

KIC 010134800

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})
010134800-01	OBS	No	0.955257	131.907709	122.9	4.103	13.9	11.7	3.31	8137	4.26	73758.14
010134800-02	OBS	No	1.789399	133.136657	264.6	8.303	11.0	11.1	3.31	8137	7.34	31941.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010134800-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
010134800-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

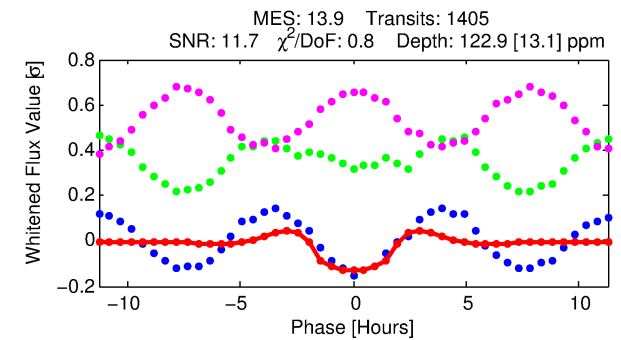
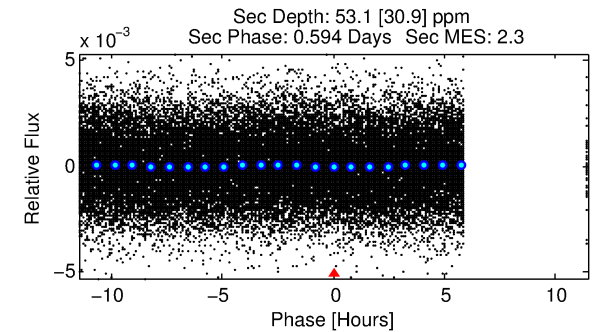
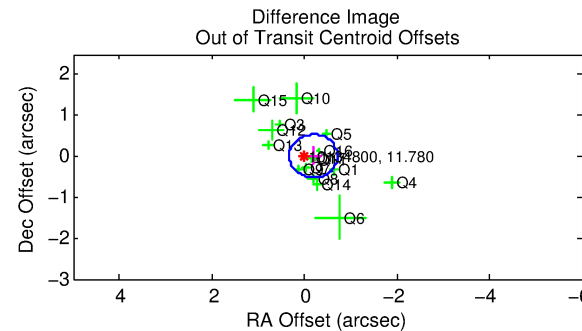
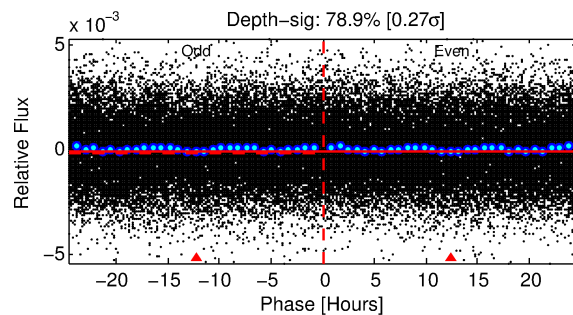
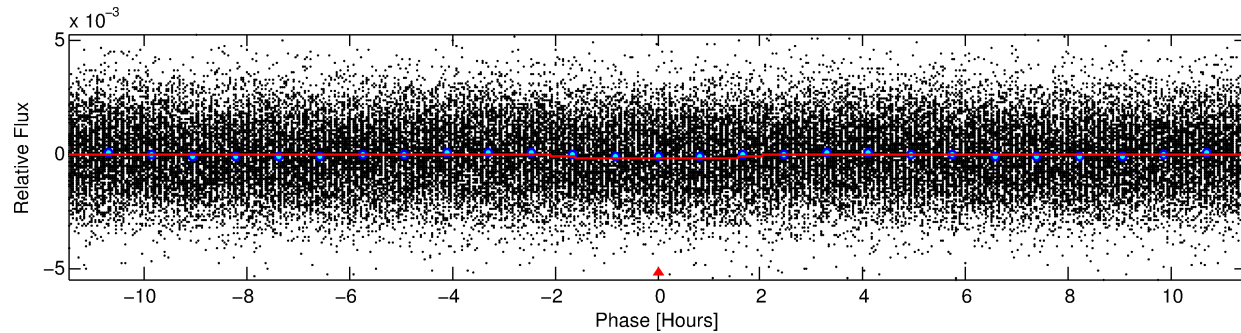
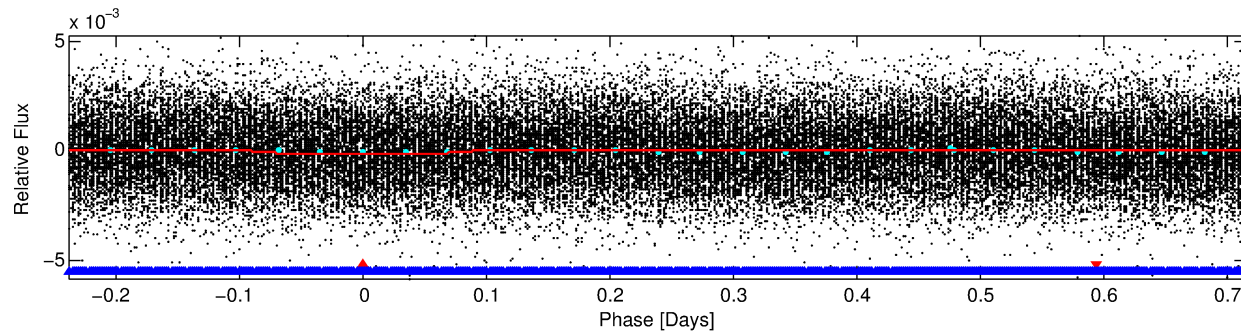
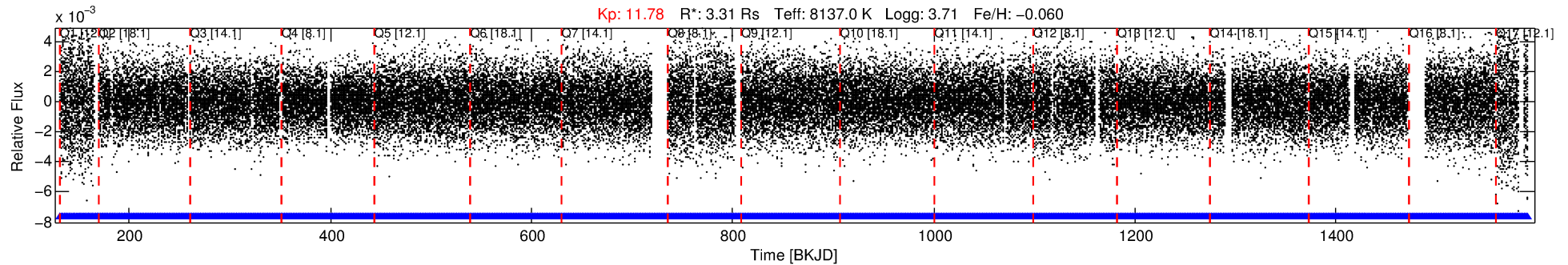
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010134800-01

No Significant Match Found

DV One-Page Summary

KIC: 10134800 Candidate: 1 of 2 Period: 0.955 d



DV Fit Results:

Period = 0.95526 [0.00001] d
Epoch = 131.9077 [0.0039] BKJD
 $R_p/R^* = 0.0118$ [0.0056]
 $a/R^* = 1.25$ [1.34]
 $b = 0.90$ [0.65]
 $\text{Seff} = 73758.14$ [54307.43]
 $T_{\text{eq}} = 4202$ [774] K
 $R_p = 4.26$ [2.85] R_e
 $a = 0.0242$ [0.0109] AU
 $A_g = 0.94$ [1.24] [-0.05 σ]
 $T_{\text{eff}} = 6394$ [1802] K [1.12 σ]

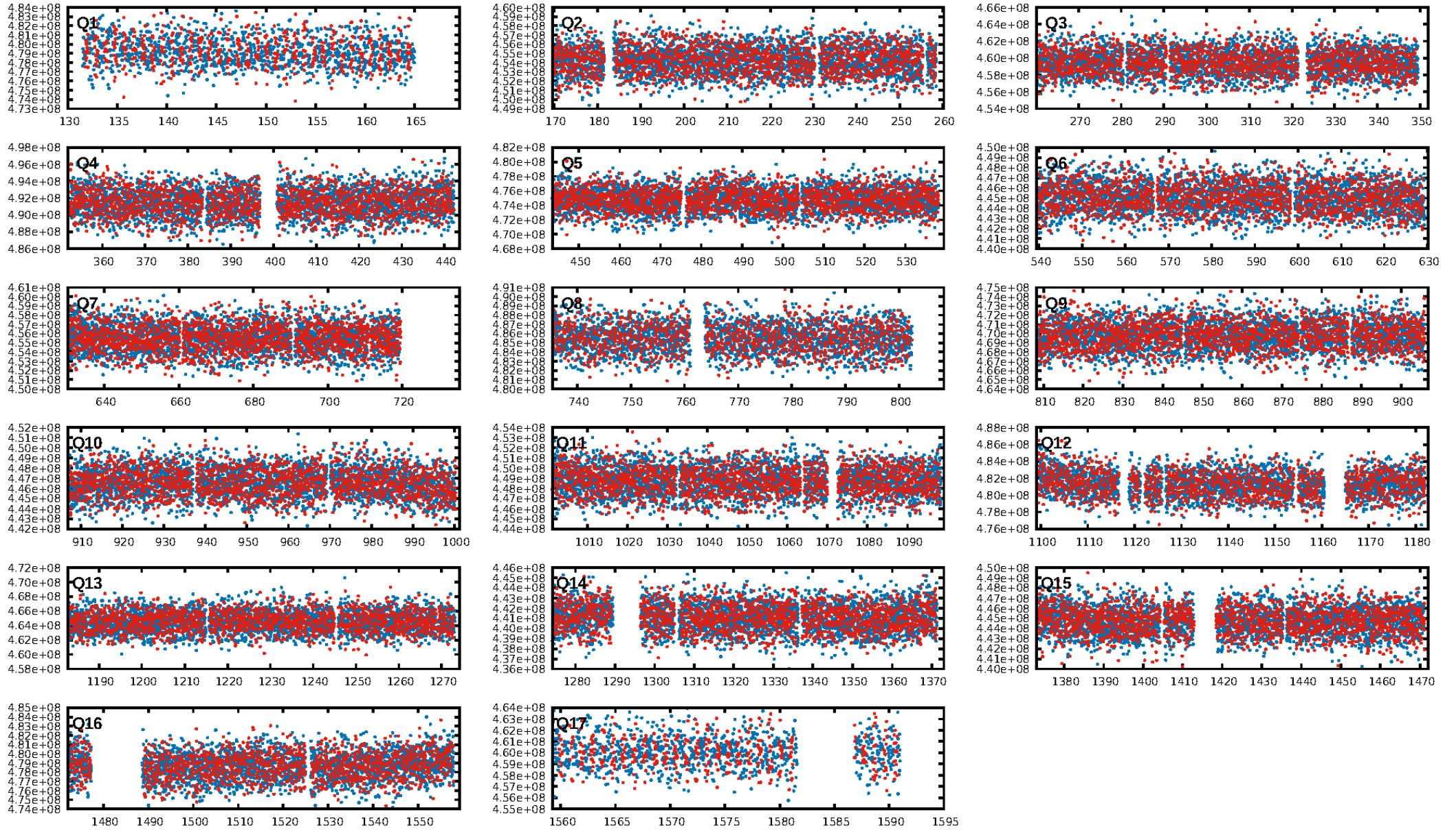
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 96.9% [2.16 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.16e-55
RollingBand-fgt: 1.00 [1342/1342]
GhostDiagnostic-chr: 1.865
Centroid-sig: 1.7%
Centroid-so: 0.198 arcsec [3.11 σ]
OotOffset-rm: 0.194 arcsec [1.11 σ]
KicOffset-rm: 0.170 arcsec [0.71 σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.69 [11/16]
DiffImageOverlap-fno: 1.00 [17/17]

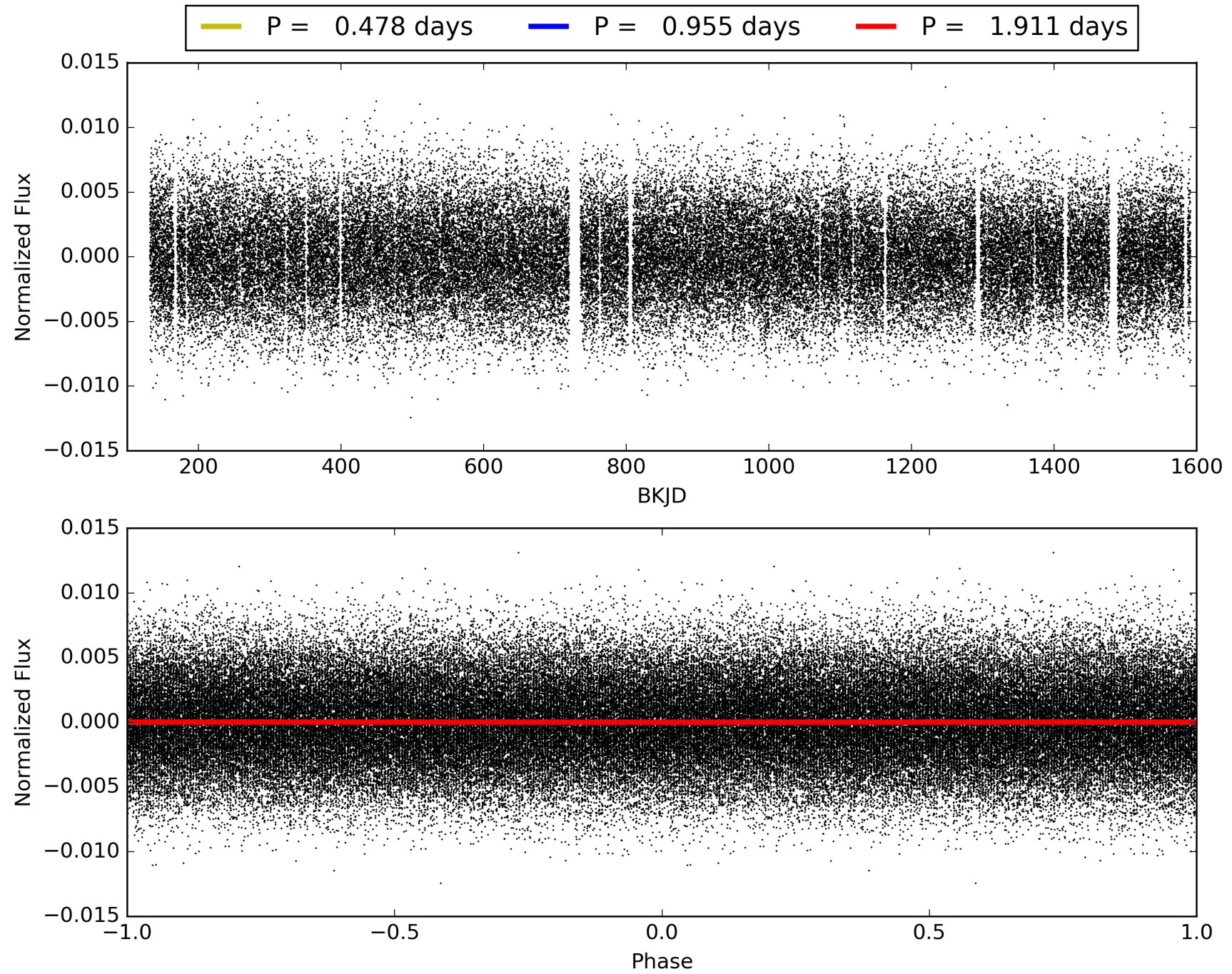
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:32:01 Z

