

KIC 011756821

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})
011756821-01	OBS	6088.01	2.745107	133.621711	13685.2	2.995	732.3	439.3	0.66	4608	9.30	150.32
011756821-02	OBS	No	2.745102	132.249077	562.6	2.151	26.1	29.9	0.66	4608	1.93	150.32
011756821-03	OBS	No	415.788492	262.170875	1335.4	1.603	10.0	6.2	0.66	4608	2.61	0.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011756821-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—HAS_SEC_TCE—CENT_KIC_POS
011756821-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_KIC_POS
011756821-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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.

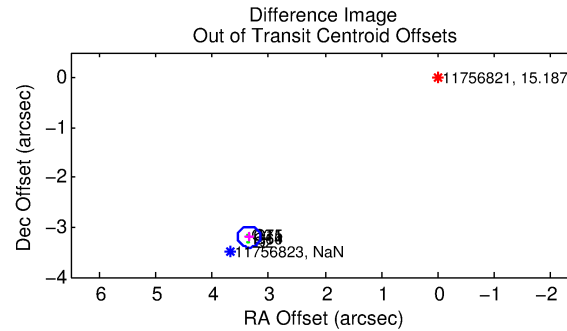
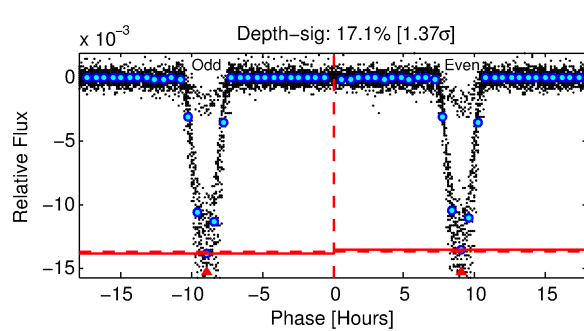
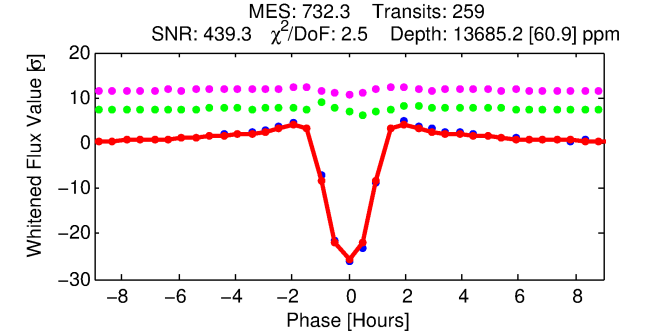
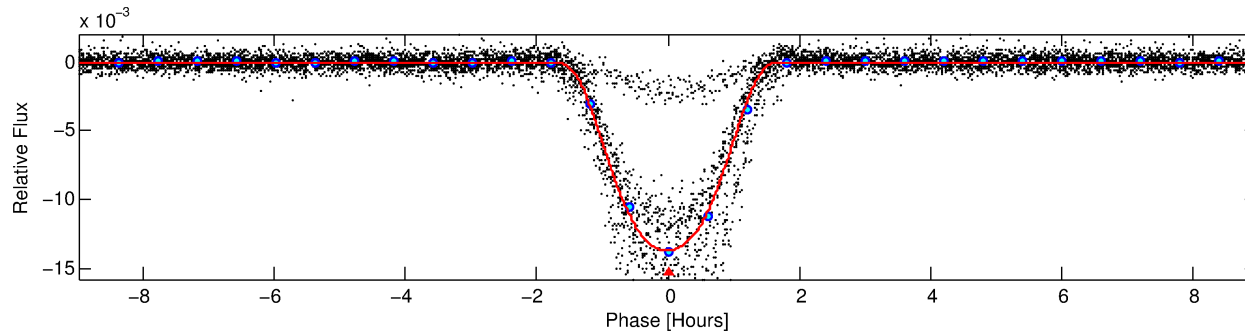
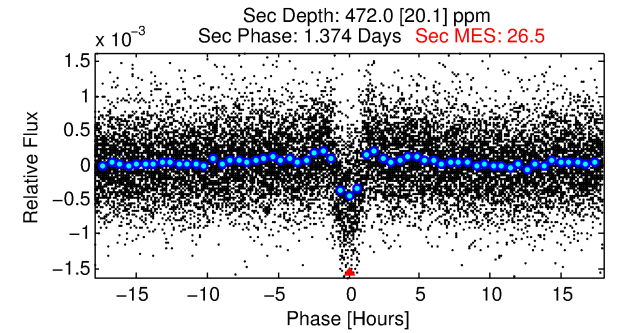
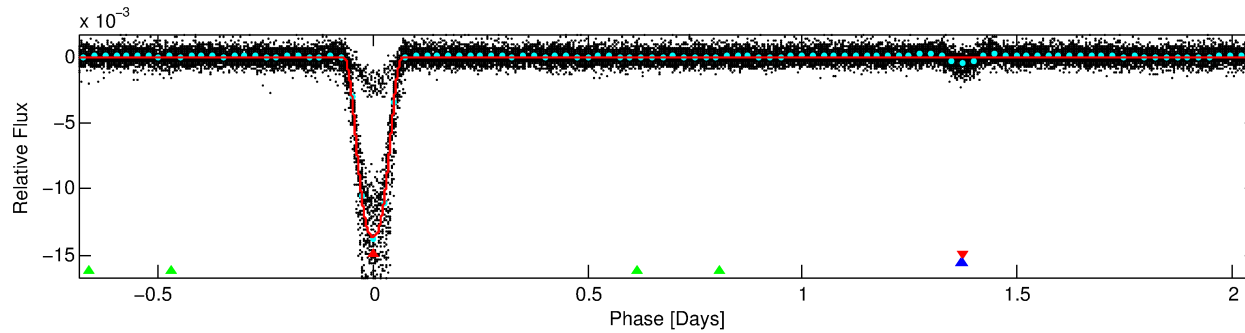
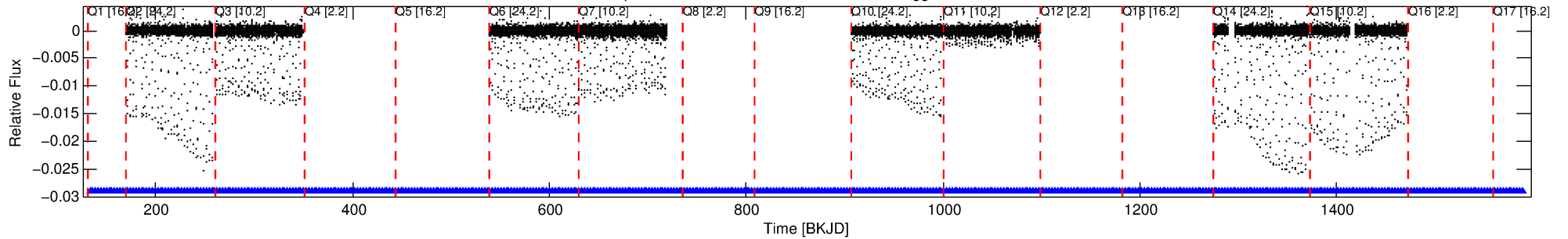
Ephemeris Match Information For 011756821-01

No Significant Match Found

DV One-Page Summary

KIC: 11756821 Candidate: 1 of 3 Period: 2.745 d
KOI: K06088.01 Corr: 0.982

Kp: 15.19 R*: 0.66 Rs Teff: 4608.0 K Logg: 4.65 Fe/H: -0.040



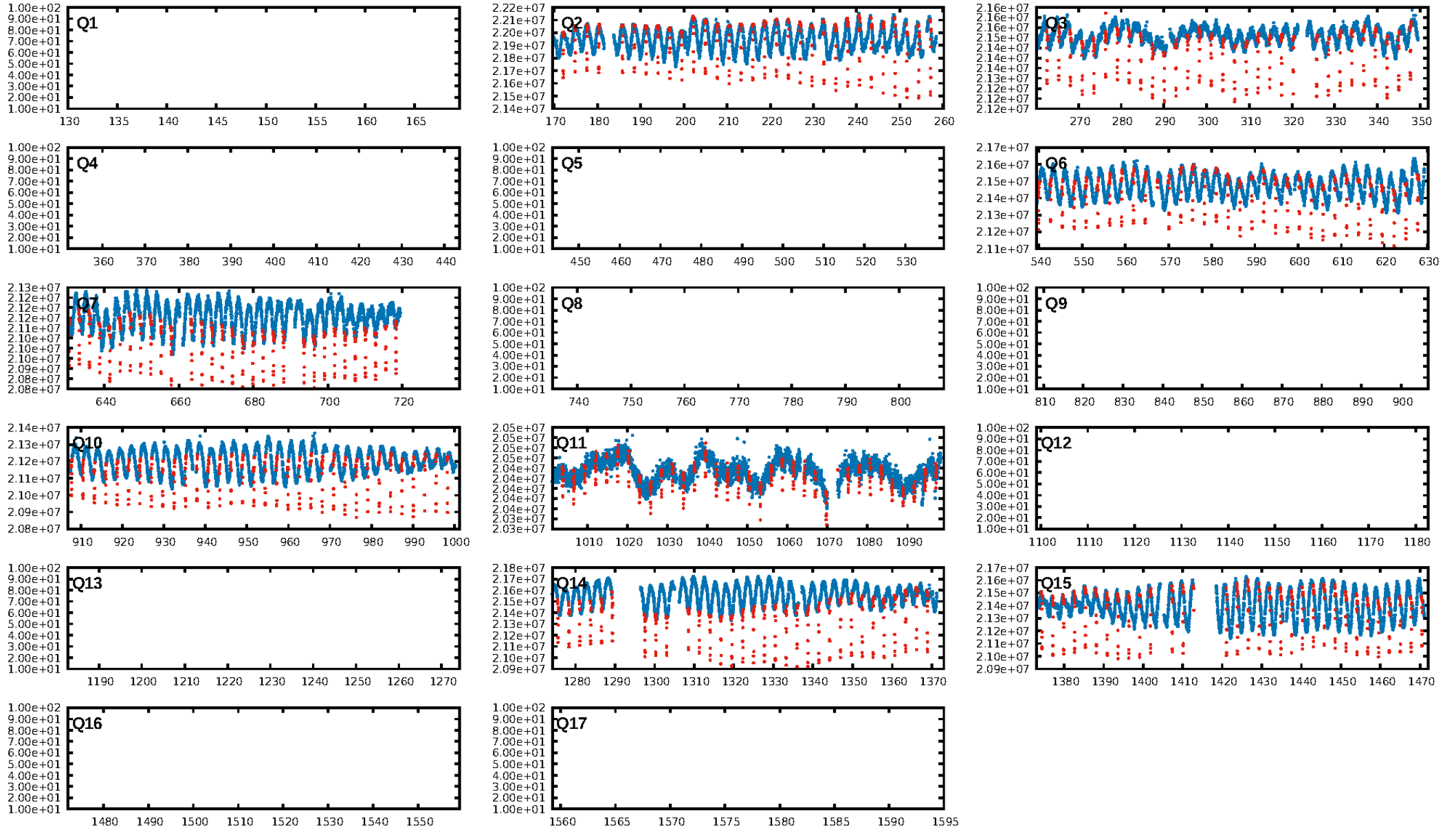
DV Fit Results:

Period = 2.74511 [0.00000] d
Epoch = 133.6217 [0.0001] BKJD
Rp/R* = 0.1296 [0.0006]
a/R* = 5.15 [0.03]
b = 0.87 [0.00]
Seff = 150.32 [27.01]
Teq = 893 [40] K
Rp = 9.30 [0.98] Re
a = 0.0341 [0.0028] AU
Ag = 3.49 [0.42] [5.99σ]
Teffp = 1887 [70] K [12.34σ]

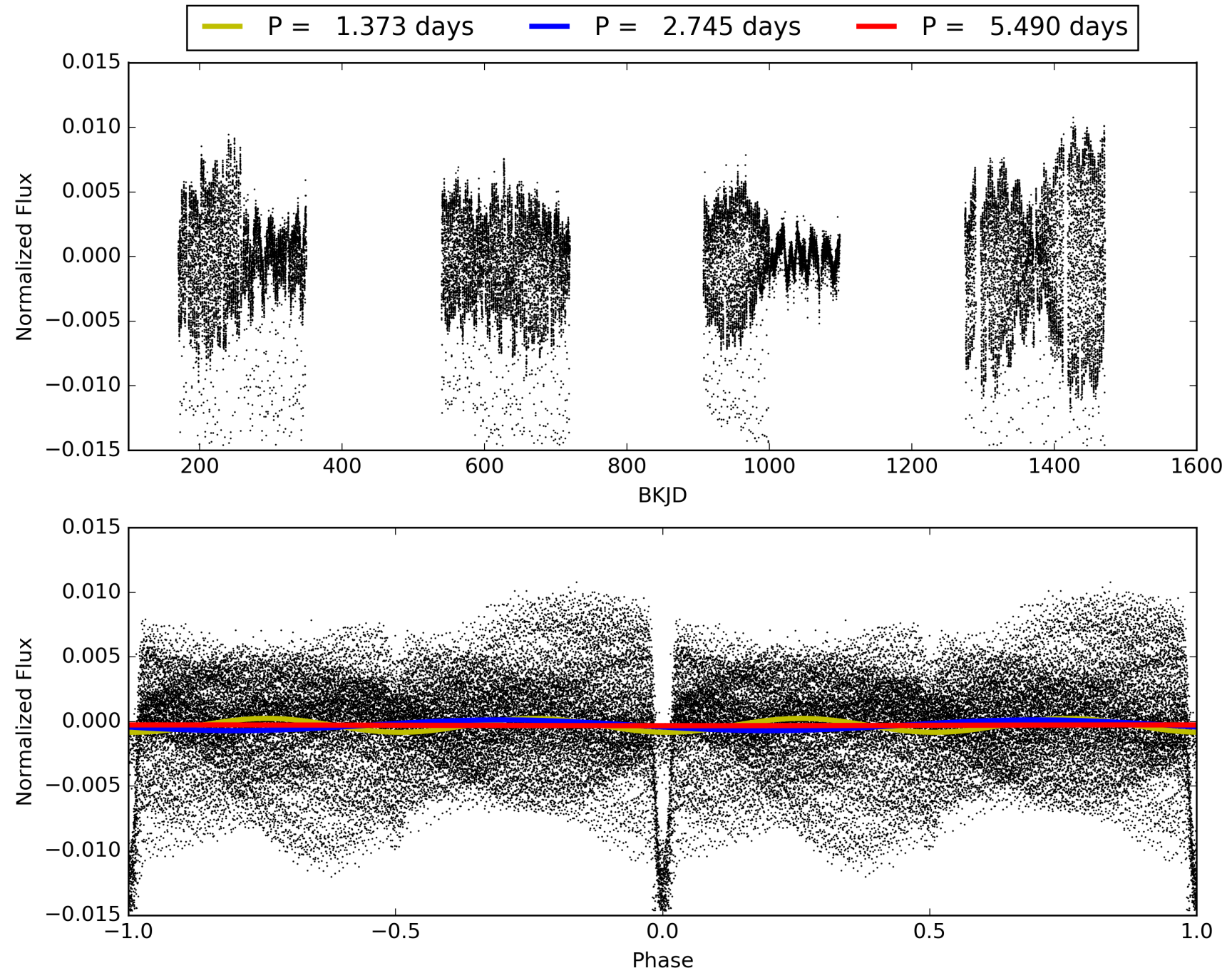
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [2917.82σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [259/259]
GhostDiagnostic-chr: 0.3098
Centroid-sig: N/A
Centroid-so: 7.851 arcsec [292.31σ]
OotOffset-rm: 4.632 arcsec [67.47σ]
KicOffset-rm: 5.128 arcsec [69.70σ]
OotOffset-st: 4/4/0/0 [8]
KicOffset-st: 4/4/0/0 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

