

KIC 005019234

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})
005019234-01	OBS	No	0.566945	131.641462	69.6	1.706	8.7	11.1	1.81	9107	1.75	77881.26
005019234-02	OBS	No	0.566950	131.915706	54.5	1.841	8.6	9.3	1.81	9107	1.40	77880.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005019234-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005019234-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD

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

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

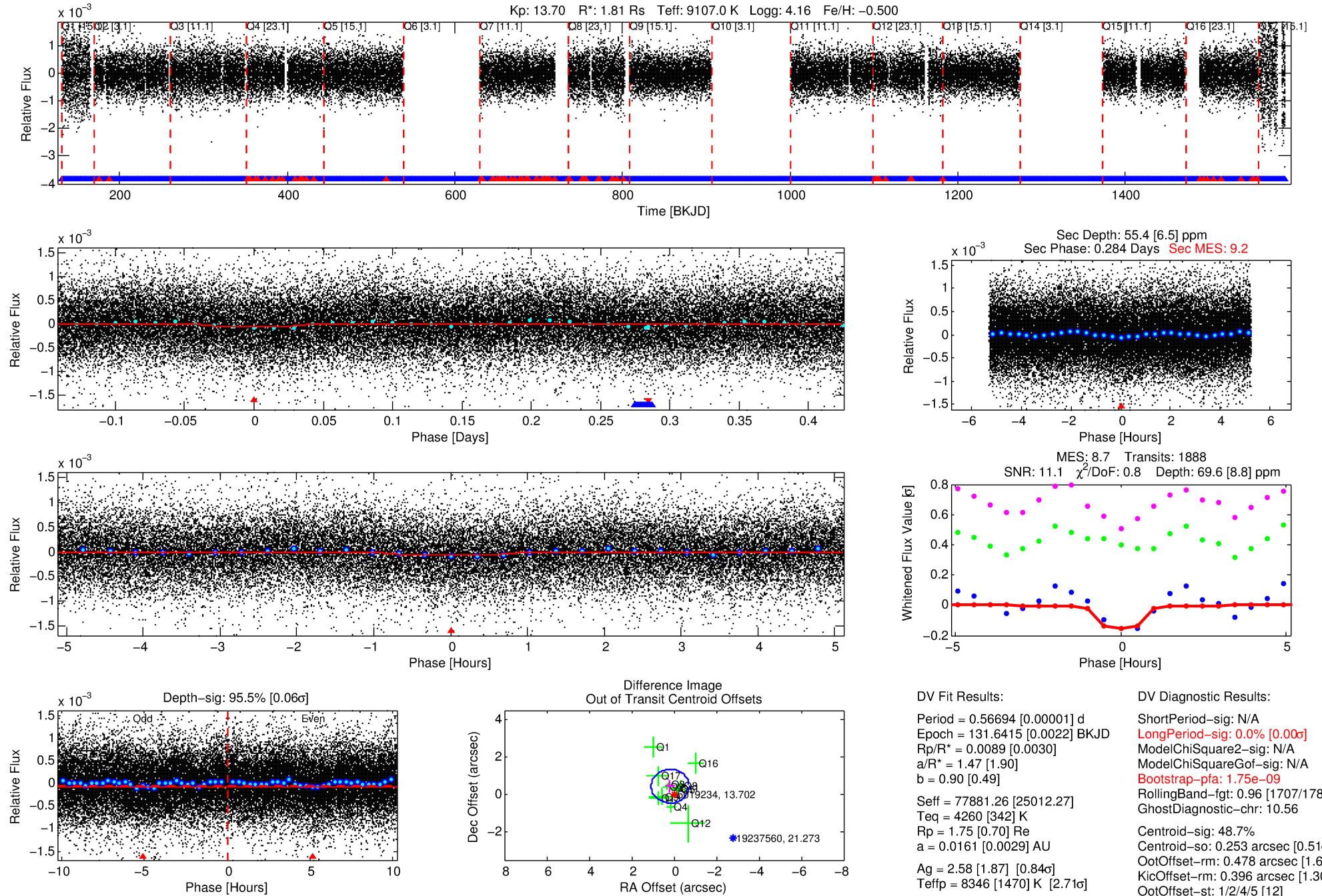
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005019234-01

No Significant Match Found

DV One-Page Summary

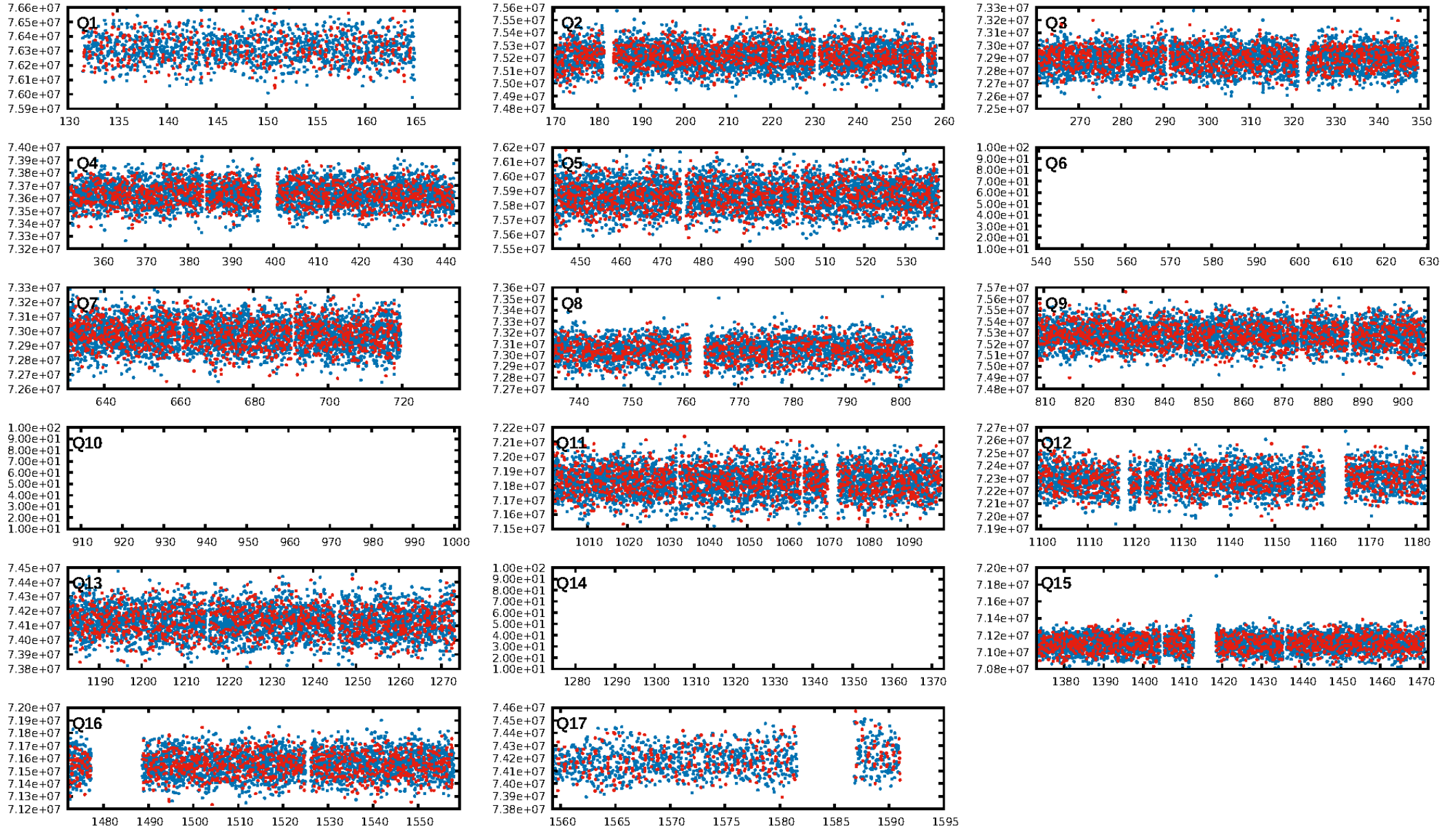
KIC: 5019234 Candidate: 1 of 2 Period: 0.567 d



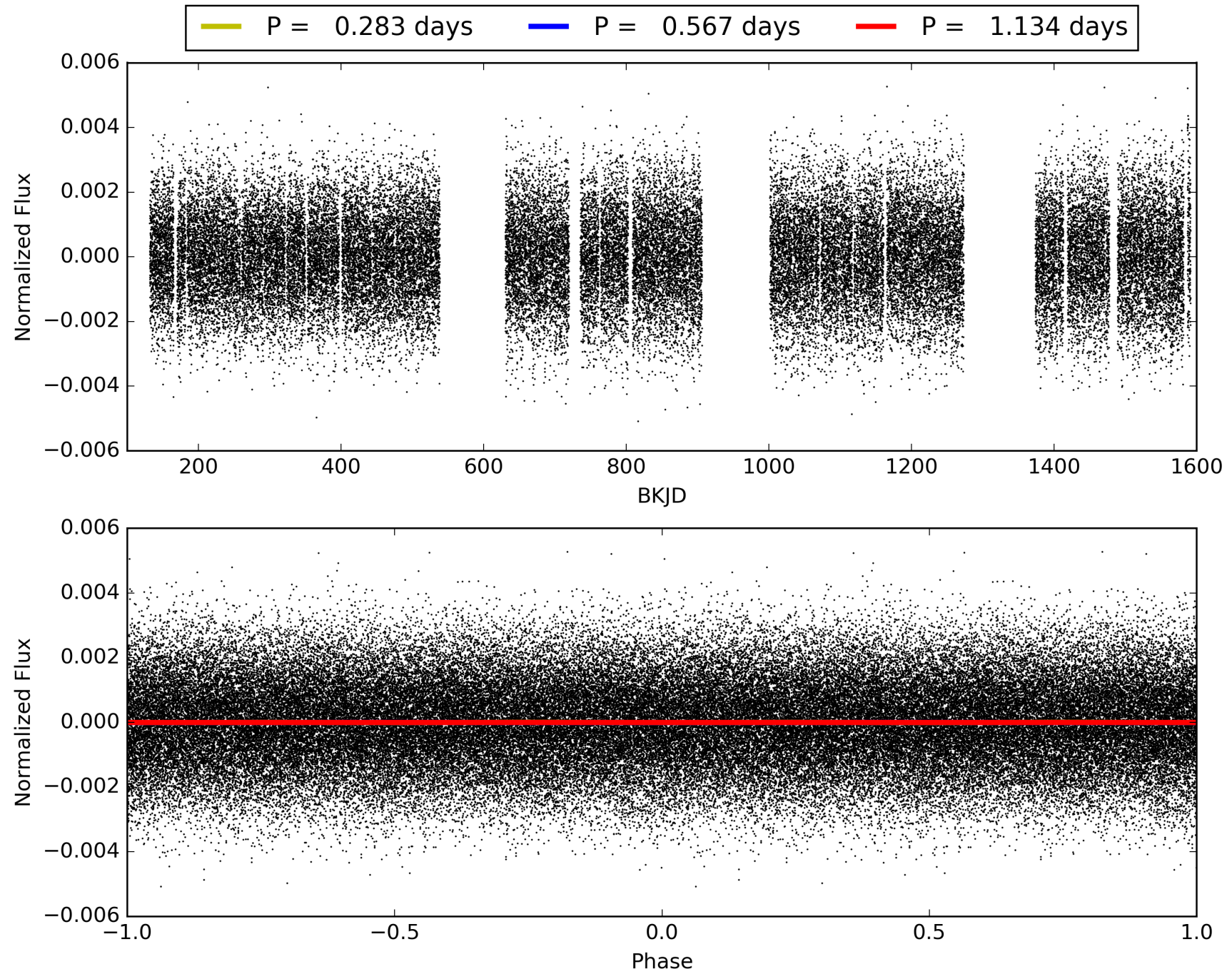
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:04:07 Z

