

KIC 010129482

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})
010129482-01	OBS	7288.01	0.846297	132.191695	168733.8	1.628	3594.6	2747.0	0.53	4627	21.77	565.01
010129482-02	OBS	No	0.846291	131.764119	42030.6	1.500	601.3	-1.0	0.53	4627	10.66	565.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010129482-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
010129482-02	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.

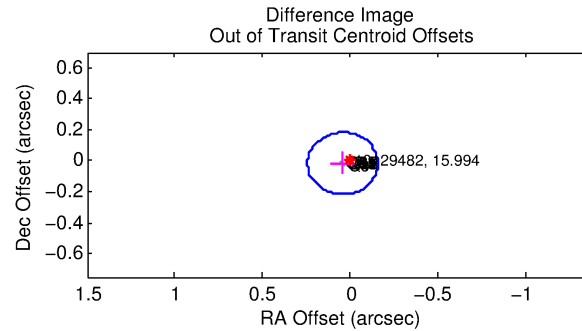
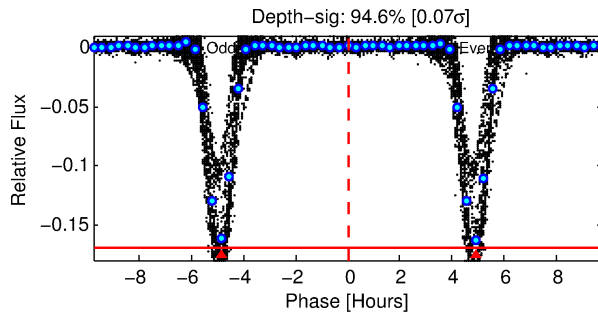
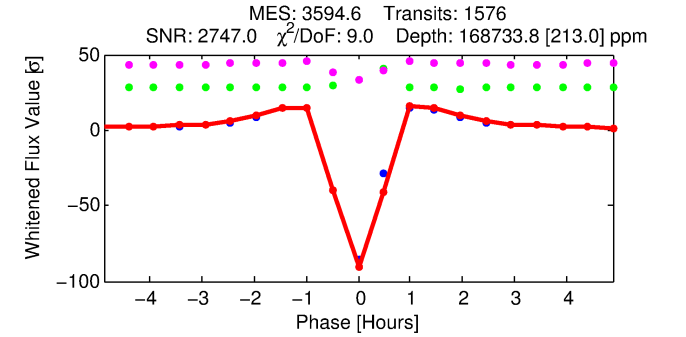
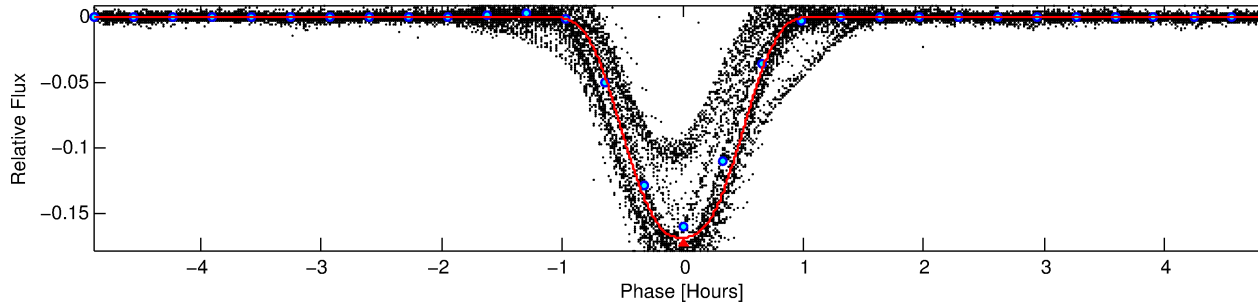
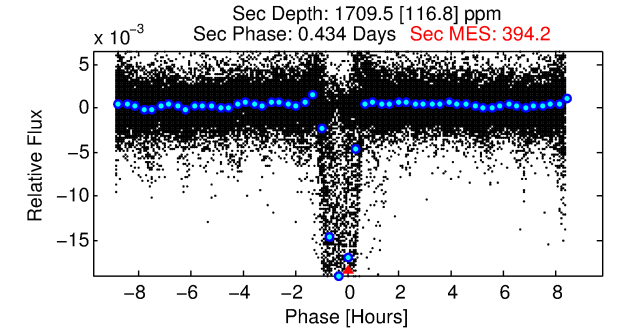
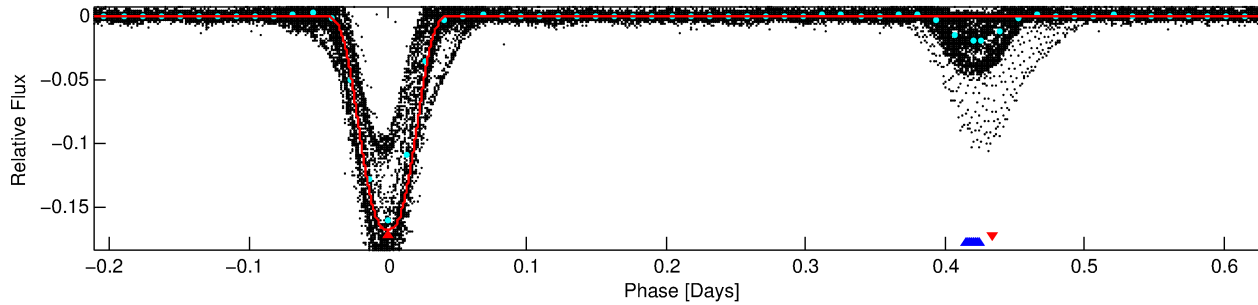
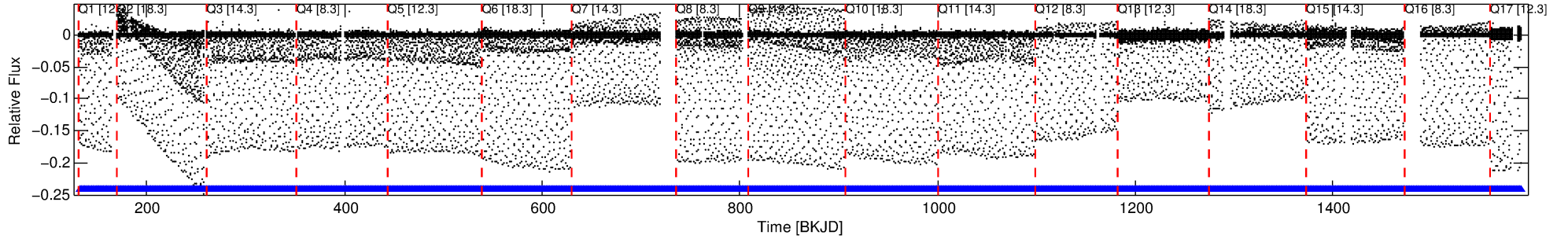
Ephemeris Match Information For 010129482-01

No Significant Match Found

DV One-Page Summary

KIC: 10129482 Candidate: 1 of 2 Period: 0.846 d
KOI: K07288.01 Corr: 0.942

Kp: 15.99 R*: 0.53 Rs Teff: 4627.0 K Logg: 4.72 Fe/H: -1.260



DV Fit Results:

Period = 0.84630 [0.00000] d
Epoch = 132.1917 [0.0000] BKJD
Rp/R* = 0.3793 [0.0006]
a/R* = 5.44 [0.02]
b = 0.26 [0.01]
Seff = 565.01 [83.28]
Teq = 1243 [46] K
Rp = 21.77 [1.41] Re
a = 0.0142 [0.0008] AU
Ag = 0.40 [0.04] [-13.77σ]
Teffp = 1528 [53] K [4.07σ]

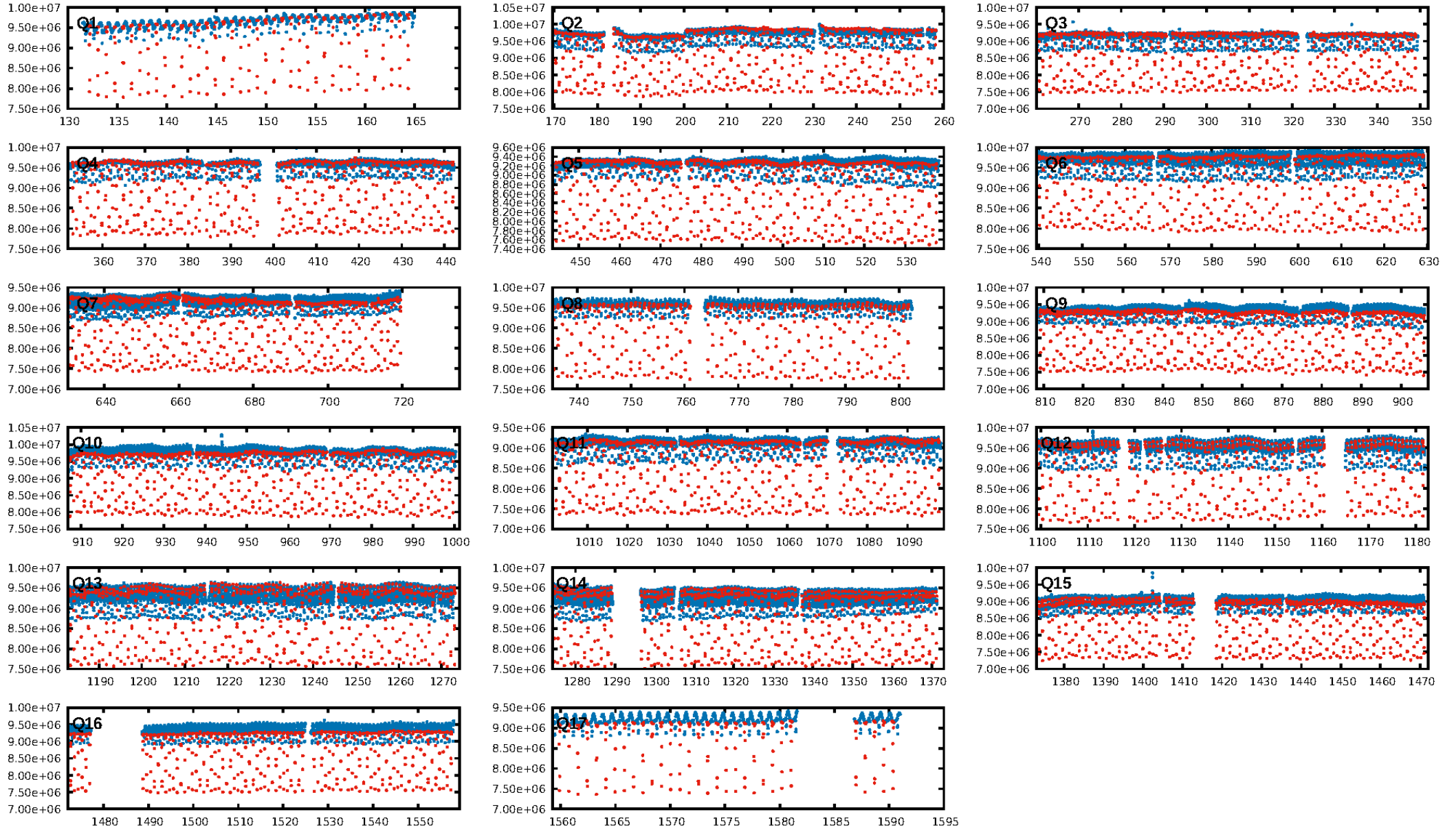
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1506/1506]
GhostDiagnostic-chr: 1.872
Centroid-sig: 0.0%
Centroid-so: 0.091 arcsec [72.65σ]
OotOffset-rm: 0.047 arcsec [0.70σ]
KicOffset-rm: 0.016 arcsec [0.23σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

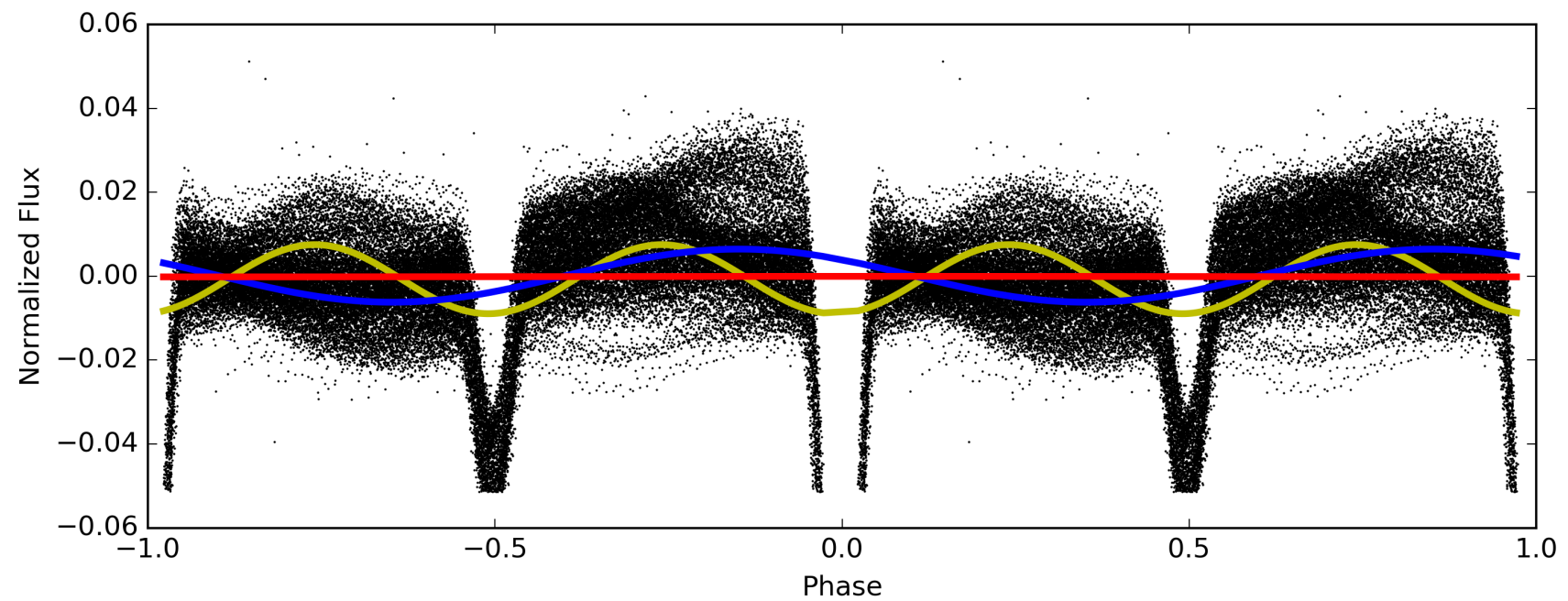
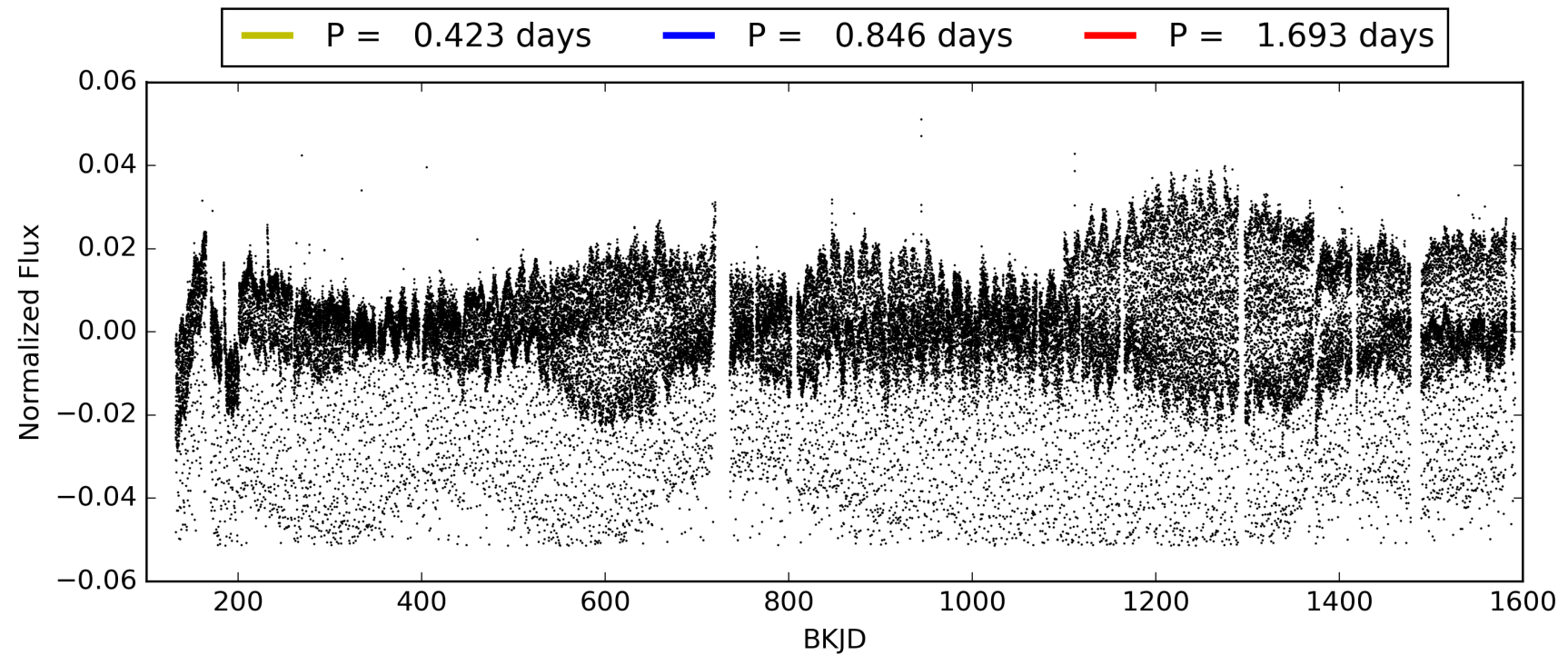
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:46:56 Z

