

KIC 008197355

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})
008197355-01	OBS	No	0.818669	132.231926	71.9	2.667	9.9	9.3	1.89	7941	1.85	30185.02
008197355-02	OBS	No	0.818663	131.810981	52.5	3.495	10.5	7.4	1.89	7941	1.47	30185.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008197355-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008197355-02	OBS	FP	0.00	1	0	0	0	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.

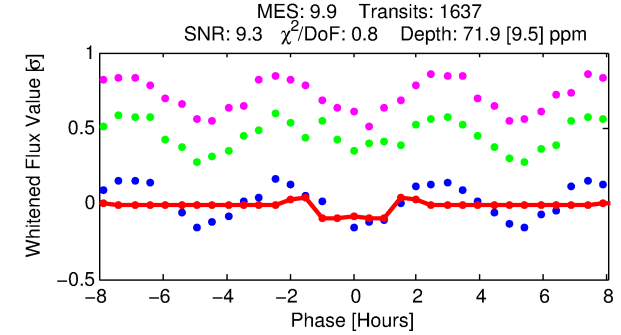
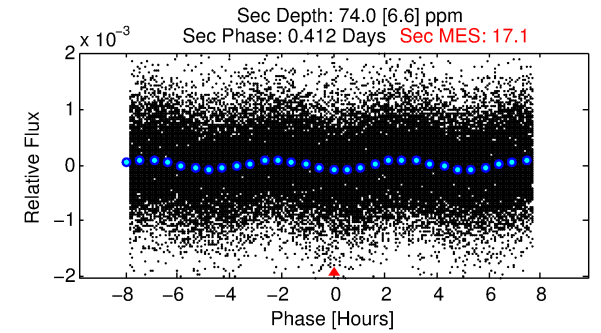
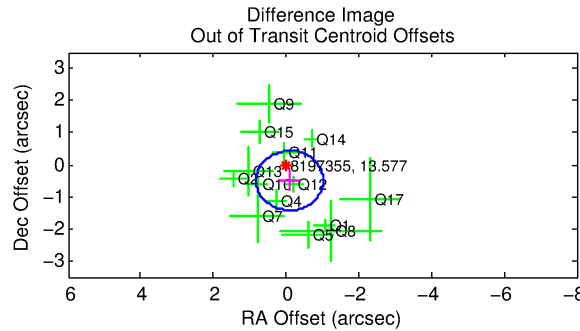
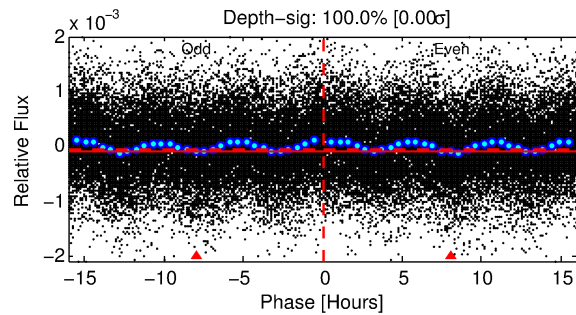
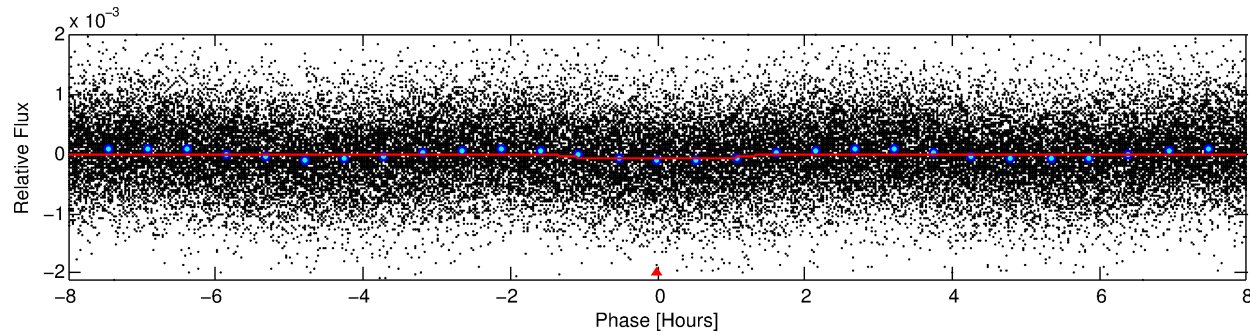
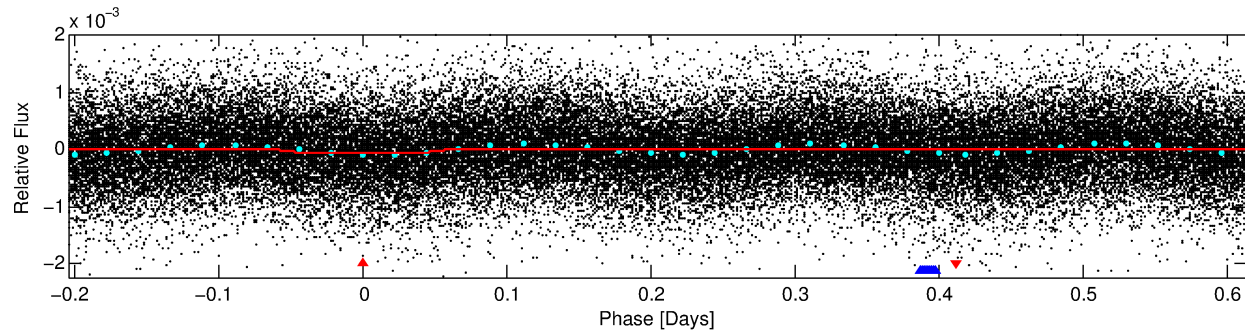
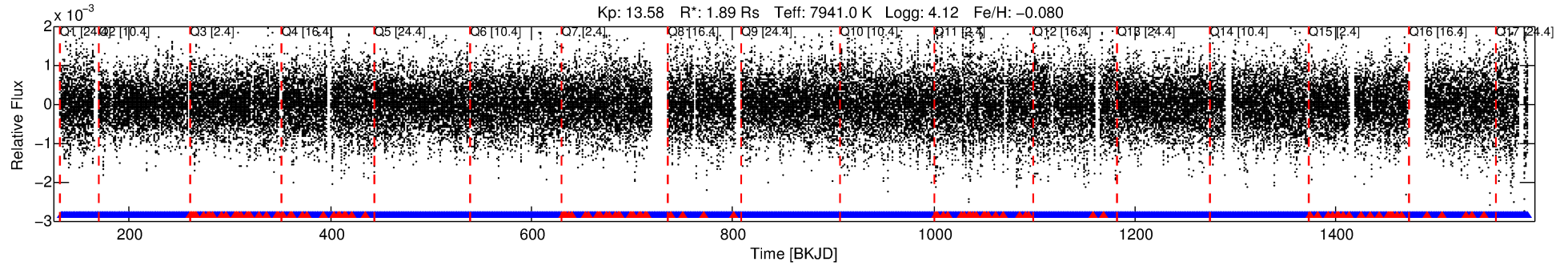
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008197355-01

No Significant Match Found

DV One-Page Summary

KIC: 8197355 Candidate: 1 of 2 Period: 0.819 d



DV Fit Results:

Period = 0.81867 [0.00001] d
Epoch = 132.2319 [0.0017] BKJD
Rp/R* = 0.0090 [0.0021]
a/R* = 1.42 [1.05]
b = 0.90 [0.31]
Seff = 30185.02 [10619.34]
Teq = 3361 [296] K
Rp = 1.85 [0.66] Re
a = 0.0205 [0.0045] AU
Ag = 4.98 [2.85] [1.40σ]
Teffp = 7762 [988] K [4.27σ]

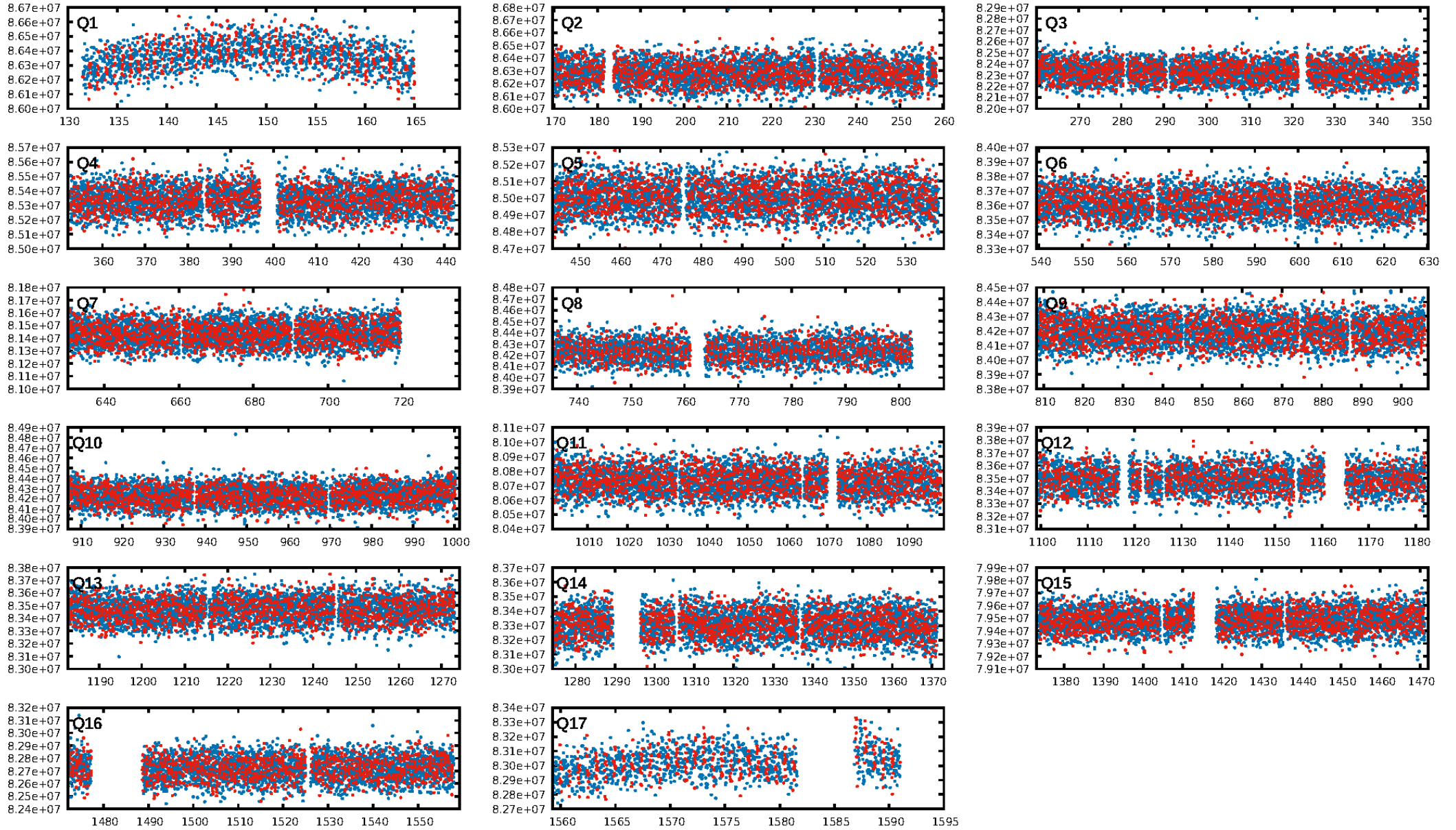
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.19e-18
RollingBand-fgt: 0.93 [1455/1564]
GhostDiagnostic-chr: 1.204
Centroid-sig: 11.6%
Centroid-so: 0.909 arcsec [1.69σ]
OotOffset-rm: 0.507 arcsec [1.64σ]
OotOffset-st: 3/3/3/5 [14]
KicOffset-rm: 0.499 arcsec [1.40σ]
KicOffset-st: 3/3/3/5 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 1.00 [17/17]

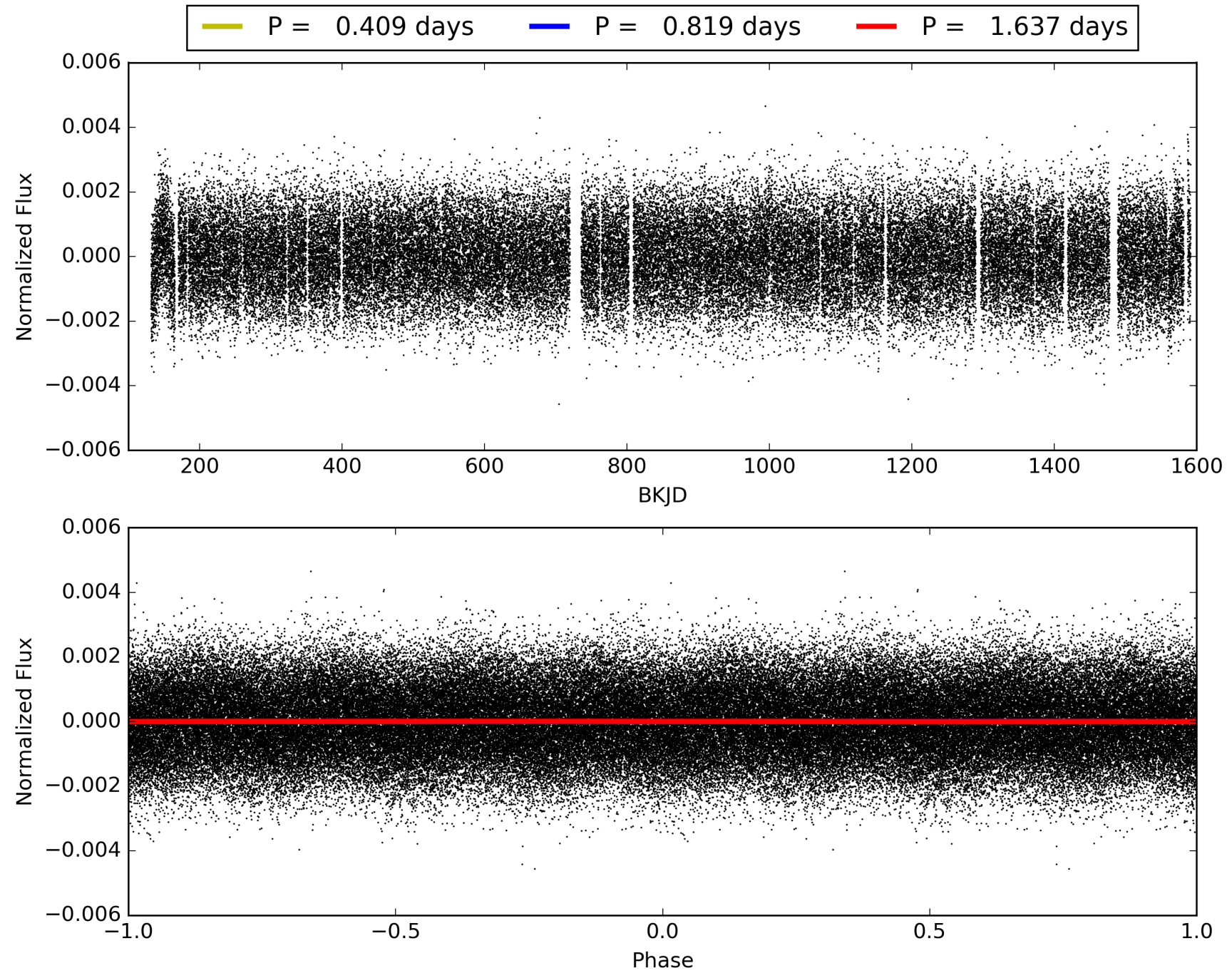
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:35:02 Z