TCE 011756821-01, PDC Light Curves

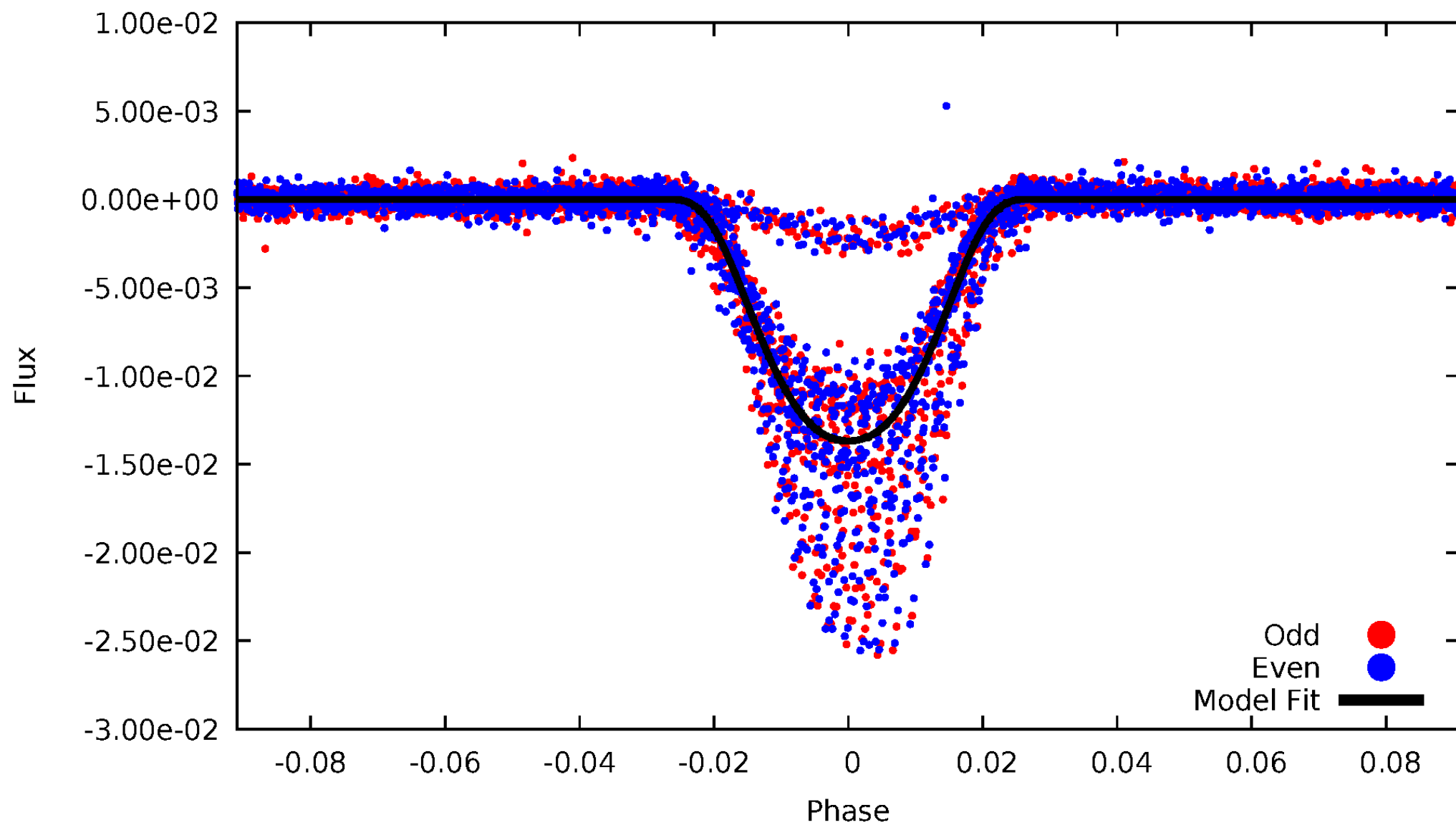


TCE 011756821-01



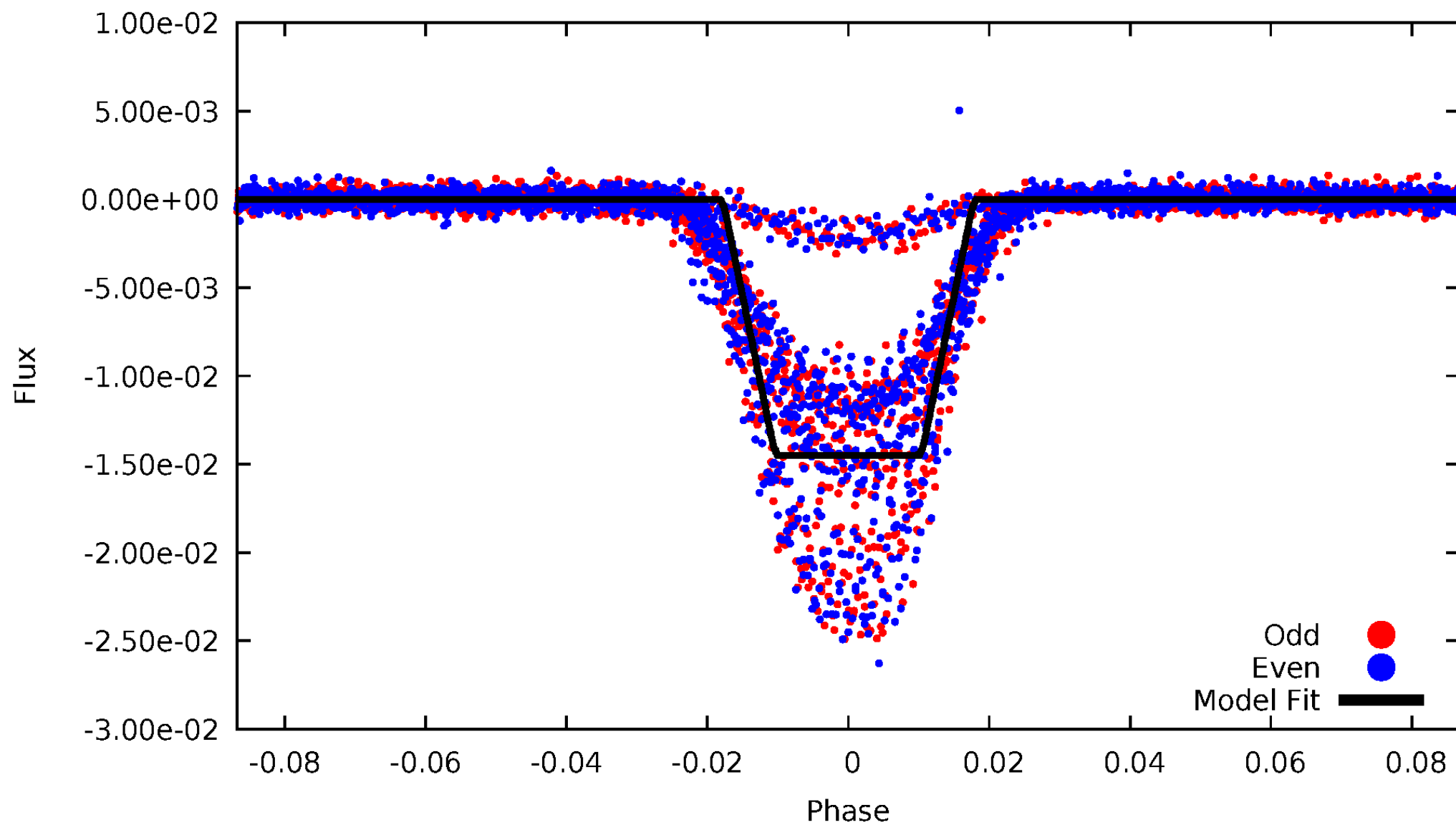
DV Odd/Even

TCE 011756821-01



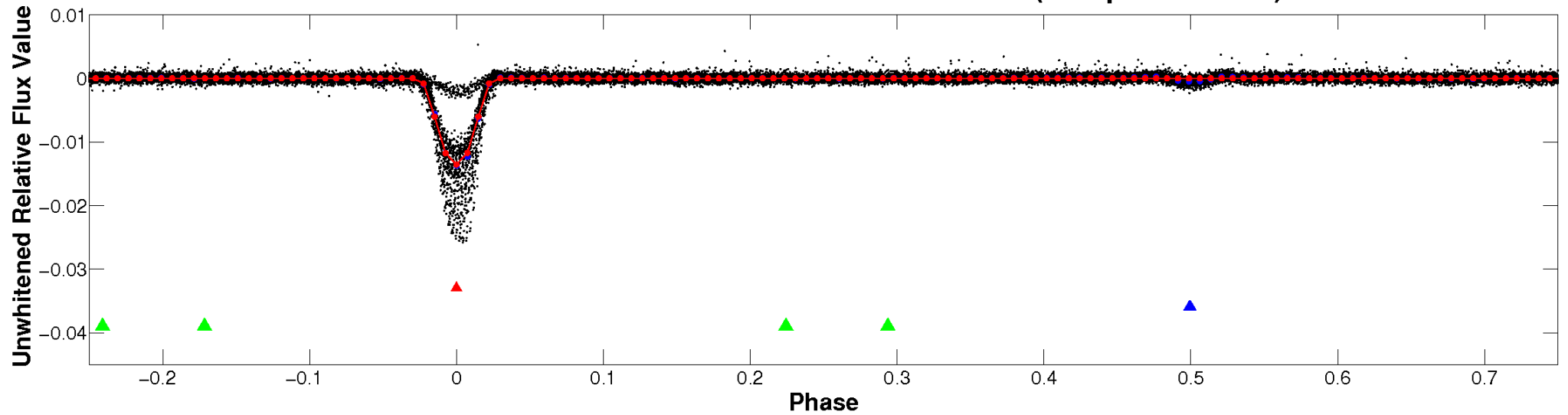
ALT Odd/Even

TCE 011756821-01

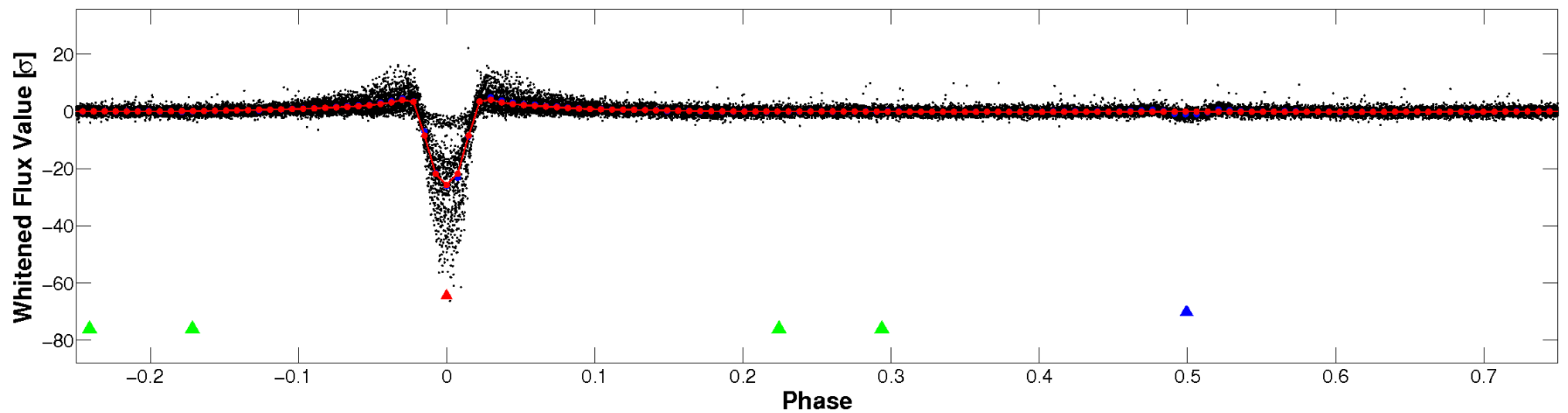


Non-Whitened Vs. Whitened Light Curve

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

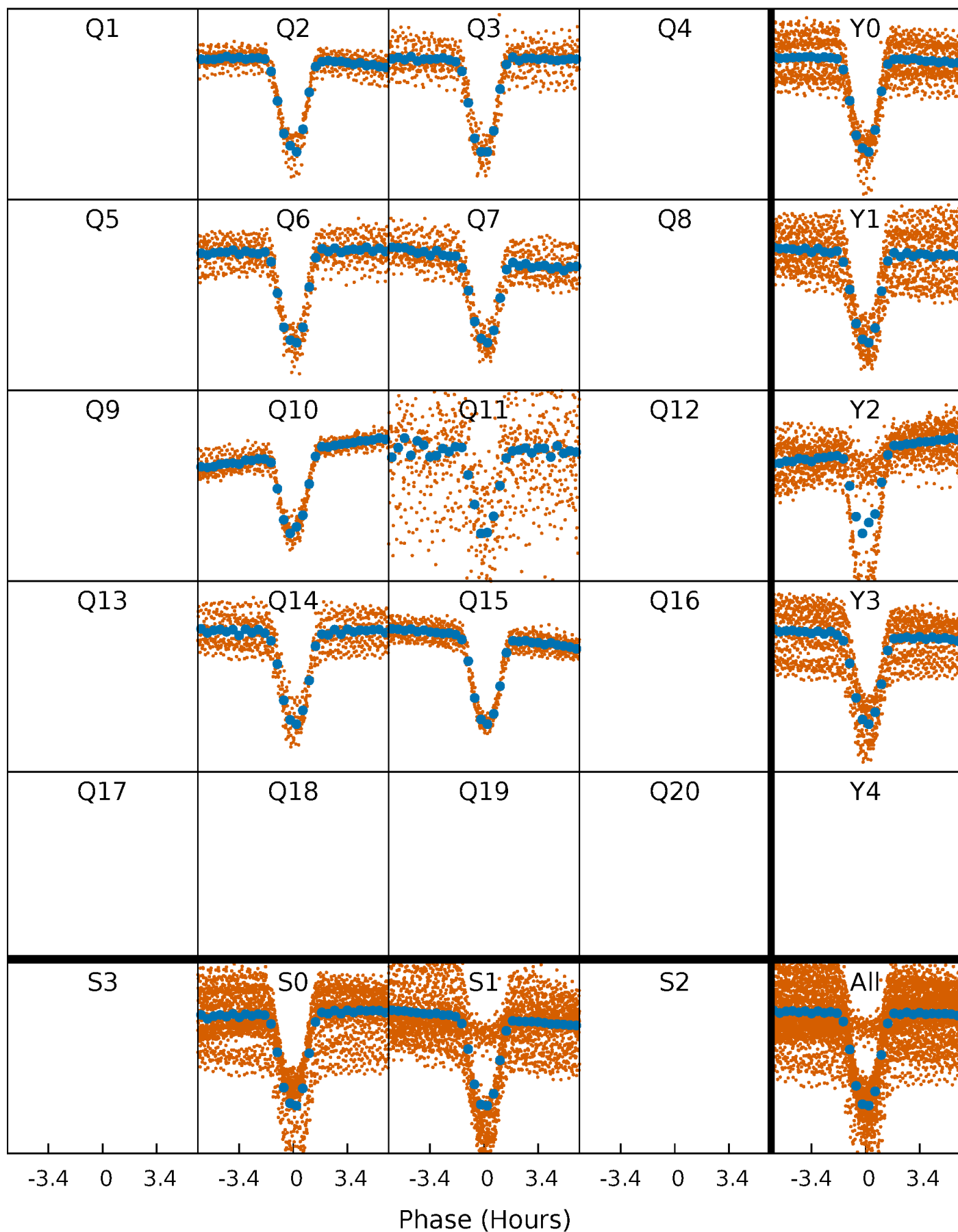


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



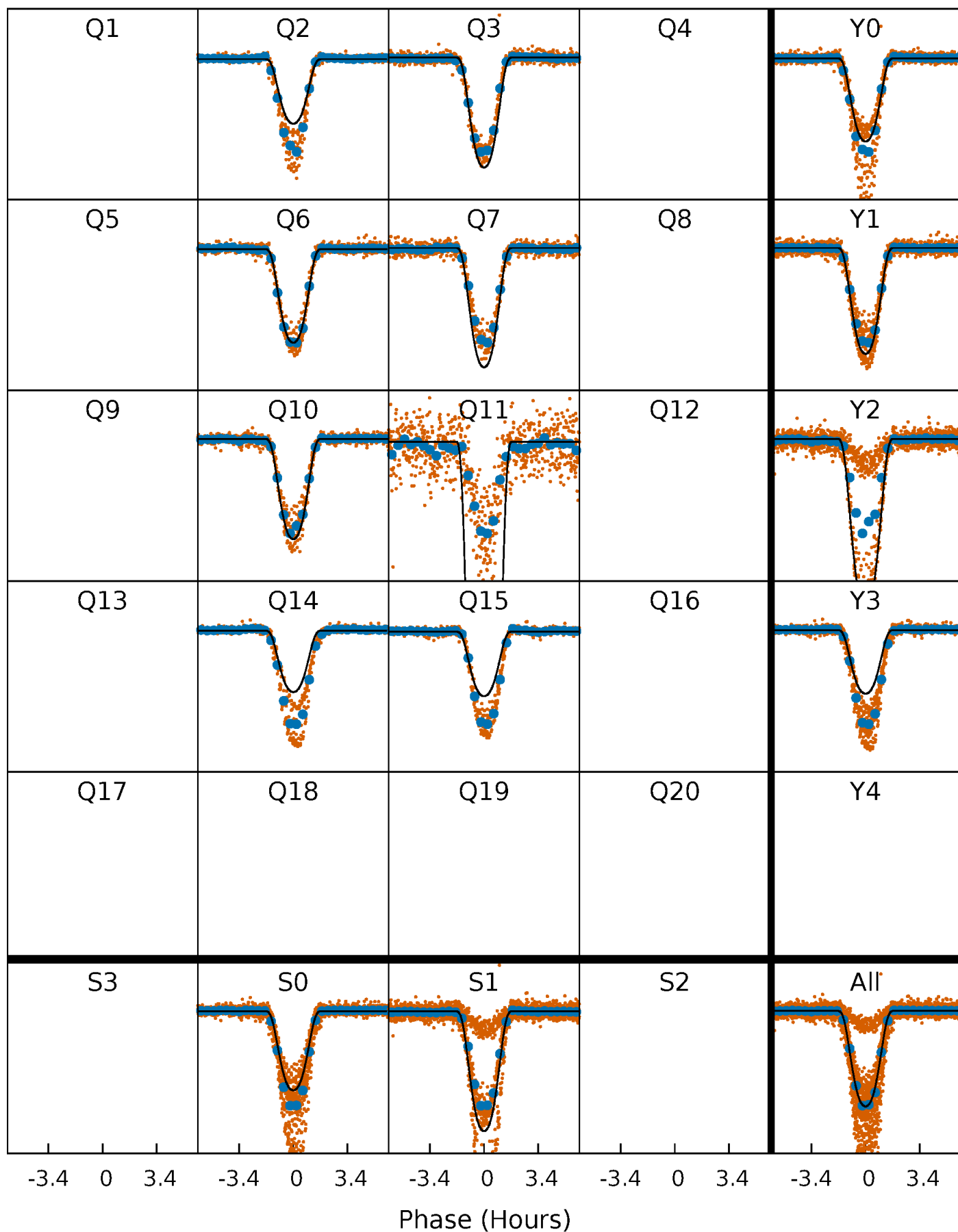
PDC Quarter-Phased Transit Curves

TCE 011756821-01 P= 2.745107 Days $T_0=133.621711$ (BKJD)



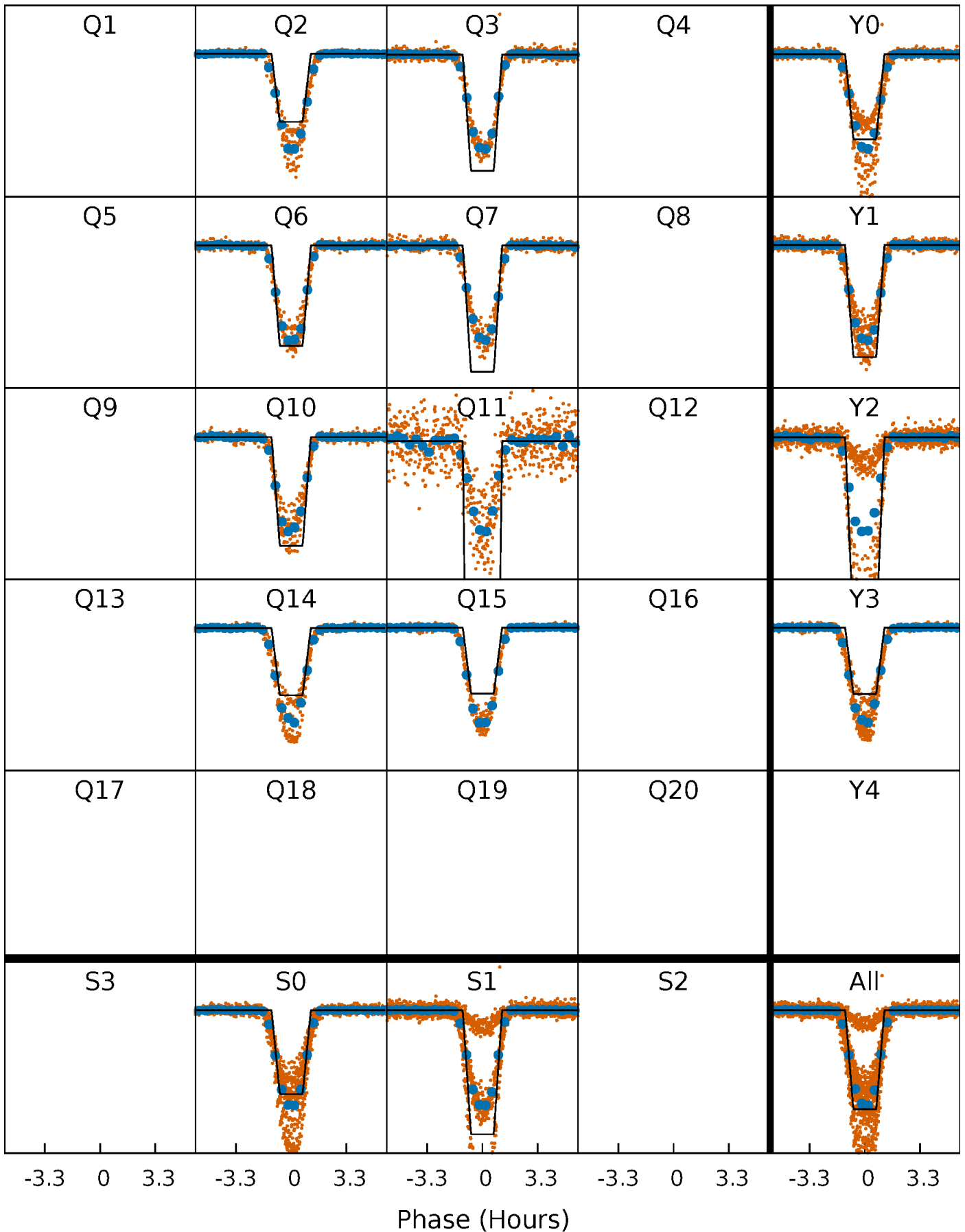
DV Quarter-Phased Transit Curves

TCE 011756821-01 P= 2.745107 Days $T_0=133.621711$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

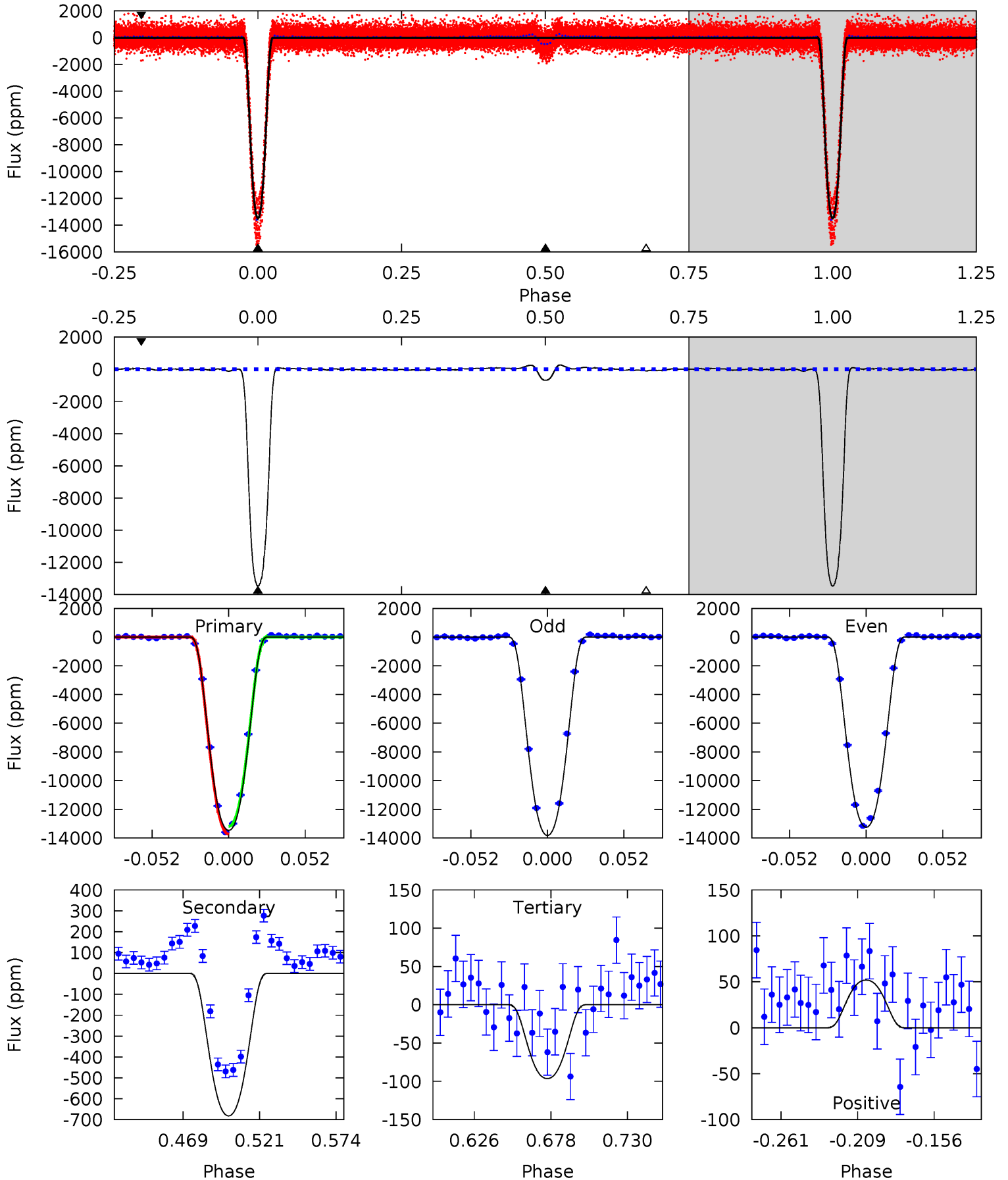
TCE 011756821-01 P= 2.745127 Days $T_0=133.617556$ (BKJD)



DV Model-Shift Uniqueness Test

011756821-01, P = 2.745107 Days, E = 133.621711 Days

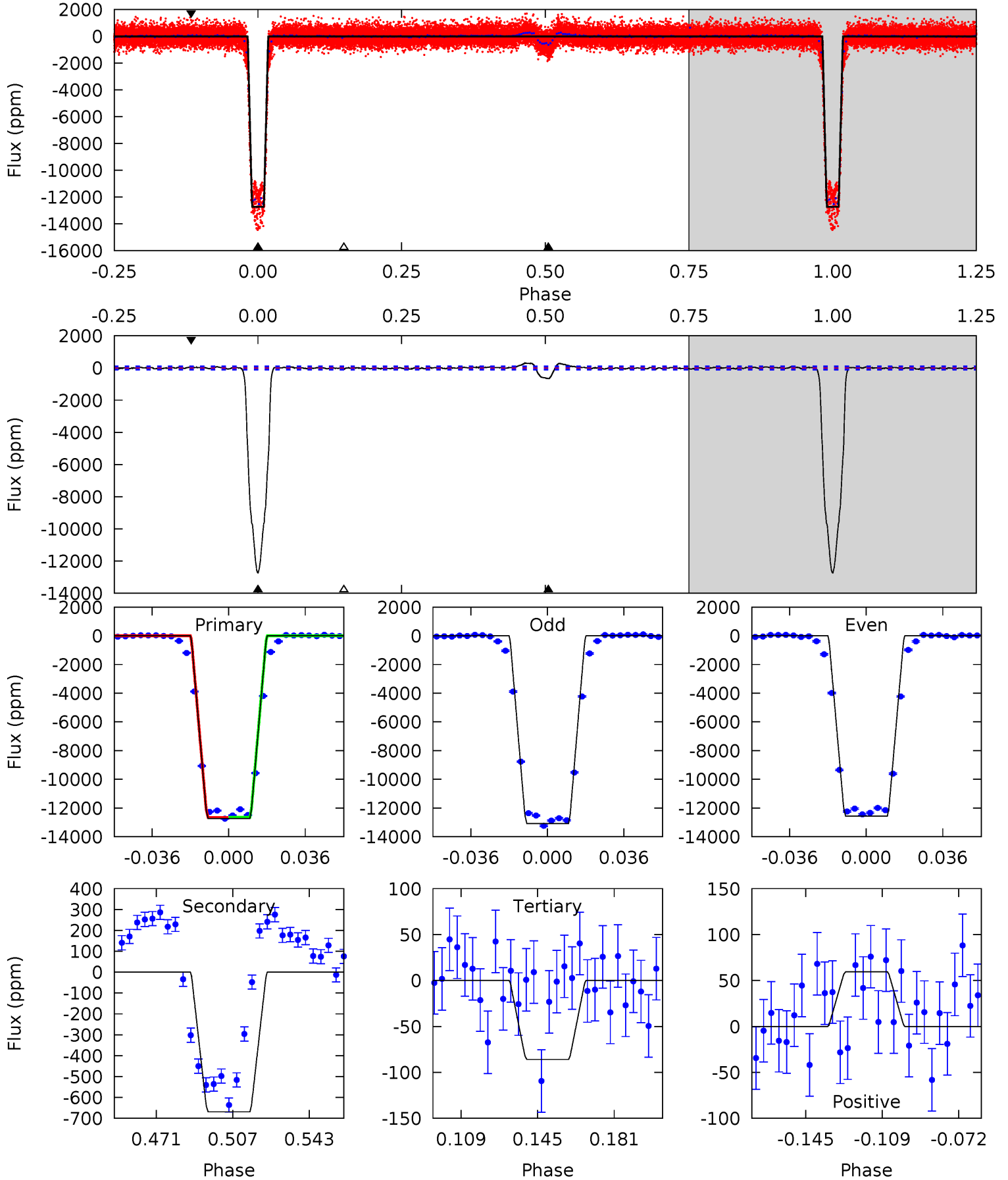
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1014	51.3	7.25	3.90	4.70	1.94	3.18	1006	1010	44.1	47.4	21.5	1.00	0.02	0



Alt Model-Shift Uniqueness Test

011756821-01, P = 2.745127 Days, E = 133.617556 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
648.4	34.1	4.38	3.03	4.77	2.09	2.31	644.0	645.3	29.7	31.1	12.7	1.01	0.02	0



Stellar Parameters For KIC 011756821

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4608^{+163}_{-163}	$4.648^{+0.024}_{-0.056}$	$-0.040^{+0.300}_{-0.300}$	$0.658^{+0.069}_{-0.040}$	$0.730^{+0.051}_{-0.077}$	$3.606^{+0.423}_{-0.823}$
	+4%/-4%	+1%/-1%	+750%/-750%	+10%/-6%	+7%/-11%	+12%/-23%
Source	KIC0	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 011756821-01 / KOI 6088.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-682 ± 13	$9.51^{+0.54}_{-0.47}$	1258^{+52}_{-44}	2735^{+63}_{-61}	$4.883^{+0.326}_{-0.385}$
Alt.	-669 ± 20	$8.85^{+0.46}_{-0.46}$	1259^{+52}_{-50}	2785^{+68}_{-68}	$5.549^{+0.416}_{-0.431}$

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

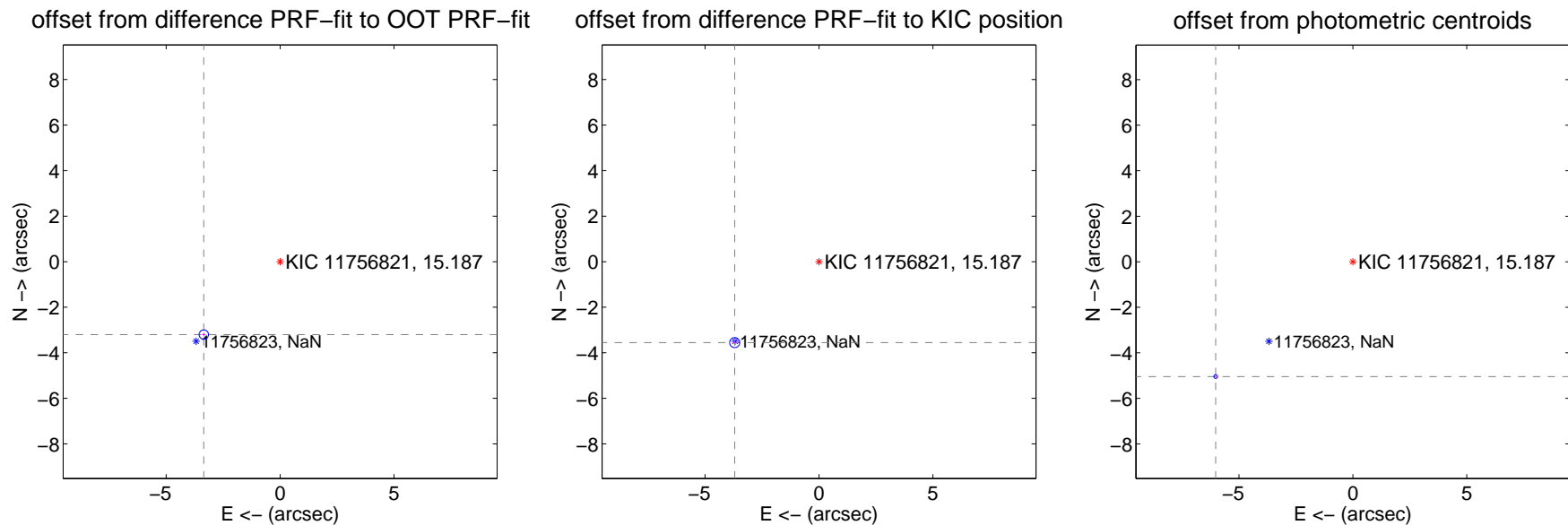
DV Centroid Data

Supplemental centroid analysis for 011756821-01. Kepler magnitude: 15.19. Transit SNR 439.31

