

KIC 006131659

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})
006131659-01	OBS	6667.01	17.527782	144.568039	347396.3	3.500	35910.5	-1.0	0.73	5079	38.83	22.36
006131659-02	OBS	No	17.527822	135.807479	107002.4	5.635	13299.0	6128.3	0.73	5079	37.33	22.36
006131659-03	OBS	No	4.382205	134.964651	77.2	4.335	1866.4	16.8	0.73	5079	0.62	141.94
006131659-04	OBS	No	4.382047	135.550028	16185.3	15.000	2084.5	-1.0	0.73	5079	9.07	141.94
006131659-05	OBS	No	298.382848	317.826380	1314.1	5.608	38.0	23.0	0.73	5079	5.30	0.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006131659-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
006131659-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
006131659-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— SAME_NTL_PERIOD—CENT_FEW_DIFFS—HALO_GHOST
006131659-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS
006131659-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS— 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 006131659-01

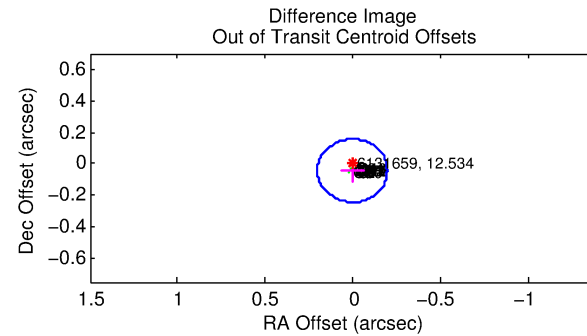
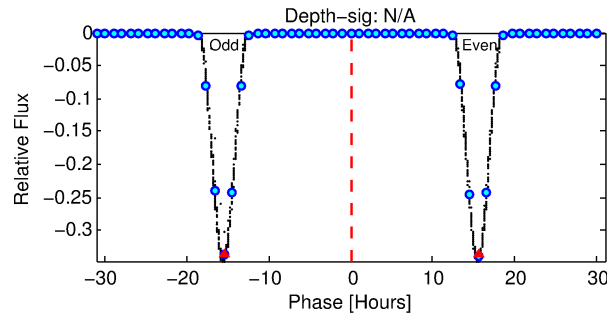
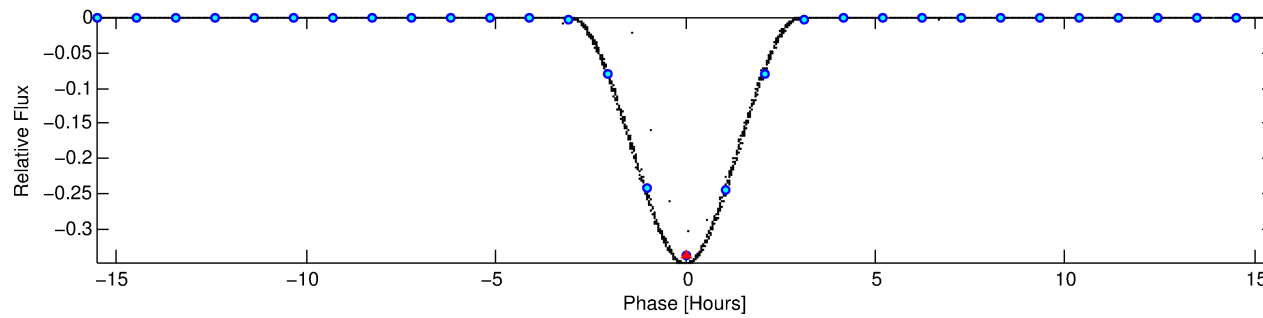
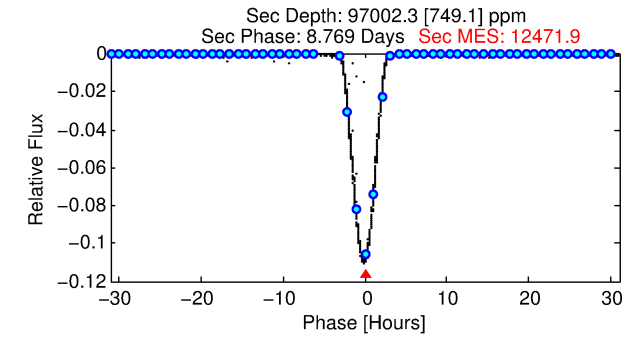
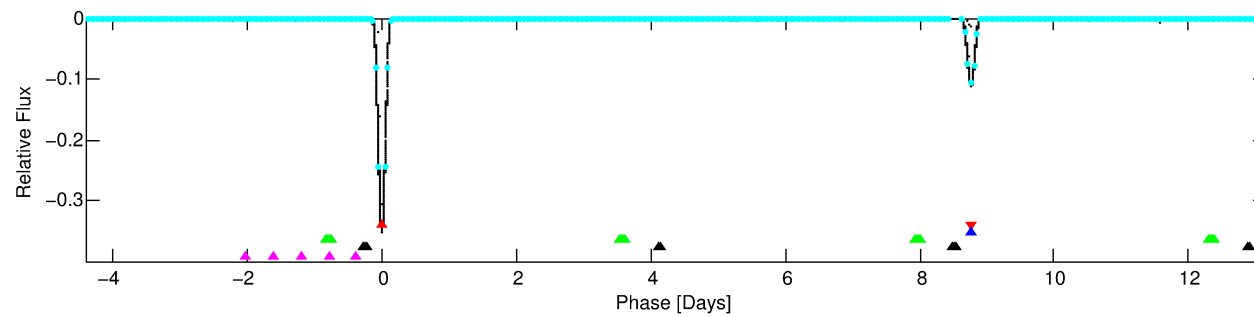
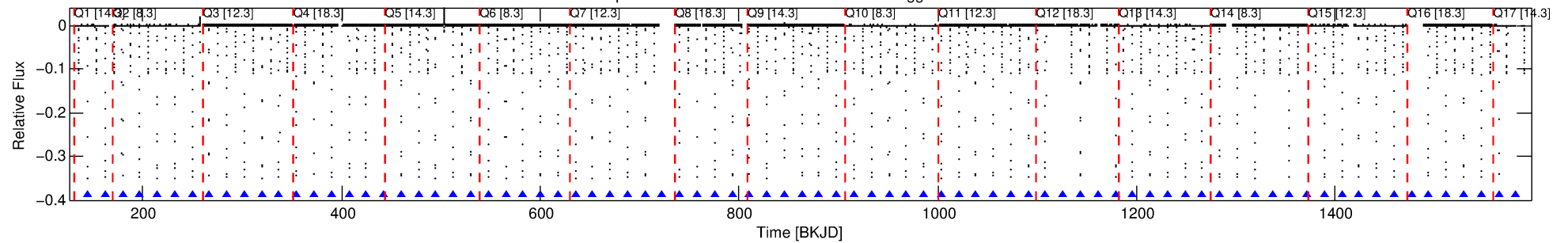
No Significant Match Found

DV One-Page Summary

KIC: 6131659 Candidate: 1 of 5 Period: 17.528 d

KOI: K06667.01 Corr: 0.778

Kp: 12.53 R*: 0.73 Rs Teff: 5079.0 K Logg: 4.58 Fe/H: -0.240



TPS TCE Results:

Period = 17.52778 d
Epoch = 144.5680 BKJD

DV fit results are unavailable

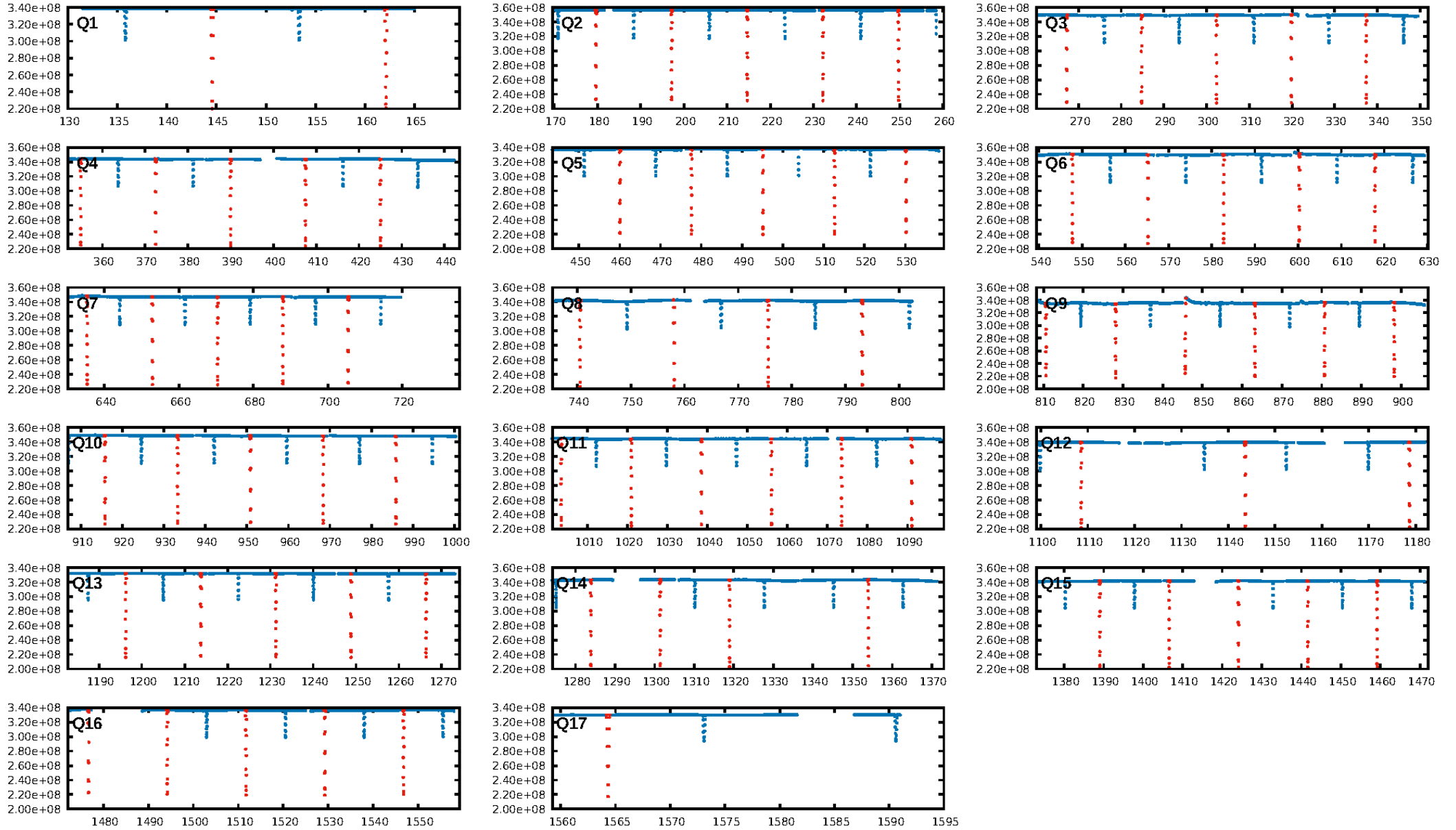
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [56.63 σ]
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [72/72]
GhostDiagnostic-chr: 6.573
Centroid-sig: 0.0%
Centroid-so: 0.167 arcsec [908.72 σ]
OotOffset-rm: 0.043 arcsec [0.65 σ]
KicOffset-rm: 0.303 arcsec [4.36 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

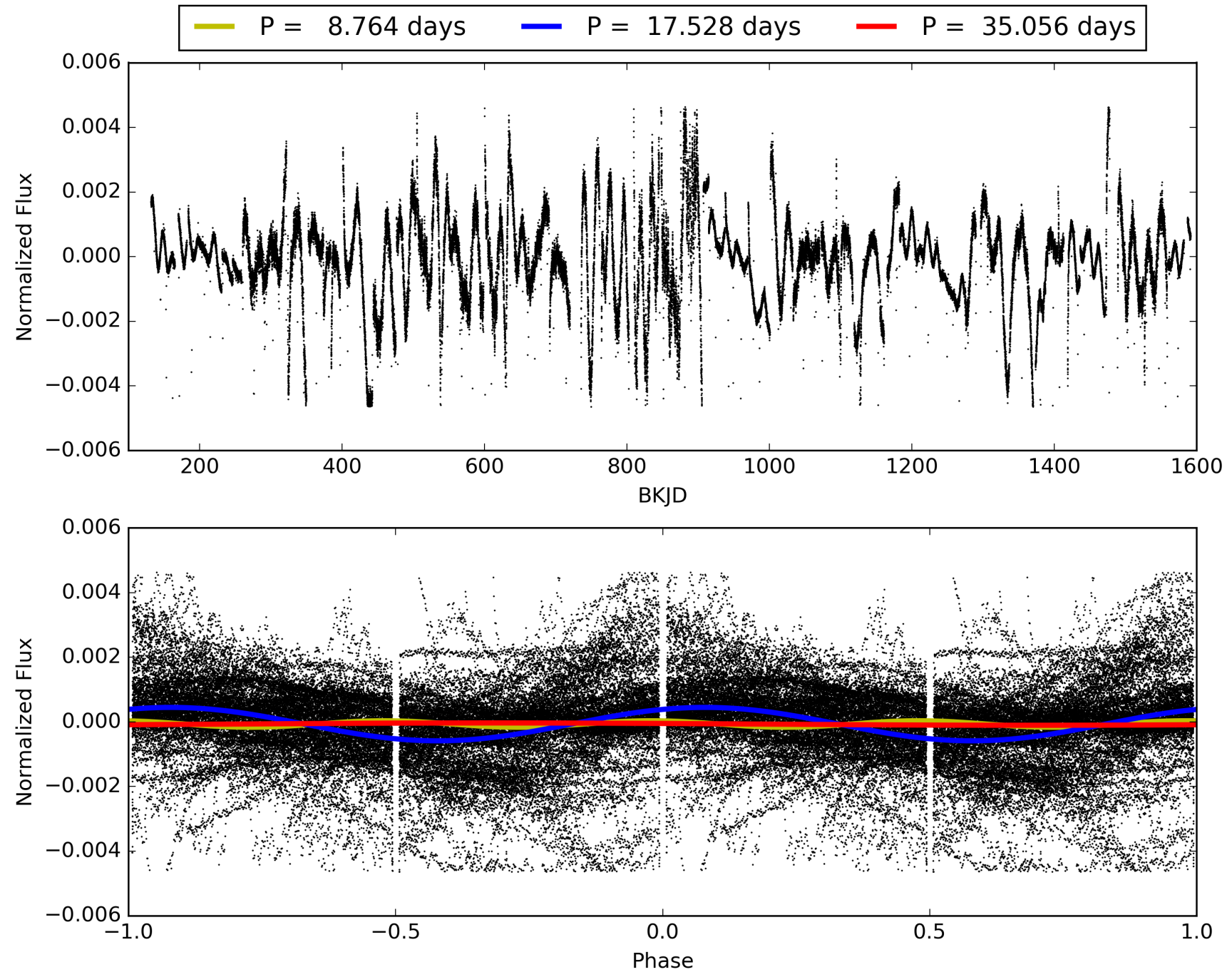
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 09:49:02 Z

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

TCE 006131659-01, PDC Light Curves

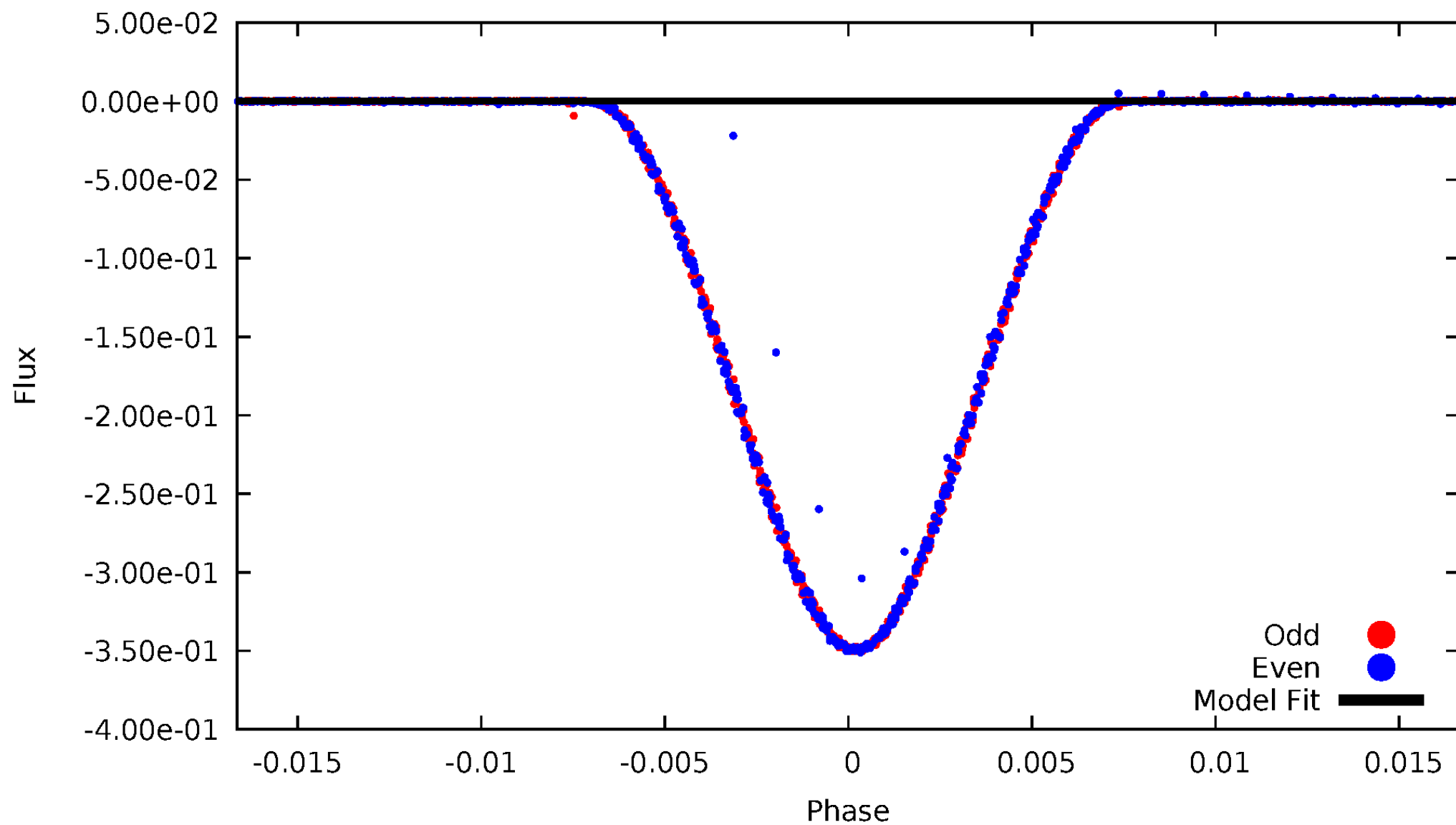


TCE 006131659-01



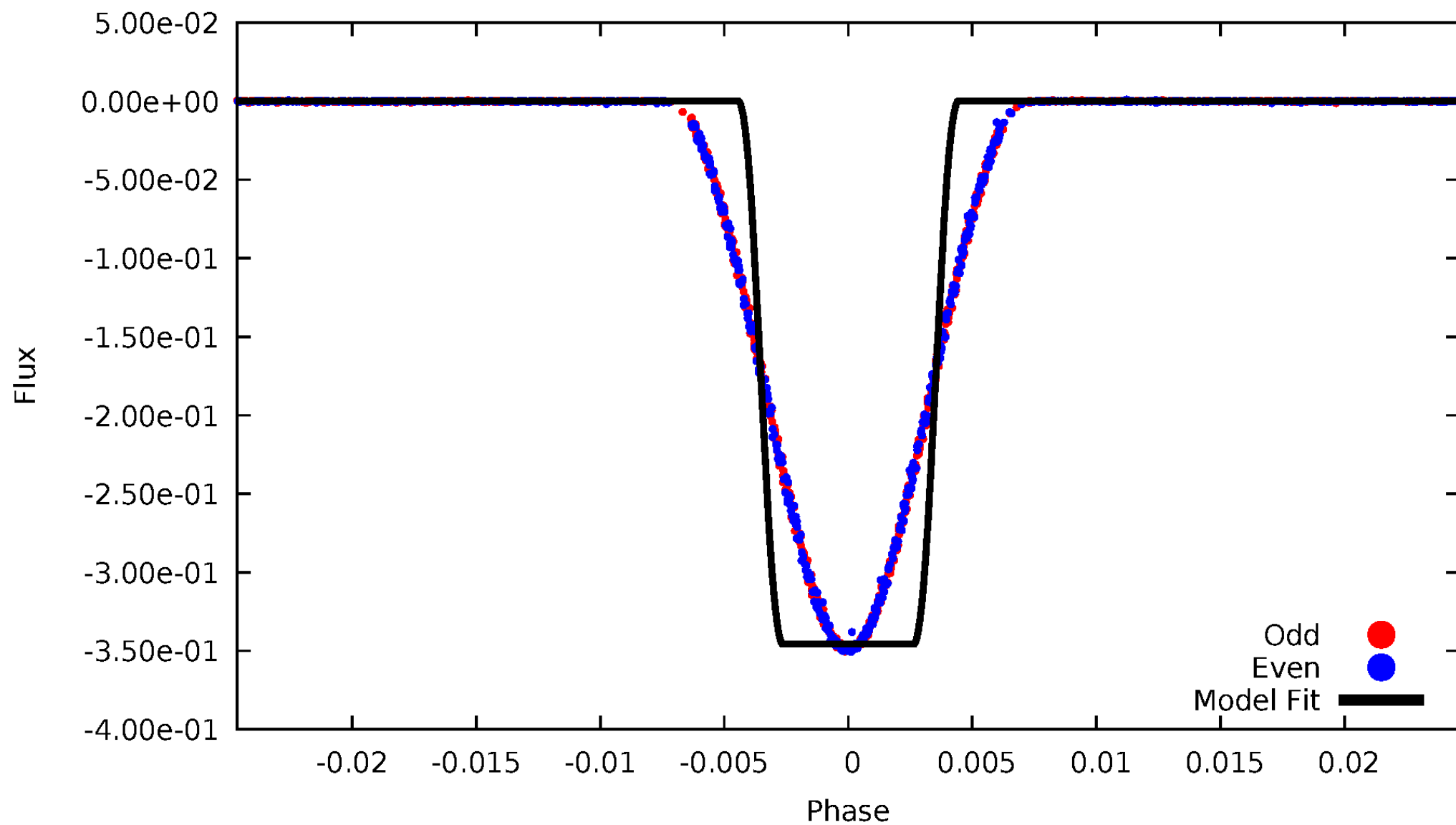
DV Odd/Even

TCE 006131659-01



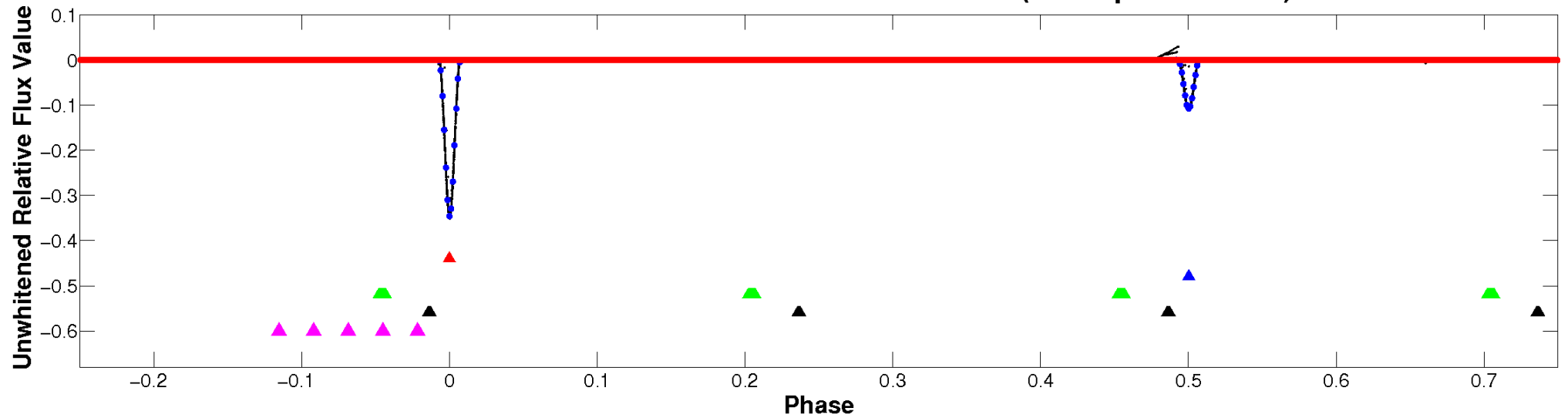
ALT Odd/Even

TCE 006131659-01



Non-Whitened Vs. Whitened Light Curve

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

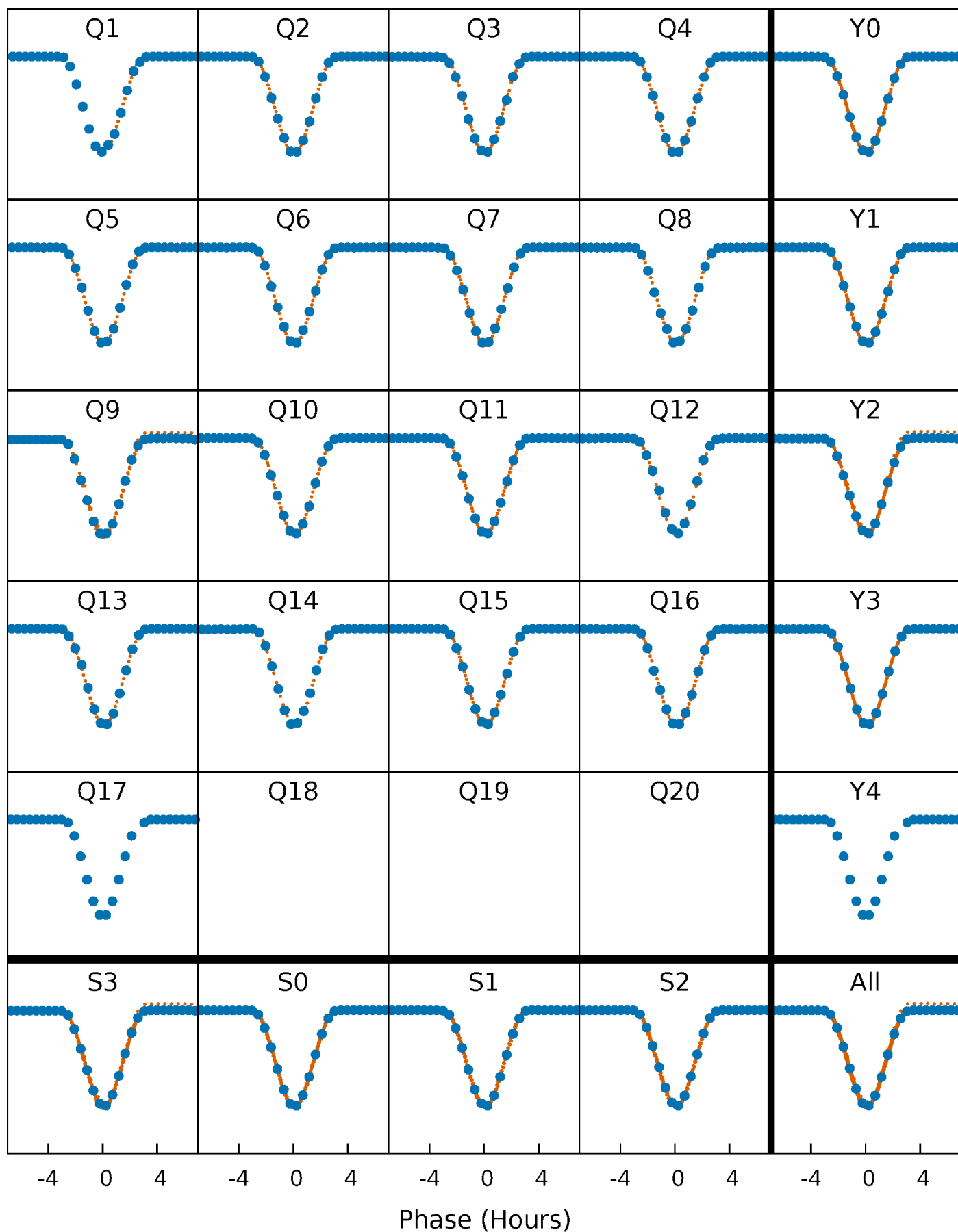


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



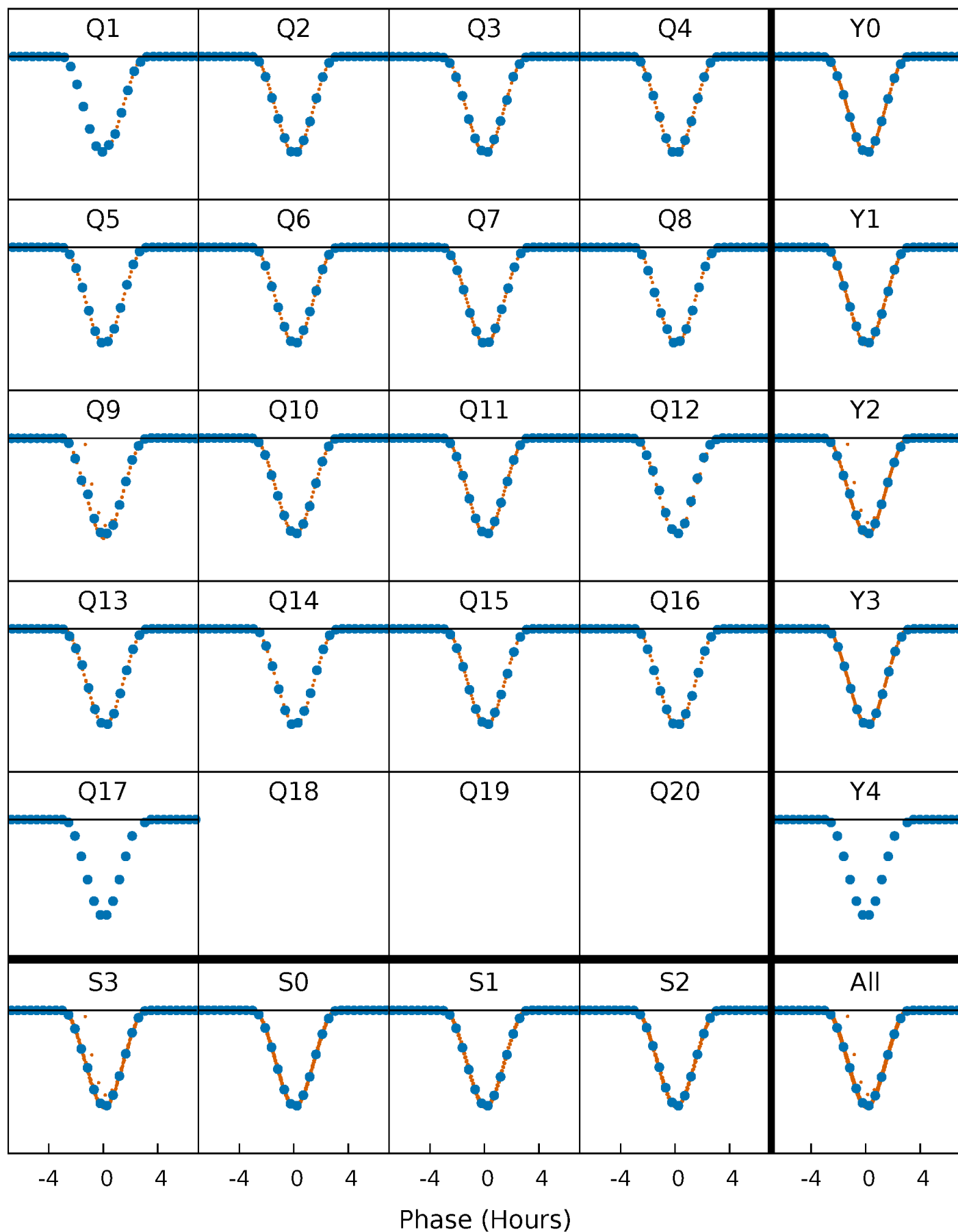
PDC Quarter-Phased Transit Curves

TCE 006131659-01 P= 17.527782 Days $T_0=144.568039$ (BKJD)



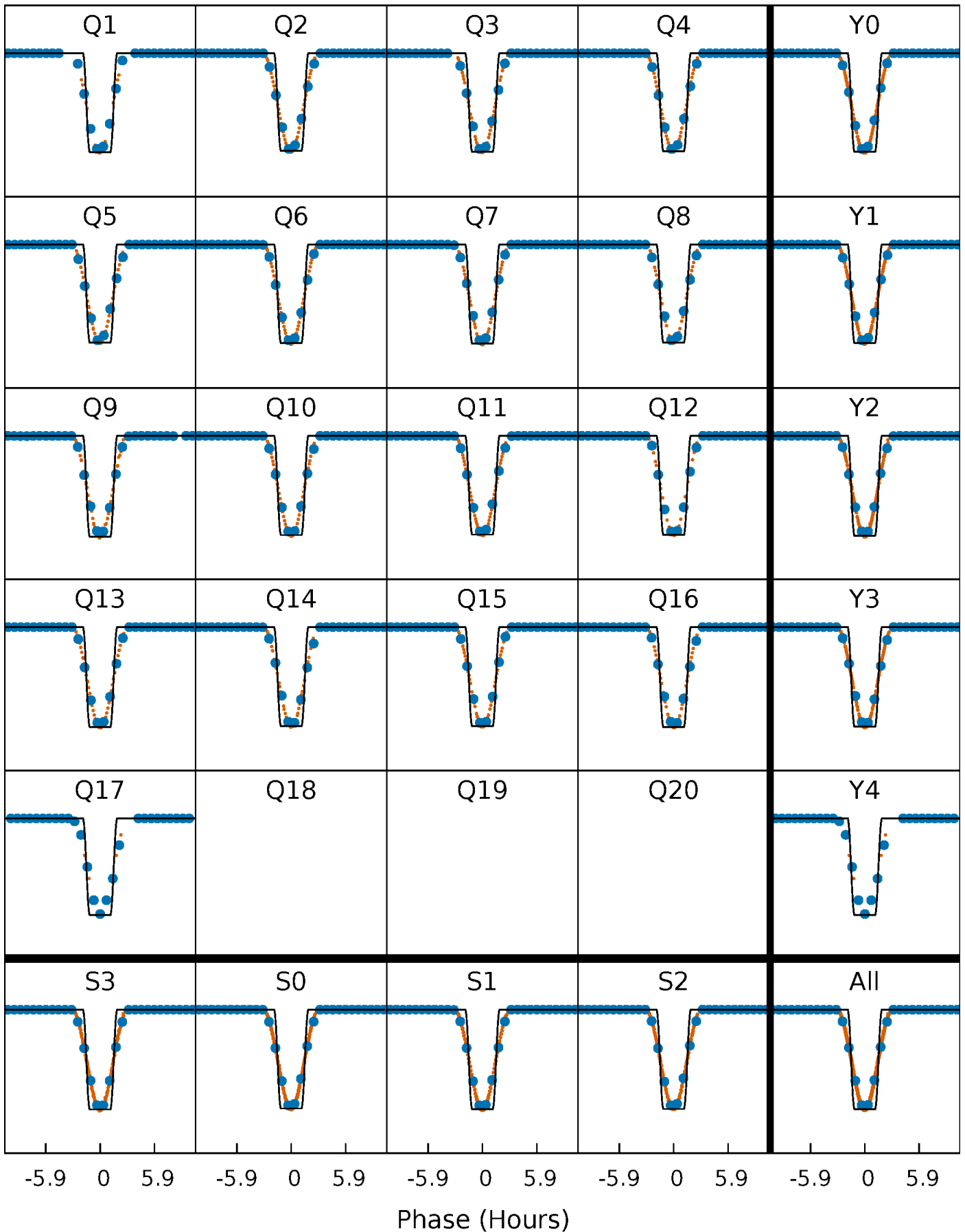
DV Quarter-Phased Transit Curves

TCE 006131659-01 P= 17.527782 Days $T_0=144.568039$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

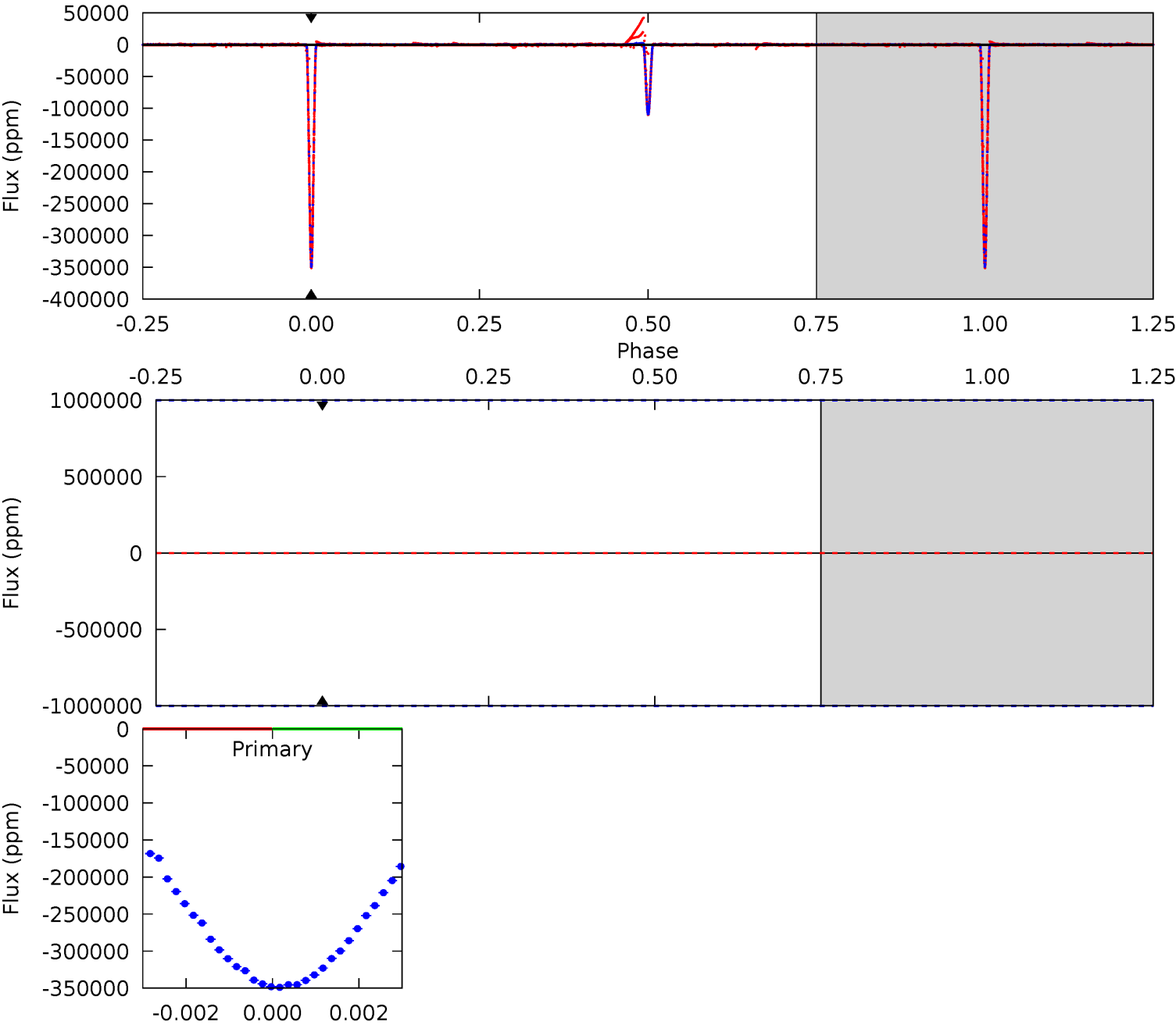
TCE 006131659-01 P= 17.527782 Days $T_0=144.571912$ (BKJD)



DV Model-Shift Uniqueness Test

006131659-01, P = 17.527782 Days, E = 127.040257 Days

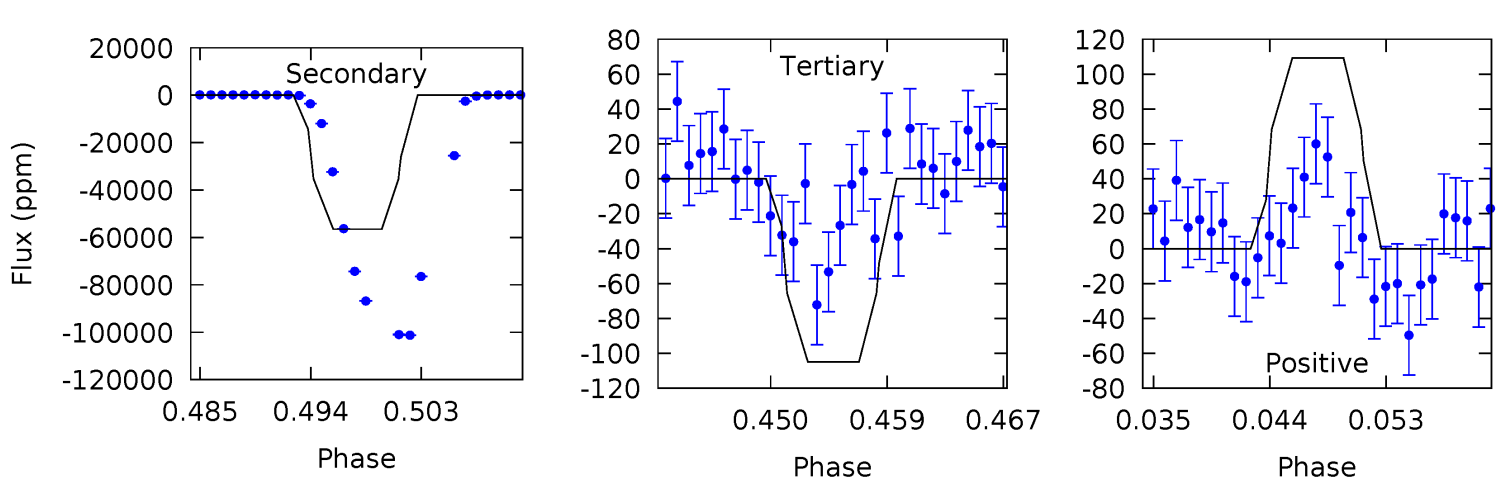
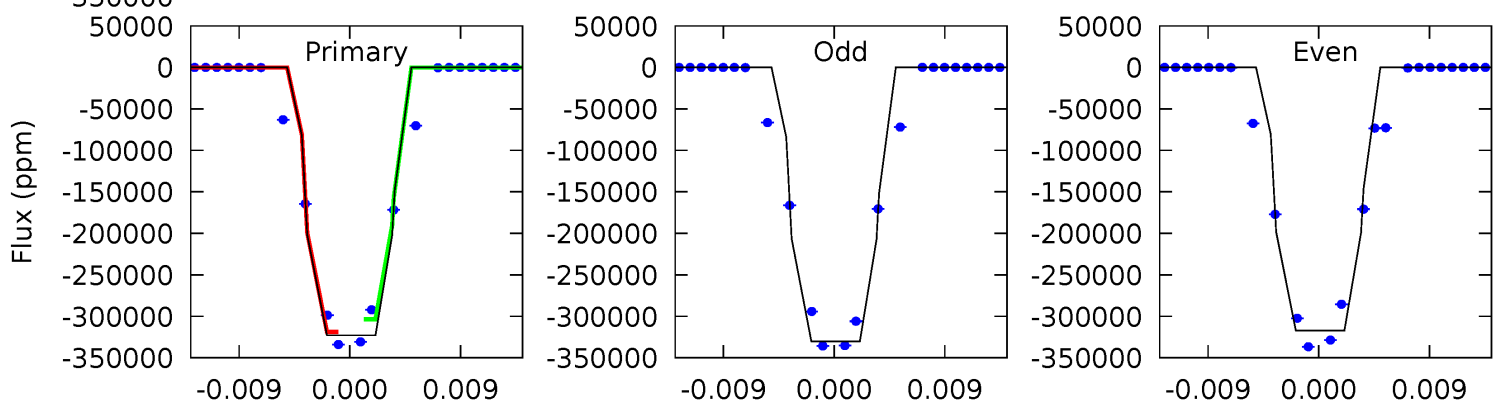
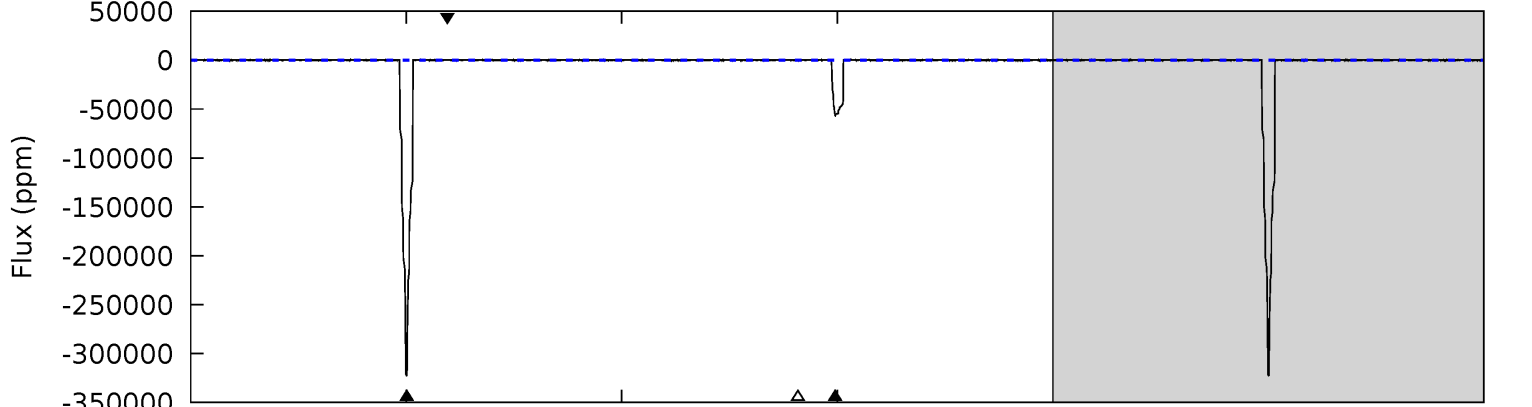
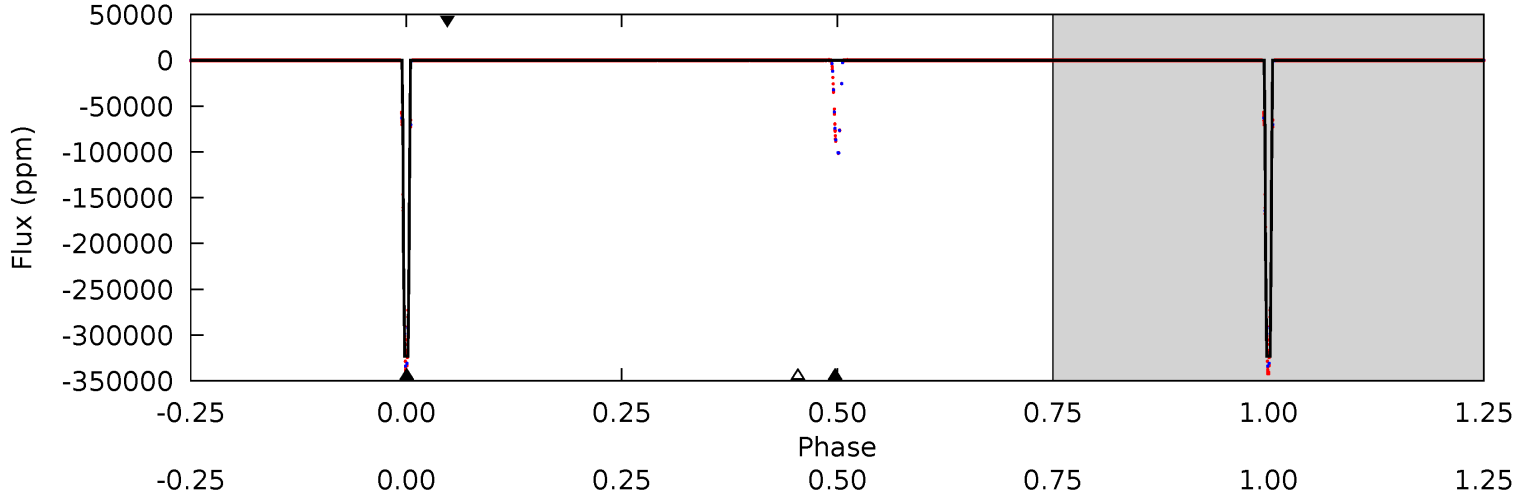
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006131659-01, P = 17.527782 Days, E = 127.044130 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12098	2118	3.93	4.09	5.05	2.62	18.2	12094	12094	2114	2114	260.2	1.00	0.00	0



Stellar Parameters For KIC 006131659

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5079^{+151}_{-136}	$4.579^{+0.050}_{-0.050}$	$-0.240^{+0.300}_{-0.300}$	$0.732^{+0.072}_{-0.065}$	$0.741^{+0.085}_{-0.064}$	$2.659^{+0.618}_{-0.502}$
	+3%/-3%	+1%/-1%	+125%/-125%	+10%/-9%	+11%/-9%	+23%/-19%
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 006131659-01 / KOI 6667.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$38.31^{+8.44}_{-8.01}$	777^{+29}_{-27}	2662^{+1862}_{-6881}	23^{+673}_{-488}
Alt.	-56524 ± 27	$47.08^{+9.58}_{-8.47}$	776^{+27}_{-28}	3659^{+273}_{-195}	212^{+103}_{-61}

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

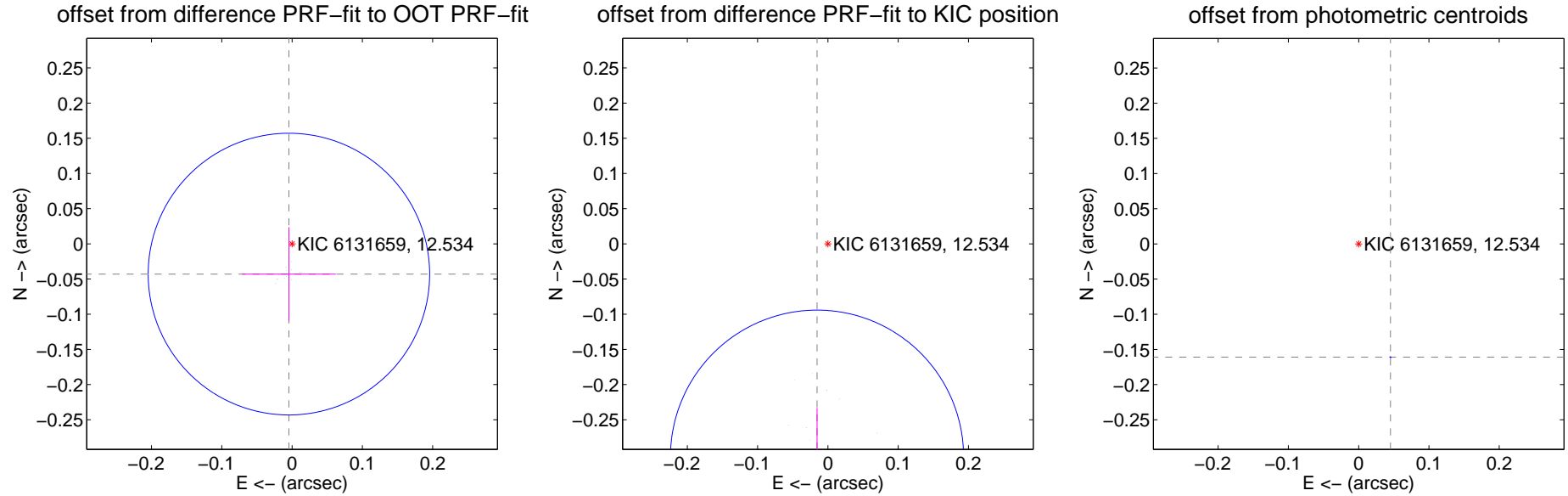
DV Centroid Data

Supplemental centroid analysis for 006131659-01. Kepler magnitude: 12.53. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