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

TCE 010134800-01, PDC Light Curves

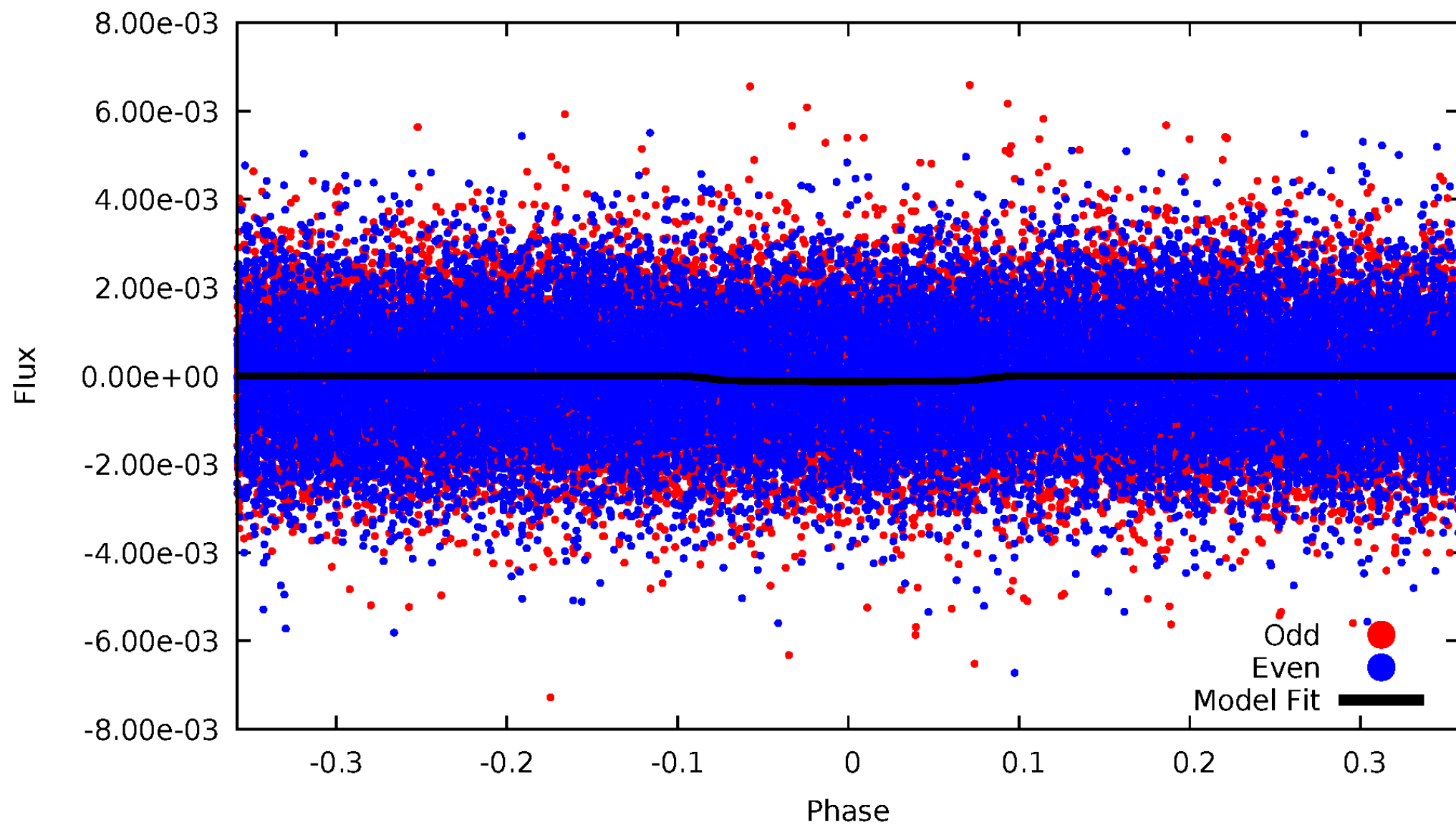


TCE 010134800-01



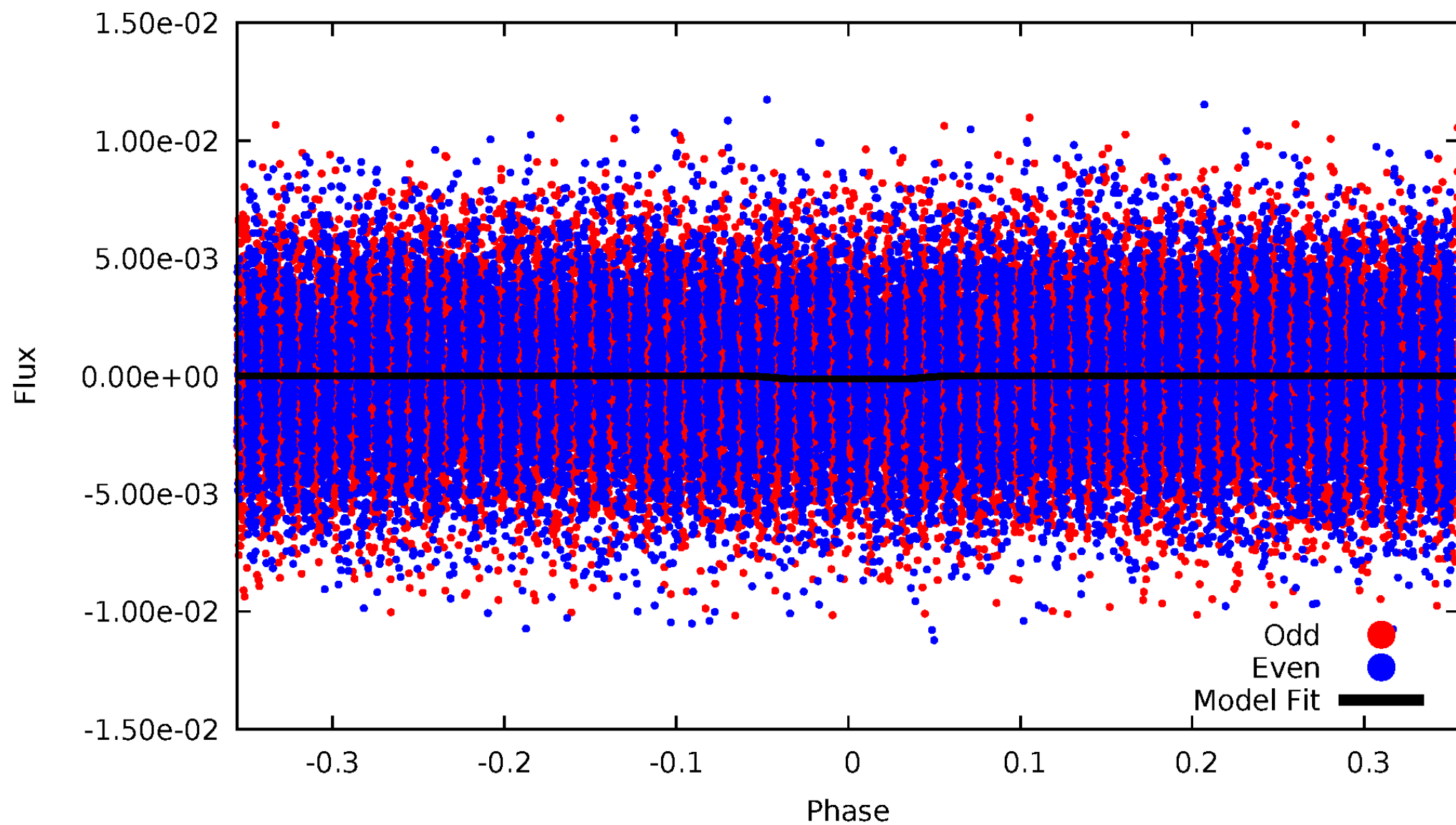
DV Odd/Even

TCE 010134800-01



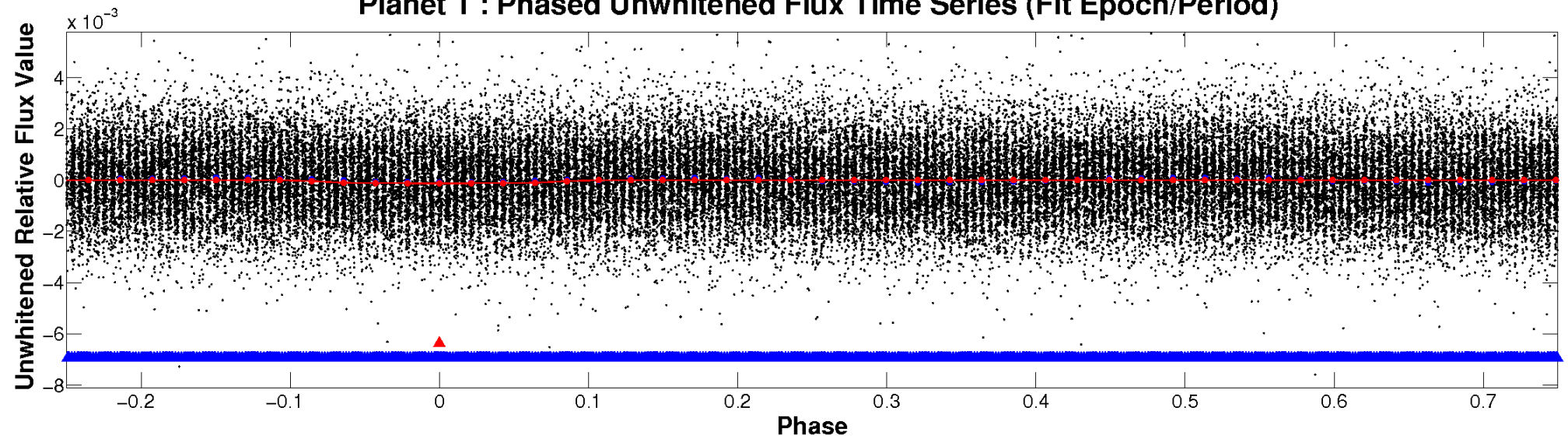
ALT Odd/Even

TCE 010134800-01

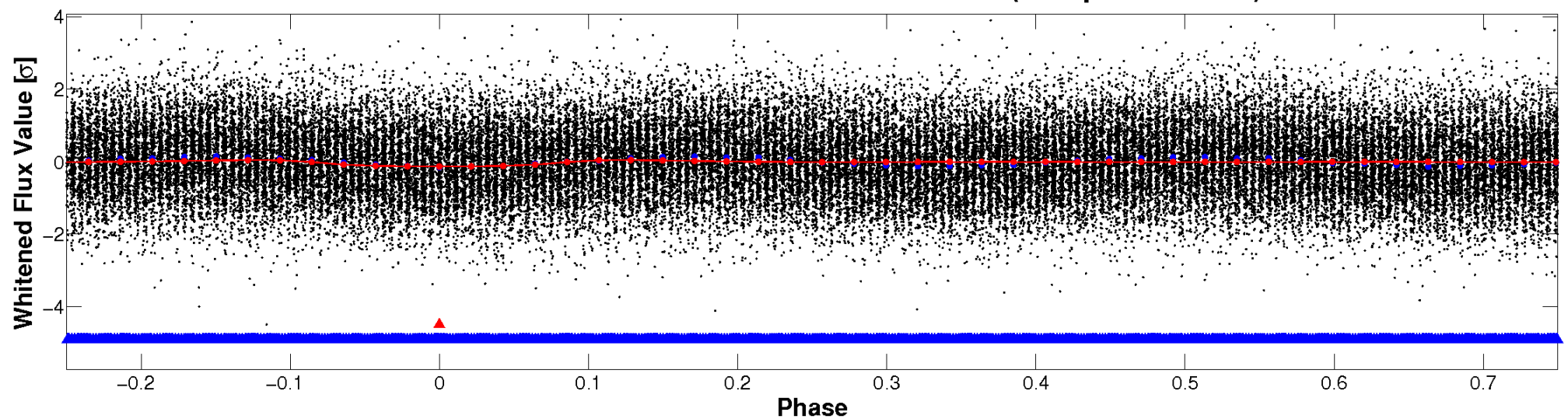


Non-Whitened Vs. Whitened Light Curve

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

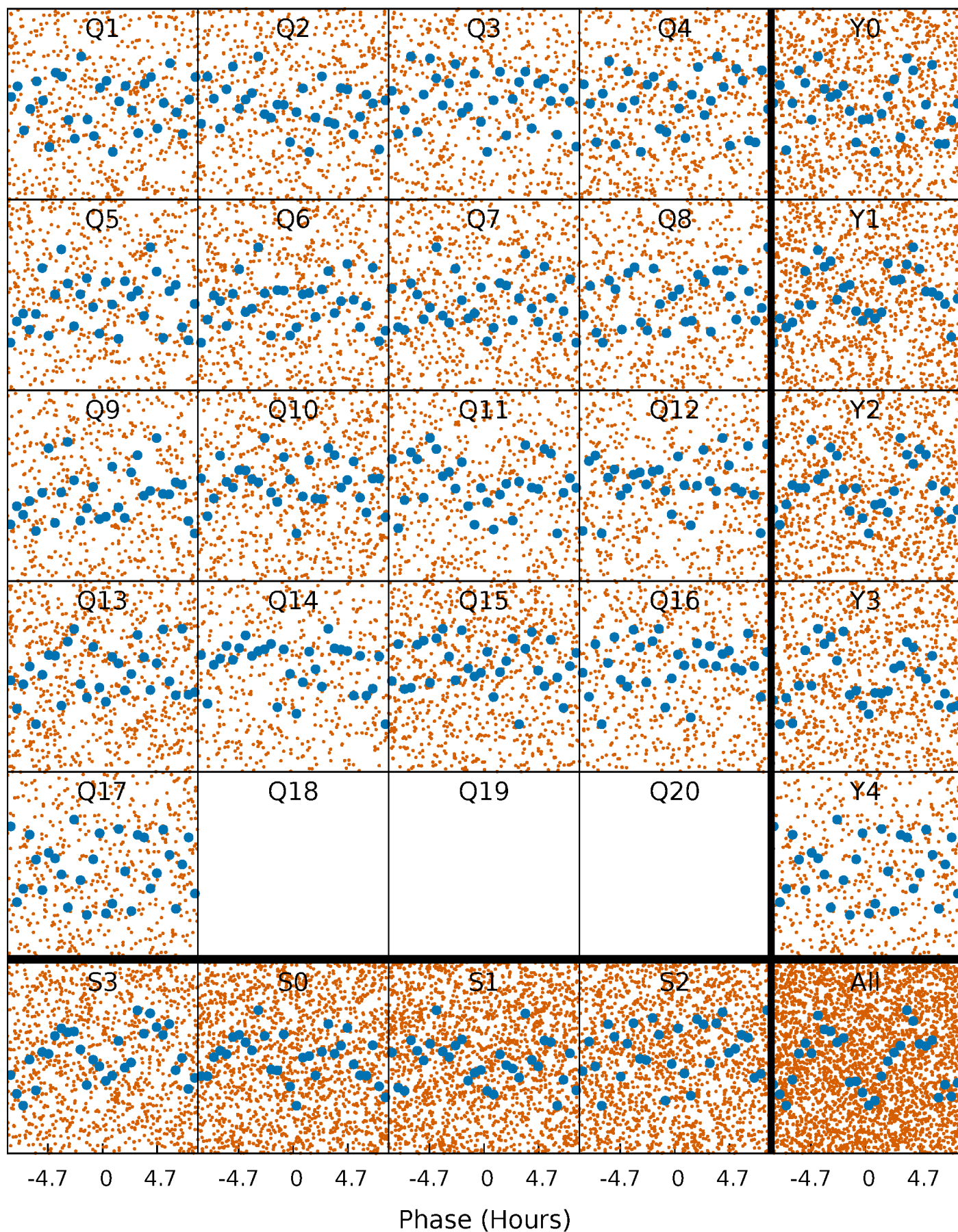


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



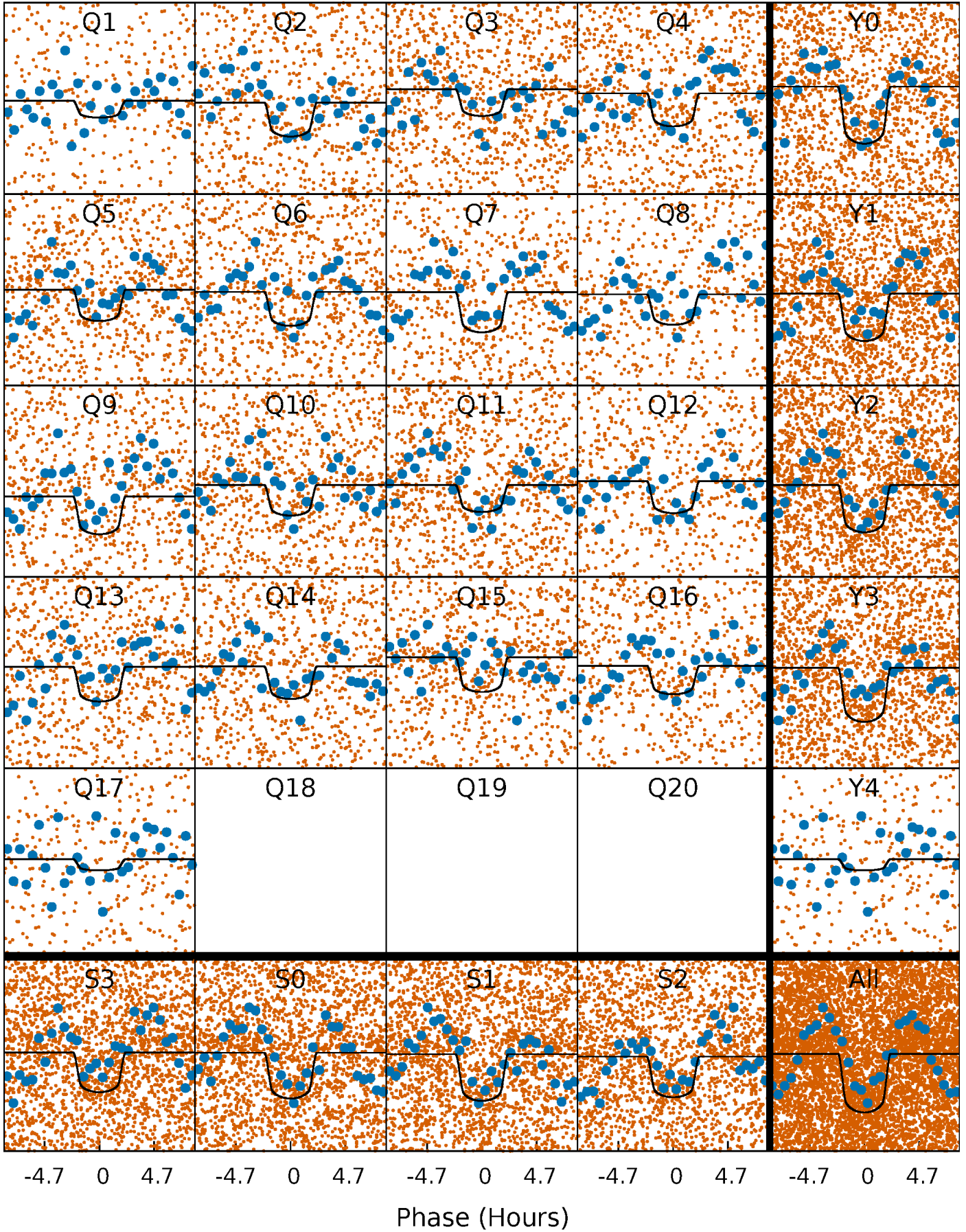
PDC Quarter-Phased Transit Curves

TCE 010134800-01 P= 0.955257 Days $T_0=131.907709$ (BKJD)



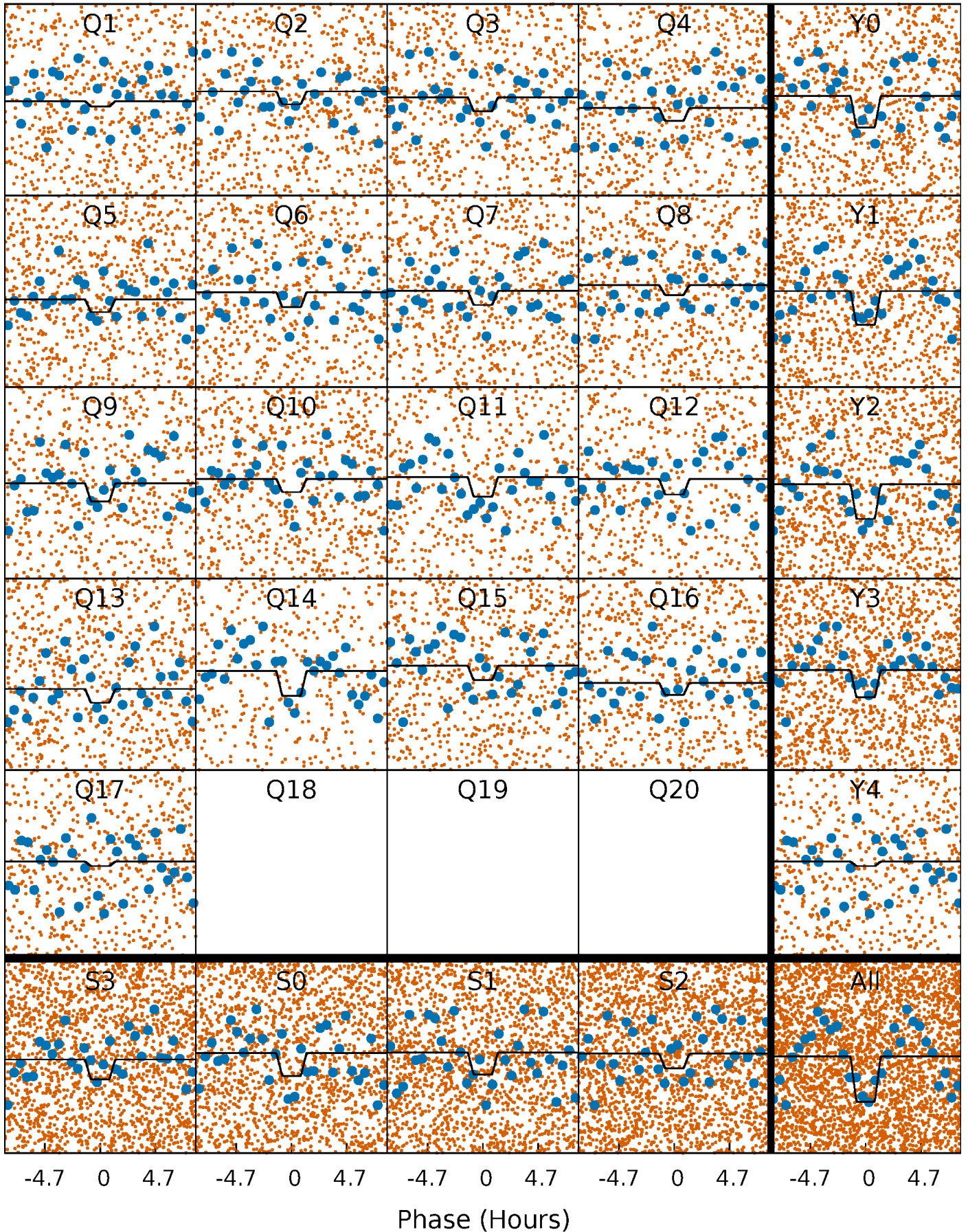
DV Quarter-Phased Transit Curves

TCE 010134800-01 P= 0.955257 Days $T_0=131.907709$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

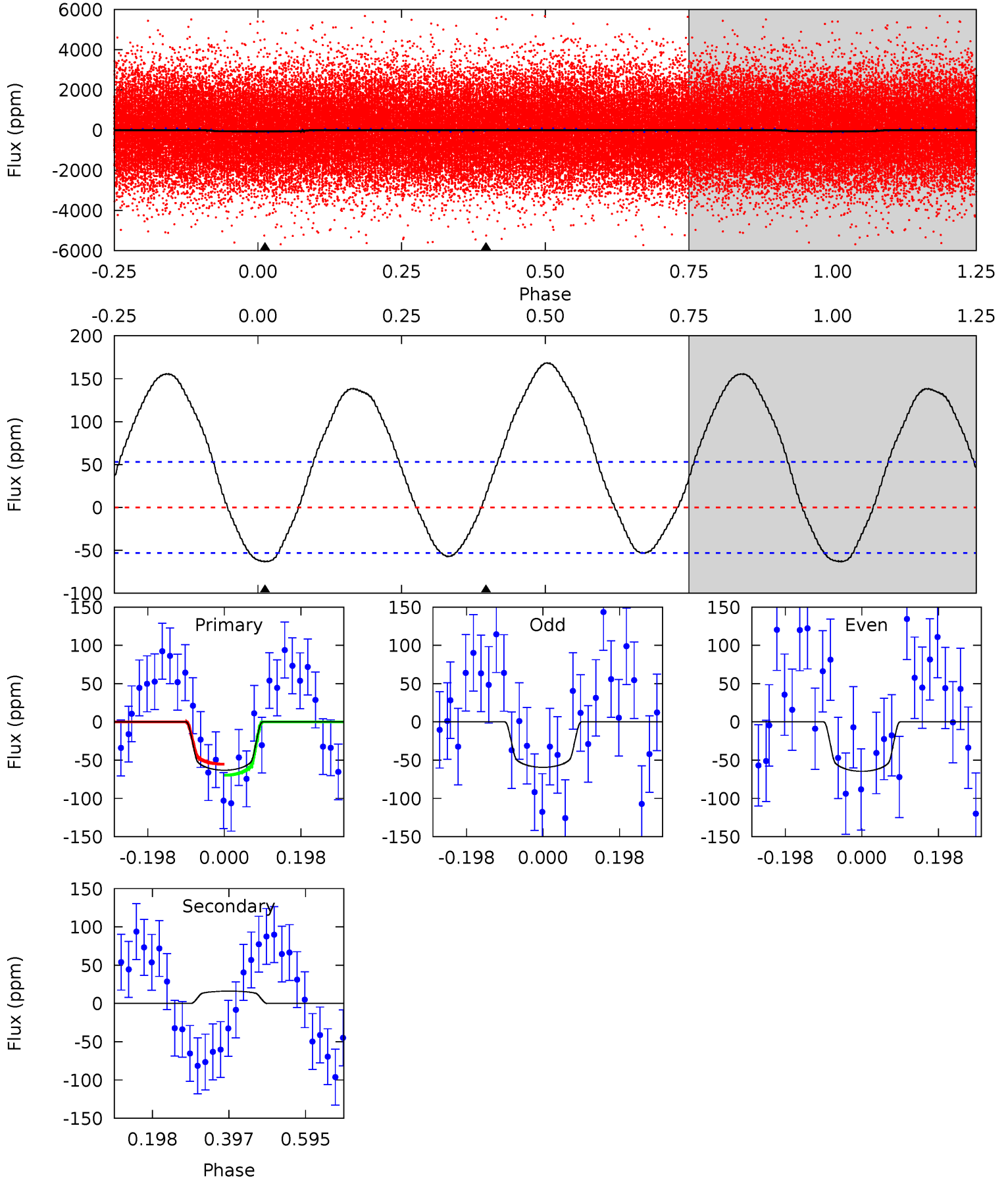
TCE 010134800-01 P= 0.955269 Days $T_0=131.905895$ (BKJD)



