

KIC 011197934

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})
011197934-01	OBS	No	0.657655	131.888696	205.9	1.935	11.6	13.4	2.81	7641	4.68	70214.93
011197934-02	OBS	No	1.127535	132.006145	363.7	7.817	10.2	14.0	2.81	7641	7.33	34217.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011197934-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011197934-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—CENT_SATURATED

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

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

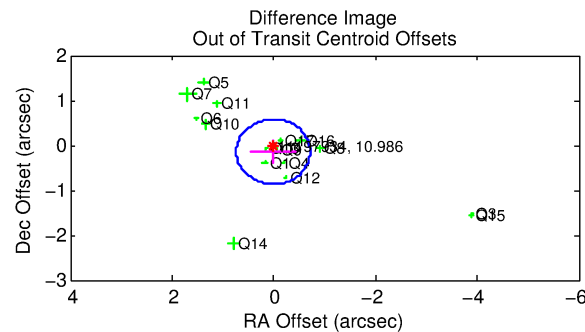
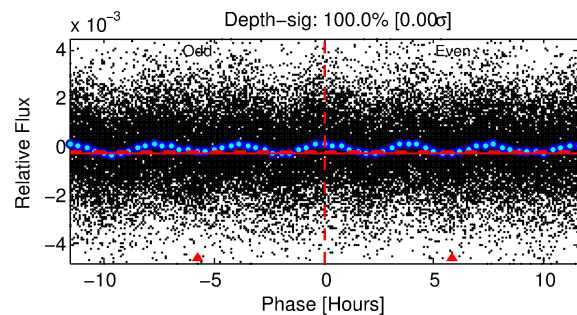
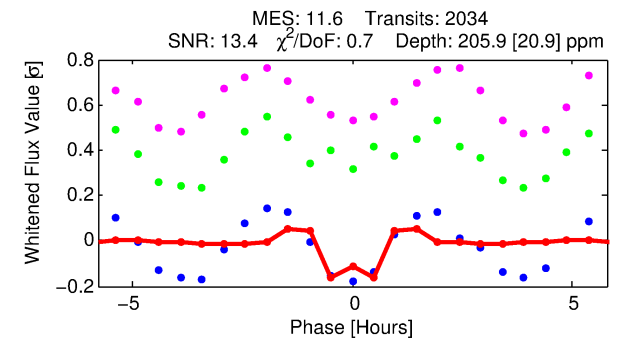
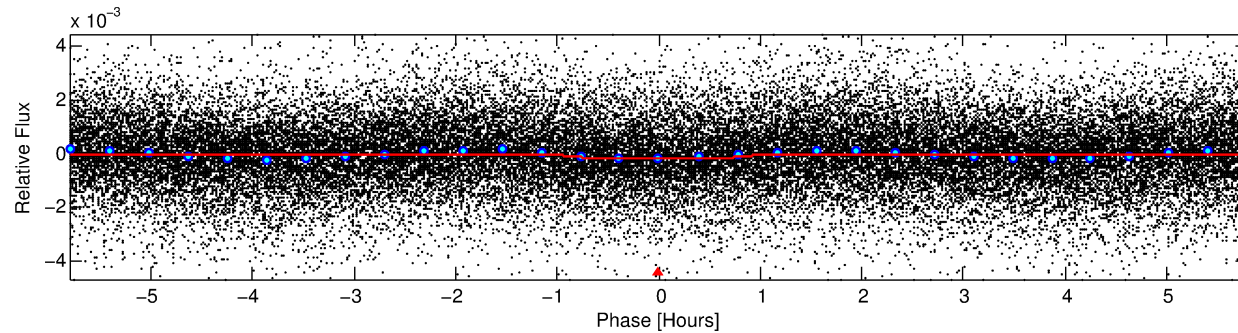
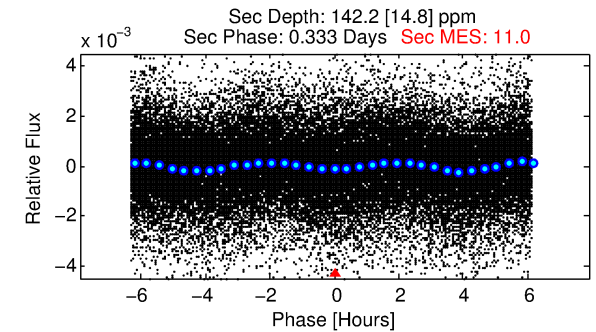
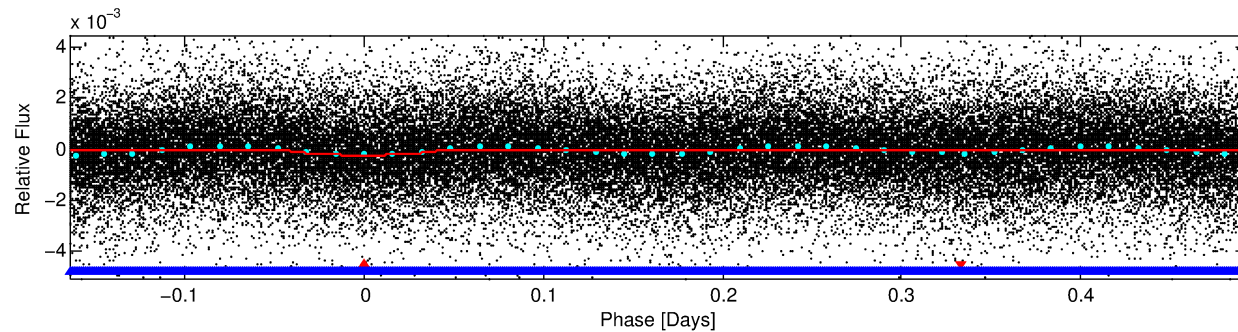
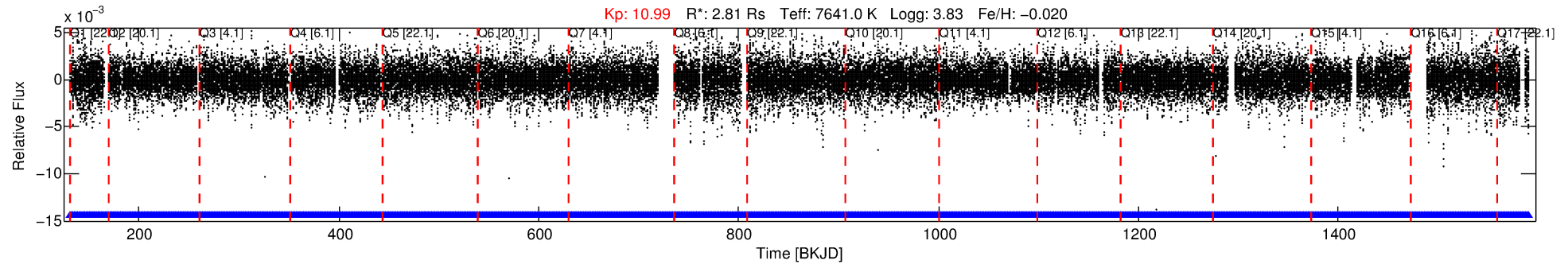
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011197934-01

No Significant Match Found

DV One-Page Summary

KIC: 11197934 Candidate: 1 of 2 Period: 0.658 d



DV Fit Results:

Period = 0.65765 [0.00001] d
Epoch = 131.8887 [0.0009] BKJD
Rp/R* = 0.0153 [0.0023]
a/R* = 1.54 [0.76]
b = 0.90 [0.18]
Seff = 70214.93 [27712.02]
Teq = 4151 [410] K
Rp = 4.68 [1.48] Re
a = 0.0185 [0.0047] AU
Ag = 1.22 [0.62] [0.36σ]
Teffp = 6750 [547] K [3.80σ]

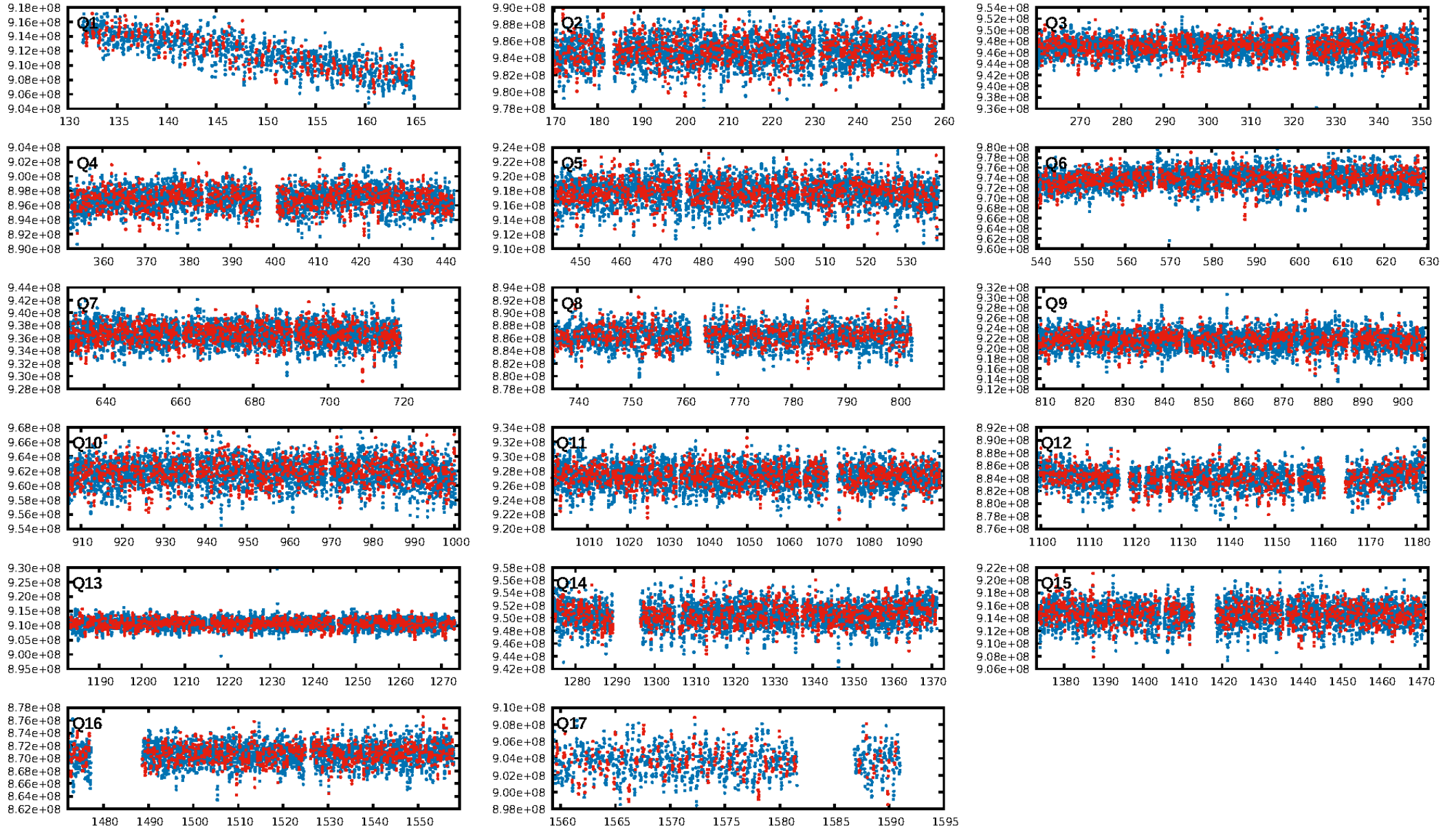
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 83.9% [1.40σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1943/1943]
GhostDiagnostic-chr: 1.378
Centroid-sig: N/A
Centroid-so: 0.081 arcsec [1.46σ]
OotOffset-rm: 0.145 arcsec [0.60σ]
KicOffset-rm: 0.124 arcsec [0.69σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.81 [13/16]
DiffImageOverlap-fno: 1.00 [17/17]

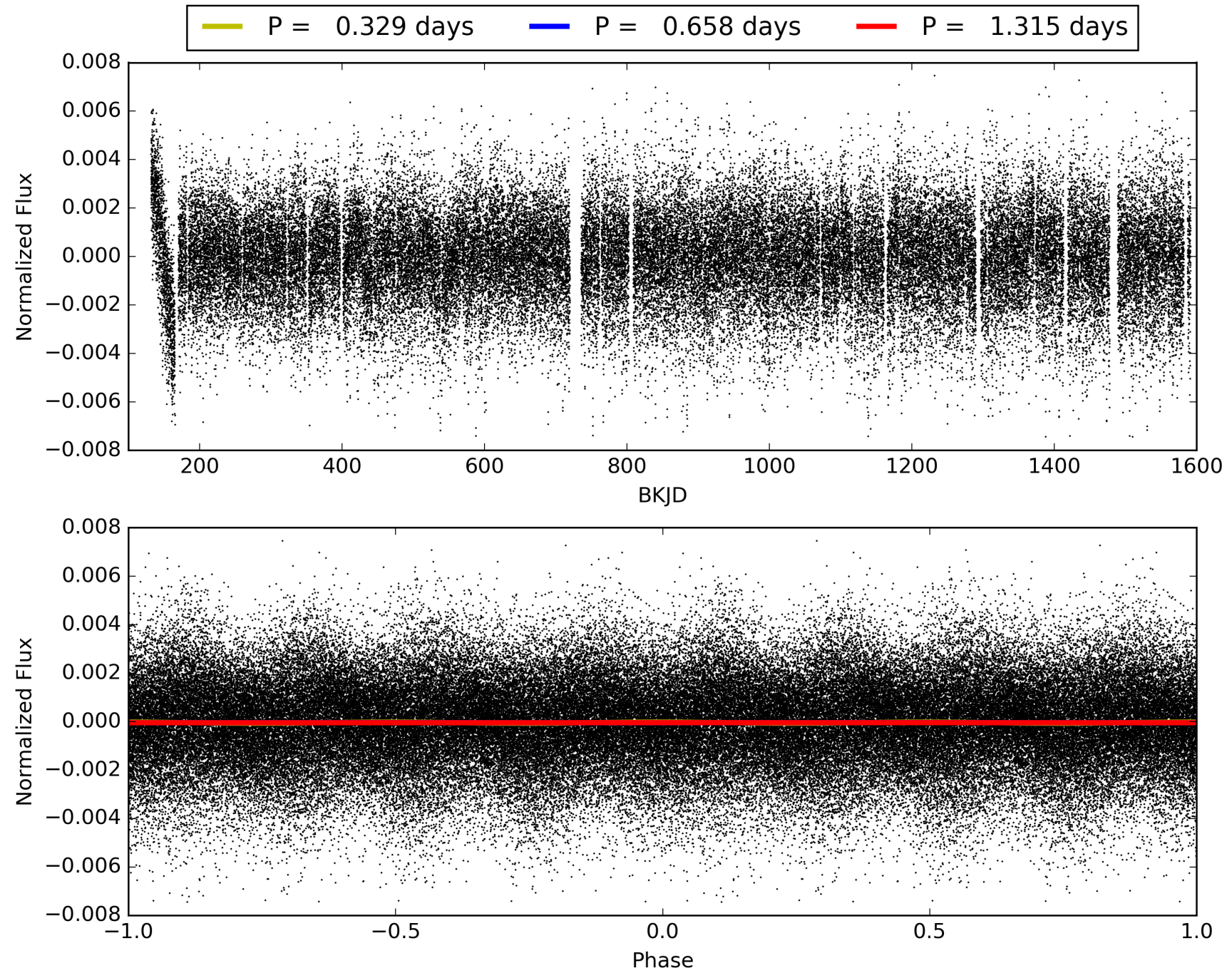
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:11:32 Z

