

KIC 008197788

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})
008197788-01	OBS	No	1.175493	132.655308	216.6	3.937	10.6	10.0	2.20	7509	4.08	19343.91
008197788-02	OBS	No	1.175580	132.344032	400.0	3.502	11.3	15.0	2.20	7509	5.09	19342.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008197788-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
008197788-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD

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

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

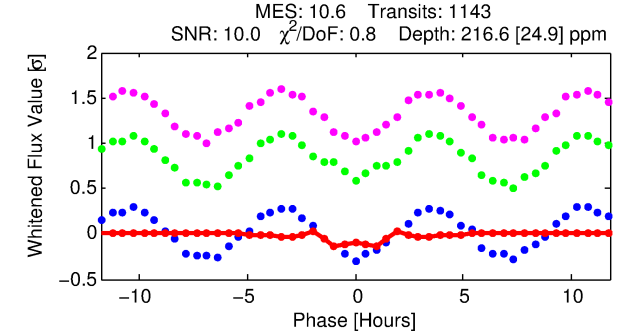
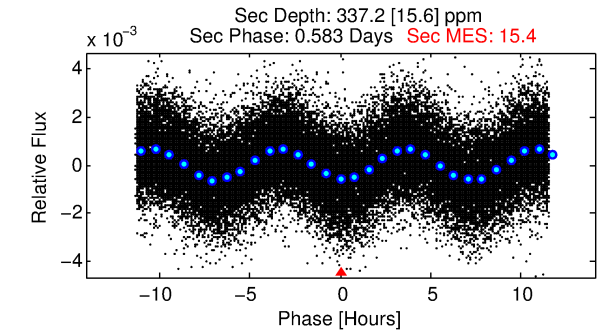
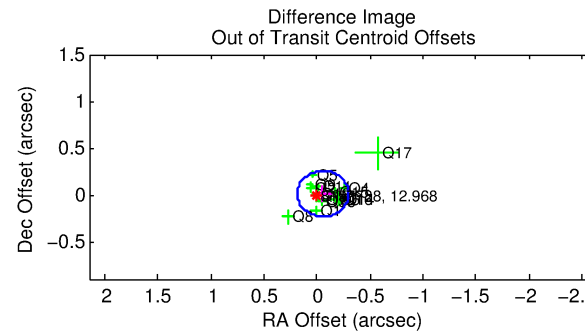
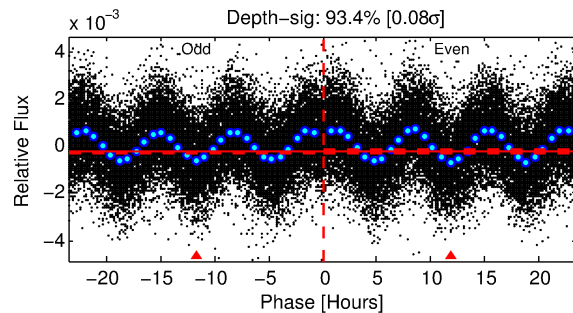
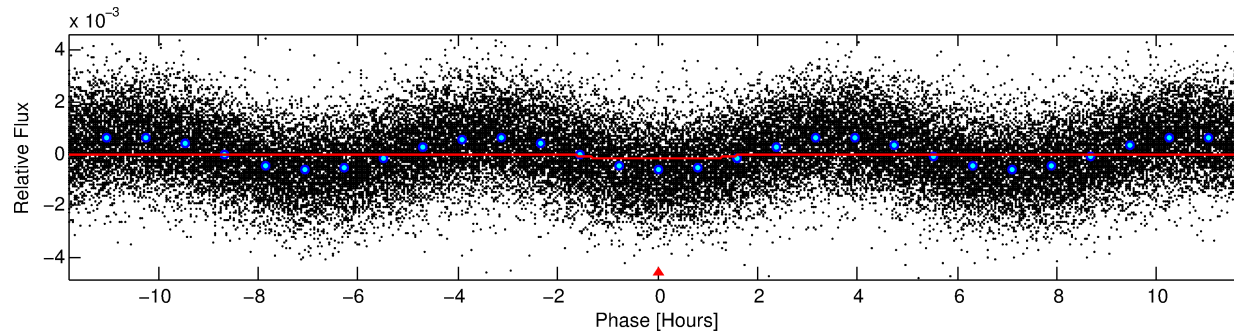
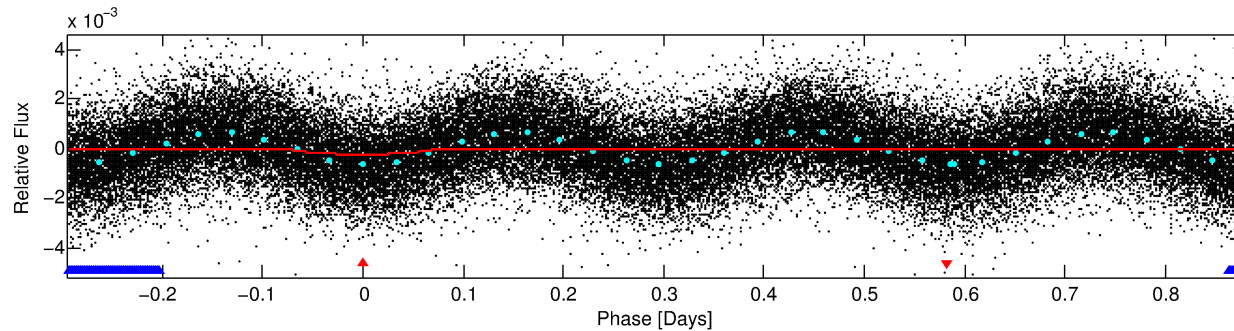
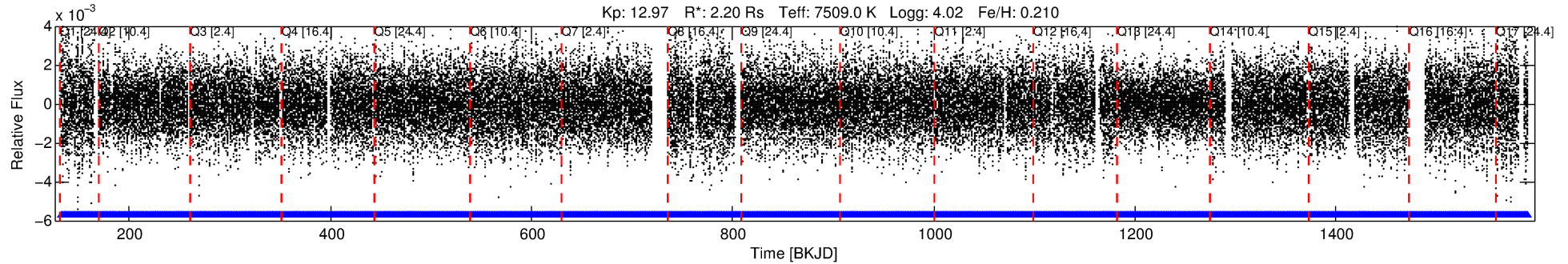
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008197788-01

No Significant Match Found

DV One-Page Summary

KIC: 8197788 Candidate: 1 of 2 Period: 1.175 d



DV Fit Results:

Period = 1.17549 [0.00001] d
Epoch = 132.6553 [0.0028] BKJD
Rp/R* = 0.0170 [0.0011]
a/R* = 1.20 [0.05]
b = 0.97 [0.01]
Seff = 19343.91 [4225.24]
Teq = 3007 [164] K
Rp = 4.09 [0.73] Re
a = 0.0267 [0.0037] AU
Ag = 7.92 [1.88] [3.68 σ]
Teffp = 7801 [320] K [13.33 σ]

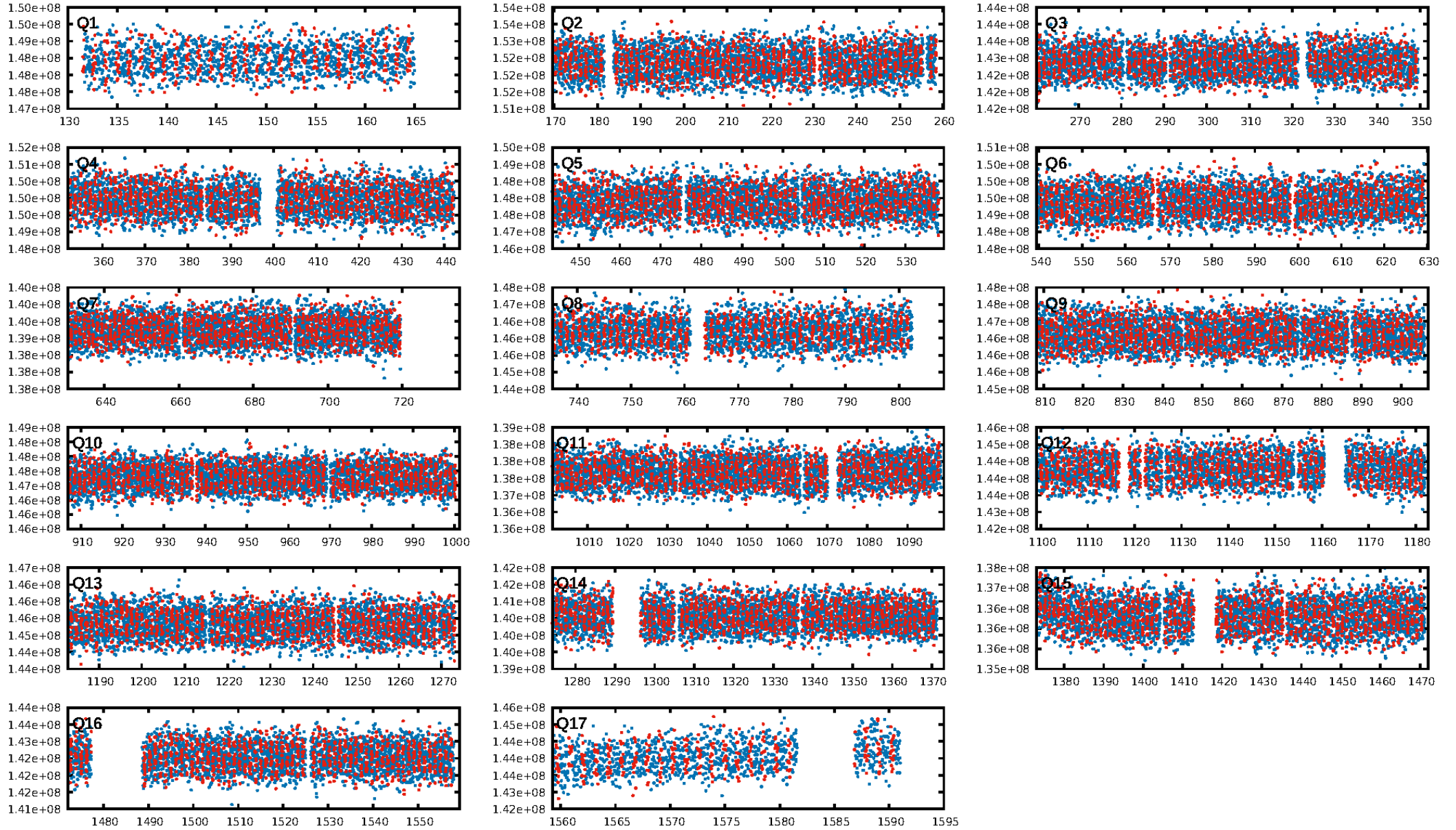
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.01e-39
RollingBand-fgt: 1.00 [1091/1091]
GhostDiagnostic-chr: 28.5
Centroid-sig: 17.7%
Centroid-so: 0.311 arcsec [2.08 σ]
OotOffset-rm: 0.054 arcsec [0.67 σ]
KicOffset-rm: 0.124 arcsec [1.38 σ]
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]

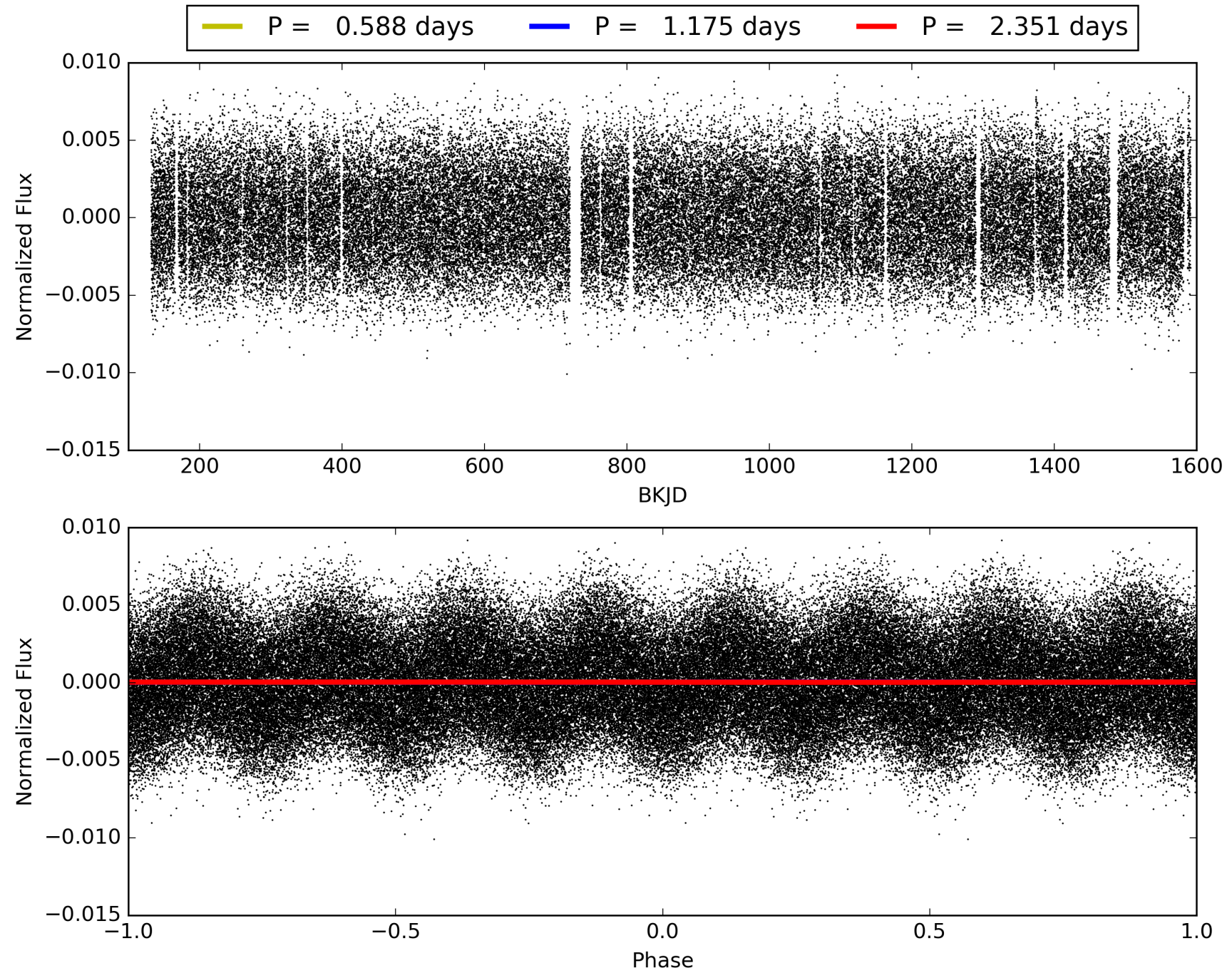
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:15:16 Z