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

TCE 008197355-01, PDC Light Curves

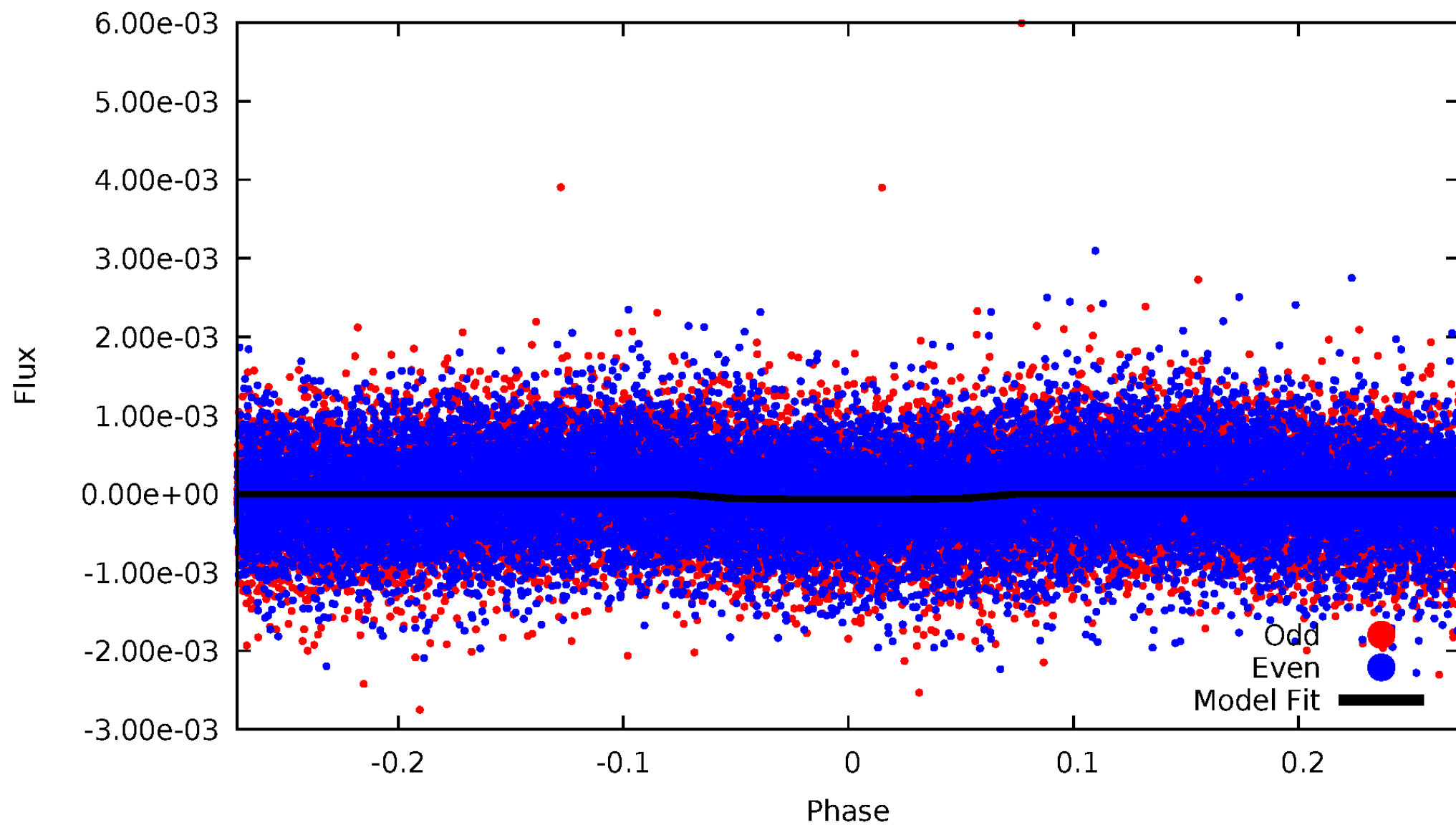


TCE 008197355-01



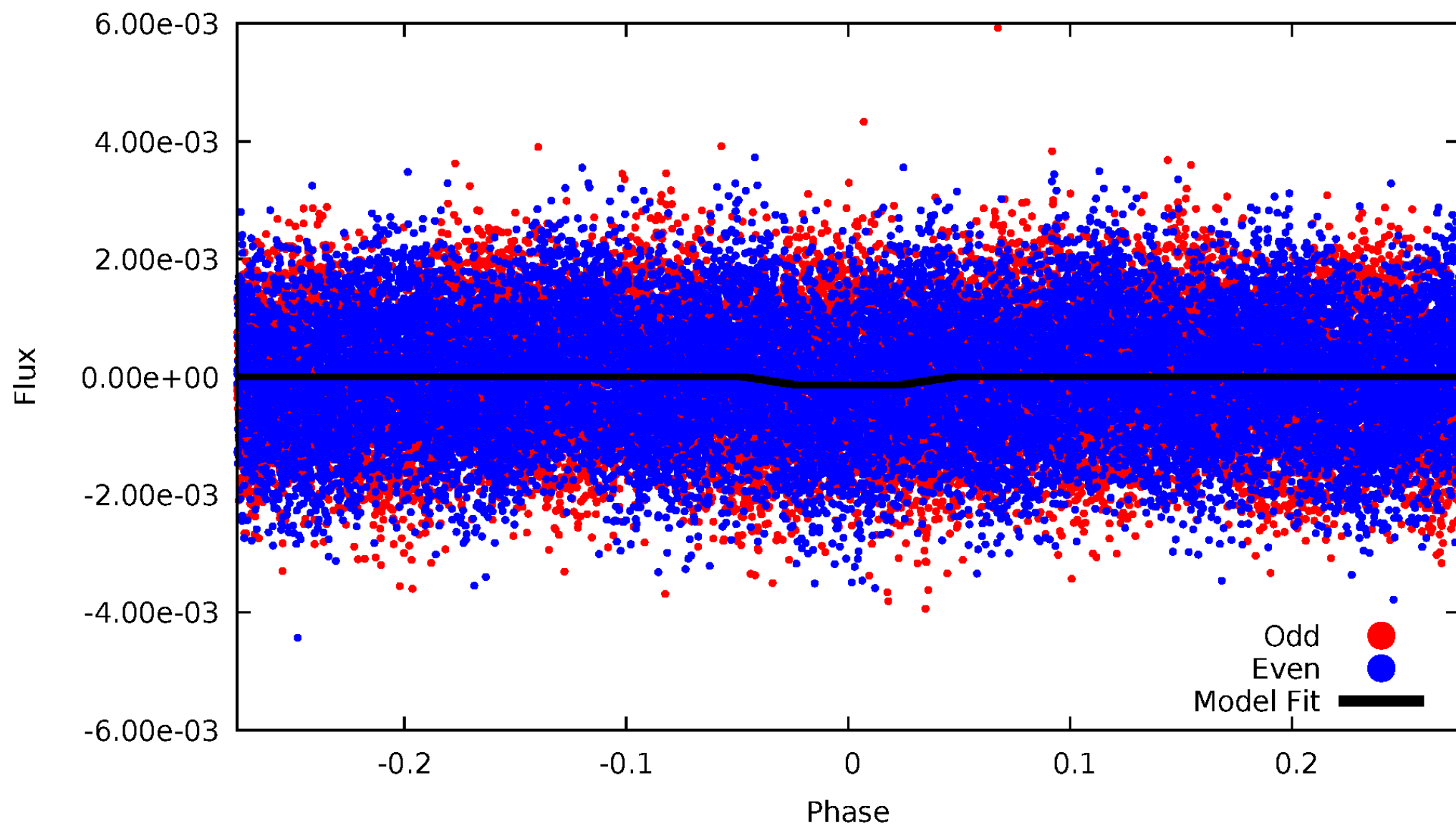
DV Odd/Even

TCE 008197355-01

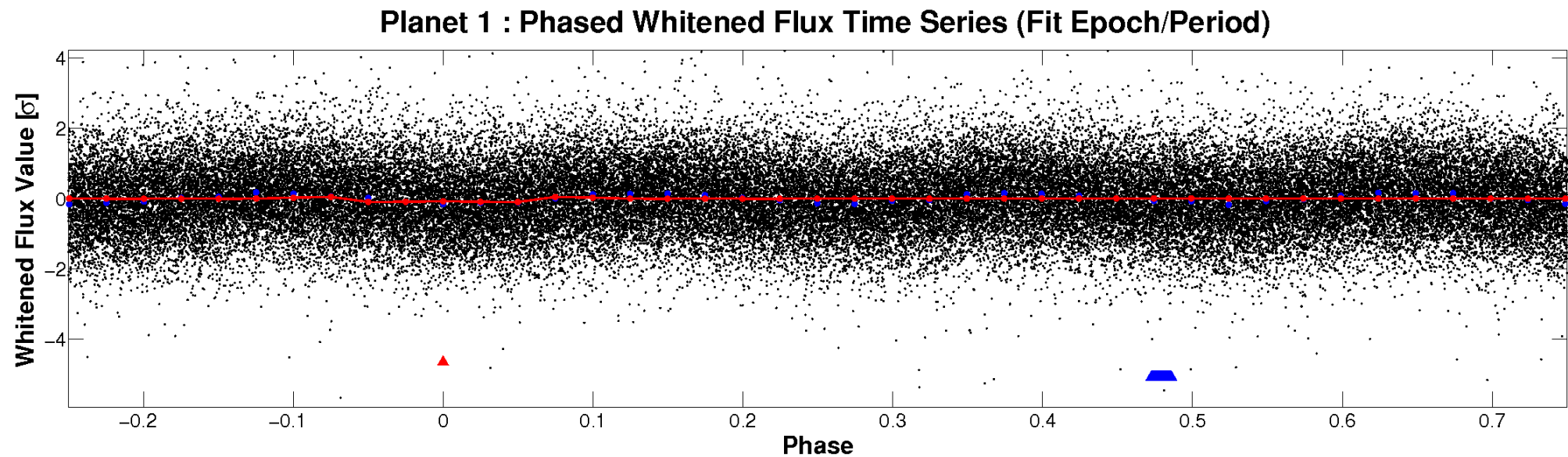
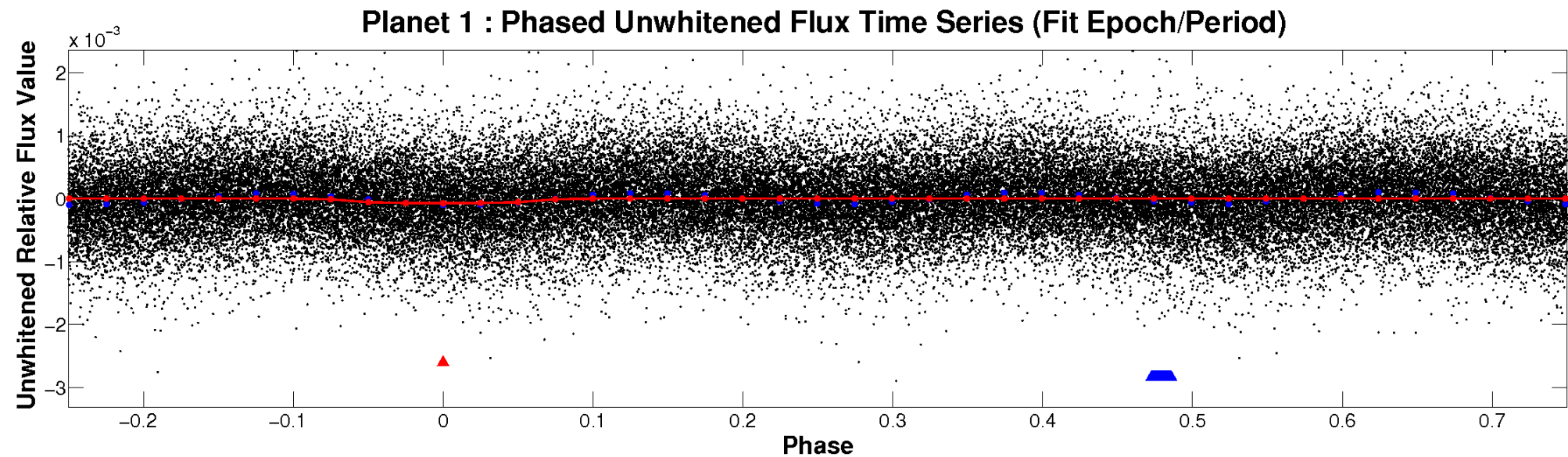


ALT Odd/Even

TCE 008197355-01

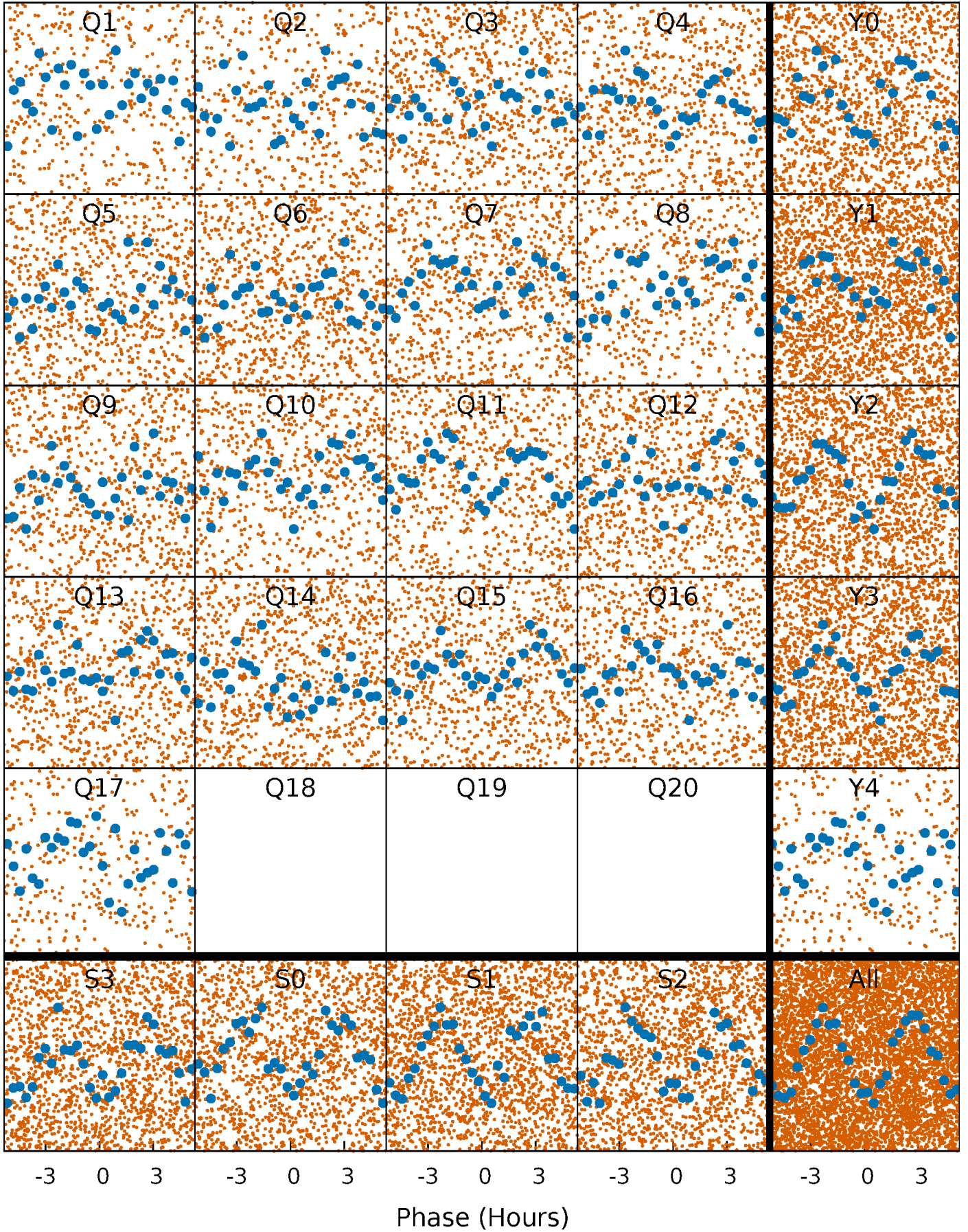


Non-Whitened Vs. Whitened Light Curve



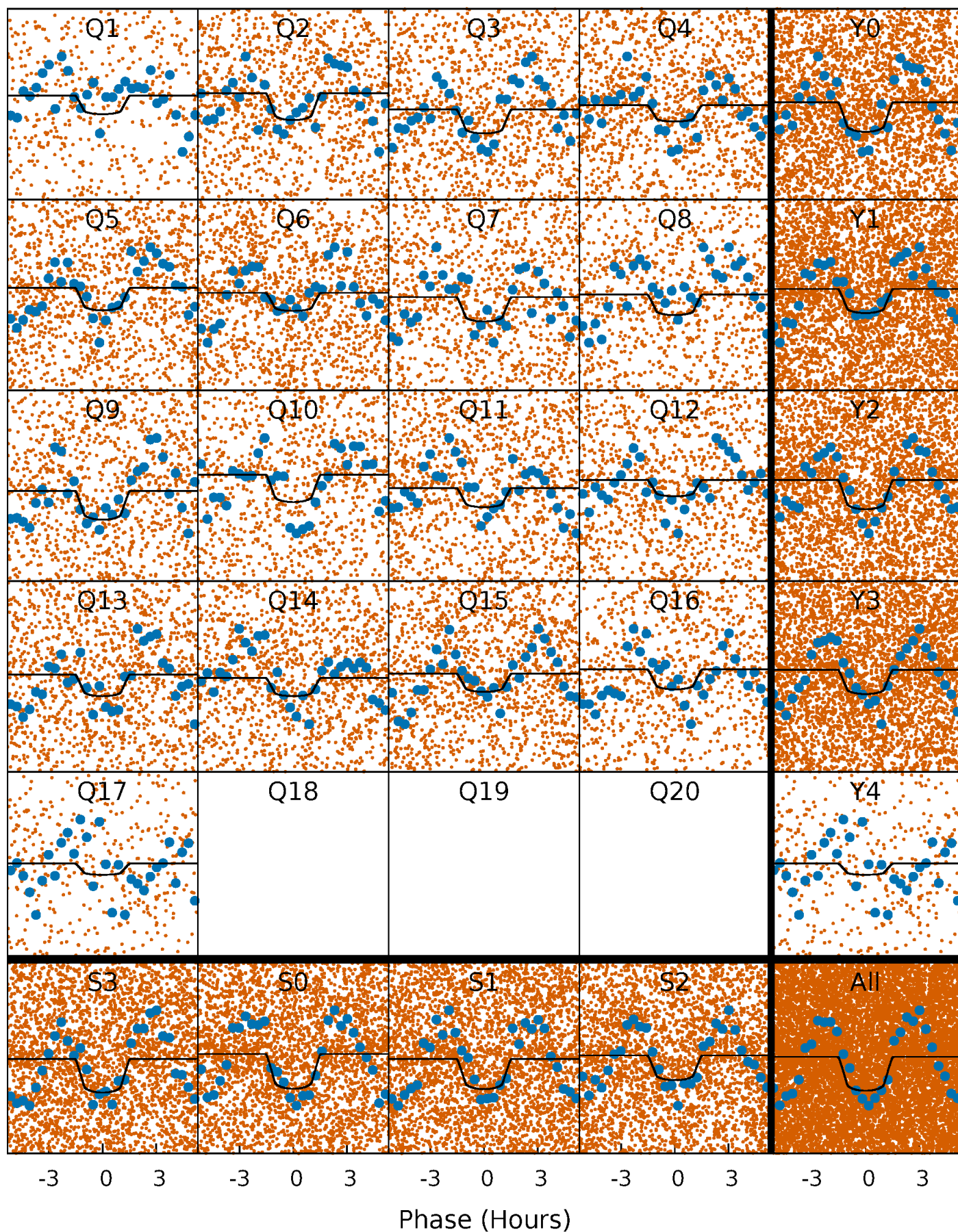
PDC Quarter-Phased Transit Curves

TCE 008197355-01 P= 0.818669 Days $T_0=132.231926$ (BKJD)



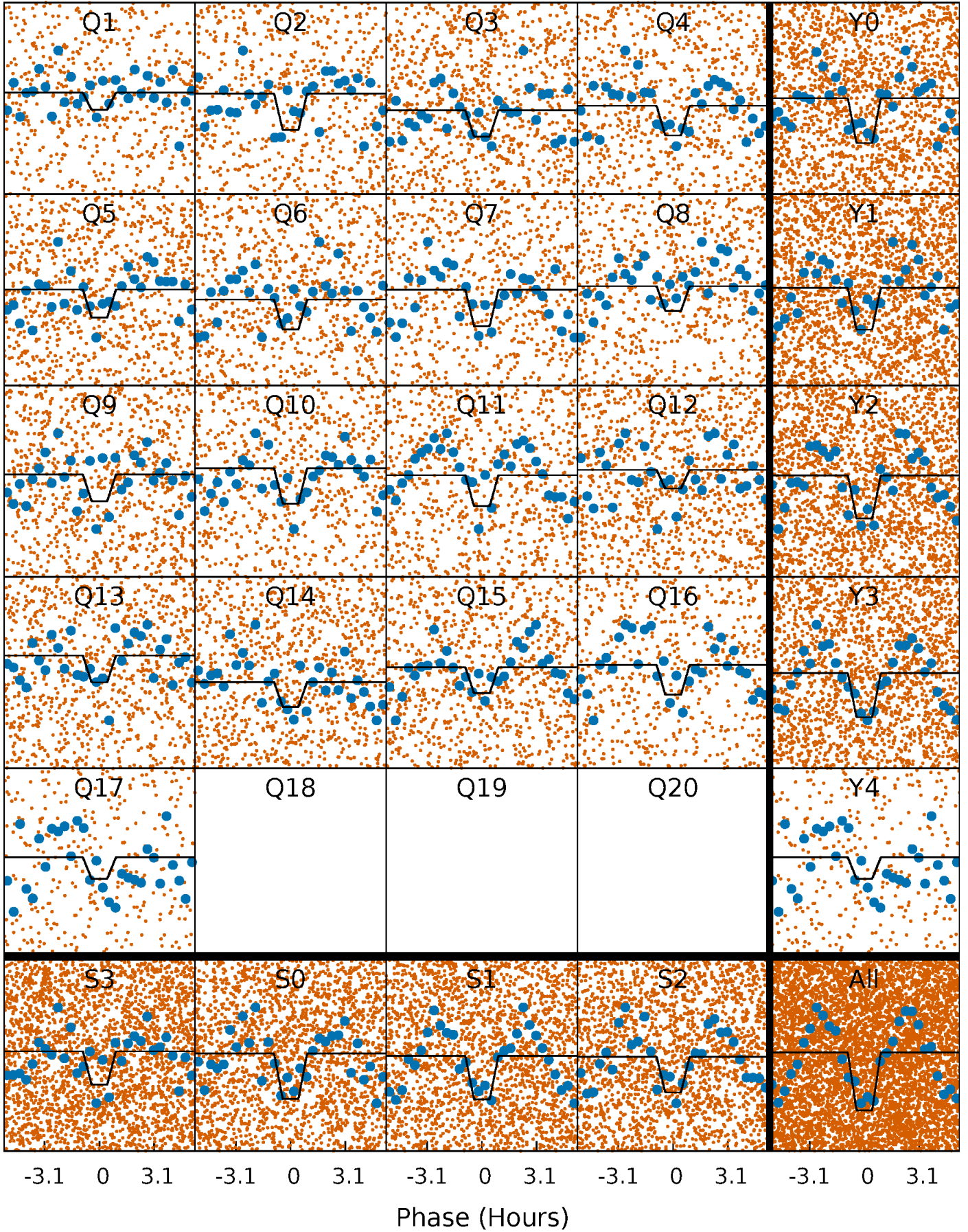
DV Quarter-Phased Transit Curves

TCE 008197355-01 P= 0.818669 Days $T_0=132.231926$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

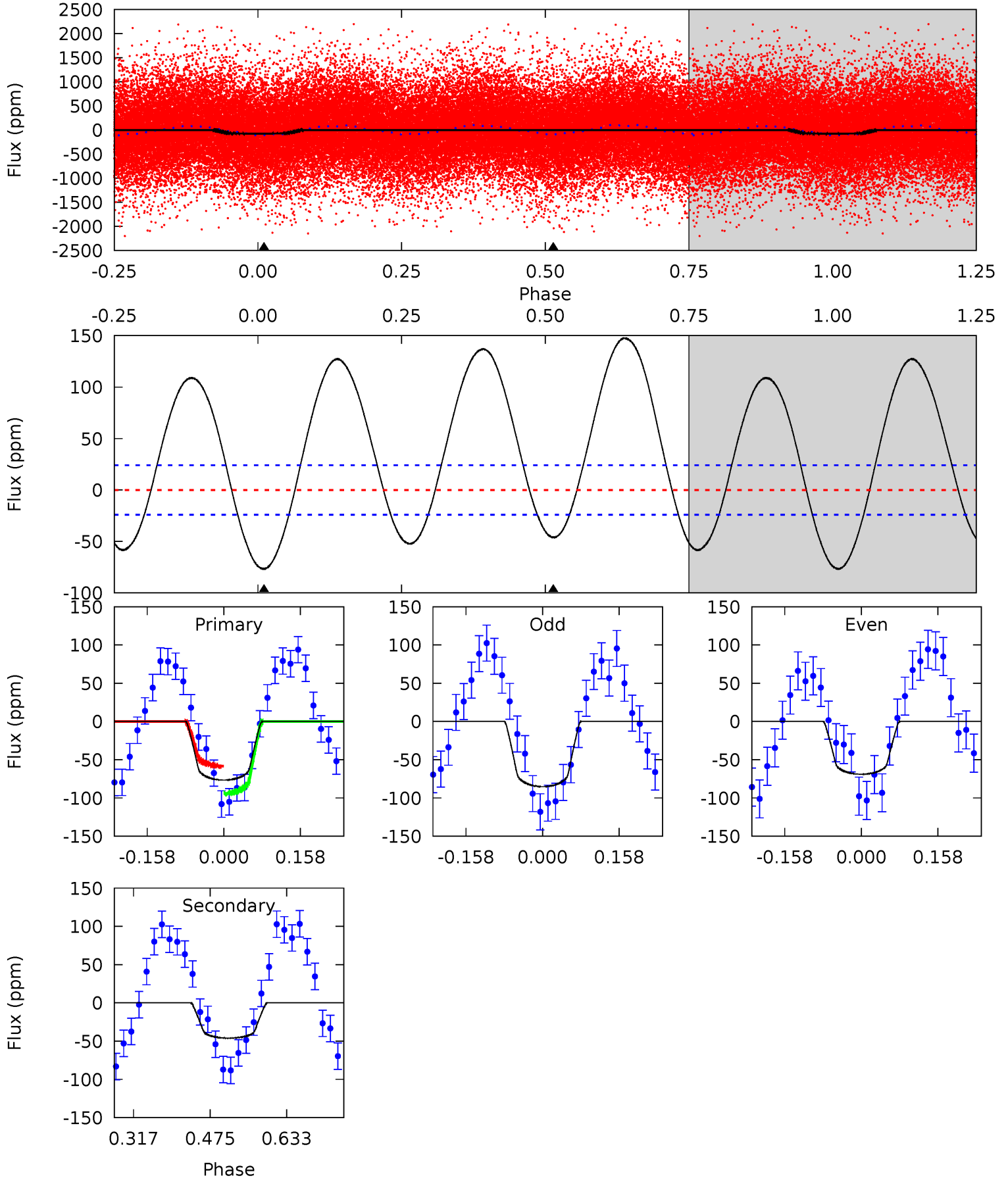
TCE 008197355-01 P= 0.818682 Days $T_0=132.229971$ (BKJD)



DV Model-Shift Uniqueness Test

008197355-01, P = 0.818669 Days, E = 131.413257 Days

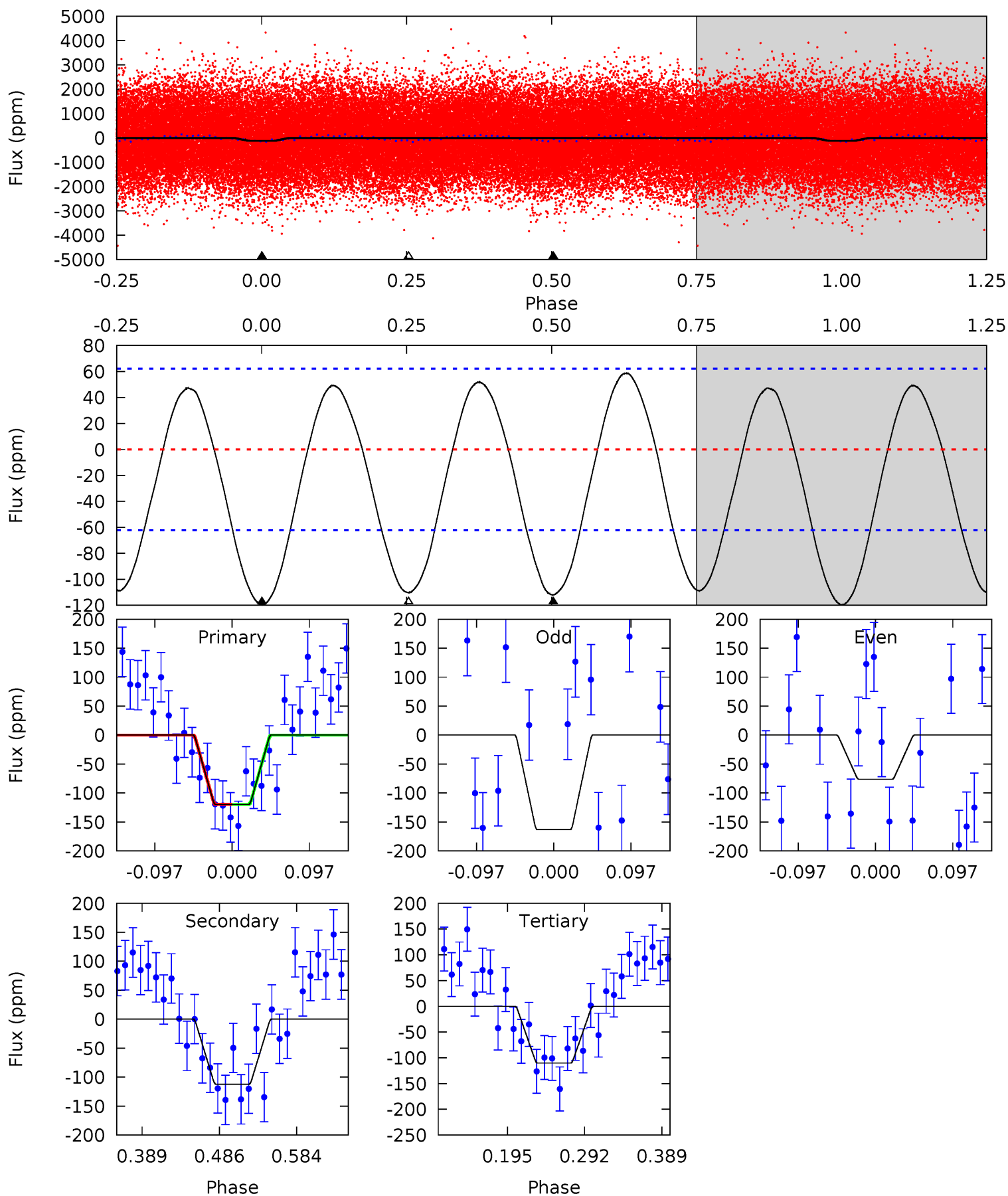
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	8.58	0	0	4.47	1.41	9.48	14.3	14.3	8.58	8.58	1.51	1.28	0.66	3.33



