

KIC 011442465

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})
011442465-01	OBS	0768.01	33.933722	152.742745	8084.1	14.362	193.4	184.7	0.70	5040	7.13	8.13
011442465-02	OBS	No	33.933726	134.299214	956.3	8.896	22.3	23.1	0.70	5040	2.48	8.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011442465-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_UNRESOLVED_OFFSET
011442465-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_UNRESOLVED_OFFSET

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.

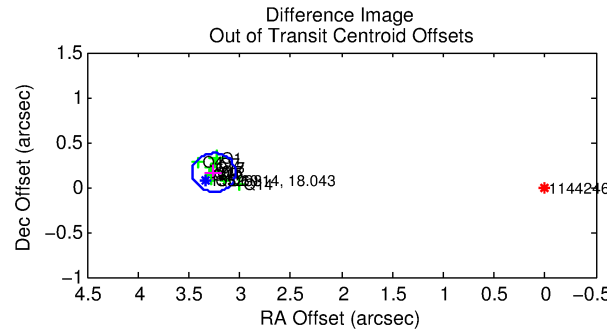
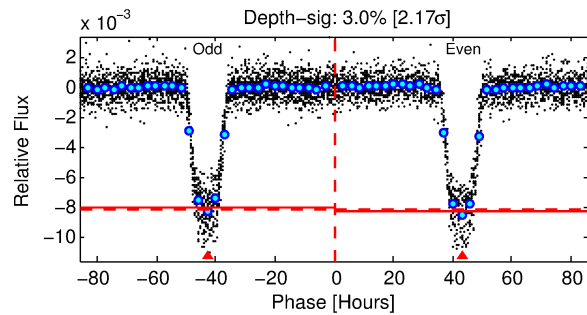
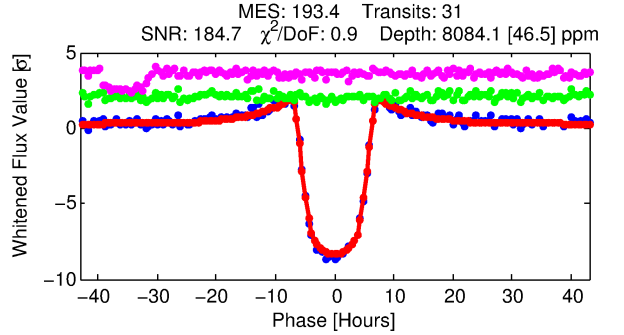
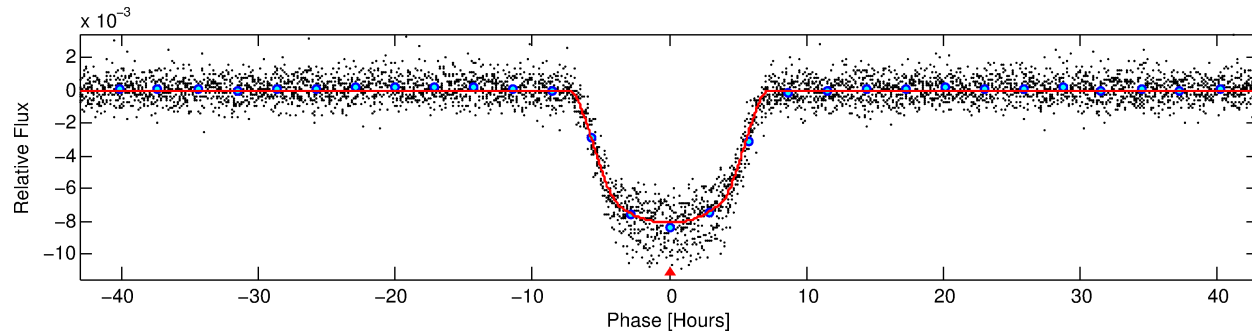
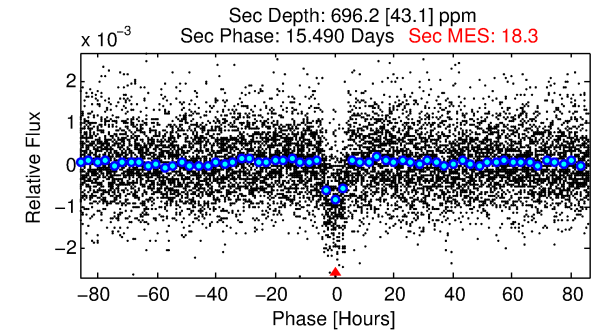
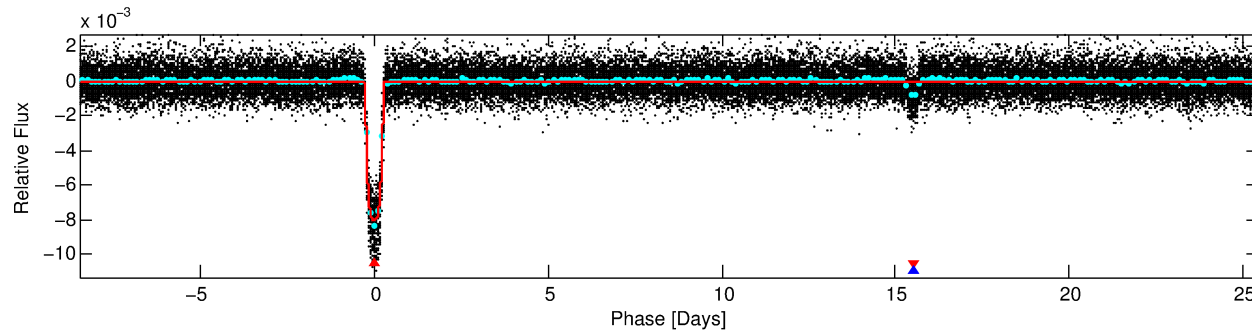
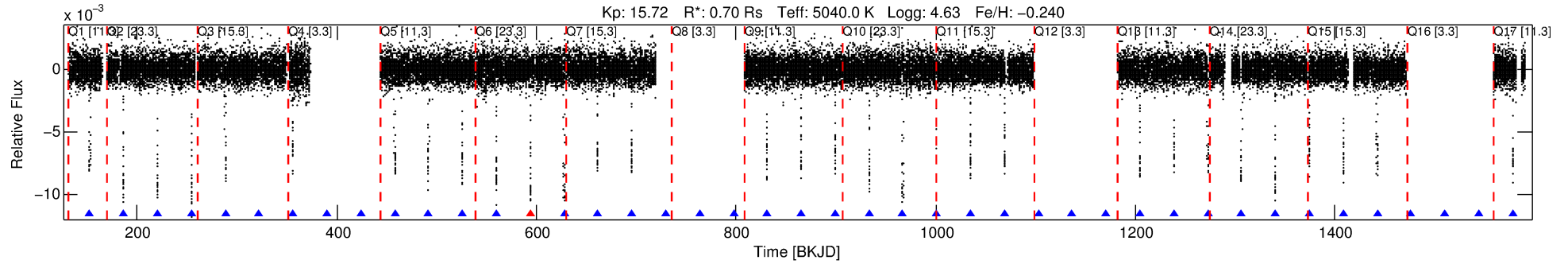
Ephemeris Match Information For 011442465-01

No Significant Match Found

DV One-Page Summary

KIC: 11442465 Candidate: 1 of 2 Period: 33.934 d

KOI: K00768.01 Corr: 0.994



DV Fit Results:

Period = 33.93372 [0.00006] d
Epoch = 152.7427 [0.0015] BKJD
Rp/R* = 0.0927 [0.0005]
a/R* = 13.34 [0.20]
b = 0.81 [0.01]
Seff = 8.13 [1.47]
Teq = 431 [19] K
Rp = 7.14 [0.87] Re
a = 0.1880 [0.0183] AU
Ag = 266.02 [39.57] [6.70σ]
Teffp = 2688 [91] K [24.27σ]

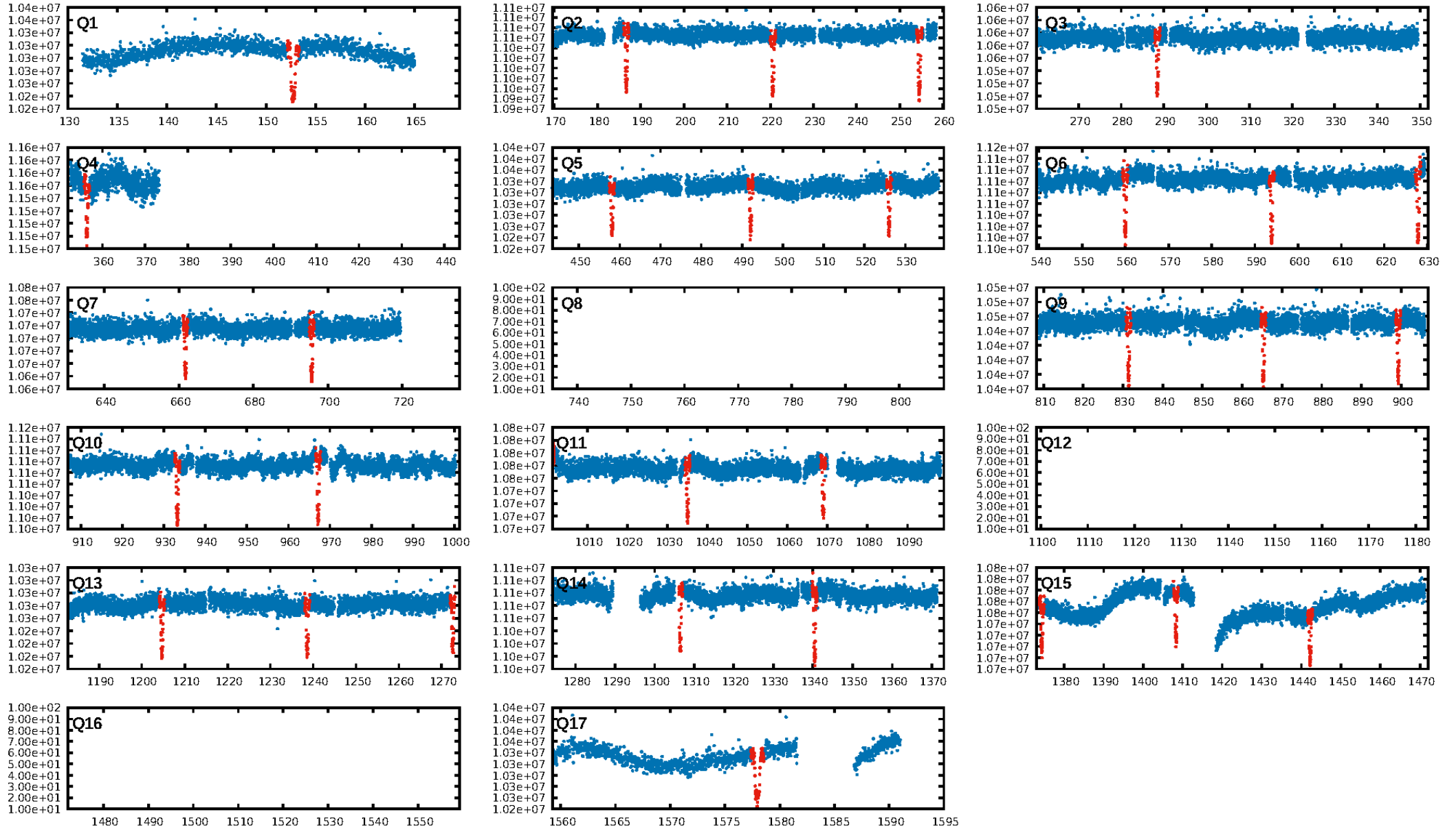
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.96 [27/28]
GhostDiagnostic-chr: 1.414
Centroid-sig: 0.0%
Centroid-so: 3.119 arcsec [49.67σ]
OotOffset-rm: 3.258 arcsec [45.72σ]
KicOffset-rm: 3.353 arcsec [47.93σ]
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]

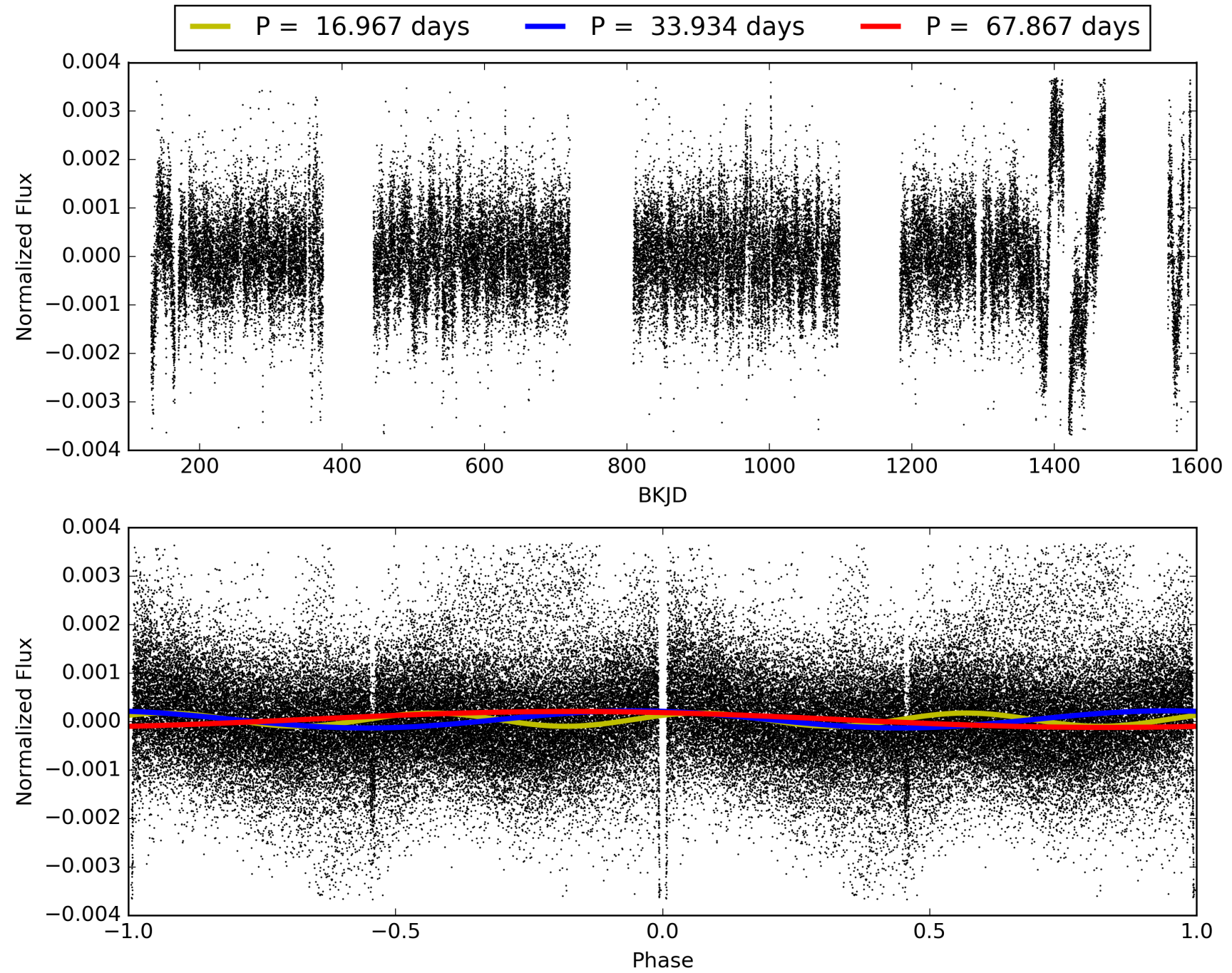
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011442465-01, PDC Light Curves

