

KIC 010619192

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})
010619192-01	OBS	0203.01	1.485710	132.793659	20739.7	2.285	2002.6	2173.0	1.02	5624	14.45	1409.27
010619192-02	OBS	No	1.485729	132.043530	64.0	2.343	8.9	9.2	1.02	5624	0.87	1409.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010619192-01	OBS	PC	1.00	0	1	0	0	MOD_SEC_DV—PLANET_OCCULT_DV—HAS_SEC_TCE
010619192-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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.

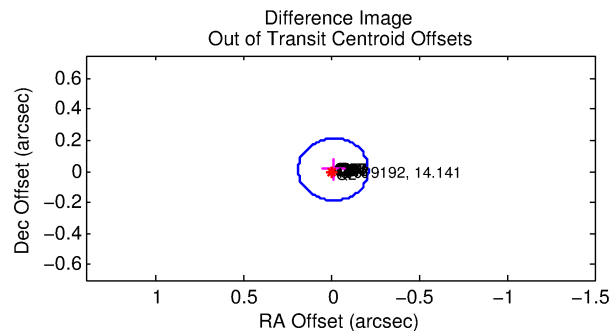
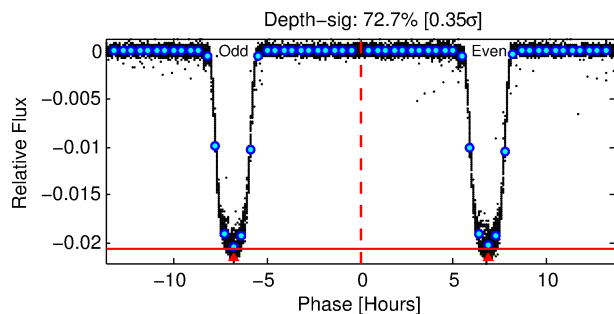
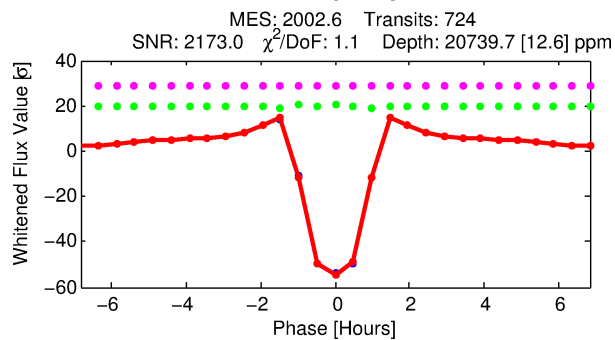
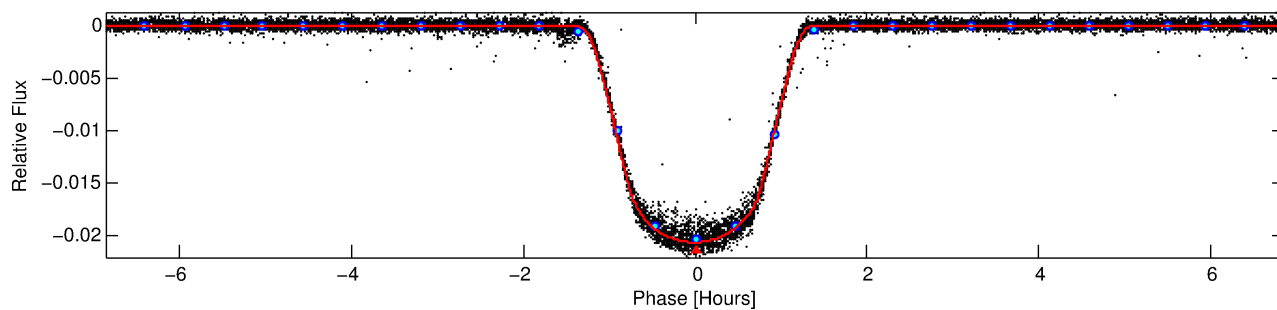
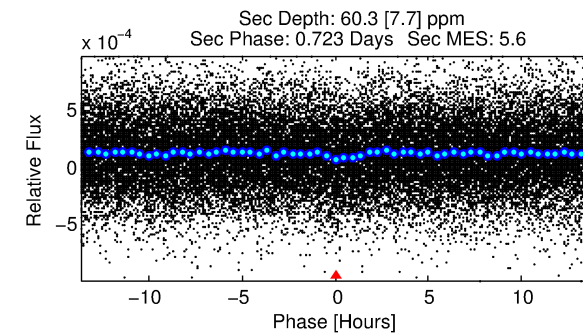
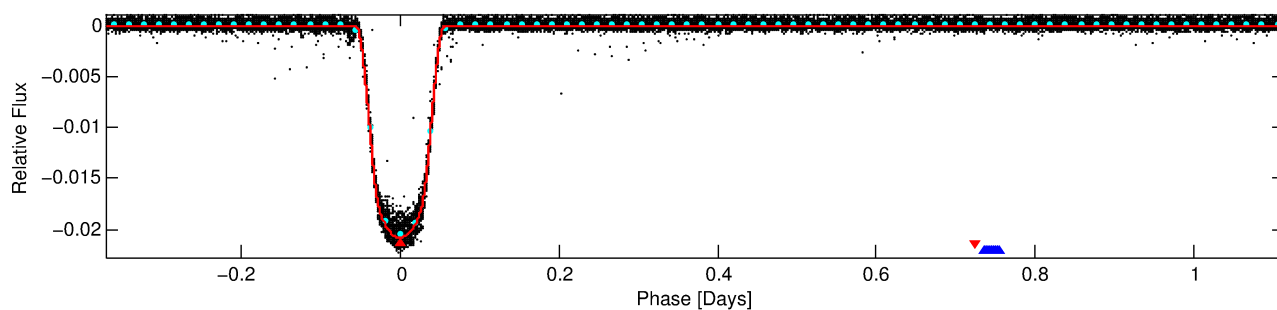
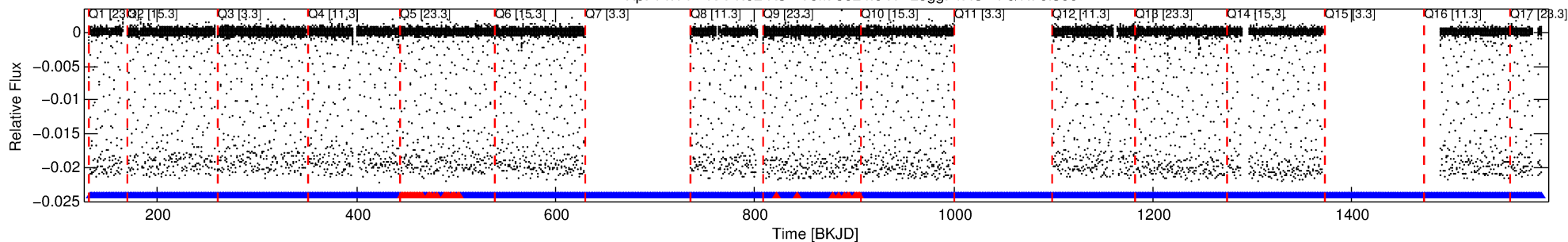
Ephemeris Match Information For 010619192-01

No Significant Match Found

DV One-Page Summary

KIC: 10619192 Candidate: 1 of 2 Period: 1.486 d
KOI: K00203.01 Name: Kepler-17b Corr: 0.997

Kp: 14.14 R*: 1.02 Rs Teff: 5624.0 K Logg: 4.43 Fe/H: 0.300



DV Fit Results:

Period = 1.48571 [0.00000] d
Epoch = 132.7937 [0.0000] BKJD
Rp/R* = 0.1300 [0.0003]
a/R* = 5.63 [0.04]
b = 0.09 [0.08]
Seff = 1409.27 [164.66]
Teff = 1562 [46] K
Rp = 14.45 [0.88] Re
a = 0.0257 [0.0014] AU
Ag = 0.10 [0.02] [-55.52σ]
Teffp = 1374 [52] K [-2.72σ]

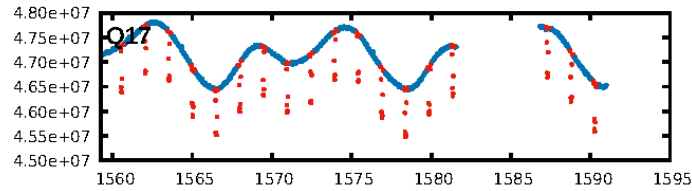
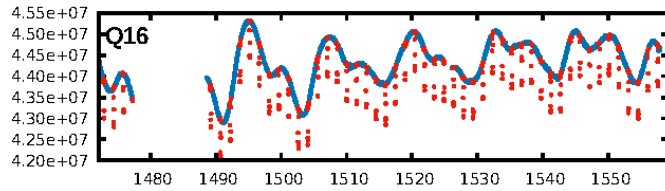
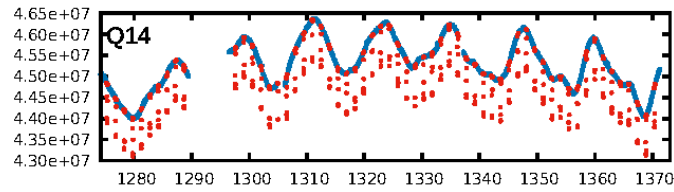
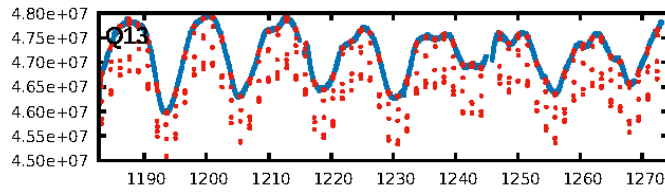
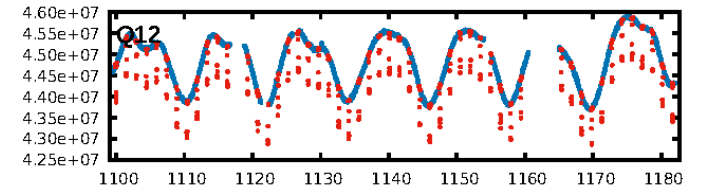
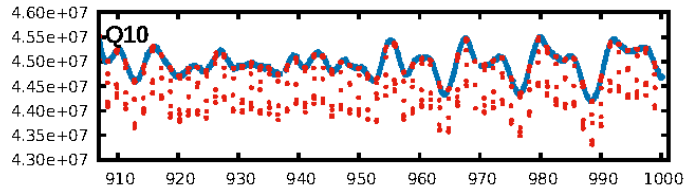
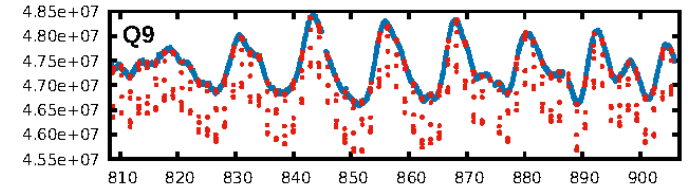
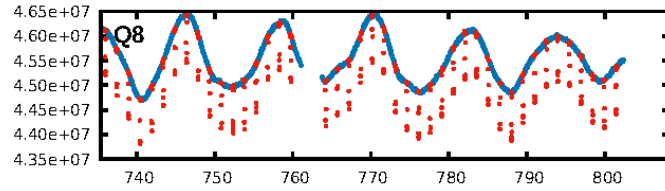
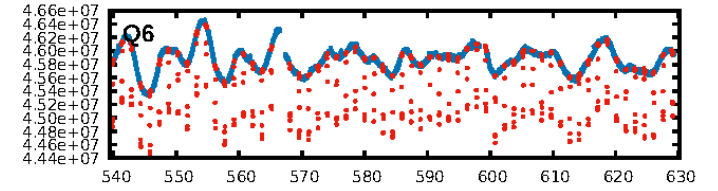
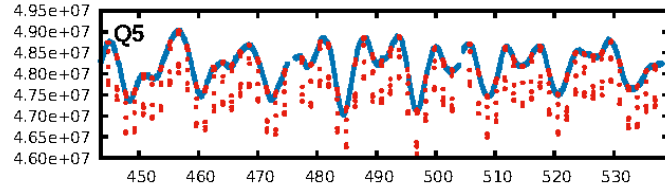
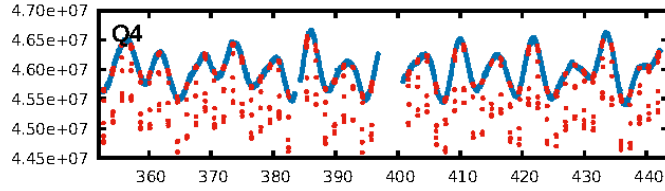
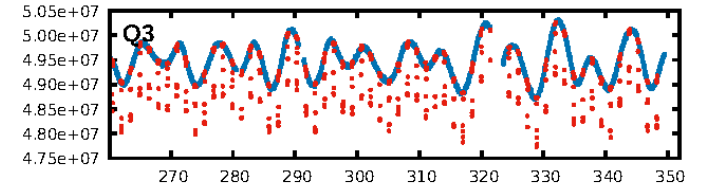
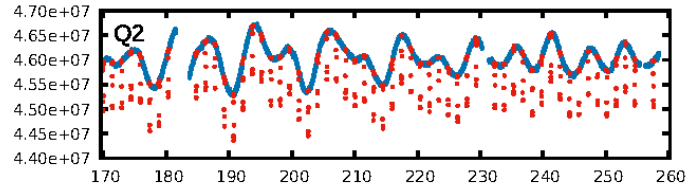
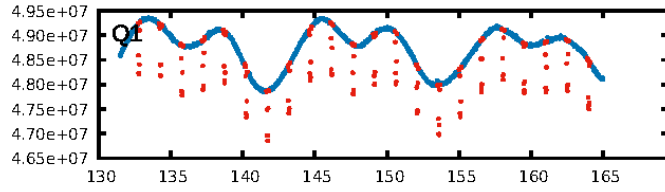
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-figt: 0.94 [644/684]
GhostDiagnostic-chr: 2.955
Centroid-sig: 0.0%
Centroid-so: 0.172 arcsec [41.22σ]
OotOffset-rm: 0.017 arcsec [0.26σ]
KicOffset-rm: 0.067 arcsec [0.98σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

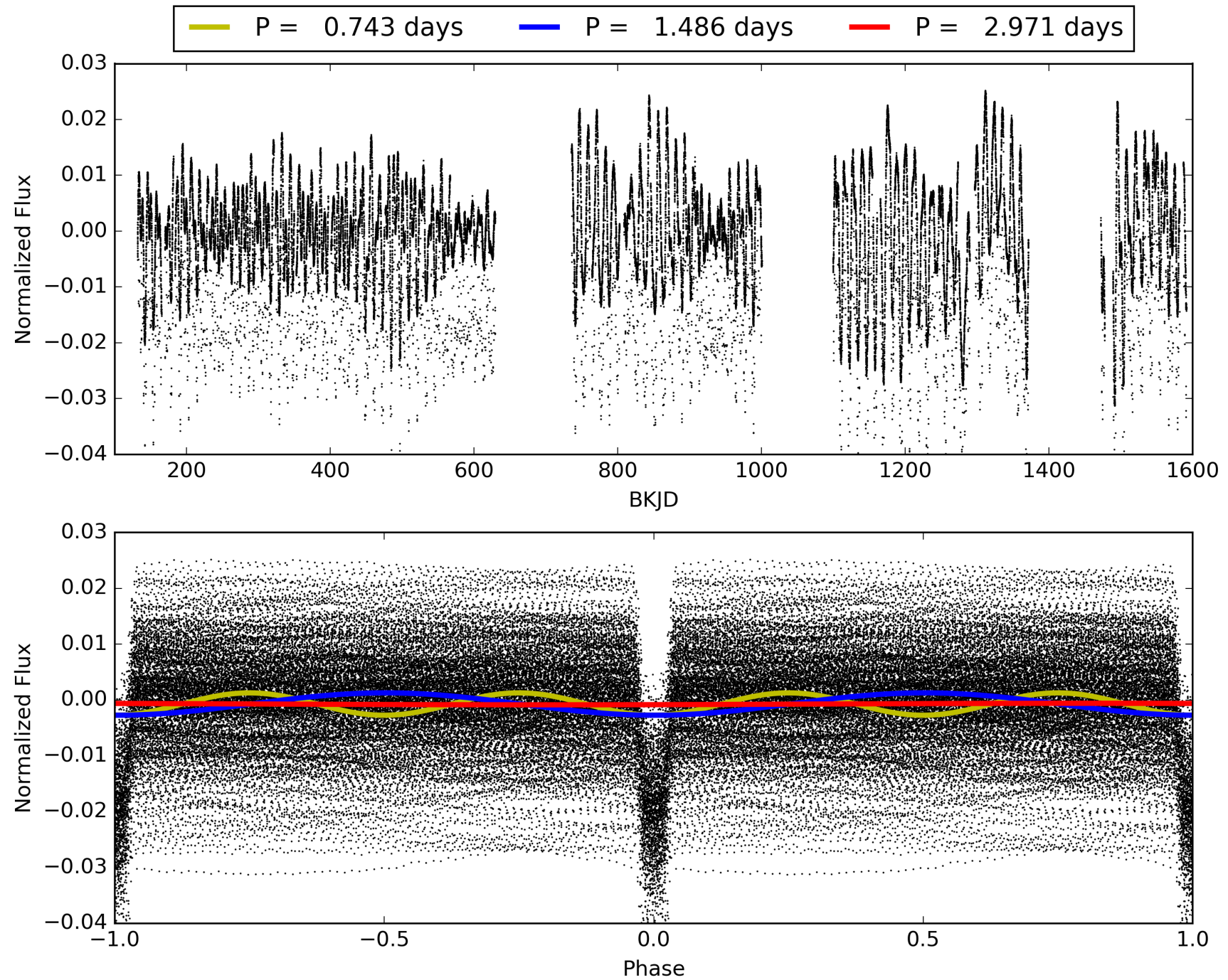
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:23:04 Z