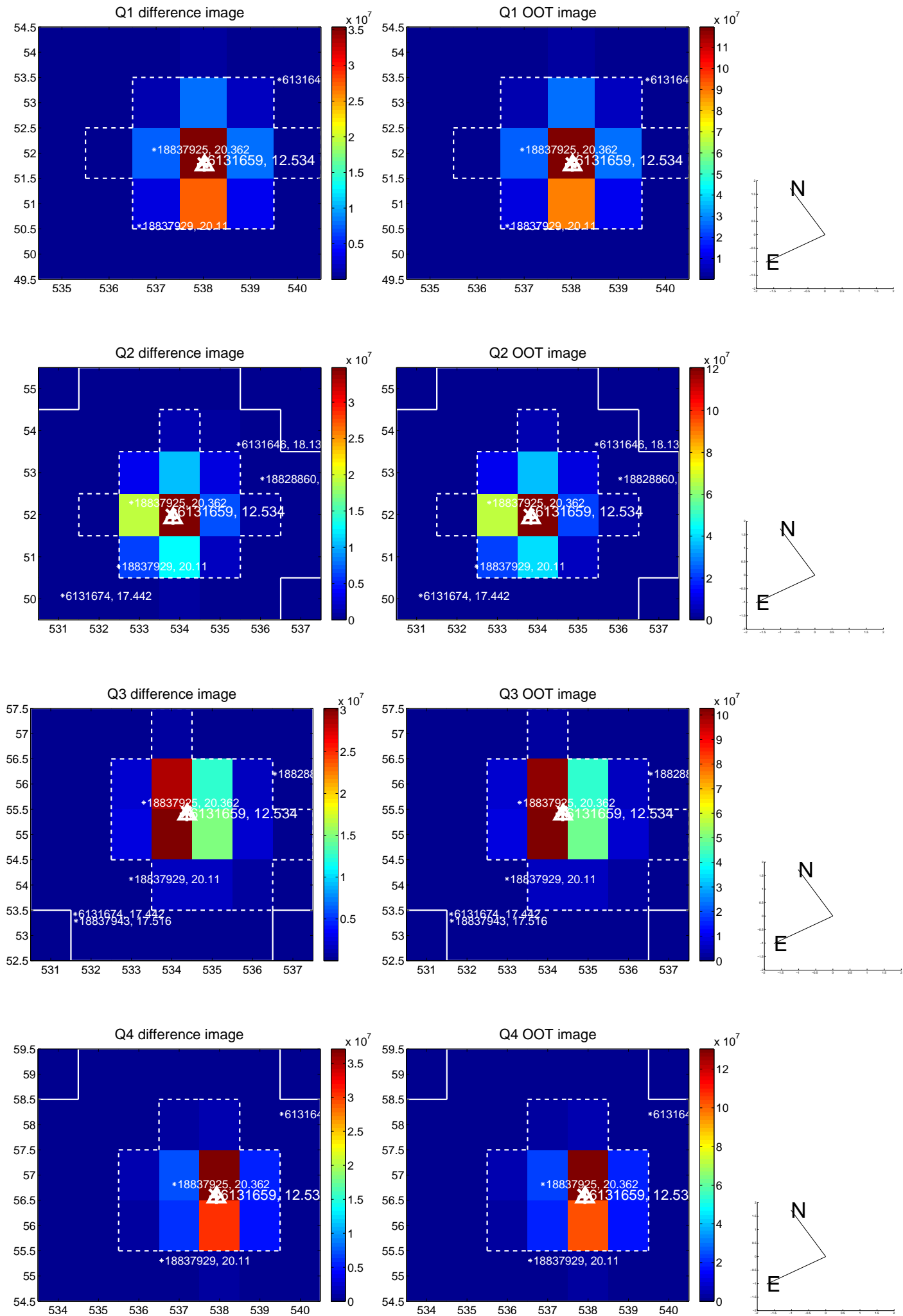
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.043 ± 0.067	0.65	0.005 ± 0.067	-0.043 ± 0.067
PRF-fit source offset from KIC position	0.303 ± 0.069	4.36	0.015 ± 0.068	-0.303 ± 0.069
photometric centroid source offset	0.17 ± 0.00	908.72	-0.05 ± 0.00	-0.16 ± 0.00

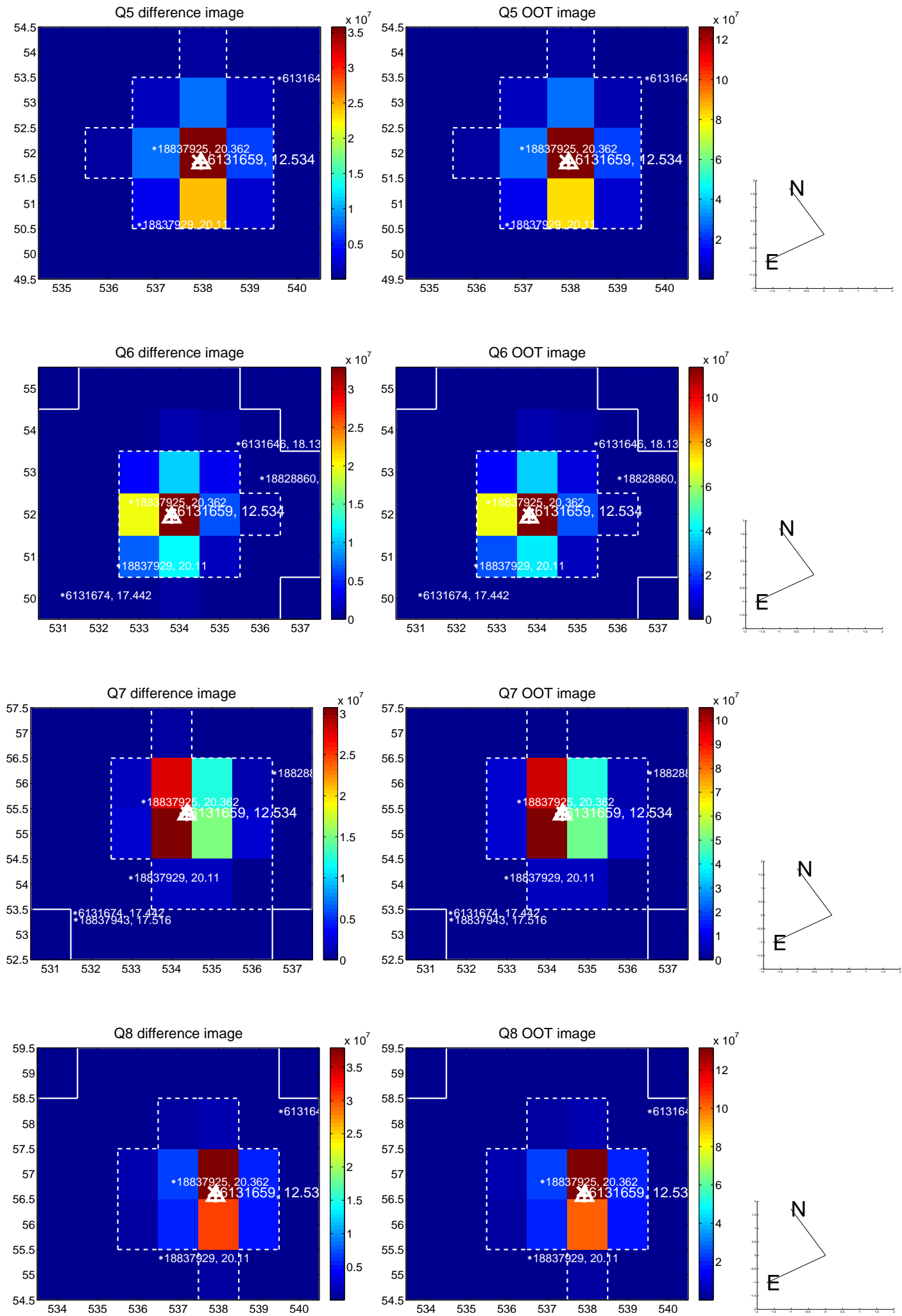


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

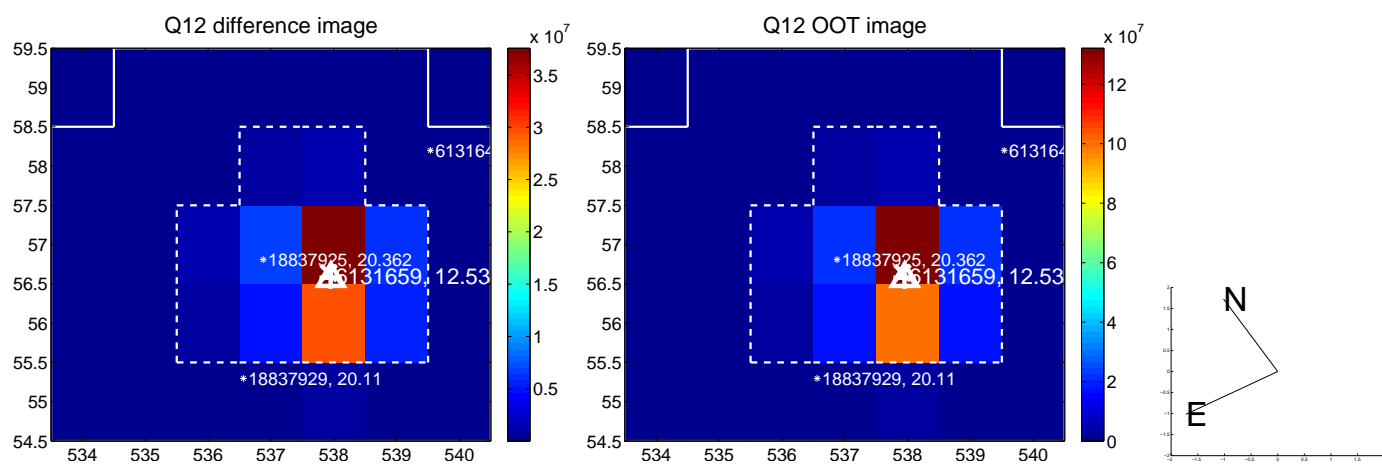
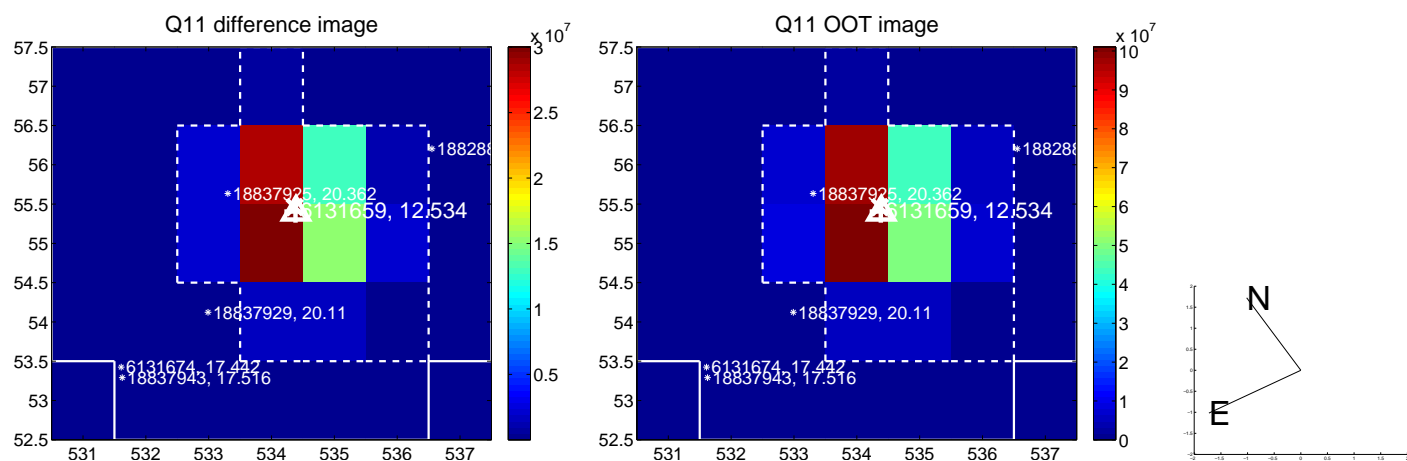
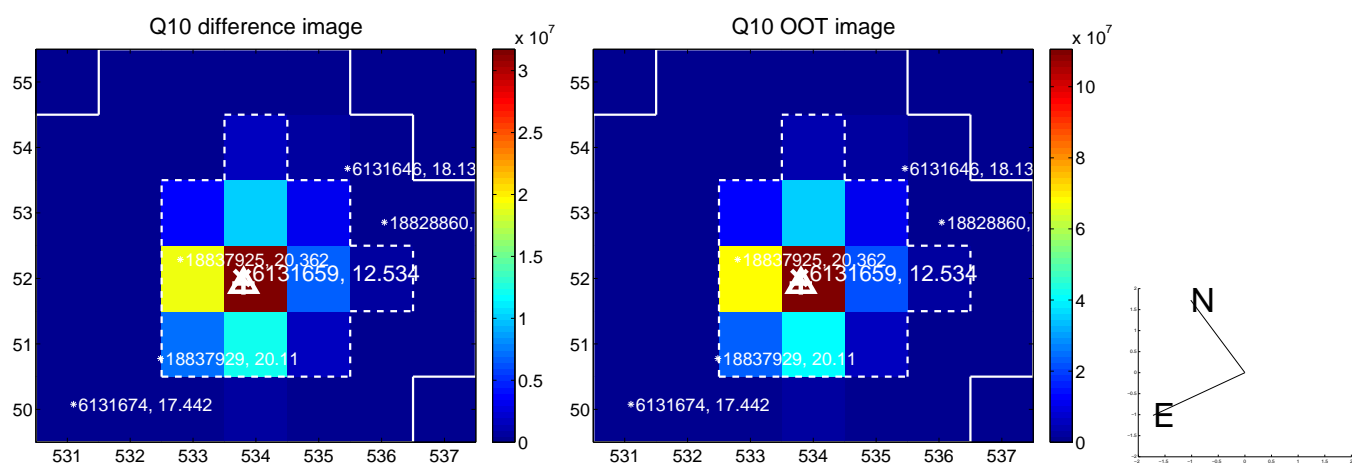
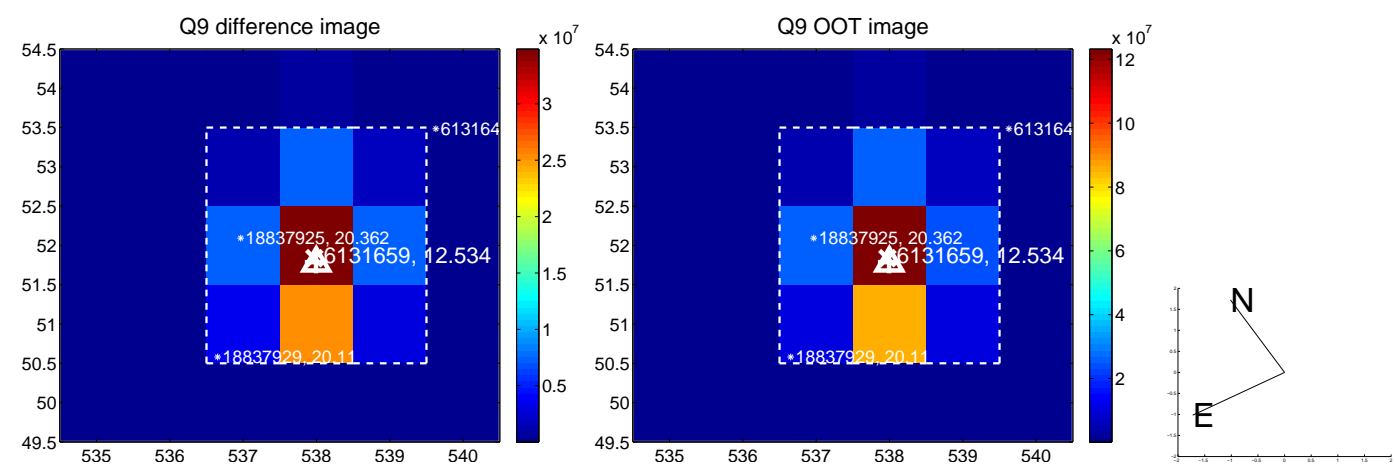
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



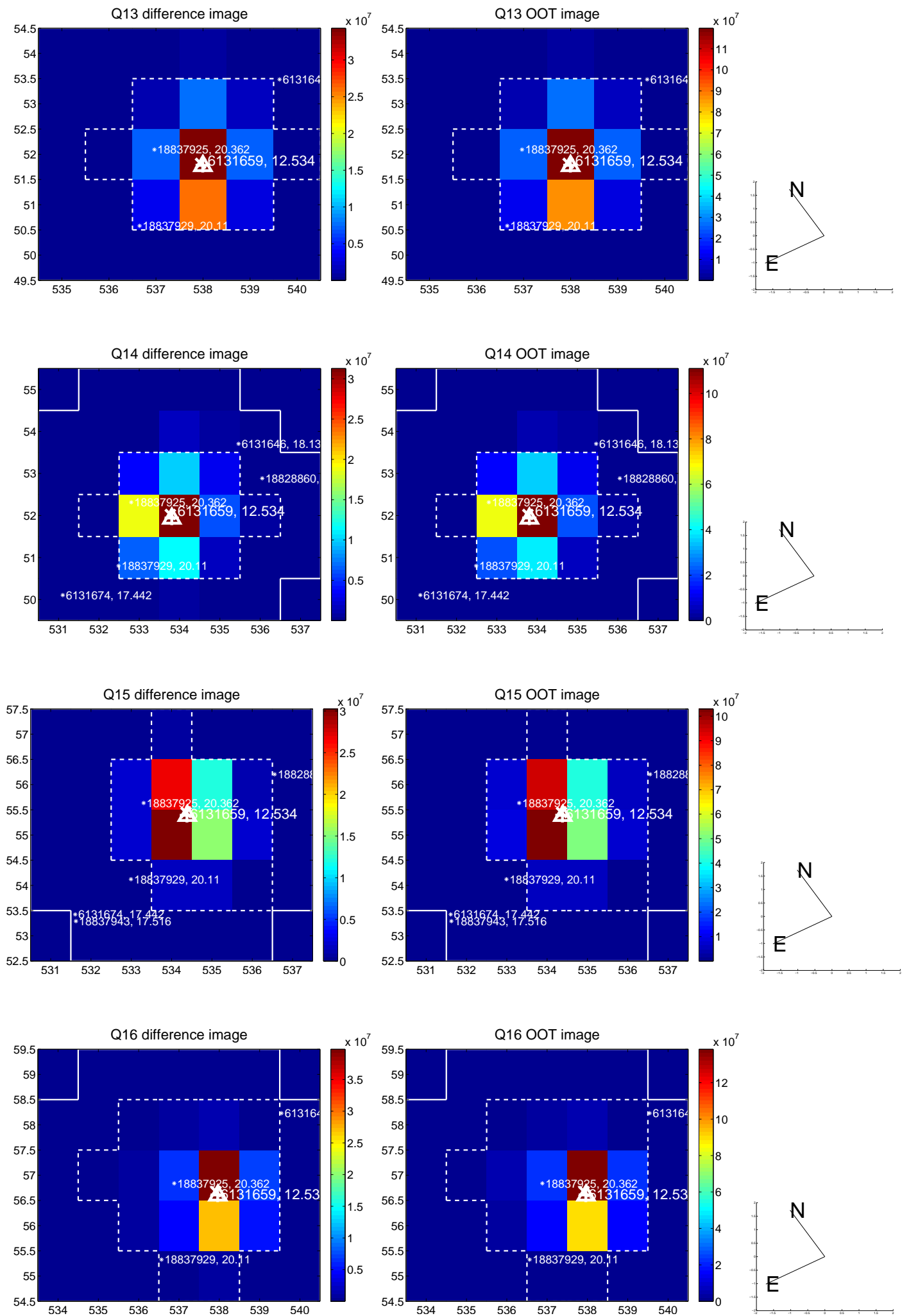
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



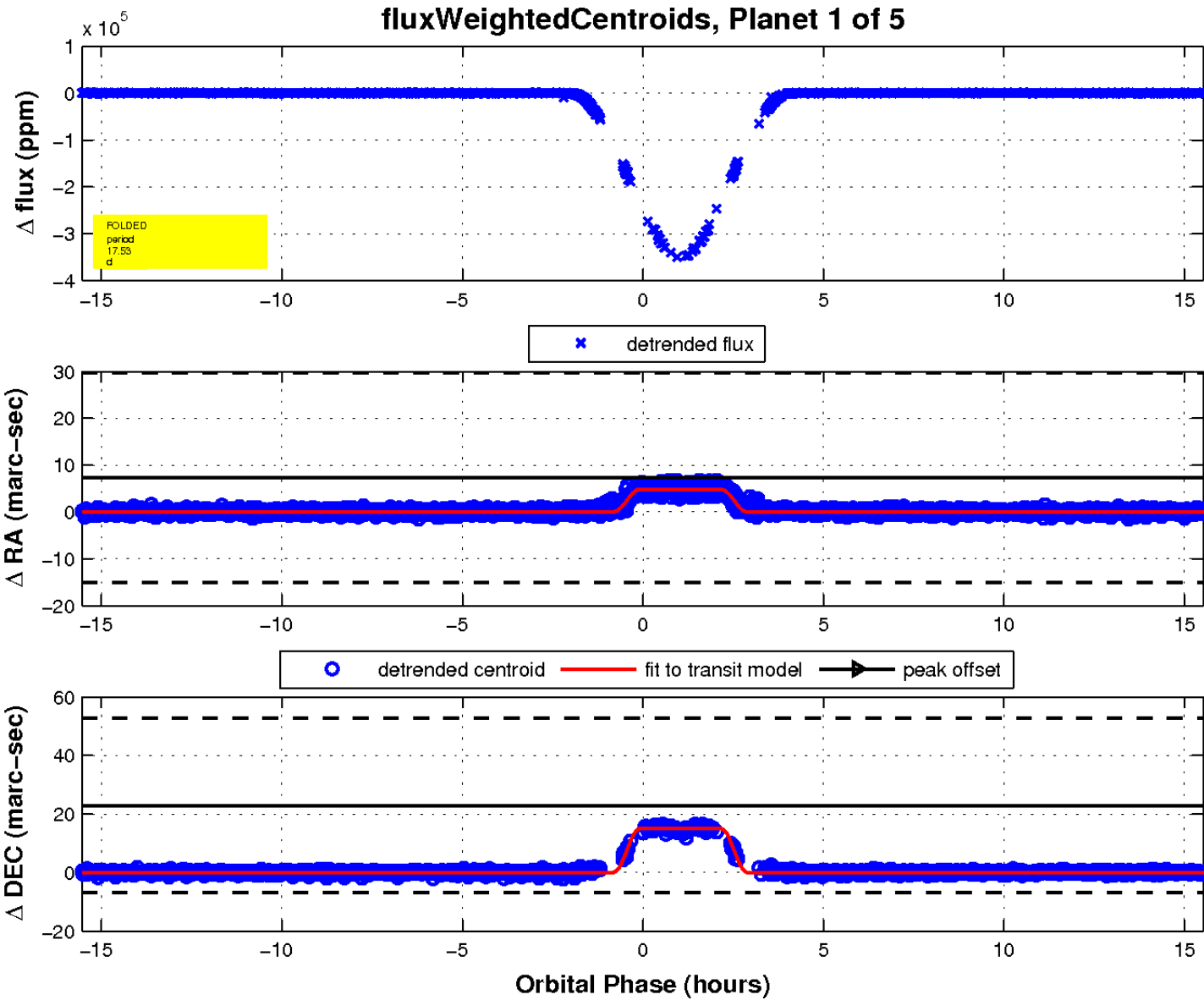
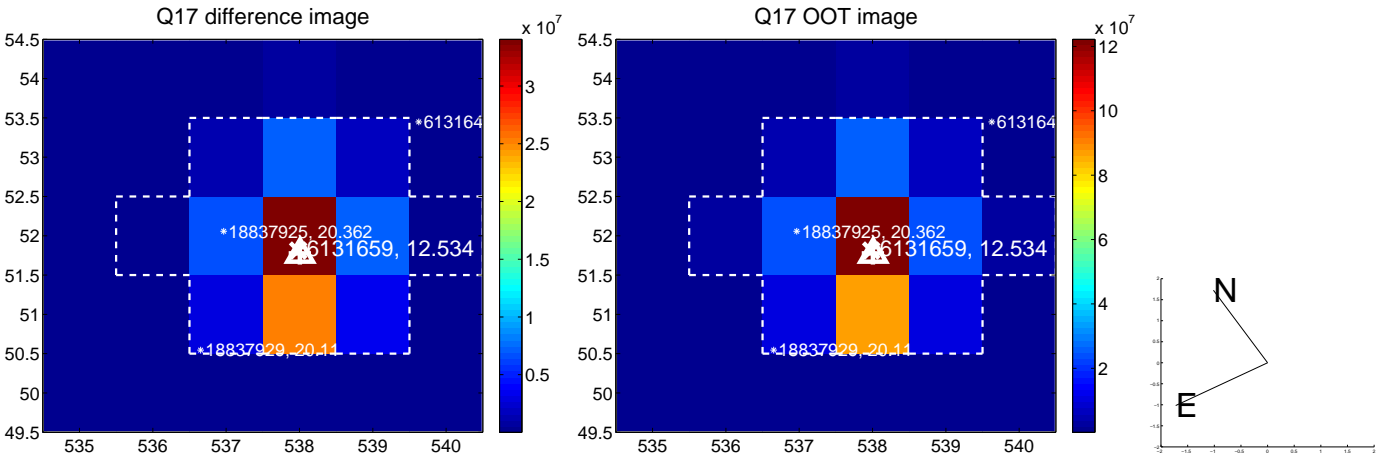
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



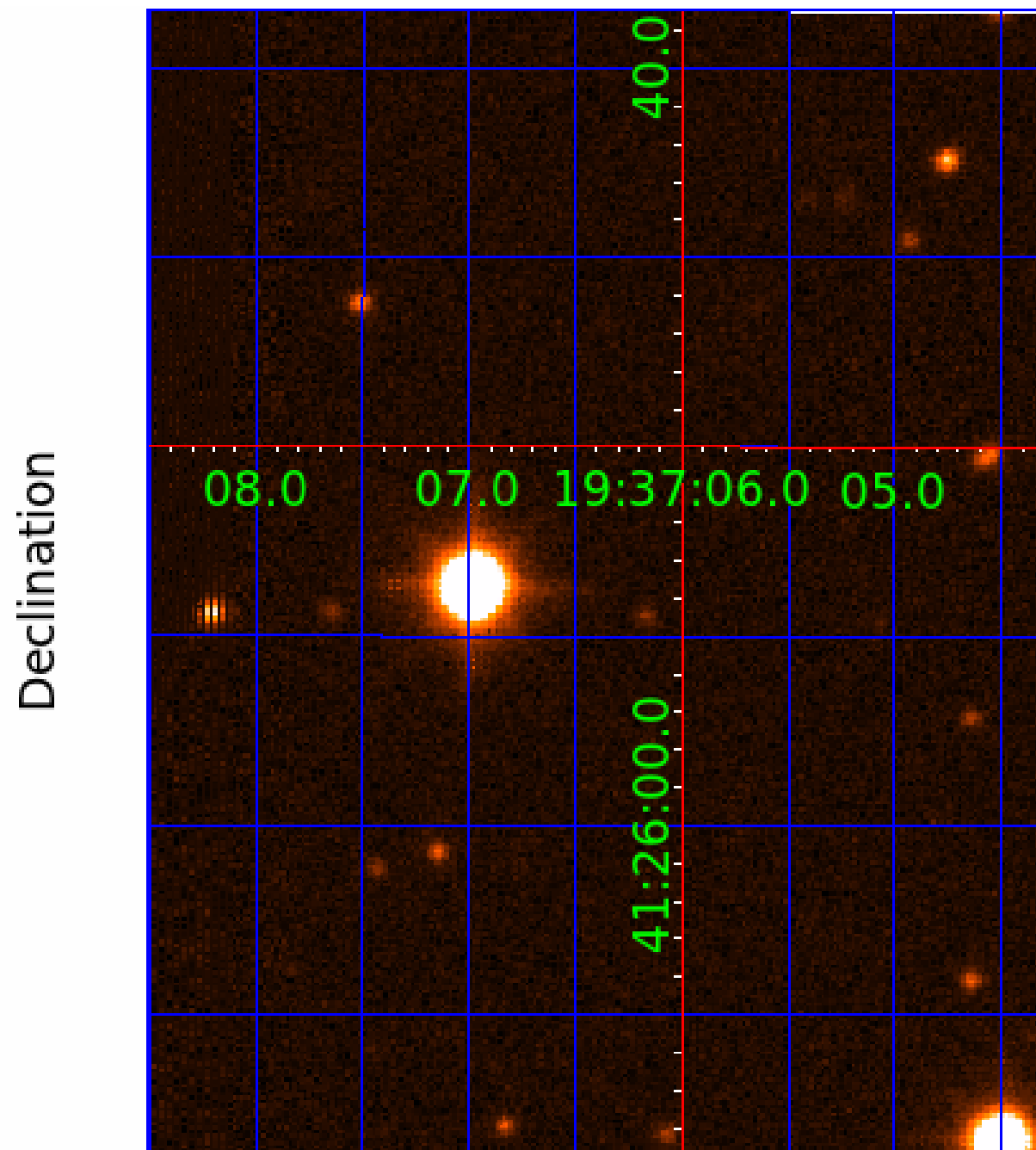
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006131659

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})
006131659-01	OBS	6667.01	17.527782	144.568039	347396.3	3.500	35910.5	-1.0	0.73	5079	38.83	22.36
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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006131659-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
006131659-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— SAME_NTL_PERIOD—CENT_FEW_DIFFS—HALO_GHOST
006131659-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS
006131659-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS— 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 006131659-02

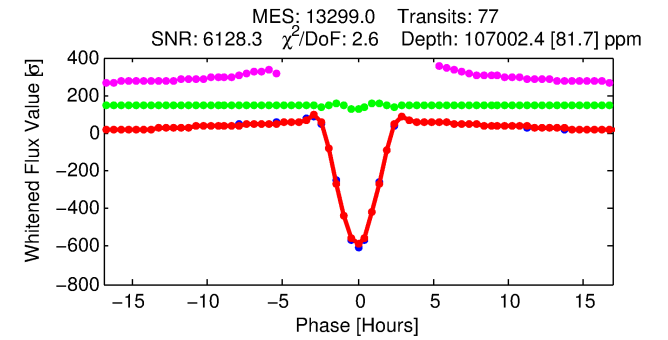
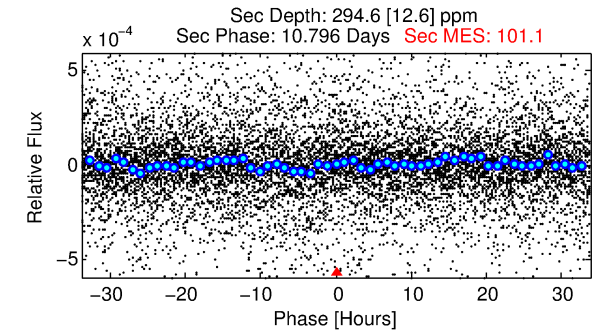
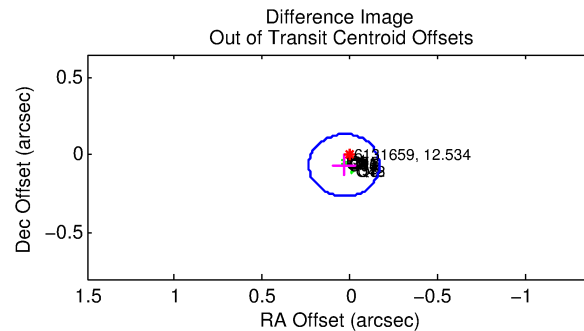
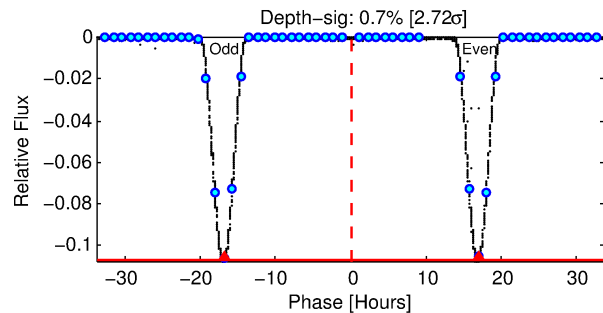
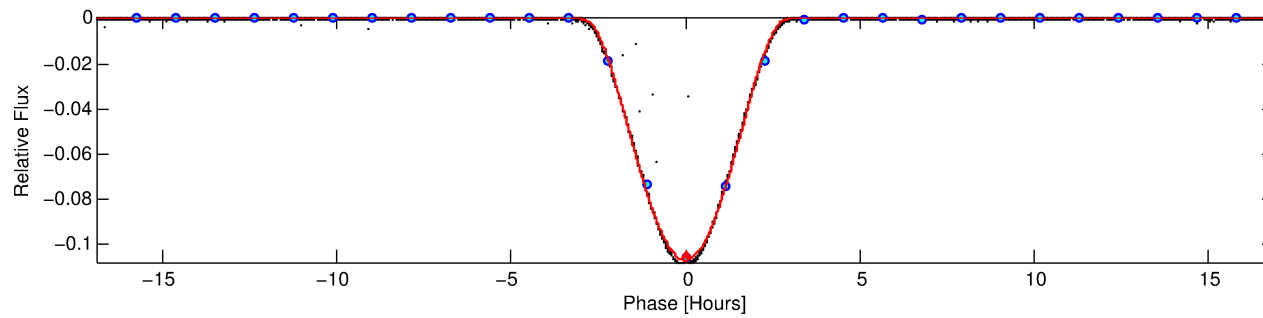
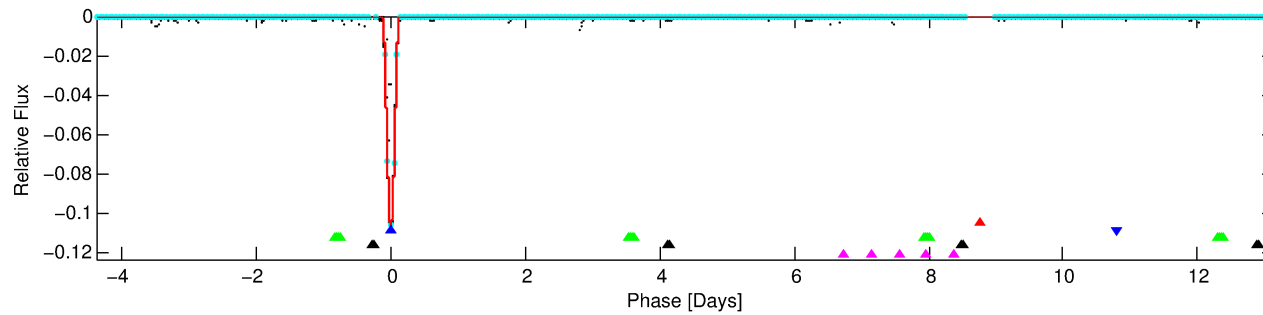
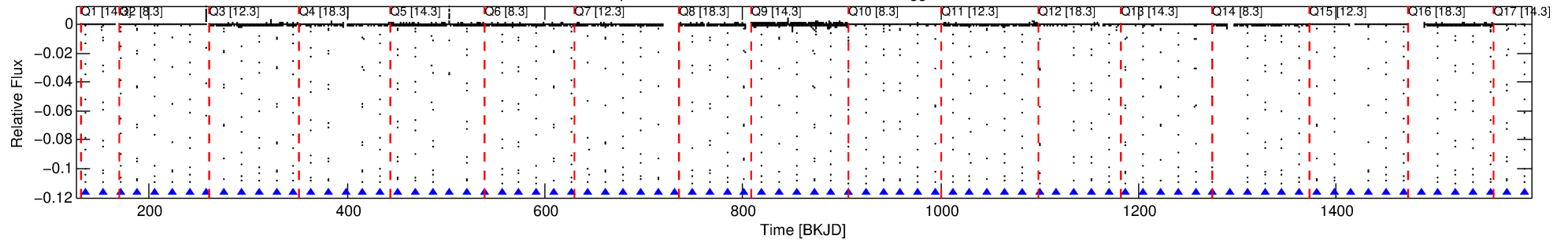
No Significant Match Found

DV One-Page Summary

KIC: 6131659 Candidate: 2 of 5 Period: 17.528 d

KOI: K06667 Corr: No Ephemeris Match

Kp: 12.53 R*: 0.73 Rs Teff: 5079.0 K Logg: 4.58 Fe/H: -0.240



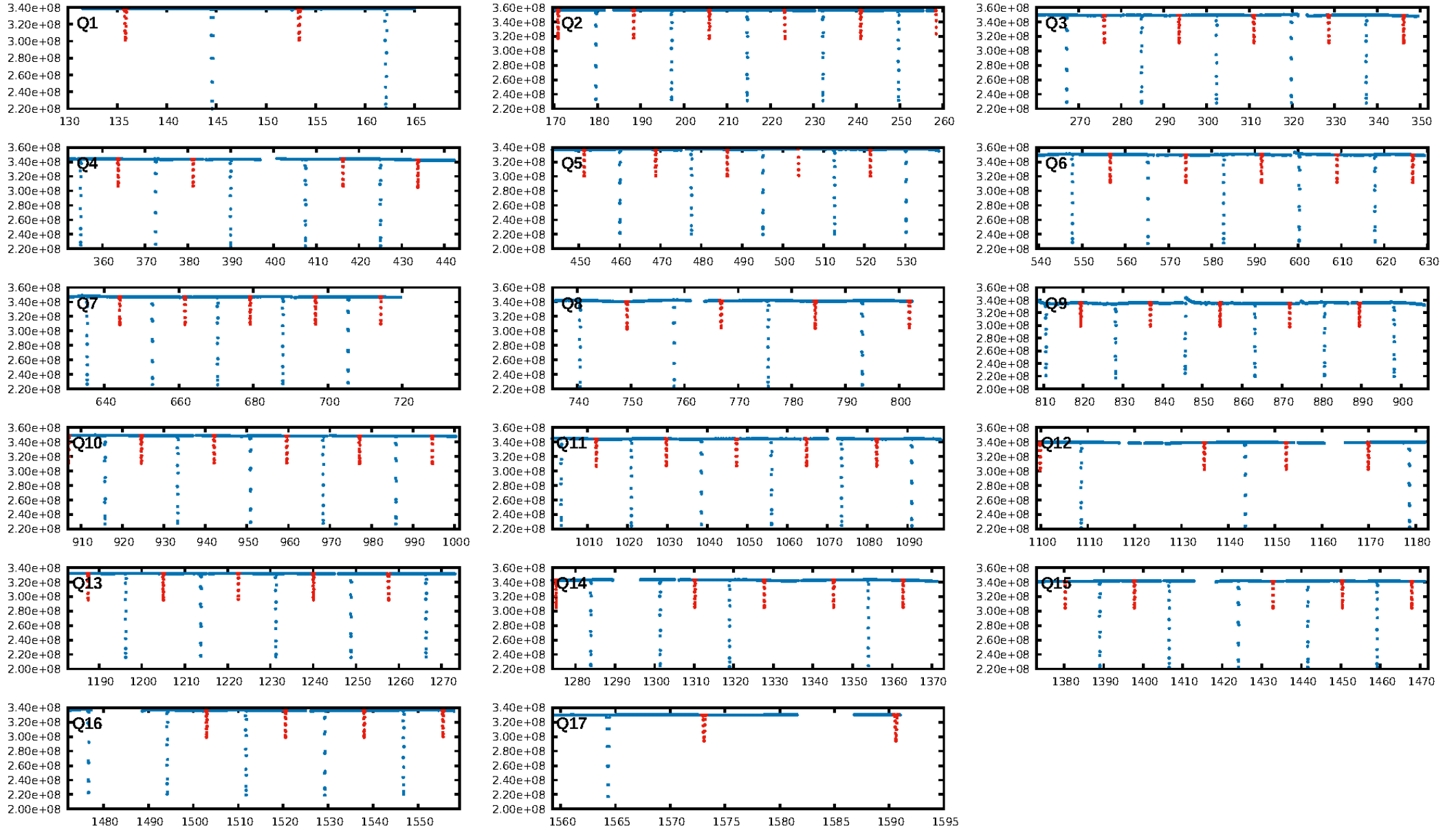
DV Fit Results:

Period = 17.52782 [0.00000] d
Epoch = 135.8075 [0.0000] BKJD
Rp/R* = 0.4674 [0.0219]
a/R* = 26.85 [0.08]
b = 0.94 [0.03]
Seff = 22.36 [3.49]
Teq = 554 [22] K
Rp = 37.33 [4.07] Re
a = 0.1195 [0.0091] AU
Ag = 1.66 [0.24] [2.76σ]
Teffp = 973 [38] K [9.52σ]

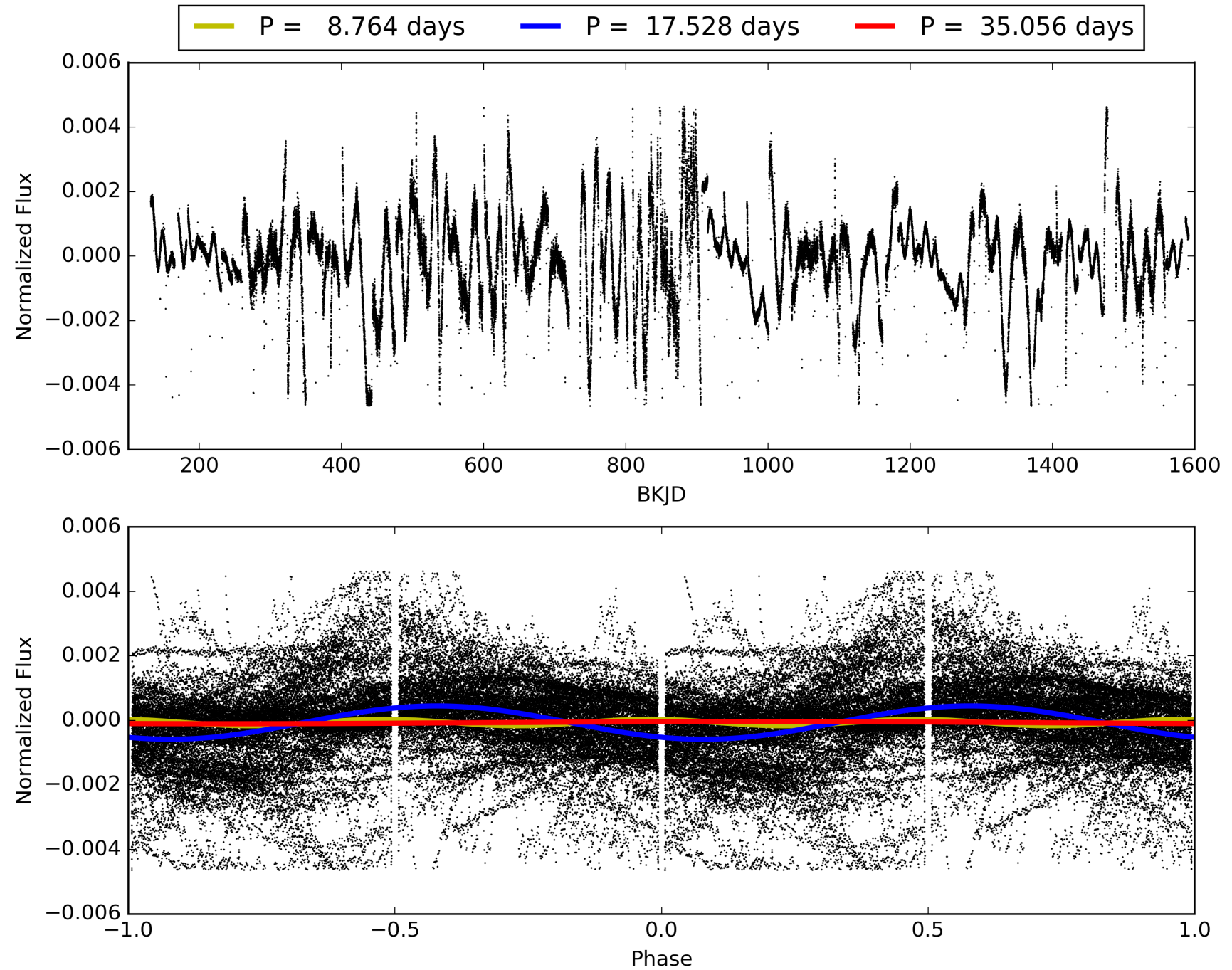
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [847.84σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [73/73]
GhostDiagnostic-chr: 10.63
Centroid-sig: 0.0%
Centroid-so: 0.185 arcsec [388.00σ]
OotOffset-rm: 0.075 arcsec [1.12σ]
KicOffset-rm: 0.337 arcsec [4.80σ]
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]