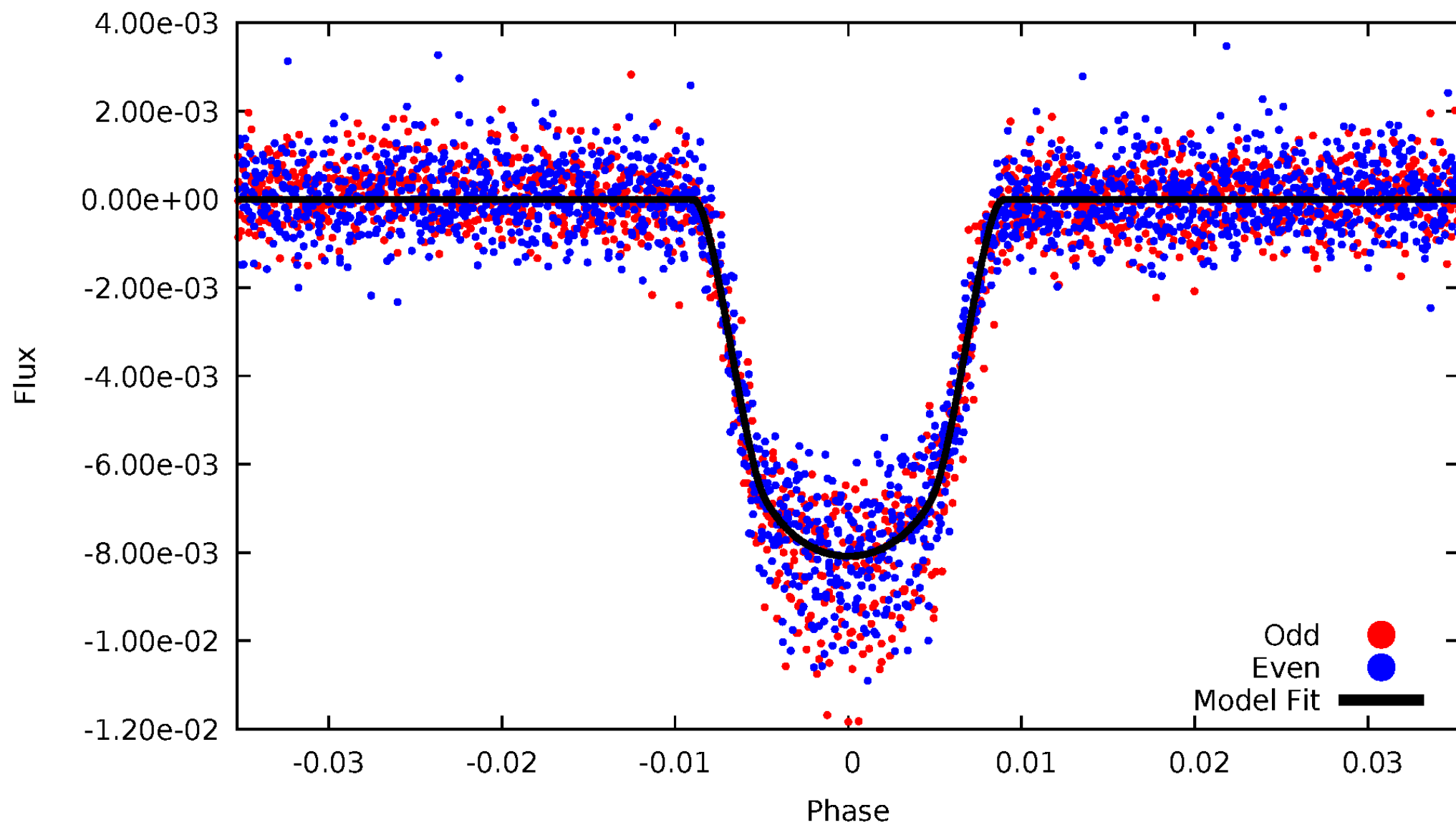


TCE 011442465-01



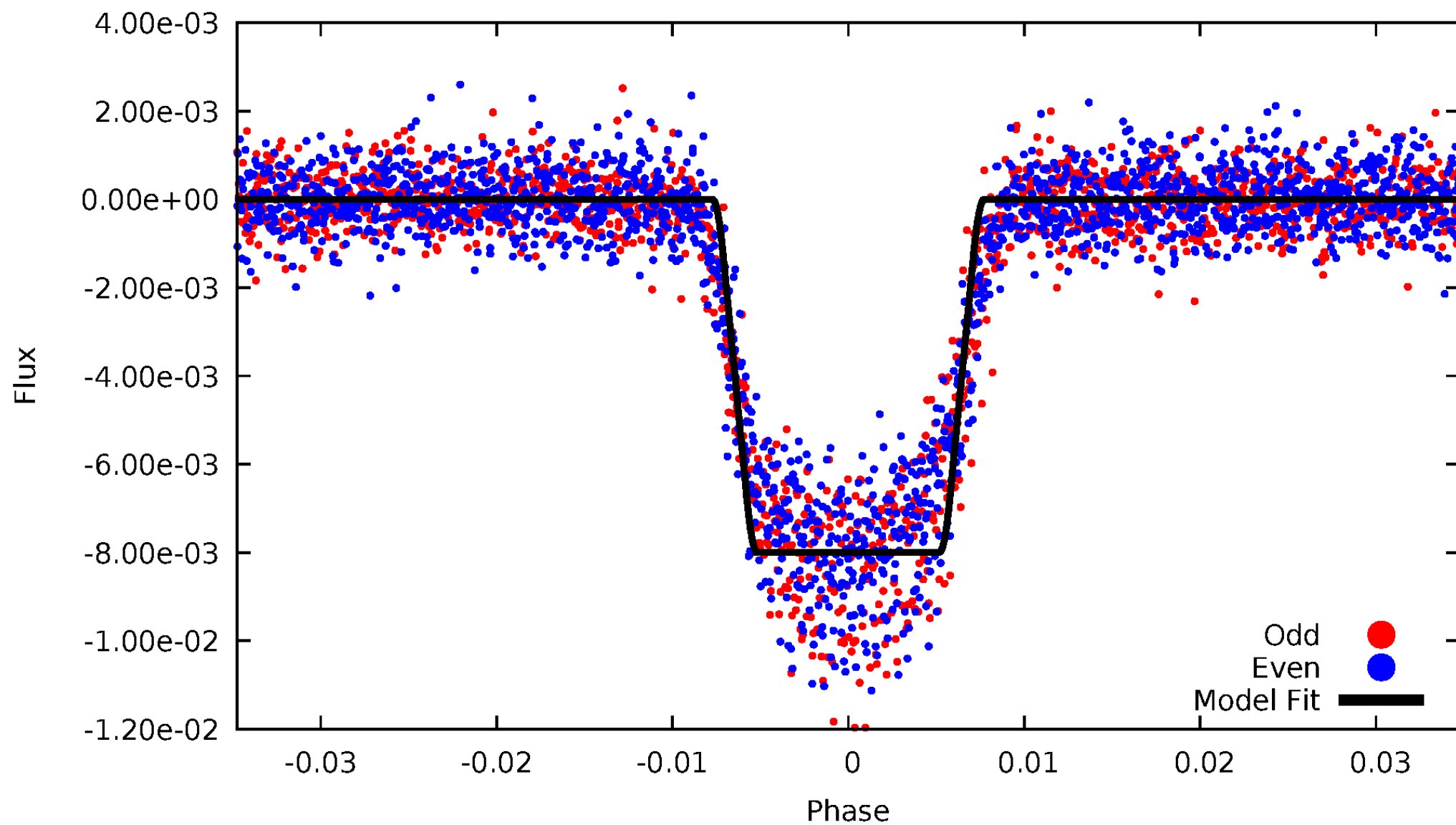
DV Odd/Even

TCE 011442465-01



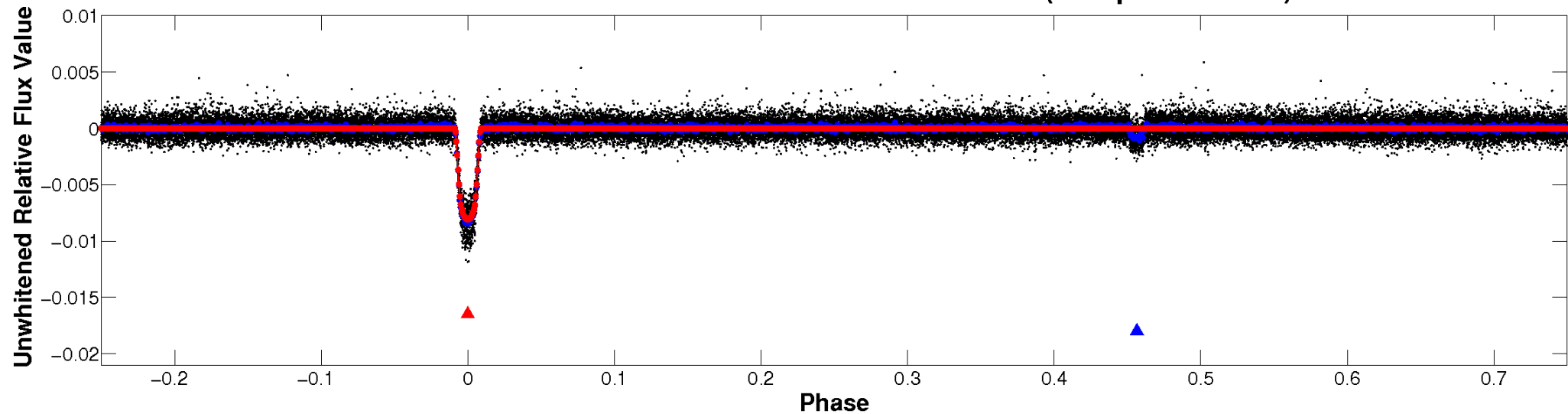
ALT Odd/Even

TCE 011442465-01

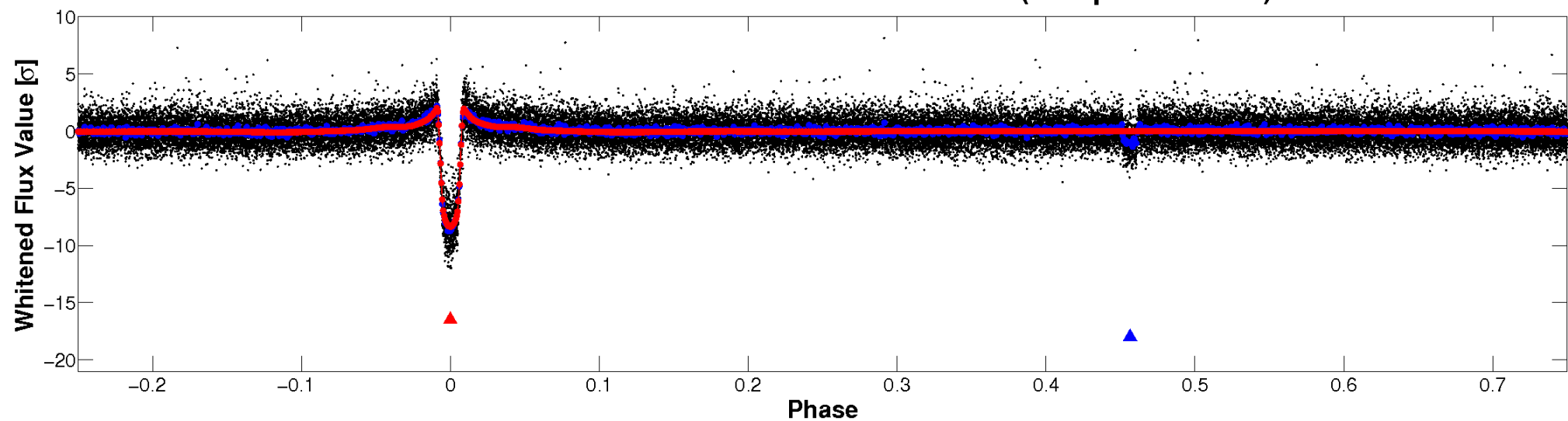


Non-Whitened Vs. Whitened Light Curve

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

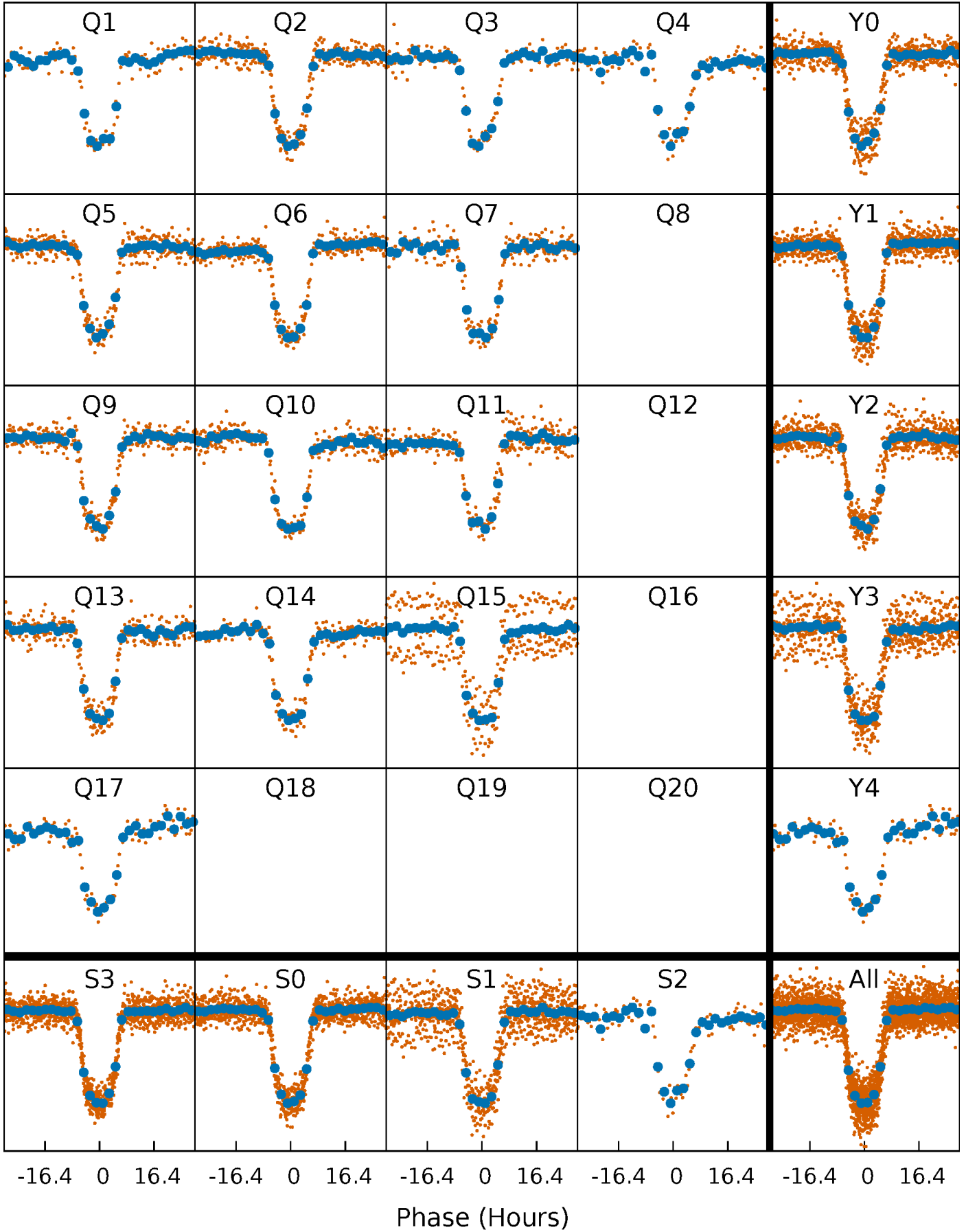


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



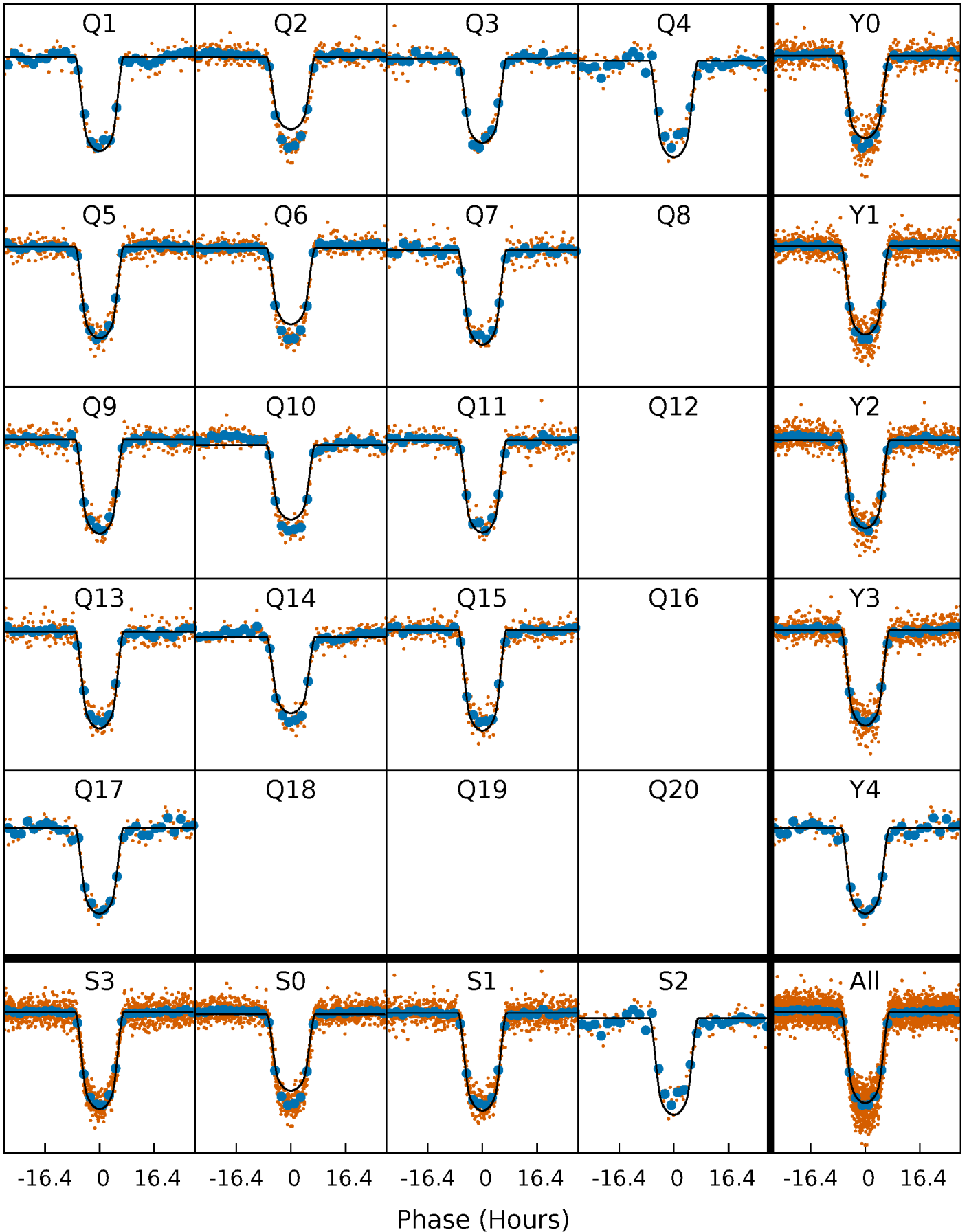
PDC Quarter-Phased Transit Curves

TCE 011442465-01 P= 33.933722 Days $T_0=152.742745$ (BKJD)



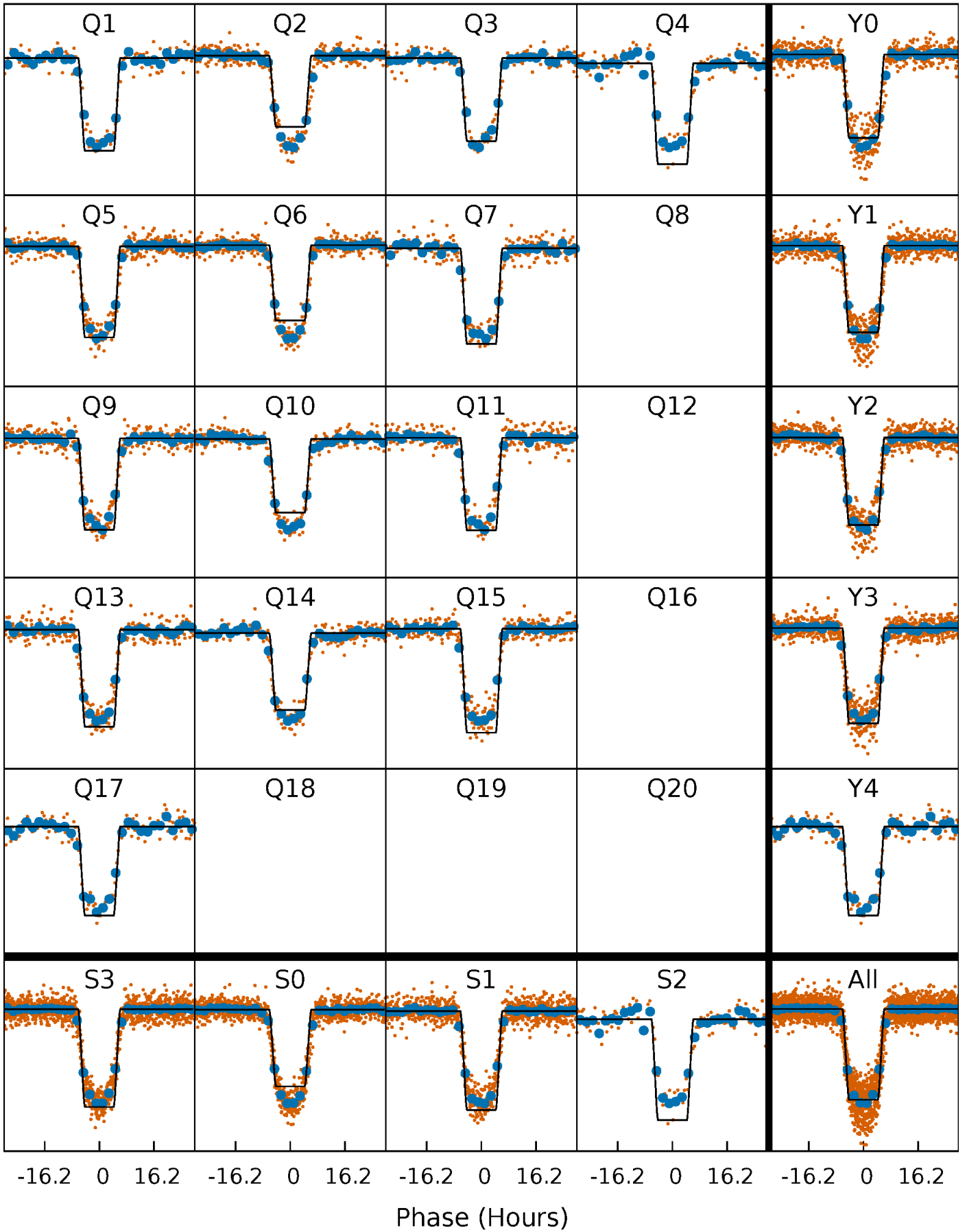
DV Quarter-Phased Transit Curves

TCE 011442465-01 P= 33.933722 Days $T_0=152.742745$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

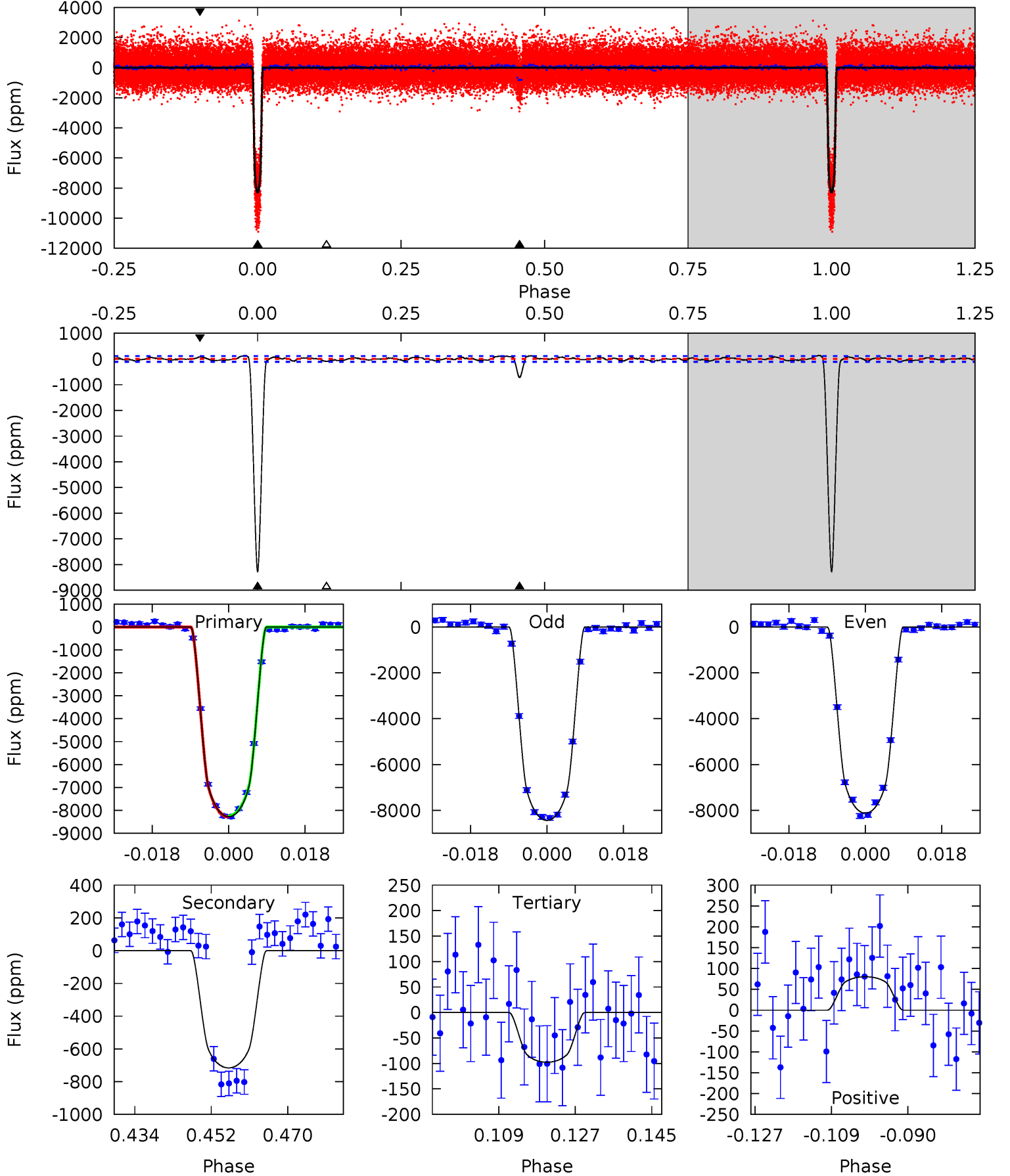
TCE 011442465-01 P= 33.934415 Days $T_0=152.728149$ (BKJD)