There are 8 quarters with good PRF difference image offsets

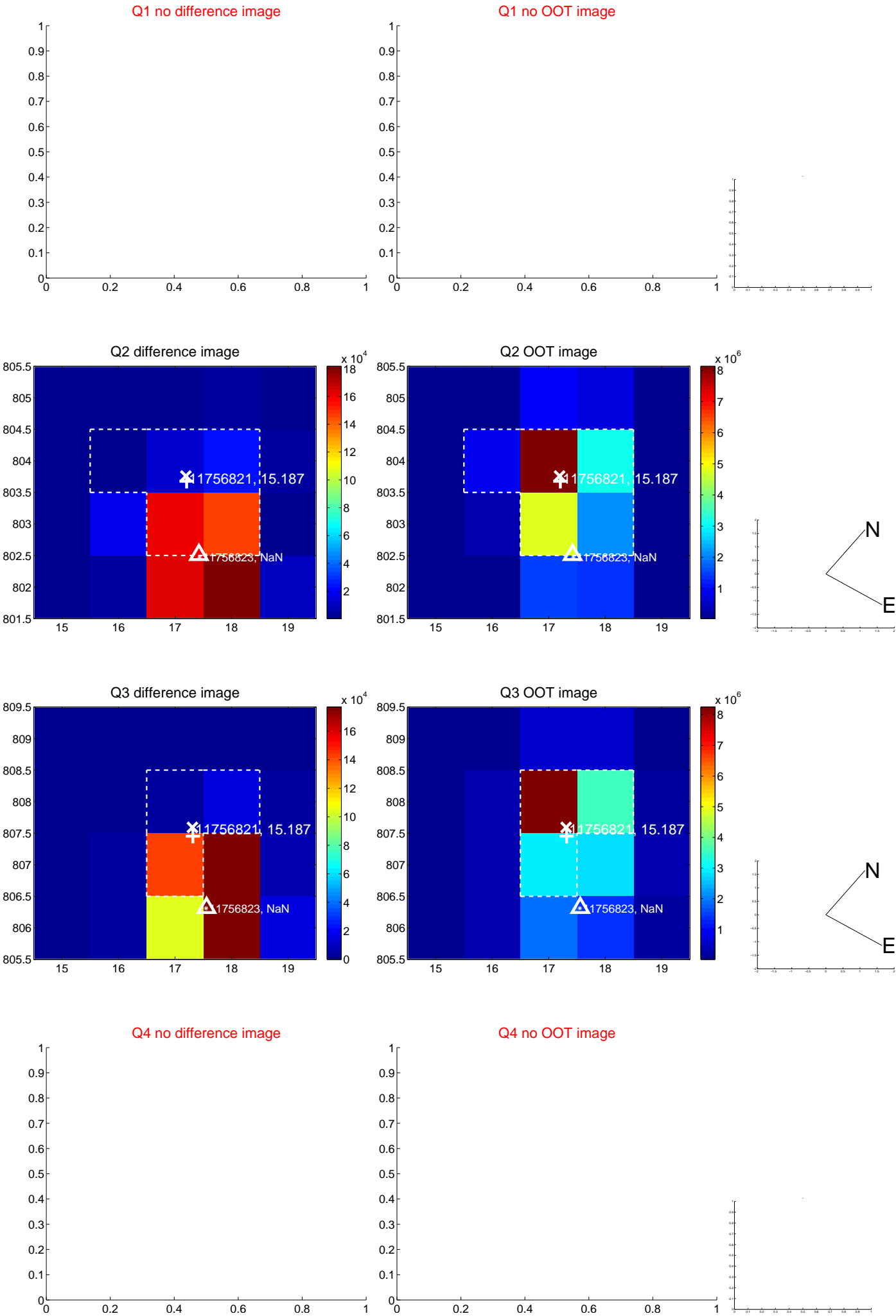
The direct PRF centroid is offset from the target star catalog position by about 0.63 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.632 ± 0.069	67.47	3.348 ± 0.067	-3.201 ± 0.071
PRF-fit source offset from KIC position	5.128 ± 0.074	69.70	3.698 ± 0.071	-3.553 ± 0.073
photometric centroid source offset	7.85 ± 0.03	292.31	6.02 ± 0.03	-5.04 ± 0.03



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.

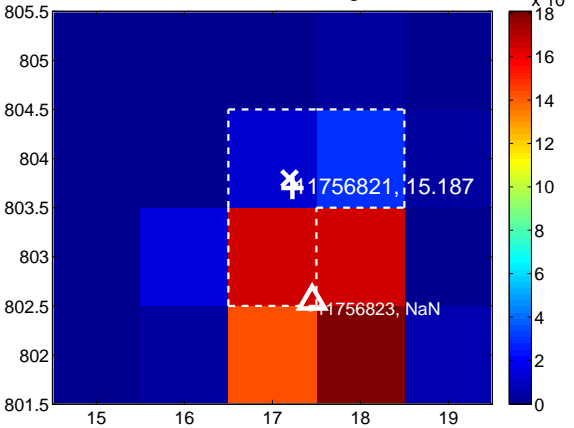
Q5 no difference image



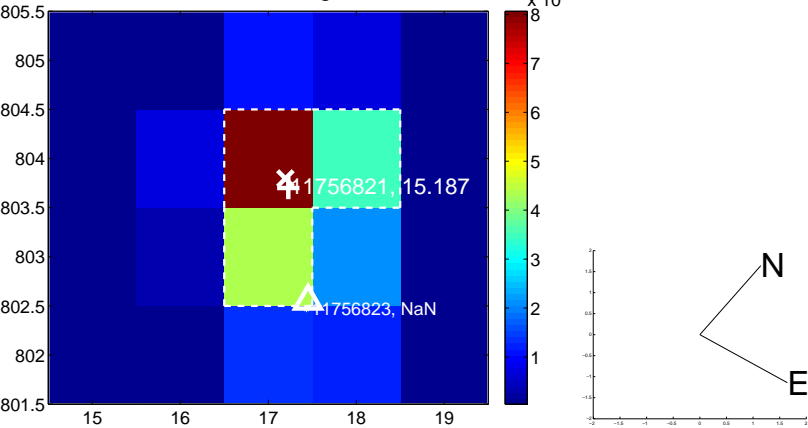
Q5 no OOT image



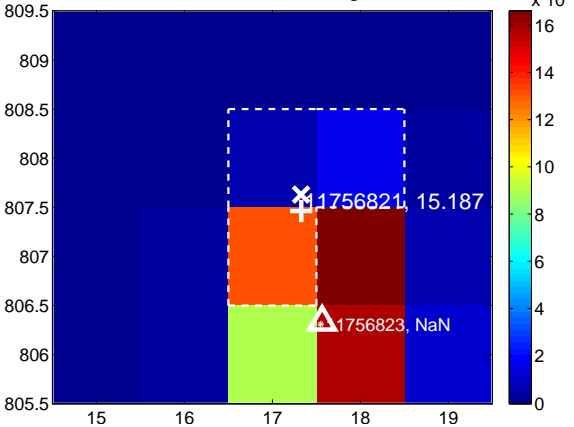
Q6 difference image



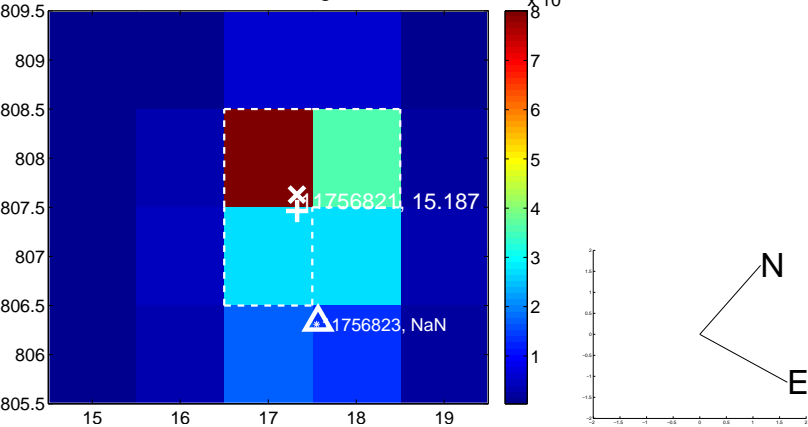
Q6 OOT image



Q7 difference image



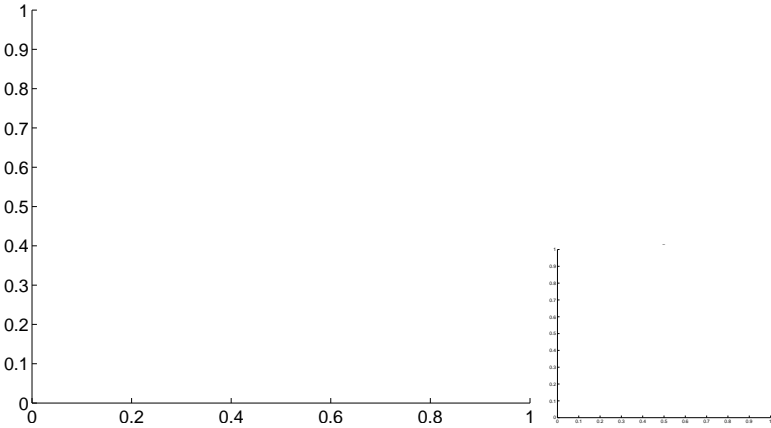
Q7 OOT image



Q8 no difference image



Q8 no OOT image

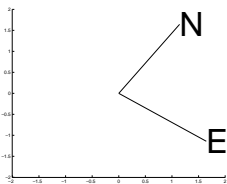
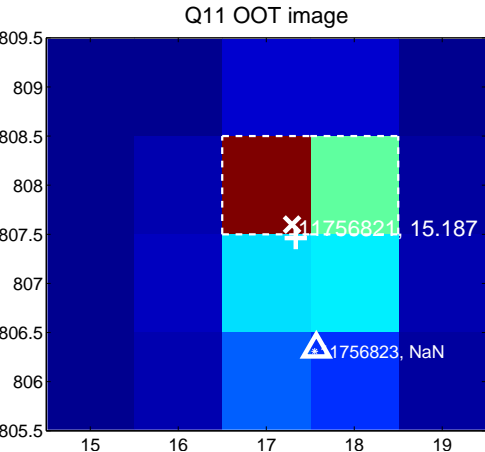
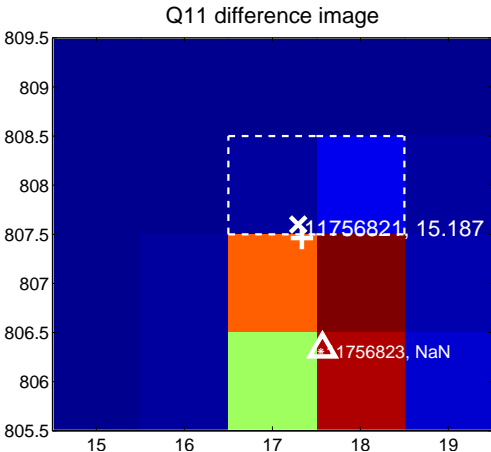
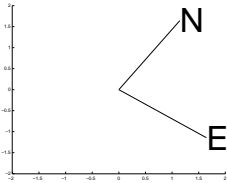
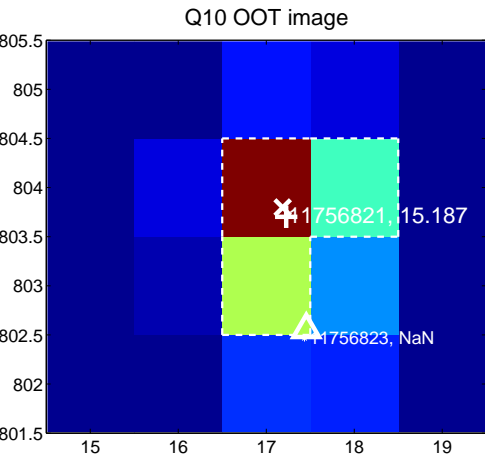
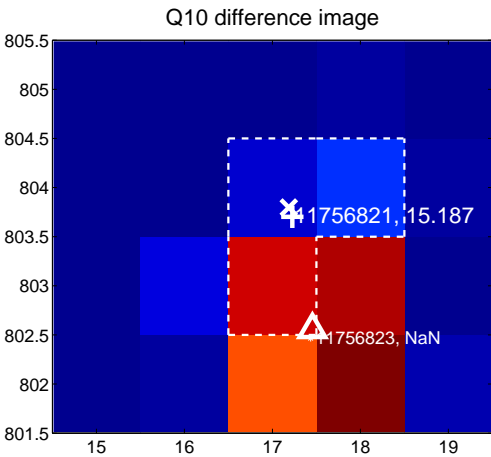


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

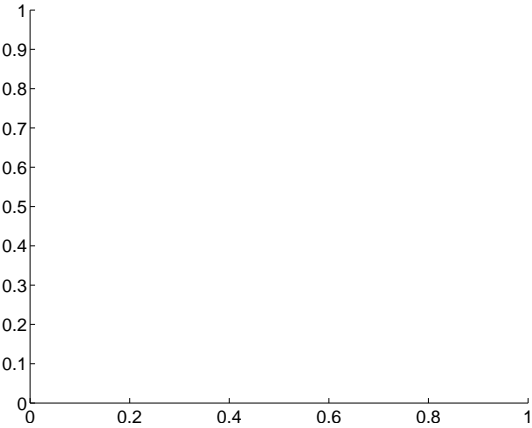
Q9 no difference image



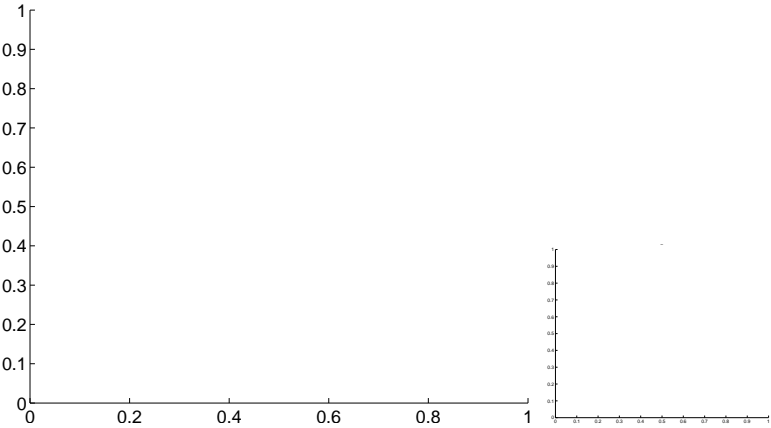
Q9 no OOT image



Q12 no difference image



Q12 no OOT image



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

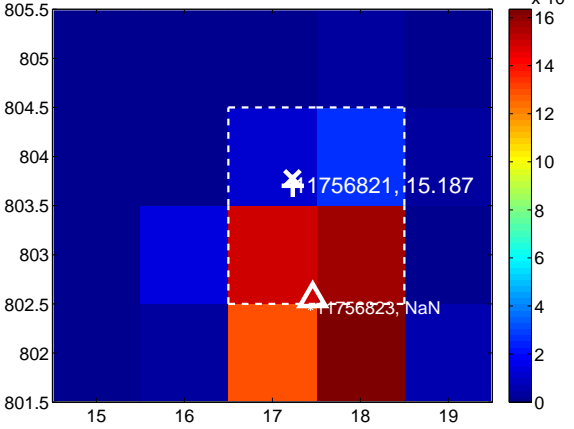
Q13 no difference image



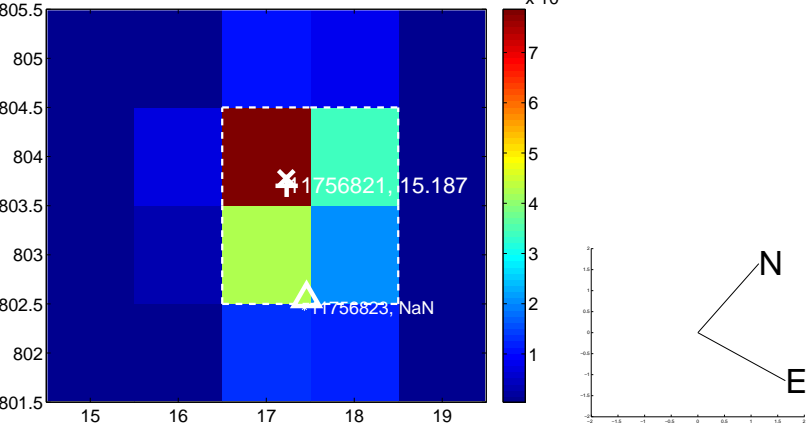
Q13 no OOT image



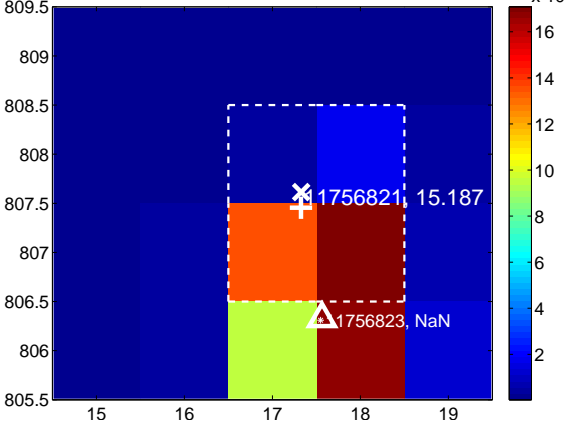
Q14 difference image



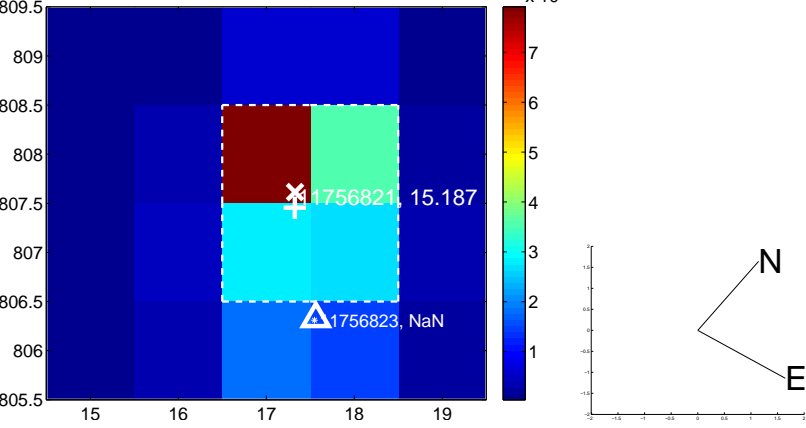
Q14 OOT image



Q15 difference image



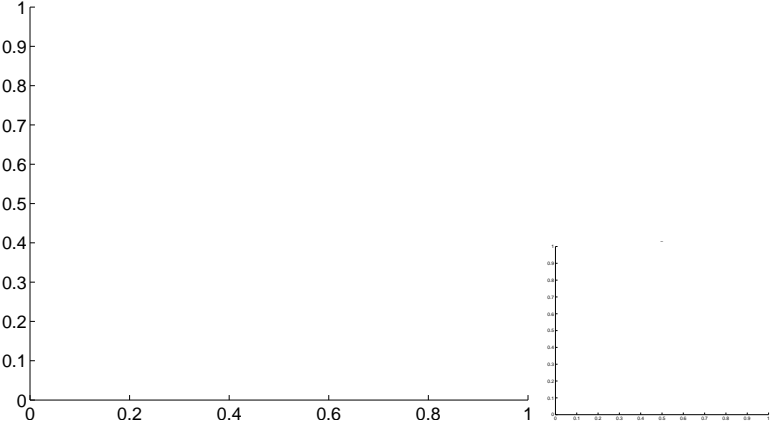
Q15 OOT image



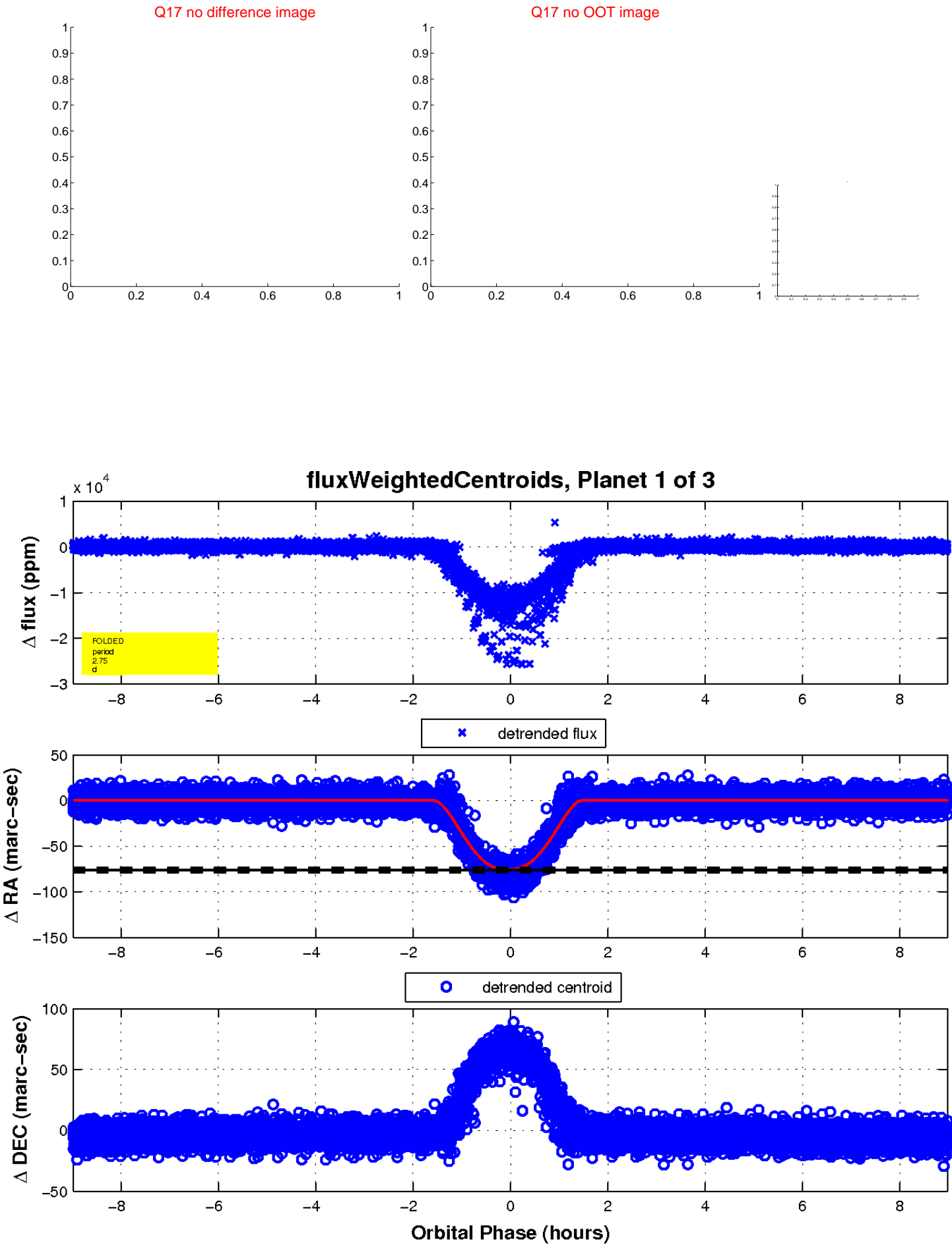
Q16 no difference image



Q16 no OOT image

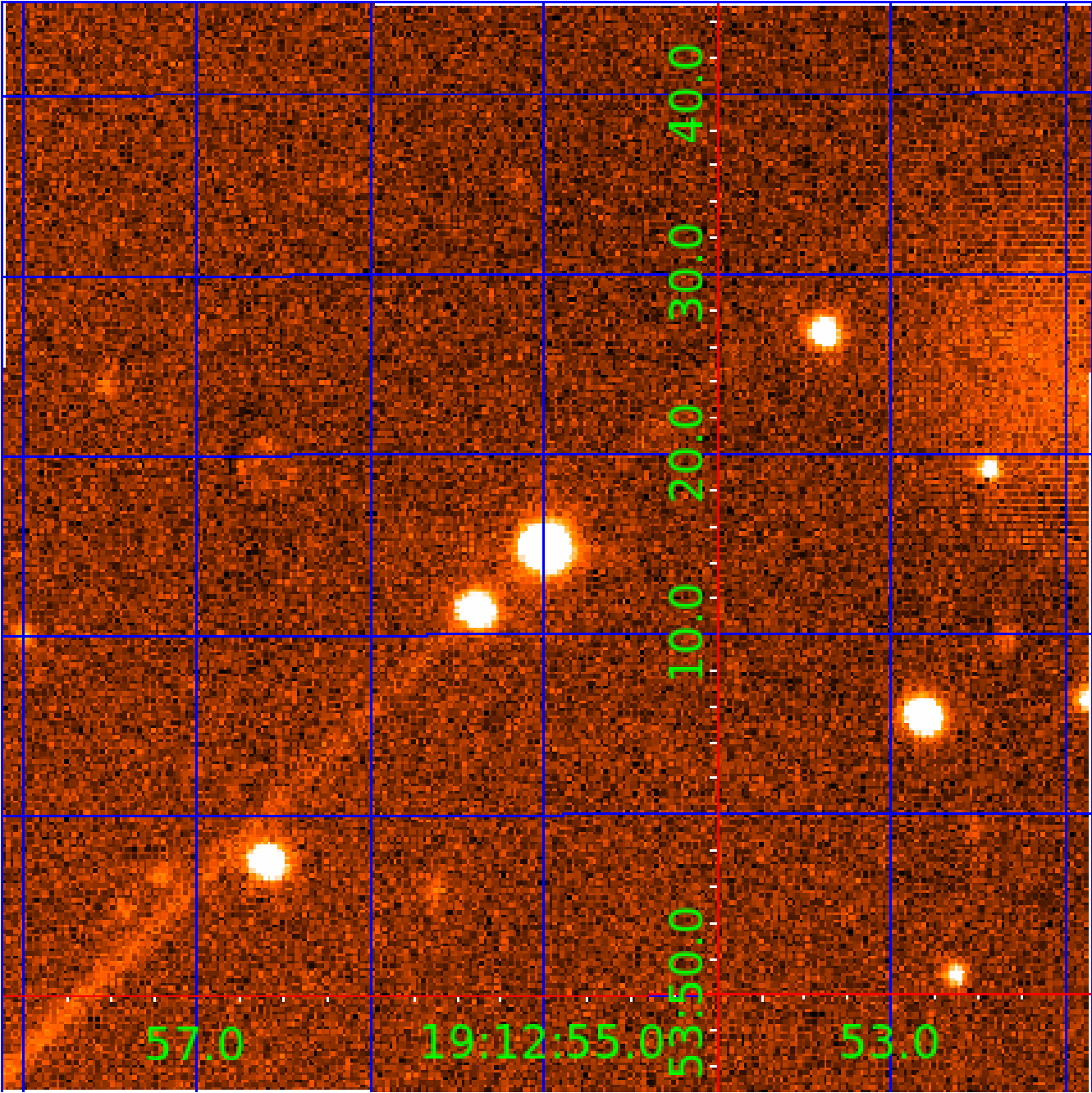


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011756821

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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011756821-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_KIC_POS
011756821-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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.

