

KIC 003114661

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})
003114661-01	OBS	0796.01	0.888578	132.103552	7910.9	1.578	277.1	226.3	0.64	5255	6.90	1067.98
003114661-02	OBS	No	0.888579	131.657869	21288.8	1.500	342.8	-1.0	0.64	5255	9.21	1067.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003114661-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—SEASONAL_DEPTH_ALT—CENT_RESOLVED_OFFSET—EPHEM_MATCH
003114661-02	OBS	FP	0.00	1	1	1	1	IS_SEC_TCE—CENT_NOFITS—HALO_GHOST—EPHEM_MATCH

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 003114661-01

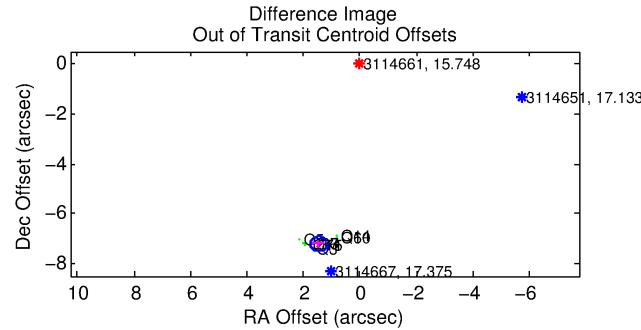
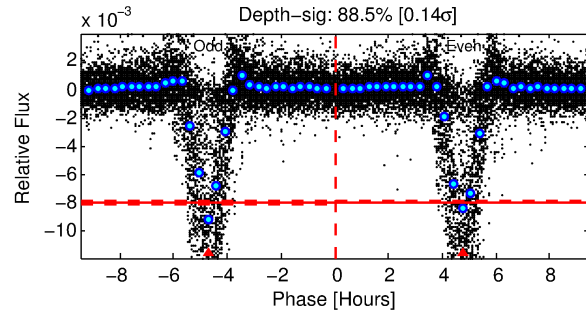
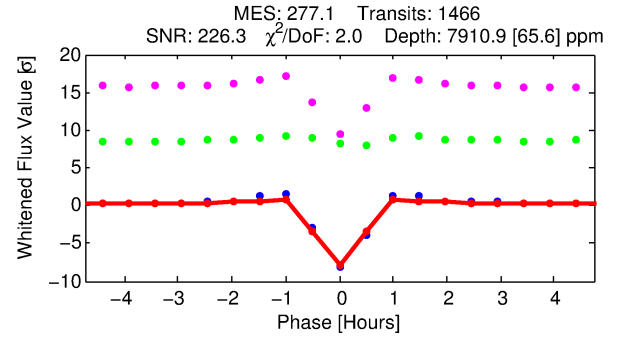
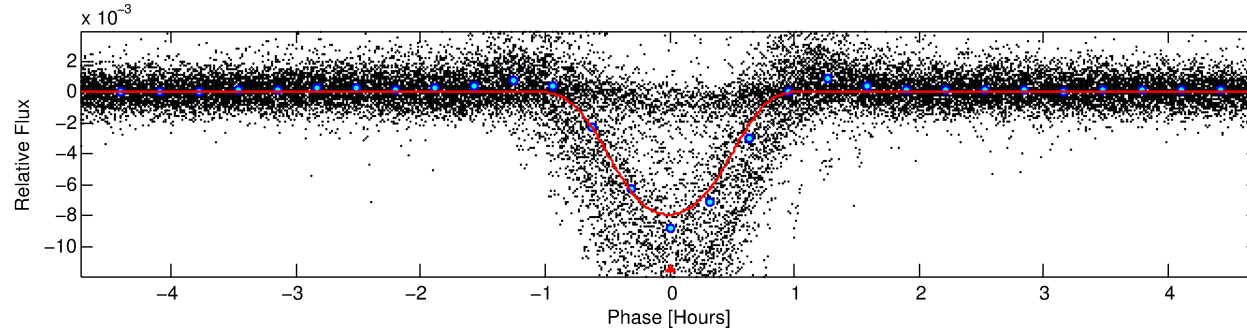
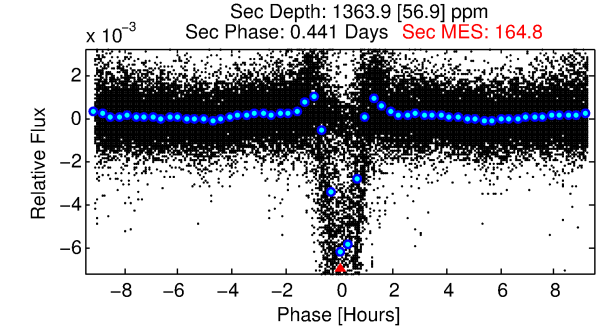
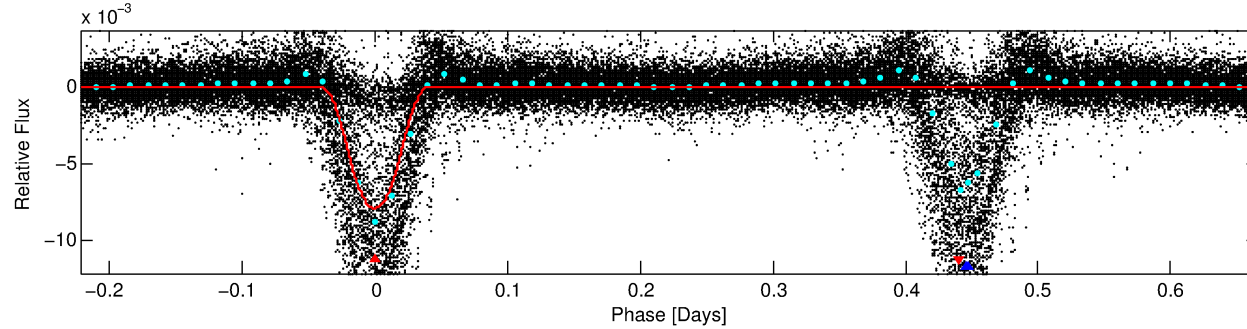
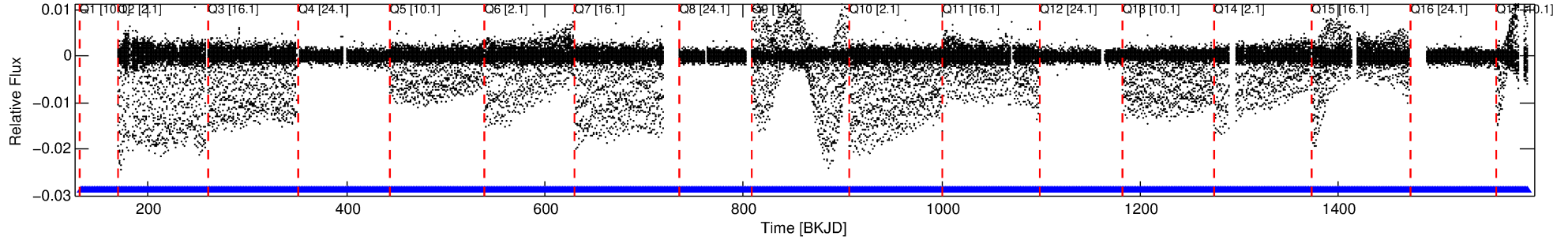
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
003114661-01	3114661	3763.01	3114667	1:1	8.4	-2	1	17.38	15.75	70.99	Direct-PRF	0	0.71	0.30

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 3114661 Candidate: 1 of 2 Period: 0.889 d
KOI: K00796 Corr: No Ephemeris Match

Kp: 15.75 R*: 0.64 Rs Teff: 5255.0 K Logg: 4.68 Fe/H: -0.720



DV Fit Results:

Period = 0.88858 [0.00000] d
Epoch = 132.1036 [0.0001] BKJD
Rp/R* = 0.0995 [0.0012]
a/R* = 2.90 [0.04]
b = 0.90 [0.01]
Seff = 1067.98 [206.44]
Teq = 1458 [70] K
Rp = 6.90 [0.87] Re
a = 0.0161 [0.0017] AU
Ag = 4.07 [0.65] [4.72σ]
Teffp = 3202 [103] K [14.01σ]

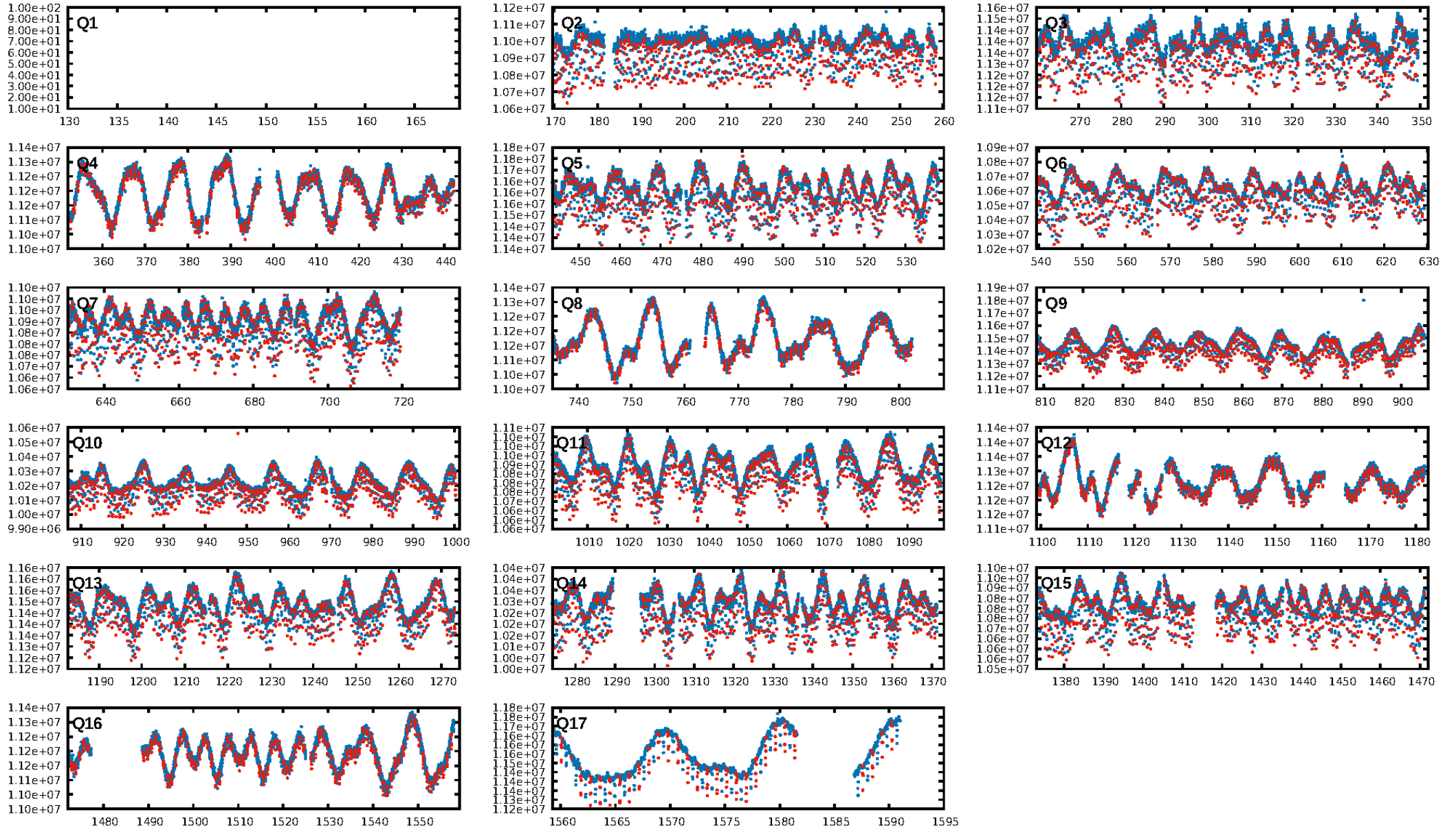
DV Diagnostic Results:

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 [1437/1437]
GhostDiagnostic-chr: -0.2551
Centroid-sig: 0.0%
Centroid-so: 35.551 arcsec [1524.67σ]
OotOffset-rm: 7.365 arcsec [73.88σ]
KicOffset-rm: 7.937 arcsec [76.68σ]
OotOffset-st: 3/4/0/4 [11]
KicOffset-st: 3/4/0/4 [11]
DiffImageQuality-fgm: 1.00 [11/11]
DiffImageOverlap-fno: 1.00 [16/16]

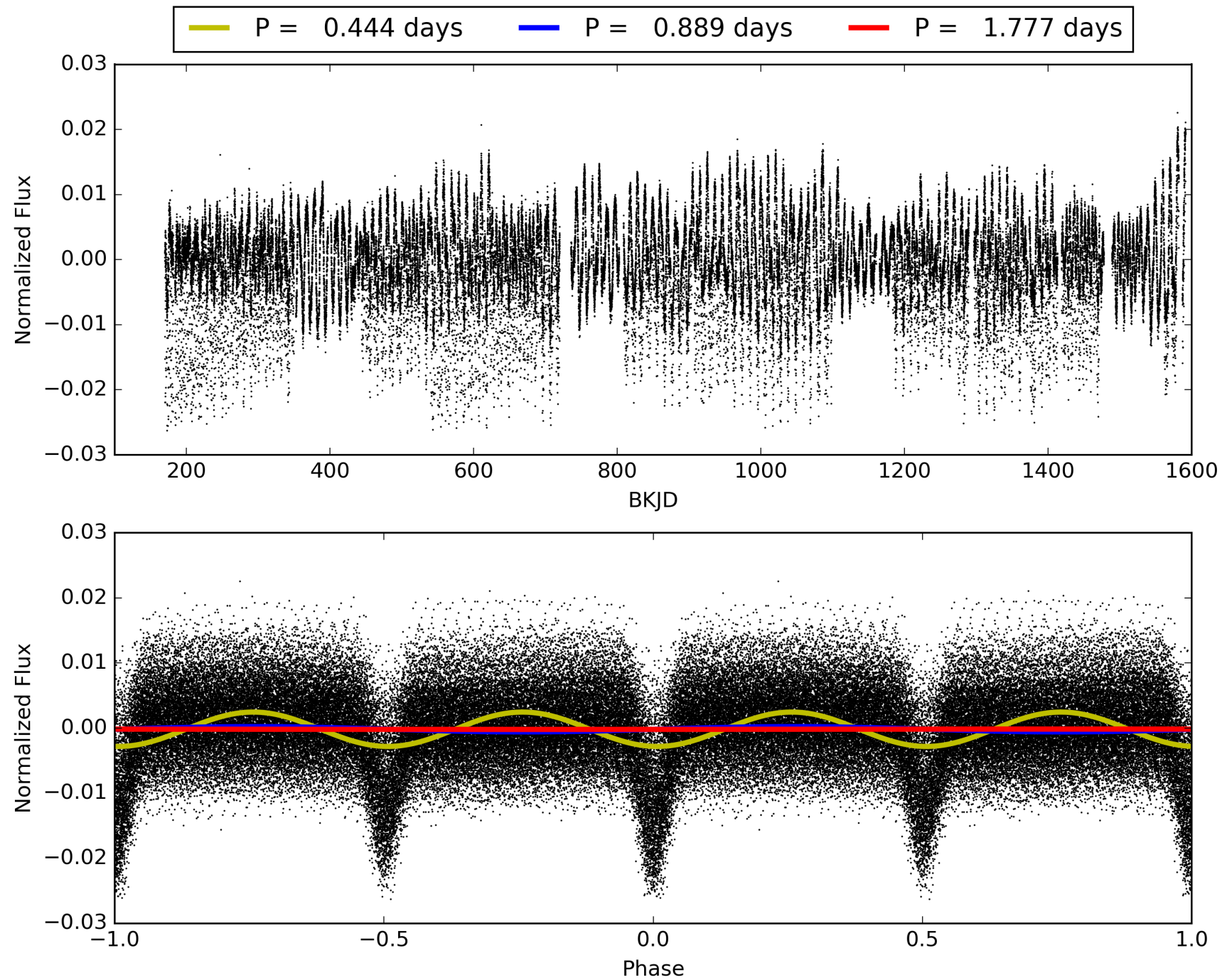
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 10:31:08 Z