DV Model-Shift Uniqueness Test

010134800-01, P = 0.955257 Days, E = 130.952452 Days

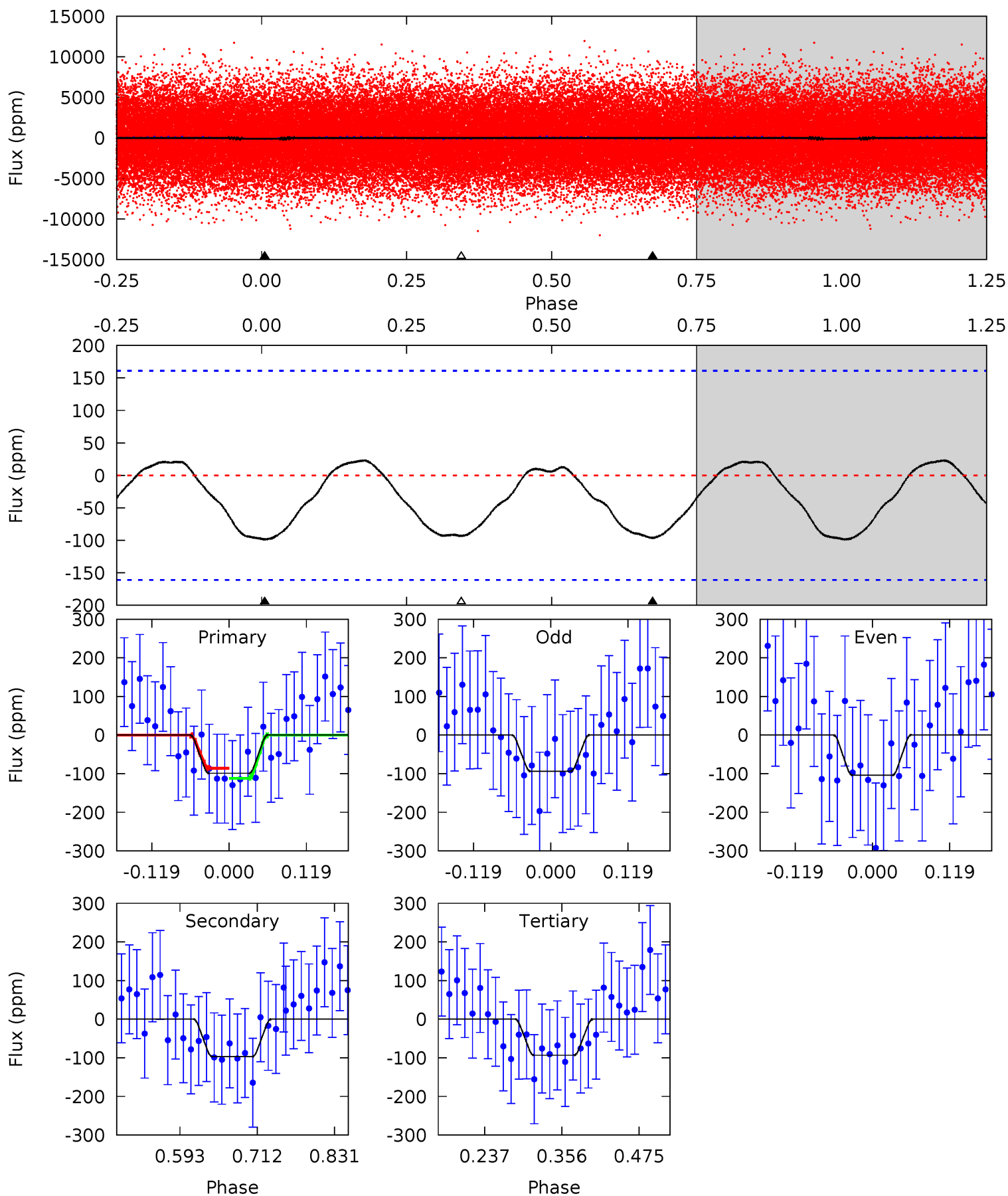
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.27	-1.34	0	0	4.42	1.29	4.85	5.27	5.27	-1.34	-1.34	0.22	0.85	0.73	0.60



Alt Model-Shift Uniqueness Test

010134800-01, P = 0.955269 Days, E = 130.950626 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.78	2.72	2.63	0	4.53	1.56	1.15	0.16	2.78	0.09	2.72	0.14	1.23	0.19	0.36



Stellar Parameters For KIC 010134800

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8137^{+225}_{-338}	$3.712^{+0.420}_{-0.112}$	$-0.060^{+0.250}_{-0.350}$	$3.310^{+0.840}_{-1.561}$	$2.060^{+0.348}_{-0.523}$	$0.080^{+0.313}_{-0.032}$
	+3%/-4%	+11%/-3%	+417%/-583%	+25%/-47%	+17%/-25%	+391%/-40%
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 010134800-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	16 ± 12	$3.89^{+2.24}_{-1.97}$	5684^{+439}_{-676}	-5375^{+631}_{-1280}	$-0.291^{+0.231}_{-0.997}$
Alt.	-97 ± 36	$3.62^{+2.21}_{-1.77}$	5676^{+461}_{-670}	7077^{+4434}_{-1808}	$2.167^{+7.206}_{-1.371}$

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

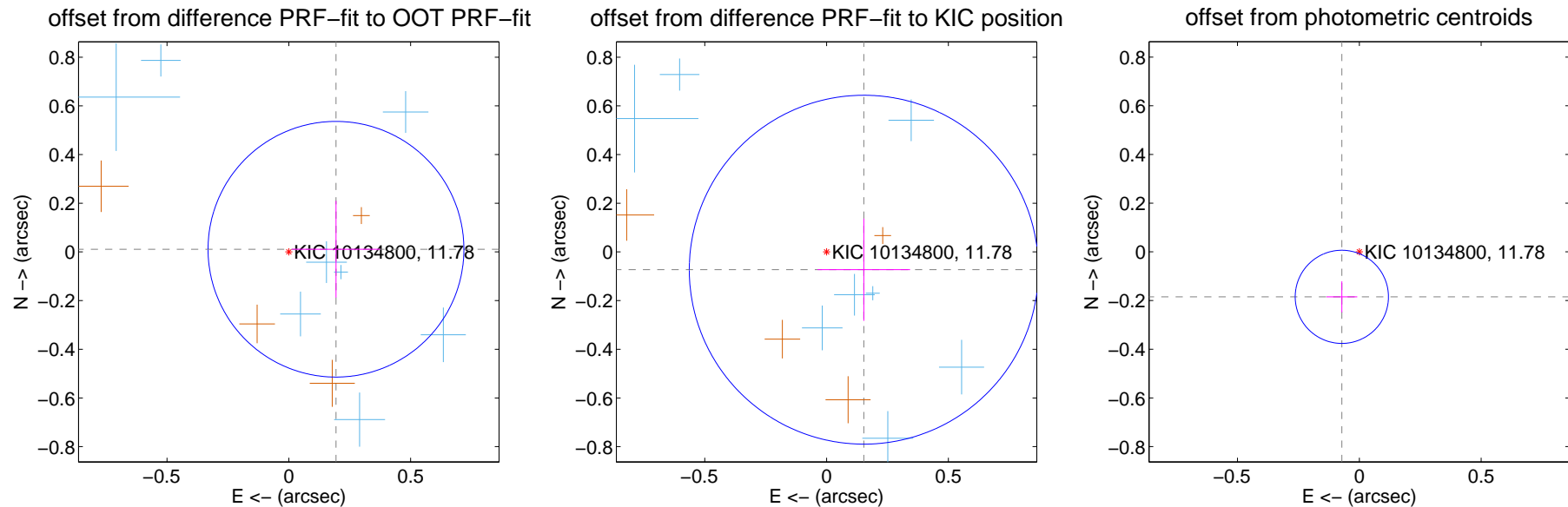
DV Centroid Data

Supplemental centroid analysis for 010134800-01. **Kepler magnitude: 11.78.** Transit SNR 11.70

There are 11 quarters with good PRF difference image offsets

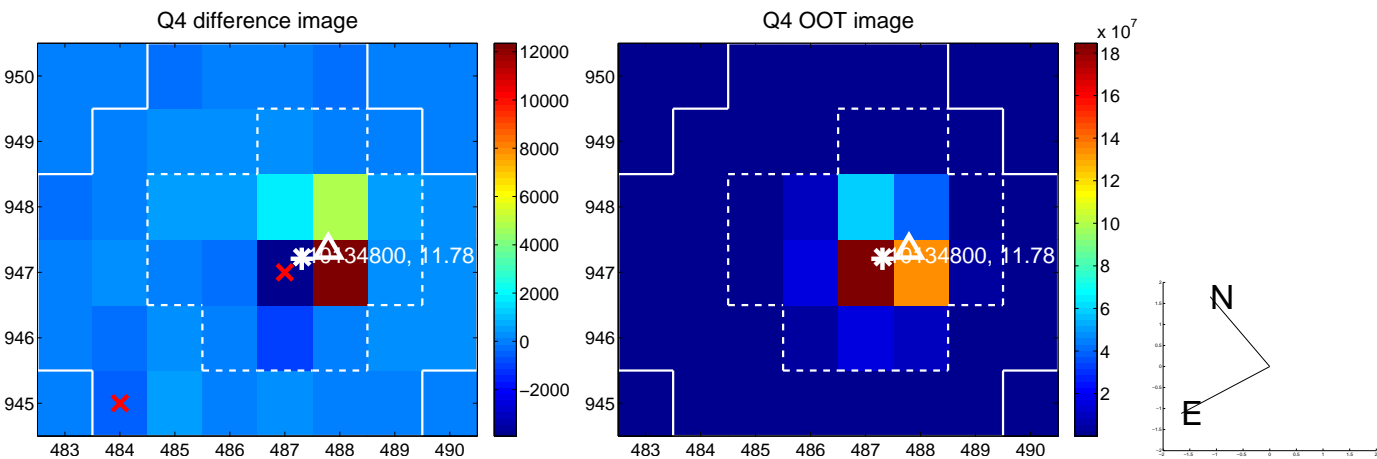
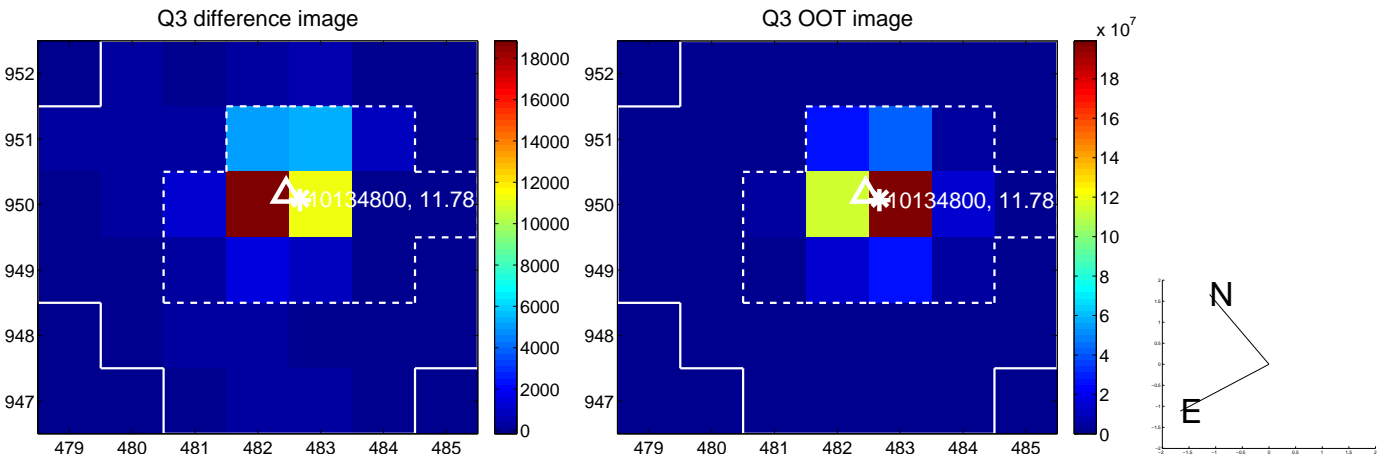
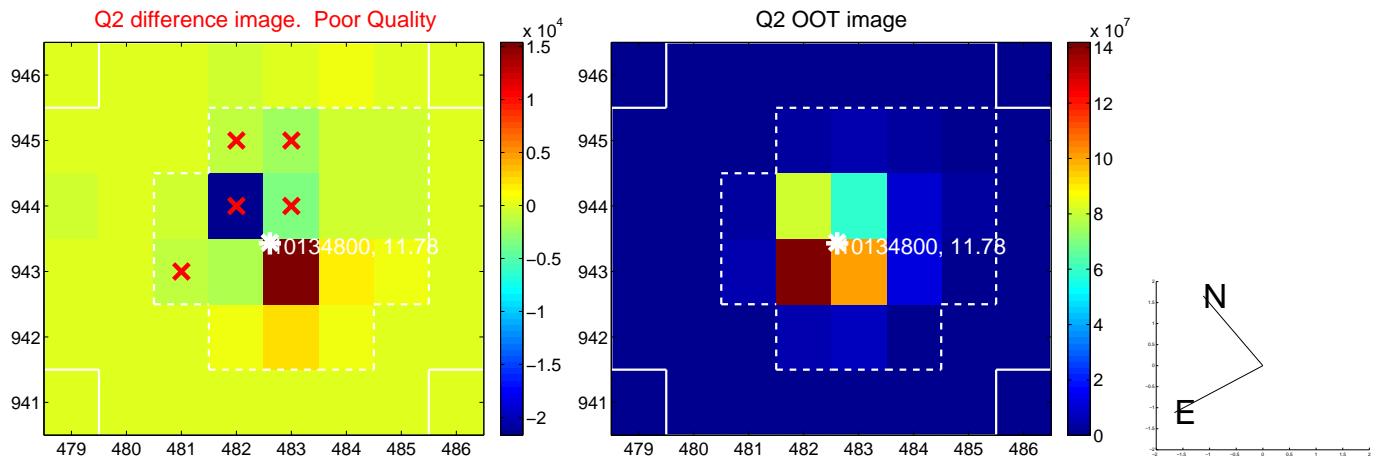
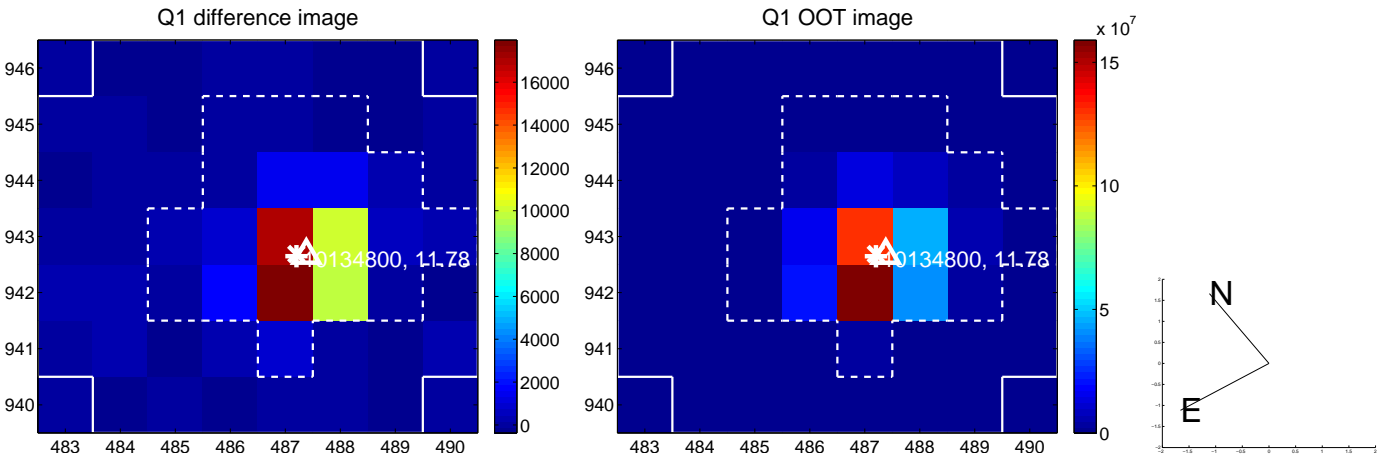
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.194 ± 0.175	1.11	-0.194 ± 0.181	0.011 ± 0.199
PRF-fit source offset from KIC position	0.170 ± 0.239	0.71	-0.153 ± 0.190	-0.073 ± 0.210
photometric centroid source offset	0.20 ± 0.06	3.11	0.07 ± 0.06	-0.18 ± 0.06