TCE 006131659-02, PDC Light Curves

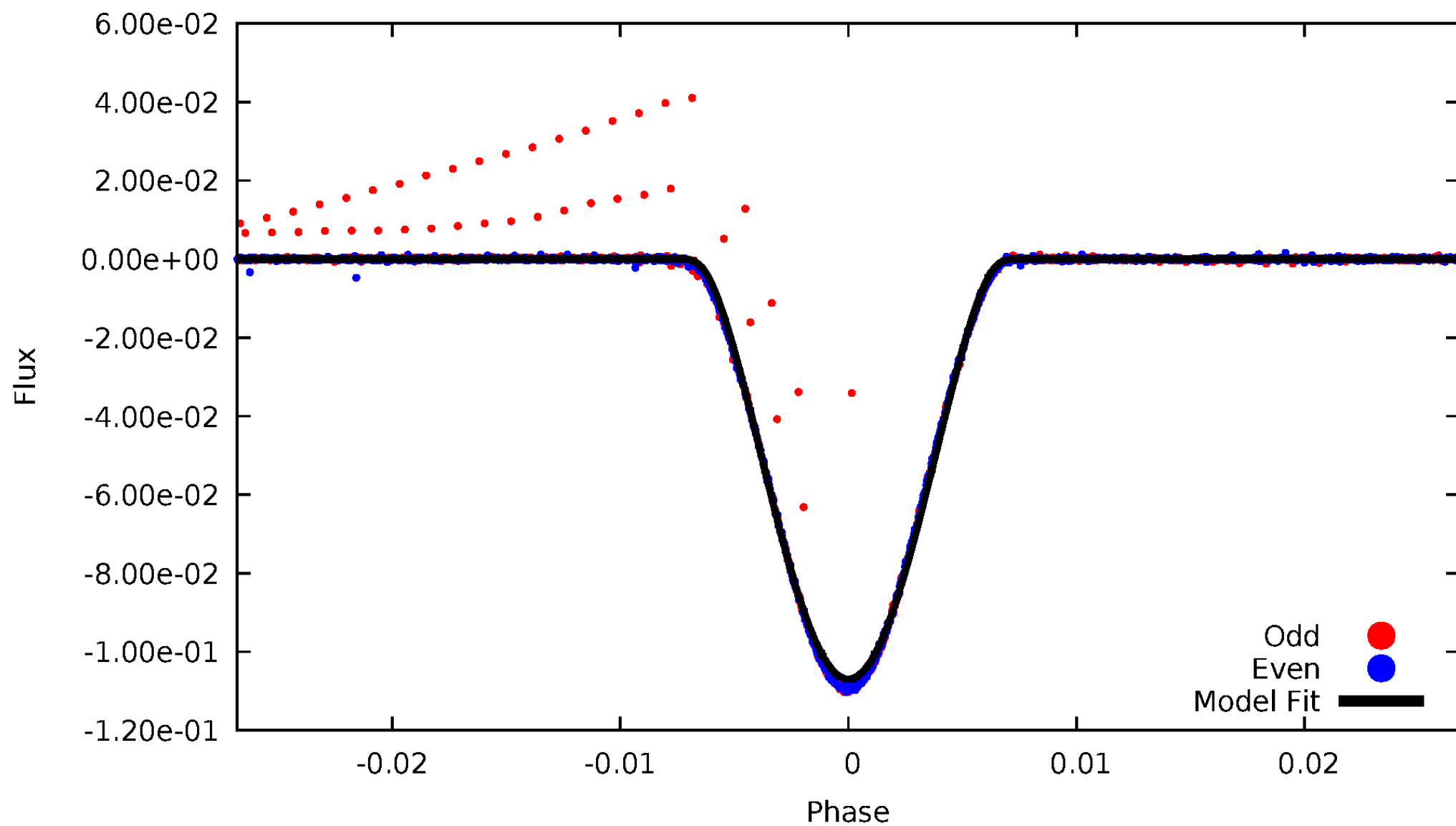


TCE 006131659-02



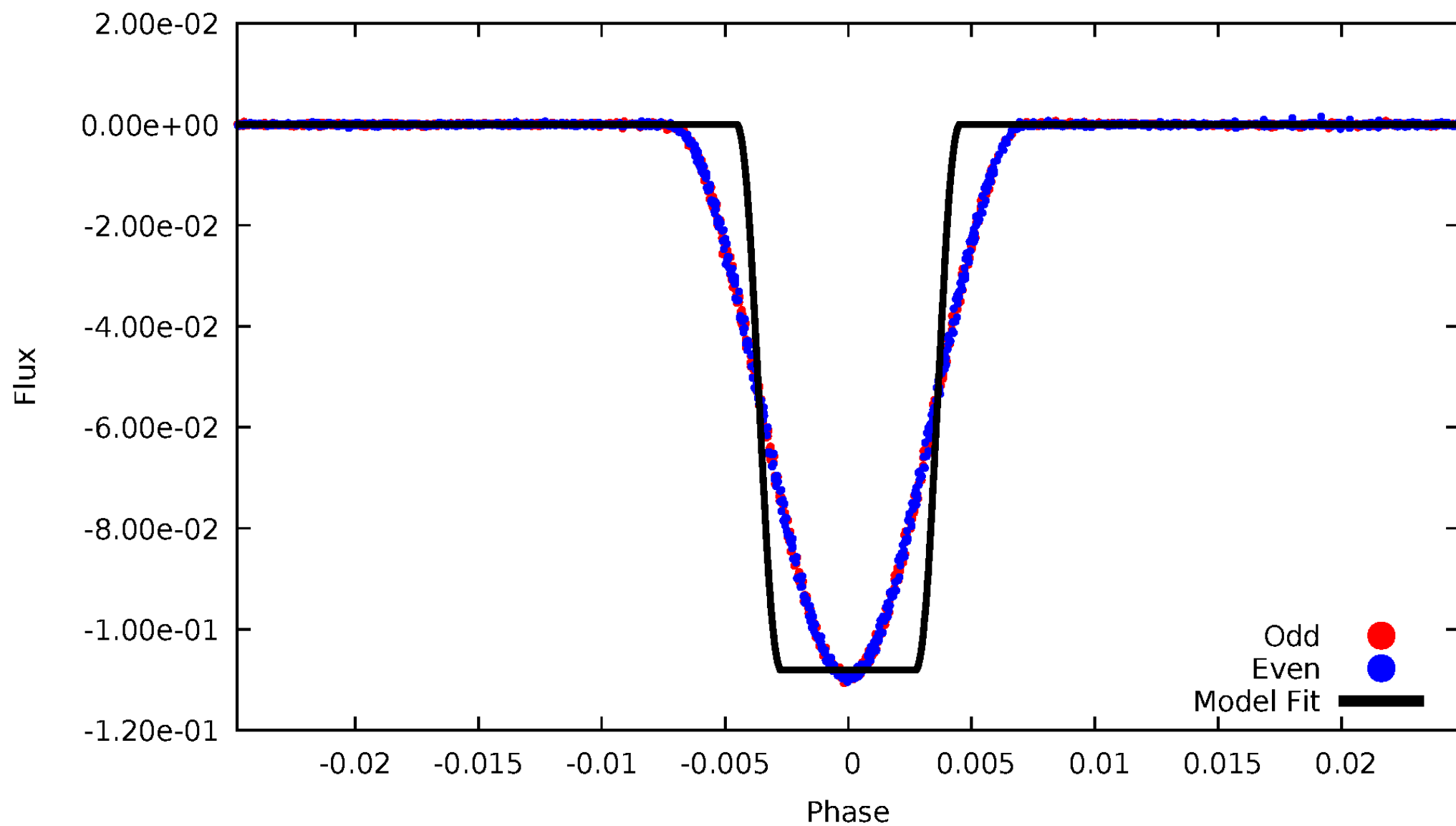
DV Odd/Even

TCE 006131659-02



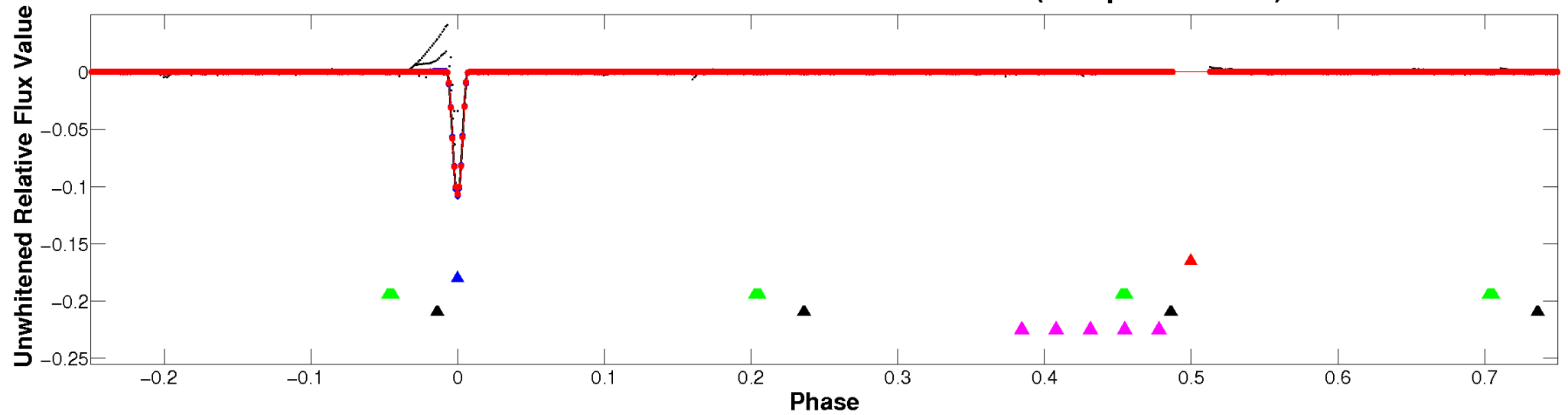
ALT Odd/Even

TCE 006131659-02

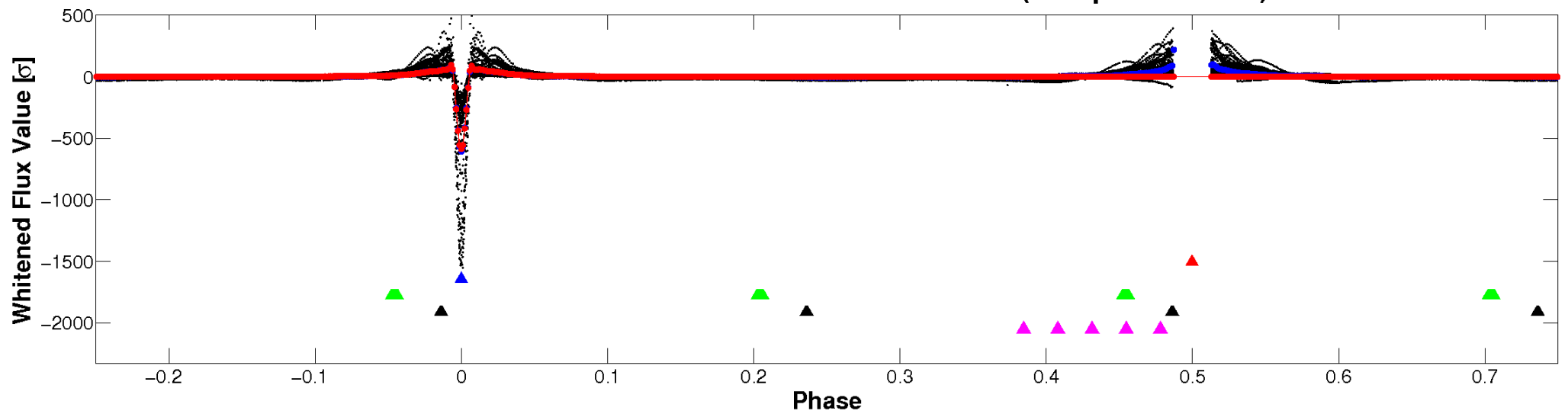


Non-Whitened Vs. Whitened Light Curve

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

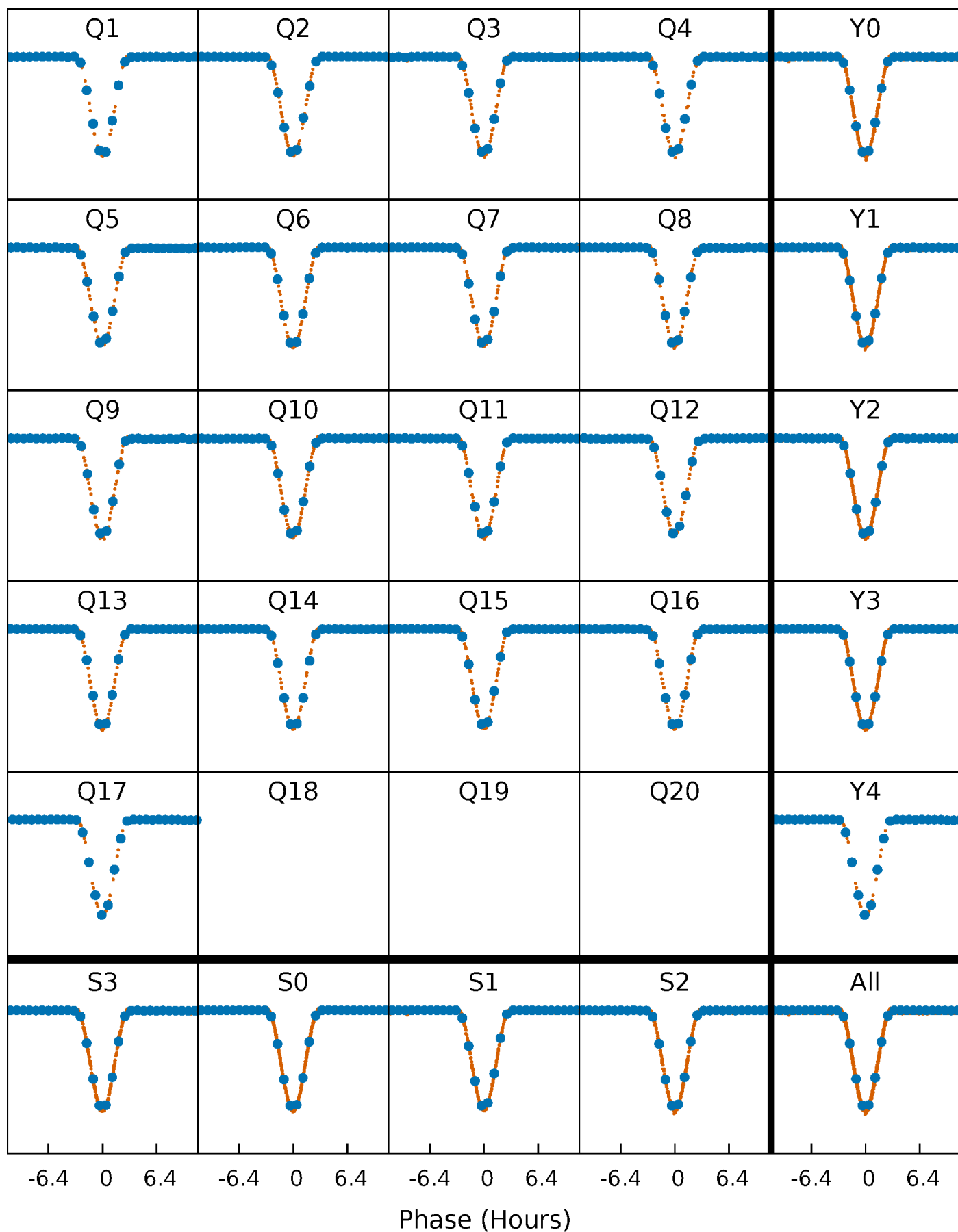


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



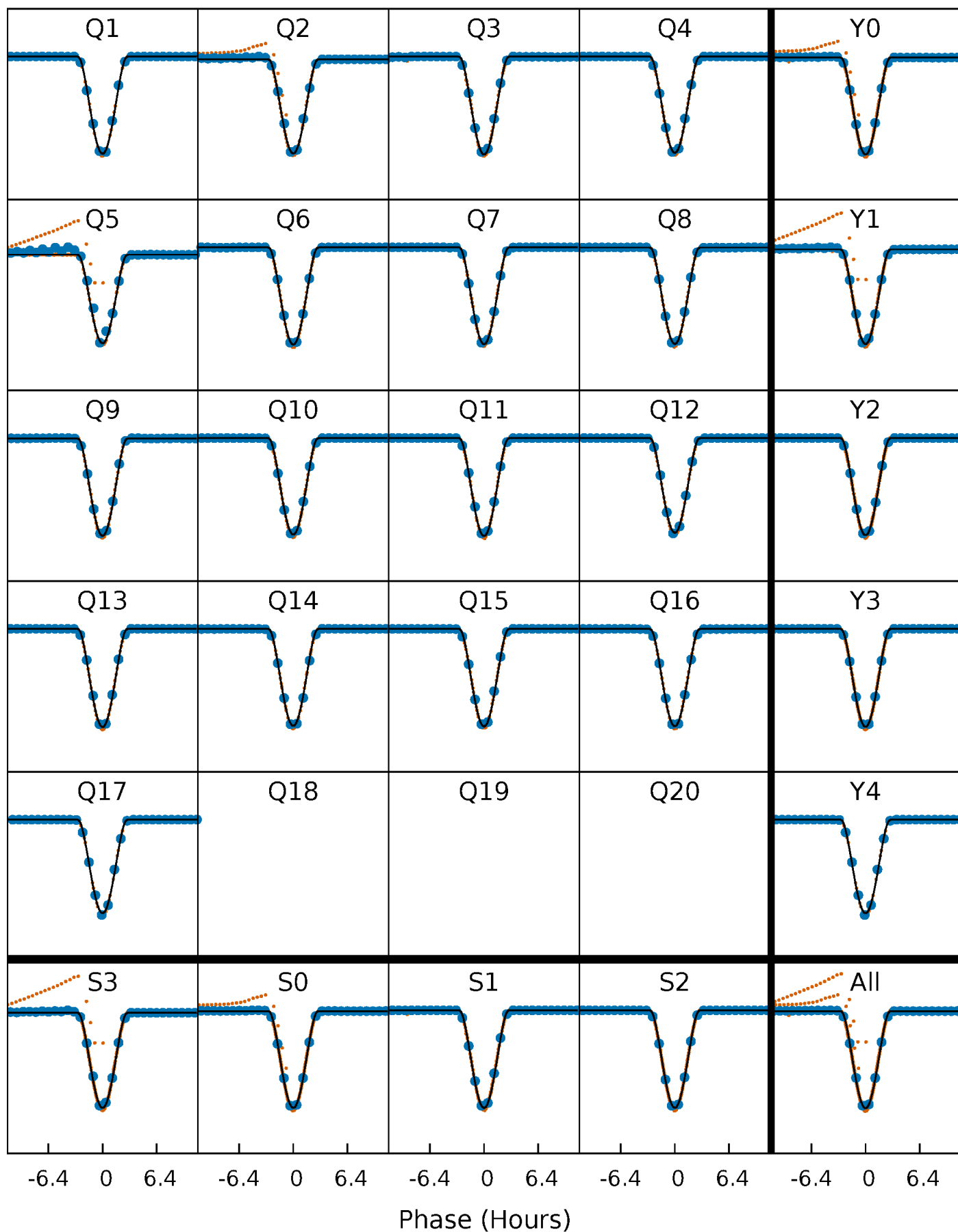
PDC Quarter-Phased Transit Curves

TCE 006131659-02 P= 17.527822 Days $T_0=135.807479$ (BKJD)



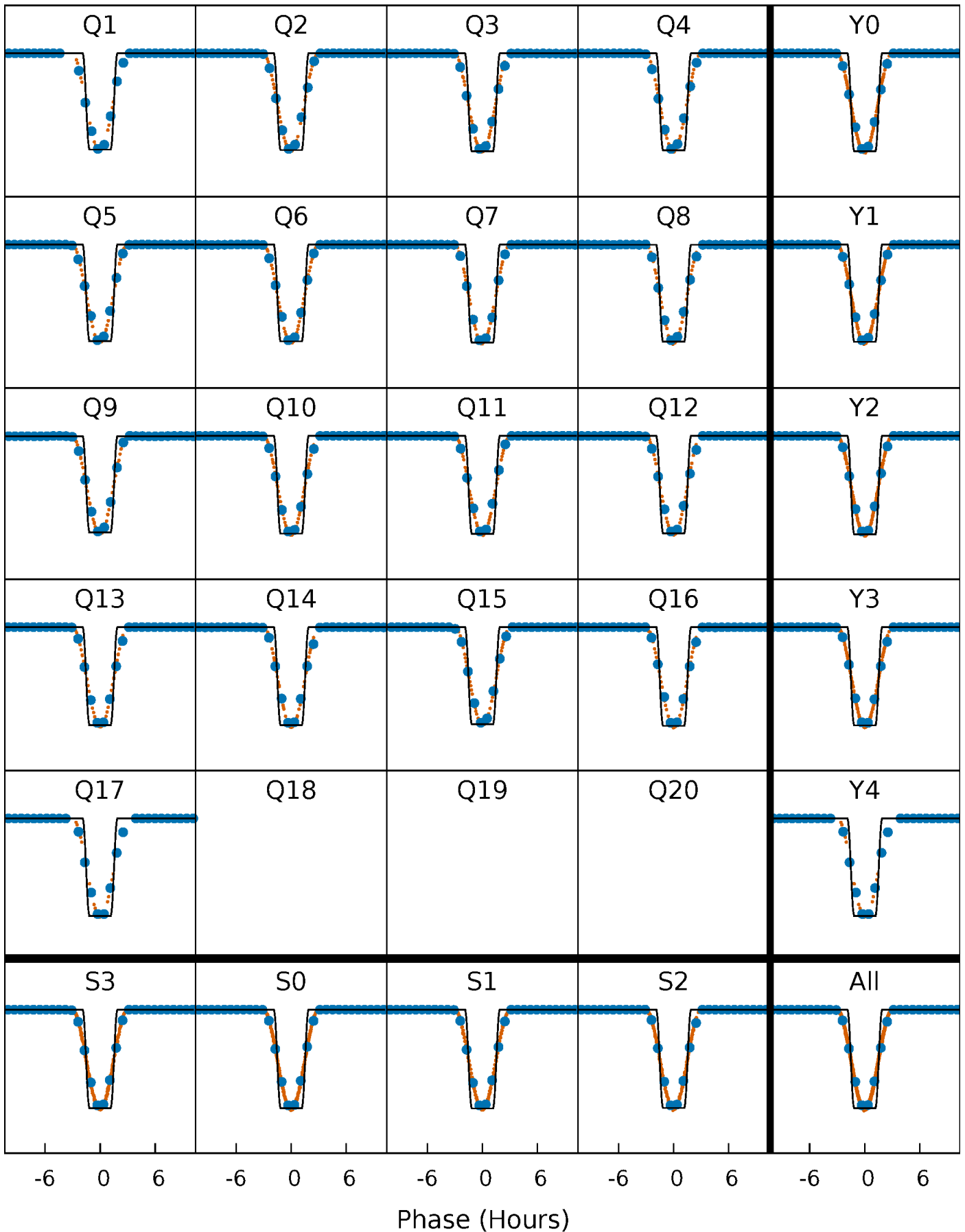
DV Quarter-Phased Transit Curves

TCE 006131659-02 P= 17.527822 Days $T_0=135.807479$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

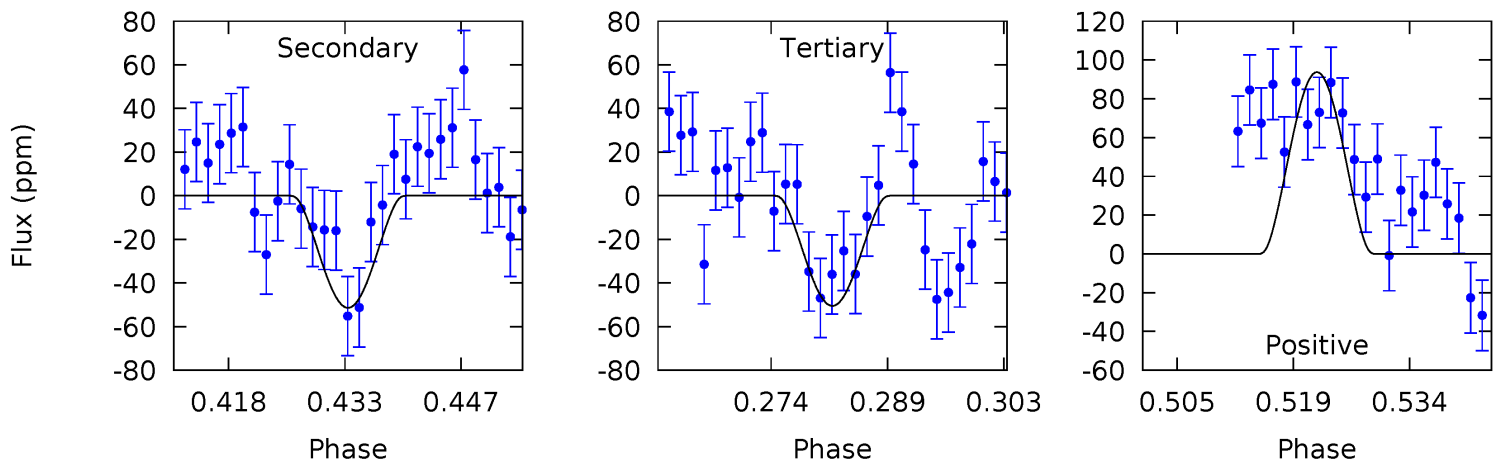
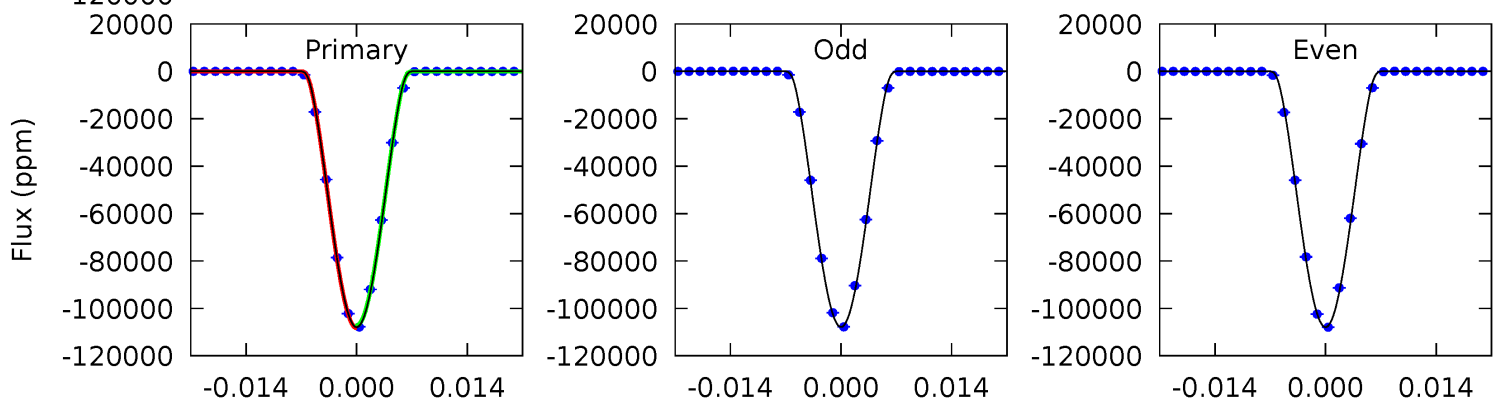
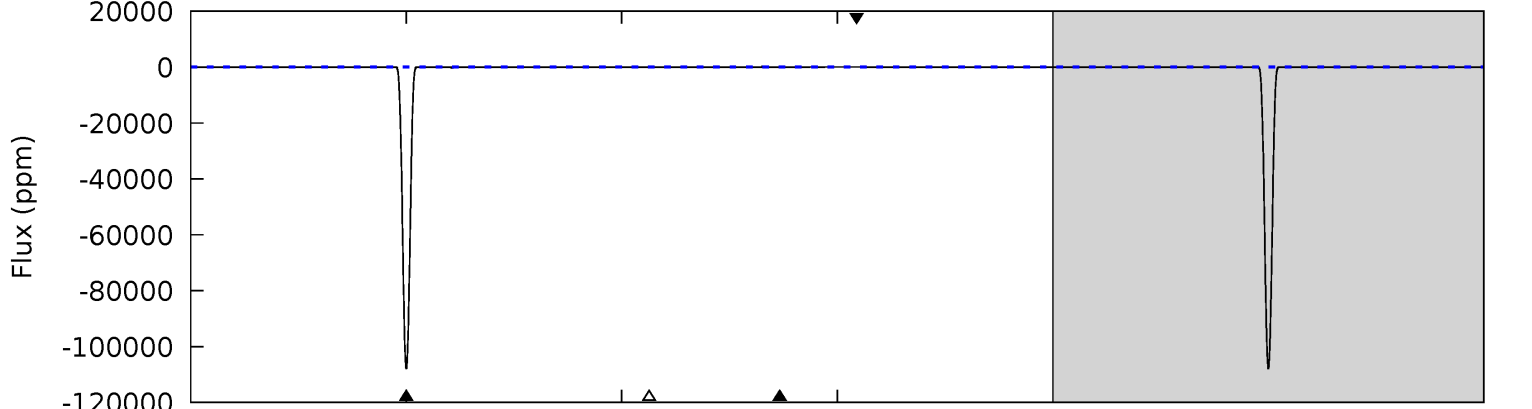
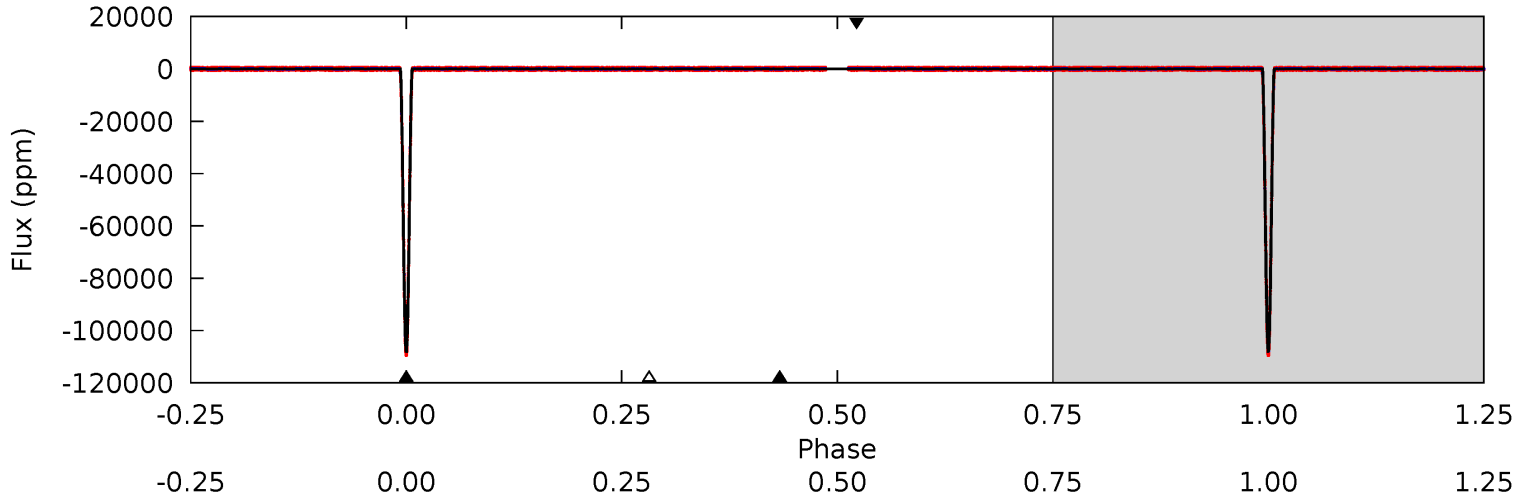
TCE 006131659-02 P= 17.527782 Days $T_0=135.808912$ (BKJD)



DV Model-Shift Uniqueness Test

006131659-02, P = 17.527822 Days, E = 118.279657 Days

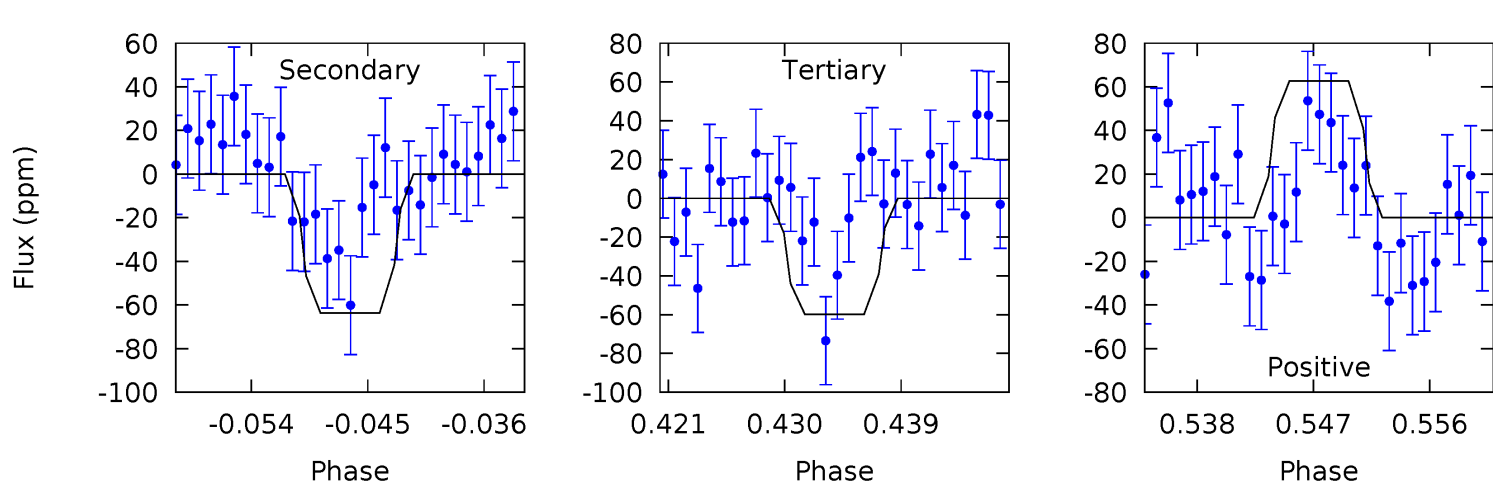
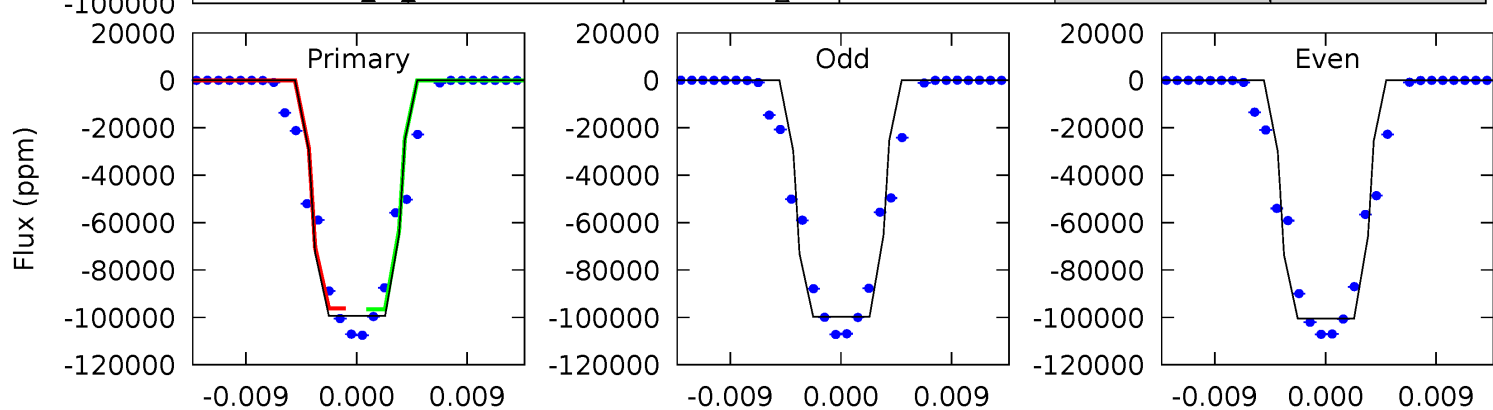
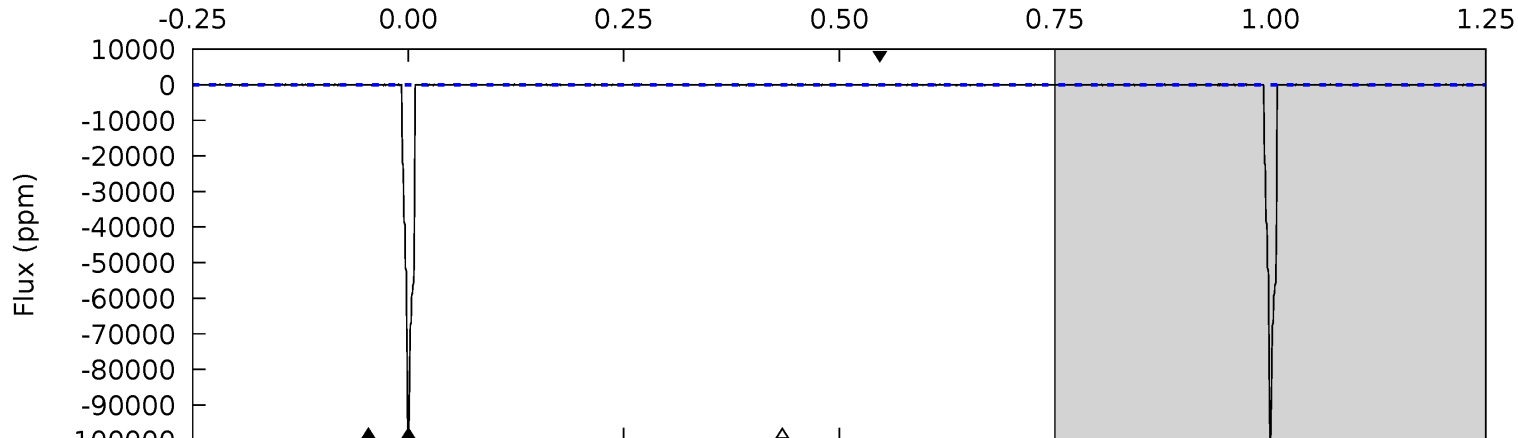
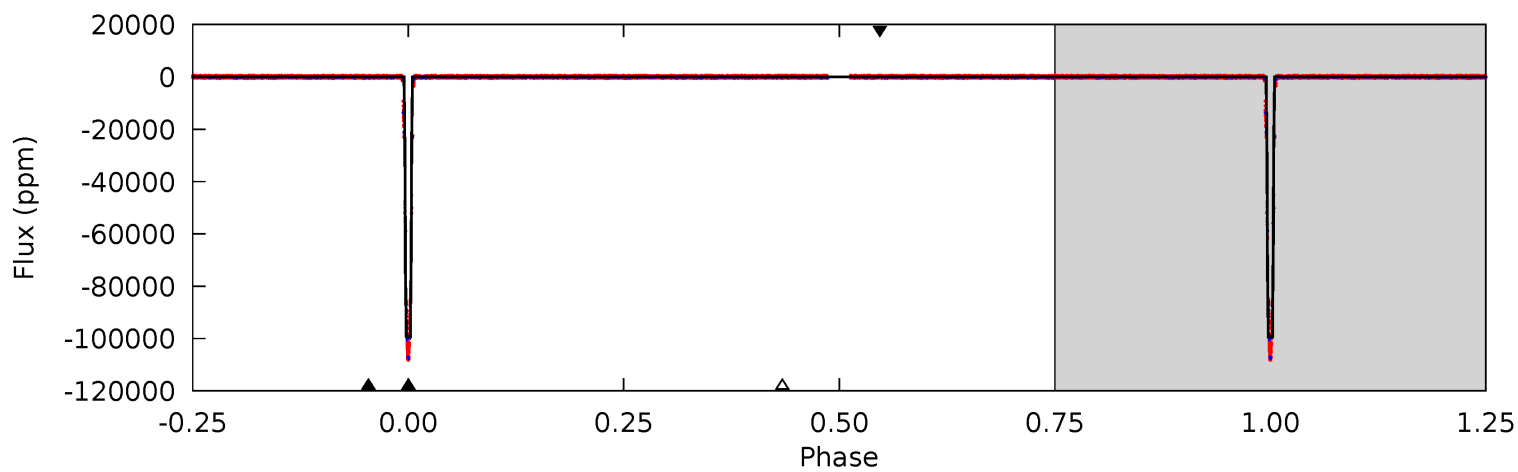
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15733	7.49	7.36	13.7	4.96	2.45	3.42	15726	15719	0.13	-6.17	5.75	0.98	0.00	77.6



Alt Model-Shift Uniqueness Test

006131659-02, P = 17.527782 Days, E = 118.281130 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6580	4.22	3.96	4.15	5.05	2.61	1.21	6576	6576	0.26	0.07	25.7	1.00	0.00	0



Stellar Parameters For KIC 006131659

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5079^{+151}_{-136}	$4.579^{+0.050}_{-0.050}$	$-0.240^{+0.300}_{-0.300}$	$0.732^{+0.072}_{-0.065}$	$0.741^{+0.085}_{-0.064}$	$2.659^{+0.618}_{-0.502}$
	+3%/-3%	+1%/-1%	+125%/-125%	+10%/-9%	+11%/-9%	+23%/-19%
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 006131659-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-51 ± 7	$37.61^{+2.73}_{-3.02}$	776^{+28}_{-27}	-1315^{+2750}_{-159}	$0.285^{+0.061}_{-0.046}$
Alt.	-64 ± 15	$26.34^{+2.27}_{-2.17}$	776^{+29}_{-26}	1731^{+70}_{-99}	$0.732^{+0.222}_{-0.204}$

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

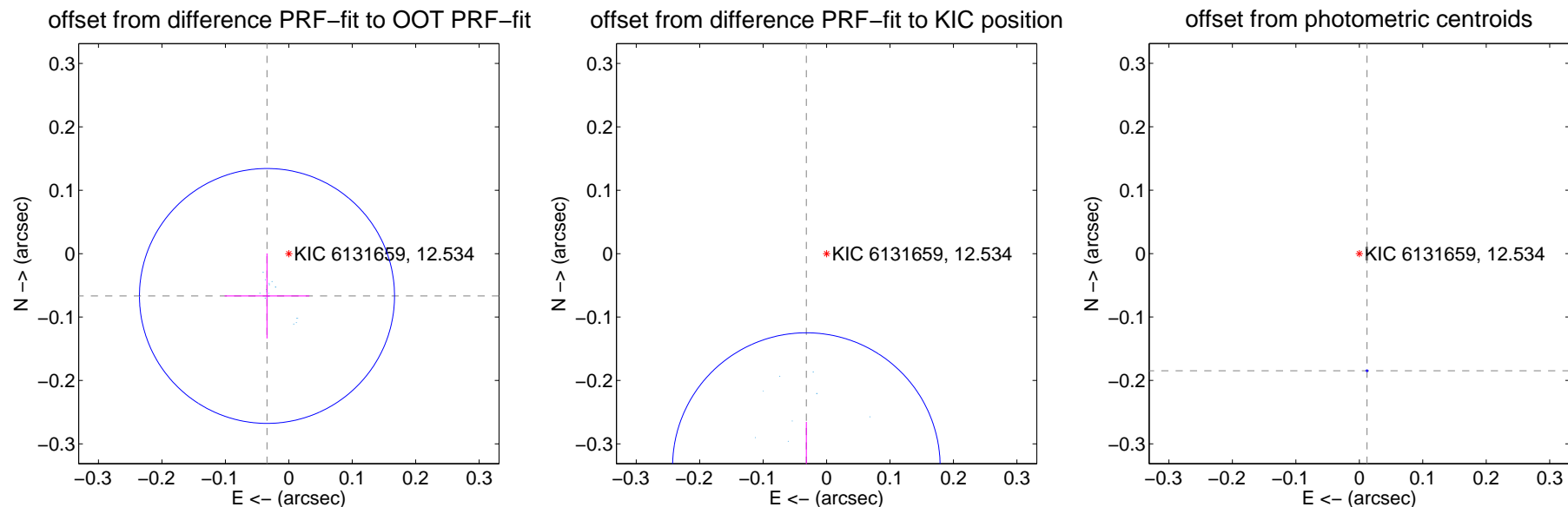
DV Centroid Data

Supplemental centroid analysis for 006131659-02. Kepler magnitude: 12.53. Transit SNR 6128.26

There are 17 quarters with good PRF difference image offsets

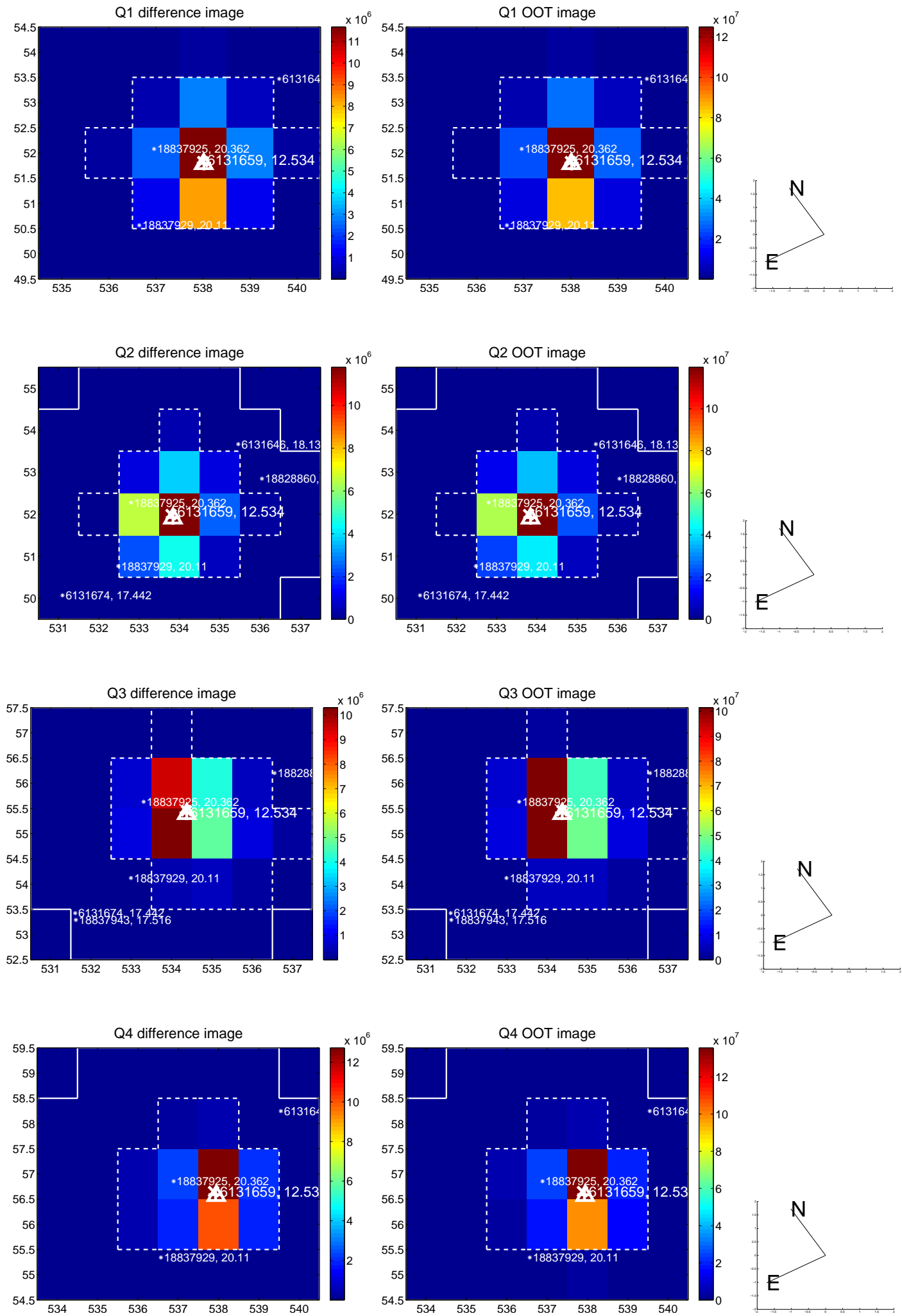
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.075 ± 0.067	1.12	0.034 ± 0.067	-0.067 ± 0.067
PRF-fit source offset from KIC position	0.337 ± 0.070	4.80	0.032 ± 0.070	-0.336 ± 0.070
photometric centroid source offset	0.19 ± 0.00	388.00	-0.01 ± 0.00	-0.18 ± 0.00

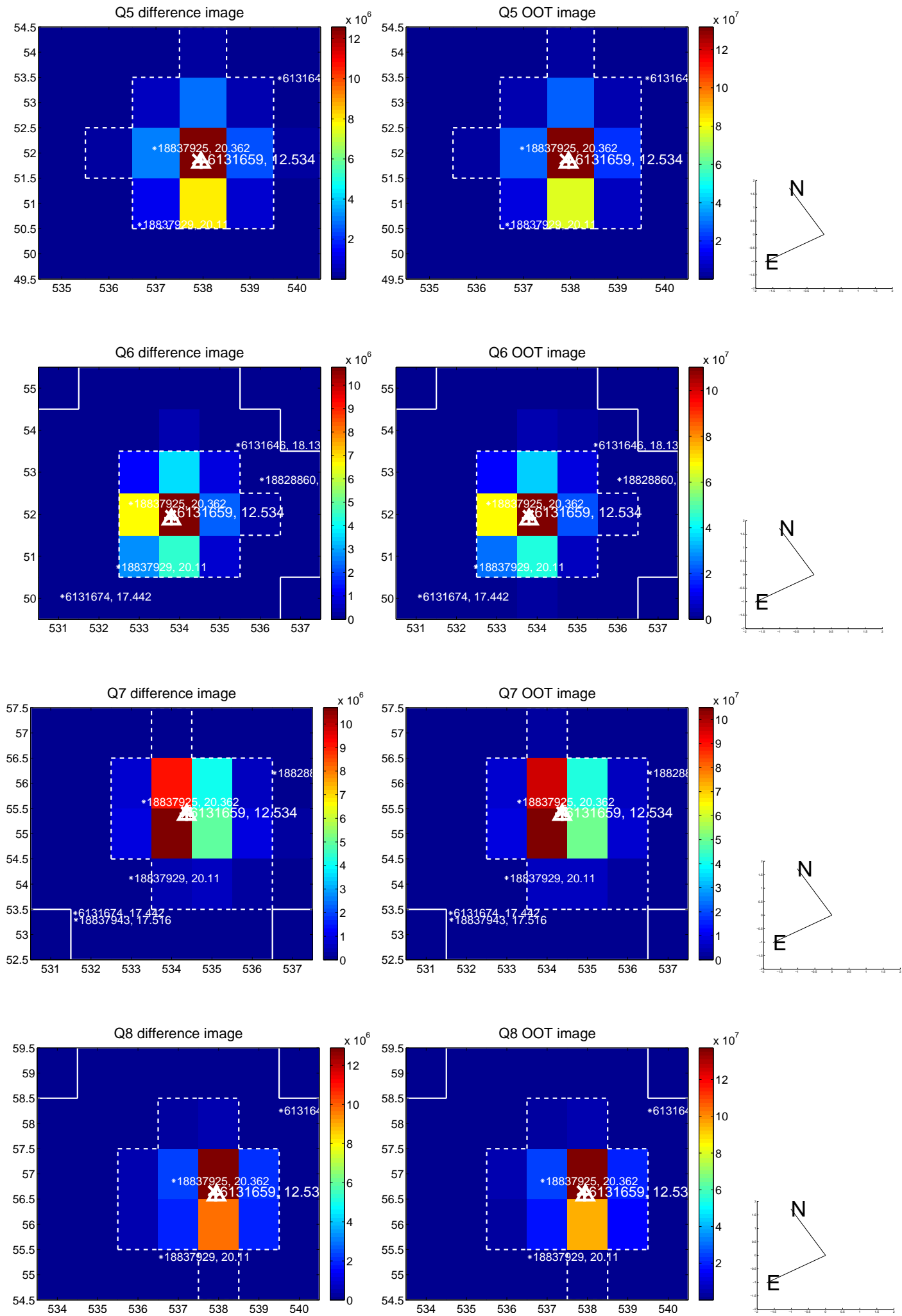


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

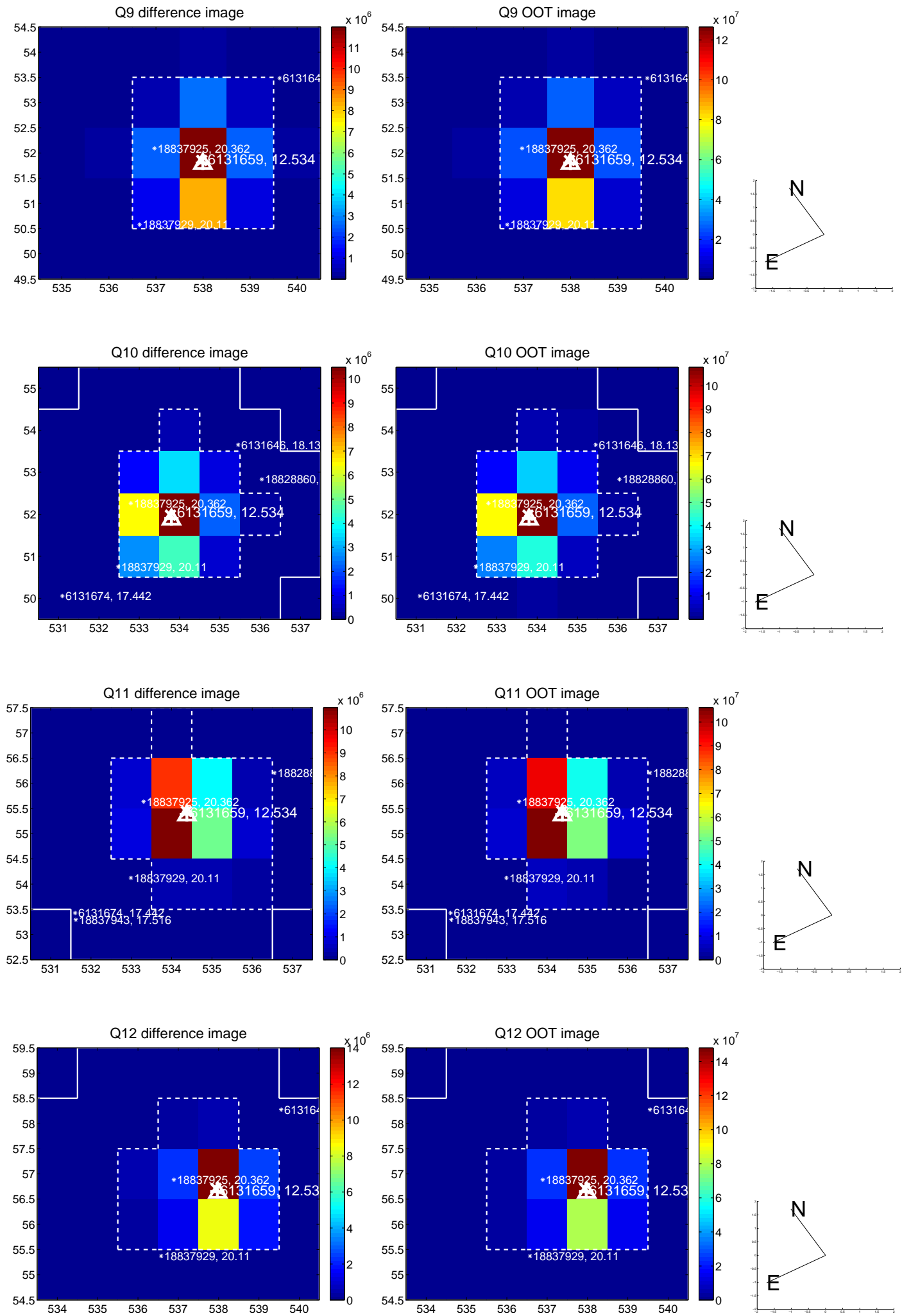
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



