

KIC 011285136

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})
011285136-01	OBS	1774.01	2.368166	133.812084	10653.0	2.711	488.8	441.4	0.99	5944	12.44	984.86
011285136-02	OBS	No	2.368174	132.626071	422.0	2.158	19.4	21.6	0.99	5944	2.32	984.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011285136-01	OBS	FP	0.45	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
011285136-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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

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

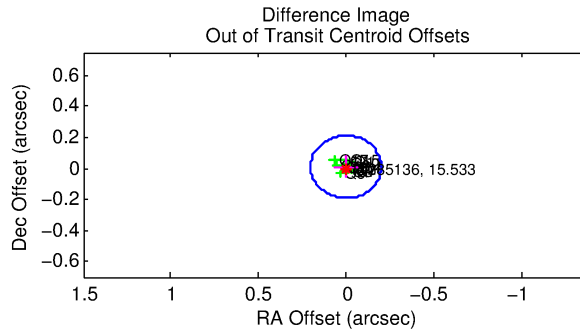
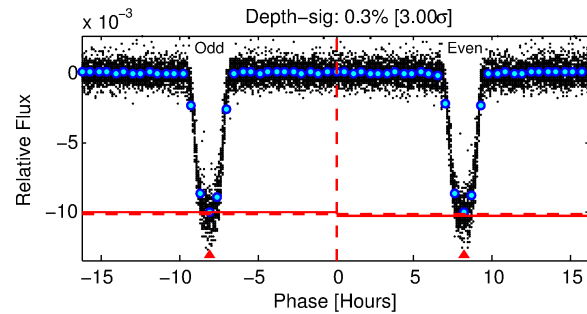
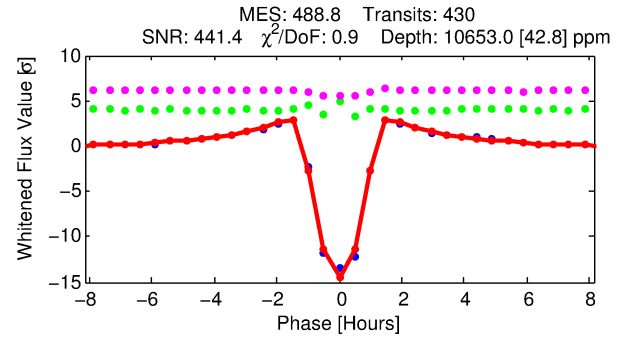
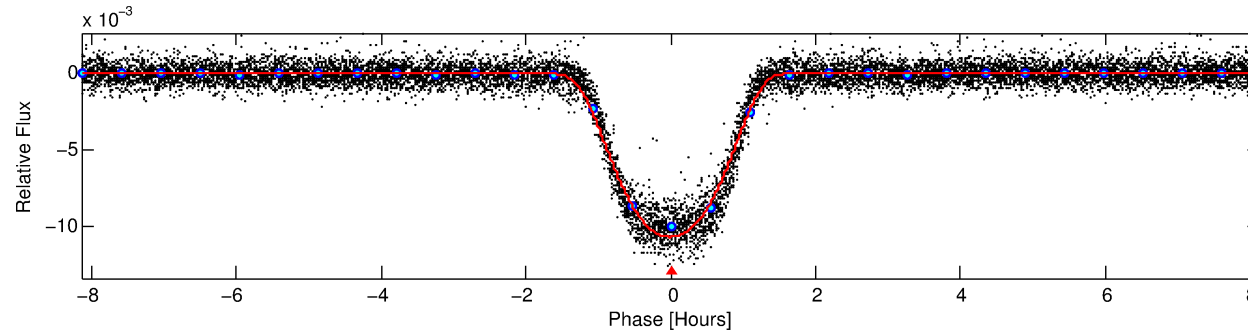
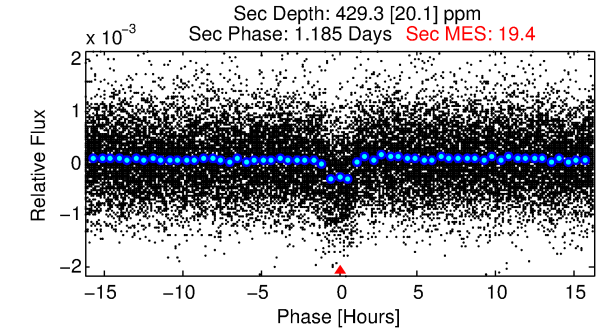
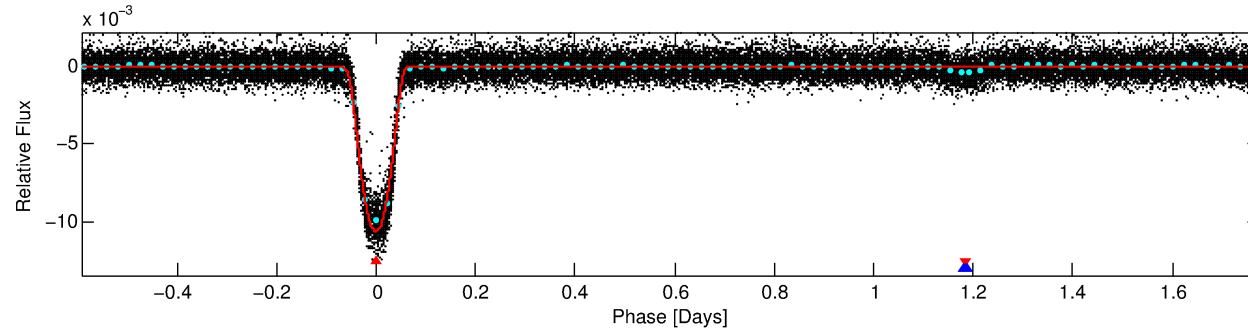
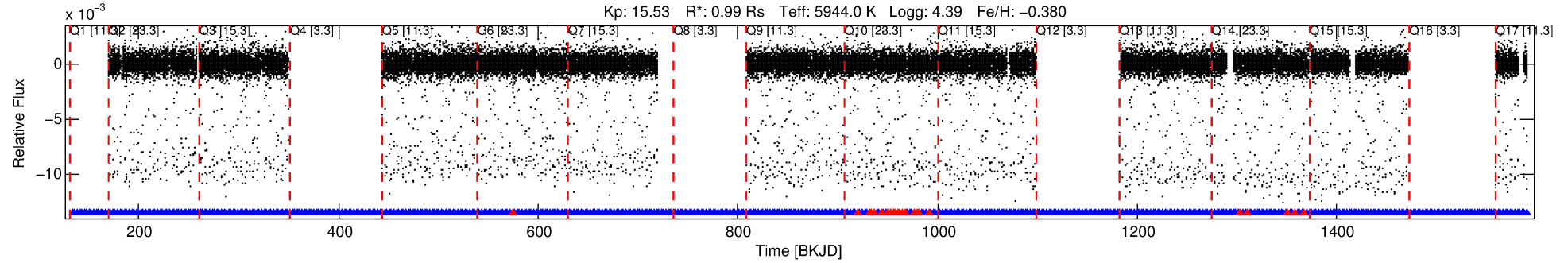
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011285136-01

No Significant Match Found

DV One-Page Summary

KIC: 11285136 Candidate: 1 of 2 Period: 2.368 d
KOI: K01774.01 Corr: 0.928



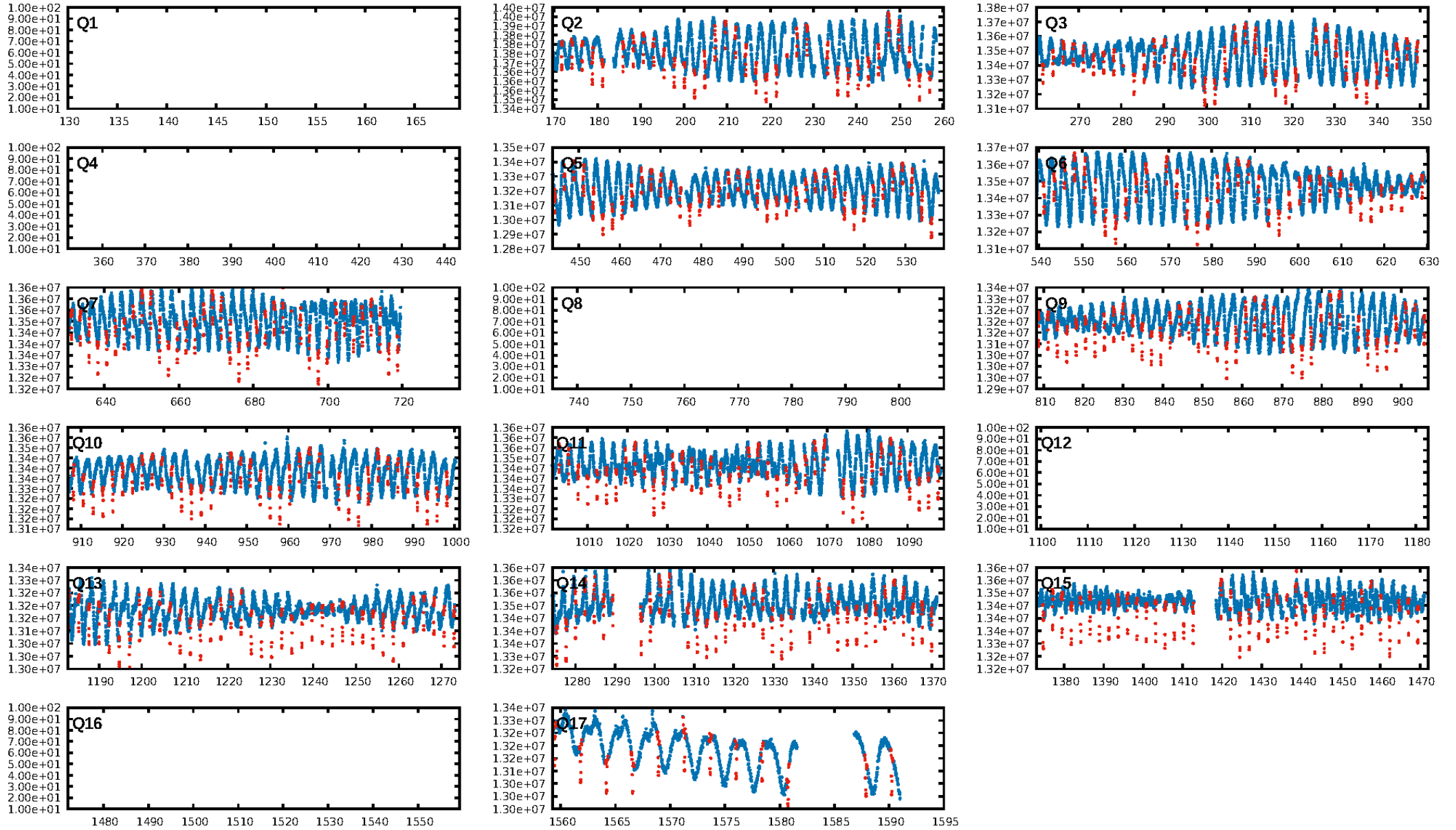
DV Fit Results:

Period = 2.36817 [0.00000] d
Epoch = 133.8121 [0.0001] BKJD
Rp/R* = 0.1150 [0.0011]
a/R* = 4.51 [0.03]
b = 0.90 [0.00]
Seff = 984.86 [364.46]
Teff = 1428 [132] K
Rp = 12.44 [3.53] Re
a = 0.0334 [0.0080] AU
Ag = 1.70 [0.60] [1.17 σ]
Teffp = 2523 [82] K [7.04 σ]

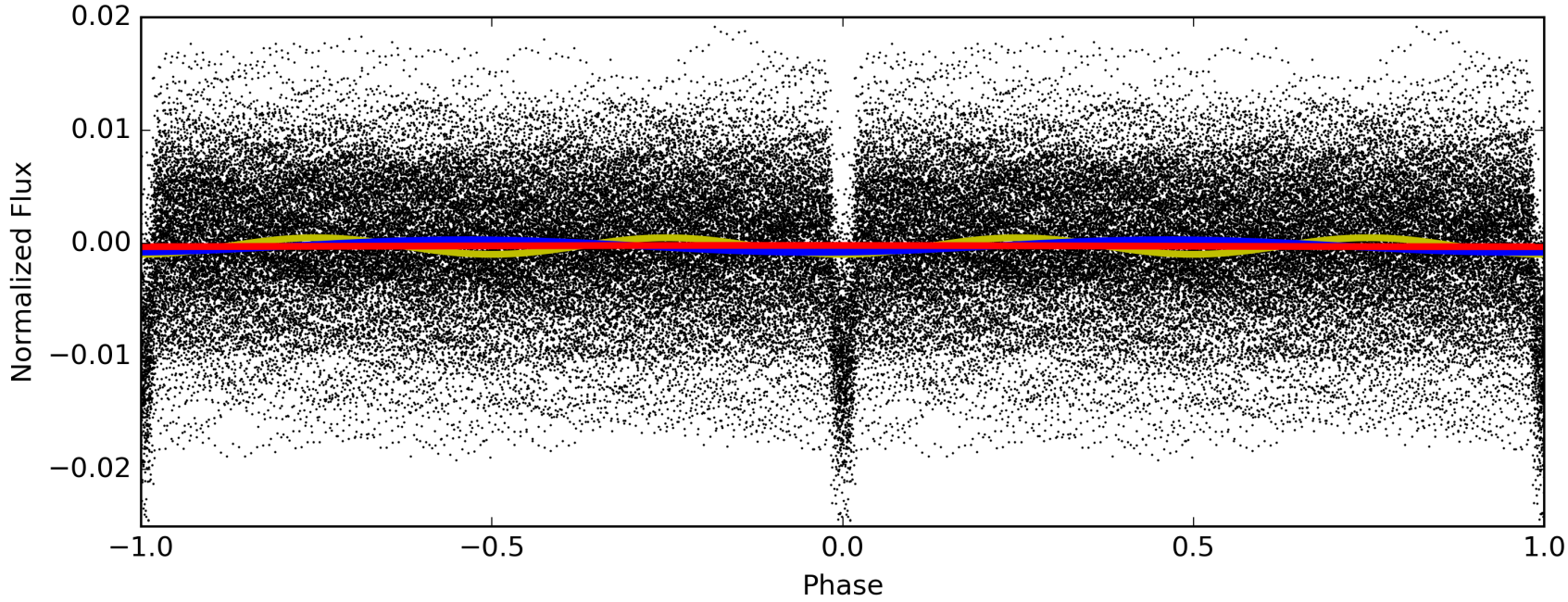
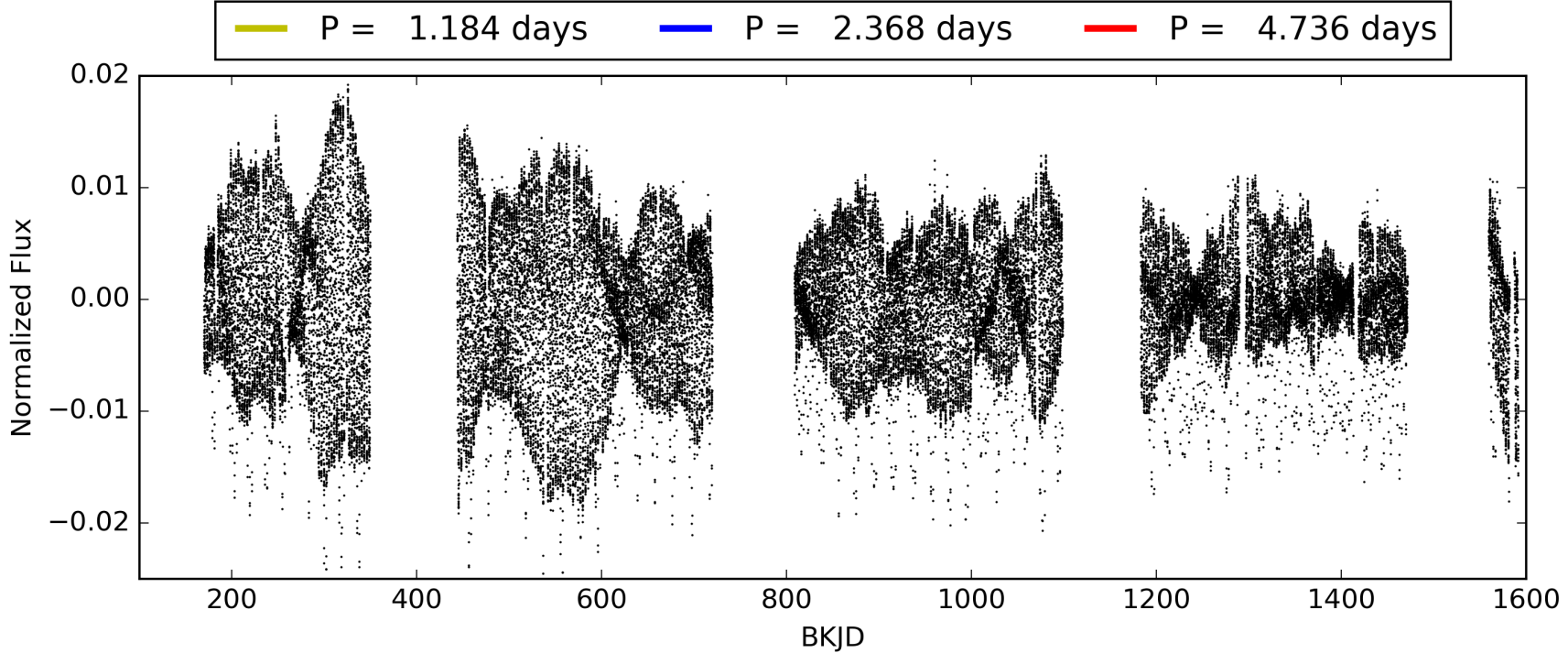
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.94 [395/418]
GhostDiagnostic-chr: 2.801
Centroid-sig: 3.0%
Centroid-so: 0.358 arcsec [16.38 σ]
OotOffset-rm: 0.011 arcsec [0.17 σ]
KicOffset-rm: 0.276 arcsec [3.84 σ]
OotOffset-st: 4/4/0/4 [12]
KicOffset-st: 4/4/0/4 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [12/12]