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

TCE 011197934-01, PDC Light Curves

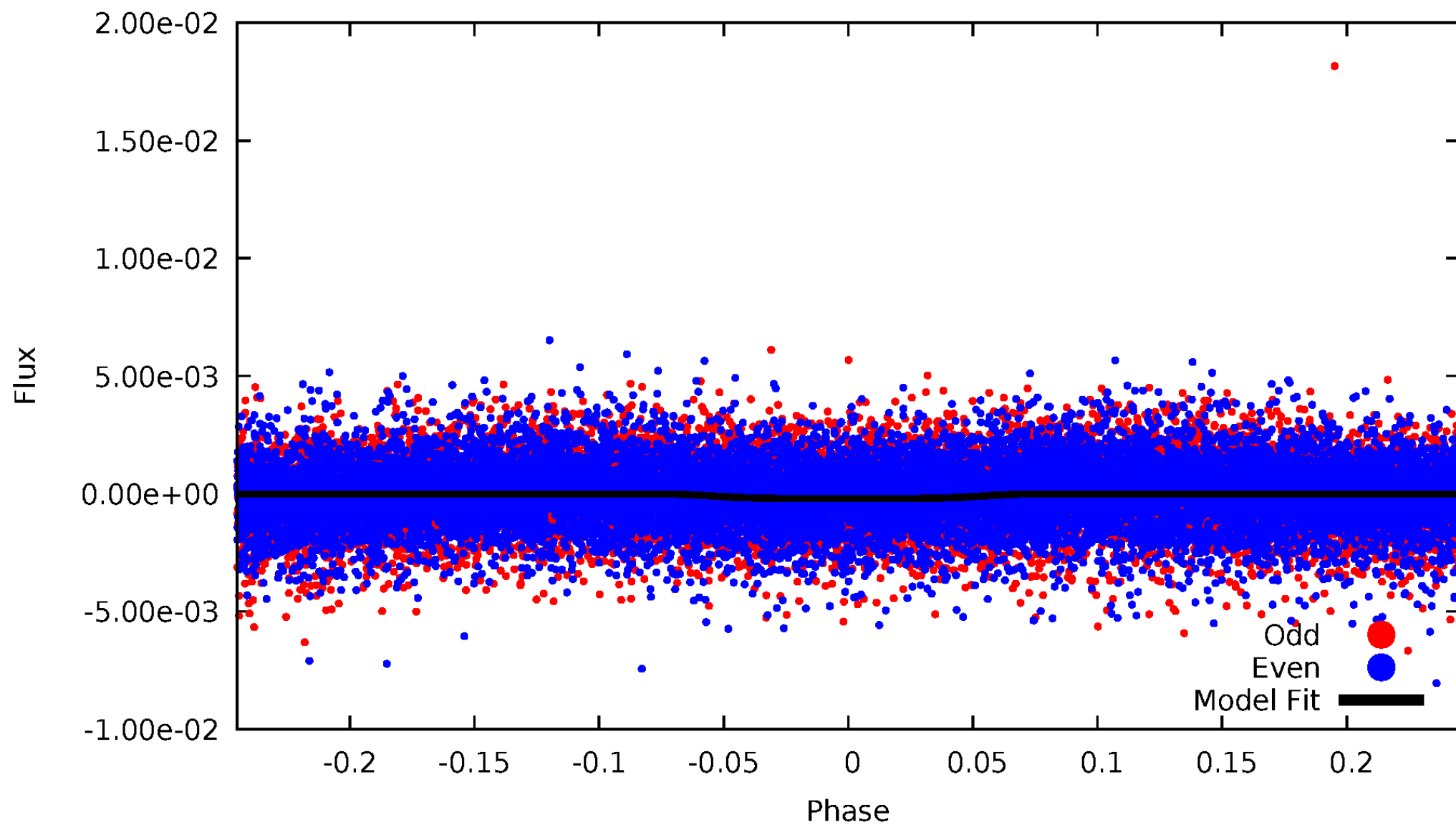


TCE 011197934-01



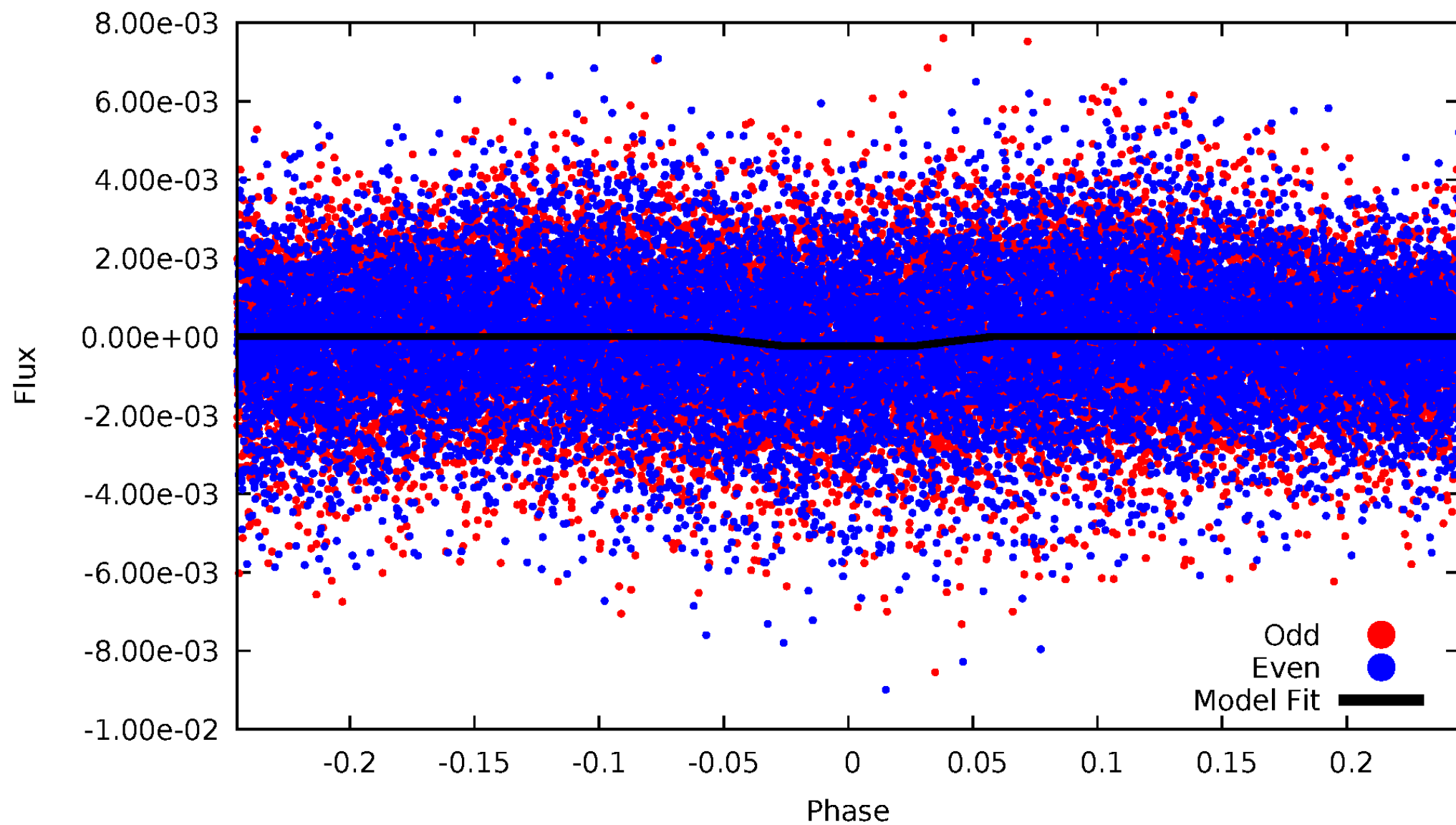
DV Odd/Even

TCE 011197934-01



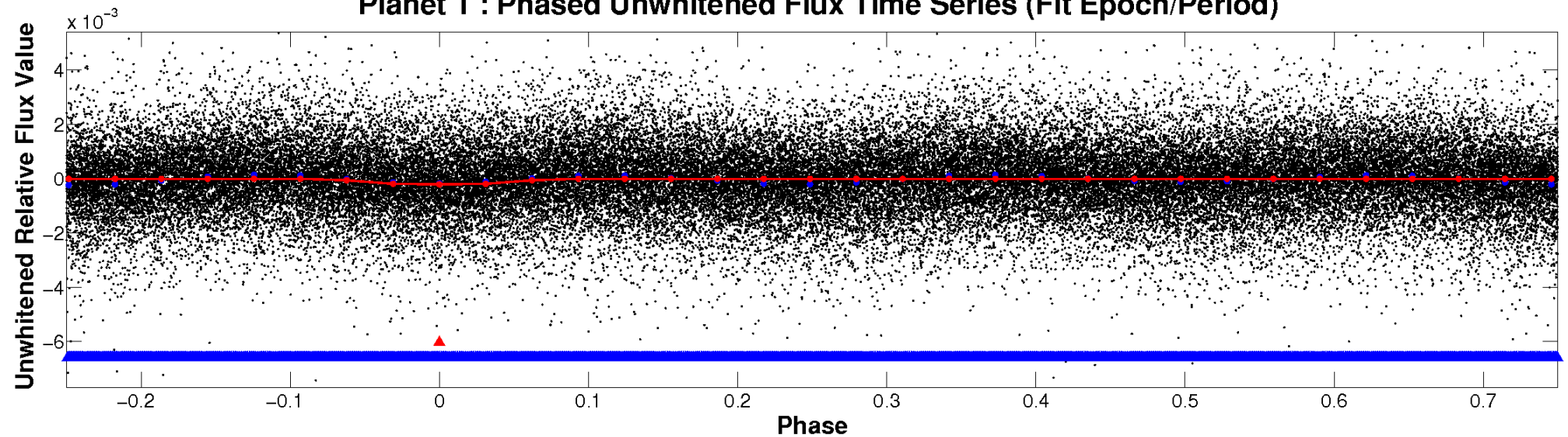
ALT Odd/Even

TCE 011197934-01

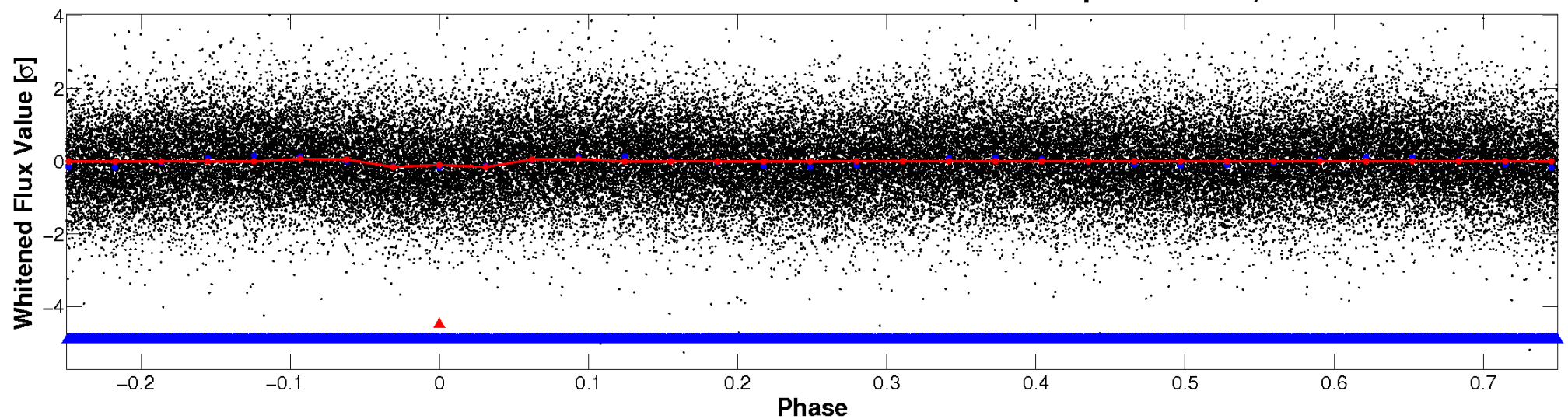


Non-Whitened Vs. Whitened Light Curve

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

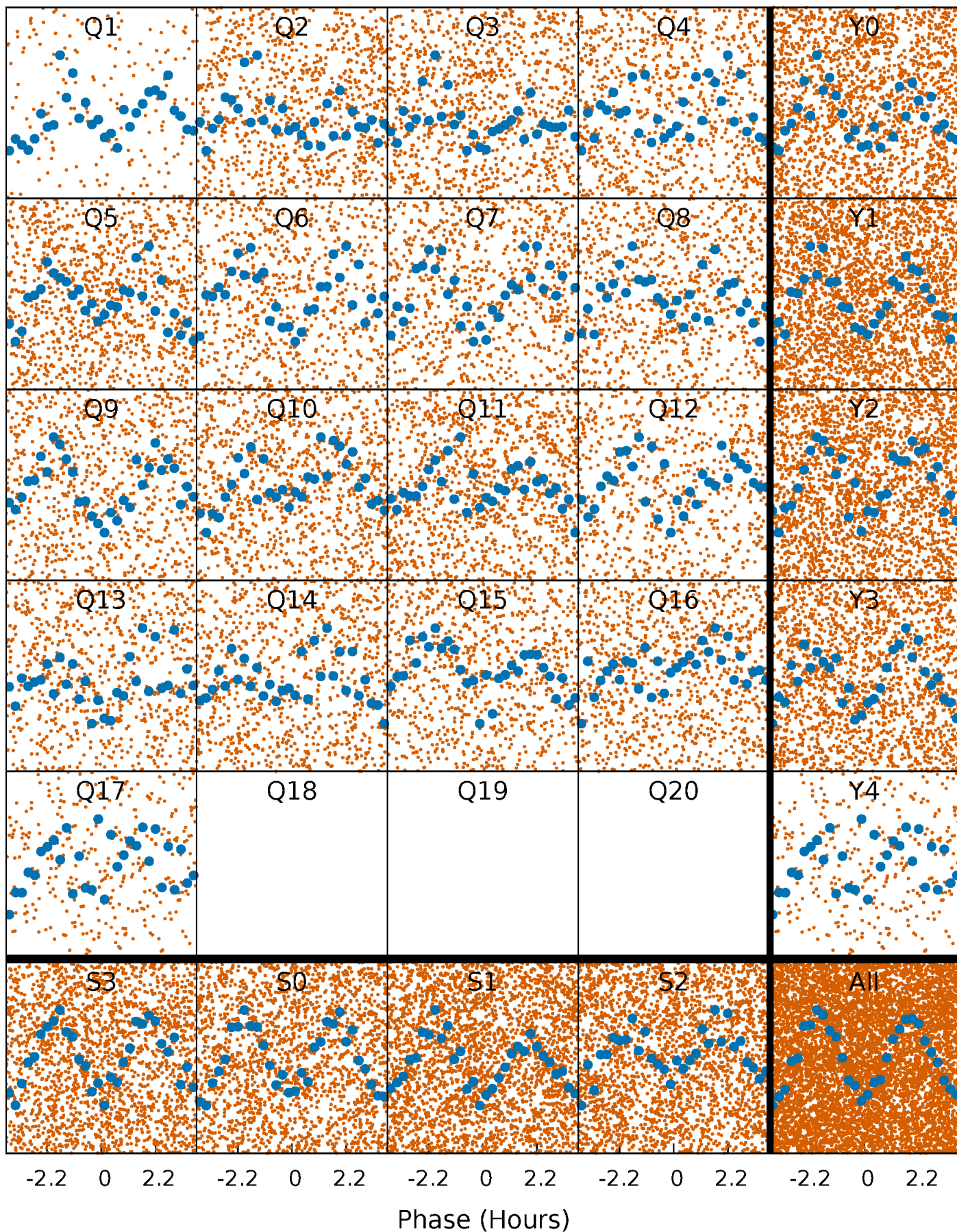


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



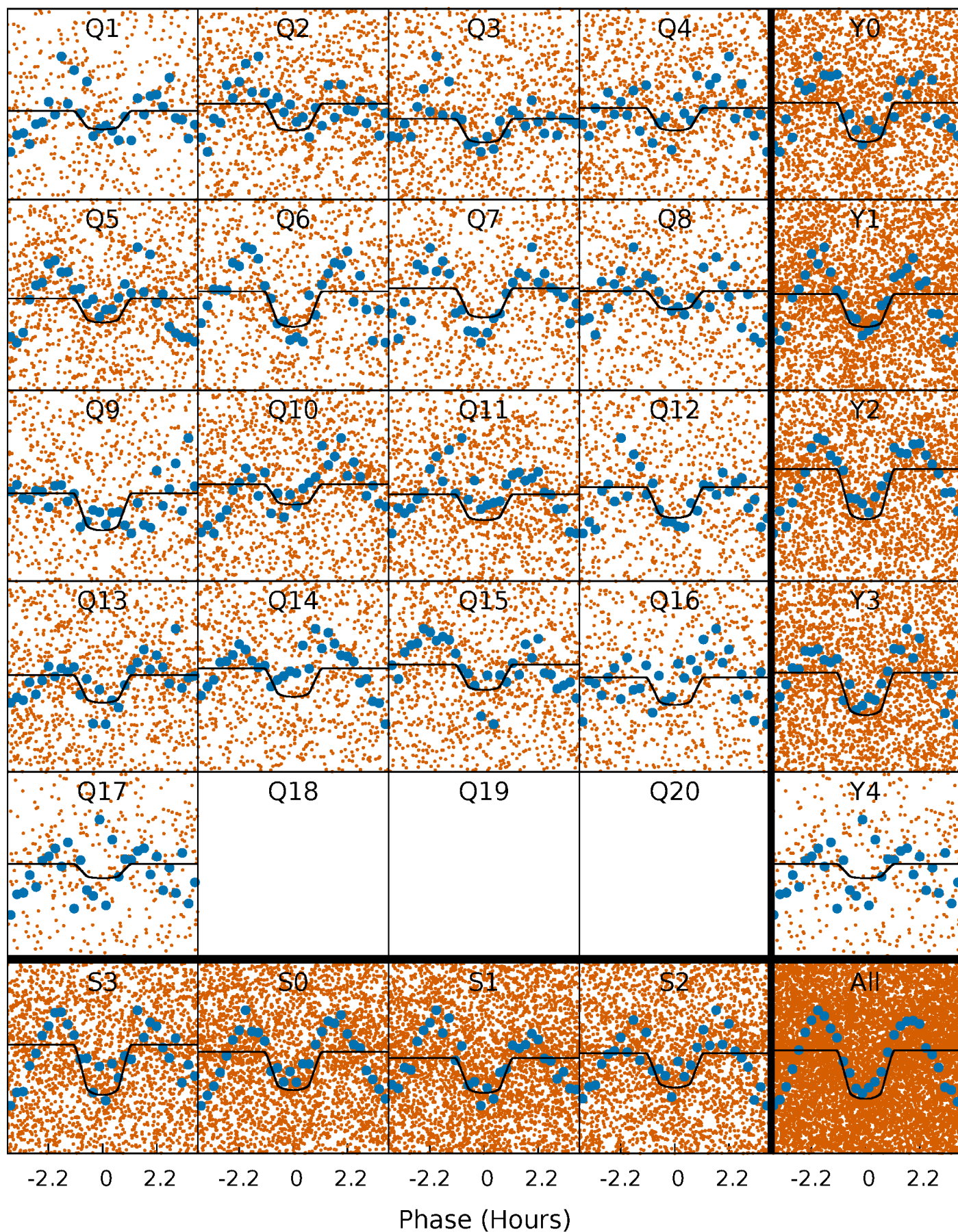
PDC Quarter-Phased Transit Curves

TCE 011197934-01 P= 0.657655 Days $T_0=131.888696$ (BKJD)