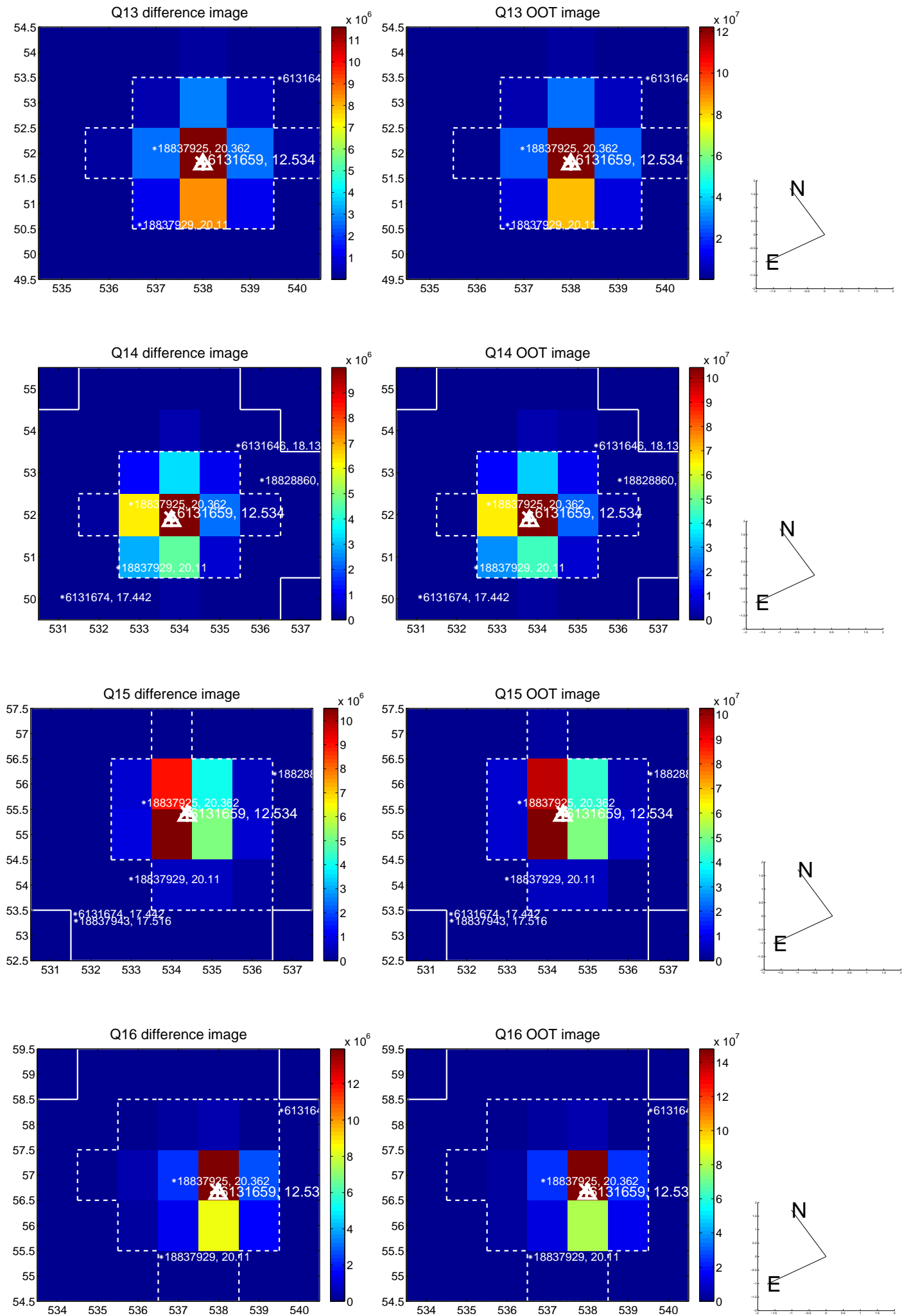
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



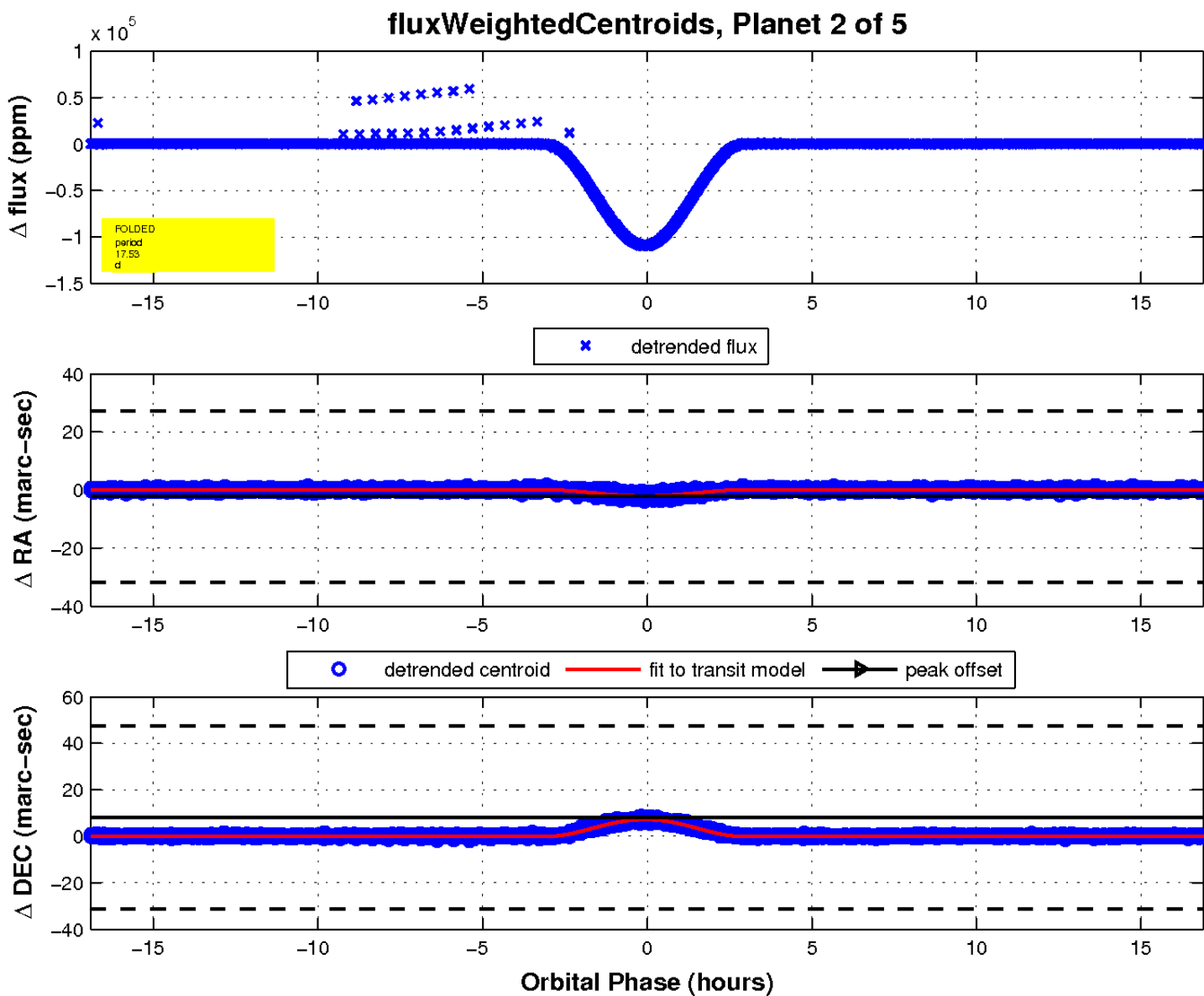
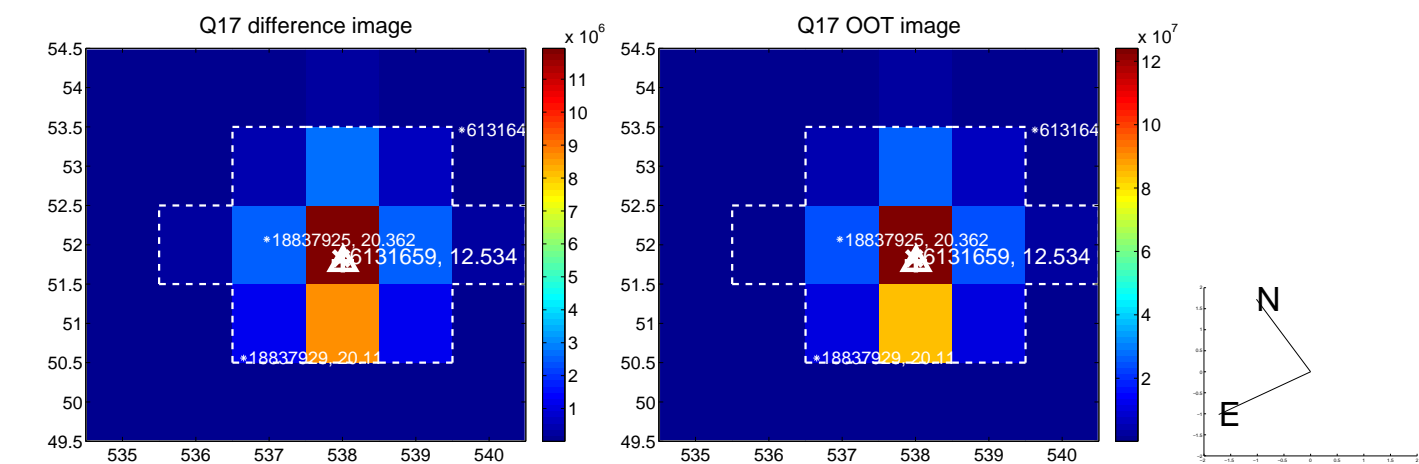
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



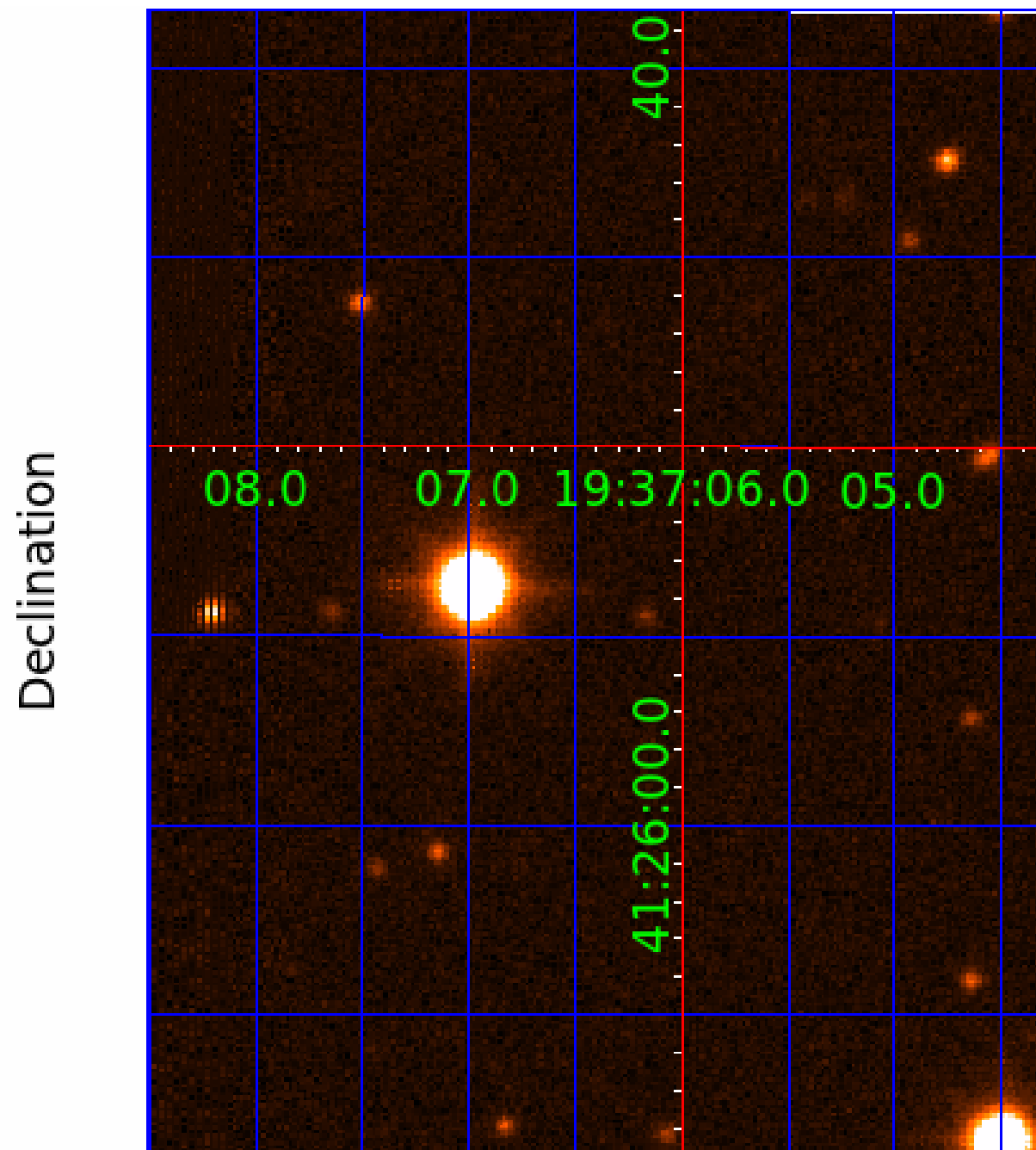
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006131659

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})
006131659-01	OBS	6667.01	17.527782	144.568039	347396.3	3.500	35910.5	-1.0	0.73	5079	38.83	22.36
006131659-02	OBS	No	17.527822	135.807479	107002.4	5.635	13299.0	6128.3	0.73	5079	37.33	22.36
006131659-03	OBS	No	4.382205	134.964651	77.2	4.335	1866.4	16.8	0.73	5079	0.62	141.94
006131659-04	OBS	No	4.382047	135.550028	16185.3	15.000	2084.5	-1.0	0.73	5079	9.07	141.94
006131659-05	OBS	No	298.382848	317.826380	1314.1	5.608	38.0	23.0	0.73	5079	5.30	0.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006131659-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
006131659-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
006131659-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— SAME_NTL_PERIOD—CENT_FEW_DIFFS—HALO_GHOST
006131659-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS
006131659-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS— 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.

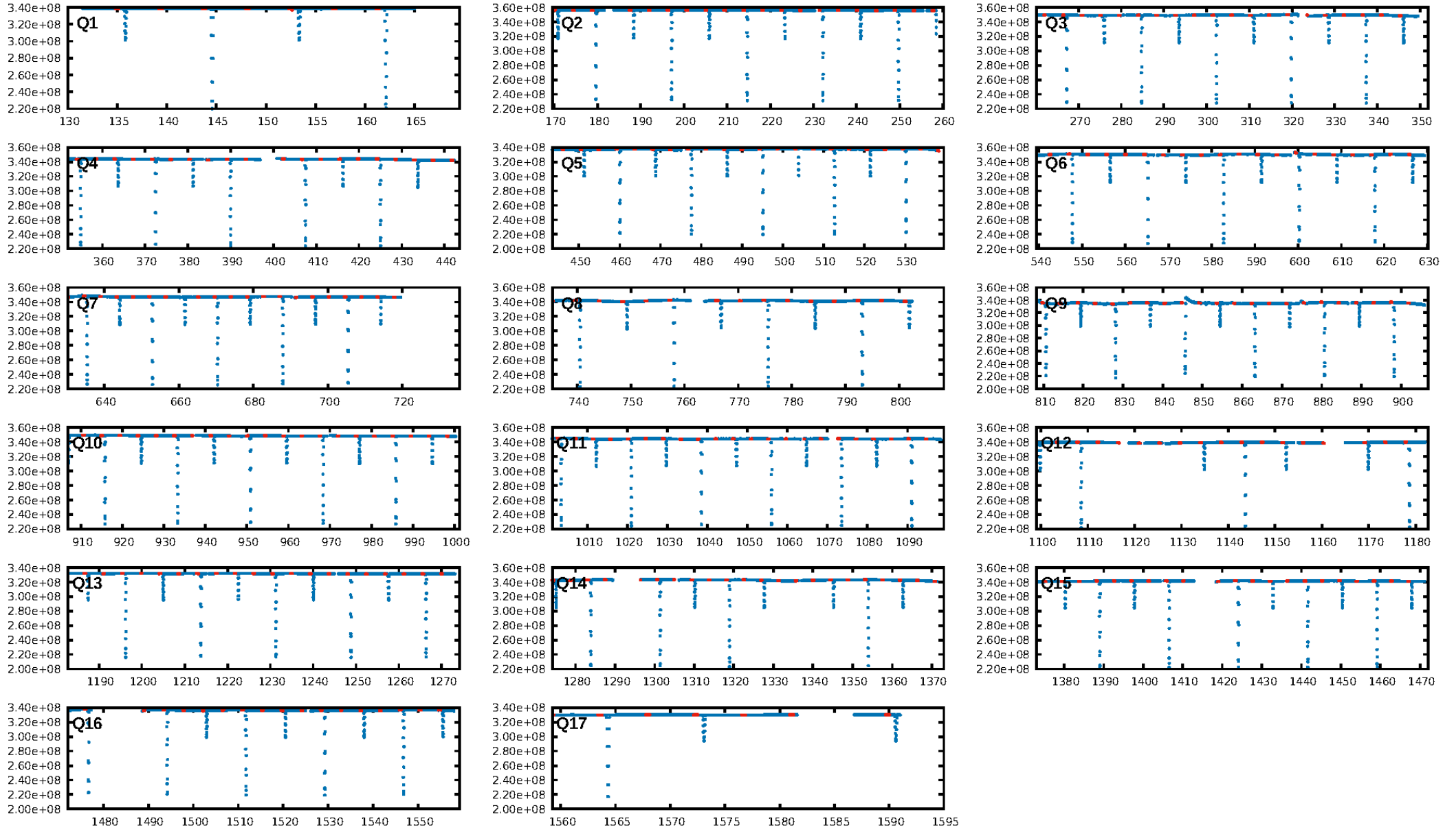
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006131659-03

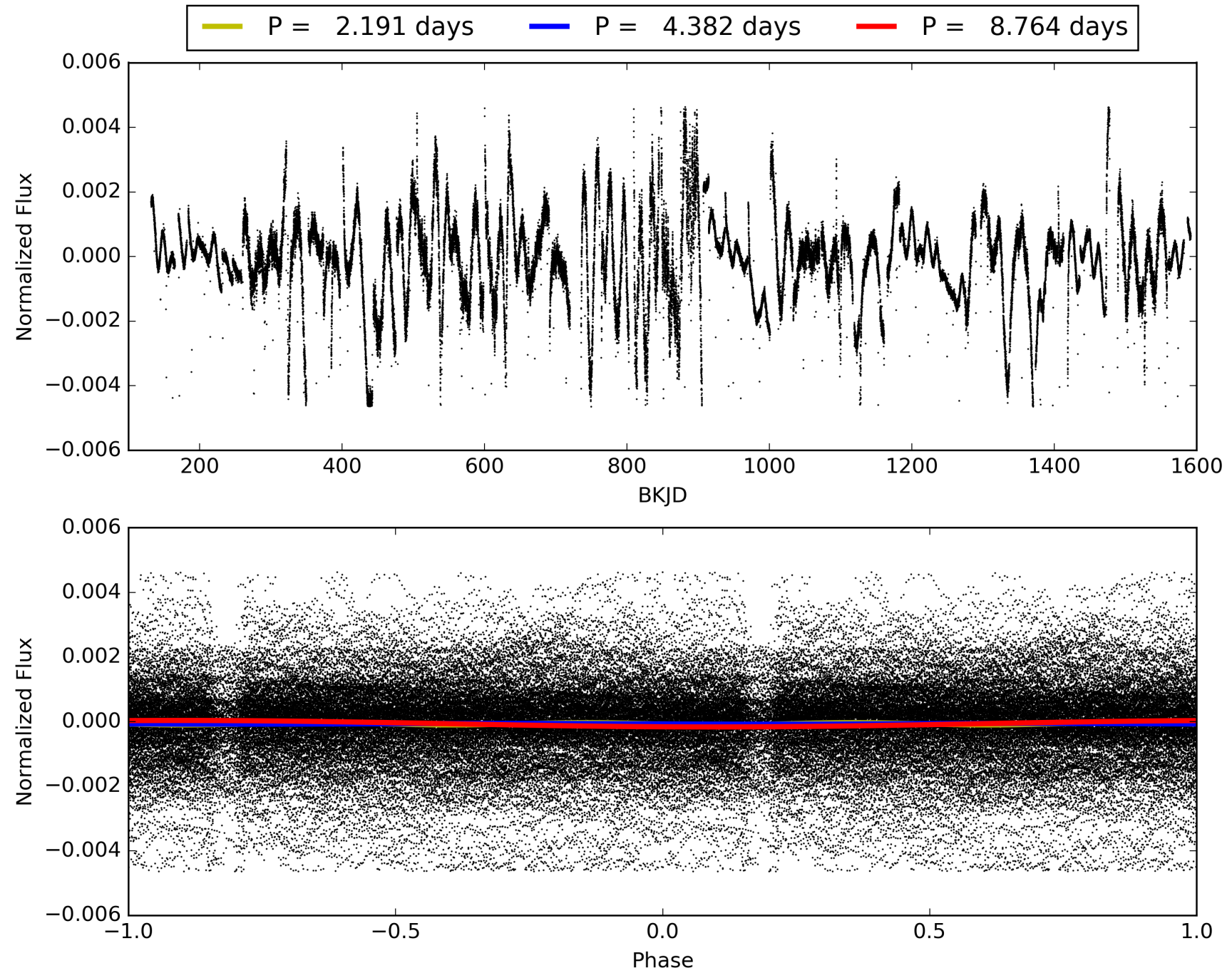
No Significant Match Found

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

TCE 006131659-03, PDC Light Curves

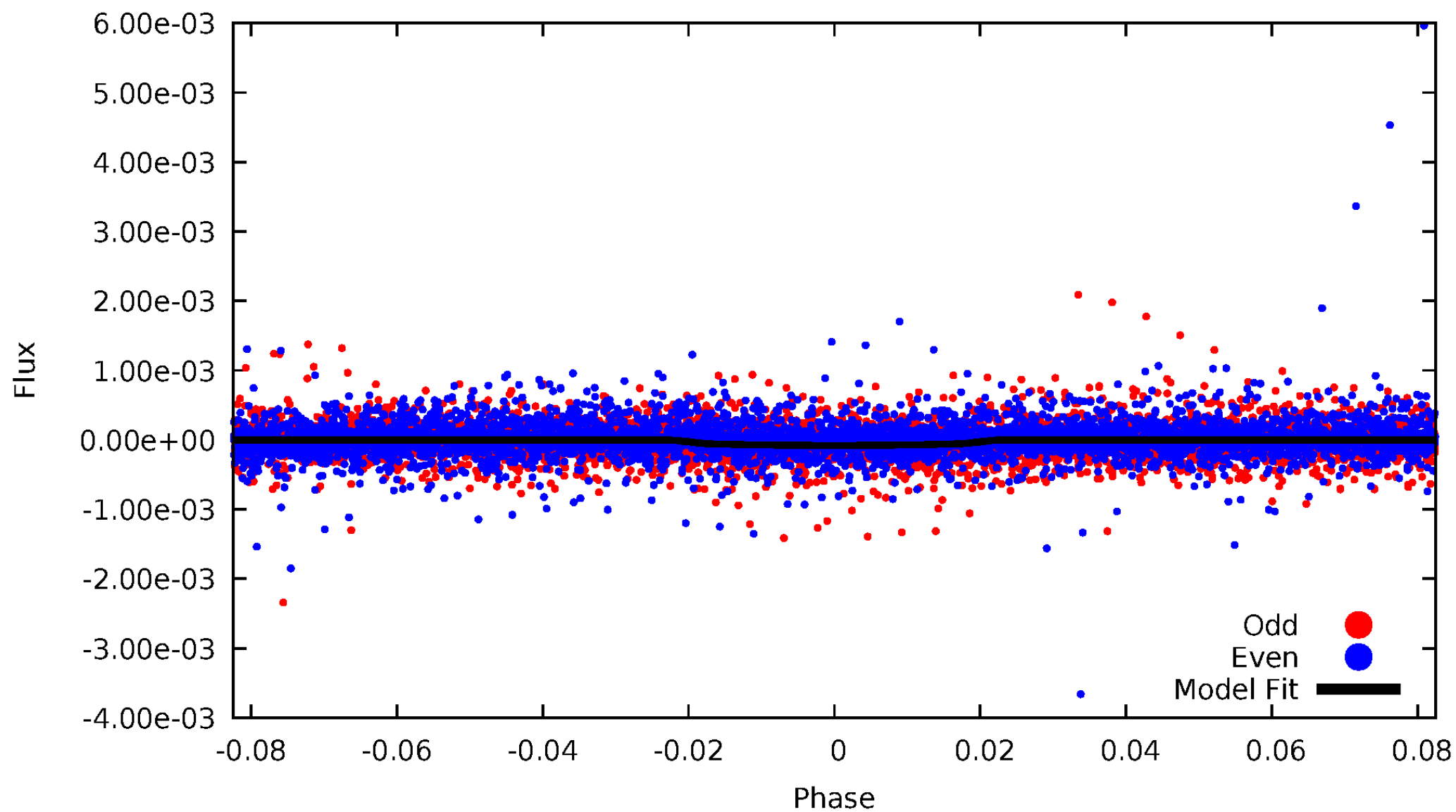


TCE 006131659-03



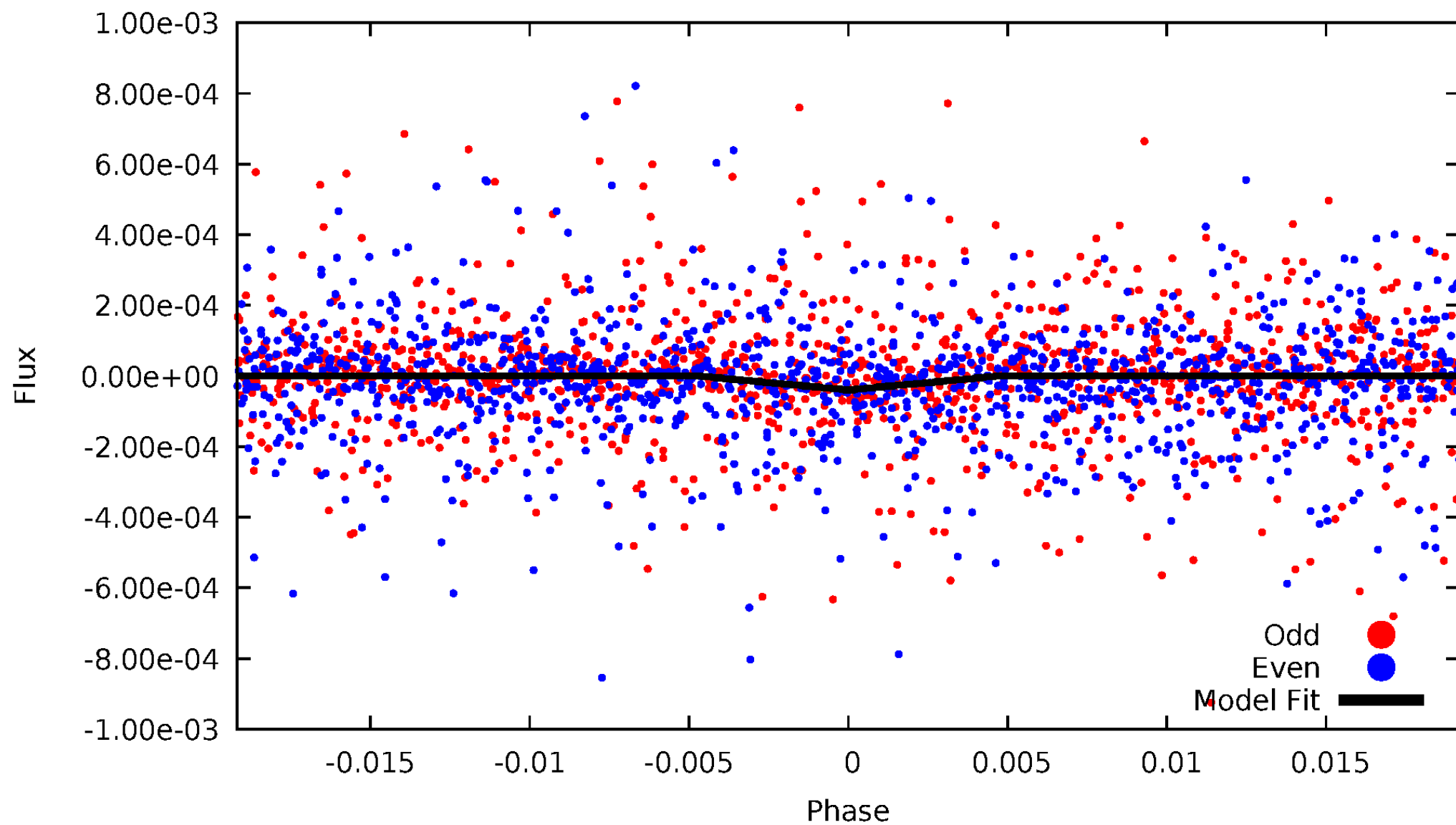
DV Odd/Even

TCE 006131659-03



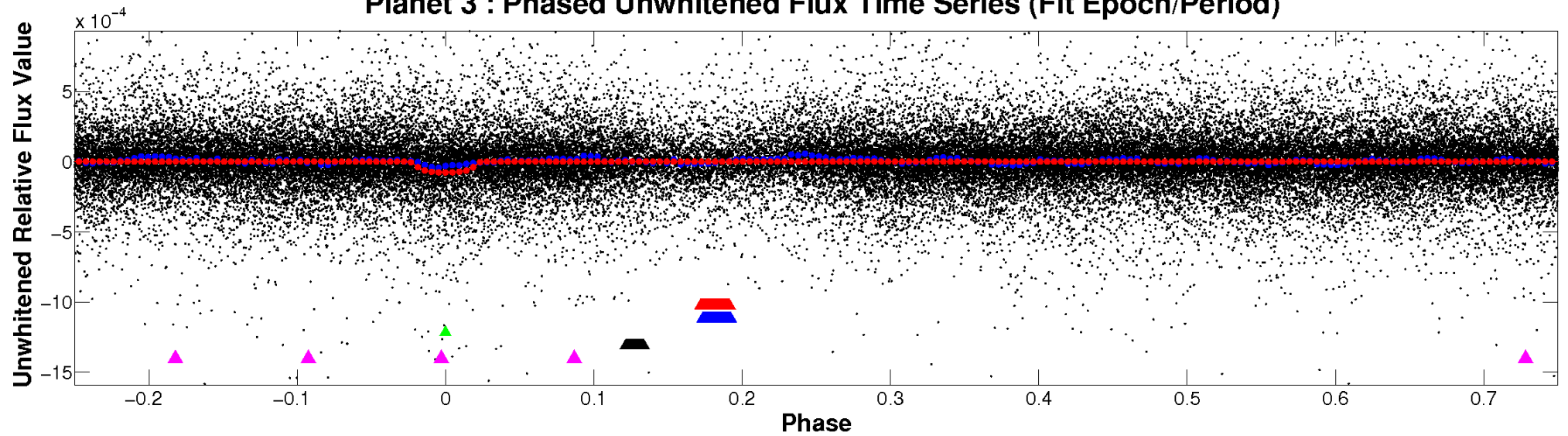
ALT Odd/Even

TCE 006131659-03

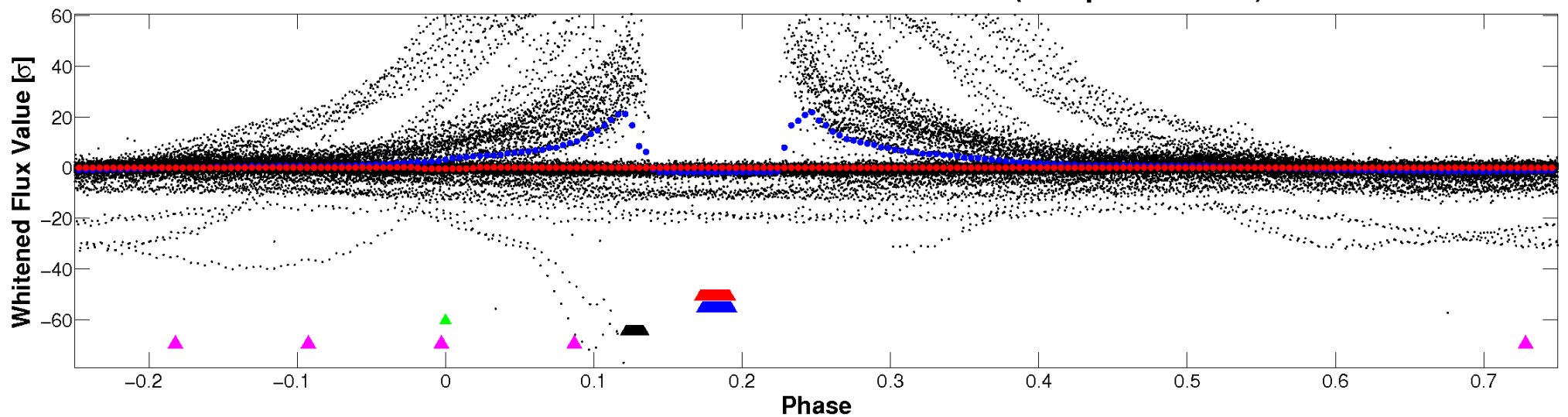


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

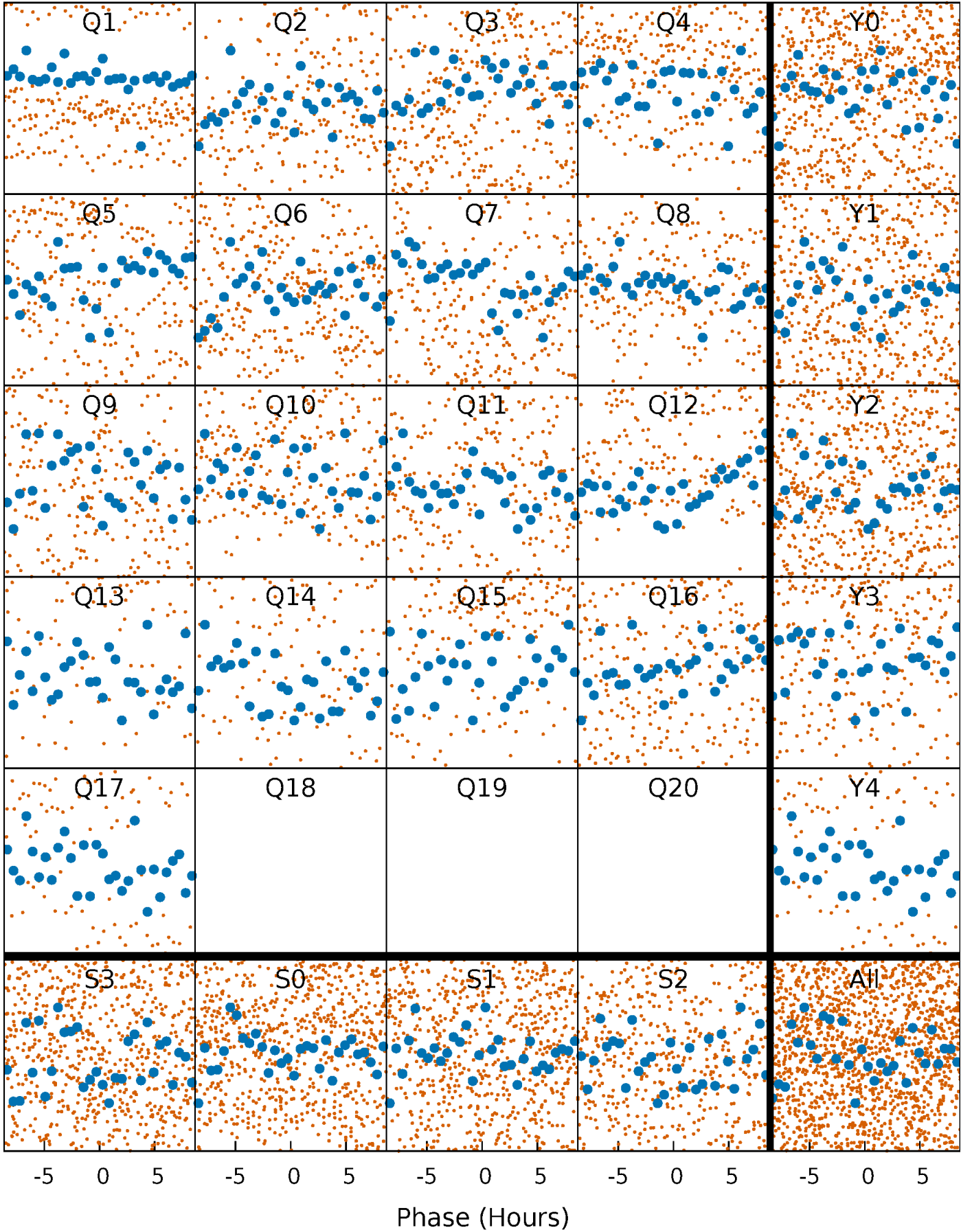


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



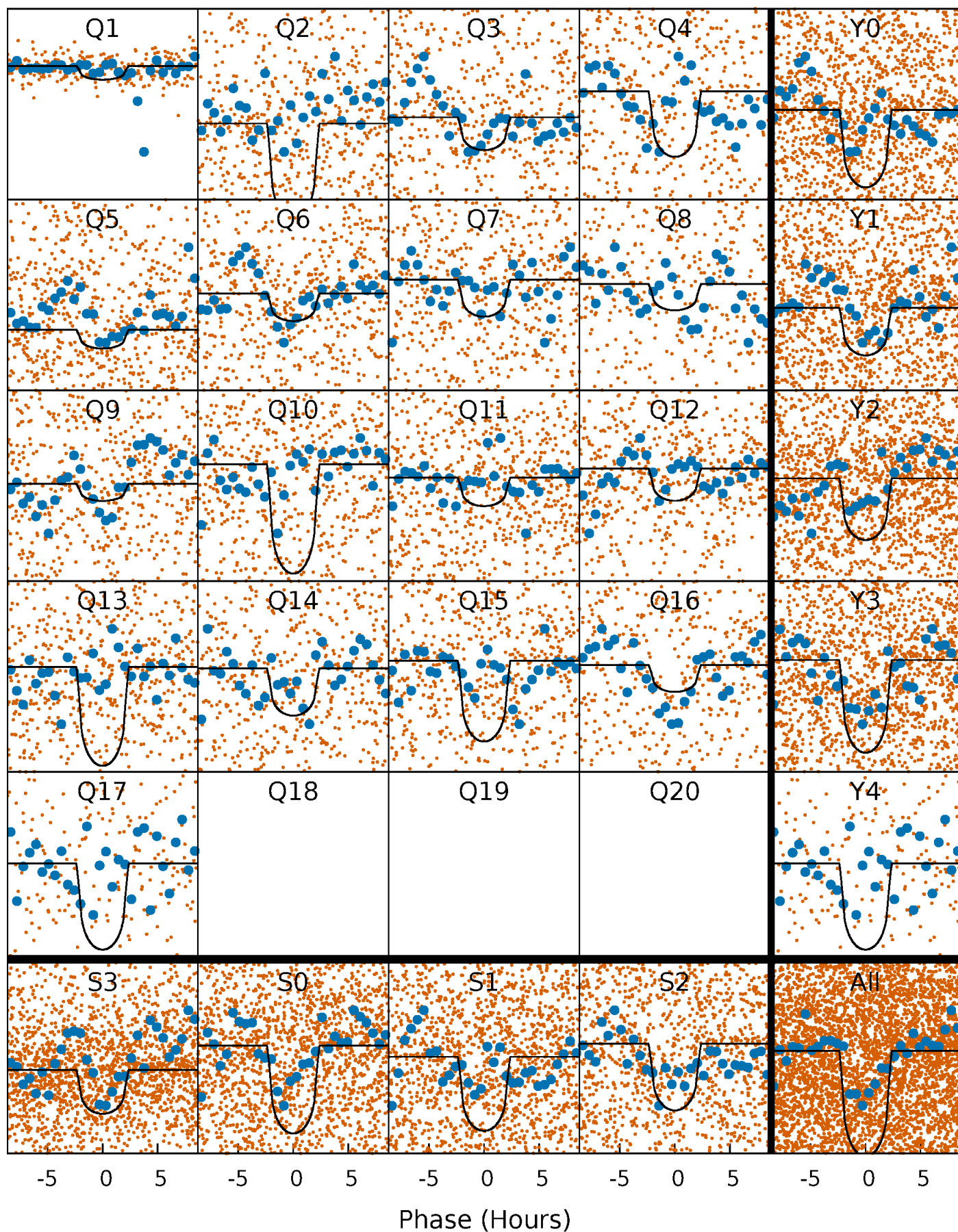
PDC Quarter-Phased Transit Curves

TCE 006131659-03 P= 4.382205 Days $T_0=134.964651$ (BKJD)



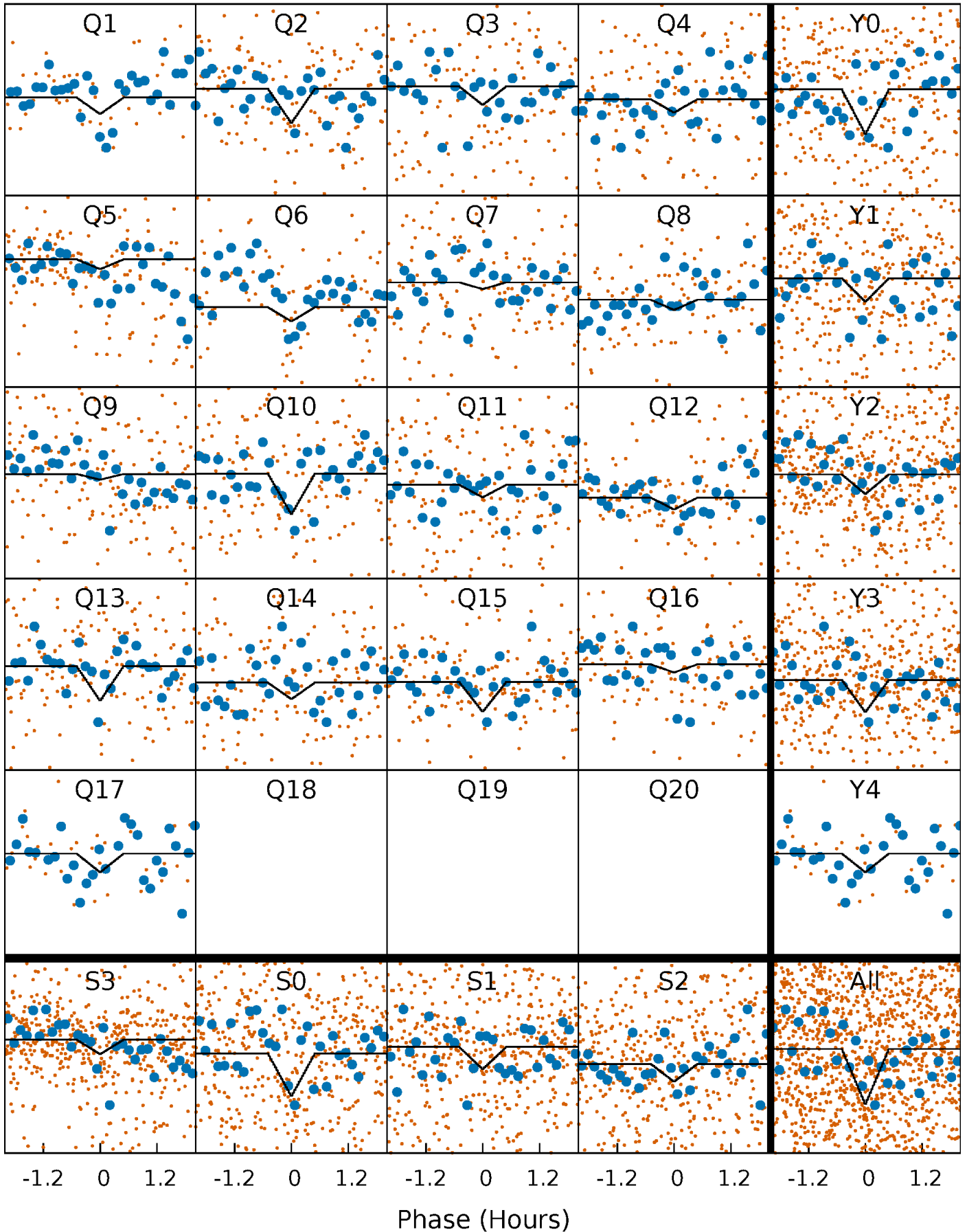
DV Quarter-Phased Transit Curves

TCE 006131659-03 P= 4.382205 Days $T_0=134.964651$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

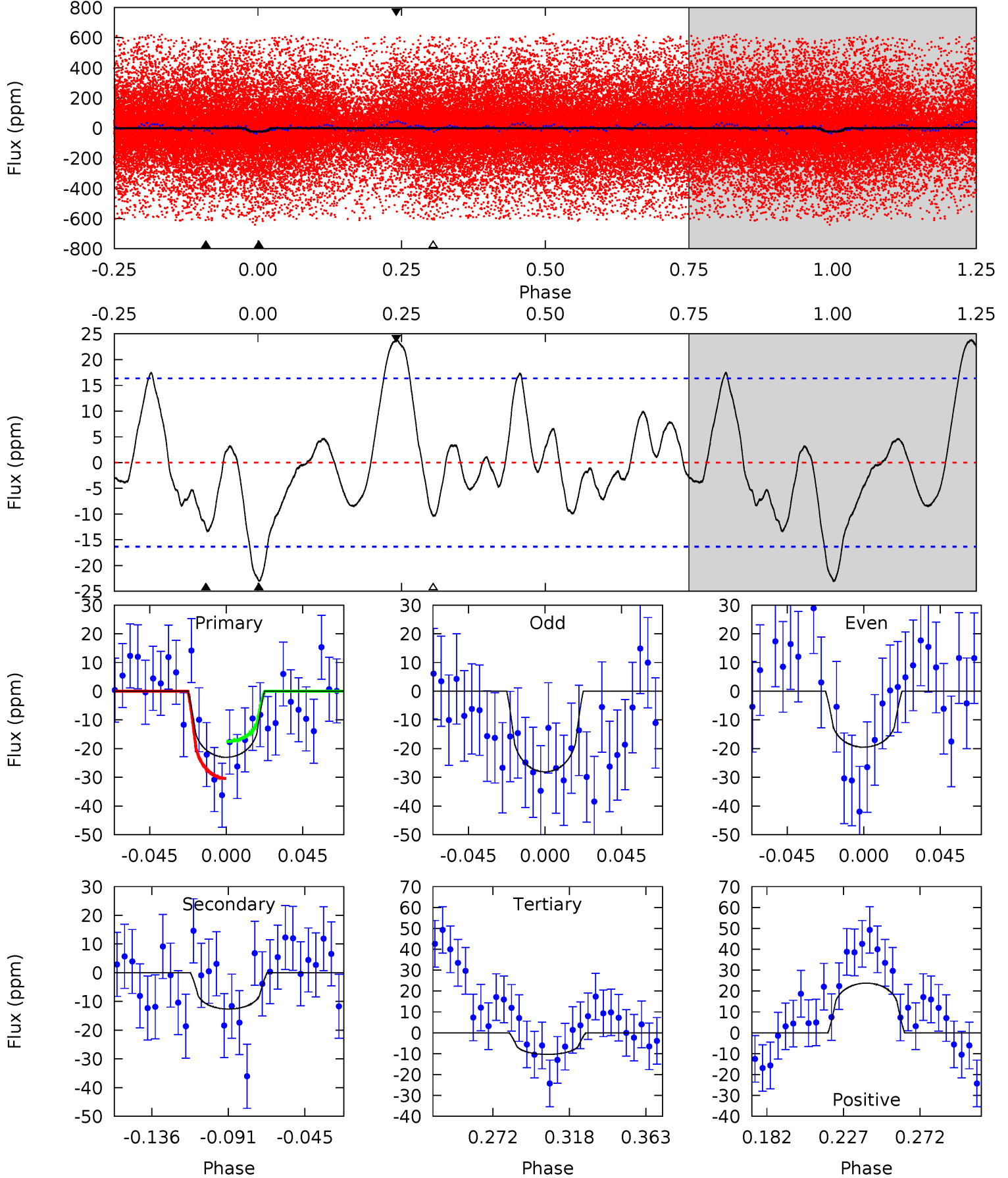
TCE 006131659-03 P= 4.382047 Days $T_0=134.935897$ (BKJD)



DV Model-Shift Uniqueness Test

006131659-03, P = 4.382205 Days, E = 130.582446 Days

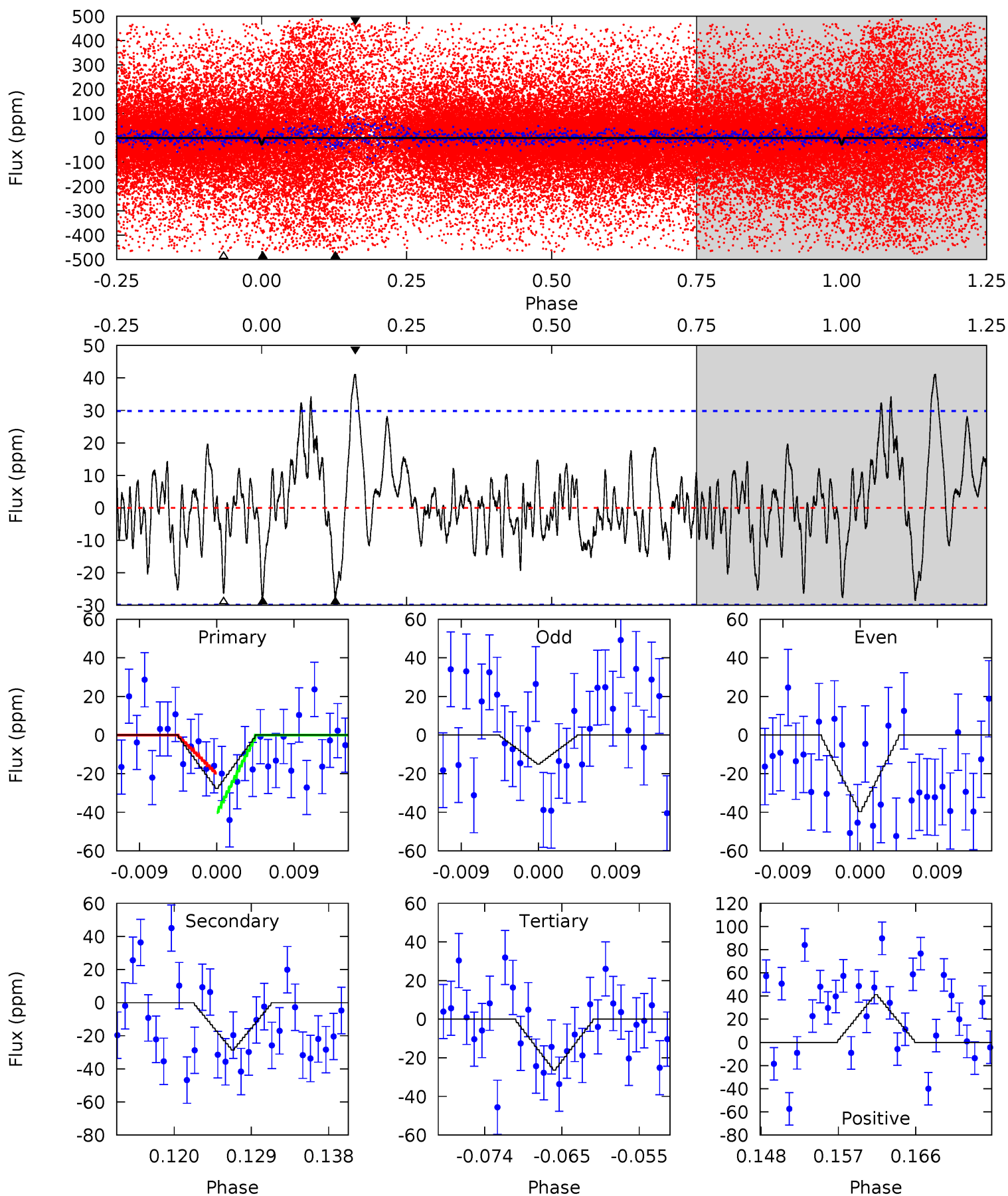
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.65	3.65	2.99	6.87	4.73	2.00	2.16	3.66	-0.22	0.66	-3.22	1.25	1.76	0.51	1.87