DV Model-Shift Uniqueness Test

011442465-01, P = 33.933722 Days, E = 118.809023 Days

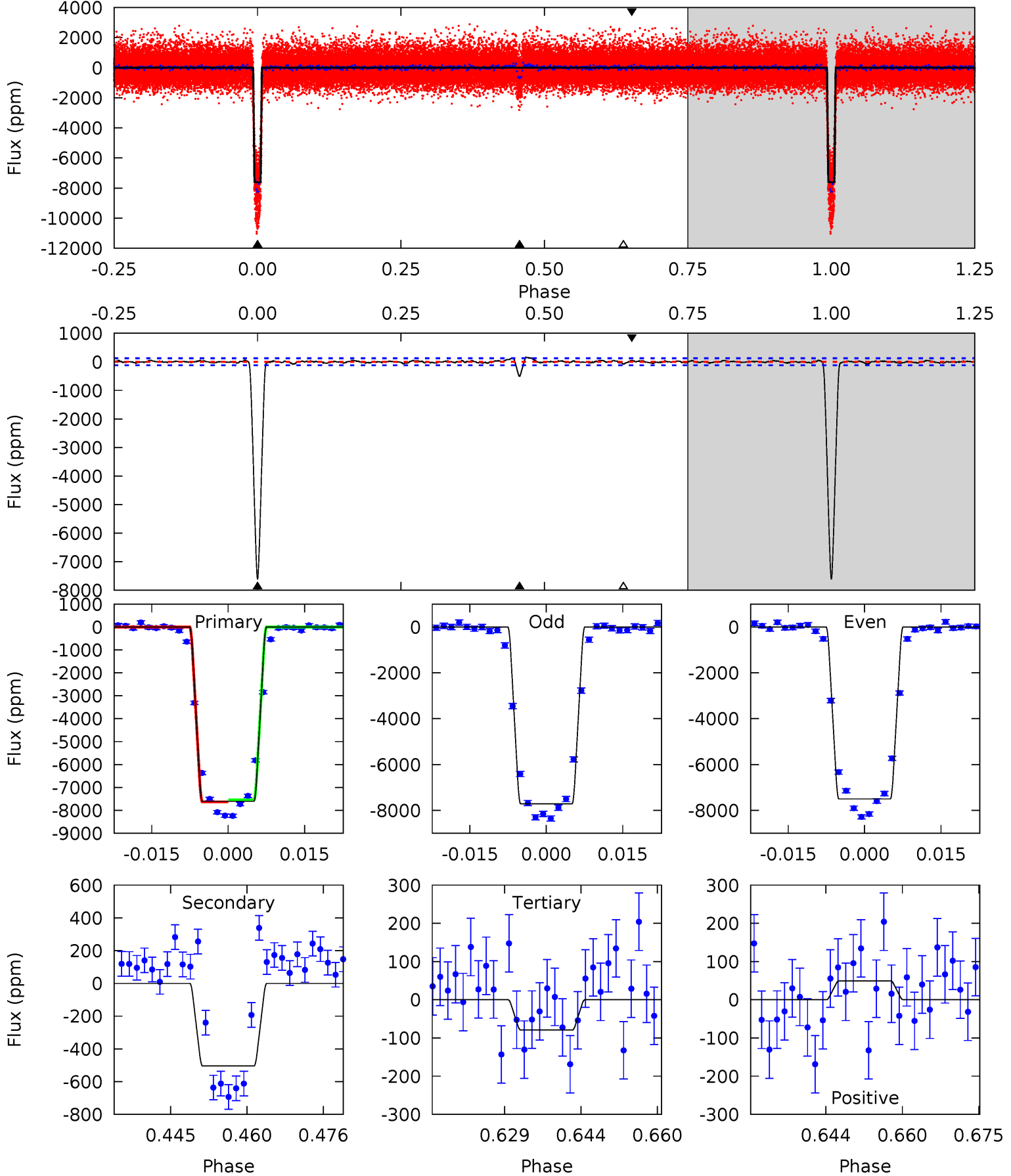
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
357.1	30.9	4.21	3.46	4.91	2.36	1.89	352.9	353.6	26.7	27.4	6.77	1.05	0.02	1.03



Alt Model-Shift Uniqueness Test

011442465-01, P = 33.934415 Days, E = 118.793734 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
310.0	20.5	3.23	2.01	4.94	2.42	1.16	306.8	308.0	17.3	18.5	4.22	1.06	0.02	1.67



Stellar Parameters For KIC 011442465

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5040^{+136}_{-151}	$4.628^{+0.030}_{-0.070}$	$-0.240^{+0.300}_{-0.300}$	$0.705^{+0.086}_{-0.058}$	$0.782^{+0.063}_{-0.087}$	$3.145^{+0.489}_{-0.788}$
	+3%/-3%	+1%/-2%	+125%/-125%	+12%/-8%	+8%/-11%	+16%/-25%
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 011442465-01 / KOI 0768.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-716 ± 23	$7.25^{+0.45}_{-0.37}$	606^{+22}_{-21}	3244^{+58}_{-74}	263^{+25}_{-21}
Alt.	-504 ± 25	$6.97^{+0.46}_{-0.33}$	606^{+22}_{-20}	3113^{+60}_{-69}	200^{+19}_{-19}

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

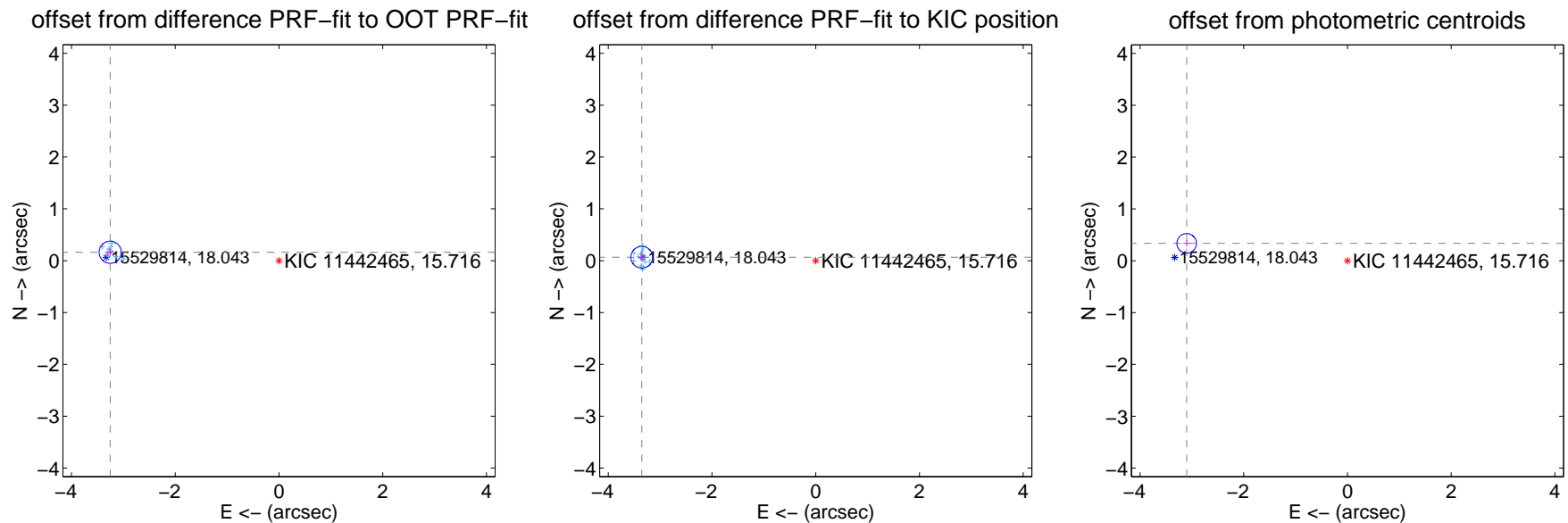
DV Centroid Data

Supplemental centroid analysis for 011442465-01. Kepler magnitude: 15.72. Transit SNR 184.69

There are 14 quarters with good PRF difference image offsets

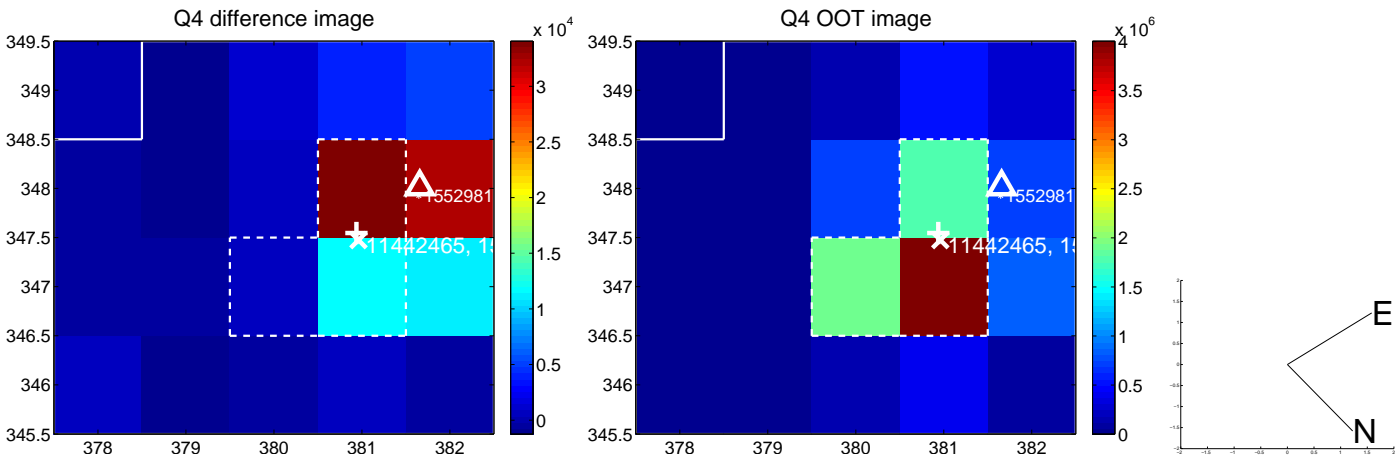
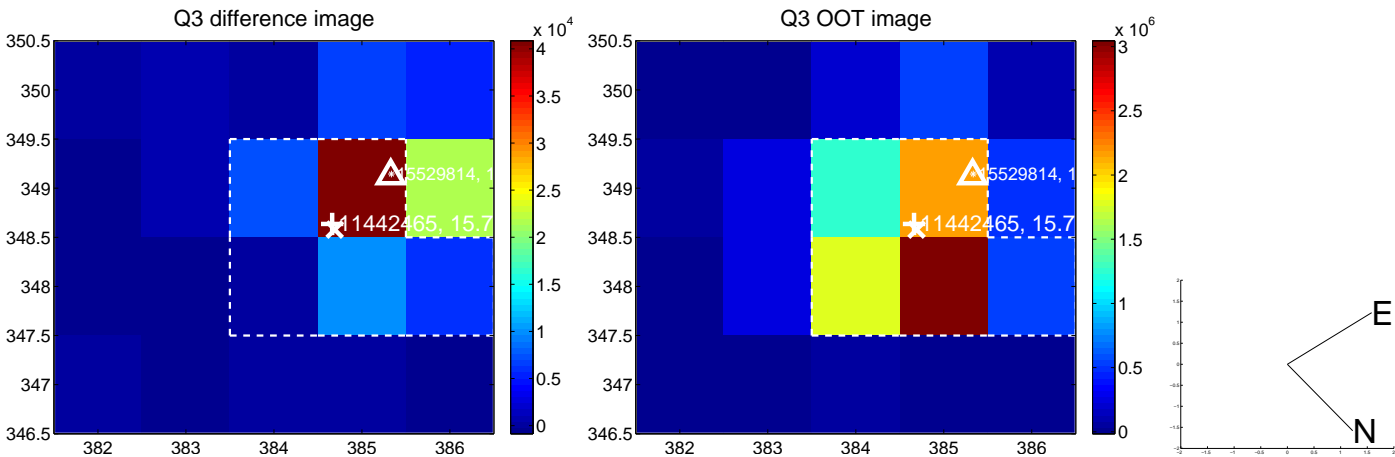
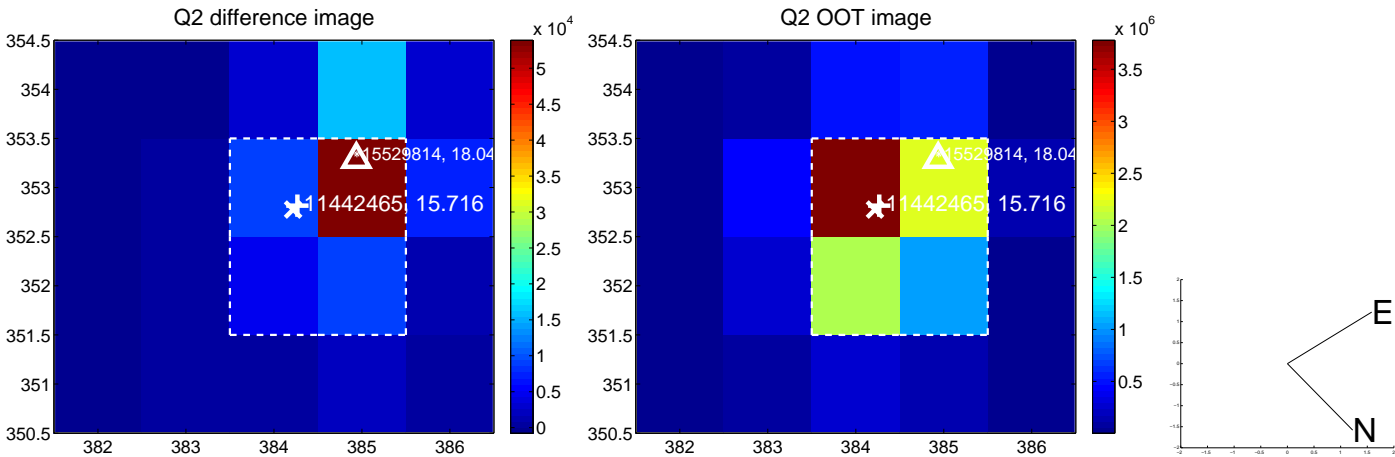
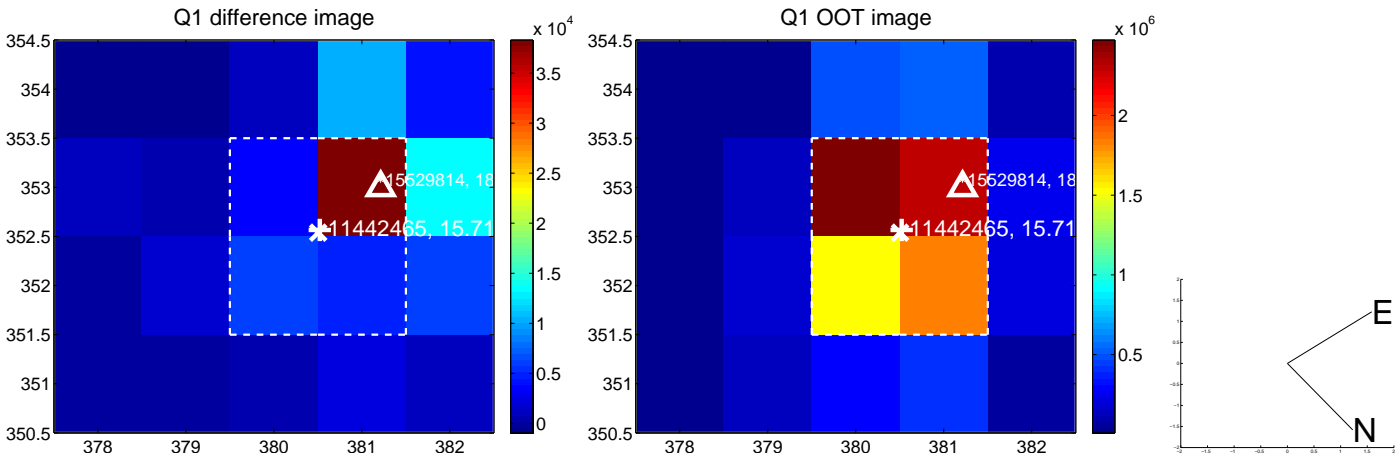
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.258 ± 0.071	45.72	3.254 ± 0.071	0.163 ± 0.070
PRF-fit source offset from KIC position	3.353 ± 0.070	47.93	3.353 ± 0.070	0.066 ± 0.076
photometric centroid source offset	3.12 ± 0.06	49.67	3.10 ± 0.06	0.34 ± 0.06

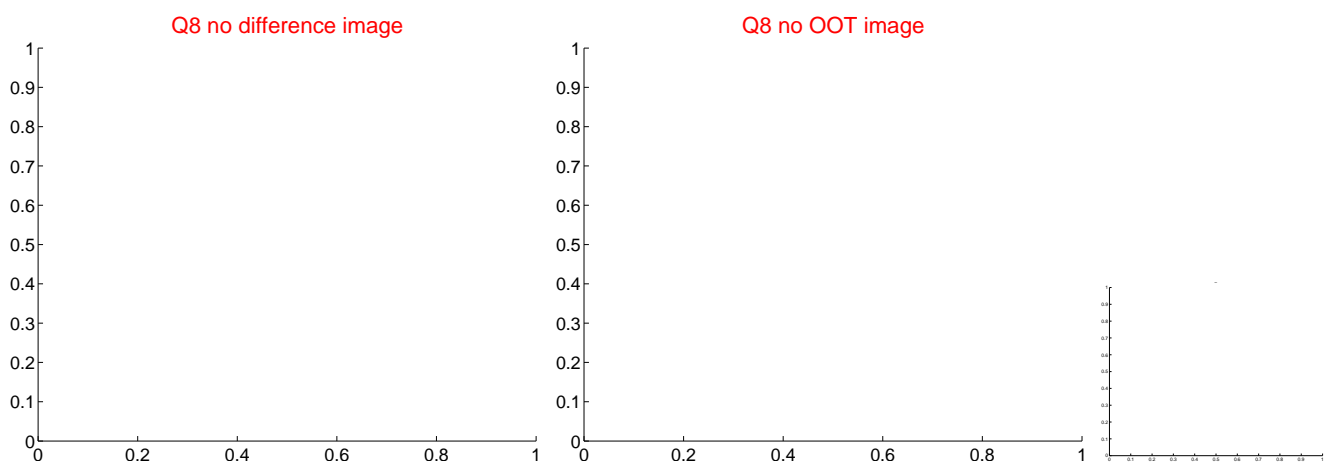
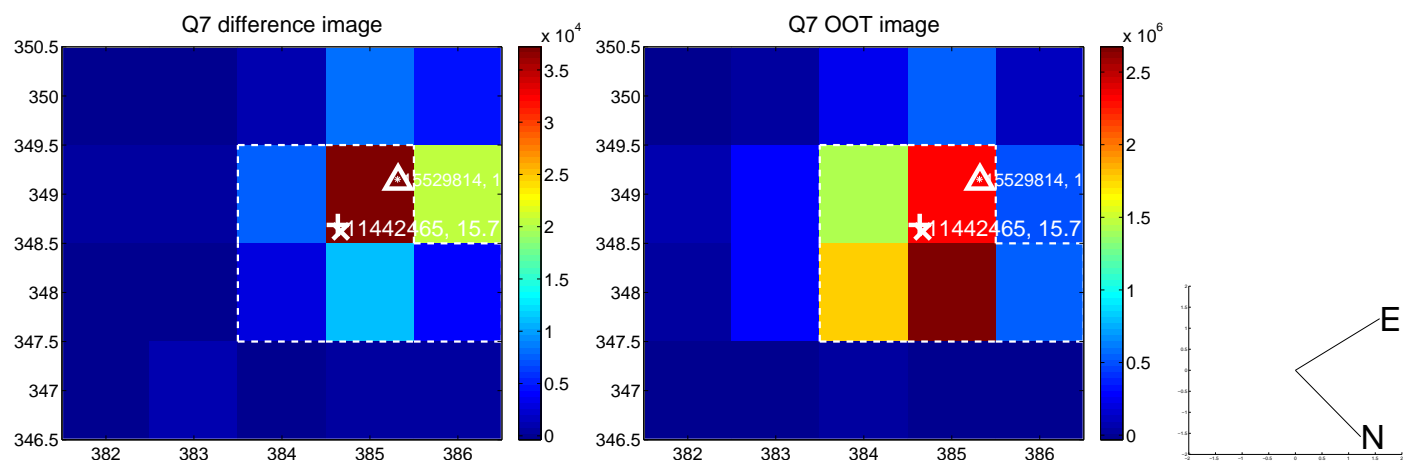
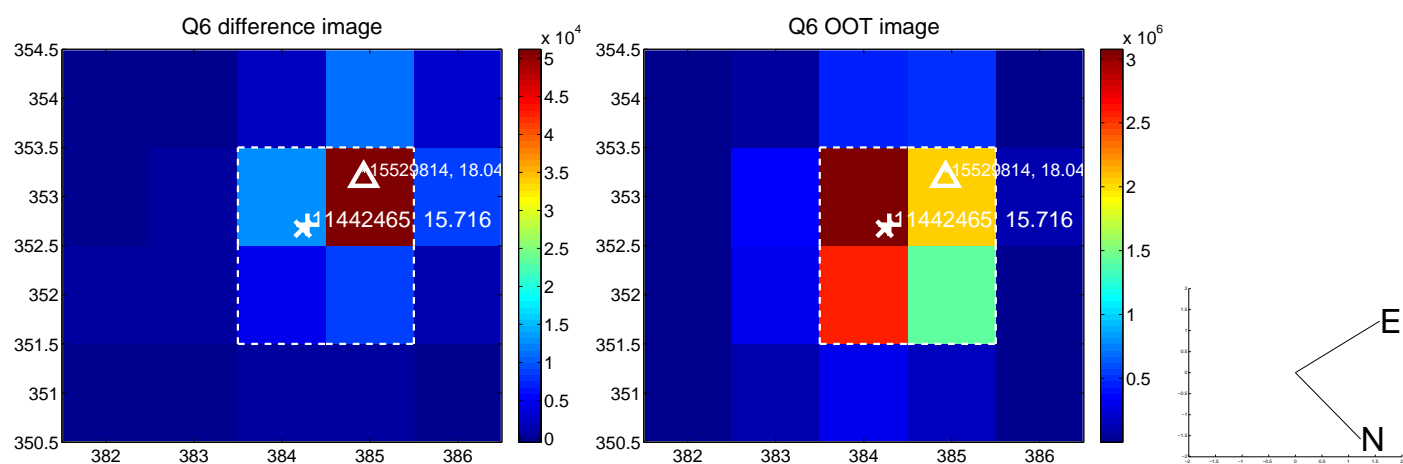
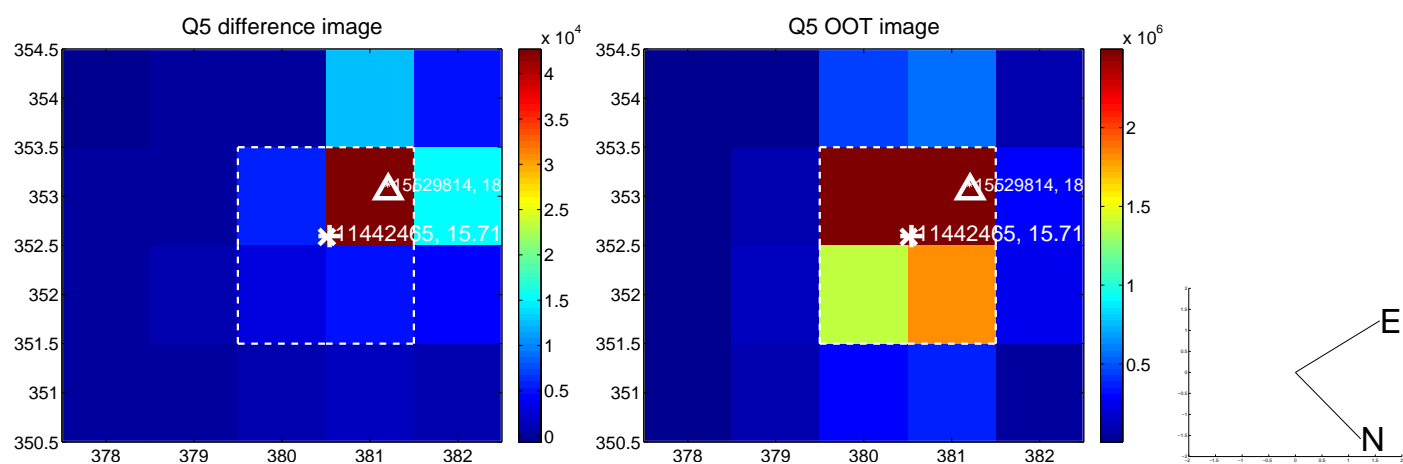