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

TCE 003114661-01, PDC Light Curves

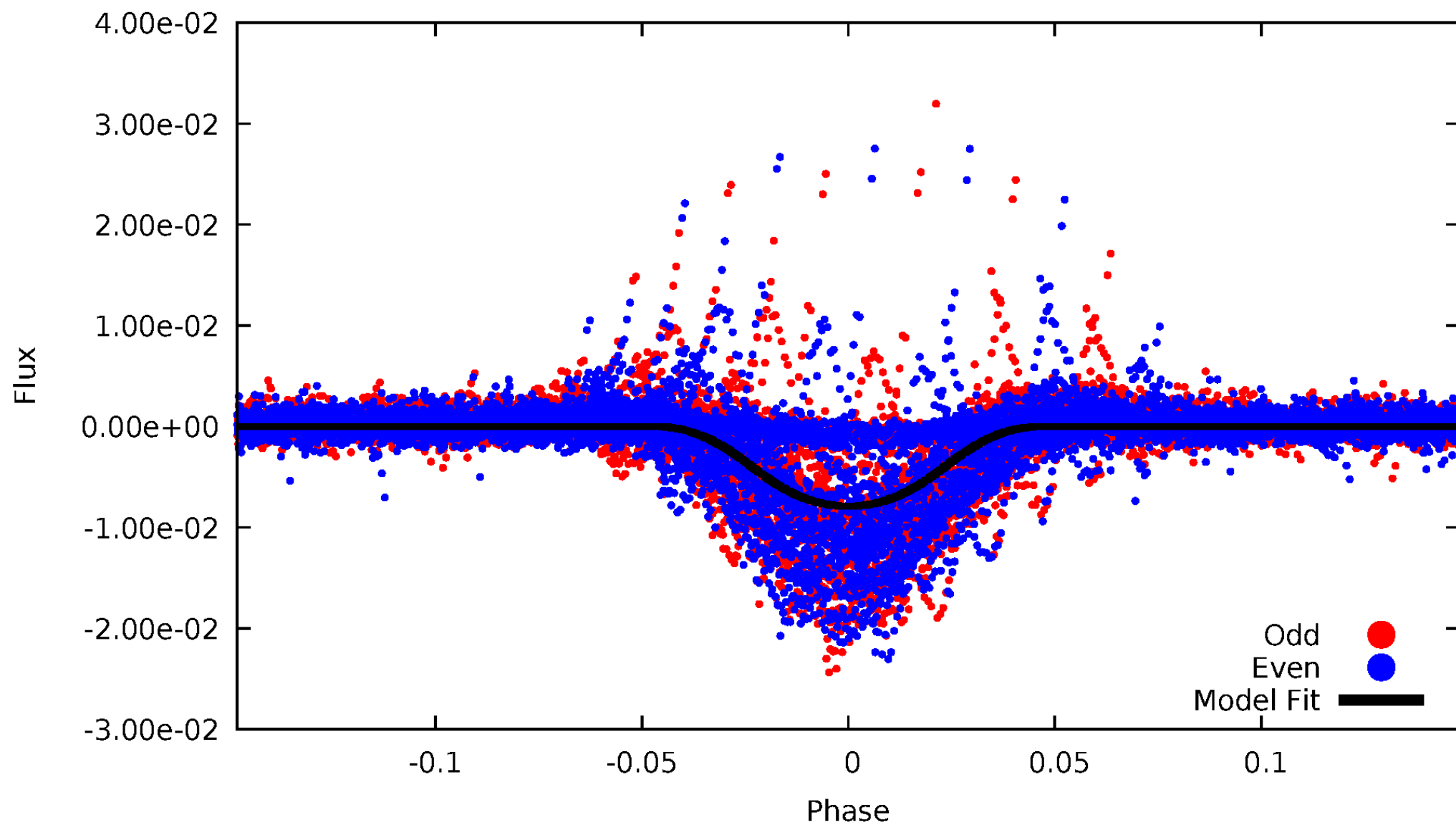


TCE 003114661-01



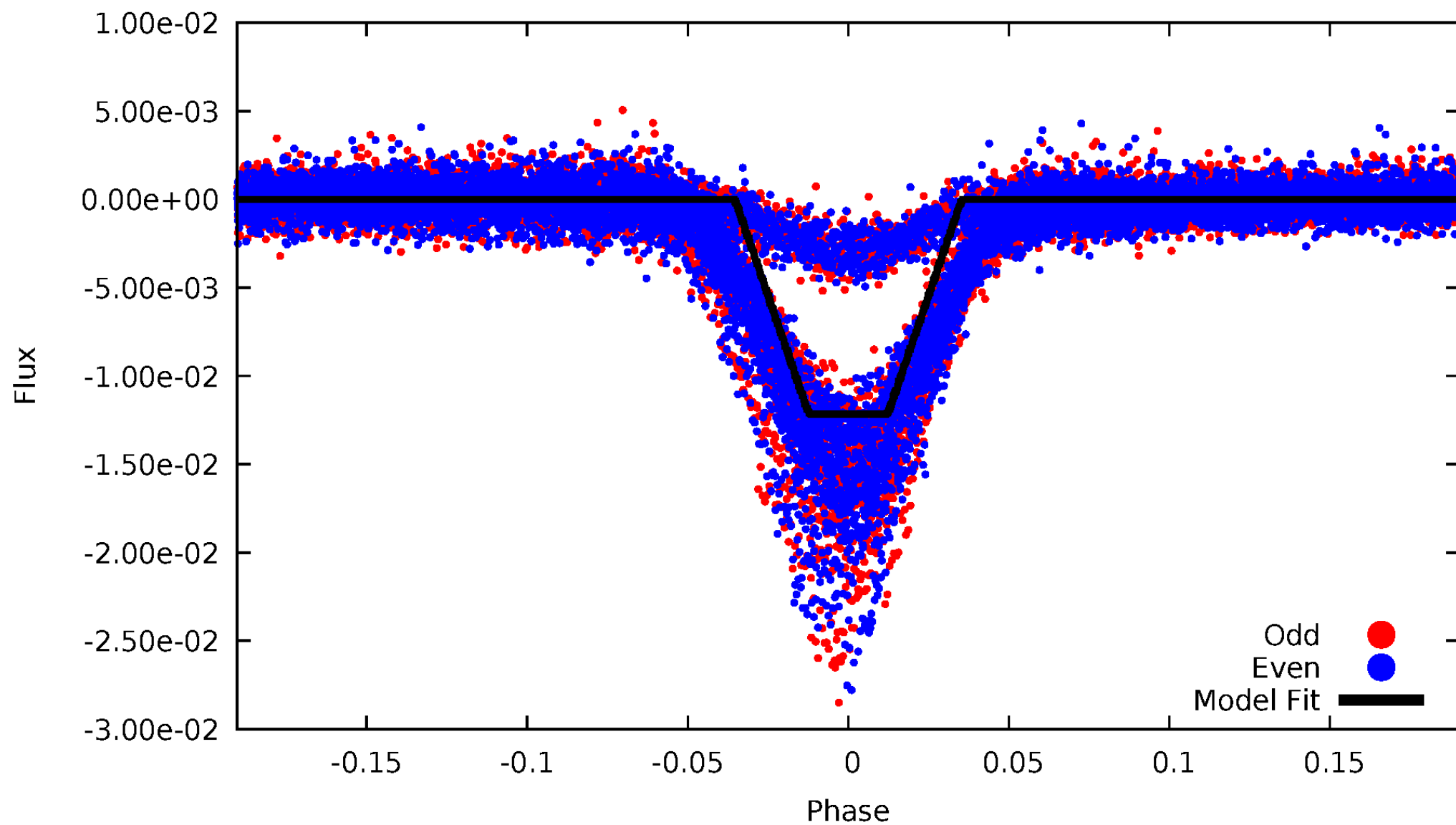
DV Odd/Even

TCE 003114661-01



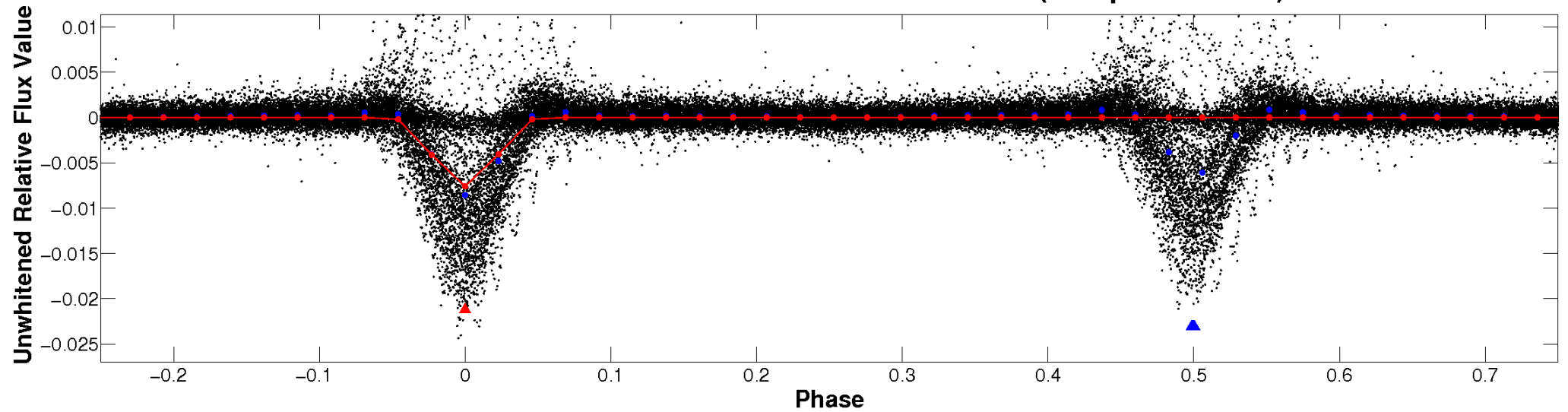
ALT Odd/Even

TCE 003114661-01

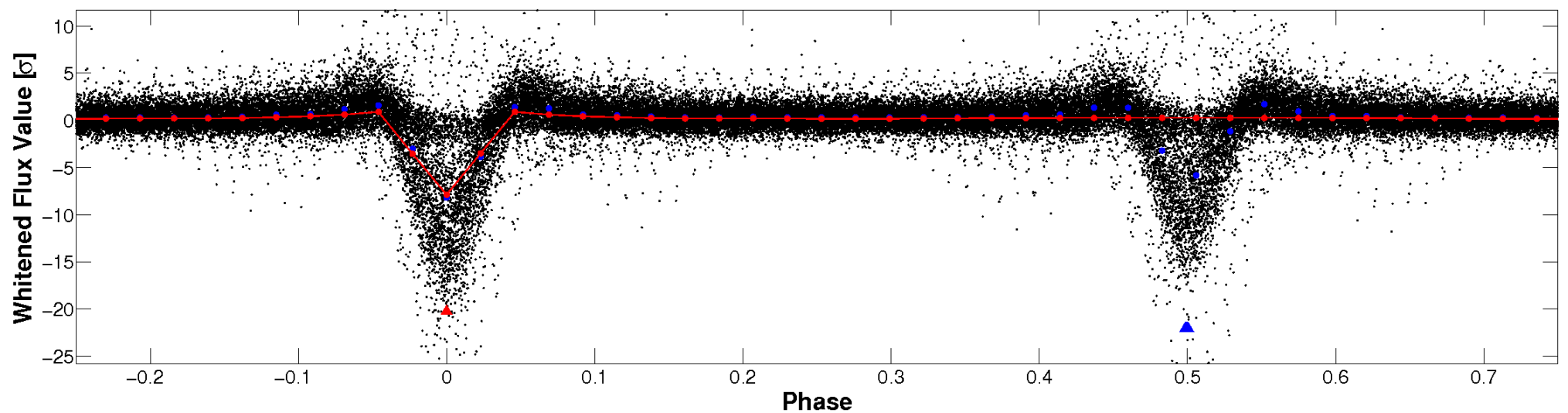


Non-Whitened Vs. Whitened Light Curve

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

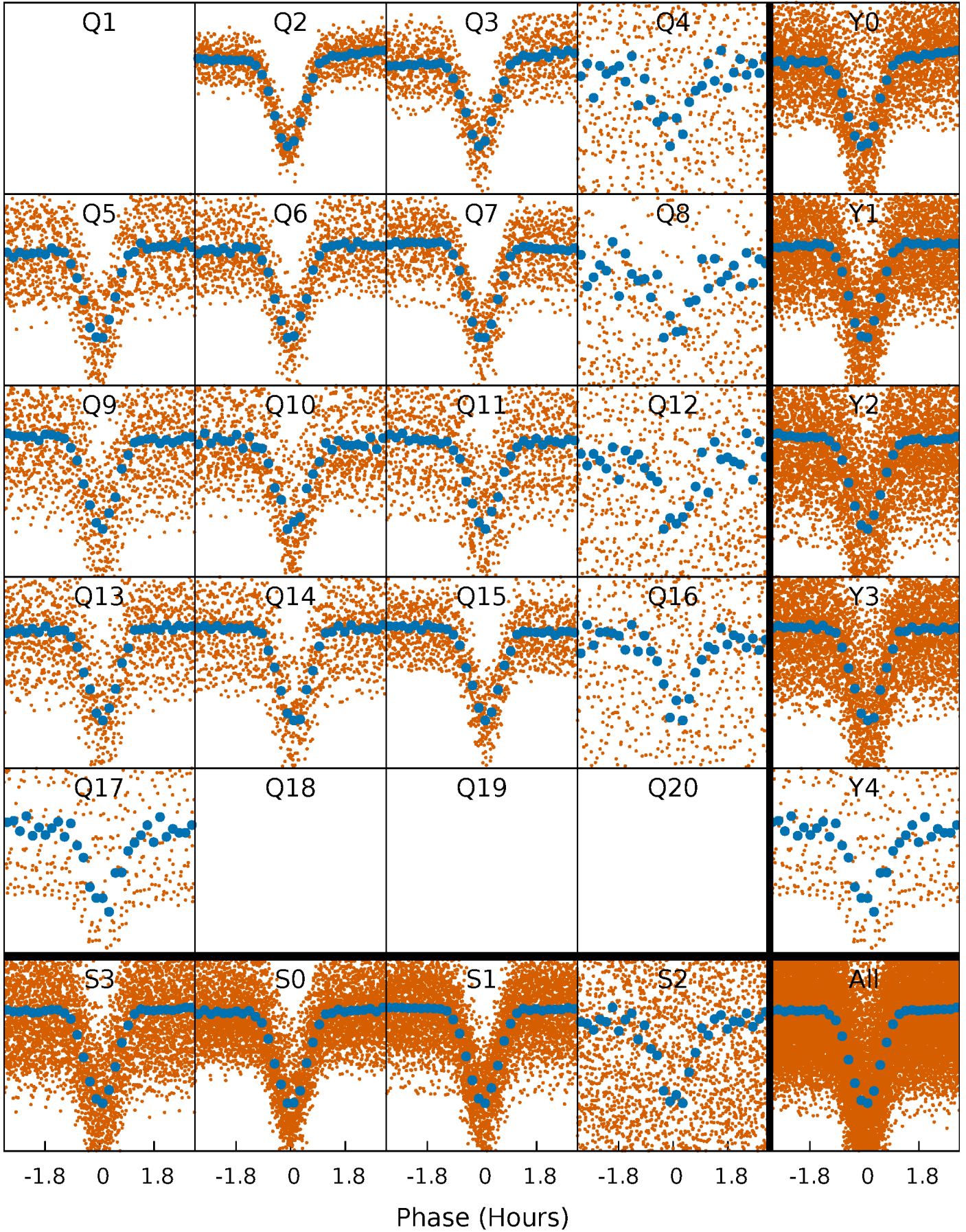


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



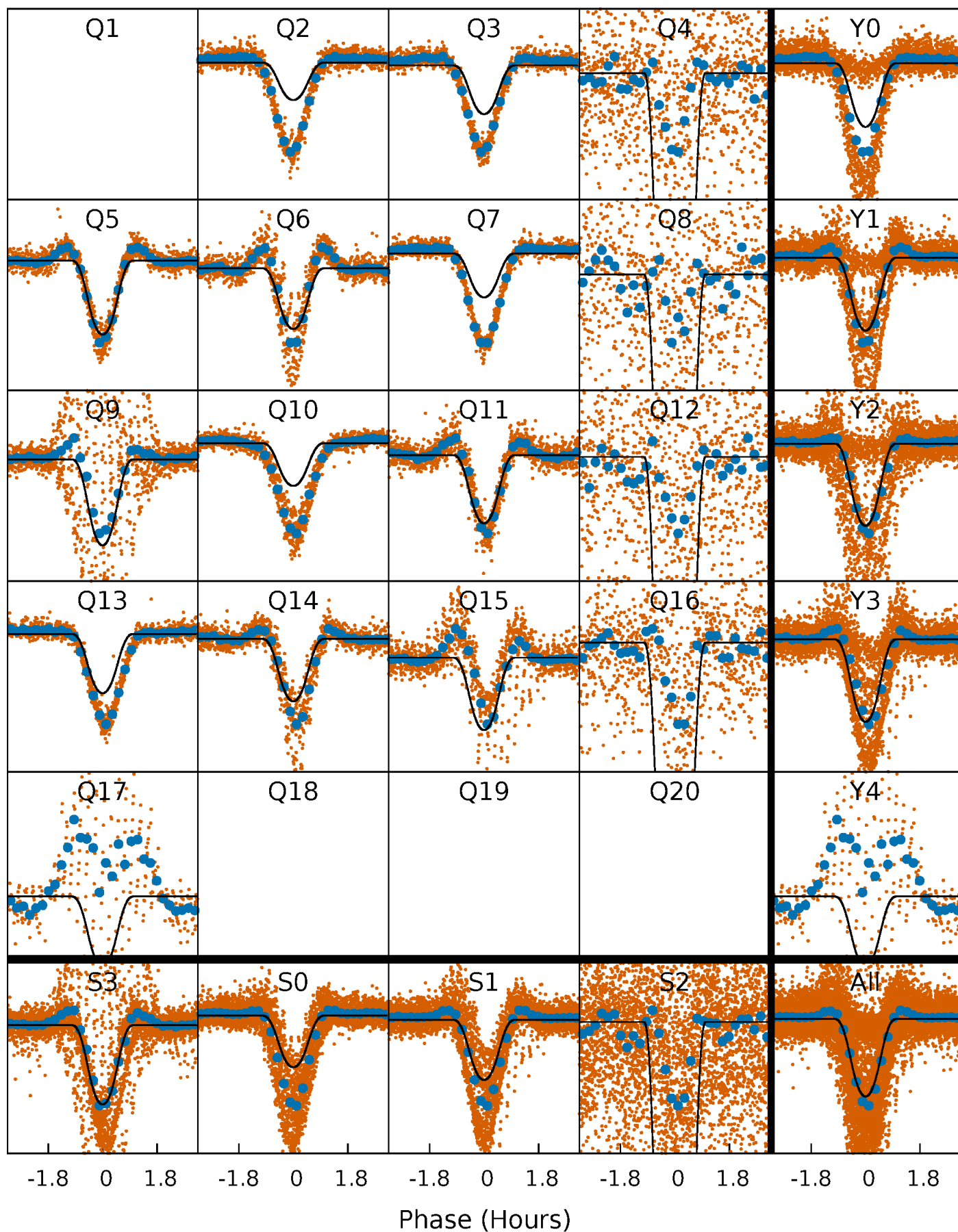
PDC Quarter-Phased Transit Curves

TCE 003114661-01 P= 0.888578 Days $T_0=132.103552$ (BKJD)



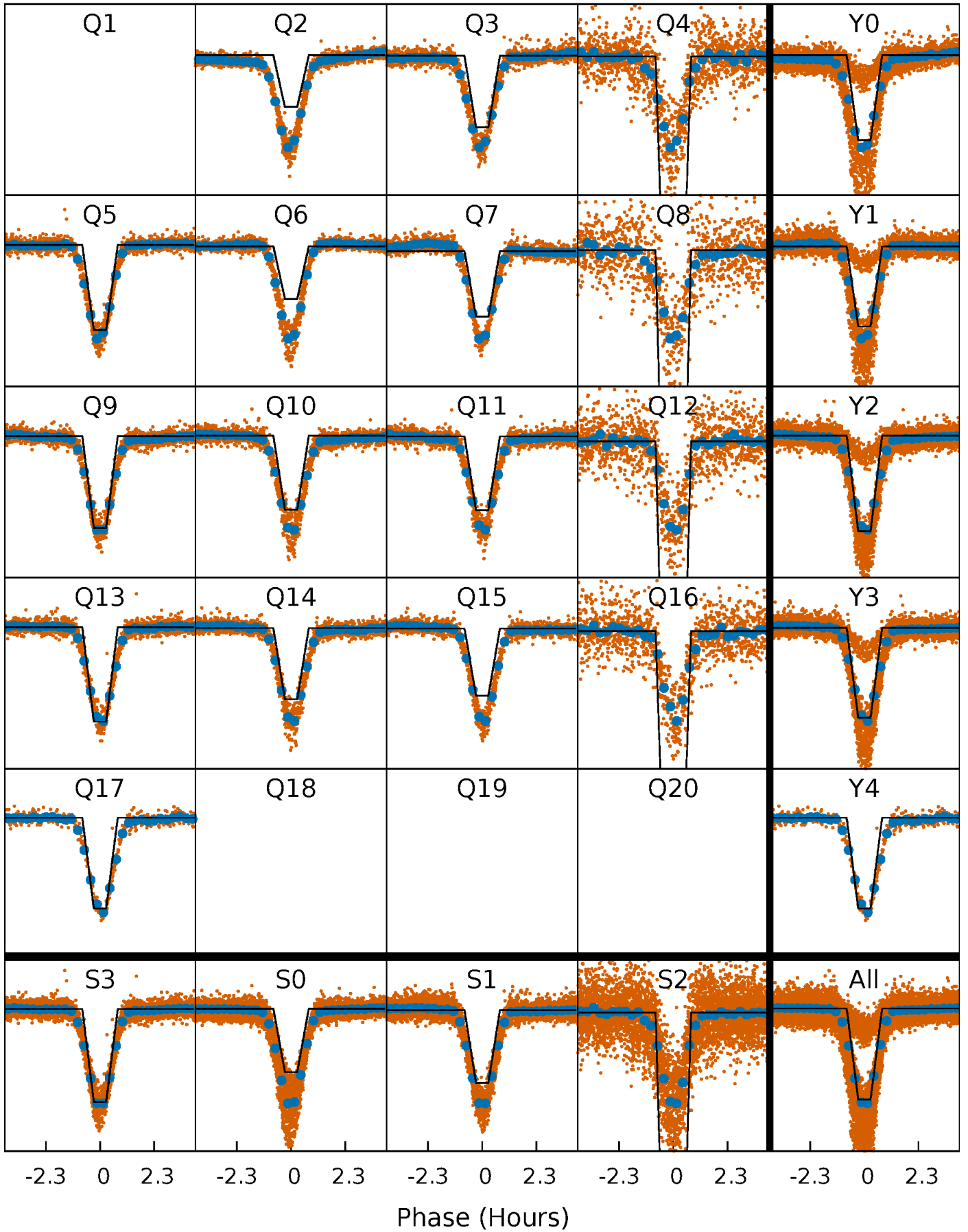
DV Quarter-Phased Transit Curves

TCE 003114661-01 P= 0.888578 Days $T_0=132.103552$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

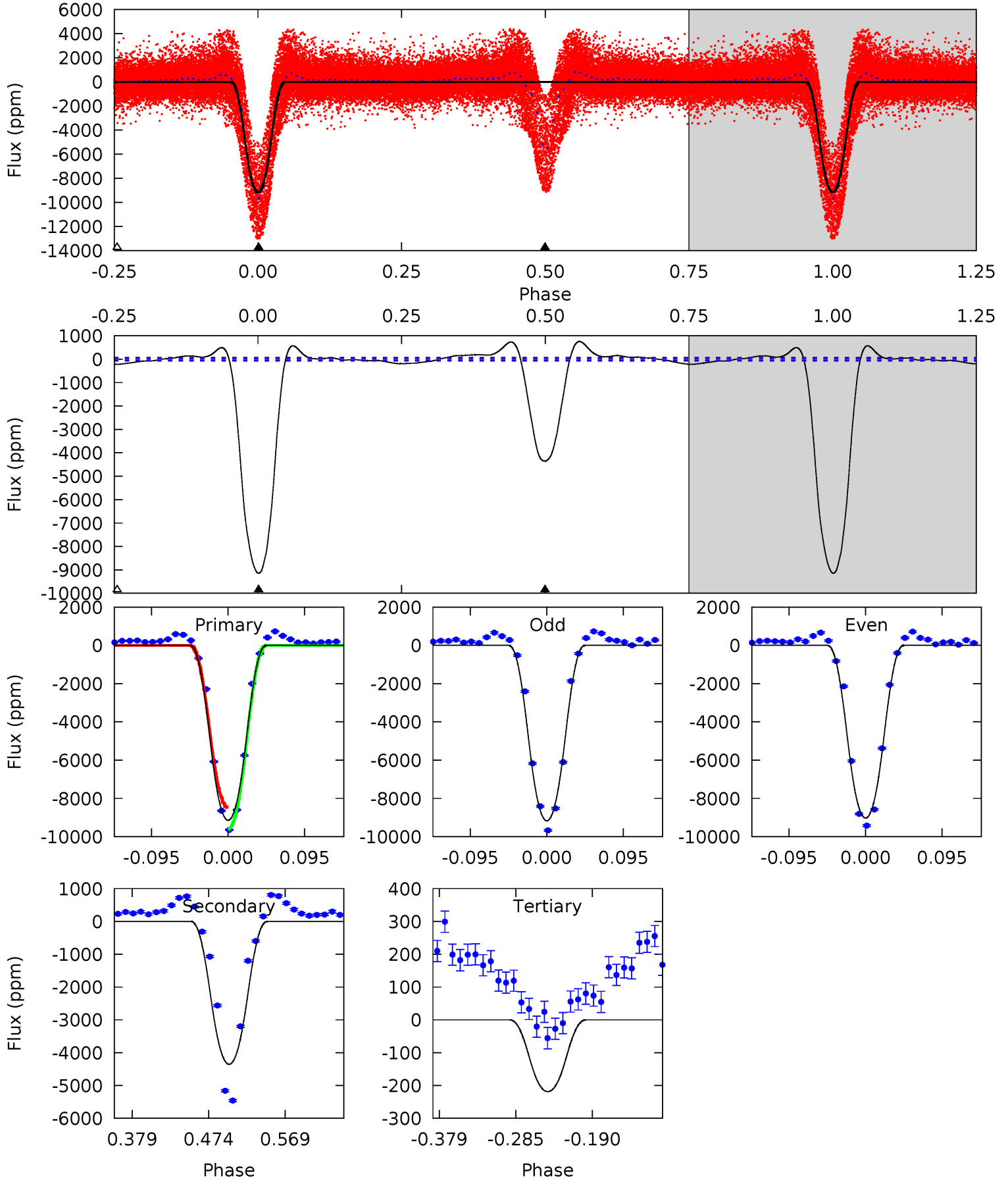
TCE 003114661-01 P= 0.888581 Days $T_0=132.103195$ (BKJD)