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

TCE 010129482-01, PDC Light Curves

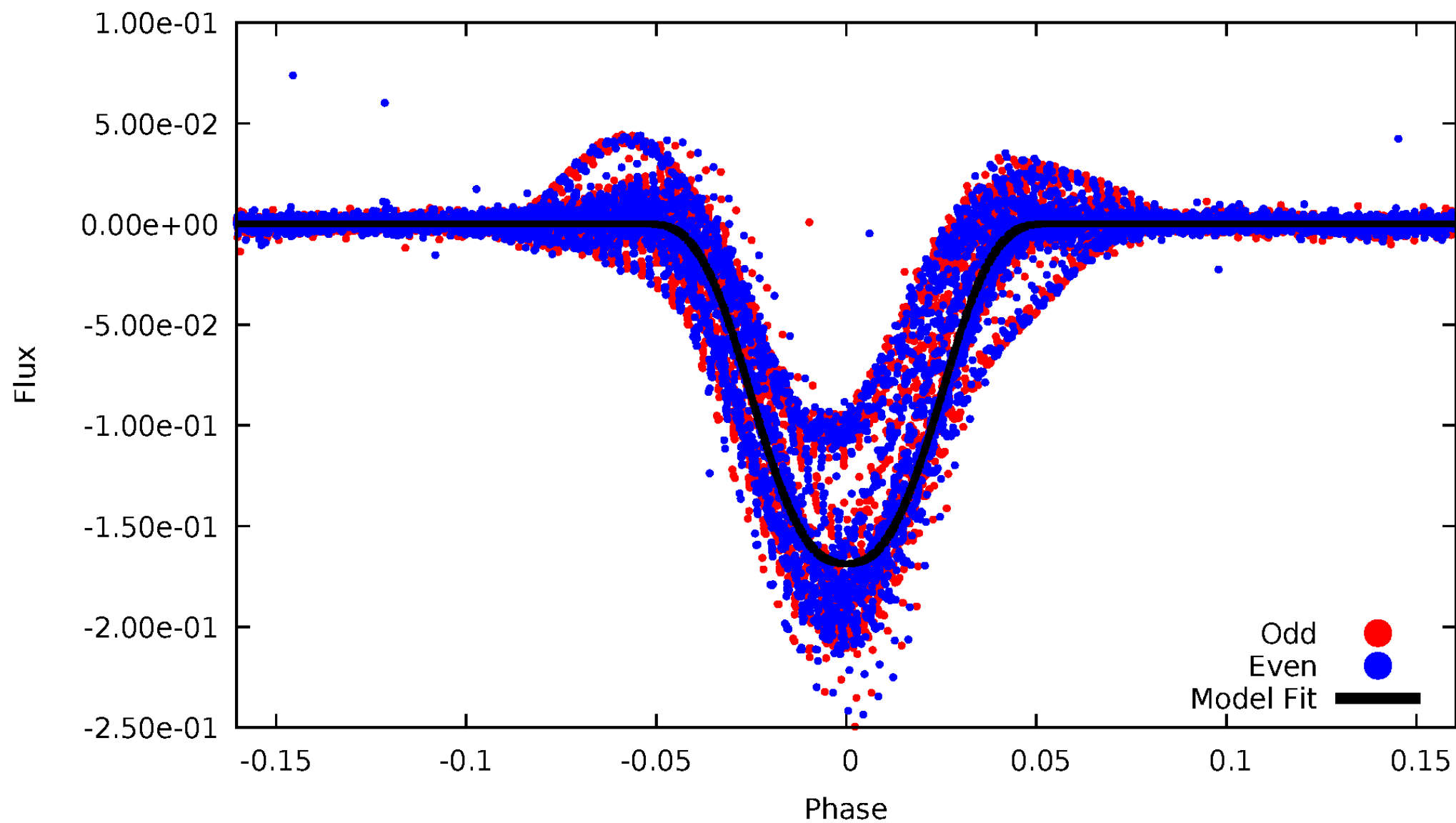


TCE 010129482-01



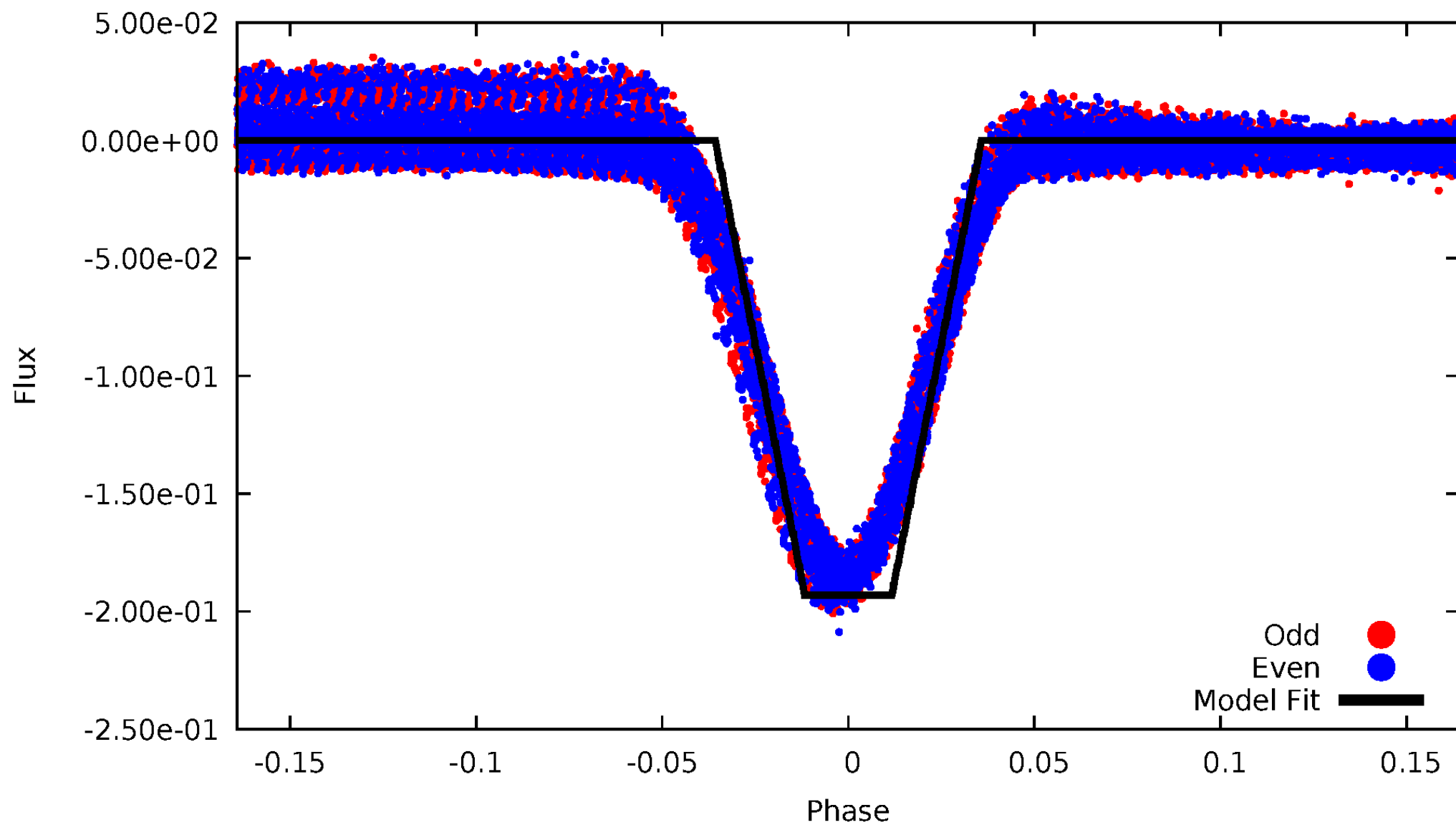
DV Odd/Even

TCE 010129482-01



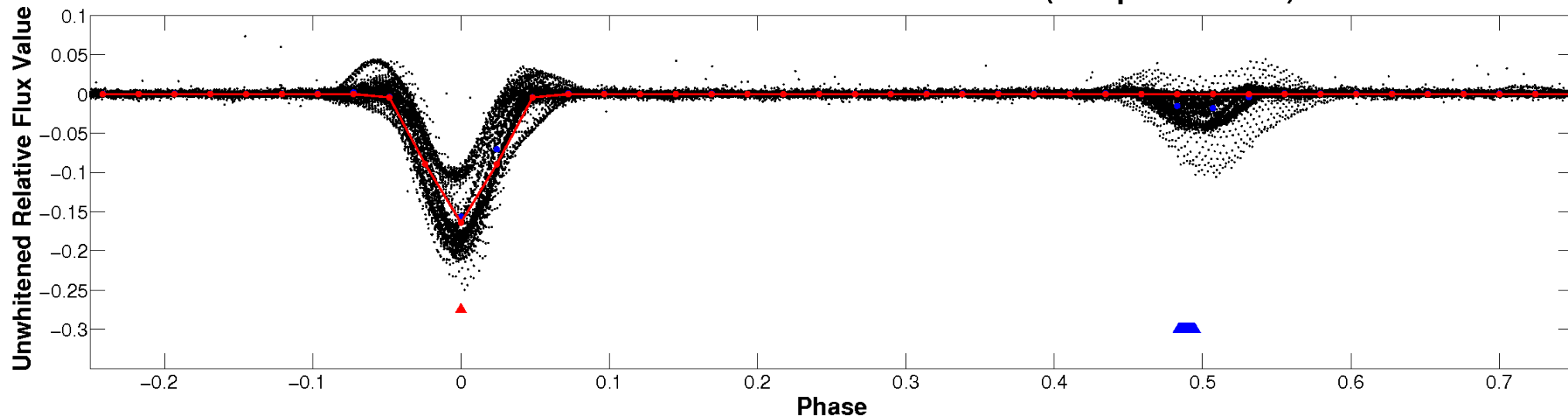
ALT Odd/Even

TCE 010129482-01

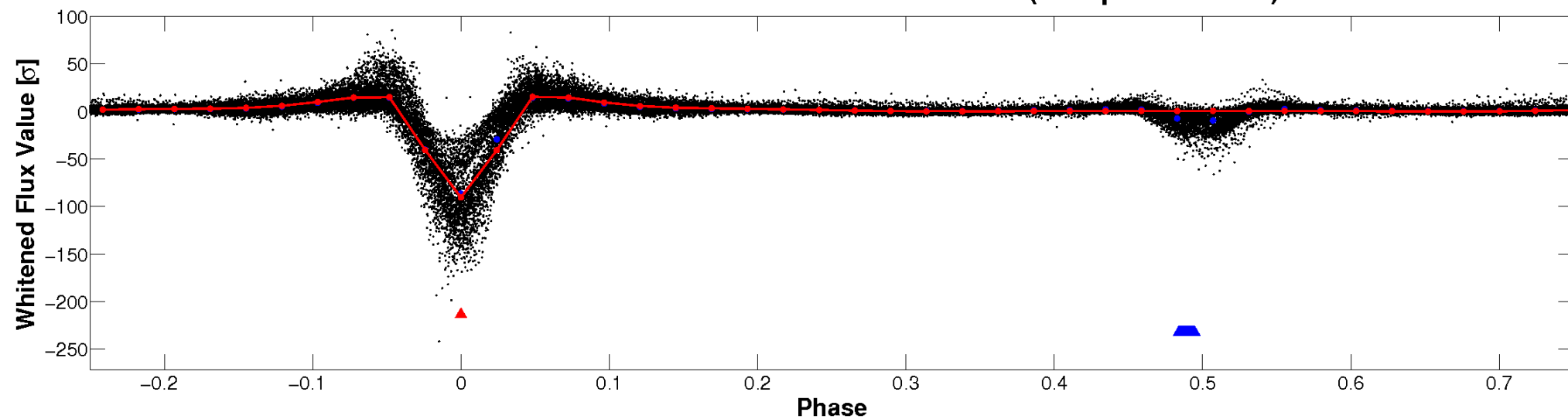


Non-Whitened Vs. Whitened Light Curve

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

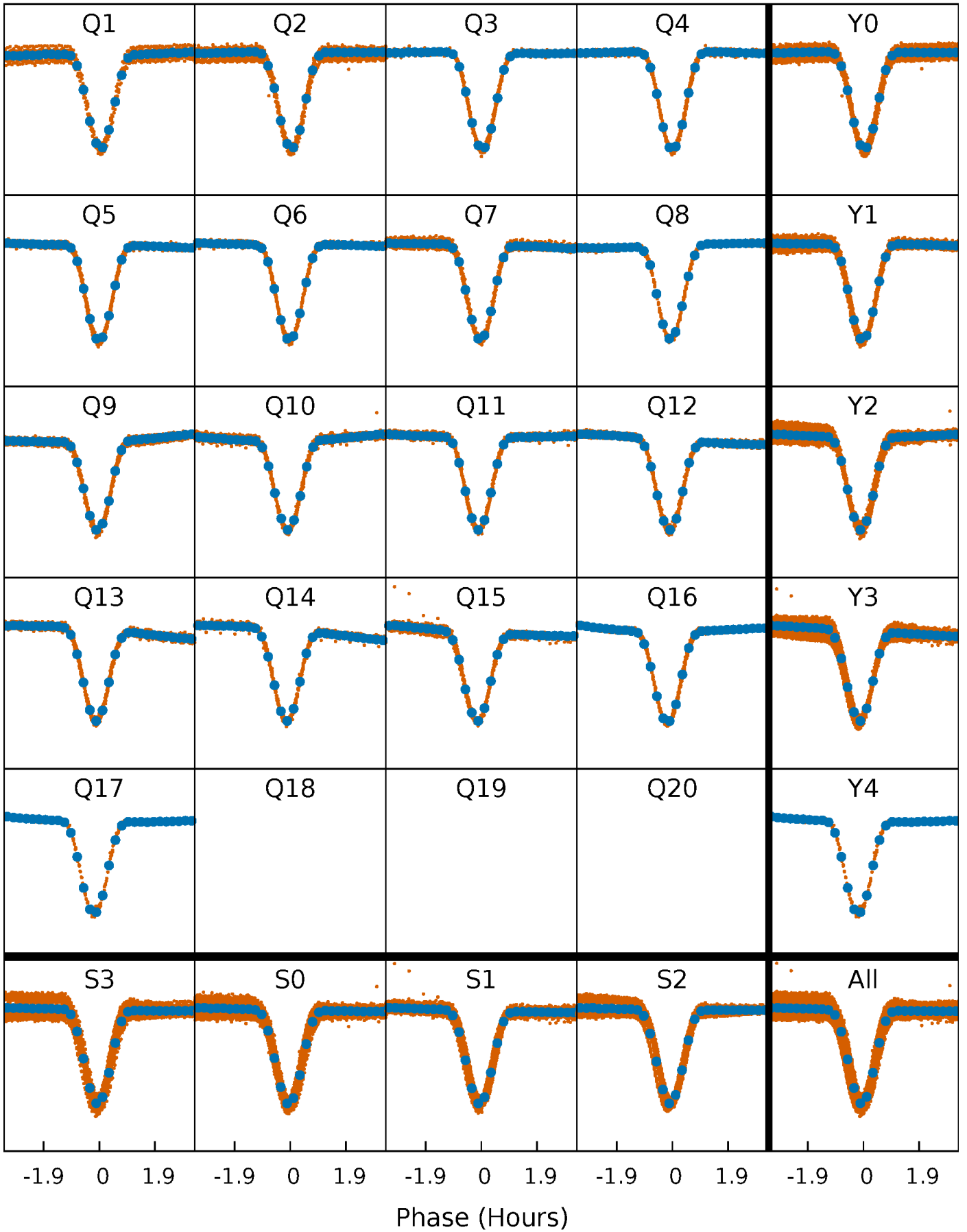


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



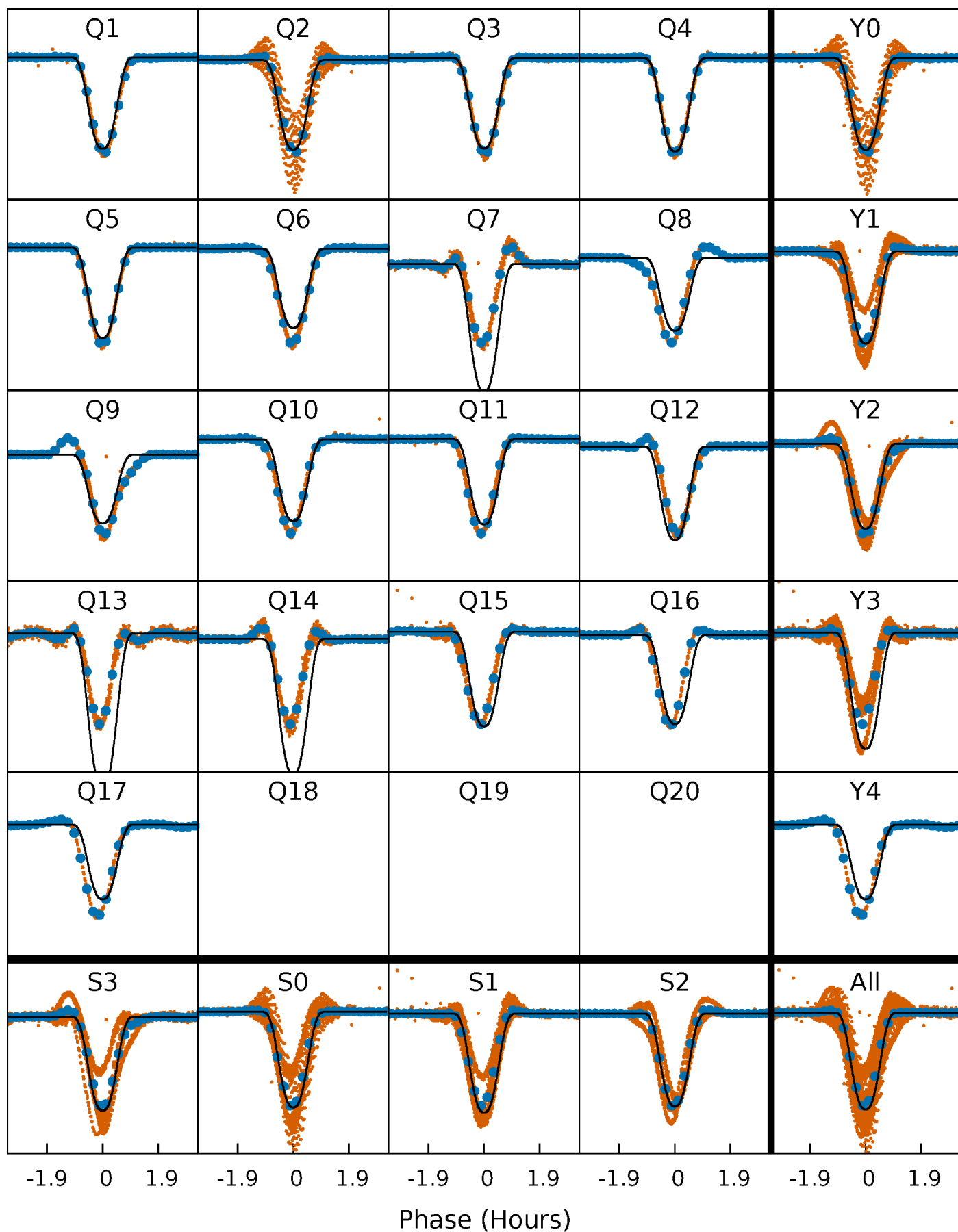
PDC Quarter-Phased Transit Curves

TCE 010129482-01 P= 0.846297 Days $T_0=132.191695$ (BKJD)



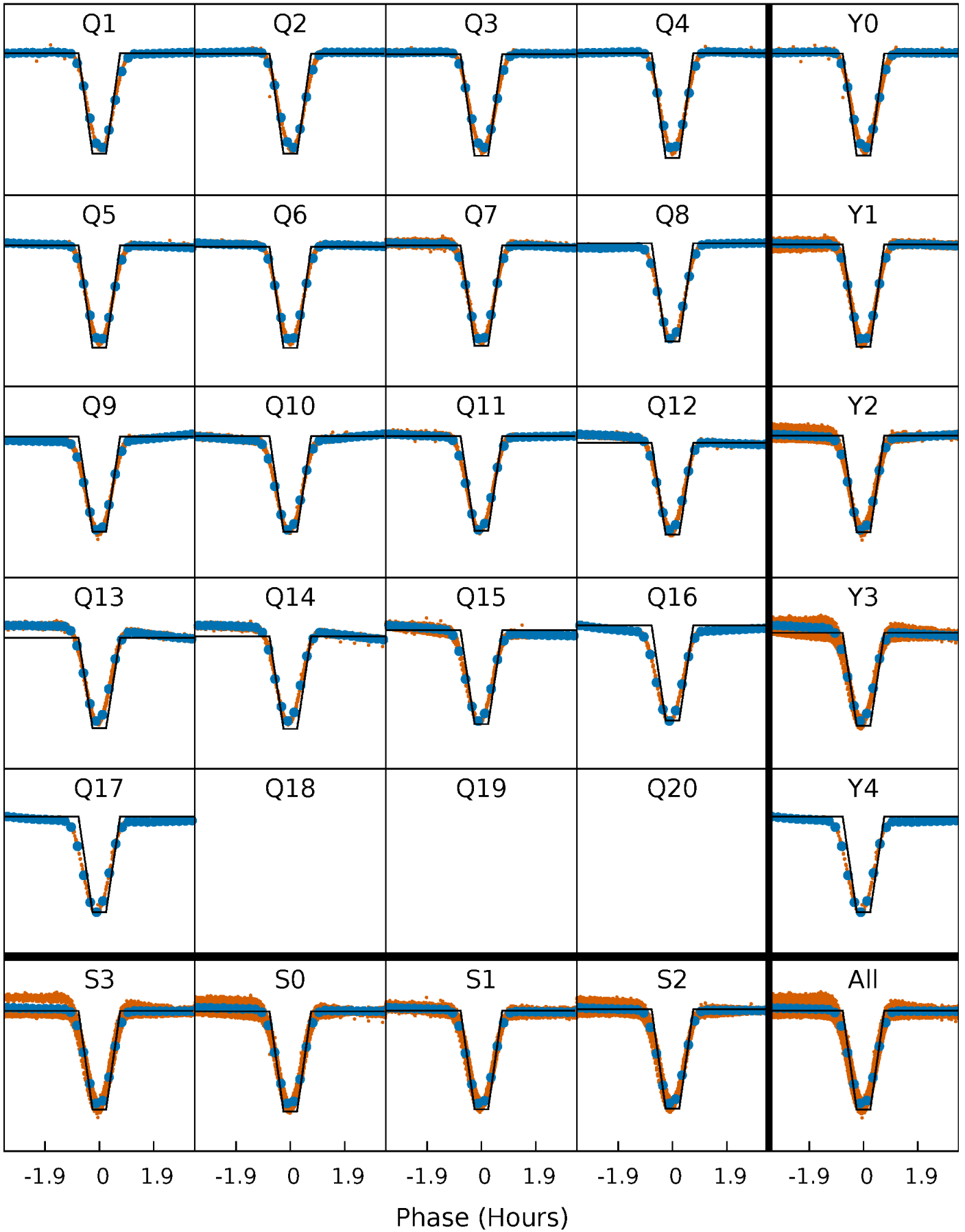
DV Quarter-Phased Transit Curves

TCE 010129482-01 P= 0.846297 Days $T_0=132.191695$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

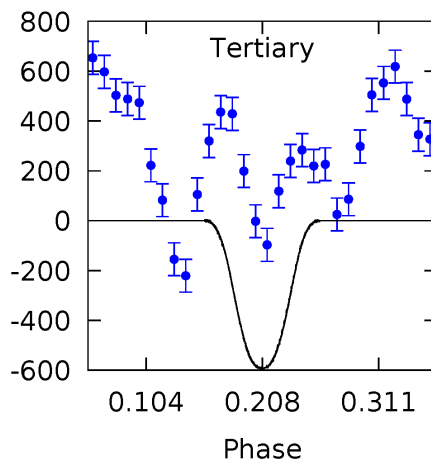
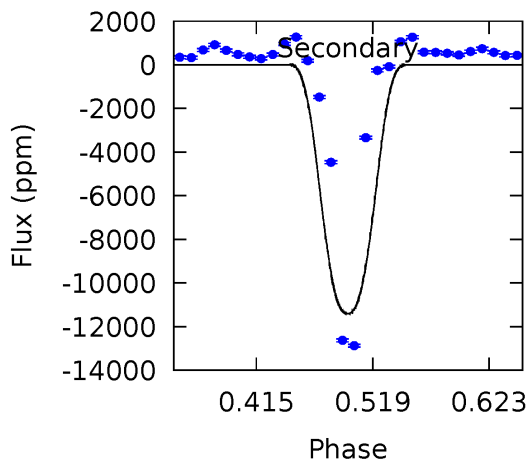
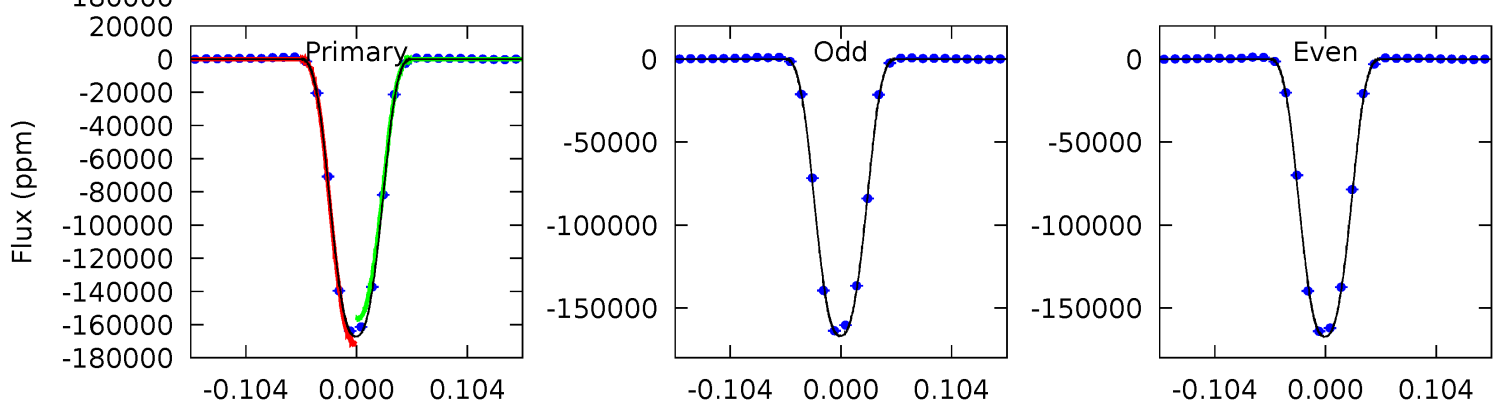
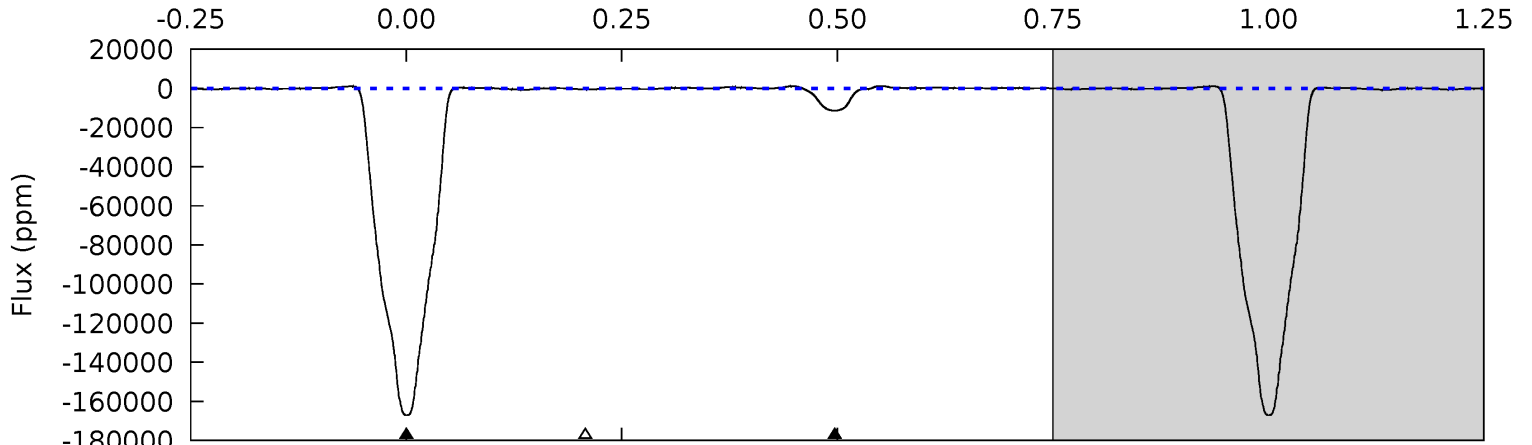
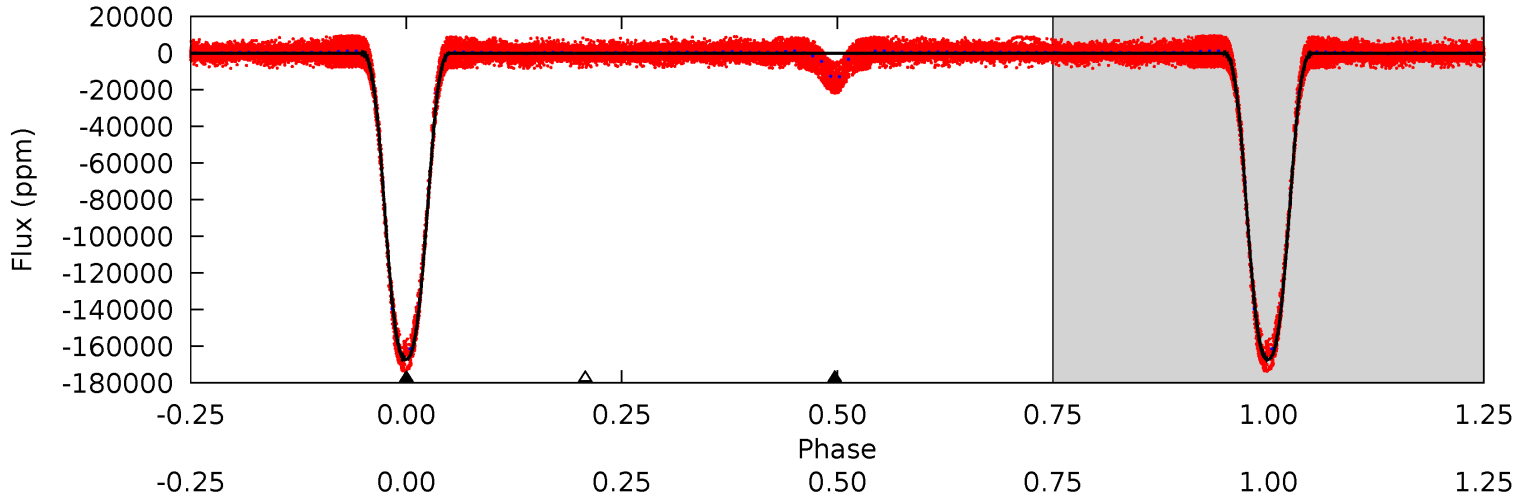
TCE 010129482-01 P= 0.846295 Days $T_0=132.191548$ (BKJD)