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

TCE 008197788-01, PDC Light Curves

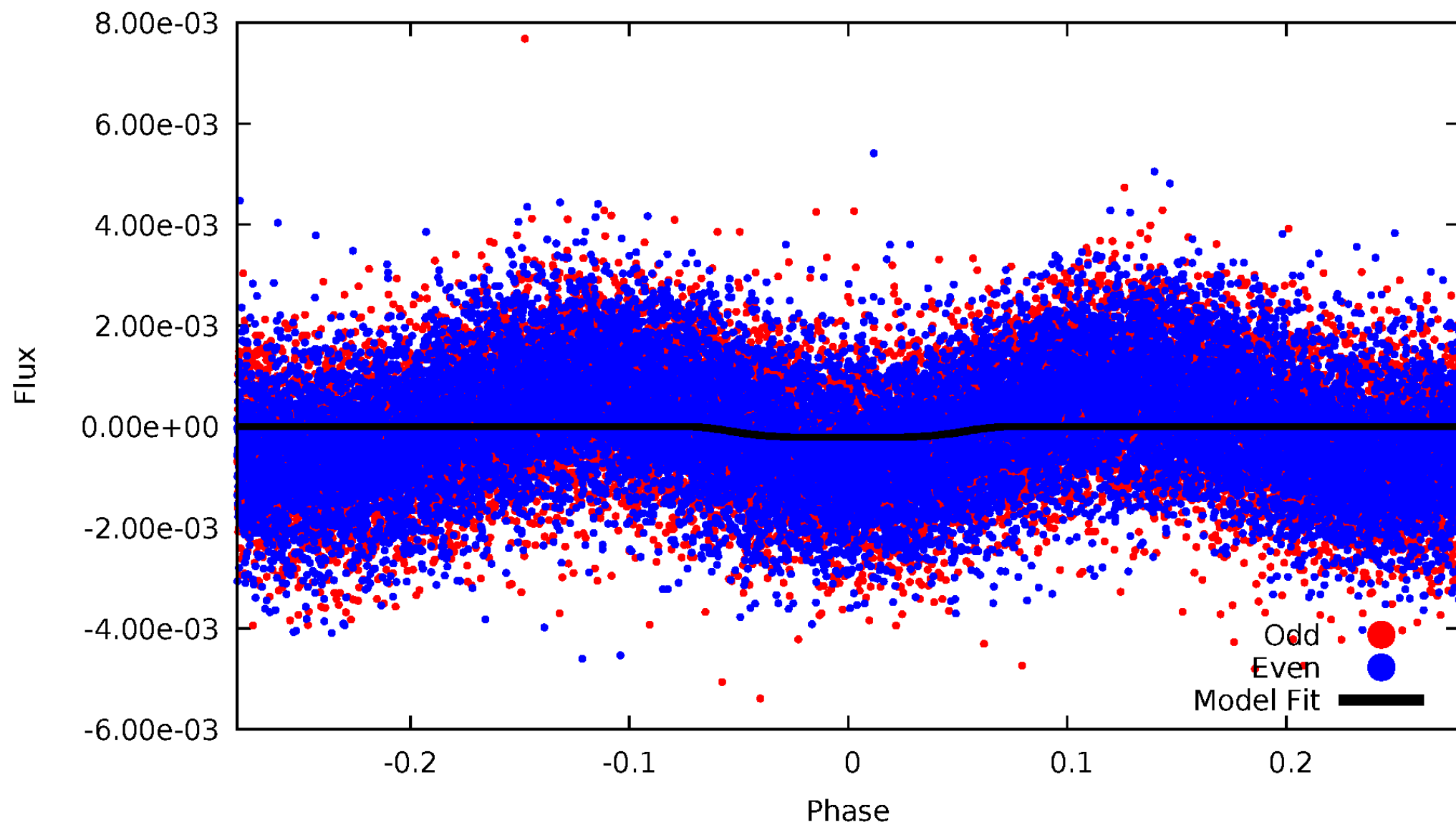


TCE 008197788-01



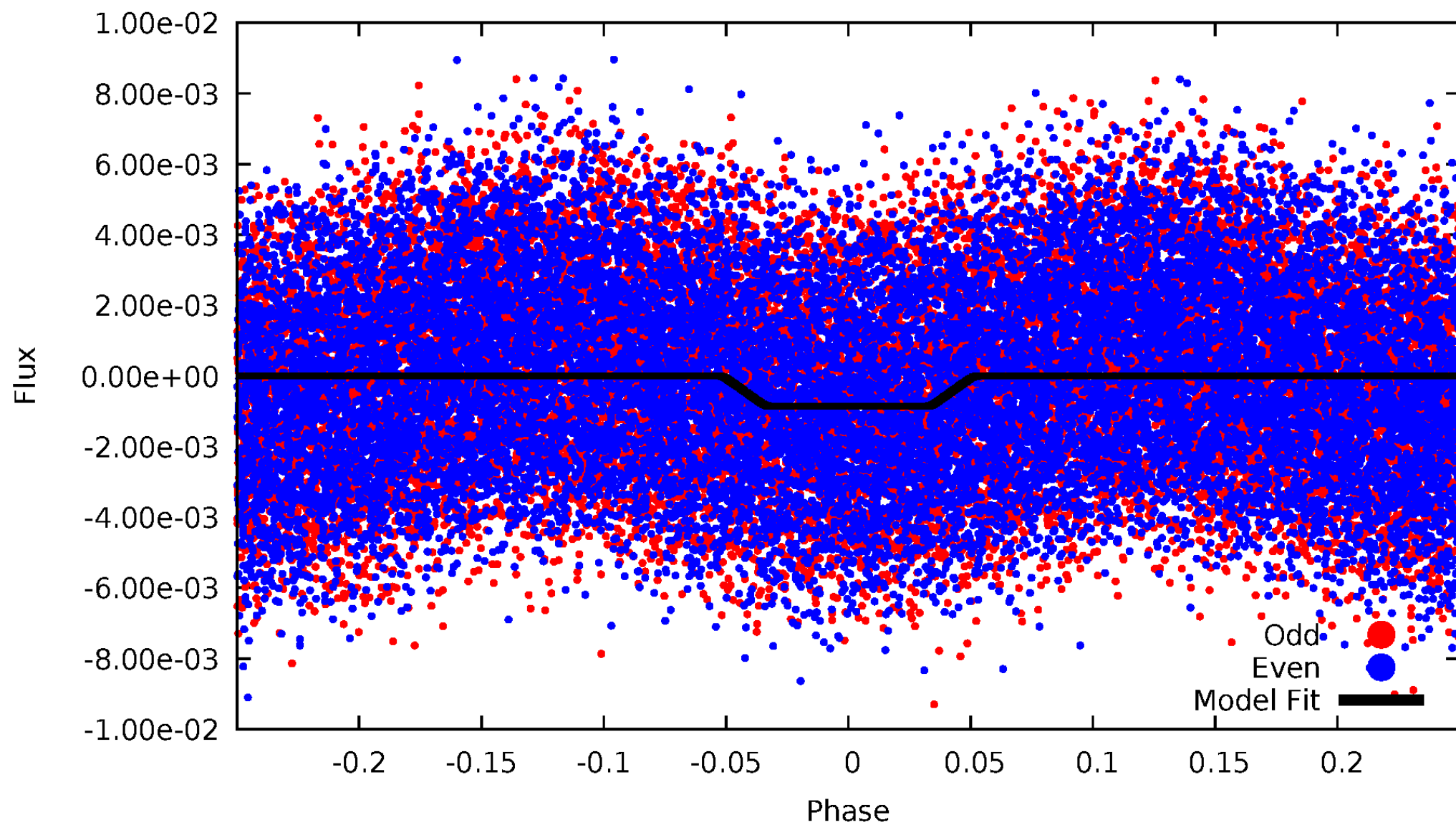
DV Odd/Even

TCE 008197788-01

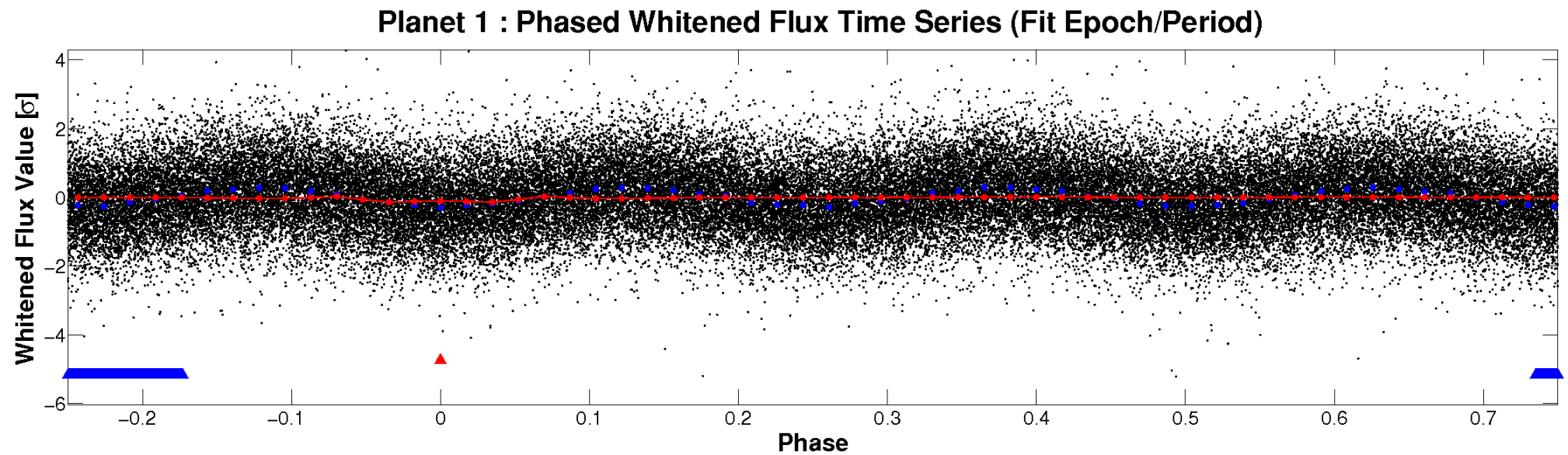
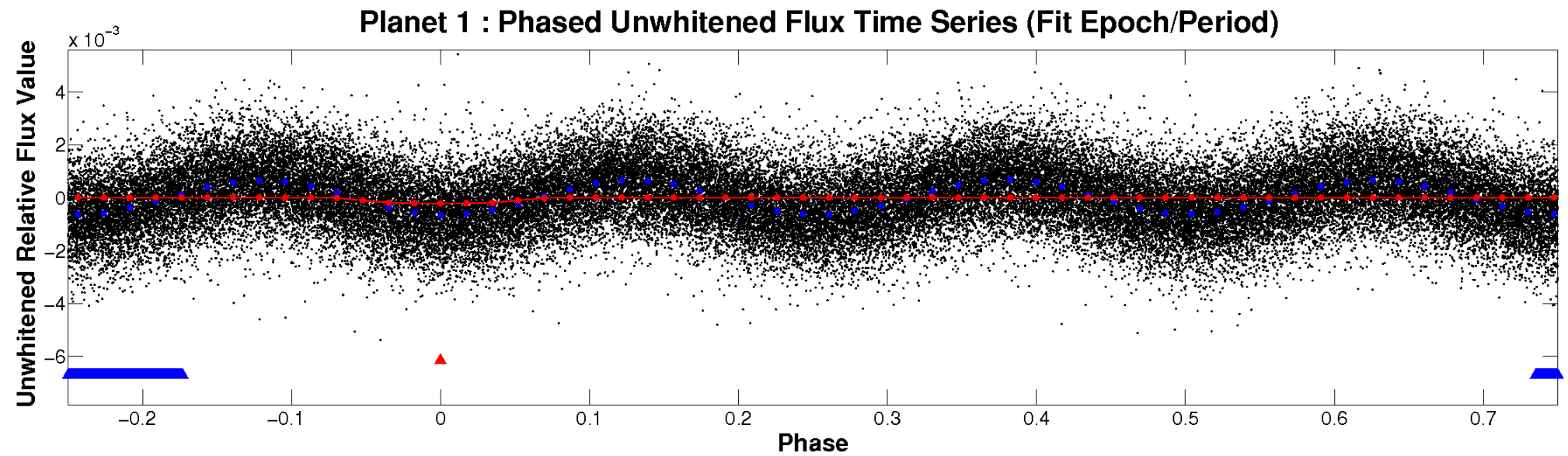


ALT Odd/Even

TCE 008197788-01

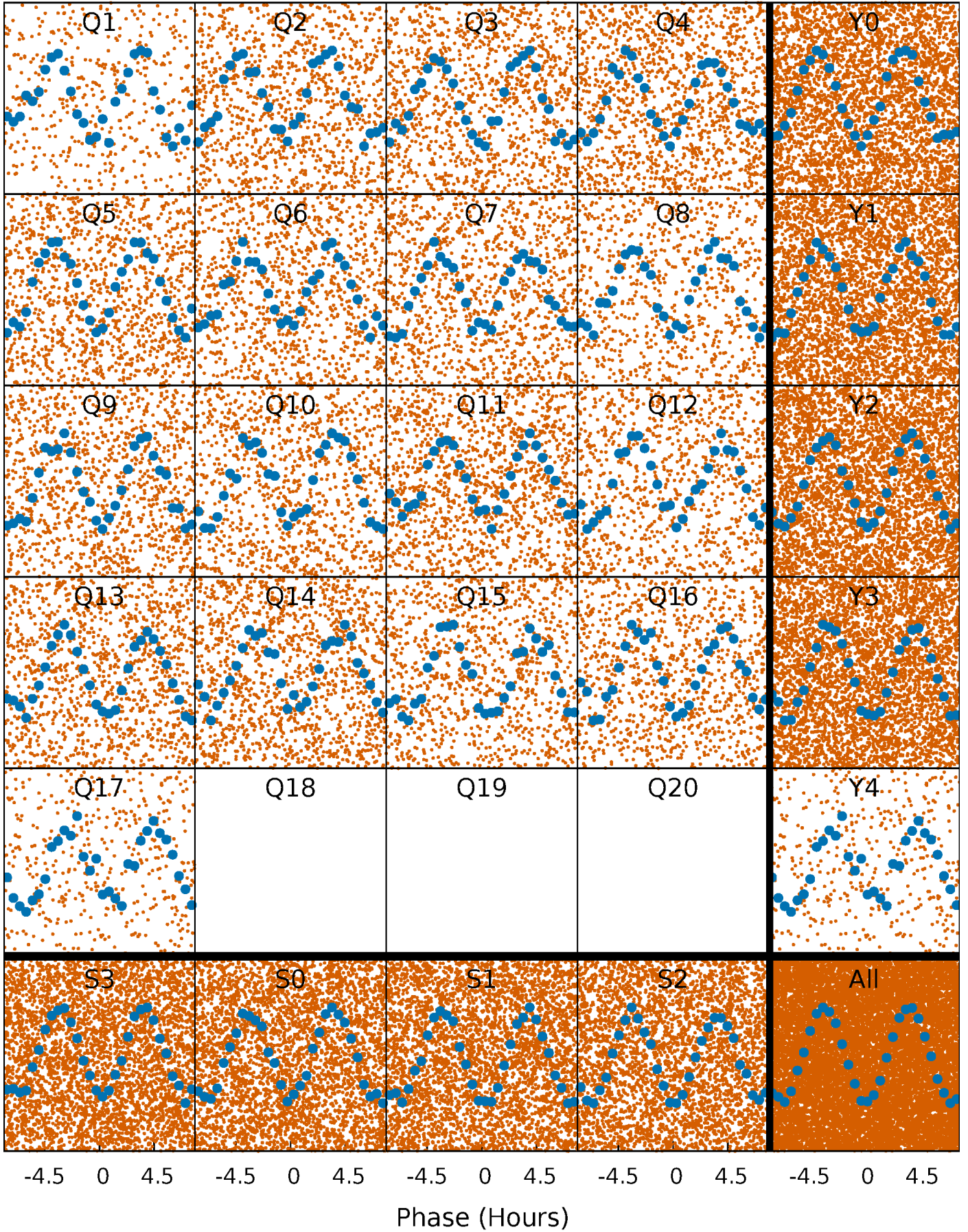


Non-Whitened Vs. Whitened Light Curve



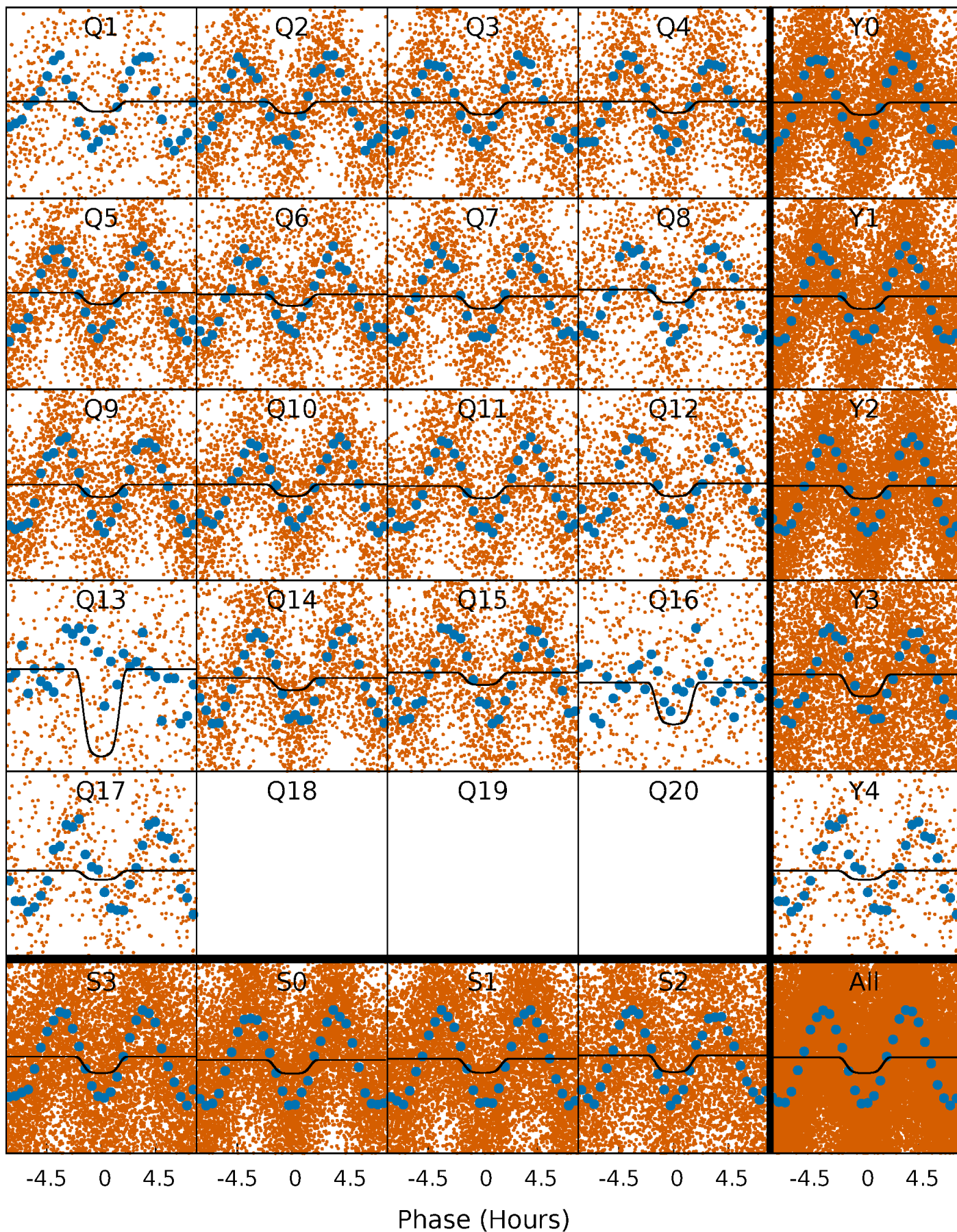
PDC Quarter-Phased Transit Curves

TCE 008197788-01 P= 1.175493 Days $T_0=132.655308$ (BKJD)



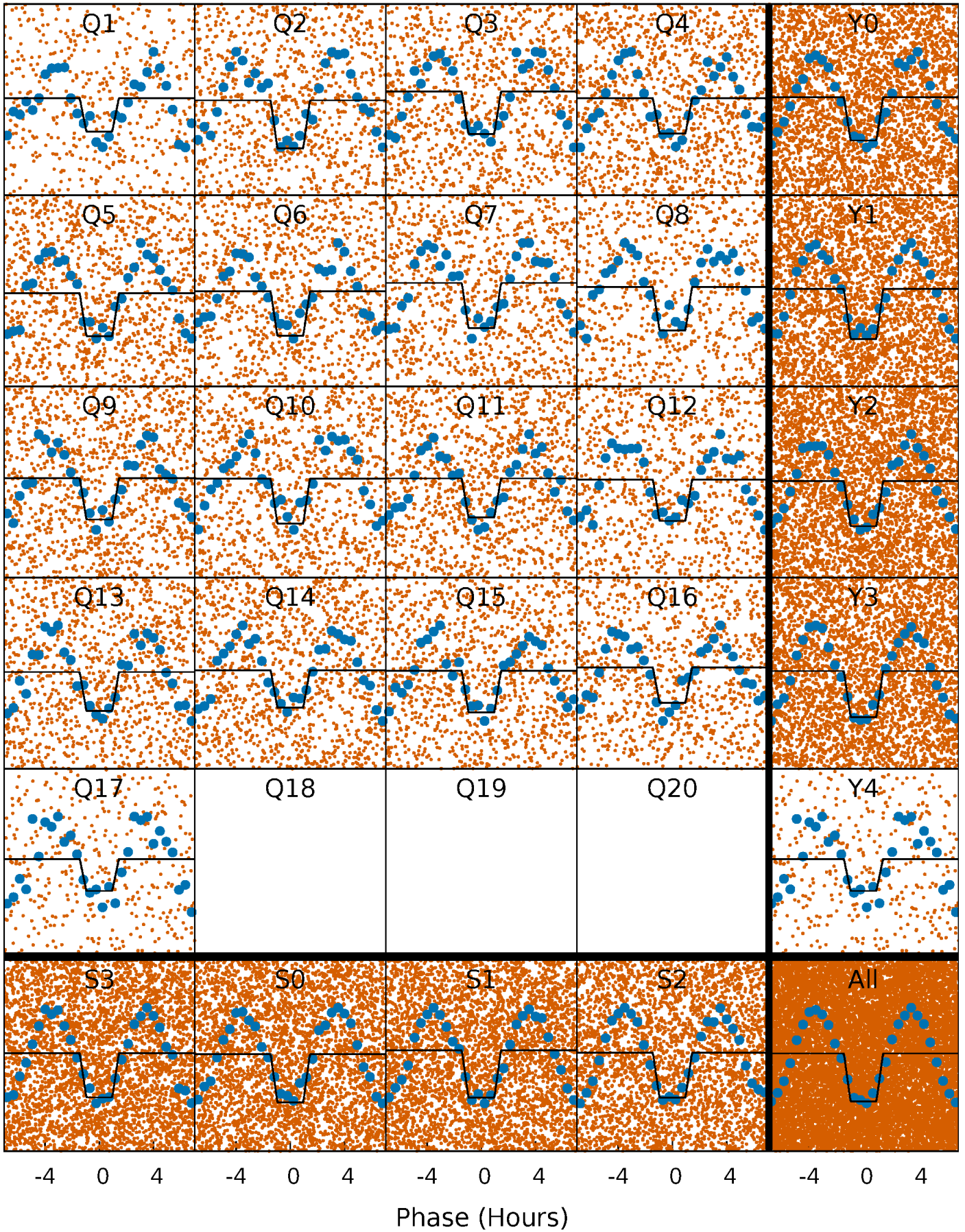
DV Quarter-Phased Transit Curves

TCE 008197788-01 P= 1.175493 Days $T_0=132.655308$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

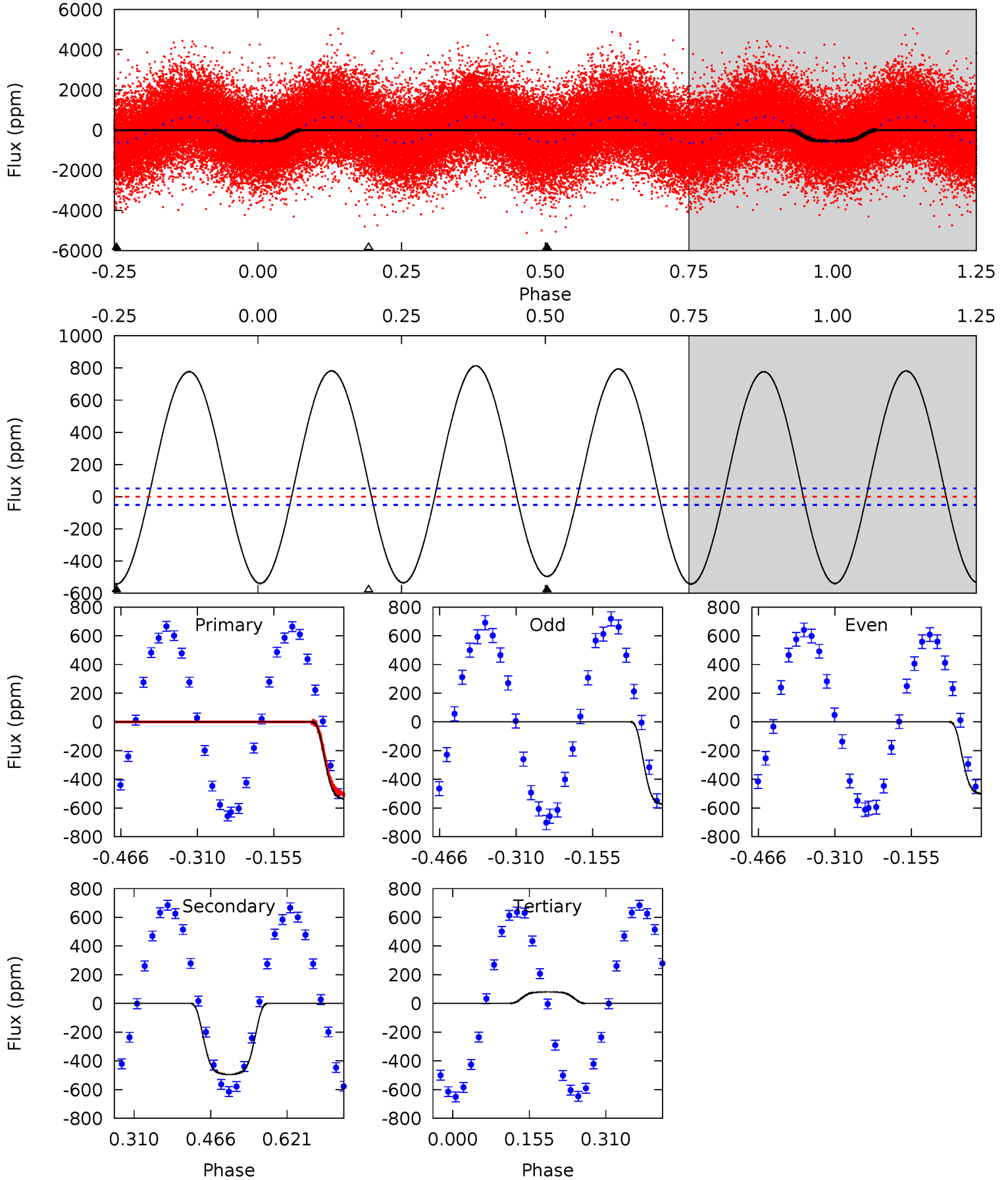
TCE 008197788-01 P= 1.175546 Days $T_0=132.630917$ (BKJD)



