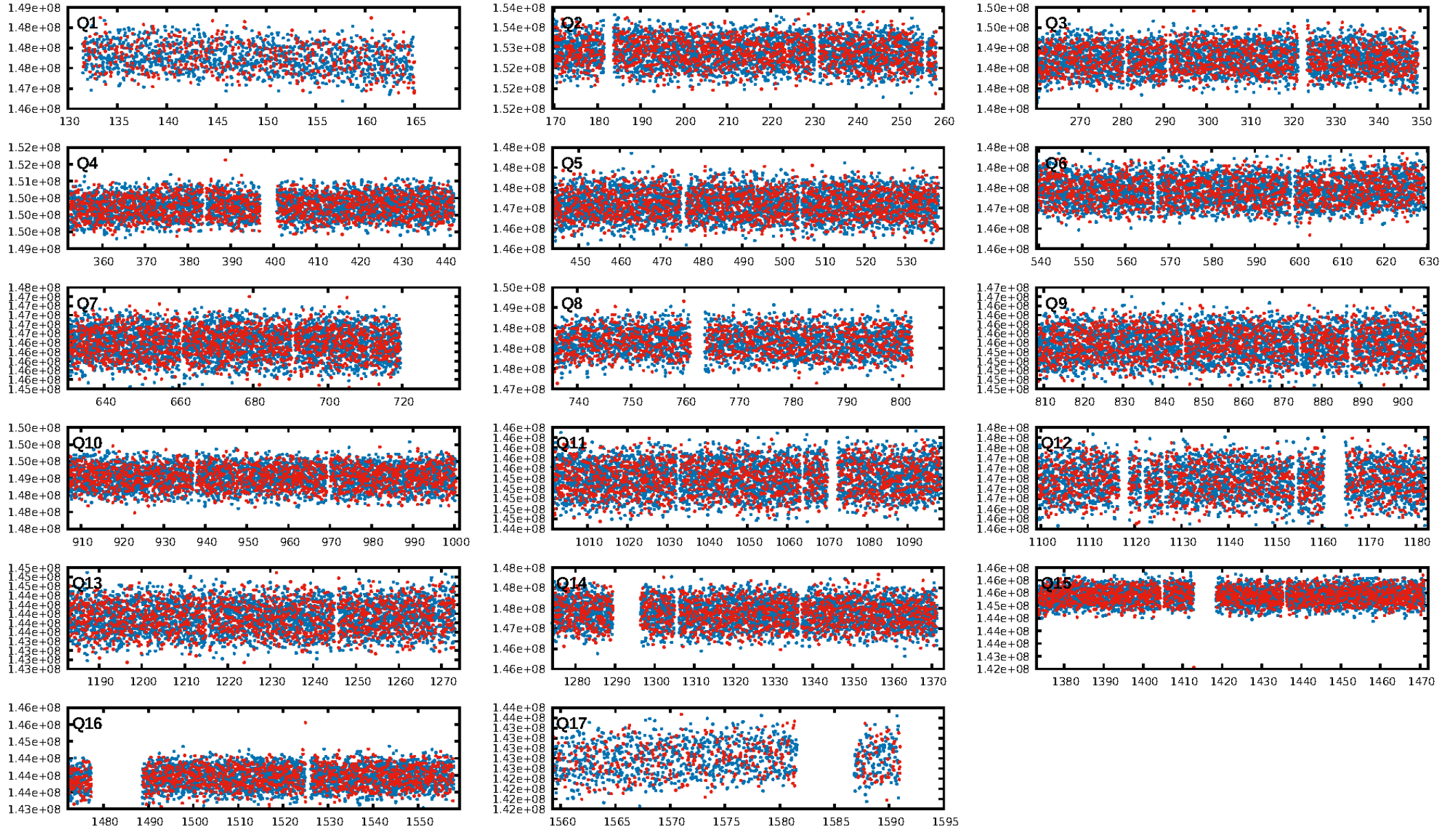
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 88.2% [1.56σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.82e-27
RollingBand-fgt: 1.00 [801/803]
GhostDiagnostic-chr: -1.297
Centroid-sig: 0.0%
Centroid-so: 1.540 arcsec [28.25σ]
OotOffset-rm: 2.836 arcsec [38.72σ]
KicOffset-rm: 2.870 arcsec [40.06σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

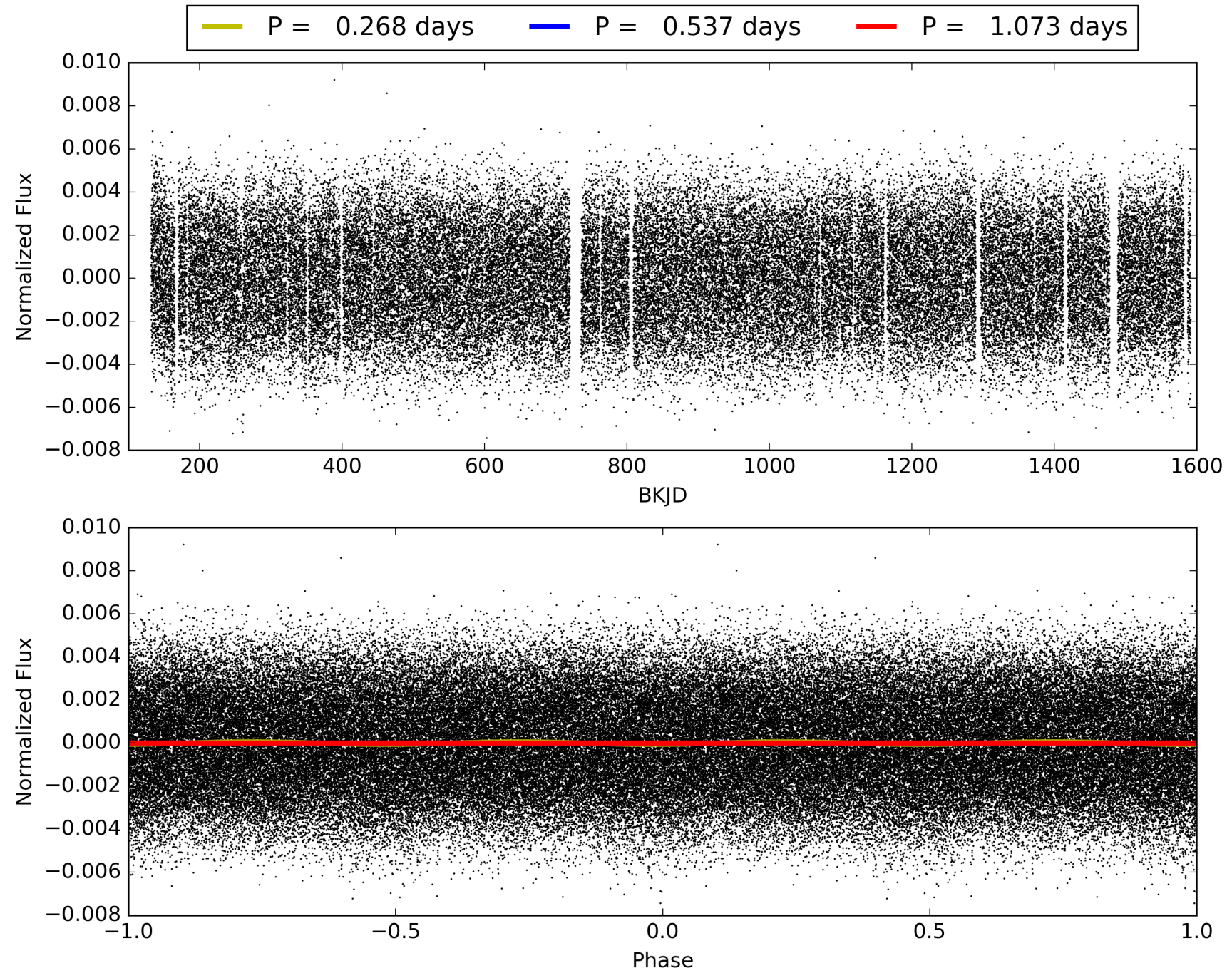
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:13:16 Z