DV Model-Shift Uniqueness Test

010129482-01, P = 0.846297 Days, E = 131.345398 Days

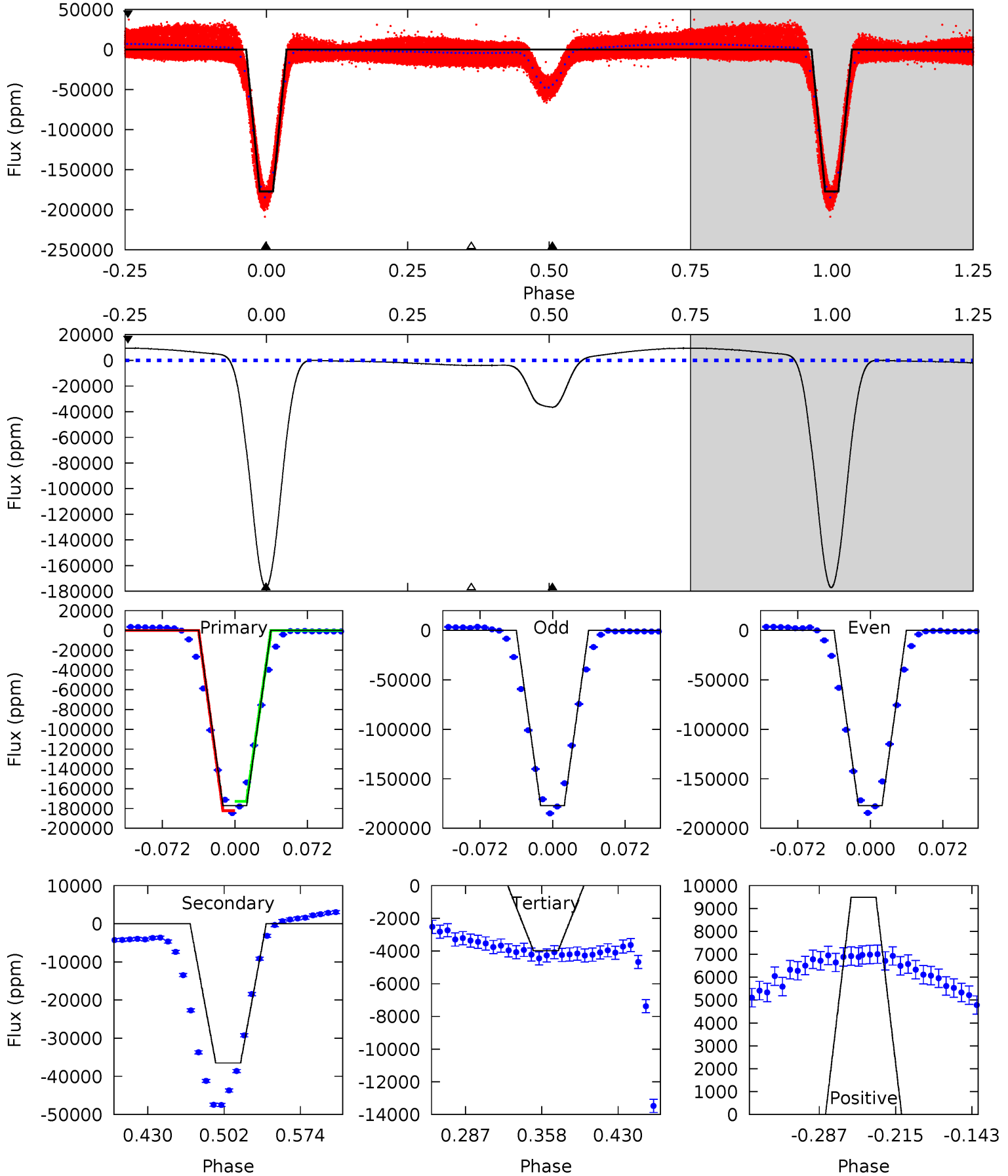
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3925	267.9	13.9	0	4.56	1.63	6.72	3911	3925	254.0	267.9	5.00	0.91	0.01	0



Alt Model-Shift Uniqueness Test

010129482-01, P = 0.846295 Days, E = 131.345253 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1324	272.8	29.7	70.9	4.63	1.80	37.6	1294	1253	243.1	201.9	0.28	1.00	0.05	35.4



Stellar Parameters For KIC 010129482

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4627^{+139}_{-139}	$4.721^{+0.048}_{-0.028}$	$-1.260^{+0.300}_{-0.300}$	$0.526^{+0.031}_{-0.034}$	$0.530^{+0.036}_{-0.025}$	$5.140^{+1.009}_{-0.579}$
	+3%/-3%	+1%/-1%	+24%/-24%	+6%/-6%	+7%/-5%	+20%/-11%
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 010129482-01 / KOI 7288.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-11405 ± 43	$21.63^{+0.88}_{-0.79}$	1730^{+57}_{-58}	2986^{+63}_{-65}	$2.733^{+0.183}_{-0.154}$
Alt.	-36502 ± 134	$25.16^{+0.95}_{-0.95}$	1732^{+57}_{-59}	3447^{+82}_{-83}	$6.649^{+0.456}_{-0.362}$

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 $A_{obs} \gg 1.0$

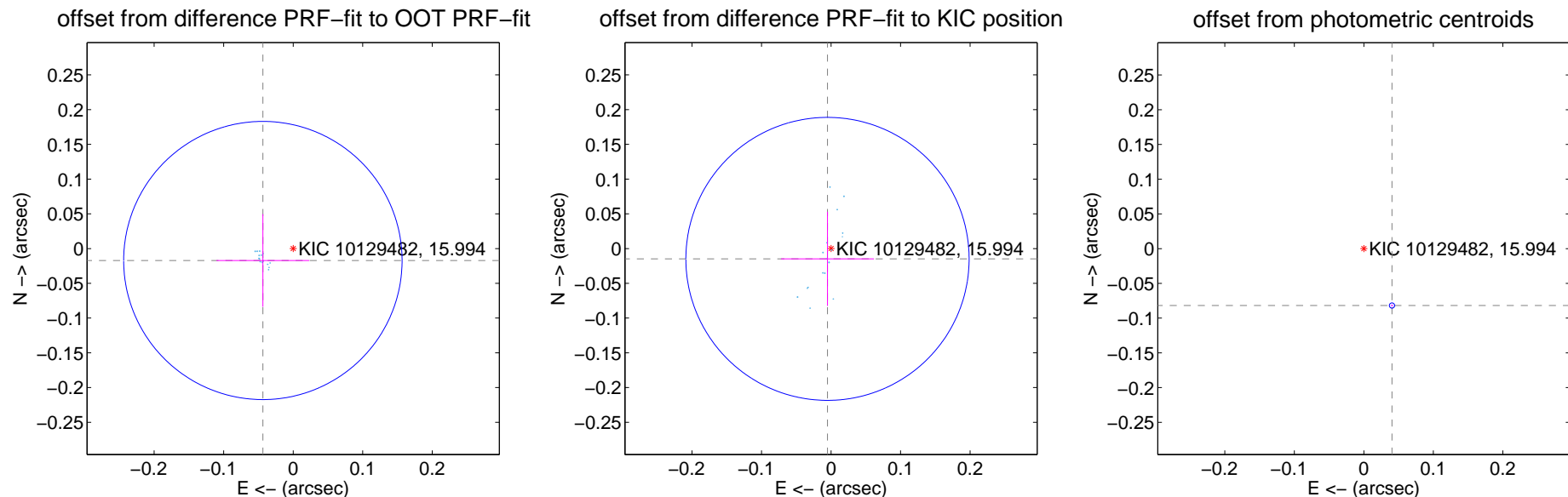
DV Centroid Data

Supplemental centroid analysis for 010129482-01. Kepler magnitude: 15.99. Transit SNR 2747.03

There are 17 quarters with good PRF difference image offsets

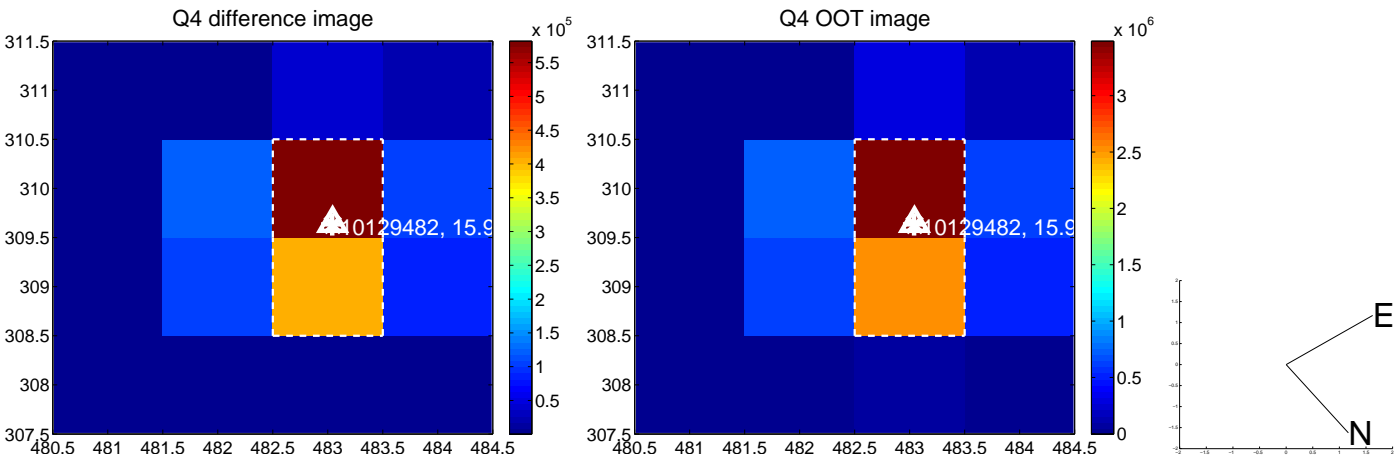
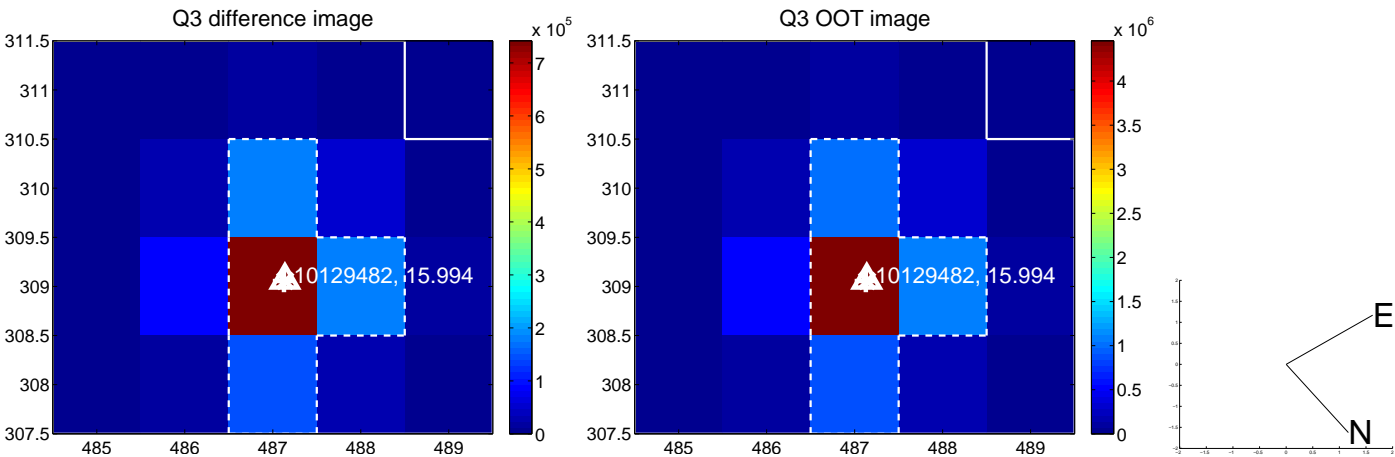
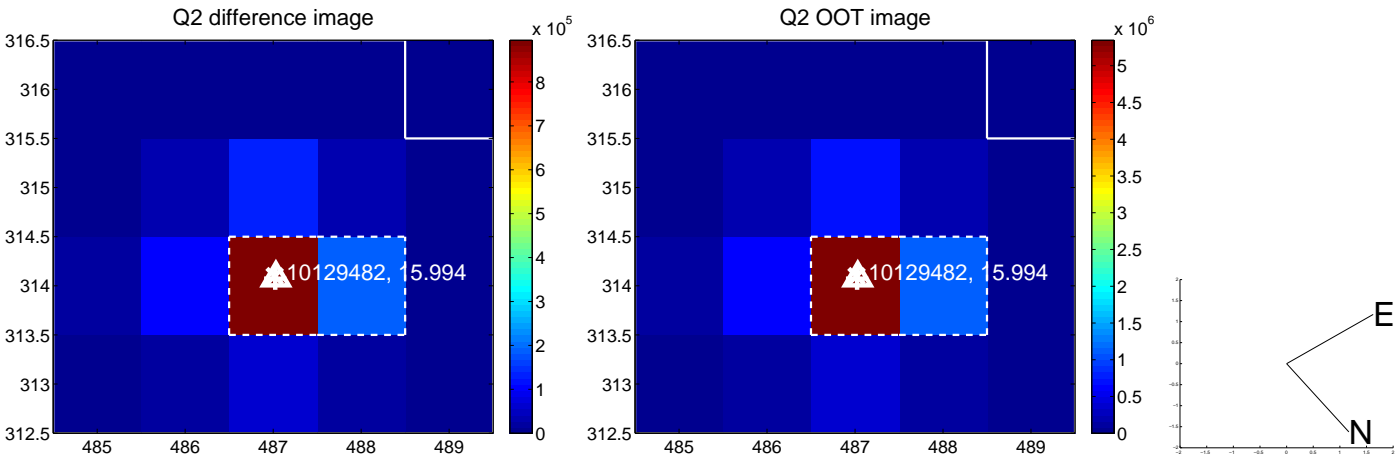
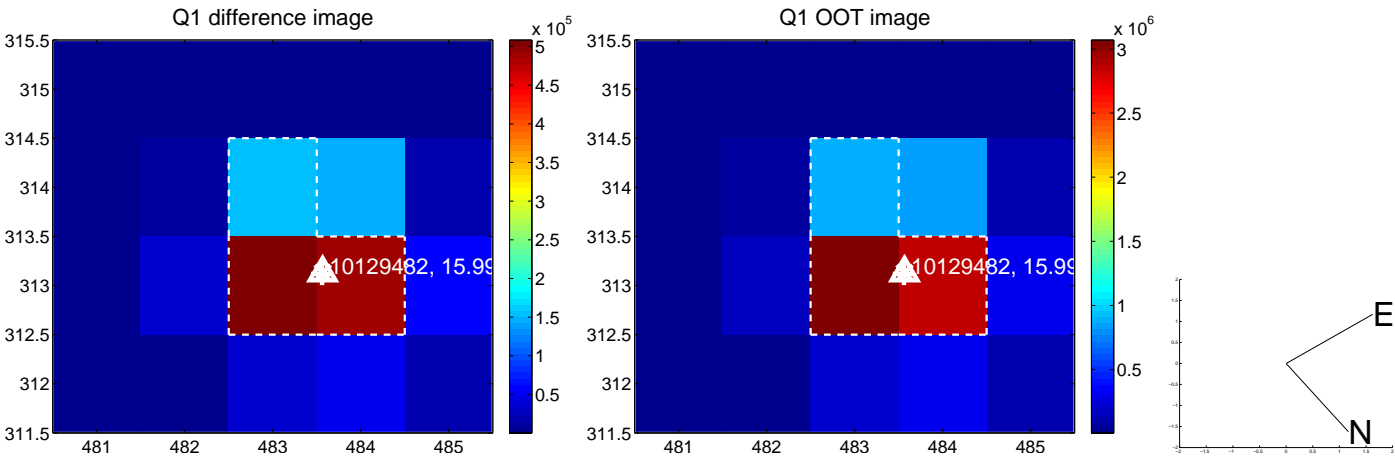
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.047 ± 0.067	0.70	0.044 ± 0.067	-0.017 ± 0.067
PRF-fit source offset from KIC position	0.016 ± 0.068	0.23	0.005 ± 0.067	-0.015 ± 0.068
photometric centroid source offset	0.09 ± 0.00	72.65	-0.04 ± 0.00	-0.08 ± 0.00