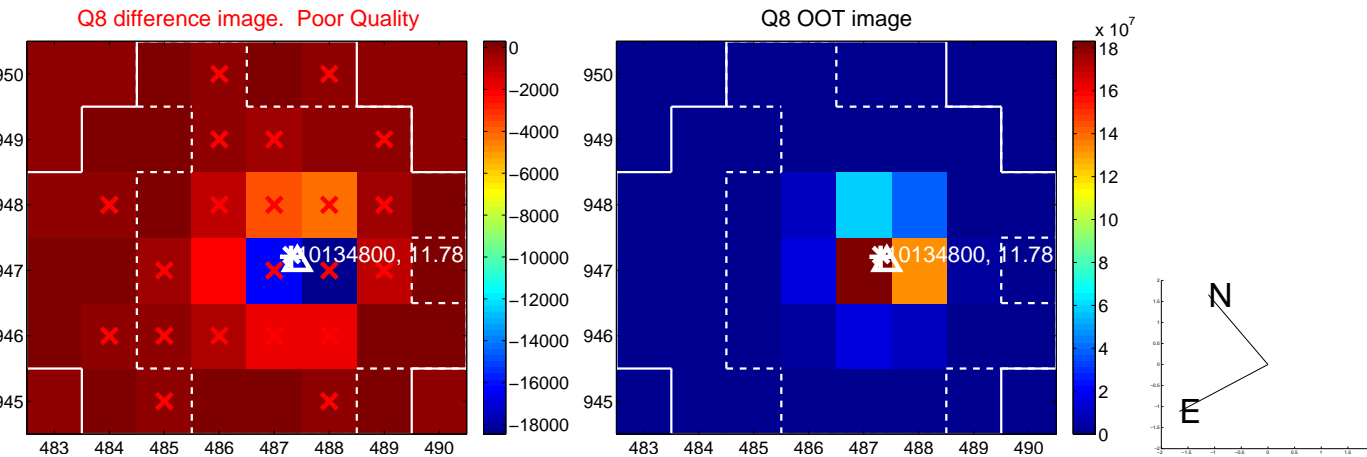
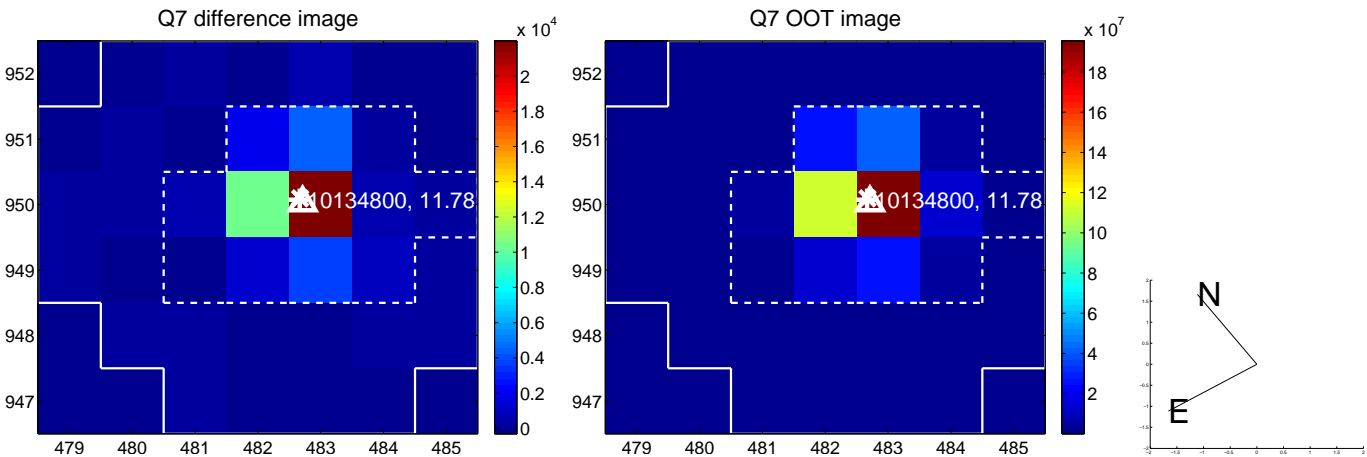
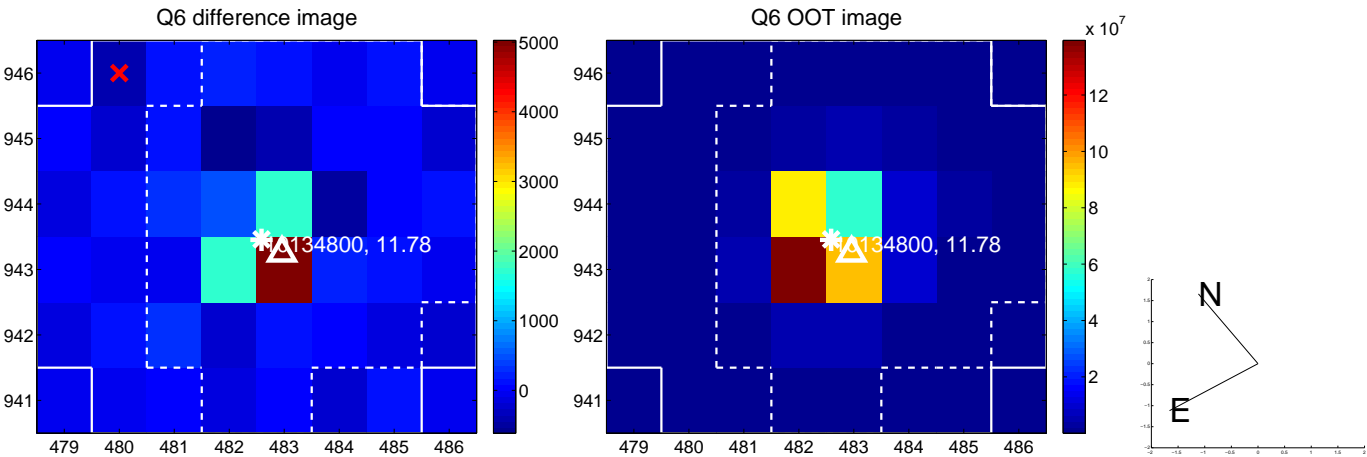
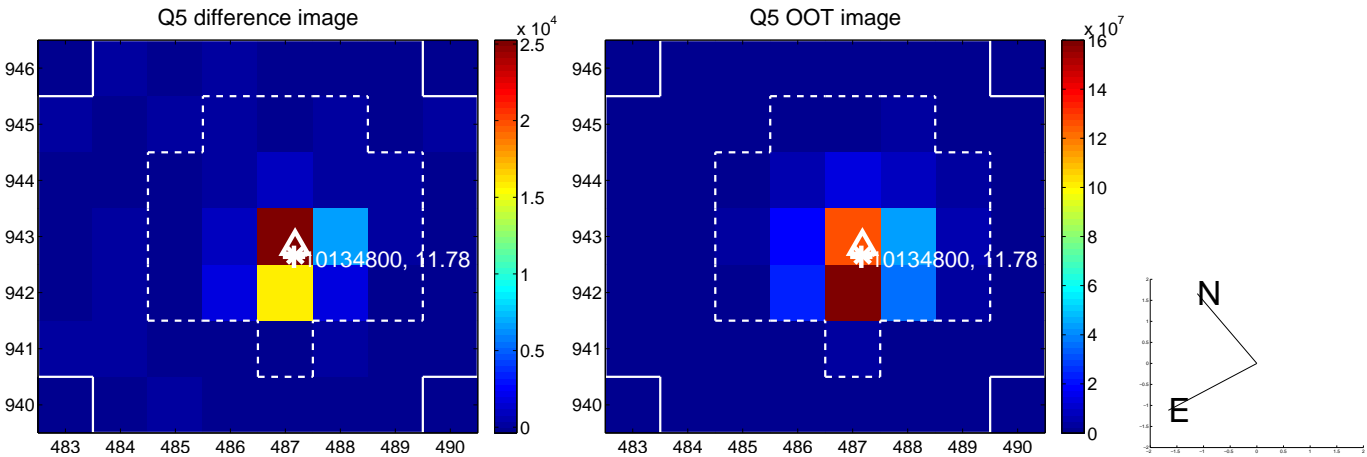


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

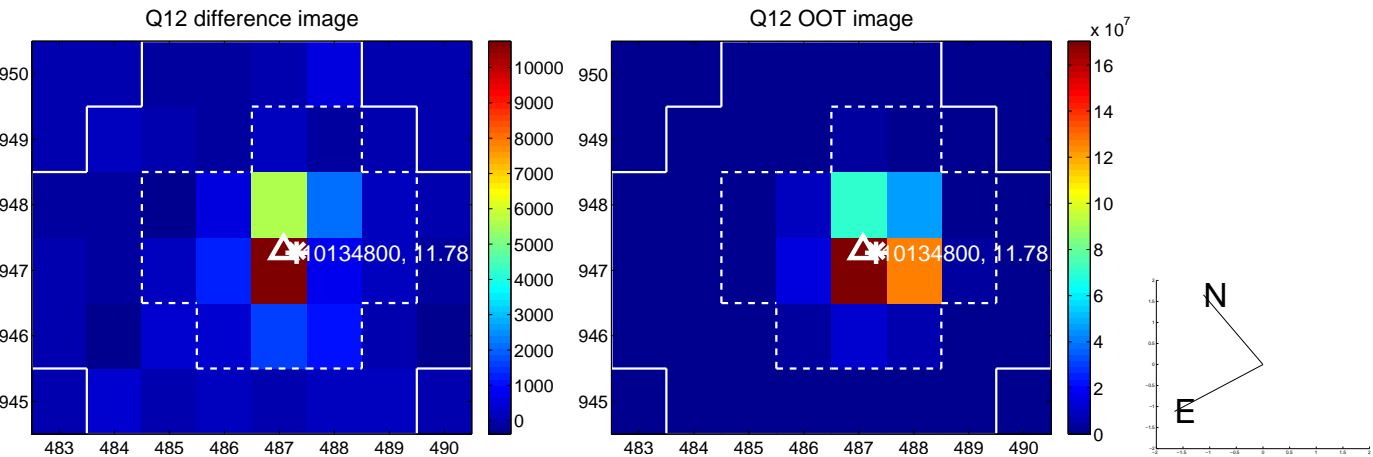
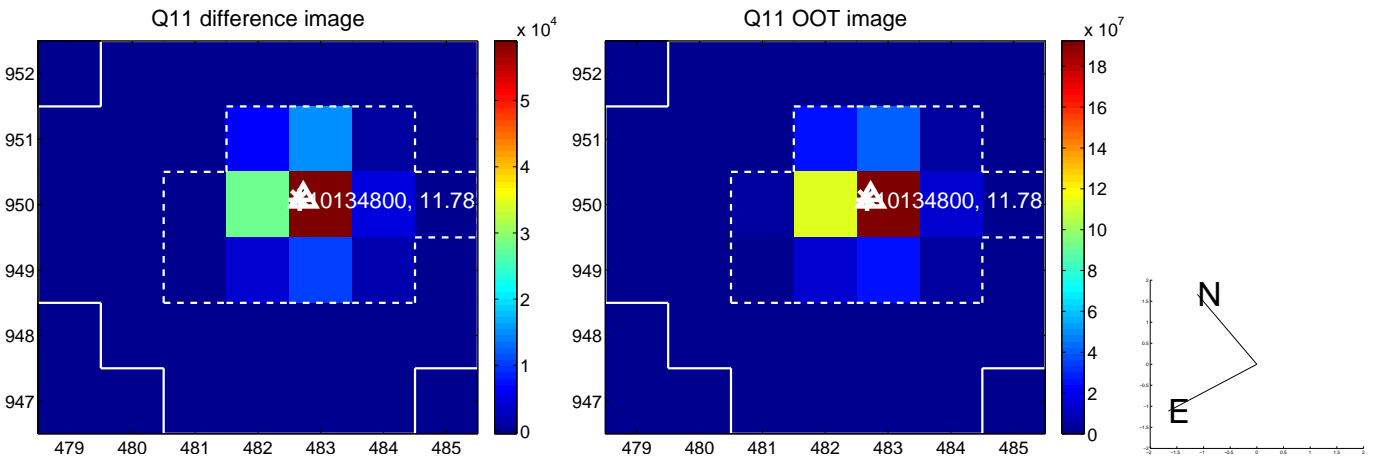
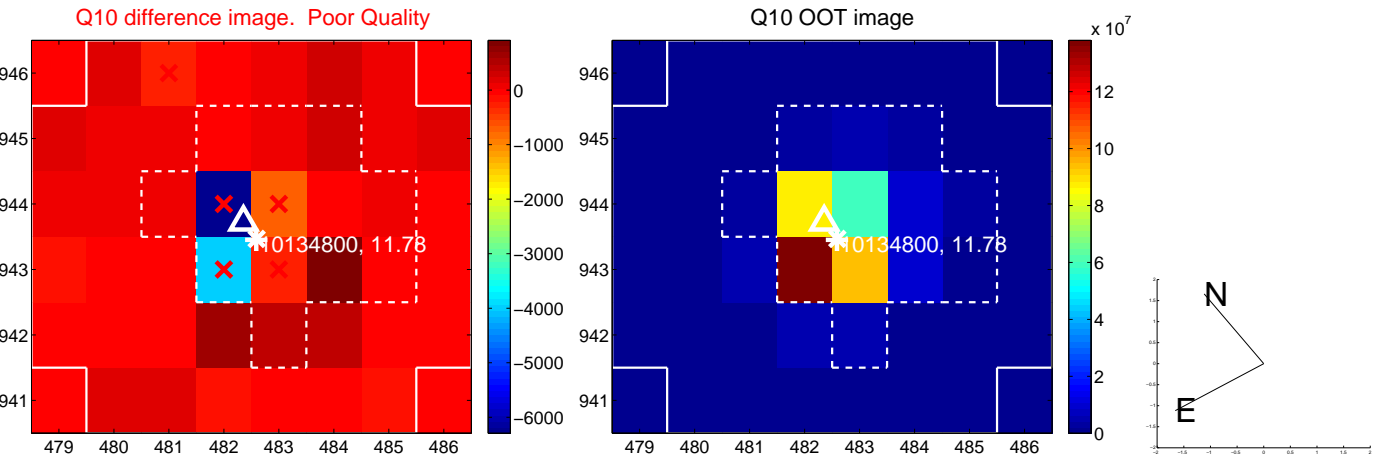
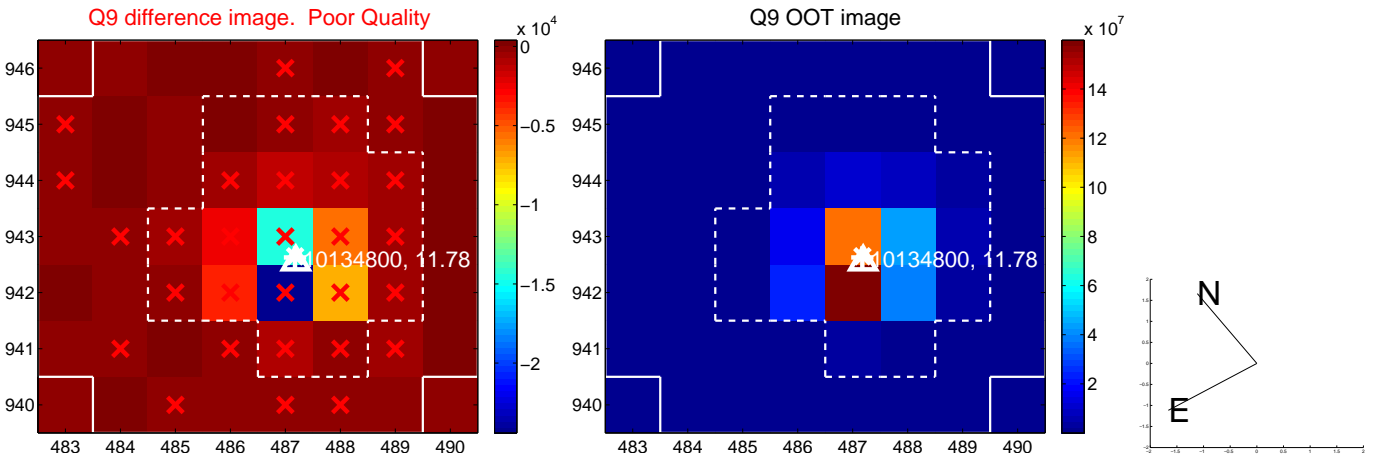
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



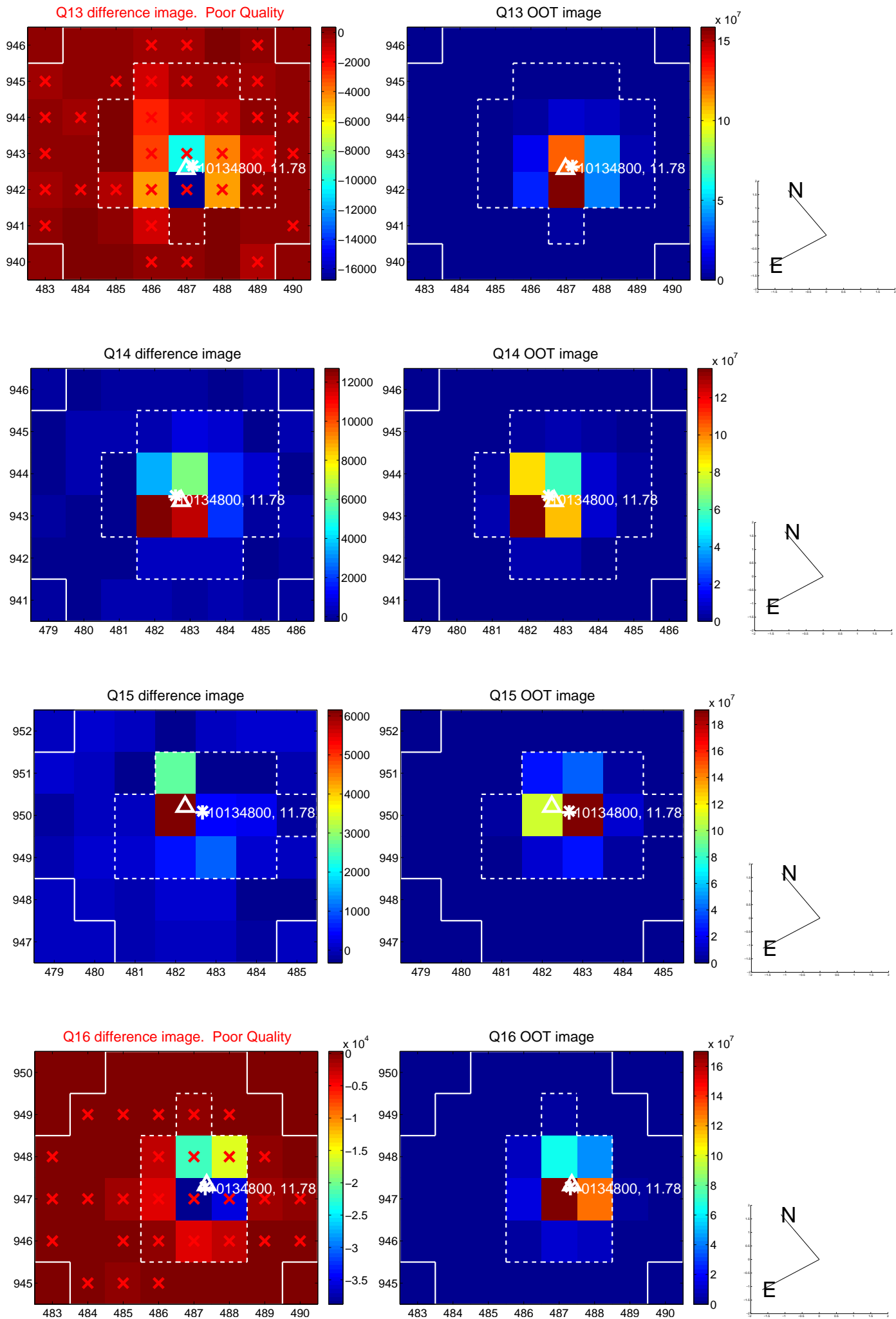
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



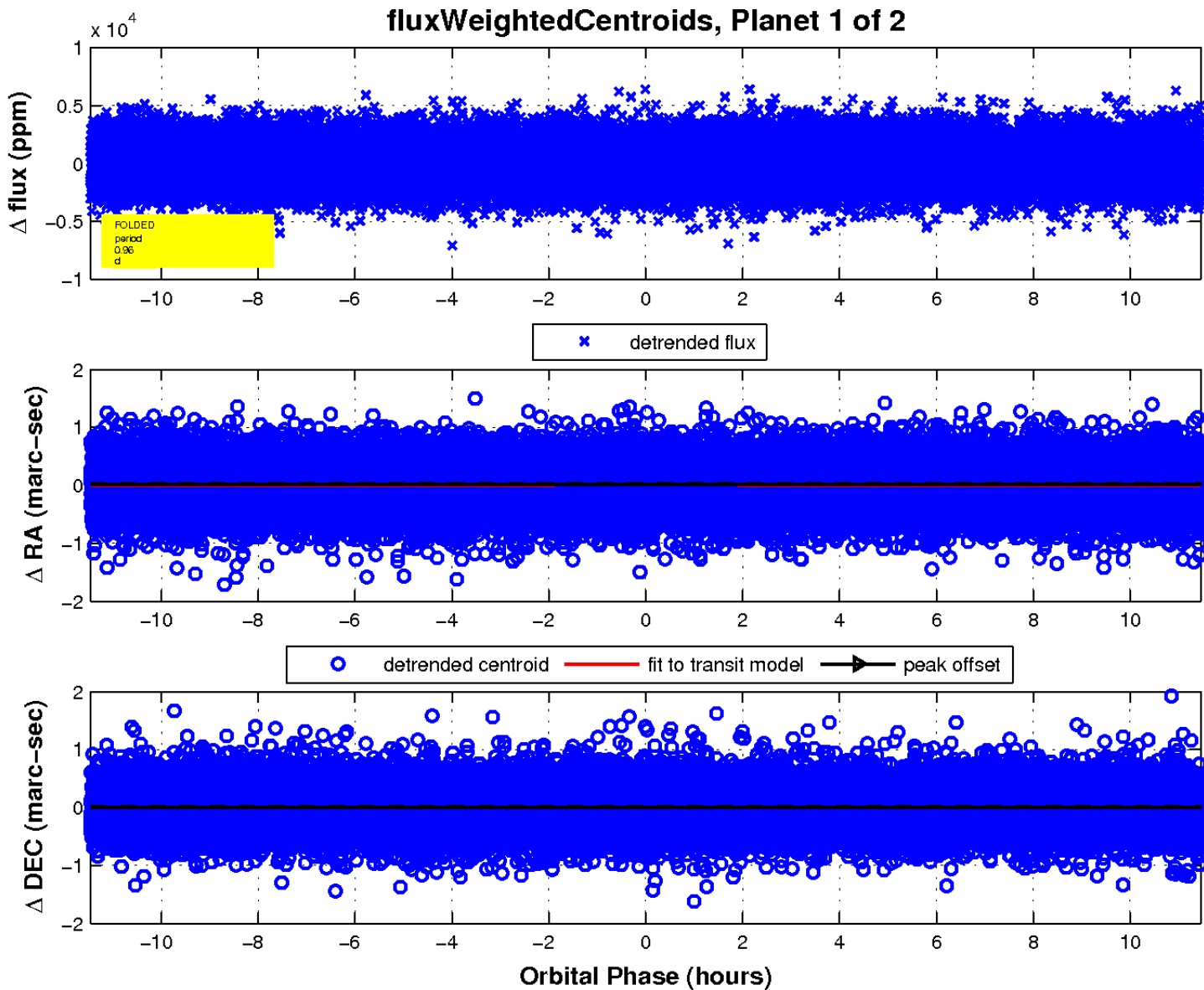
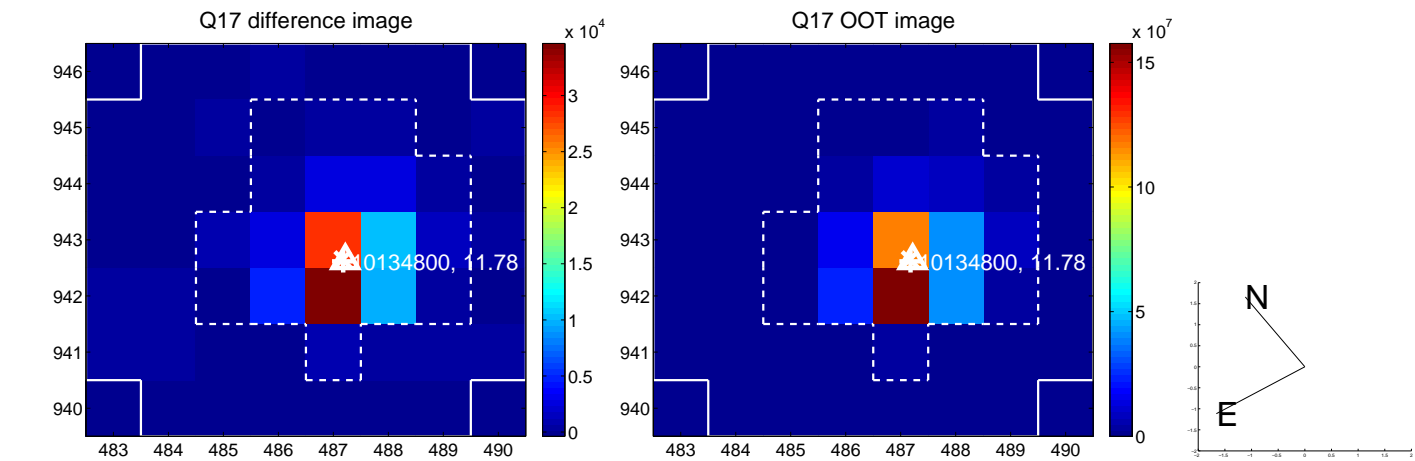
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