DV Model-Shift Uniqueness Test

003114661-01, P = 0.888578 Days, E = 132.103552 Days

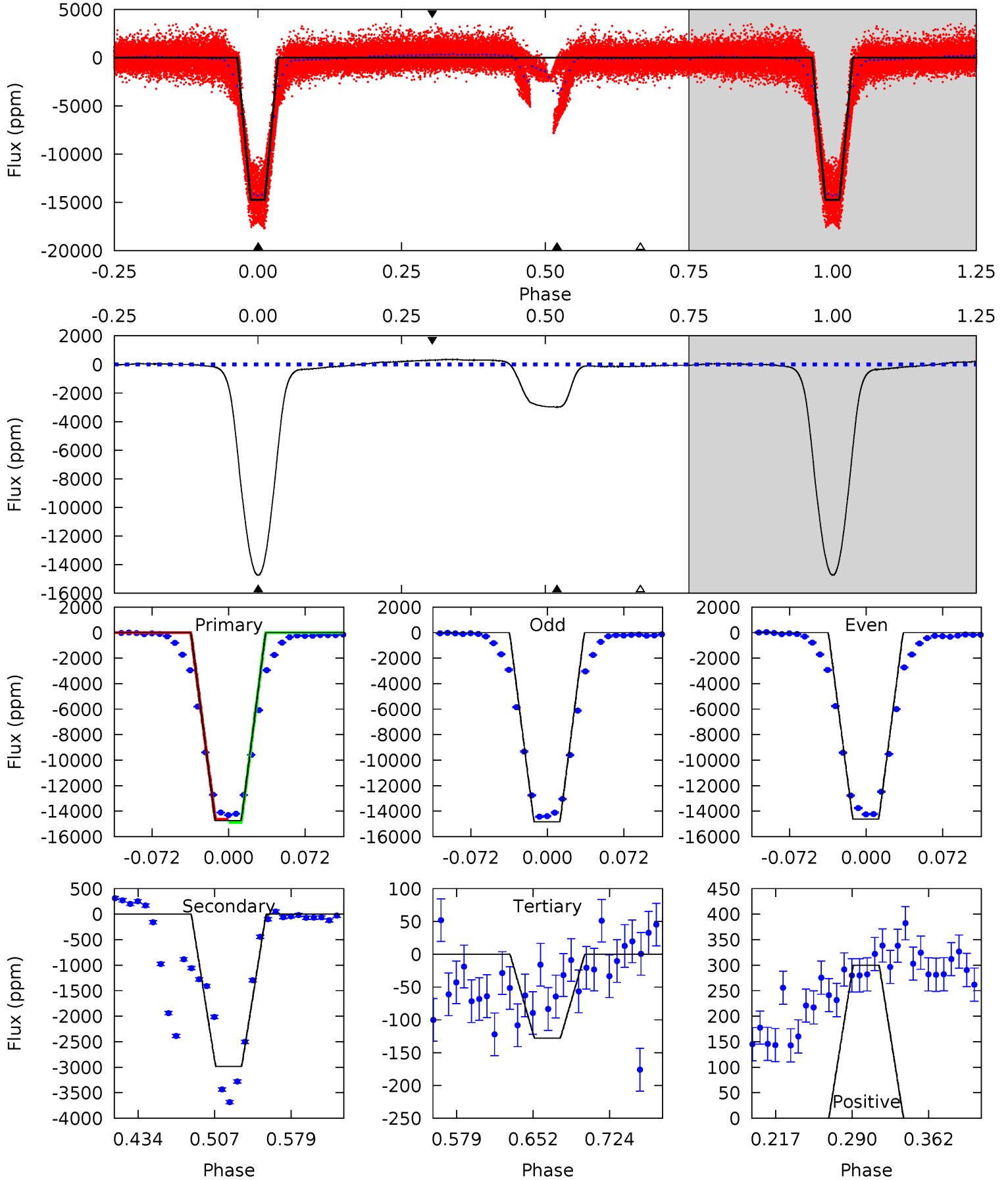
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
658.8	313.7	15.8	0	4.58	1.67	8.39	643.0	658.8	298.0	313.7	5.11	0.97	0.08	0



Alt Model-Shift Uniqueness Test

003114661-01, P = 0.888581 Days, E = 132.103195 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1068	216.4	9.26	21.7	4.63	1.80	13.6	1058	1046	207.2	194.7	8.14	0.91	0.02	8.85



Stellar Parameters For KIC 003114661

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5255^{+156}_{-156}	$4.678^{+0.028}_{-0.083}$	$-0.720^{+0.300}_{-0.300}$	$0.636^{+0.080}_{-0.040}$	$0.709^{+0.060}_{-0.060}$	$3.888^{+0.424}_{-1.037}$
	+3%/-3%	+1%/-2%	+42%/-42%	+13%/-6%	+8%/-8%	+11%/-27%
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 003114661-01 / KOI 0796.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4354 ± 14	$7.02^{+0.45}_{-0.33}$	2065^{+81}_{-74}	4435^{+113}_{-124}	13^{+1}_{-1}
Alt.	-2986 ± 14	$7.79^{+0.55}_{-0.36}$	2053^{+86}_{-67}	3952^{+91}_{-94}	$6.995^{+0.545}_{-0.708}$

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

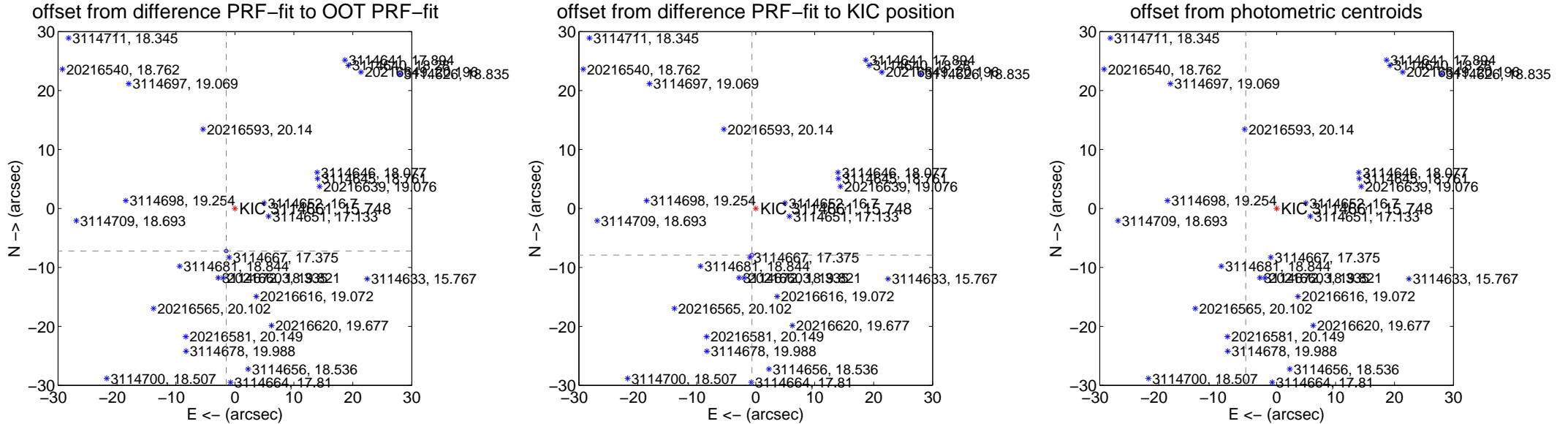
DV Centroid Data

Supplemental centroid analysis for 003114661-01. Kepler magnitude: 15.75. Transit SNR 226.29

There are 11 quarters with good PRF difference image offsets

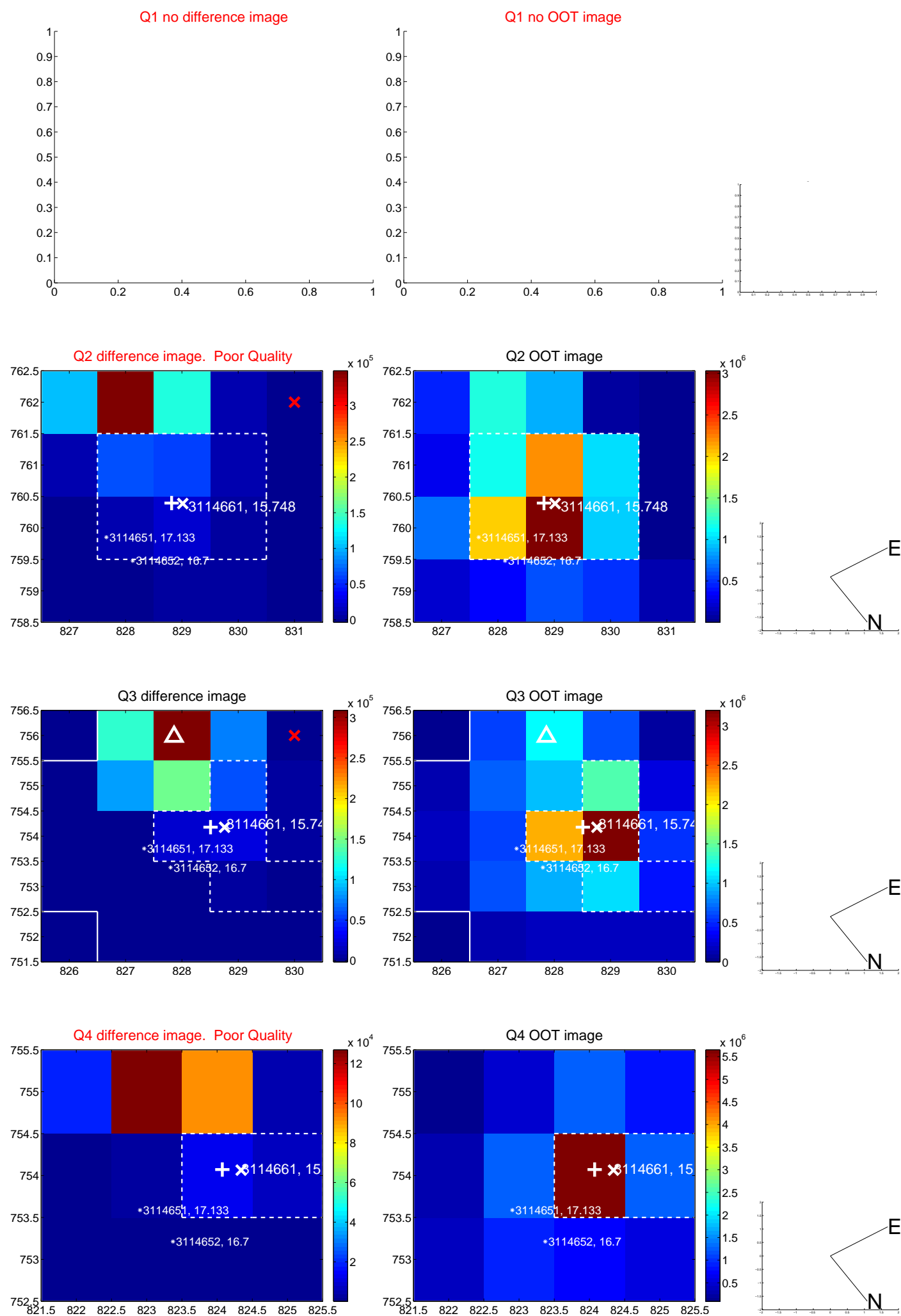
The direct PRF centroid is offset from the target star catalog position by about 1.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.365 \pm 0.100	73.88	1.470 \pm 0.185	-7.217 \pm 0.095
PRF-fit source offset from KIC position	7.937 \pm 0.103	76.68	0.648 \pm 0.108	-7.910 \pm 0.099
photometric centroid source offset	35.55 \pm 0.02	1524.67	5.23 \pm 0.02	-35.16 \pm 0.02

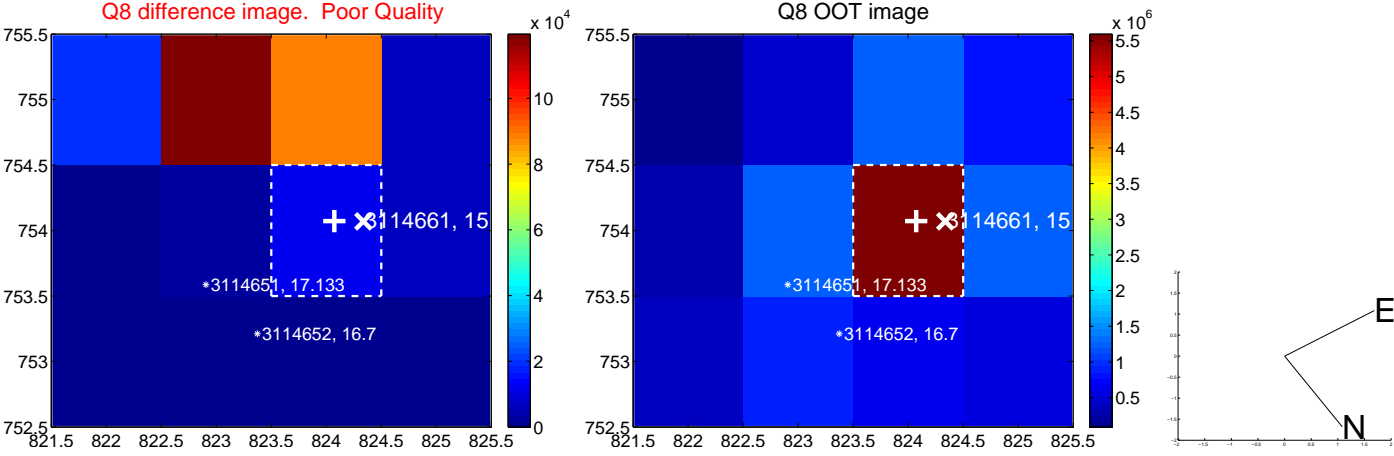
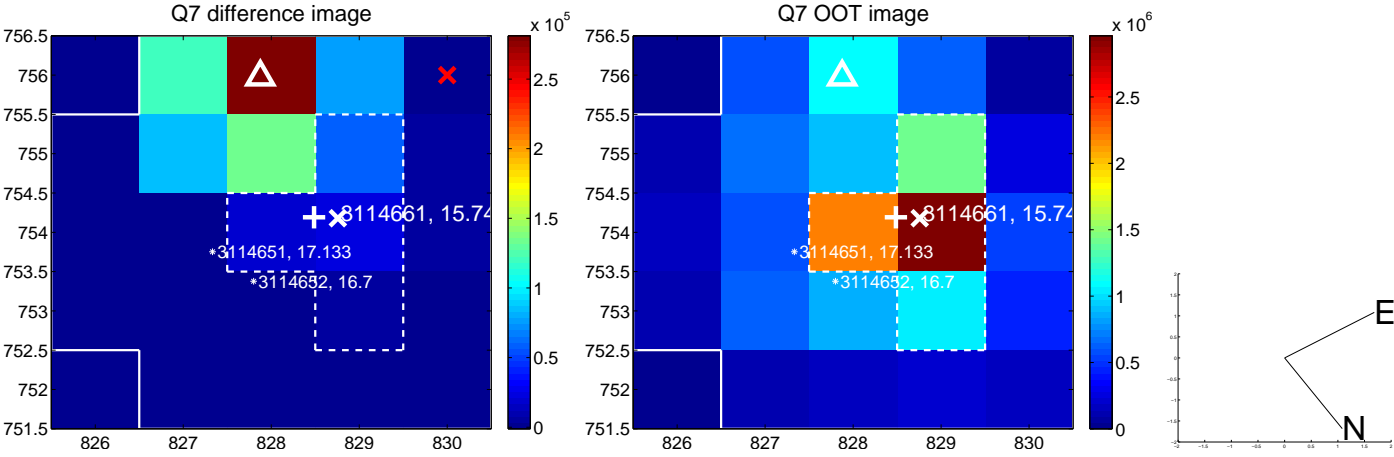
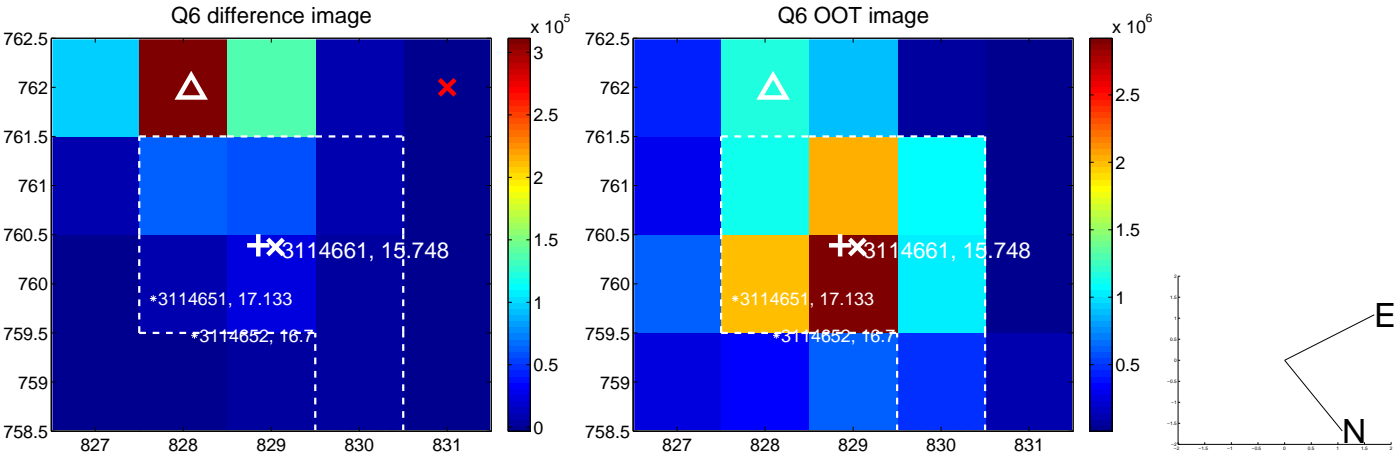
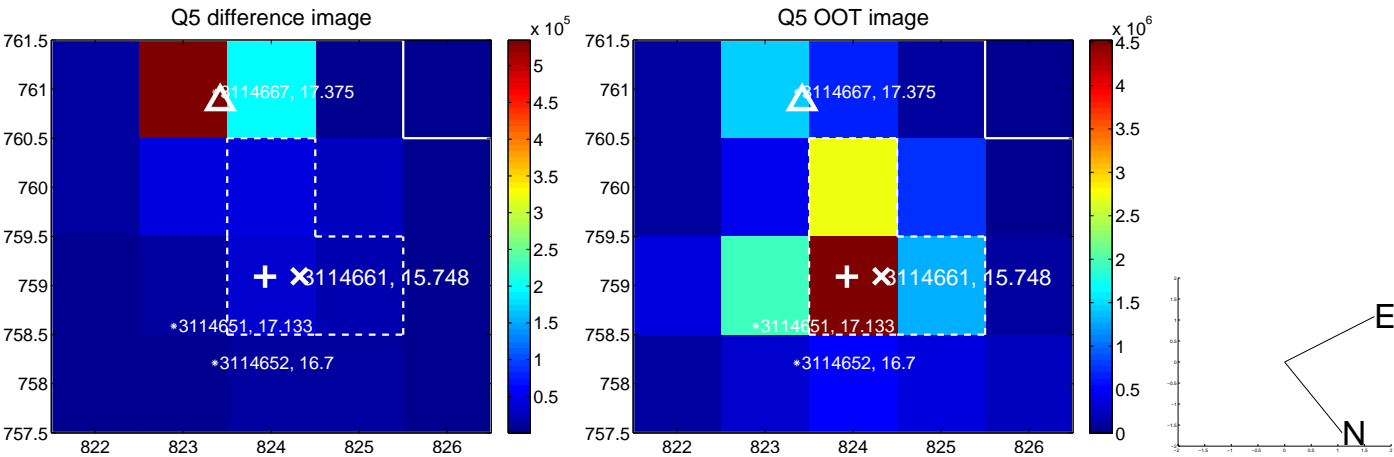