Alt Model-Shift Uniqueness Test

008197355-01, P = 0.818682 Days, E = 131.411289 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.80	8.24	8.10	0	4.57	1.66	4.31	0.70	8.80	0.14	8.24	3.19	1.09	0.33	0.01



Stellar Parameters For KIC 008197355

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7941^{+219}_{-329}	$4.120^{+0.135}_{-0.165}$	$-0.080^{+0.150}_{-0.350}$	$1.885^{+0.507}_{-0.380}$	$1.706^{+0.180}_{-0.270}$	$0.359^{+0.267}_{-0.163}$
	+3%/-4%	+3%/-4%	+188%/-438%	+27%/-20%	+11%/-16%	+74%/-45%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008197355-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-46 ± 5	$1.87^{+0.53}_{-0.46}$	4693^{+320}_{-311}	6450^{+1204}_{-736}	$2.956^{+2.342}_{-1.126}$
Alt.	-112 ± 14	$2.44^{+0.62}_{-0.49}$	4714^{+298}_{-307}	7185^{+1108}_{-771}	$4.200^{+2.515}_{-1.563}$

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

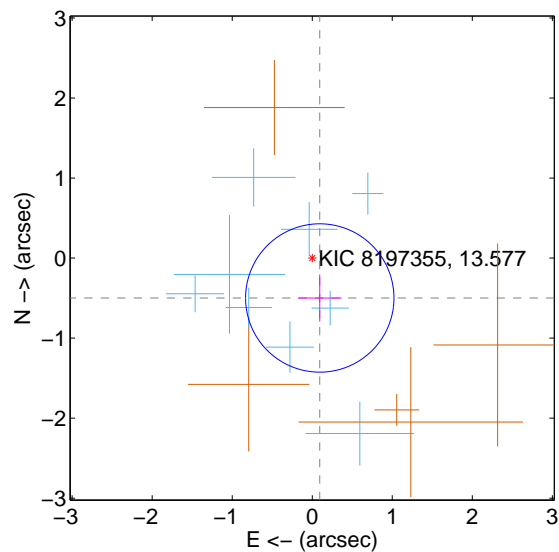
Supplemental centroid analysis for 008197355-01. Kepler magnitude: 13.58. Transit SNR 9.27

There are 9 quarters with good PRF difference image offsets

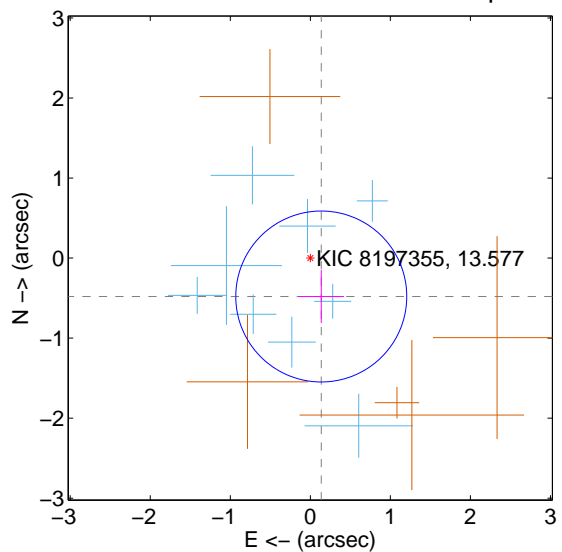
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.507 ± 0.309	1.64	-0.094 ± 0.273	-0.498 ± 0.294
PRF-fit source offset from KIC position	0.499 ± 0.356	1.40	-0.137 ± 0.283	-0.480 ± 0.331
photometric centroid source offset	0.91 ± 0.54	1.69	0.86 ± 0.53	-0.30 ± 0.56

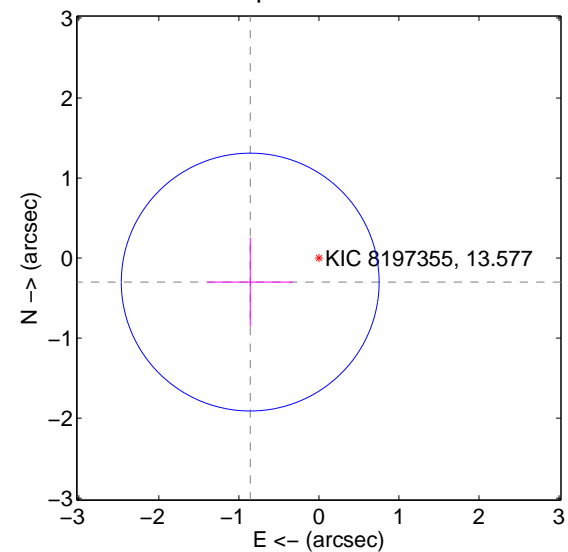
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

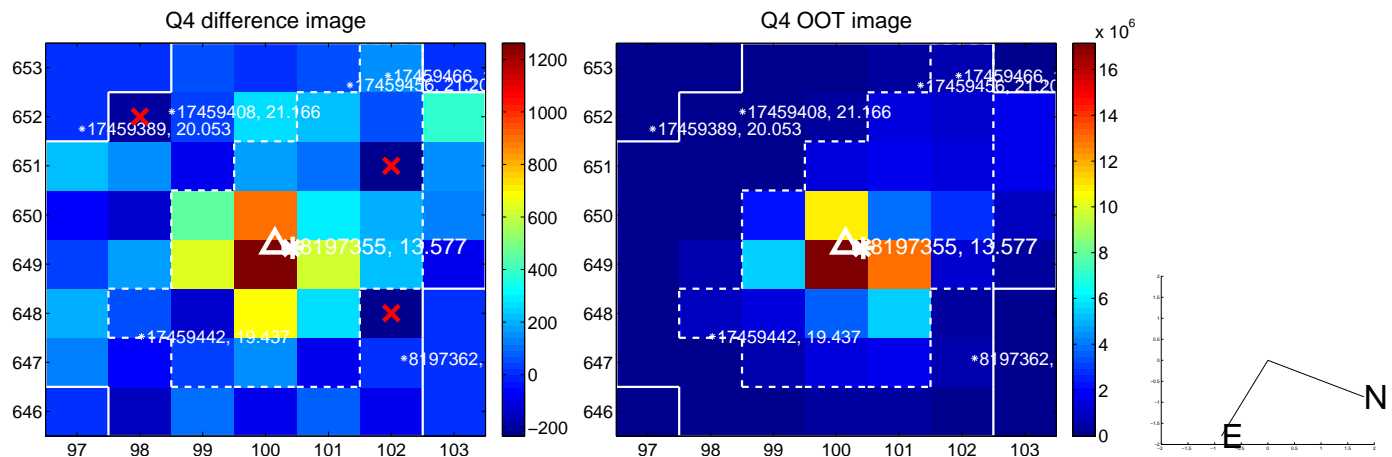
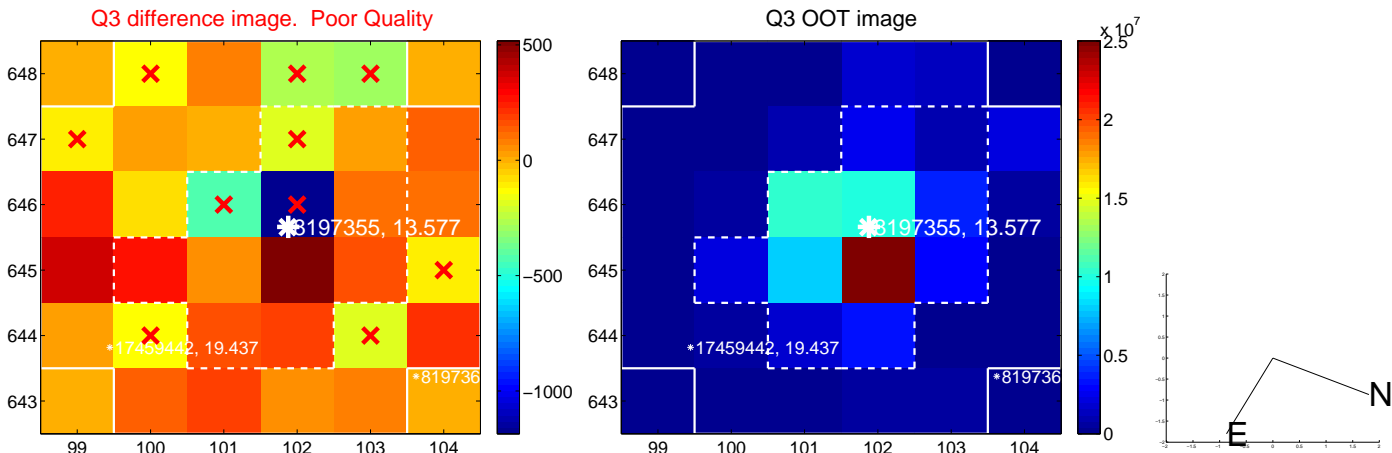
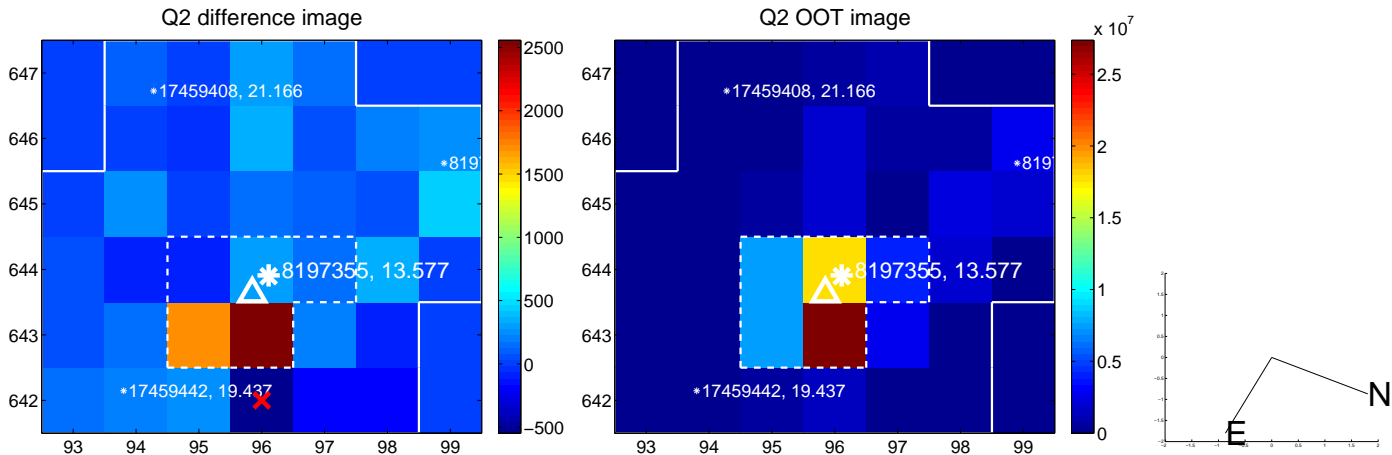
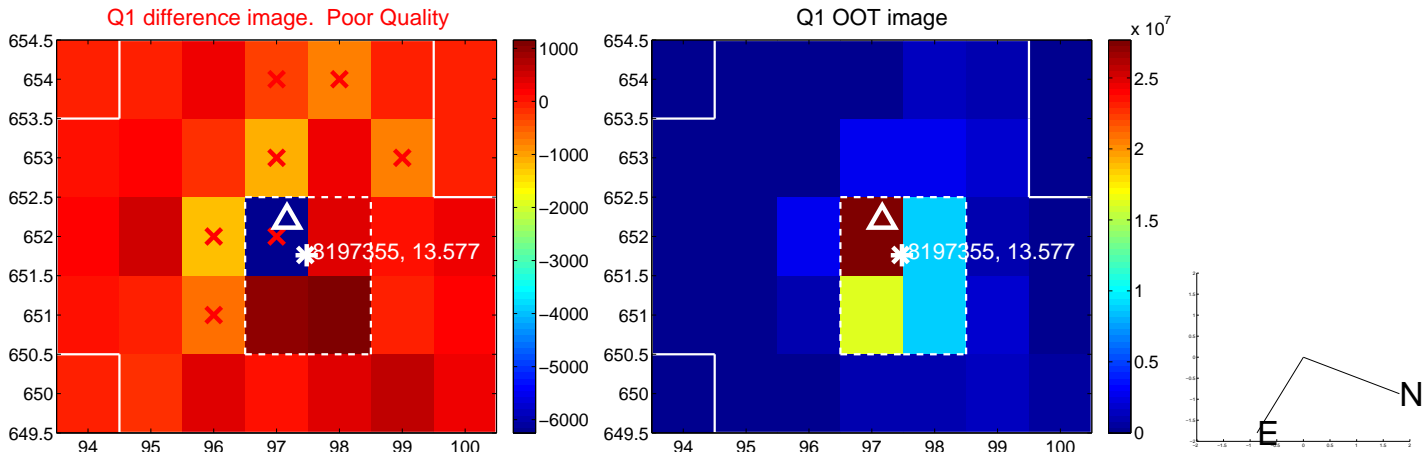


offset from photometric centroids

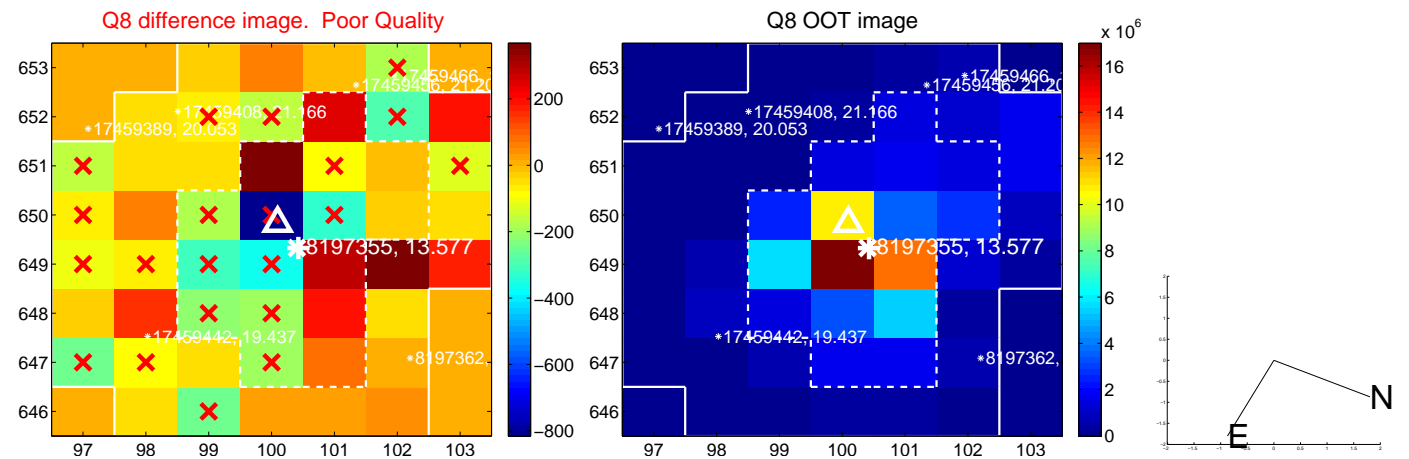
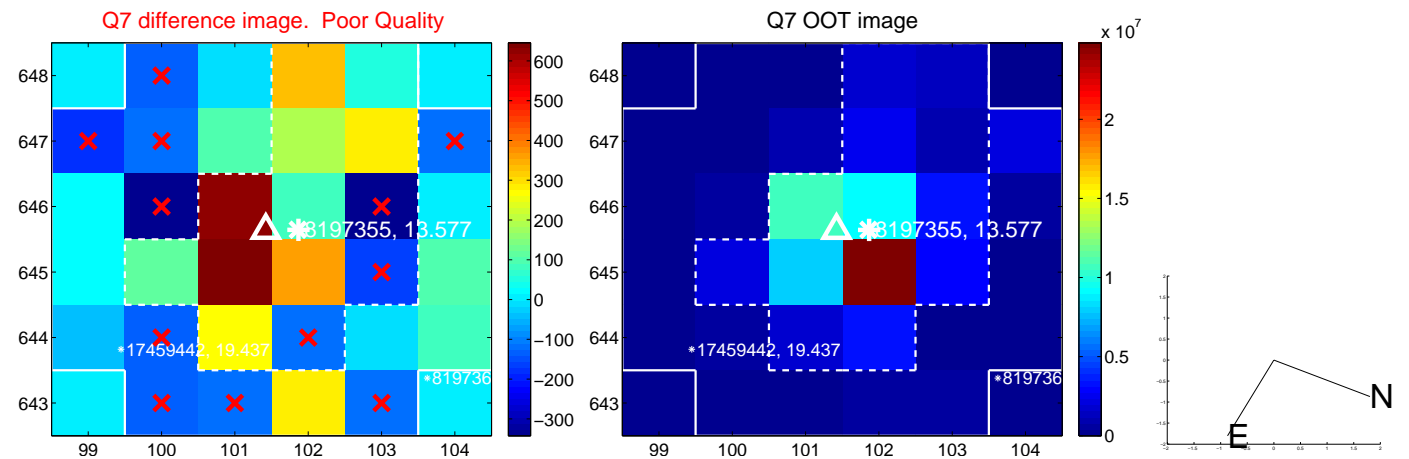
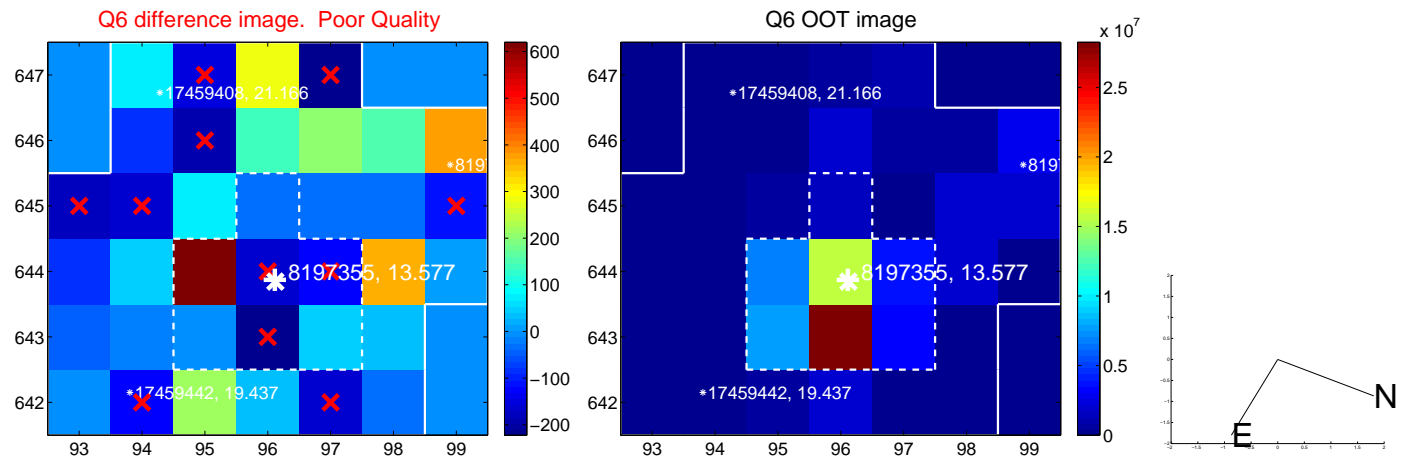
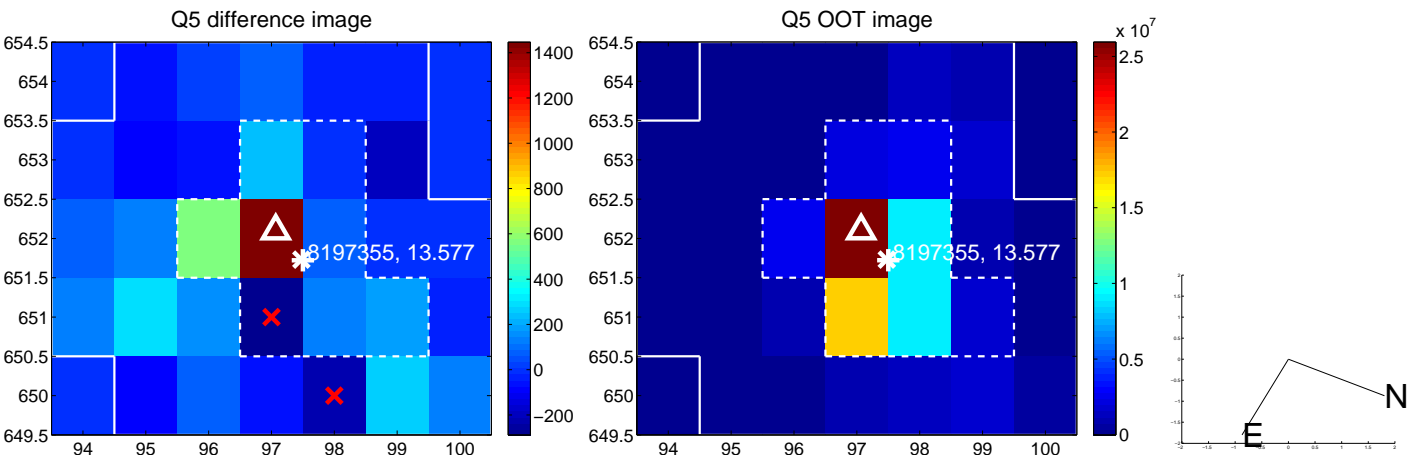


