

KIC 005866724

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})
005866724-01	OBS	0085.01	5.859940	132.039903	319.3	4.245	149.3	153.2	1.42	6181	2.97	571.41
005866724-02	OBS	0085.02	2.154901	133.501496	84.4	3.221	61.7	68.0	1.42	6181	1.54	2168.87
005866724-03	OBS	0085.03	8.131224	137.991471	106.6	4.393	41.2	44.0	1.42	6181	1.73	369.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005866724-01	OBS	PC	1.00	0	0	0	0	CENT_SATURATED
005866724-02	OBS	PC	1.00	0	0	0	0	CENT_SATURATED
005866724-03	OBS	PC	1.00	0	0	0	0	CENT_SATURATED

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.

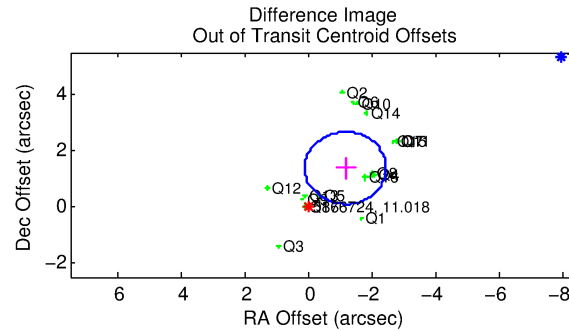
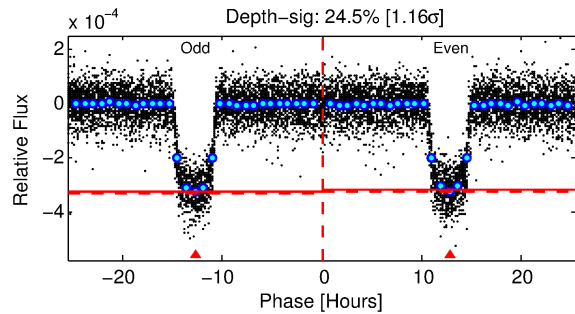
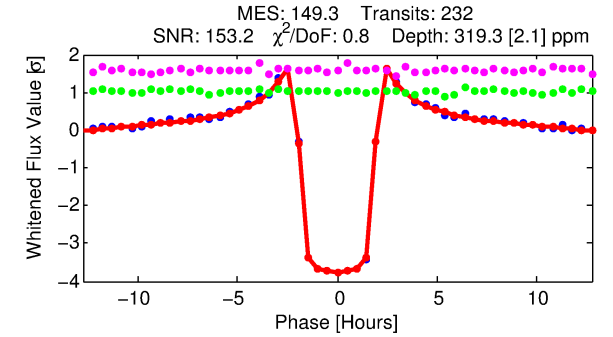
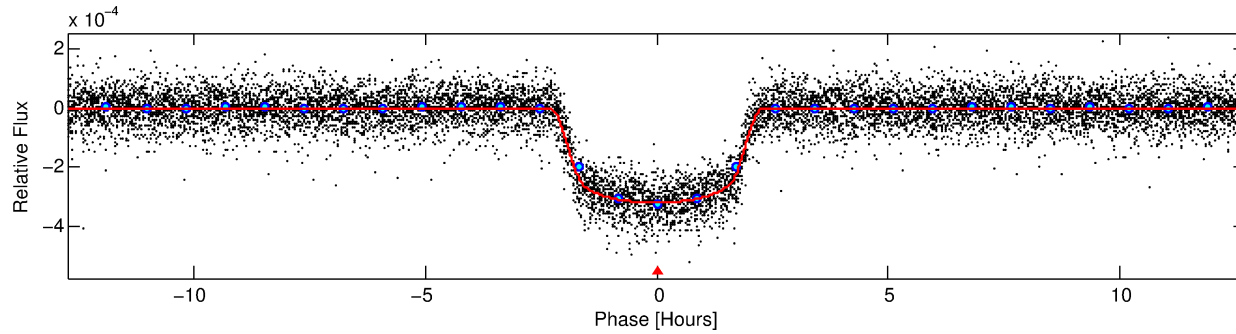
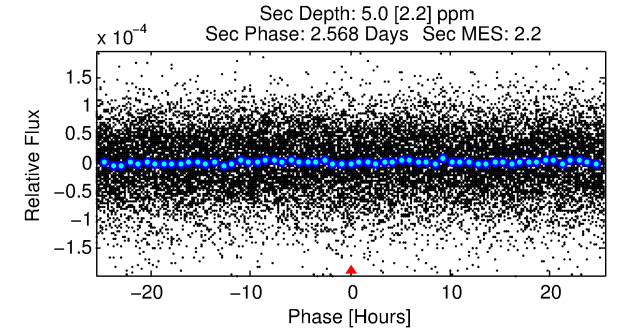
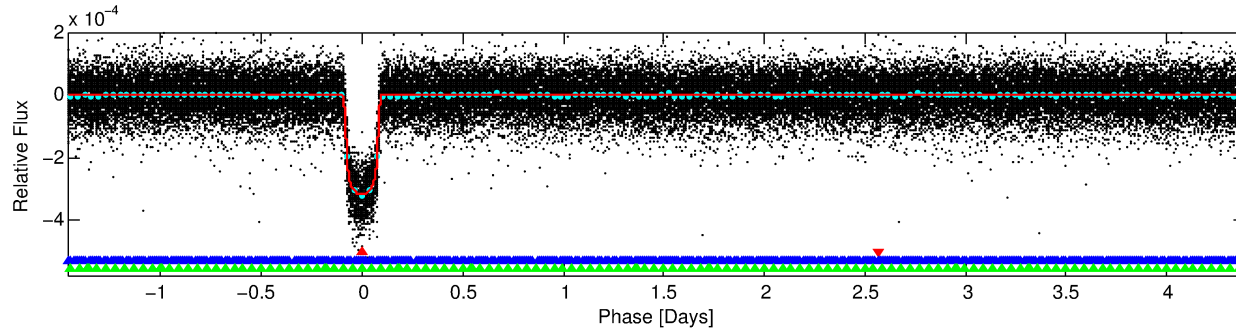
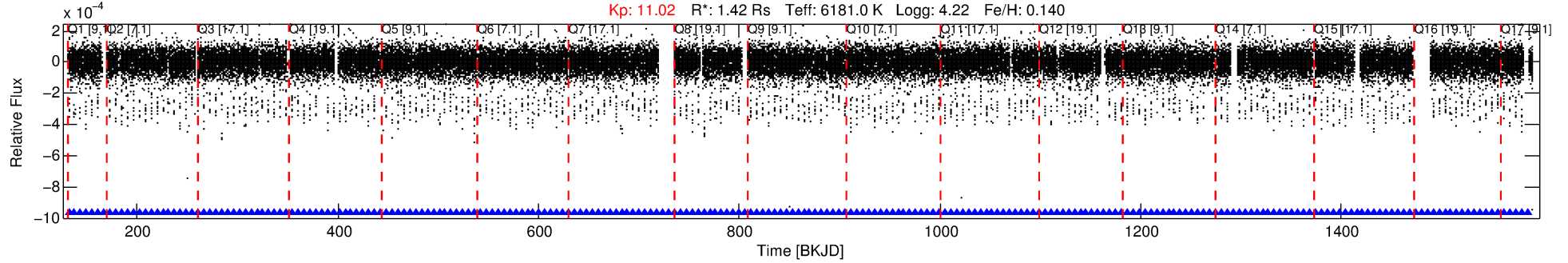
Ephemeris Match Information For 005866724-01

No Significant Match Found

DV One-Page Summary

KIC: 5866724 Candidate: 1 of 3 Period: 5.860 d
KOI: K00085.01 Name: Kepler-65c Corr: 0.971

Kp: 11.02 R*: 1.42 Rs Teff: 6181.0 K Logg: 4.22 Fe/H: 0.140



DV Fit Results:

Period = 5.85994 [0.00000] d
Epoch = 132.0399 [0.0003] BKJD
Rp/R* = 0.0191 [0.0003]
a/R* = 5.35 [0.38]
b = 0.89 [0.02]
Seff = 571.41 [48.64]
Teq = 1247 [27] K
Rp = 2.97 [0.18] Re
a = 0.0681 [0.0032] AU
Ag = 1.44 [0.64] [0.70σ]
Teffp = 2113 [233] K [3.70σ]

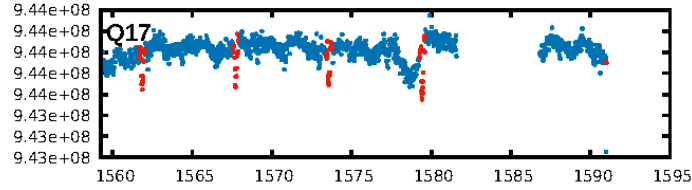
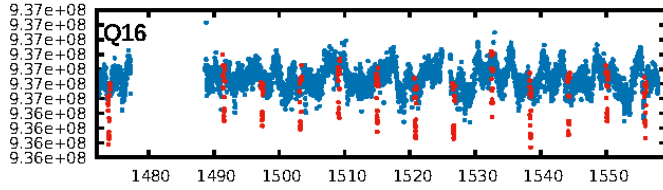
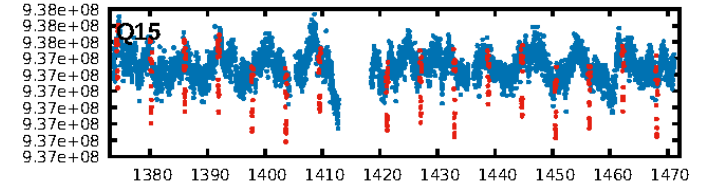
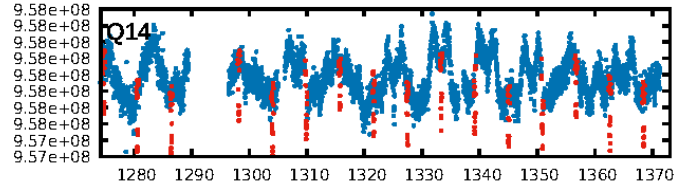
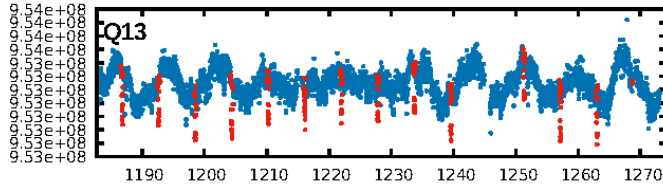
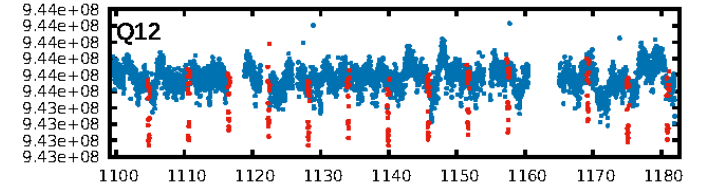
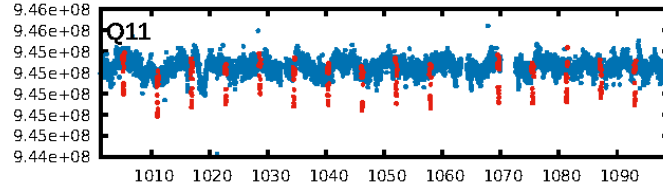
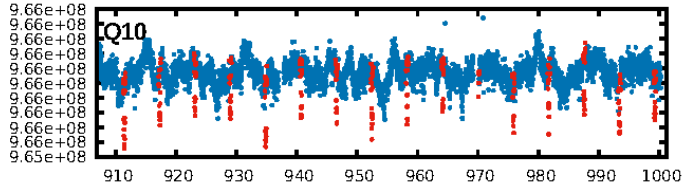
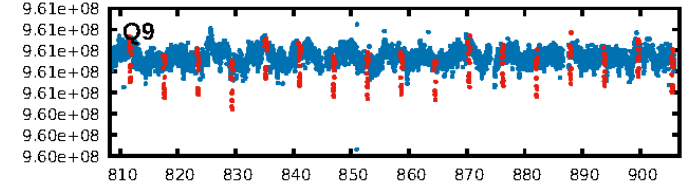
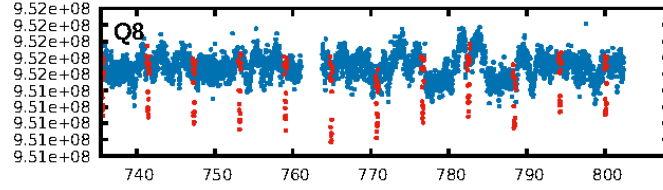
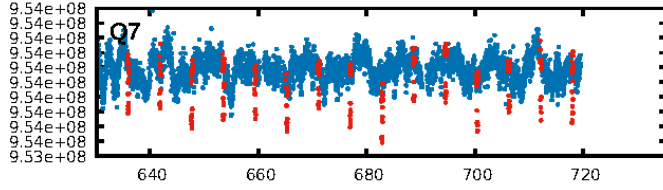
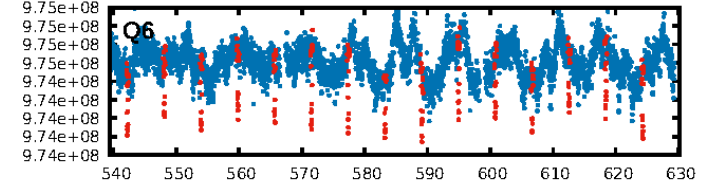
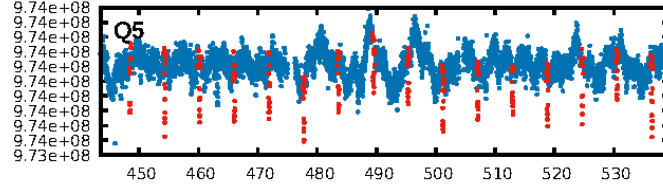
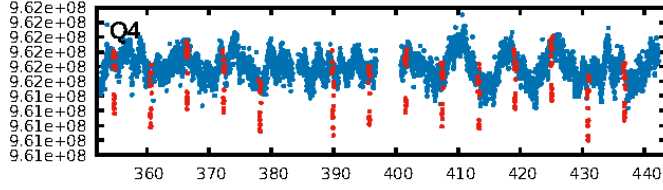
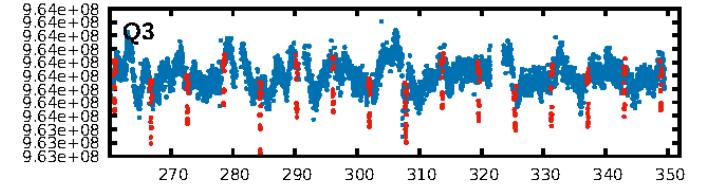
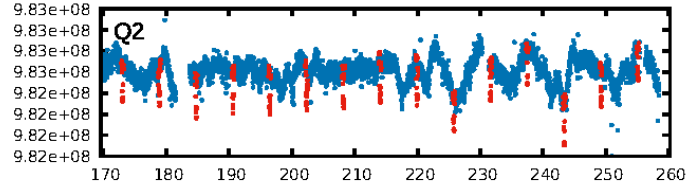
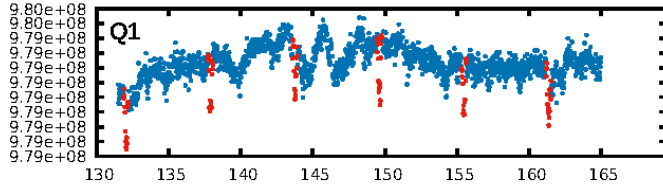
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [16.69σ]
LongPeriod-sig: 100.0% [8.92σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [222/222]
GhostDiagnostic-chr: 10.02
Centroid-sig: 0.0%
Centroid-so: 0.099 arcsec [1.74σ]
OotOffset-rm: 1.796 arcsec [4.20σ]
KicOffset-rm: 1.632 arcsec [3.72σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 1.00 [17/17]

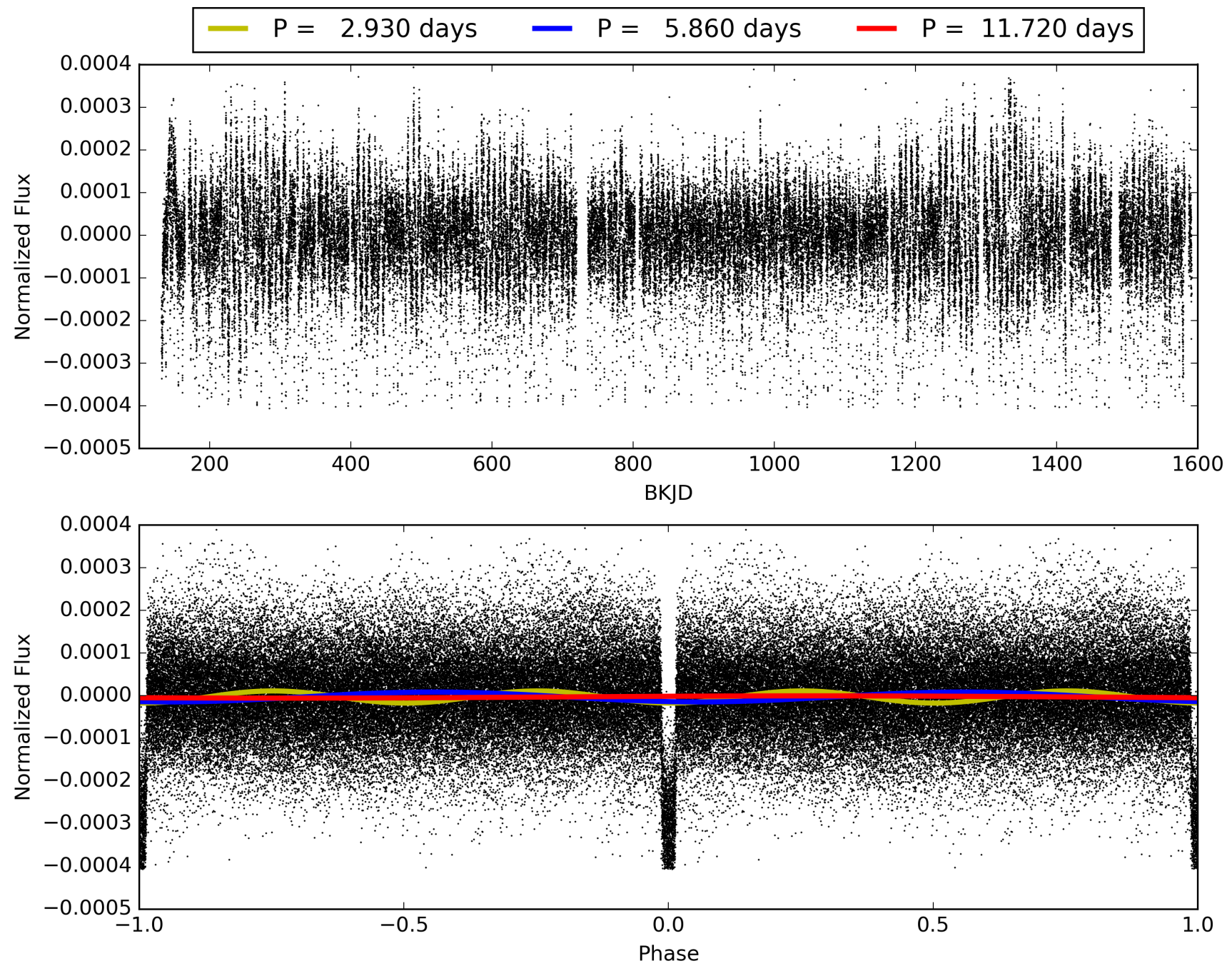
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005866724-01, PDC Light Curves