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

TCE 007918688-02, PDC Light Curves

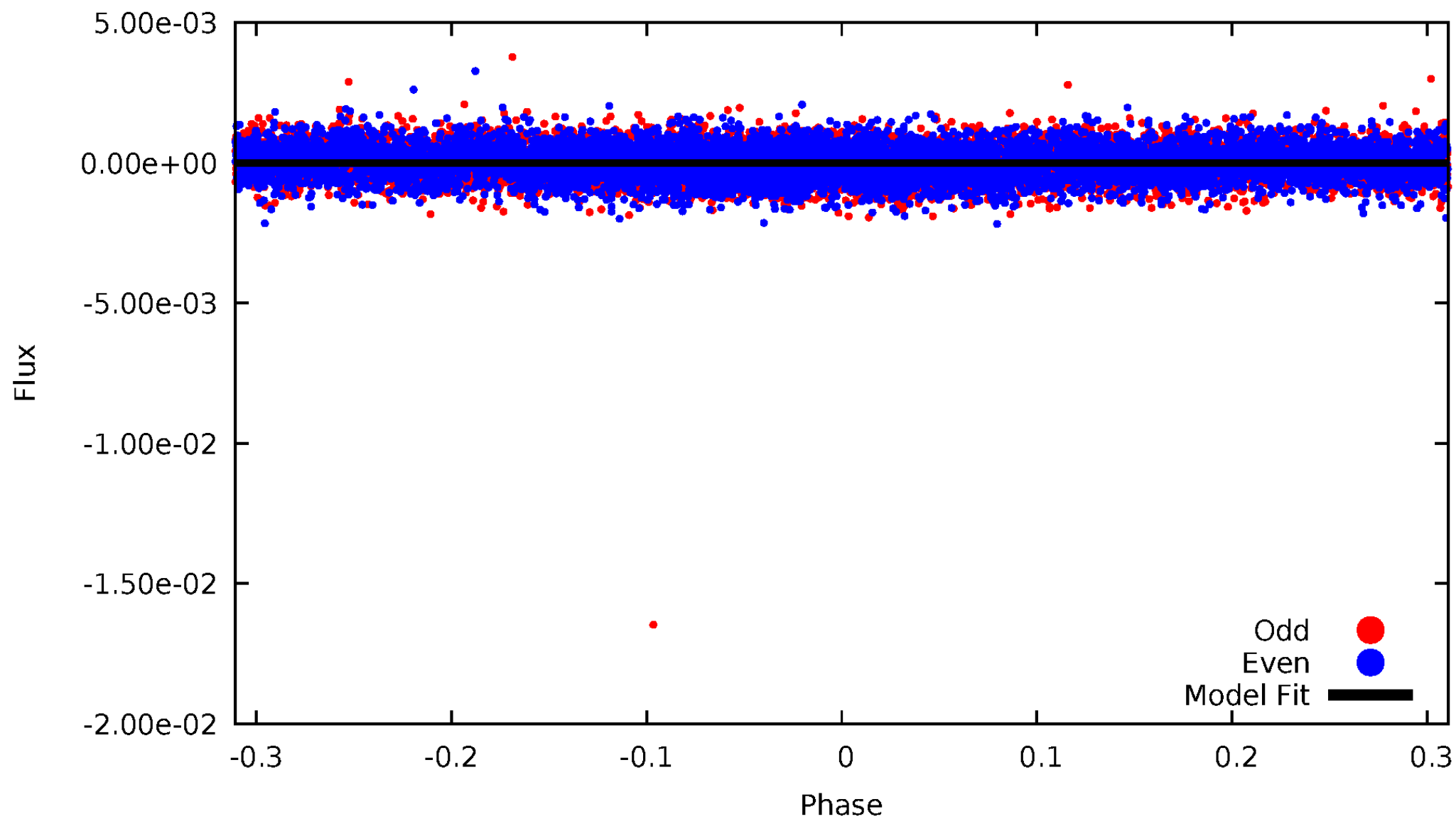


TCE 007918688-02



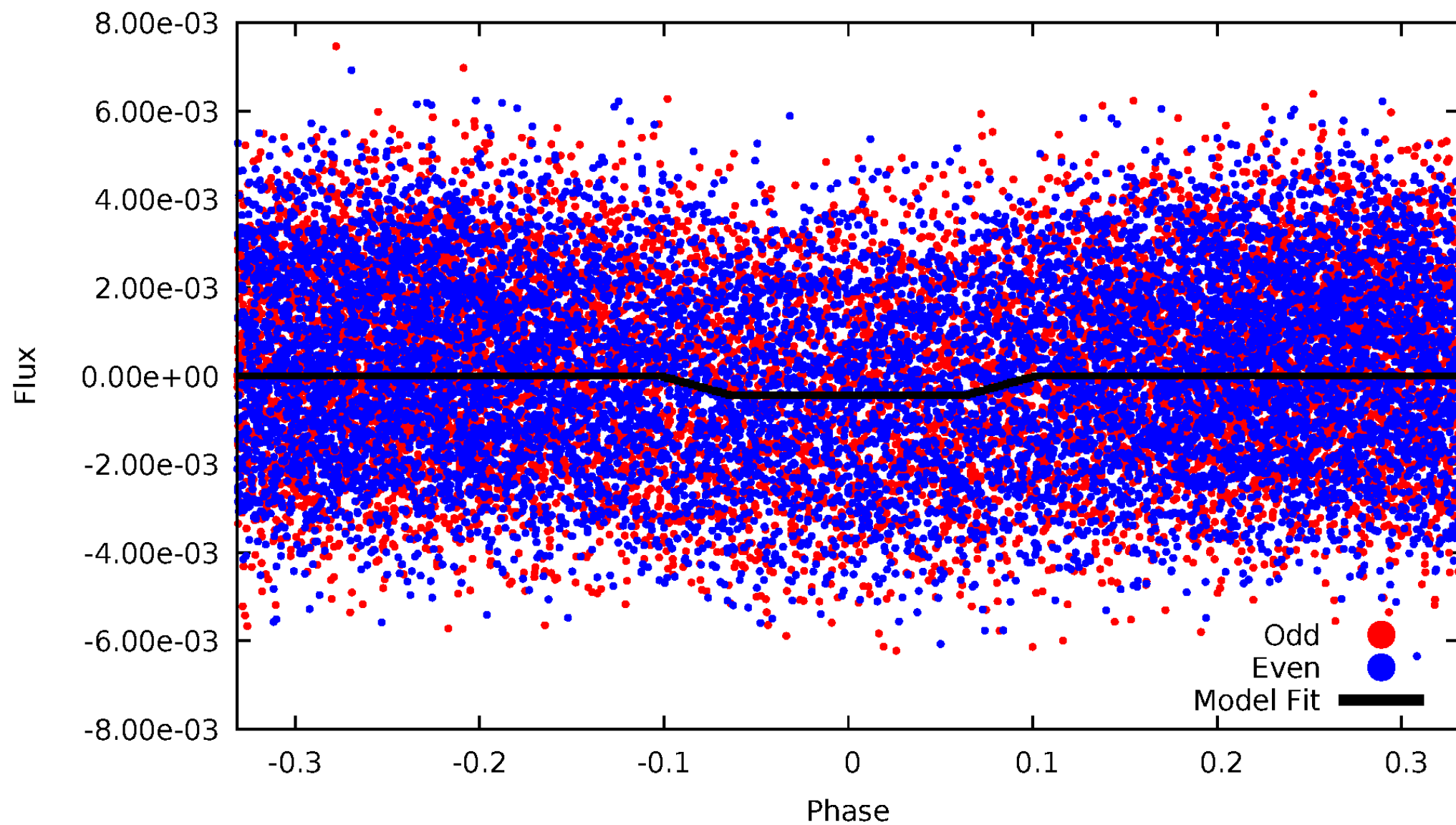
DV Odd/Even

TCE 007918688-02



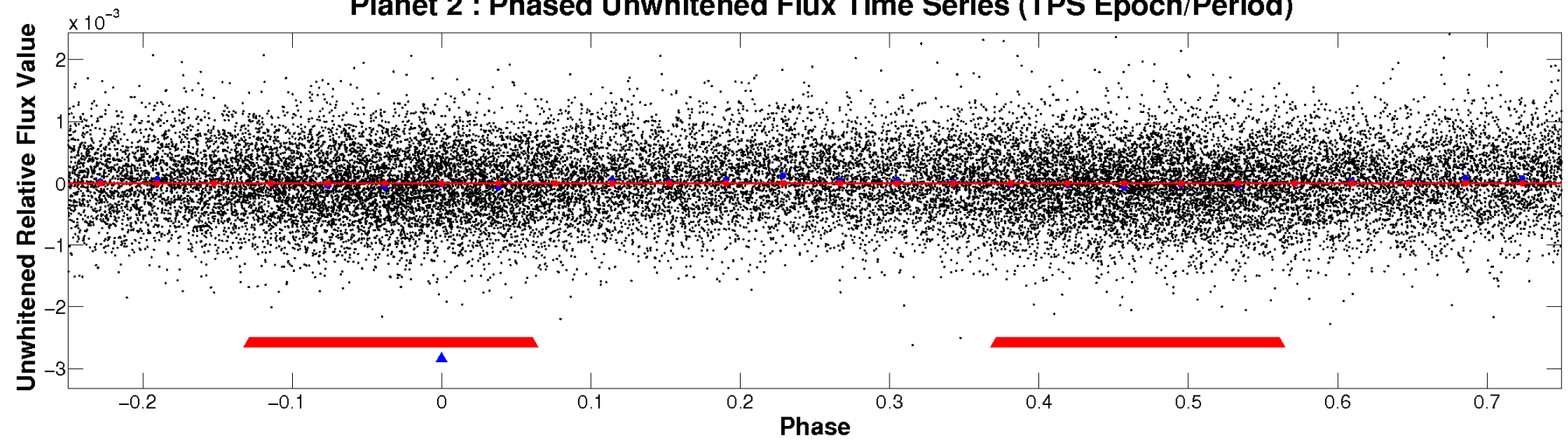
ALT Odd/Even

TCE 007918688-02

