

KIC 011235323

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})
011235323-01	OBS	7424.01	19.669016	132.498616	340696.6	12.500	9825.5	-1.0	0.72	5260	16.00	22.39
011235323-02	OBS	No	9.834115	132.532672	21293.6	12.500	3916.5	-1.0	0.72	5260	10.31	56.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011235323-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
011235323-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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.

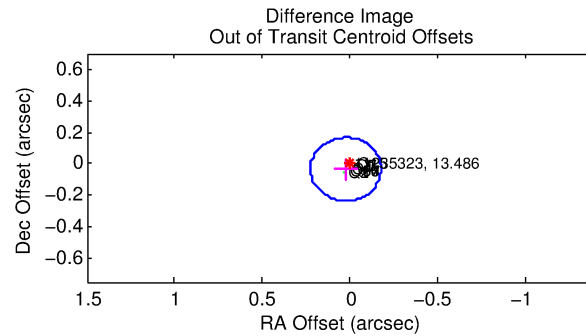
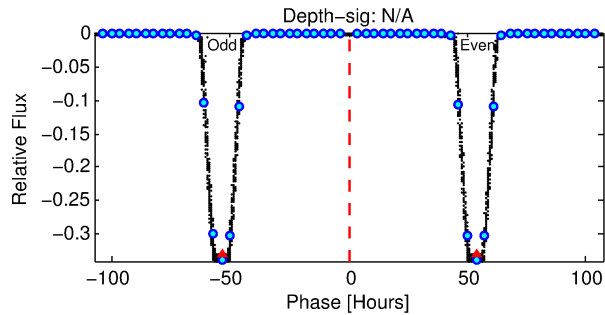
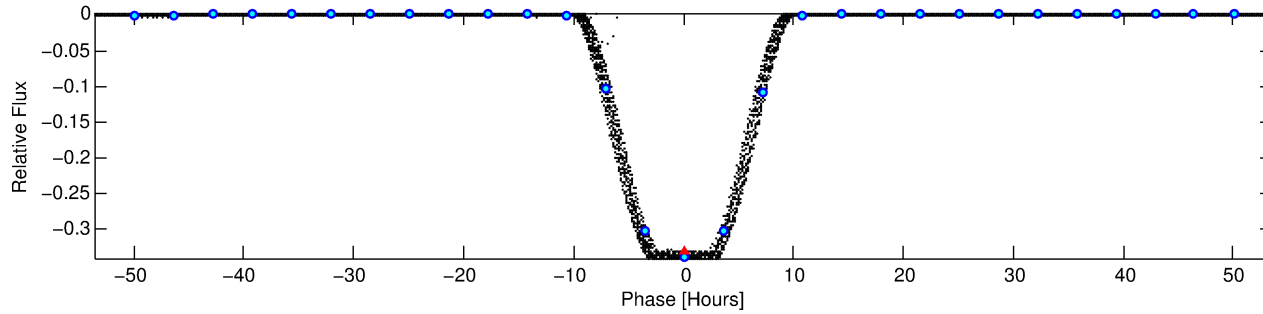
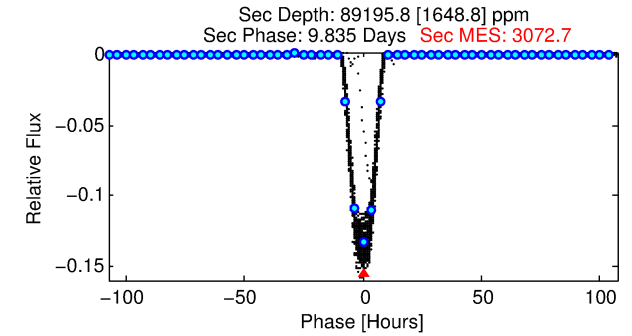
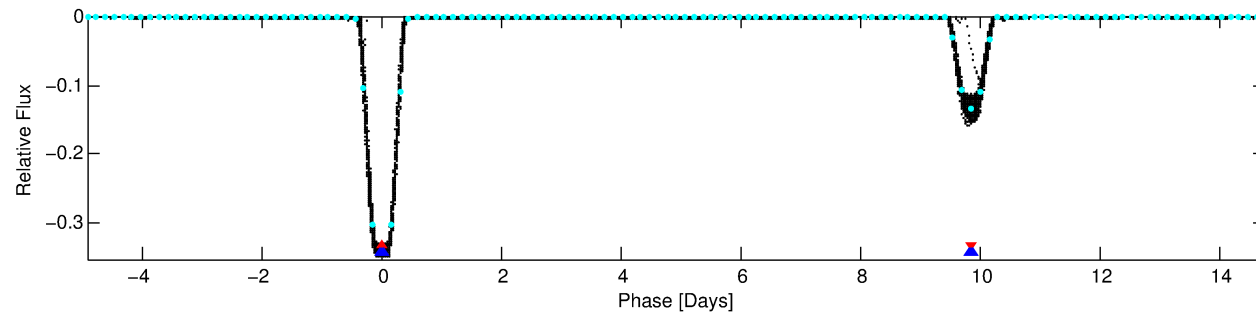
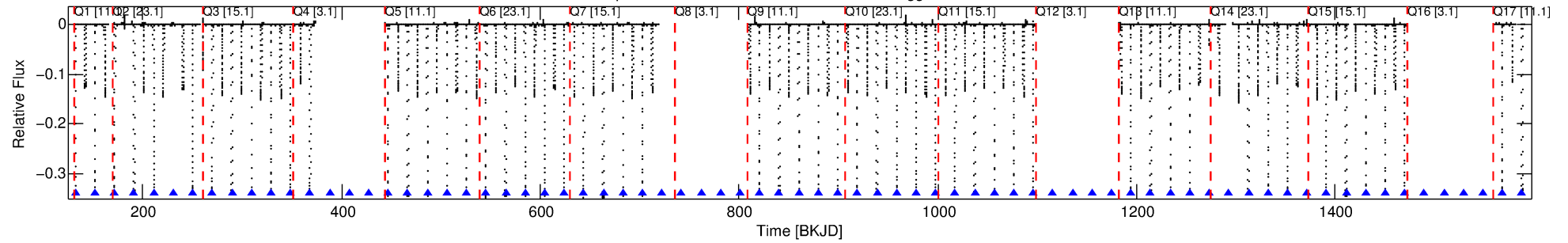
Ephemeris Match Information For 011235323-01

No Significant Match Found

DV One-Page Summary

KIC: 11235323 Candidate: 1 of 2 Period: 19.669 d
KOI: K07424.01 Corr: 0.768

Kp: 13.49 R*: 0.72 Rs Teff: 5260.0 K Logg: 4.56 Fe/H: -0.580



TPS TCE Results:

Period = 19.66902 d
Epoch = 132.4986 BKJD

DV fit results are unavailable

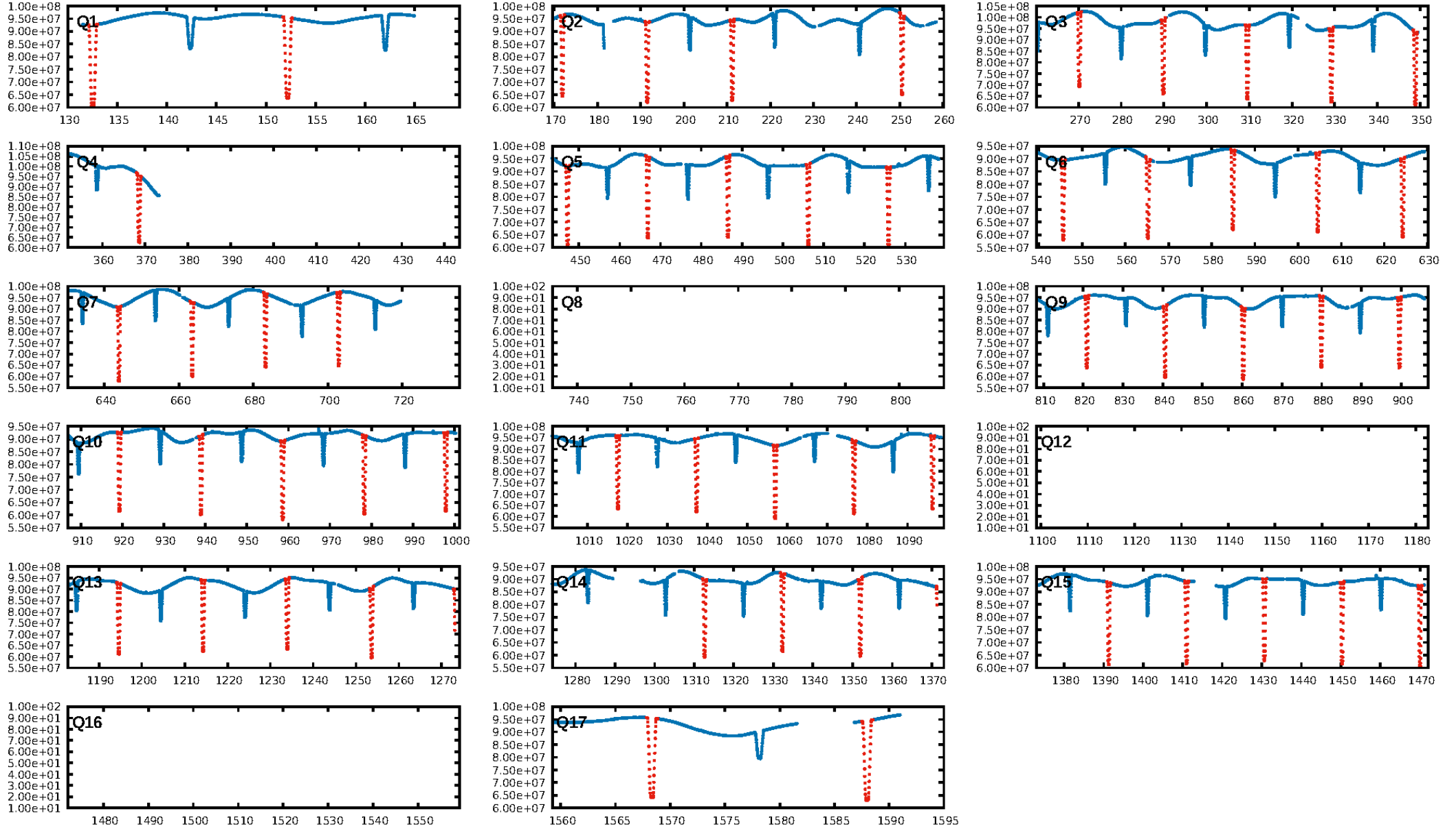
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [13.35 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [52/52]
GhostDiagnostic-chr: 0.3616
Centroid-sig: 0.0%
Centroid-so: 0.083 arcsec [164.58 σ]
OotOffset-rm: 0.043 arcsec [0.64 σ]
KicOffset-rm: 0.126 arcsec [1.88 σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 0.00 [0/14]

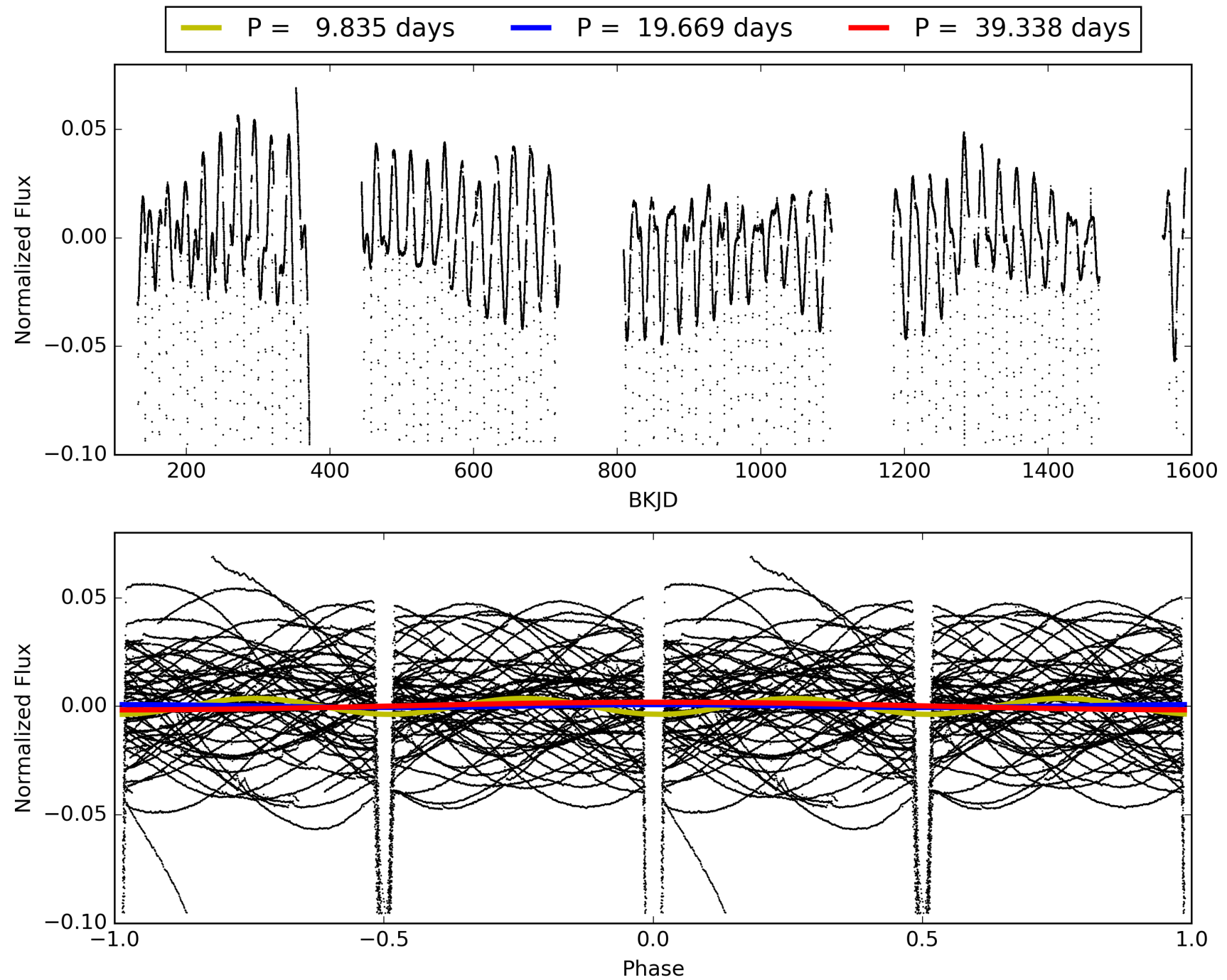
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:15:48 Z