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

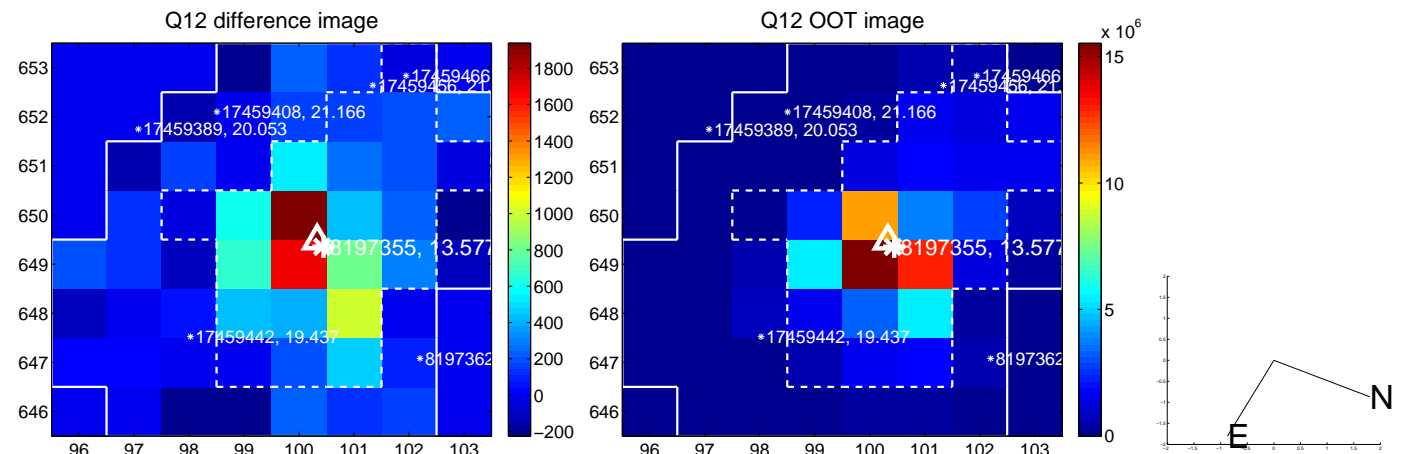
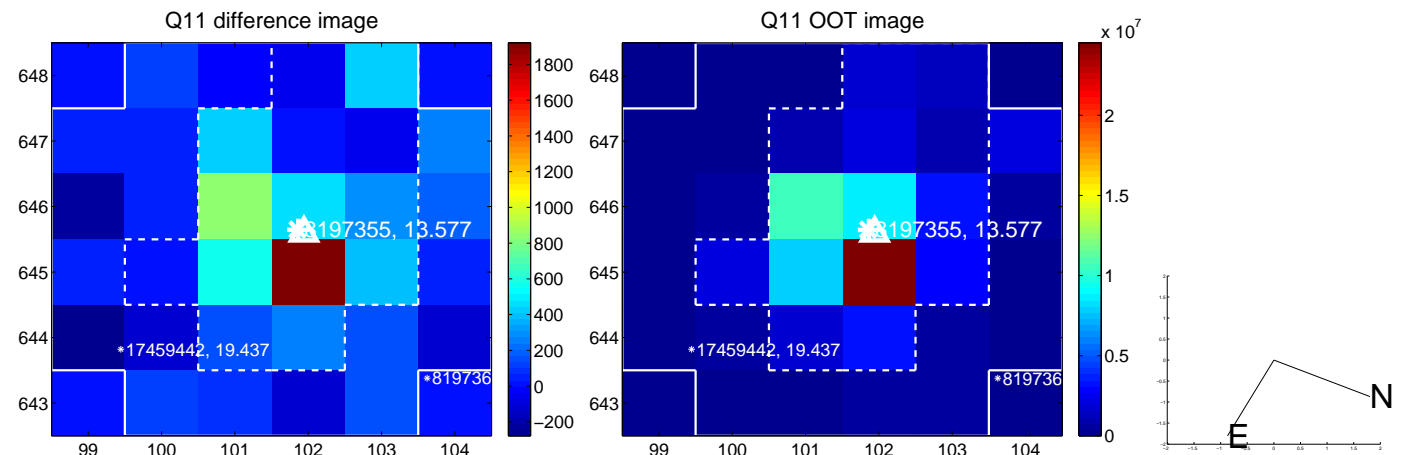
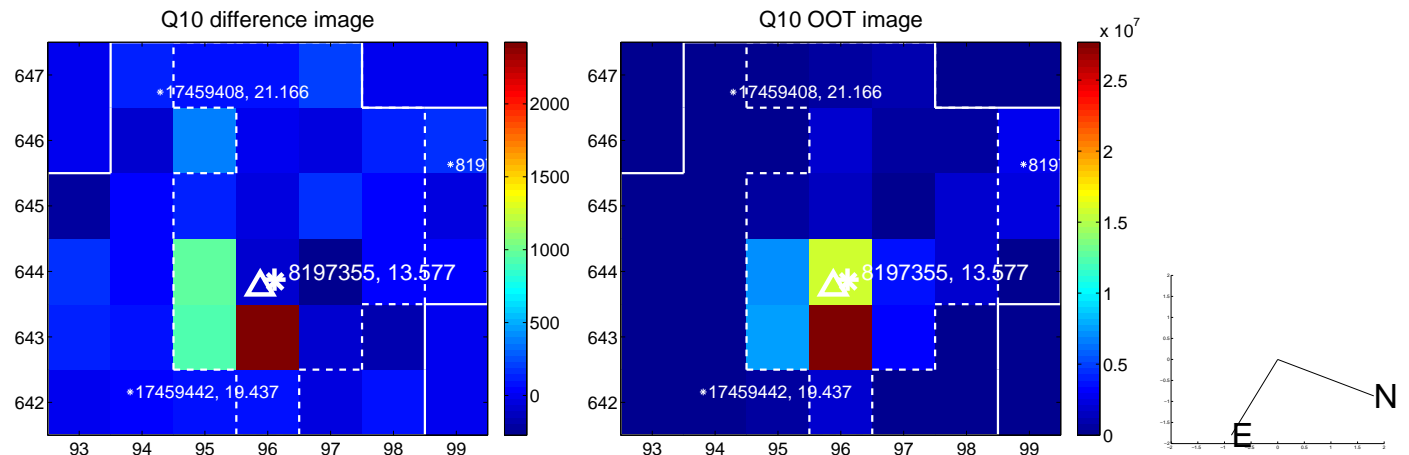
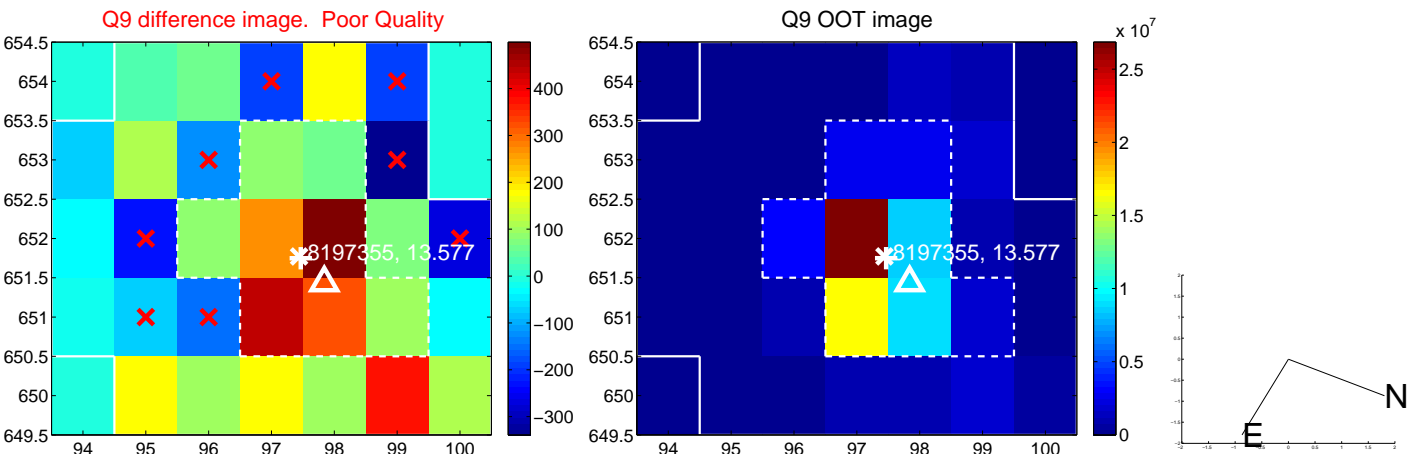
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



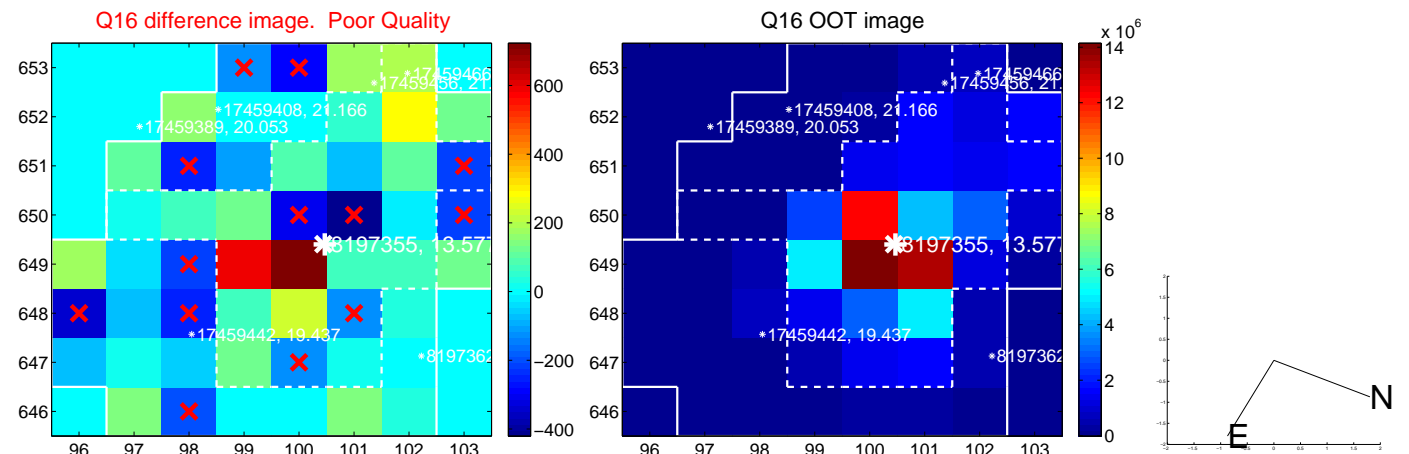
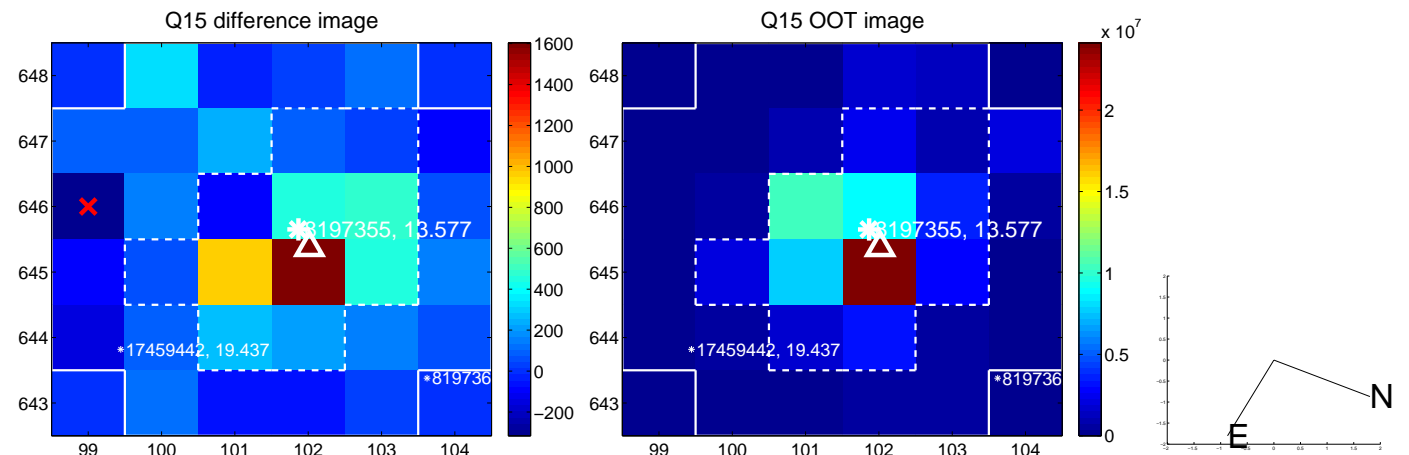
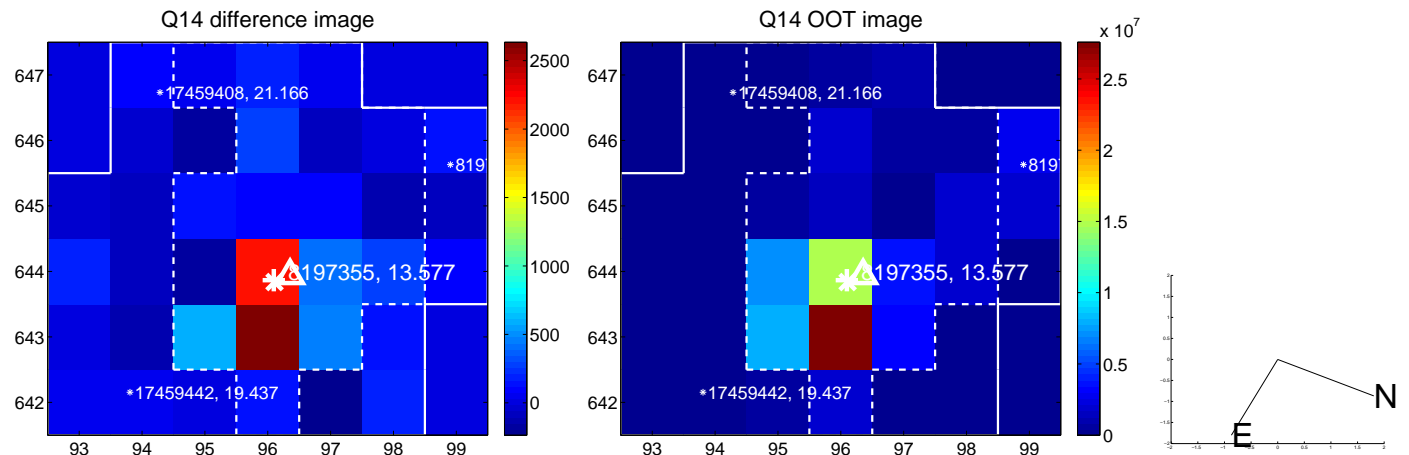
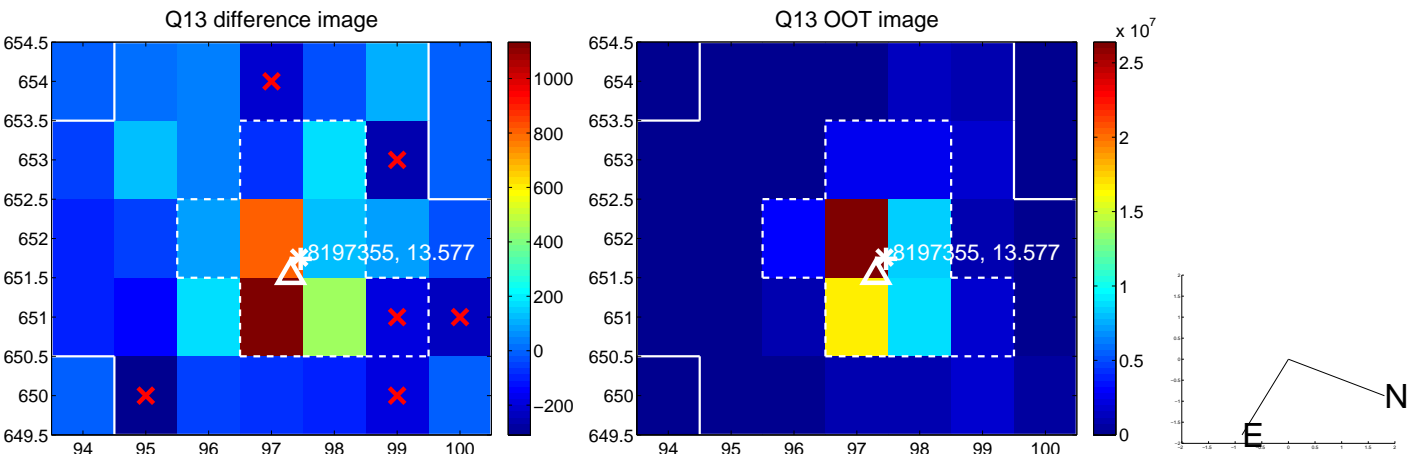
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



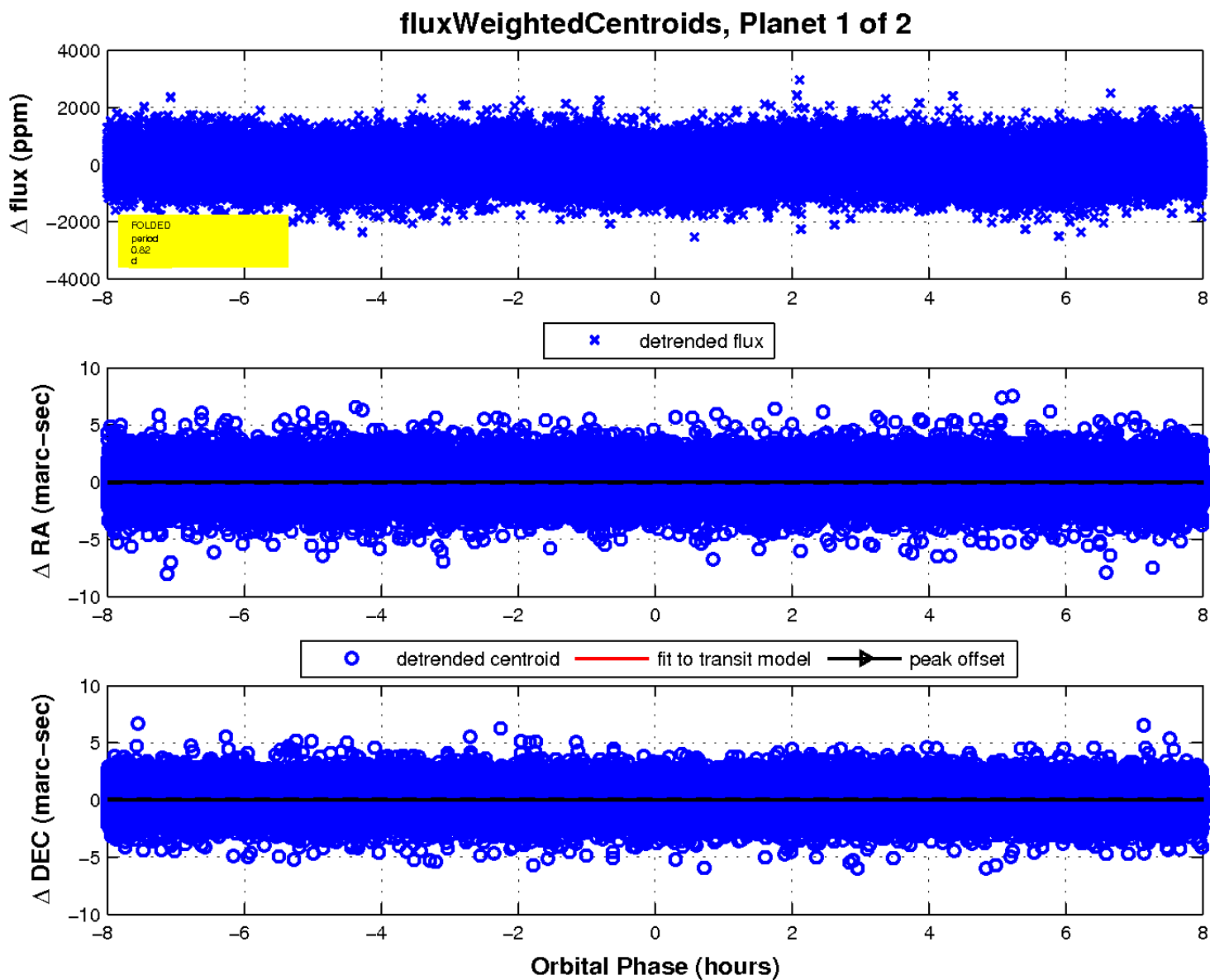
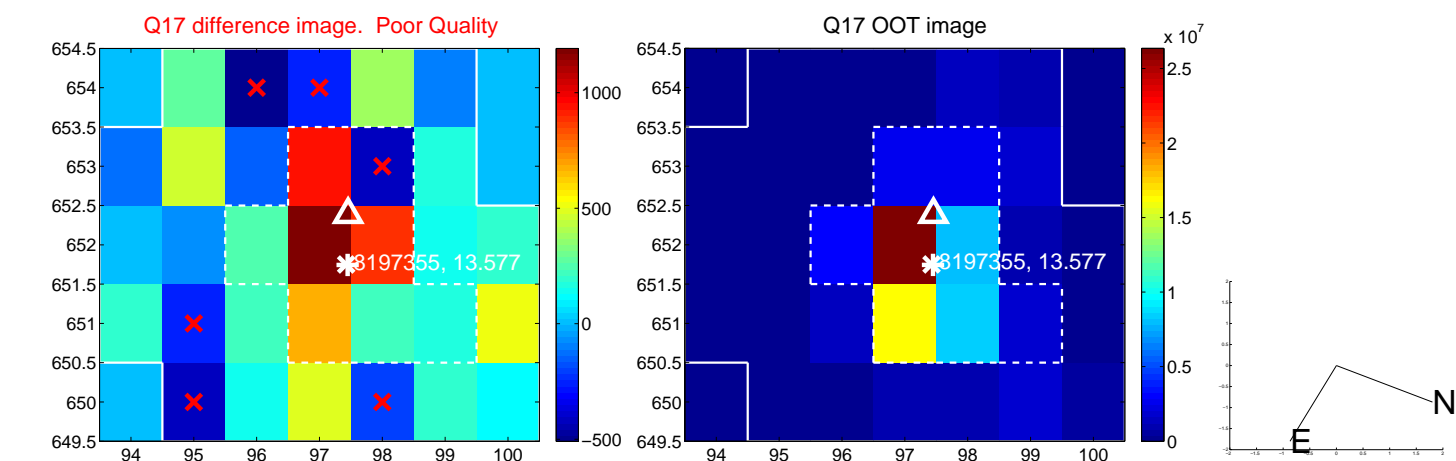
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

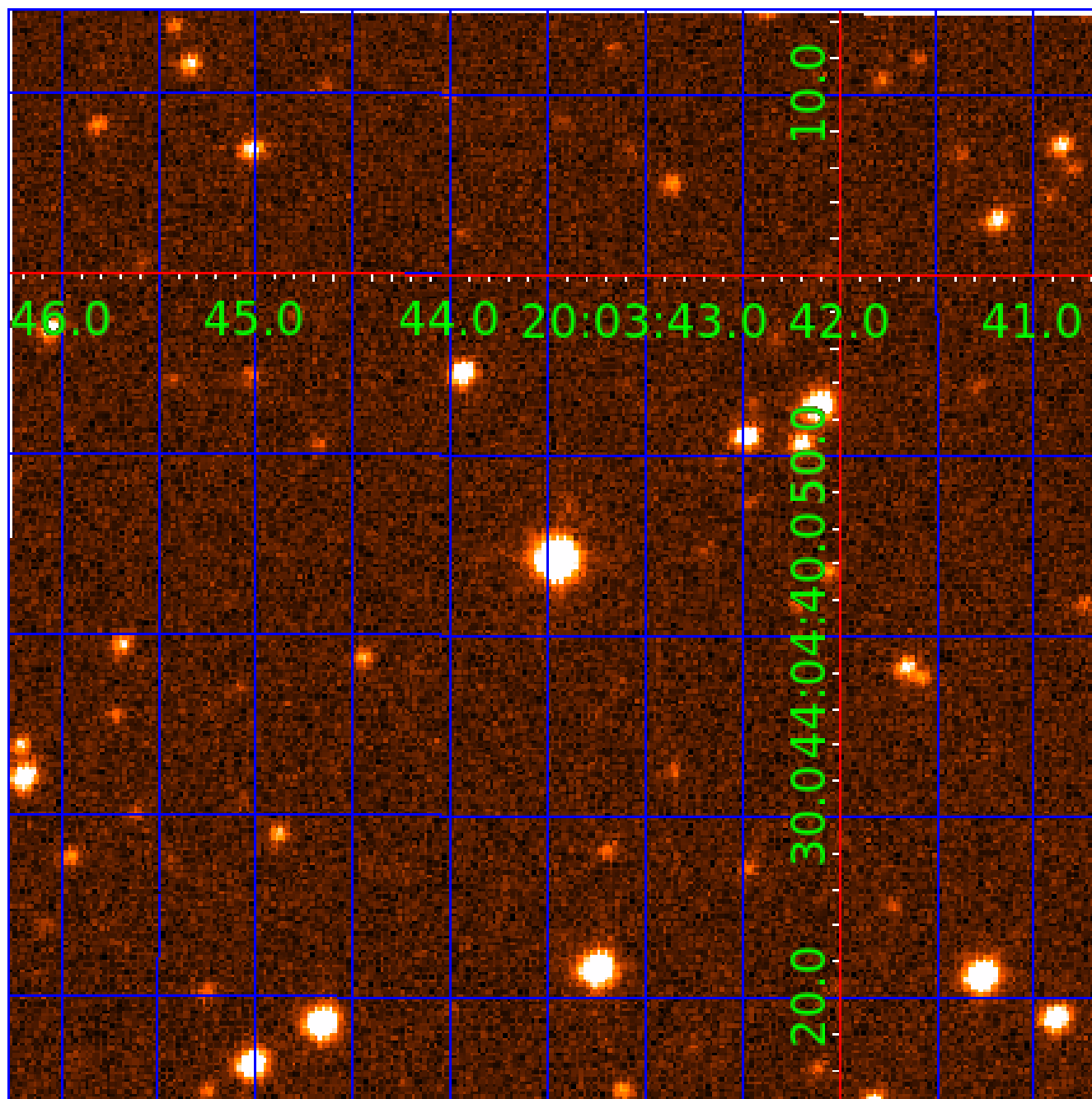


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008197355

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})
008197355-01	OBS	No	0.818669	132.231926	71.9	2.667	9.9	9.3	1.89	7941	1.85	30185.02
008197355-02	OBS	No	0.818663	131.810981	52.5	3.495	10.5	7.4	1.89	7941	1.47	30185.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008197355-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008197355-02	OBS	FP	0.00	1	0	0	0	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.

