

KIC 004679369

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})
004679369-01	OBS	No	1.955392	133.118736	99.3	6.489	14.1	14.7	1.01	6141	1.04	1438.30
004679369-02	OBS	No	1.954798	132.844205	43.7	18.639	8.8	9.2	1.01	6141	0.67	1438.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004679369-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
004679369-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—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.

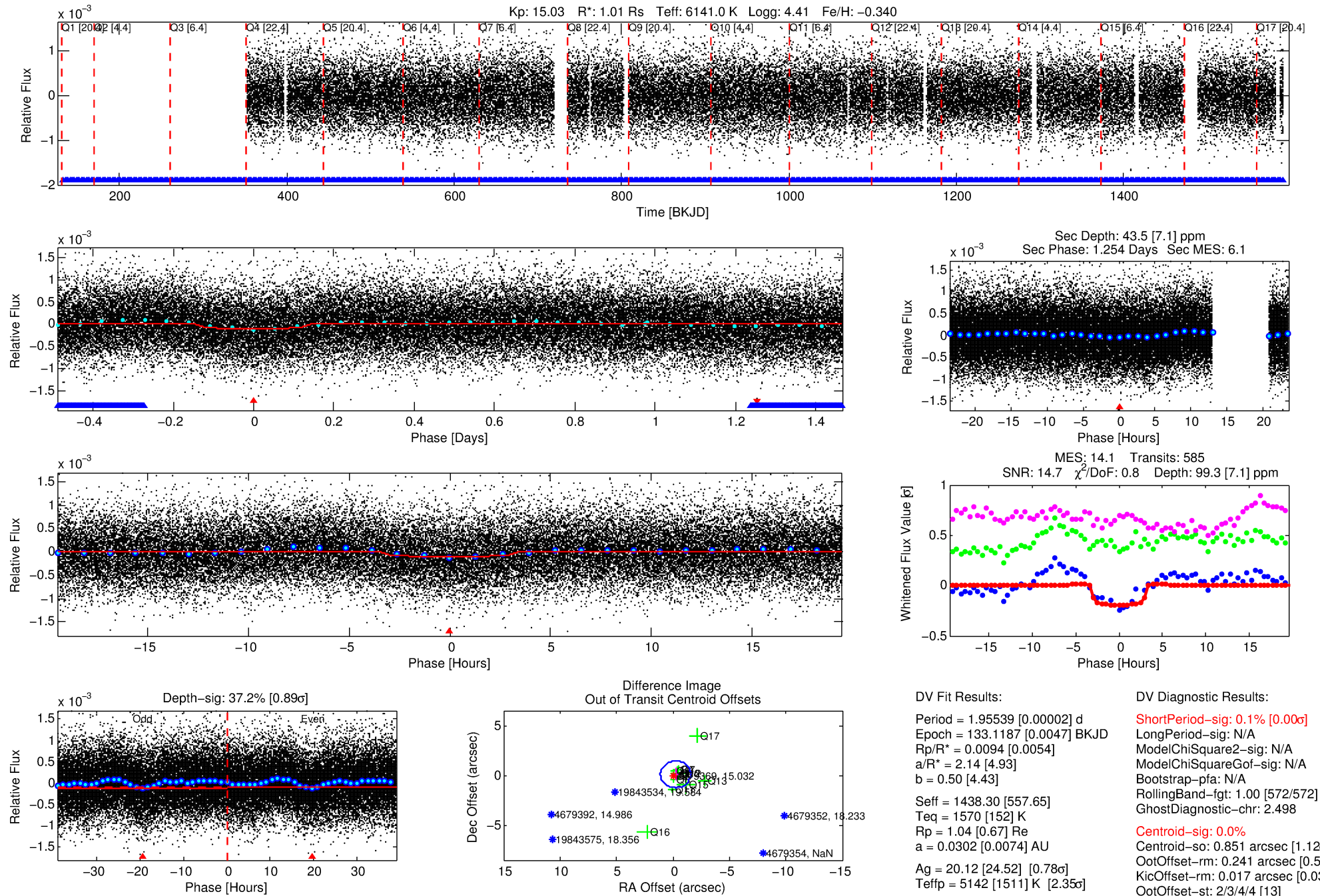
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004679369-01

No Significant Match Found

DV One-Page Summary

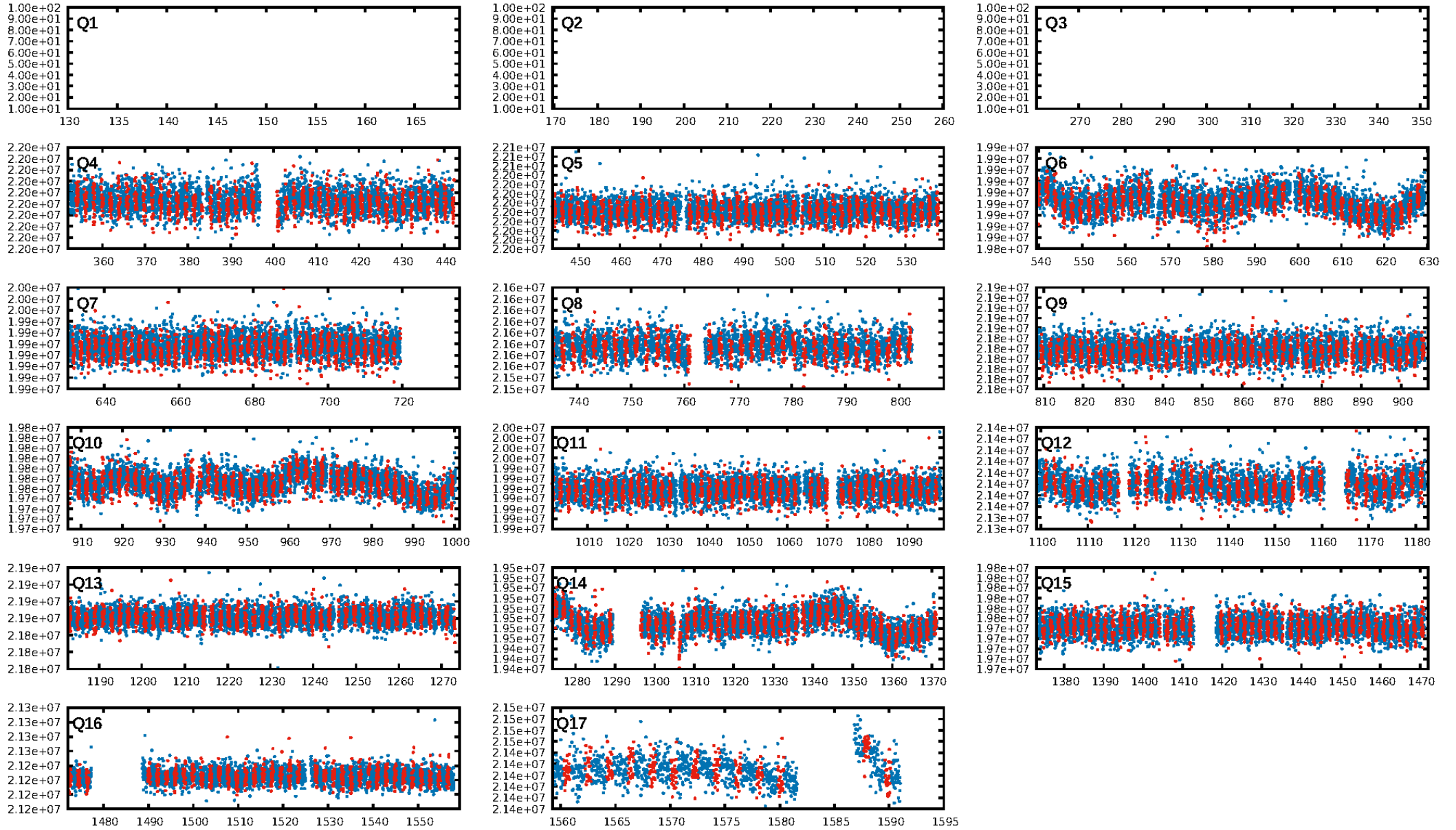
KIC: 4679369 Candidate: 1 of 2 Period: 1.955 d



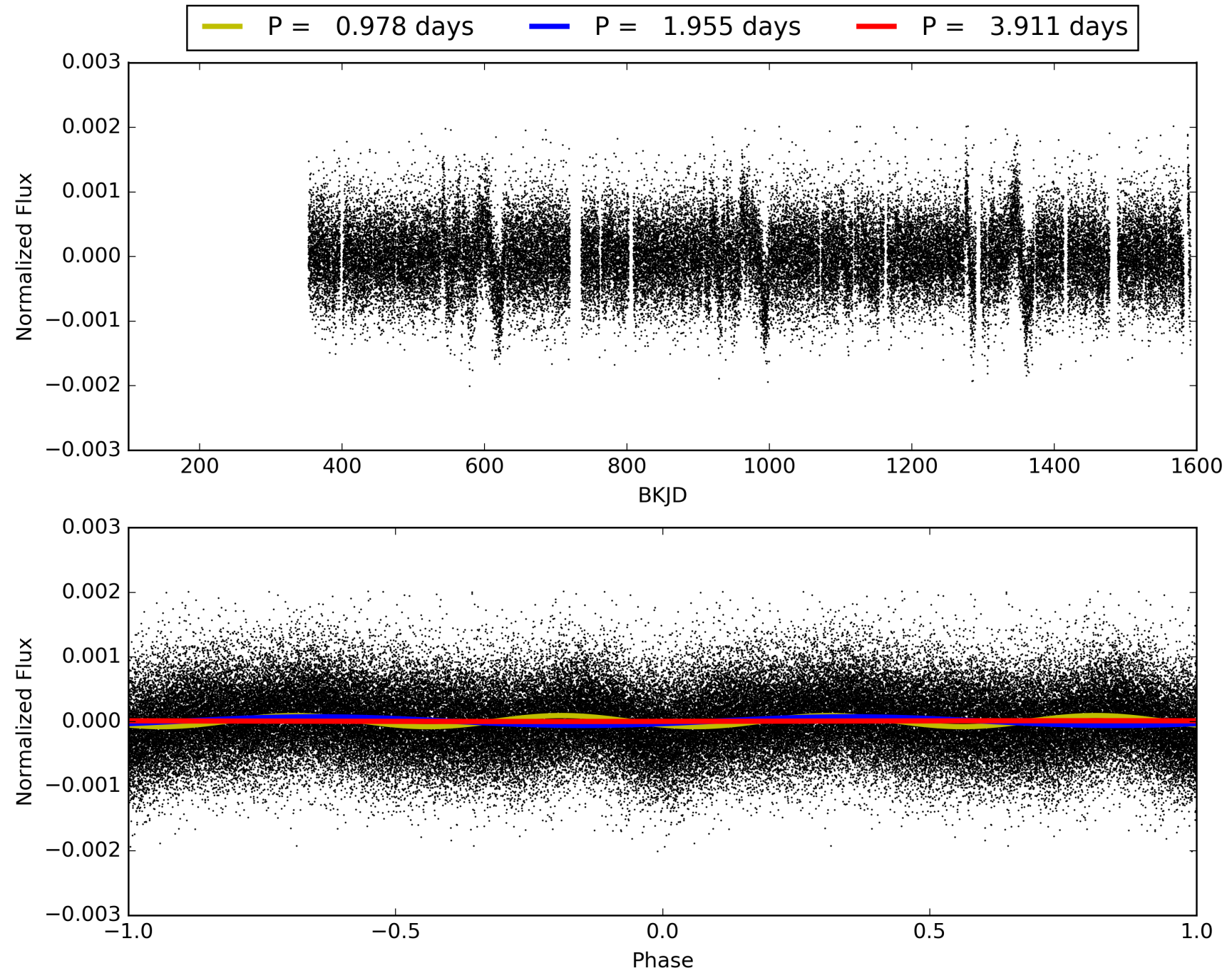
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:57:26 Z