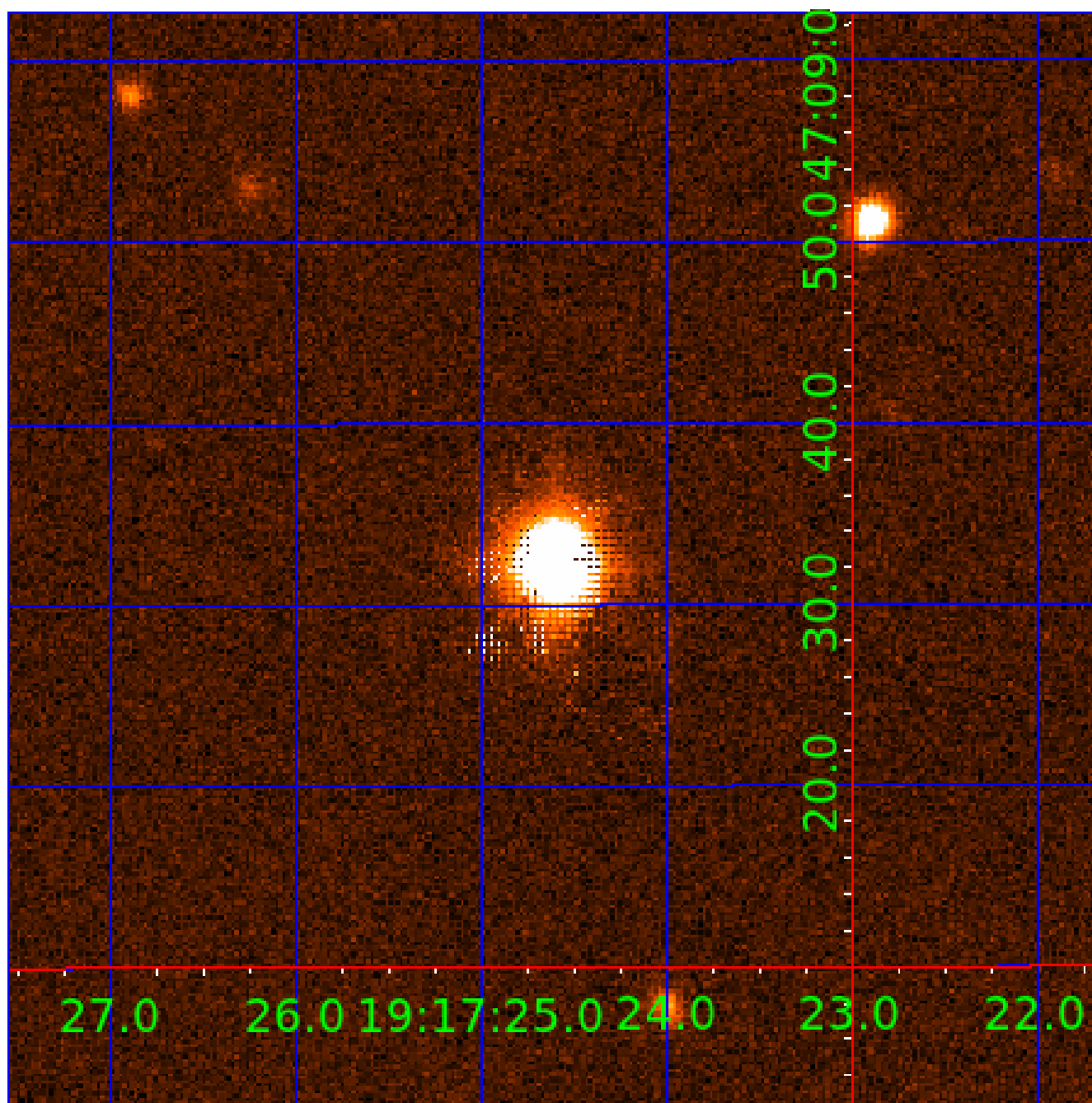


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010134800

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})
010134800-01	OBS	No	0.955257	131.907709	122.9	4.103	13.9	11.7	3.31	8137	4.26	73758.14
010134800-02	OBS	No	1.789399	133.136657	264.6	8.303	11.0	11.1	3.31	8137	7.34	31941.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010134800-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
010134800-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

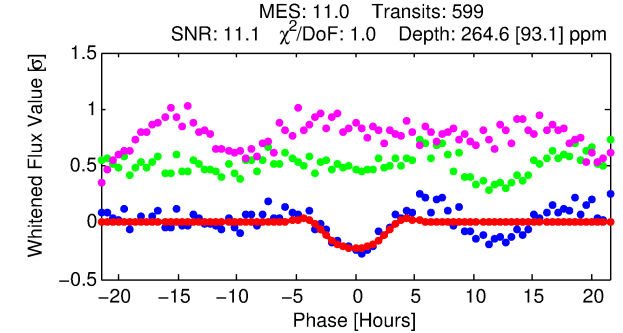
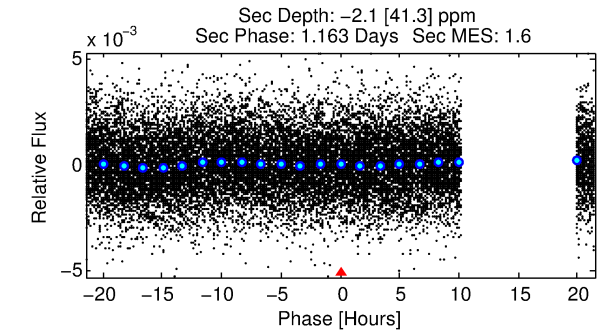
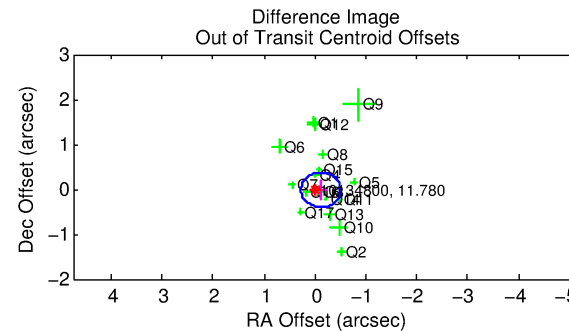
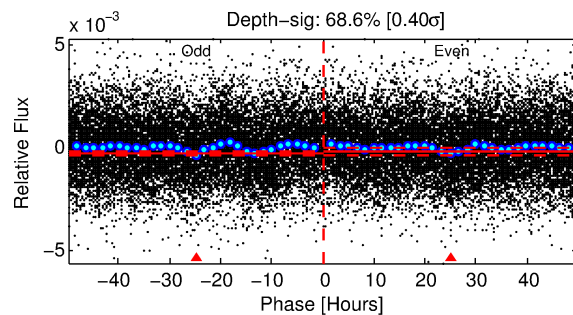
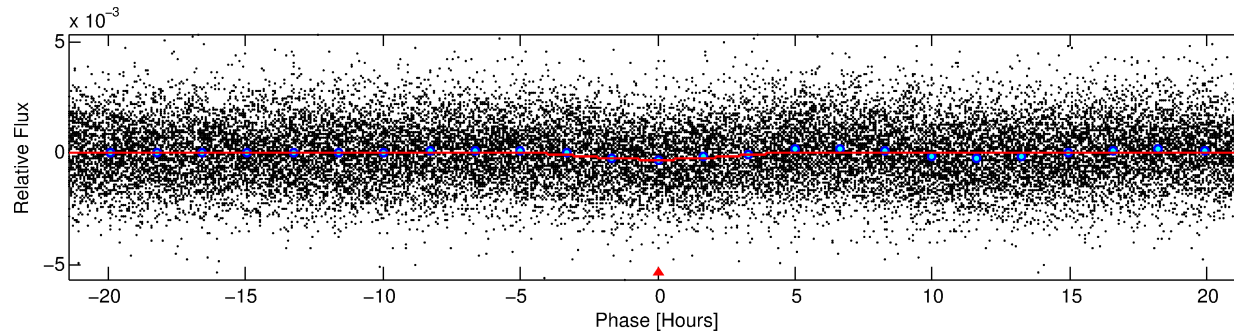
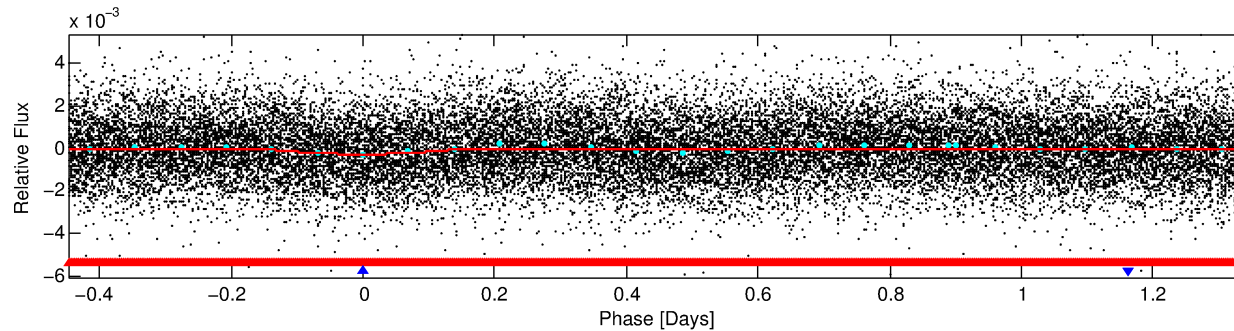
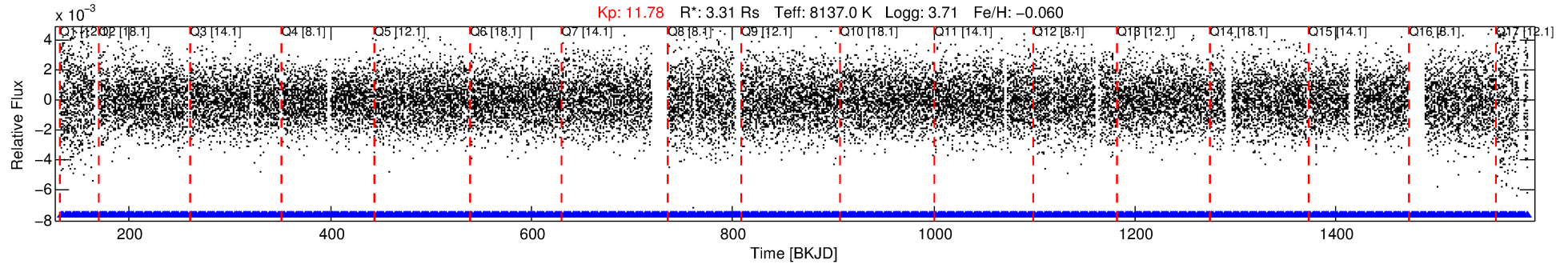
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010134800-02

No Significant Match Found

DV One-Page Summary

KIC: 10134800 Candidate: 2 of 2 Period: 1.789 d



DV Fit Results:

Period = 1.78940 [0.00004] d
Epoch = 133.1367 [0.0146] BKJD
Rp/R* = 0.0203 [0.0075]
a/R* = 1.09 [0.04]
b = 0.98 [0.02]
Seff = 31941.89 [23518.52]
Teff = 3409 [627] K
Rp = 7.35 [4.39] Re
a = 0.0367 [0.0165] AU
Ag = N/A
Teffp = N/A

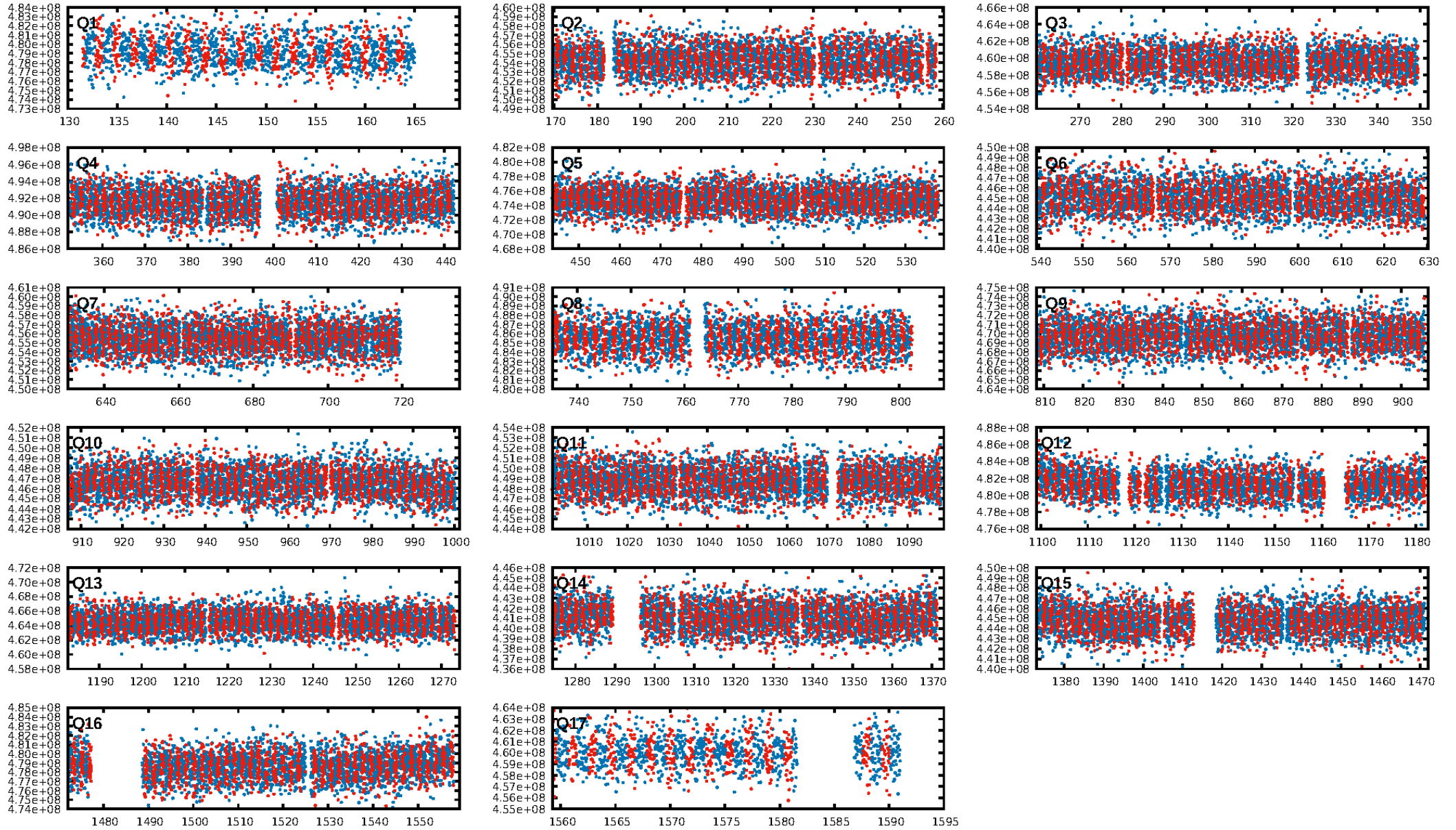
DV Diagnostic Results:

ShortPeriod-sig: 96.9% [2.16 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.37e-32
RollingBand-fgt: 1.00 [571/571]
GhostDiagnostic-chr: 0.263
Centroid-sig: 20.7%
Centroid-so: 0.236 arcsec [6.08 σ]
OotOffset-rm: 0.118 arcsec [0.91 σ]
KicOffset-rm: 0.132 arcsec [0.72 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.88 [15/17]
DiffImageOverlap-fno: 0.00 [0/17]

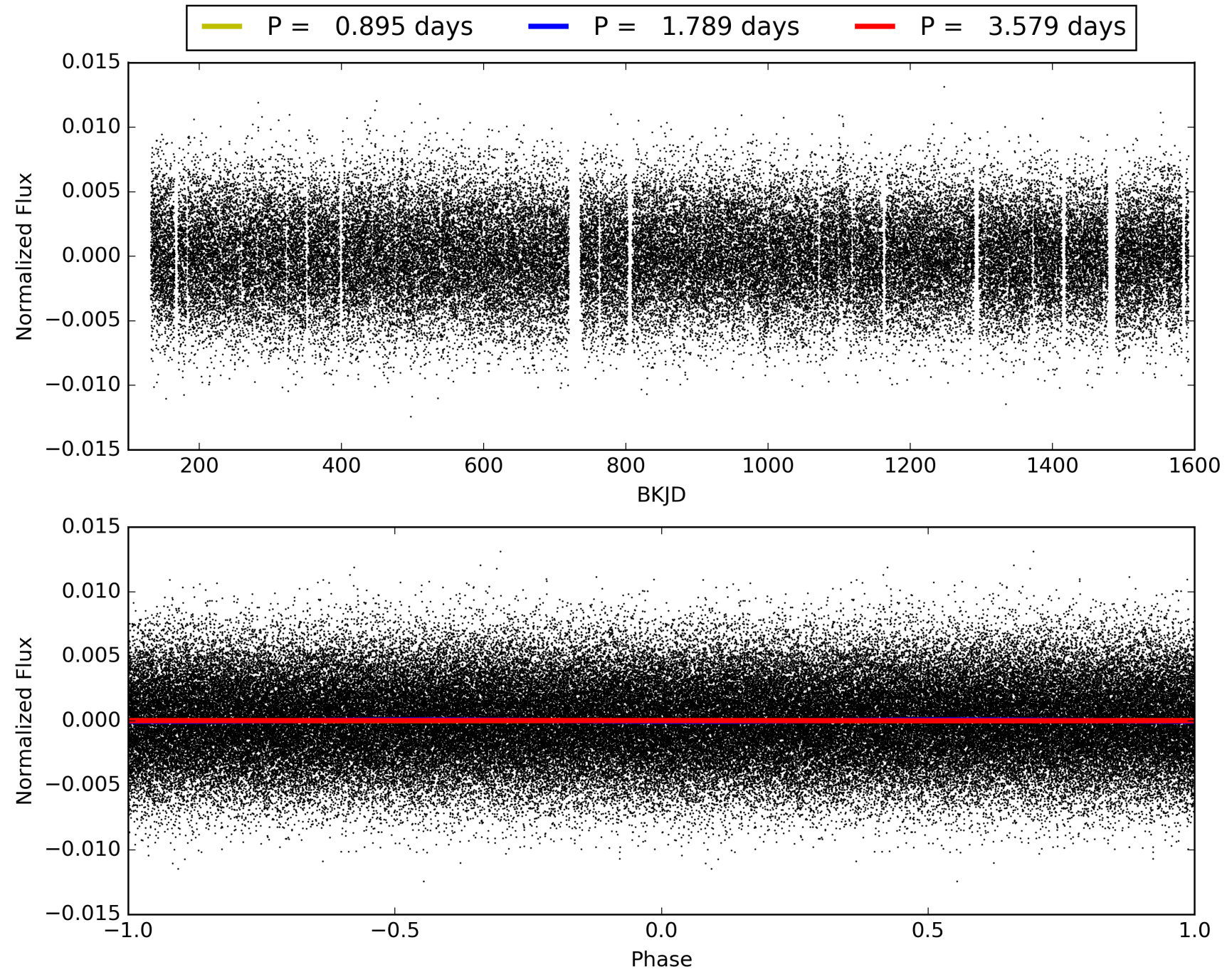
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:32:14 Z