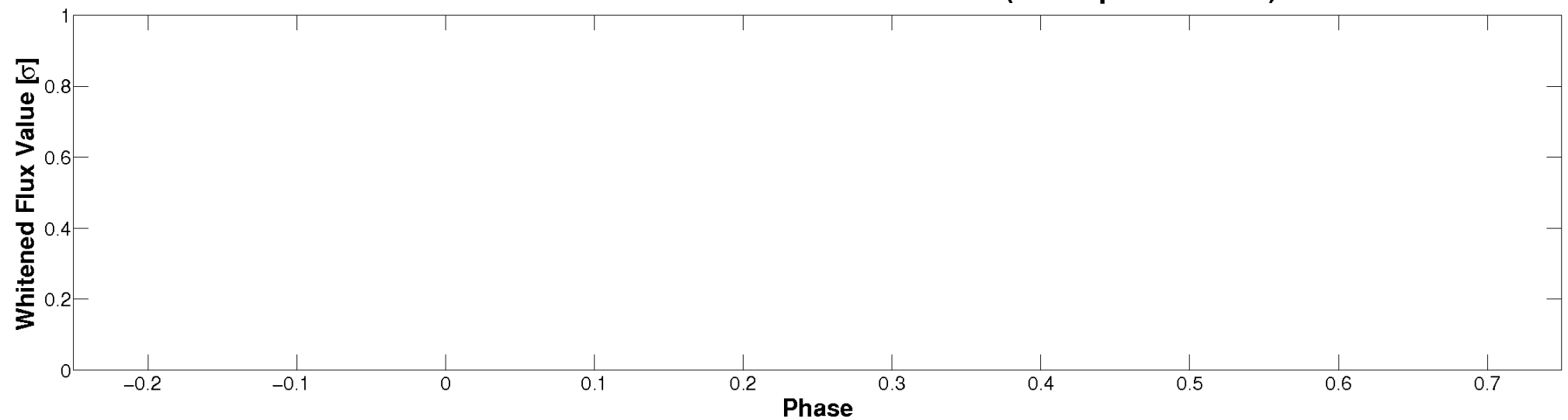


Non-Whitened Vs. Whitened Light Curve

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

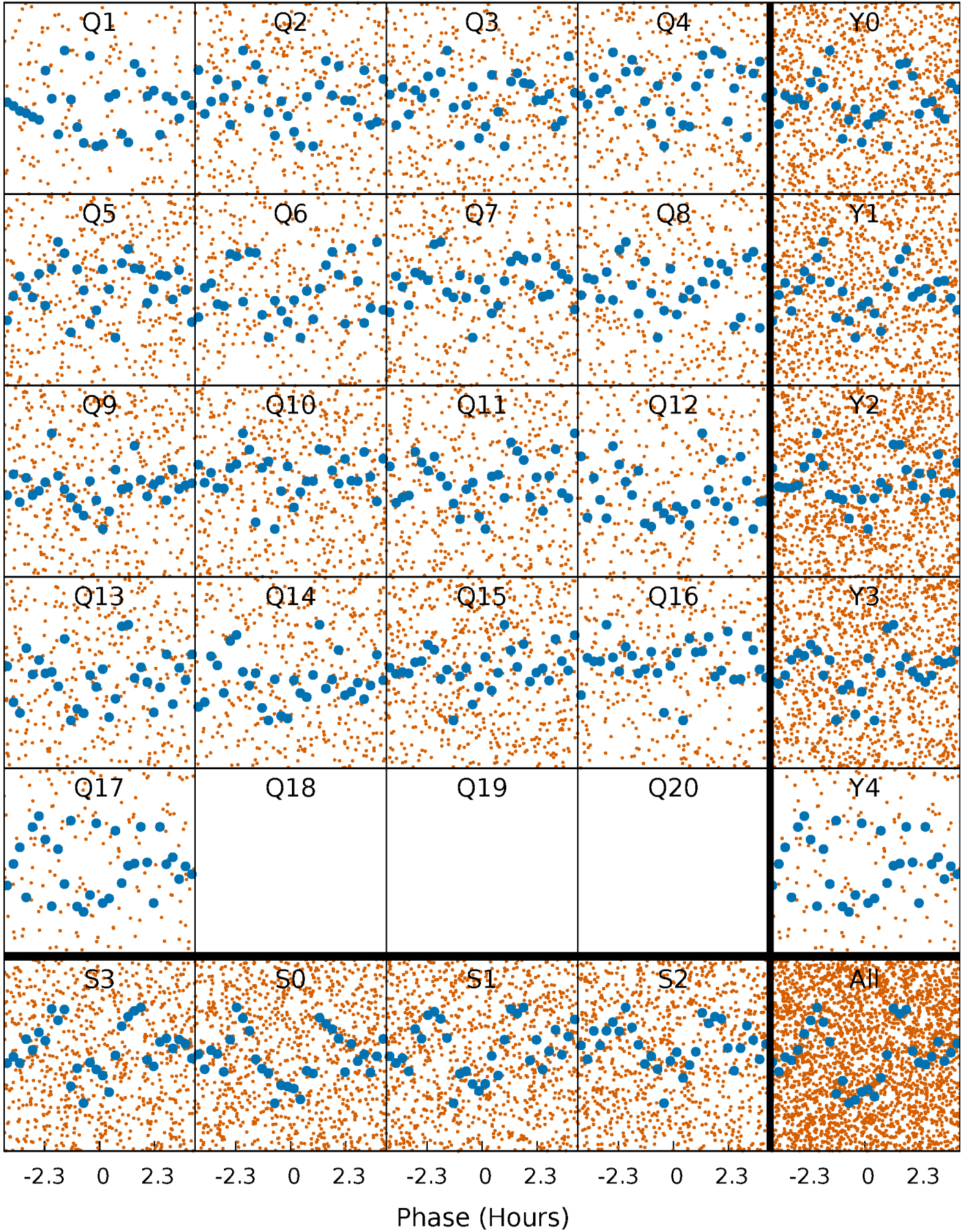


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



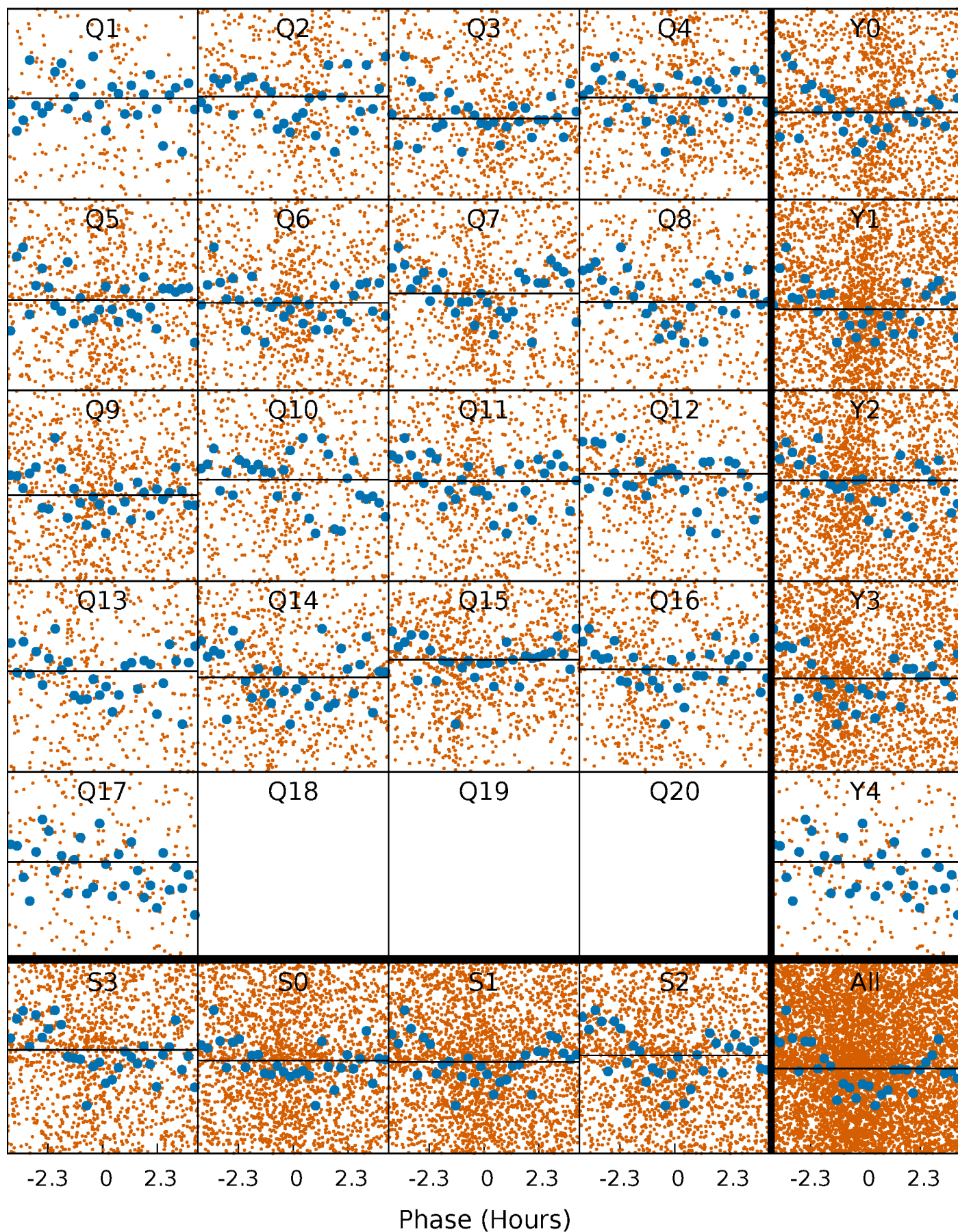
PDC Quarter-Phased Transit Curves

