

KIC 011853878

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})
011853878-01	OBS	1833.01	3.693002	132.733382	741.2	1.914	49.3	56.0	0.57	4402	1.90	72.88
011853878-02	OBS	1833.02	7.684334	133.359794	1128.6	1.424	44.4	51.9	0.57	4402	2.53	27.43
011853878-03	OBS	1833.03	5.709381	137.125886	582.3	1.923	29.5	34.5	0.57	4402	1.81	40.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011853878-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011853878-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011853878-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

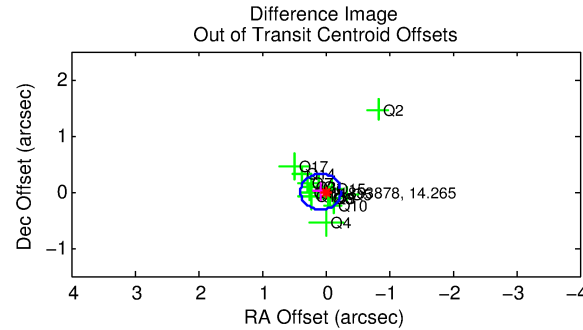
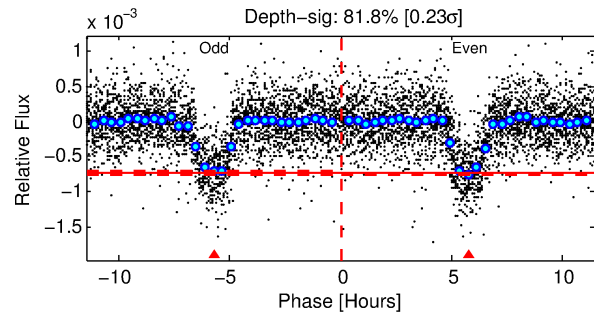
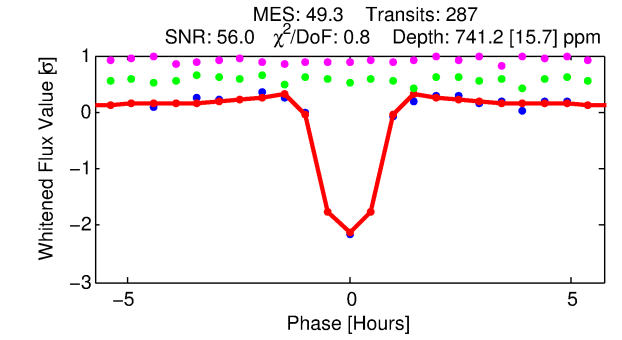
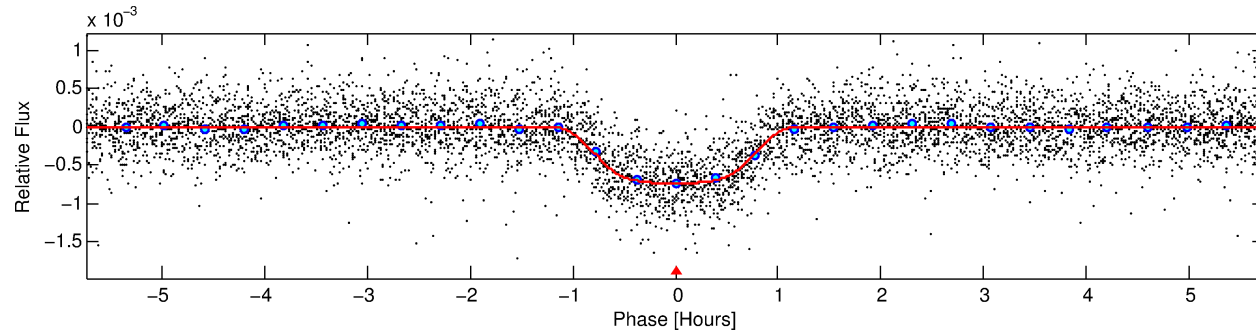
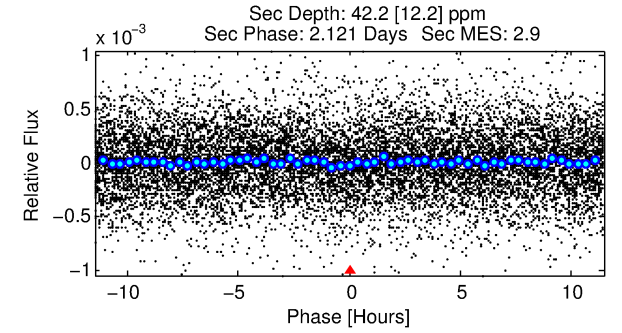
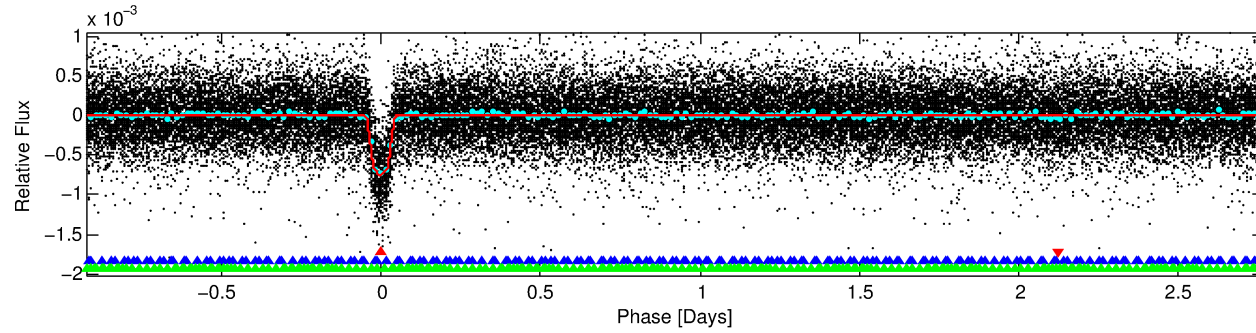
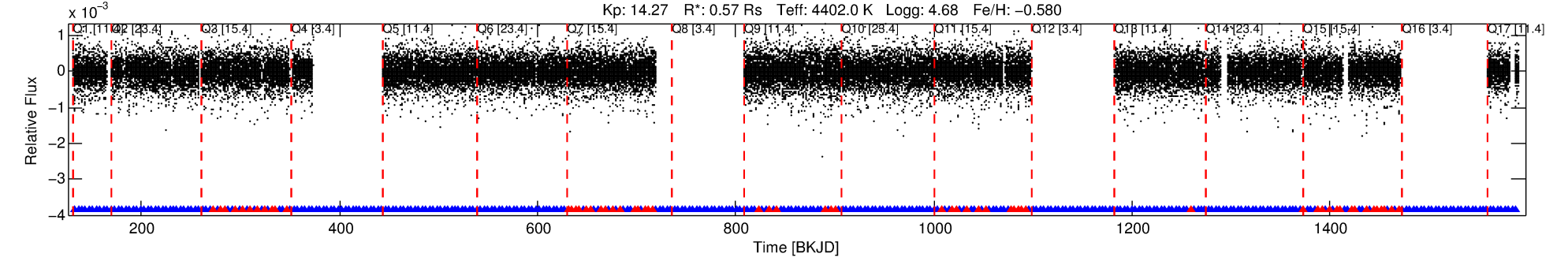
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011853878-01

No Significant Match Found

DV One-Page Summary

KIC: 11853878 Candidate: 1 of 3 Period: 3.693 d
KOI: K01833.01 Corr: 0.950



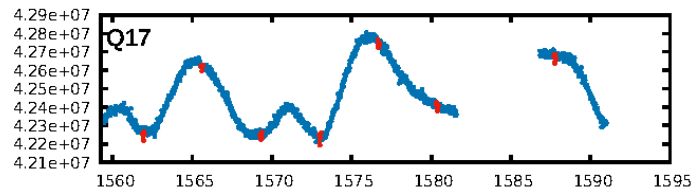
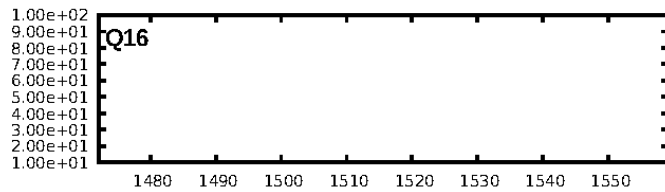
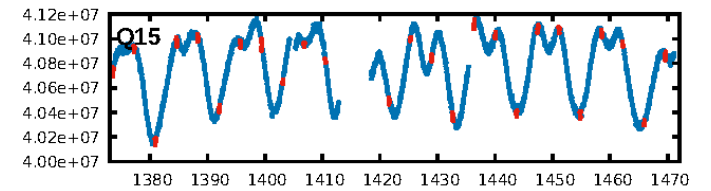
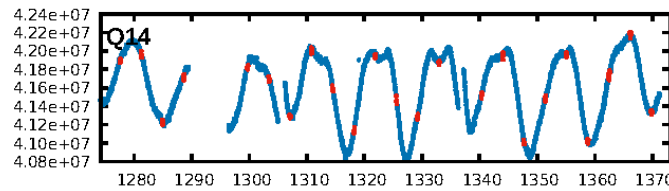
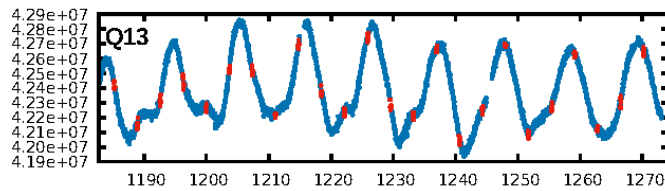
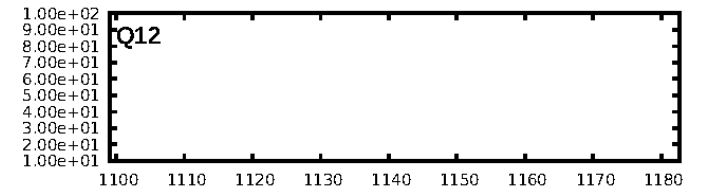
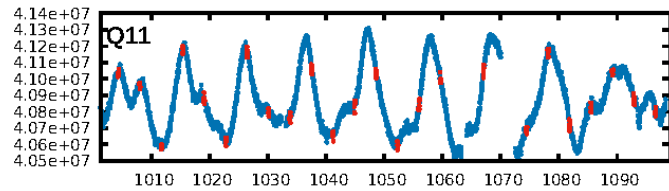
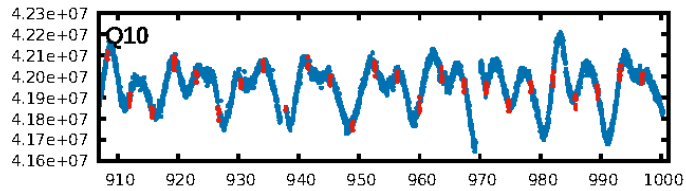
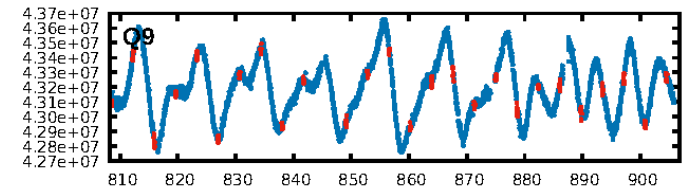
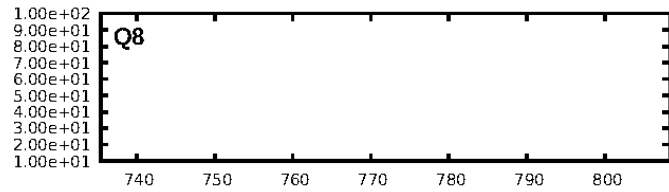
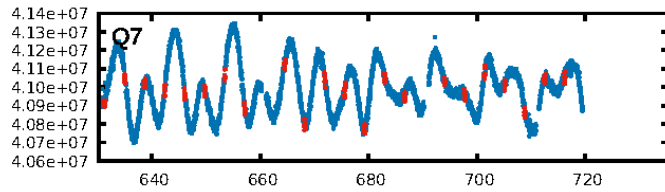
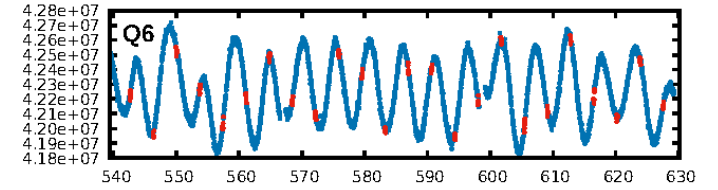
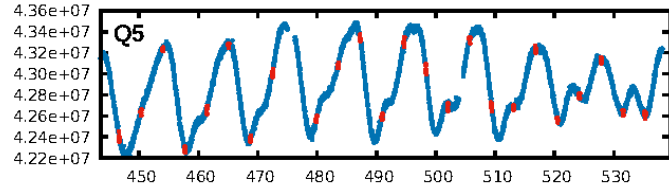
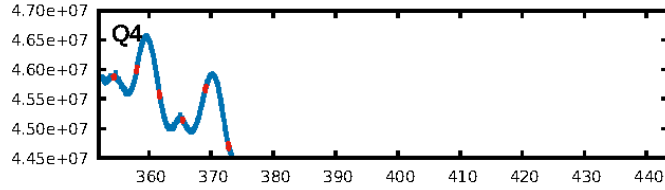
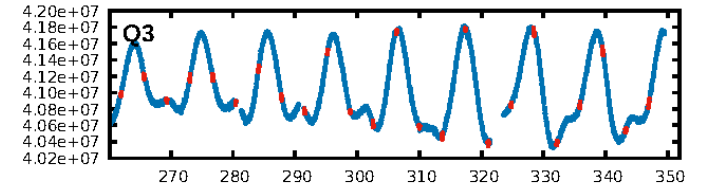
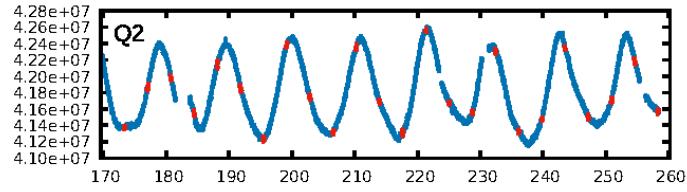
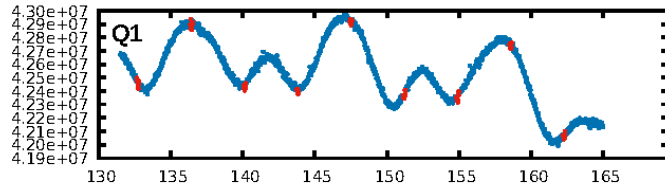
DV Fit Results:

Period = 3.69300 [0.00000] d
Epoch = 132.7334 [0.0005] BKJD
Rp/R* = 0.0304 [0.0023]
a/R* = 7.48 [2.17]
b = 0.90 [0.06]
Seff = 72.88 [11.56]
Teff = 745 [30] K
Rp = 1.90 [0.22] Re
a = 0.0389 [0.0026] AU
Ag = 9.73 [3.31] [2.64 σ]
Teffp = 2034 [180] K [7.08 σ]

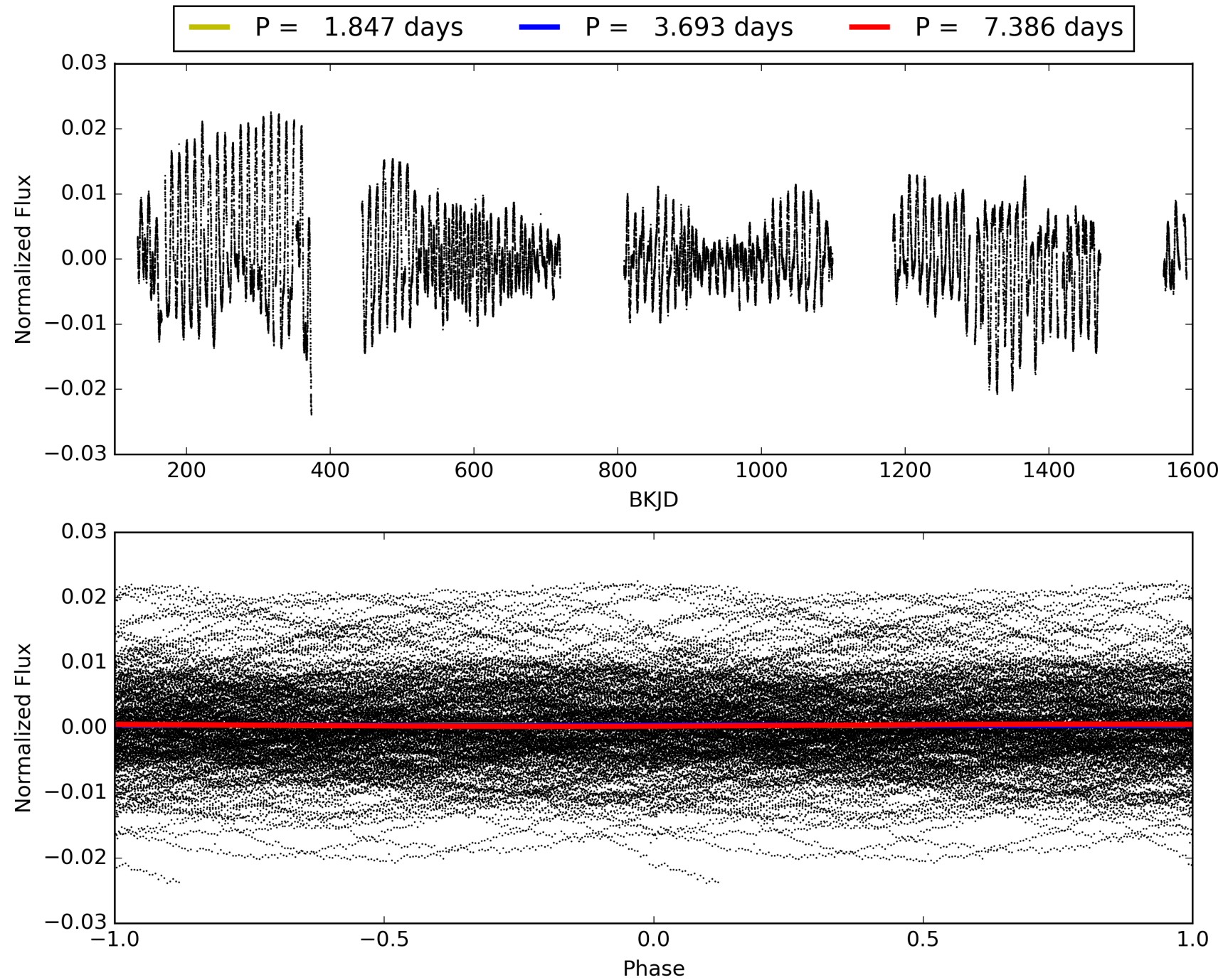
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [17.84 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.78 [206/265]
GhostDiagnostic-chr: 4.57
Centroid-sig: 19.0%
Centroid-so: 0.365 arcsec [1.58 σ]
OotOffset-rm: 0.078 arcsec [0.74 σ]
KicOffset-rm: 0.085 arcsec [0.80 σ]
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]

TCE 011853878-01, PDC Light Curves

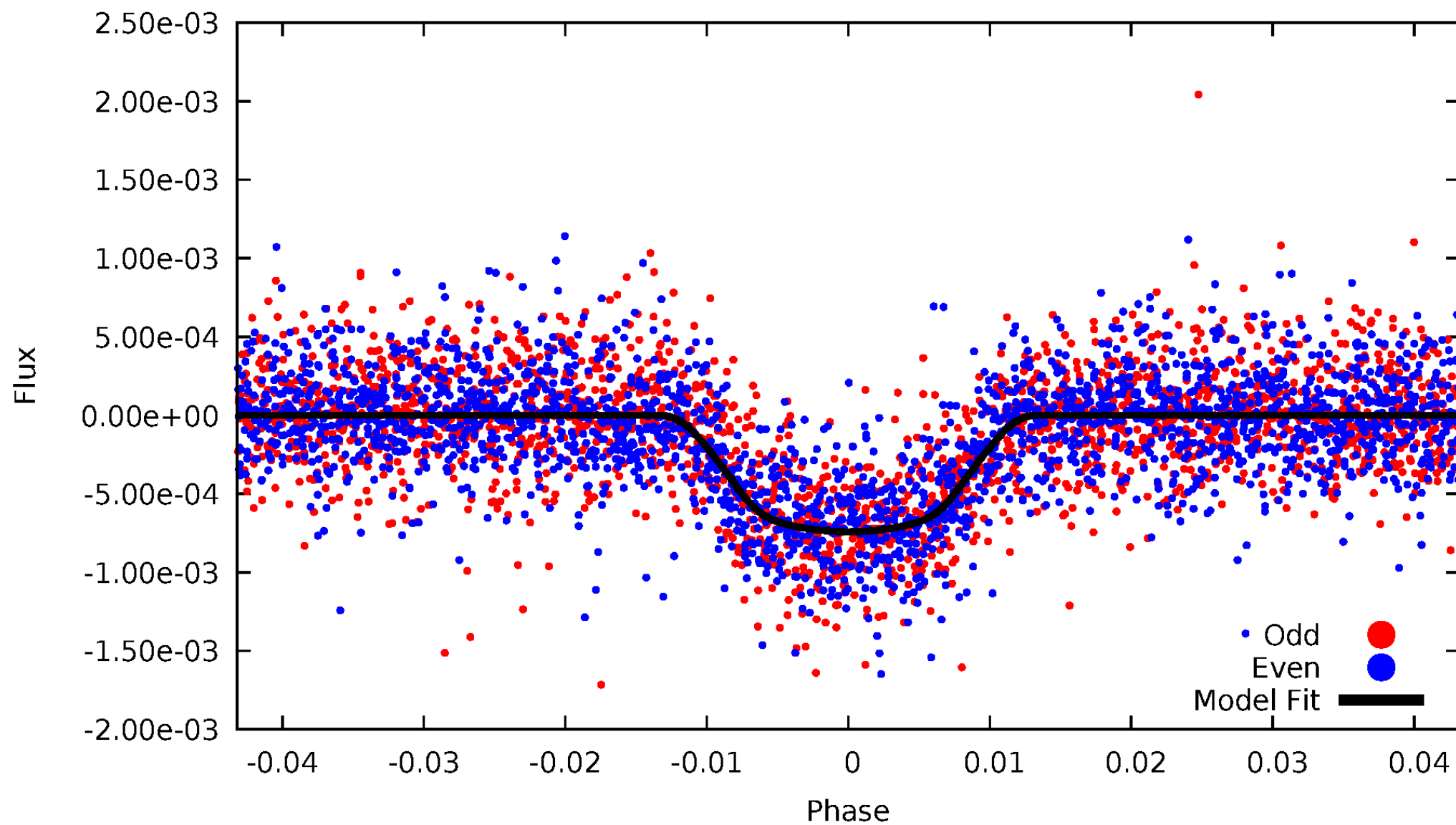


TCE 011853878-01



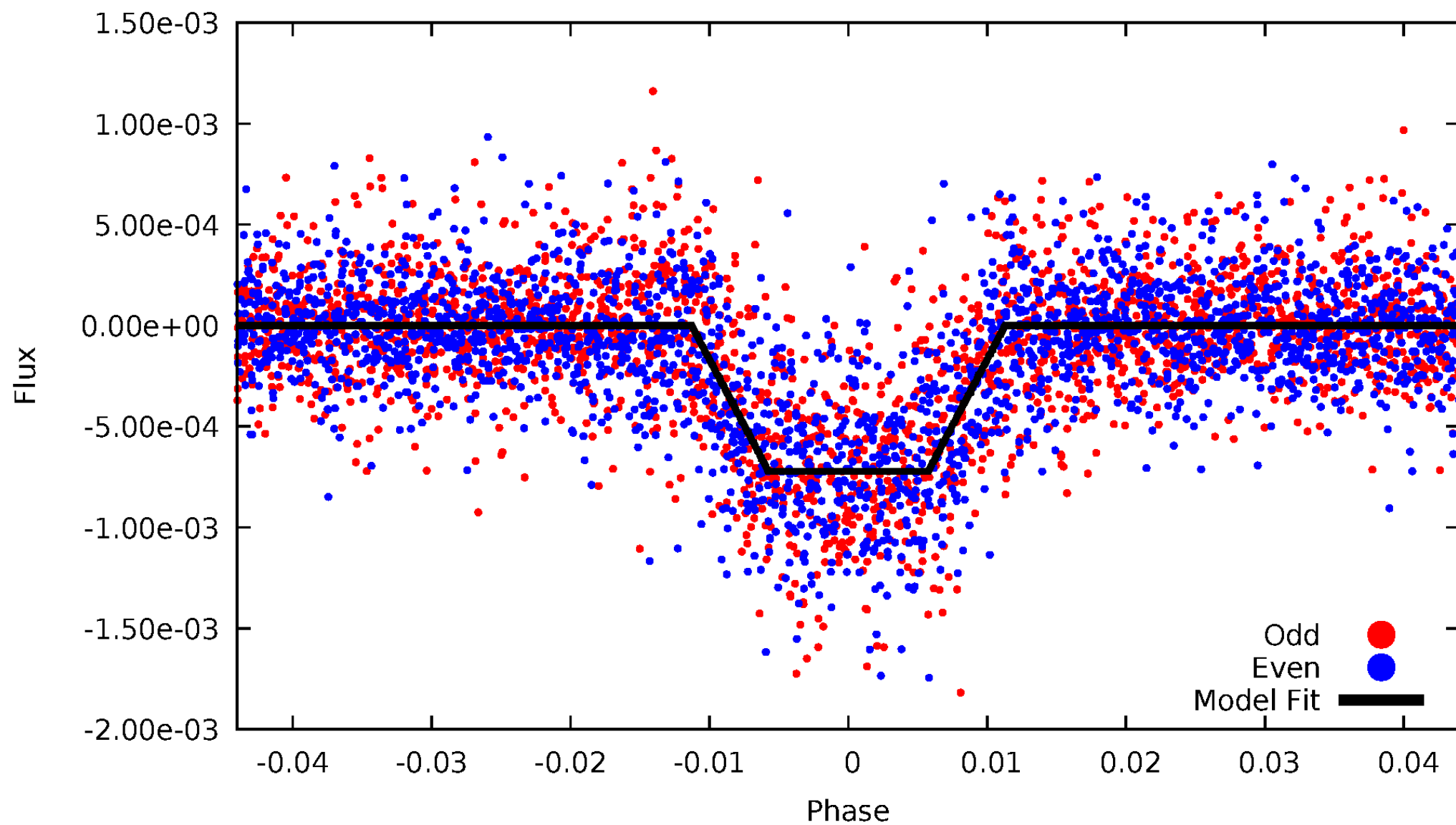
DV Odd/Even

TCE 011853878-01



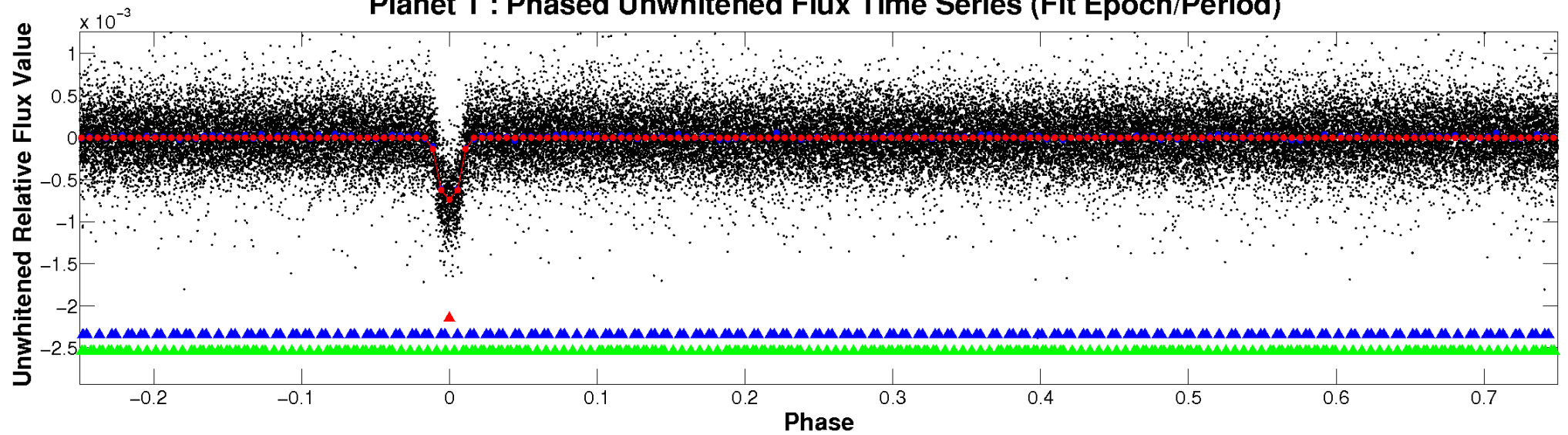
ALT Odd/Even

TCE 011853878-01

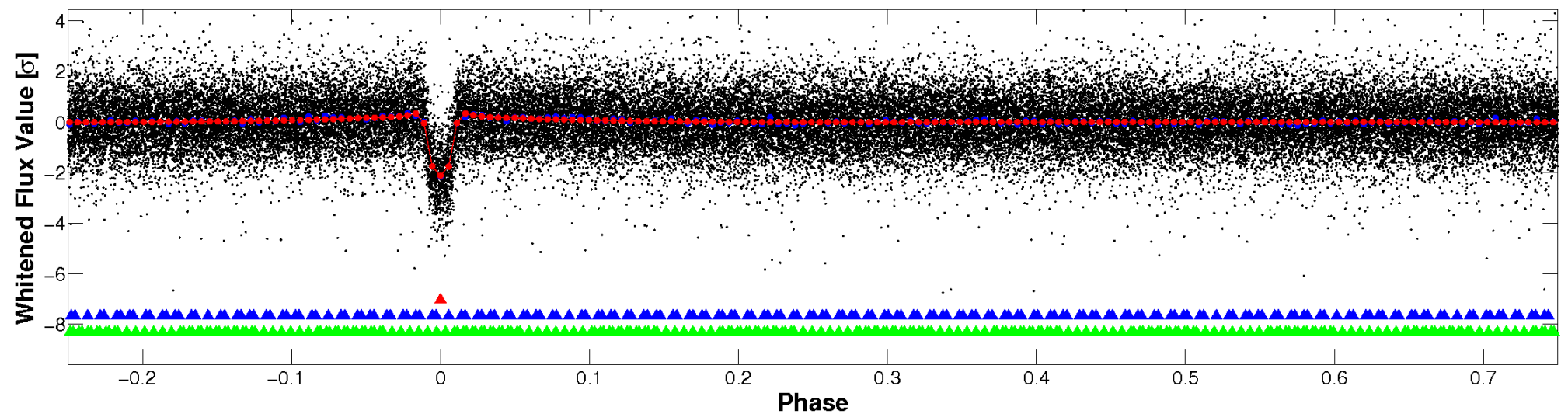


Non-Whitened Vs. Whitened Light Curve

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

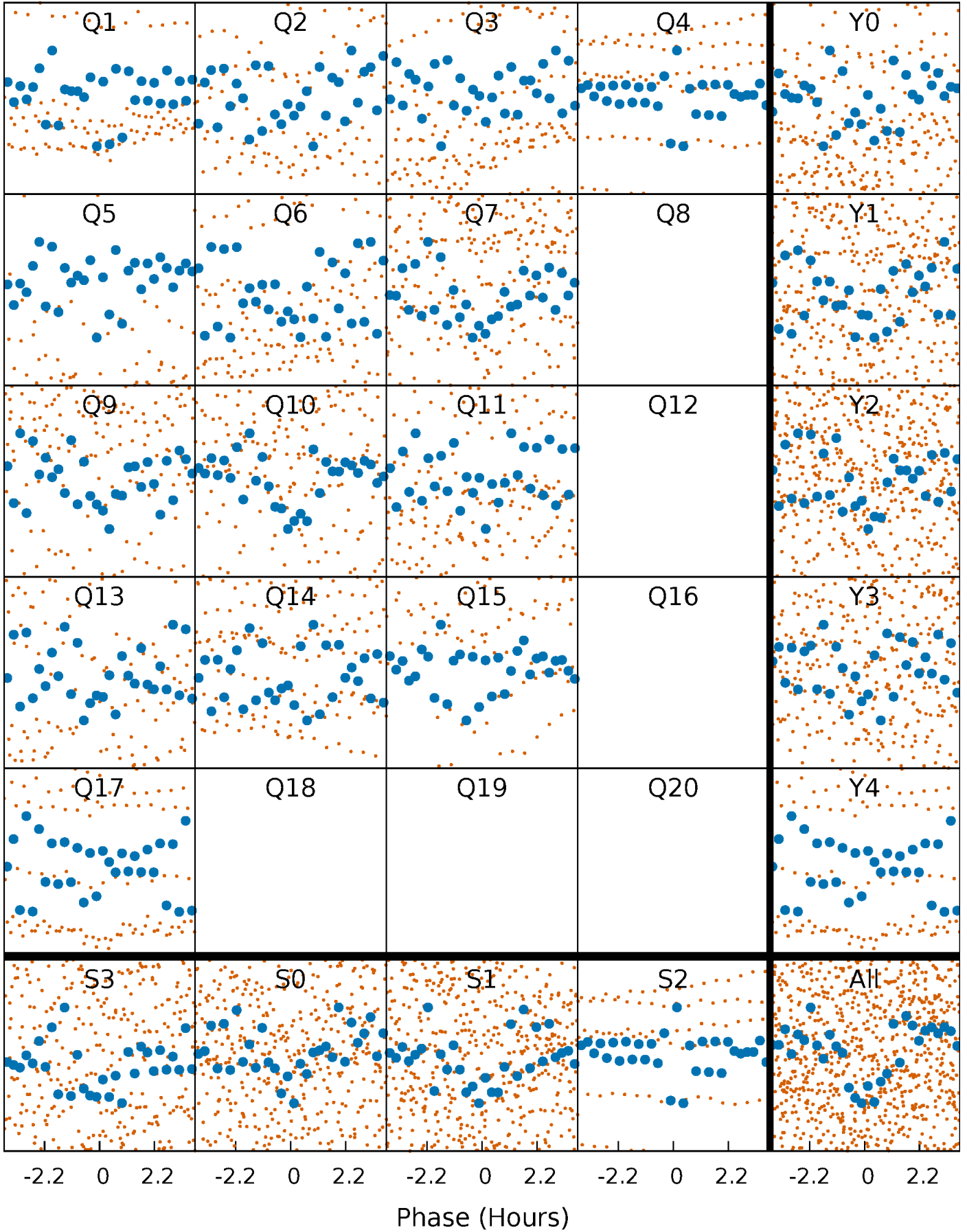


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



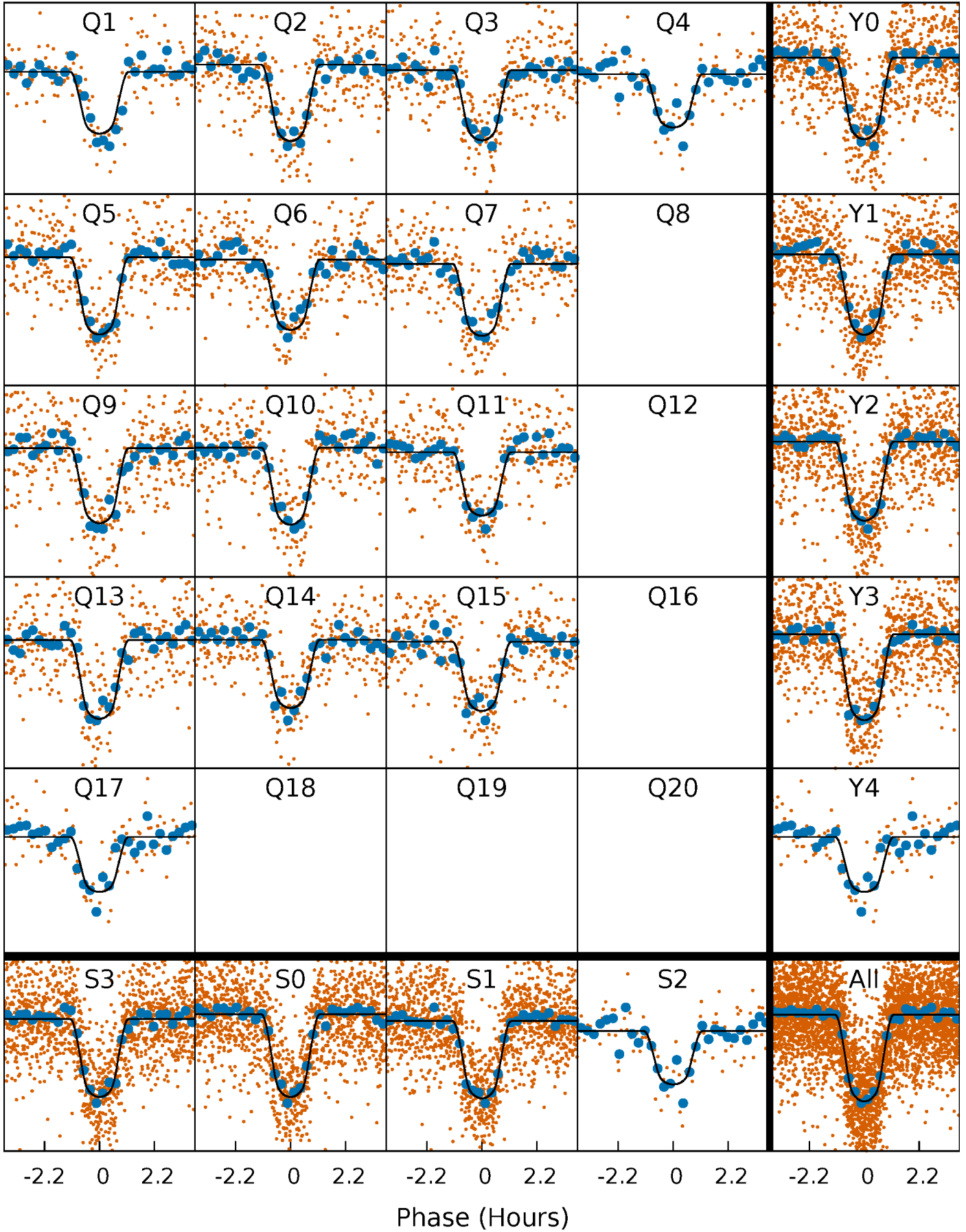
PDC Quarter-Phased Transit Curves

TCE 011853878-01 P= 3.693002 Days $T_0=132.733382$ (BKJD)