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

TCE 010134800-02, PDC Light Curves

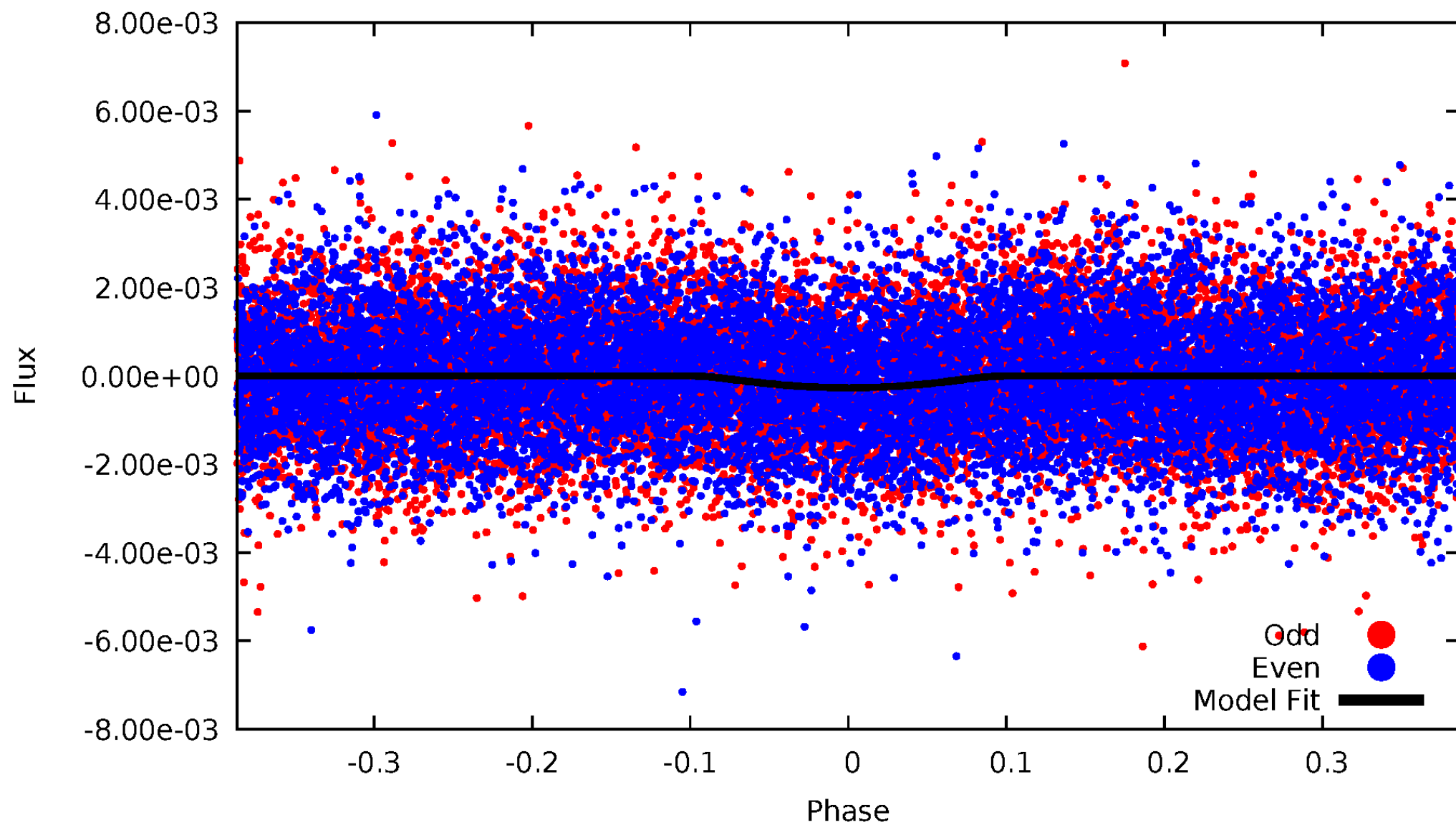


TCE 010134800-02



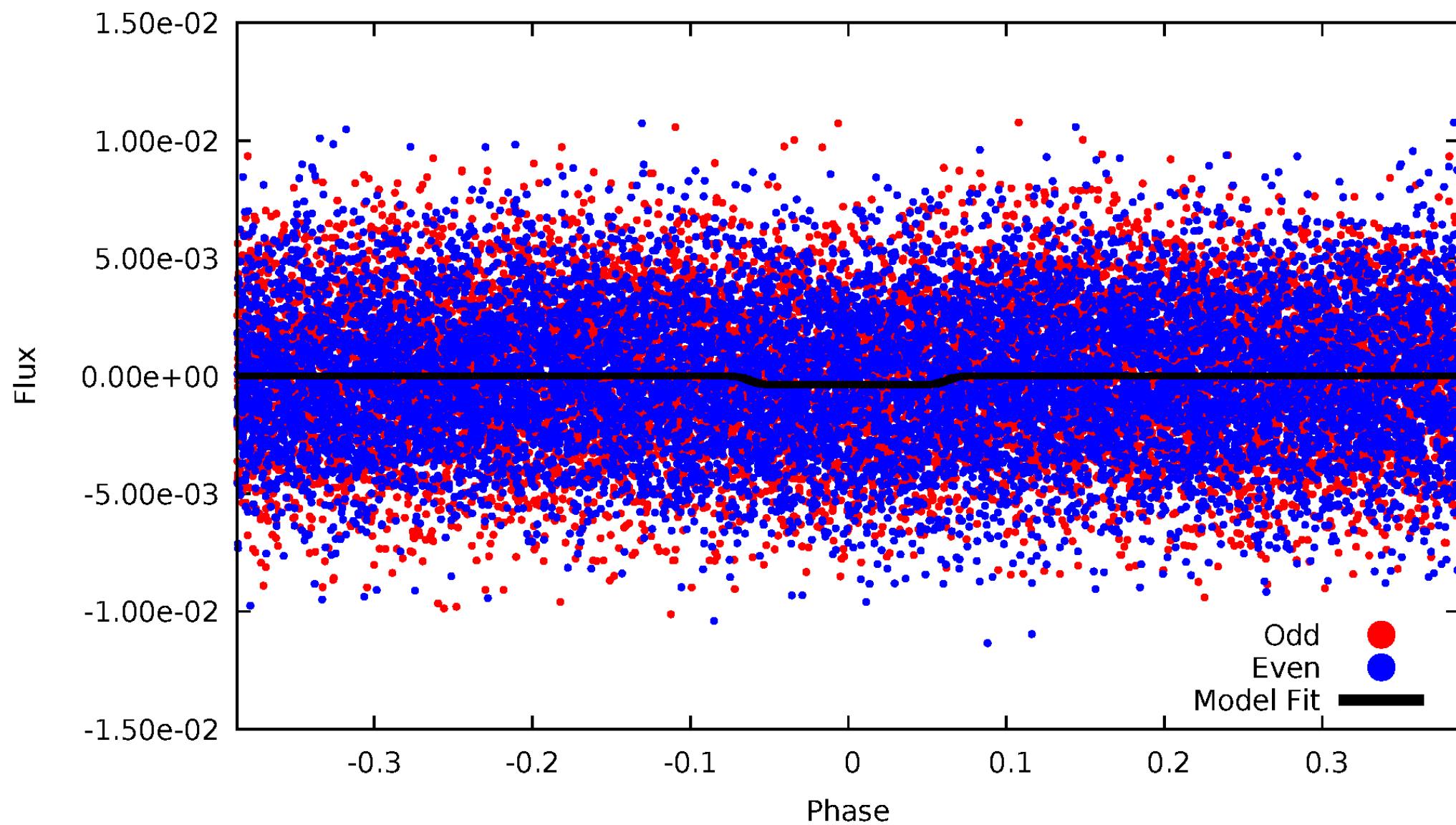
DV Odd/Even

TCE 010134800-02



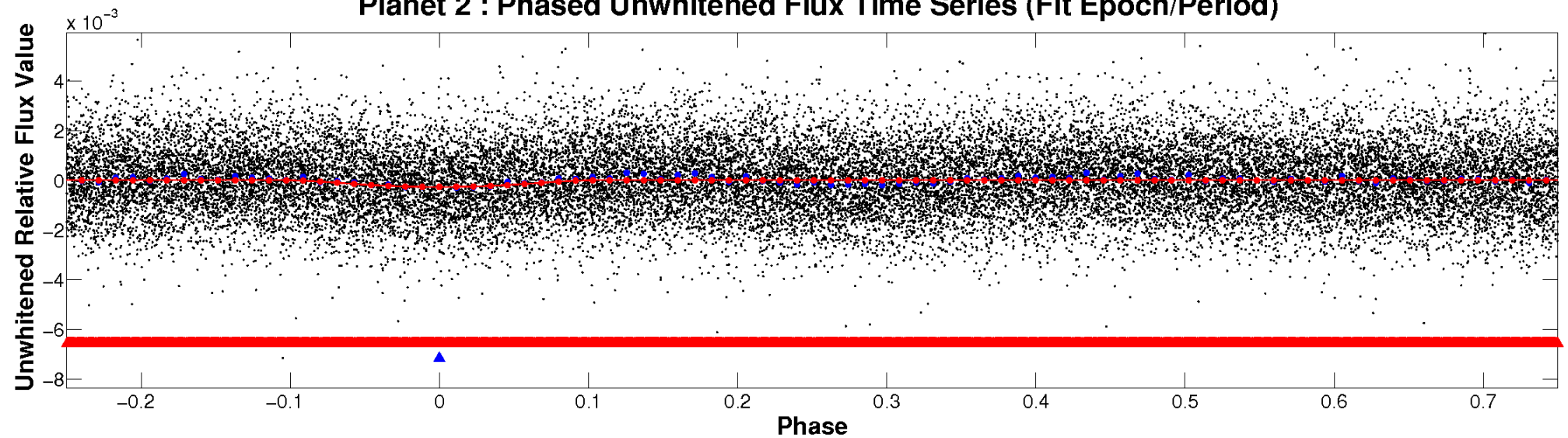
ALT Odd/Even

TCE 010134800-02

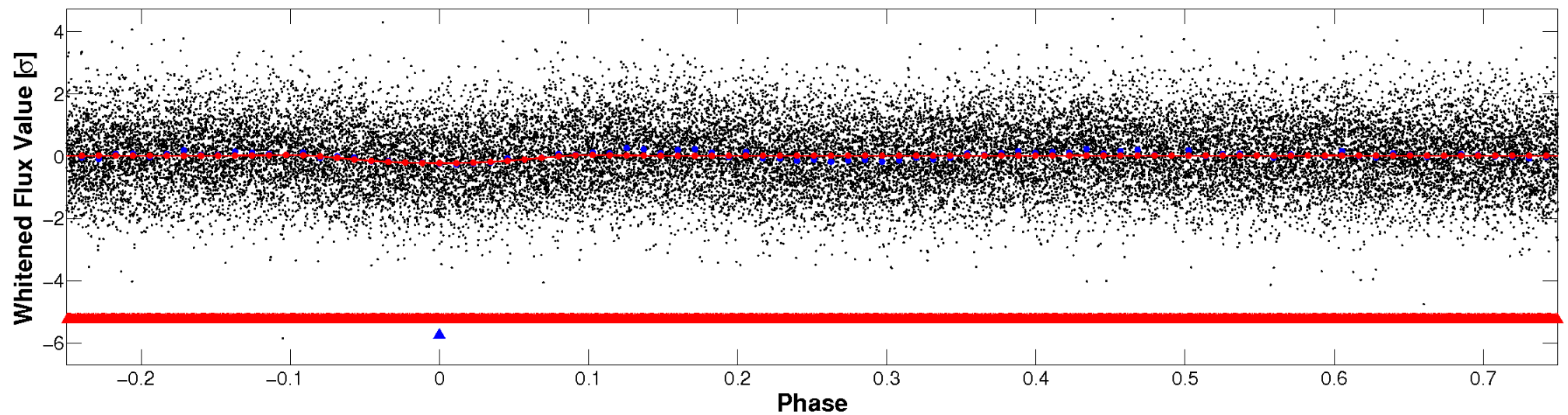


Non-Whitened Vs. Whitened Light Curve

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

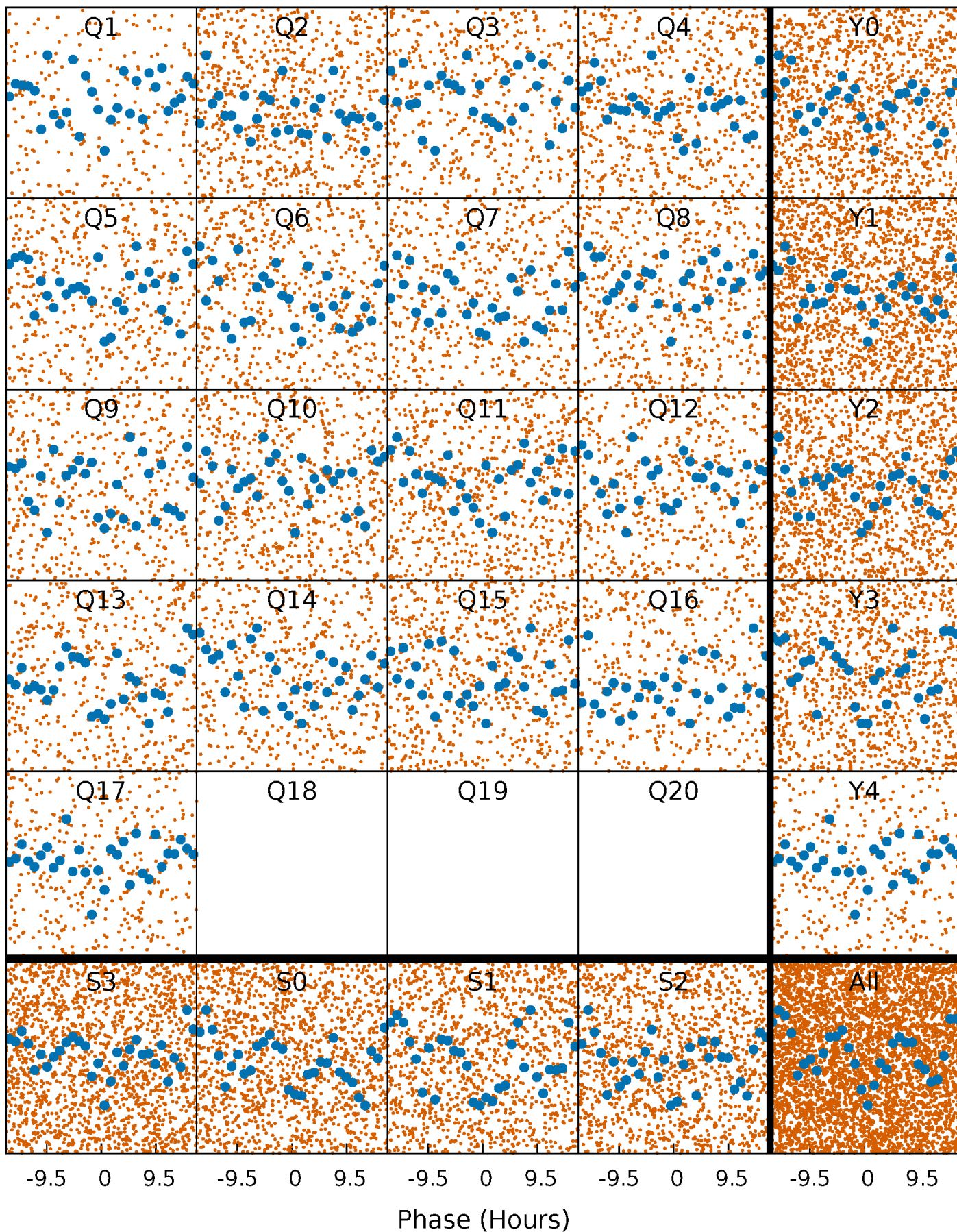


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



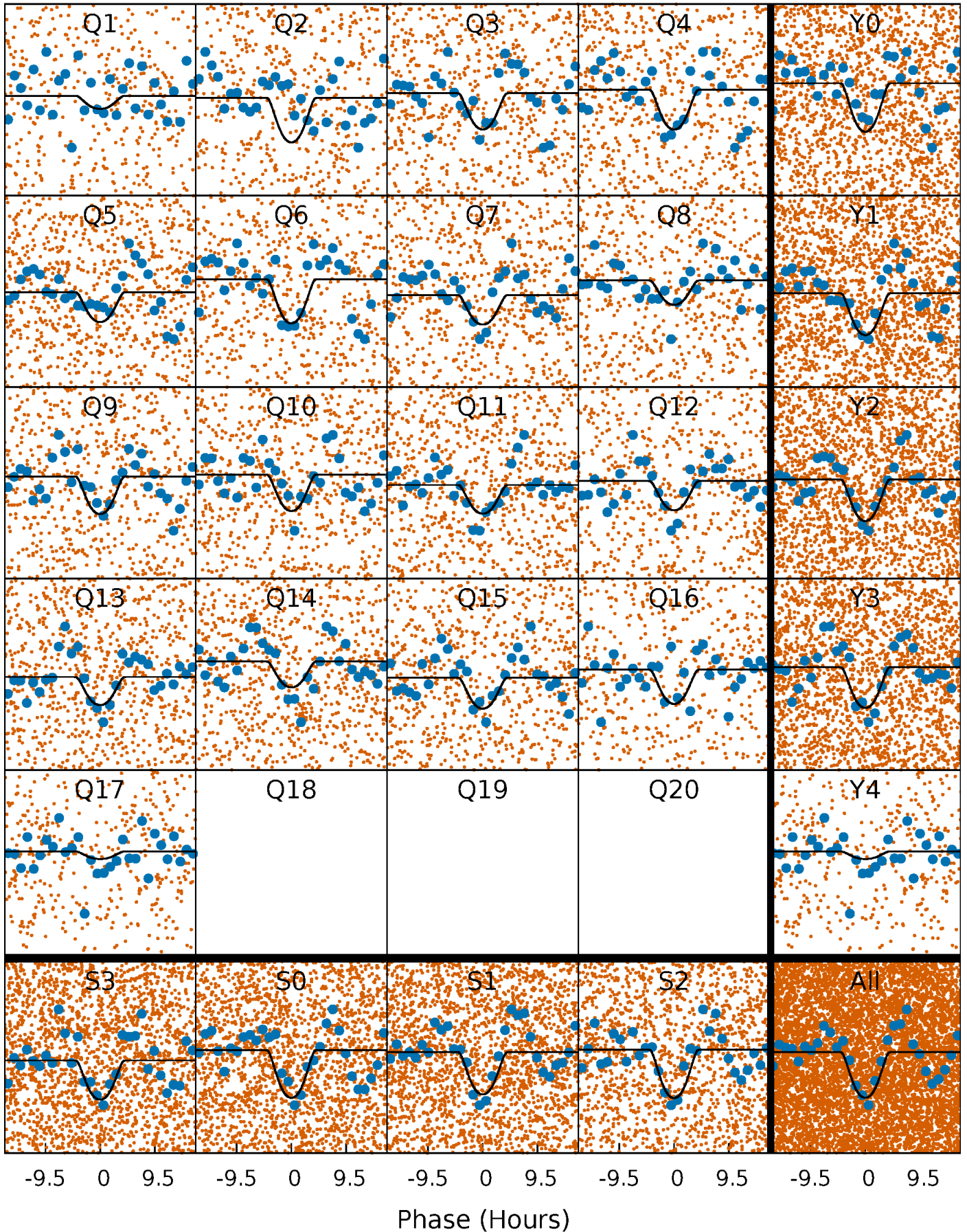
PDC Quarter-Phased Transit Curves

TCE 010134800-02 P= 1.789399 Days $T_0=133.136658$ (BKJD)