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

TCE 011235323-01, PDC Light Curves

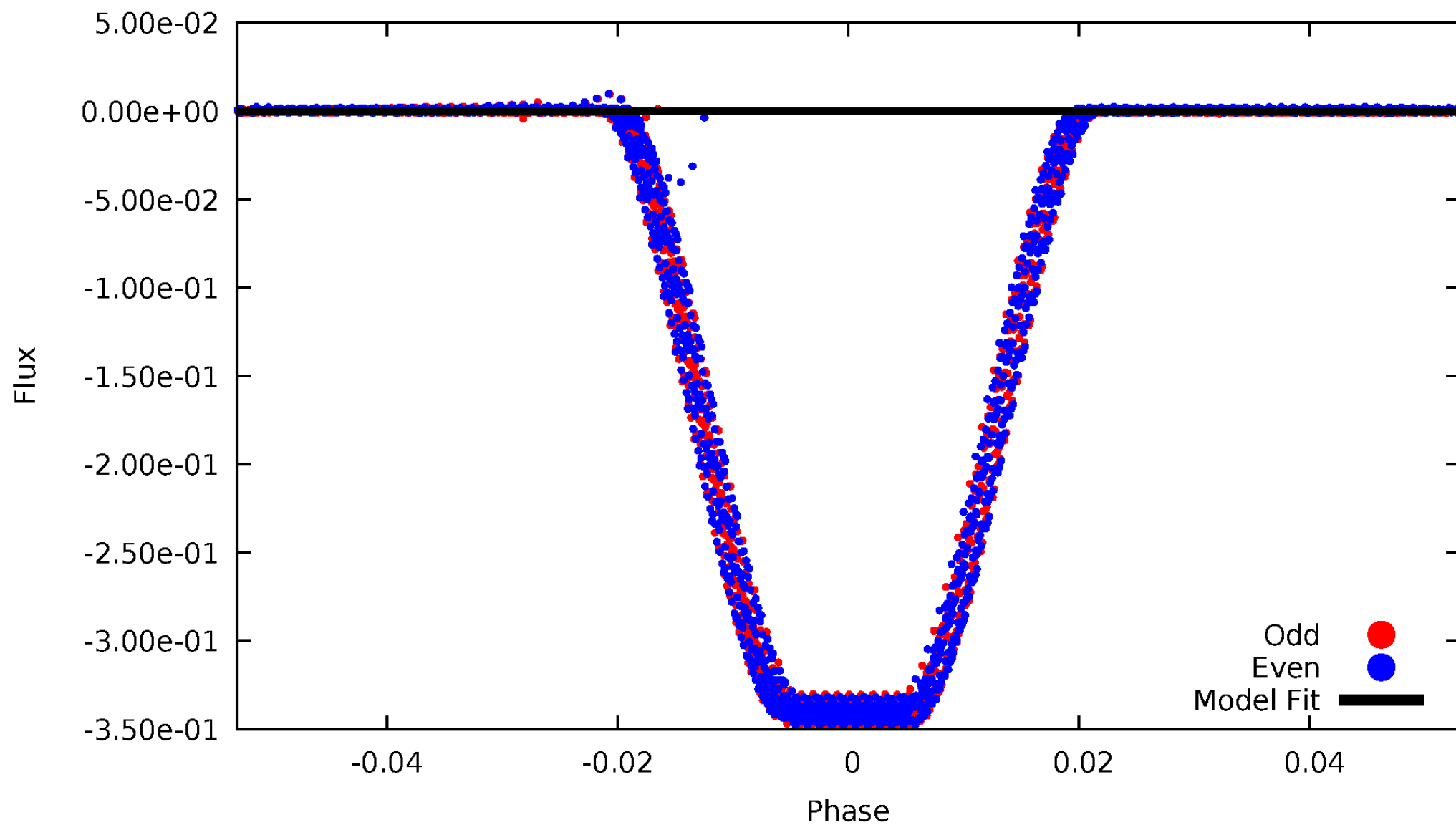


TCE 011235323-01



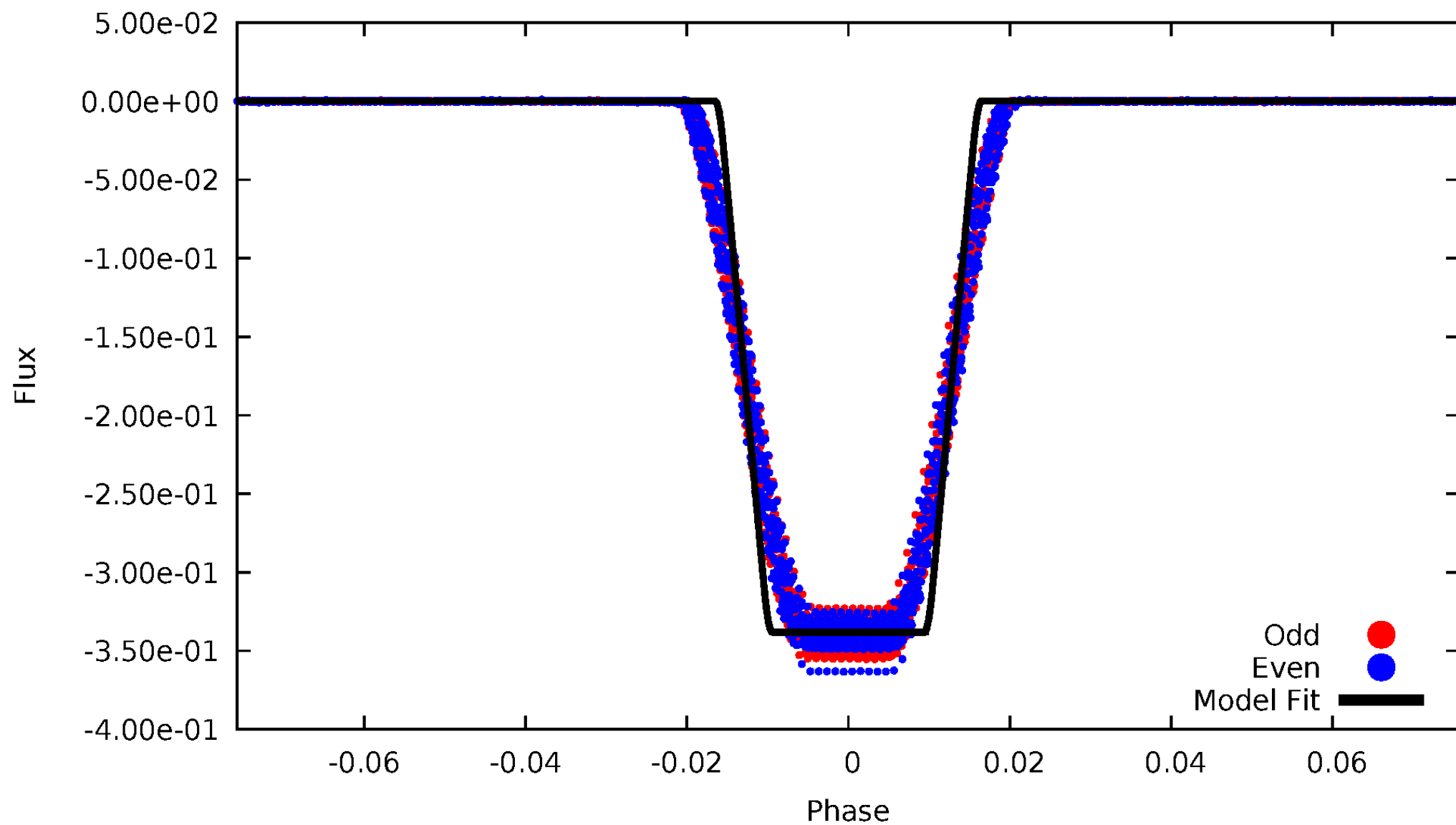
DV Odd/Even

TCE 011235323-01



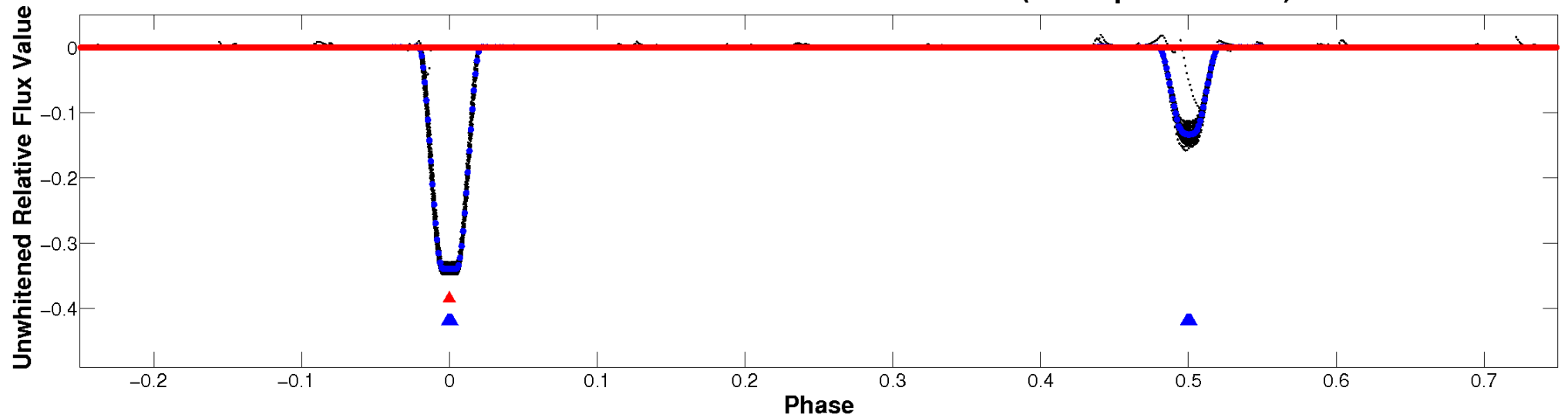
ALT Odd/Even

TCE 011235323-01



Non-Whitened Vs. Whitened Light Curve

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

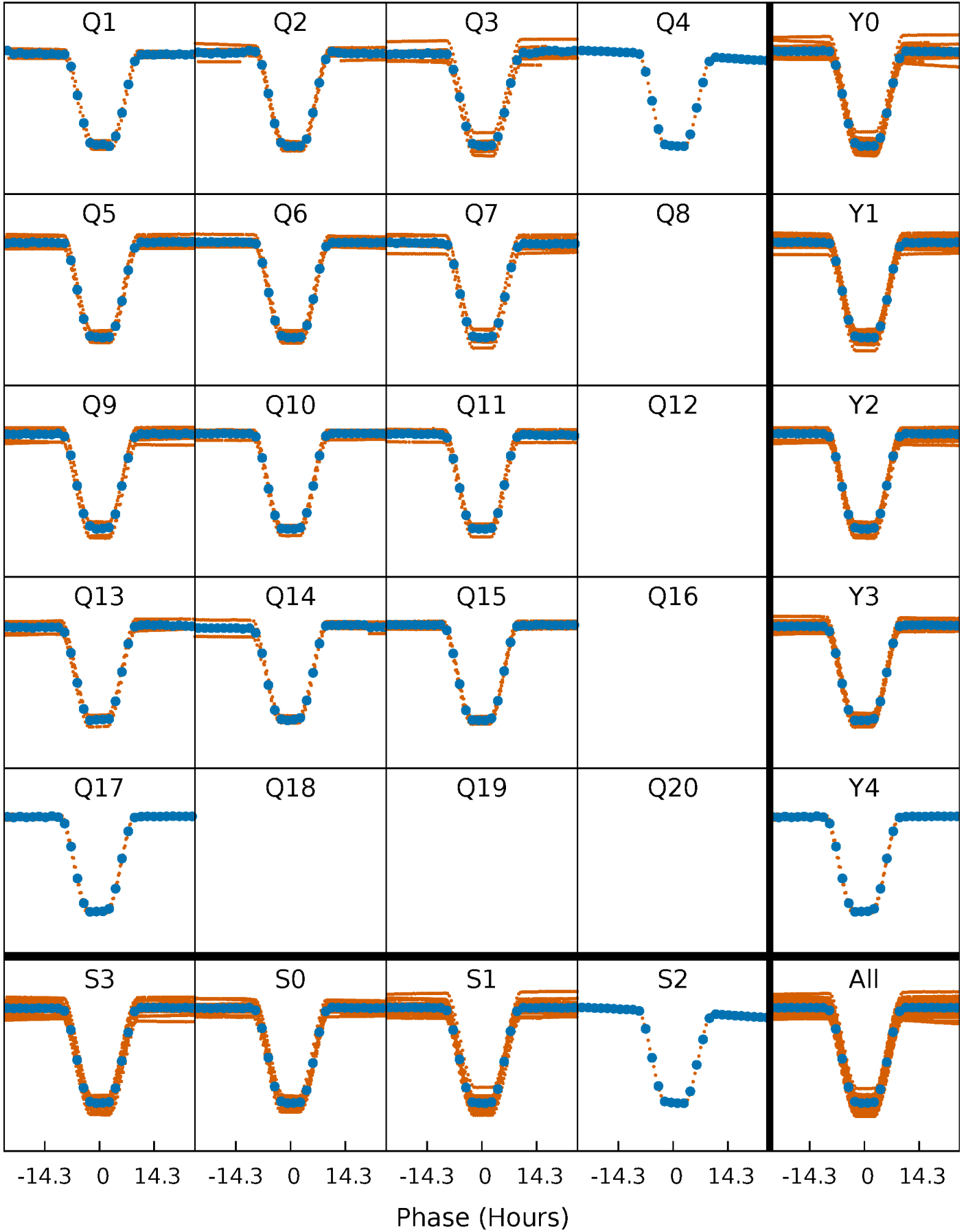


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



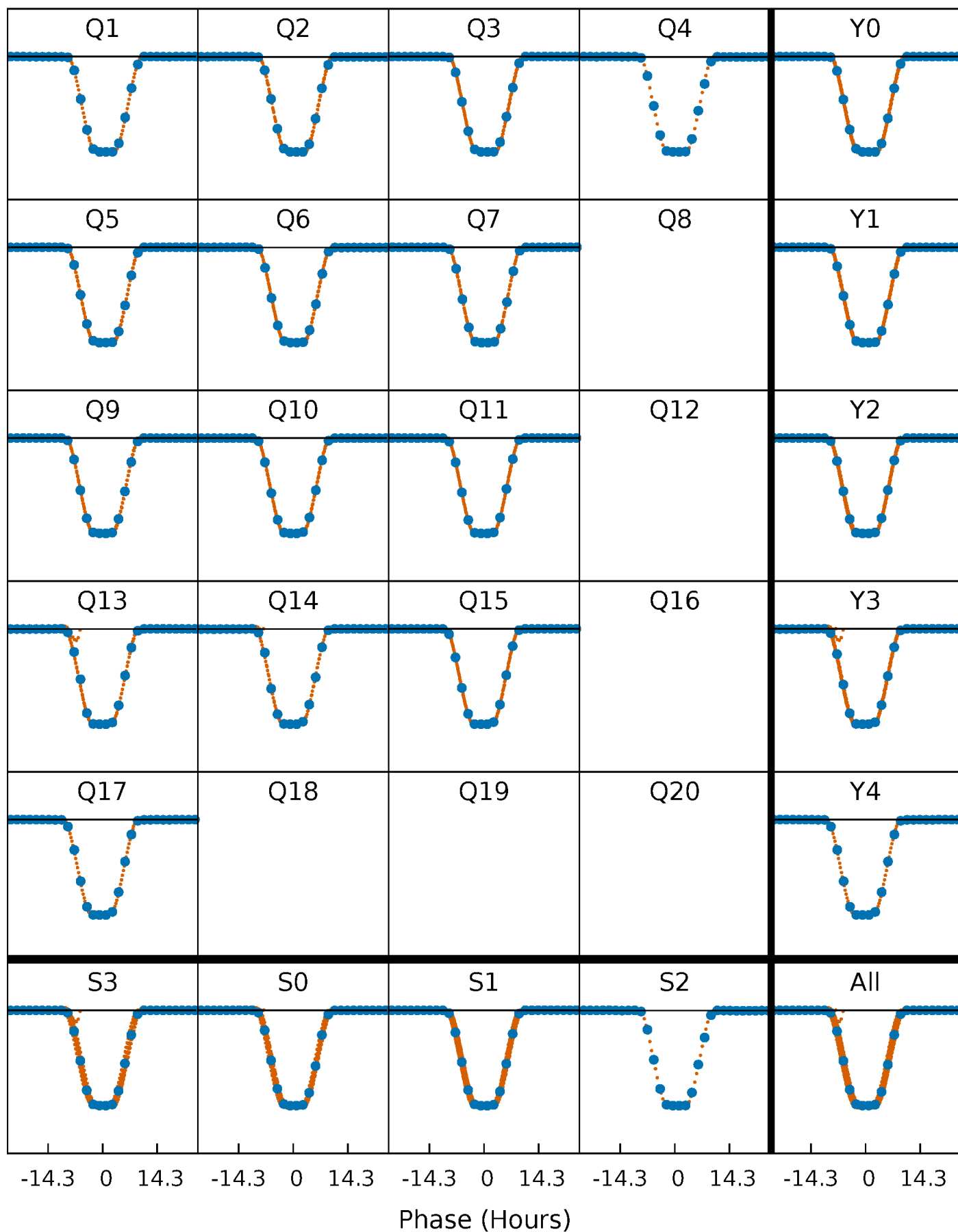
PDC Quarter-Phased Transit Curves

TCE 011235323-01 P= 19.669016 Days $T_0=132.498616$ (BKJD)



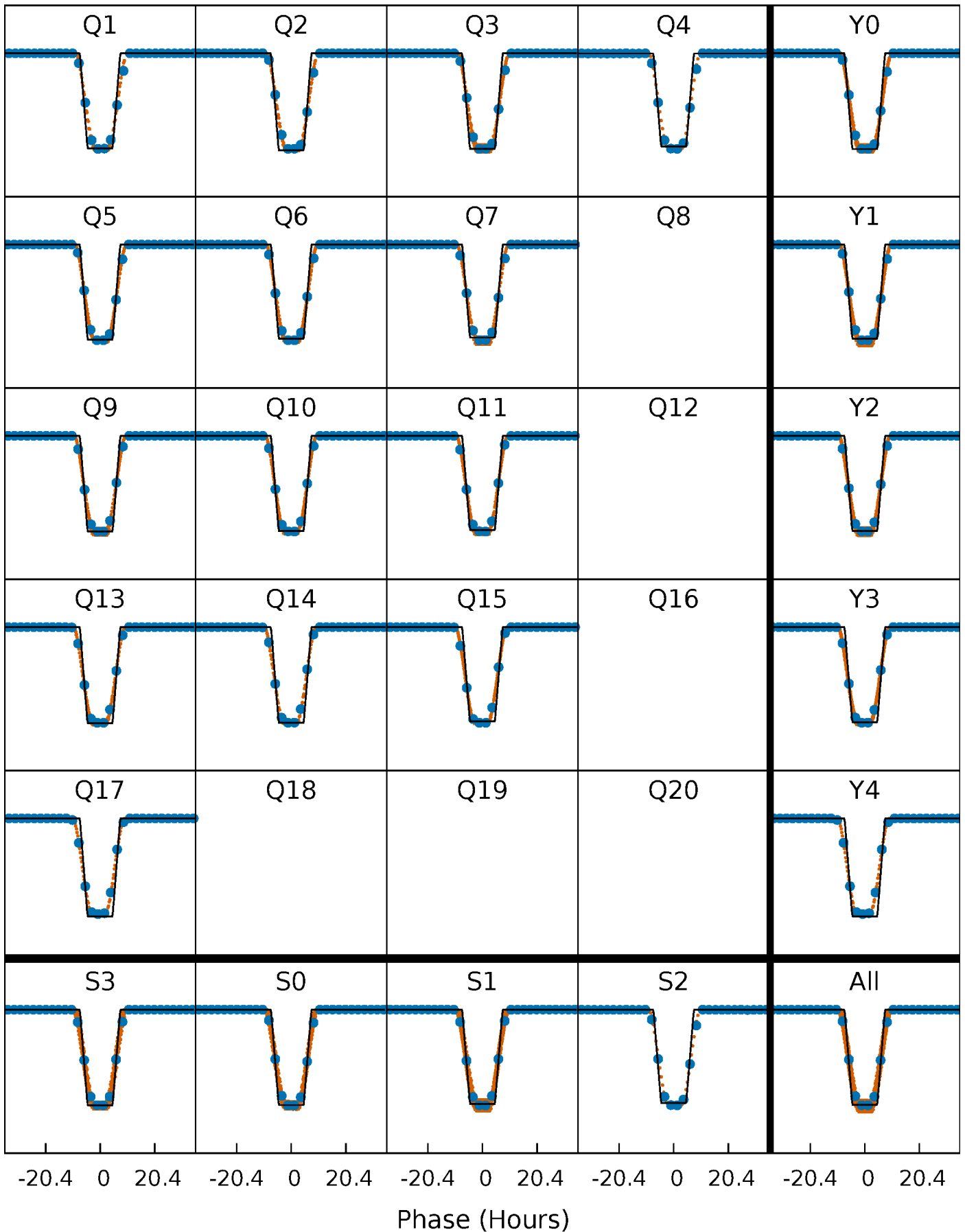
DV Quarter-Phased Transit Curves

TCE 011235323-01 P= 19.669016 Days $T_0=132.498616$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

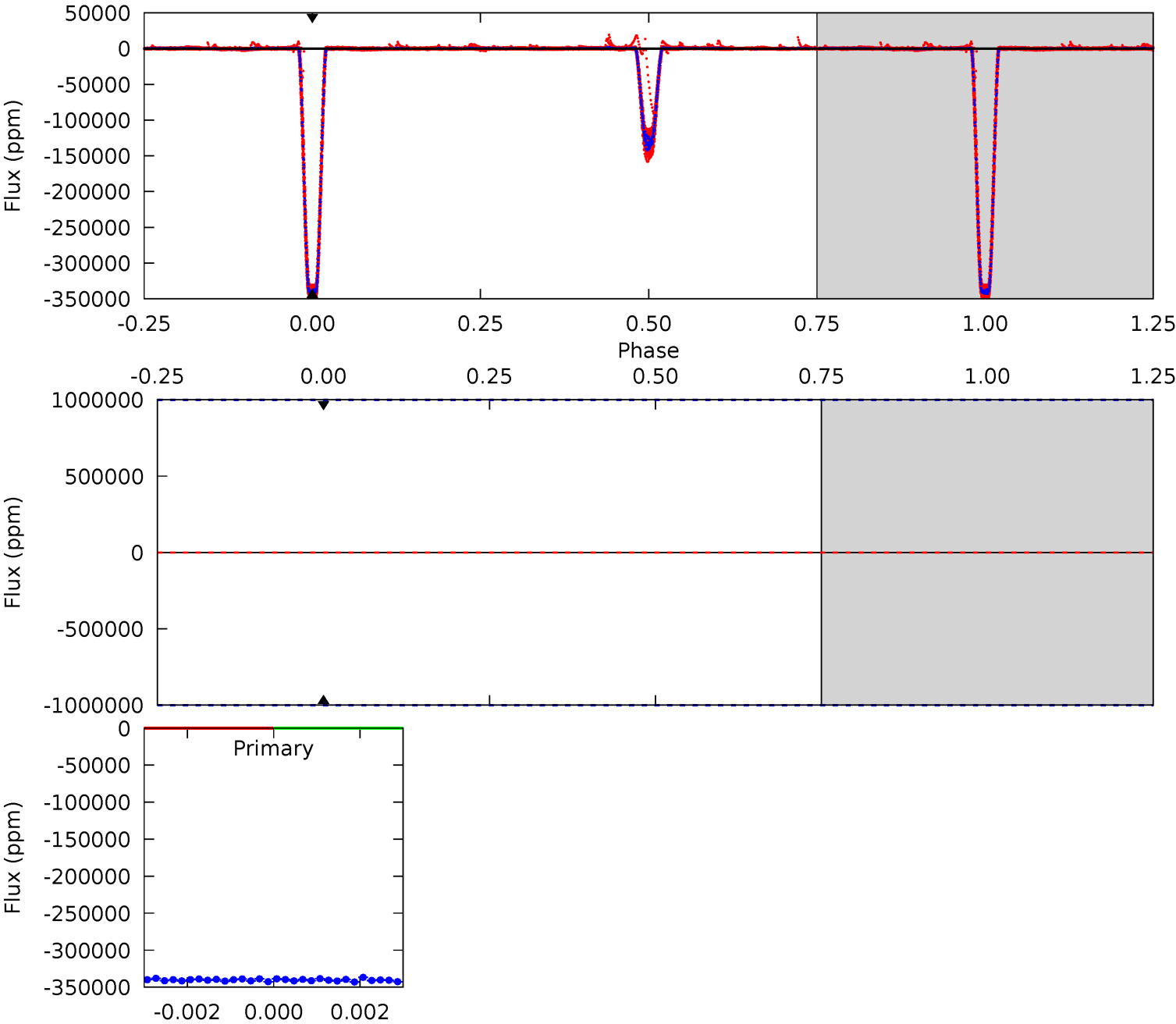
TCE 011235323-01 P= 19.669016 Days $T_0=132.501999$ (BKJD)



DV Model-Shift Uniqueness Test

011235323-01, P = 19.669016 Days, E = 112.829600 Days

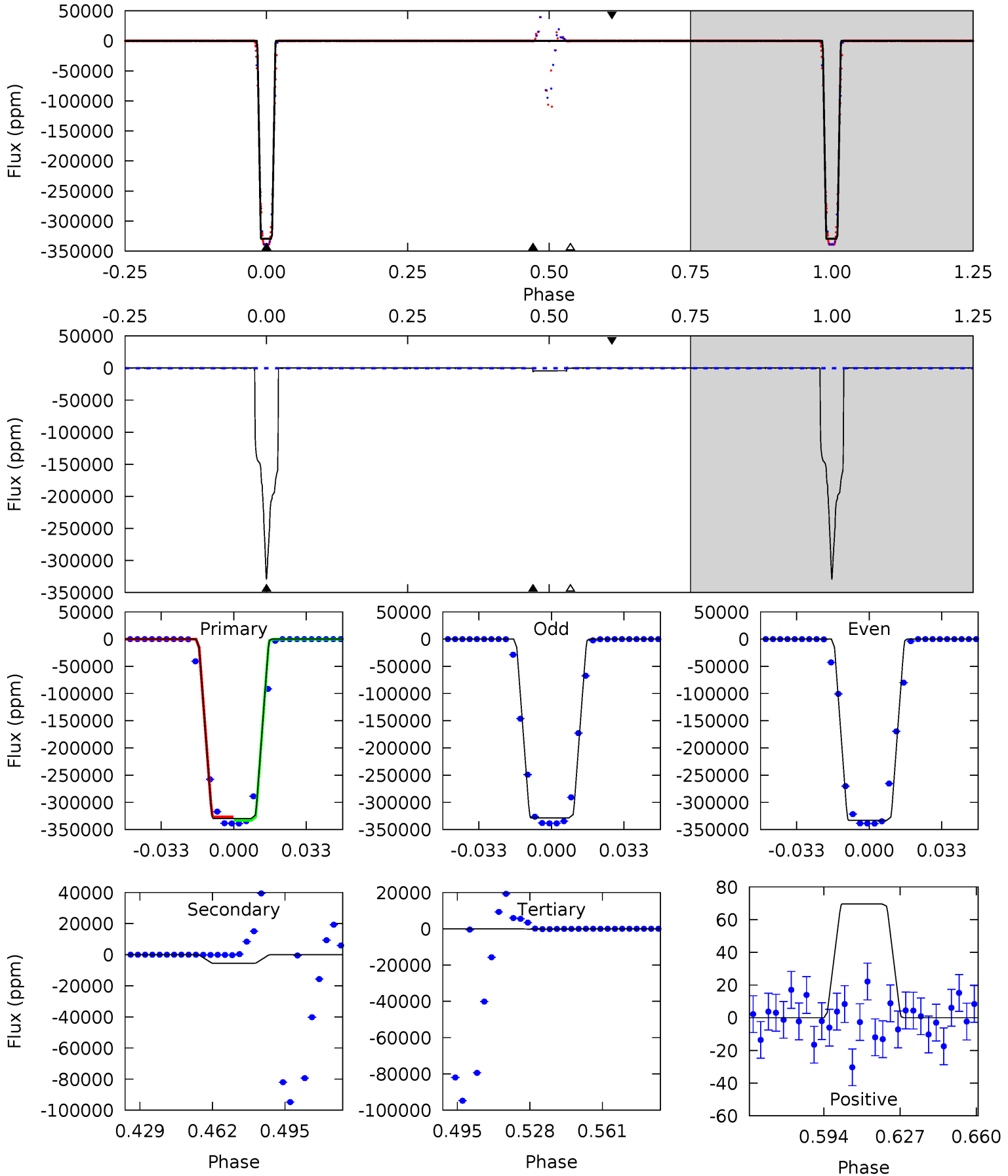
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011235323-01, P = 19.669016 Days, E = 112.832983 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4718	78.7	2.56	1.00	4.79	2.13	1.89	4715	4717	76.1	77.7	53.9	1.01	0.00	0