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

TCE 010619192-01, PDC Light Curves

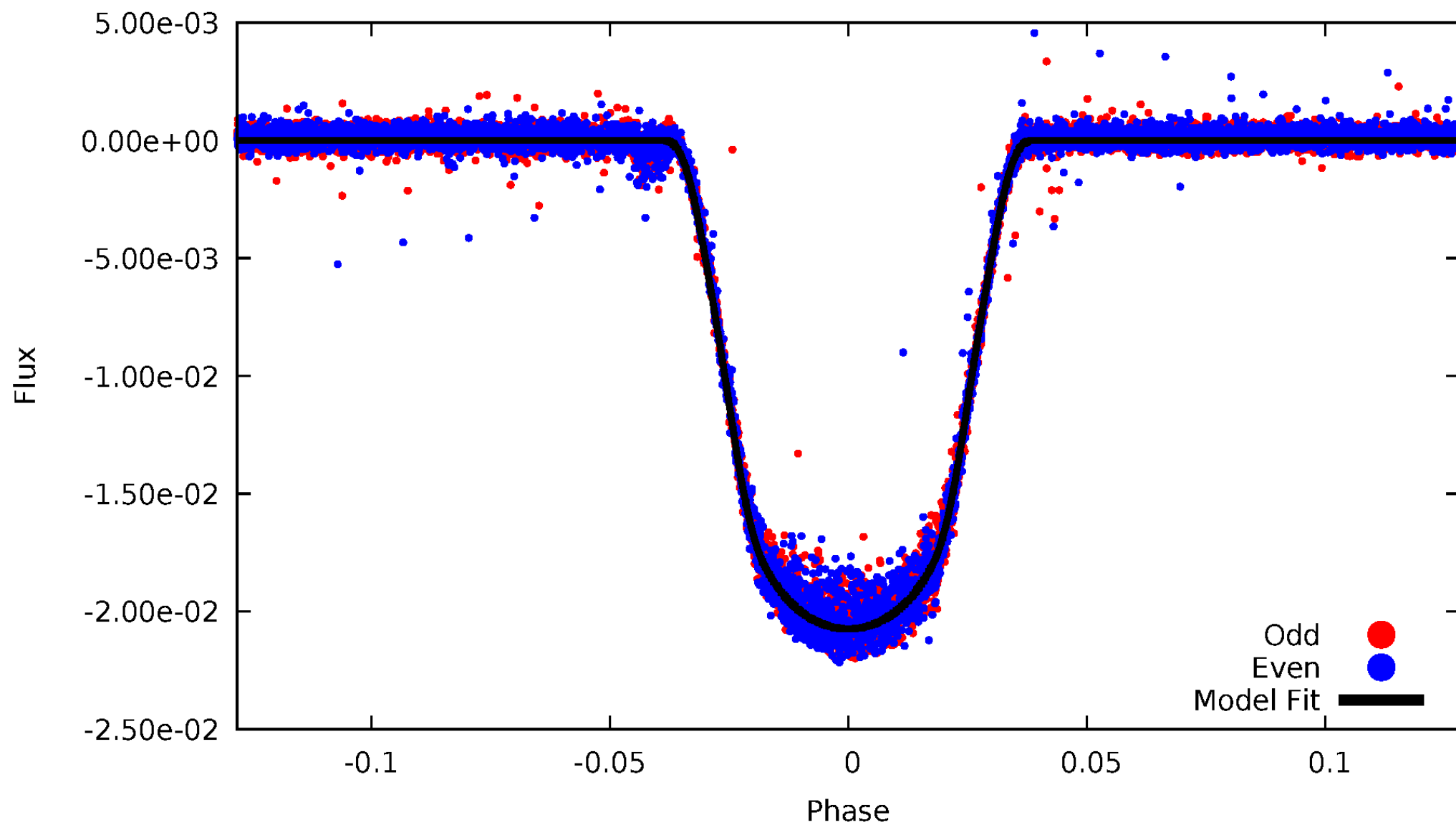


TCE 010619192-01



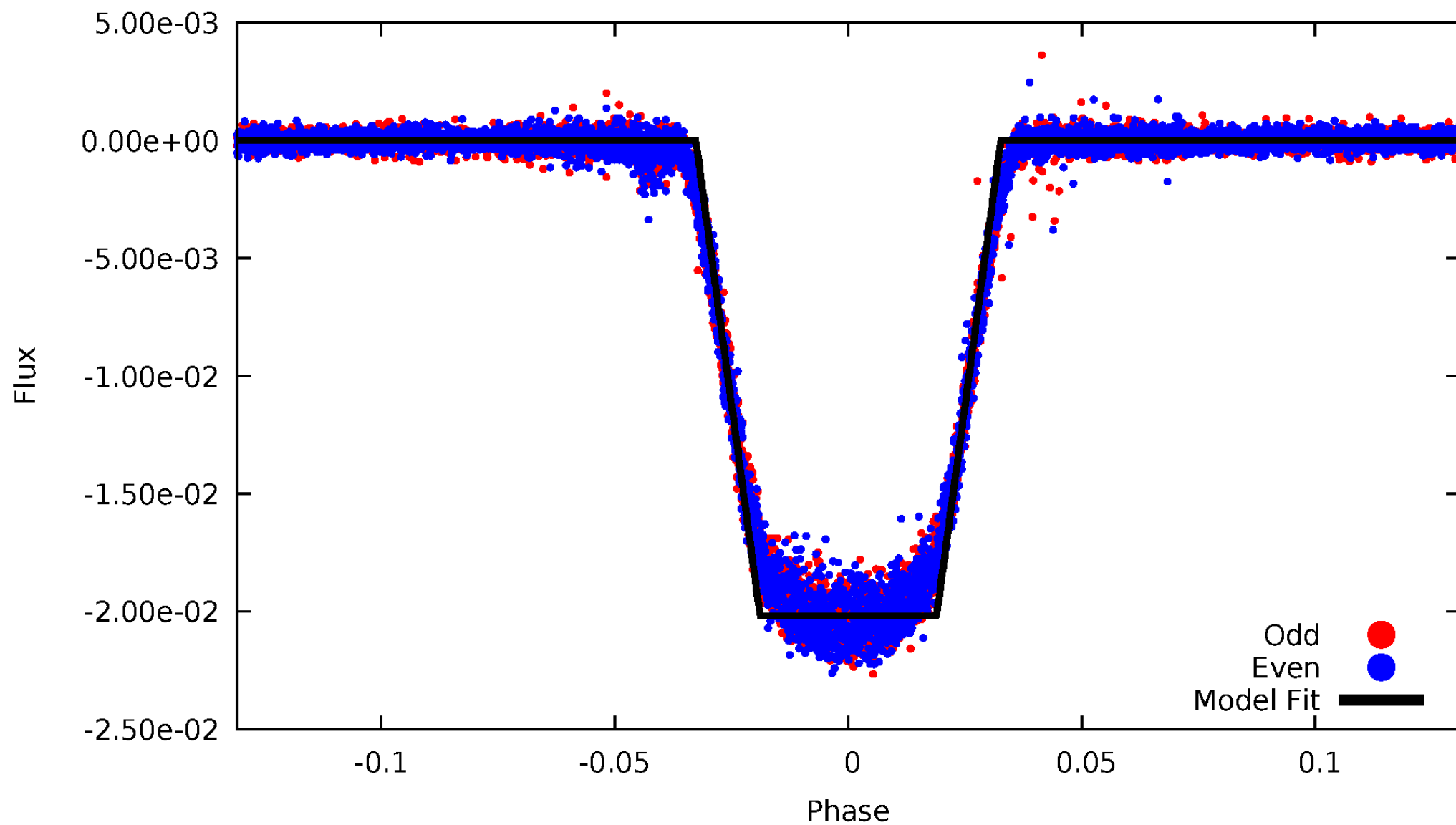
DV Odd/Even

TCE 010619192-01



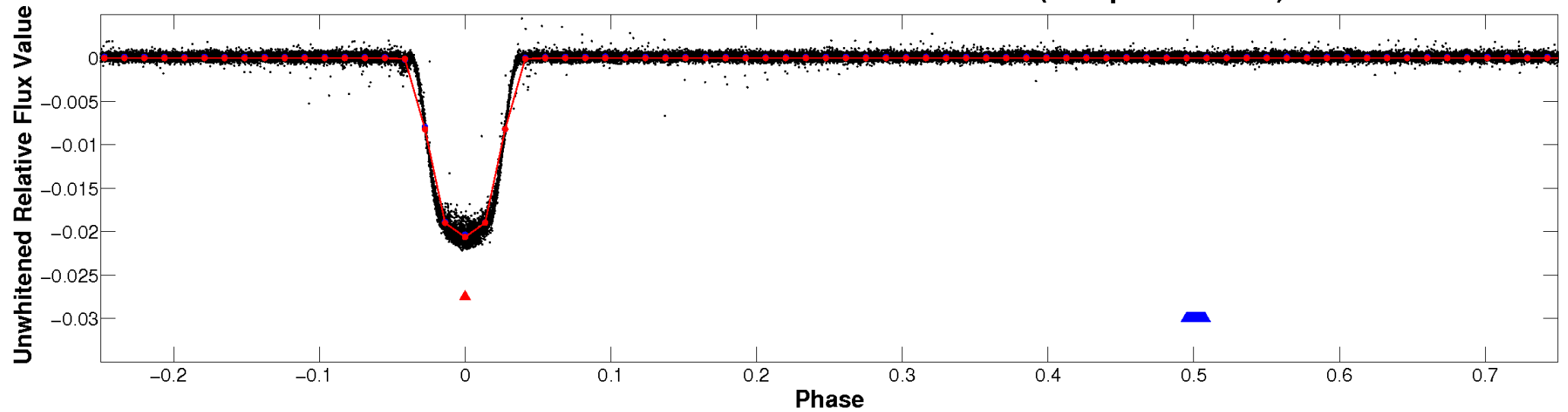
ALT Odd/Even

TCE 010619192-01

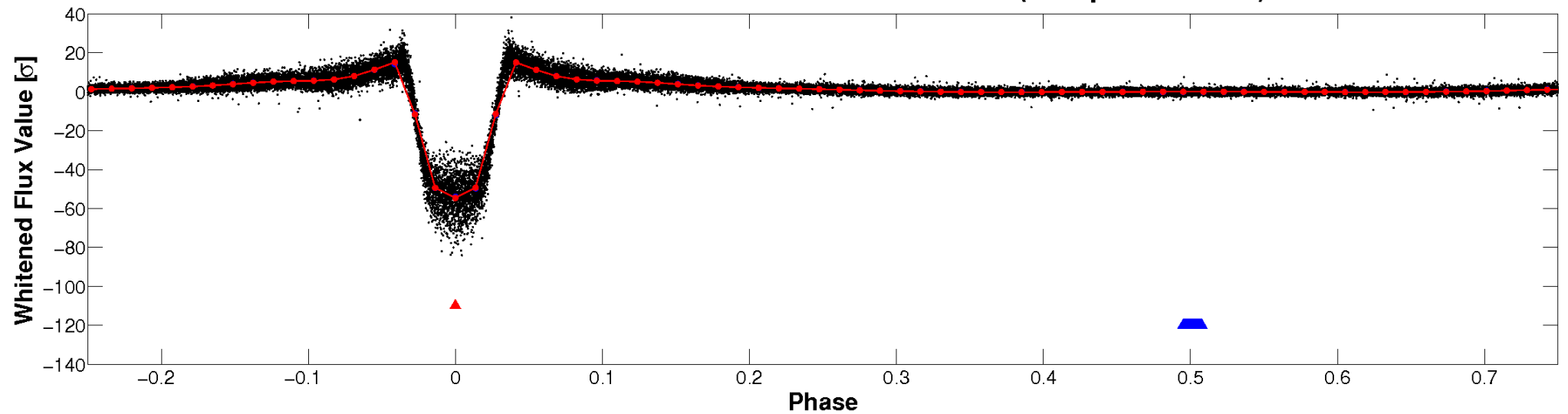


Non-Whitened Vs. Whitened Light Curve

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

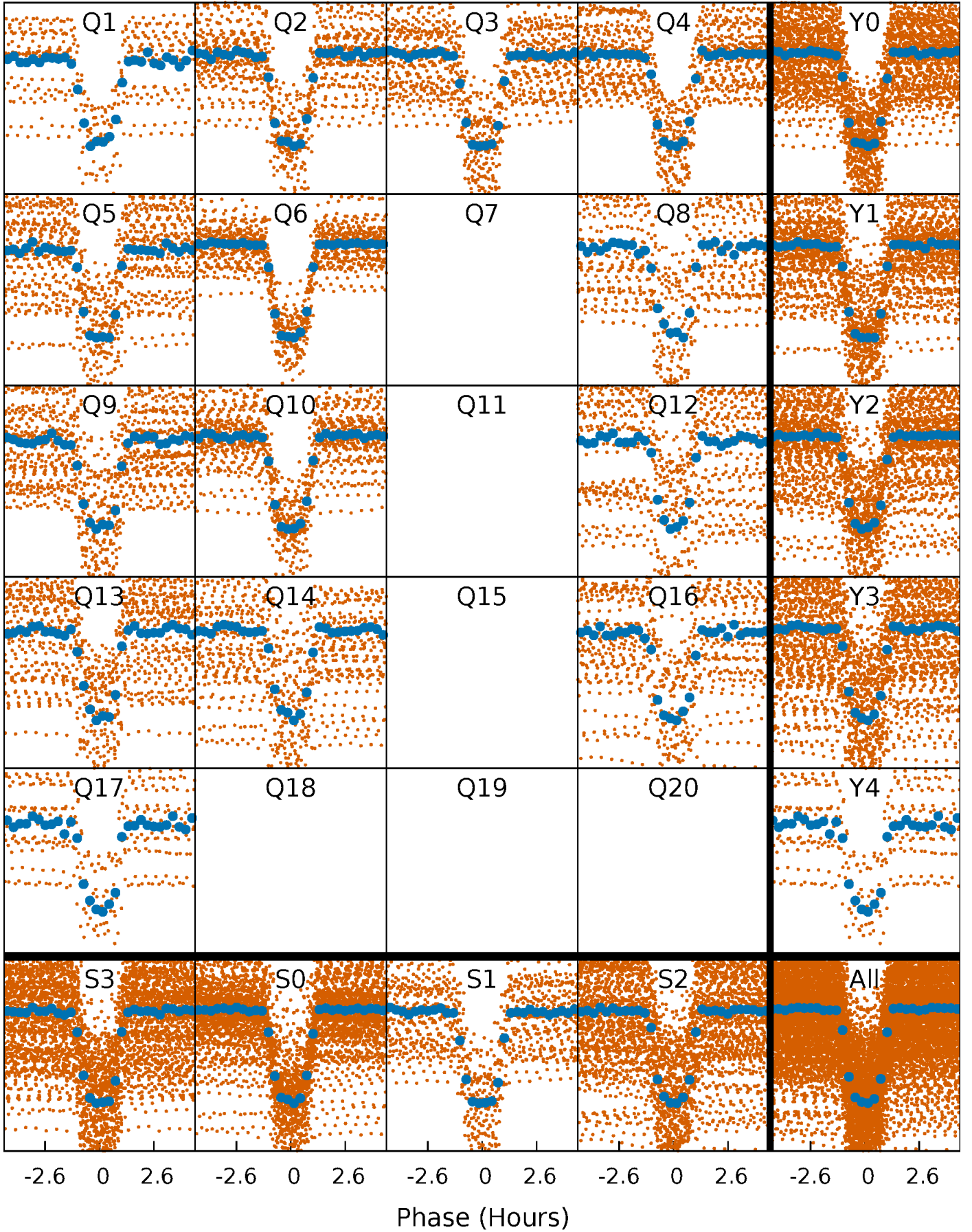


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



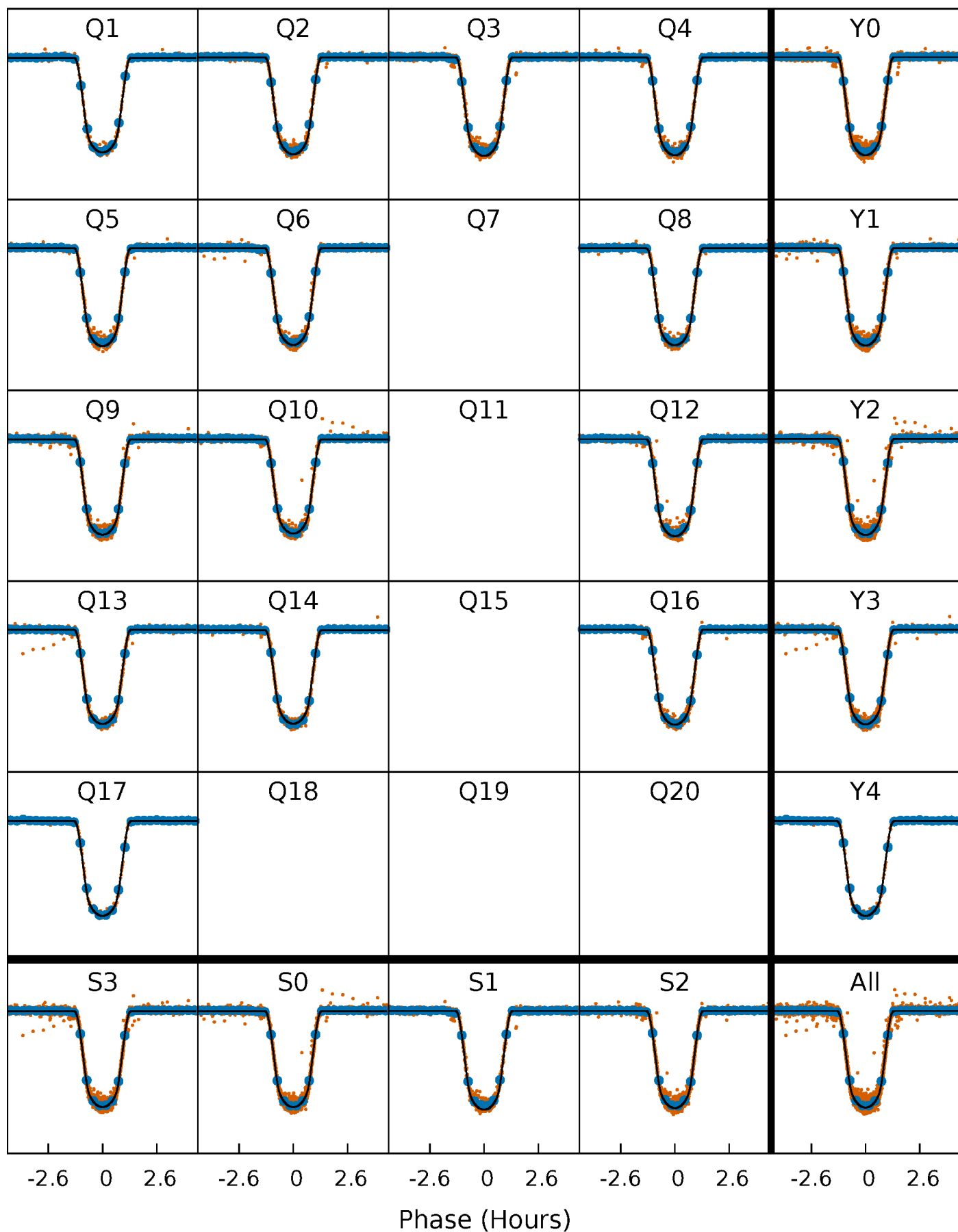
PDC Quarter-Phased Transit Curves

TCE 010619192-01 P= 1.485710 Days $T_0=132.793659$ (BKJD)



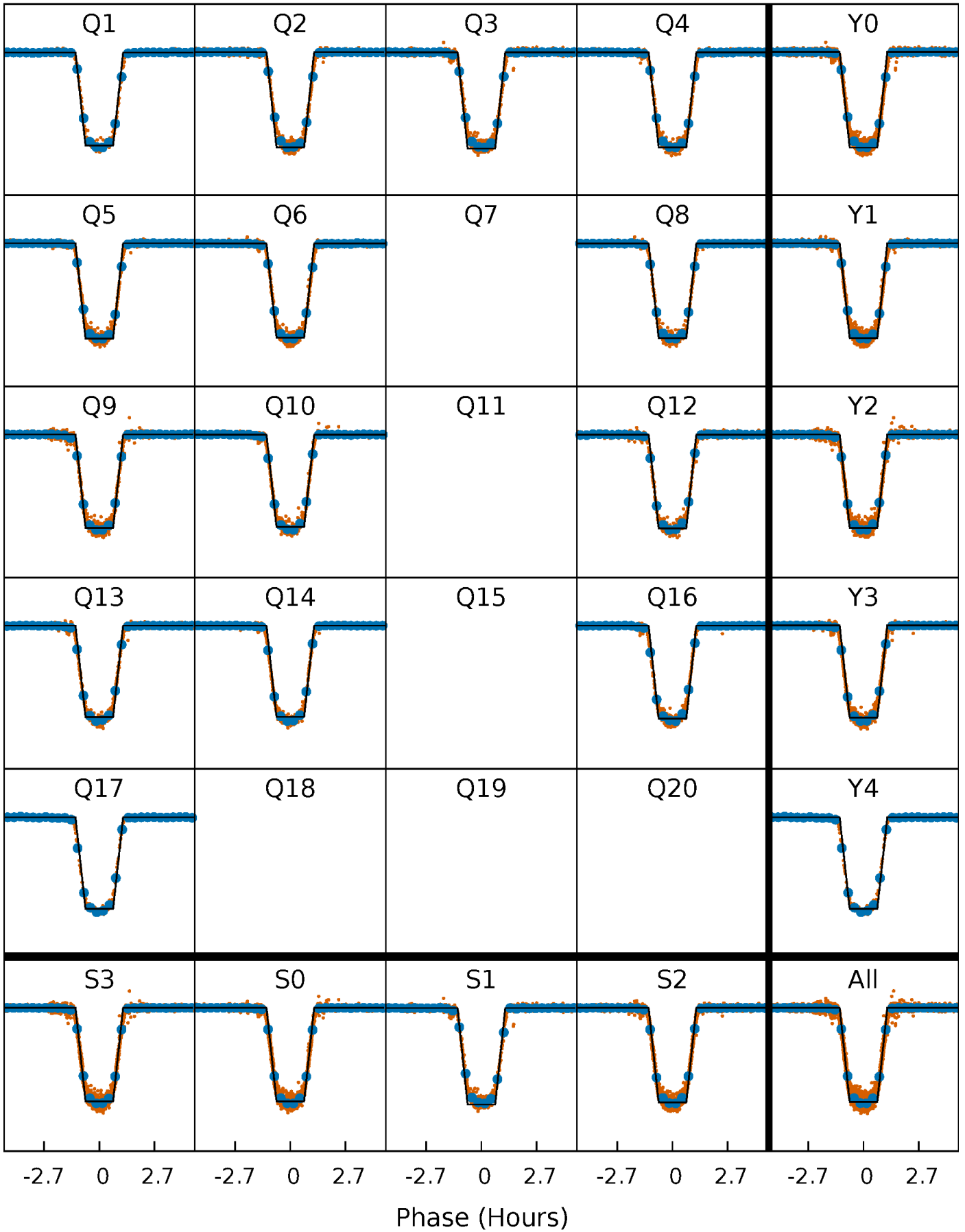
DV Quarter-Phased Transit Curves

TCE 010619192-01 P= 1.485710 Days $T_0=132.793659$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

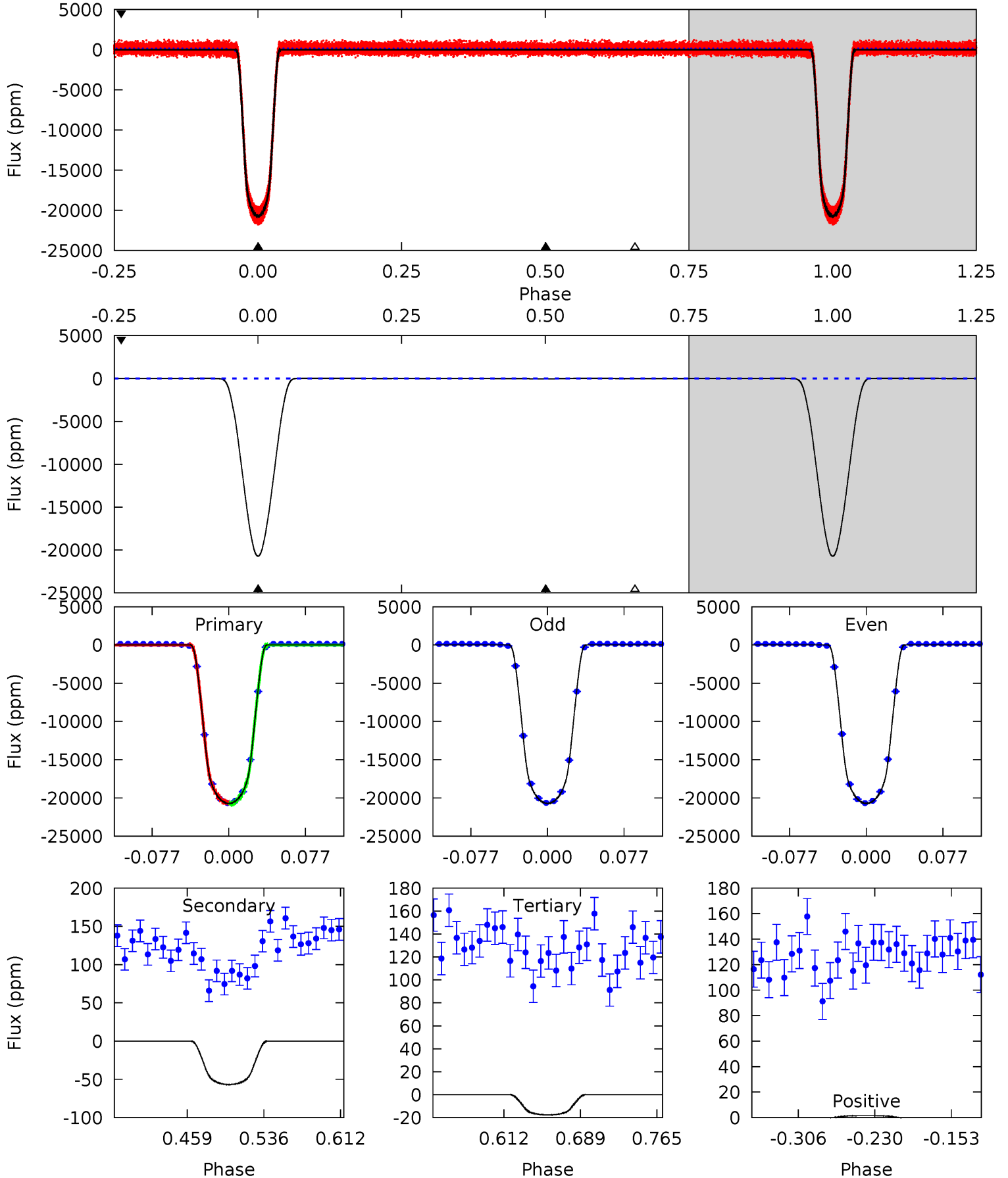
TCE 010619192-01 P= 1.485714 Days $T_0=132.792109$ (BKJD)