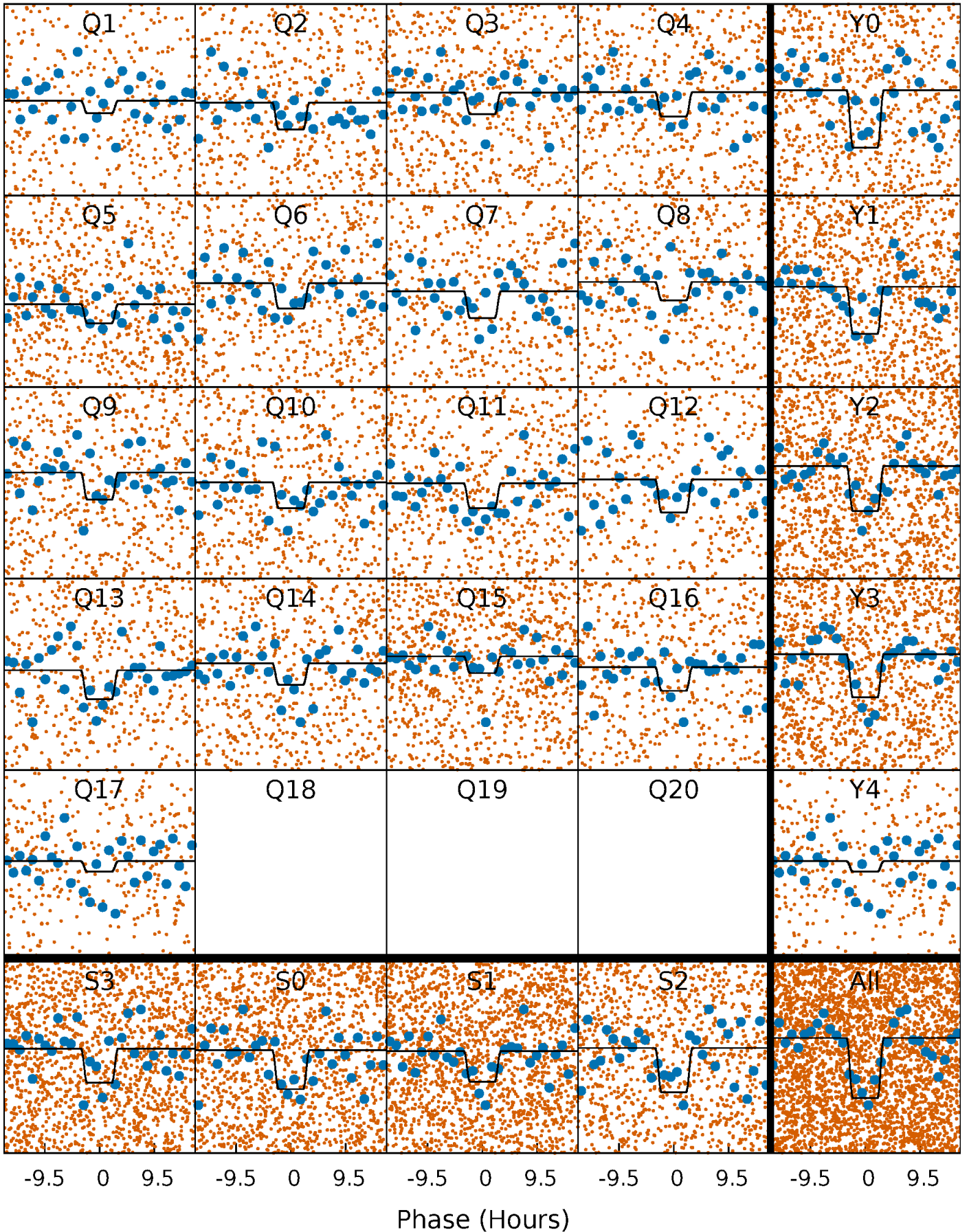
DV Quarter-Phased Transit Curves

TCE 010134800-02 P= 1.789399 Days $T_0=133.136658$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

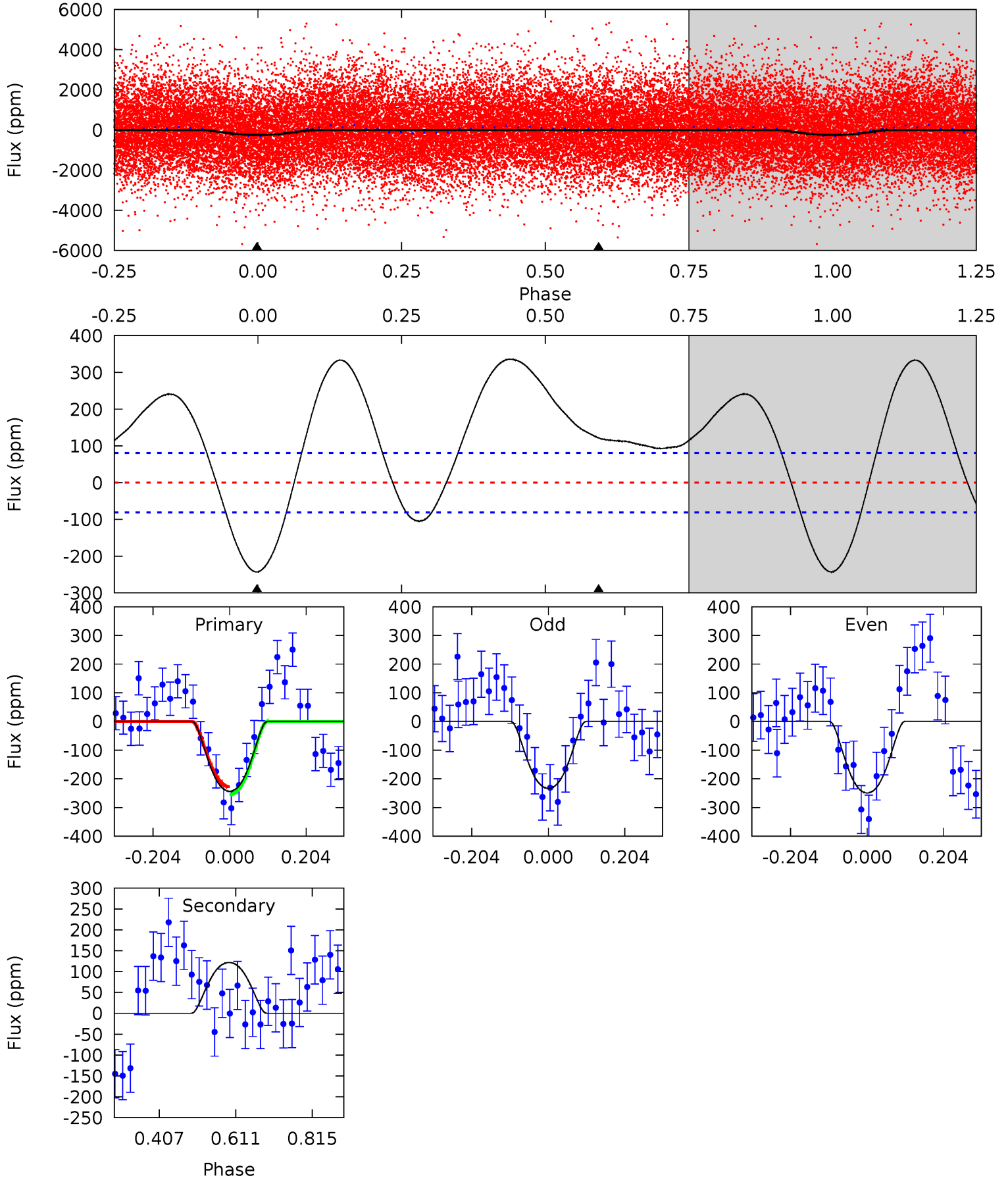
TCE 010134800-02 P= 1.789442 Days $T_0=133.117464$ (BKJD)



DV Model-Shift Uniqueness Test

010134800-02, P = 1.789399 Days, E = 131.347259 Days

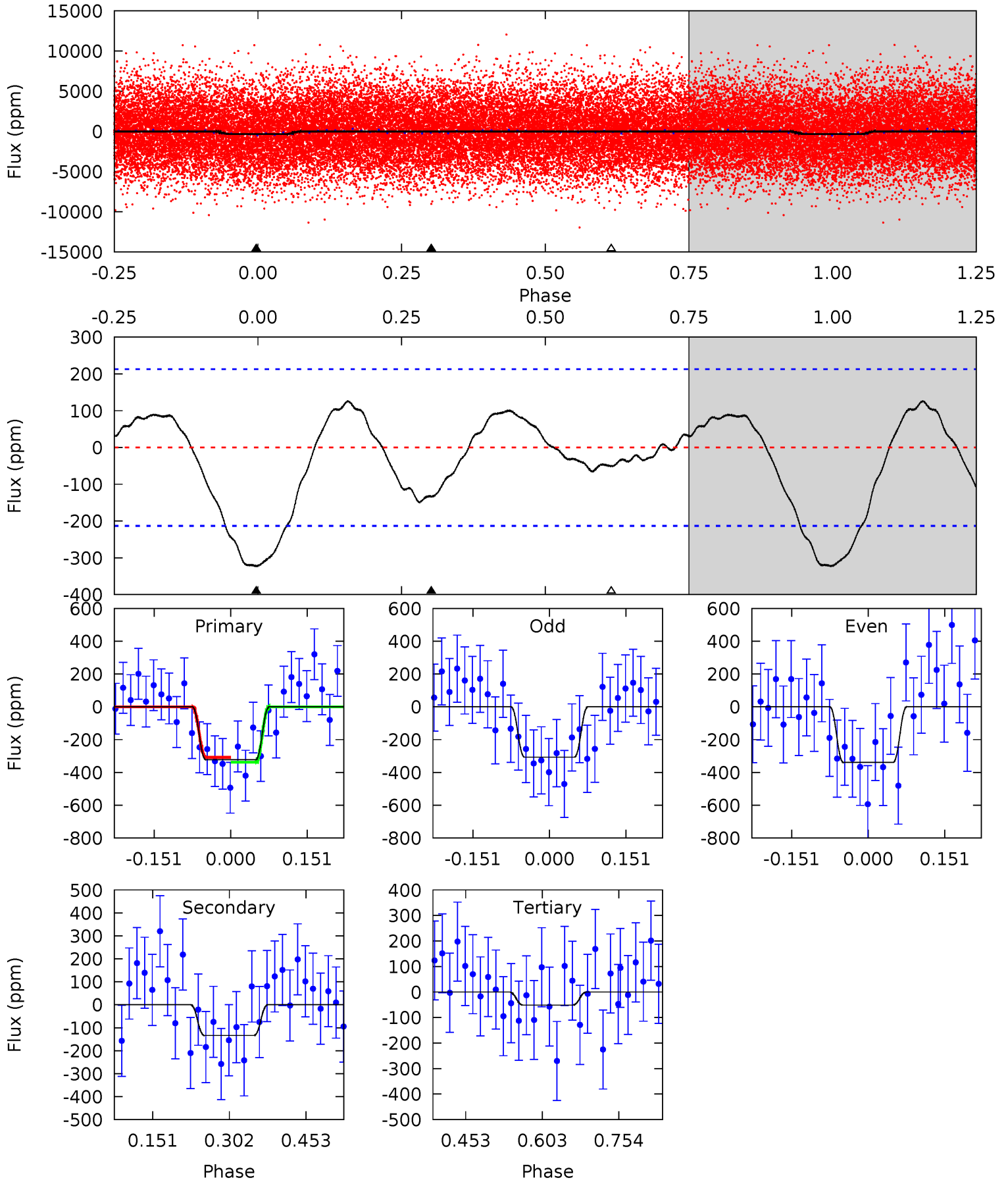
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	-6.65	0	0	4.41	1.27	5.62	13.3	13.3	-6.65	-6.65	0.45	0.09	0.58	0.75



Alt Model-Shift Uniqueness Test

010134800-02, P = 1.789442 Days, E = 131.328022 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.78	2.81	1.08	0	4.48	1.44	1.05	5.70	6.78	1.73	2.81	0.33	1.00	0.28	0.31



Stellar Parameters For KIC 010134800

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8137^{+225}_{-338}	$3.712^{+0.420}_{-0.112}$	$-0.060^{+0.250}_{-0.350}$	$3.310^{+0.840}_{-1.561}$	$2.060^{+0.348}_{-0.523}$	$0.080^{+0.313}_{-0.032}$
	+3%/-4%	+11%/-3%	+417%/-583%	+25%/-47%	+17%/-25%	+391%/-40%
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 010134800-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	122 ± 18	$6.59^{+3.17}_{-2.83}$	4584^{+398}_{-548}	-6011^{+708}_{-1573}	$-2.049^{+1.074}_{-4.070}$
Alt.	-134 ± 48	$6.21^{+3.07}_{-2.59}$	4570^{+407}_{-510}	5875^{+1887}_{-1167}	$2.506^{+4.537}_{-1.456}$

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

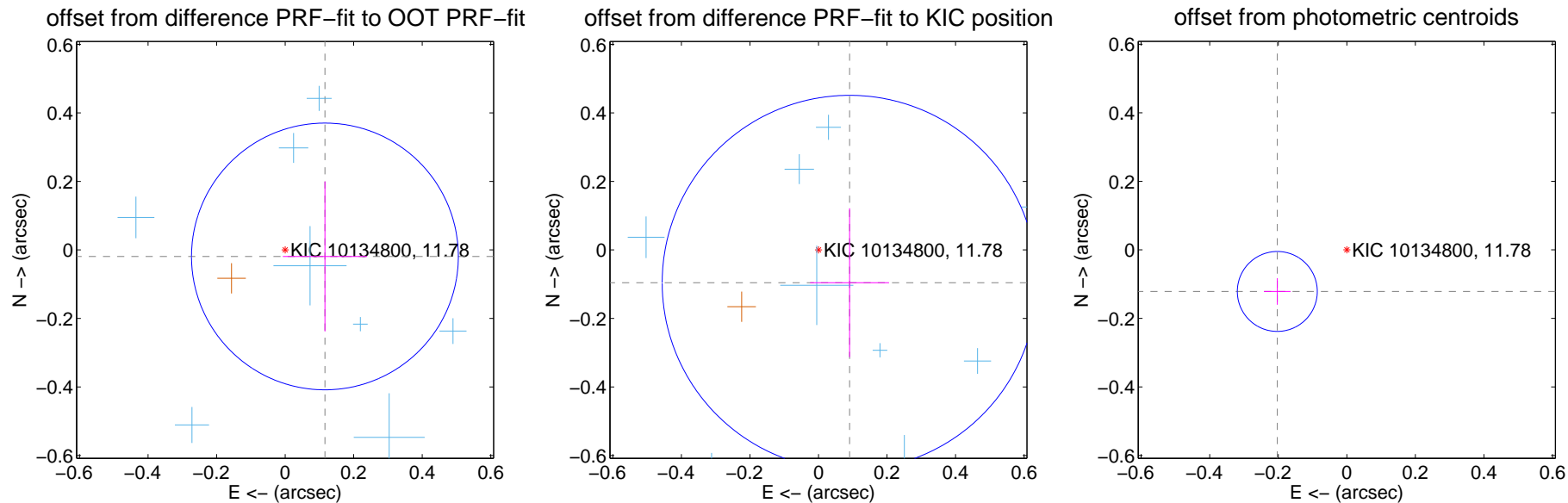
DV Centroid Data

Supplemental centroid analysis for 010134800-02. **Kepler magnitude: 11.78.** Transit SNR 11.05

There are 15 quarters with good PRF difference image offsets

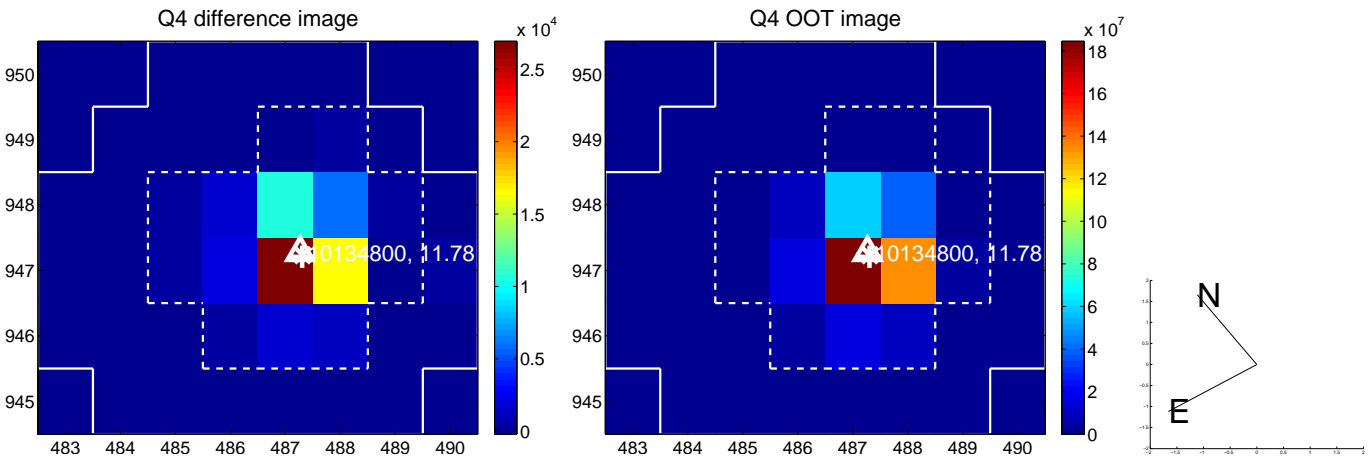
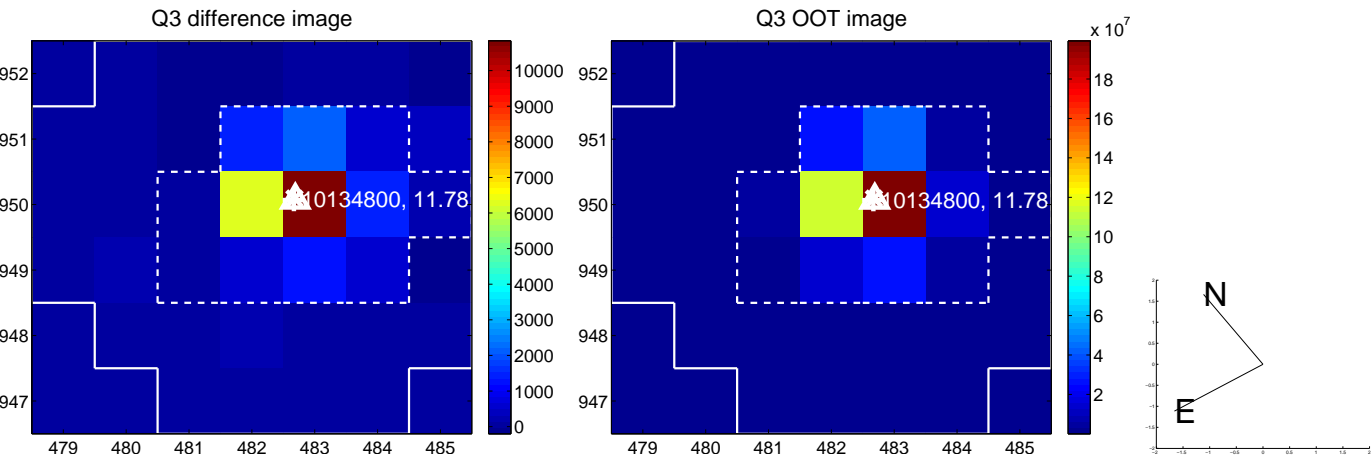
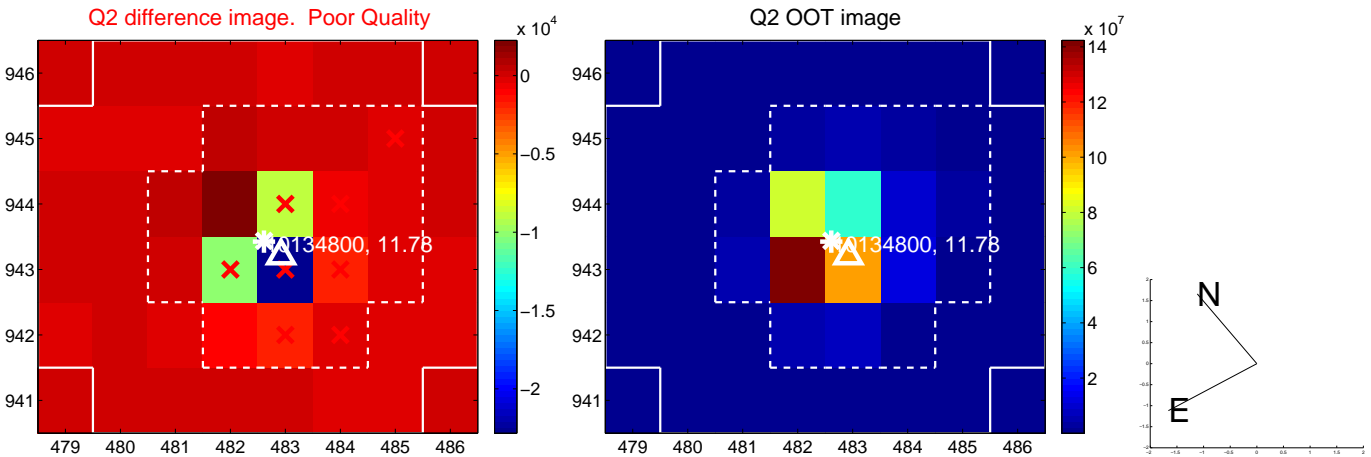
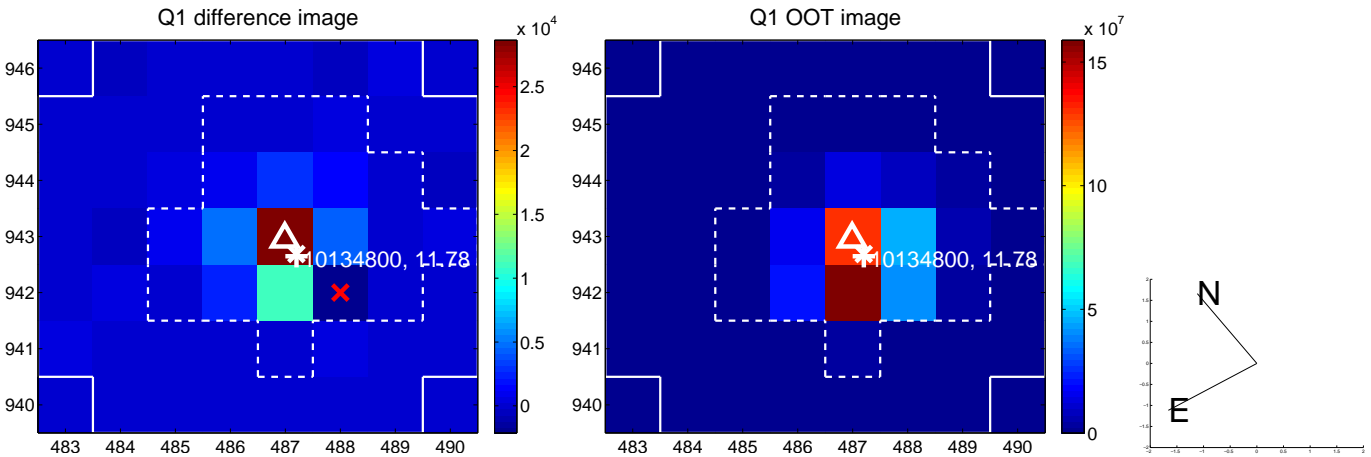
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.118 ± 0.130	0.91	-0.116 ± 0.123	-0.019 ± 0.219
PRF-fit source offset from KIC position	0.132 ± 0.182	0.72	-0.091 ± 0.115	-0.096 ± 0.217
photometric centroid source offset	0.24 ± 0.04	6.08	0.20 ± 0.04	-0.12 ± 0.04