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

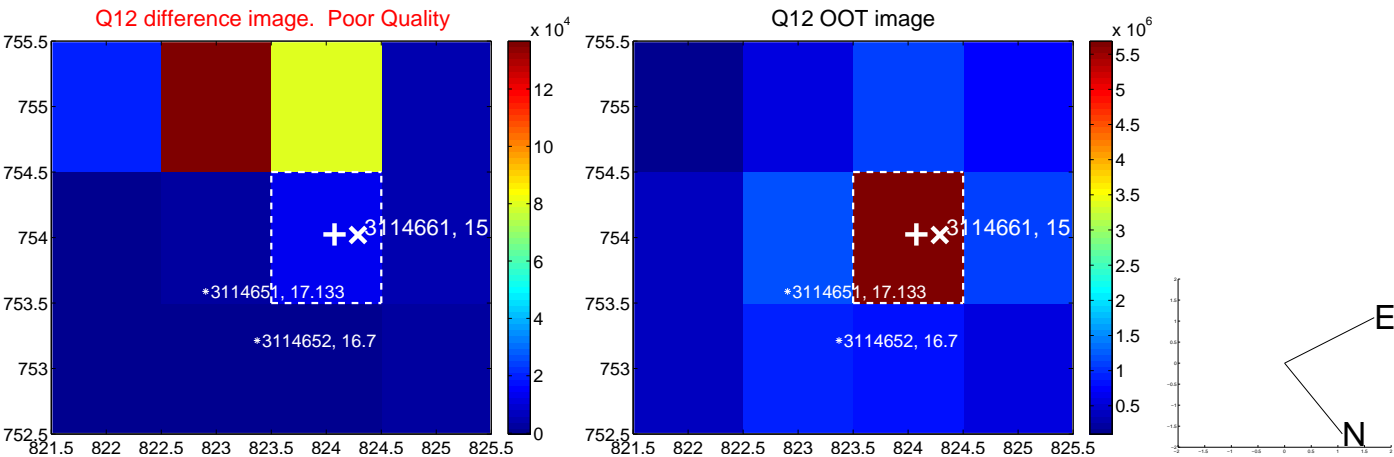
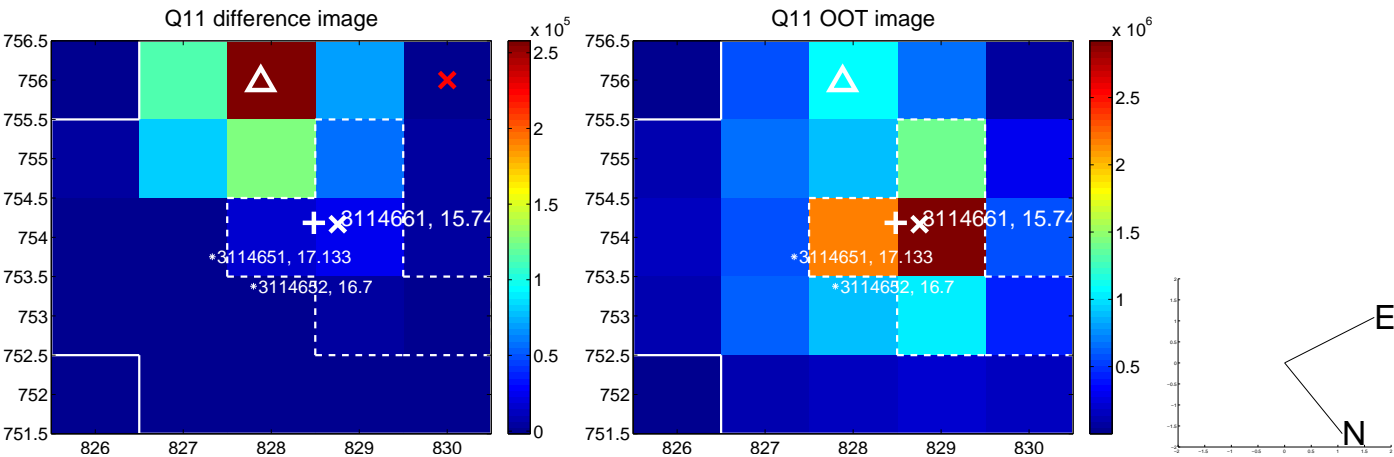
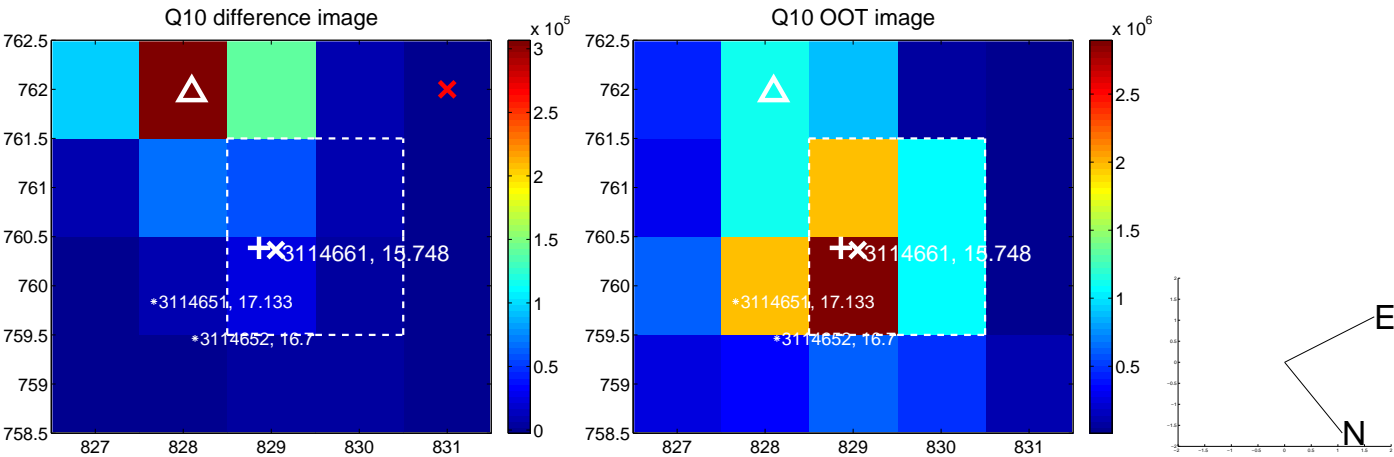
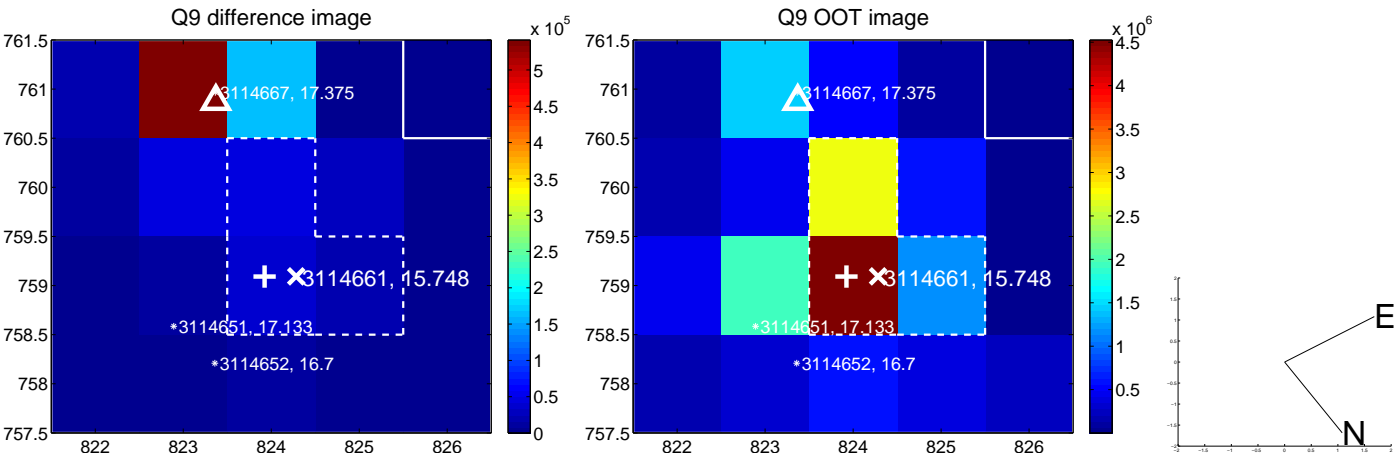
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



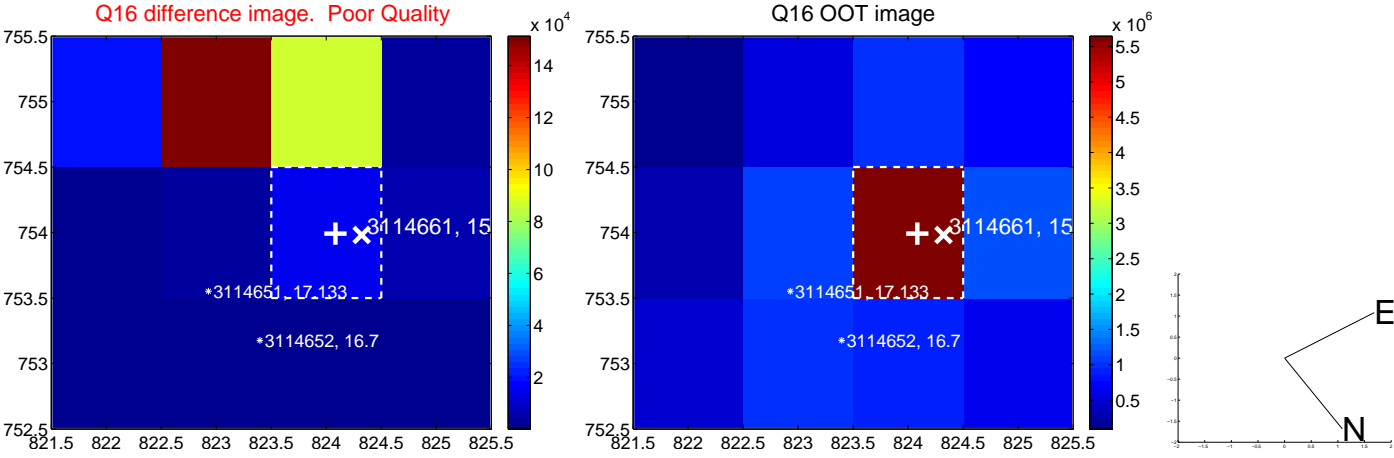
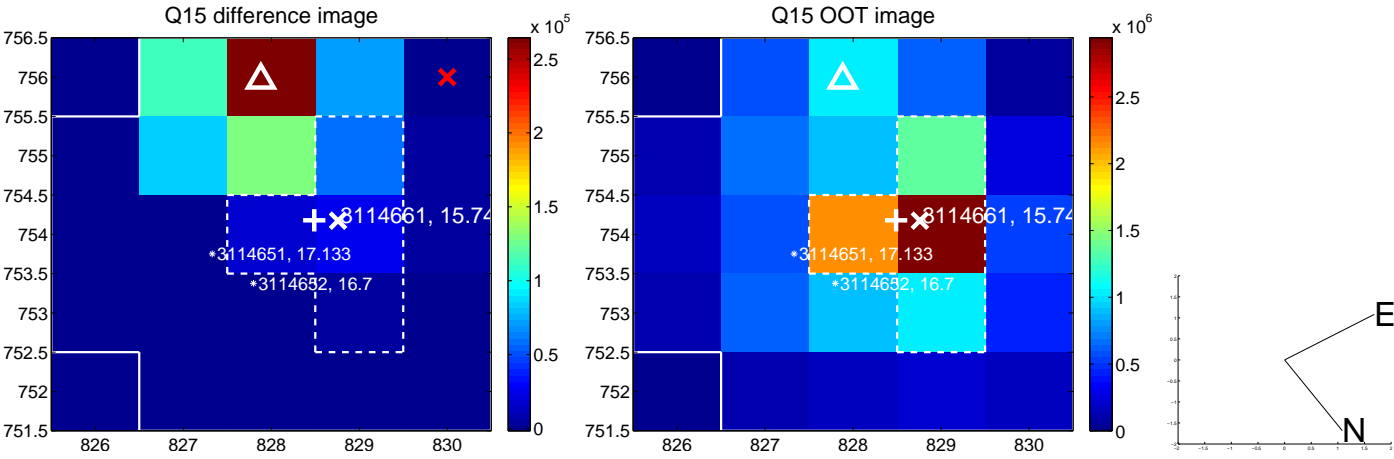
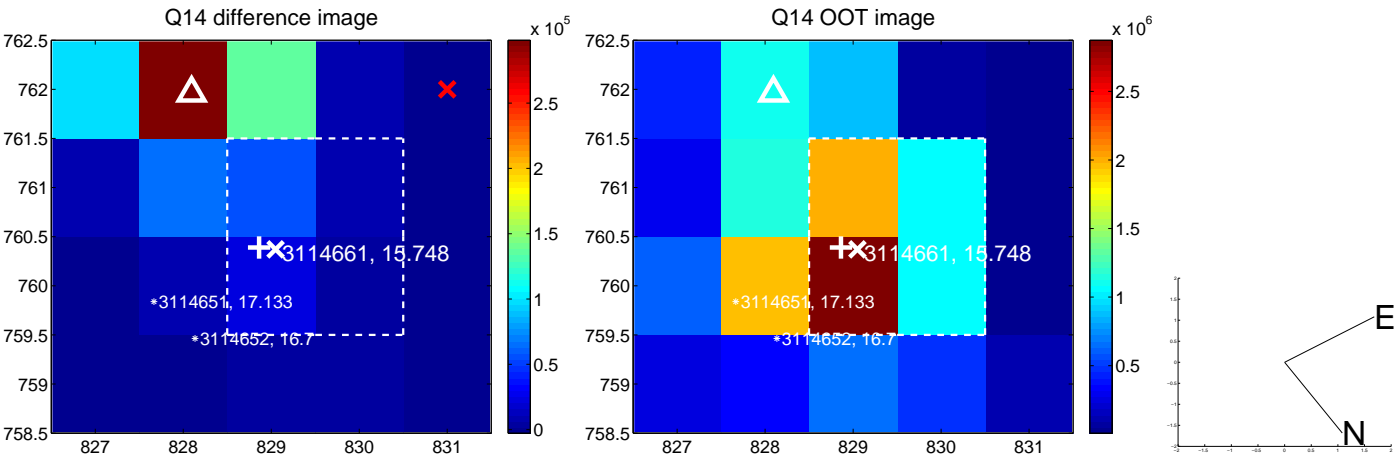
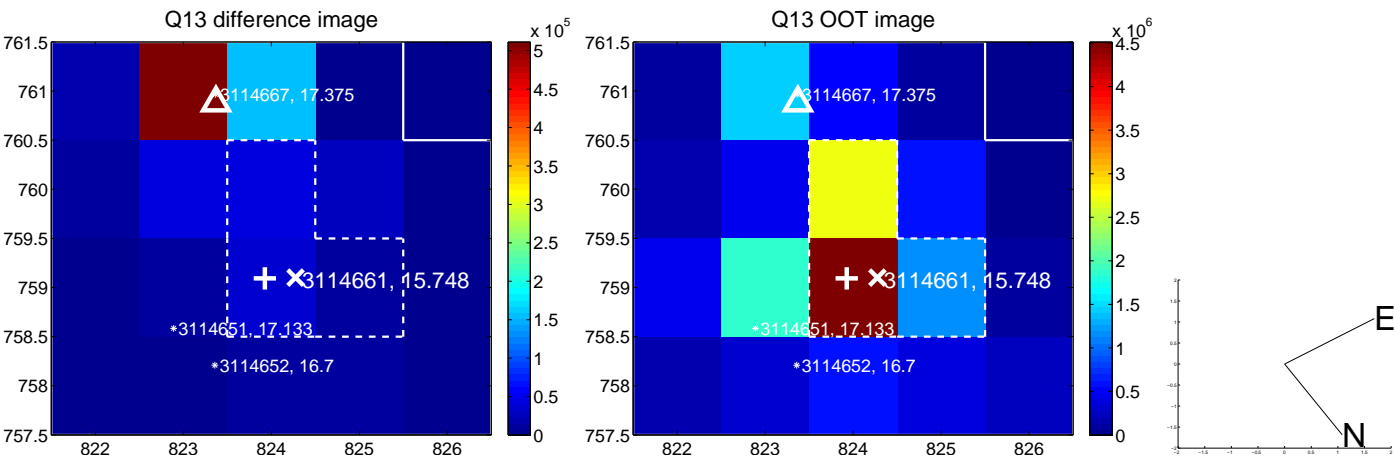
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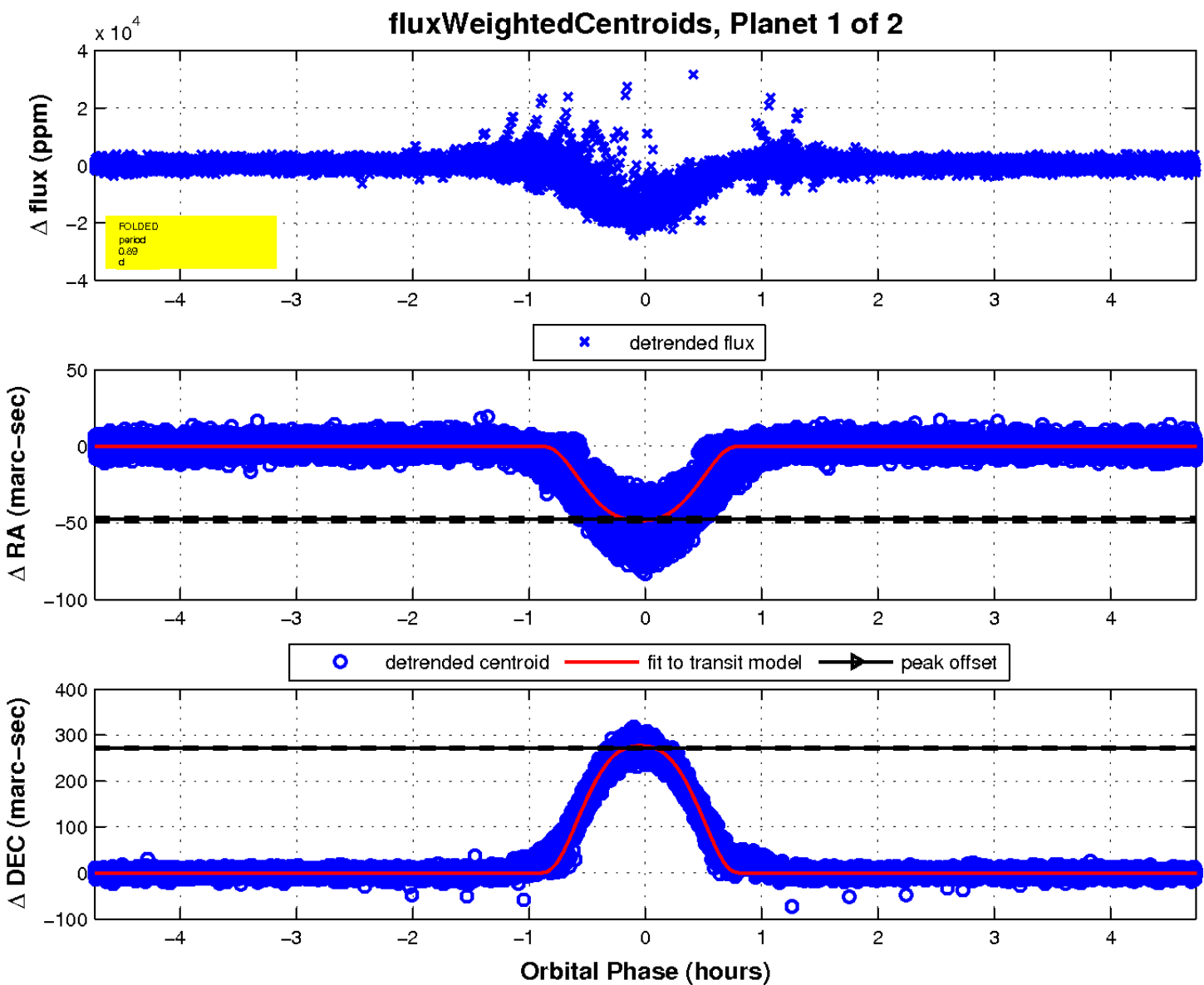
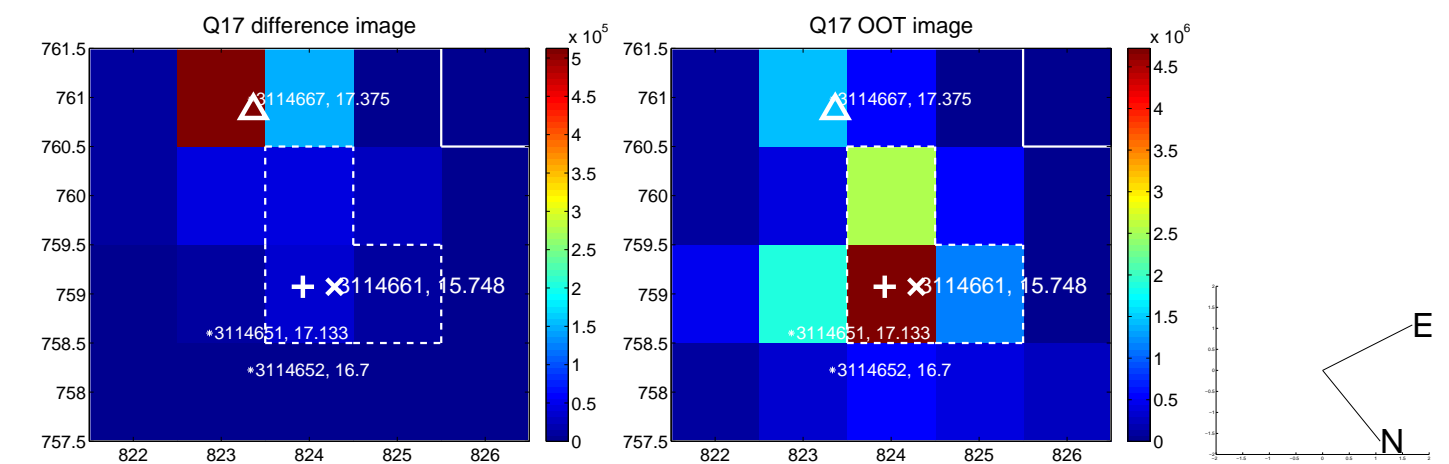
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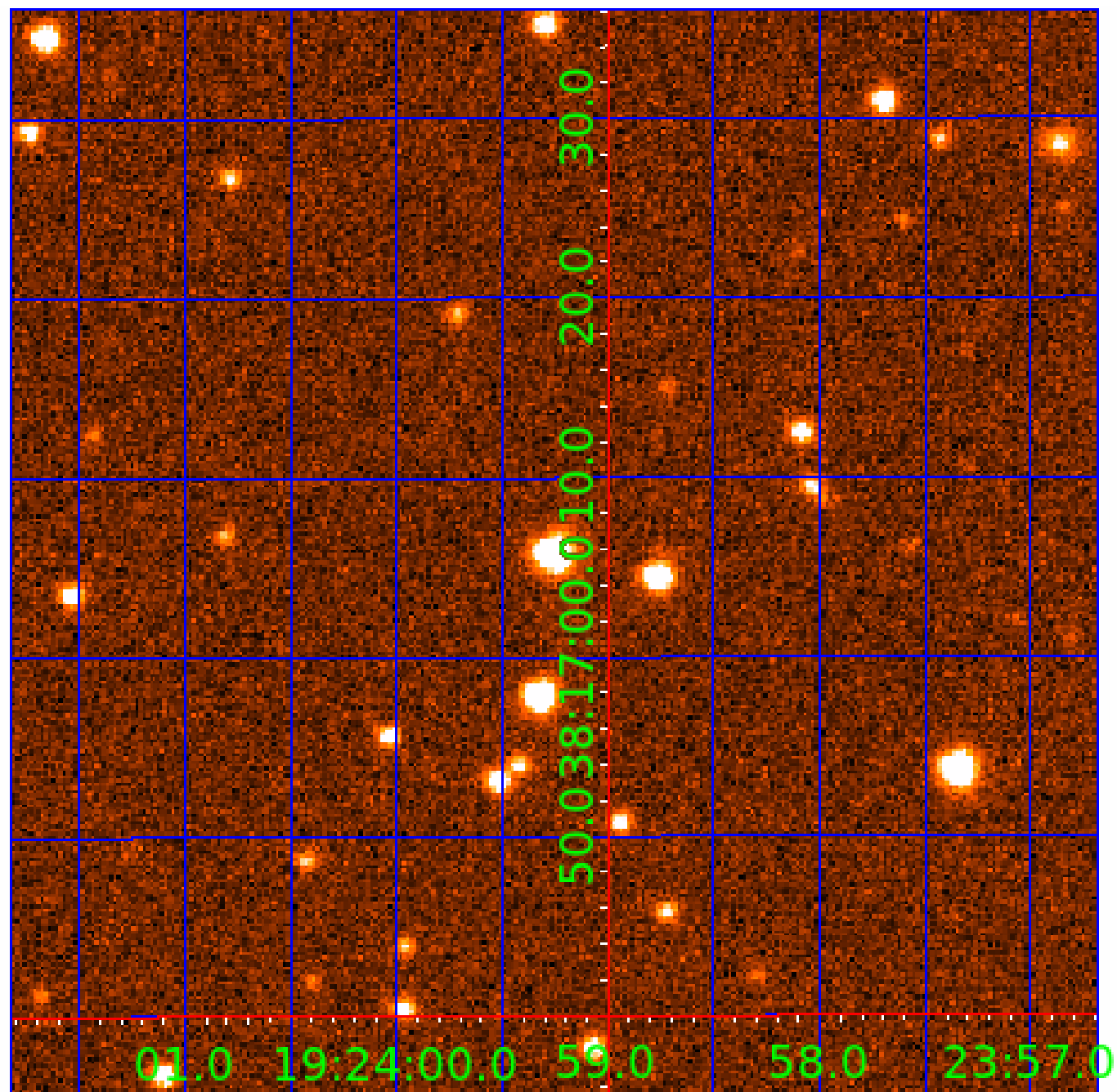