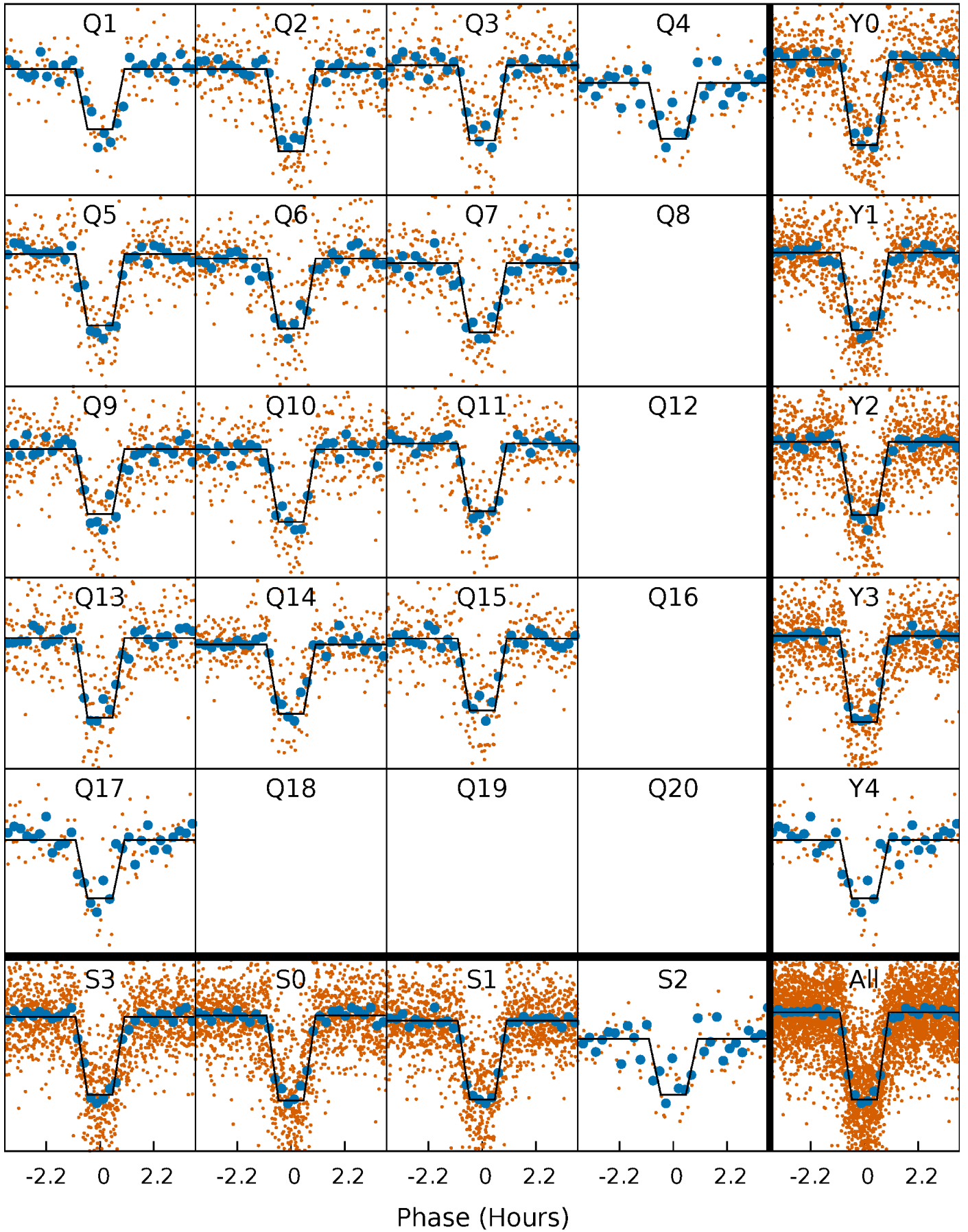
DV Quarter-Phased Transit Curves

TCE 011853878-01 P= 3.693002 Days $T_0=132.733382$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

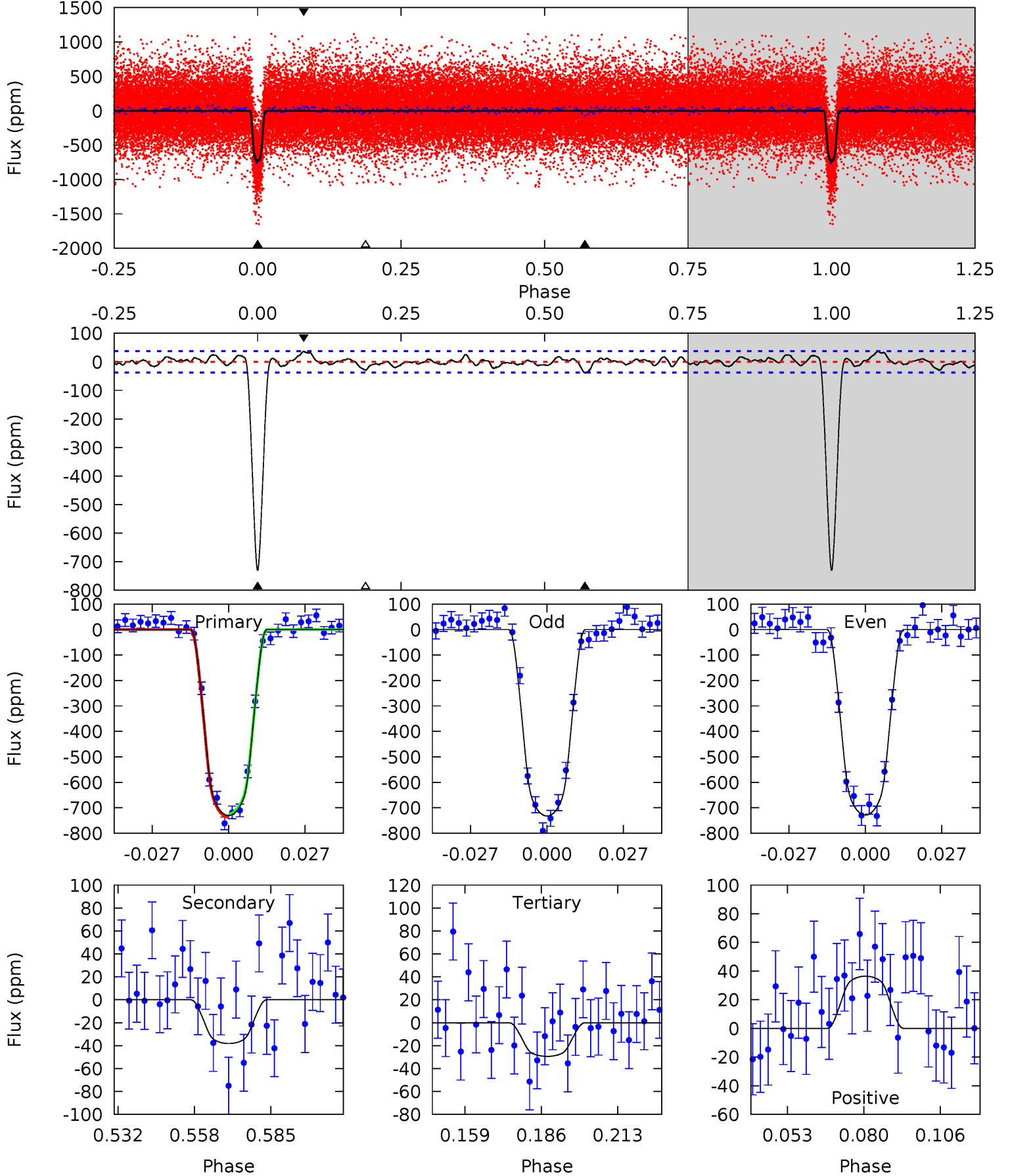
TCE 011853878-01 P= 3.692999 Days $T_0=132.733773$ (BKJD)



DV Model-Shift Uniqueness Test

011853878-01, P = 3.693002 Days, E = 129.040380 Days

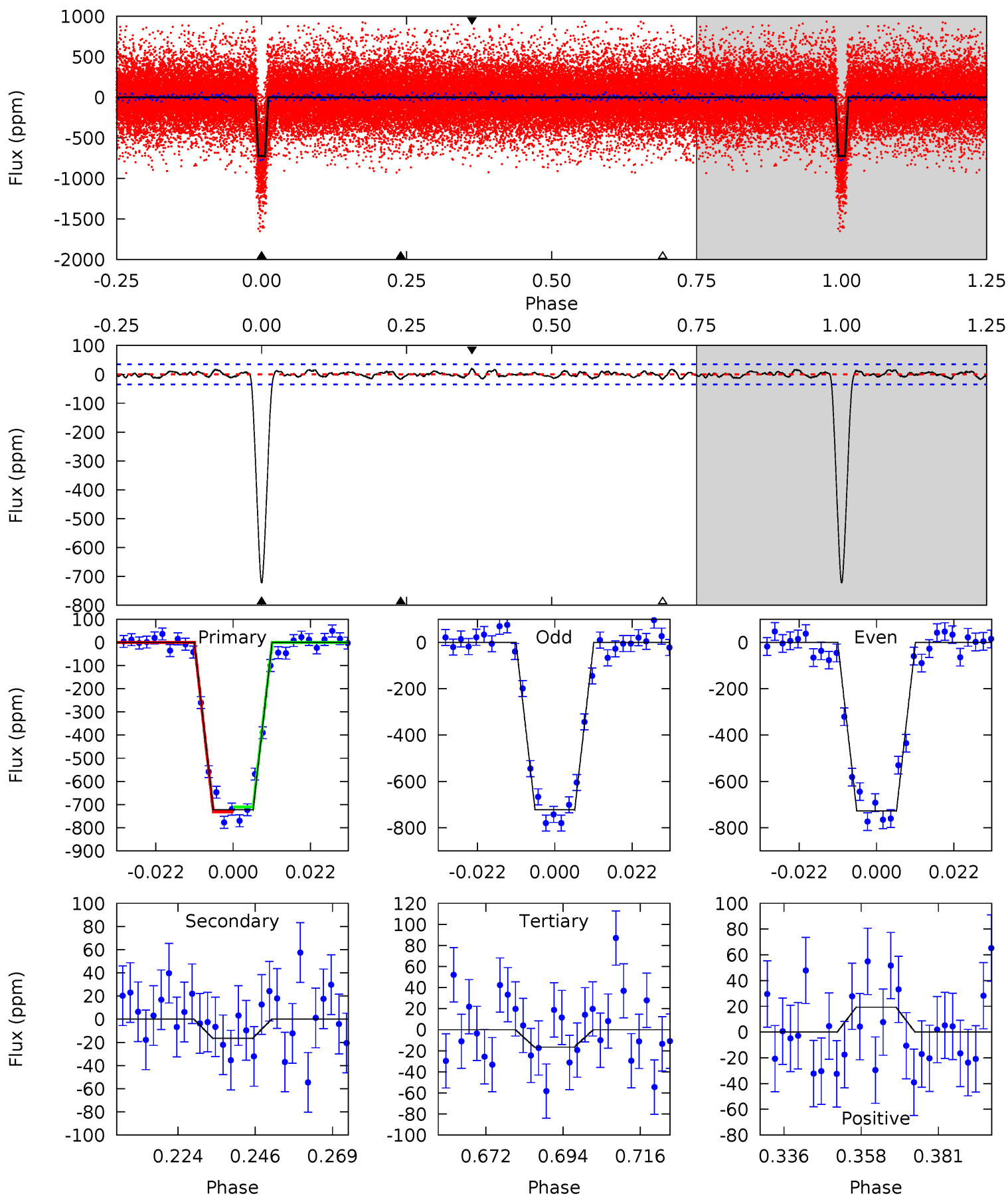
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
93.9	4.91	3.78	4.68	4.84	2.22	1.42	90.1	89.2	1.13	0.23	0.24	1.02	0.05	0.78



Alt Model-Shift Uniqueness Test

011853878-01, P = 3.692999 Days, E = 129.040774 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
101.6	2.33	2.33	2.72	4.87	2.28	1.00	99.3	98.9	0.00	-0.39	0.37	0.98	0.03	1.46



Stellar Parameters For KIC 011853878

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4402^{+118}_{-144}	$4.682^{+0.045}_{-0.036}$	$-0.580^{+0.300}_{-0.300}$	$0.572^{+0.049}_{-0.049}$	$0.575^{+0.058}_{-0.042}$	$4.314^{+0.970}_{-0.660}$
	+3%/-3%	+1%/-1%	+52%/-52%	+9%/-9%	+10%/-7%	+22%/-15%
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 011853878-01 / KOI 1833.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-38 ± 8	$1.90^{+0.19}_{-0.17}$	1038^{+33}_{-36}	2663^{+114}_{-110}	$8.873^{+2.772}_{-2.258}$
Alt.	-17 ± 7	$1.68^{+0.17}_{-0.16}$	1037^{+37}_{-34}	2471^{+134}_{-189}	$4.967^{+2.492}_{-2.238}$

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

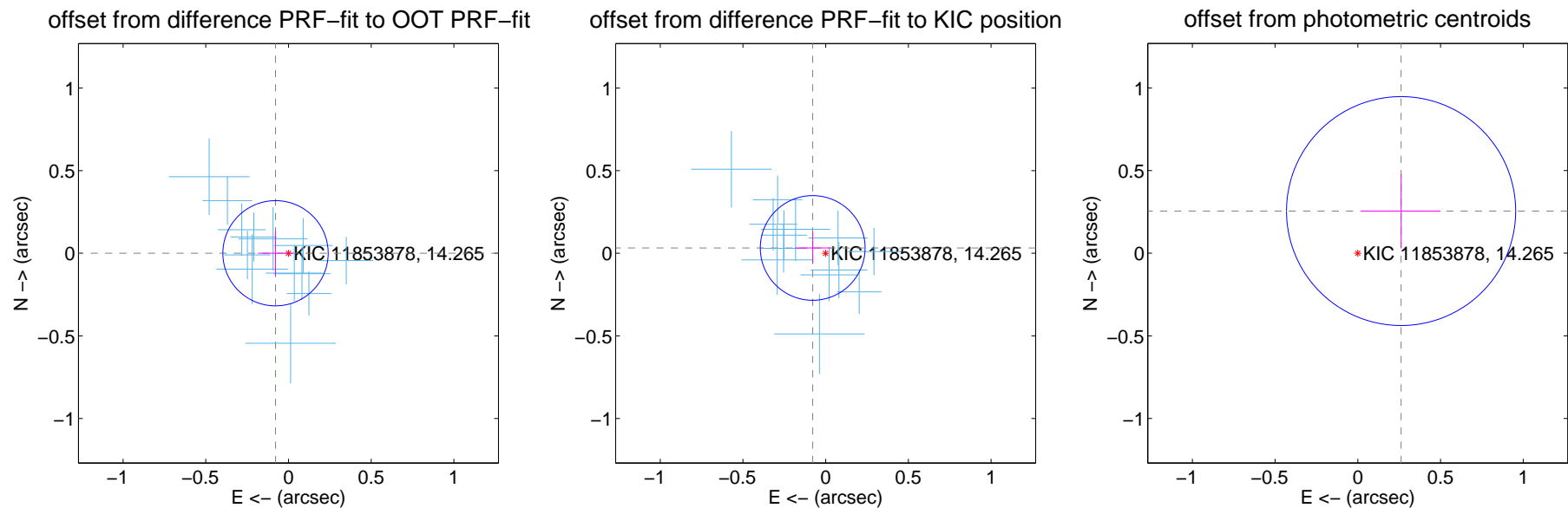
DV Centroid Data

Supplemental centroid analysis for 011853878-01. Kepler magnitude: 14.27. Transit SNR 56.02

There are 14 quarters with good PRF difference image offsets

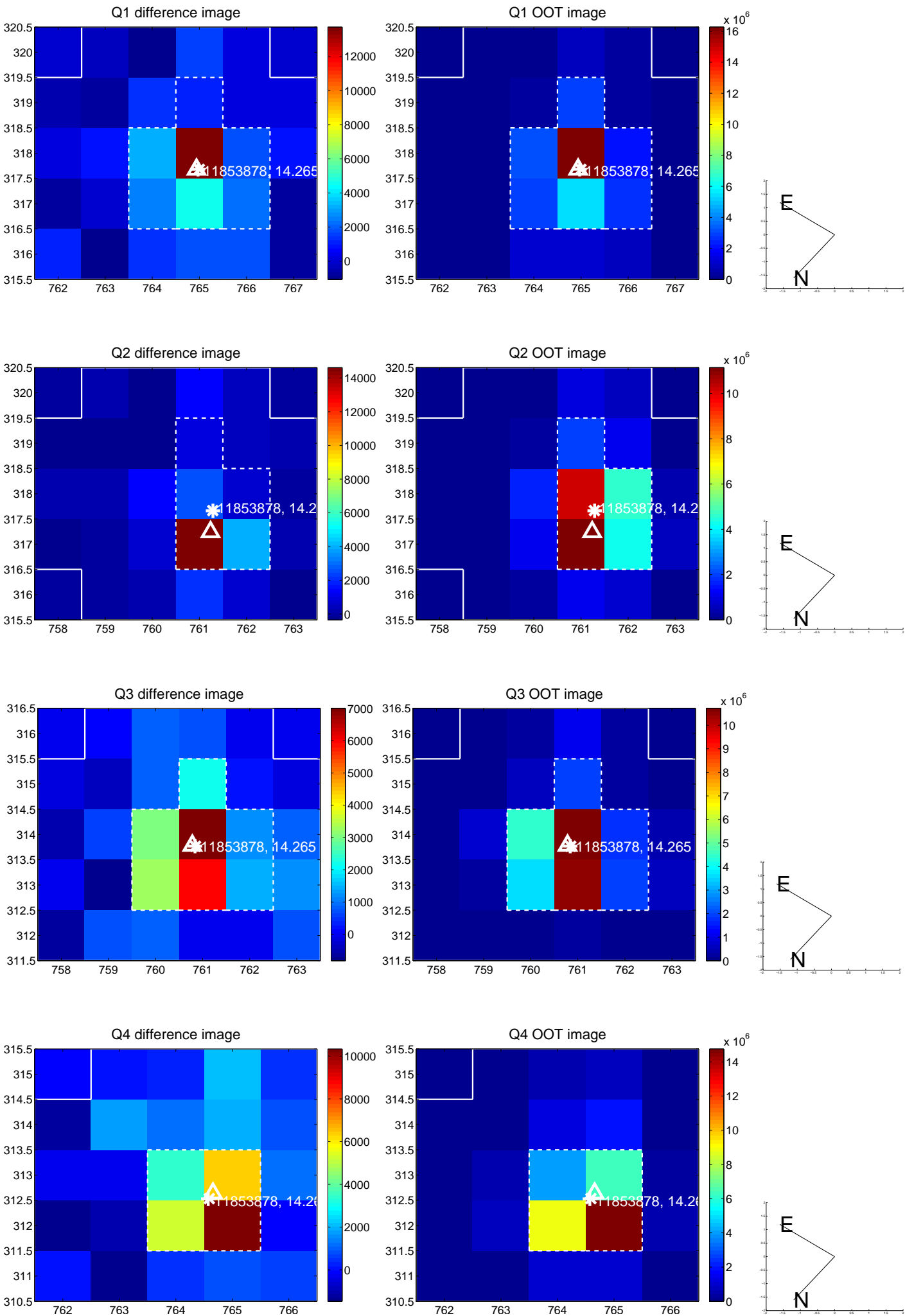
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.078 ± 0.106	0.74	0.078 ± 0.106	0.000 ± 0.135
PRF-fit source offset from KIC position	0.085 ± 0.106	0.80	0.078 ± 0.107	0.032 ± 0.096
photometric centroid source offset	0.37 ± 0.23	1.58	-0.26 ± 0.24	0.25 ± 0.22

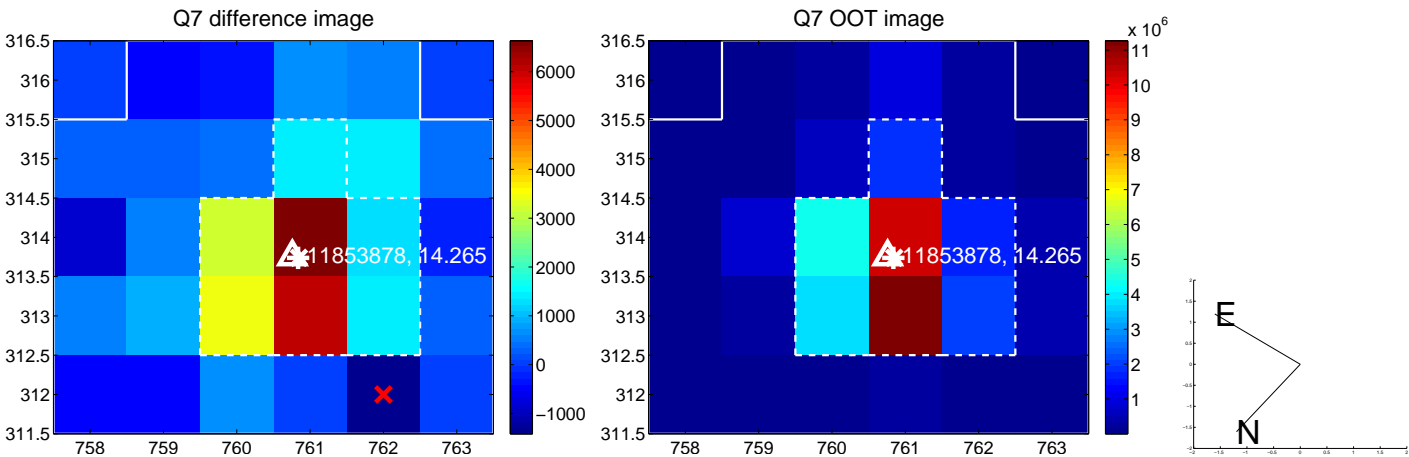
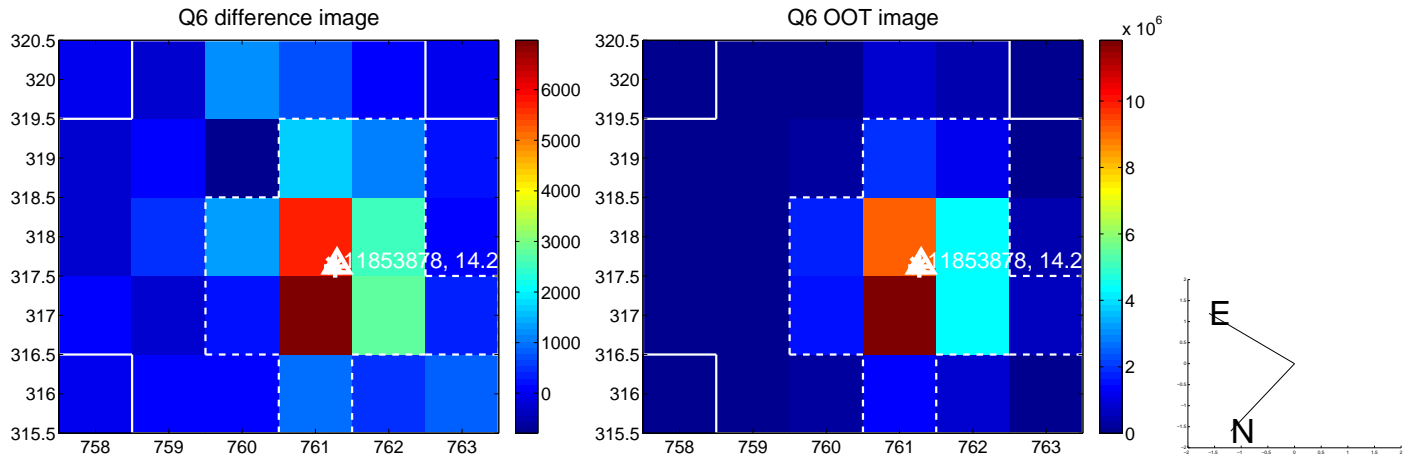
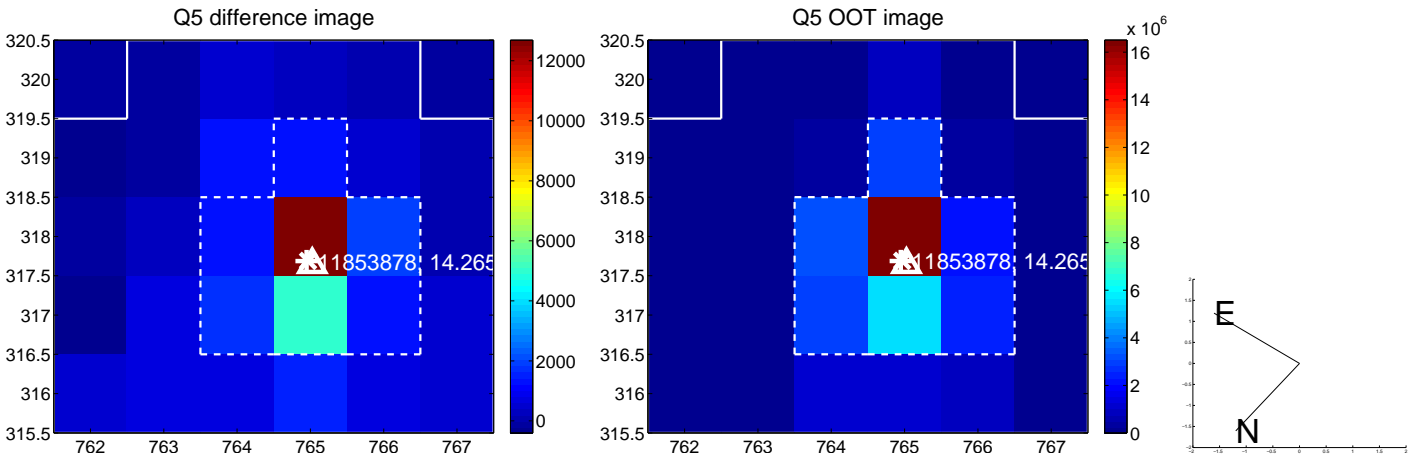


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

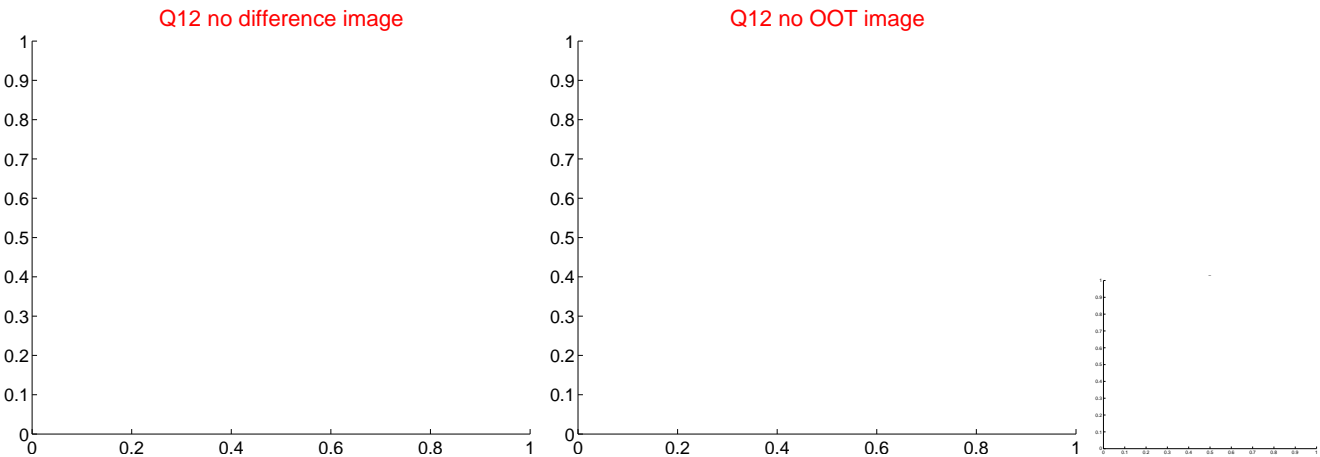
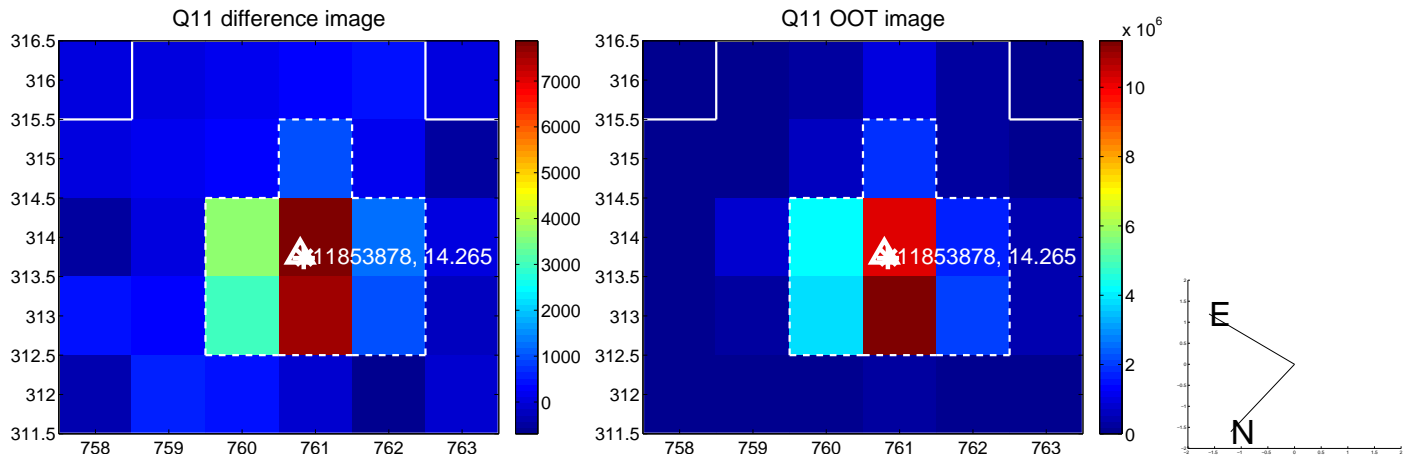
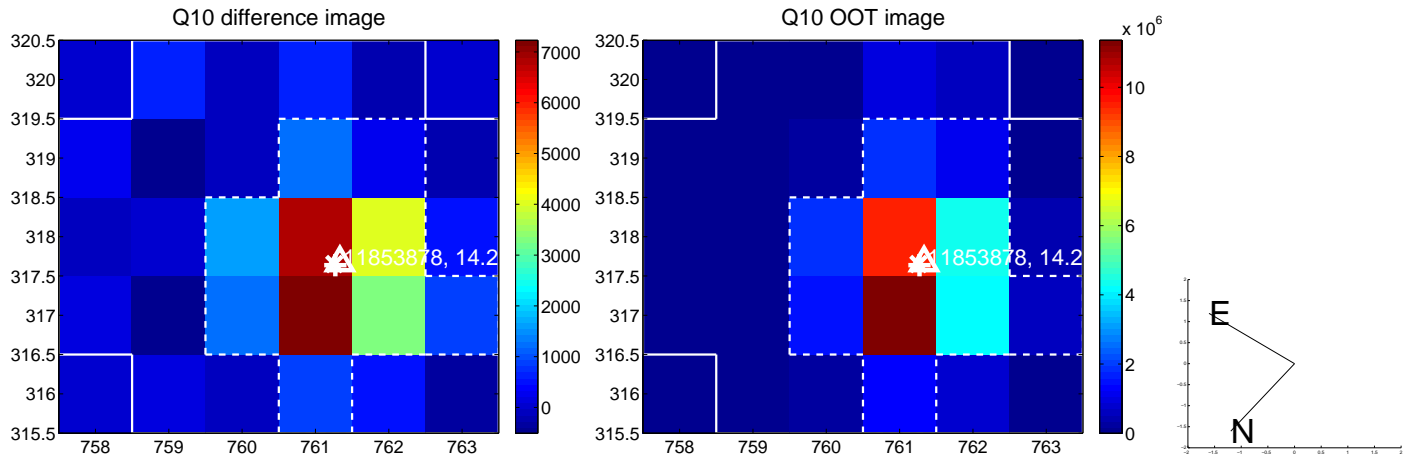
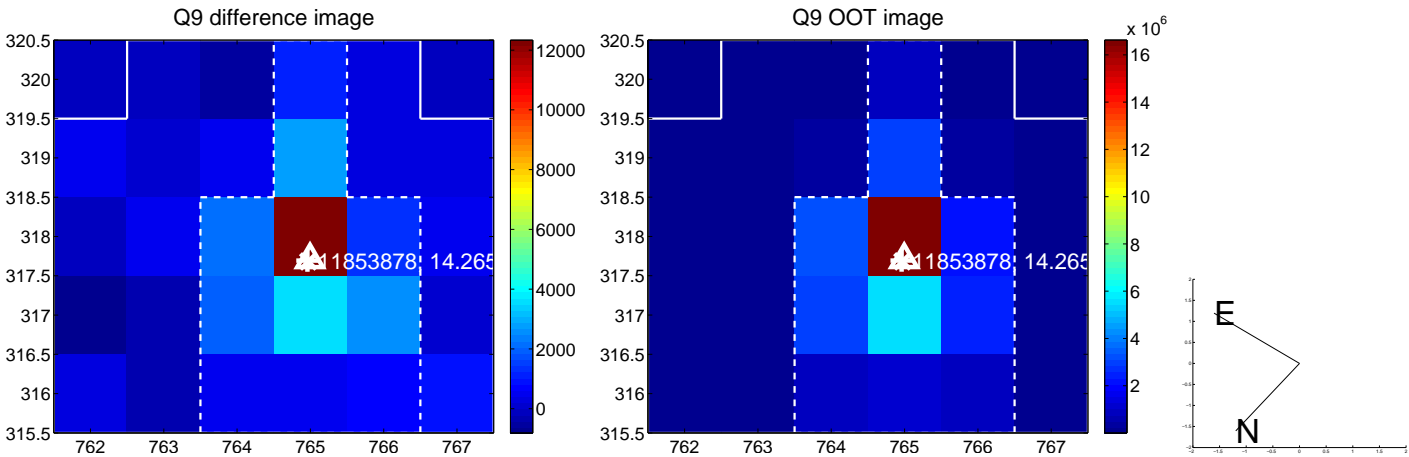
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



