

KIC 005894549

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})
005894549-01	OBS	No	1.276054	131.667507	45.7	4.215	10.7	8.6	1.44	6415	1.06	4983.03
005894549-02	OBS	No	1.276249	132.401776	31.1	8.274	9.2	7.2	1.44	6415	0.80	4982.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005894549-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
005894549-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_KIC_POS

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

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

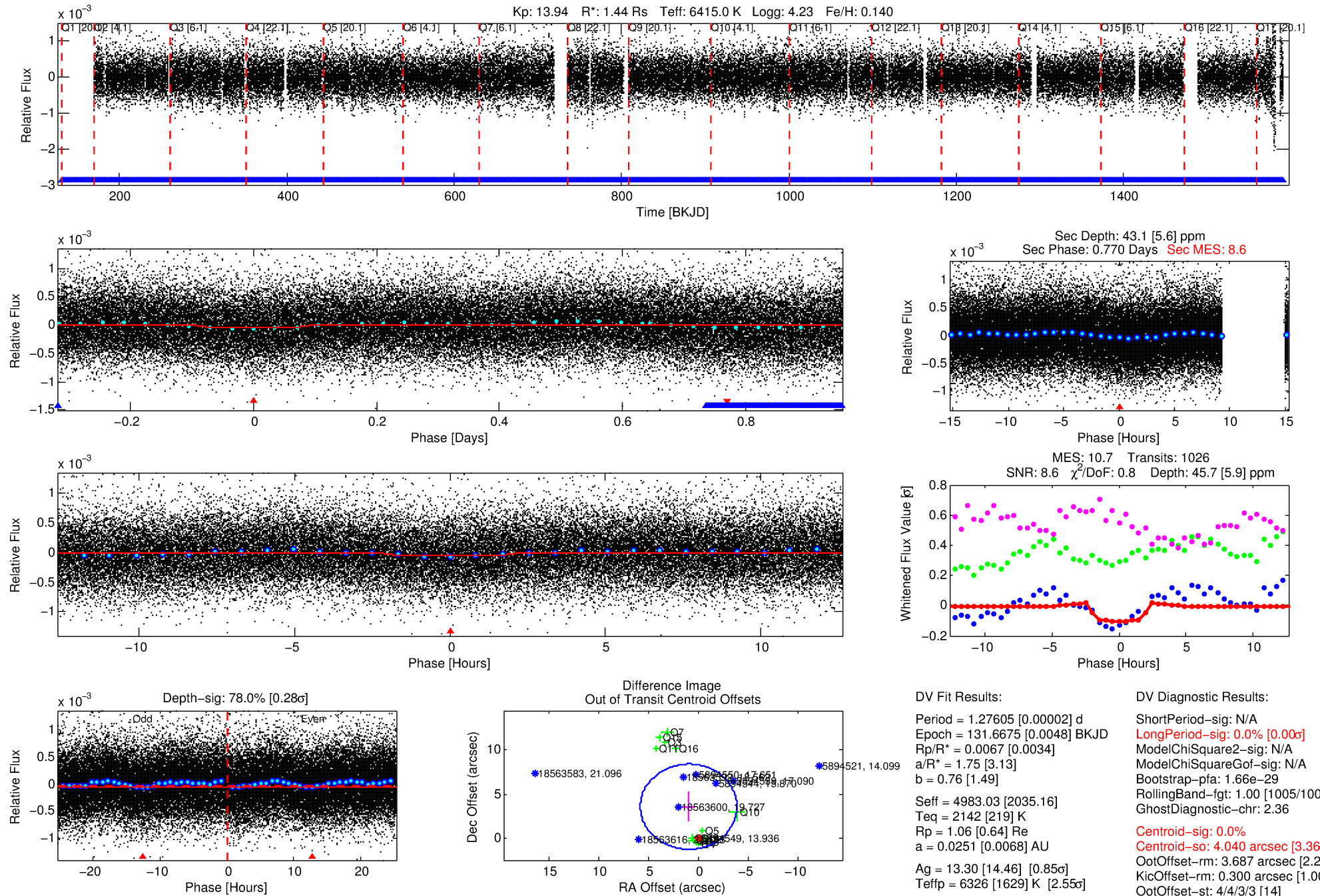
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005894549-01

No Significant Match Found

DV One-Page Summary

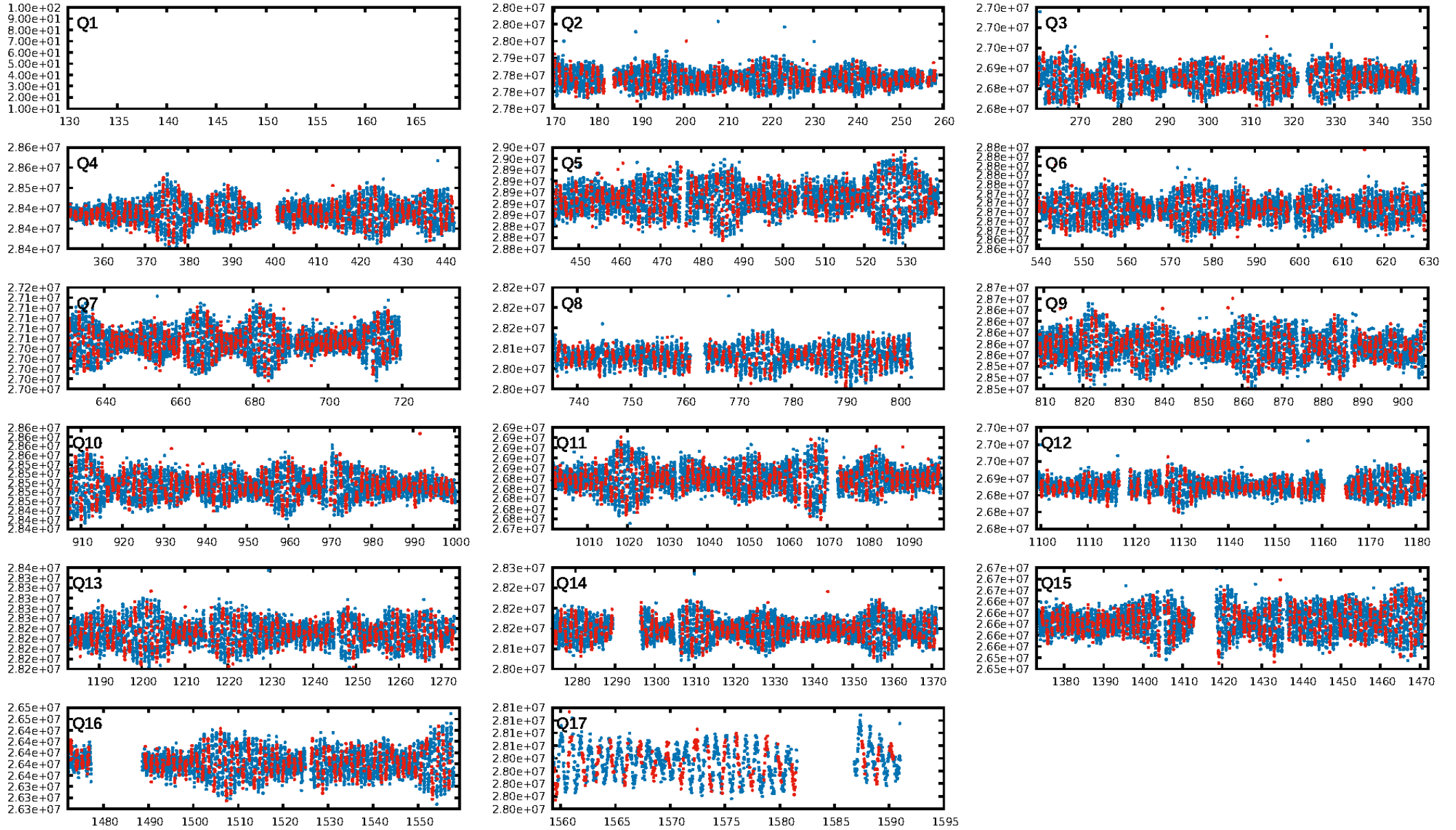
KIC: 5894549 Candidate: 1 of 2 Period: 1.276 d



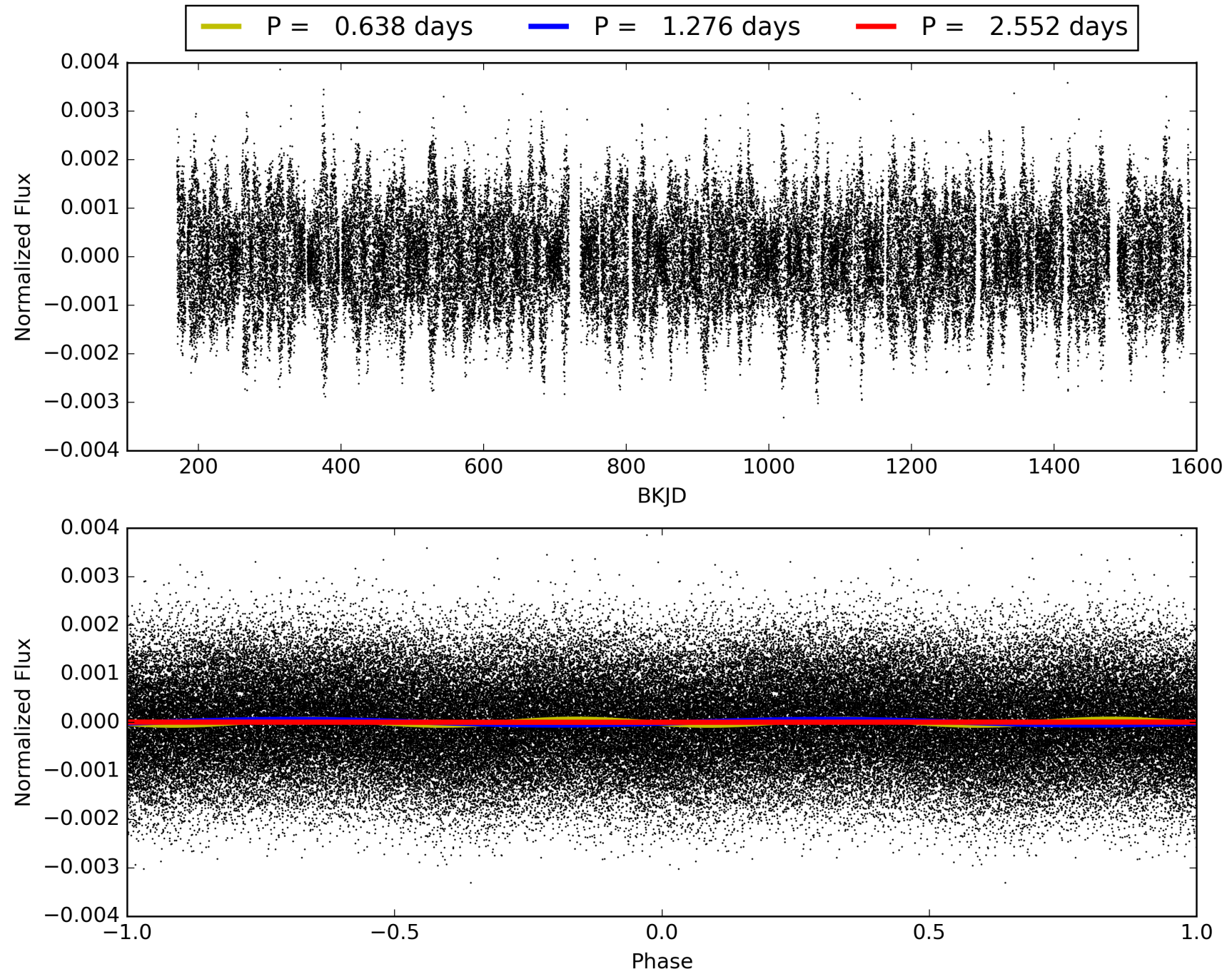
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:19:25 Z