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

TCE 004679369-01, PDC Light Curves

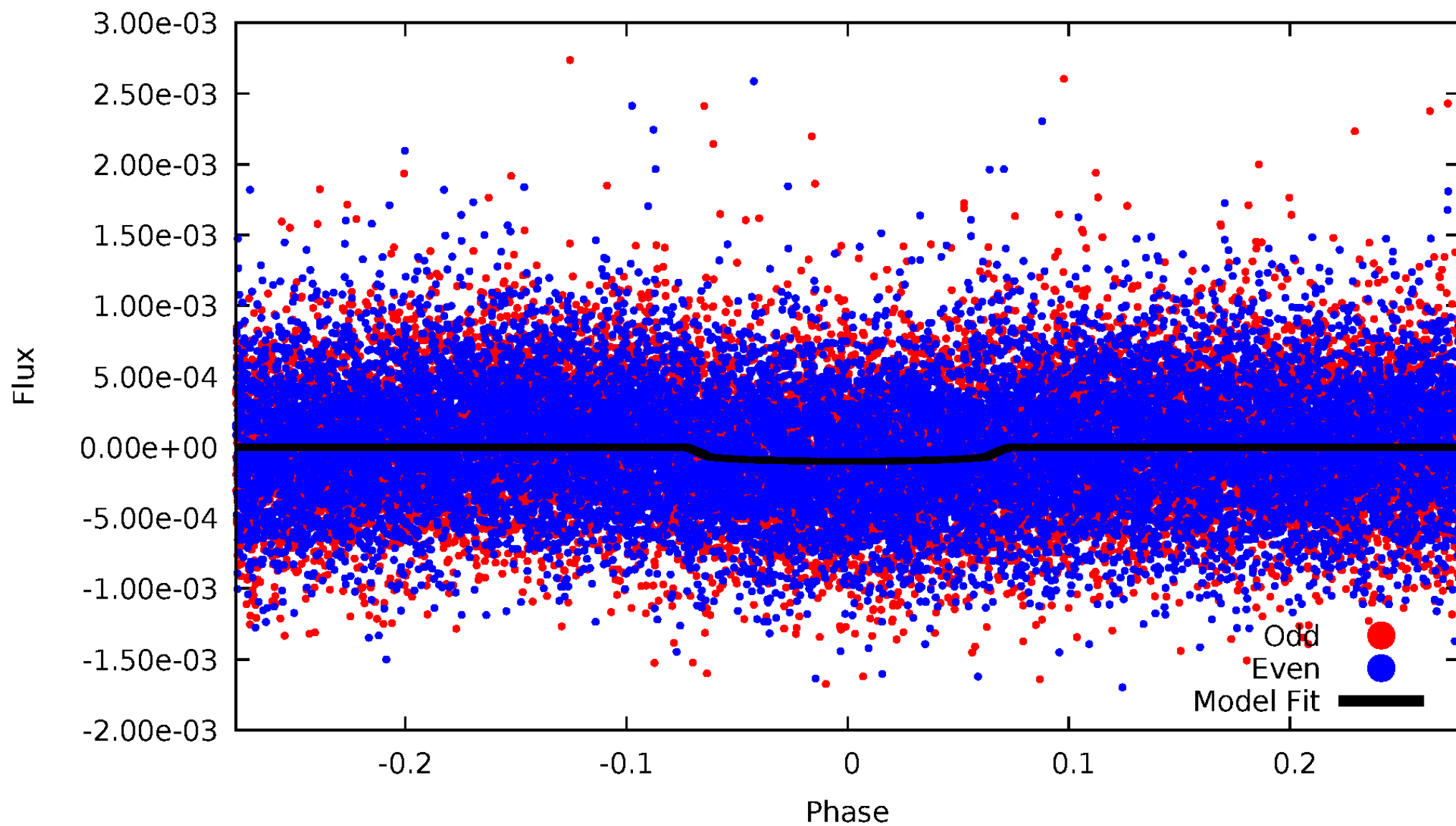


TCE 004679369-01



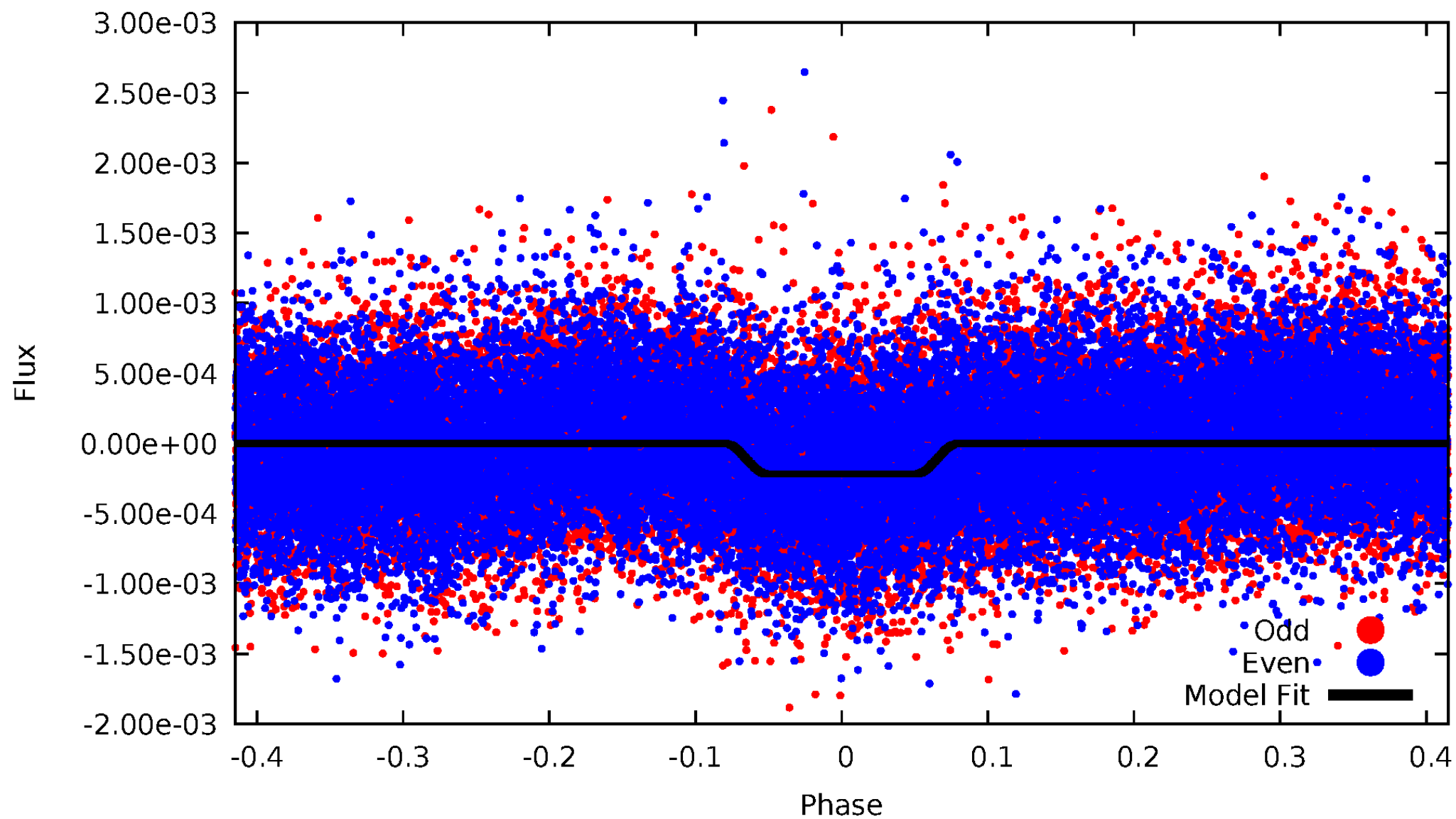
DV Odd/Even

TCE 004679369-01



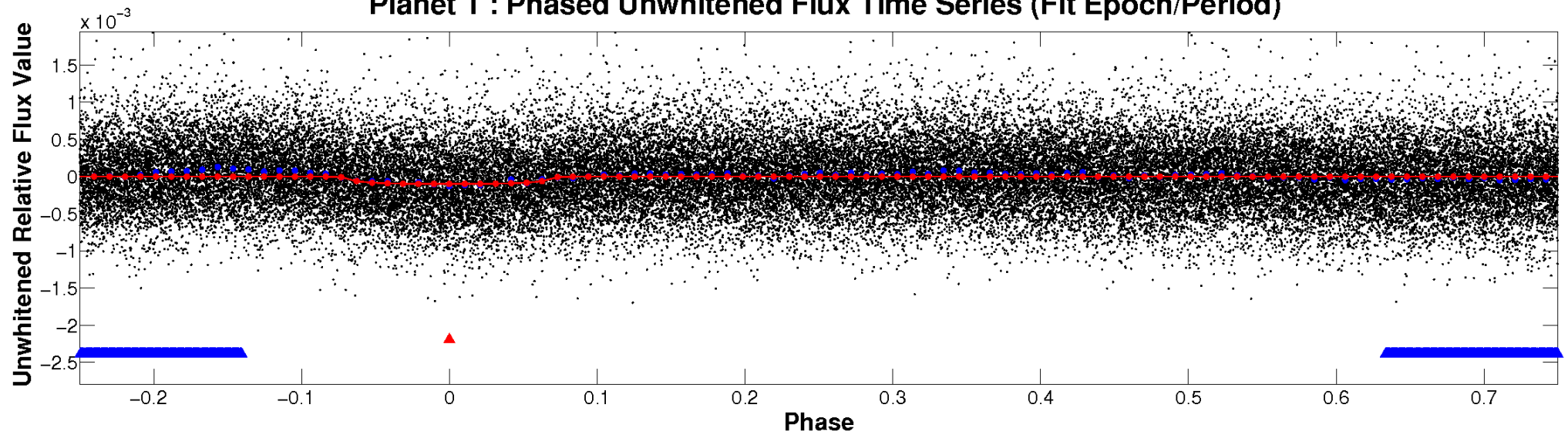
ALT Odd/Even

TCE 004679369-01

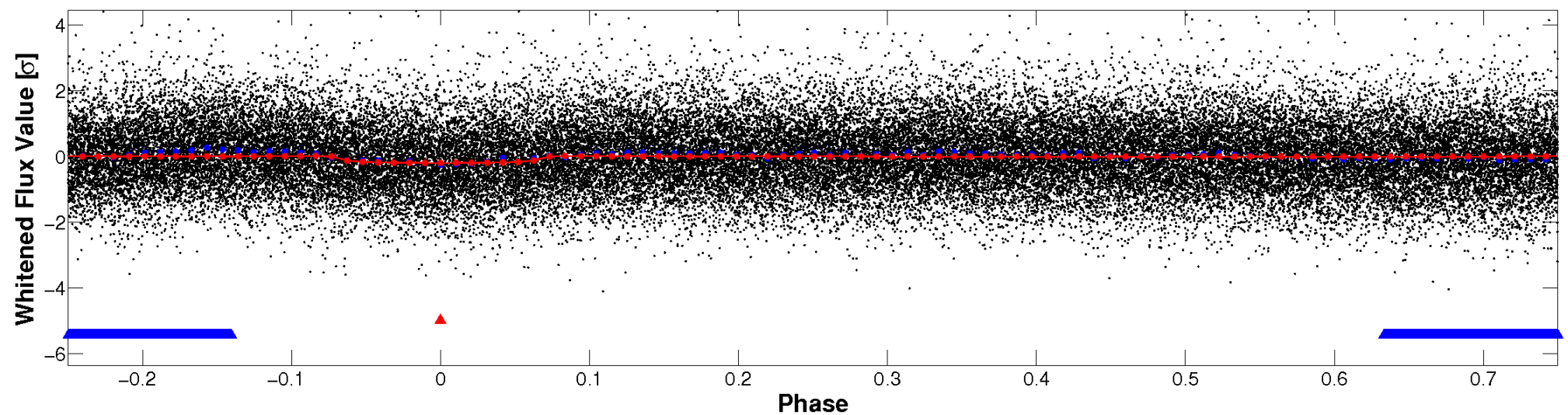


Non-Whitened Vs. Whitened Light Curve

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

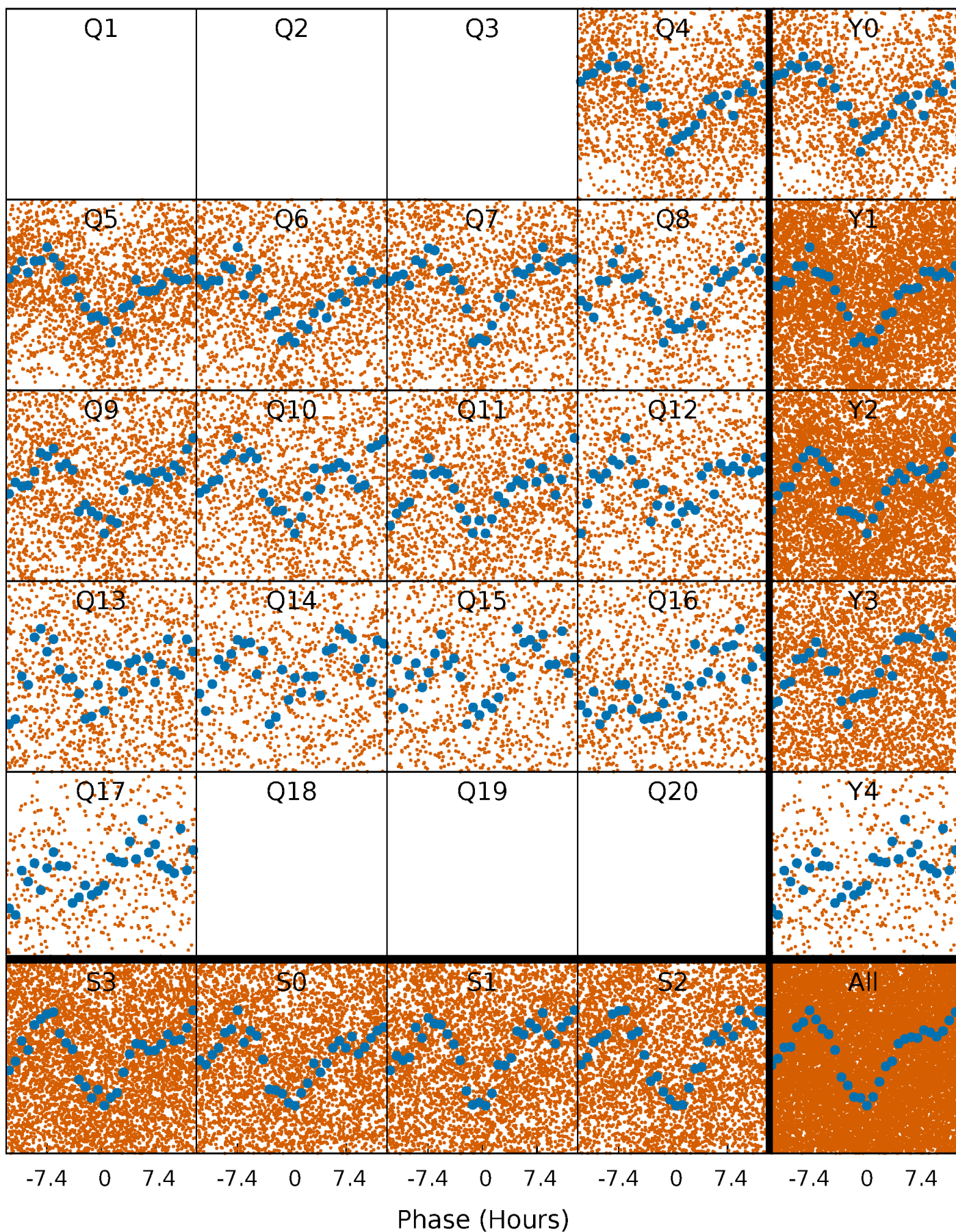


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



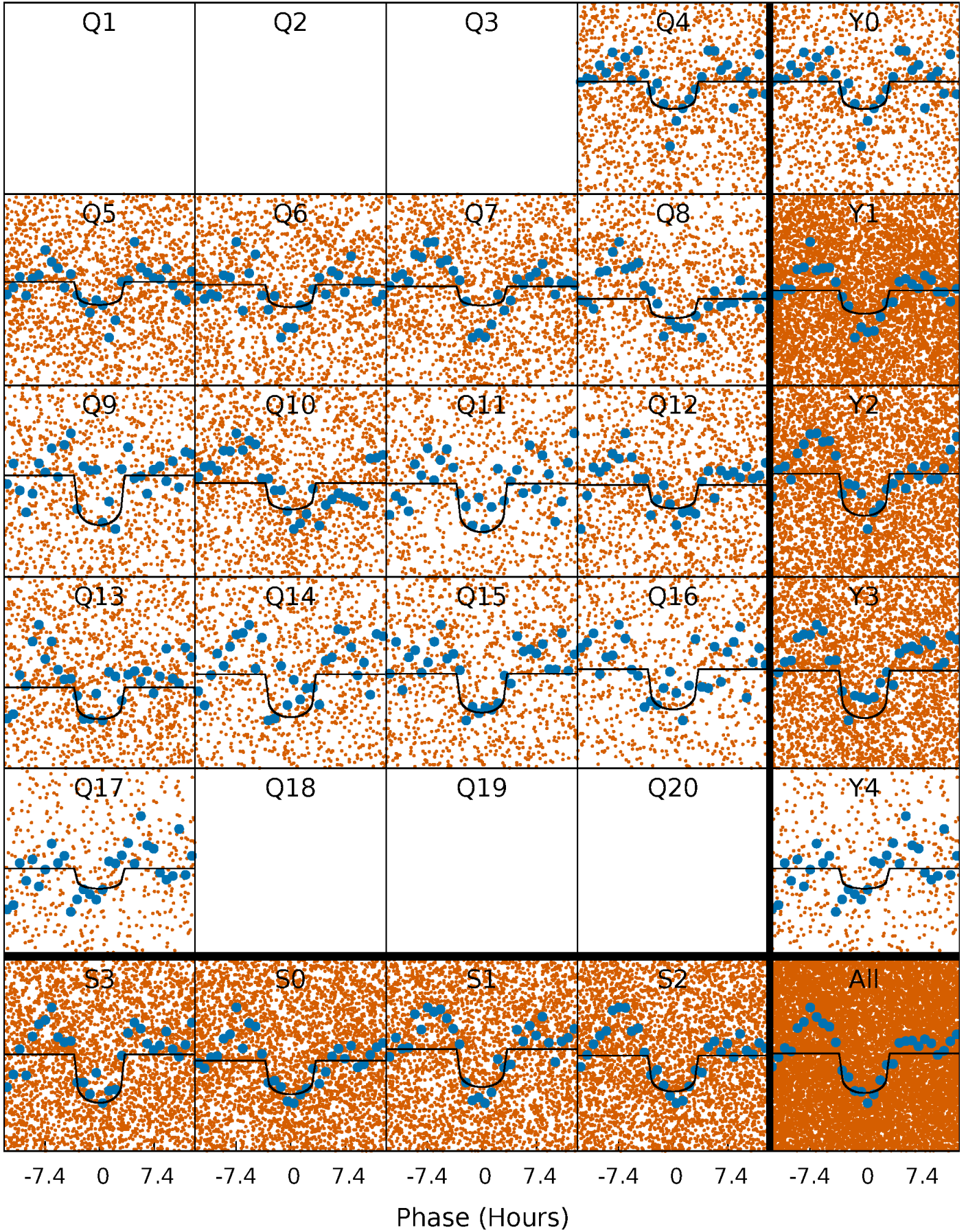
PDC Quarter-Phased Transit Curves

TCE 004679369-01 P= 1.955392 Days $T_0=133.118736$ (BKJD)



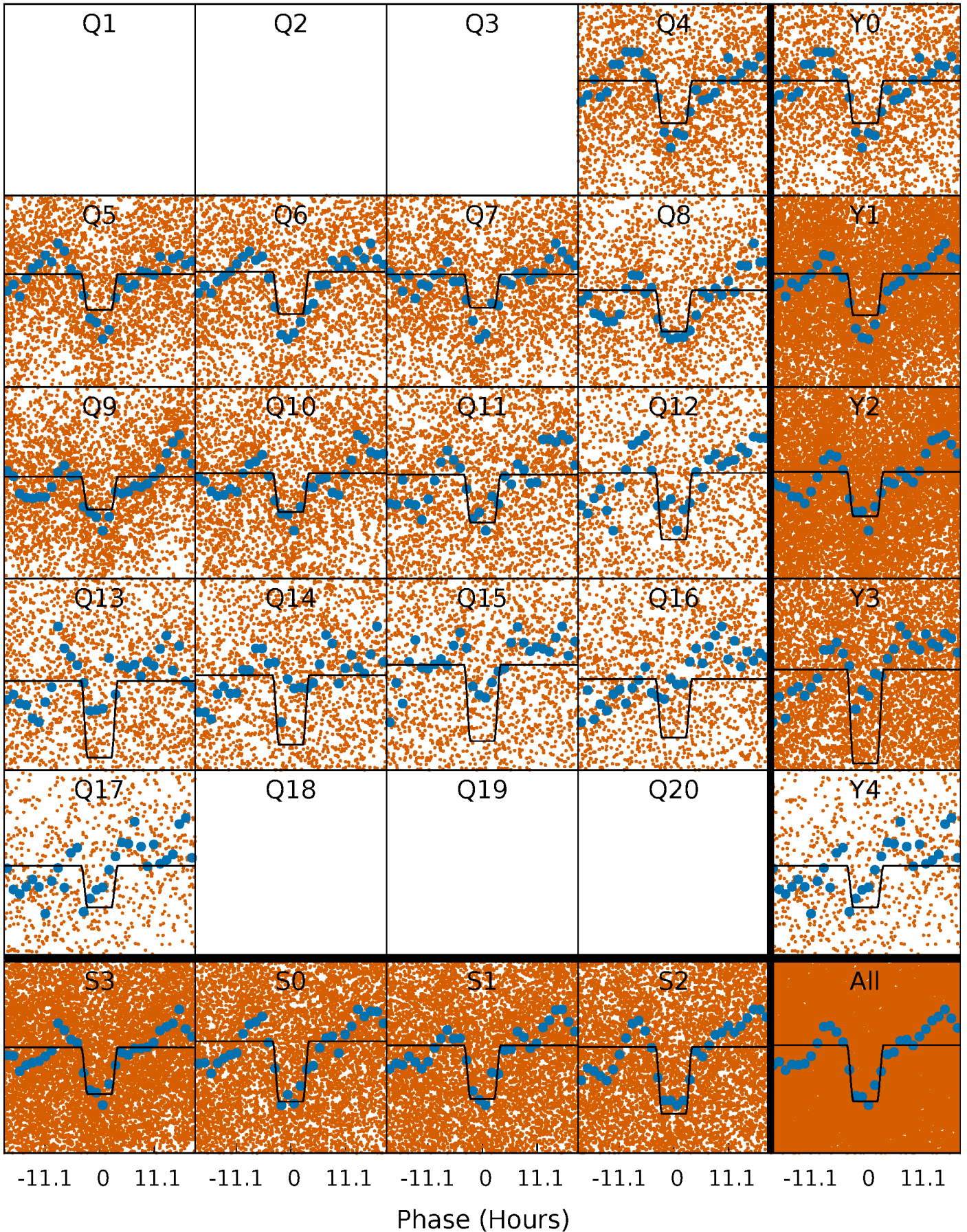
DV Quarter-Phased Transit Curves

TCE 004679369-01 P= 1.955392 Days $T_0=133.118736$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

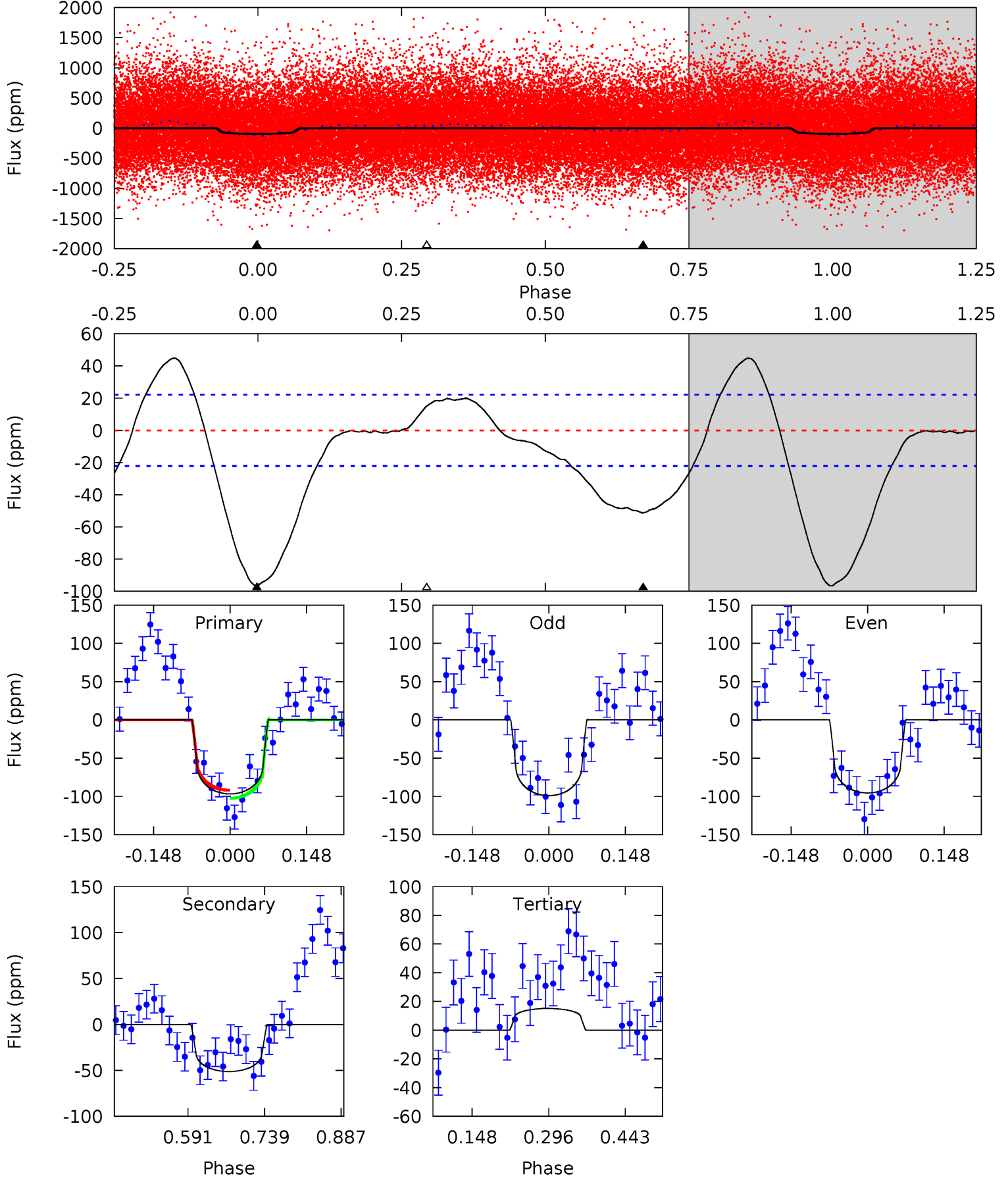
TCE 004679369-01 P= 1.955292 Days $T_0=133.157307$ (BKJD)