Stellar Parameters For KIC 011235323

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5260^{+157}_{-141}	$4.560^{+0.083}_{-0.060}$	$-0.580^{+0.350}_{-0.300}$	$0.717^{+0.080}_{-0.072}$	$0.680^{+0.095}_{-0.032}$	$2.599^{+0.878}_{-0.551}$
	+3%/-3%	+2%/-1%	+60%/-52%	+11%/-10%	+14%/-5%	+34%/-21%
Source	PHO1	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 011235323-01 / KOI 7424.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$16.34^{+7.96}_{-7.76}$	773^{+32}_{-30}	-2442^{+9323}_{-4455}	$-9.405^{+4210.088}_{-4411.203}$
Alt.	-5494 ± 70	$45.86^{+7.85}_{-7.82}$	775^{+30}_{-32}	2654^{+135}_{-105}	23^{+10}_{-6}

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 $A_{obs} \gg 1.0$

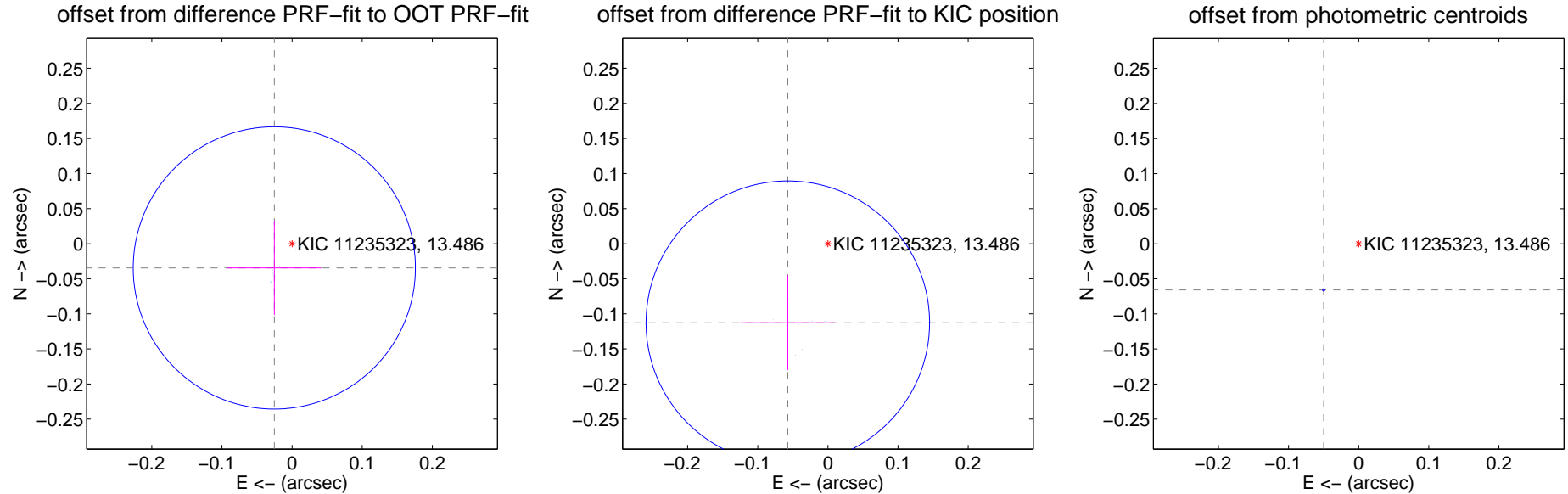
DV Centroid Data

Supplemental centroid analysis for 011235323-01. Kepler magnitude: 13.49. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

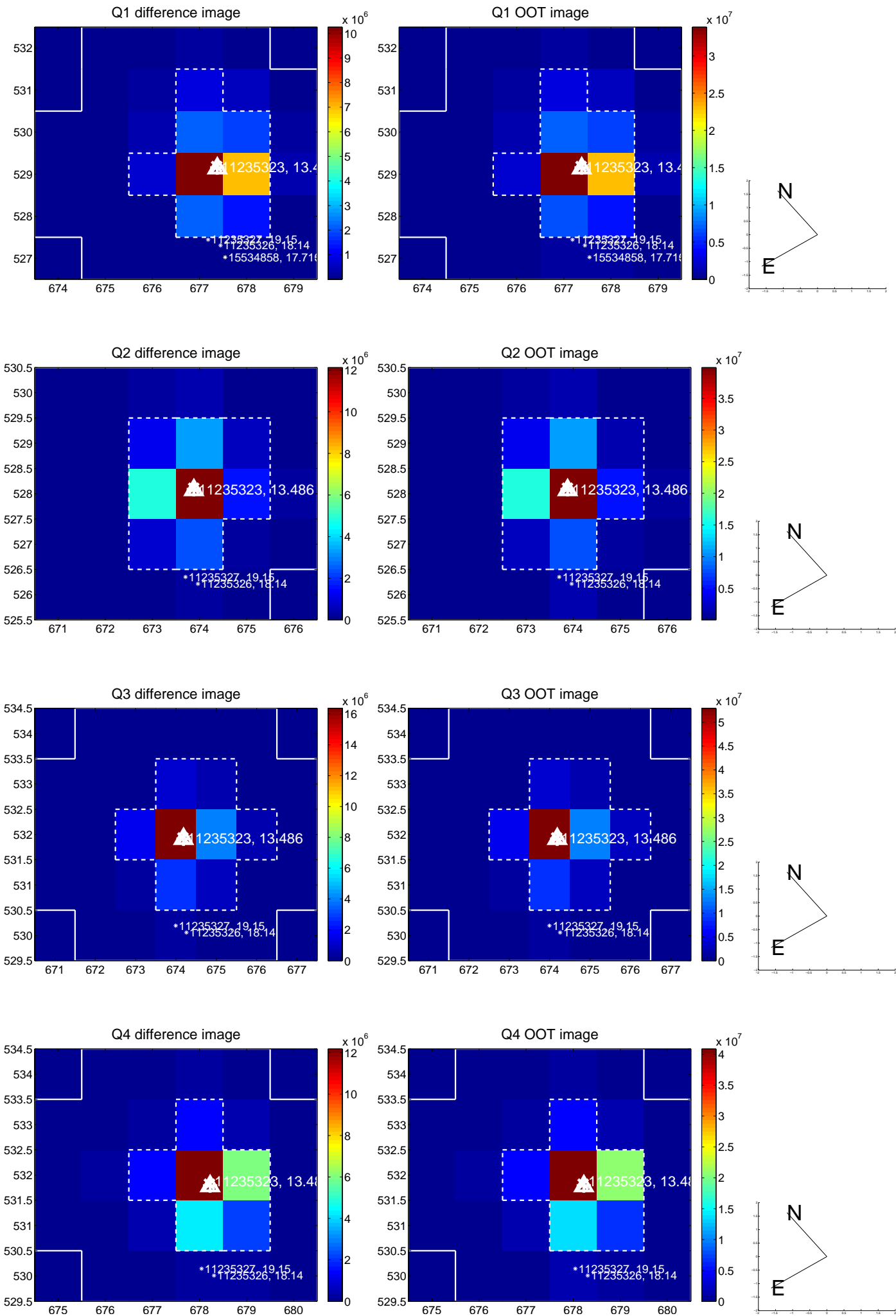
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.043 ± 0.067	0.64	0.025 ± 0.067	-0.035 ± 0.067
PRF-fit source offset from KIC position	0.126 ± 0.067	1.88	0.057 ± 0.067	-0.113 ± 0.067
photometric centroid source offset	0.08 ± 0.00	164.58	0.05 ± 0.00	-0.07 ± 0.00

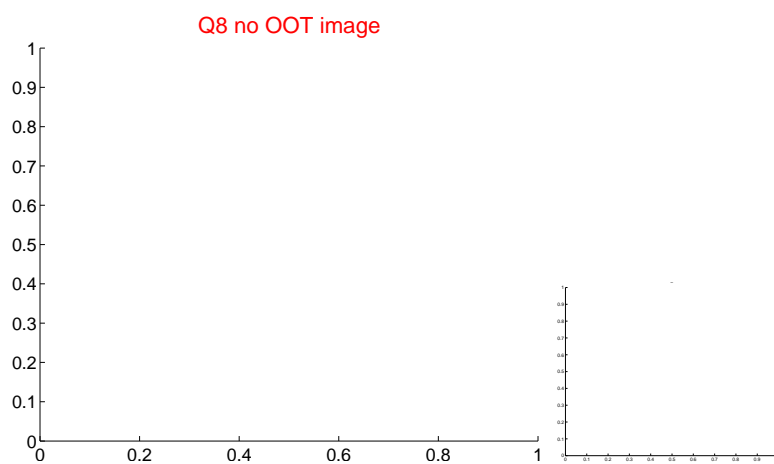
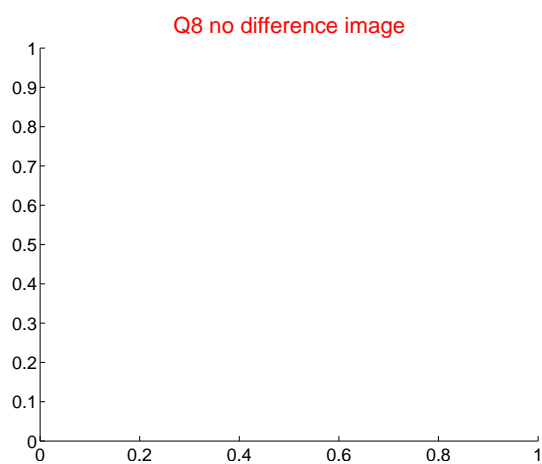
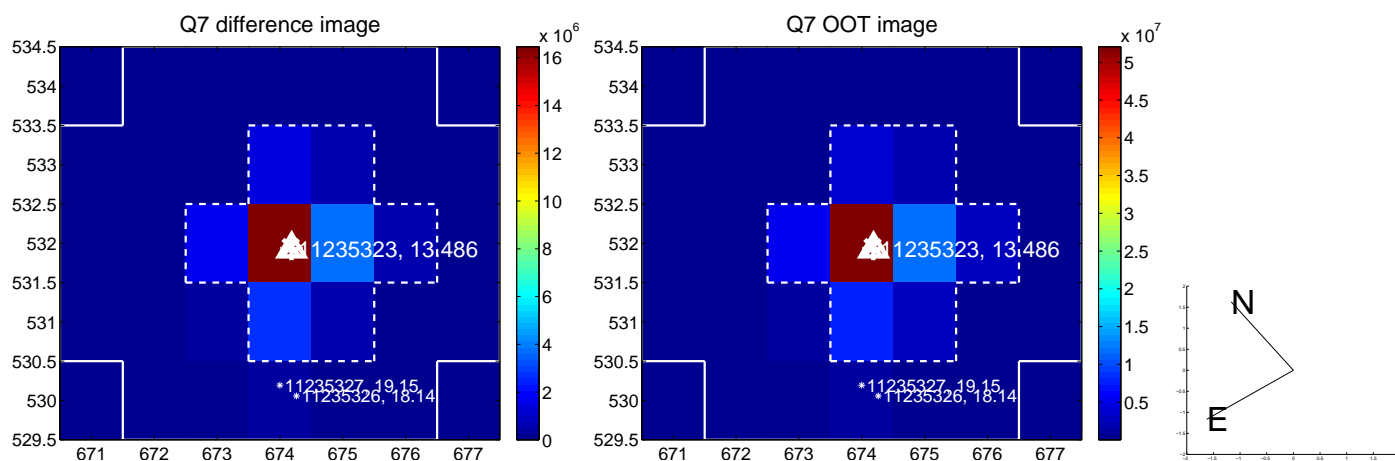
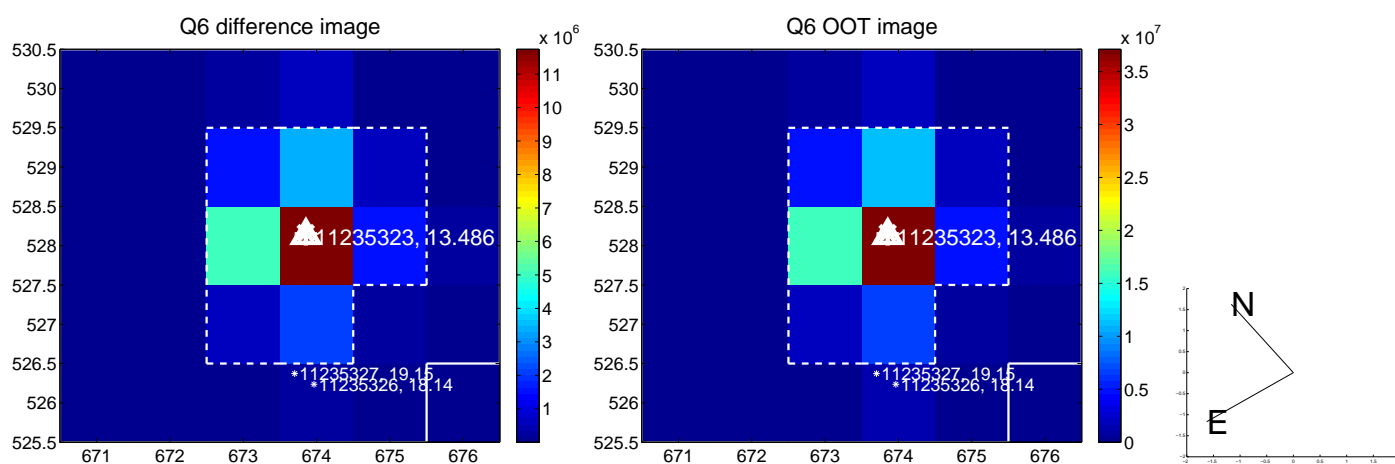
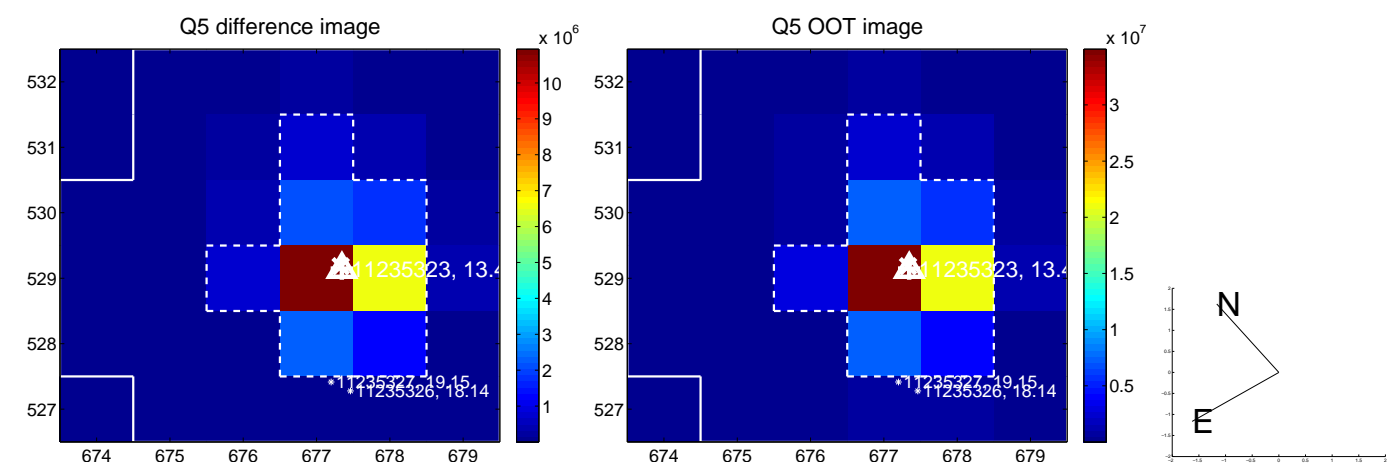