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

TCE 005894549-01, PDC Light Curves

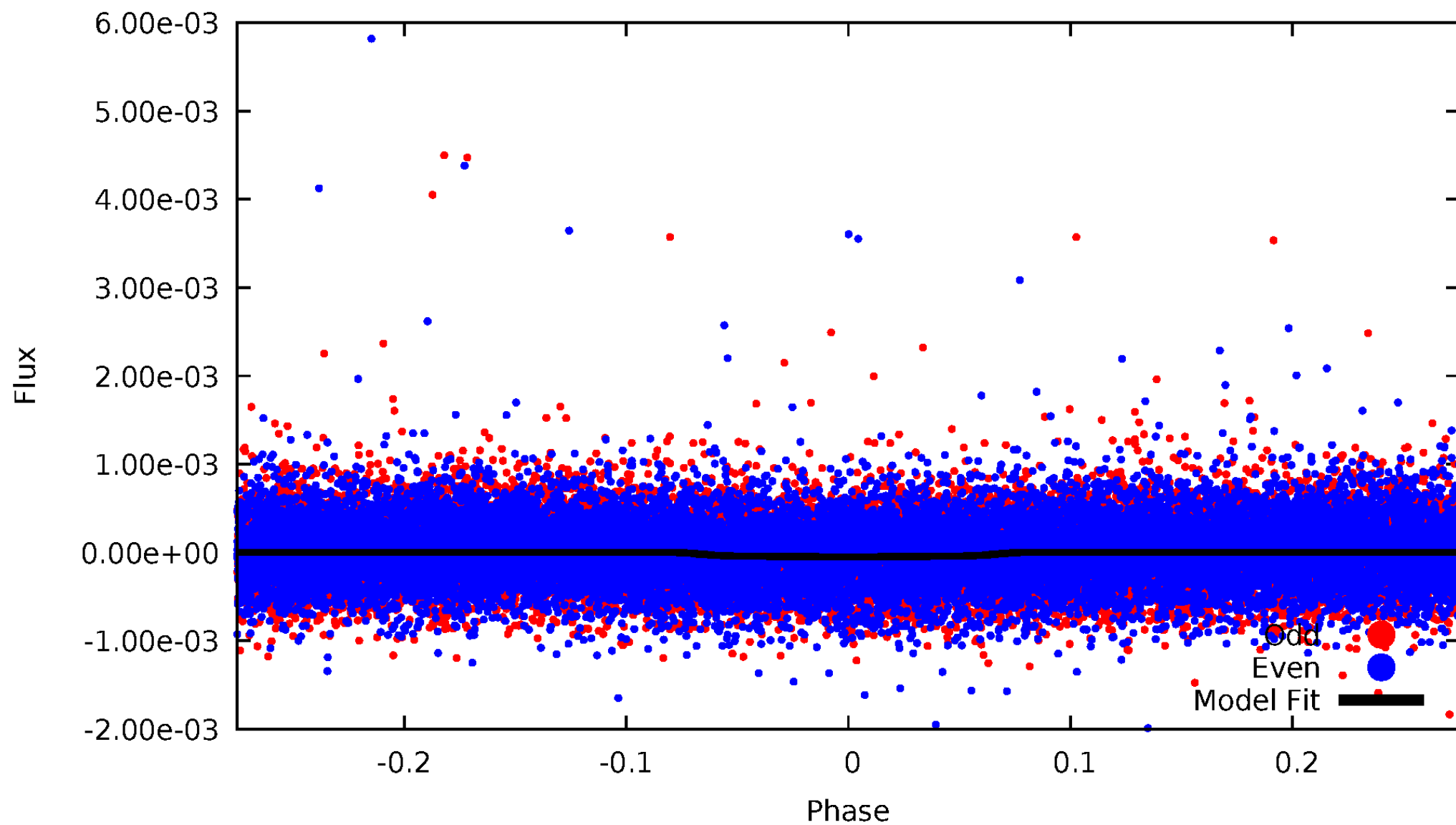


TCE 005894549-01



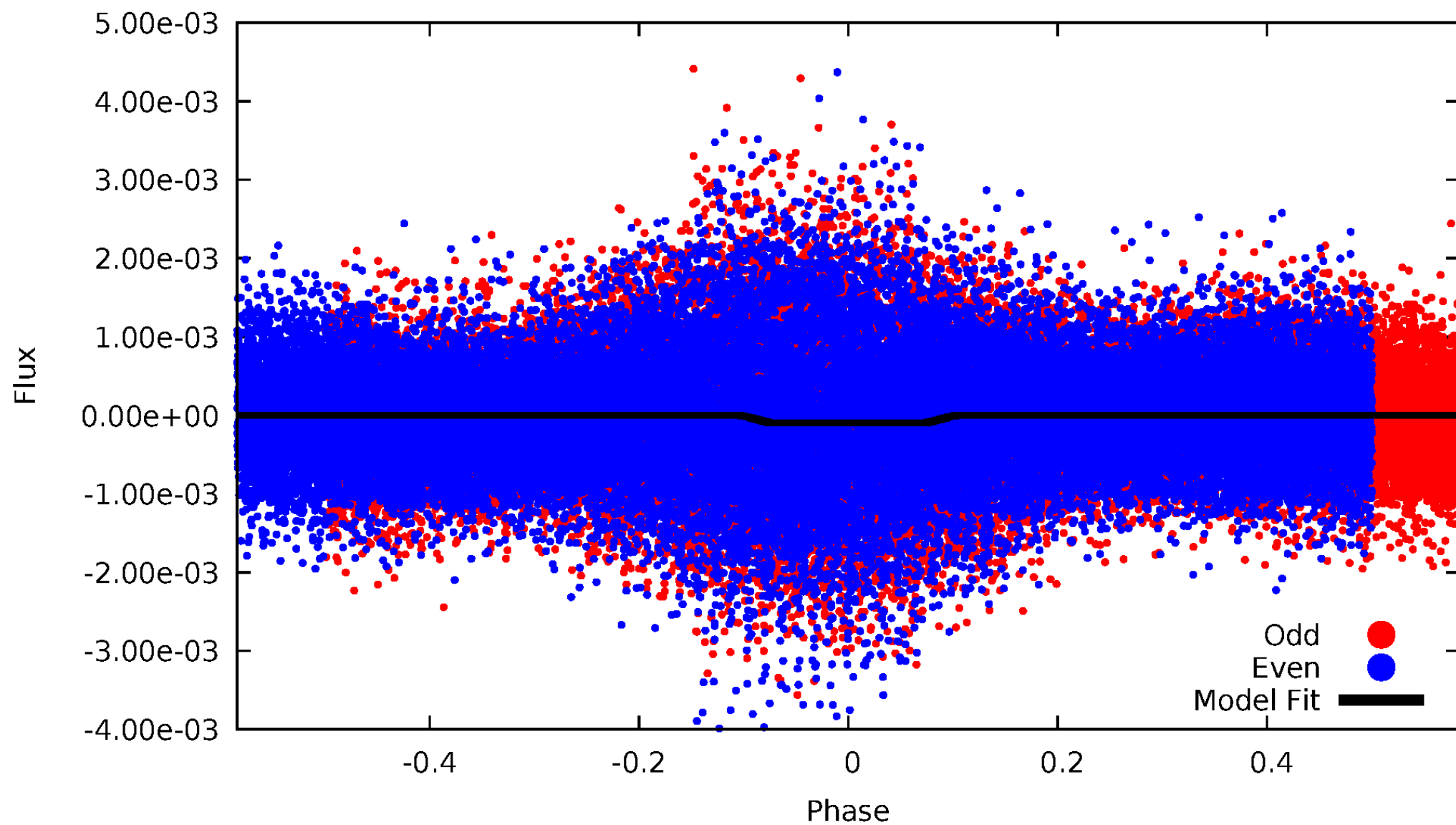
DV Odd/Even

TCE 005894549-01



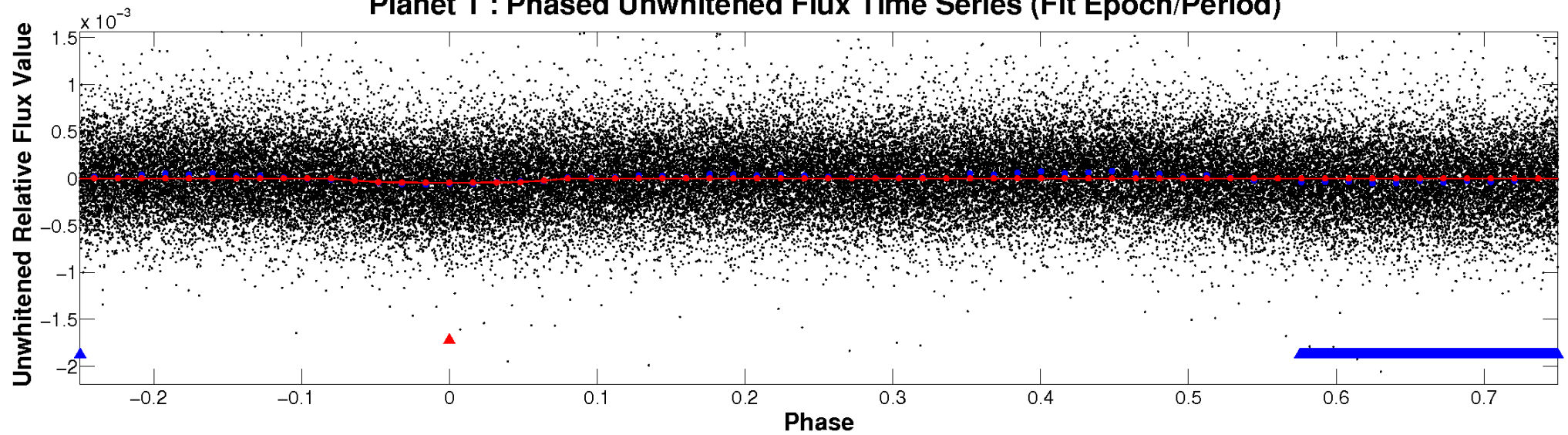
ALT Odd/Even

TCE 005894549-01

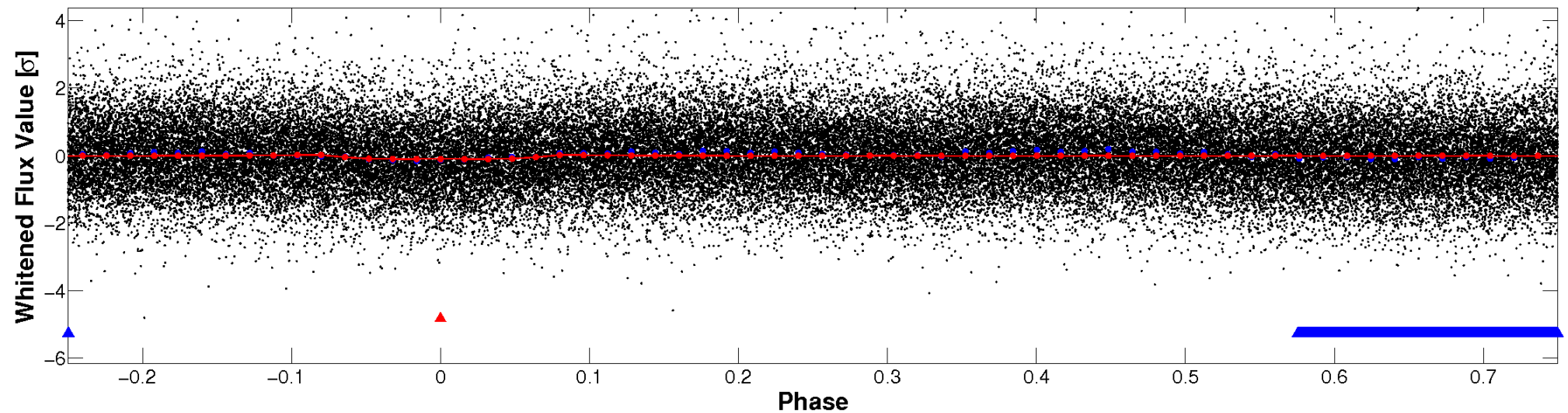


Non-Whitened Vs. Whitened Light Curve

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

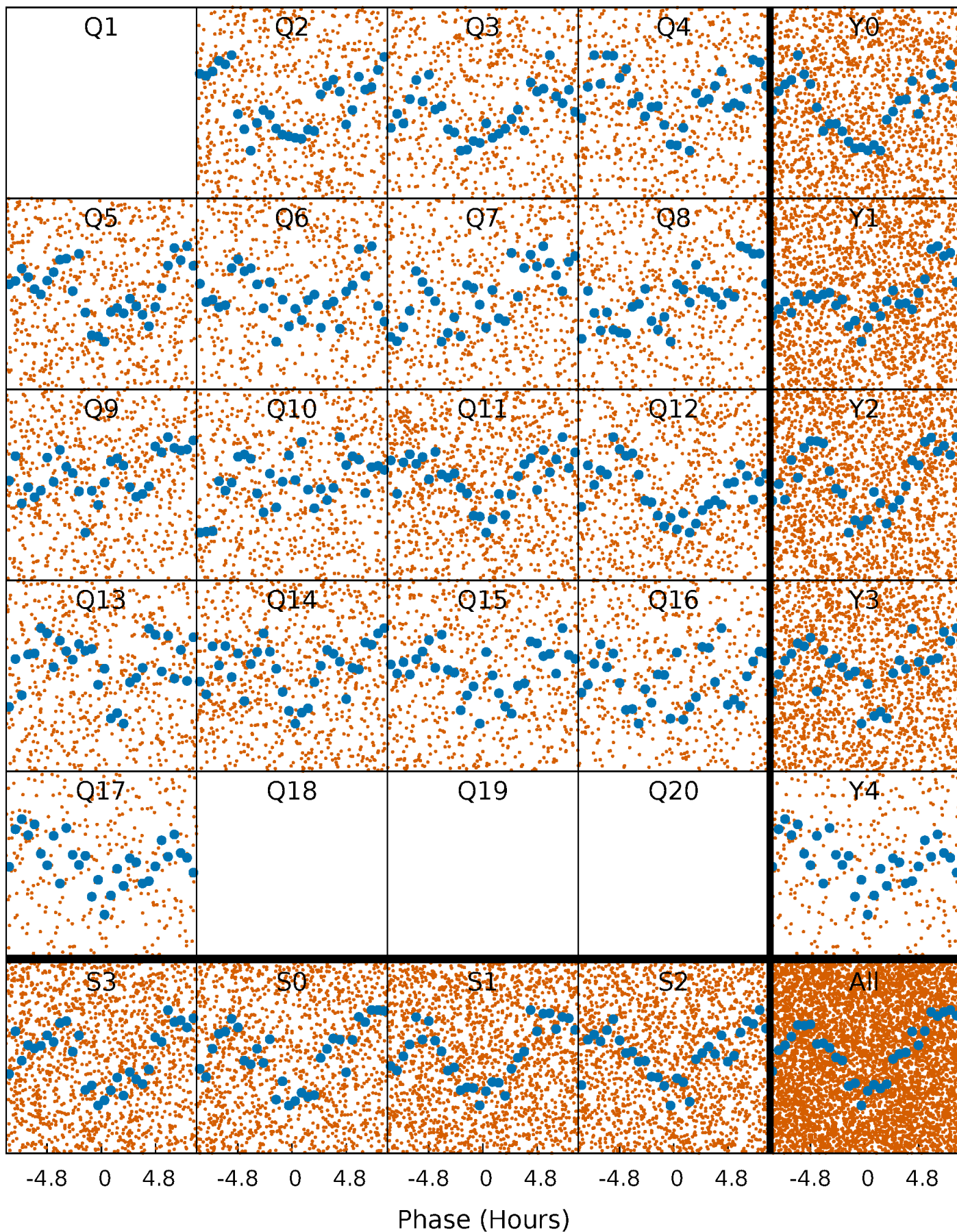


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



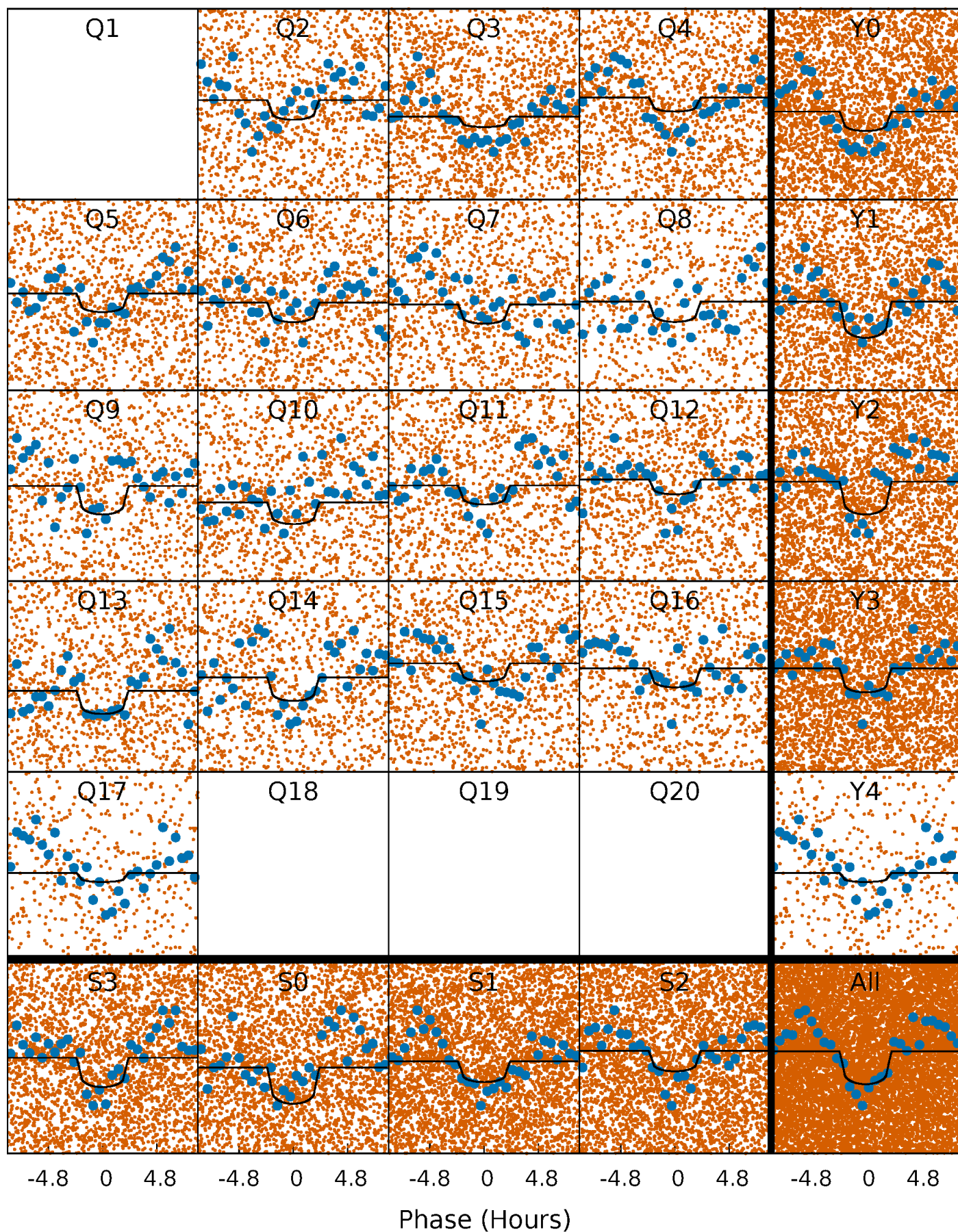
PDC Quarter-Phased Transit Curves

TCE 005894549-01 P= 1.276054 Days $T_0=131.667507$ (BKJD)



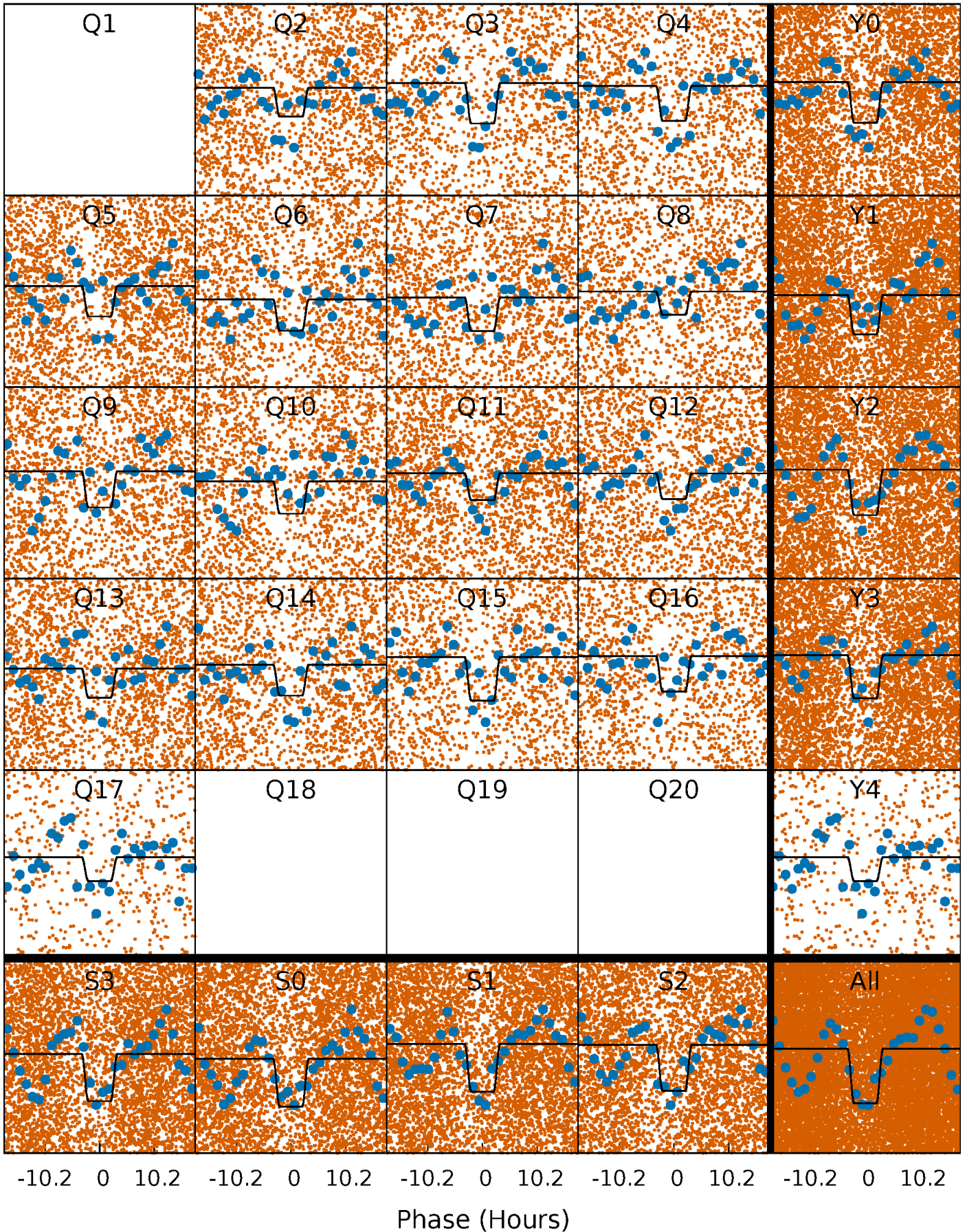
DV Quarter-Phased Transit Curves

TCE 005894549-01 P= 1.276054 Days $T_0=131.667507$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

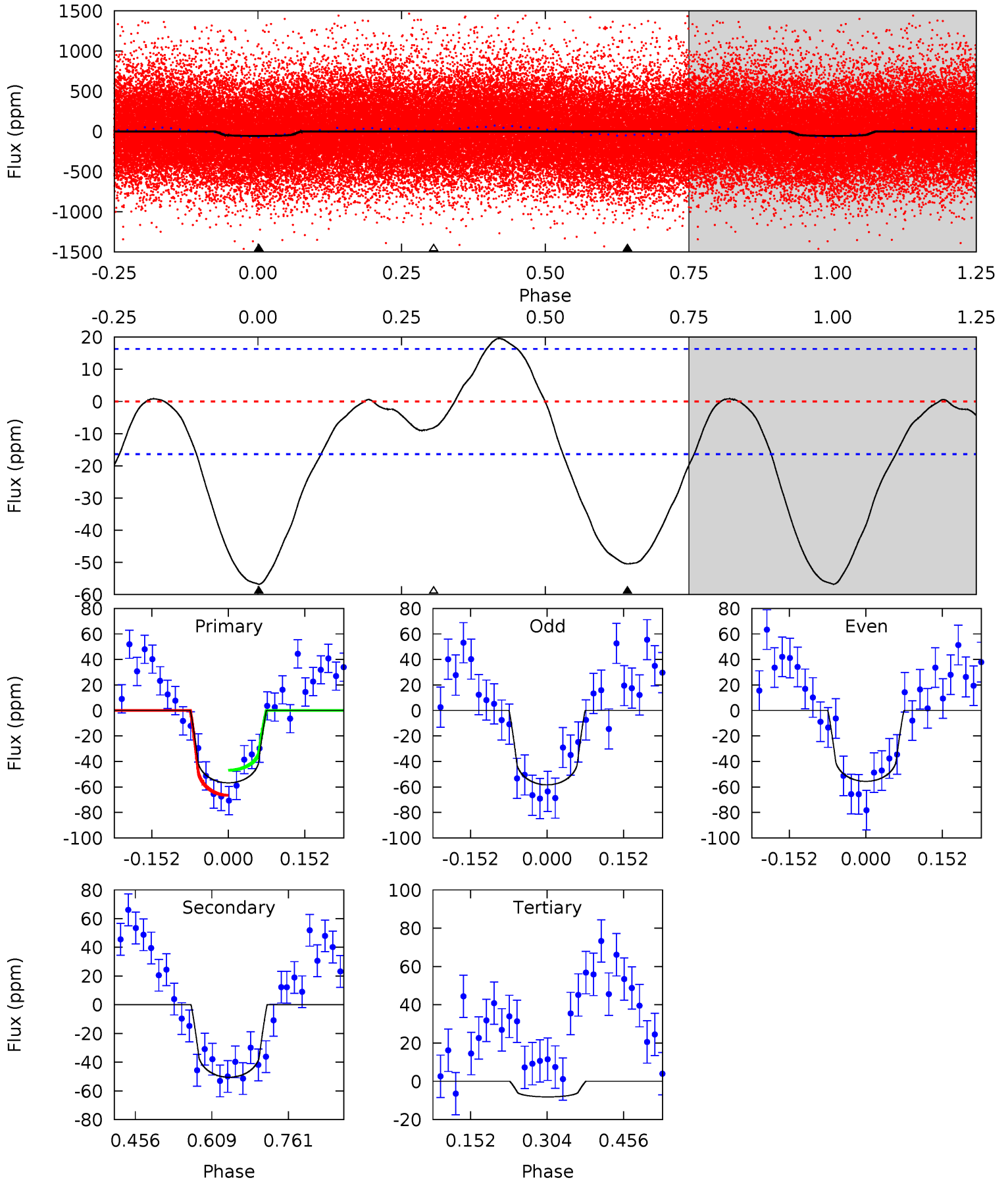
TCE 005894549-01 P= 1.276081 Days $T_0=131.684883$ (BKJD)



DV Model-Shift Uniqueness Test

005894549-01, P = 1.276054 Days, E = 131.667507 Days

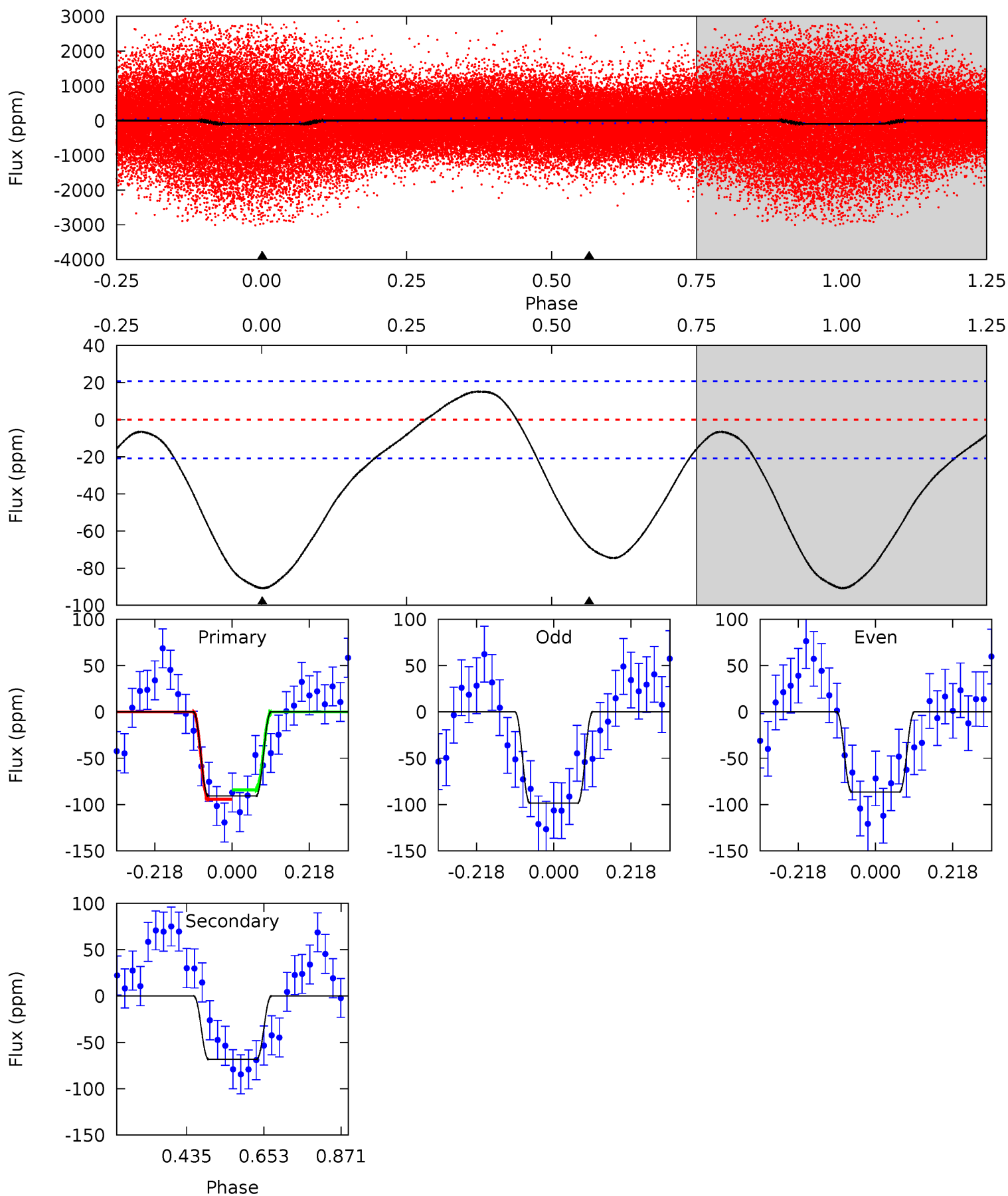
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	13.8	2.23	0	4.48	1.43	2.39	13.3	15.5	11.6	13.8	0.37	1.12	0.26	2.70