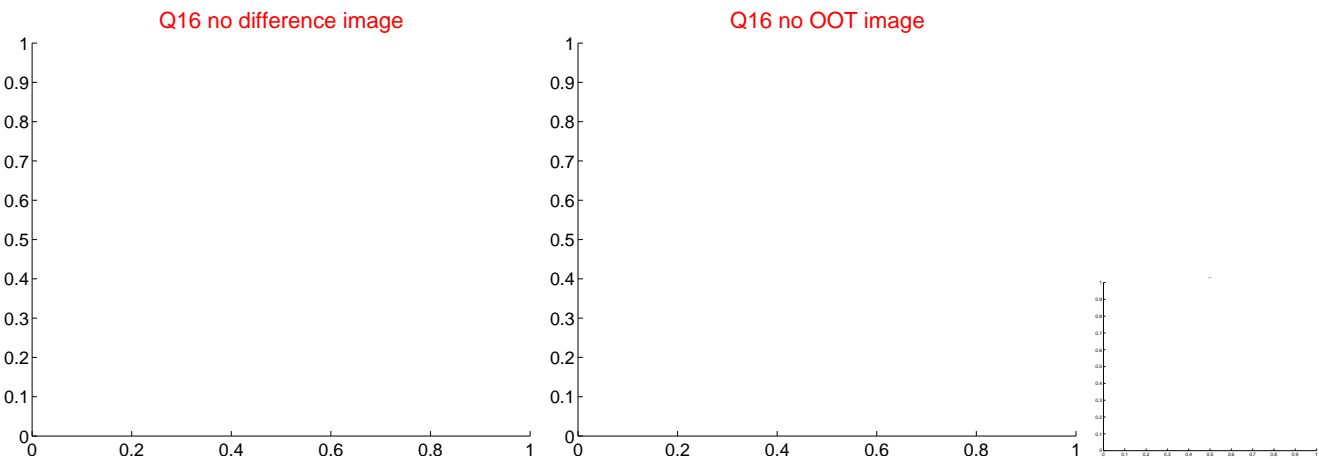
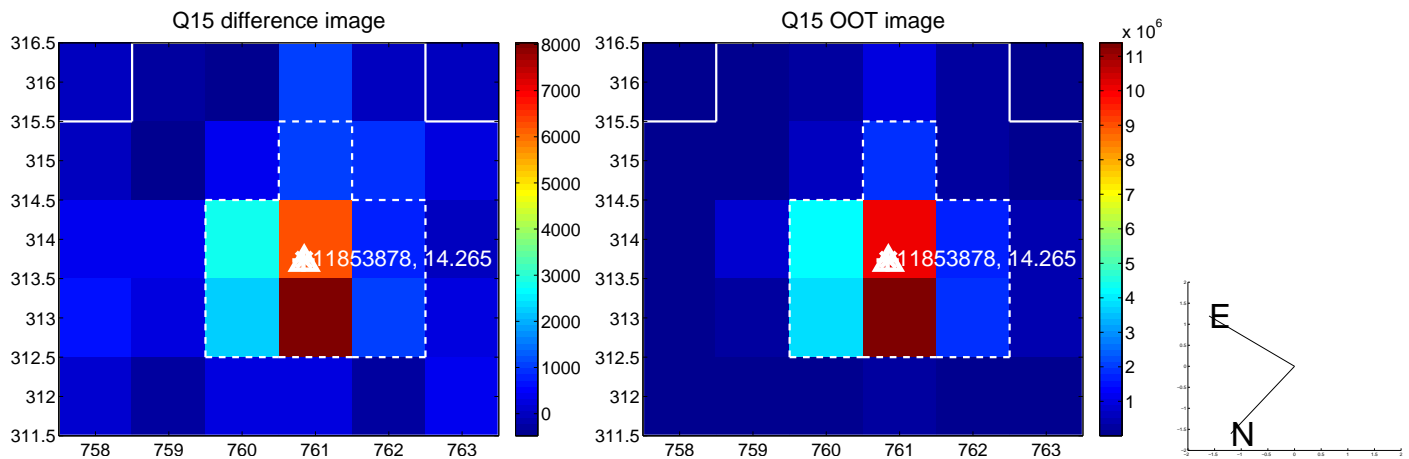
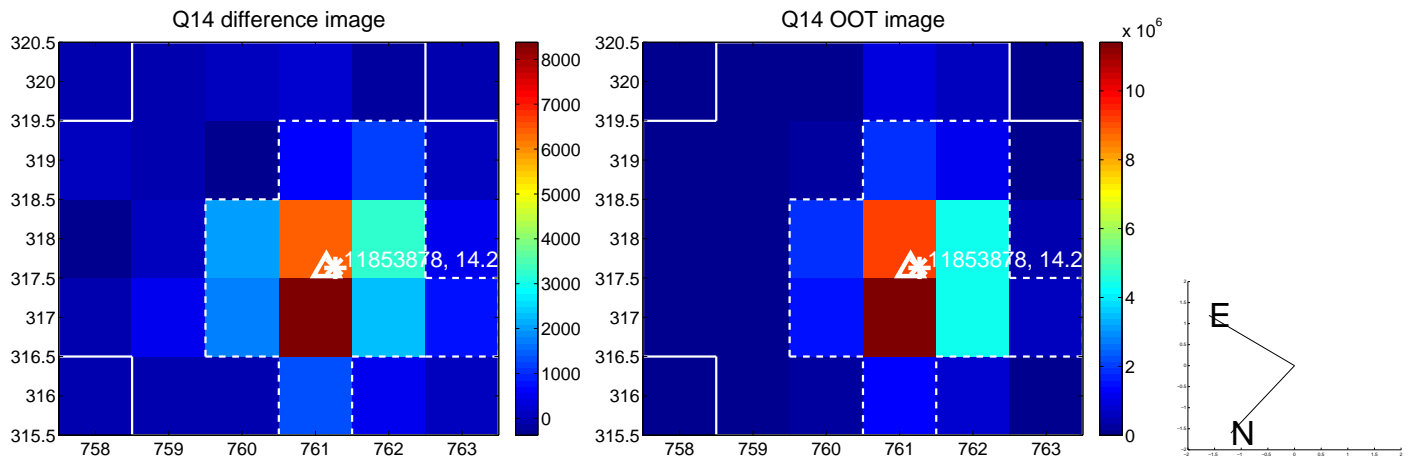
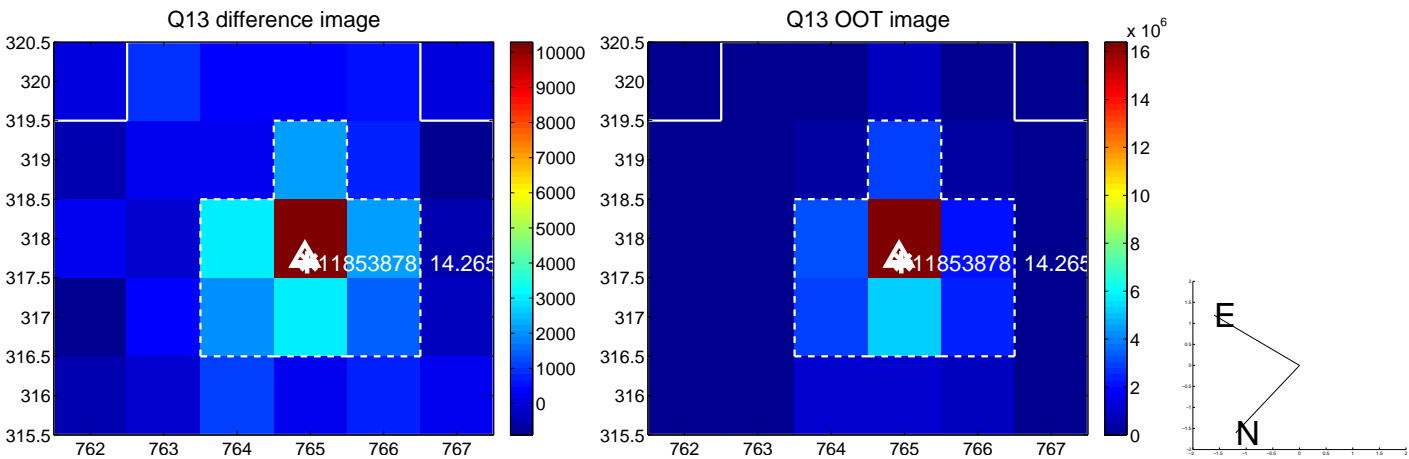
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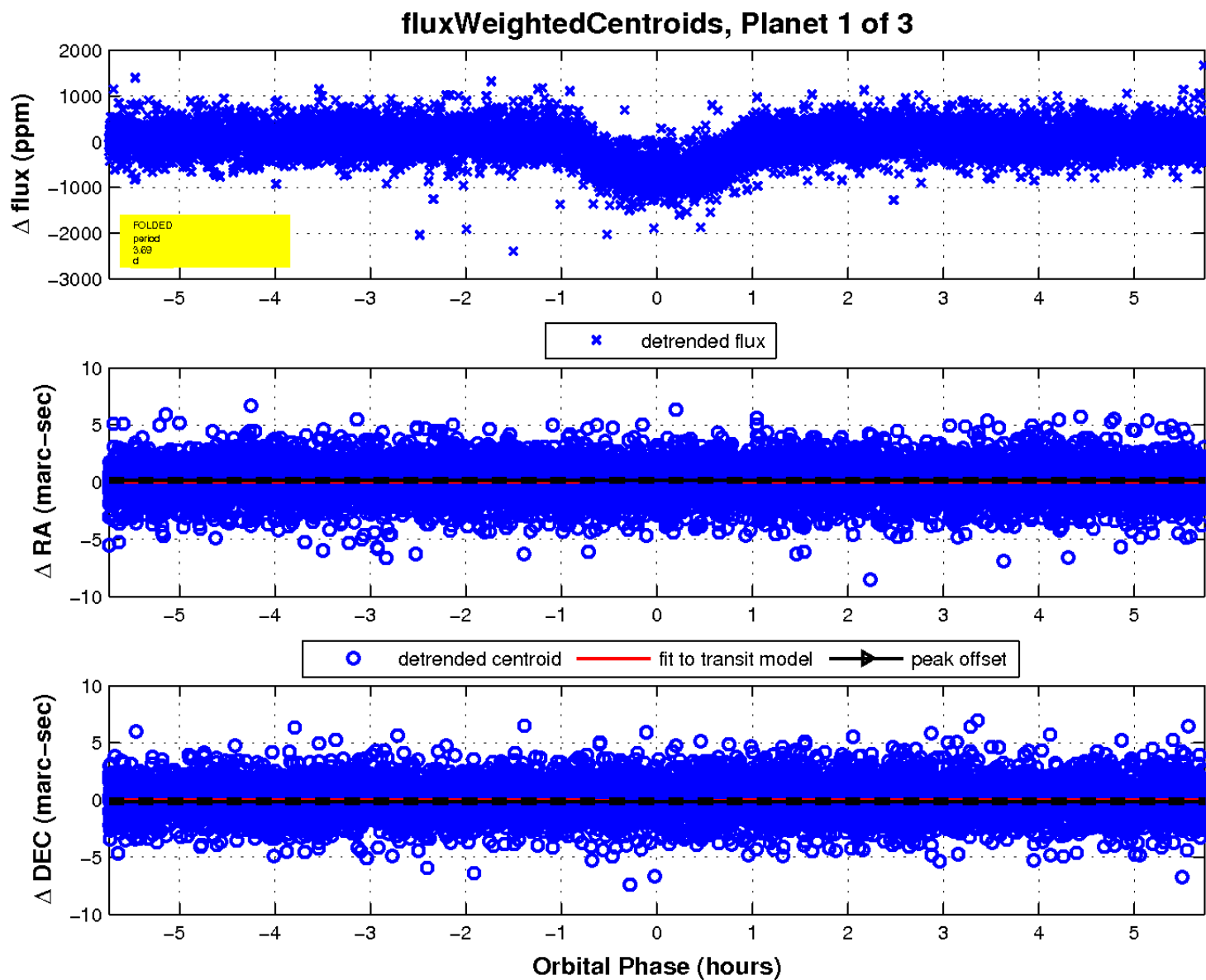
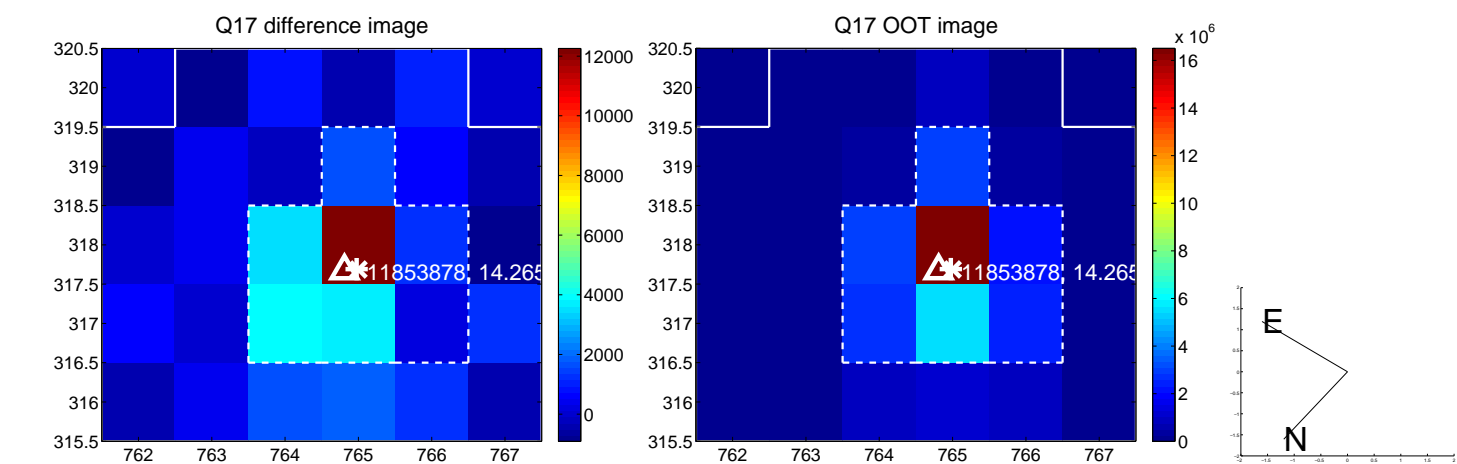
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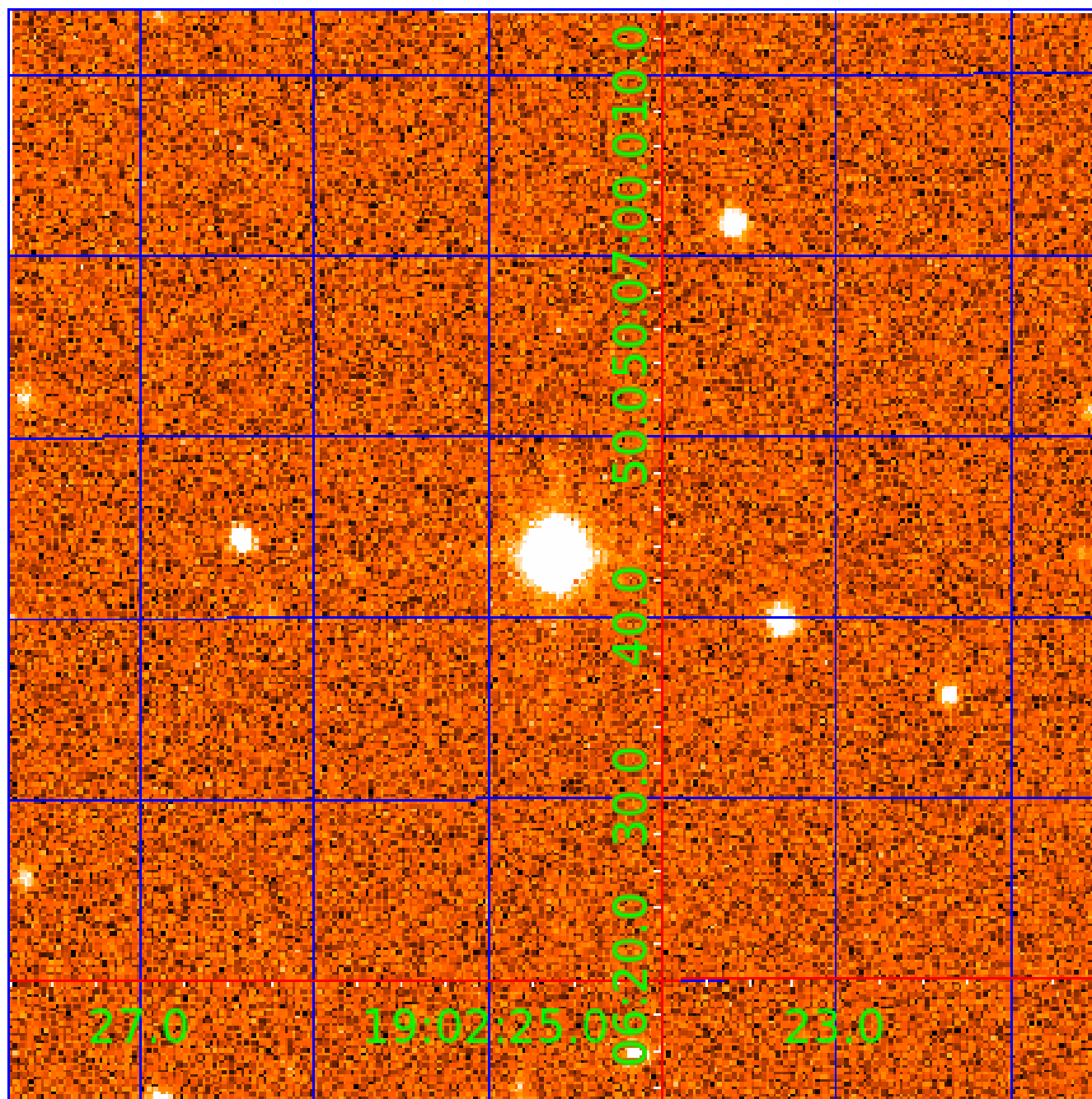


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UKIRT Image

Declination



KIC 011853878

Q1-17 DR25 TCE Parameters

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Robovetter Results

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011853878-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011853878-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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.

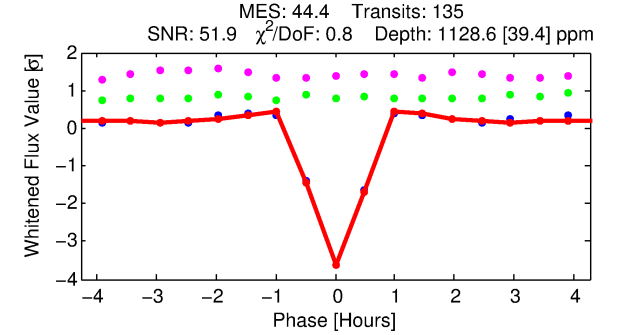
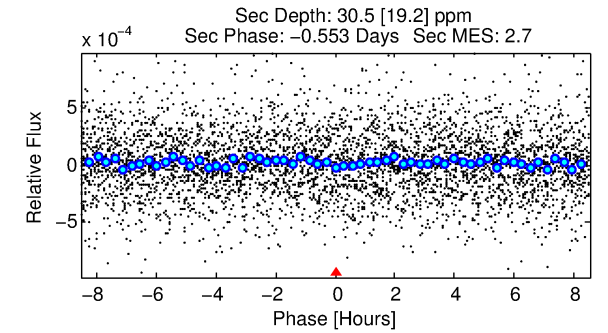
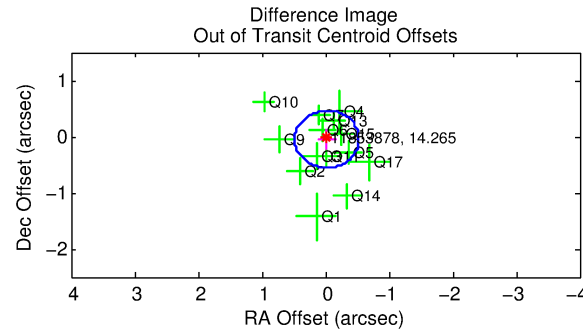
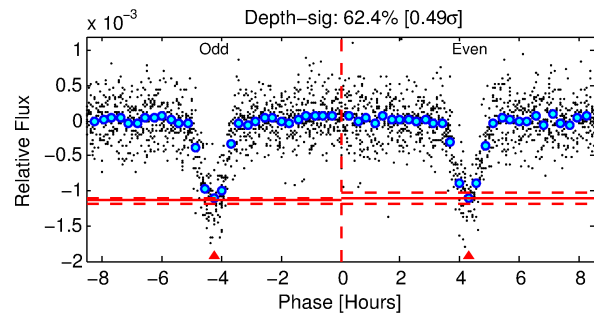
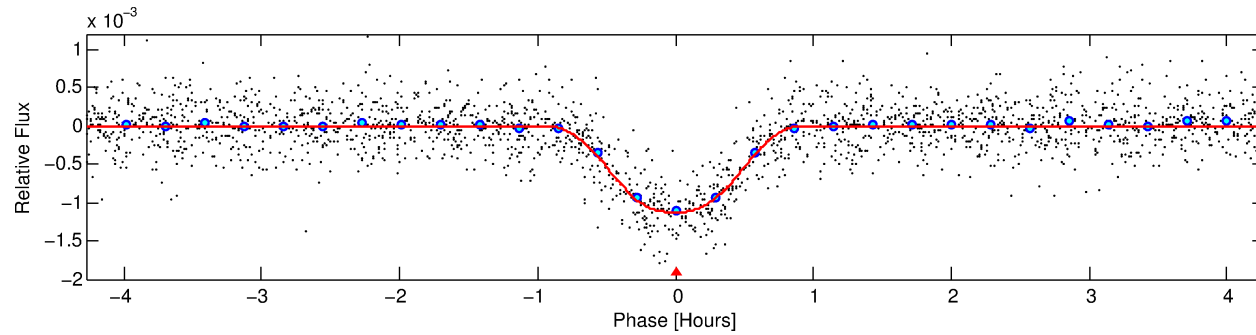
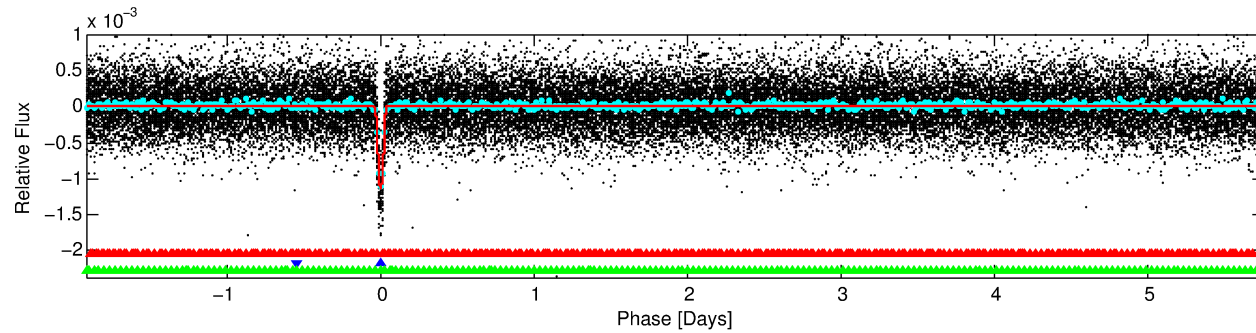
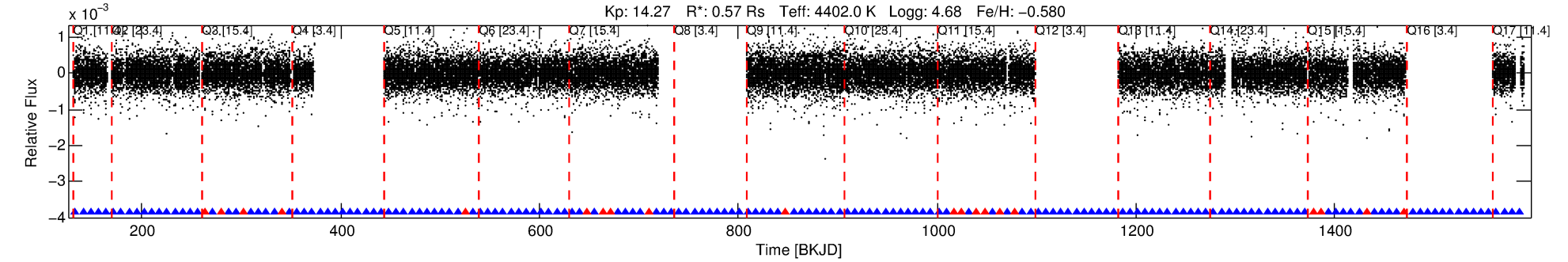
Ephemeris Match Information For 011853878-02

No Significant Match Found

DV One-Page Summary

KIC: 11853878 Candidate: 2 of 3 Period: 7.684 d

KOI: K01833.02 Corr: 0.908



DV Fit Results:

Period = 7.68433 [0.00001] d
Epoch = 133.3598 [0.0006] BKJD
Rp/R* = 0.0406 [0.0019]
a/R* = 17.92 [2.18]
b = 0.95 [0.02]
Seff = 27.43 [4.35]
Teq = 584 [23] K
Rp = 2.53 [0.25] Re
a = 0.0633 [0.0042] AU
Ag = 10.50 [6.75] [1.41 σ]
Teffp = 1624 [264] K [3.93 σ]

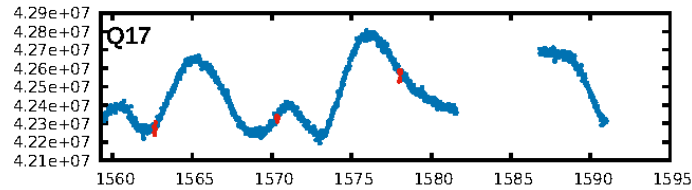
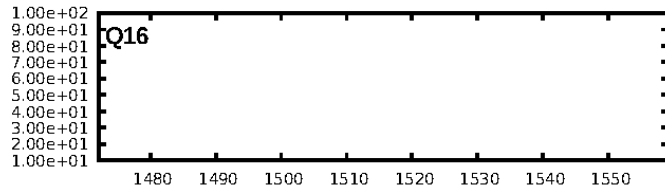
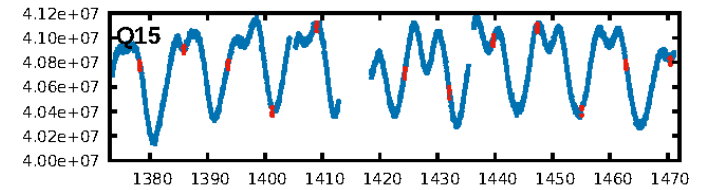
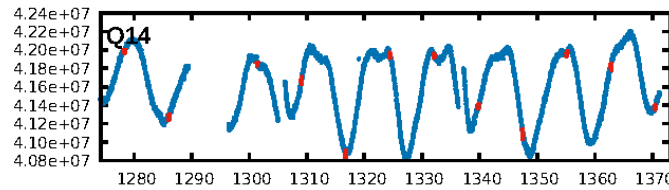
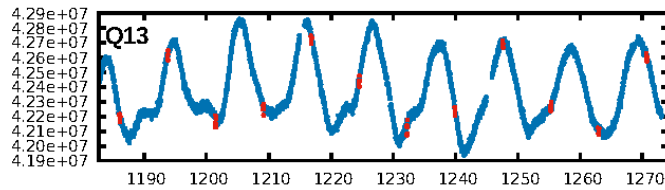
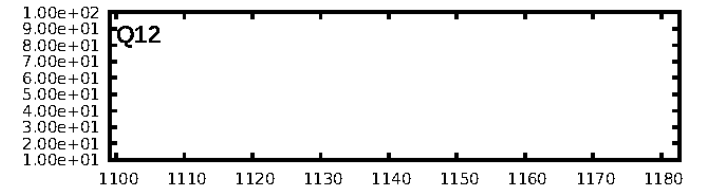
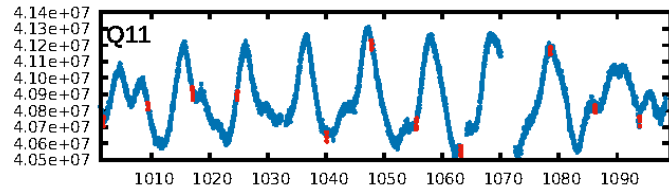
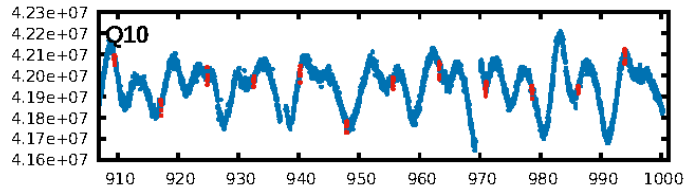
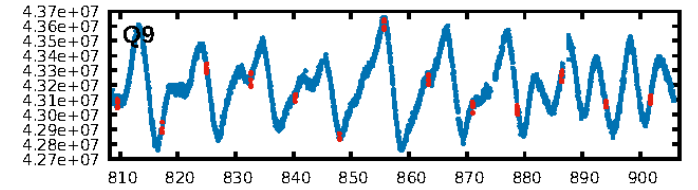
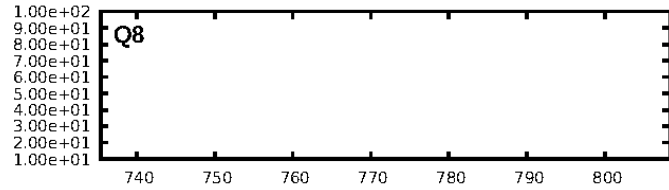
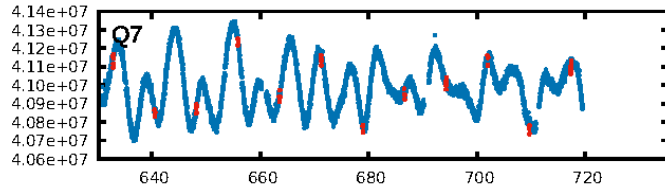
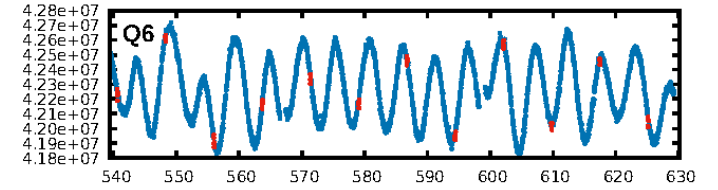
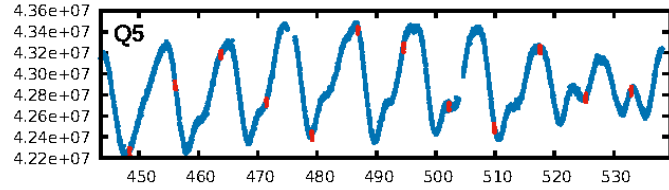
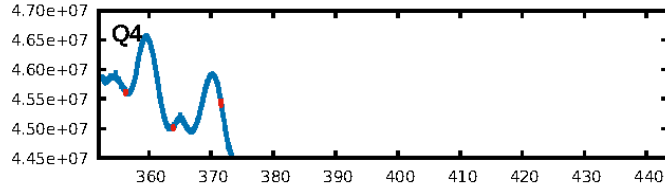
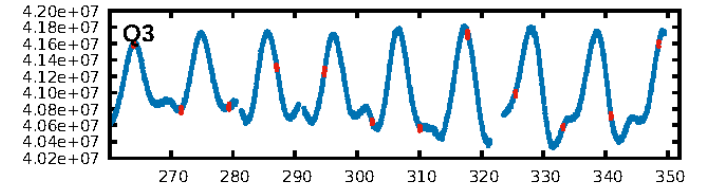
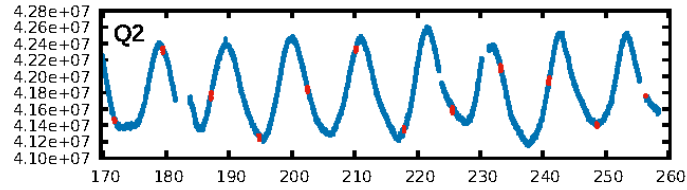
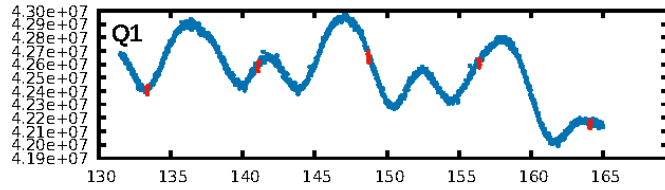
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [19.81 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.84 [104/124]
GhostDiagnostic-chr: 5.023
Centroid-sig: 0.7%
Centroid-so: 0.544 arcsec [2.03 σ]
OotOffset-rm: 0.051 arcsec [0.30 σ]
KicOffset-rm: 0.024 arcsec [0.16 σ]
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]