TCE 011285136-01, PDC Light Curves

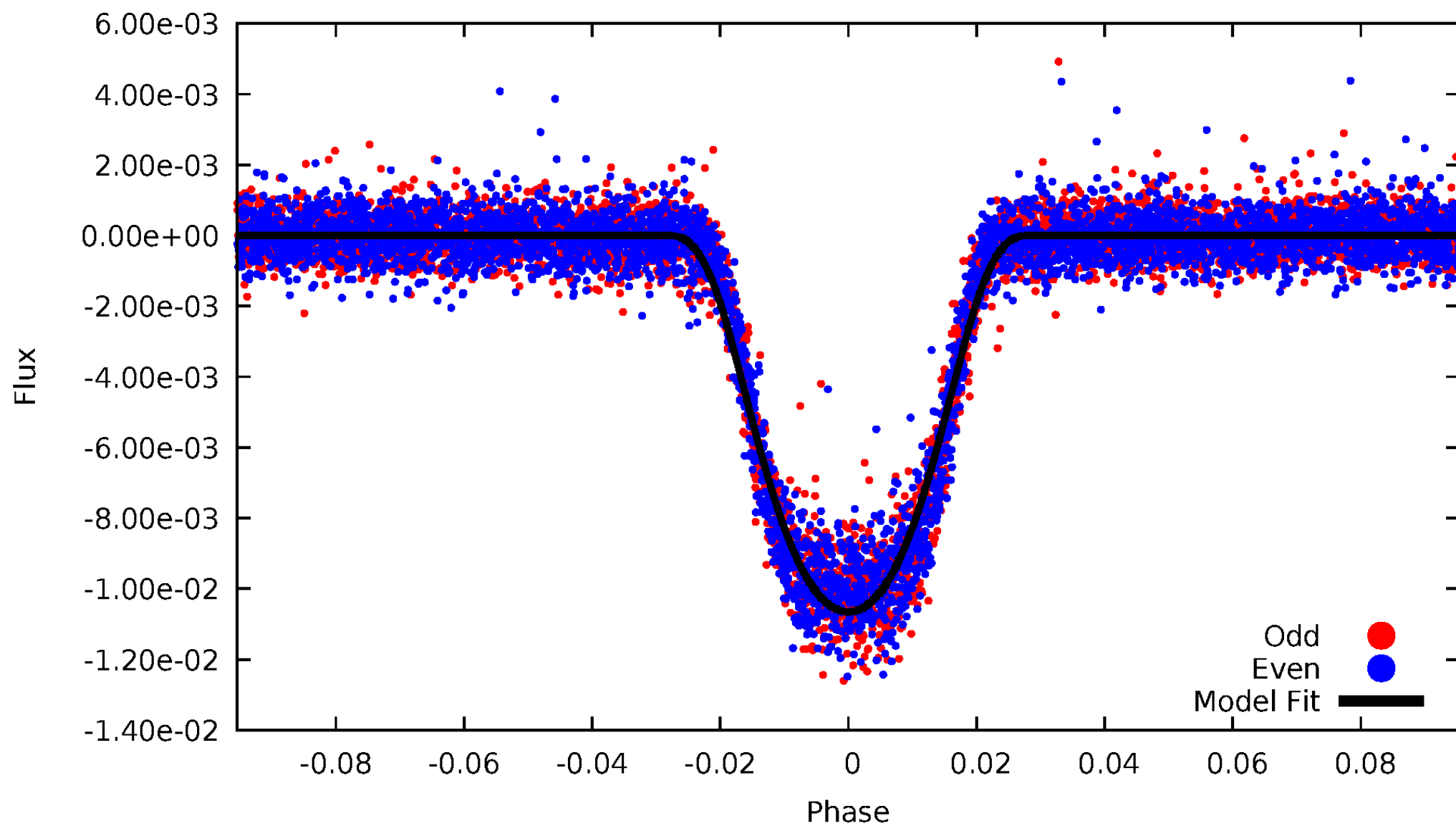


TCE 011285136-01



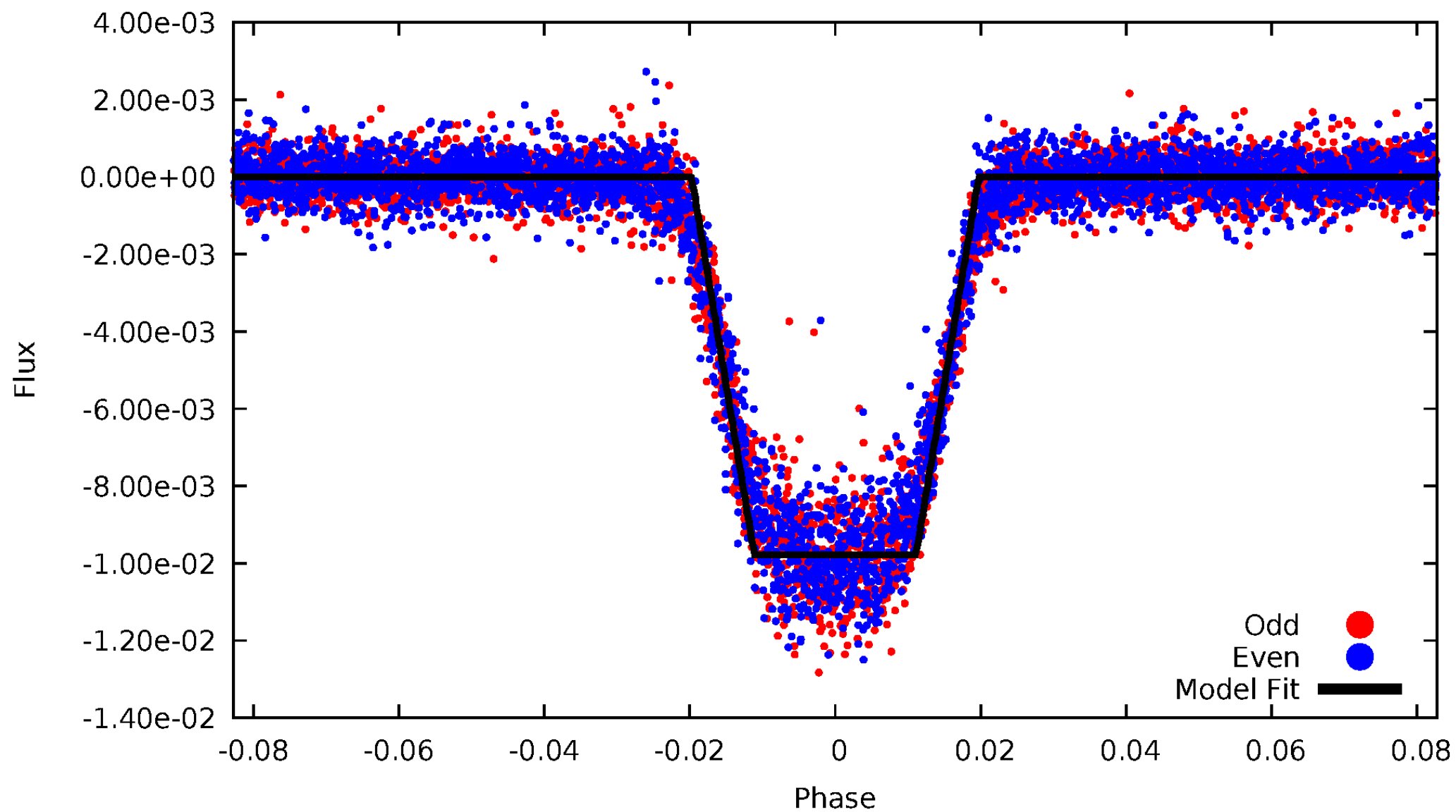
DV Odd/Even

TCE 011285136-01



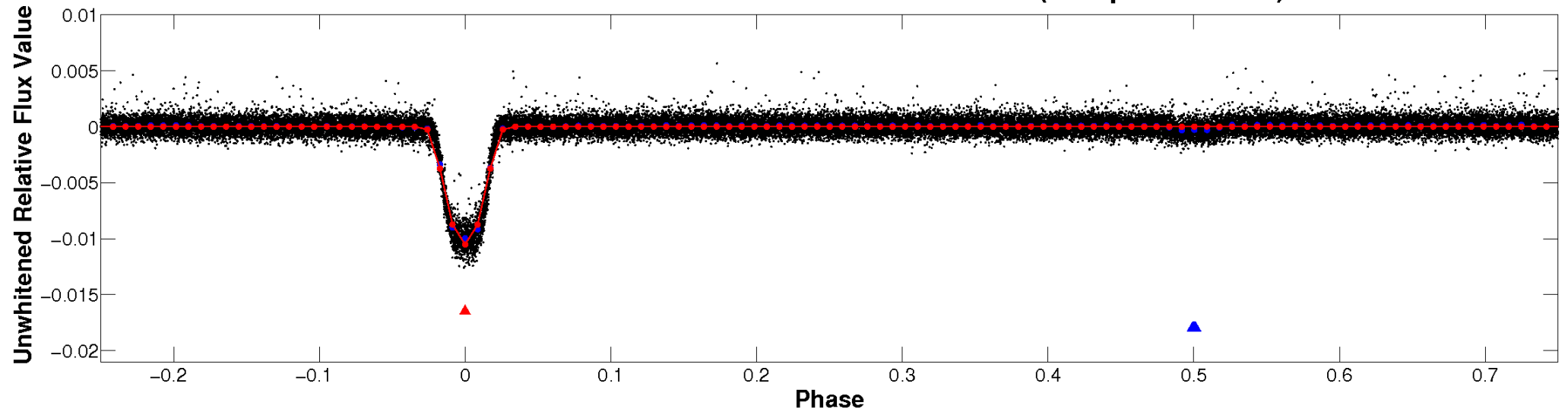
ALT Odd/Even

TCE 011285136-01

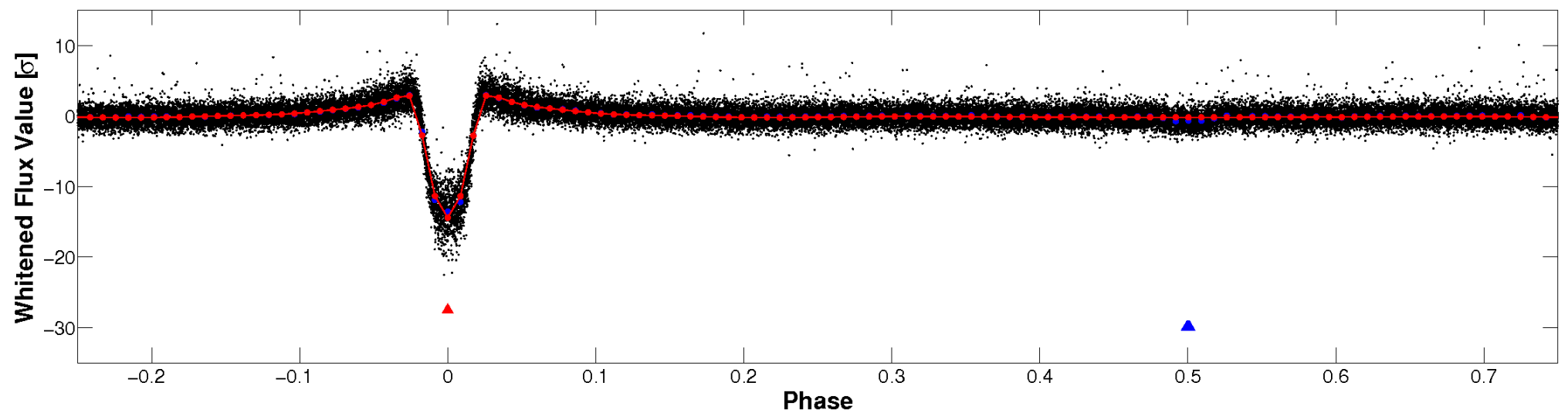


Non-Whitened Vs. Whitened Light Curve

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

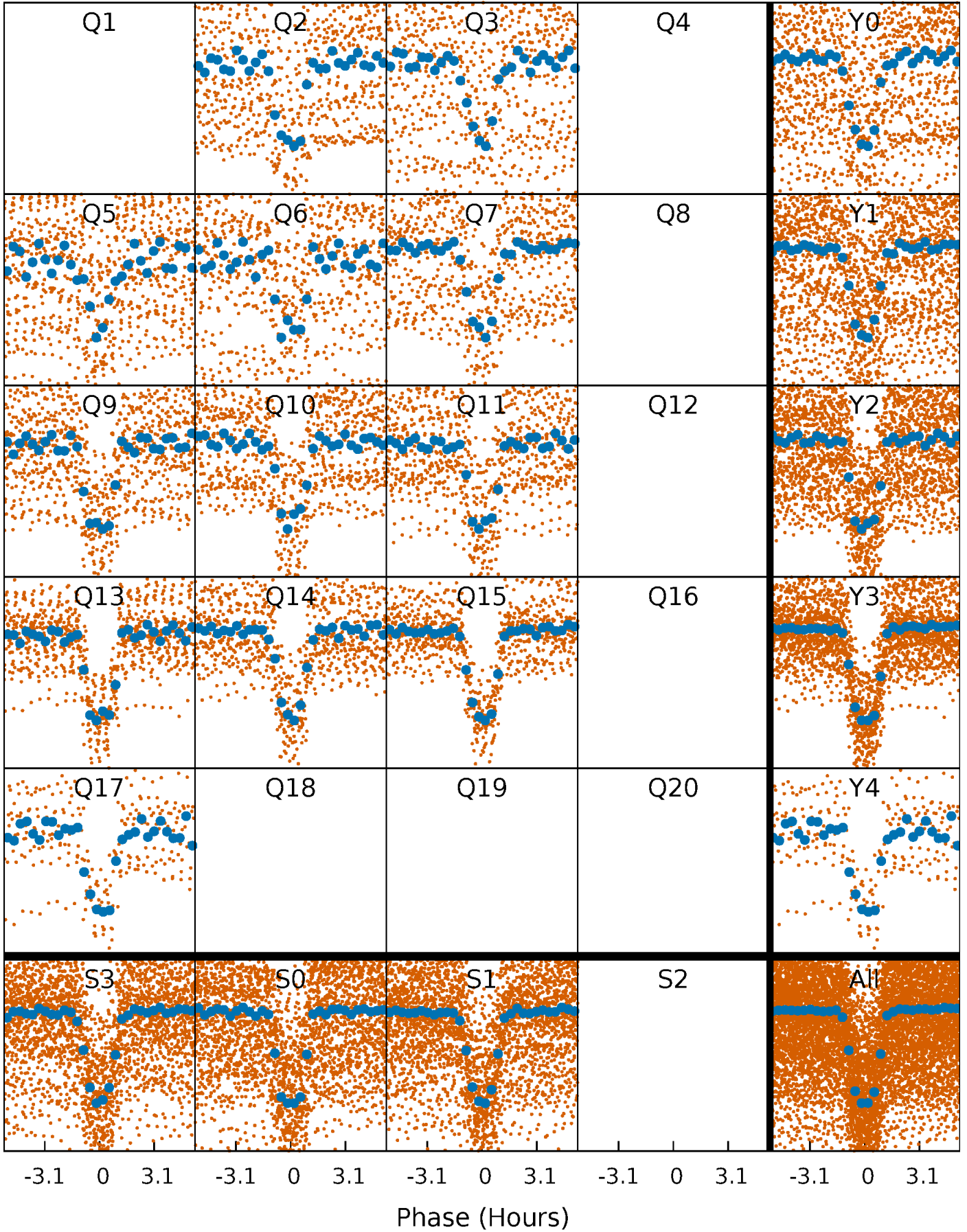


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



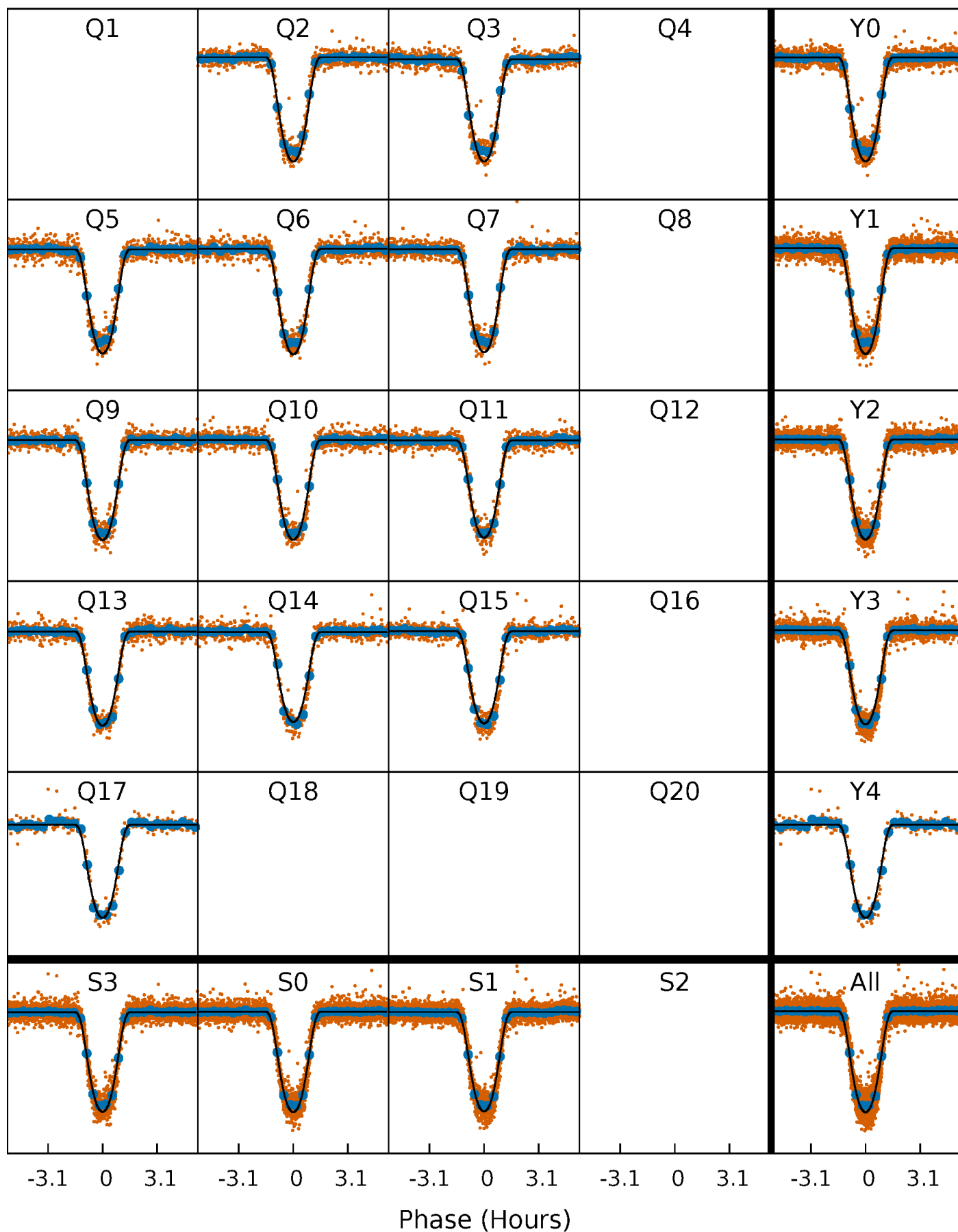
PDC Quarter-Phased Transit Curves

TCE 011285136-01 P= 2.368166 Days $T_0=133.812084$ (BKJD)



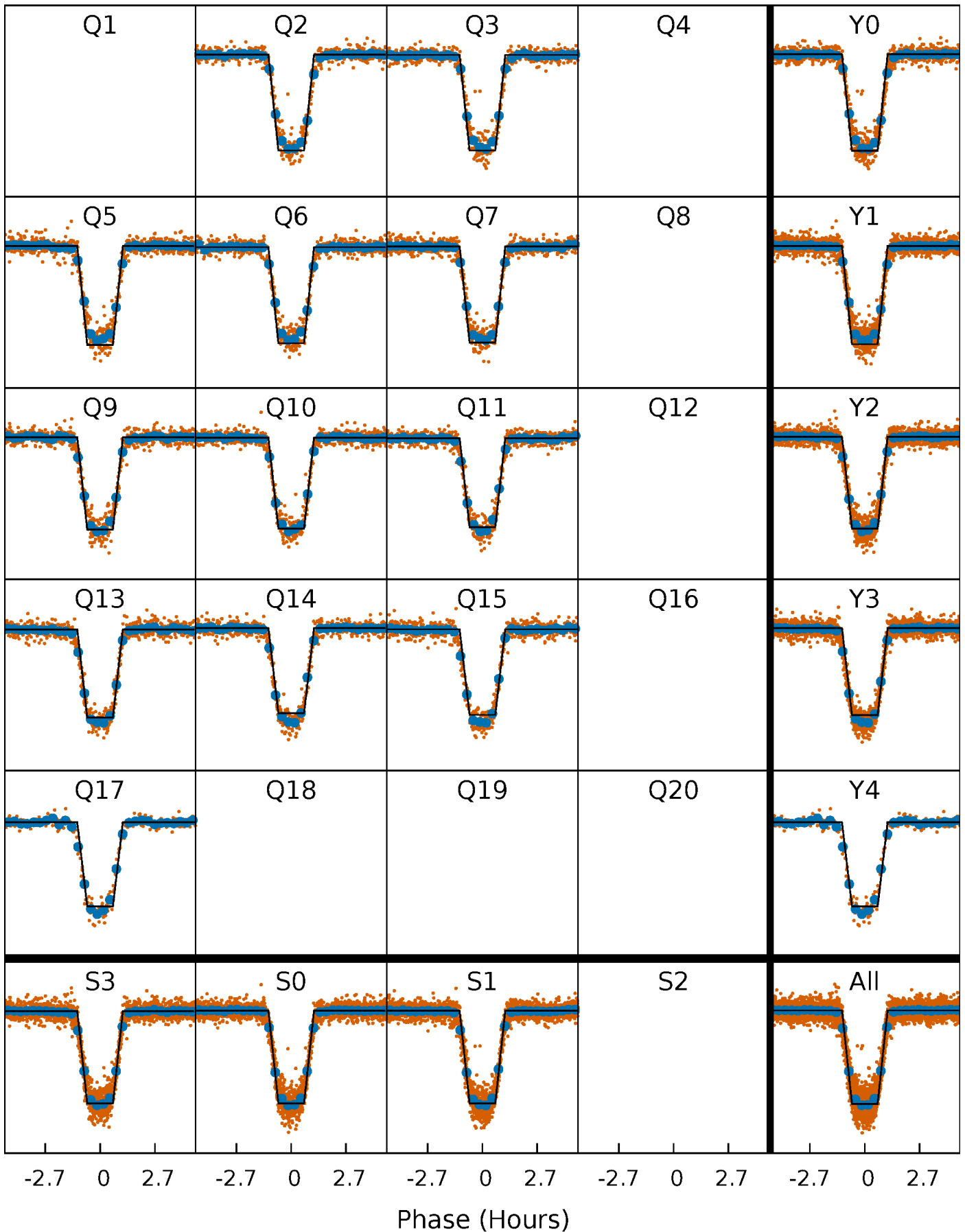
DV Quarter-Phased Transit Curves

TCE 011285136-01 P= 2.368166 Days $T_0=133.812084$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

