

KIC 007199917

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})
007199917-01	OBS	No	0.566756	131.852174	8.5	3.625	13.0	7.9	1.99	5551	0.60	17715.69
007199917-02	OBS	No	44.519490	151.558211	132.5	1.687	9.0	7.5	1.99	5551	2.26	52.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007199917-01	OBS	FP	0.00	1	0	0	1	LPP_DV—MOD_NONUNIQ_ALT—EPHEM_MATCH
007199917-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS

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

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

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

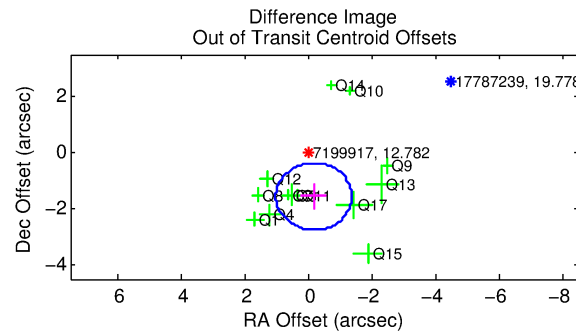
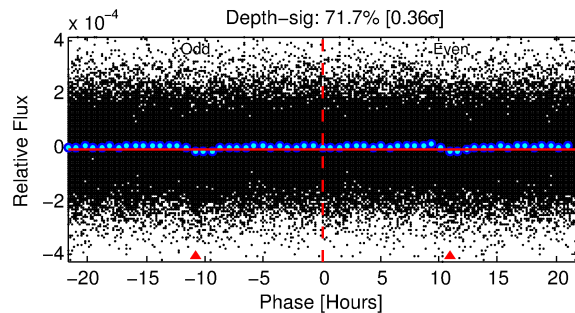
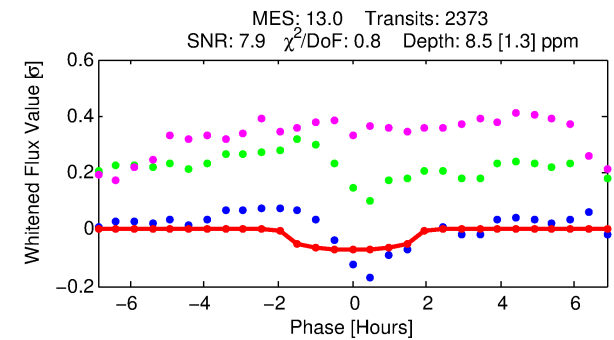
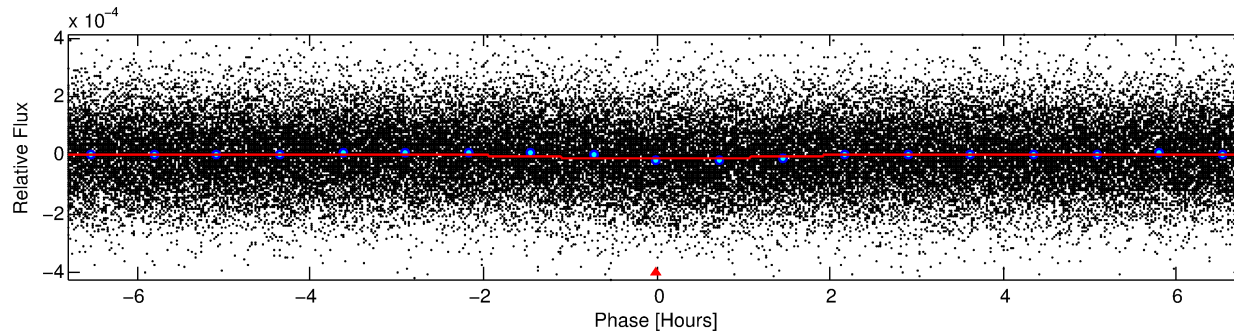
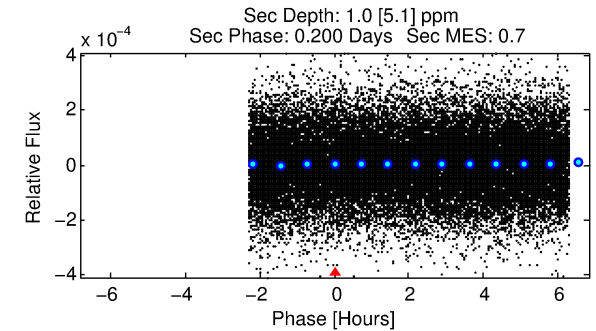
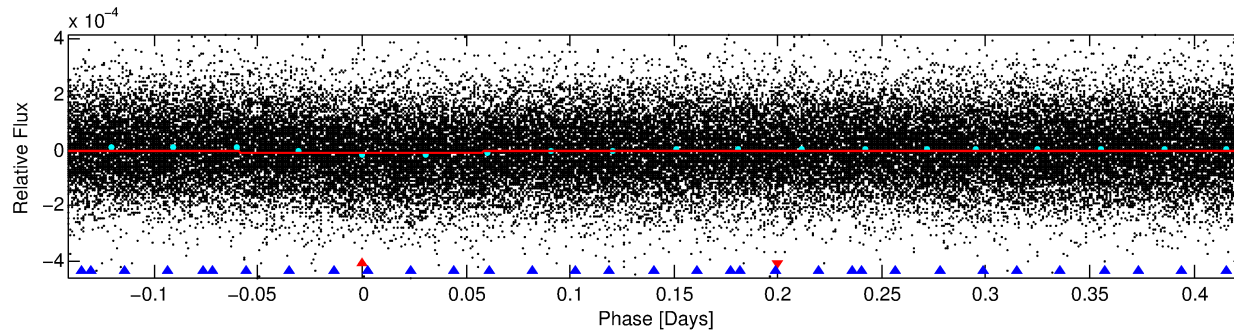
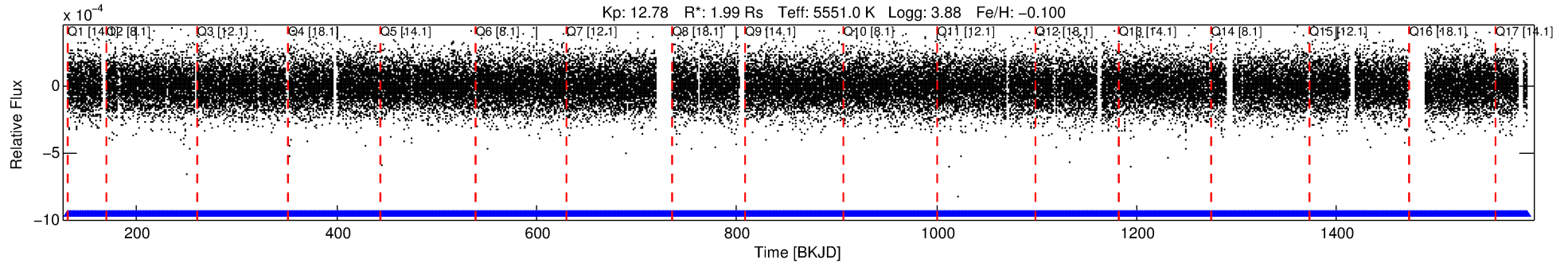
Ephemeris Match Information For 007199917-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007199917-01	7199917	RR-Lyr-pri	7198959	1:1	781.9	142	136	7.86	12.78	77912.00	Direct-PRF	0	1.64	23.08

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

DV One-Page Summary

KIC: 7199917 Candidate: 1 of 2 Period: 0.567 d



DV Fit Results:

Period = 0.56676 [0.00001] d
Epoch = 131.8522 [0.0054] BKJD
Rp/R* = 0.0028 [0.0018]
a/R* = 1.24 [1.20]
b = 0.59 [3.09]
Seff = 17715.69 [9409.10]
Teq = 2942 [391] K
Rp = 0.60 [0.45] Re
a = 0.0138 [0.0045] AU
Ag = 0.30 [1.53] [-0.46σ]
Teffp = 3357 [4301] K [0.10σ]

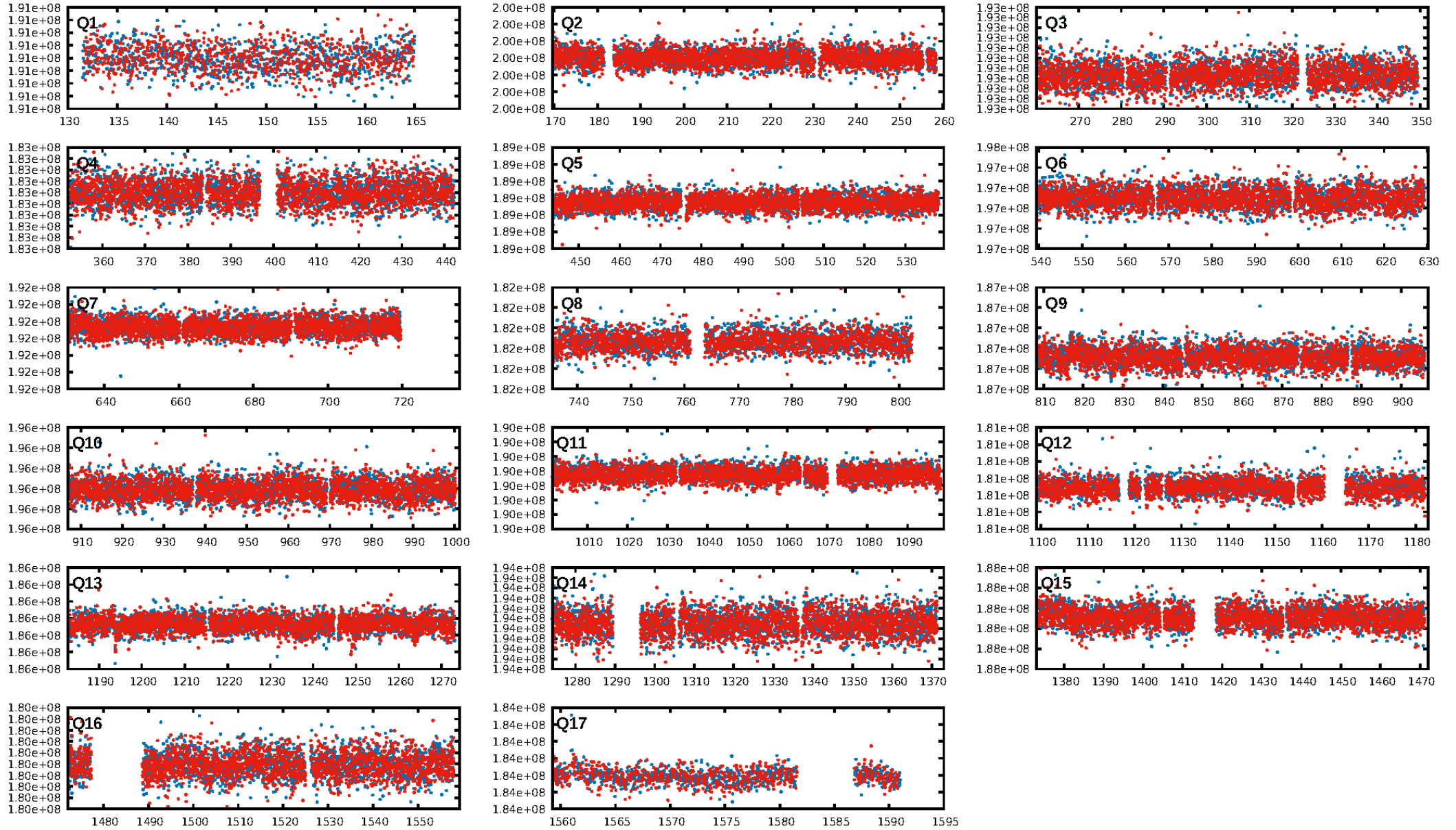
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [263.83σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.08e-20
RollingBand-fgt: 1.00 [2267/2267]
GhostDiagnostic-chr: 0.3111
Centroid-sig: N/A
Centroid-so: 4.616 arcsec [3.43σ]
OotOffset-rm: 1.572 arcsec [3.95σ]
KicOffset-rm: 1.619 arcsec [3.55σ]
OotOffset-st: 2/4/3/4 [13]
KicOffset-st: 2/4/3/4 [13]
DiffImageQuality-fgm: 0.38 [5/13]
DiffImageOverlap-fno: 1.00 [17/17]

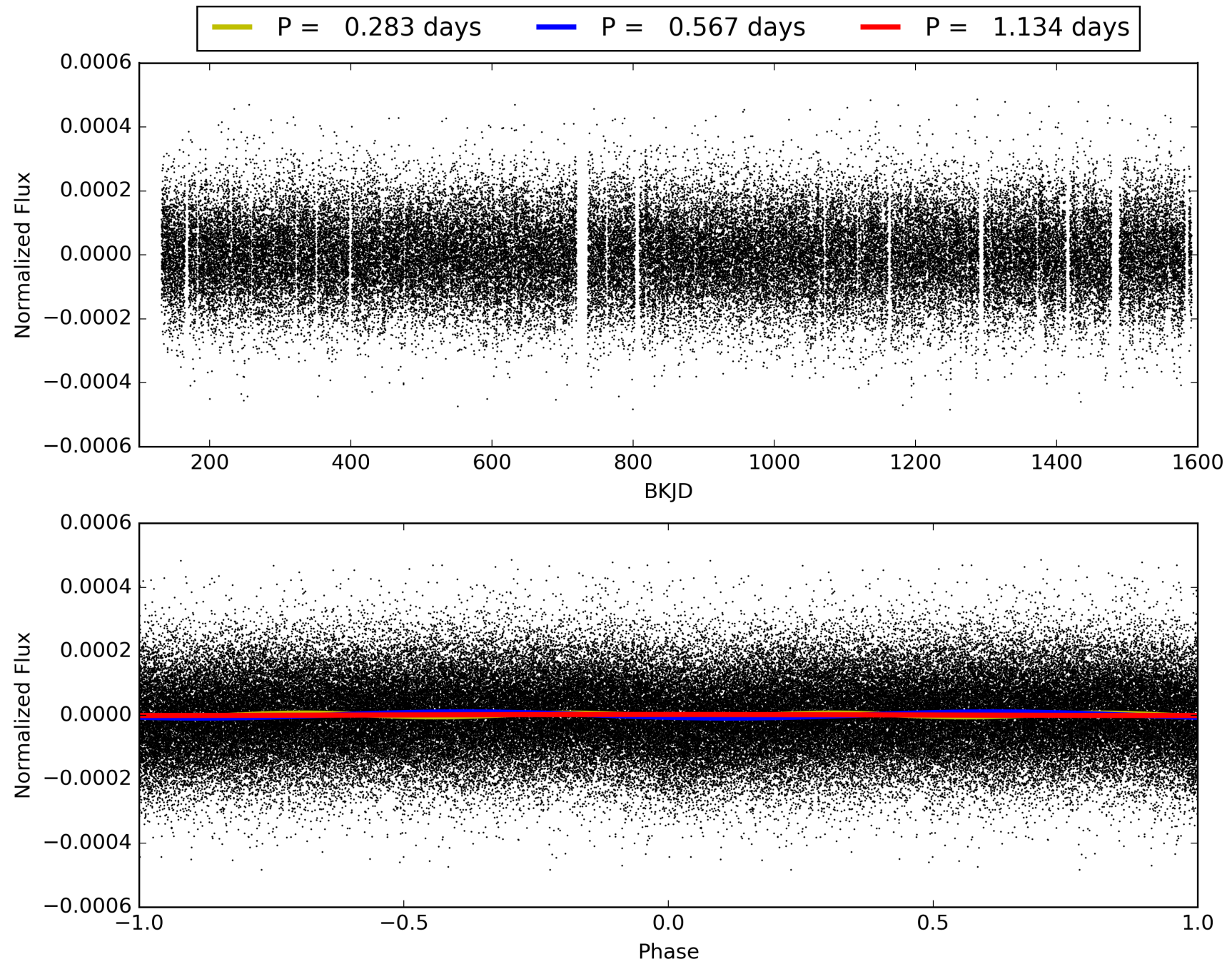
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 14:49:38 Z