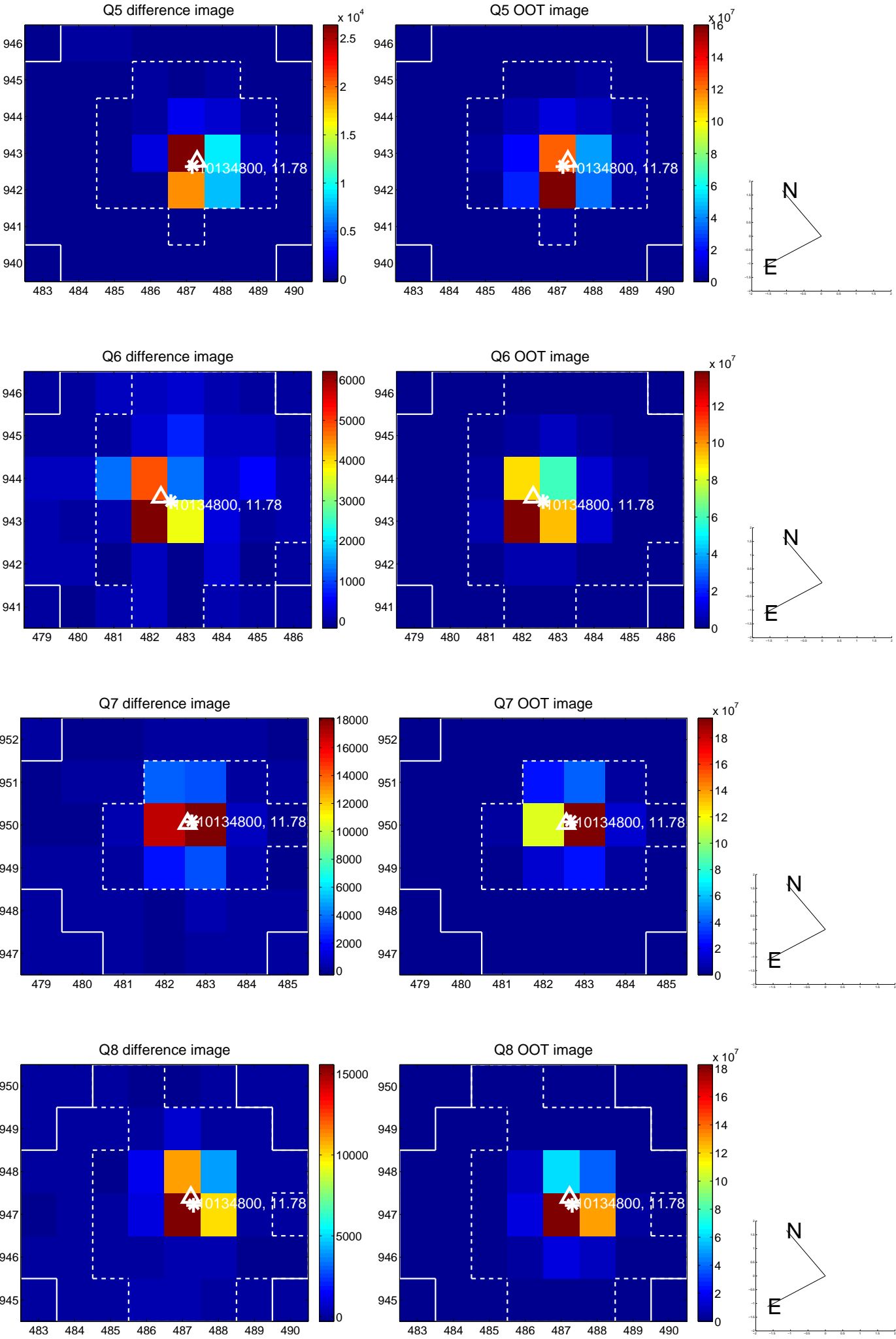


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

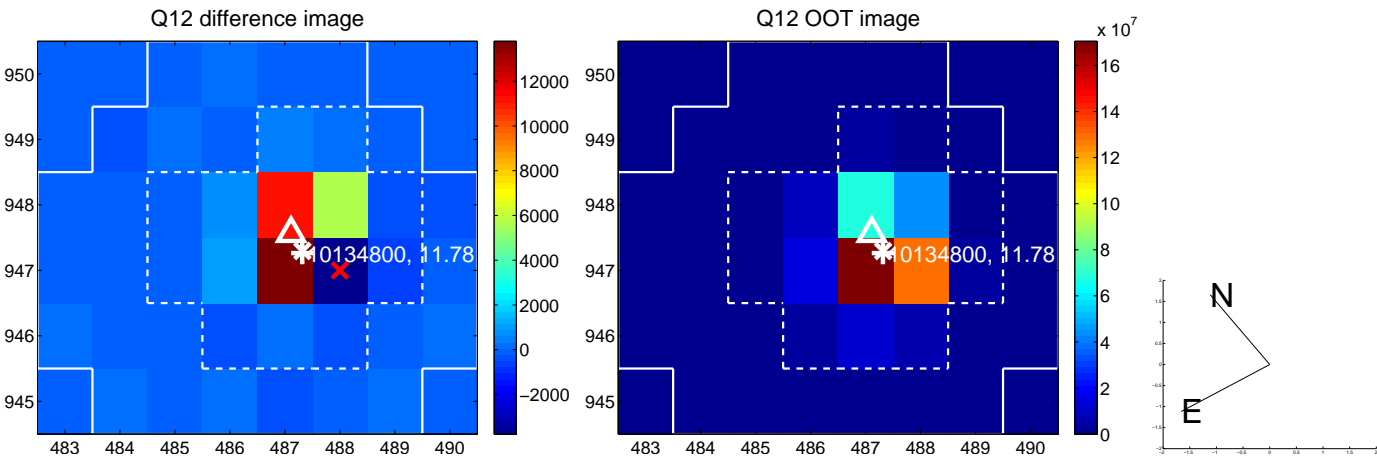
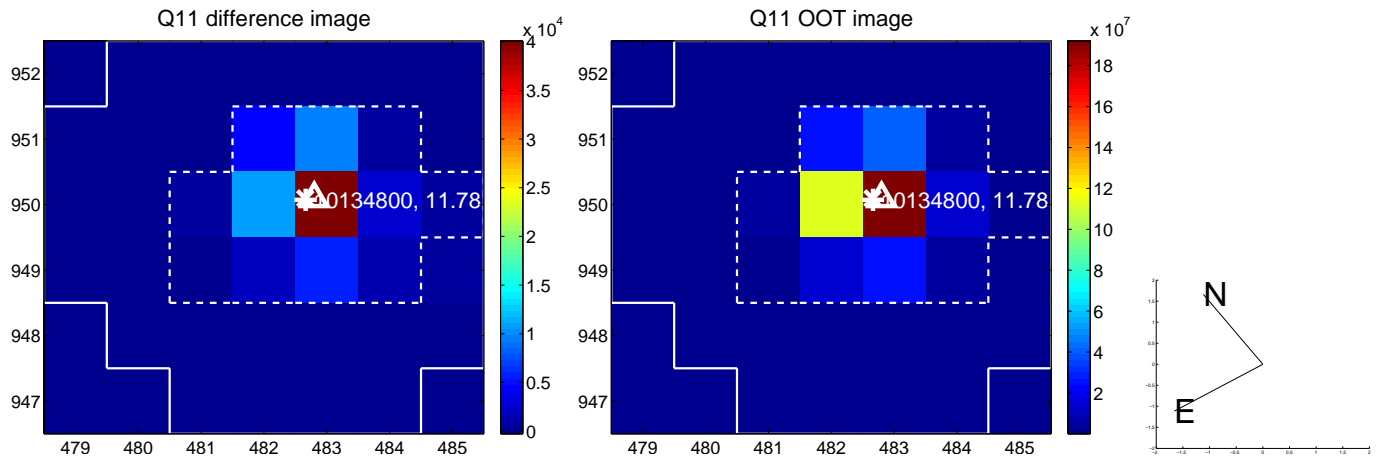
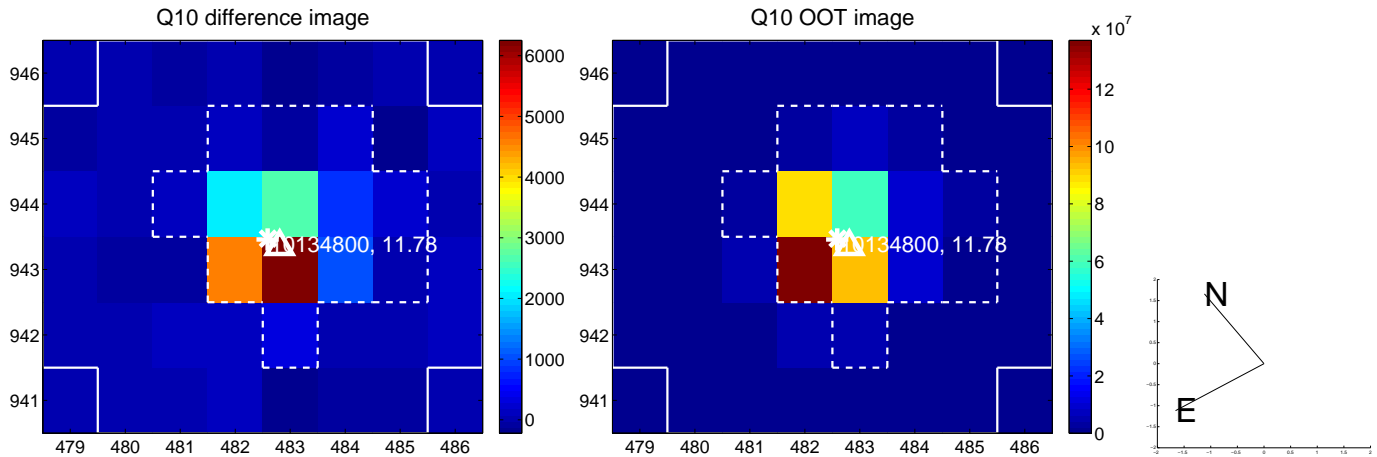
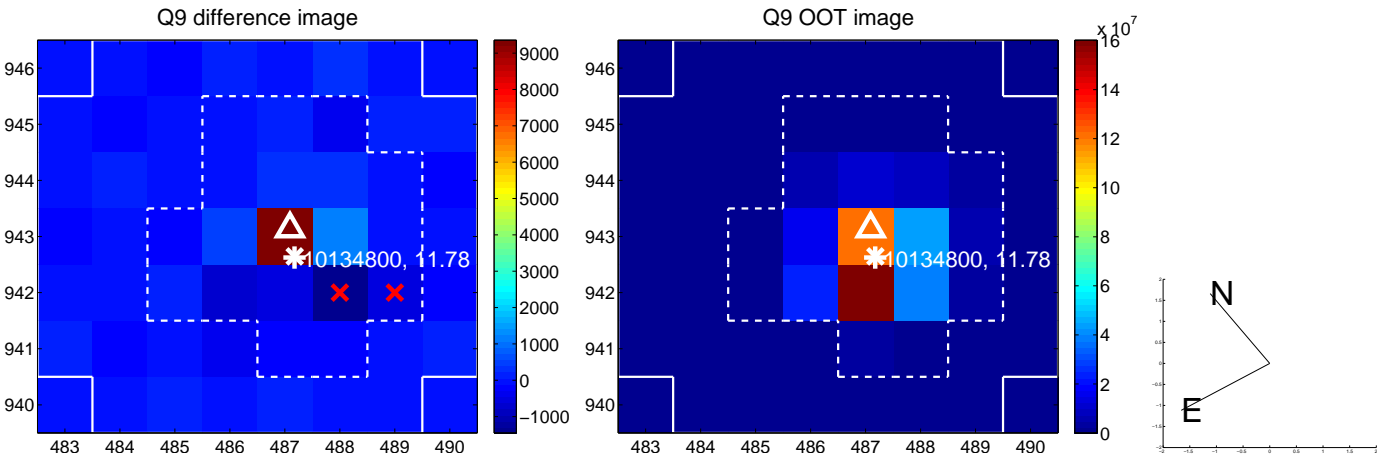
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



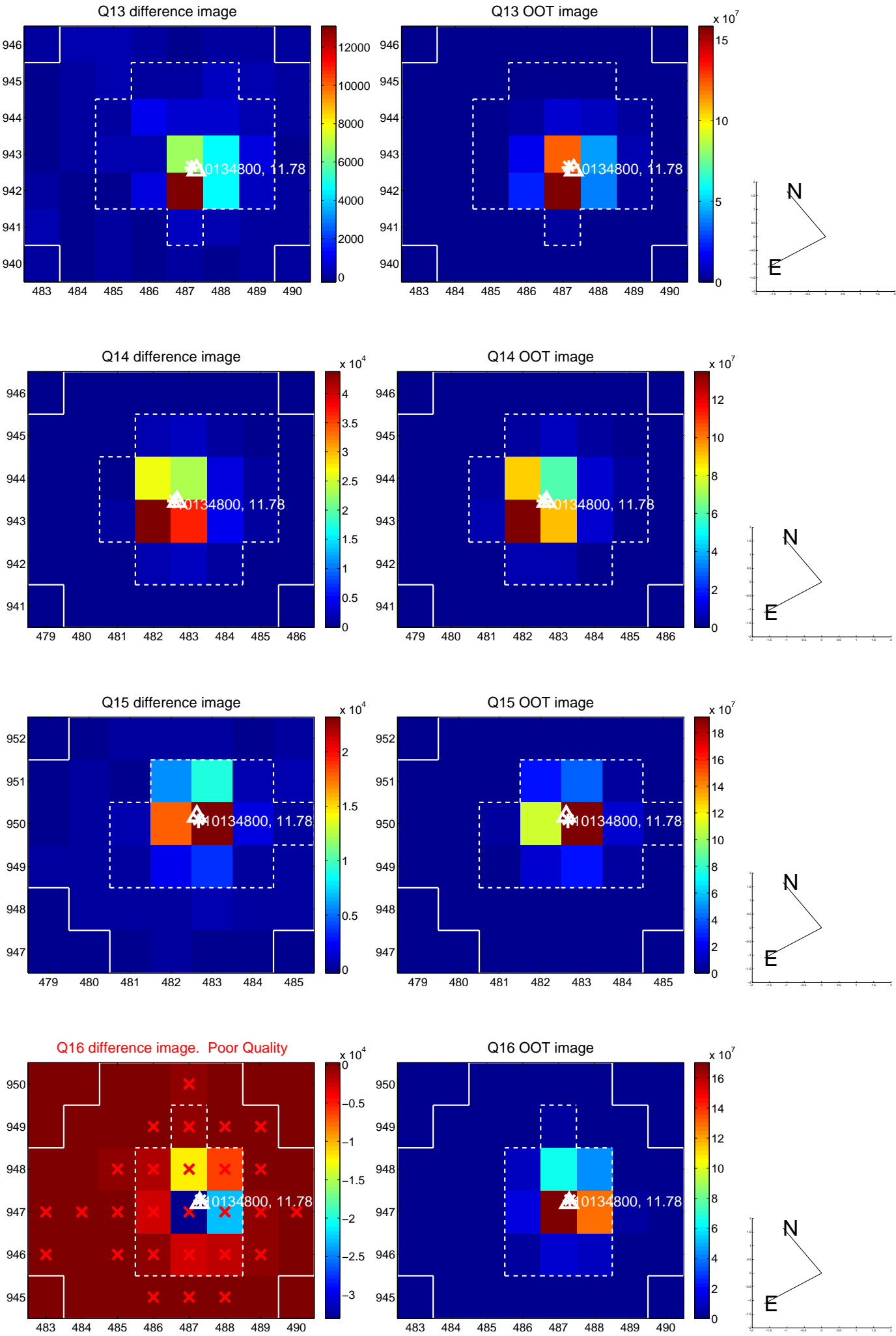
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



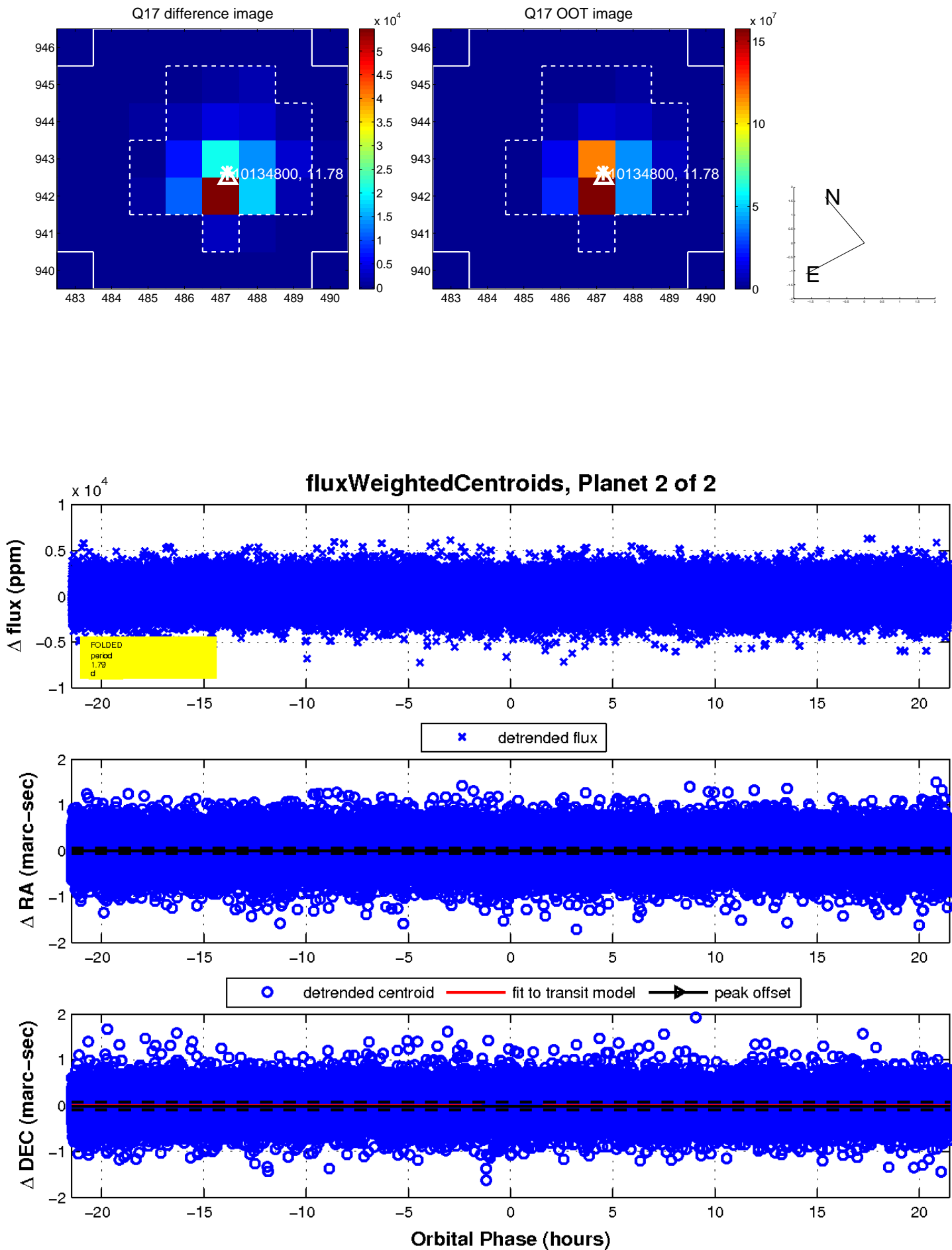
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