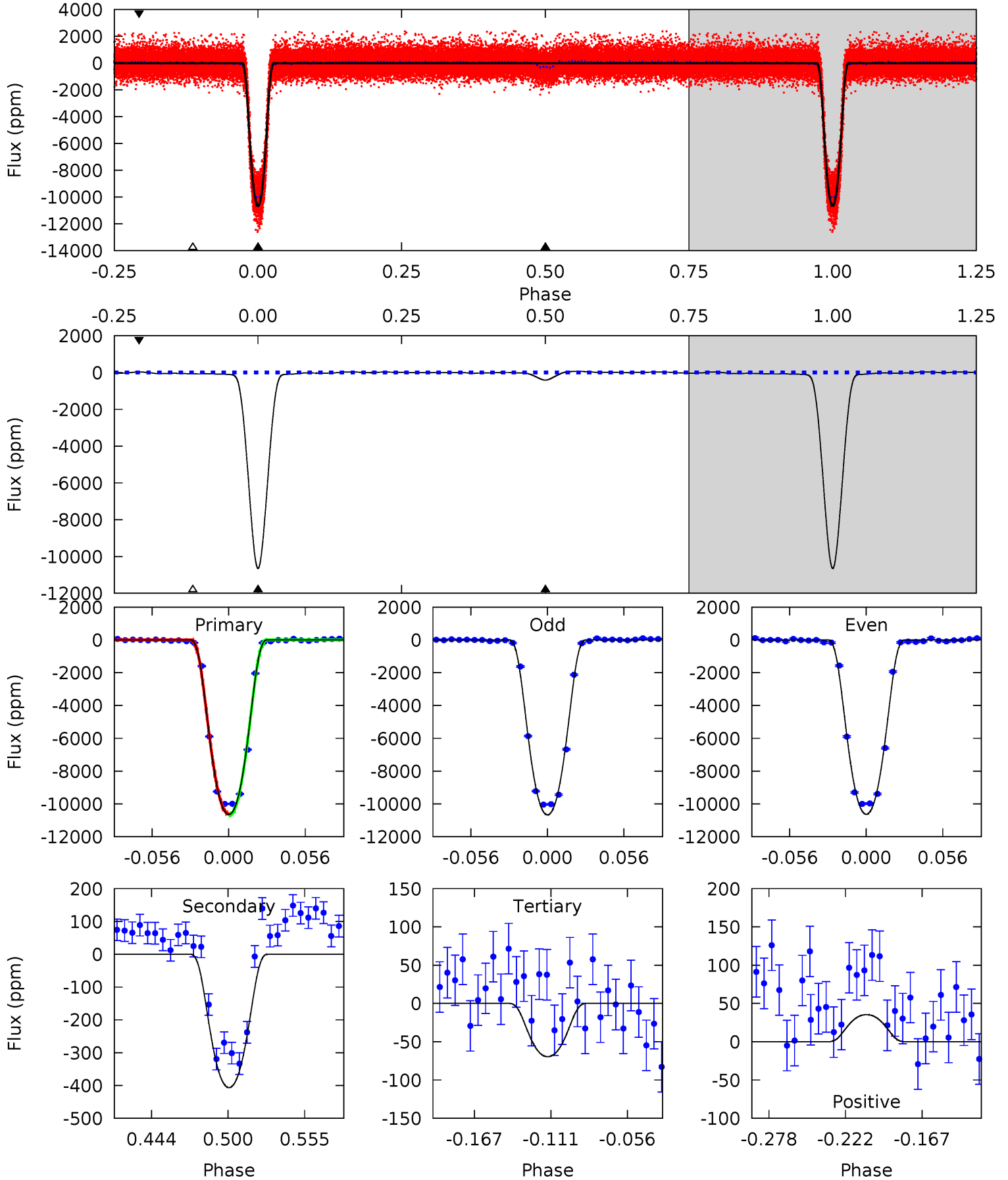
TCE 011285136-01 P= 2.368181 Days $T_0=133.808144$ (BKJD)



DV Model-Shift Uniqueness Test

011285136-01, P = 2.368166 Days, E = 133.812084 Days

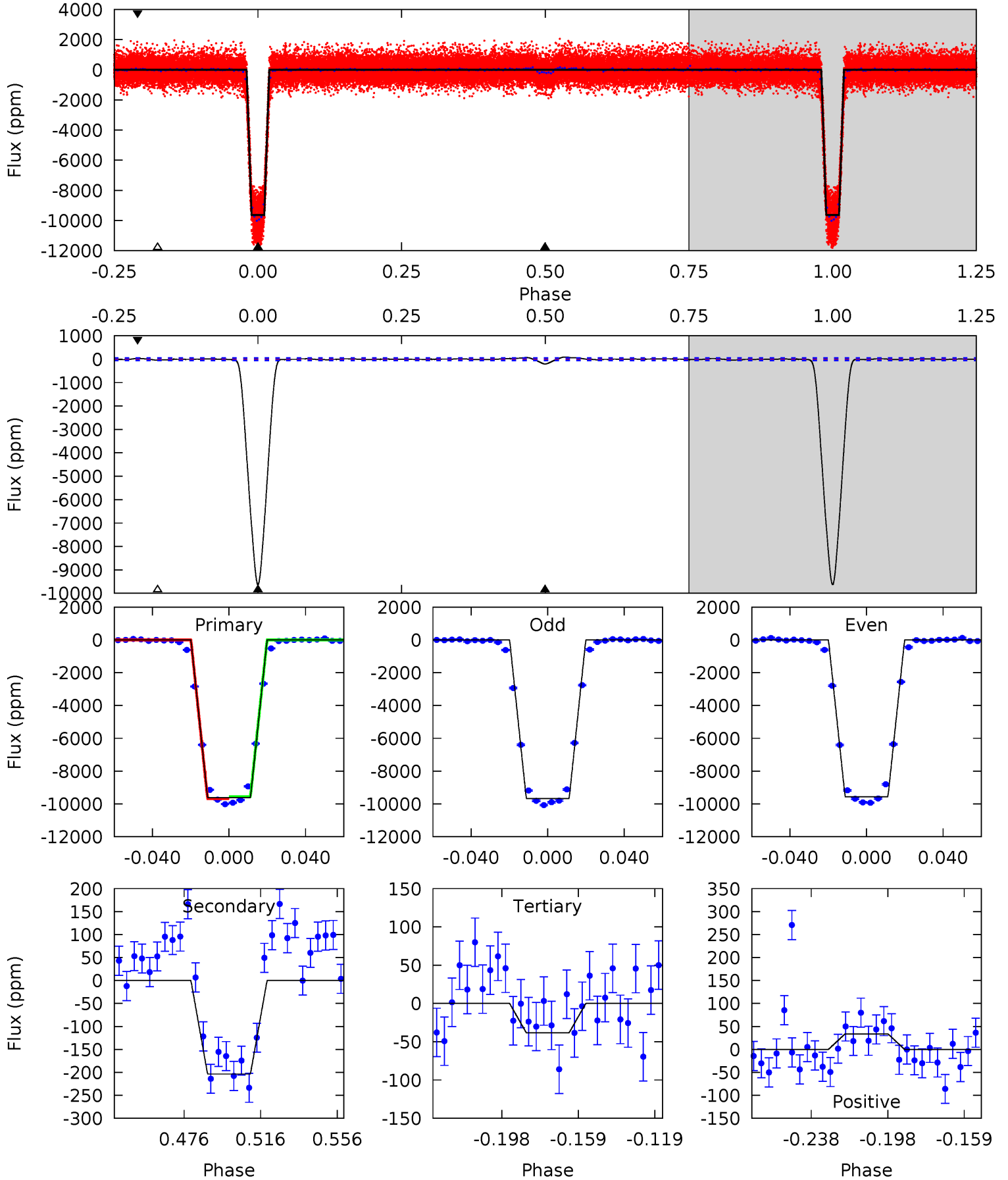
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
964.7	36.8	6.30	3.21	4.69	1.91	2.95	958.4	961.5	30.5	33.6	1.66	0.99	0.01	5.61



Alt Model-Shift Uniqueness Test

011285136-01, P = 2.368181 Days, E = 133.808144 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
851.5	18.0	3.39	2.99	4.76	2.06	1.54	848.1	848.5	14.6	15.0	5.17	1.00	0.01	5.38



Stellar Parameters For KIC 011285136

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5944^{+160}_{-178}	$4.393^{+0.128}_{-0.192}$	$-0.380^{+0.300}_{-0.300}$	$0.991^{+0.281}_{-0.151}$	$0.886^{+0.120}_{-0.090}$	$1.283^{+0.742}_{-0.633}$
	+3%/-3%	+3%/-4%	+79%/-79%	+28%/-15%	+14%/-10%	+58%/-49%
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 011285136-01 / KOI 1774.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-407 ± 11	$12.52^{+2.08}_{-1.15}$	2006^{+153}_{-120}	3016^{+58}_{-62}	$1.581^{+0.339}_{-0.389}$
Alt.	-204 ± 11	$10.77^{+1.69}_{-0.99}$	2002^{+160}_{-110}	2810^{+62}_{-77}	$1.061^{+0.247}_{-0.256}$

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

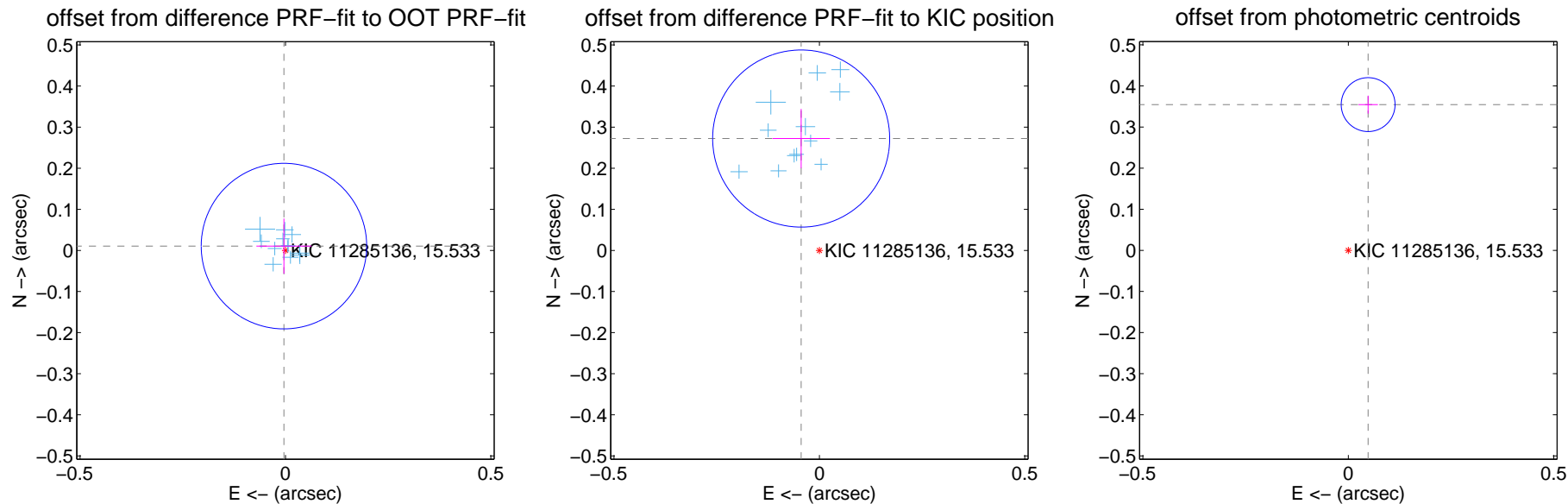
DV Centroid Data

Supplemental centroid analysis for 011285136-01. Kepler magnitude: 15.53. Transit SNR 441.44

There are 12 quarters with good PRF difference image offsets

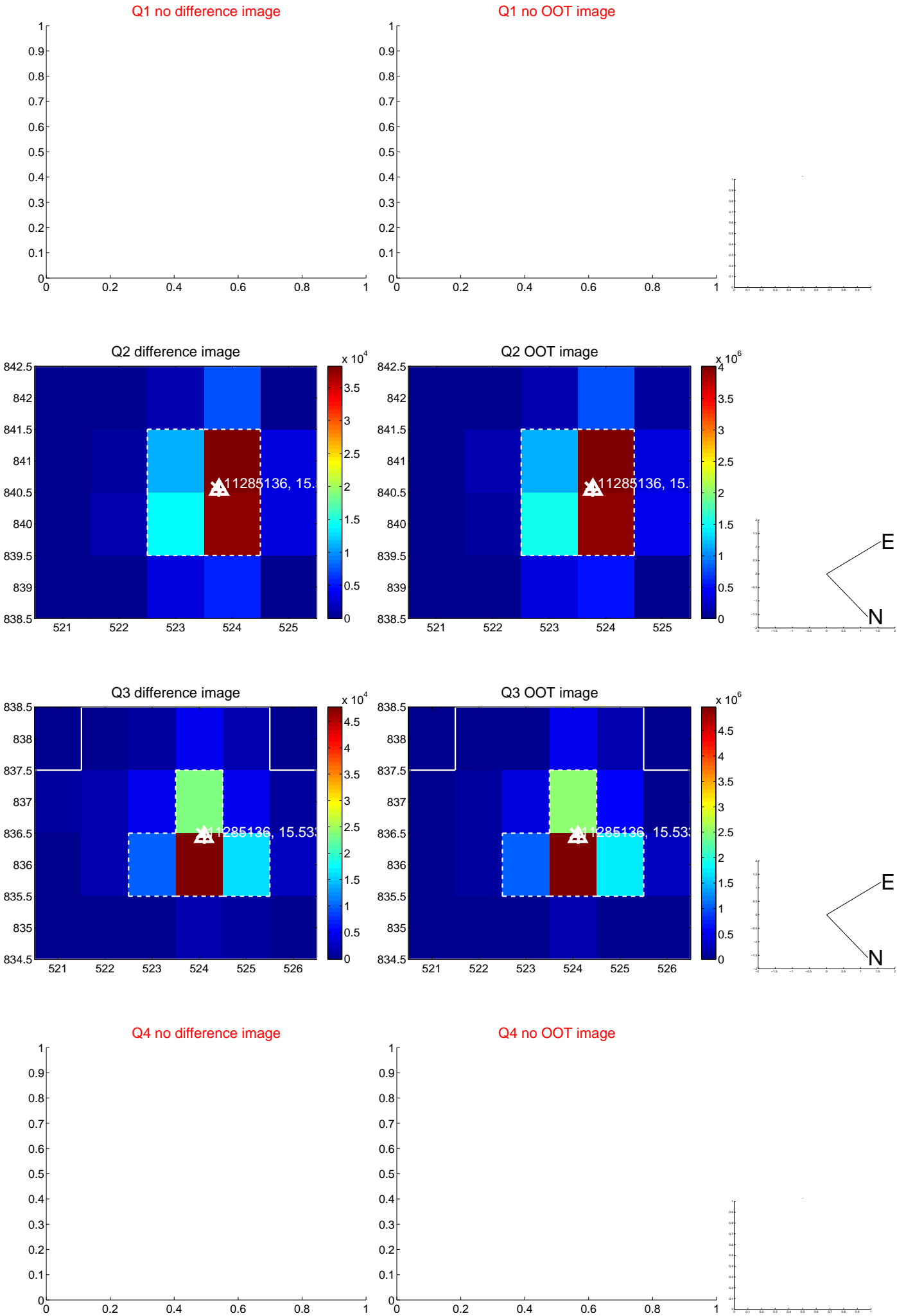
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.011 ± 0.067	0.17	0.004 ± 0.067	0.011 ± 0.067
PRF-fit source offset from KIC position	0.276 ± 0.072	3.84	0.044 ± 0.070	0.272 ± 0.072
photometric centroid source offset	0.36 ± 0.02	16.38	-0.05 ± 0.02	0.35 ± 0.02

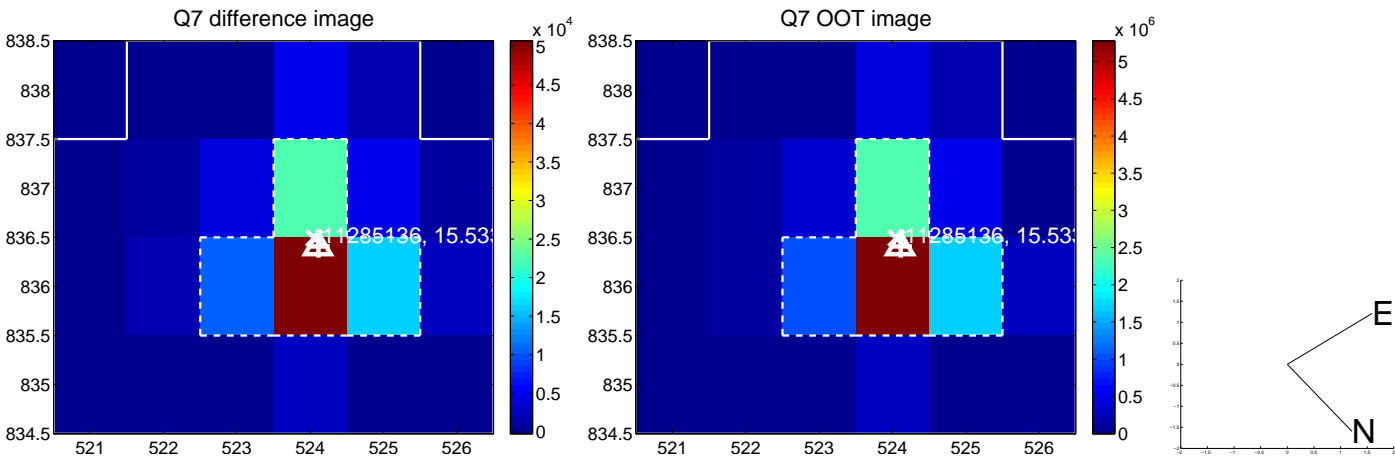
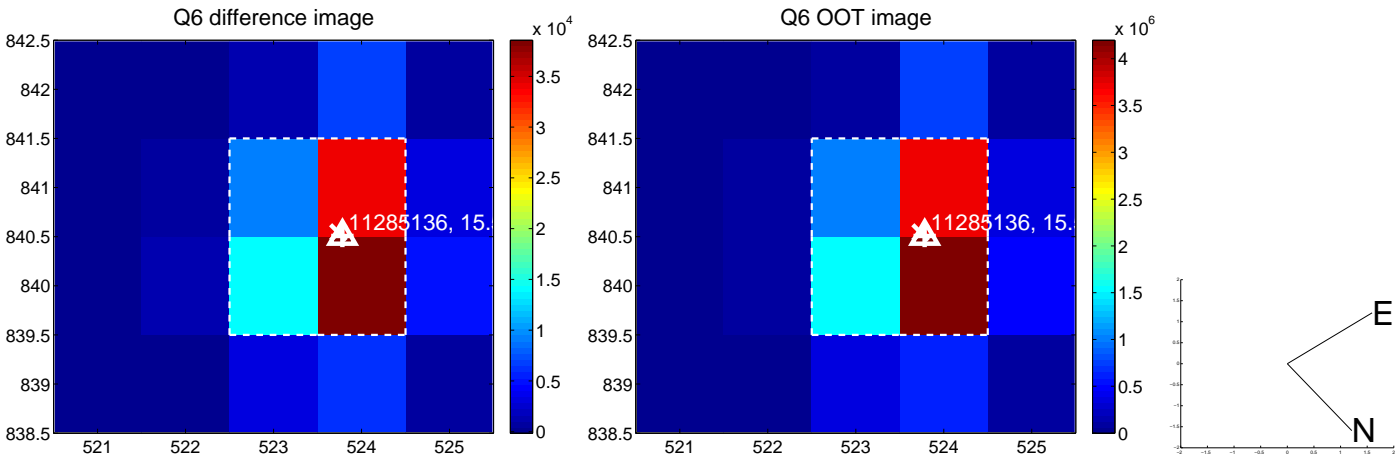
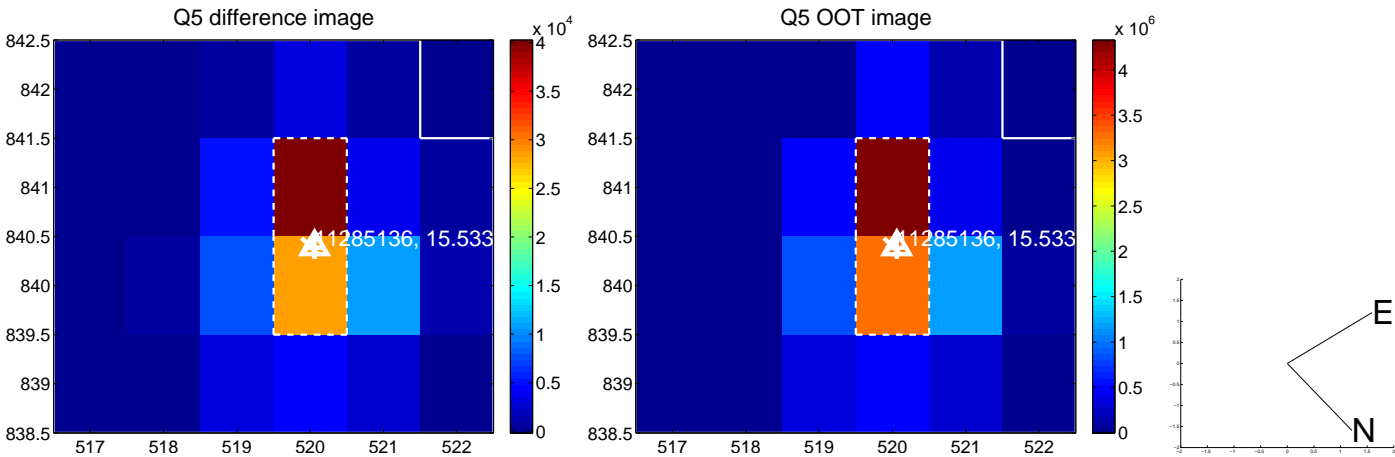