TCE 007918688-02 P= 0.536501 Days $T_0=131.667444$ (BKJD)



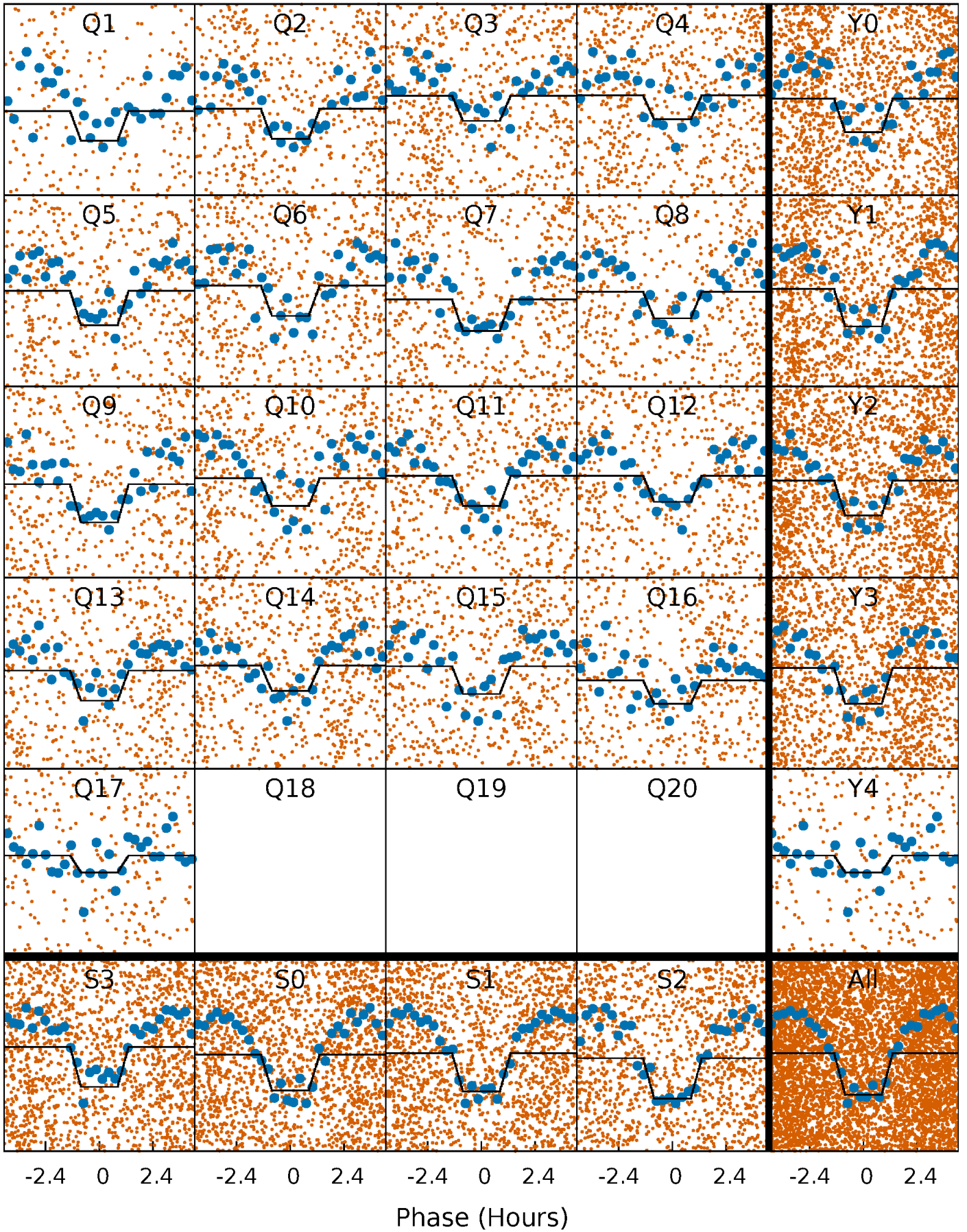
DV Quarter-Phased Transit Curves

TCE 007918688-02 P= 0.536501 Days $T_0=131.667444$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

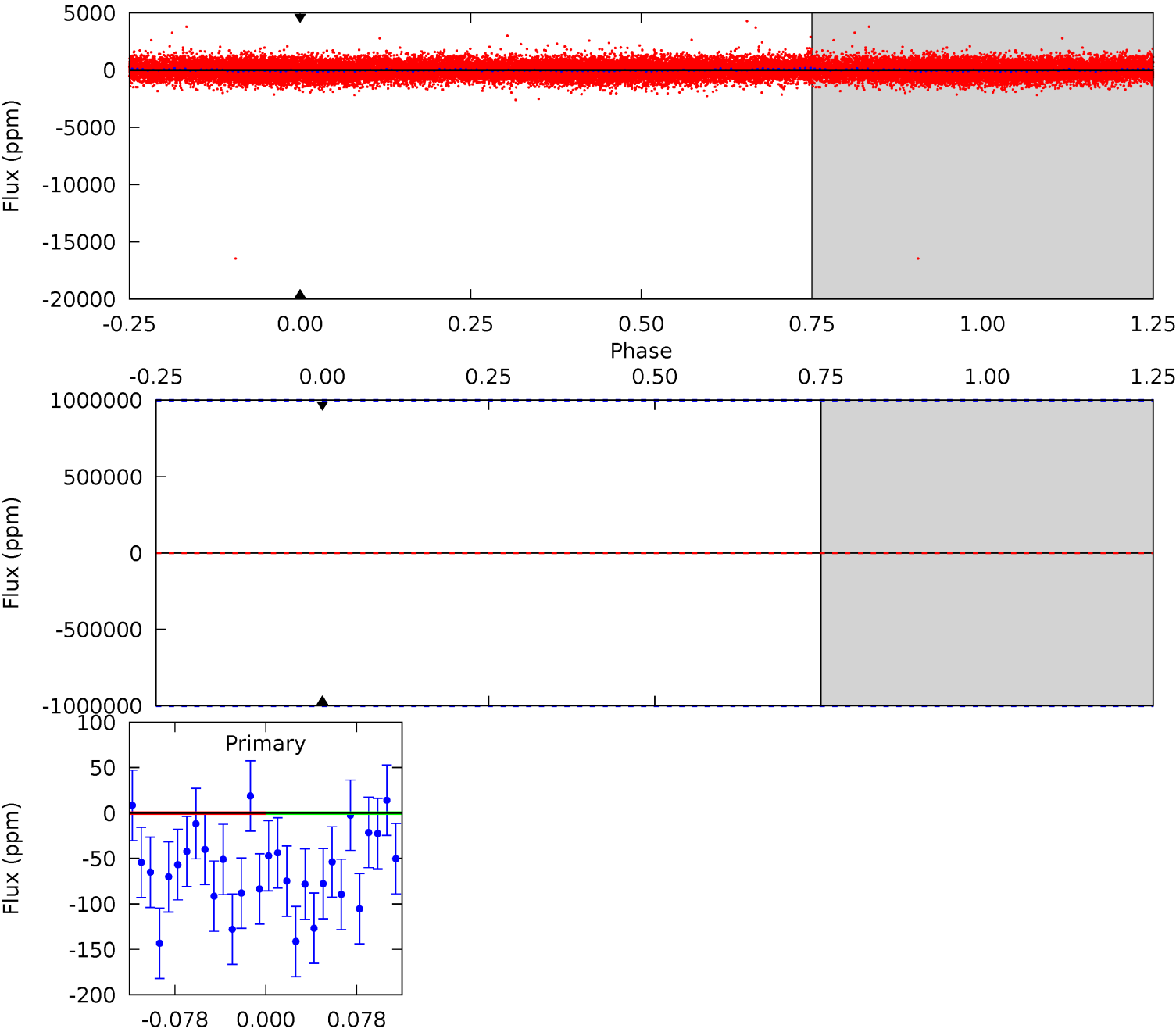
TCE 007918688-02 P= 0.536501 Days $T_0=131.788445$ (BKJD)