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

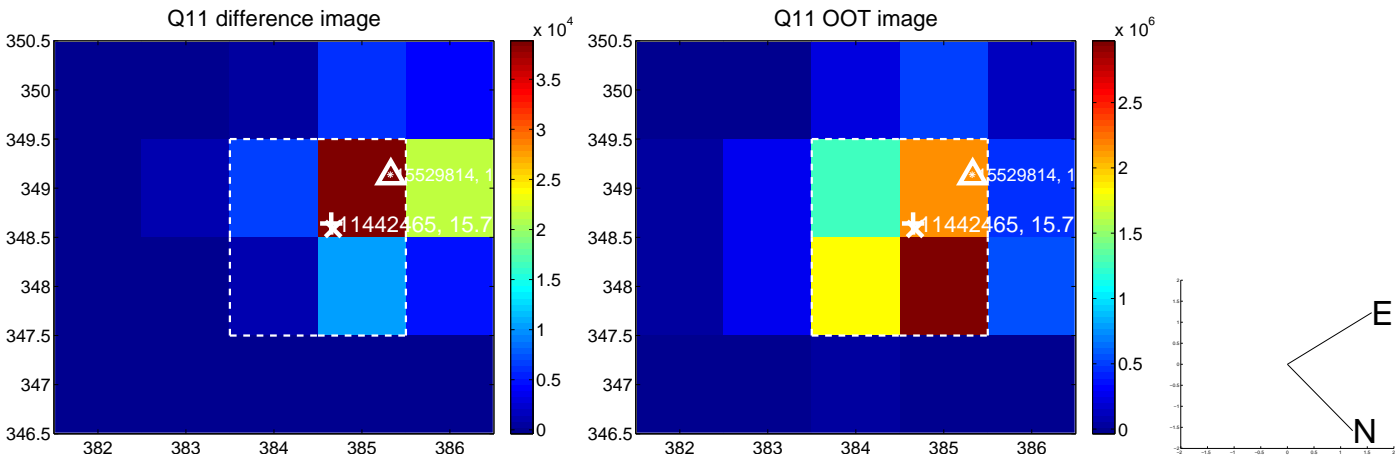
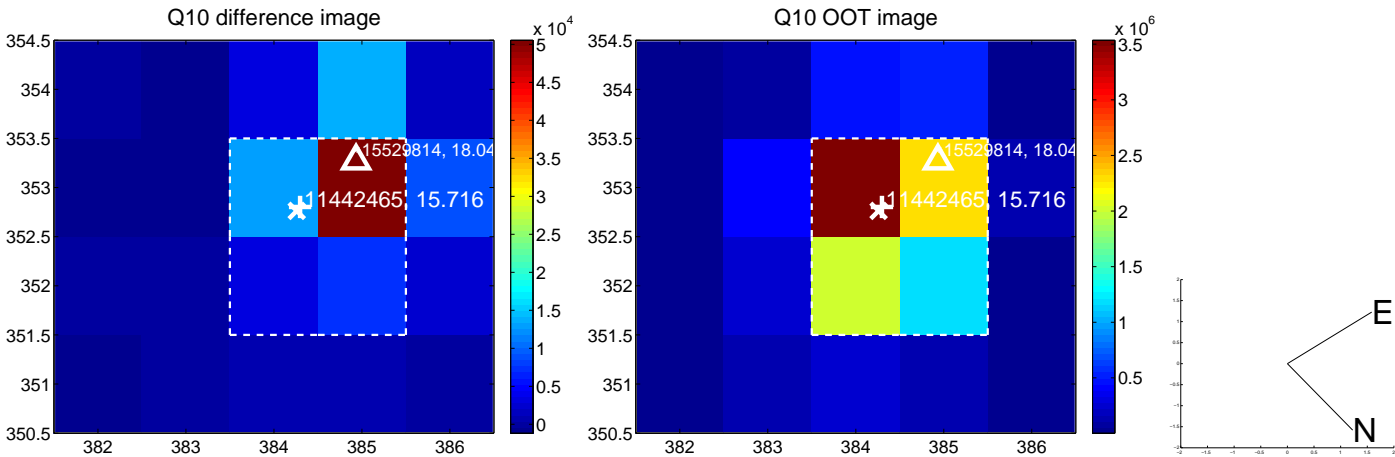
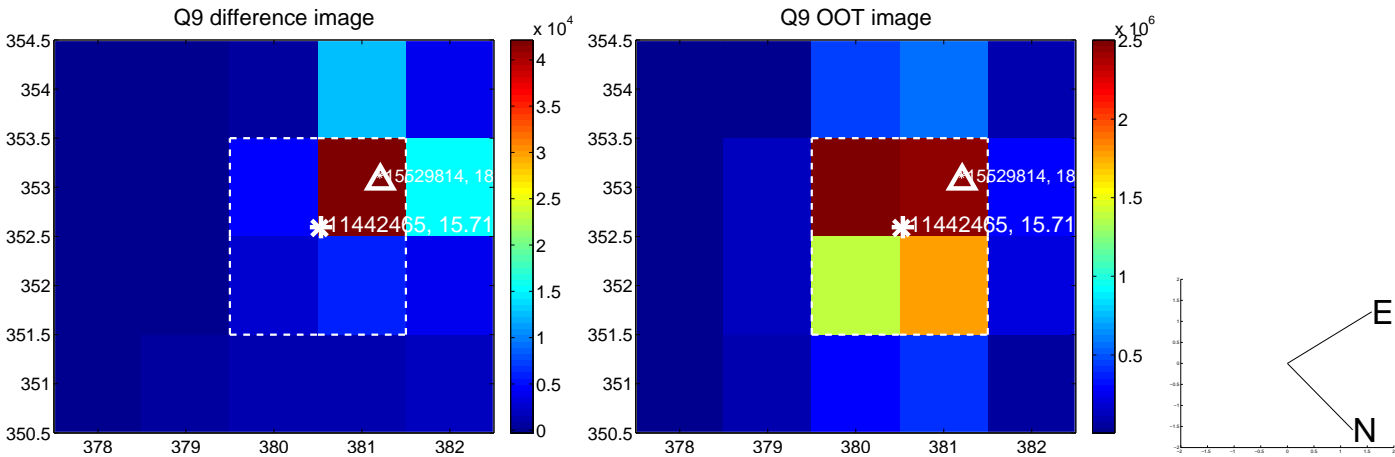
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



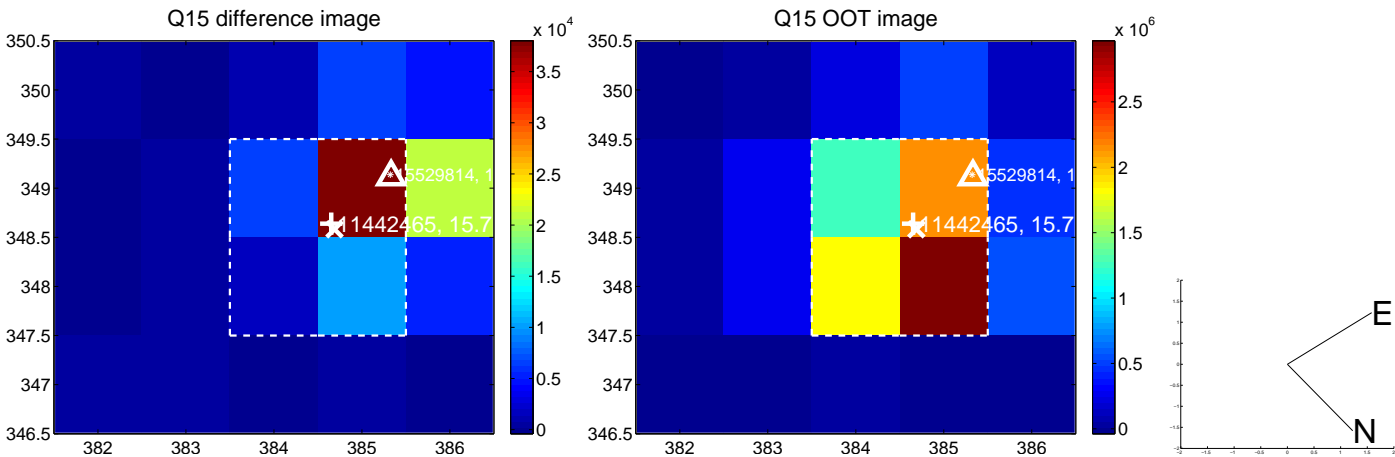
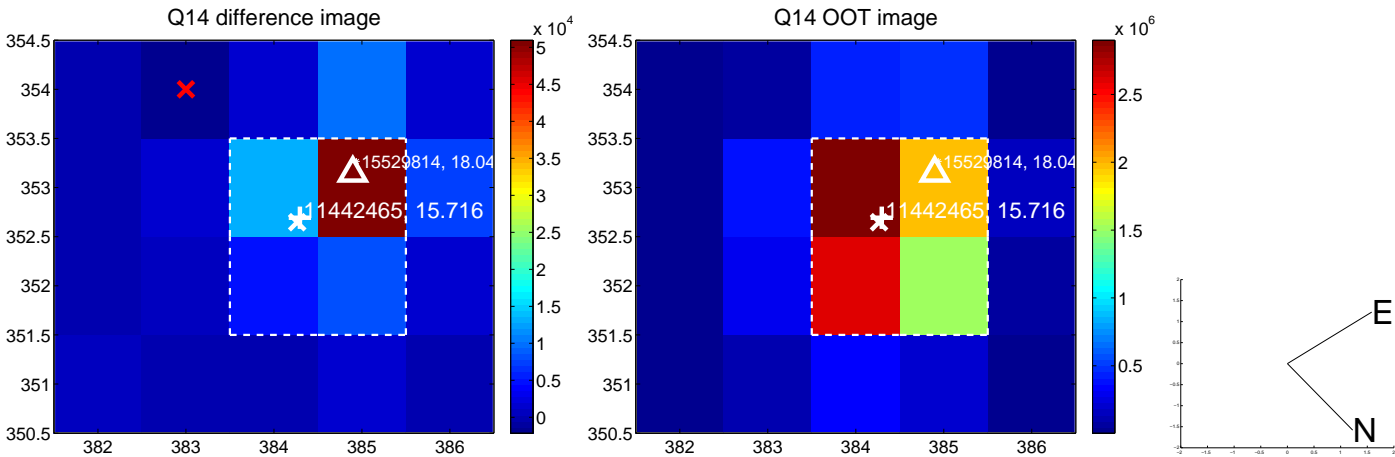
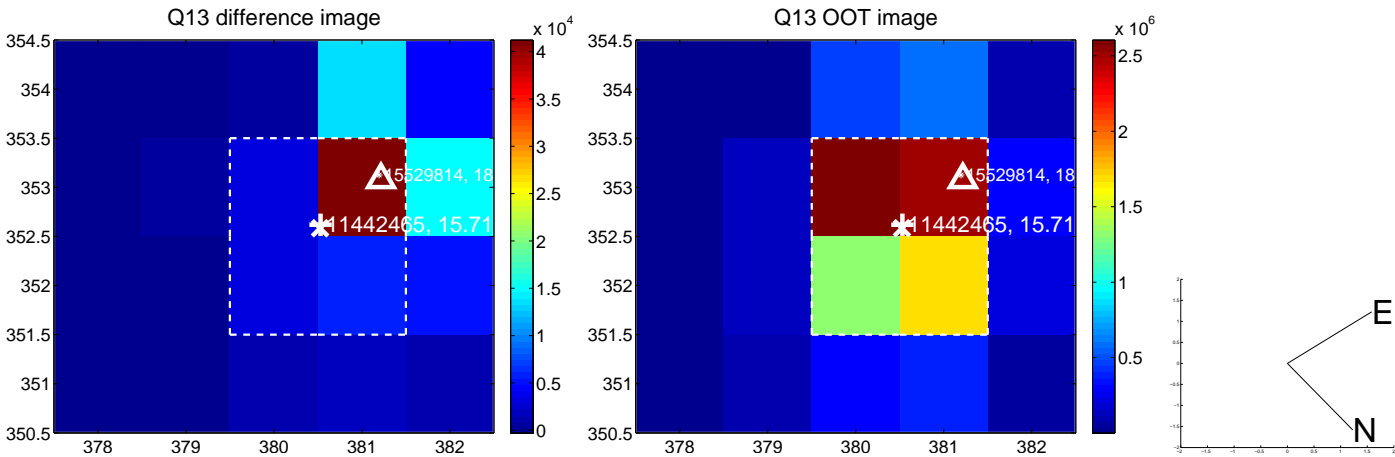
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



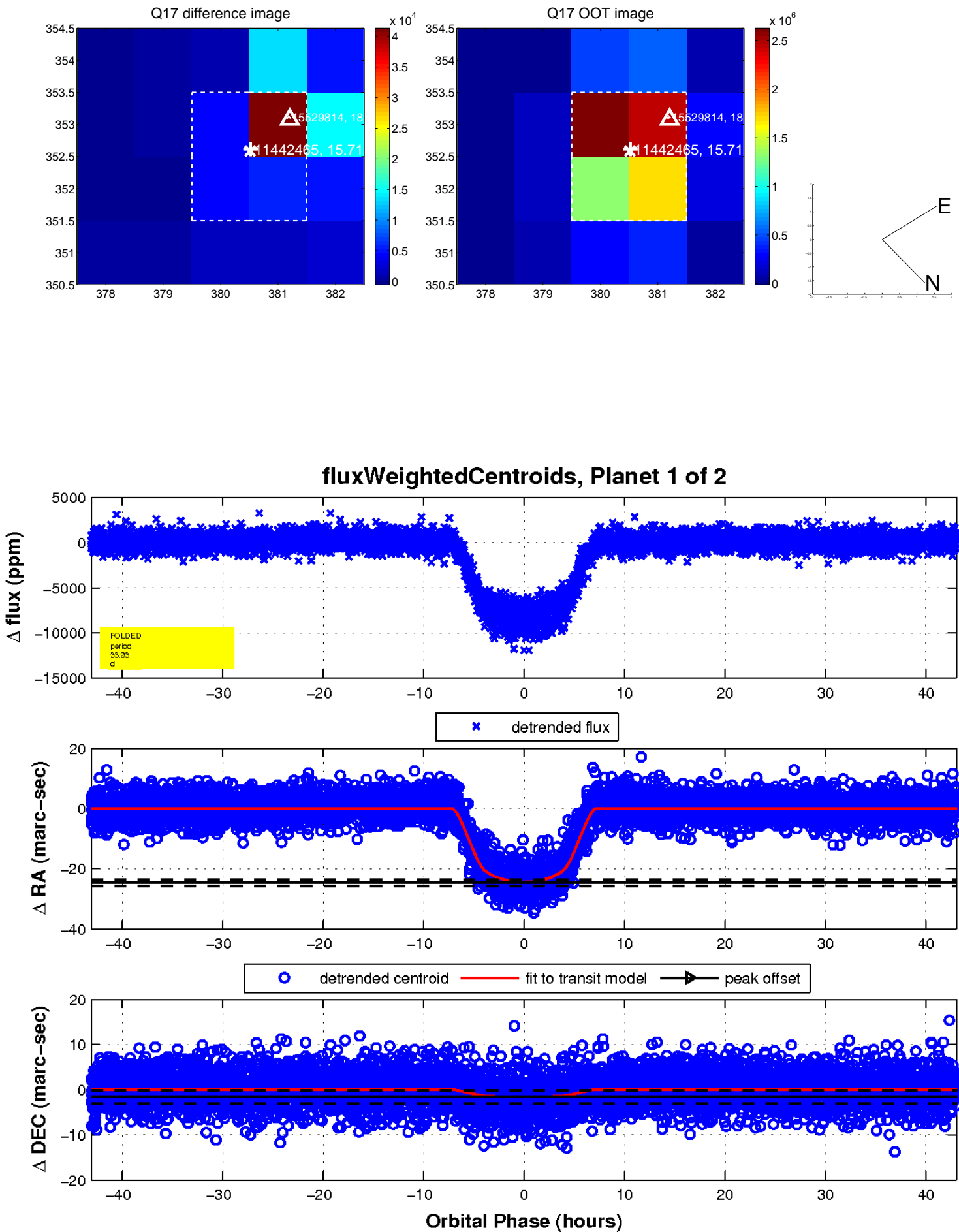
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

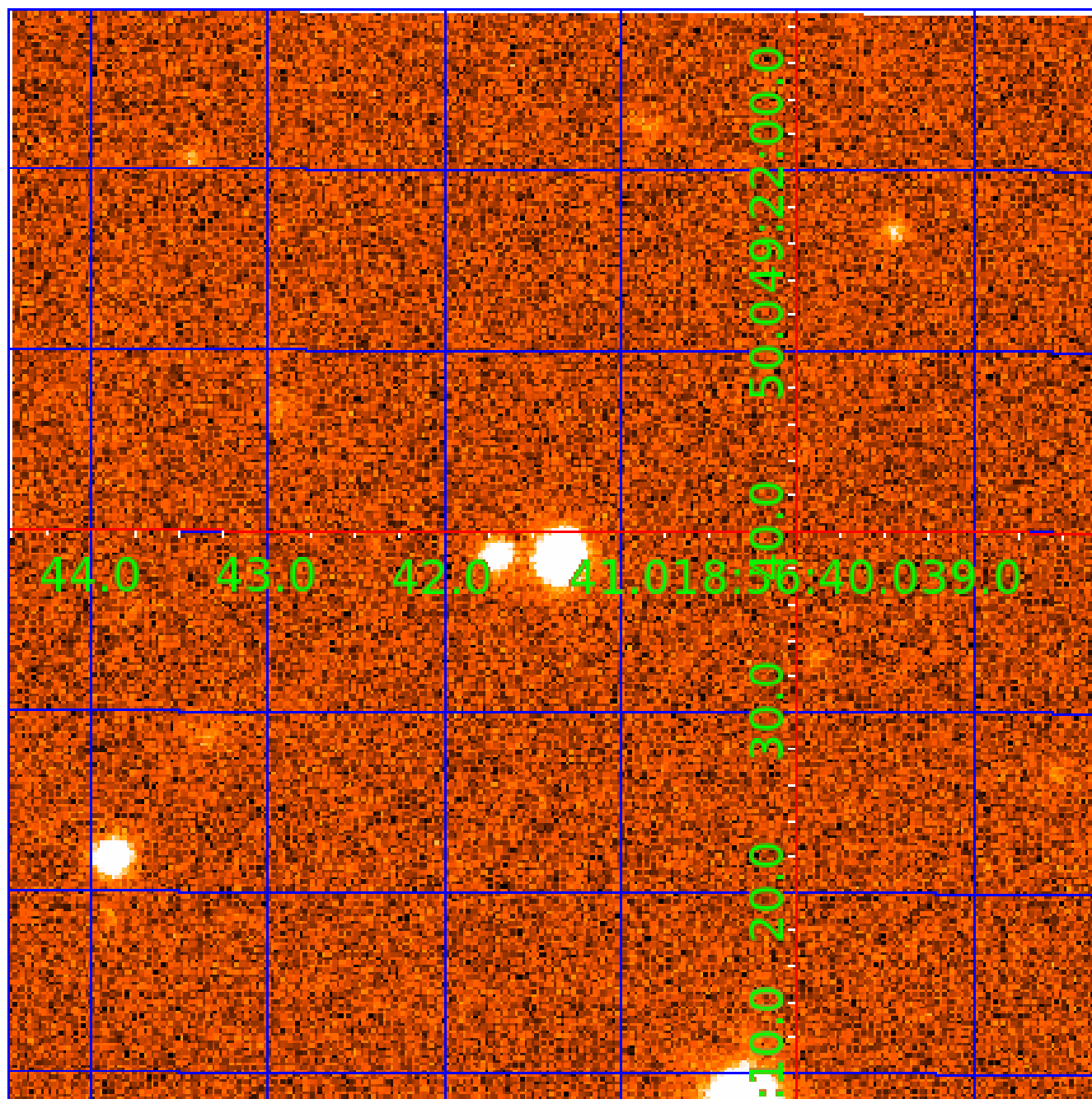


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011442465

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})
011442465-01	OBS	0768.01	33.933722	152.742745	8084.1	14.362	193.4	184.7	0.70	5040	7.13	8.13
011442465-02	OBS	No	33.933726	134.299214	956.3	8.896	22.3	23.1	0.70	5040	2.48	8.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011442465-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_UNRESOLVED_OFFSET
011442465-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_UNRESOLVED_OFFSET

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.