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

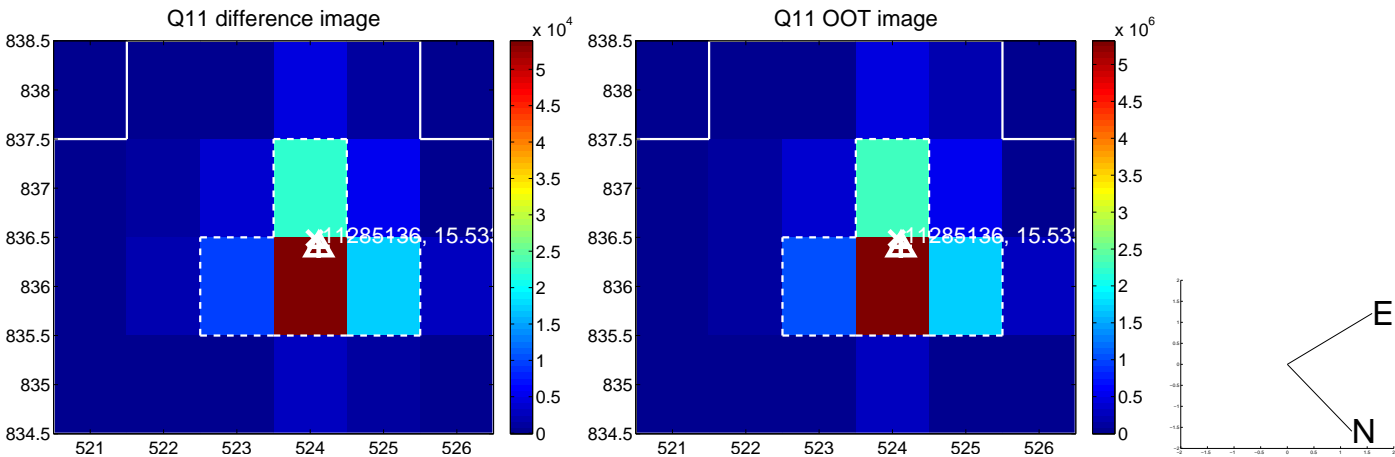
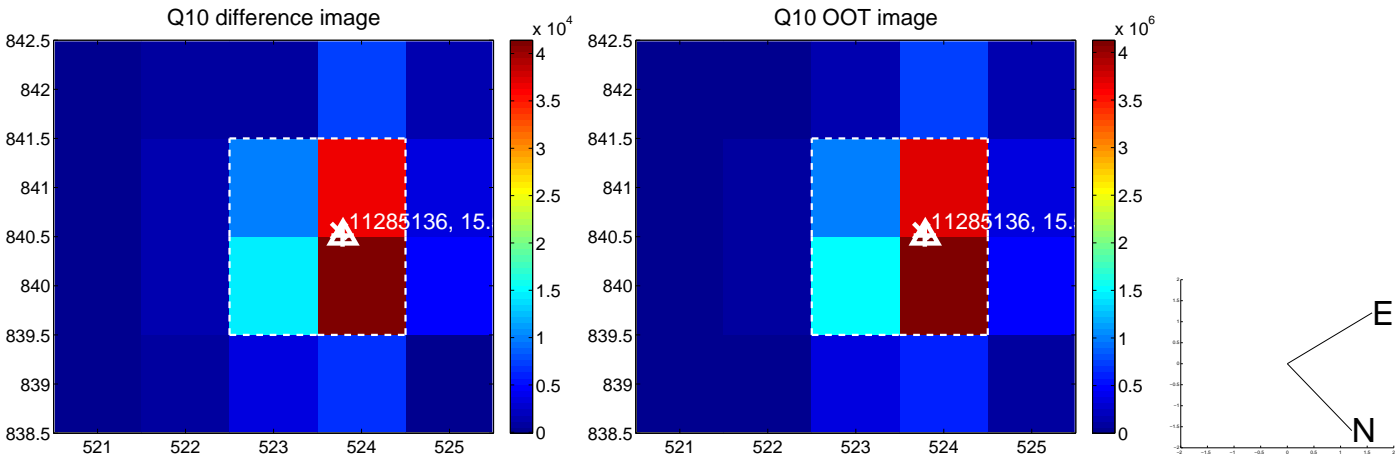
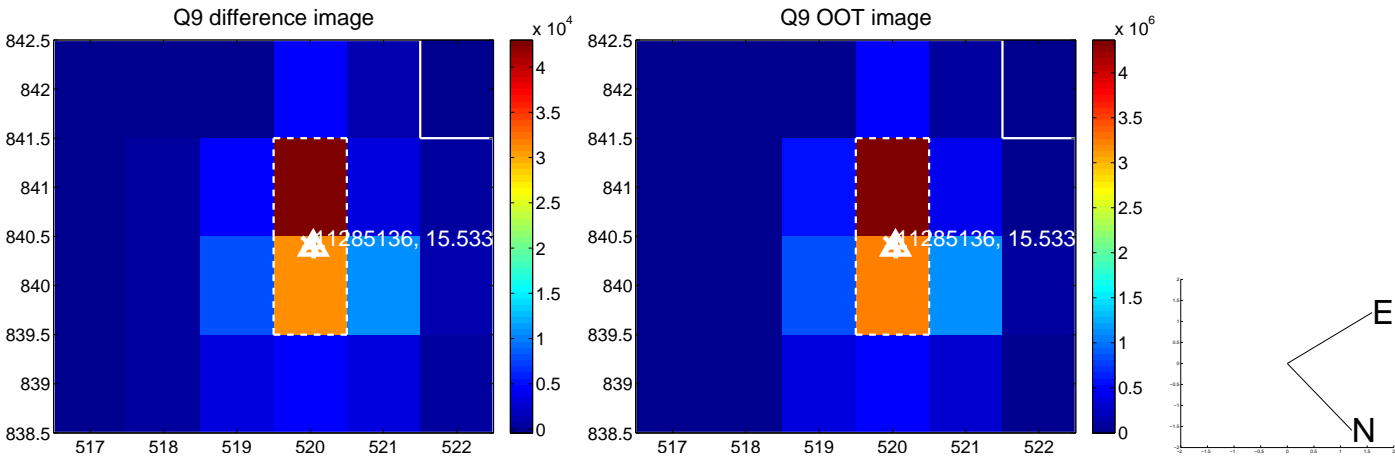
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



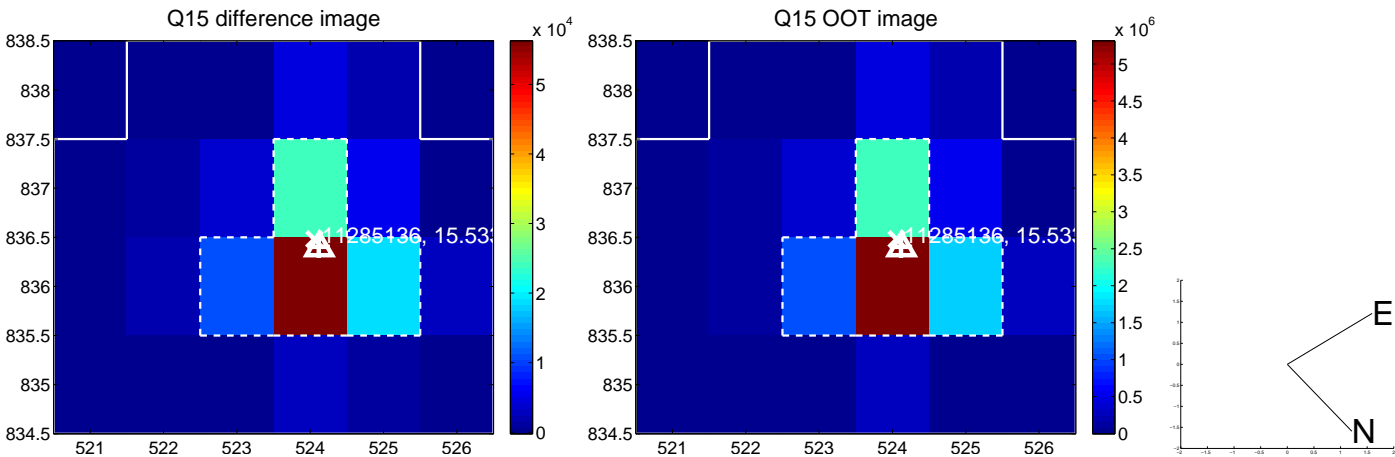
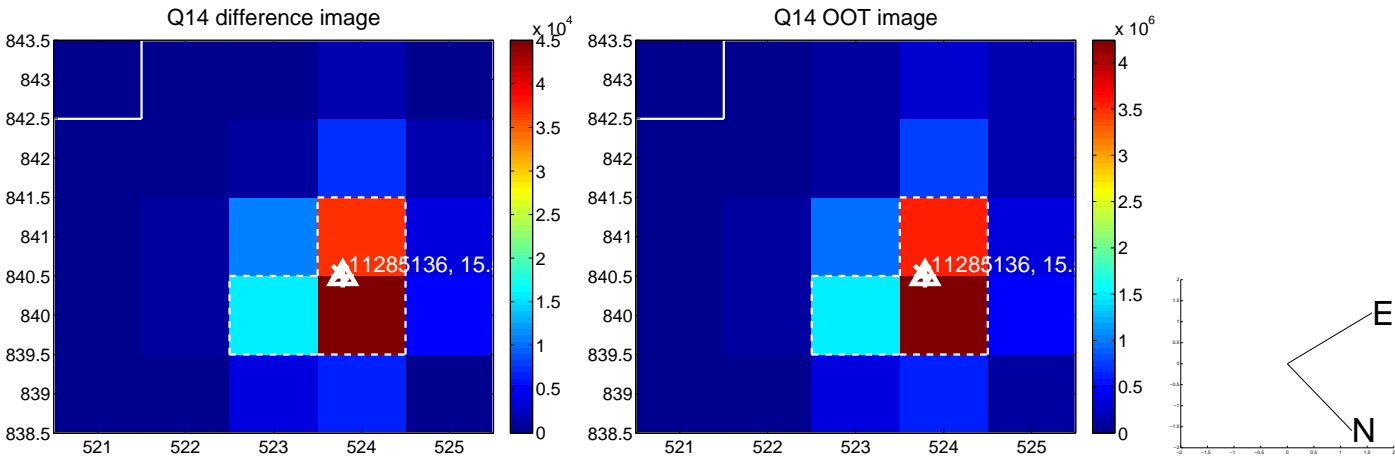
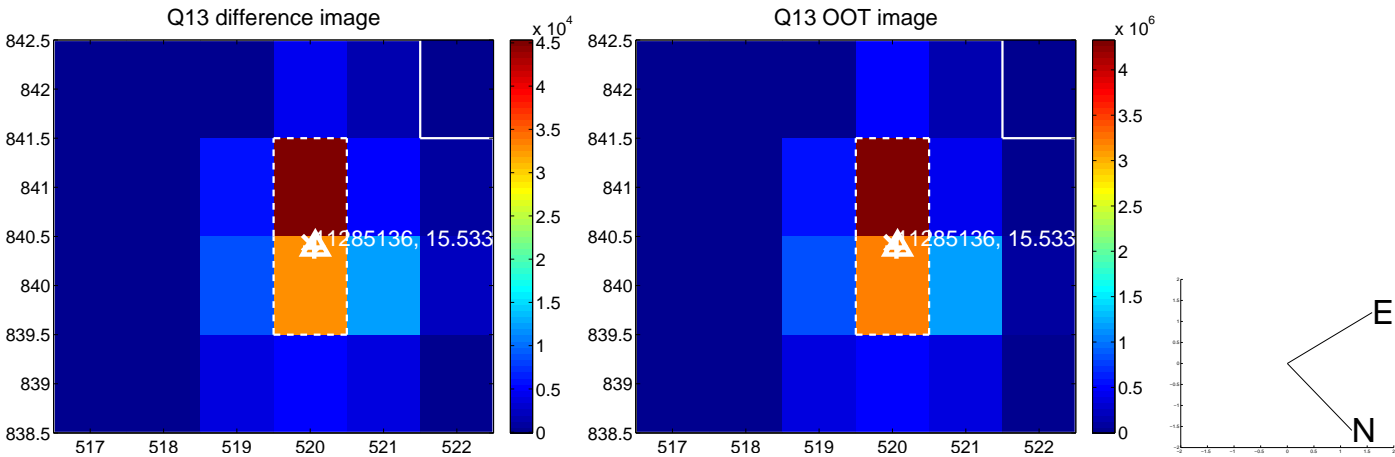
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



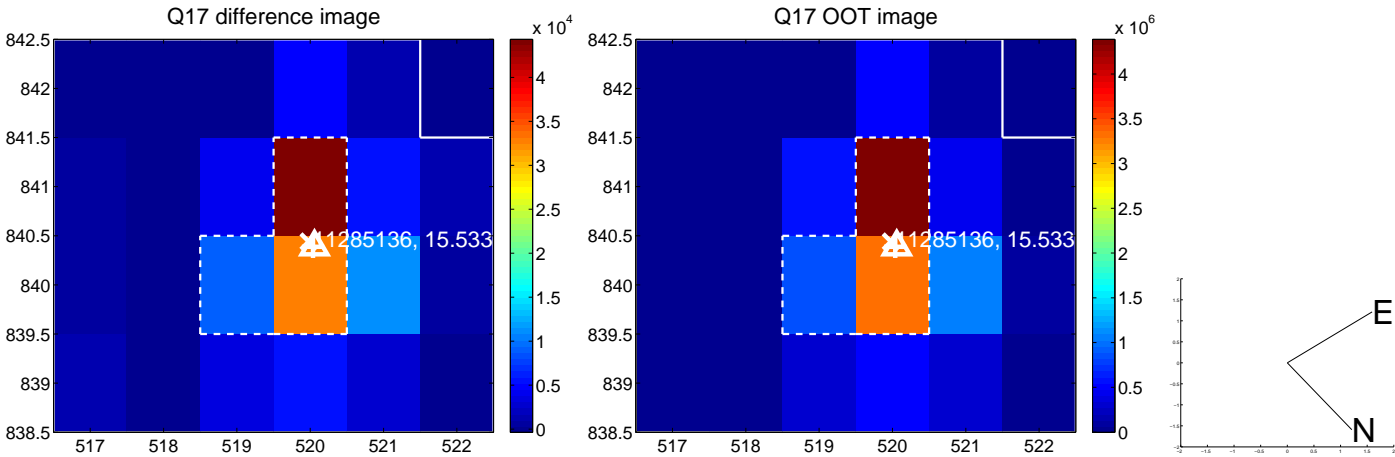
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



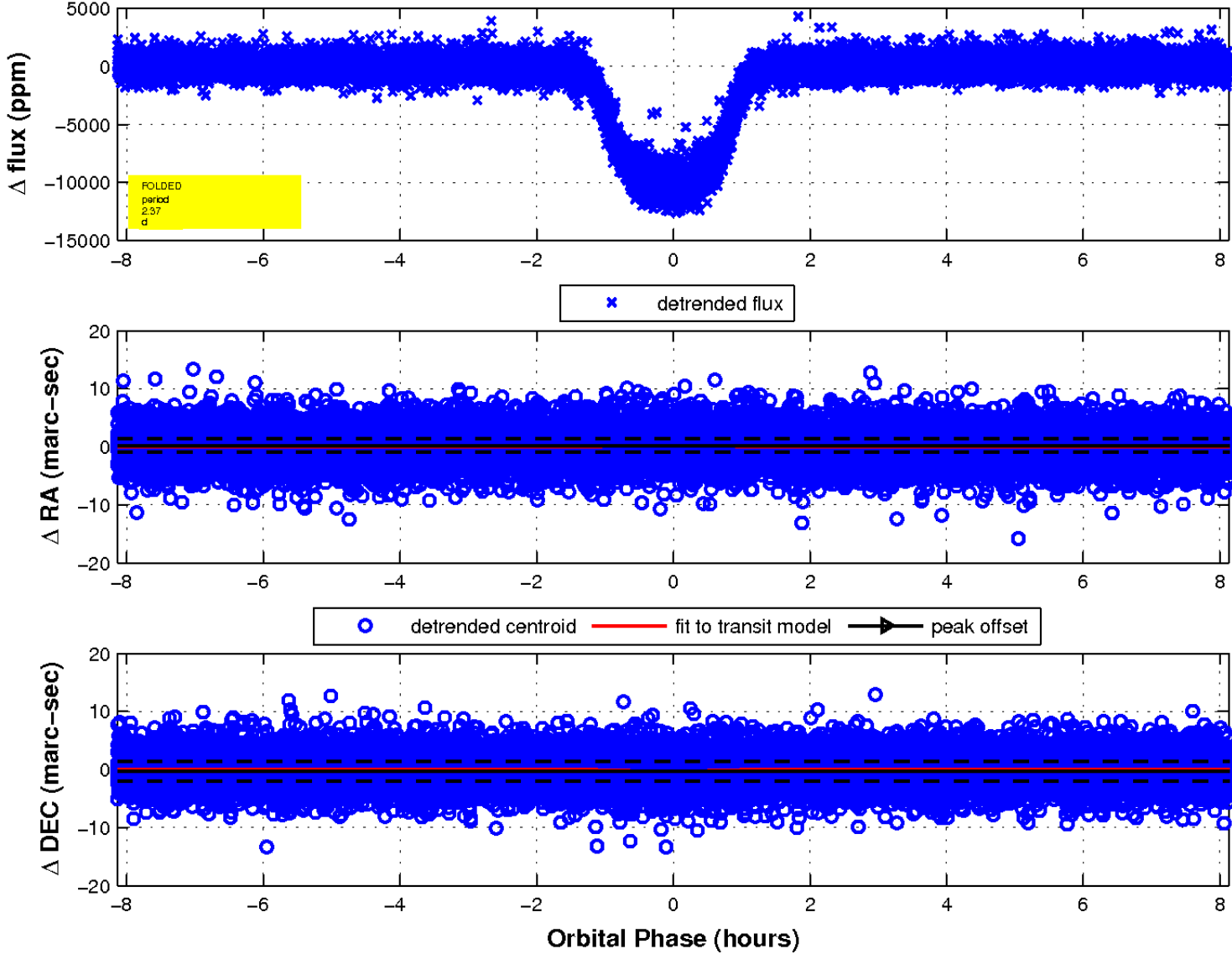
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