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

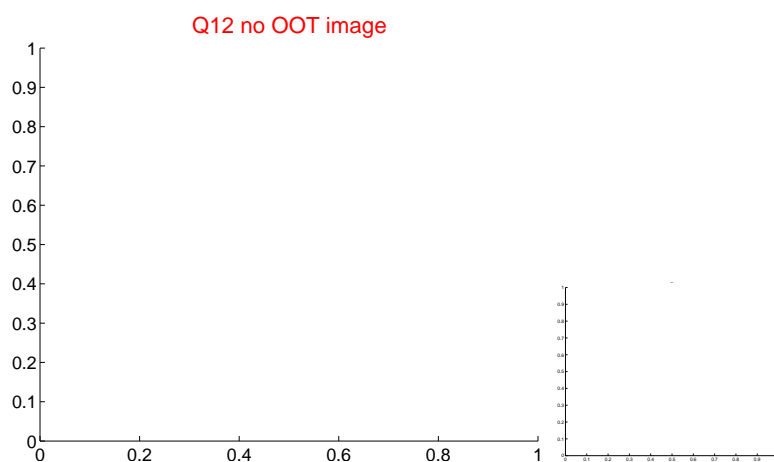
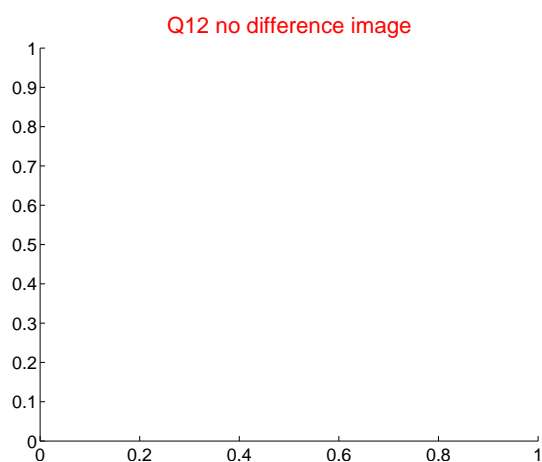
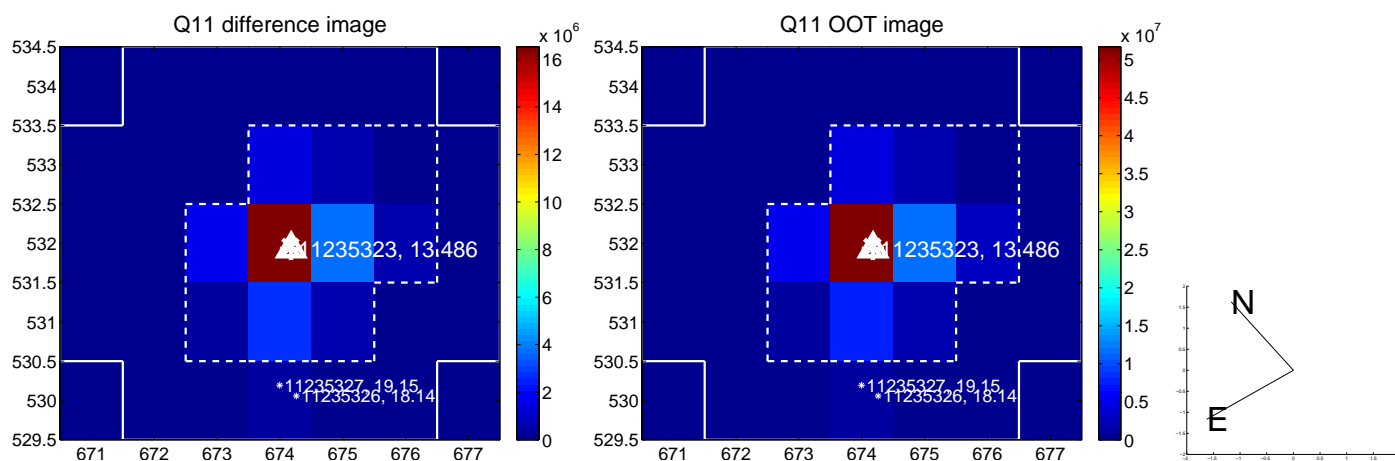
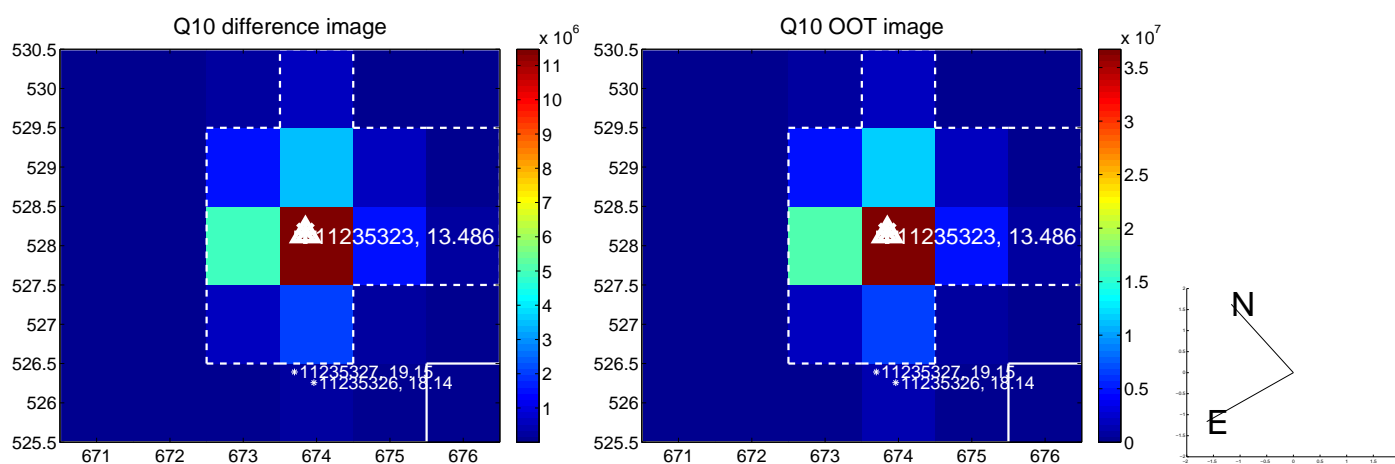
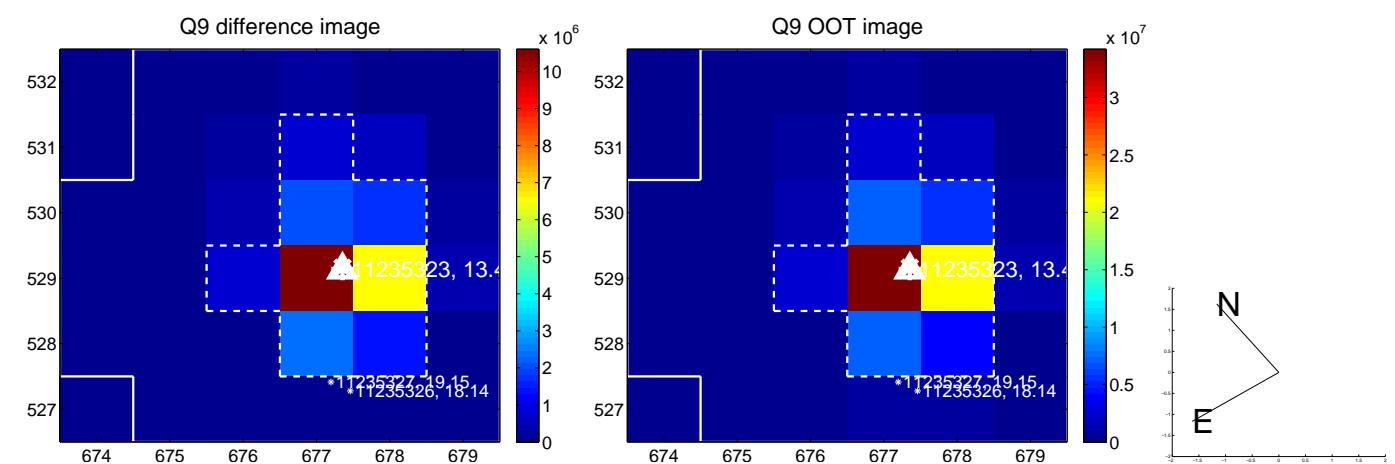
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



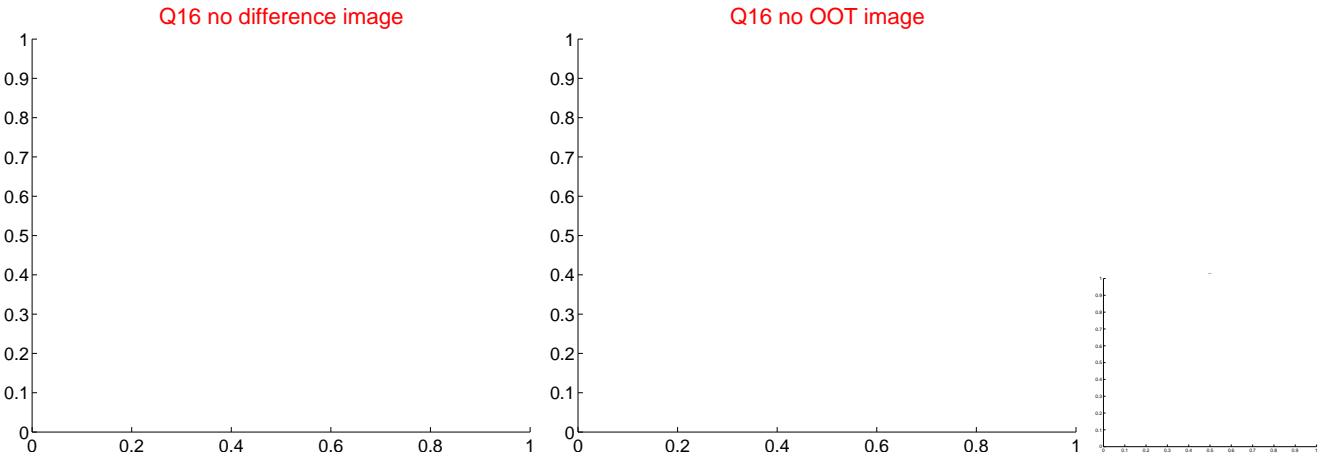
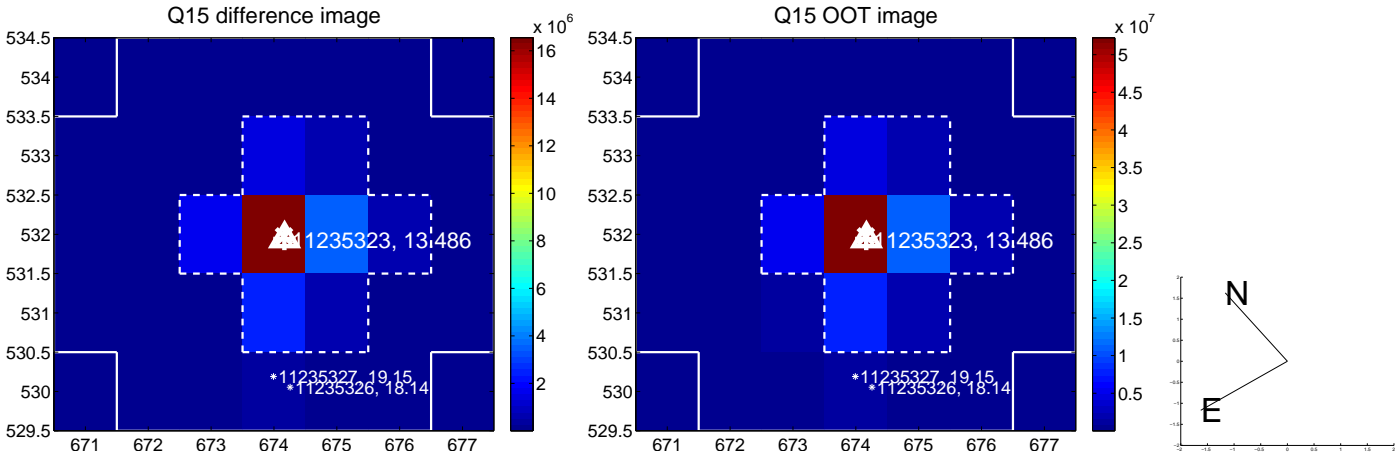
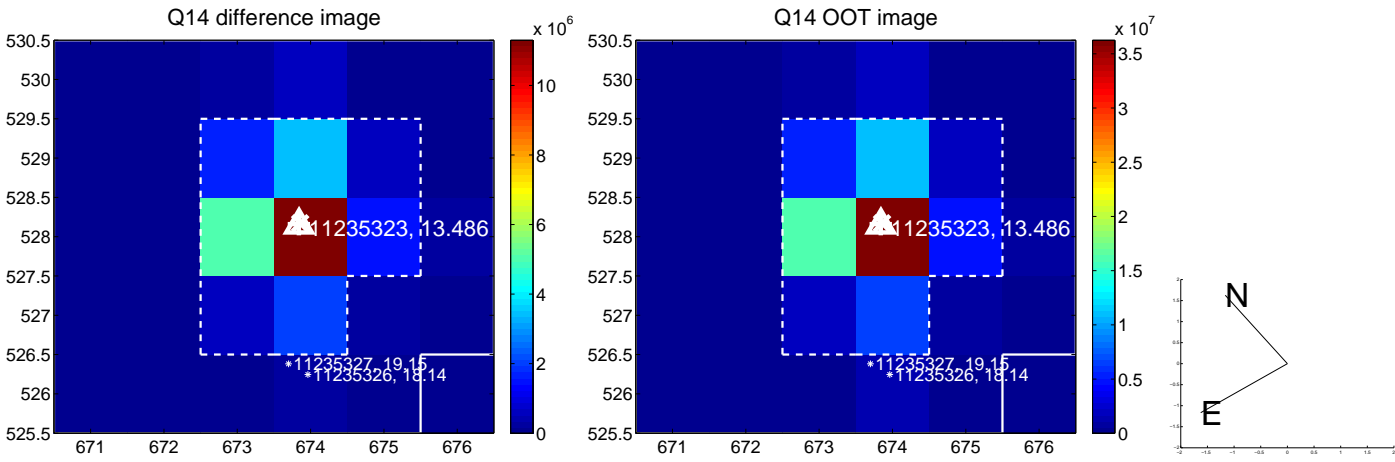
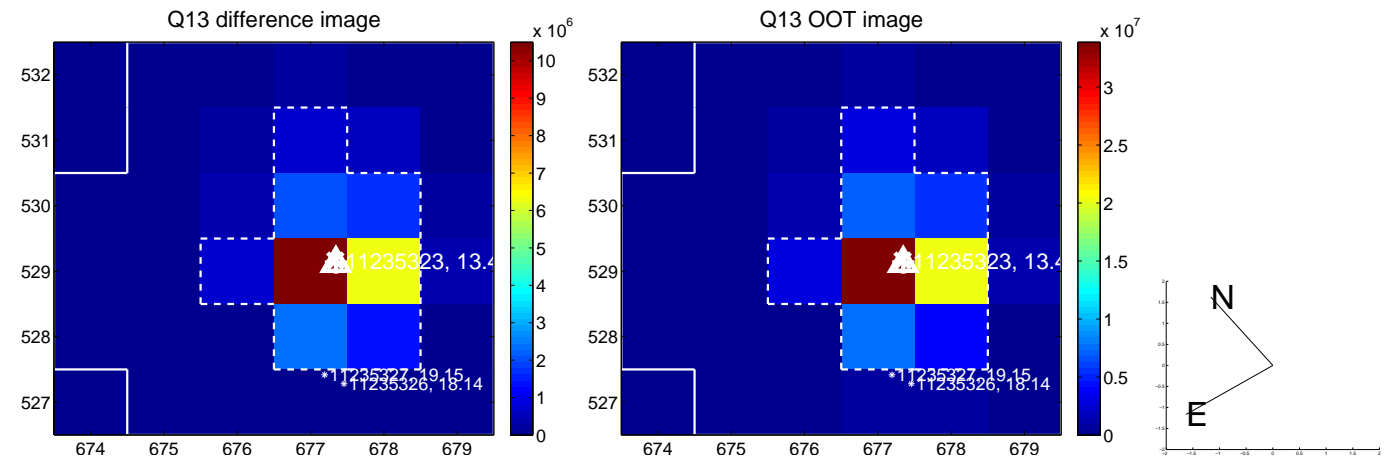
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



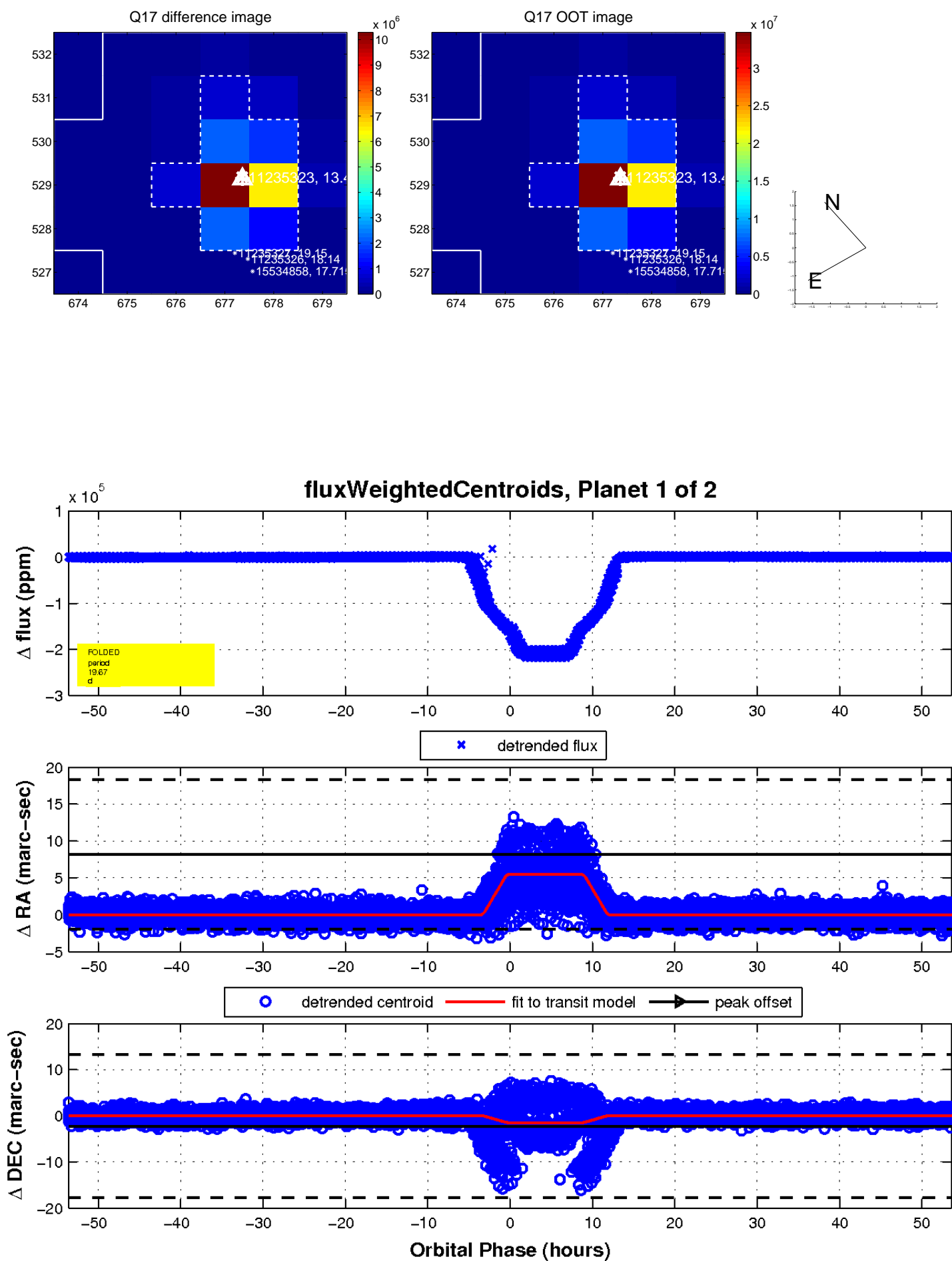
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

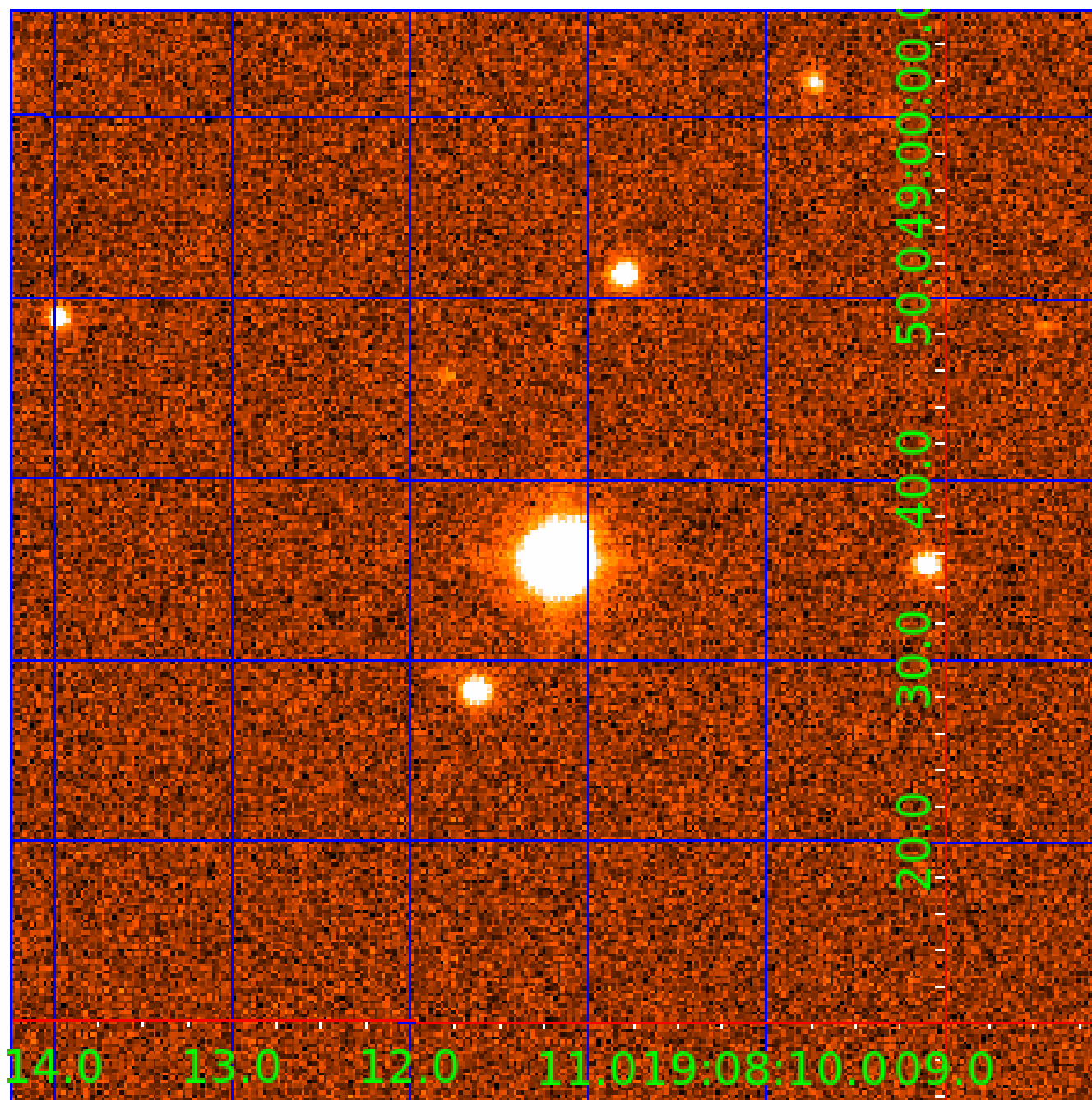


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011235323

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})
011235323-01	OBS	7424.01	19.669016	132.498616	340696.6	12.500	9825.5	-1.0	0.72	5260	16.00	22.39
011235323-02	OBS	No	9.834115	132.532672	21293.6	12.500	3916.5	-1.0	0.72	5260	10.31	56.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011235323-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
011235323-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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.