DV Model-Shift Uniqueness Test

010619192-01, P = 1.485710 Days, E = 131.307949 Days

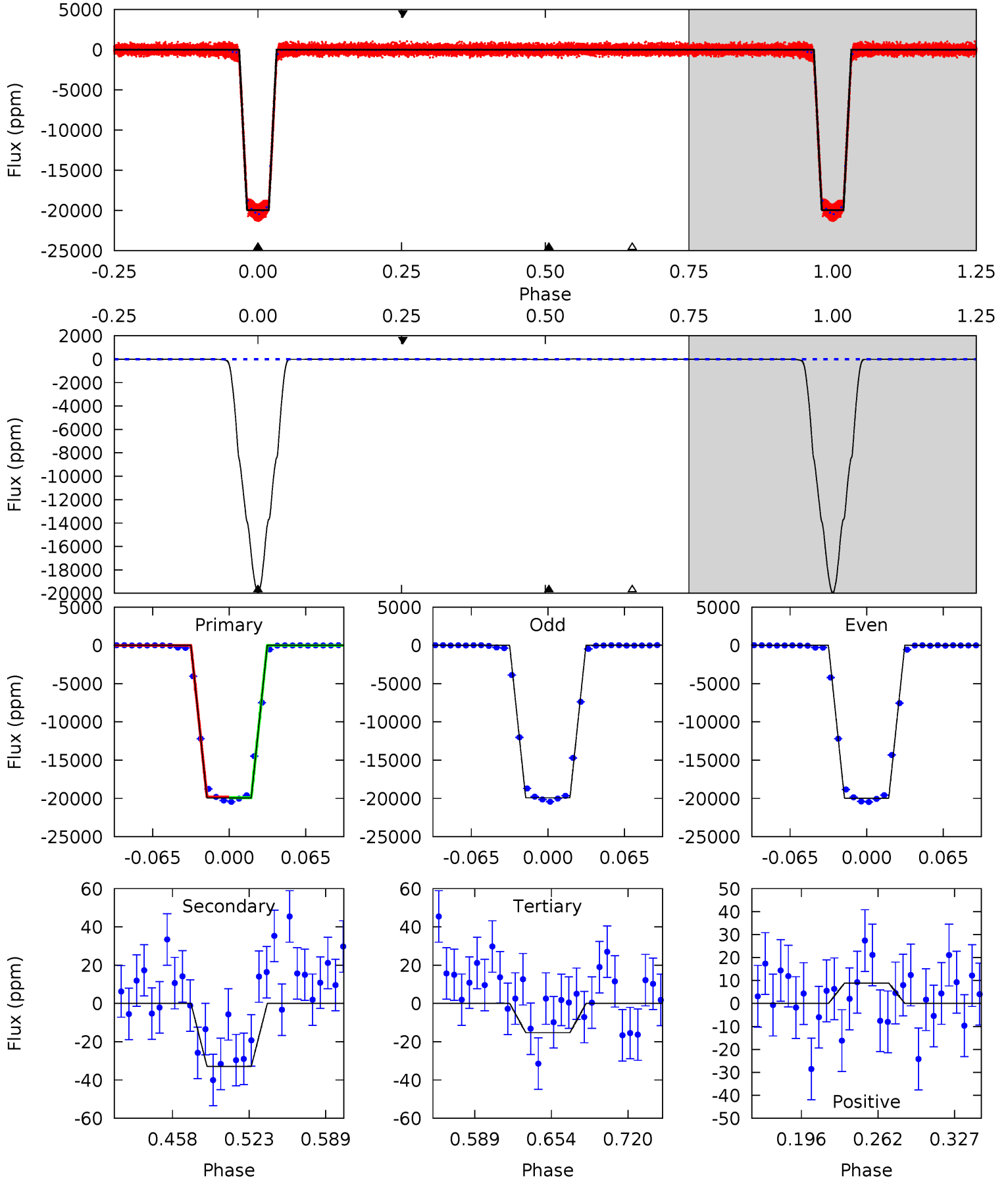
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4070	11.2	3.47	0.31	4.62	1.77	1.38	4066	4070	7.68	10.8	0.18	1.00	0.00	13.7



Alt Model-Shift Uniqueness Test

010619192-01, P = 1.485714 Days, E = 131.306395 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3764	6.21	2.87	1.67	4.65	1.84	1.20	3761	3762	3.33	4.54	5.64	1.00	0.00	0



Stellar Parameters For KIC 010619192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5624^{+101}_{-112}	$4.432^{+0.040}_{-0.049}$	$0.300^{+0.100}_{-0.150}$	$1.018^{+0.062}_{-0.062}$	$1.021^{+0.048}_{-0.064}$	$1.363^{+0.219}_{-0.206}$
	+2%/-2%	+1%/-1%	+33%/-50%	+6%/-6%	+5%/-6%	+16%/-15%
Source	SPE29	TRA29	SPE29	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010619192-01 / KOI 0203.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-57 ± 5	$14.50^{+0.55}_{-0.58}$	2185^{+56}_{-54}	-2480^{+42}_{-42}	$0.098^{+0.011}_{-0.011}$
Alt.	-33 ± 5	$15.84^{+0.60}_{-0.57}$	2184^{+53}_{-51}	-2549^{+38}_{-36}	$0.047^{+0.008}_{-0.007}$

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

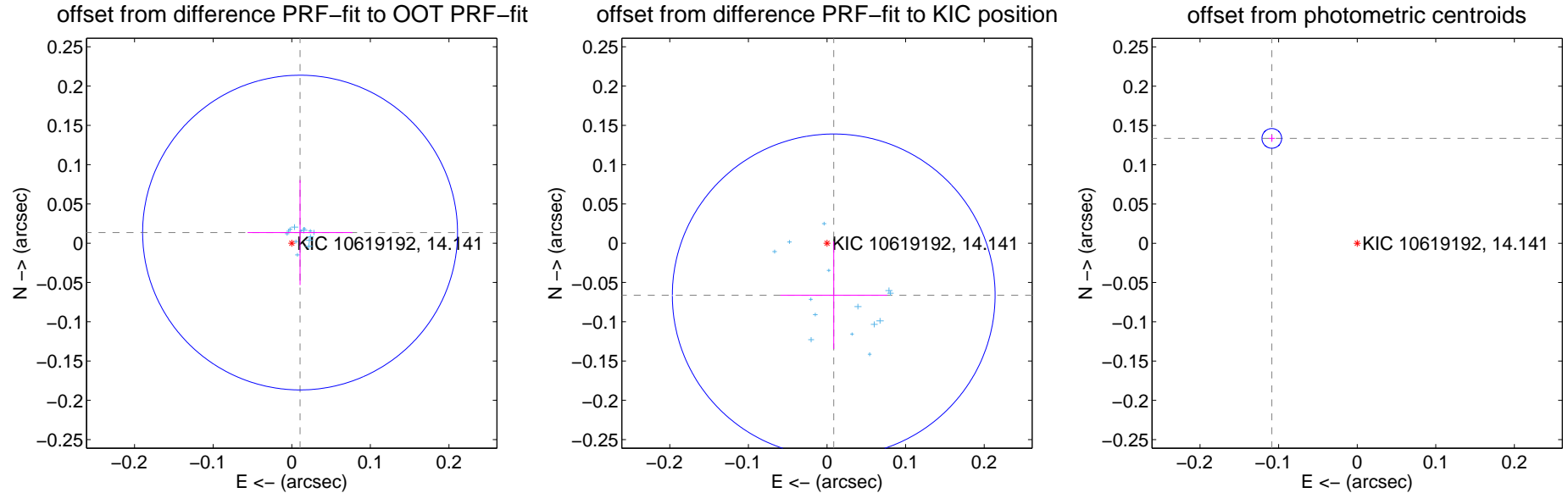
DV Centroid Data

Supplemental centroid analysis for 010619192-01. Kepler magnitude: 14.14. Transit SNR 2173.03

There are 14 quarters with good PRF difference image offsets

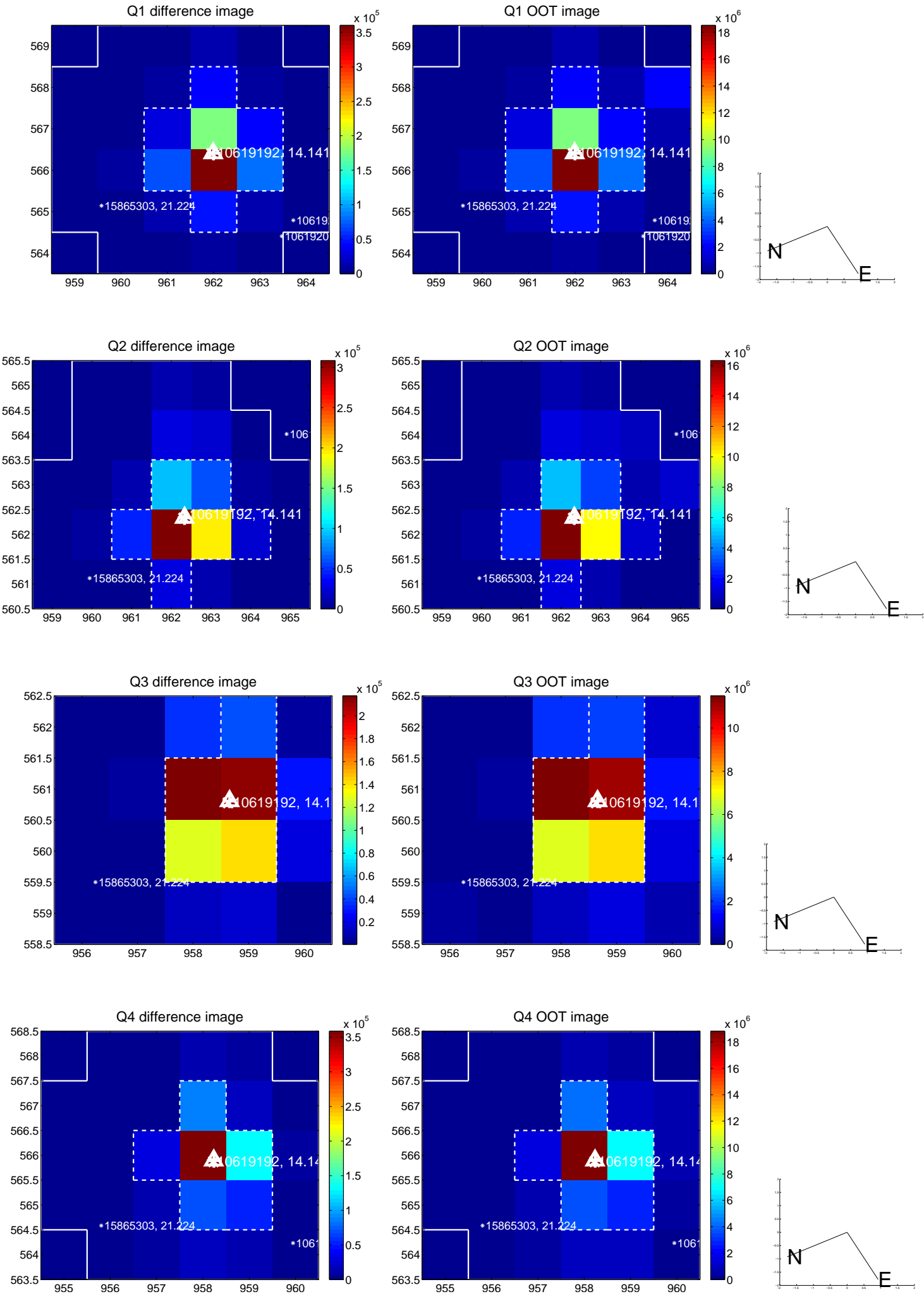
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.017 ± 0.067	0.26	-0.011 ± 0.067	0.014 ± 0.067
PRF-fit source offset from KIC position	0.067 ± 0.068	0.98	-0.009 ± 0.068	-0.066 ± 0.068
photometric centroid source offset	0.17 ± 0.00	41.22	0.11 ± 0.00	0.13 ± 0.00

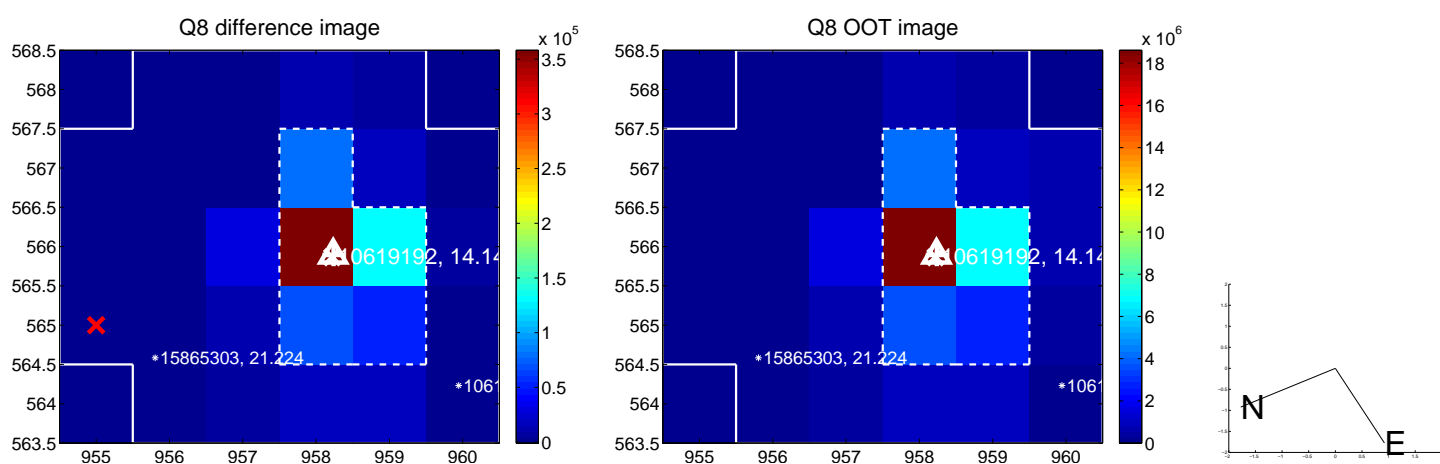
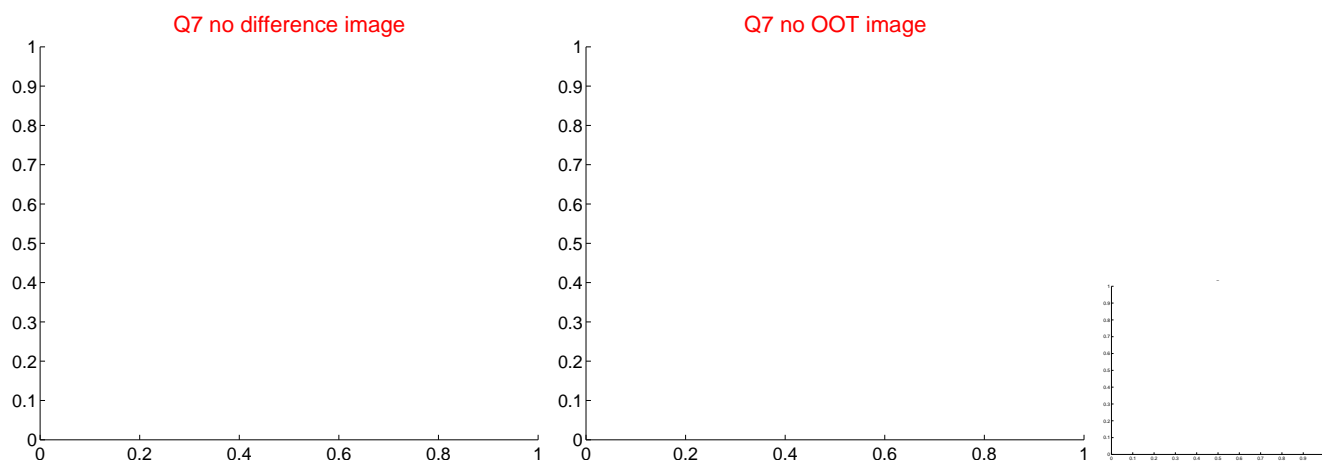
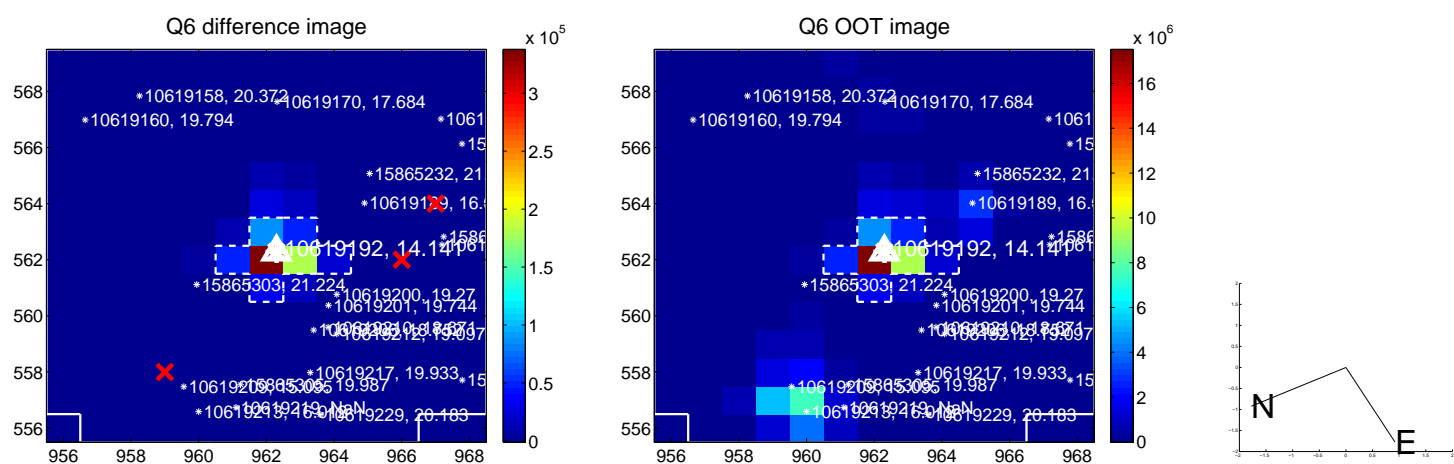
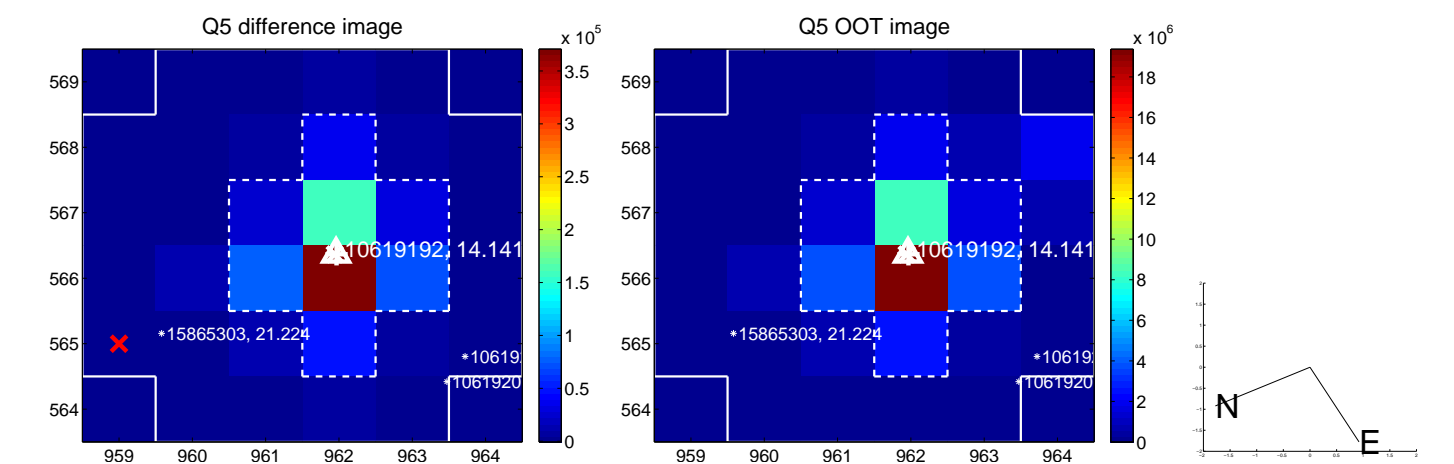