Alt Model-Shift Uniqueness Test

005894549-01, P = 1.276081 Days, E = 131.684883 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	14.5	0	0	4.40	1.23	1.78	19.2	19.2	14.5	14.5	1.25	1.03	0.14	0.97



Stellar Parameters For KIC 005894549

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6415^{+177}_{-243}	$4.234^{+0.132}_{-0.198}$	$0.140^{+0.200}_{-0.350}$	$1.437^{+0.489}_{-0.301}$	$1.293^{+0.196}_{-0.196}$	$0.613^{+0.417}_{-0.336}$
	+3%/-4%	+3%/-5%	+143%/-250%	+34%/-21%	+15%/-15%	+68%/-55%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 005894549-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-50 ± 4	$1.07^{+0.61}_{-0.51}$	3009^{+253}_{-196}	6556^{+3128}_{-1275}	15^{+40}_{-9}
Alt.	-68 ± 5	$1.60^{+0.66}_{-0.53}$	3006^{+248}_{-177}	5736^{+1274}_{-751}	$8.883^{+11.349}_{-4.233}$

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 $A_{obs} \gg 1.0$

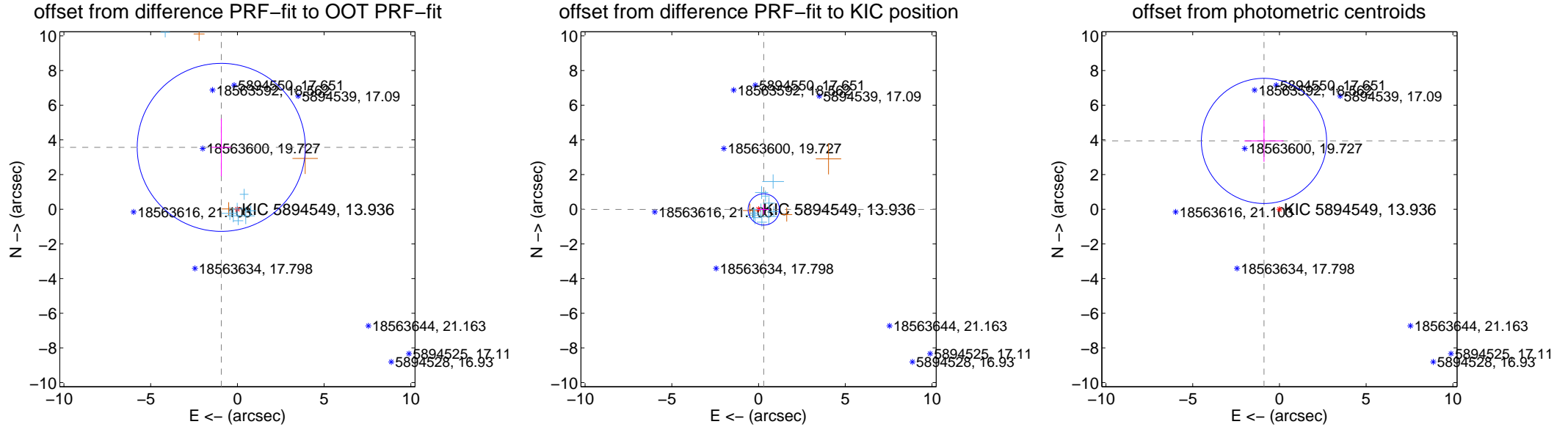
DV Centroid Data

Supplemental centroid analysis for 005894549-01. Kepler magnitude: 13.94. Transit SNR 8.57

There are 11 quarters with good PRF difference image offsets

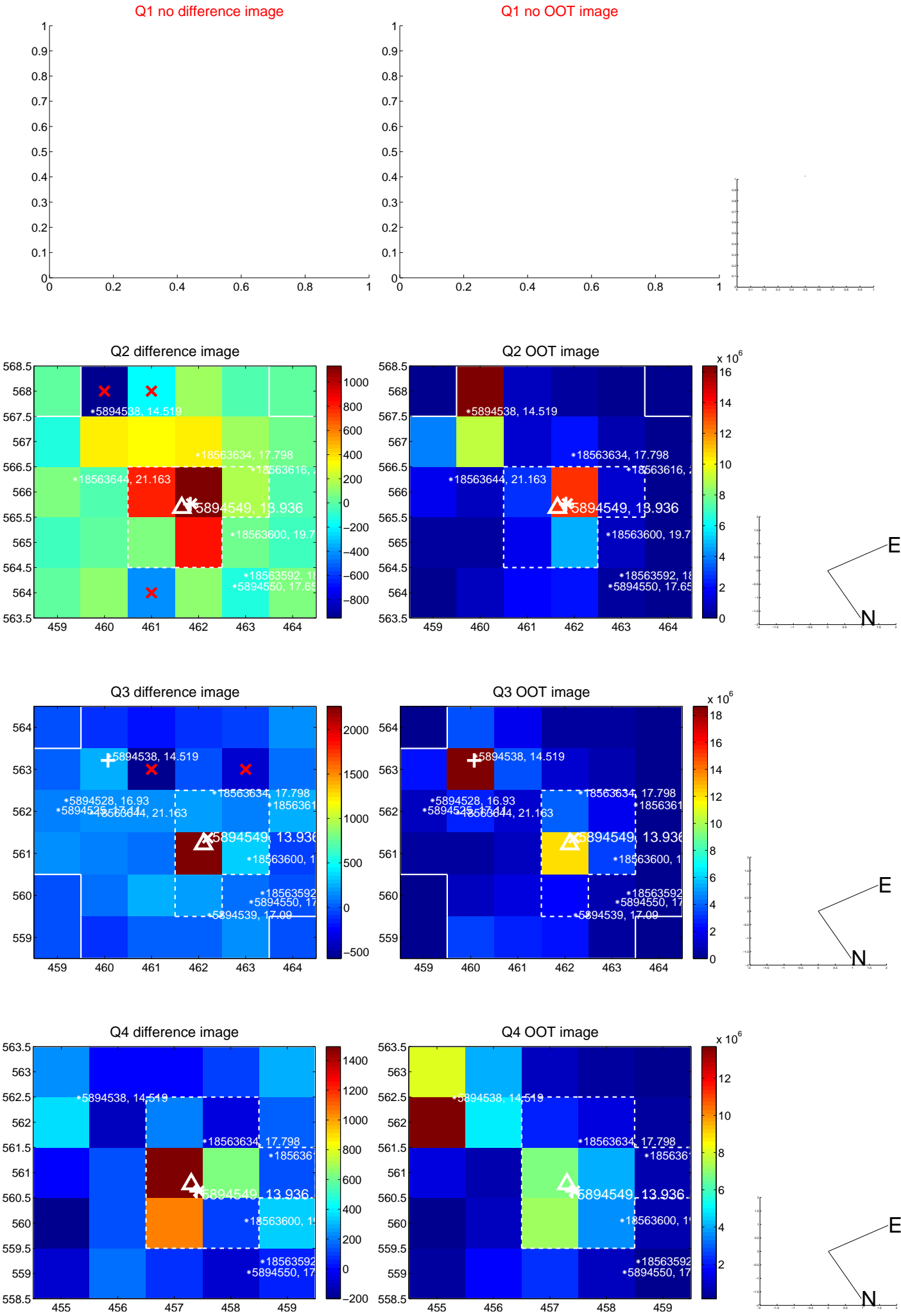
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.687 ± 1.615	2.28	0.930 ± 0.576	3.568 ± 1.662
PRF-fit source offset from KIC position	0.300 ± 0.301	1.00	-0.300 ± 0.309	-0.012 ± 0.270
photometric centroid source offset	4.04 ± 1.20	3.36	0.89 ± 1.13	3.94 ± 1.21

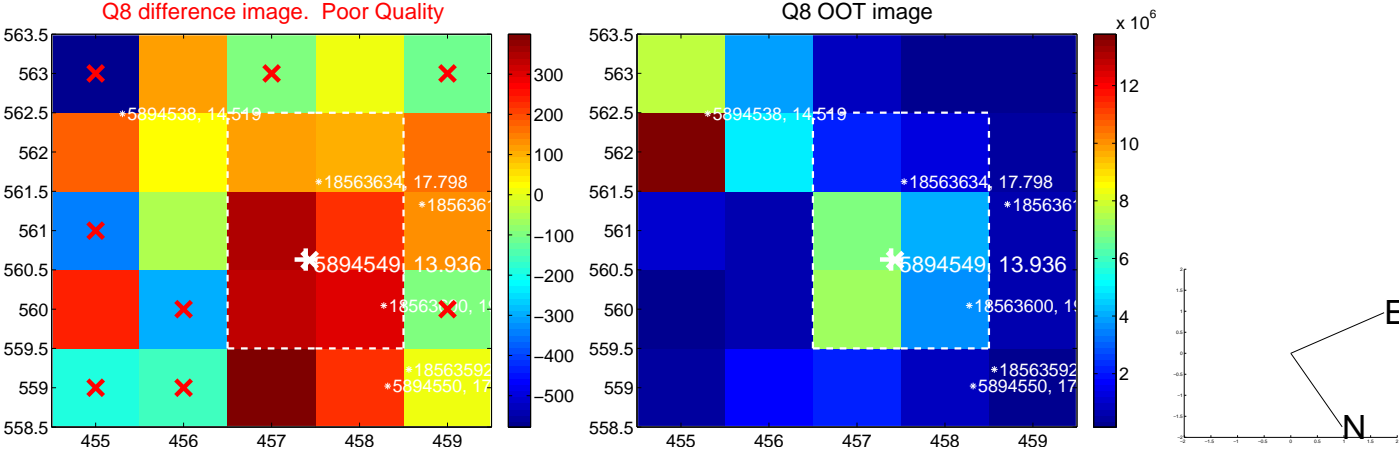
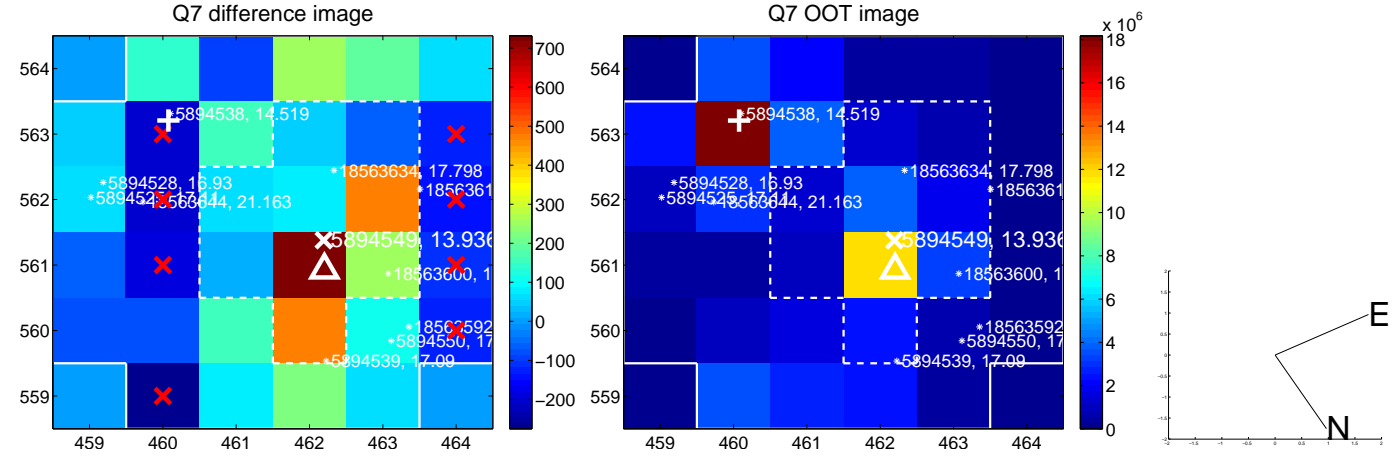
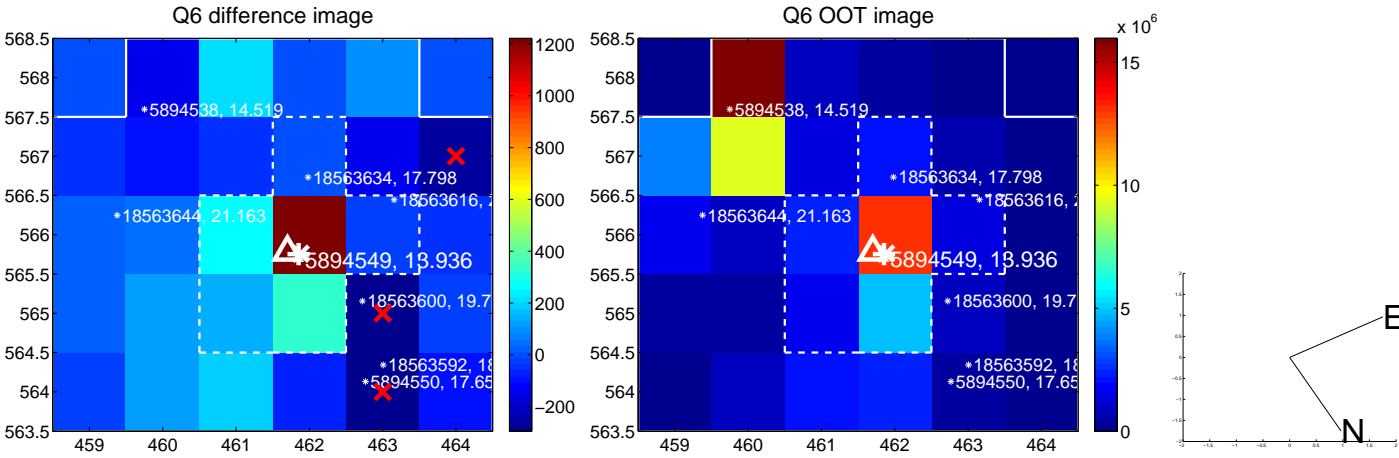
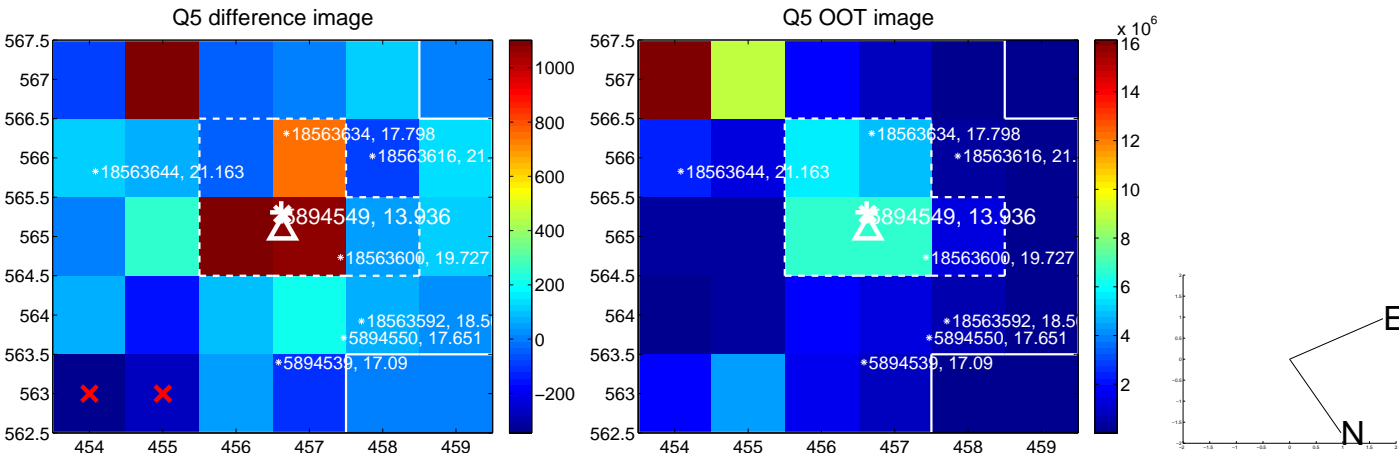