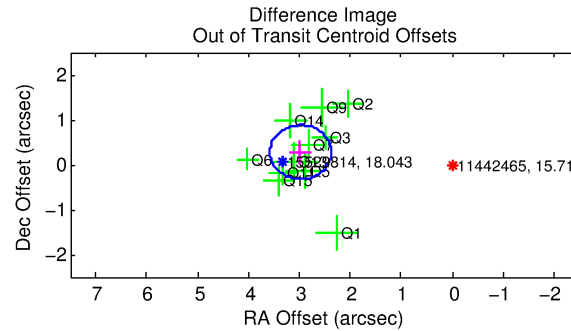
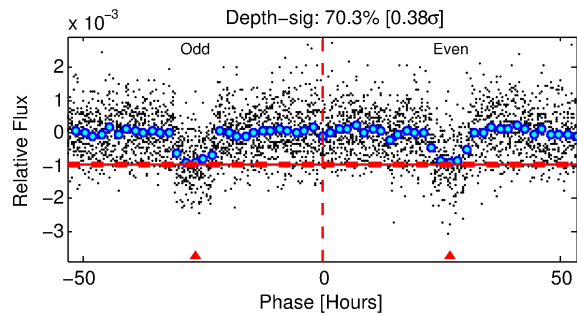
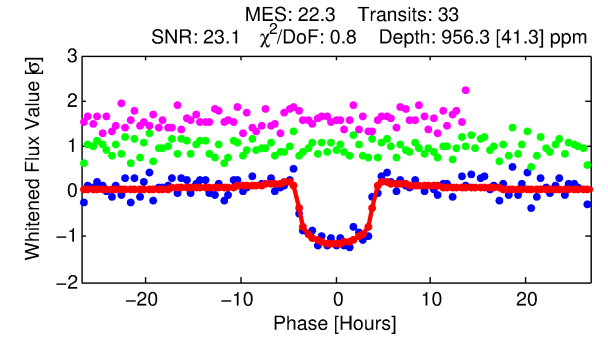
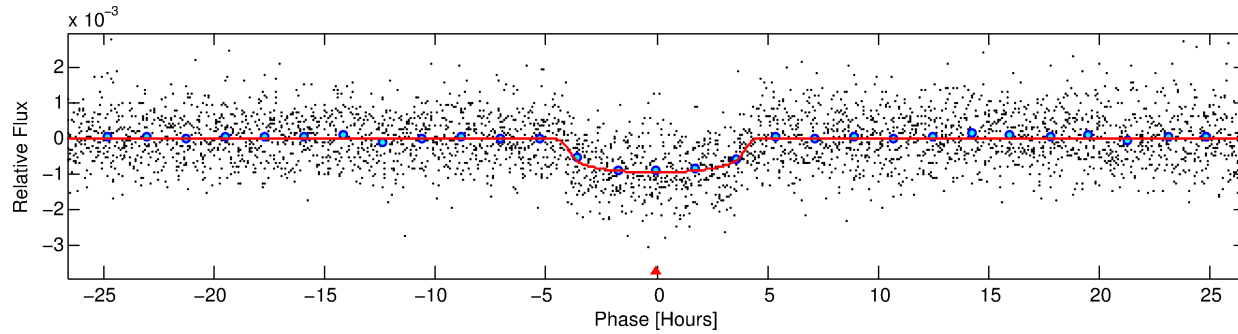
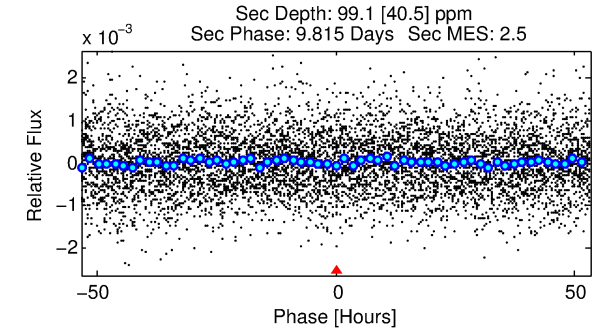
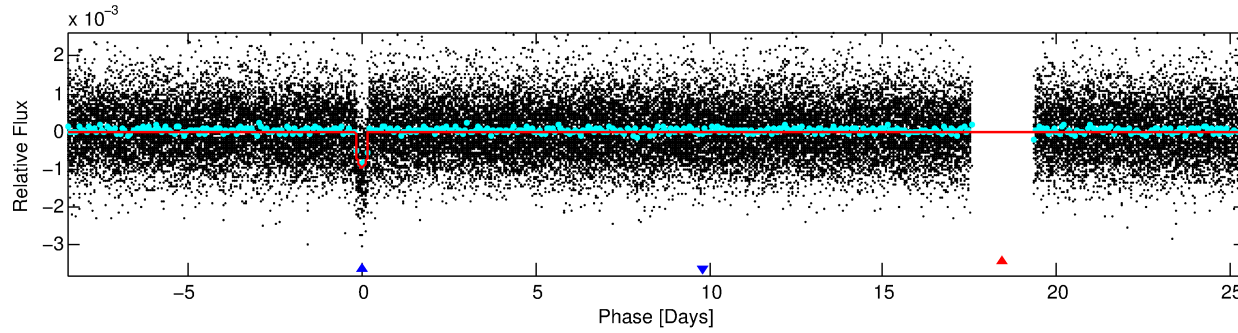
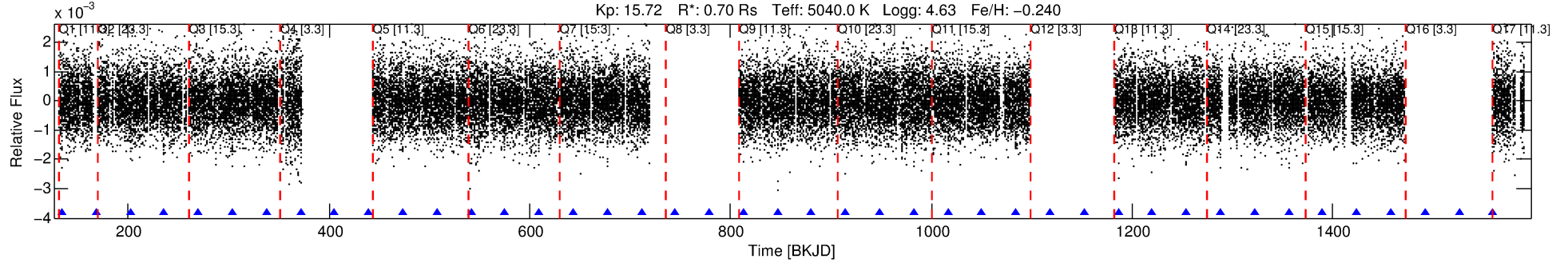
Ephemeris Match Information For 011442465-02

No Significant Match Found

DV One-Page Summary

KIC: 11442465 Candidate: 2 of 2 Period: 33.934 d
KOI: K00768 Corr: No Ephemeris Match

Kp: 15.72 R*: 0.70 Rs Teff: 5040.0 K Logg: 4.63 Fe/H: -0.240



DV Fit Results:

Period = 33.93373 [0.00028] d
Epoch = 134.2992 [0.0070] BKJD
Rp/R* = 0.0323 [0.0030]
a/R* = 17.96 [5.97]
b = 0.83 [0.13]
Seff = 8.13 [1.47]
Teq = 431 [19] K
Rp = 2.48 [0.38] Re
a = 0.1880 [0.0183] AU
Ag = 312.75 [146.61] [2.13σ]
Teff = 2799 [325] K [7.27σ]

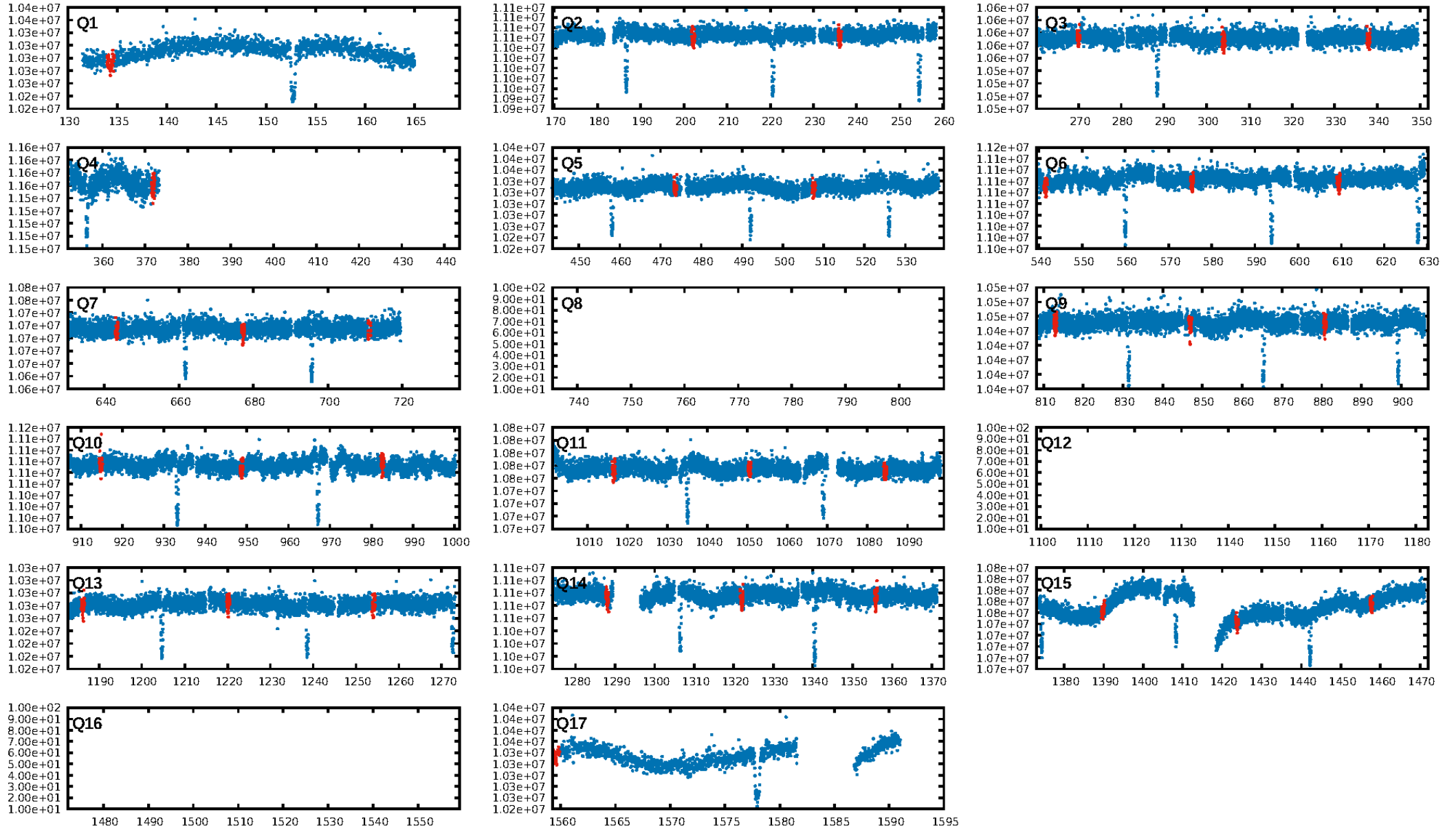
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 71.7%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 3.57e-105
RollingBand-fgt: 1.00 [30/30]
GhostDiagnostic-chr: 2.152
Centroid-sig: 0.0%
Centroid-so: 3.665 arcsec [6.32σ]
OotOffset-rm: 2.993 arcsec [14.95σ]
KicOffset-rm: 3.045 arcsec [16.31σ]
OotOffset-st: 3/4/0/4 [11]
KicOffset-st: 3/4/0/4 [11]
DiffImageQuality-fgm: 1.00 [11/11]
DiffImageOverlap-fno: 1.00 [13/13]

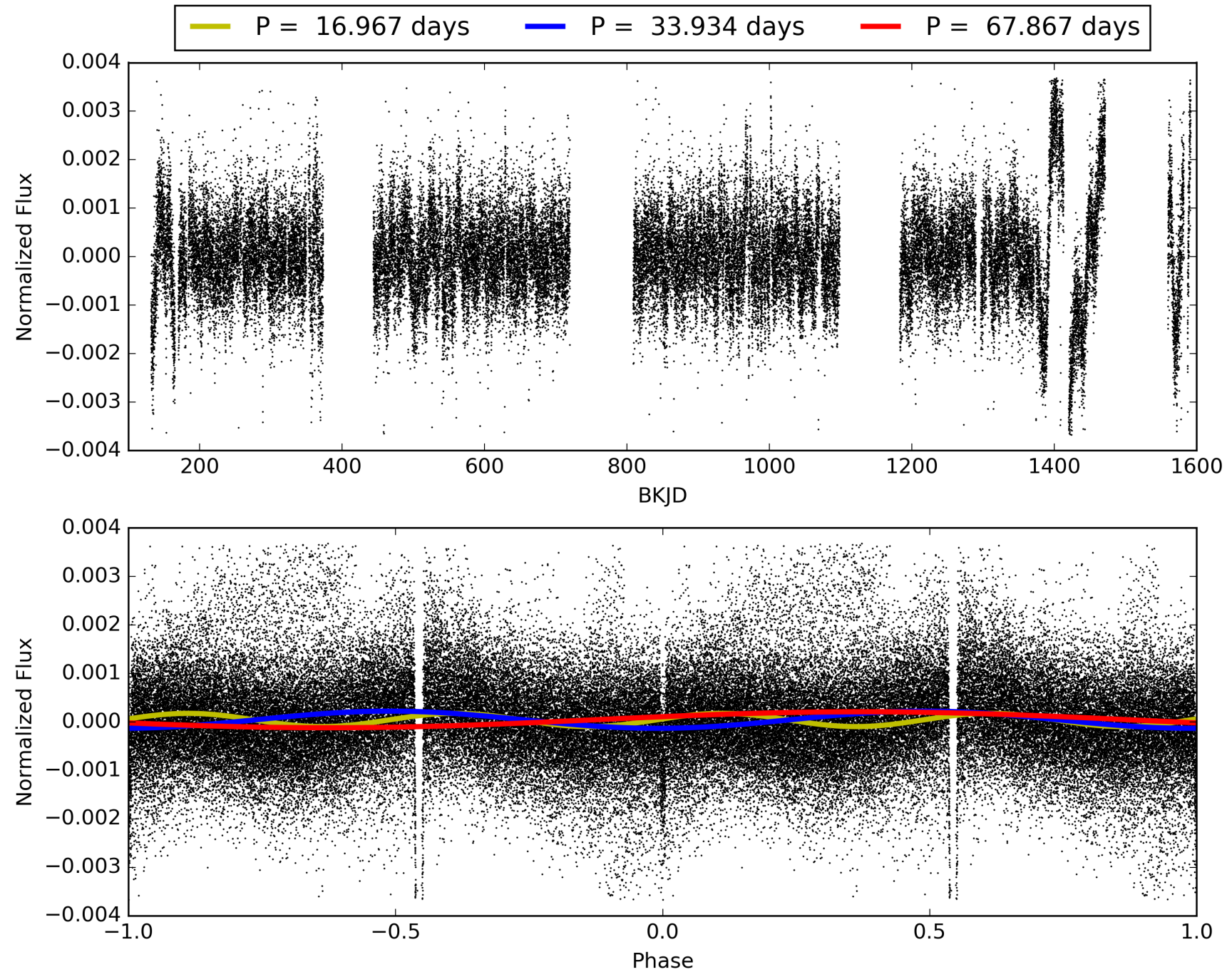
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011442465-02, PDC Light Curves