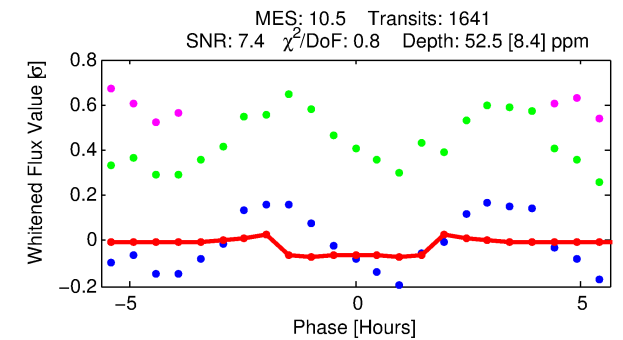
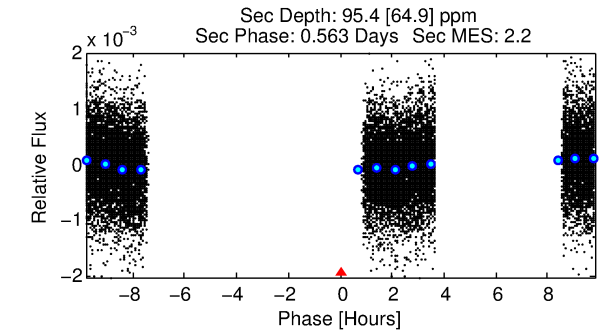
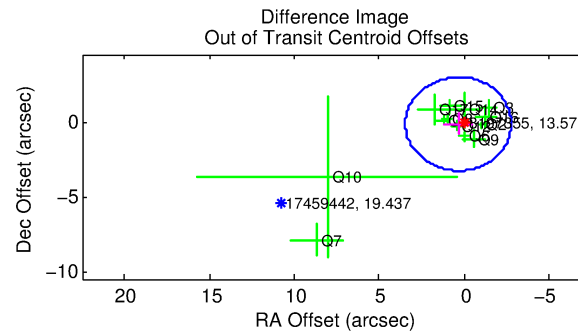
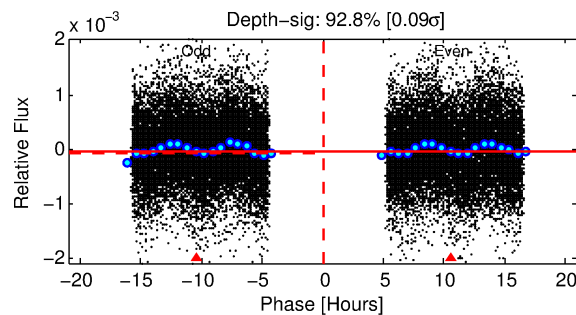
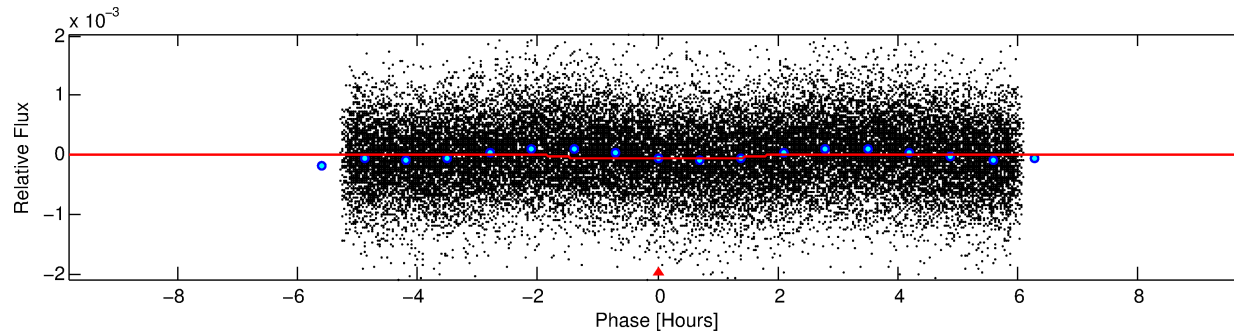
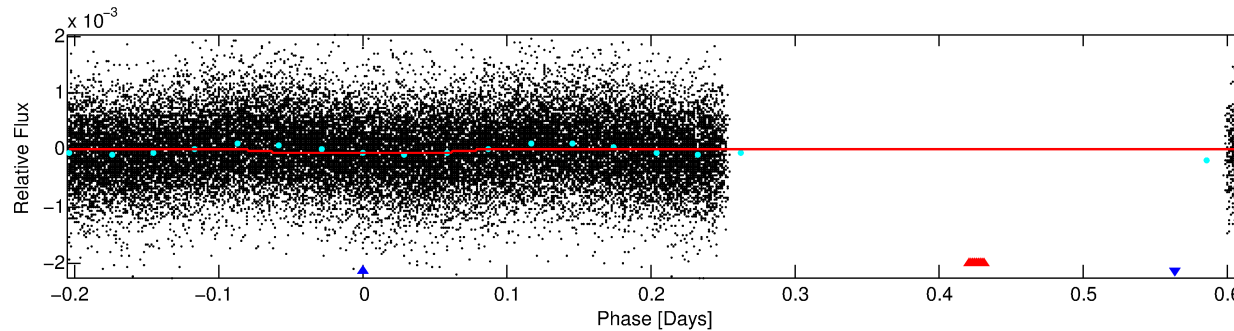
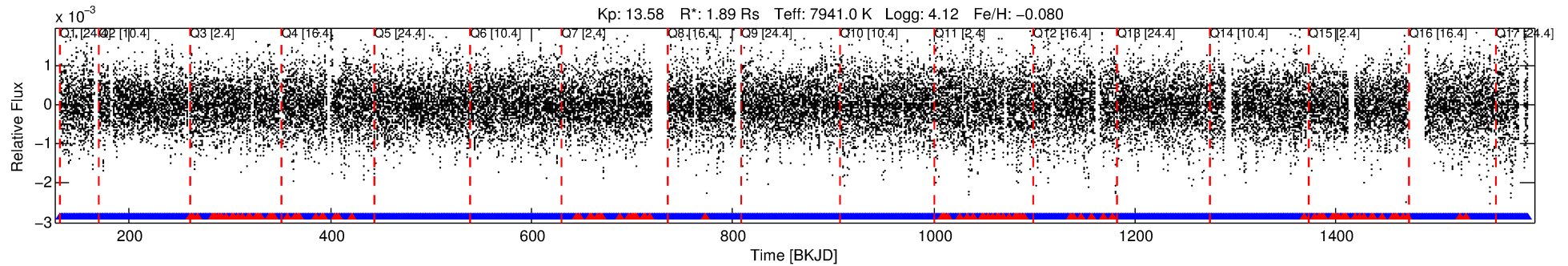
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008197355-02

No Significant Match Found

DV One-Page Summary

KIC: 8197355 Candidate: 2 of 2 Period: 0.819 d



DV Fit Results:

Period = 0.81866 [0.00001] d
Epoch = 131.8110 [0.0027] BKJD
Rp/R* = 0.0071 [0.0024]
a/R* = 1.53 [1.79]
b = 0.71 [1.47]
Seff = 30185.32 [10619.44]
Teq = 3361 [296] K
Rp = 1.47 [0.63] Re
a = 0.0205 [0.0045] AU
Ag = 10.23 [10.31] [0.90 σ]
Teffp = 9295 [2261] K [2.60 σ]

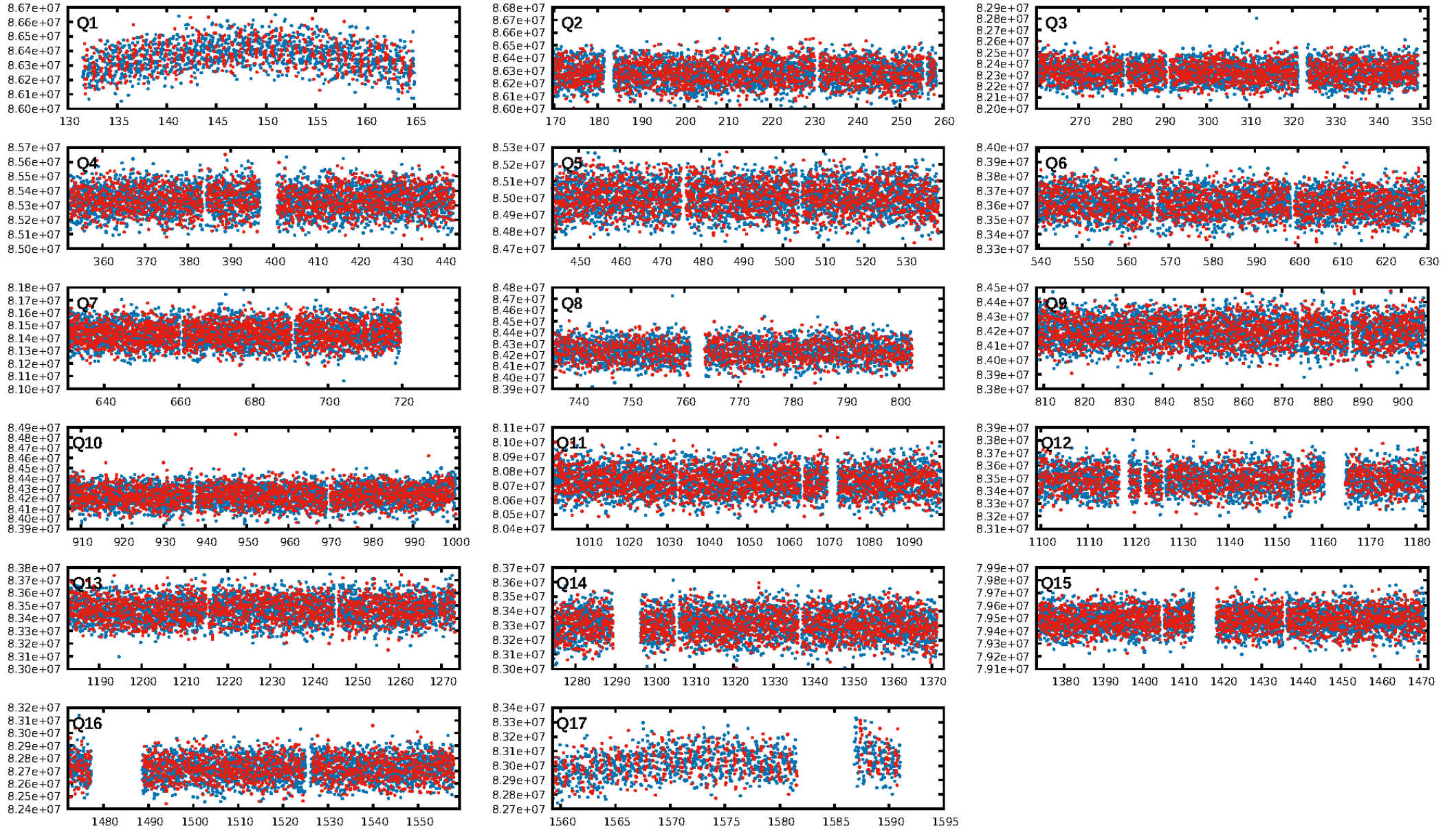
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.35e-02
RollingBand-fgt: 0.93 [1456/1567]
GhostDiagnostic-chr: 0.8426
Centroid-sig: 5.6%
Centroid-so: 0.786 arcsec [1.23 σ]
OotOffset-rm: 0.353 arcsec [0.34 σ]
OotOffset-st: 4/3/4/2 [13]
KicOffset-rm: 0.299 arcsec [0.29 σ]
KicOffset-st: 4/3/4/2 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 0.12 [2/17]

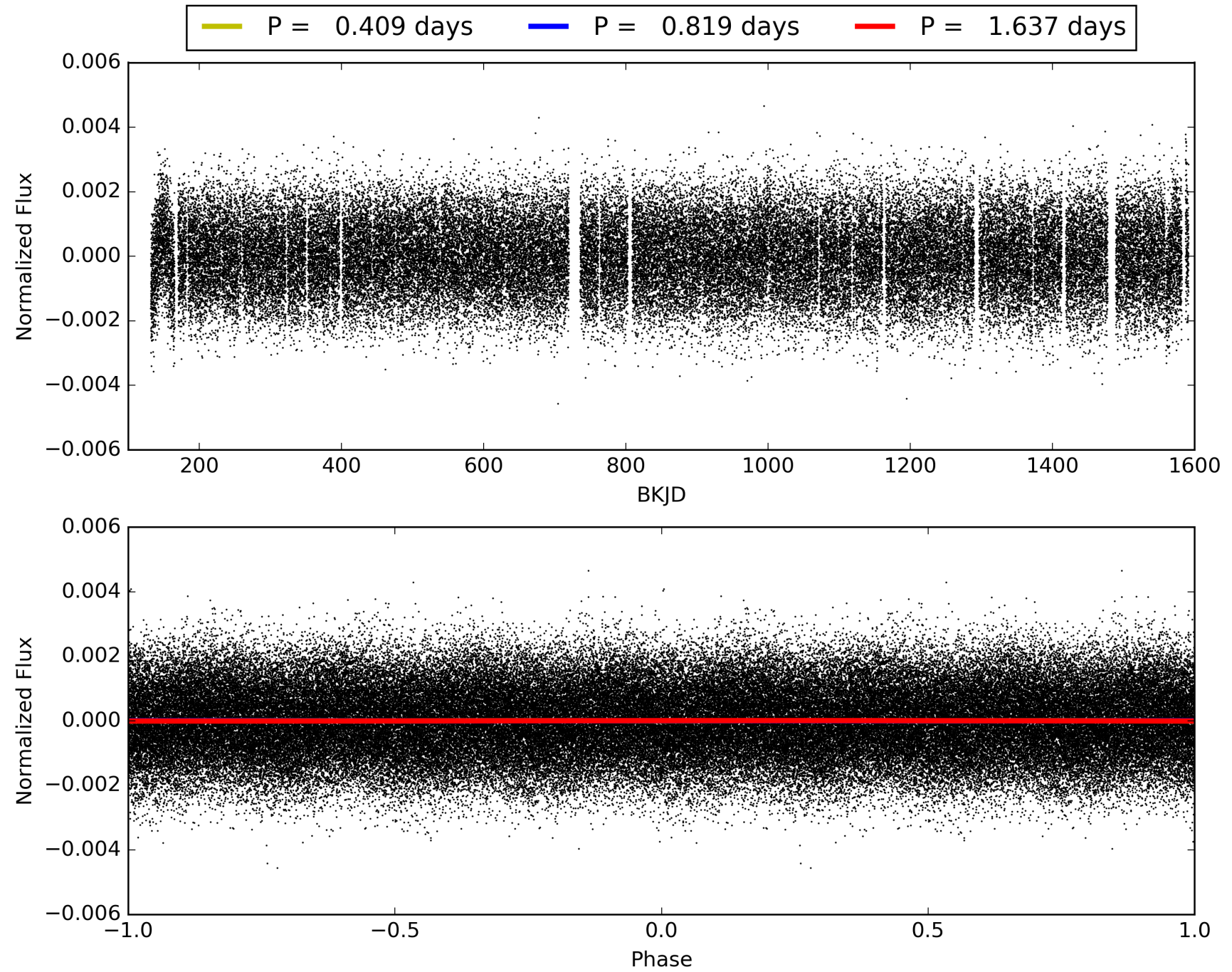
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:35:14 Z