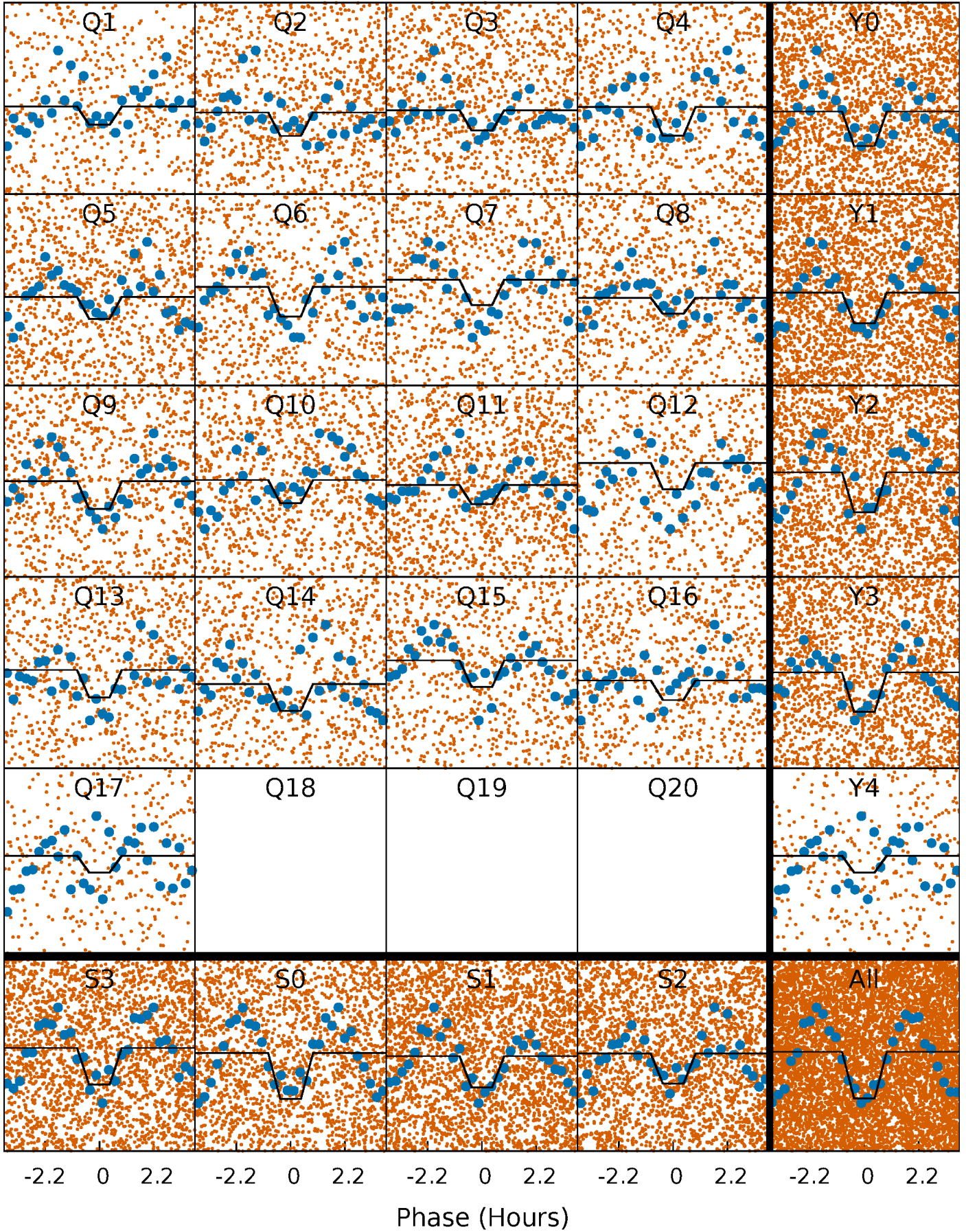
DV Quarter-Phased Transit Curves

TCE 011197934-01 P= 0.657655 Days $T_0=131.888696$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

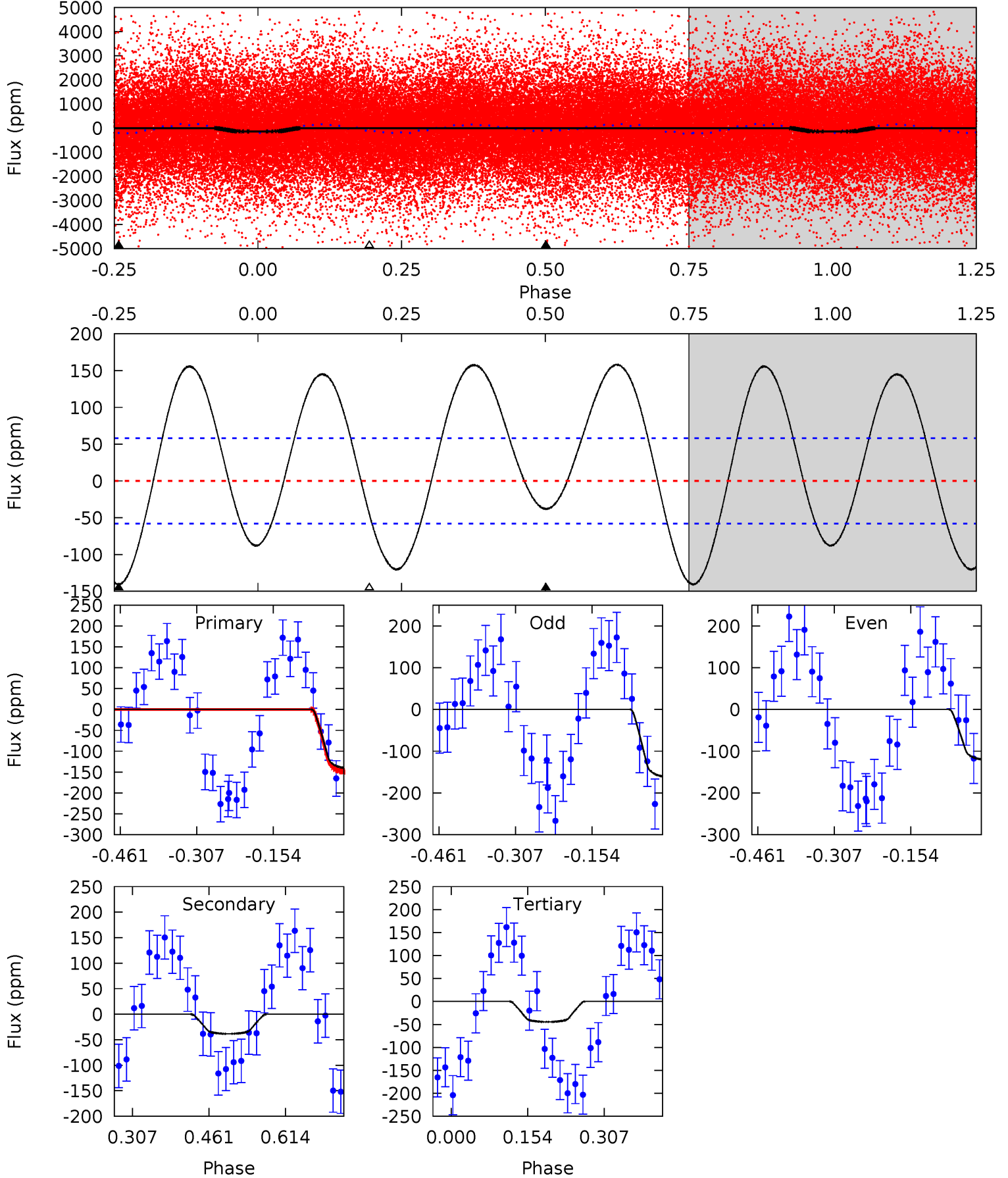
TCE 011197934-01 P= 0.657655 Days $T_0=131.888696$ (BKJD)



DV Model-Shift Uniqueness Test

011197934-01, P = 0.657655 Days, E = 131.231041 Days

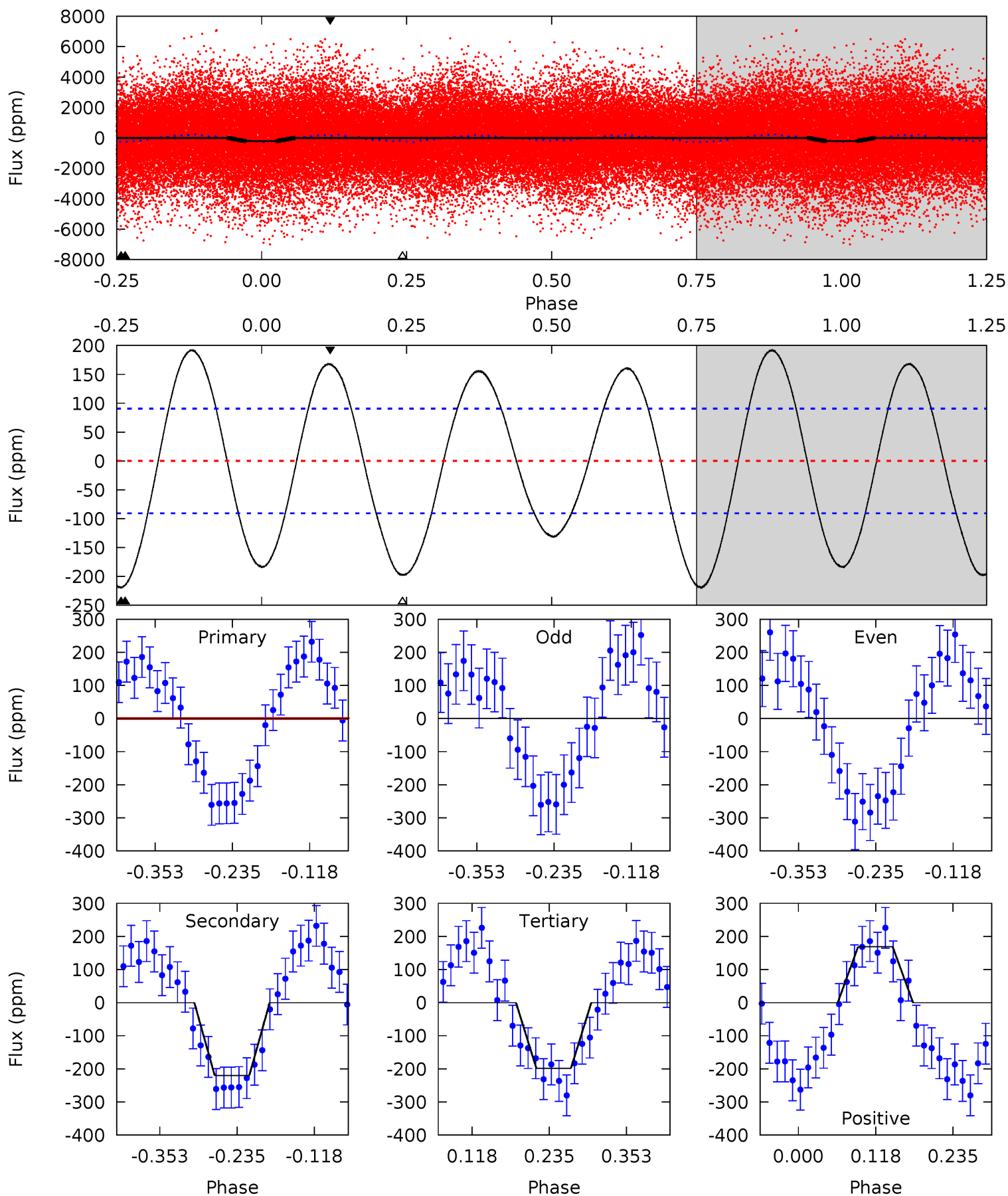
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	2.96	3.44	0	4.47	1.43	6.54	7.44	10.9	-0.48	2.96	1.60	0.99	0.53	0.82



Alt Model-Shift Uniqueness Test

011197934-01, P = 0.657655 Days, E = 131.231041 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	11.0	9.92	8.44	4.53	1.56	6.04	0.86	2.34	1.10	2.58	1.28	2.01	0.47	0.14



Stellar Parameters For KIC 011197934

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7641^{+68}_{-91}	$3.833^{+0.225}_{-0.060}$	$-0.020^{+0.150}_{-0.150}$	$2.808^{+0.260}_{-0.779}$	$1.956^{+0.017}_{-0.294}$	$0.124^{+0.172}_{-0.024}$
	+1%/-1%	+6%/-2%	+750%/-750%	+9%/-28%	+1%/-15%	+138%/-20%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 011197934-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-38 ± 13	$4.42^{+0.83}_{-0.90}$	5739^{+187}_{-431}	3487^{+1135}_{-7343}	$0.355^{+0.249}_{-0.152}$
Alt.	-220 ± 20	$4.39^{+0.89}_{-0.87}$	5724^{+205}_{-386}	7184^{+879}_{-682}	$2.109^{+1.099}_{-0.638}$

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 $A_{obs} \gg 1.0$

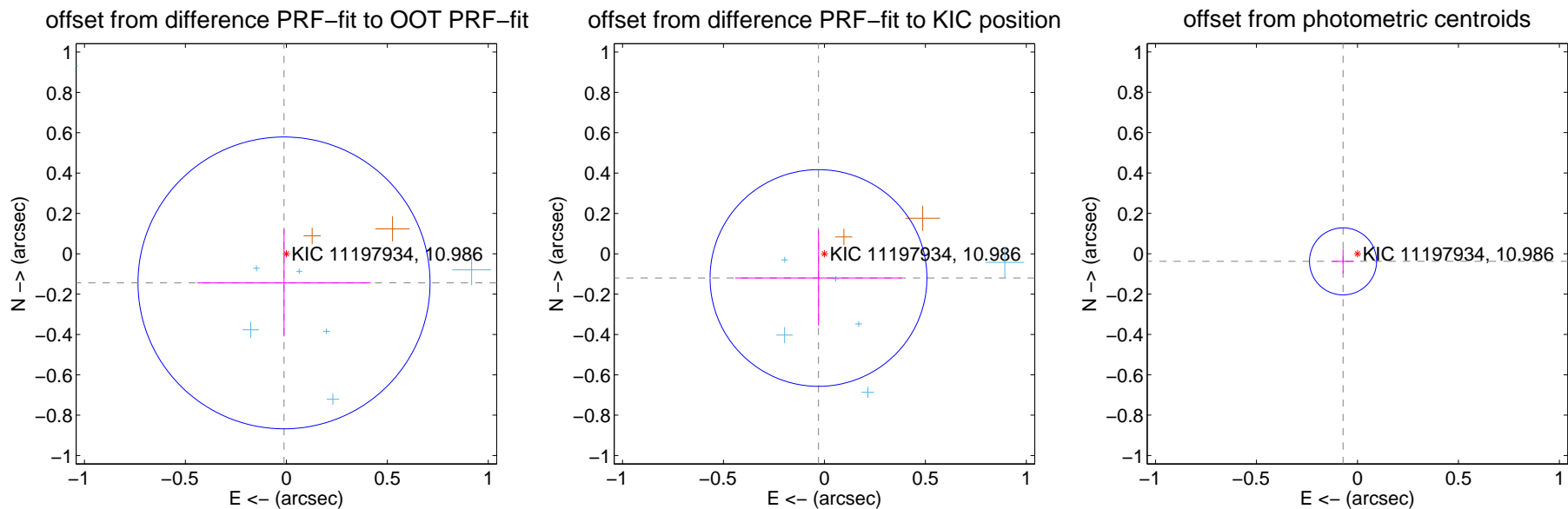
DV Centroid Data

Supplemental centroid analysis for 011197934-01. **Kepler magnitude: 10.99.** Transit SNR 13.43

There are 13 quarters with good PRF difference image offsets

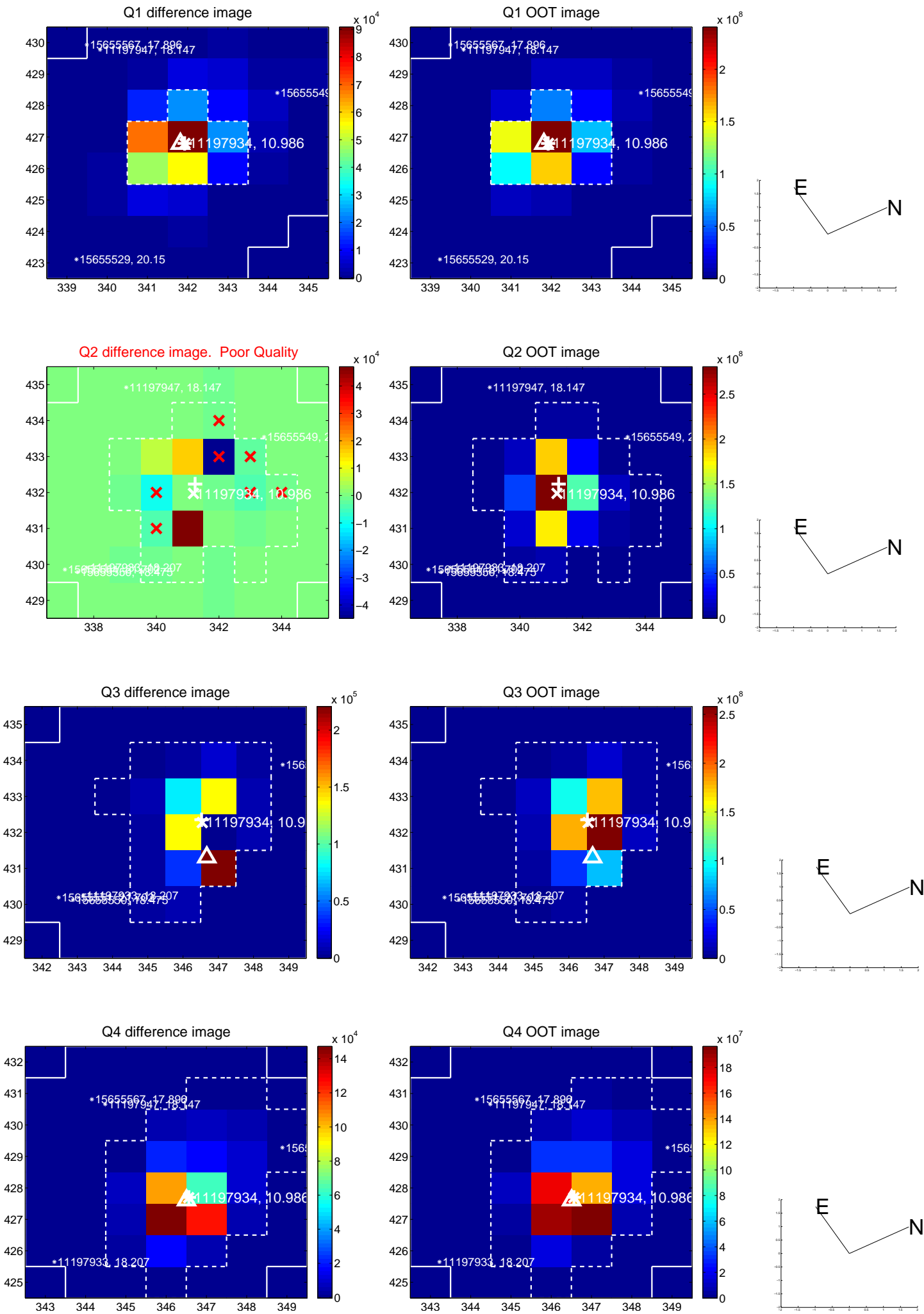
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.145 ± 0.241	0.60	0.012 ± 0.430	-0.144 ± 0.265
PRF-fit source offset from KIC position	0.124 ± 0.179	0.69	0.029 ± 0.413	-0.120 ± 0.237
photometric centroid source offset	0.08 ± 0.06	1.46	0.07 ± 0.05	-0.04 ± 0.06