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

TCE 005019234-01, PDC Light Curves

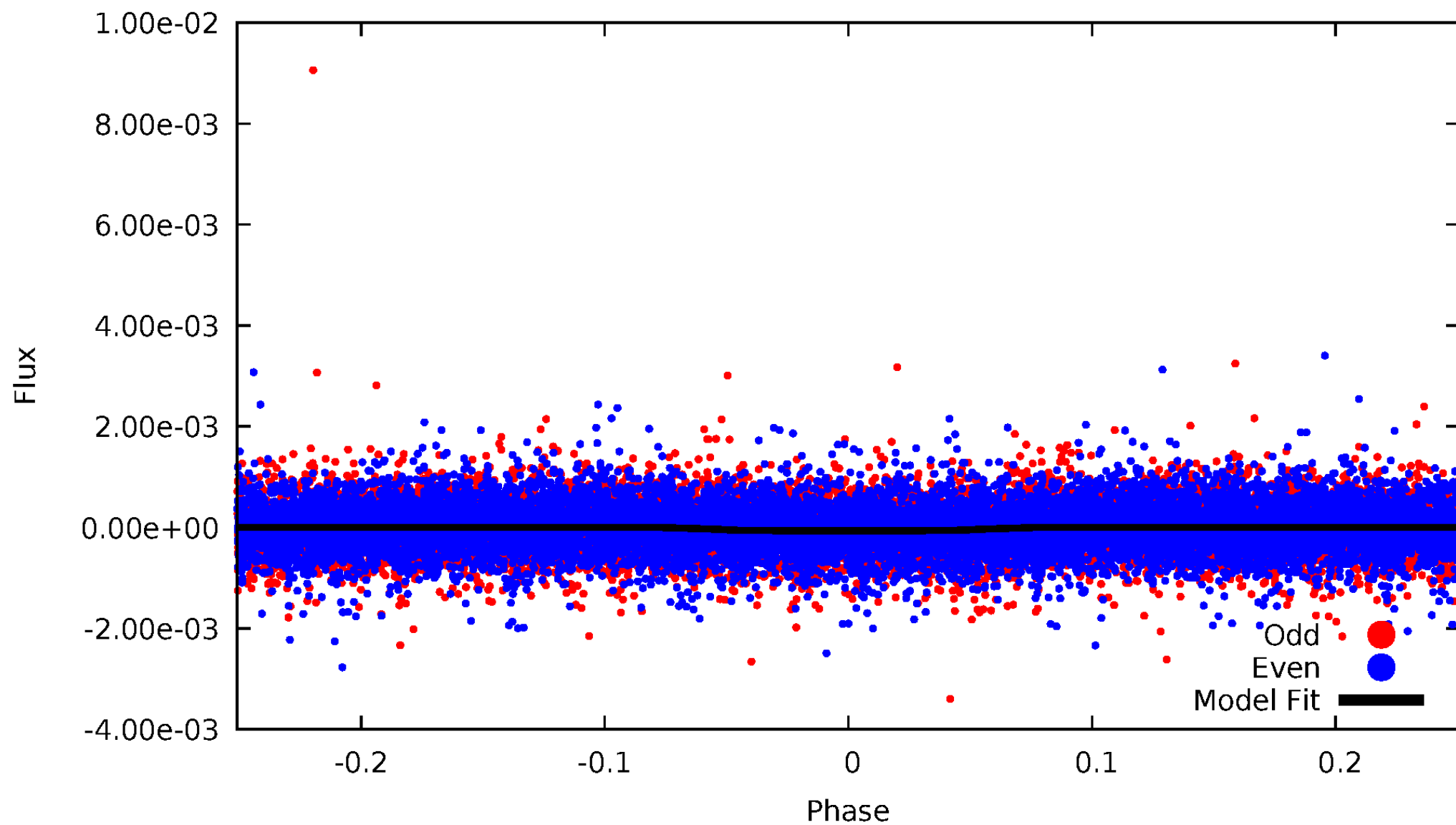


TCE 005019234-01



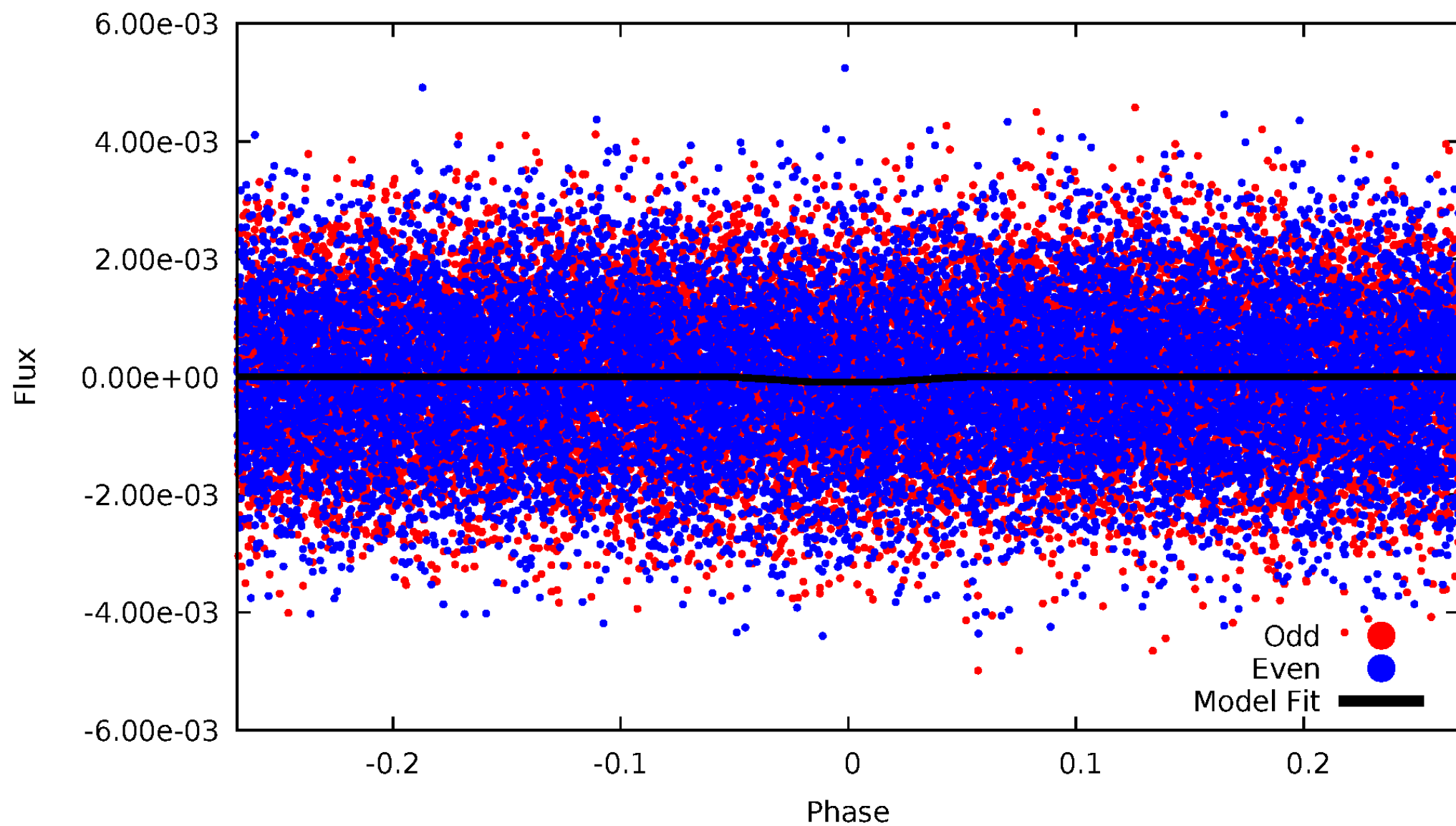
DV Odd/Even

TCE 005019234-01



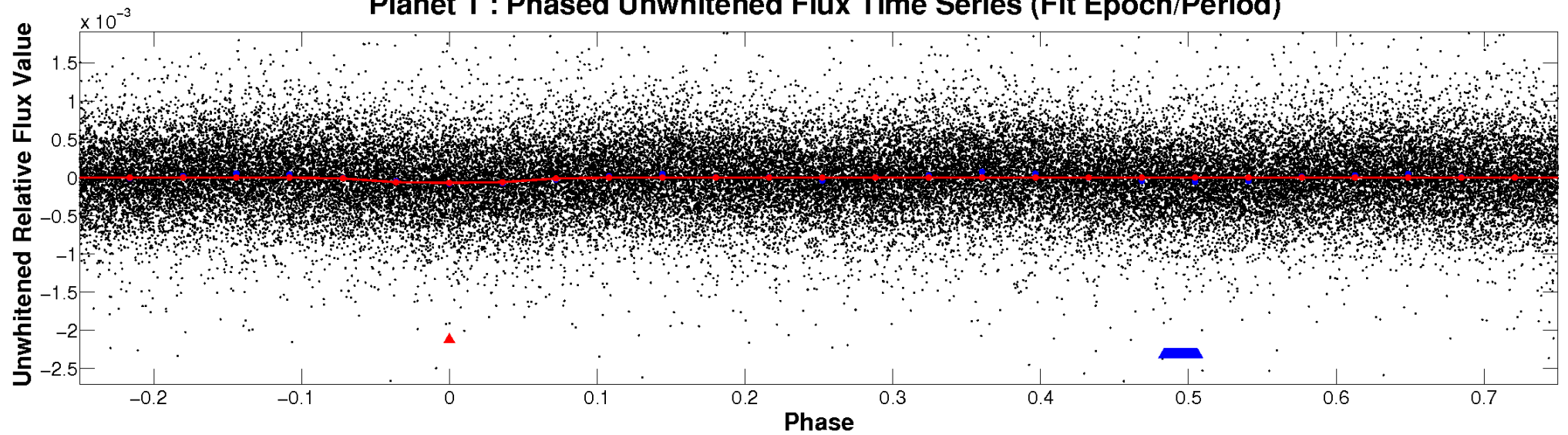
ALT Odd/Even

TCE 005019234-01

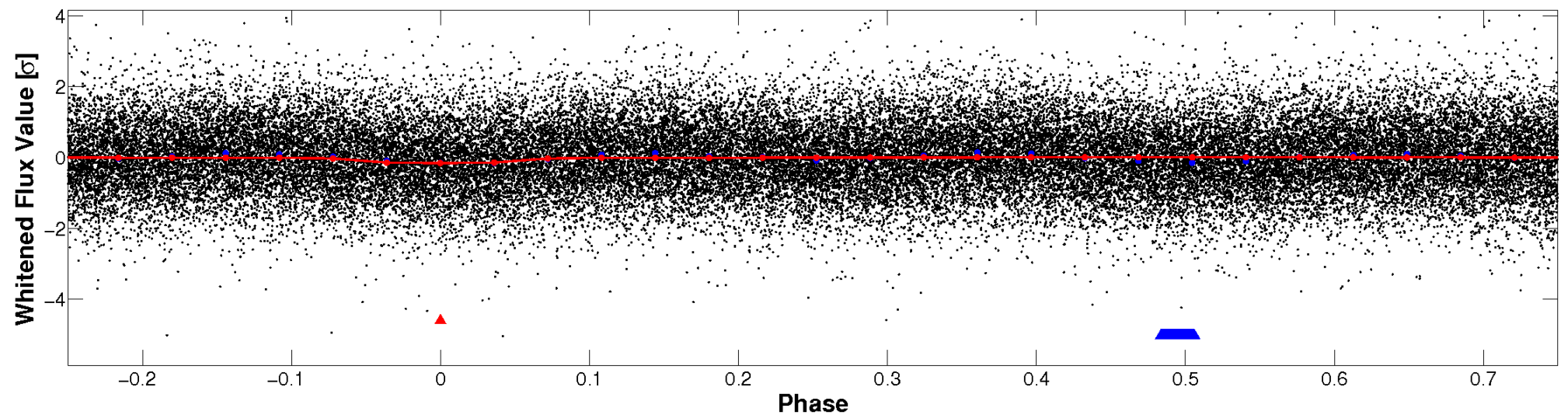


Non-Whitened Vs. Whitened Light Curve

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

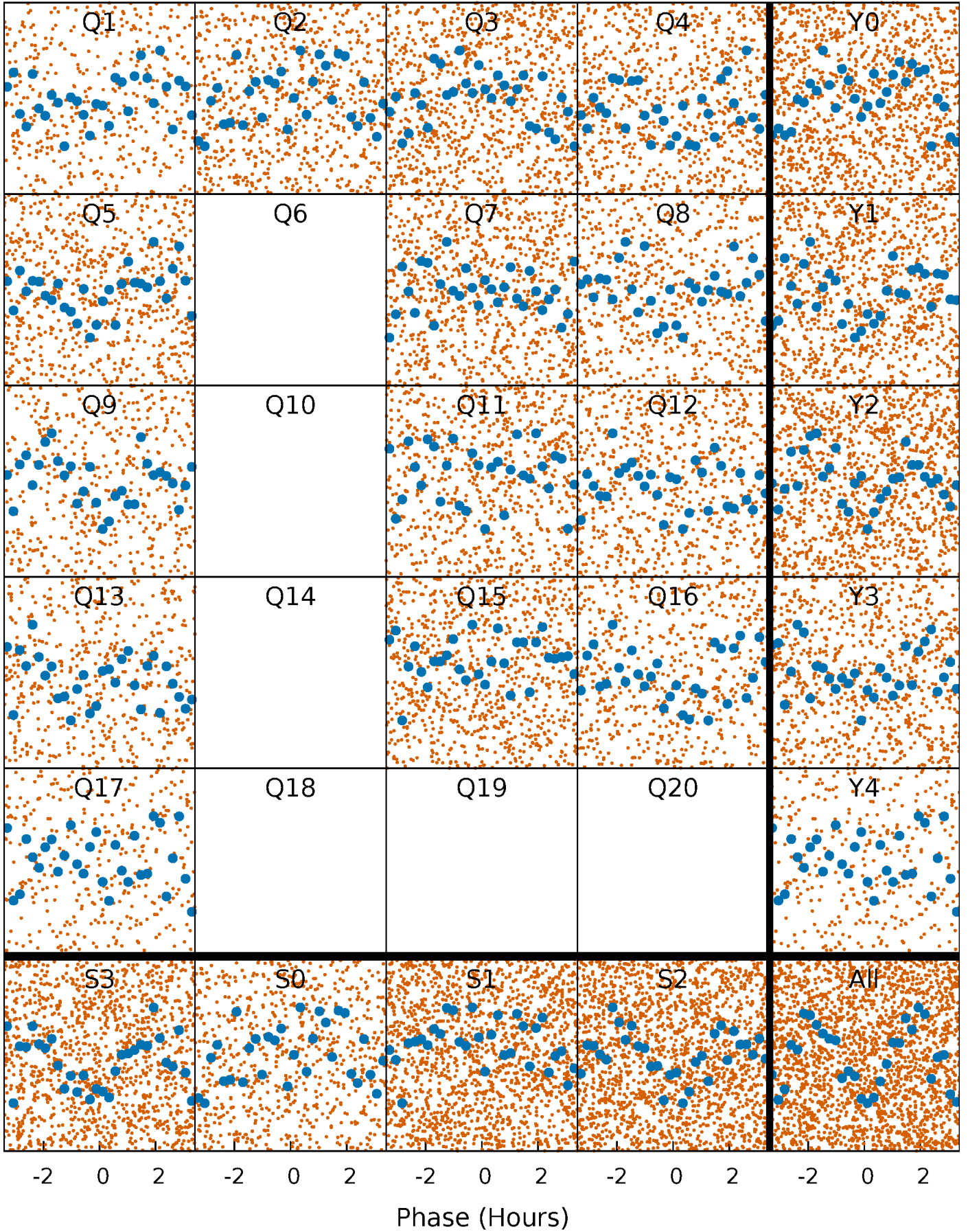


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



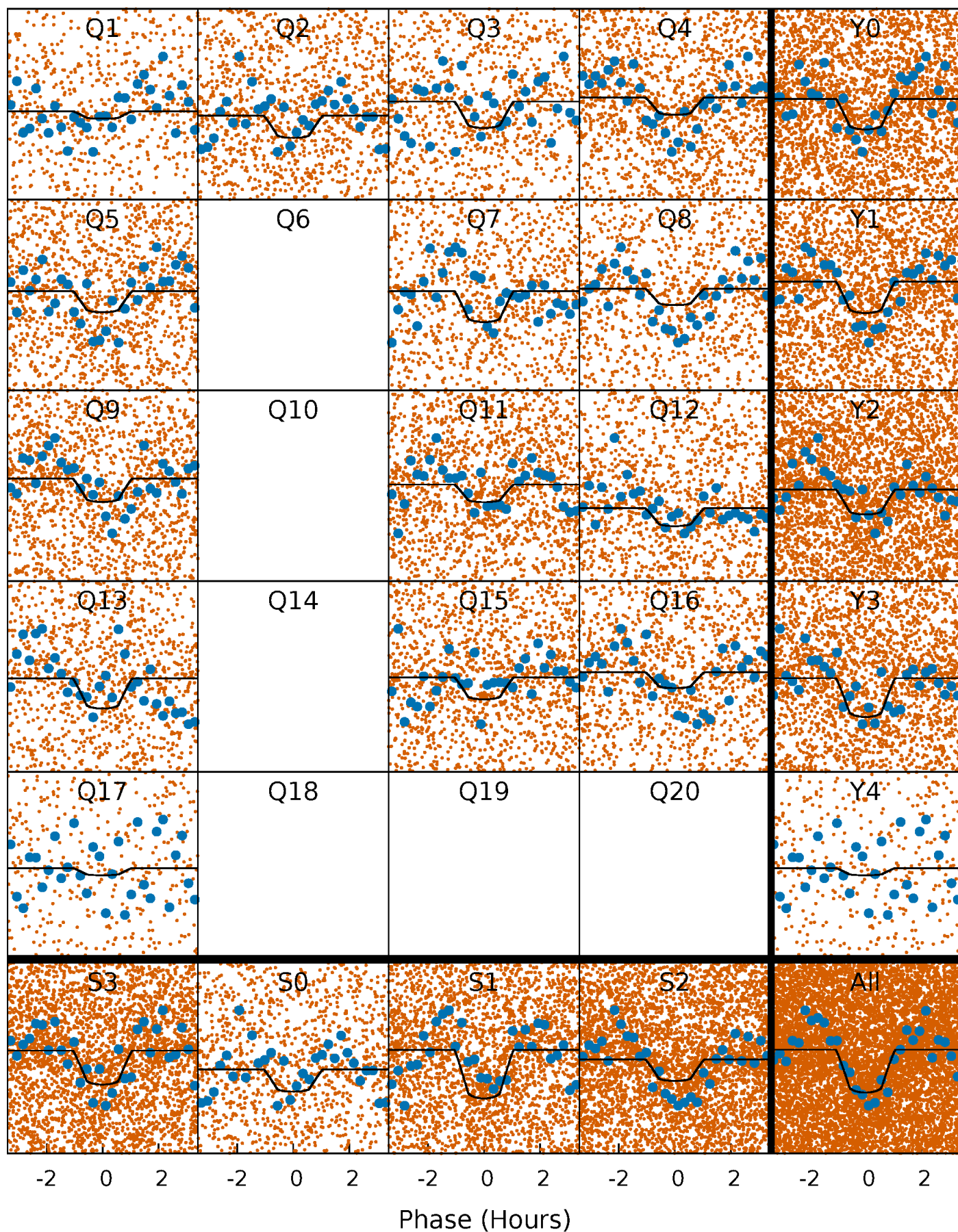
PDC Quarter-Phased Transit Curves

TCE 005019234-01 P= 0.566945 Days $T_0=131.641462$ (BKJD)



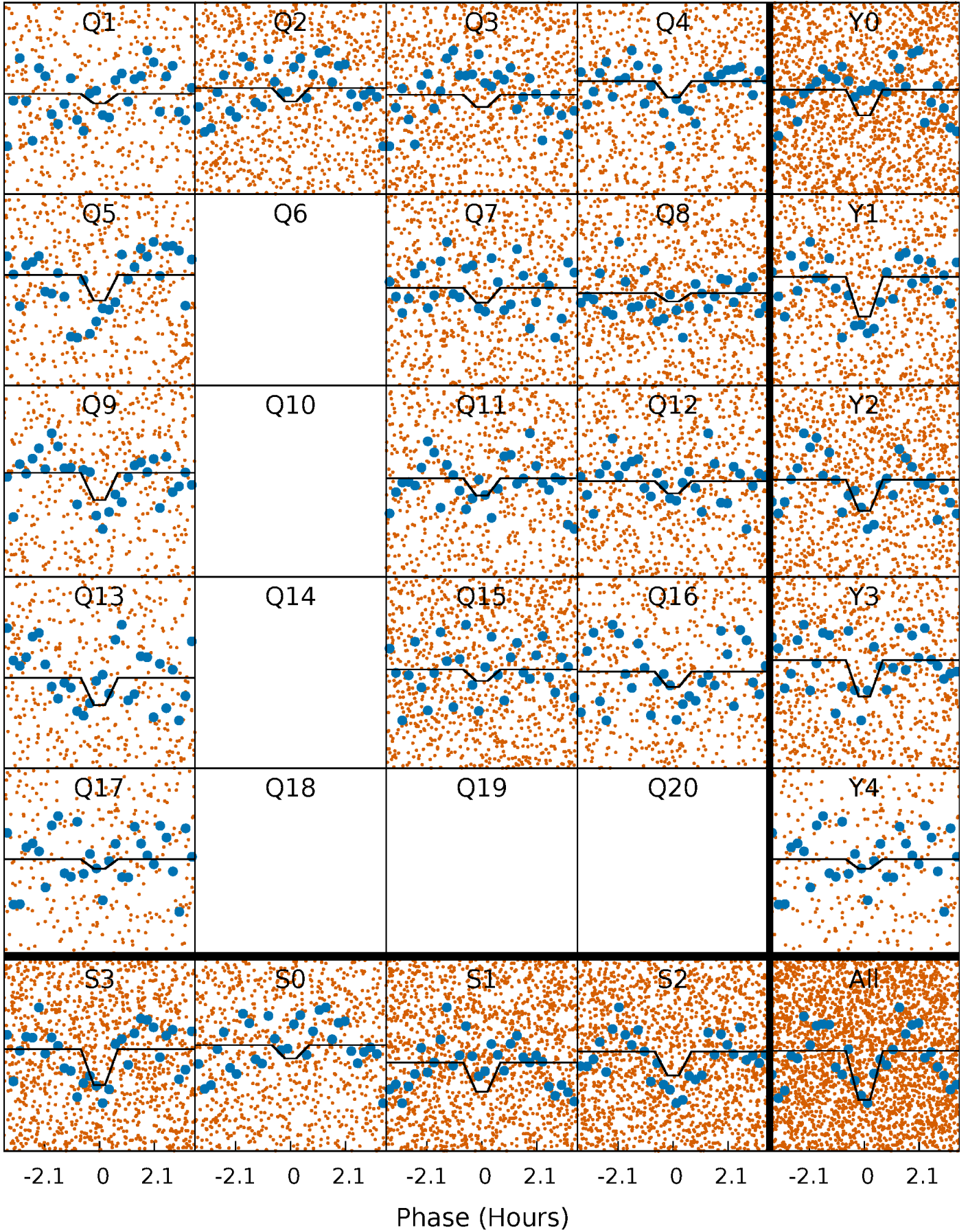
DV Quarter-Phased Transit Curves

TCE 005019234-01 P= 0.566945 Days $T_0=131.641462$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

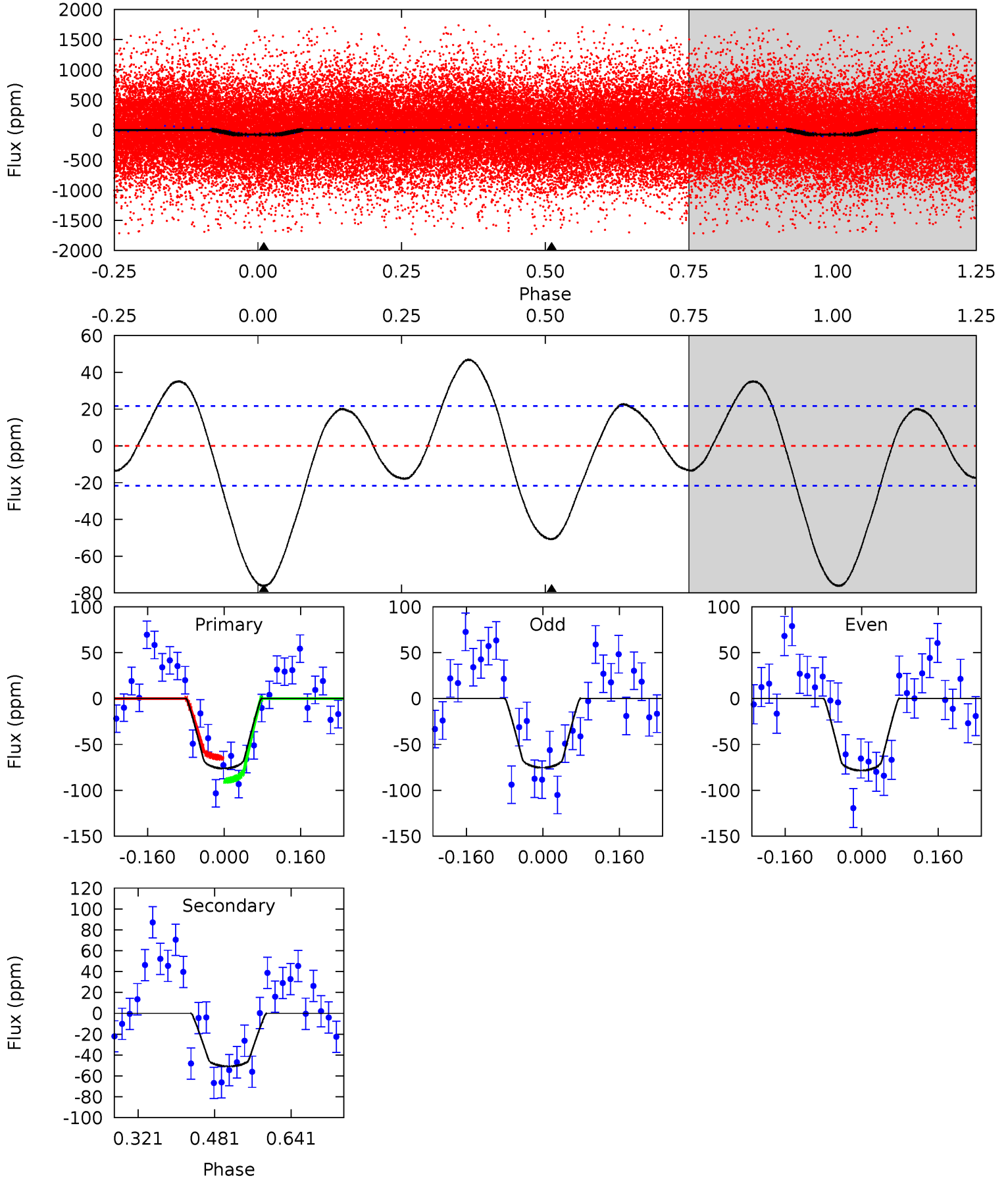
TCE 005019234-01 P= 0.566949 Days $T_0=131.639603$ (BKJD)



DV Model-Shift Uniqueness Test

005019234-01, P = 0.566945 Days, E = 131.074517 Days

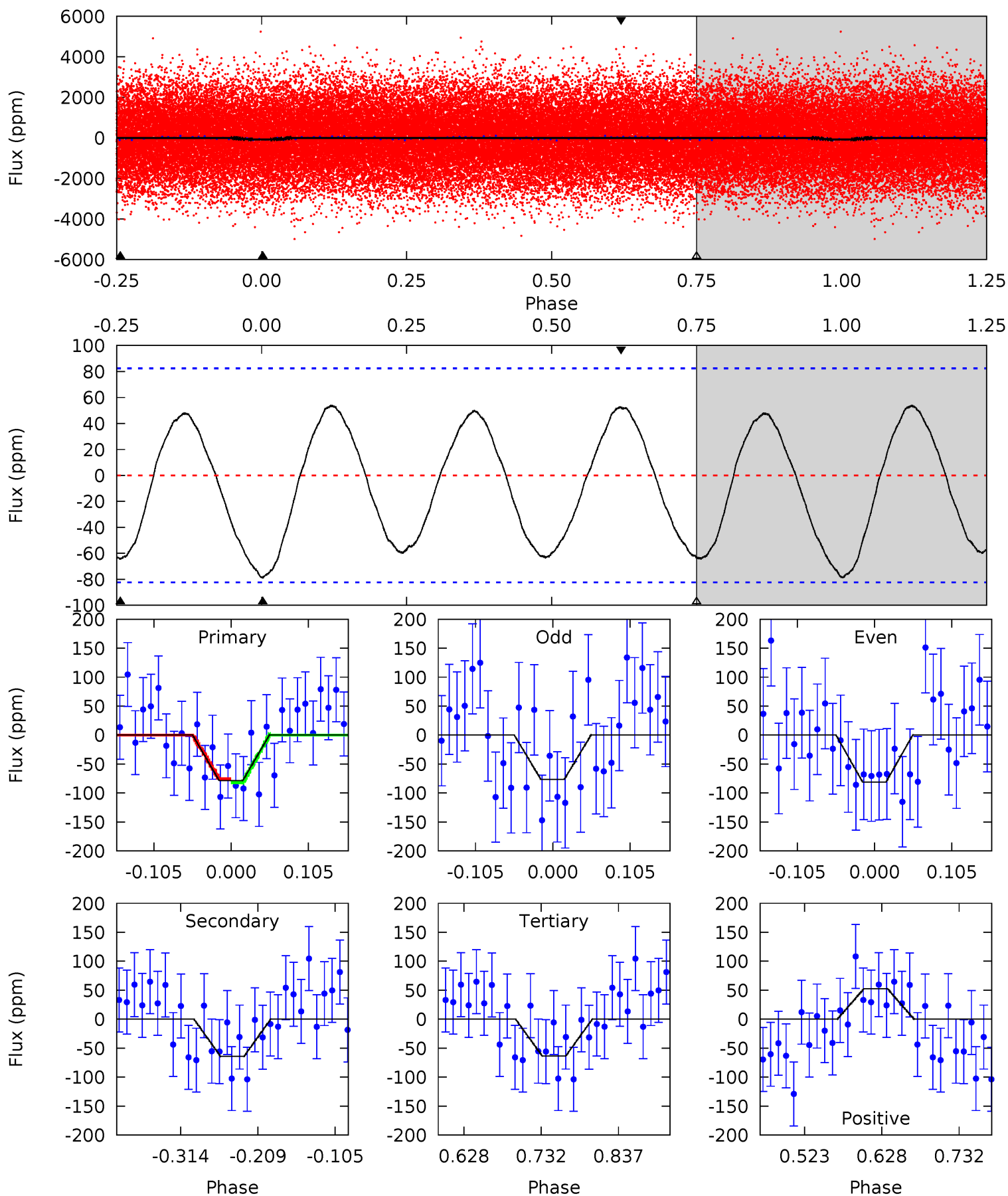
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.7	10.5	0	0	4.46	1.40	3.29	15.7	15.7	10.5	10.5	0.32	1.09	0.38	2.58