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

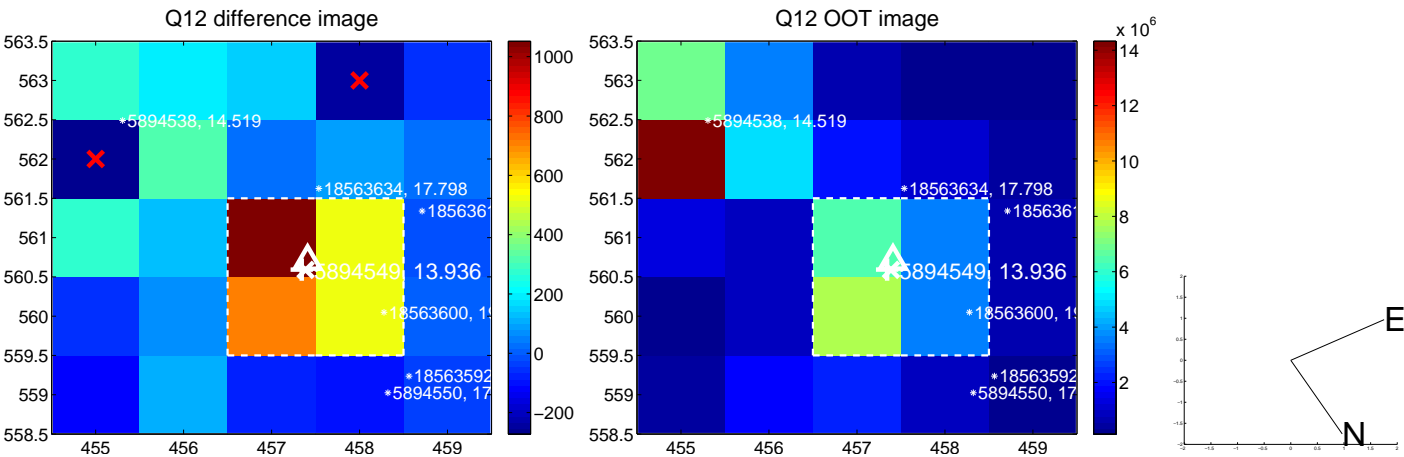
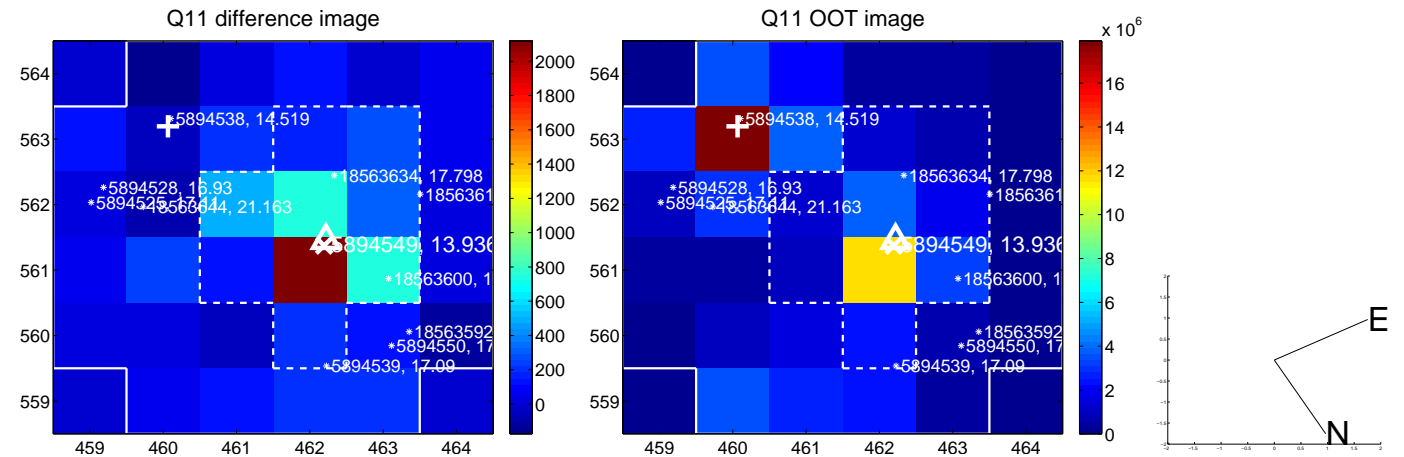
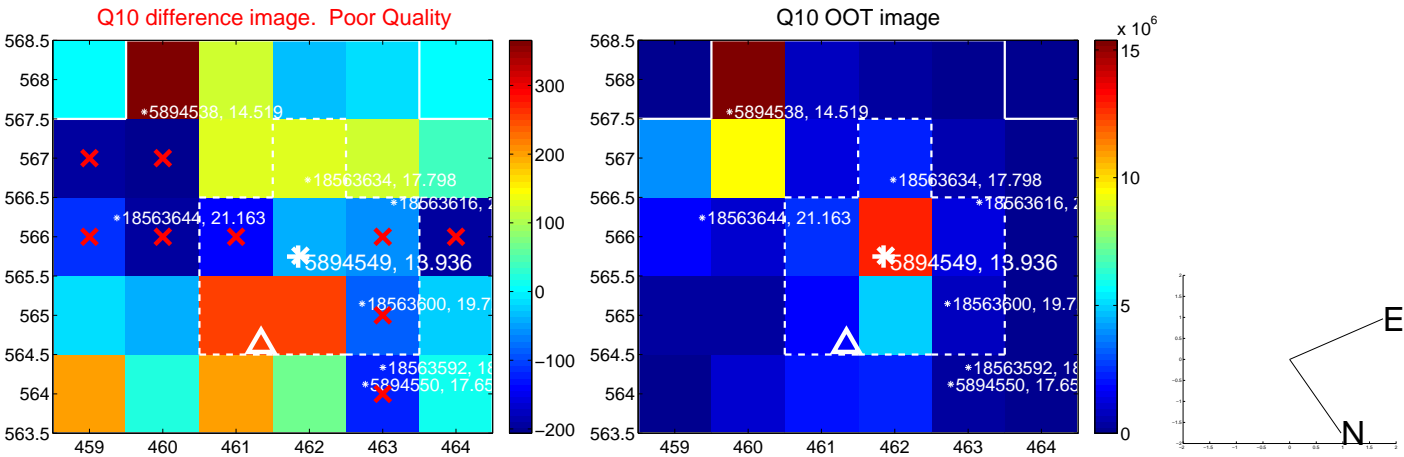
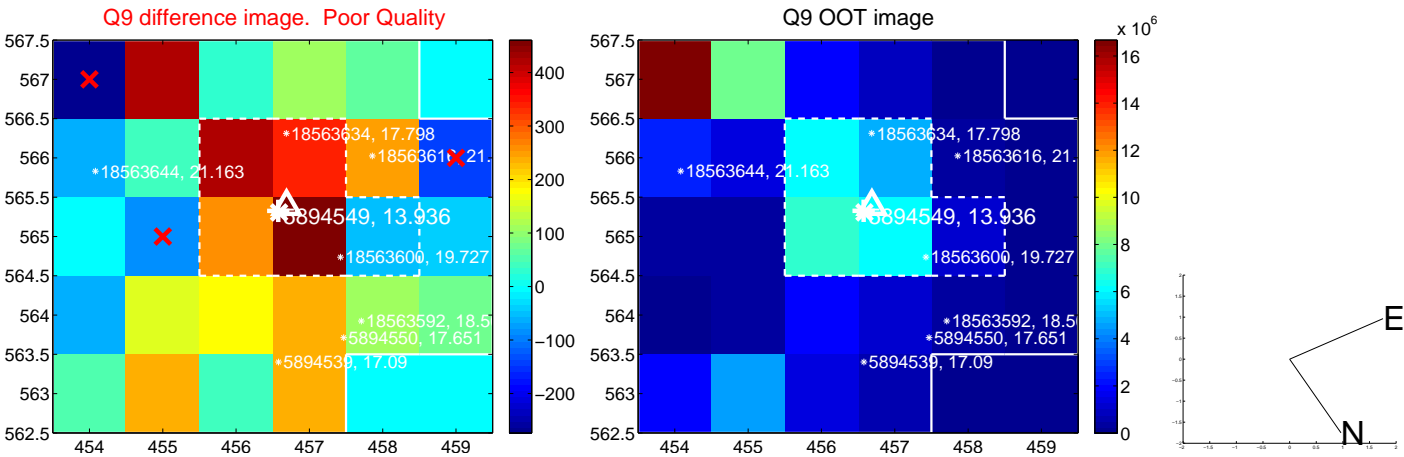
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



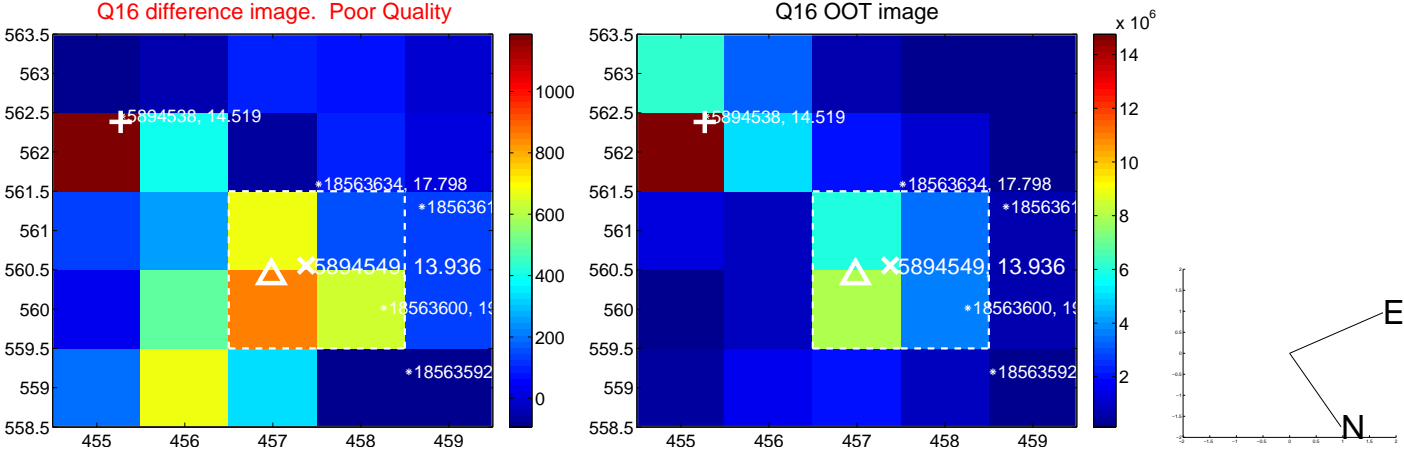
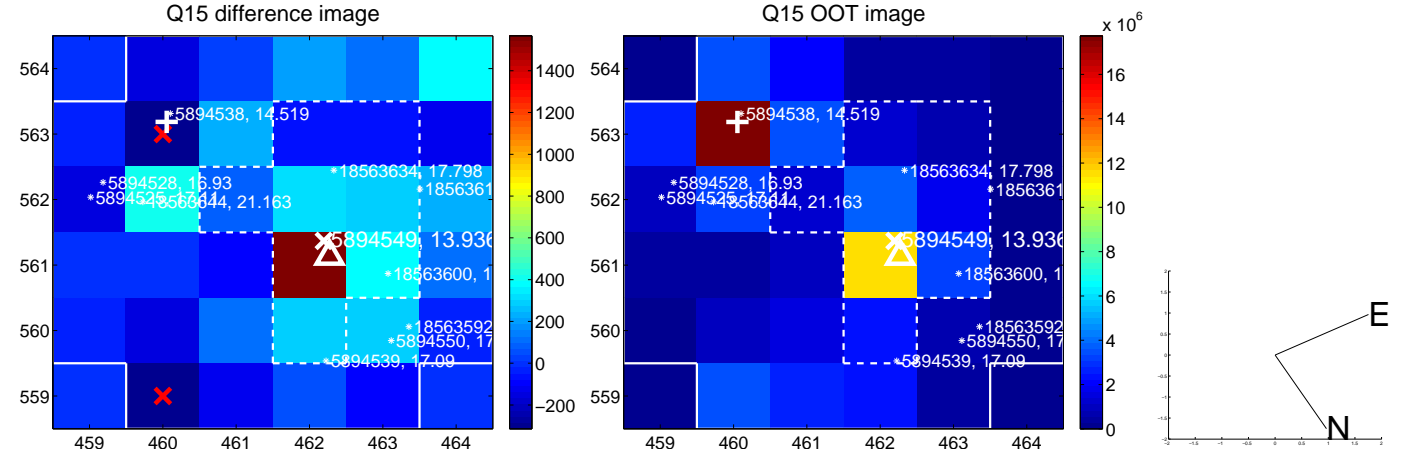
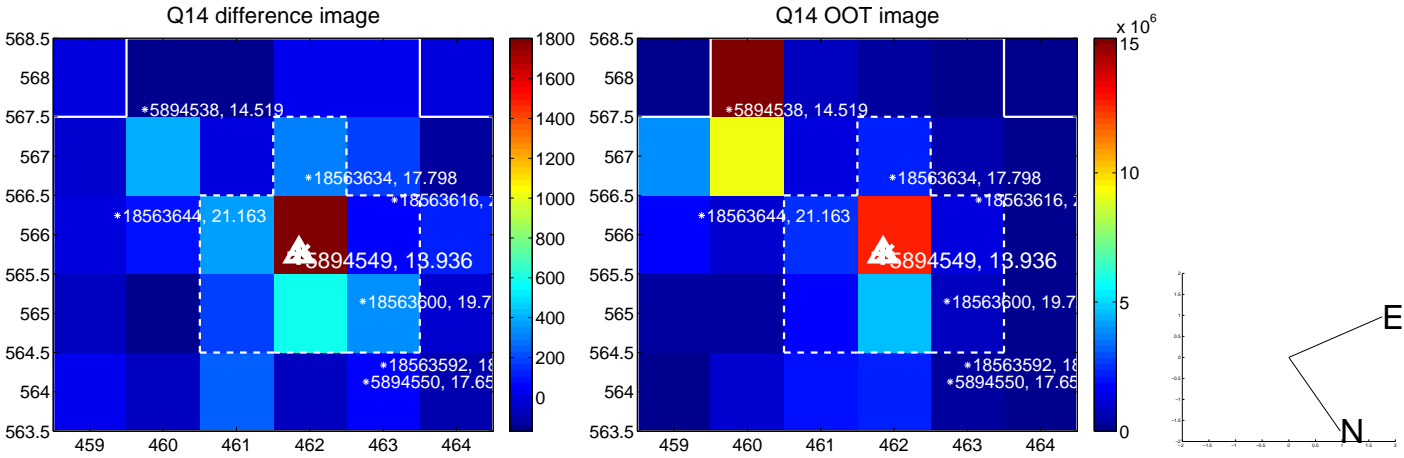
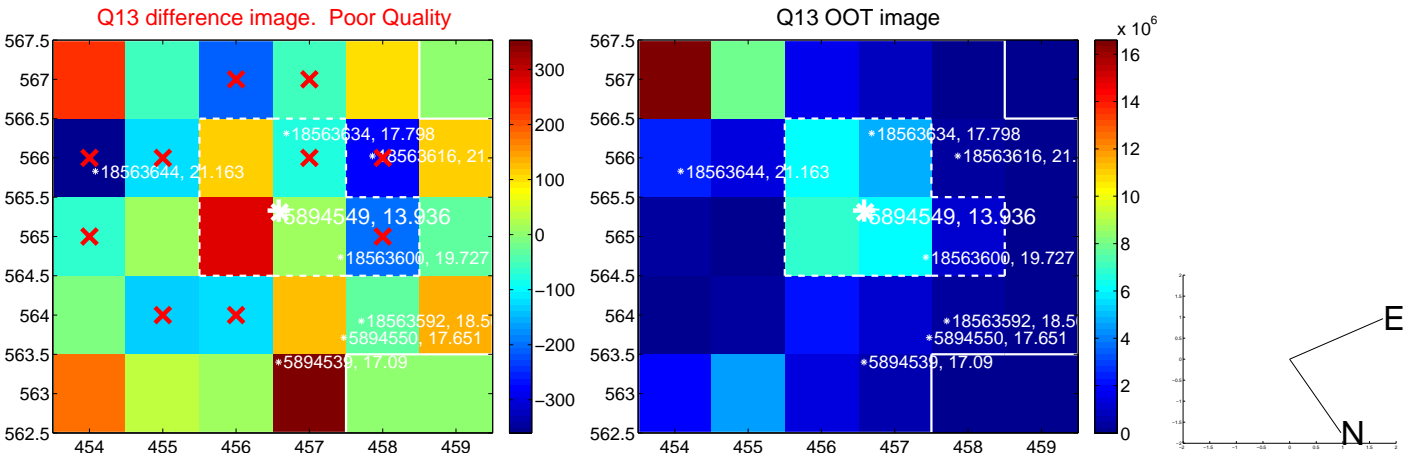
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



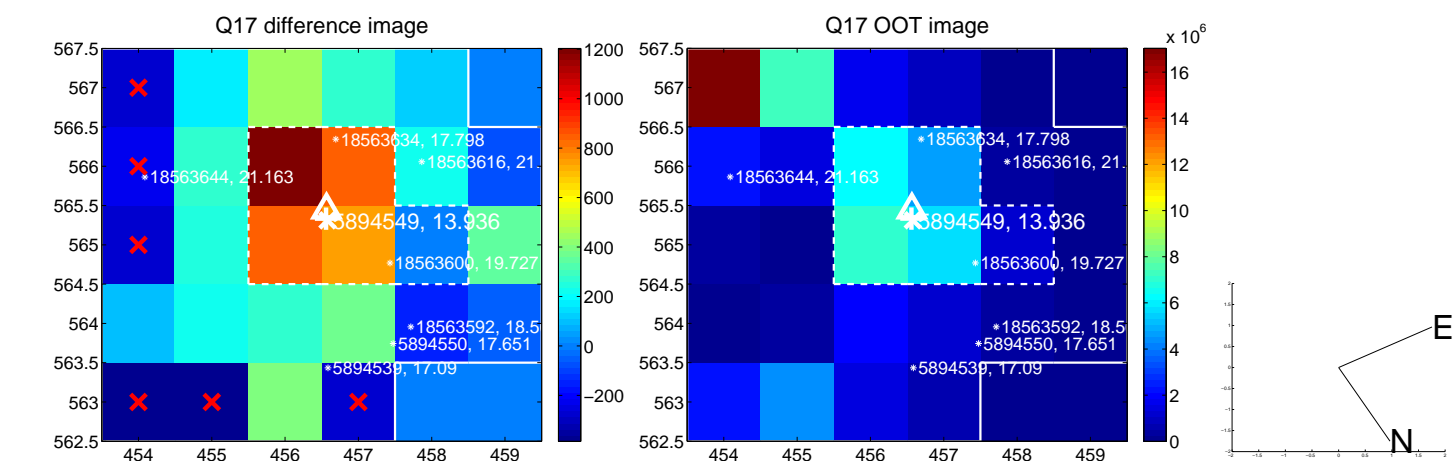
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



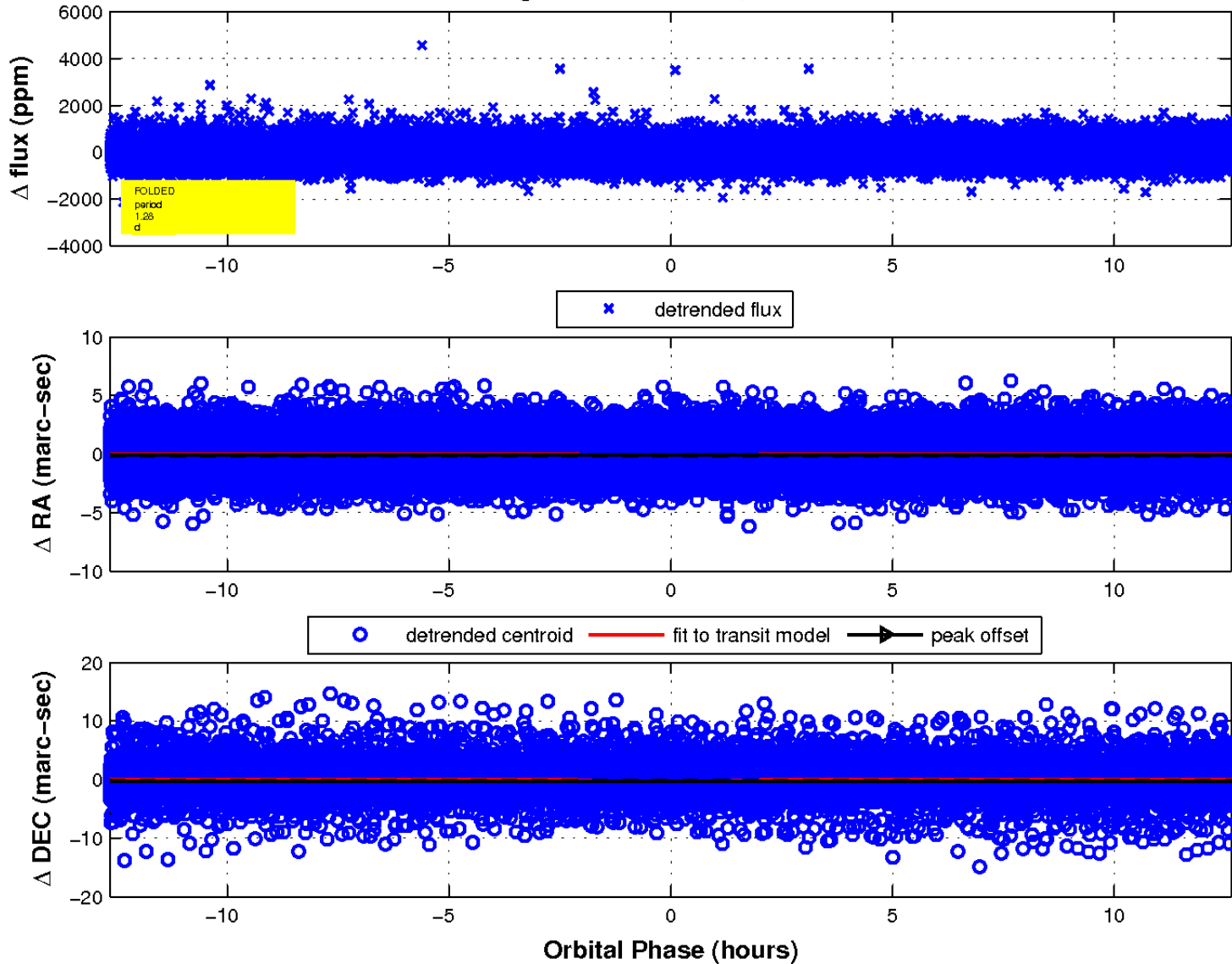
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



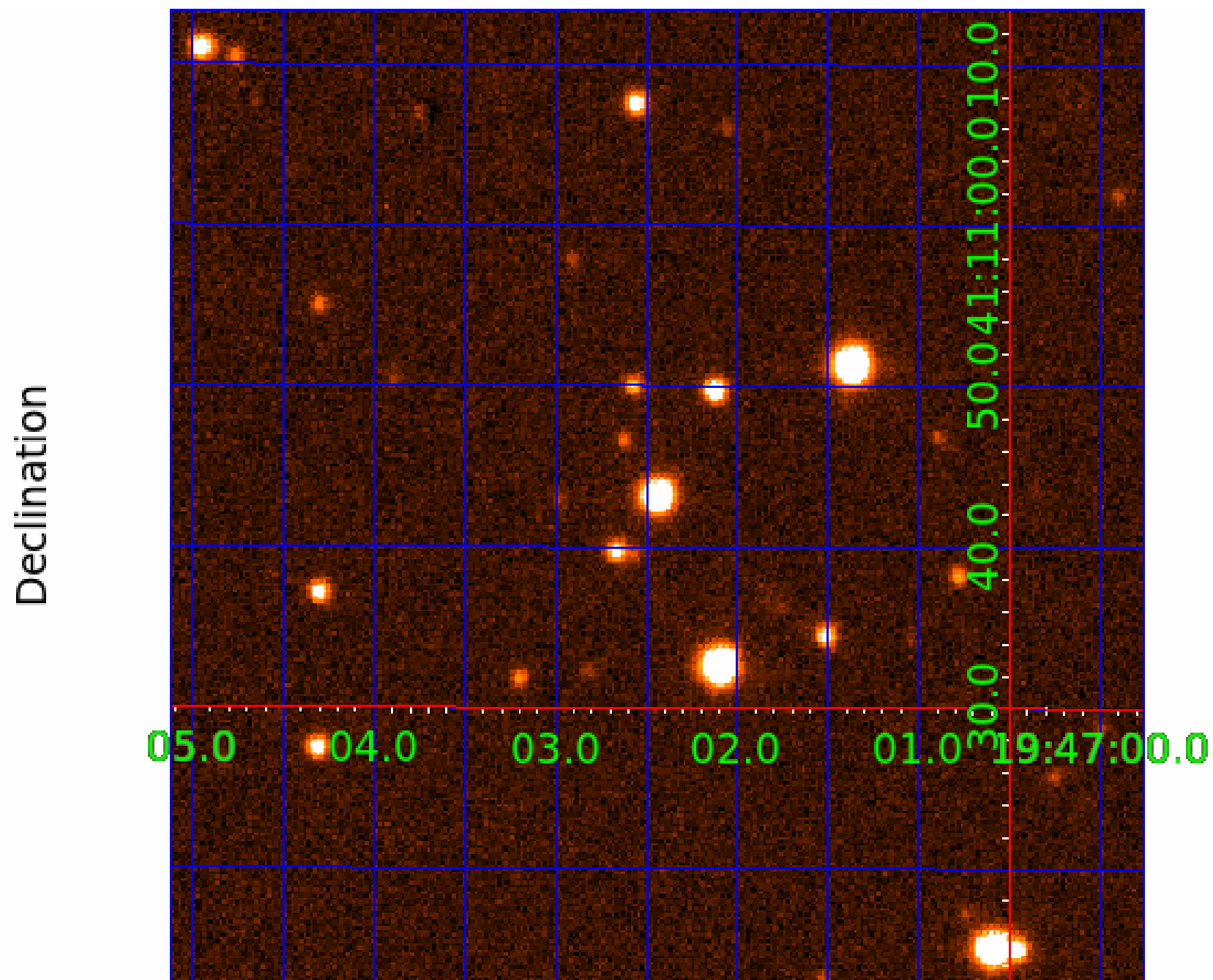
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 2