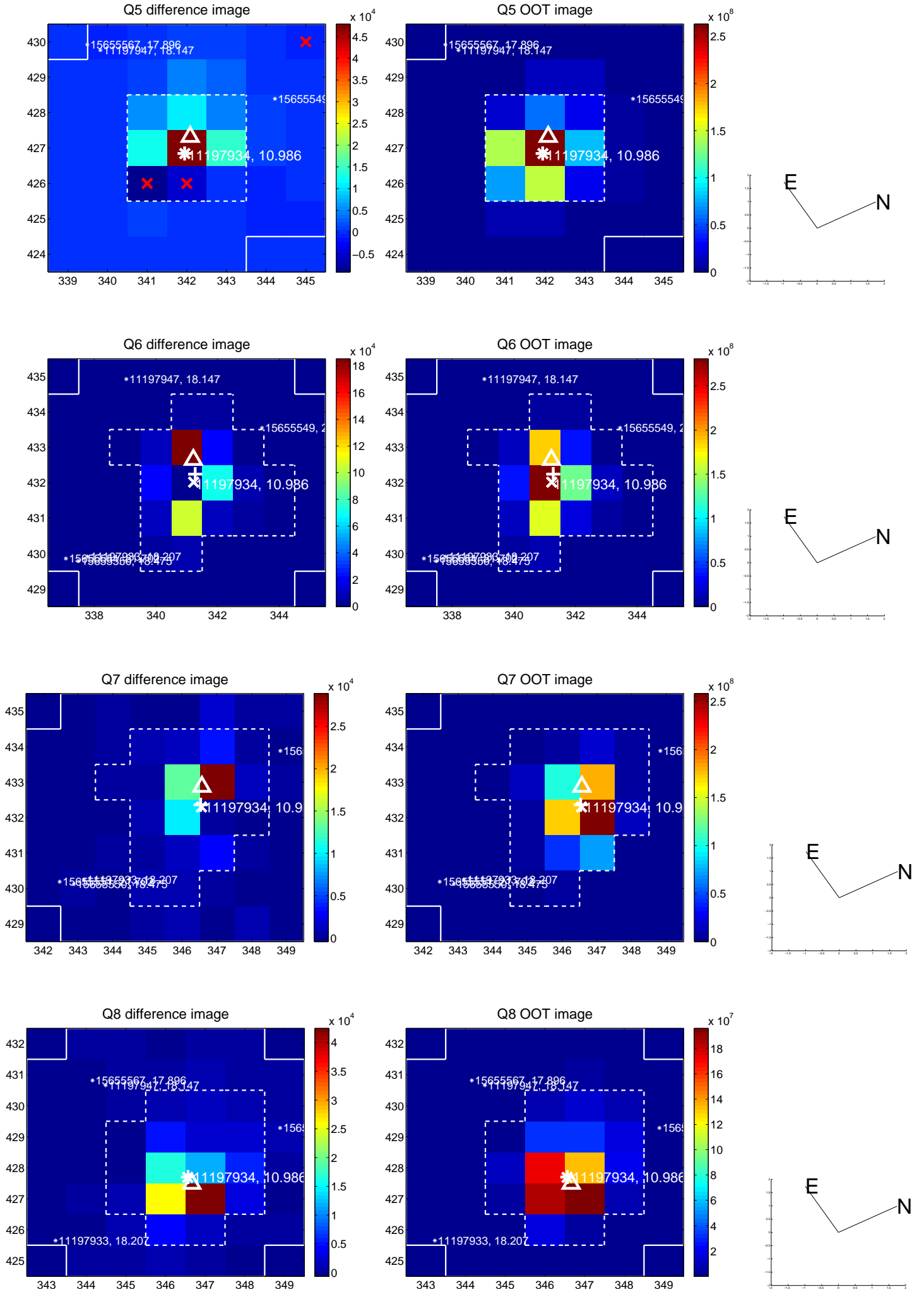


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

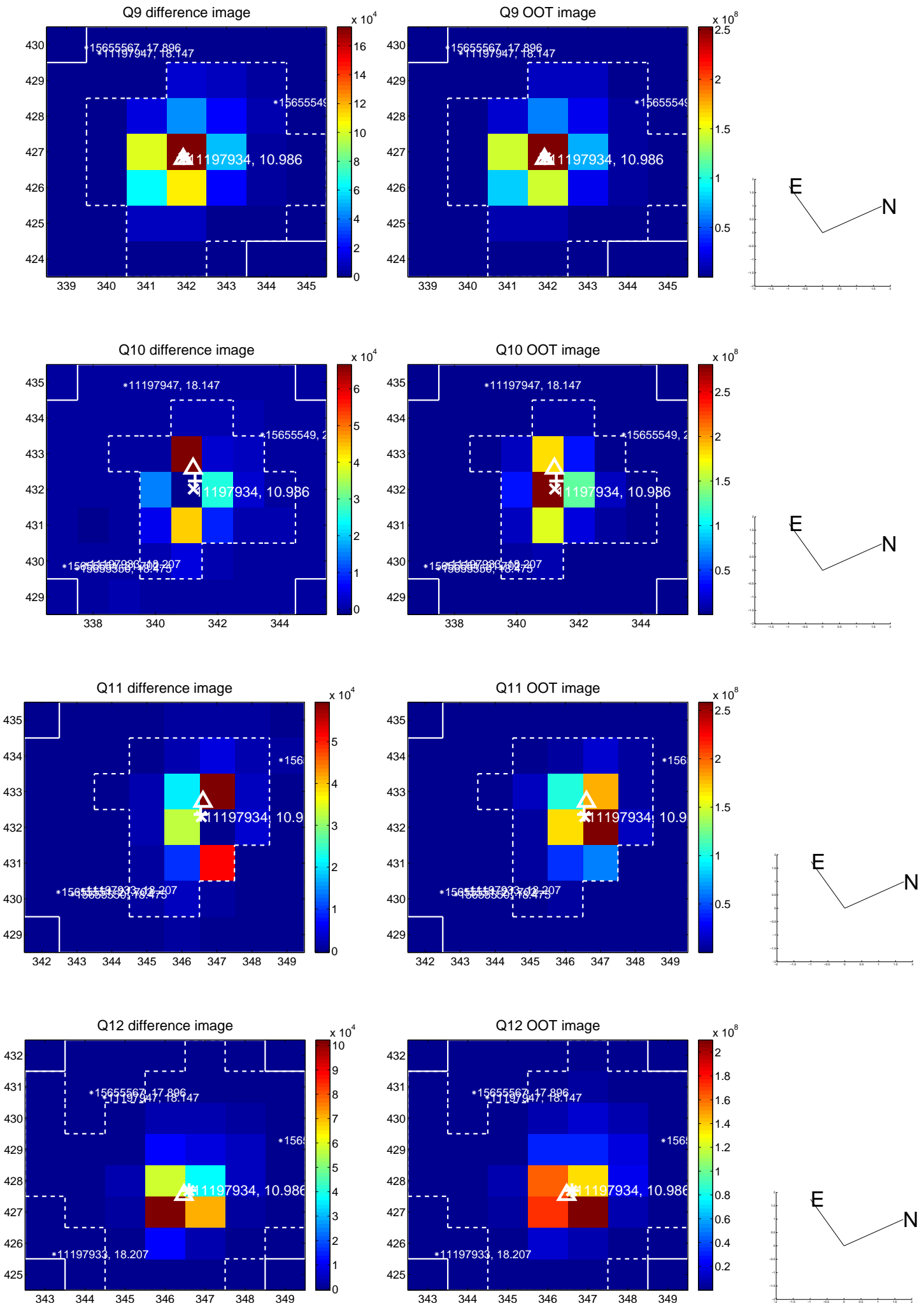
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



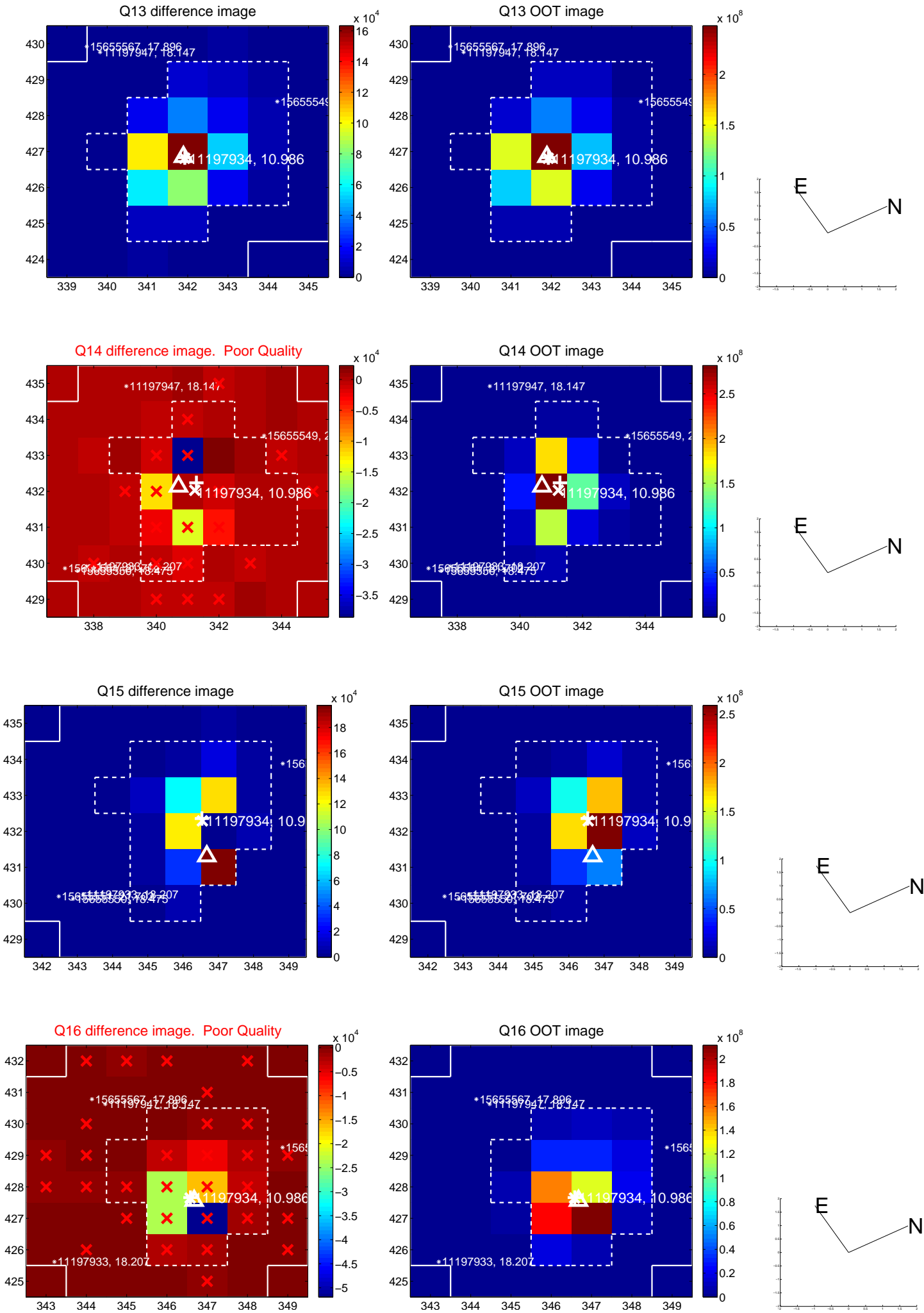
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



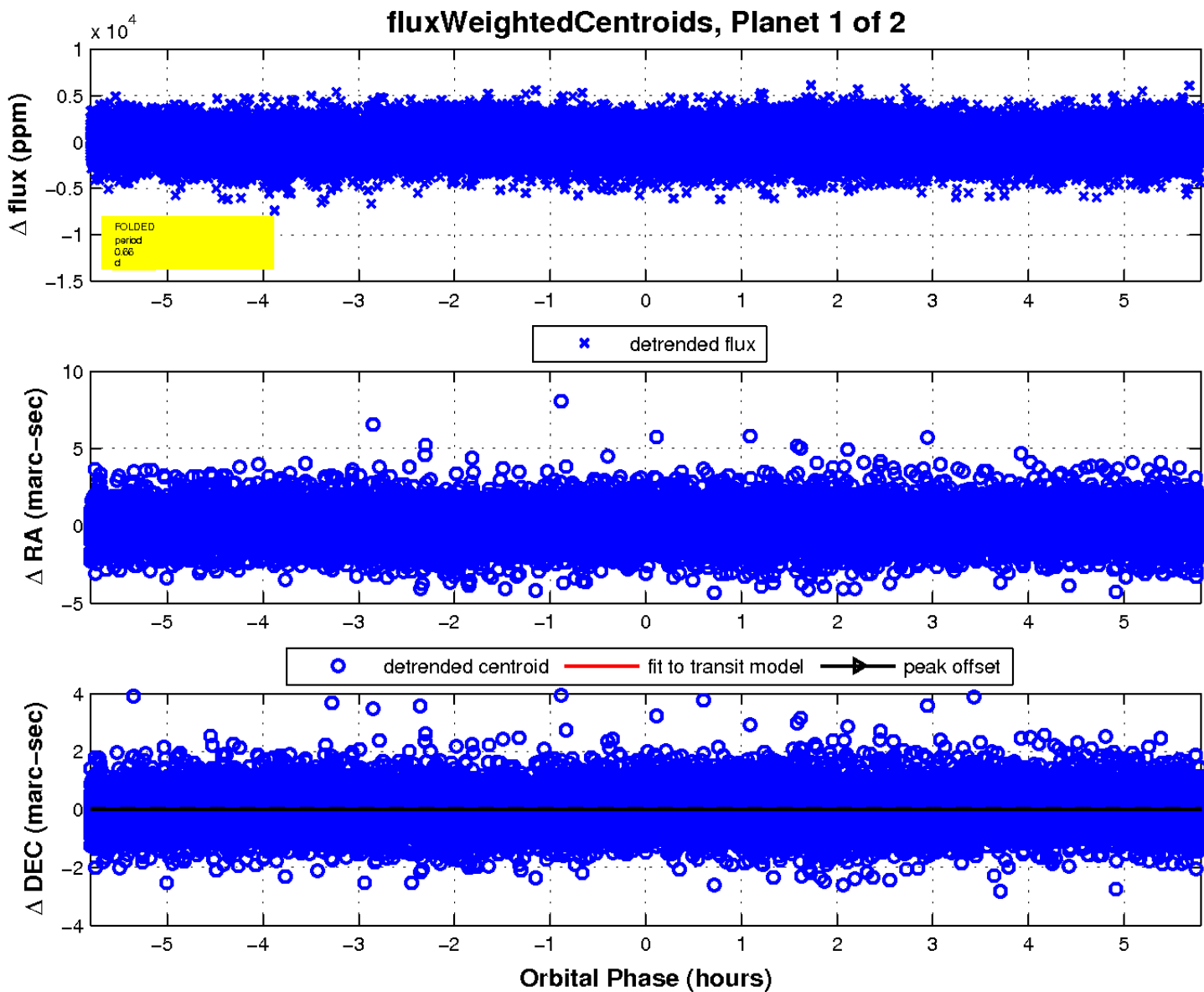
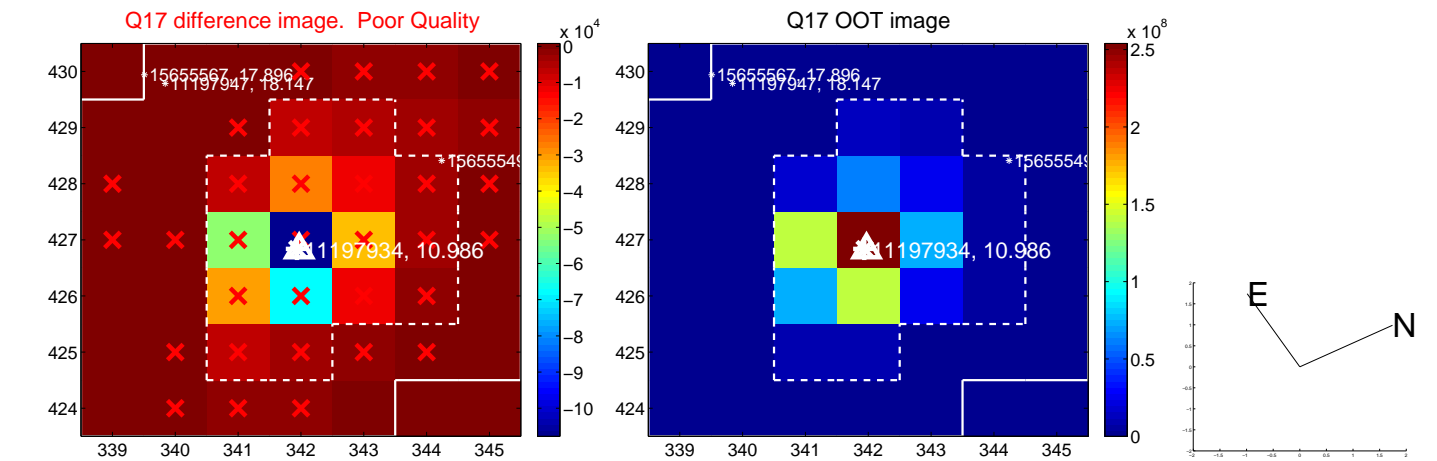
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