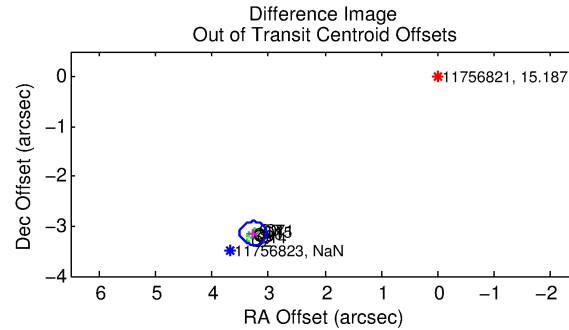
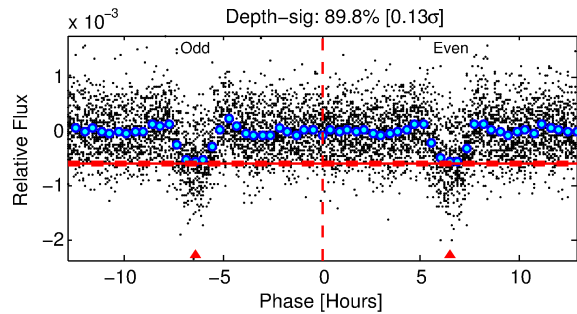
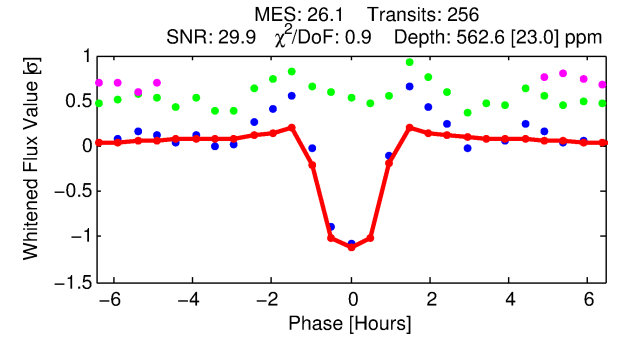
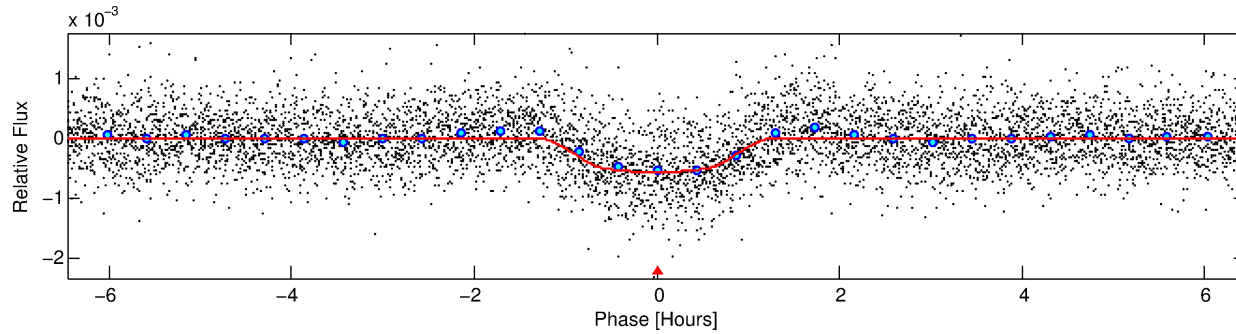
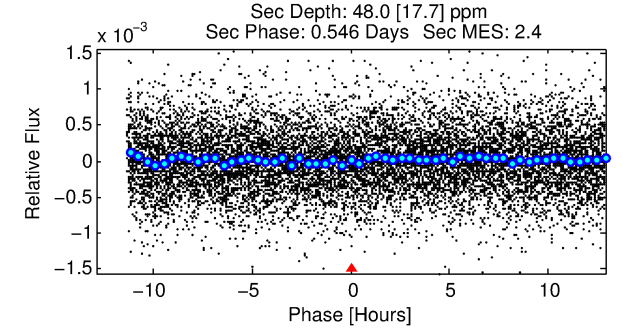
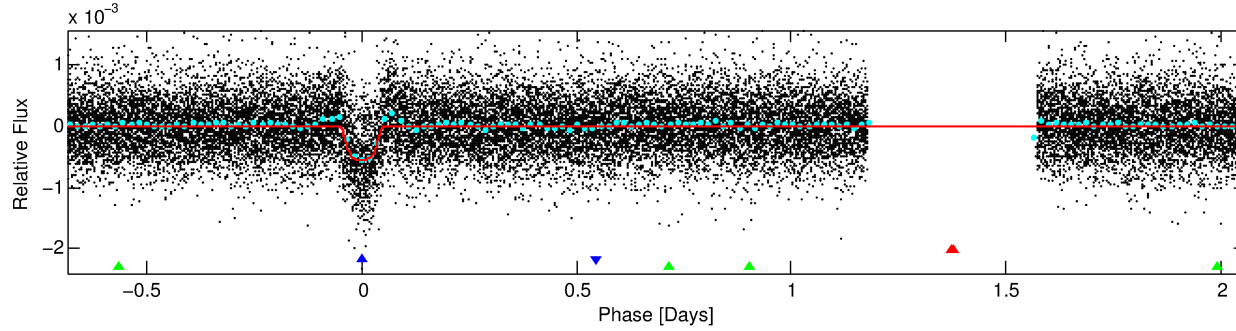
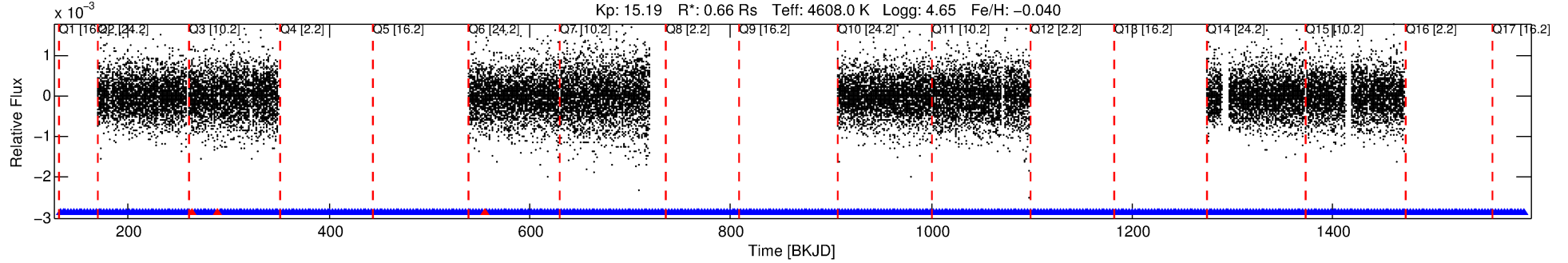
Ephemeris Match Information For 011756821-02

No Significant Match Found

DV One-Page Summary

KIC: 11756821 Candidate: 2 of 3 Period: 2.745 d
KOI: K06088 Corr: No Ephemeris Match

Kp: 15.19 R*: 0.66 Rs Teff: 4608.0 K Logg: 4.65 Fe/H: -0.040



DV Fit Results:

Period = 2.74510 [0.00001] d
Epoch = 132.2491 [0.0010] BKJD
Rp/R* = 0.0269 [0.0044]
a/R* = 4.89 [2.77]
b = 0.90 [0.13]
Seff = 150.32 [27.01]
Teq = 893 [40] K
Rp = 1.93 [0.37] Re
a = 0.0341 [0.0028] AU
Ag = 8.26 [4.17] [1.74σ]
Teff = 2340 [300] K [4.79σ]

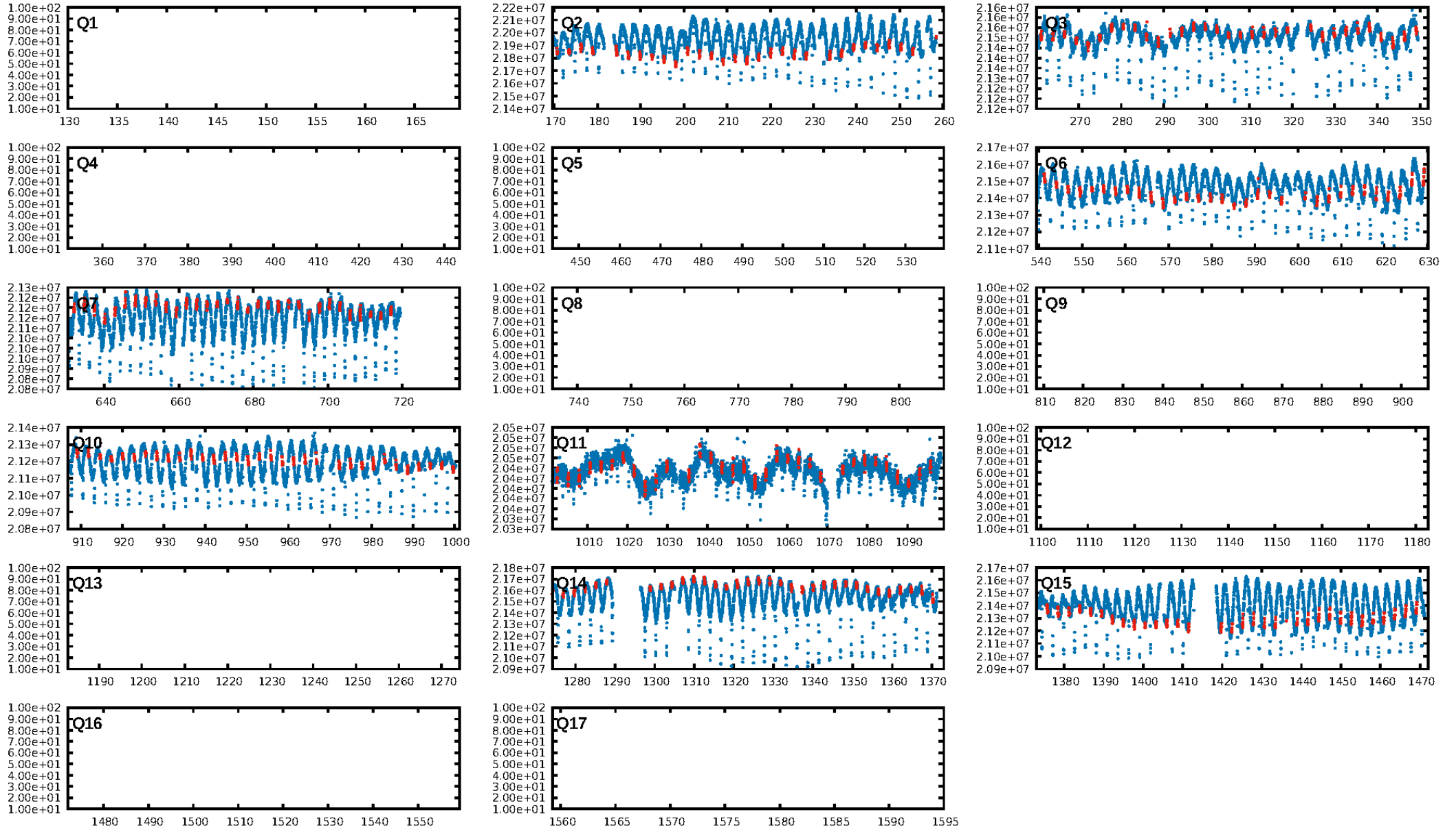
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.29e-132
RollingBand-fgt: 0.99 [253/256]
GhostDiagnostic-chr: 0.4708
Centroid-sig: N/A
Centroid-so: 9.382 arcsec [15.48σ]
OotOffset-rm: 4.535 arcsec [57.93σ]
KicOffset-rm: 5.026 arcsec [66.86σ]
OotOffset-st: 4/4/0/0 [8]
KicOffset-st: 4/4/0/0 [8]
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DiffImageOverlap-fno: 1.00 [8/8]

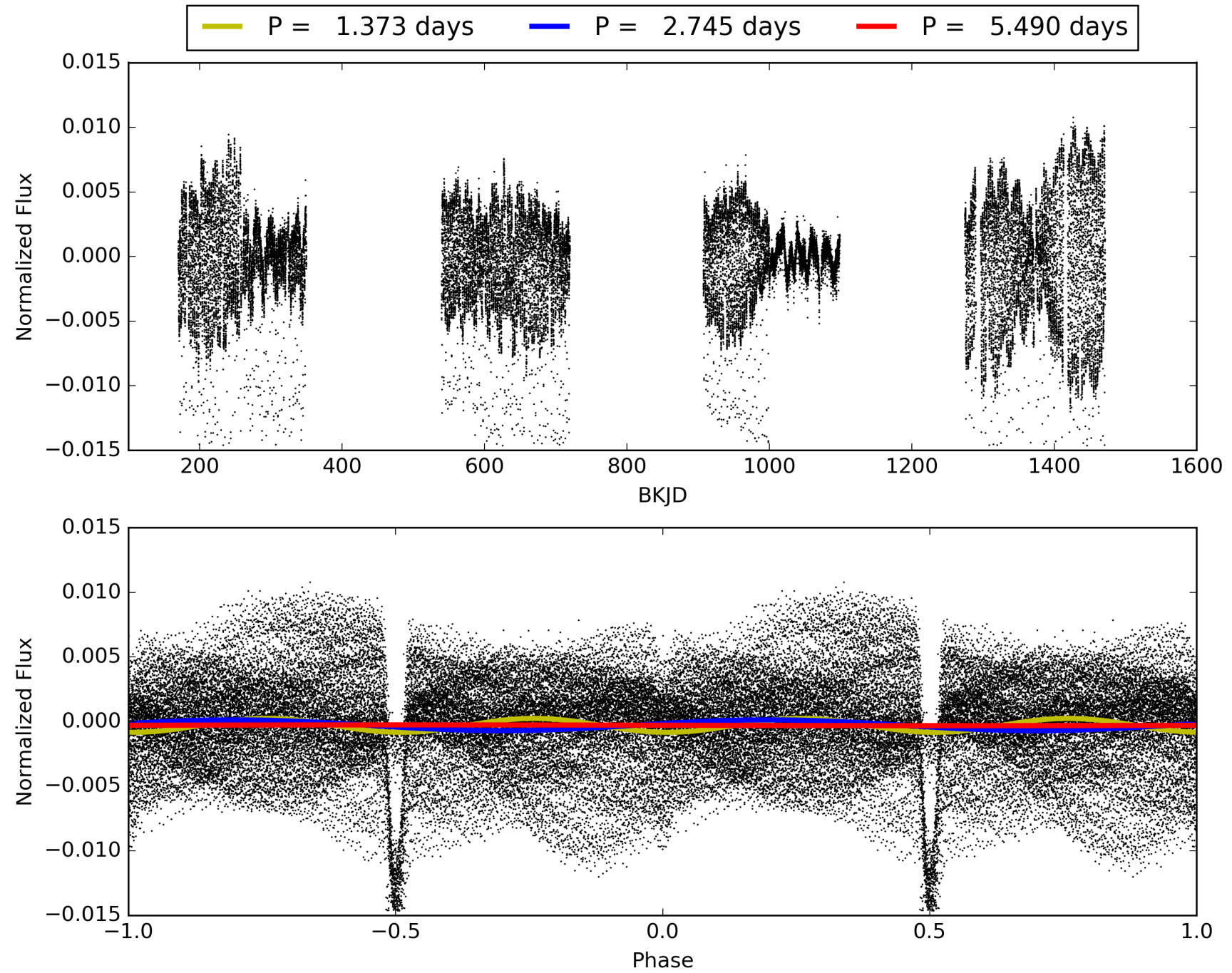
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011756821-02, PDC Light Curves