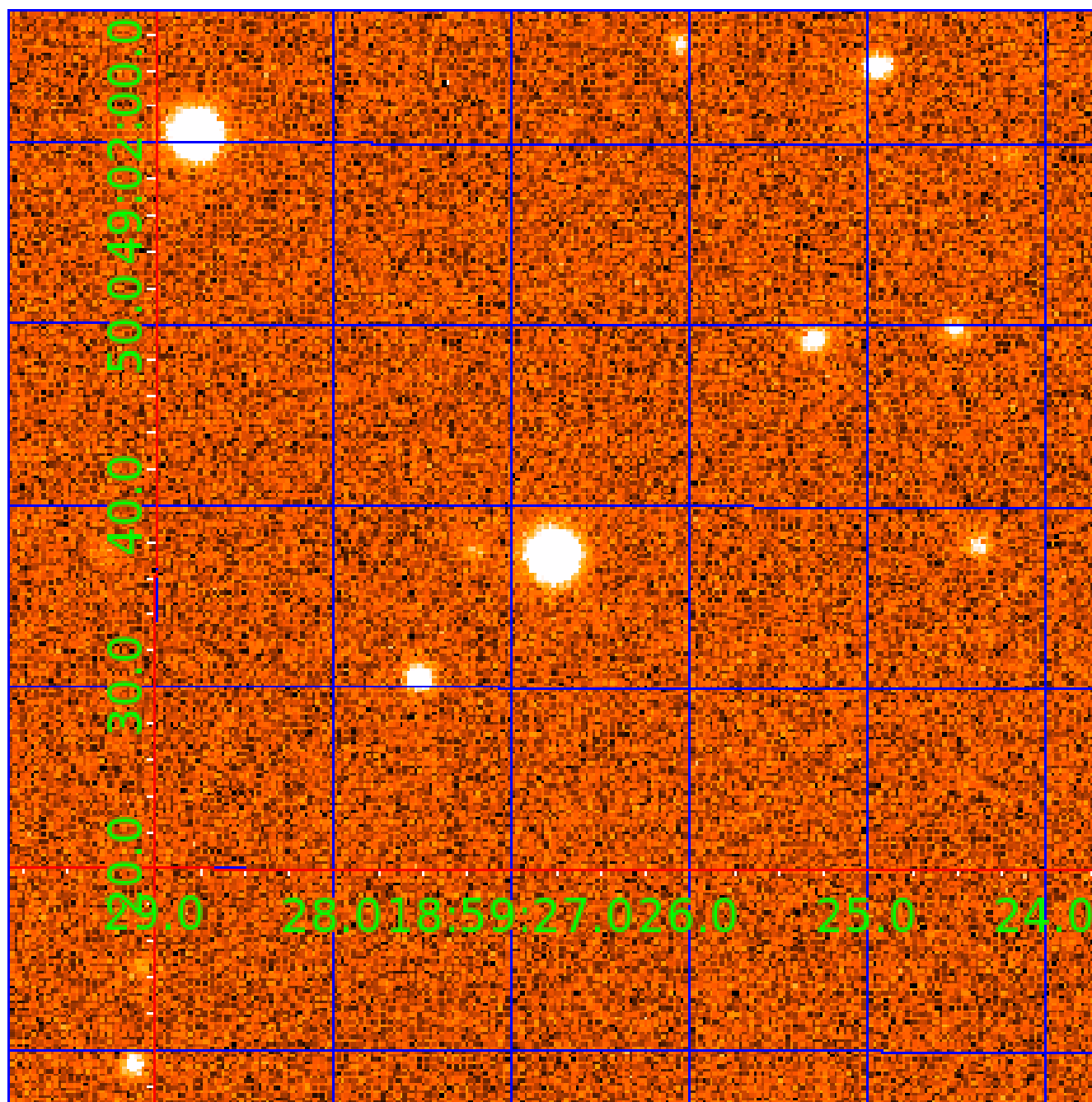


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 011285136

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})
011285136-01	OBS	1774.01	2.368166	133.812084	10653.0	2.711	488.8	441.4	0.99	5944	12.44	984.86
011285136-02	OBS	No	2.368174	132.626071	422.0	2.158	19.4	21.6	0.99	5944	2.32	984.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011285136-01	OBS	FP	0.45	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
011285136-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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 011285136-02

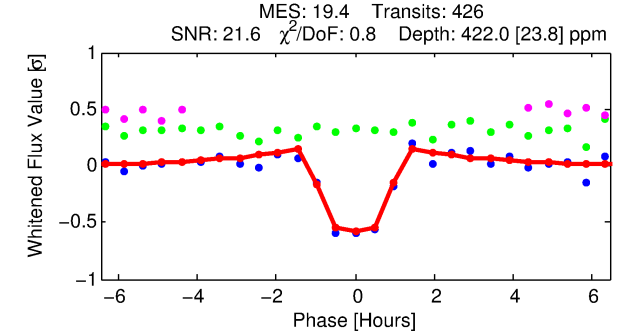
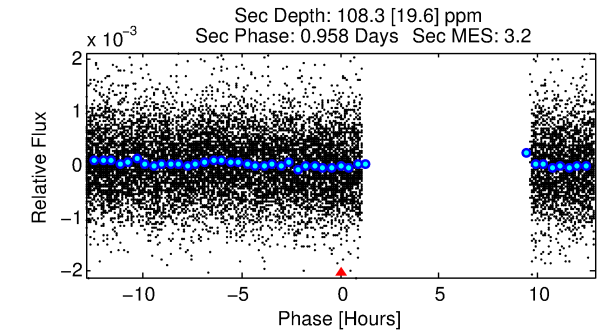
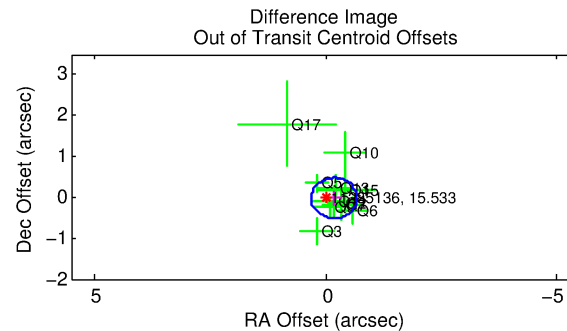
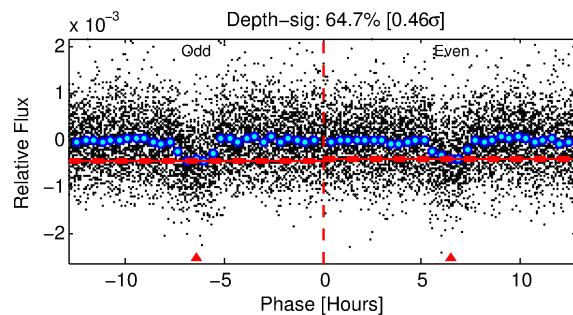
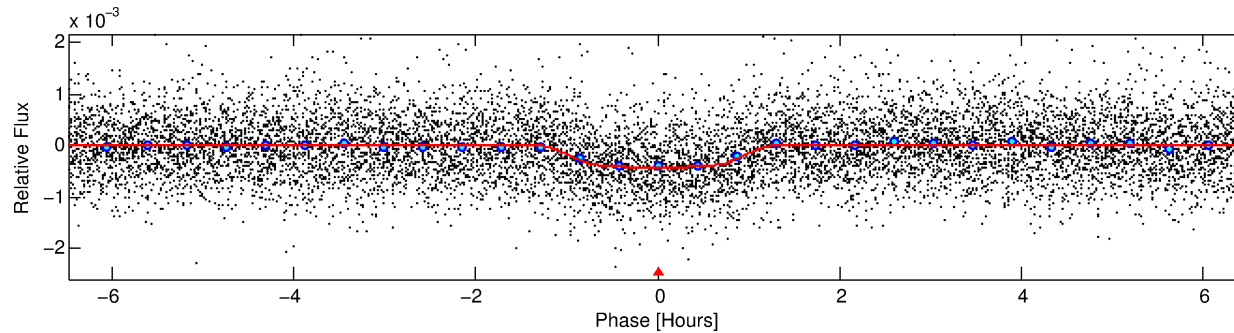
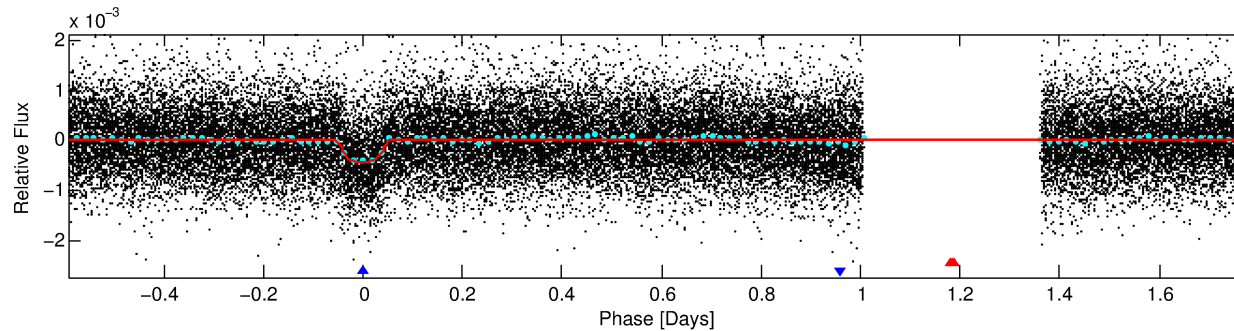
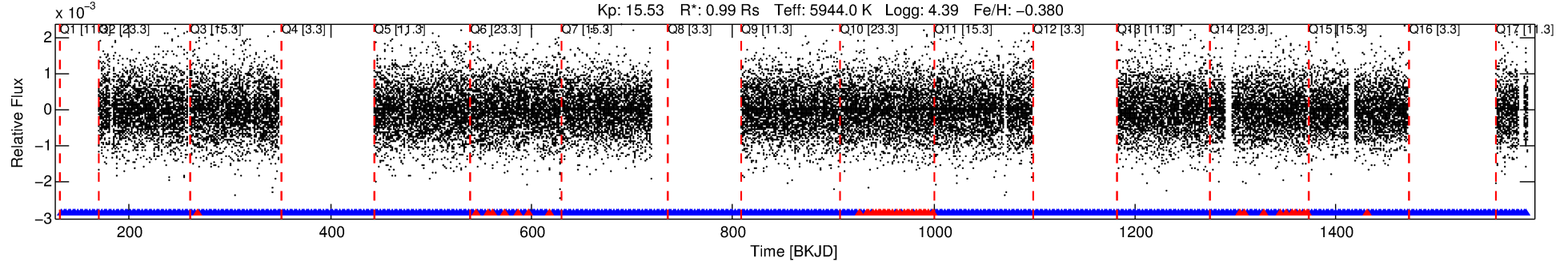
No Significant Match Found

DV One-Page Summary

KIC: 11285136 Candidate: 2 of 2 Period: 2.368 d

KOI: K01774 Corr: No Ephemeris Match

Kp: 15.53 R*: 0.99 Rs Teff: 5944.0 K Logg: 4.39 Fe/H: -0.380



DV Fit Results:

Period = 2.36817 [0.00001] d
Epoch = 132.6261 [0.0013] BKJD
Rp/R* = 0.0214 [0.0059]
a/R* = 4.80 [6.29]
b = 0.85 [0.44]
Seff = 984.86 [364.46]
Teq = 1428 [132] K
Rp = 2.32 [0.91] Re
a = 0.0334 [0.0080] AU
Ag = 12.35 [8.34] [1.36σ]
Teff = 4140 [610] K [4.35σ]

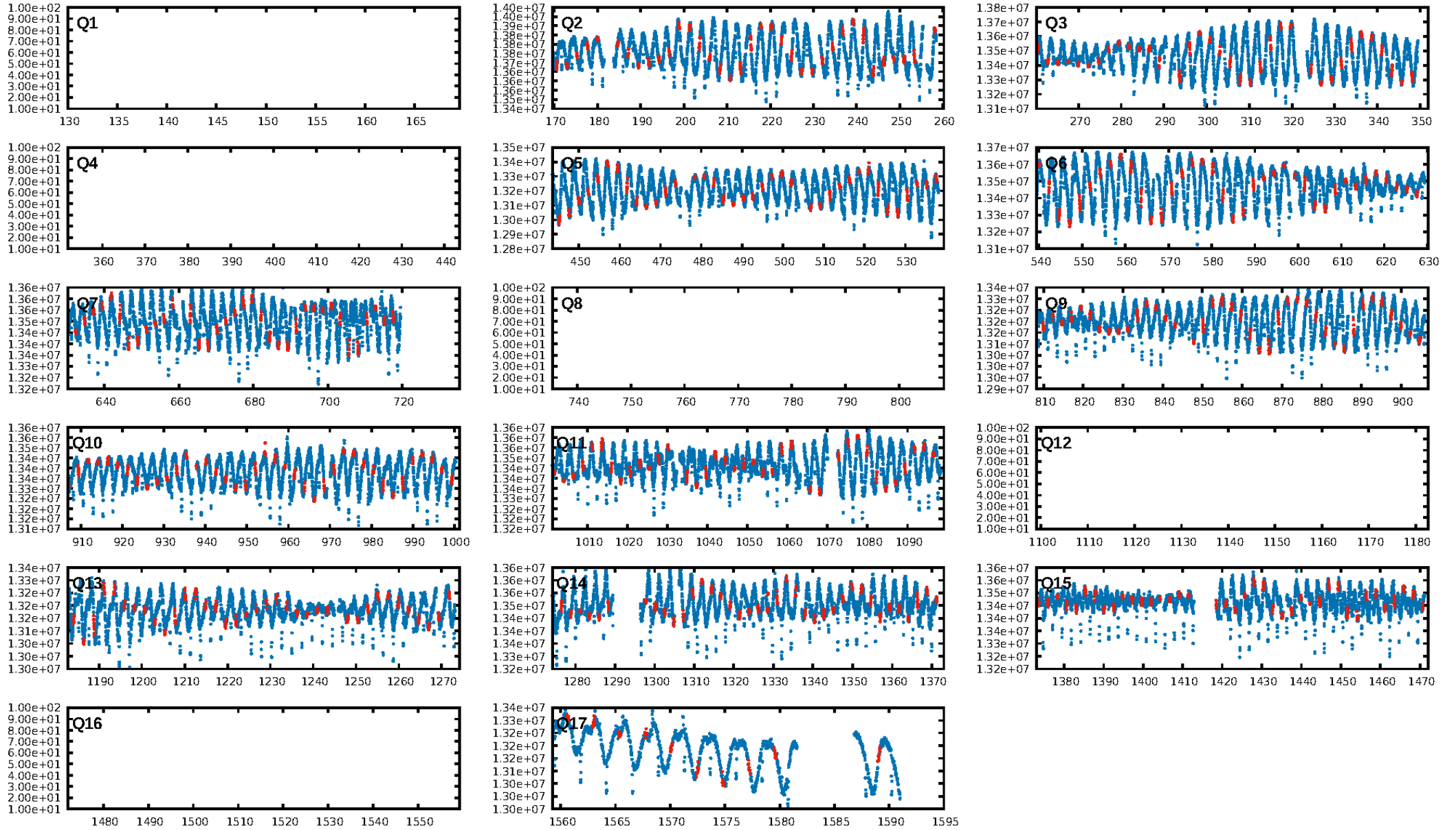
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.36e-73
RollingBand-fgt: 0.89 [372/416]
GhostDiagnostic-chr: 1.88
Centroid-sig: 0.0%
Centroid-so: 1.259 arcsec [2.37σ]
OotOffset-rm: 0.183 arcsec [1.11σ]
KicOffset-rm: 0.288 arcsec [1.57σ]
OotOffset-st: 3/4/0/4 [11]
KicOffset-st: 3/4/0/4 [11]
DiffImageQuality-fgm: 0.91 [10/11]
DiffImageOverlap-fno: 1.00 [12/12]

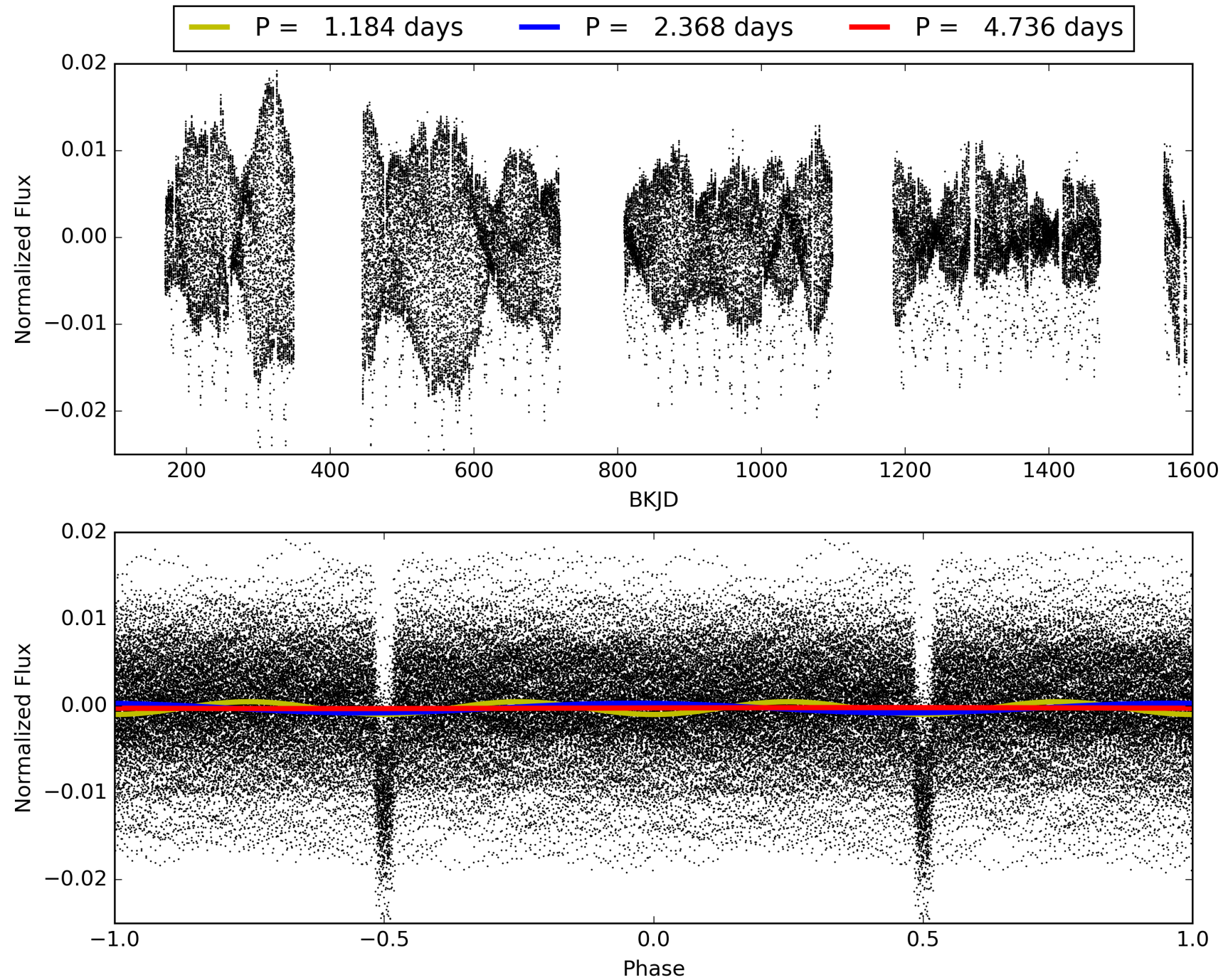
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:14:08 Z