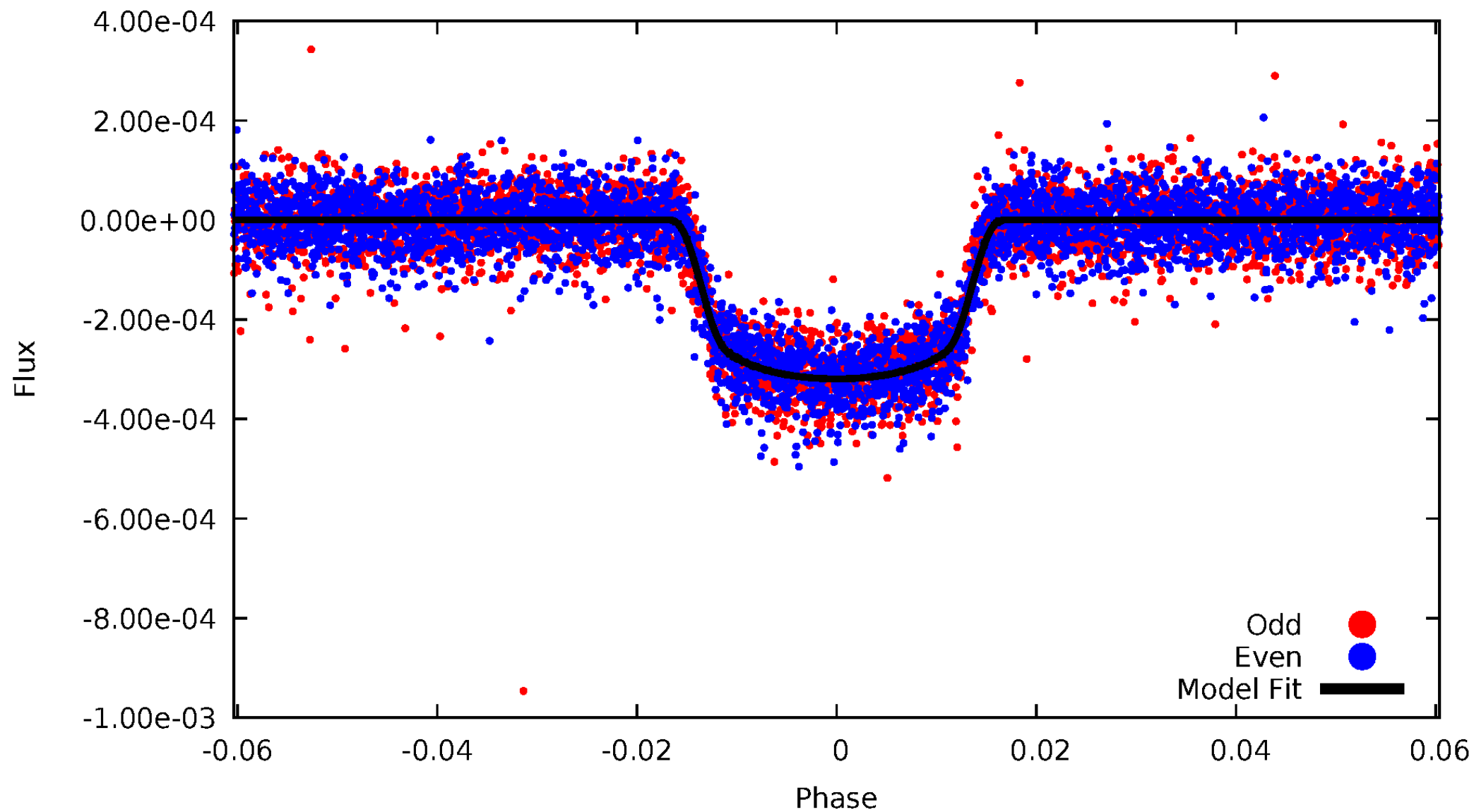


TCE 005866724-01



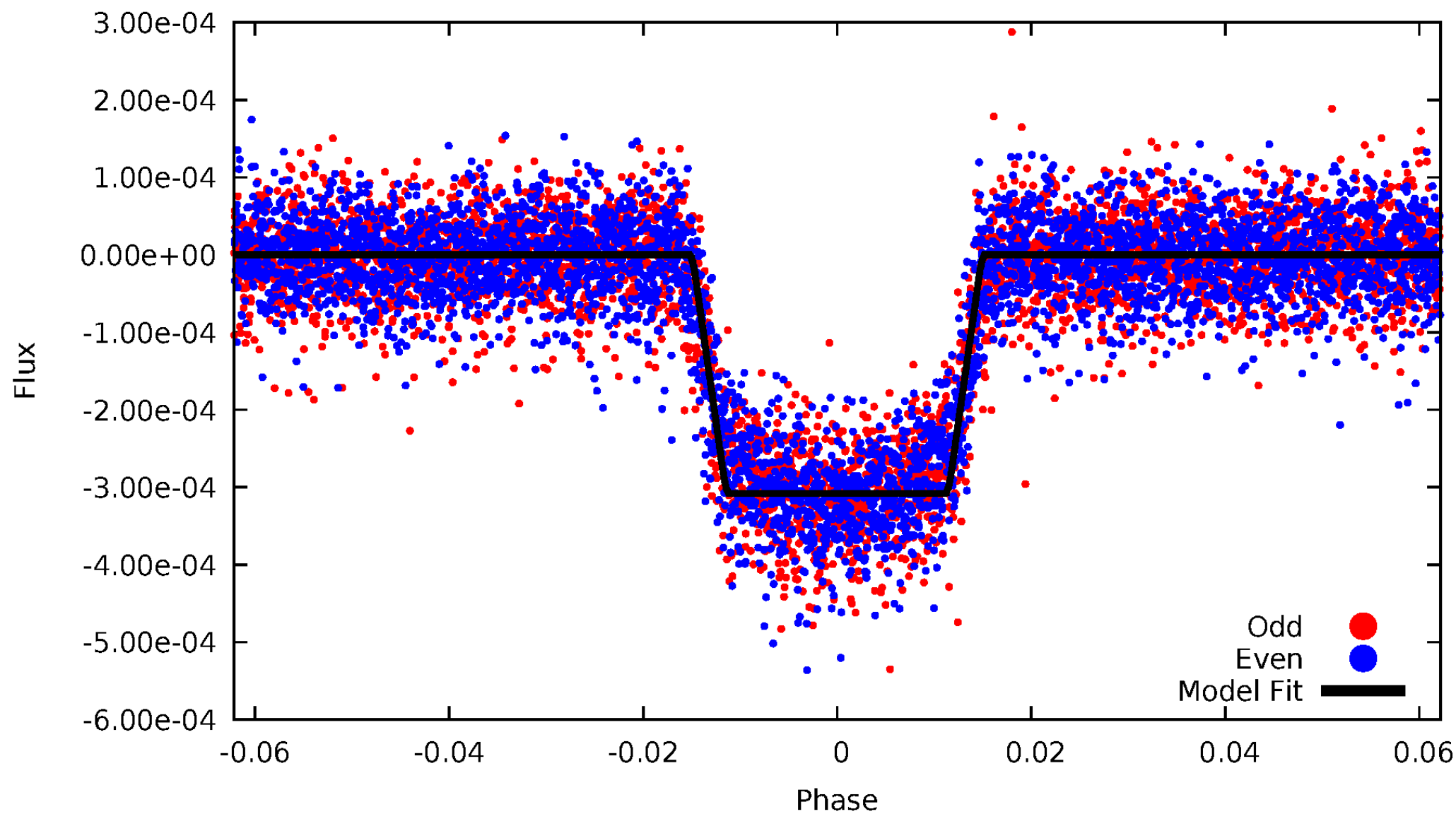
DV Odd/Even

TCE 005866724-01



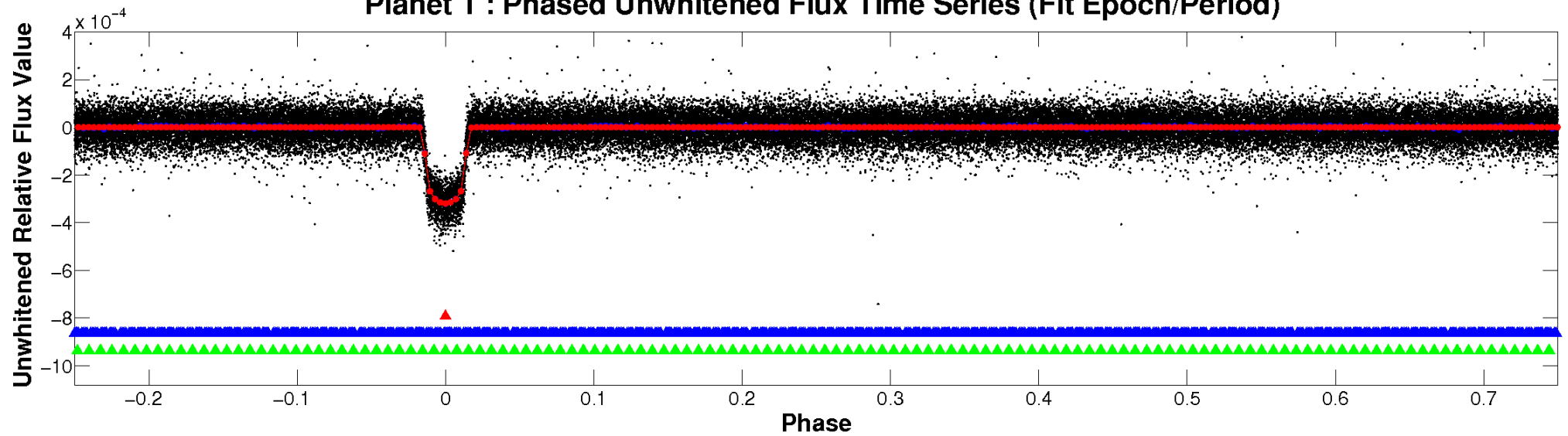
ALT Odd/Even

TCE 005866724-01

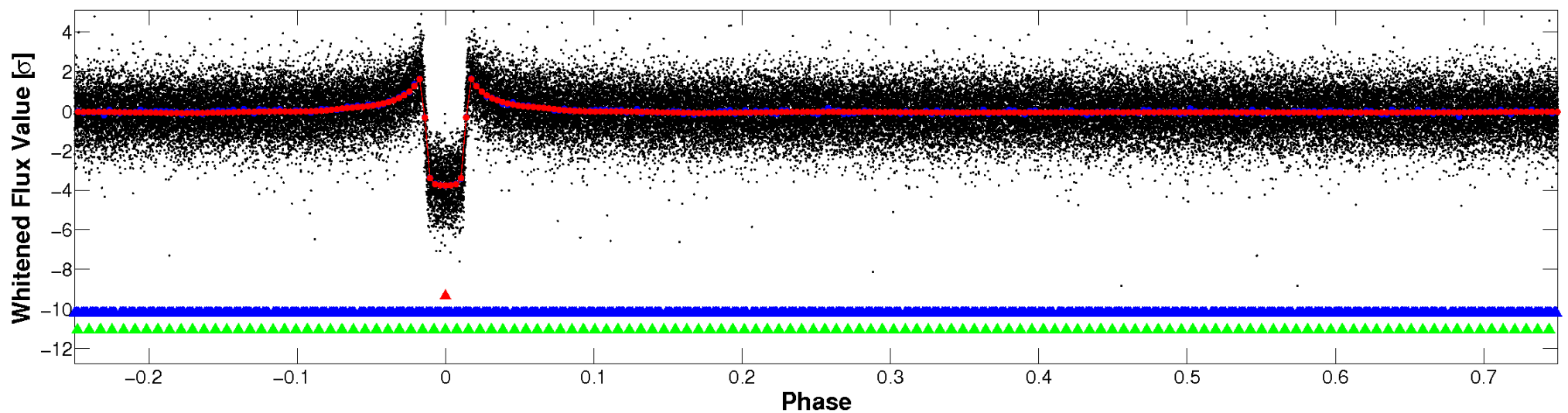


Non-Whitened Vs. Whitened Light Curve

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

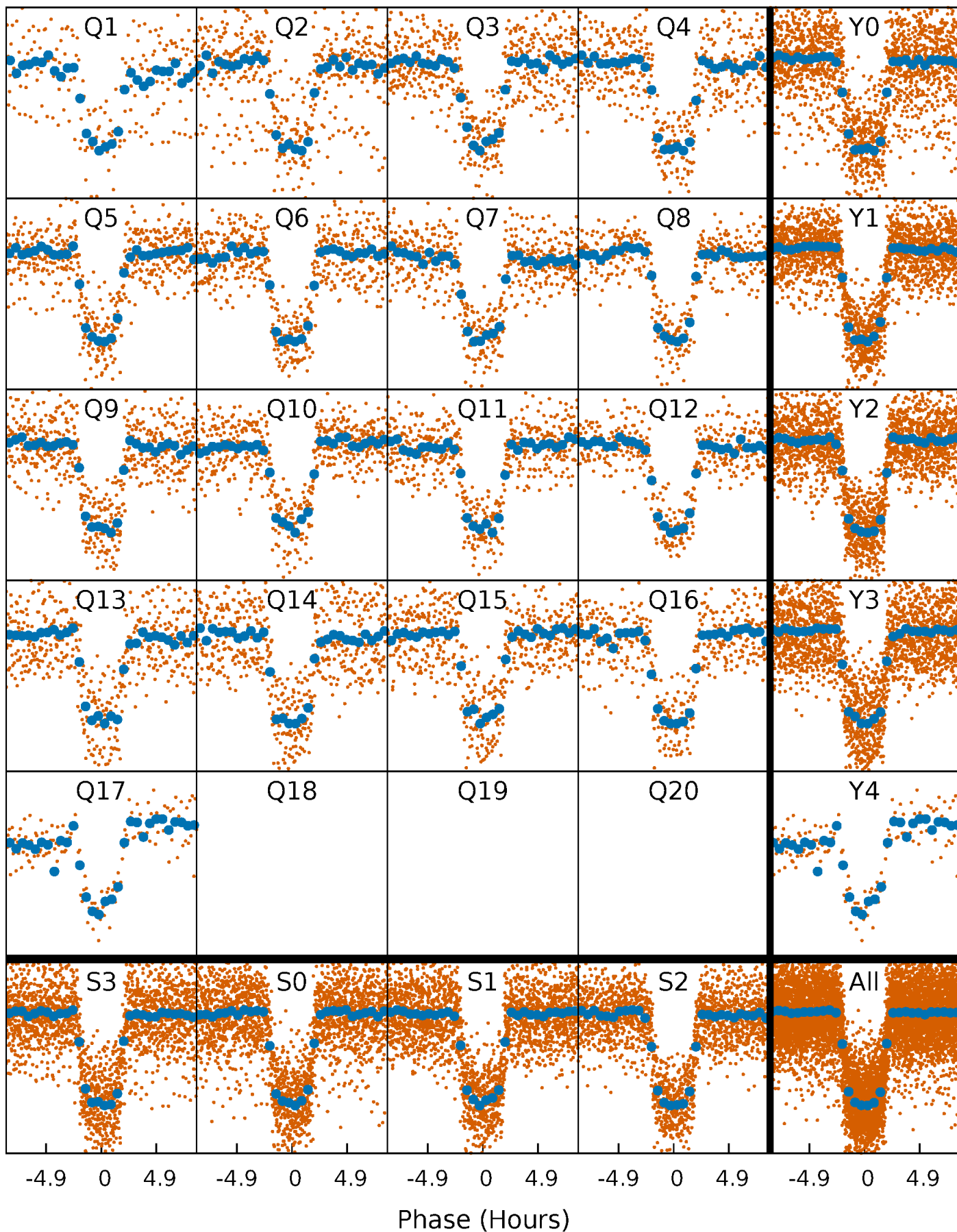


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



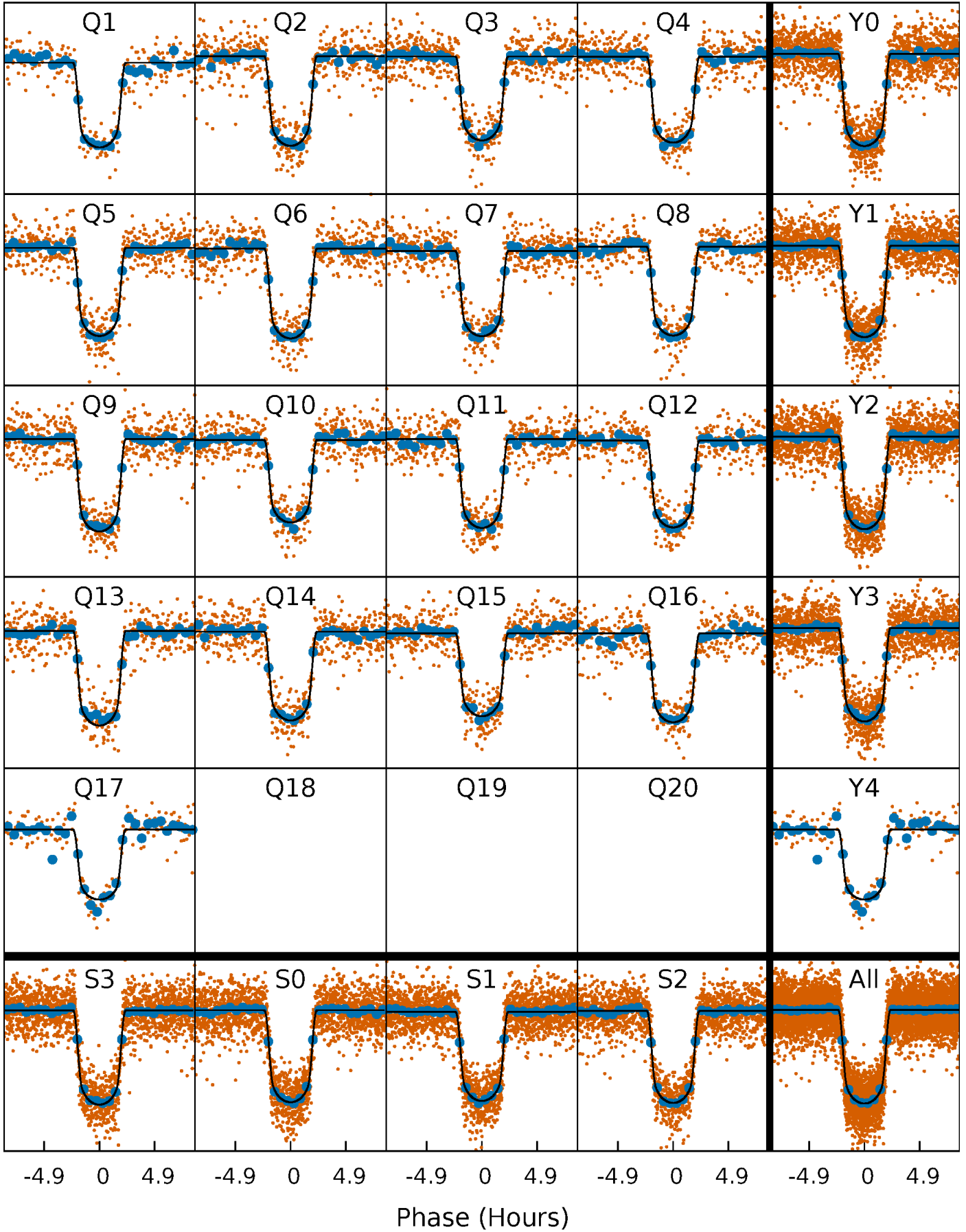
PDC Quarter-Phased Transit Curves

TCE 005866724-01 P= 5.859940 Days $T_0=132.039903$ (BKJD)



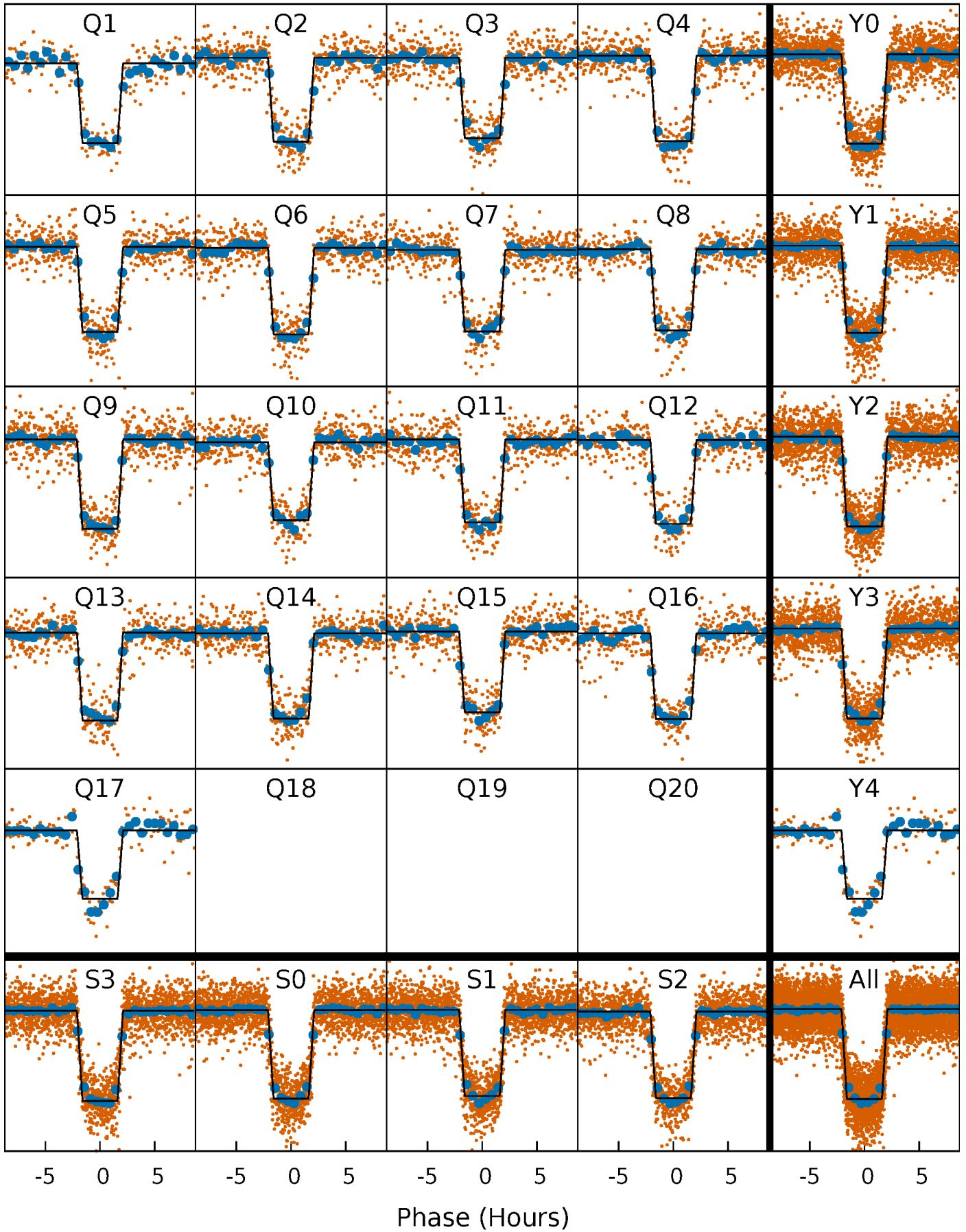
DV Quarter-Phased Transit Curves

TCE 005866724-01 P= 5.859940 Days $T_0=132.039903$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

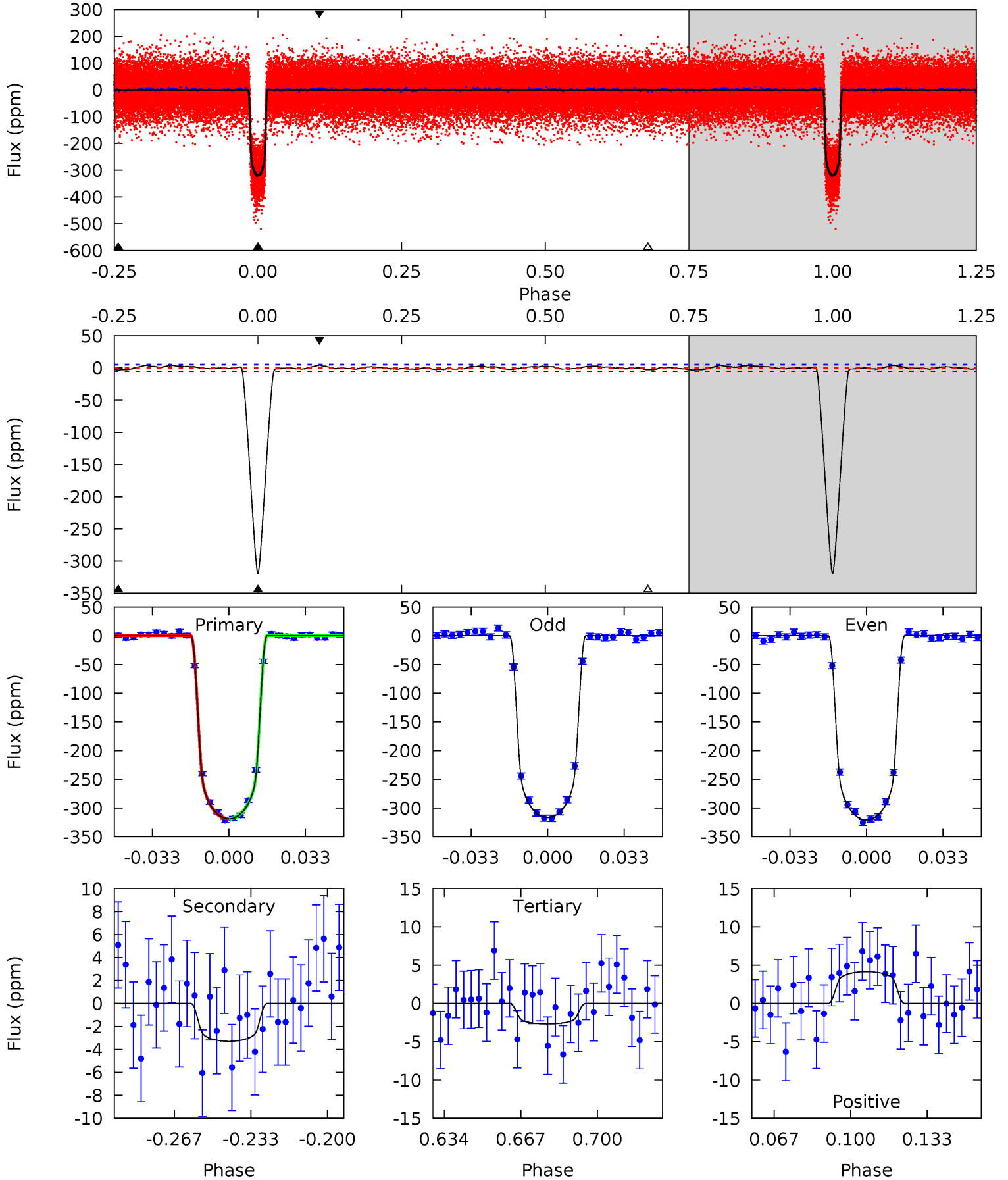
TCE 005866724-01 P= 5.859981 Days $T_0=132.035042$ (BKJD)



DV Model-Shift Uniqueness Test

005866724-01, P = 5.859940 Days, E = 126.179963 Days

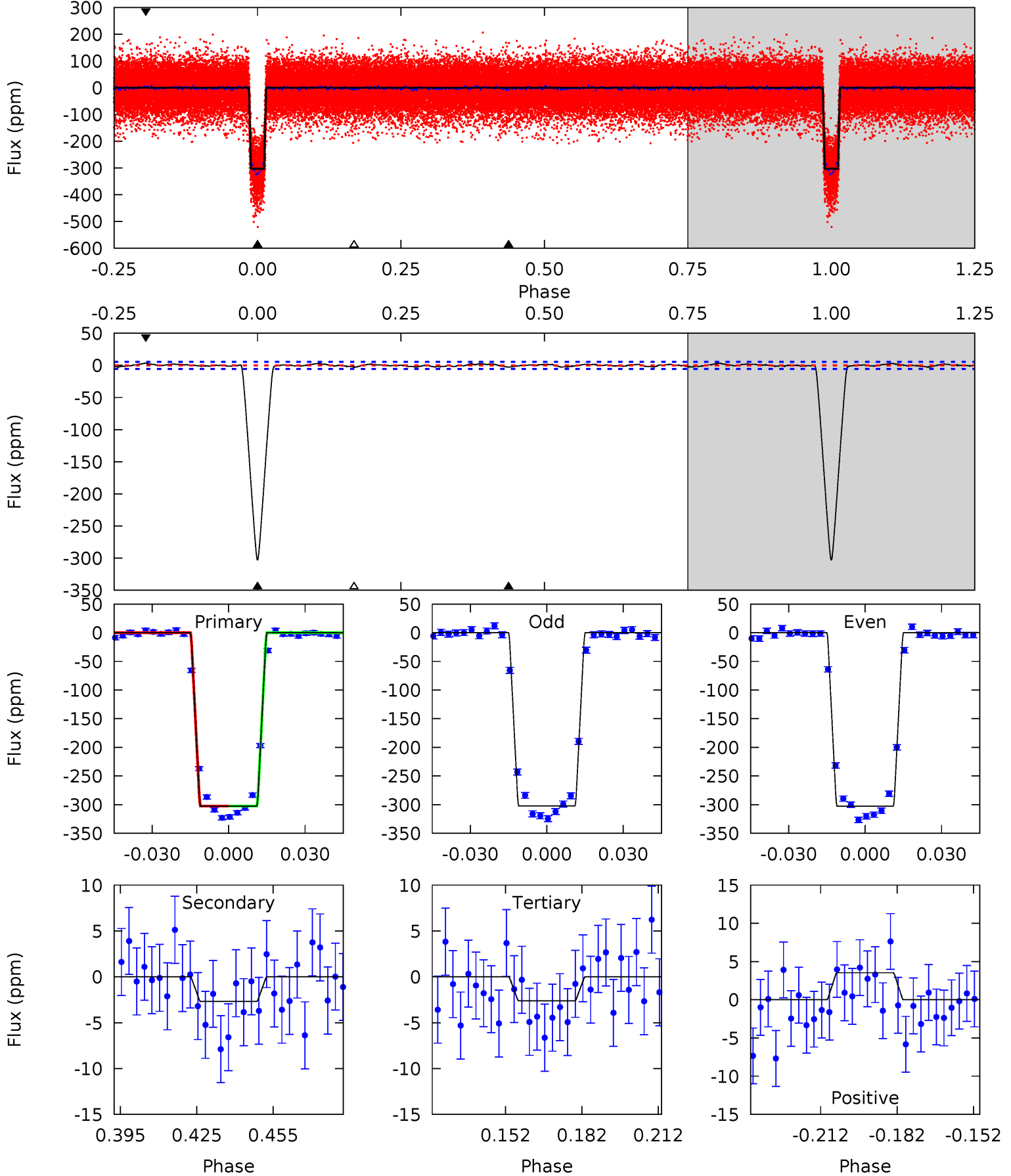
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
286.5	2.96	2.41	3.73	4.79	2.13	1.48	284.1	282.8	0.55	-0.77	1.85	1.00	0.01	0.21



Alt Model-Shift Uniqueness Test

005866724-01, P = 5.859981 Days, E = 126.175061 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
266.5	2.36	2.30	3.11	4.81	2.17	1.15	264.2	263.4	0.06	-0.75	0.19	1.00	0.01	0.11



Stellar Parameters For KIC 005866724

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6181^{+68}_{-86}	$4.220^{+0.033}_{-0.027}$	$0.140^{+0.150}_{-0.150}$	$1.424^{+0.056}_{-0.085}$	$1.231^{+0.059}_{-0.097}$	$0.600^{+0.081}_{-0.059}$
	+1%/-1%	+1%/-1%	+107%/-107%	+4%/-6%	+5%/-8%	+14%/-10%
Source	SPE72	AST69	SPE72	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005866724-01 / KOI 0085.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3 ± 1	$2.98^{+0.09}_{-0.11}$	1740^{+27}_{-29}	2567^{+134}_{-199}	$0.951^{+0.333}_{-0.311}$
Alt.	-3 ± 1	$2.74^{+0.09}_{-0.11}$	1740^{+29}_{-29}	2540^{+171}_{-296}	$0.905^{+0.406}_{-0.389}$

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

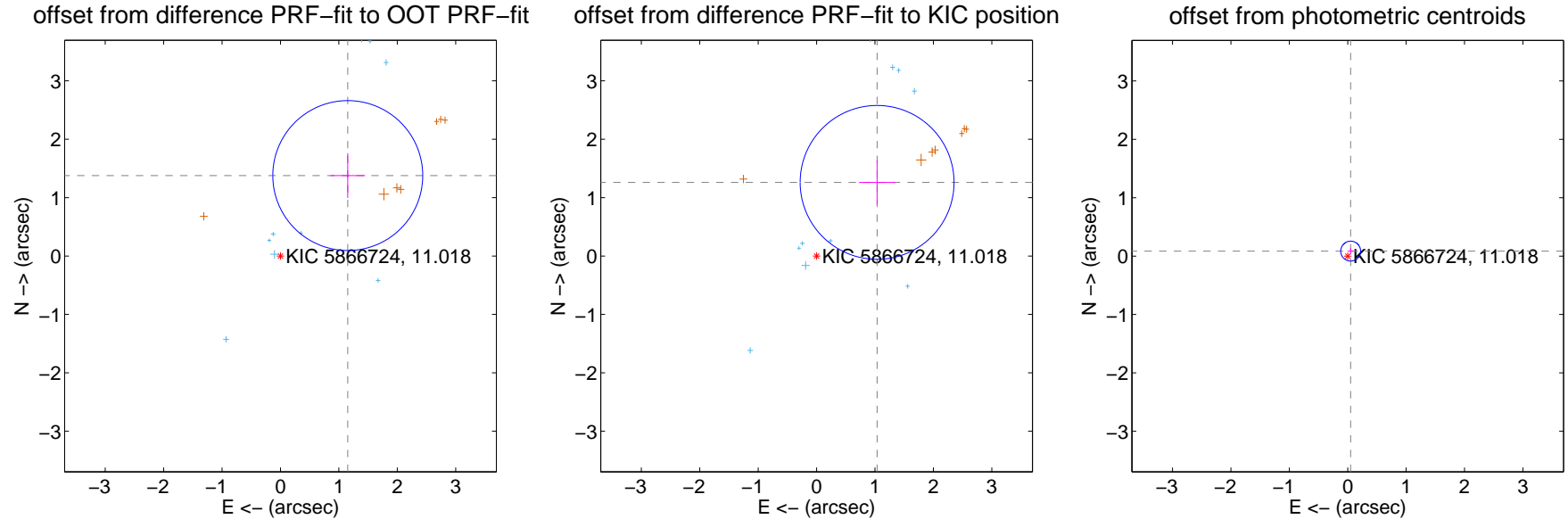
DV Centroid Data

Supplemental centroid analysis for 005866724-01. **Kepler magnitude: 11.02.** Transit SNR 153.21

There are 10 quarters with good PRF difference image offsets

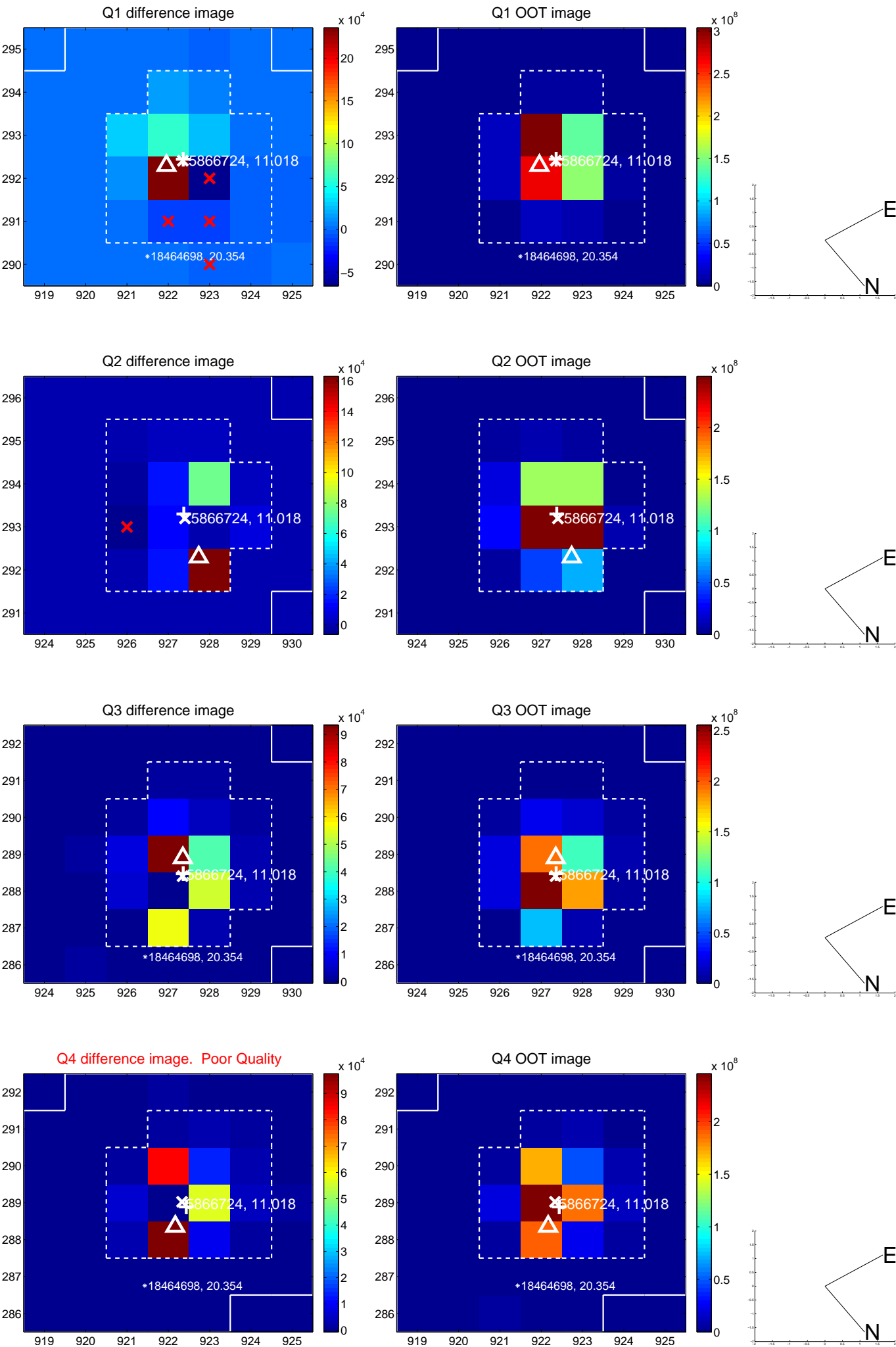
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.796 ± 0.428	4.20	-1.153 ± 0.296	1.378 ± 0.384
PRF-fit source offset from KIC position	1.632 ± 0.439	3.72	-1.036 ± 0.308	1.261 ± 0.379
photometric centroid source offset	0.10 ± 0.06	1.74	-0.05 ± 0.05	0.09 ± 0.06