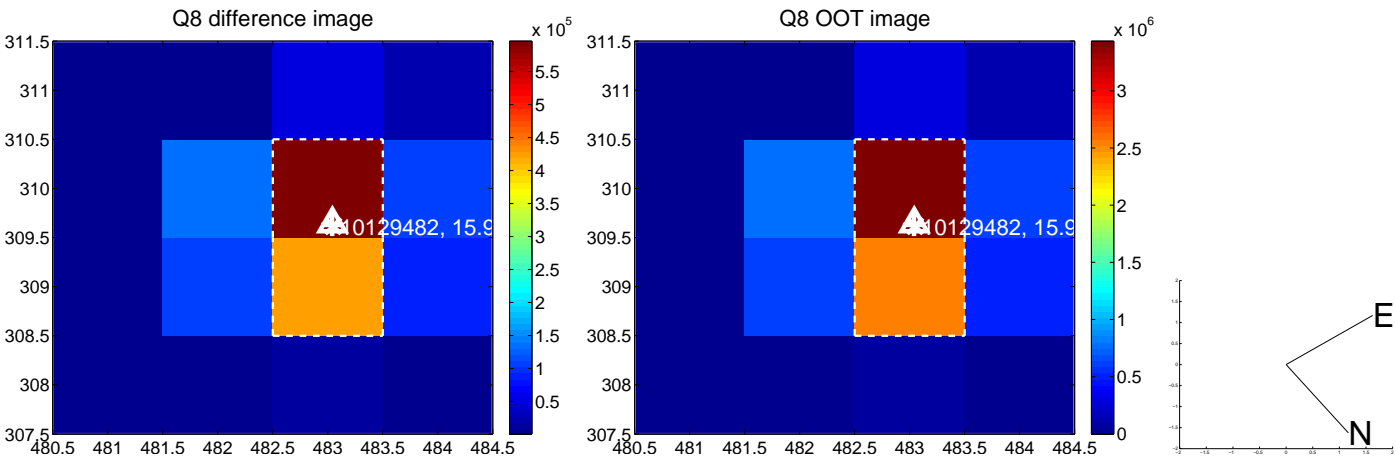
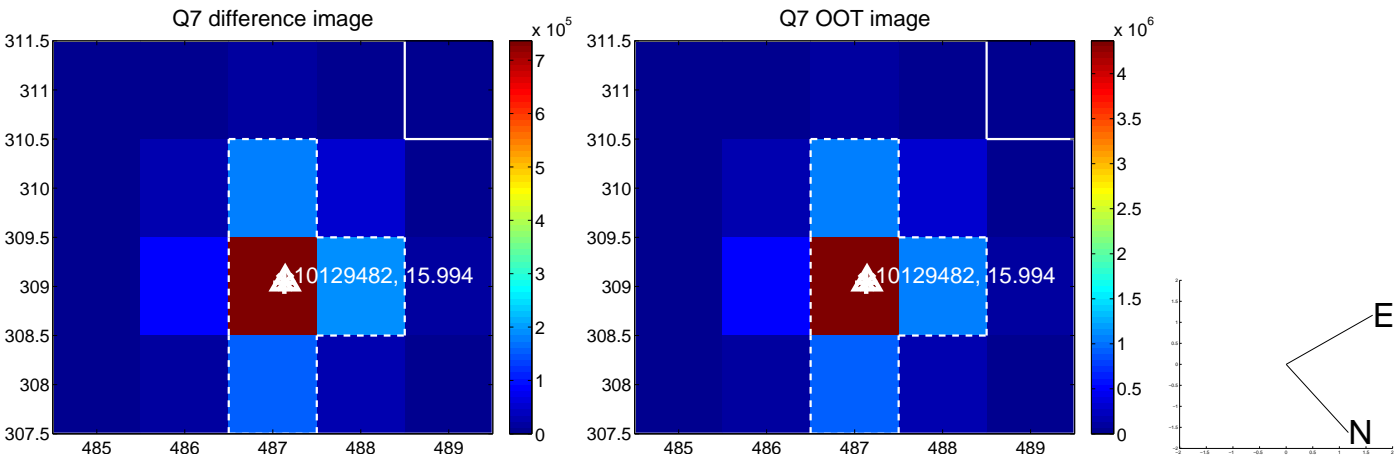
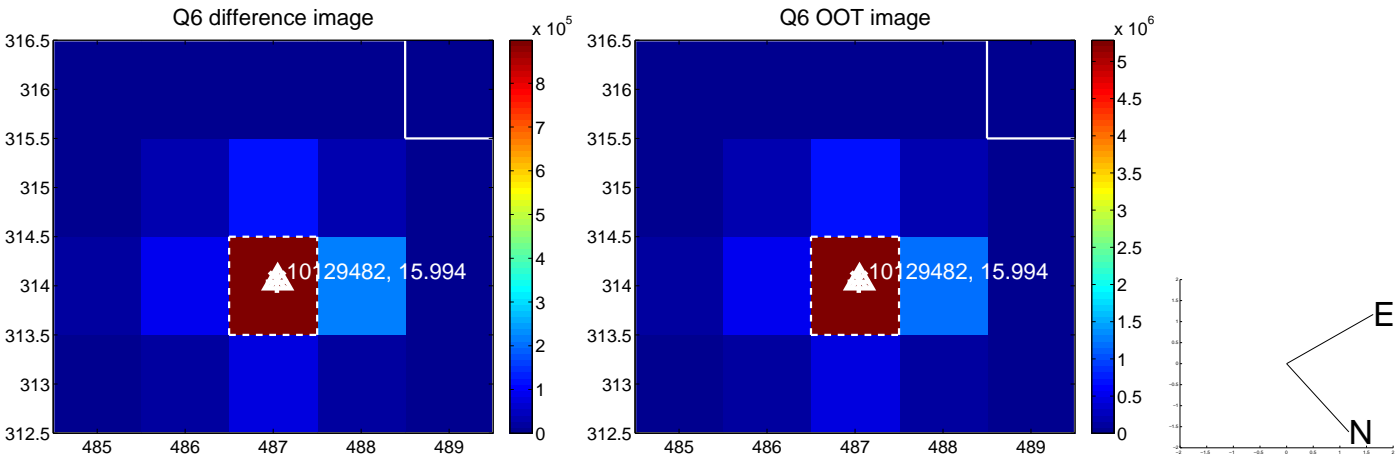
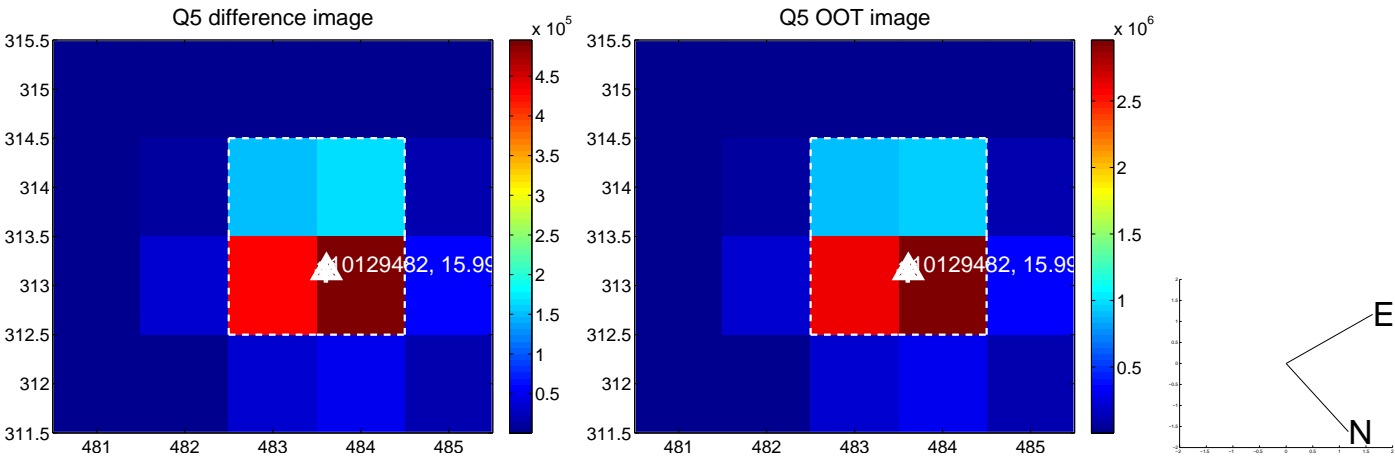


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

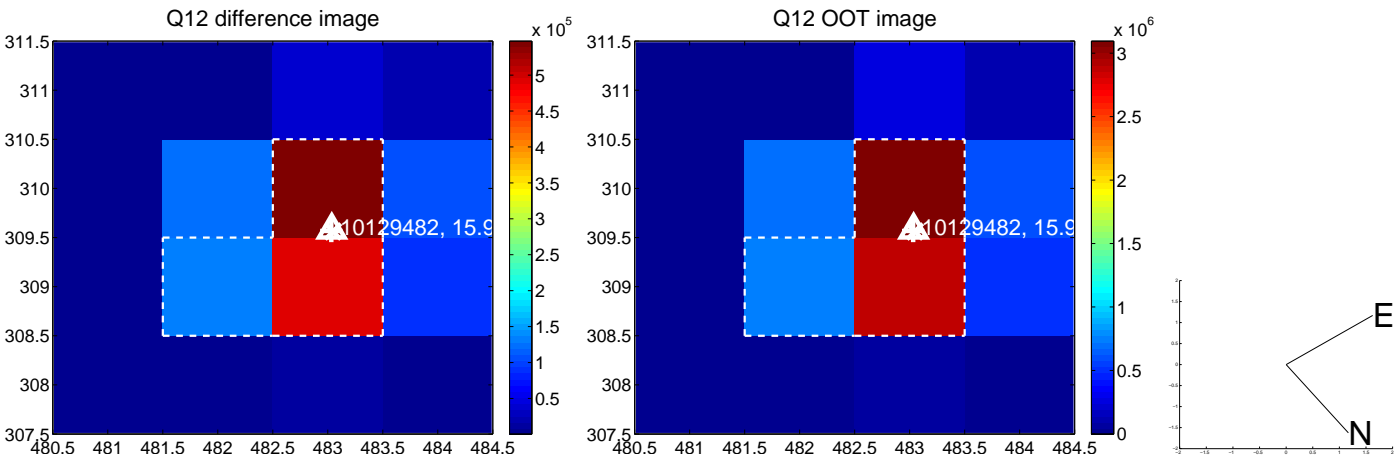
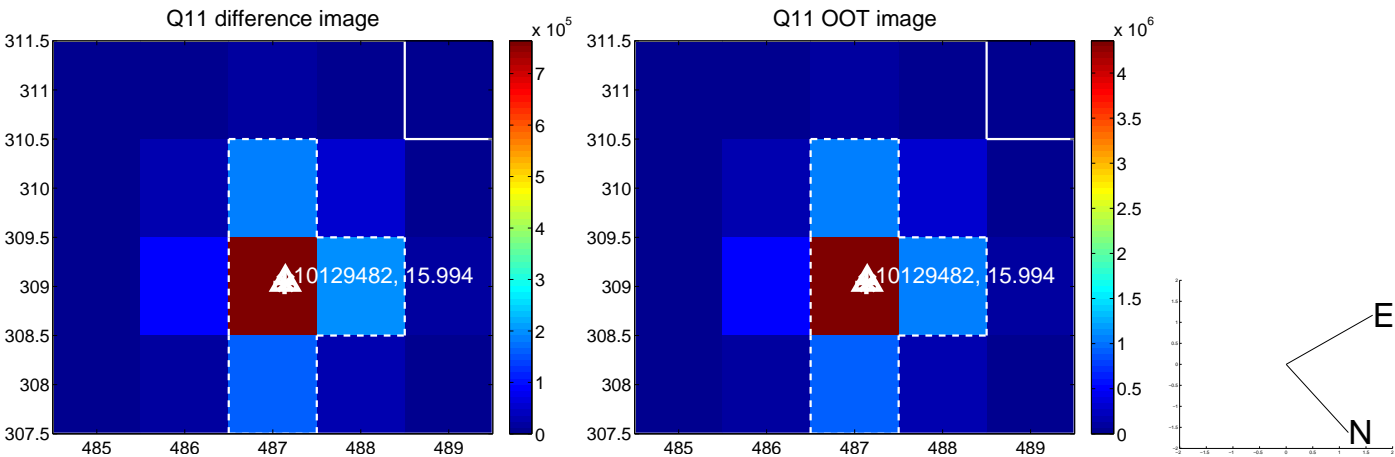
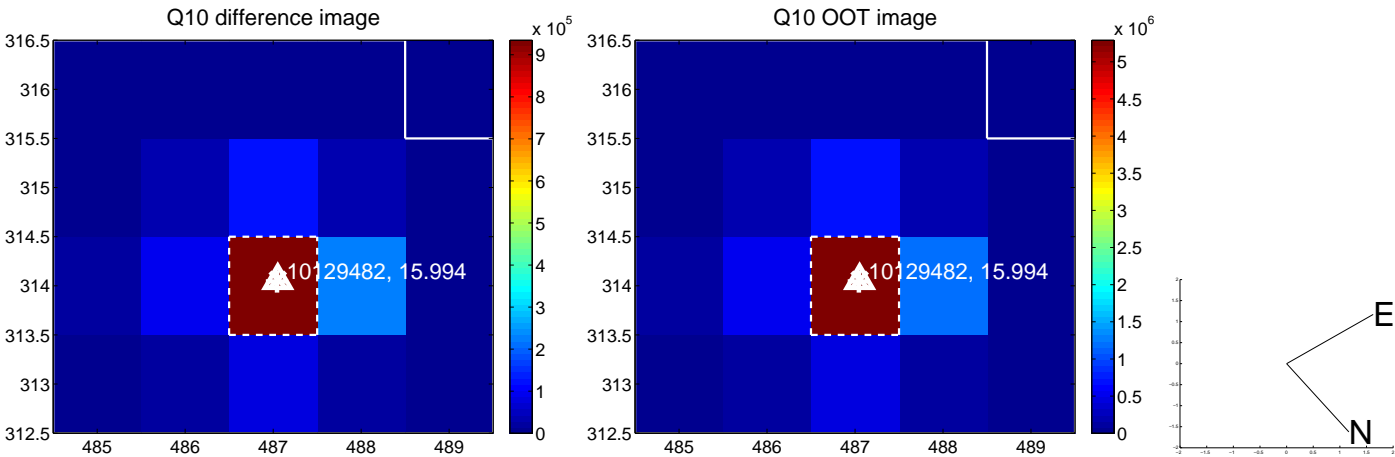
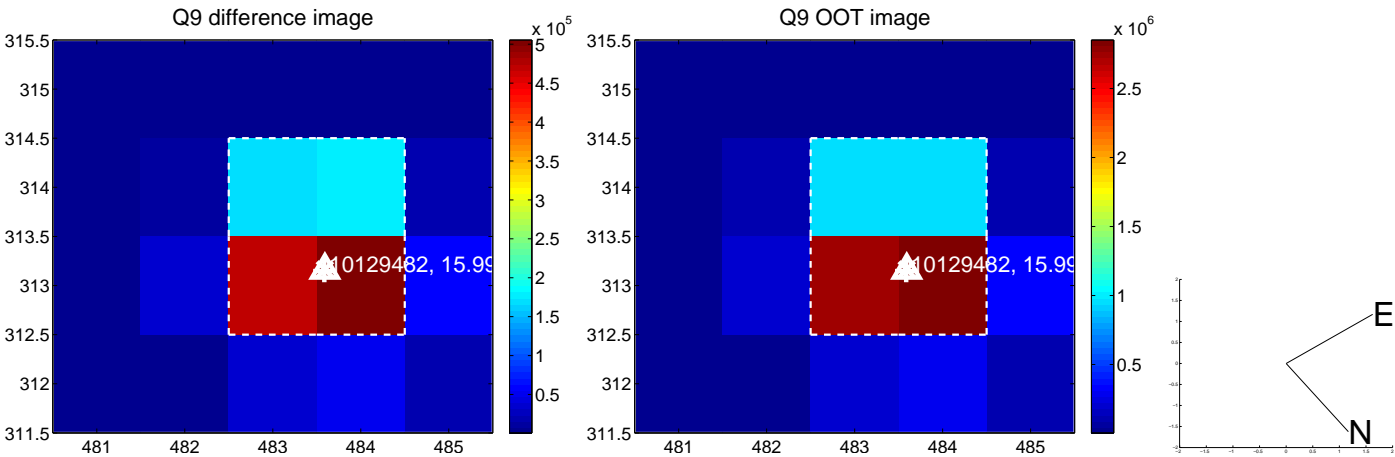
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



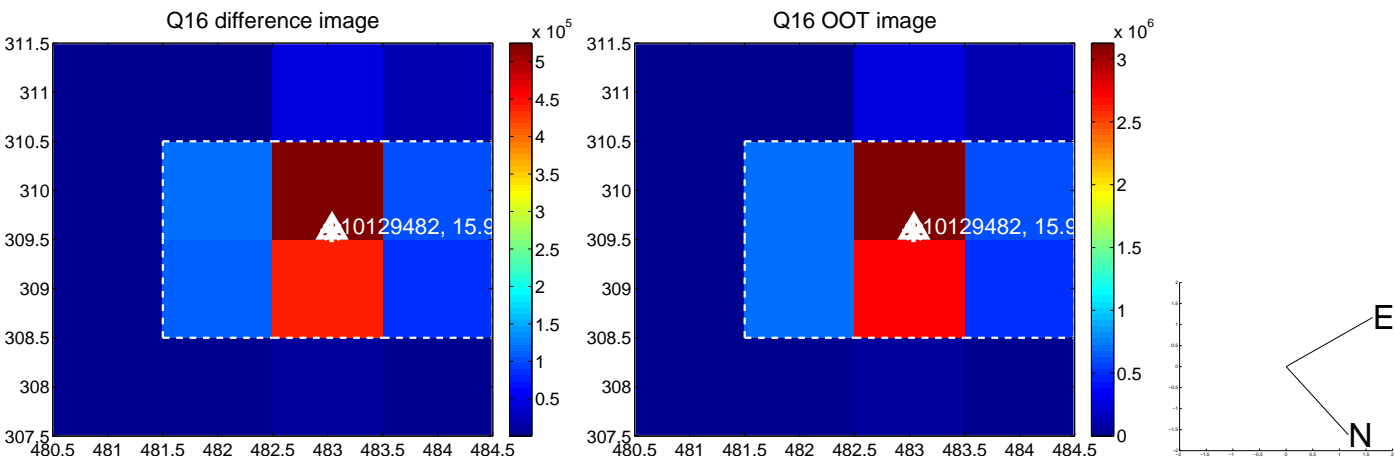
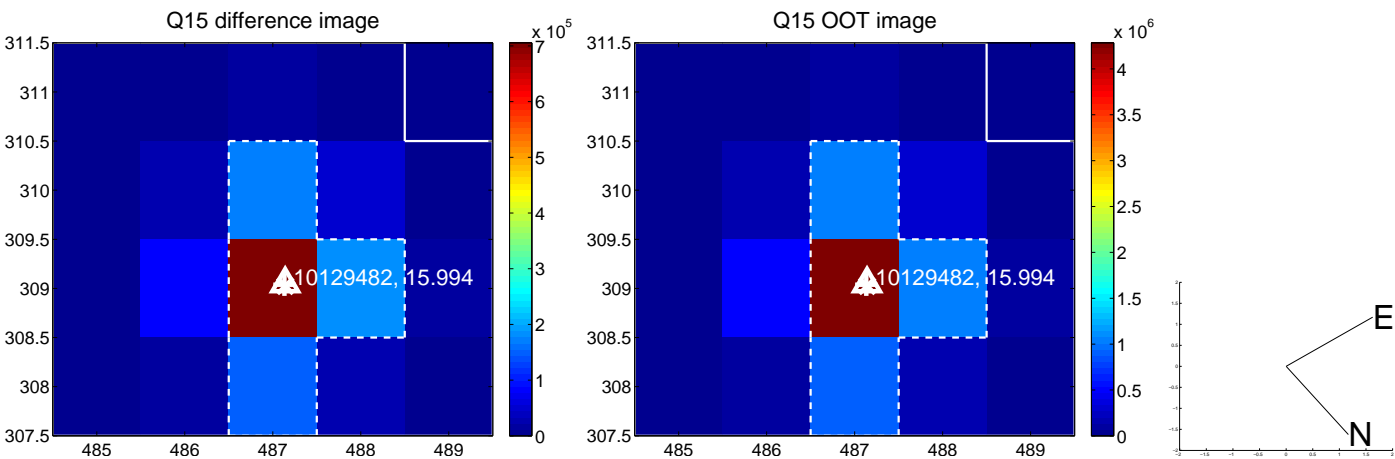
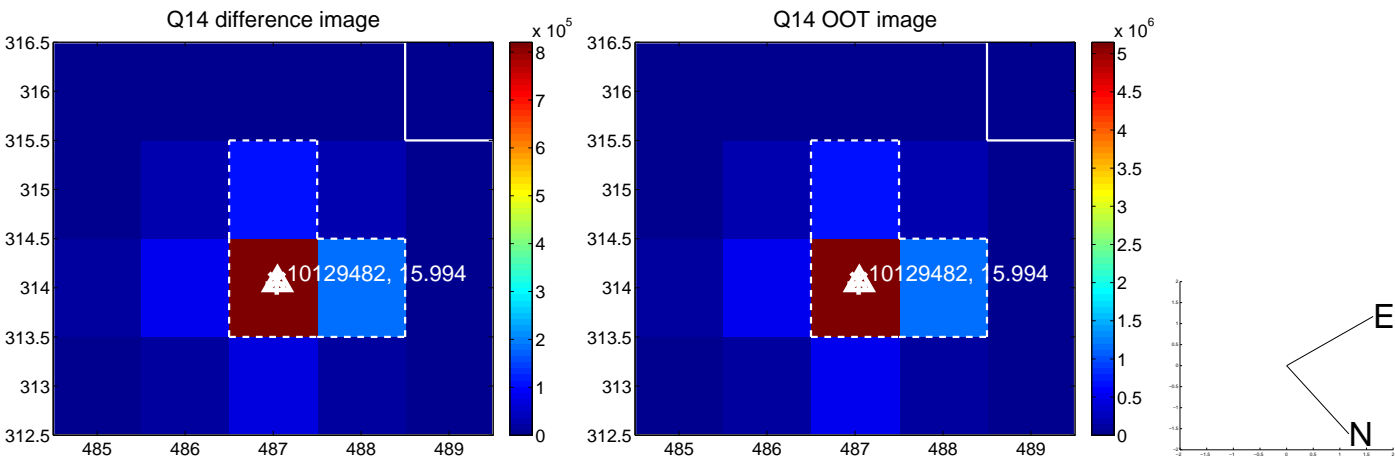
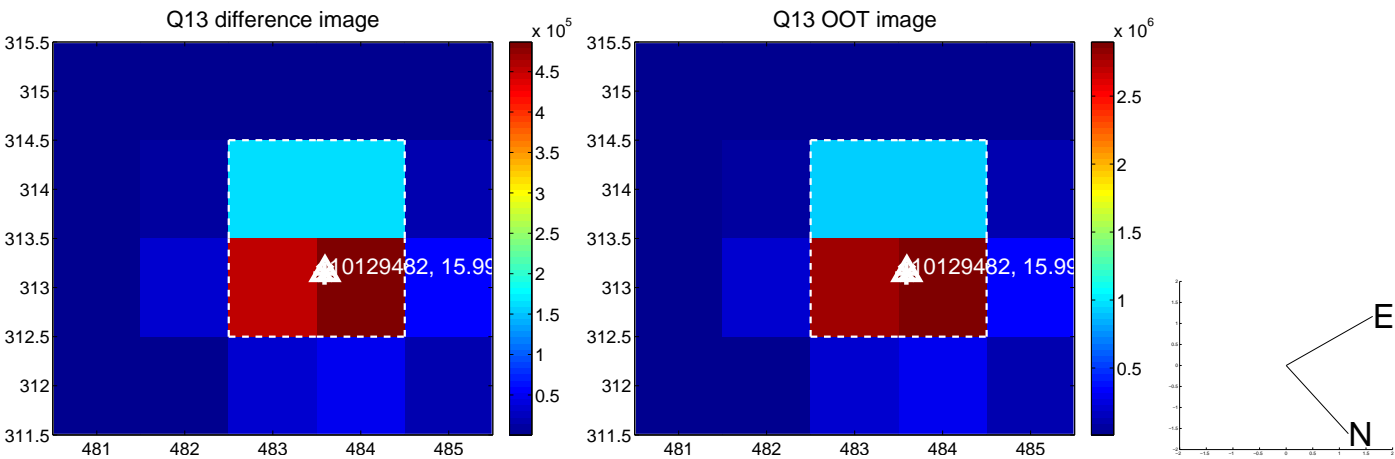
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