UKIRT Image



KIC 005894549

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})
005894549-01	OBS	No	1.276054	131.667507	45.7	4.215	10.7	8.6	1.44	6415	1.06	4983.03
005894549-02	OBS	No	1.276249	132.401776	31.1	8.274	9.2	7.2	1.44	6415	0.80	4982.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005894549-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
005894549-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_KIC_POS

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

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

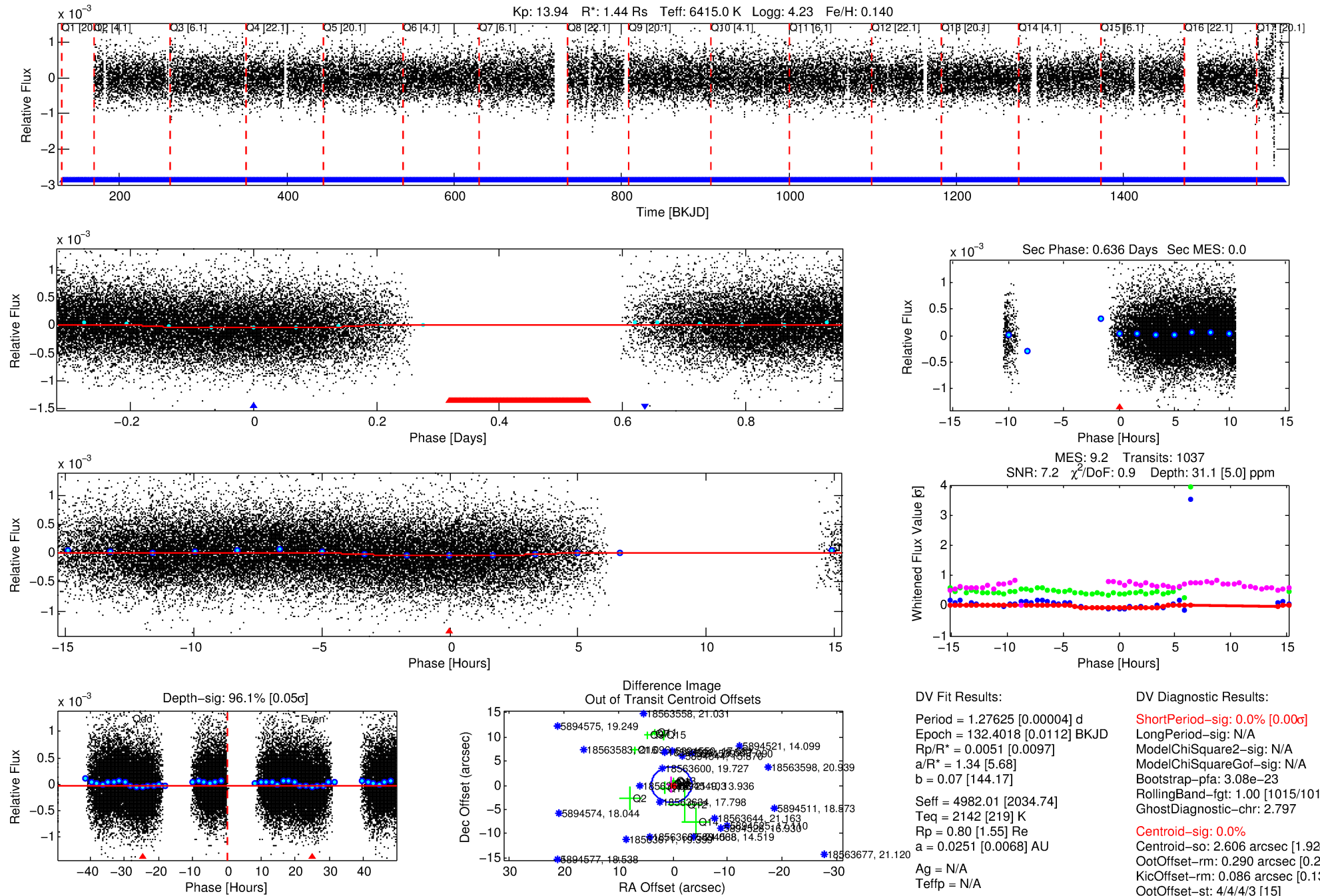
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005894549-02

No Significant Match Found

DV One-Page Summary

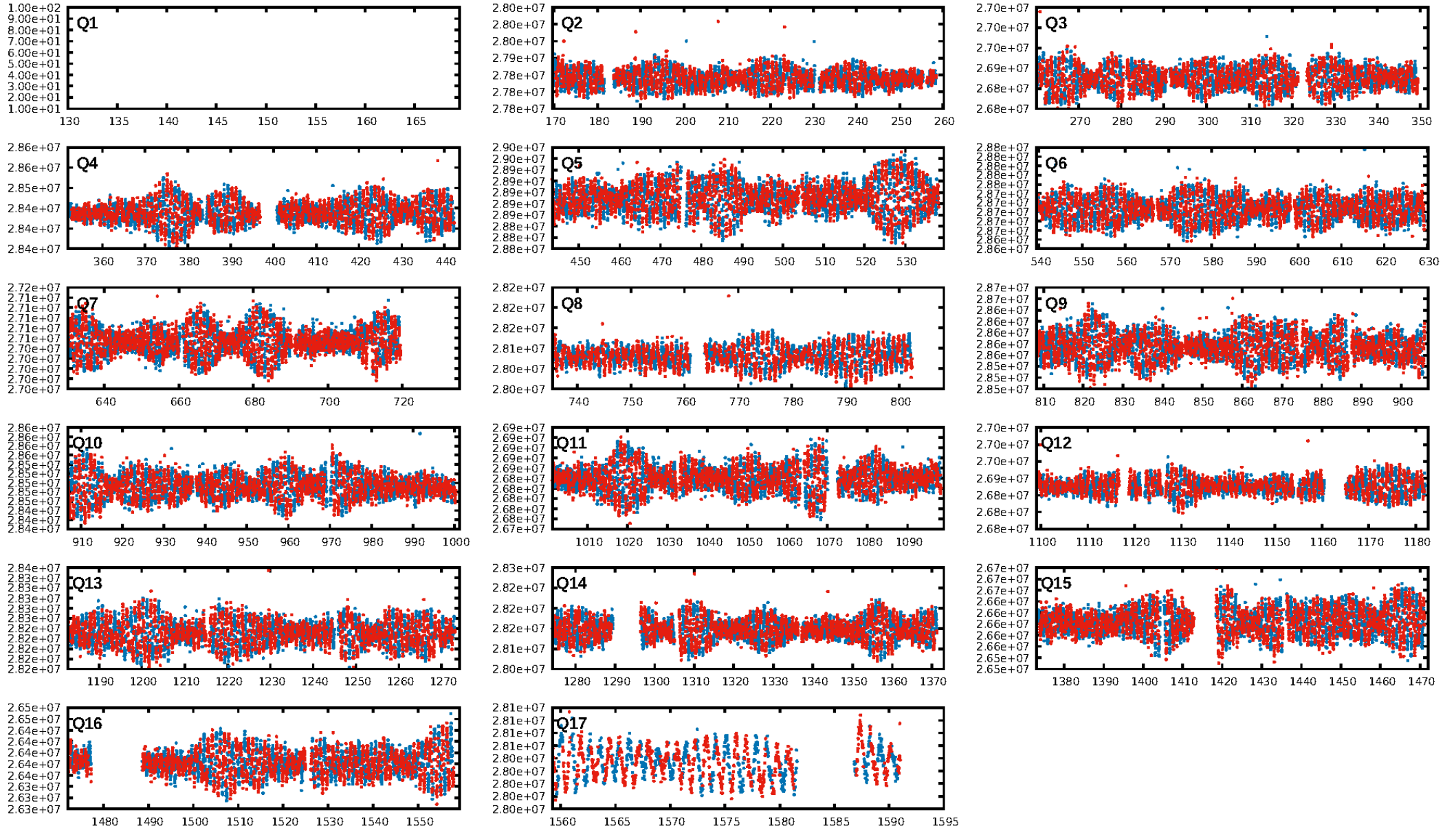
KIC: 5894549 Candidate: 2 of 2 Period: 1.276 d



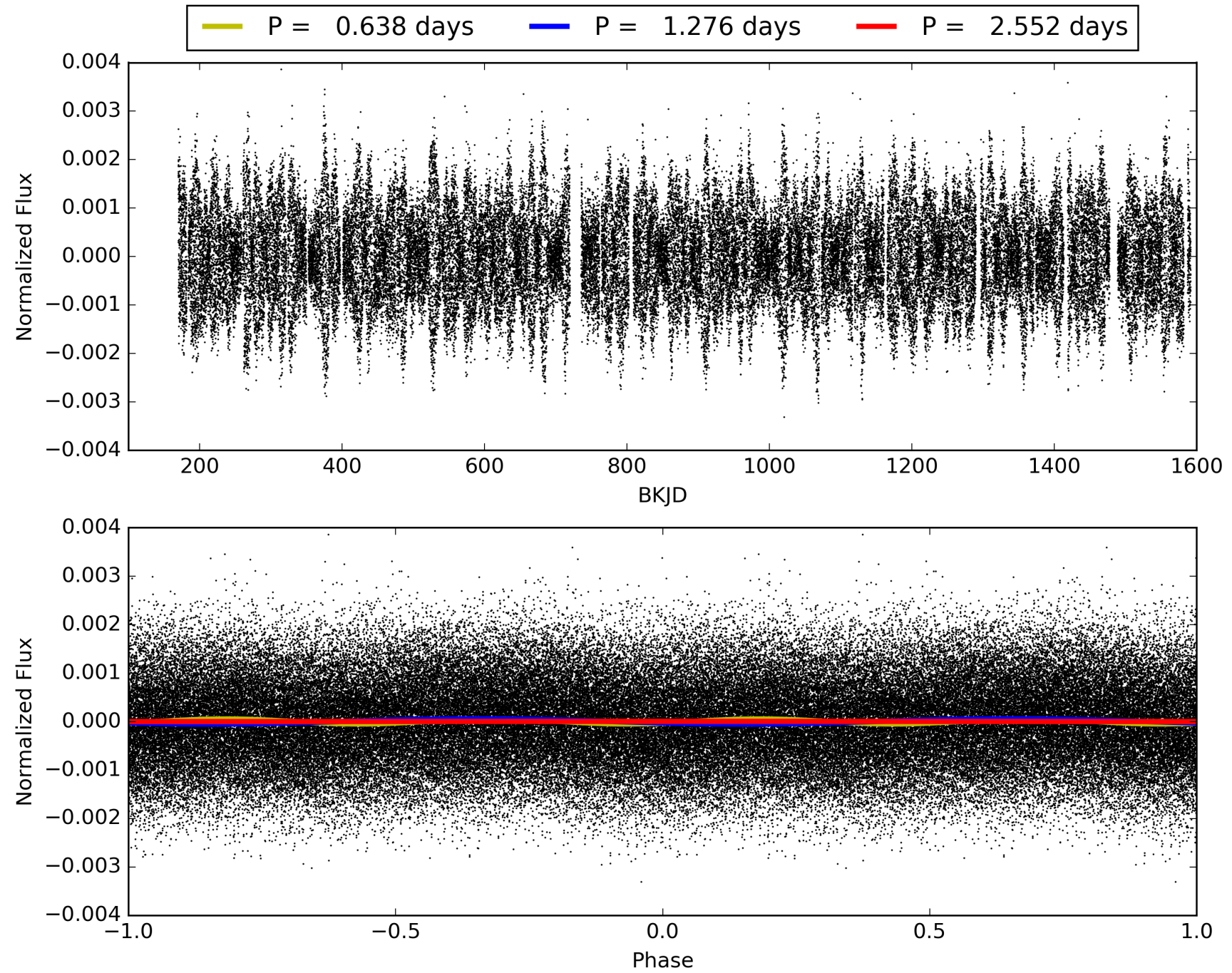
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005894549-02, PDC Light Curves