DV Model-Shift Uniqueness Test

007918688-02, P = 0.536501 Days, E = 131.130943 Days

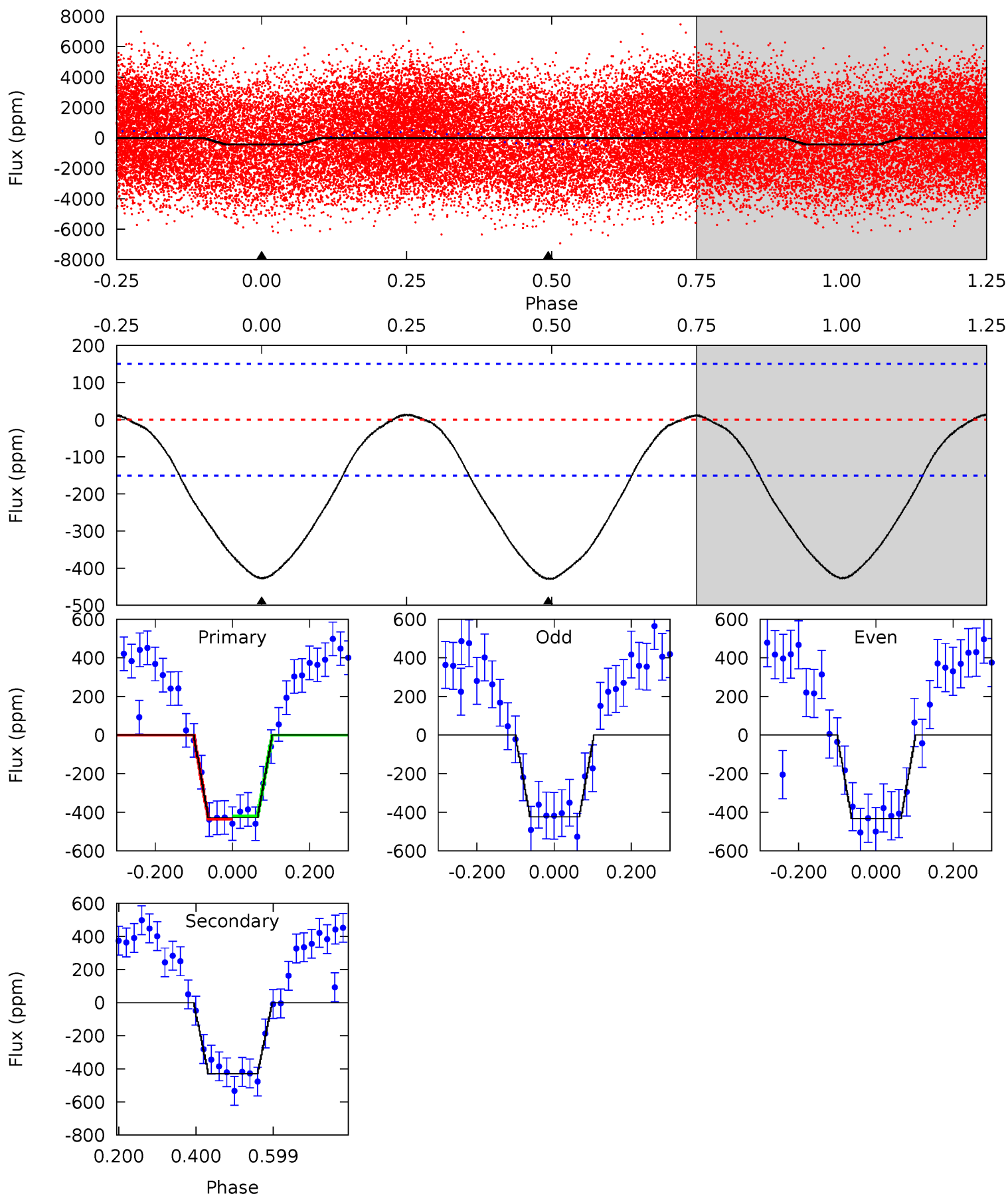
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007918688-02, P = 0.536501 Days, E = 131.251944 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	12.6	0	0	4.42	1.28	0.31	12.6	12.6	12.6	12.6	0.14	0.98	0.03	0.25



Stellar Parameters For KIC 007918688

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6798^{+165}_{-259}	$4.236^{+0.124}_{-0.186}$	$-0.180^{+0.250}_{-0.300}$	$1.432^{+0.438}_{-0.256}$	$1.298^{+0.190}_{-0.209}$	$0.622^{+0.373}_{-0.315}$
	+2%/-4%	+3%/-4%	+139%/-167%	+31%/-18%	+15%/-16%	+60%/-51%
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 007918688-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$11.68^{+12.14}_{-8.09}$	4262^{+327}_{-284}	-4943^{+35566}_{-22700}	$-0.824^{+127.484}_{-120.018}$
Alt.	-429 ± 34	$11.86^{+12.84}_{-8.56}$	4227^{+305}_{-268}	2680^{+3812}_{-6353}	$0.329^{+3.857}_{-0.256}$

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

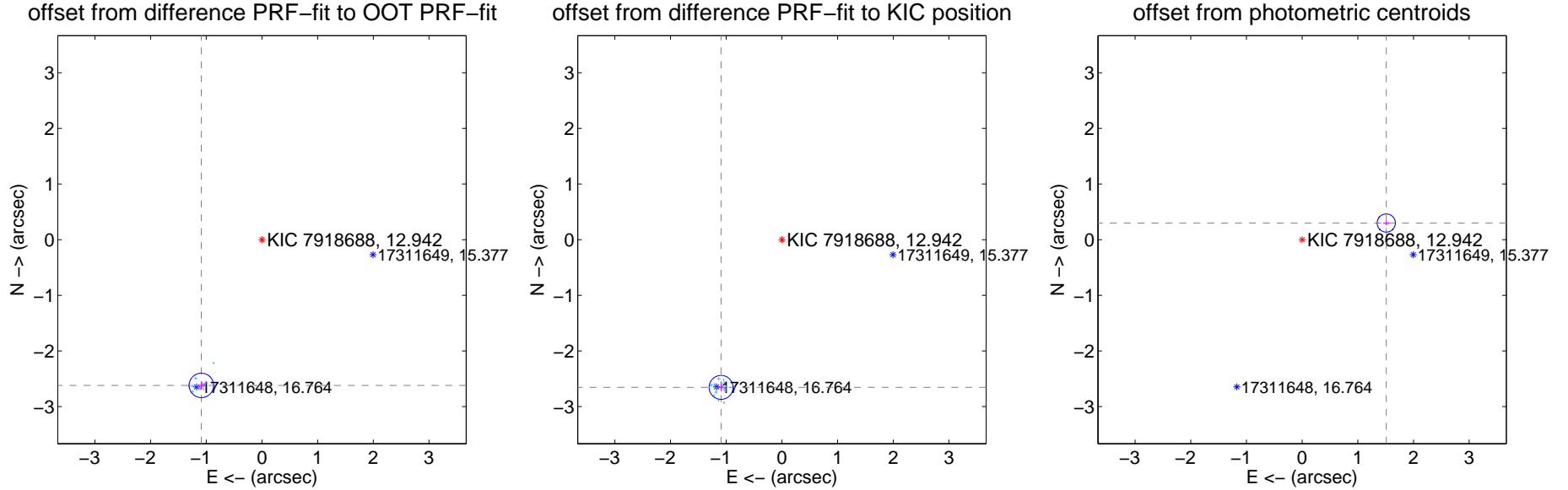
DV Centroid Data

Supplemental centroid analysis for 007918688-02. Kepler magnitude: 12.94. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