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003114661

Q1-17 DR25 TCE Parameters

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Robovetter Results

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003114661-02	OBS	FP	0.00	1	1	1	1	IS_SEC_TCE—CENT_NOFITS—HALO_GHOST—EPHEM_MATCH

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 003114661-02

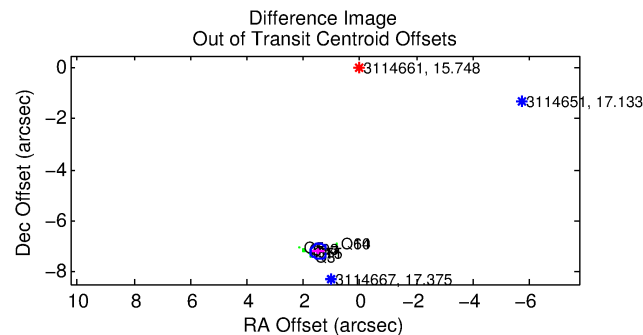
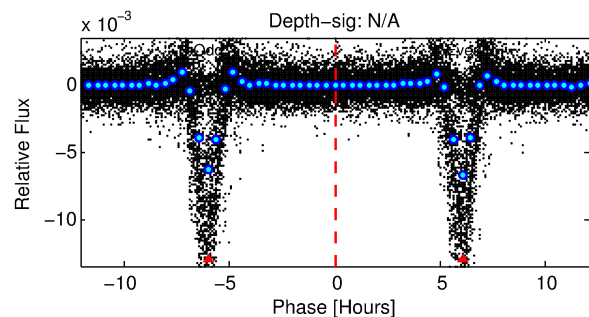
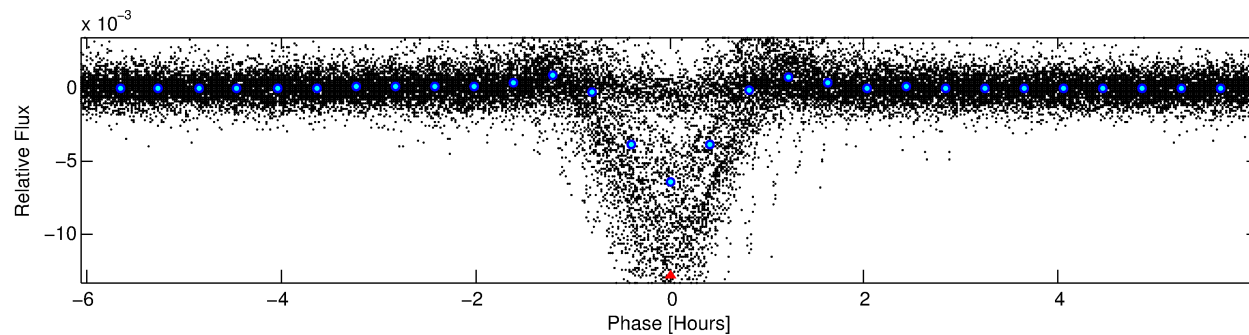
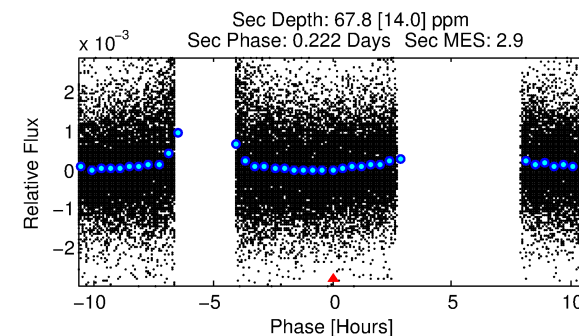
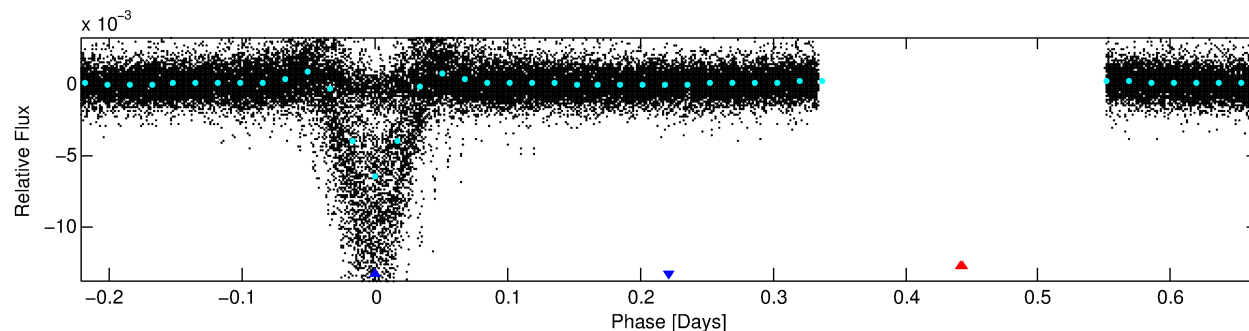
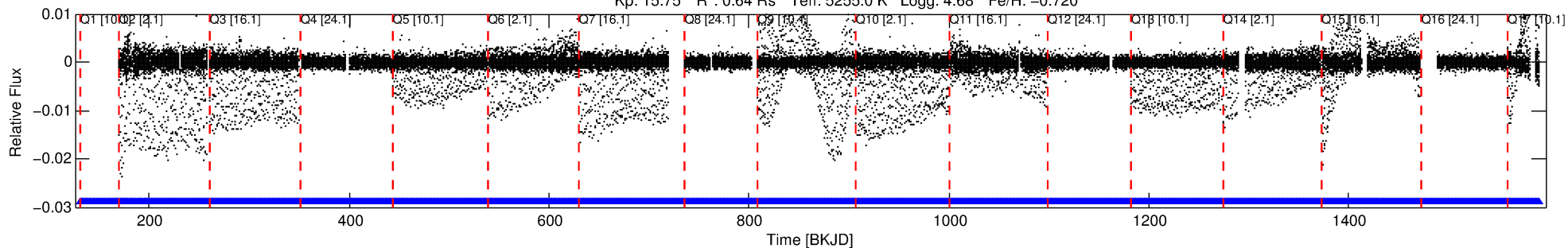
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
003114661-02	3114661	003114667-sec	3114667	1:1	8.4	-2	1	17.38	15.75	14.82	Direct-PRF	0	0.42	0.28

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 3114661 Candidate: 2 of 2 Period: 0.889 d
KOI: K00796 Corr: No Ephemeris Match

Kp: 15.75 R*: 0.64 Rs Teff: 5255.0 K Logg: 4.68 Fe/H: -0.720



TPS TCE Results:

Period = 0.88858 d
Epoch = 131.6579 BKJD

DV fit results are unavailable

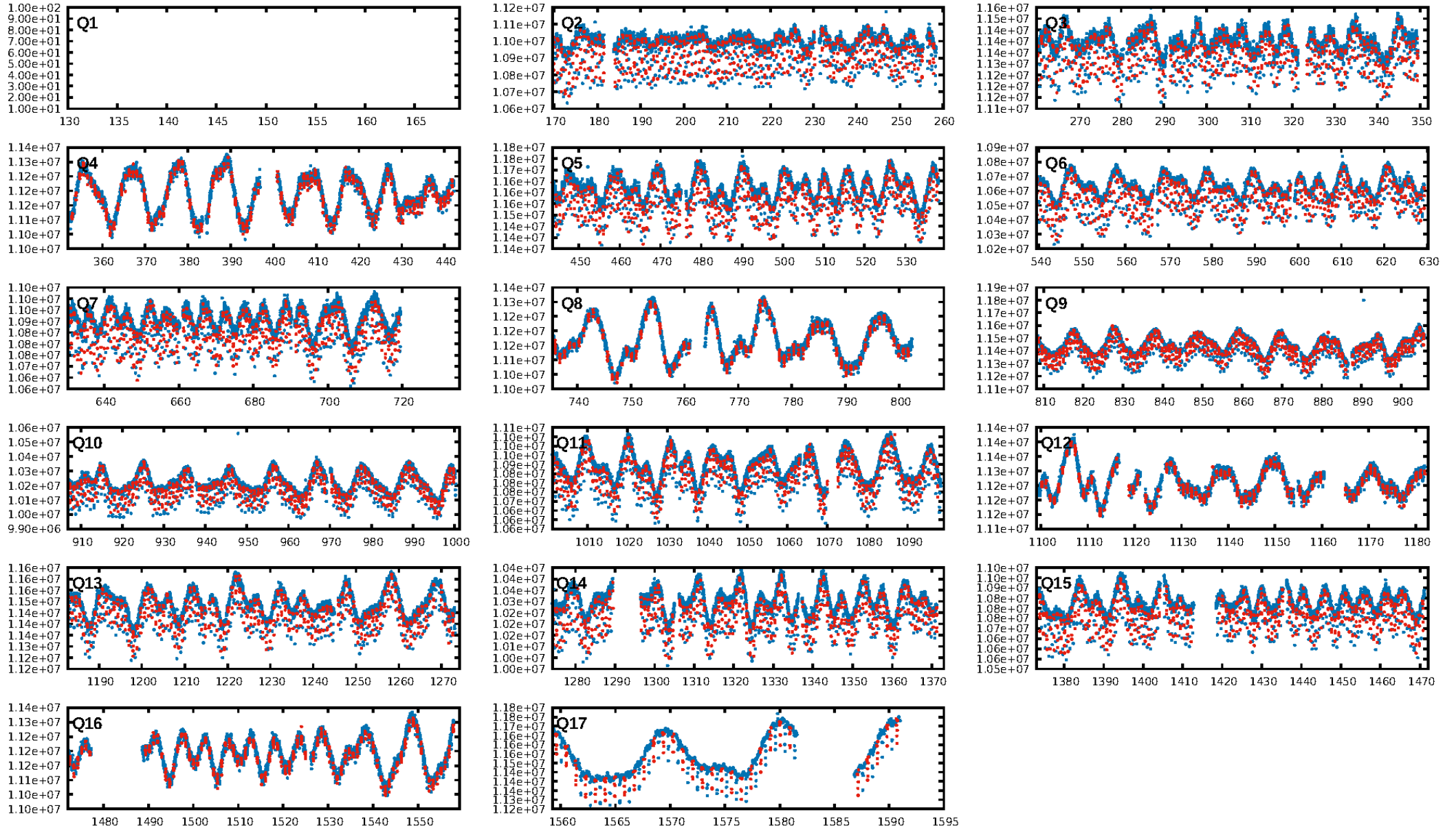
DV Diagnostic Results:

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 [1439/1439]
GhostDiagnostic-chr: -0.2311
Centroid-sig: 0.0%
Centroid-so: 22.295 arcsec [1280.12σ]
OotOffset-rm: 7.371 arcsec [74.03σ]
KicOffset-rm: 7.937 arcsec [80.22σ]
OotOffset-st: 3/4/0/4 [11]
KicOffset-st: 3/4/0/4 [11]
DiffImageQuality-fgm: 1.00 [11/11]
DiffImageOverlap-fno: 1.00 [16/16]

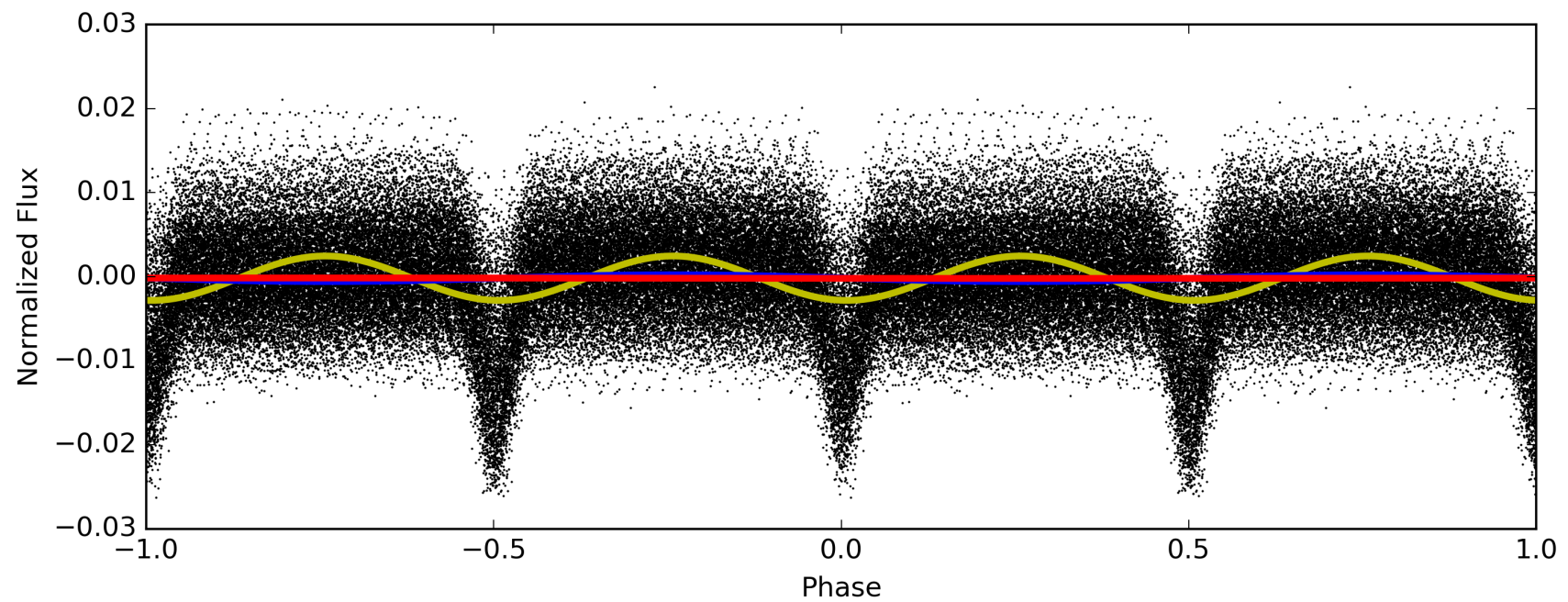
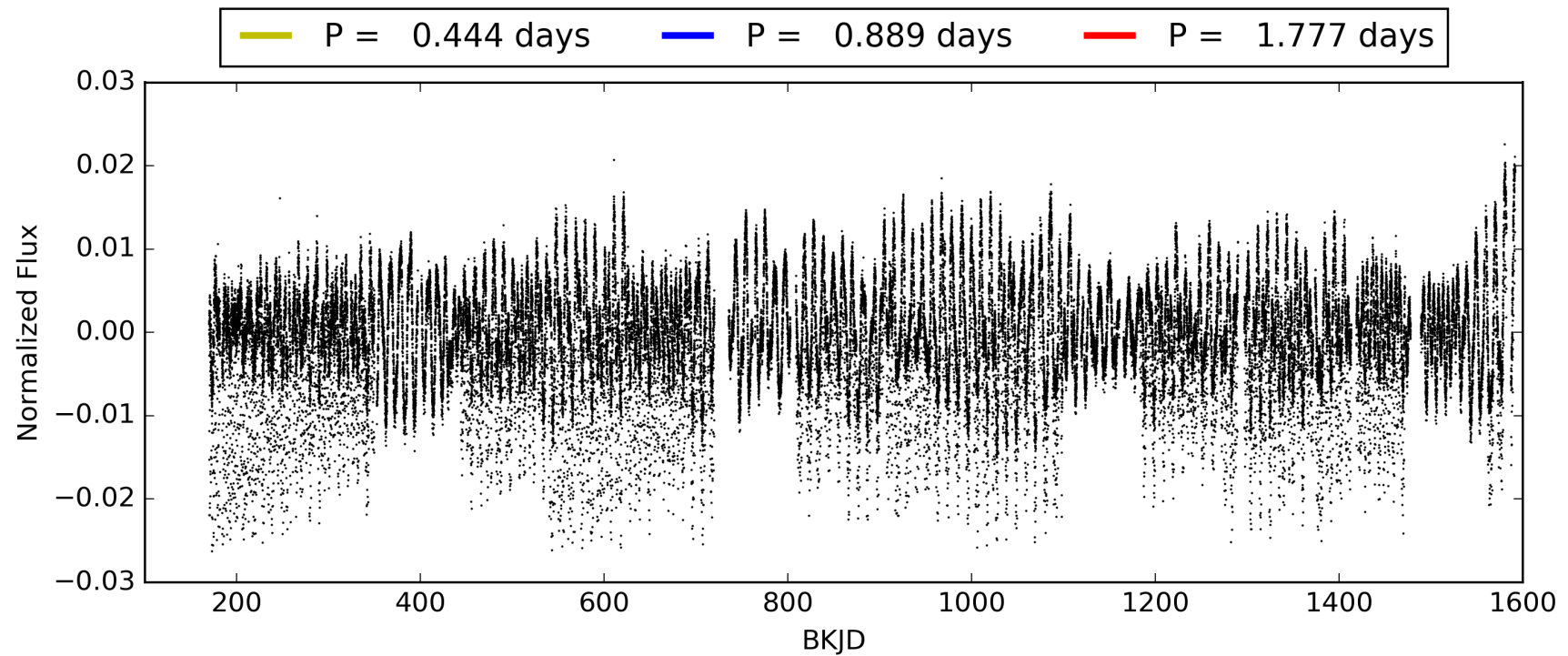
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 10:31:17 Z

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TCE 003114661-02, PDC Light Curves