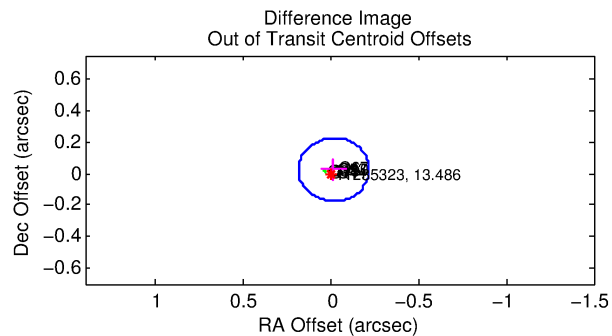
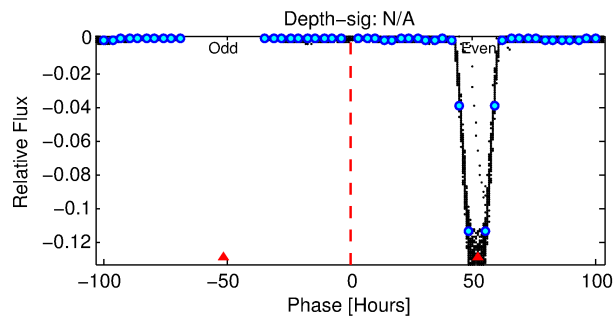
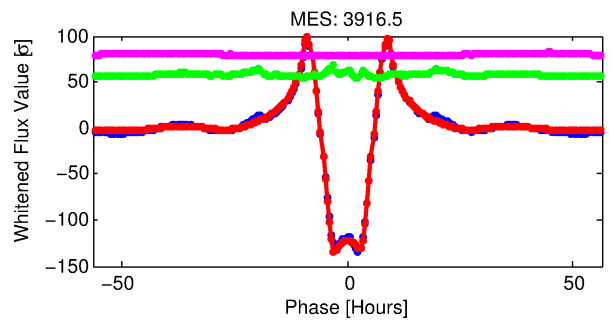
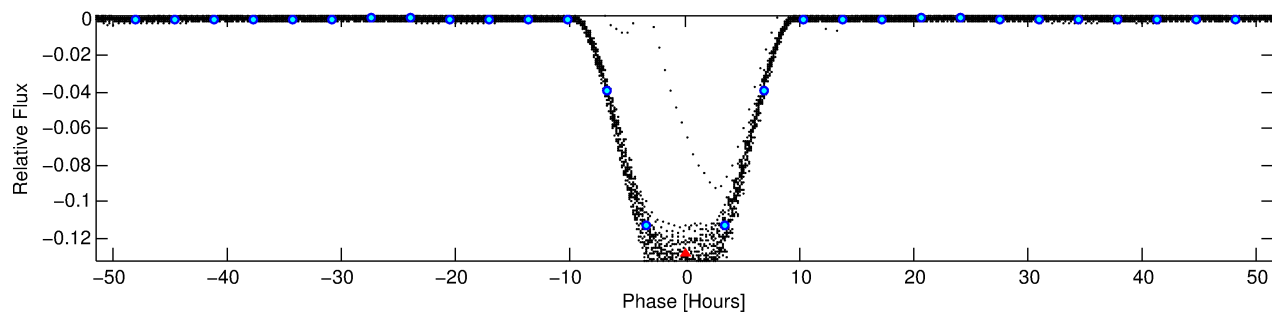
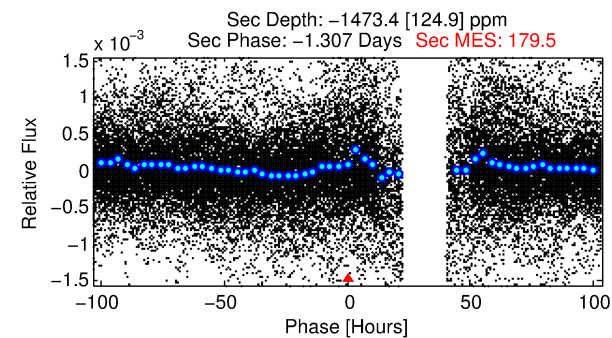
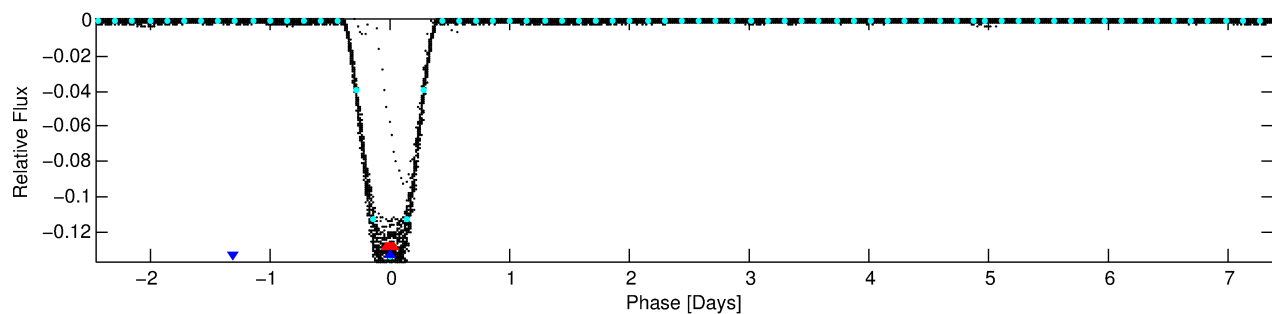
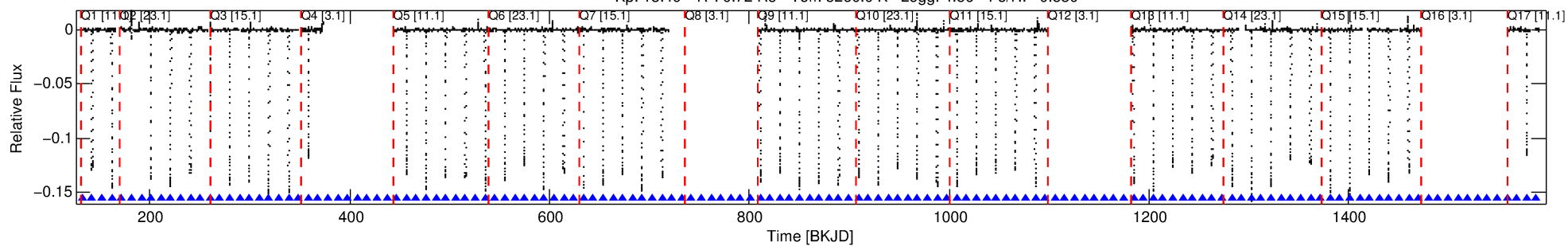
Ephemeris Match Information For 011235323-02

No Significant Match Found

DV One-Page Summary

KIC: 11235323 Candidate: 2 of 2 Period: 9.834 d
KOI: K07424 Corr: No Ephemeris Match

Kp: 13.49 R*: 0.72 Rs Teff: 5260.0 K Logg: 4.56 Fe/H: -0.580



TPS TCE Results:

Period = 9.83412 d
Epoch = 132.5327 BKJD

DV fit results are unavailable

DV Diagnostic Results:

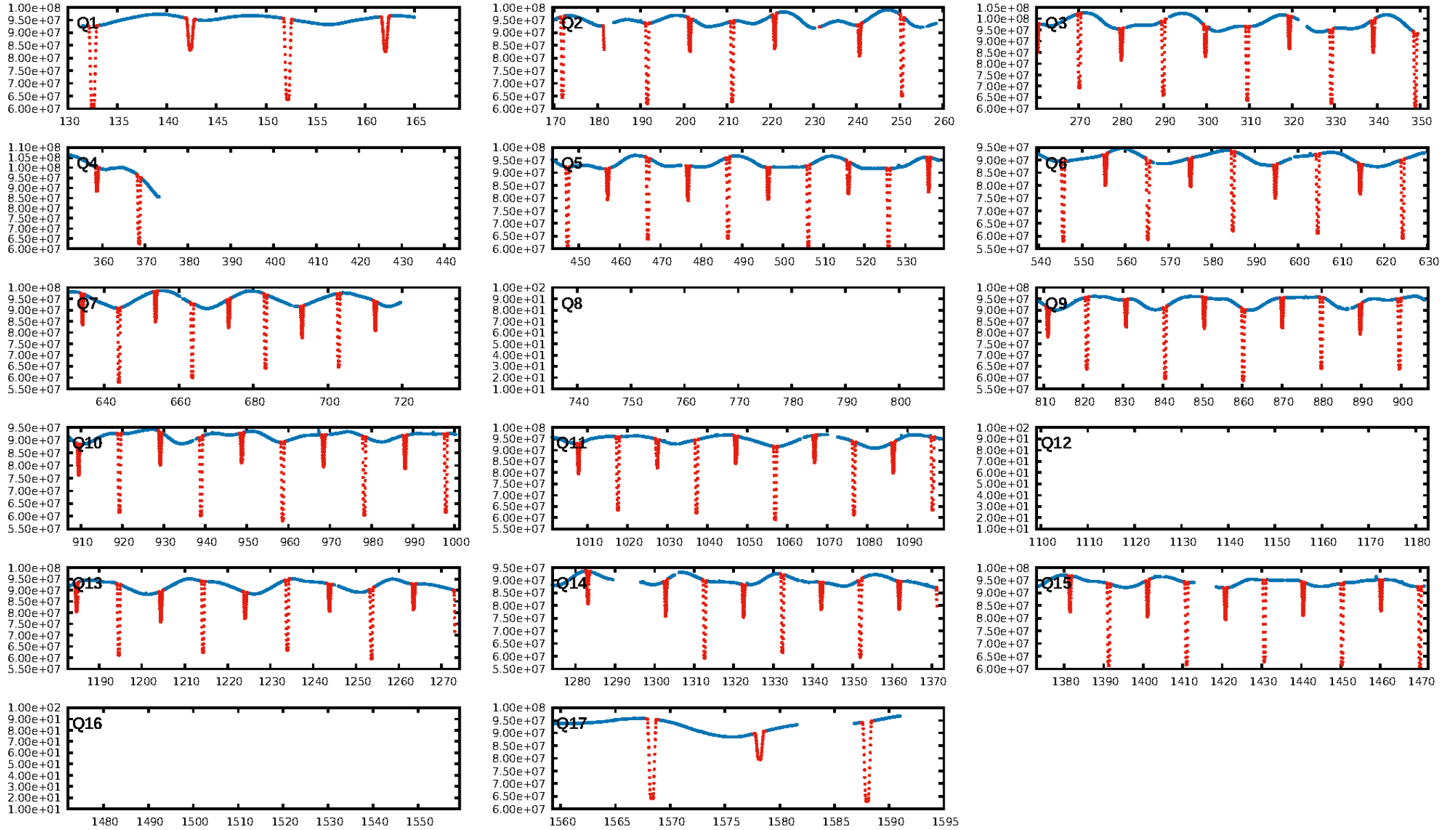
ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [13.35σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [53/53]
GhostDiagnostic-chr: 0.5162

Centroid-sig: 0.0%
Centroid-so: 0.039 arcsec [51.54σ]
OotOffset-rm: 0.031 arcsec [0.46σ]
KicOffset-rm: 0.066 arcsec [0.97σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

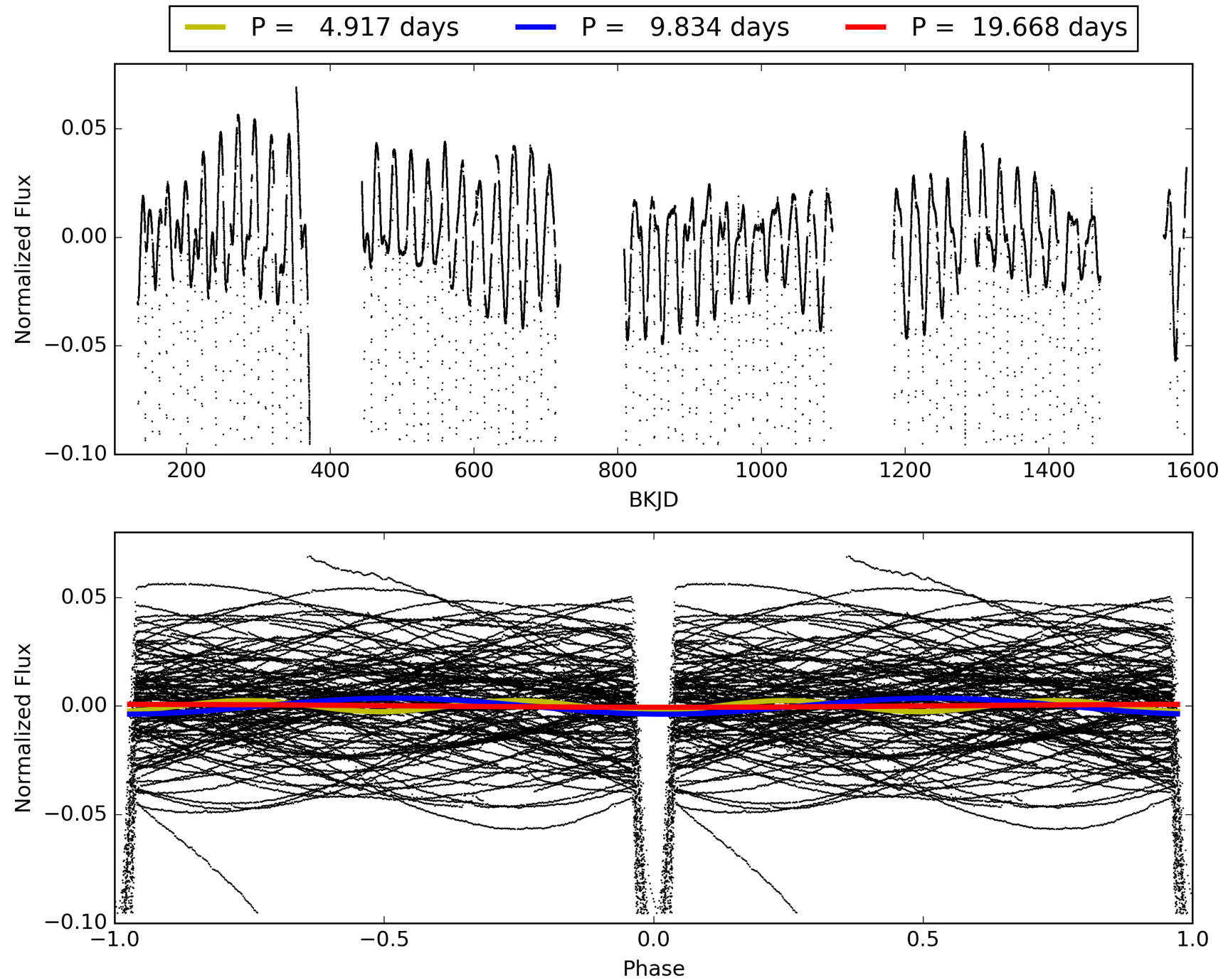
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:15:54 Z