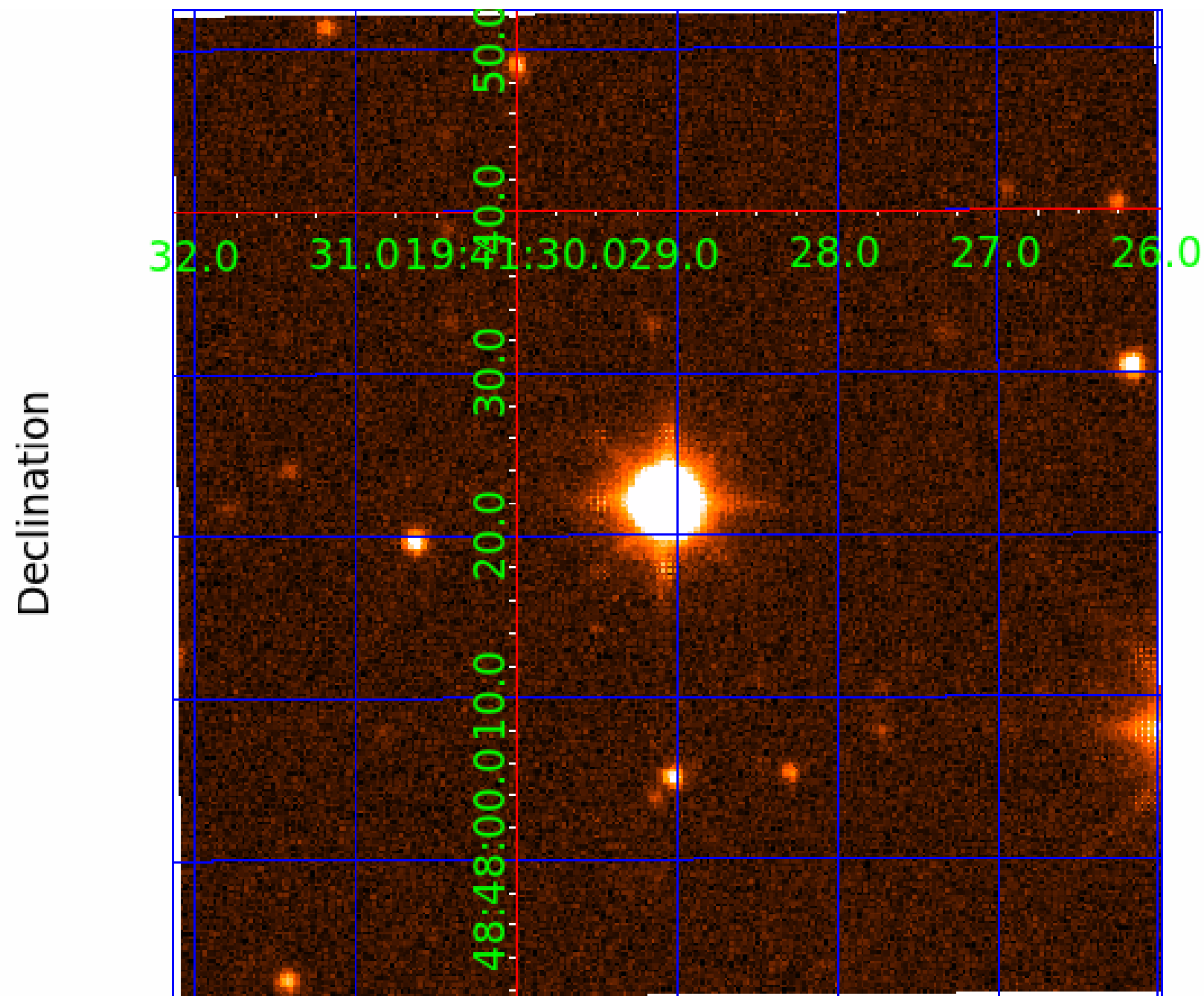
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 011197934

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})
011197934-01	OBS	No	0.657655	131.888696	205.9	1.935	11.6	13.4	2.81	7641	4.68	70214.93
011197934-02	OBS	No	1.127535	132.006145	363.7	7.817	10.2	14.0	2.81	7641	7.33	34217.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011197934-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011197934-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—CENT_SATURATED

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

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

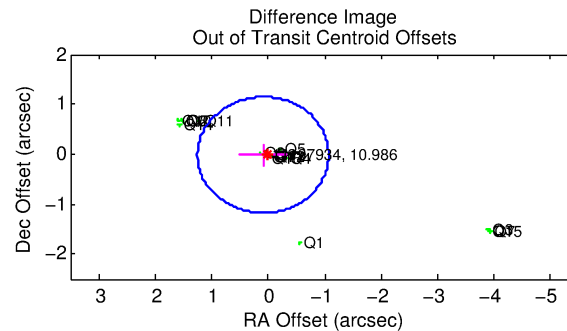
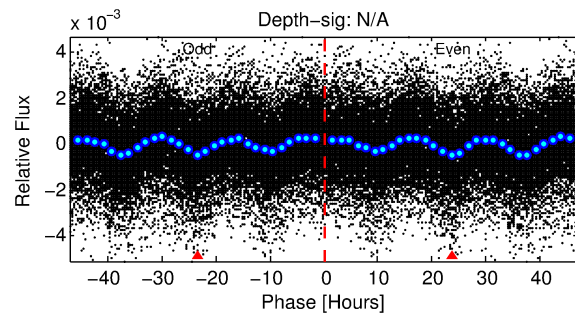
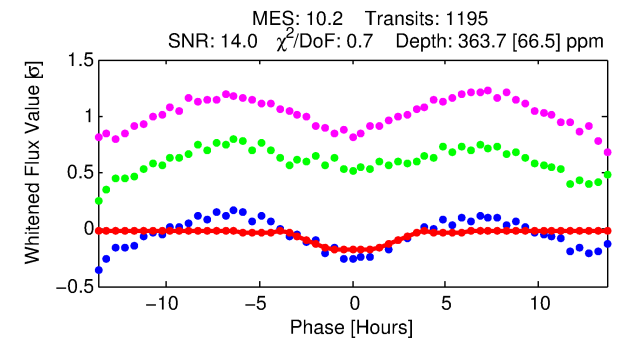
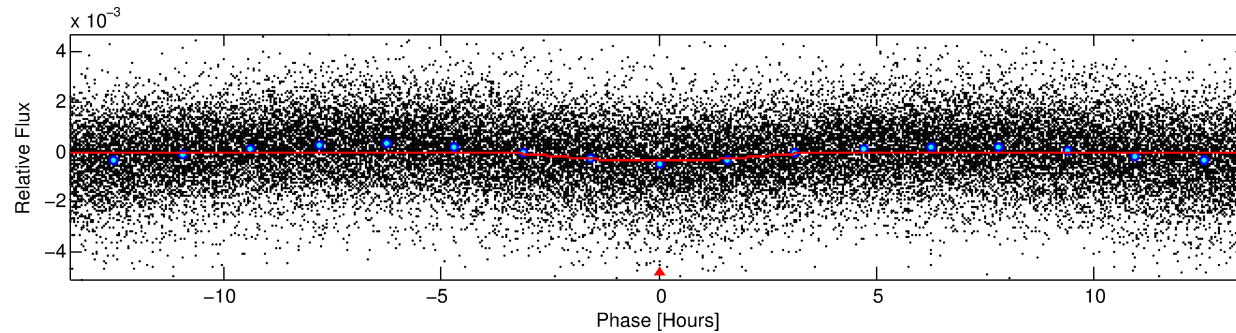
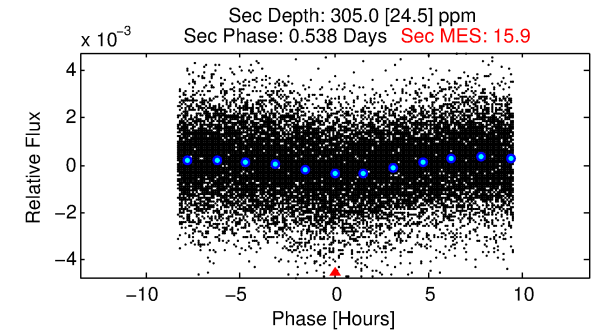
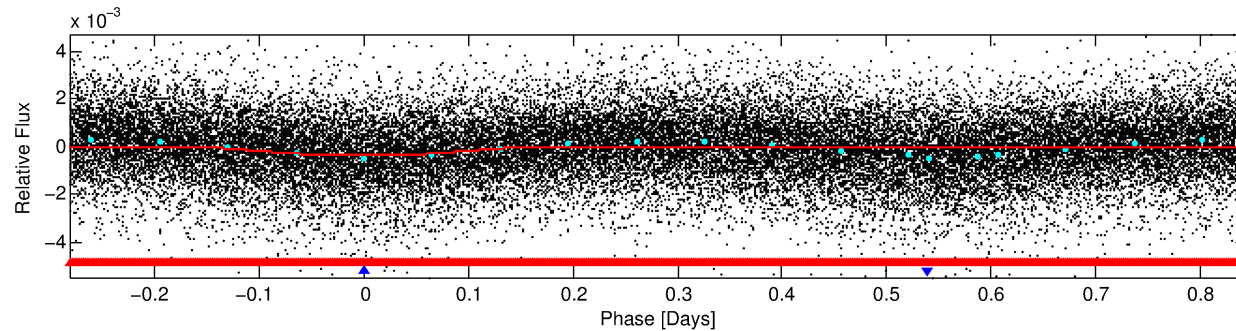
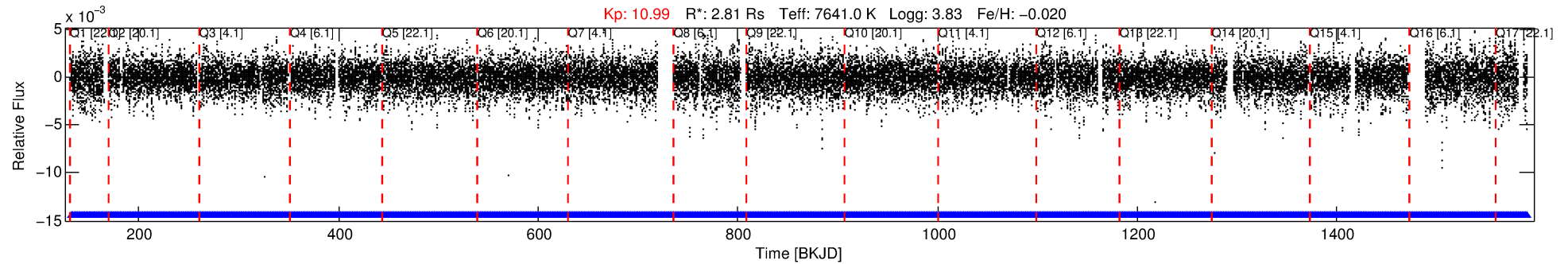
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011197934-02

No Significant Match Found

DV One-Page Summary

KIC: 11197934 Candidate: 2 of 2 Period: 1.128 d



DV Fit Results:

Period = 1.12753 [0.00002] d
Epoch = 132.0061 [0.0083] BKJD
 $R_p/R^* = 0.0239$ [0.0052]
 $a/R^* = 1.05$ [0.01]
 $b = 0.98$ [0.01]
 $S_{\text{eff}} = 34217.89$ [13504.92]
 $T_{\text{eq}} = 3468$ [342] K
 $R_p = 7.33$ [2.58] R_{e}
 $a = 0.0265$ [0.0067] AU
 $A_g = 2.20$ [1.30] [0.92σ]
 $T_{\text{eff}} = 6527$ [725] K [3.81σ]

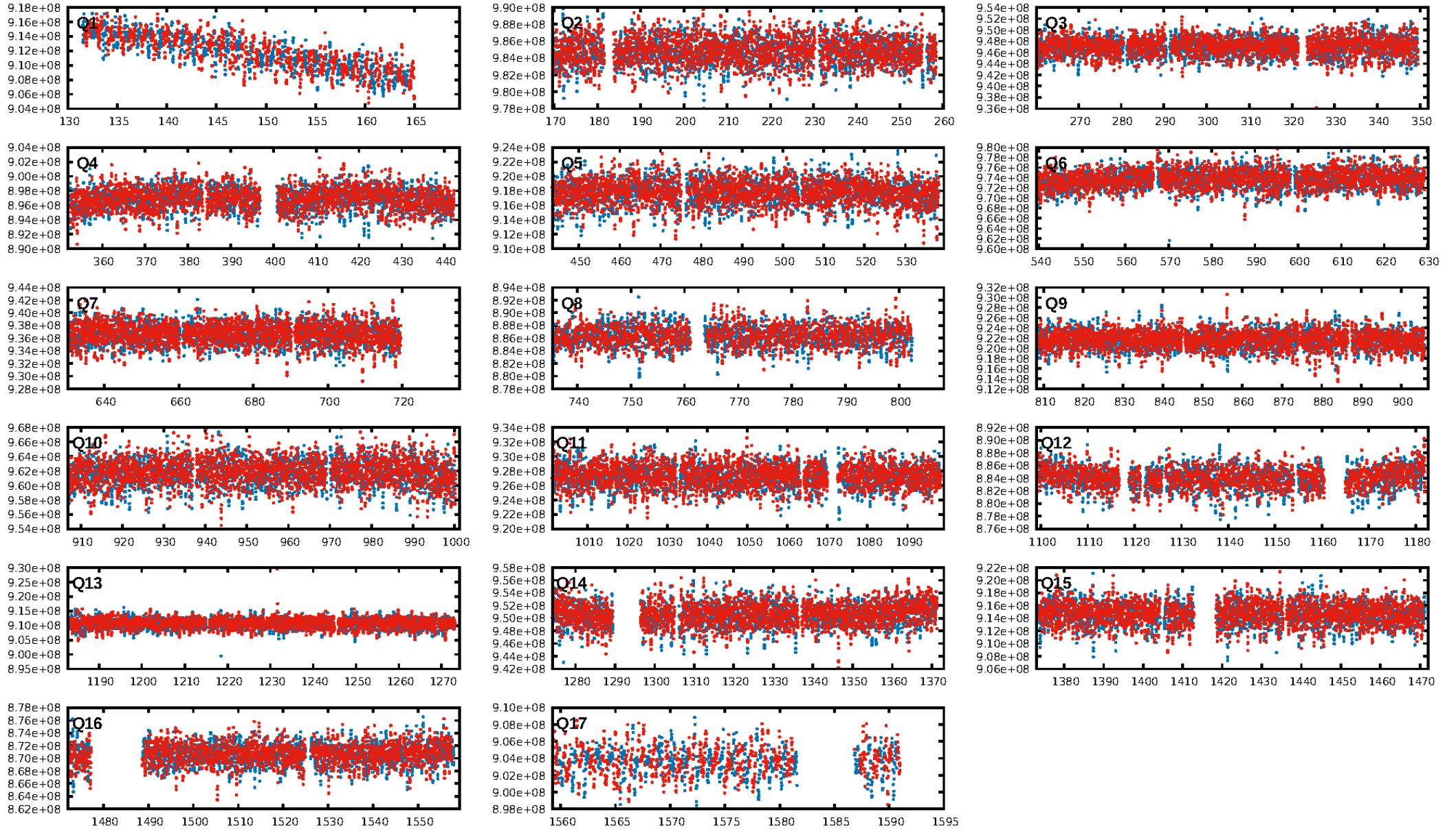
DV Diagnostic Results:

ShortPeriod-sig: 83.9% [1.40σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1141/1141]
GhostDiagnostic-chr: 1.907
Centroid-sig: N/A
Centroid-so: 0.053 arcsec [1.66σ]
OotOffset-rm: 0.091 arcsec [0.24σ]
KicOffset-rm: 0.202 arcsec [0.77σ]
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]

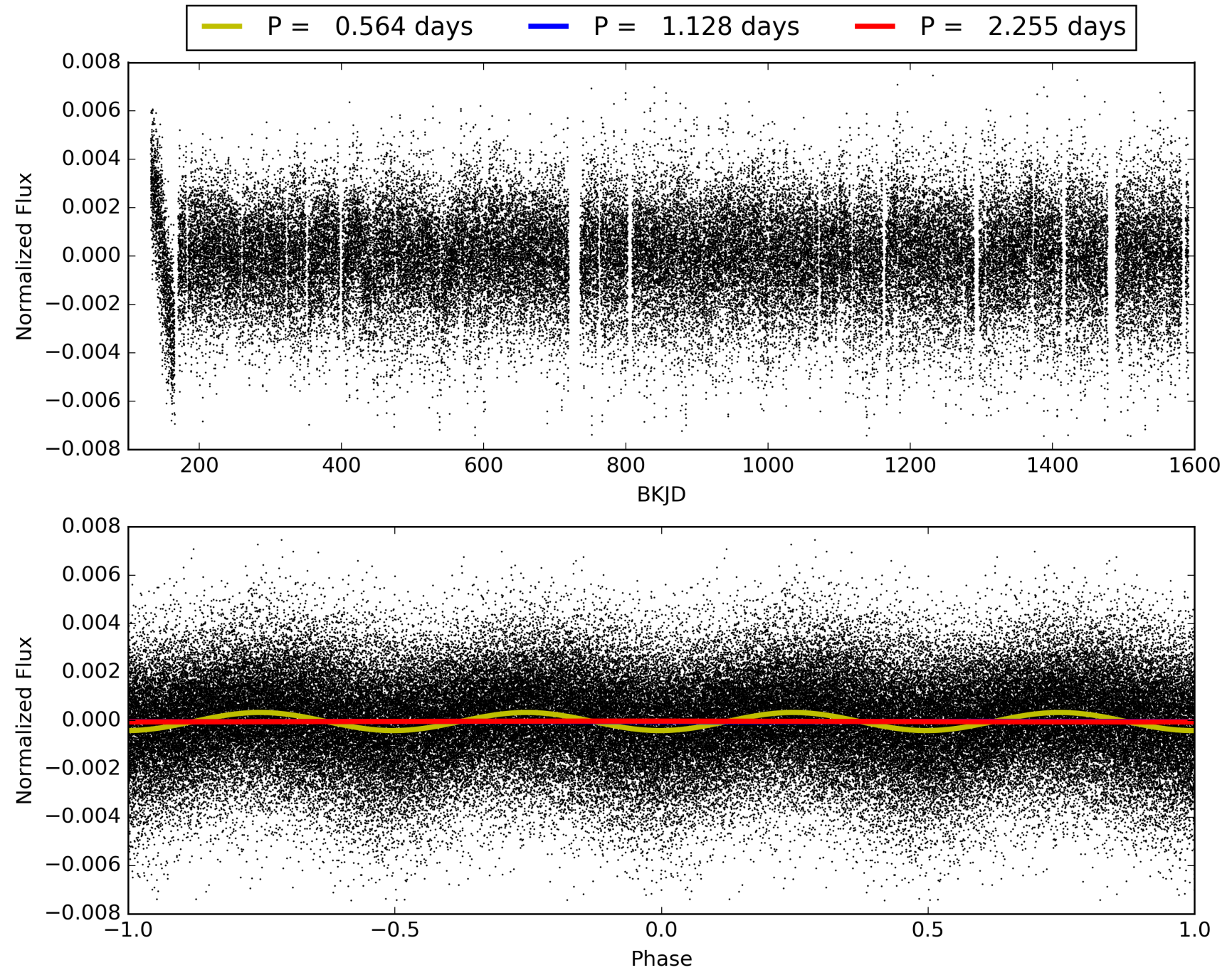
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:11:46 Z