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

TCE 007199917-01, PDC Light Curves

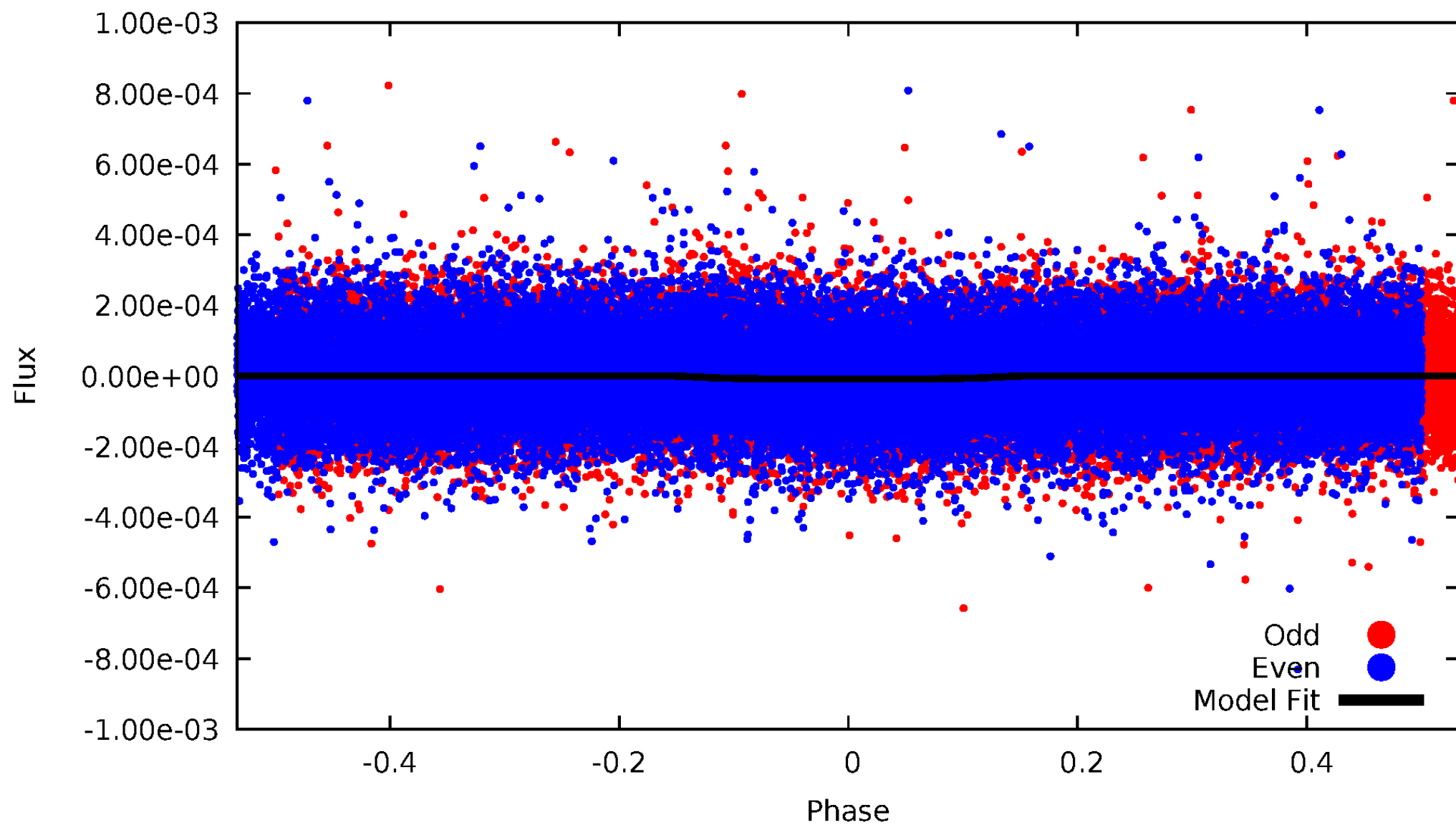


TCE 007199917-01



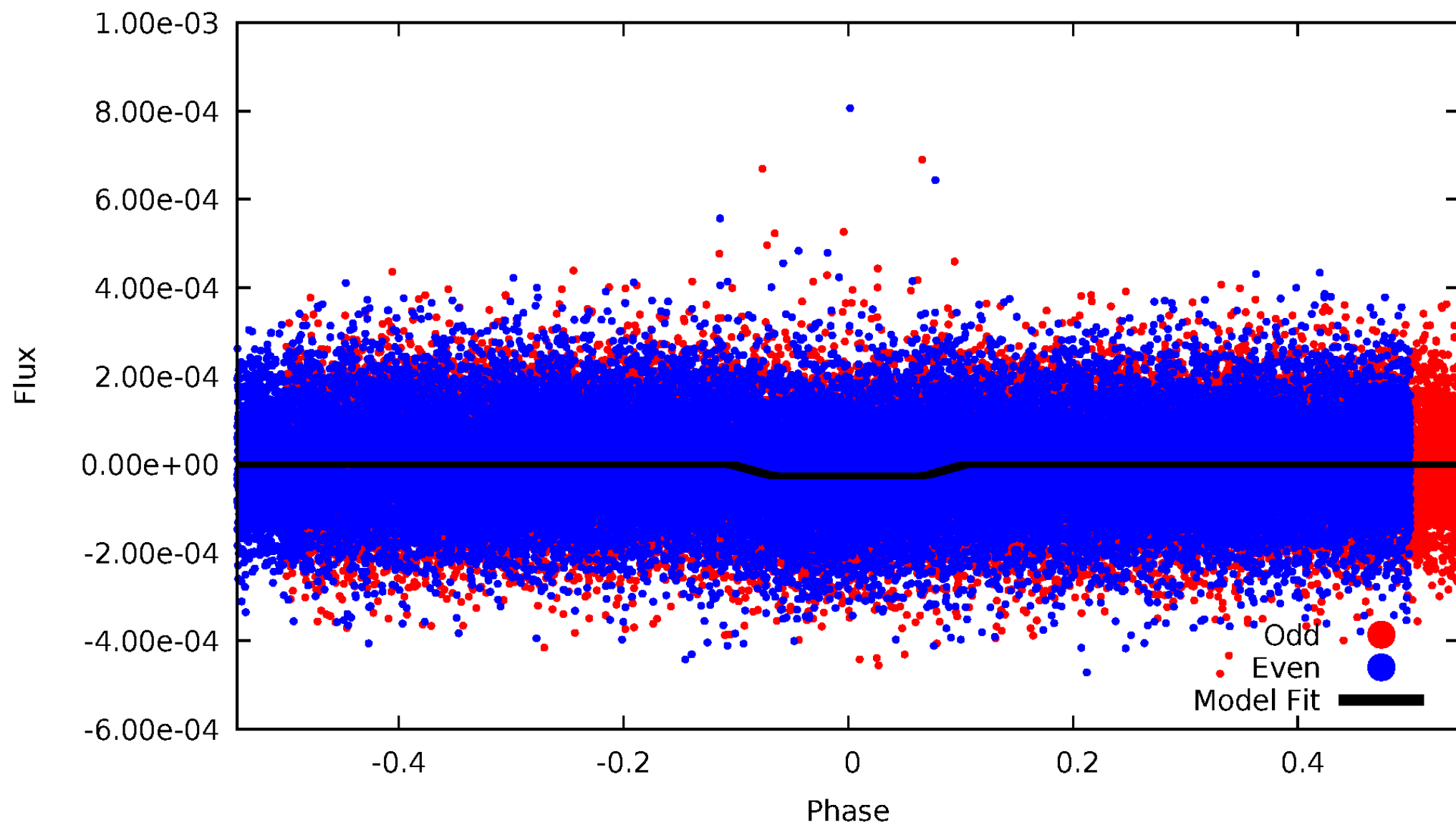
DV Odd/Even

TCE 007199917-01



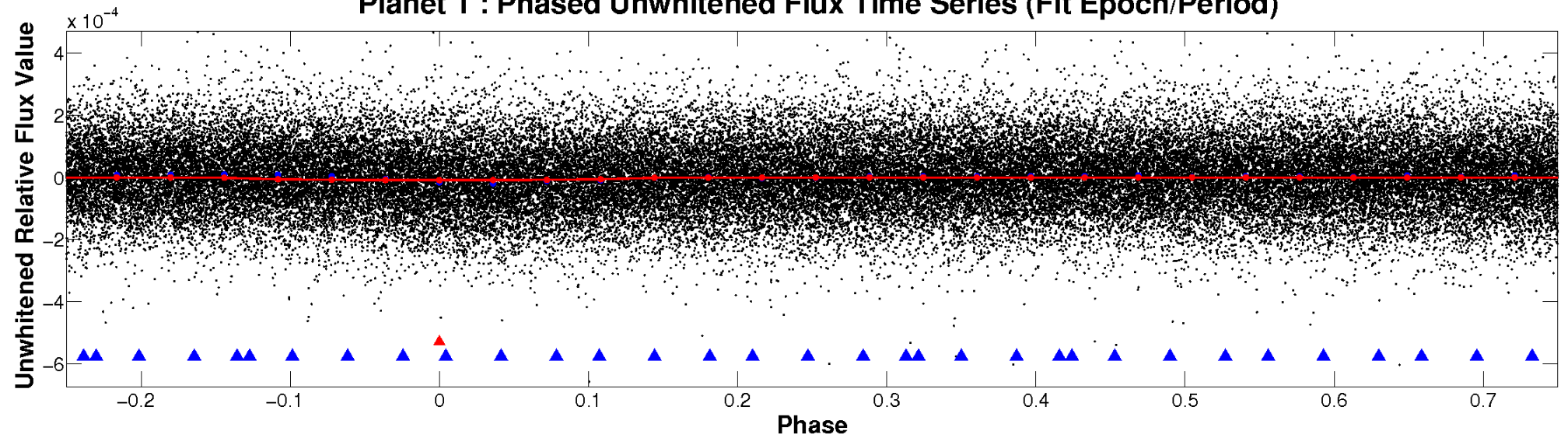
ALT Odd/Even

TCE 007199917-01

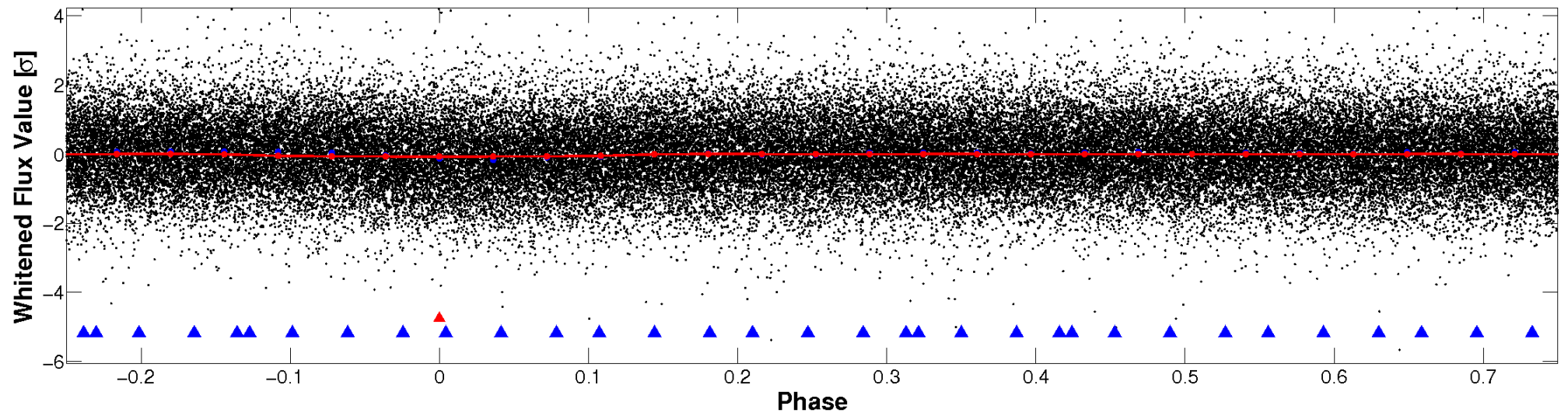


Non-Whitened Vs. Whitened Light Curve

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

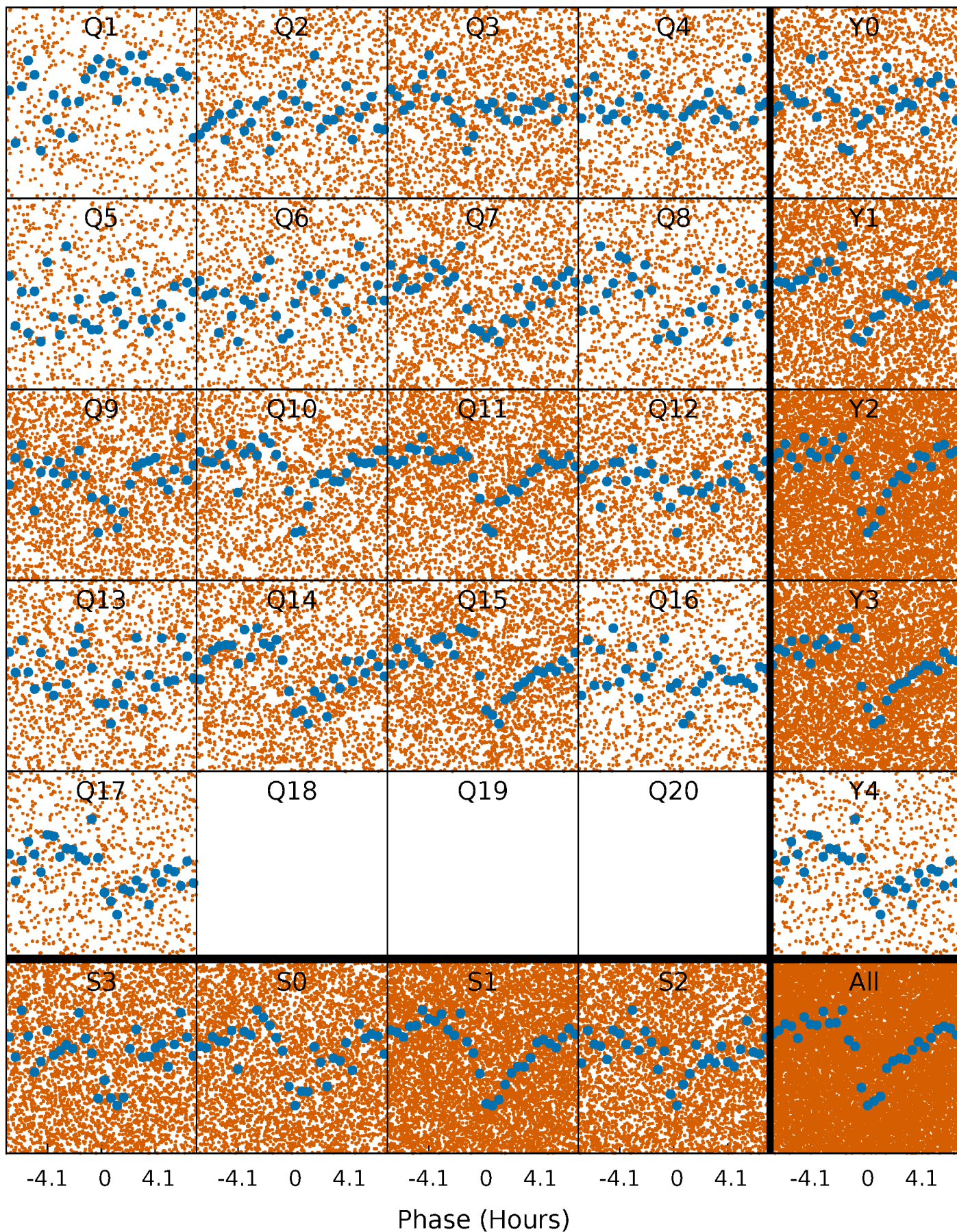


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



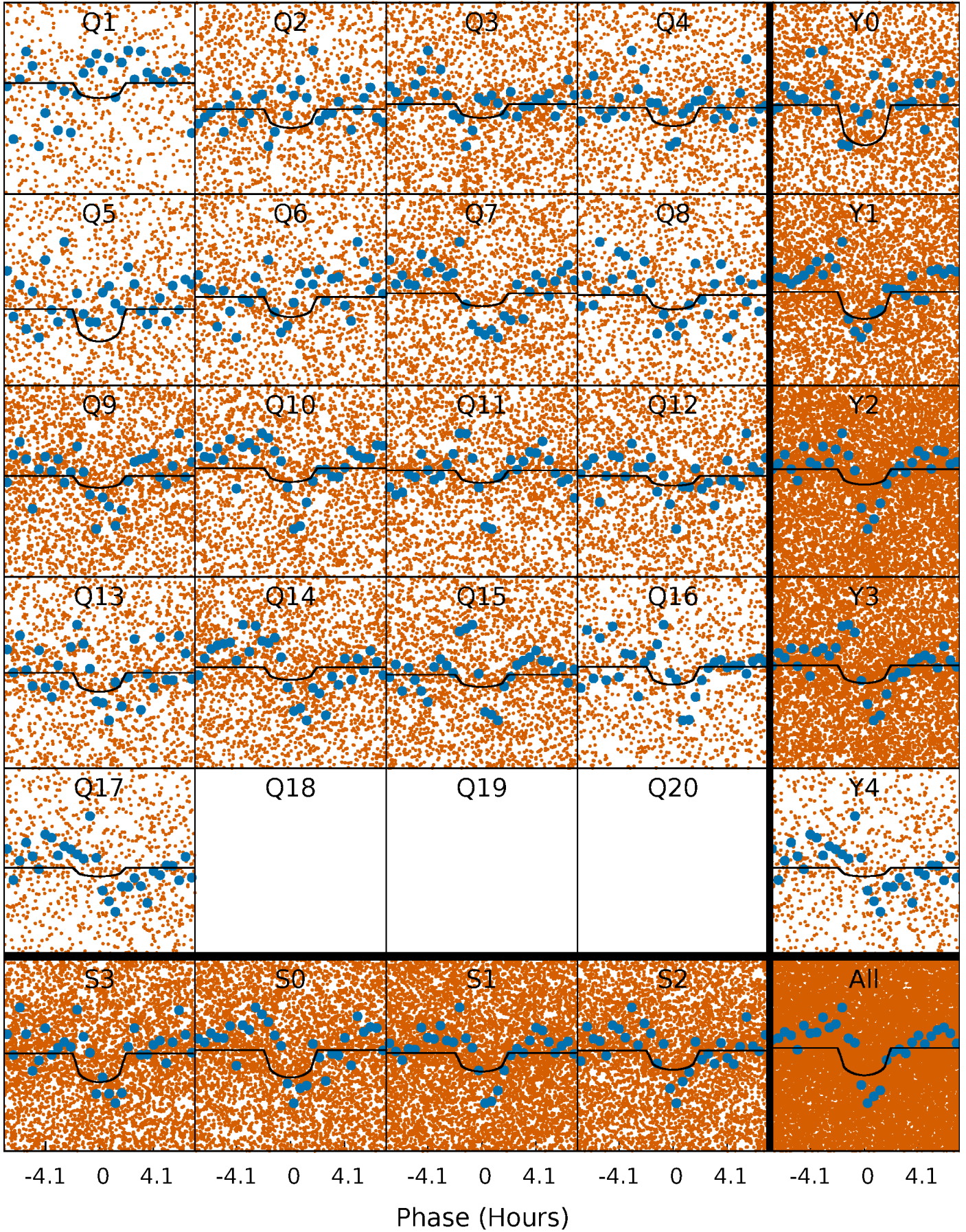
PDC Quarter-Phased Transit Curves

TCE 007199917-01 P= 0.566756 Days $T_0=131.852174$ (BKJD)



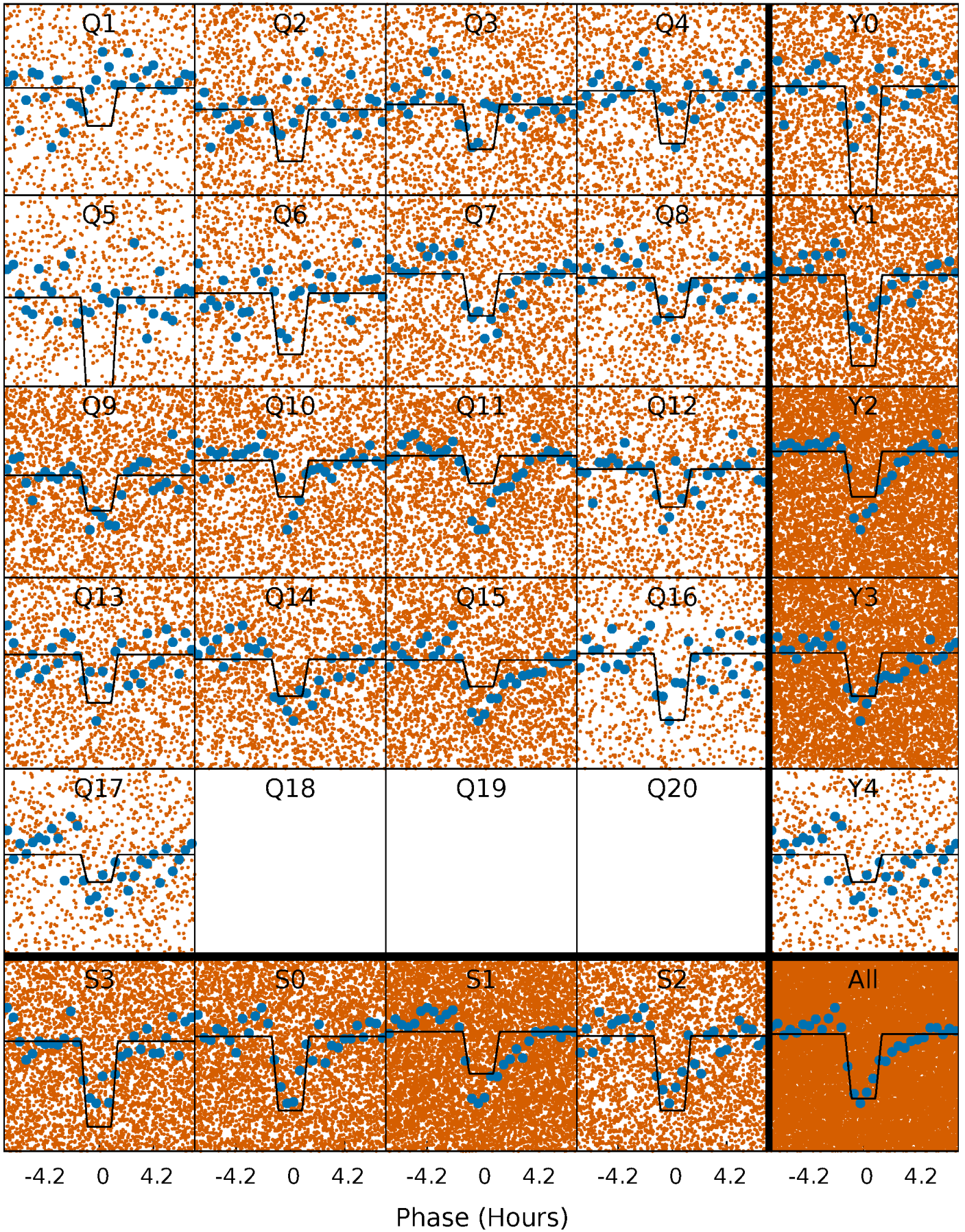
DV Quarter-Phased Transit Curves

TCE 007199917-01 P= 0.566756 Days $T_0=131.852174$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

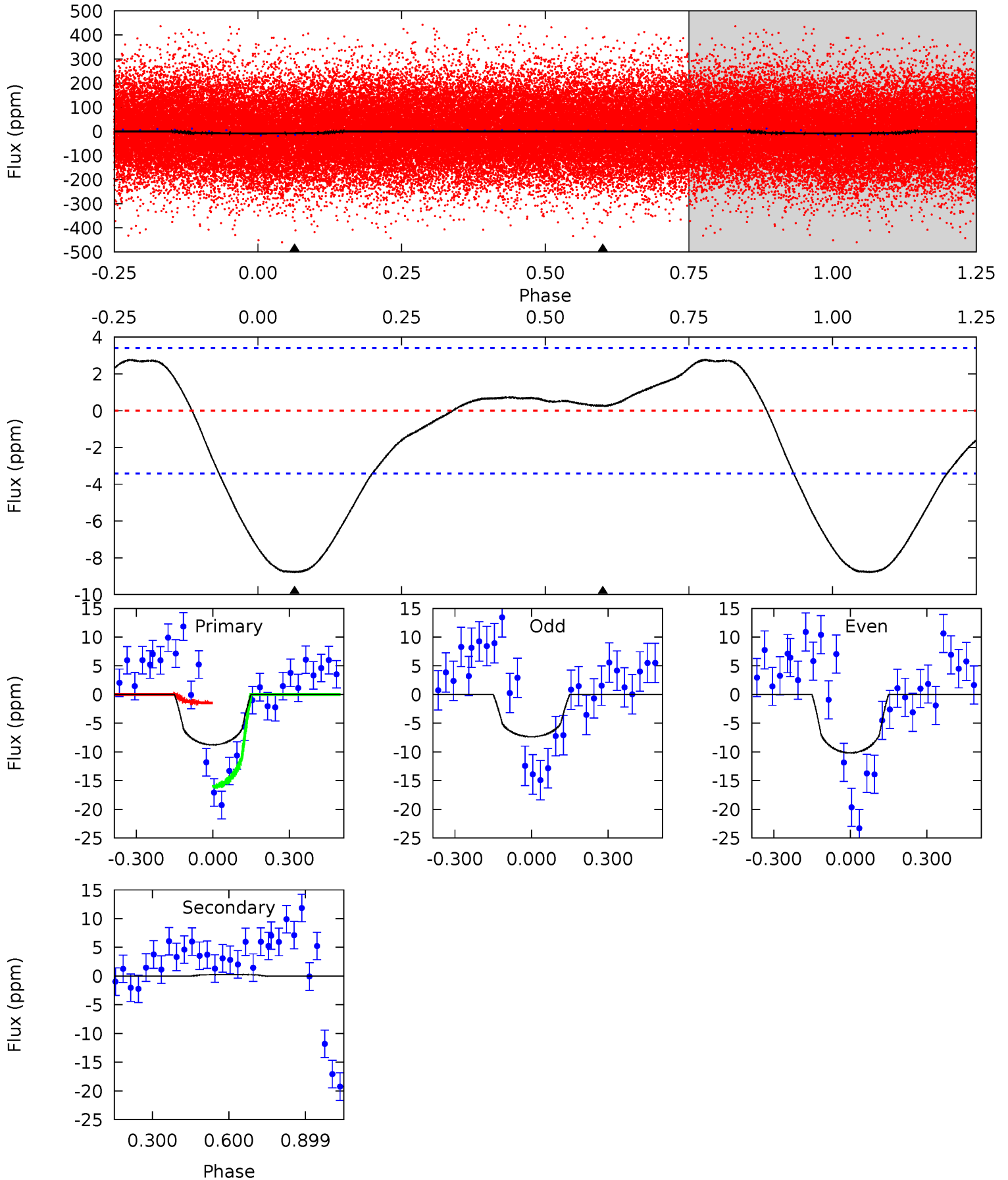
TCE 007199917-01 P= 0.566788 Days $T_0=131.824738$ (BKJD)