Alt Model-Shift Uniqueness Test

005019234-01, P = 0.566949 Days, E = 131.072654 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.36	3.55	3.52	2.91	4.56	1.62	2.20	0.84	1.44	0.04	0.64	0.13	1.21	0.41	0.19



Stellar Parameters For KIC 005019234

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9107^{+251}_{-430}	$4.162^{+0.140}_{-0.140}$	$-0.500^{+0.100}_{-0.300}$	$1.814^{+0.397}_{-0.361}$	$1.742^{+0.281}_{-0.216}$	$0.411^{+0.322}_{-0.168}$
	+3%/-5%	+3%/-3%	+20%/-60%	+22%/-20%	+16%/-12%	+78%/-41%
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 005019234-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-51 ± 5	$1.77^{+0.67}_{-0.62}$	5941^{+343}_{-381}	7469^{+2592}_{-1313}	$2.305^{+3.409}_{-1.083}$
Alt.	-64 ± 18	$1.87^{+0.66}_{-0.61}$	5945^{+372}_{-381}	7885^{+2597}_{-1493}	$2.678^{+3.545}_{-1.291}$

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

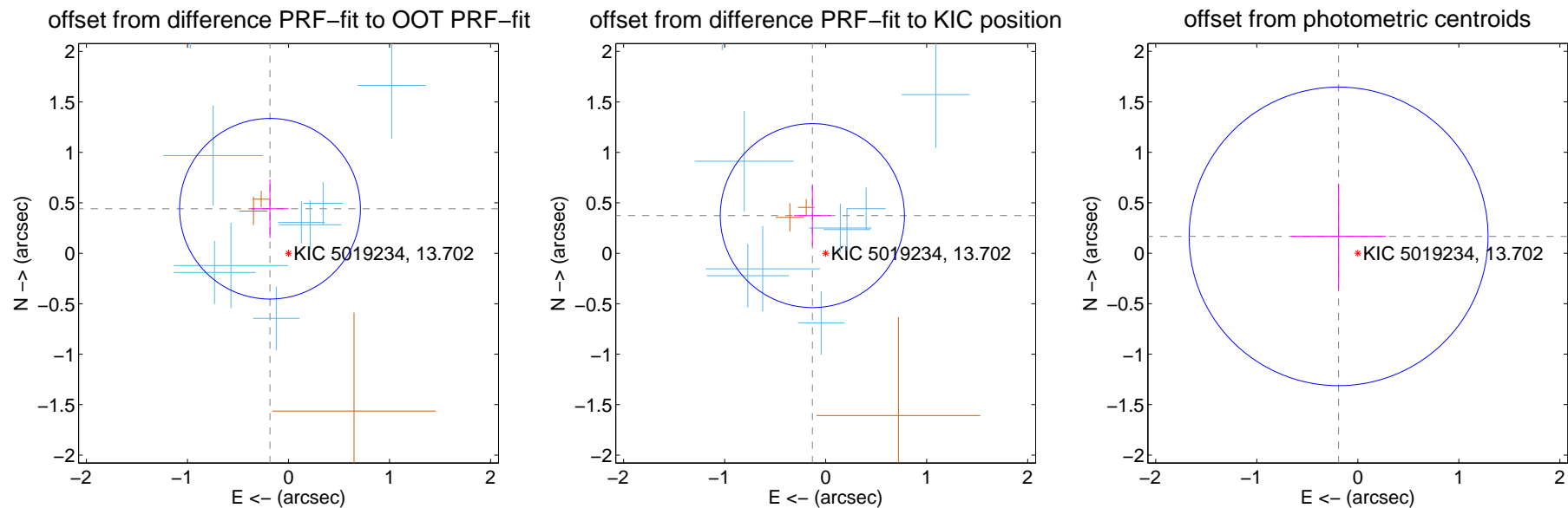
DV Centroid Data

Supplemental centroid analysis for 005019234-01. Kepler magnitude: 13.70. Transit SNR 11.08

There are 9 quarters with good PRF difference image offsets

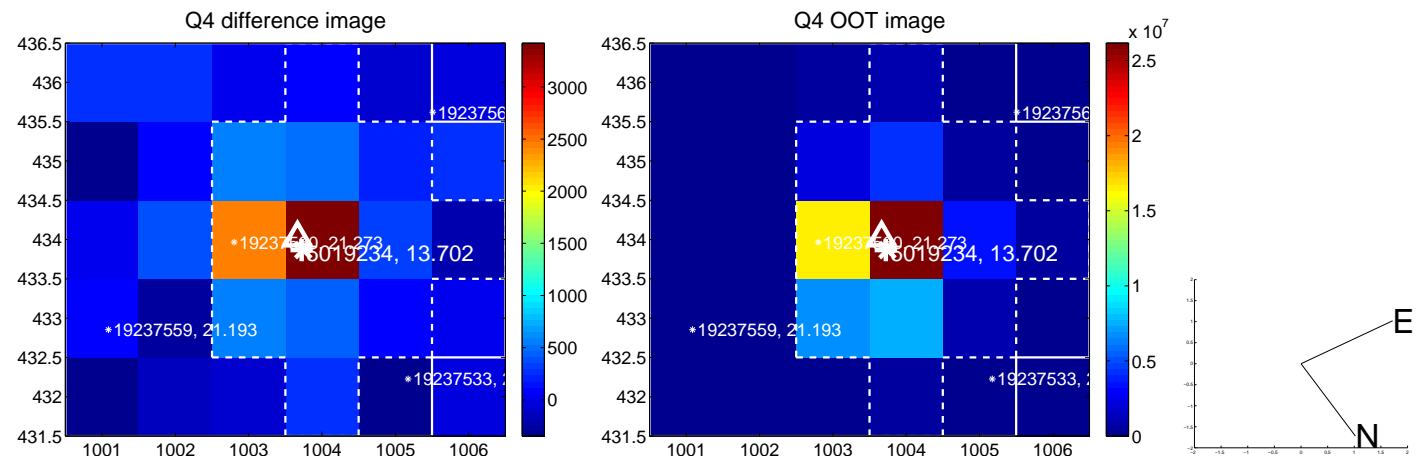
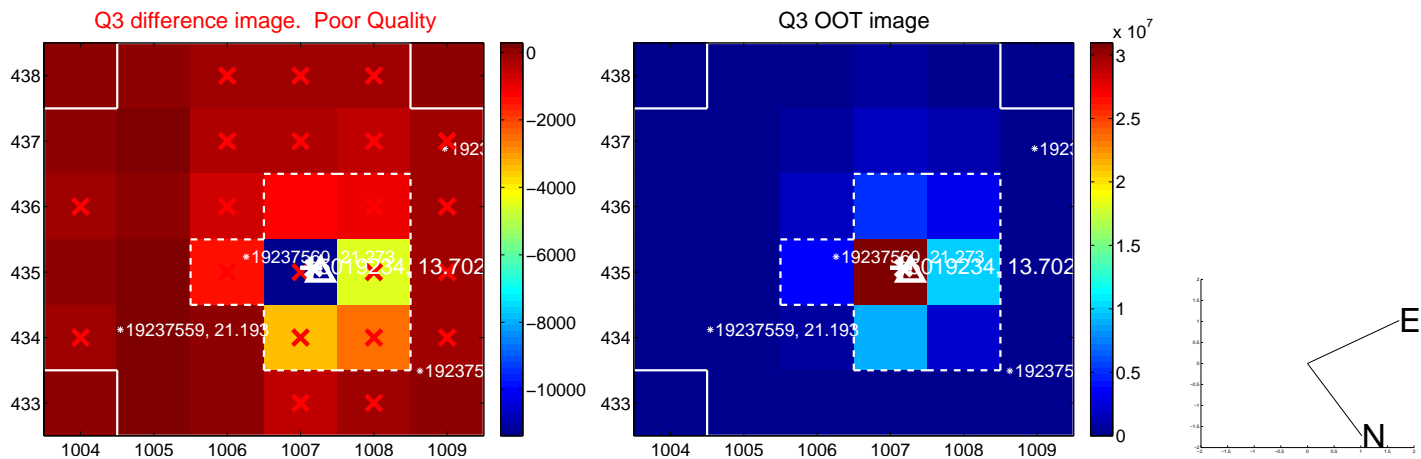
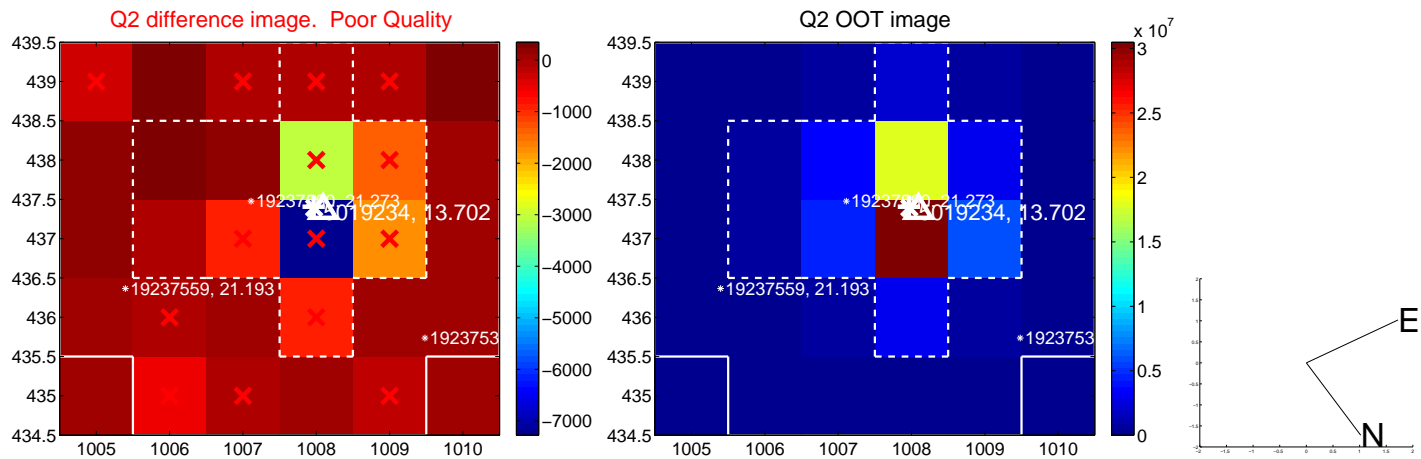
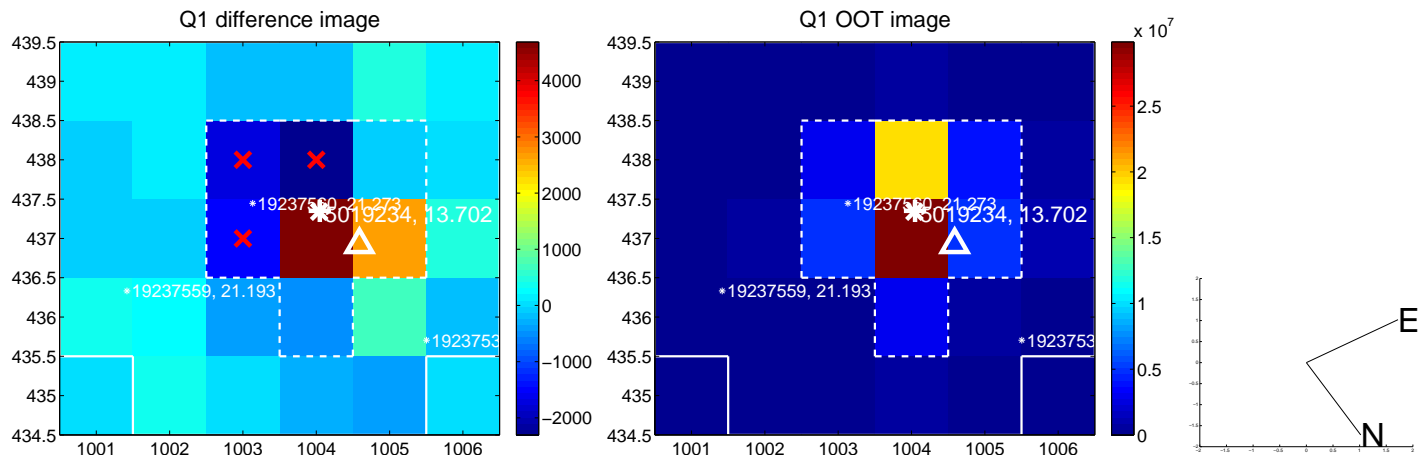
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.478 ± 0.298	1.60	0.183 ± 0.185	0.441 ± 0.291
PRF-fit source offset from KIC position	0.396 ± 0.304	1.30	0.132 ± 0.182	0.373 ± 0.302
photometric centroid source offset	0.25 ± 0.49	0.51	0.19 ± 0.47	0.17 ± 0.52

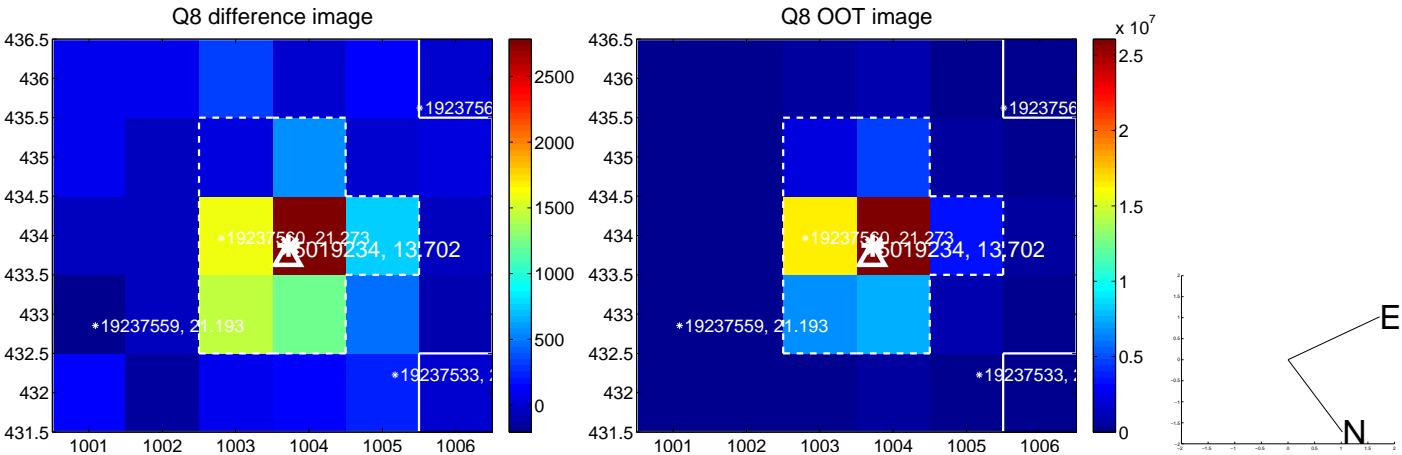
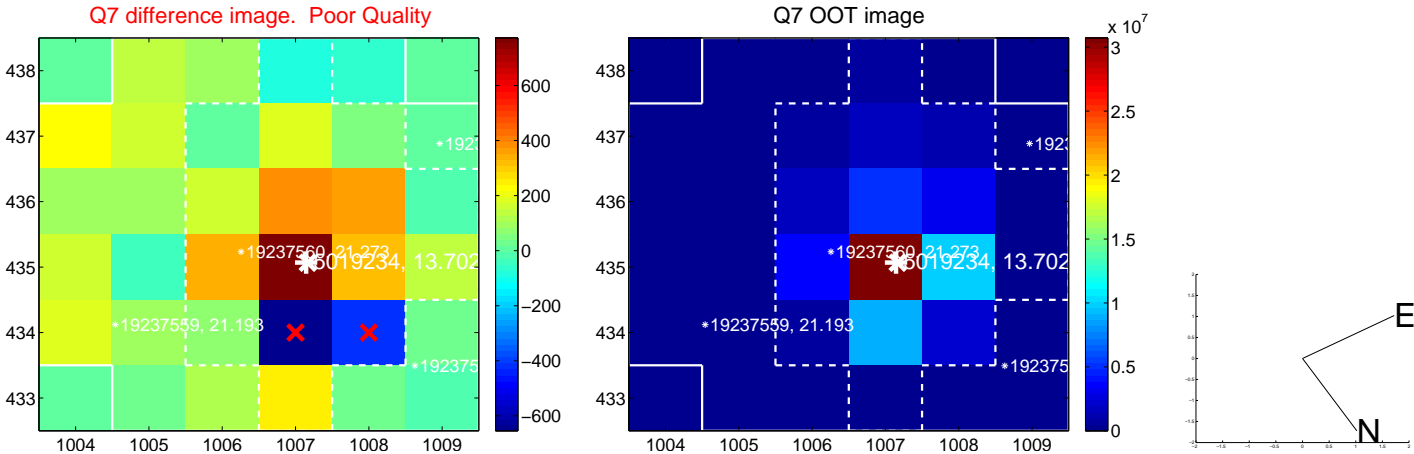
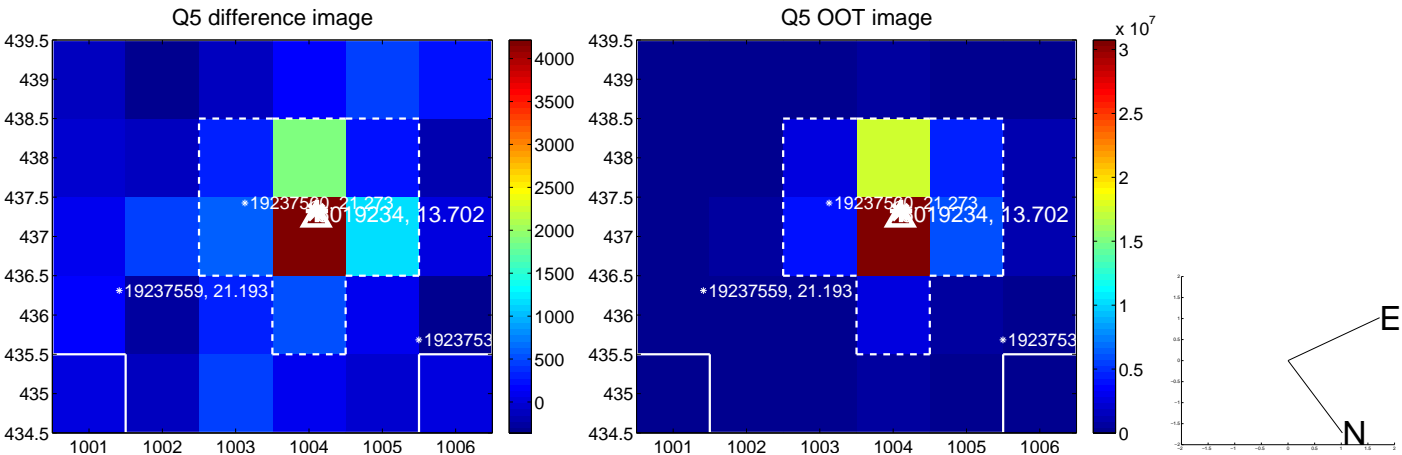