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

TCE 011197934-02, PDC Light Curves

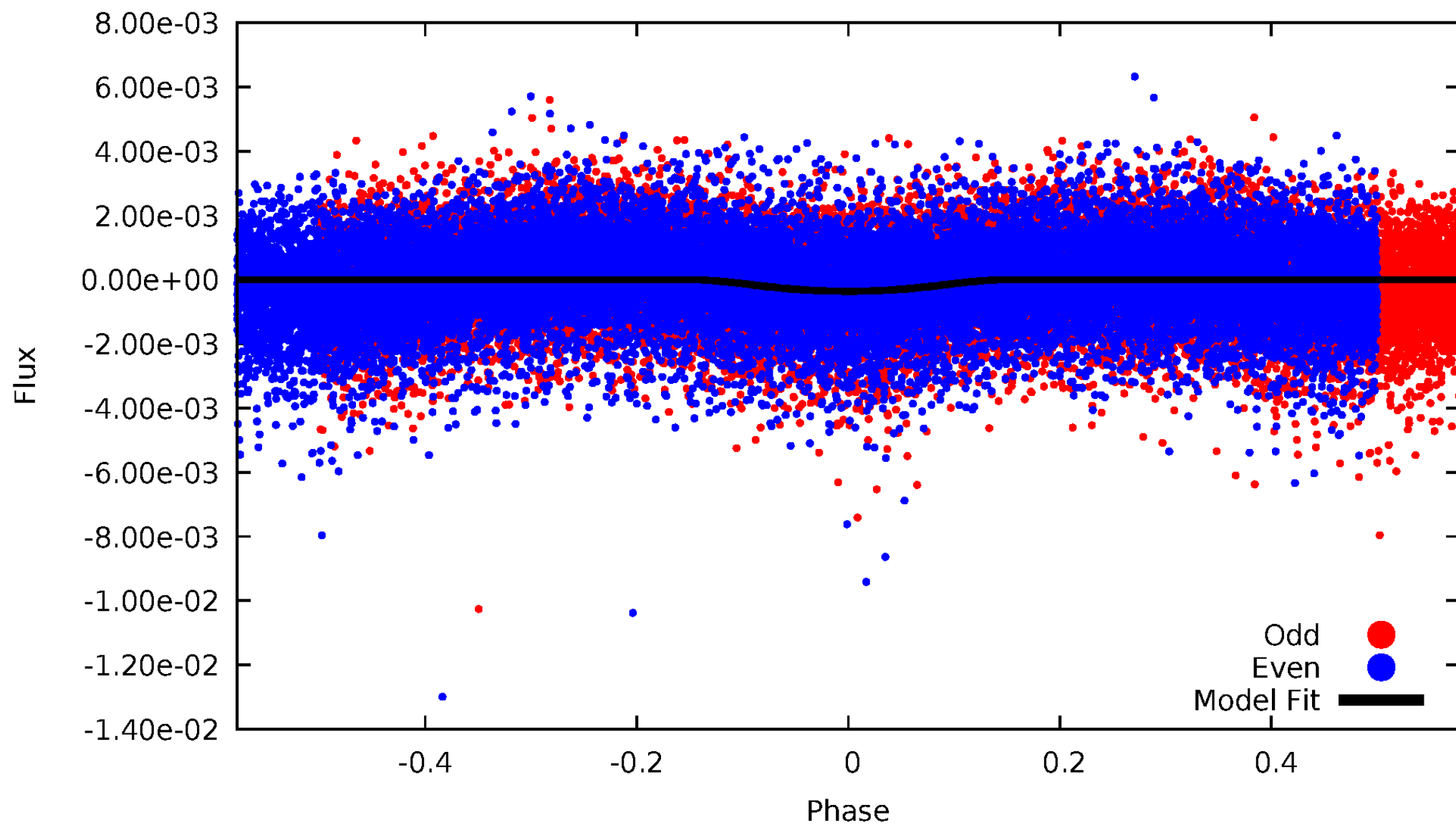


TCE 011197934-02



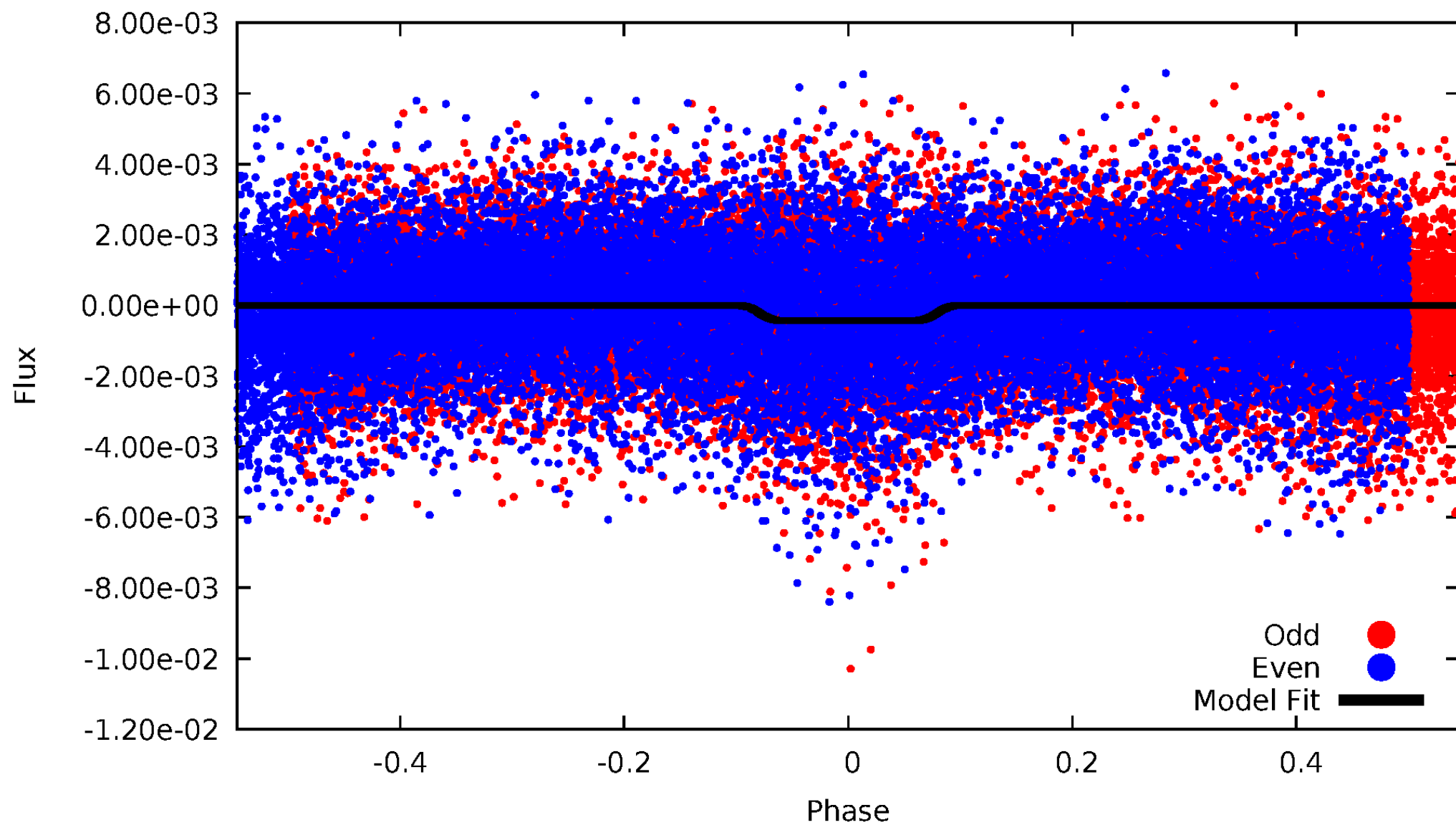
DV Odd/Even

TCE 011197934-02



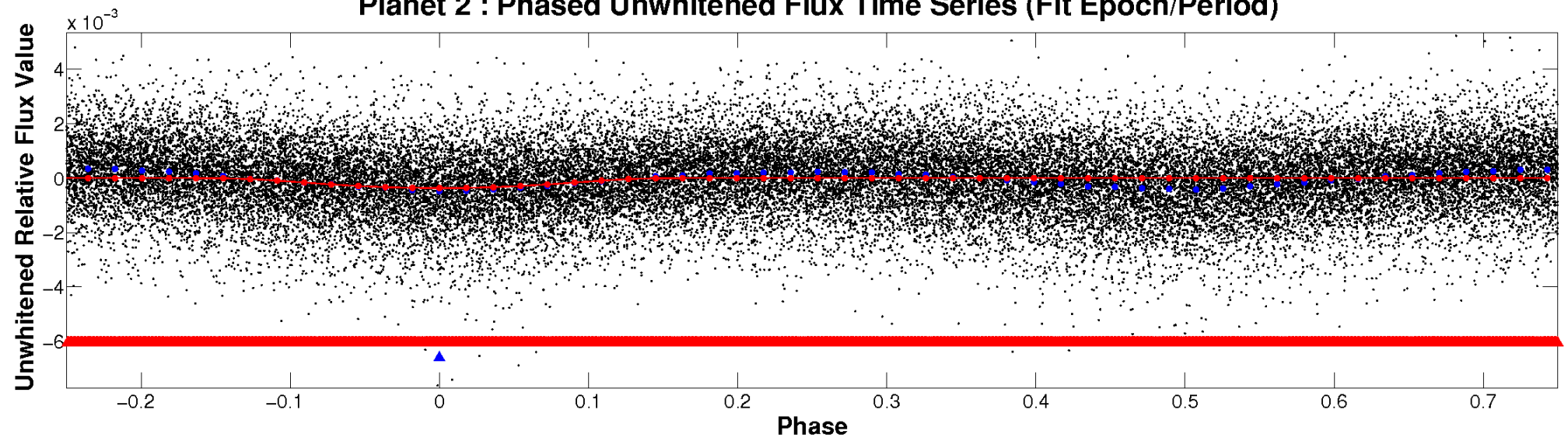
ALT Odd/Even

TCE 011197934-02

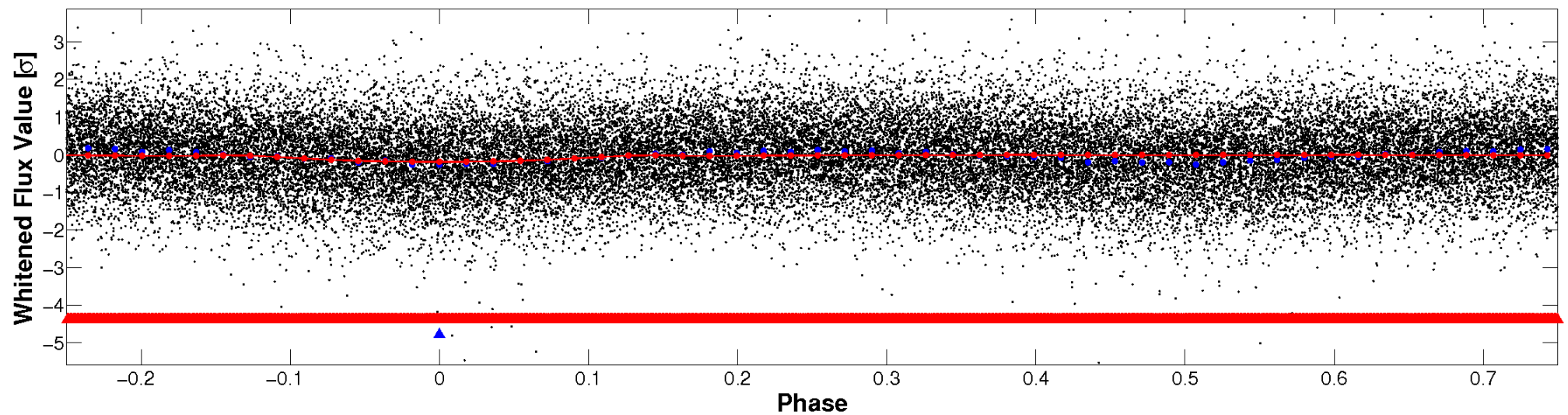


Non-Whitened Vs. Whitened Light Curve

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

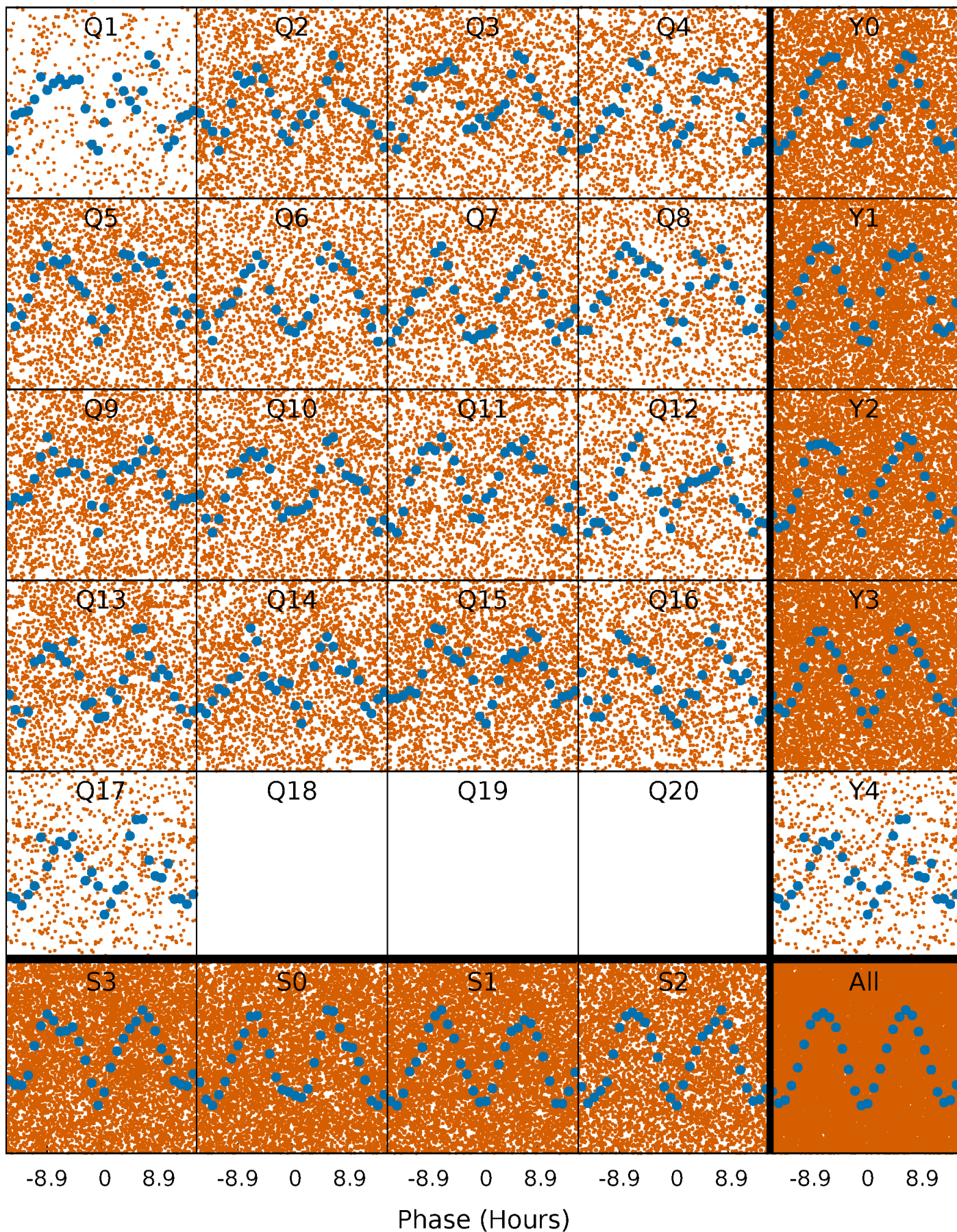


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



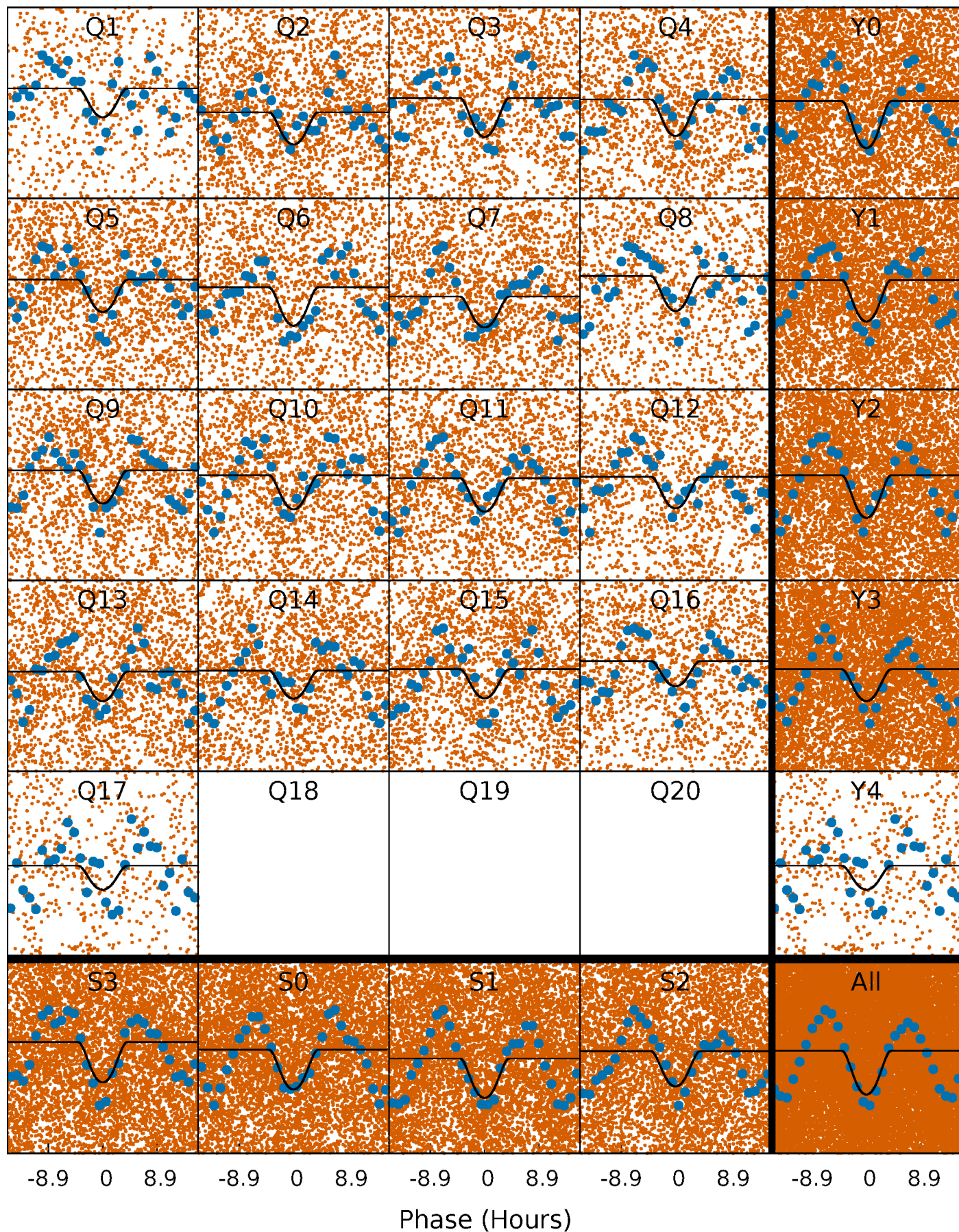
PDC Quarter-Phased Transit Curves

TCE 011197934-02 P= 1.127535 Days $T_0=132.006145$ (BKJD)