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

TCE 011285136-02, PDC Light Curves

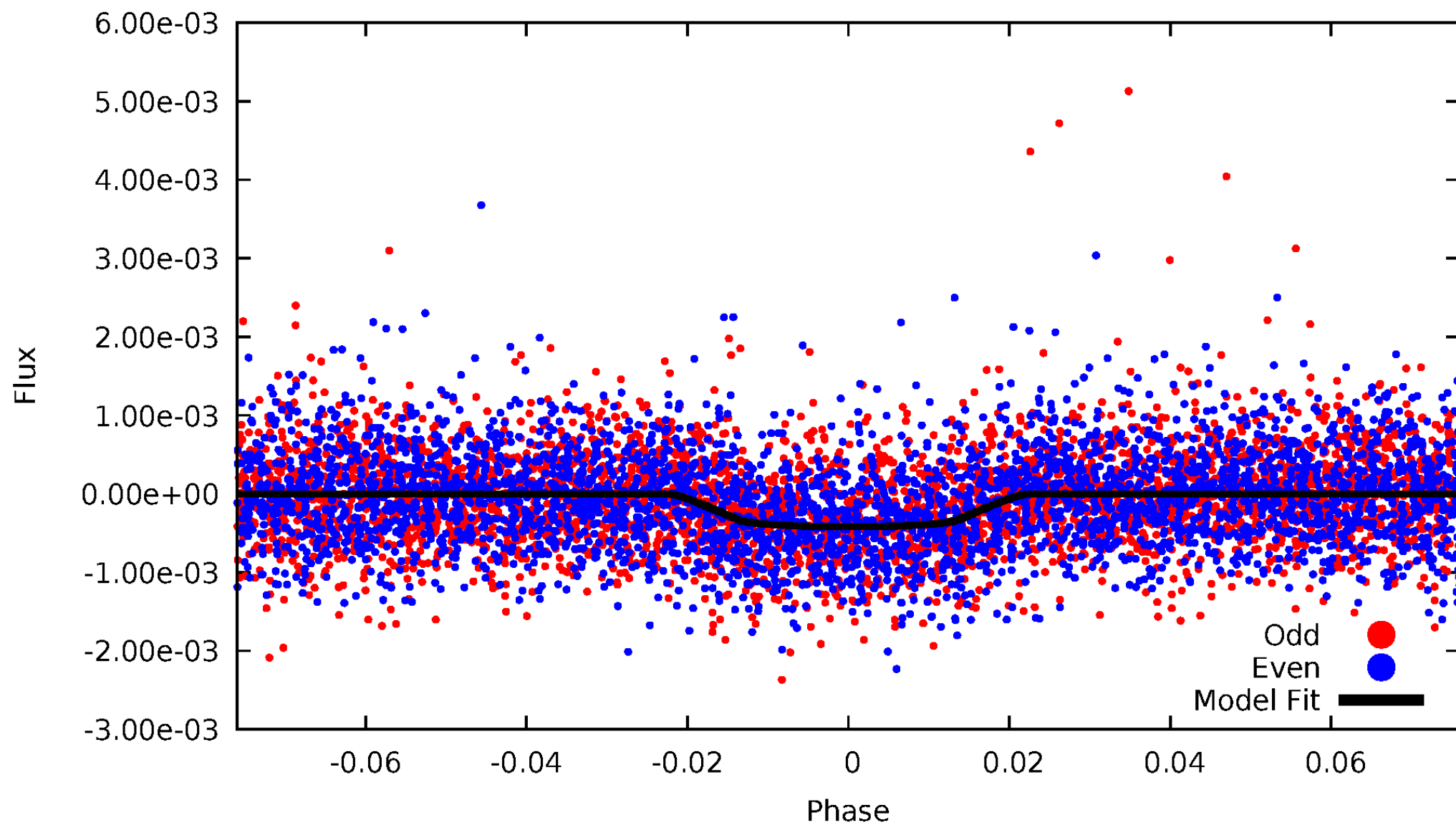


TCE 011285136-02



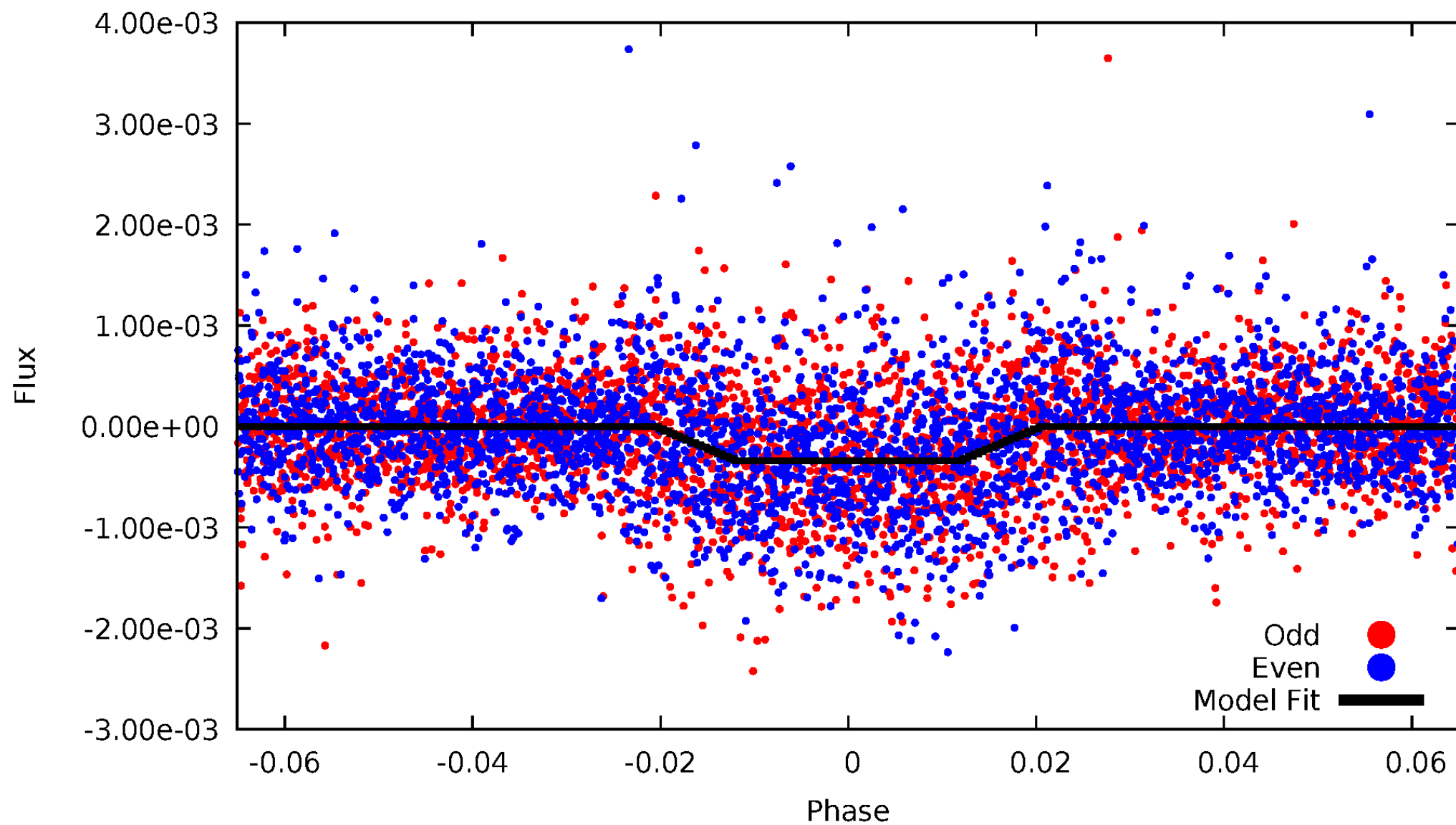
DV Odd/Even

TCE 011285136-02



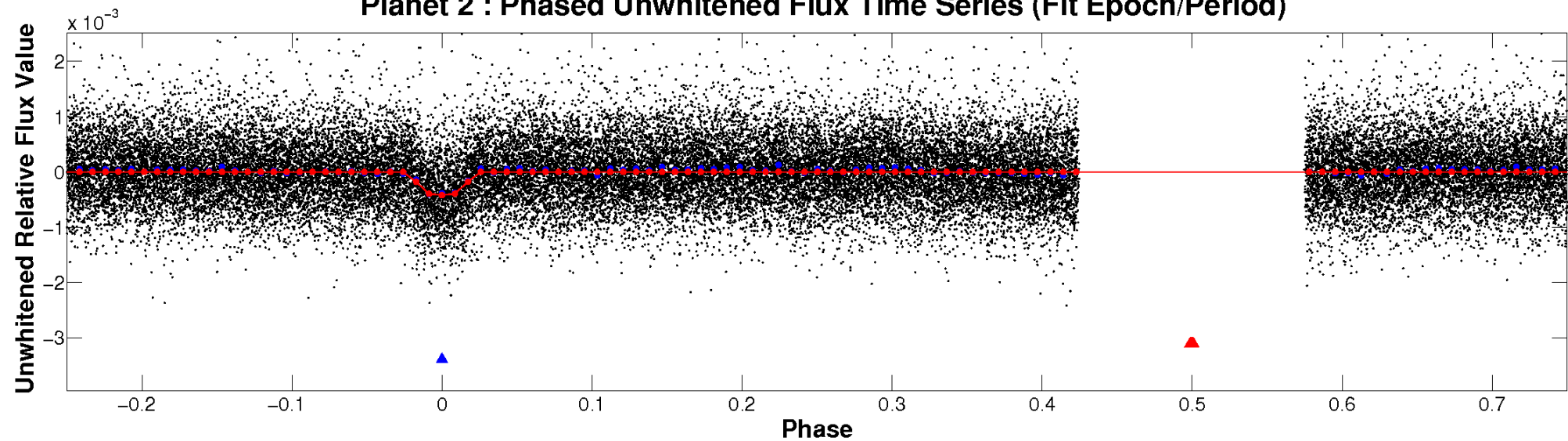
ALT Odd/Even

TCE 011285136-02

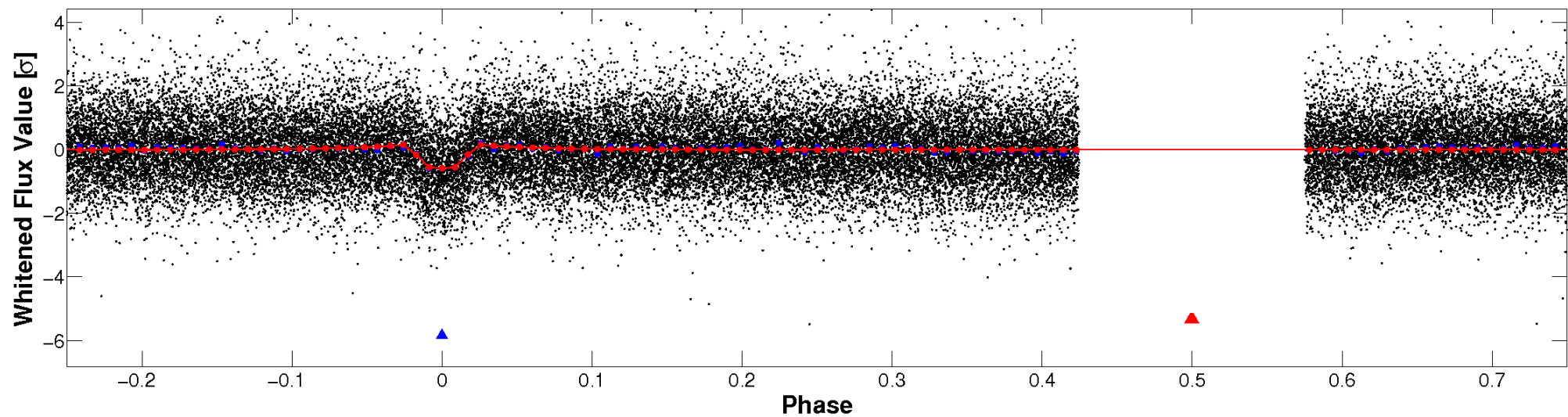


Non-Whitened Vs. Whitened Light Curve

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

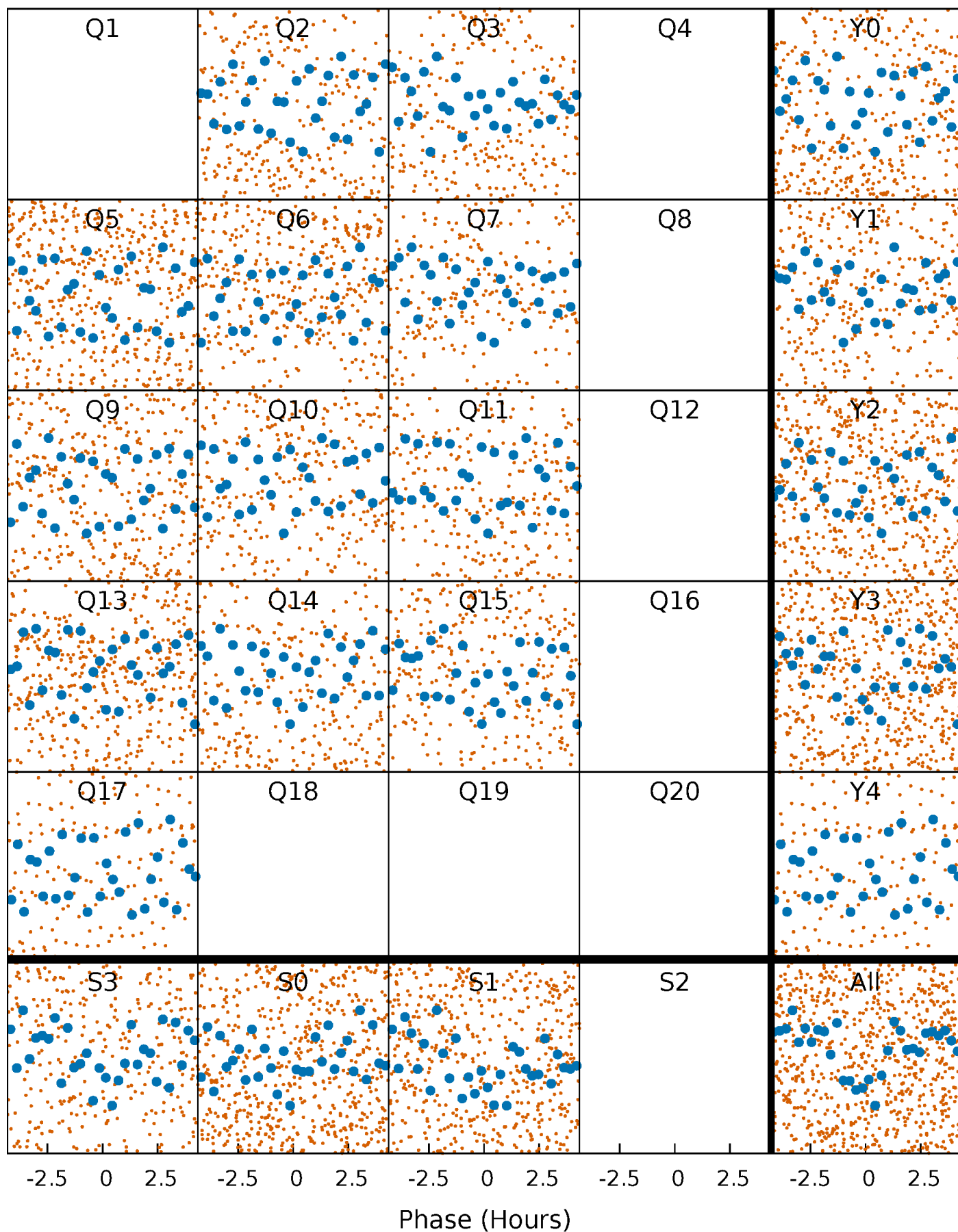


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



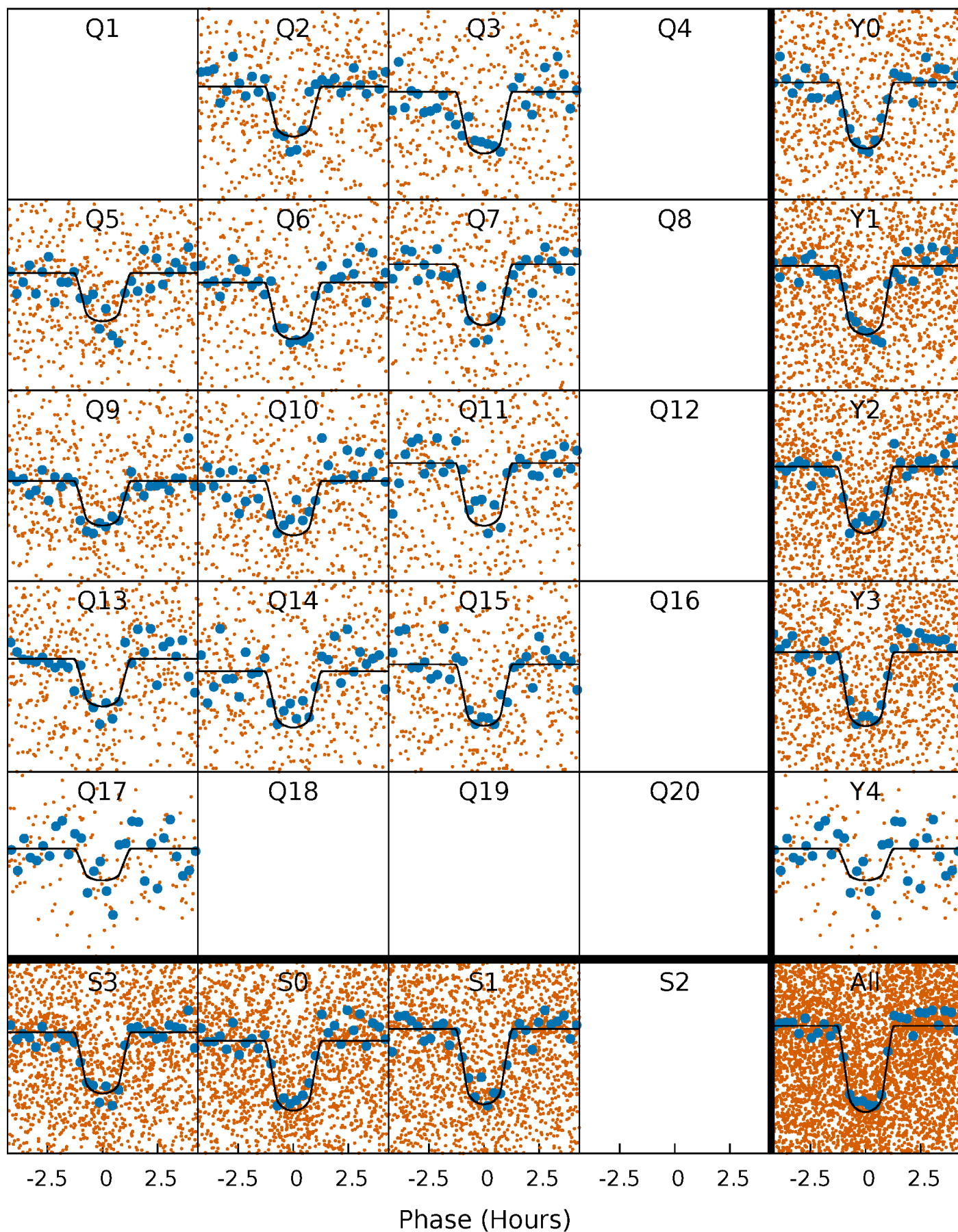
PDC Quarter-Phased Transit Curves

TCE 011285136-02 P= 2.368174 Days $T_0=132.626071$ (BKJD)



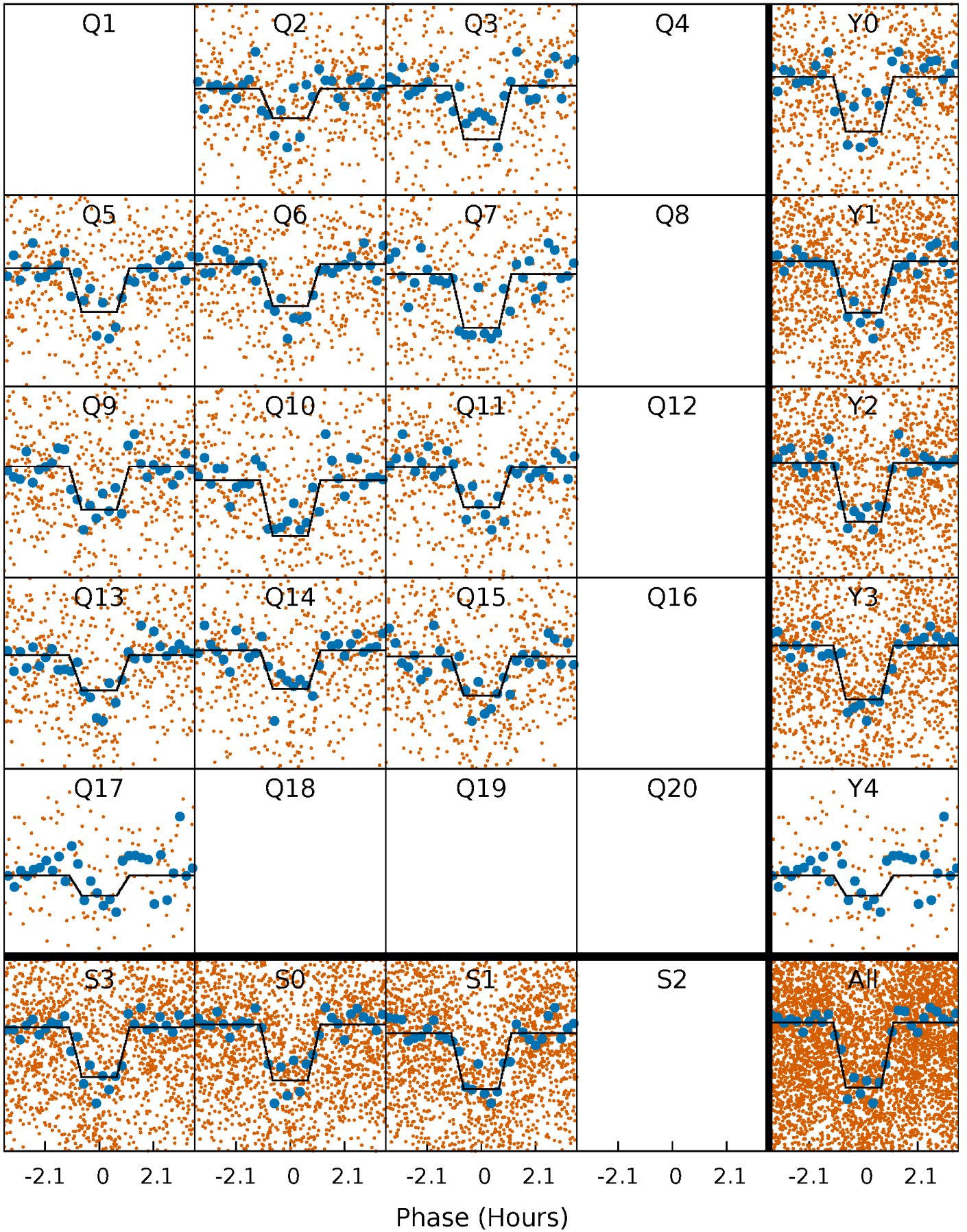
DV Quarter-Phased Transit Curves

TCE 011285136-02 P= 2.368174 Days $T_0=132.626071$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