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

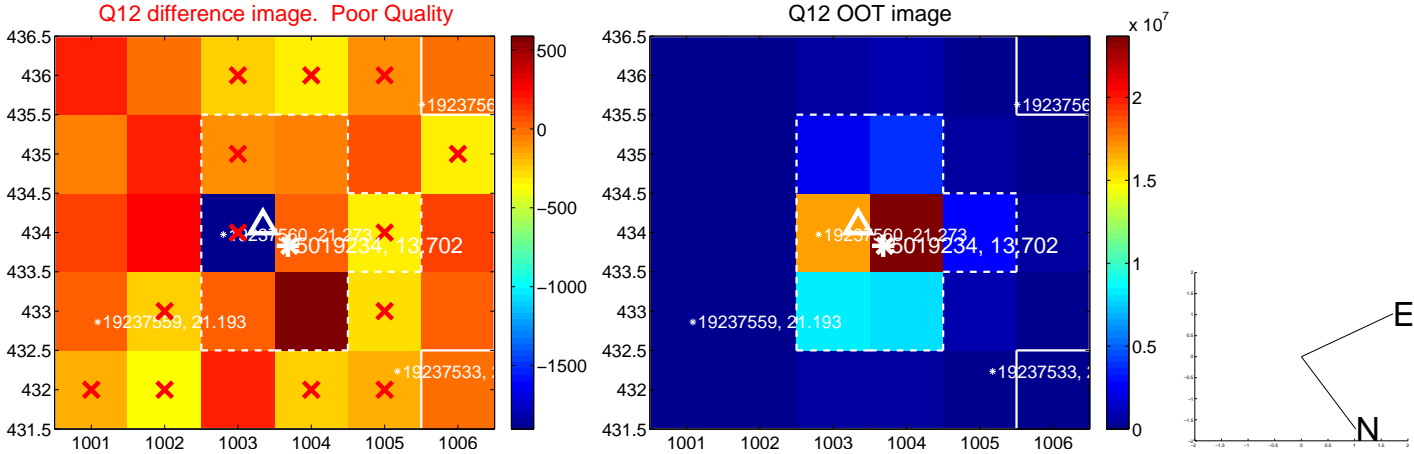
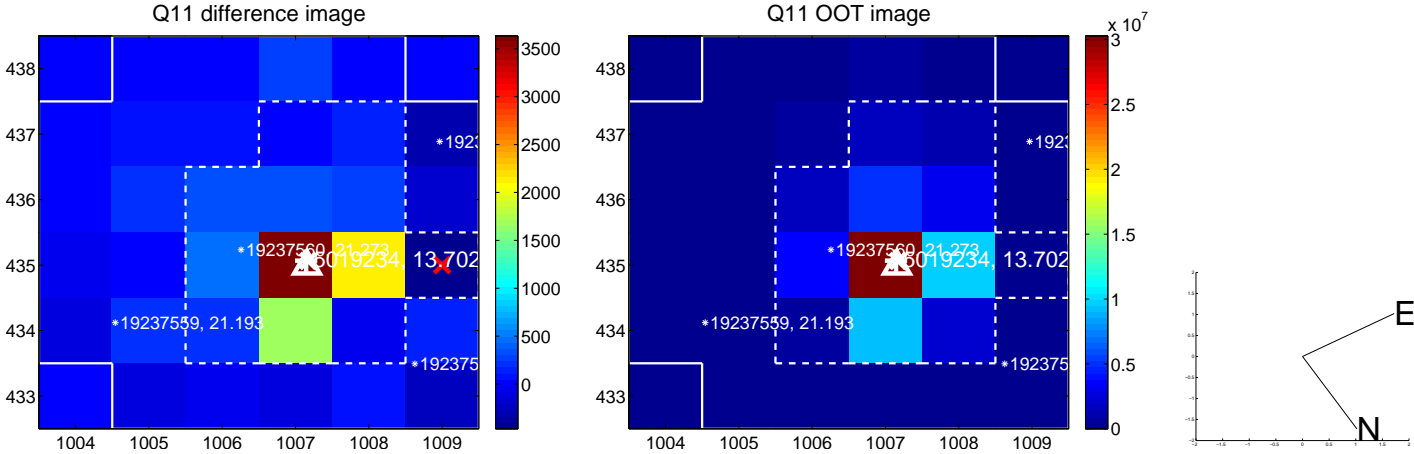
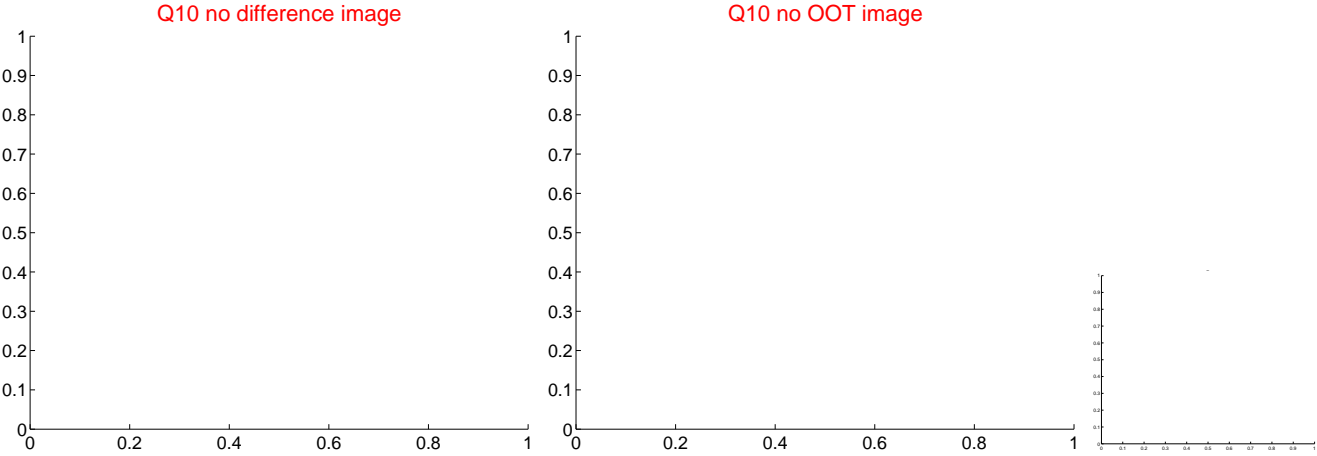
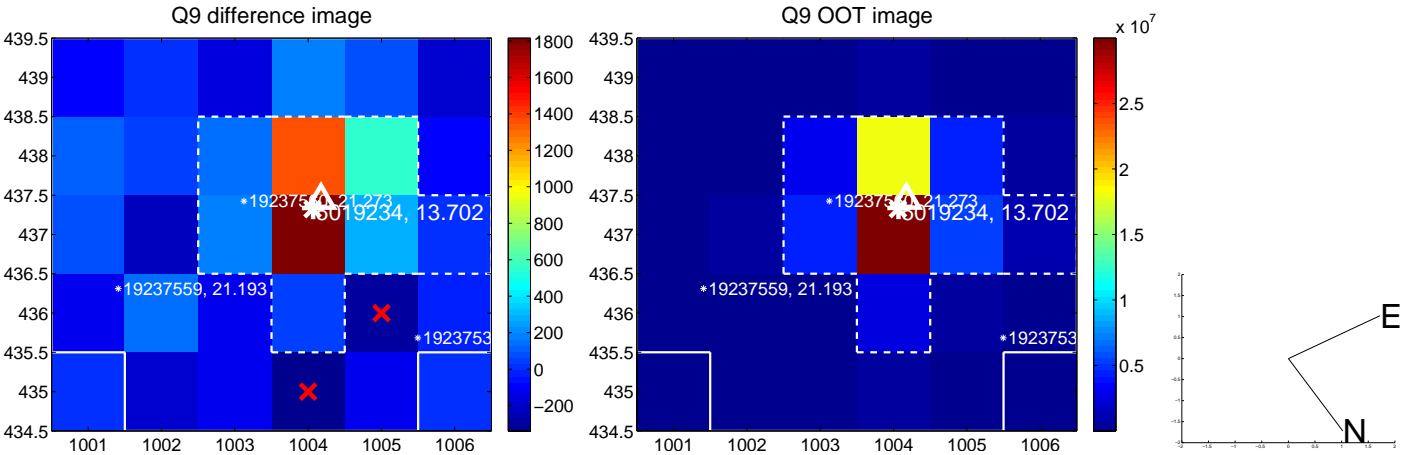
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



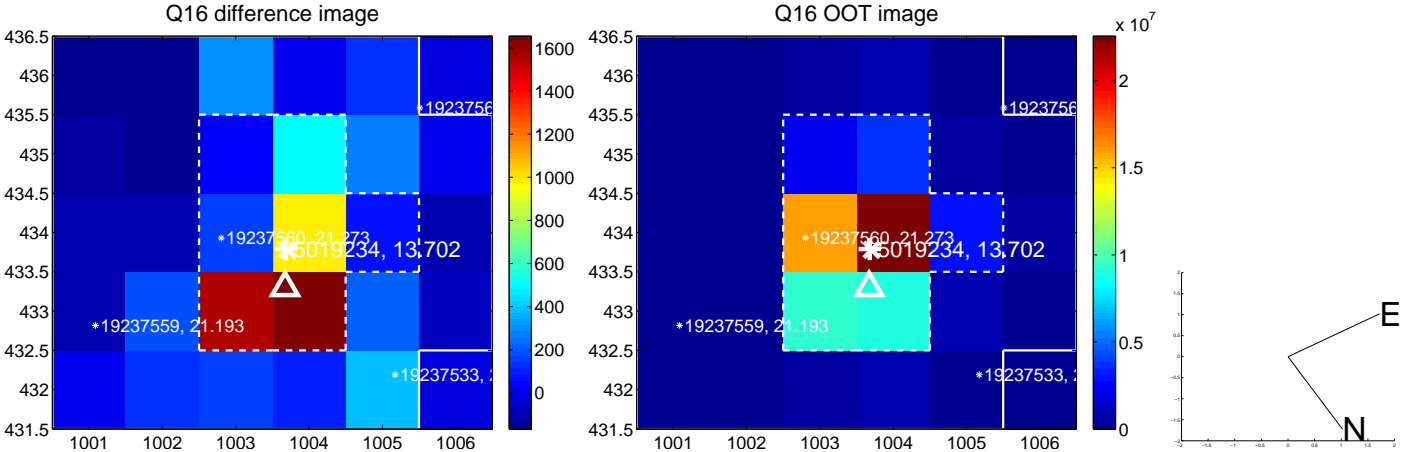
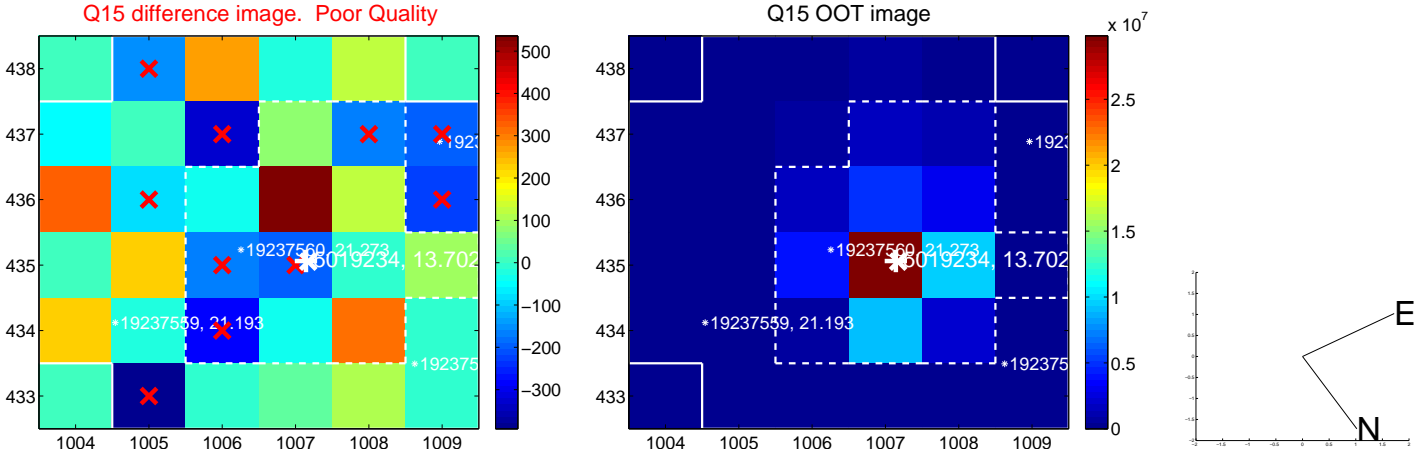
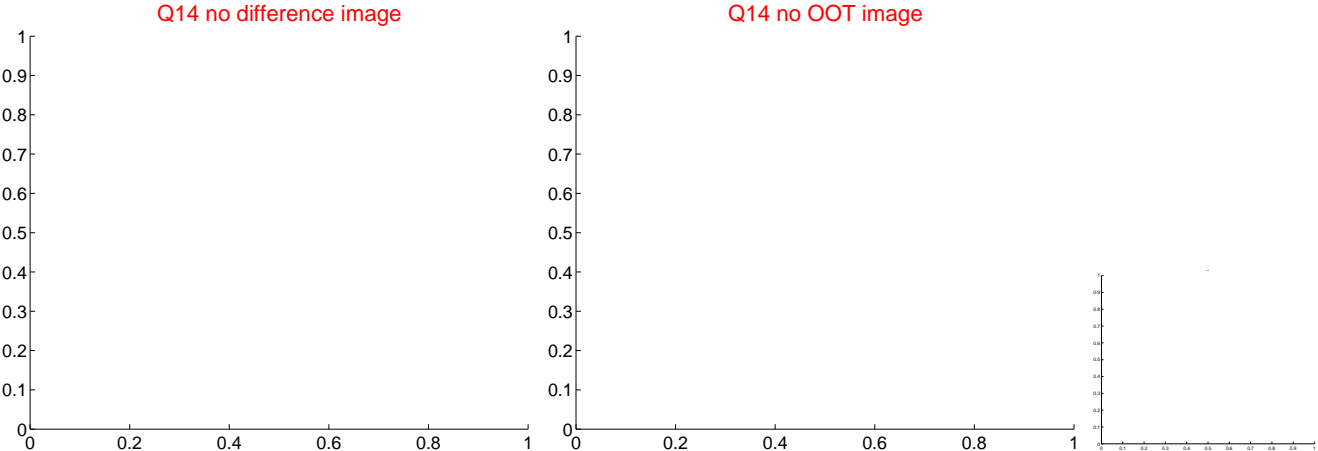
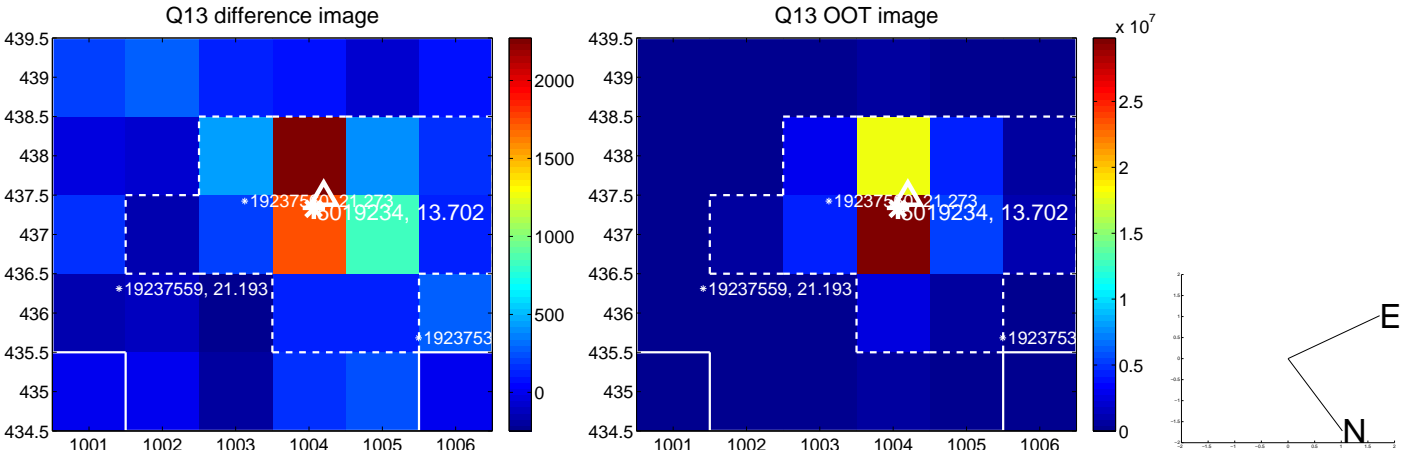
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



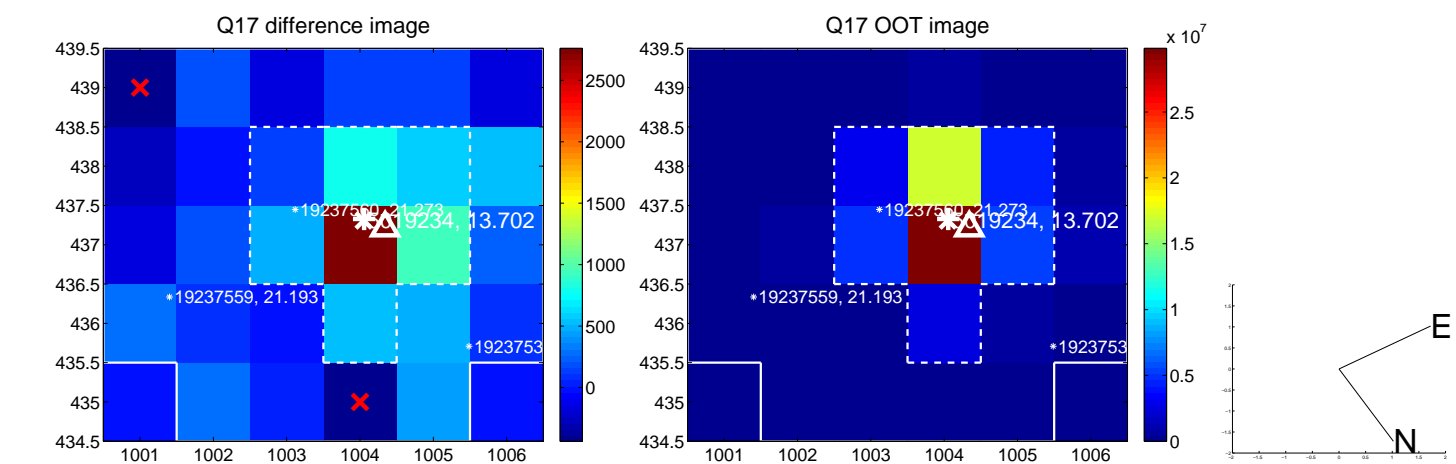
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



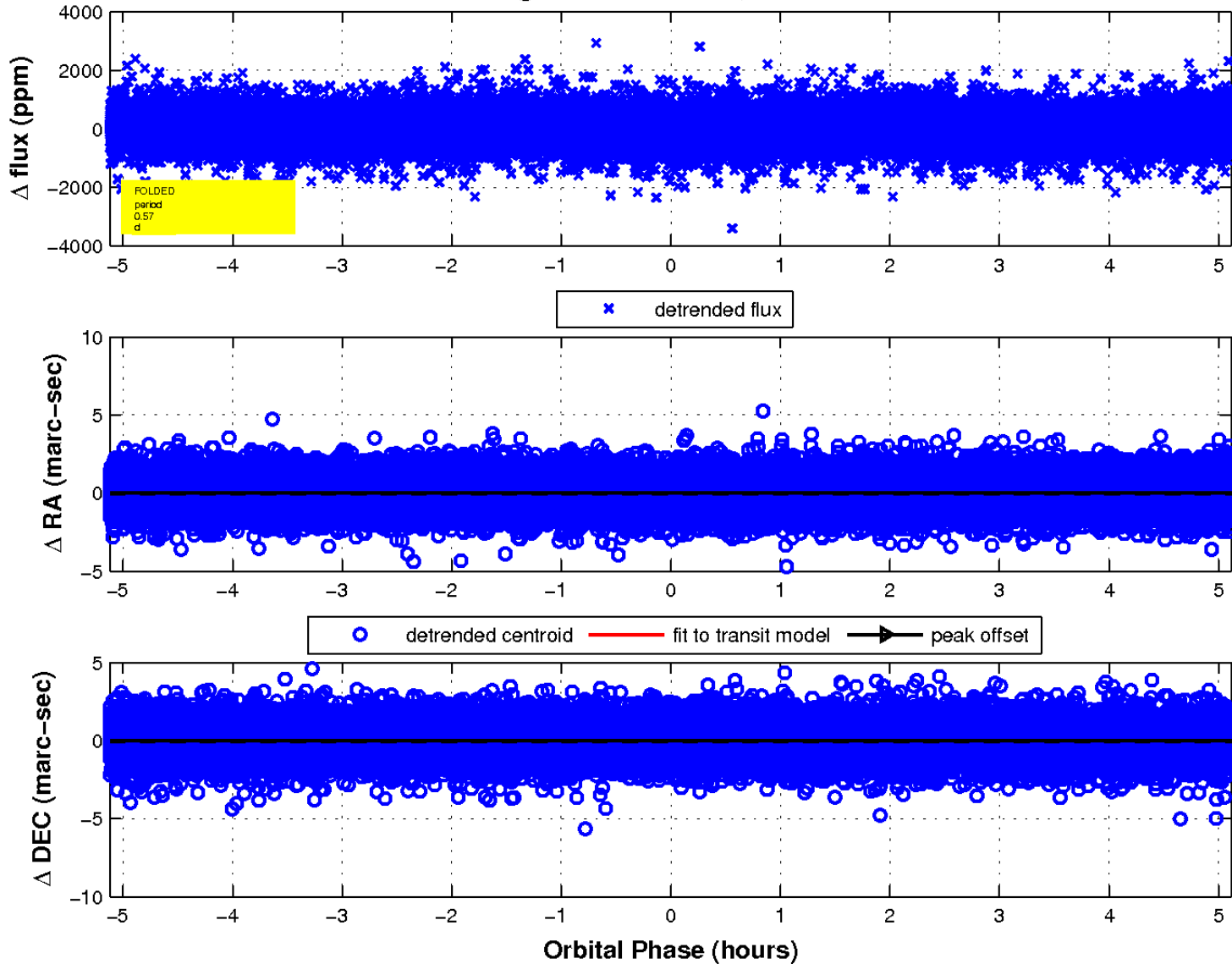
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