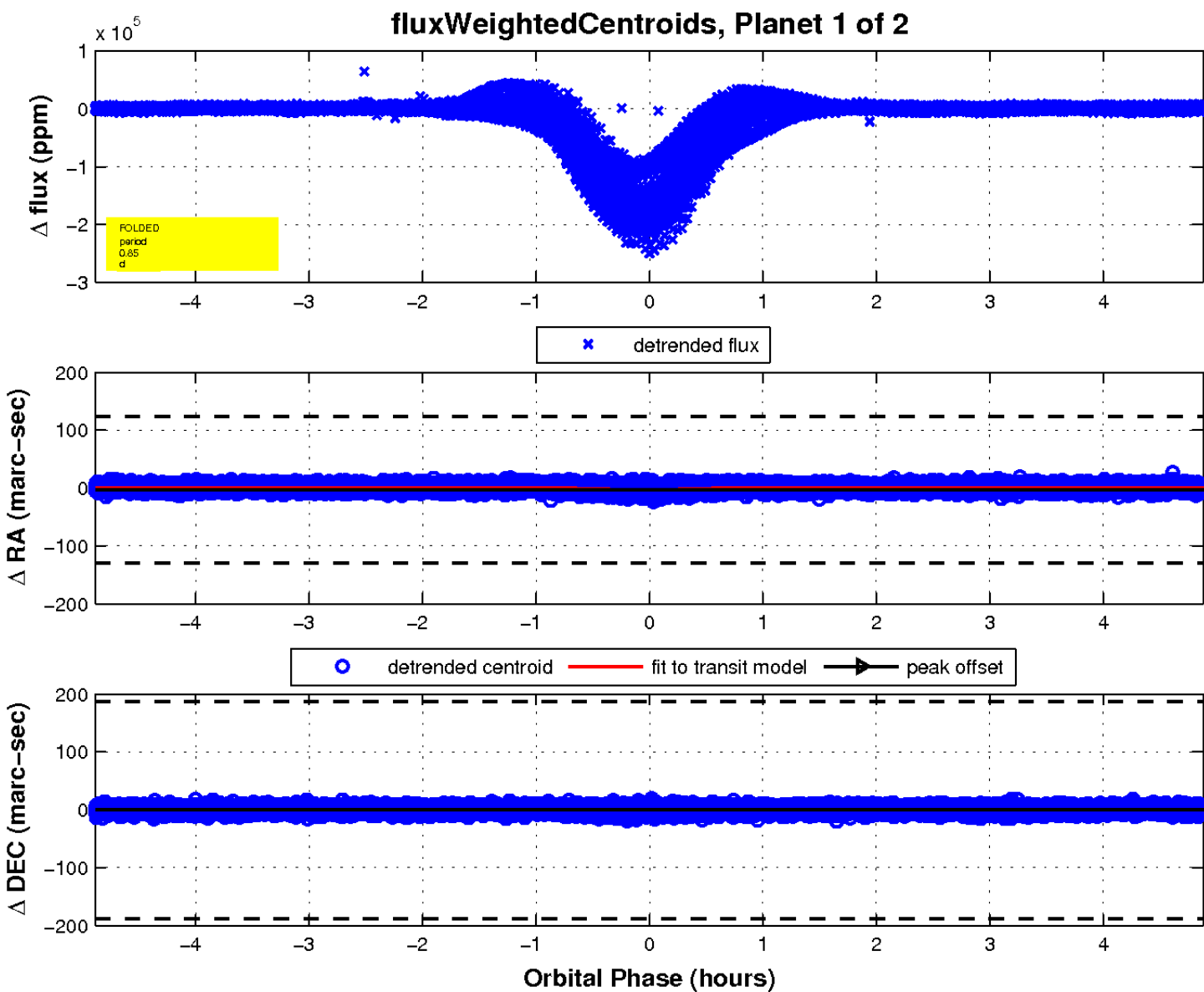
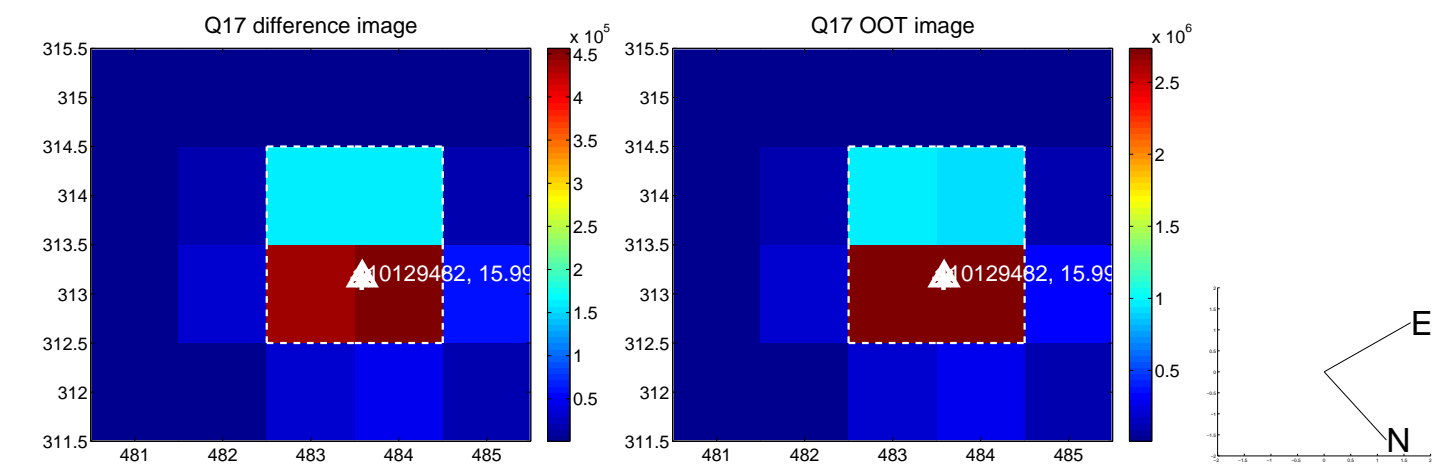
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

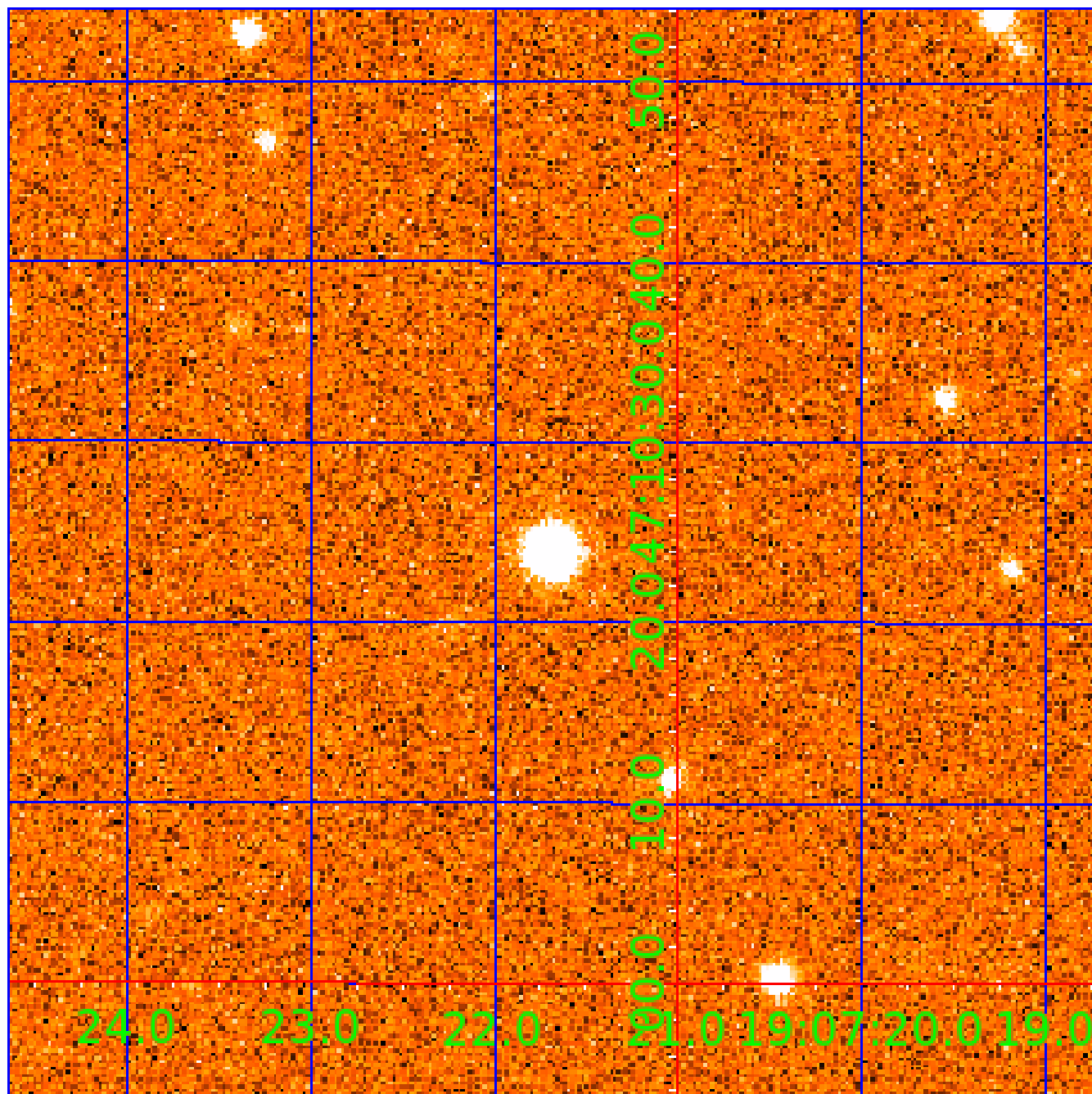


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010129482

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})
010129482-01	OBS	7288.01	0.846297	132.191695	168733.8	1.628	3594.6	2747.0	0.53	4627	21.77	565.01
010129482-02	OBS	No	0.846291	131.764119	42030.6	1.500	601.3	-1.0	0.53	4627	10.66	565.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010129482-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
010129482-02	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.

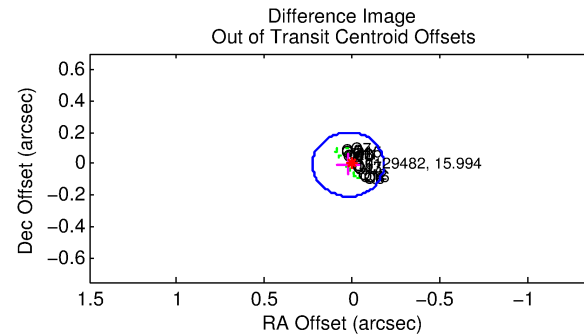
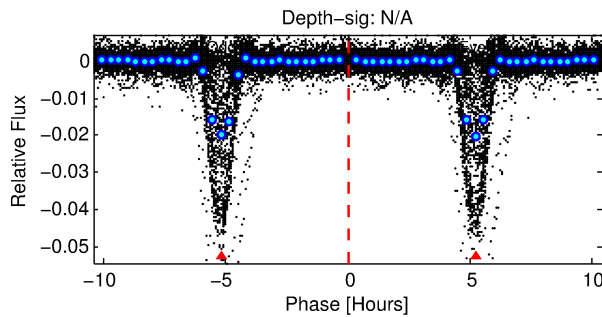
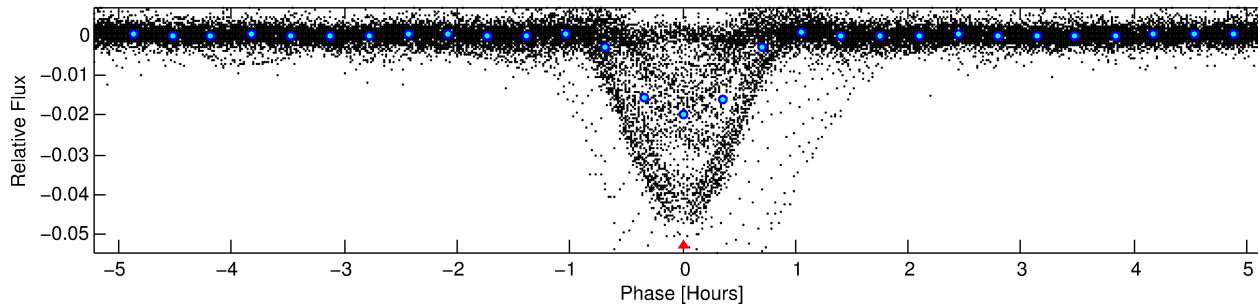
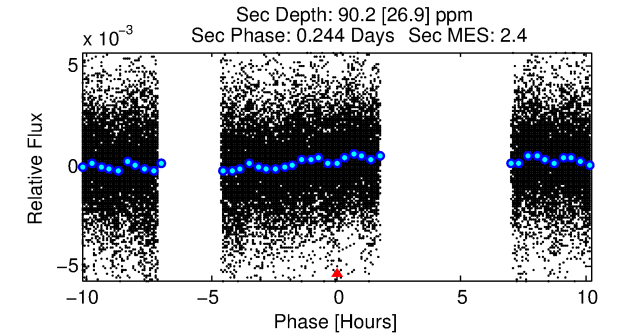
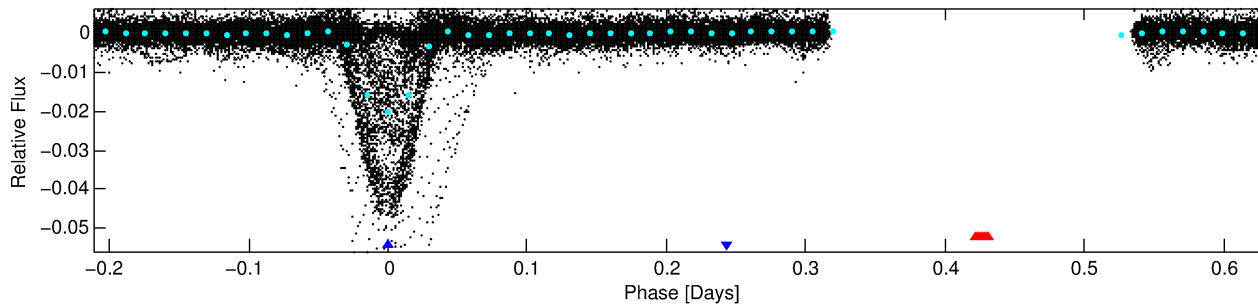
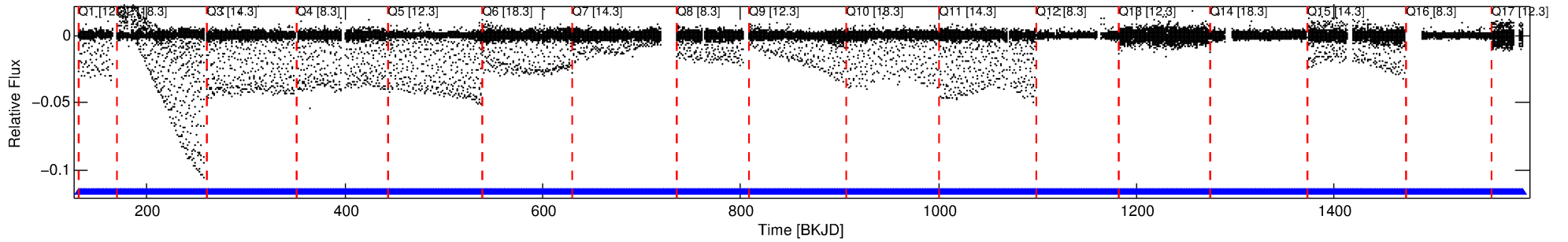
Ephemeris Match Information For 010129482-02

No Significant Match Found

DV One-Page Summary

KIC: 10129482 Candidate: 2 of 2 Period: 0.846 d
KOI: K07288 Corr: No Ephemeris Match

Kp: 15.99 R*: 0.53 Rs Teff: 4627.0 K Logg: 4.72 Fe/H: -1.260



TPS TCE Results:

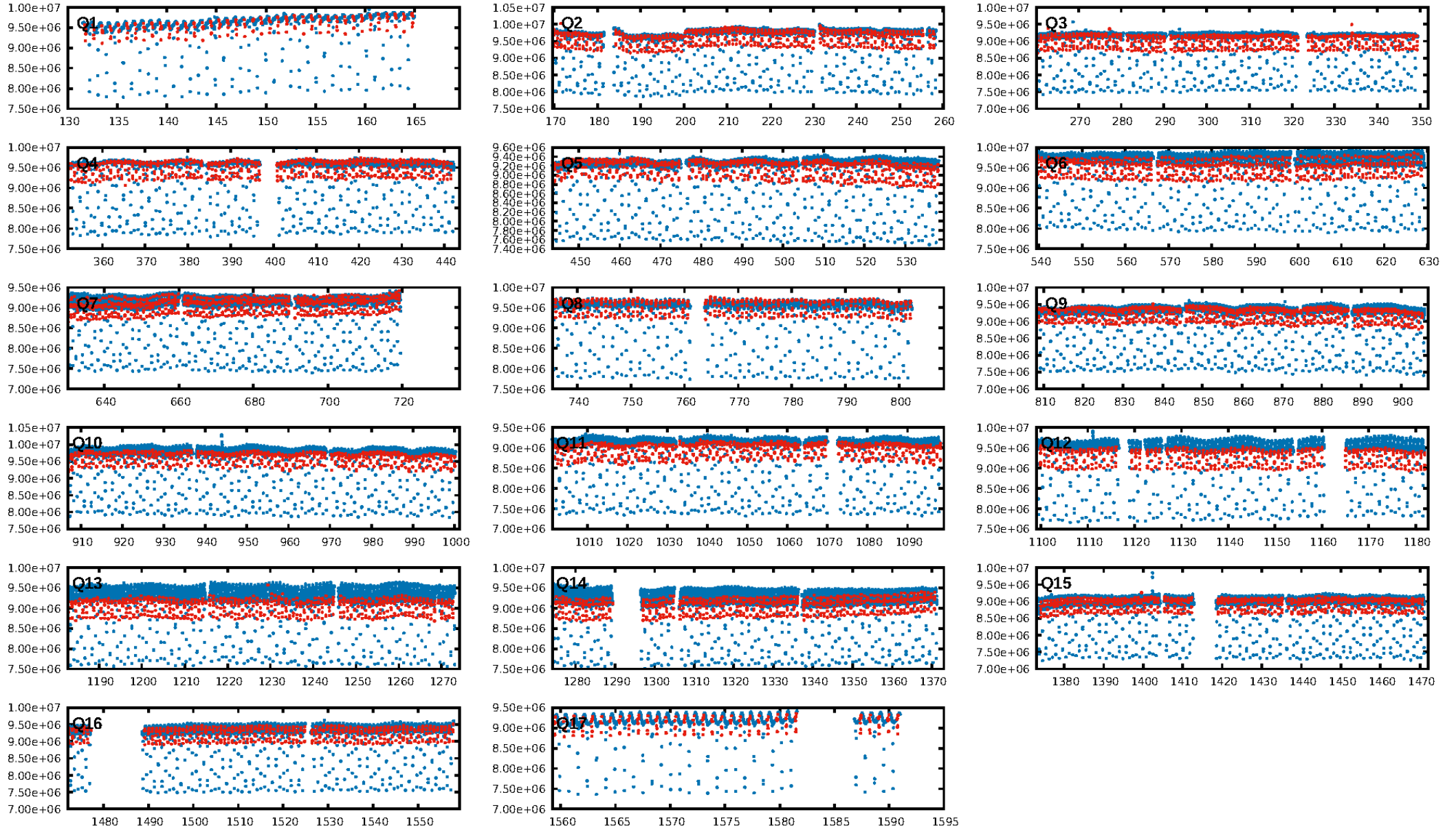
Period = 0.84629 d
Epoch = 131.7641 BKJD

DV fit results are unavailable

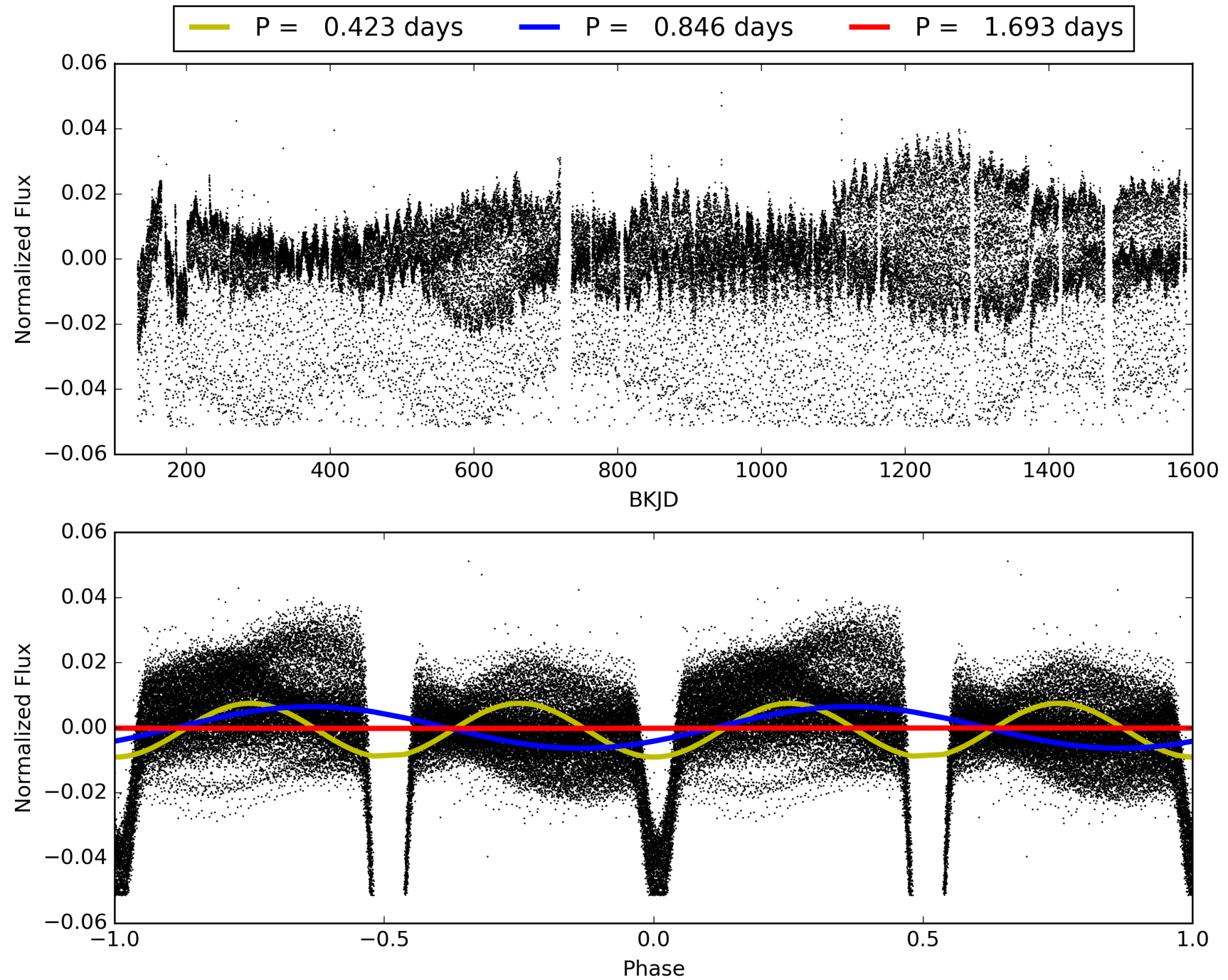
DV Diagnostic Results:

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 [1513/1513]
GhostDiagnostic-chr: 3.359
Centroid-sig: 0.0%
Centroid-so: 0.104 arcsec [28.29σ]
OotOffset-rm: 0.024 arcsec [0.36σ]
KicOffset-rm: 0.013 arcsec [0.20σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
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TCE 010129482-02, PDC Light Curves