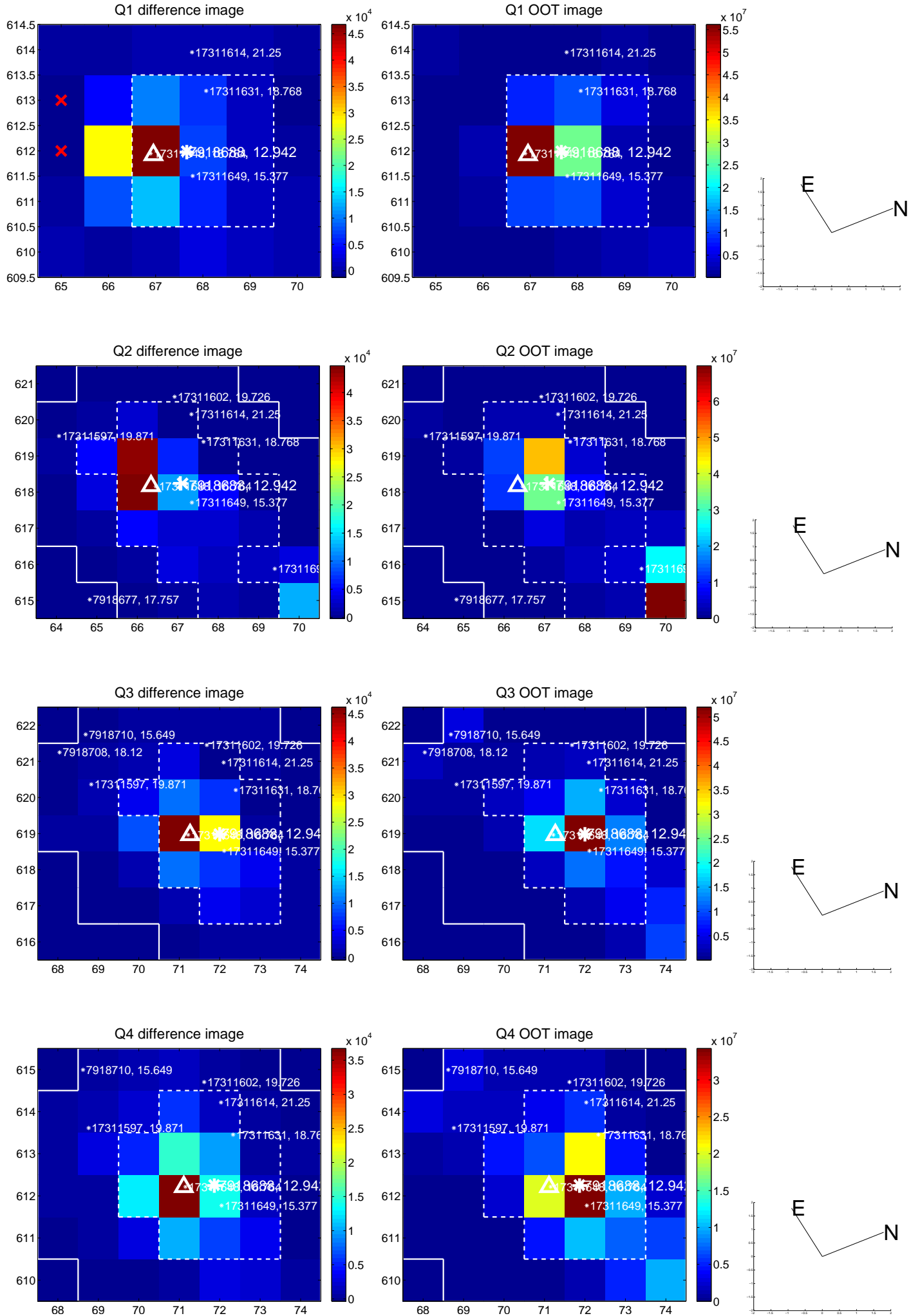
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.836 ± 0.073	38.72	1.088 ± 0.071	-2.619 ± 0.071
PRF-fit source offset from KIC position	2.870 ± 0.072	40.06	1.092 ± 0.069	-2.654 ± 0.072
photometric centroid source offset	1.54 ± 0.05	28.25	-1.51 ± 0.05	0.30 ± 0.04