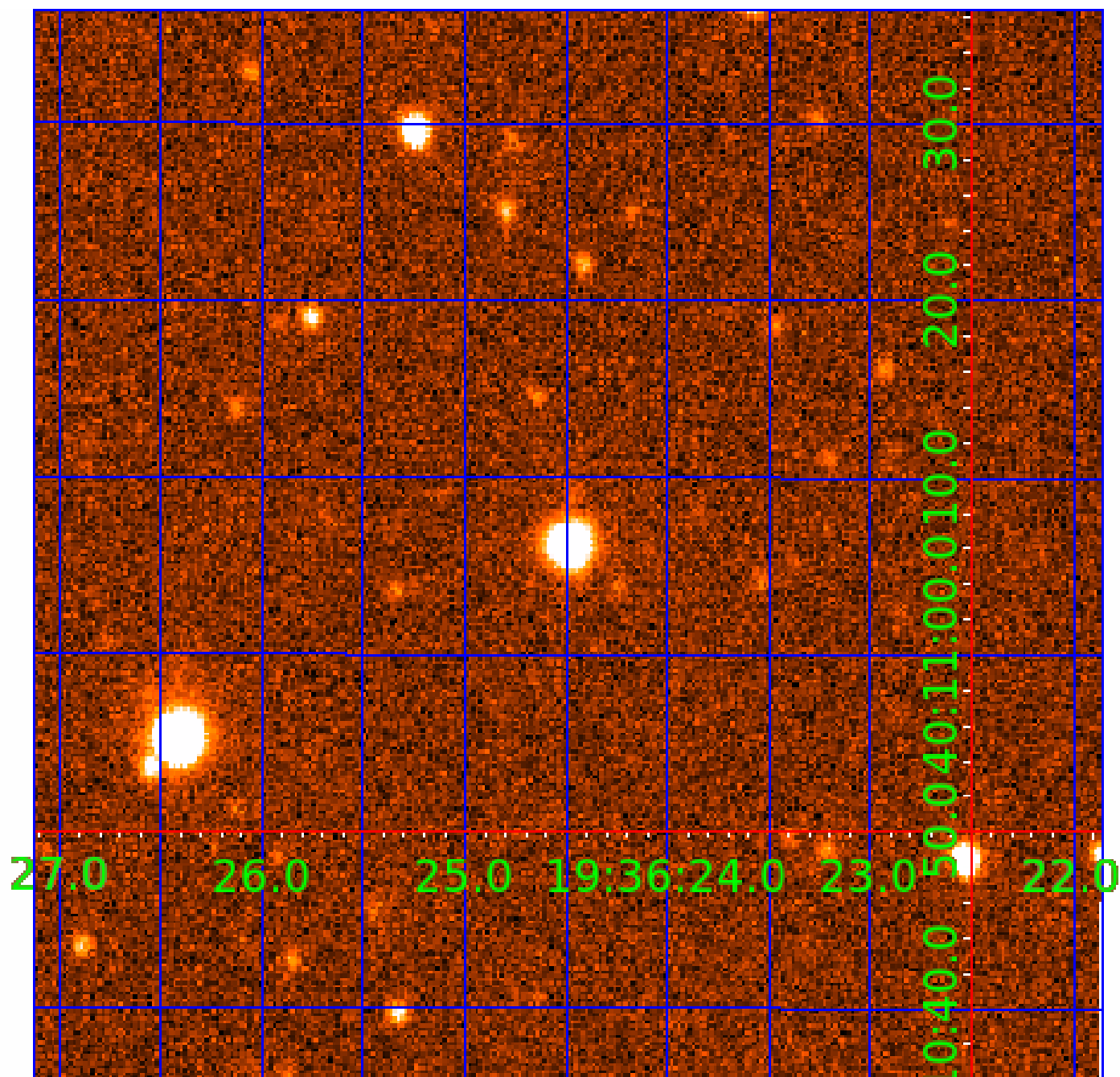


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 005019234

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})
005019234-01	OBS	No	0.566945	131.641462	69.6	1.706	8.7	11.1	1.81	9107	1.75	77881.26
005019234-02	OBS	No	0.566950	131.915706	54.5	1.841	8.6	9.3	1.81	9107	1.40	77880.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005019234-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005019234-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD

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

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

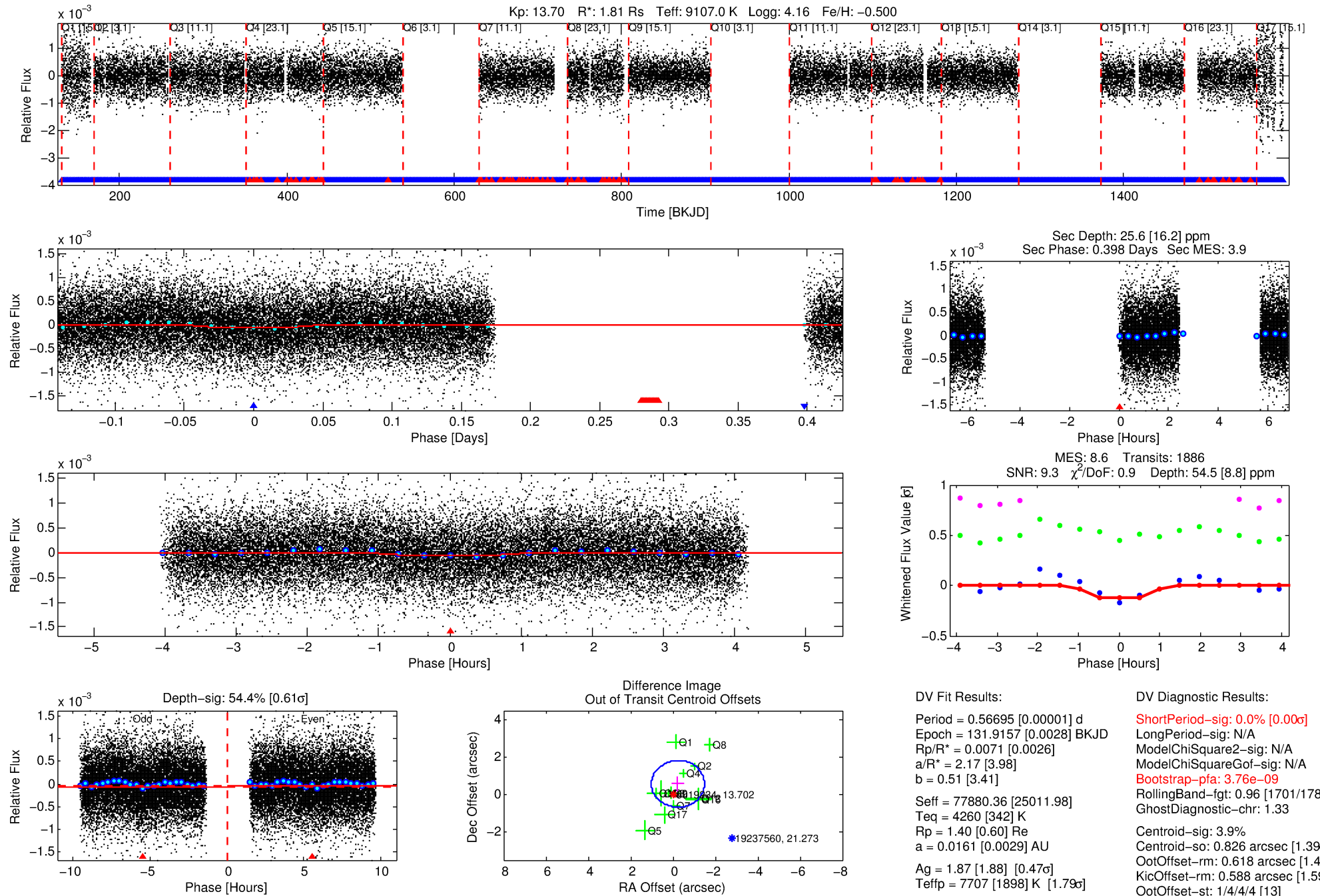
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005019234-02

No Significant Match Found

DV One-Page Summary

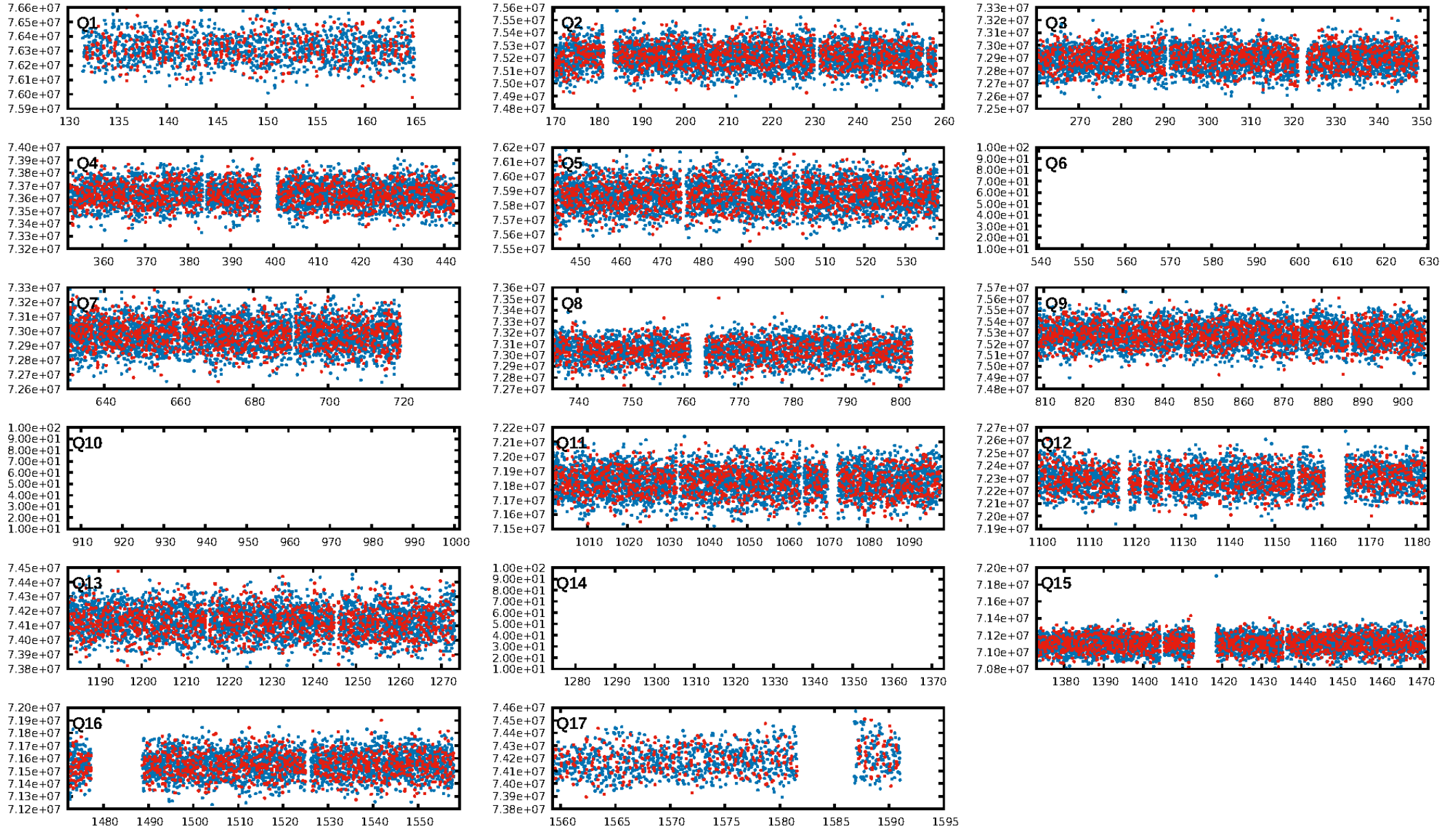
KIC: 5019234 Candidate: 2 of 2 Period: 0.567 d



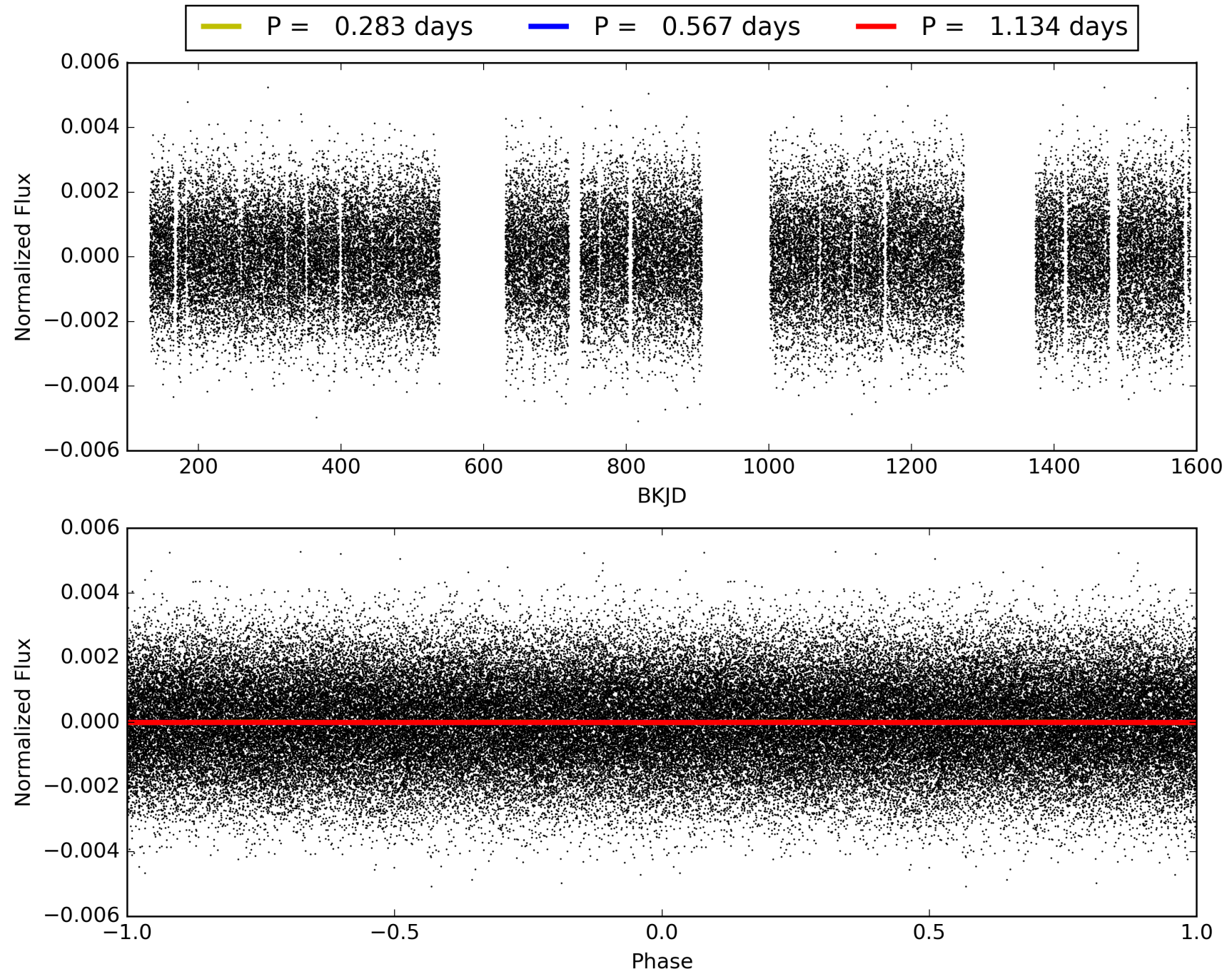
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:04:17 Z