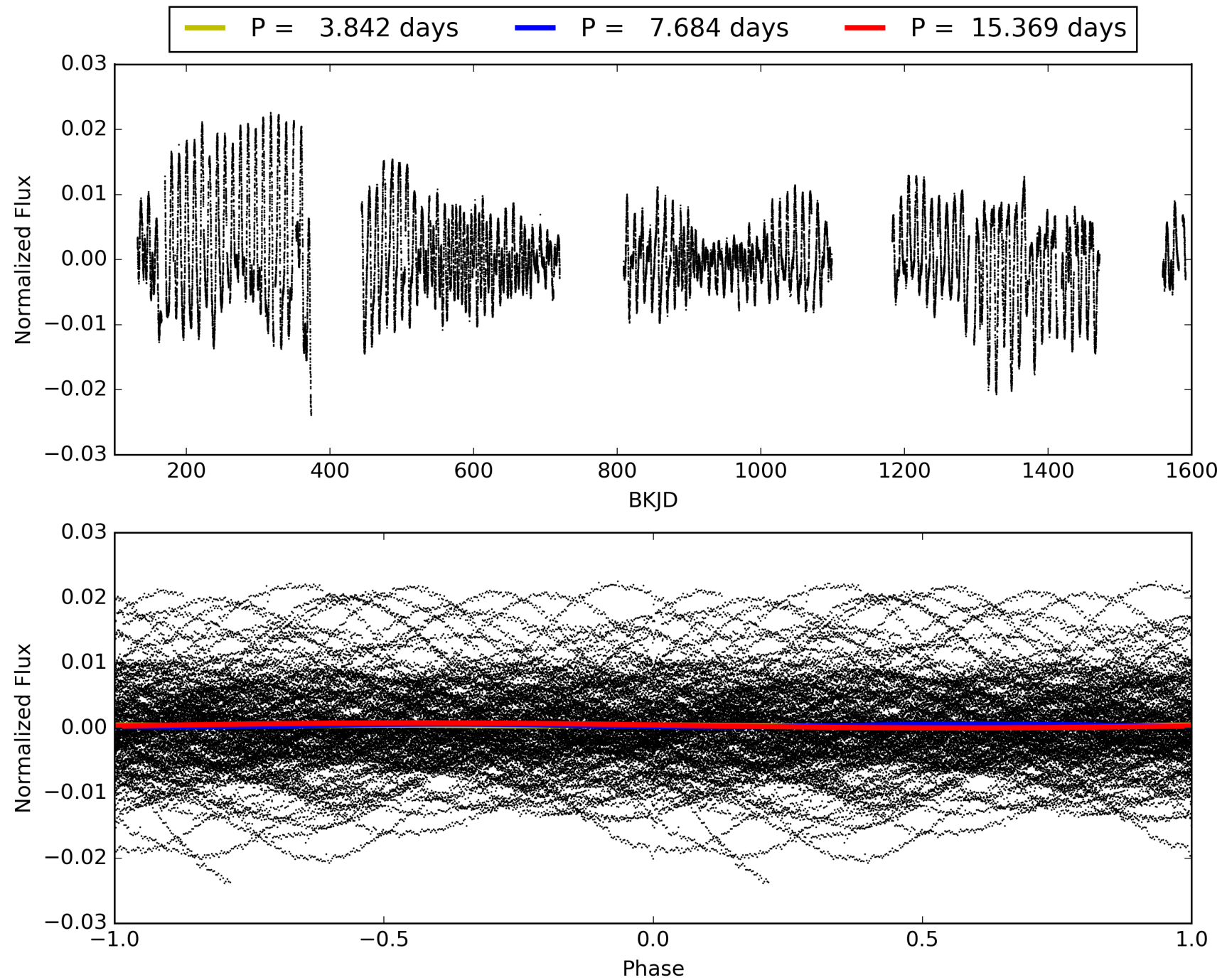
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:24:19 Z

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

TCE 011853878-02, PDC Light Curves

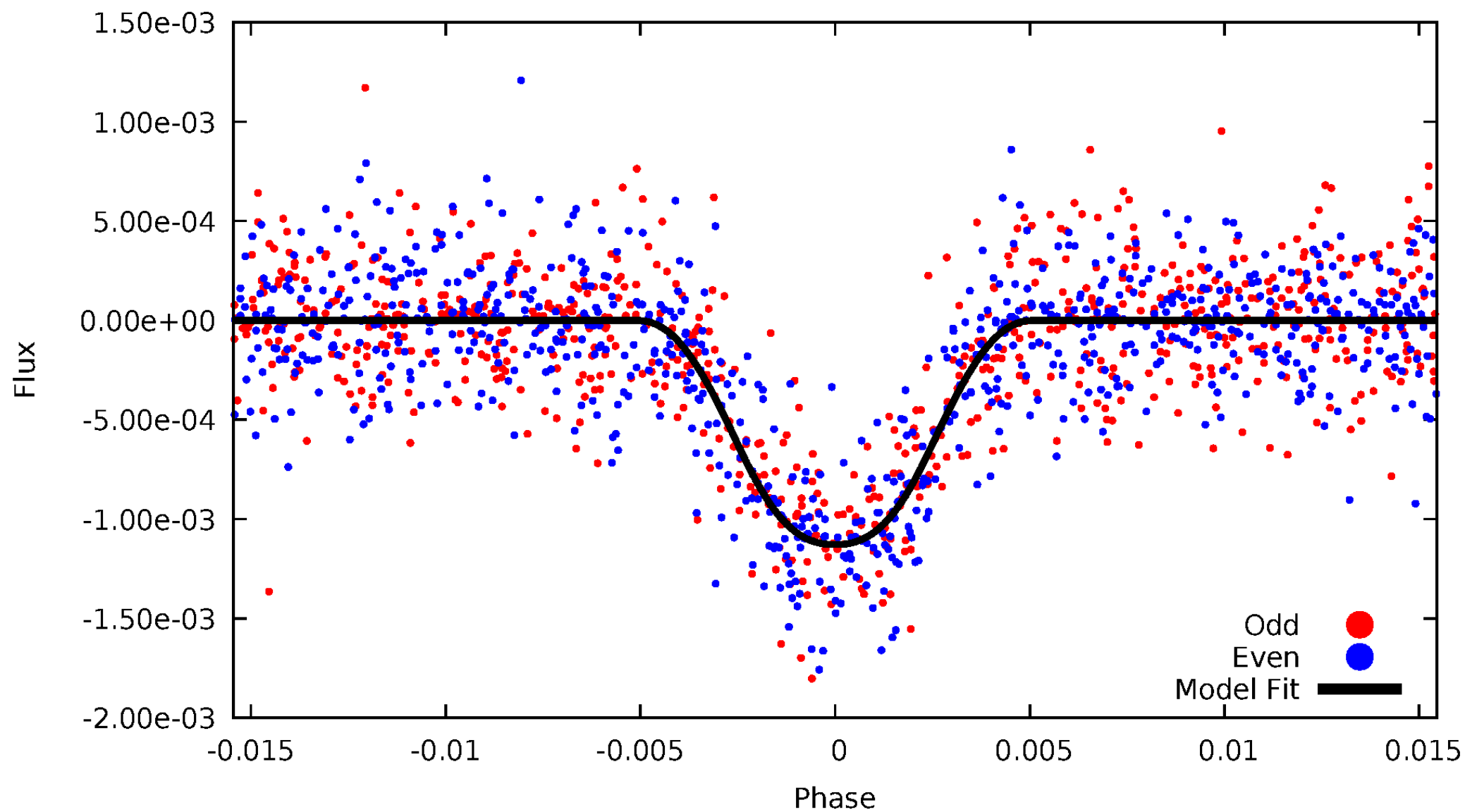


TCE 011853878-02



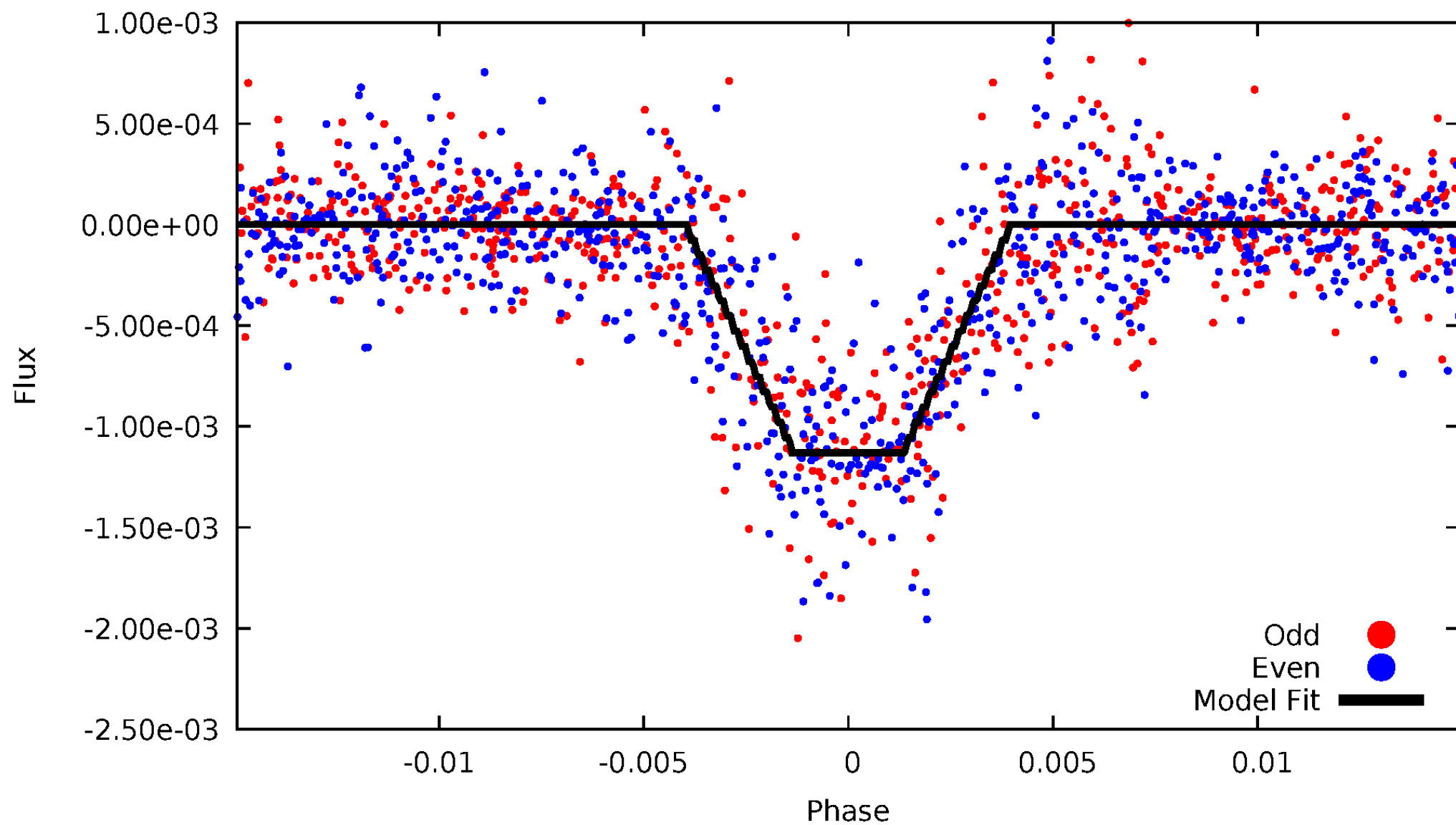
DV Odd/Even

TCE 011853878-02



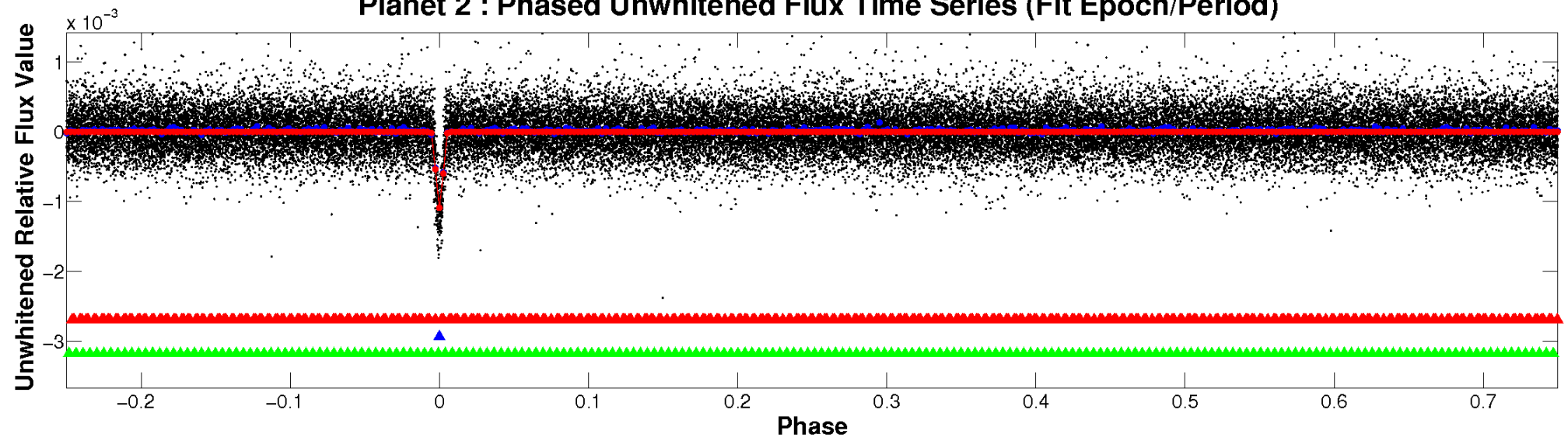
ALT Odd/Even

TCE 011853878-02

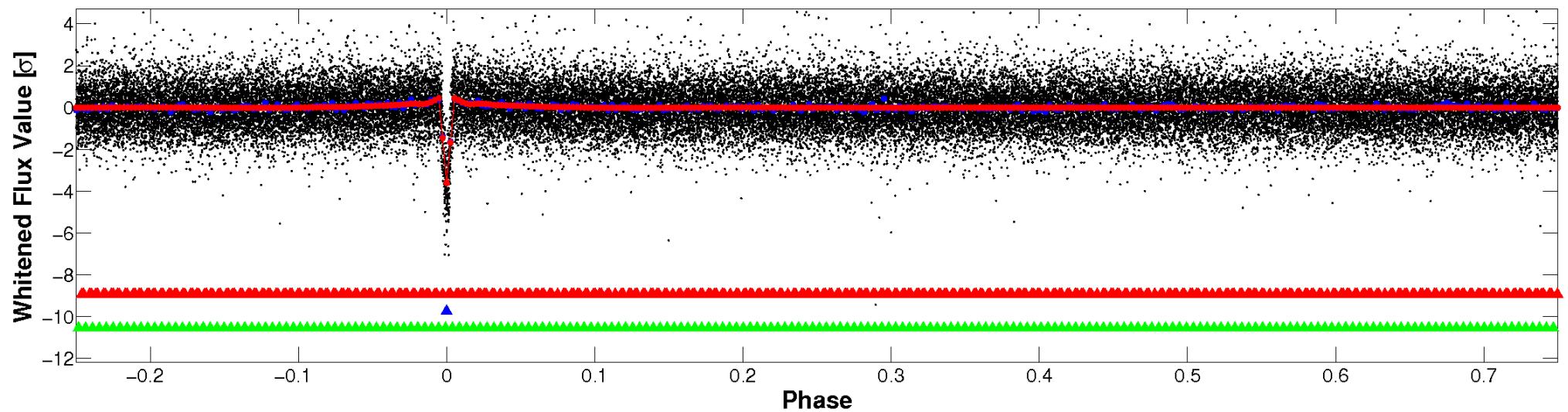


Non-Whitened Vs. Whitened Light Curve

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

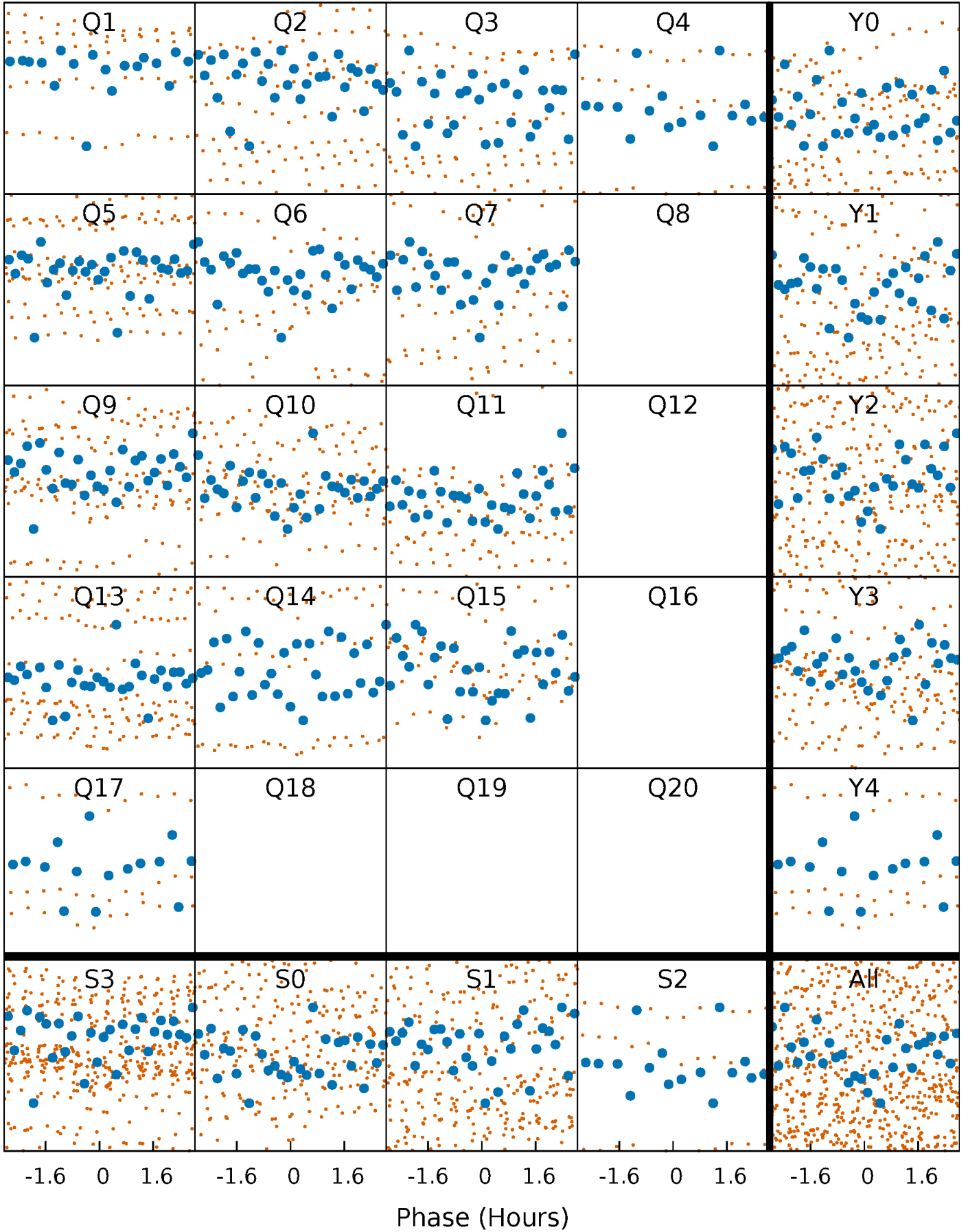


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



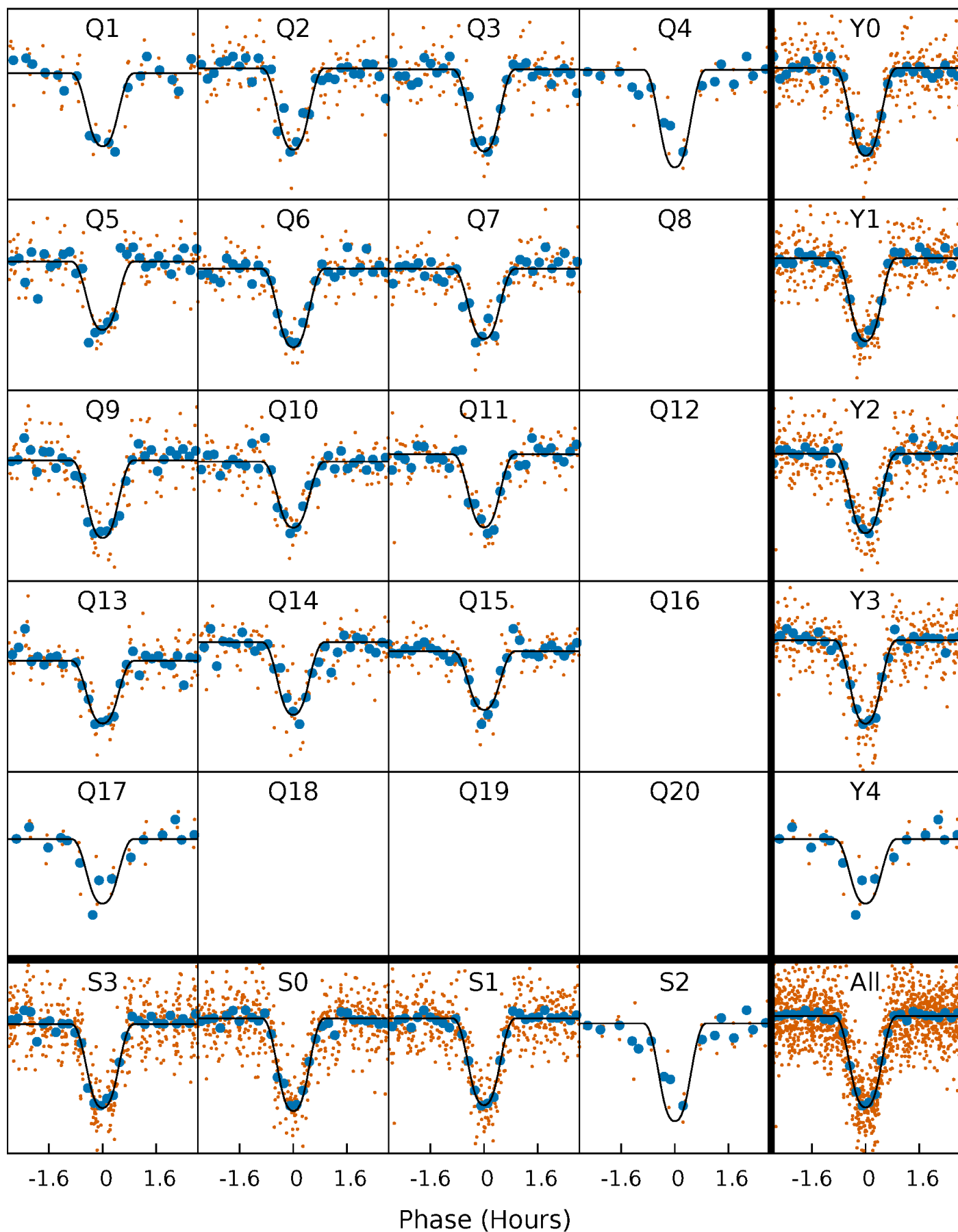
PDC Quarter-Phased Transit Curves

TCE 011853878-02 P= 7.684334 Days $T_0=133.359794$ (BKJD)



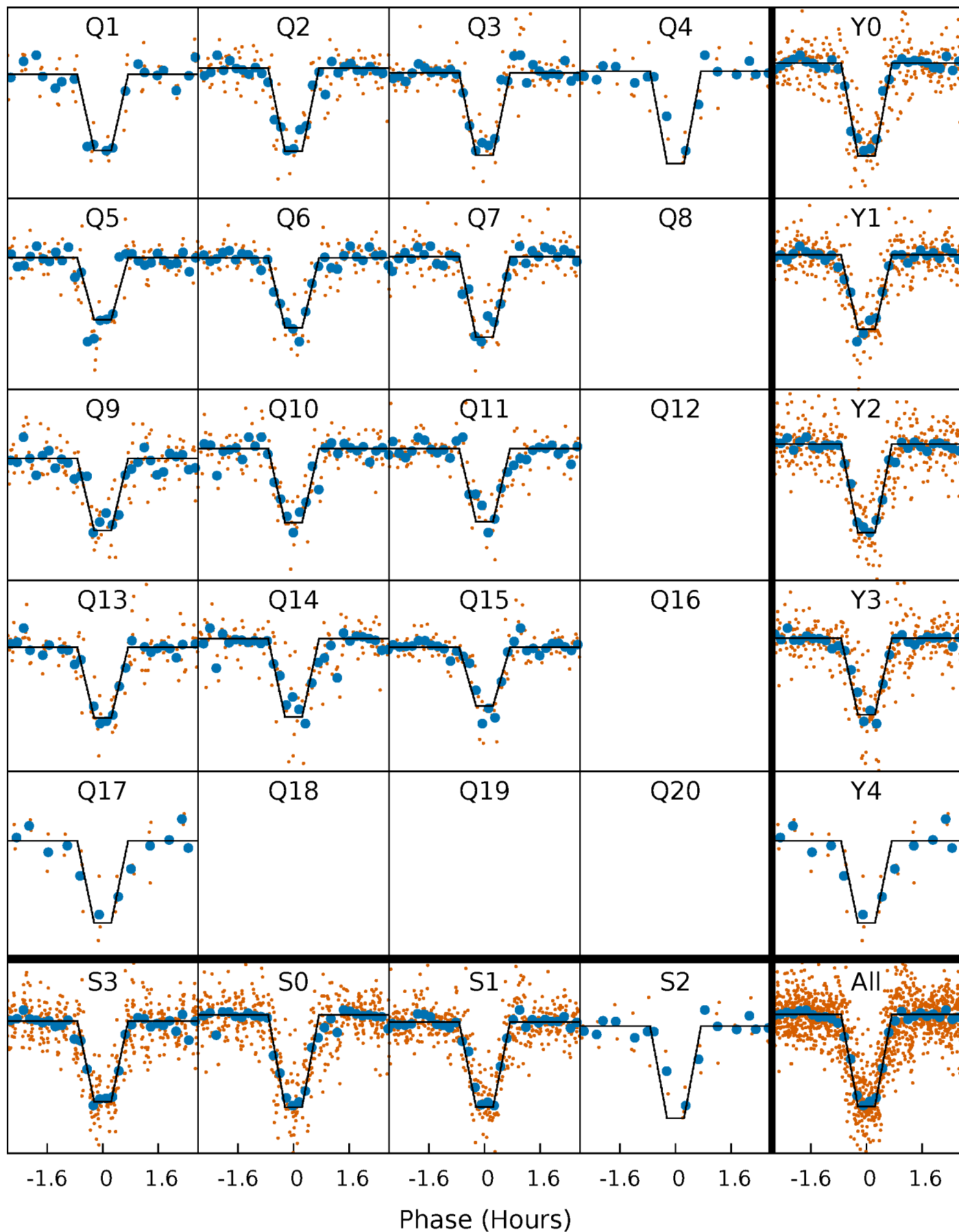
DV Quarter-Phased Transit Curves

TCE 011853878-02 P= 7.684334 Days $T_0=133.359794$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

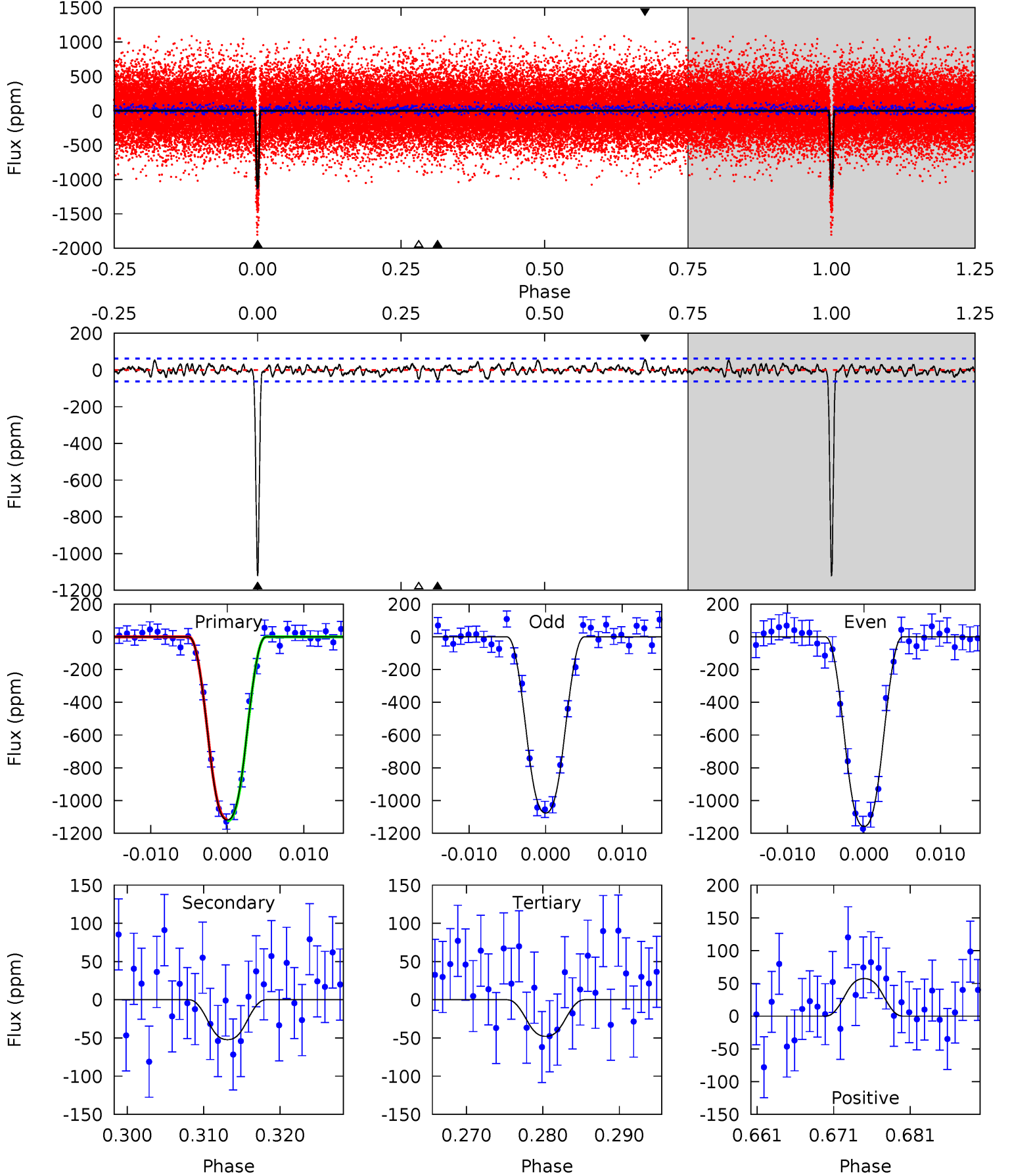
TCE 011853878-02 P= 7.684300 Days $T_0=133.362346$ (BKJD)