DV Model-Shift Uniqueness Test

007199917-01, P = 0.566756 Days, E = 131.285418 Days

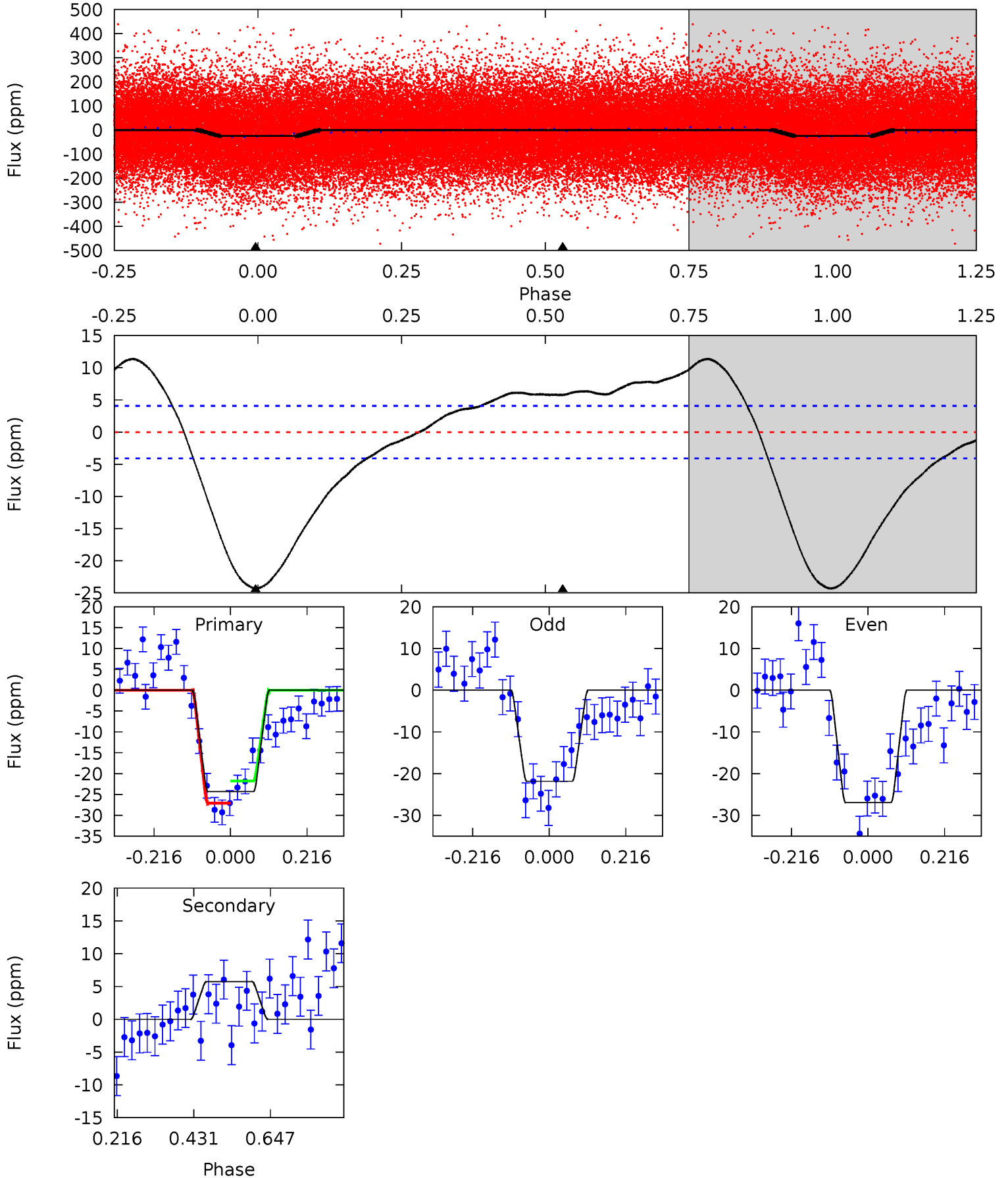
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	-0.33	0	0	4.33	1.04	1.29	11.1	11.1	-0.33	-0.33	1.80	1.20	0.24	9.17



Alt Model-Shift Uniqueness Test

007199917-01, P = 0.566788 Days, E = 131.257950 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.2	-6.21	0	0	4.40	1.24	5.39	26.2	26.2	-6.21	-6.21	2.77	1.06	0.32	2.86



Stellar Parameters For KIC 007199917

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5551^{+182}_{-126}	$3.876^{+0.301}_{-0.108}$	$-0.100^{+0.350}_{-0.200}$	$1.985^{+0.415}_{-0.675}$	$1.080^{+0.159}_{-0.159}$	$0.195^{+0.403}_{-0.076}$
	+3%/-2%	+8%/-3%	+350%/-200%	+21%/-34%	+15%/-15%	+207%/-39%
Source	PHO1	FLK73	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 007199917-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1	$0.60^{+0.37}_{-0.33}$	4034^{+281}_{-368}	-3820^{+669}_{-604}	$-0.055^{+0.228}_{-0.433}$
Alt.	6 ± 1	$1.05^{+0.42}_{-0.40}$	4069^{+260}_{-332}	-4471^{+344}_{-637}	$-0.543^{+0.270}_{-0.856}$

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

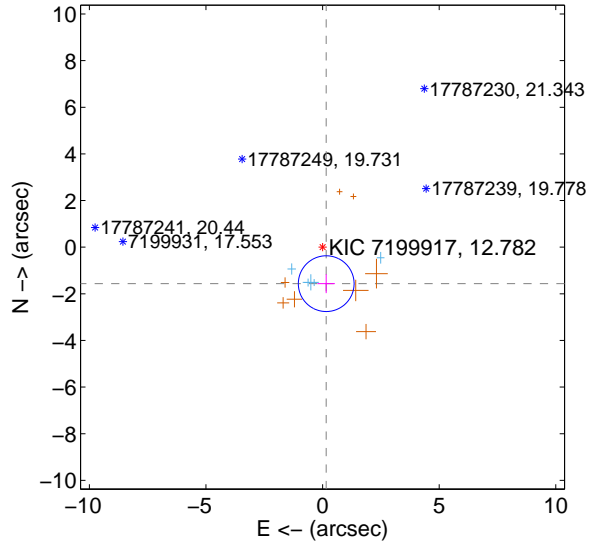
Supplemental centroid analysis for 007199917-01. Kepler magnitude: 12.78. Transit SNR 7.93

There are 5 quarters with good PRF difference image offsets

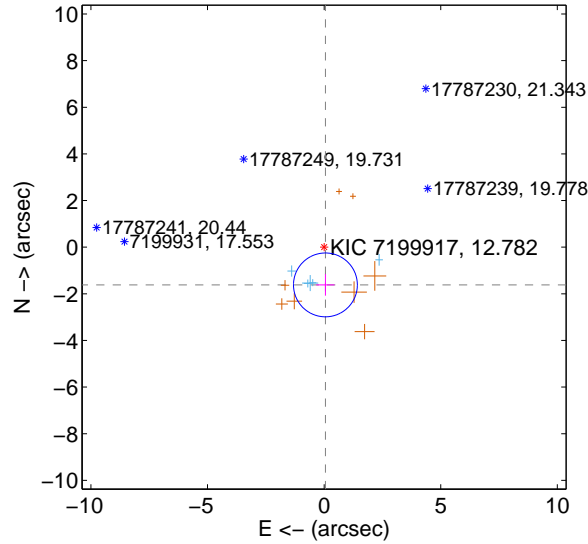
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.572 ± 0.399	3.95	-0.156 ± 0.373	-1.565 ± 0.406
PRF-fit source offset from KIC position	1.619 ± 0.456	3.55	-0.056 ± 0.391	-1.618 ± 0.460
photometric centroid source offset	4.62 ± 1.34	3.43	-1.77 ± 1.40	-4.26 ± 1.33

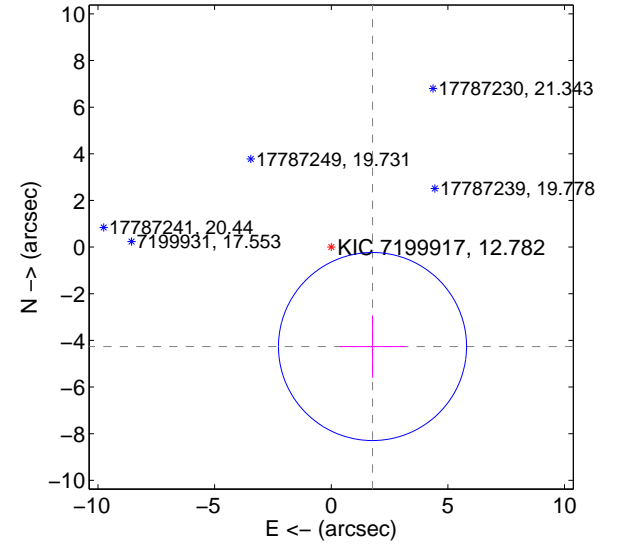
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

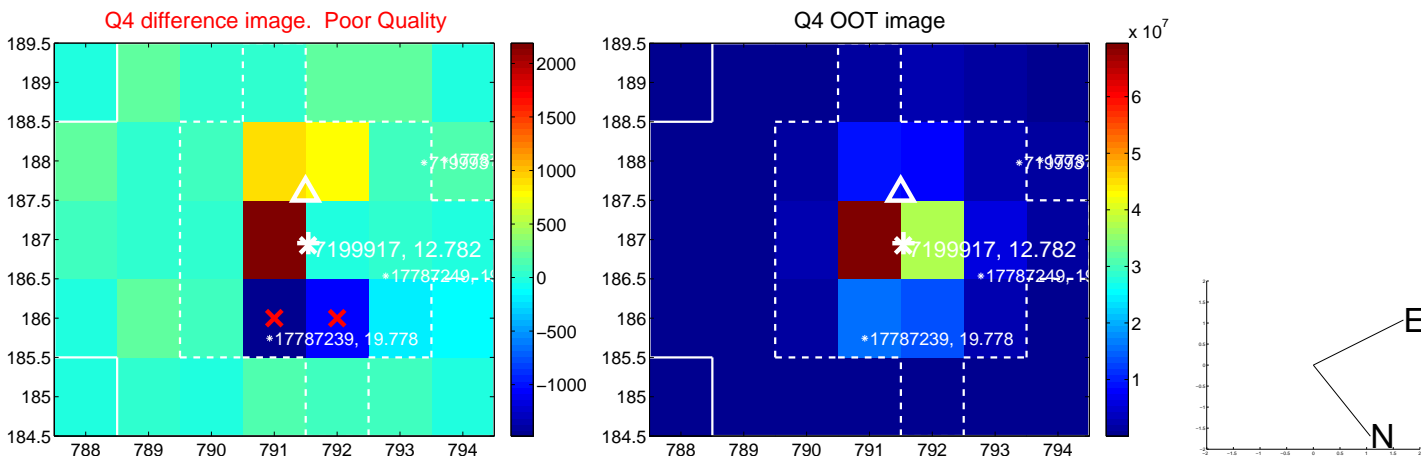
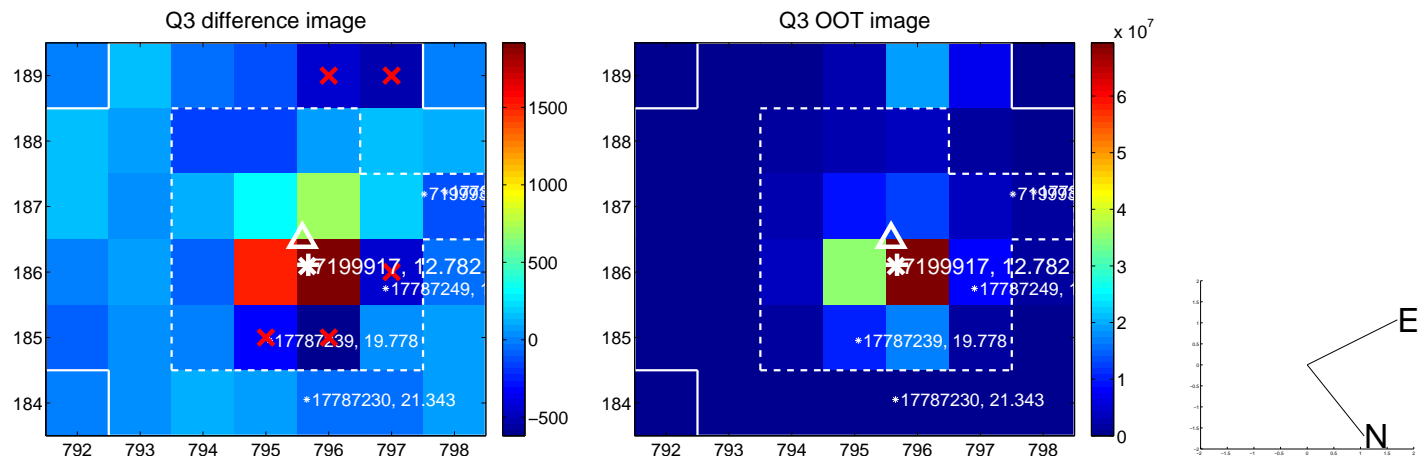
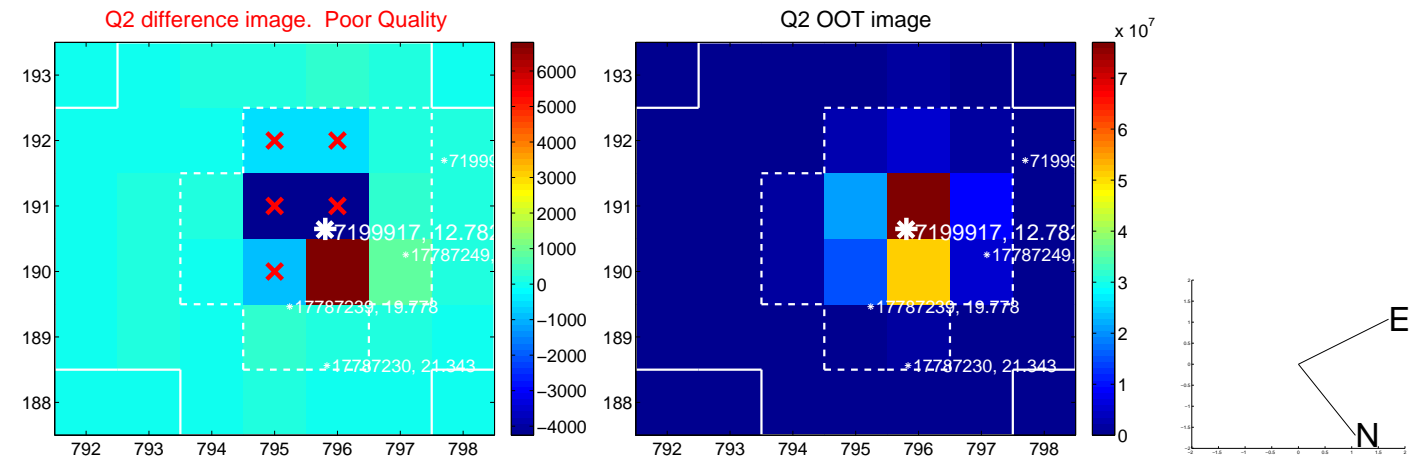
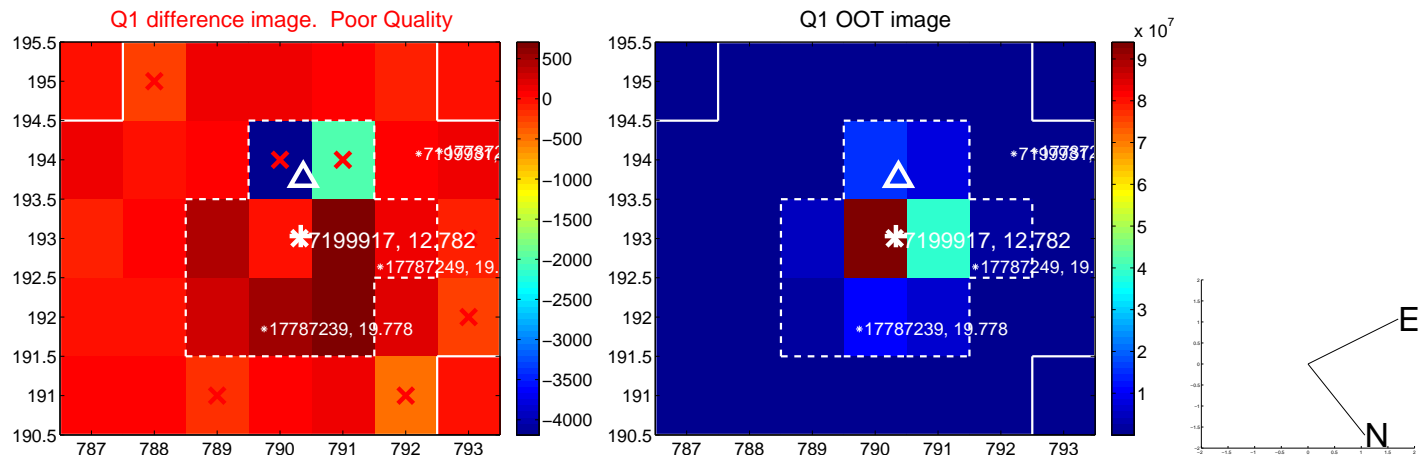


offset from photometric centroids

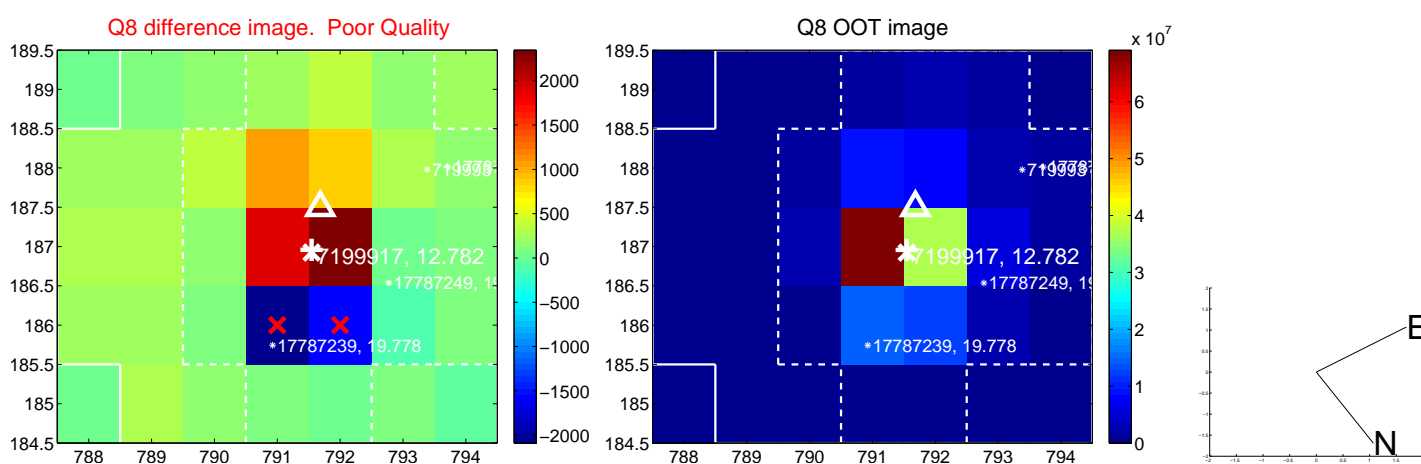
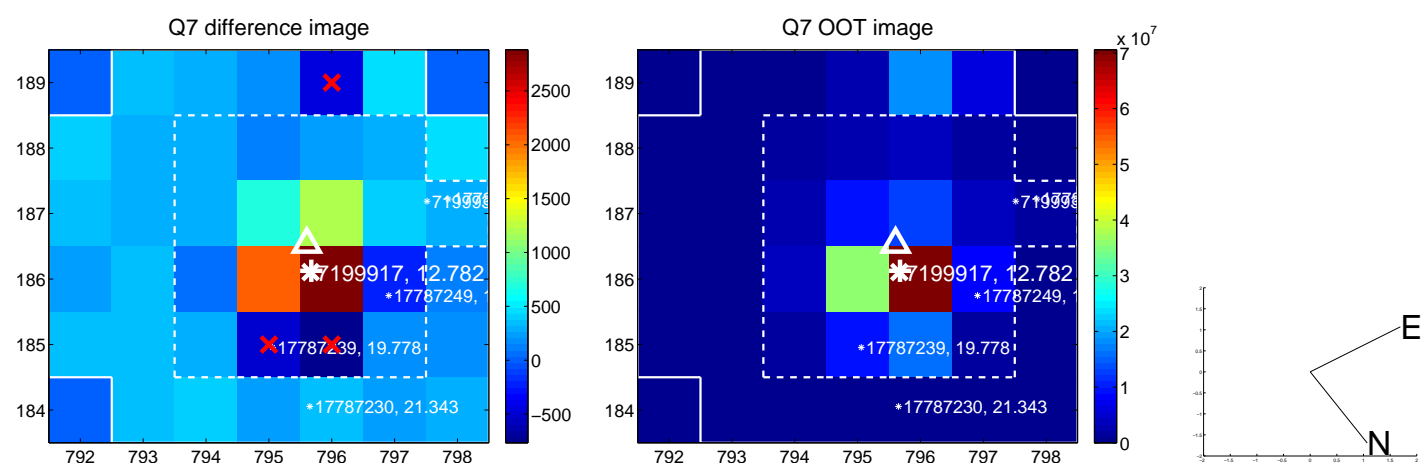
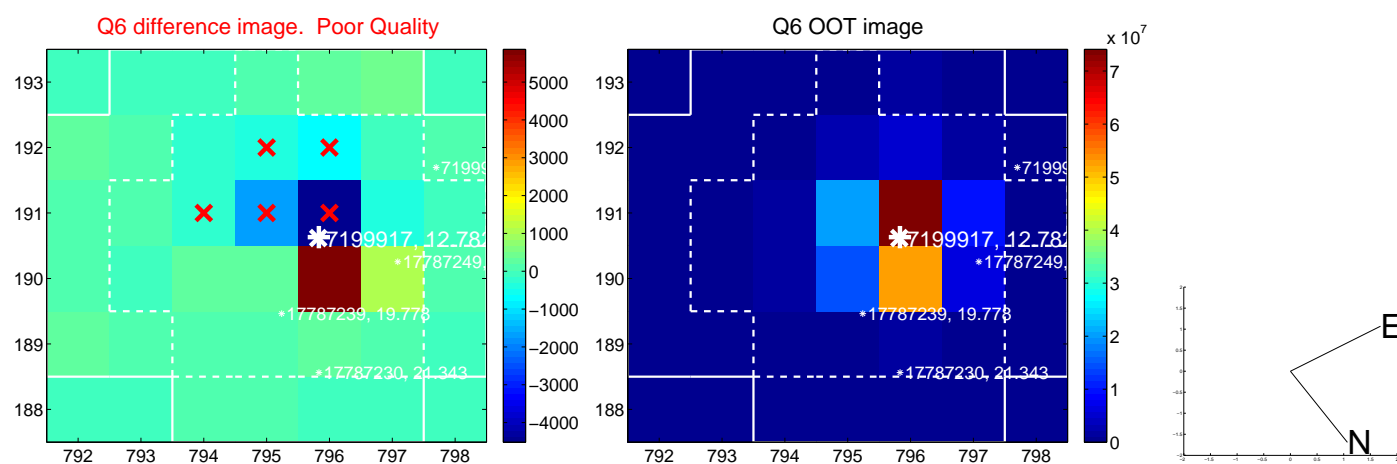
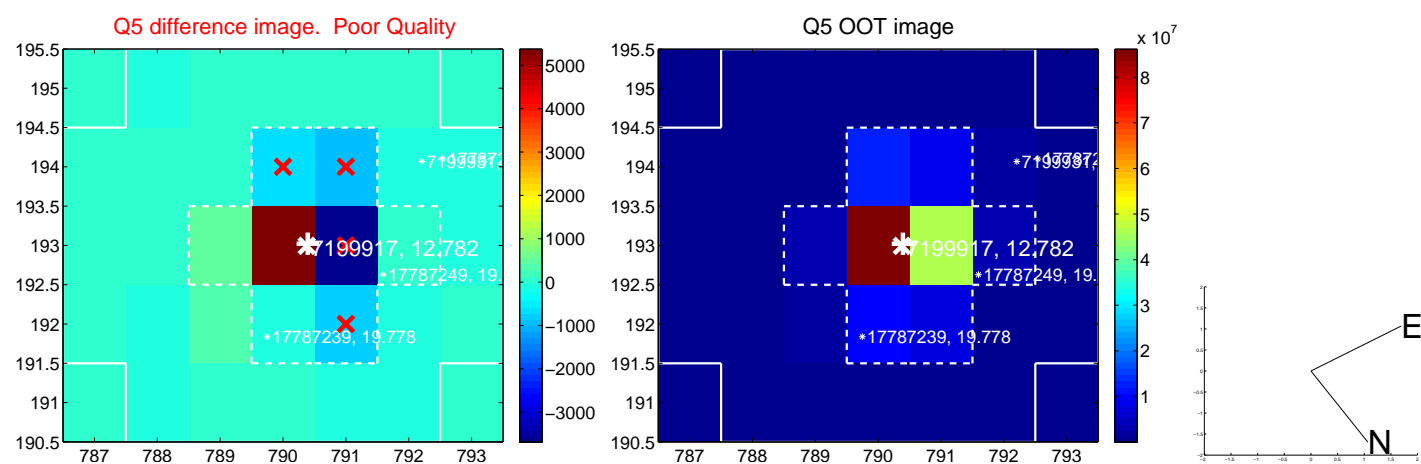