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

TCE 008197355-02, PDC Light Curves

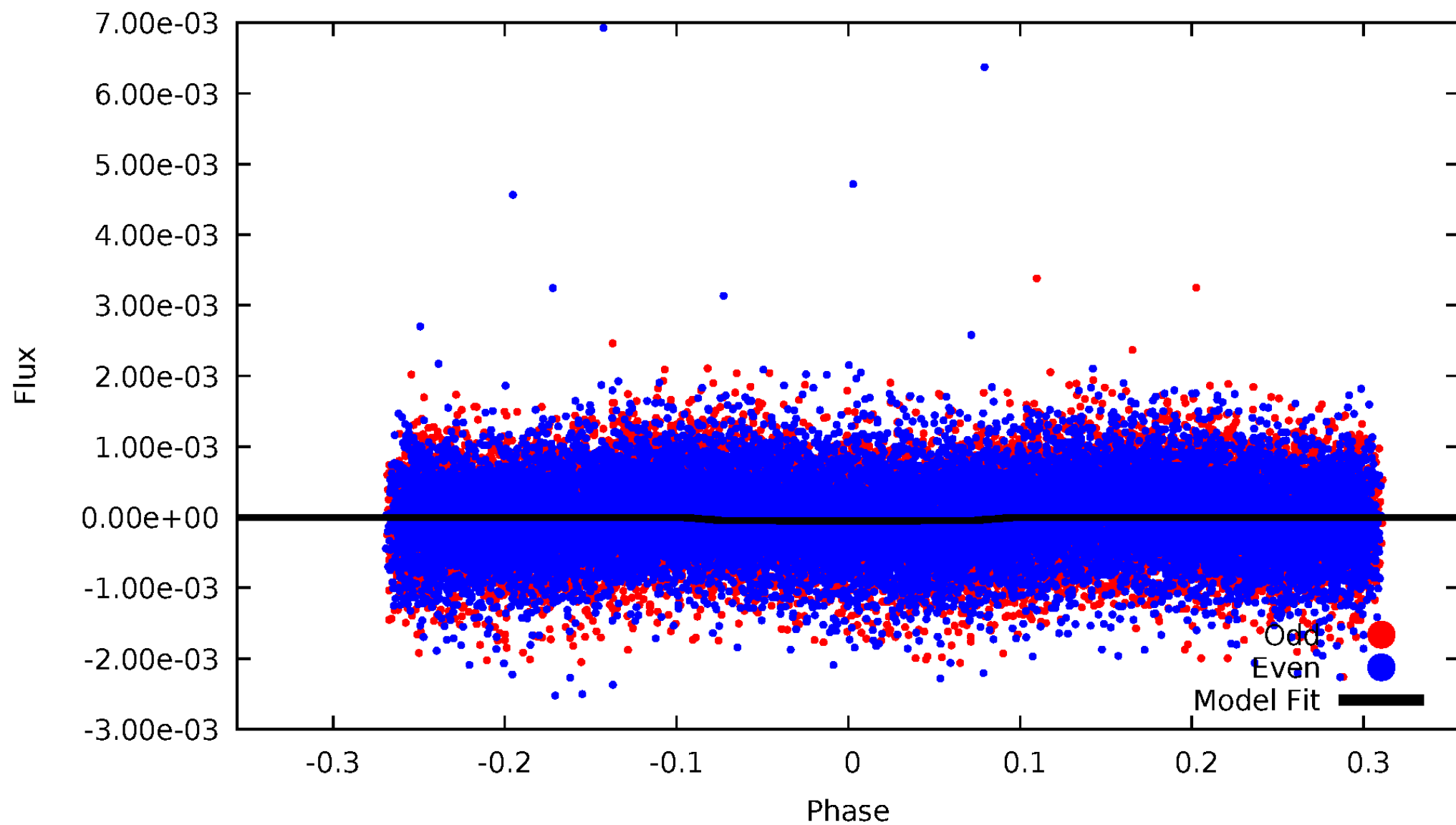


TCE 008197355-02



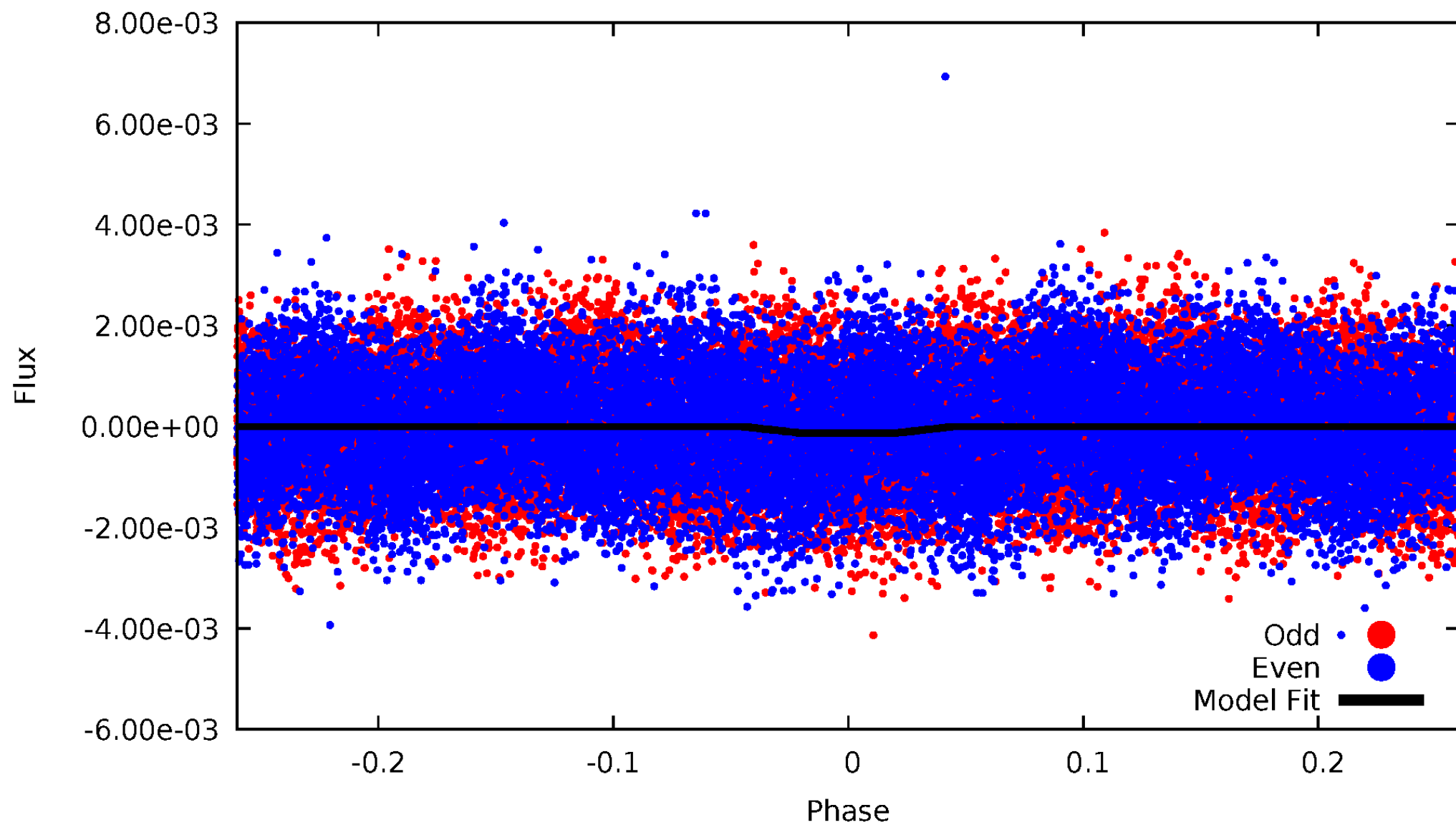
DV Odd/Even

TCE 008197355-02



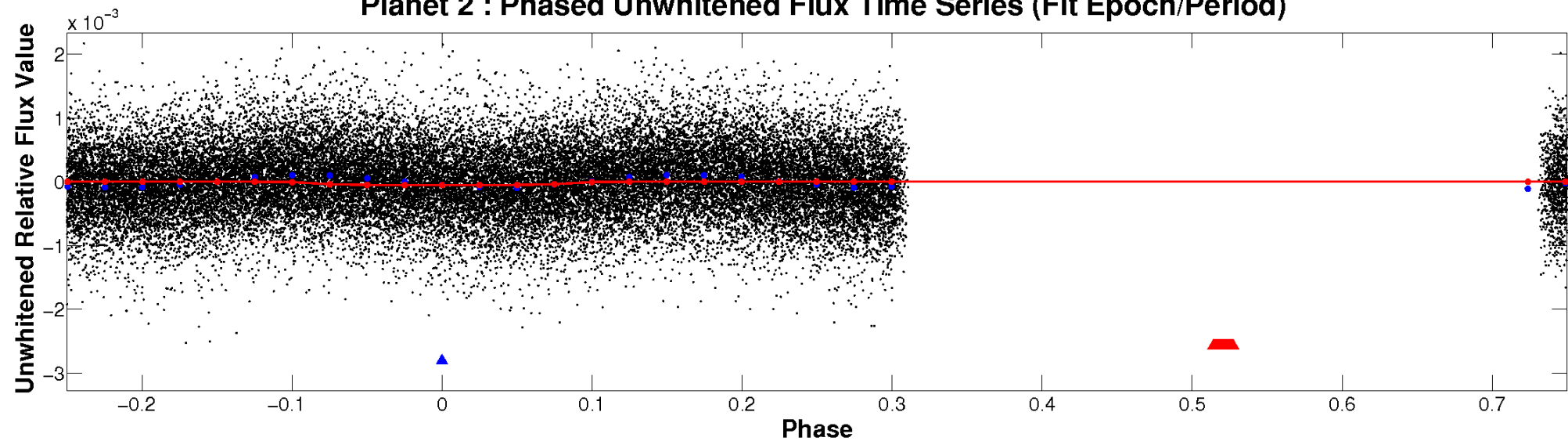
ALT Odd/Even

TCE 008197355-02

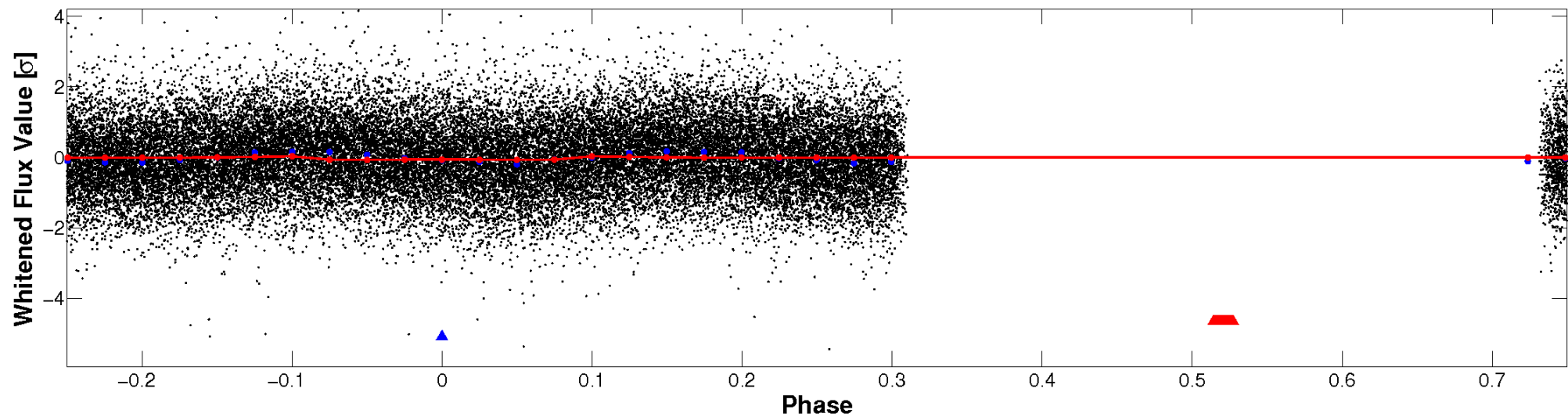


Non-Whitened Vs. Whitened Light Curve

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

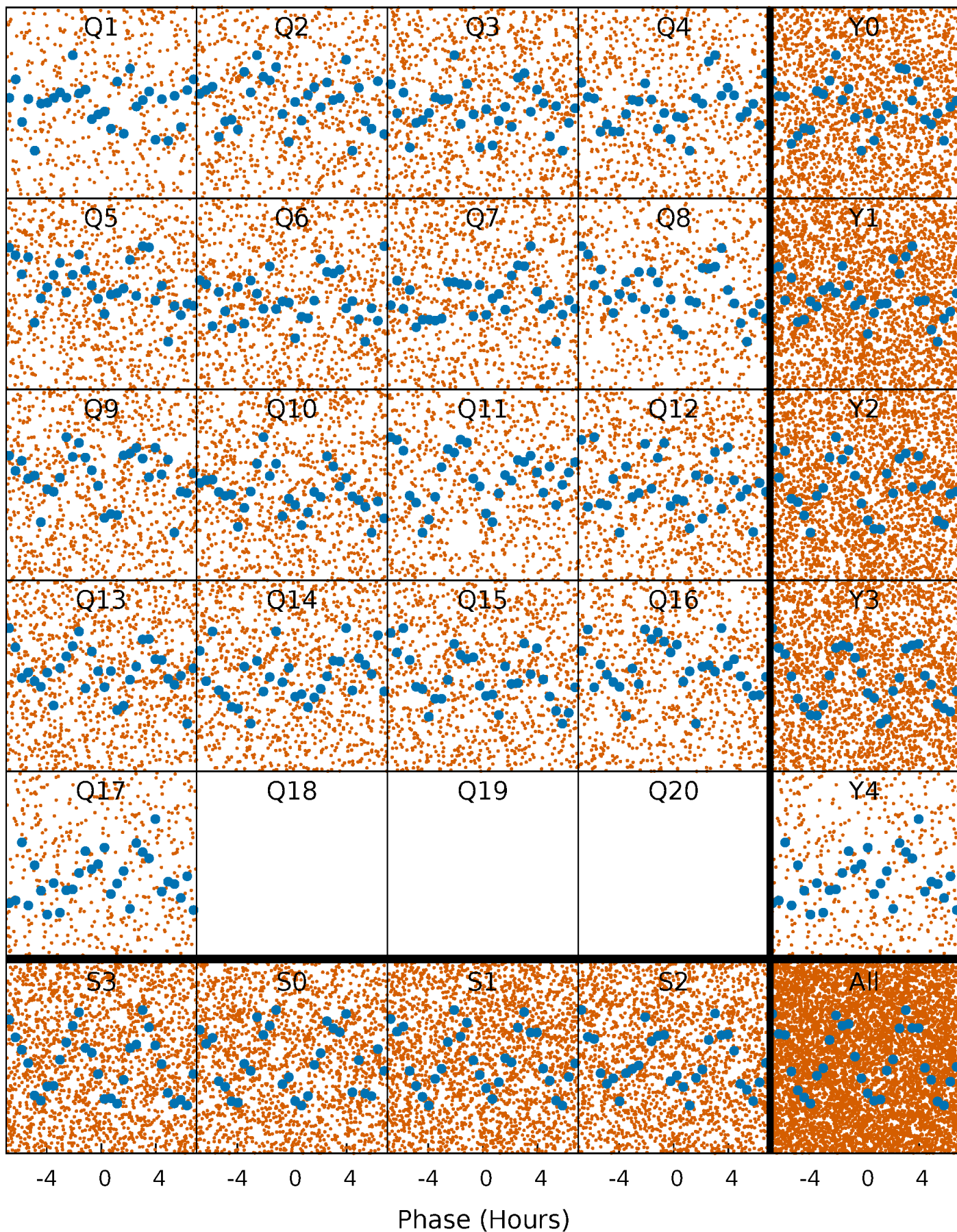


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



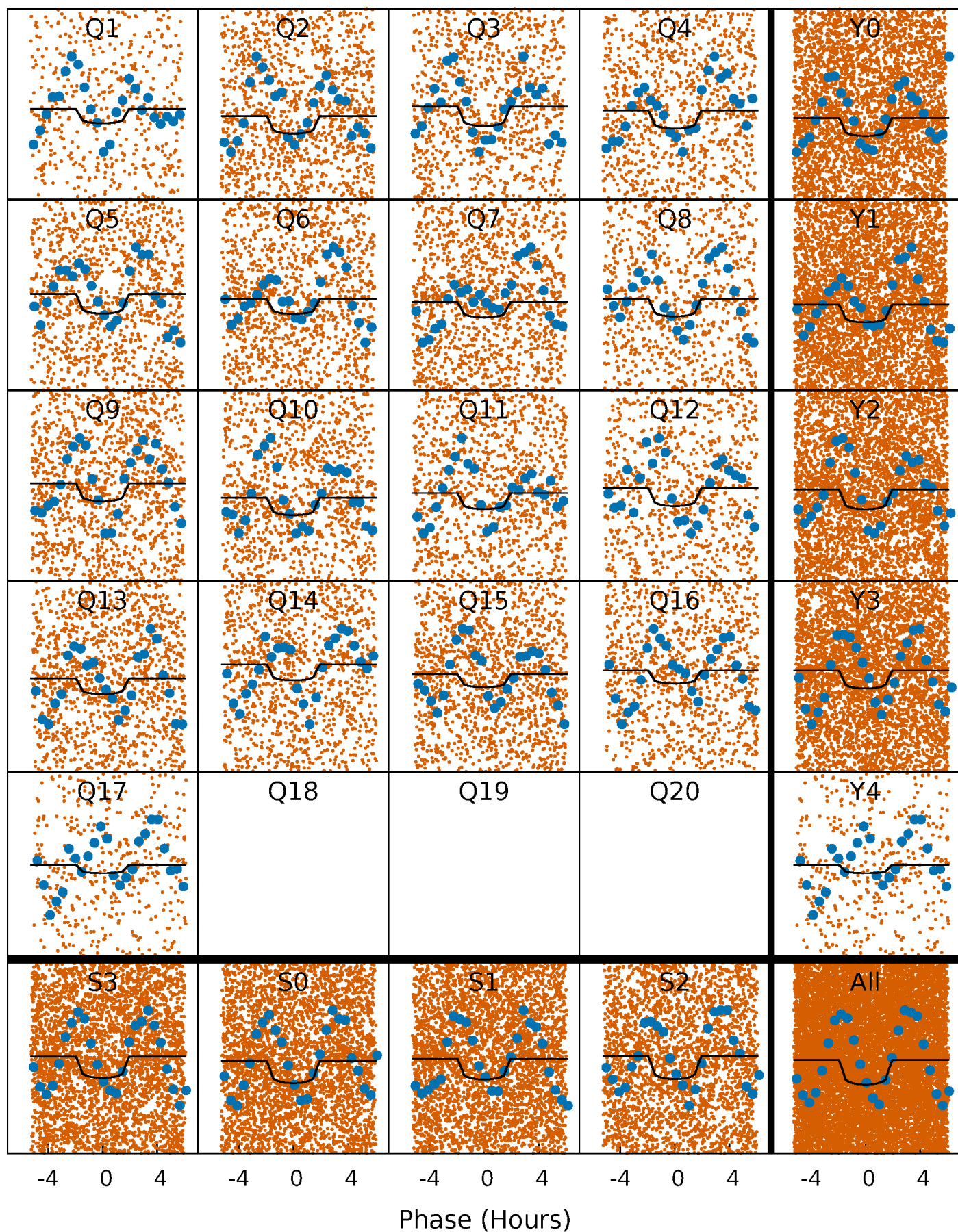
PDC Quarter-Phased Transit Curves

TCE 008197355-02 P= 0.818663 Days $T_0=131.810981$ (BKJD)



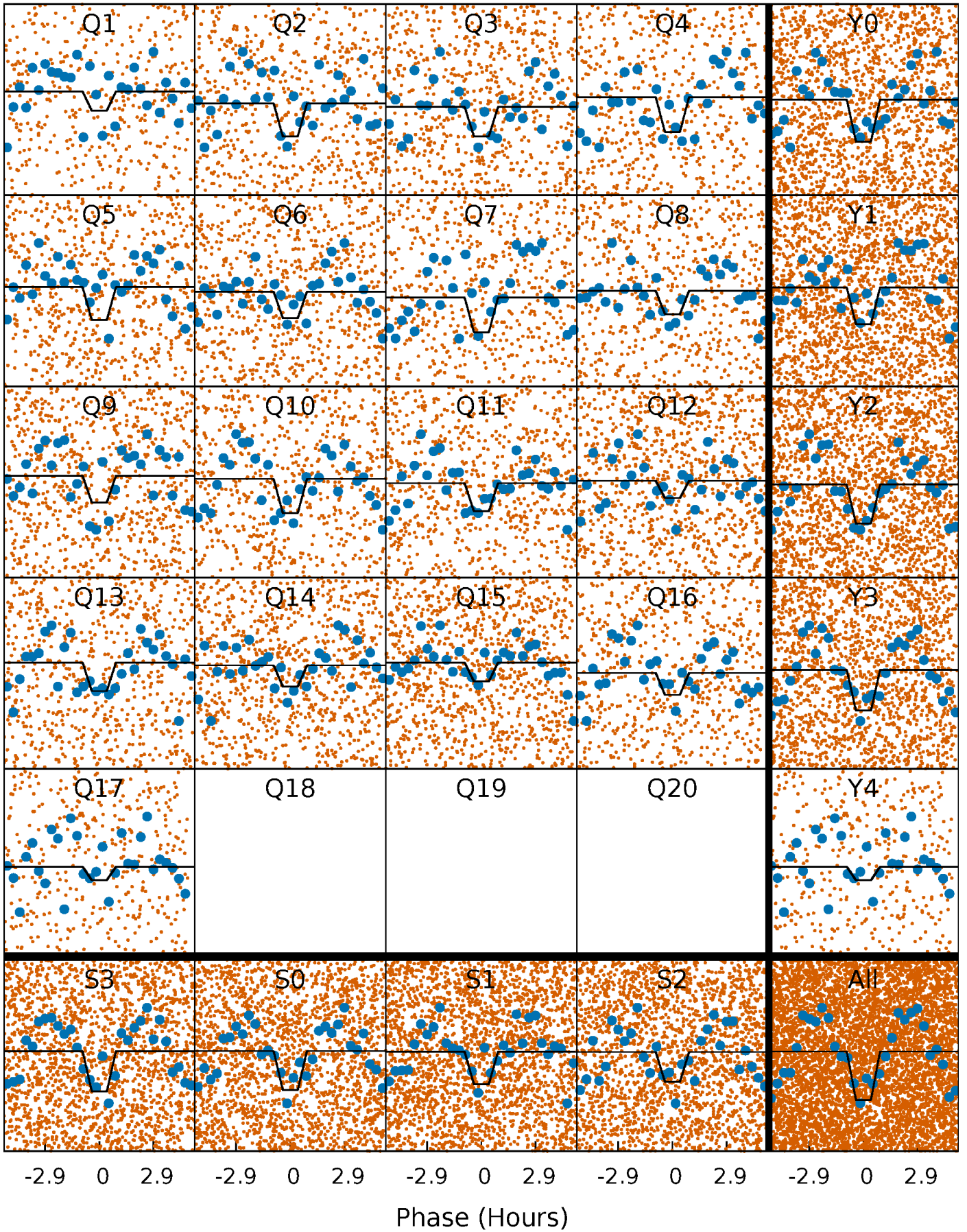
DV Quarter-Phased Transit Curves

TCE 008197355-02 P= 0.818663 Days $T_0=131.810981$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

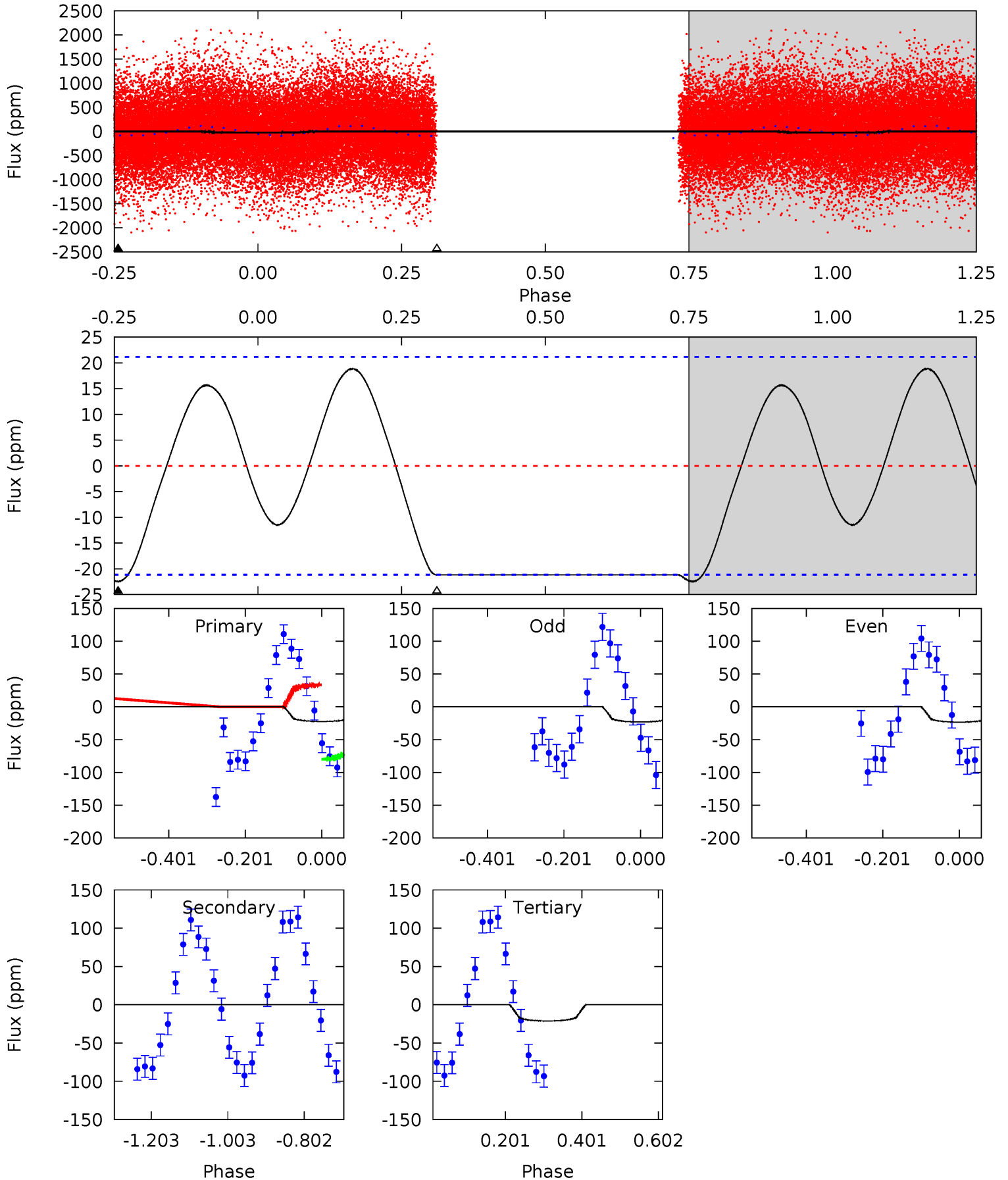
TCE 008197355-02 P= 0.818699 Days $T_0=131.806959$ (BKJD)