Alt Model-Shift Uniqueness Test

006131659-03, P = 4.382047 Days, E = 130.553850 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.67	4.85	4.46	6.97	5.04	2.60	1.65	0.21	-2.30	0.39	-2.12	2.10	0.72	0.59	1.69



Stellar Parameters For KIC 006131659

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5079^{+151}_{-136}	$4.579^{+0.050}_{-0.050}$	$-0.240^{+0.300}_{-0.300}$	$0.732^{+0.072}_{-0.065}$	$0.741^{+0.085}_{-0.064}$	$2.659^{+0.618}_{-0.502}$
	+3%/-3%	+1%/-1%	+125%/-125%	+10%/-9%	+11%/-9%	+23%/-19%
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 006131659-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-13 ± 3	$0.80^{+0.65}_{-0.52}$	1230^{+49}_{-41}	3485^{+1679}_{-598}	25^{+176}_{-18}
Alt.	-29 ± 6	$0.79^{+0.59}_{-0.51}$	1231^{+44}_{-43}	3981^{+2198}_{-678}	57^{+410}_{-39}

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

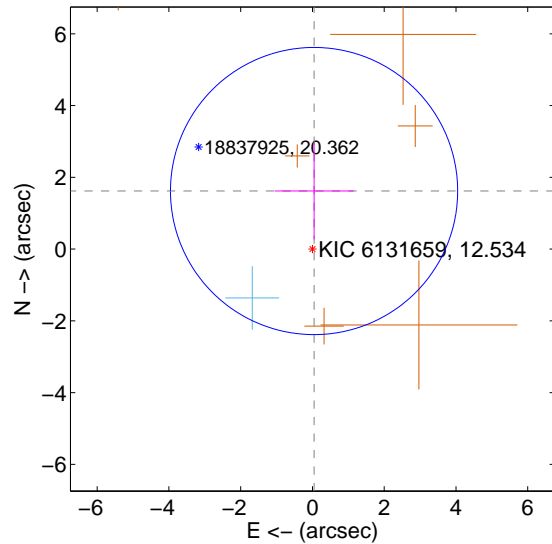
Supplemental centroid analysis for 006131659-03. Kepler magnitude: 12.53. Transit SNR 16.76

There are 1 quarters with good PRF difference image offsets

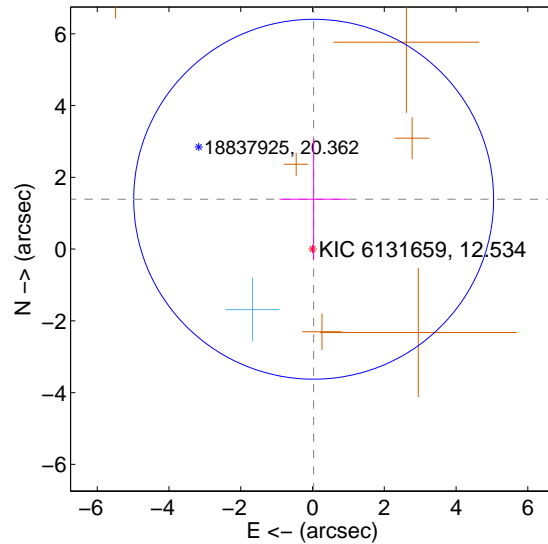
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.619 ± 1.334	1.21	-0.045 ± 1.101	1.618 ± 1.345
PRF-fit source offset from KIC position	1.390 ± 1.671	0.83	-0.032 ± 0.952	1.389 ± 1.678
photometric centroid source offset	0.13 ± 0.26	0.49	-0.10 ± 0.26	0.08 ± 0.26

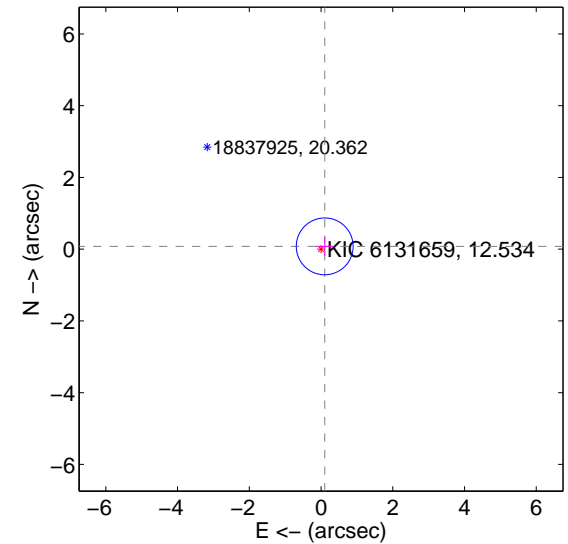
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

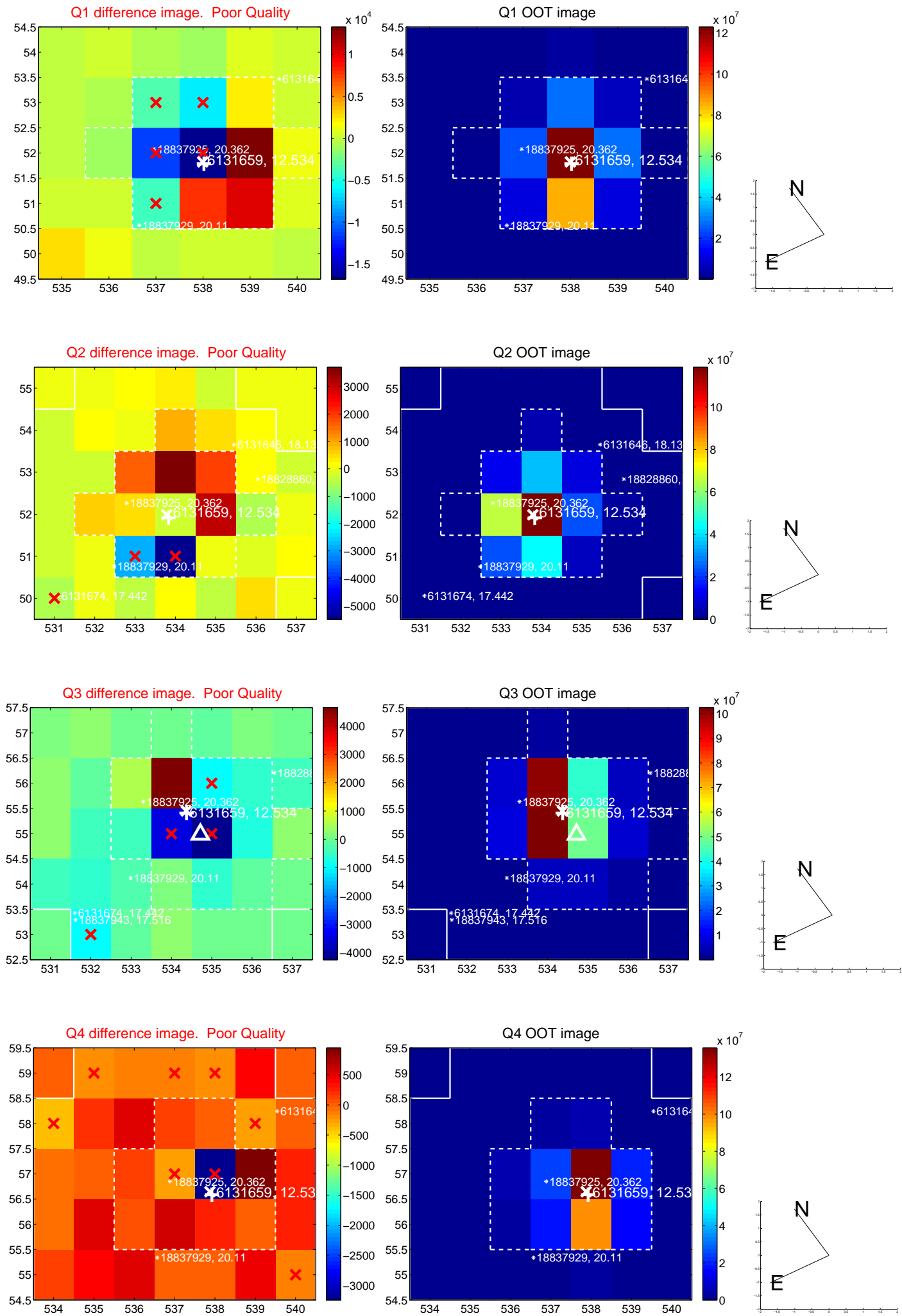


offset from photometric centroids

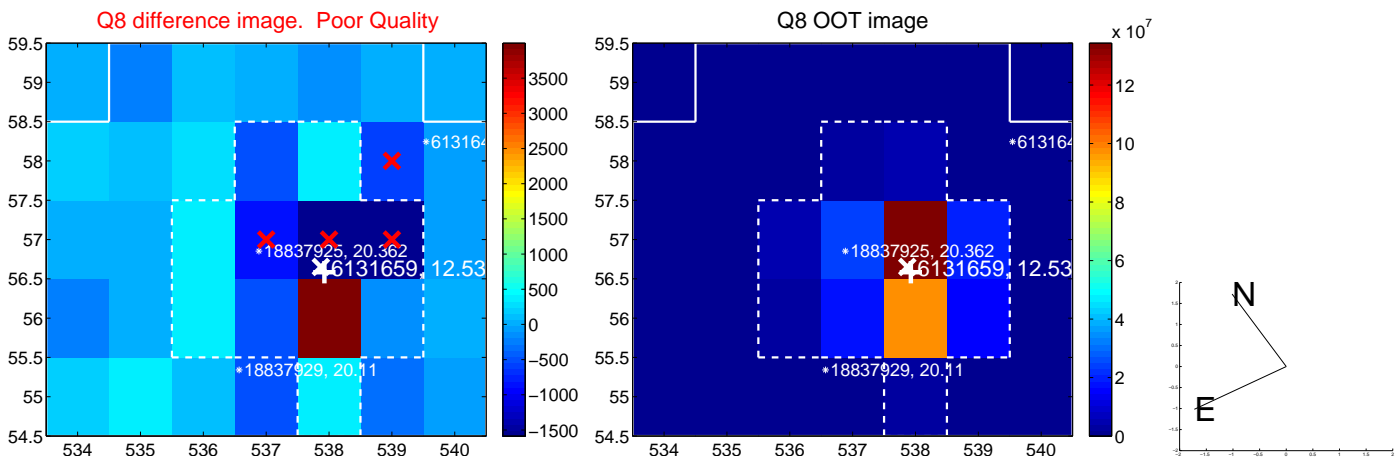
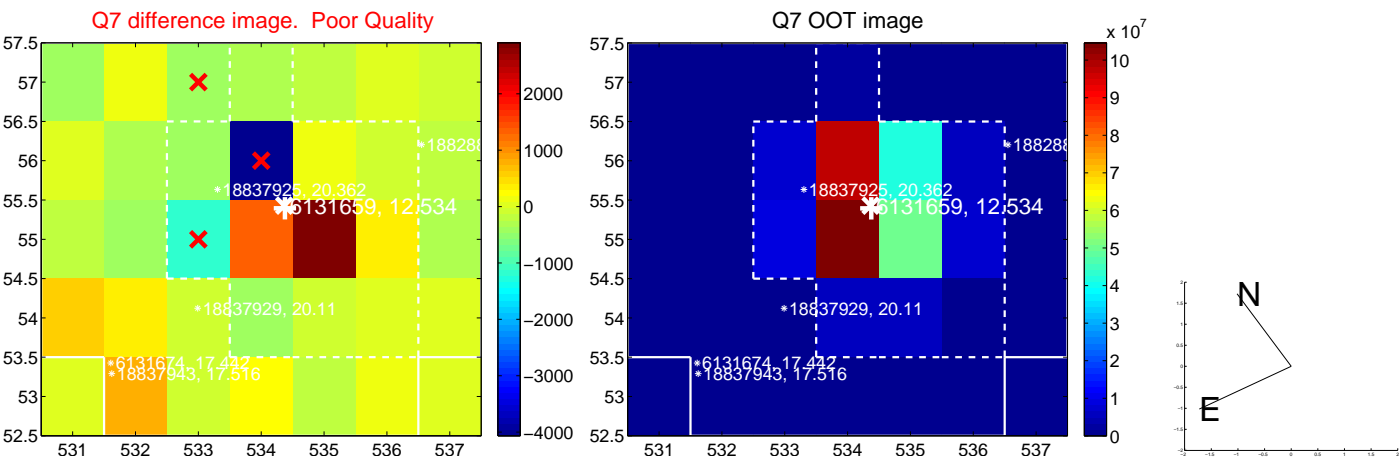
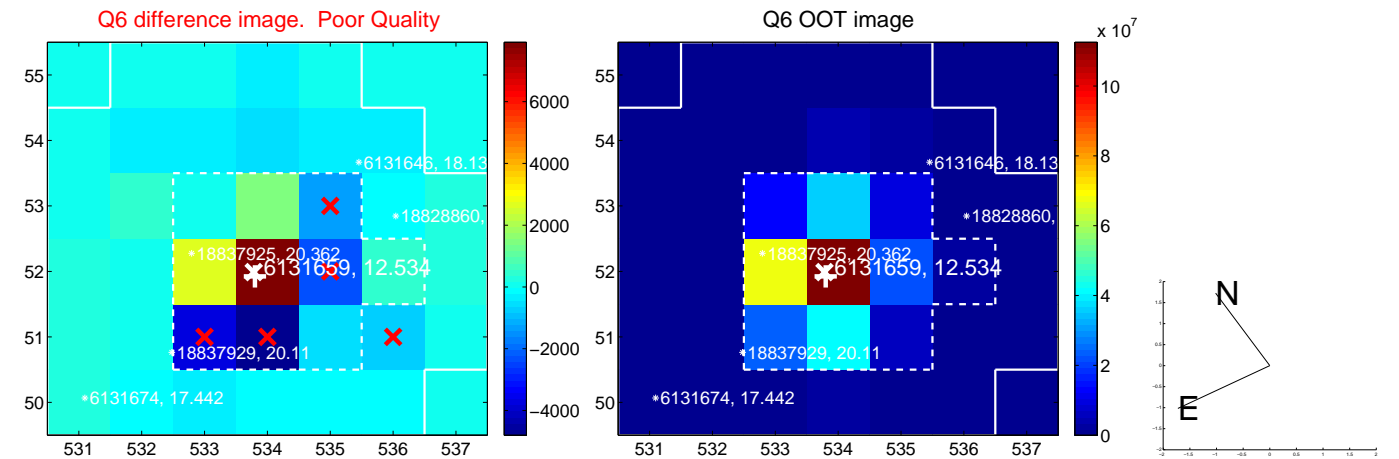
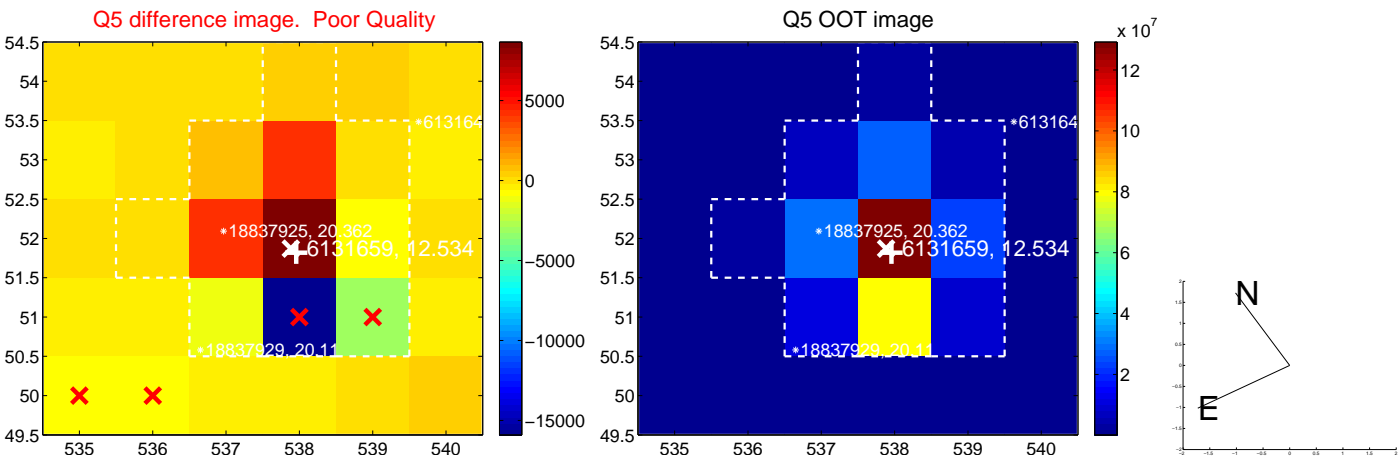


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

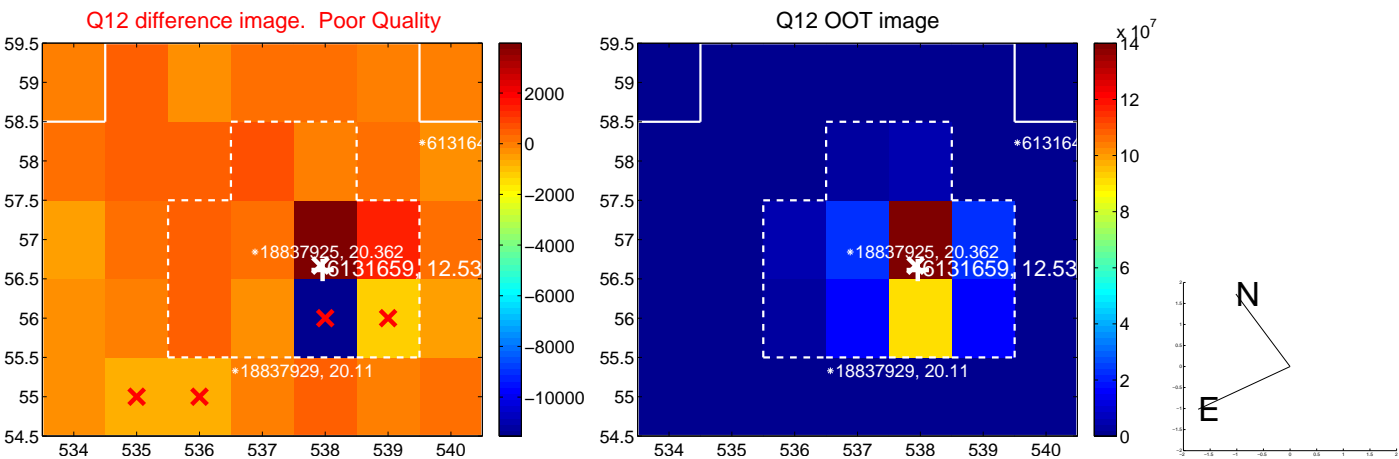
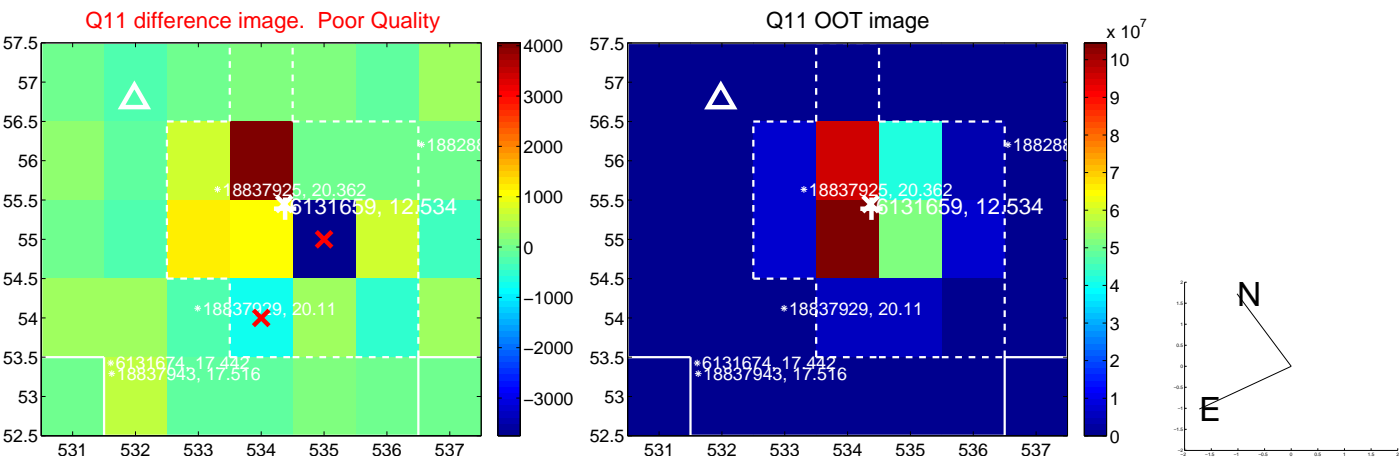
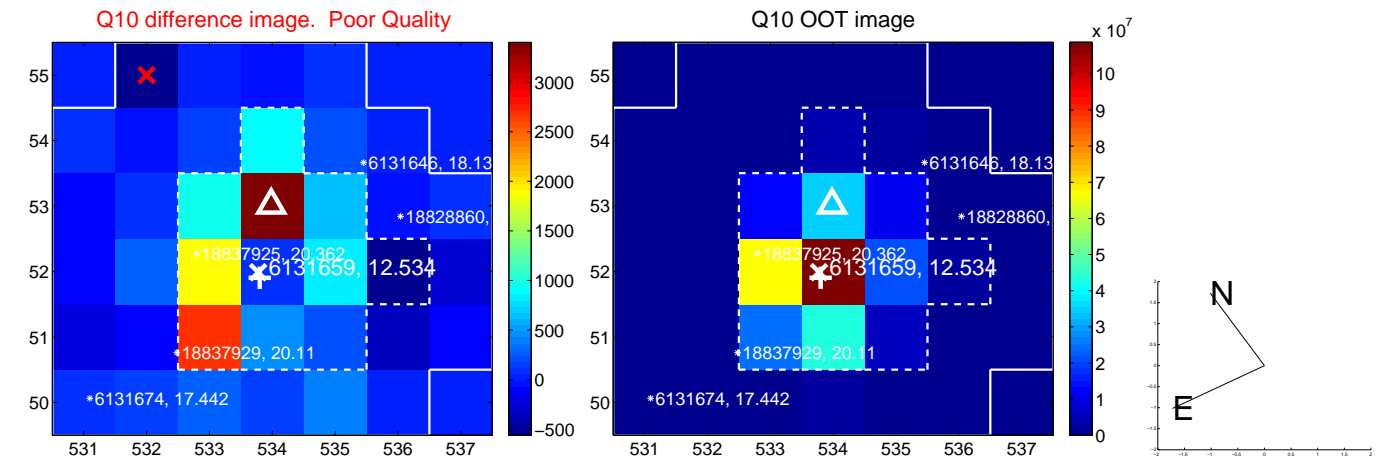
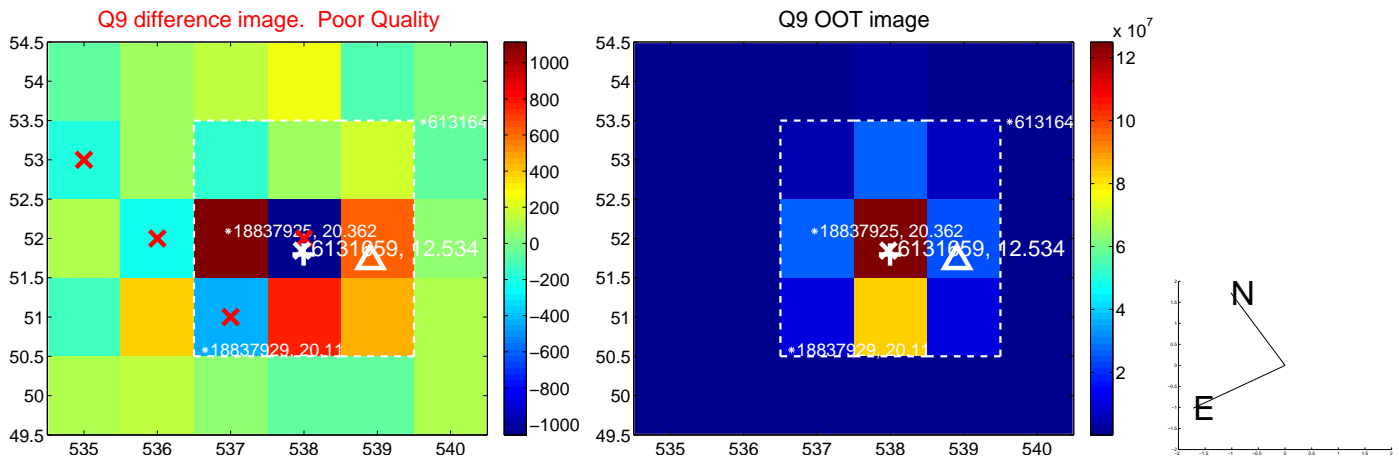
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



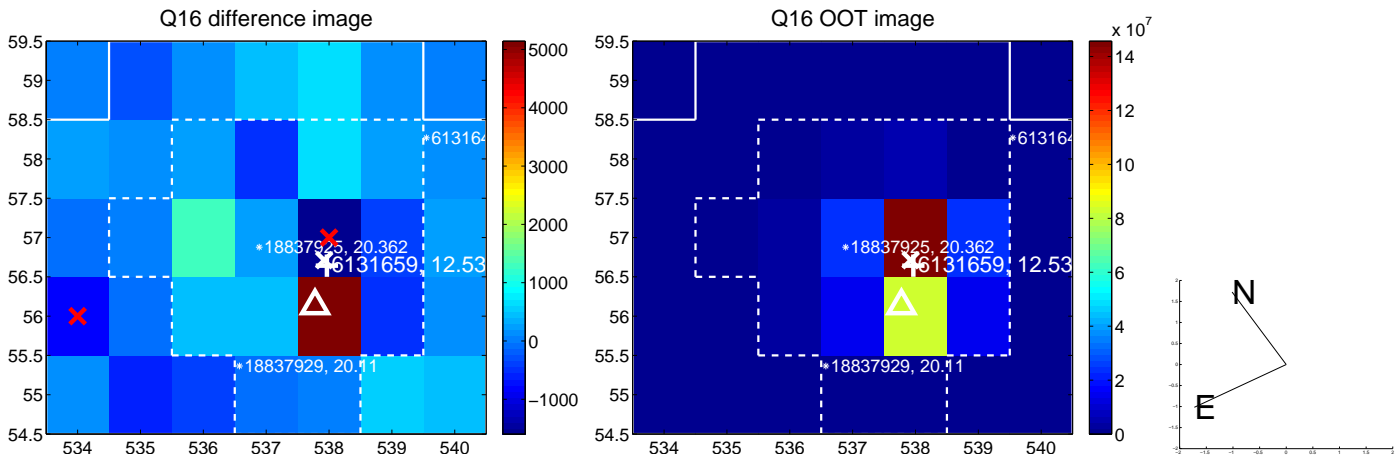
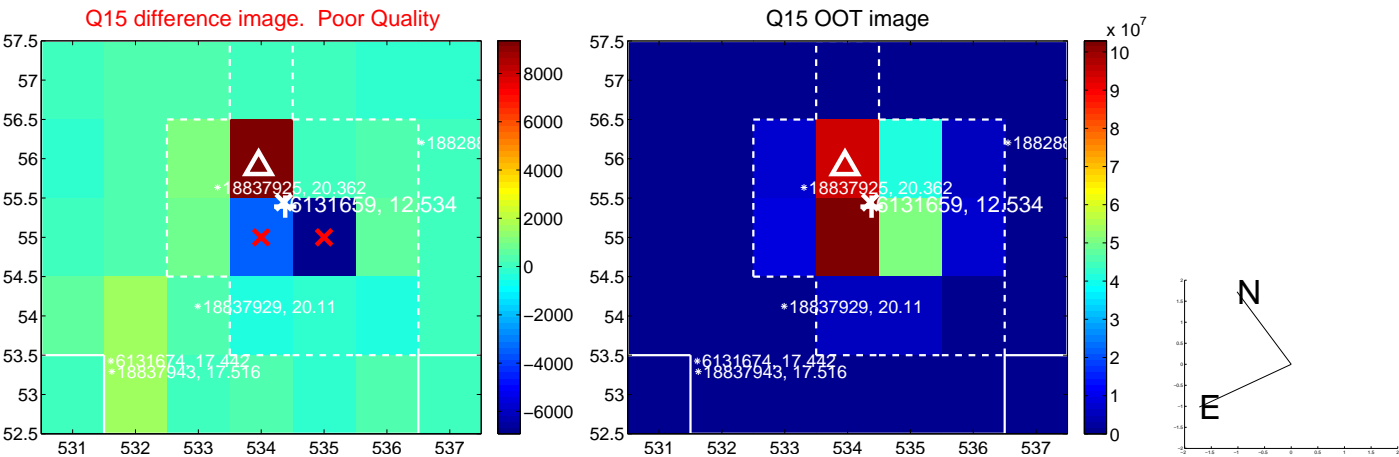
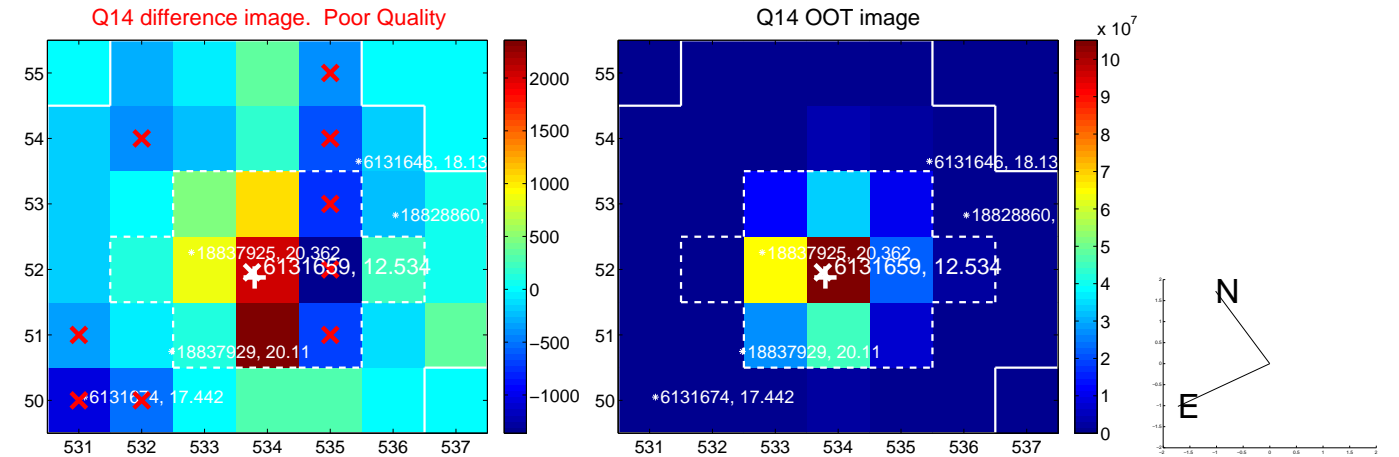
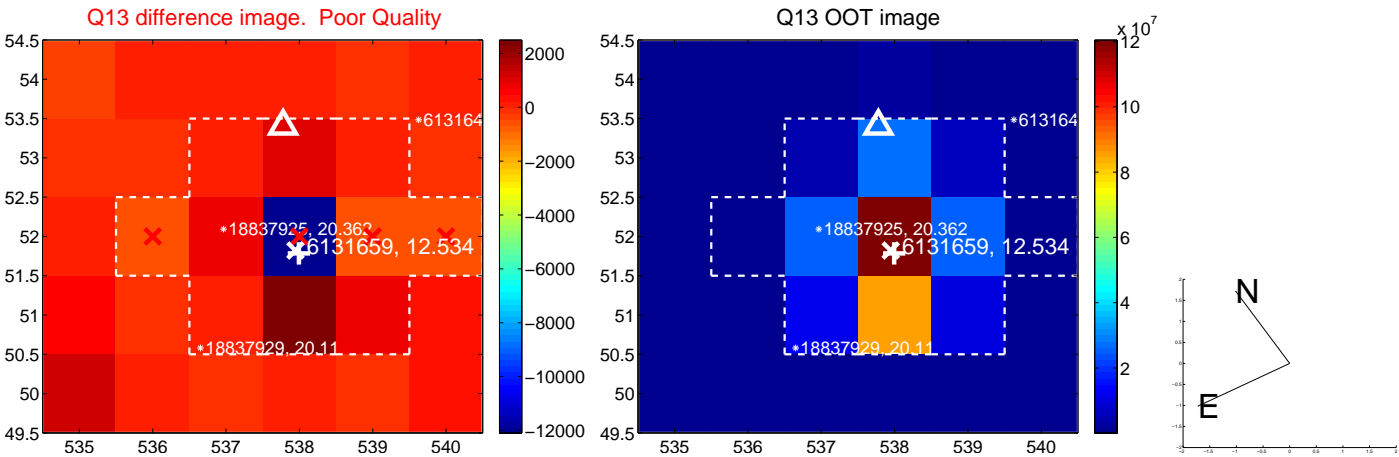
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



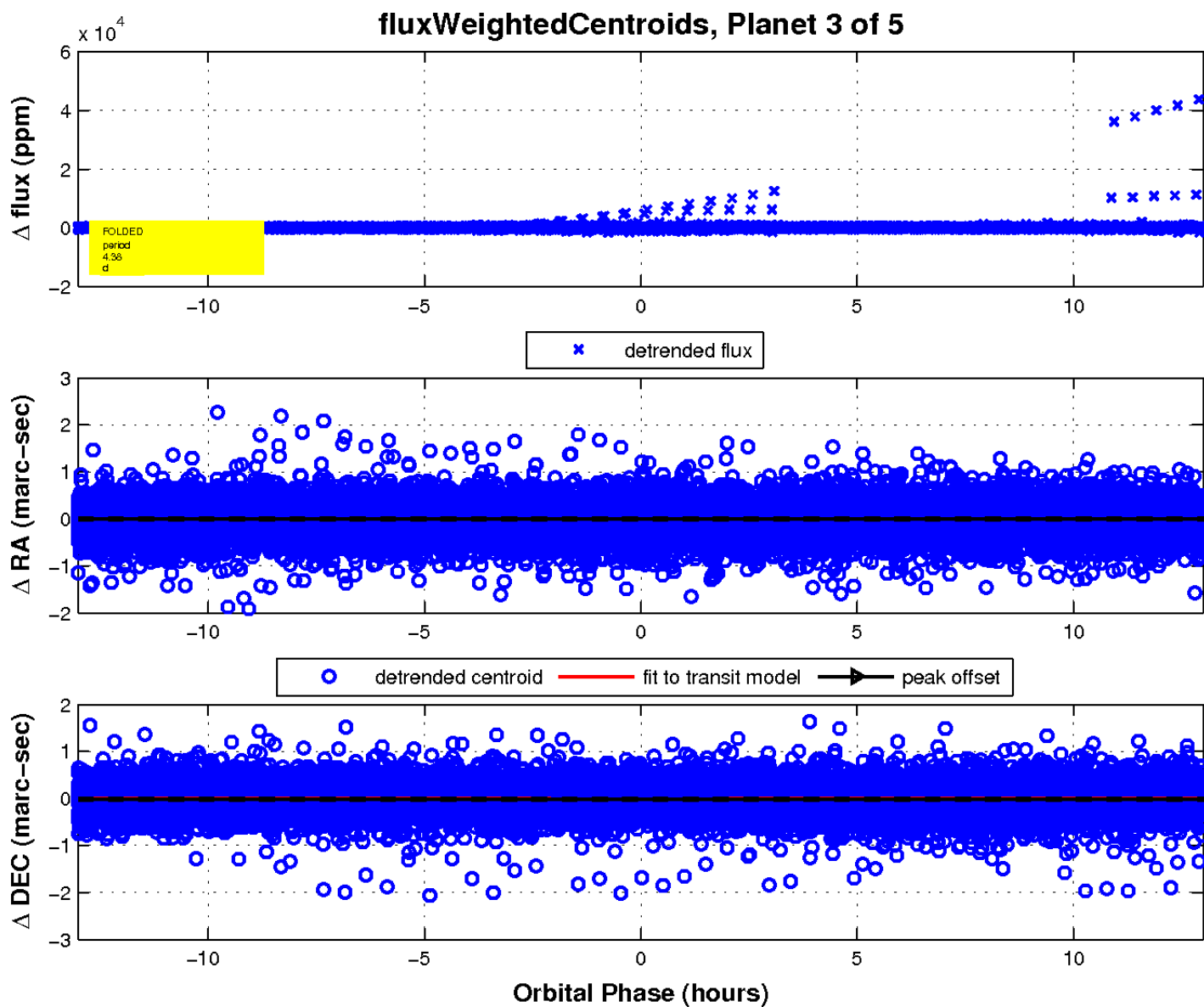
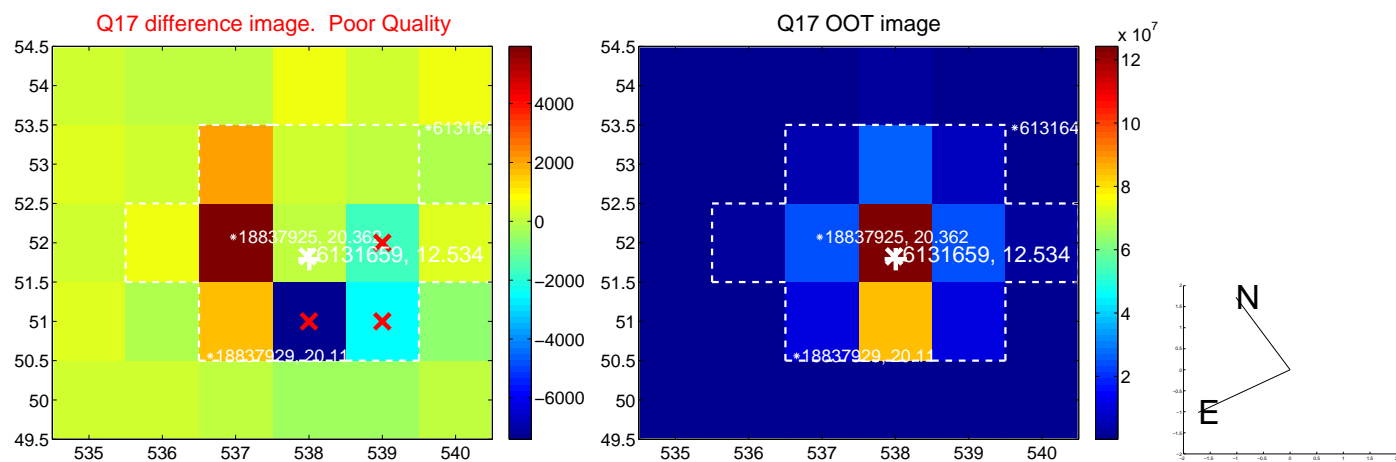
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



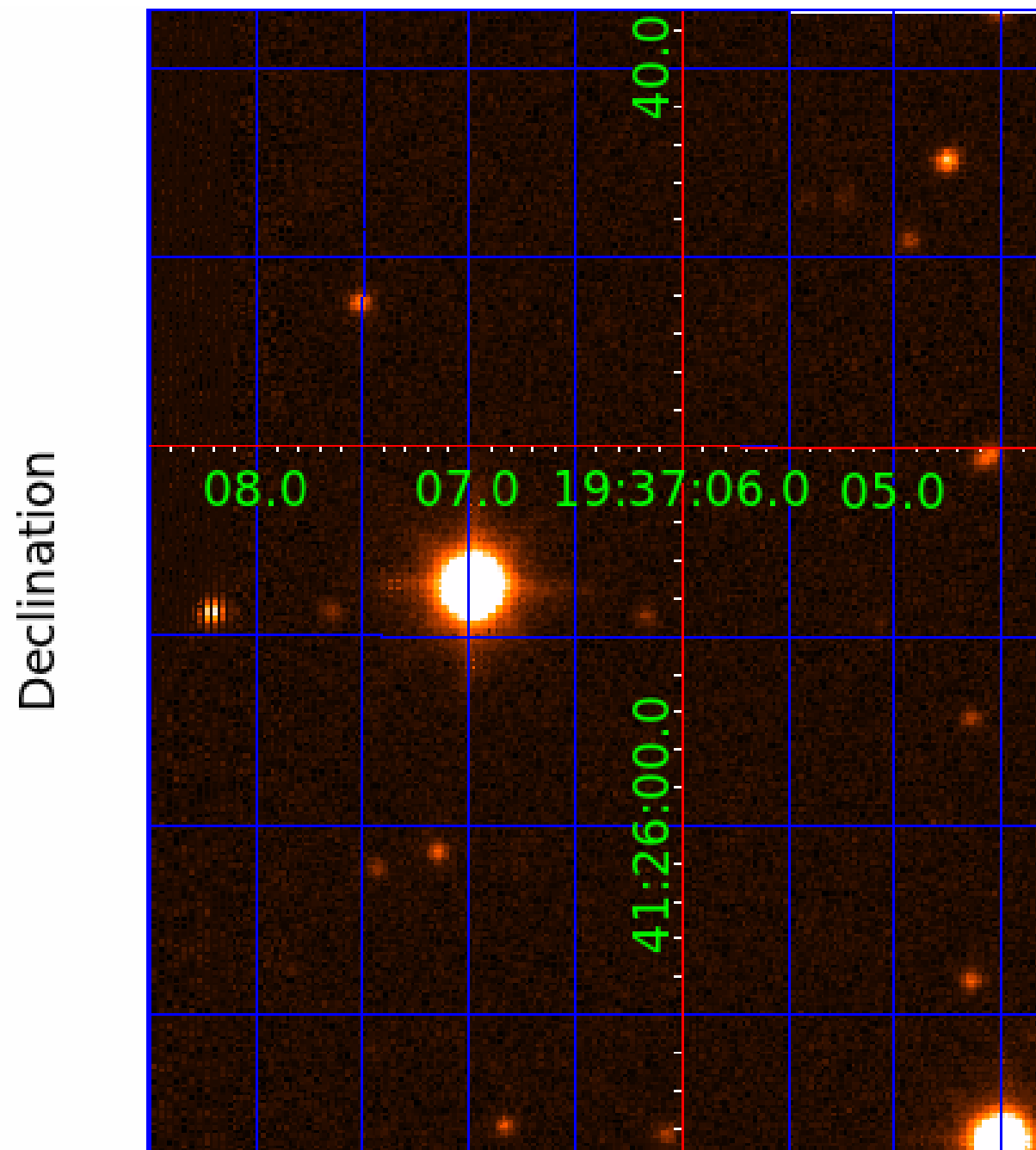
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006131659

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})
006131659-01	OBS	6667.01	17.527782	144.568039	347396.3	3.500	35910.5	-1.0	0.73	5079	38.83	22.36
006131659-02	OBS	No	17.527822	135.807479	107002.4	5.635	13299.0	6128.3	0.73	5079	37.33	22.36
006131659-03	OBS	No	4.382205	134.964651	77.2	4.335	1866.4	16.8	0.73	5079	0.62	141.94
006131659-04	OBS	No	4.382047	135.550028	16185.3	15.000	2084.5	-1.0	0.73	5079	9.07	141.94
006131659-05	OBS	No	298.382848	317.826380	1314.1	5.608	38.0	23.0	0.73	5079	5.30	0.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006131659-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
006131659-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
006131659-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— SAME_NTL_PERIOD—CENT_FEW_DIFFS—HALO_GHOST
006131659-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS
006131659-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS— 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.