DV Model-Shift Uniqueness Test

004679369-01, P = 1.955392 Days, E = 133.118736 Days

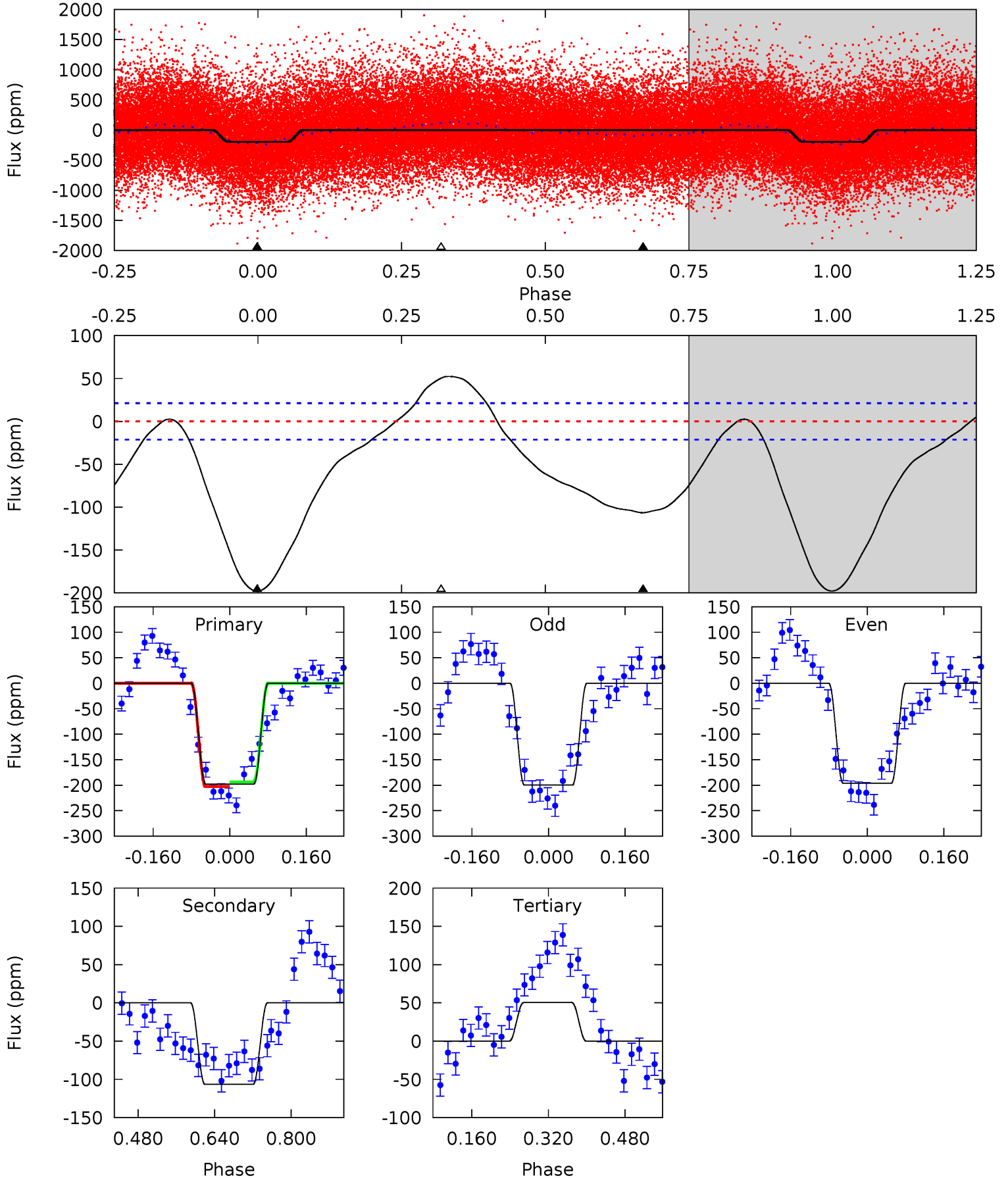
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	10.4	-3.05	0	4.48	1.45	2.83	22.6	19.6	13.4	10.4	0.35	1.05	0.32	1.08



Alt Model-Shift Uniqueness Test

004679369-01, P = 1.955292 Days, E = 133.157307 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.7	22.4	-10.6	0	4.47	1.41	7.41	52.3	41.7	33.0	22.4	0.36	1.07	0.21	0.96



Stellar Parameters For KIC 004679369

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6141^{+192}_{-235}	$4.408^{+0.105}_{-0.195}$	$-0.340^{+0.300}_{-0.300}$	$1.015^{+0.294}_{-0.136}$	$0.963^{+0.140}_{-0.114}$	$1.295^{+0.626}_{-0.679}$
	+3%/-4%	+2%/-4%	+88%/-88%	+29%/-13%	+15%/-12%	+48%/-52%
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 004679369-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-51 ± 5	$1.10^{+0.63}_{-0.59}$	2219^{+159}_{-135}	5219^{+2468}_{-833}	21^{+71}_{-12}
Alt.	-107 ± 5	$1.70^{+0.70}_{-0.65}$	2201^{+170}_{-117}	5162^{+1201}_{-668}	18^{+29}_{-9}

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

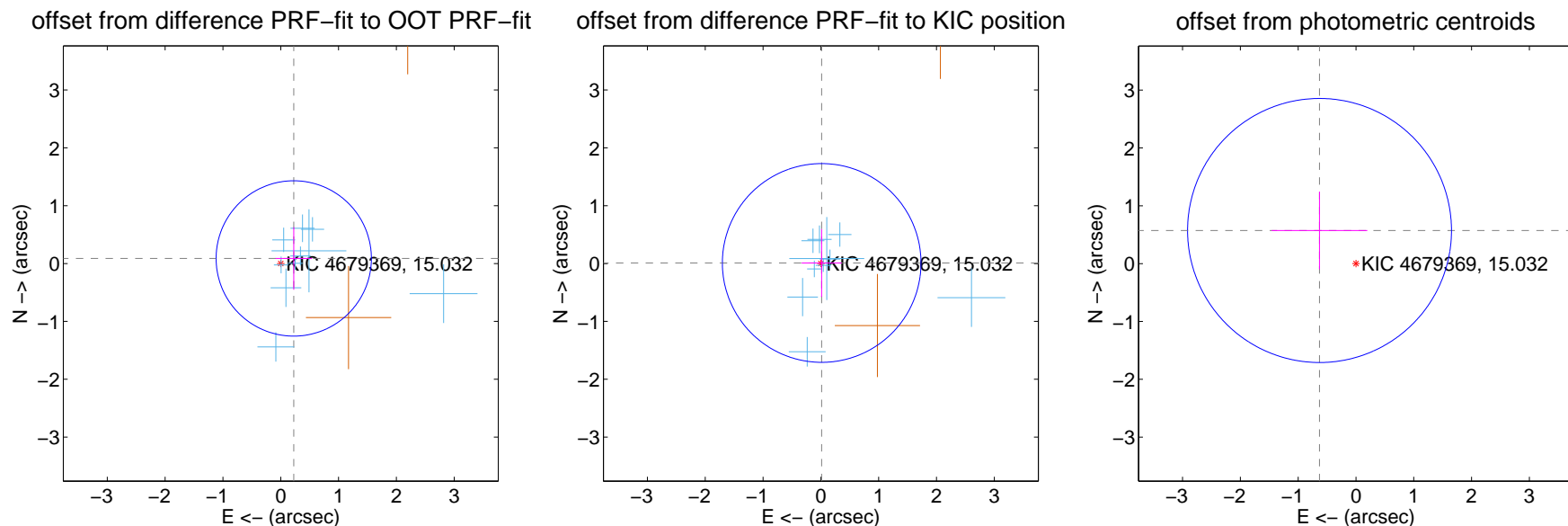
DV Centroid Data

Supplemental centroid analysis for 004679369-01. Kepler magnitude: 15.03. Transit SNR 14.74

There are 10 quarters with good PRF difference image offsets

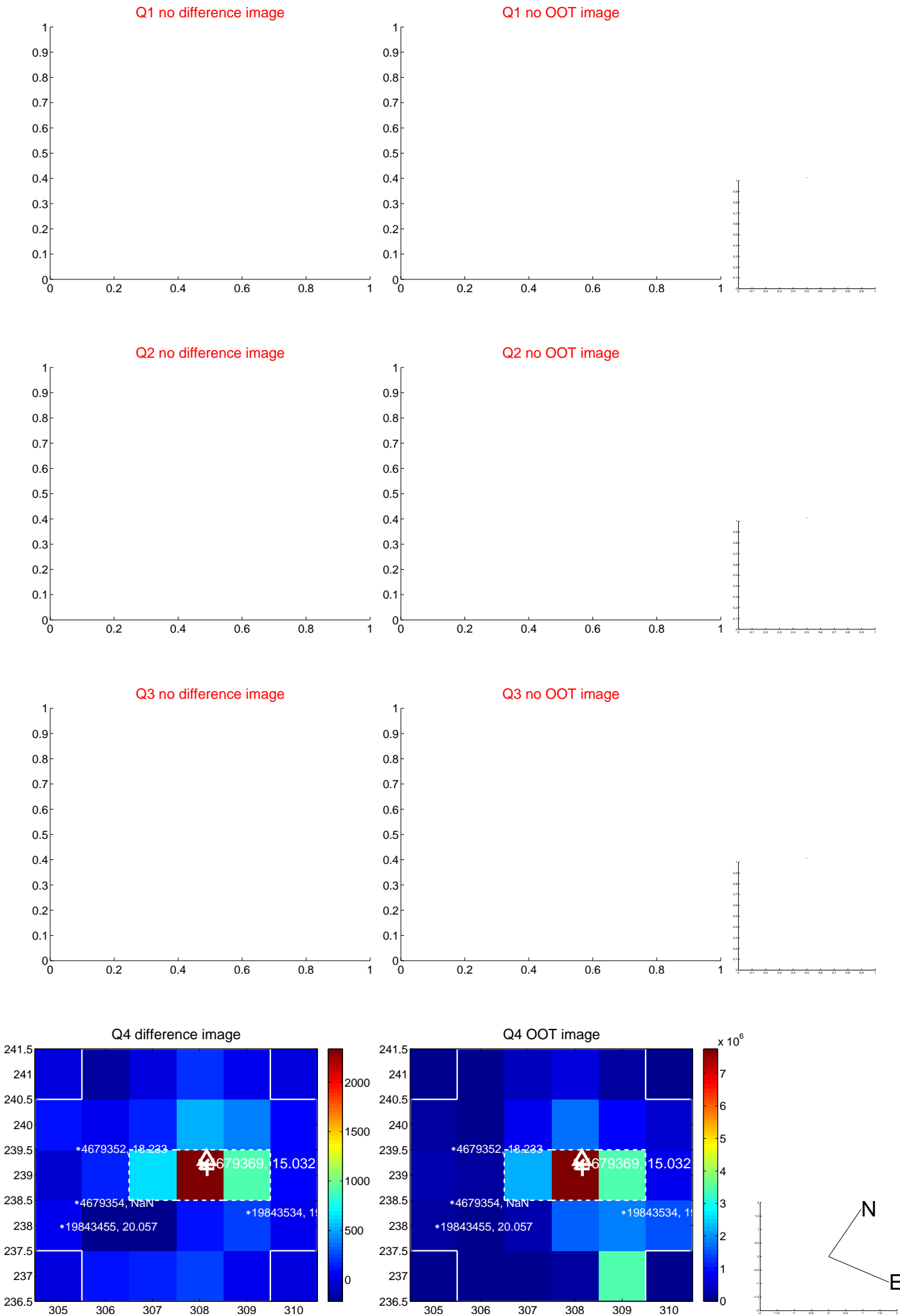
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.241 ± 0.447	0.54	-0.225 ± 0.315	0.088 ± 0.541
PRF-fit source offset from KIC position	0.017 ± 0.572	0.03	-0.014 ± 0.346	0.010 ± 0.585
photometric centroid source offset	0.85 ± 0.76	1.12	0.63 ± 0.83	0.57 ± 0.67

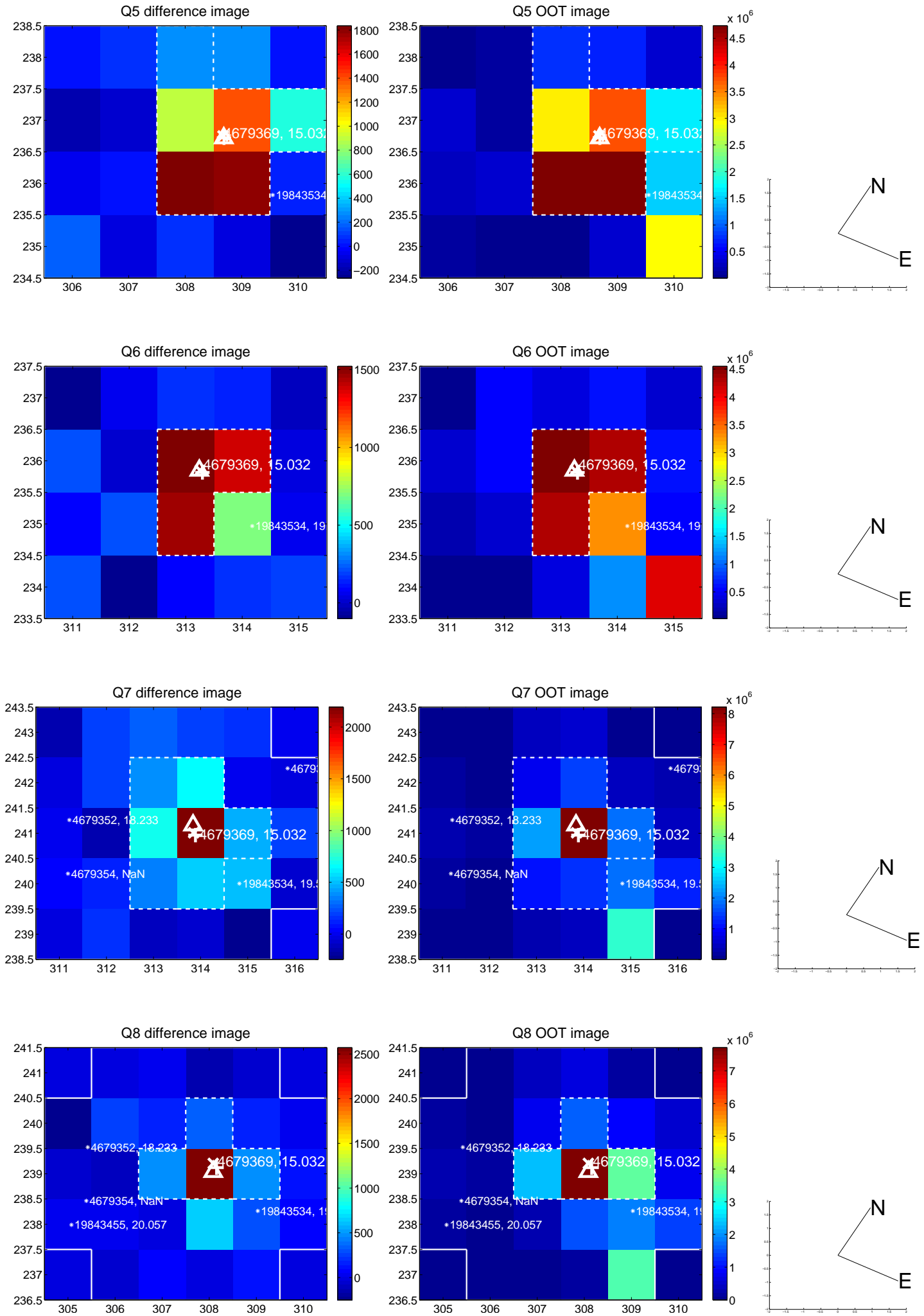


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

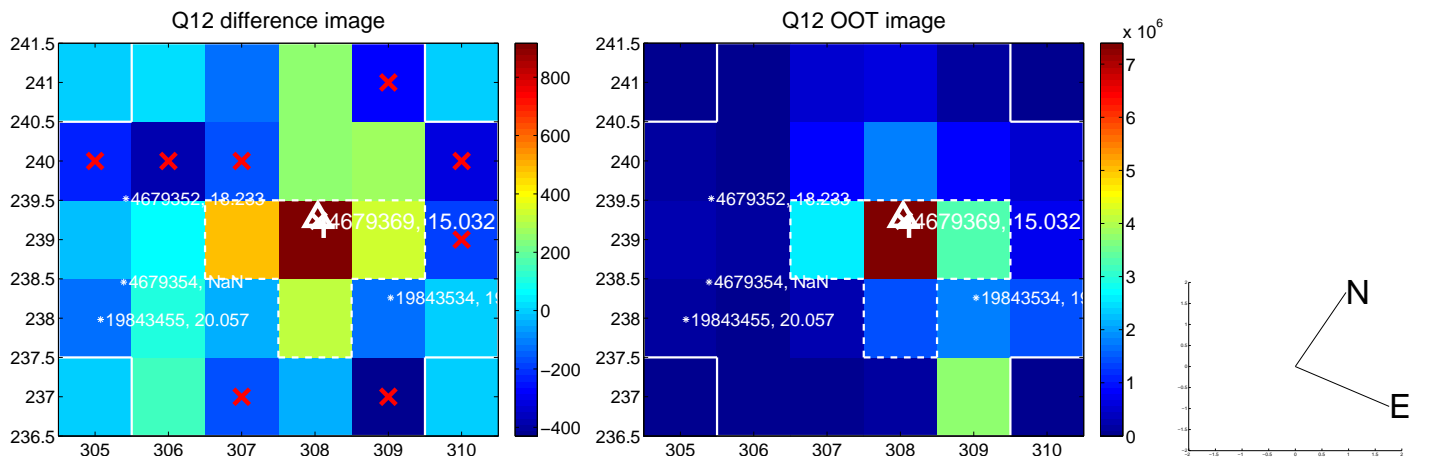
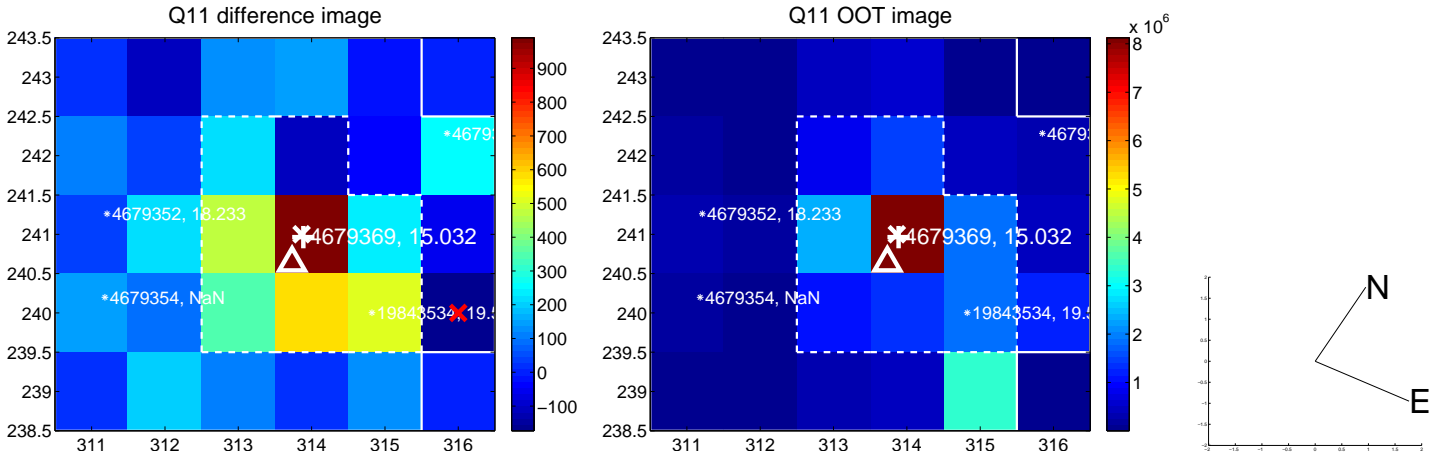
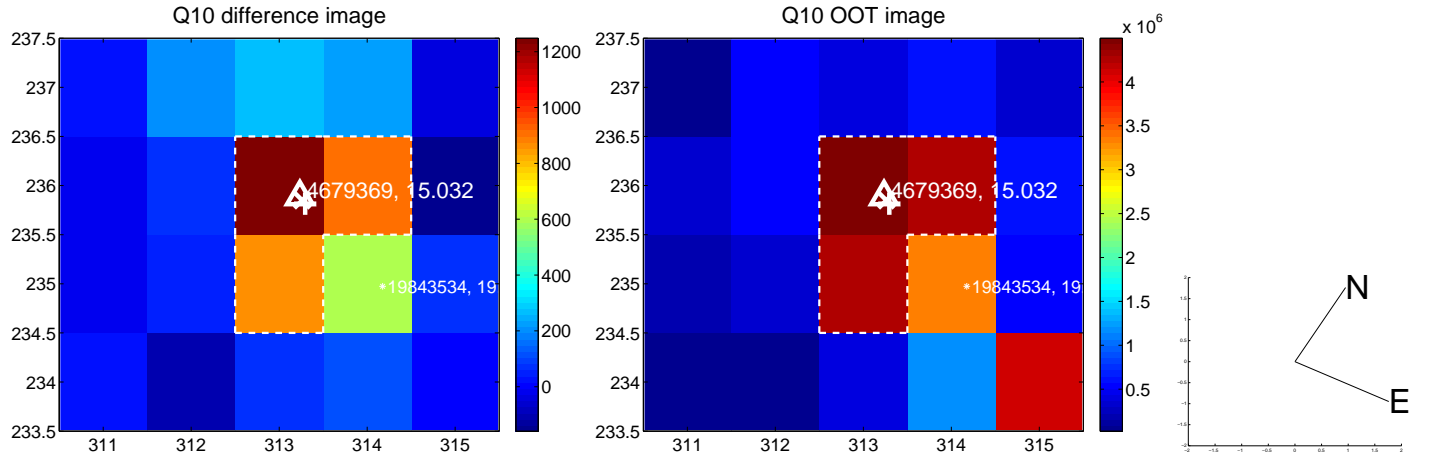
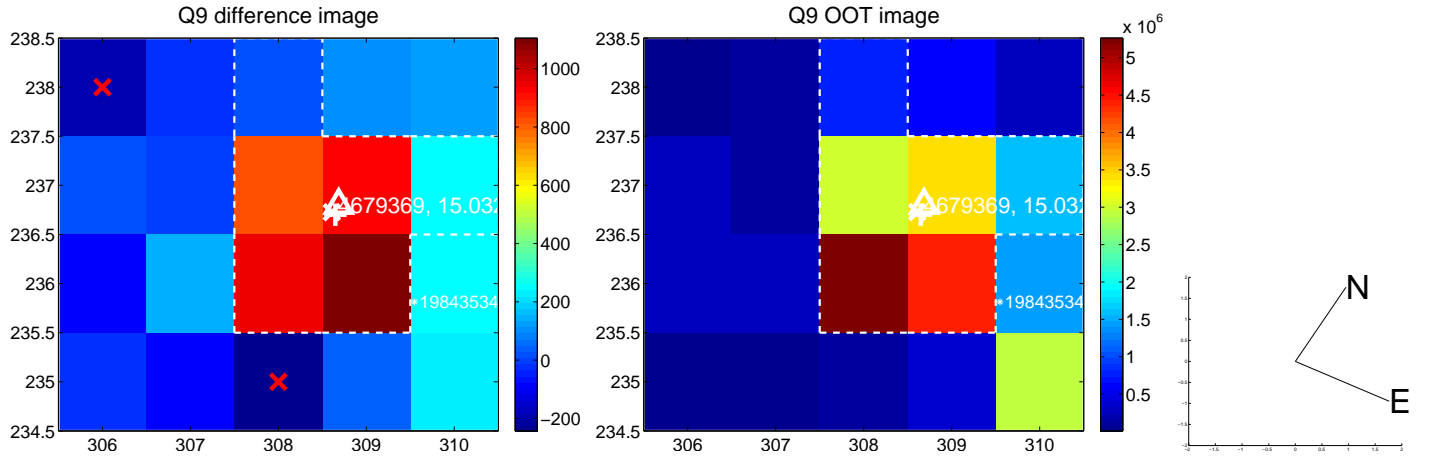
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