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

TCE 005019234-02, PDC Light Curves

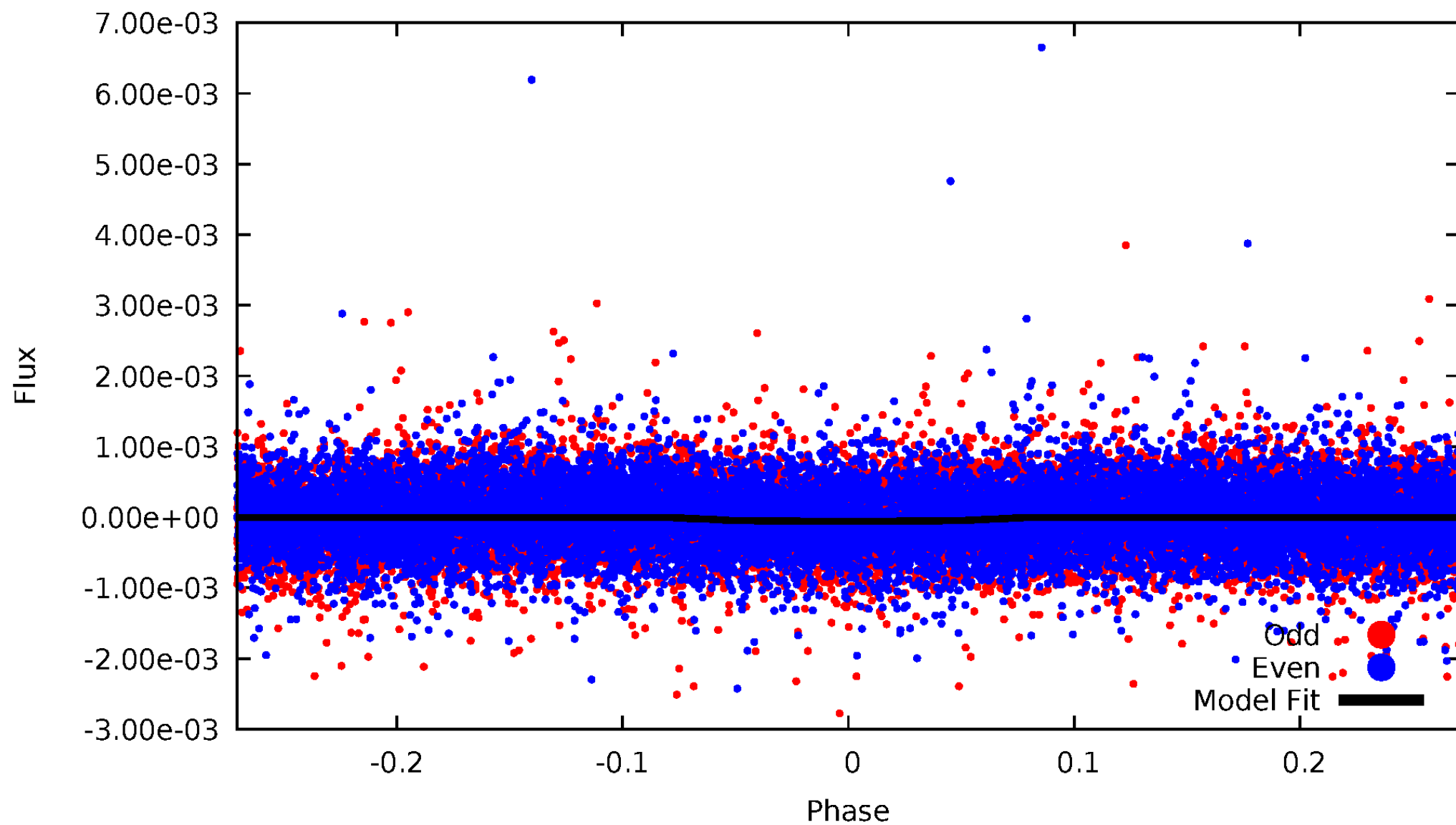


TCE 005019234-02



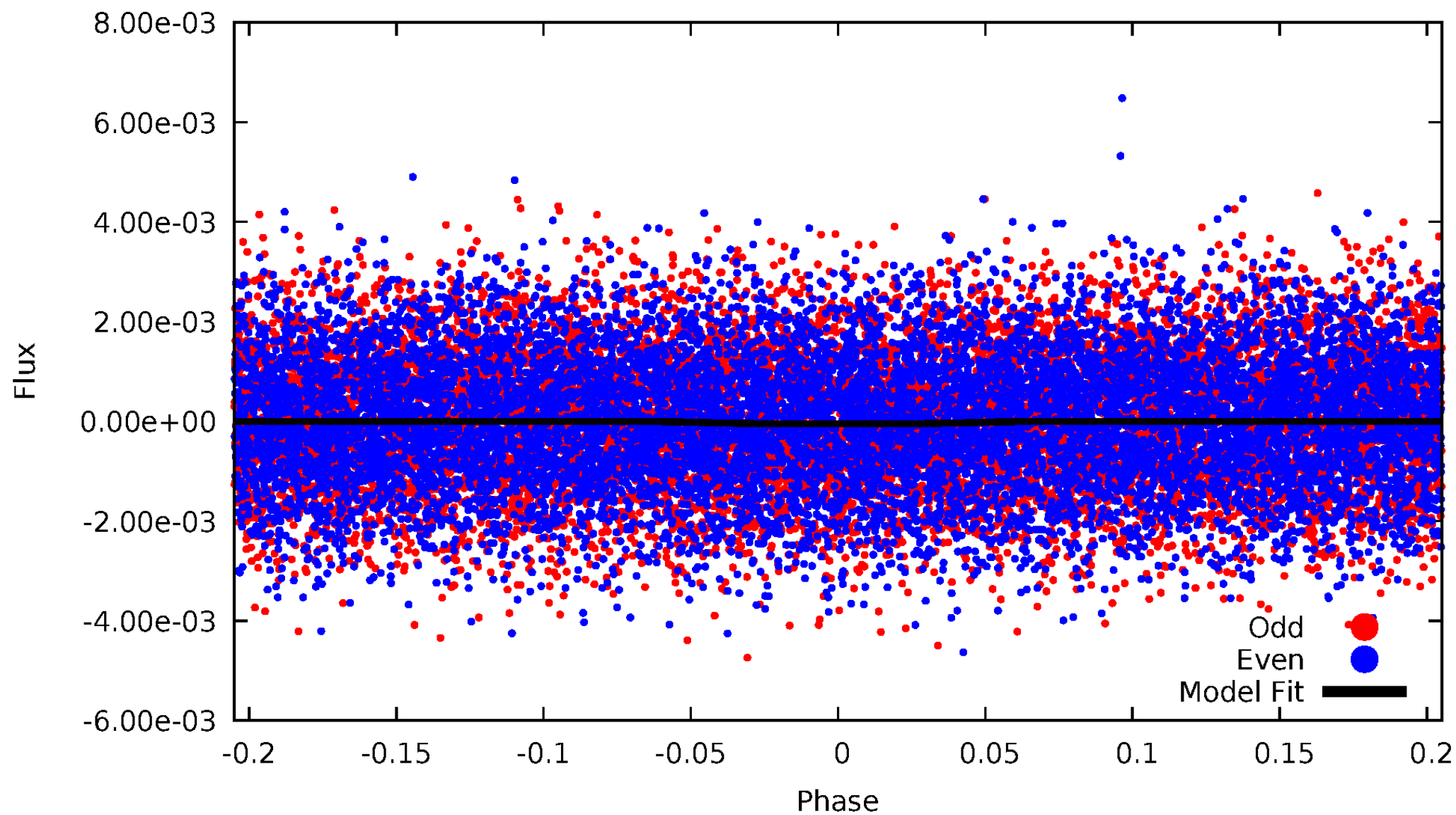
DV Odd/Even

TCE 005019234-02



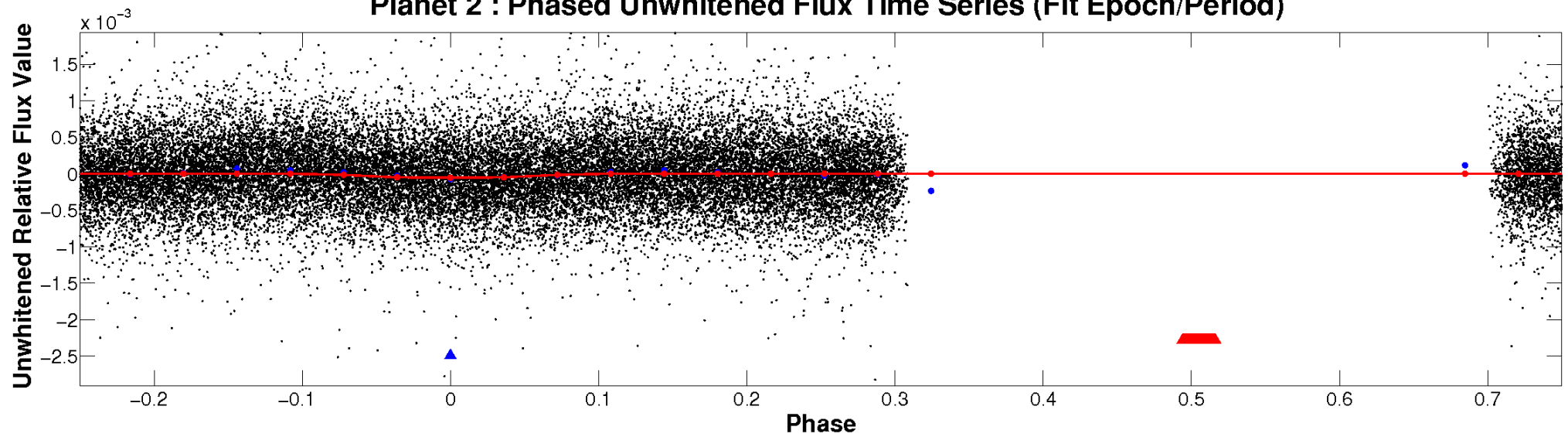
ALT Odd/Even

TCE 005019234-02

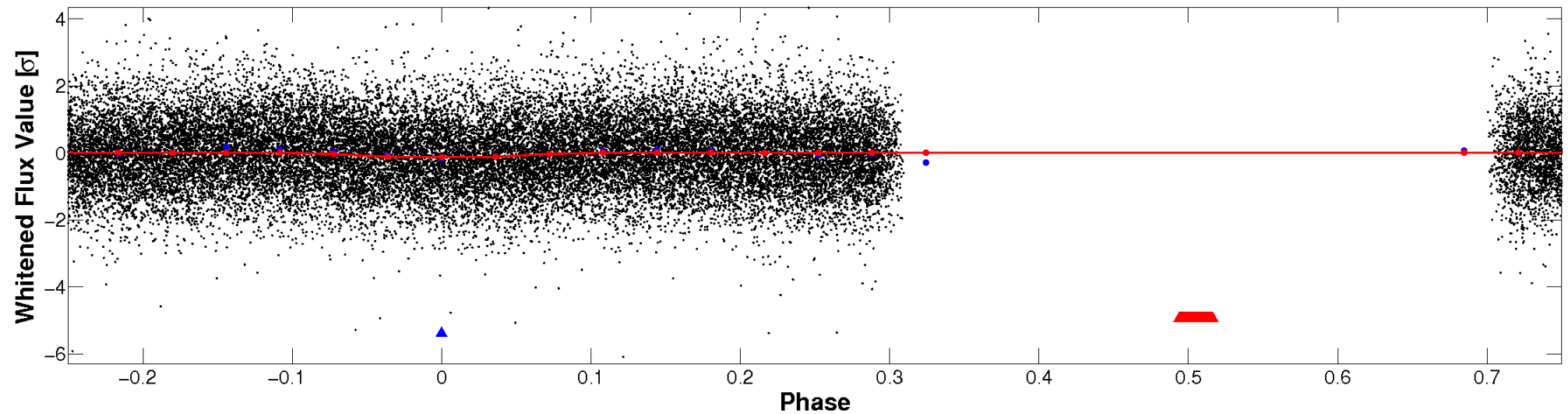


Non-Whitened Vs. Whitened Light Curve

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

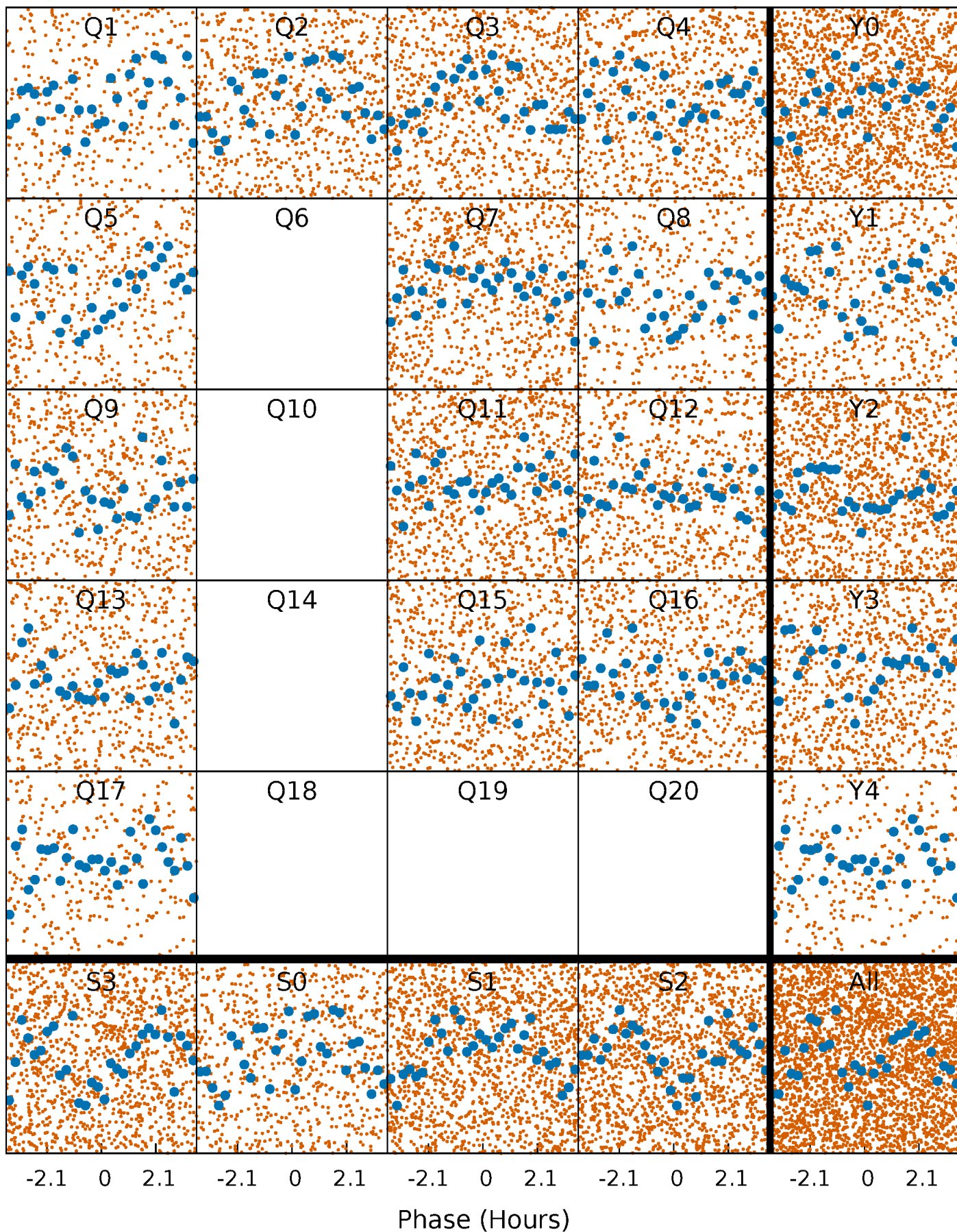


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



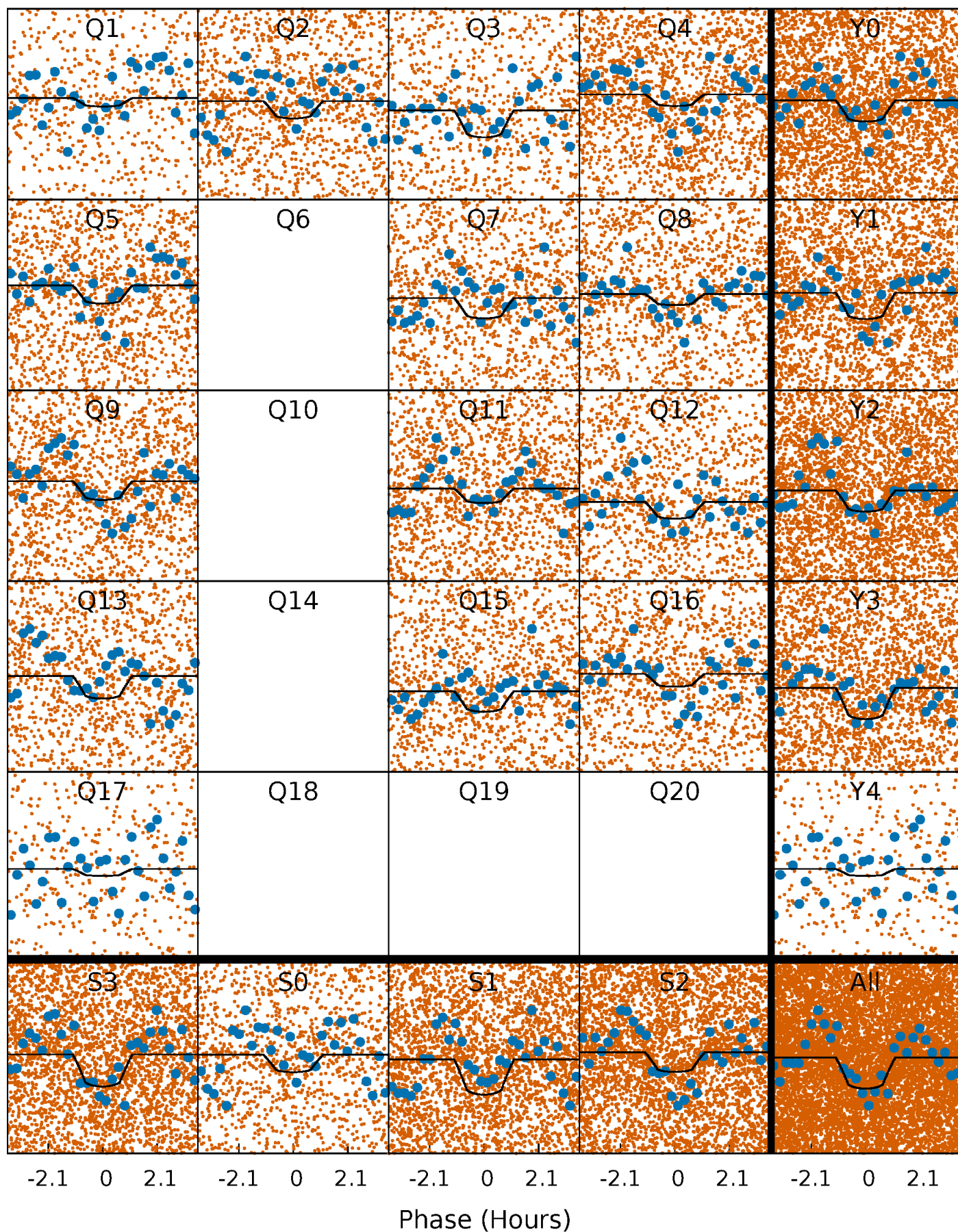
PDC Quarter-Phased Transit Curves

TCE 005019234-02 P= 0.566950 Days $T_0=131.915706$ (BKJD)



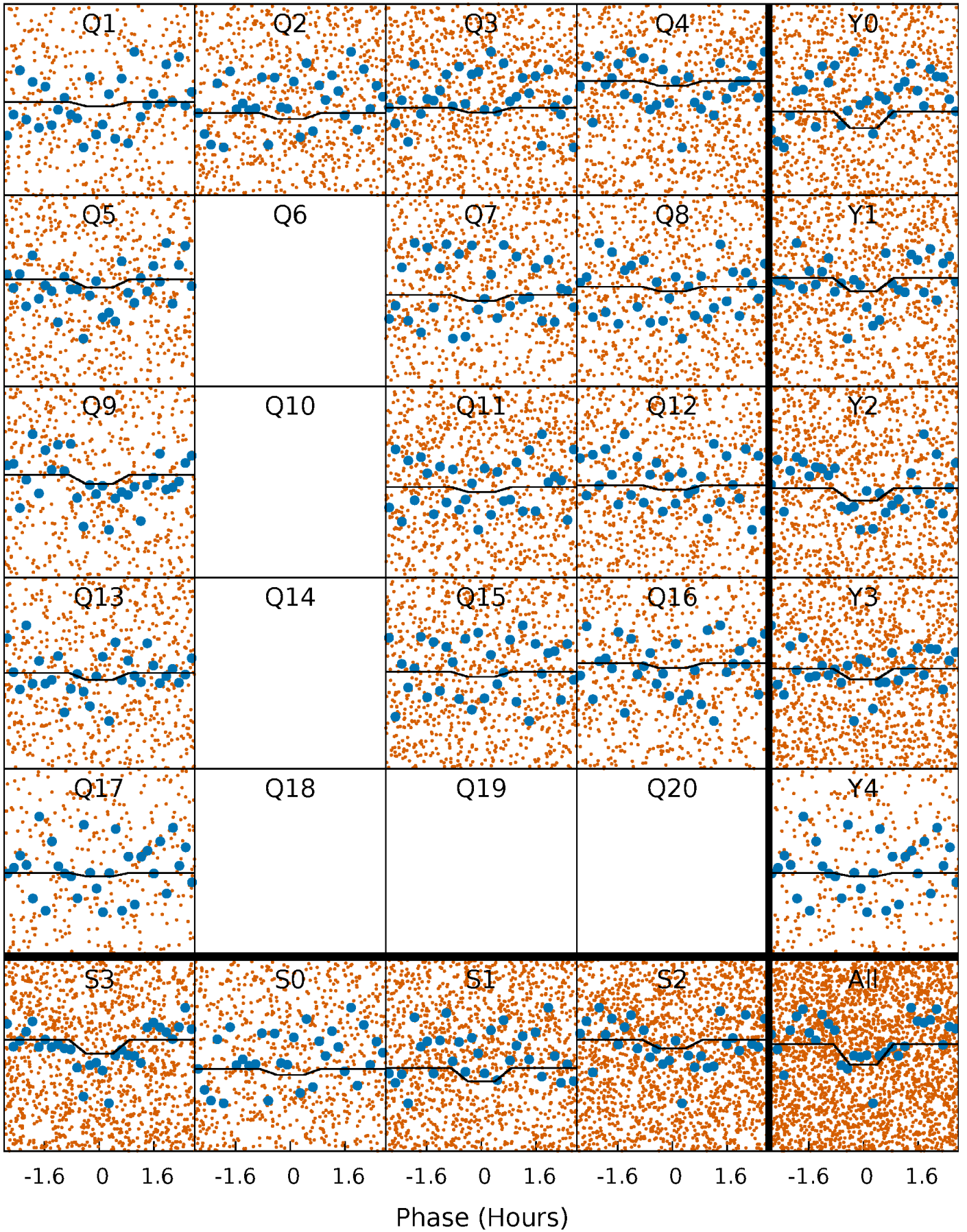
DV Quarter-Phased Transit Curves

TCE 005019234-02 P= 0.566950 Days $T_0=131.915706$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

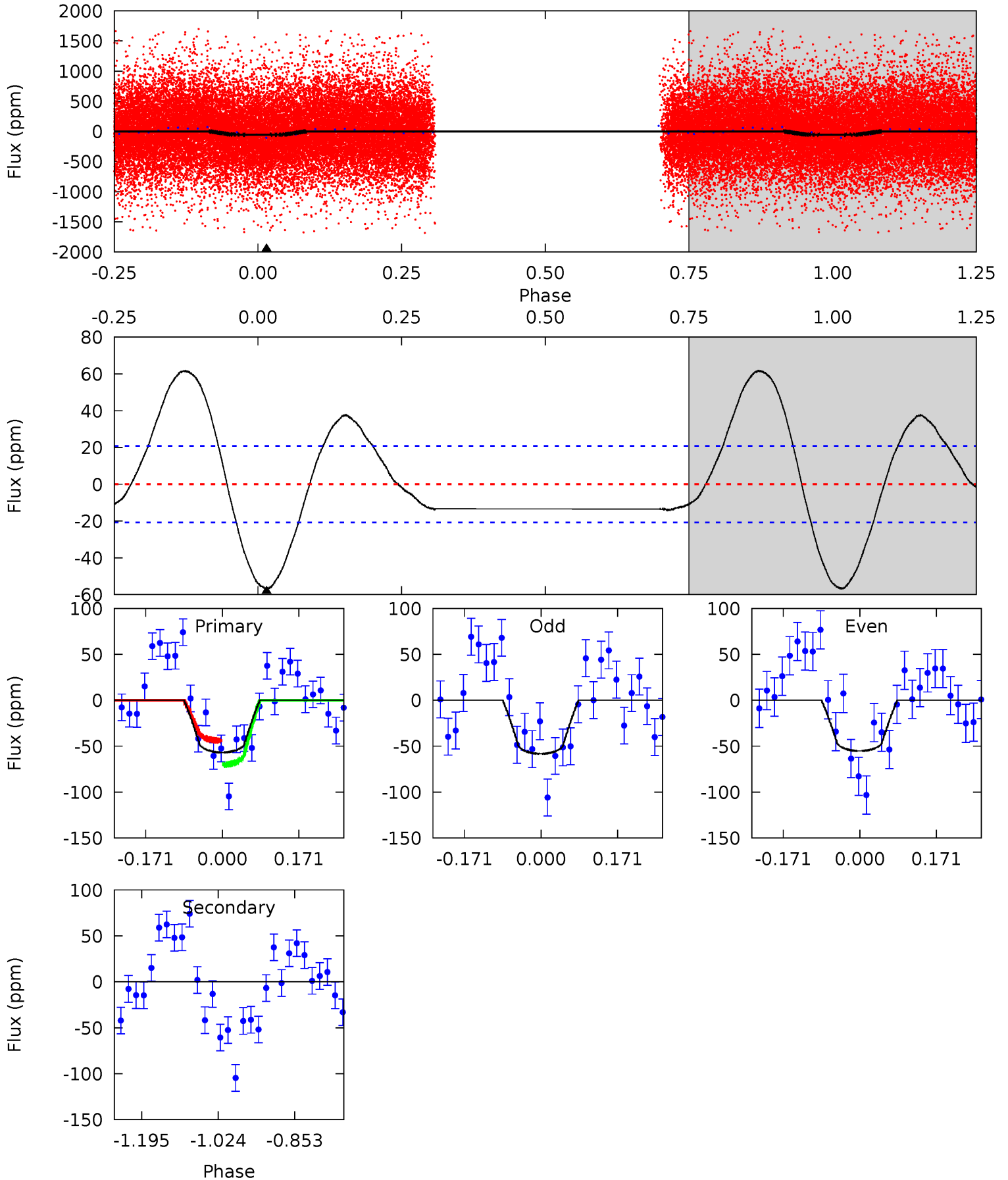
TCE 005019234-02 P= 0.566954 Days $T_0=131.904858$ (BKJD)