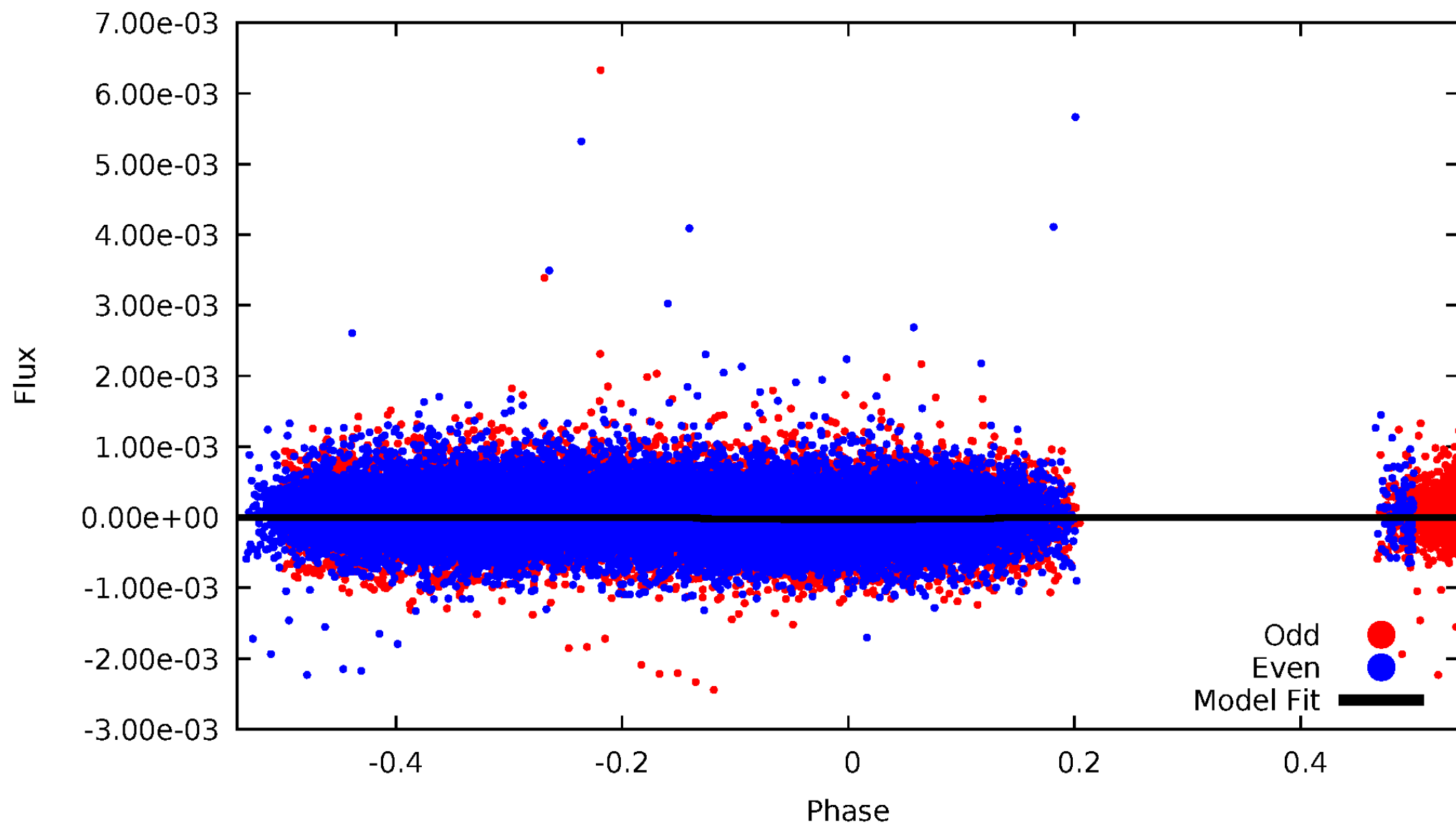


TCE 005894549-02



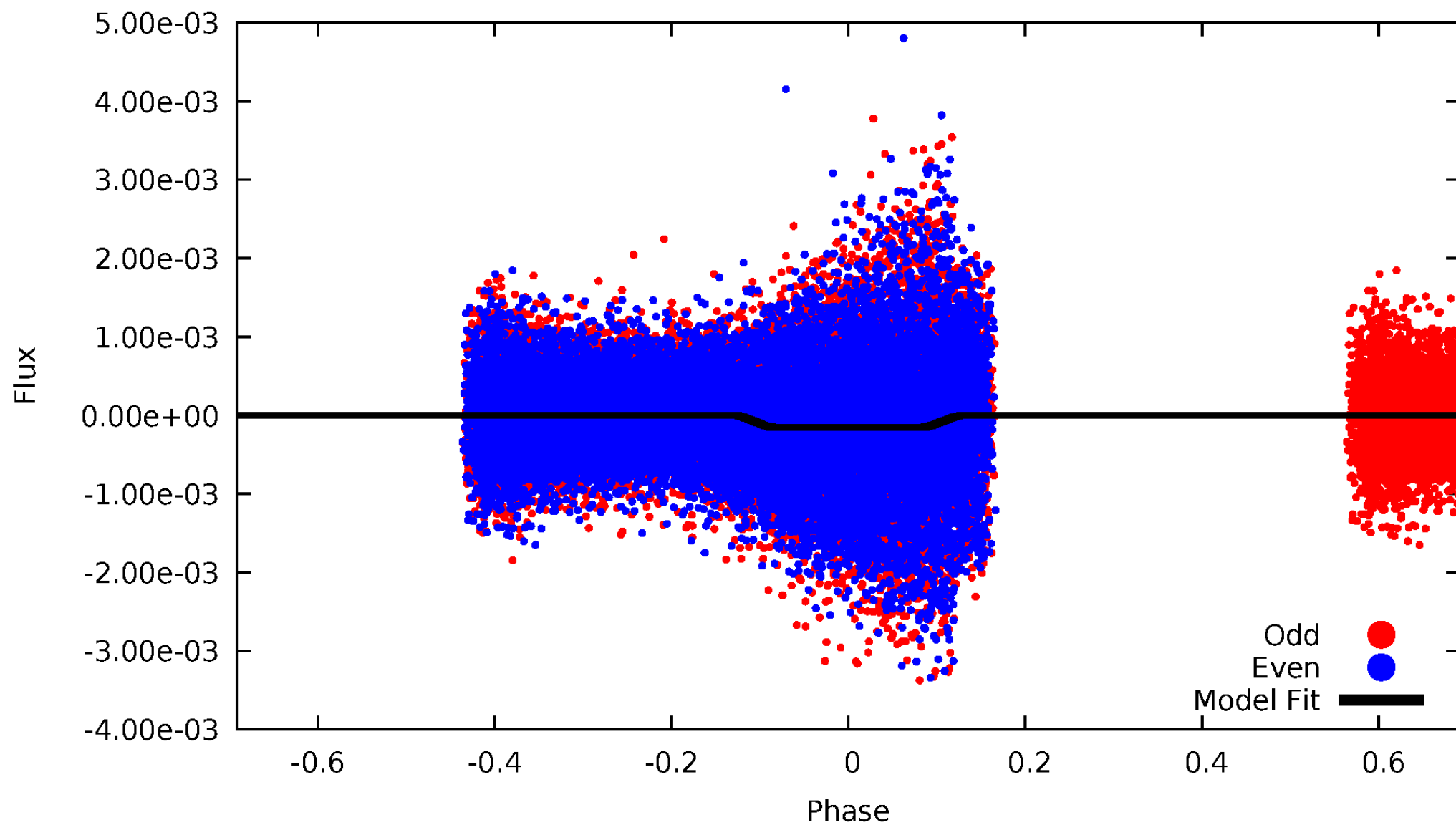
DV Odd/Even

TCE 005894549-02



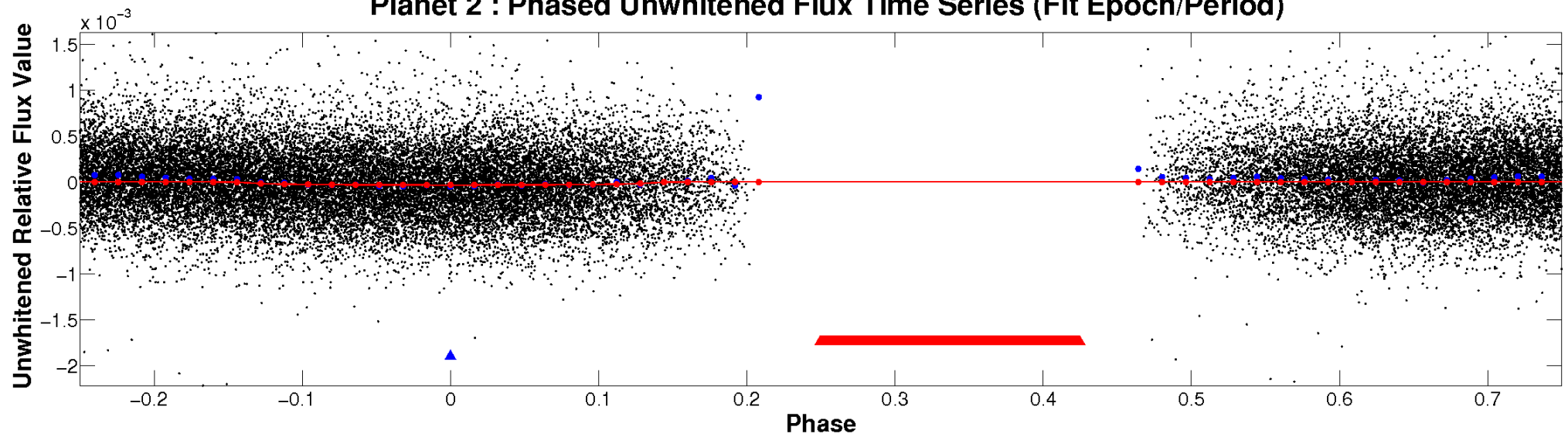
ALT Odd/Even

TCE 005894549-02

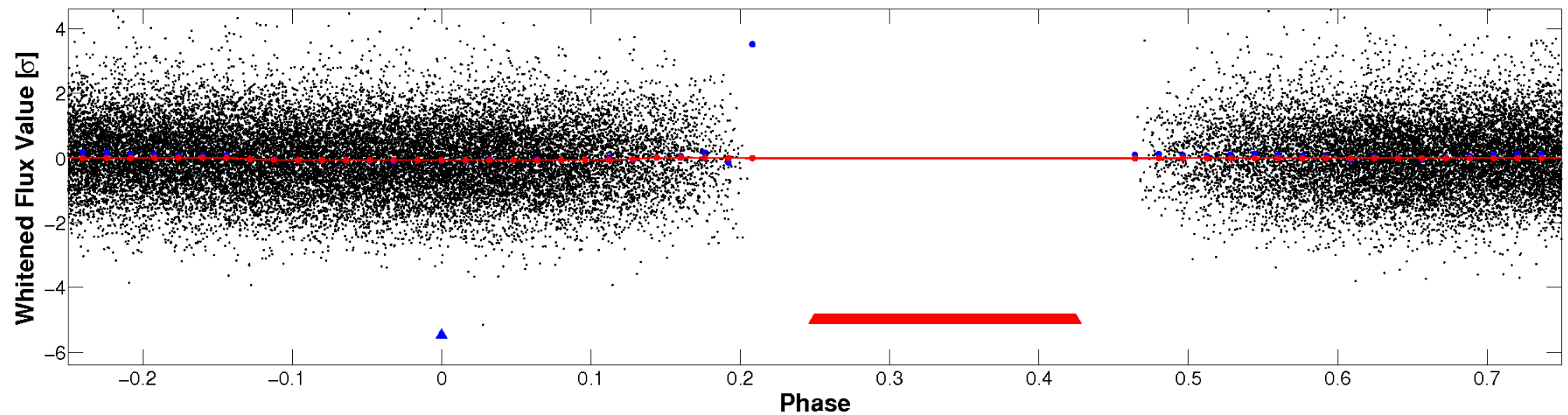


Non-Whitened Vs. Whitened Light Curve

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

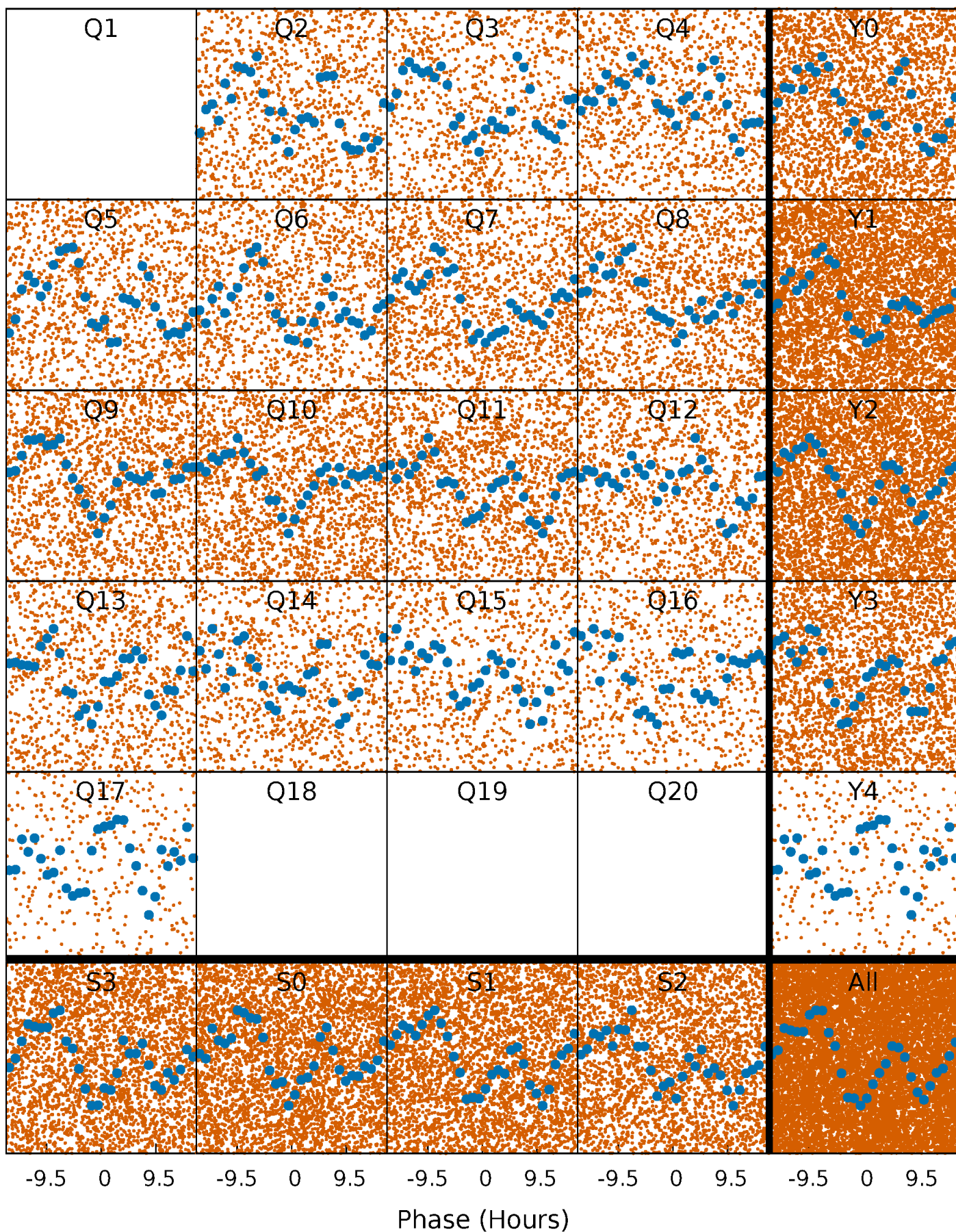


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



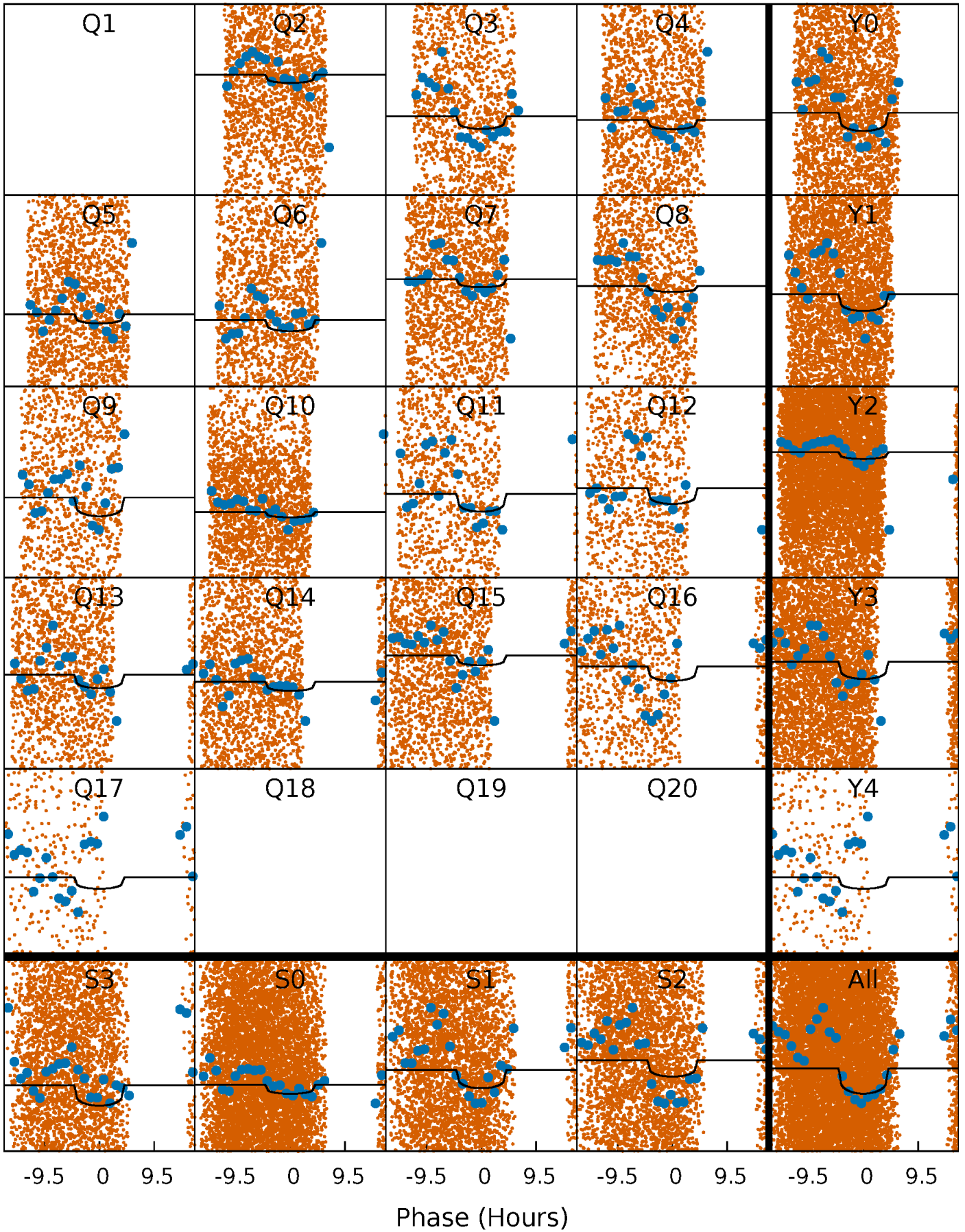
PDC Quarter-Phased Transit Curves

TCE 005894549-02 P= 1.276249 Days $T_0=132.401776$ (BKJD)



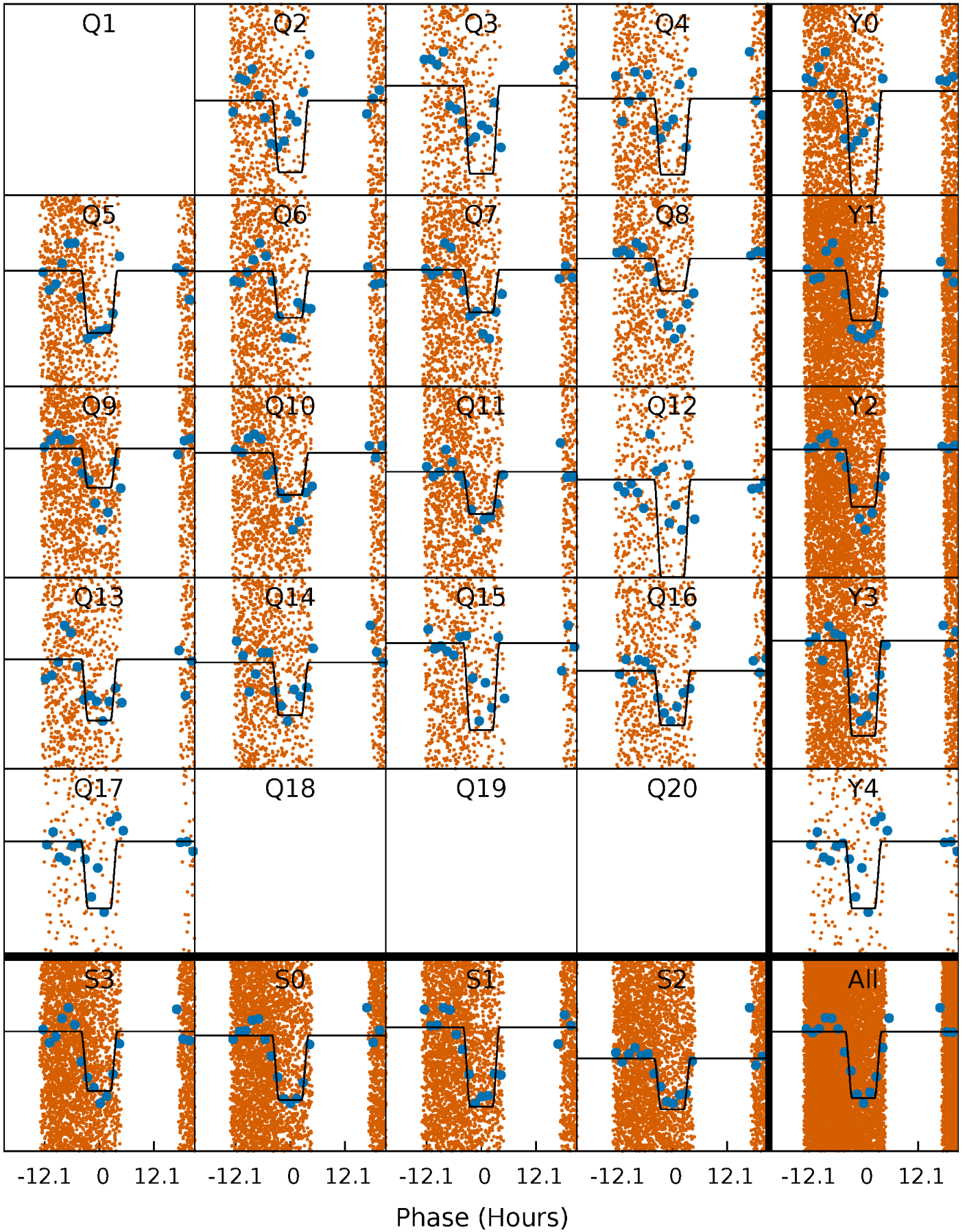
DV Quarter-Phased Transit Curves

TCE 005894549-02 P= 1.276249 Days $T_0=132.401776$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

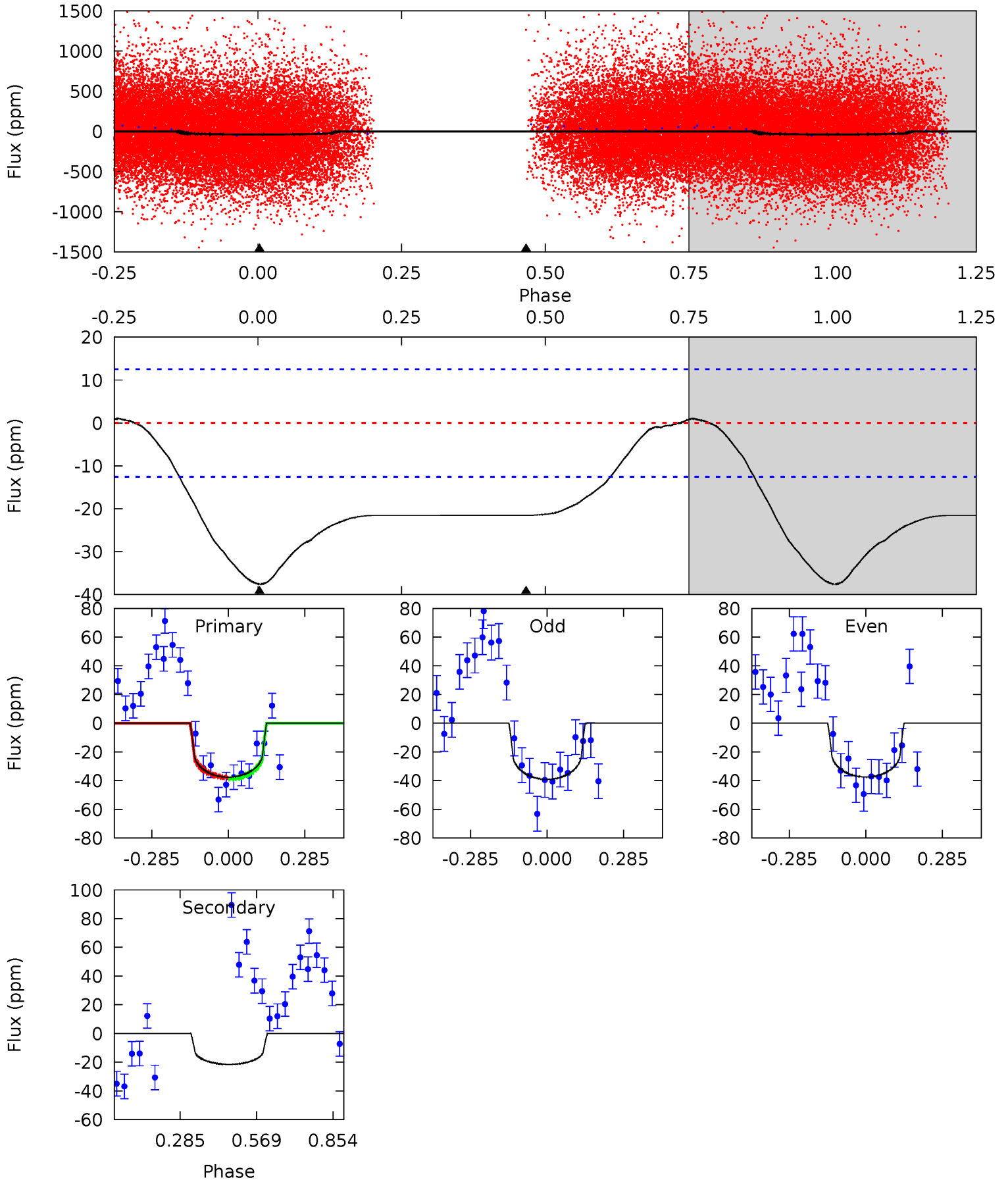
TCE 005894549-02 P= 1.276016 Days $T_0=132.500128$ (BKJD)