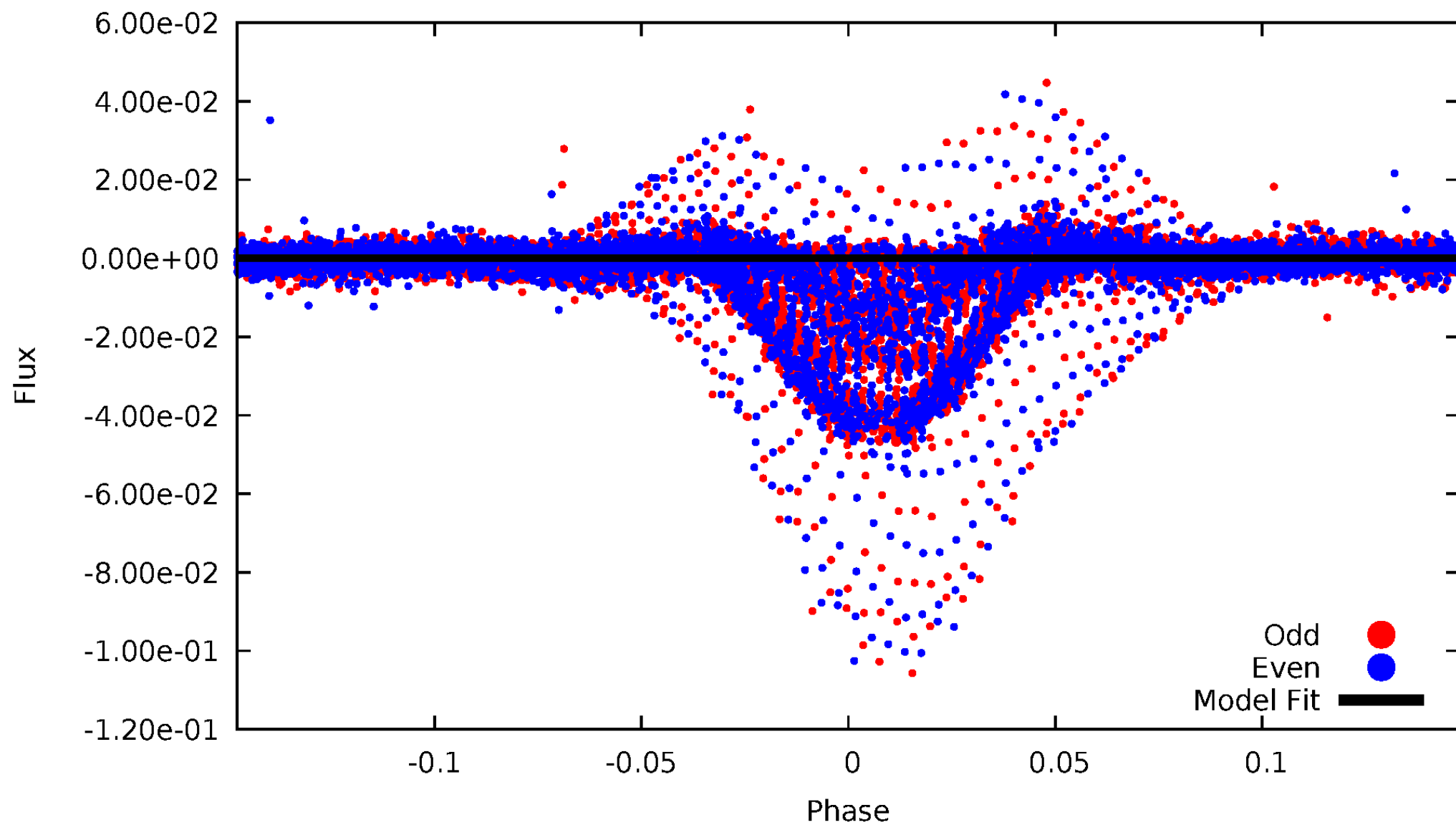


TCE 010129482-02



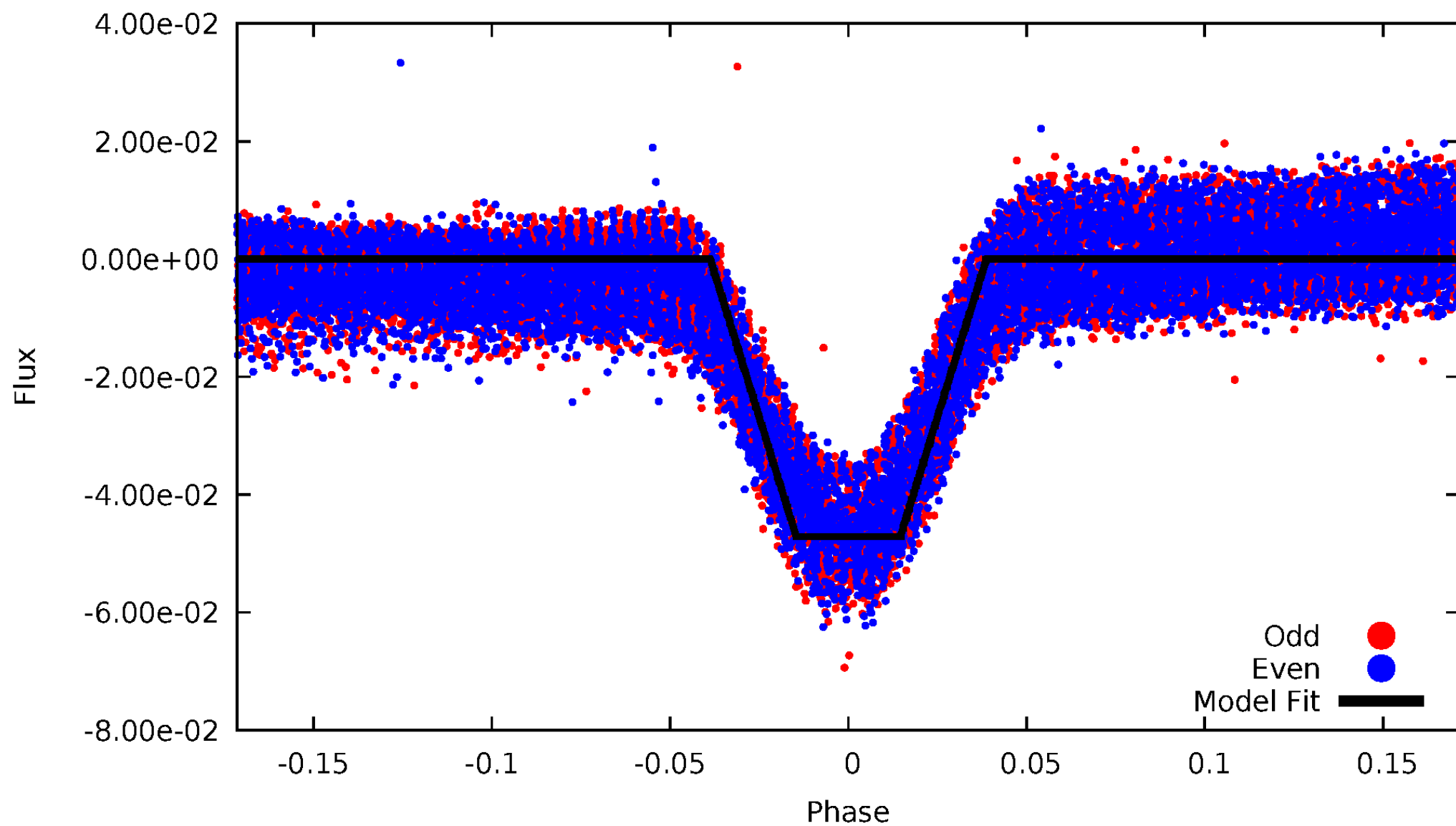
DV Odd/Even

TCE 010129482-02



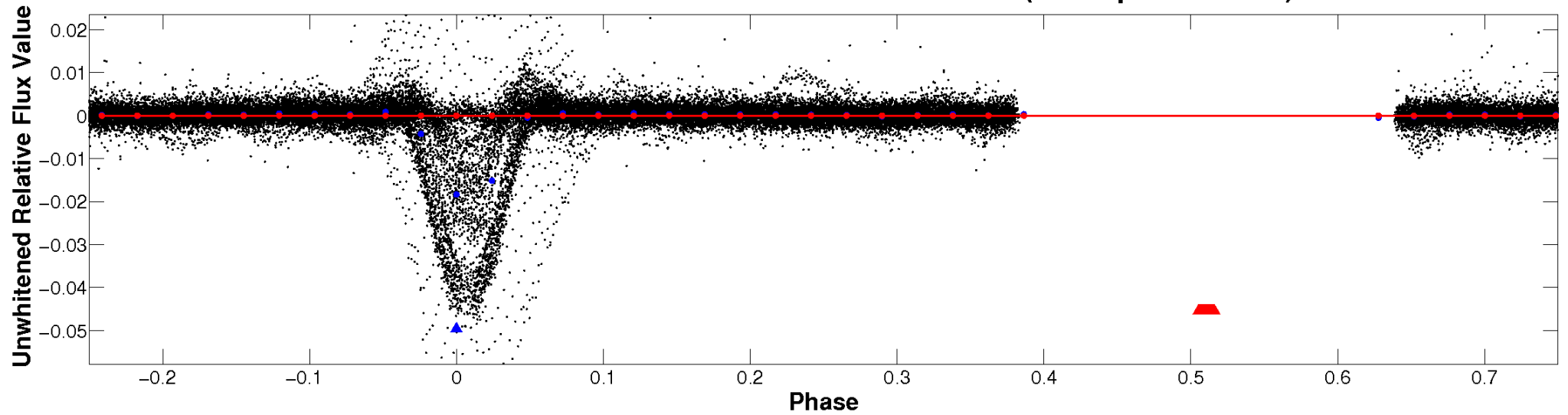
ALT Odd/Even

TCE 010129482-02

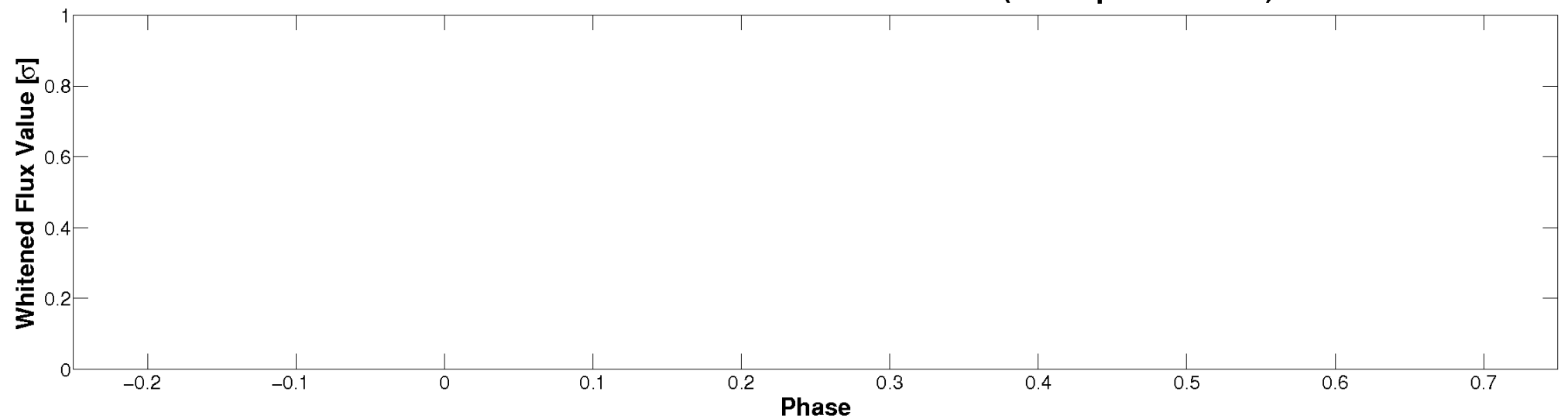


Non-Whitened Vs. Whitened Light Curve

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

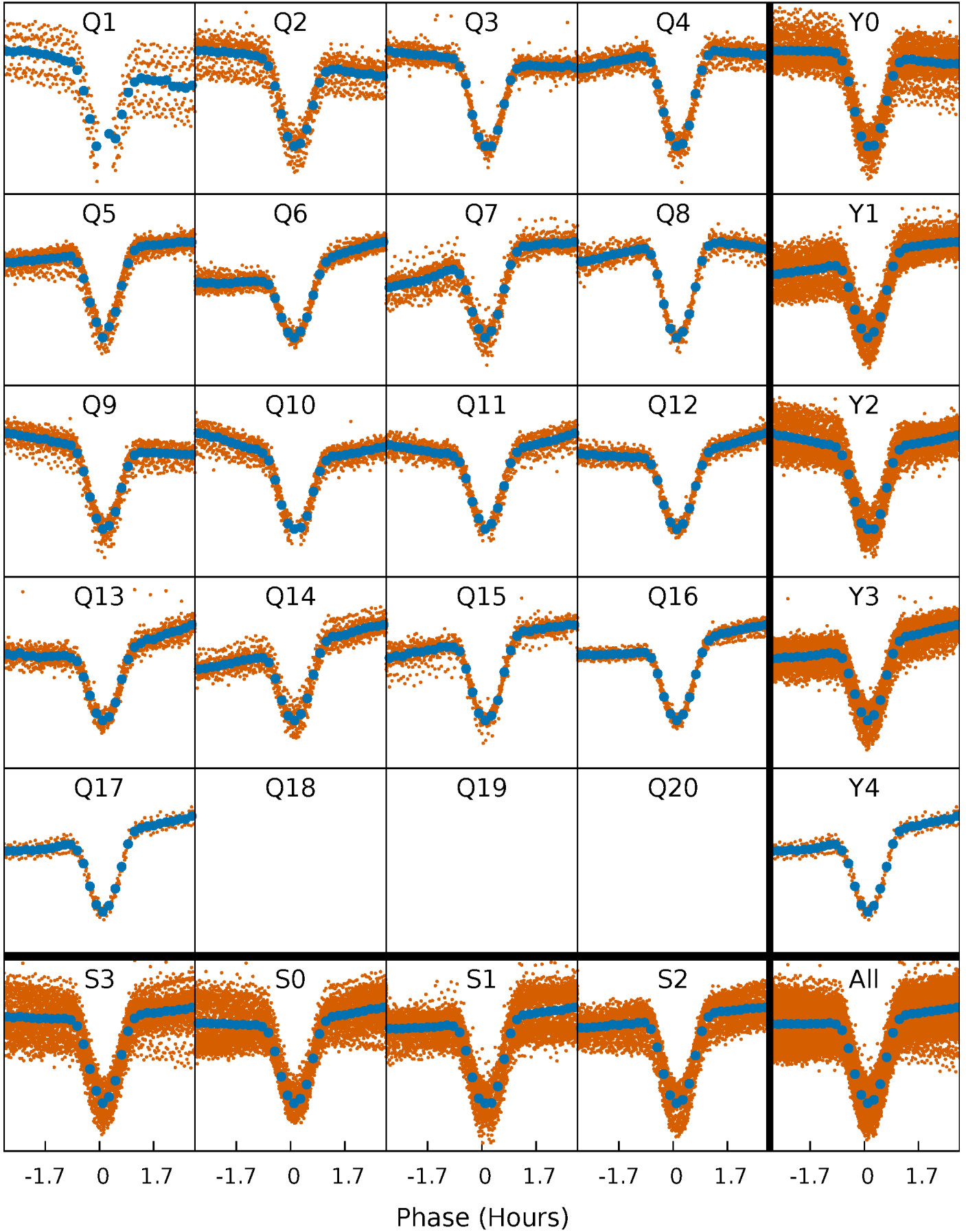


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



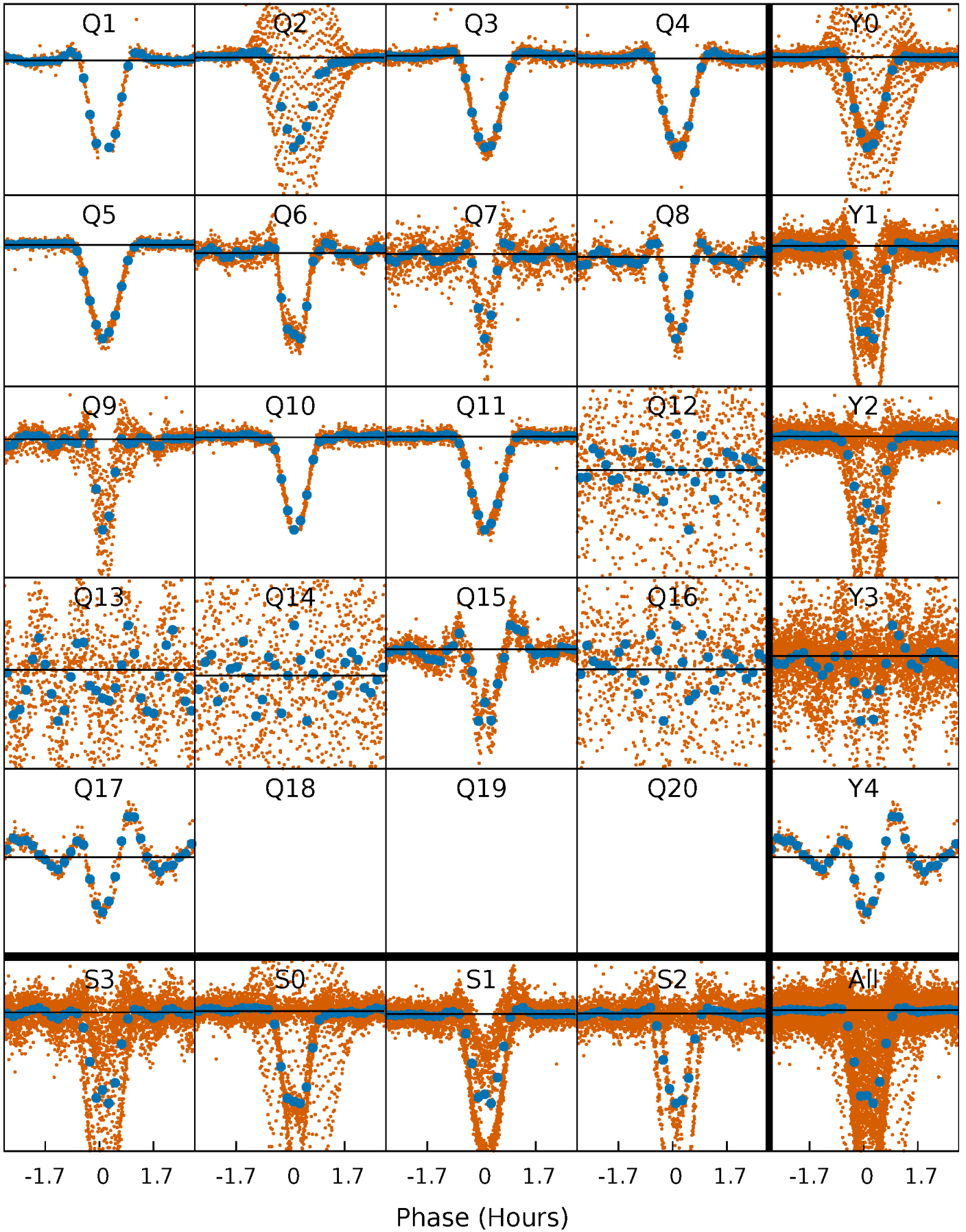
PDC Quarter-Phased Transit Curves

TCE 010129482-02 P= 0.846291 Days $T_0=131.764119$ (BKJD)



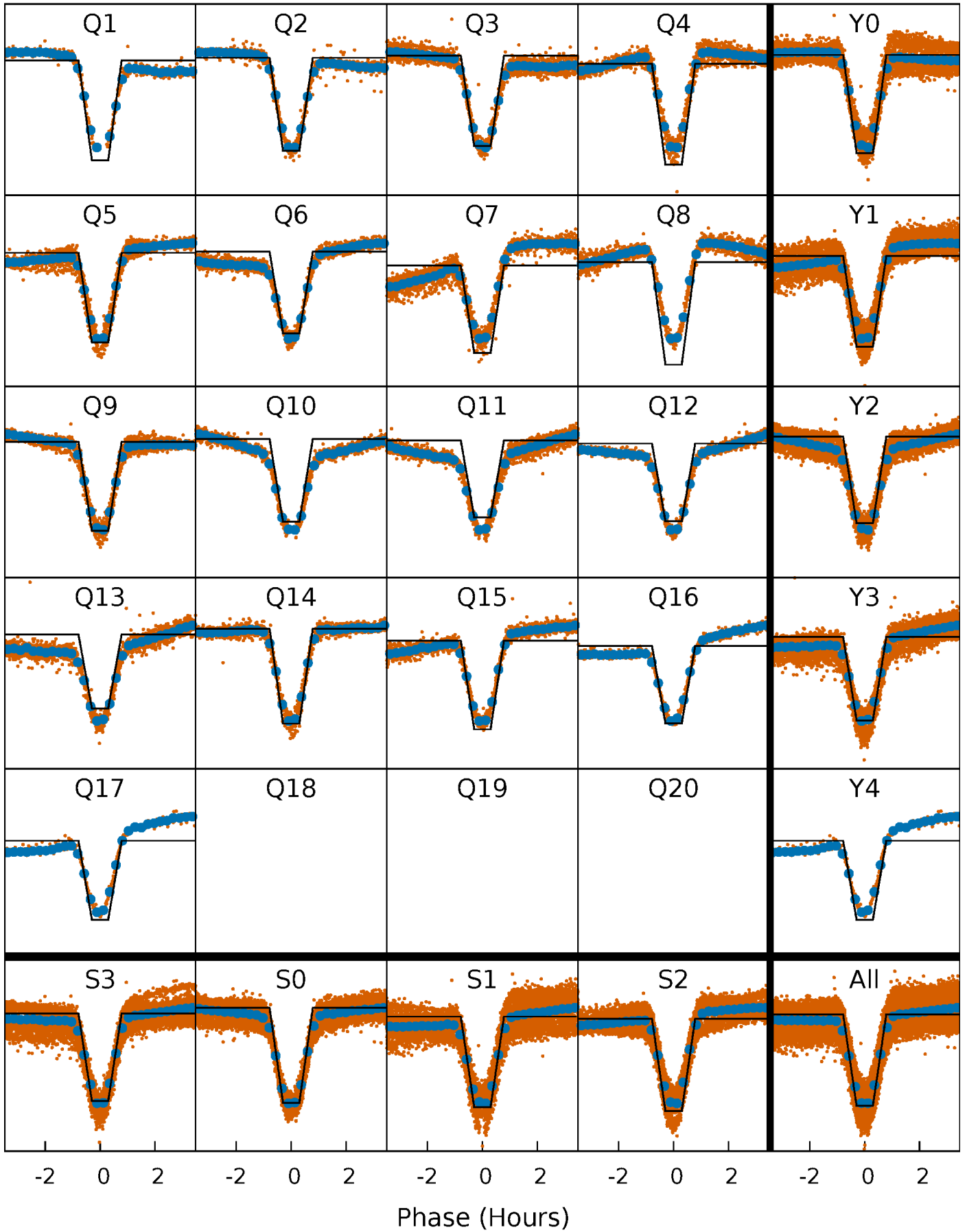
DV Quarter-Phased Transit Curves

TCE 010129482-02 P= 0.846291 Days $T_0=131.764119$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