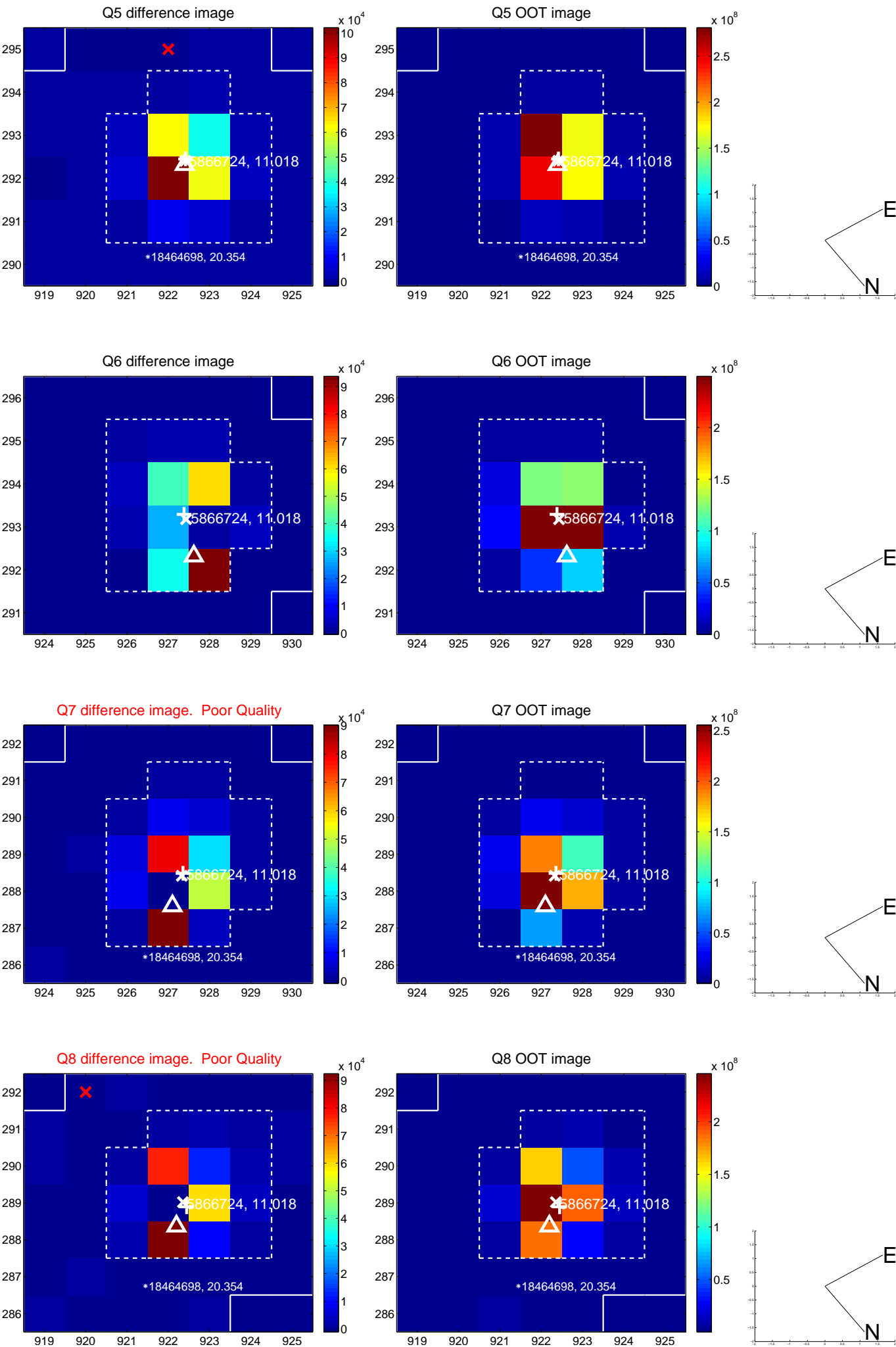


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

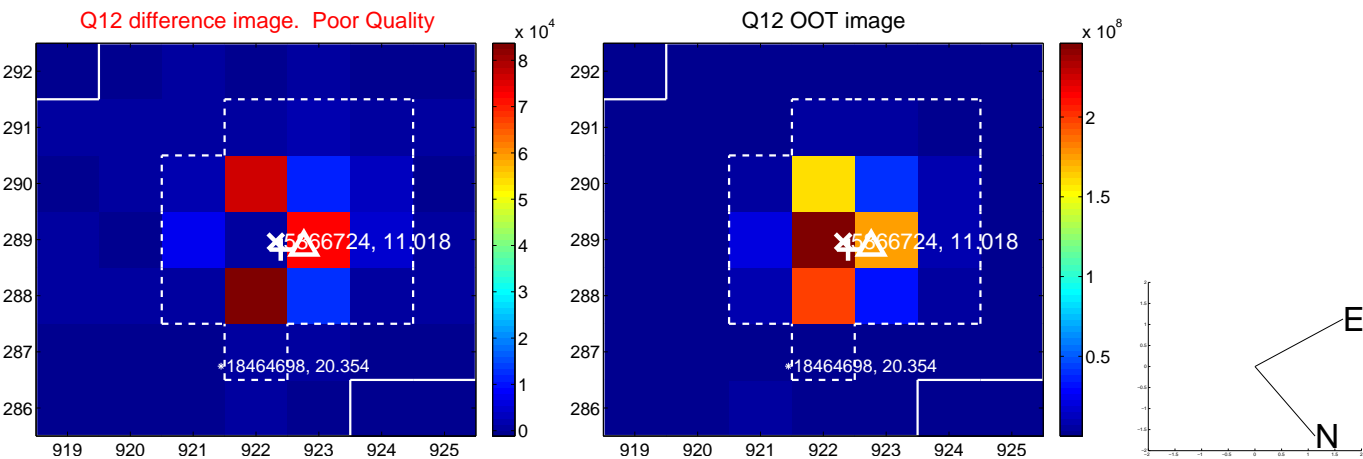
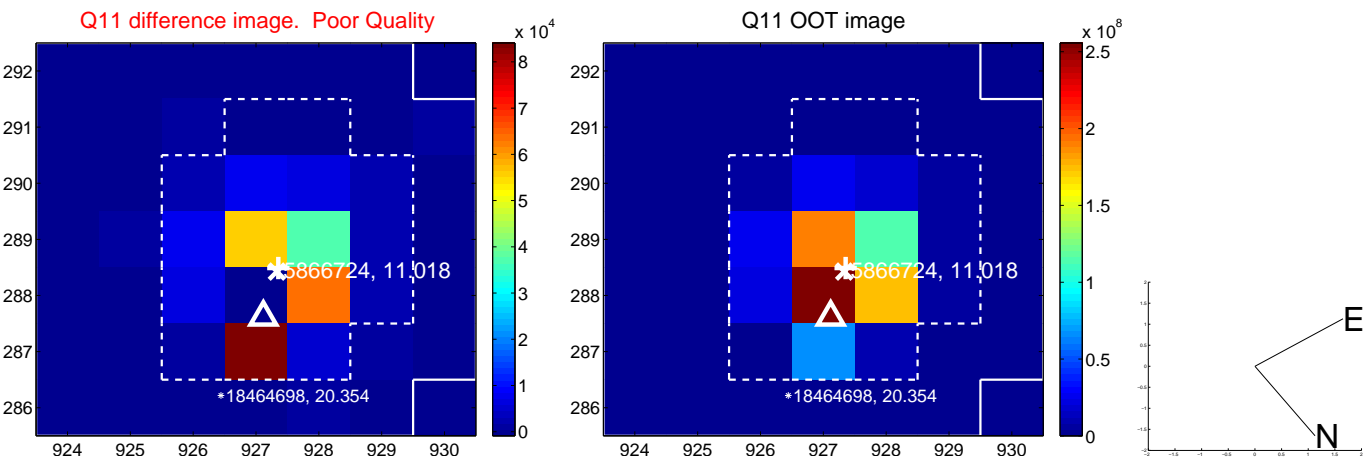
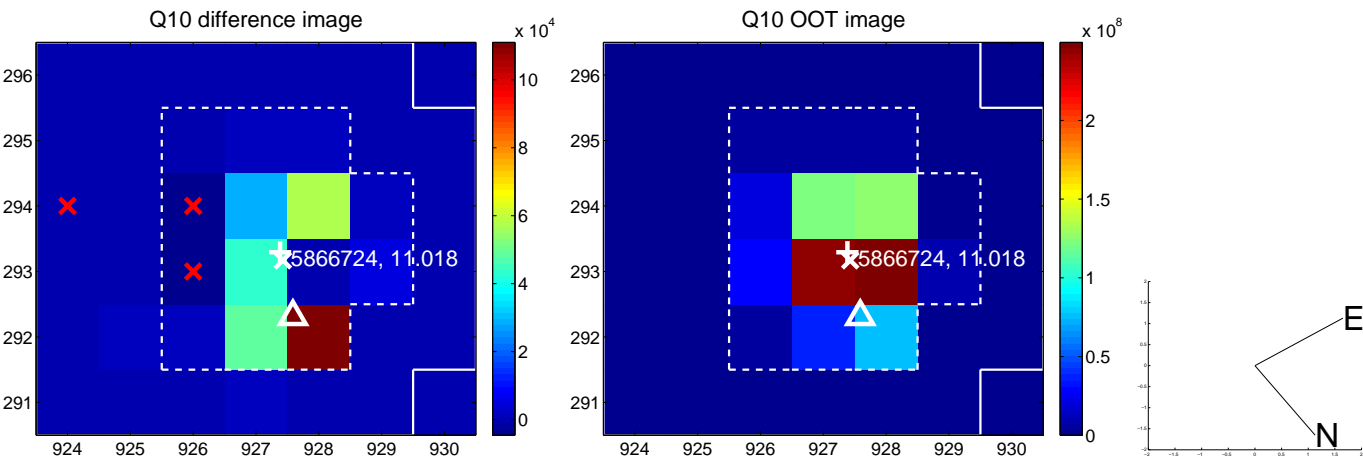
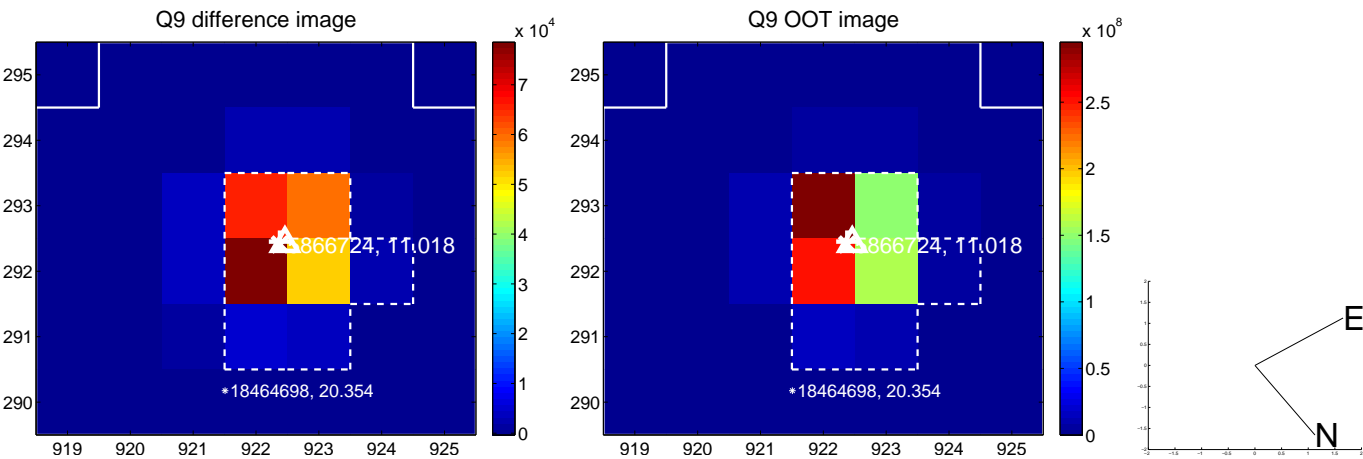
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



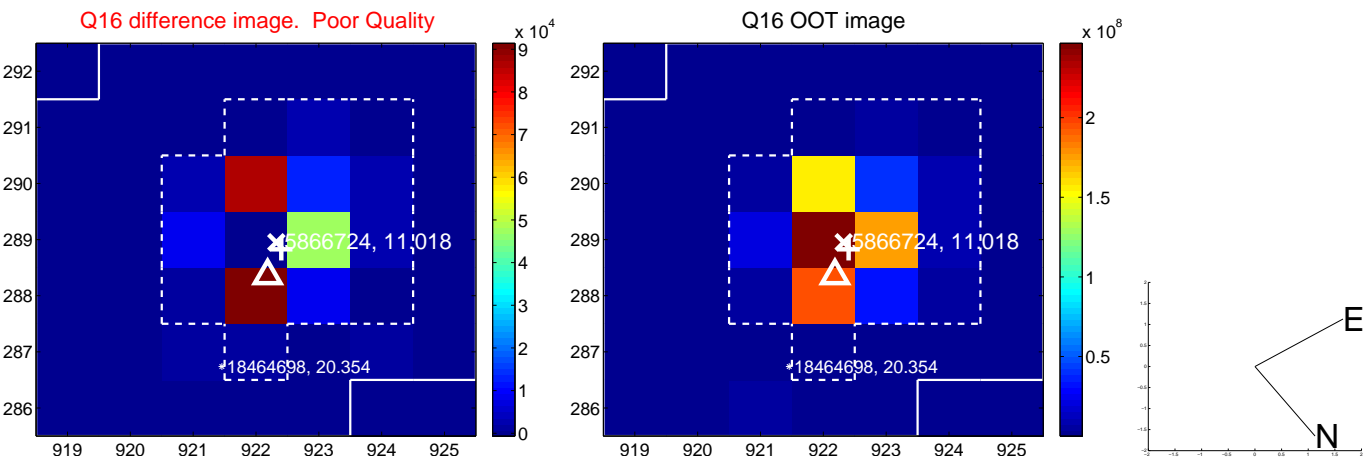
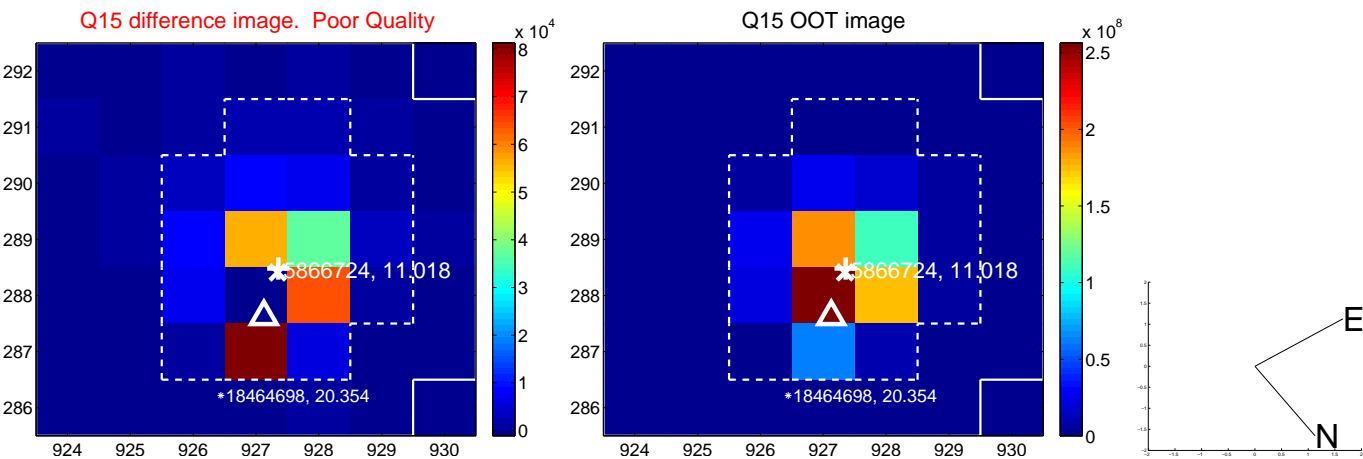
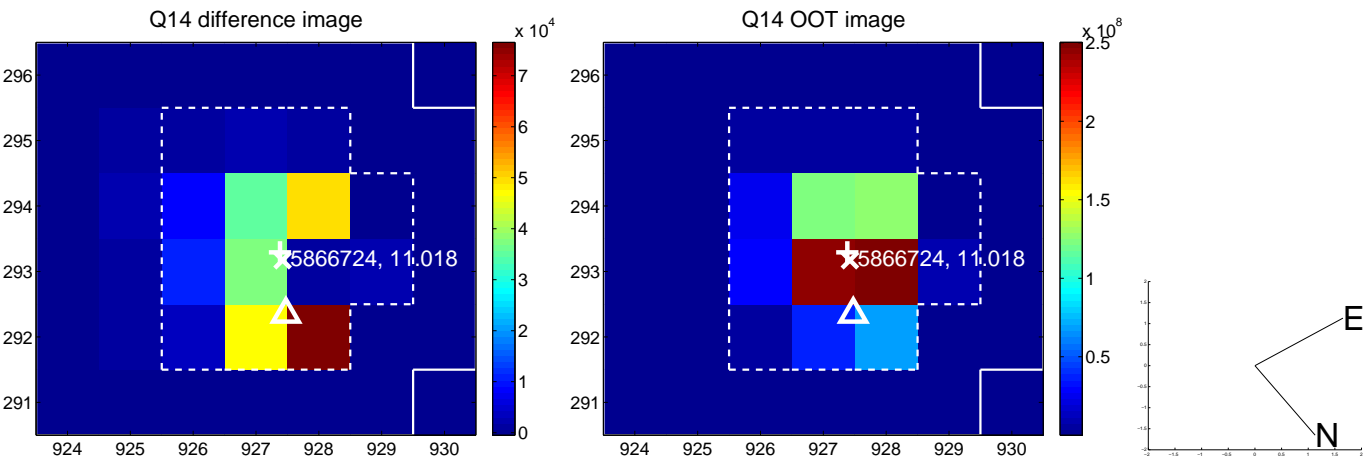
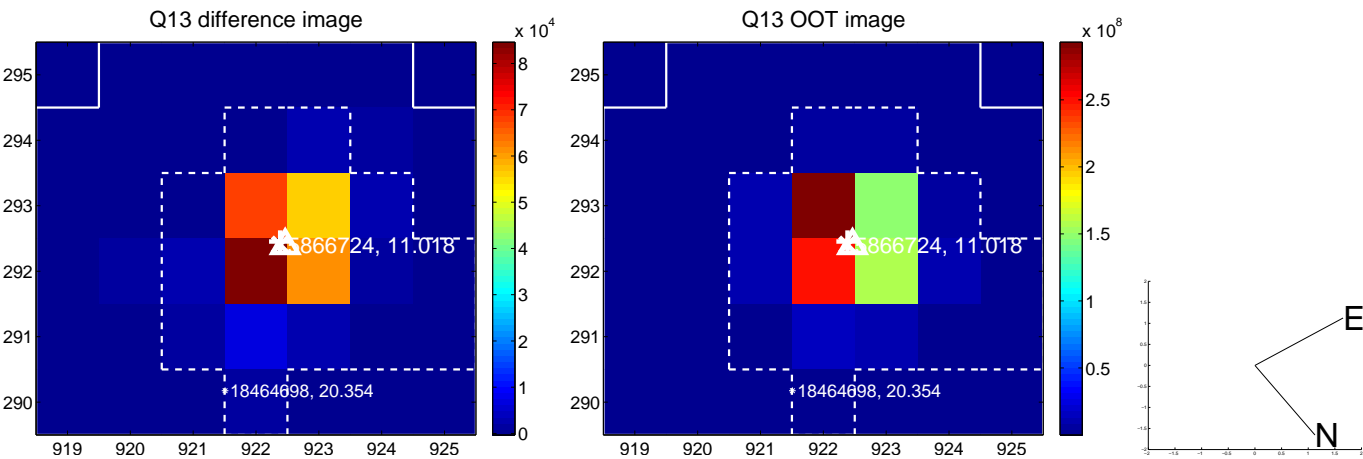
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



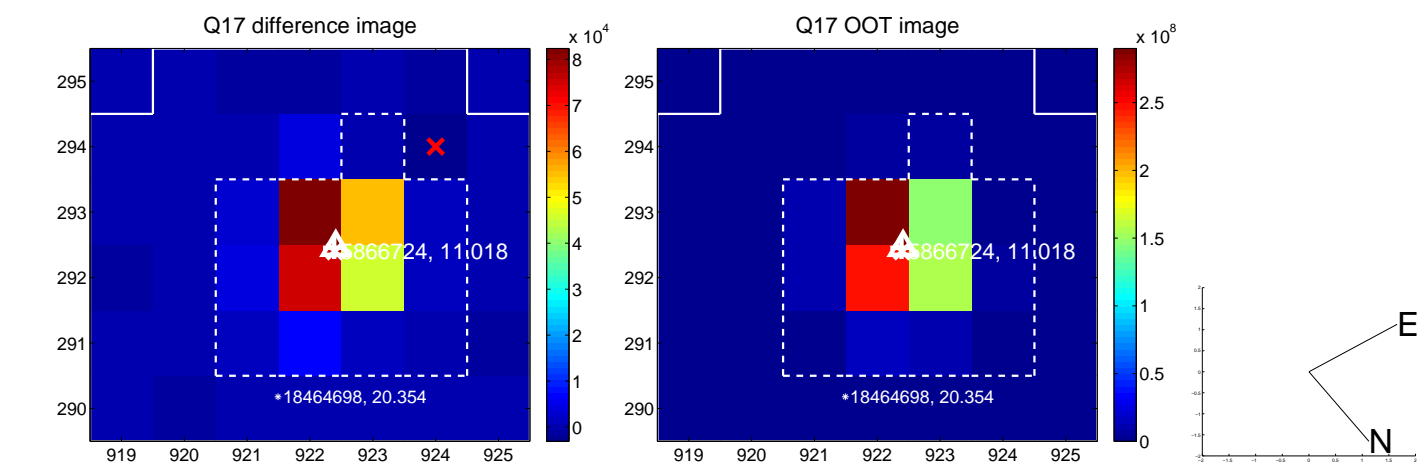
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



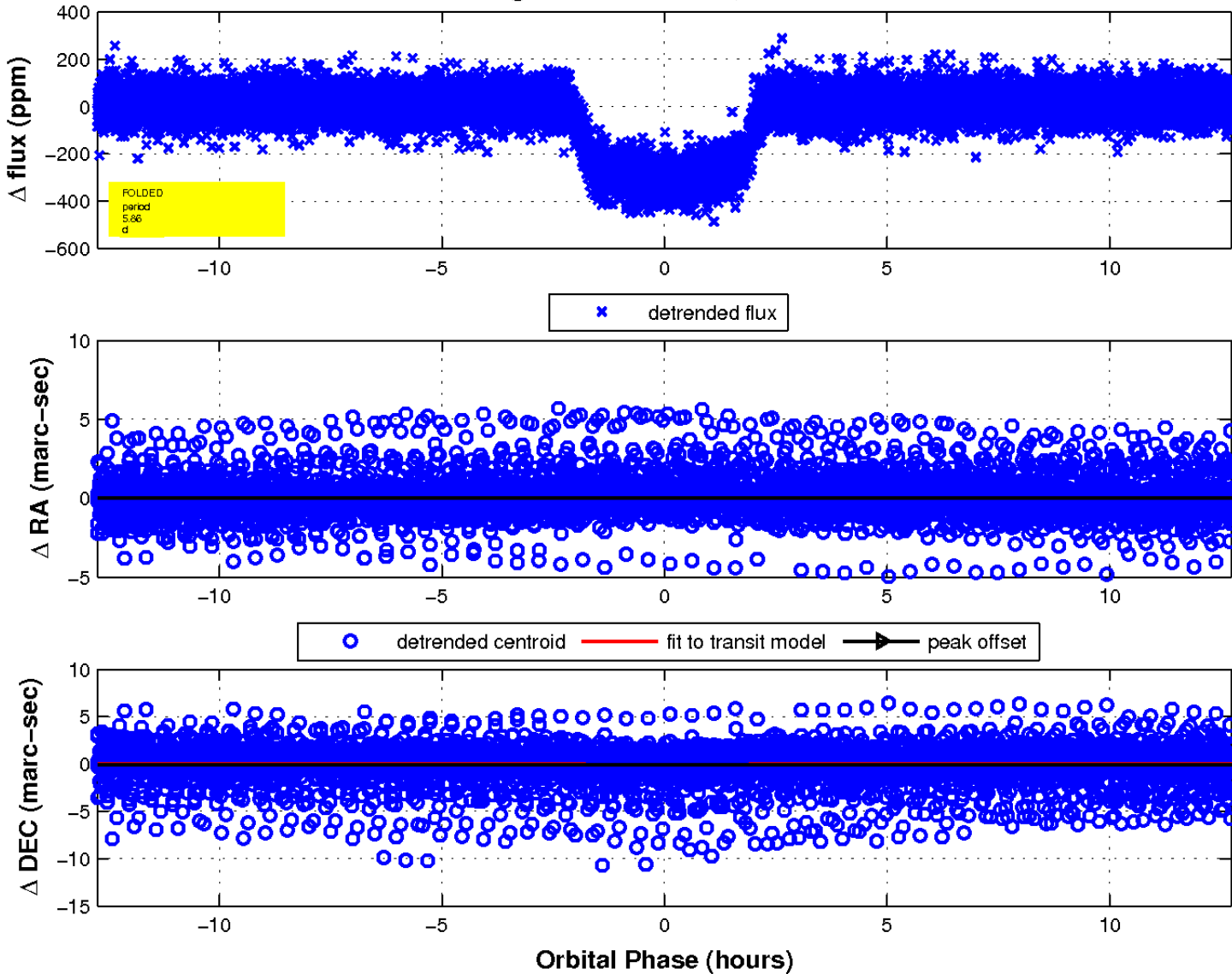
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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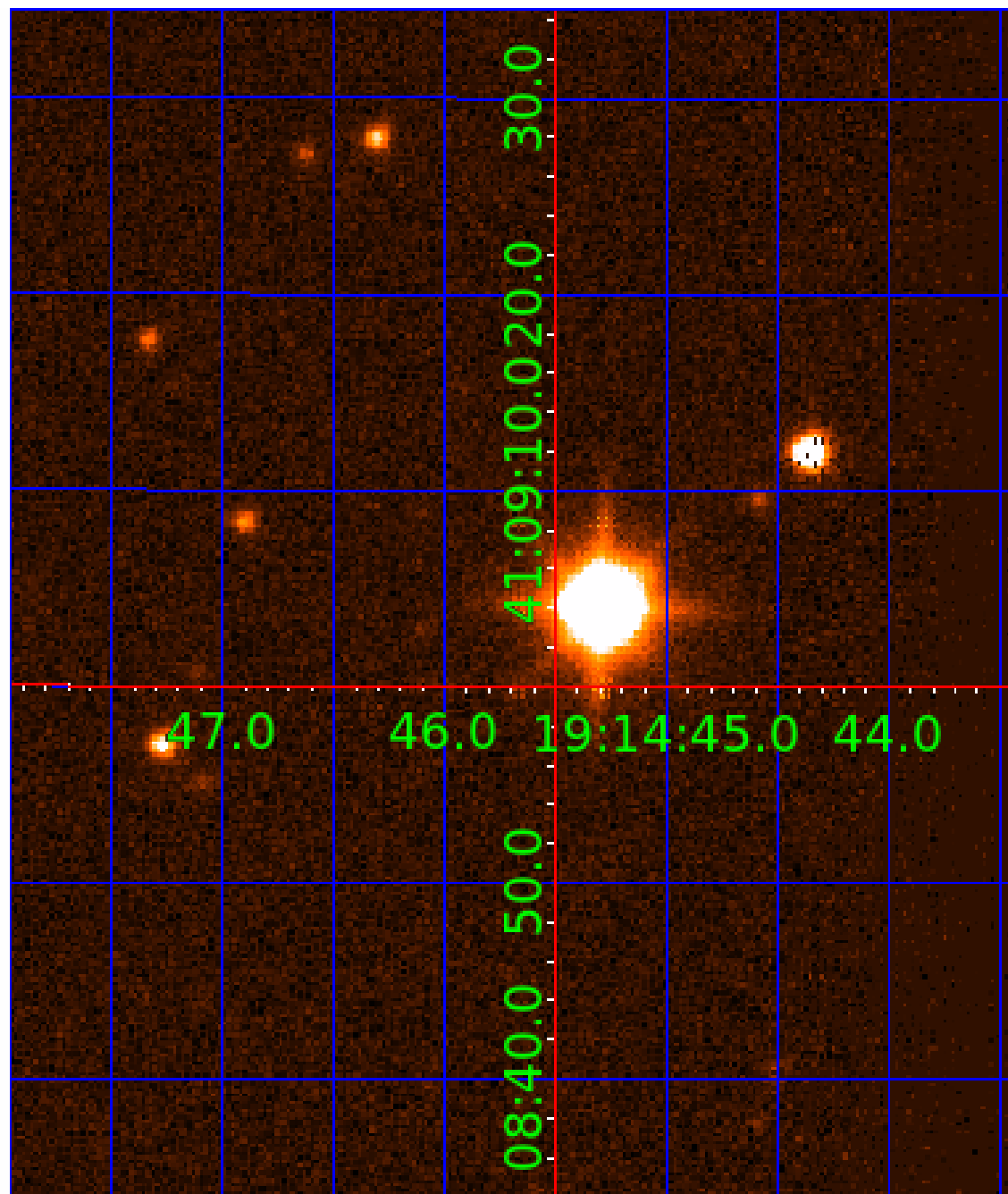


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 005866724

Q1-17 DR25 TCE Parameters

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Robovetter Results

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005866724-01	OBS	PC	1.00	0	0	0	0	CENT_SATURATED
005866724-02	OBS	PC	1.00	0	0	0	0	CENT_SATURATED
005866724-03	OBS	PC	1.00	0	0	0	0	CENT_SATURATED

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

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

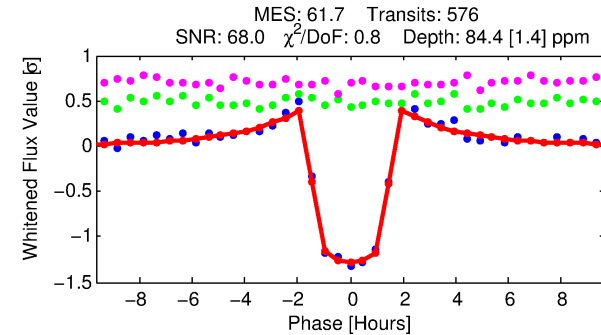
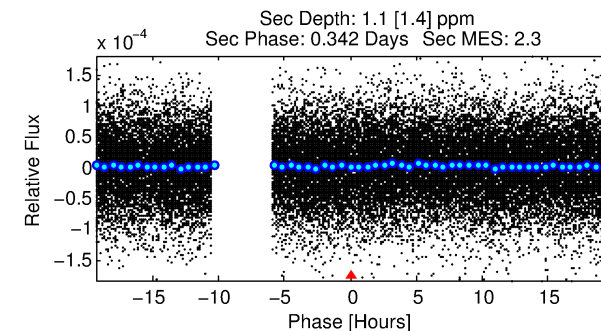
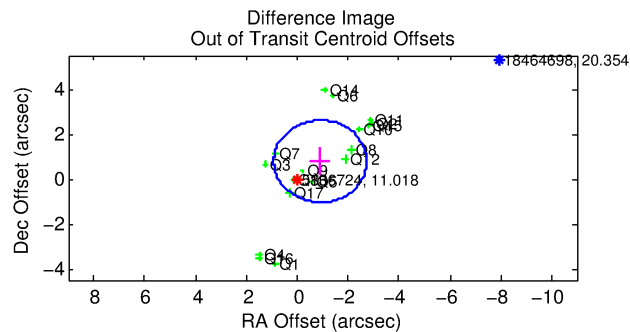
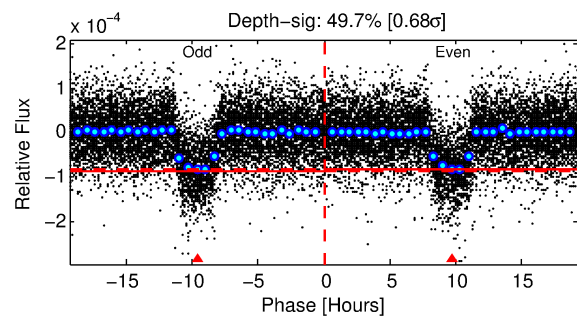
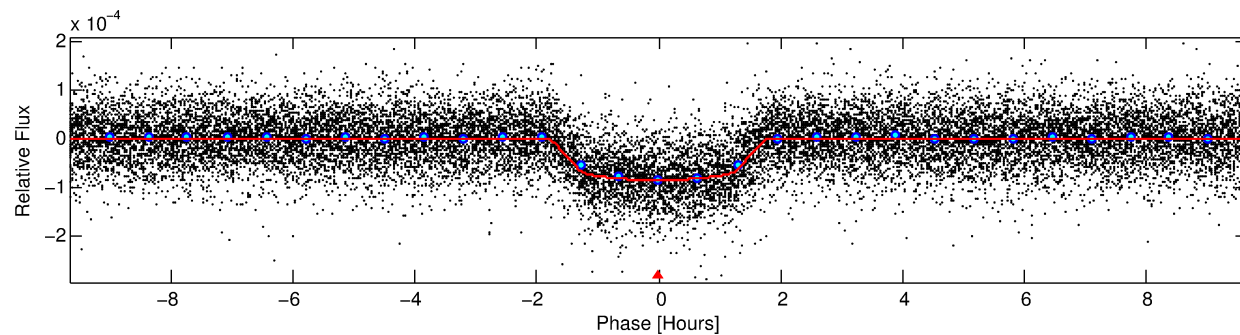
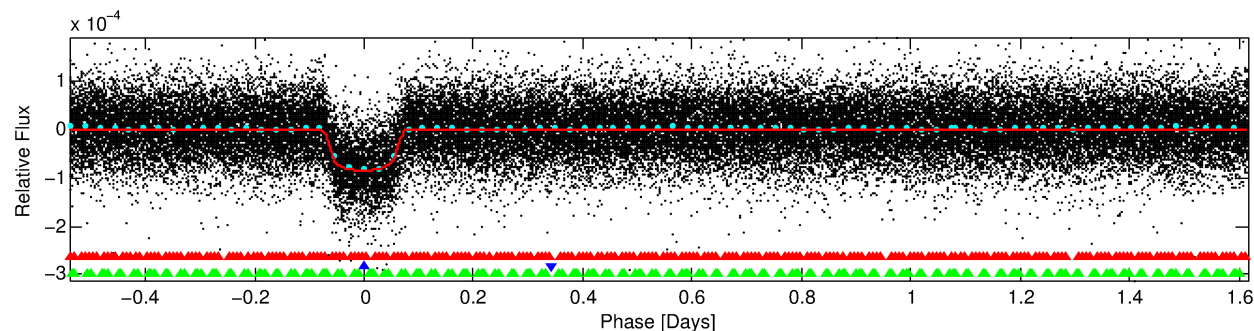
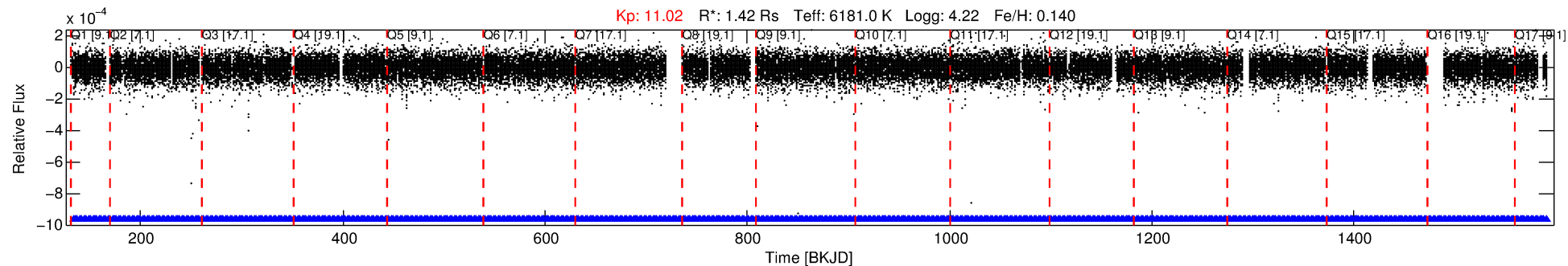
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005866724-02