DV Model-Shift Uniqueness Test

011853878-02, P = 7.684334 Days, E = 125.675460 Days

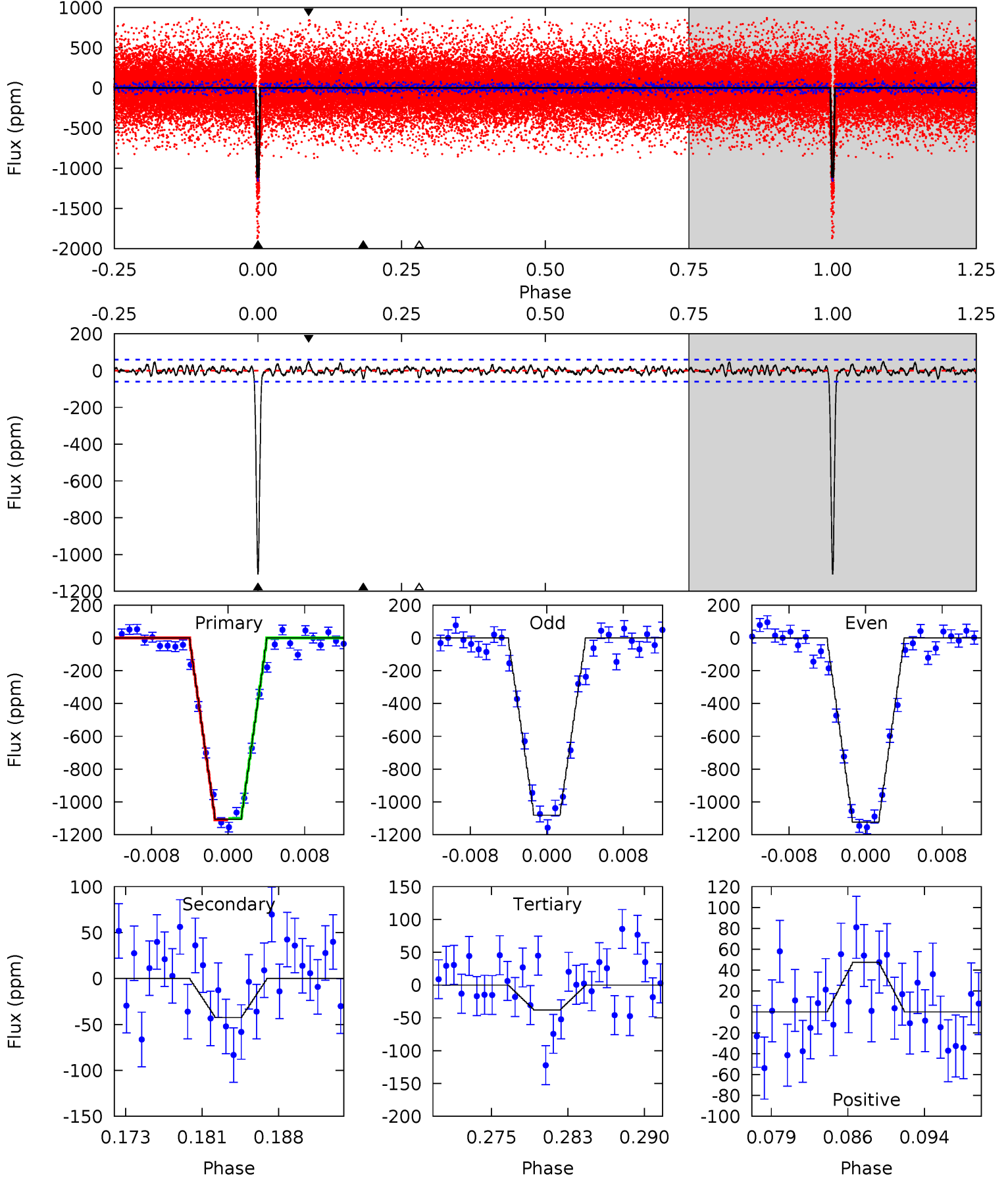
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
90.1	4.20	3.85	4.61	5.03	2.58	1.34	86.2	85.5	0.35	-0.41	3.32	1.01	0.05	0.40



Alt Model-Shift Uniqueness Test

011853878-02, P = 7.684300 Days, E = 125.678046 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
93.8	3.61	3.23	4.03	5.07	2.66	1.13	90.6	89.8	0.38	-0.42	1.81	1.01	0.04	0.32



Stellar Parameters For KIC 011853878

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4402^{+118}_{-144}	$4.682^{+0.045}_{-0.036}$	$-0.580^{+0.300}_{-0.300}$	$0.572^{+0.049}_{-0.049}$	$0.575^{+0.058}_{-0.042}$	$4.314^{+0.970}_{-0.660}$
	+3%/-3%	+1%/-1%	+52%/-52%	+9%/-9%	+10%/-7%	+22%/-15%
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 011853878-02 / KOI 1833.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-52 ± 12	$2.54^{+0.16}_{-0.16}$	813^{+28}_{-30}	2582^{+96}_{-107}	18^{+5}_{-5}
Alt.	-43 ± 12	$2.10^{+0.16}_{-0.15}$	815^{+25}_{-29}	2635^{+121}_{-122}	21^{+7}_{-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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

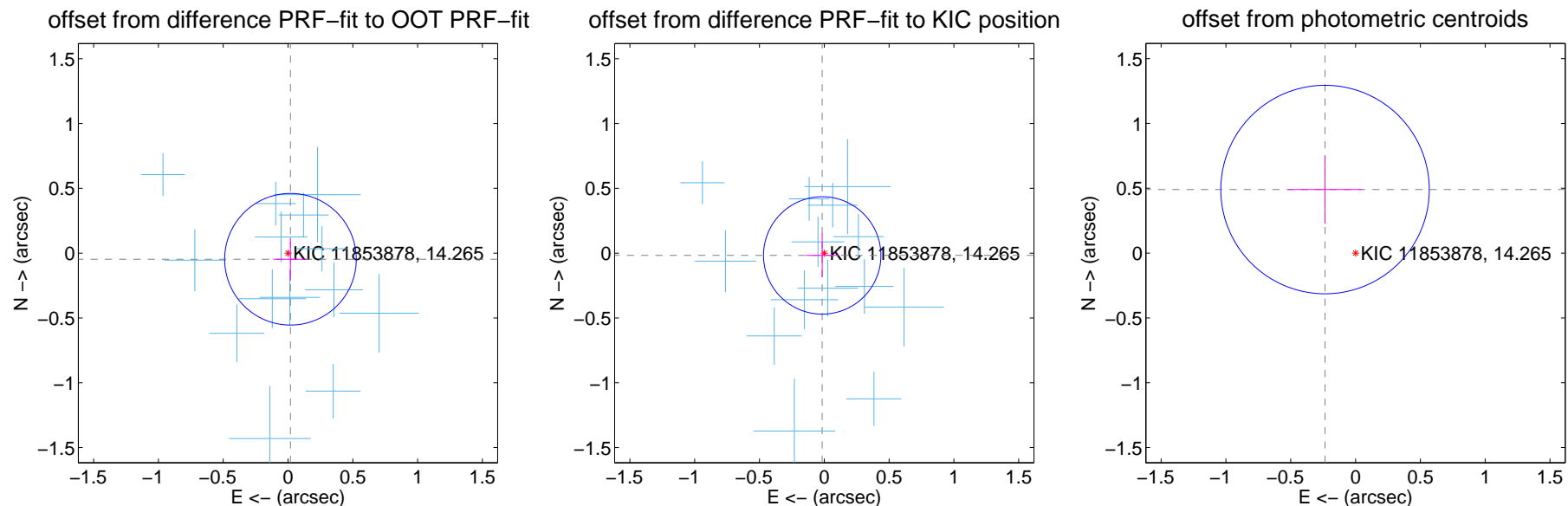
DV Centroid Data

Supplemental centroid analysis for 011853878-02. Kepler magnitude: 14.27. Transit SNR 51.90

There are 14 quarters with good PRF difference image offsets

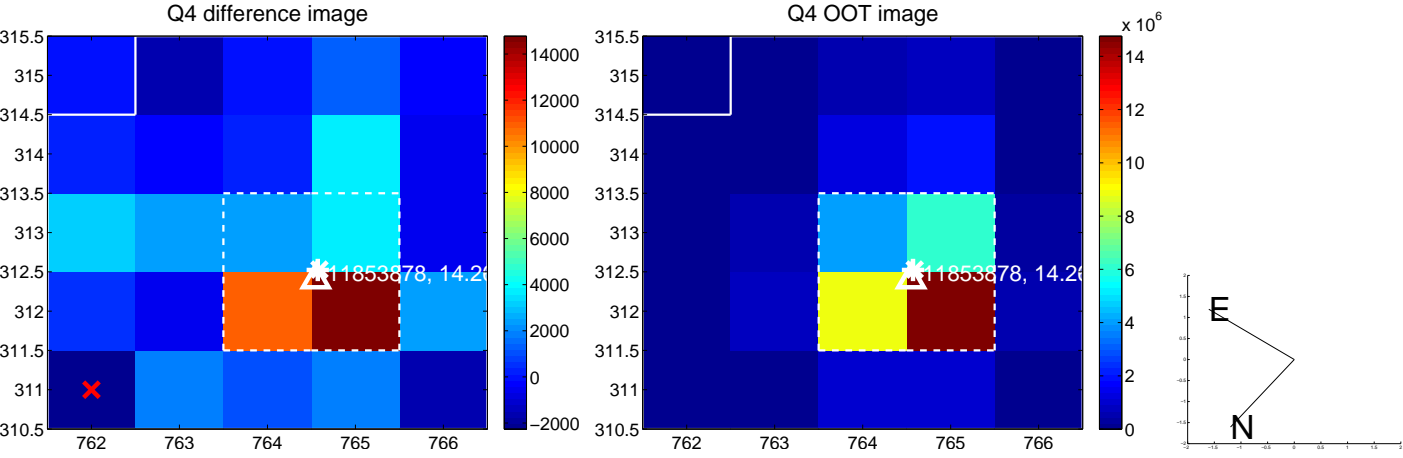
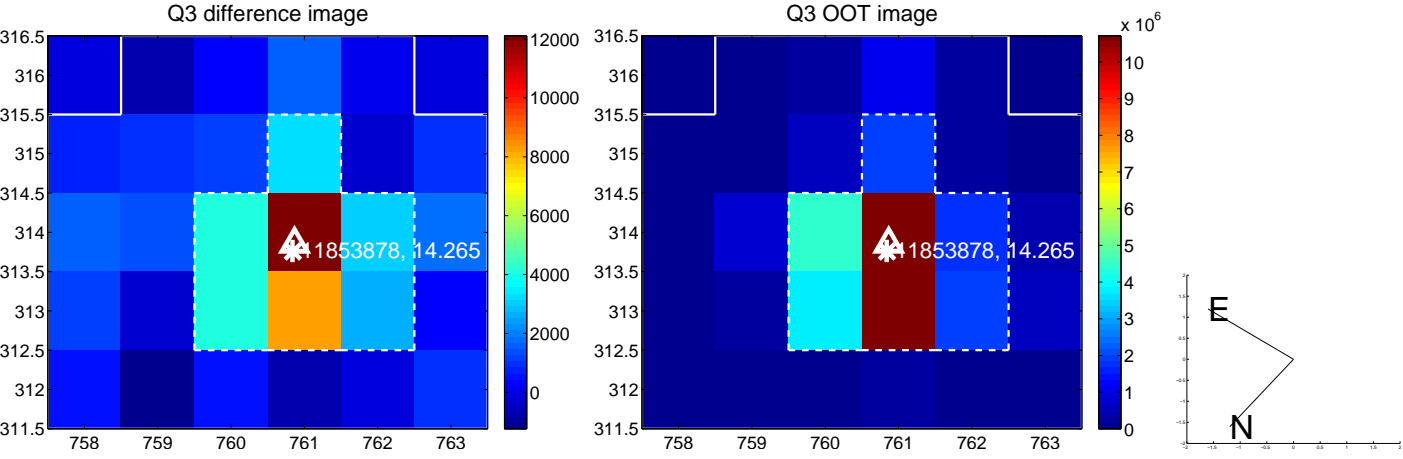
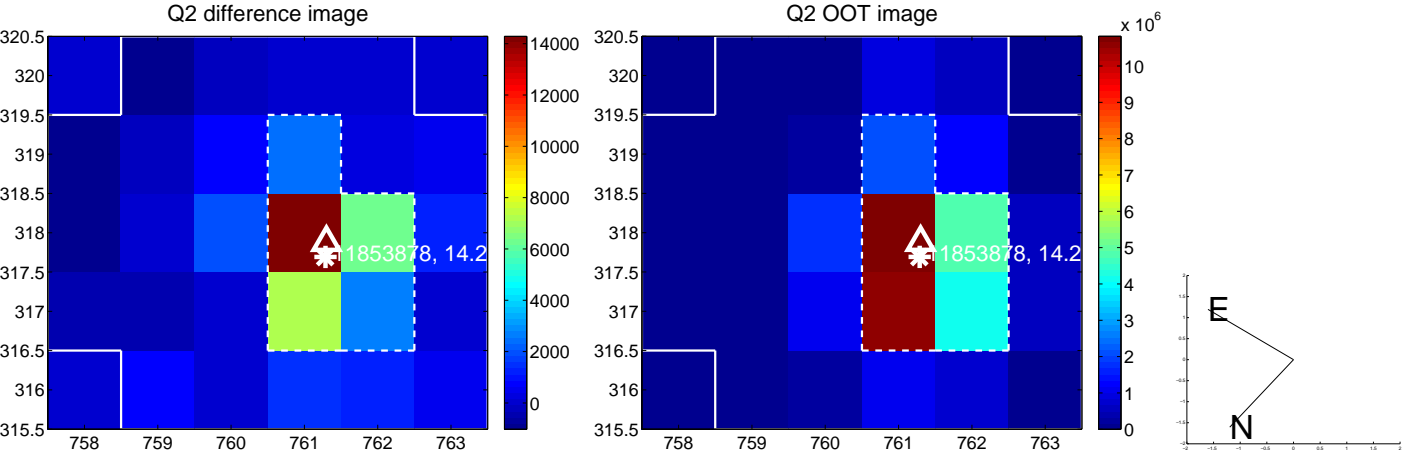
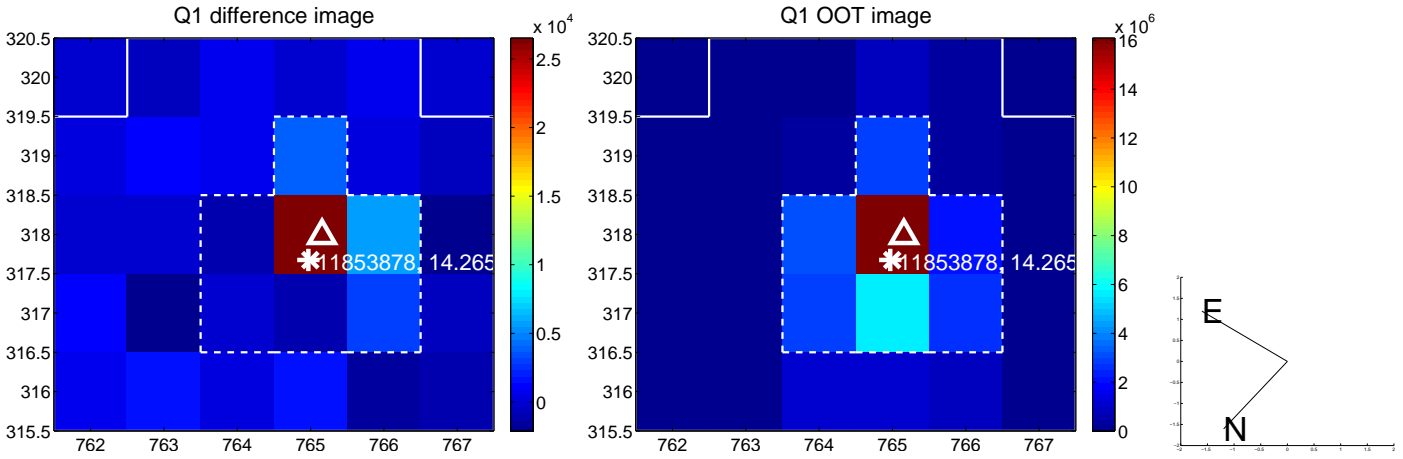
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.051 ± 0.169	0.30	-0.019 ± 0.131	-0.047 ± 0.166
PRF-fit source offset from KIC position	0.024 ± 0.151	0.16	0.016 ± 0.126	-0.018 ± 0.169
photometric centroid source offset	0.54 ± 0.27	2.03	0.24 ± 0.29	0.49 ± 0.26

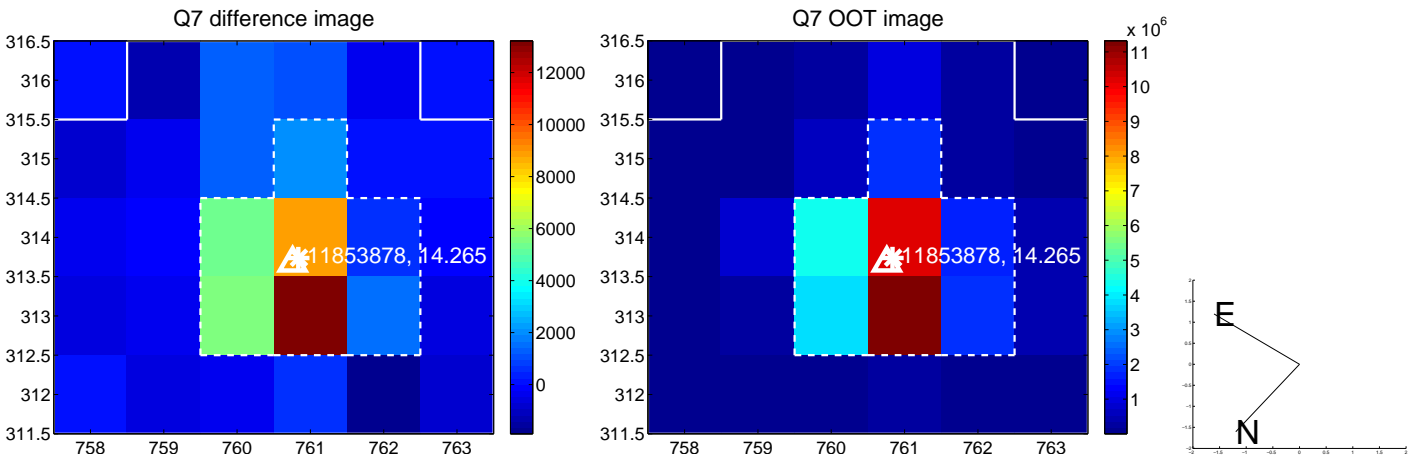
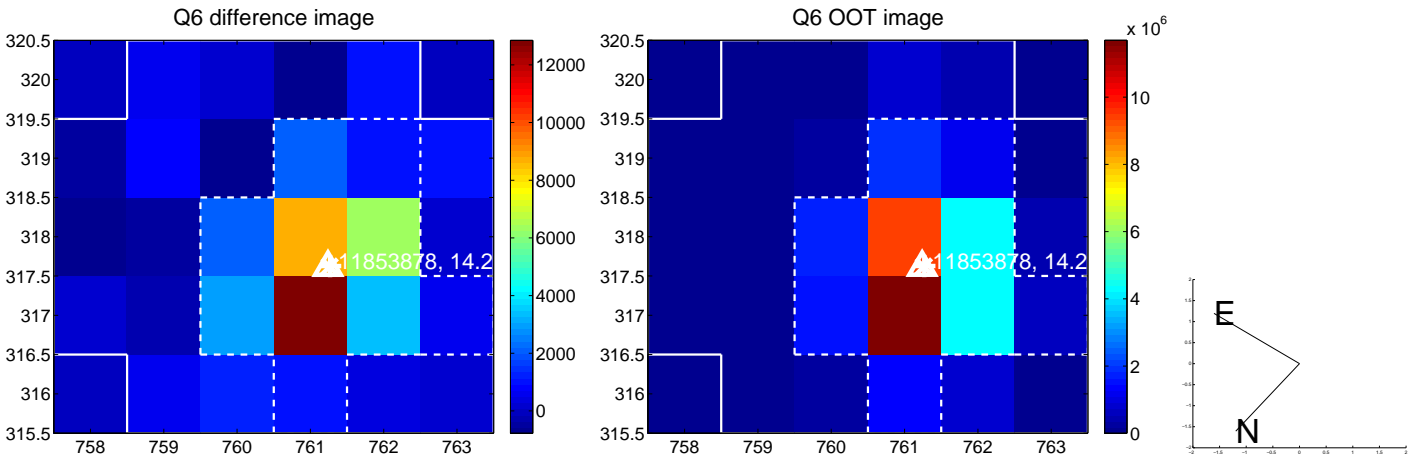
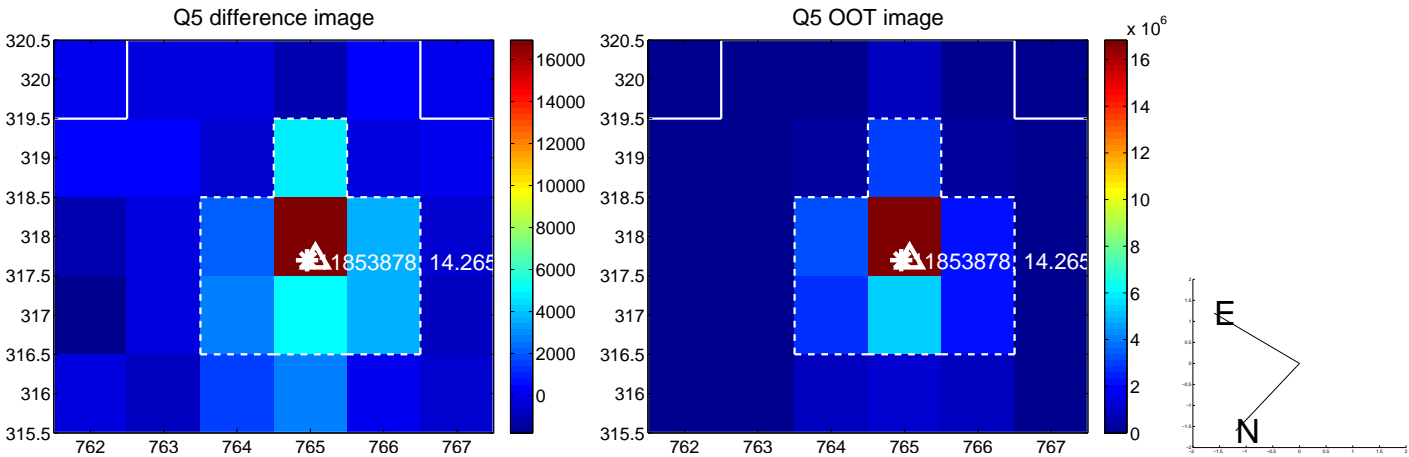


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

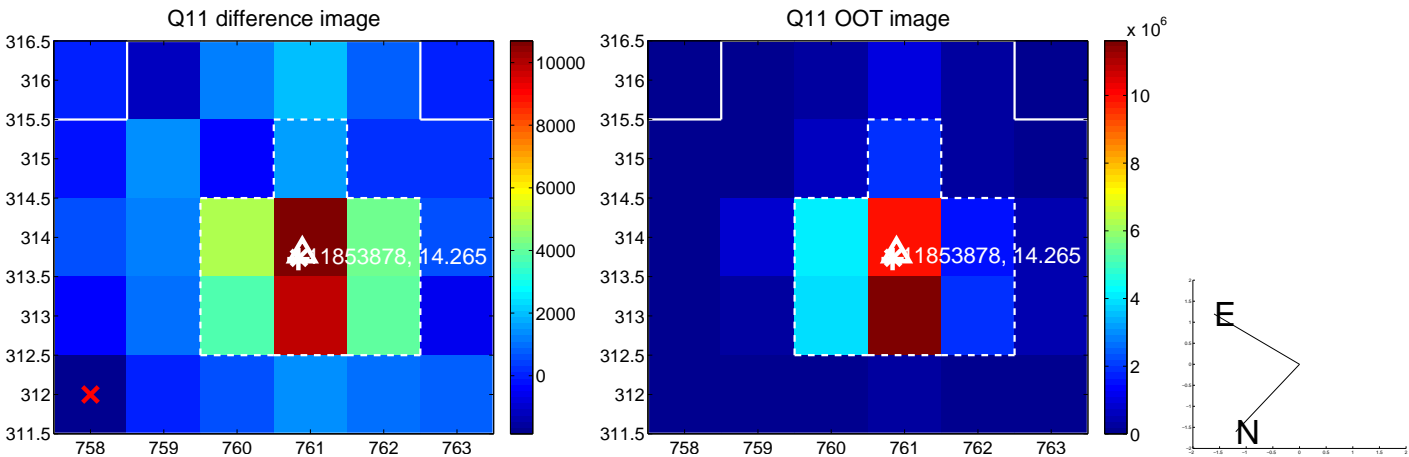
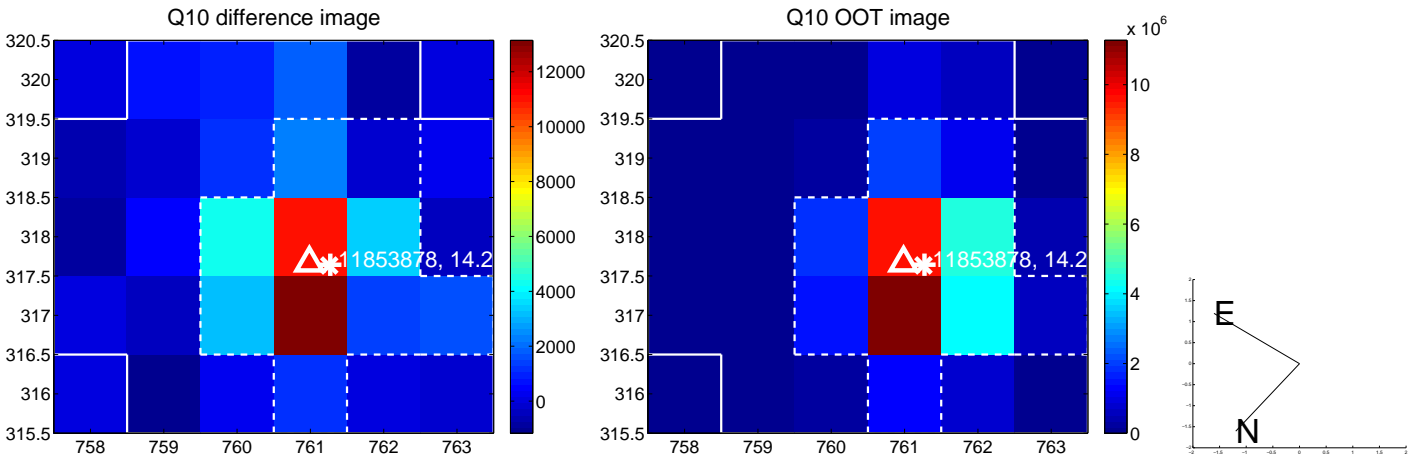
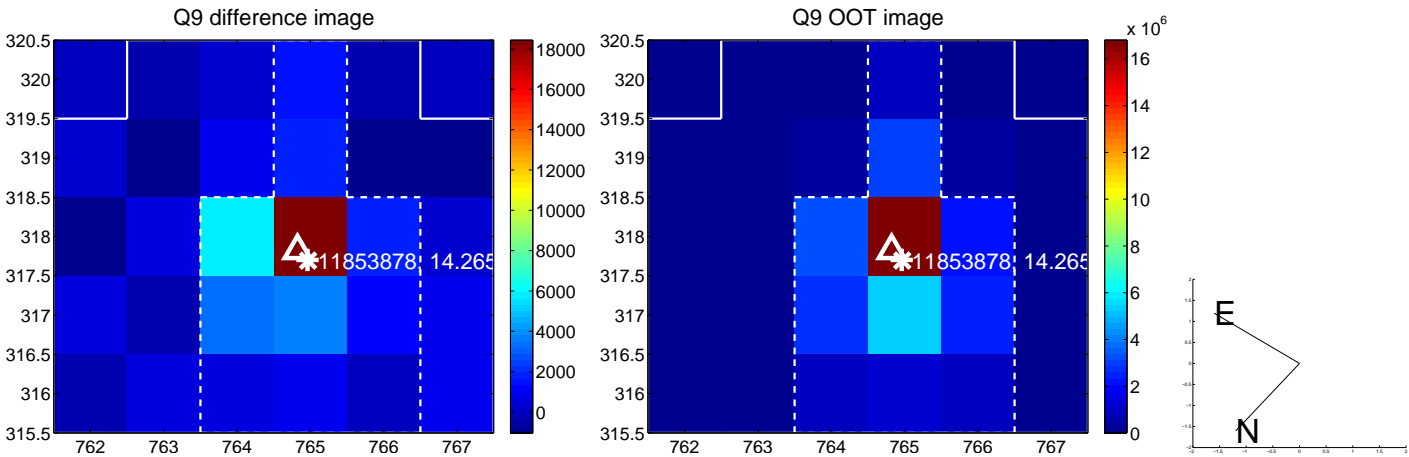
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



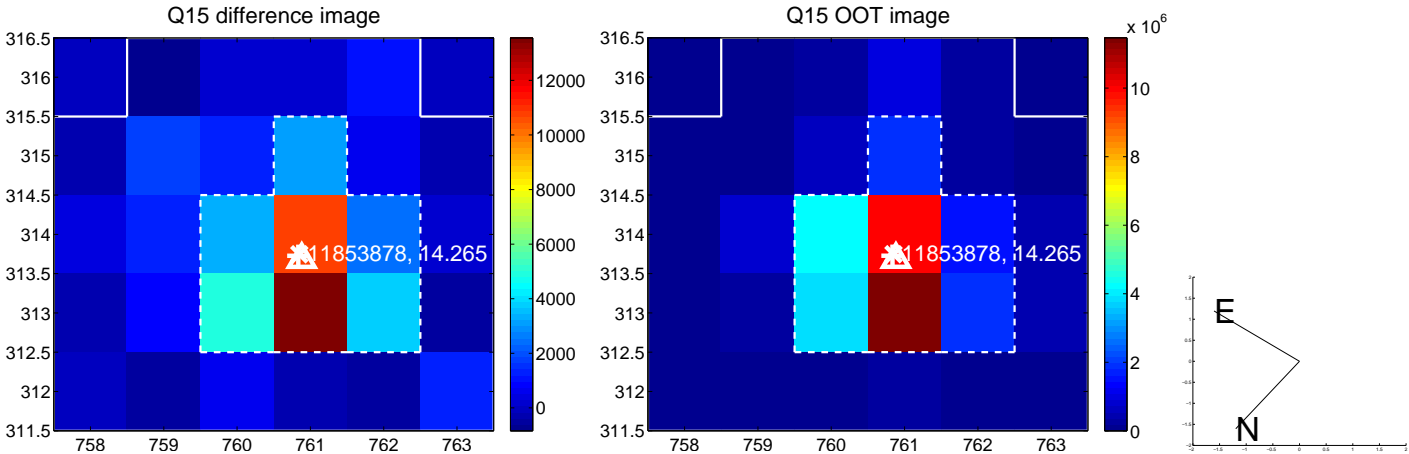
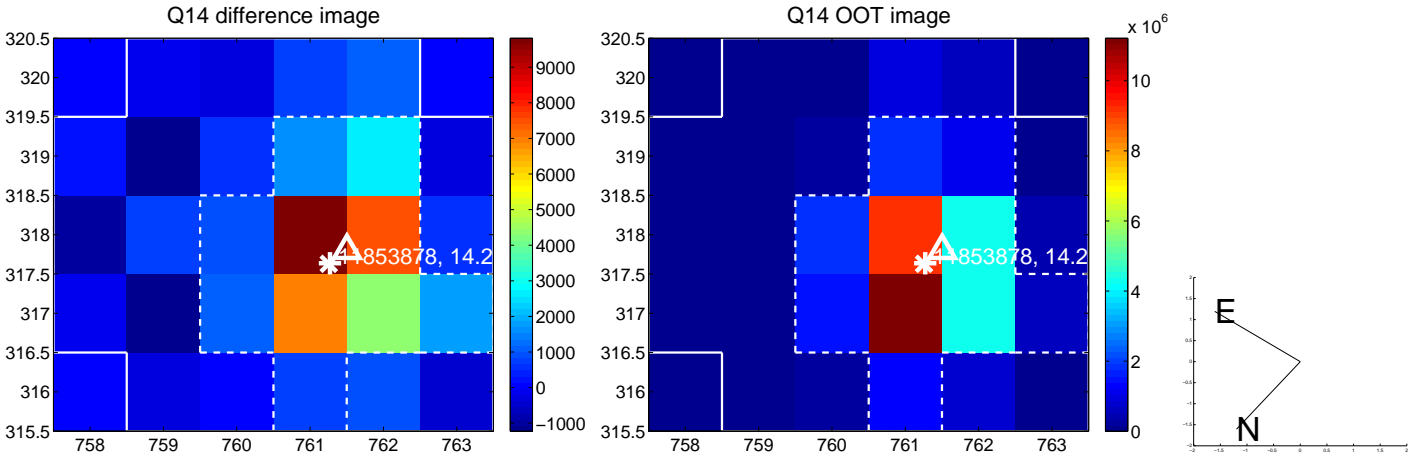
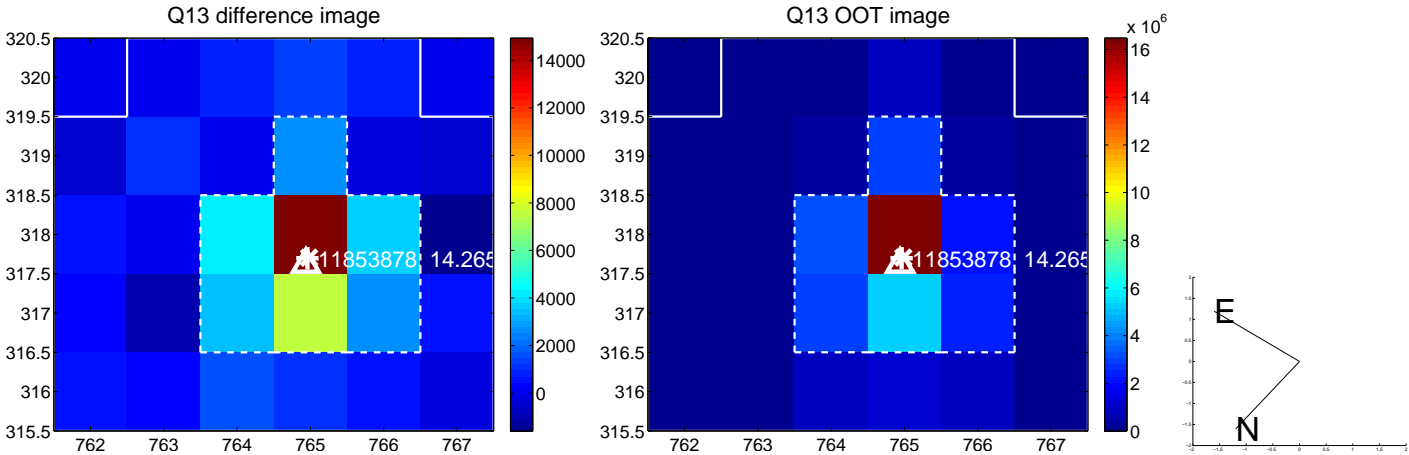
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