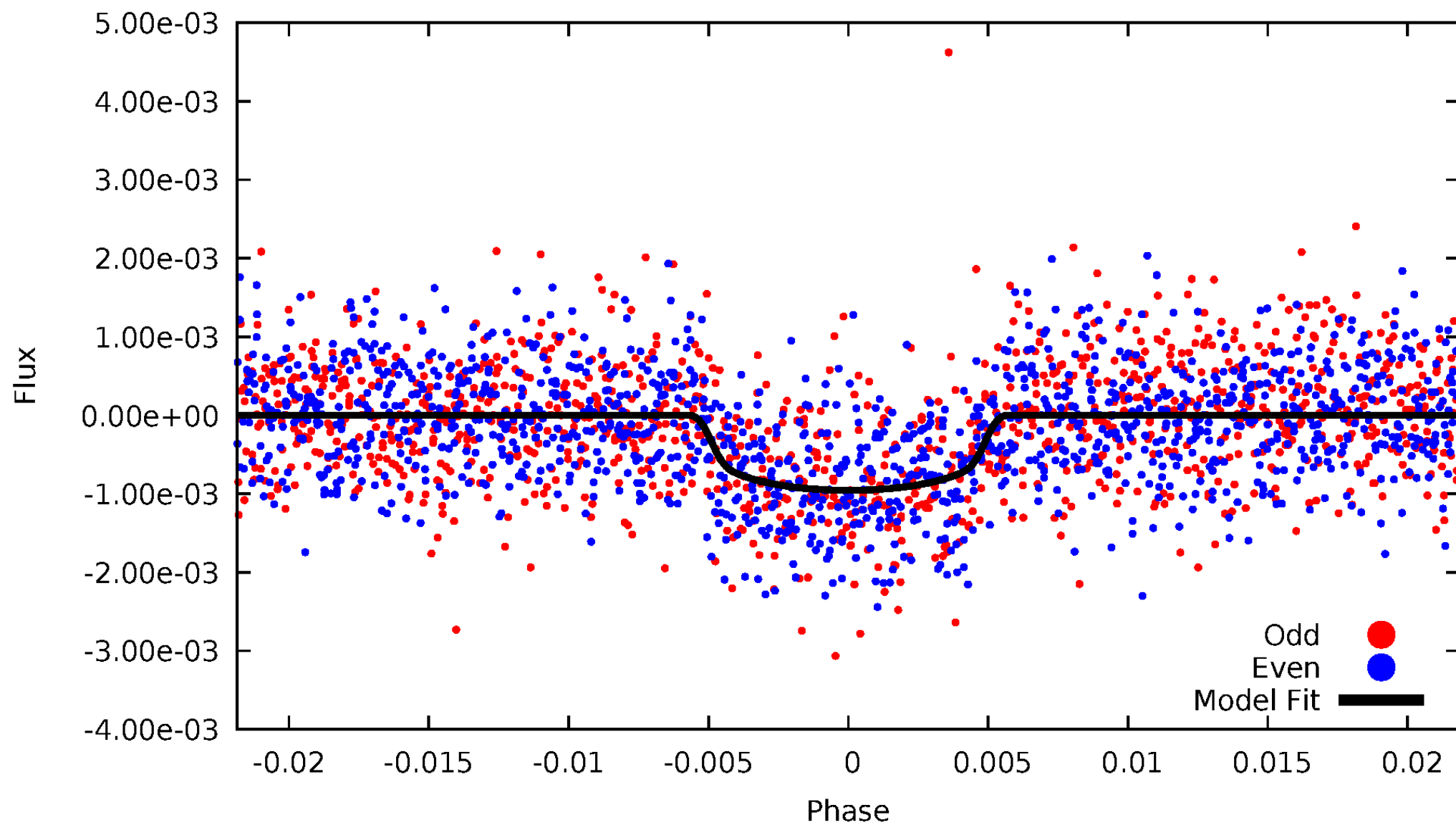


TCE 011442465-02



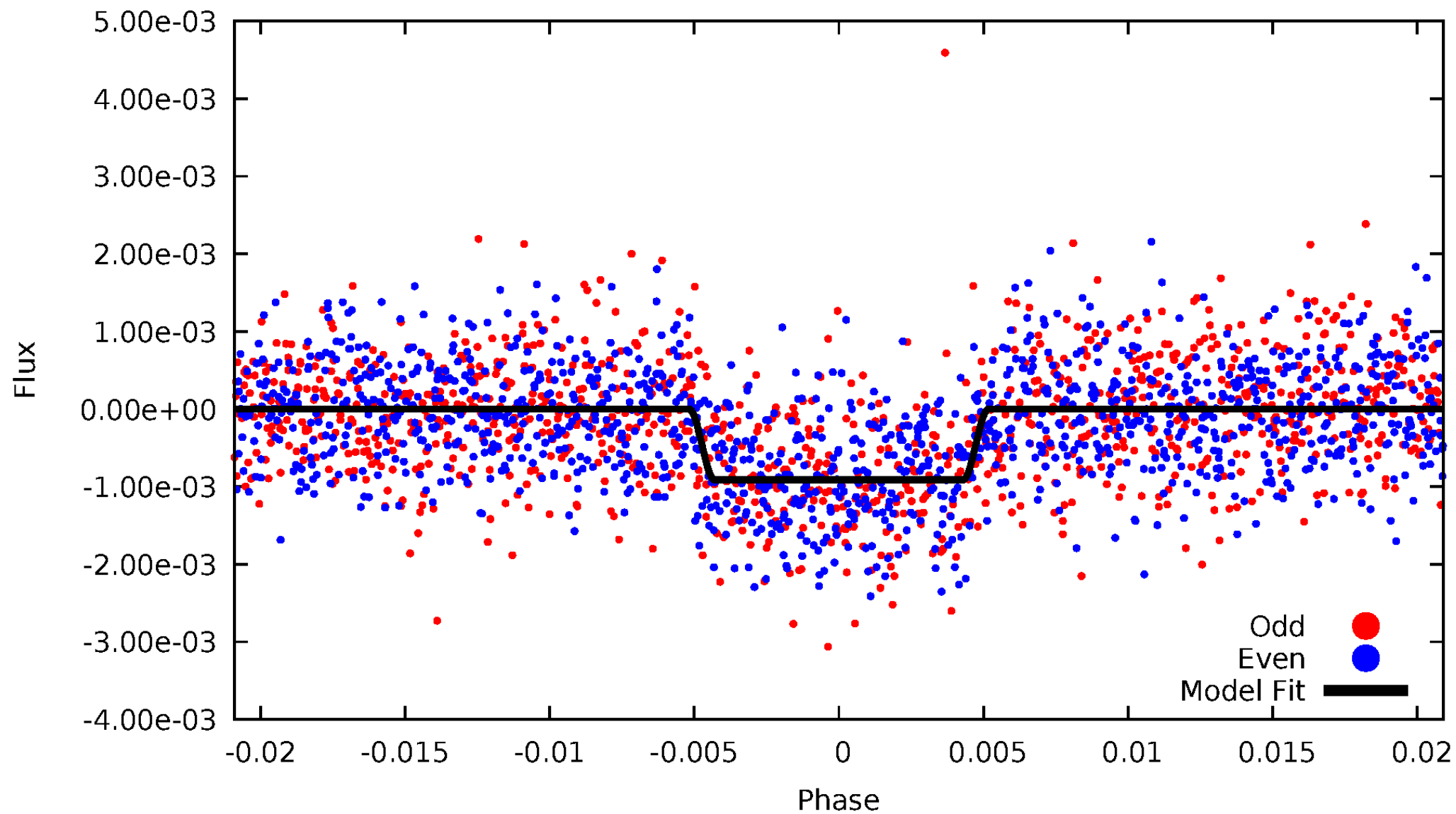
DV Odd/Even

TCE 011442465-02



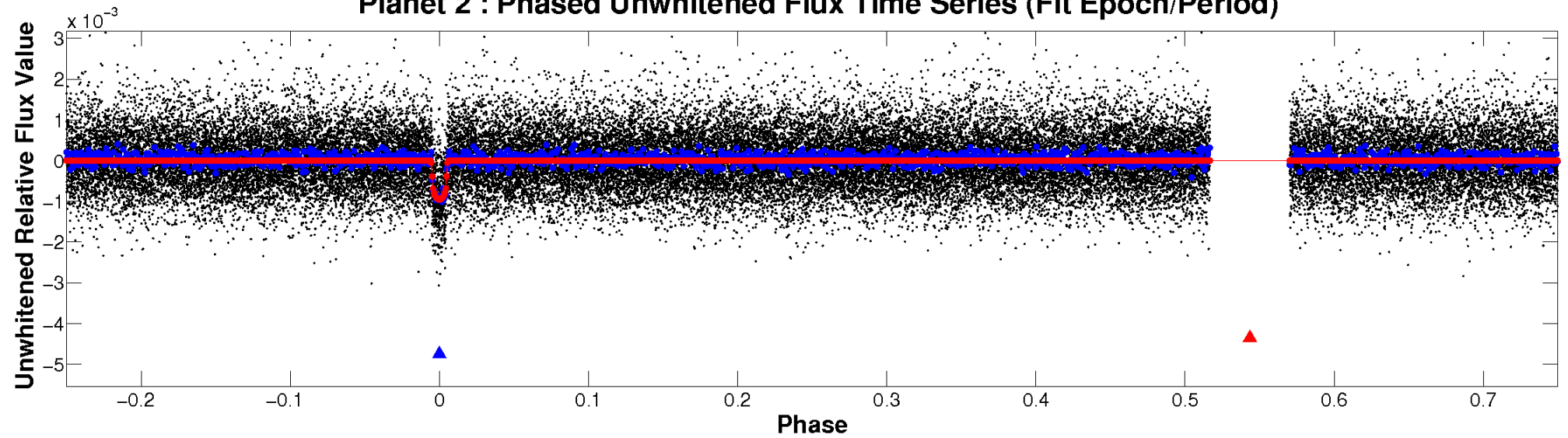
ALT Odd/Even

TCE 011442465-02

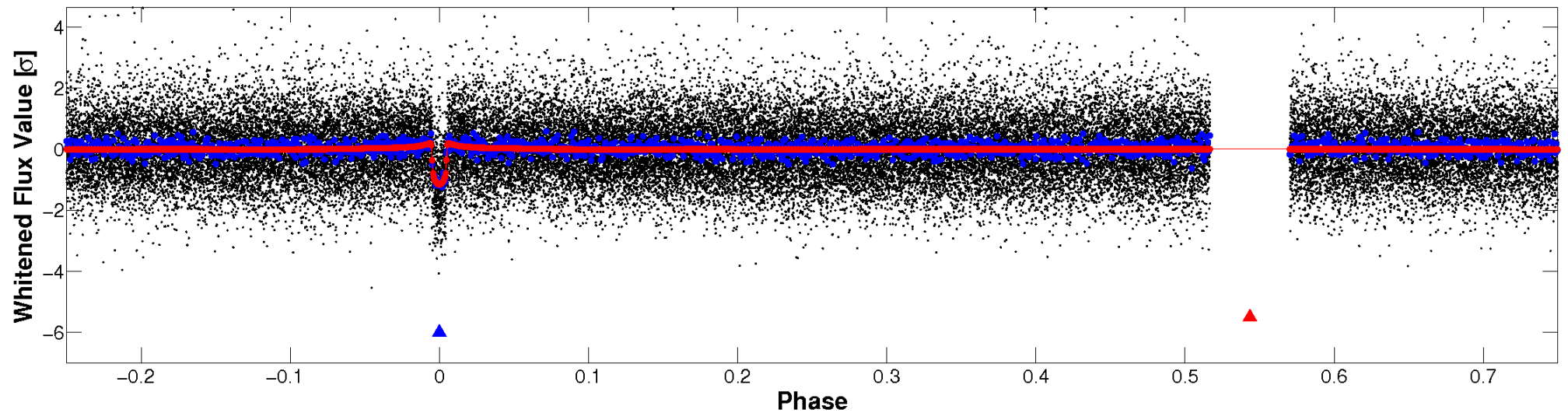


Non-Whitened Vs. Whitened Light Curve

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

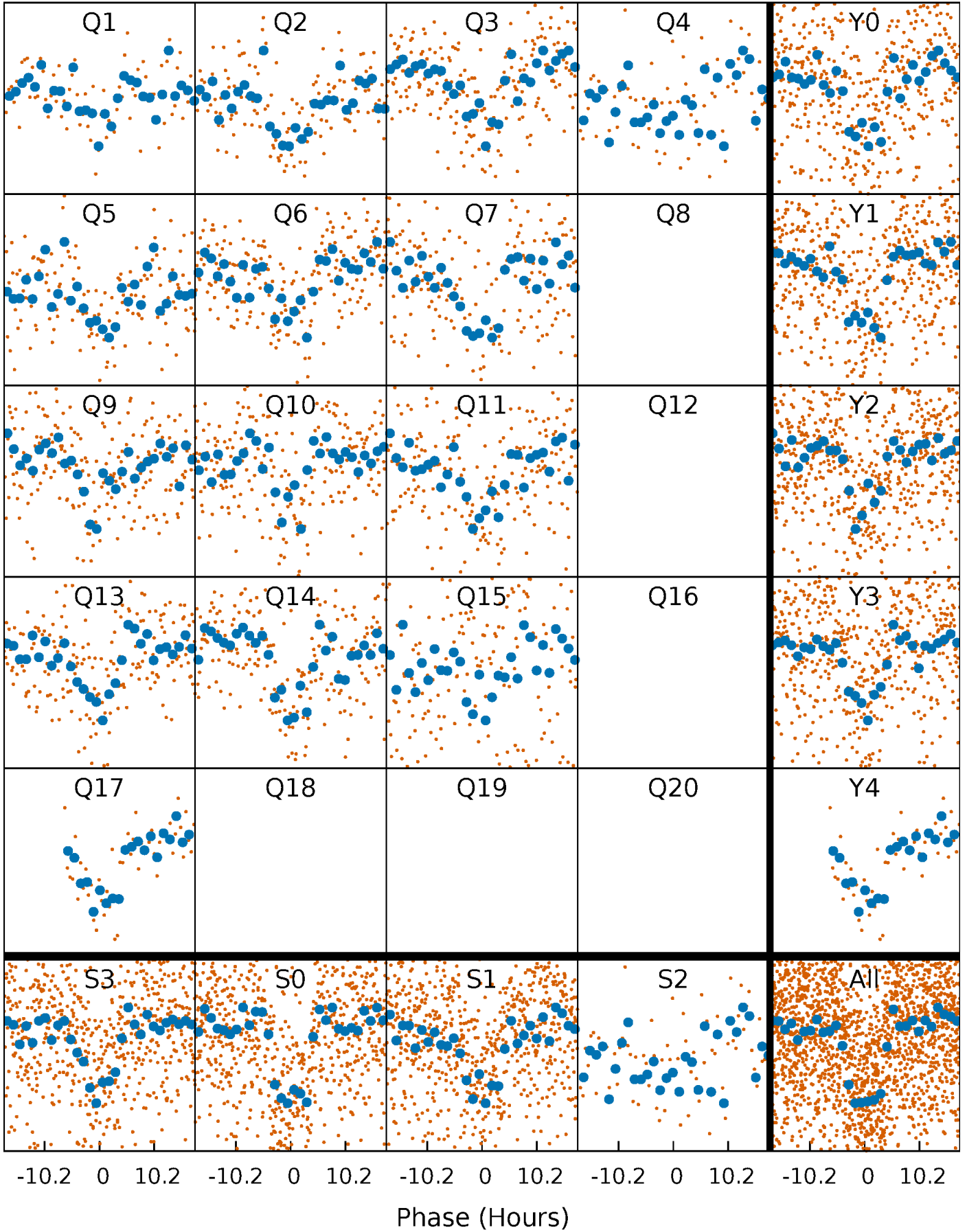


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



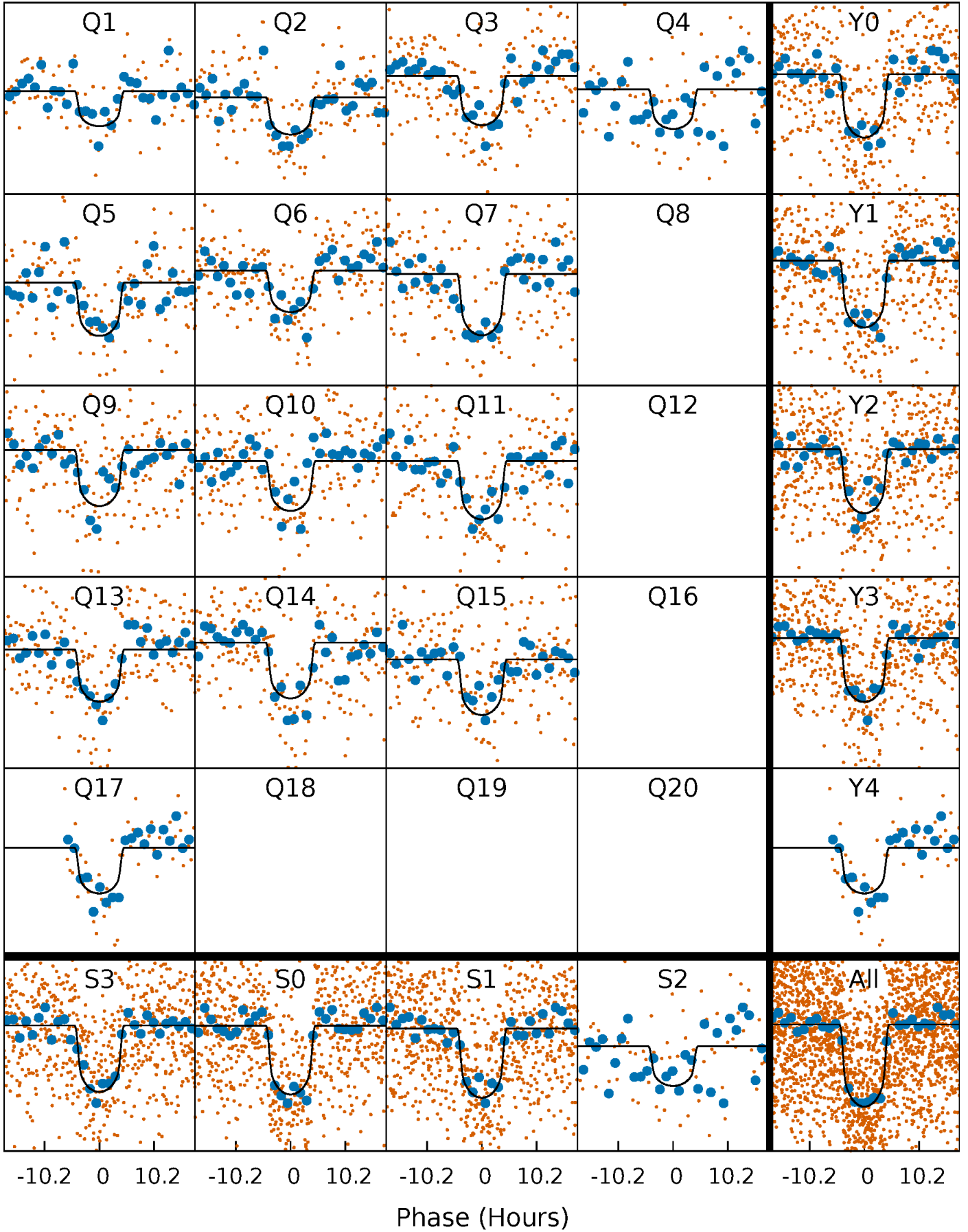
PDC Quarter-Phased Transit Curves

TCE 011442465-02 P= 33.933726 Days $T_0=134.299214$ (BKJD)



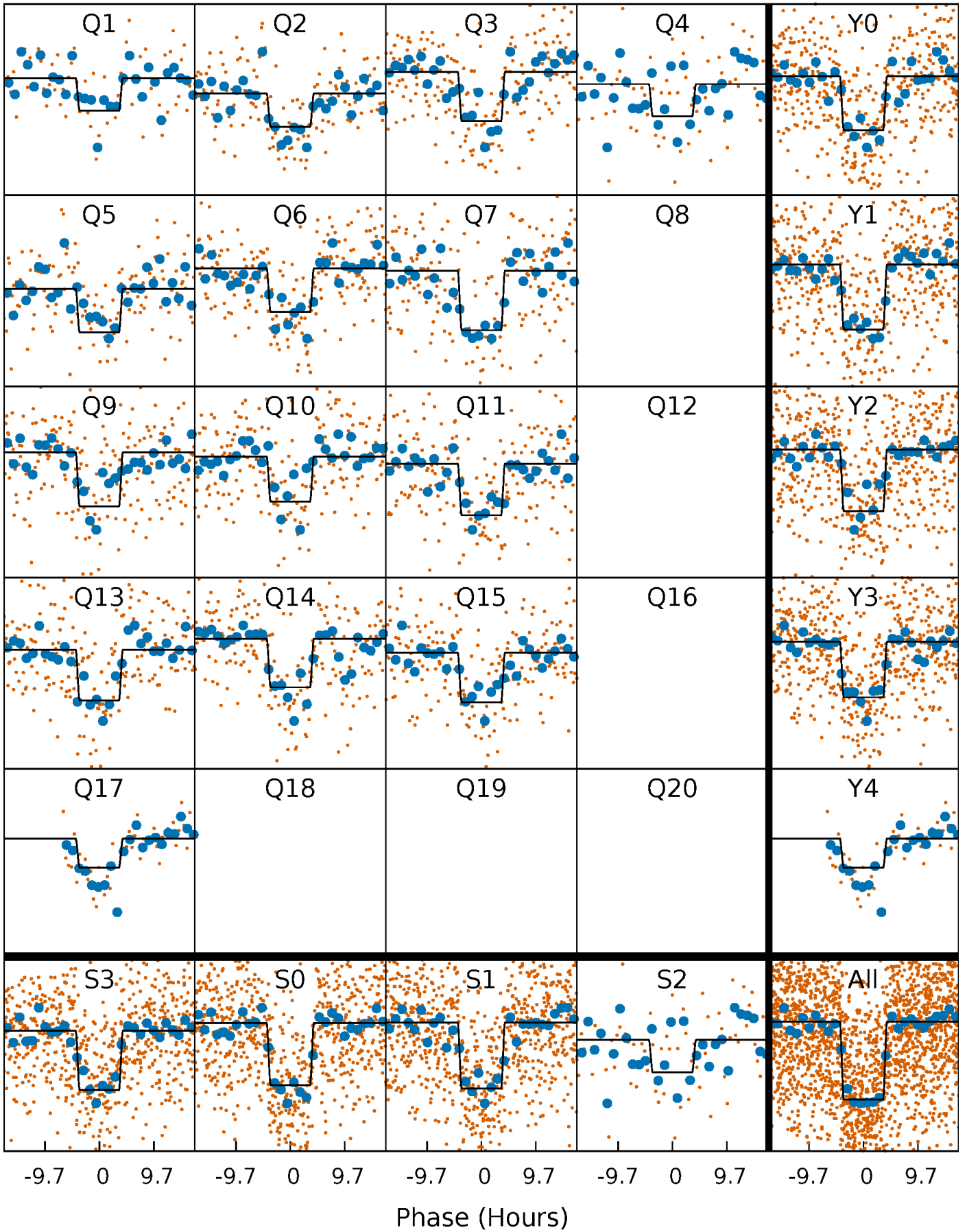
DV Quarter-Phased Transit Curves

TCE 011442465-02 $P = 33.933726$ Days $T_0 = 134.299214$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

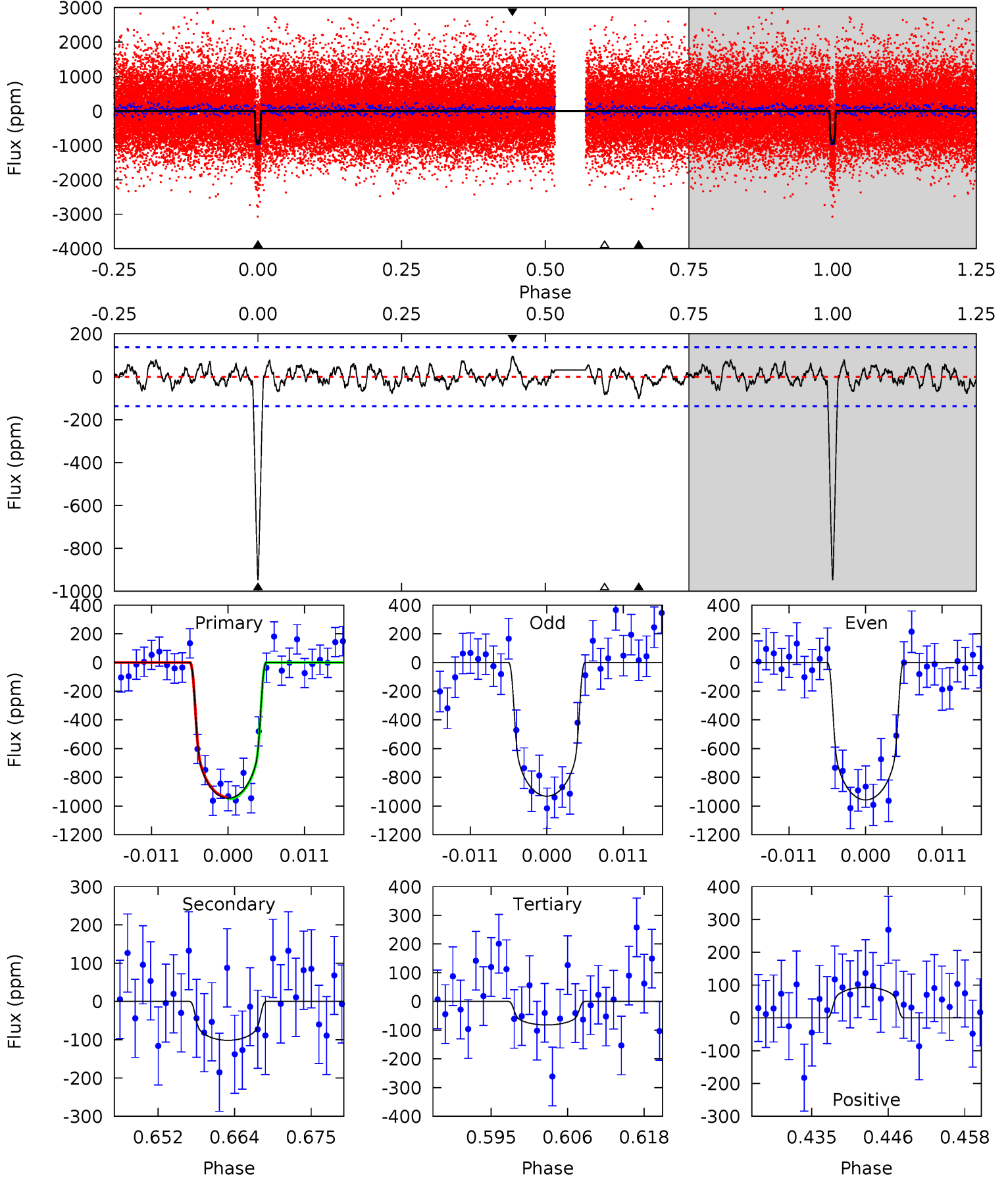
TCE 011442465-02 P= 33.933826 Days $T_0=134.294131$ (BKJD)