DV Model-Shift Uniqueness Test

005019234-02, P = 0.566950 Days, E = 131.348756 Days

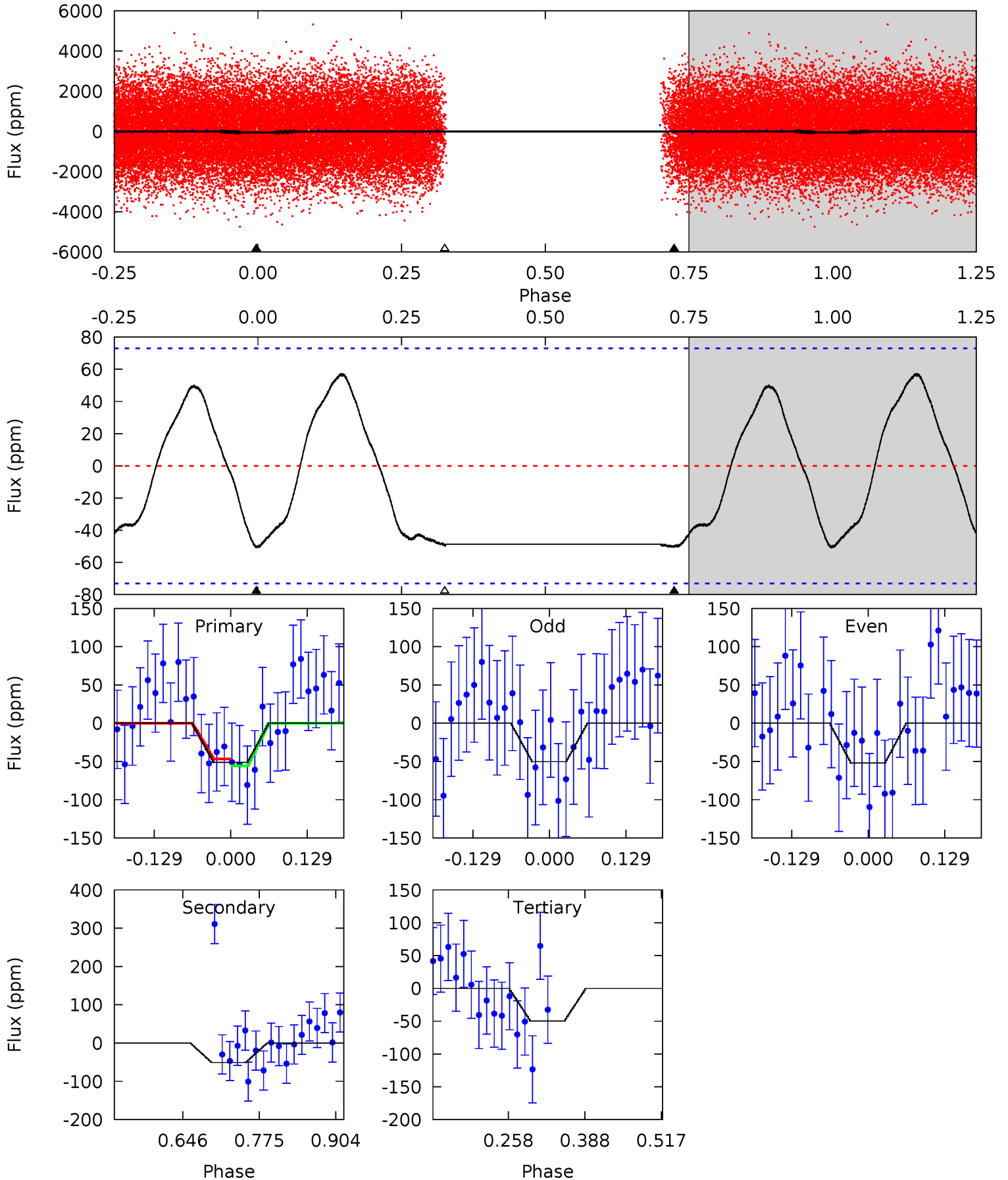
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	0	0	0	4.45	1.37	3.69	12.2	12.2	0	0	0.34	0.88	0.52	2.83



Alt Model-Shift Uniqueness Test

005019234-02, P = 0.566954 Days, E = 131.337904 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.16	3.14	3.07	0	4.51	1.52	2.39	0.08	3.16	0.07	3.14	0.06	1.23	0.53	0.27



Stellar Parameters For KIC 005019234

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9107^{+251}_{-430}	$4.162^{+0.140}_{-0.140}$	$-0.500^{+0.100}_{-0.300}$	$1.814^{+0.397}_{-0.361}$	$1.742^{+0.281}_{-0.216}$	$0.411^{+0.322}_{-0.168}$
	+3%/-5%	+3%/-3%	+20%/-60%	+22%/-20%	+16%/-12%	+78%/-41%
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 005019234-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 5	$1.43^{+0.51}_{-0.55}$	5950^{+354}_{-389}	-4768^{+8146}_{-958}	$0.002^{+0.343}_{-0.439}$
Alt.	-51 ± 16	$1.37^{+0.55}_{-0.49}$	5936^{+341}_{-371}	8774^{+4289}_{-1929}	$3.790^{+6.192}_{-2.042}$

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

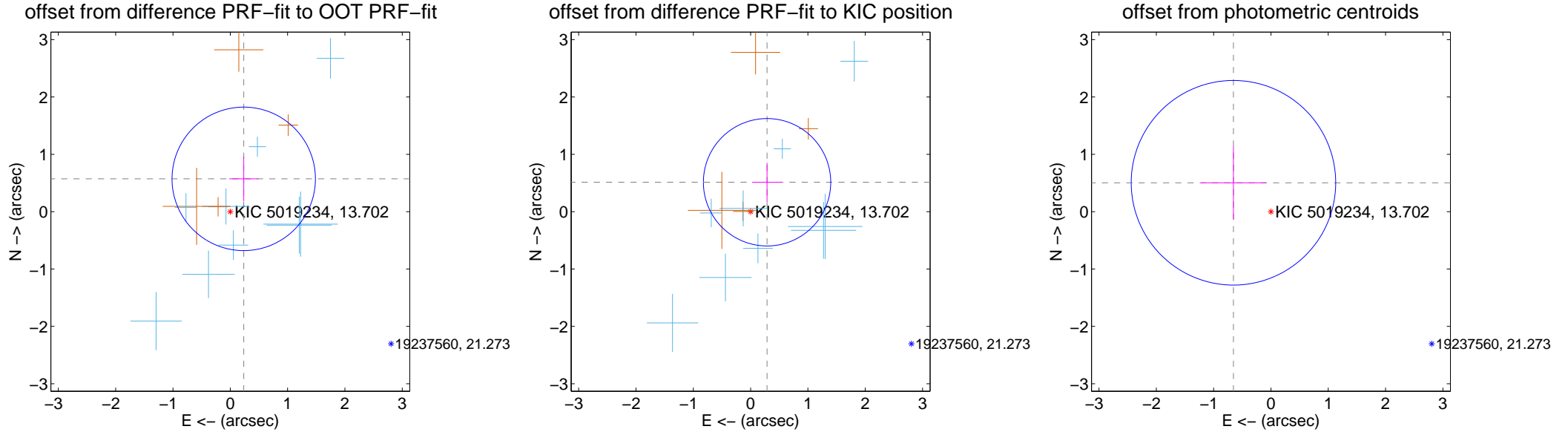
DV Centroid Data

Supplemental centroid analysis for 005019234-02. Kepler magnitude: 13.70. Transit SNR 9.31

There are 9 quarters with good PRF difference image offsets

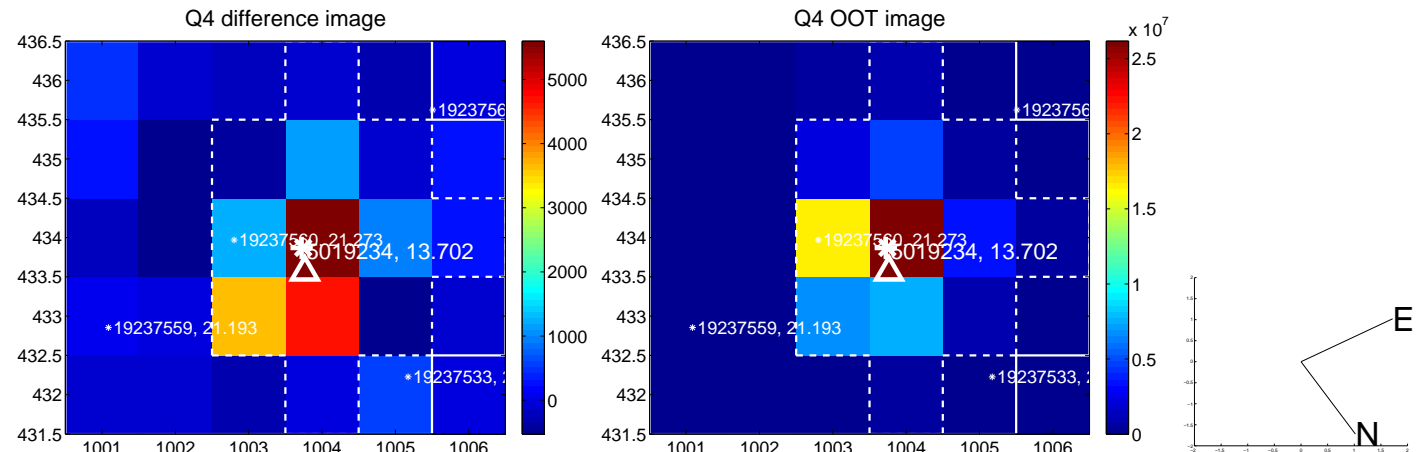
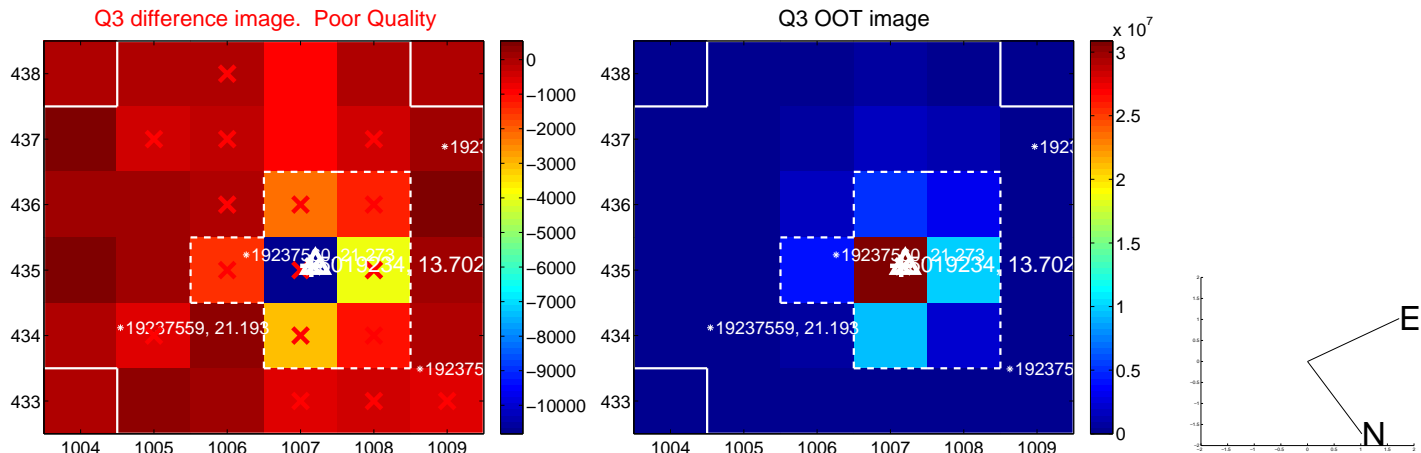
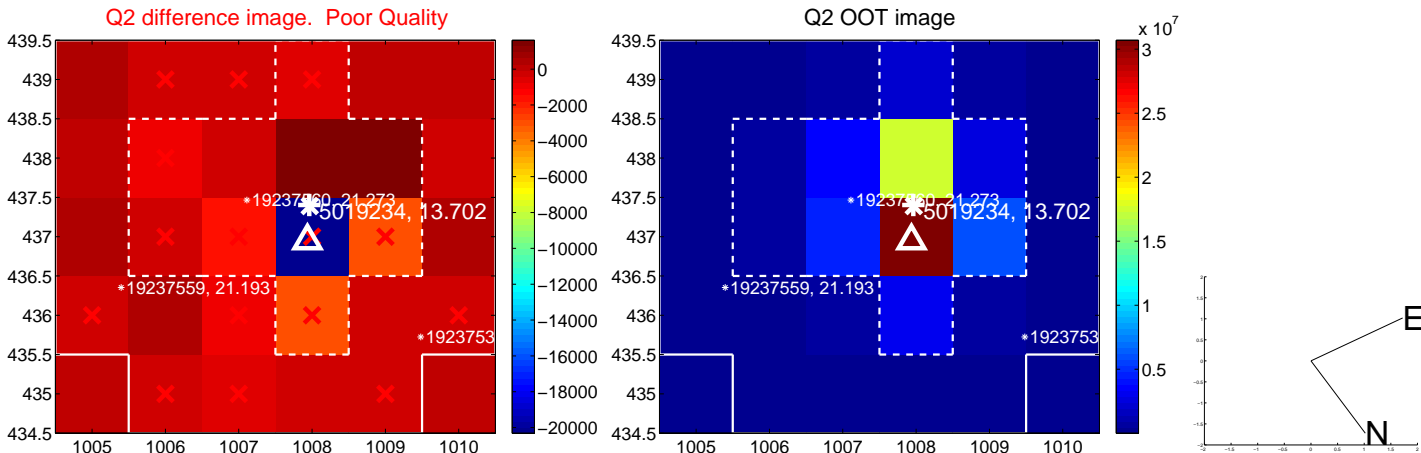
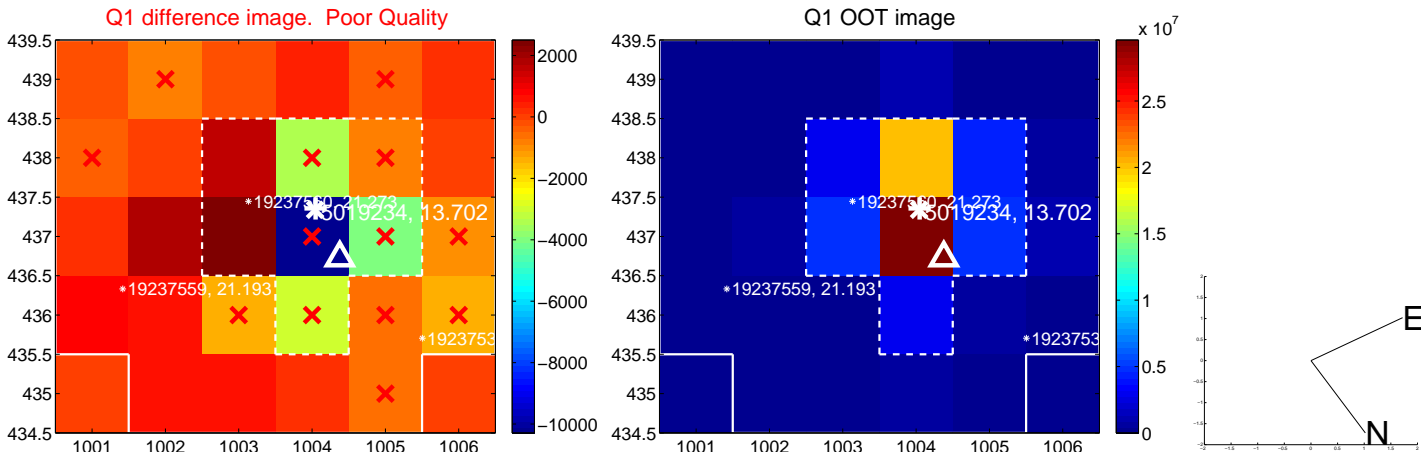
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.618 ± 0.417	1.48	-0.234 ± 0.254	0.572 ± 0.388
PRF-fit source offset from KIC position	0.588 ± 0.370	1.59	-0.287 ± 0.259	0.513 ± 0.338
photometric centroid source offset	0.83 ± 0.59	1.39	0.65 ± 0.57	0.50 ± 0.63

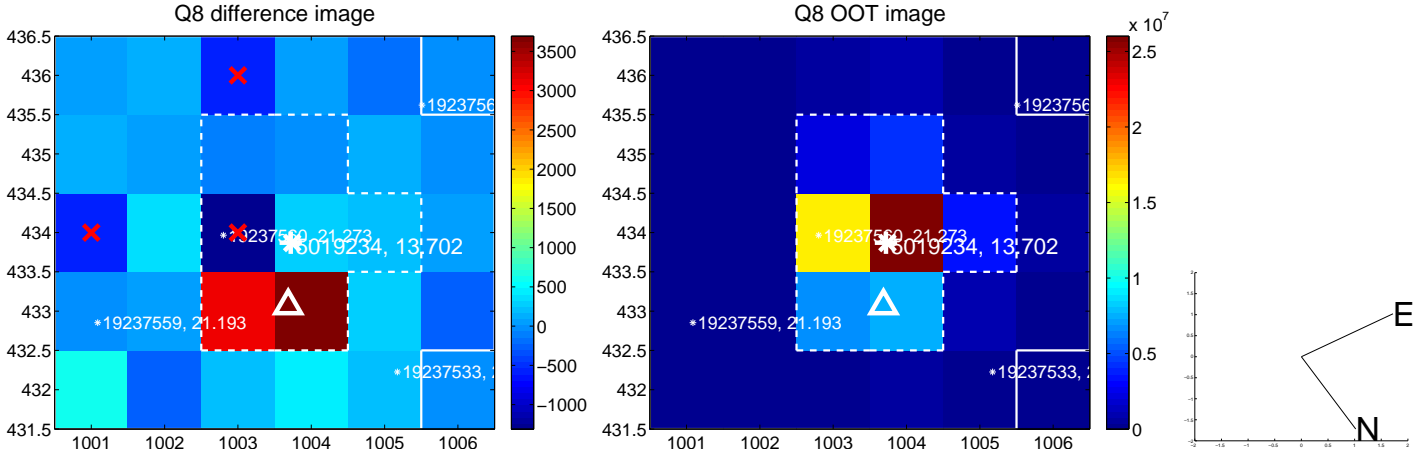
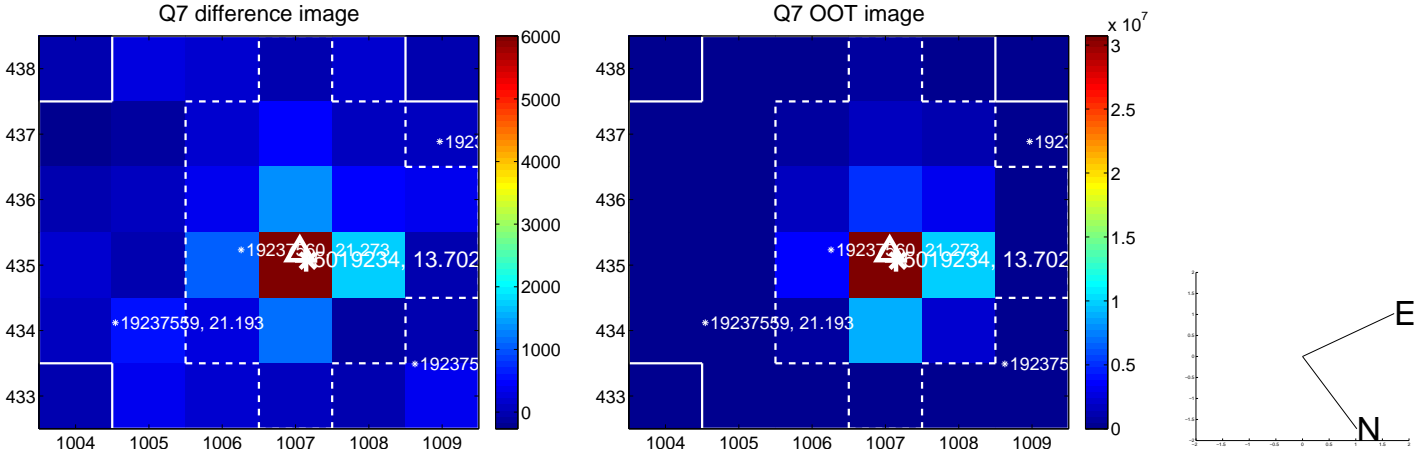
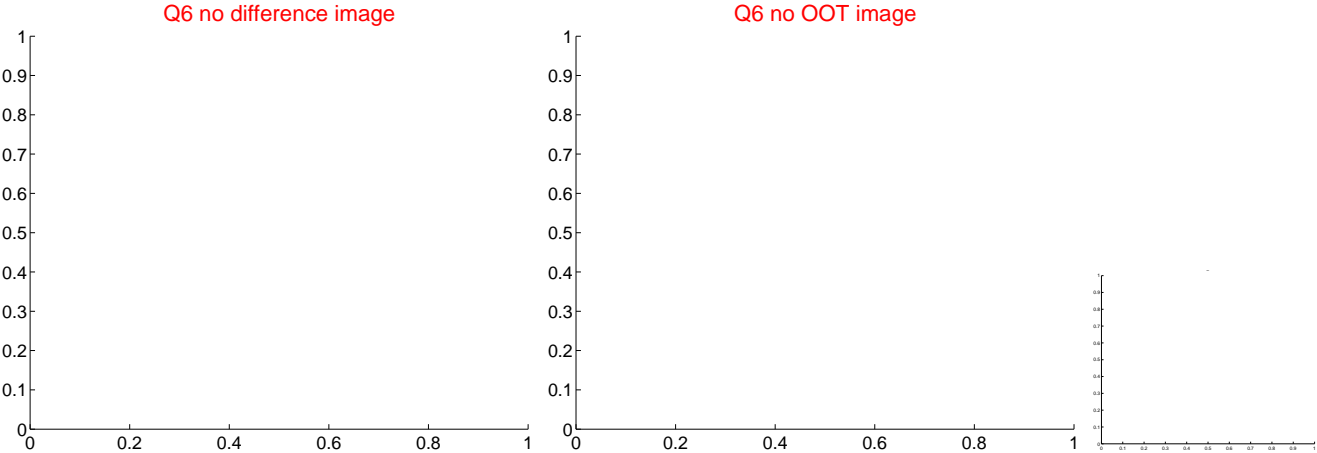
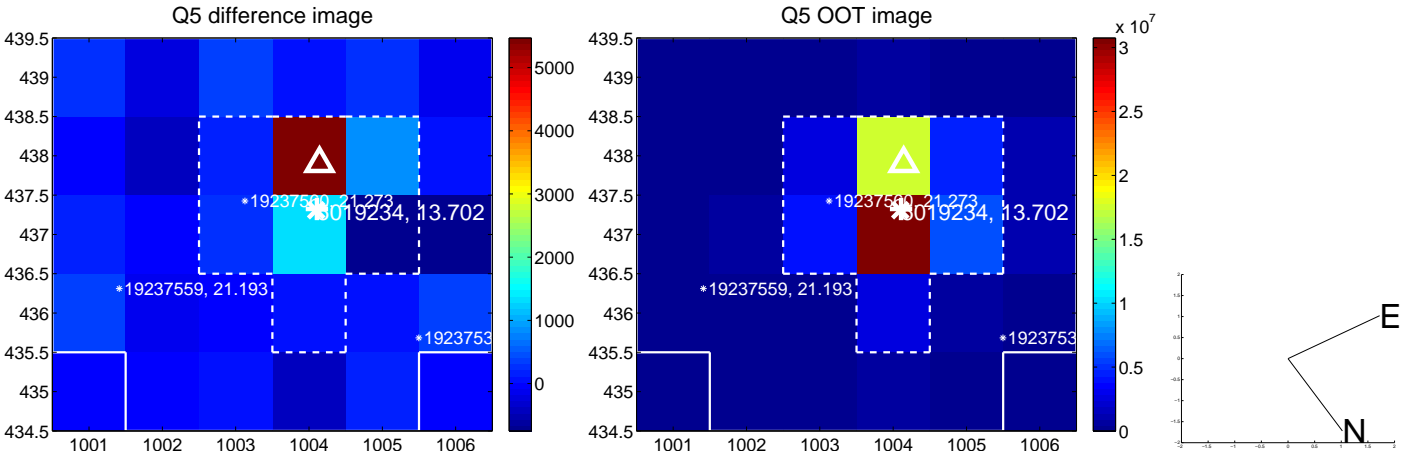