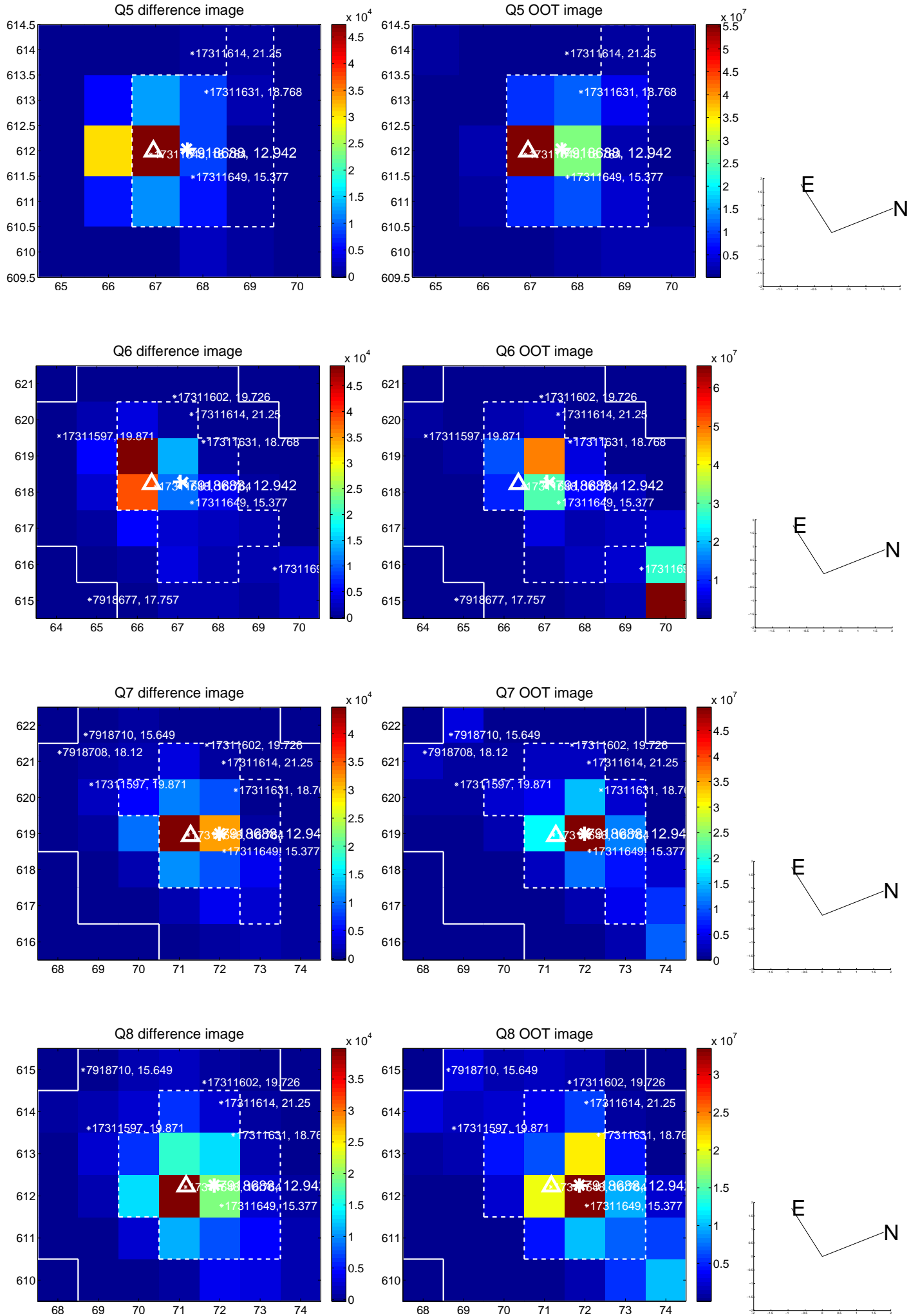


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

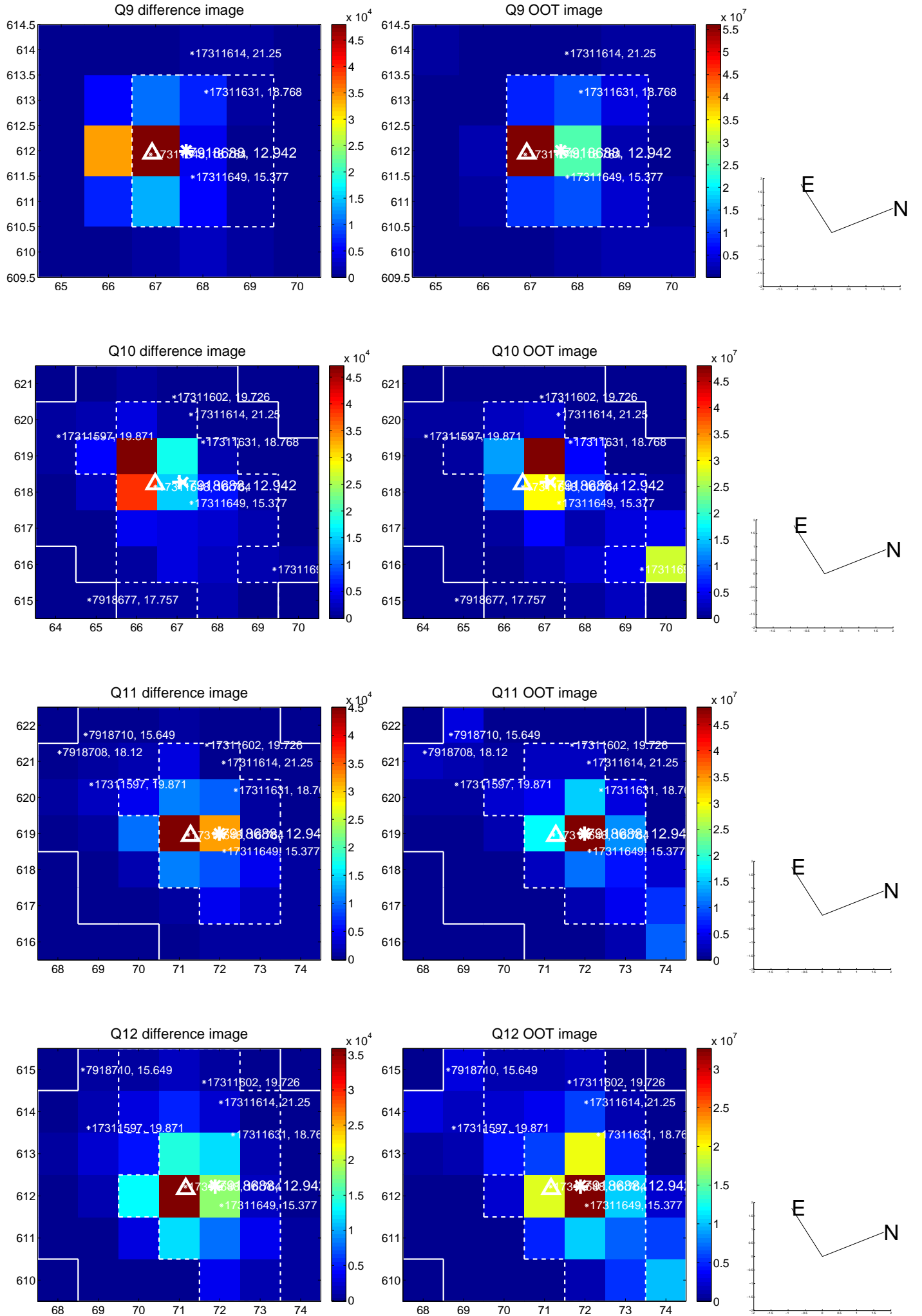
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



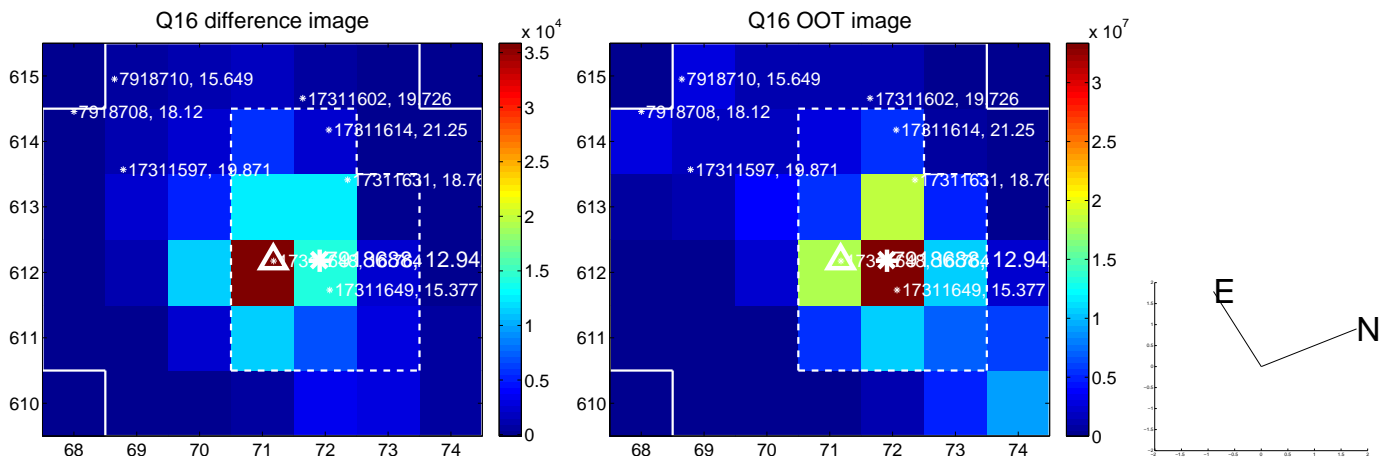
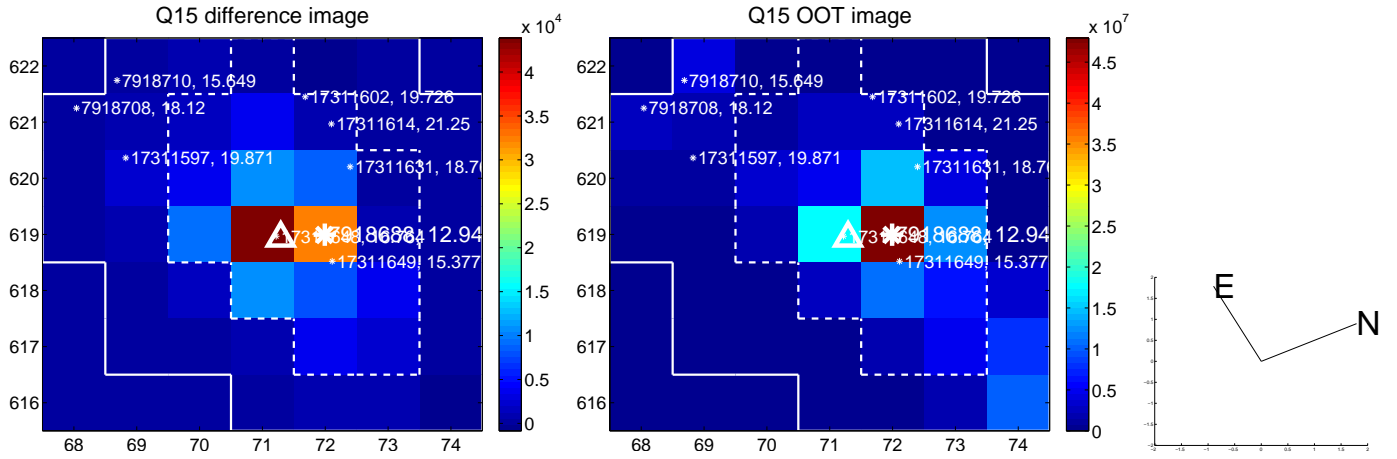
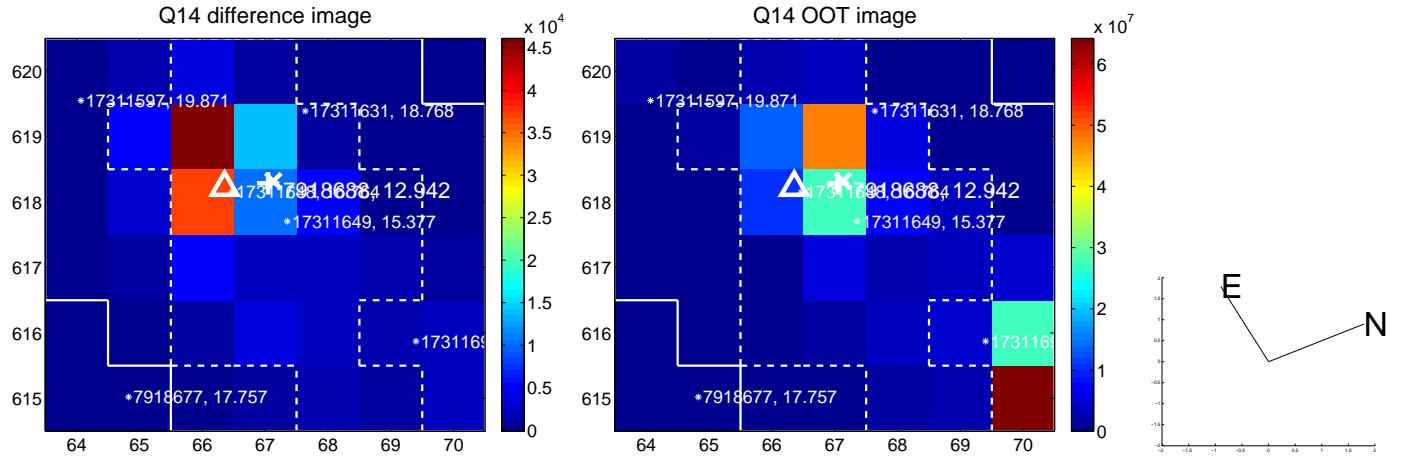
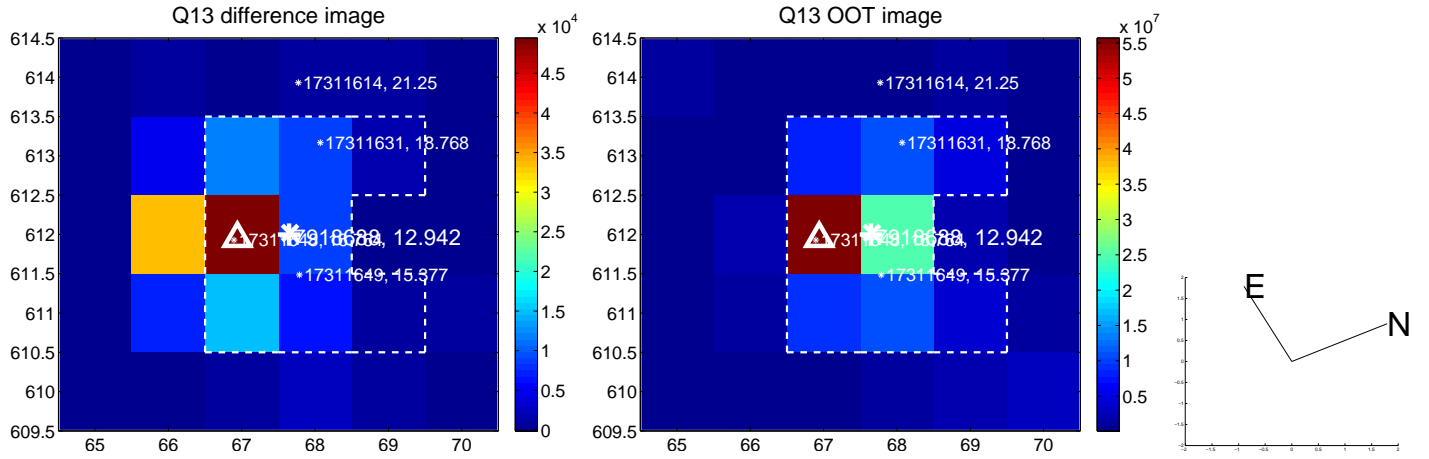
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