DV Model-Shift Uniqueness Test

008197788-01, P = 1.175493 Days, E = 131.479815 Days

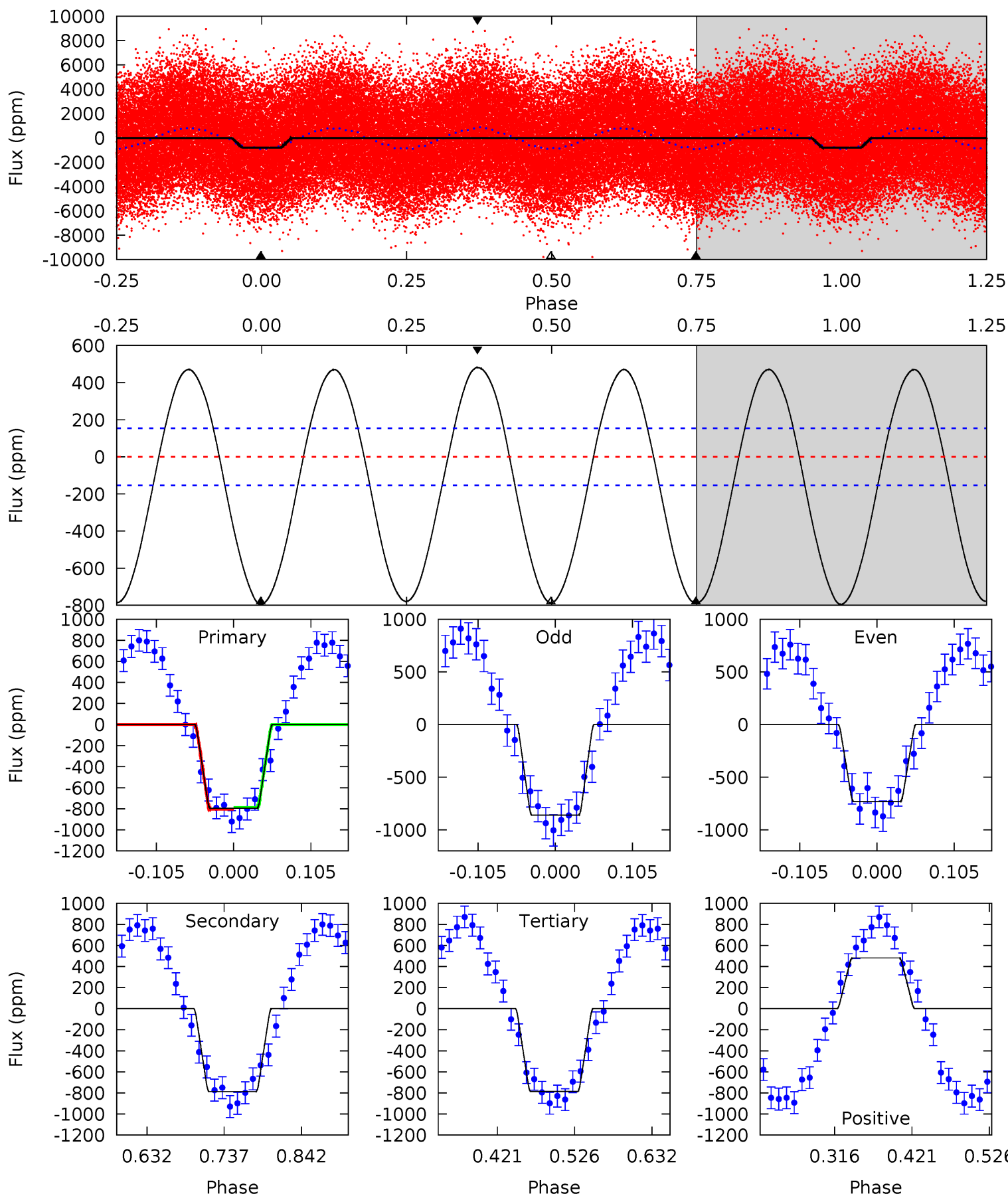
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.3	43.2	-7.02	0	4.47	1.42	38.2	54.3	47.3	50.2	43.2	3.18	1.03	0.60	3.19



Alt Model-Shift Uniqueness Test

008197788-01, P = 1.175546 Days, E = 131.455371 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.5	23.2	23.2	14.2	4.55	1.62	13.6	0.27	9.28	0.02	9.03	1.91	0.99	0.38	0.24



Stellar Parameters For KIC 008197788

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7509^{+119}_{-179}	$4.017^{+0.105}_{-0.105}$	$0.210^{+0.150}_{-0.150}$	$2.200^{+0.371}_{-0.304}$	$1.836^{+0.103}_{-0.167}$	$0.243^{+0.119}_{-0.080}$
	+2%/-2%	+3%/-3%	+71%/-71%	+17%/-14%	+6%/-9%	+49%/-33%
Source	SPE4	SPE4	SPE4	DSEP		

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

Secondary Eclipse Parameters for KIC 008197788-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-495 ± 11	$4.10^{+0.46}_{-0.44}$	4193^{+189}_{-172}	8780^{+459}_{-437}	12^{+3}_{-2}
Alt.	-787 ± 34	$6.94^{+0.69}_{-0.54}$	4181^{+191}_{-171}	7202^{+239}_{-215}	$6.321^{+1.097}_{-1.043}$

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

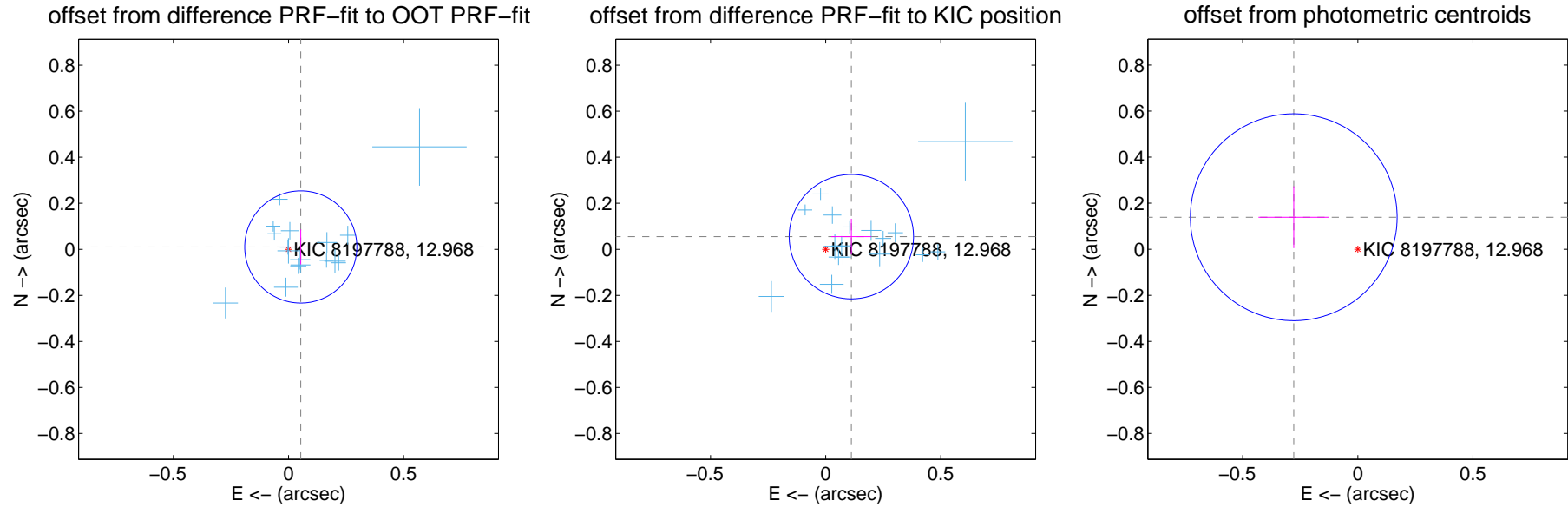
DV Centroid Data

Supplemental centroid analysis for 008197788-01. Kepler magnitude: 12.97. Transit SNR 9.97

There are 17 quarters with good PRF difference image offsets

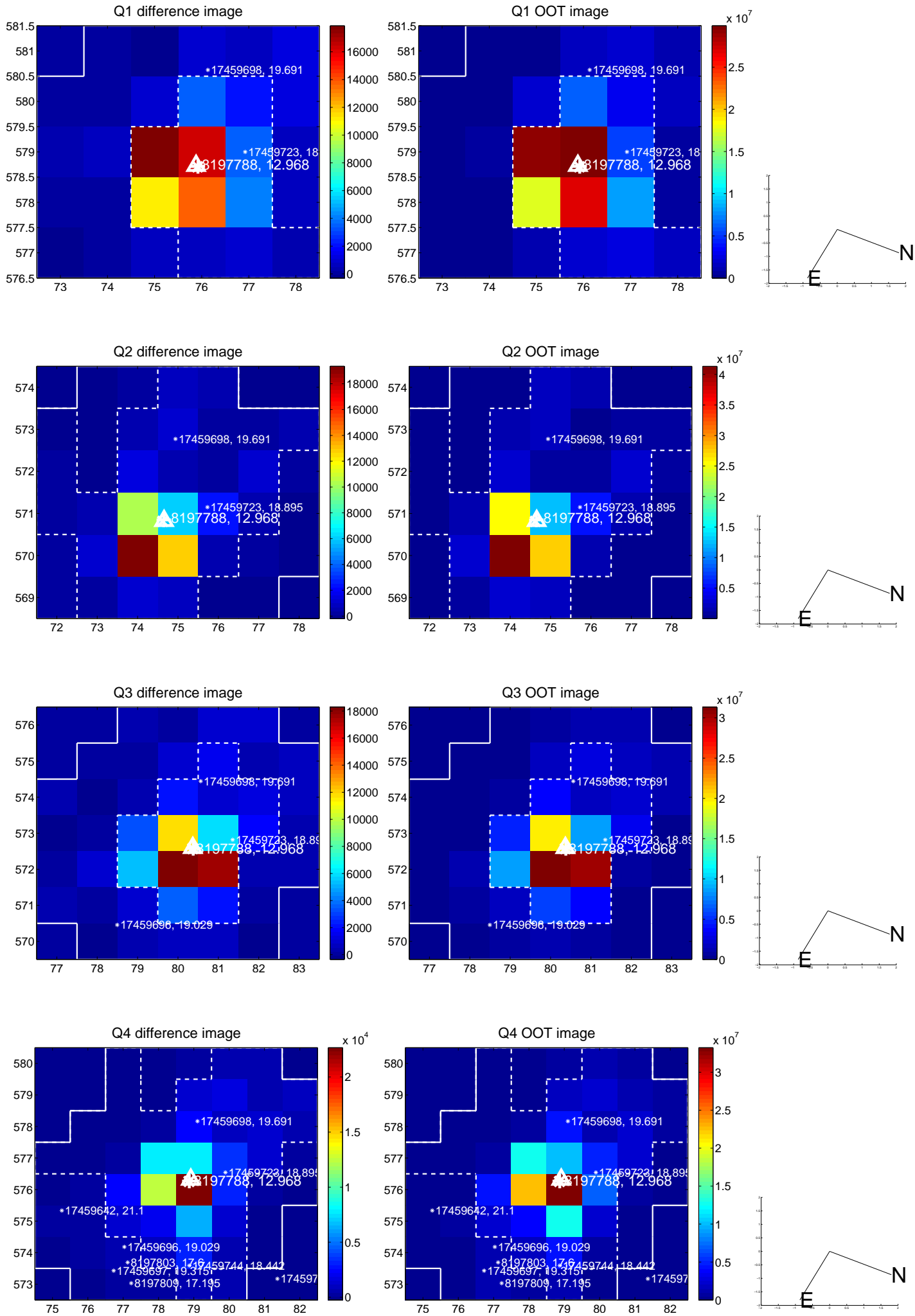
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.054 ± 0.081	0.67	-0.053 ± 0.079	0.010 ± 0.076
PRF-fit source offset from KIC position	0.124 ± 0.090	1.38	-0.112 ± 0.087	0.055 ± 0.078
photometric centroid source offset	0.31 ± 0.15	2.08	0.28 ± 0.15	0.14 ± 0.13

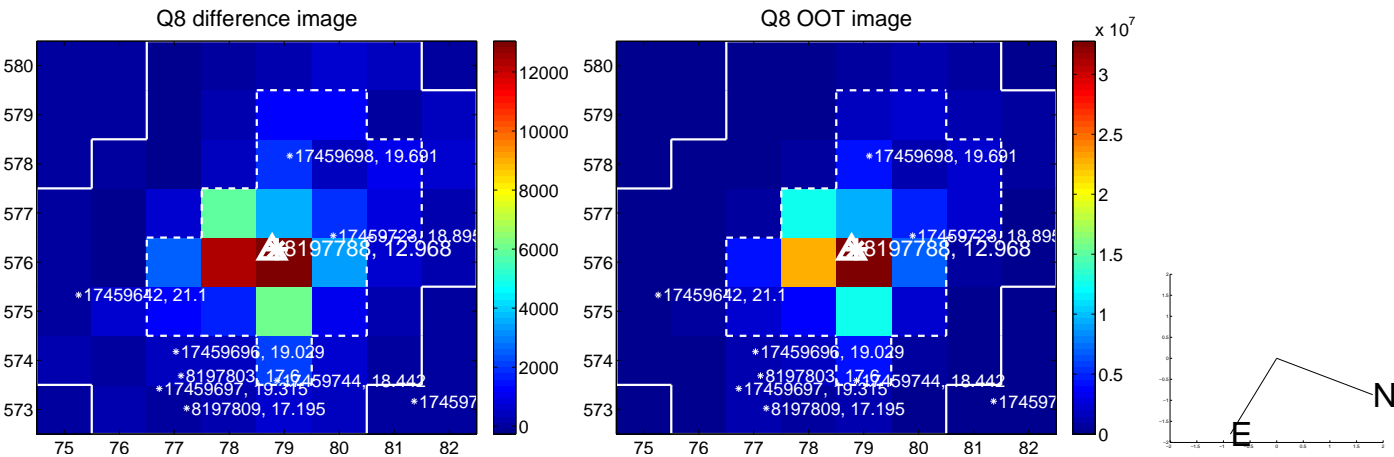
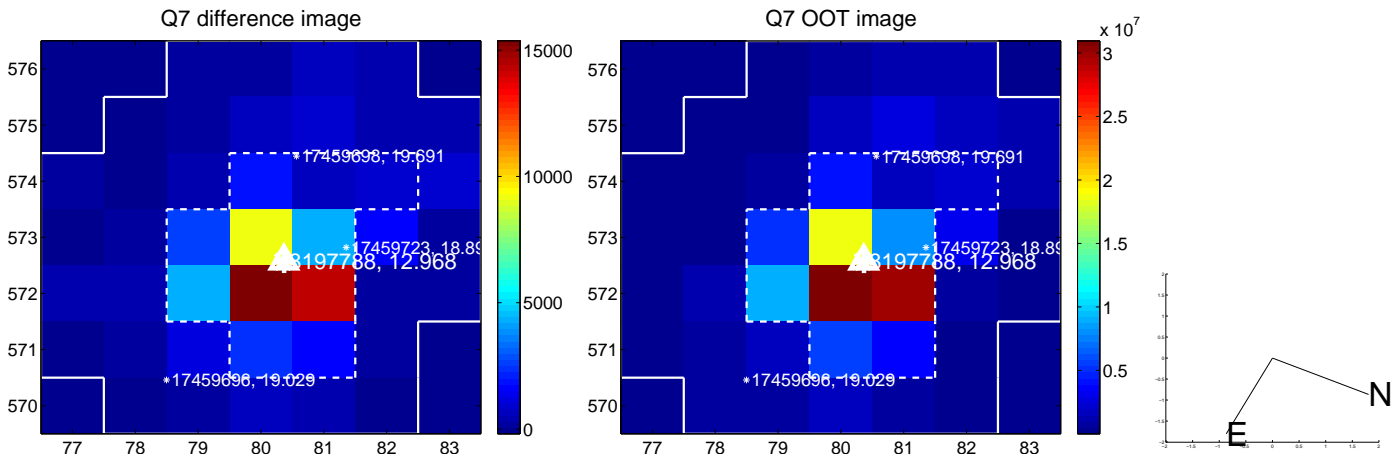
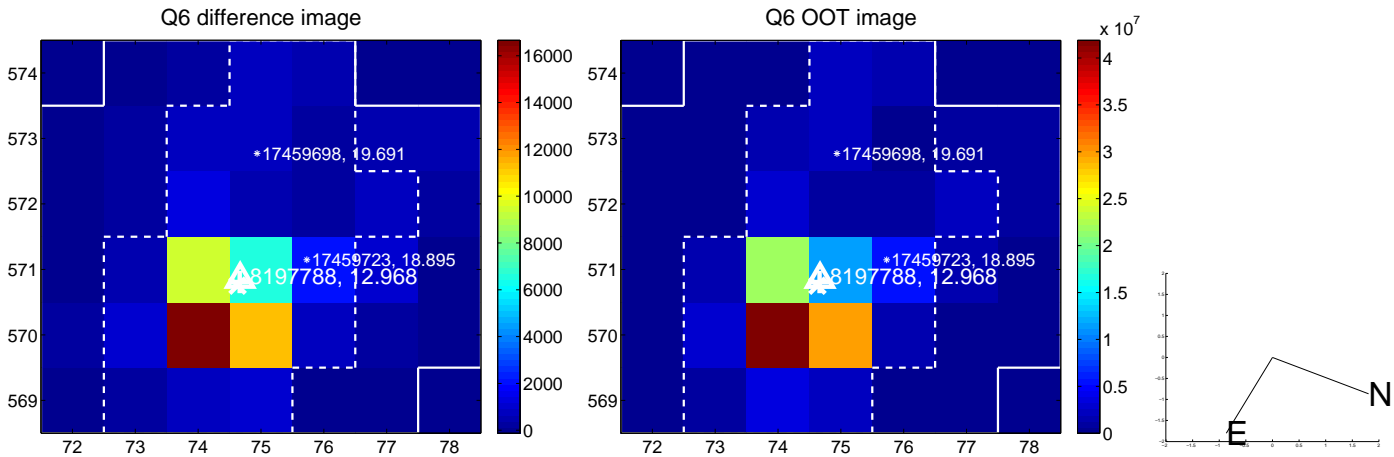
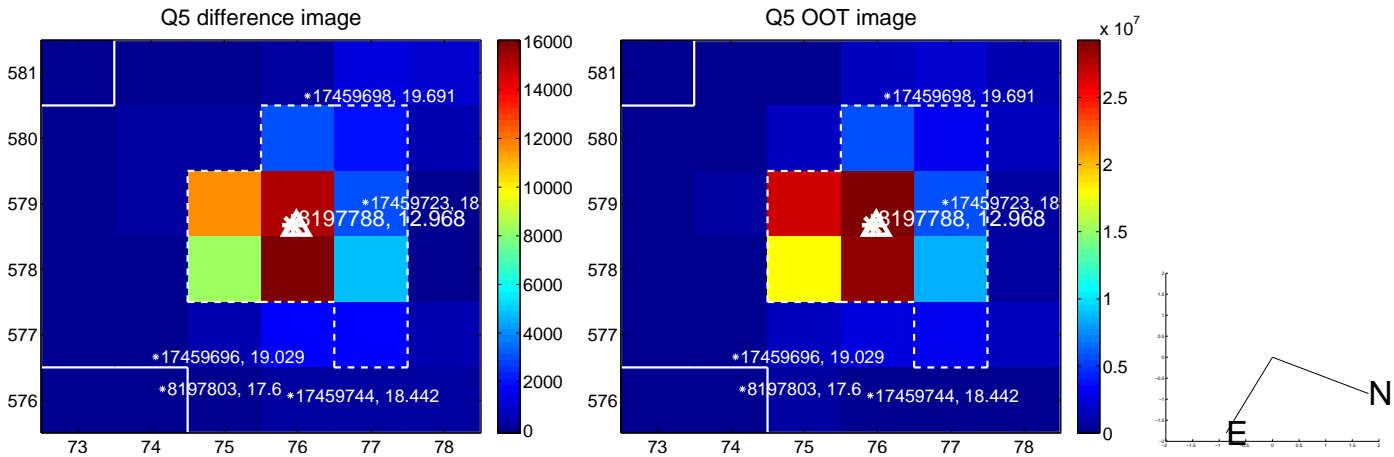