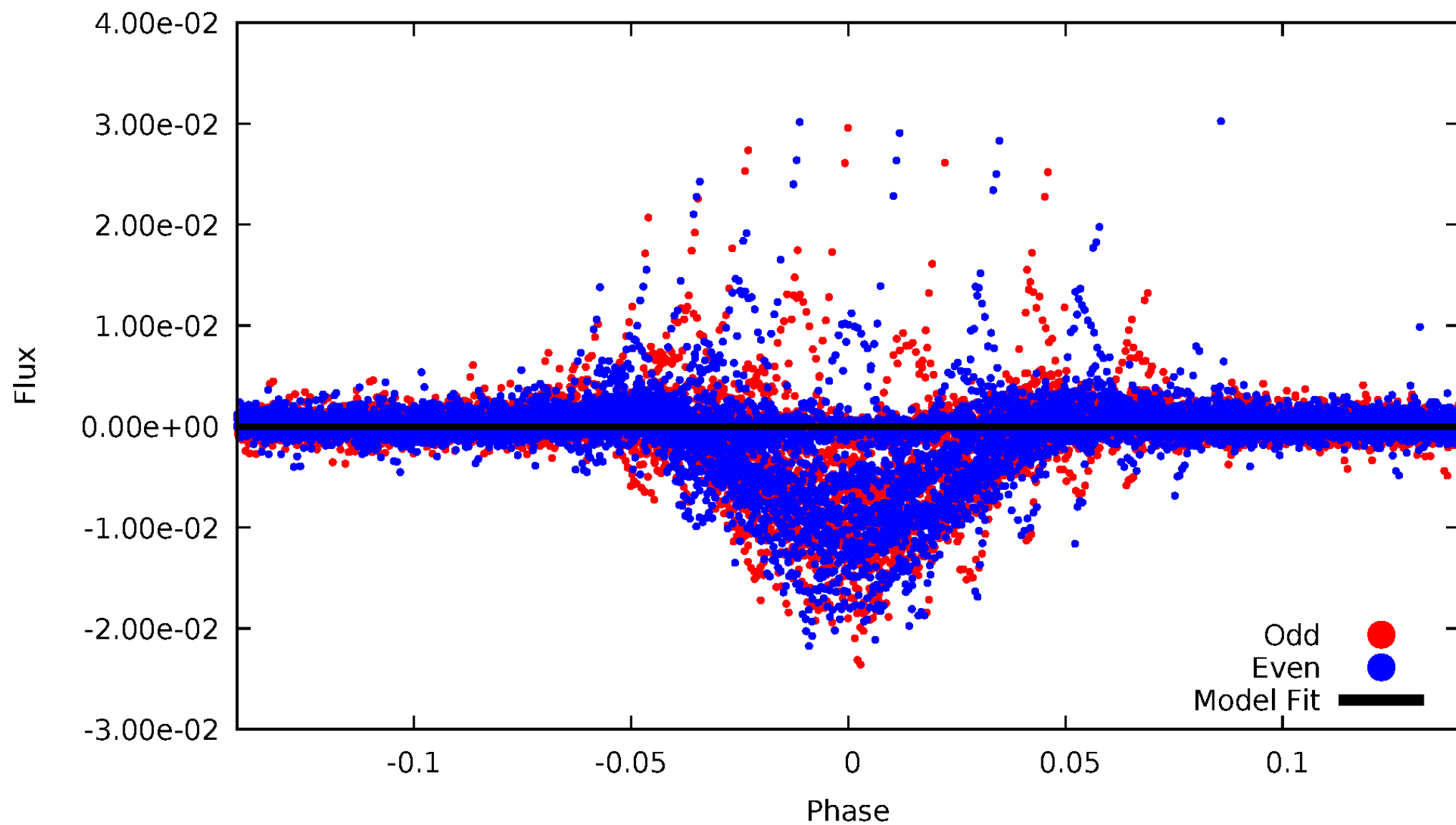


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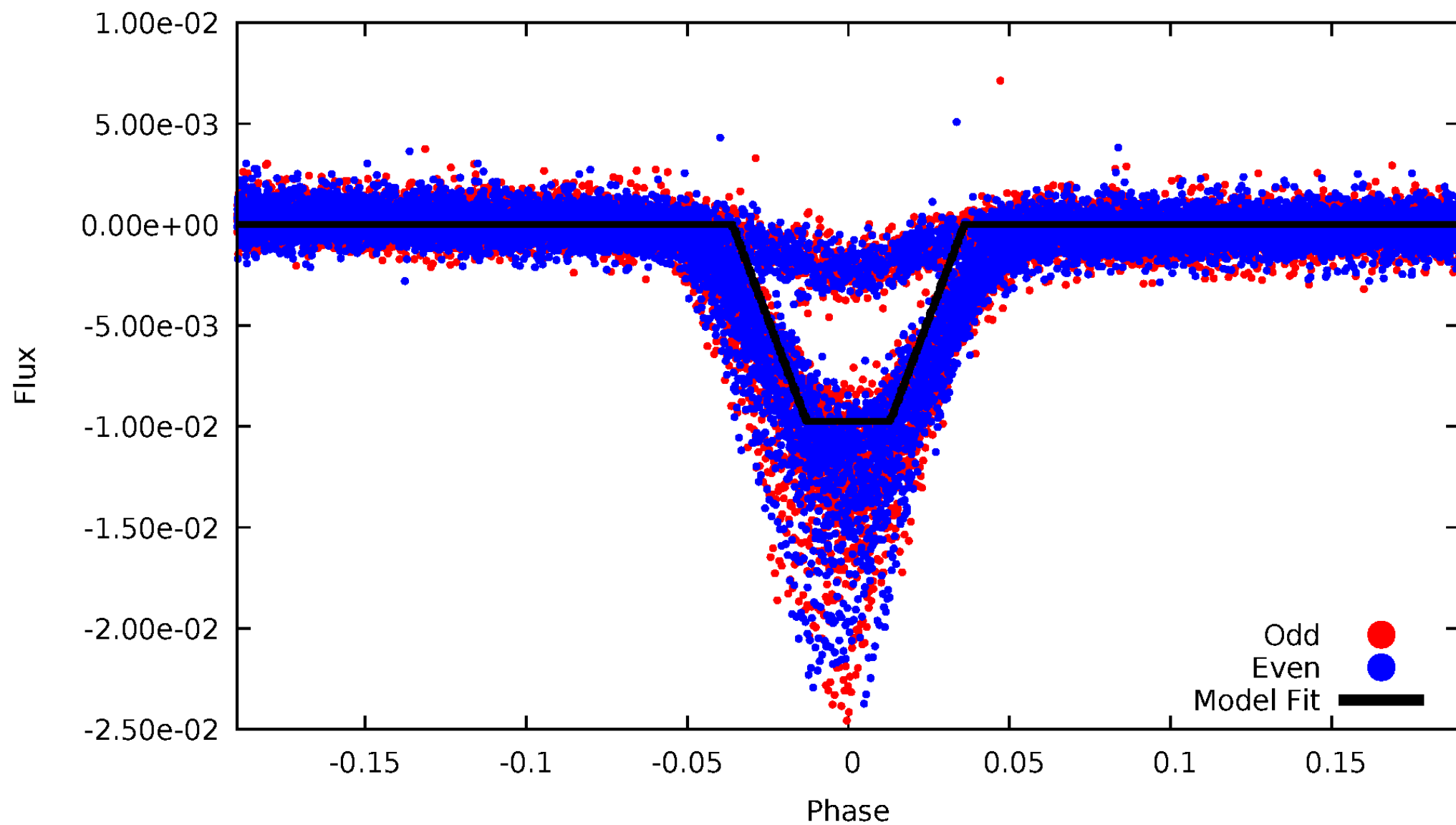
DV Odd/Even

TCE 003114661-02



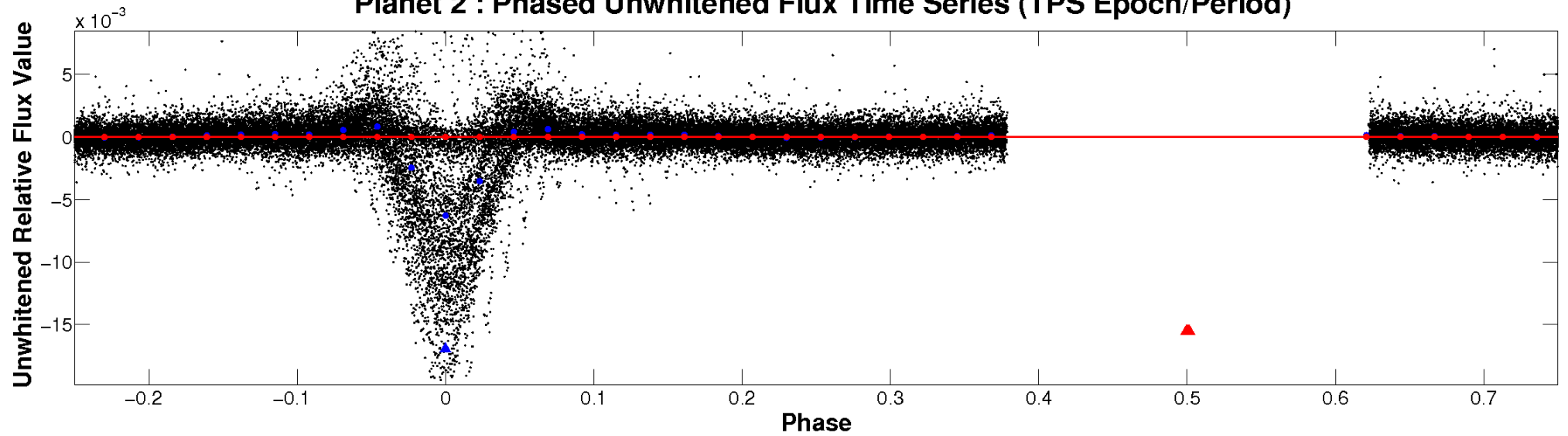
ALT Odd/Even

TCE 003114661-02

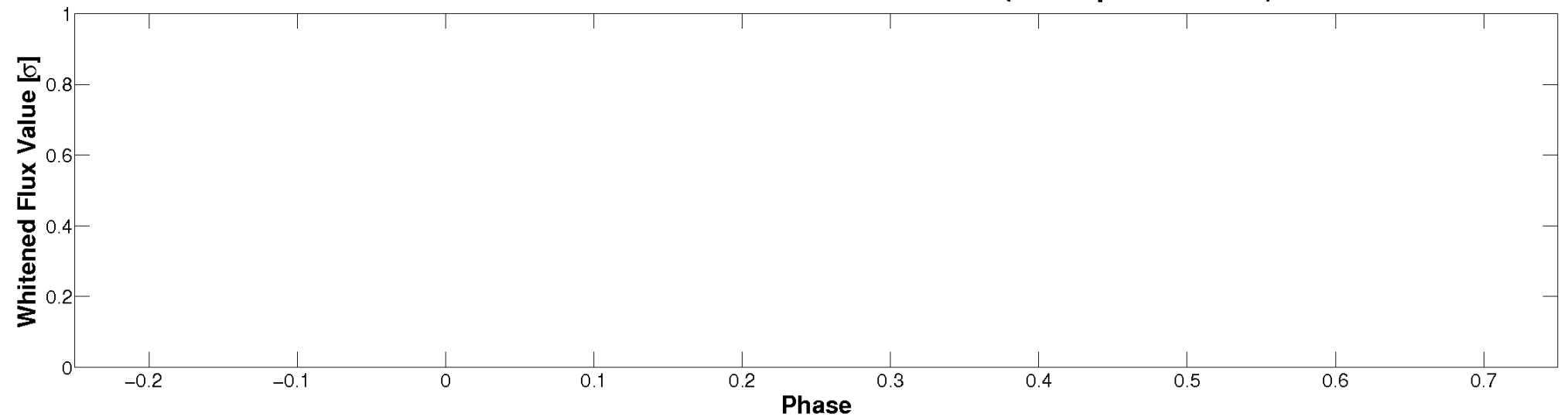


Non-Whitened Vs. Whitened Light Curve

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

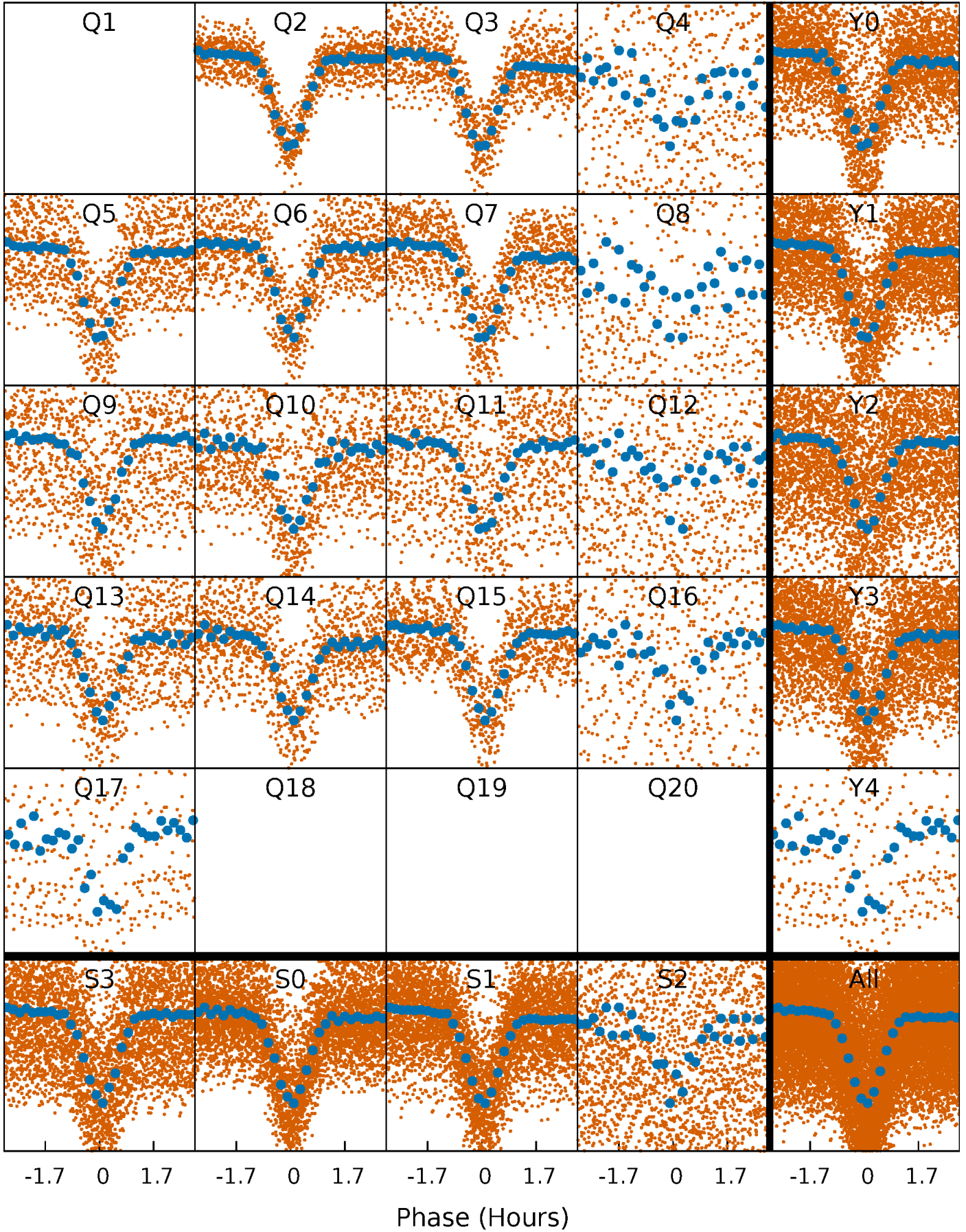


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



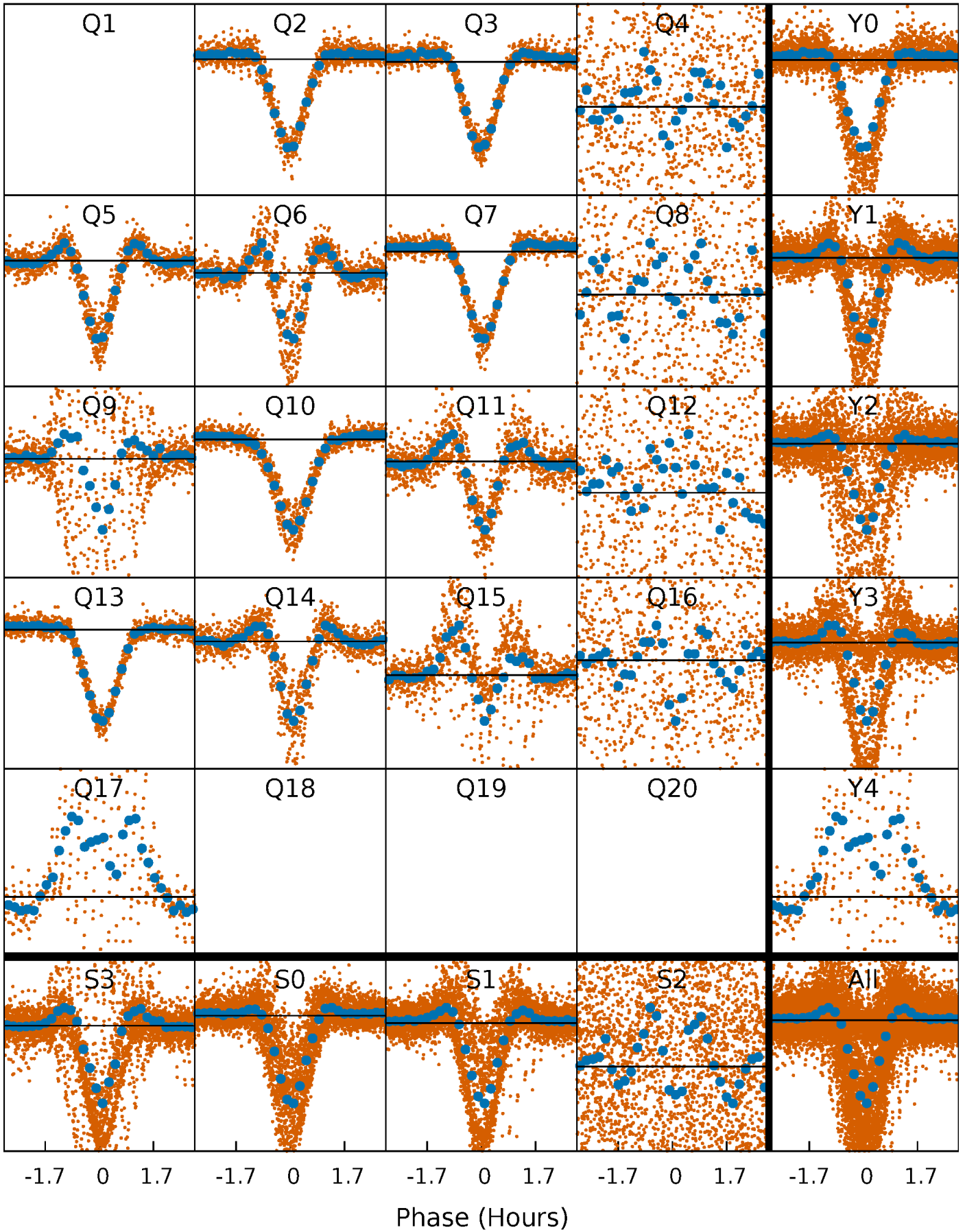
PDC Quarter-Phased Transit Curves

TCE 003114661-02 P= 0.888579 Days $T_0=131.657869$ (BKJD)



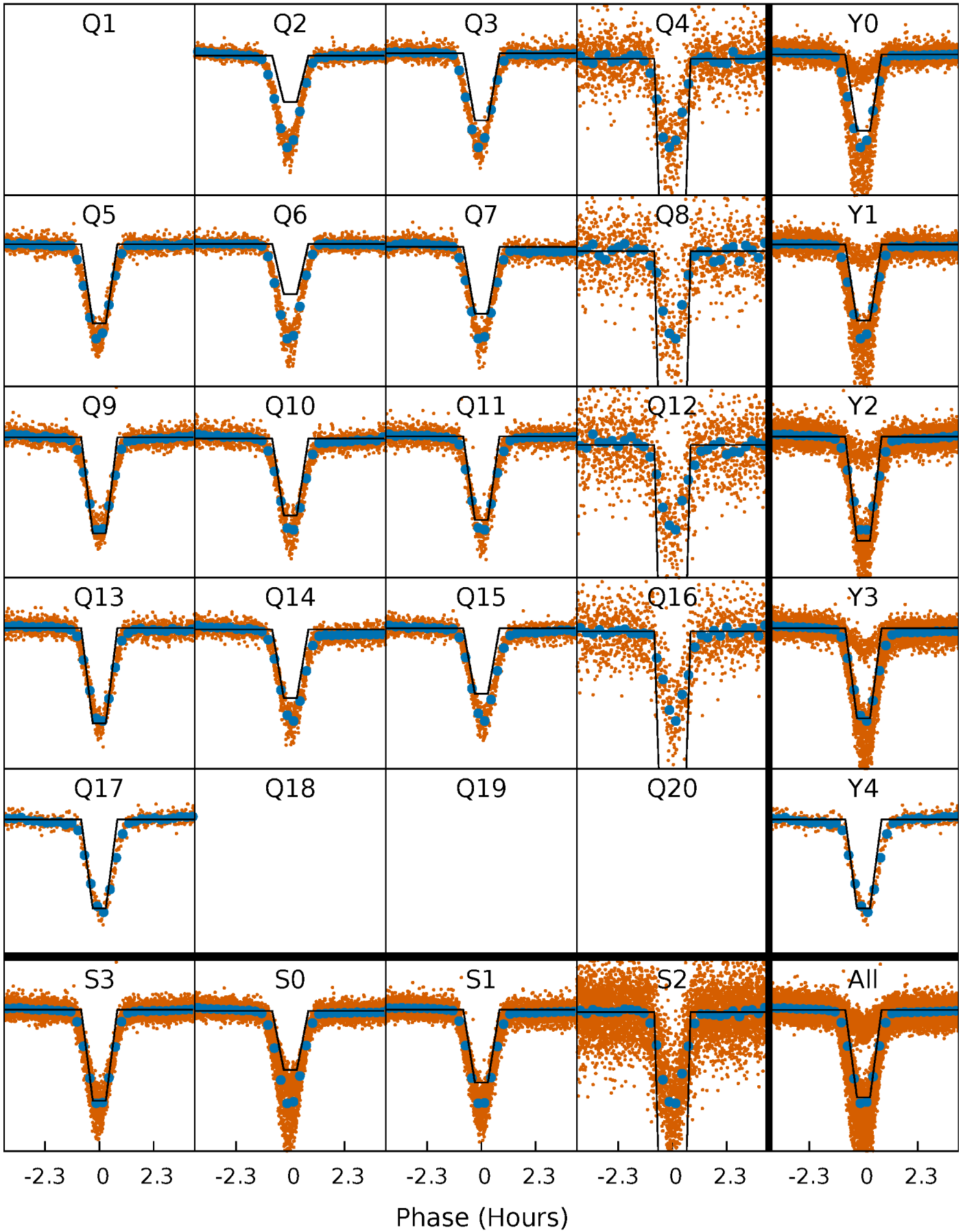
DV Quarter-Phased Transit Curves

TCE 003114661-02 P= 0.888579 Days $T_0=131.657869$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