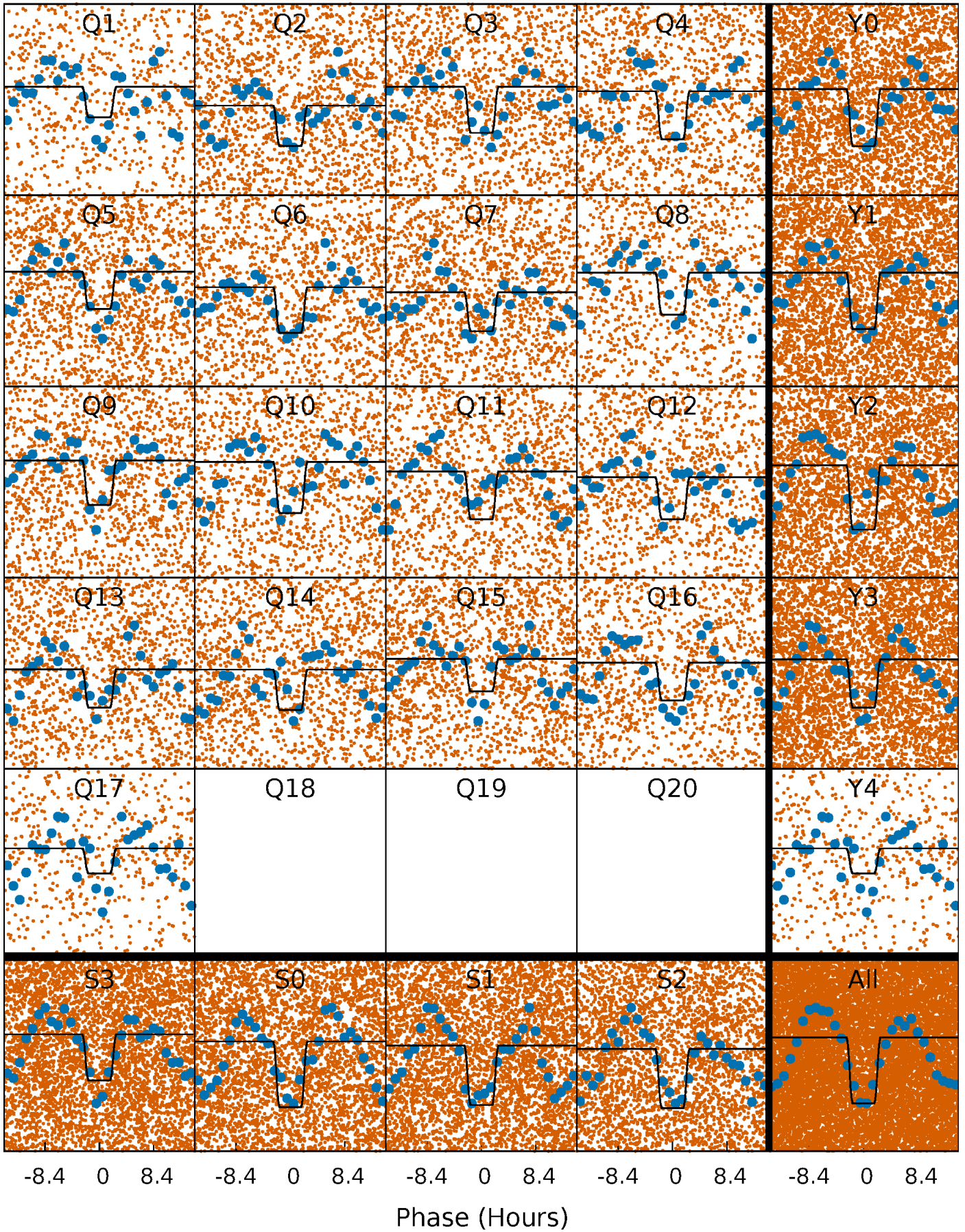
DV Quarter-Phased Transit Curves

TCE 011197934-02 P= 1.127535 Days $T_0=132.006145$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

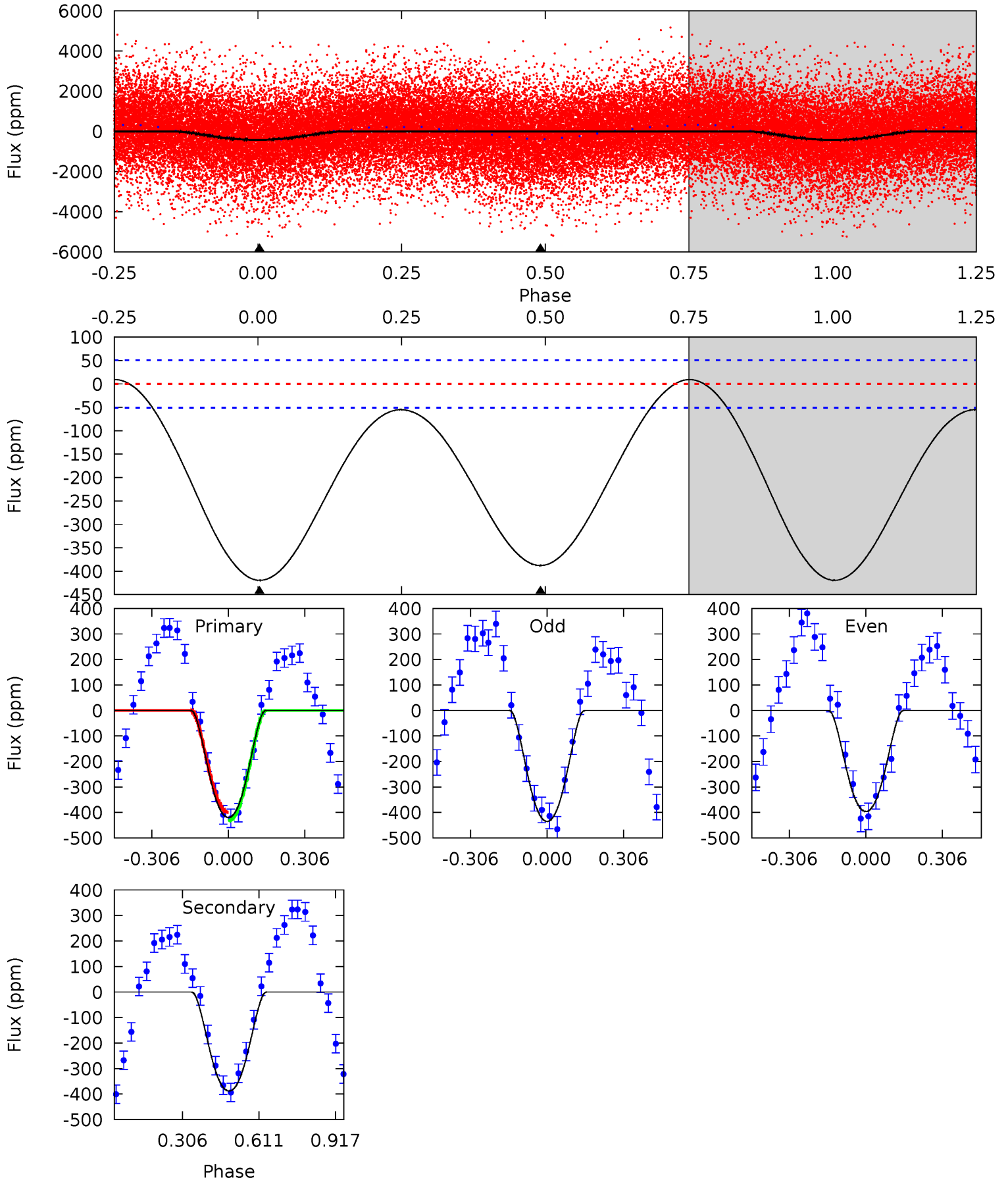
TCE 011197934-02 P= 1.127590 Days $T_0=131.976550$ (BKJD)



DV Model-Shift Uniqueness Test

011197934-02, P = 1.127535 Days, E = 130.878610 Days

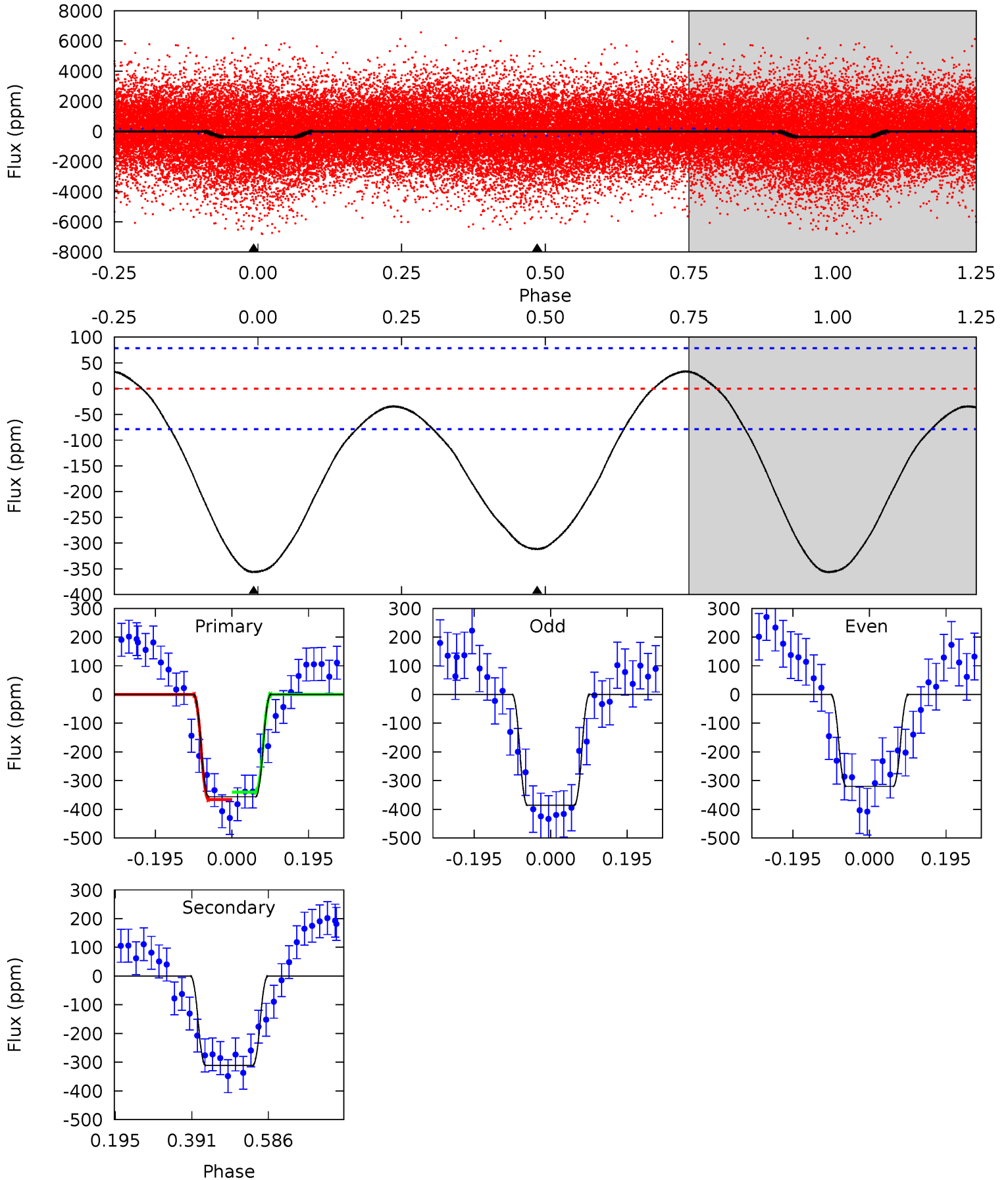
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.8	33.1	0	0	4.32	1.02	2.56	35.8	35.8	33.1	33.1	1.66	1.16	0.02	1.37



Alt Model-Shift Uniqueness Test

011197934-02, P = 1.127590 Days, E = 130.848960 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.1	17.5	0	0	4.42	1.29	1.89	20.1	20.1	17.5	17.5	1.83	1.24	0.09	0.72



Stellar Parameters For KIC 011197934

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7641^{+68}_{-91}	$3.833^{+0.225}_{-0.060}$	$-0.020^{+0.150}_{-0.150}$	$2.808^{+0.260}_{-0.779}$	$1.956^{+0.017}_{-0.294}$	$0.124^{+0.172}_{-0.024}$
	+1%/-1%	+6%/-2%	+750%/-750%	+9%/-28%	+1%/-15%	+138%/-20%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 011197934-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-388 ± 12	$6.83^{+1.70}_{-1.56}$	4772^{+181}_{-271}	6672^{+1021}_{-739}	$3.138^{+2.071}_{-1.132}$
Alt.	-312 ± 18	$5.92^{+1.67}_{-1.58}$	4772^{+172}_{-311}	6809^{+1311}_{-854}	$3.352^{+2.832}_{-1.292}$

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 $A_{obs} \gg 1.0$

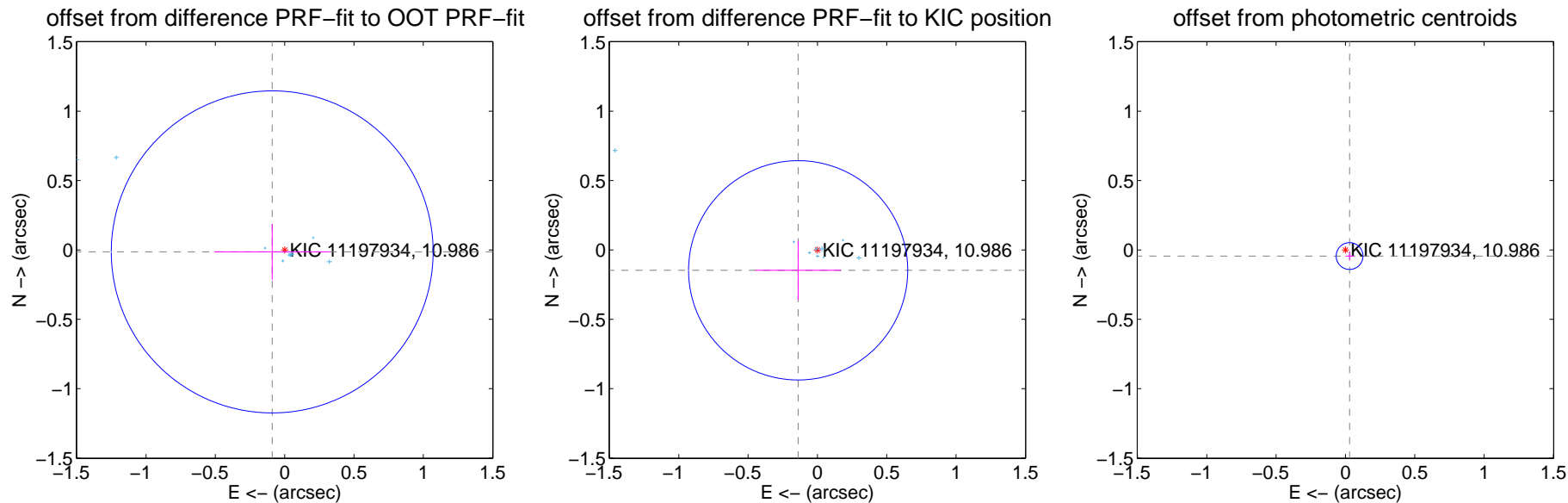
DV Centroid Data

Supplemental centroid analysis for 011197934-02. **Kepler magnitude: 10.99.** Transit SNR 14.00