No Significant Match Found

DV One-Page Summary

KIC: 5866724 Candidate: 2 of 3 Period: 2.155 d
KOI: K00085.02 Name: Kepler-65b Corr: 0.988



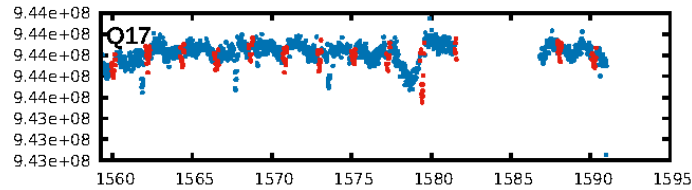
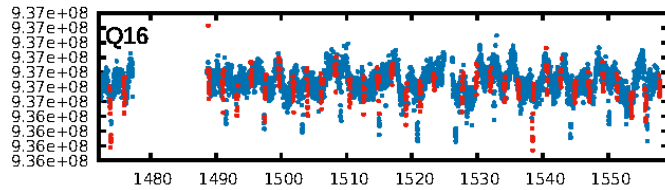
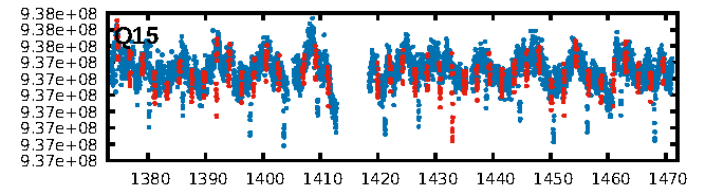
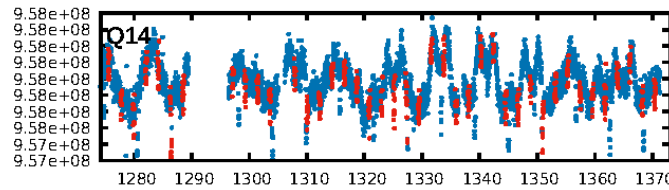
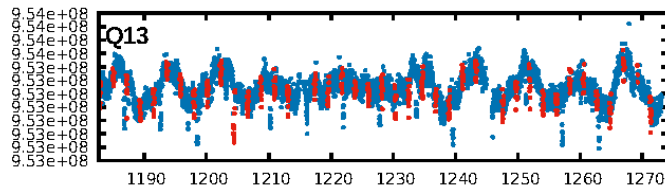
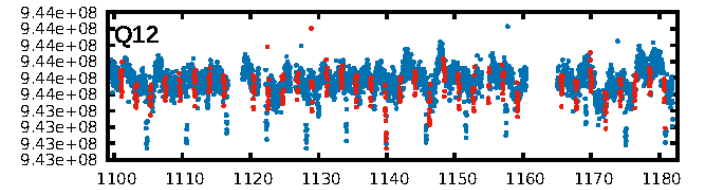
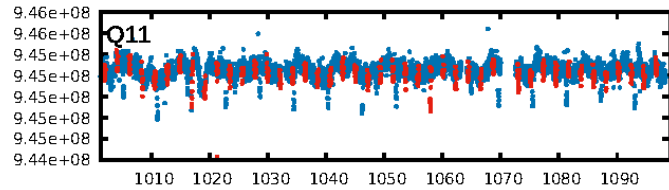
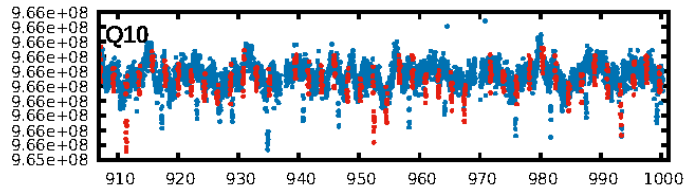
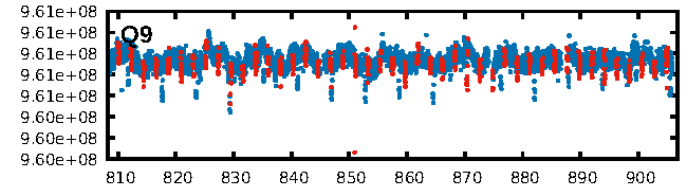
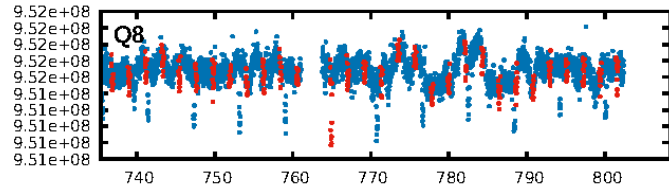
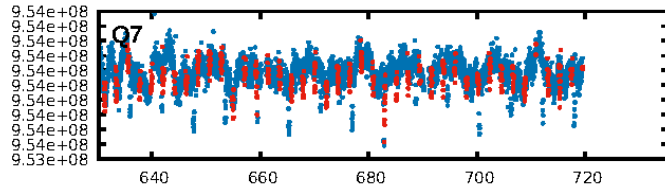
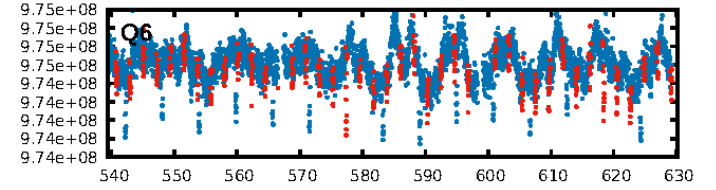
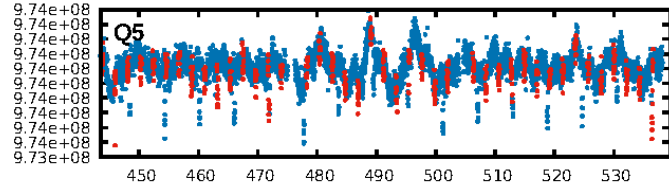
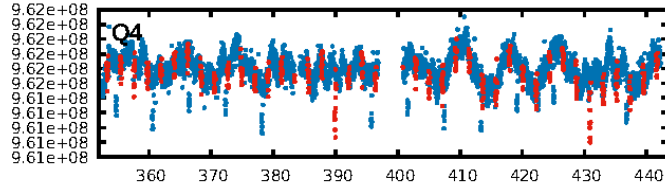
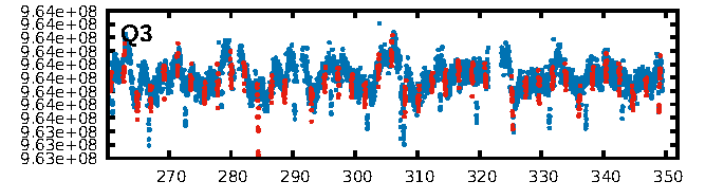
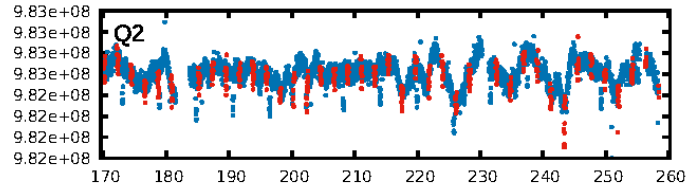
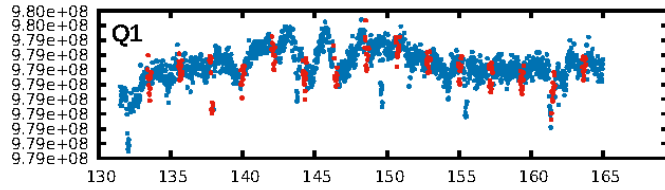
DV Fit Results:

Period = 2.15490 [0.00000] d
Epoch = 133.5015 [0.0005] BKJD
Rp/R* = 0.0099 [0.0007]
a/R* = 2.52 [0.73]
b = 0.90 [0.07]
Seff = 2168.87 [184.64]
Teq = 1740 [37] K
Rp = 1.54 [0.14] Re
a = 0.0350 [0.0016] AU
Ag = 0.32 [0.40] [-1.72 σ]
Teffp = 2022 [629] K [0.45 σ]

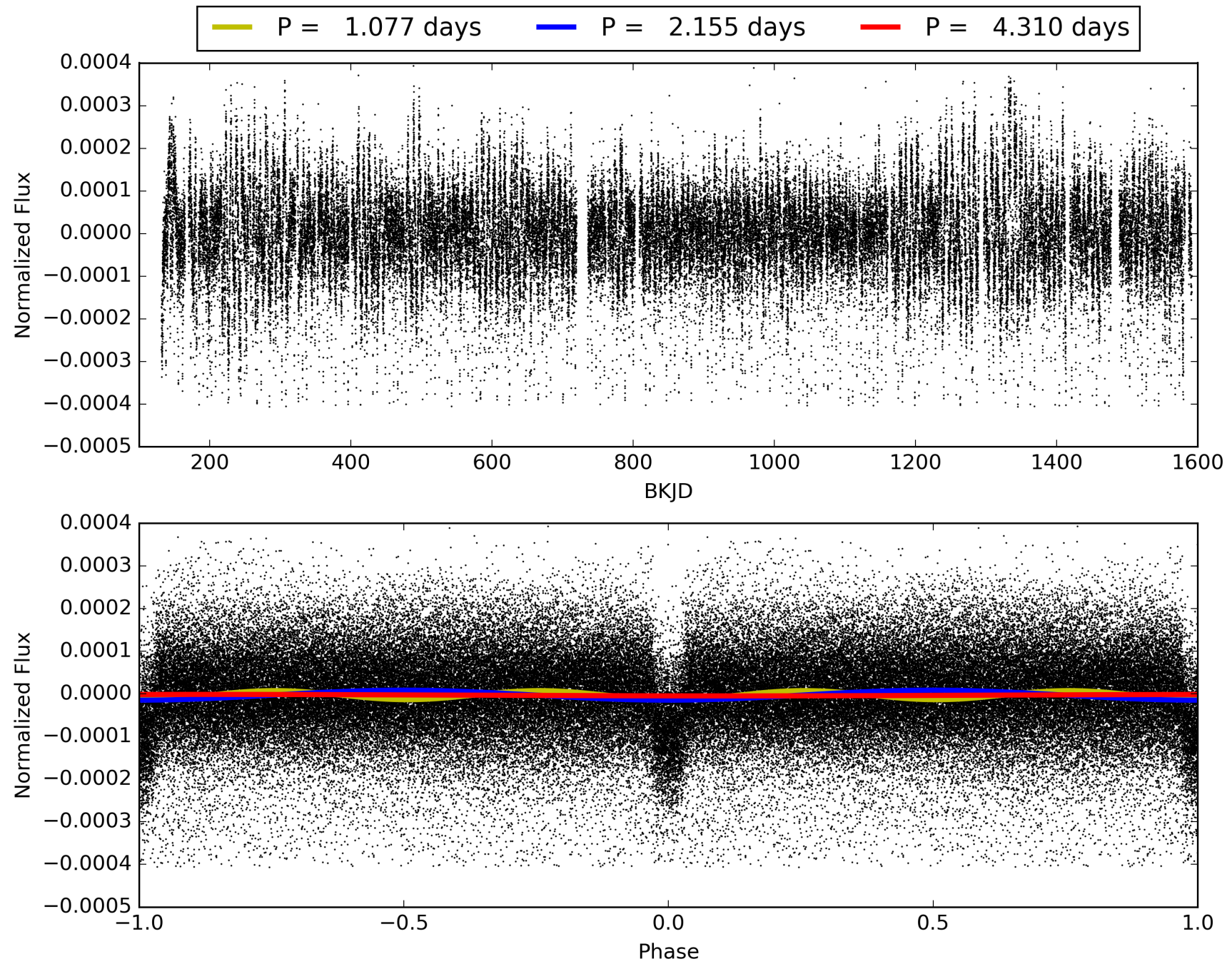
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [16.69 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [551/551]
GhostDiagnostic-chr: 11.31
Centroid-sig: 9.6%
Centroid-so: 0.093 arcsec [0.71 σ]
OotOffset-rm: 1.195 arcsec [1.96 σ]
KicOffset-rm: 1.028 arcsec [1.91 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005866724-02, PDC Light Curves

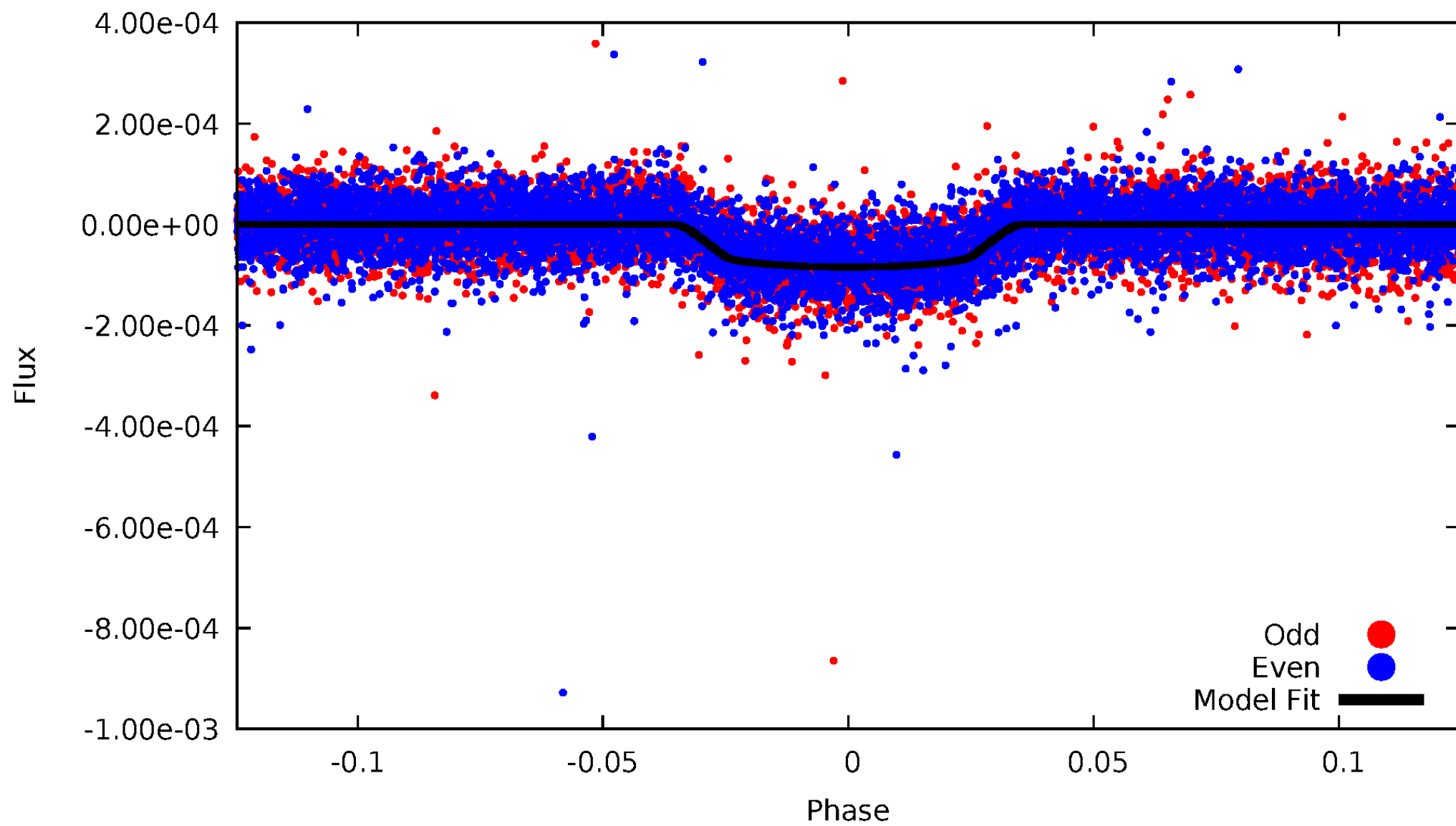


TCE 005866724-02



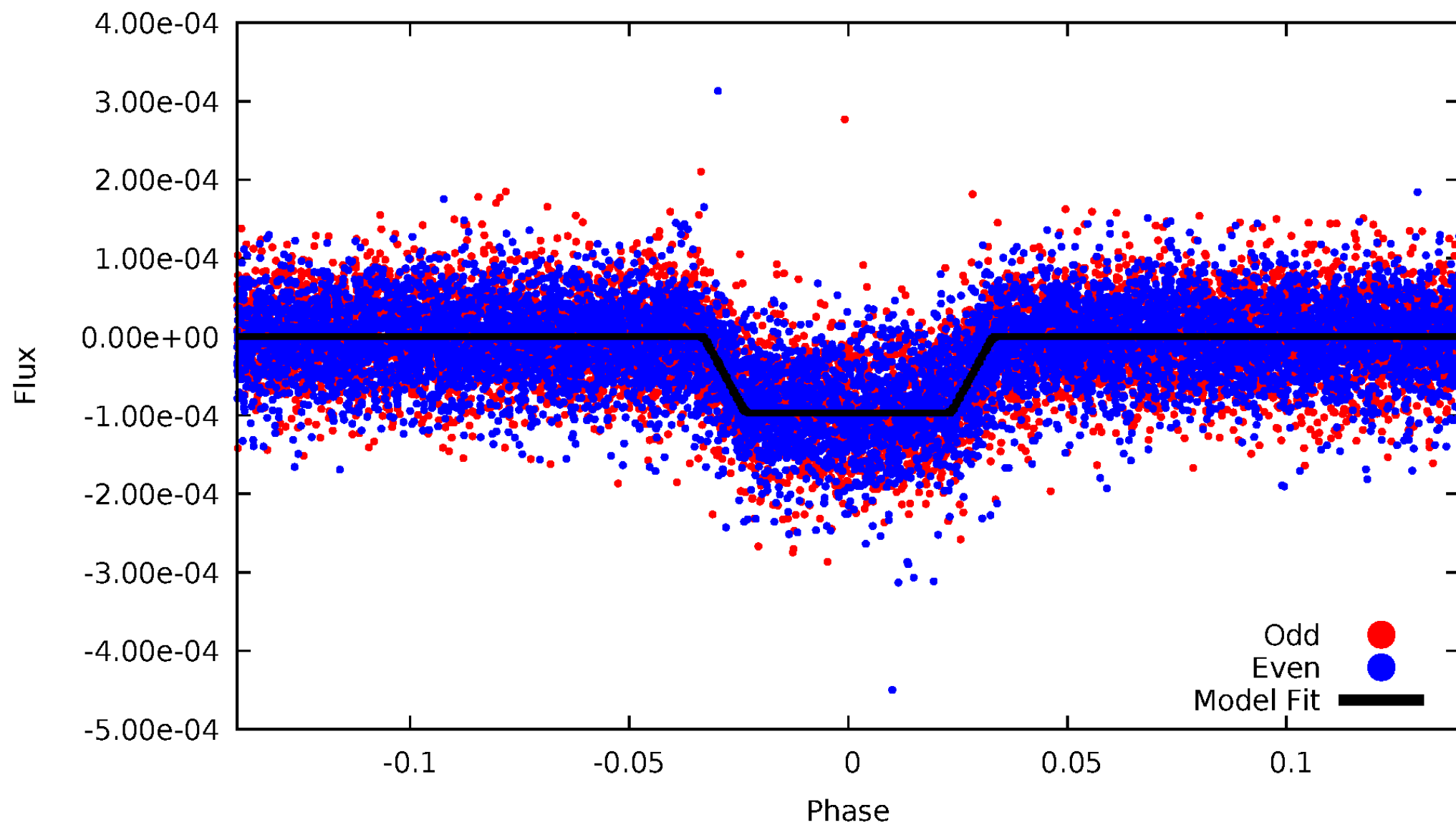
DV Odd/Even

TCE 005866724-02



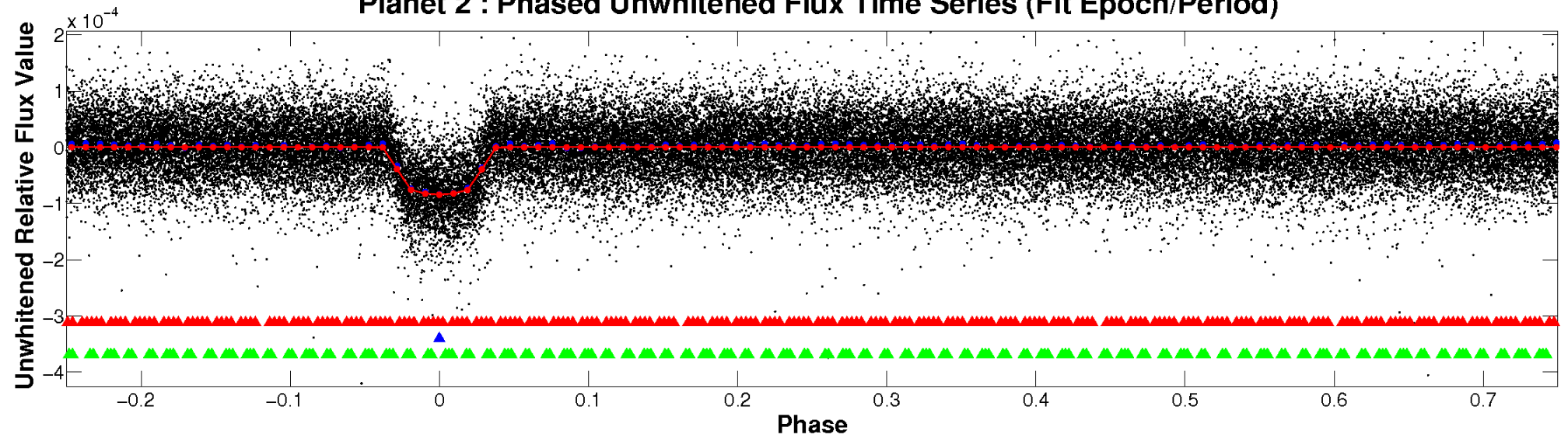
ALT Odd/Even

TCE 005866724-02

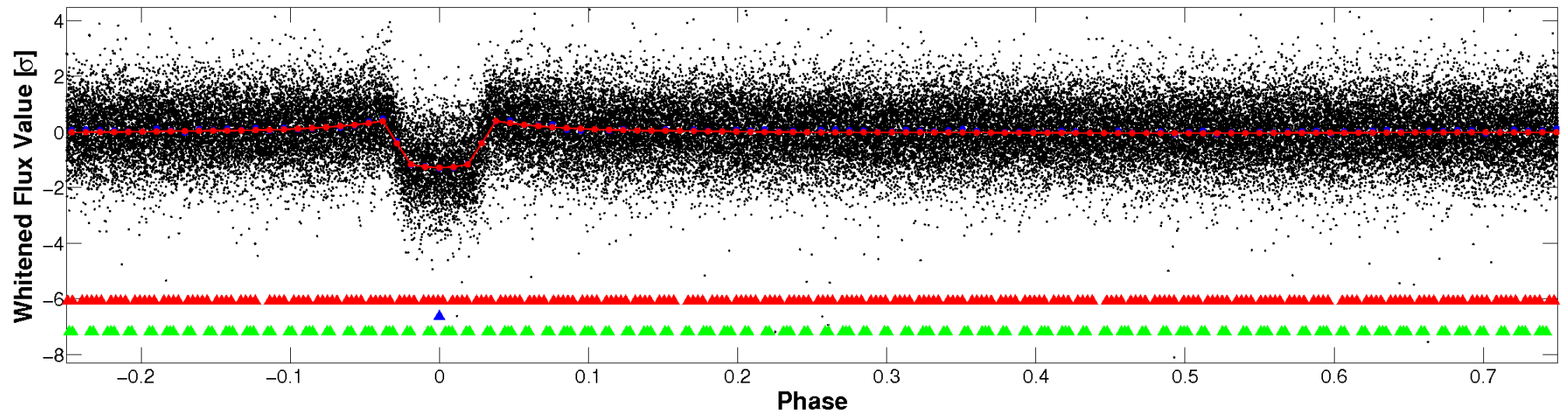


Non-Whitened Vs. Whitened Light Curve

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

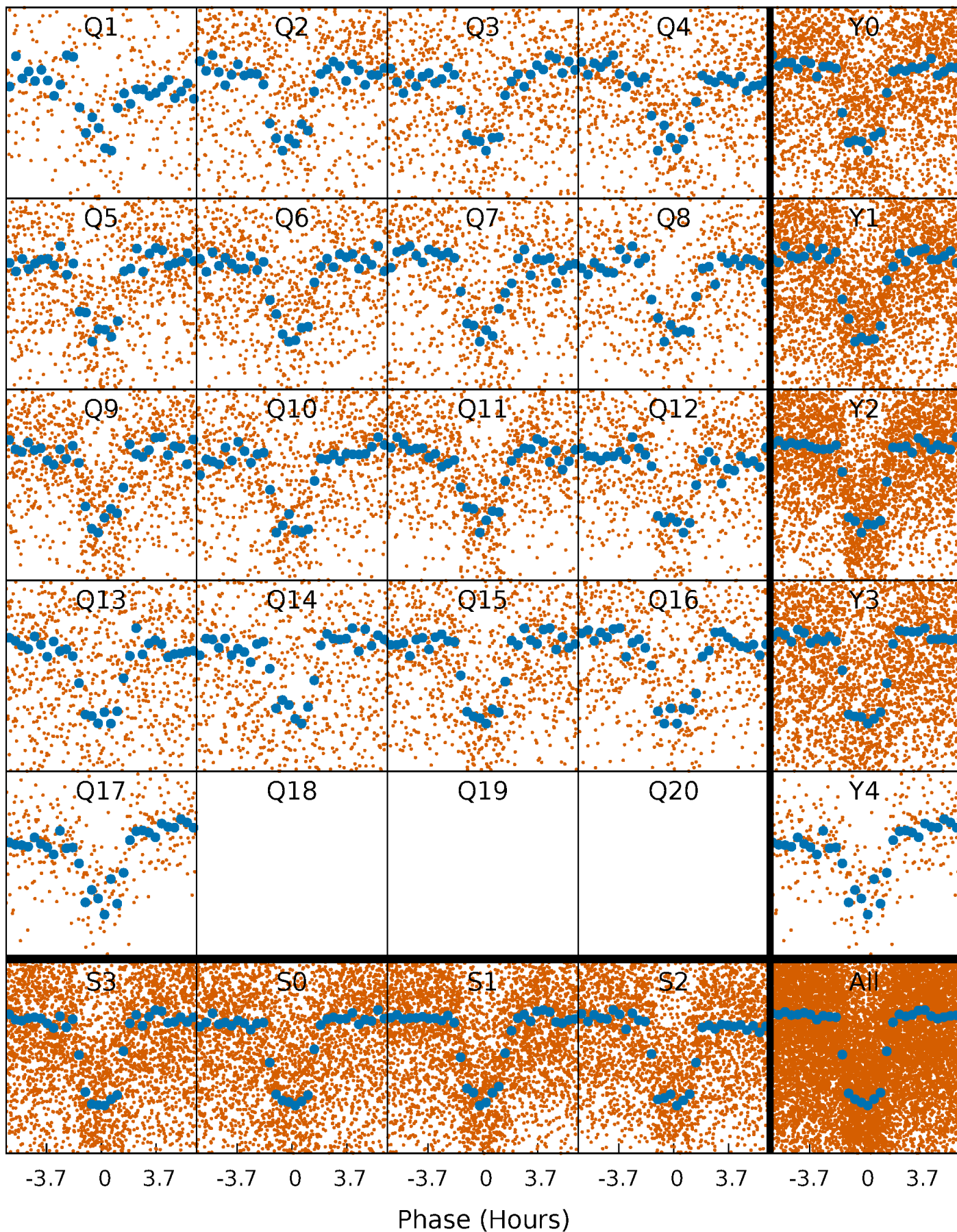


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



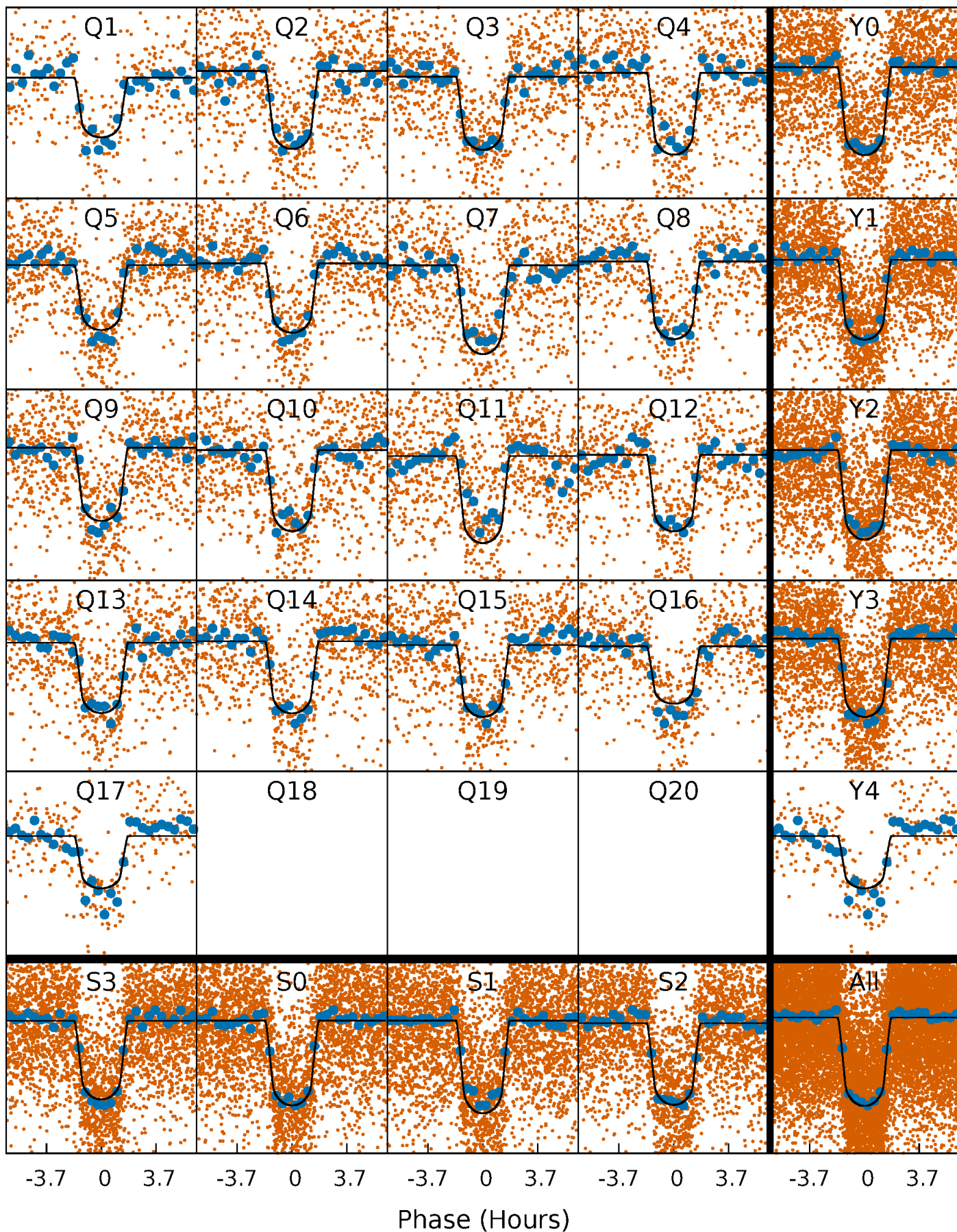
PDC Quarter-Phased Transit Curves

TCE 005866724-02 P= 2.154901 Days $T_0=133.501496$ (BKJD)