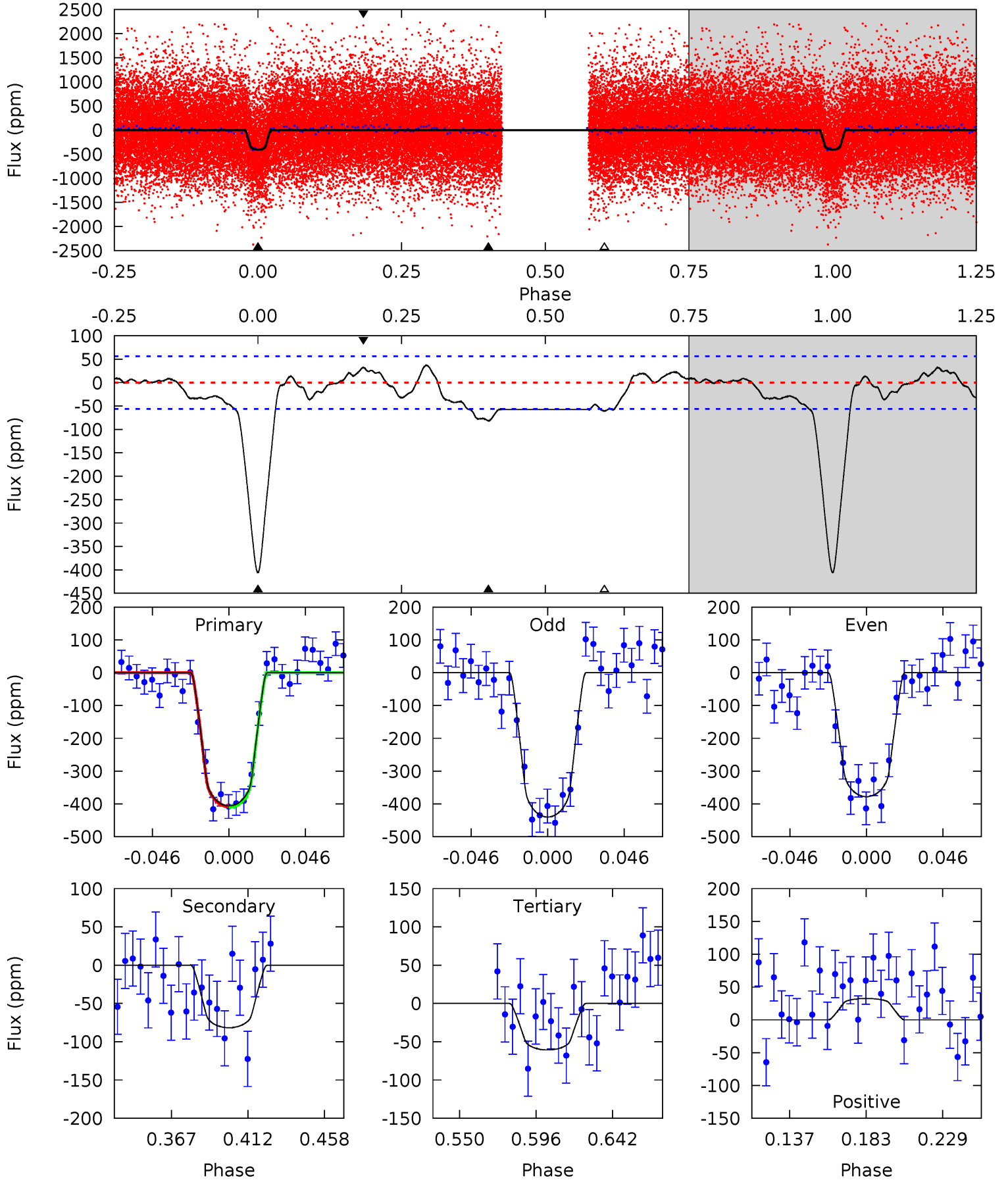
TCE 011285136-02 P= 2.368156 Days $T_0=132.631872$ (BKJD)



DV Model-Shift Uniqueness Test

011285136-02, P = 2.368174 Days, E = 132.626071 Days

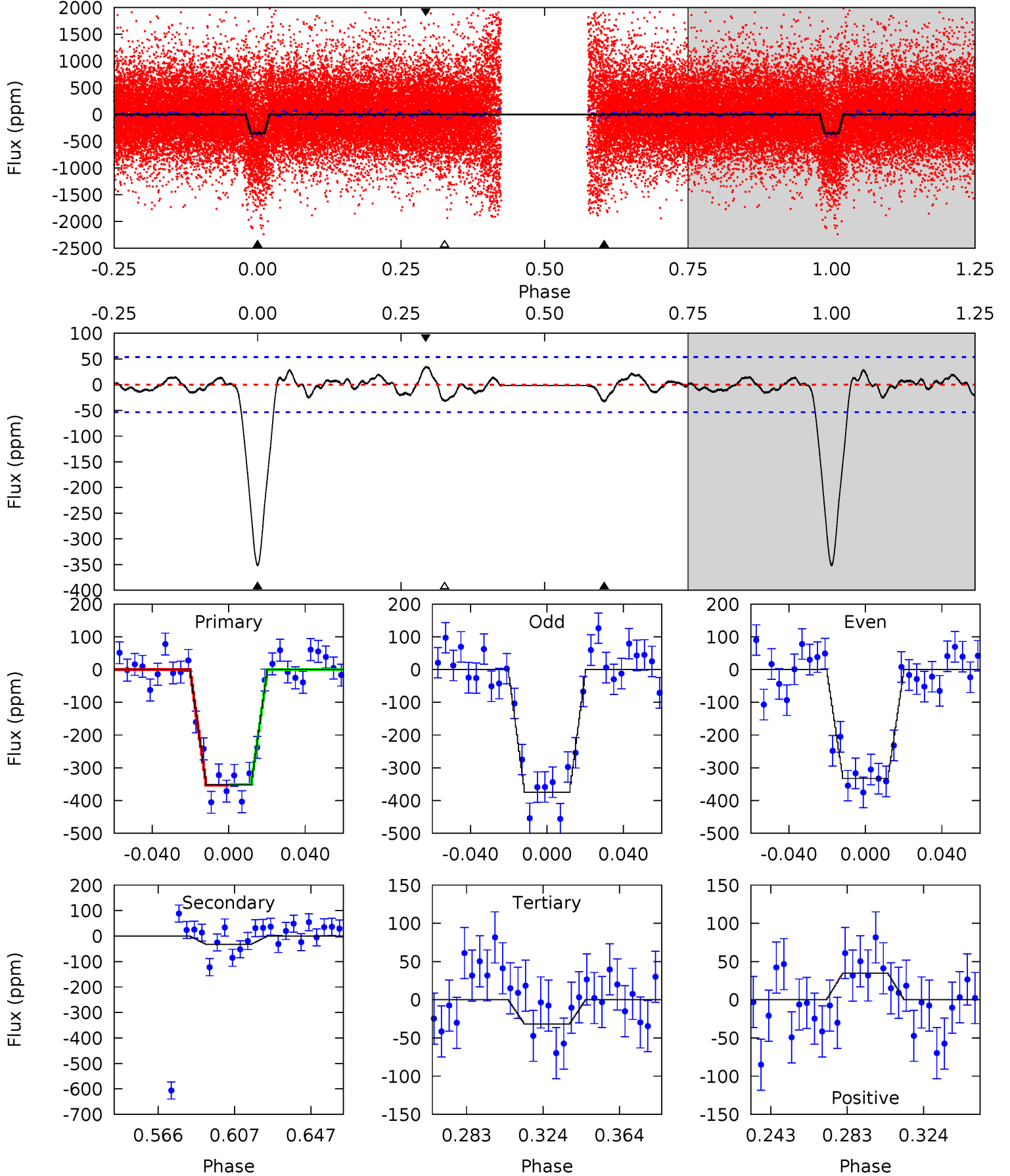
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.1	6.86	5.10	2.73	4.73	2.00	2.05	29.0	31.3	1.76	4.12	2.61	0.97	0.08	0.08



Alt Model-Shift Uniqueness Test

011285136-02, P = 2.368156 Days, E = 132.631872 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.2	2.91	2.82	3.09	4.75	2.05	1.10	28.4	28.1	0.09	-0.18	1.84	0.99	0.09	0.14



Stellar Parameters For KIC 011285136

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5944^{+160}_{-178}	$4.393^{+0.128}_{-0.192}$	$-0.380^{+0.300}_{-0.300}$	$0.991^{+0.281}_{-0.151}$	$0.886^{+0.120}_{-0.090}$	$1.283^{+0.742}_{-0.633}$
	+3%/-3%	+3%/-4%	+79%/-79%	+28%/-15%	+14%/-10%	+58%/-49%
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 011285136-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-82 ± 12	$2.40^{+0.69}_{-0.71}$	2007^{+152}_{-117}	4093^{+589}_{-377}	$8.865^{+8.793}_{-3.764}$
Alt.	-33 ± 11	$2.01^{+0.67}_{-0.68}$	2005^{+133}_{-120}	3680^{+580}_{-416}	$4.846^{+6.884}_{-2.402}$

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

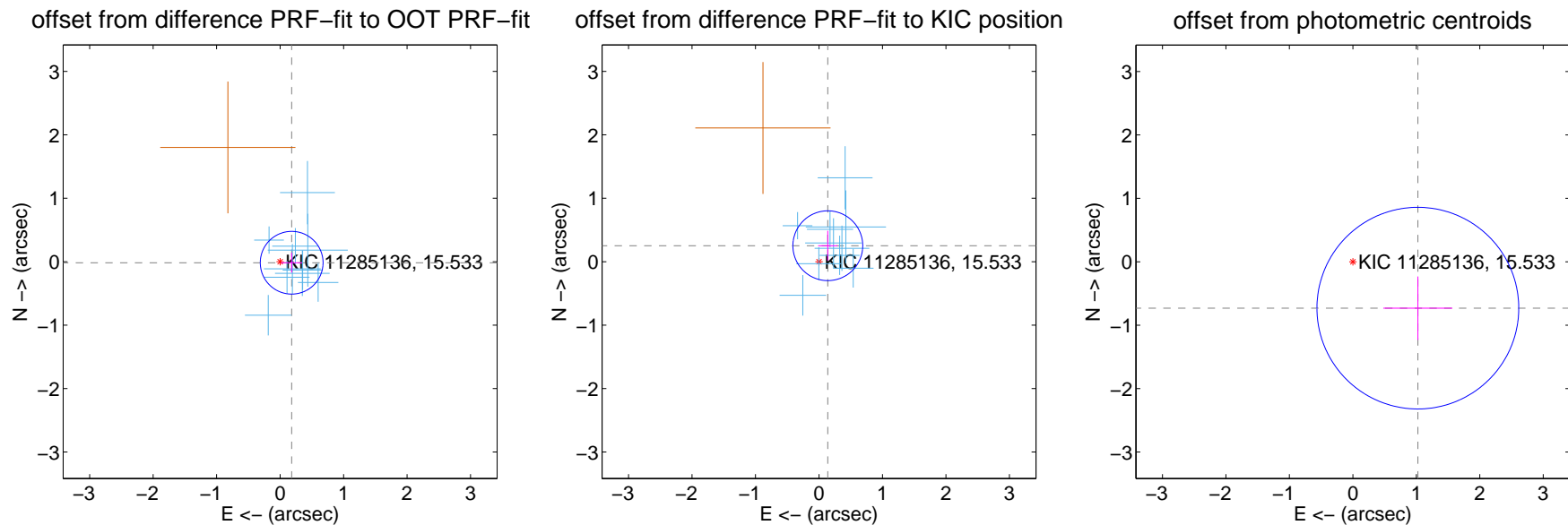
DV Centroid Data

Supplemental centroid analysis for 011285136-02. Kepler magnitude: 15.53. Transit SNR 21.58

There are 10 quarters with good PRF difference image offsets

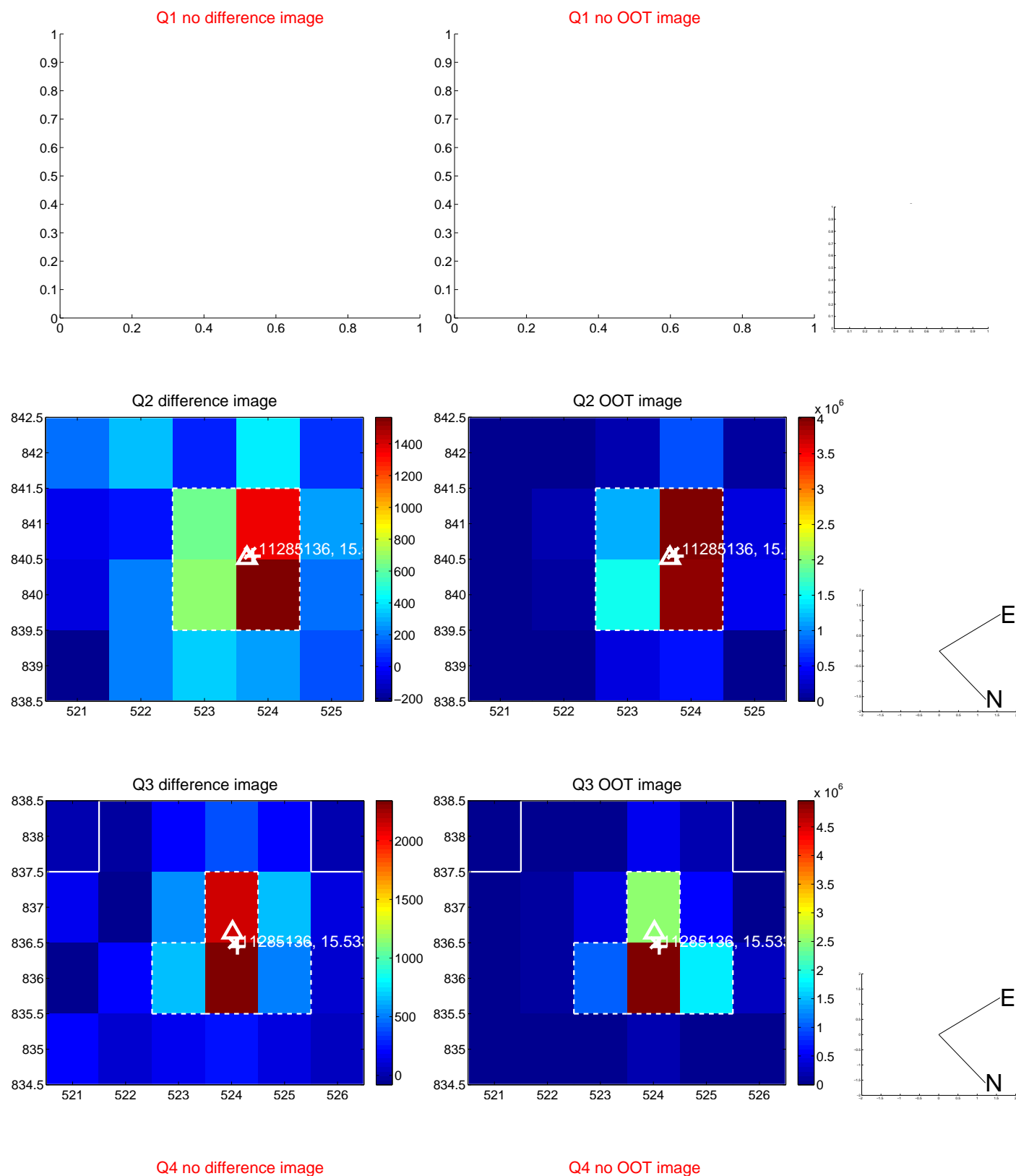
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.183 ± 0.165	1.11	-0.182 ± 0.165	-0.016 ± 0.157
PRF-fit source offset from KIC position	0.288 ± 0.183	1.57	-0.139 ± 0.153	0.252 ± 0.236
photometric centroid source offset	1.26 ± 0.53	2.37	-1.02 ± 0.54	-0.73 ± 0.50

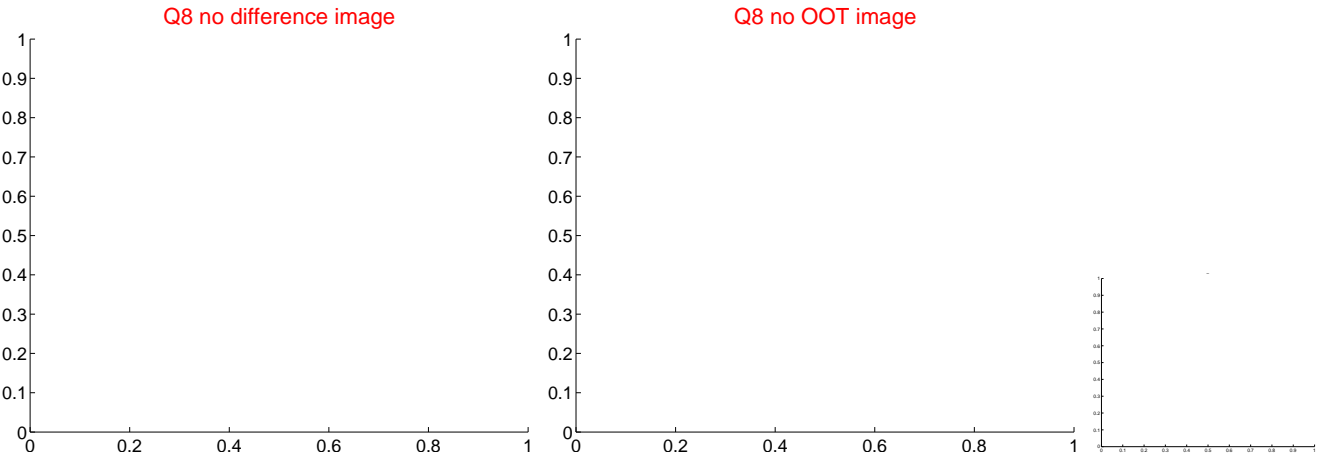
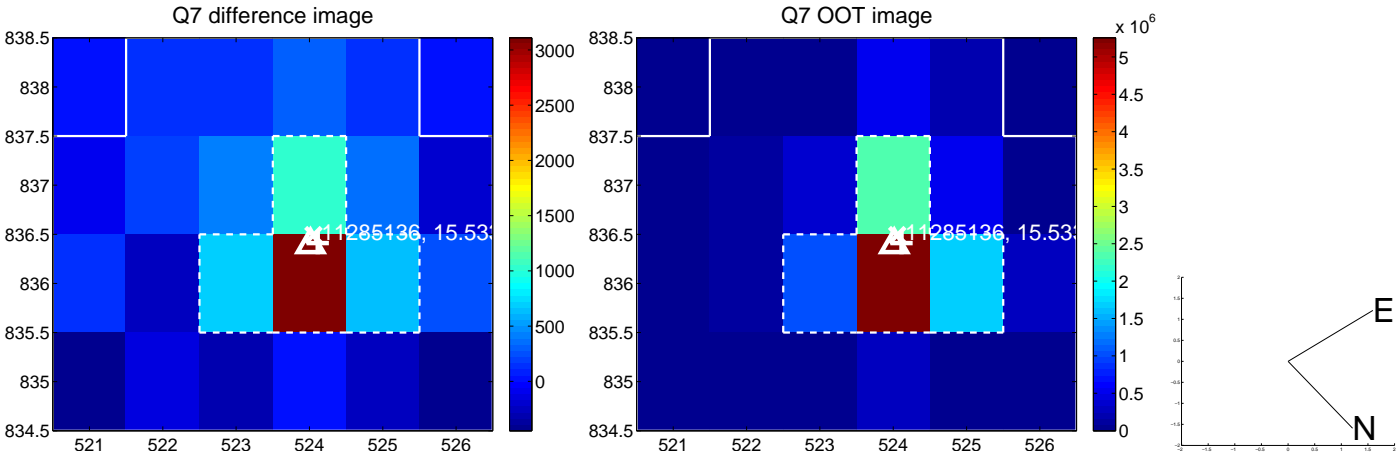
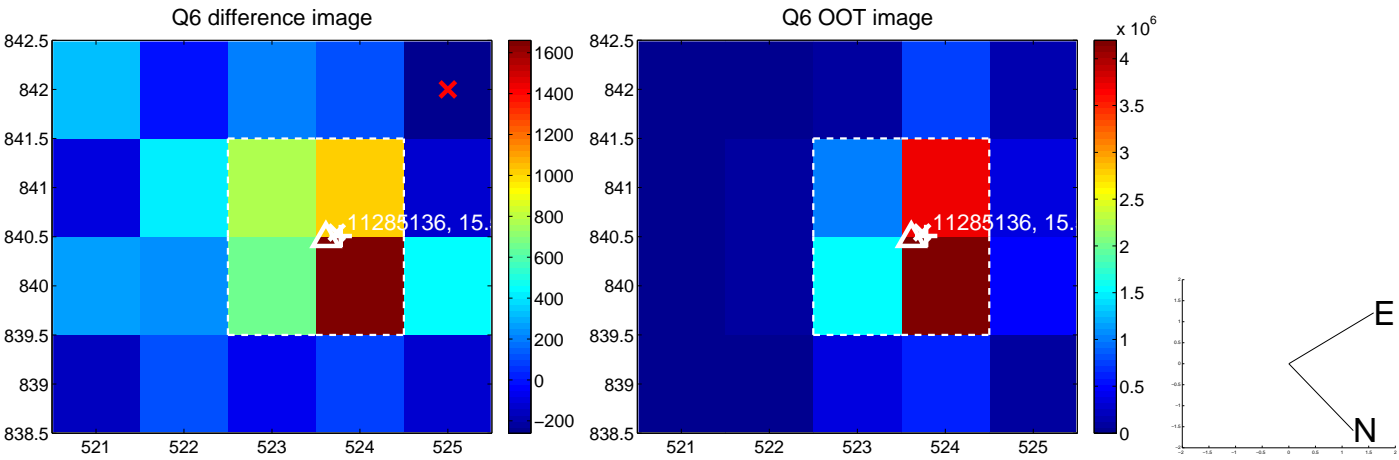
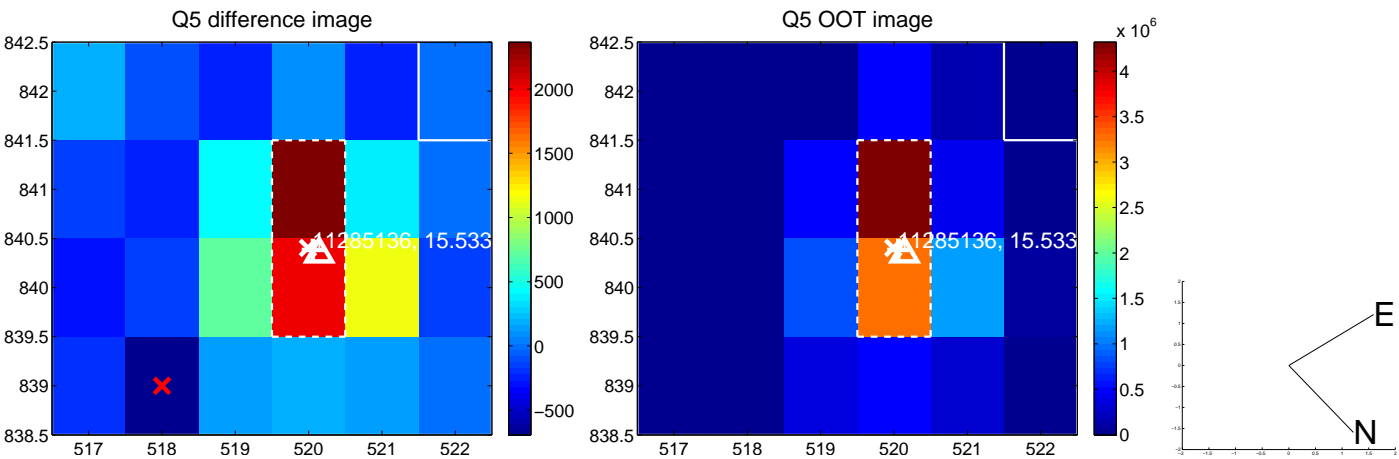