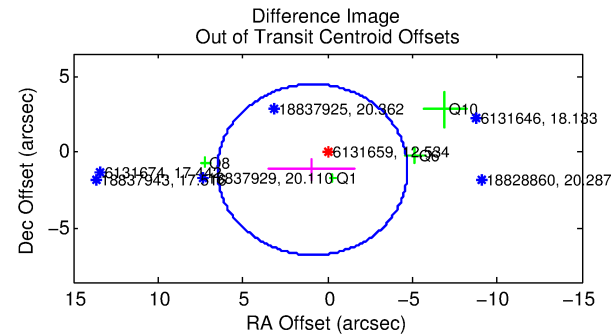
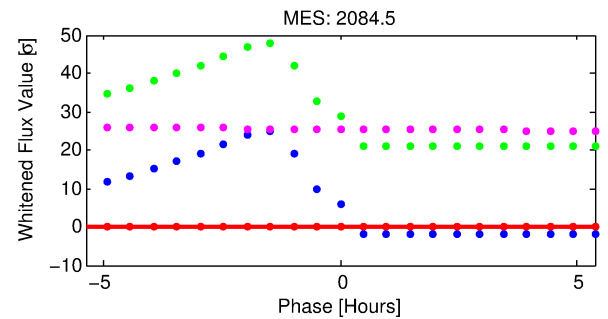
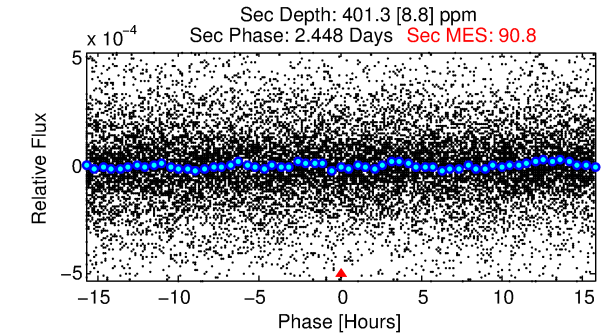
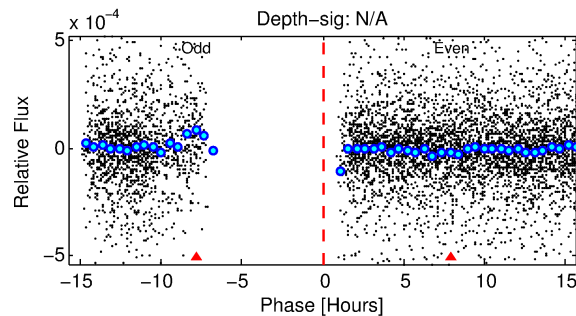
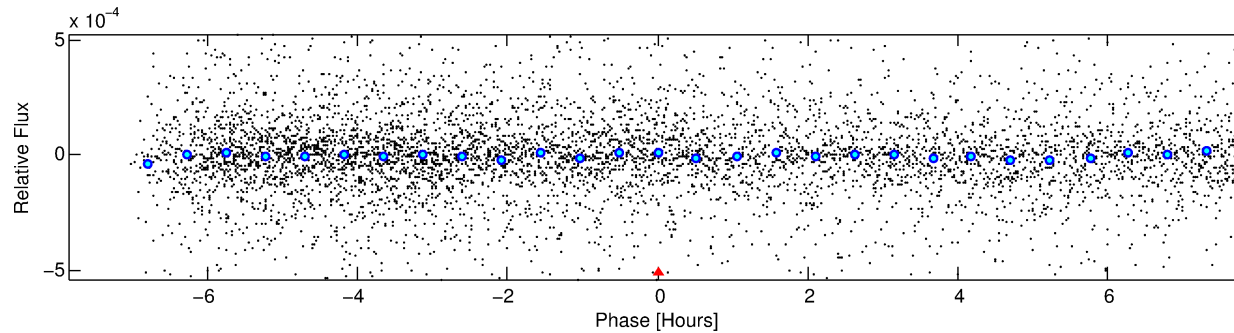
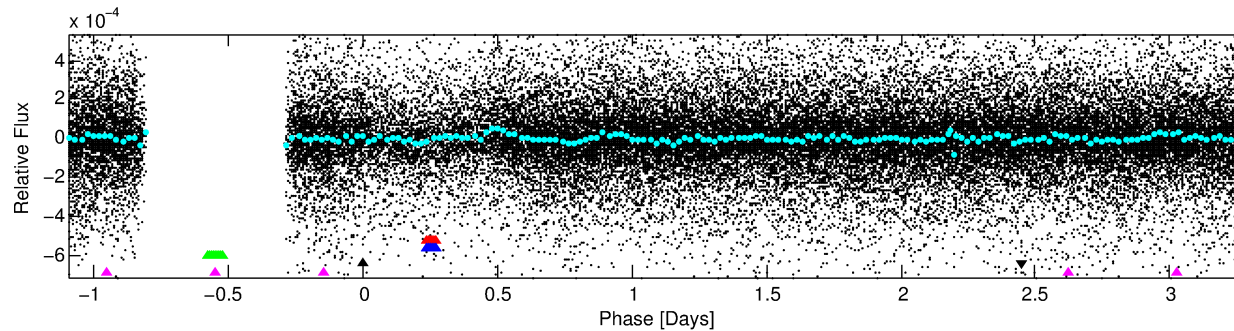
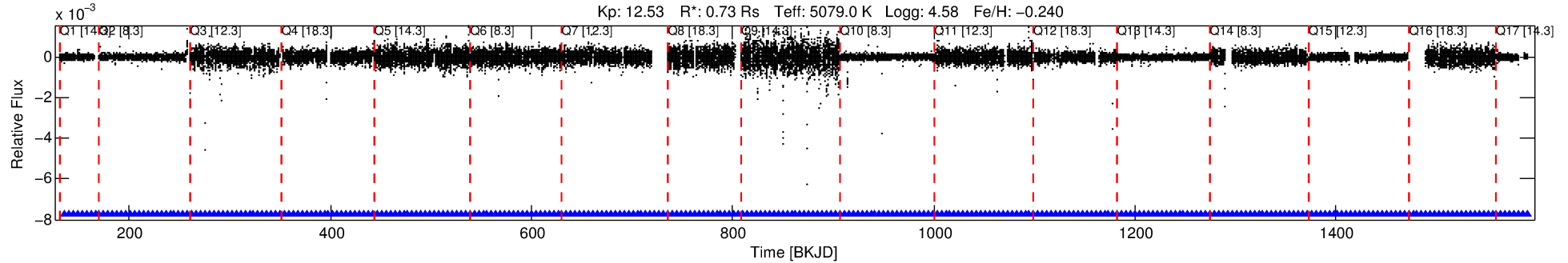
Ephemeris Match Information For 006131659-04

No Significant Match Found

DV One-Page Summary

KIC: 6131659 Candidate: 4 of 5 Period: 4.382 d
KOI: K06667 Corr: No Ephemeris Match

Kp: 12.53 R*: 0.73 Rs Teff: 5079.0 K Logg: 4.58 Fe/H: -0.240



TPS TCE Results:

Period = 4.38205 d
Epoch = 135.5500 BKJD

DV fit results are unavailable

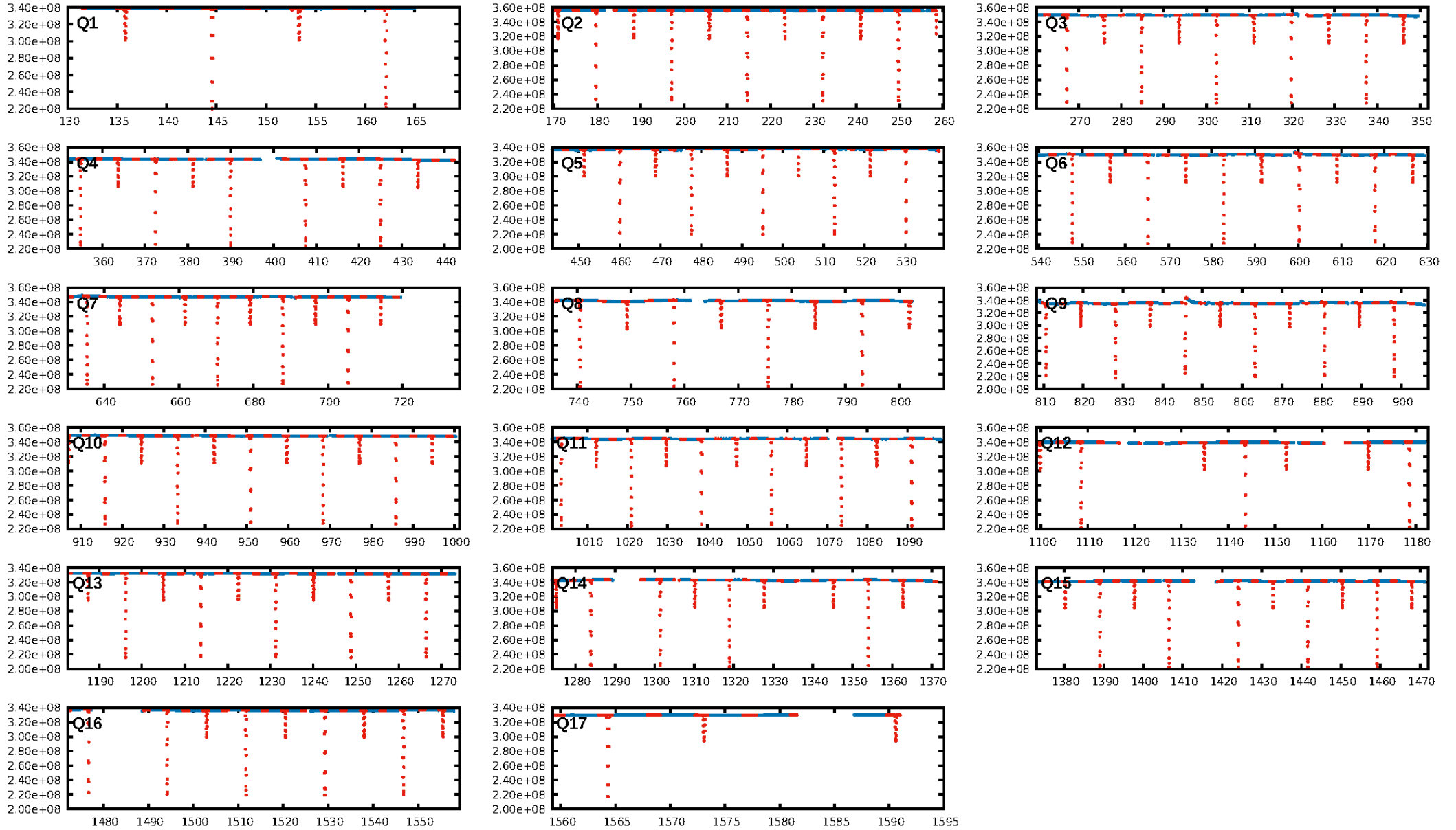
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [223/223]
GhostDiagnostic-chr: -0.6924
Centroid-sig: 0.0%
Centroid-so: 8.162 arcsec [4.15σ]
OotOffset-rm: 1.431 arcsec [0.77σ]
KicOffset-rm: 1.615 arcsec [0.96σ]
OotOffset-st: 2/0/1/1 [4]
KicOffset-st: 2/0/1/1 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [17/17]

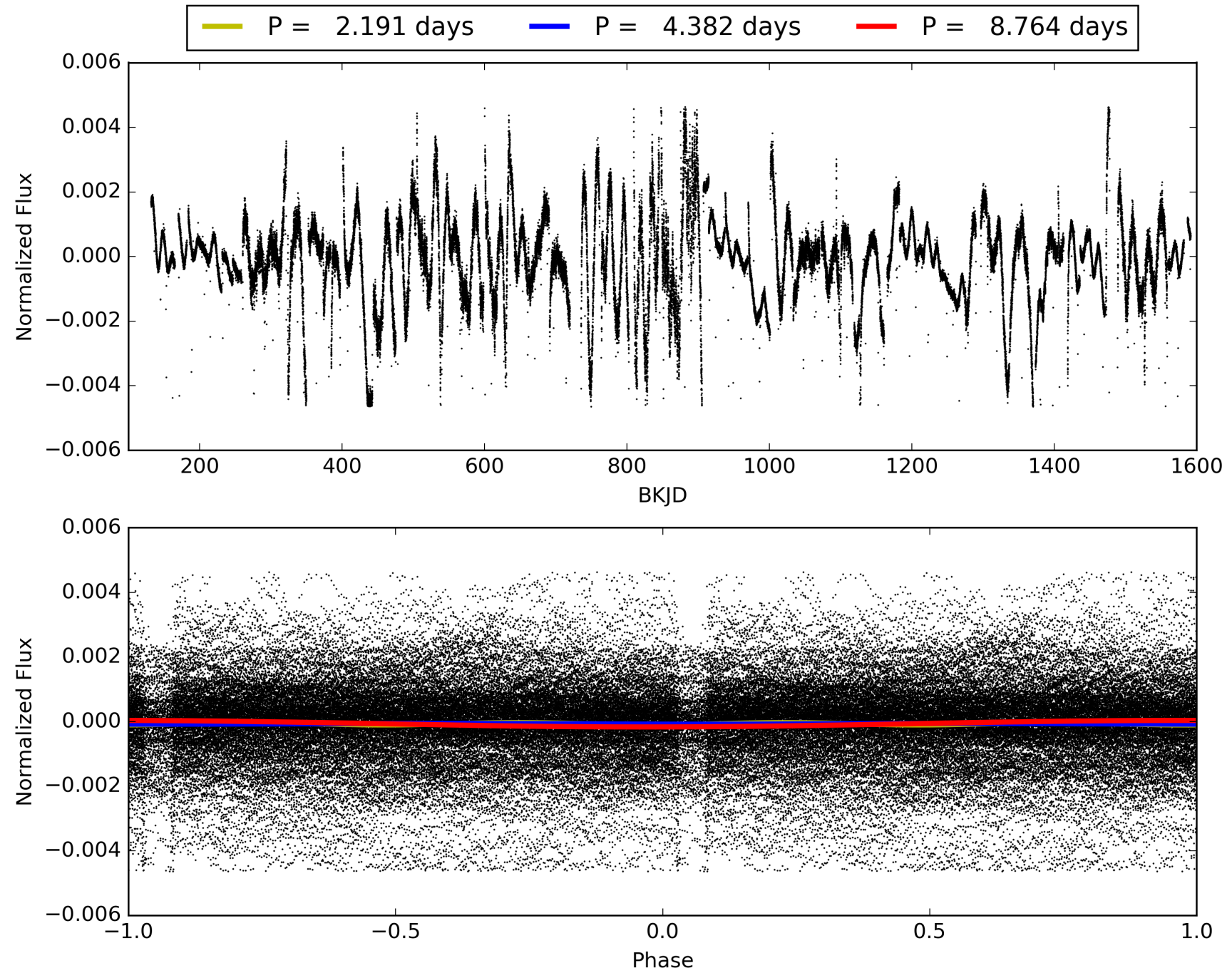
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 09:49:18 Z

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

TCE 006131659-04, PDC Light Curves

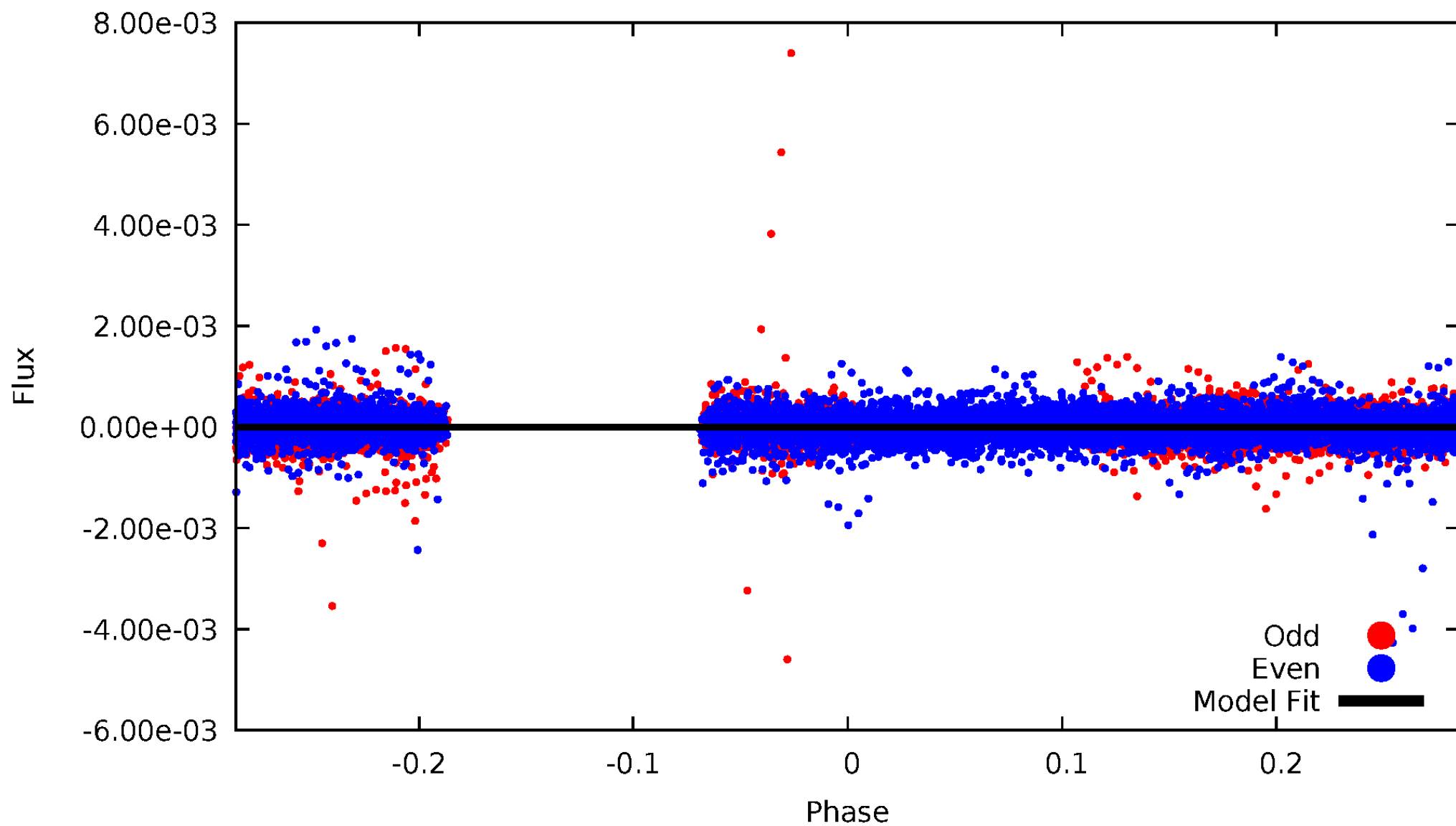


TCE 006131659-04



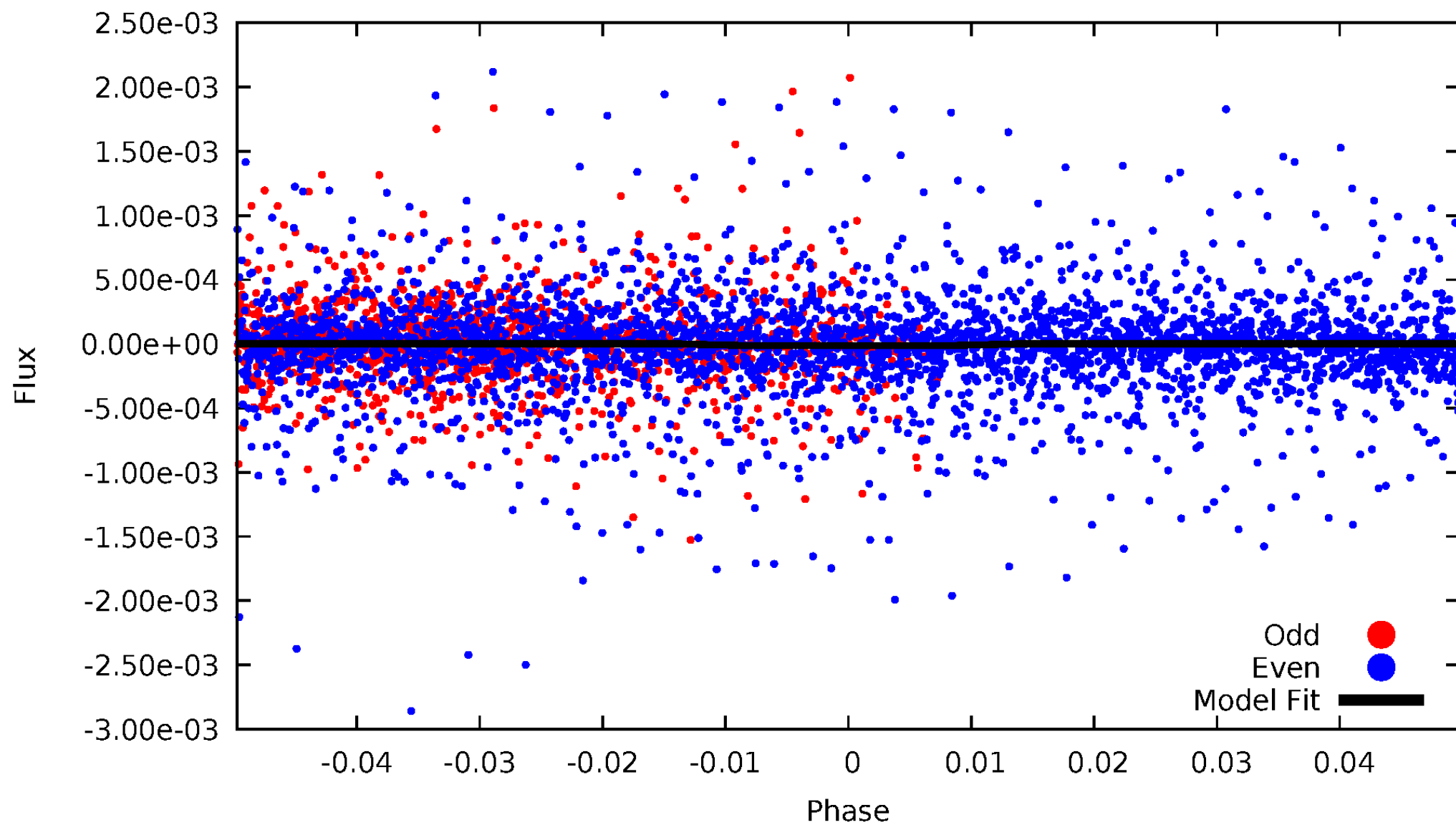
DV Odd/Even

TCE 006131659-04



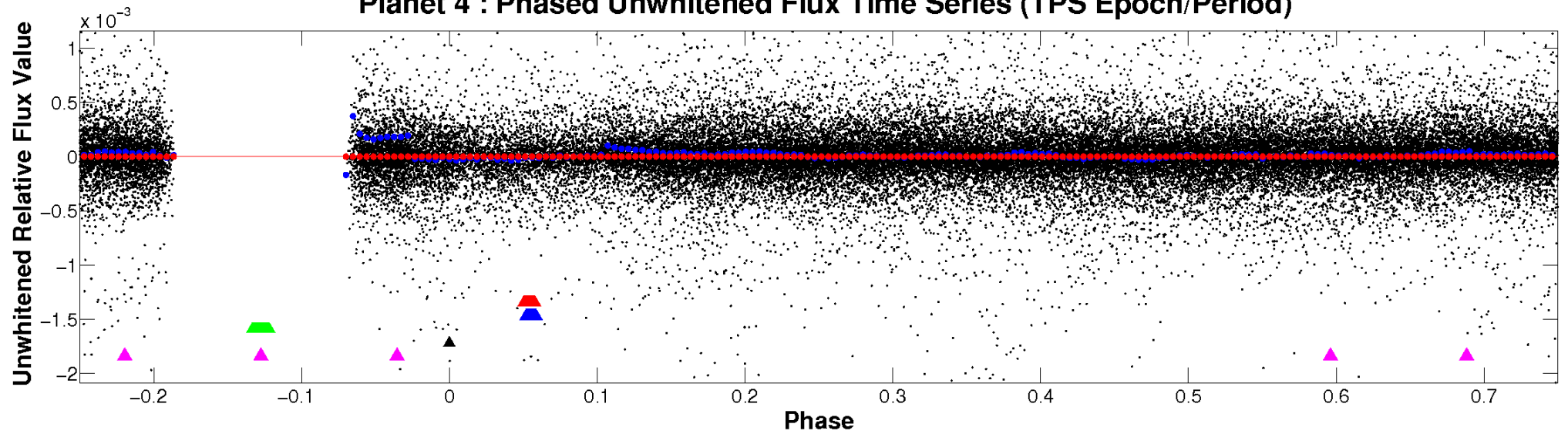
ALT Odd/Even

TCE 006131659-04



Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

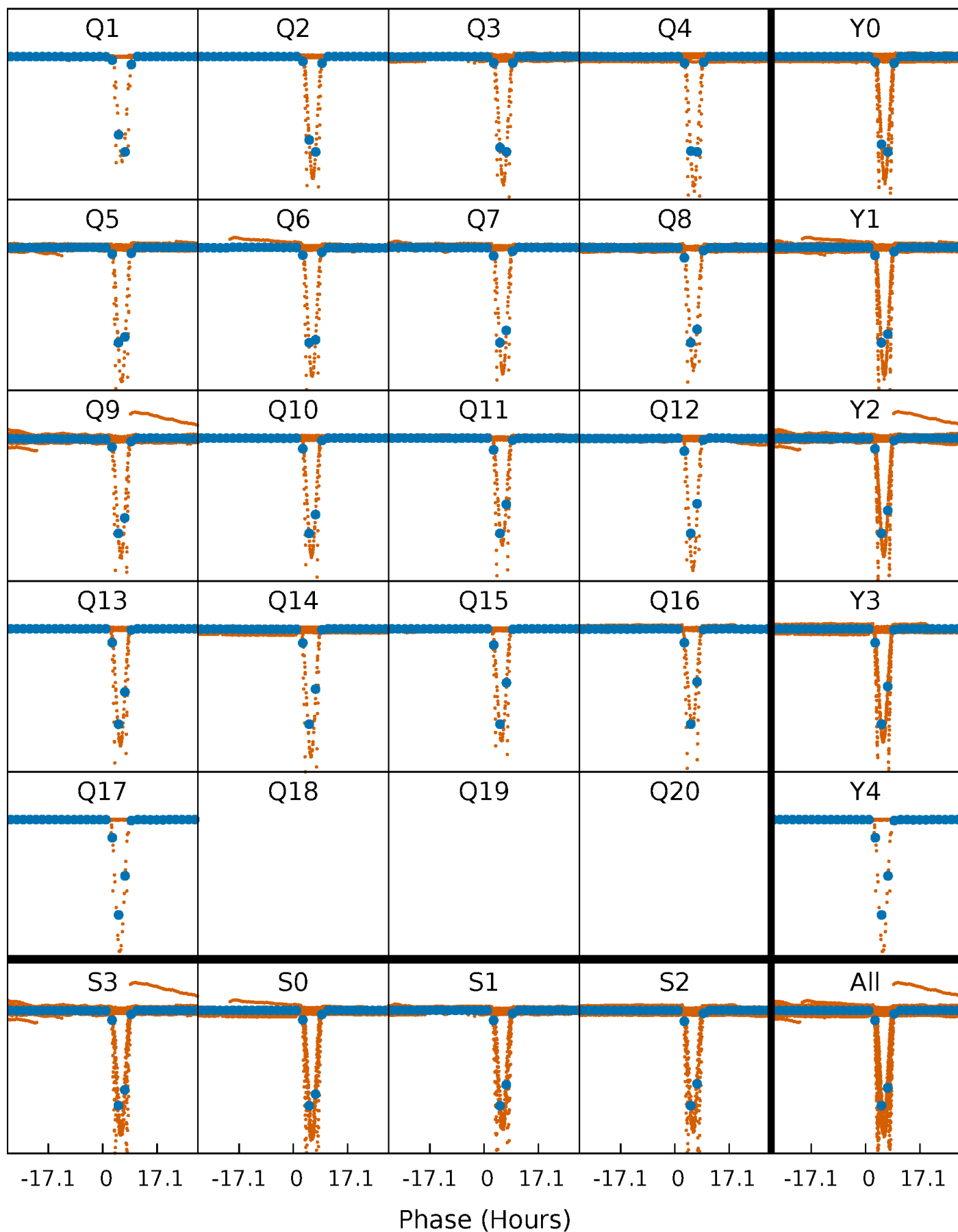


Planet 4 : Phased Whitened Flux Time Series (TPS Epoch/Period)



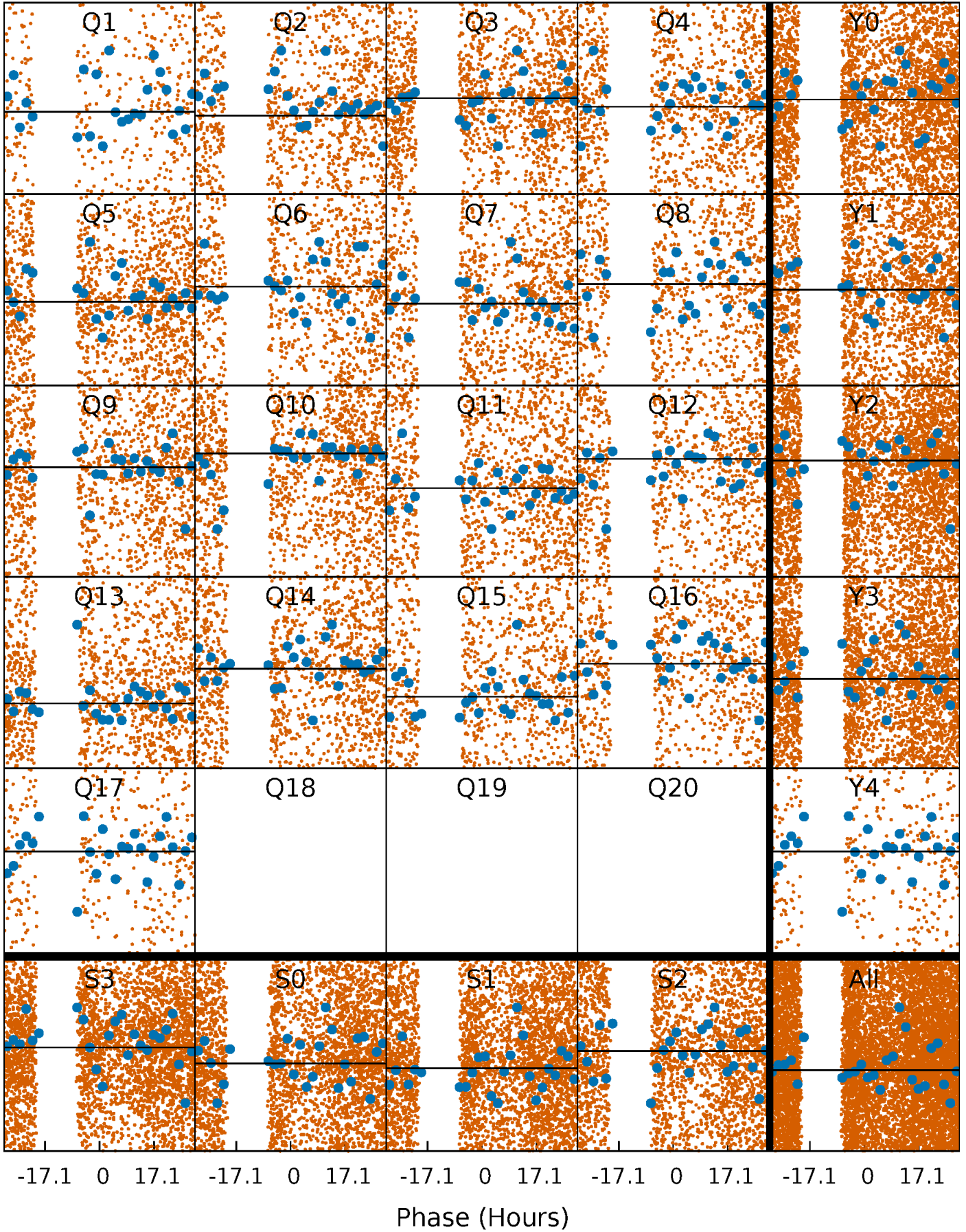
PDC Quarter-Phased Transit Curves

TCE 006131659-04 P= 4.382047 Days $T_0=135.550027$ (BKJD)



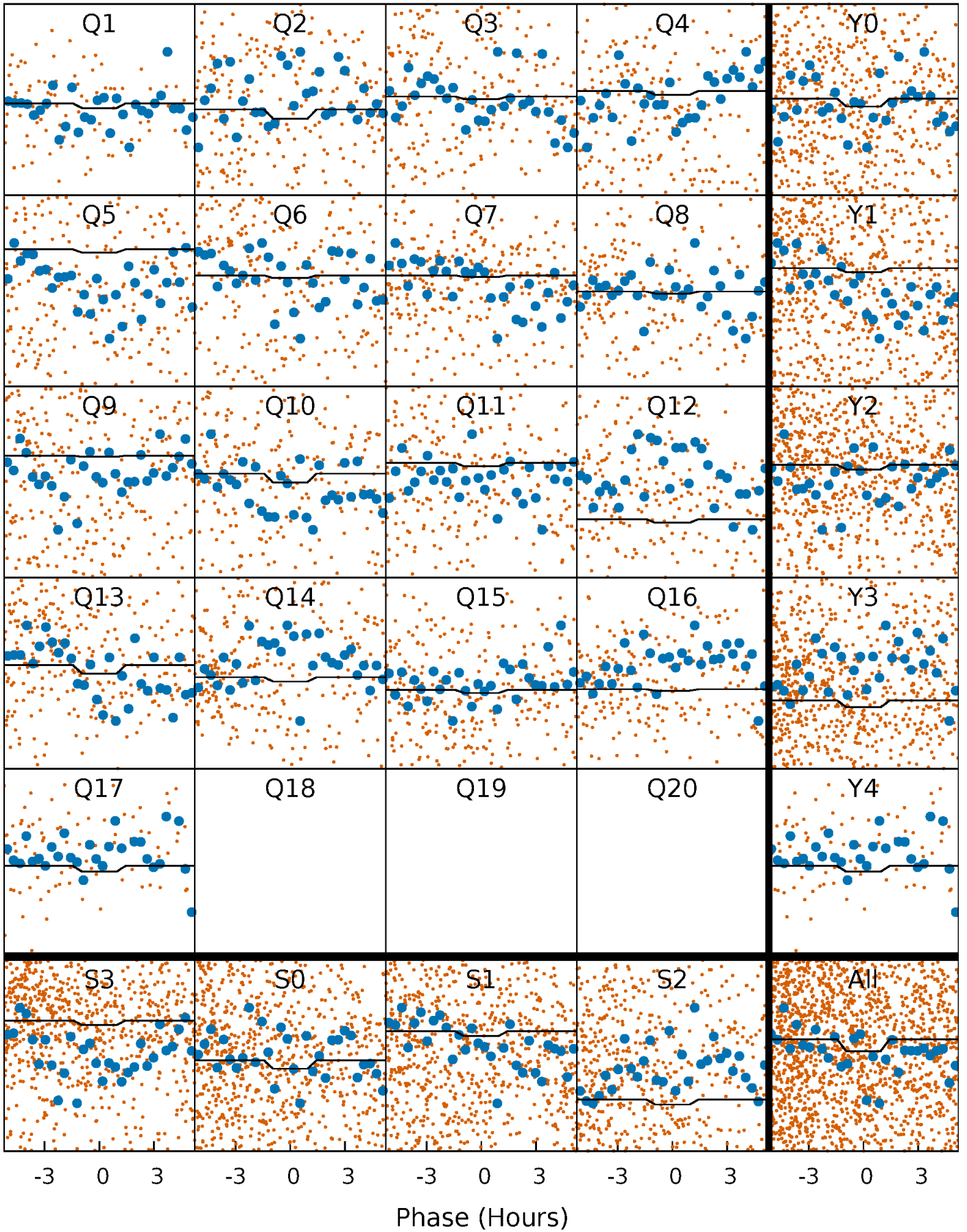
DV Quarter-Phased Transit Curves

TCE 006131659-04 P= 4.382047 Days $T_0=135.550027$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

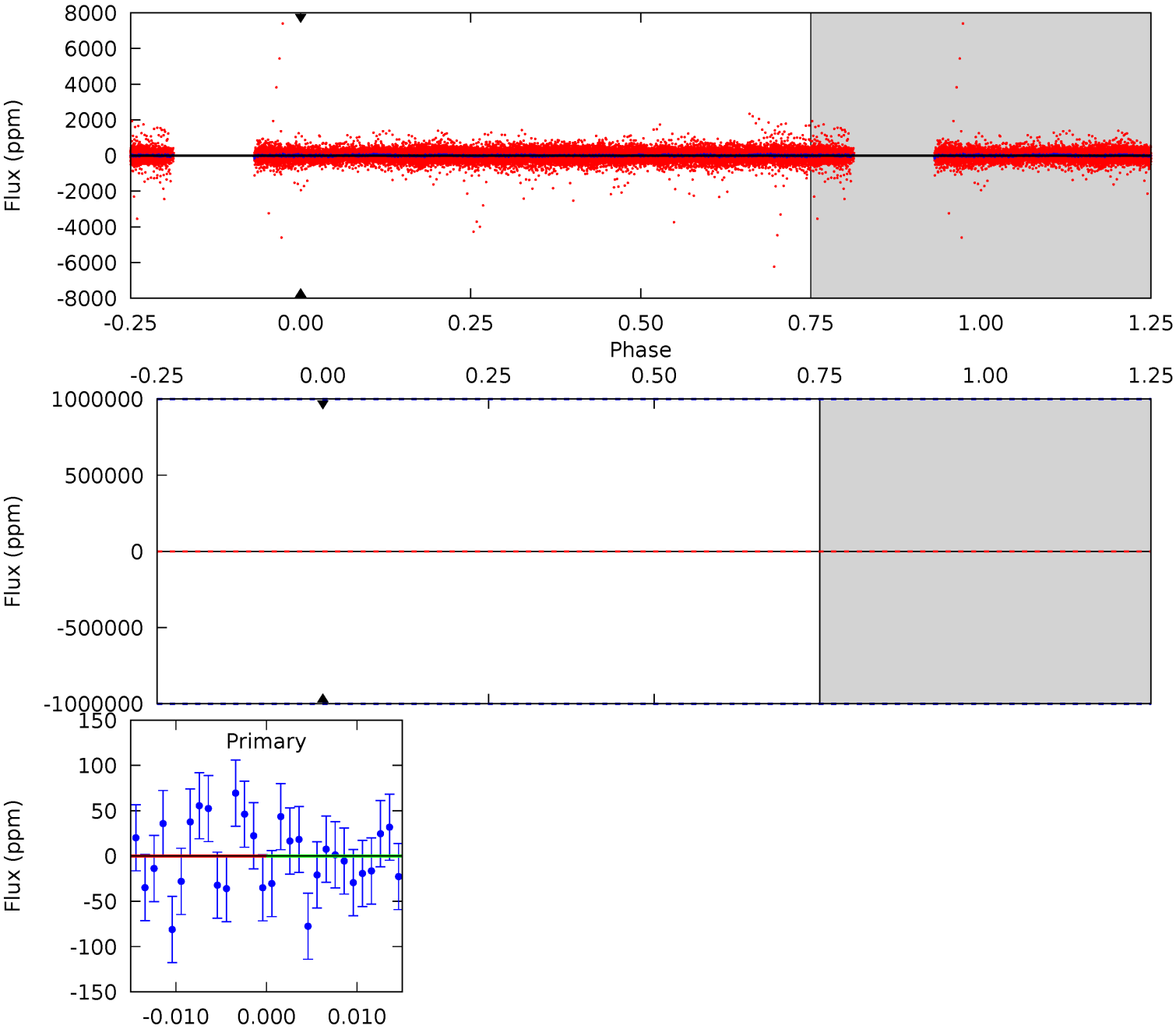
TCE 006131659-04 P= 4.382047 Days $T_0=135.539309$ (BKJD)



DV Model-Shift Uniqueness Test

006131659-04, P = 4.382047 Days, E = 131.167980 Days

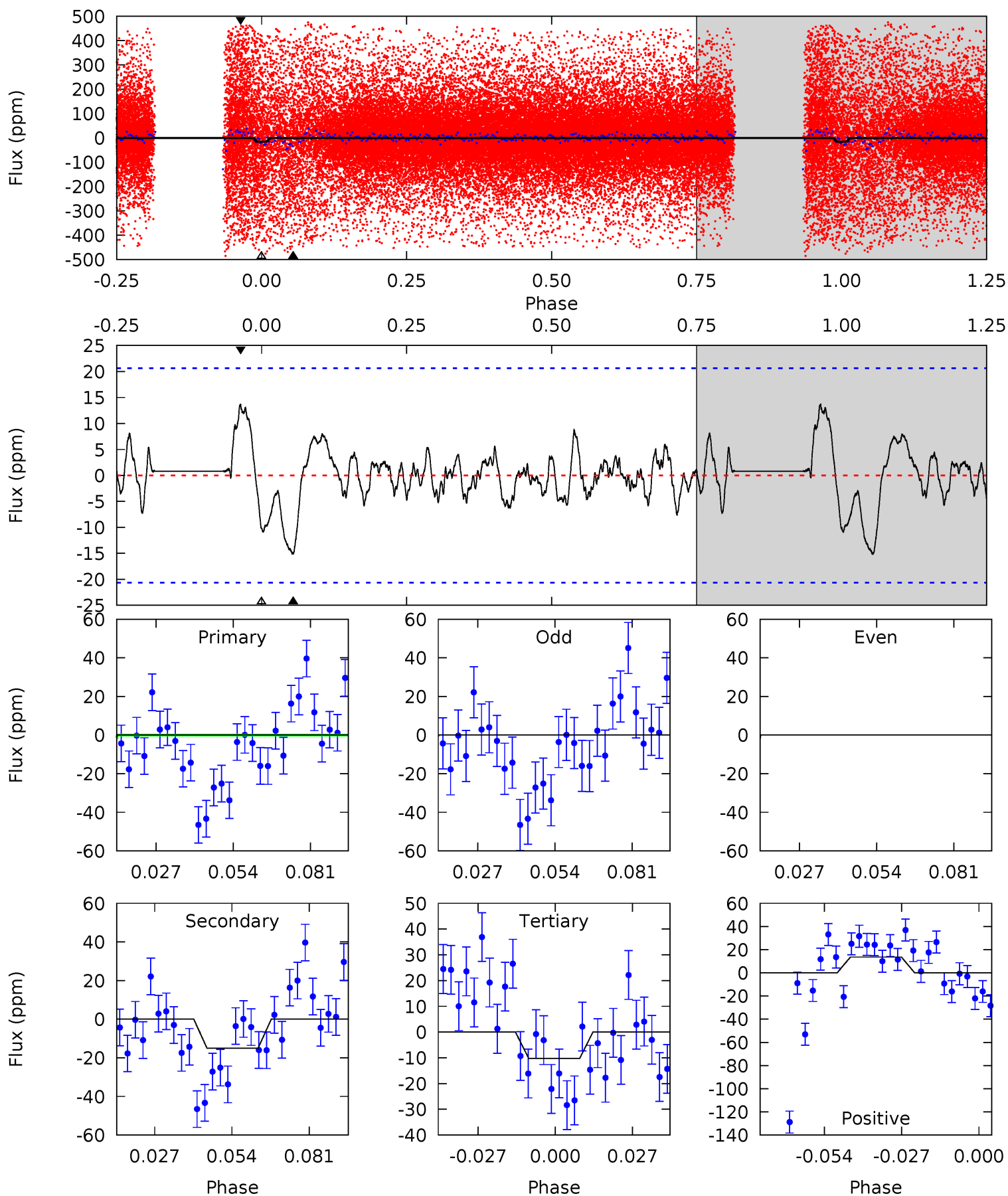
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006131659-04, P = 4.382047 Days, E = 131.157262 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.54	3.53	2.39	3.19	4.83	2.21	0.91	1.14	0.34	1.14	0.34	2.55	1.31	0.47	1.18



Stellar Parameters For KIC 006131659

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5079^{+151}_{-136}	$4.579^{+0.050}_{-0.050}$	$-0.240^{+0.300}_{-0.300}$	$0.732^{+0.072}_{-0.065}$	$0.741^{+0.085}_{-0.064}$	$2.659^{+0.618}_{-0.502}$
	+3%/-3%	+1%/-1%	+125%/-125%	+10%/-9%	+11%/-9%	+23%/-19%
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 006131659-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$10.51^{+7.71}_{-6.69}$	1232^{+44}_{-45}	3377^{+6568}_{-12296}	19^{+2178}_{-1563}
Alt.	-15 ± 4	$5.32^{+6.27}_{-3.79}$	1234^{+41}_{-45}	2038^{+860}_{-3922}	$0.652^{+6.755}_{-0.523}$

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

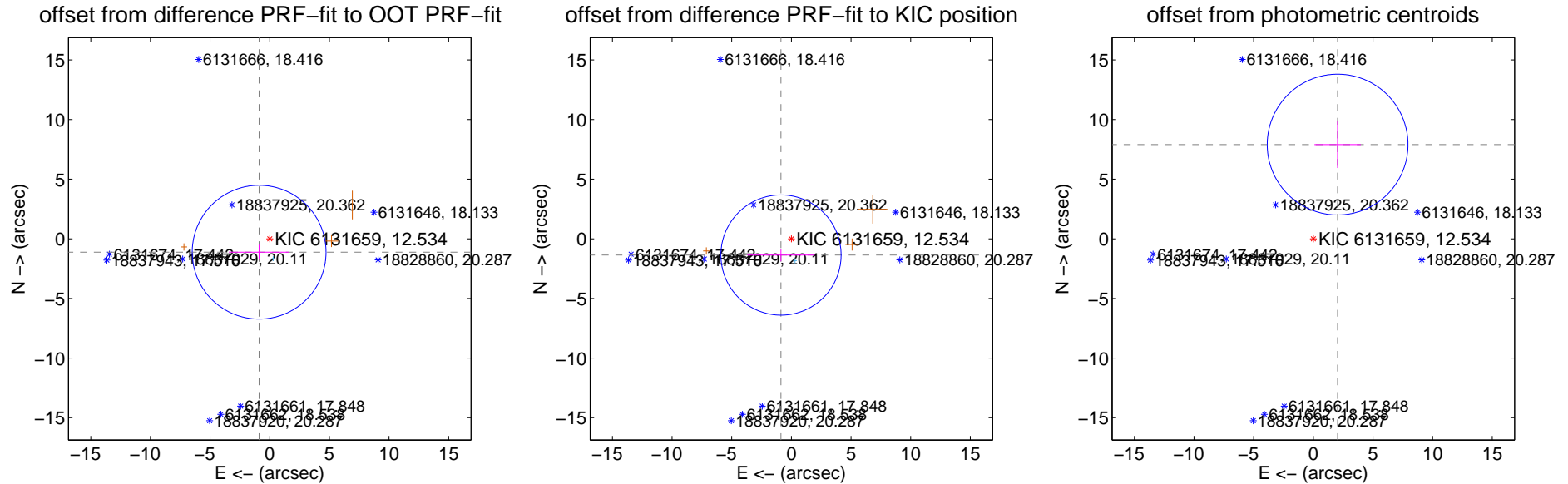
DV Centroid Data

Supplemental centroid analysis for 006131659-04. Kepler magnitude: 12.53. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

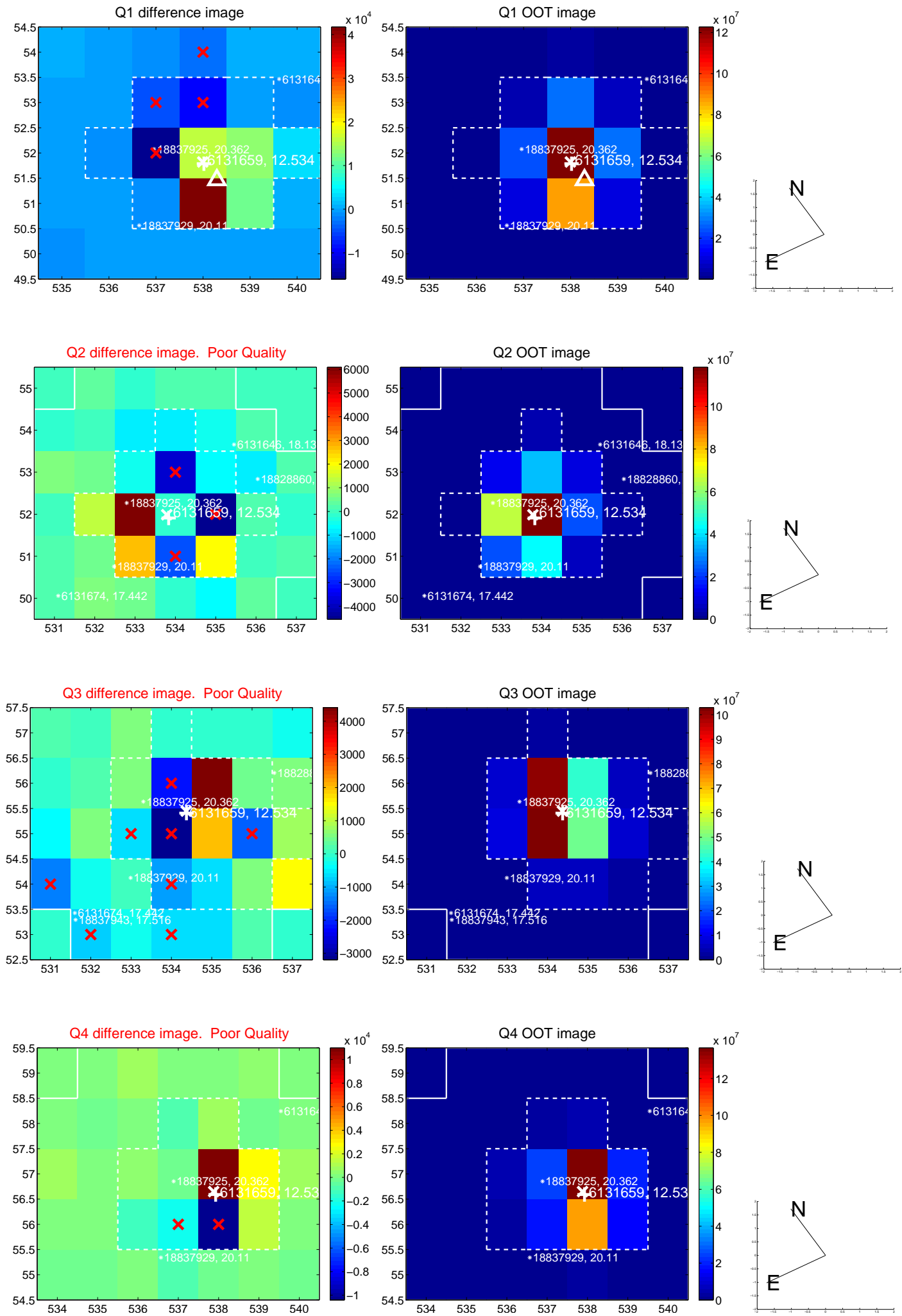
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.431 ± 1.870	0.77	0.890 ± 2.533	-1.120 ± 0.618
PRF-fit source offset from KIC position	1.615 ± 1.680	0.96	0.871 ± 2.825	-1.361 ± 0.532
photometric centroid source offset	8.16 ± 1.97	4.15	-2.04 ± 1.95	7.90 ± 1.97