DV Model-Shift Uniqueness Test

005894549-02, P = 1.276249 Days, E = 132.401776 Days

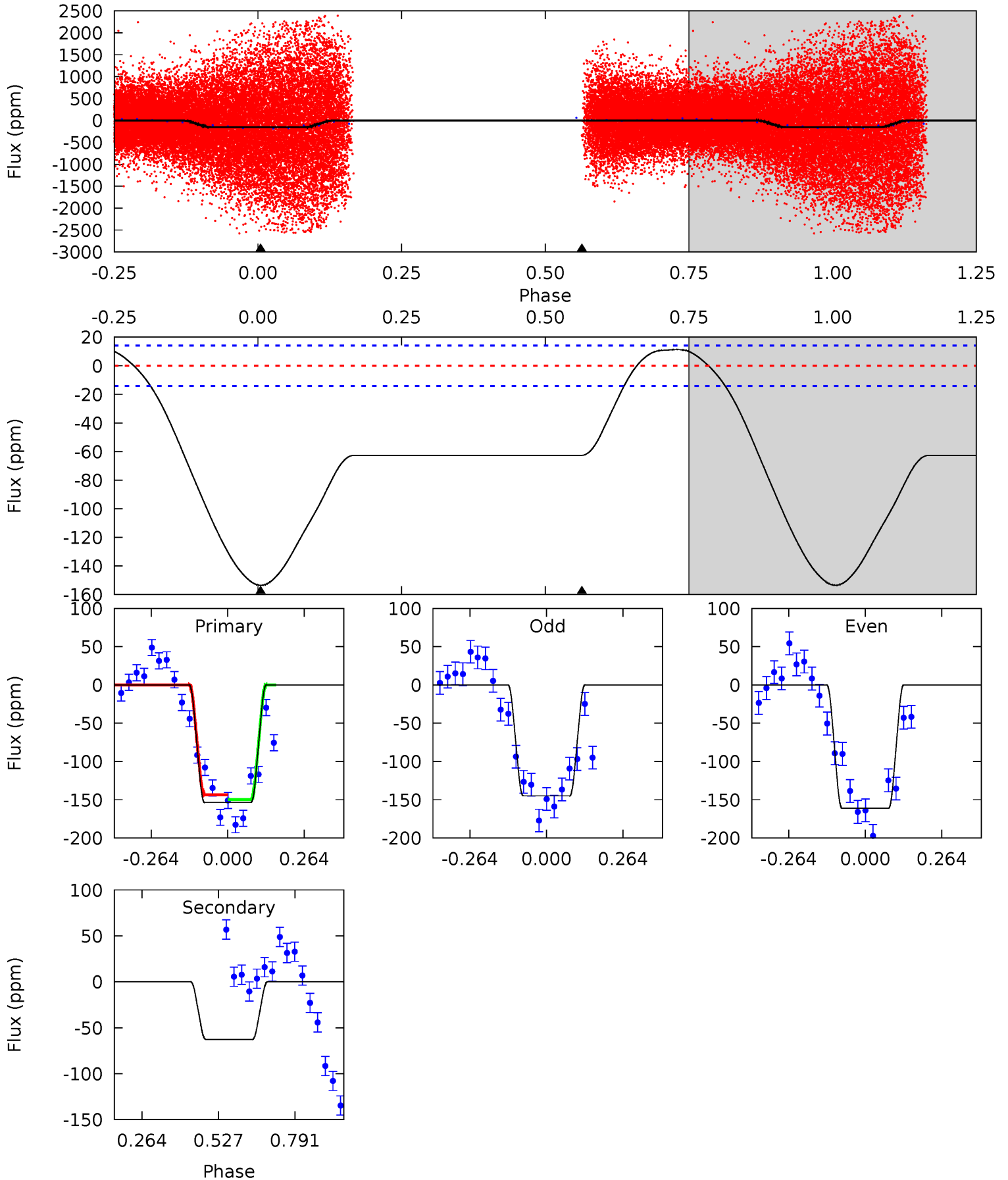
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	7.46	0	0	4.34	1.07	0.21	13.0	13.0	7.46	7.46	0.29	0.81	0.03	0.16



Alt Model-Shift Uniqueness Test

005894549-02, P = 1.276016 Days, E = 132.500128 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.3	19.3	0	0	4.36	1.12	2.08	47.3	47.3	19.3	19.3	2.51	0.88	0.07	0.56



Stellar Parameters For KIC 005894549

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6415^{+177}_{-243}	$4.234^{+0.132}_{-0.198}$	$0.140^{+0.200}_{-0.350}$	$1.437^{+0.489}_{-0.301}$	$1.293^{+0.196}_{-0.196}$	$0.613^{+0.417}_{-0.336}$
	+3%/-4%	+3%/-5%	+143%/-250%	+34%/-21%	+15%/-15%	+68%/-55%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 005894549-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-22 ± 3	$1.38^{+1.32}_{-0.94}$	3005^{+251}_{-191}	4709^{+3920}_{-1154}	$3.978^{+33.294}_{-2.969}$
Alt.	-63 ± 3	$2.18^{+1.53}_{-1.32}$	3017^{+225}_{-193}	4925^{+3012}_{-1031}	$4.557^{+25.857}_{-2.943}$

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

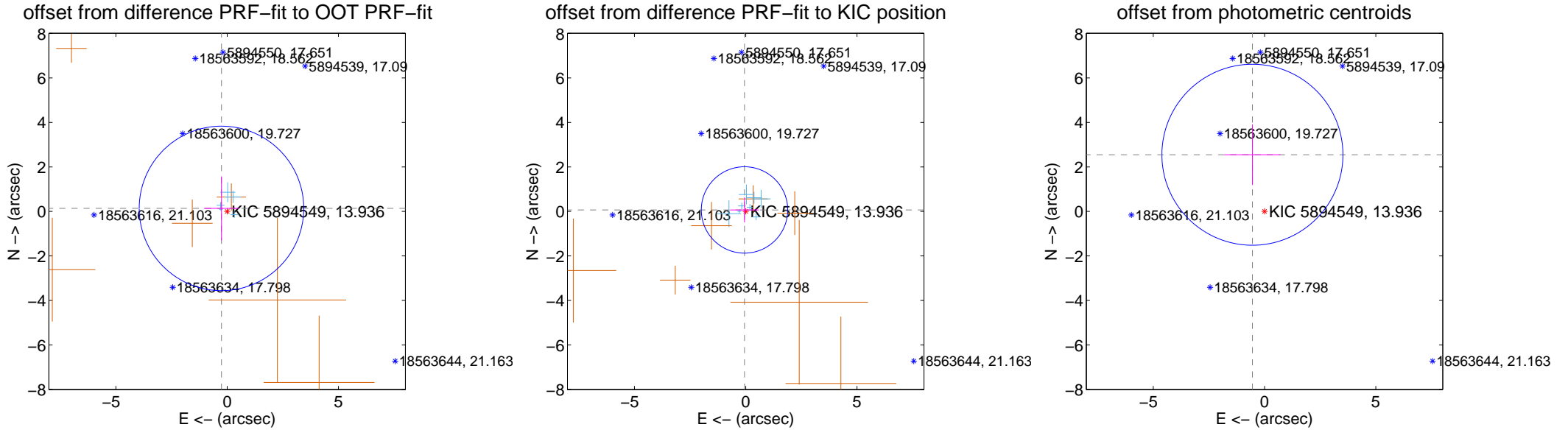
DV Centroid Data

Supplemental centroid analysis for 005894549-02. Kepler magnitude: 13.94. Transit SNR 7.24

There are 8 quarters with good PRF difference image offsets

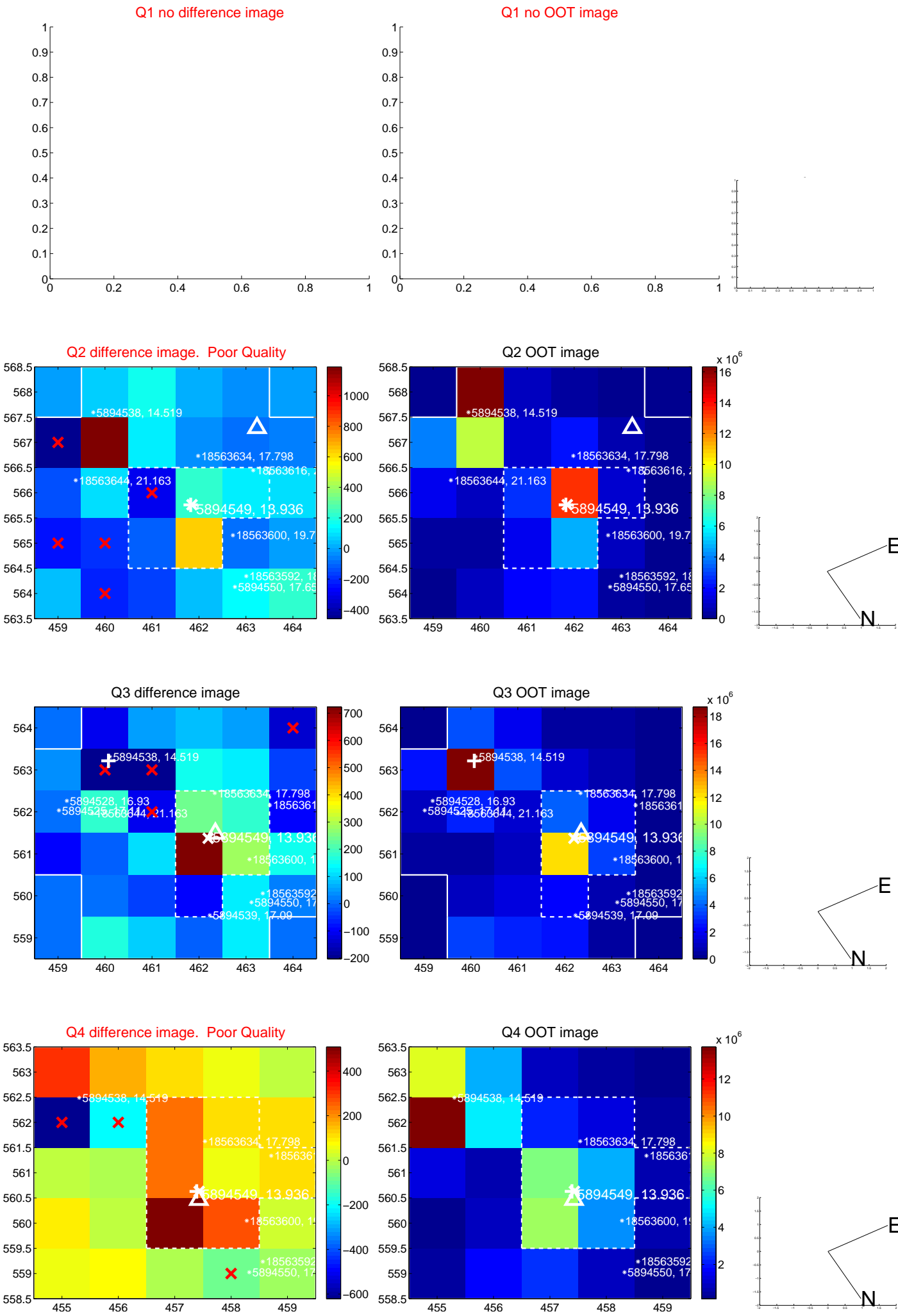
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.290 ± 1.232	0.24	0.256 ± 0.788	0.137 ± 1.439
PRF-fit source offset from KIC position	0.086 ± 0.647	0.13	0.054 ± 0.648	0.067 ± 0.562
photometric centroid source offset	2.61 ± 1.36	1.92	0.54 ± 1.26	2.55 ± 1.36

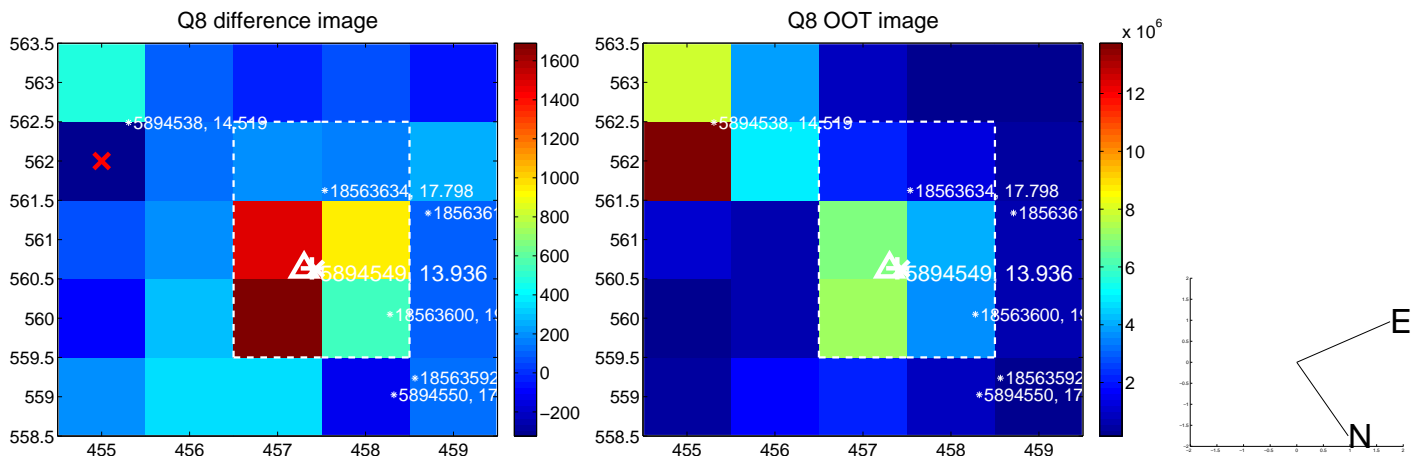
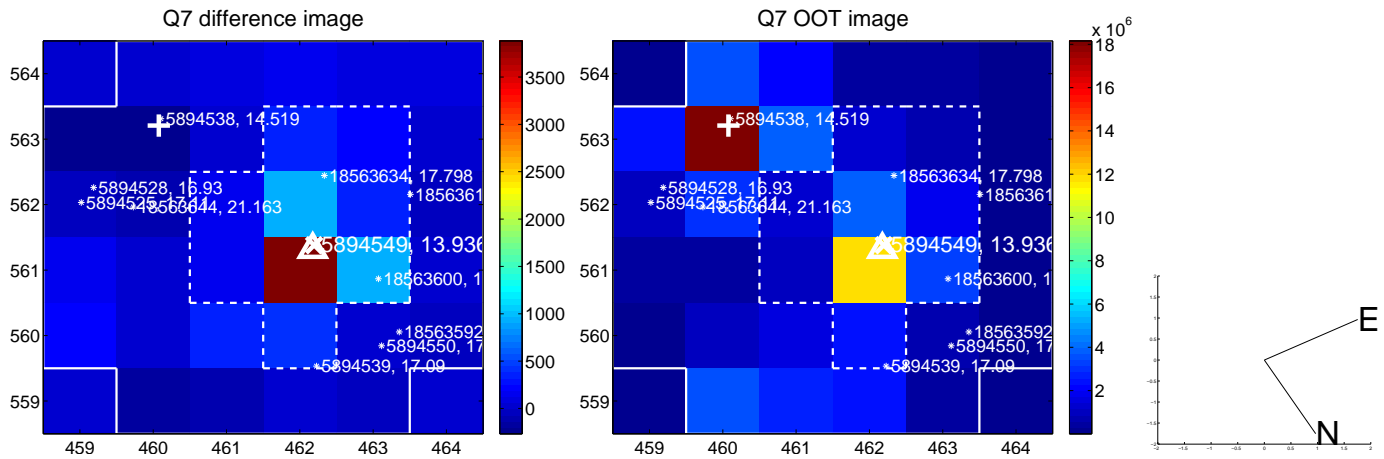
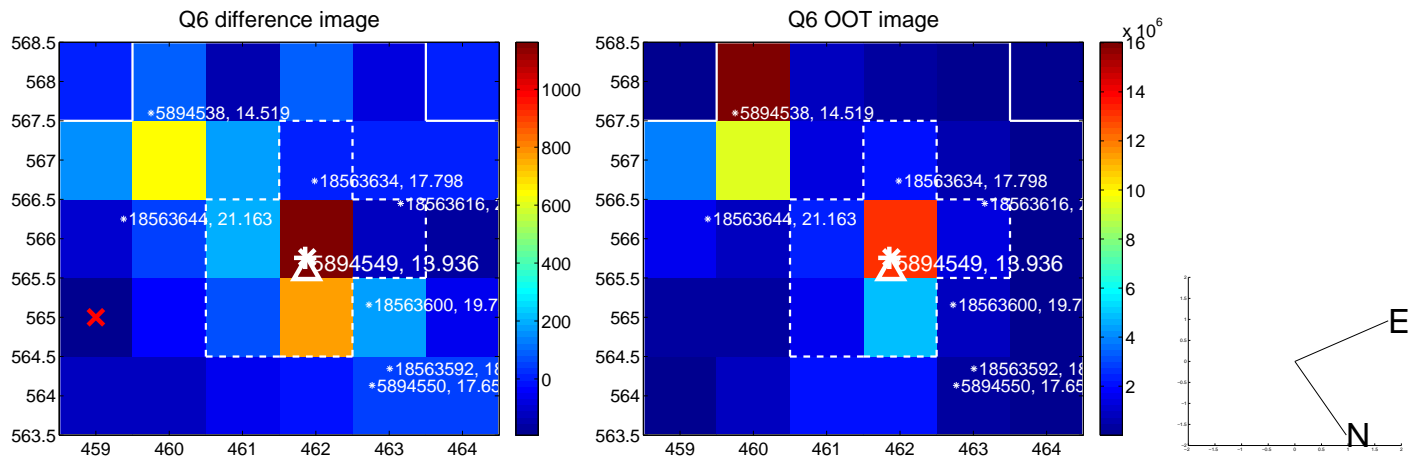
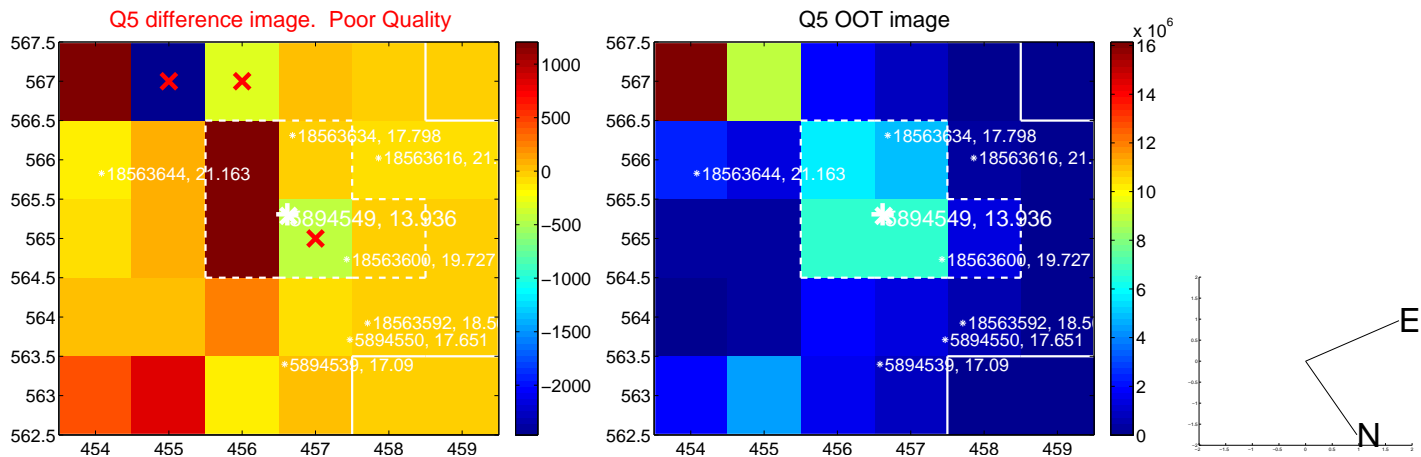