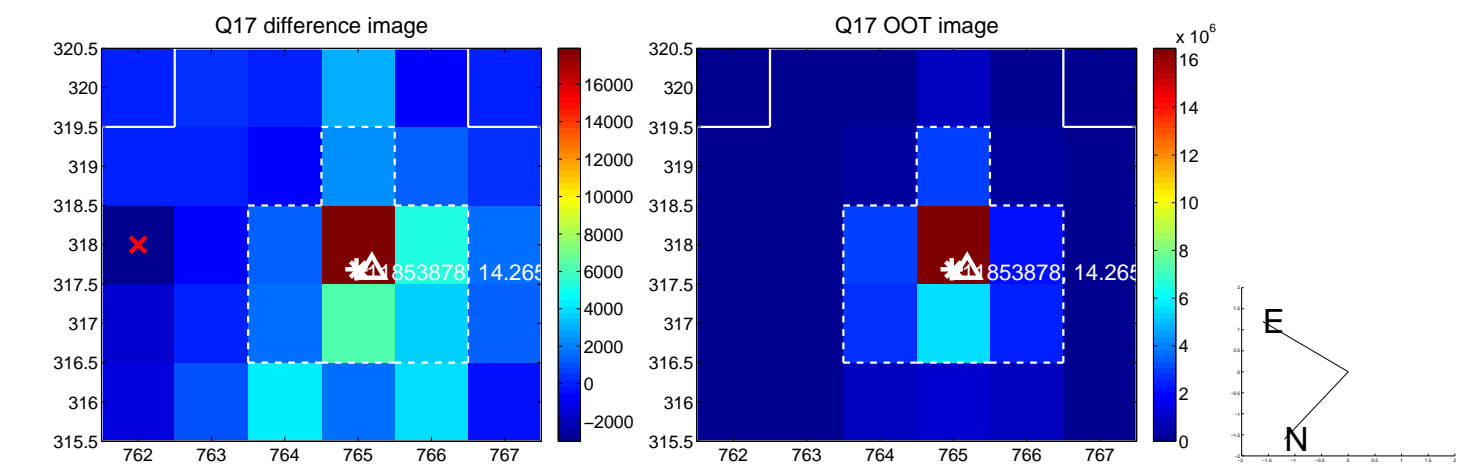
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



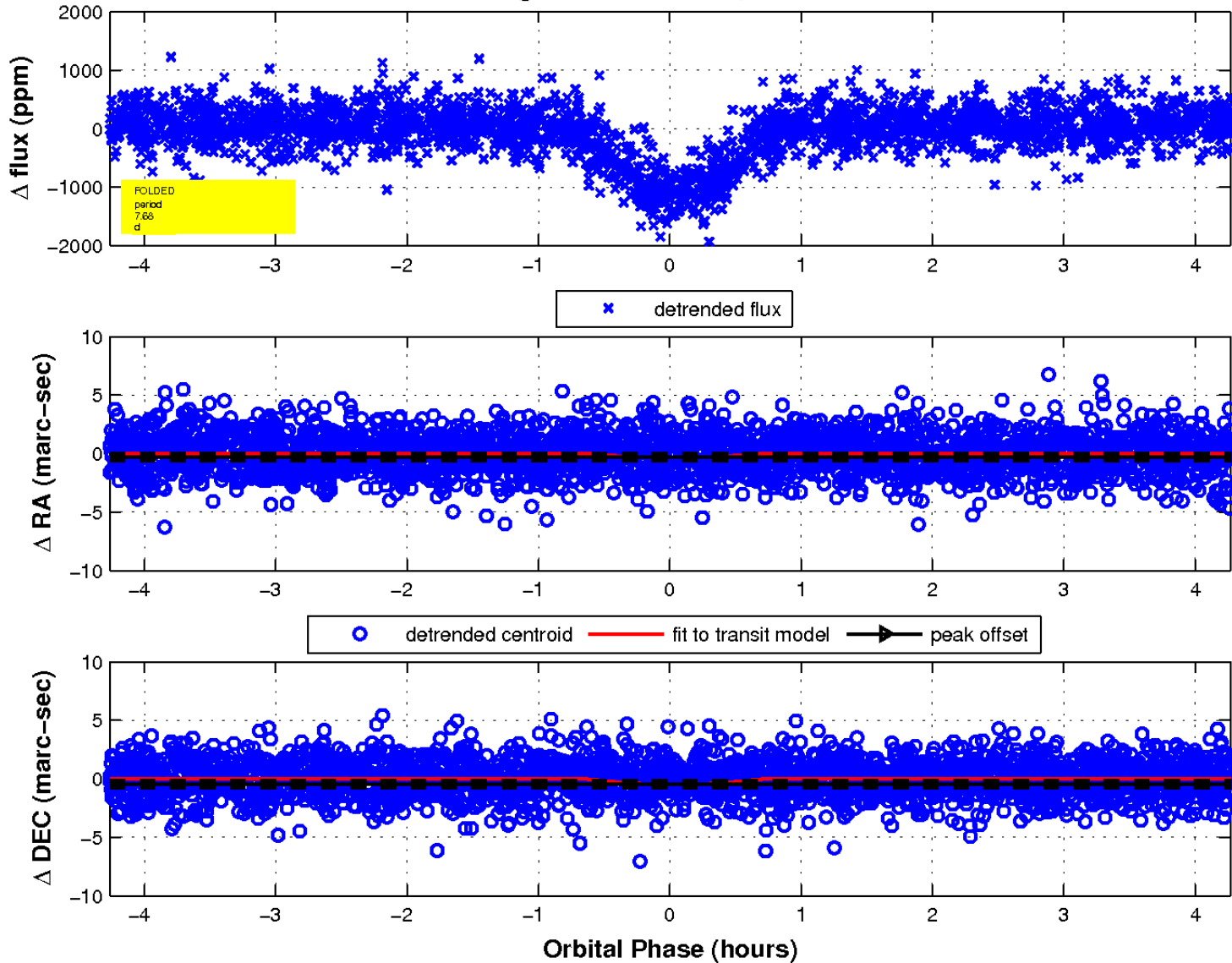
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

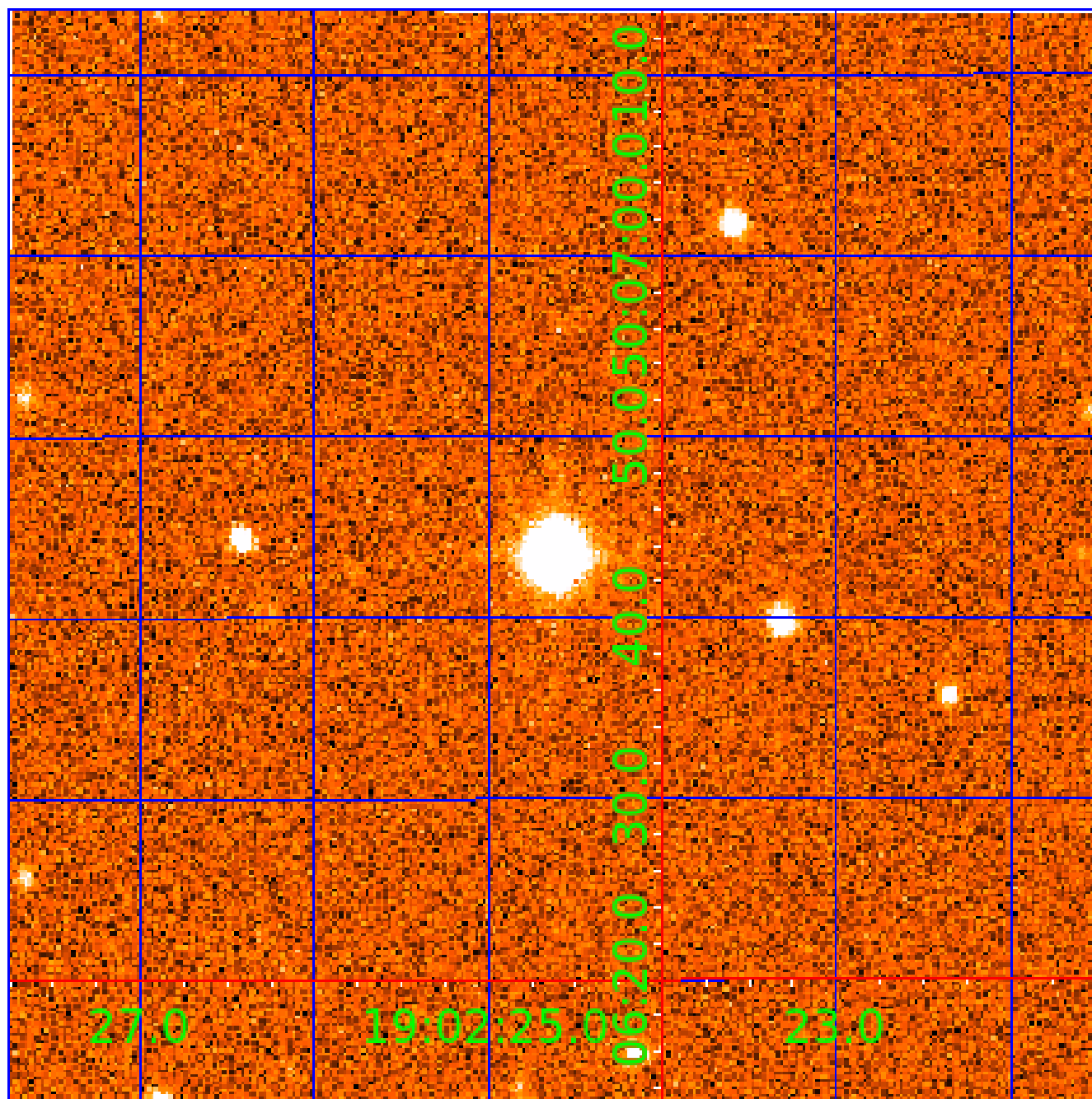


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 011853878

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})
011853878-01	OBS	1833.01	3.693002	132.733382	741.2	1.914	49.3	56.0	0.57	4402	1.90	72.88
011853878-02	OBS	1833.02	7.684334	133.359794	1128.6	1.424	44.4	51.9	0.57	4402	2.53	27.43
011853878-03	OBS	1833.03	5.709381	137.125886	582.3	1.923	29.5	34.5	0.57	4402	1.81	40.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011853878-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011853878-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011853878-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

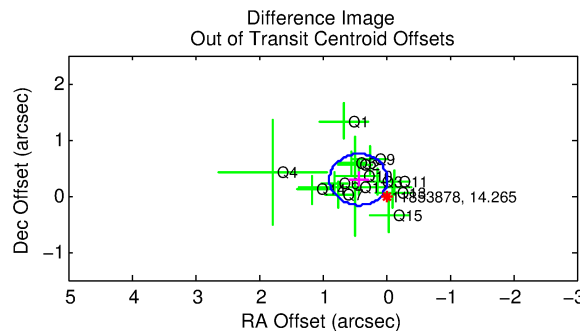
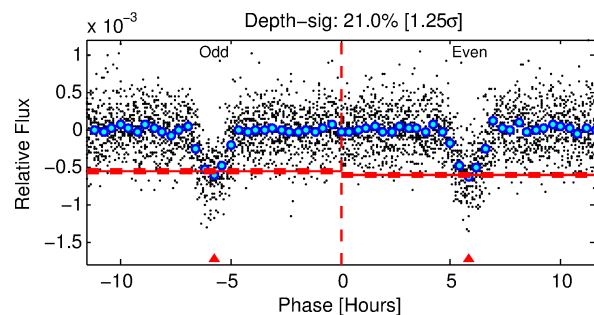
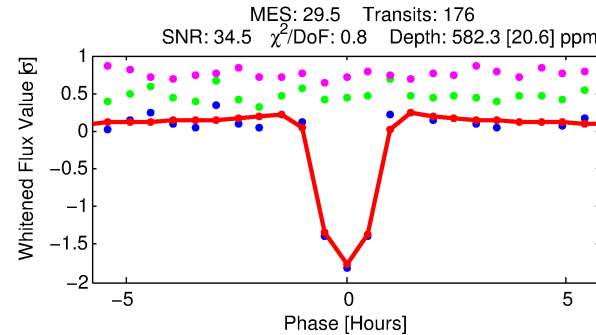
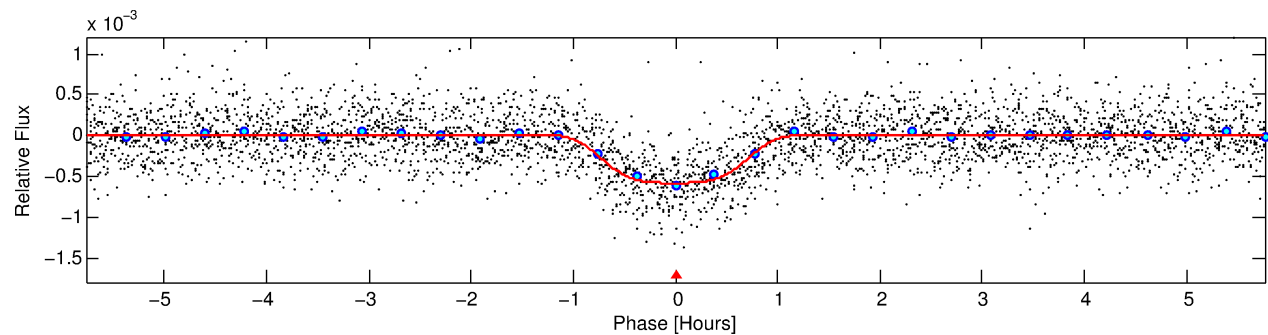
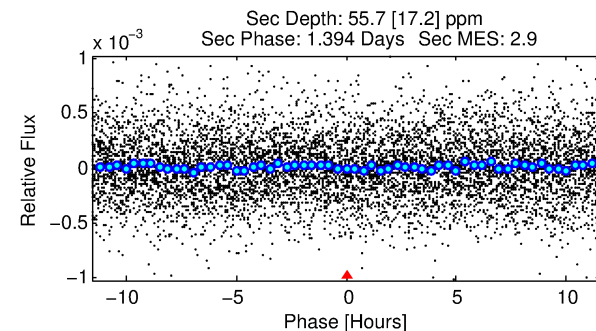
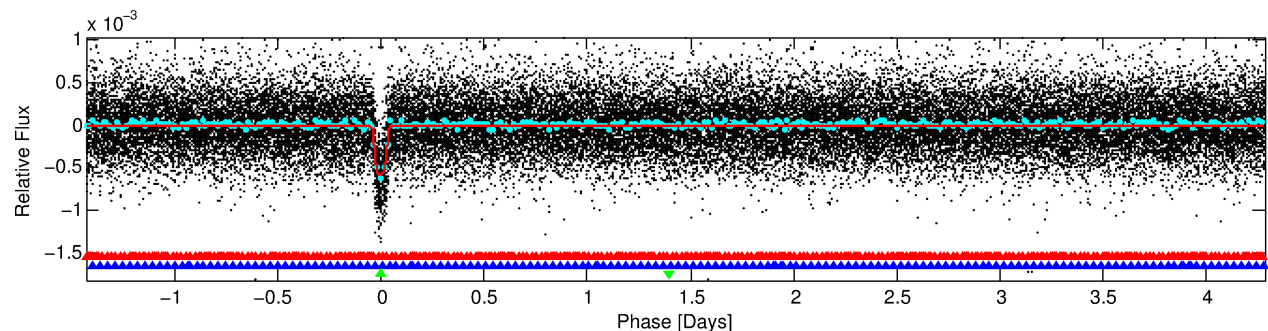
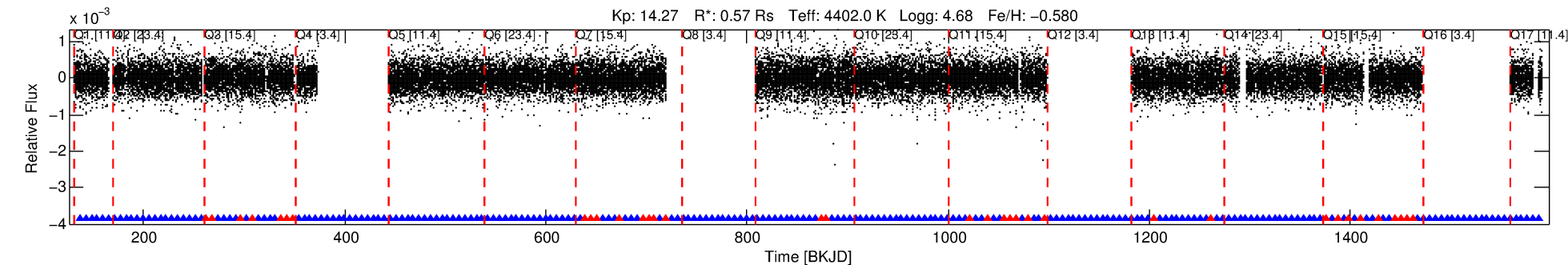
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011853878-03

No Significant Match Found

DV One-Page Summary

KIC: 11853878 Candidate: 3 of 3 Period: 5.709 d
KOI: K01833.03 Corr: 0.906



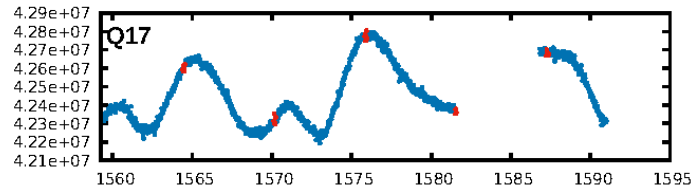
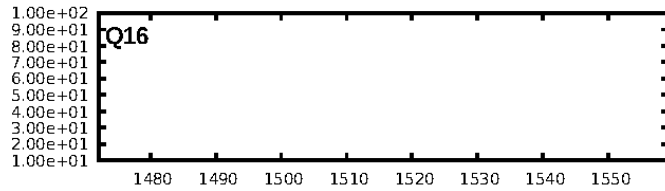
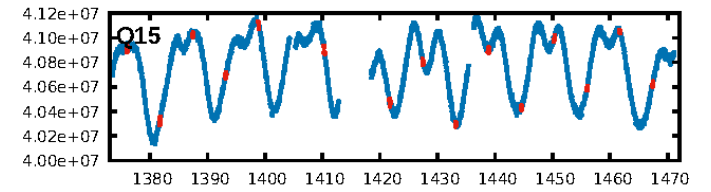
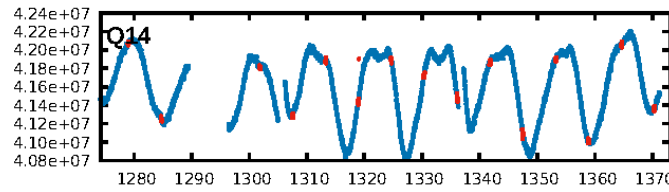
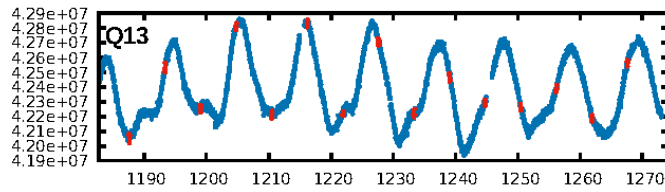
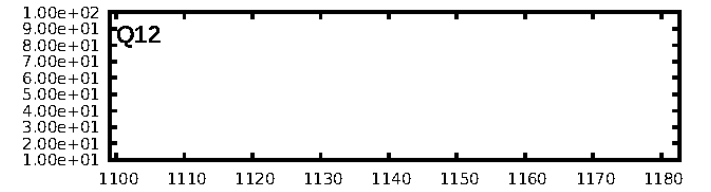
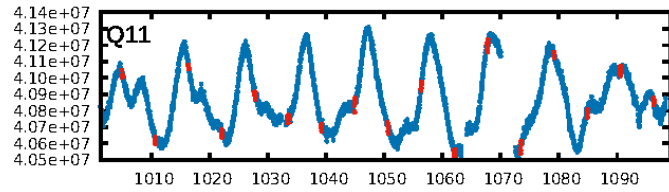
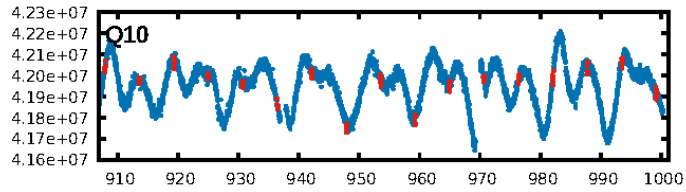
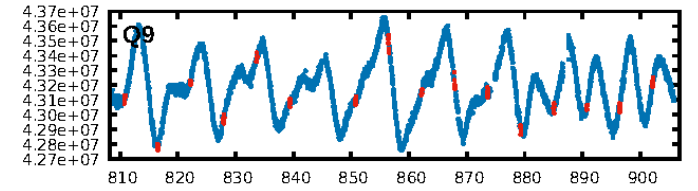
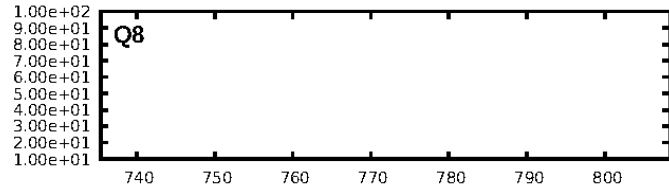
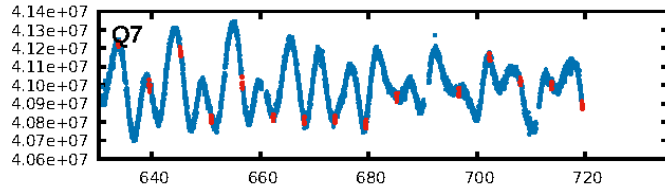
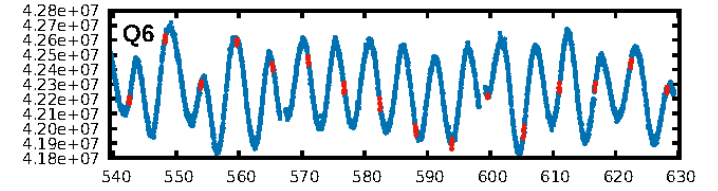
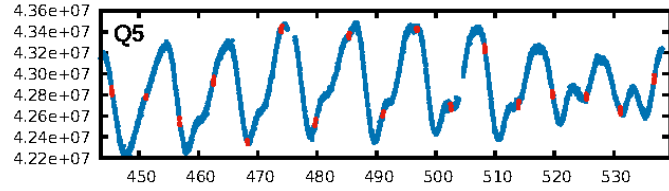
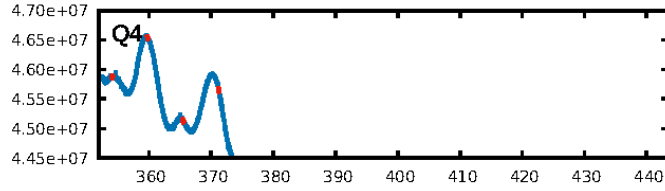
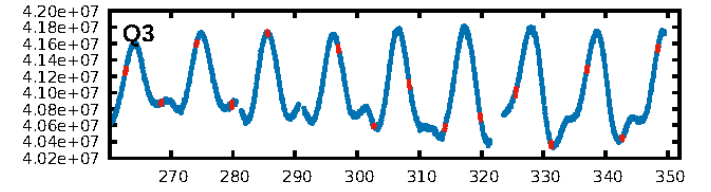
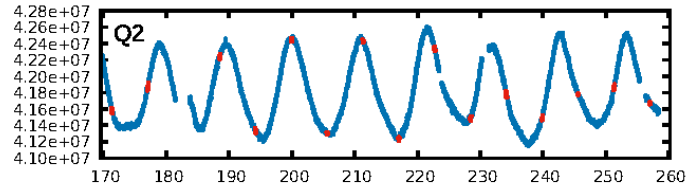
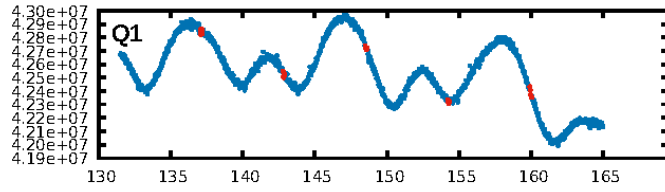
DV Fit Results:

Period = 5.70938 [0.00001] d
Epoch = 137.1259 [0.0010] BKJD
Rp/R* = 0.0290 [0.0015]
a/R* = 9.19 [1.73]
b = 0.95 [0.02]
Seff = 40.77 [6.47]
Teff = 644 [26] K
Rp = 1.81 [0.18] Re
a = 0.0520 [0.0035] AU
Ag = 25.33 [8.55] [2.84 σ]
Teffp = 2235 [196] K [8.04 σ]

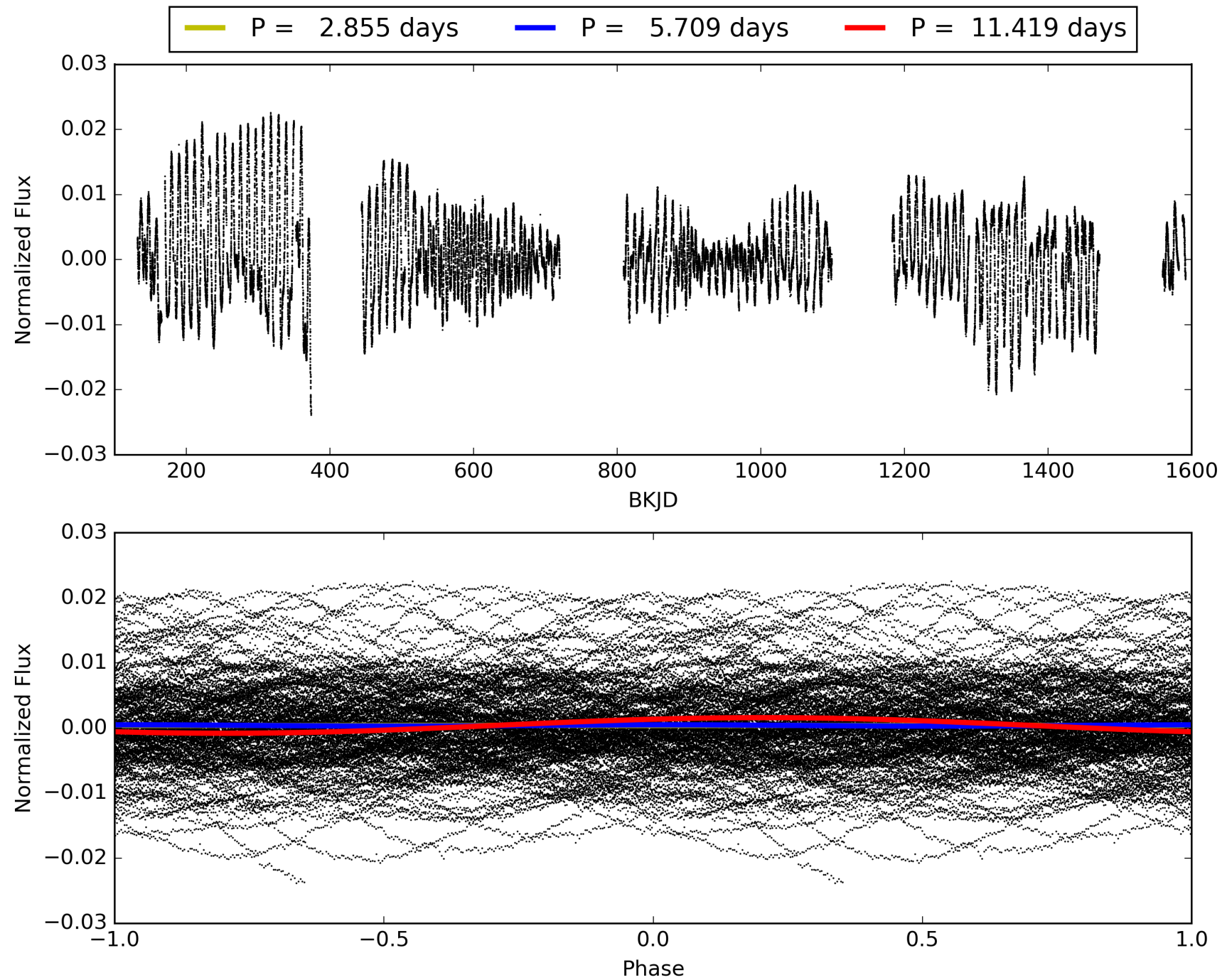
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [17.84 σ]
LongPeriod-sig: 100.0% [19.81 σ]
ModelChiSquare2-sig: 99.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.35e-173
RollingBand-fgt: 0.78 [127/162]
GhostDiagnostic-chr: 4.528
Centroid-sig: 1.3%
Centroid-so: 0.750 arcsec [1.98 σ]
OotOffset-rm: 0.521 arcsec [3.42 σ]
KicOffset-rm: 0.543 arcsec [3.46 σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 0.93 [13/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 011853878-03, PDC Light Curves