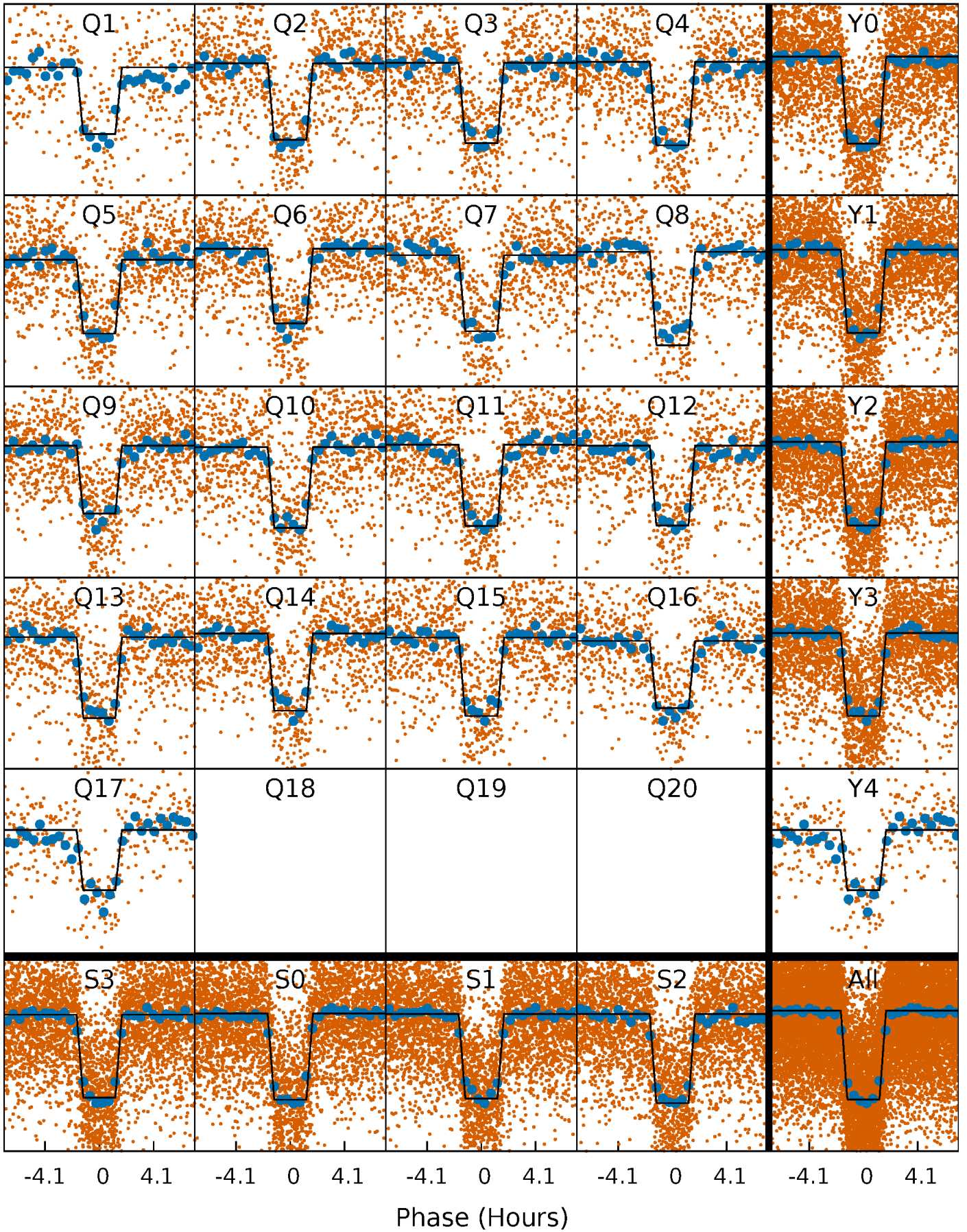
DV Quarter-Phased Transit Curves

TCE 005866724-02 P= 2.154901 Days $T_0=133.501496$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

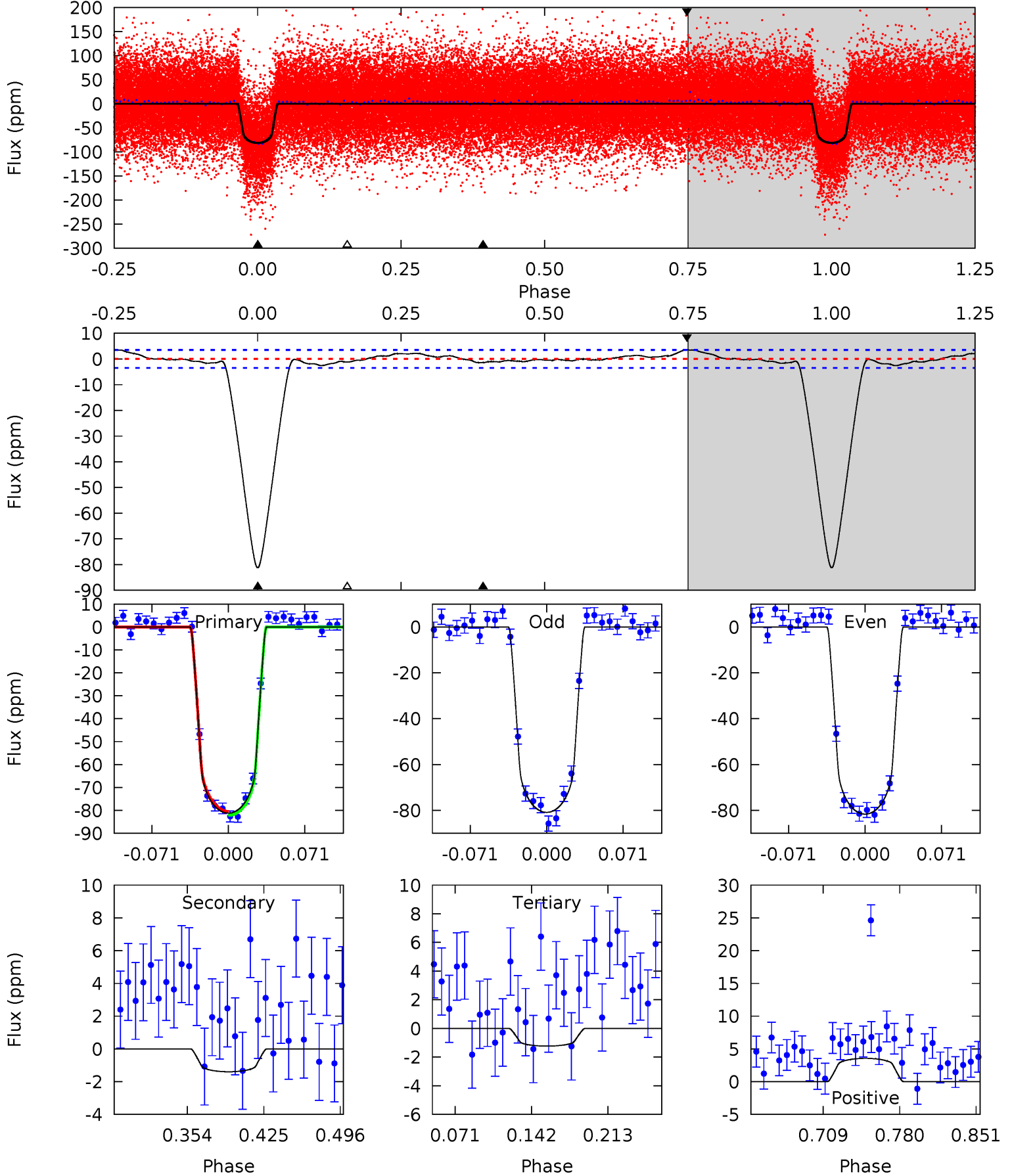
TCE 005866724-02 P= 2.154904 Days $T_0=133.500651$ (BKJD)



DV Model-Shift Uniqueness Test

005866724-02, P = 2.154901 Days, E = 131.346595 Days

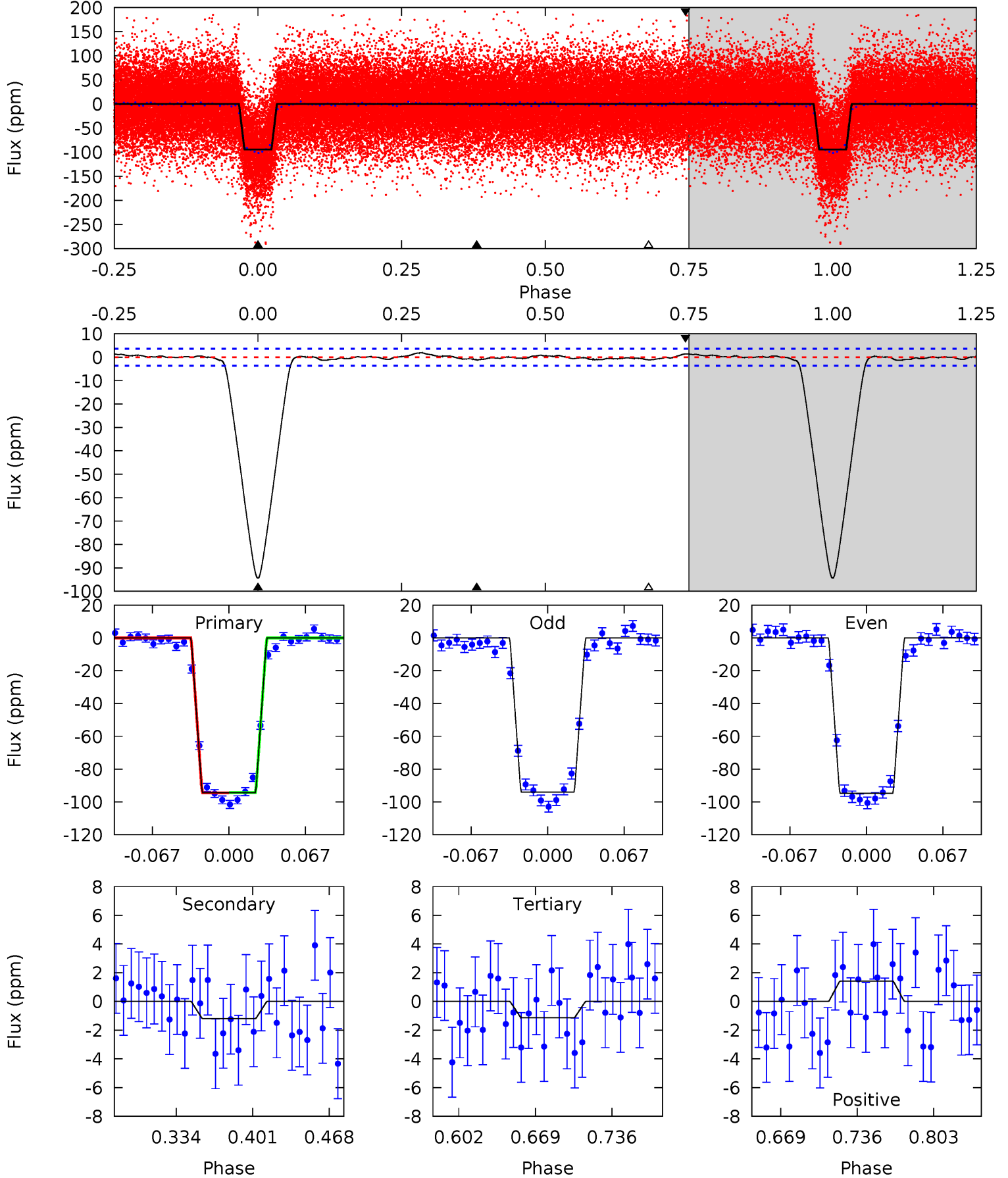
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
107.9	1.85	1.64	4.72	4.64	1.81	1.81	106.3	103.2	0.22	-2.87	0.51	0.99	0.04	1.08



Alt Model-Shift Uniqueness Test

005866724-02, P = 2.154904 Days, E = 131.345747 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
121.6	1.54	1.46	1.82	4.65	1.83	0.88	120.2	119.8	0.07	-0.28	0.48	1.01	0.02	0.15



Stellar Parameters For KIC 005866724

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6181^{+68}_{-86}	$4.220^{+0.033}_{-0.027}$	$0.140^{+0.150}_{-0.150}$	$1.424^{+0.056}_{-0.085}$	$1.231^{+0.059}_{-0.097}$	$0.600^{+0.081}_{-0.059}$
	+1%/-1%	+1%/-1%	+107%/-107%	+4%/-6%	+5%/-8%	+14%/-10%
Source	SPE72	AST69	SPE72	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005866724-02 / KOI 0085.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1 ± 1	$1.54^{+0.12}_{-0.11}$	2428^{+41}_{-41}	2361^{+435}_{-4839}	$0.388^{+0.251}_{-0.217}$
Alt.	-1 ± 1	$1.53^{+0.11}_{-0.12}$	2430^{+39}_{-43}	2134^{+593}_{-4700}	$0.336^{+0.244}_{-0.205}$

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

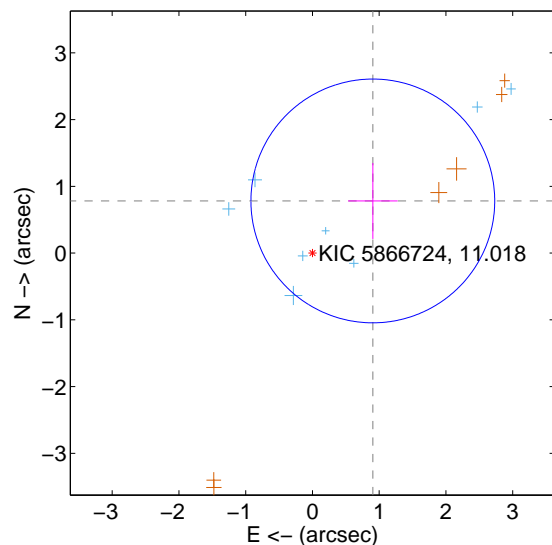
Supplemental centroid analysis for 005866724-02. **Kepler magnitude: 11.02.** Transit SNR 68.02

There are 10 quarters with good PRF difference image offsets

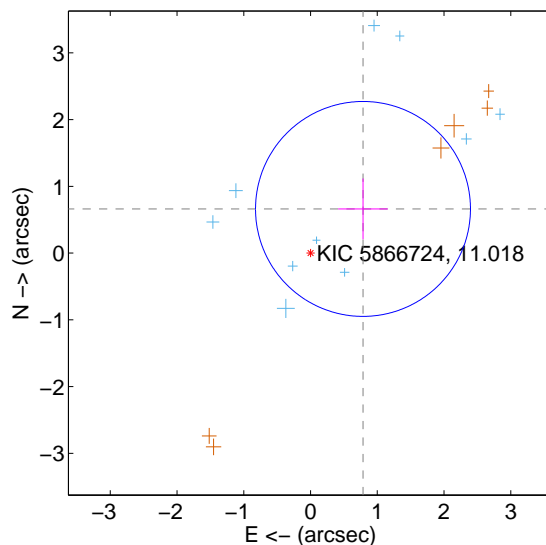
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.195 ± 0.609	1.96	-0.905 ± 0.370	0.781 ± 0.569
PRF-fit source offset from KIC position	1.028 ± 0.537	1.91	-0.786 ± 0.372	0.662 ± 0.456
photometric centroid source offset	0.09 ± 0.13	0.71	-0.09 ± 0.13	0.02 ± 0.14

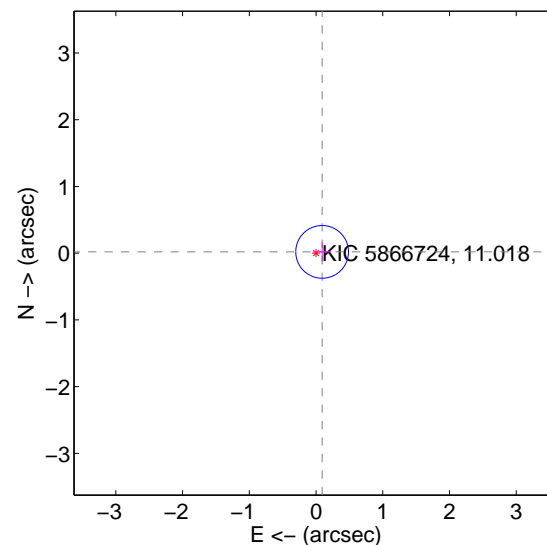
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

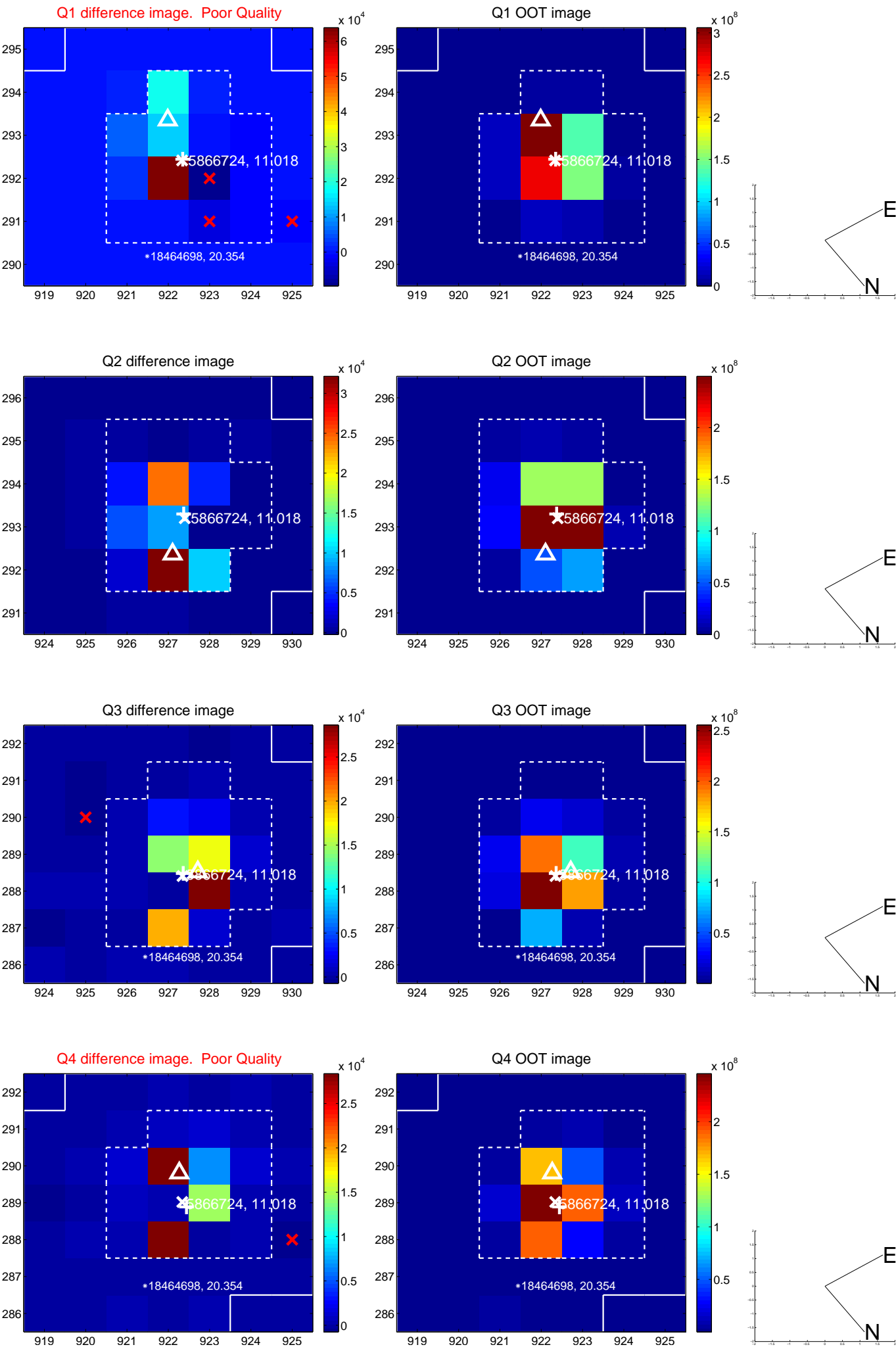


offset from photometric centroids

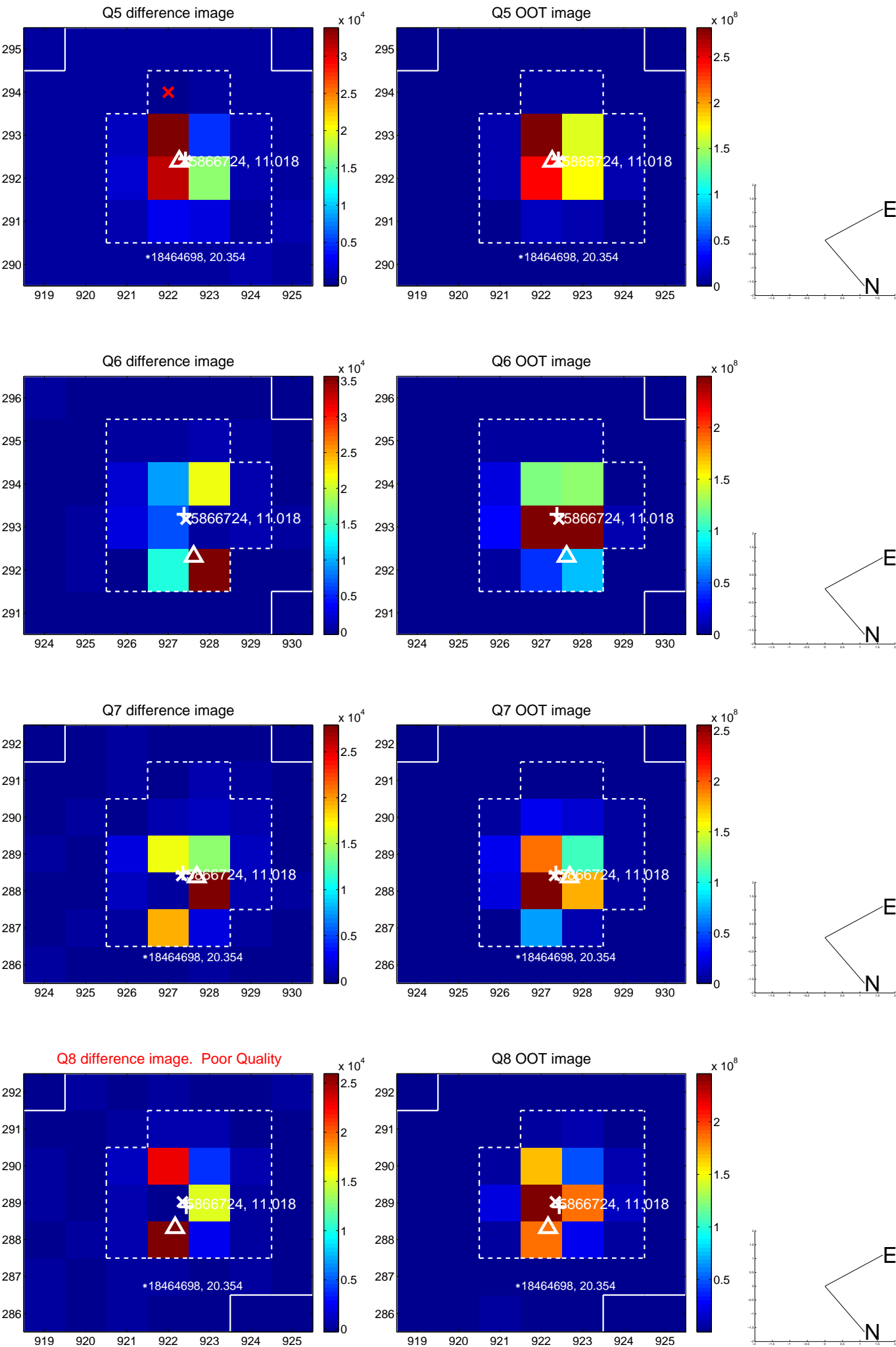


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

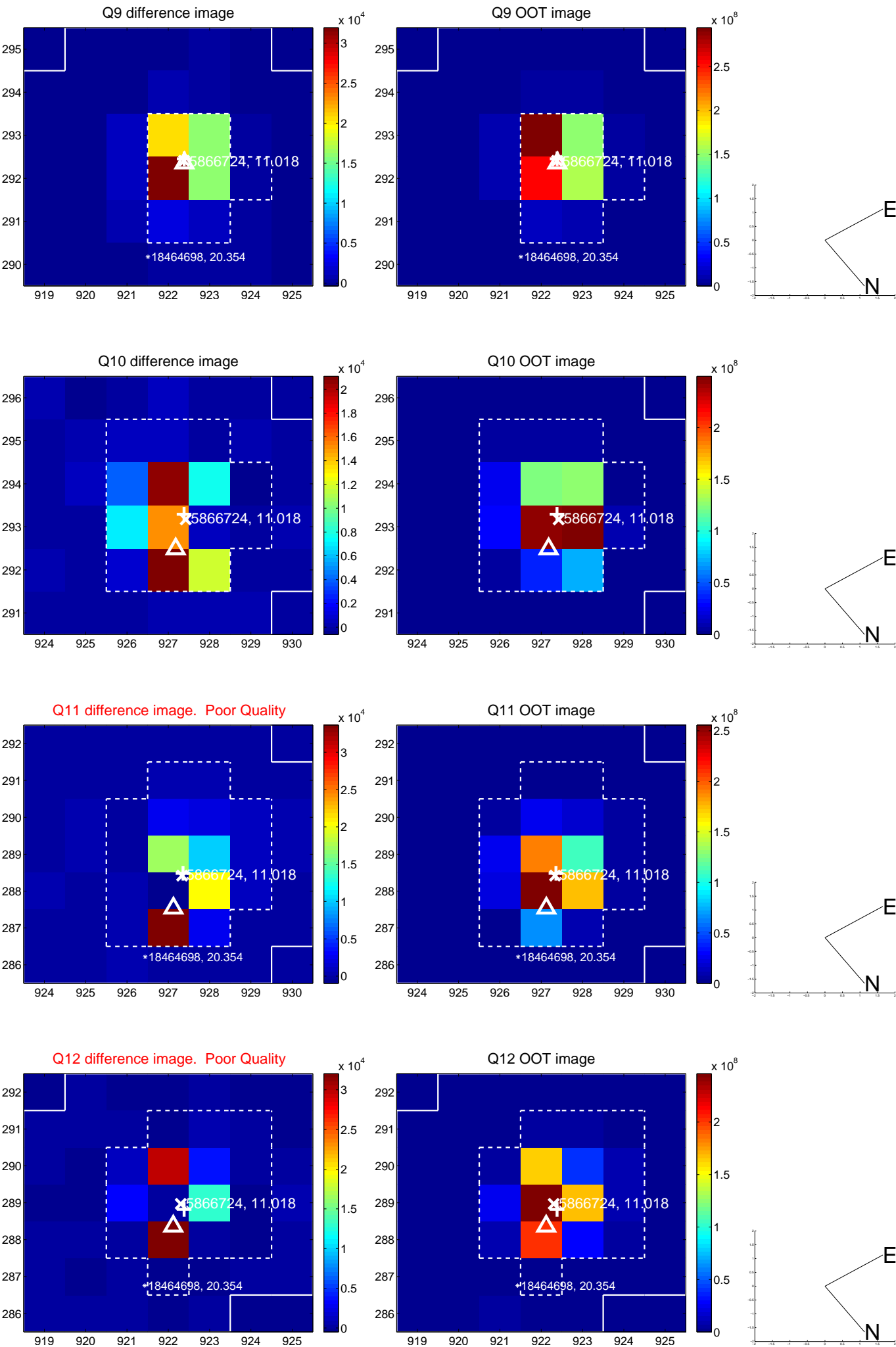
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