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

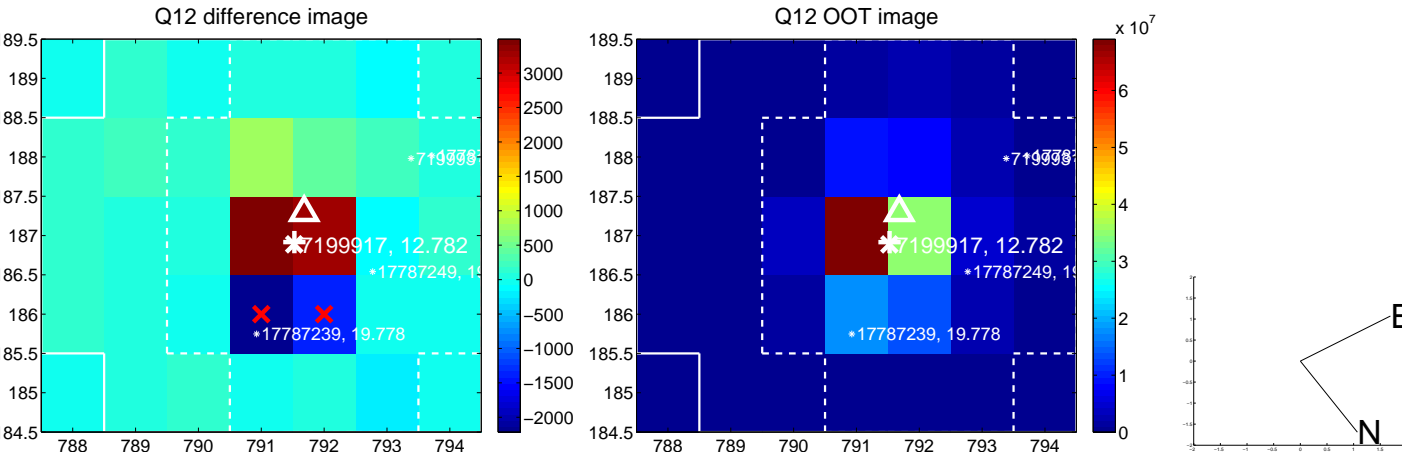
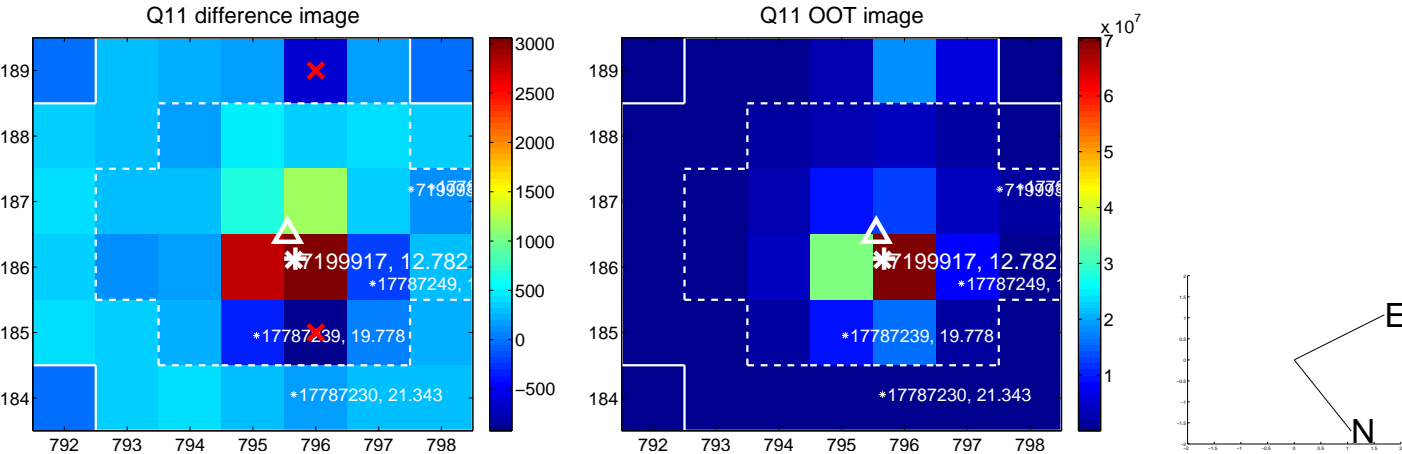
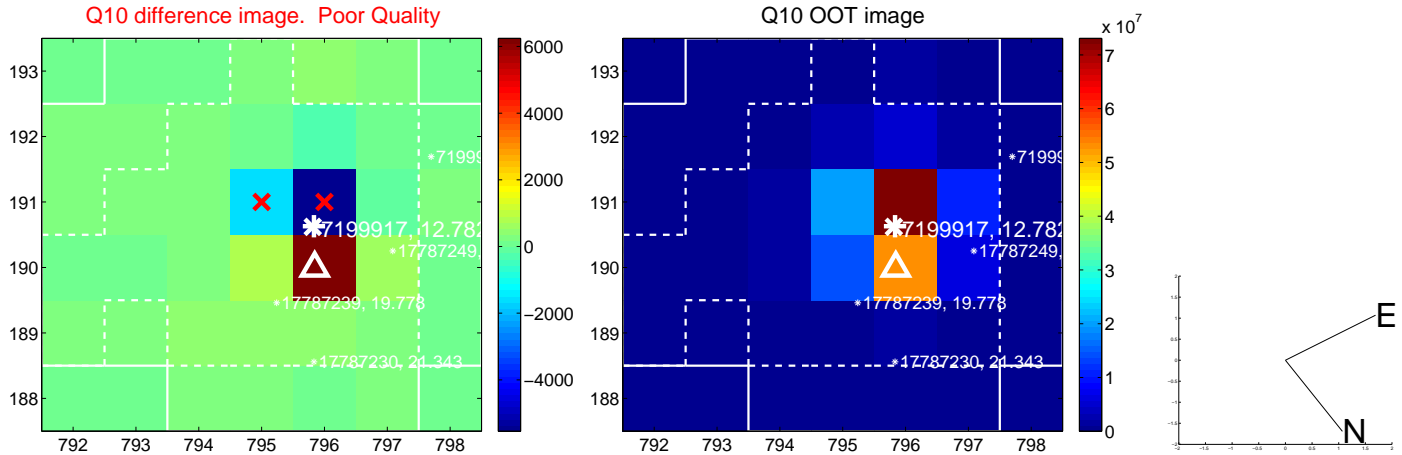
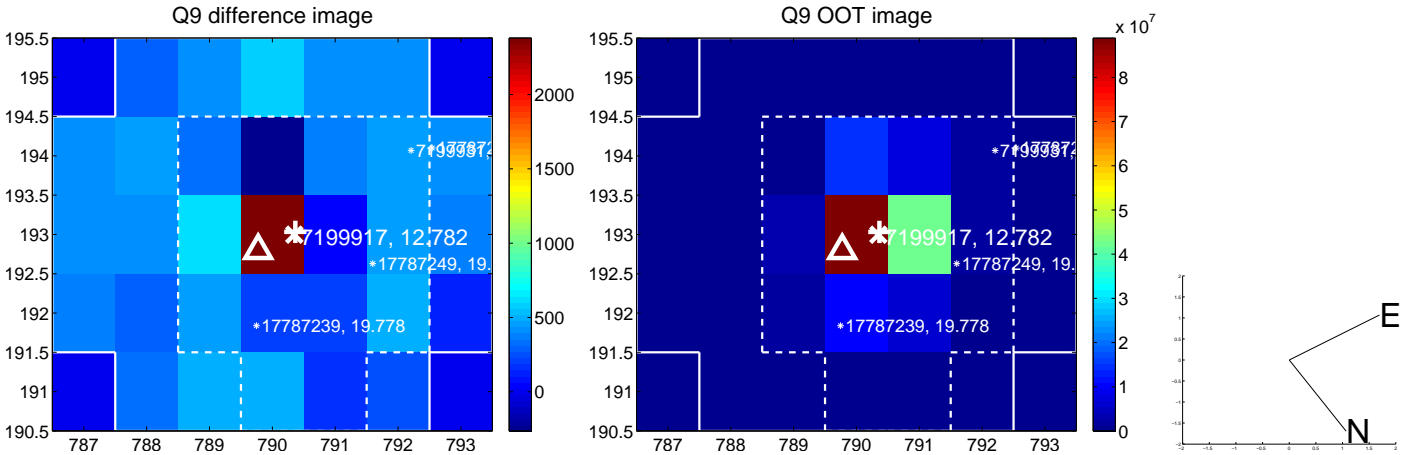
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



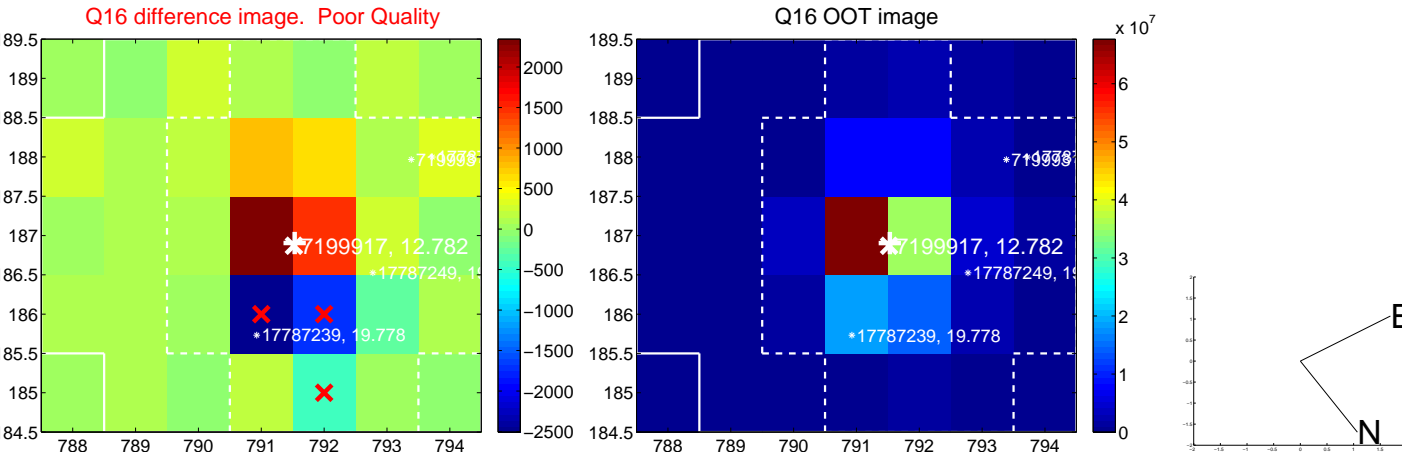
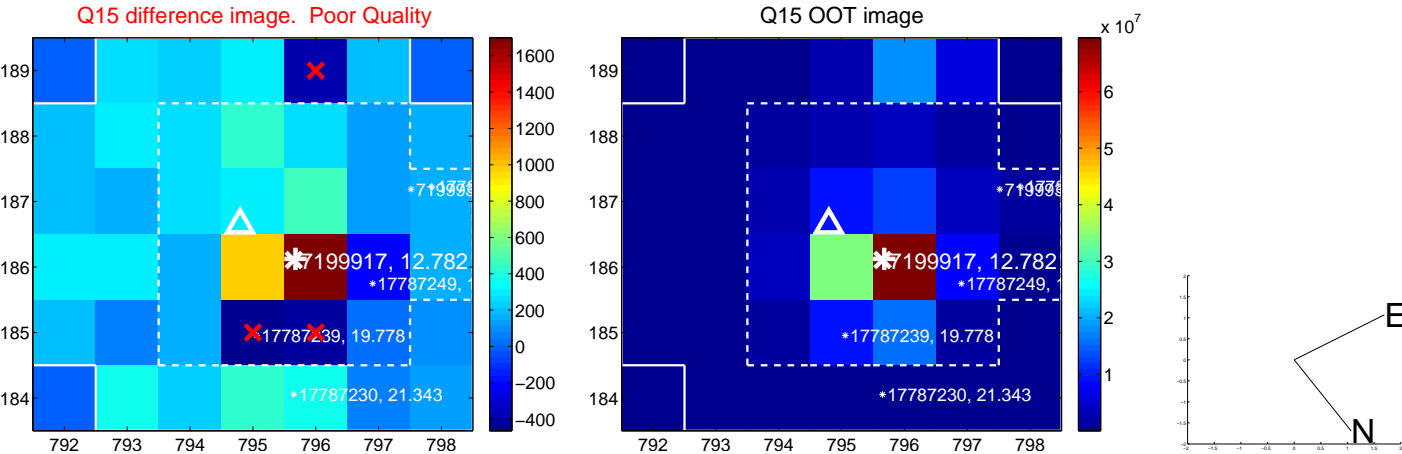
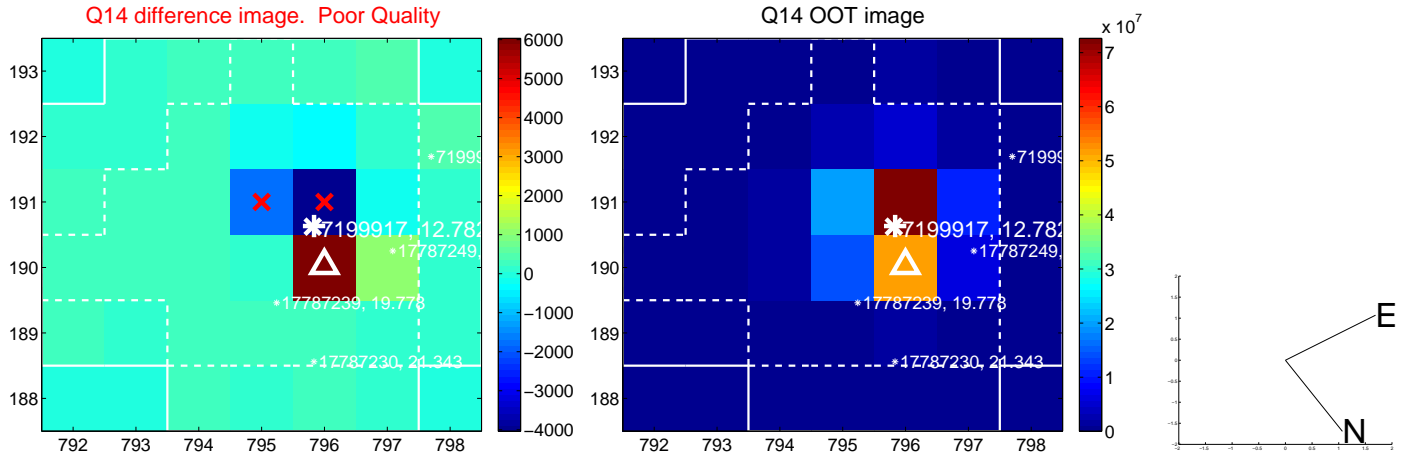
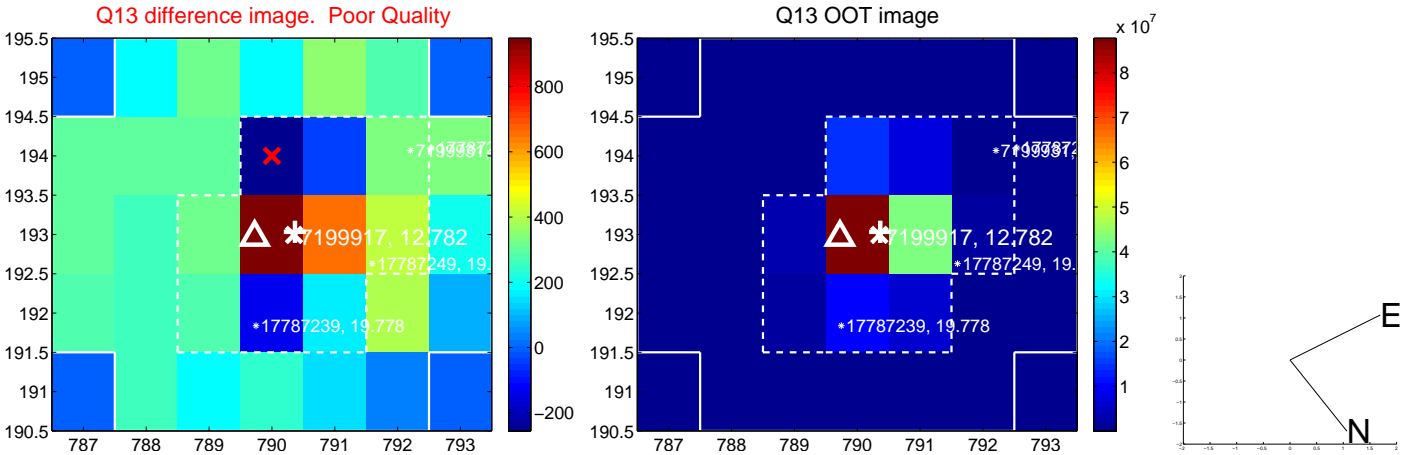
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