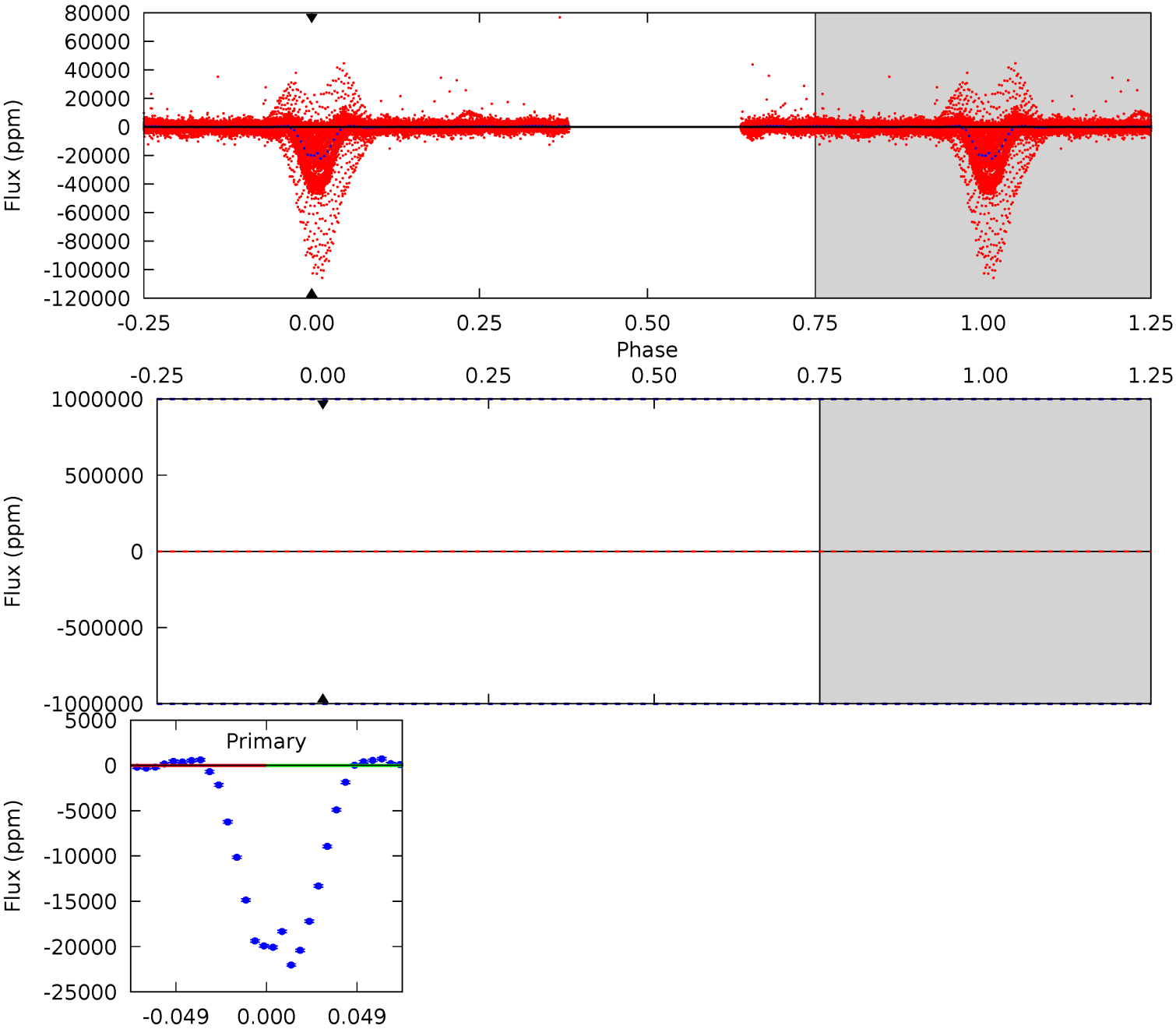
TCE 010129482-02 P= 0.846291 Days $T_0=131.770358$ (BKJD)



DV Model-Shift Uniqueness Test

010129482-02, P = 0.846291 Days, E = 130.917828 Days

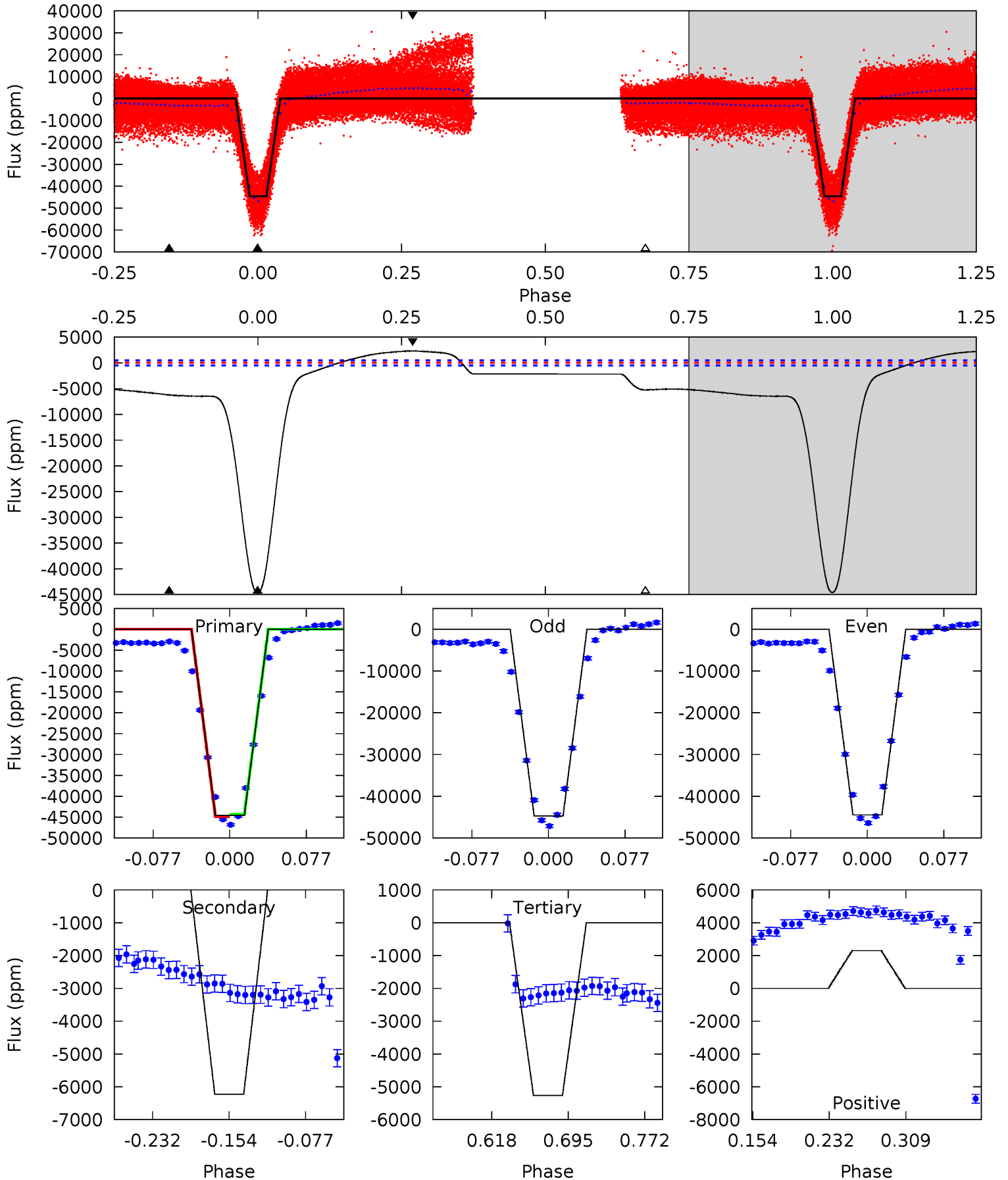
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010129482-02, P = 0.846291 Days, E = 130.924067 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
417.2	58.2	49.3	21.5	4.62	1.77	27.5	367.9	395.6	8.97	36.7	0.99	1.02	0.05	2.75



Stellar Parameters For KIC 010129482

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4627^{+139}_{-139}	$4.721^{+0.048}_{-0.028}$	$-1.260^{+0.300}_{-0.300}$	$0.526^{+0.031}_{-0.034}$	$0.530^{+0.036}_{-0.025}$	$5.140^{+1.009}_{-0.579}$
	+3%/-3%	+1%/-1%	+24%/-24%	+6%/-6%	+7%/-5%	+20%/-11%
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 010129482-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$11.06^{+5.27}_{-5.43}$	1728^{+60}_{-60}	2674^{+3556}_{-8532}	$1.425^{+129.757}_{-99.022}$
Alt.	-6223 ± 107	$12.40^{+5.27}_{-5.45}$	1726^{+62}_{-60}	3240^{+701}_{-367}	$4.501^{+10.124}_{-2.301}$

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

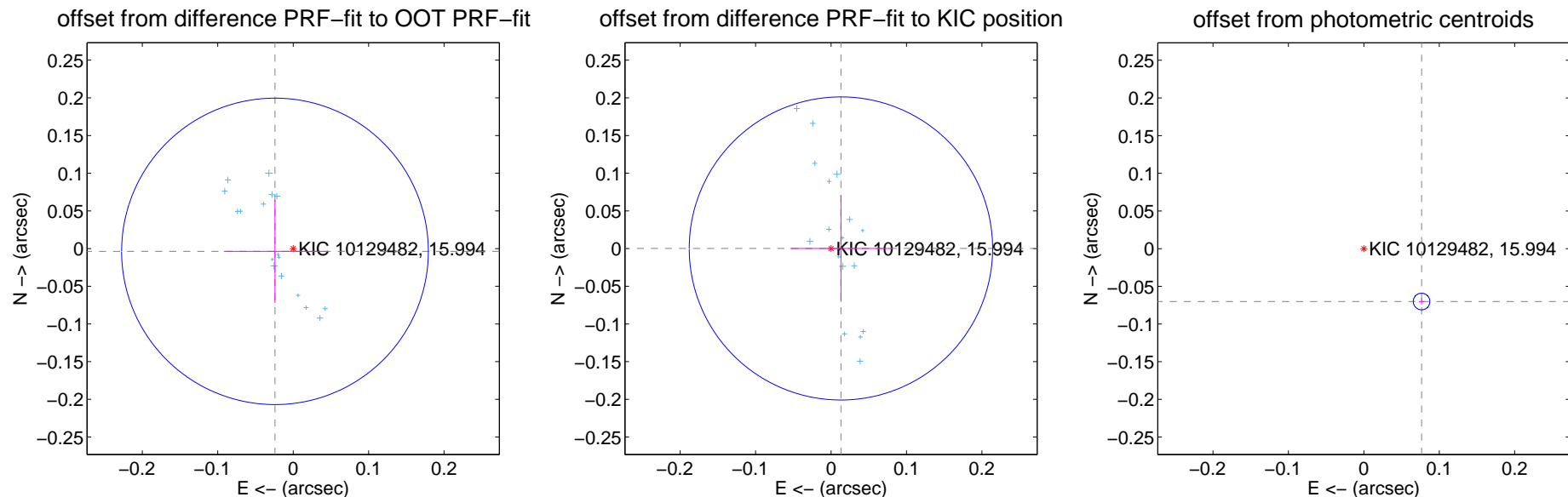
DV Centroid Data

Supplemental centroid analysis for 010129482-02. Kepler magnitude: 15.99. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

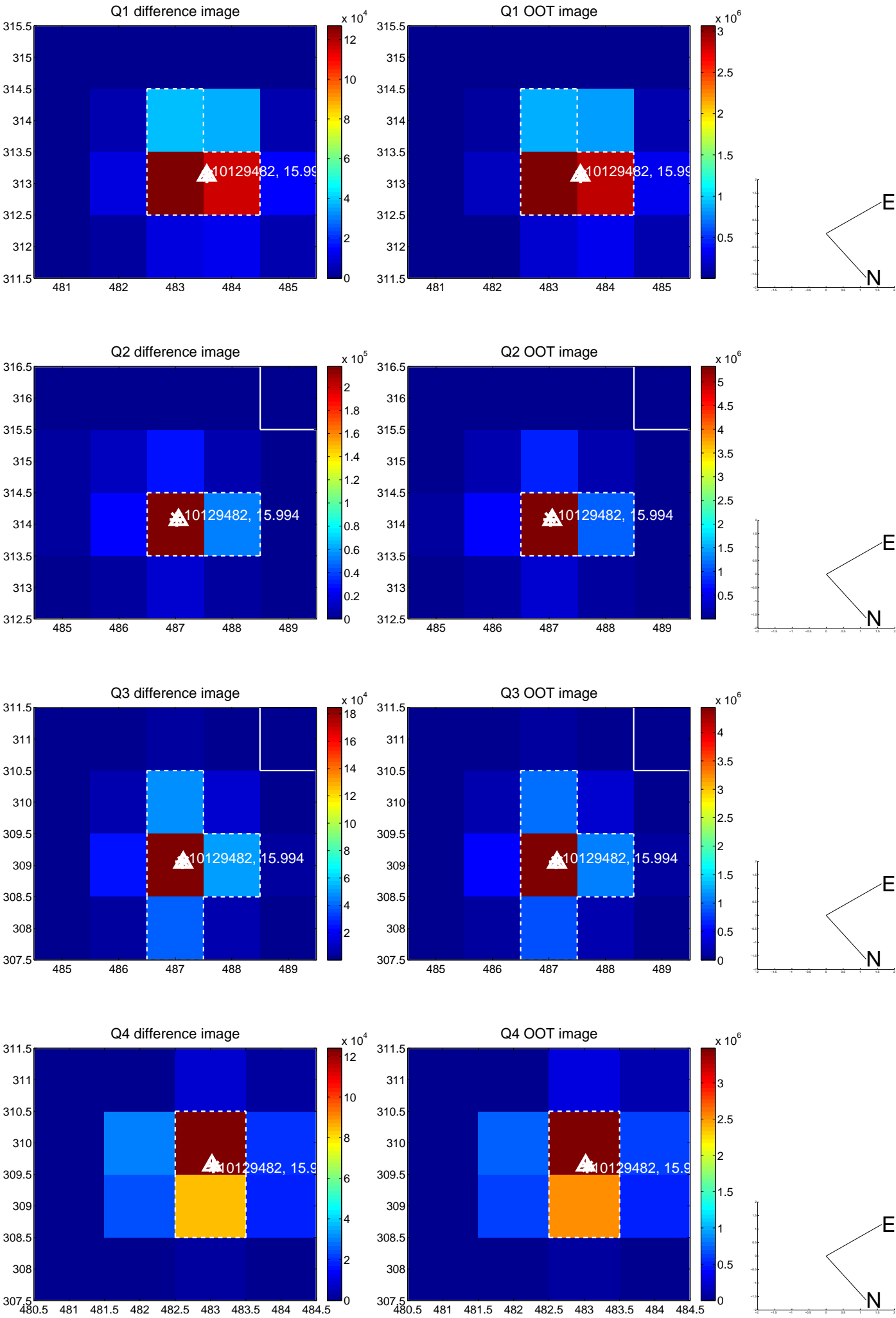
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.024 ± 0.068	0.36	0.024 ± 0.068	-0.004 ± 0.068
PRF-fit source offset from KIC position	0.013 ± 0.067	0.20	-0.013 ± 0.067	0.000 ± 0.071
photometric centroid source offset	0.10 ± 0.00	28.29	-0.08 ± 0.00	-0.07 ± 0.00

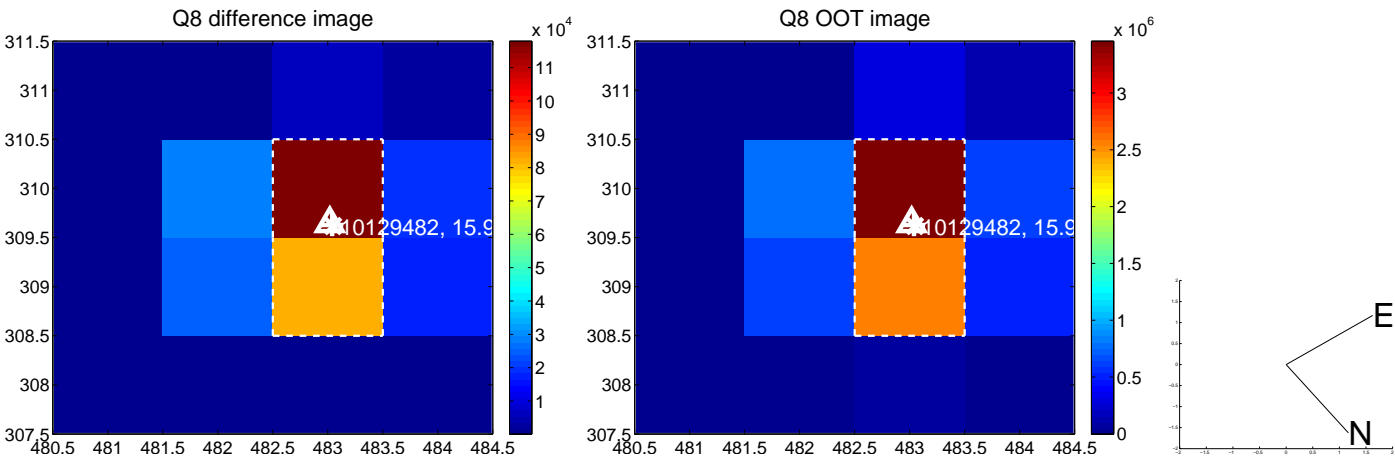
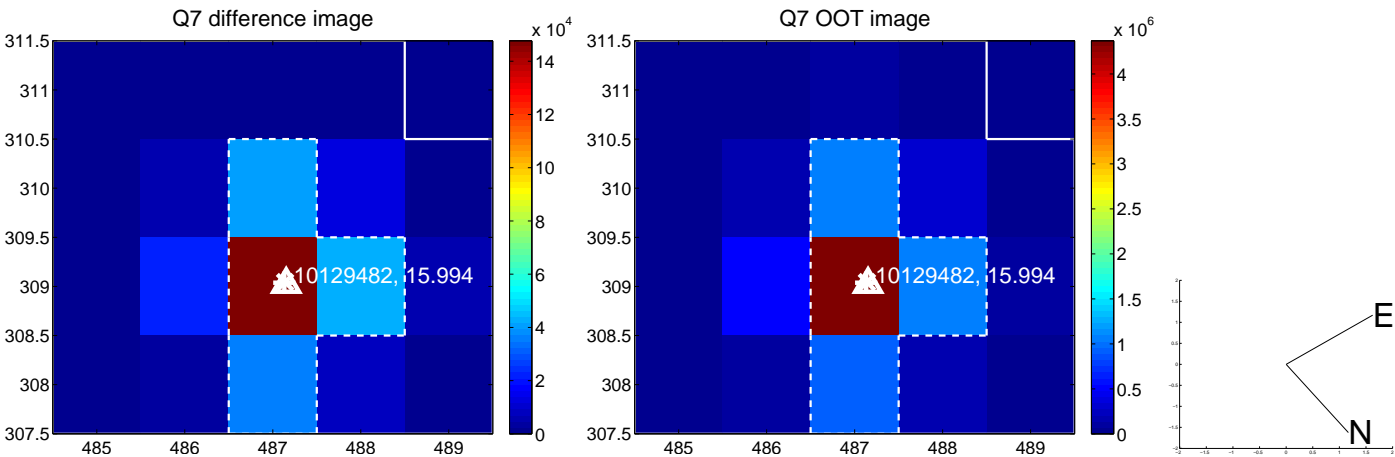
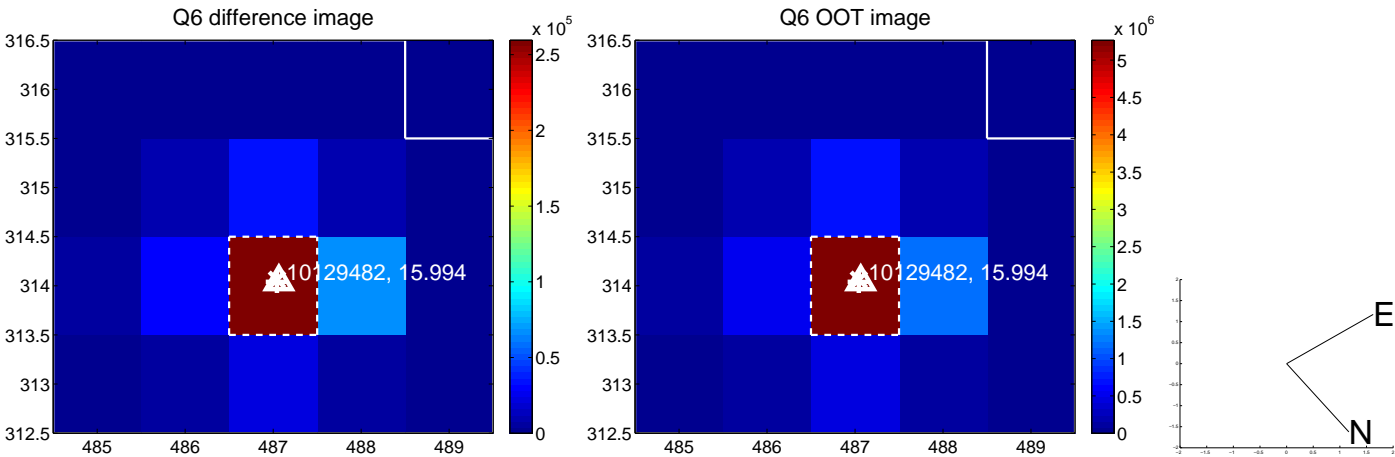
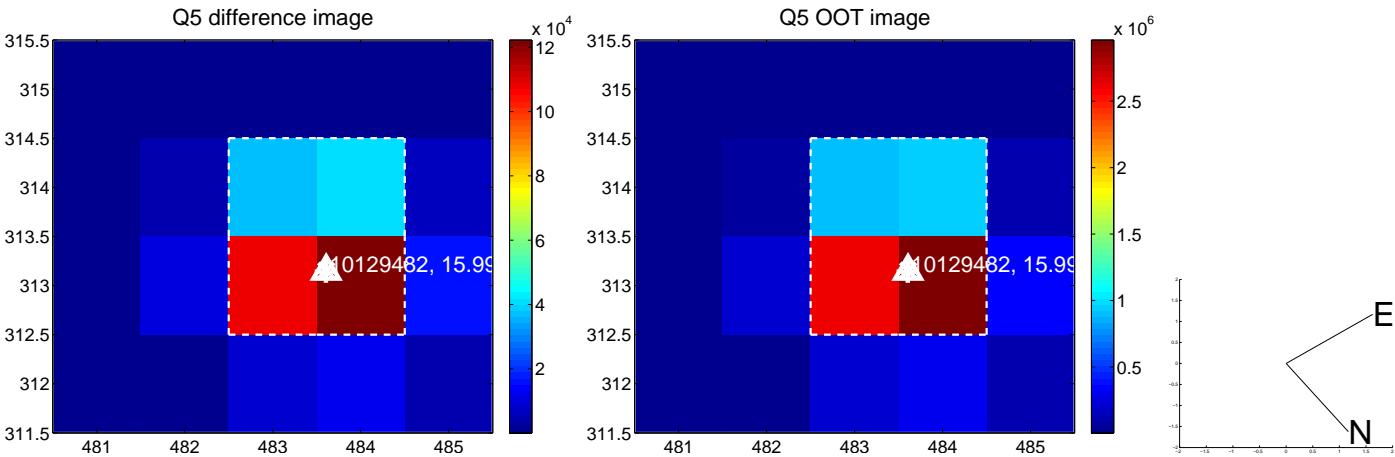