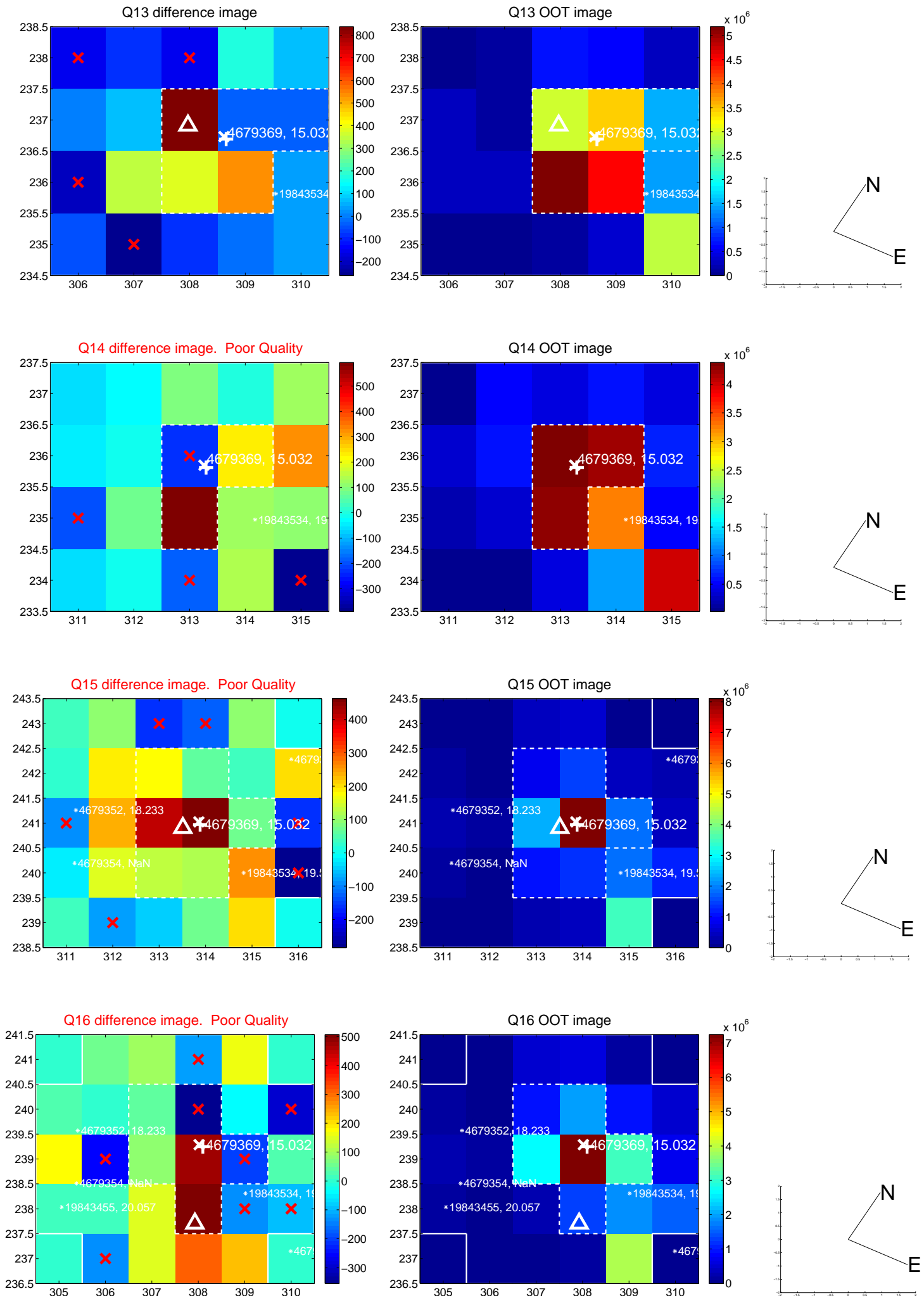
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



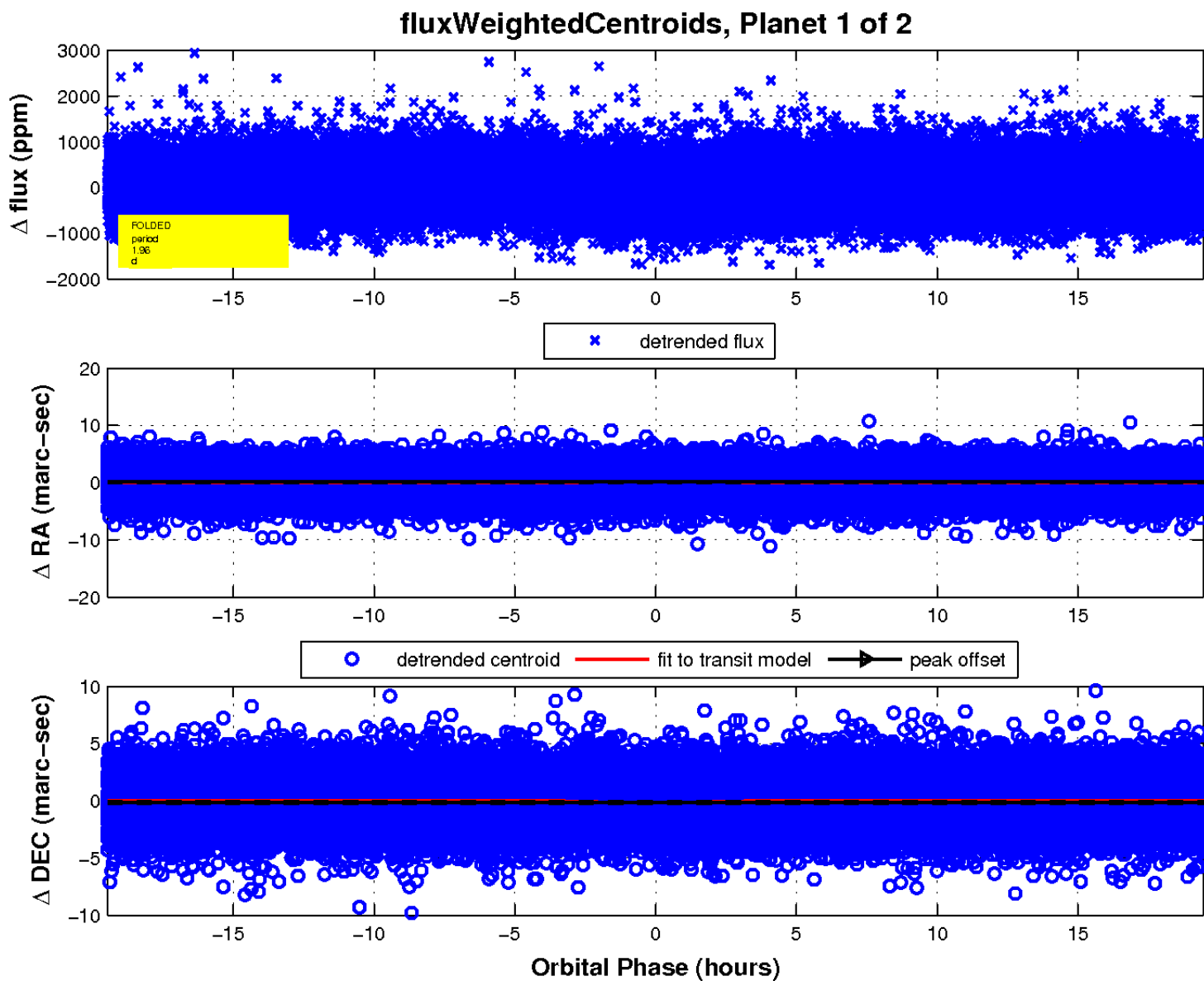
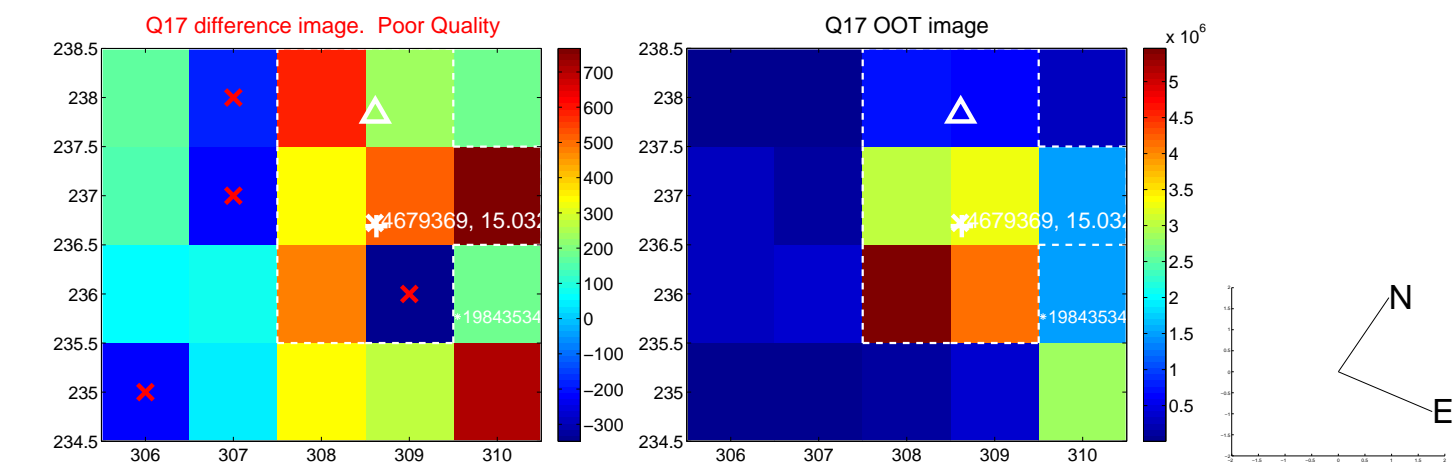
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

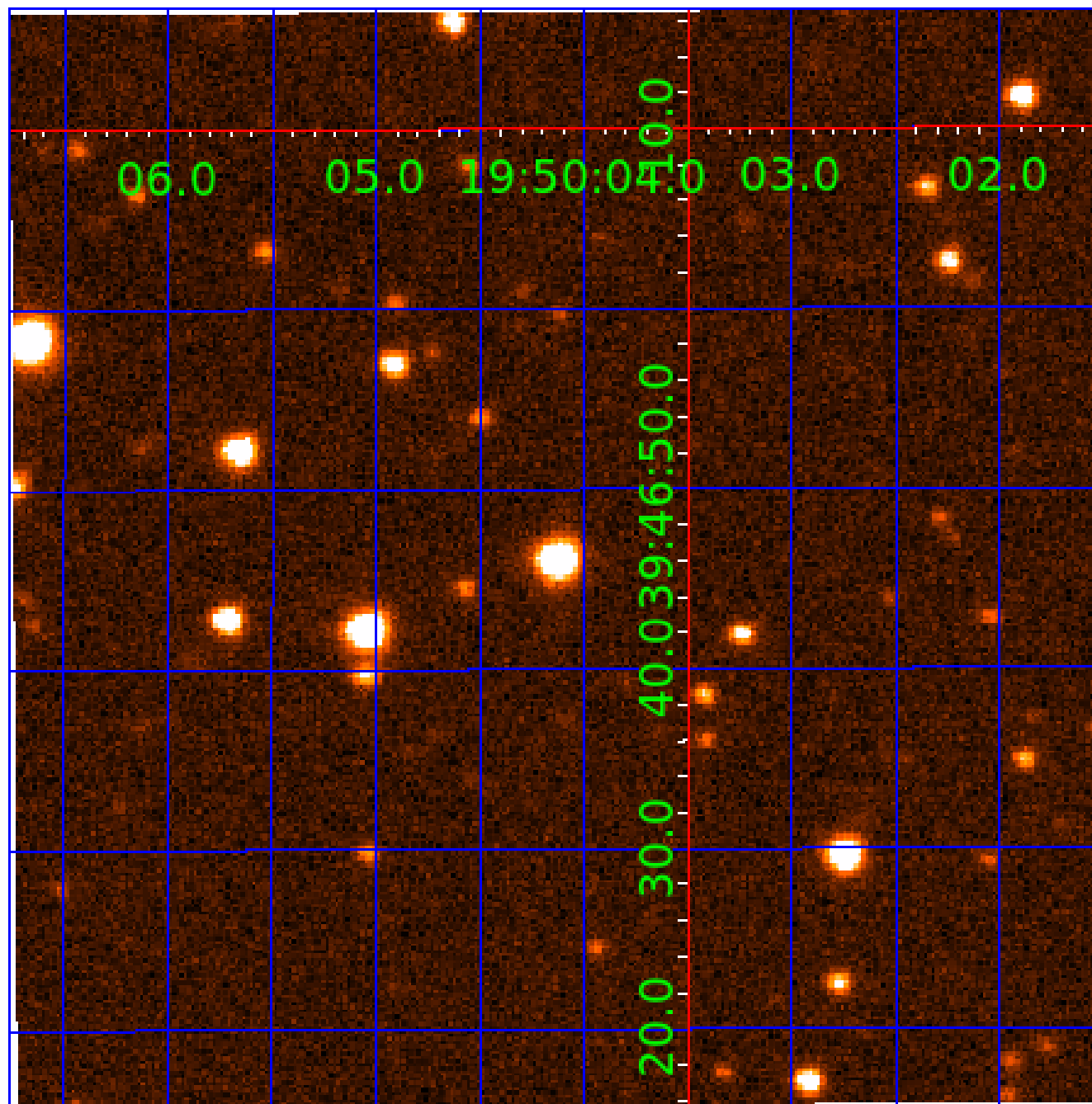


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004679369

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})
004679369-01	OBS	No	1.955392	133.118736	99.3	6.489	14.1	14.7	1.01	6141	1.04	1438.30
004679369-02	OBS	No	1.954798	132.844205	43.7	18.639	8.8	9.2	1.01	6141	0.67	1438.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004679369-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
004679369-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—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.