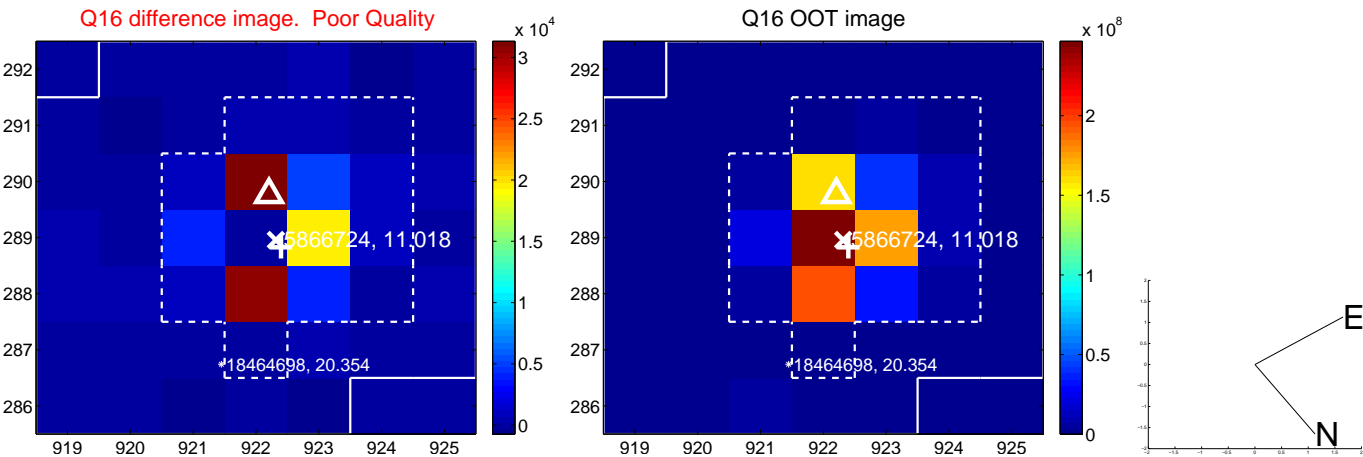
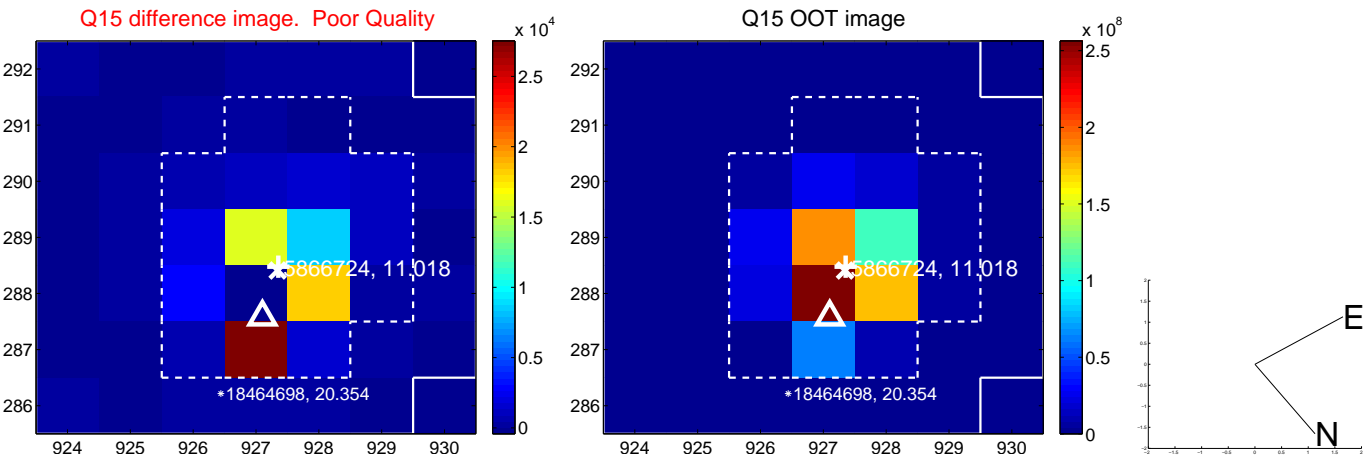
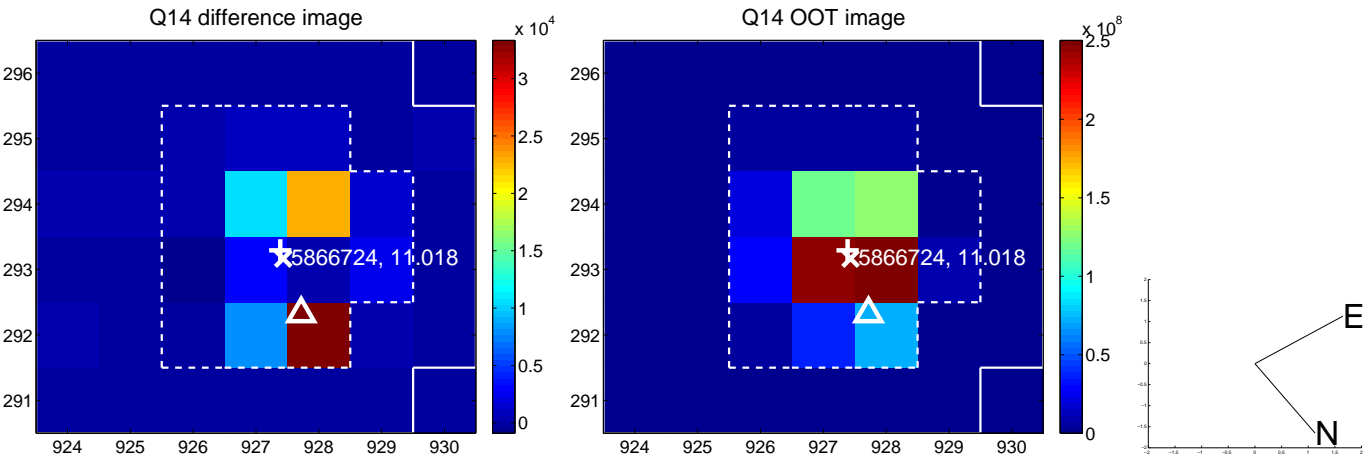
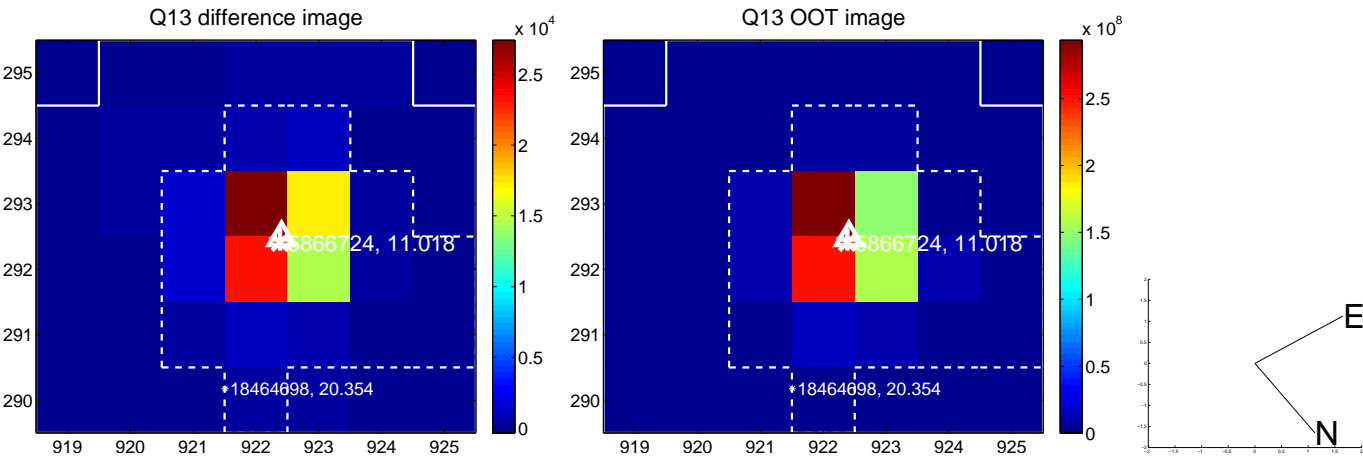
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



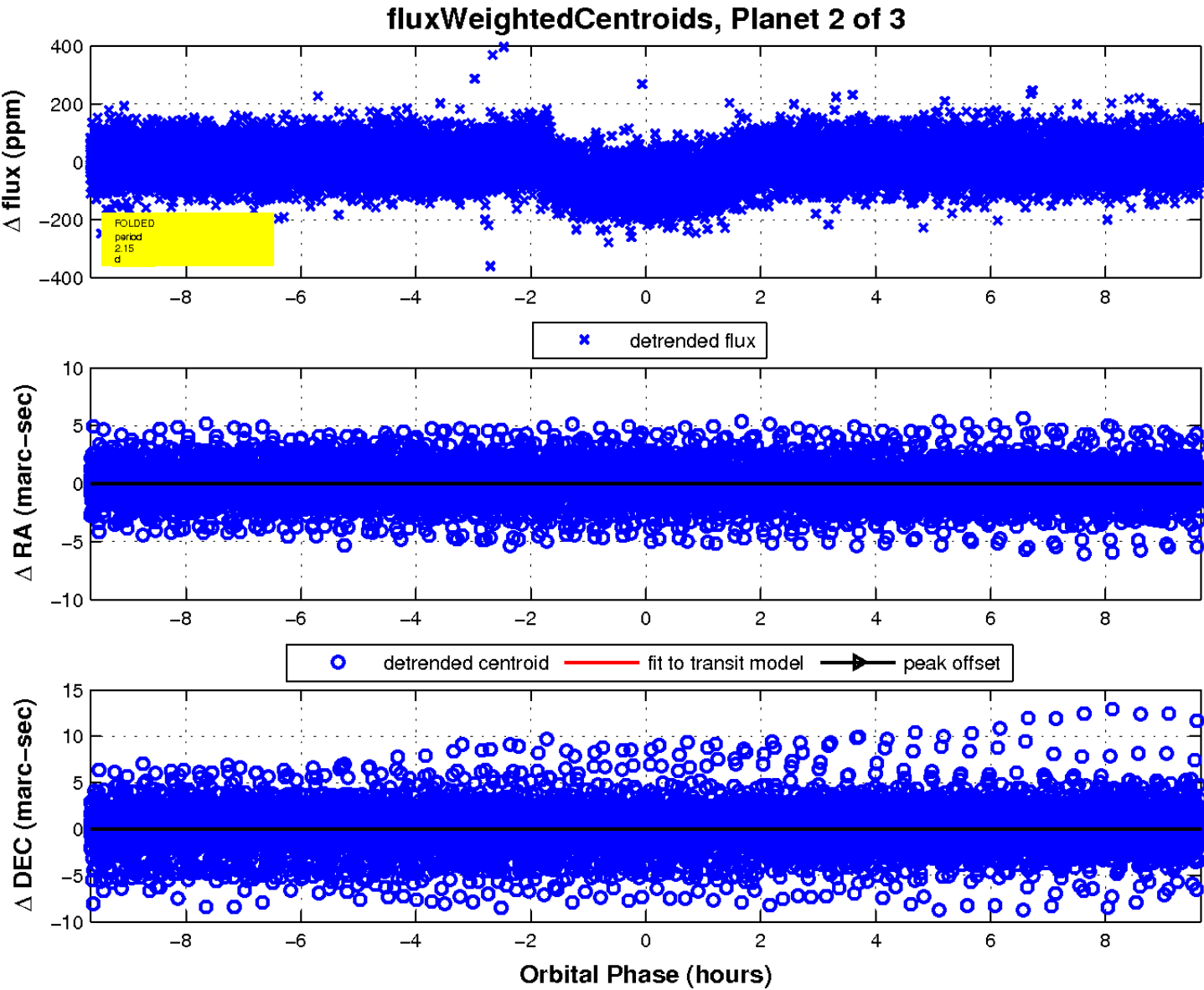
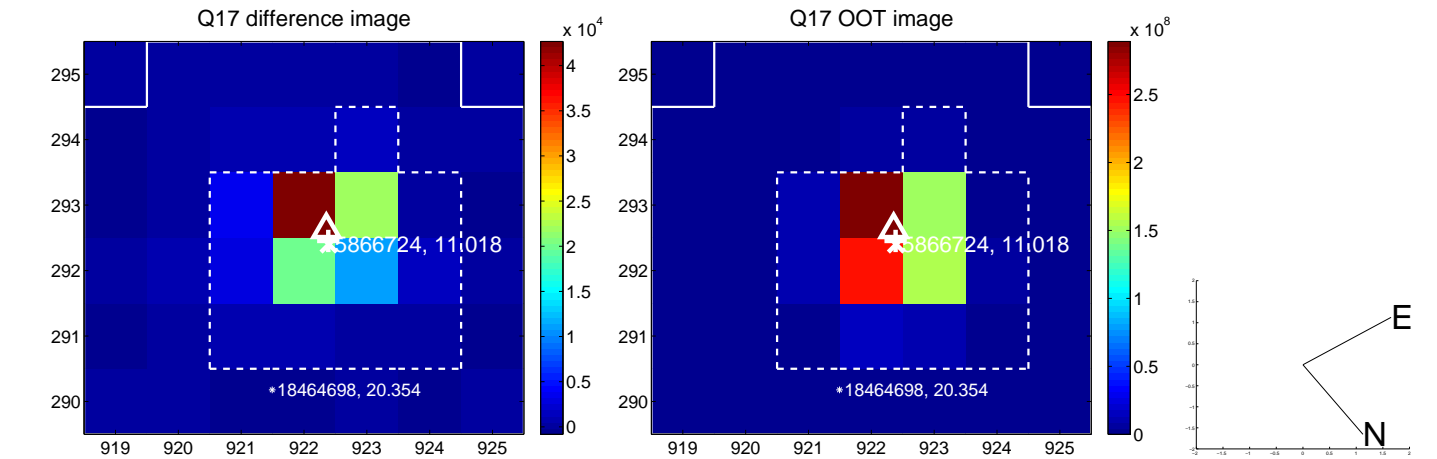
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

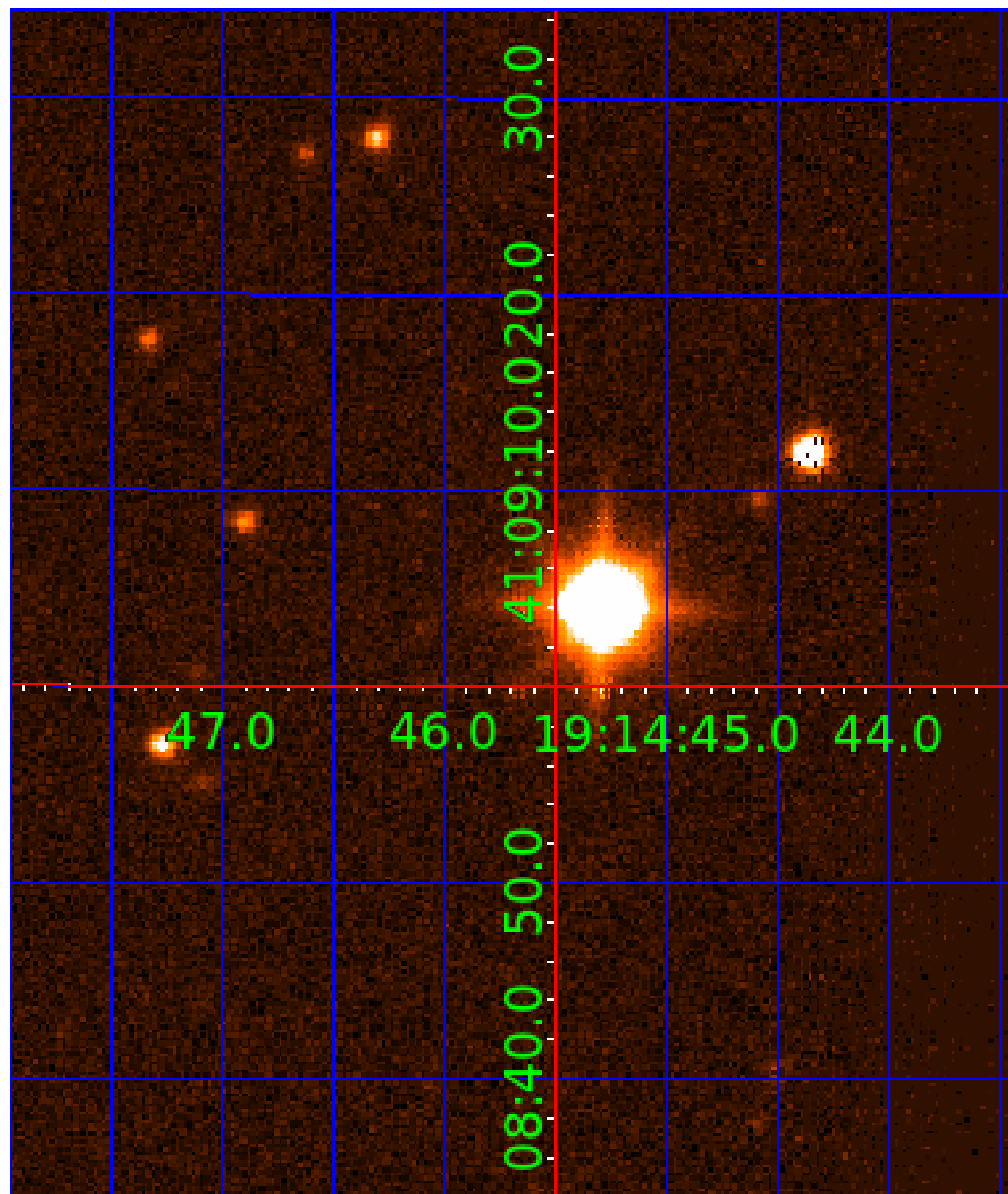


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005866724

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})
005866724-01	OBS	0085.01	5.859940	132.039903	319.3	4.245	149.3	153.2	1.42	6181	2.97	571.41
005866724-02	OBS	0085.02	2.154901	133.501496	84.4	3.221	61.7	68.0	1.42	6181	1.54	2168.87
005866724-03	OBS	0085.03	8.131224	137.991471	106.6	4.393	41.2	44.0	1.42	6181	1.73	369.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005866724-01	OBS	PC	1.00	0	0	0	0	CENT_SATURATED
005866724-02	OBS	PC	1.00	0	0	0	0	CENT_SATURATED
005866724-03	OBS	PC	1.00	0	0	0	0	CENT_SATURATED

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.

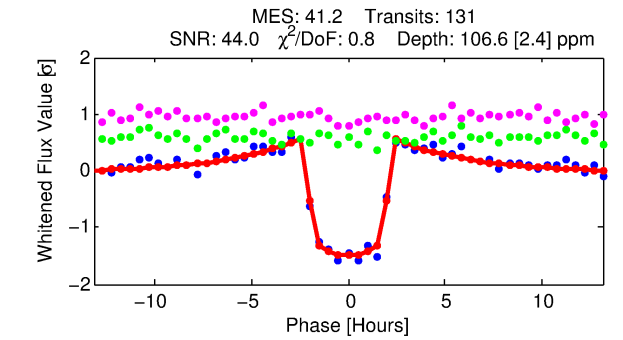
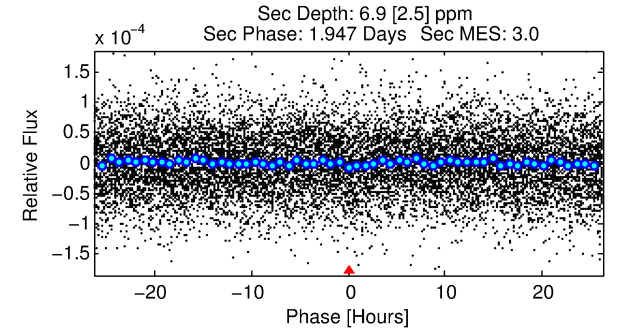
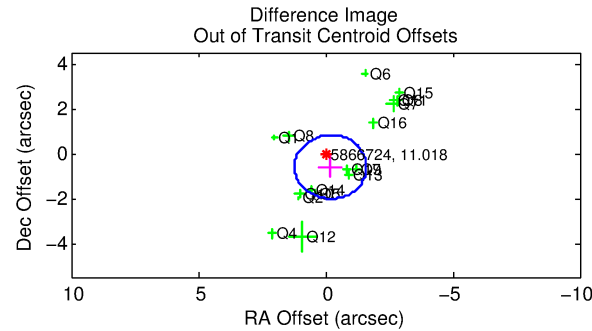
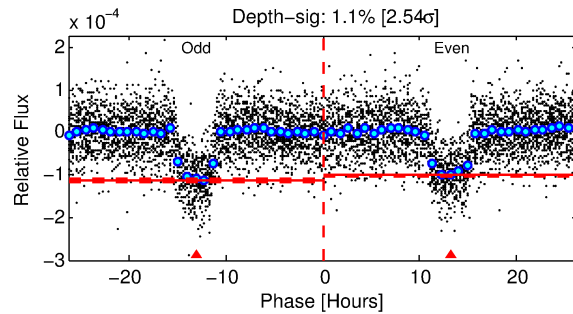
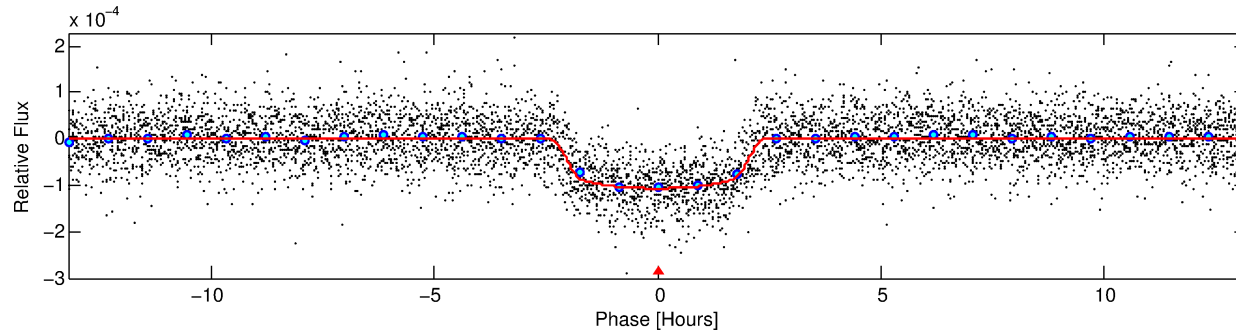
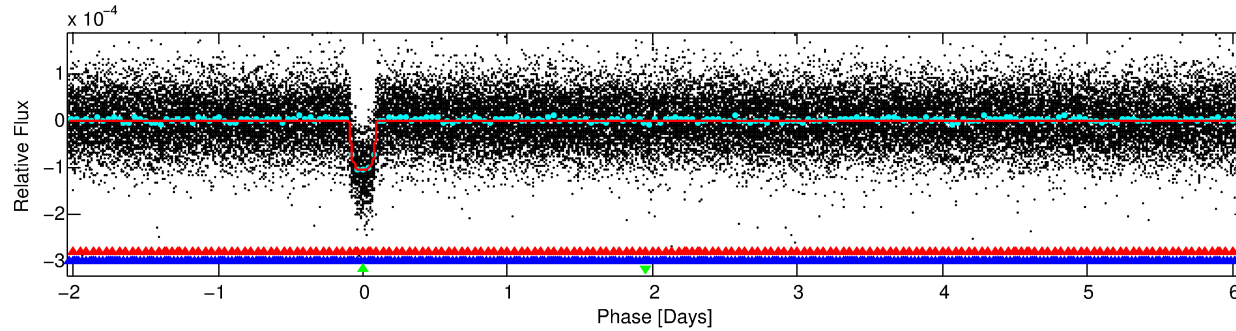
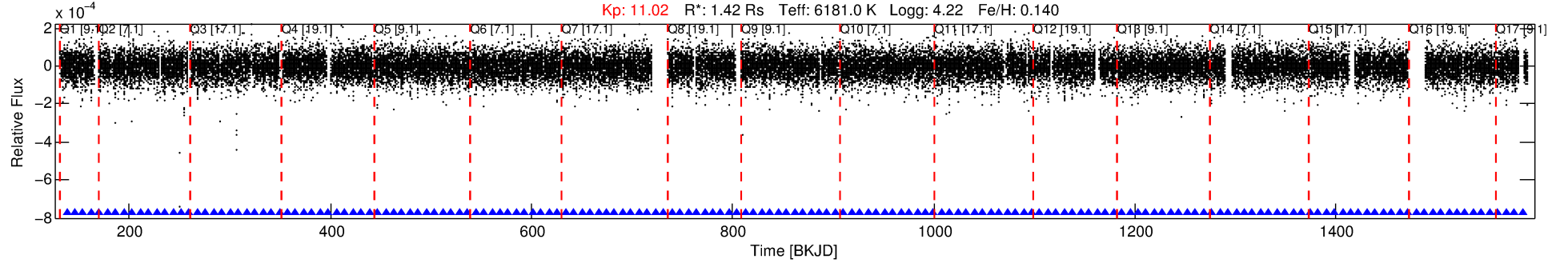
Ephemeris Match Information For 005866724-03

No Significant Match Found

DV One-Page Summary

KIC: 5866724 Candidate: 3 of 3 Period: 8.131 d
KOI: K00085.03 Name: Kepler-65d Corr: 0.994

Kp: 11.02 R*: 1.42 Rs Teff: 6181.0 K Logg: 4.22 Fe/H: 0.140



DV Fit Results:

Period = 8.13122 [0.00001] d
Epoch = 137.9915 [0.0013] BKJD
Rp/R* = 0.0111 [0.0008]
a/R* = 6.57 [2.53]
b = 0.90 [0.08]
Seff = 369.20 [31.43]
Teff = 1118 [24] K
Rp = 1.73 [0.17] Re
a = 0.0848 [0.0040] AU
Ag = 9.06 [3.63] [2.22σ]
Teffp = 2998 [299] K [6.26σ]

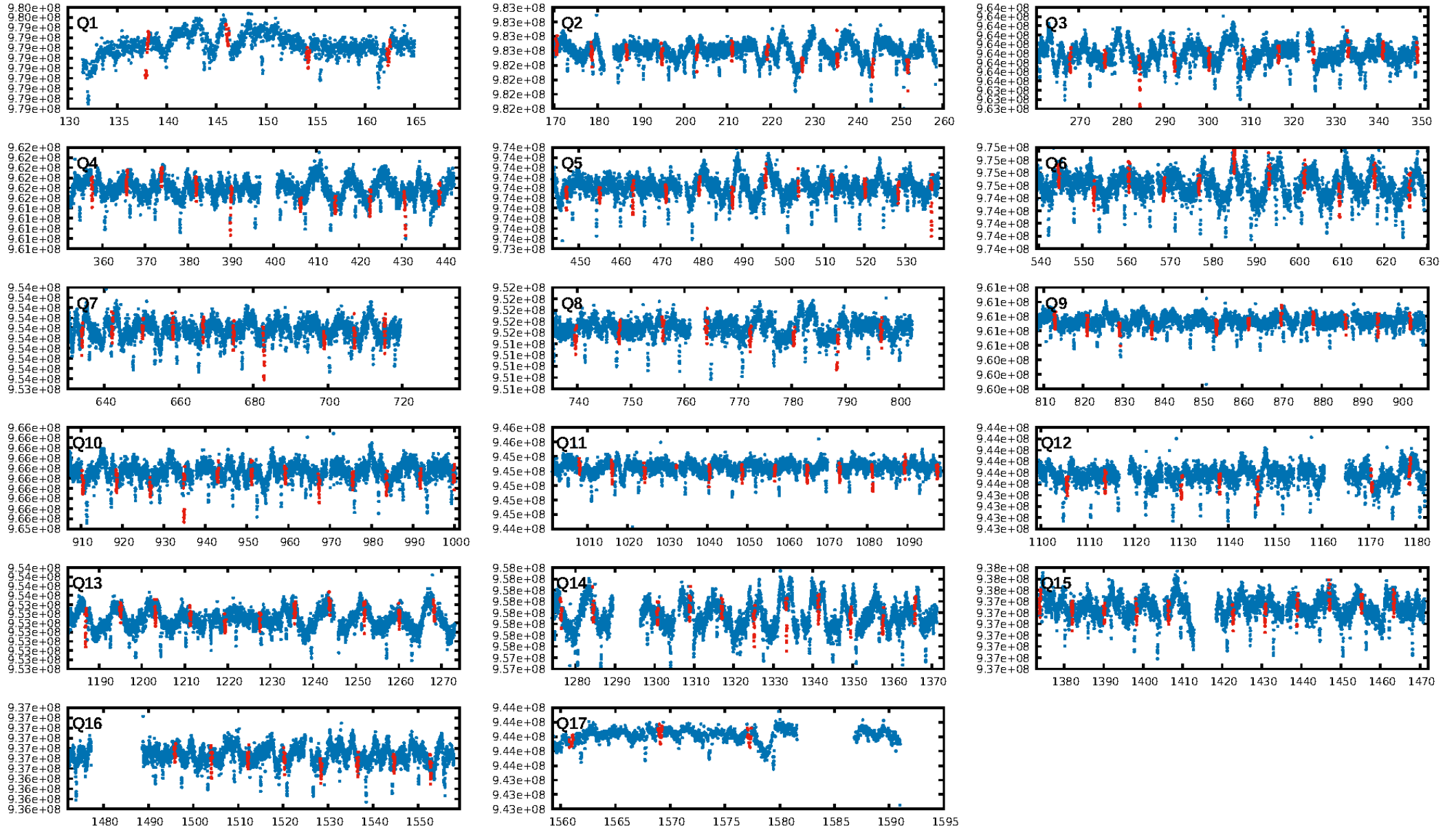
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.92σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [126/126]
GhostDiagnostic-chr: 4.411
Centroid-sig: 1.8%
Centroid-so: 0.182 arcsec [0.90σ]
OotOffset-rm: 0.631 arcsec [1.34σ]
KicOffset-rm: 0.723 arcsec [1.43σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.65 [11/17]
DiffImageOverlap-fno: 0.94 [16/17]

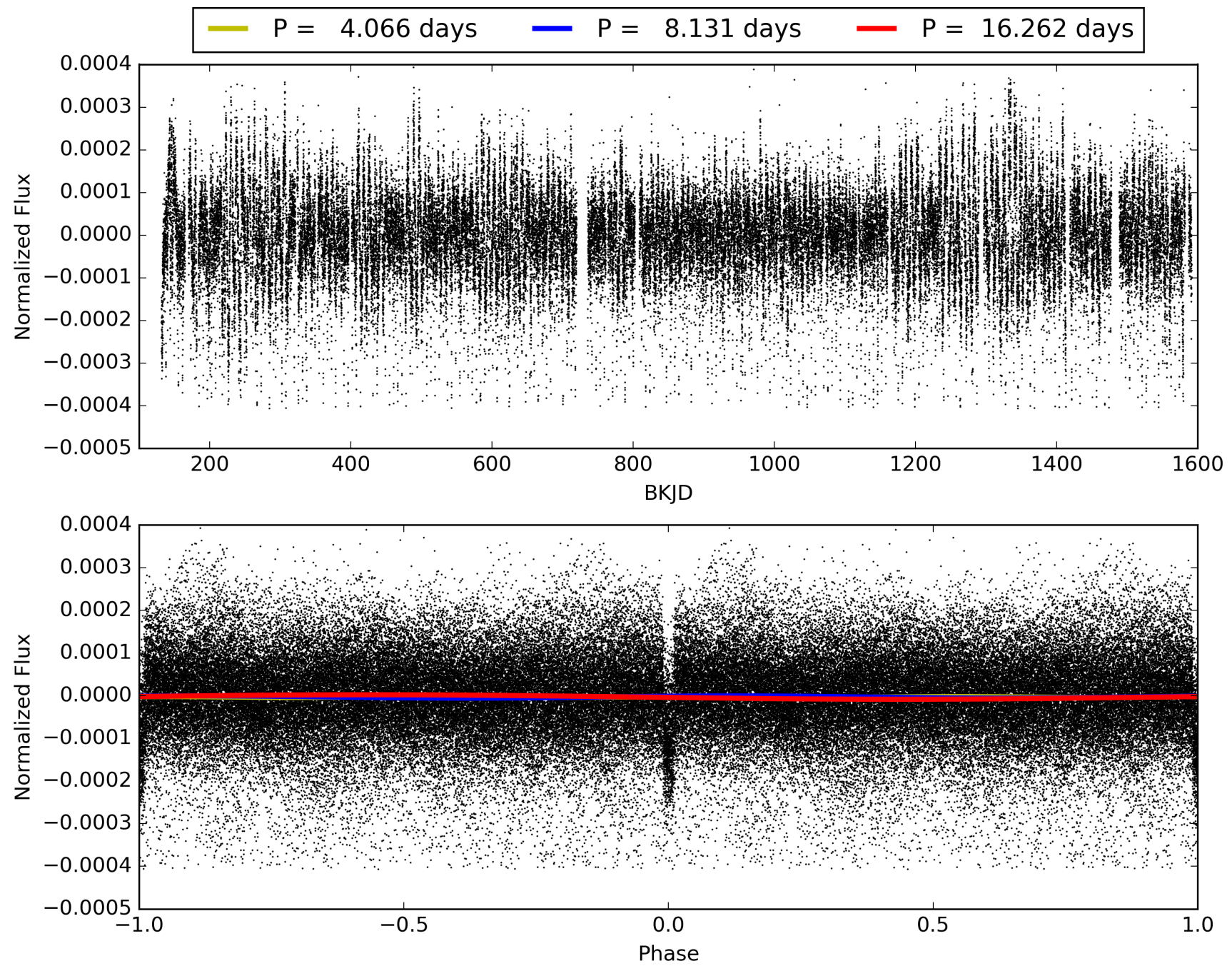
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:32:49 Z