DV Model-Shift Uniqueness Test

011442465-02, P = 33.933726 Days, E = 100.365488 Days

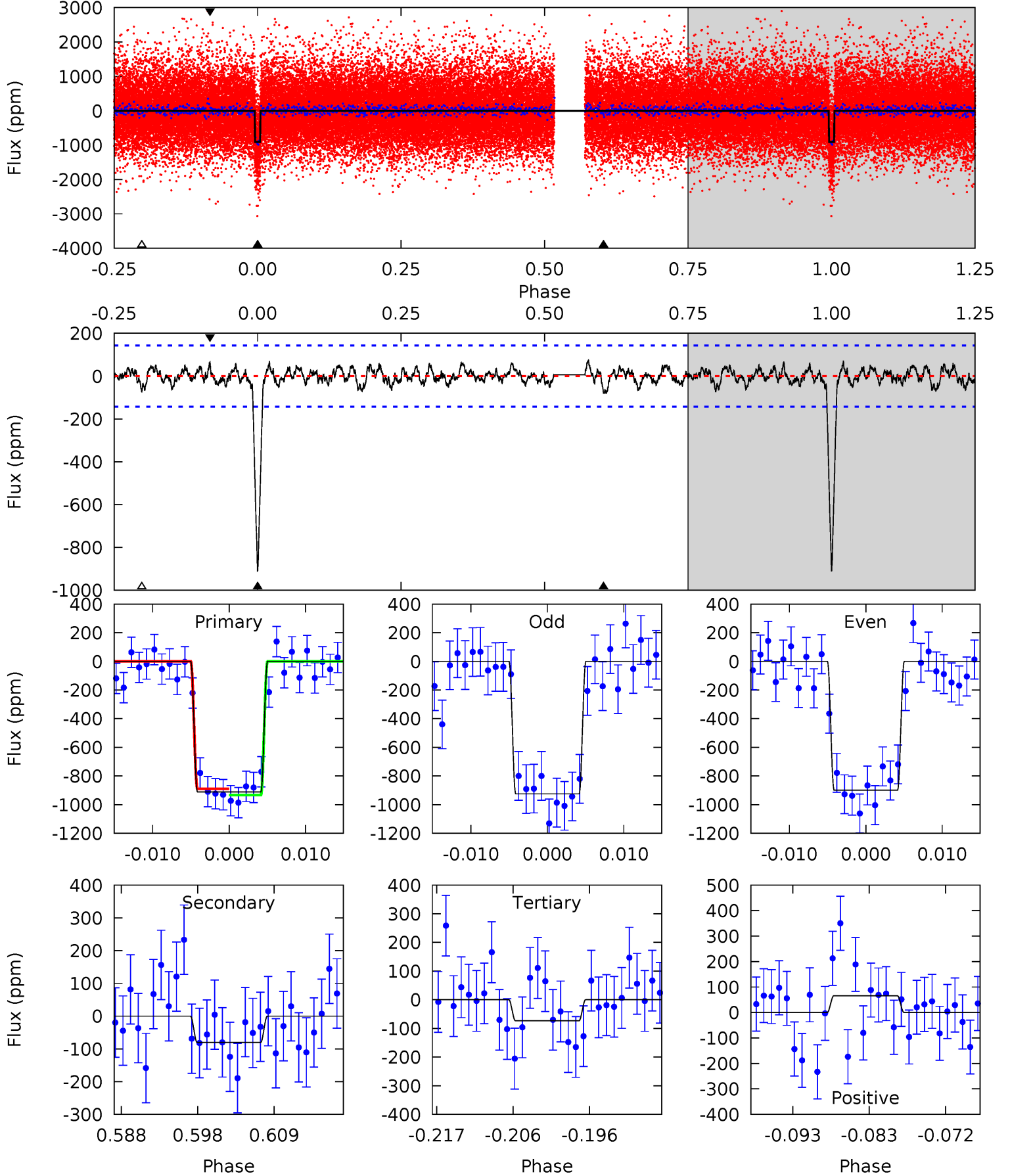
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.4	3.70	2.98	3.39	5.00	2.53	1.18	31.5	31.0	0.72	0.31	0.47	1.00	0.09	0.23



Alt Model-Shift Uniqueness Test

011442465-02, P = 33.933826 Days, E = 100.360305 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.1	2.83	2.58	2.32	5.02	2.56	0.94	29.5	29.8	0.25	0.51	0.45	0.99	0.08	0.76



Stellar Parameters For KIC 011442465

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5040^{+136}_{-151}	$4.628^{+0.030}_{-0.070}$	$-0.240^{+0.300}_{-0.300}$	$0.705^{+0.086}_{-0.058}$	$0.782^{+0.063}_{-0.087}$	$3.145^{+0.489}_{-0.788}$
	+3%/-3%	+1%/-2%	+125%/-125%	+12%/-8%	+8%/-11%	+16%/-25%
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 011442465-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-101 ± 27	$2.52^{+0.29}_{-0.27}$	607^{+22}_{-21}	3310^{+180}_{-174}	301^{+119}_{-88}
Alt.	-80 ± 28	$2.37^{+0.26}_{-0.28}$	607^{+21}_{-21}	3264^{+228}_{-246}	277^{+136}_{-111}

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

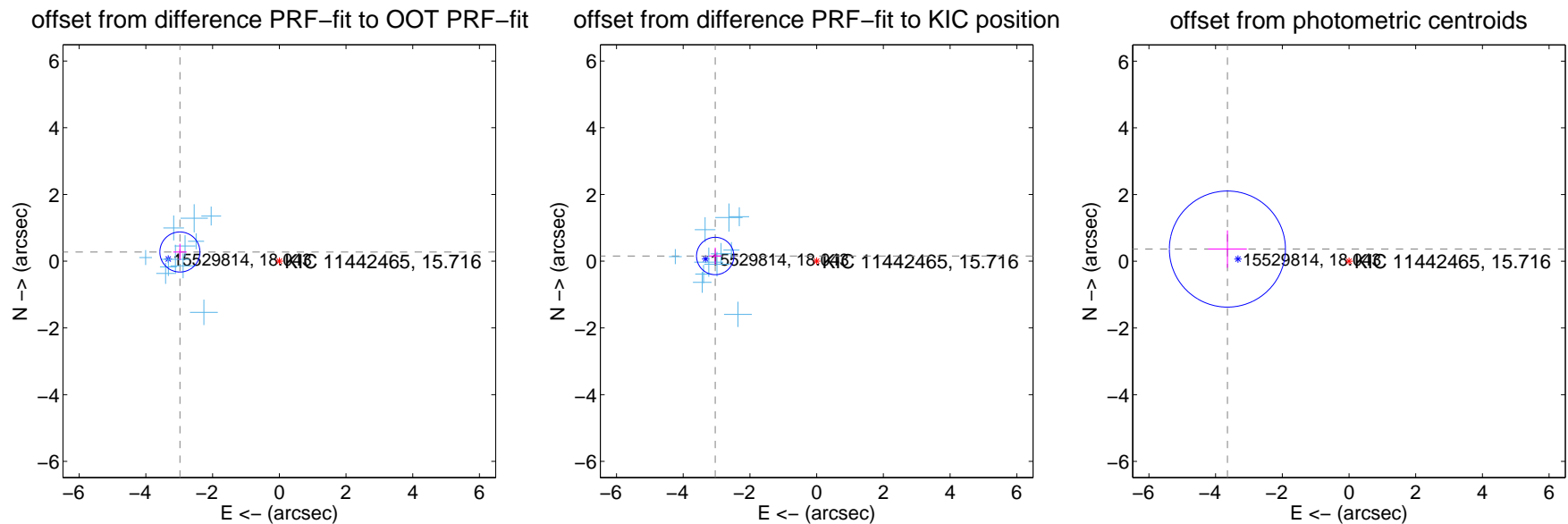
DV Centroid Data

Supplemental centroid analysis for 011442465-02. Kepler magnitude: 15.72. Transit SNR 23.08

There are 11 quarters with good PRF difference image offsets

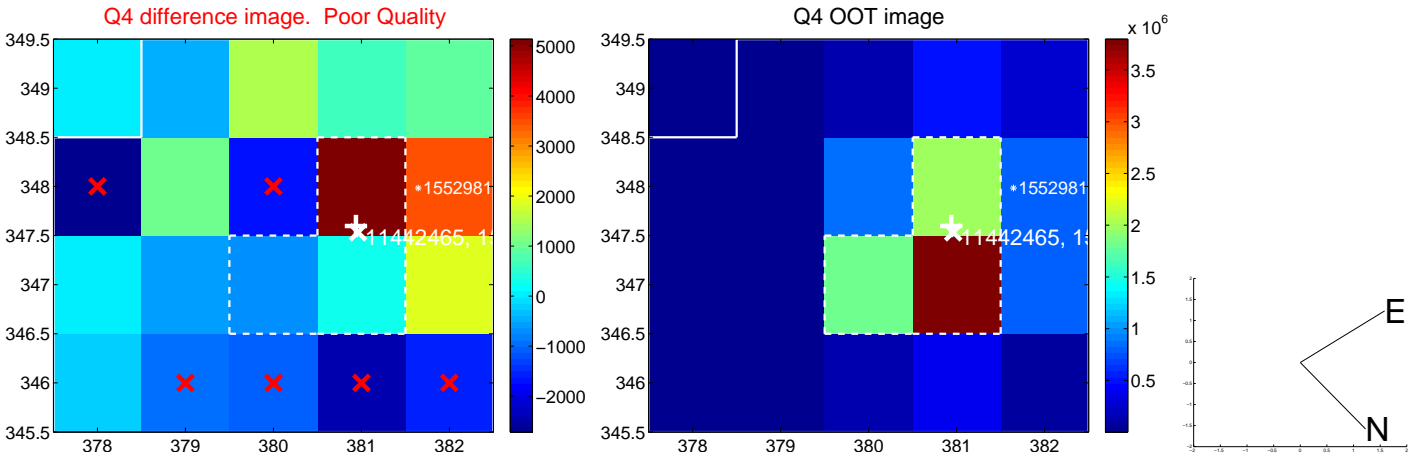
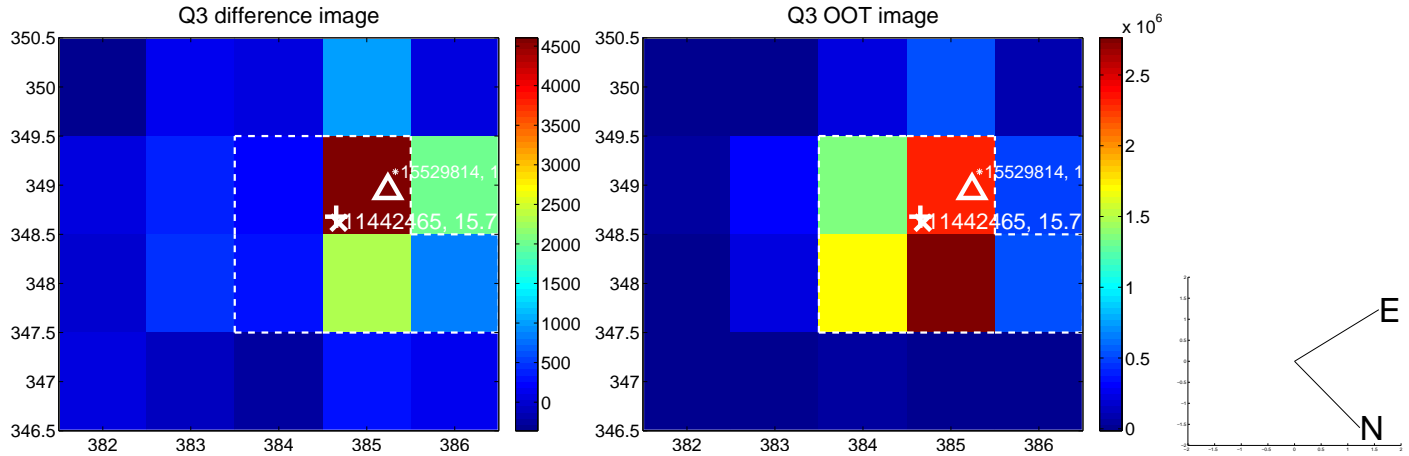
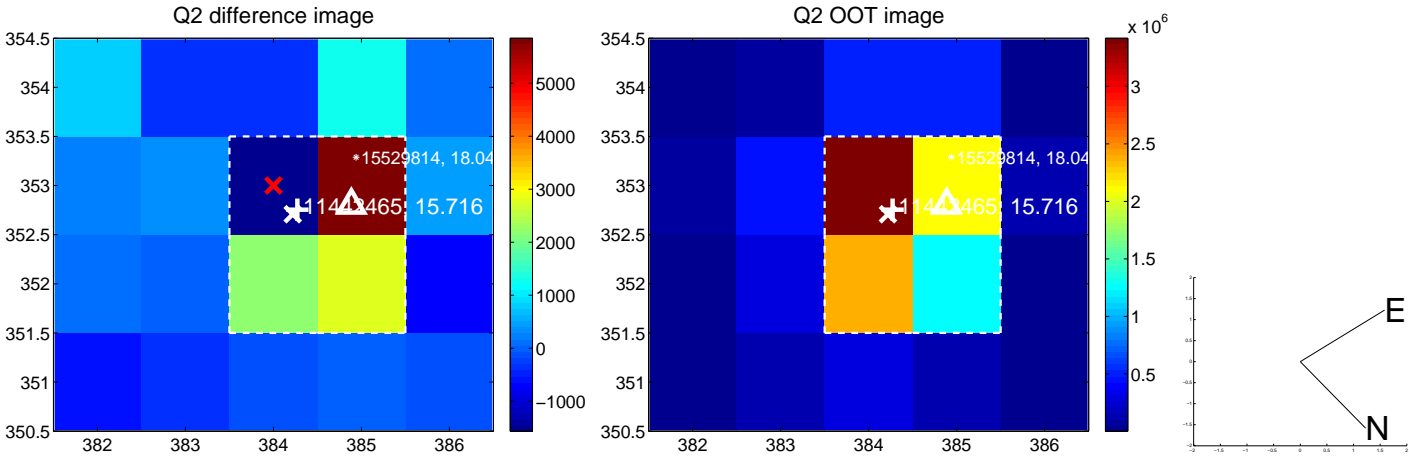
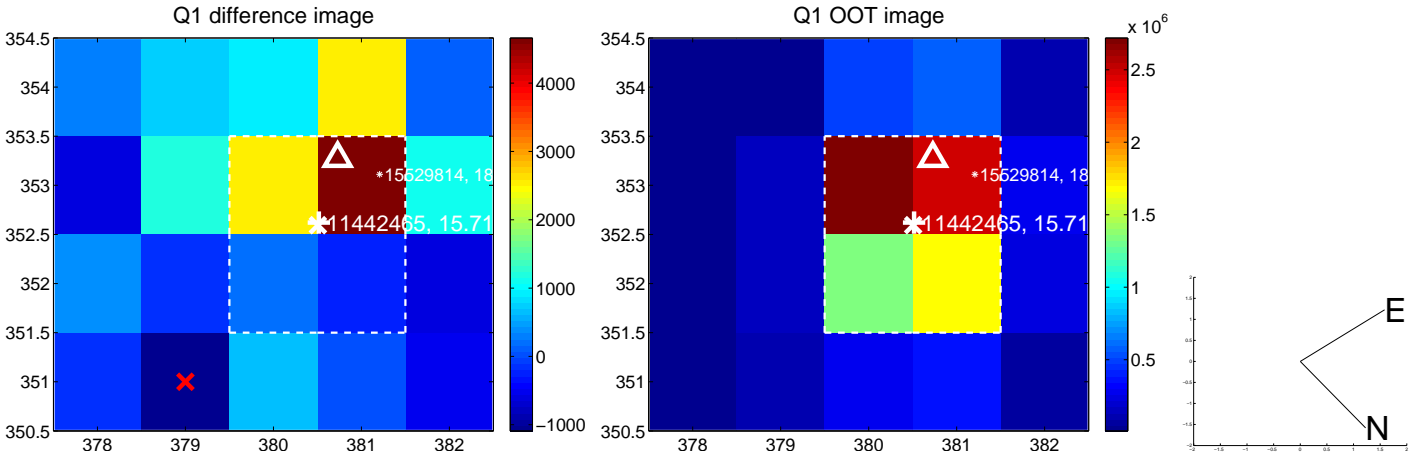
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.993 ± 0.200	14.95	2.980 ± 0.200	0.276 ± 0.247
PRF-fit source offset from KIC position	3.045 ± 0.187	16.31	3.042 ± 0.186	0.156 ± 0.252
photometric centroid source offset	3.66 ± 0.58	6.32	3.65 ± 0.58	0.37 ± 0.56

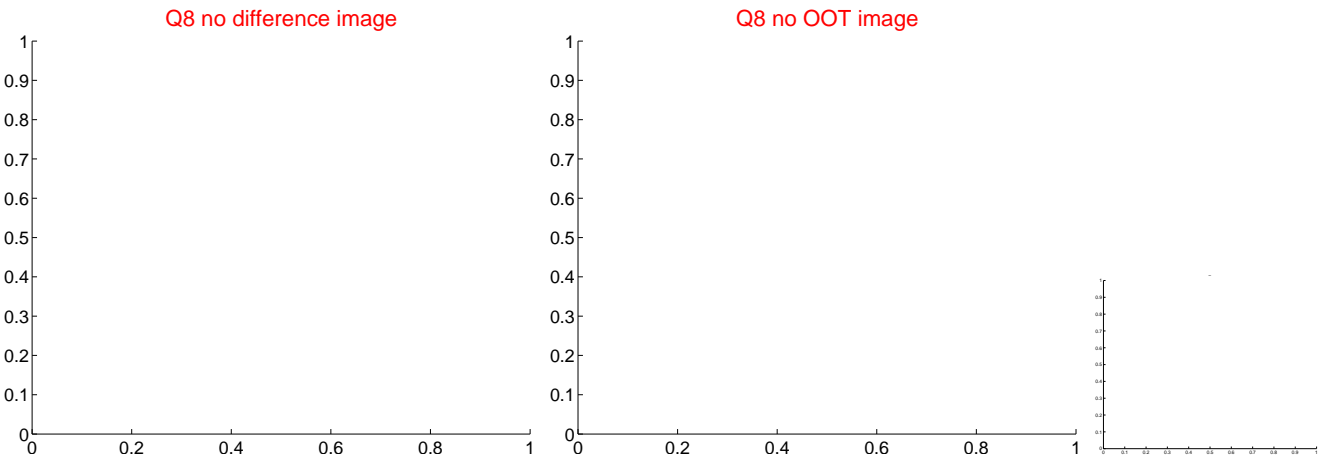
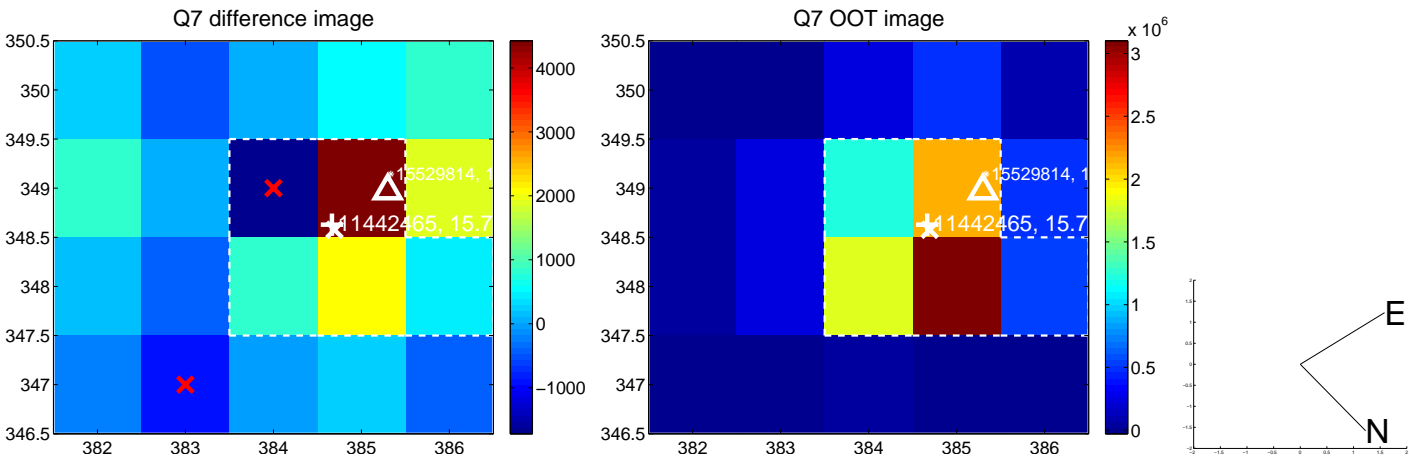
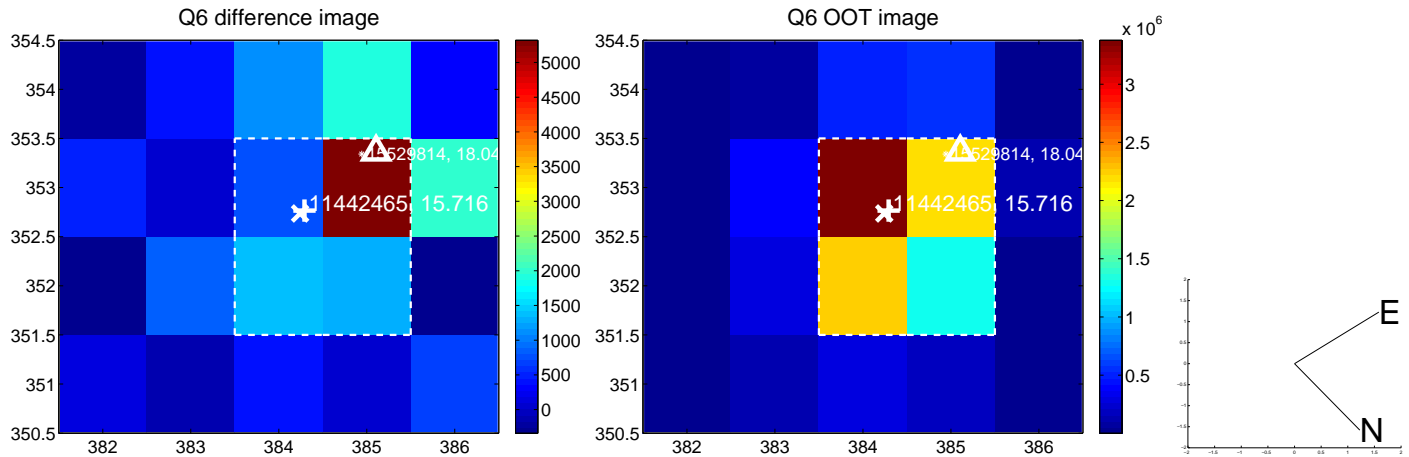
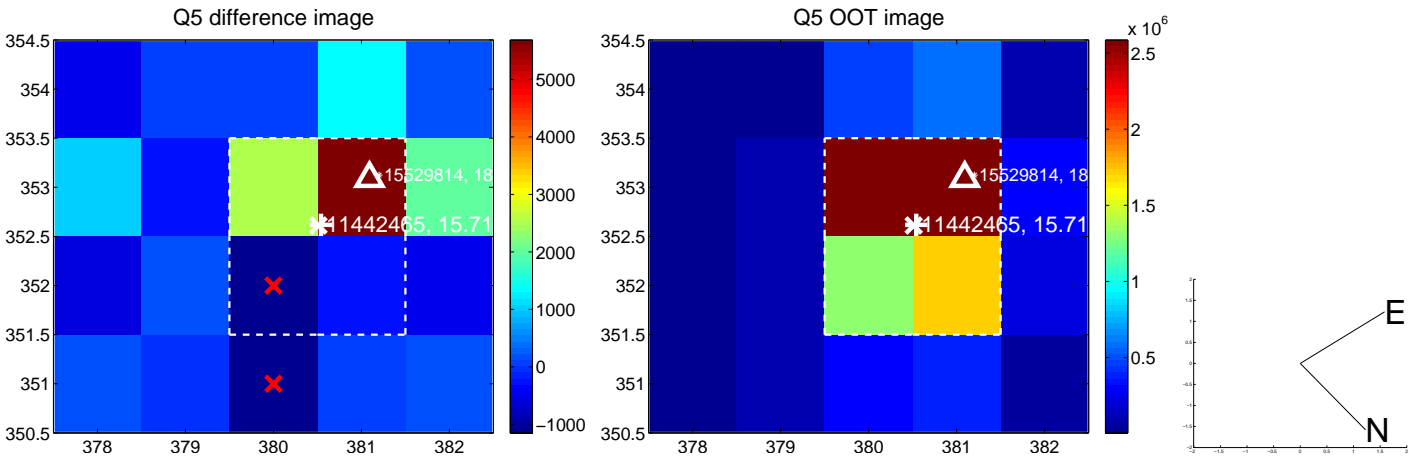