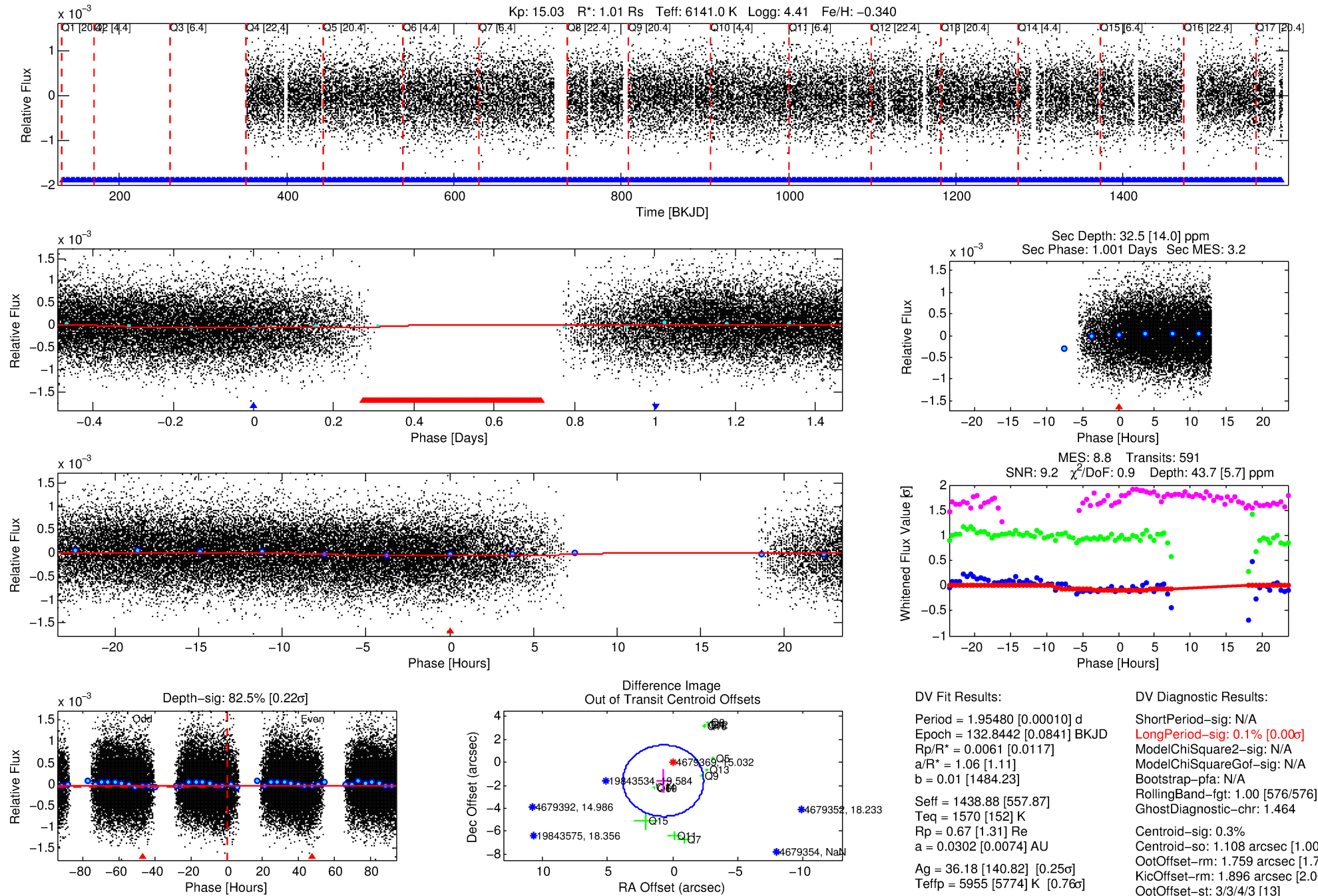
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004679369-02

No Significant Match Found

DV One-Page Summary

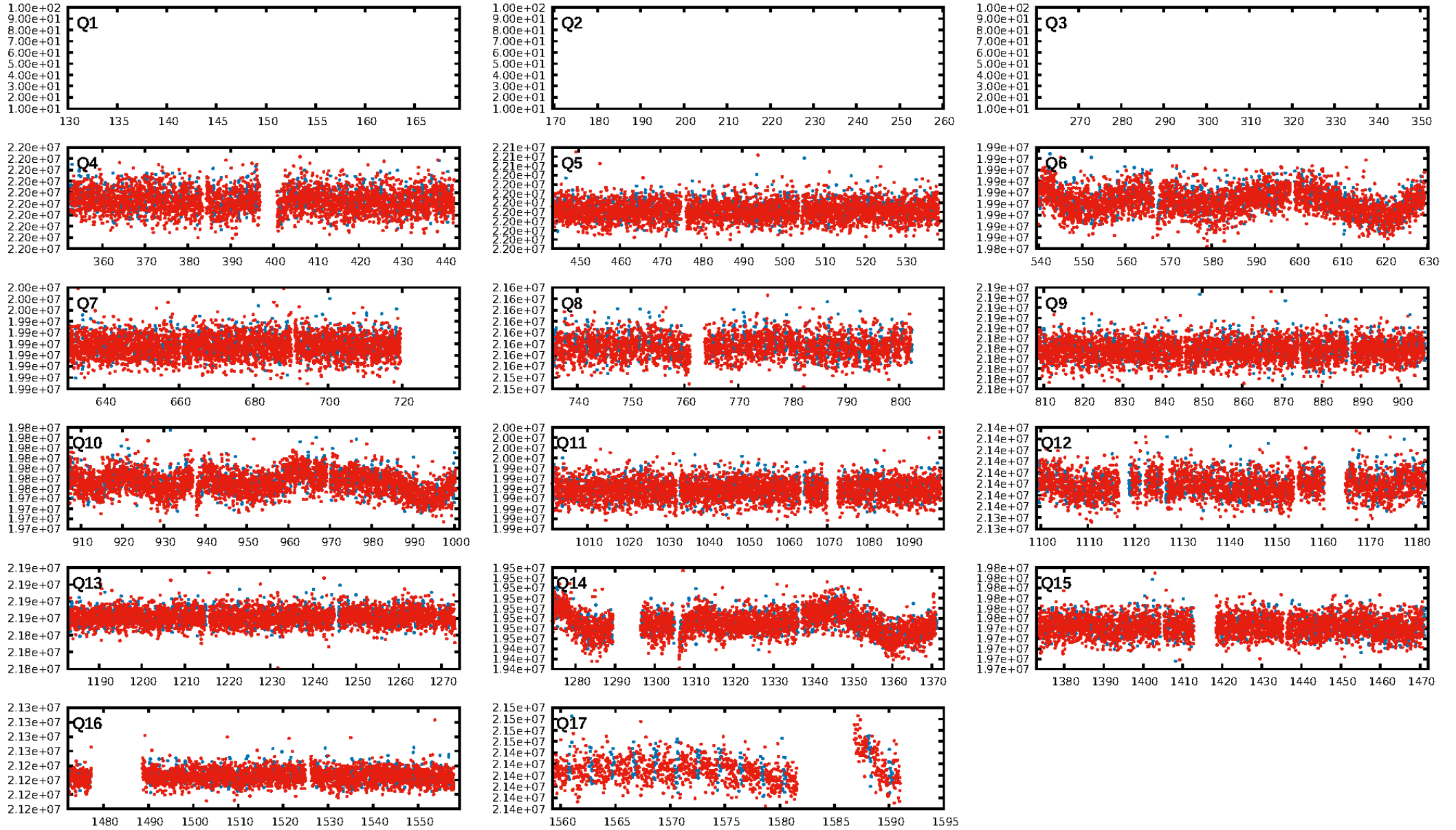
KIC: 4679369 Candidate: 2 of 2 Period: 1.955 d



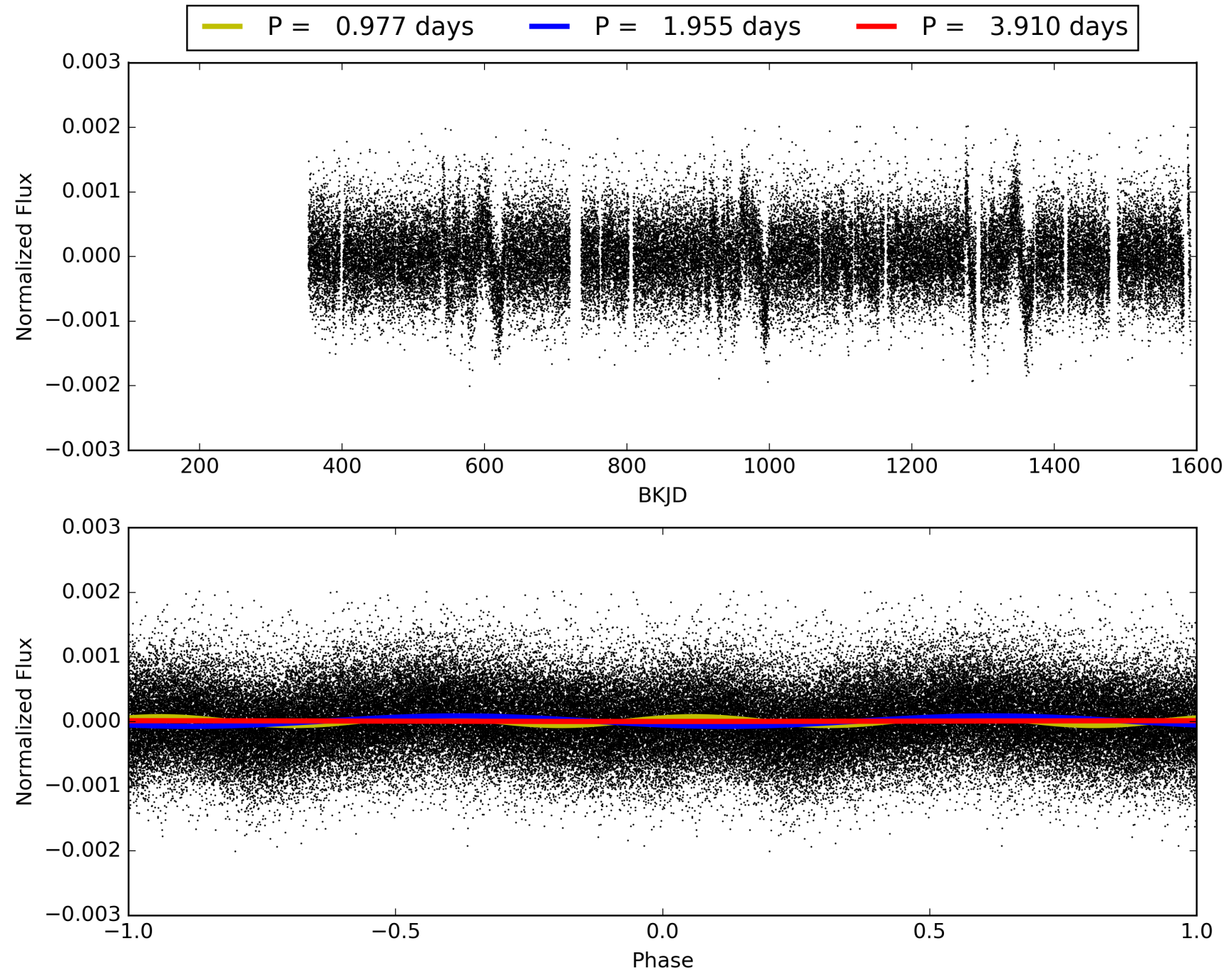
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:57:57 Z