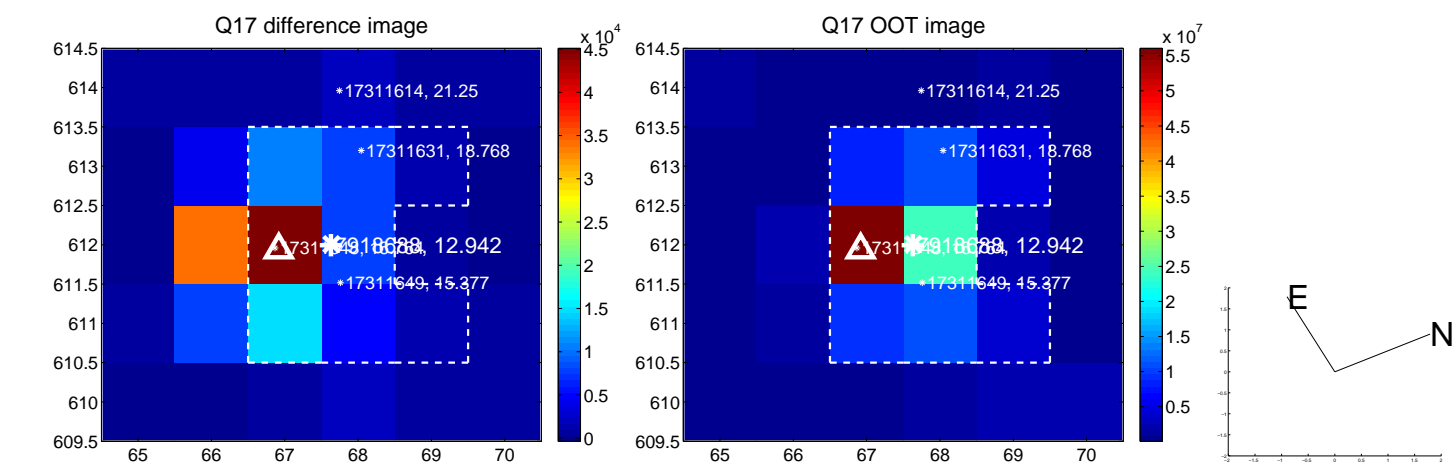
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



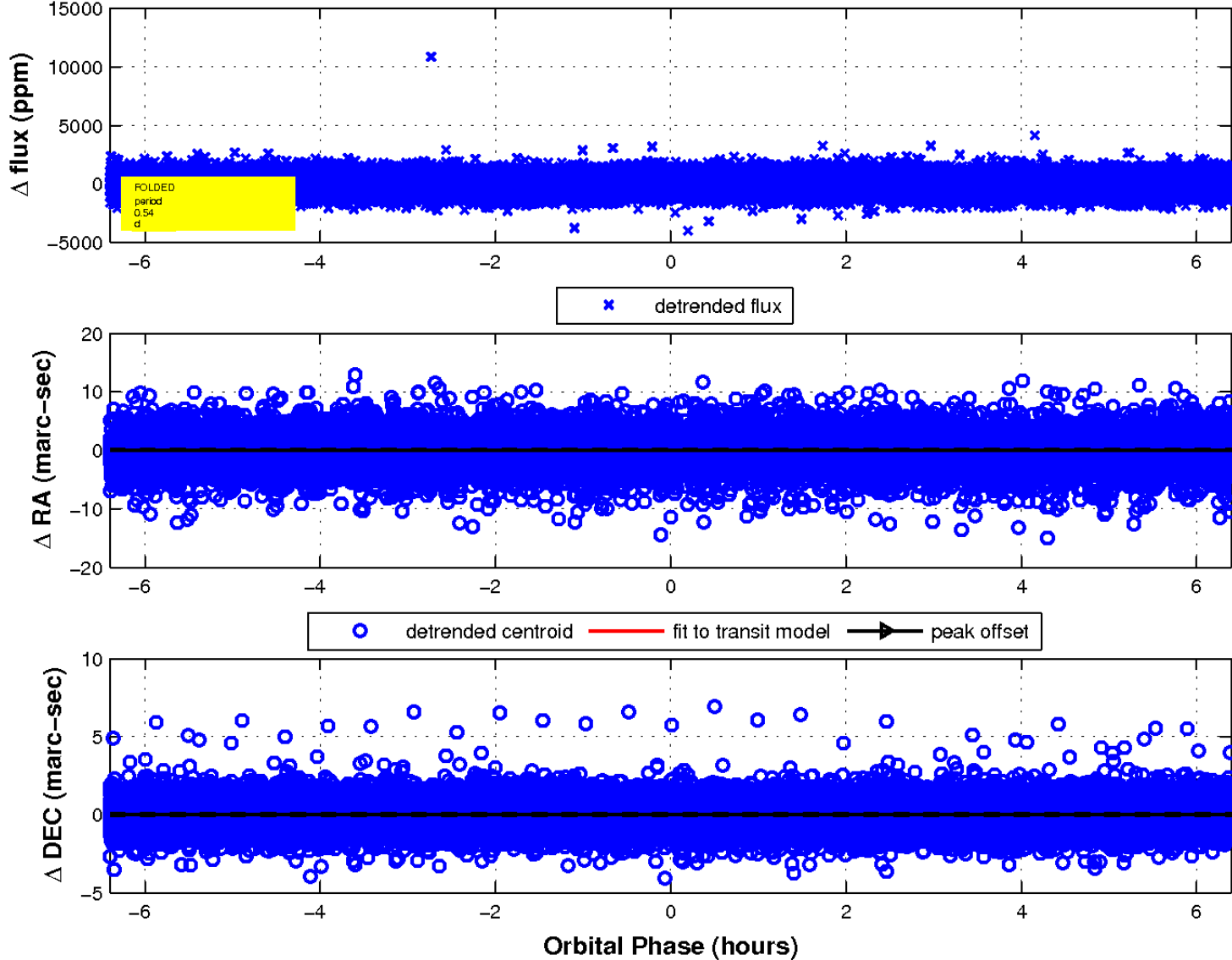
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