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

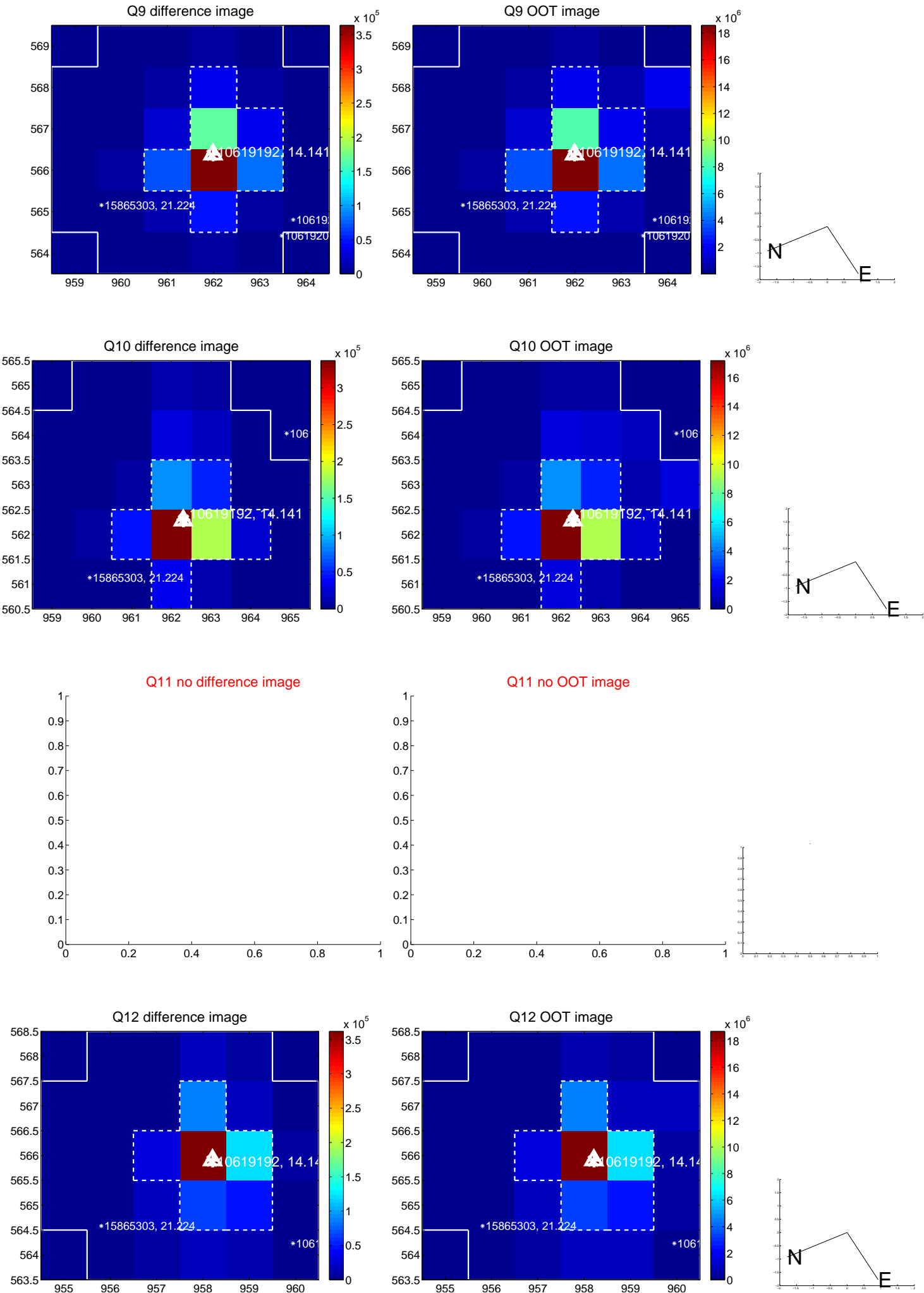
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



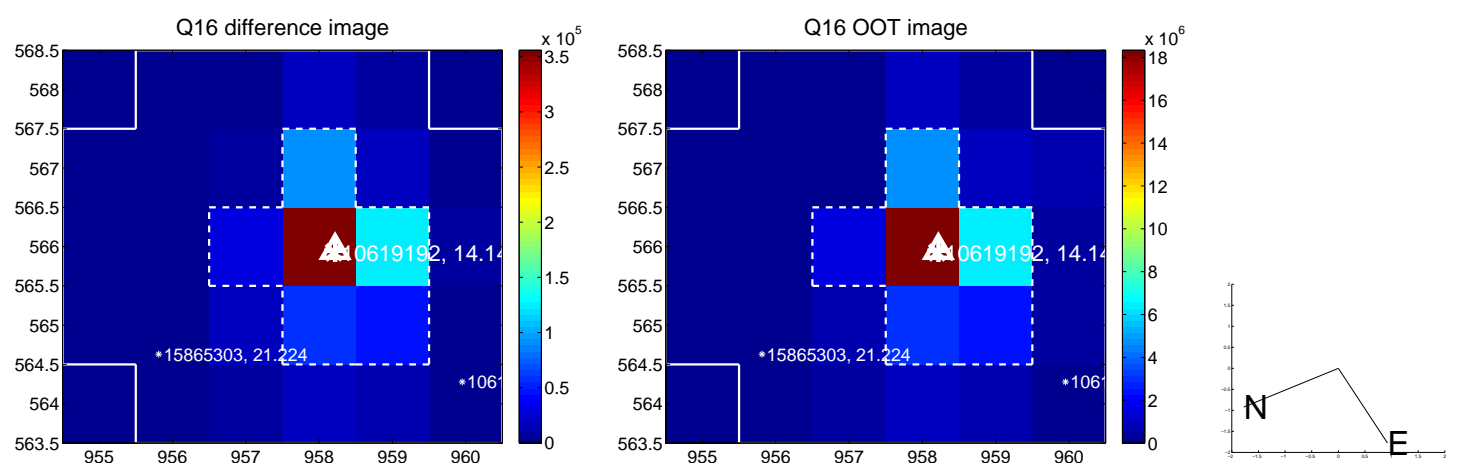
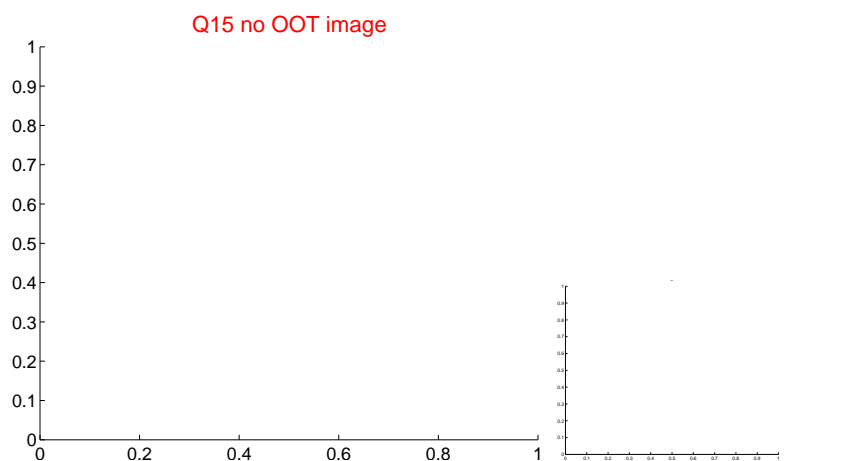
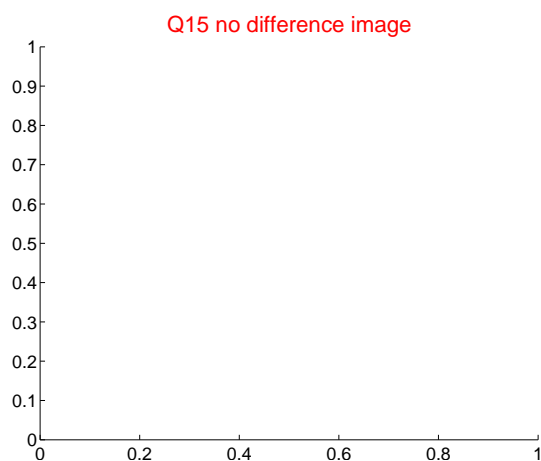
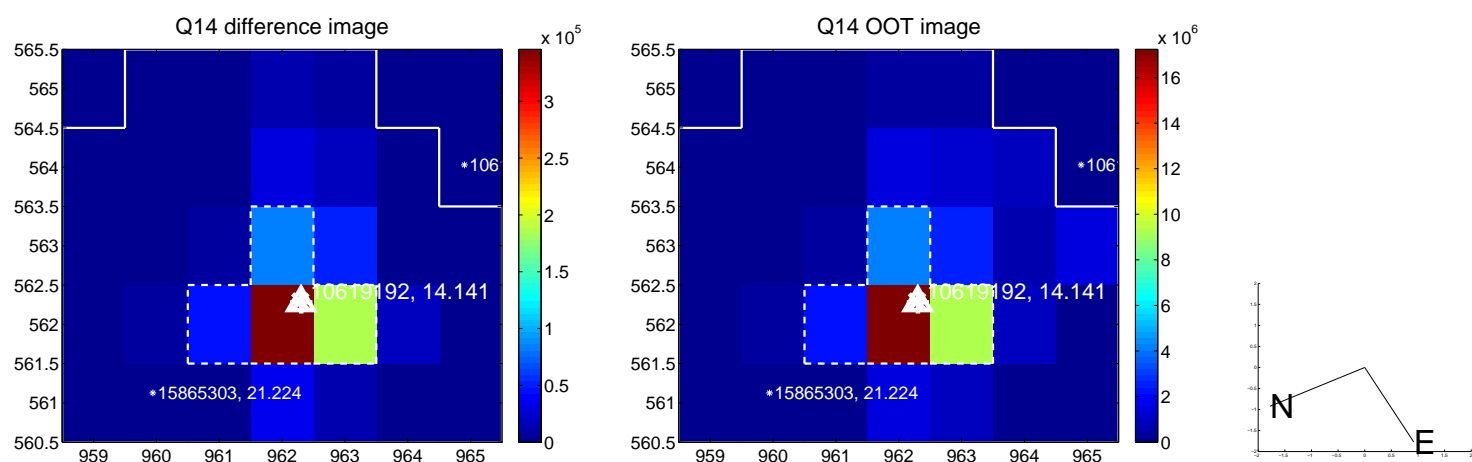
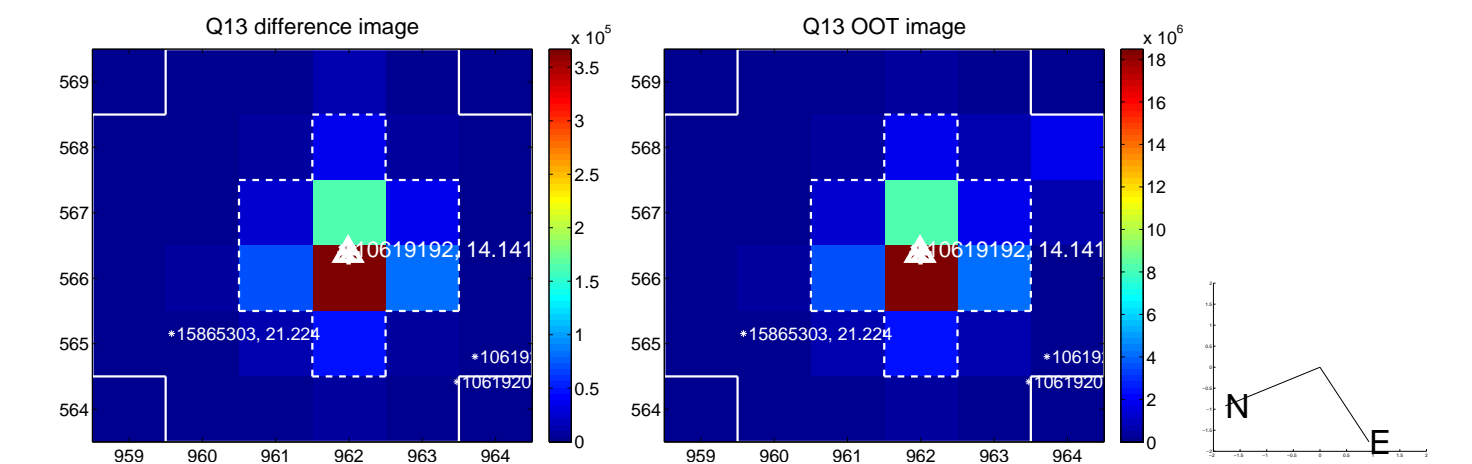
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



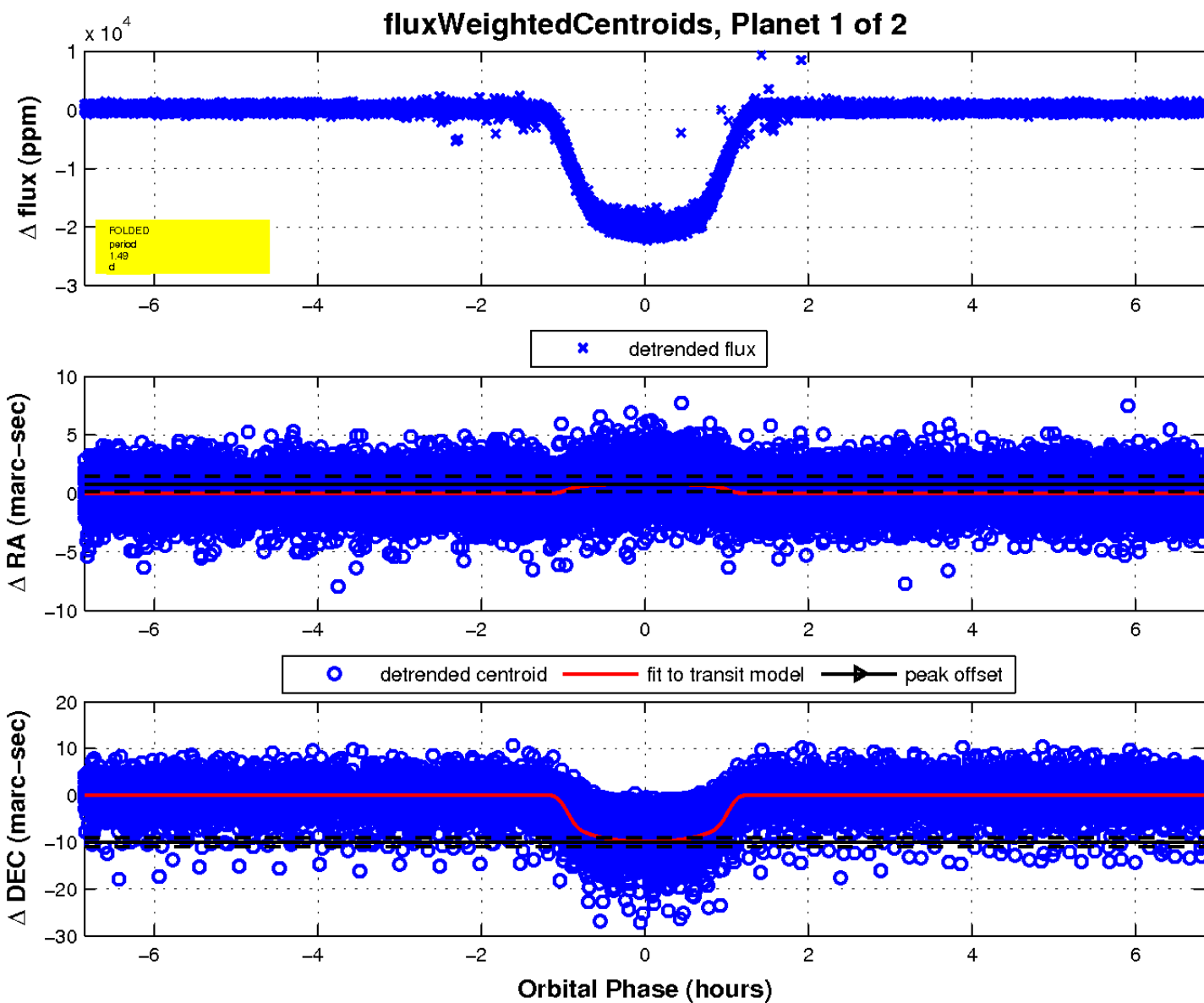
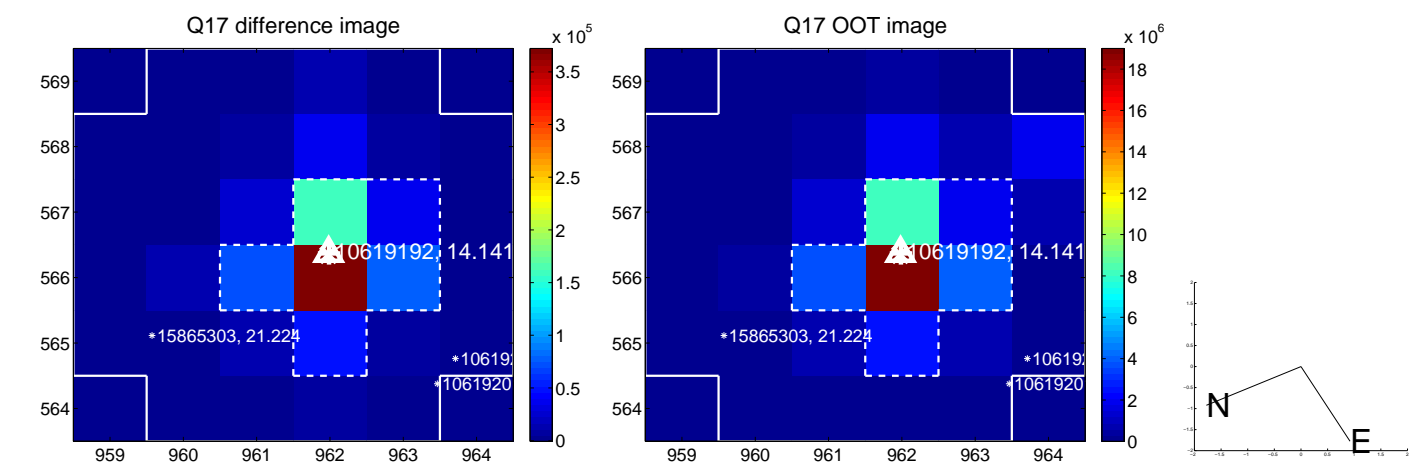
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

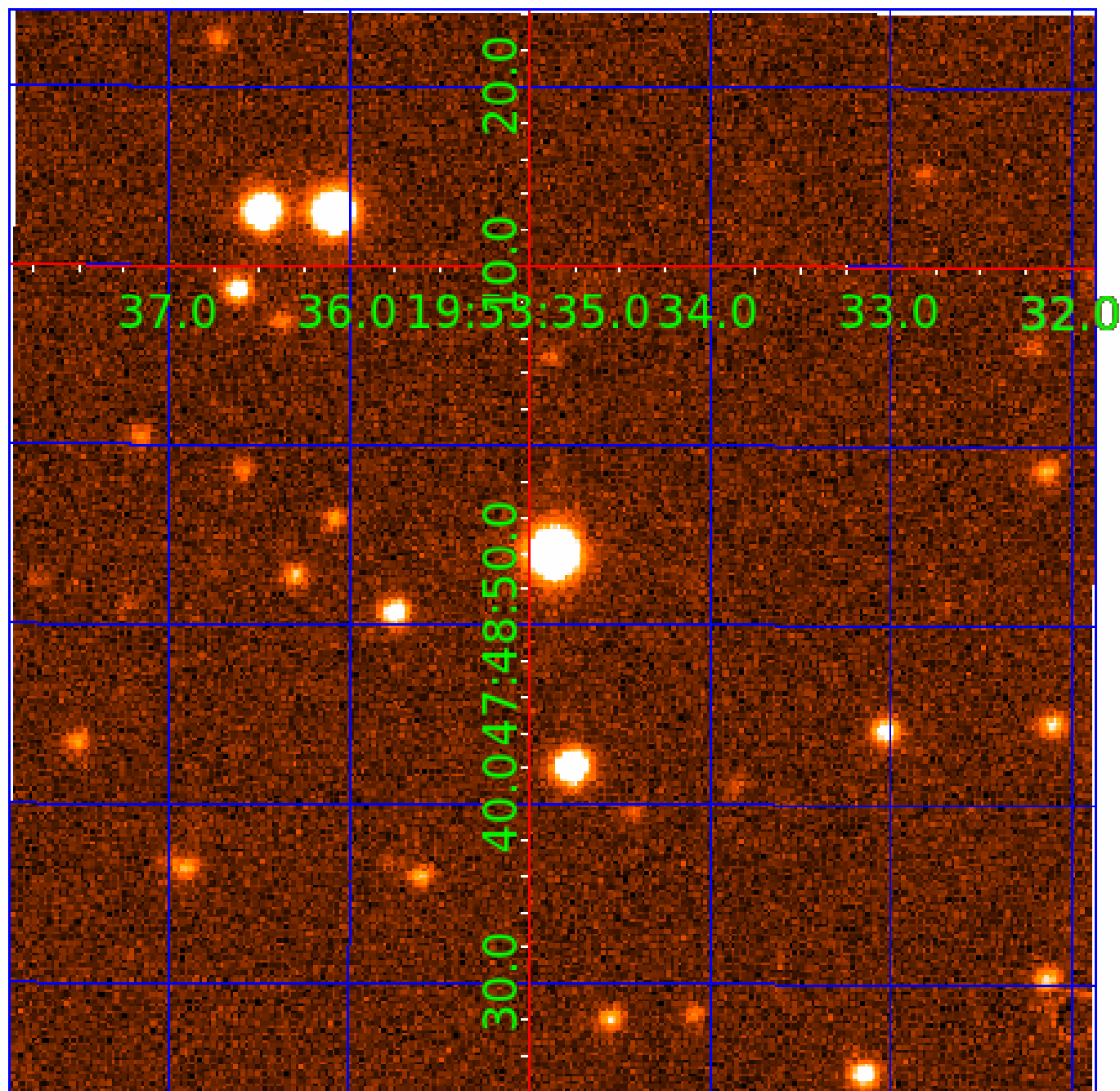


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010619192

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})
010619192-01	OBS	0203.01	1.485710	132.793659	20739.7	2.285	2002.6	2173.0	1.02	5624	14.45	1409.27
010619192-02	OBS	No	1.485729	132.043530	64.0	2.343	8.9	9.2	1.02	5624	0.87	1409.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010619192-01	OBS	PC	1.00	0	1	0	0	MOD_SEC_DV—PLANET_OCCULT_DV—HAS_SEC_TCE
010619192-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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