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

TCE 004679369-02, PDC Light Curves

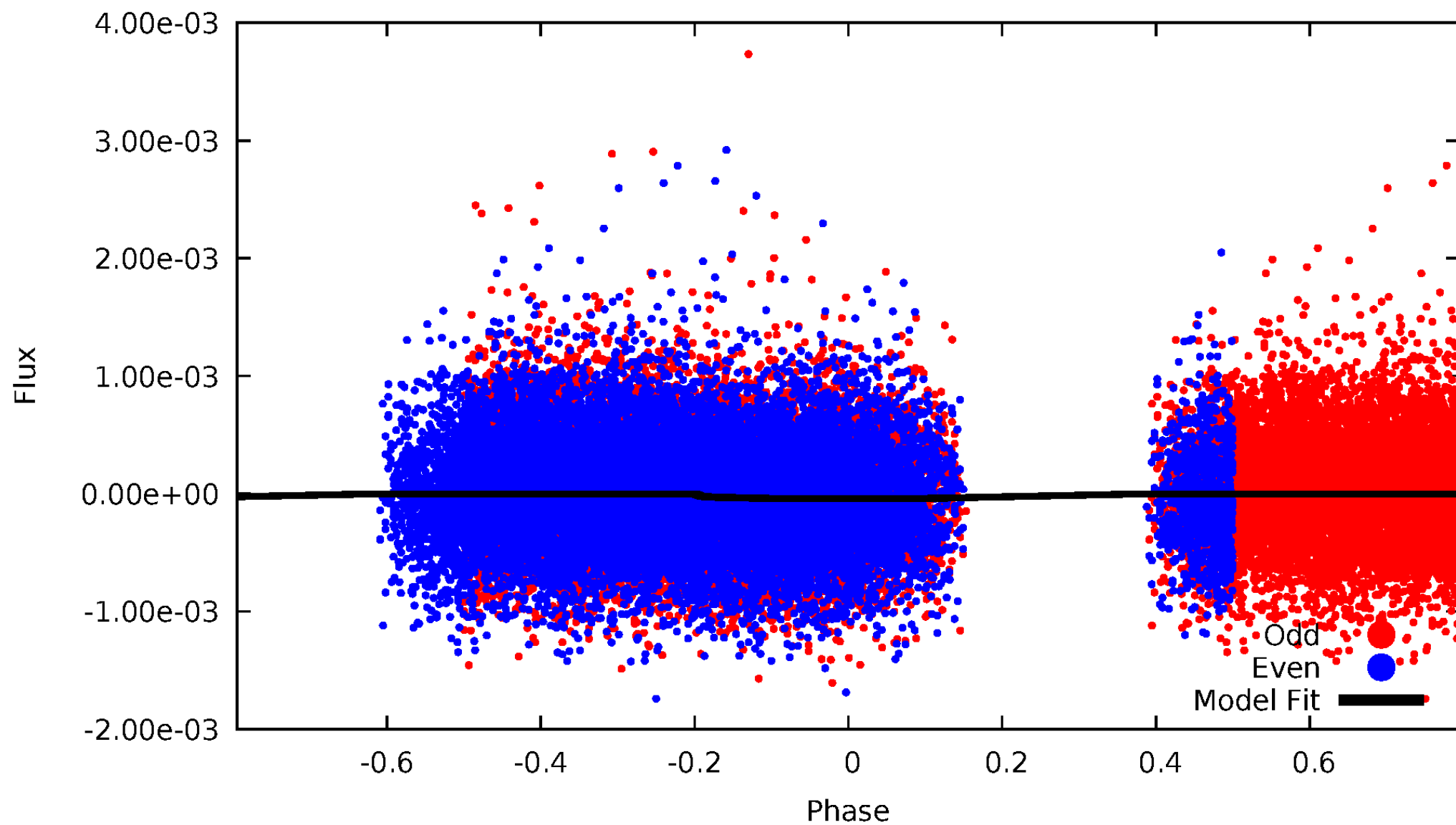


TCE 004679369-02



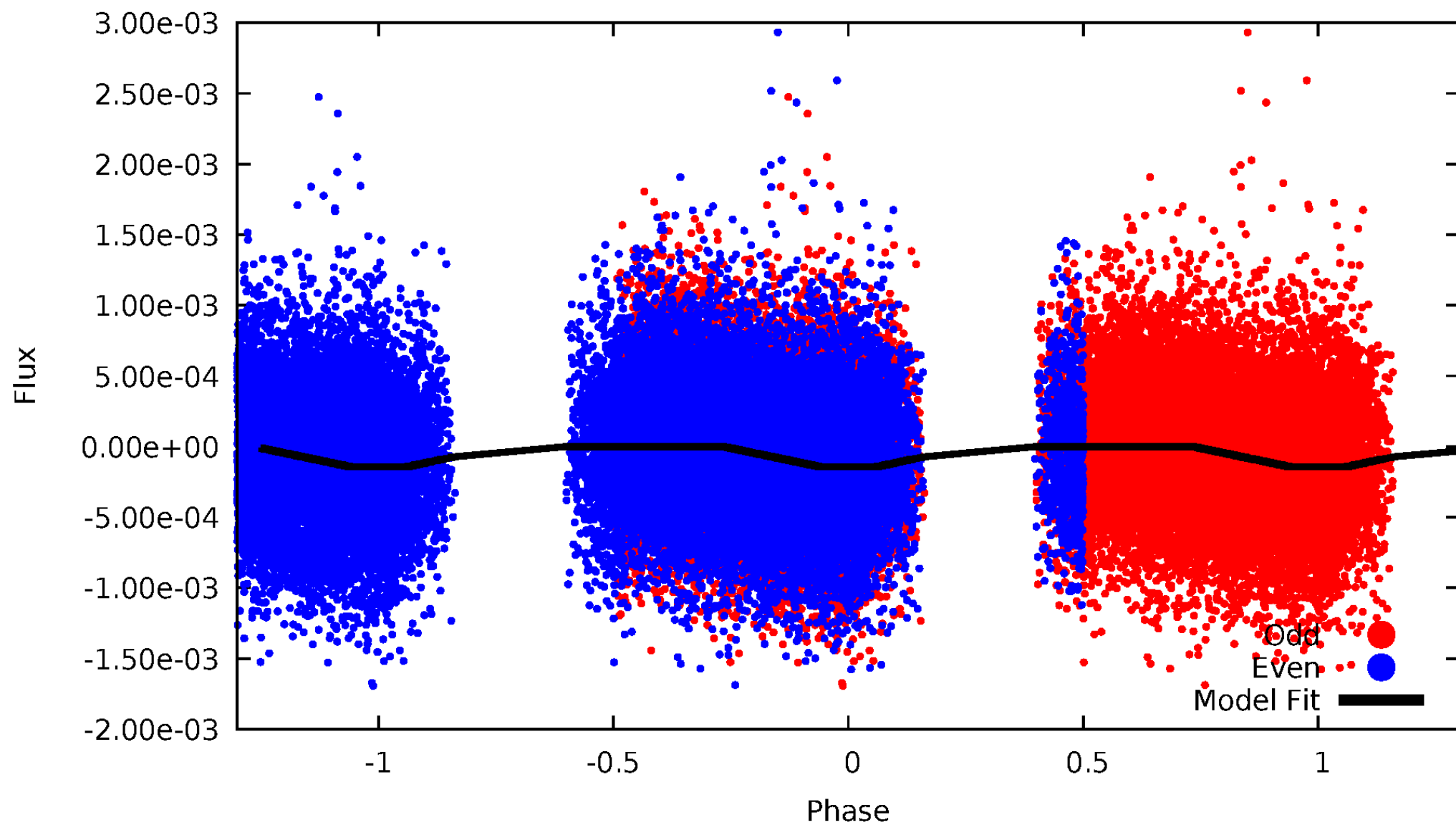
DV Odd/Even

TCE 004679369-02



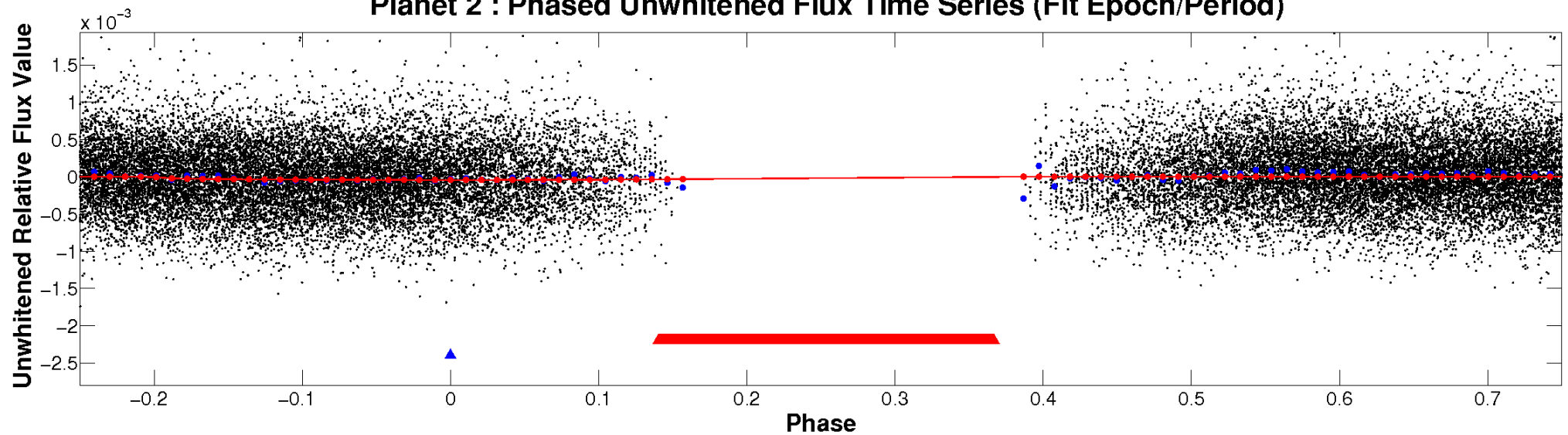
ALT Odd/Even

TCE 004679369-02

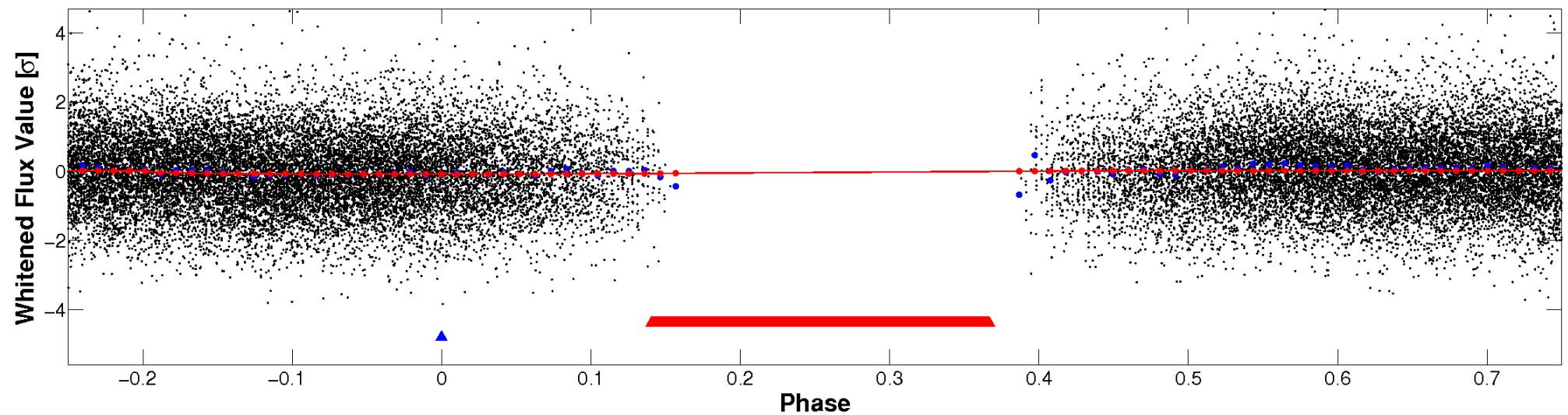


Non-Whitened Vs. Whitened Light Curve

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

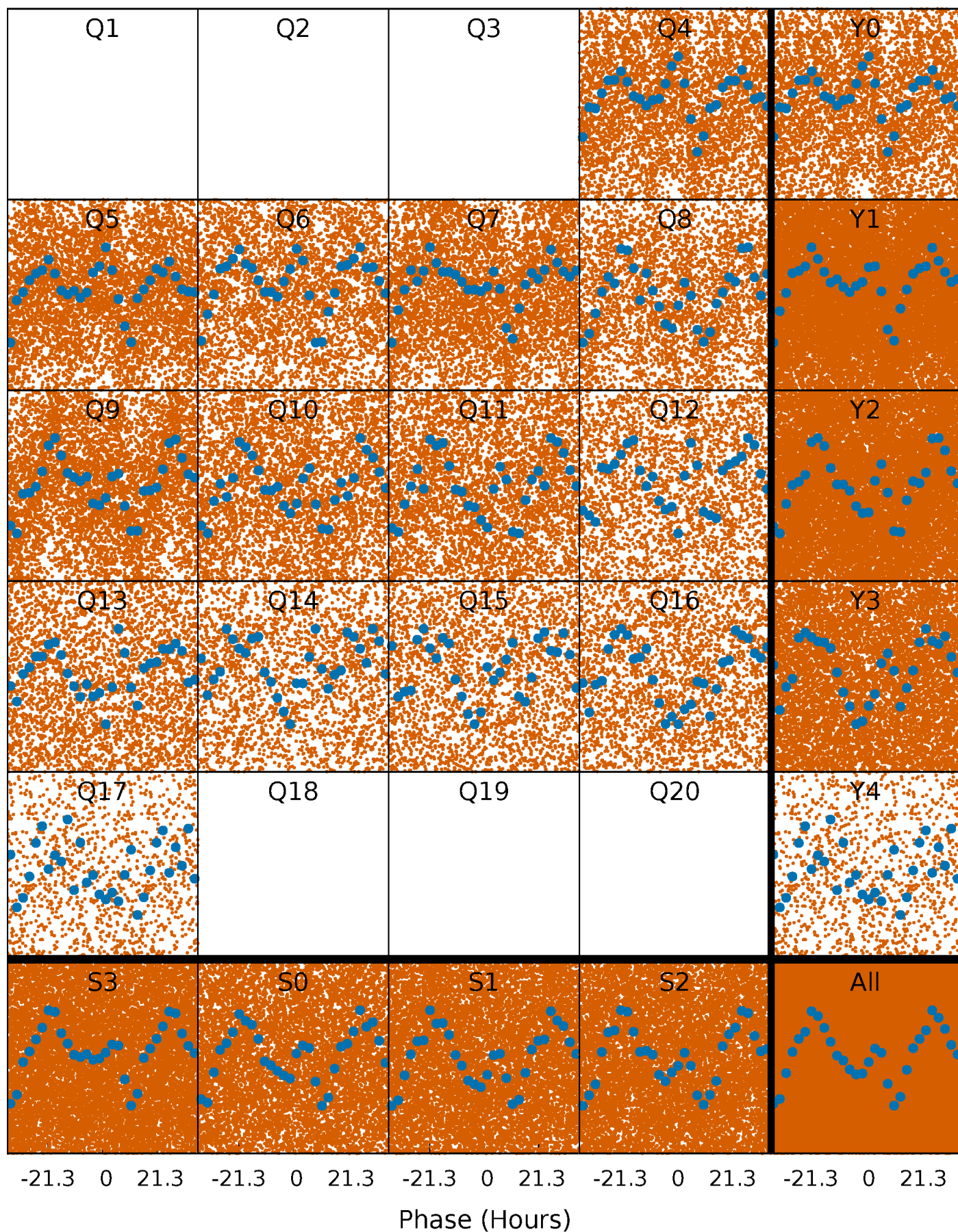


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



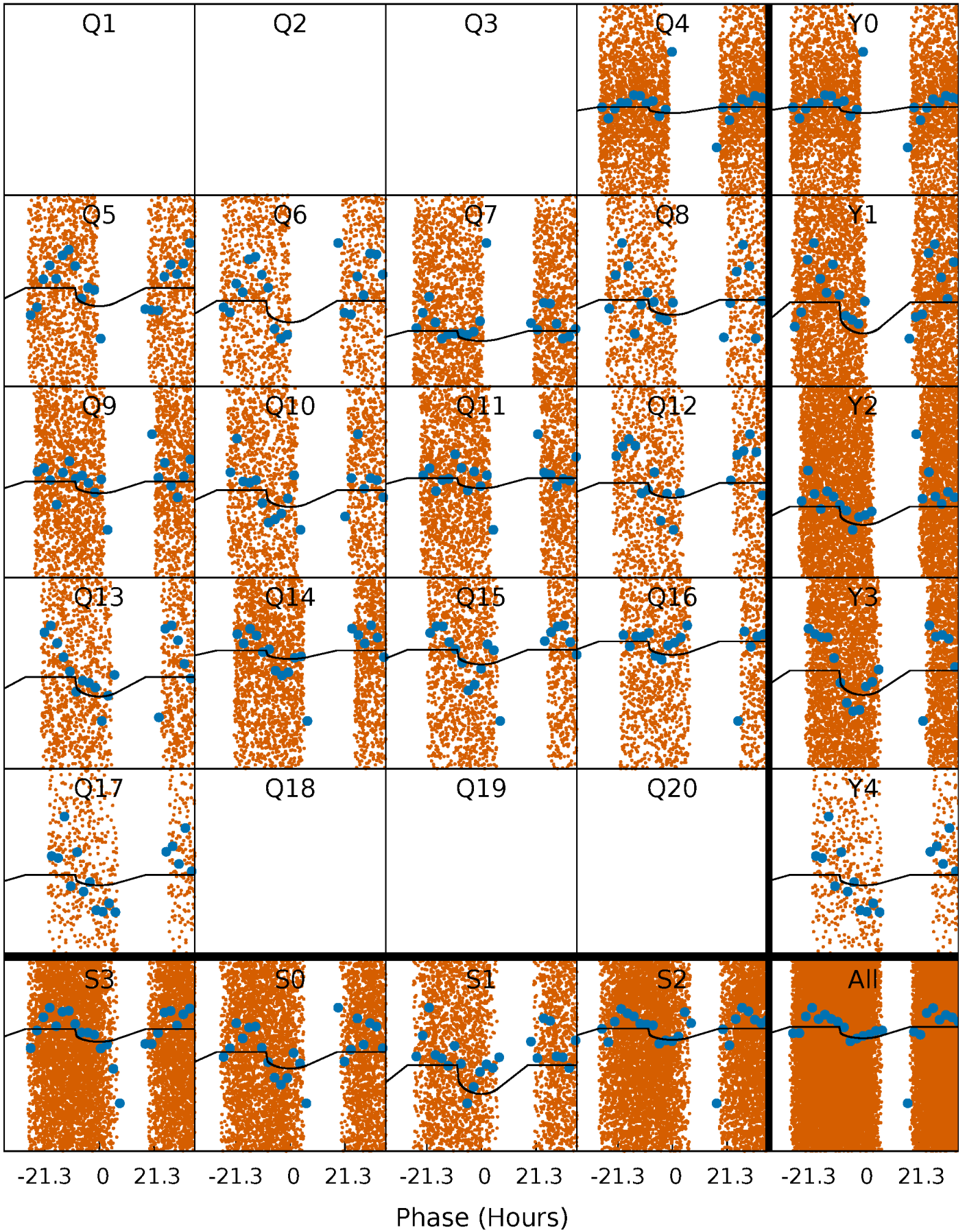
PDC Quarter-Phased Transit Curves

TCE 004679369-02 P= 1.954798 Days $T_0=132.844205$ (BKJD)



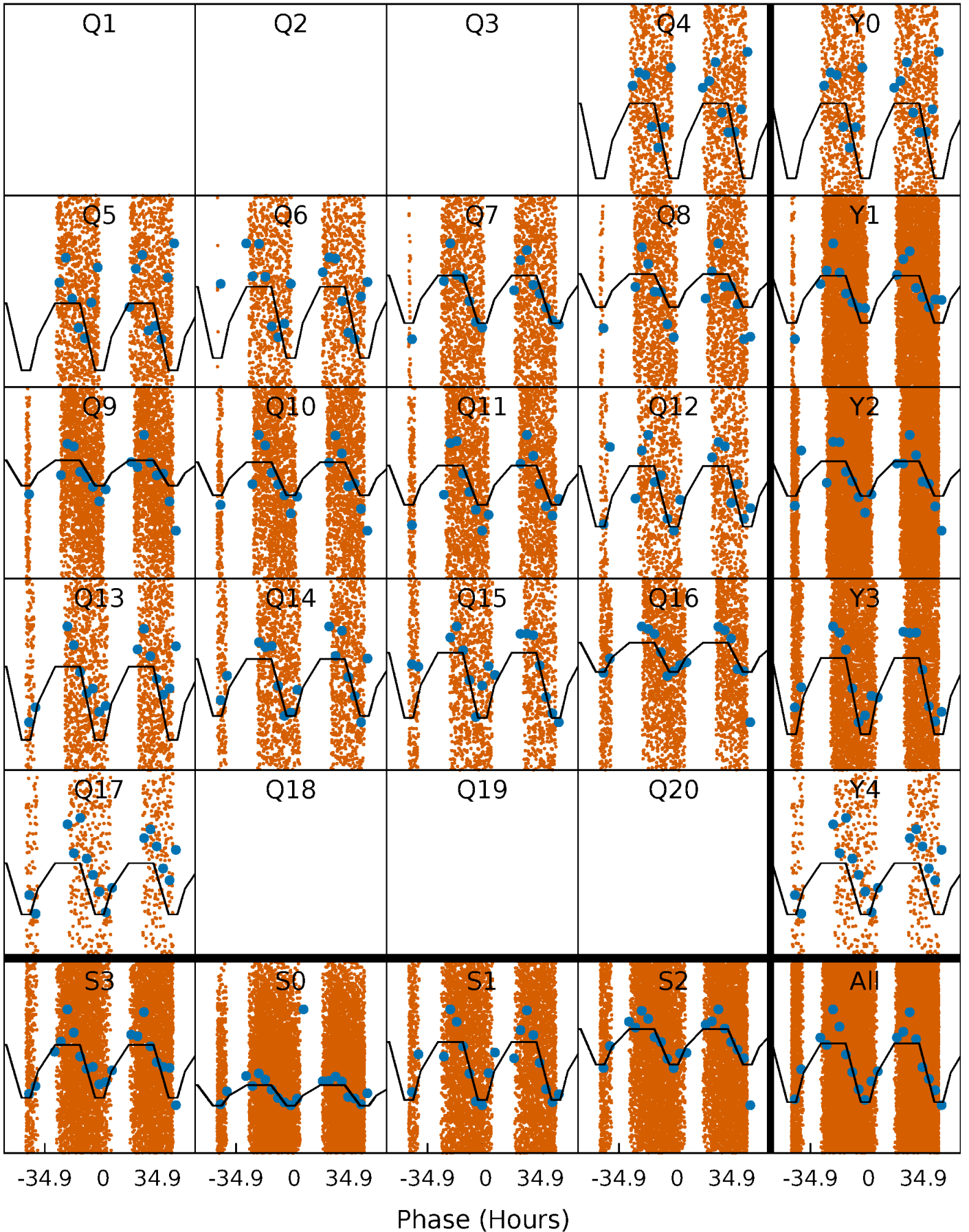
DV Quarter-Phased Transit Curves

TCE 004679369-02 P= 1.954798 Days $T_0=132.844205$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

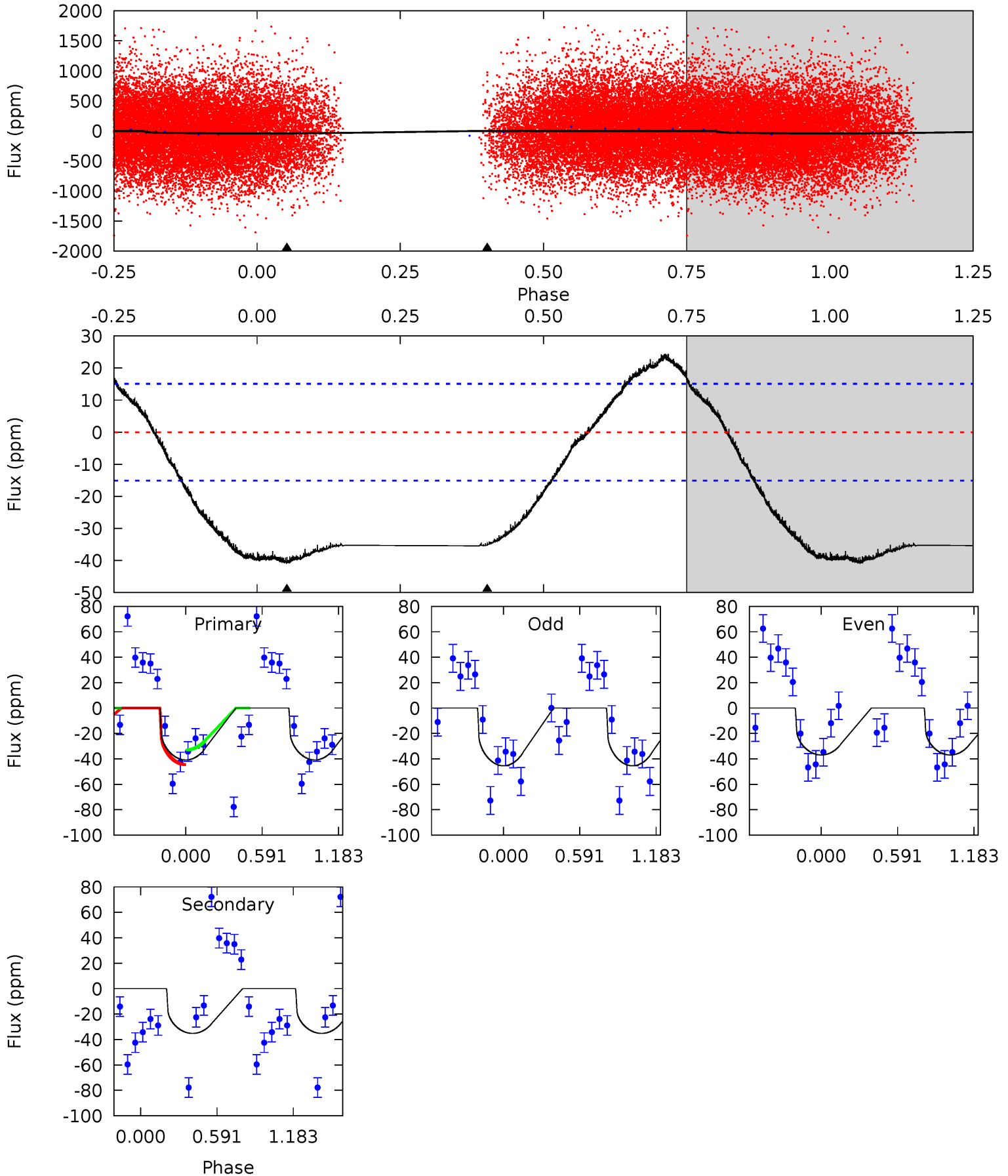
TCE 004679369-02 $P = 1.954797$ Days $T_0 = 132.826988$ (BKJD)



DV Model-Shift Uniqueness Test

004679369-02, P = 1.954798 Days, E = 132.844205 Days

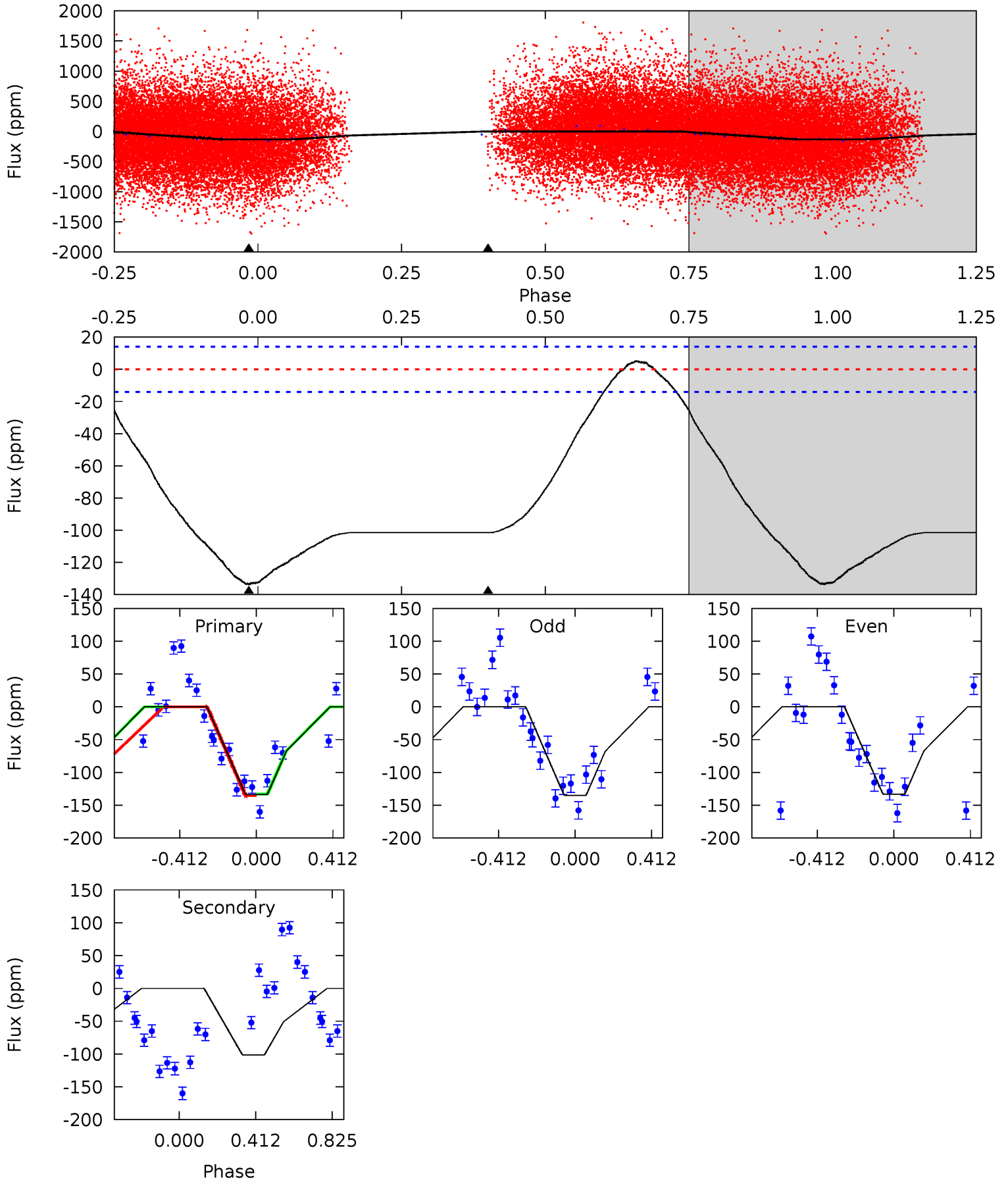
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	9.75	0	0	4.18	0.54	1.47	11.3	11.3	9.75	9.75	1.18	1.06	0.37	1.38