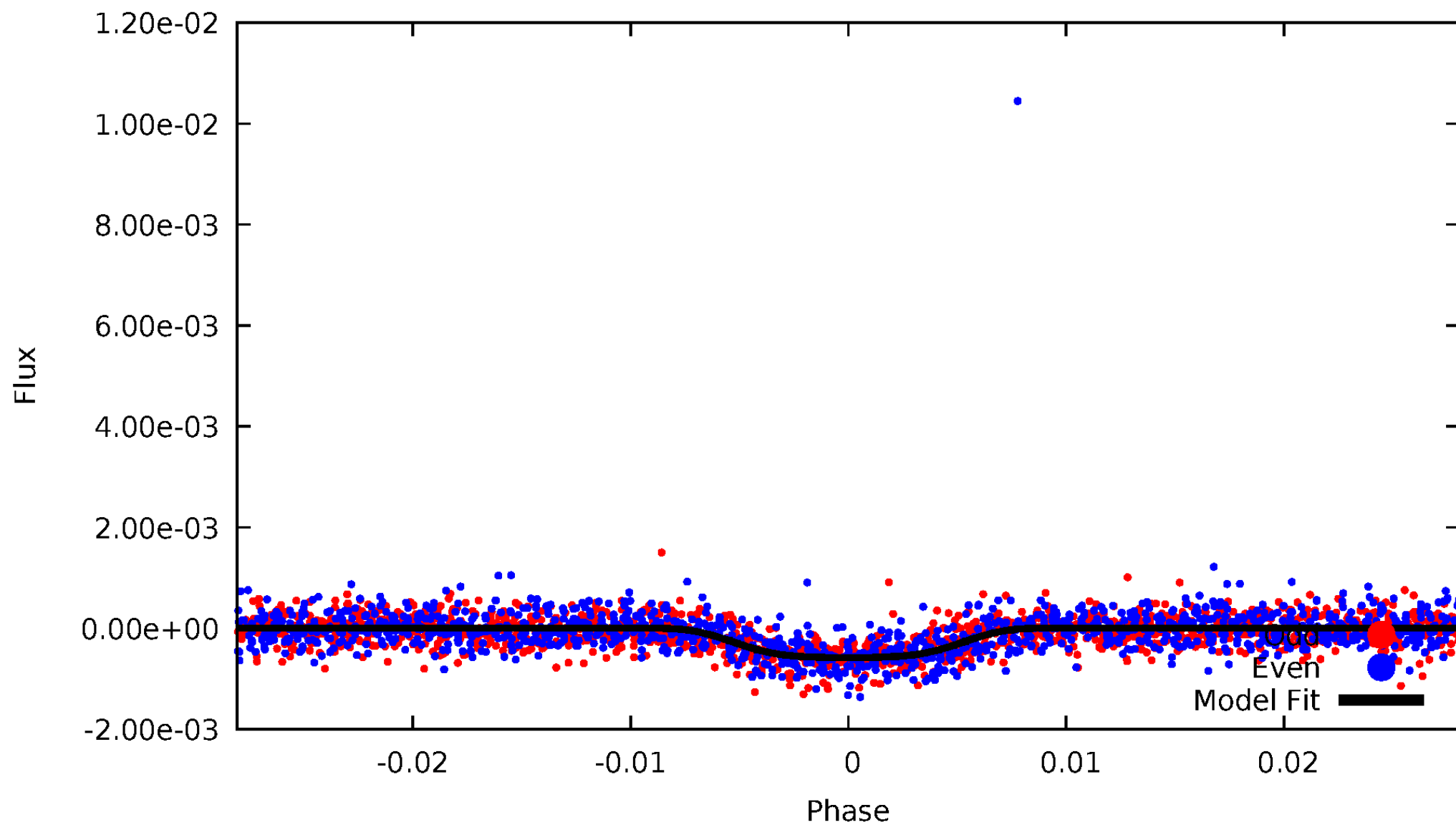


TCE 011853878-03



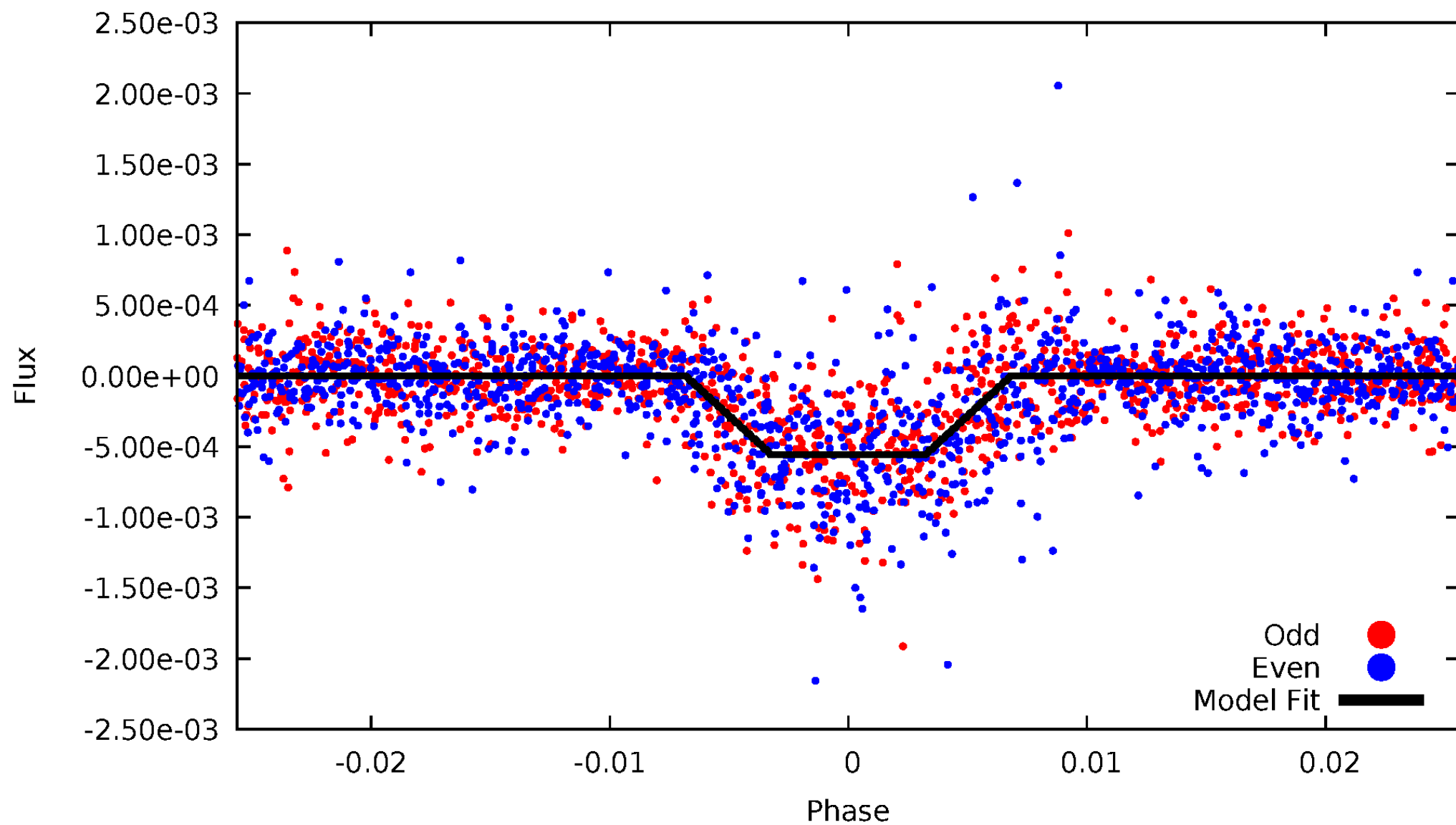
DV Odd/Even

TCE 011853878-03



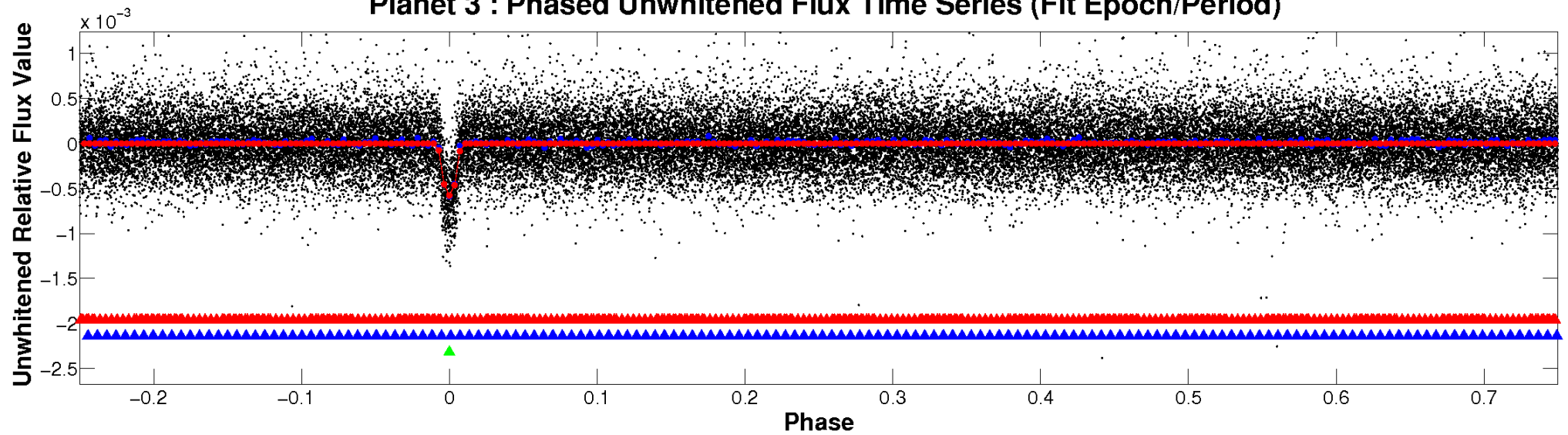
ALT Odd/Even

TCE 011853878-03

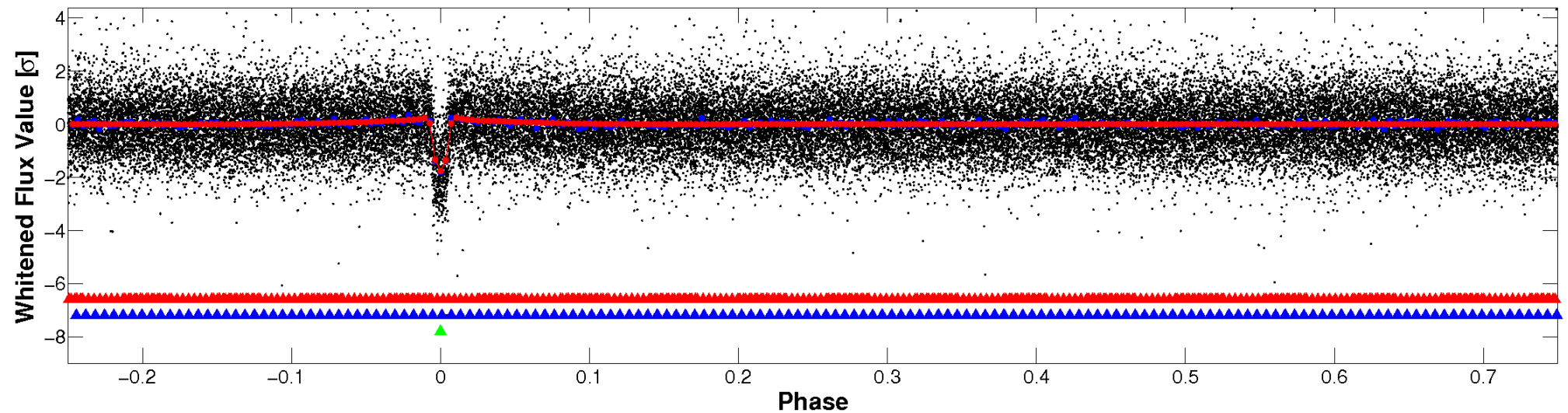


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

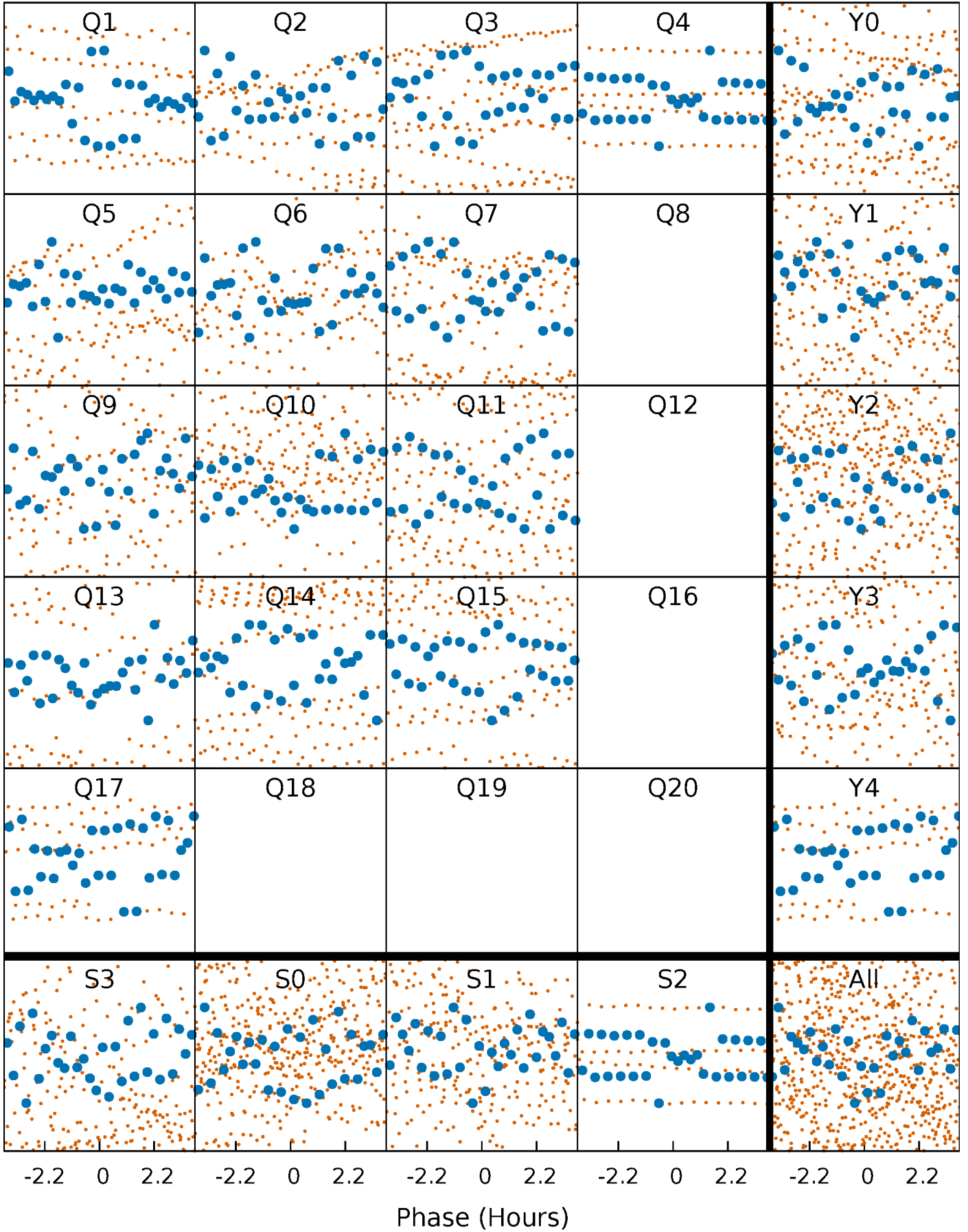


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



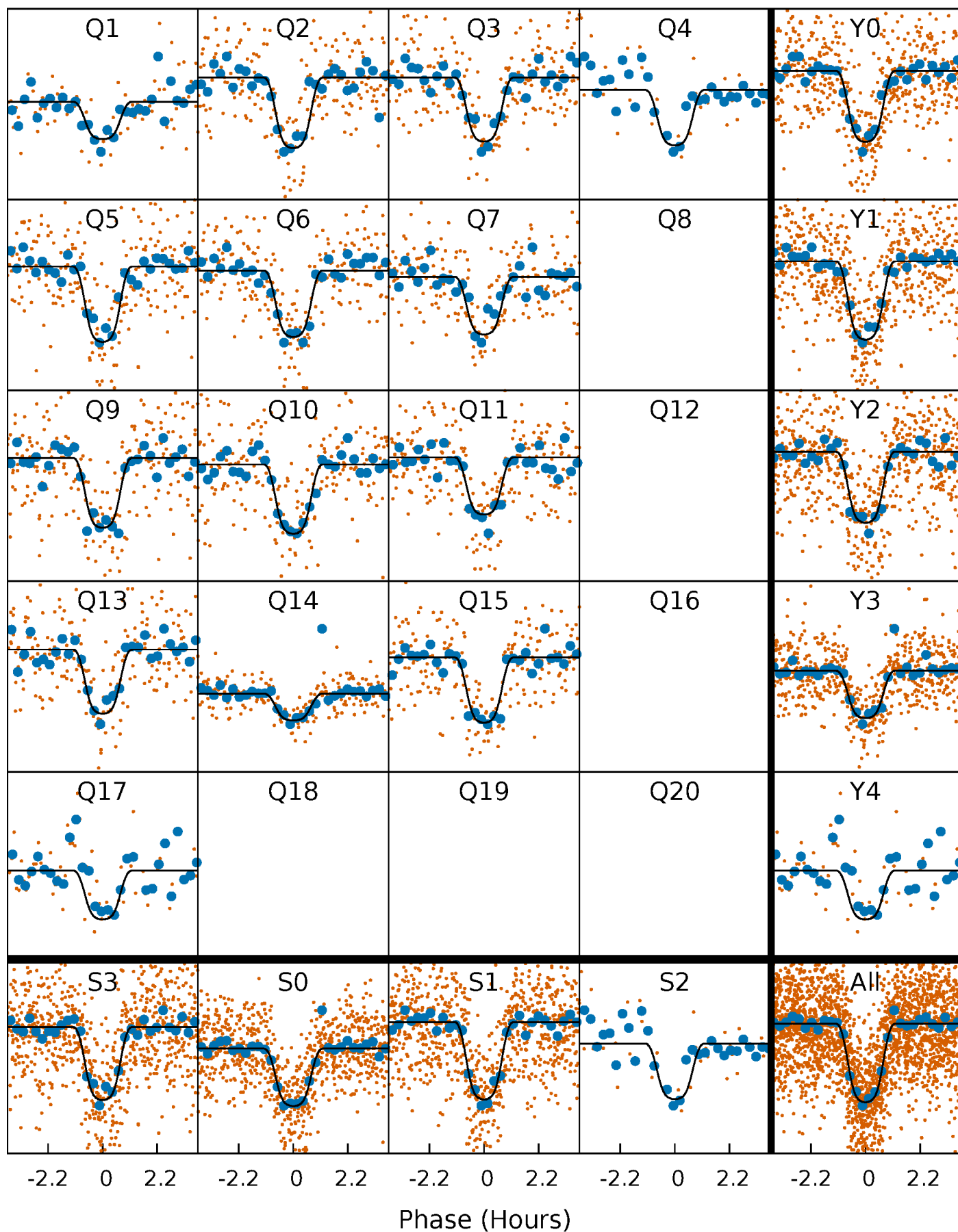
PDC Quarter-Phased Transit Curves

TCE 011853878-03 P= 5.709381 Days $T_0=137.125886$ (BKJD)



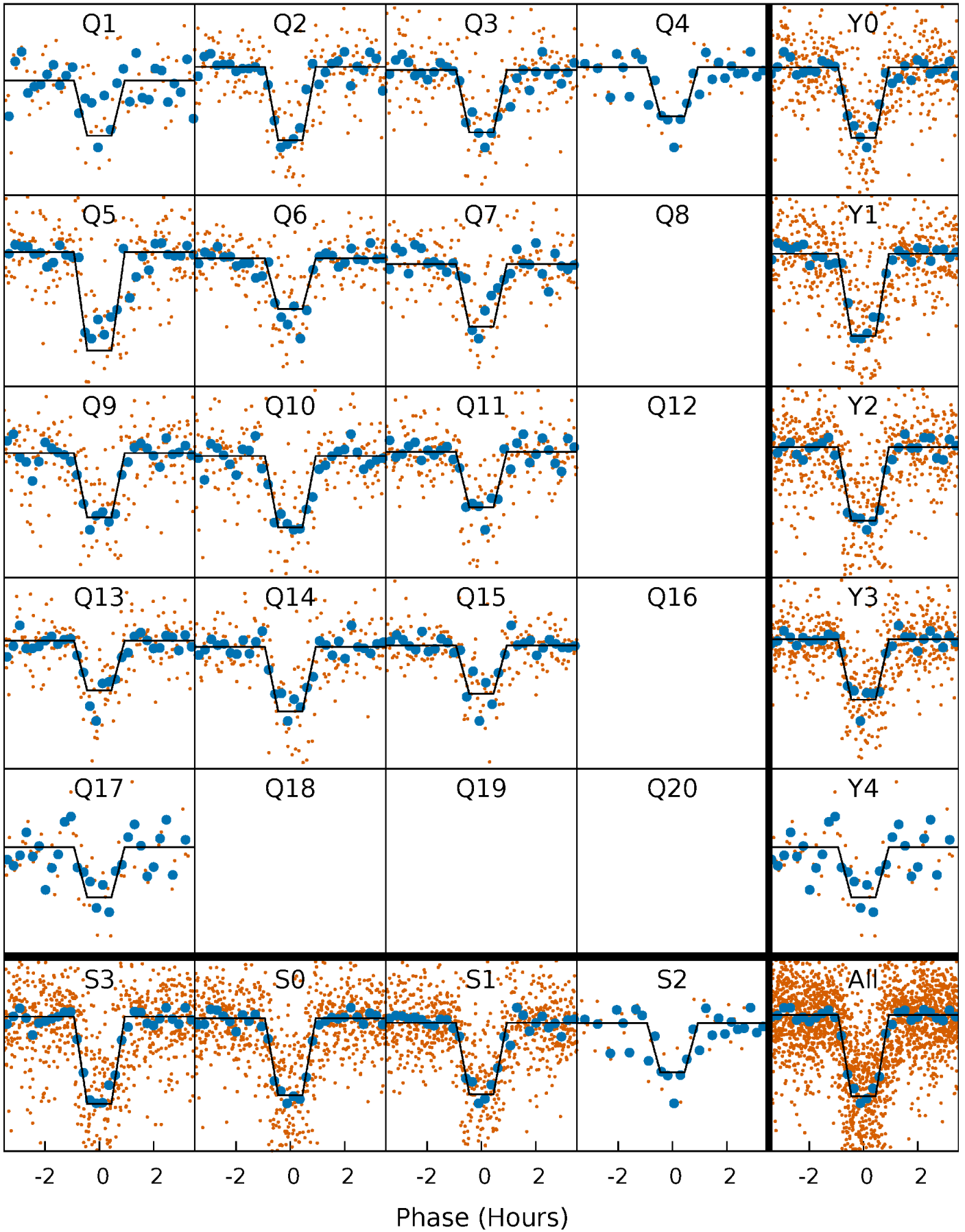
DV Quarter-Phased Transit Curves

TCE 011853878-03 P= 5.709381 Days $T_0=137.125886$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

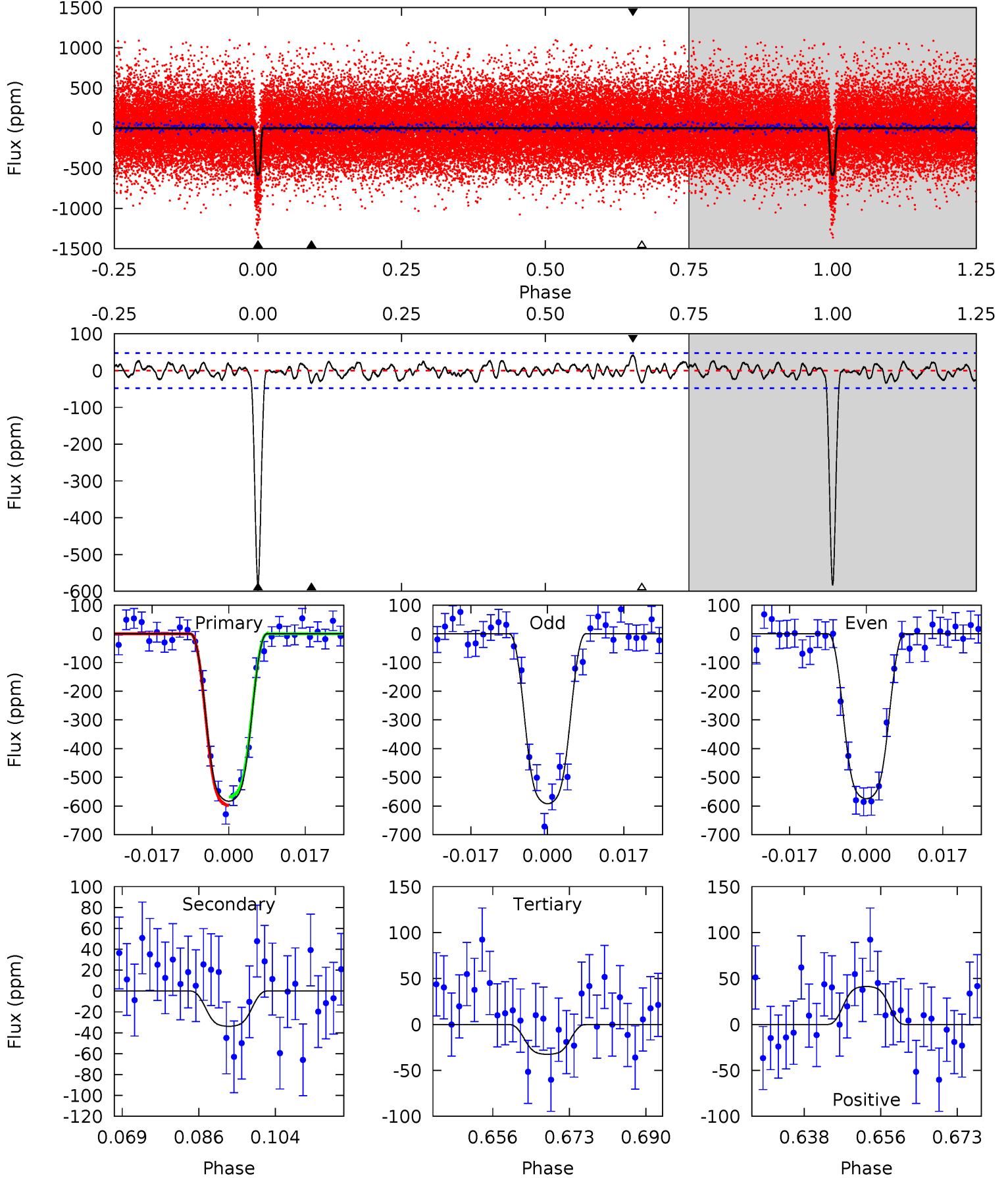
TCE 011853878-03 P= 5.709395 Days $T_0=137.123847$ (BKJD)



DV Model-Shift Uniqueness Test

011853878-03, P = 5.709381 Days, E = 131.416505 Days

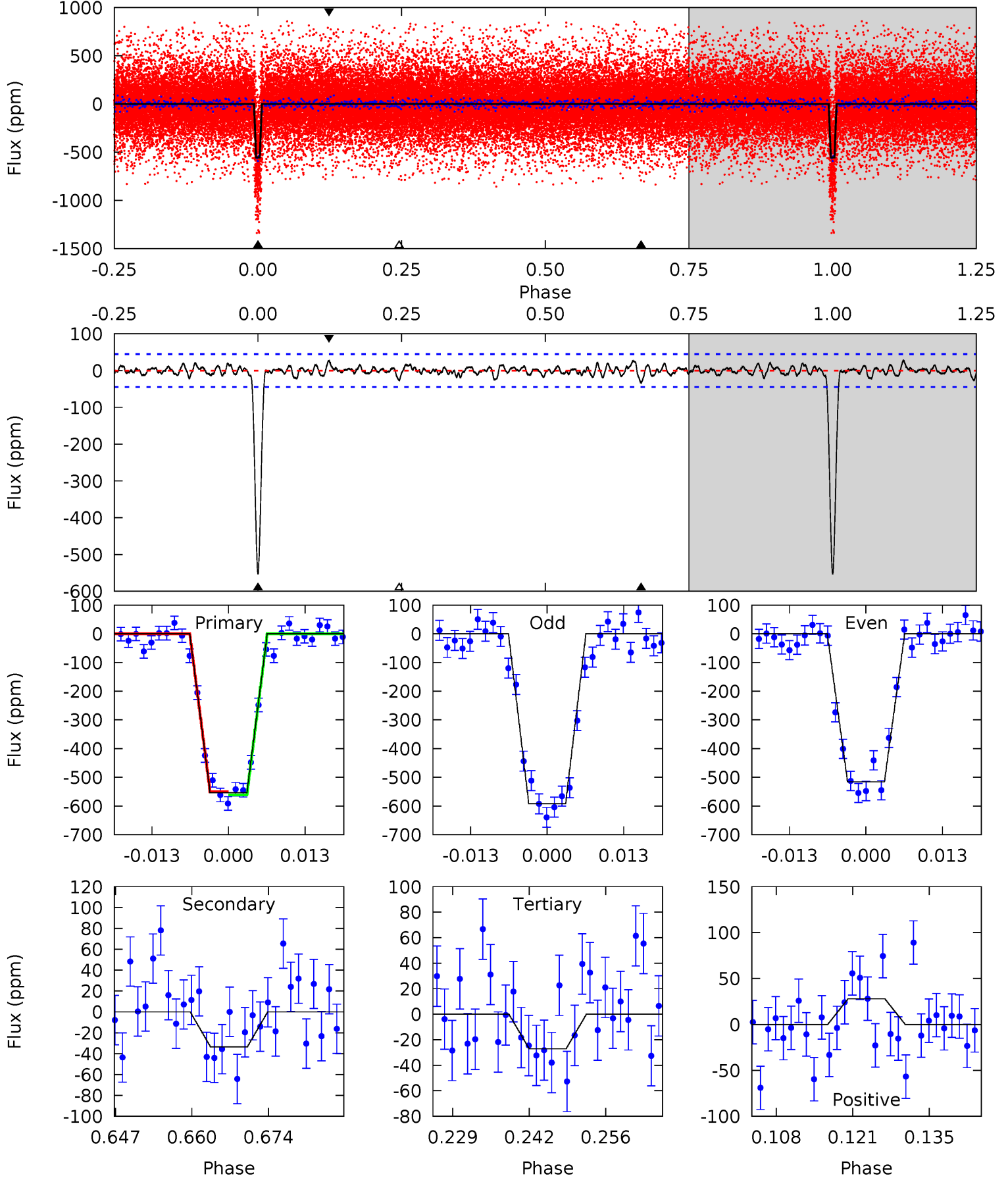
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
59.9	3.47	3.34	4.24	4.92	2.38	1.35	56.5	55.6	0.13	-0.77	0.89	0.98	0.07	1.51



Alt Model-Shift Uniqueness Test

011853878-03, P = 5.709395 Days, E = 131.414452 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
61.5	3.73	3.02	3.10	4.97	2.47	0.99	58.5	58.4	0.71	0.63	4.22	1.03	0.05	0.63



Stellar Parameters For KIC 011853878

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4402^{+118}_{-144}	$4.682^{+0.045}_{-0.036}$	$-0.580^{+0.300}_{-0.300}$	$0.572^{+0.049}_{-0.049}$	$0.575^{+0.058}_{-0.042}$	$4.314^{+0.970}_{-0.660}$
	+3%/-3%	+1%/-1%	+52%/-52%	+9%/-9%	+10%/-7%	+22%/-15%
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 011853878-03 / KOI 1833.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-34 ± 10	$1.81^{+0.13}_{-0.13}$	896^{+31}_{-33}	2654^{+110}_{-124}	15^{+5}_{-4}
Alt.	-34 ± 9	$1.47^{+0.12}_{-0.12}$	898^{+28}_{-32}	2811^{+118}_{-129}	23^{+8}_{-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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

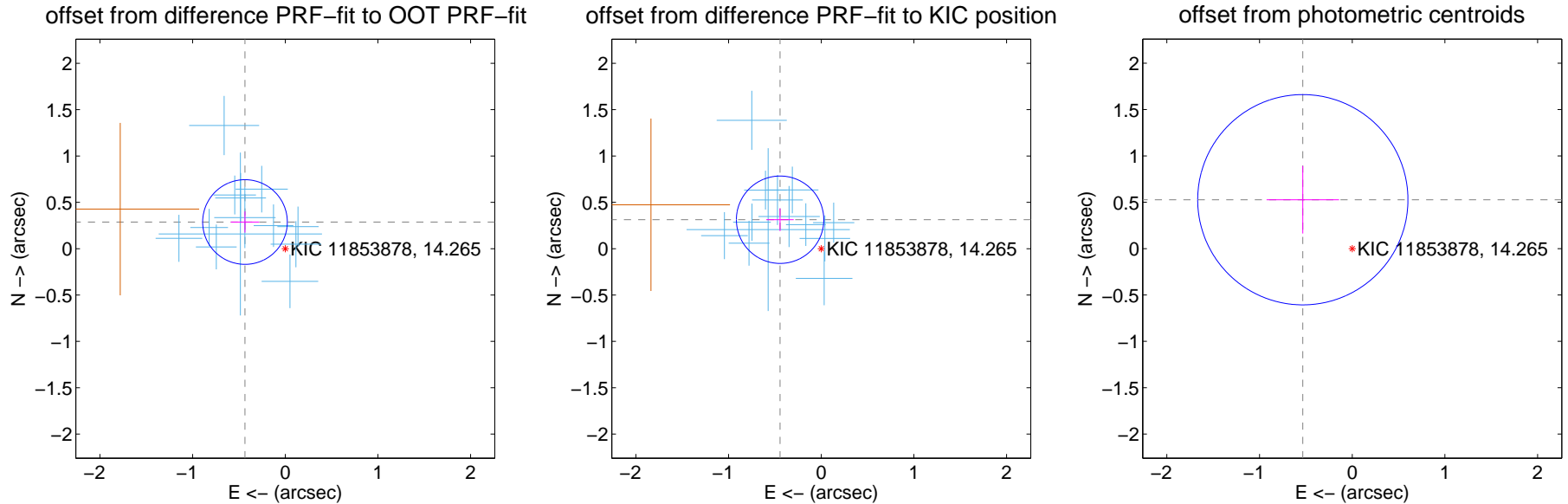
DV Centroid Data

Supplemental centroid analysis for 011853878-03. Kepler magnitude: 14.27. Transit SNR 34.54

There are 13 quarters with good PRF difference image offsets

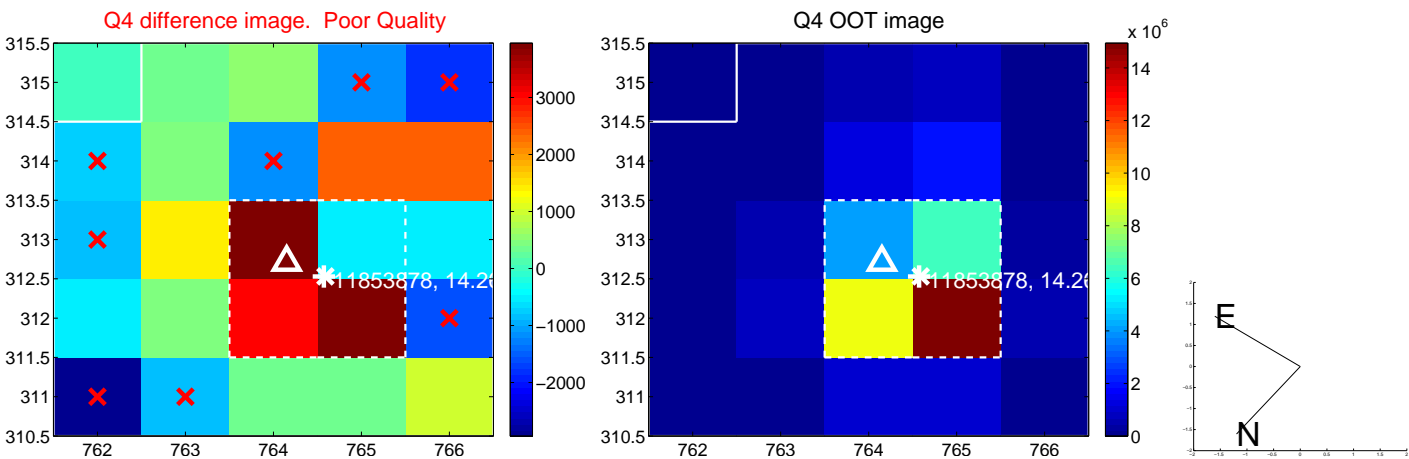
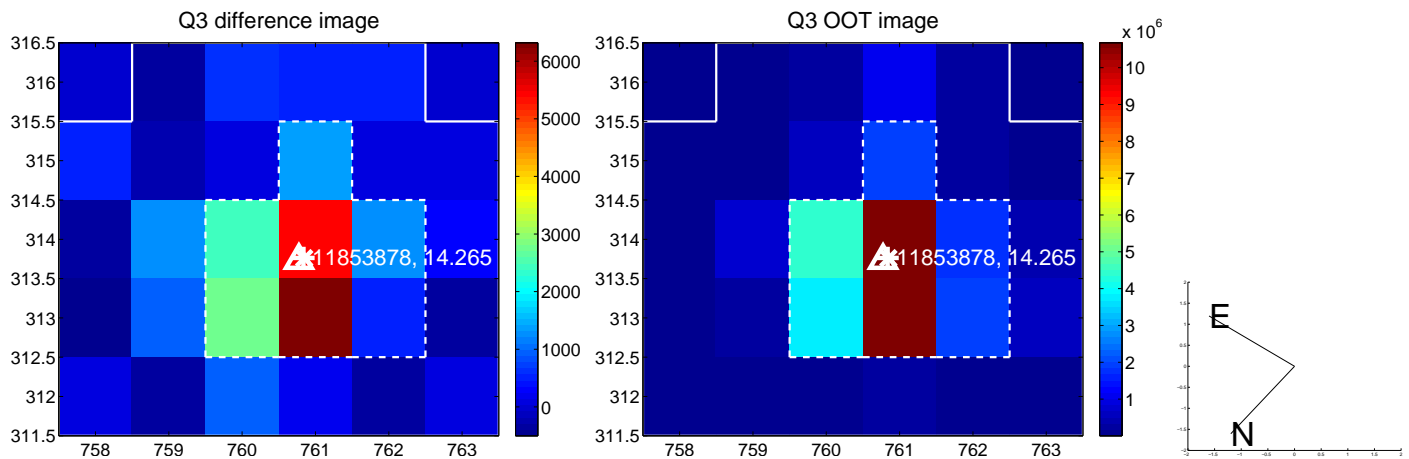
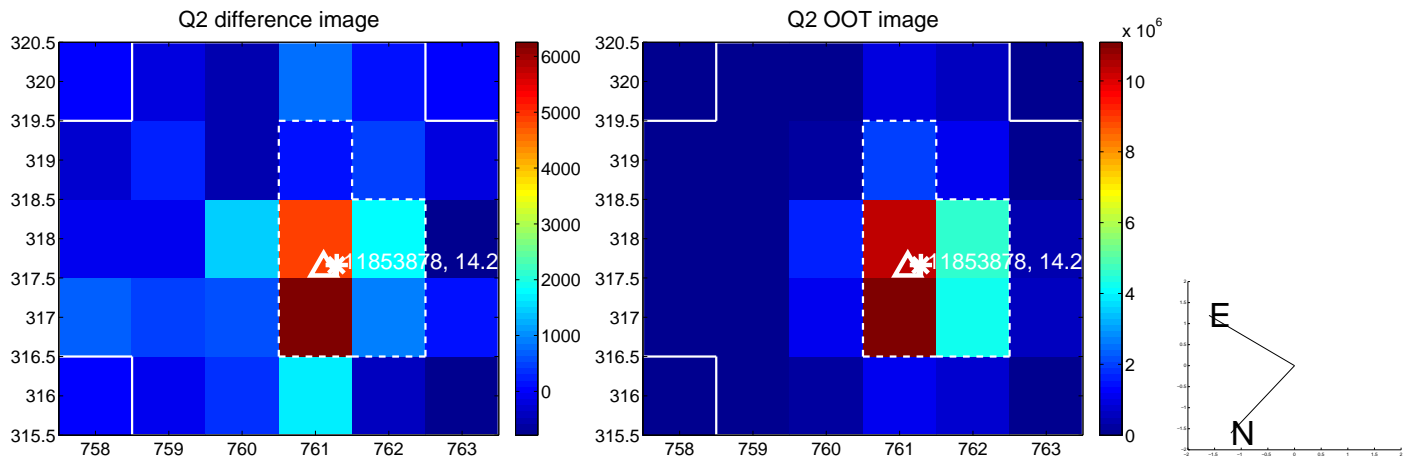
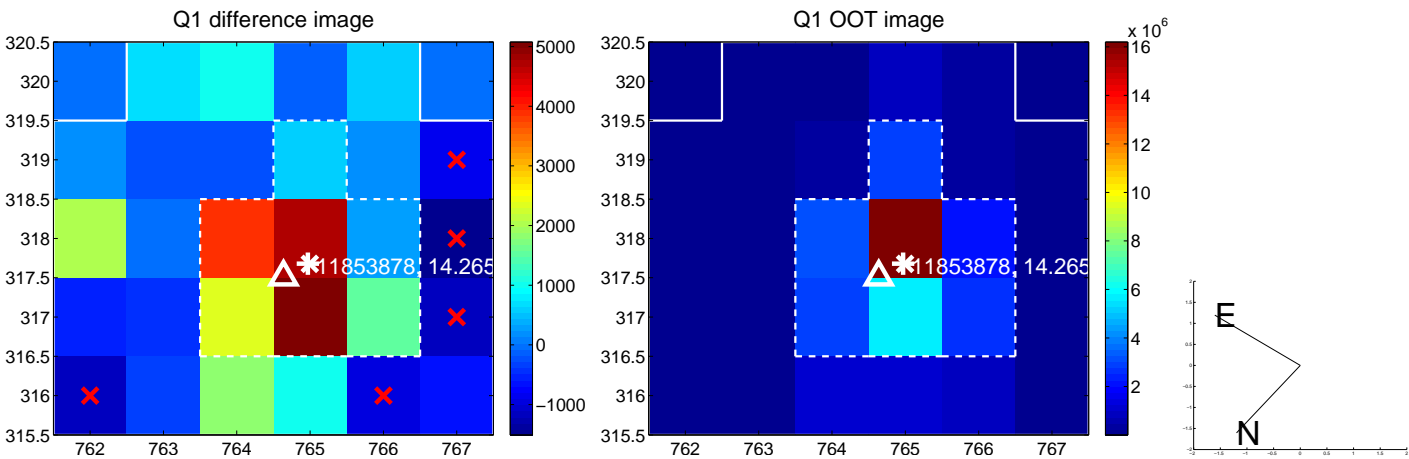
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.521 ± 0.152	3.42	0.435 ± 0.153	0.288 ± 0.114
PRF-fit source offset from KIC position	0.543 ± 0.157	3.46	0.444 ± 0.148	0.313 ± 0.122
photometric centroid source offset	0.75 ± 0.38	1.98	0.53 ± 0.39	0.53 ± 0.36