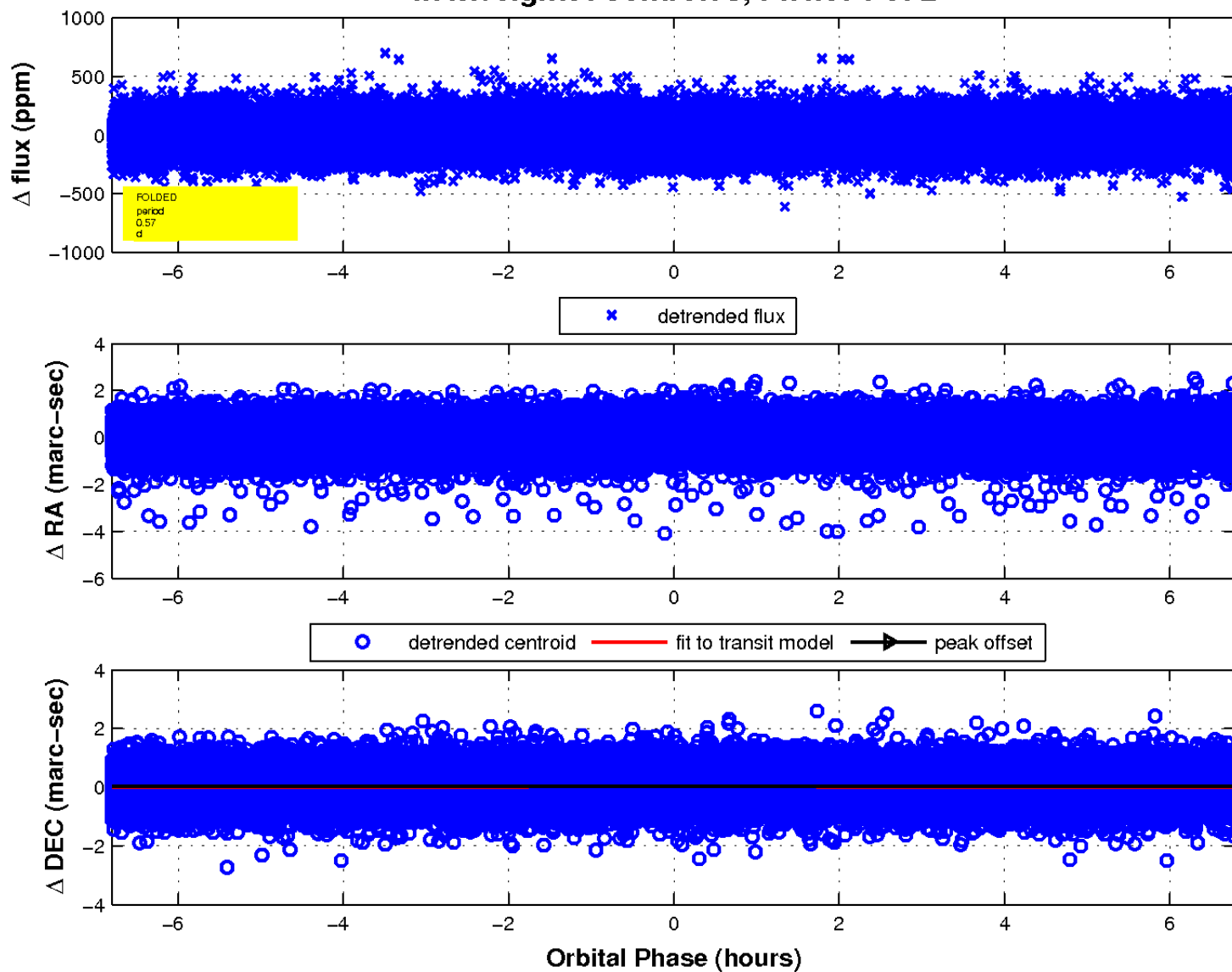
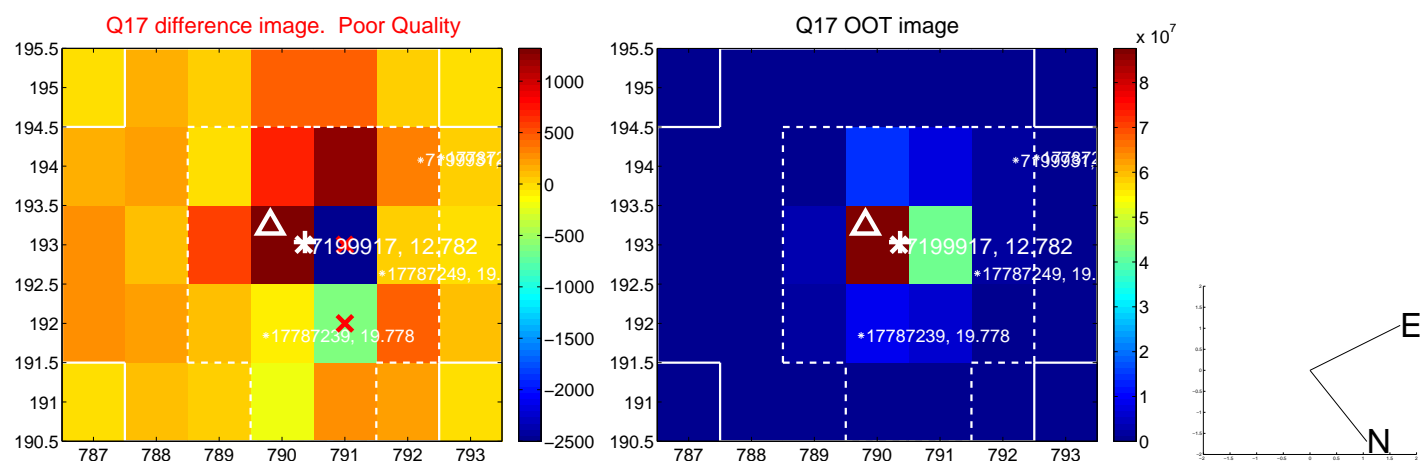
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

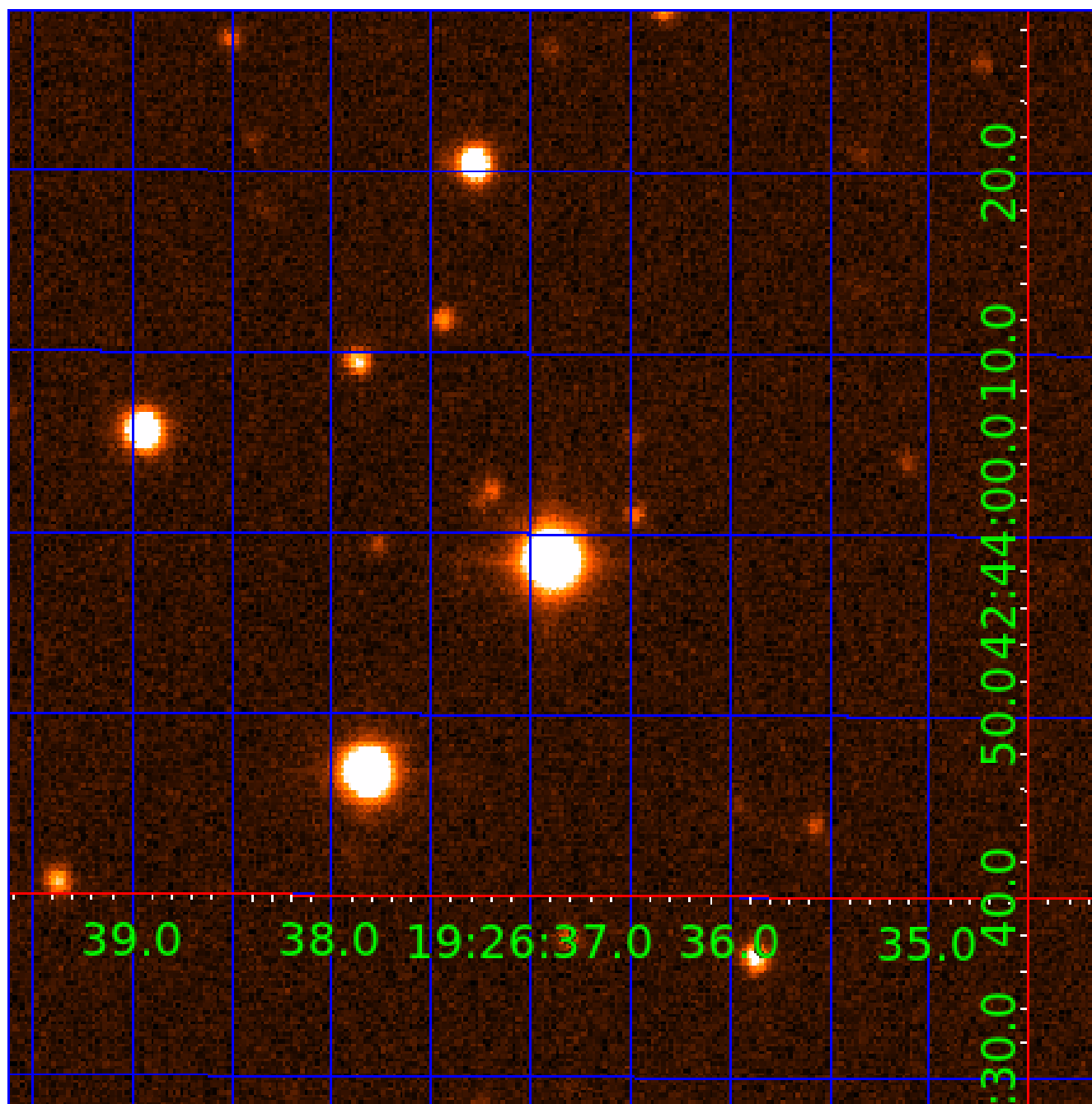


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007199917

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})
007199917-01	OBS	No	0.566756	131.852174	8.5	3.625	13.0	7.9	1.99	5551	0.60	17715.69
007199917-02	OBS	No	44.519490	151.558211	132.5	1.687	9.0	7.5	1.99	5551	2.26	52.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007199917-01	OBS	FP	0.00	1	0	0	1	LPP_DV—MOD_NONUNIQ_ALT—EPHEM_MATCH
007199917-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS

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

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

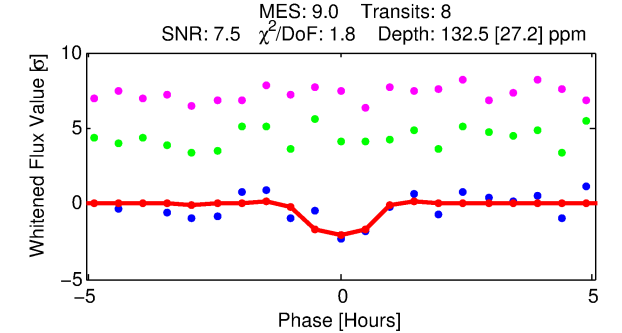
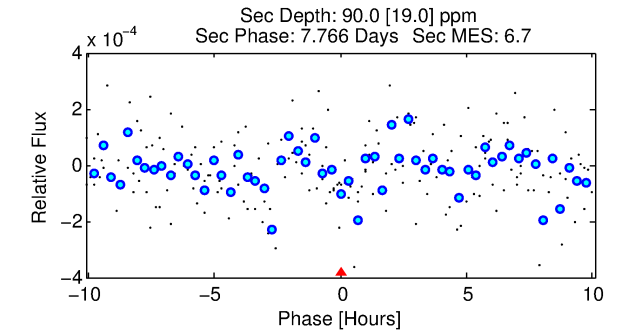
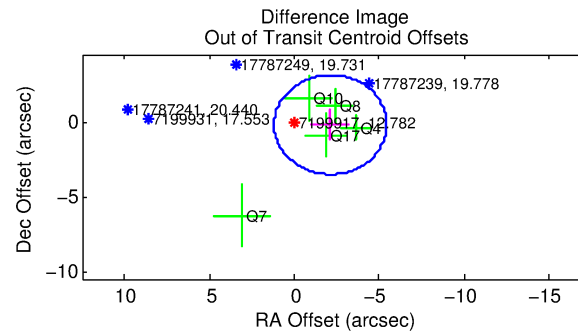
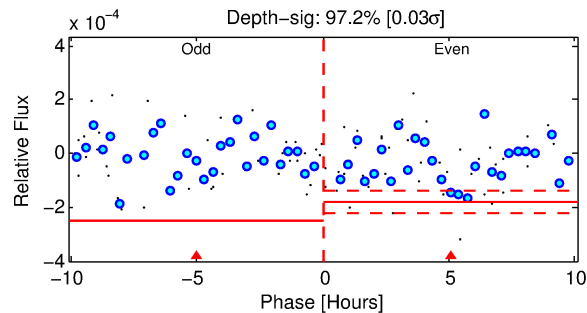
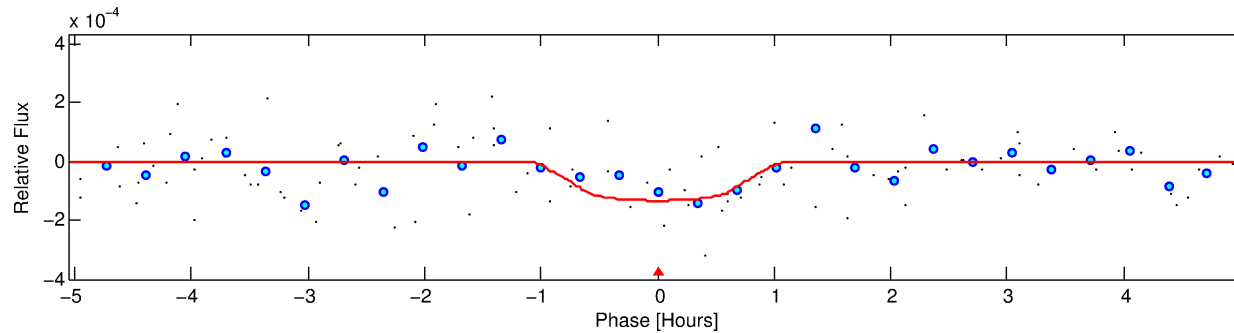
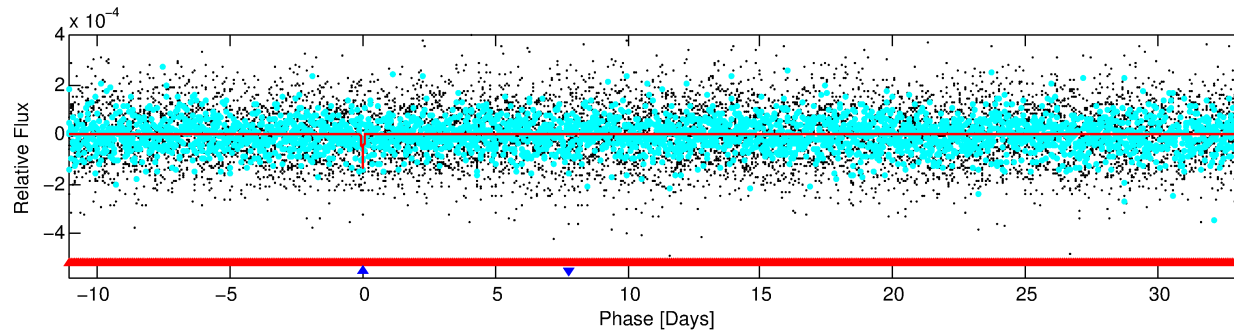
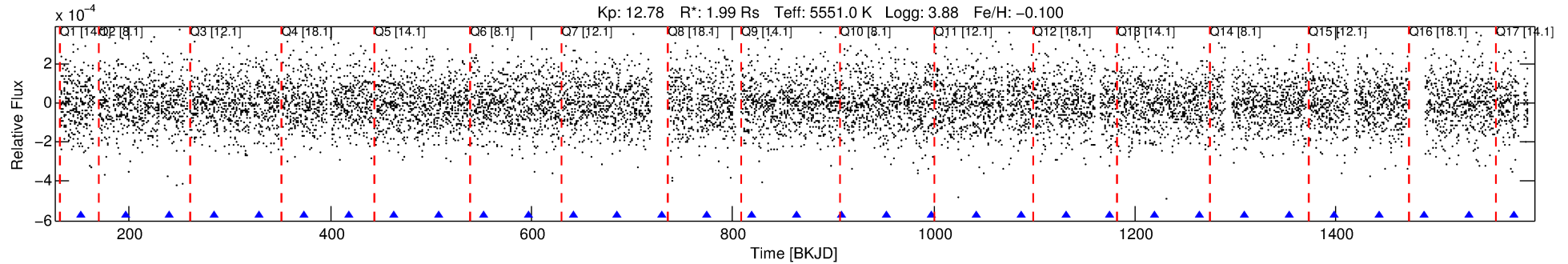
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007199917-02

No Significant Match Found

DV One-Page Summary

KIC: 7199917 Candidate: 2 of 2 Period: 44.519 d



DV Fit Results:

Period = 44.51949 [0.00072] d
Epoch = 151.5582 [0.0127] BKJD
Rp/R* = 0.0104 [0.0411]
a/R* = 203.01 [3370.79]
b = 0.09 [190.06]
Seff = 52.66 [27.97]
Teq = 687 [91] K
Rp = 2.26 [8.94] Re
a = 0.2523 [0.0817] AU
Ag = 617.20 [4877.35] [0.13σ]
Teffp = 5294 [10437] K [0.44σ]

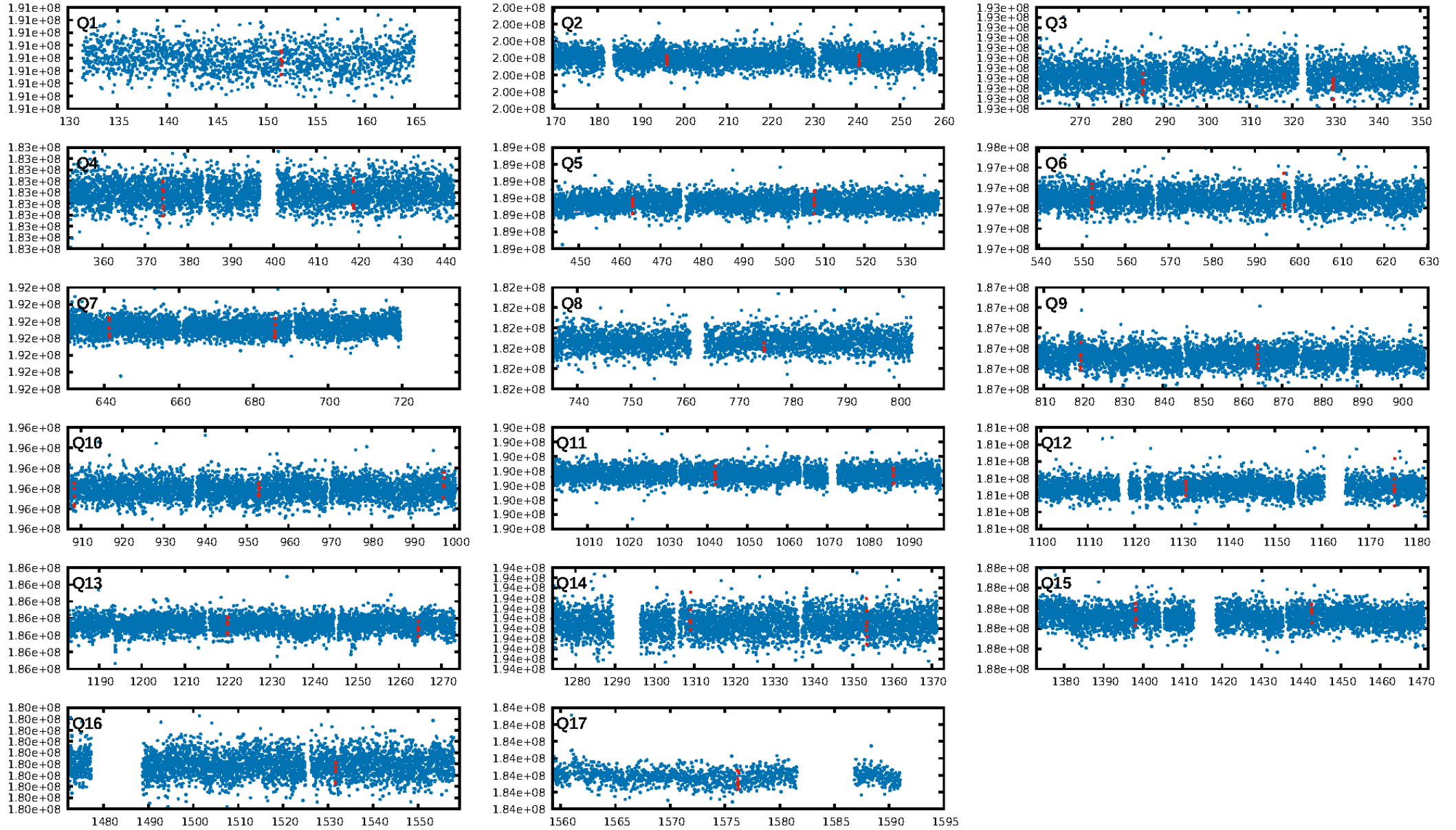
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [263.83σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.0%
ModelChiSquareGof-sig: 90.6%
Bootstrap-pfa: 2.46e-09
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 0.2879
Centroid-sig: N/A
Centroid-so: 1.123 arcsec [1.03σ]
OotOffset-rm: 2.146 arcsec [1.94σ]
KicOffset-rm: 2.068 arcsec [1.85σ]
OotOffset-st: 1/1/2/1 [5]
KicOffset-st: 1/1/2/1 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 0.00 [0/17]