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

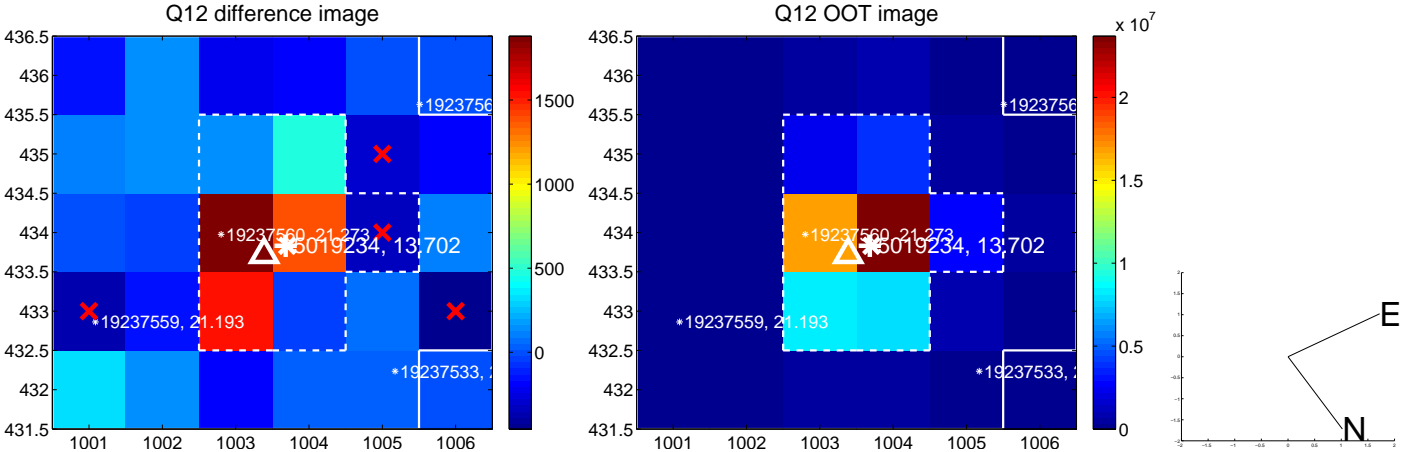
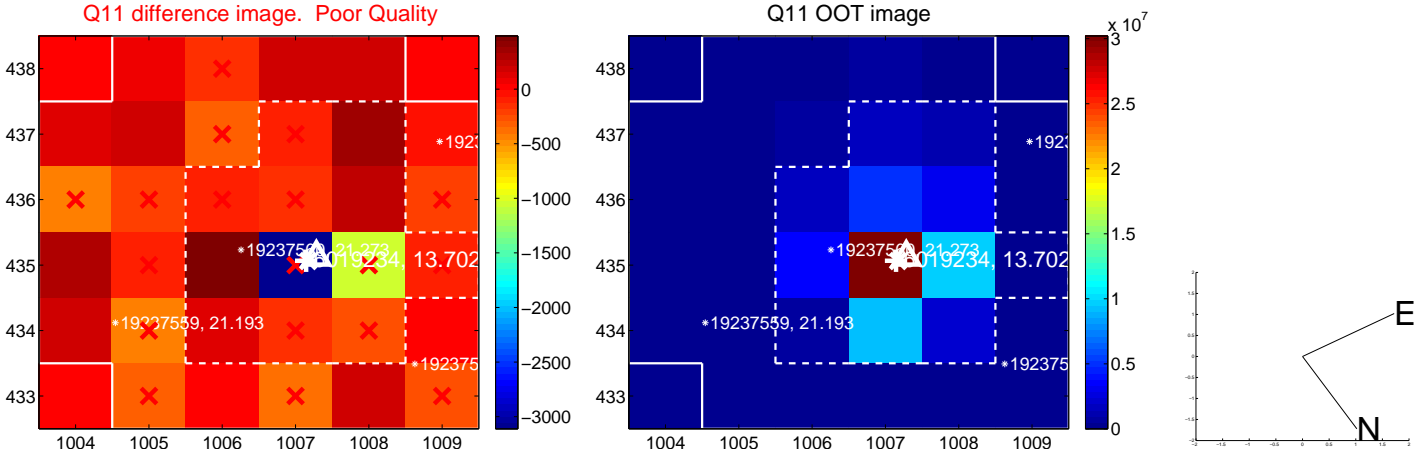
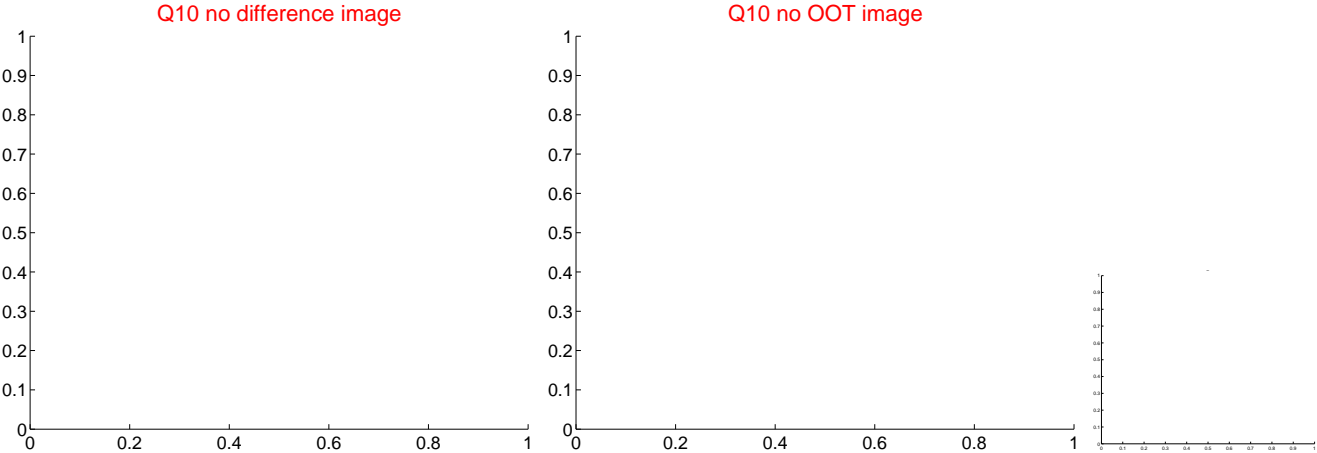
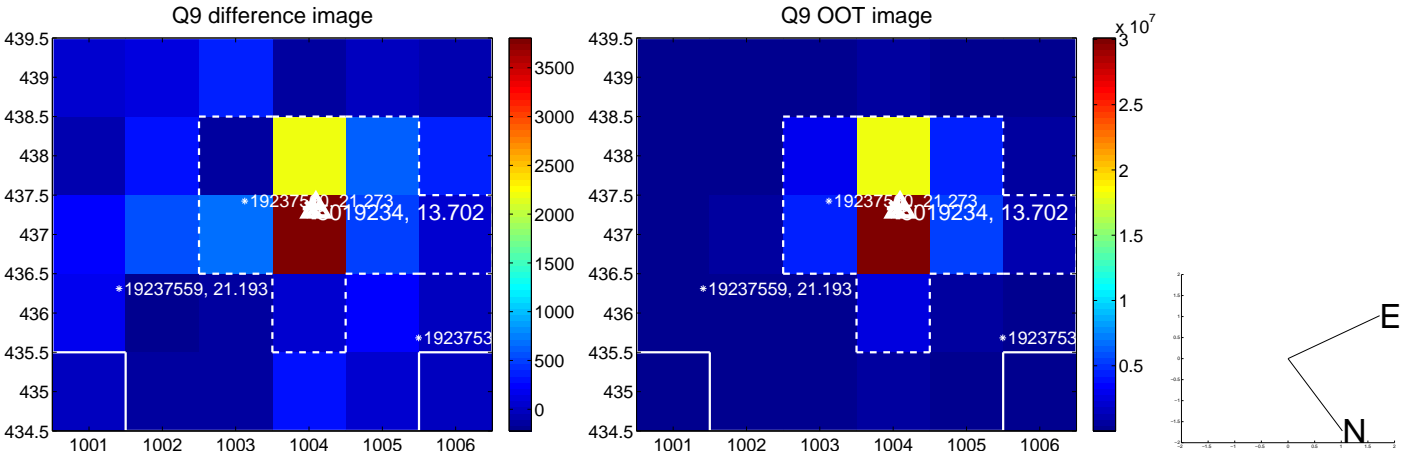
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



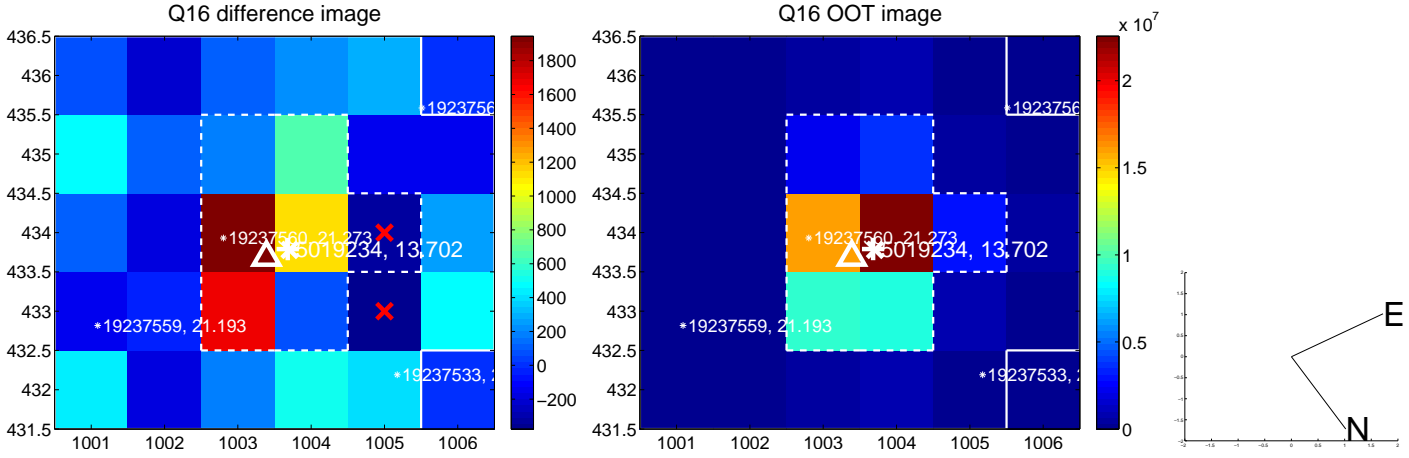
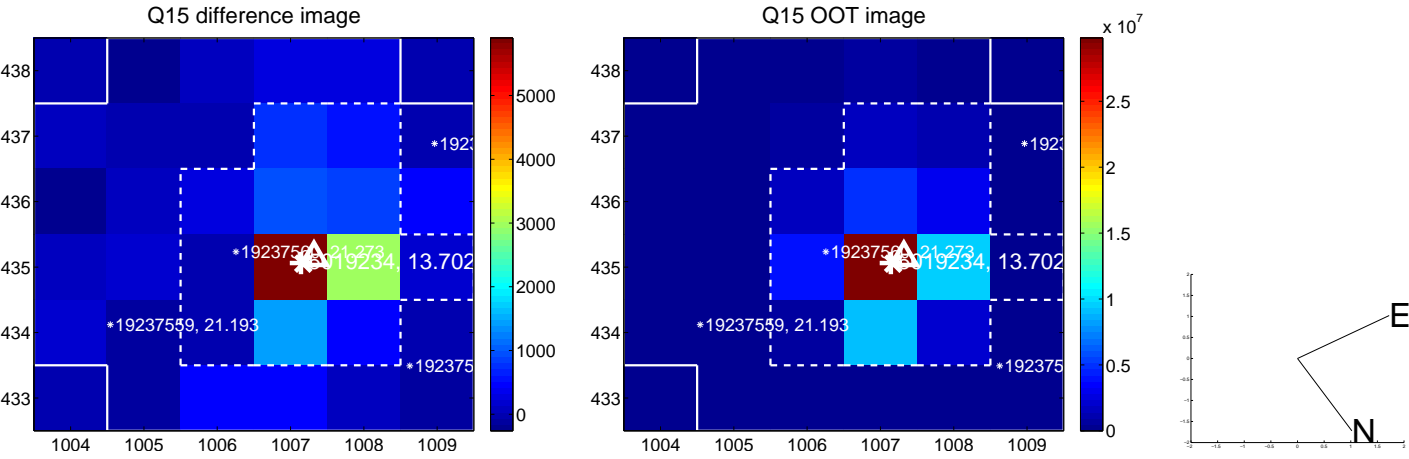
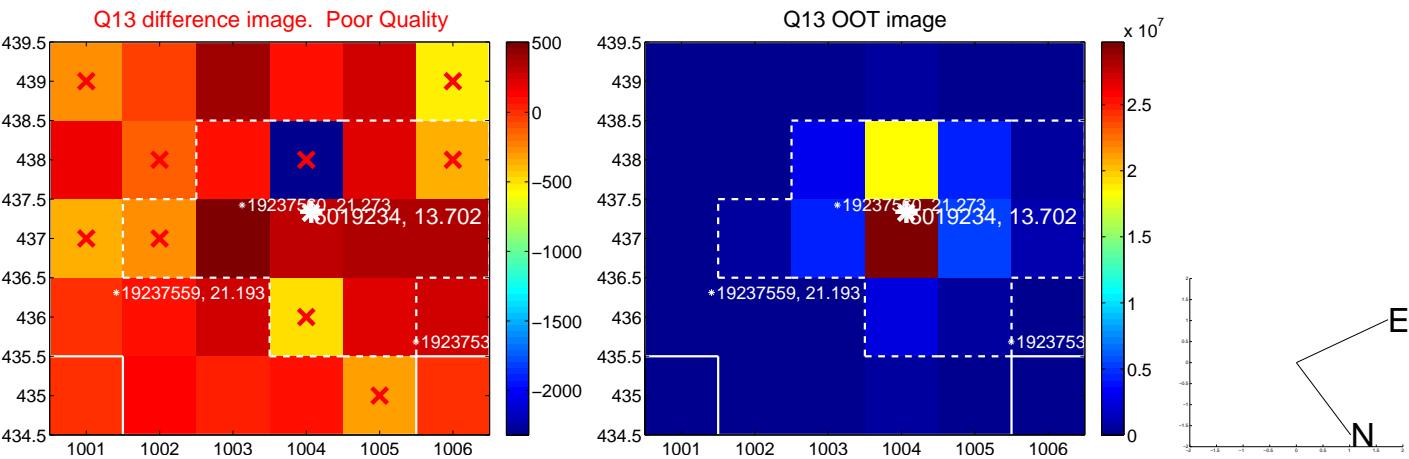
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



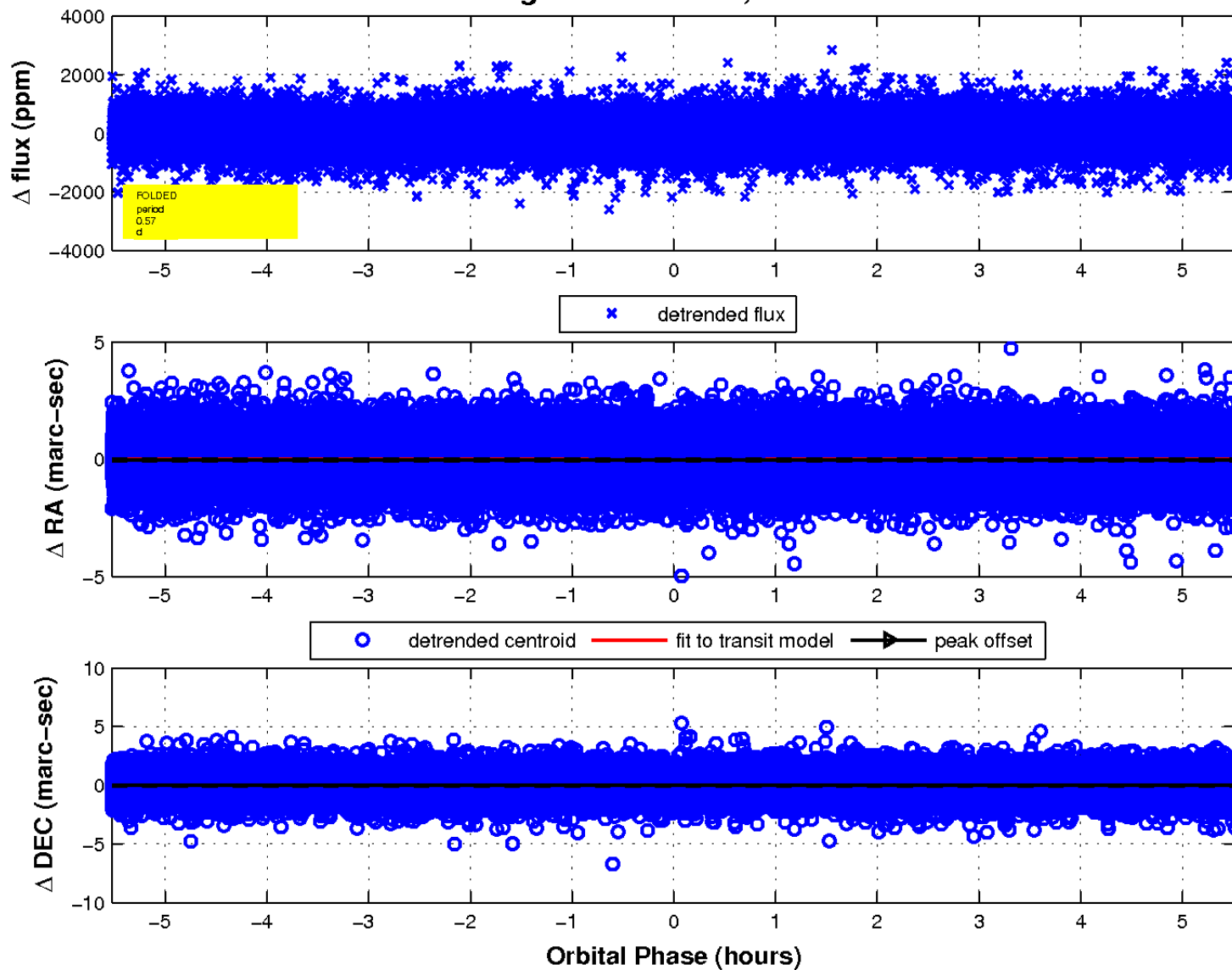
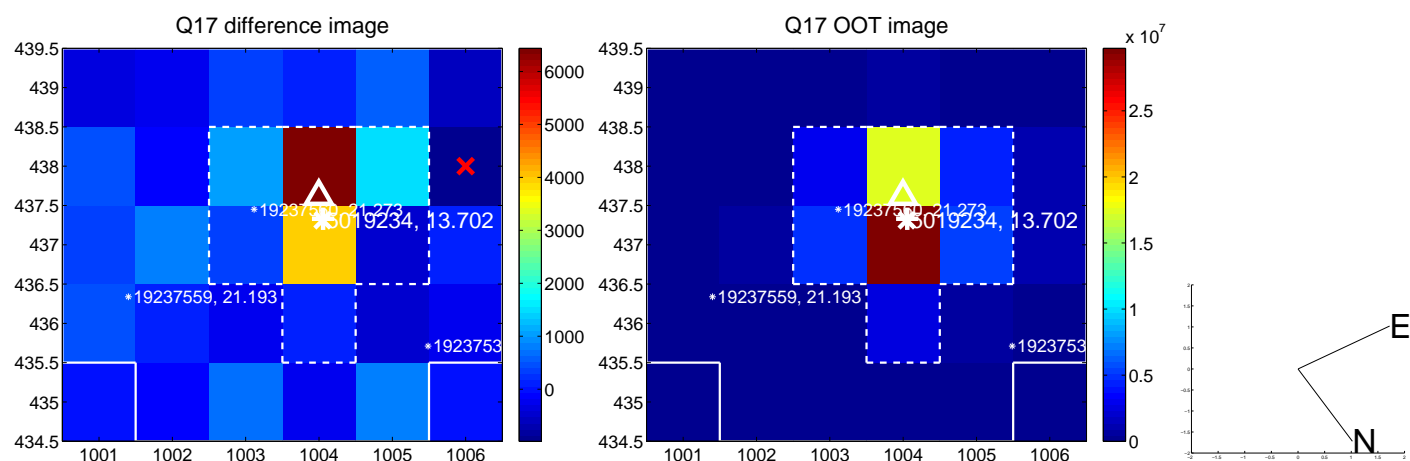
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