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

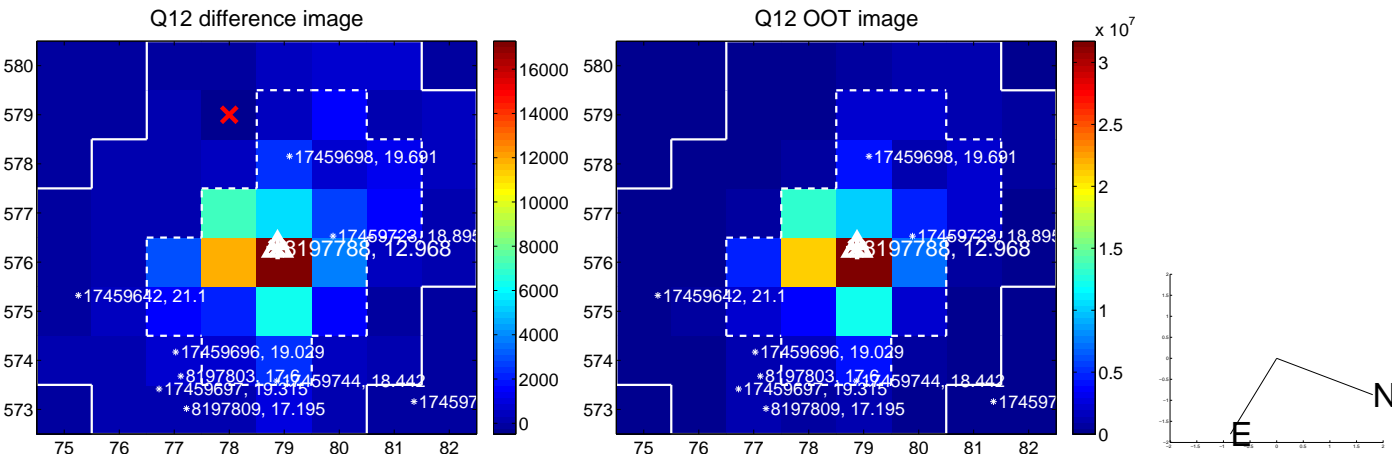
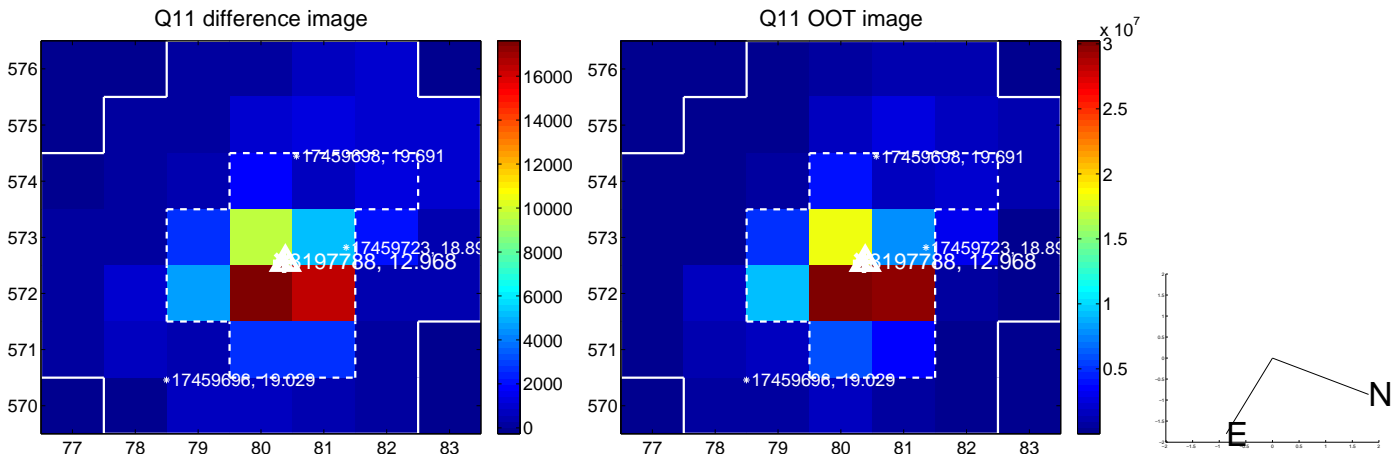
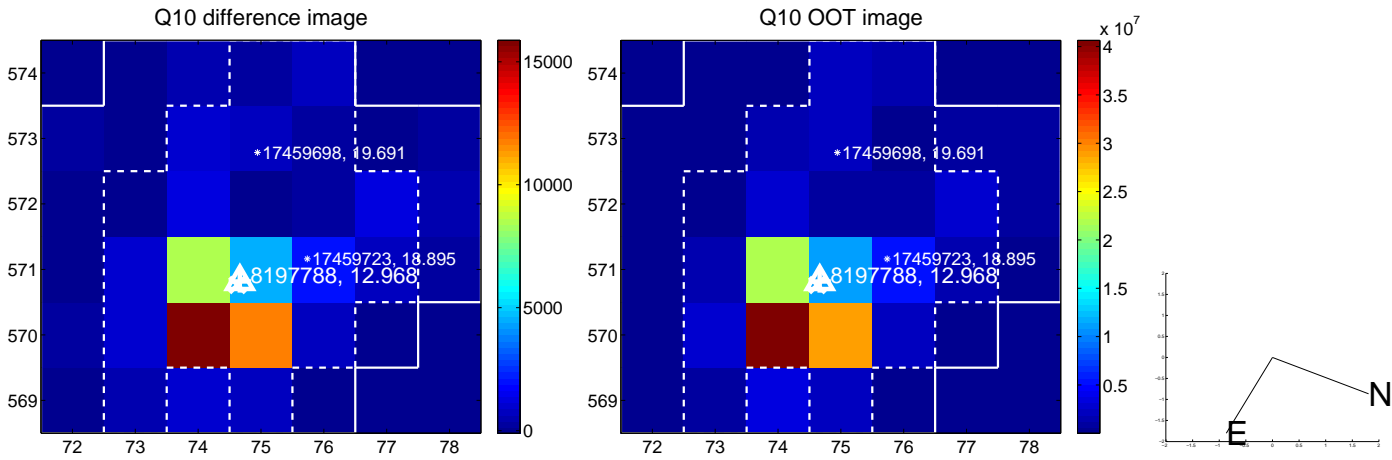
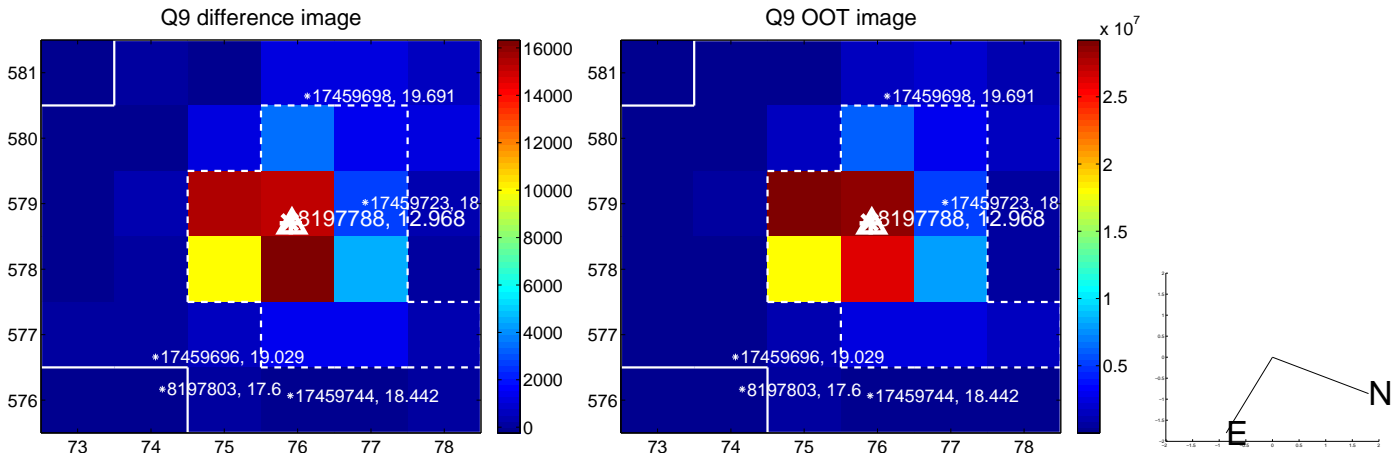
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



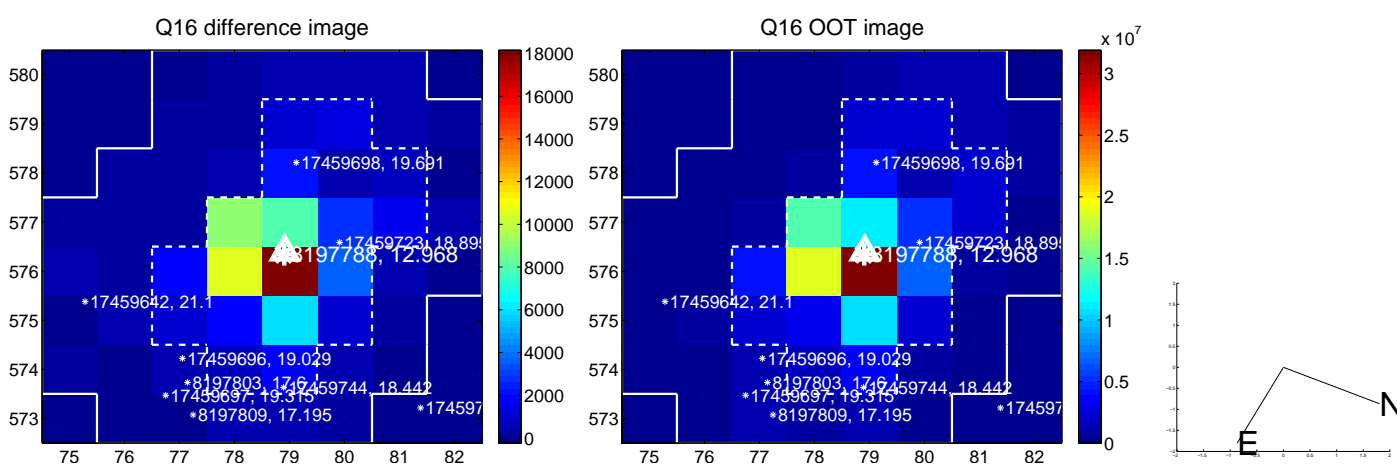
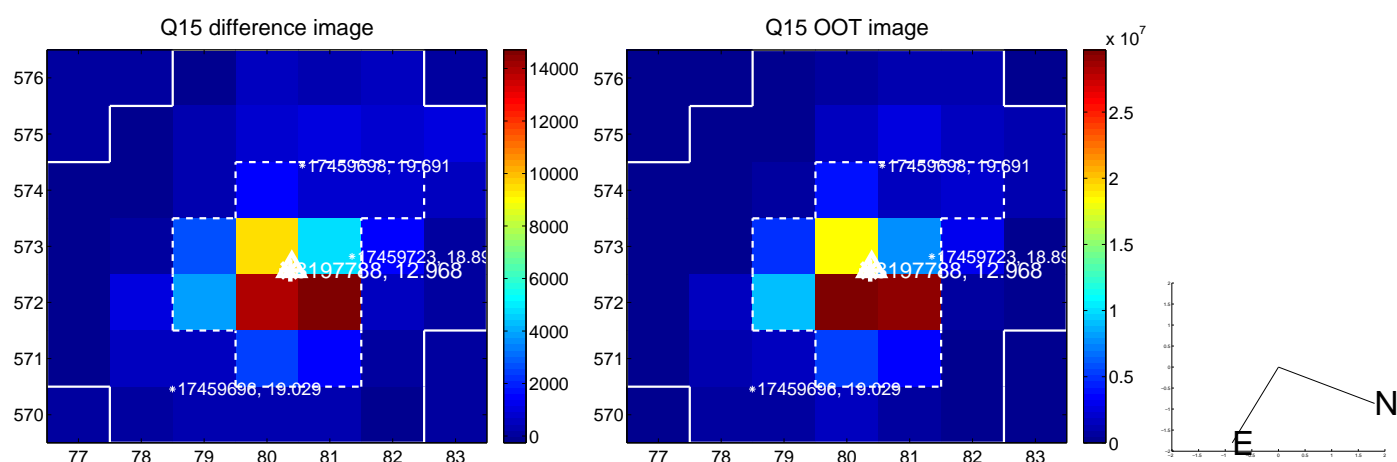
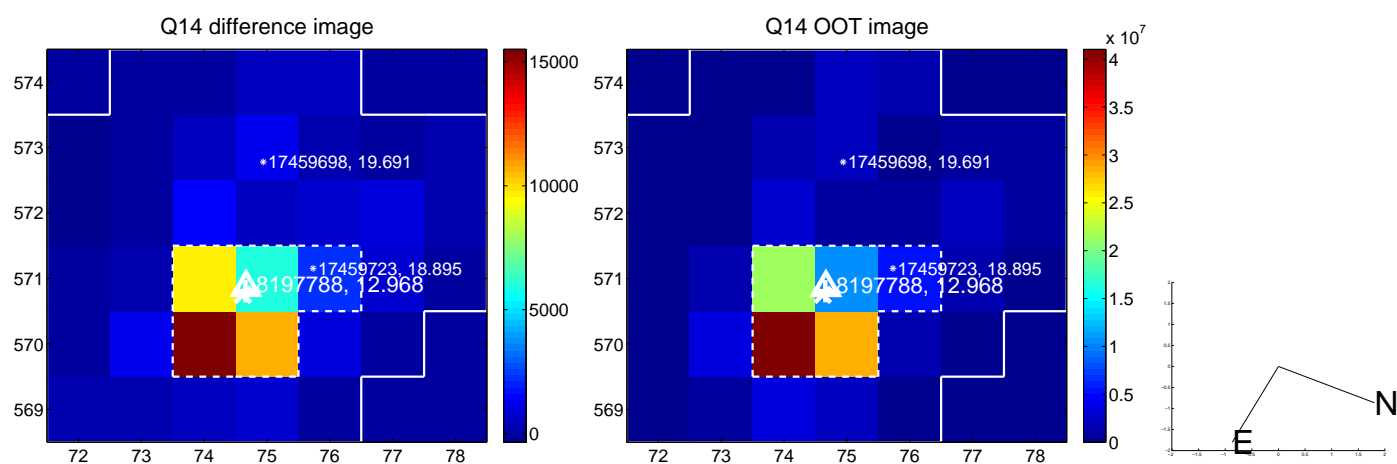
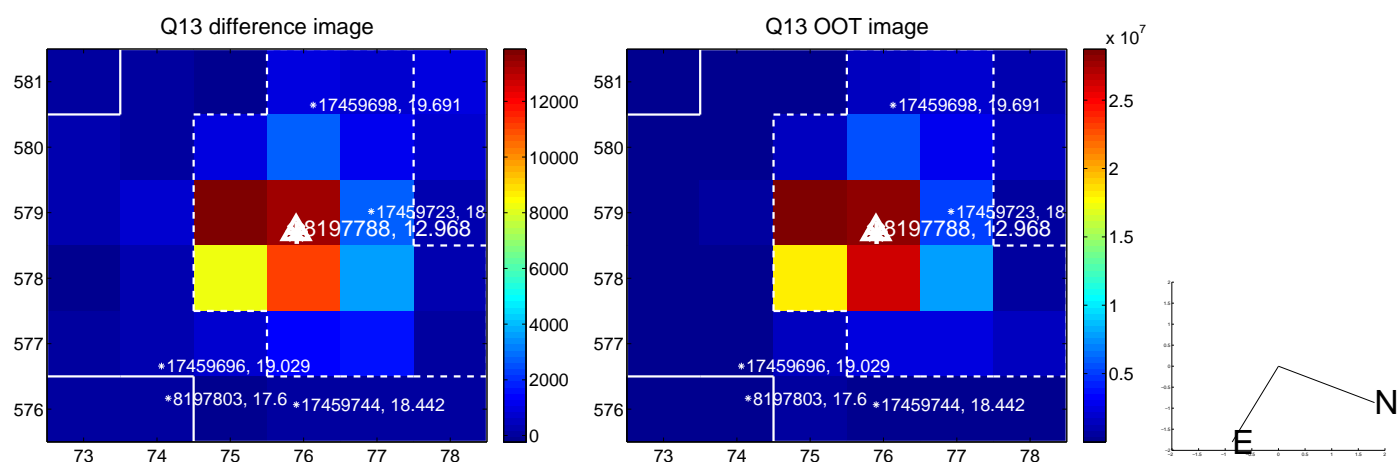
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



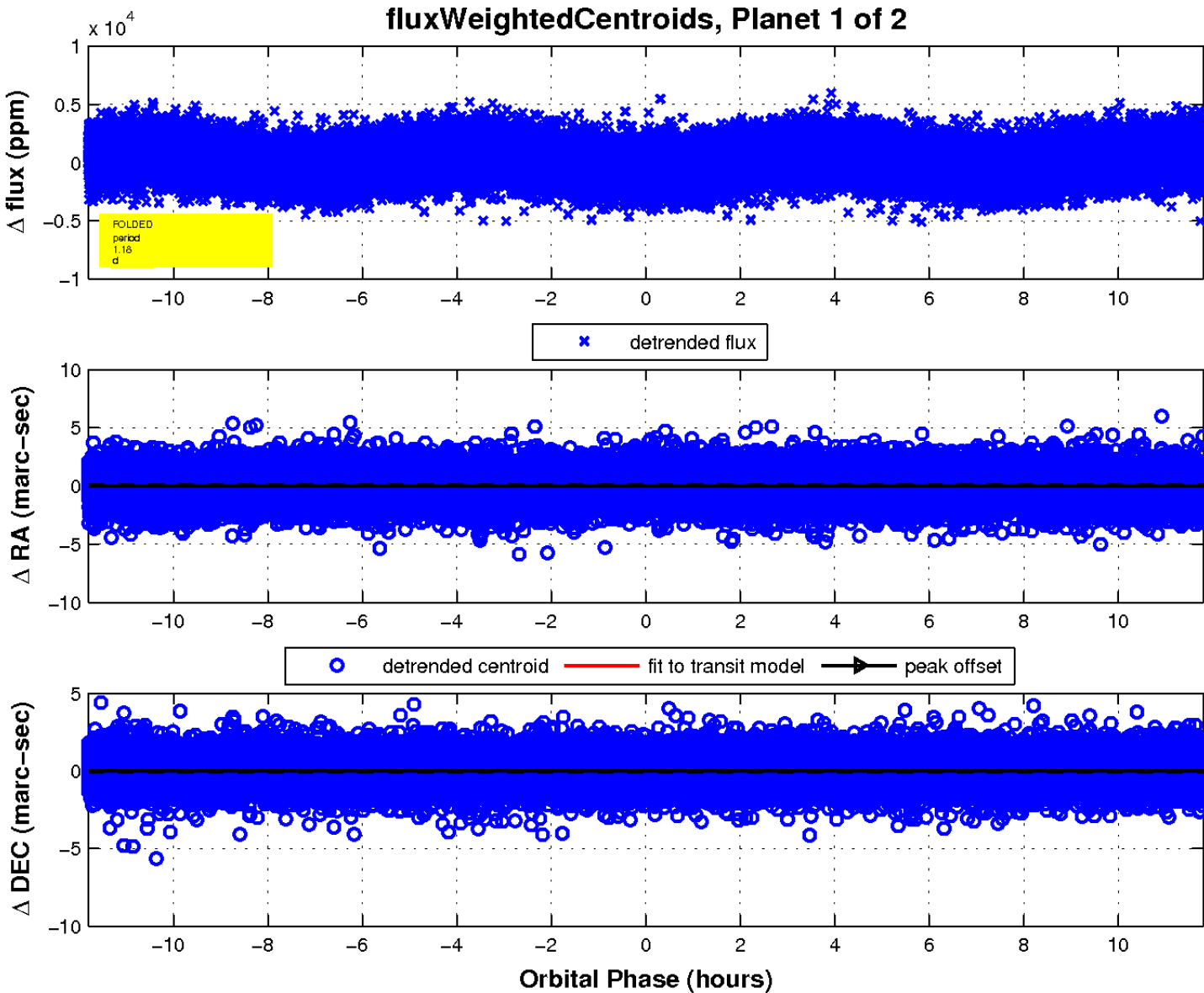
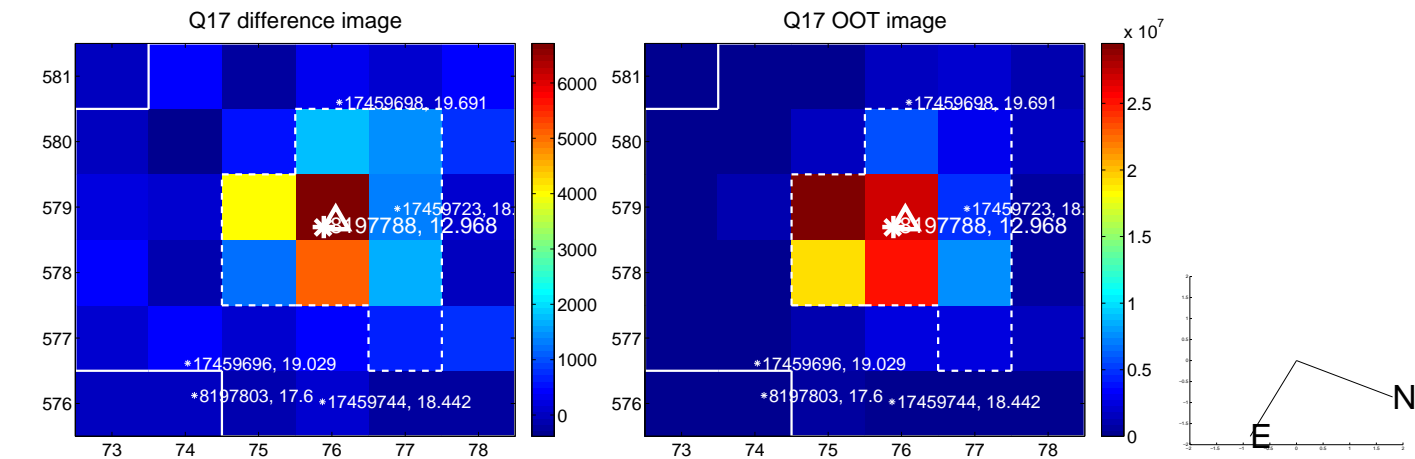
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