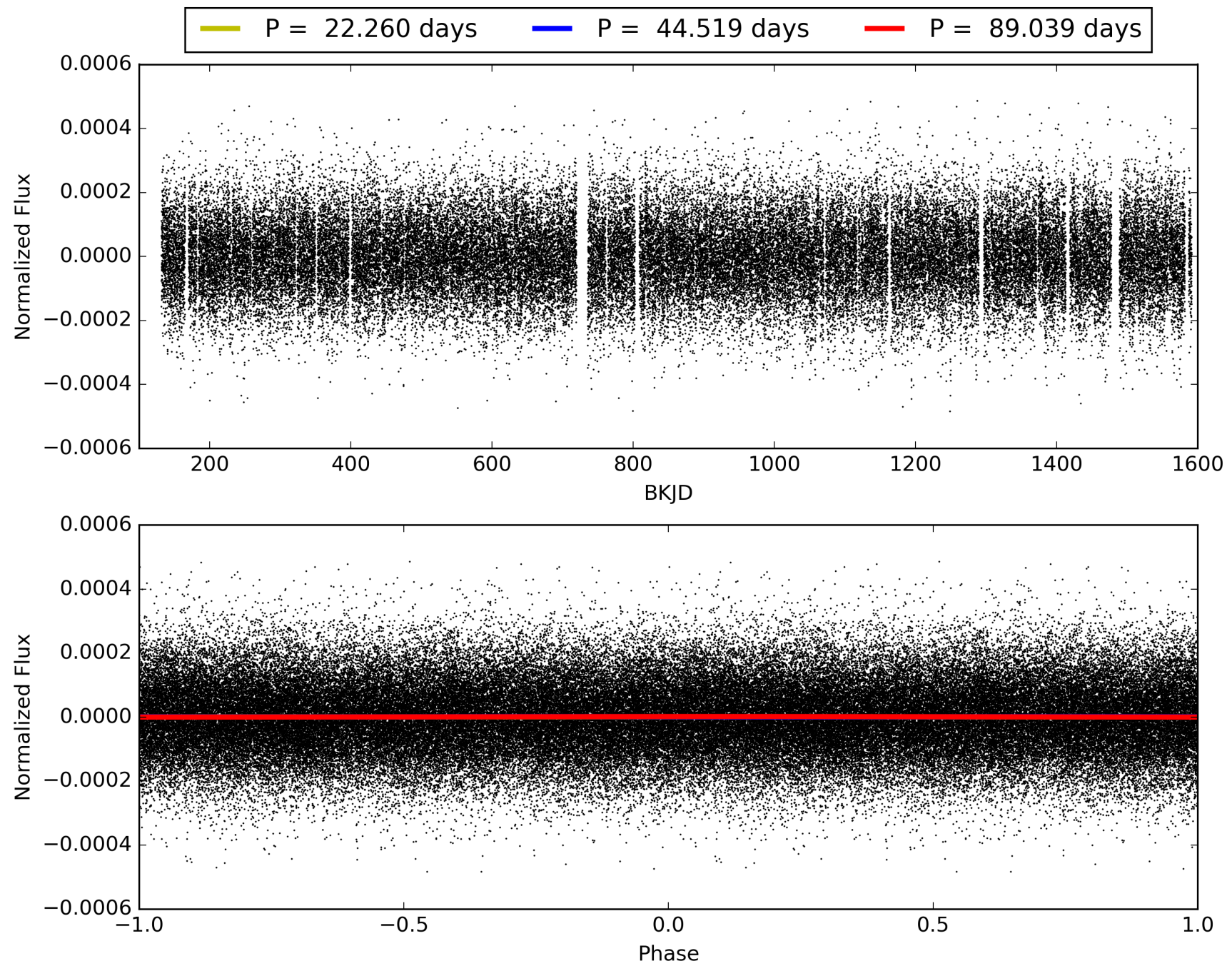
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 14:49:49 Z

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

TCE 007199917-02, PDC Light Curves

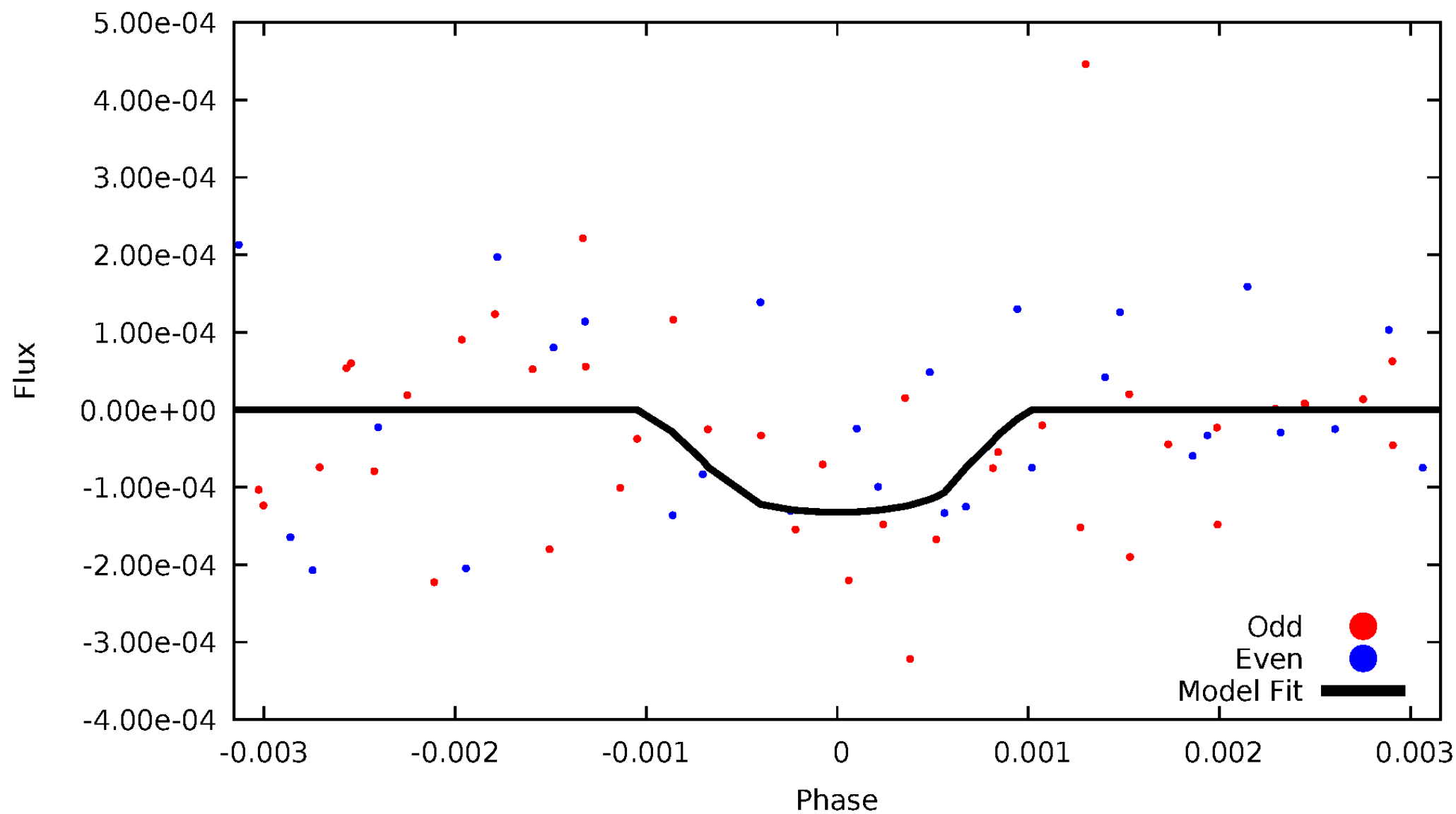


TCE 007199917-02



DV Odd/Even

TCE 007199917-02

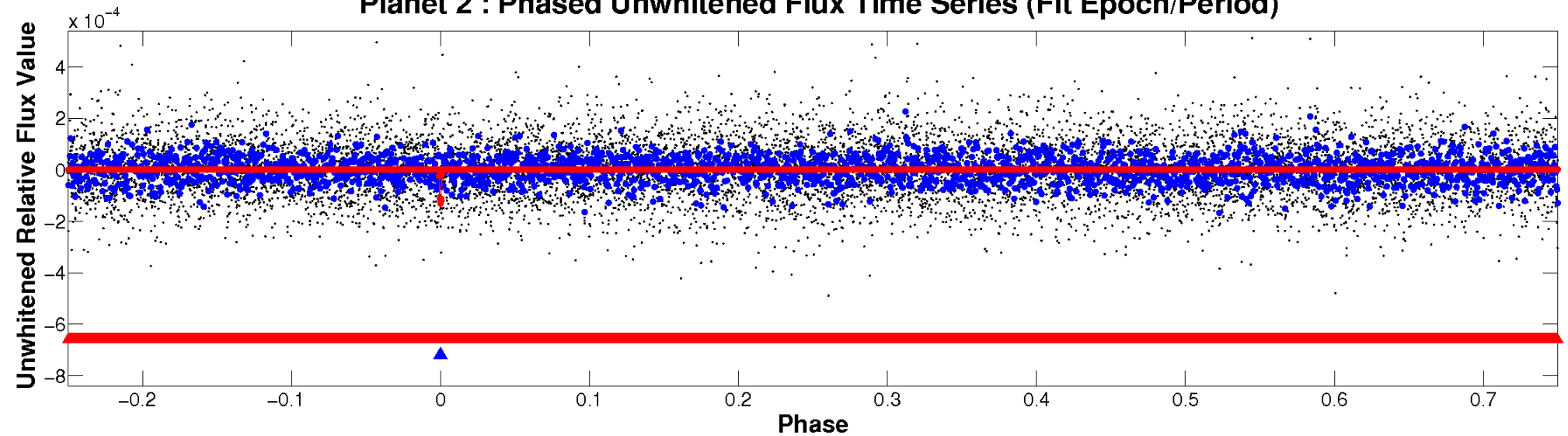


ALT Odd/Even

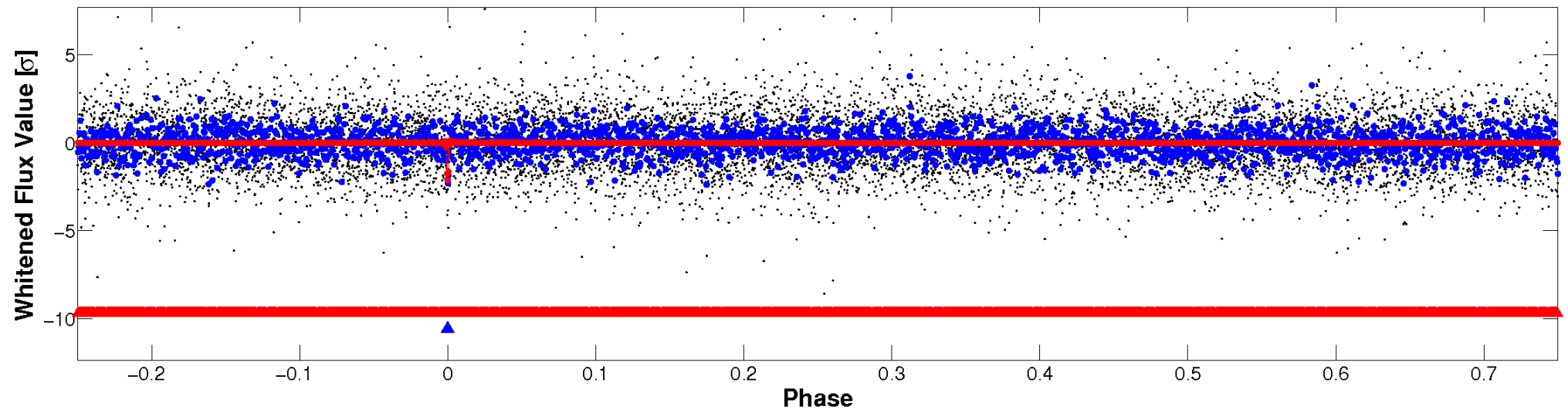
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

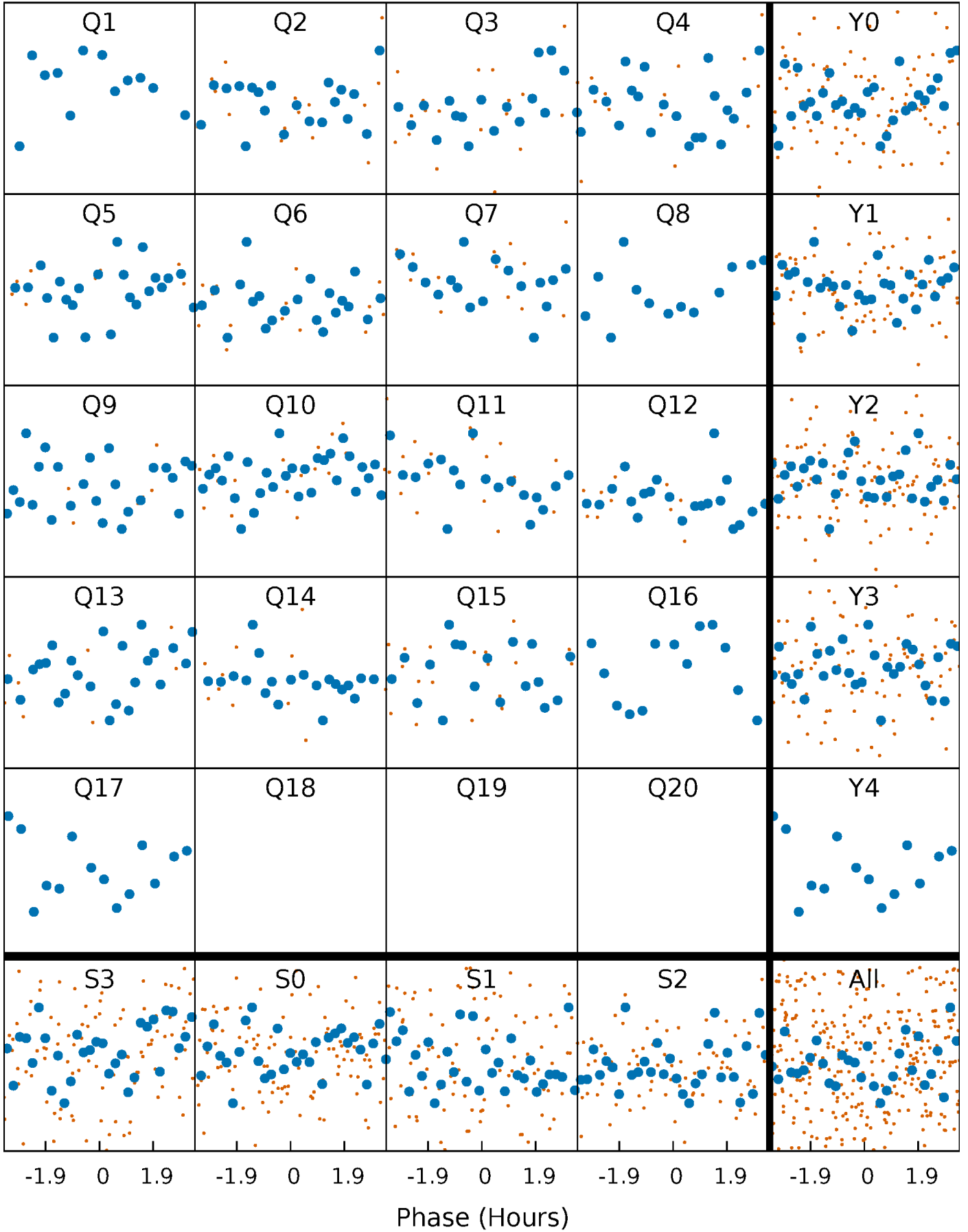


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



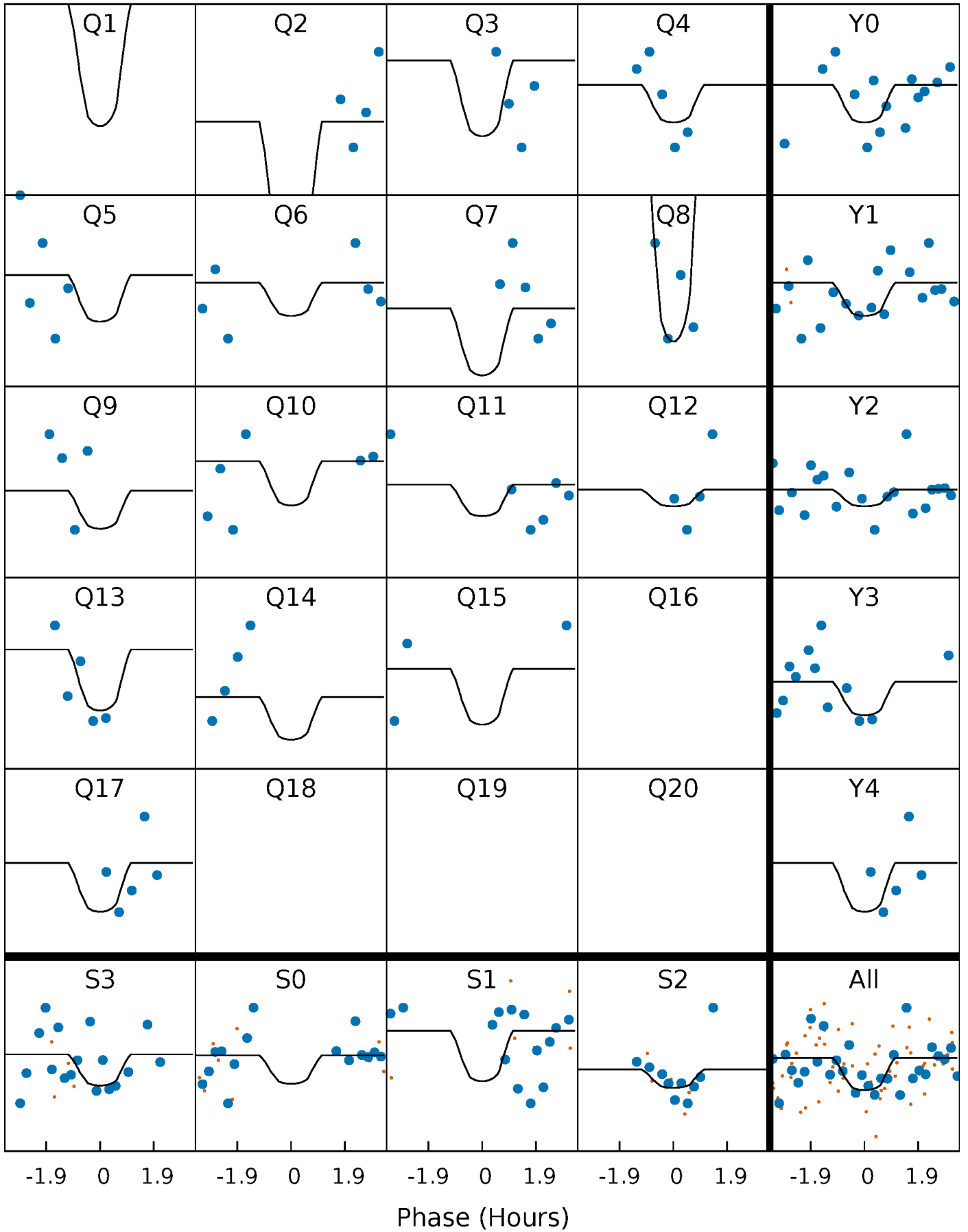
PDC Quarter-Phased Transit Curves

TCE 007199917-02 P= 44.519490 Days $T_0=151.558211$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007199917-02 P= 44.519490 Days $T_0=151.558211$ (BKJD)

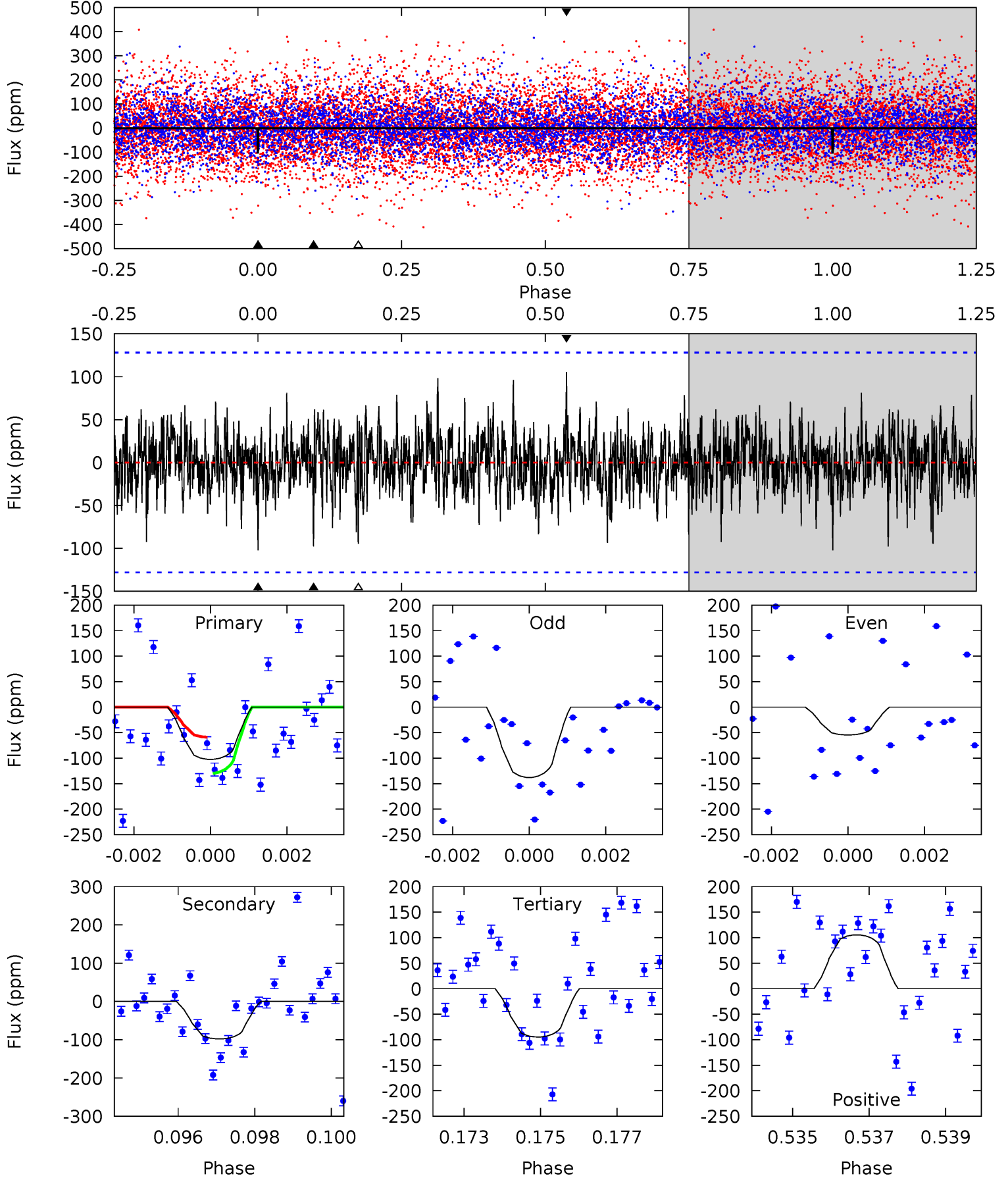


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

007199917-02, P = 44.519490 Days, E = 107.038721 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.26	4.08	3.95	4.40	5.34	3.11	1.14	0.32	-0.13	0.13	-0.32	1.73	0.61	0.51	1.42