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

TCE 011235323-02, PDC Light Curves

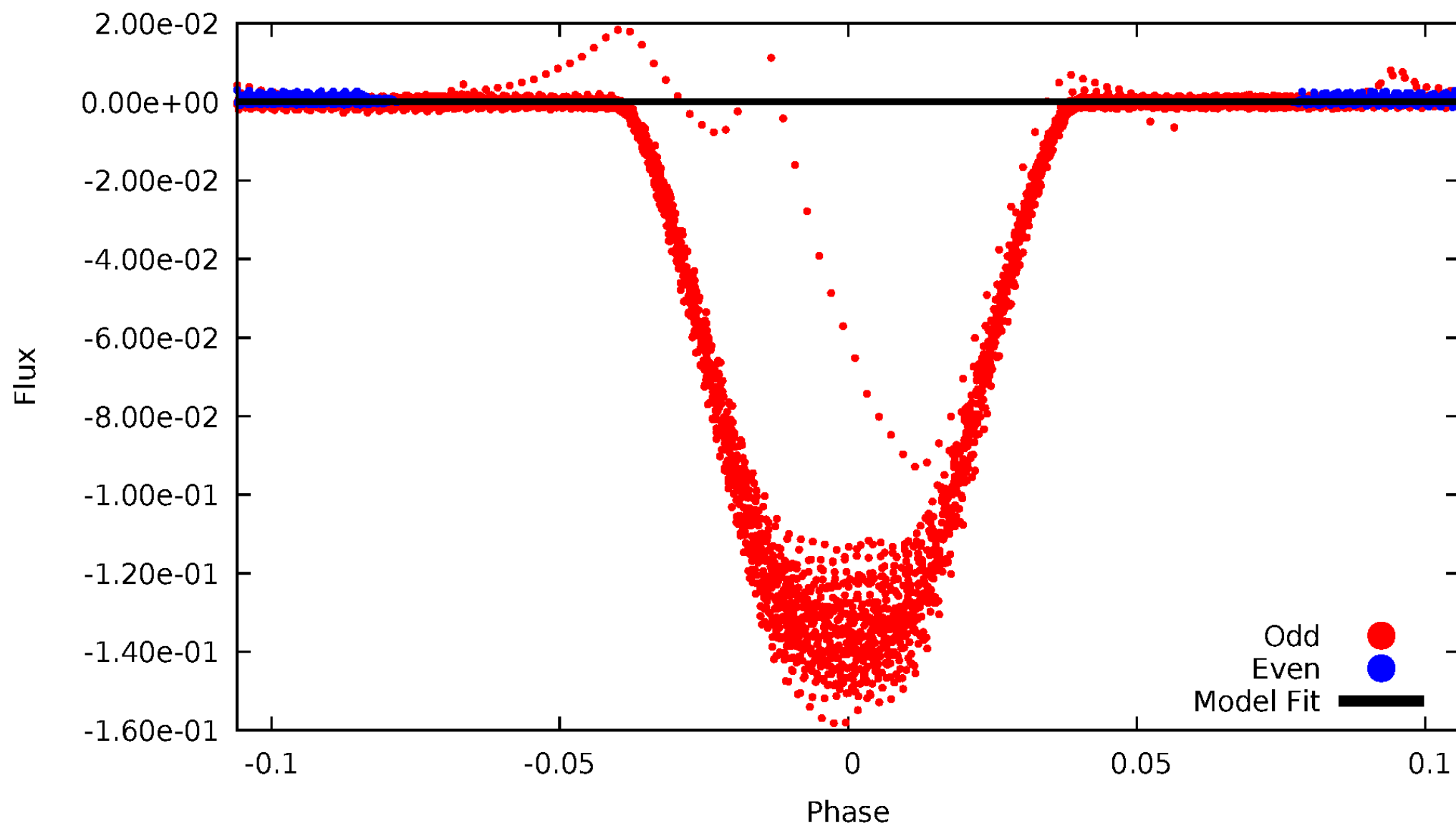


TCE 011235323-02



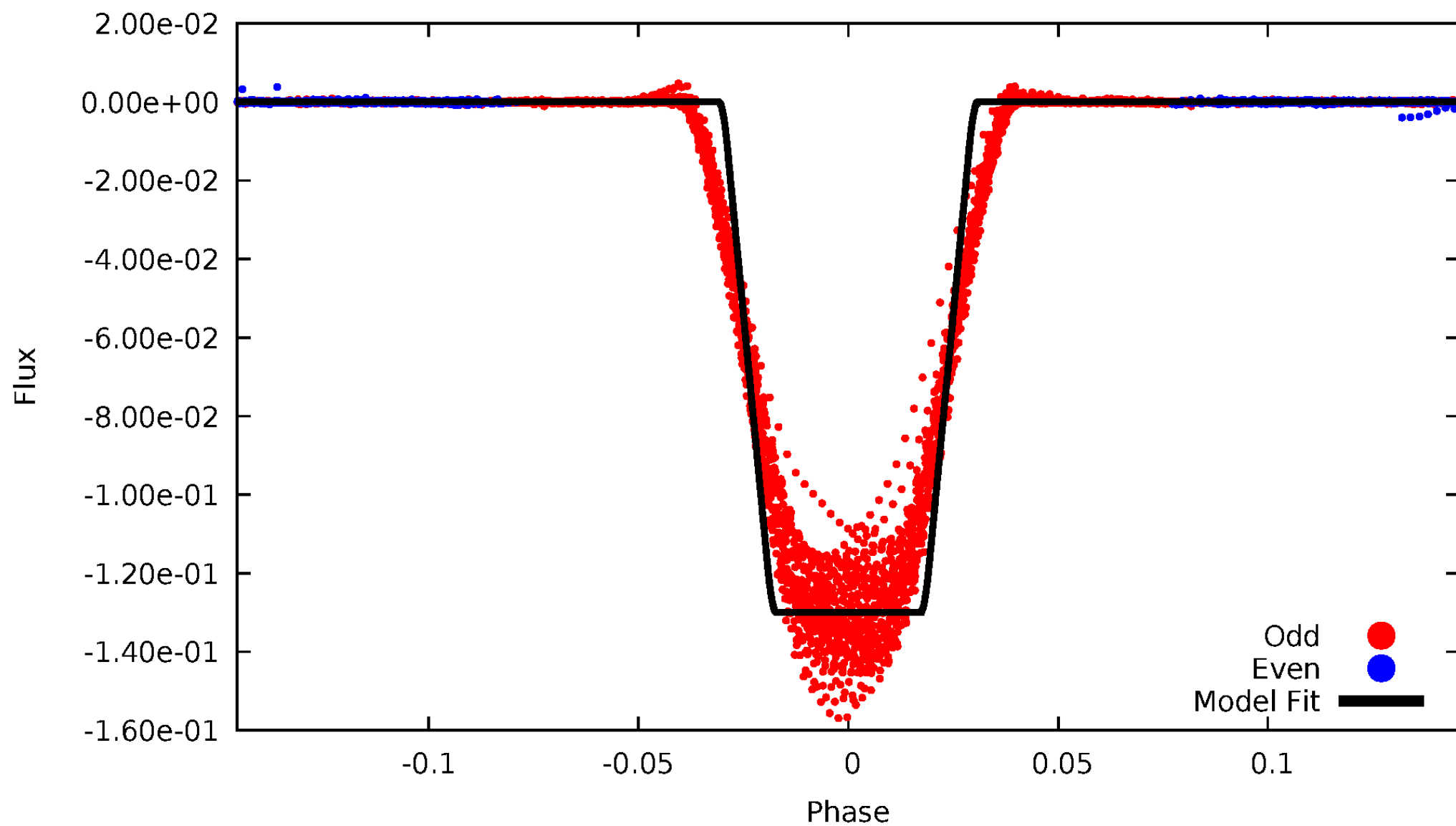
DV Odd/Even

TCE 011235323-02



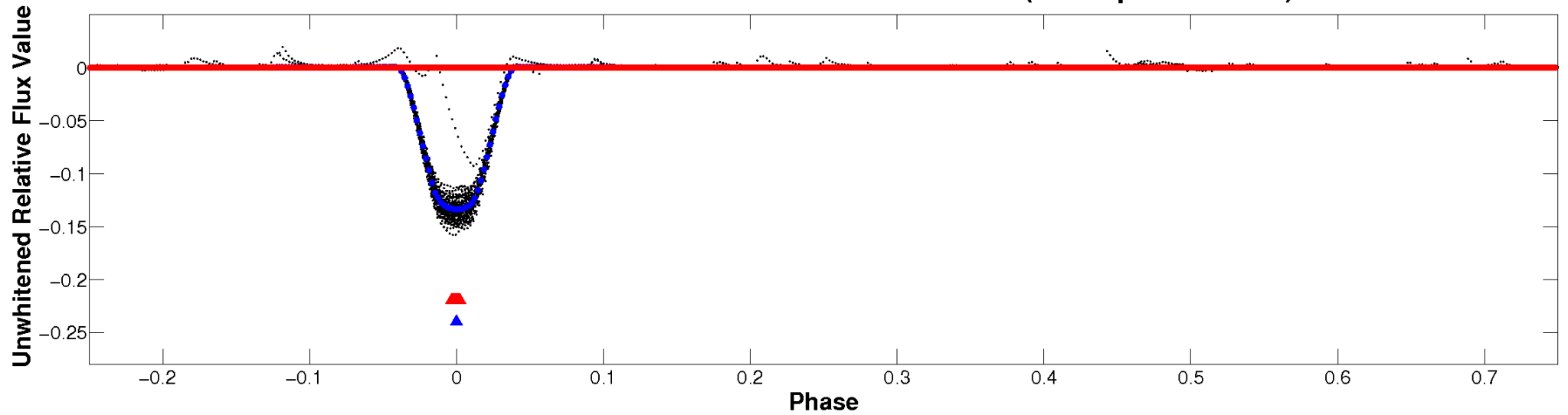
ALT Odd/Even

TCE 011235323-02



Non-Whitened Vs. Whitened Light Curve

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

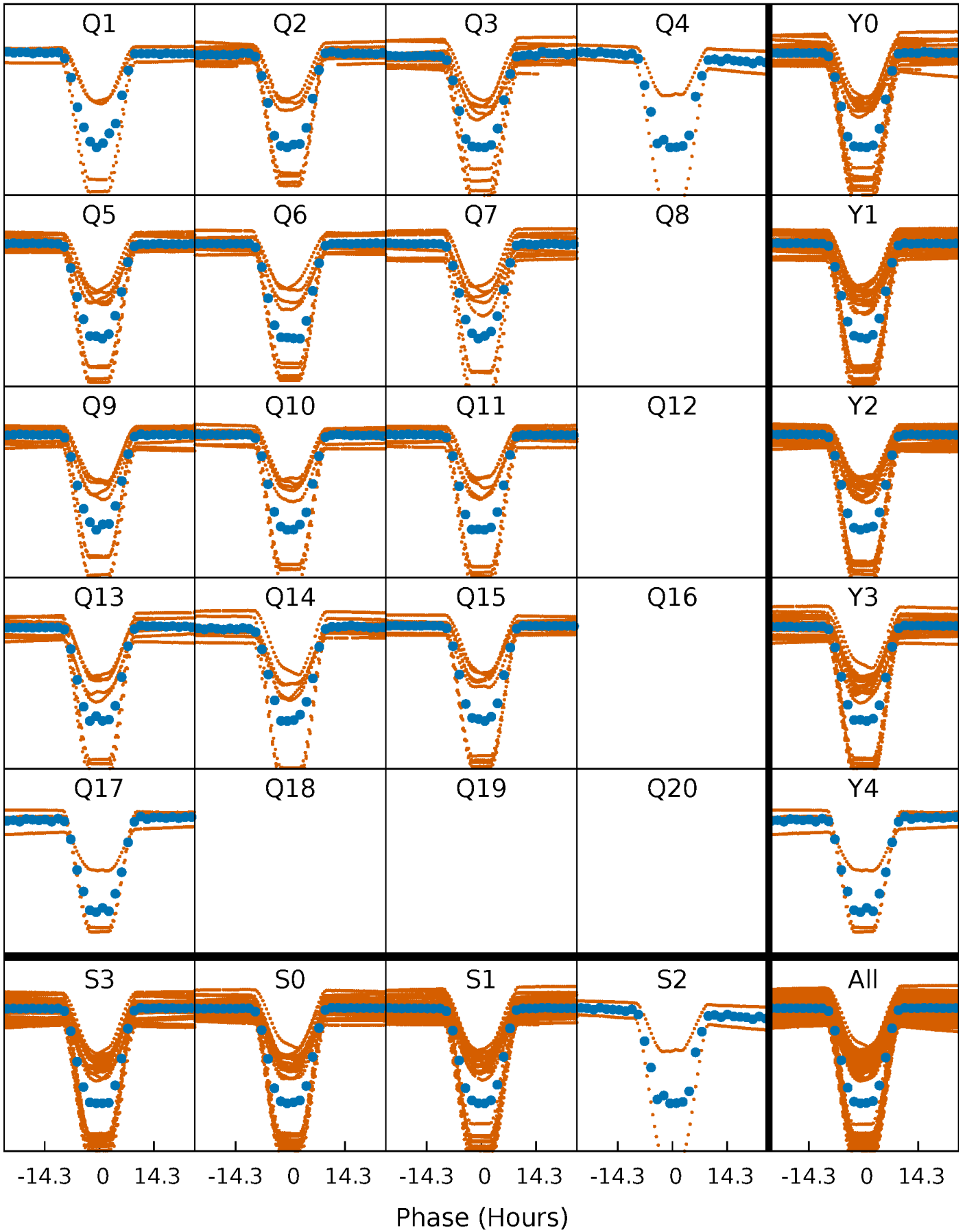


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



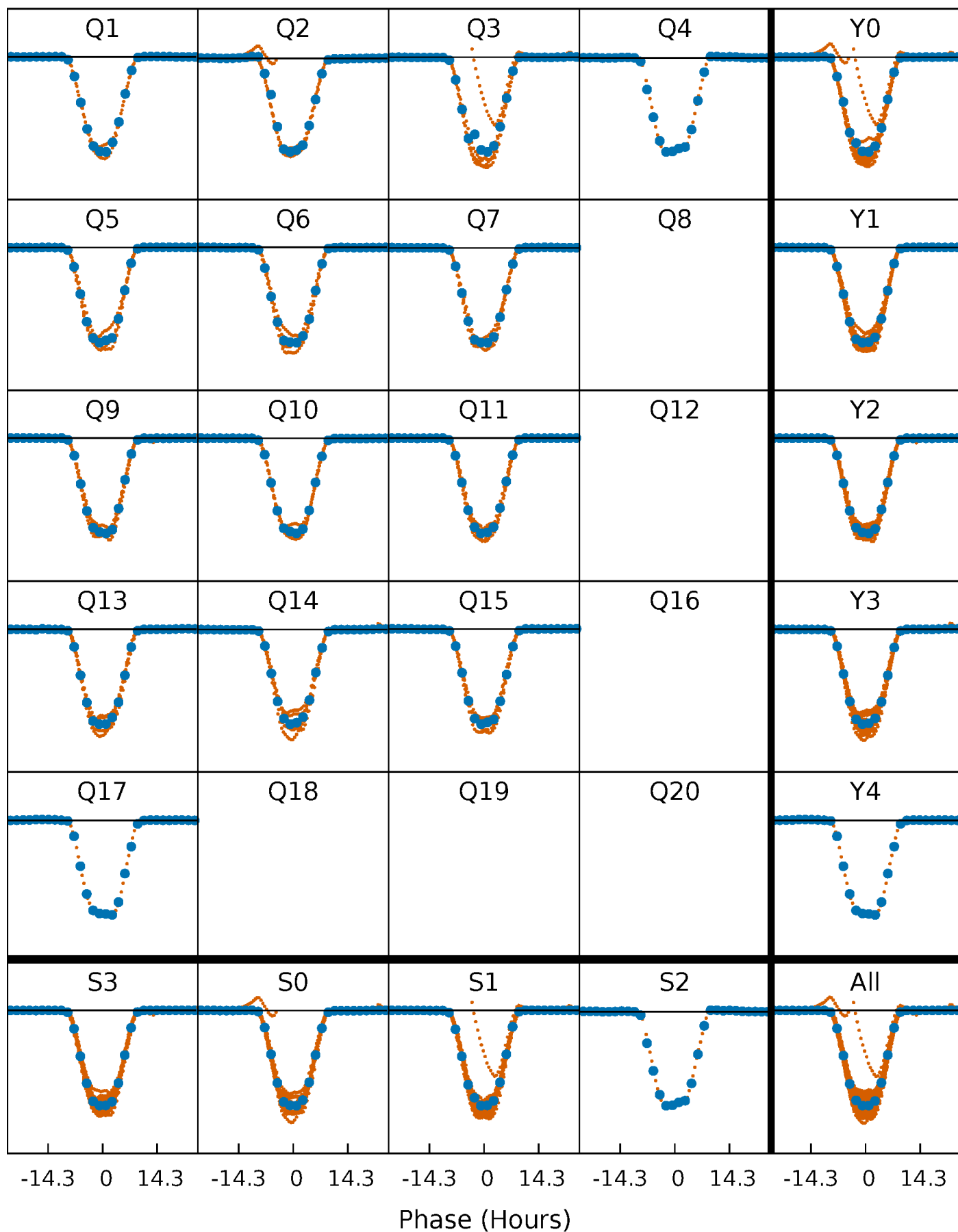
PDC Quarter-Phased Transit Curves

TCE 011235323-02 P= 9.834115 Days $T_0=132.532672$ (BKJD)



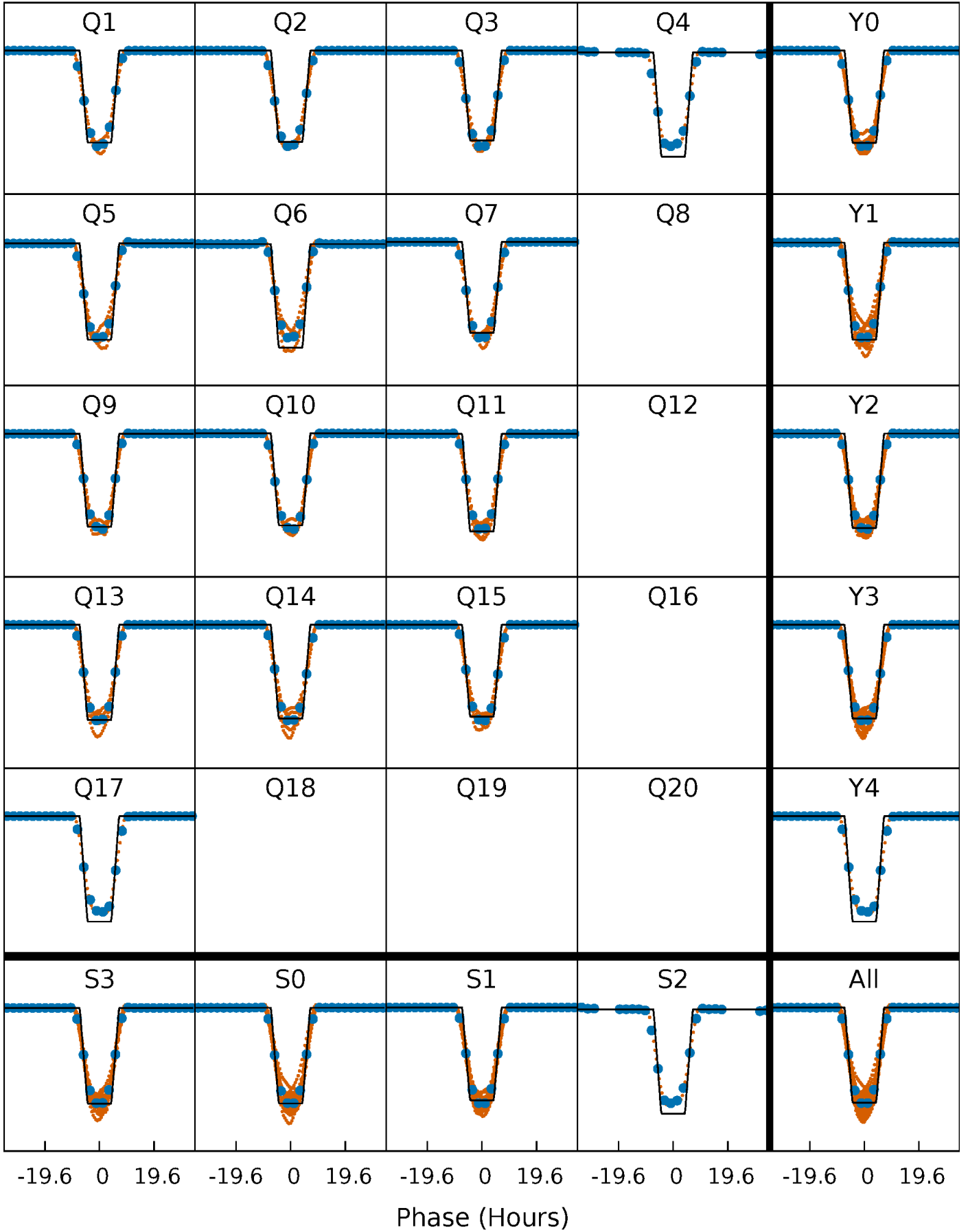
DV Quarter-Phased Transit Curves

TCE 011235323-02 P= 9.834115 Days $T_0=132.532672$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

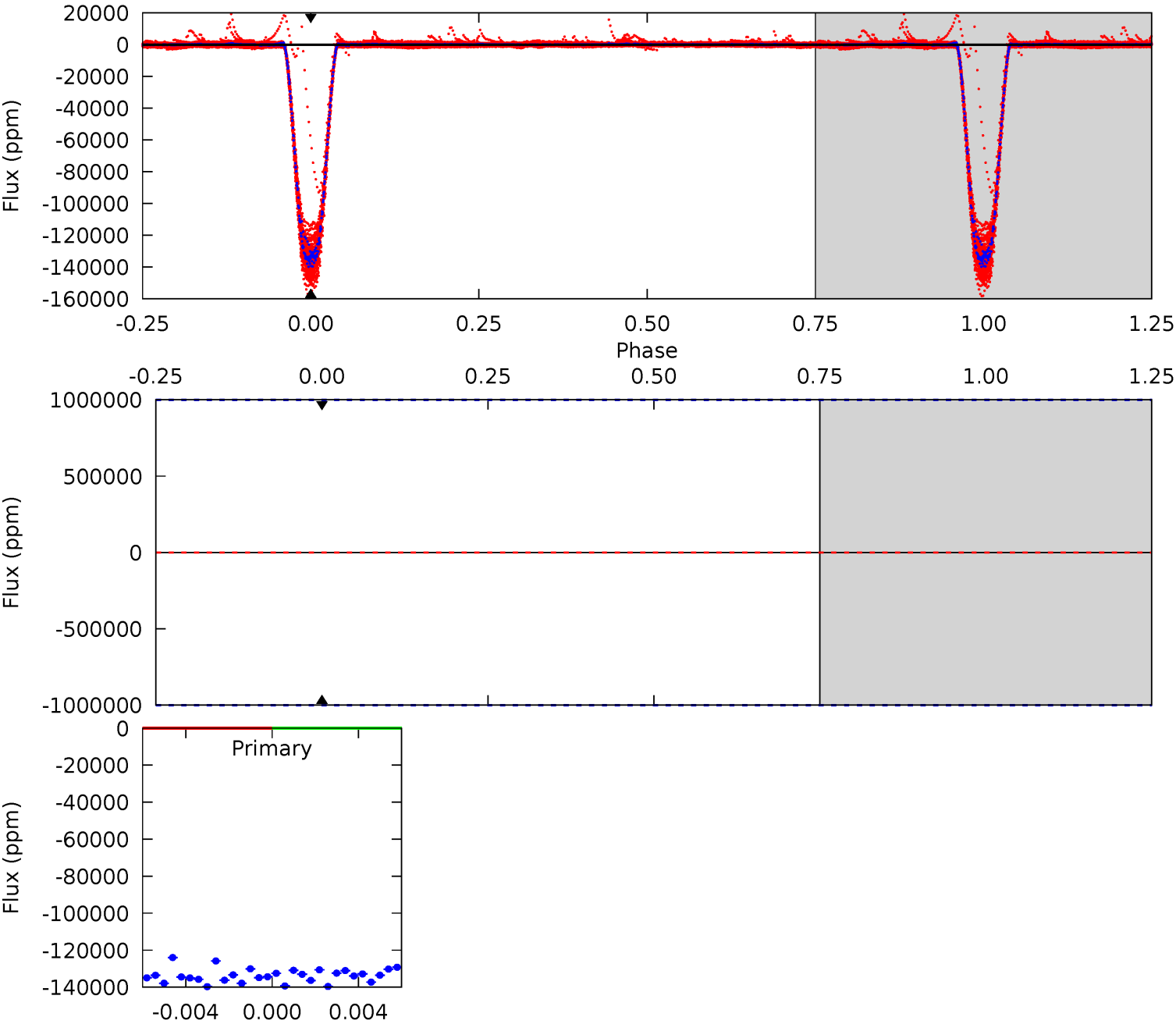
TCE 011235323-02 P= 9.834115 Days $T_0=132.531074$ (BKJD)