Alt Model-Shift Uniqueness Test

004679369-02, P = 1.954797 Days, E = 132.826988 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.3	30.6	0	0	4.26	0.82	1.52	40.3	40.3	30.6	30.6	0.30	1.05	0.04	0.25



Stellar Parameters For KIC 004679369

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6141^{+192}_{-235}	$4.408^{+0.105}_{-0.195}$	$-0.340^{+0.300}_{-0.300}$	$1.015^{+0.294}_{-0.136}$	$0.963^{+0.140}_{-0.114}$	$1.295^{+0.626}_{-0.679}$
	+3%/-4%	+2%/-4%	+88%/-88%	+29%/-13%	+15%/-12%	+48%/-52%
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 004679369-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-35 ± 4	$1.19^{+1.13}_{-0.84}$	2212^{+162}_{-123}	4721^{+4090}_{-1066}	13^{+123}_{-9}
Alt.	-101 ± 3	$1.60^{+1.26}_{-1.05}$	2201^{+151}_{-124}	5223^{+4109}_{-1137}	20^{+153}_{-14}

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

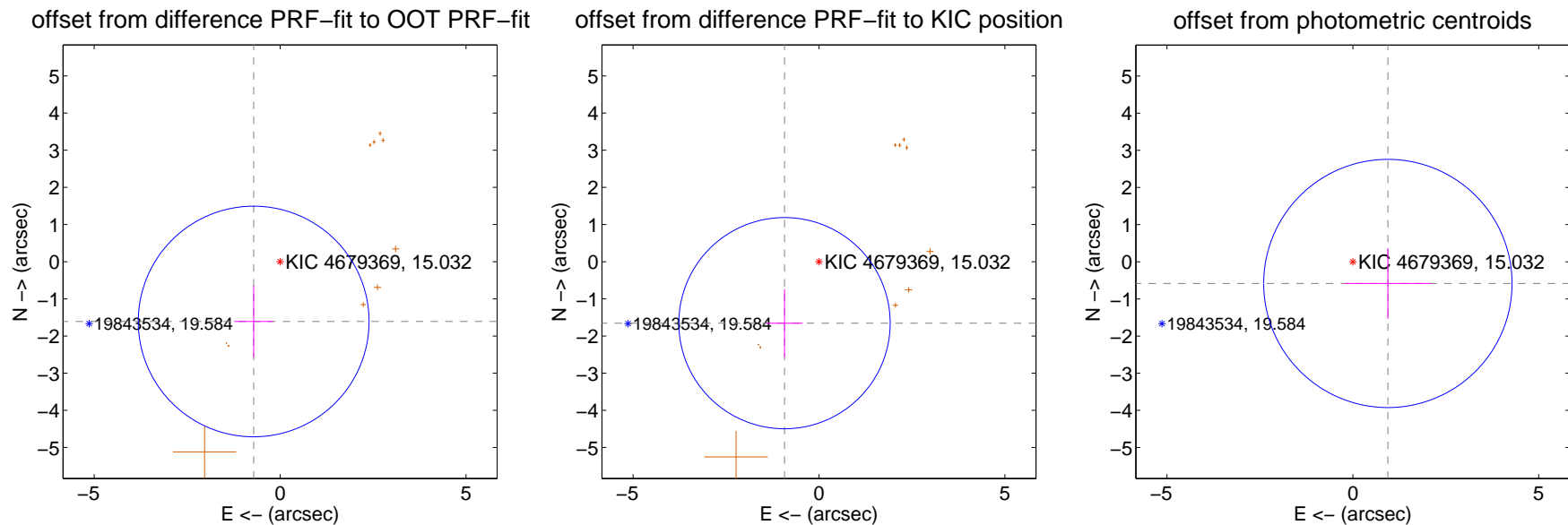
DV Centroid Data

Supplemental centroid analysis for 004679369-02. Kepler magnitude: 15.03. Transit SNR 9.24

There are 0 quarters with good PRF difference image offsets

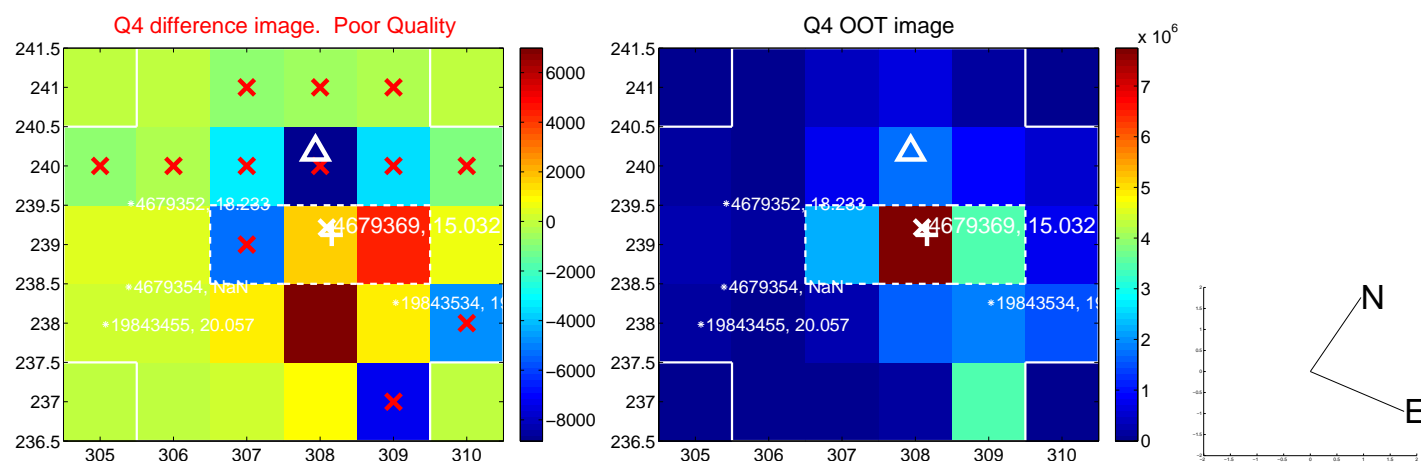
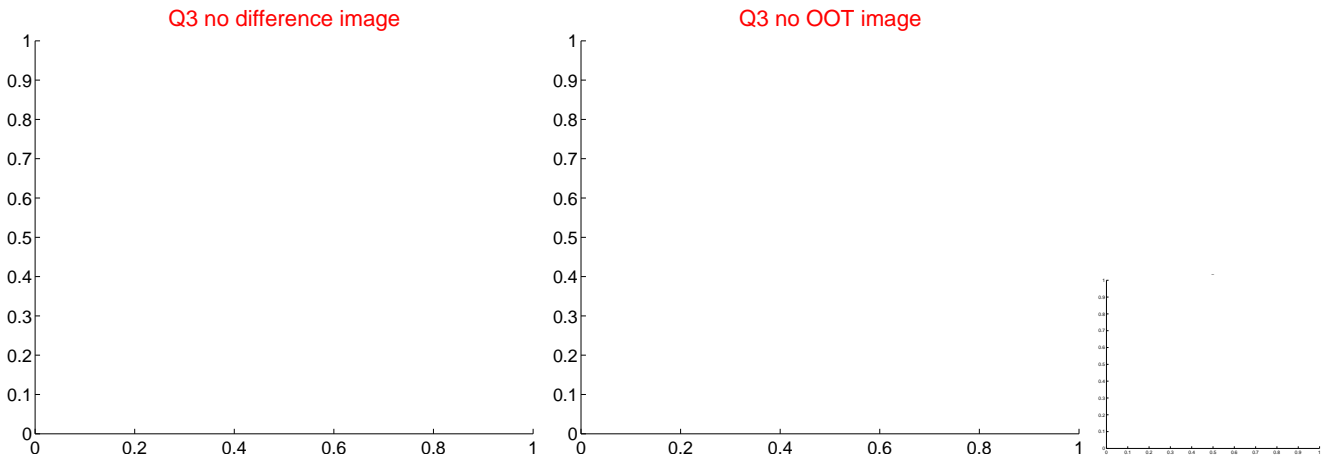
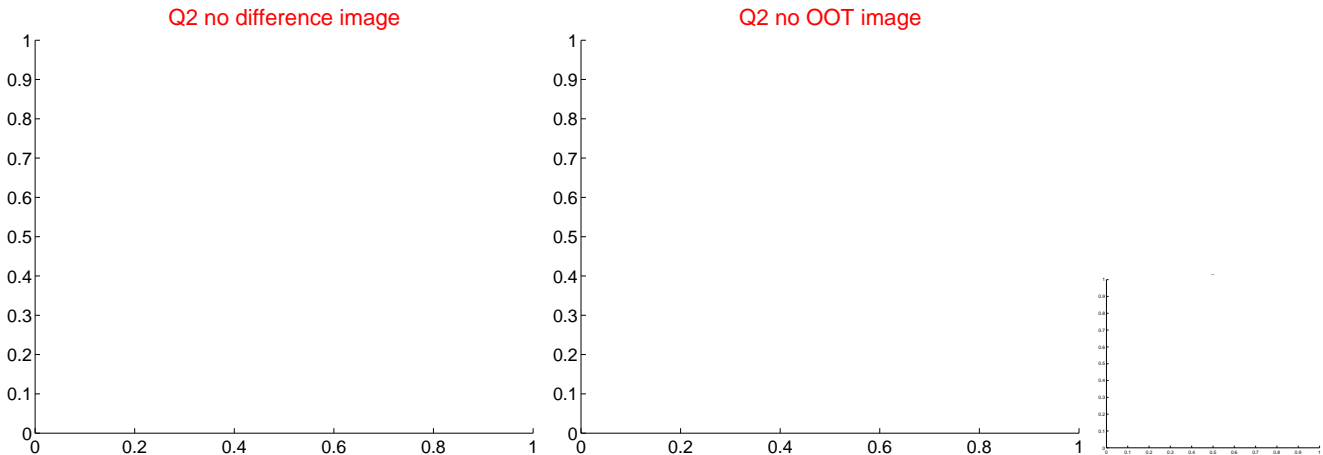
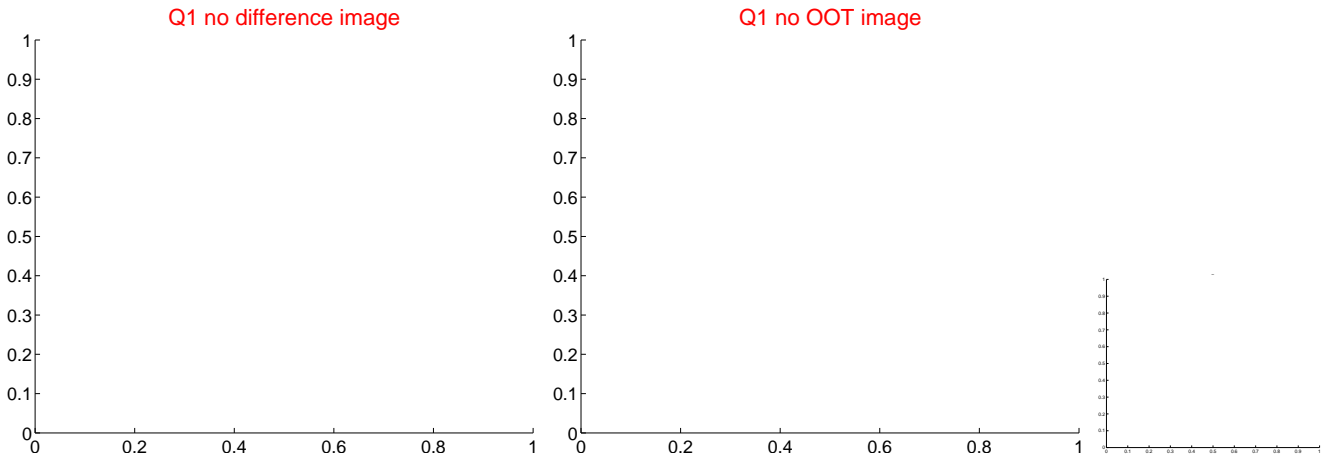
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.759 ± 1.034	1.70	0.711 ± 0.523	-1.609 ± 0.960
PRF-fit source offset from KIC position	1.896 ± 0.947	2.00	0.927 ± 0.490	-1.654 ± 0.917
photometric centroid source offset	1.11 ± 1.11	1.00	-0.94 ± 1.17	-0.58 ± 0.95

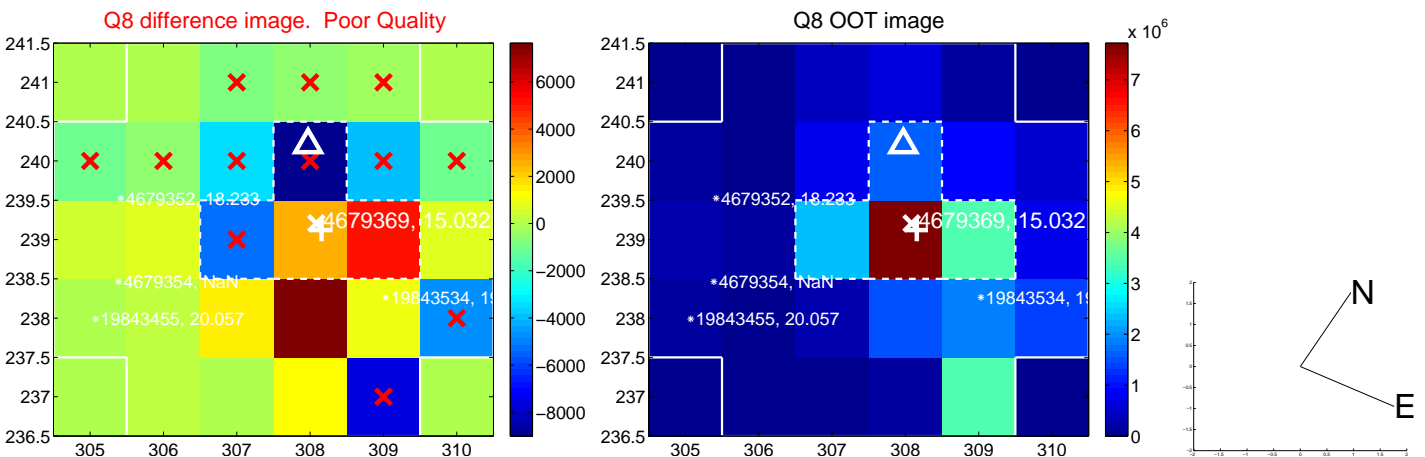
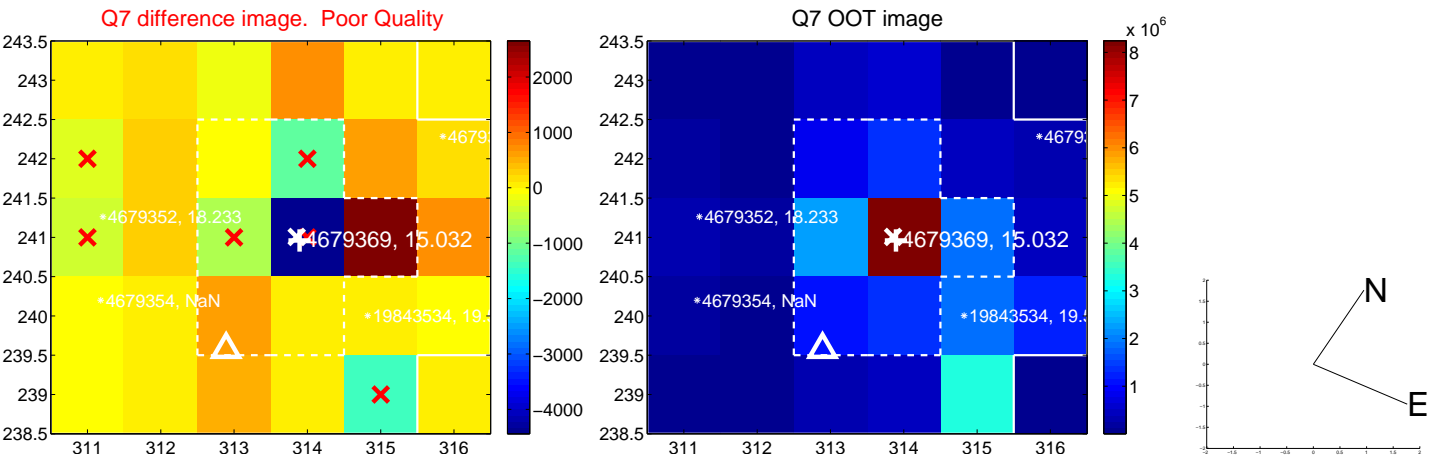
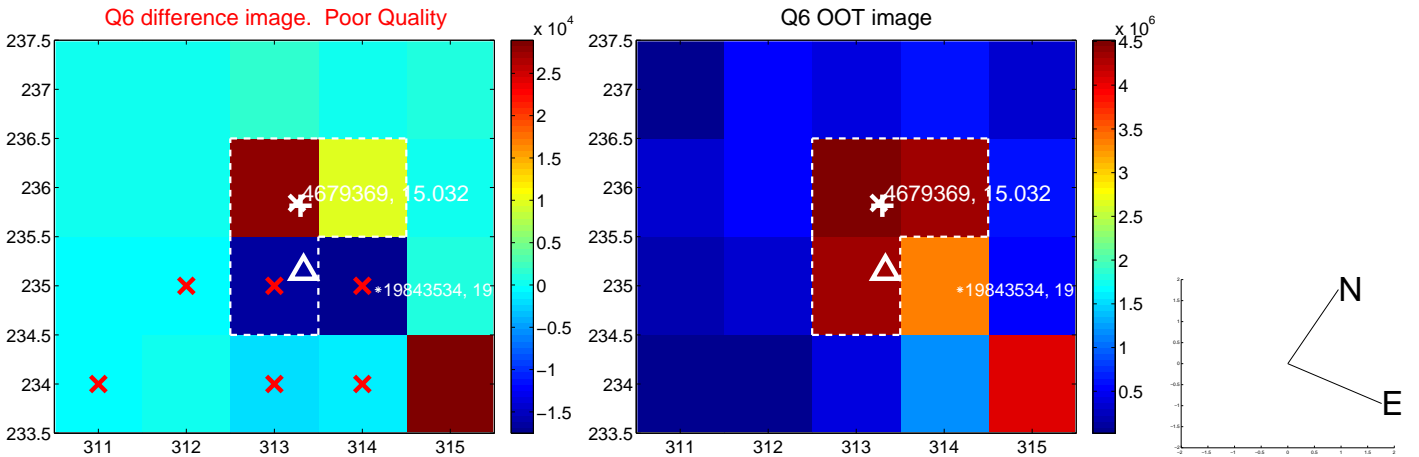
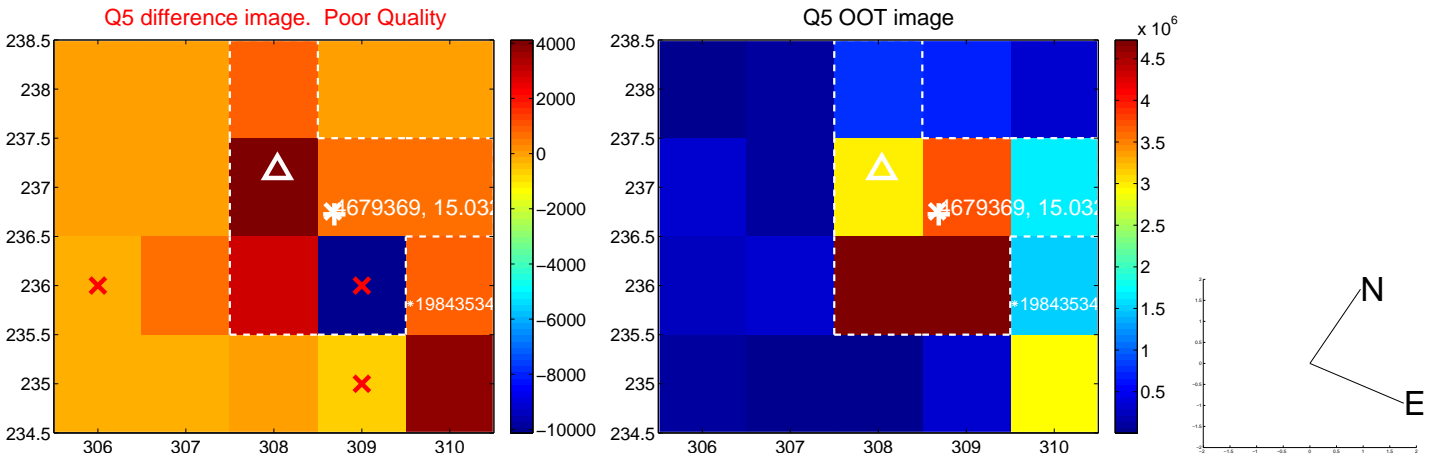