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 007199917

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5551^{+182}_{-126}	$3.876^{+0.301}_{-0.108}$	$-0.100^{+0.350}_{-0.200}$	$1.985^{+0.415}_{-0.675}$	$1.080^{+0.159}_{-0.159}$	$0.195^{+0.403}_{-0.076}$
	+3%/-2%	+8%/-3%	+350%/-200%	+21%/-34%	+15%/-15%	+207%/-39%
Source	PHO1	FLK73	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 007199917-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-98 ± 24	$6.48^{+7.25}_{-4.44}$	948^{+62}_{-80}	3566^{+1866}_{-710}	80^{+748}_{-63}
Alt.	N/A	N/A	N/A	N/A	N/A

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

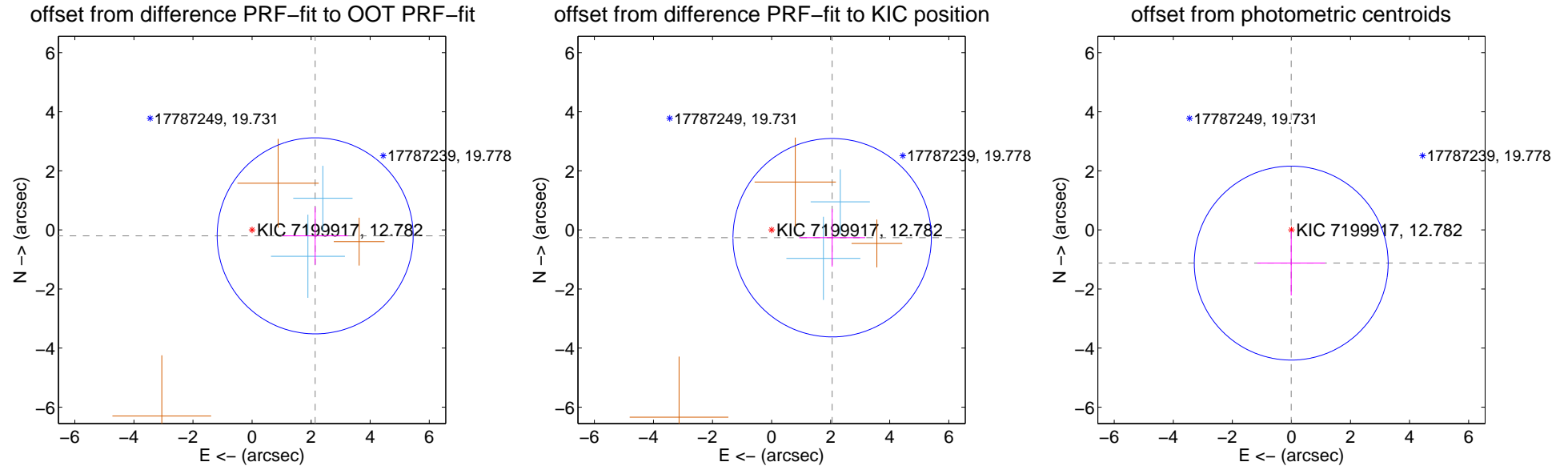
DV Centroid Data

Supplemental centroid analysis for 007199917-02. Kepler magnitude: 12.78. Transit SNR 7.46

There are 2 quarters with good PRF difference image offsets

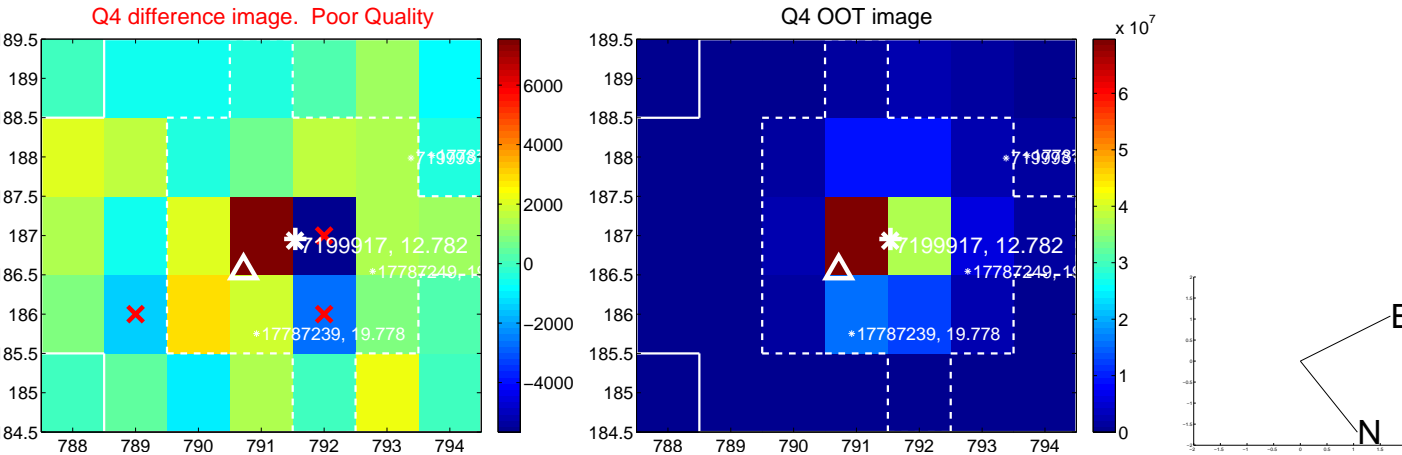
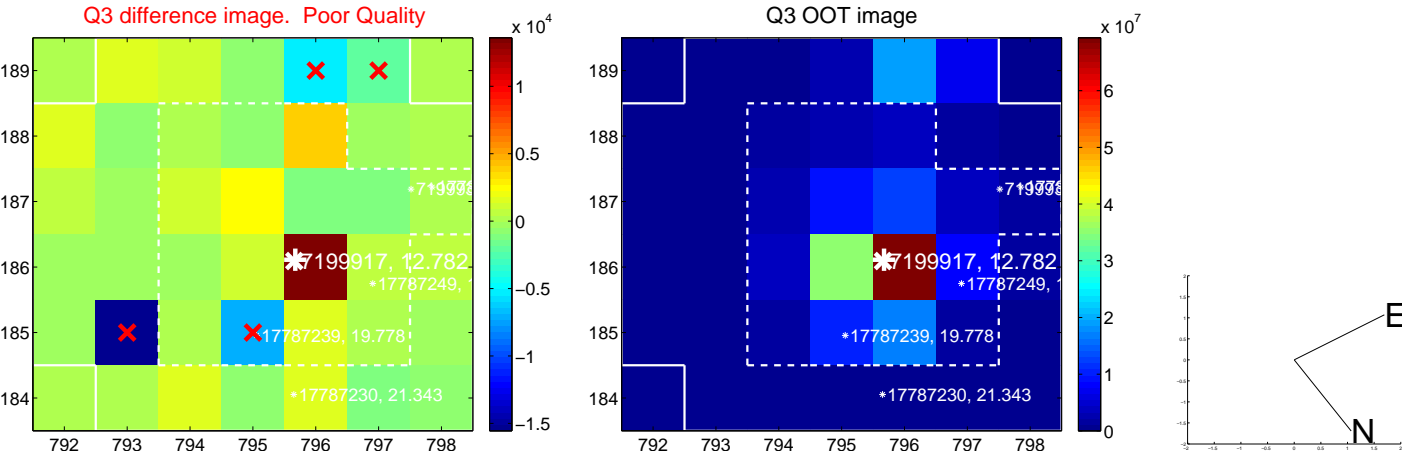
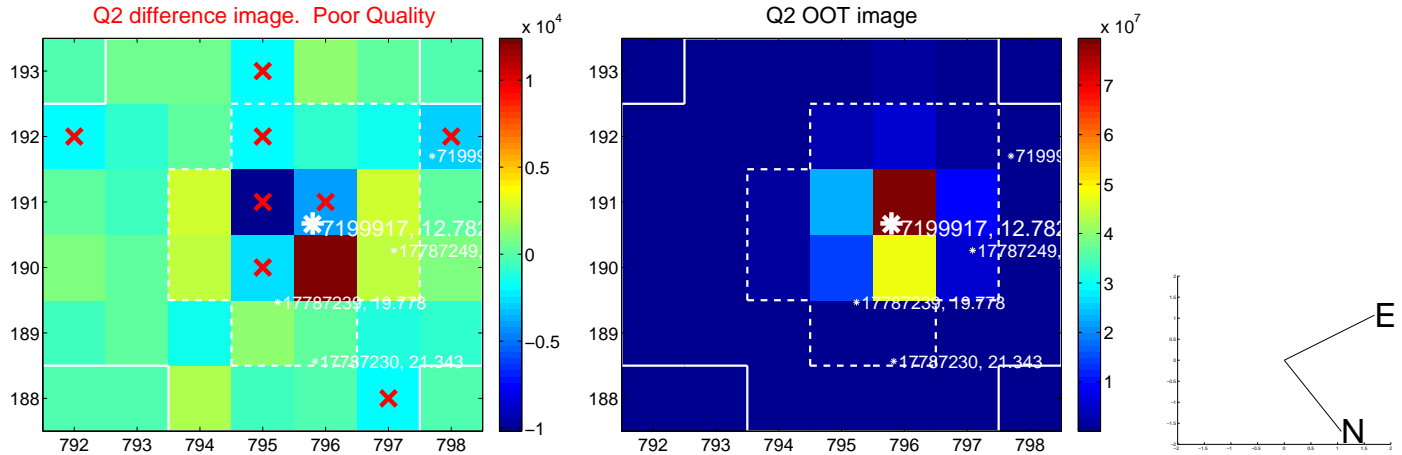
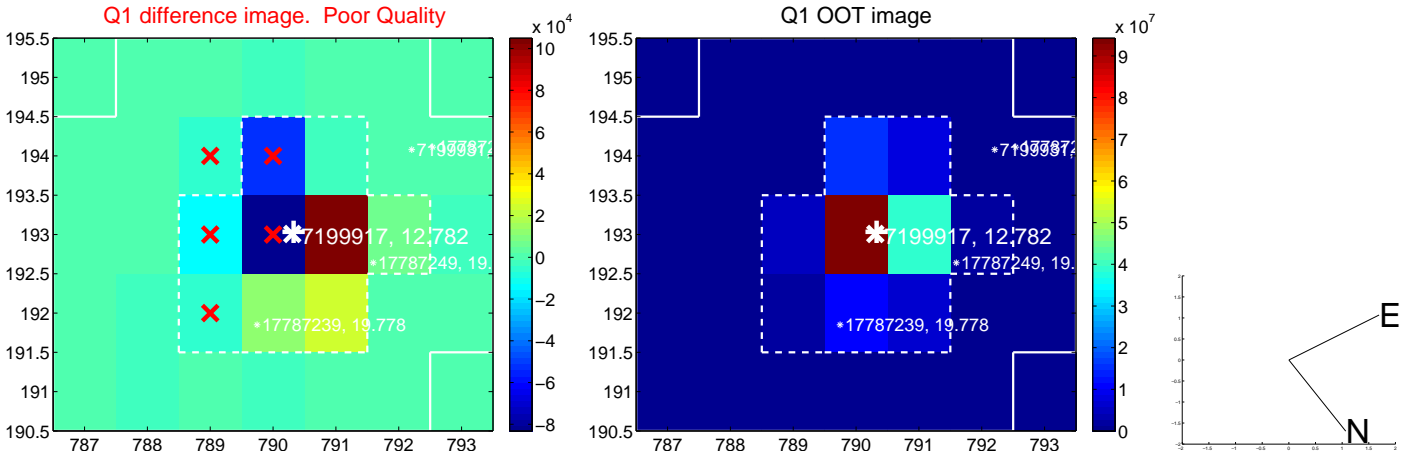
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.146 ± 1.106	1.94	-2.137 ± 1.107	-0.200 ± 0.975
PRF-fit source offset from KIC position	2.068 ± 1.120	1.85	-2.051 ± 1.122	-0.263 ± 0.977
photometric centroid source offset	1.12 ± 1.09	1.03	0.01 ± 1.15	-1.12 ± 1.09

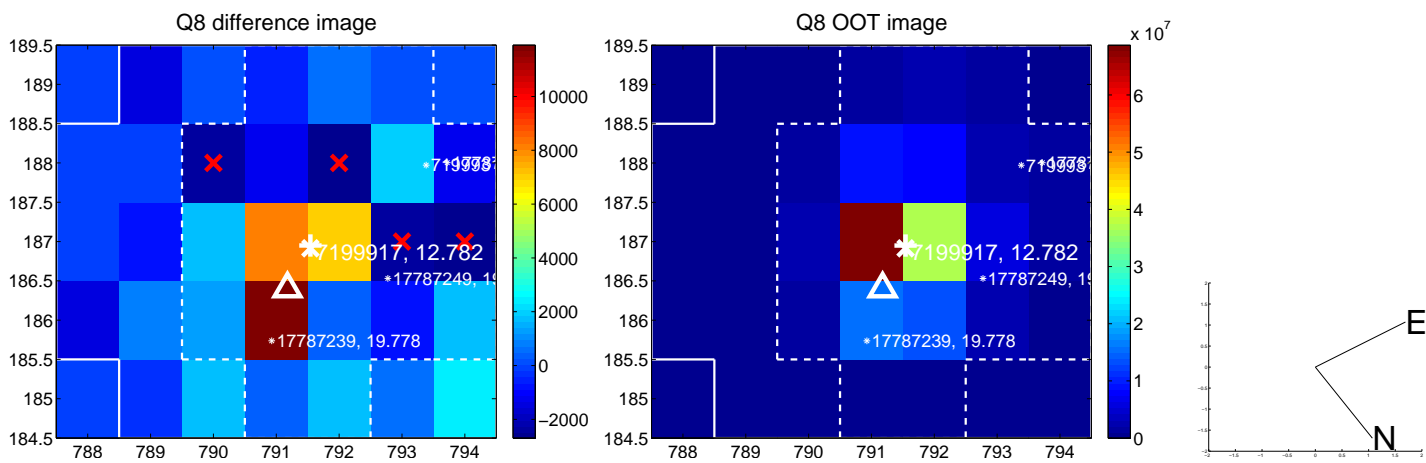
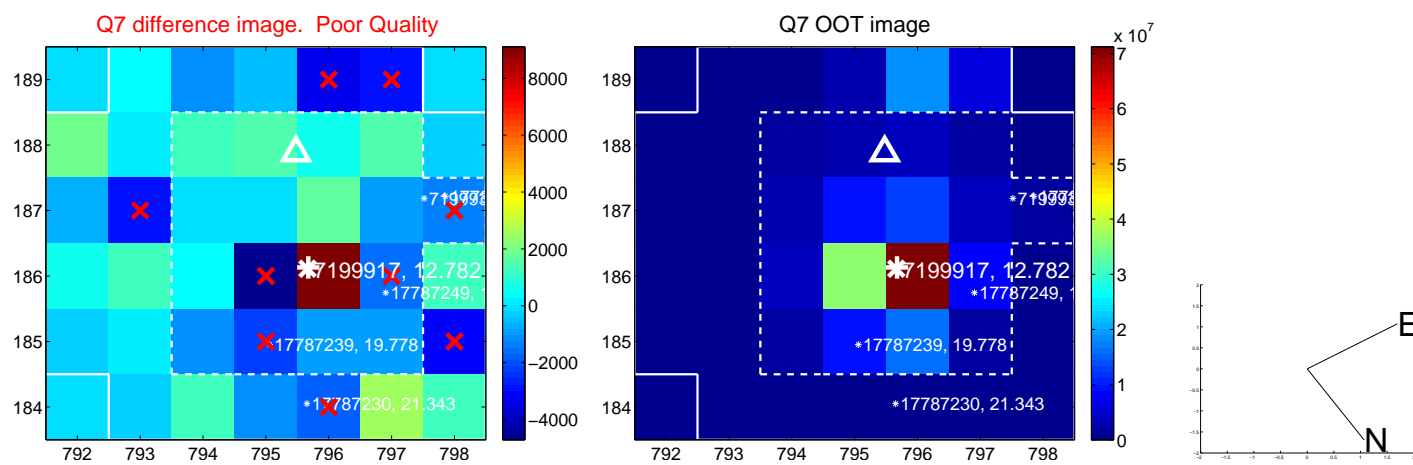
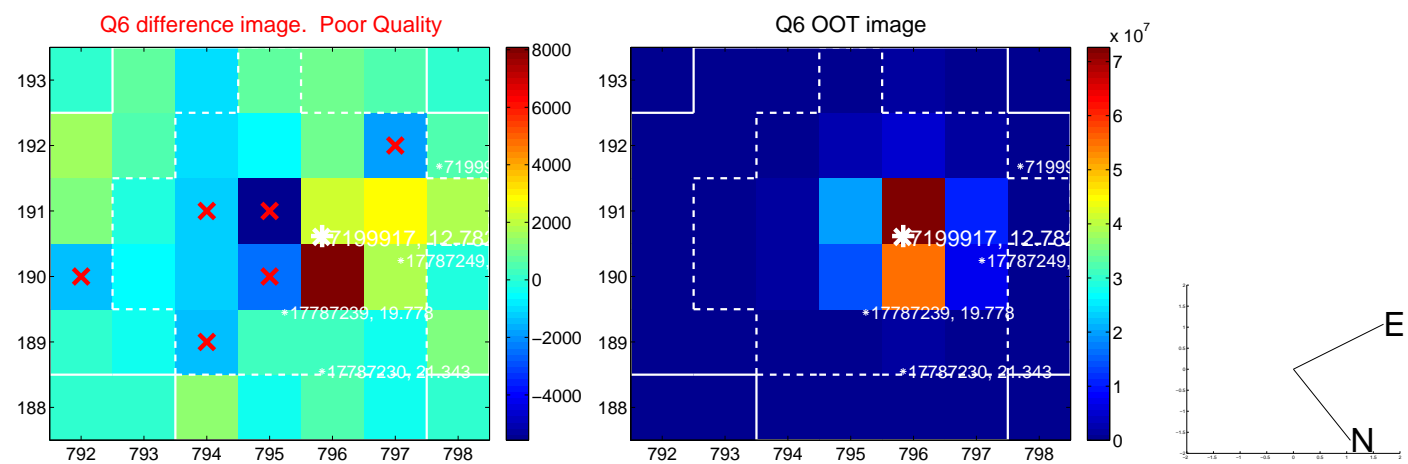
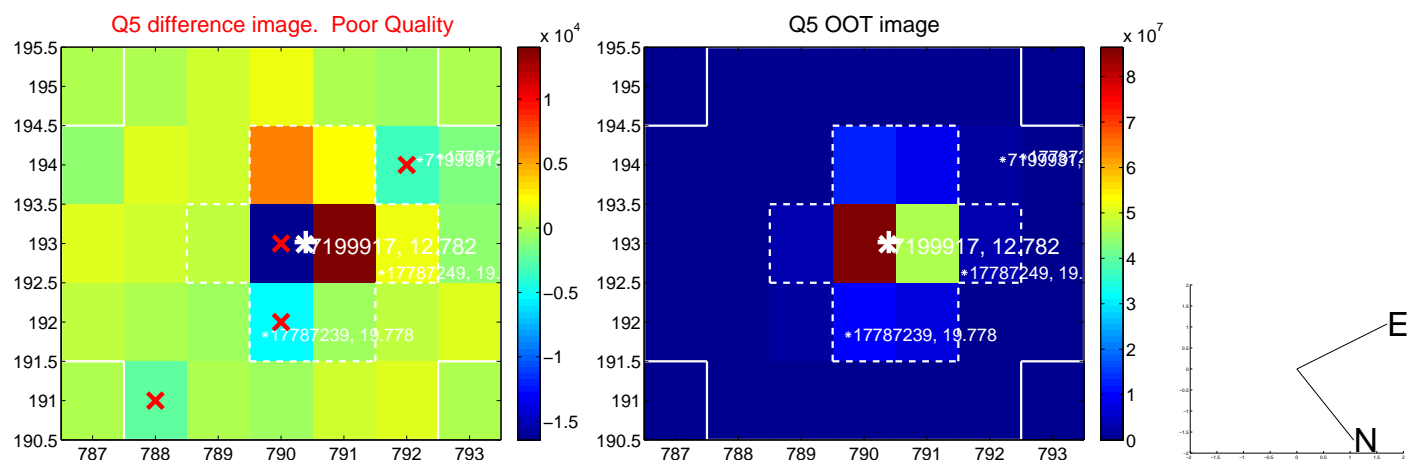