DV Model-Shift Uniqueness Test

011235323-02, P = 9.834115 Days, E = 122.698557 Days

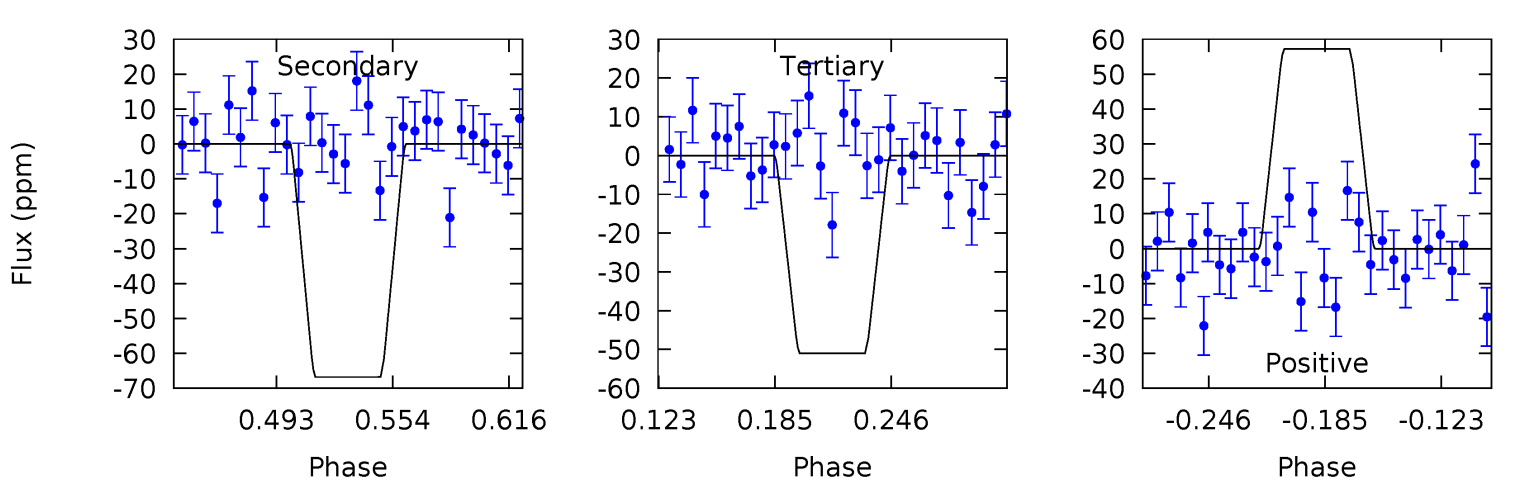
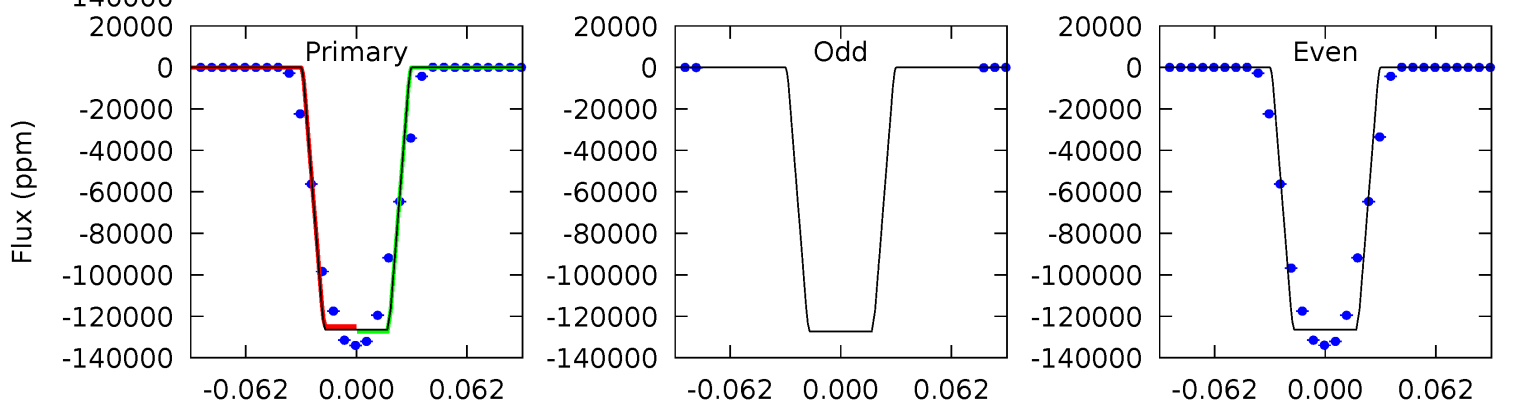
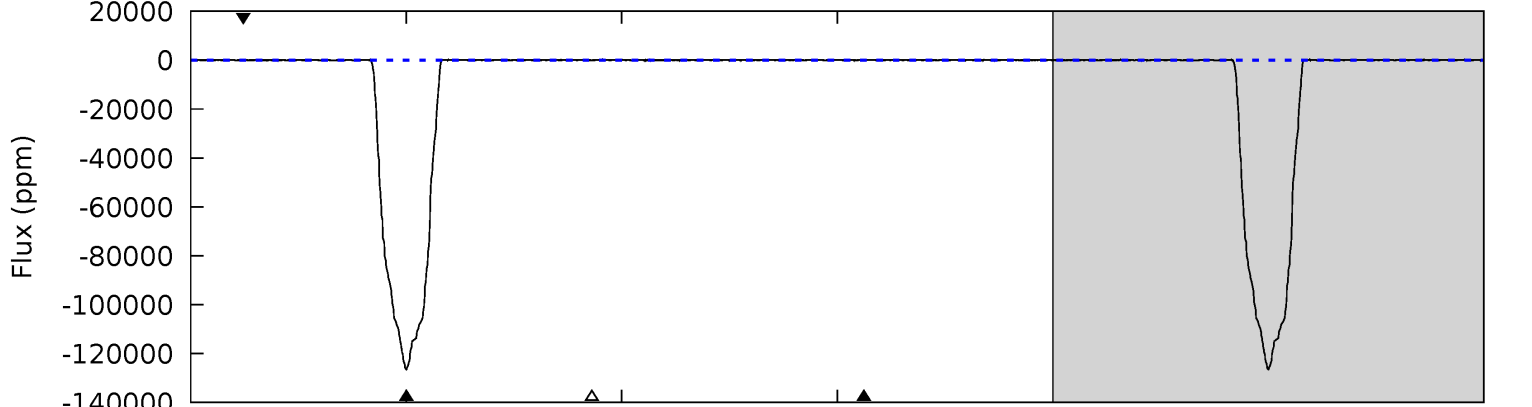
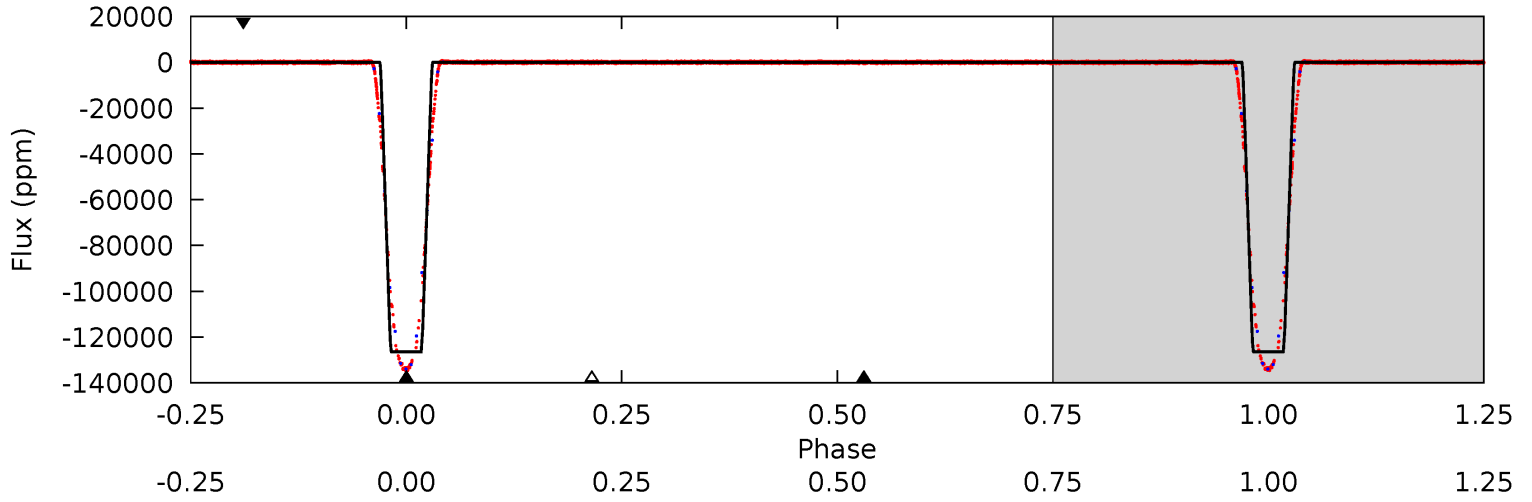
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011235323-02, P = 9.834115 Days, E = 132.531074 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9213	4.86	3.72	4.17	4.67	1.87	1.33	9209	9208	1.15	0.70	37.8	0.98	0.00	0



Stellar Parameters For KIC 011235323

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5260^{+157}_{-141}	$4.560^{+0.083}_{-0.060}$	$-0.580^{+0.350}_{-0.300}$	$0.717^{+0.080}_{-0.072}$	$0.680^{+0.095}_{-0.032}$	$2.599^{+0.878}_{-0.551}$
	+3%/-3%	+2%/-1%	+60%/-52%	+11%/-10%	+14%/-5%	+34%/-21%
Source	PHO1	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 011235323-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$10.64^{+7.73}_{-6.09}$	972^{+38}_{-39}	3286^{+6185}_{-12171}	43^{+4848}_{-4229}
Alt.	-67 ± 14	$28.17^{+8.74}_{-7.93}$	972^{+40}_{-37}	1213^{+604}_{-2909}	$0.302^{+0.280}_{-0.135}$

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

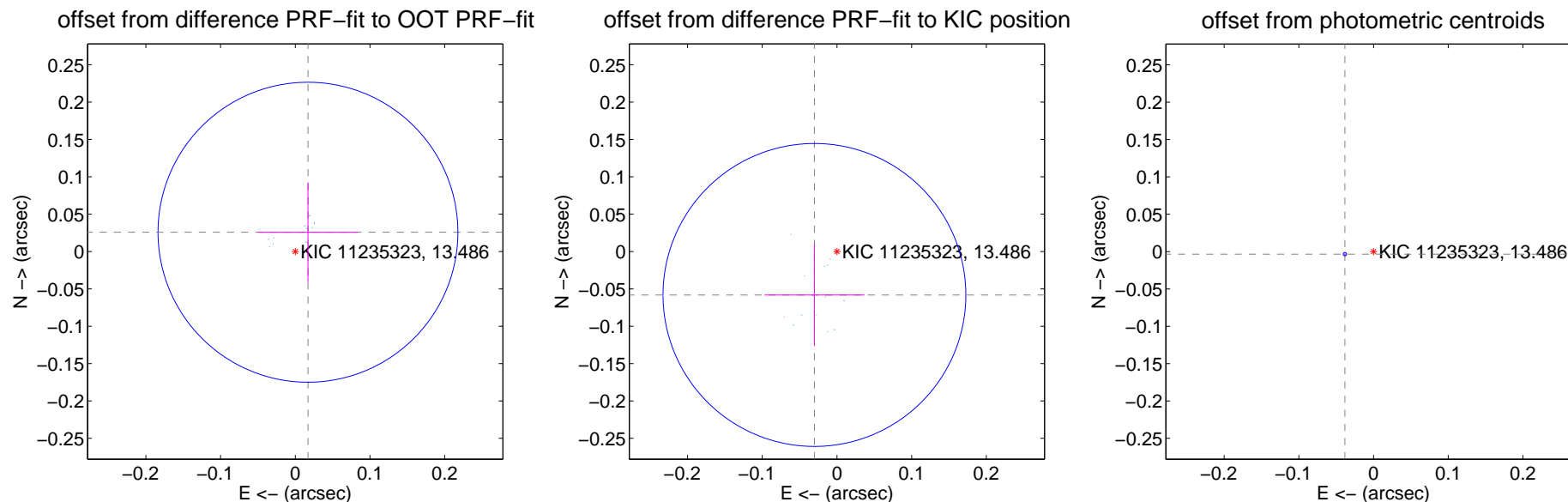
DV Centroid Data

Supplemental centroid analysis for 011235323-02. Kepler magnitude: 13.49. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

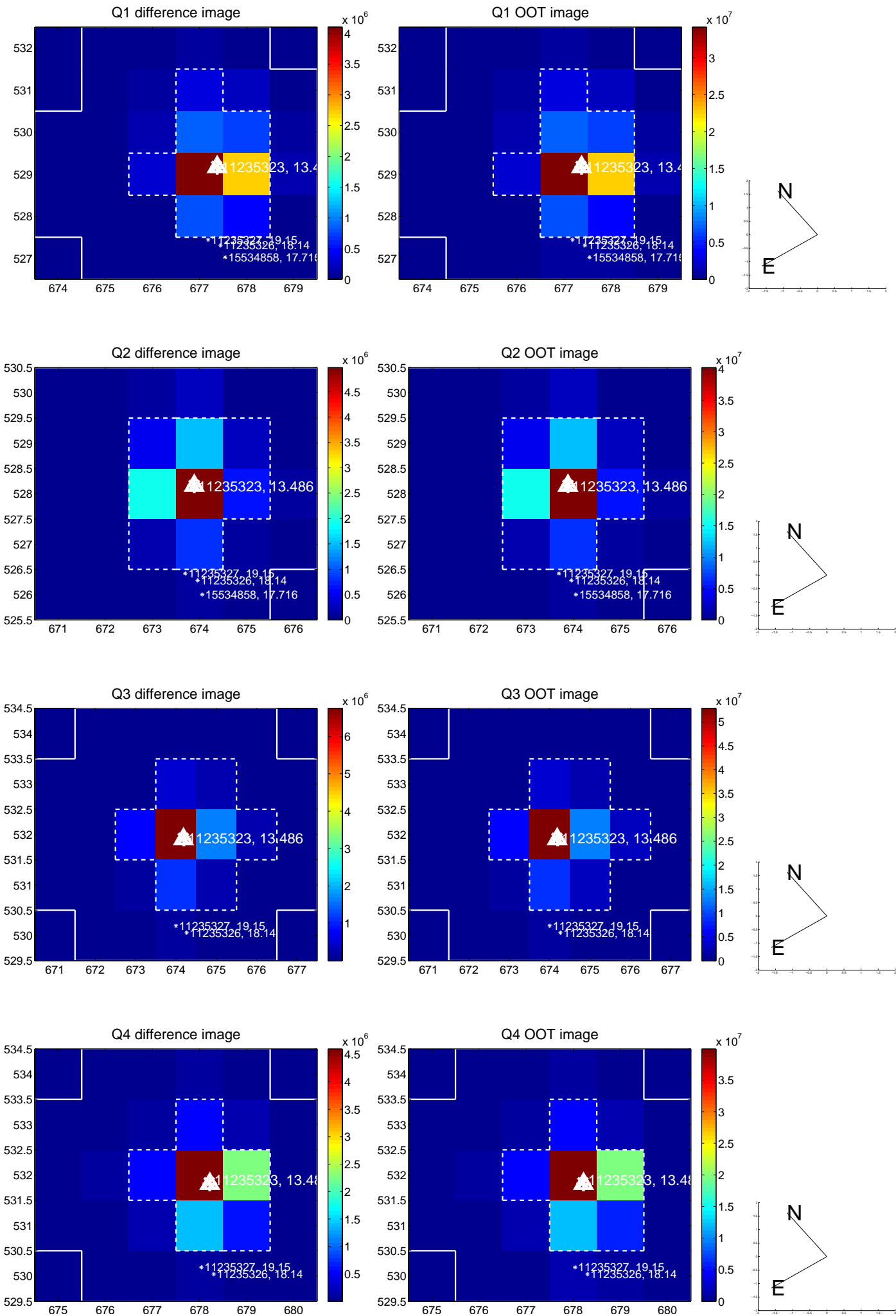
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.031 ± 0.067	0.46	-0.017 ± 0.067	0.026 ± 0.067
PRF-fit source offset from KIC position	0.066 ± 0.068	0.97	0.030 ± 0.067	-0.058 ± 0.068
photometric centroid source offset	0.04 ± 0.00	51.54	0.04 ± 0.00	-0.00 ± 0.00

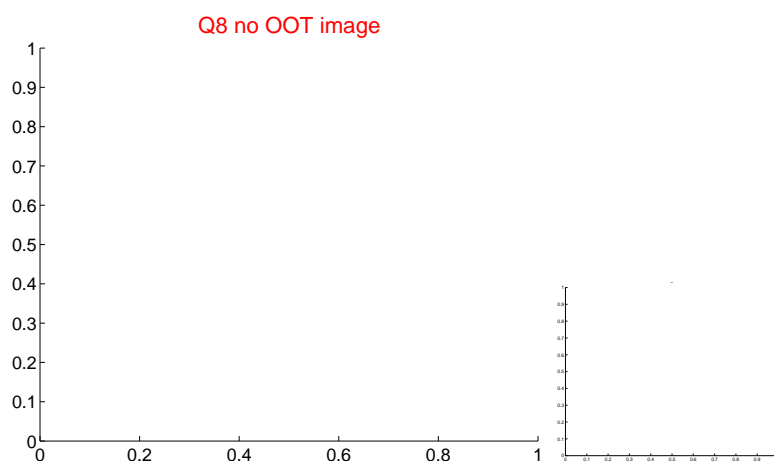
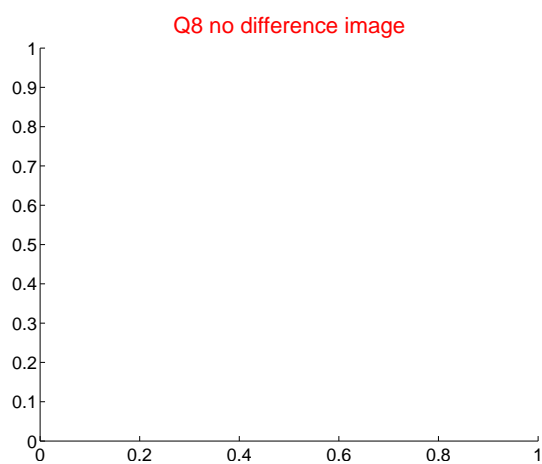
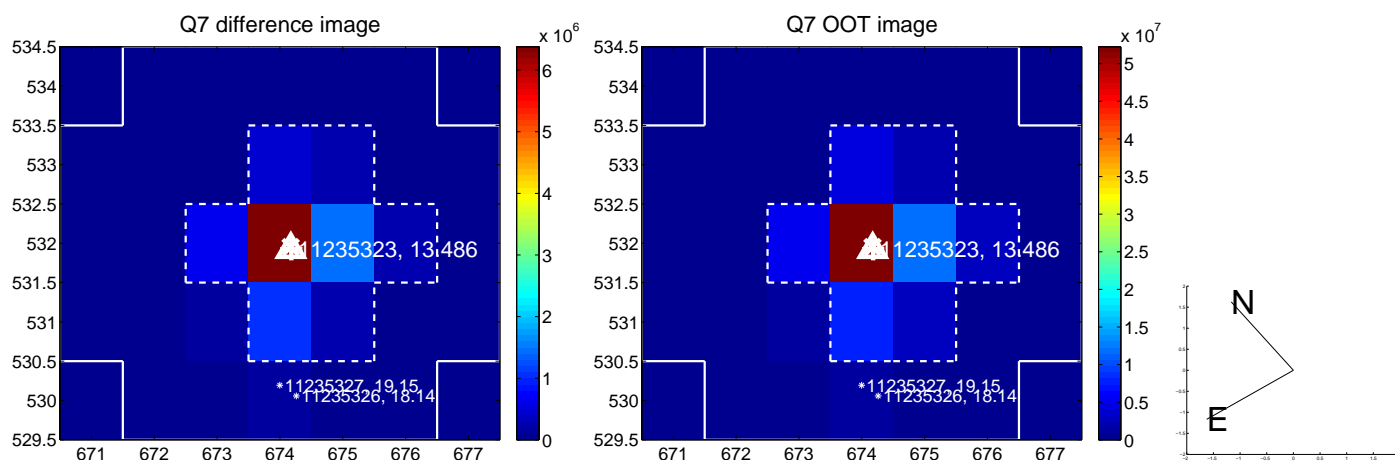
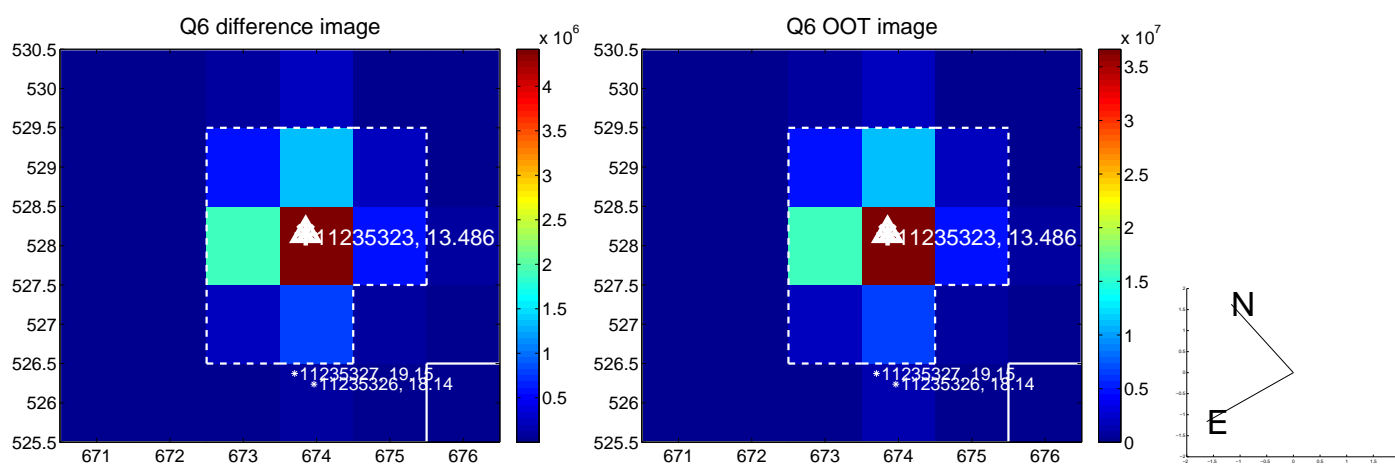
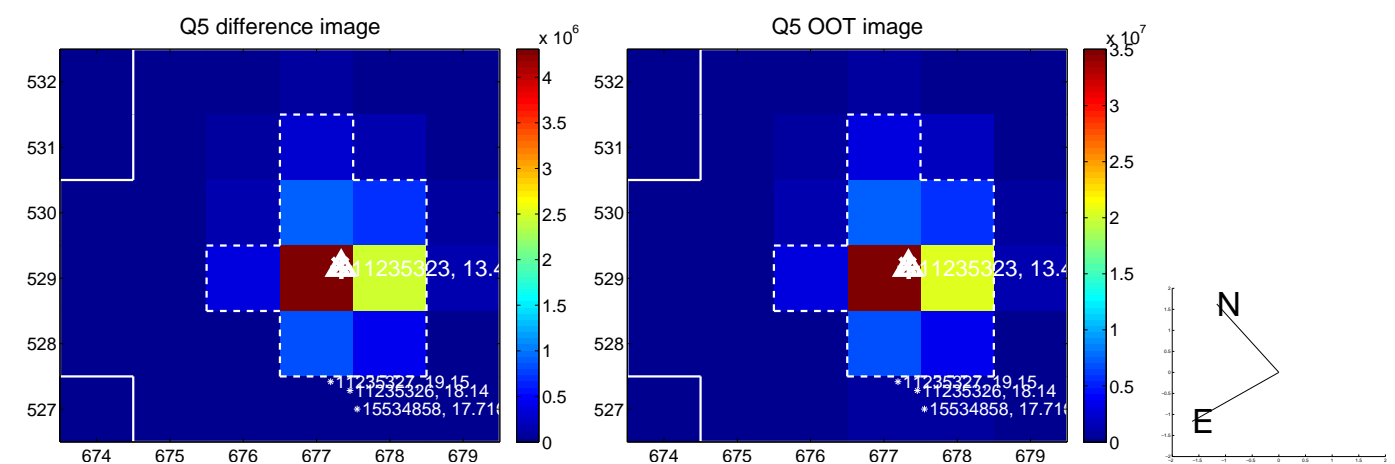