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

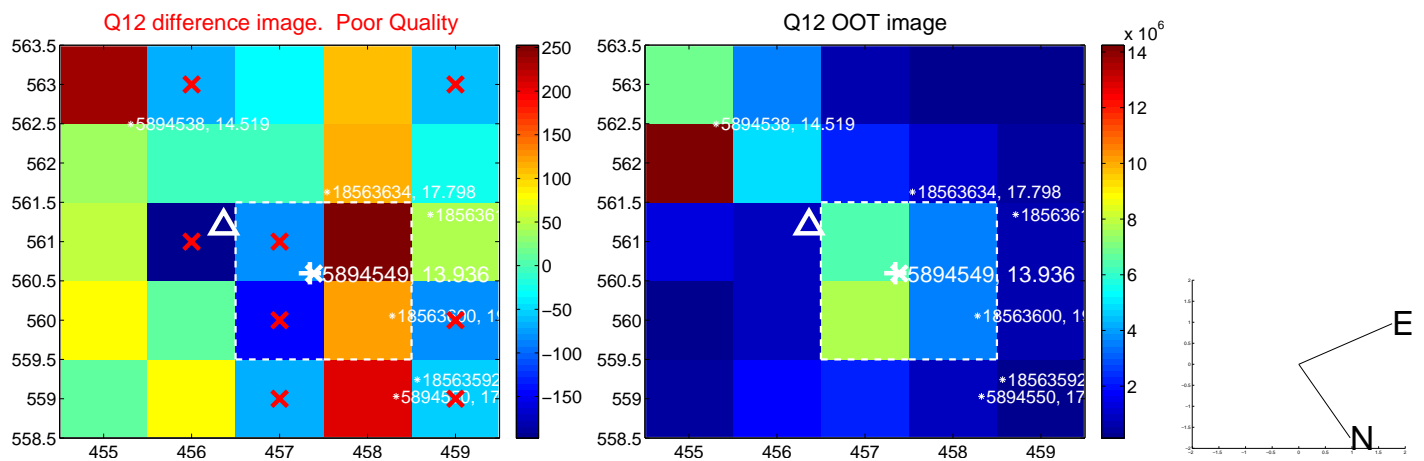
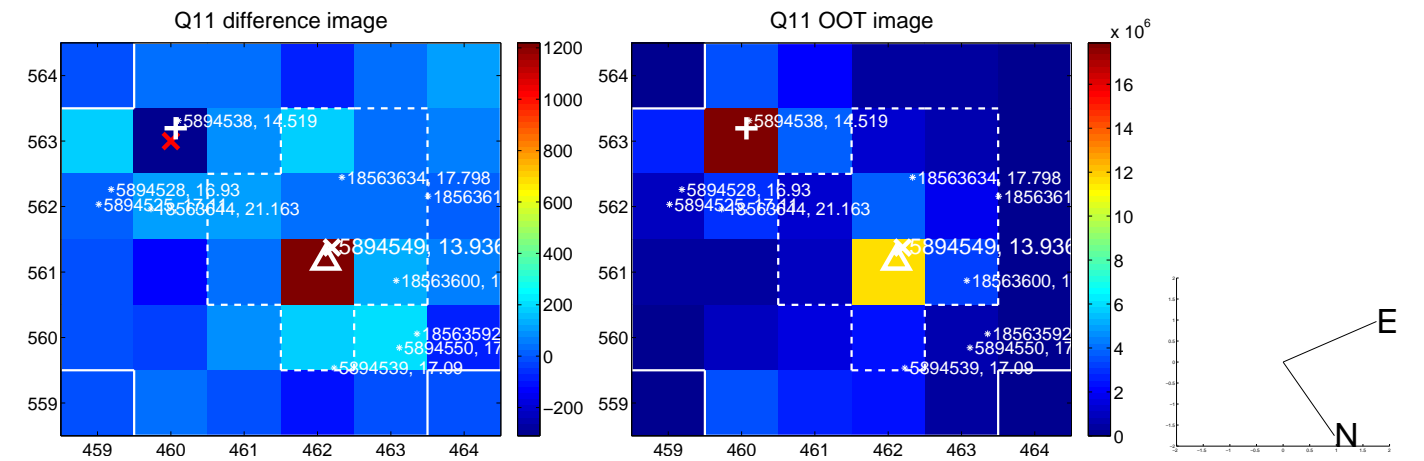
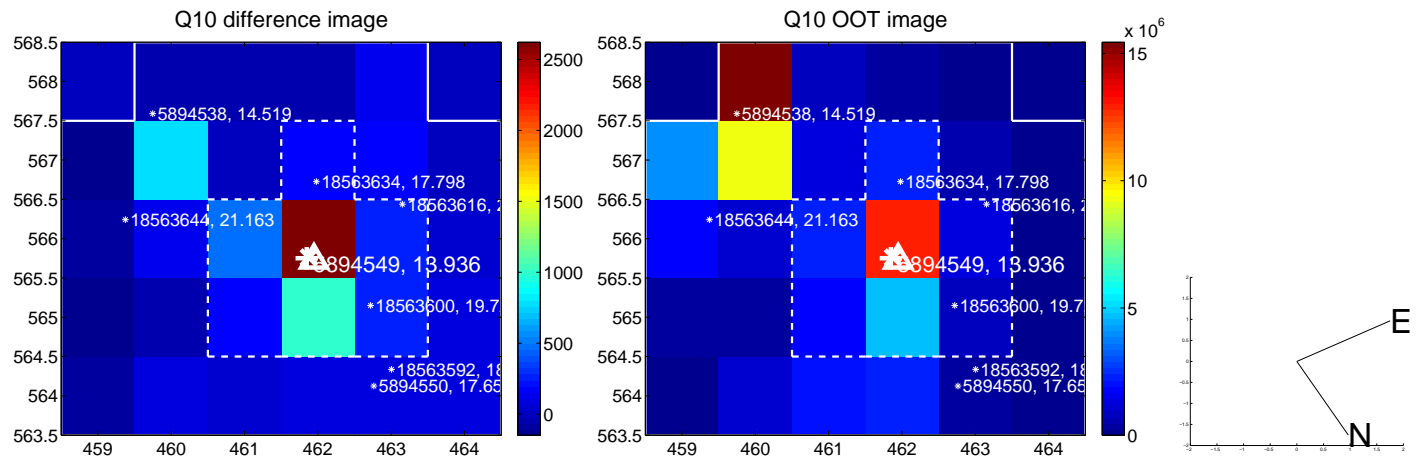
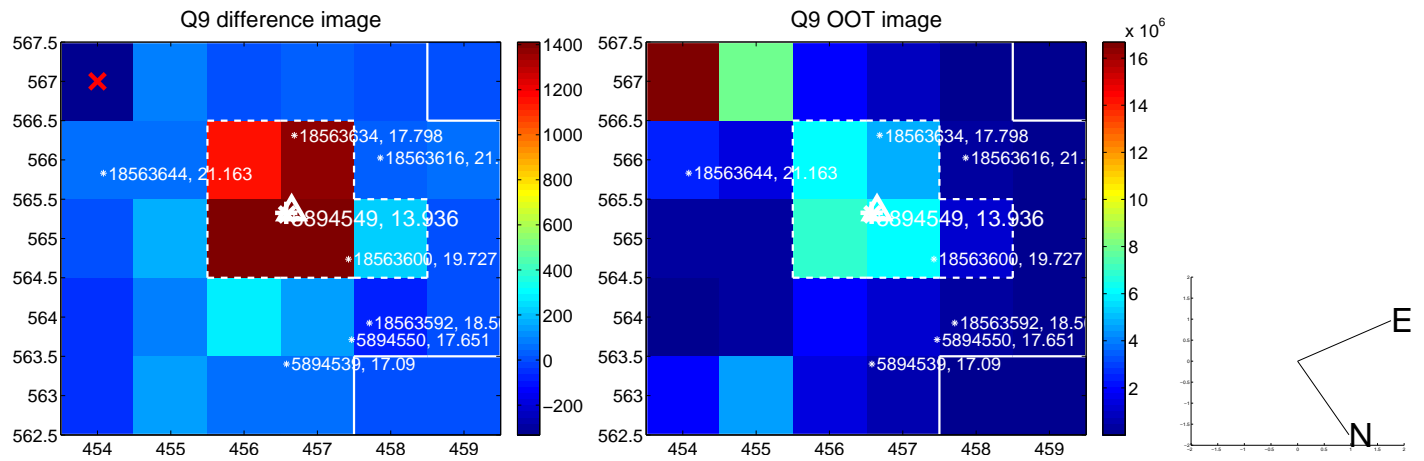
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



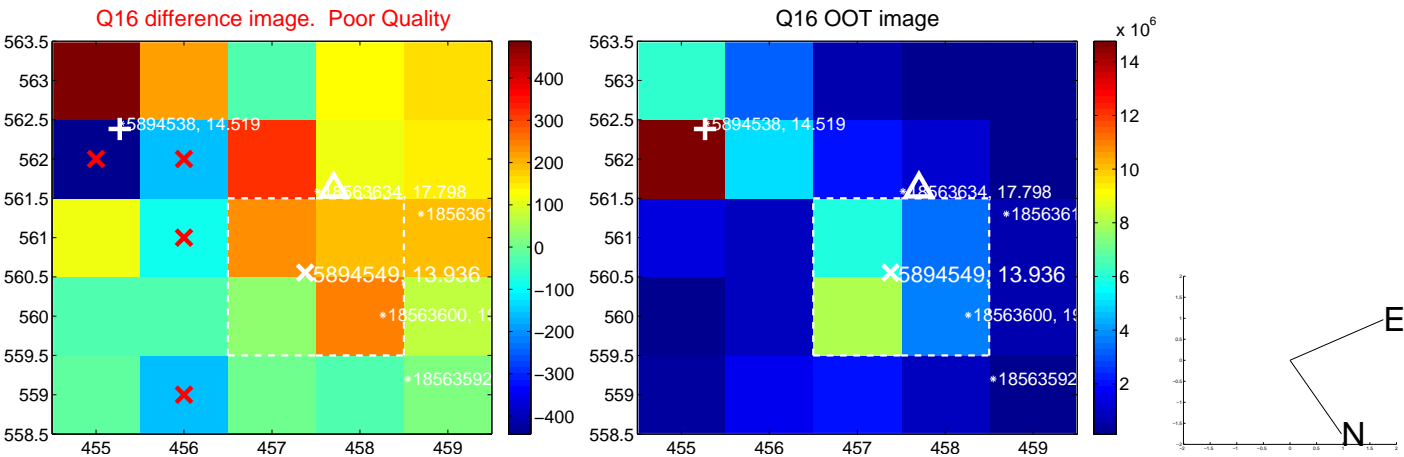
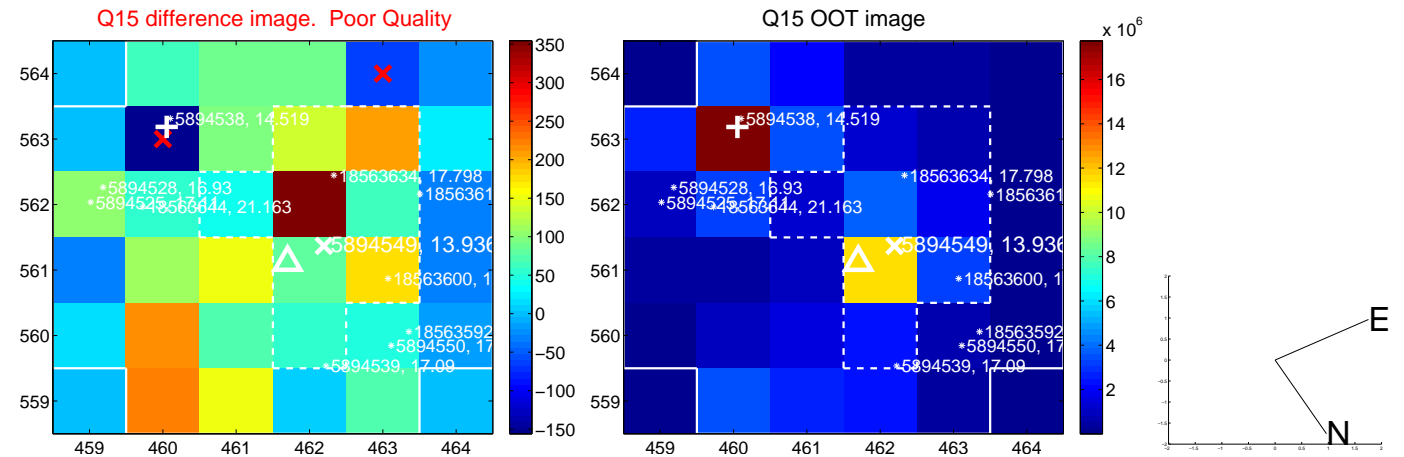
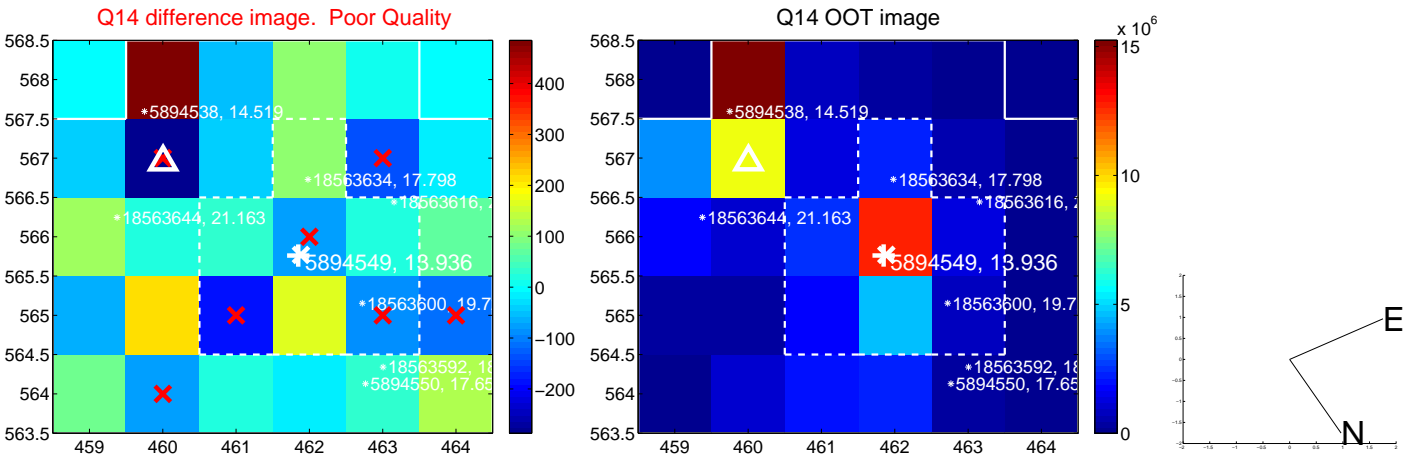
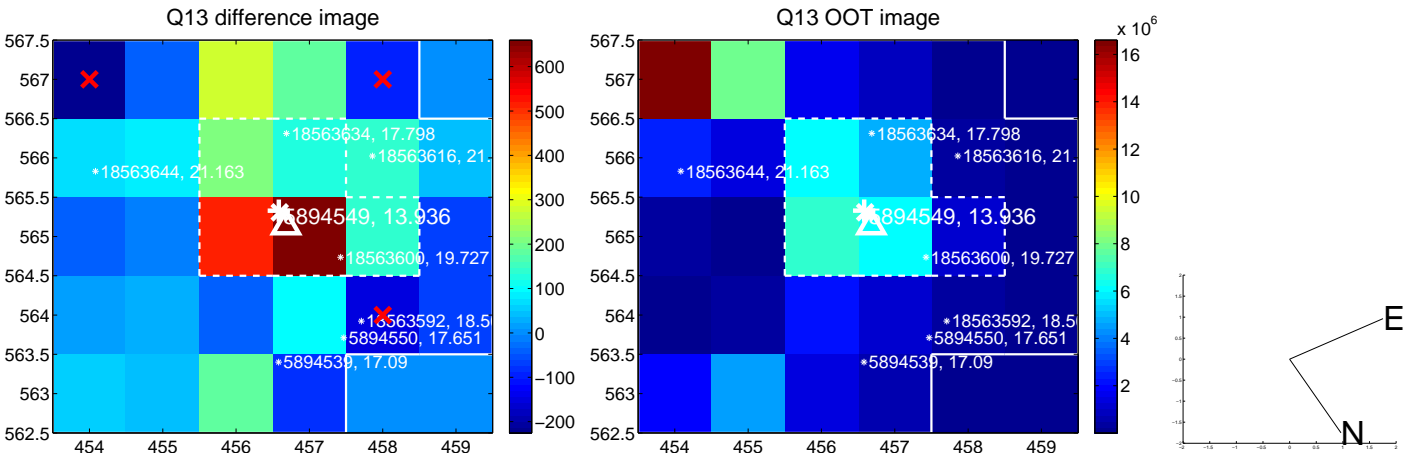
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



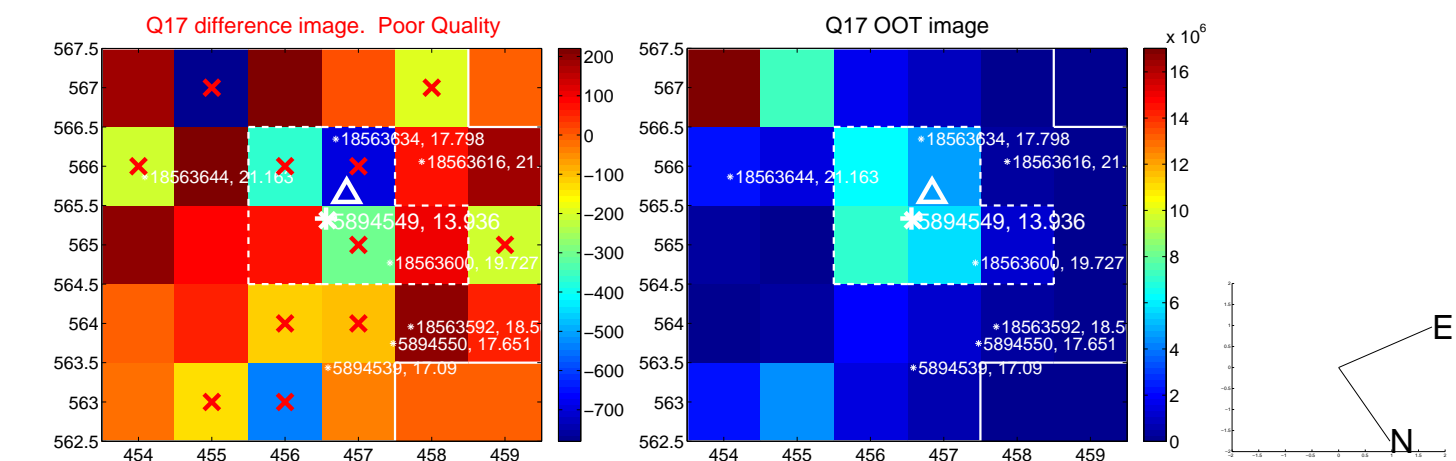
white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



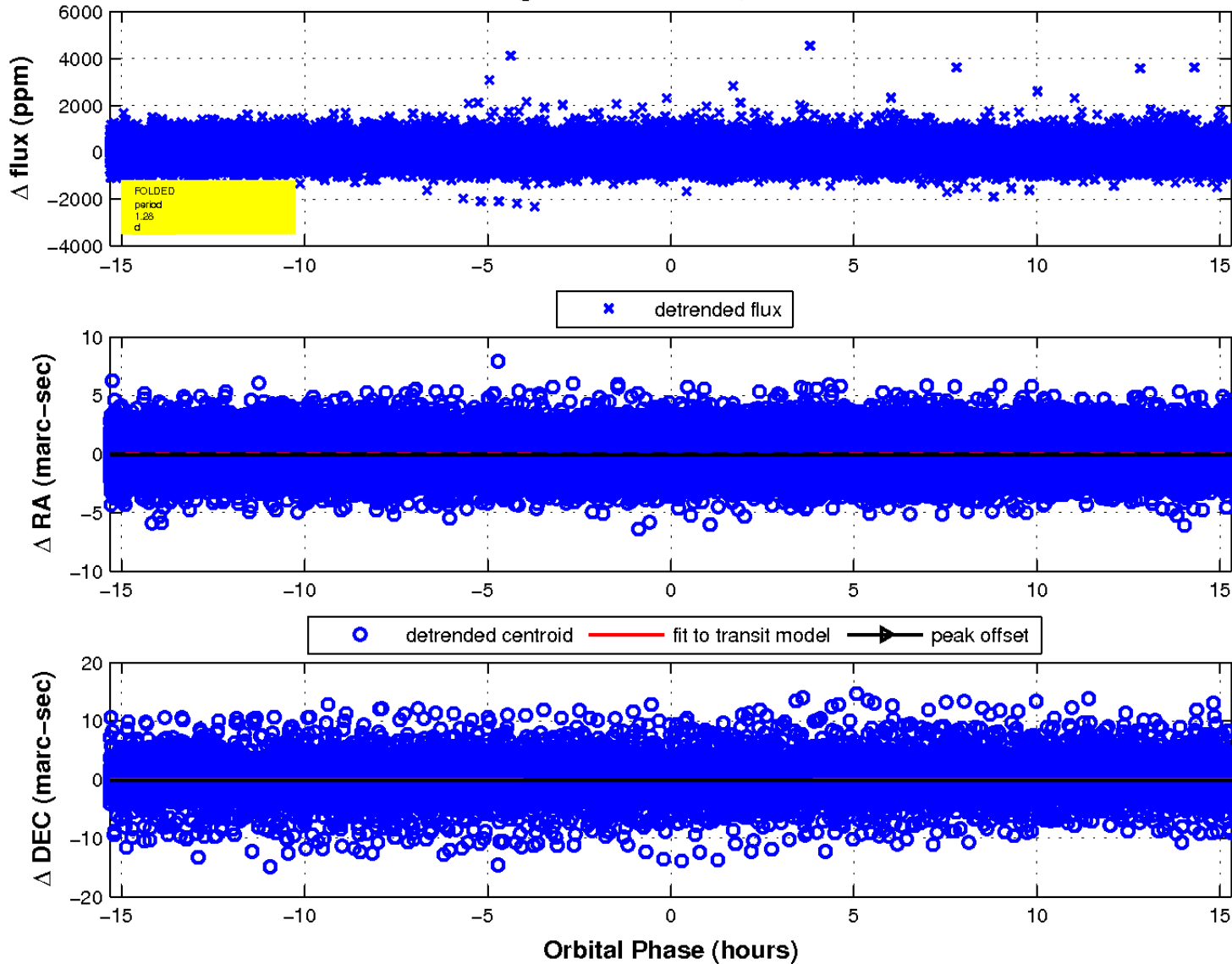
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