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

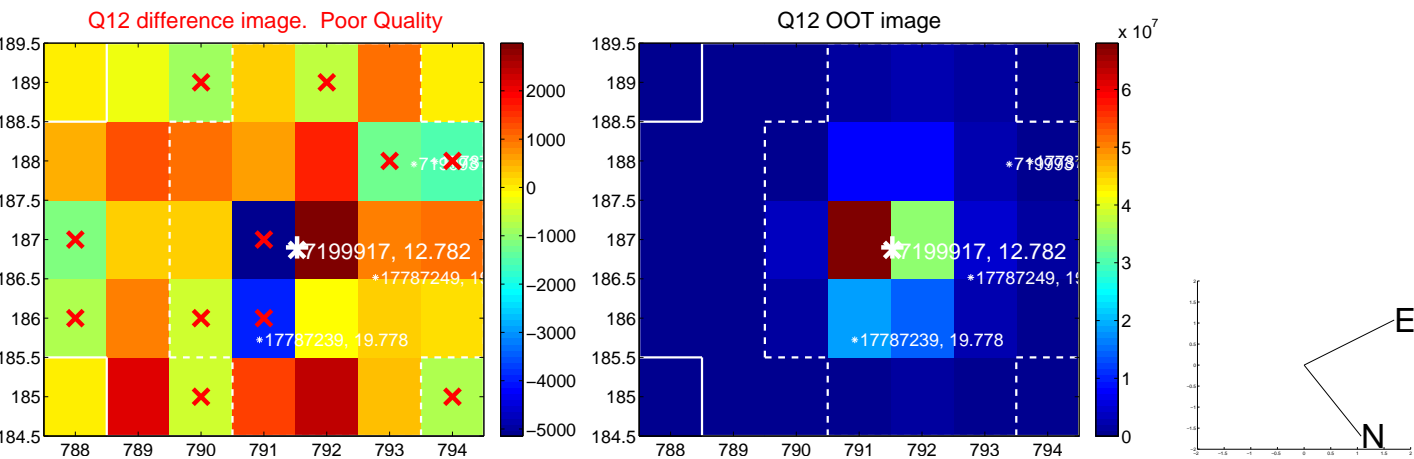
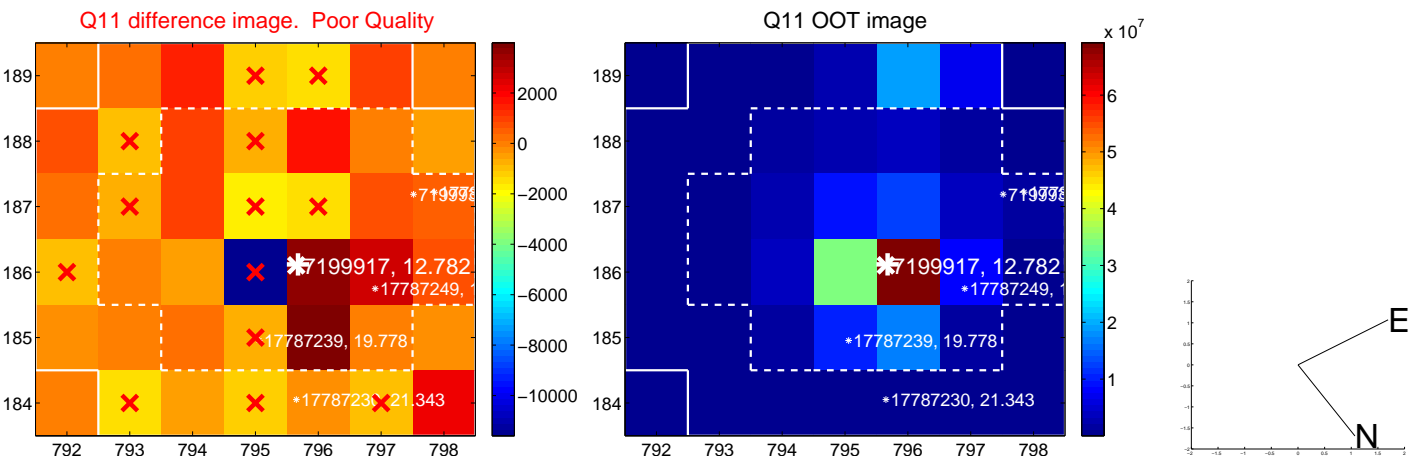
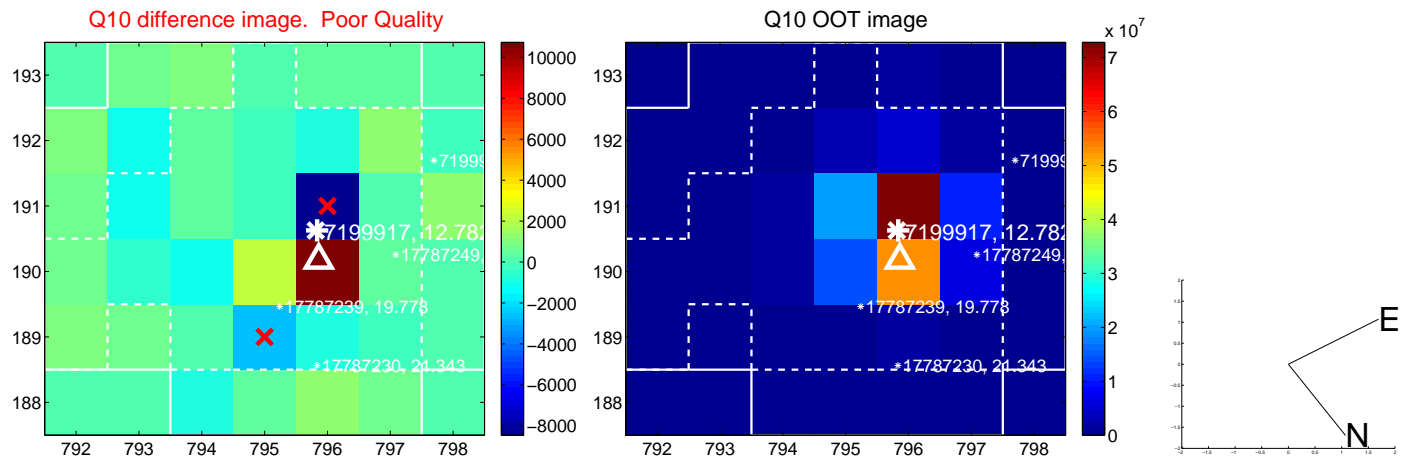
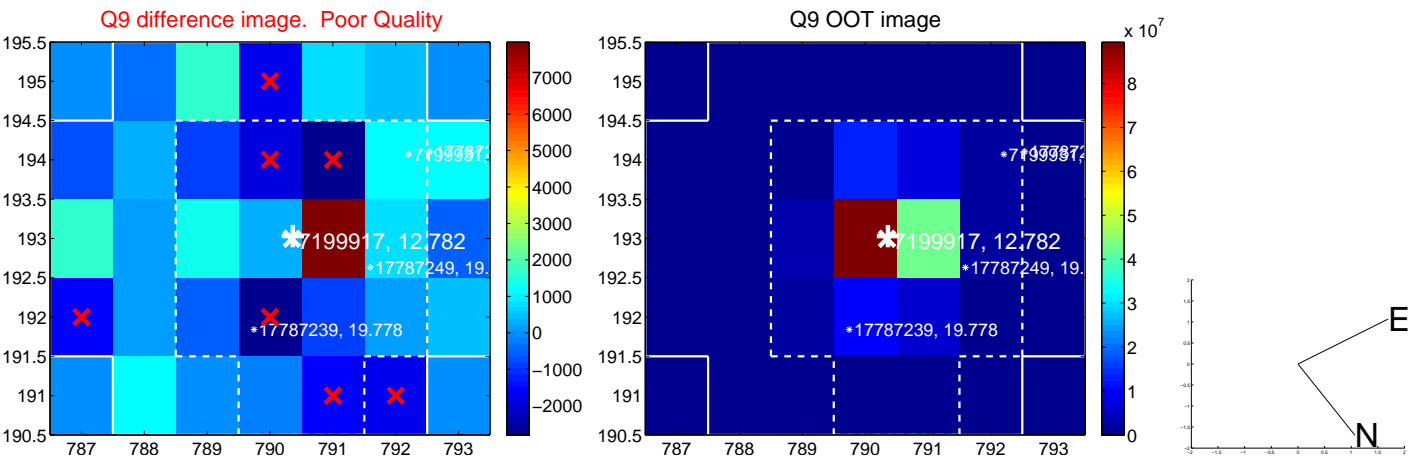
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



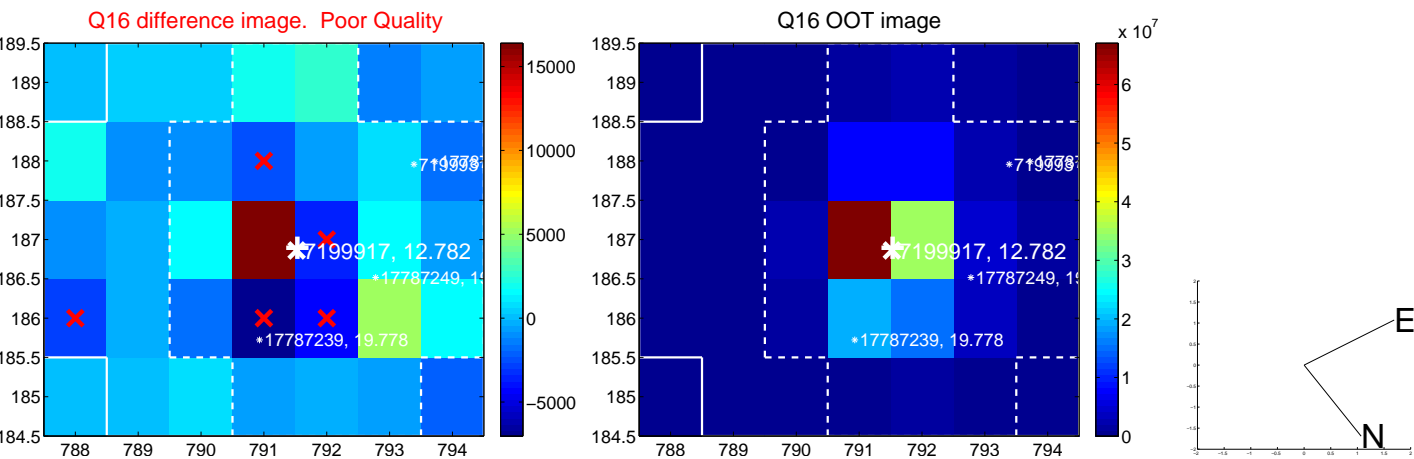
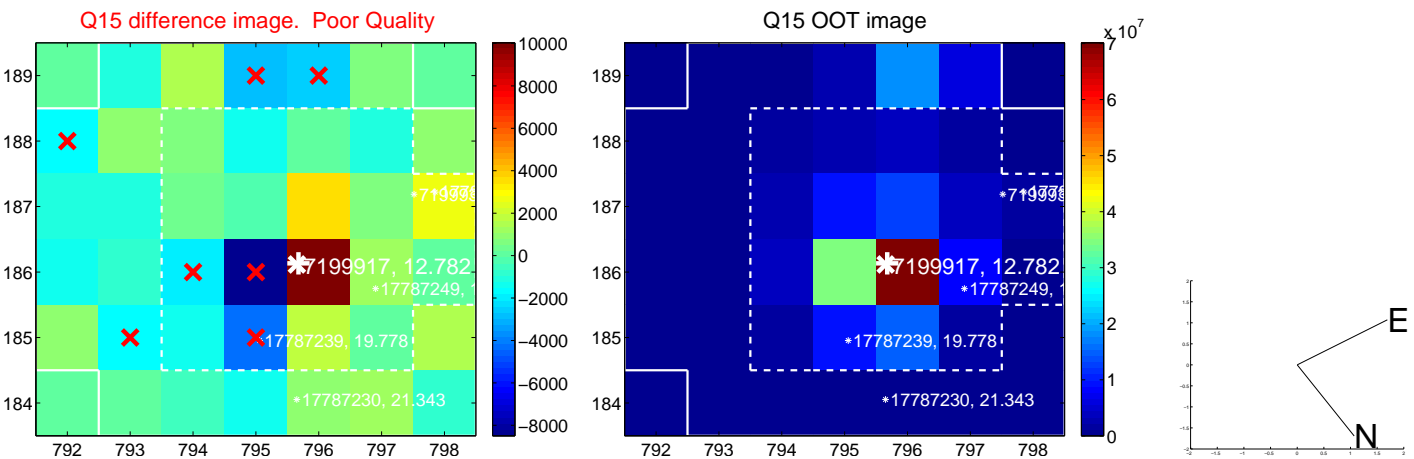
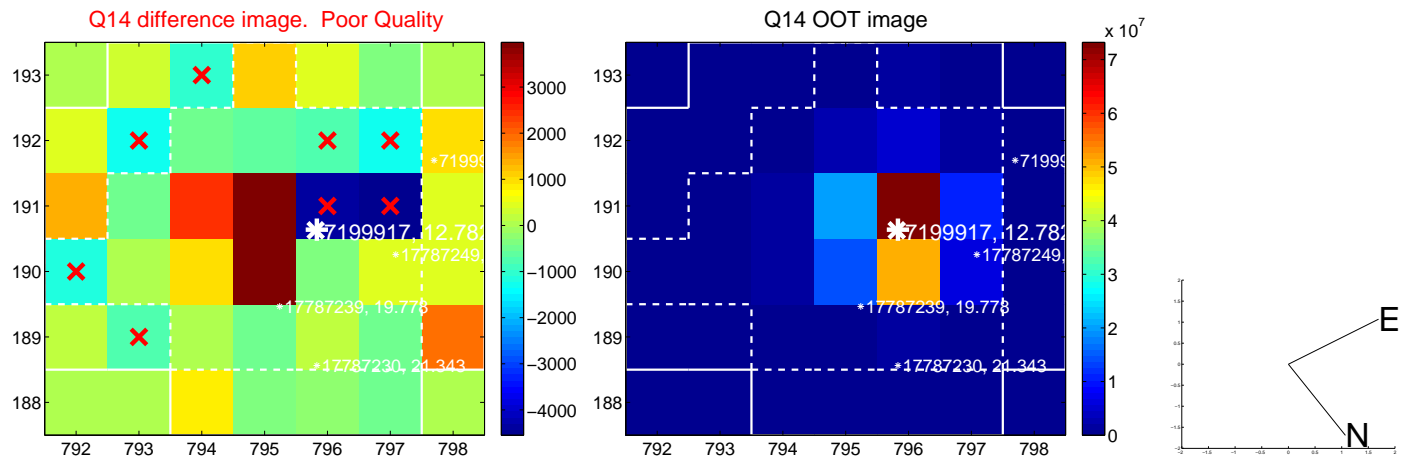
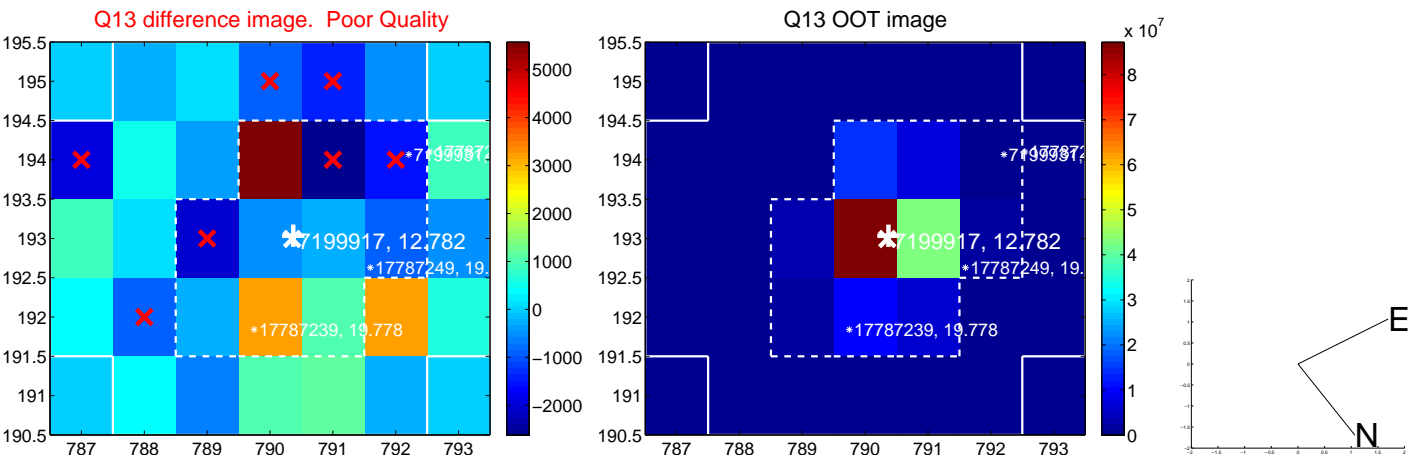
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



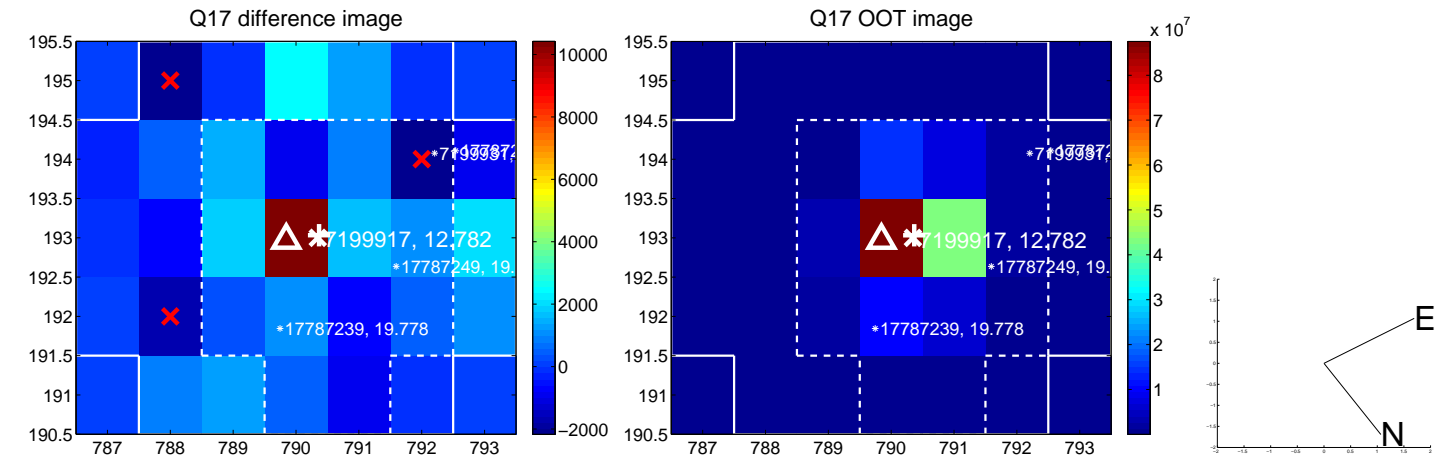
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



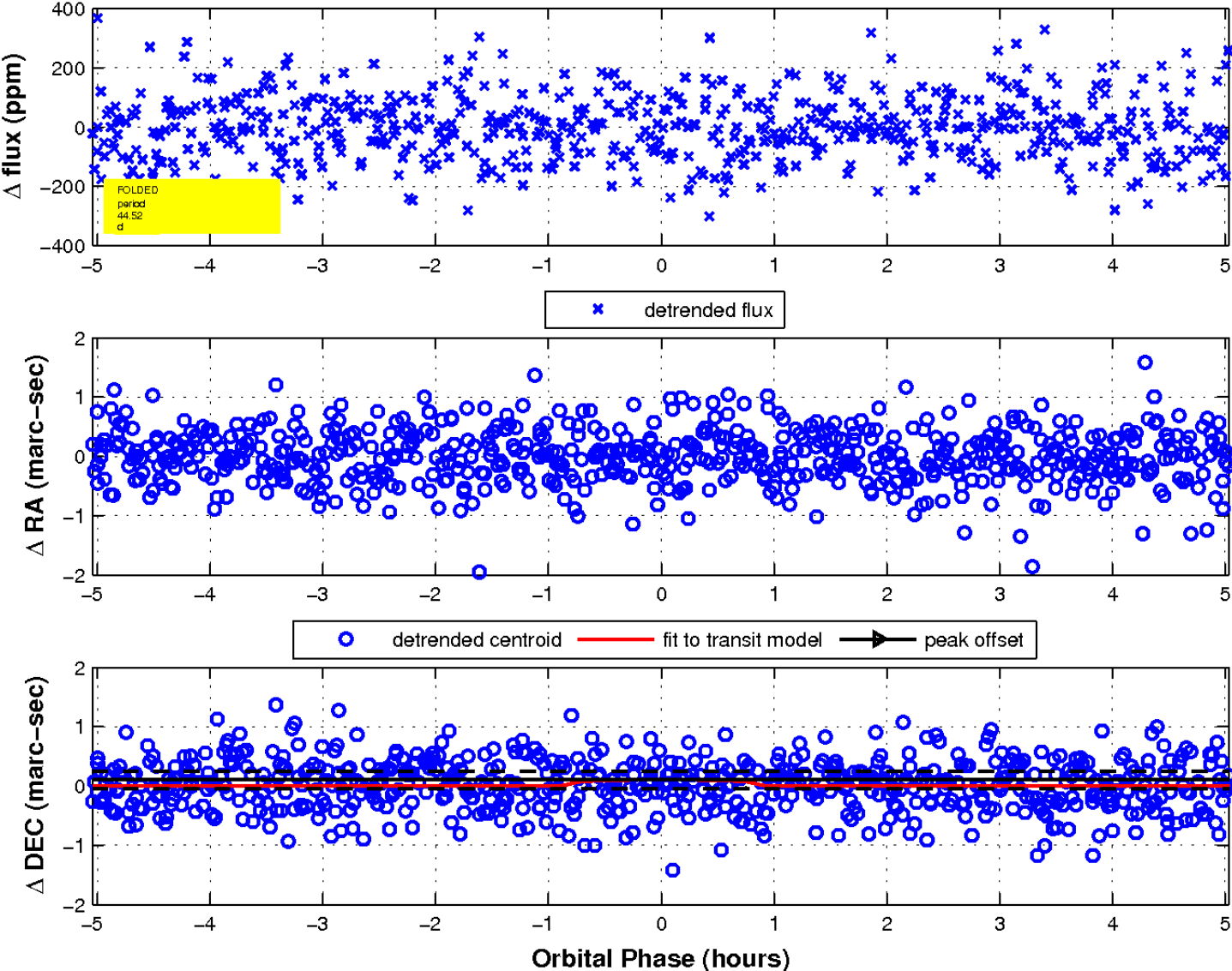
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