There are 17 quarters with good PRF difference image offsets

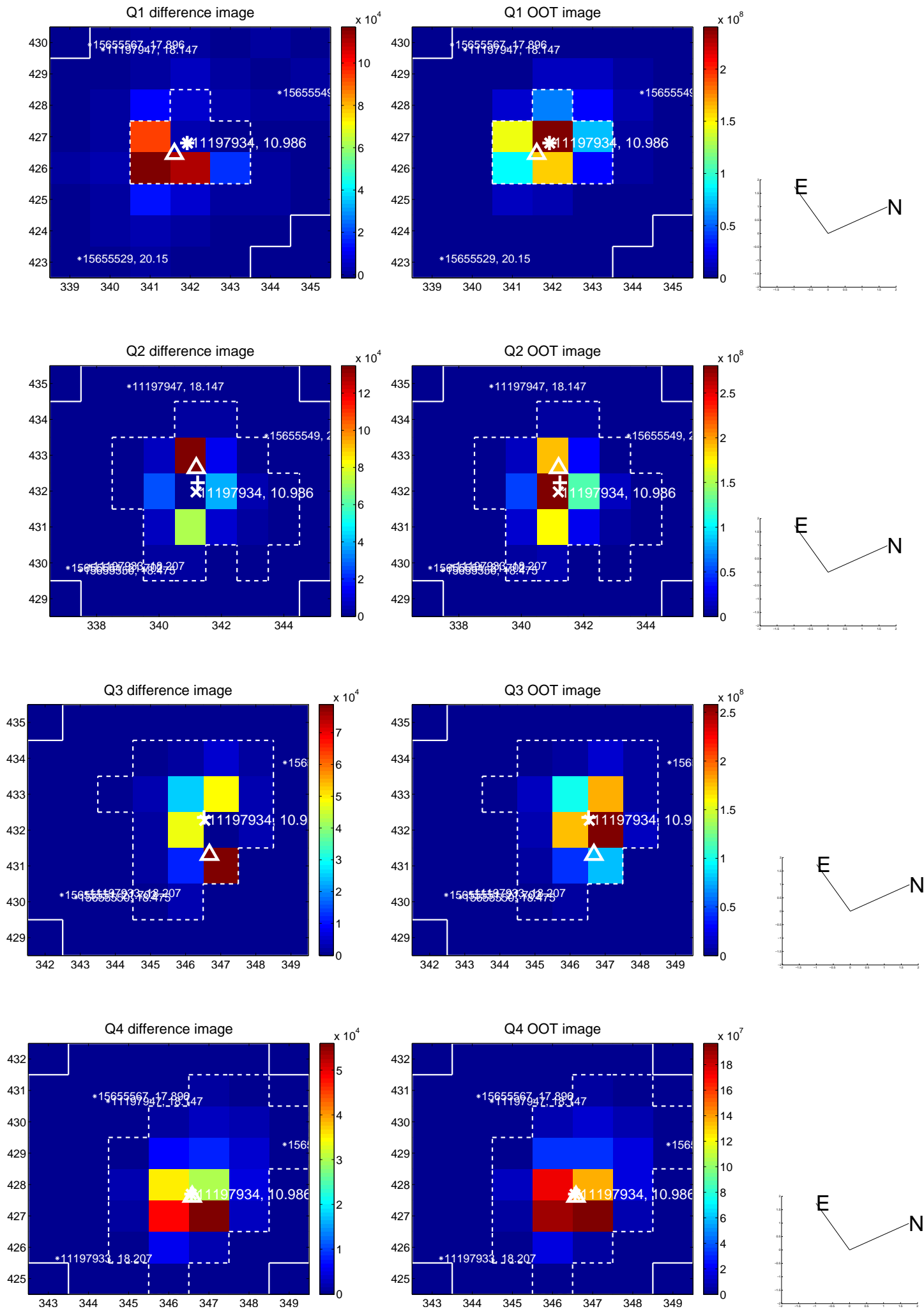
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.091 ± 0.387	0.24	0.090 ± 0.417	-0.014 ± 0.201
PRF-fit source offset from KIC position	0.202 ± 0.263	0.77	0.139 ± 0.311	-0.147 ± 0.212
photometric centroid source offset	0.05 ± 0.03	1.66	-0.03 ± 0.03	-0.04 ± 0.03

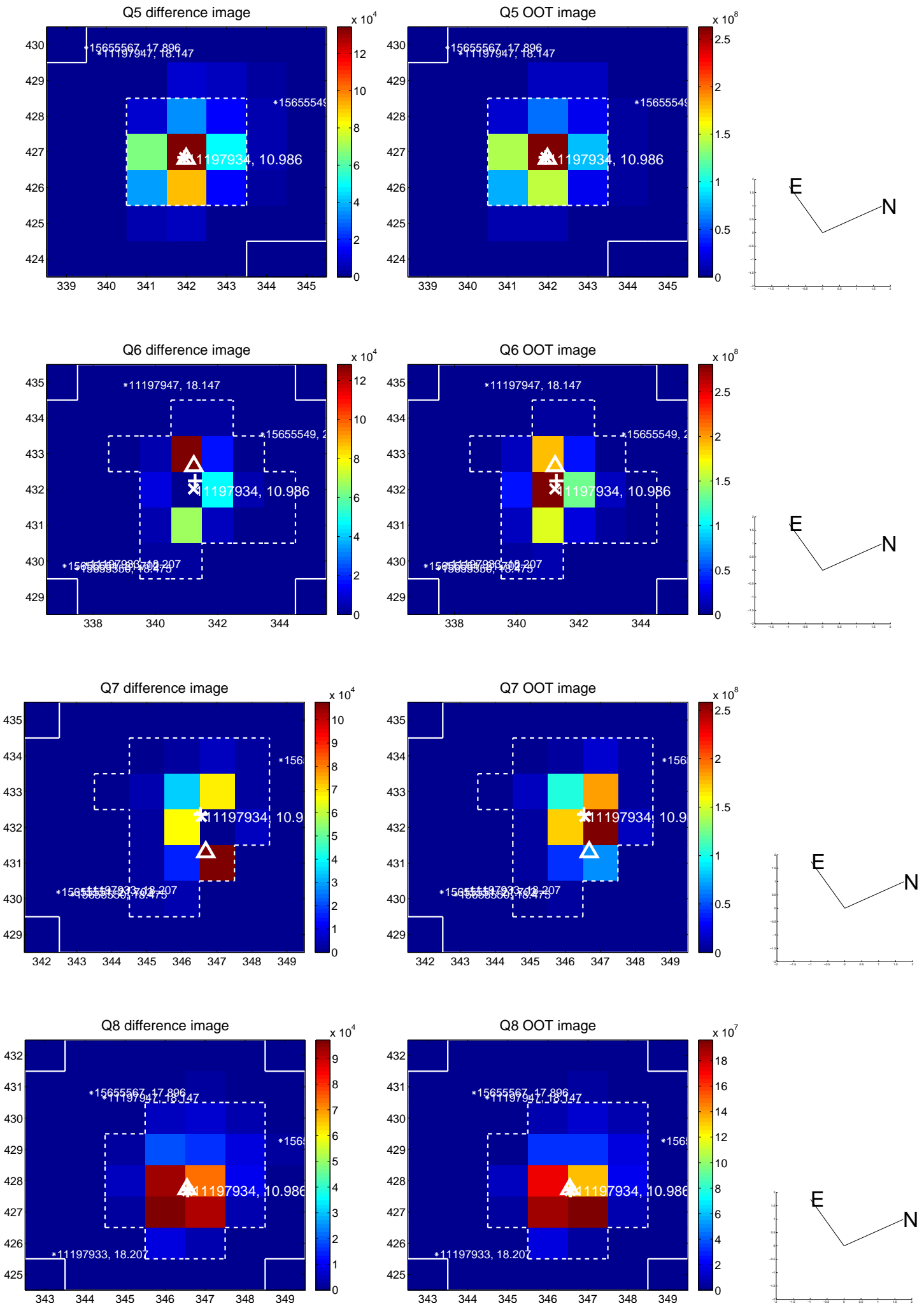


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

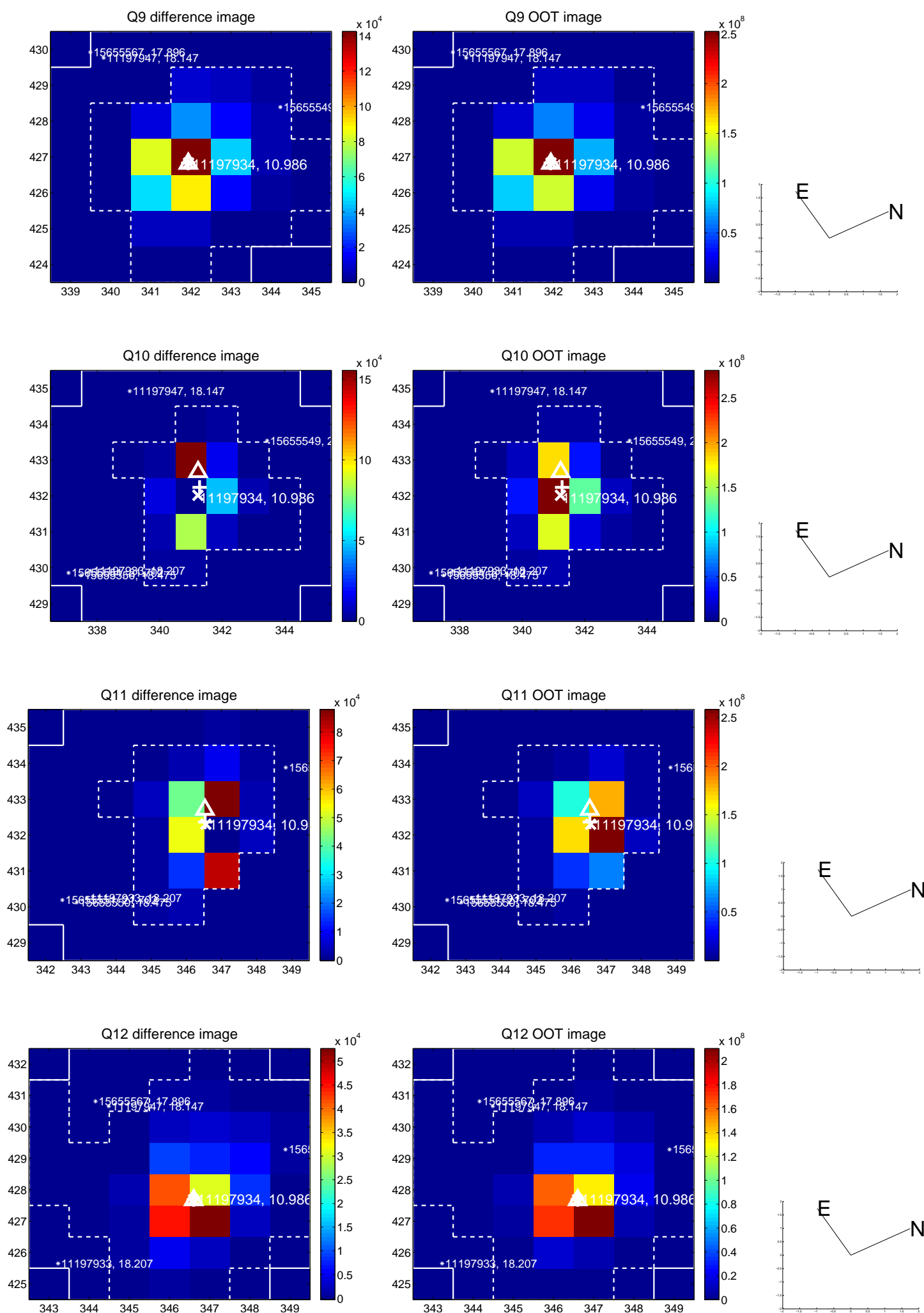
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



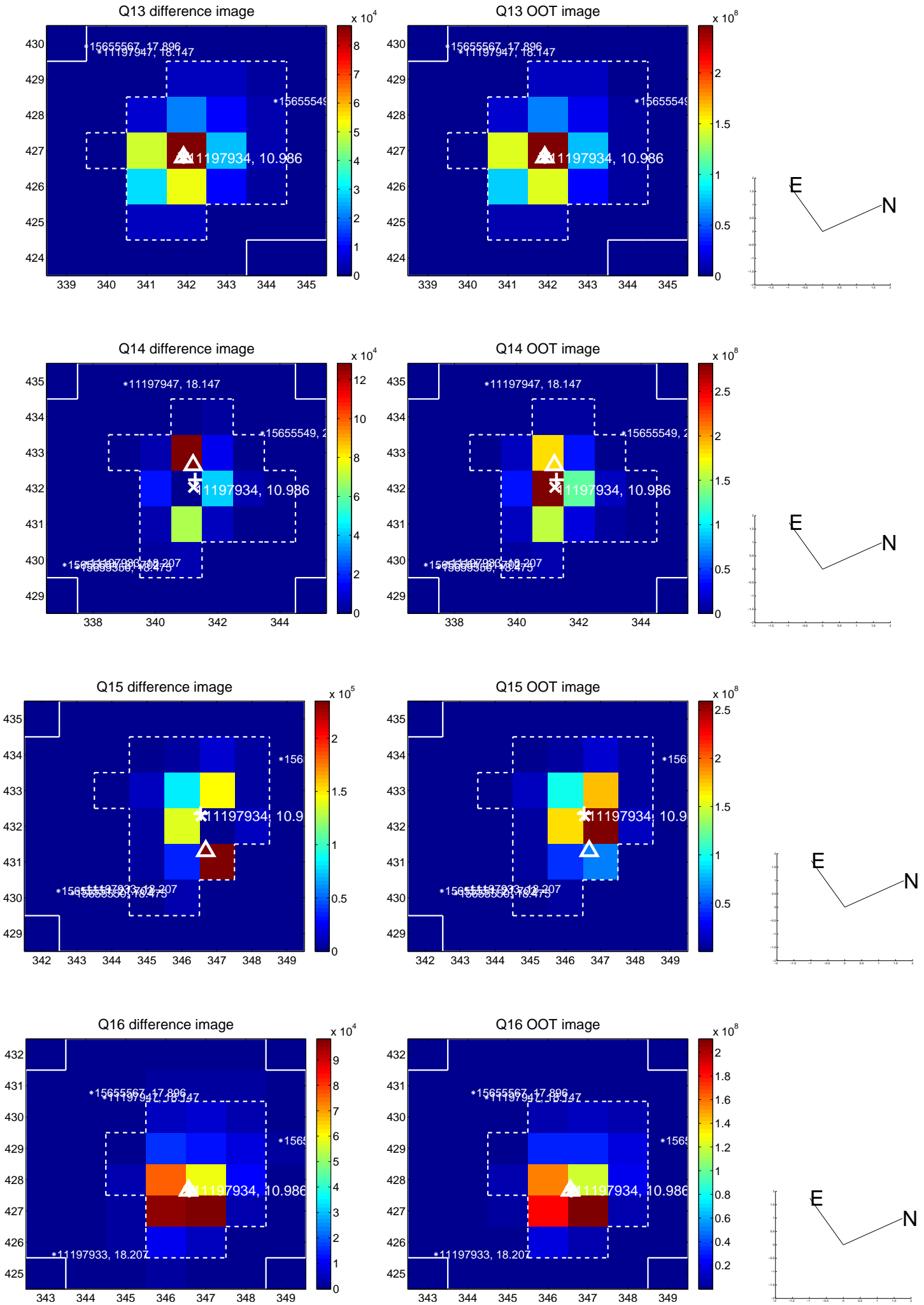
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



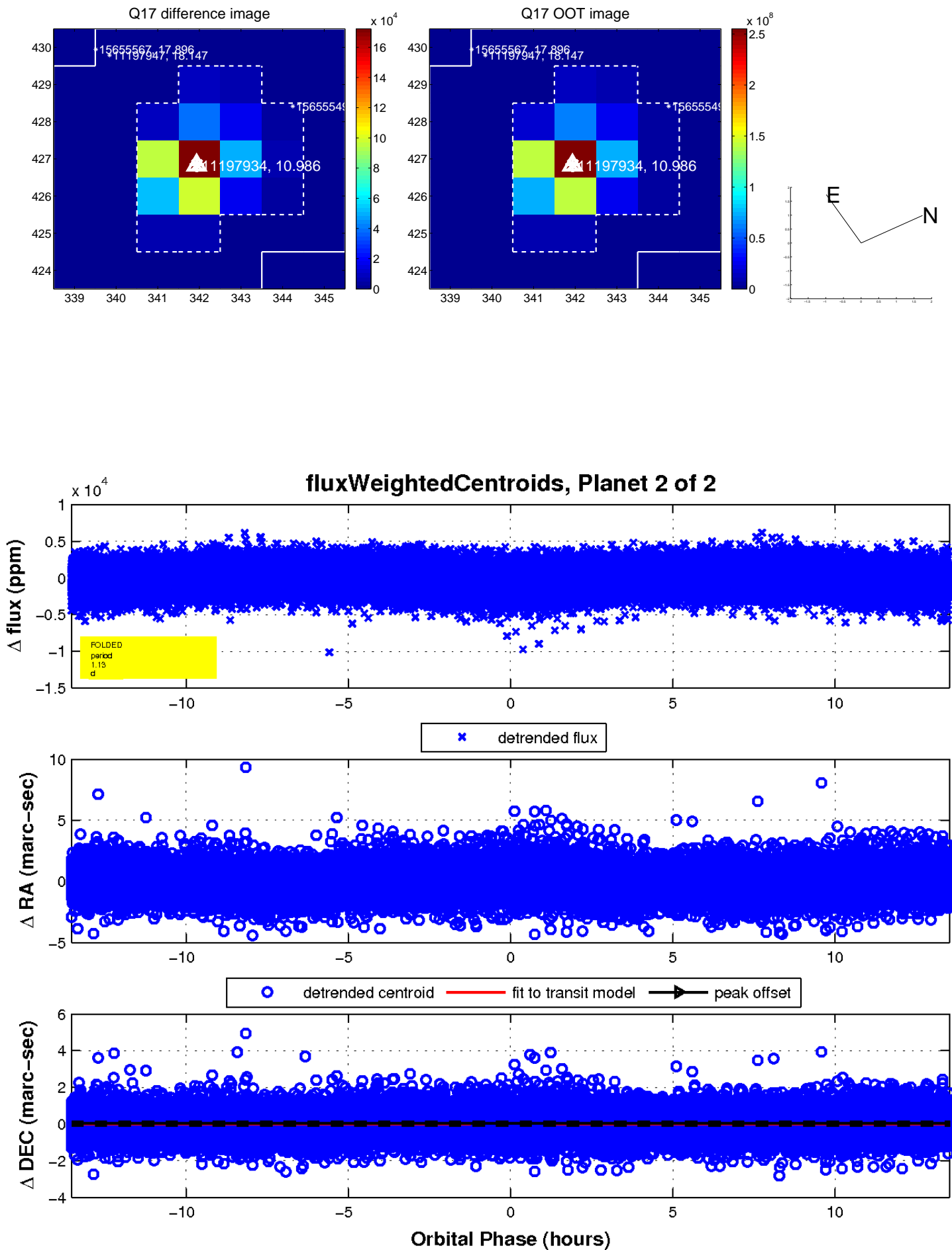
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