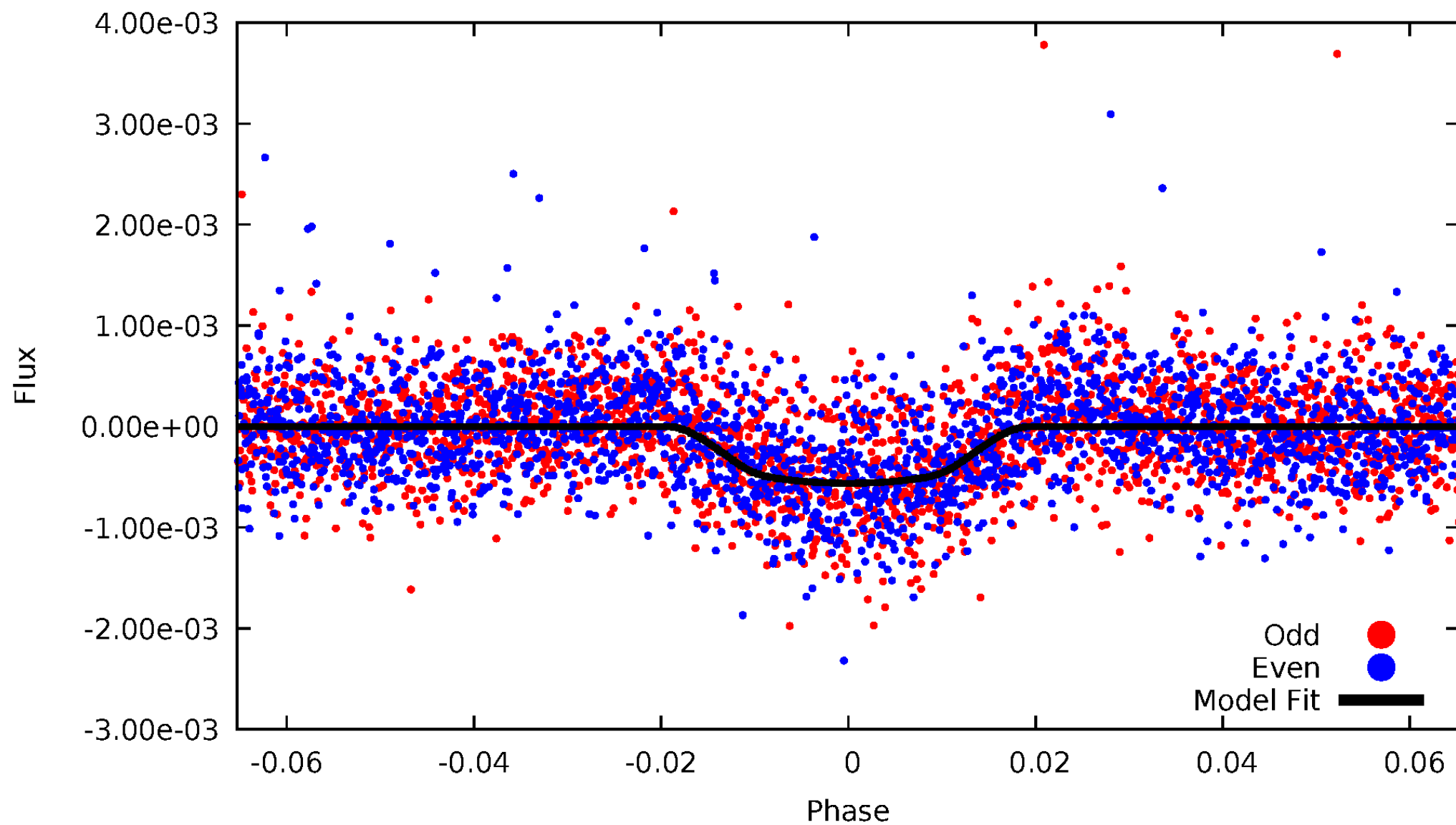


TCE 011756821-02



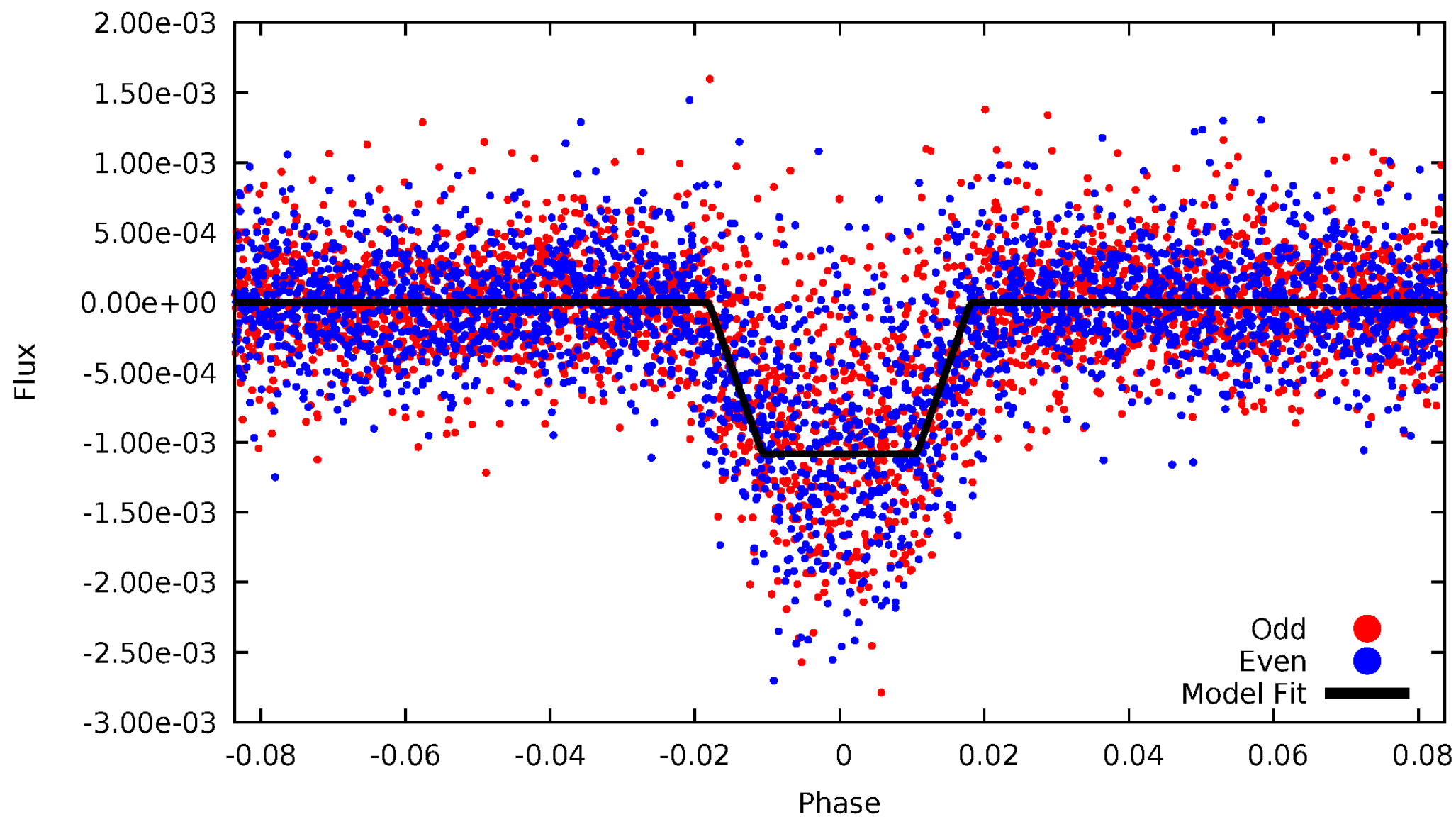
DV Odd/Even

TCE 011756821-02



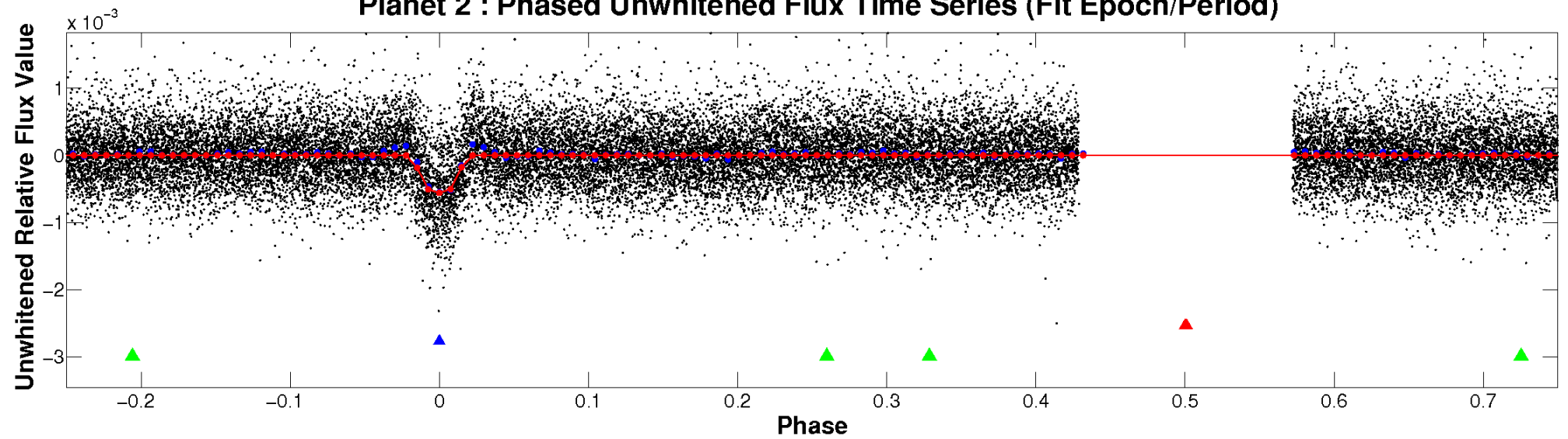
ALT Odd/Even

TCE 011756821-02

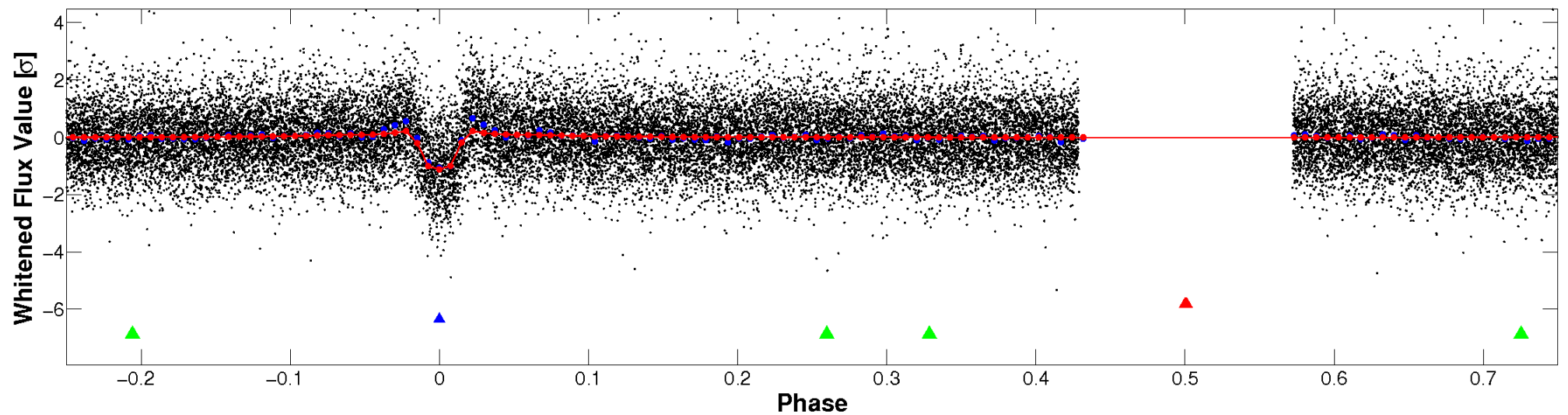


Non-Whitened Vs. Whitened Light Curve

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

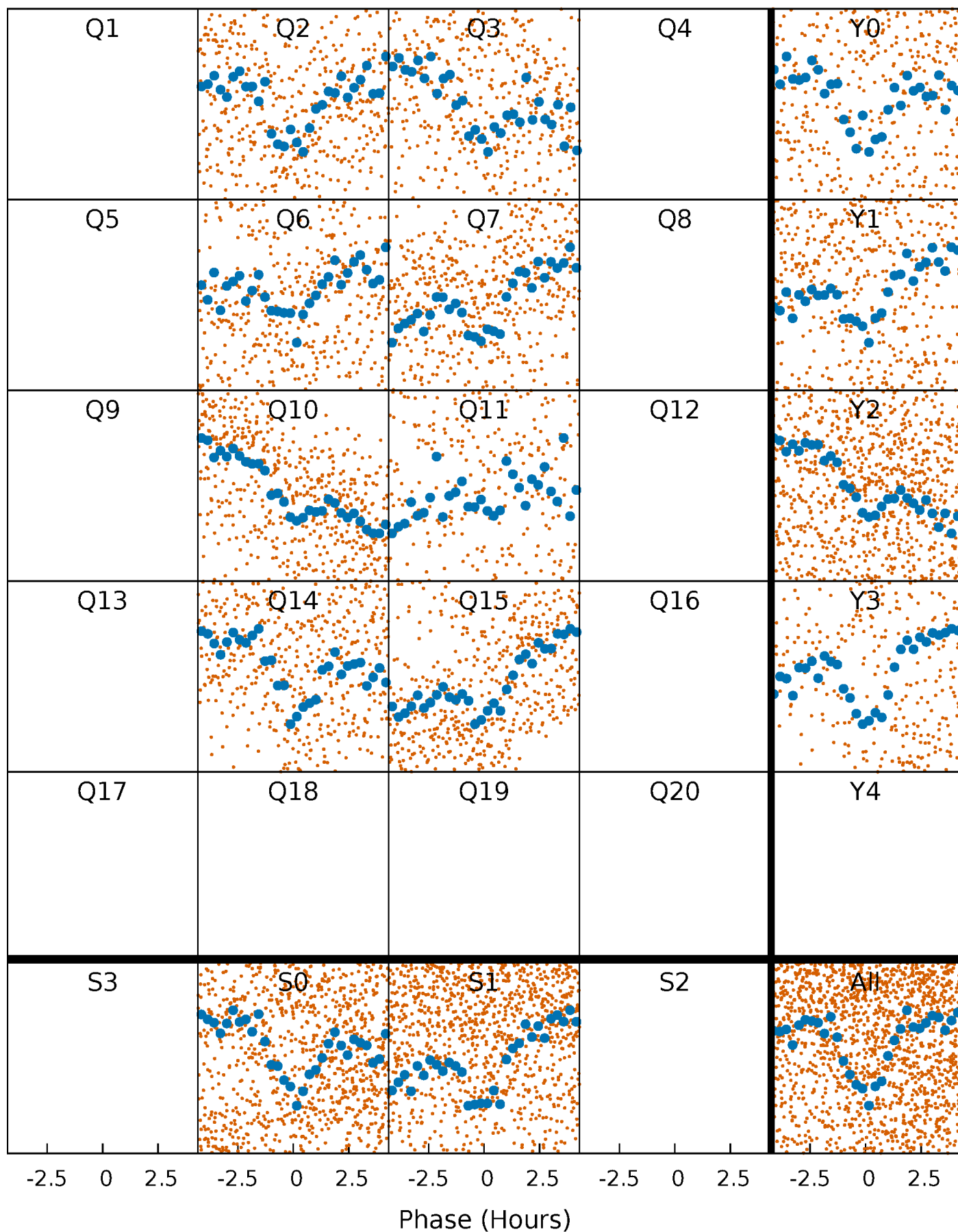


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



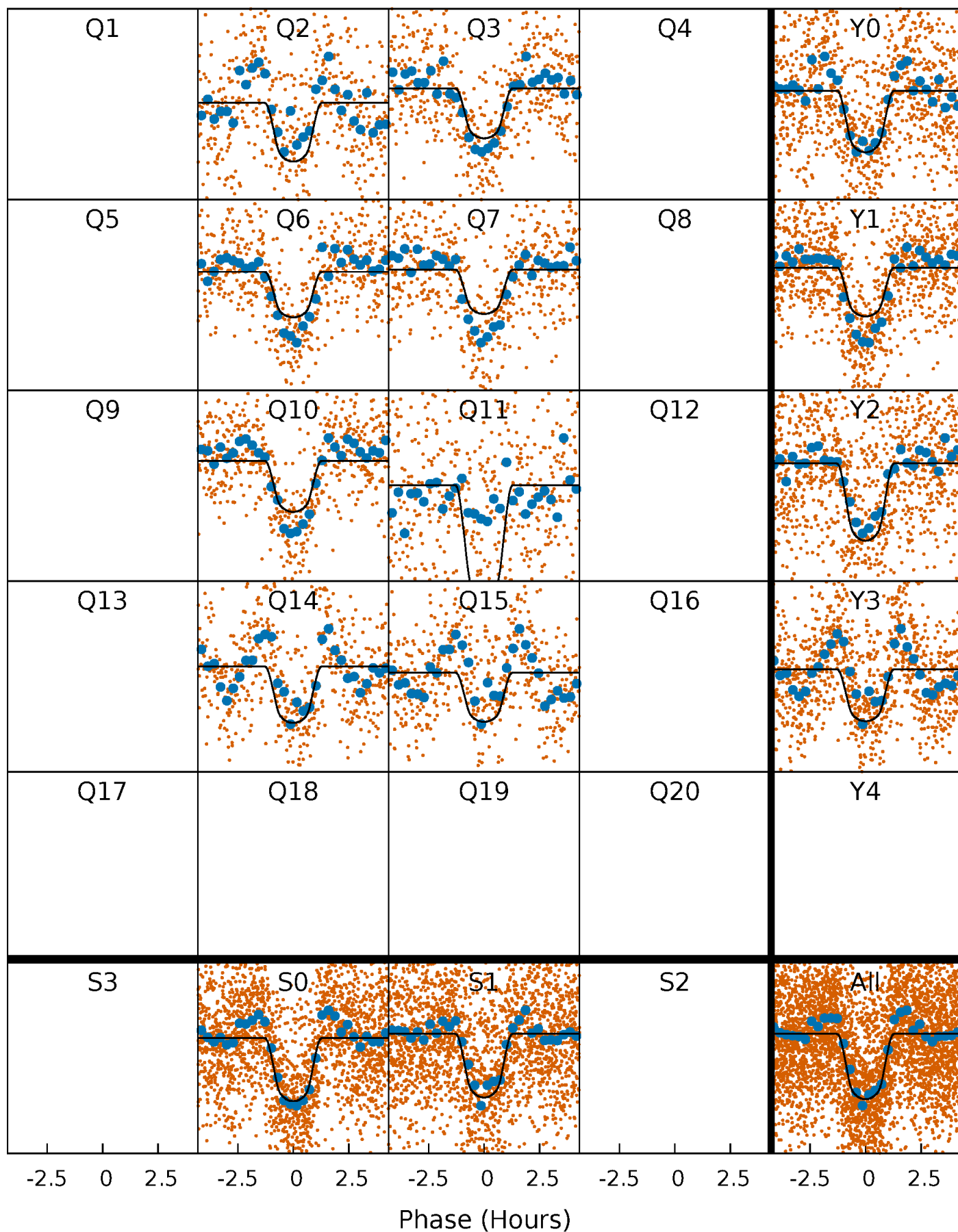
PDC Quarter-Phased Transit Curves

TCE 011756821-02 P= 2.745102 Days $T_0=132.249077$ (BKJD)



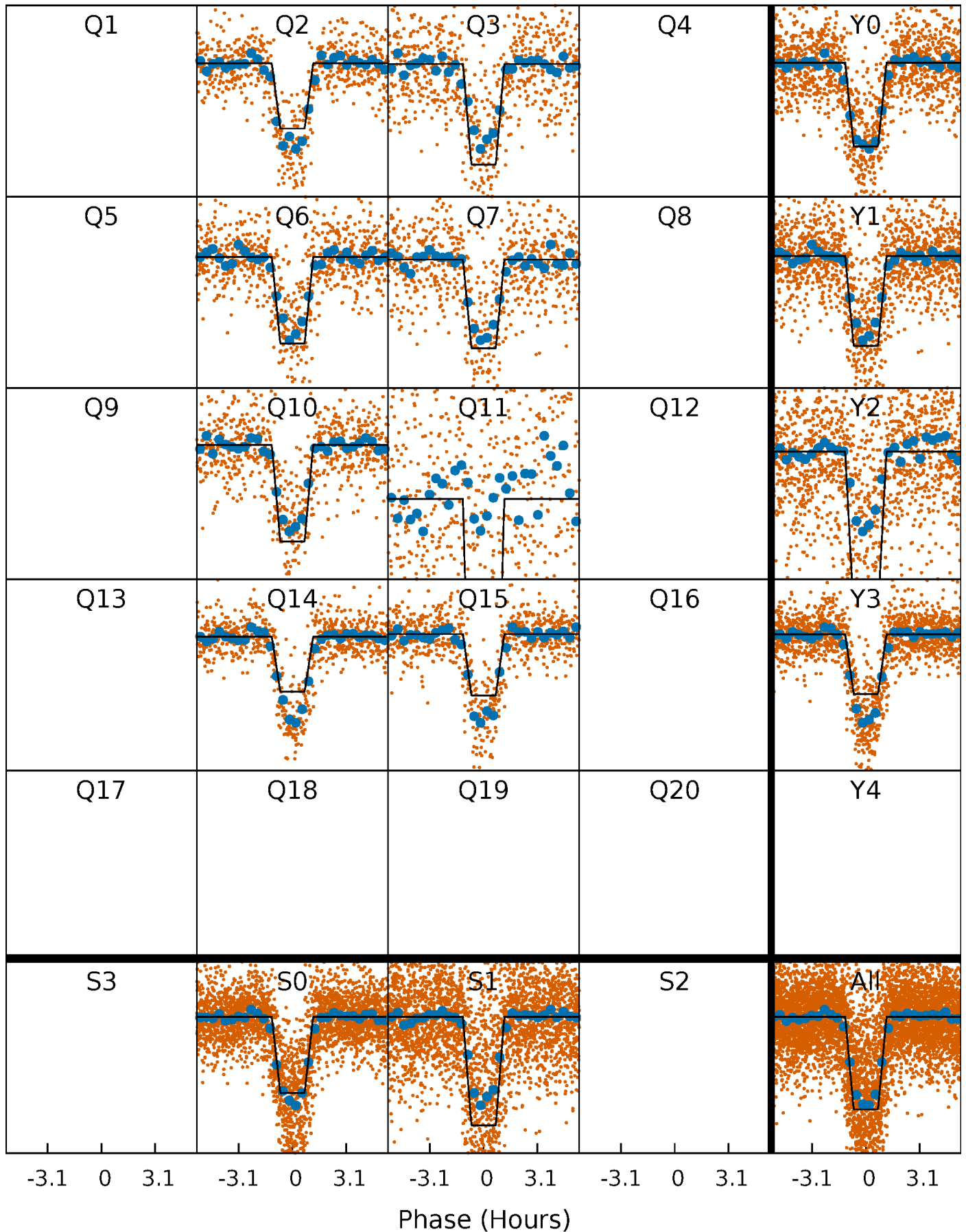
DV Quarter-Phased Transit Curves

TCE 011756821-02 P= 2.745102 Days $T_0=132.249077$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

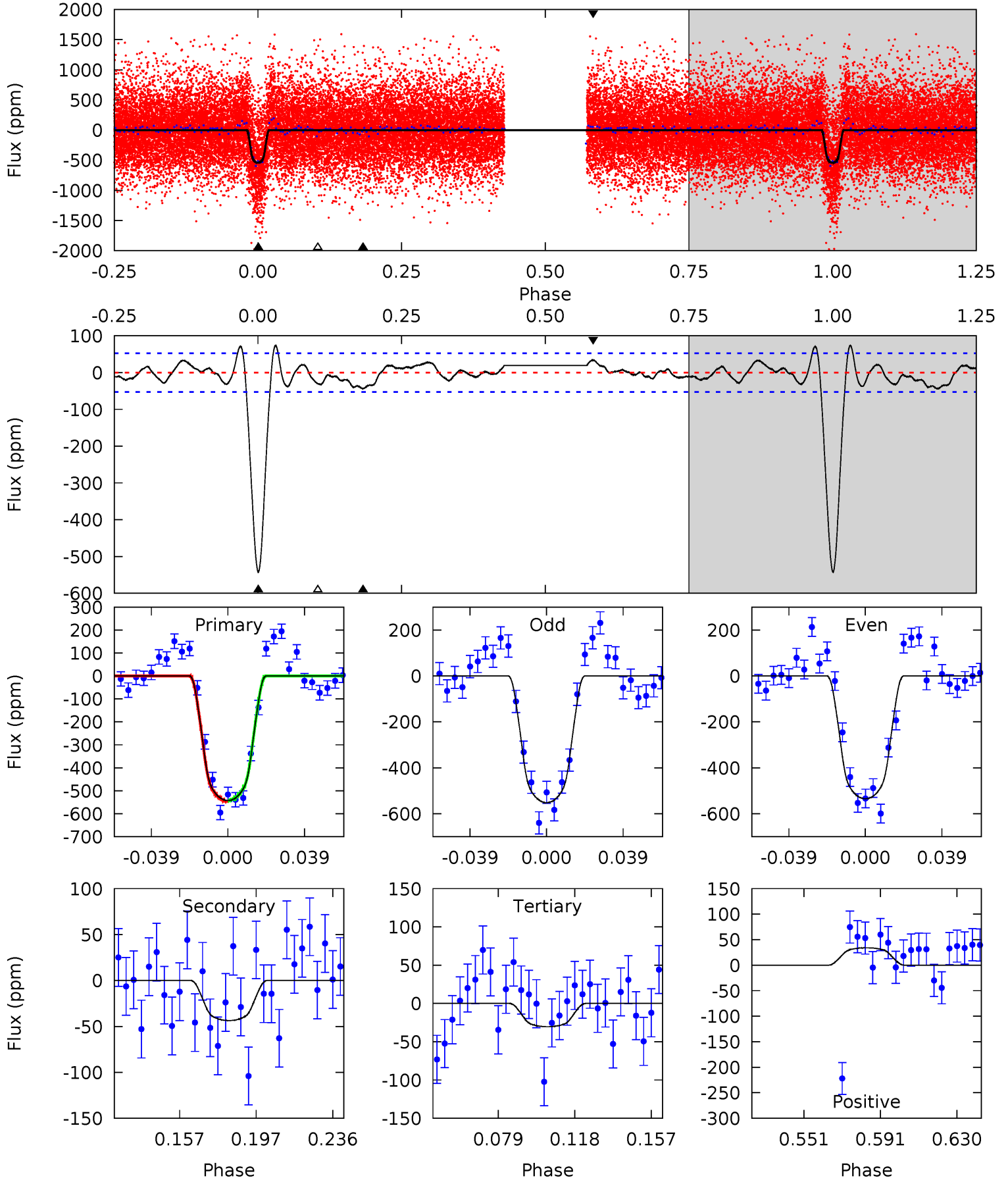
TCE 011756821-02 $P = 2.745118$ Days $T_0 = 132.246820$ (BKJD)



DV Model-Shift Uniqueness Test

011756821-02, P = 2.745102 Days, E = 132.249077 Days

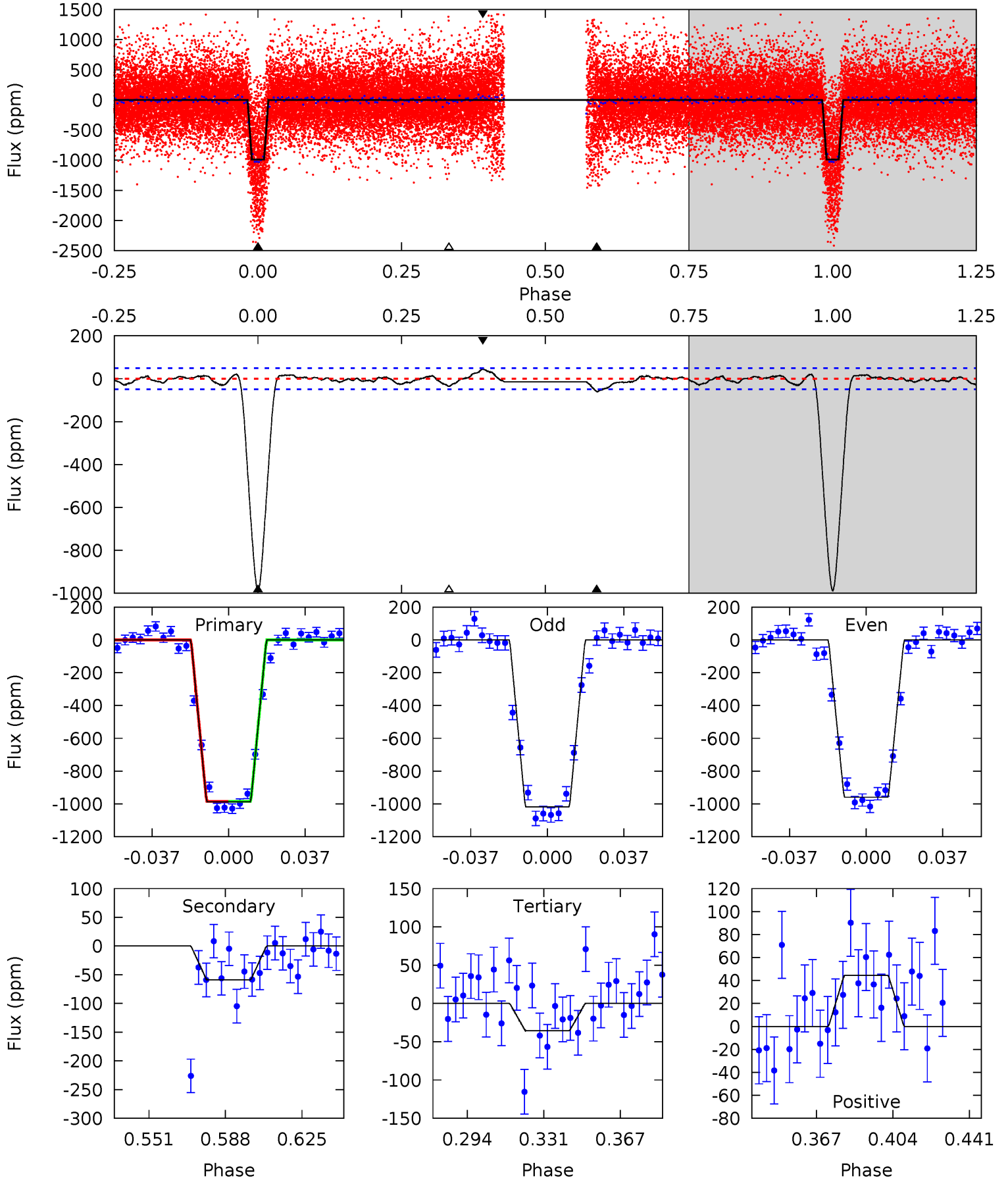
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.0	3.94	2.74	3.08	4.76	2.06	1.42	46.3	46.0	1.20	0.87	0.78	0.96	0.12	0.22