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

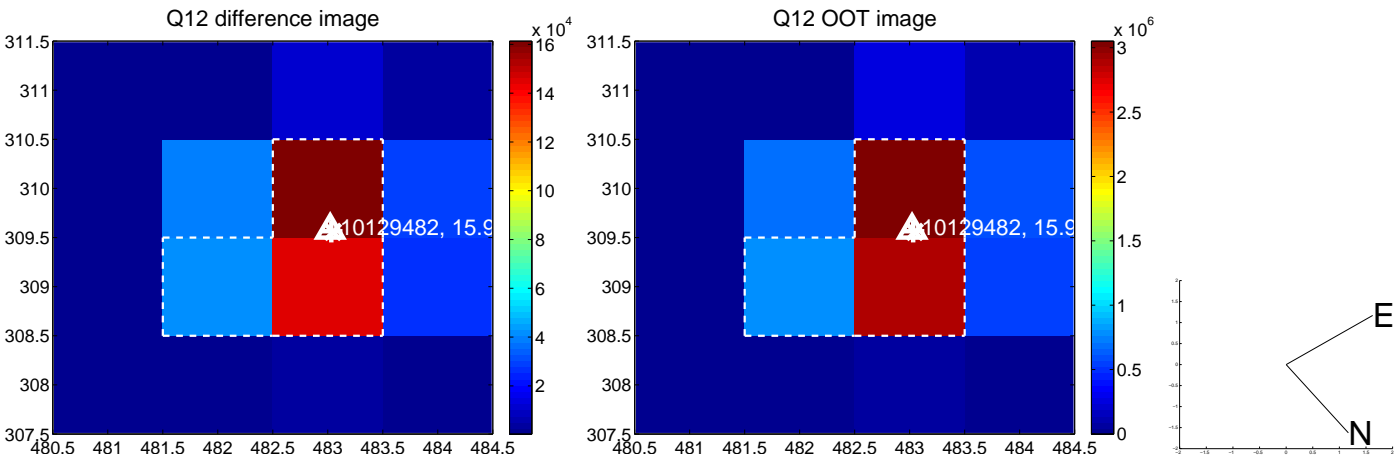
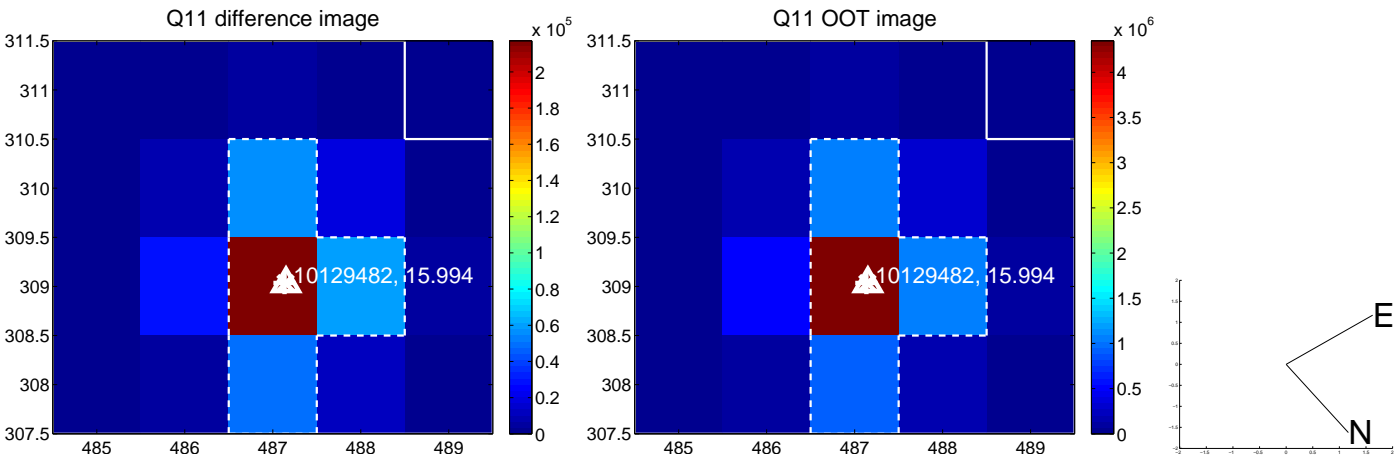
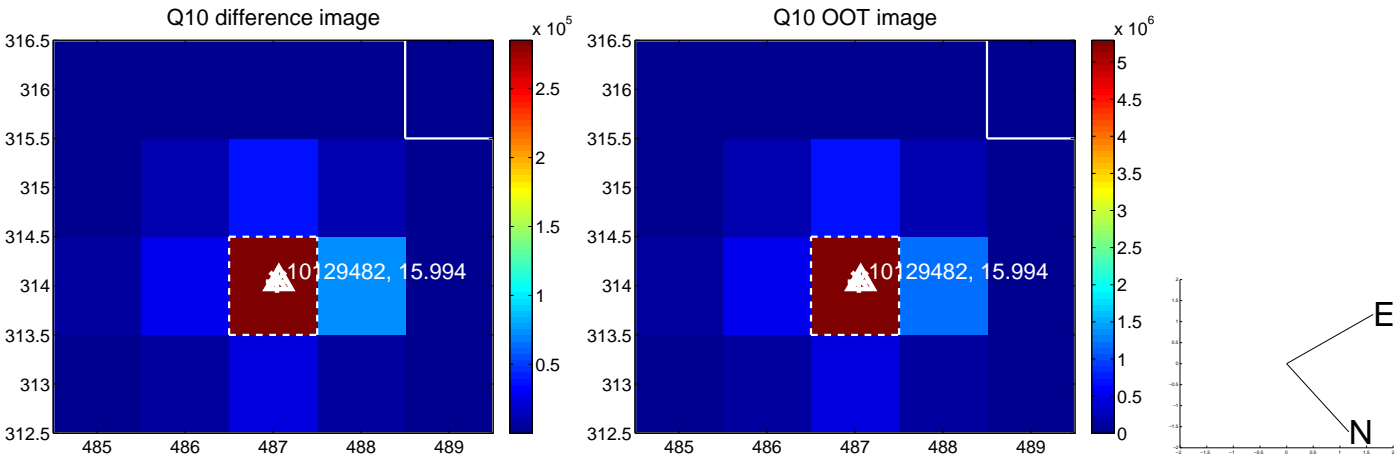
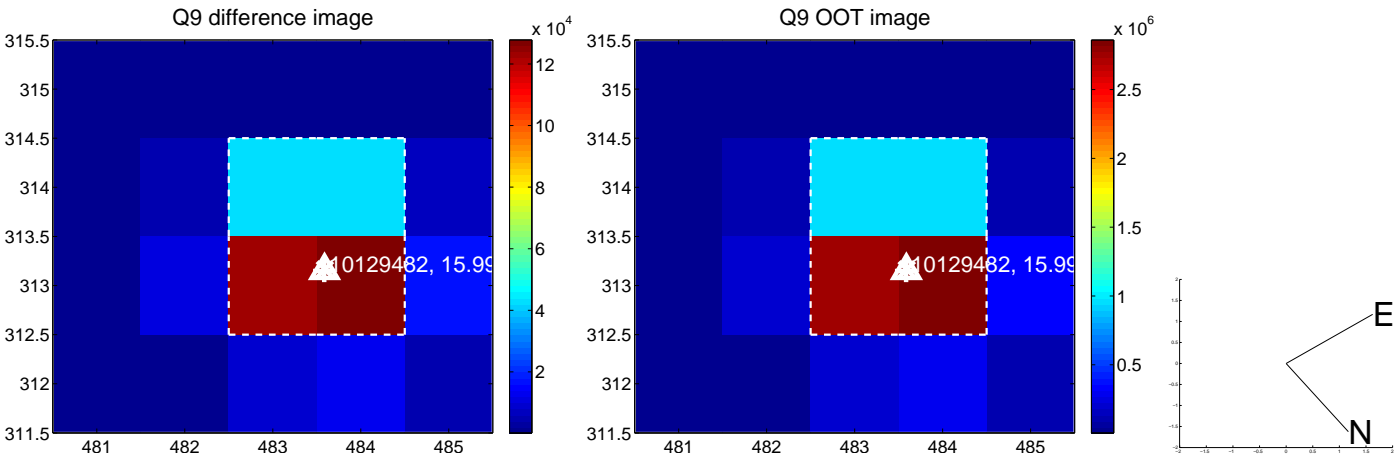
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



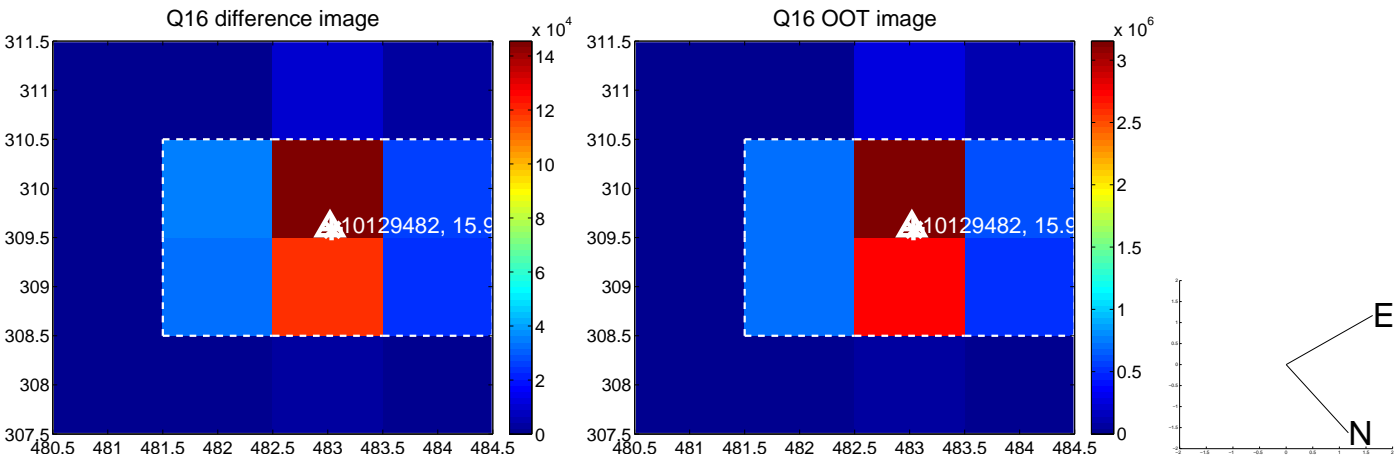
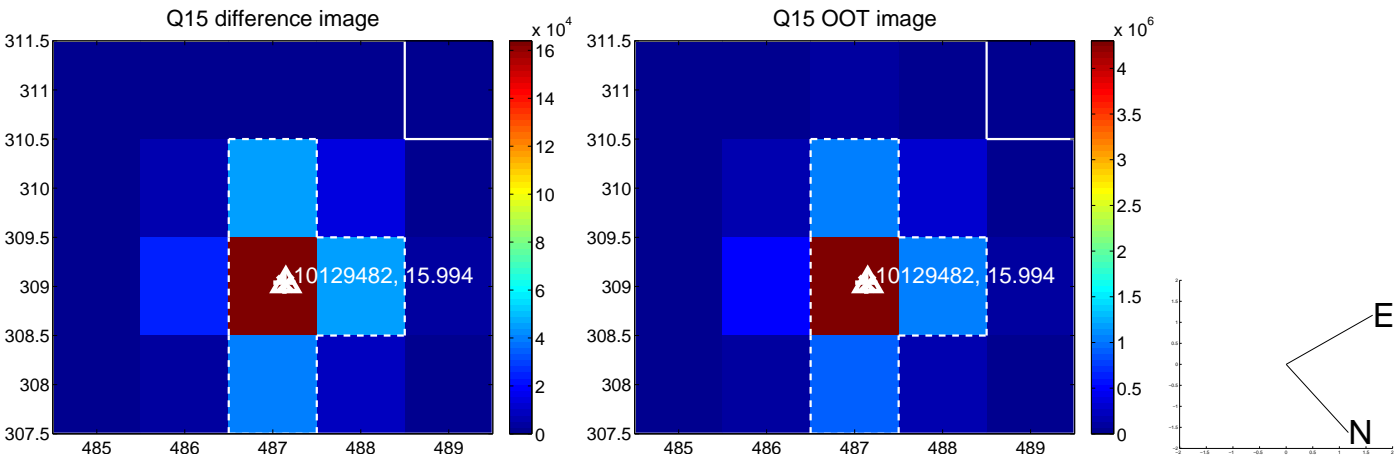
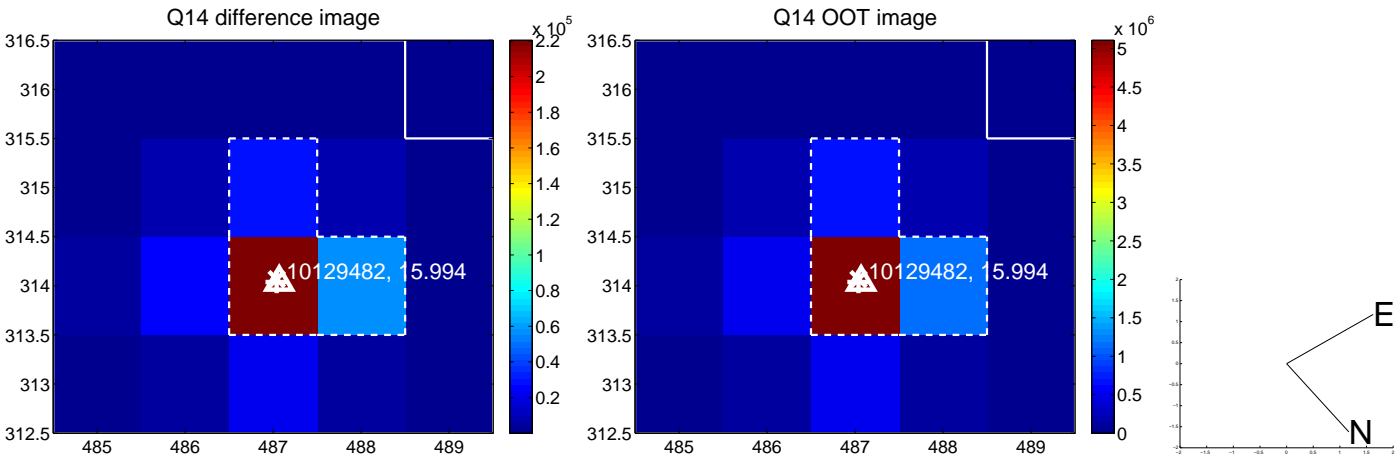
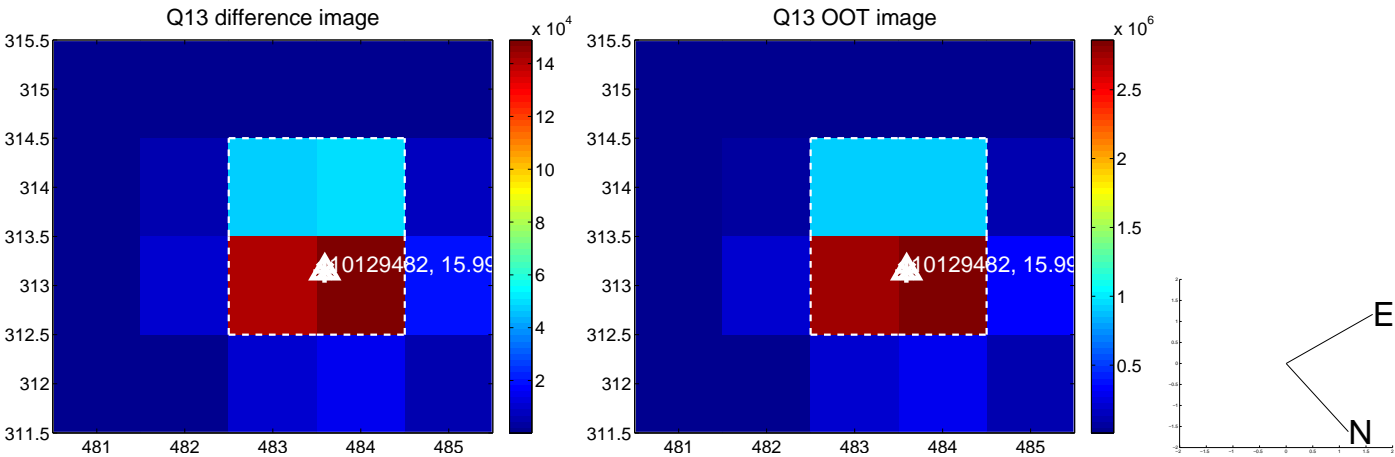
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



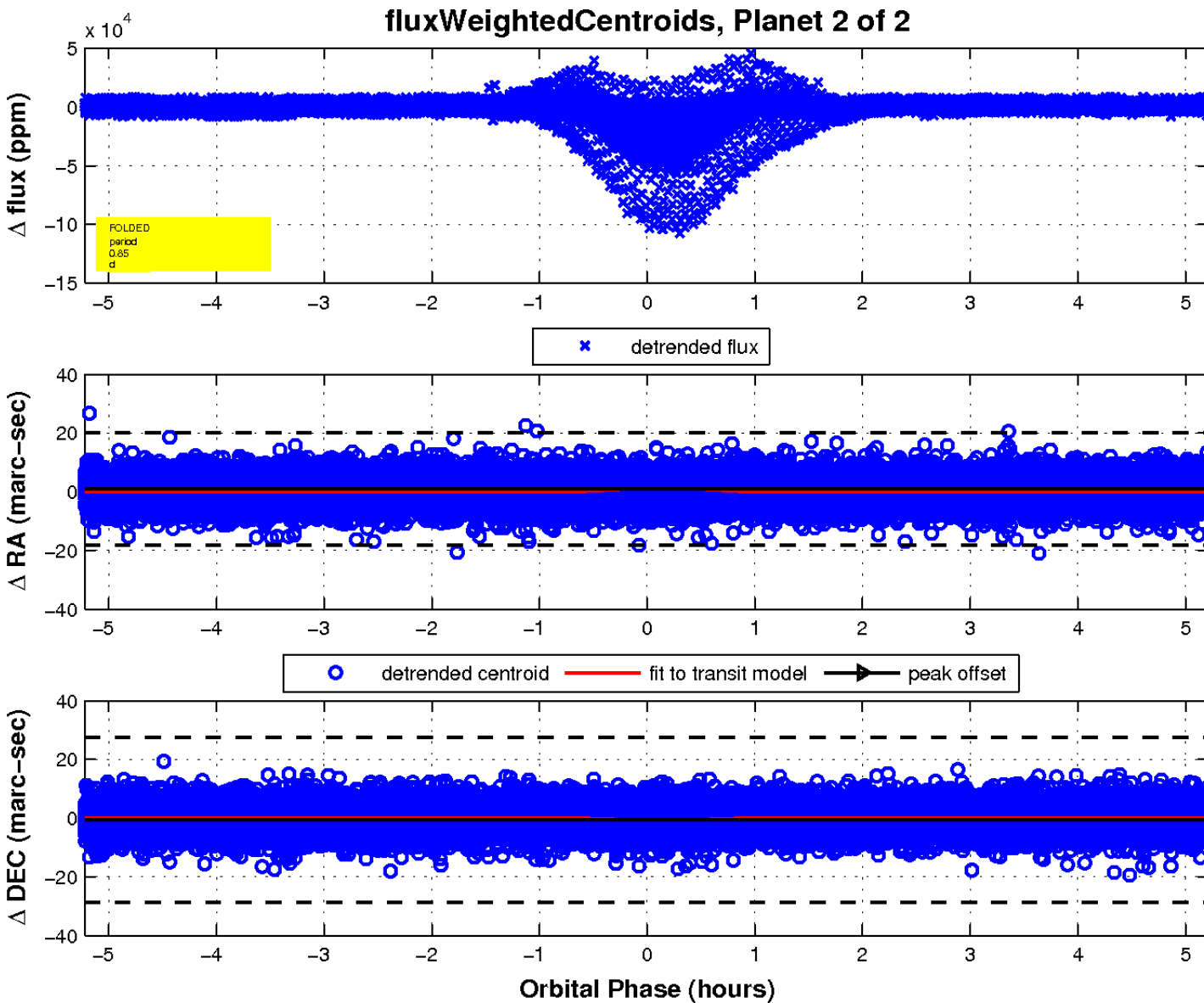
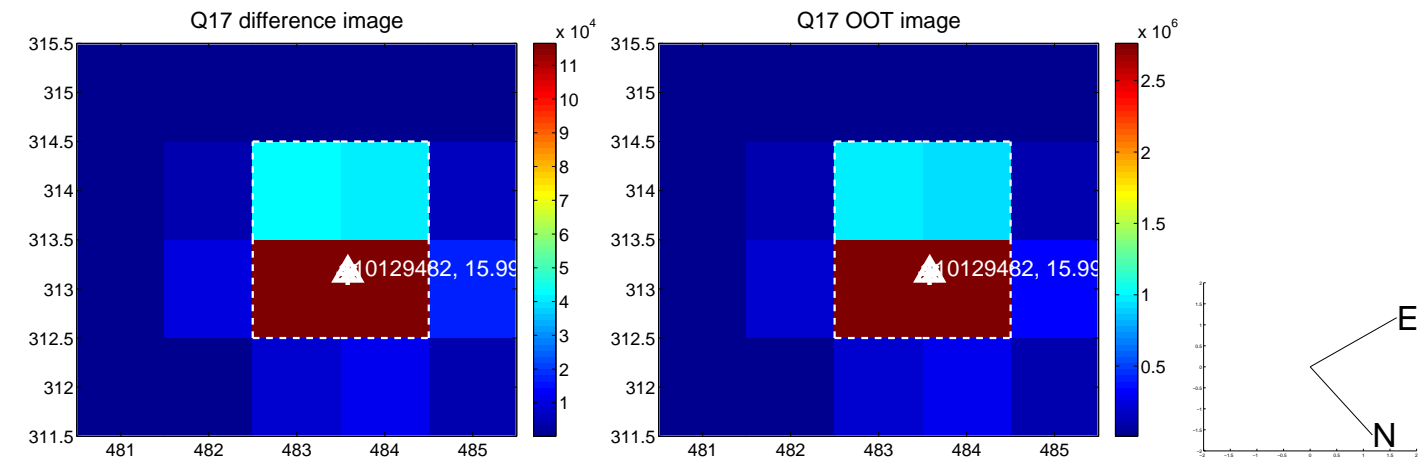
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