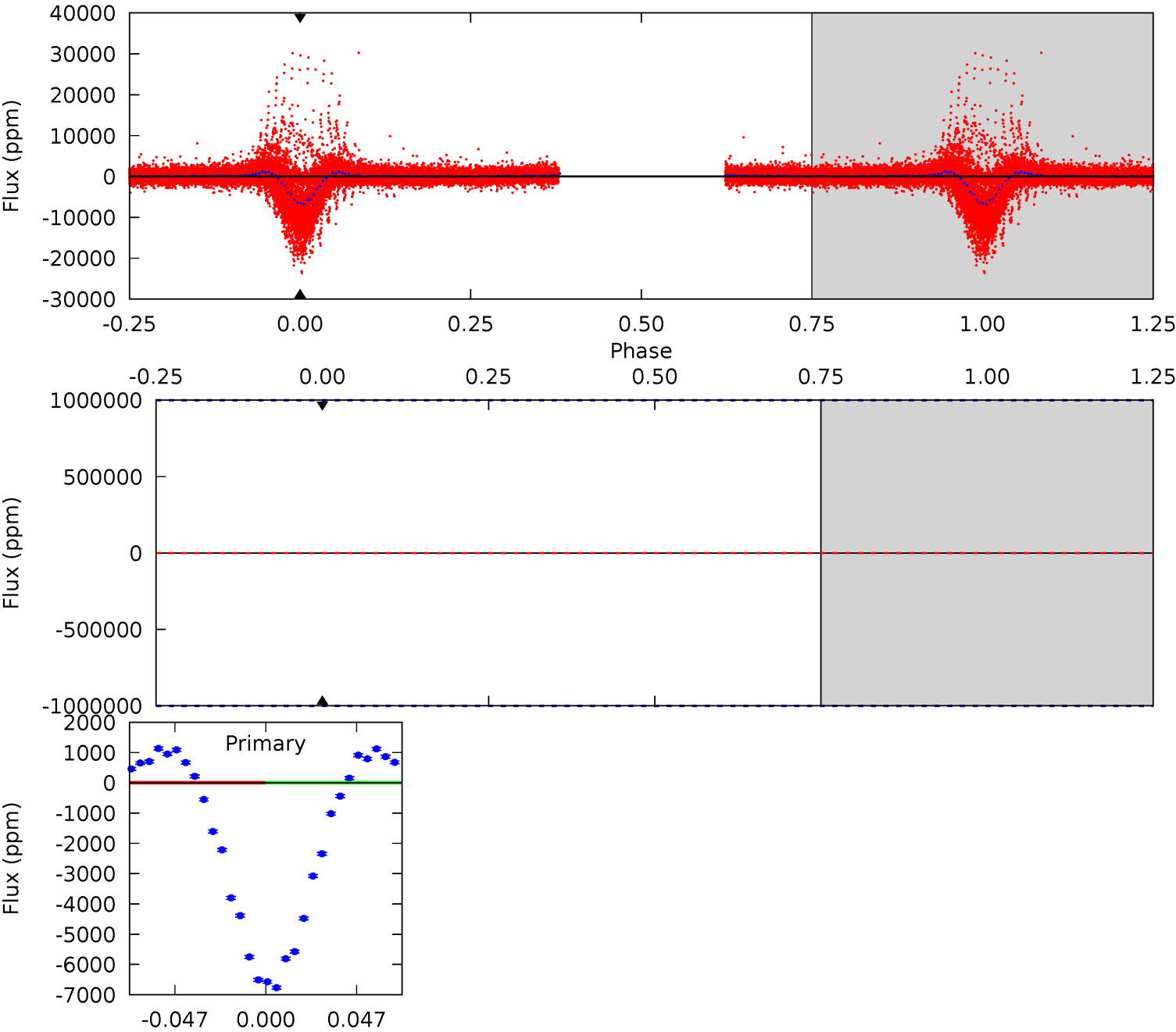
TCE 003114661-02 P= 0.888579 Days $T_0=131.660168$ (BKJD)



DV Model-Shift Uniqueness Test

003114661-02, P = 0.888579 Days, E = 131.657869 Days

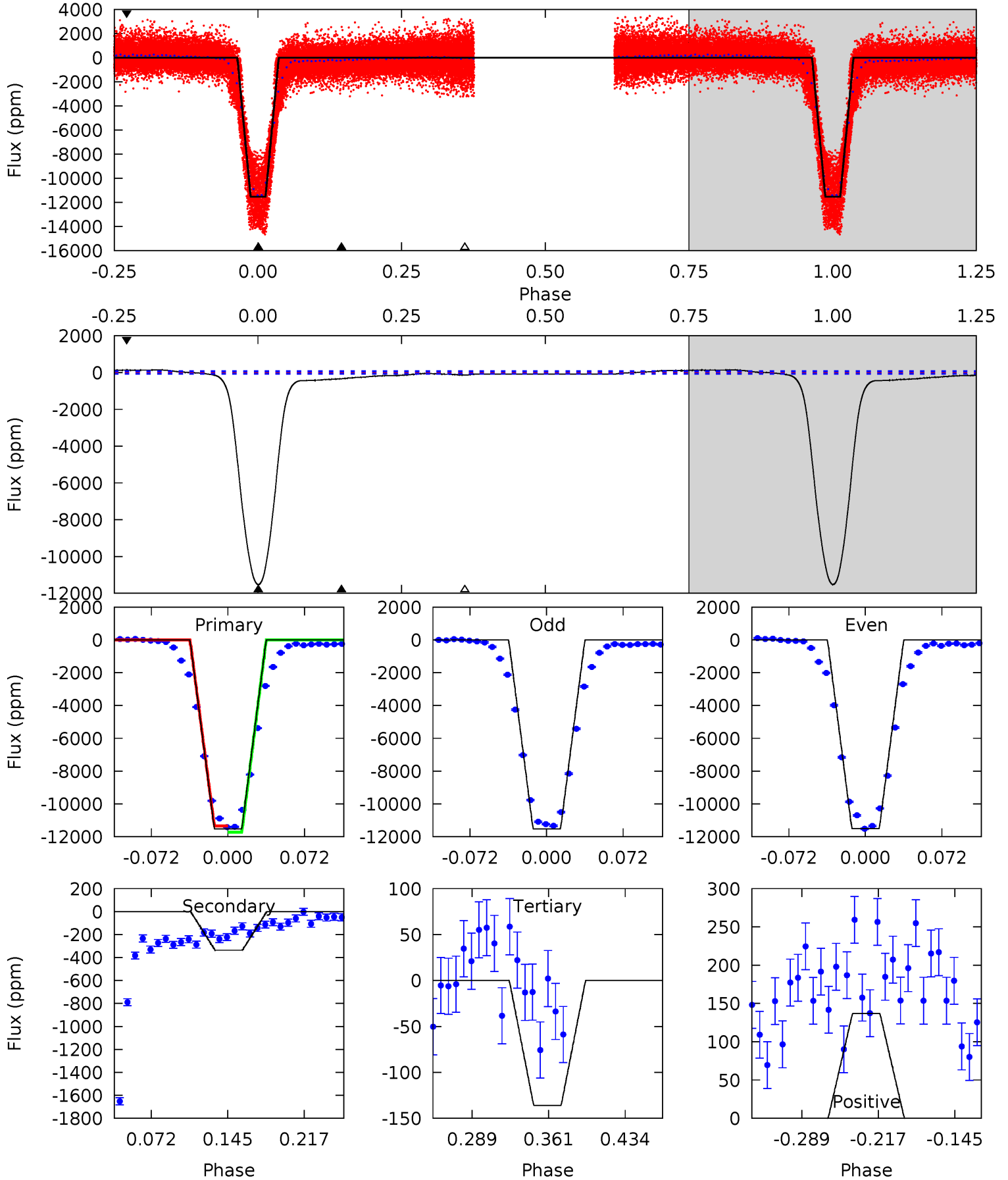
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003114661-02, P = 0.888579 Days, E = 131.660168 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
792.8	23.1	9.36	9.42	4.63	1.80	7.15	783.5	783.4	13.8	13.7	0.82	0.94	0.01	0



Stellar Parameters For KIC 003114661

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5255^{+156}_{-156}	$4.678^{+0.028}_{-0.083}$	$-0.720^{+0.300}_{-0.300}$	$0.636^{+0.080}_{-0.040}$	$0.709^{+0.060}_{-0.060}$	$3.888^{+0.424}_{-1.037}$
	+3%/-3%	+1%/-2%	+42%/-42%	+13%/-6%	+8%/-8%	+11%/-27%
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 003114661-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$9.95^{+6.46}_{-6.02}$	2058^{+83}_{-73}	4038^{+5950}_{-12674}	$8.046^{+281.188}_{-194.666}$
Alt.	-336 ± 15	$8.54^{+6.65}_{-5.22}$	2056^{+80}_{-71}	2570^{+1071}_{-4776}	$0.658^{+3.749}_{-0.454}$

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

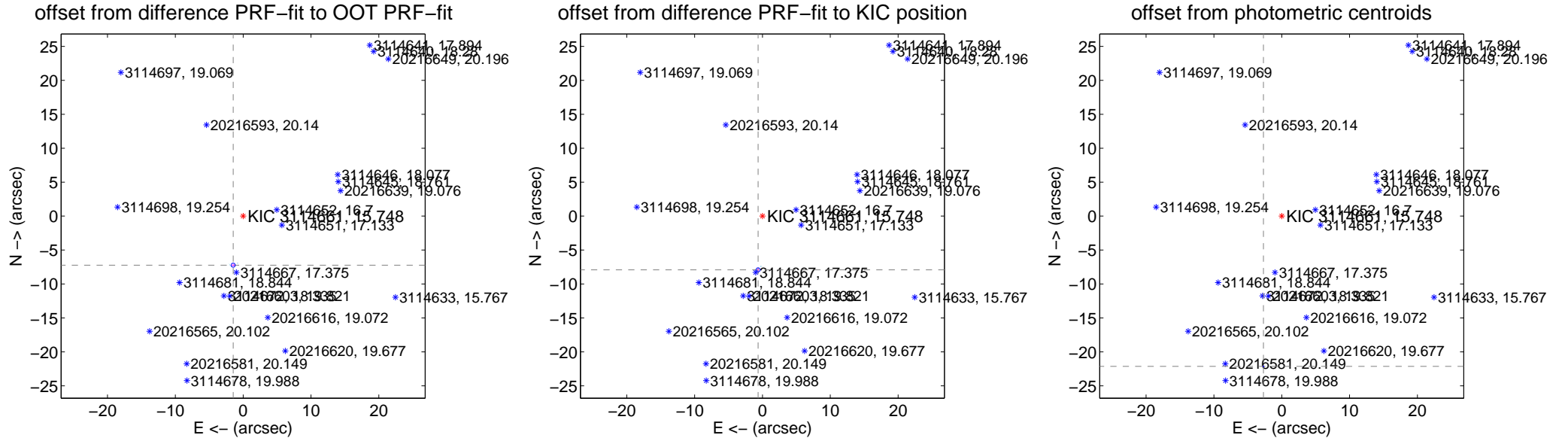
DV Centroid Data

Supplemental centroid analysis for 003114661-02. Kepler magnitude: 15.75. Transit SNR -1.00

There are 11 quarters with good PRF difference image offsets

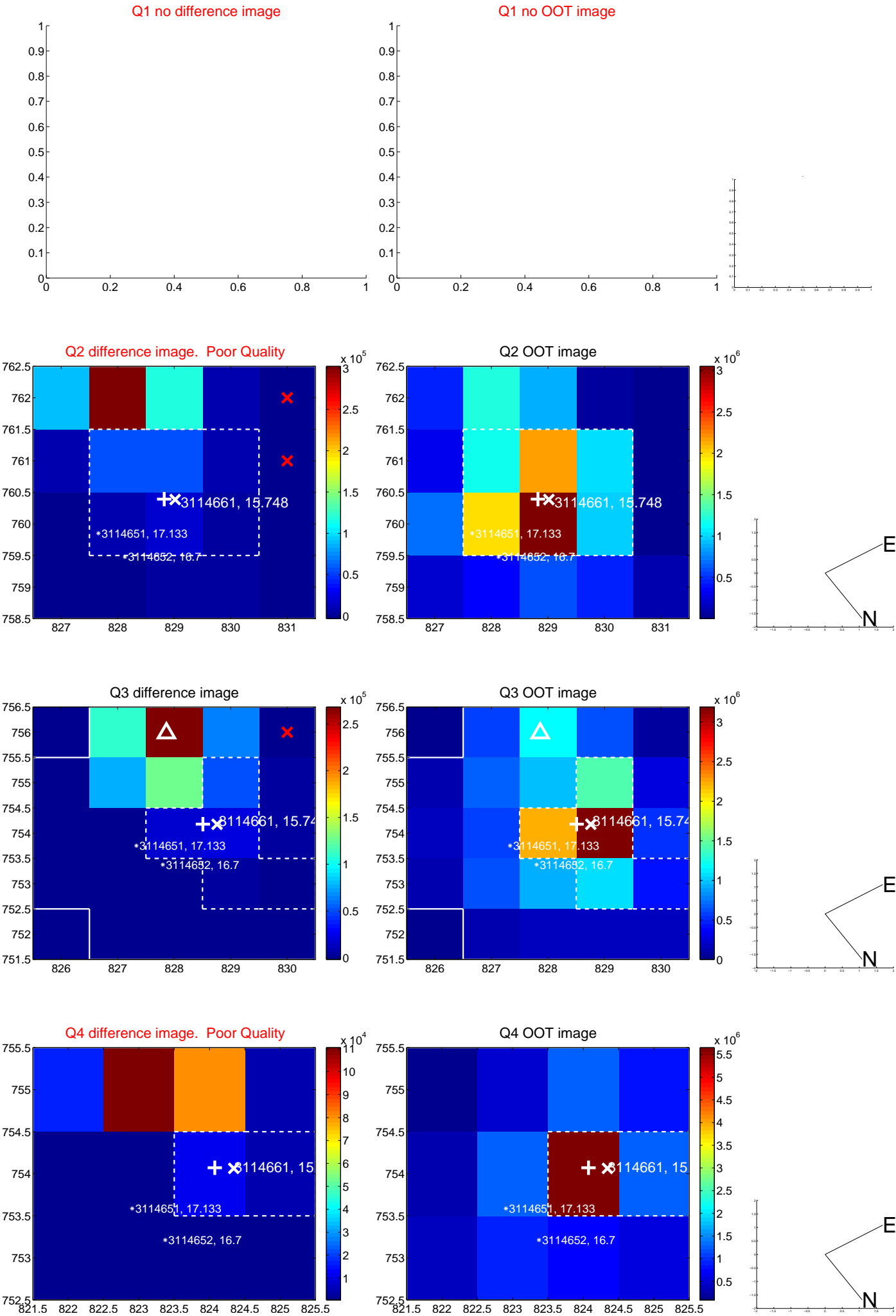
The direct PRF centroid is offset from the target star catalog position by about 1.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.371 \pm 0.100	74.03	1.470 \pm 0.188	-7.223 \pm 0.094
PRF-fit source offset from KIC position	7.937 \pm 0.099	80.22	0.645 \pm 0.106	-7.911 \pm 0.094
photometric centroid source offset	22.29 \pm 0.02	1280.12	2.69 \pm 0.02	-22.13 \pm 0.02

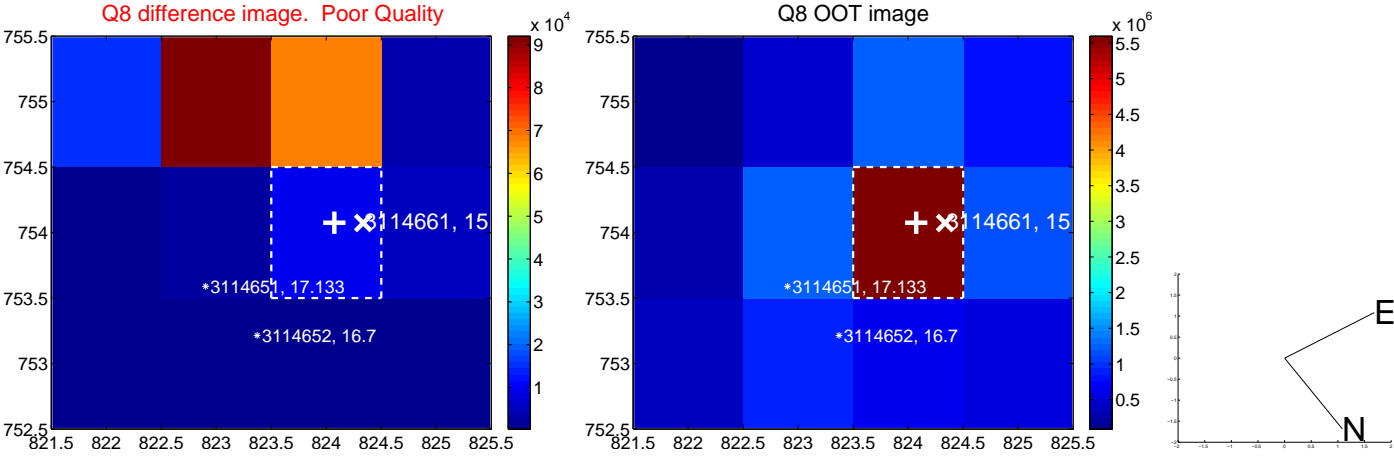
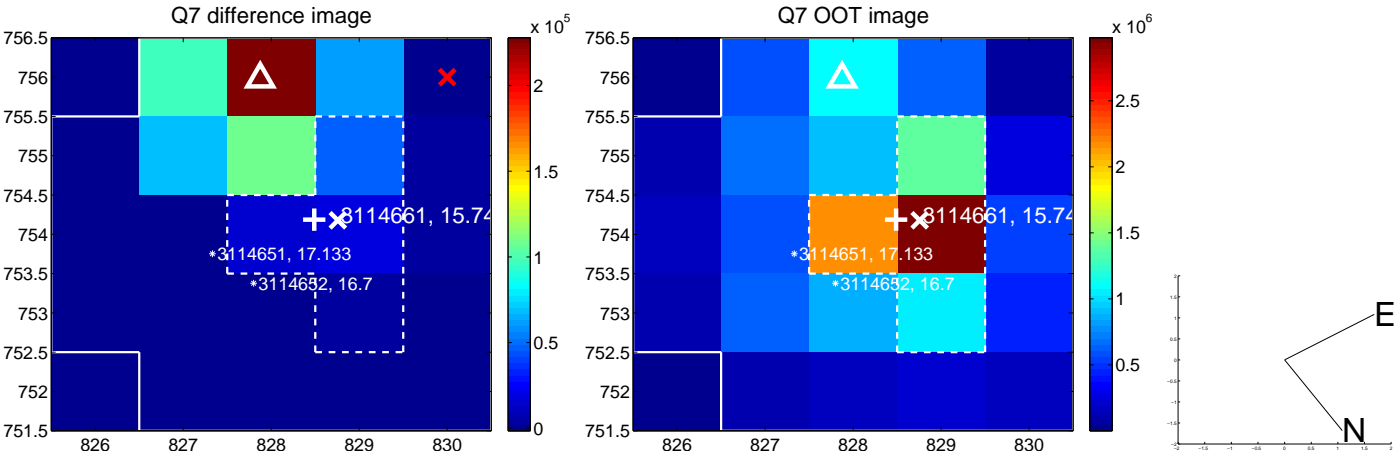
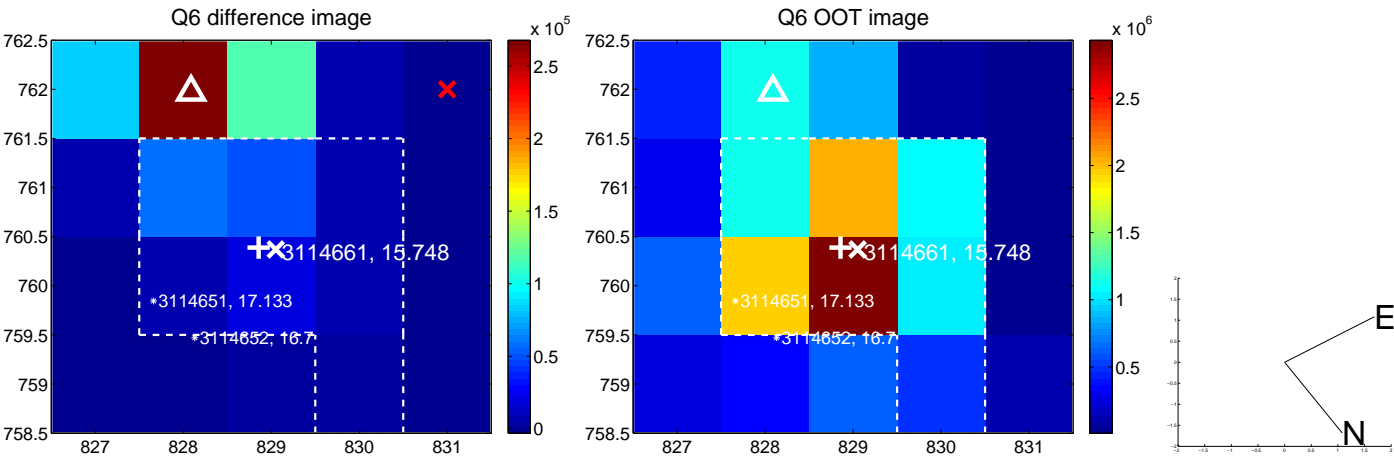
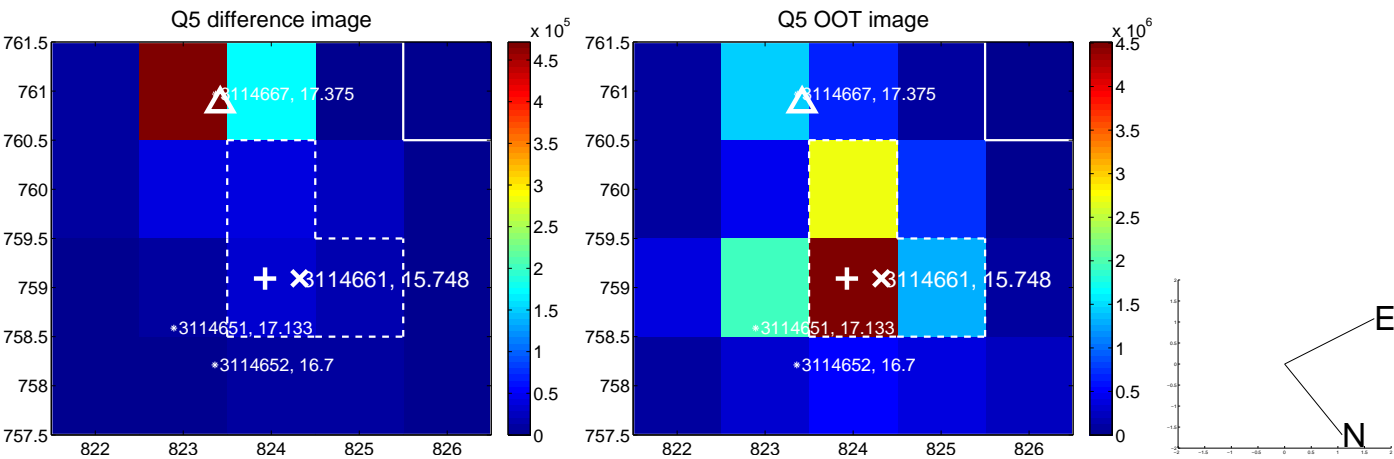