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

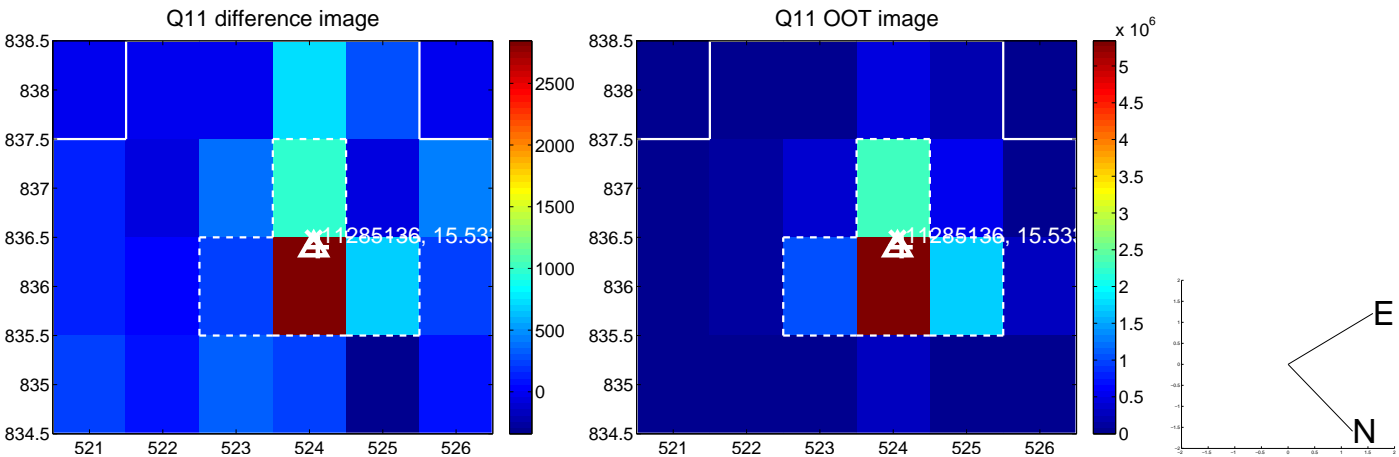
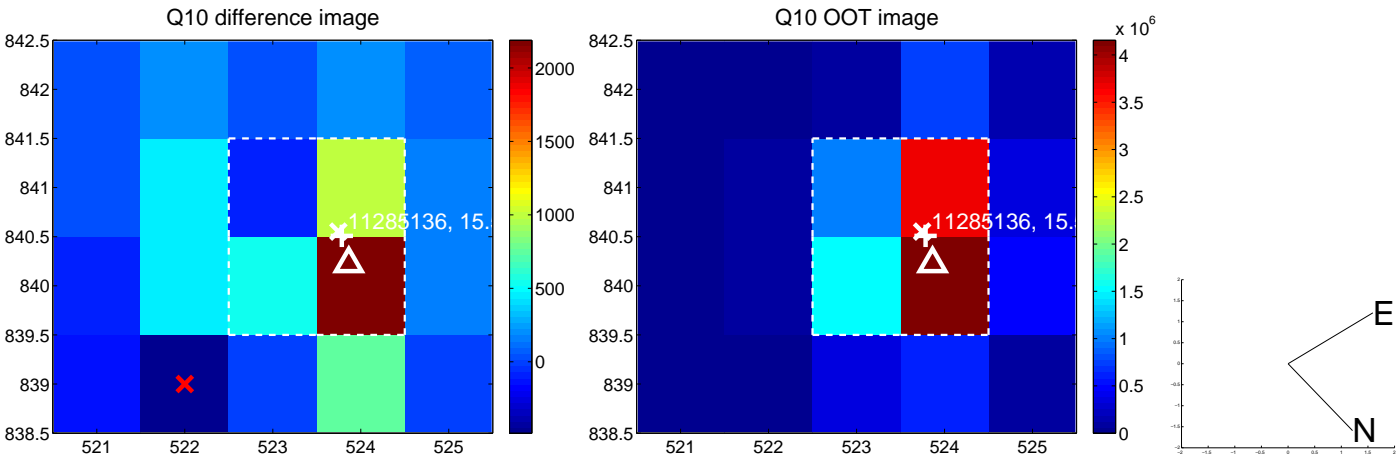
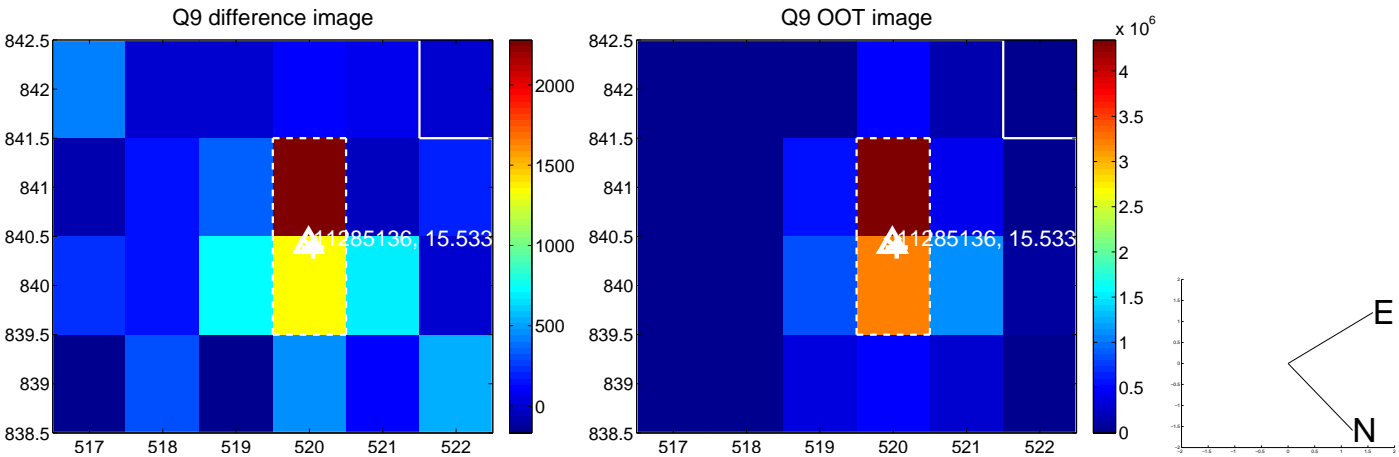
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



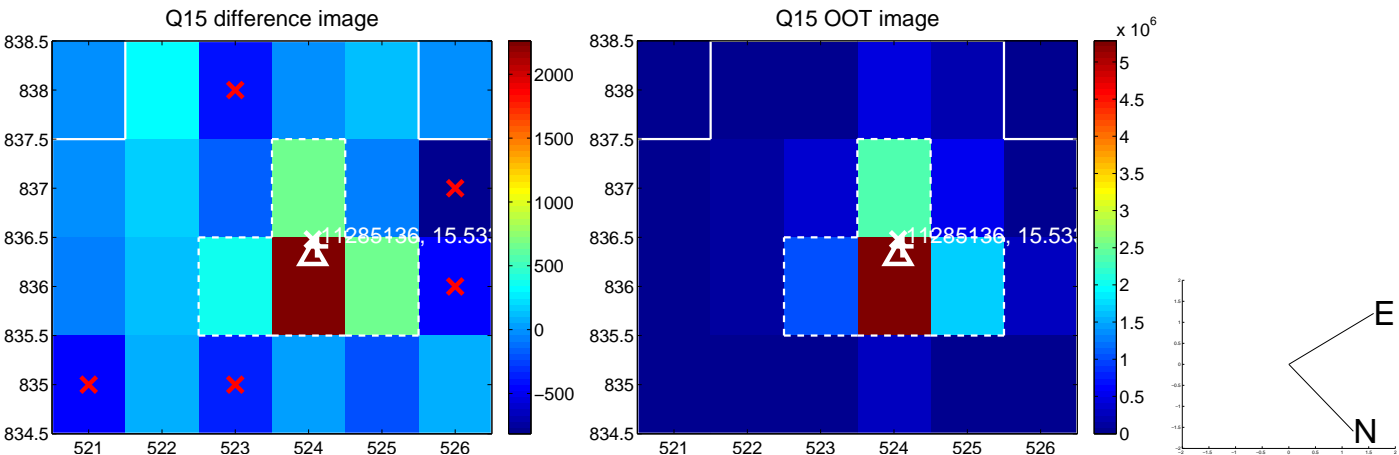
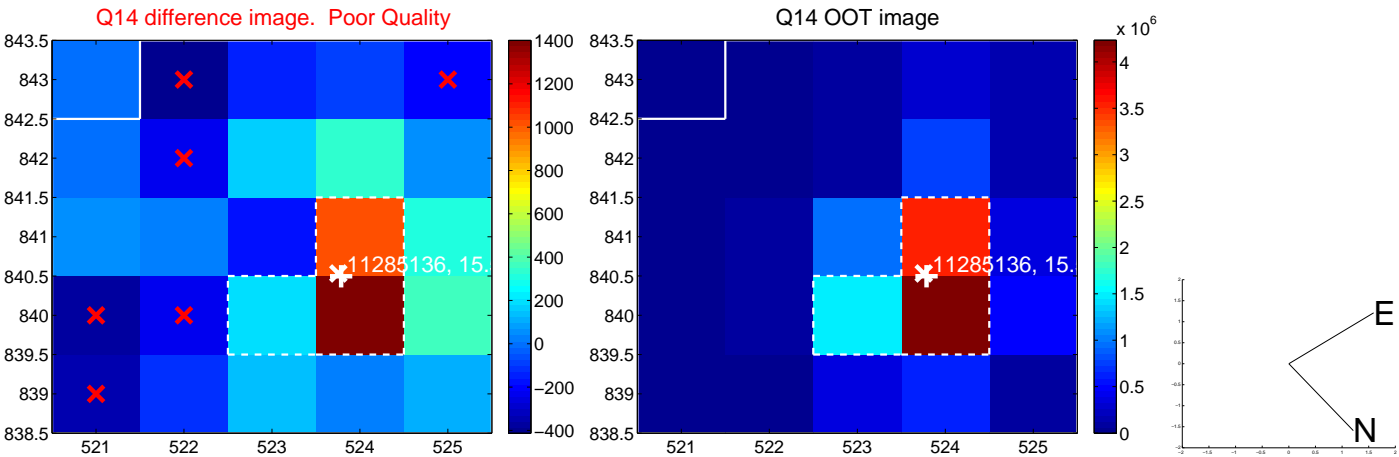
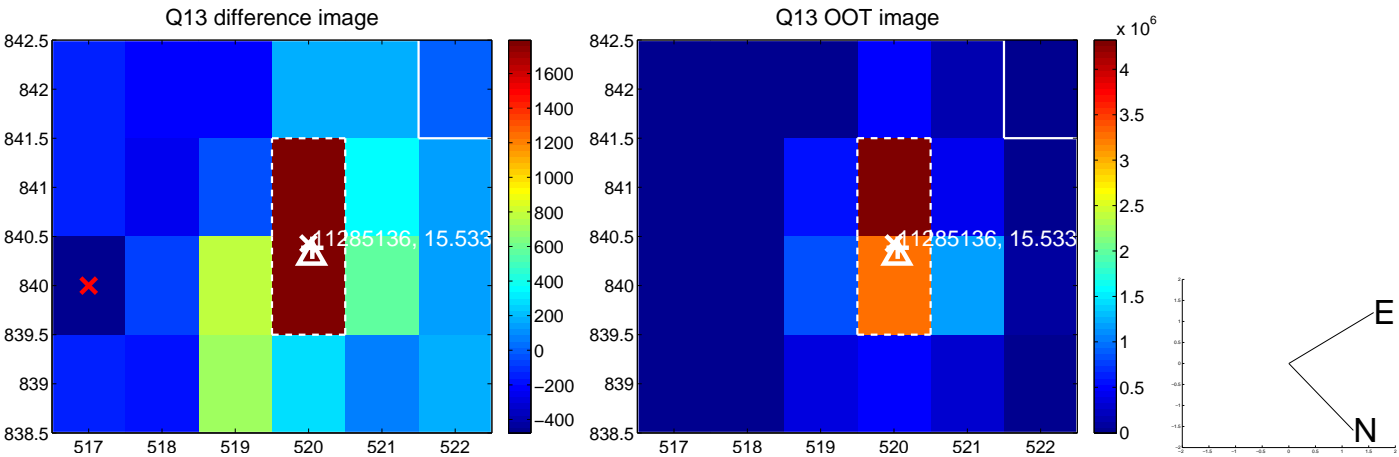
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



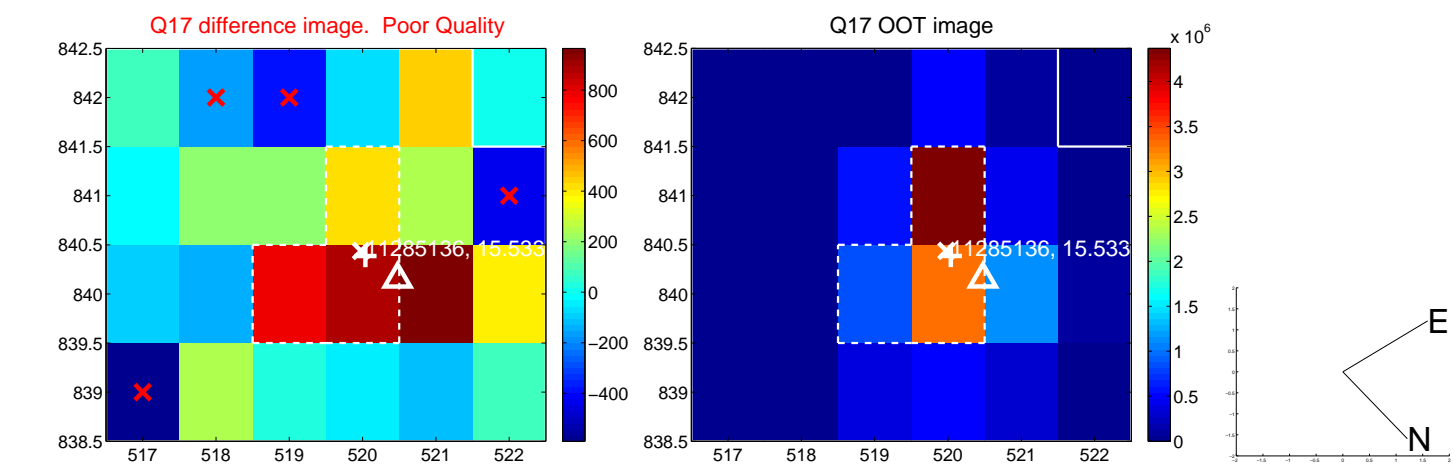
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



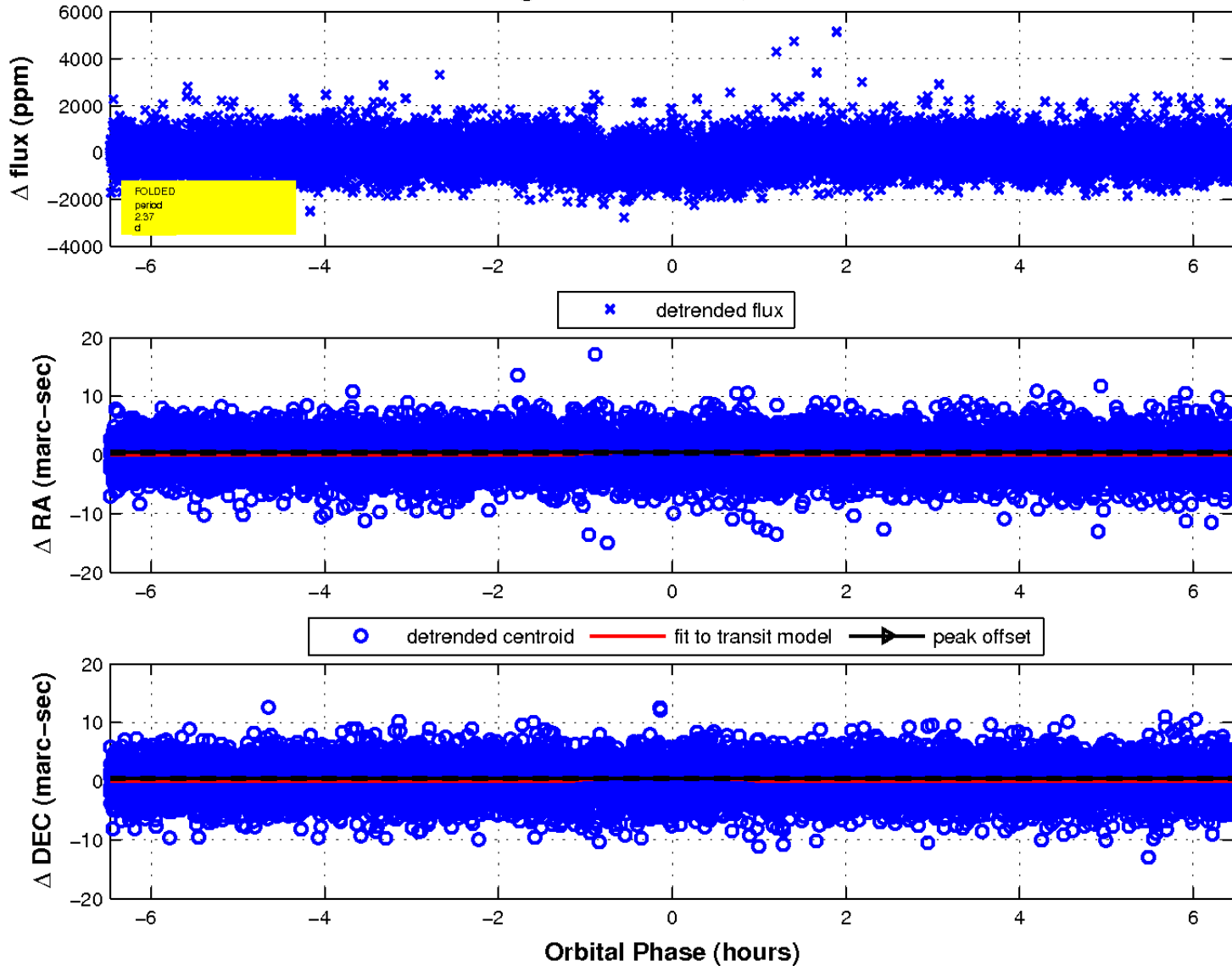
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