DV Model-Shift Uniqueness Test

008197355-02, P = 0.818663 Days, E = 130.992318 Days

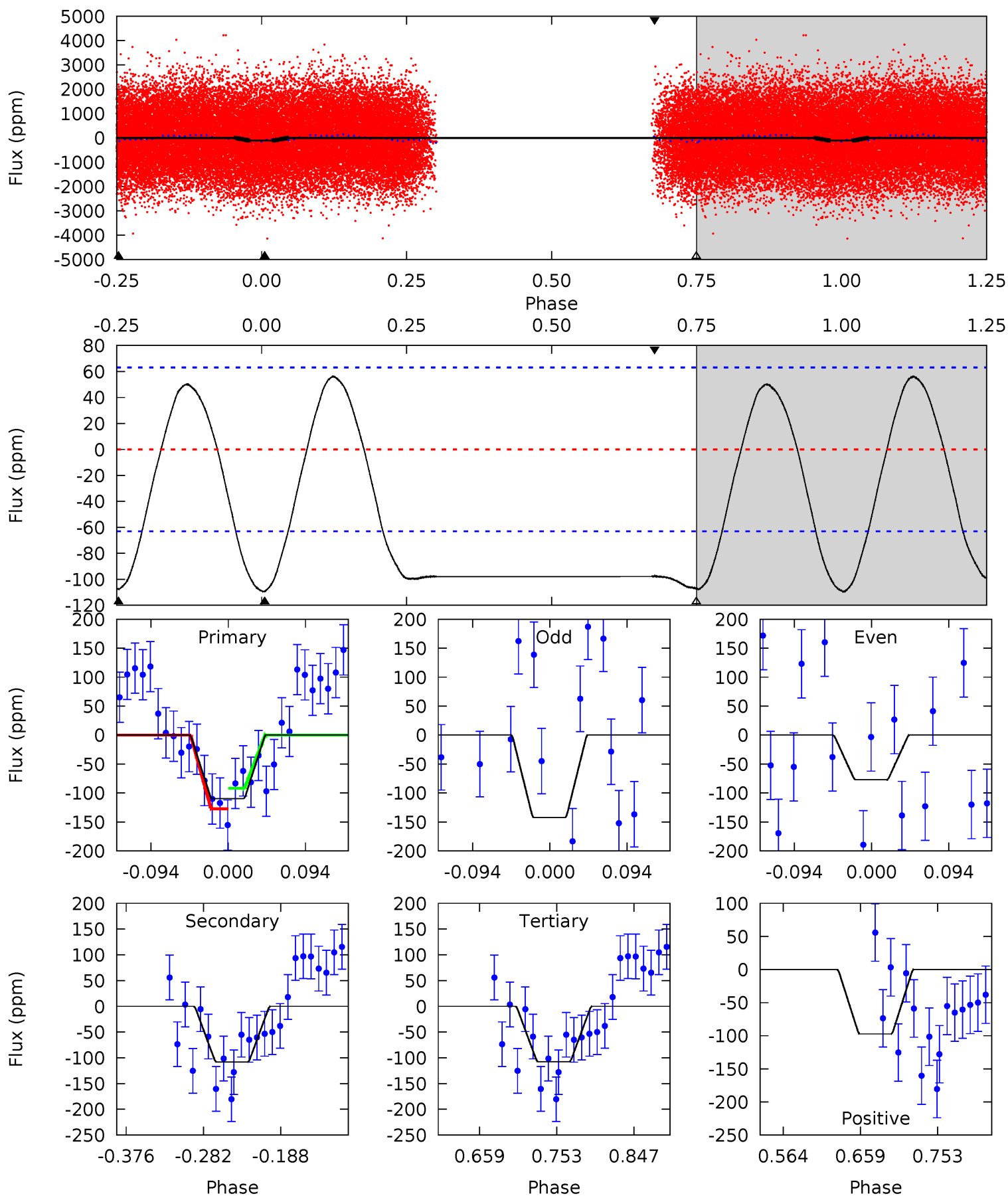
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.69	0	4.42	0	4.42	1.28	2.37	0.27	4.69	-4.42	0	0.02	1.24	0.46	4.91



Alt Model-Shift Uniqueness Test

008197355-02, P = 0.818699 Days, E = 130.988260 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.97	7.84	7.80	-7.06	4.58	1.67	4.71	0.18	15.0	0.04	14.9	2.36	1.36	0.34	1.28



Stellar Parameters For KIC 008197355

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7941^{+219}_{-329}	$4.120^{+0.135}_{-0.165}$	$-0.080^{+0.150}_{-0.350}$	$1.885^{+0.507}_{-0.380}$	$1.706^{+0.180}_{-0.270}$	$0.359^{+0.267}_{-0.163}$
	+3%/-4%	+3%/-4%	+188%/-438%	+27%/-20%	+11%/-16%	+74%/-45%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008197355-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 5	$1.48^{+0.58}_{-0.52}$	4704^{+305}_{-290}	-4050^{+7967}_{-924}	$-0.001^{+0.555}_{-0.520}$
Alt.	-108 ± 14	$2.39^{+0.62}_{-0.61}$	4702^{+310}_{-315}	7242^{+1305}_{-858}	$4.341^{+3.219}_{-1.647}$

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 $A_{obs} \gg 1.0$

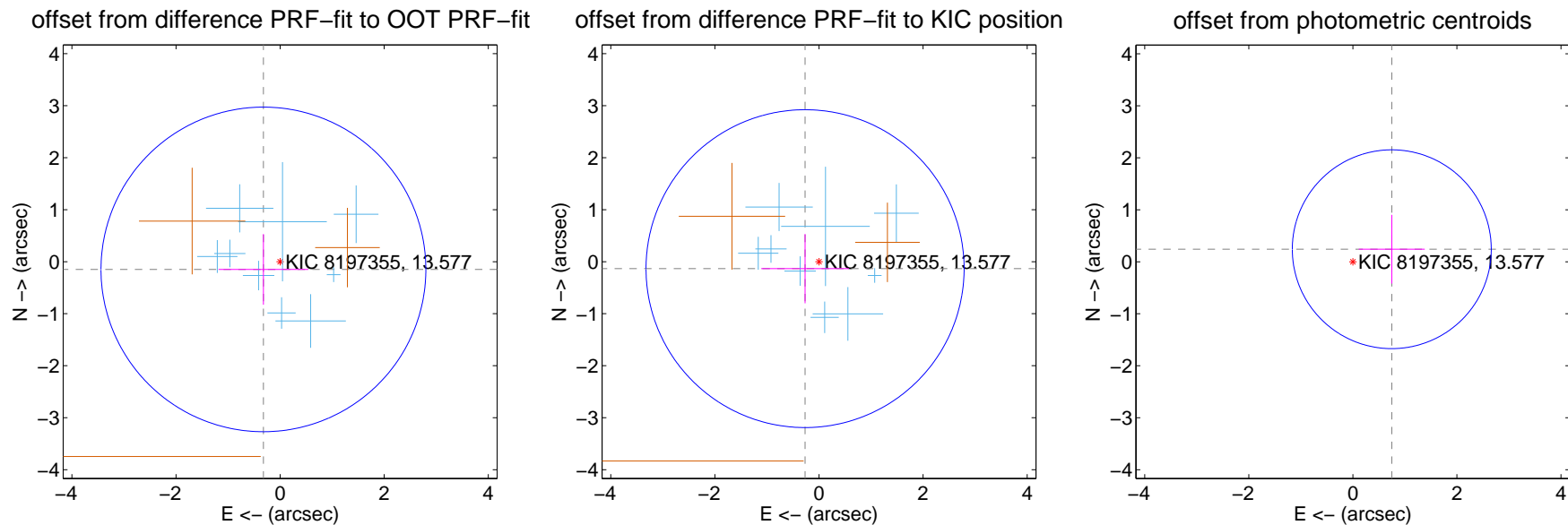
DV Centroid Data

Supplemental centroid analysis for 008197355-02. Kepler magnitude: 13.58. Transit SNR 7.43

There are 9 quarters with good PRF difference image offsets

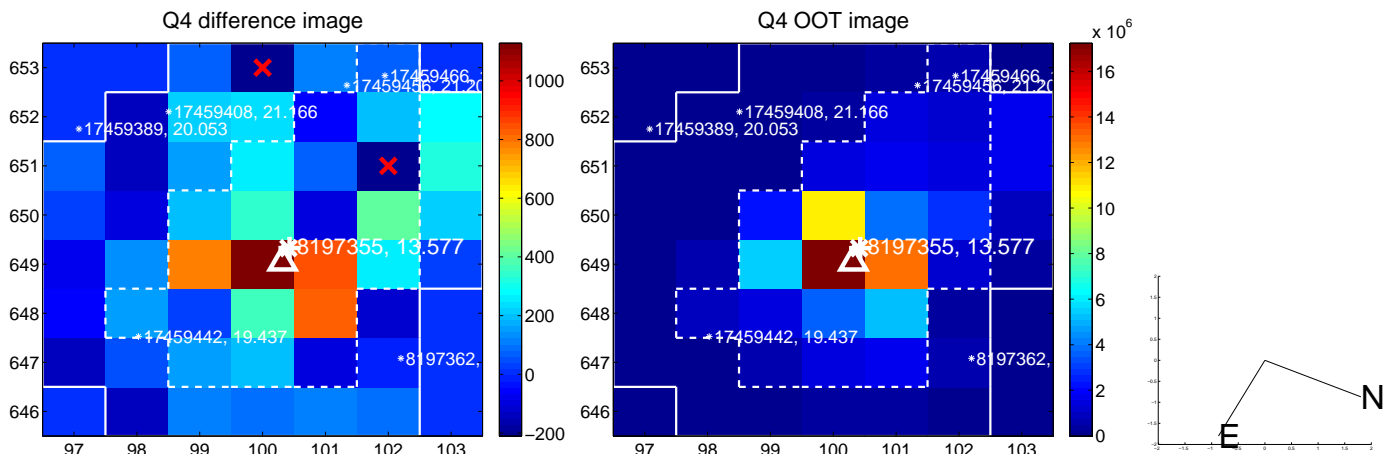
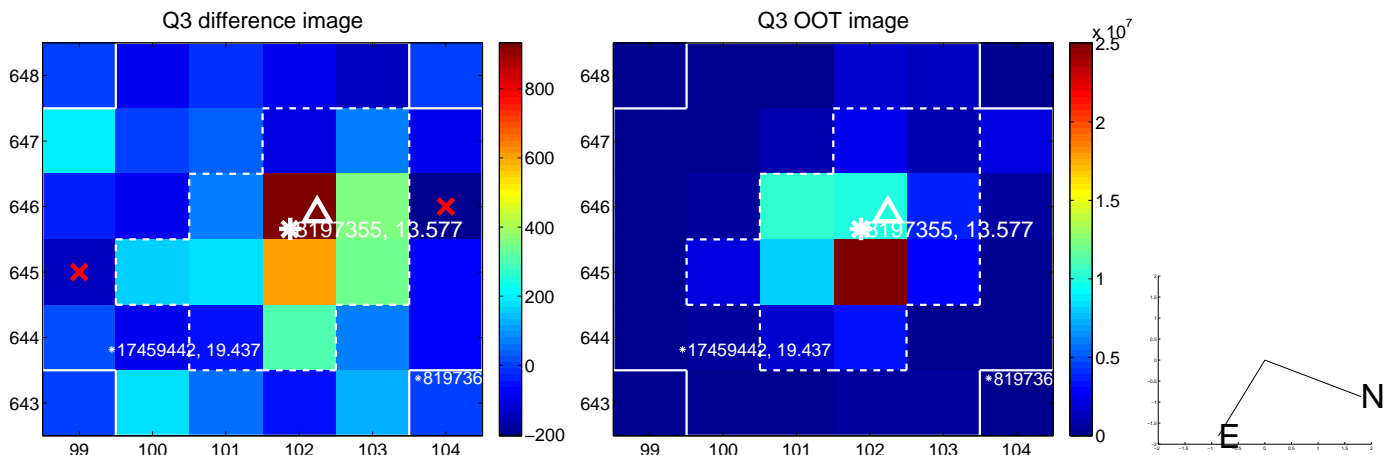
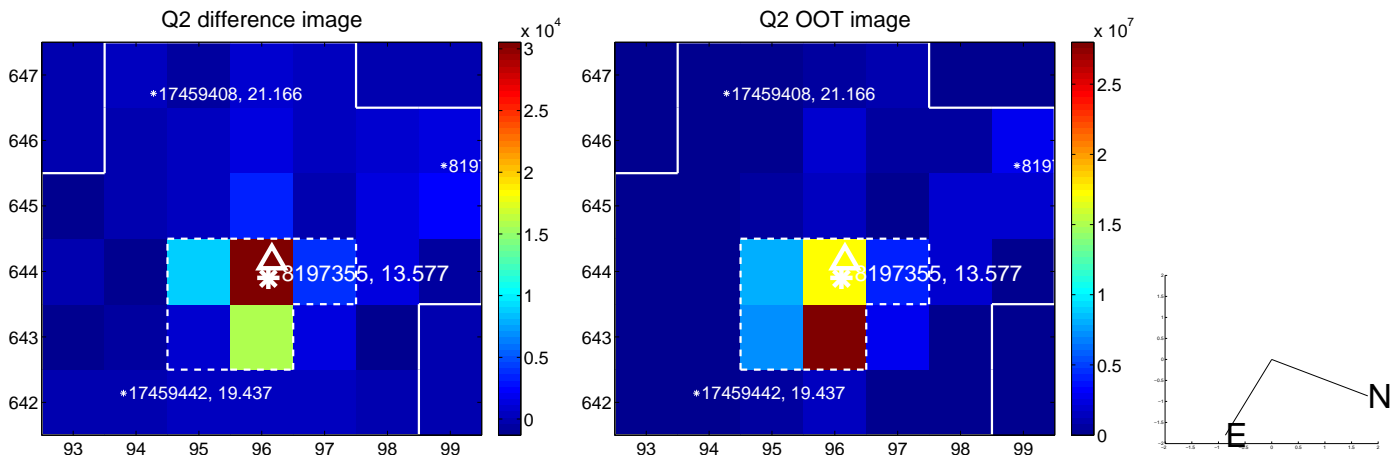
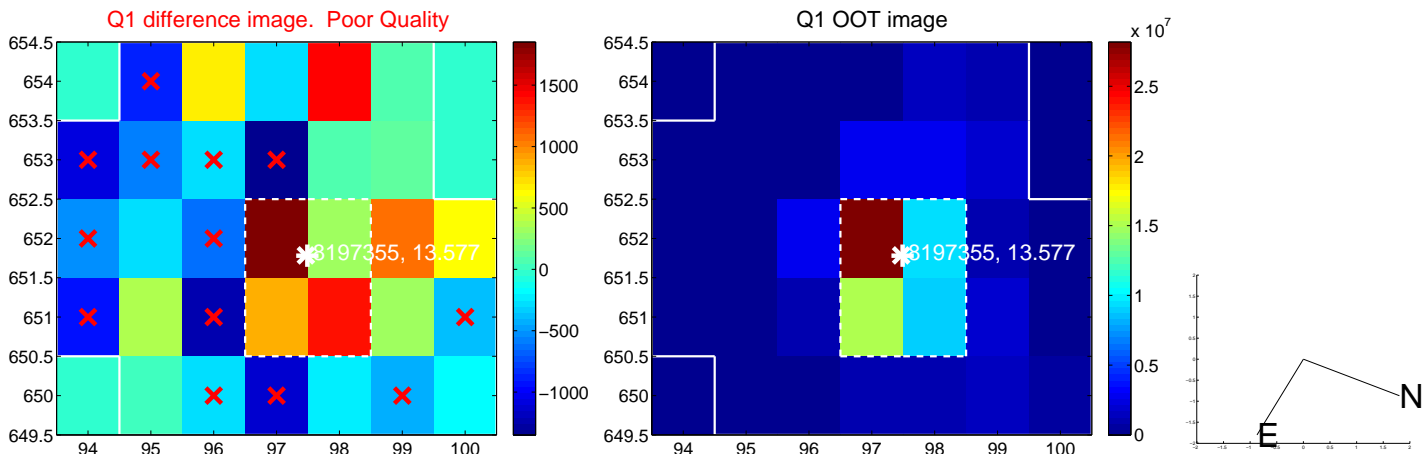
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.353 ± 1.040	0.34	0.320 ± 0.862	-0.148 ± 0.680
PRF-fit source offset from KIC position	0.299 ± 1.018	0.29	0.267 ± 0.842	-0.134 ± 0.666
photometric centroid source offset	0.79 ± 0.64	1.23	-0.75 ± 0.63	0.24 ± 0.66

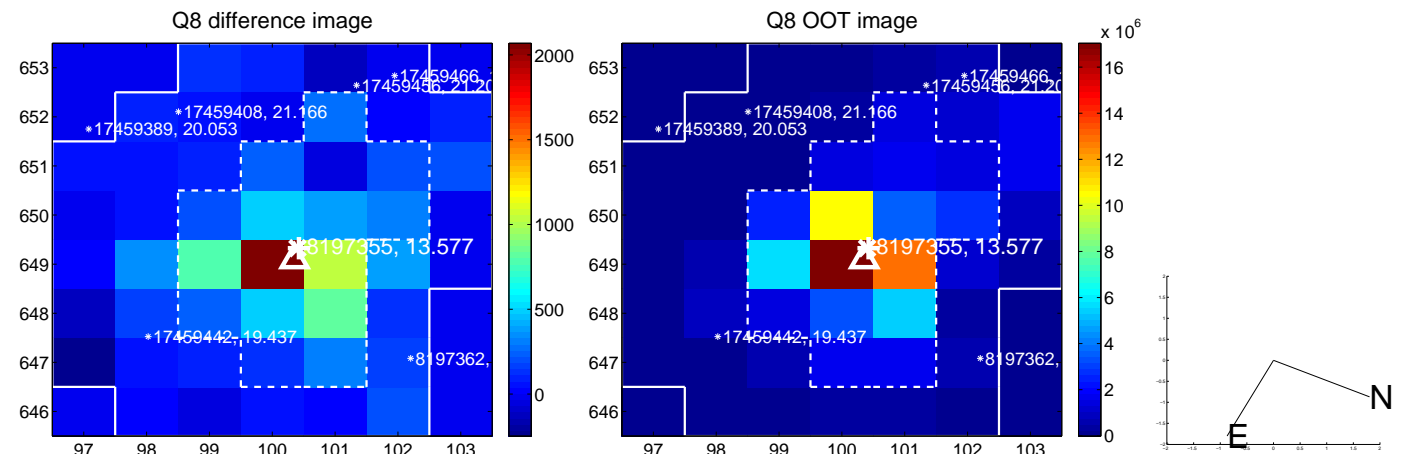
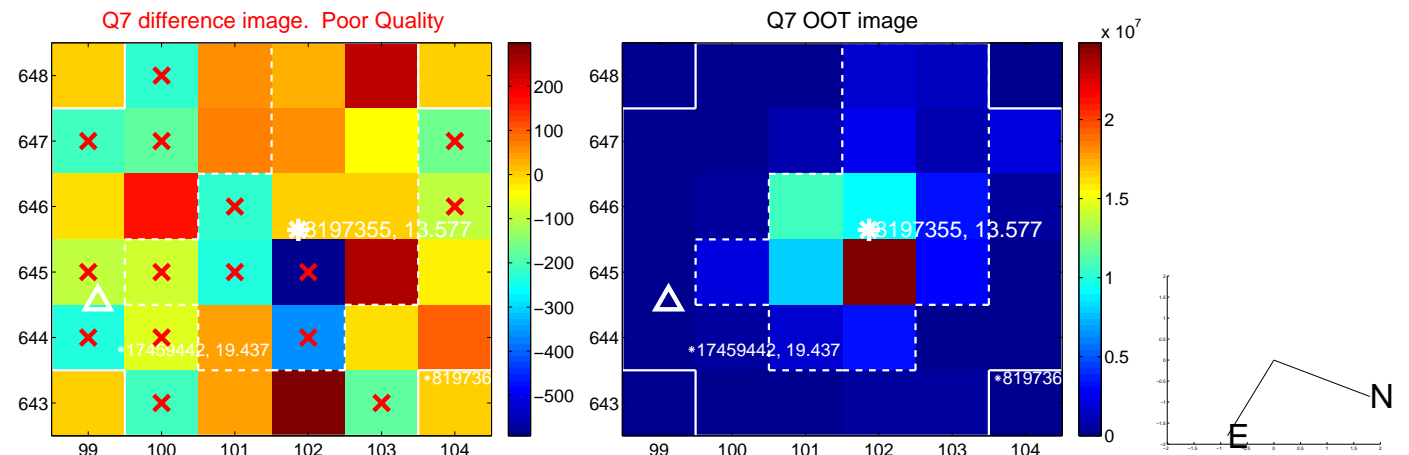
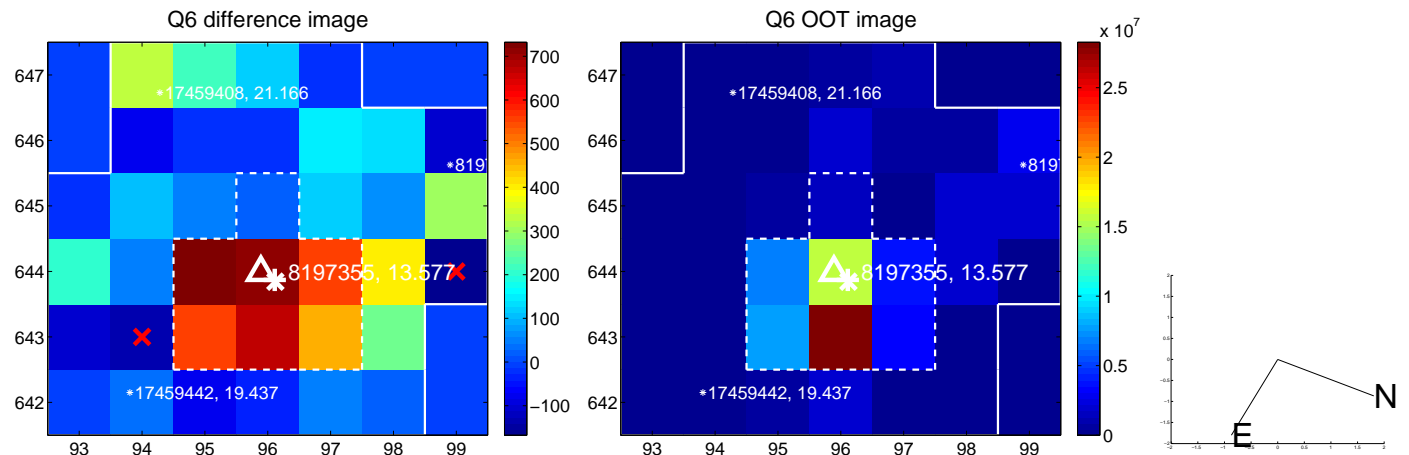
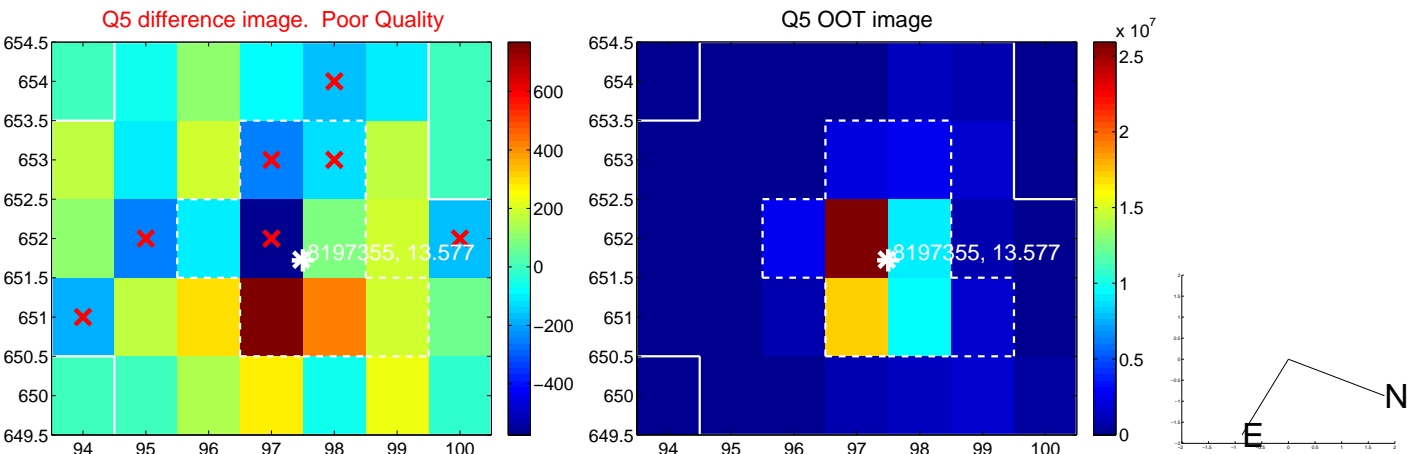