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

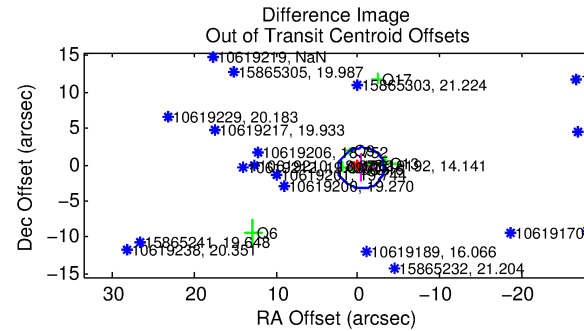
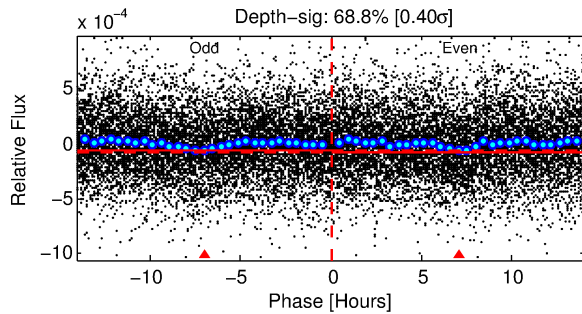
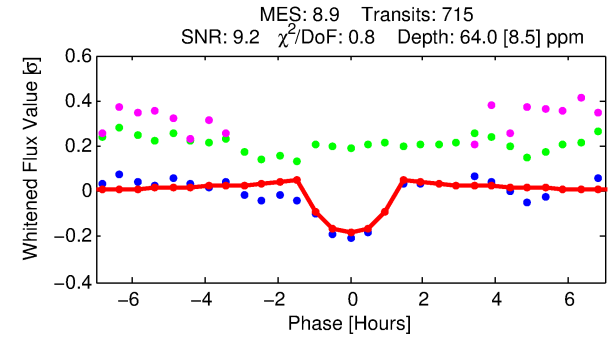
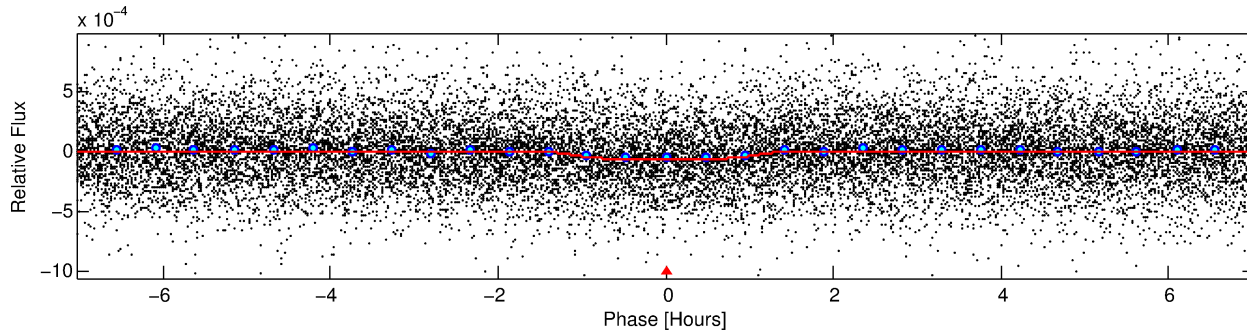
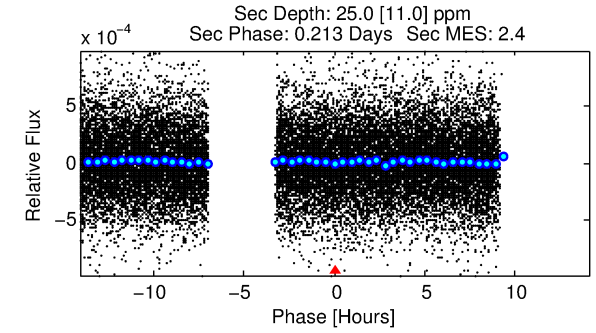
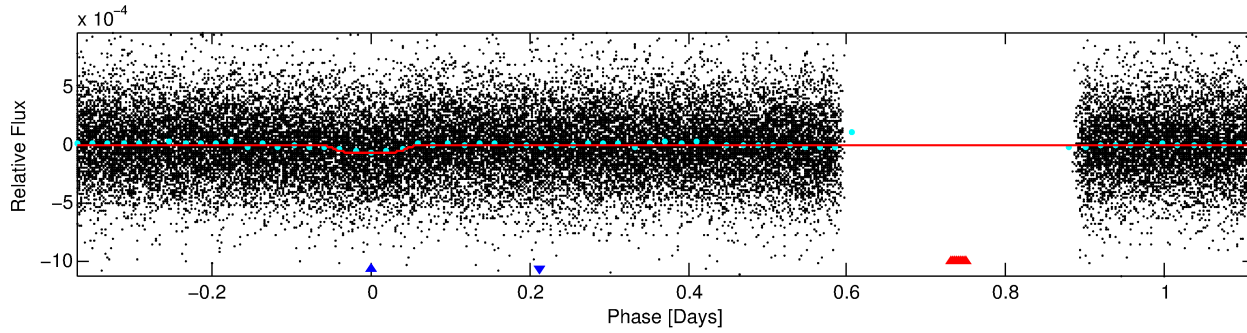
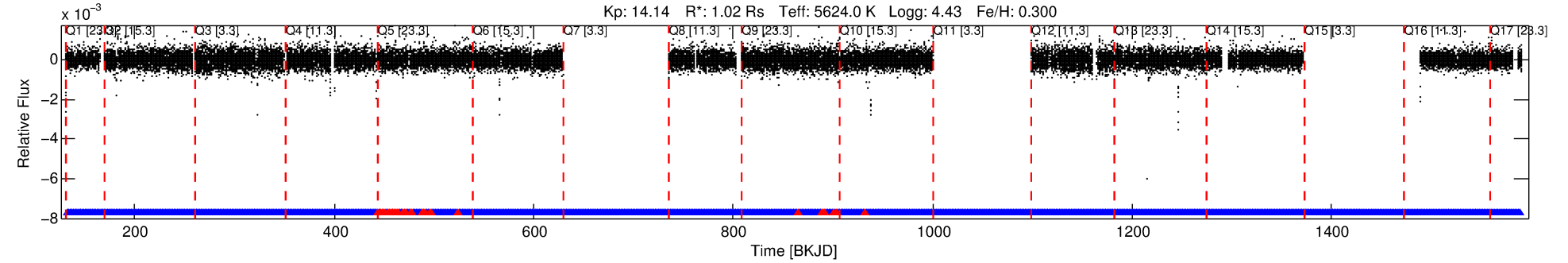
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010619192-02

No Significant Match Found

DV One-Page Summary

KIC: 10619192 Candidate: 2 of 2 Period: 1.486 d
KOI: K00203 Name: Kepler-17 Corr: No Ephemeris Match



DV Fit Results:

Period = 1.48573 [0.00001] d
Epoch = 132.0435 [0.0030] BKJD
Rp/R* = 0.0078 [0.0032]
R/R* = 3.61 [5.44]
b = 0.70 [1.21]
Seff = 1409.25 [164.66]
Teff = 1562 [46] K
Rp = 0.87 [0.36] Re
a = 0.0257 [0.0014] AU
Ag = 11.96 [11.15] [0.98σ]
Teffp = 4492 [1046] K [2.80σ]

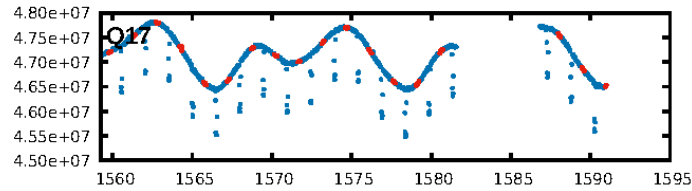
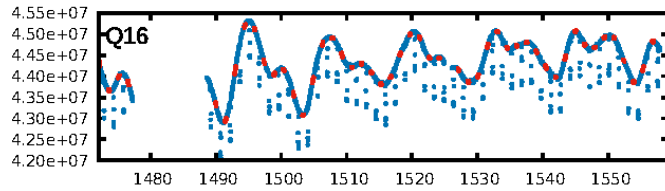
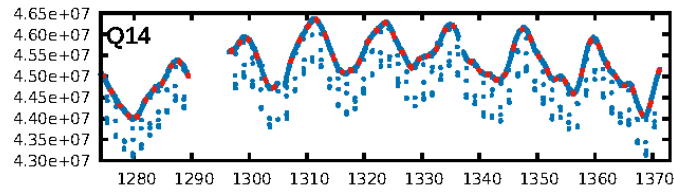
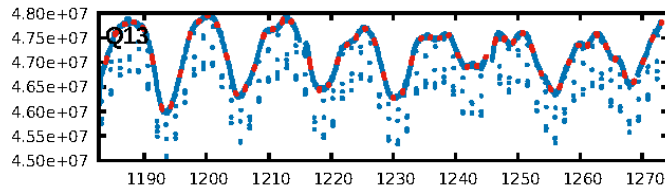
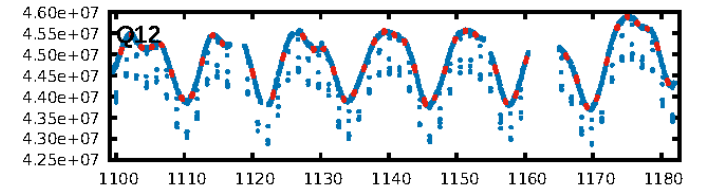
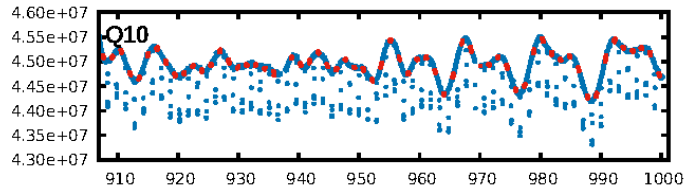
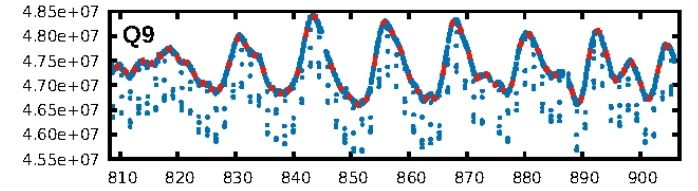
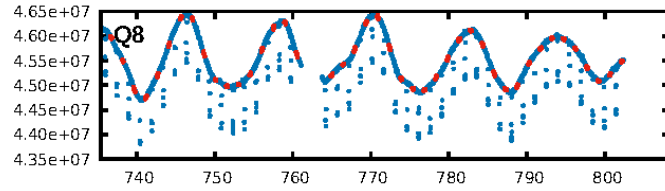
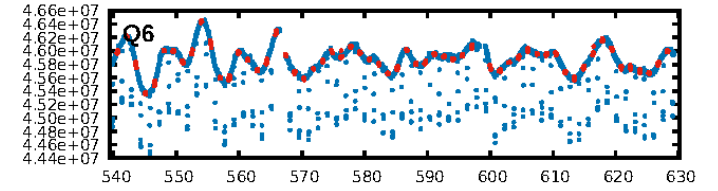
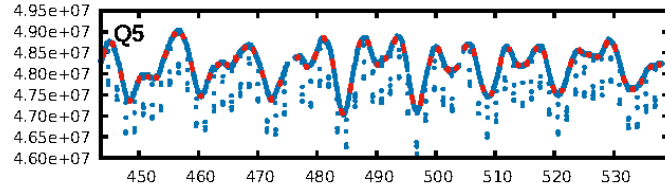
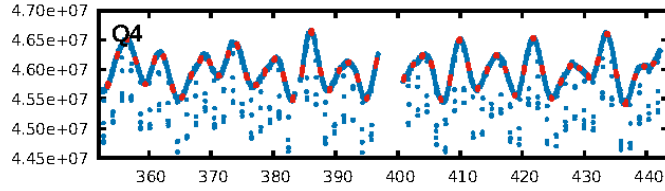
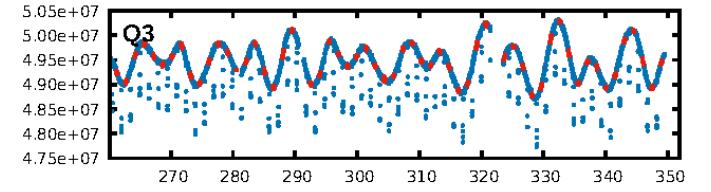
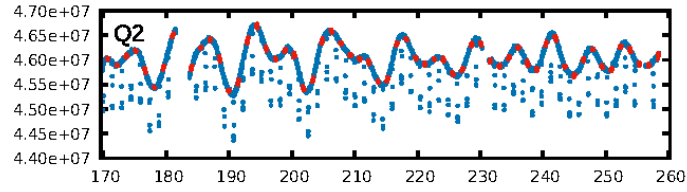
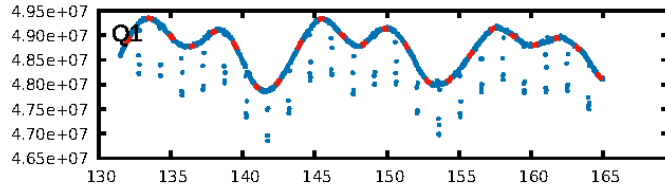
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.60e-16
RollingBand-fgt: 0.95 [643/674]
GhostDiagnostic-chr: 0.636
Centroid-sig: 90.2%
Centroid-so: 0.609 arcsec [0.46σ]
OotOffset-rm: 0.598 arcsec [0.64σ]
KicOffset-rm: 0.687 arcsec [0.78σ]
OotOffset-st: 2/0/3/4 [9]
KicOffset-st: 2/0/3/4 [9]
DiffImageQuality-fgm: 0.56 [5/9]
DiffImageOverlap-fno: 1.00 [14/14]

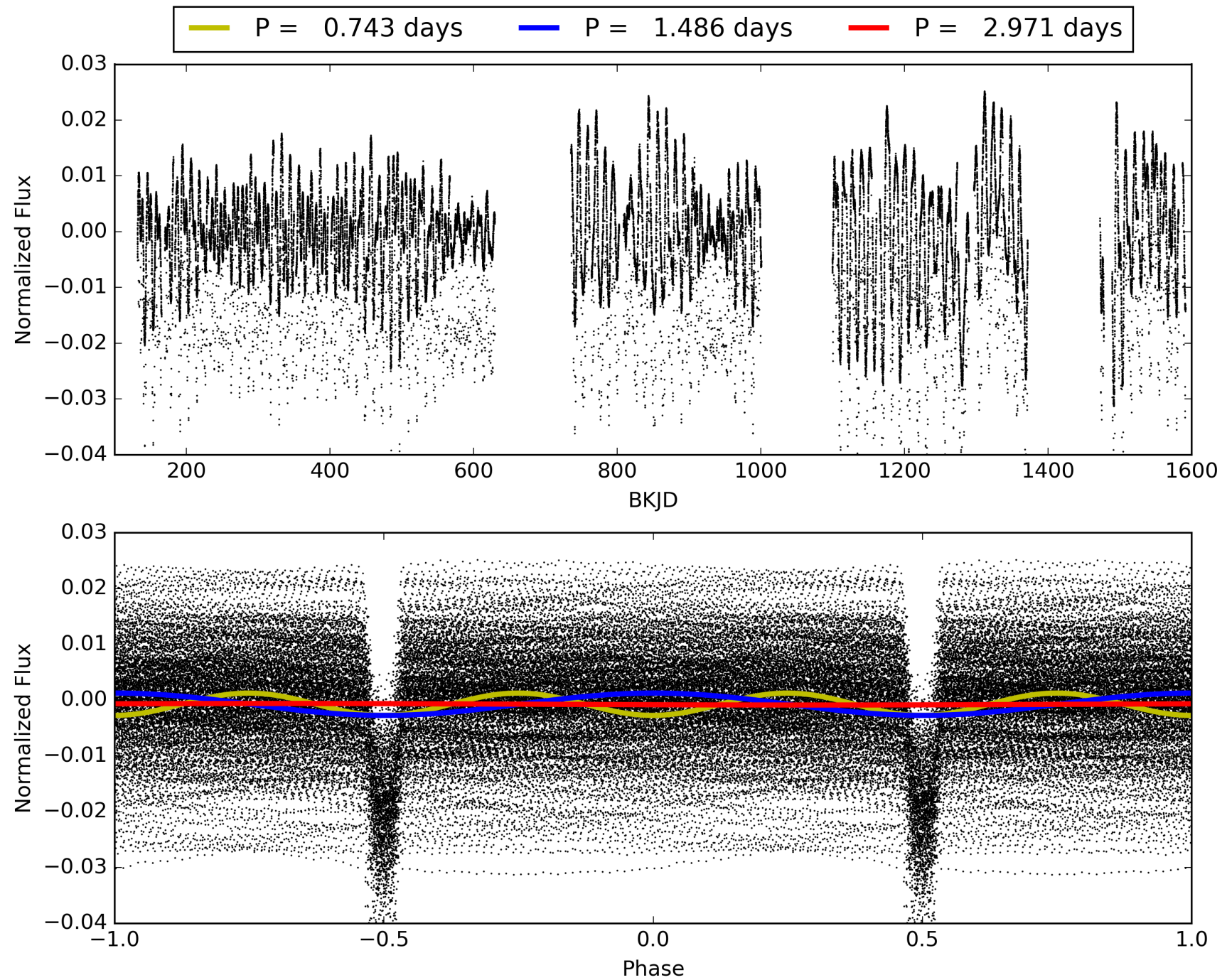
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:23:11 Z