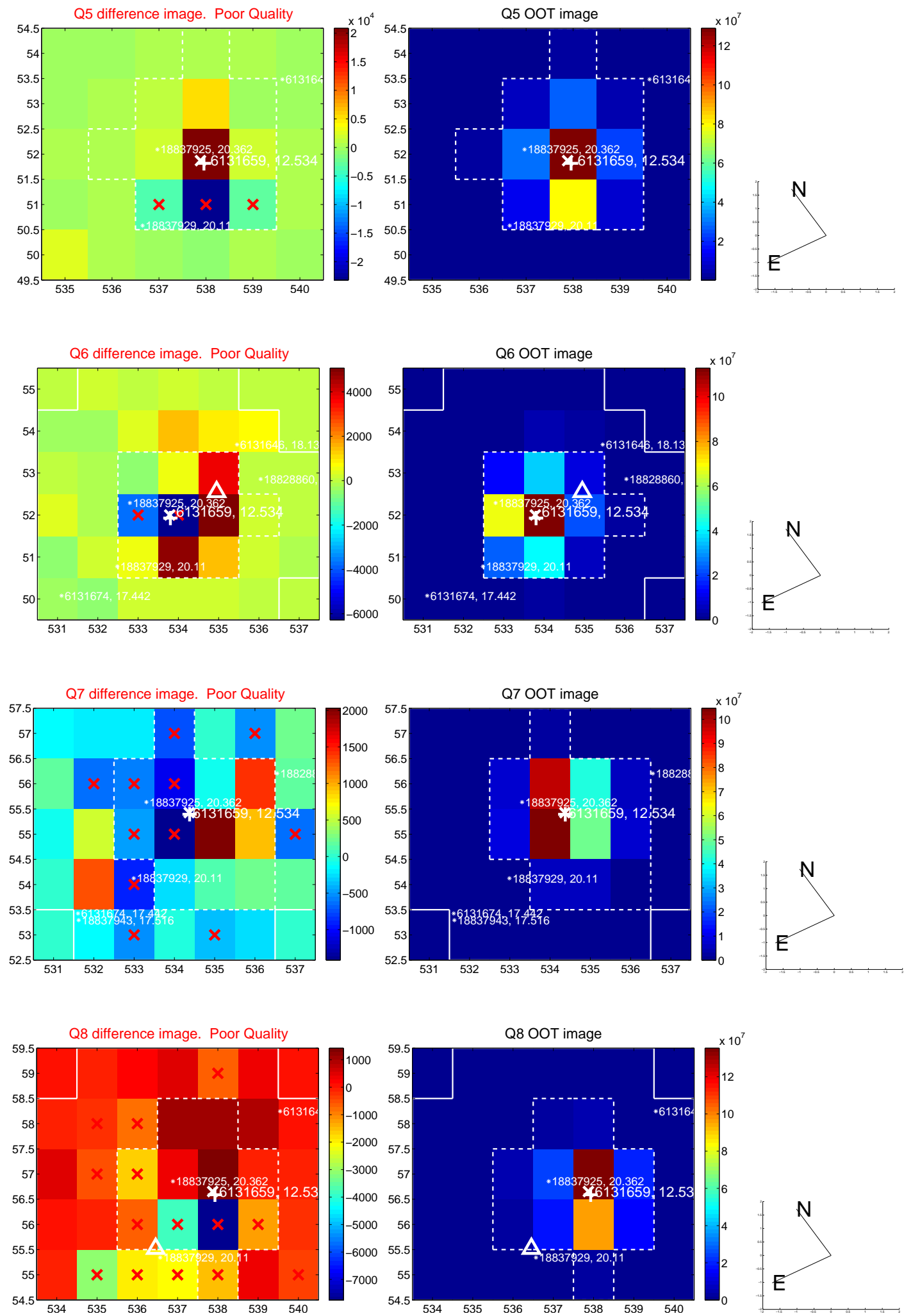


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

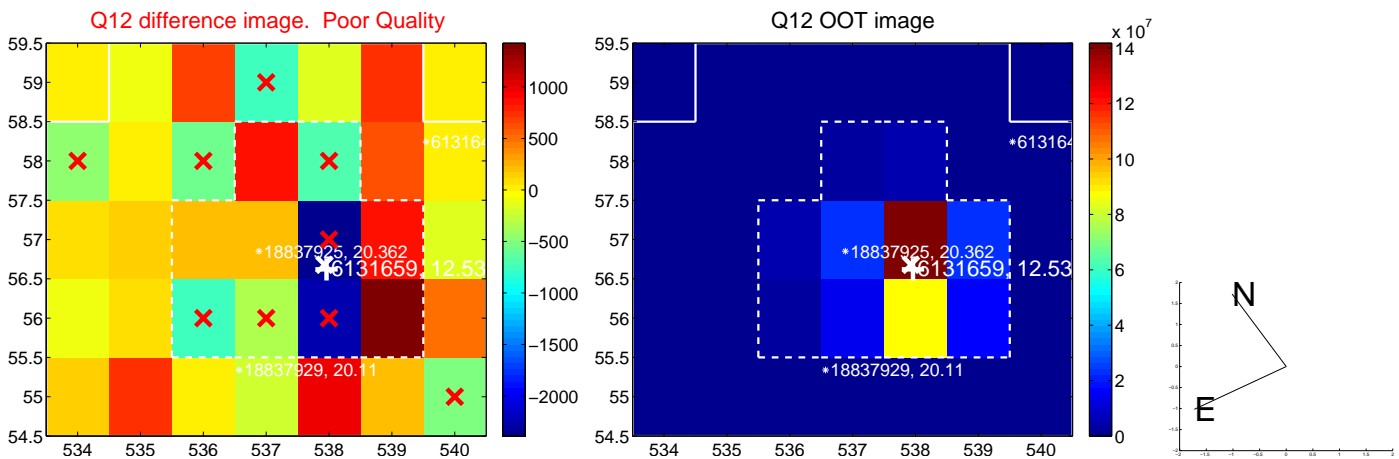
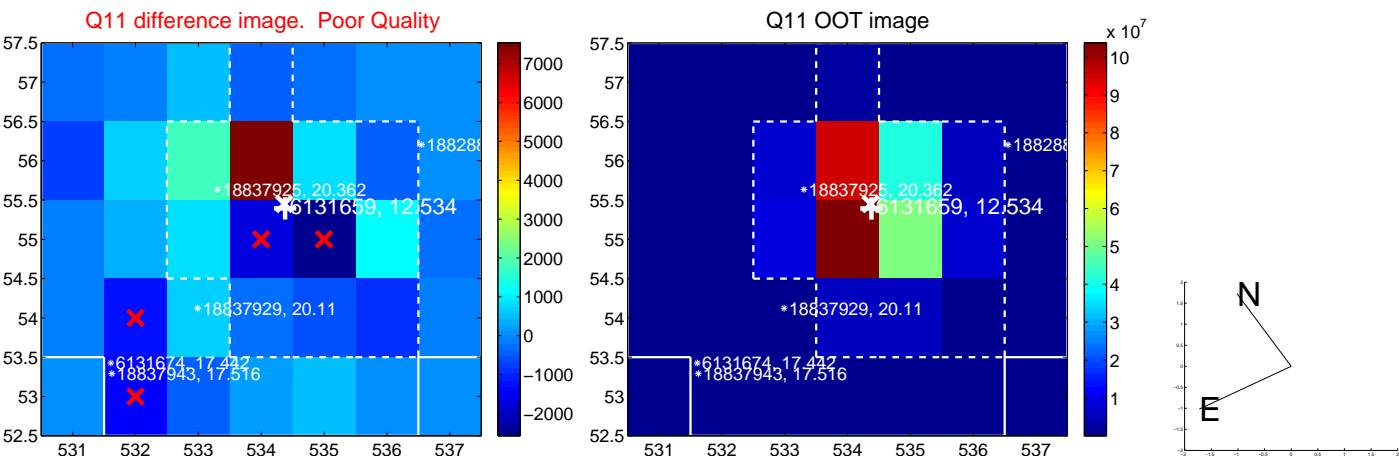
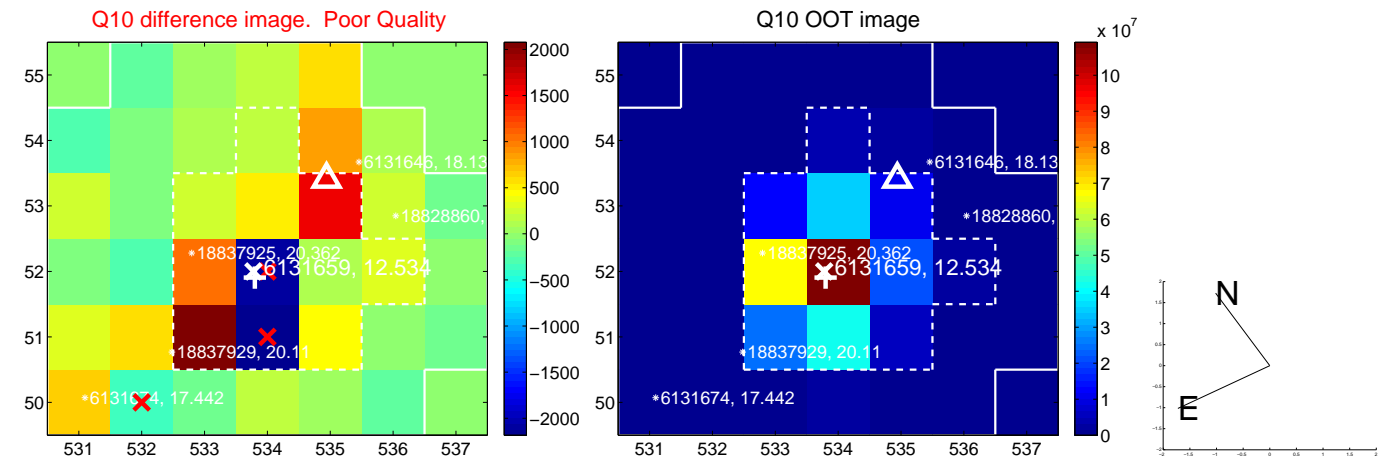
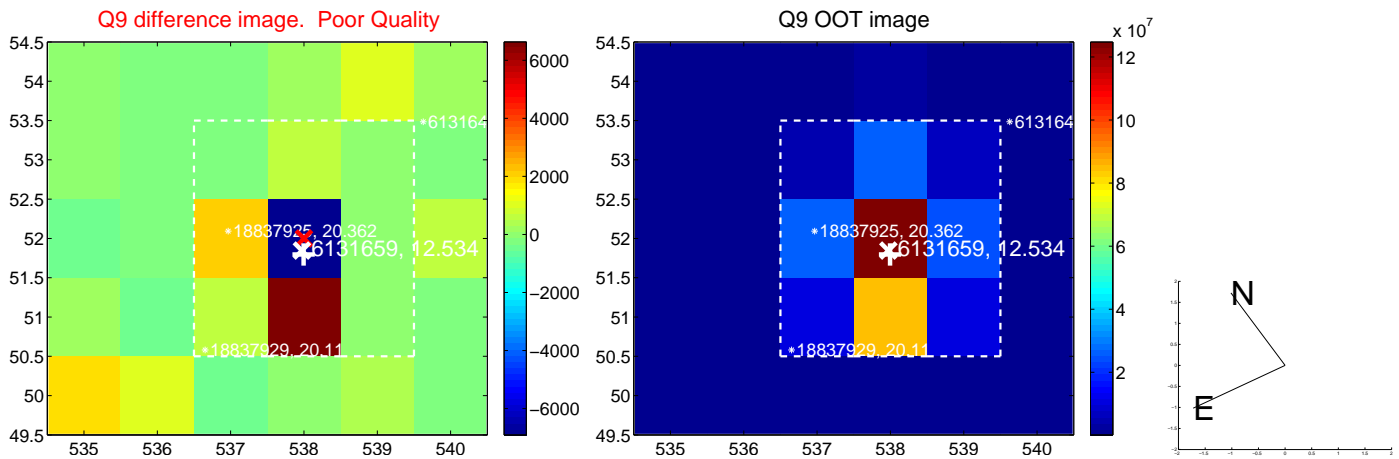
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



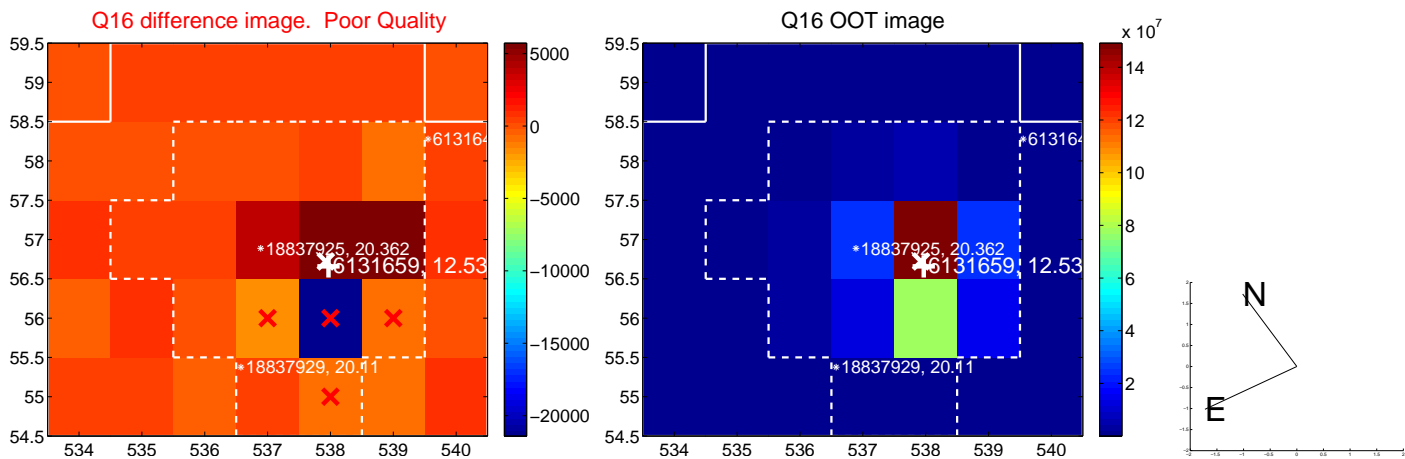
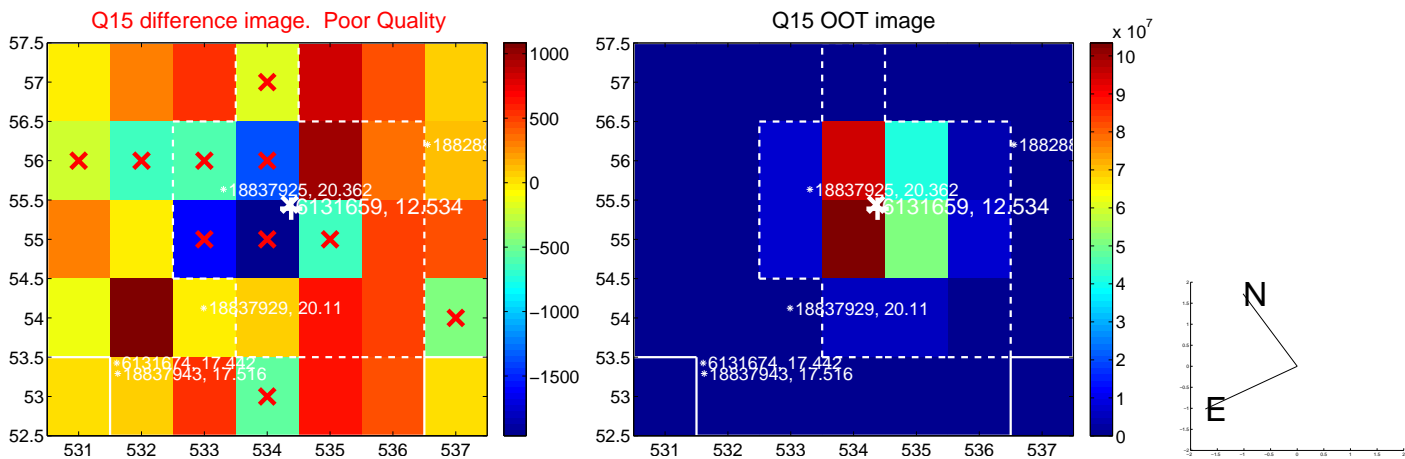
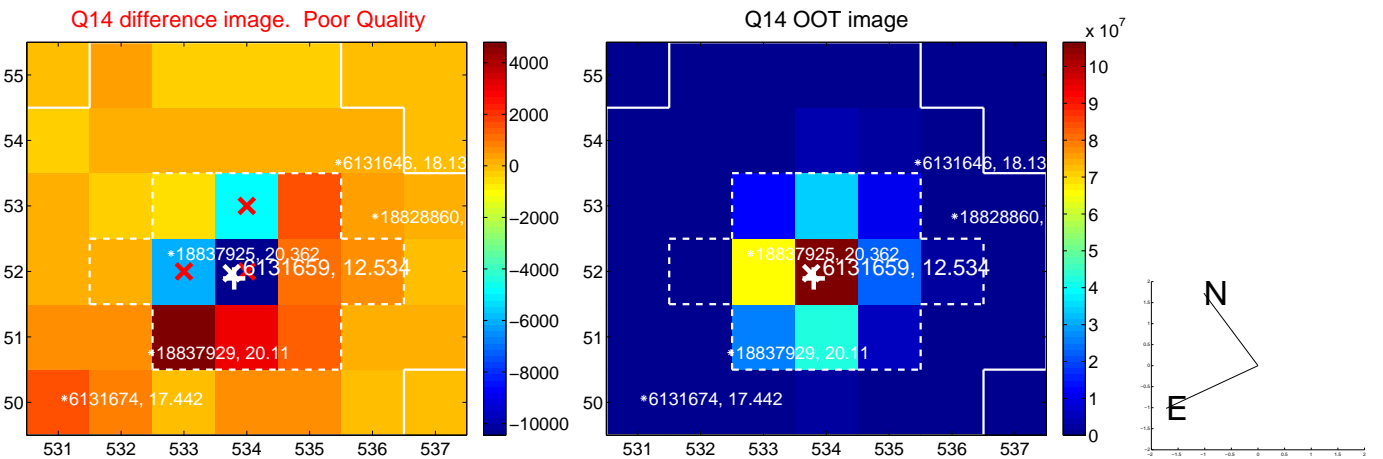
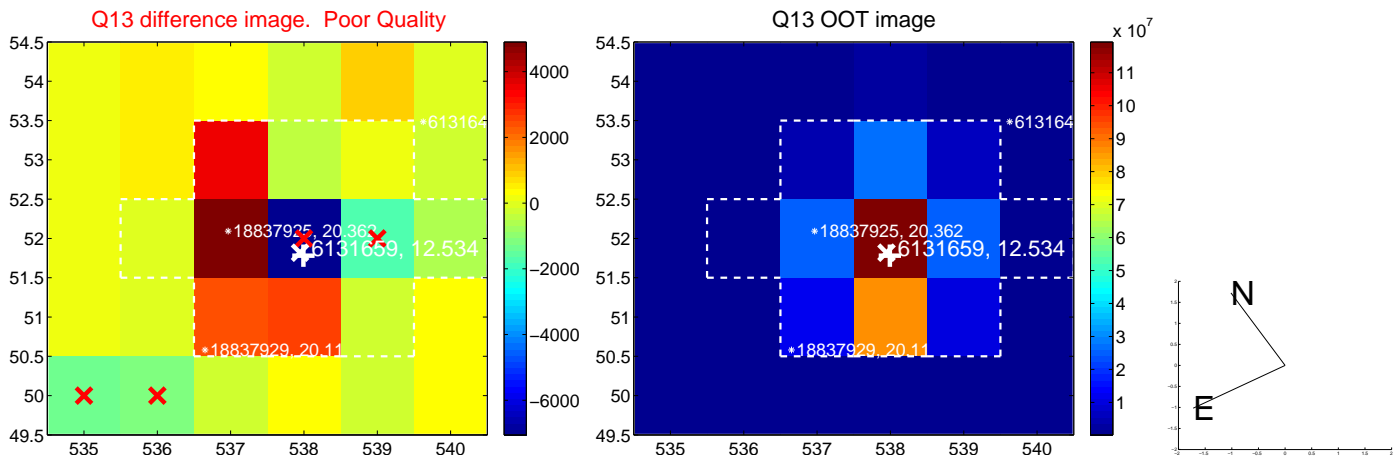
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



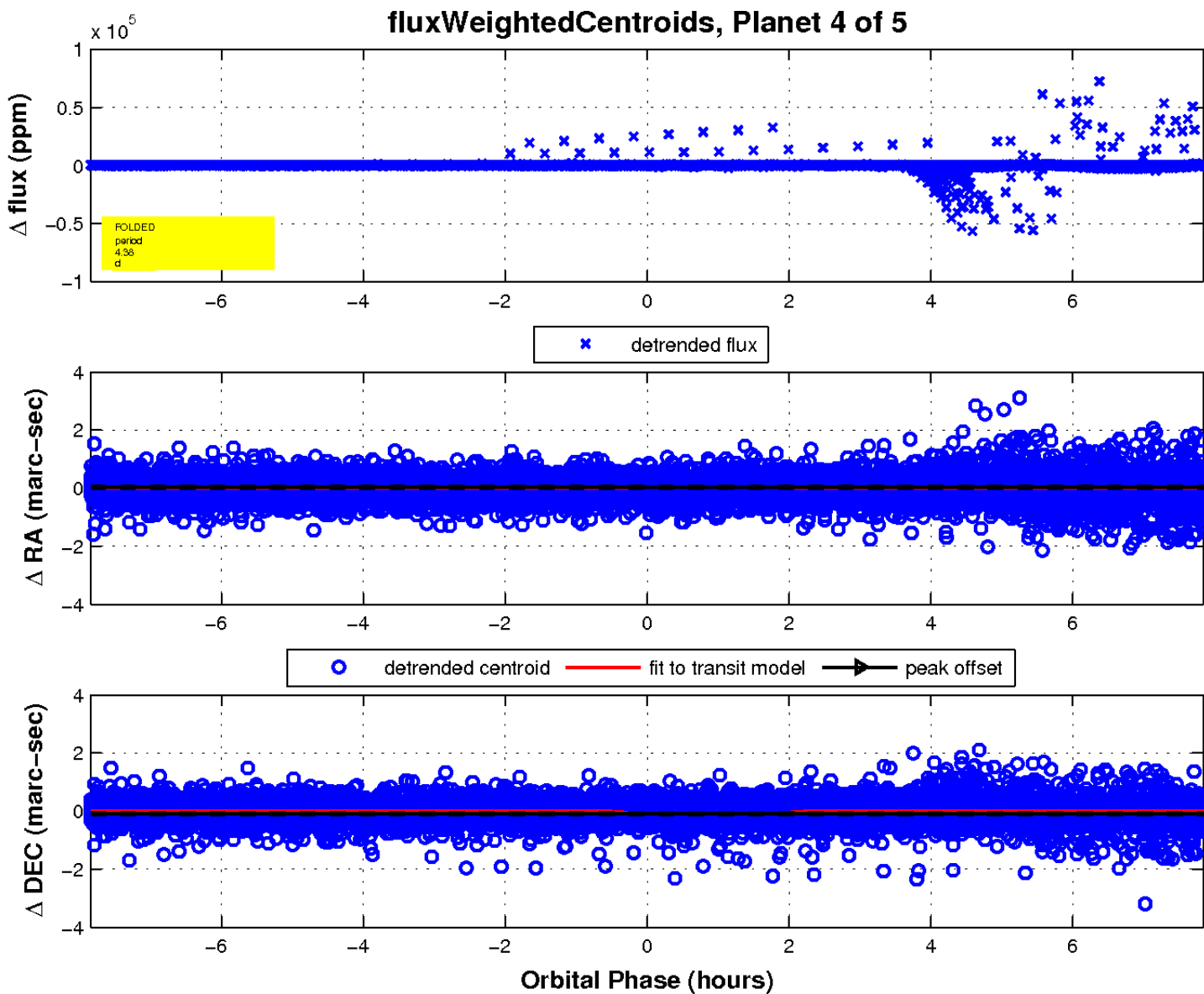
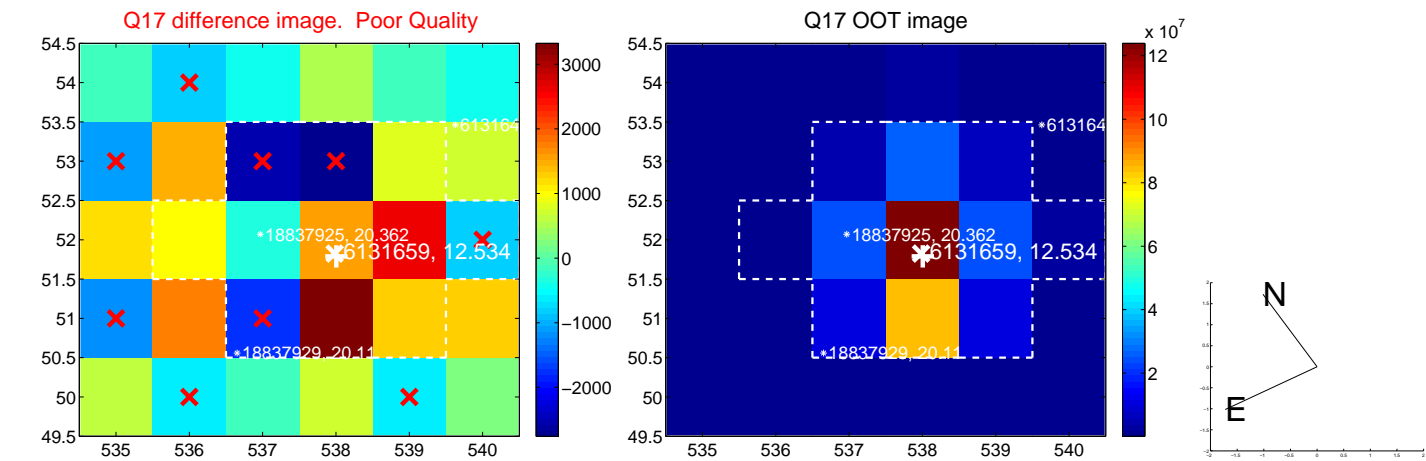
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



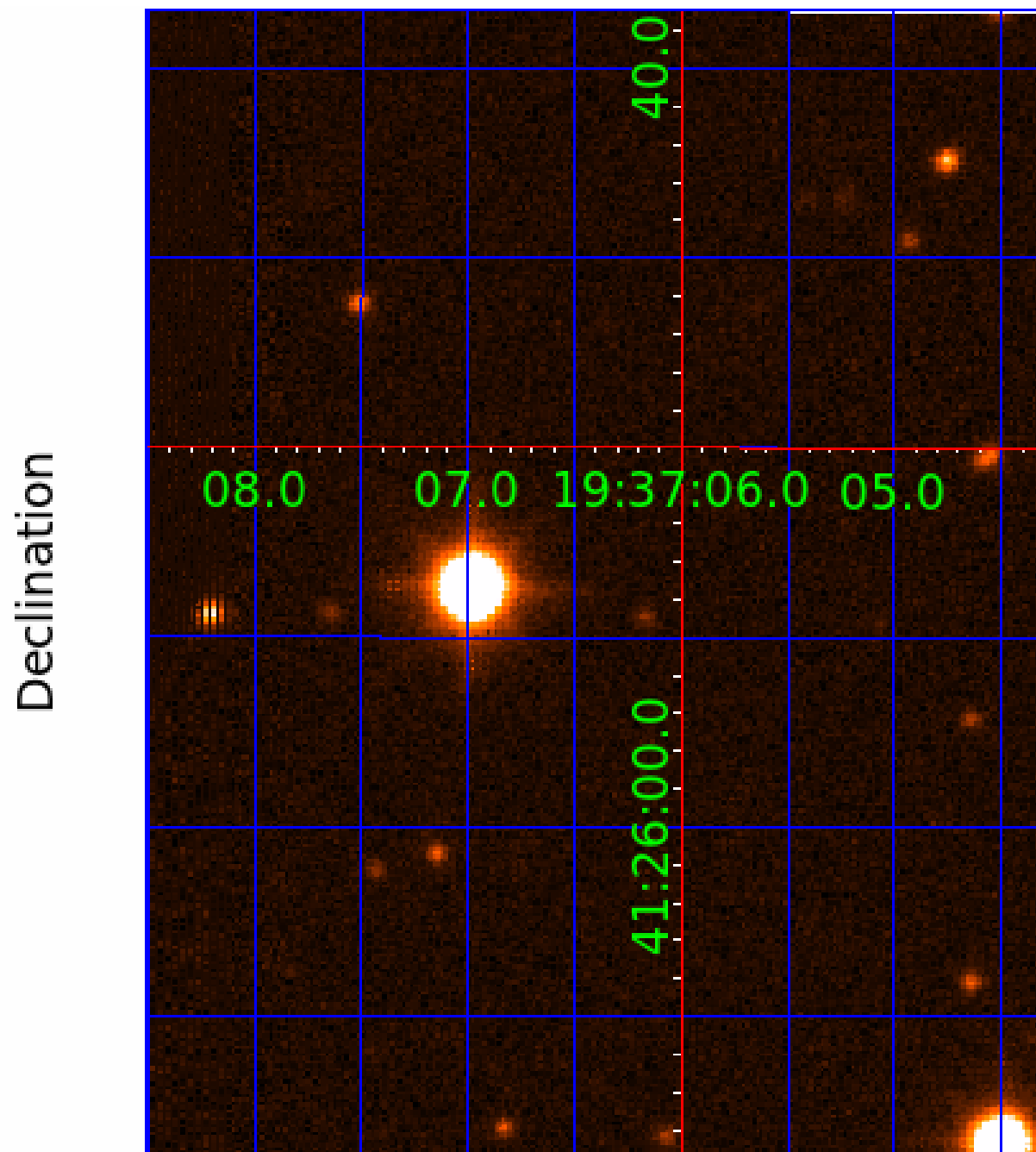
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006131659

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})
006131659-01	OBS	6667.01	17.527782	144.568039	347396.3	3.500	35910.5	-1.0	0.73	5079	38.83	22.36
006131659-02	OBS	No	17.527822	135.807479	107002.4	5.635	13299.0	6128.3	0.73	5079	37.33	22.36
006131659-03	OBS	No	4.382205	134.964651	77.2	4.335	1866.4	16.8	0.73	5079	0.62	141.94
006131659-04	OBS	No	4.382047	135.550028	16185.3	15.000	2084.5	-1.0	0.73	5079	9.07	141.94
006131659-05	OBS	No	298.382848	317.826380	1314.1	5.608	38.0	23.0	0.73	5079	5.30	0.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006131659-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
006131659-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
006131659-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— SAME_NTL_PERIOD—CENT_FEW_DIFFS—HALO_GHOST
006131659-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS
006131659-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS— 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.

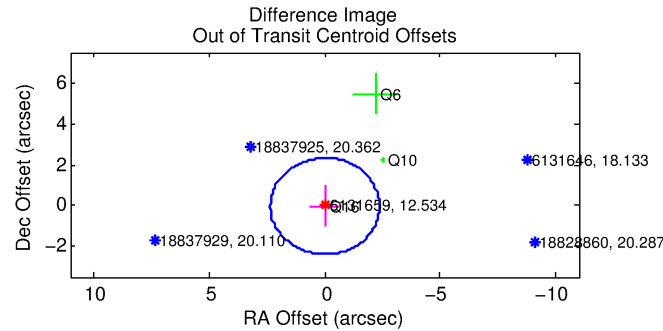
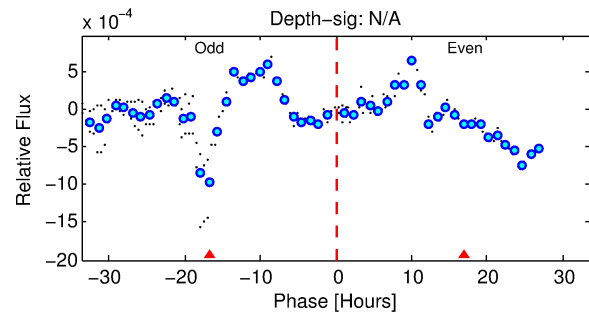
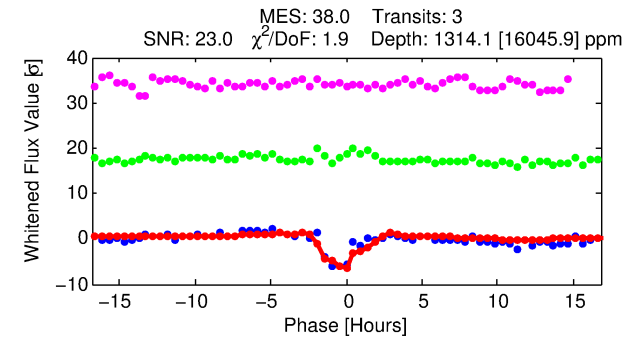
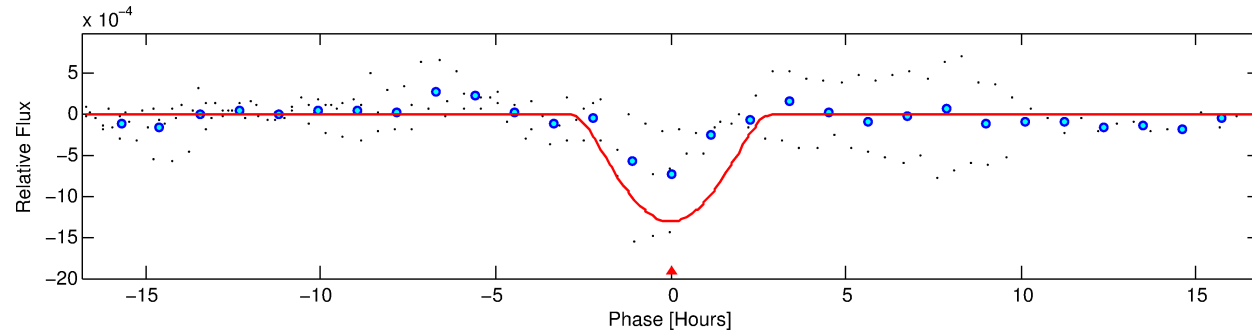
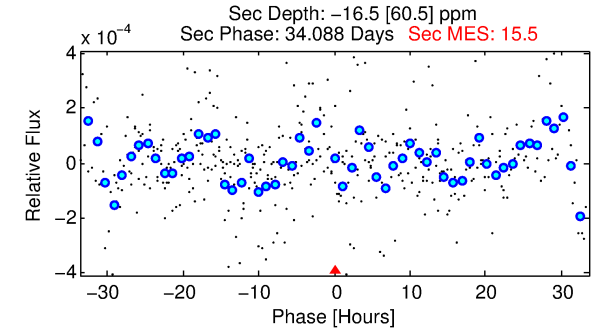
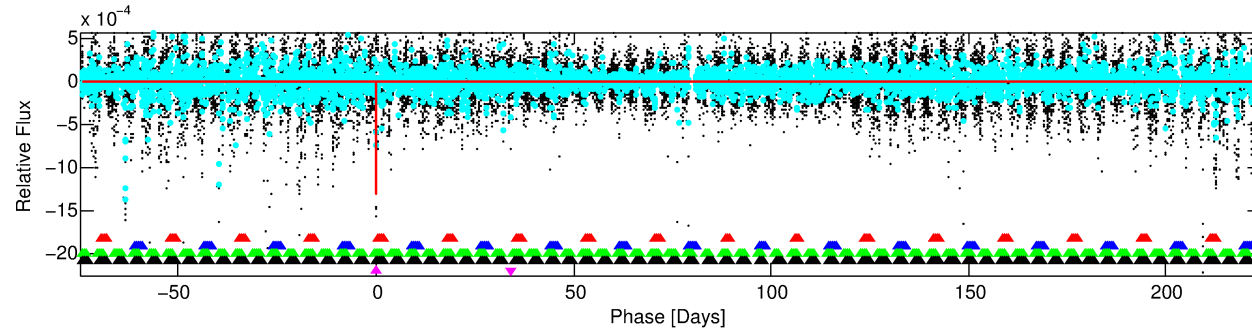
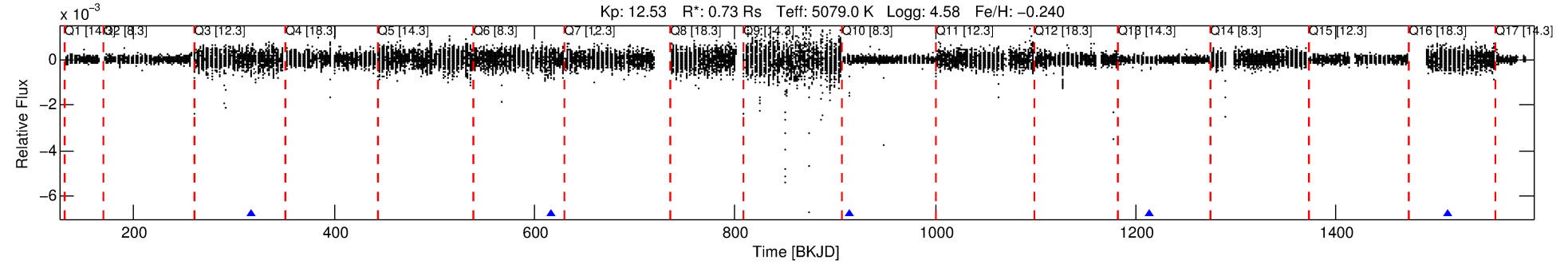
Ephemeris Match Information For 006131659-05

No Significant Match Found

DV One-Page Summary

KIC: 6131659 Candidate: 5 of 5 Period: 298.383 d

KOI: K06667 Corr: No Ephemeris Match



DV Fit Results:

Period = 298.38285 [0.00573] d
Epoch = 317.8264 [0.0086] BKJD
Rp/R* = 0.0664 [0.1270]
a/R* = 150.54 [63.23]
b = 1.00 [0.35]
Seff = 0.51 [0.08]
Teq = 216 [8] K
Rp = 5.30 [10.16] Re
a = 0.7911 [0.0601] AU
Ag = N/A
Teffp = N/A

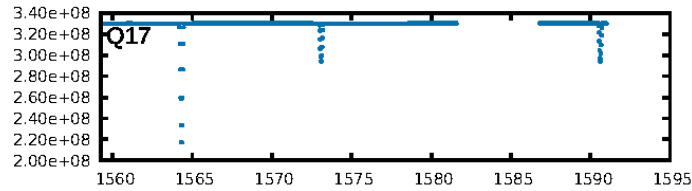
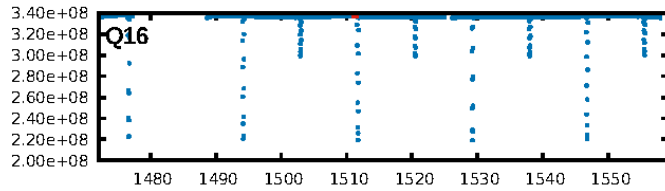
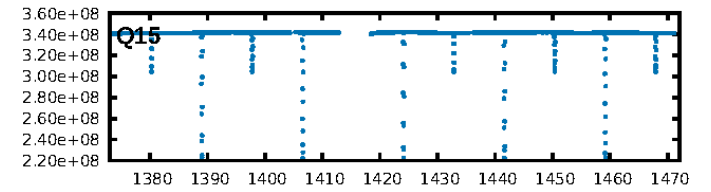
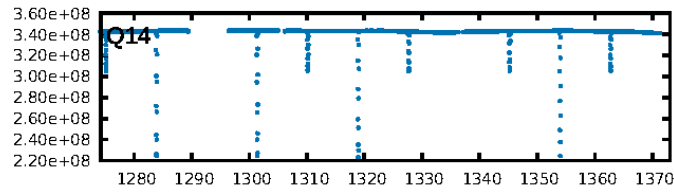
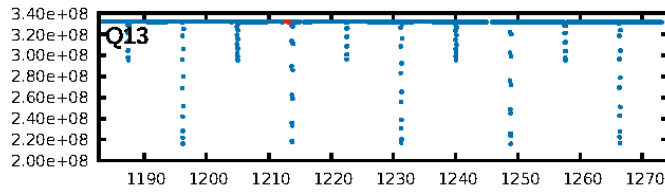
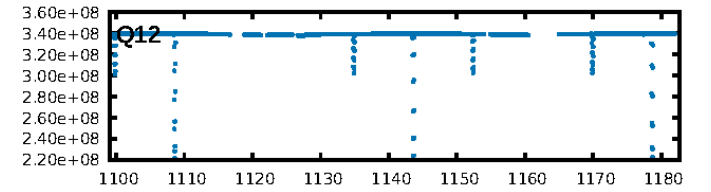
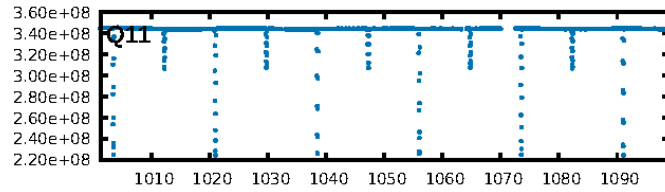
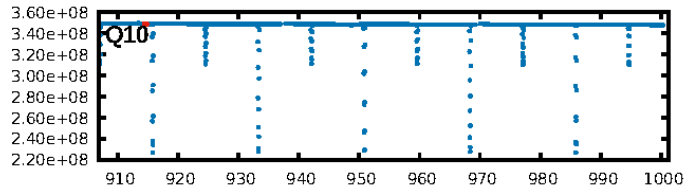
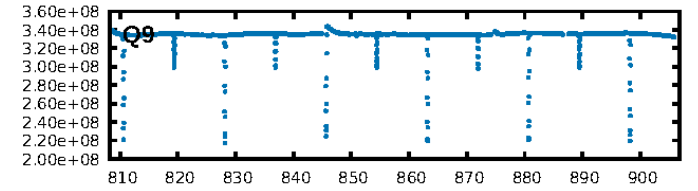
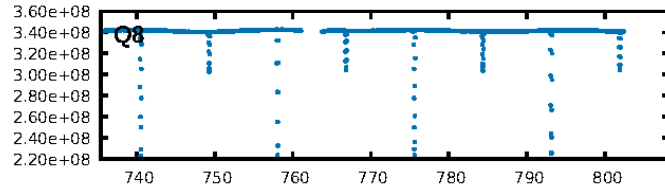
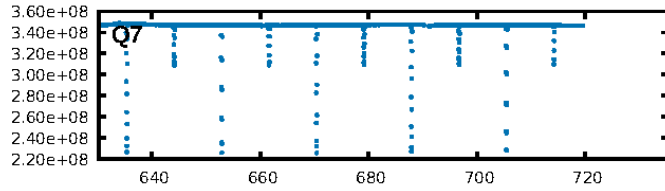
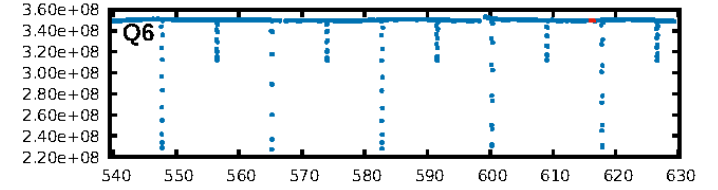
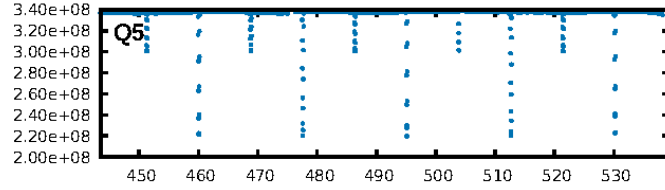
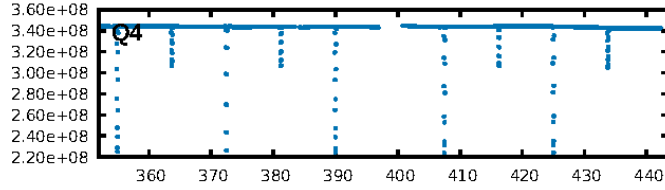
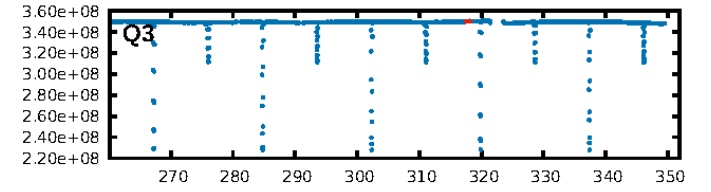
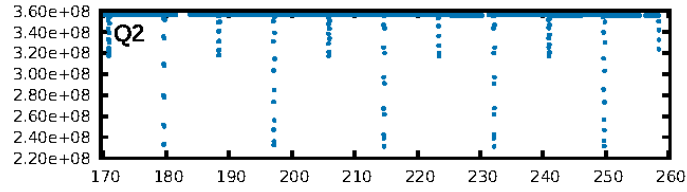
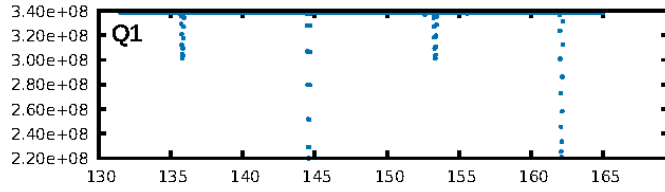
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [847.84p]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 7.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.5642
Centroid-sig: 0.0%
Centroid-so: 0.376 arcsec [2.63p]
OotOffset-rm: 0.038 arcsec [0.05p]
KicOffset-rm: 0.358 arcsec [0.32p]
OotOffset-st: 2/0/1/0 [3]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.40 [2/5]

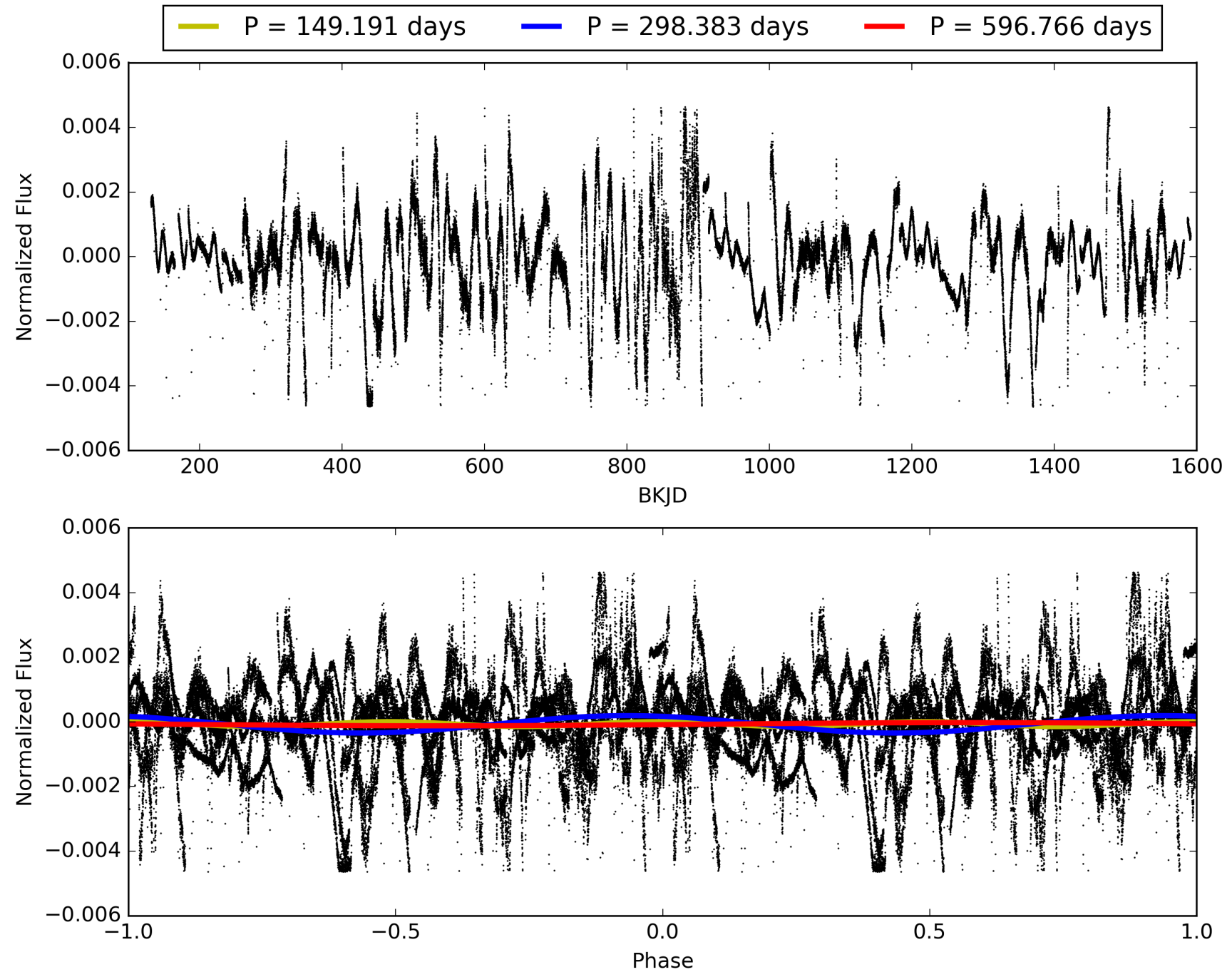
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 09:49:27 Z