Alt Model-Shift Uniqueness Test

011756821-02, P = 2.745118 Days, E = 132.246820 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
95.3	5.67	3.44	4.28	4.77	2.09	1.38	91.8	91.0	2.23	1.39	2.84	0.95	0.04	0.00



Stellar Parameters For KIC 011756821

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4608^{+163}_{-163}	$4.648^{+0.024}_{-0.056}$	$-0.040^{+0.300}_{-0.300}$	$0.658^{+0.069}_{-0.040}$	$0.730^{+0.051}_{-0.077}$	$3.606^{+0.423}_{-0.823}$
	+4%/-4%	+1%/-1%	+750%/-750%	+10%/-6%	+7%/-11%	+12%/-23%
Source	KIC0	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 011756821-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-44 ± 11	$1.97^{+0.34}_{-0.35}$	1255^{+49}_{-49}	2879^{+203}_{-181}	$7.179^{+3.947}_{-2.534}$
Alt.	-59 ± 10	$2.41^{+0.34}_{-0.30}$	1258^{+50}_{-44}	2844^{+150}_{-145}	$6.473^{+2.458}_{-1.941}$

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

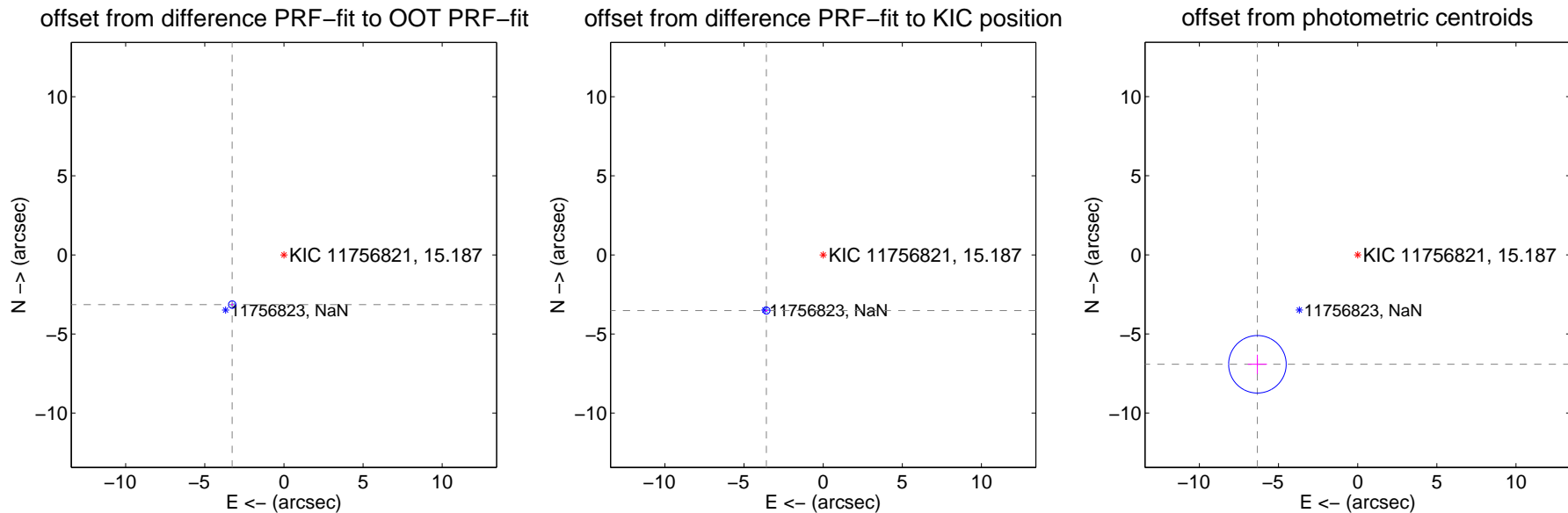
DV Centroid Data

Supplemental centroid analysis for 011756821-02. Kepler magnitude: 15.19. Transit SNR 29.89

There are 8 quarters with good PRF difference image offsets

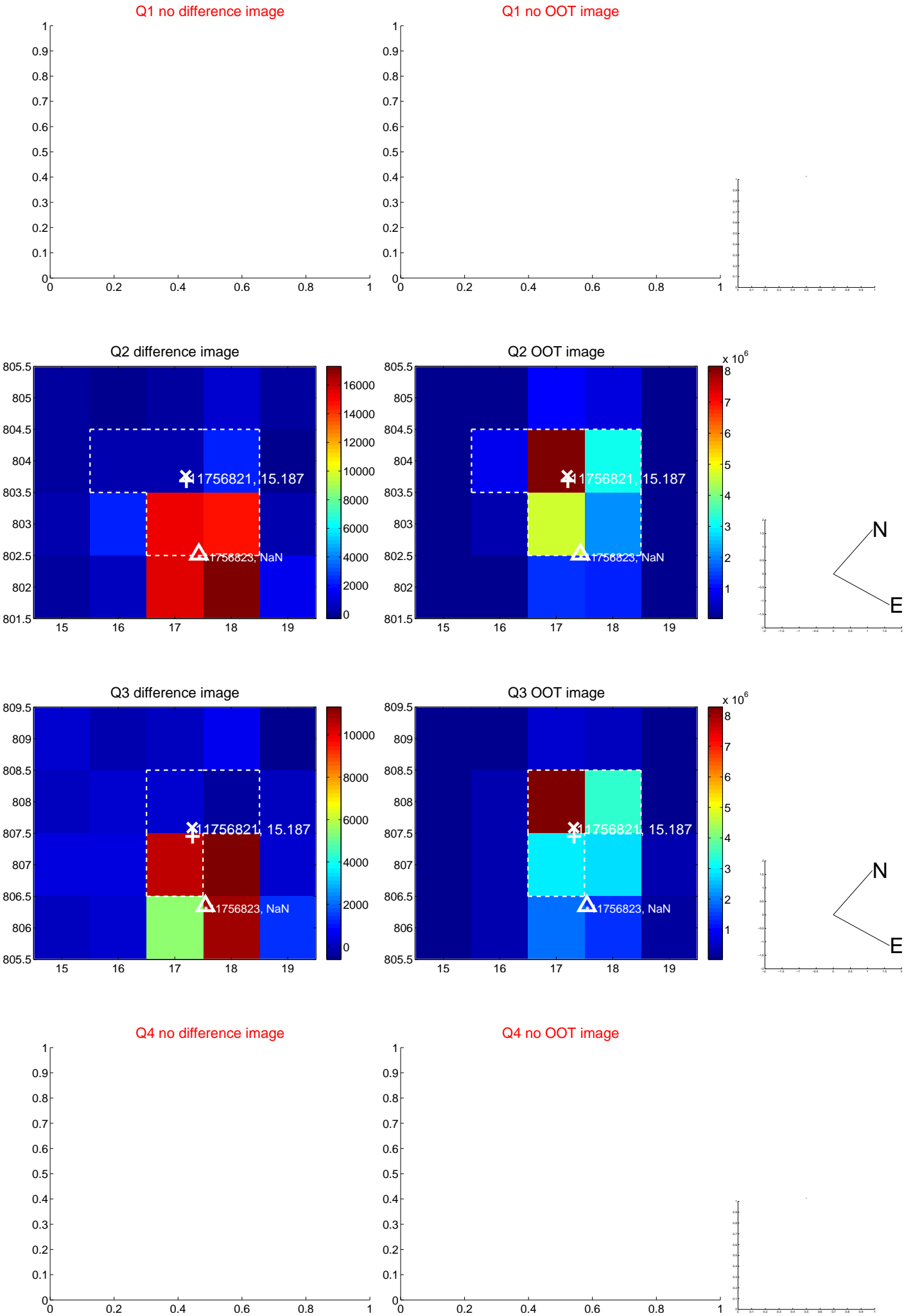
The direct PRF centroid is offset from the target star catalog position by about 0.64 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.535 ± 0.078	57.93	3.270 ± 0.075	-3.143 ± 0.072
PRF-fit source offset from KIC position	5.026 ± 0.075	66.86	3.589 ± 0.072	-3.519 ± 0.078
photometric centroid source offset	9.38 ± 0.61	15.48	6.34 ± 0.60	-6.92 ± 0.61



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.

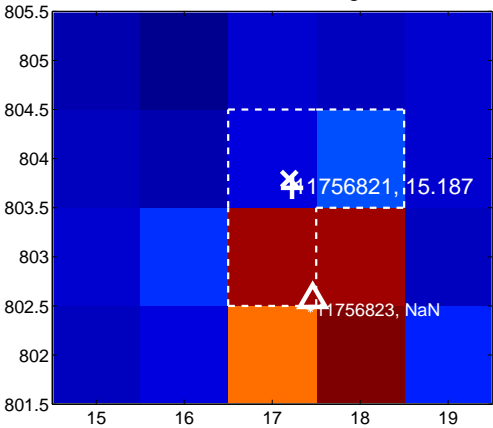
Q5 no difference image



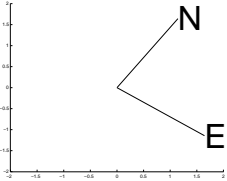
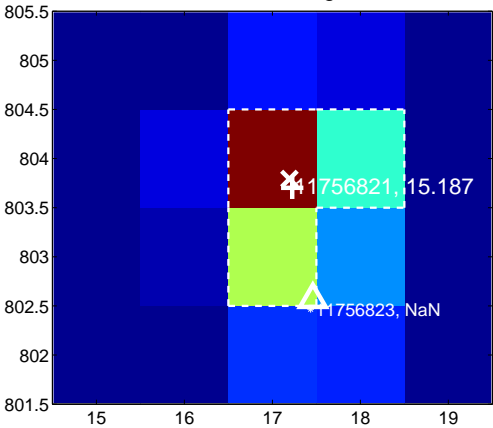
Q5 no OOT image



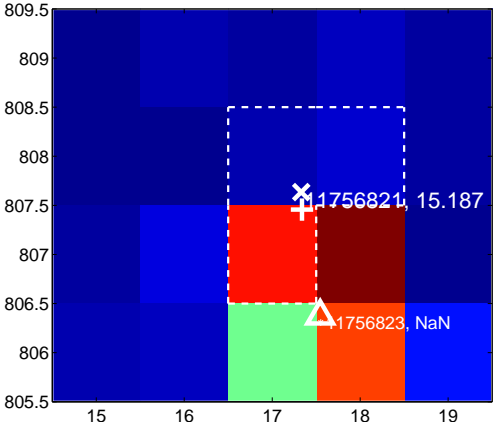
Q6 difference image



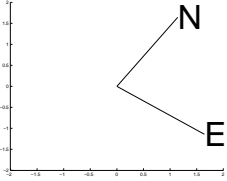
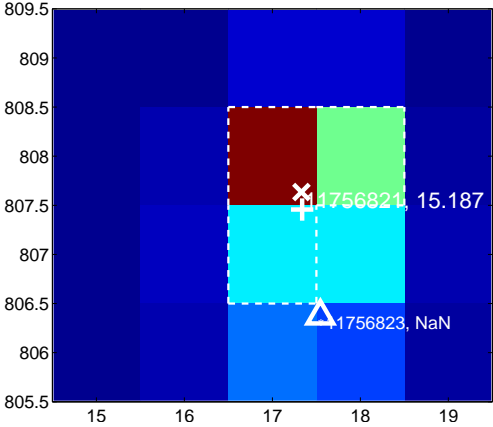
Q6 OOT image



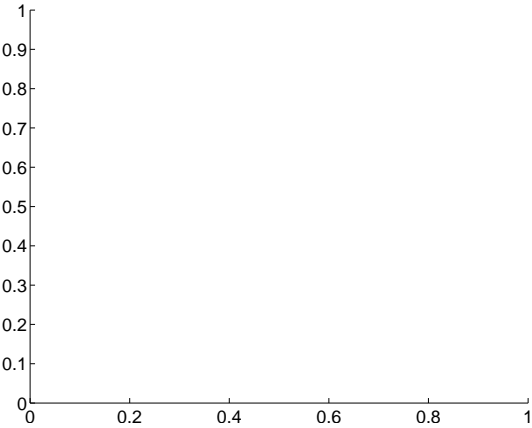
Q7 difference image



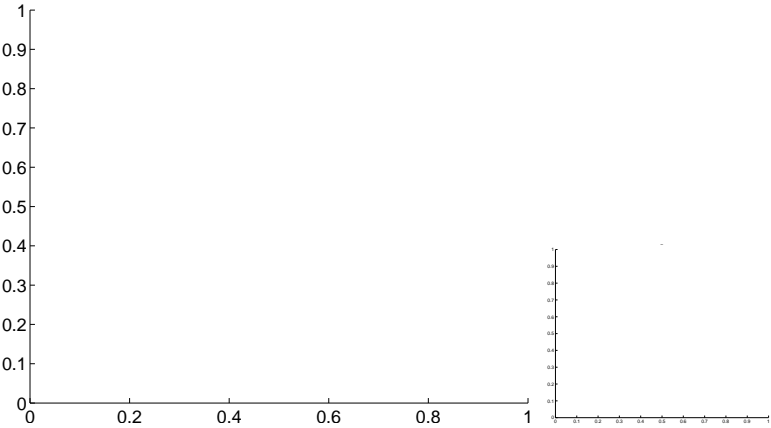
Q7 OOT image



Q8 no difference image



Q8 no OOT image

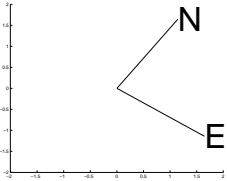
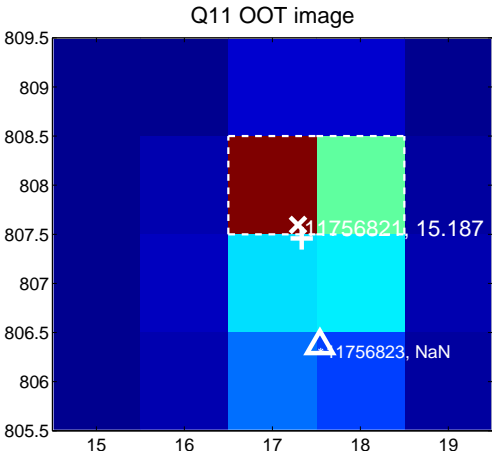
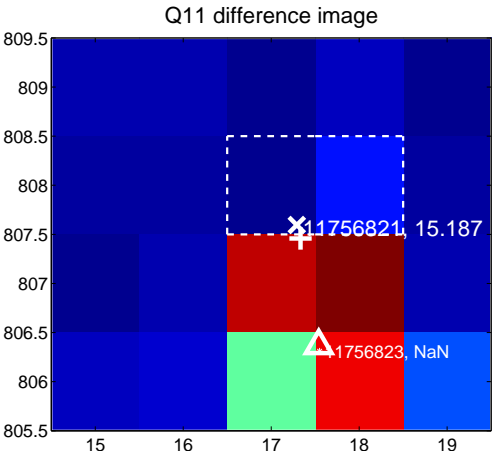
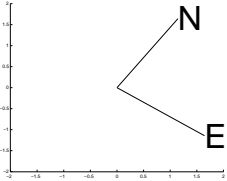
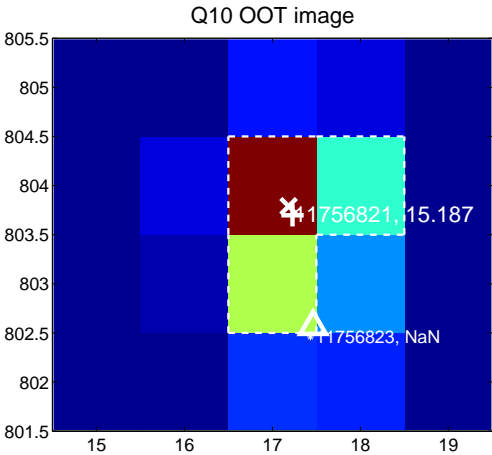
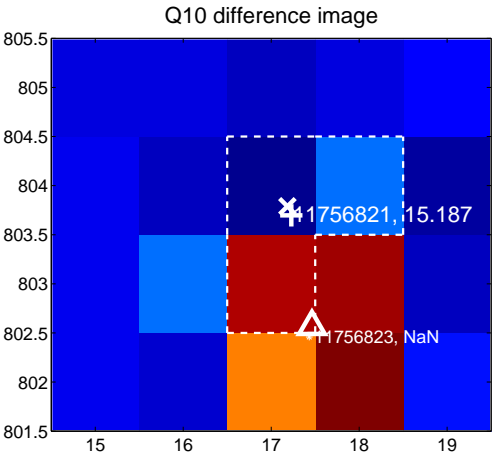


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

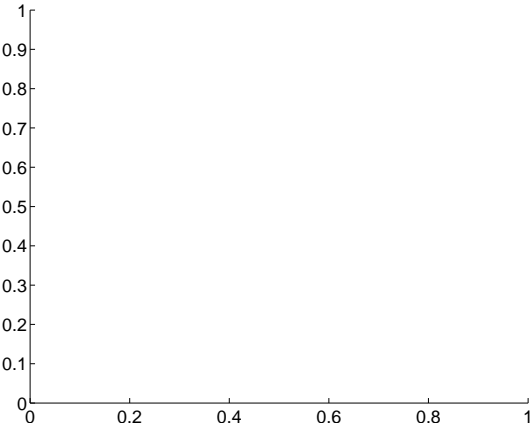
Q9 no difference image



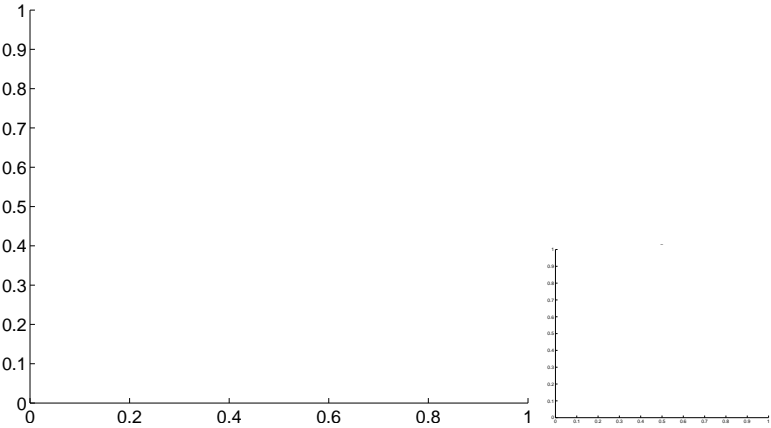
Q9 no OOT image



Q12 no difference image



Q12 no OOT image



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

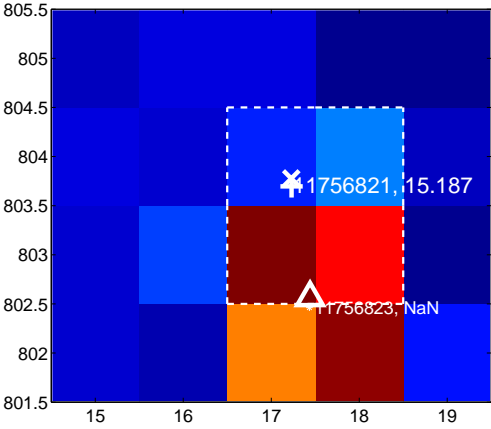
Q13 no difference image



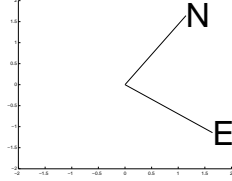
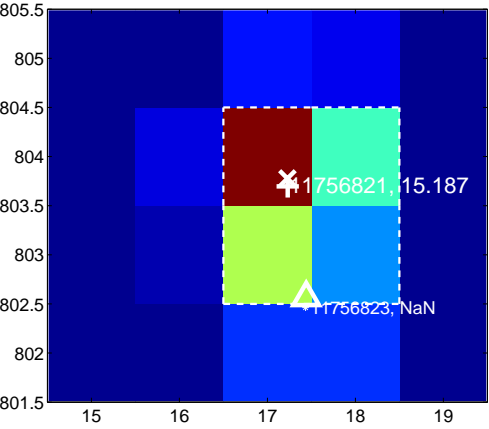
Q13 no OOT image



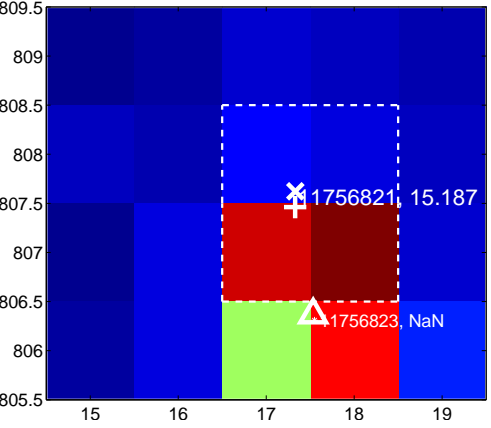
Q14 difference image



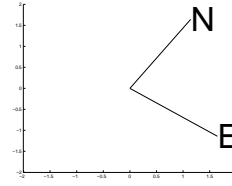
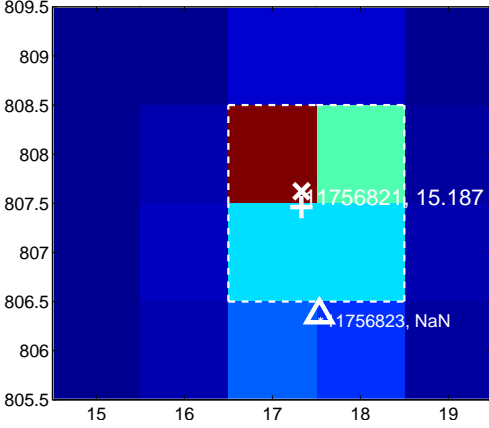
Q14 OOT image