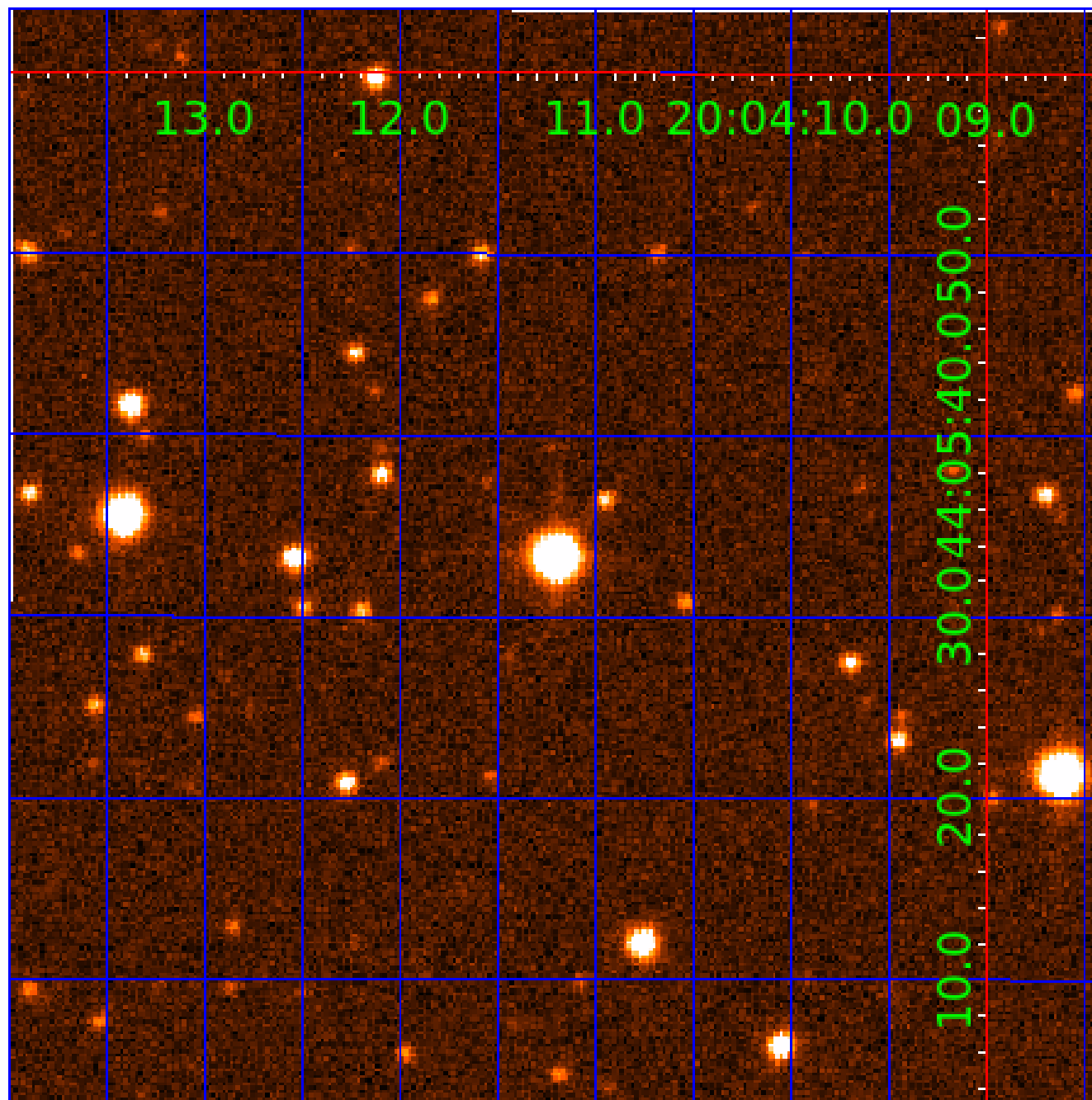


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008197788

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})
008197788-01	OBS	No	1.175493	132.655308	216.6	3.937	10.6	10.0	2.20	7509	4.08	19343.91
008197788-02	OBS	No	1.175580	132.344032	400.0	3.502	11.3	15.0	2.20	7509	5.09	19342.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008197788-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
008197788-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD

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

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

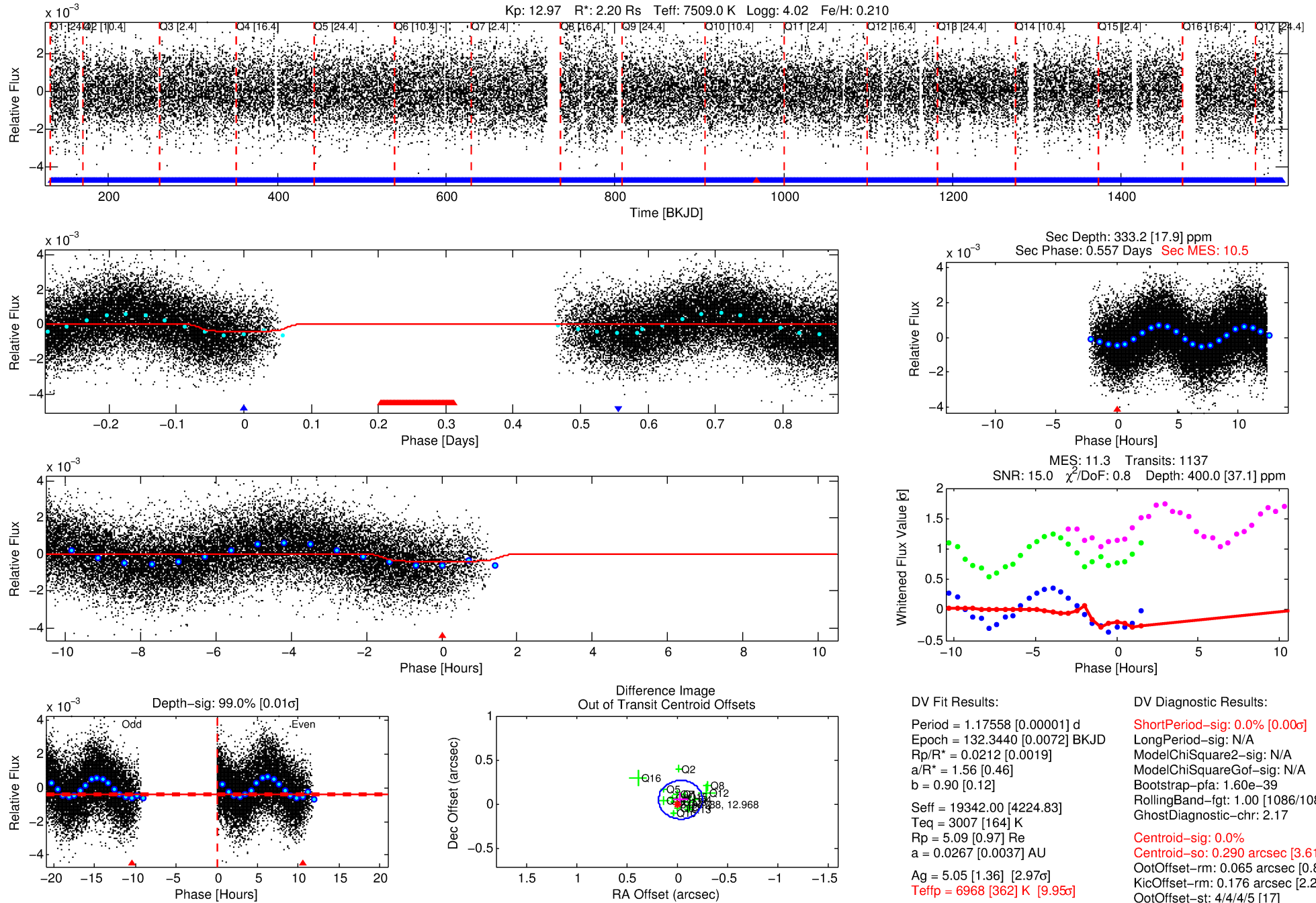
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008197788-02

No Significant Match Found

DV One-Page Summary

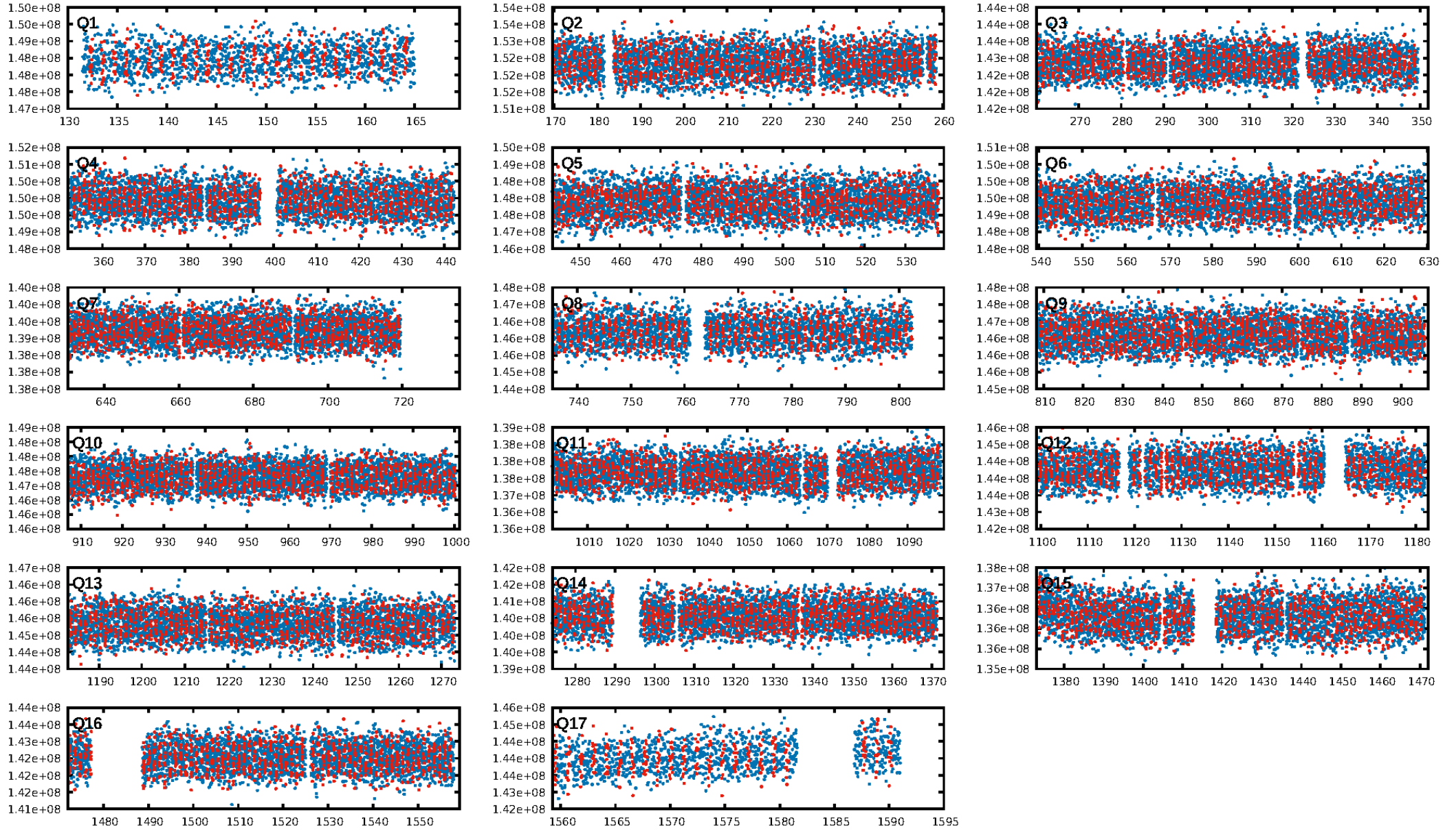
KIC: 8197788 Candidate: 2 of 2 Period: 1.176 d



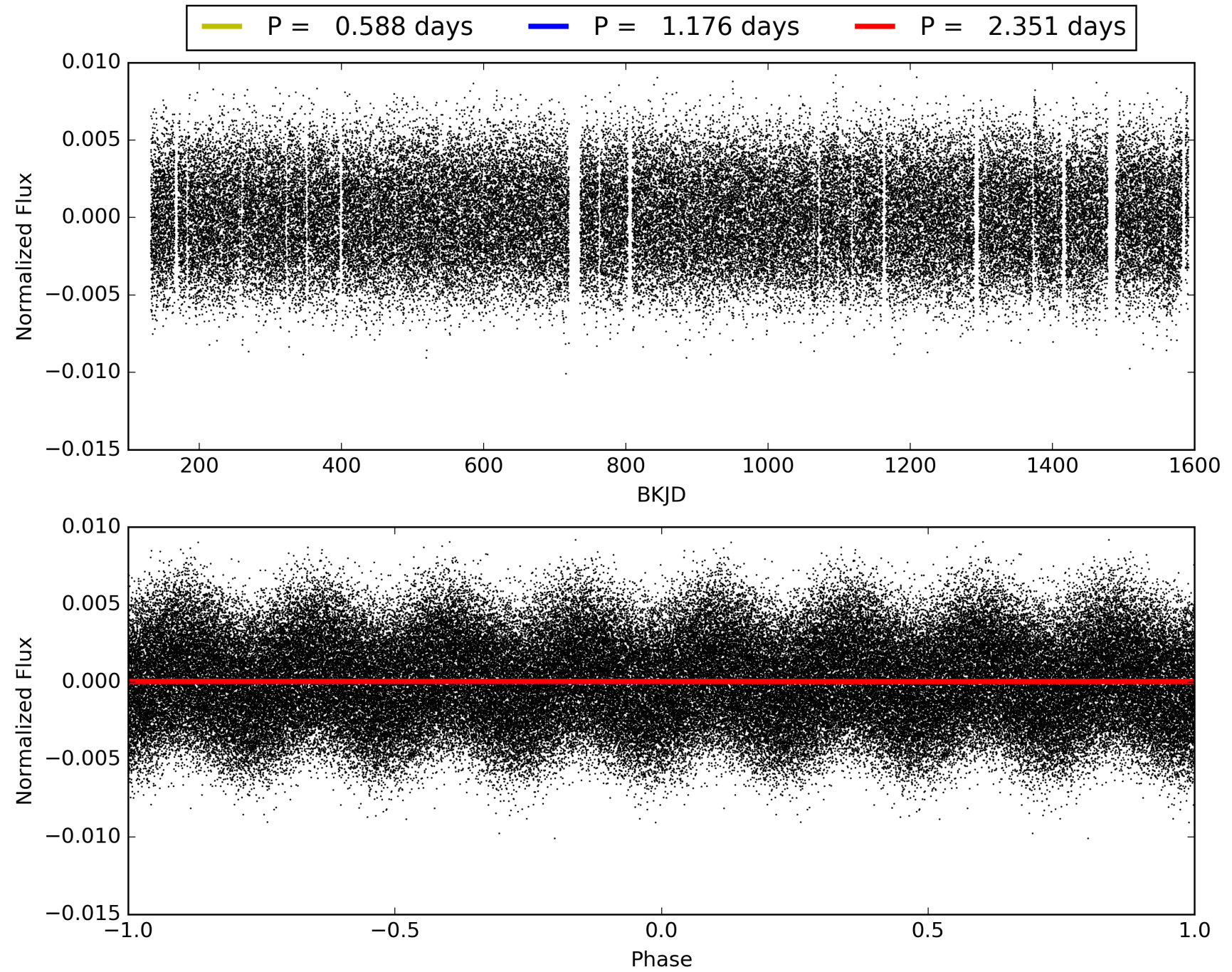
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:15:27 Z