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

TCE 010619192-02, PDC Light Curves

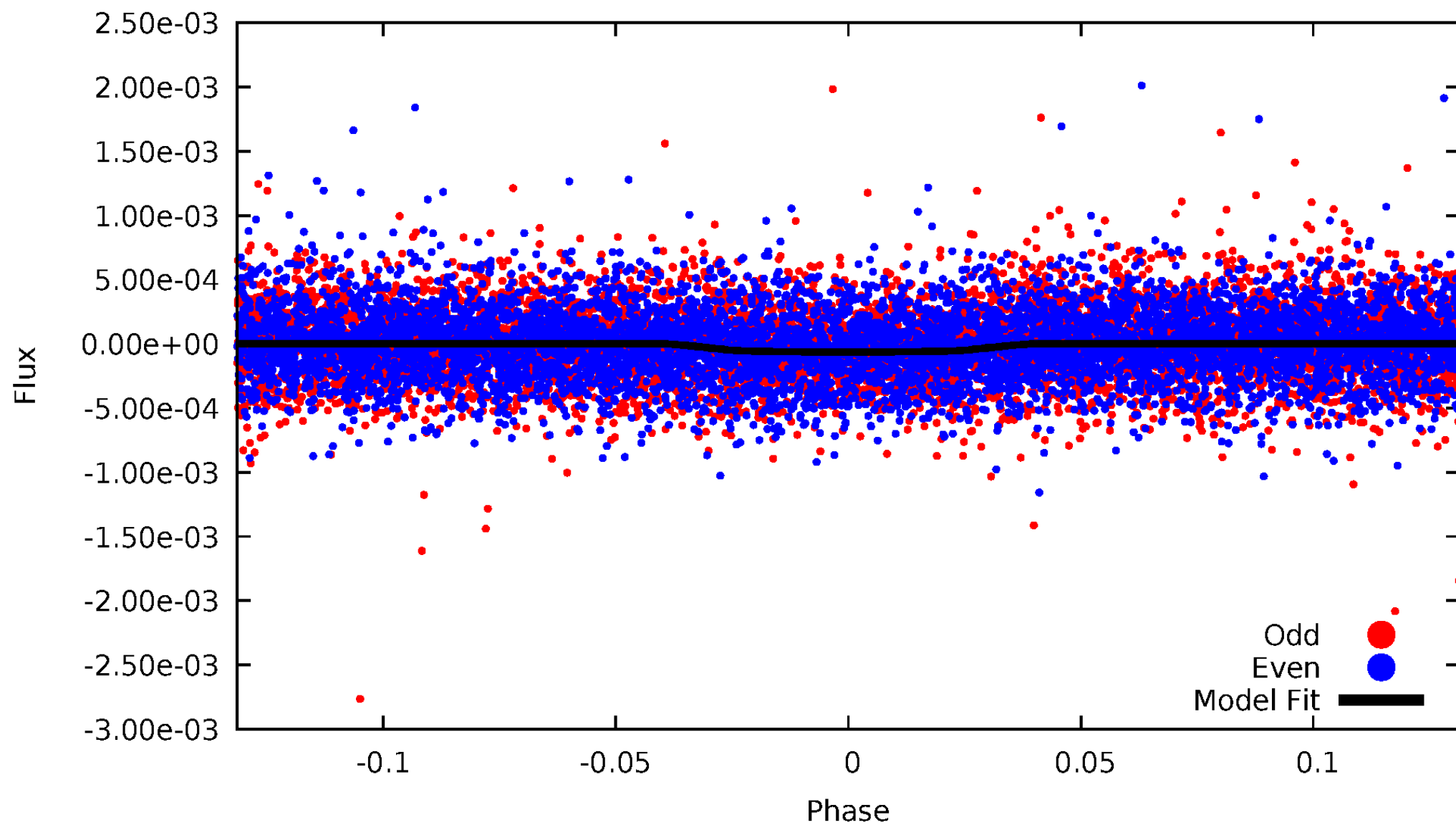


TCE 010619192-02



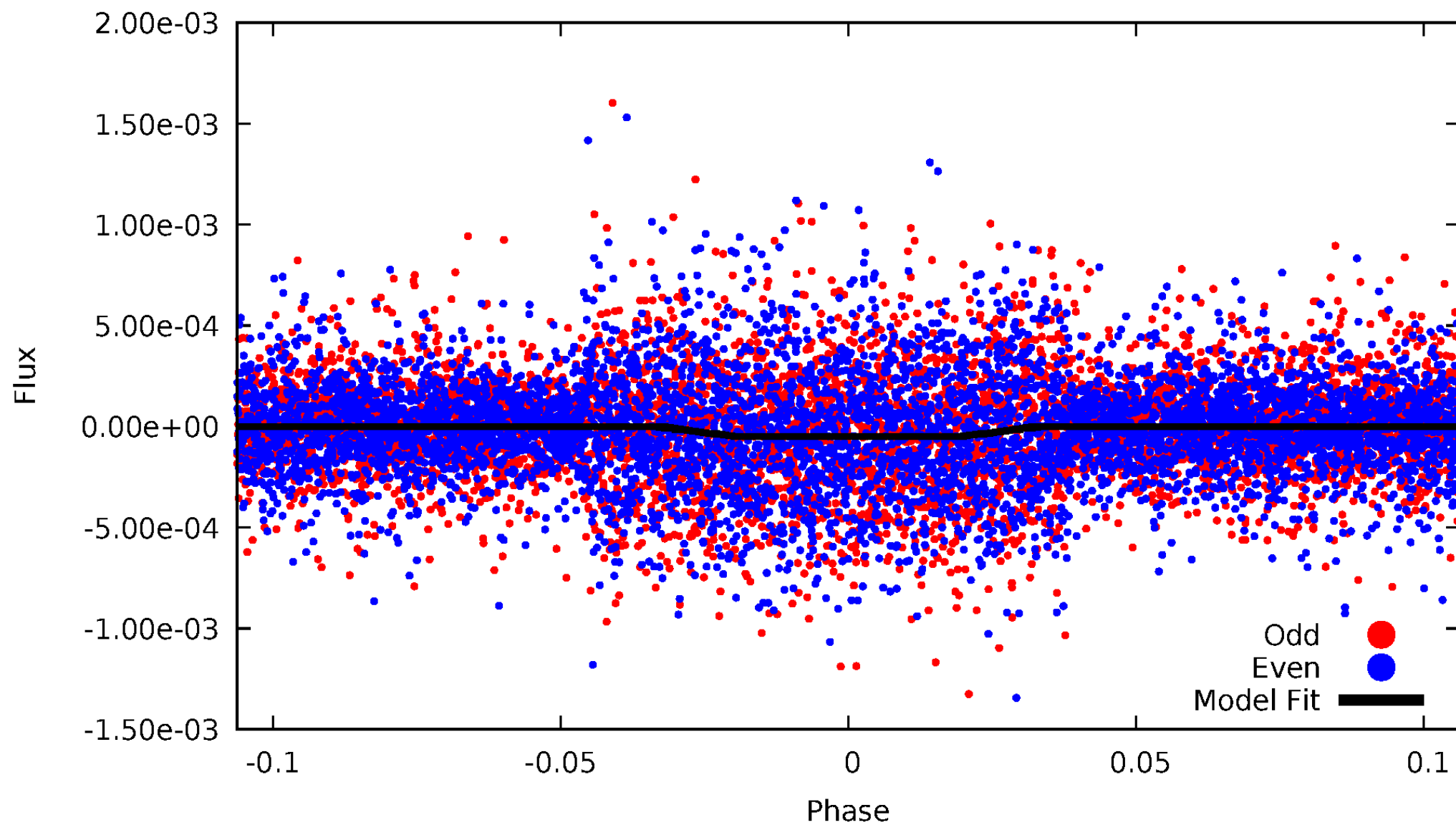
DV Odd/Even

TCE 010619192-02



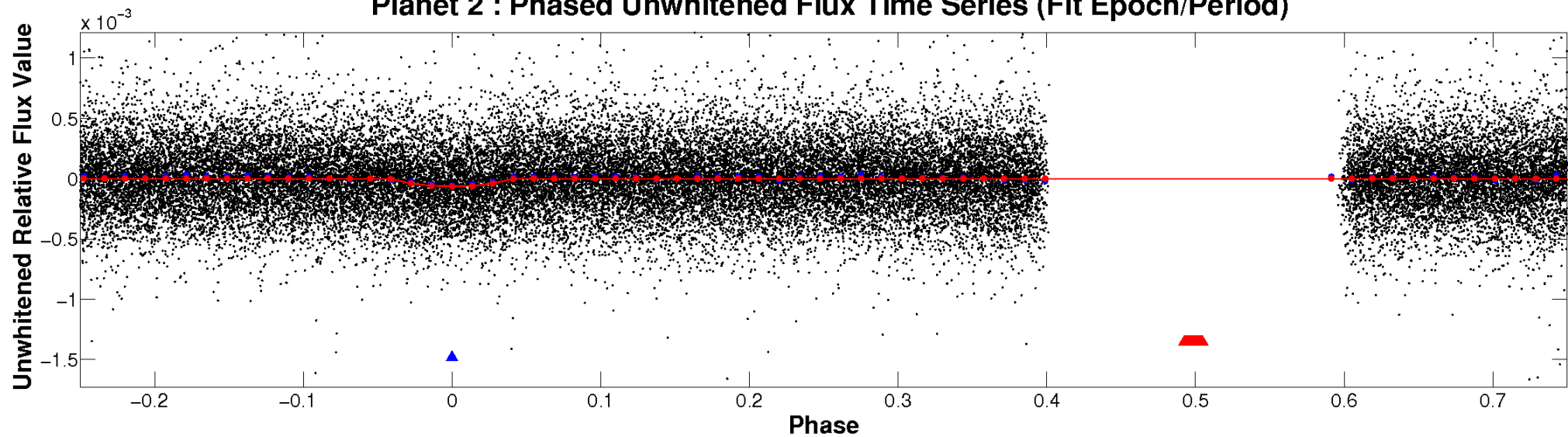
ALT Odd/Even

TCE 010619192-02

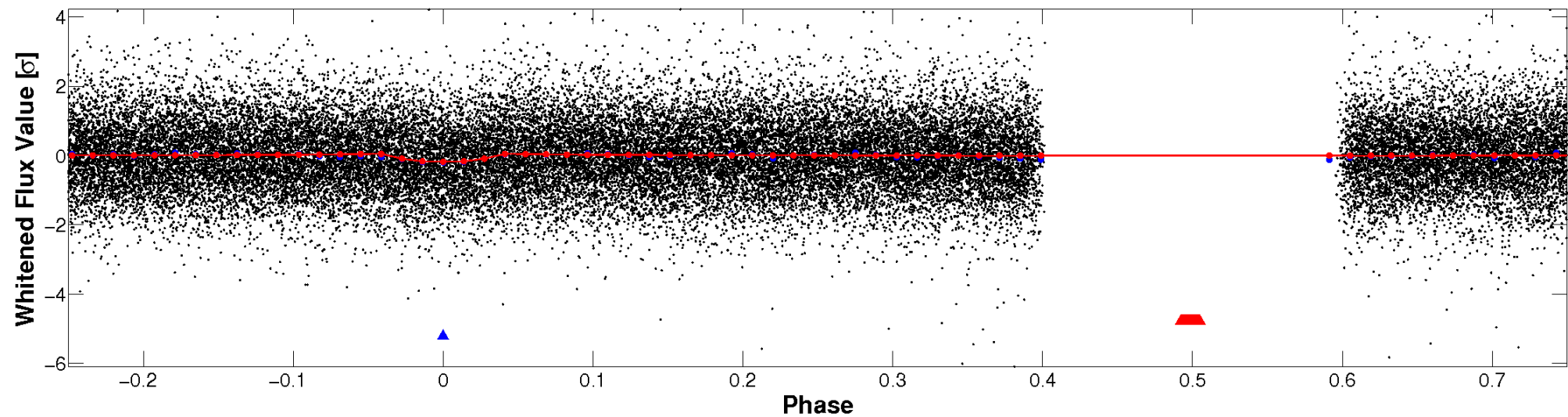


Non-Whitened Vs. Whitened Light Curve

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

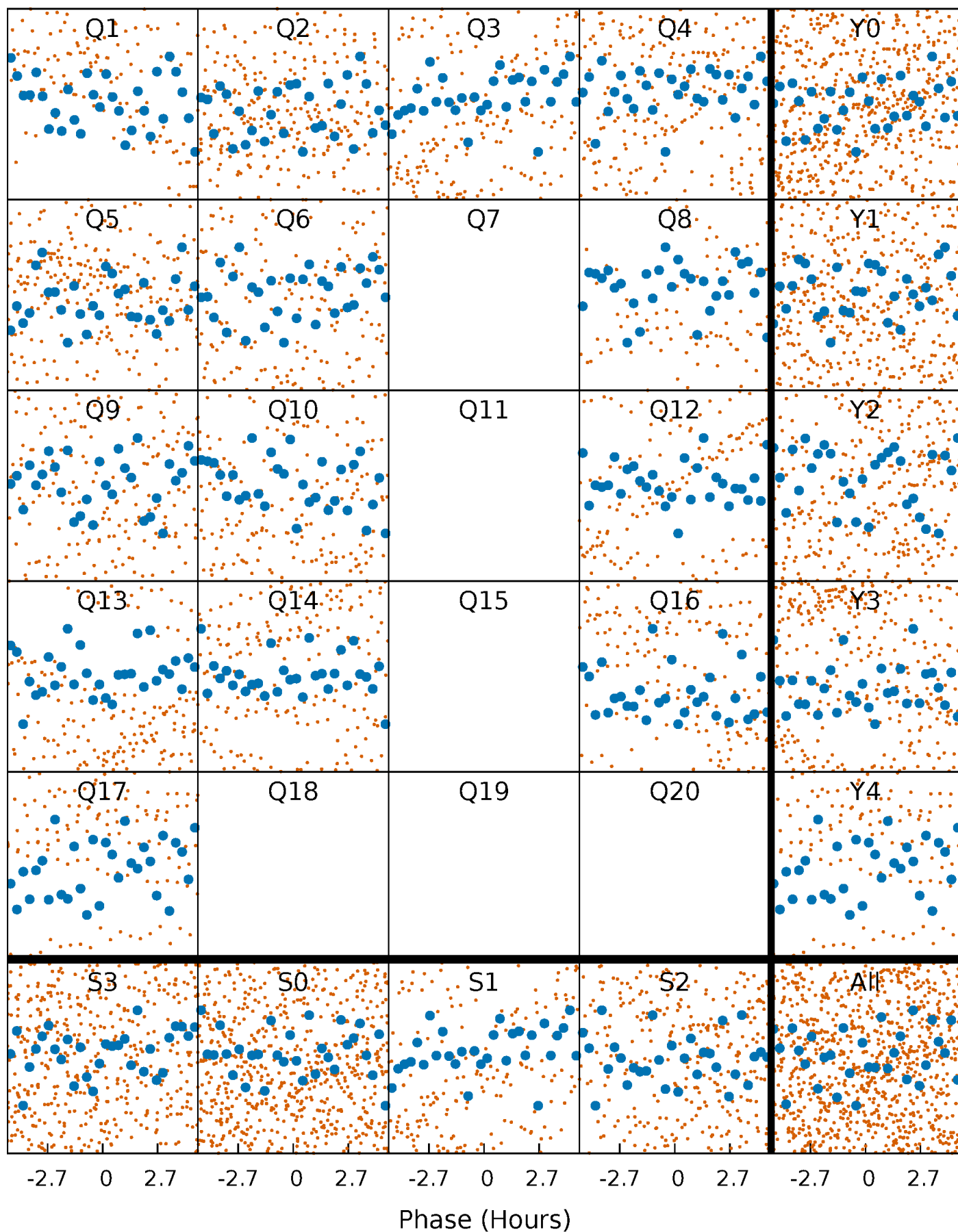


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



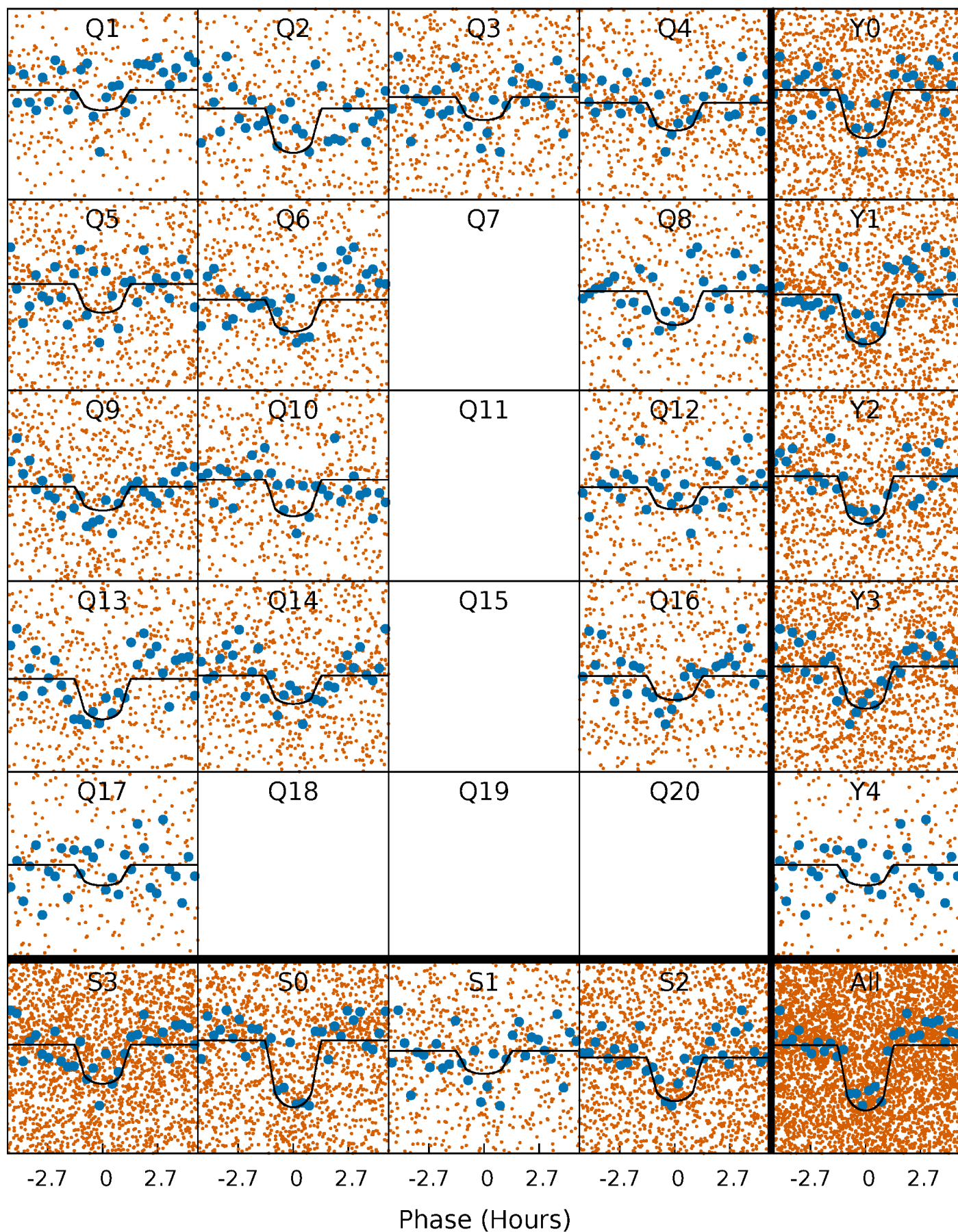
PDC Quarter-Phased Transit Curves

TCE 010619192-02 P= 1.485729 Days $T_0=132.043530$ (BKJD)



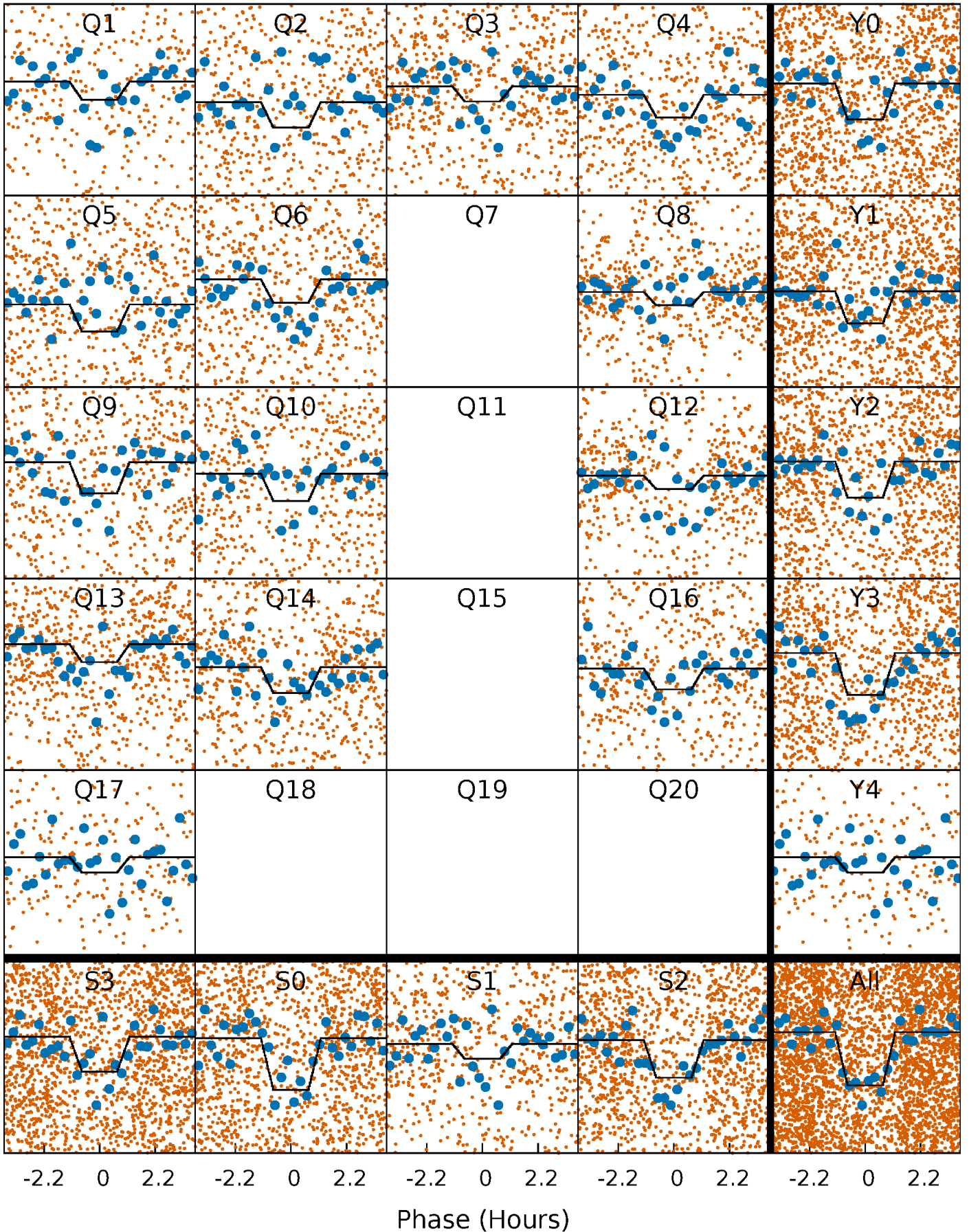
DV Quarter-Phased Transit Curves

TCE 010619192-02 P= 1.485729 Days $T_0=132.043530$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

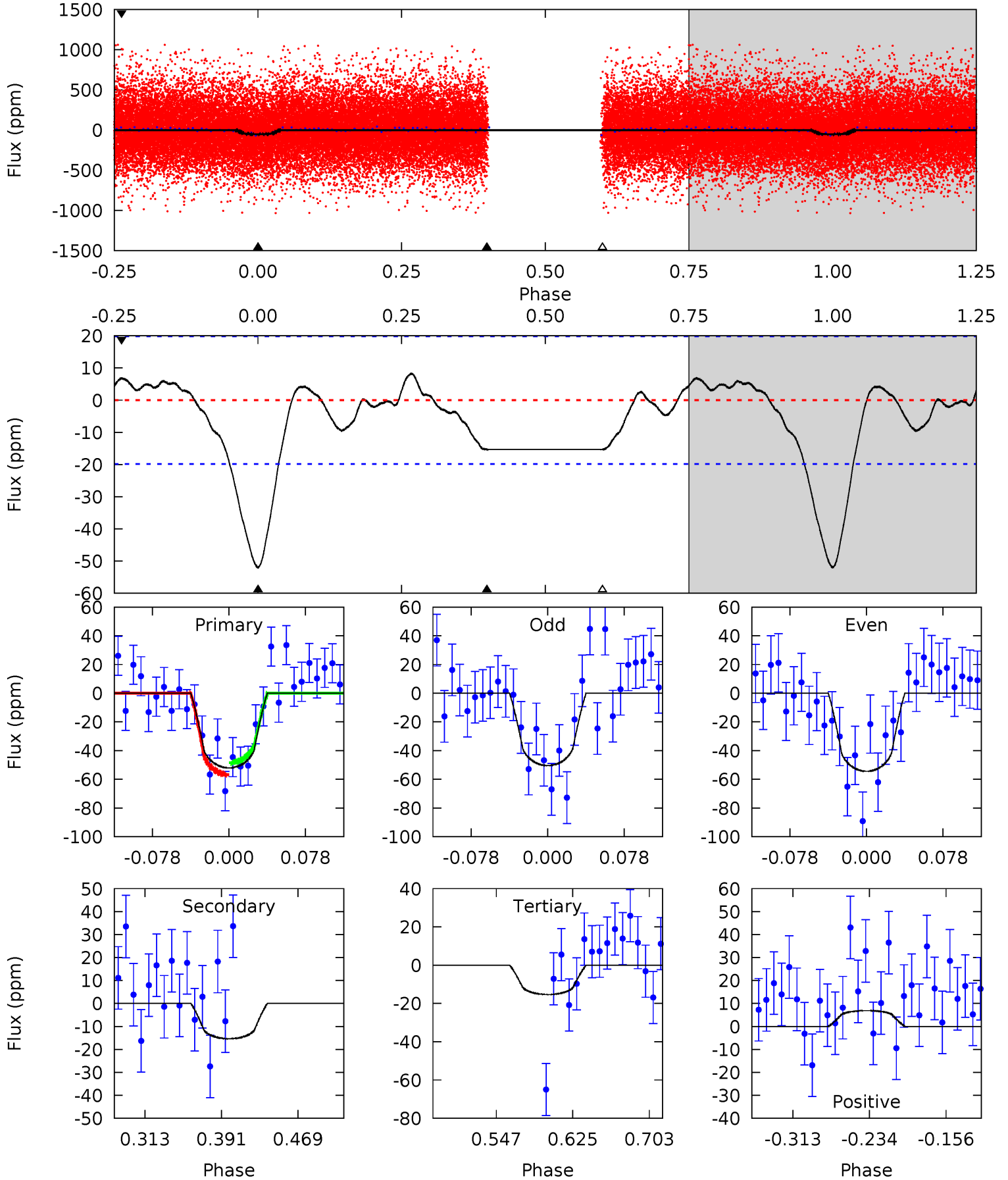
TCE 010619192-02 P= 1.485718 Days $T_0=132.048459$ (BKJD)