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

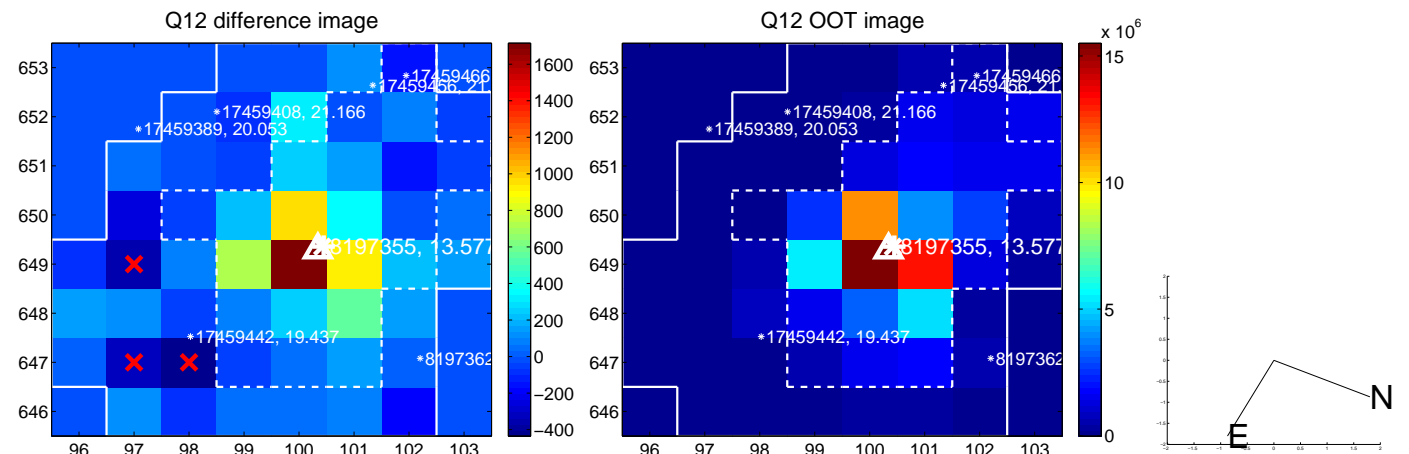
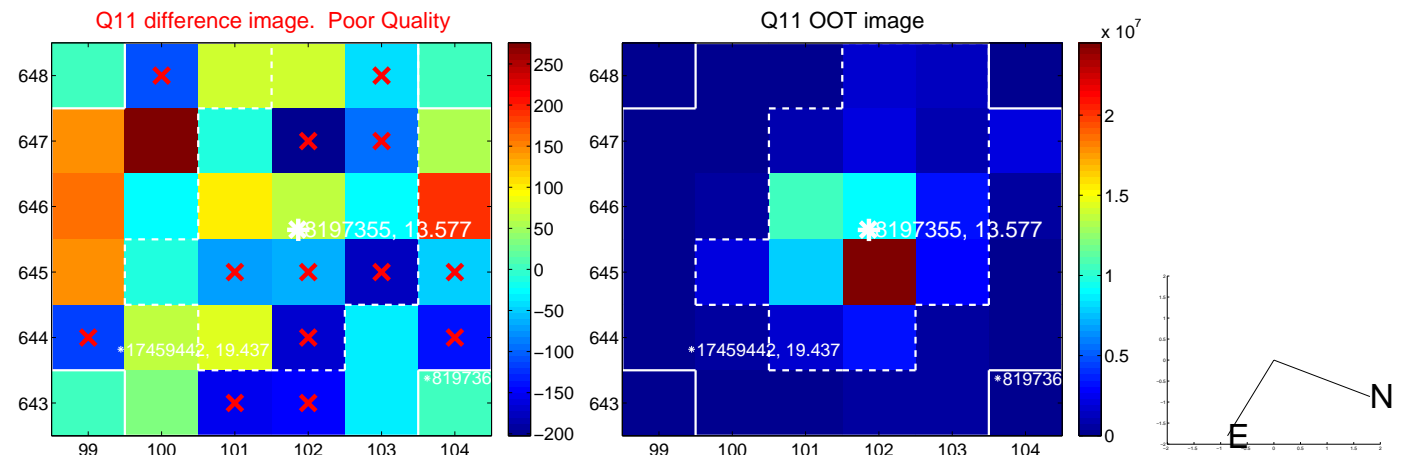
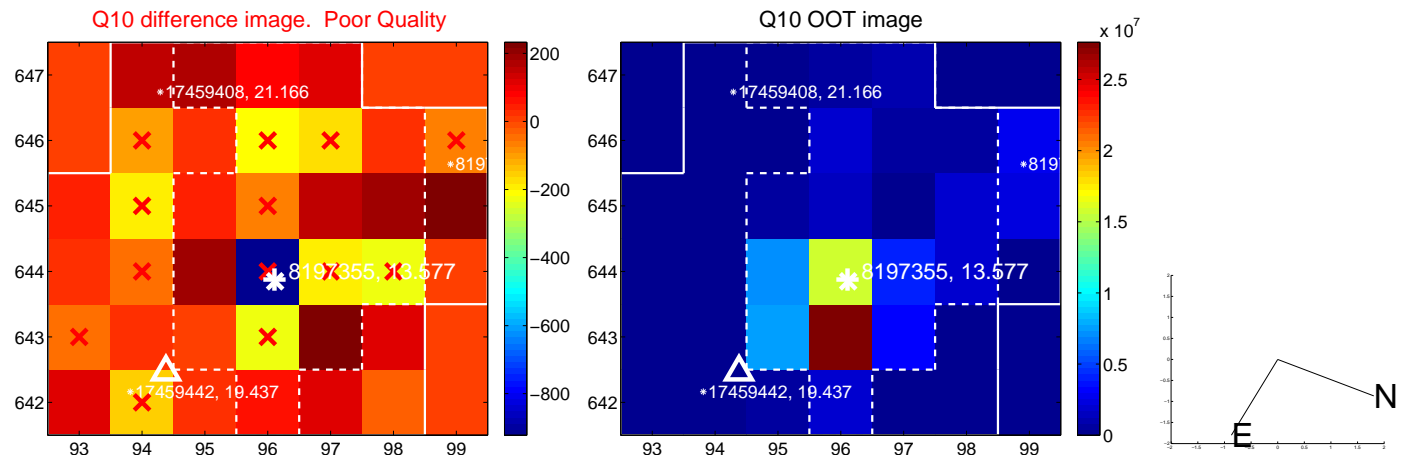
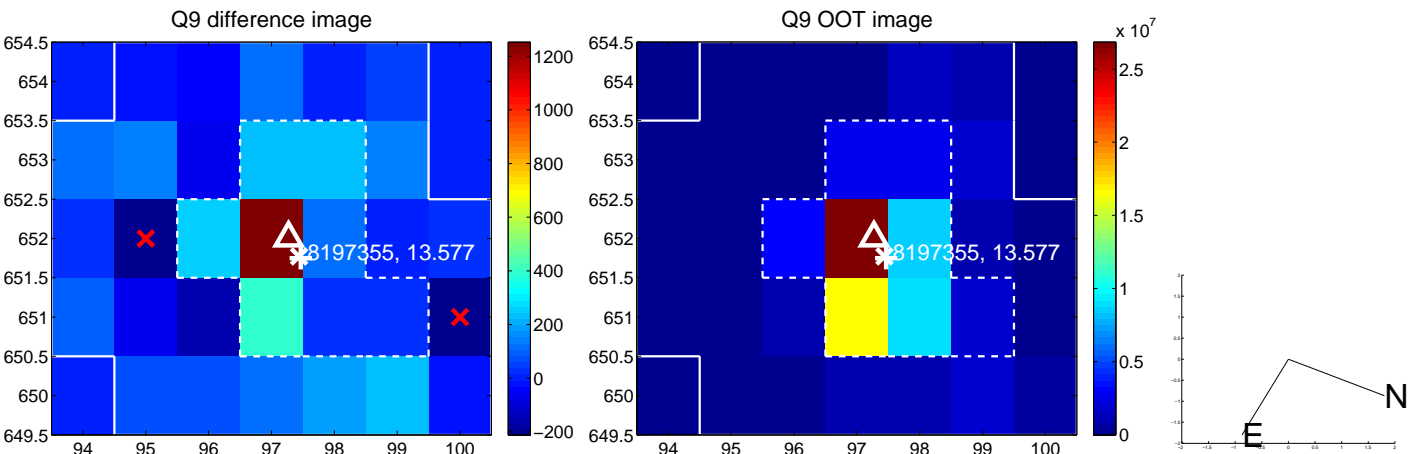
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



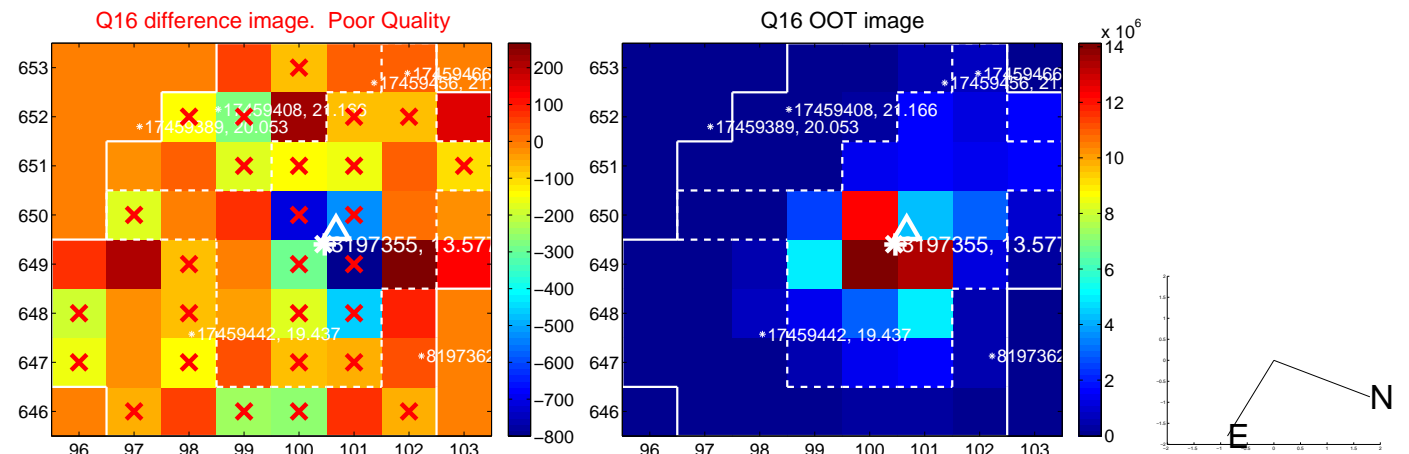
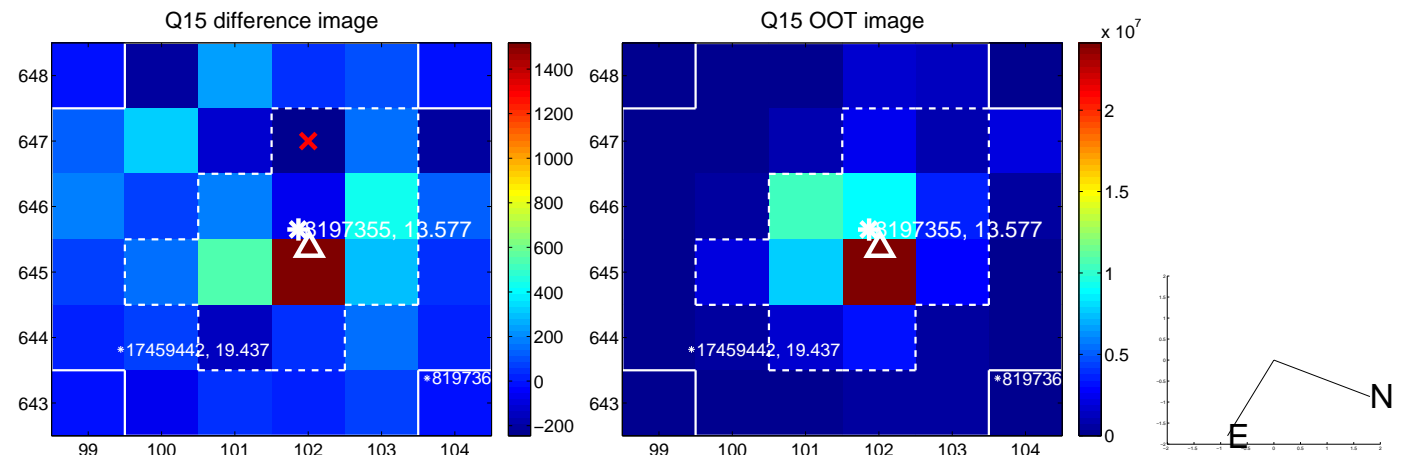
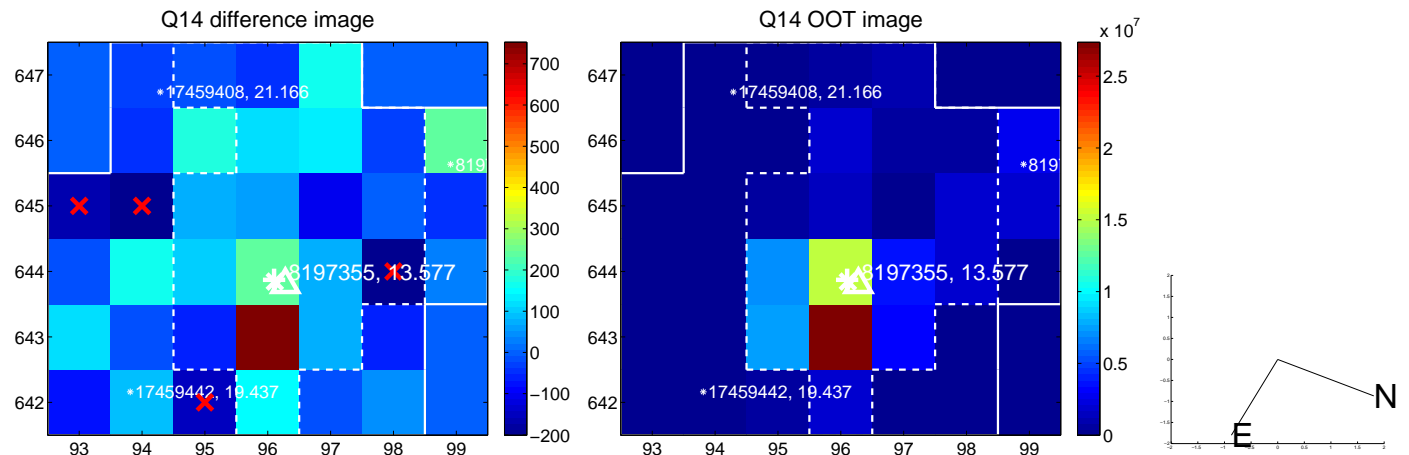
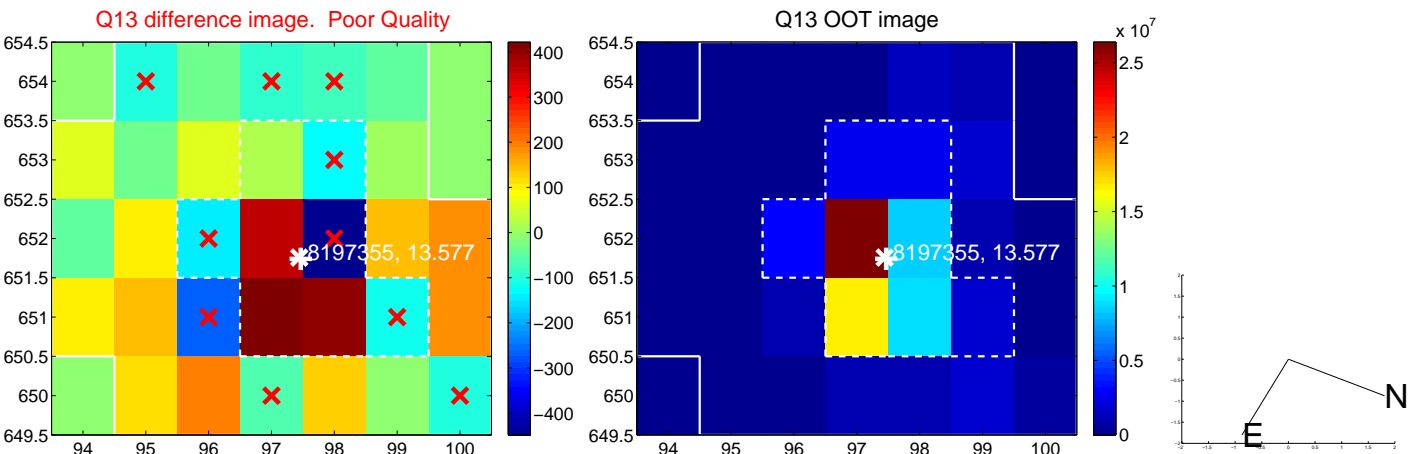
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



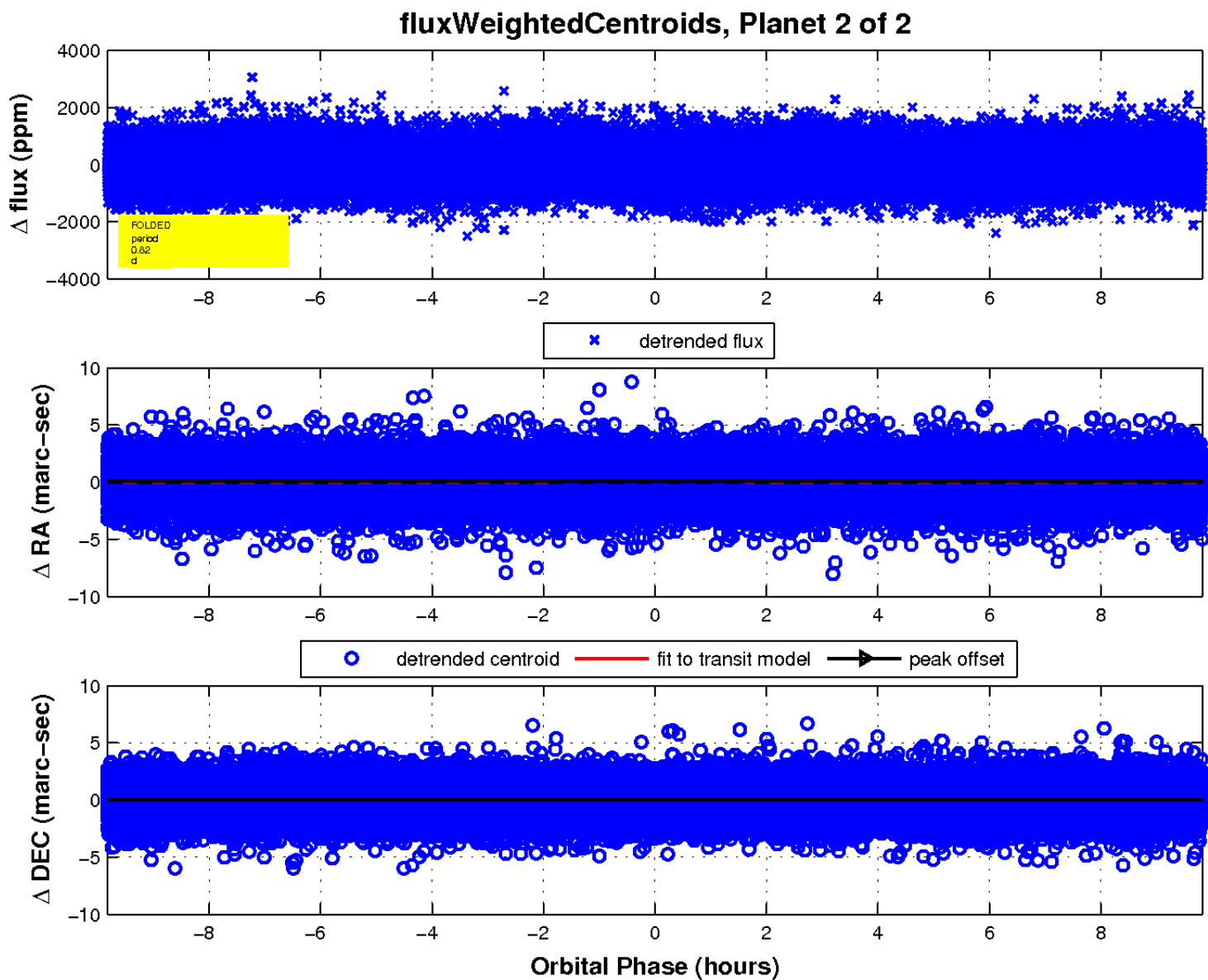
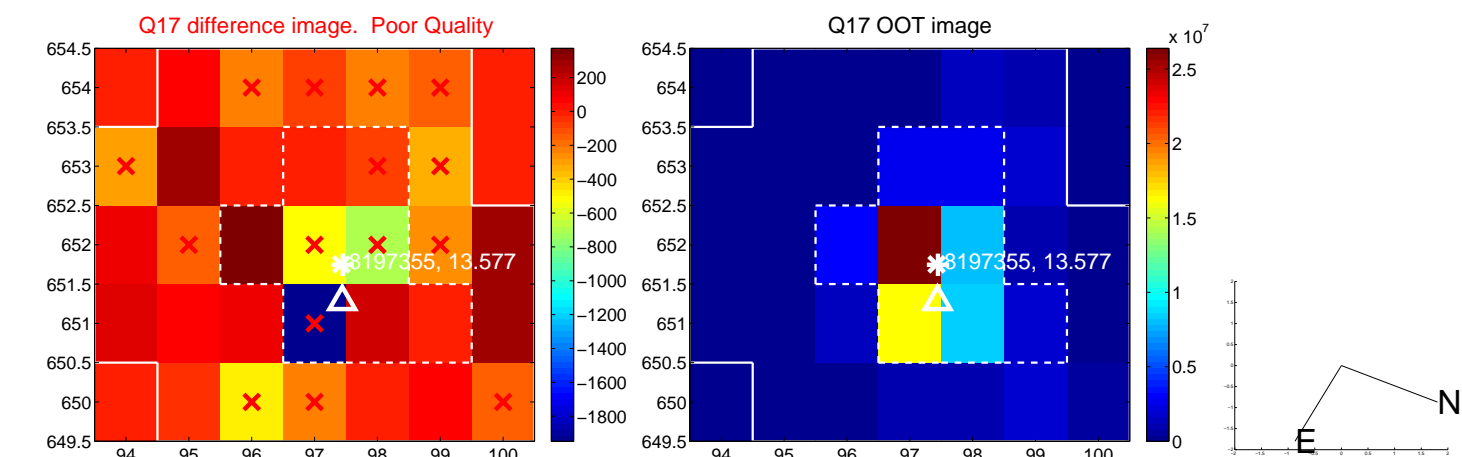
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