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

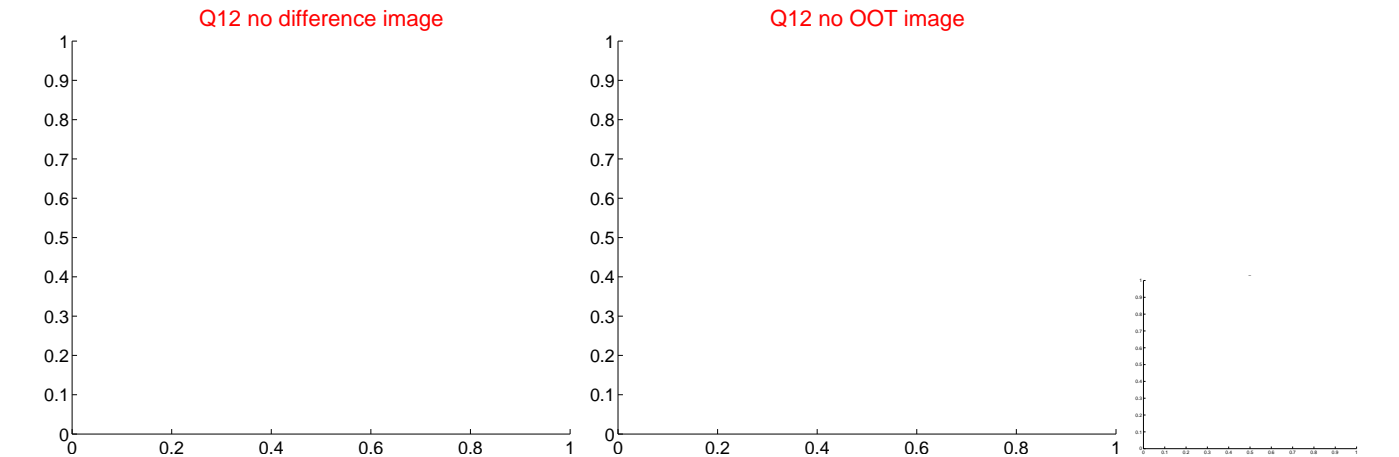
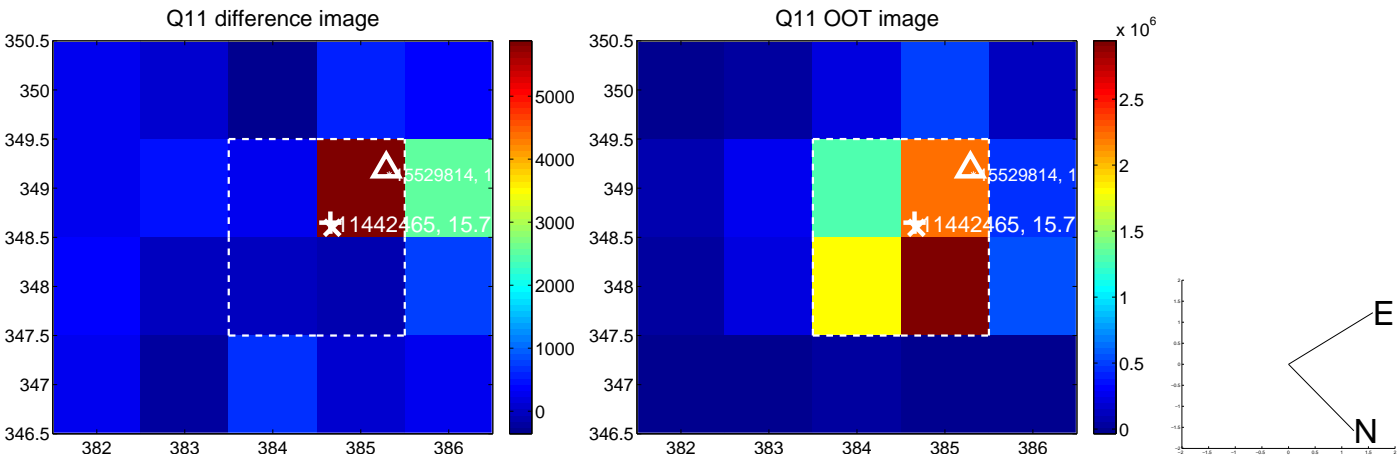
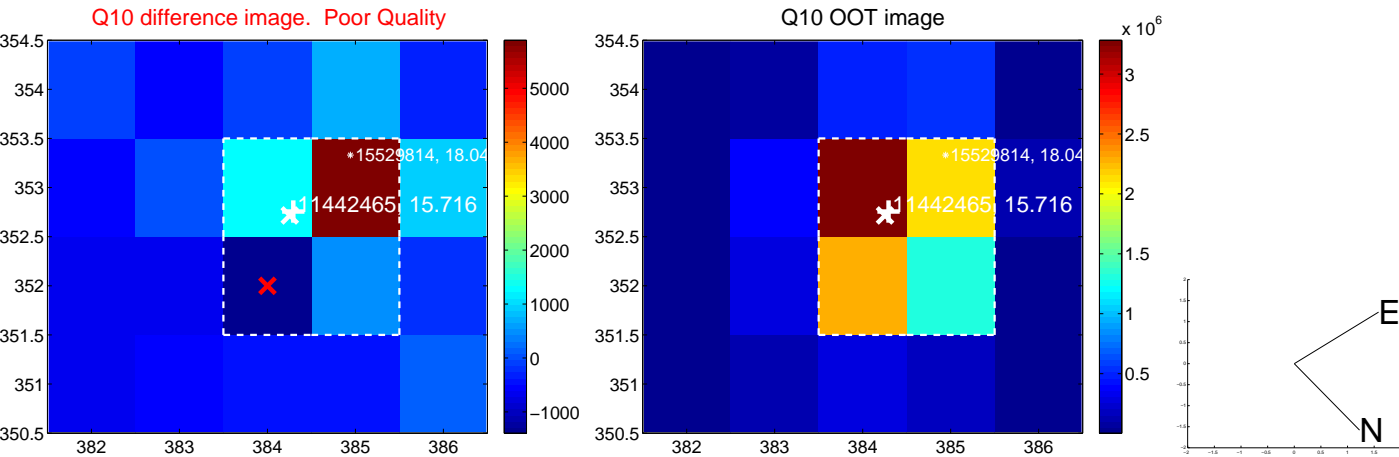
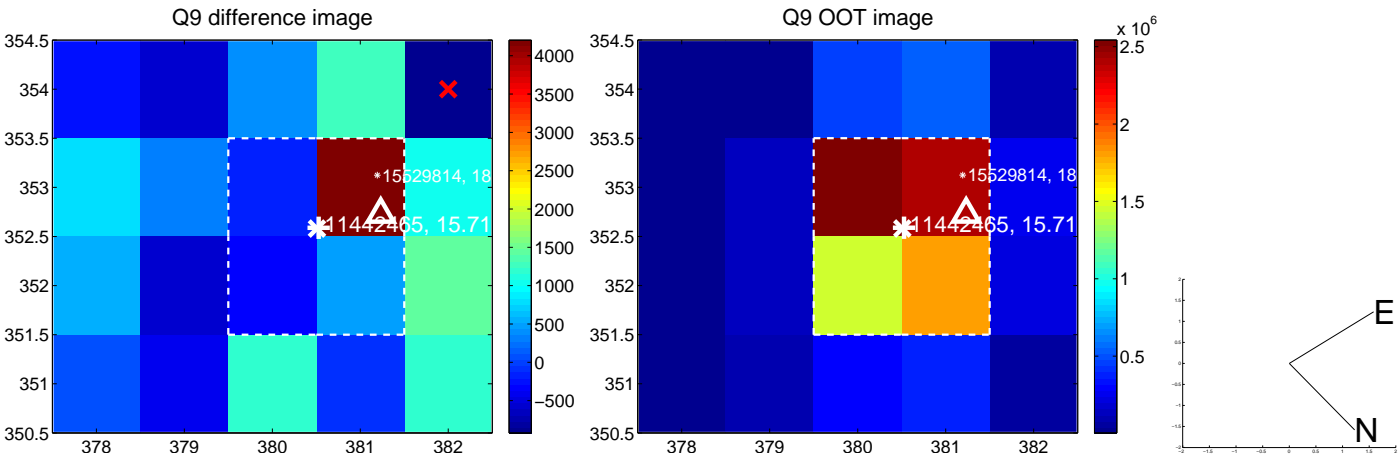
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



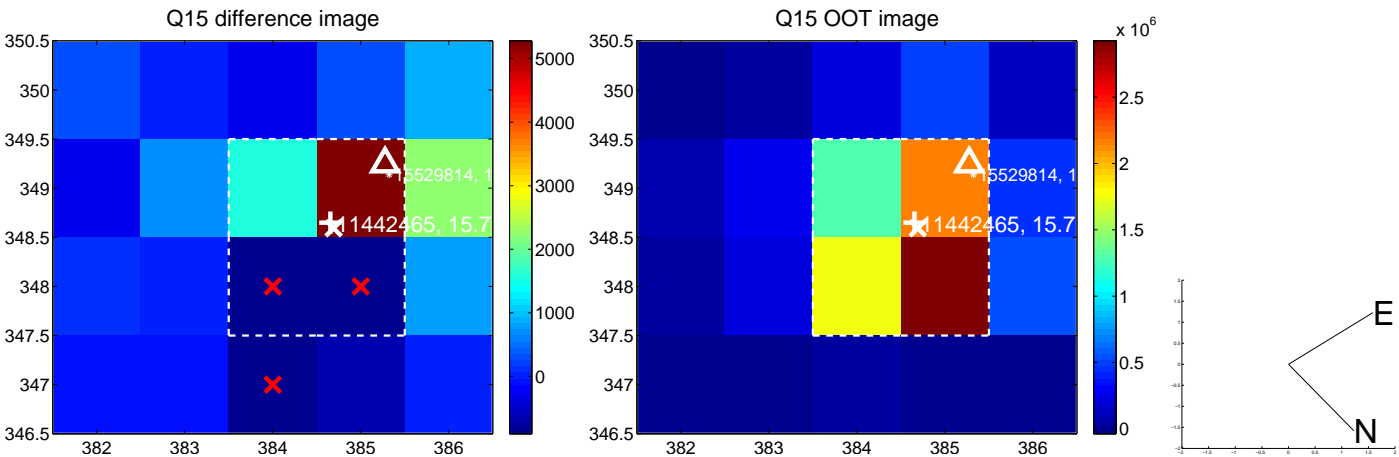
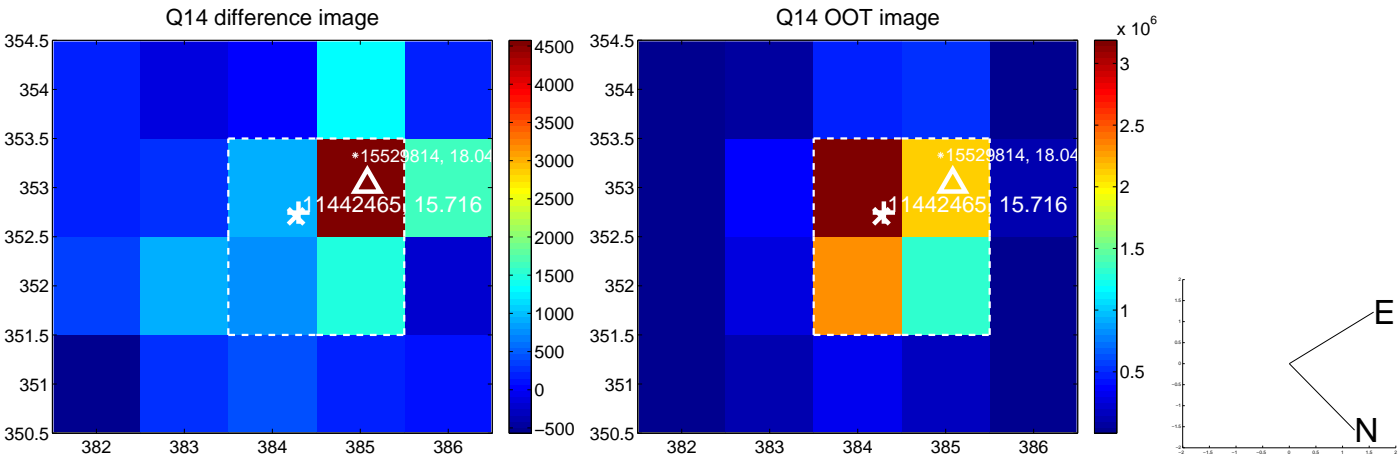
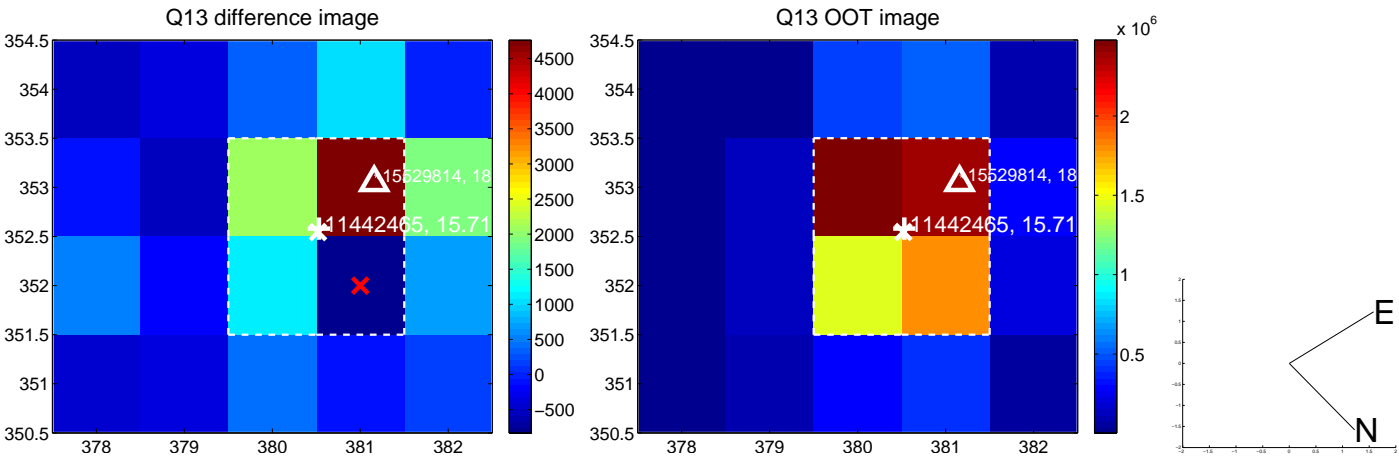
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



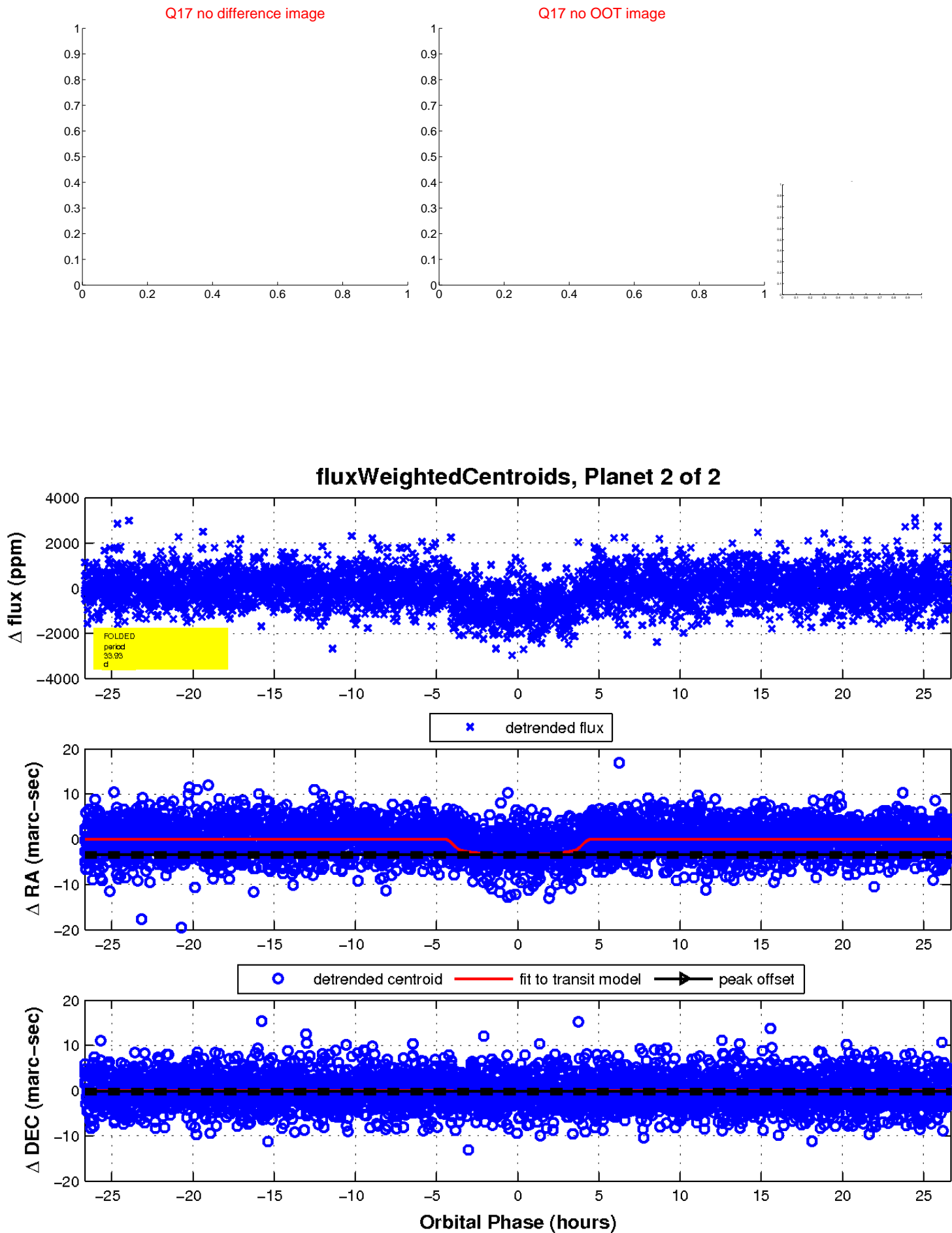
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