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

TCE 005866724-03, PDC Light Curves

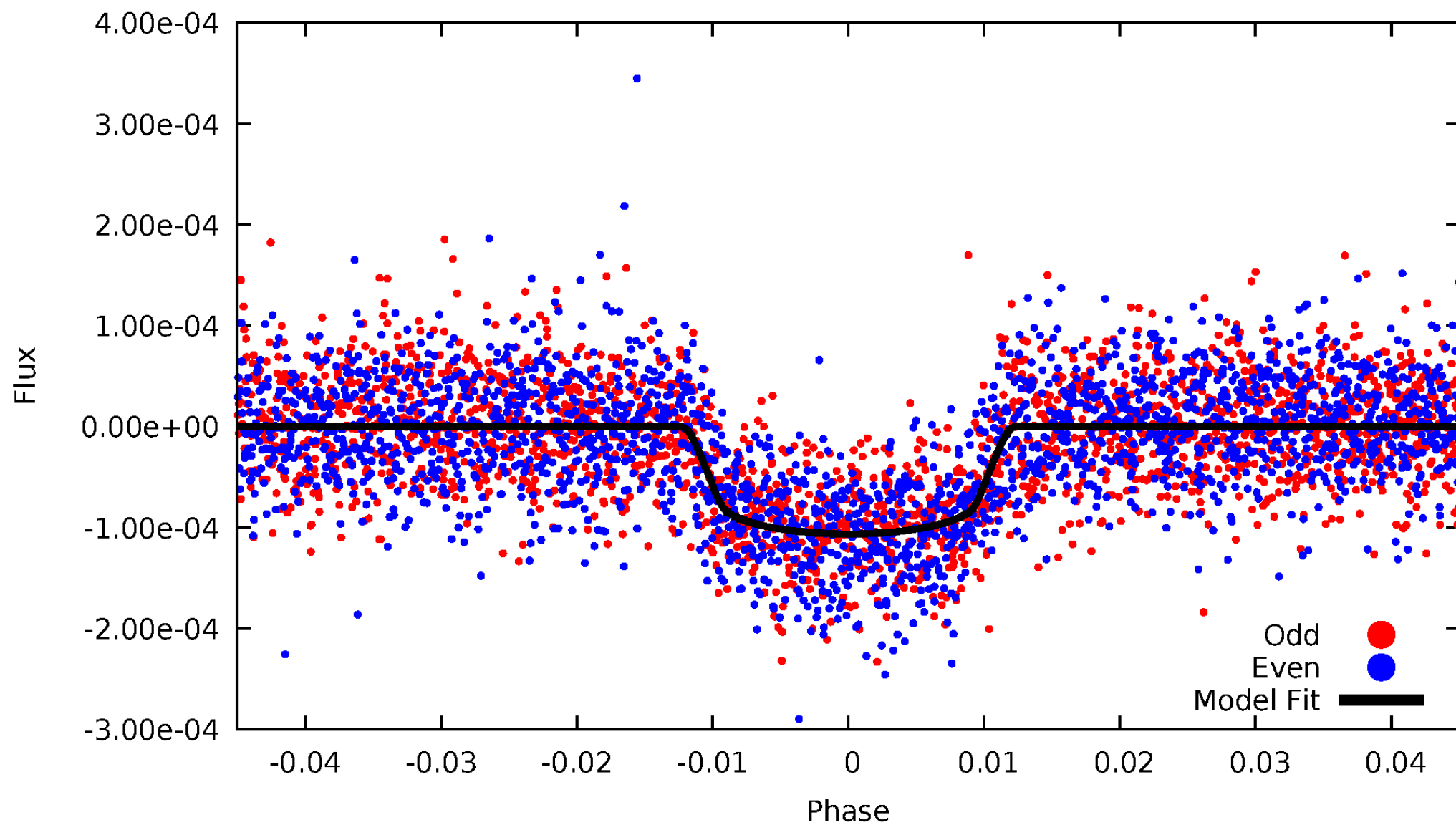


TCE 005866724-03



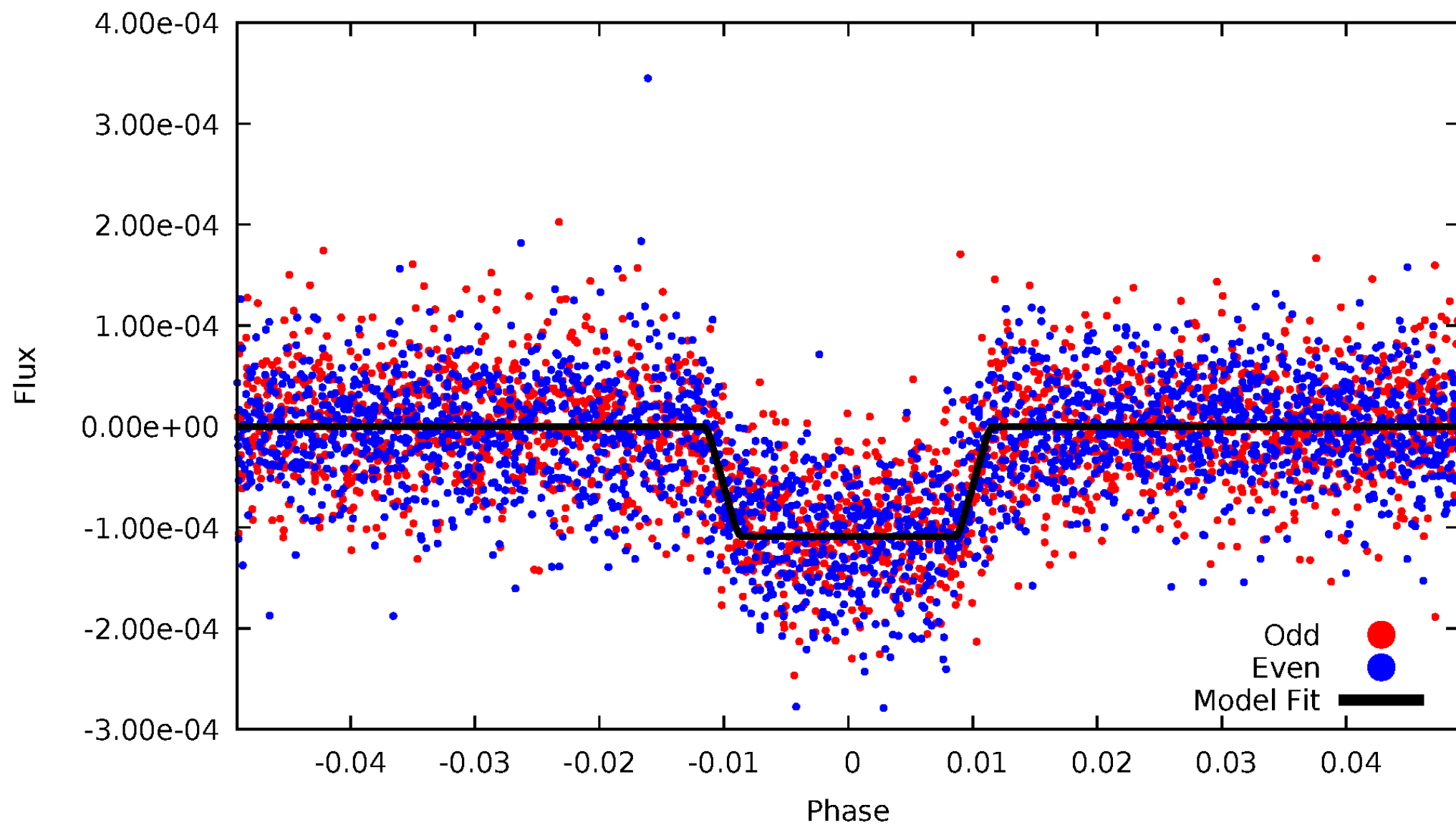
DV Odd/Even

TCE 005866724-03



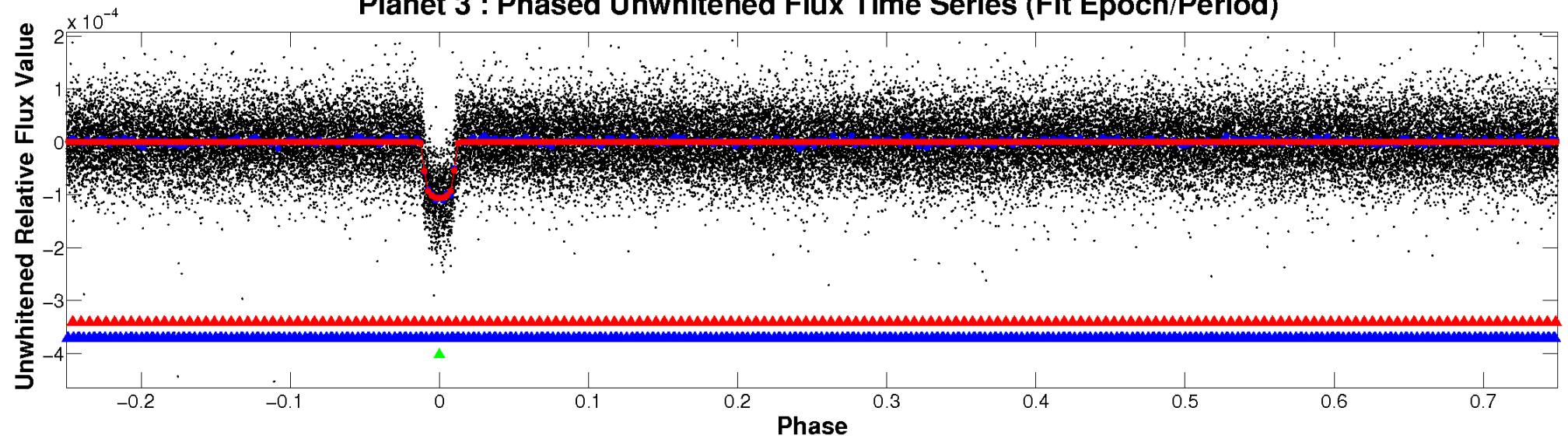
ALT Odd/Even

TCE 005866724-03

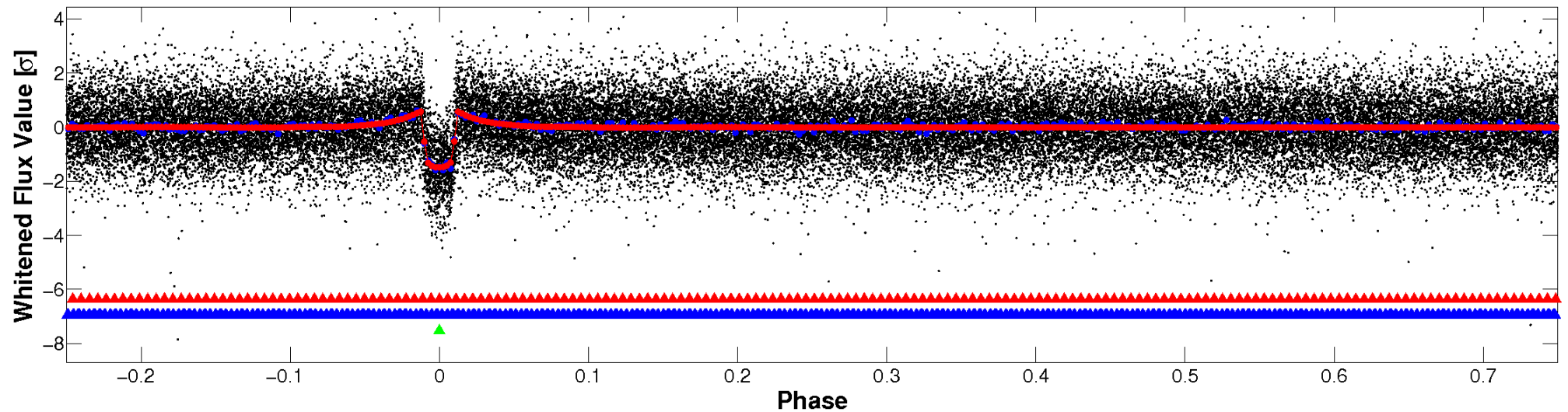


Non-Whitened Vs. Whitened Light Curve

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

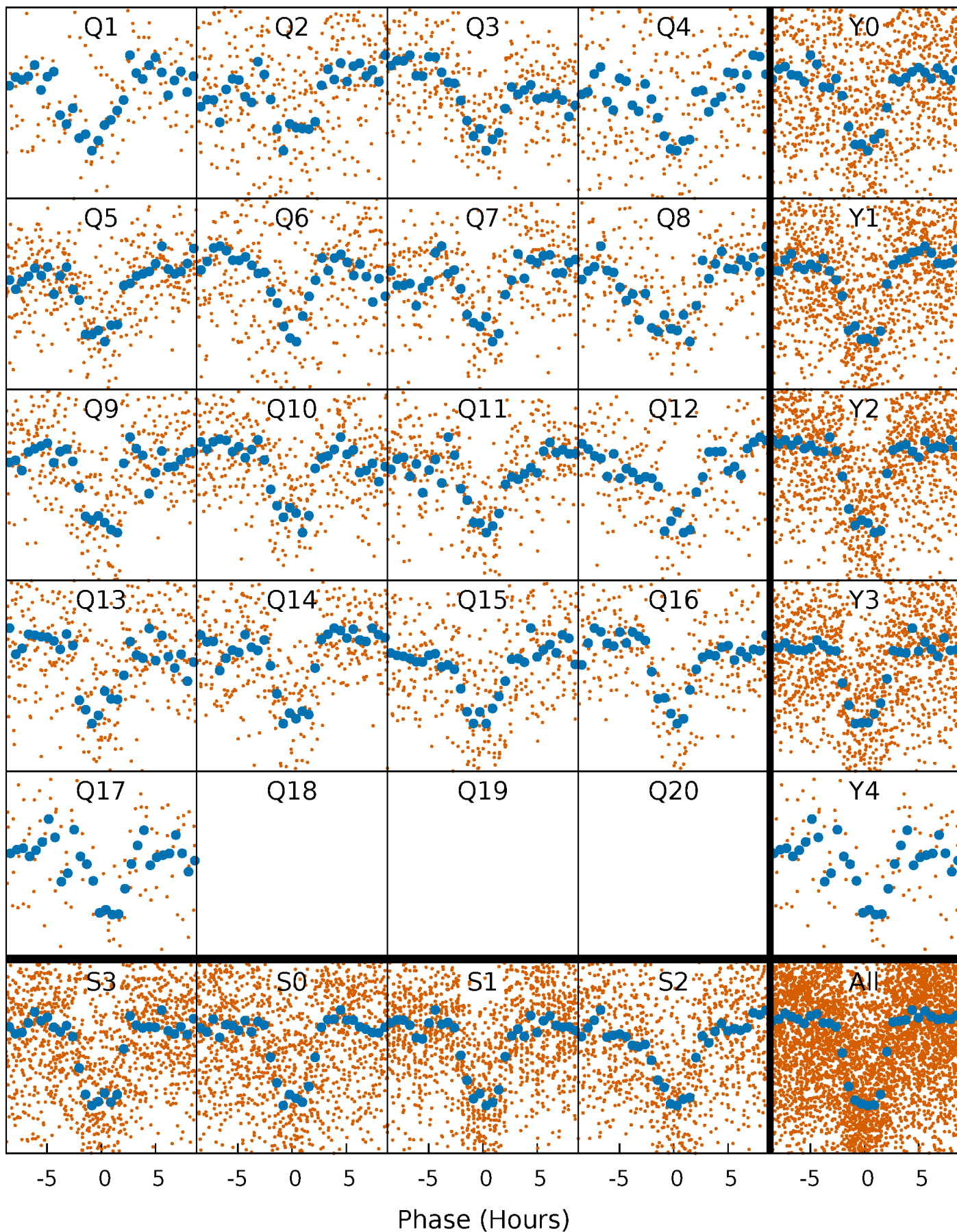


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



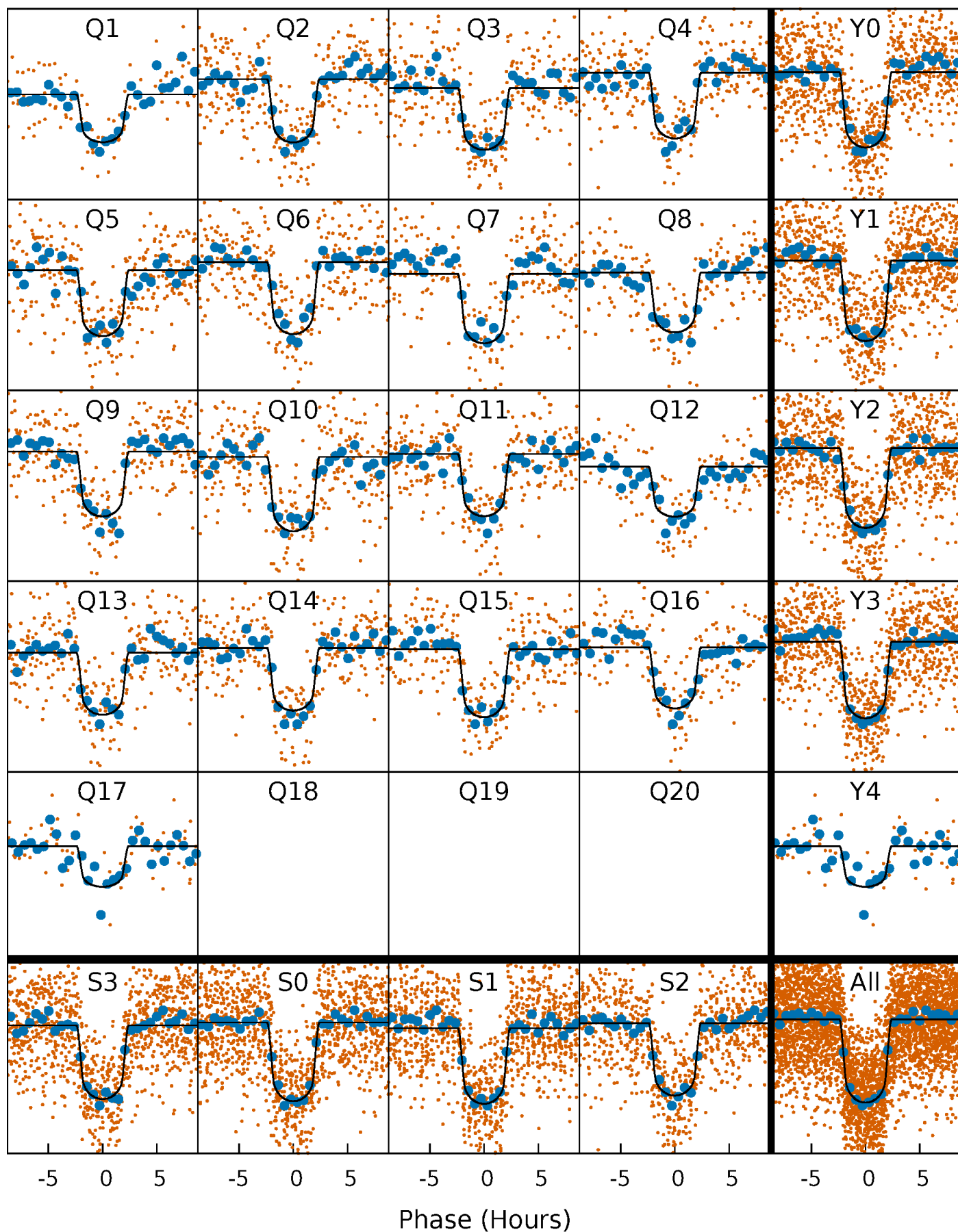
PDC Quarter-Phased Transit Curves

TCE 005866724-03 P= 8.131224 Days $T_0=137.991471$ (BKJD)



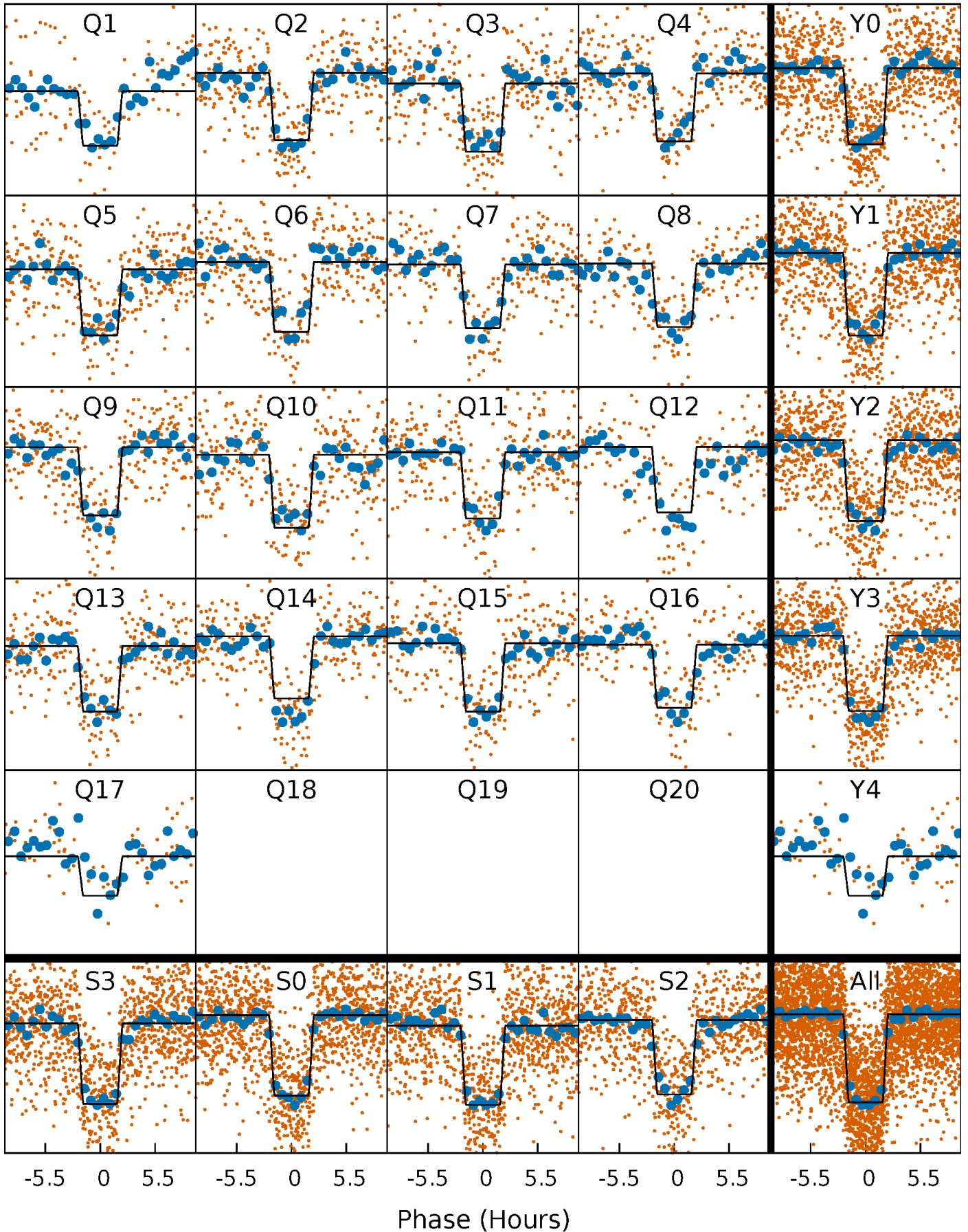
DV Quarter-Phased Transit Curves

TCE 005866724-03 P= 8.131224 Days $T_0=137.991471$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

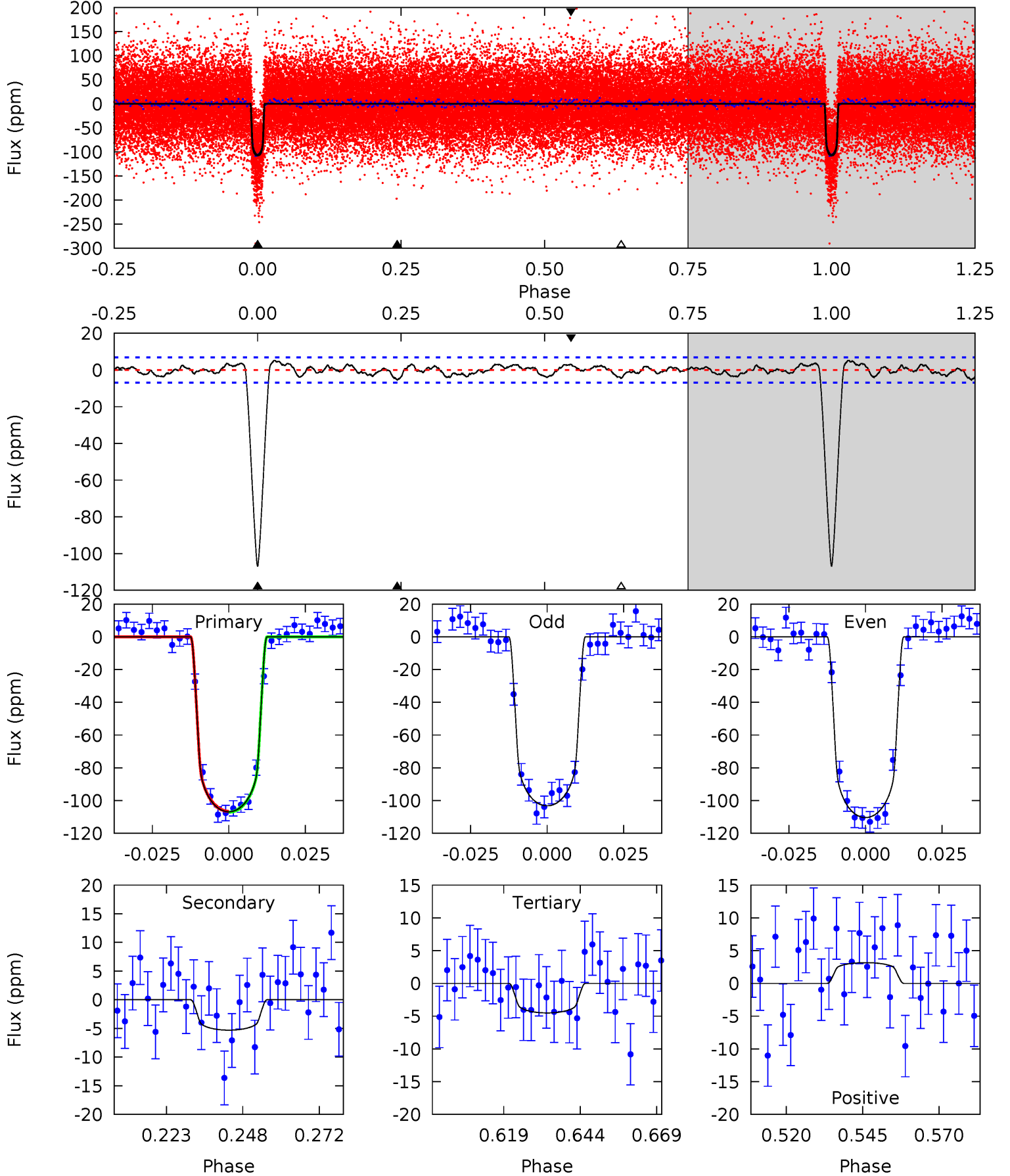
TCE 005866724-03 P= 8.131170 Days $T_0=137.996410$ (BKJD)



DV Model-Shift Uniqueness Test

005866724-03, P = 8.131224 Days, E = 129.860247 Days

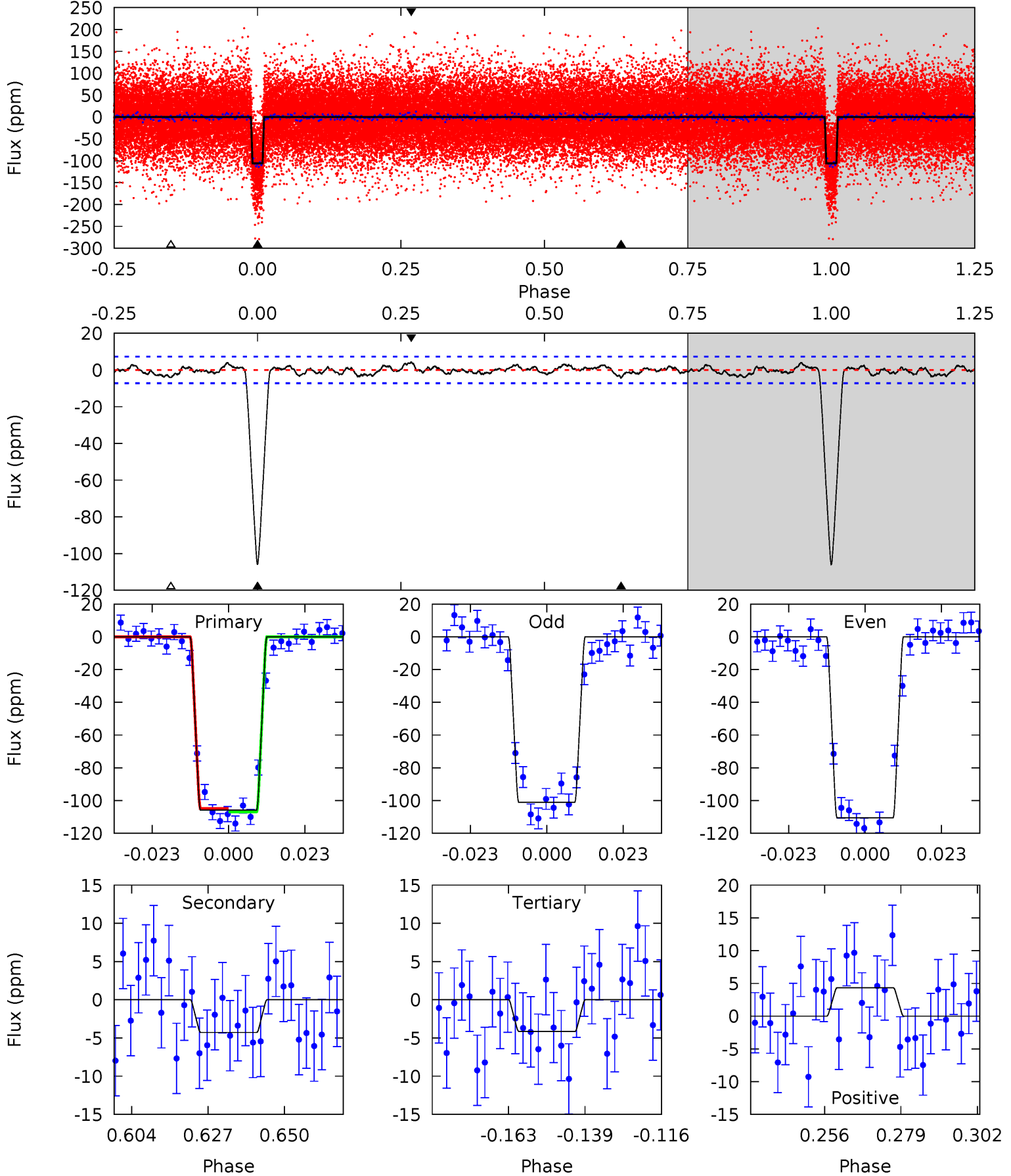
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
75.4	3.74	3.18	2.23	4.85	2.24	1.40	72.2	73.1	0.56	1.51	2.54	1.00	0.05	0.19