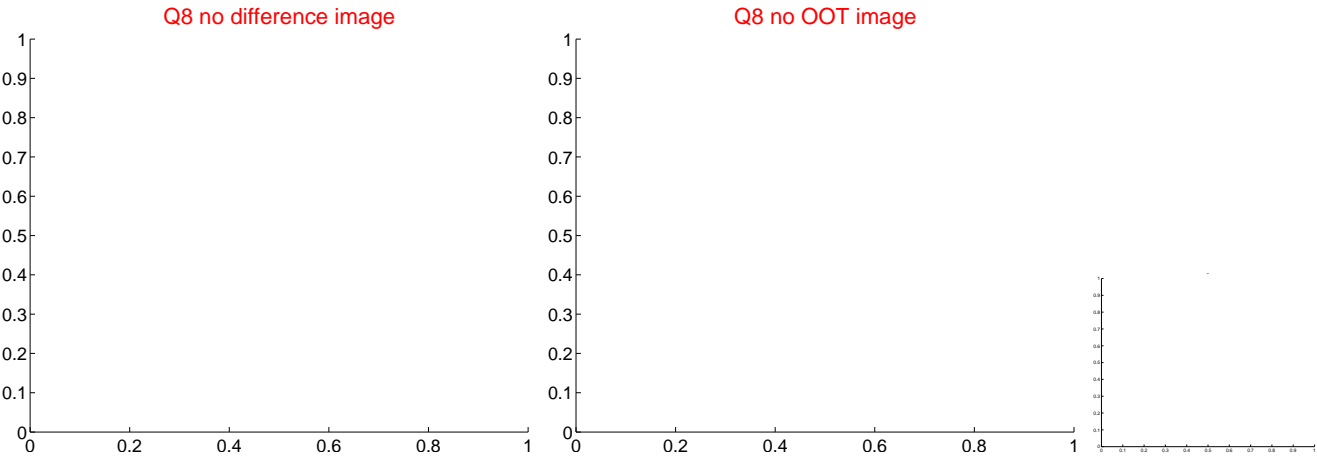
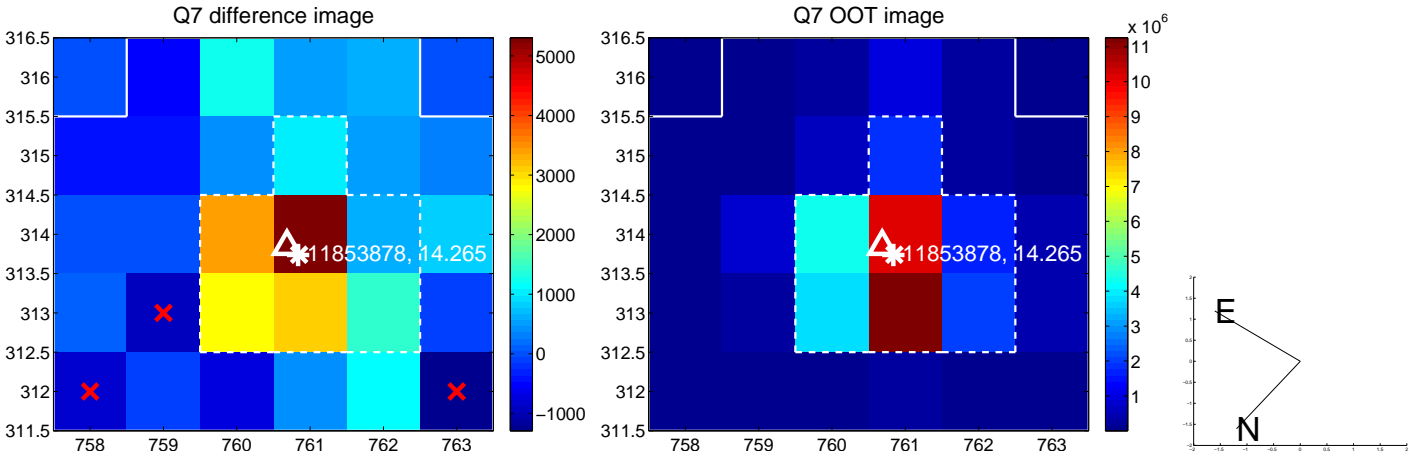
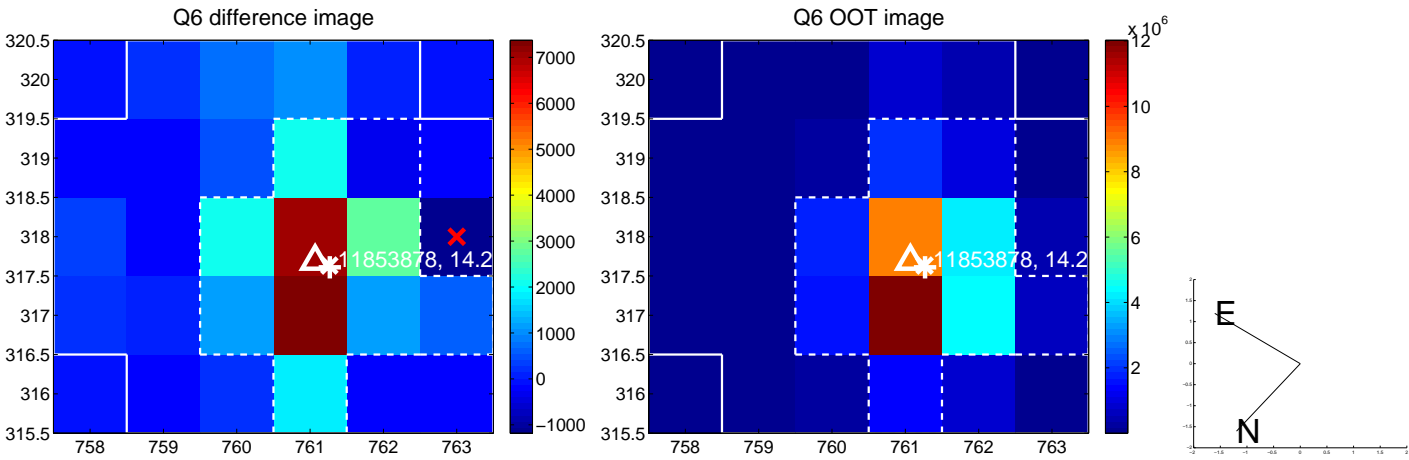
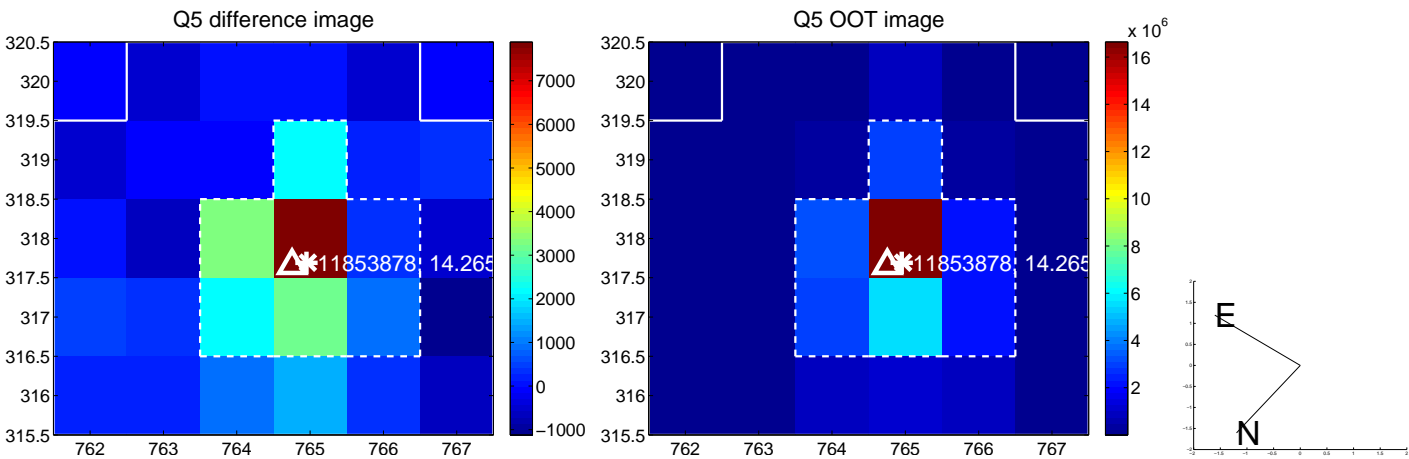


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

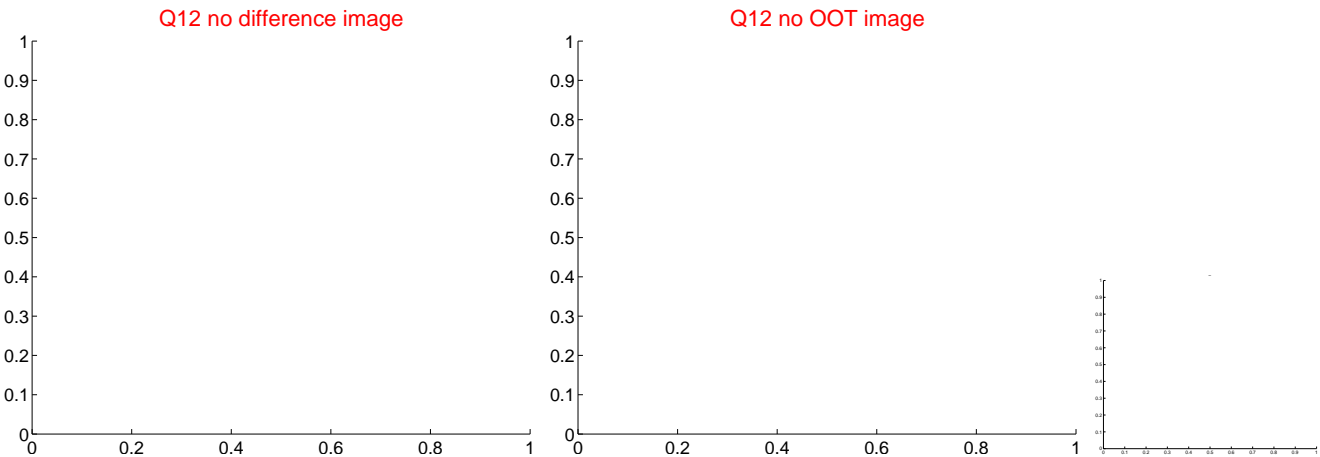
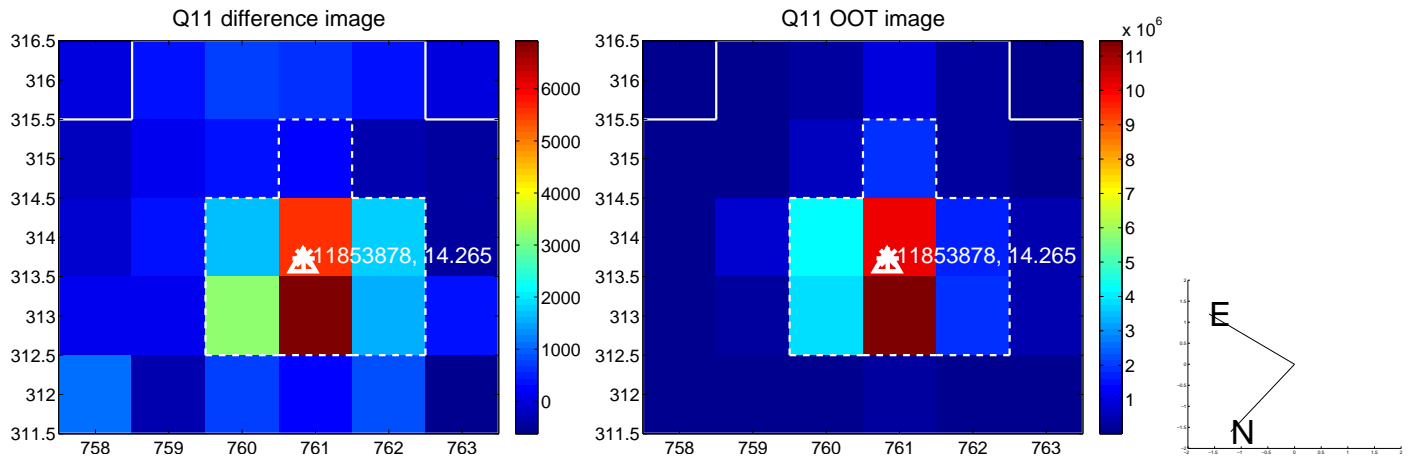
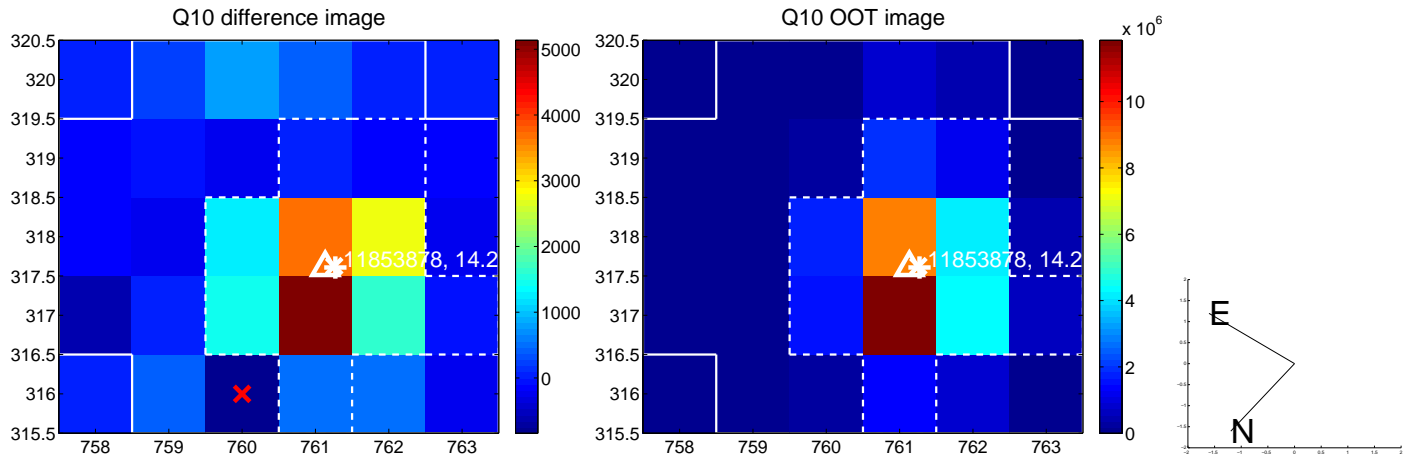
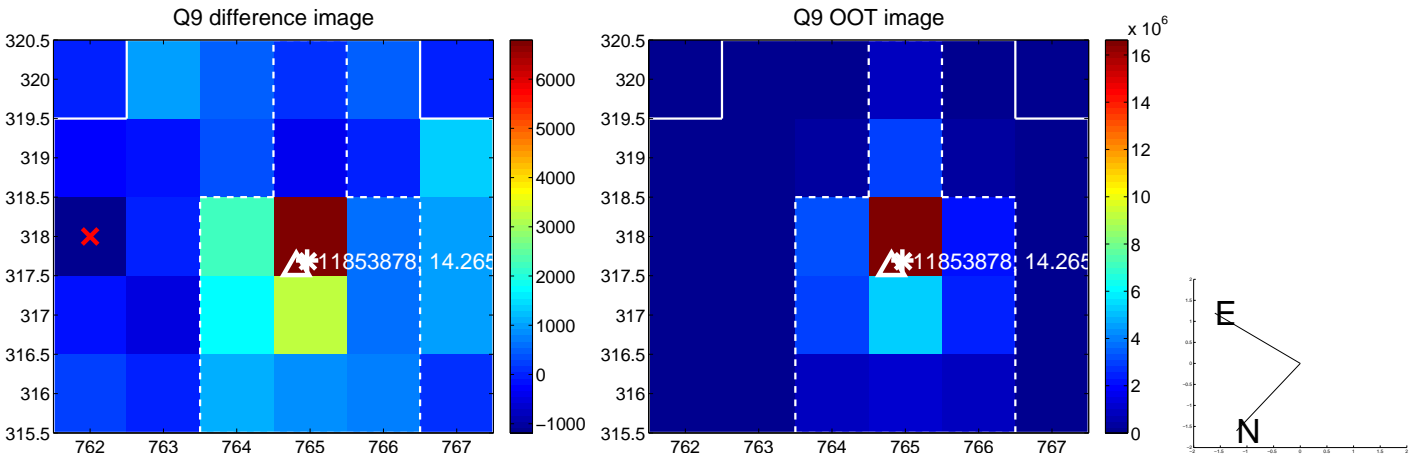
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



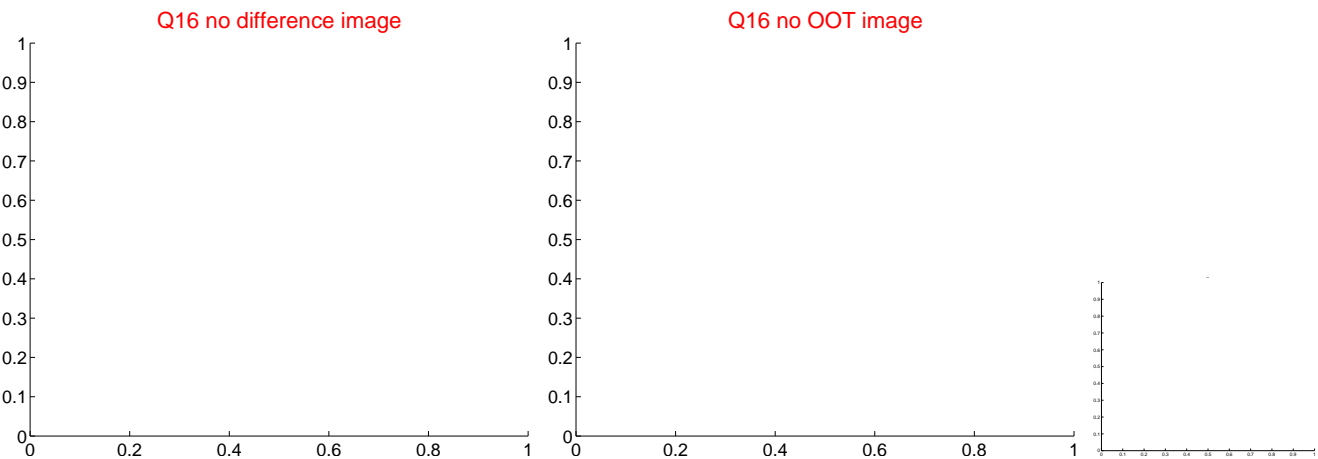
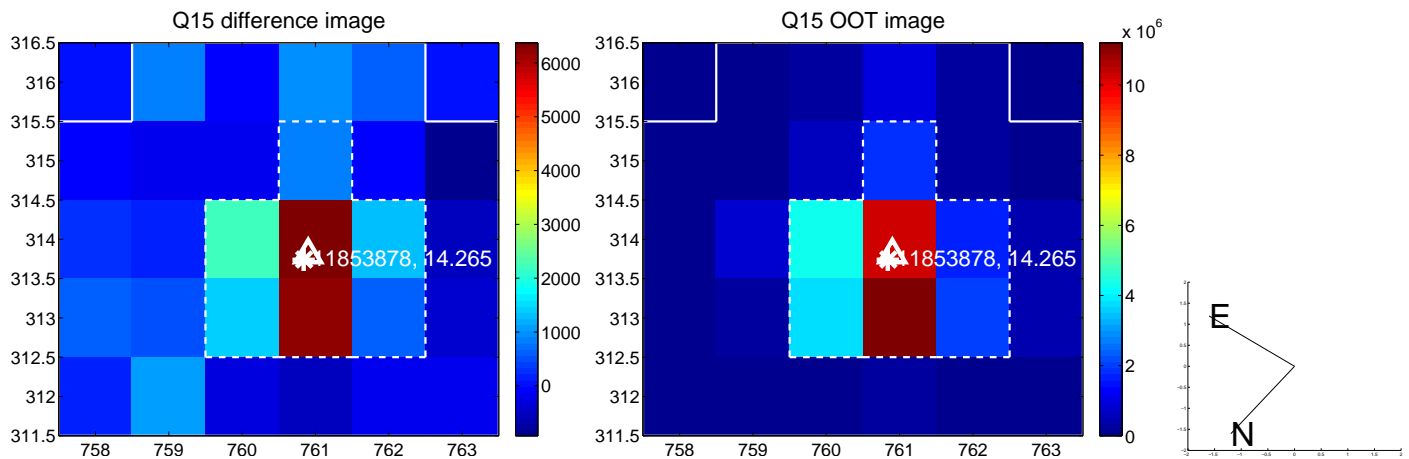
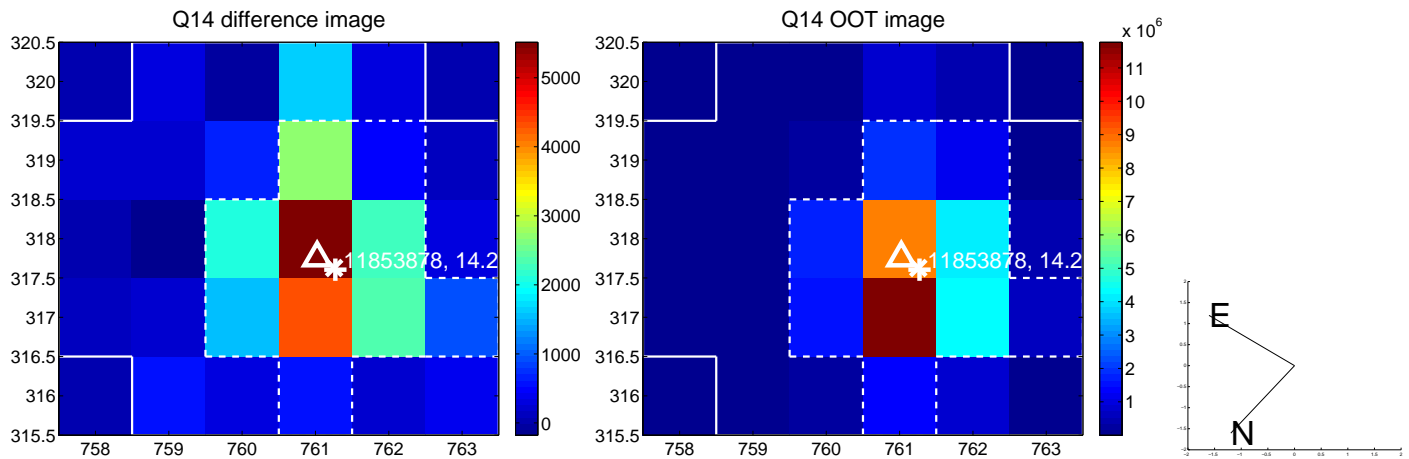
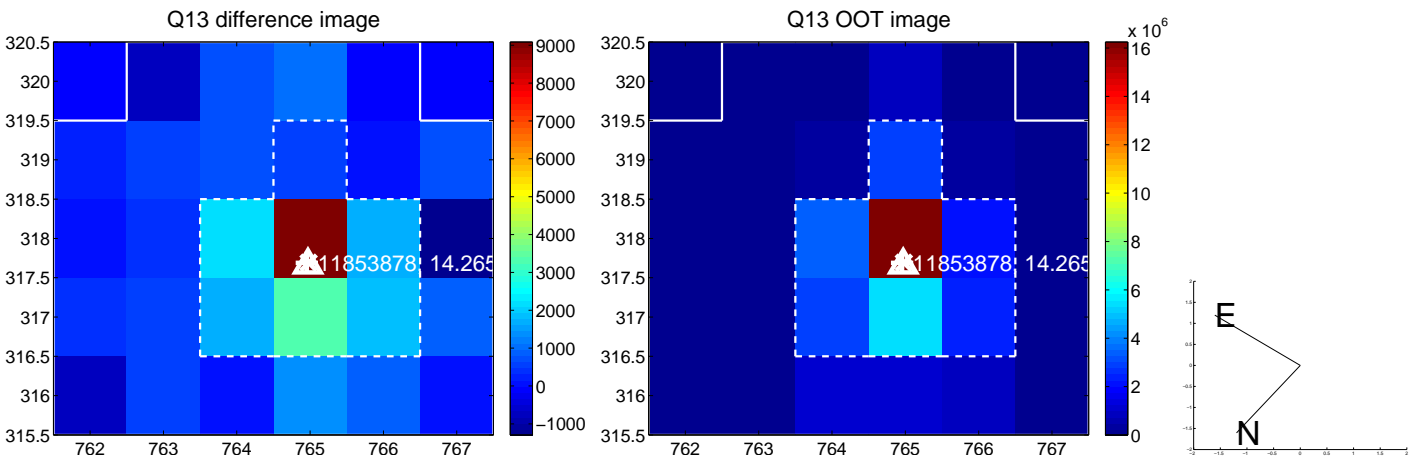
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



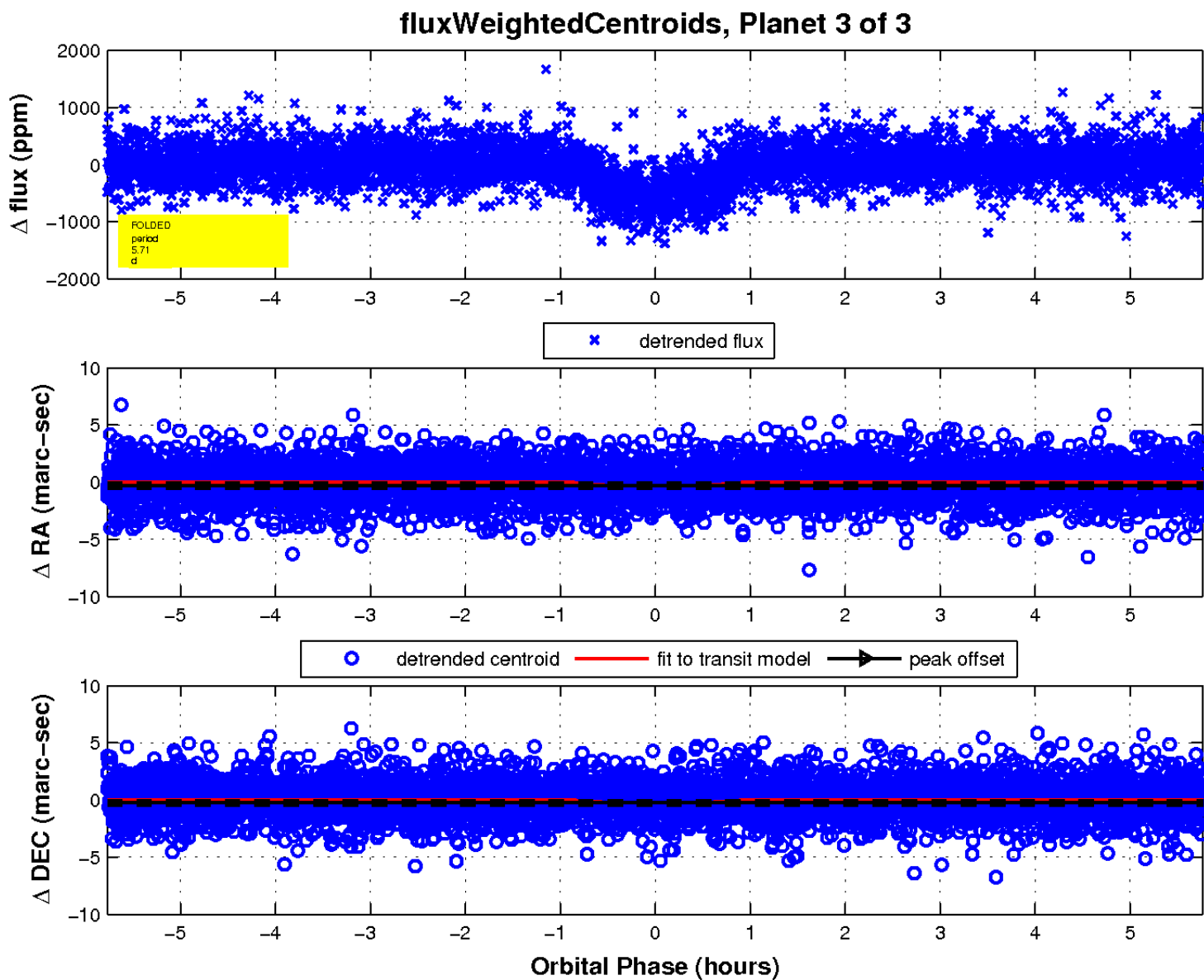
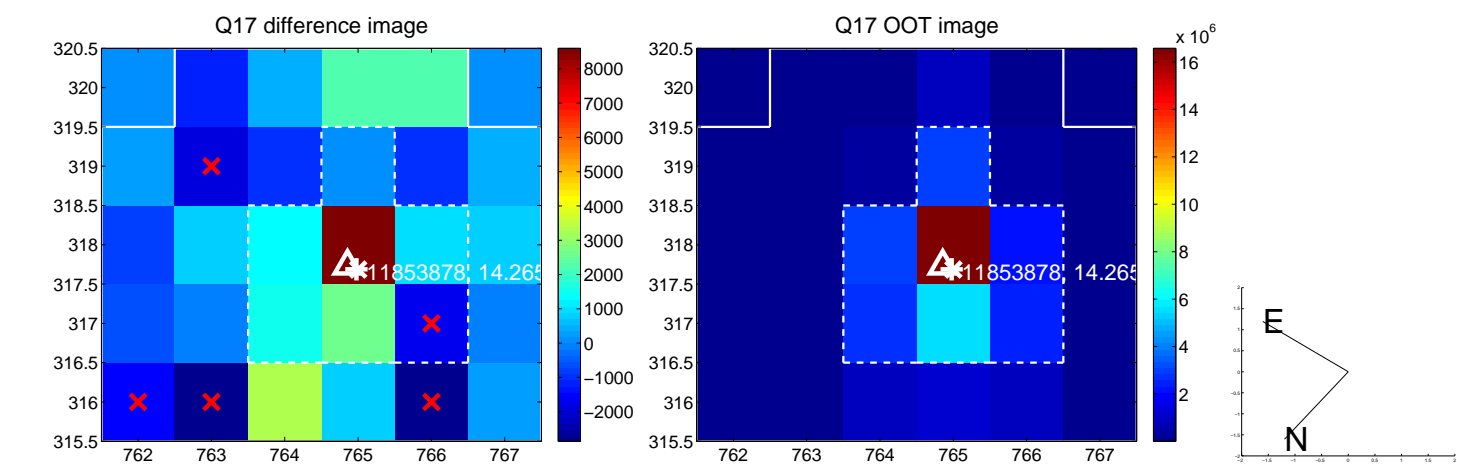
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