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

TCE 008197788-02, PDC Light Curves

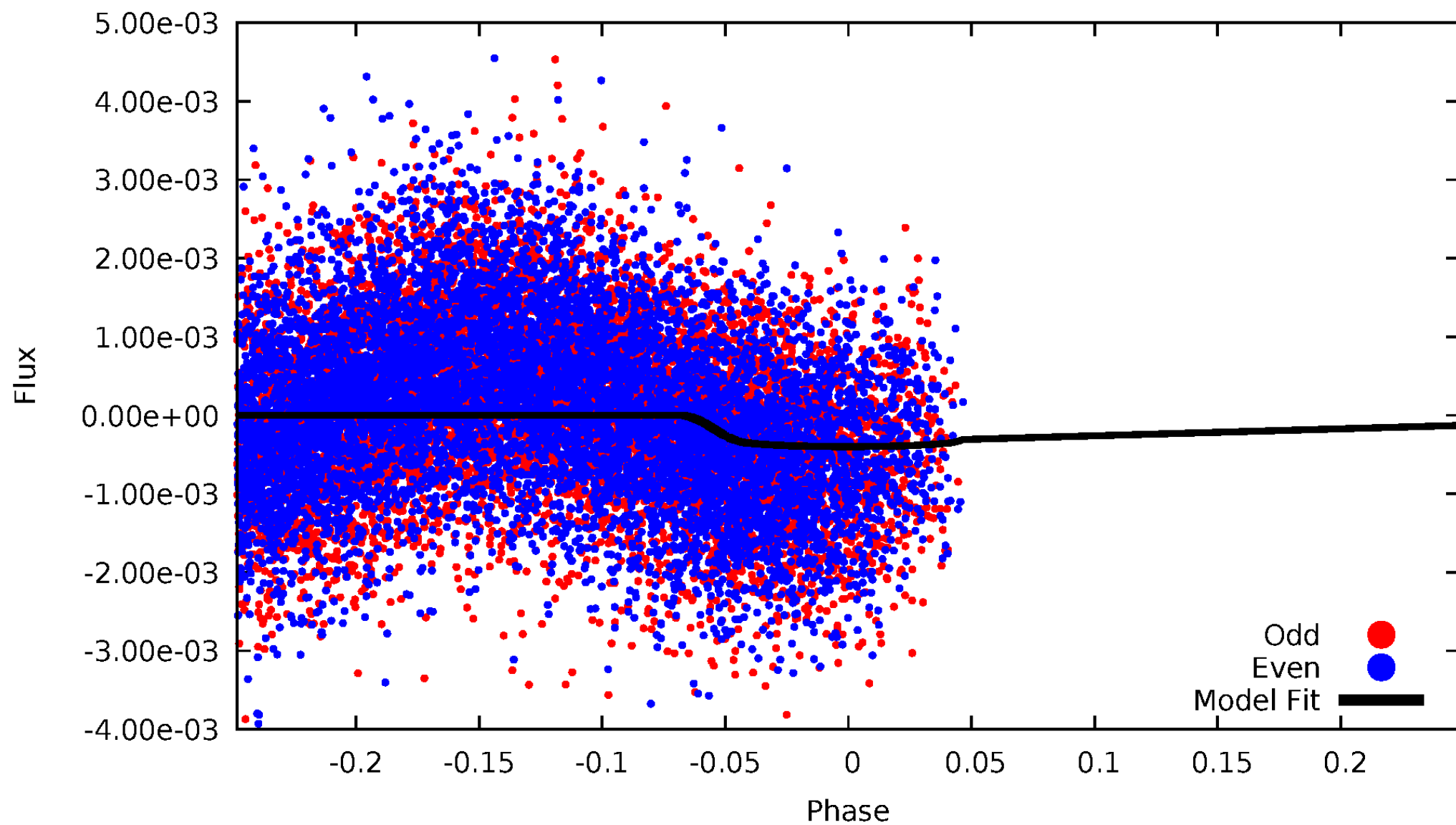


TCE 008197788-02



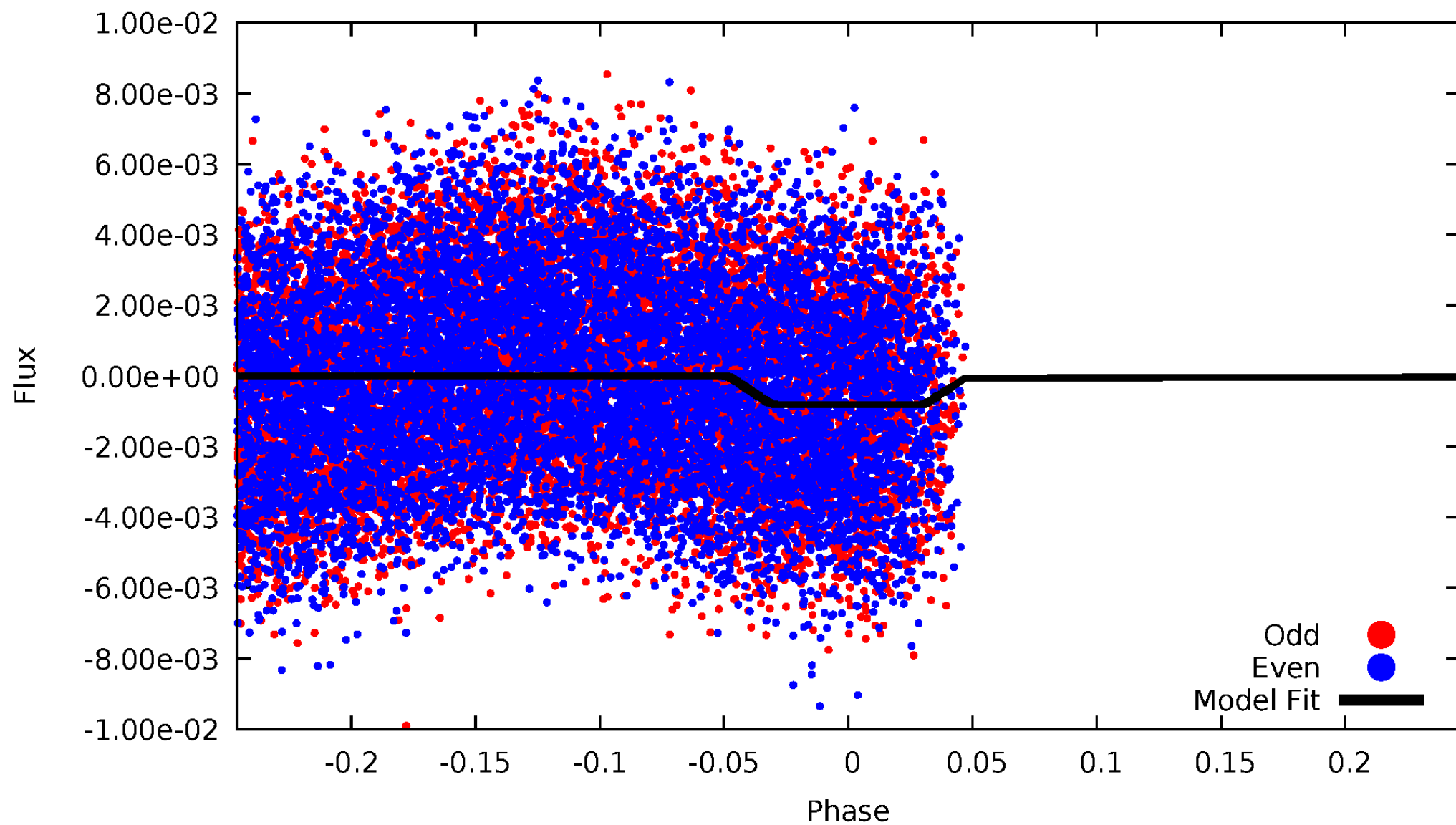
DV Odd/Even

TCE 008197788-02



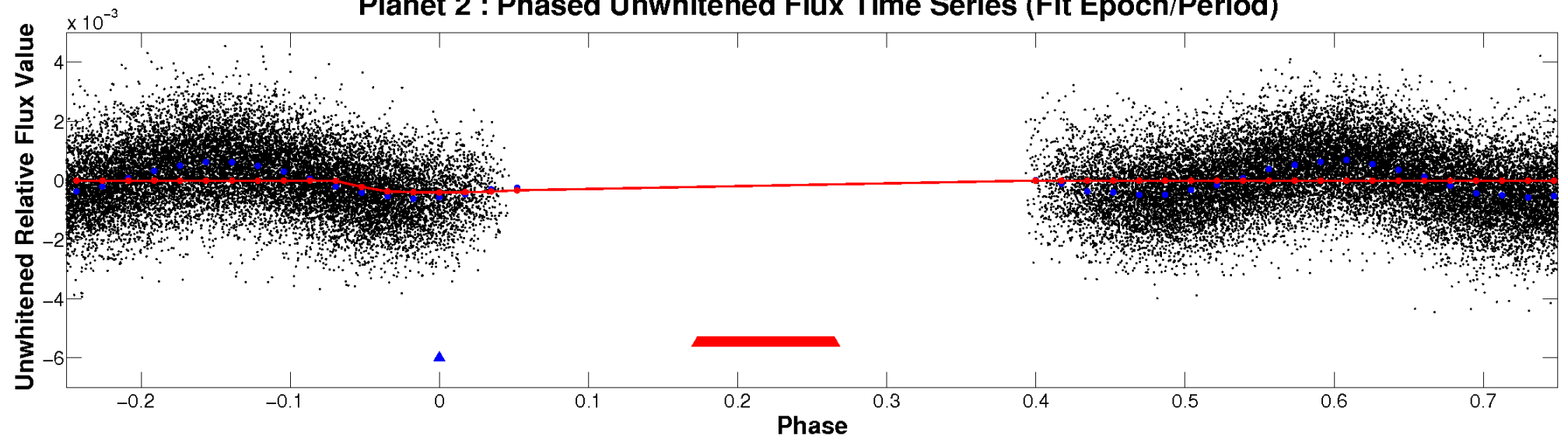
ALT Odd/Even

TCE 008197788-02

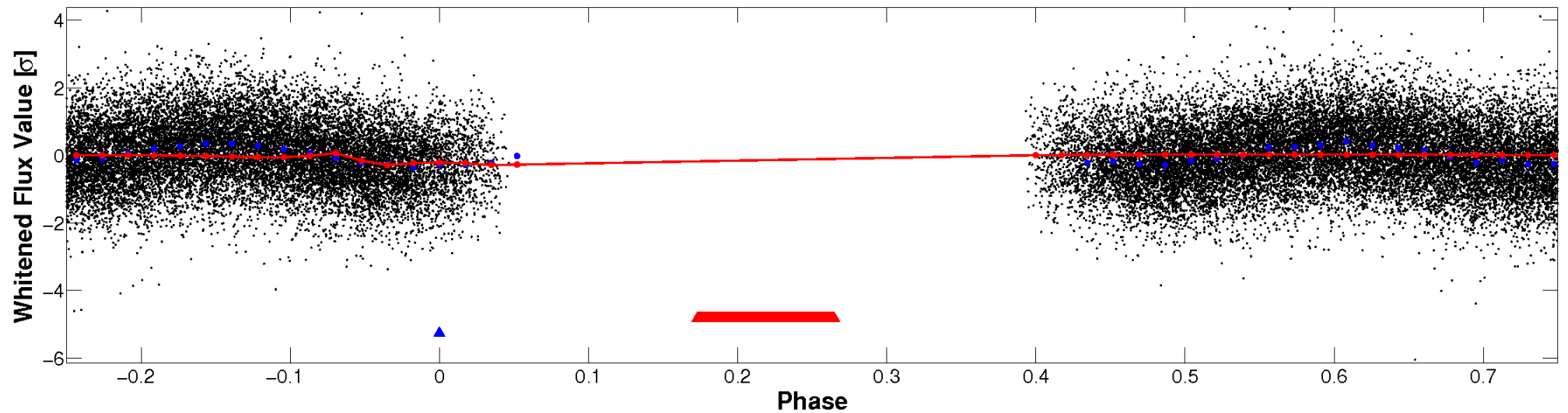


Non-Whitened Vs. Whitened Light Curve

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

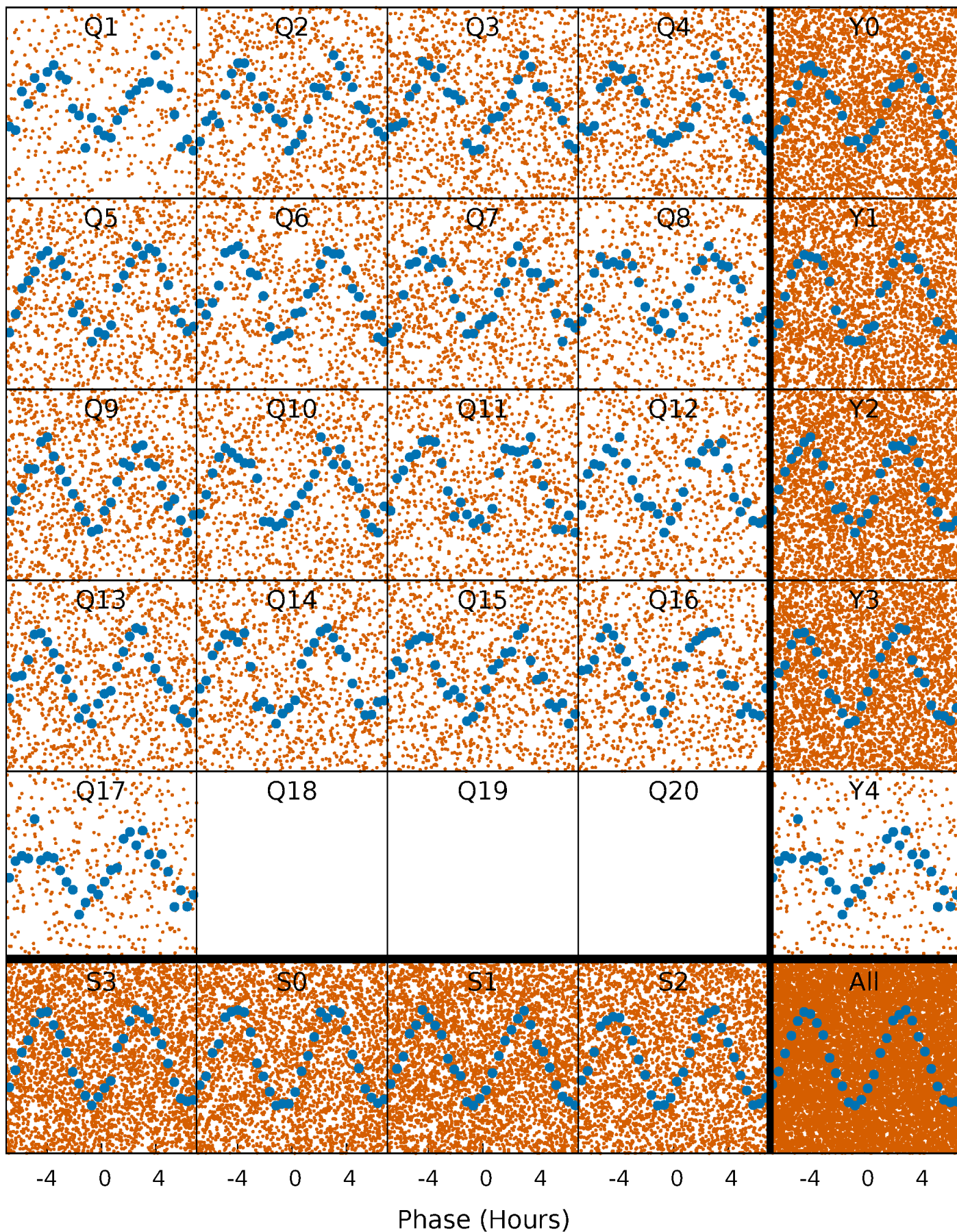


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



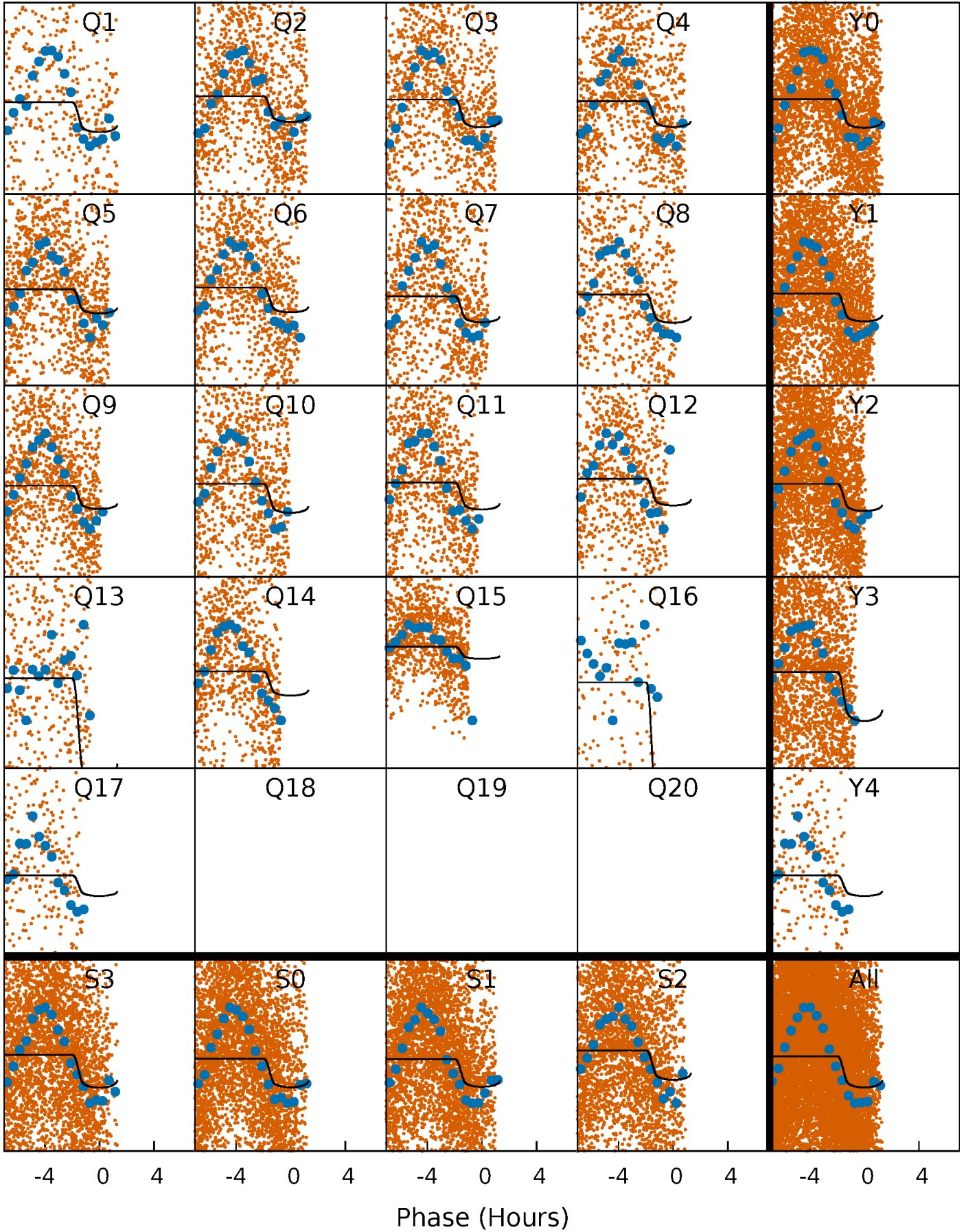
PDC Quarter-Phased Transit Curves

TCE 008197788-02 P= 1.175580 Days $T_0=132.344032$ (BKJD)



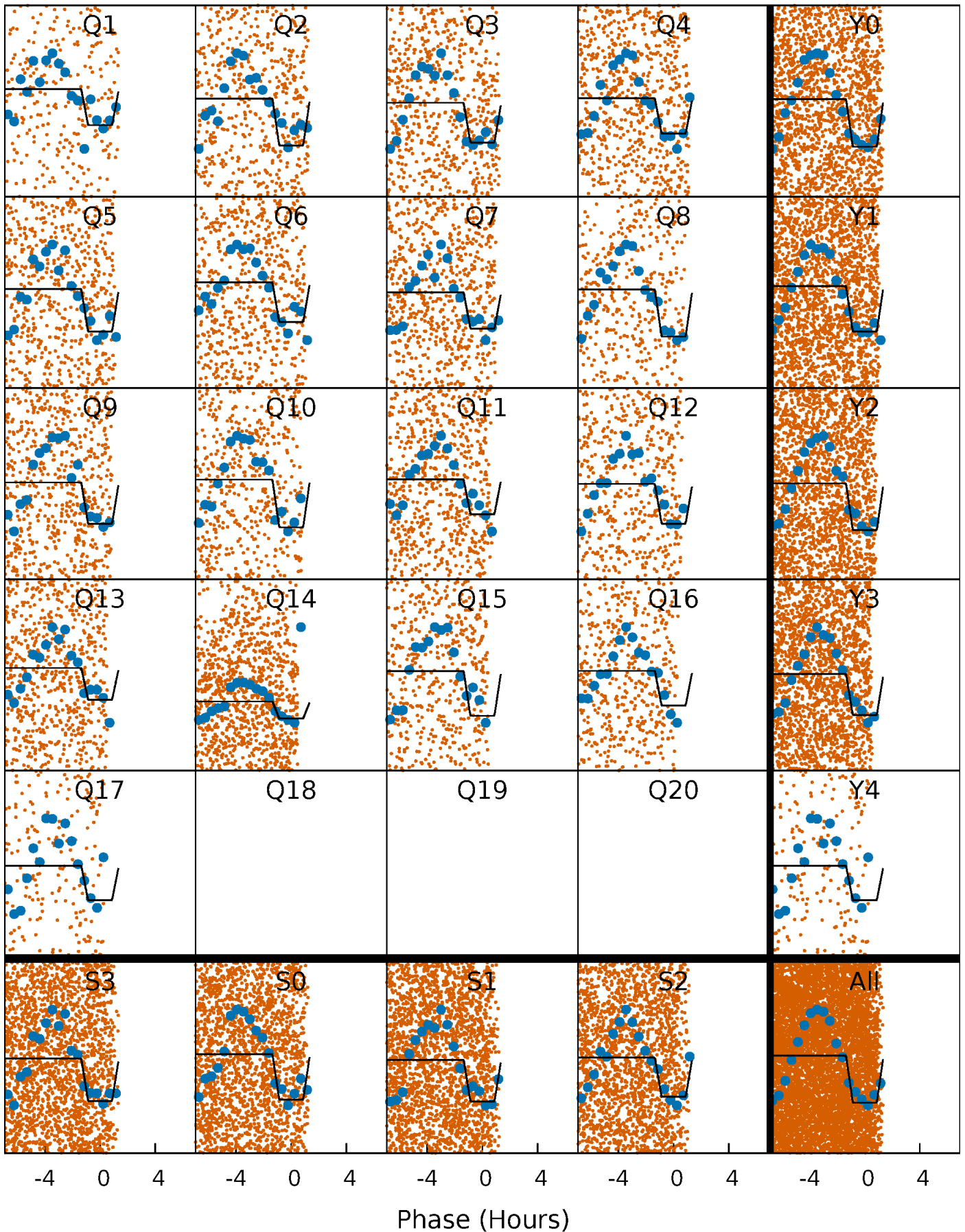
DV Quarter-Phased Transit Curves

TCE 008197788-02 P= 1.175580 Days $T_0=132.344032$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