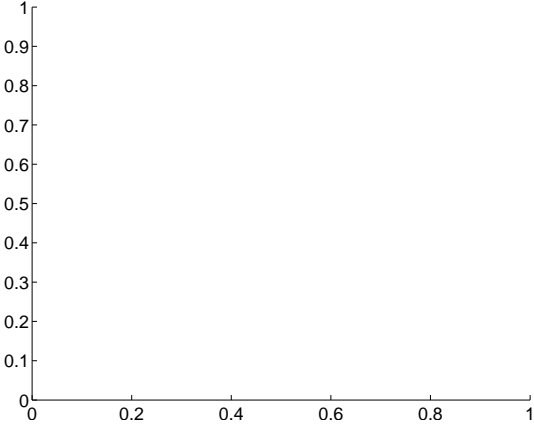
Q15 difference image



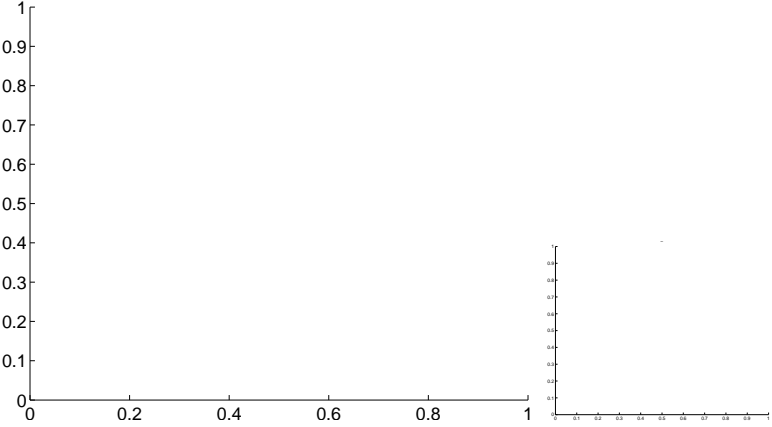
Q15 OOT image



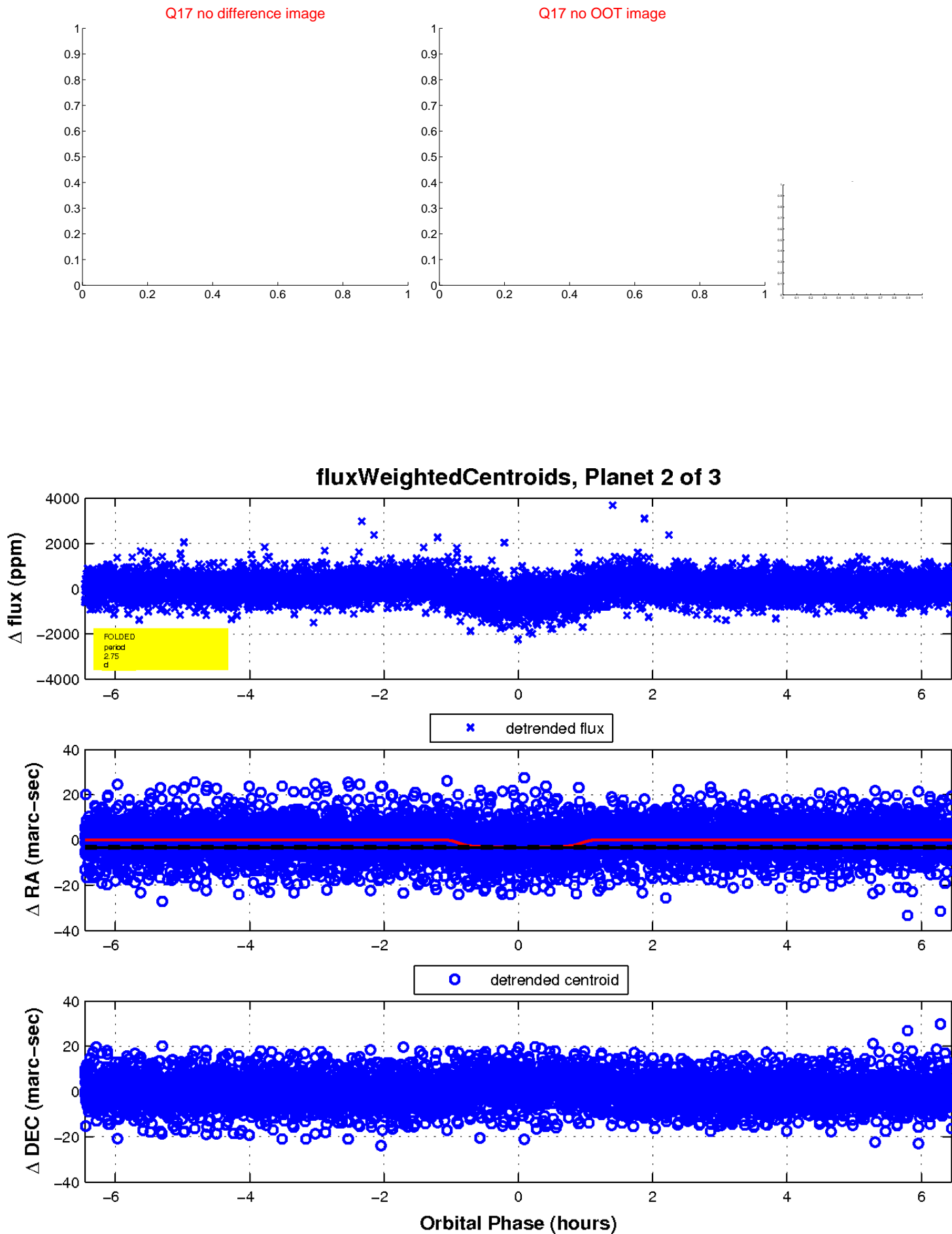
Q16 no difference image



Q16 no OOT image

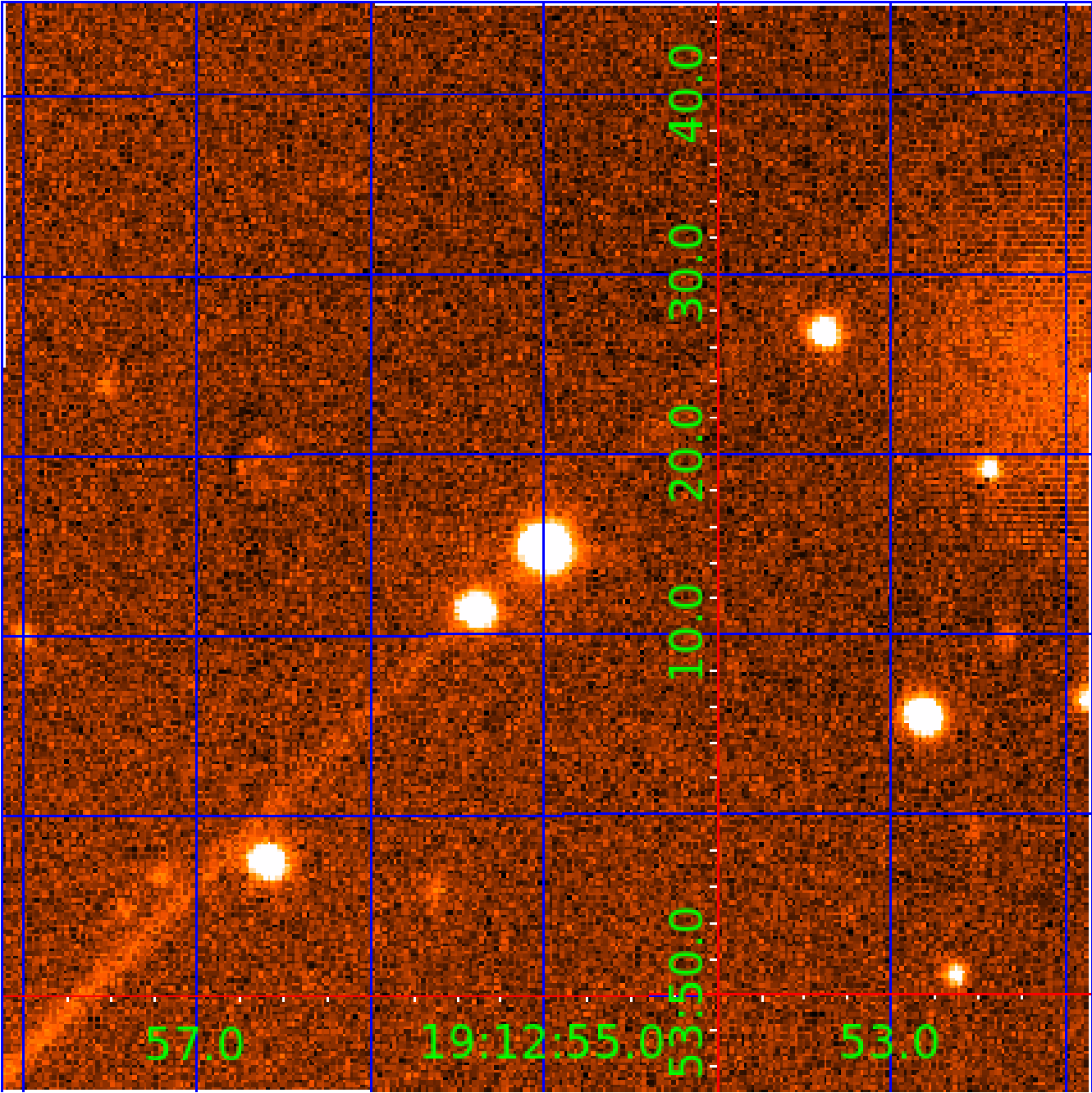


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011756821

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})
011756821-01	OBS	6088.01	2.745107	133.621711	13685.2	2.995	732.3	439.3	0.66	4608	9.30	150.32
011756821-02	OBS	No	2.745102	132.249077	562.6	2.151	26.1	29.9	0.66	4608	1.93	150.32
011756821-03	OBS	No	415.788492	262.170875	1335.4	1.603	10.0	6.2	0.66	4608	2.61	0.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011756821-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—HAS_SEC_TCE—CENT_KIC_POS
011756821-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_KIC_POS
011756821-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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.

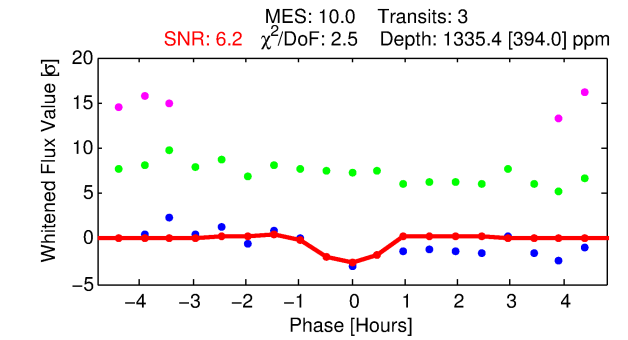
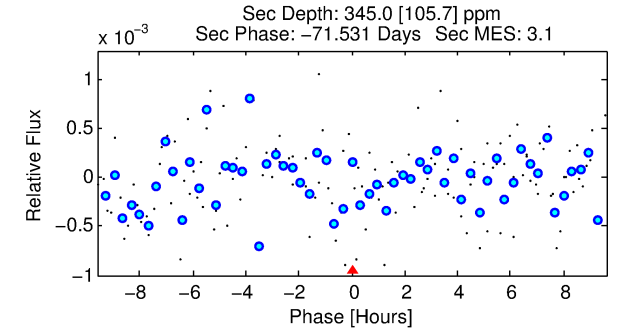
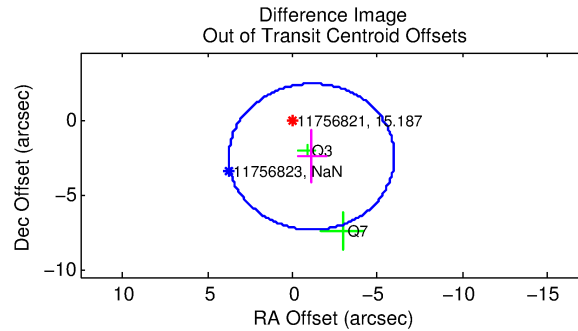
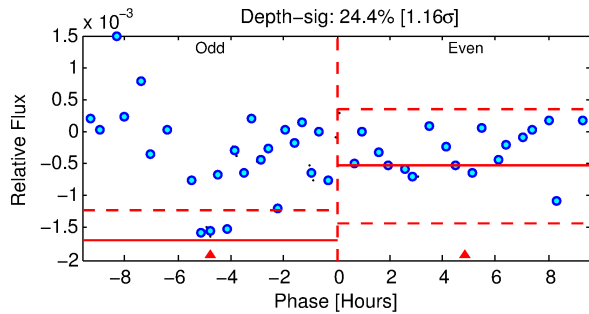
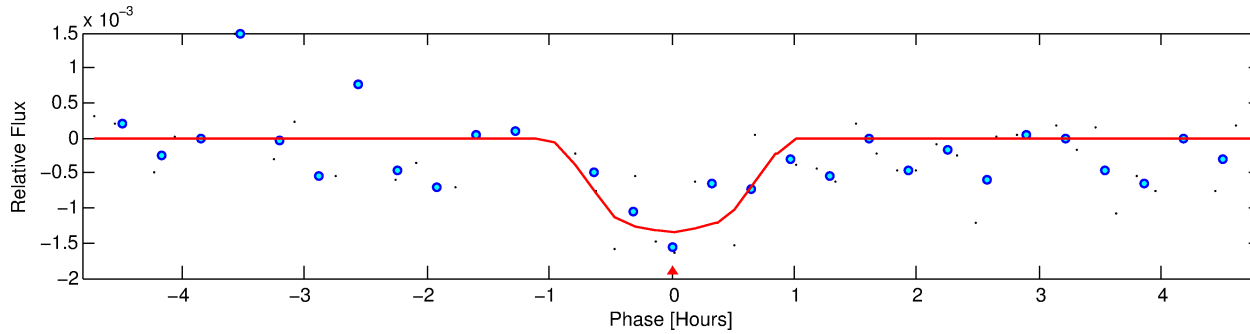
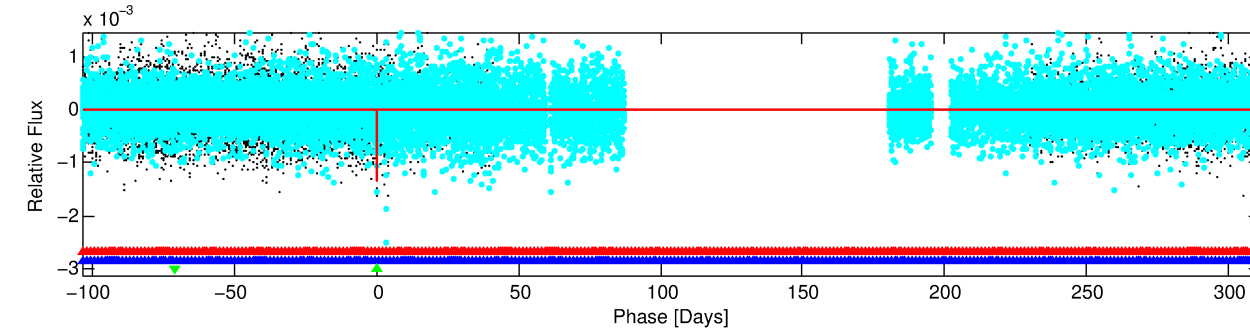
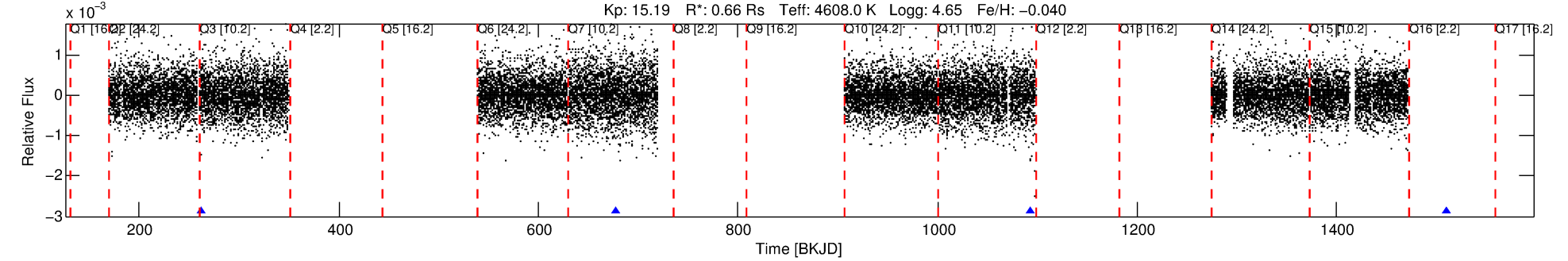
Ephemeris Match Information For 011756821-03

No Significant Match Found

DV One-Page Summary

KIC: 11756821 Candidate: 3 of 3 Period: 415.788 d
KOI: K06088 Corr: No Ephemeris Match

Kp: 15.19 R*: 0.66 Rs Teff: 4608.0 K Logg: 4.65 Fe/H: -0.040



DV Fit Results:

Period = 415.78849 [0.00826] d
Epoch = 262.1709 [0.0085] BKJD
Rp/R* = 0.0363 [0.1588]
a/R* = 1471.91 [20241.03]
b = 0.72 [9.46]
Seff = 0.19 [0.03]
Teq = 167 [8] K
Rp = 2.61 [11.40] Re
a = 0.9692 [0.0795] AU
Ag = 26264.11 [229951.43] [0.11σ]
Teffp = 3297 [7216] K [0.43σ]

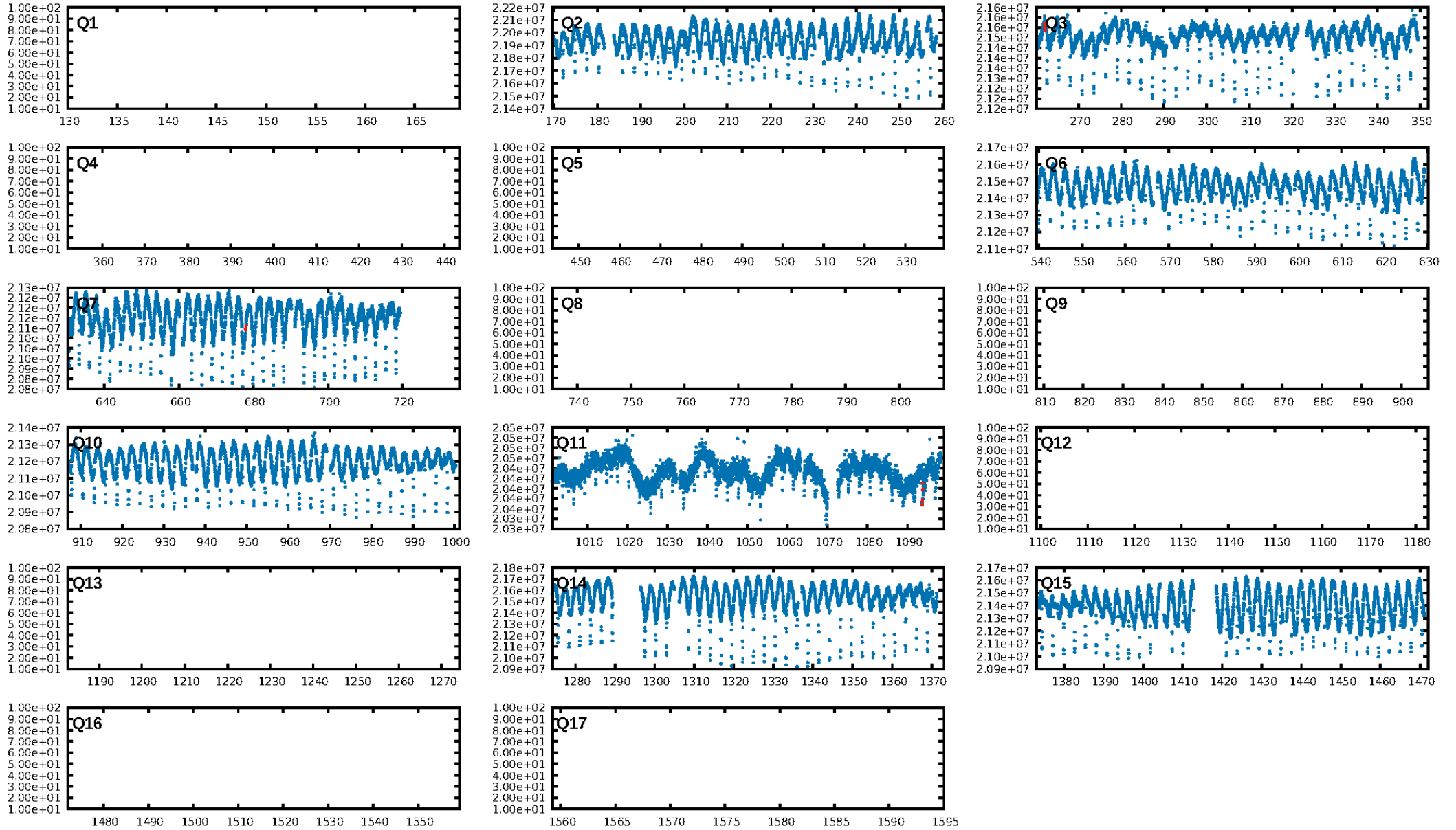
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [2917.82σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 21.7%
Bootstrap-pfa: 4.30e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.375
Centroid-sig: N/A
Centroid-so: 1.453 arcsec [0.70σ]
OotOffset-rm: 2.723 arcsec [1.67σ]
KicOffset-rm: 2.987 arcsec [1.70σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

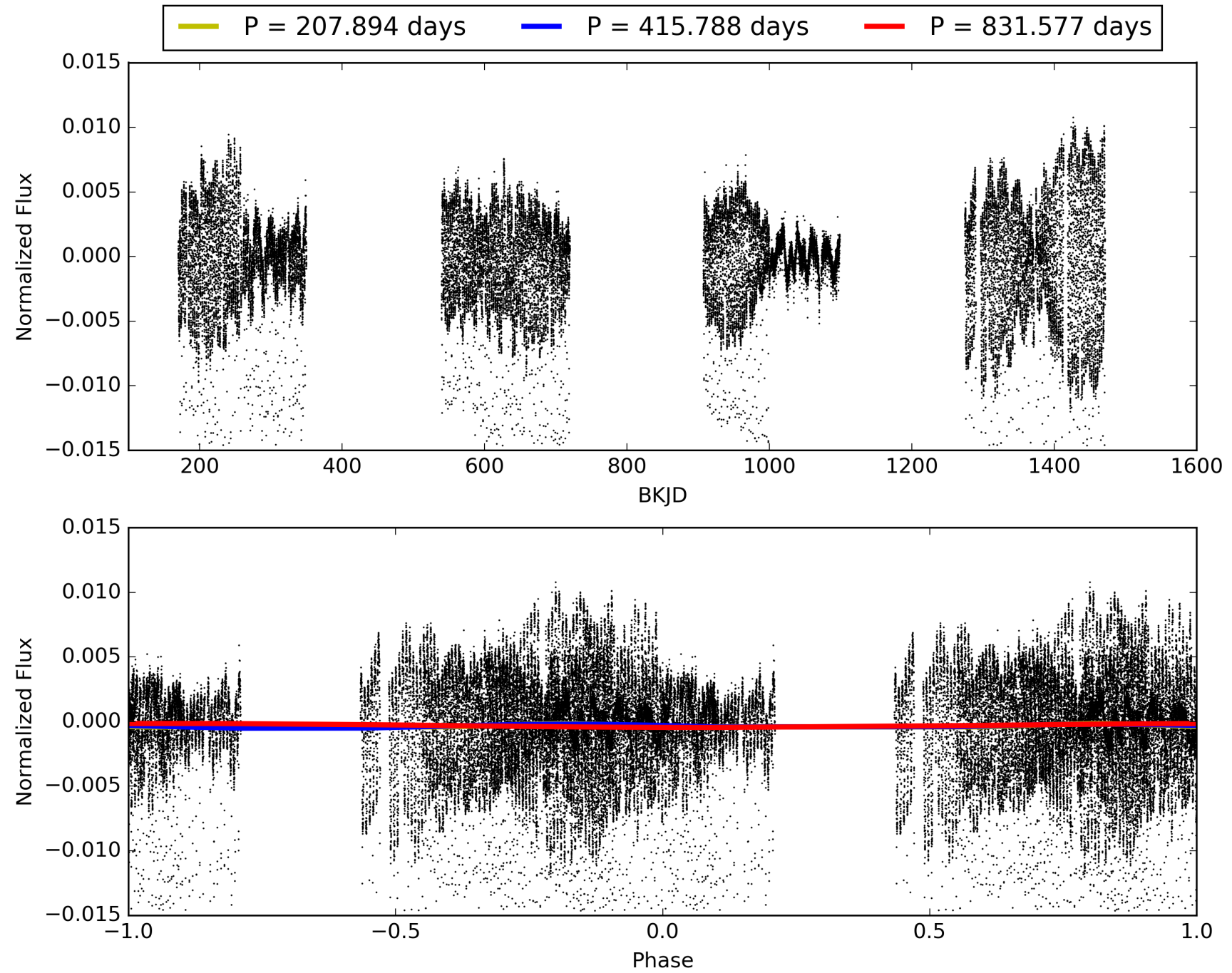
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:02:55 Z