DV Model-Shift Uniqueness Test

010619192-02, P = 1.485729 Days, E = 130.557801 Days

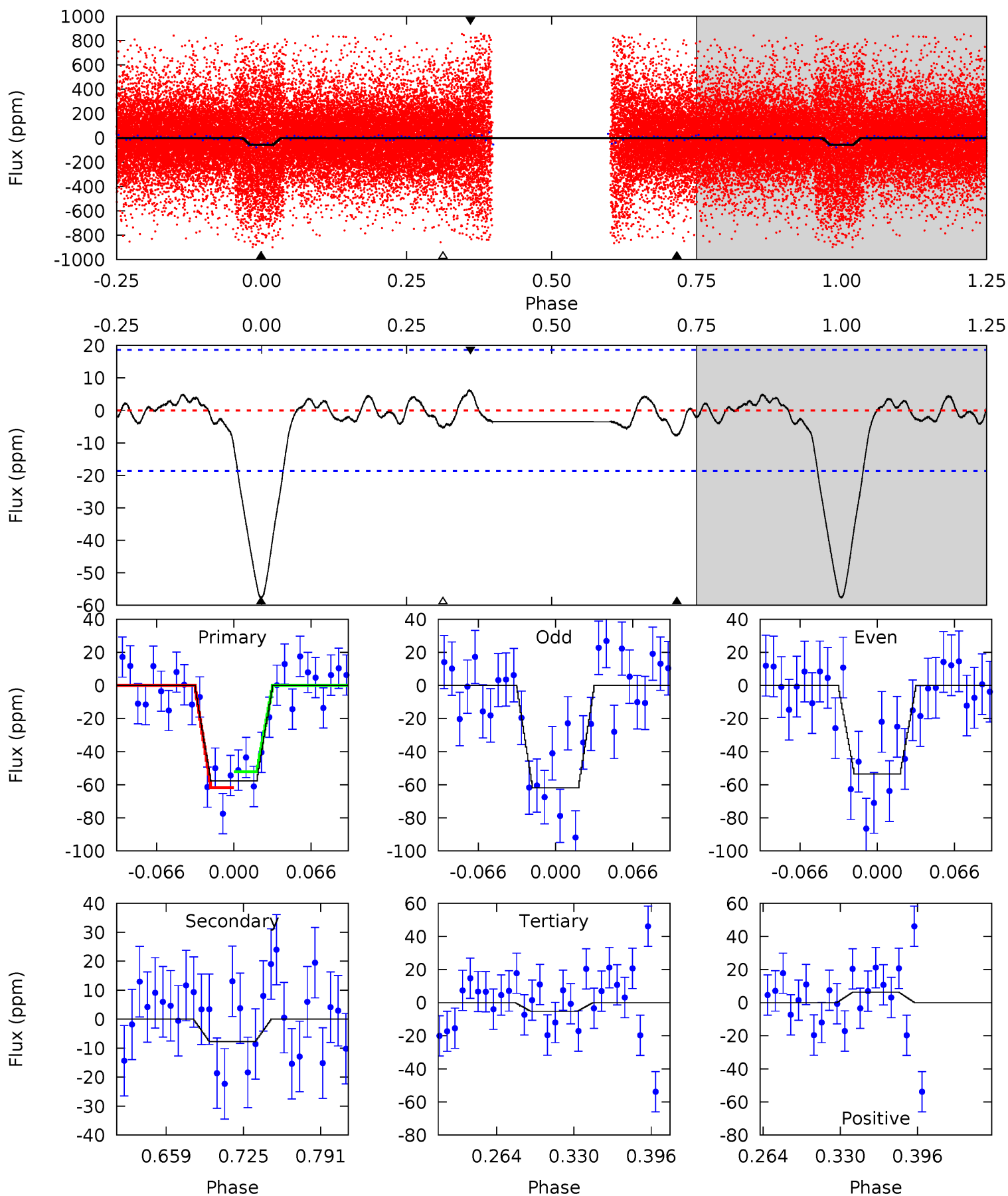
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	3.57	3.57	1.60	4.62	1.76	1.19	8.53	10.5	0.00	1.97	0.47	1.15	0.14	0.97



Alt Model-Shift Uniqueness Test

010619192-02, P = 1.485718 Days, E = 130.562741 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	1.94	1.33	1.58	4.65	1.84	0.73	13.1	12.8	0.61	0.36	1.06	0.94	0.10	1.30



Stellar Parameters For KIC 010619192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5624^{+101}_{-112}	$4.432^{+0.040}_{-0.049}$	$0.300^{+0.100}_{-0.150}$	$1.018^{+0.062}_{-0.062}$	$1.021^{+0.048}_{-0.064}$	$1.363^{+0.219}_{-0.206}$
	+2%/-2%	+1%/-1%	+33%/-50%	+6%/-6%	+5%/-6%	+16%/-15%
Source	SPE29	TRA29	SPE29	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010619192-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-15 ± 4	$0.85^{+0.38}_{-0.35}$	2181^{+60}_{-54}	4224^{+1152}_{-570}	$7.742^{+17.435}_{-4.220}$
Alt.	-8 ± 4	$0.79^{+0.33}_{-0.32}$	2184^{+54}_{-53}	3783^{+898}_{-601}	$4.149^{+8.410}_{-2.512}$

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 $A_{obs} \gg 1.0$

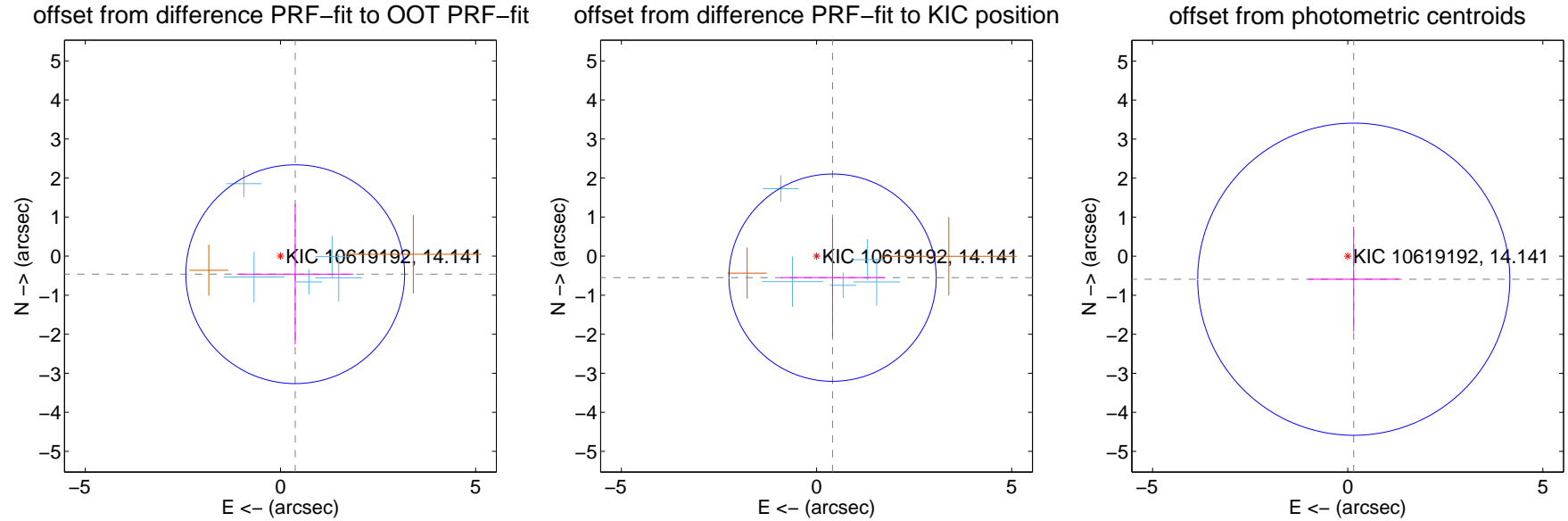
DV Centroid Data

Supplemental centroid analysis for 010619192-02. Kepler magnitude: 14.14. Transit SNR 9.19

There are 5 quarters with good PRF difference image offsets

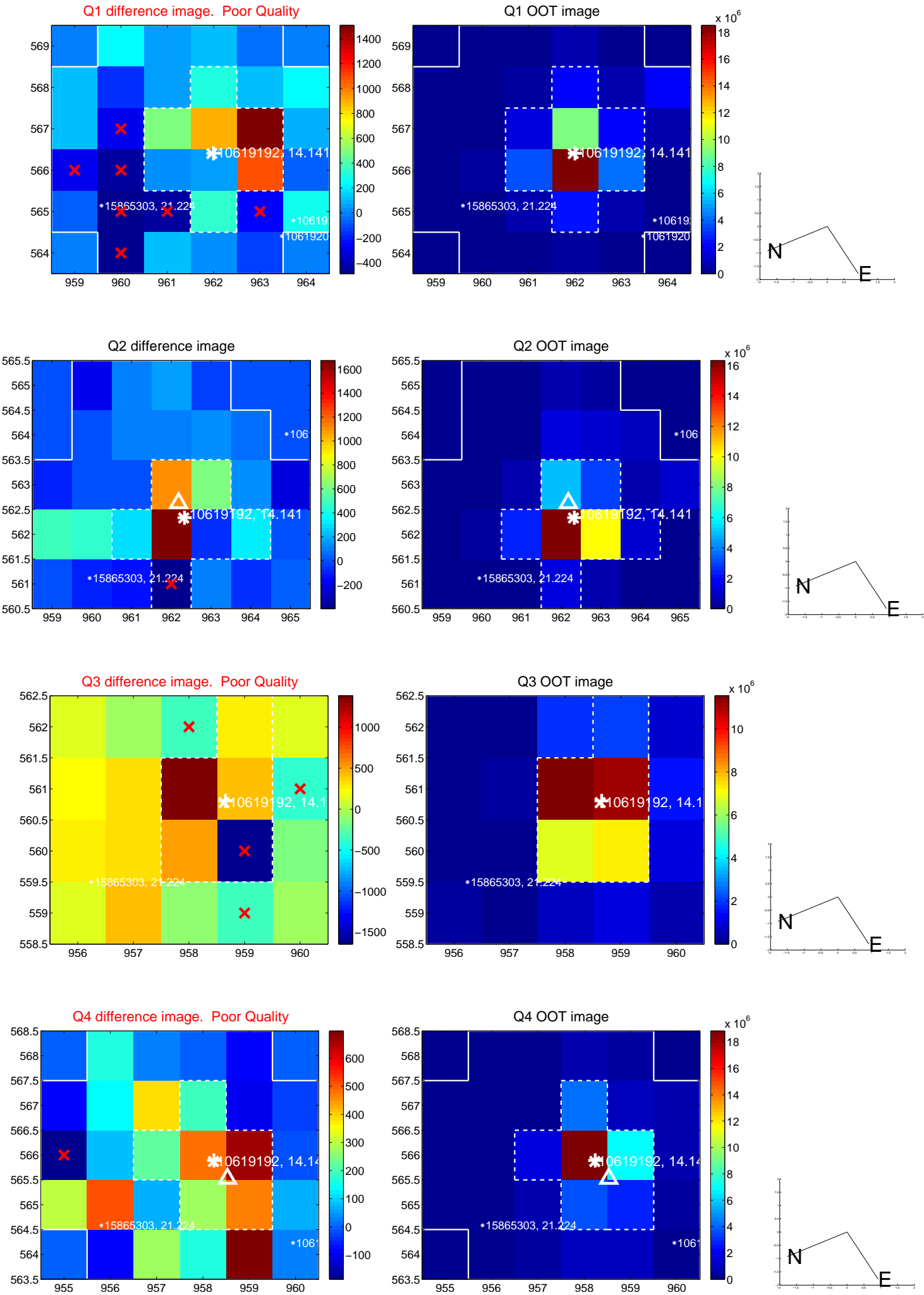
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.598 ± 0.934	0.64	-0.378 ± 1.486	-0.463 ± 1.796
PRF-fit source offset from KIC position	0.687 ± 0.885	0.78	-0.410 ± 1.325	-0.552 ± 1.515
photometric centroid source offset	0.61 ± 1.33	0.46	-0.15 ± 1.17	-0.59 ± 1.34

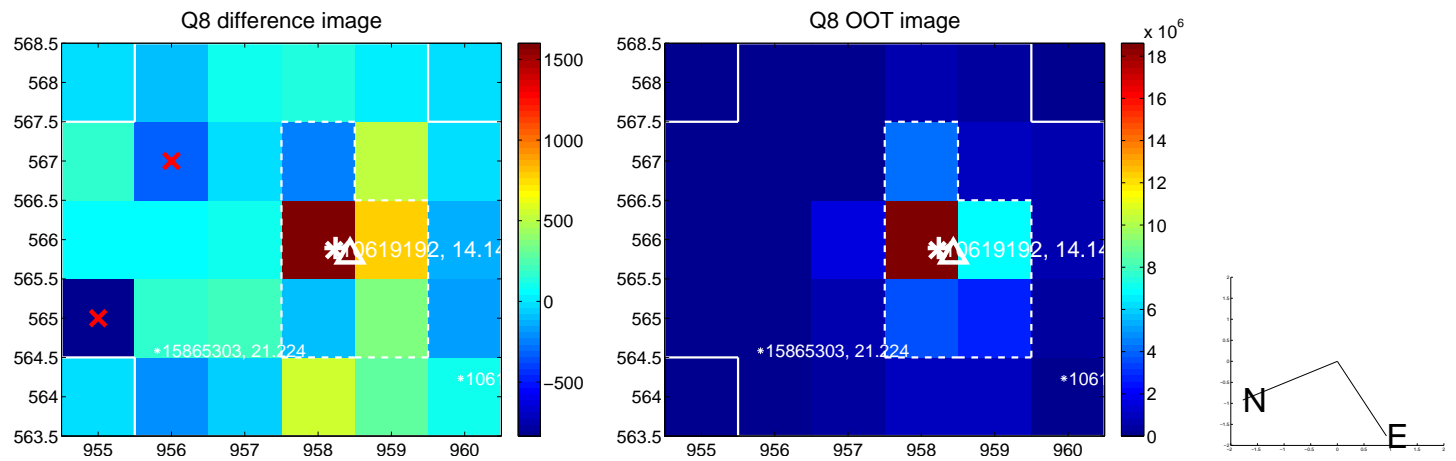
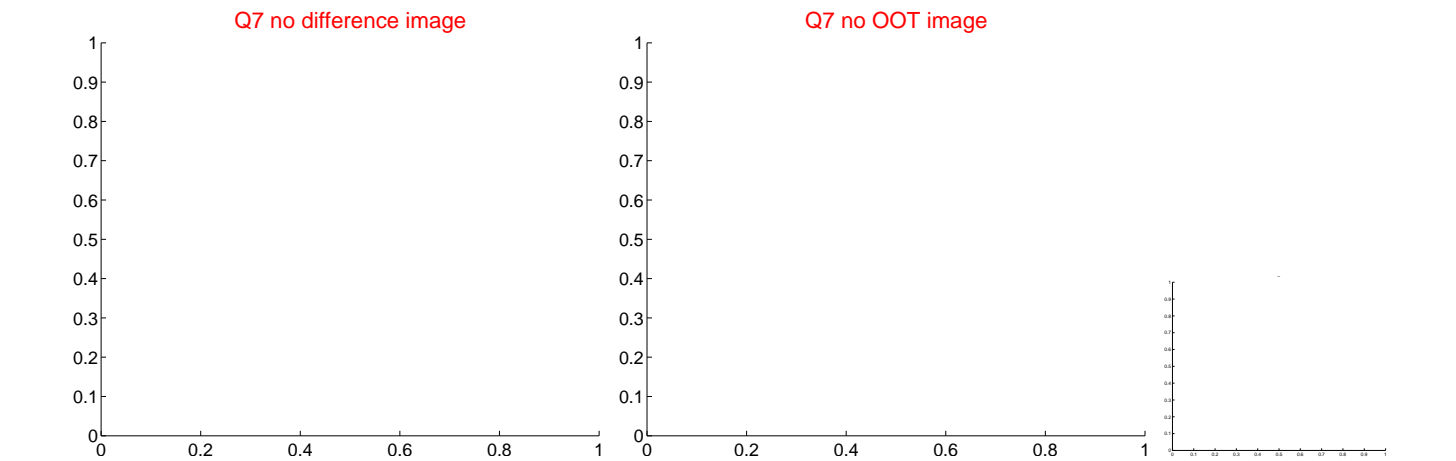
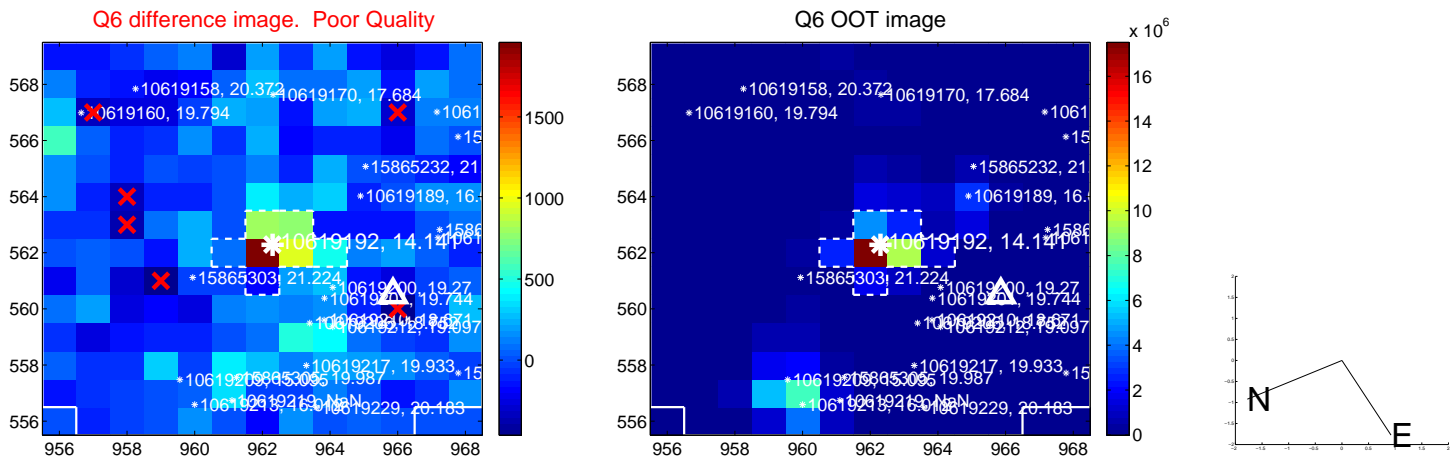
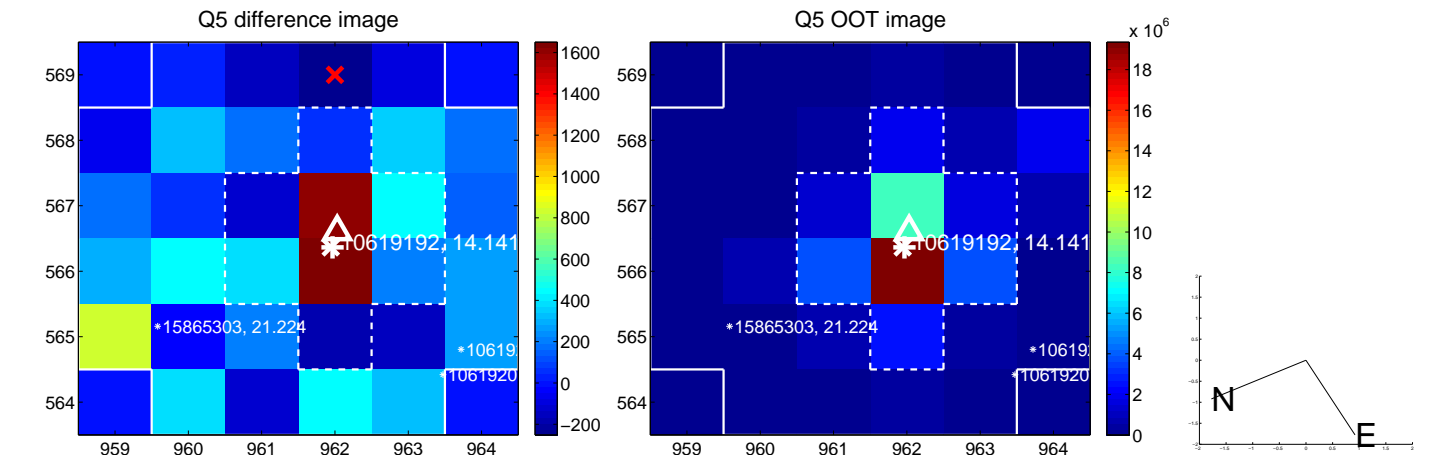