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

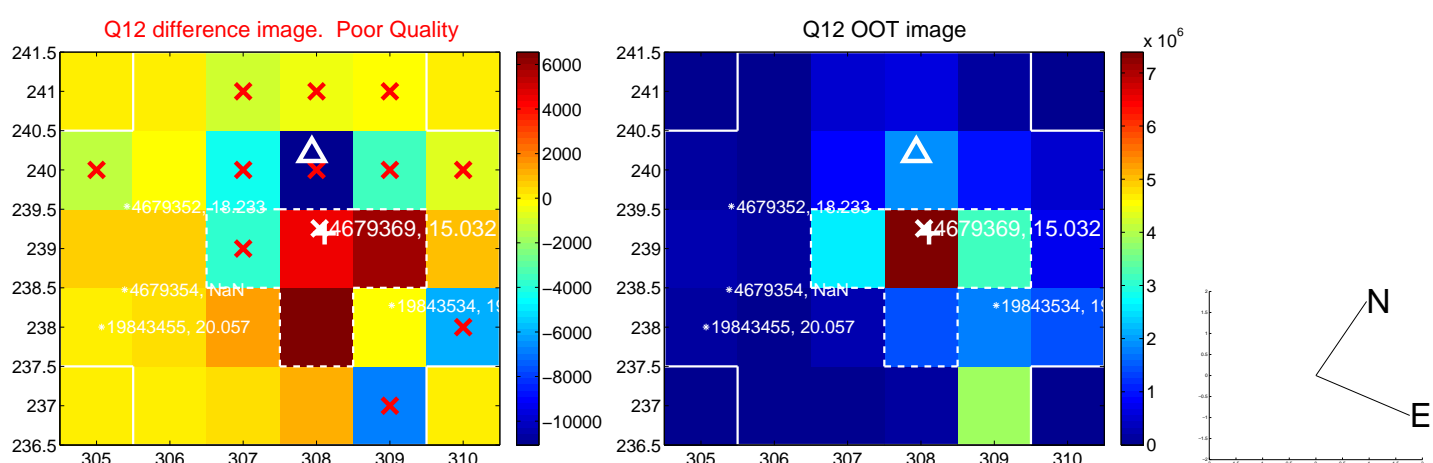
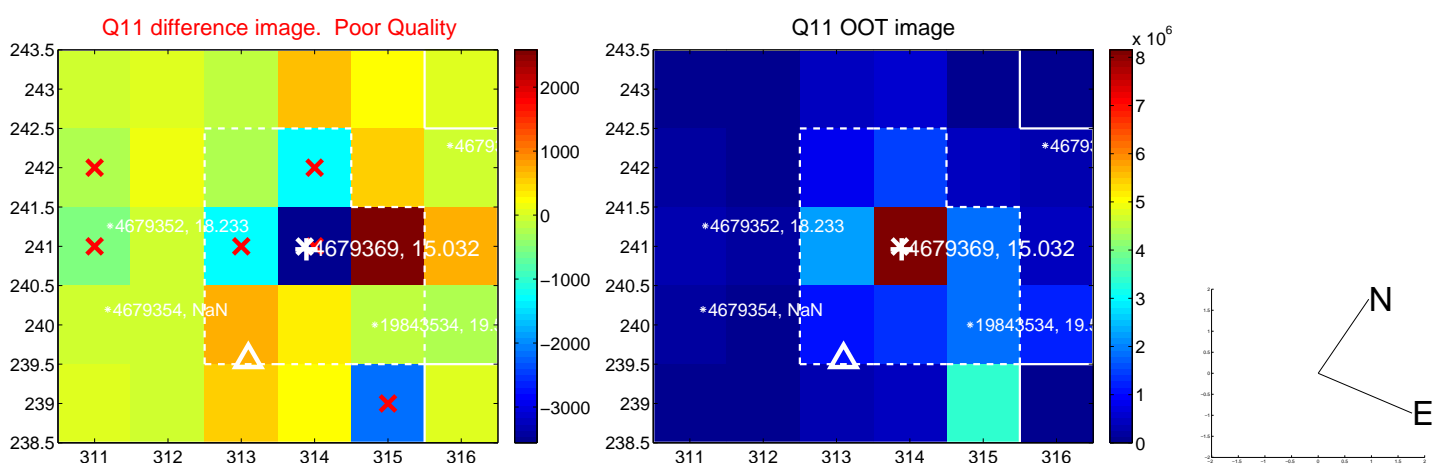
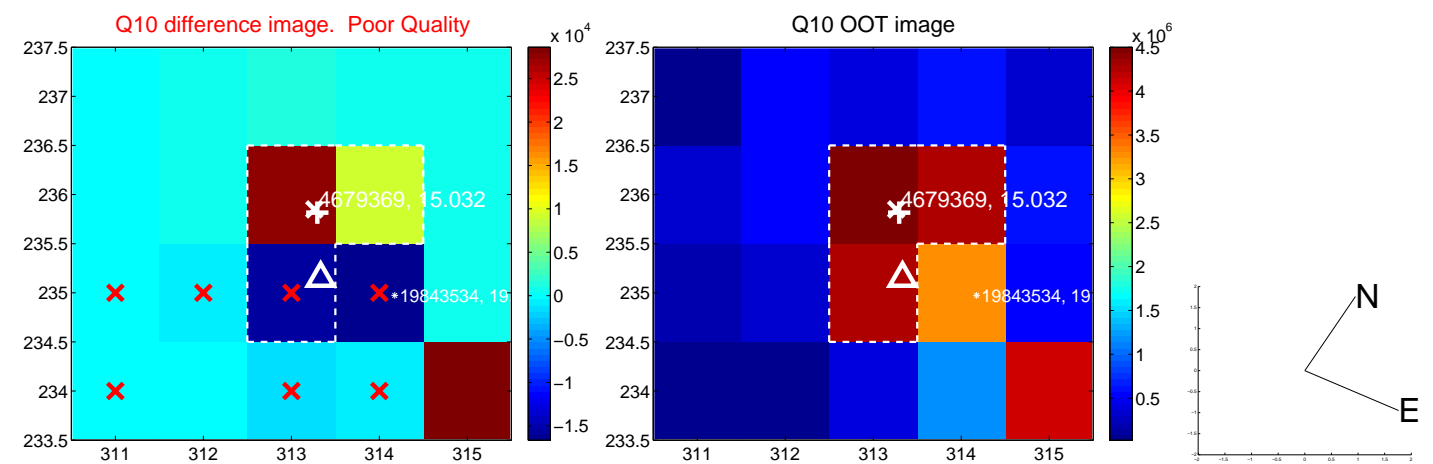
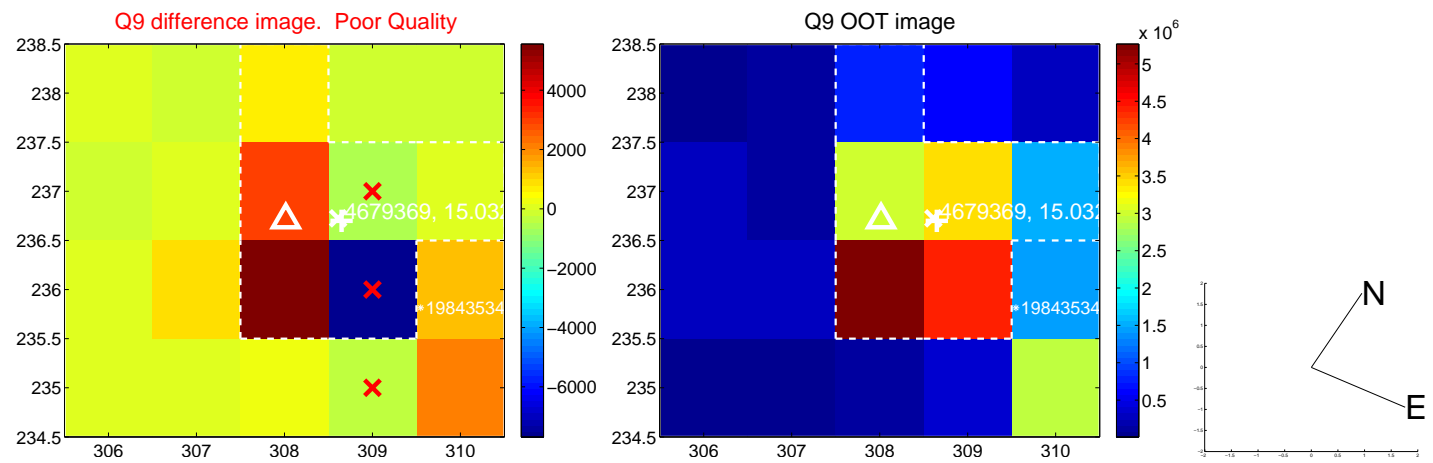
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



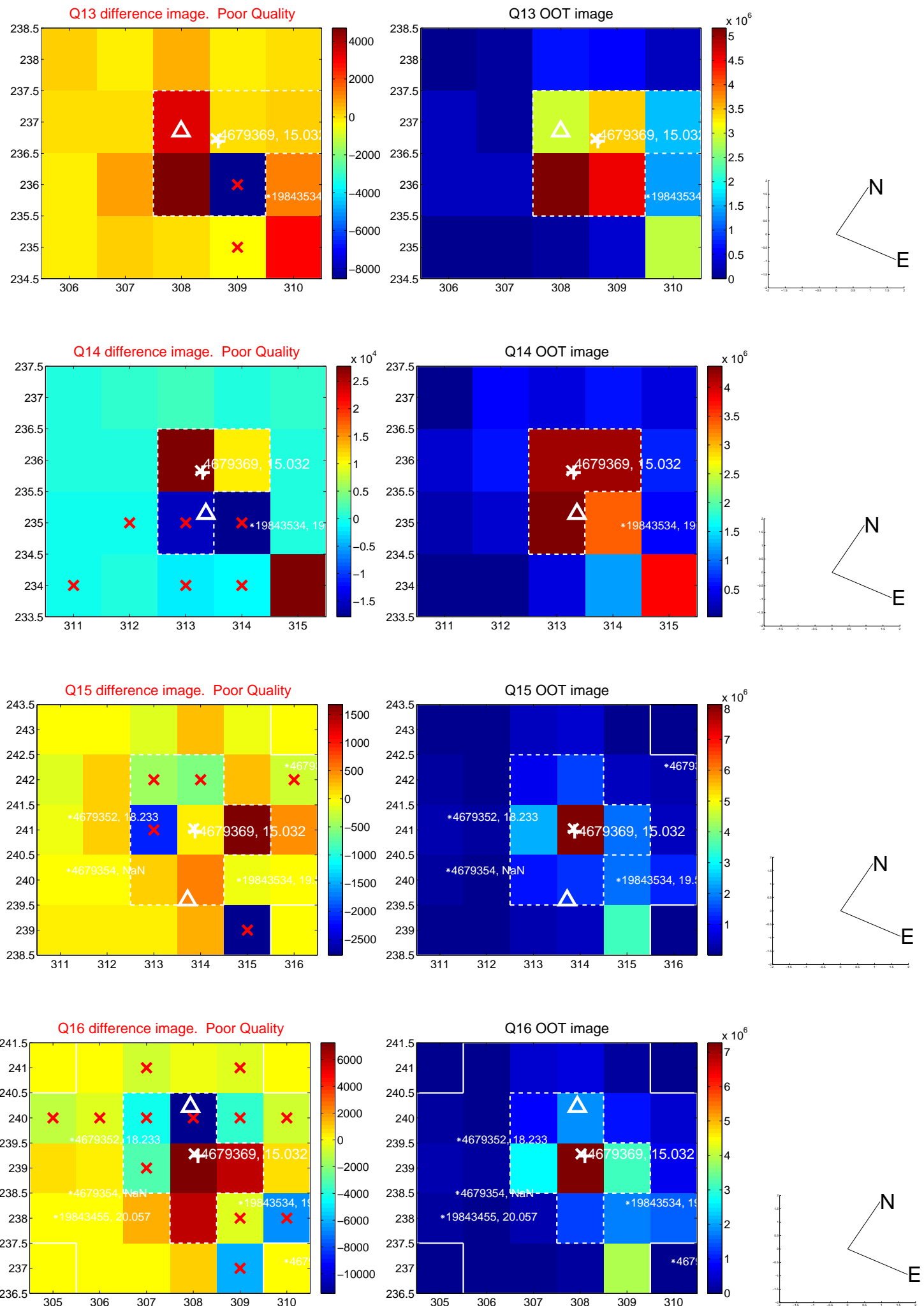
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



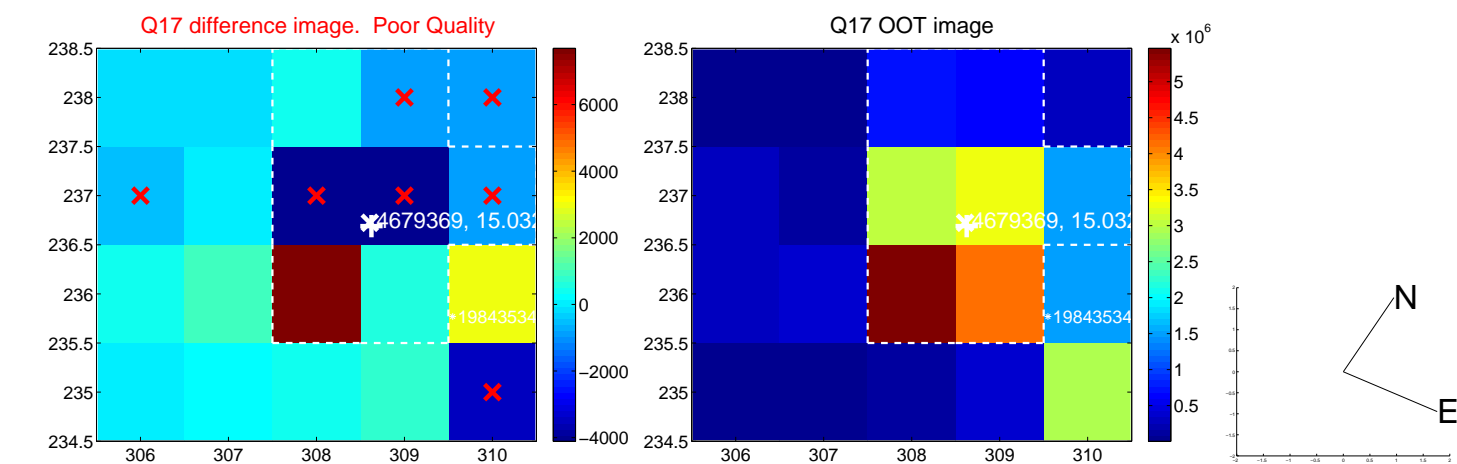
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



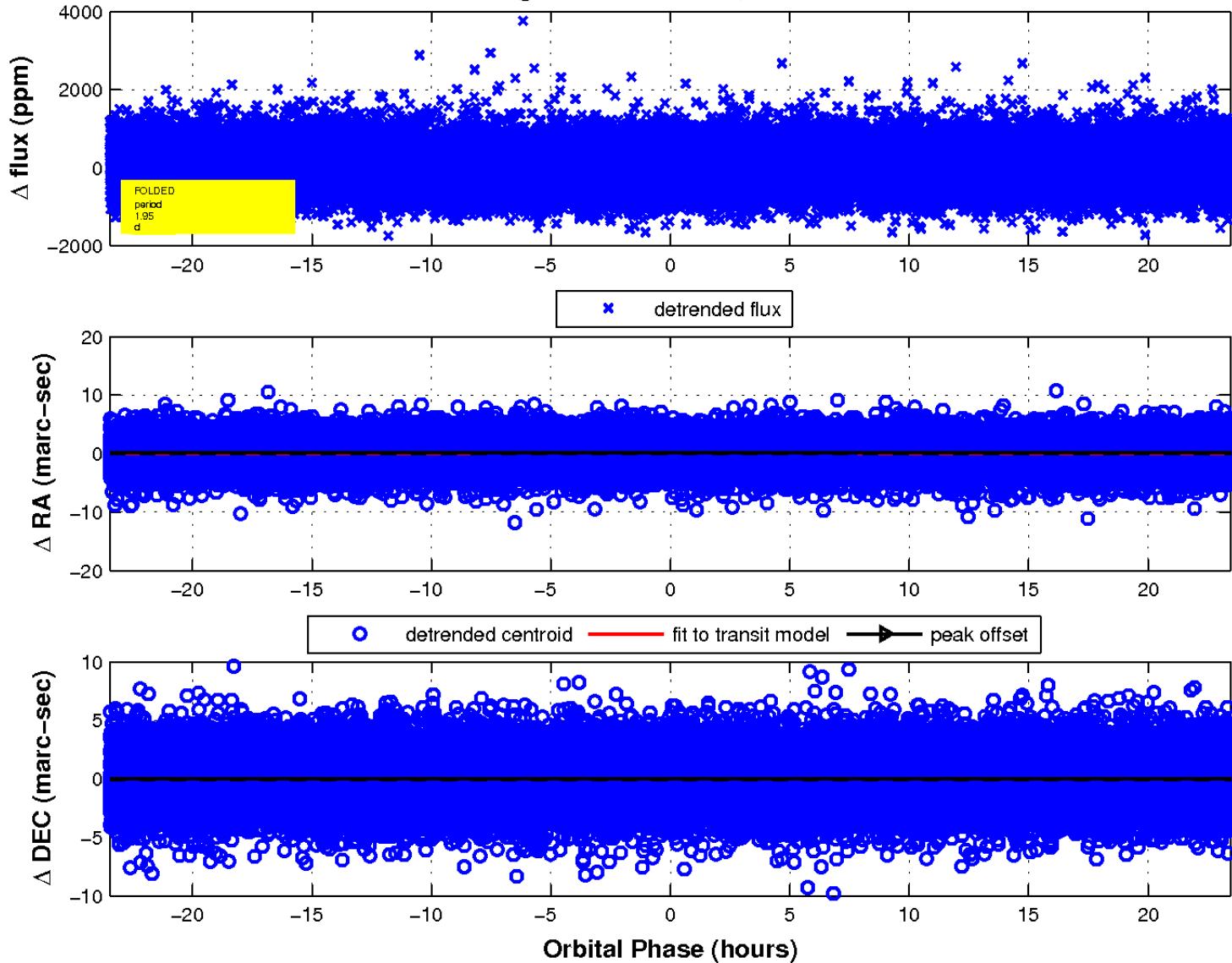
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