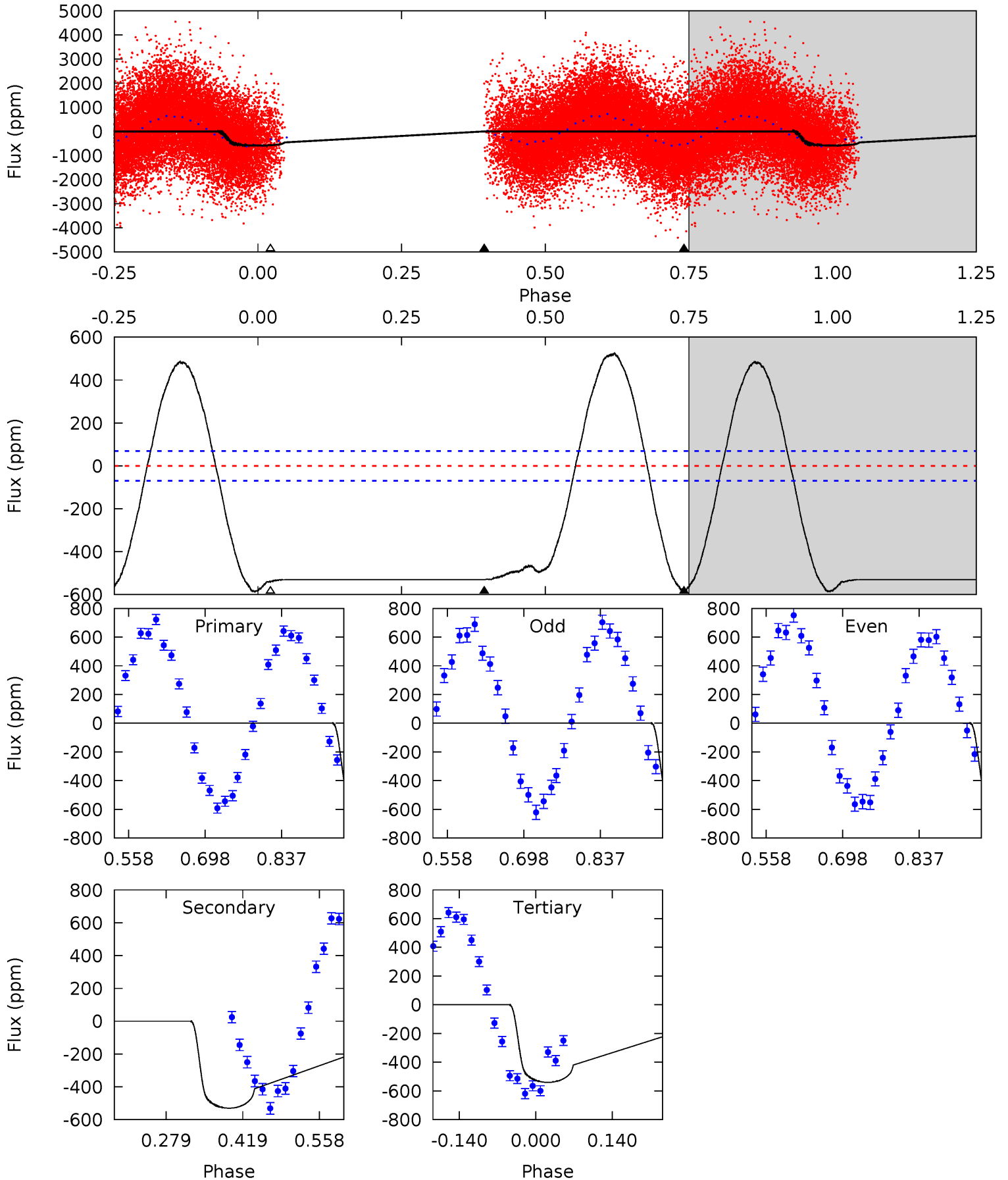
TCE 008197788-02 P= 1.175529 Days $T_0=132.343572$ (BKJD)



DV Model-Shift Uniqueness Test

008197788-02, P = 1.175580 Days, E = 131.168452 Days

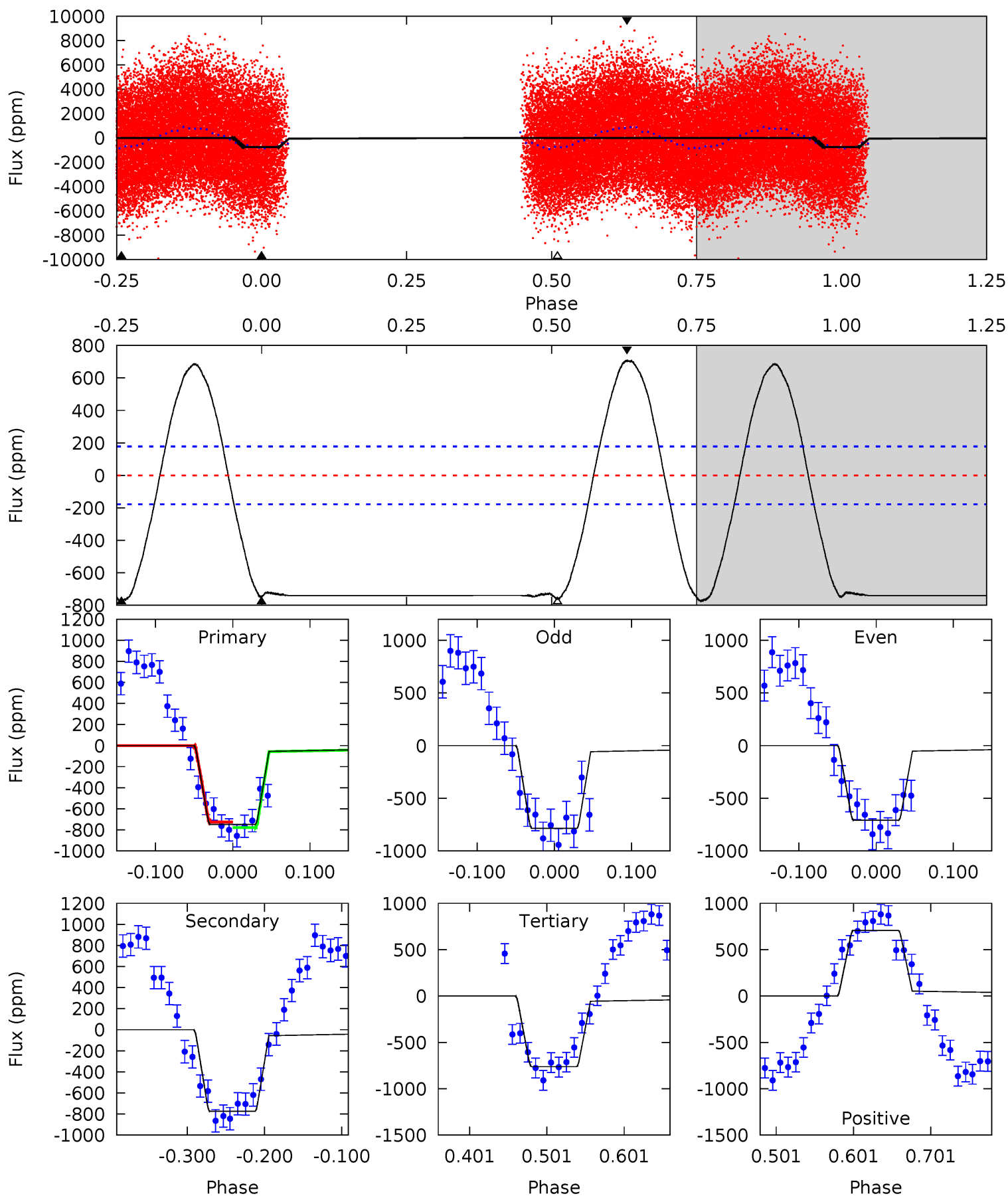
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.0	34.4	35.0	0	4.49	1.48	22.4	2.97	38.0	-0.65	34.4	0.29	1.00	0.47	3.15



Alt Model-Shift Uniqueness Test

008197788-02, P = 1.175529 Days, E = 131.168043 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	19.9	19.6	18.2	4.56	1.64	14.5	-0.37	1.03	0.33	1.73	0.99	1.04	0.48	0.66



Stellar Parameters For KIC 008197788

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7509^{+119}_{-179}	$4.017^{+0.105}_{-0.105}$	$0.210^{+0.150}_{-0.150}$	$2.200^{+0.371}_{-0.304}$	$1.836^{+0.103}_{-0.167}$	$0.243^{+0.119}_{-0.080}$
	+2%/-2%	+3%/-3%	+71%/-71%	+17%/-14%	+6%/-9%	+49%/-33%
Source	SPE4	SPE4	SPE4	DSEP		

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

Secondary Eclipse Parameters for KIC 008197788-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-530 ± 15	$5.11^{+0.65}_{-0.60}$	4202^{+189}_{-185}	7757^{+492}_{-381}	$7.879^{+2.241}_{-1.619}$
Alt.	-775 ± 39	$6.78^{+0.81}_{-0.65}$	4188^{+189}_{-184}	7289^{+365}_{-330}	$6.497^{+1.604}_{-1.146}$

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

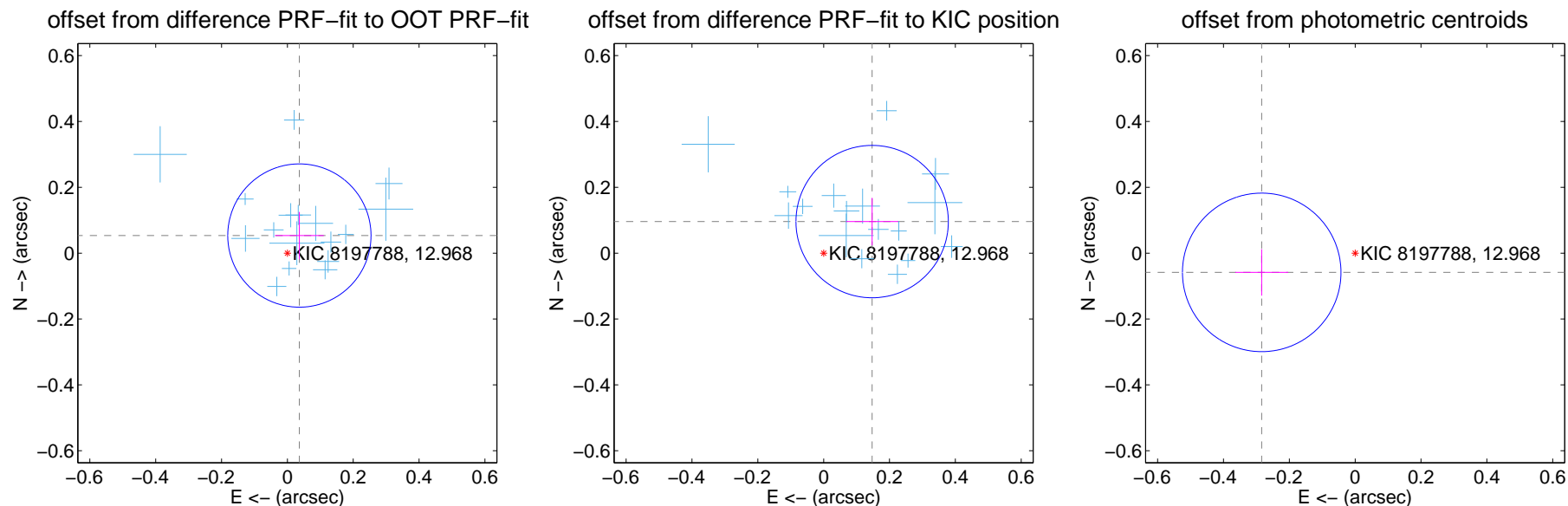
DV Centroid Data

Supplemental centroid analysis for 008197788-02. Kepler magnitude: 12.97. Transit SNR 15.00

There are 17 quarters with good PRF difference image offsets

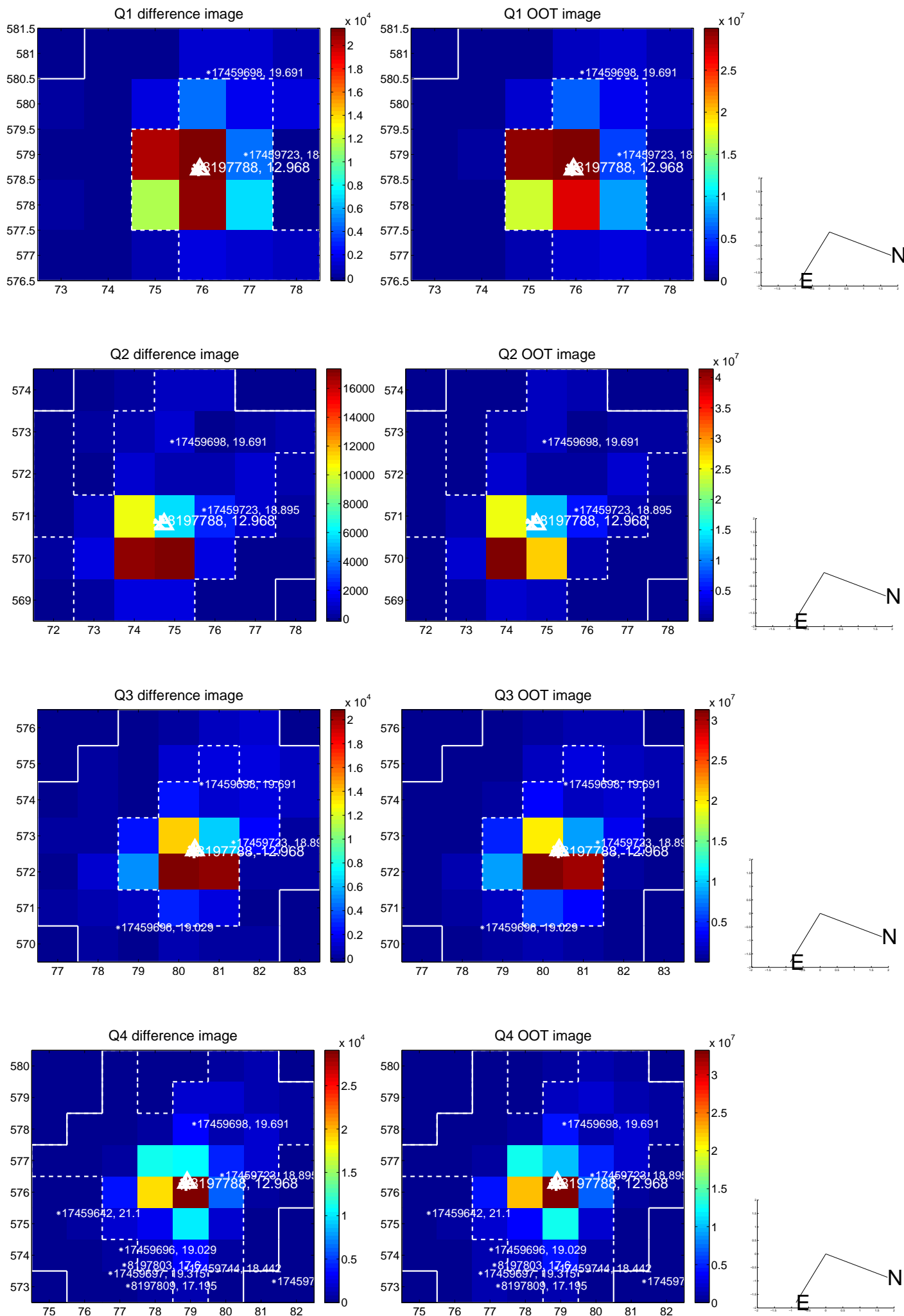
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.065 ± 0.073	0.89	-0.036 ± 0.074	0.053 ± 0.072
PRF-fit source offset from KIC position	0.176 ± 0.077	2.28	-0.147 ± 0.079	0.096 ± 0.072
photometric centroid source offset	0.29 ± 0.08	3.61	0.28 ± 0.08	-0.06 ± 0.07