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

TCE 006131659-05, PDC Light Curves

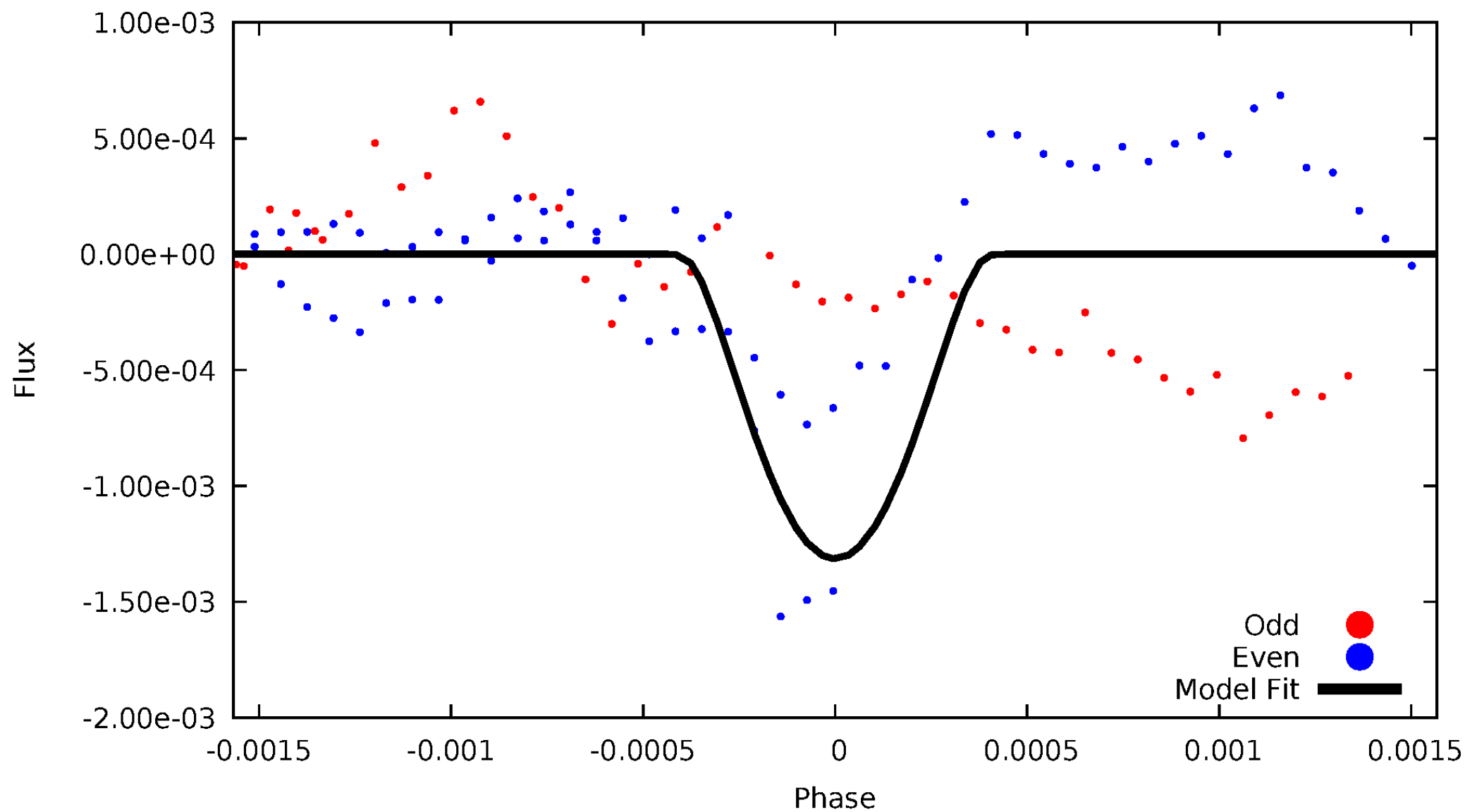


TCE 006131659-05



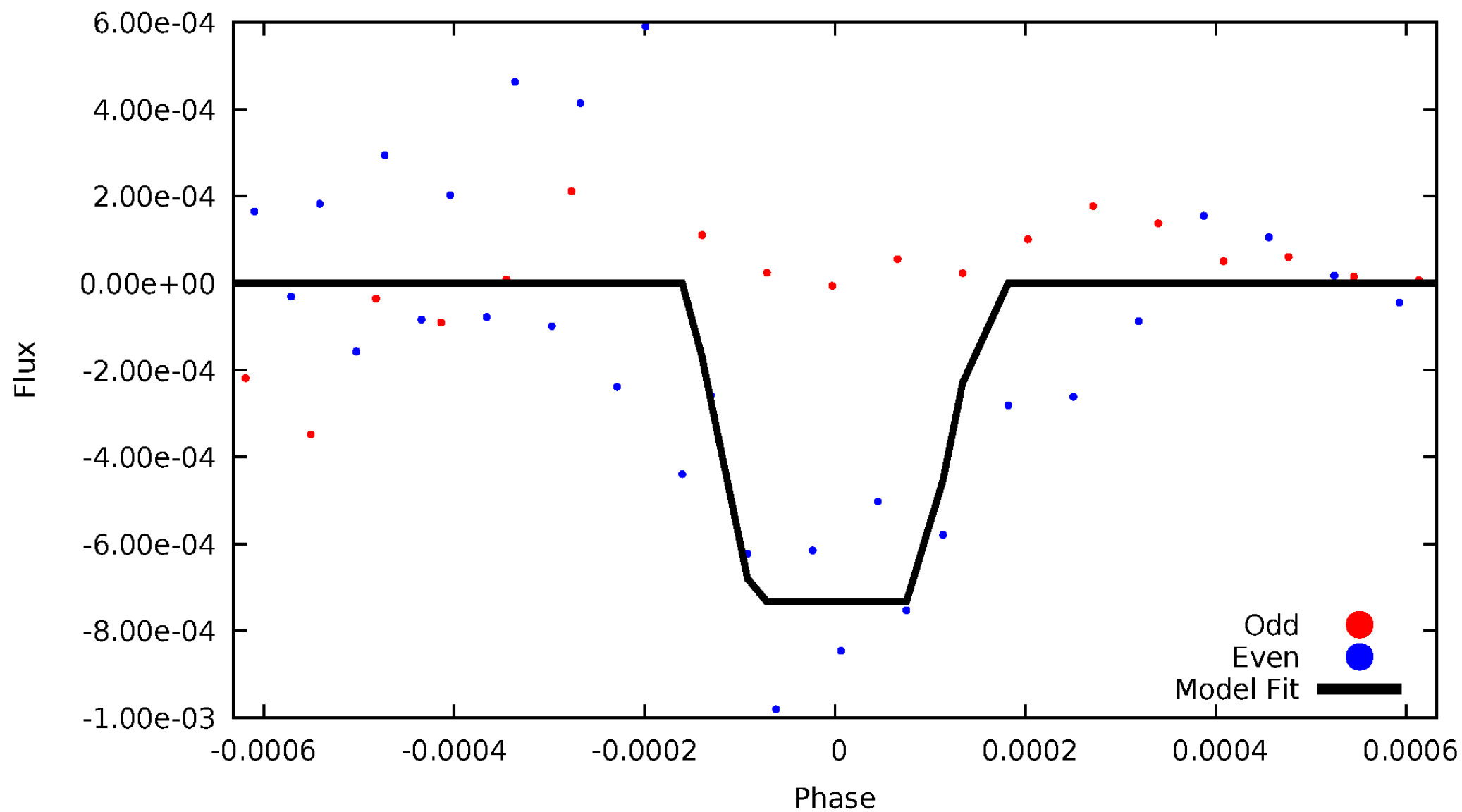
DV Odd/Even

TCE 006131659-05



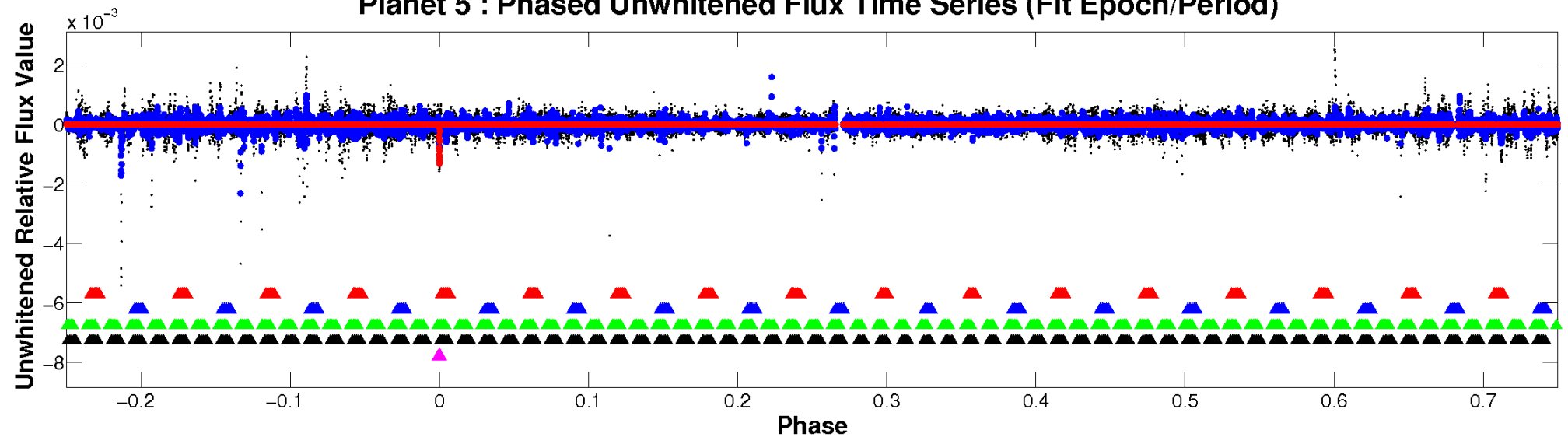
ALT Odd/Even

TCE 006131659-05

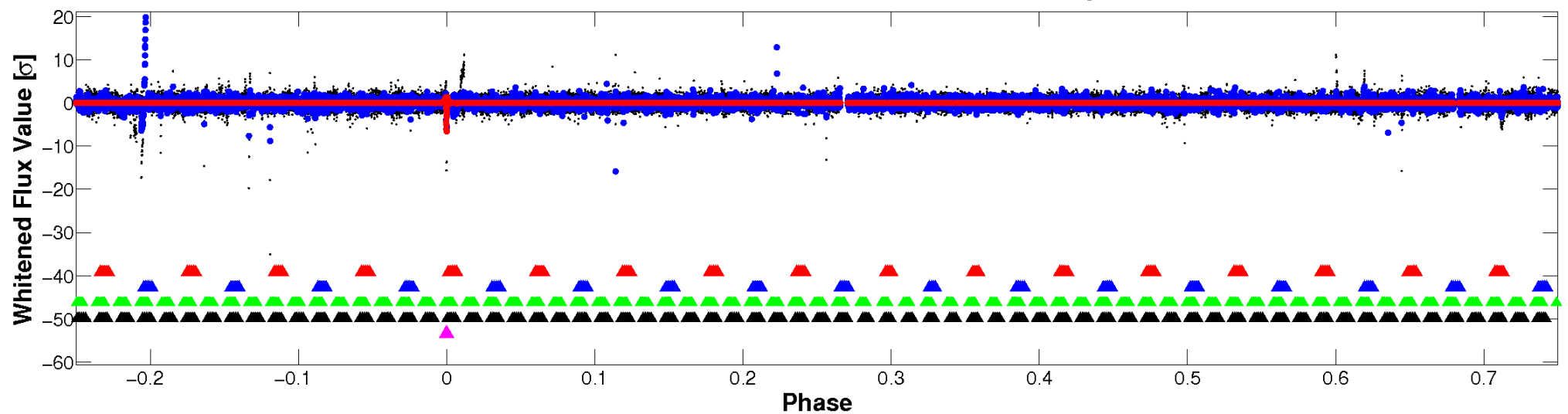


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

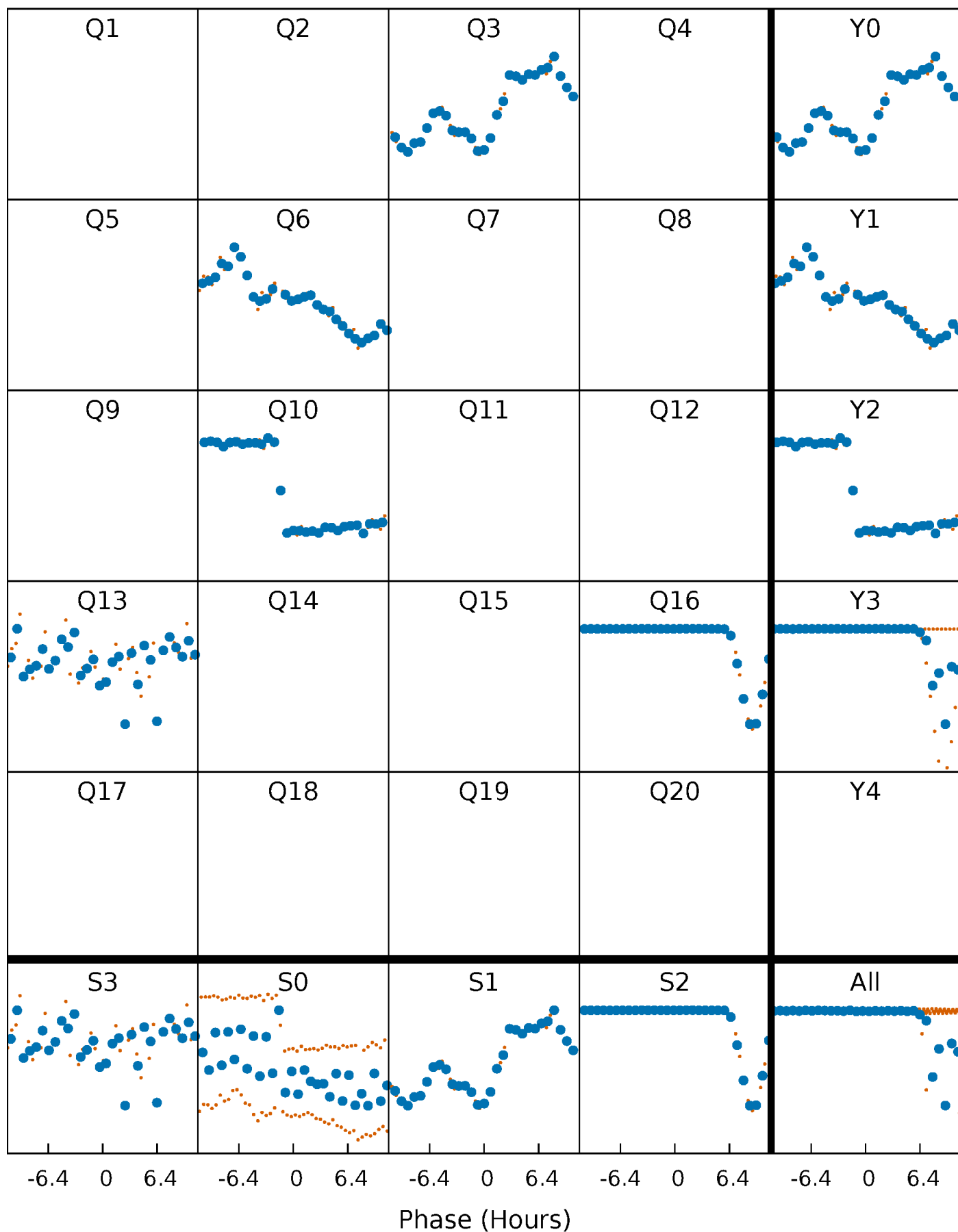


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



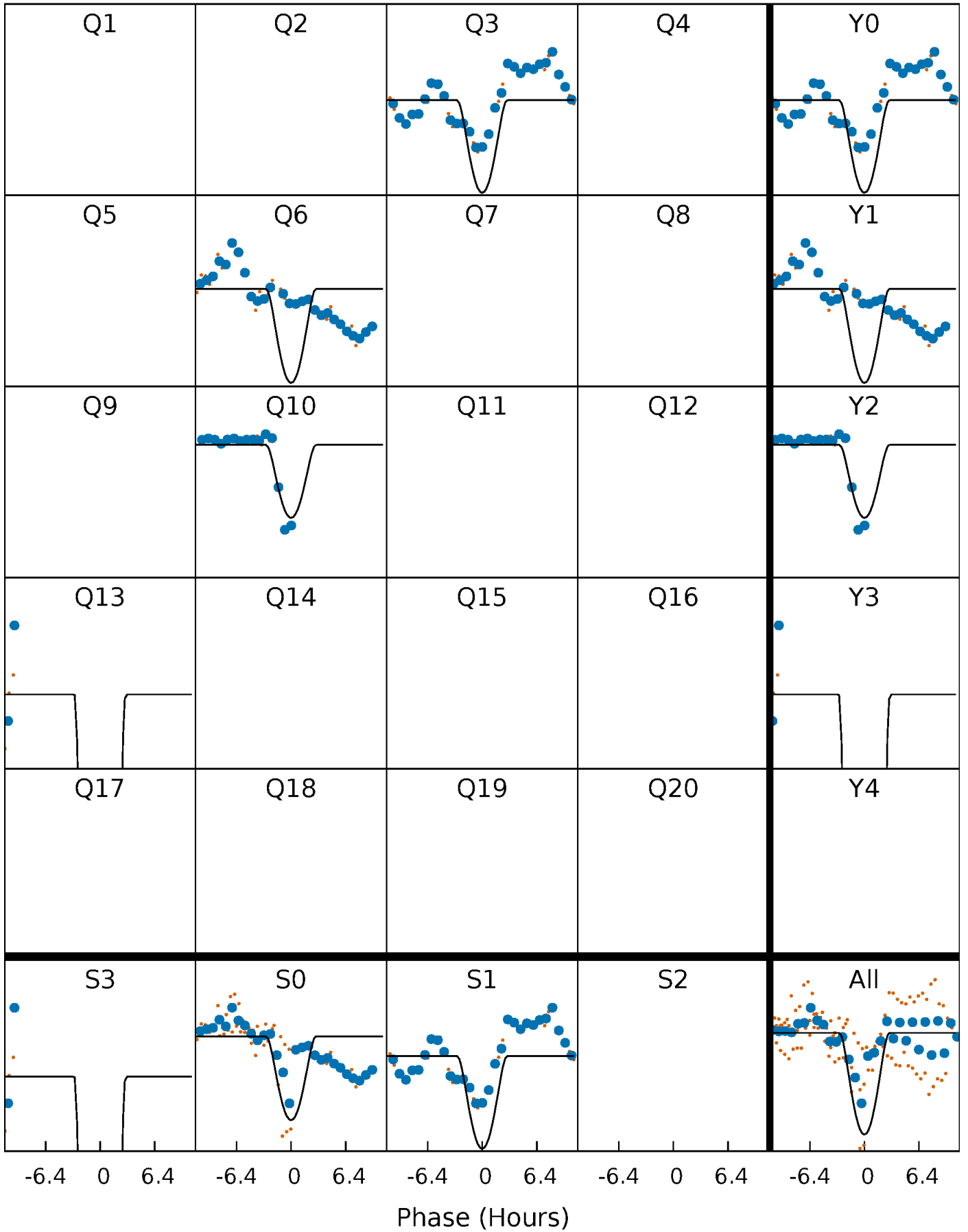
PDC Quarter-Phased Transit Curves

TCE 006131659-05 $P=298.382848$ Days $T_0=317.826380$ (BKJD)



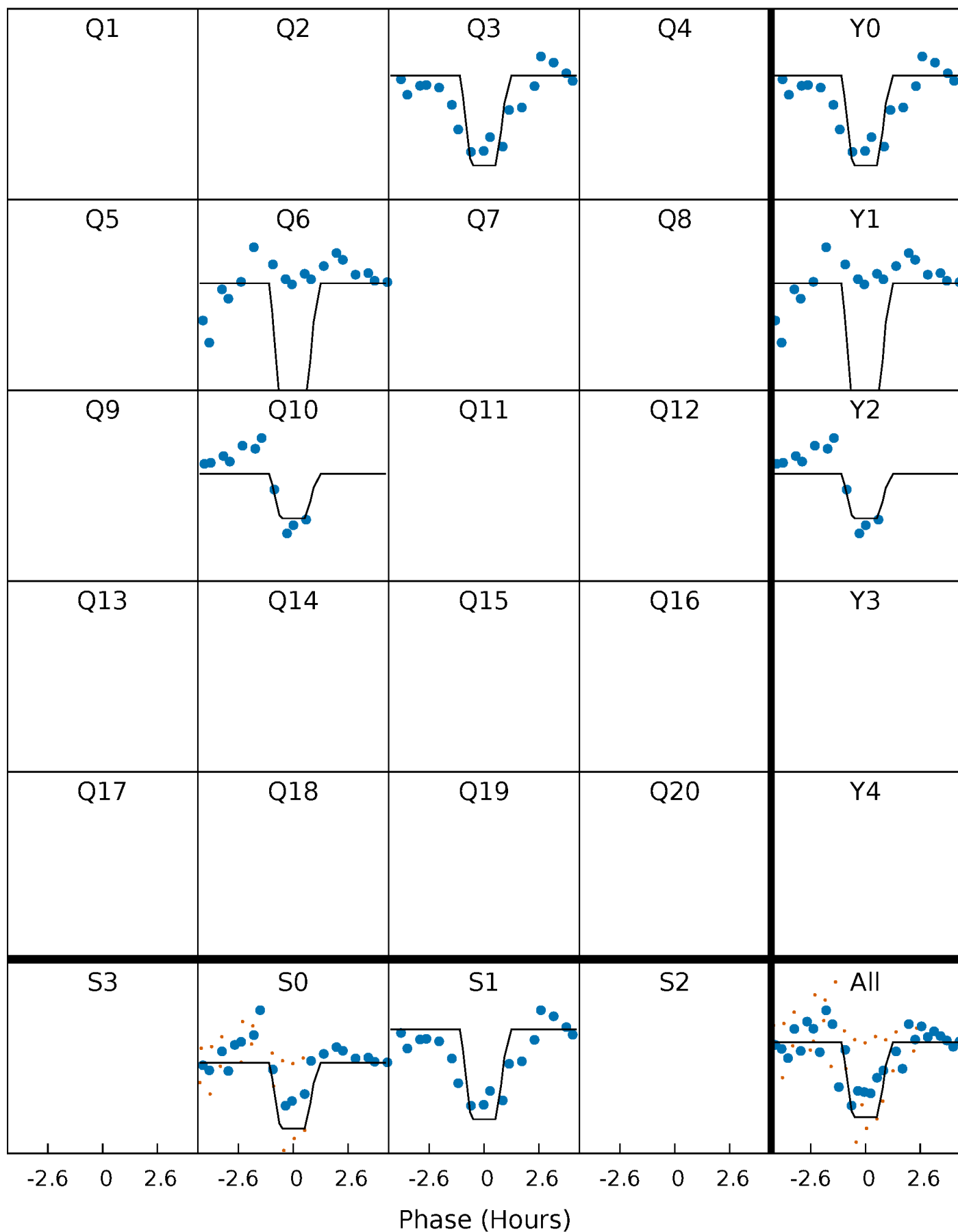
DV Quarter-Phased Transit Curves

TCE 006131659-05 P=298.382848 Days $T_0=317.826380$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

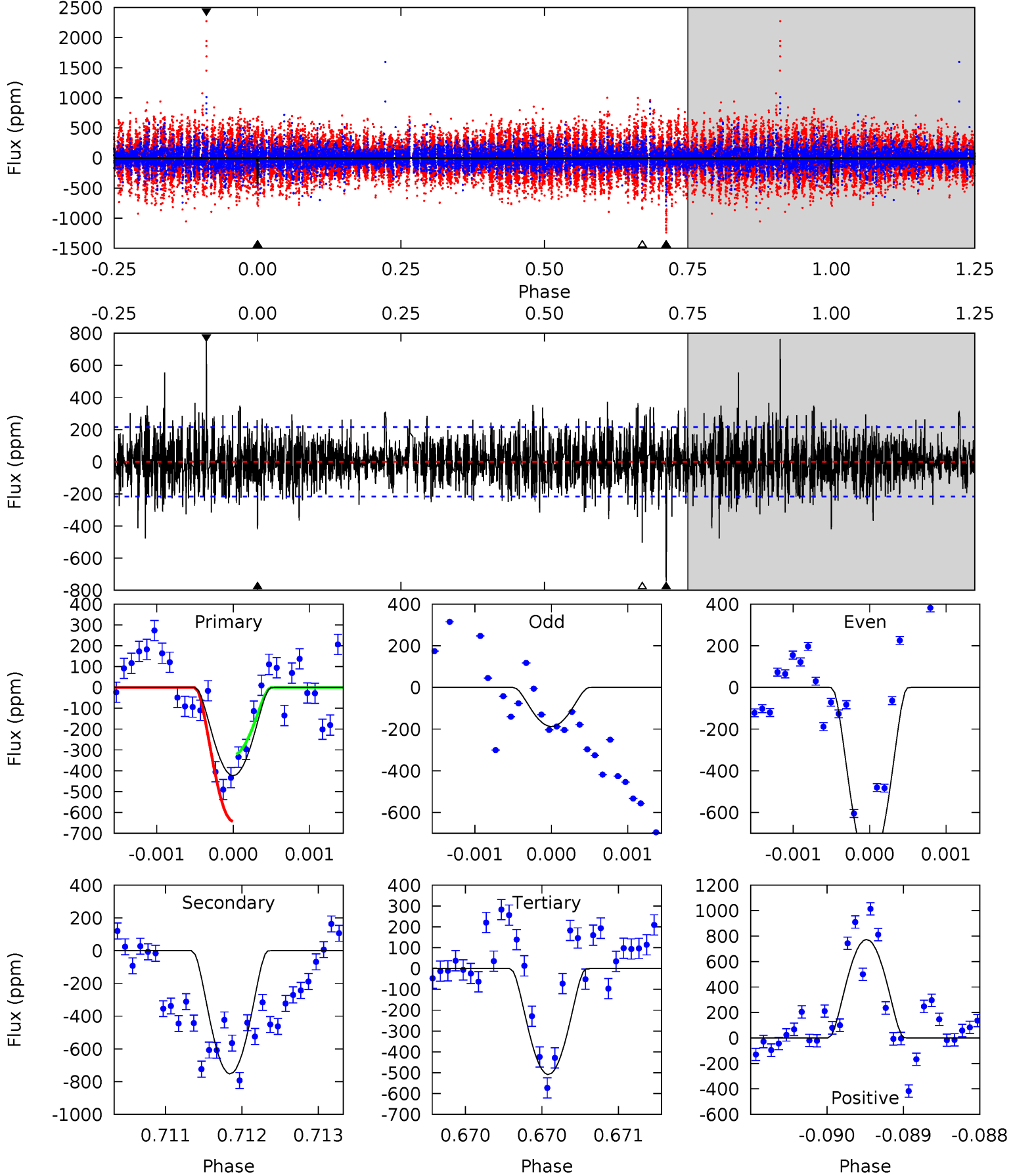
TCE 006131659-05 $P=298.368171$ Days $T_0=317.831918$ (BKJD)



DV Model-Shift Uniqueness Test

006131659-05, $P = 298.382848$ Days, $E = 19.443532$ Days

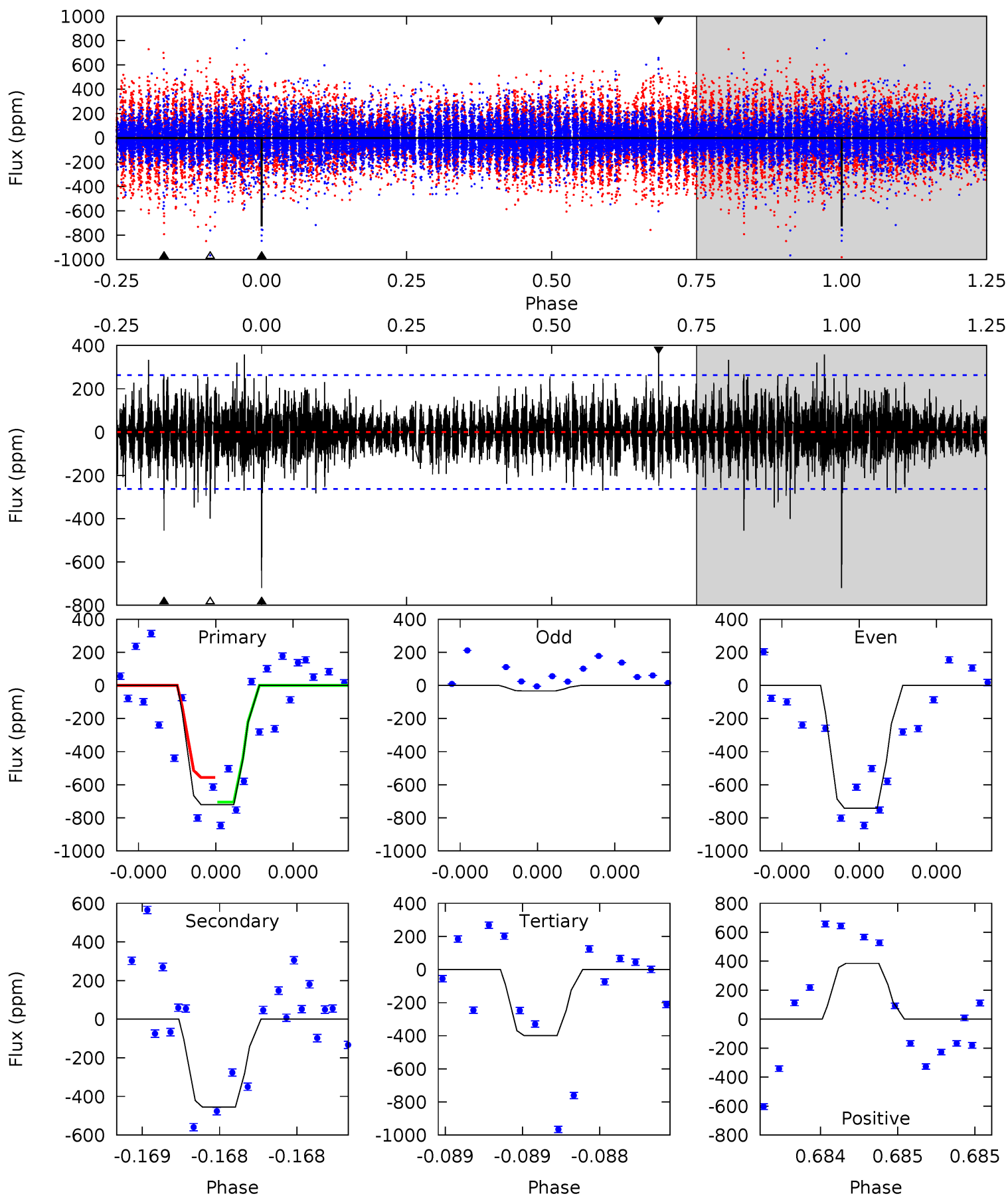
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	18.9	12.8	19.4	5.49	3.35	2.57	-2.13	-8.76	6.12	-0.51	8.04	1.25	0.51	4.19



Alt Model-Shift Uniqueness Test

006131659-05, P = 298.368171 Days, E = 19.463747 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	9.78	8.58	8.28	5.65	3.60	1.41	6.88	7.18	1.20	1.50	8.03	0.76	0.35	1.70



Stellar Parameters For KIC 006131659

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5079^{+151}_{-136}	$4.579^{+0.050}_{-0.050}$	$-0.240^{+0.300}_{-0.300}$	$0.732^{+0.072}_{-0.065}$	$0.741^{+0.085}_{-0.064}$	$2.659^{+0.618}_{-0.502}$
	+3%/-3%	+1%/-1%	+125%/-125%	+10%/-9%	+11%/-9%	+23%/-19%
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 006131659-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-744 ± 39	$9.03^{+7.92}_{-5.94}$	301^{+11}_{-10}	3098^{+1340}_{-479}	3089^{+23925}_{-2201}
Alt.	-455 ± 47	$7.90^{+8.27}_{-5.44}$	301^{+11}_{-10}	3008^{+1476}_{-502}	2515^{+25376}_{-1893}

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 $A_{obs} \gg 1.0$

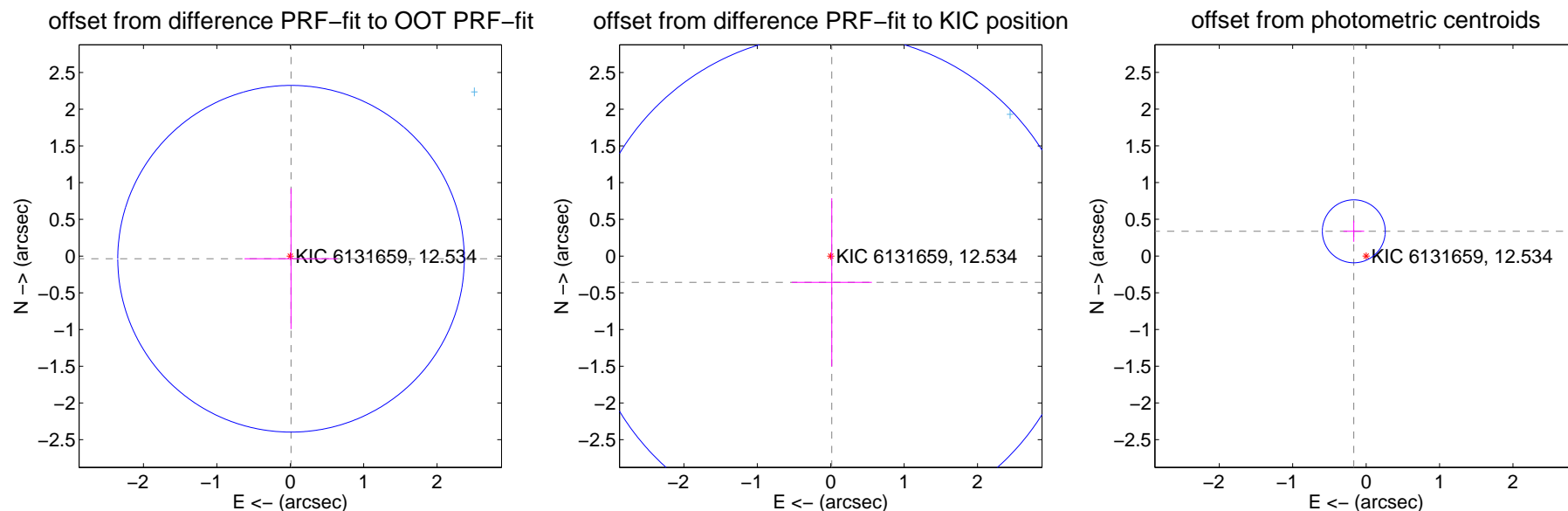
DV Centroid Data

Supplemental centroid analysis for 006131659-05. Kepler magnitude: 12.53. Transit SNR 23.01

There are 1 quarters with good PRF difference image offsets

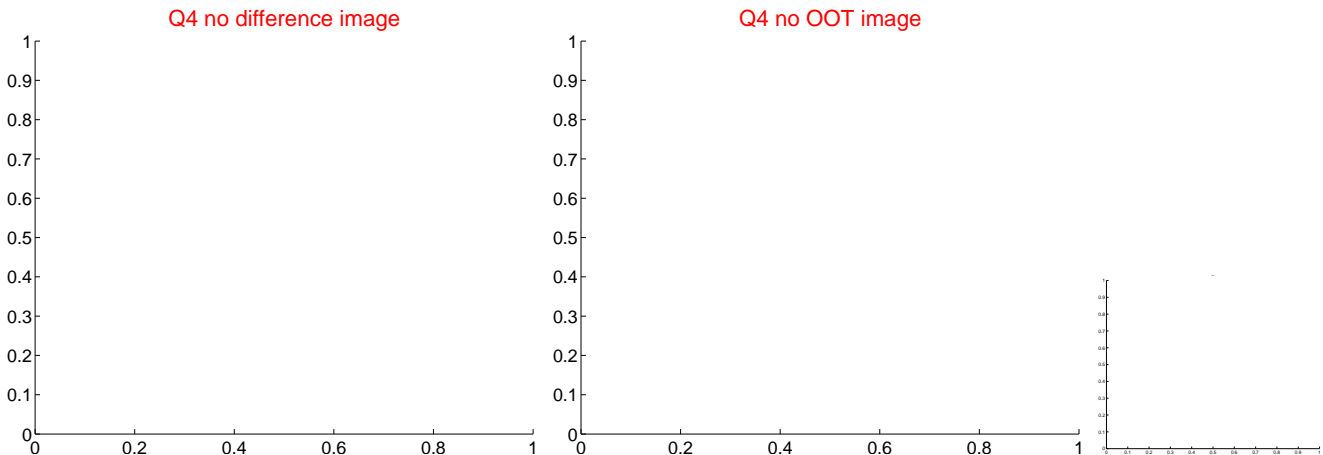
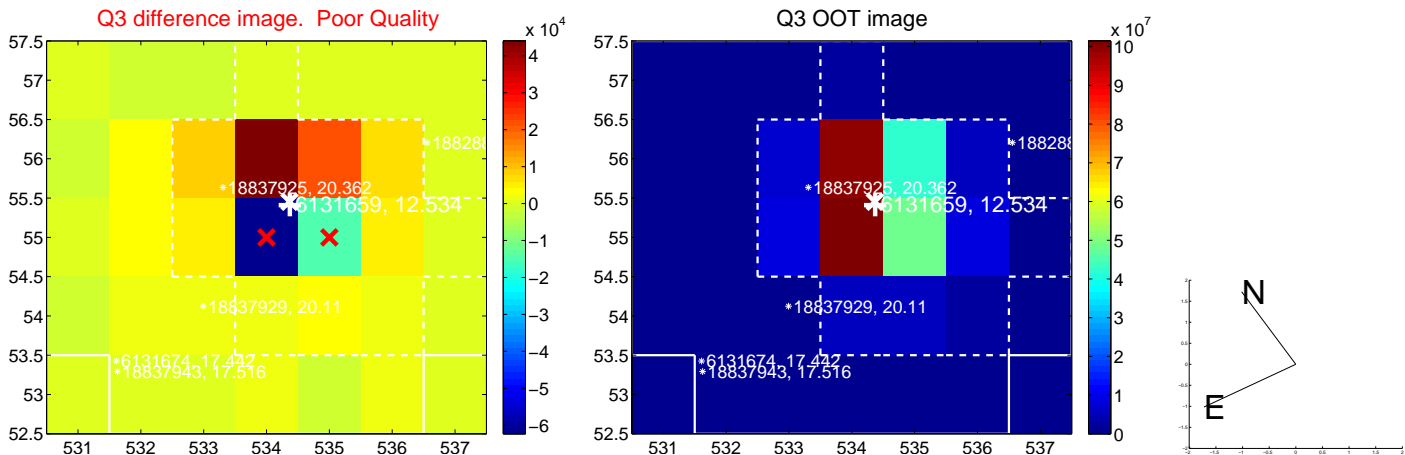
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.038 ± 0.787	0.05	-0.010 ± 0.634	-0.036 ± 0.959
PRF-fit source offset from KIC position	0.358 ± 1.128	0.32	-0.015 ± 0.546	-0.358 ± 1.145
photometric centroid source offset	0.38 ± 0.14	2.63	0.17 ± 0.14	0.34 ± 0.14

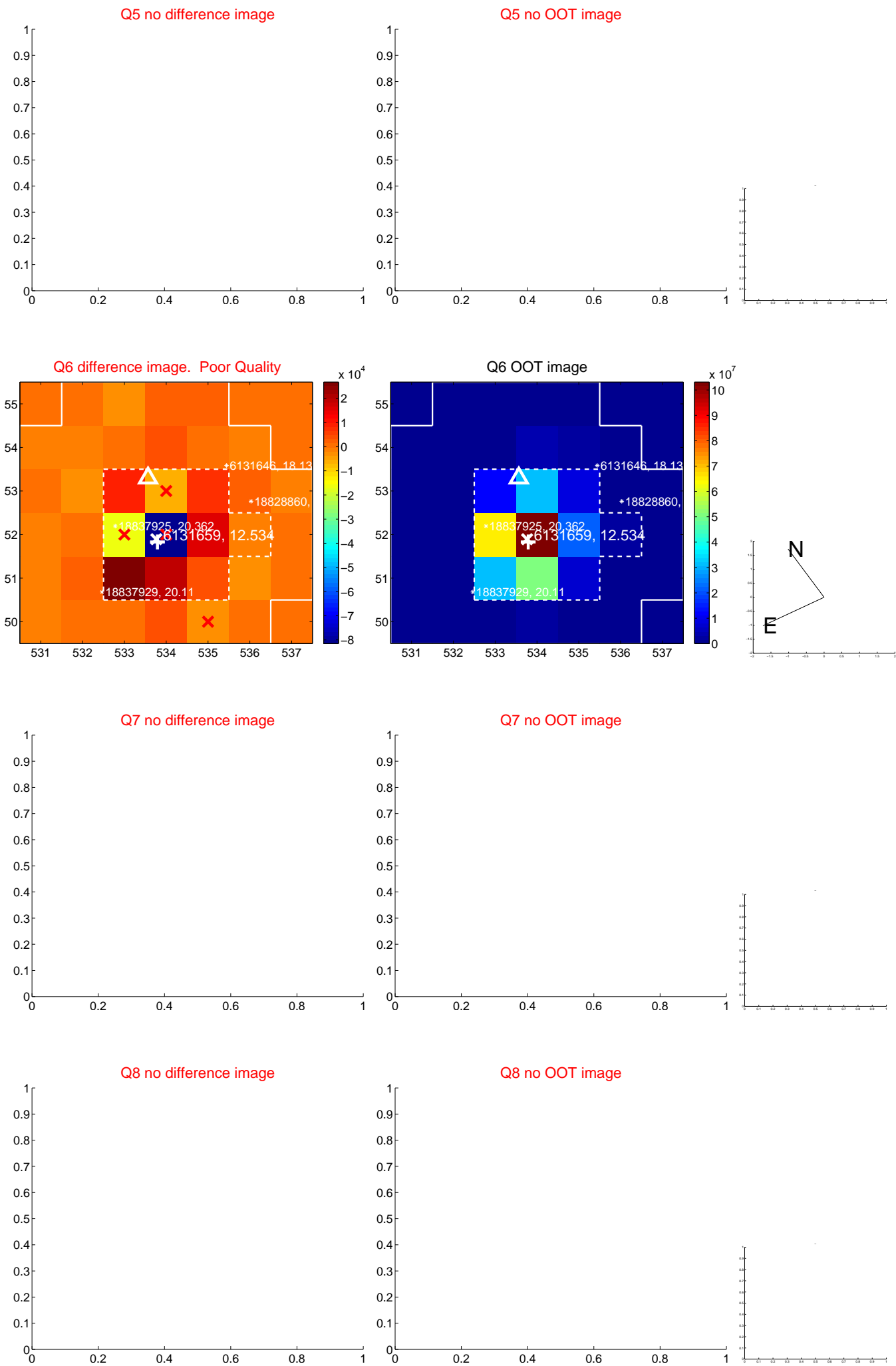


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

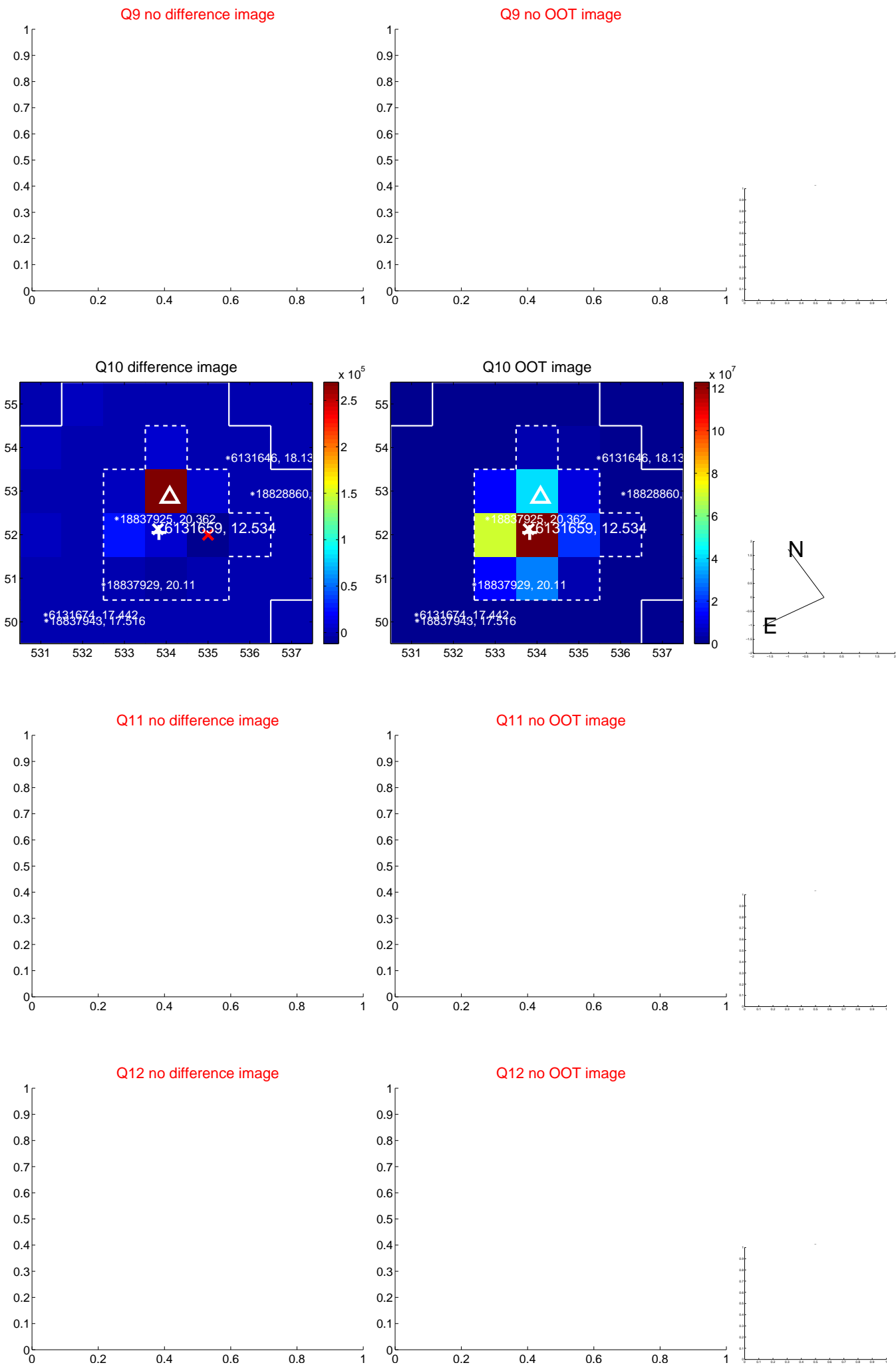
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



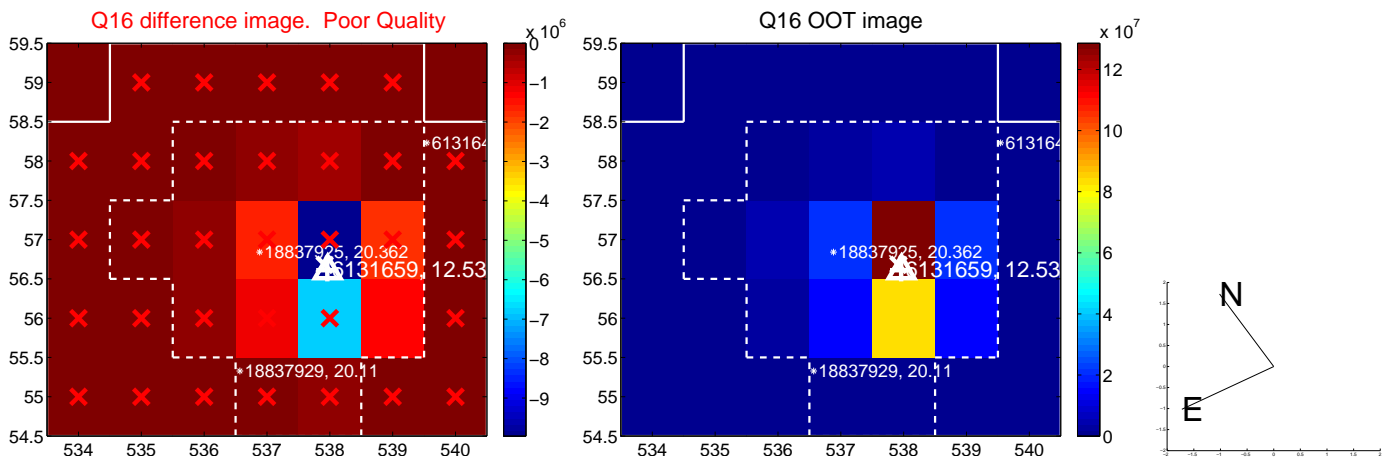
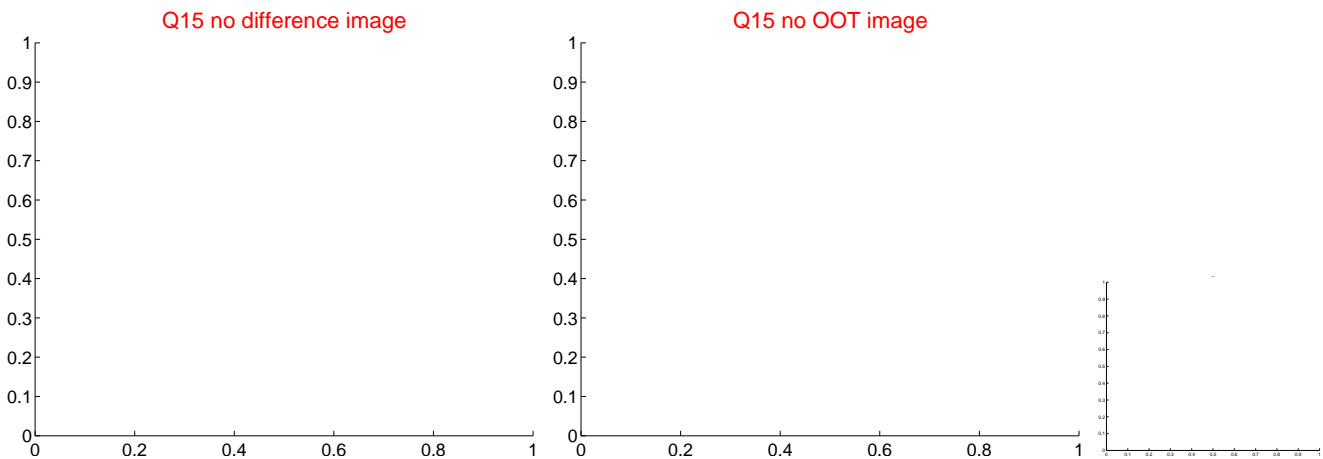
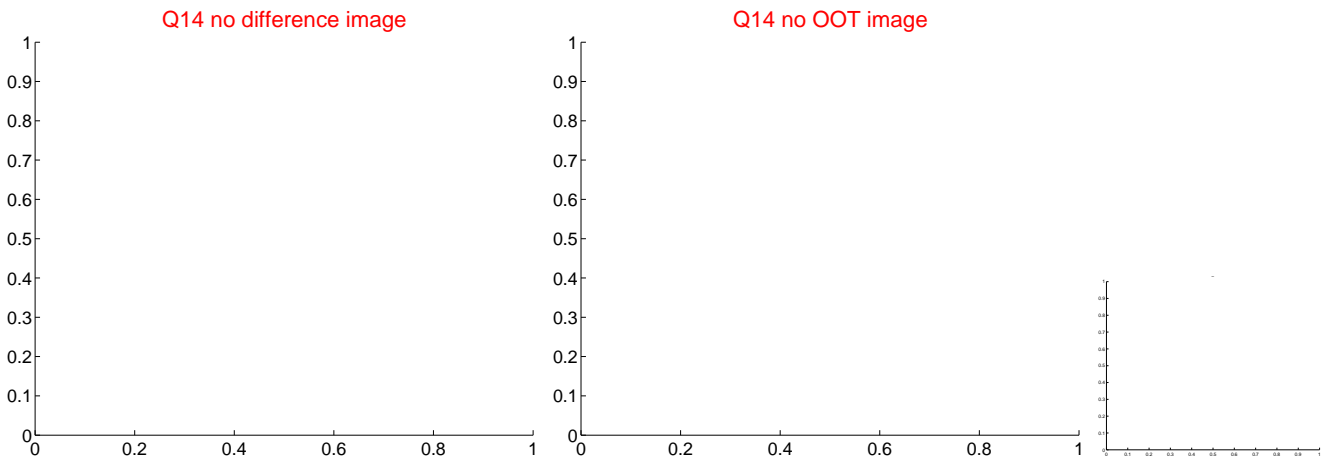
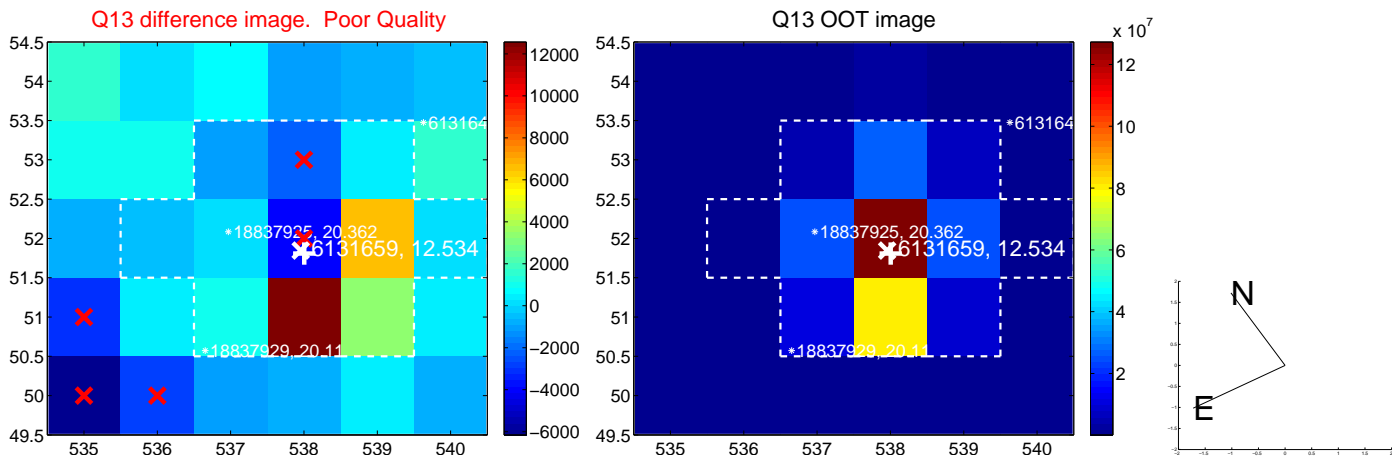
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



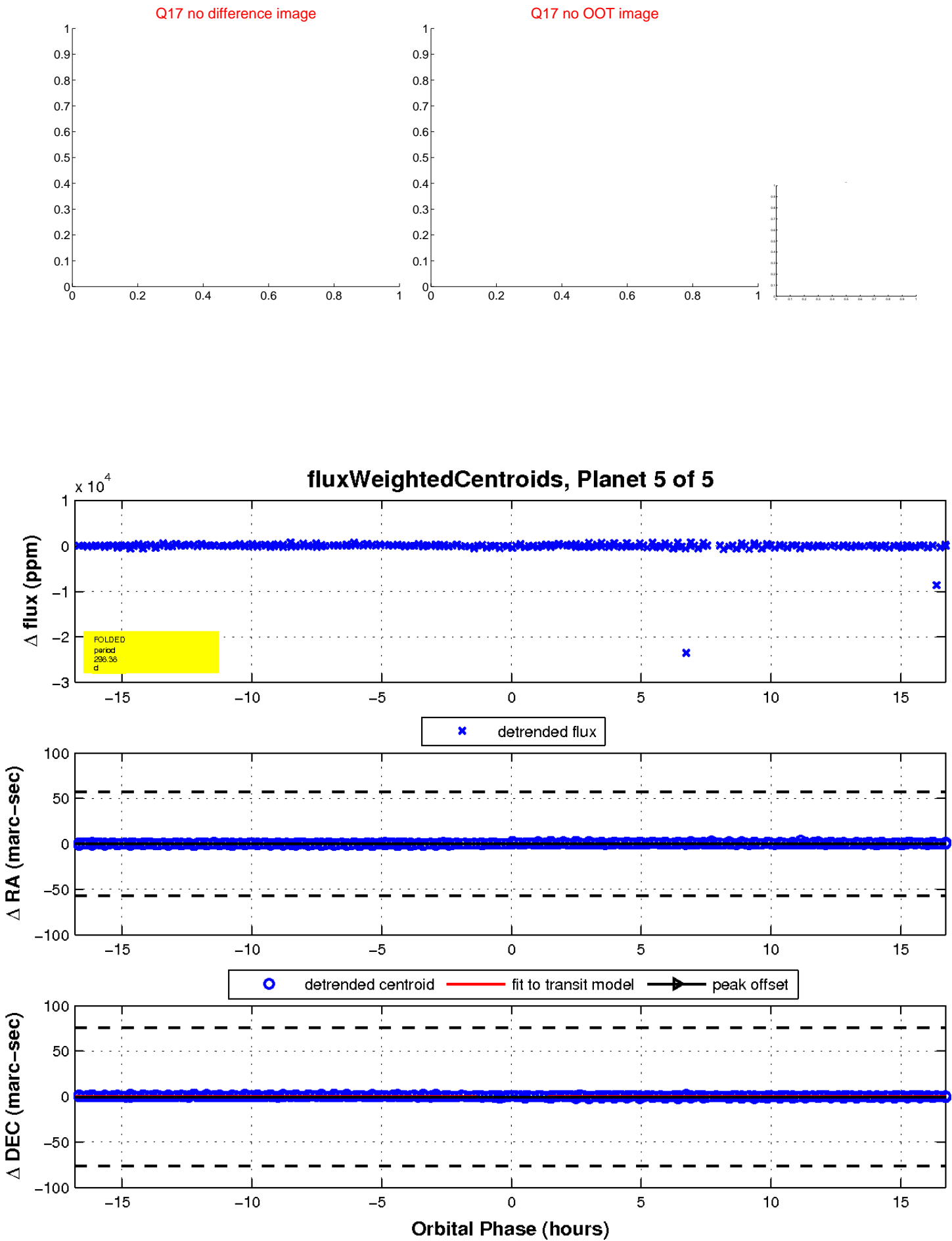
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