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

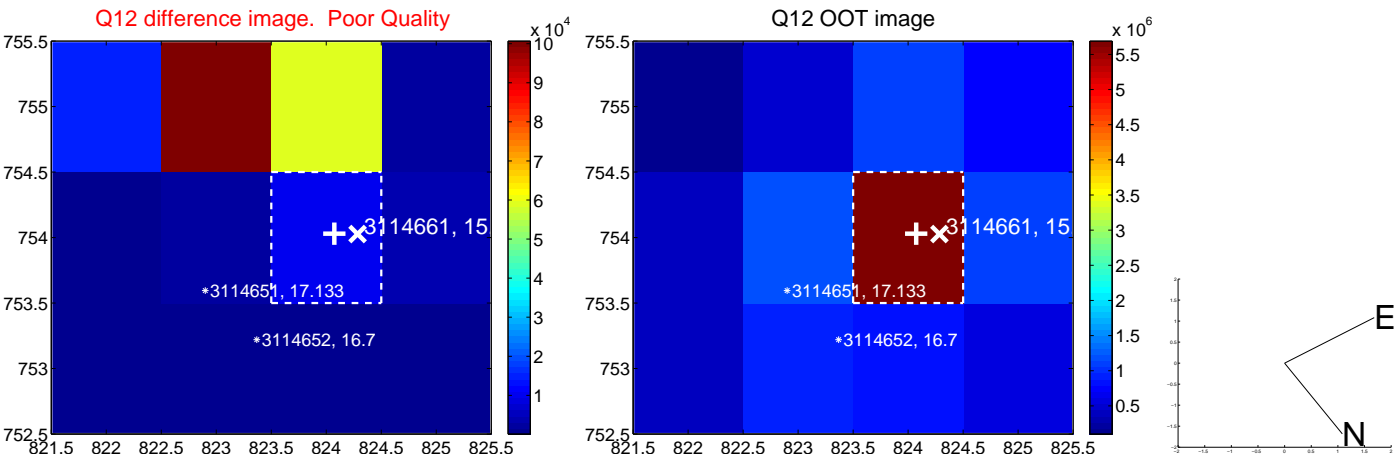
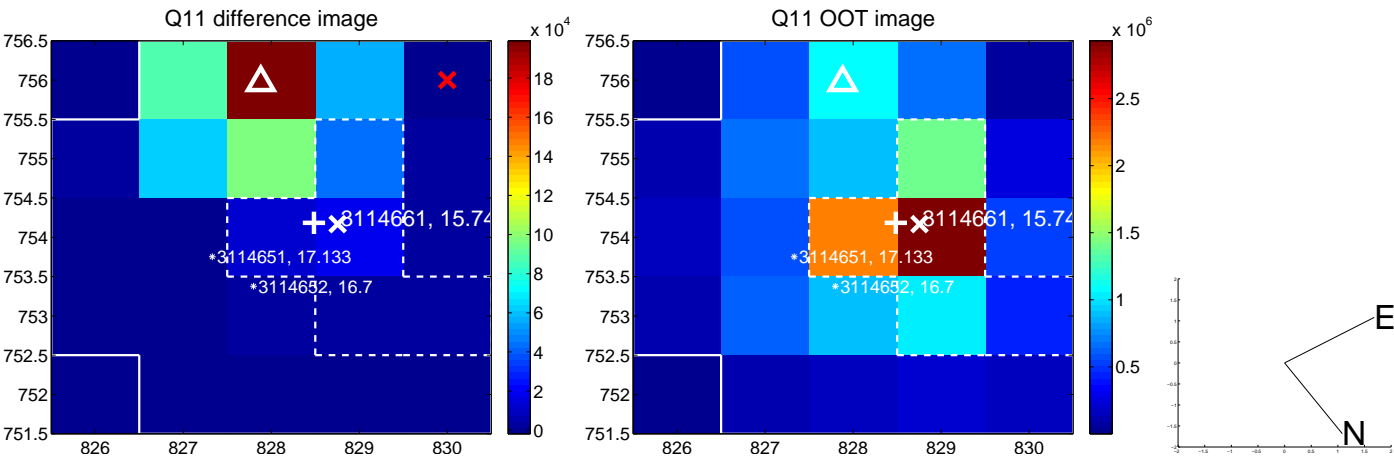
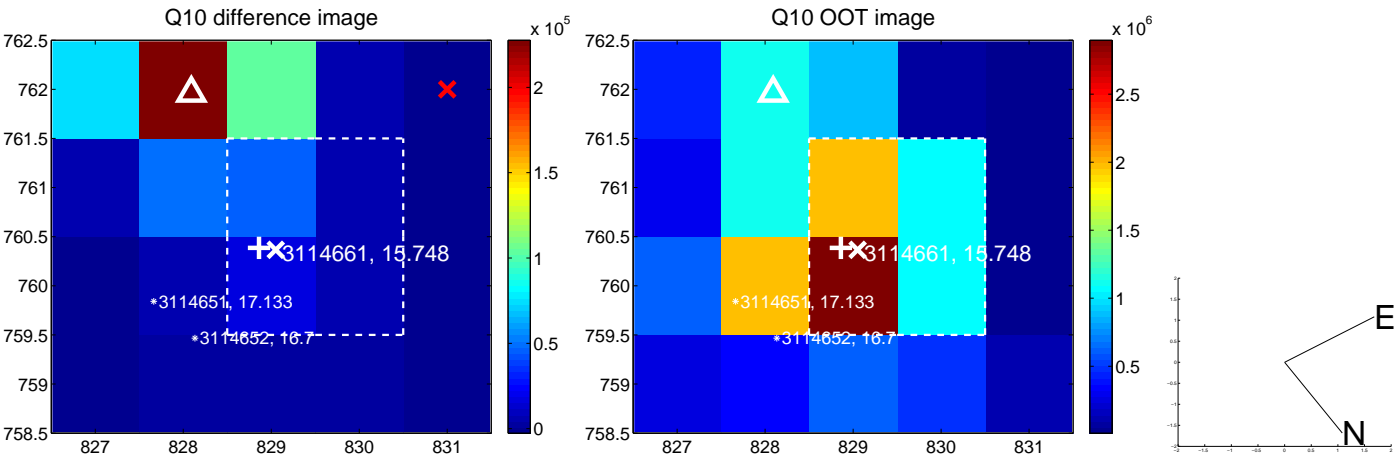
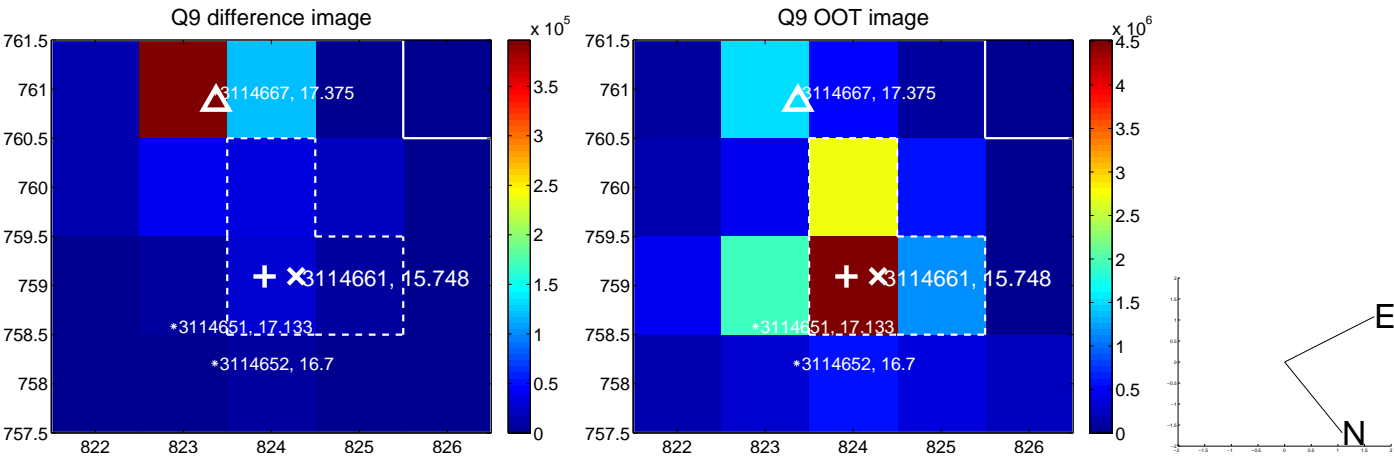
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



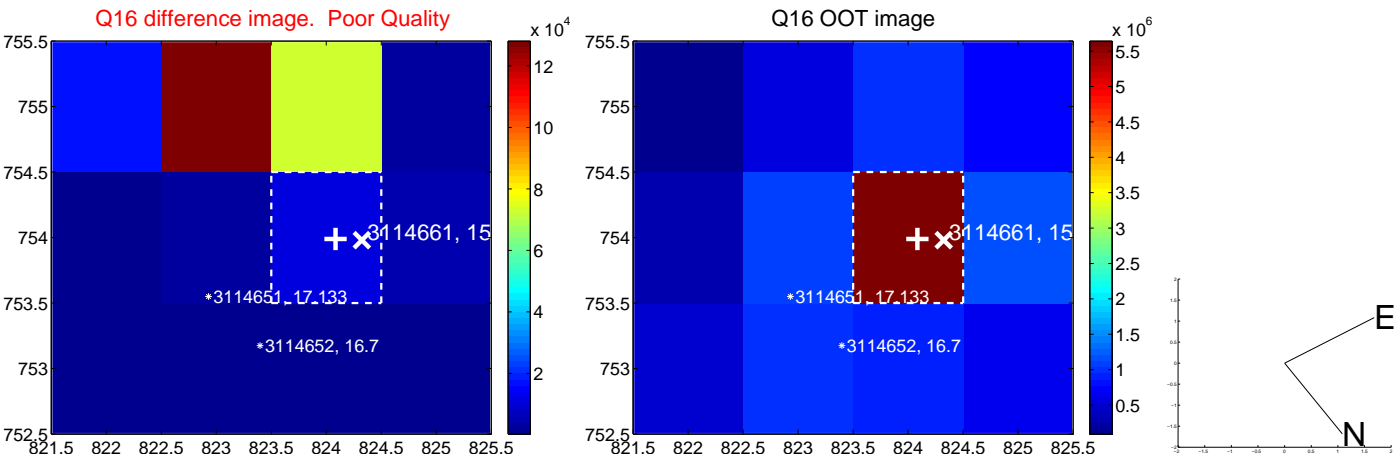
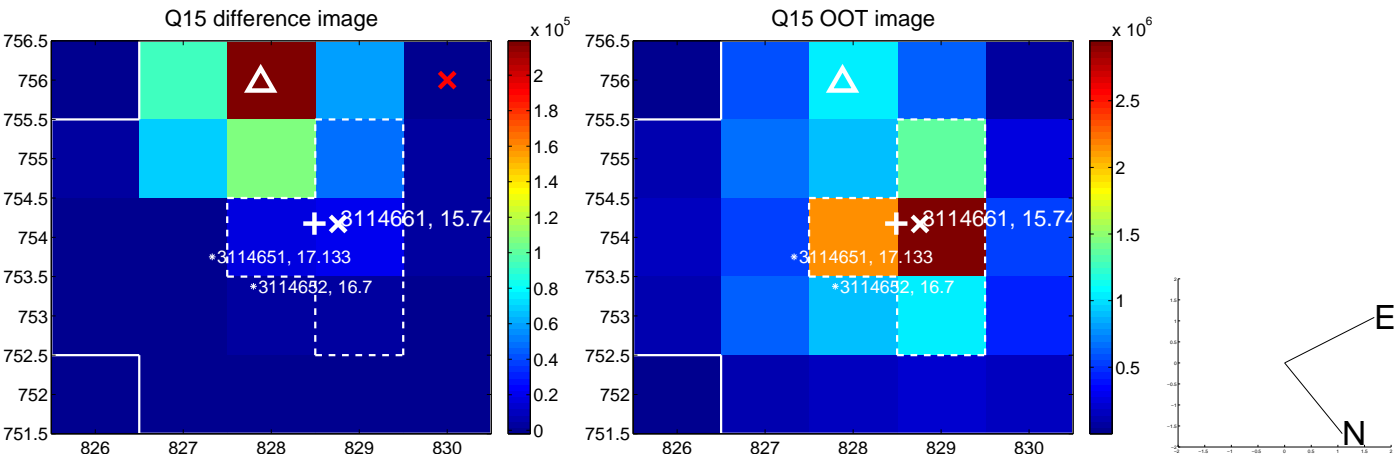
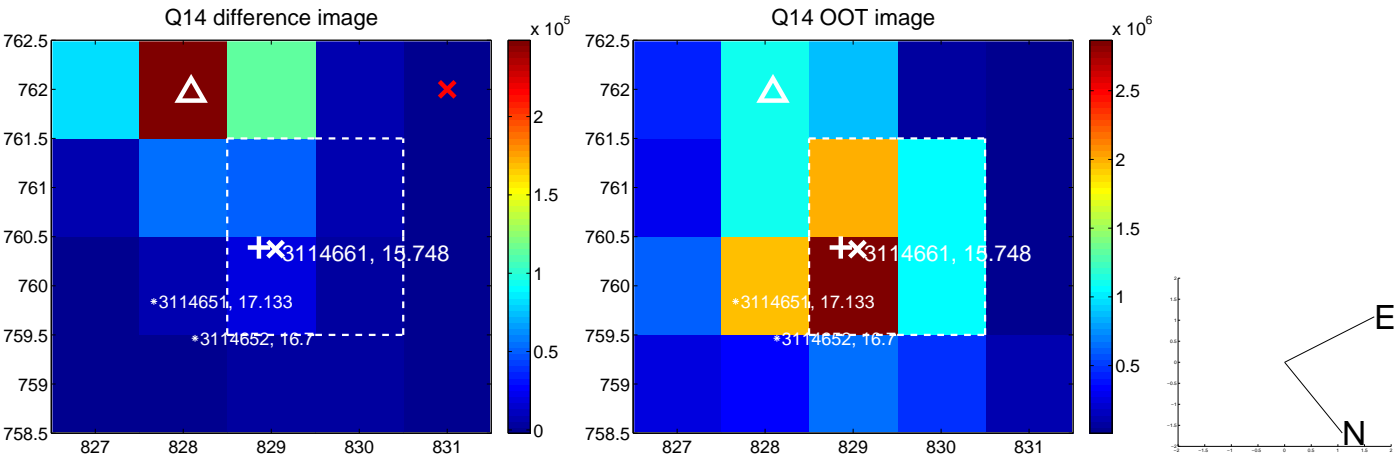
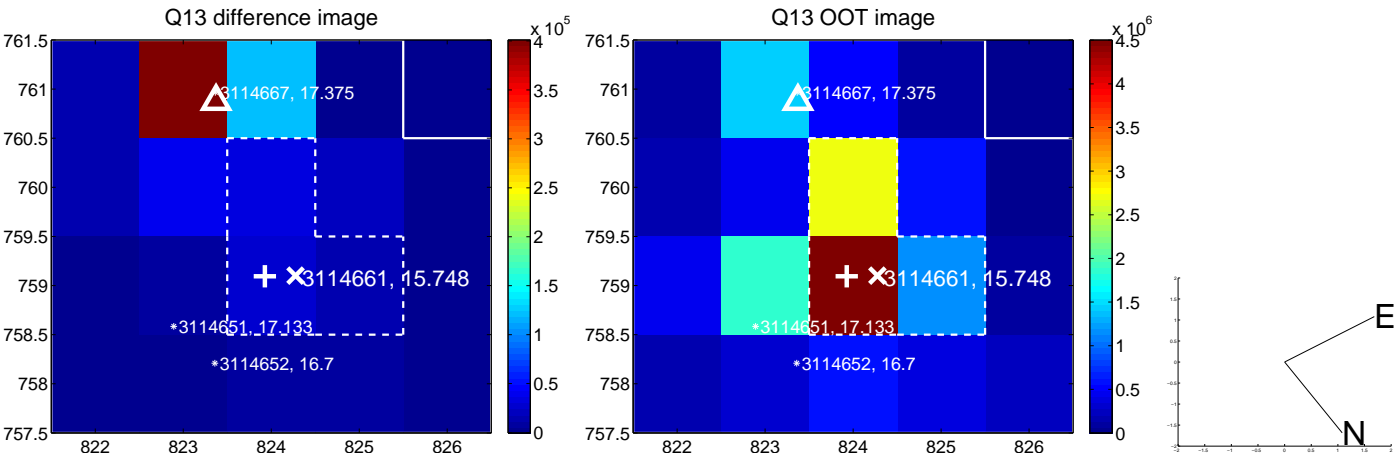
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



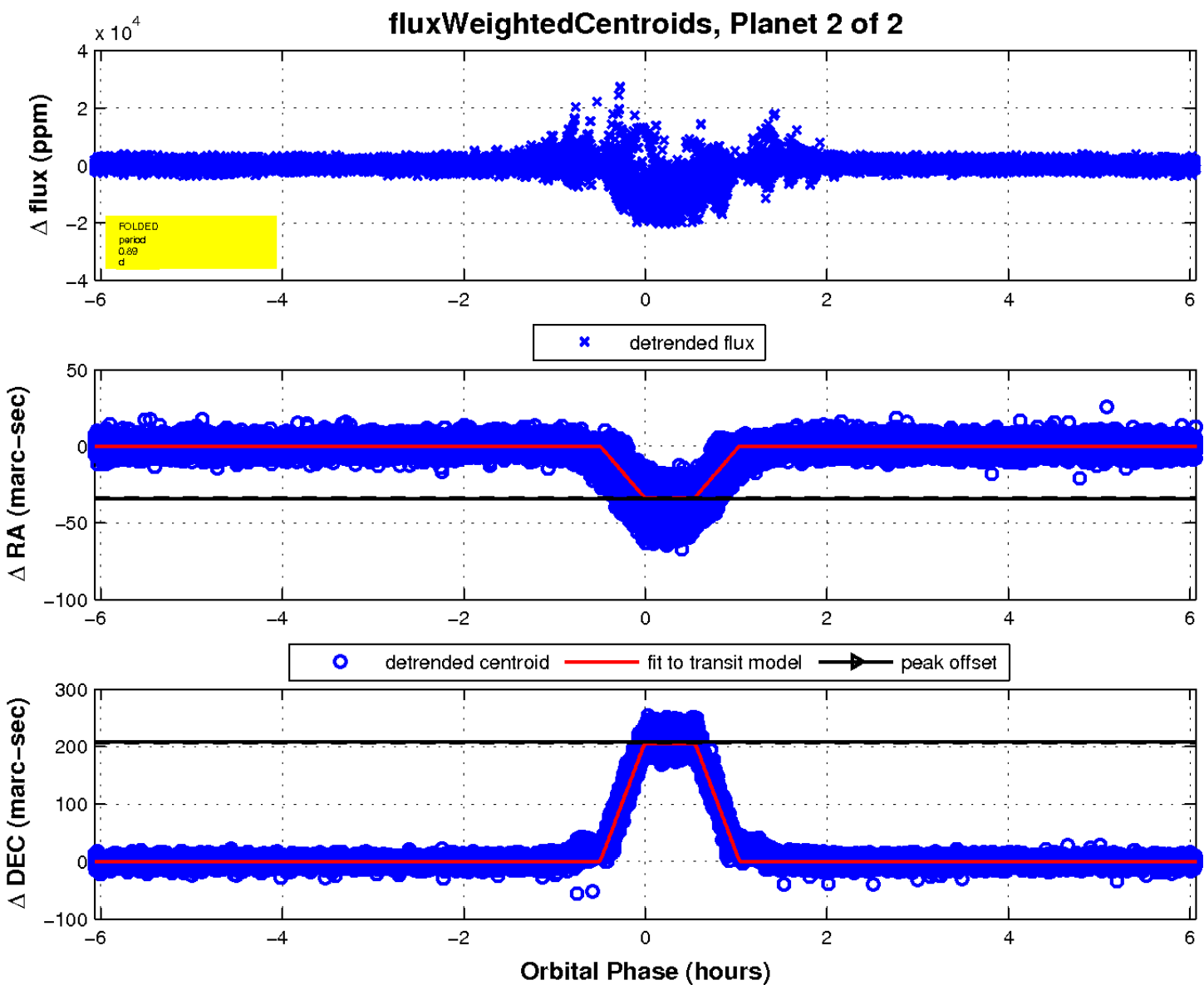
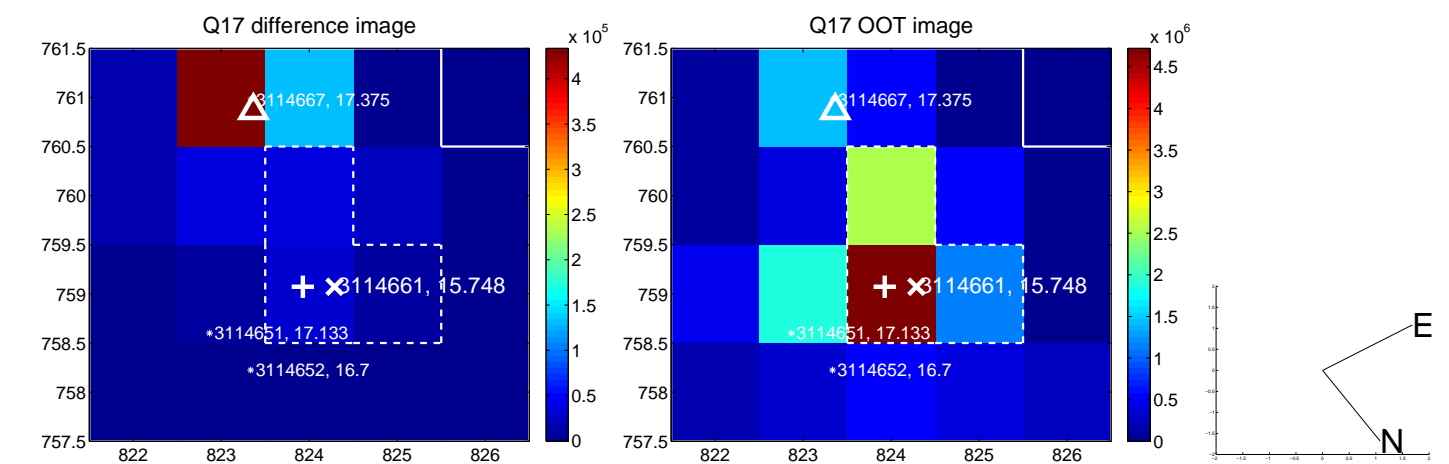
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