Alt Model-Shift Uniqueness Test

005866724-03, P = 8.131170 Days, E = 129.865240 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
71.3	2.88	2.79	2.93	4.86	2.27	1.10	68.5	68.4	0.09	-0.05	3.20	1.01	0.04	0.69



Stellar Parameters For KIC 005866724

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6181^{+68}_{-86}	$4.220^{+0.033}_{-0.027}$	$0.140^{+0.150}_{-0.150}$	$1.424^{+0.056}_{-0.085}$	$1.231^{+0.059}_{-0.097}$	$0.600^{+0.081}_{-0.059}$
	+1%/-1%	+1%/-1%	+107%/-107%	+4%/-6%	+5%/-8%	+14%/-10%
Source	SPE72	AST69	SPE72	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005866724-03 / KOI 0085.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 1	$1.73^{+0.14}_{-0.14}$	1559^{+26}_{-29}	3320^{+159}_{-175}	$6.942^{+2.340}_{-2.054}$
Alt.	-4 ± 1	$1.63^{+0.13}_{-0.14}$	1561^{+26}_{-29}	3273^{+192}_{-223}	$6.229^{+2.815}_{-2.266}$

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 $A_{obs} \gg 1.0$

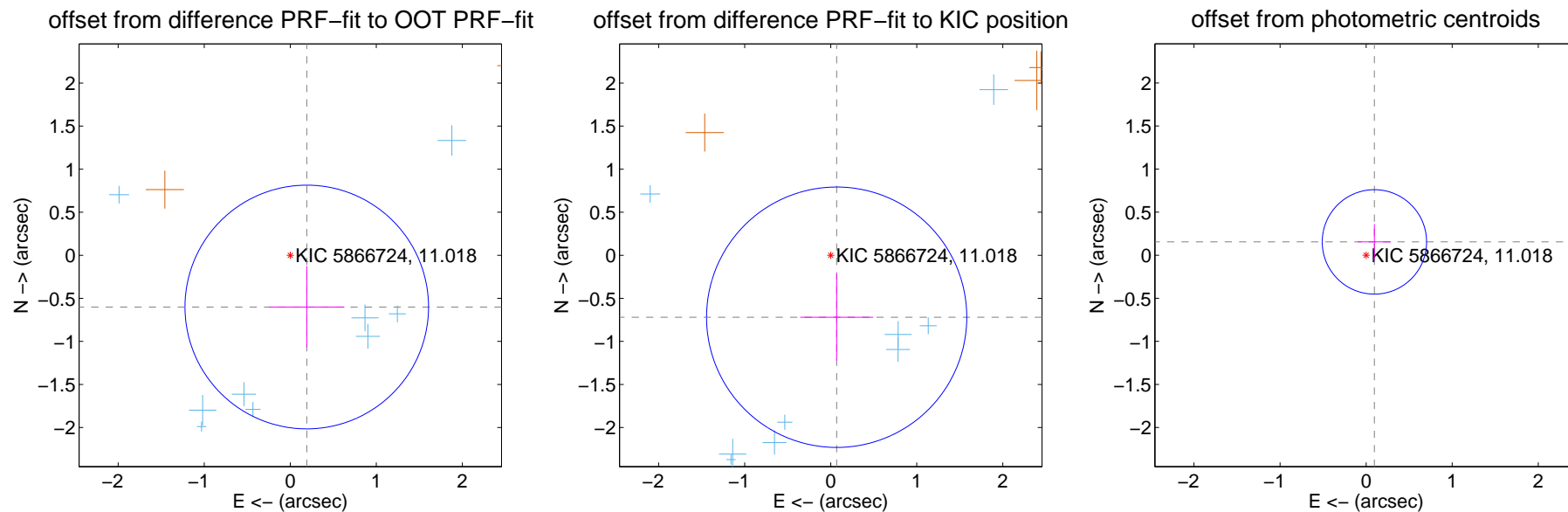
DV Centroid Data

Supplemental centroid analysis for 005866724-03. **Kepler magnitude: 11.02.** Transit SNR 43.99

There are 11 quarters with good PRF difference image offsets

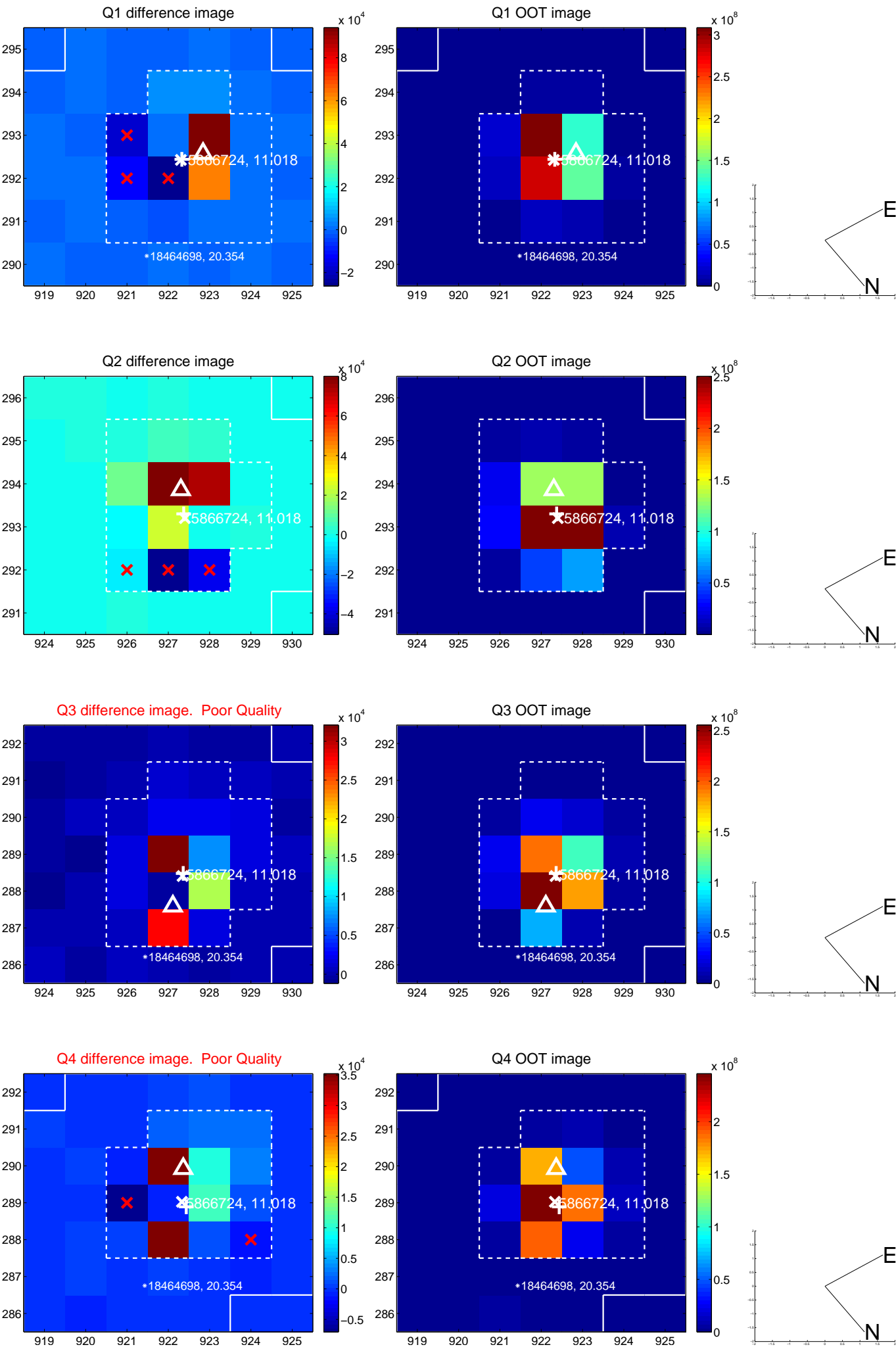
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.631 ± 0.472	1.34	-0.192 ± 0.438	-0.601 ± 0.475
PRF-fit source offset from KIC position	0.723 ± 0.504	1.43	-0.069 ± 0.424	-0.719 ± 0.505
photometric centroid source offset	0.18 ± 0.20	0.90	-0.10 ± 0.19	0.15 ± 0.21

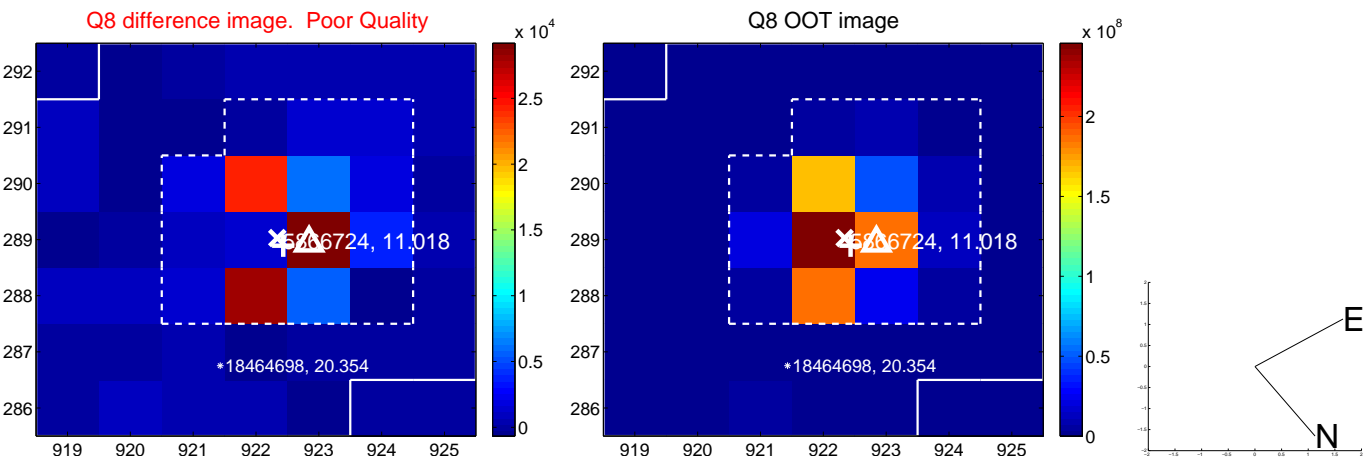
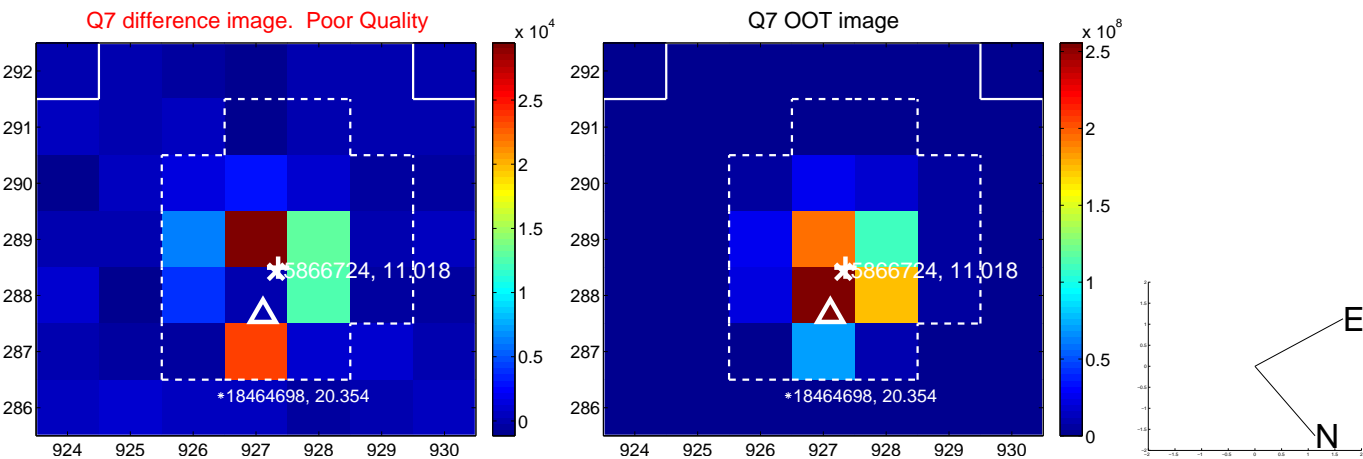
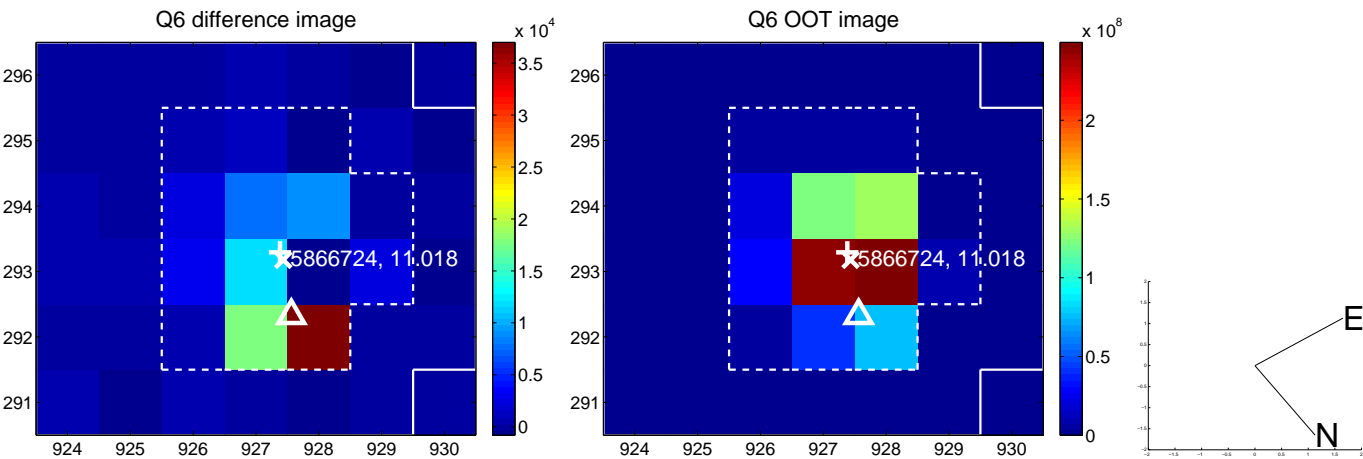
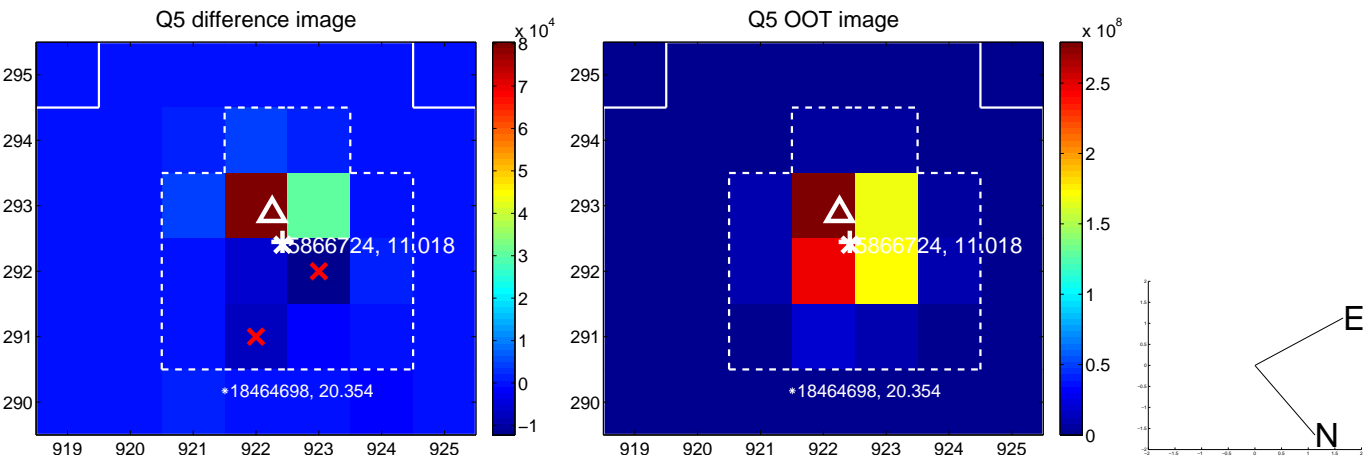


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

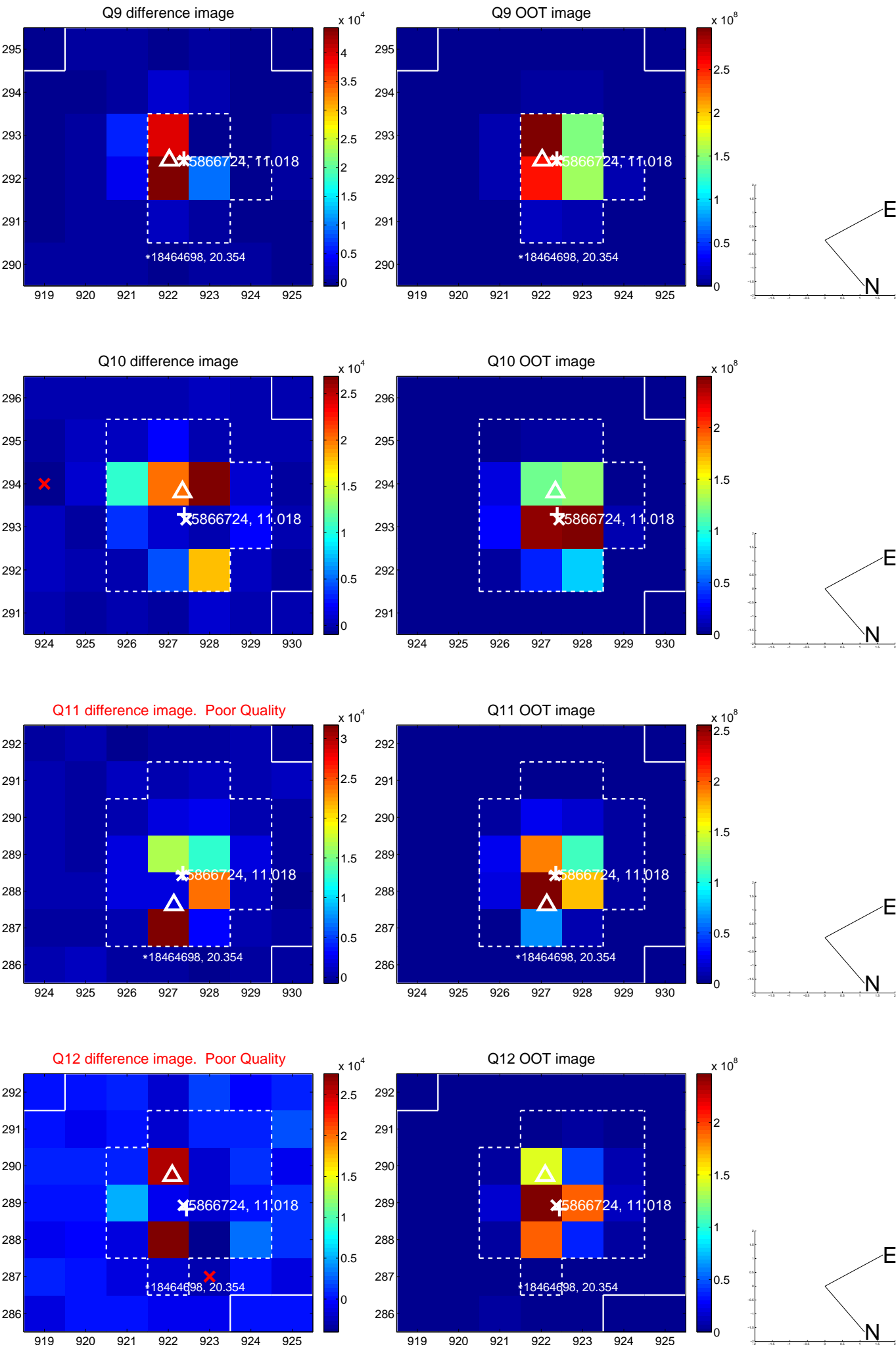
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



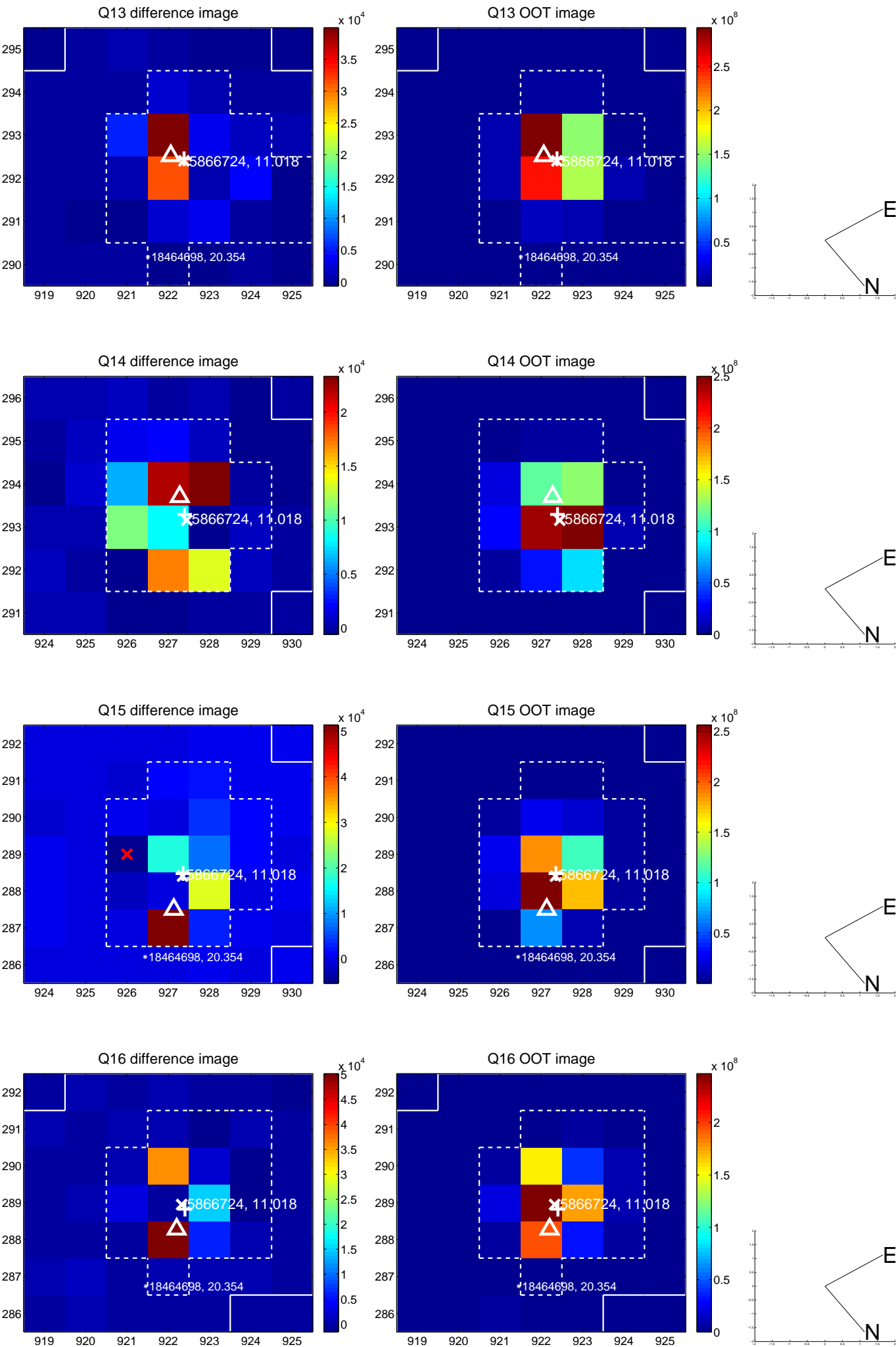
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



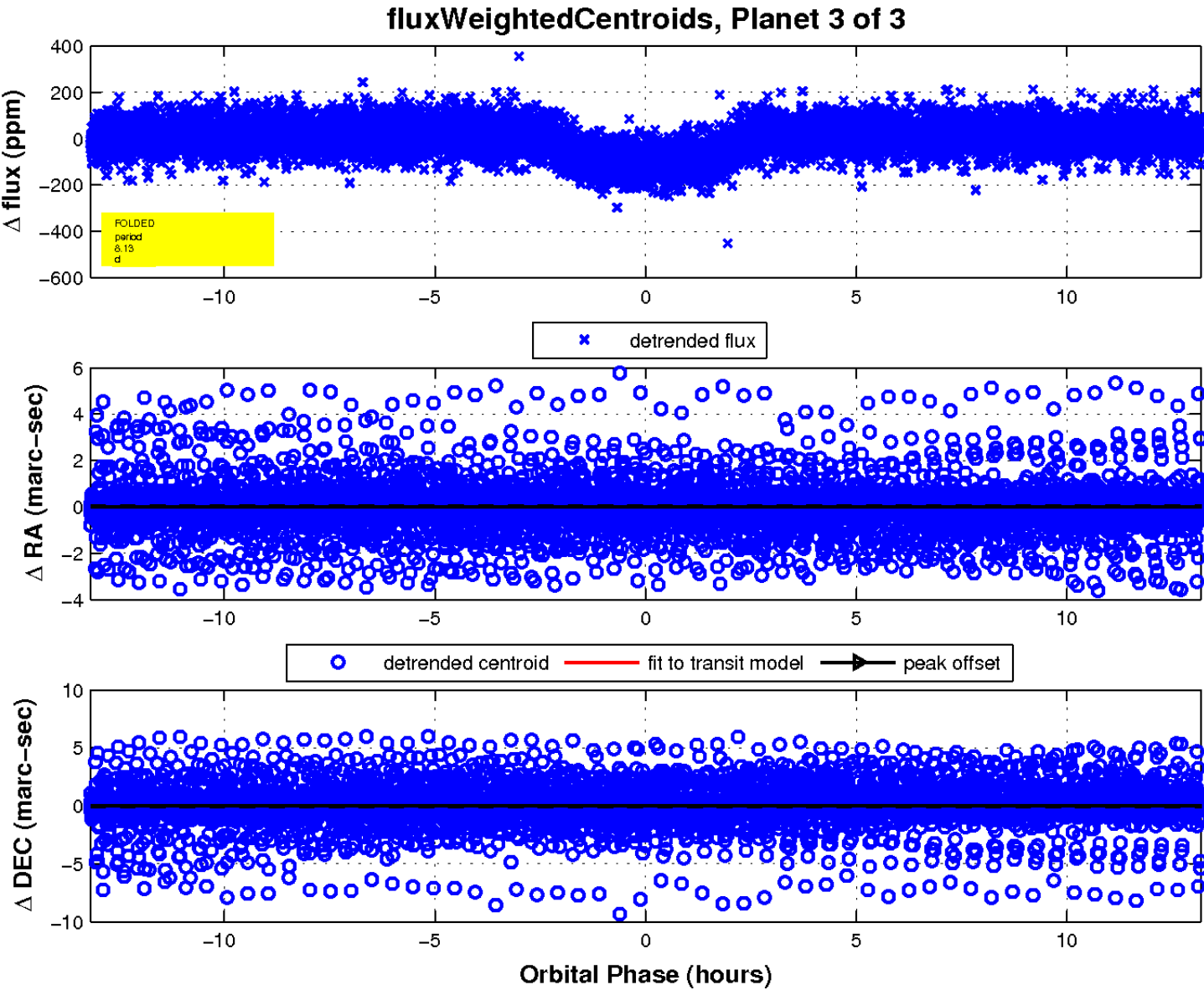
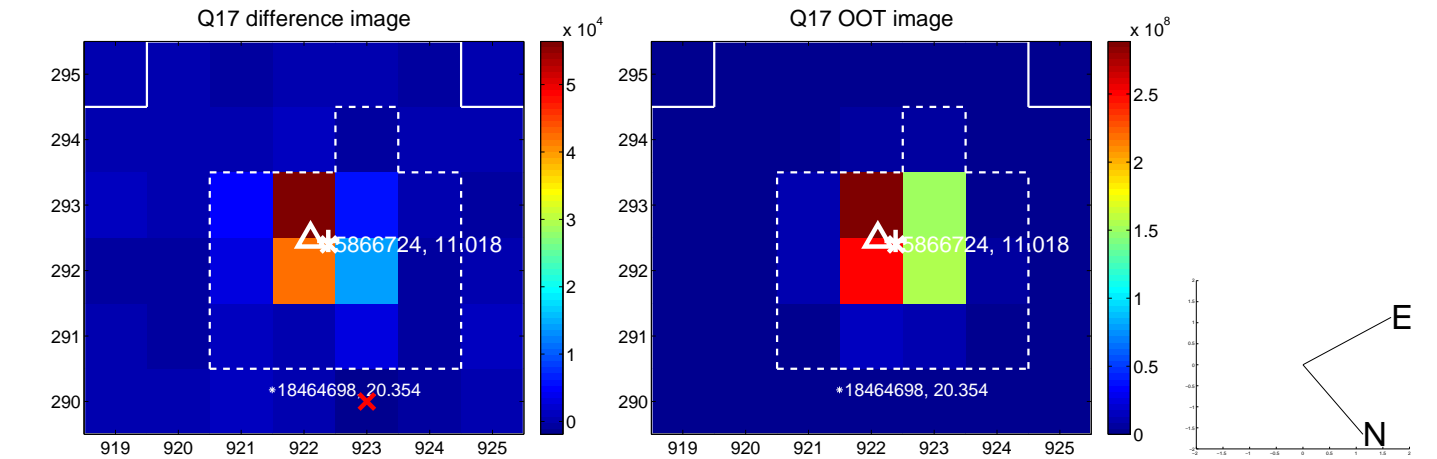
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