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

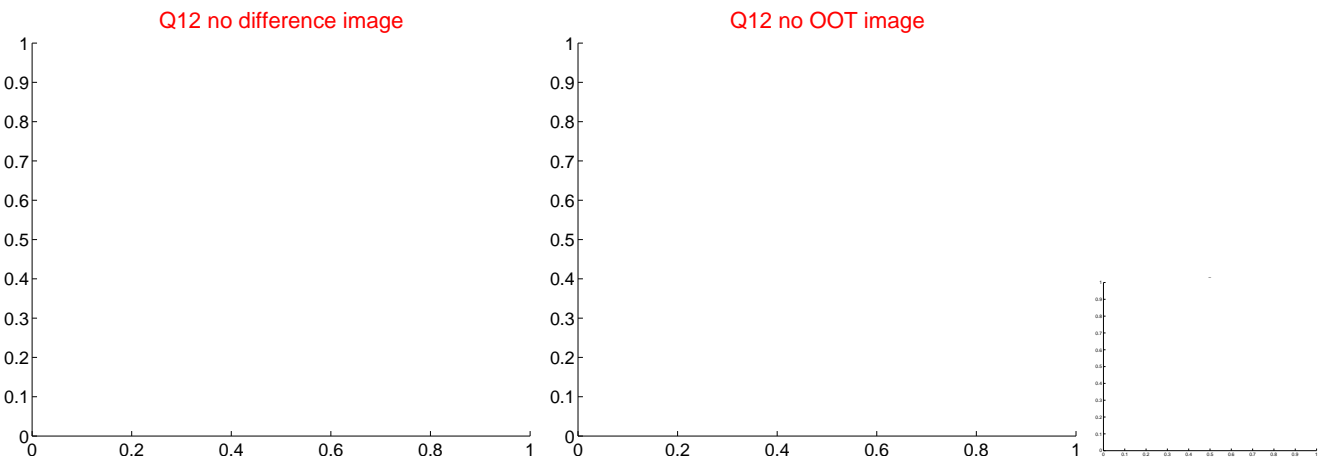
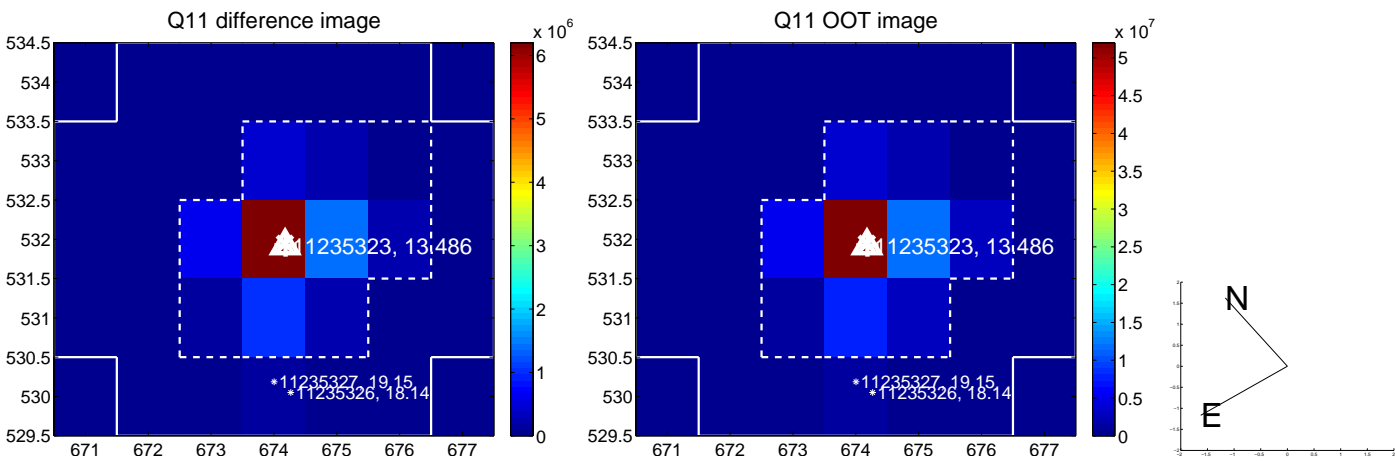
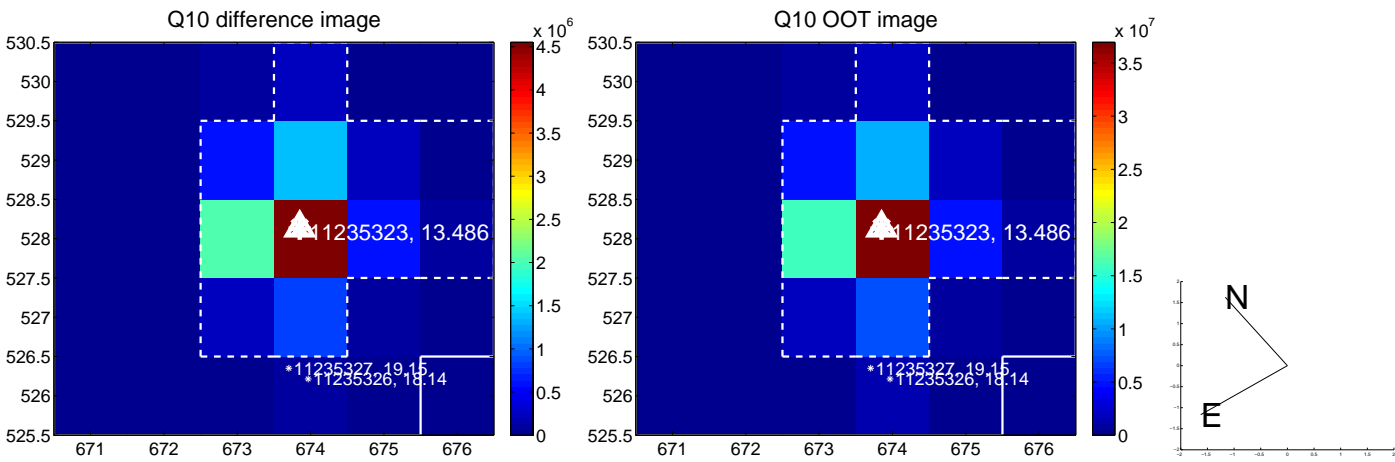
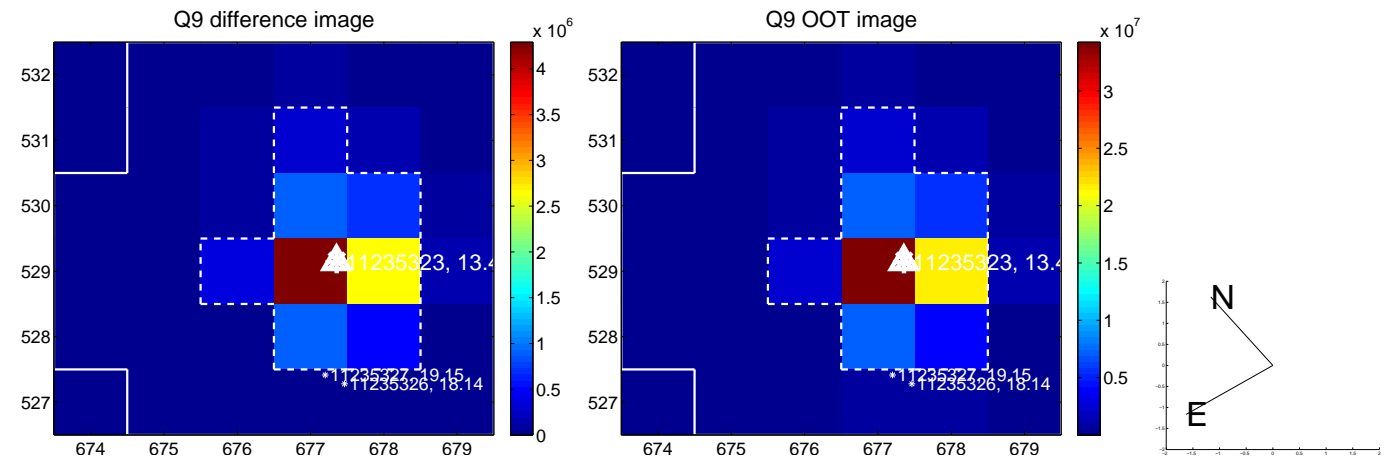
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



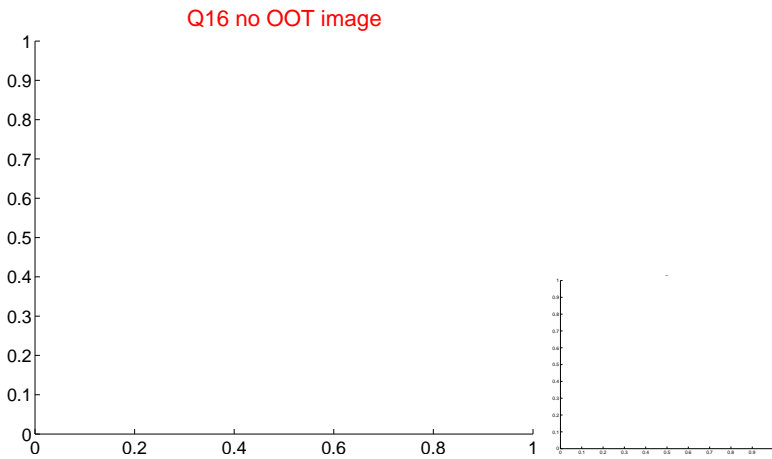
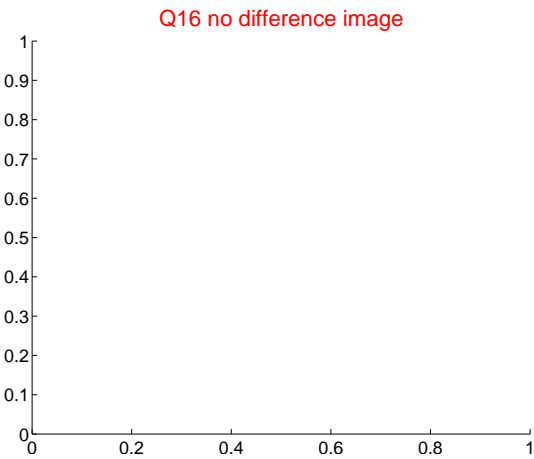
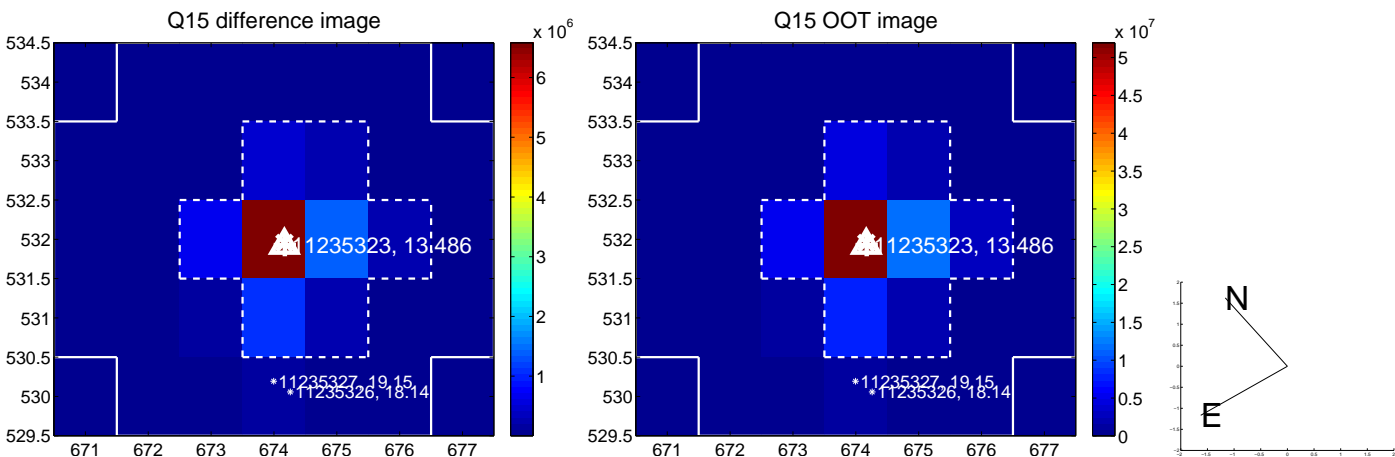
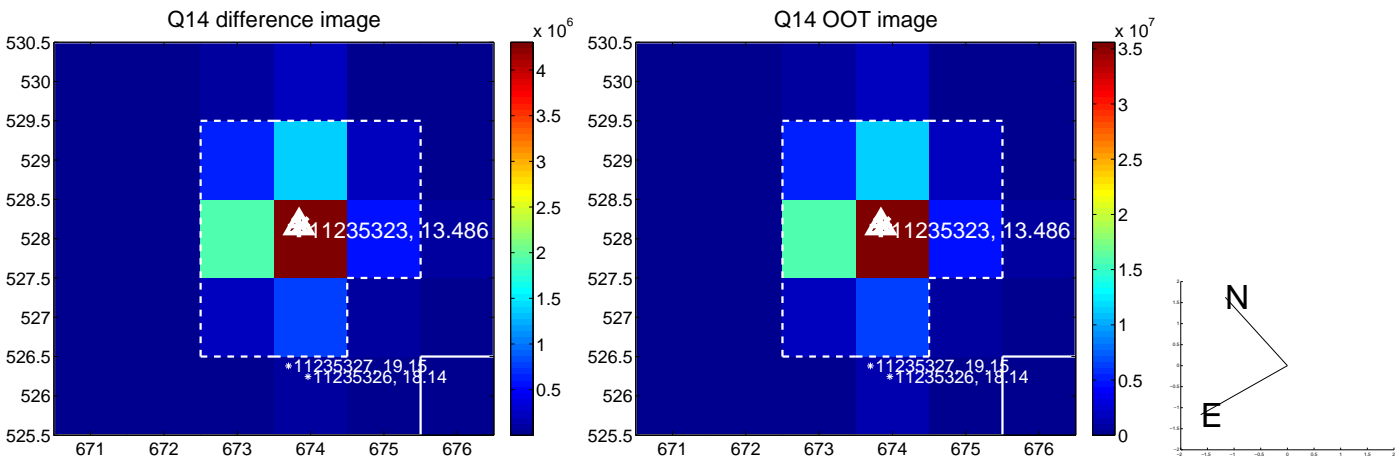
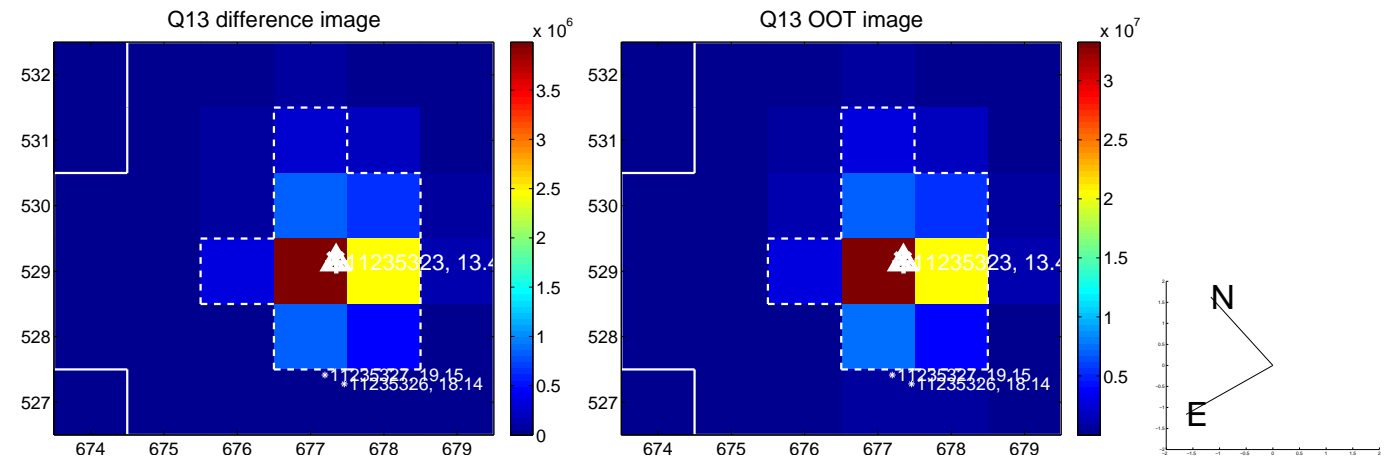
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



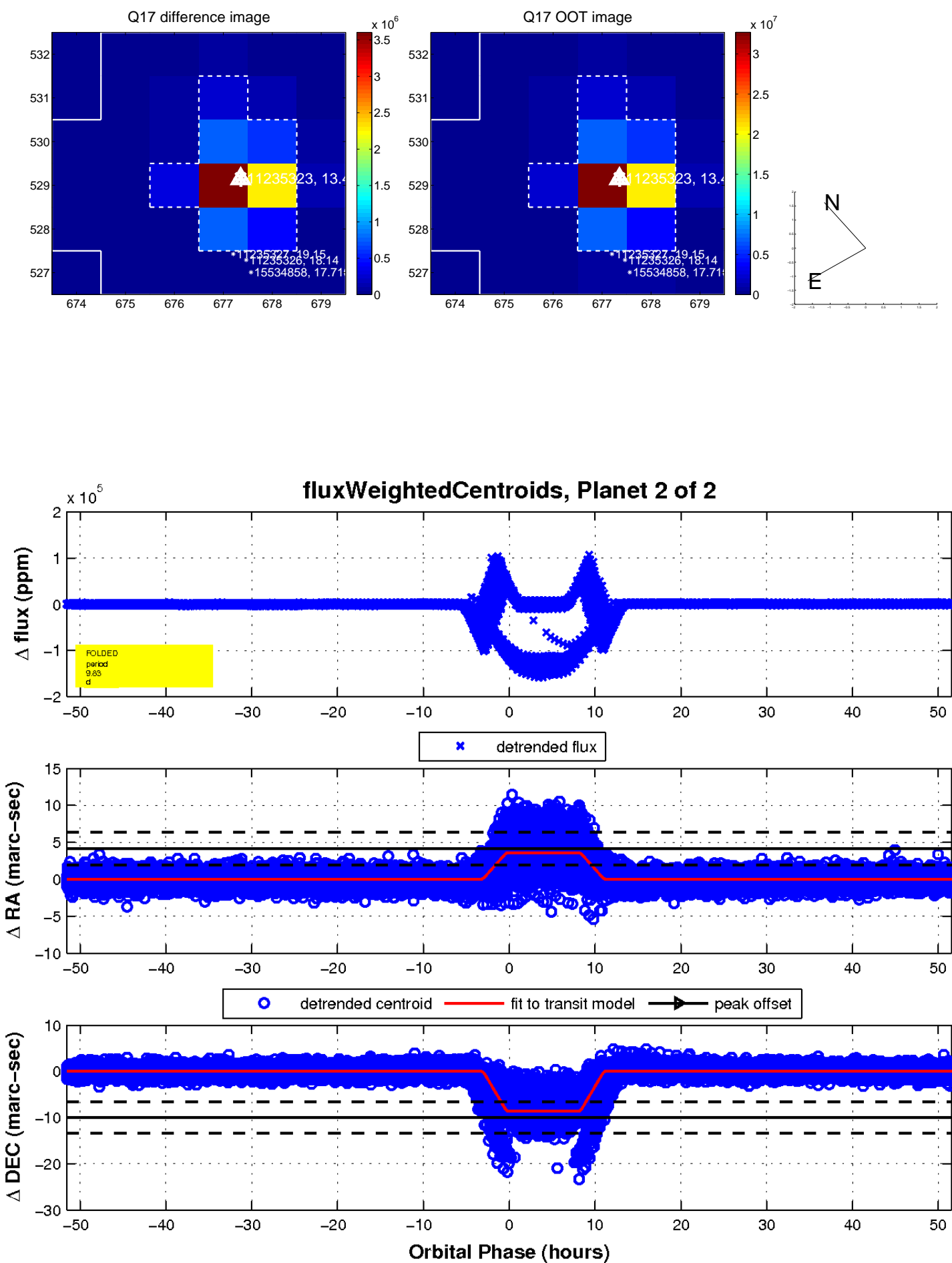
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Declination