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

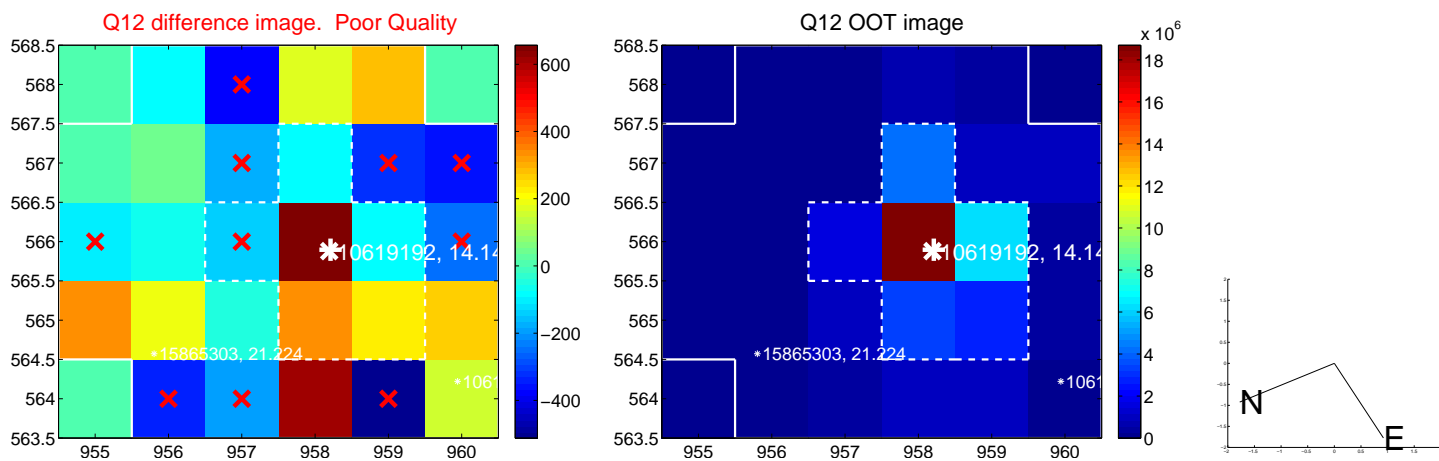
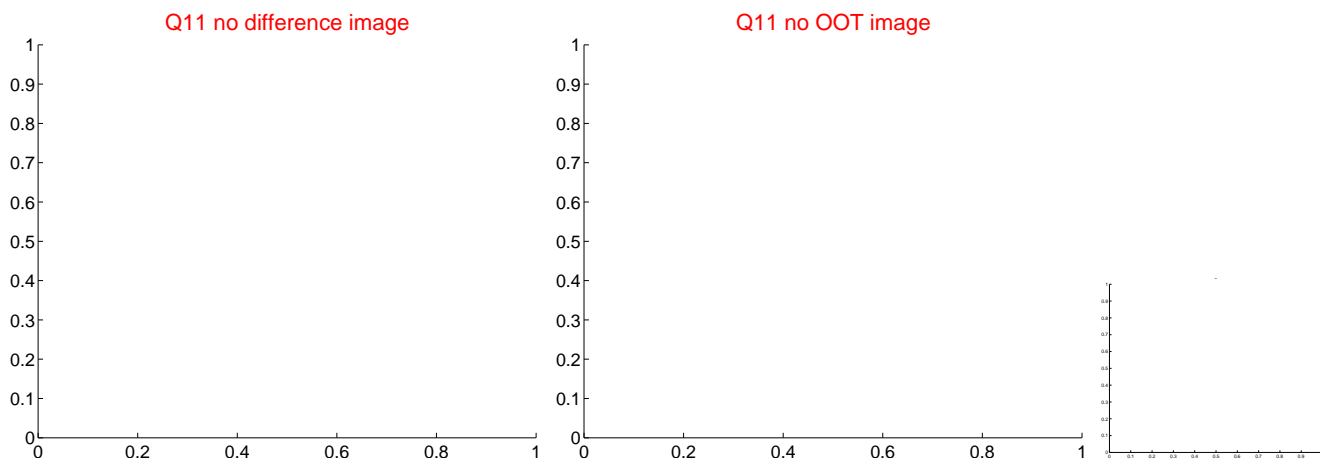
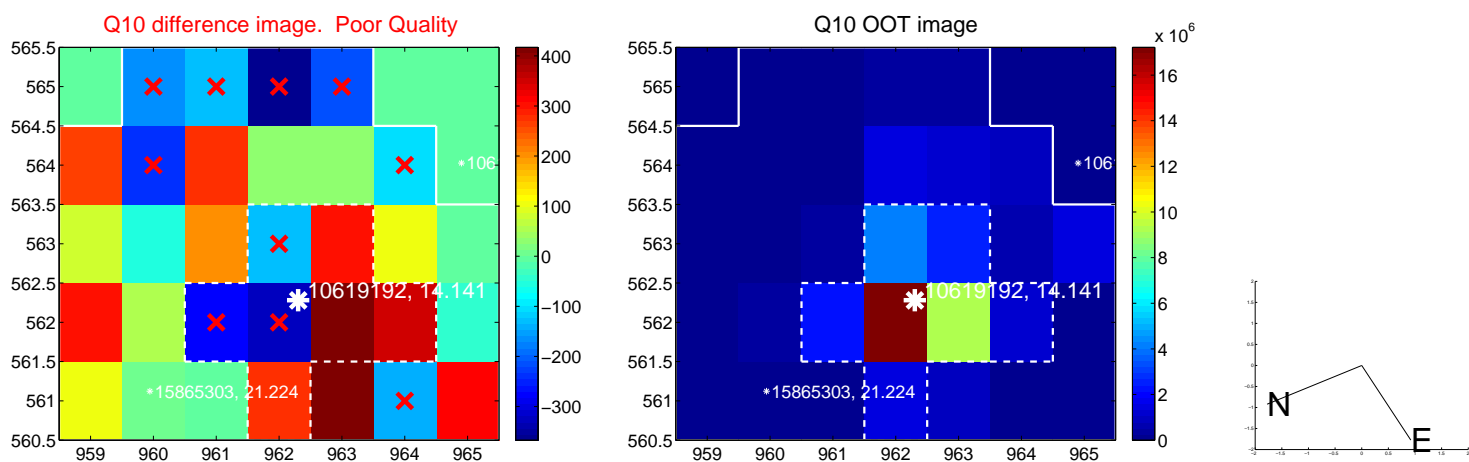
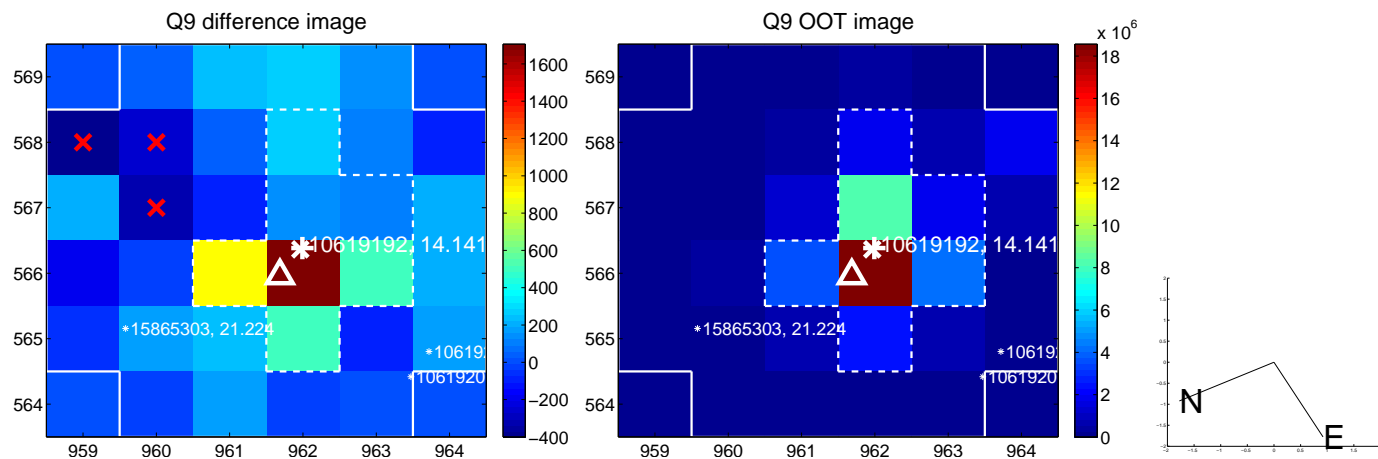
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



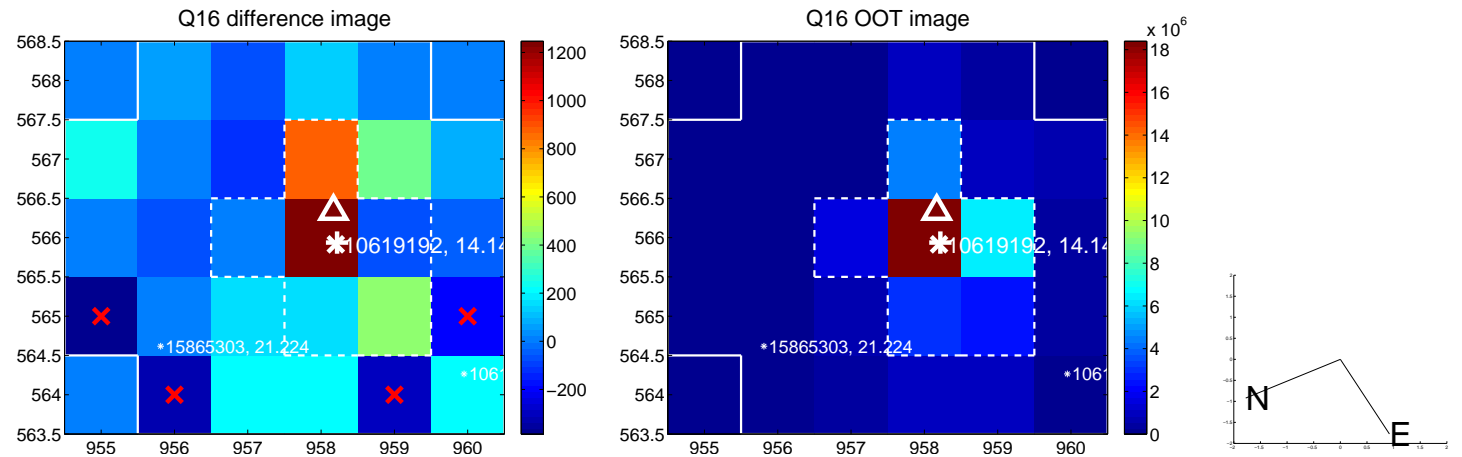
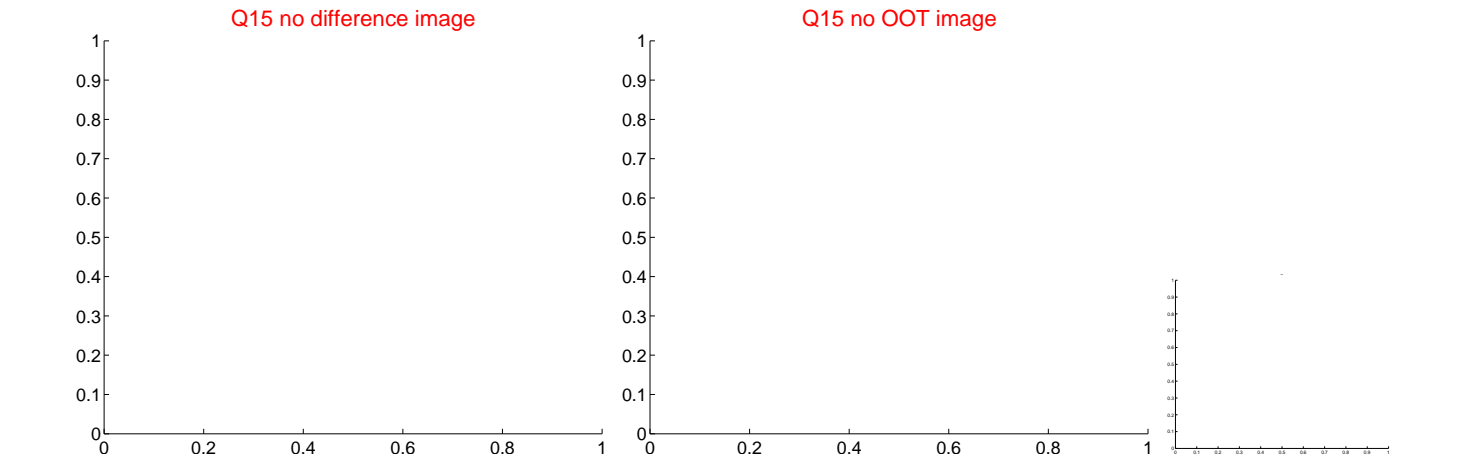
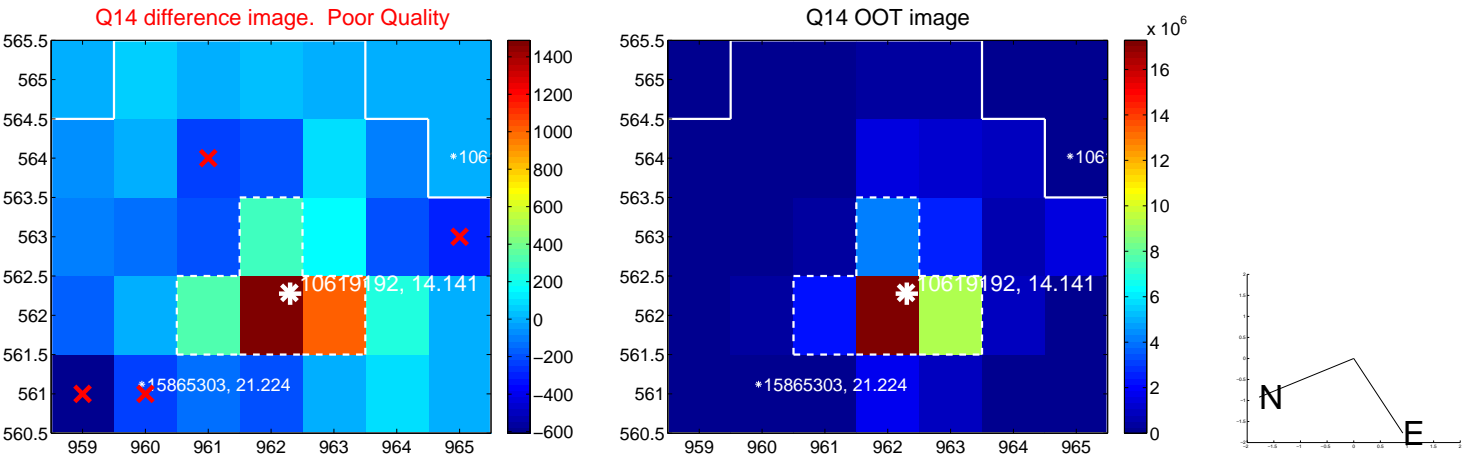
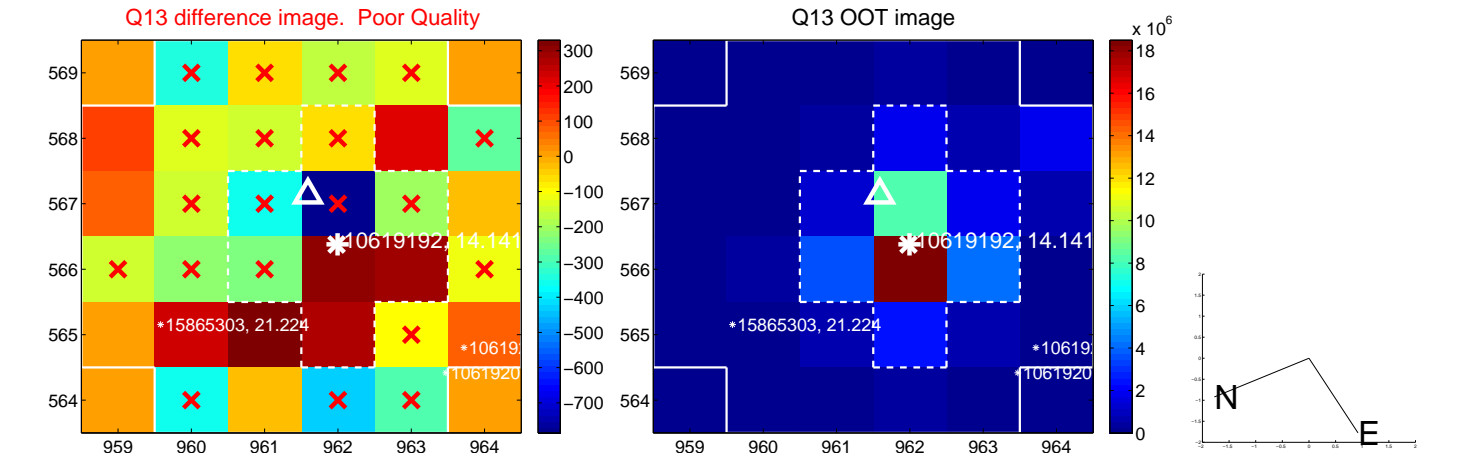
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



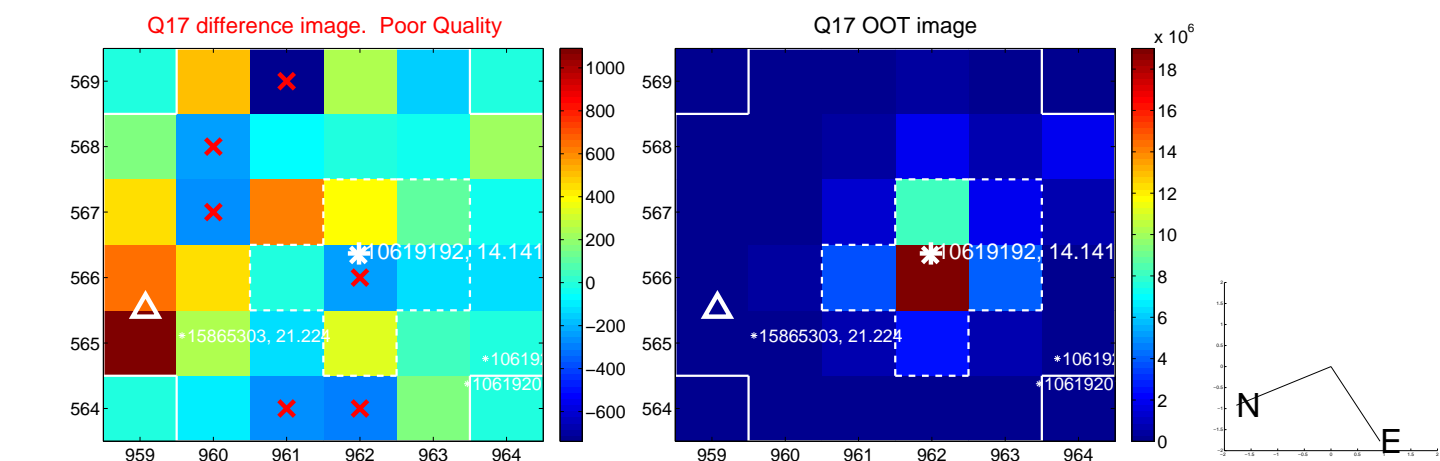
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



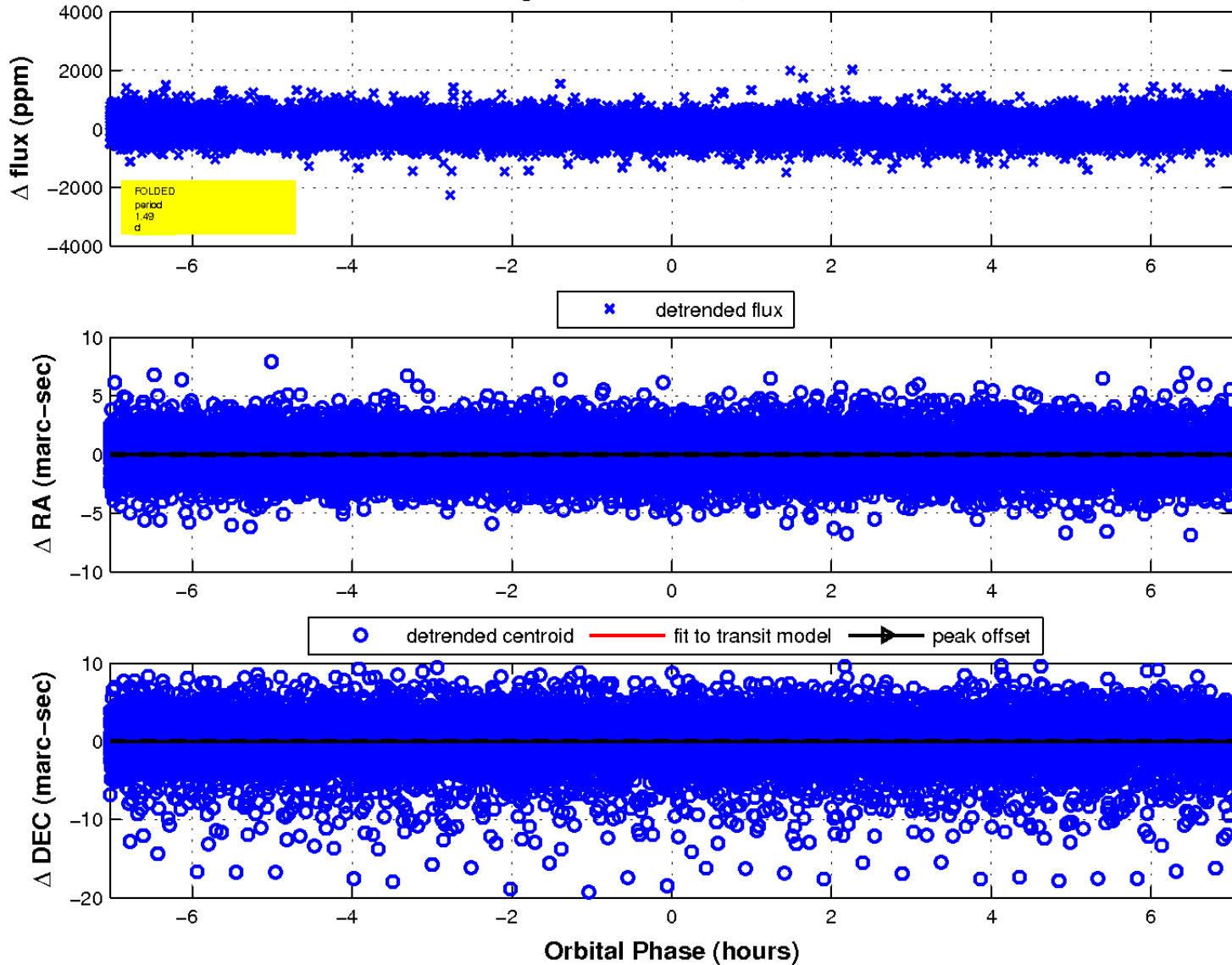
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