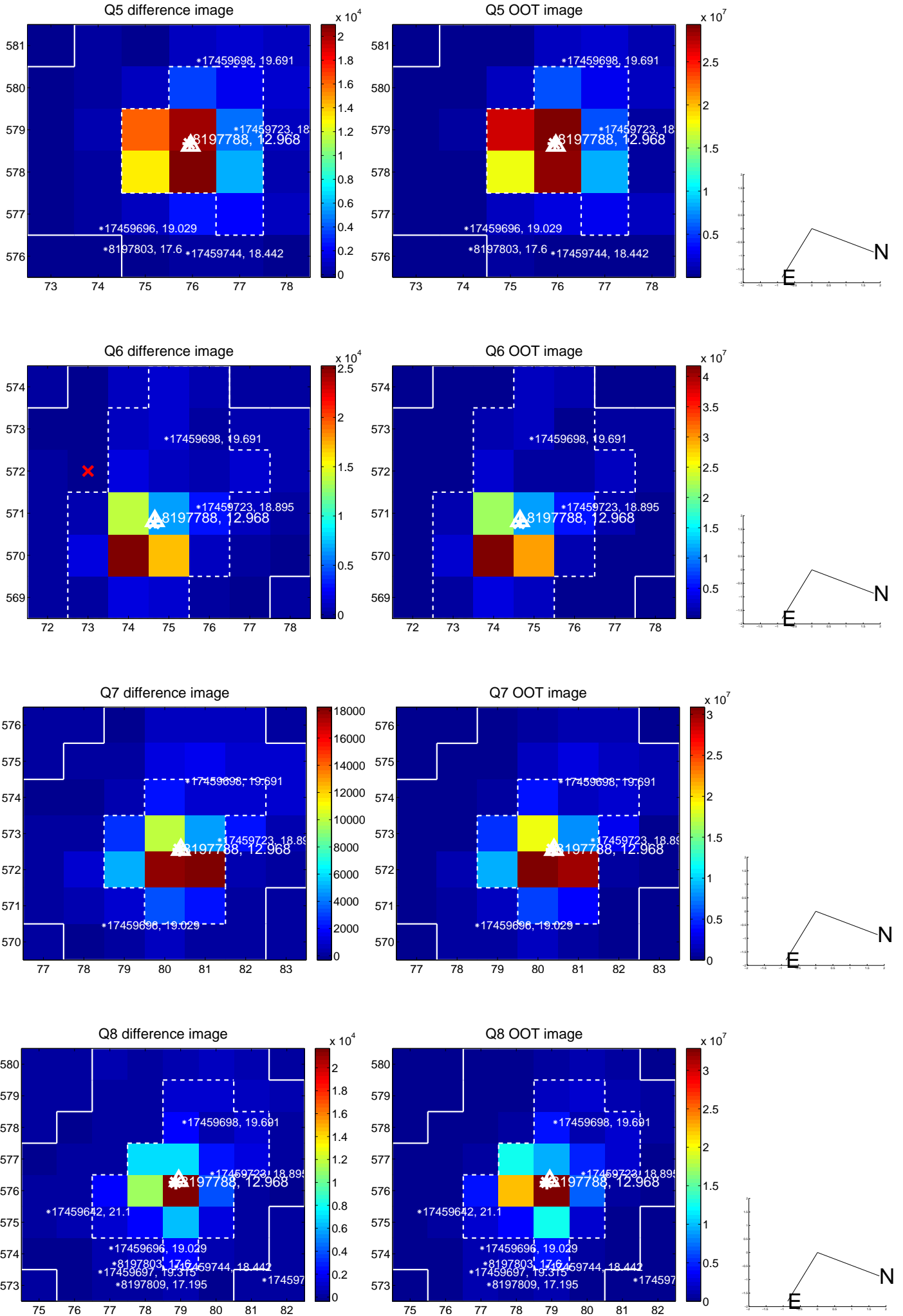


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

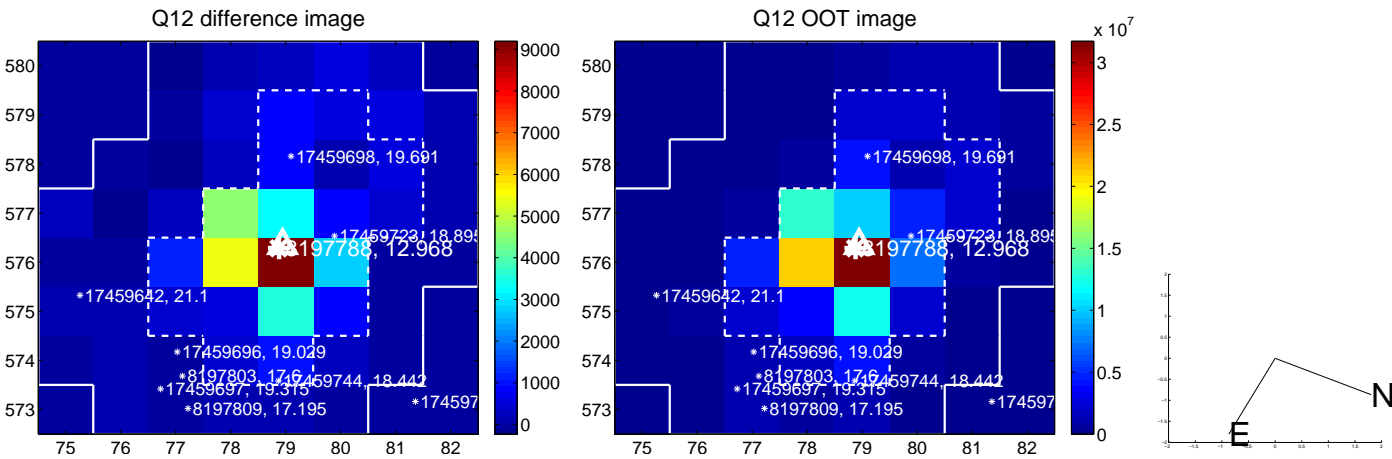
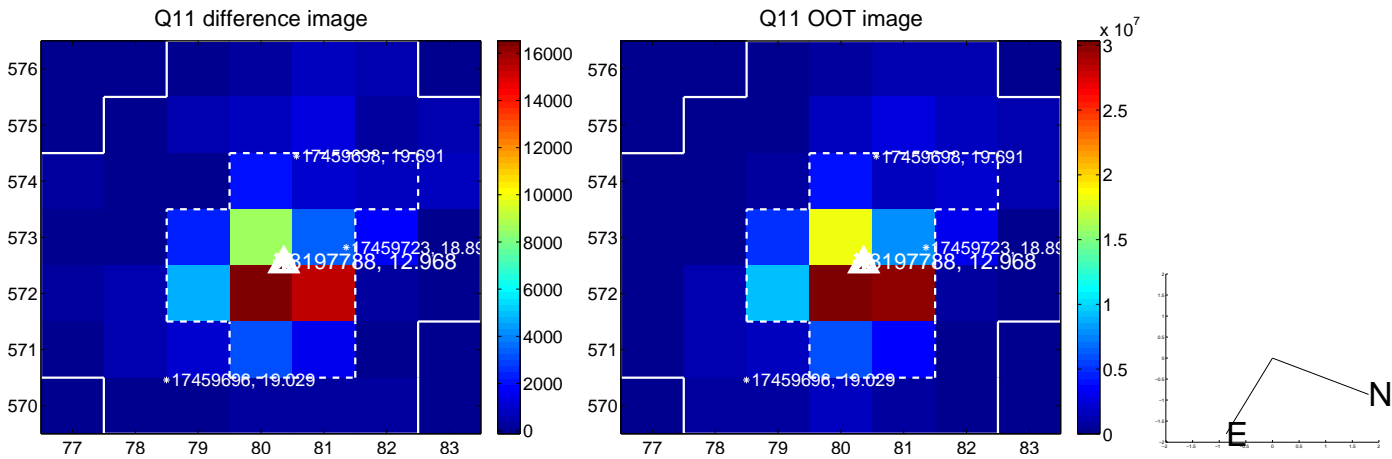
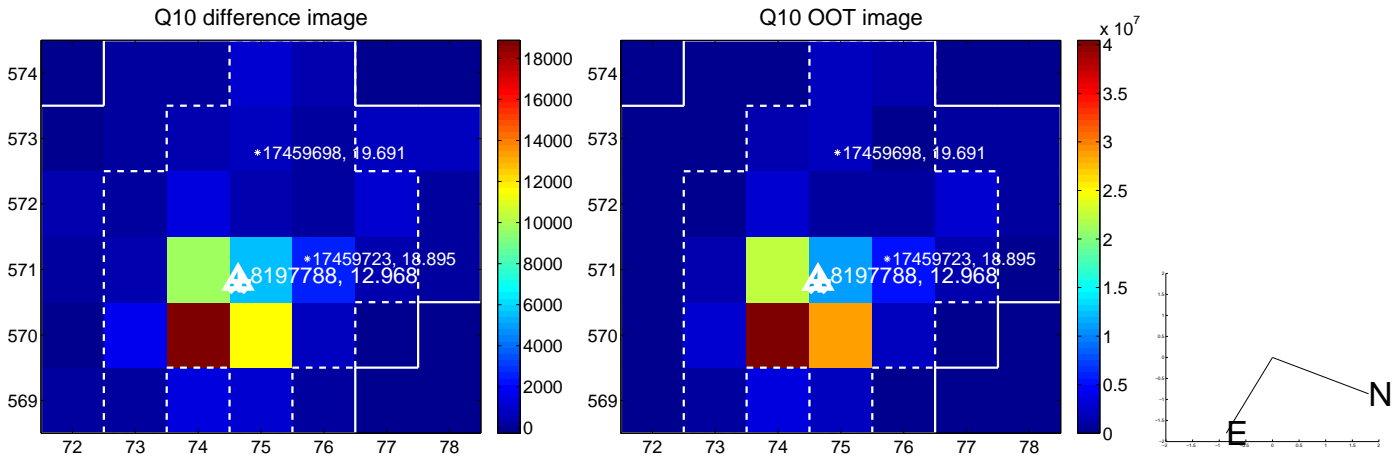
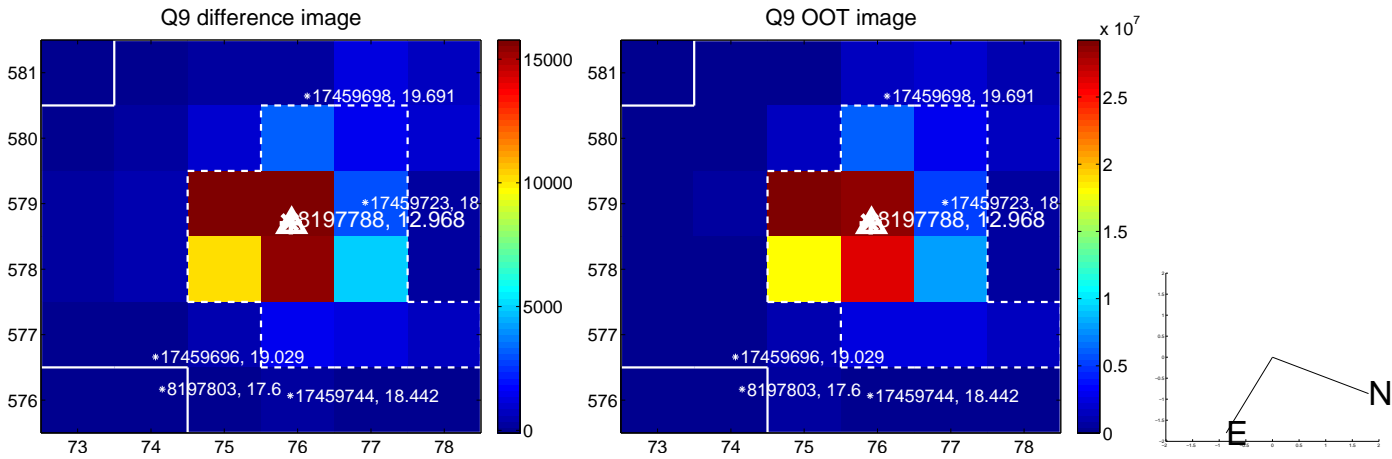
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



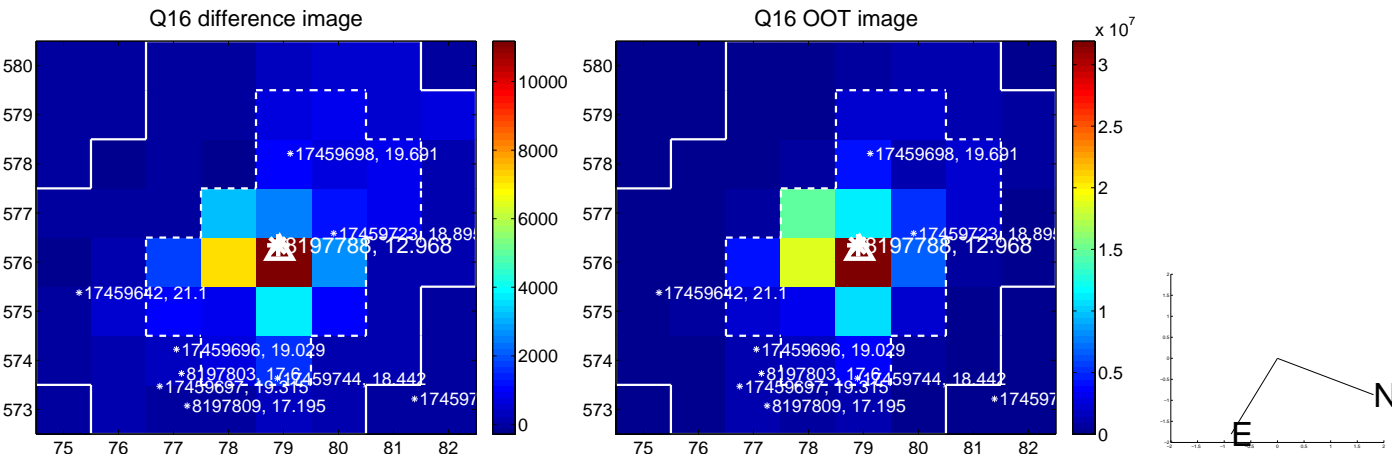
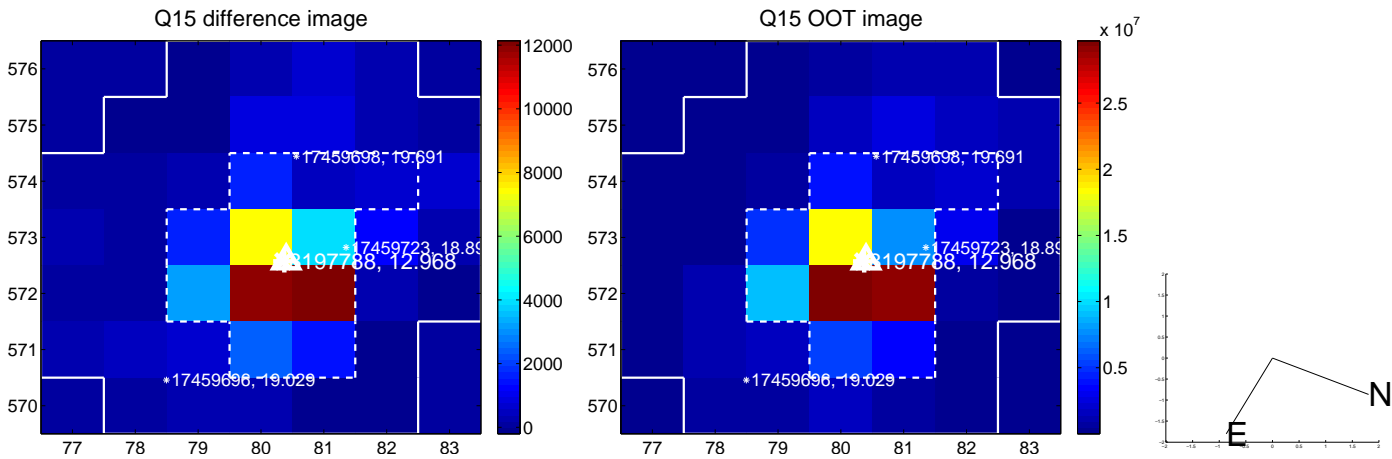
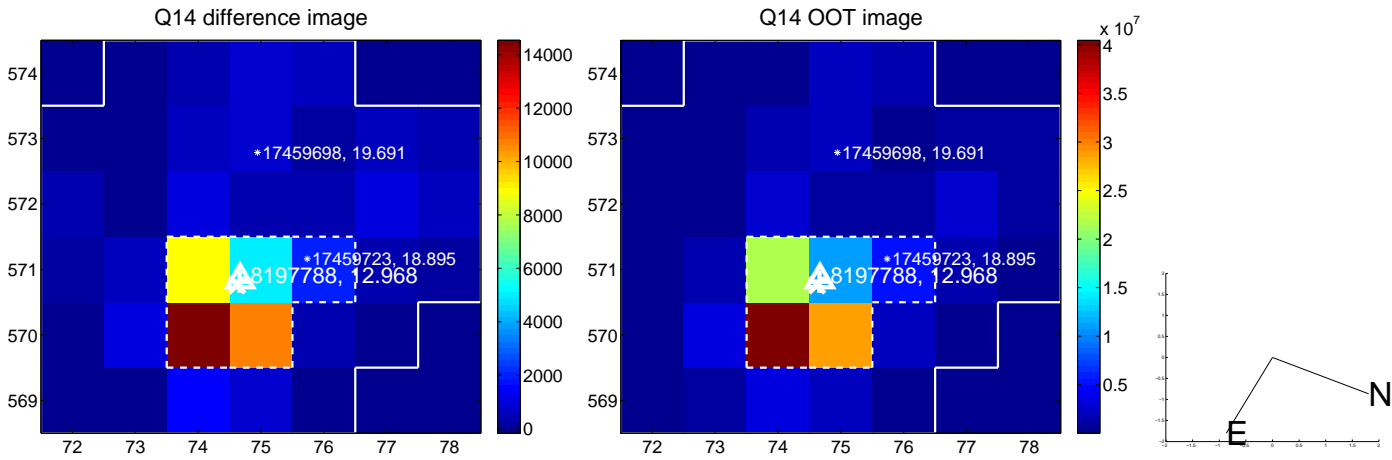
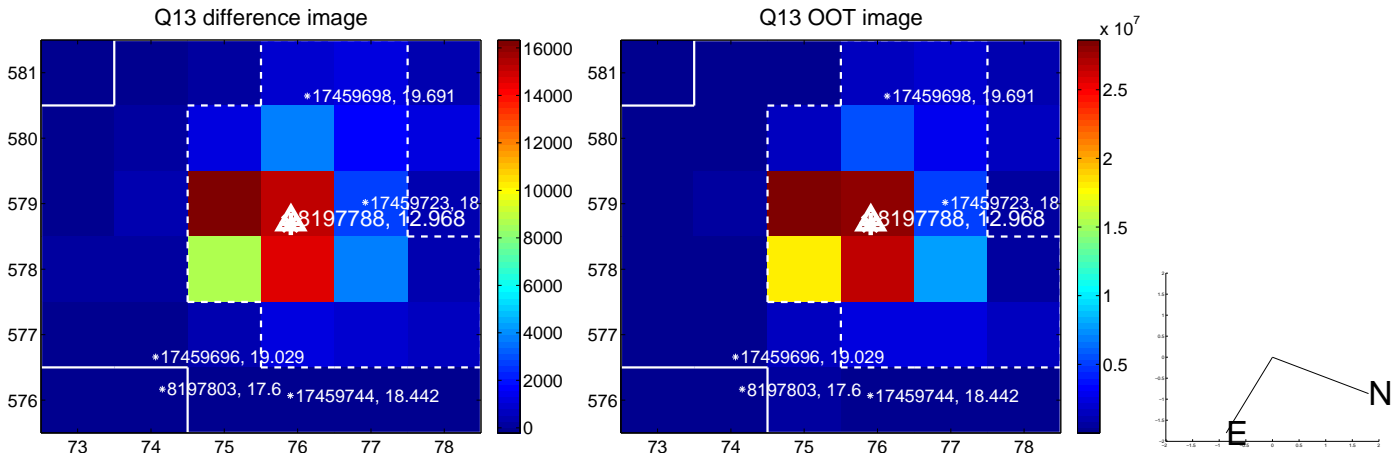
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



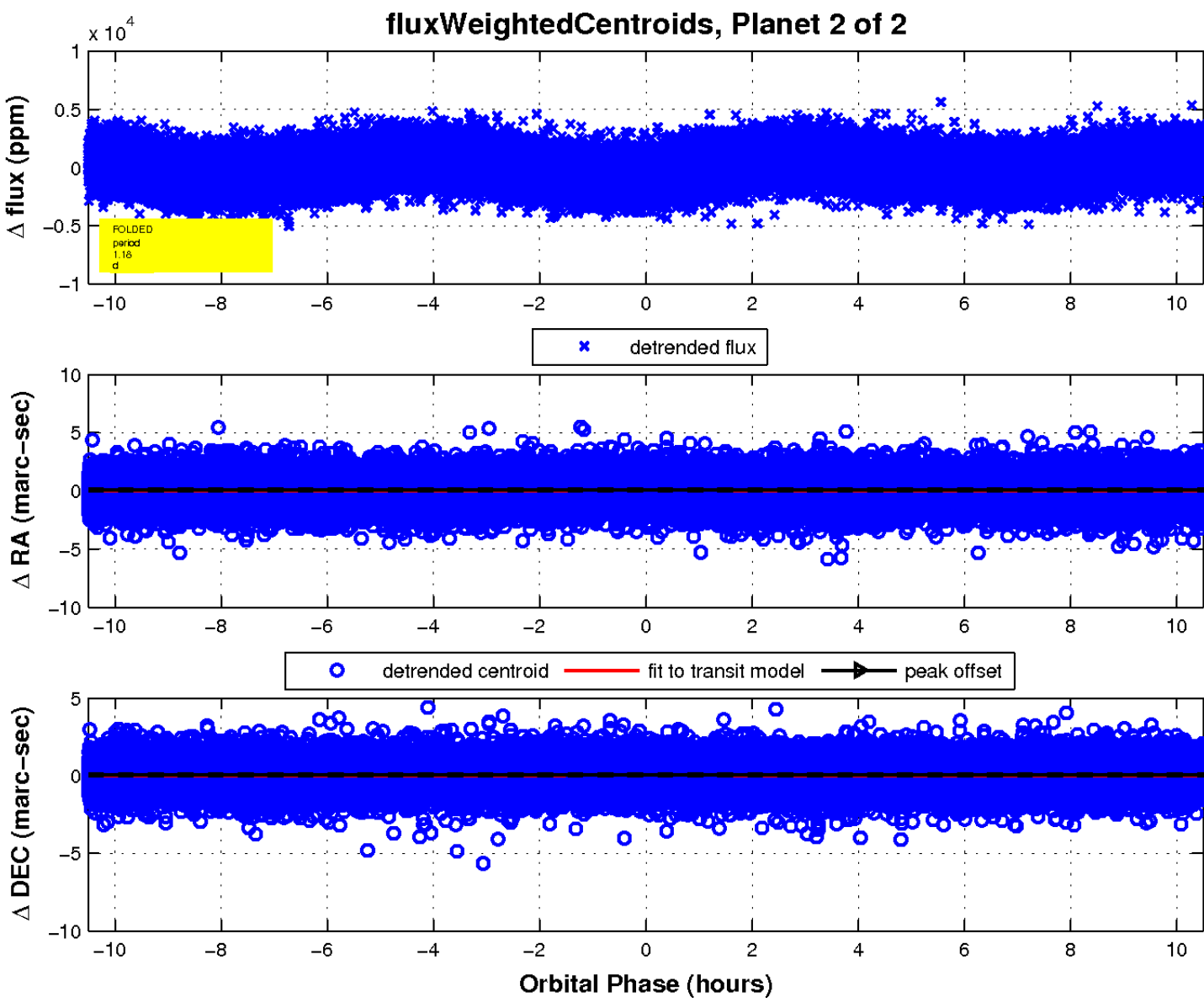
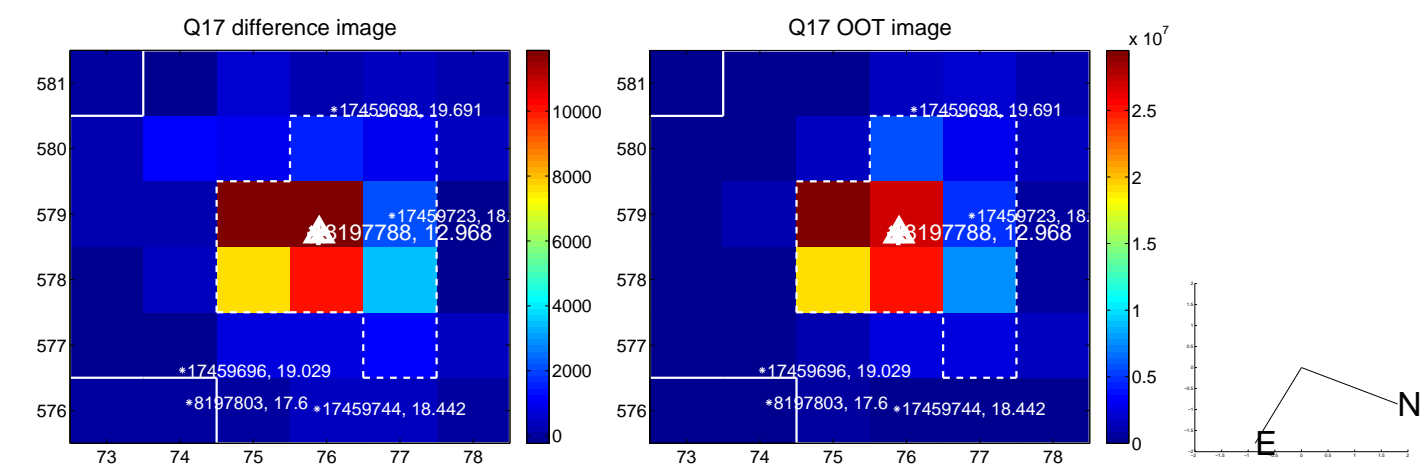
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