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

TCE 011756821-03, PDC Light Curves

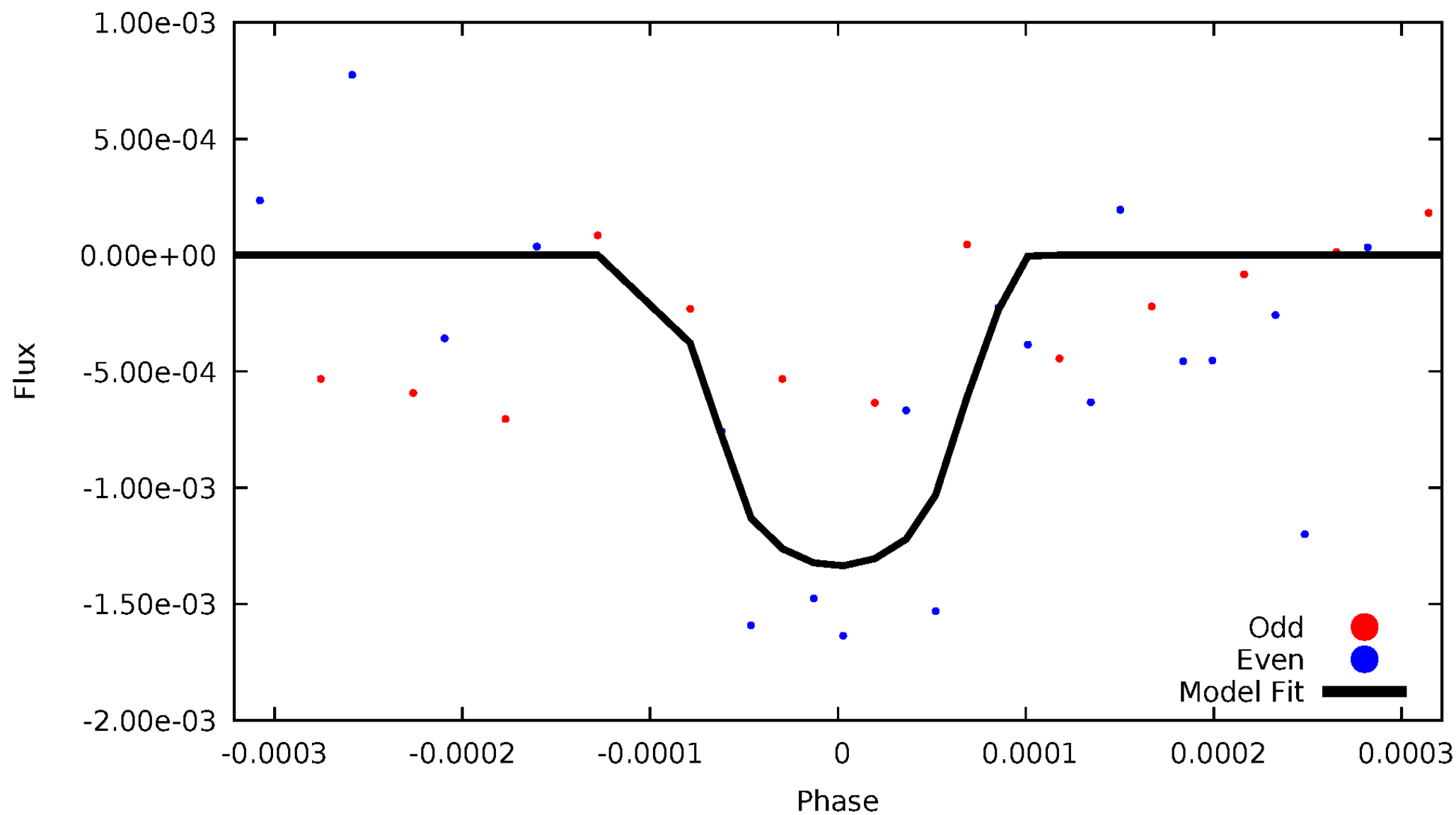


TCE 011756821-03



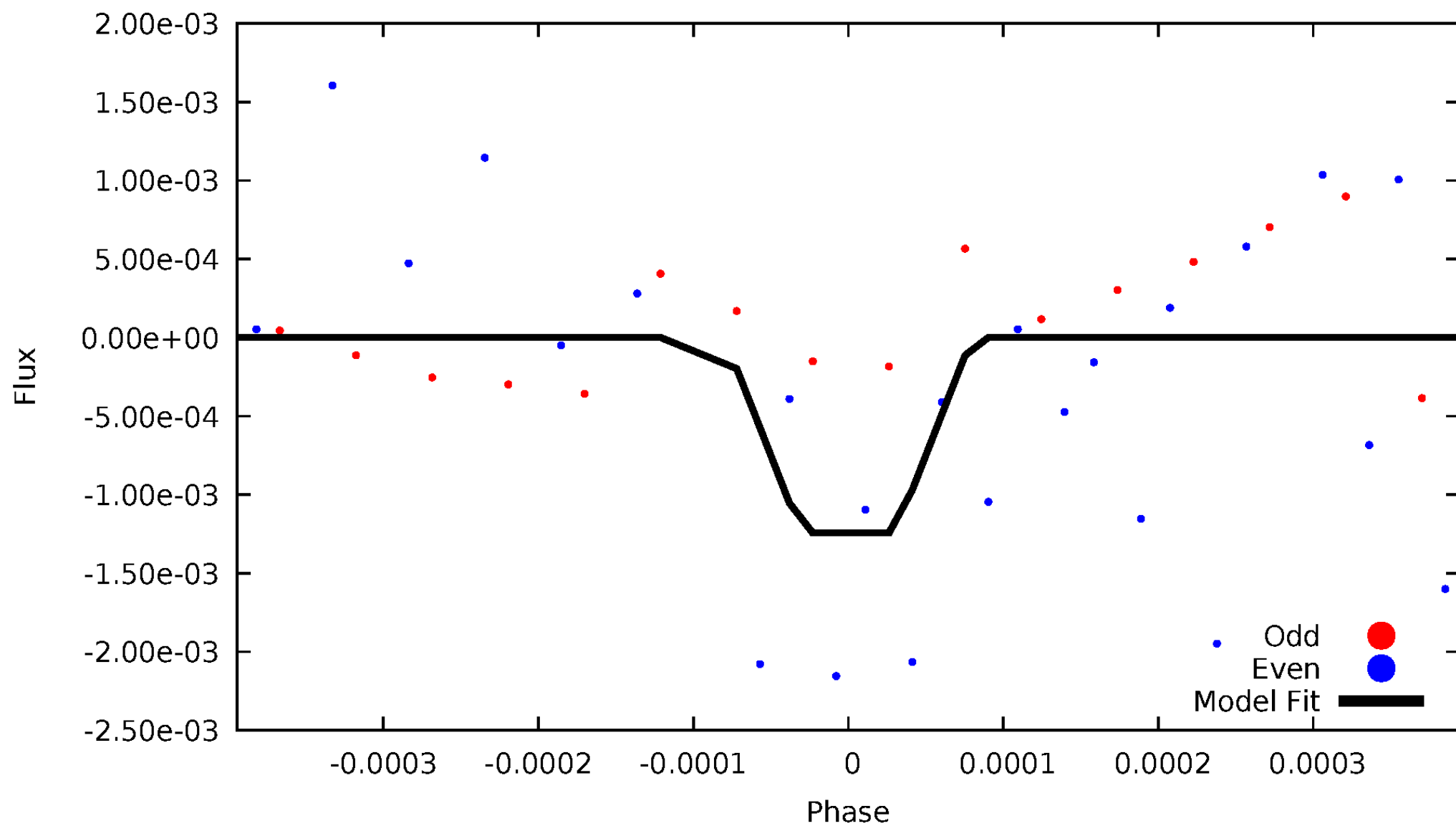
DV Odd/Even

TCE 011756821-03



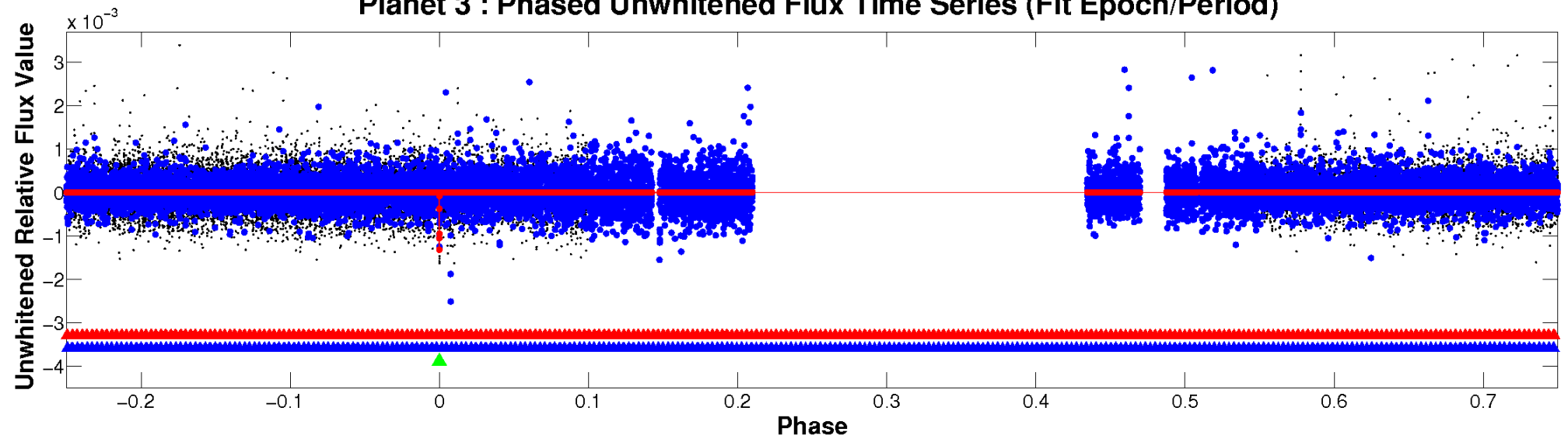
ALT Odd/Even

TCE 011756821-03

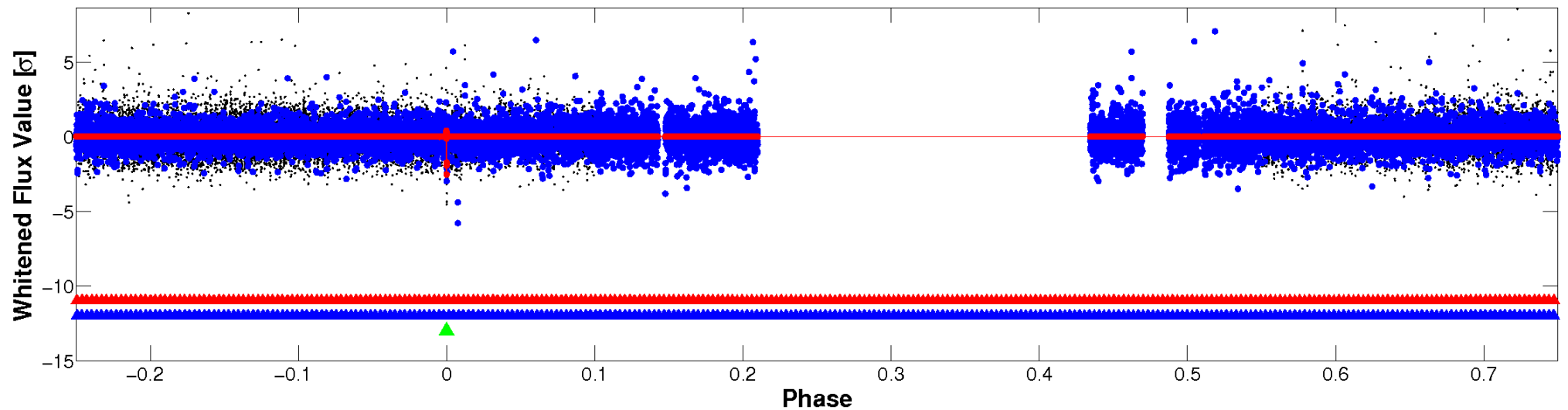


Non-Whitened Vs. Whitened Light Curve

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

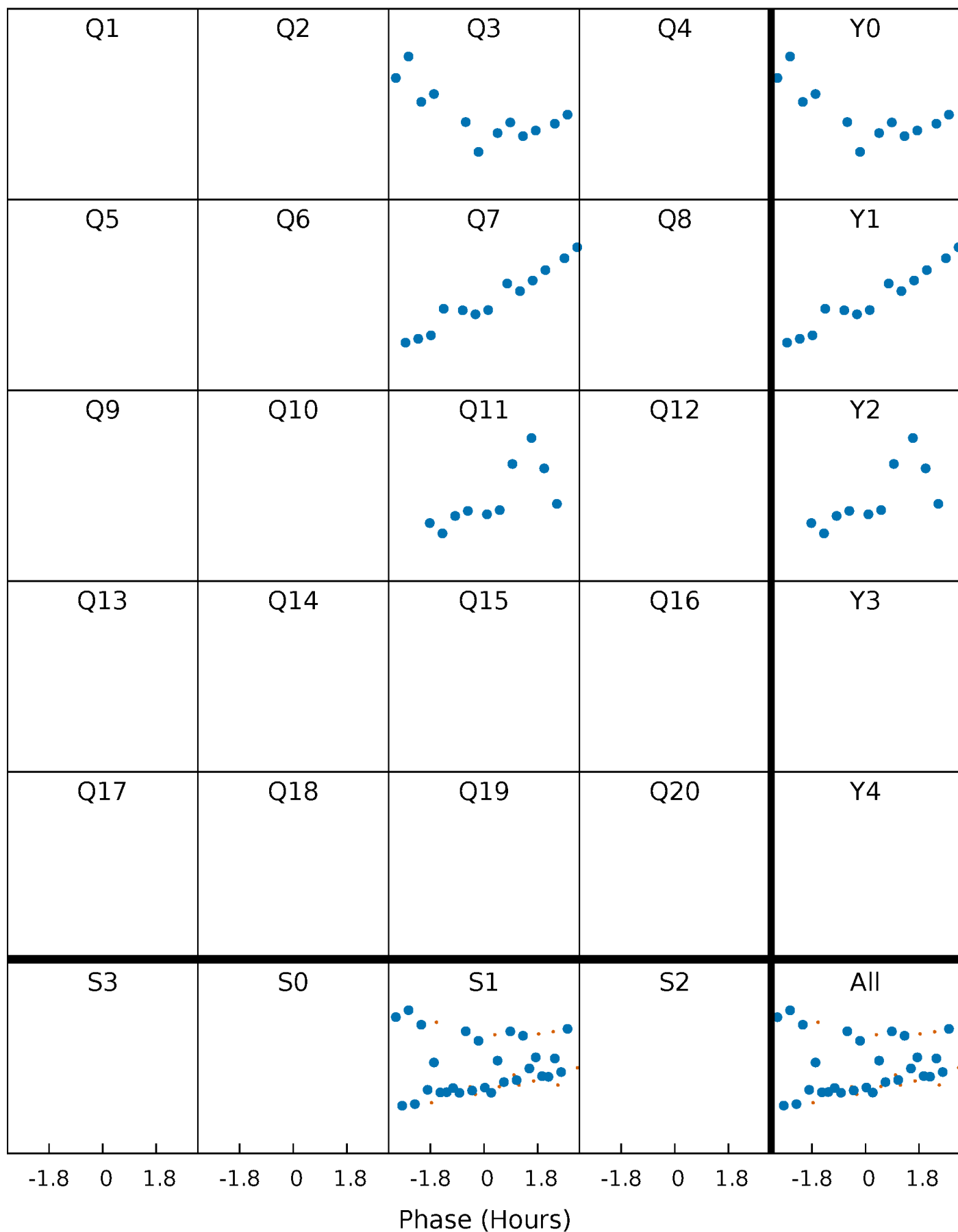


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



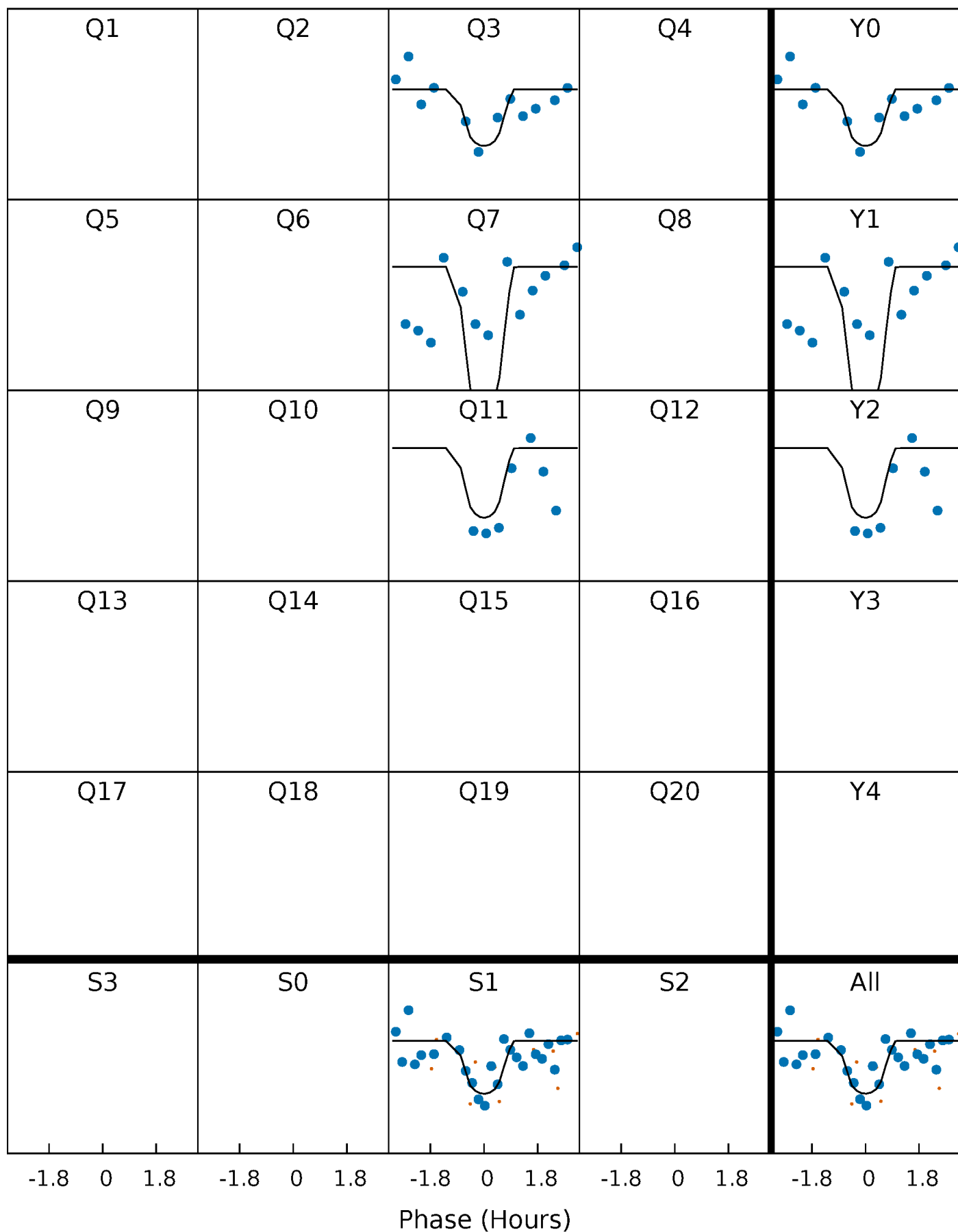
PDC Quarter-Phased Transit Curves

TCE 011756821-03 P=415.788493 Days $T_0=262.170875$ (BKJD)



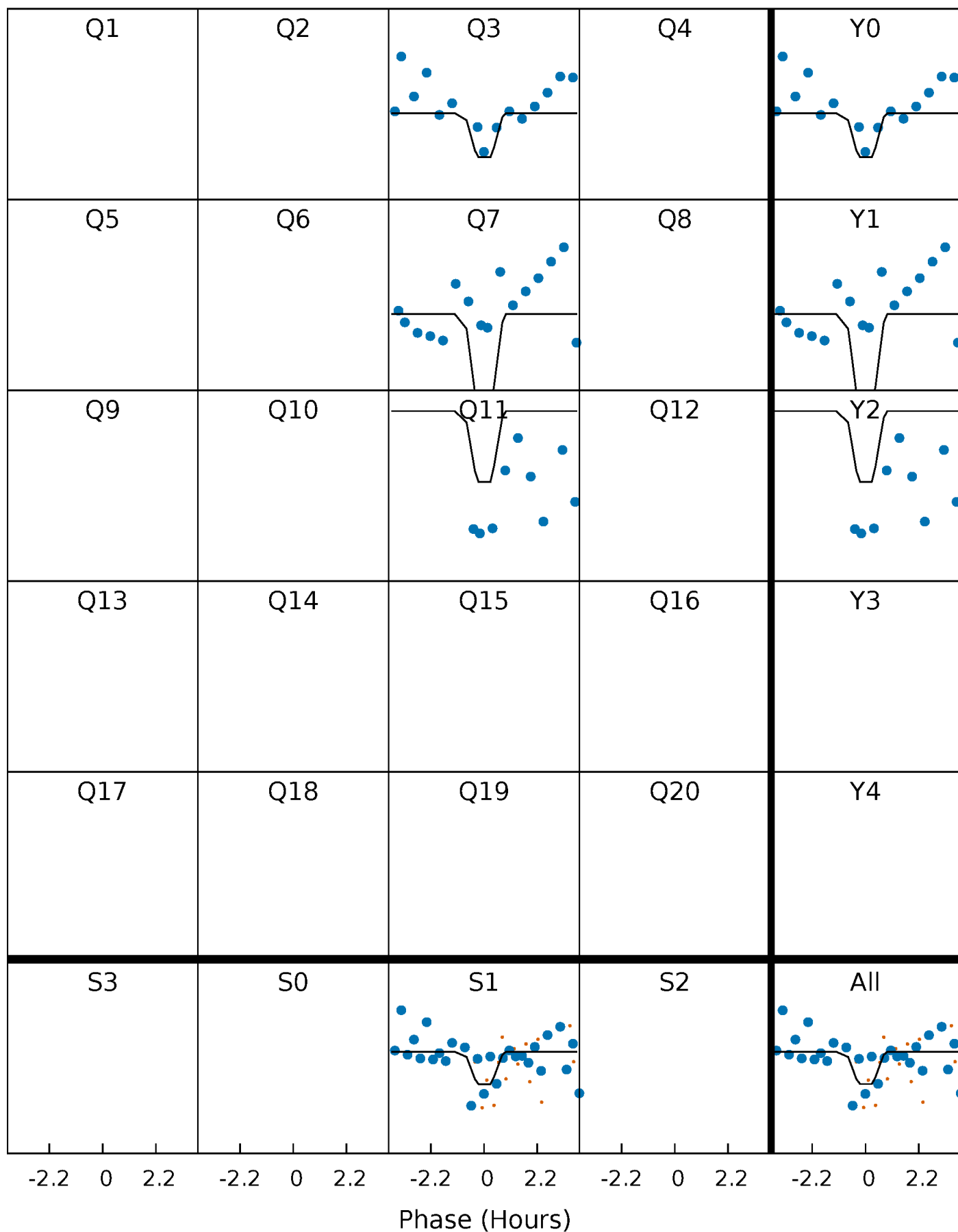
DV Quarter-Phased Transit Curves

TCE 011756821-03 $P=415.788493$ Days $T_0=262.170875$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

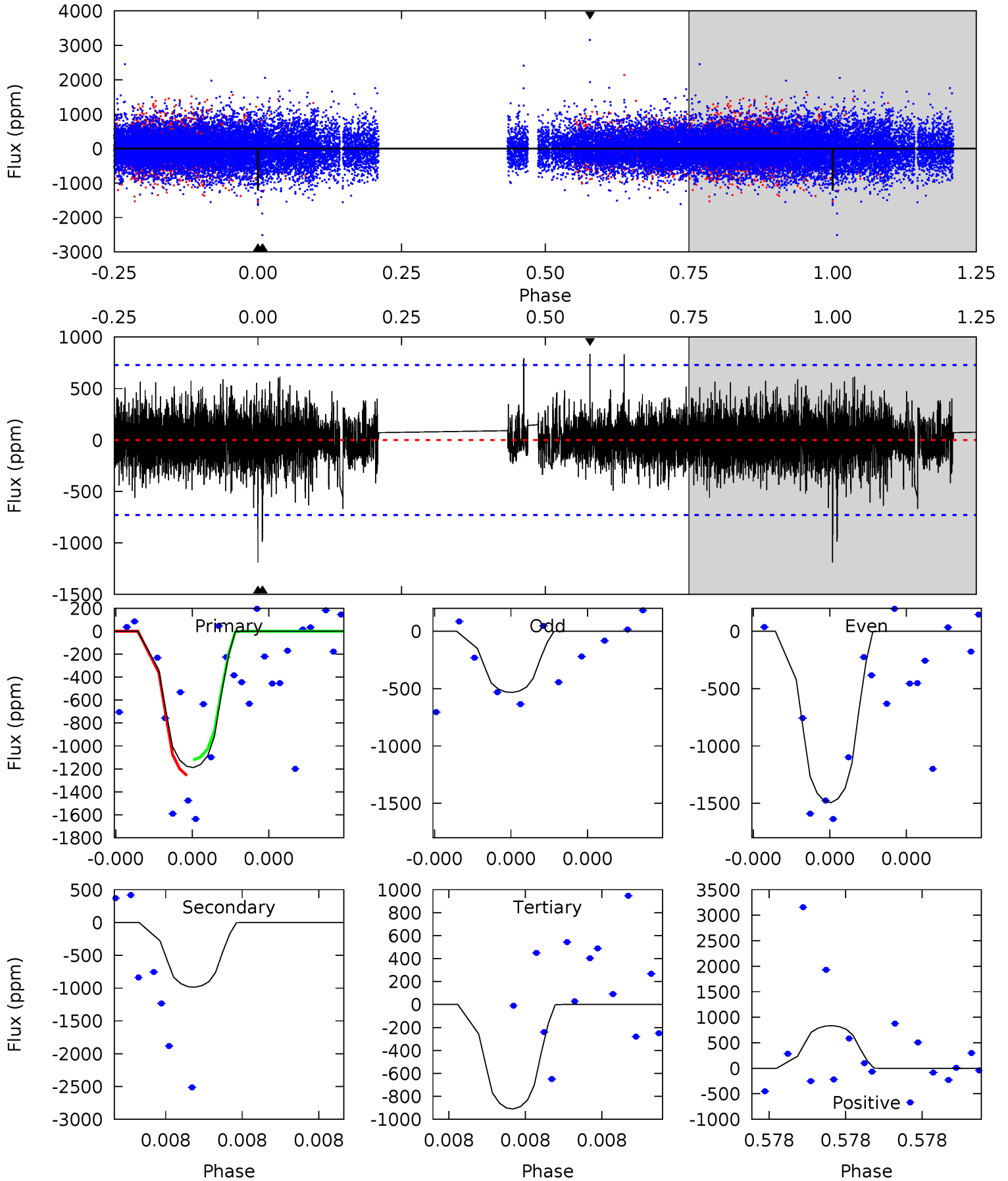
TCE 011756821-03 P=415.795701 Days $T_0=262.160886$ (BKJD)



DV Model-Shift Uniqueness Test

011756821-03, P = 415.788493 Days, E = 262.170875 Days

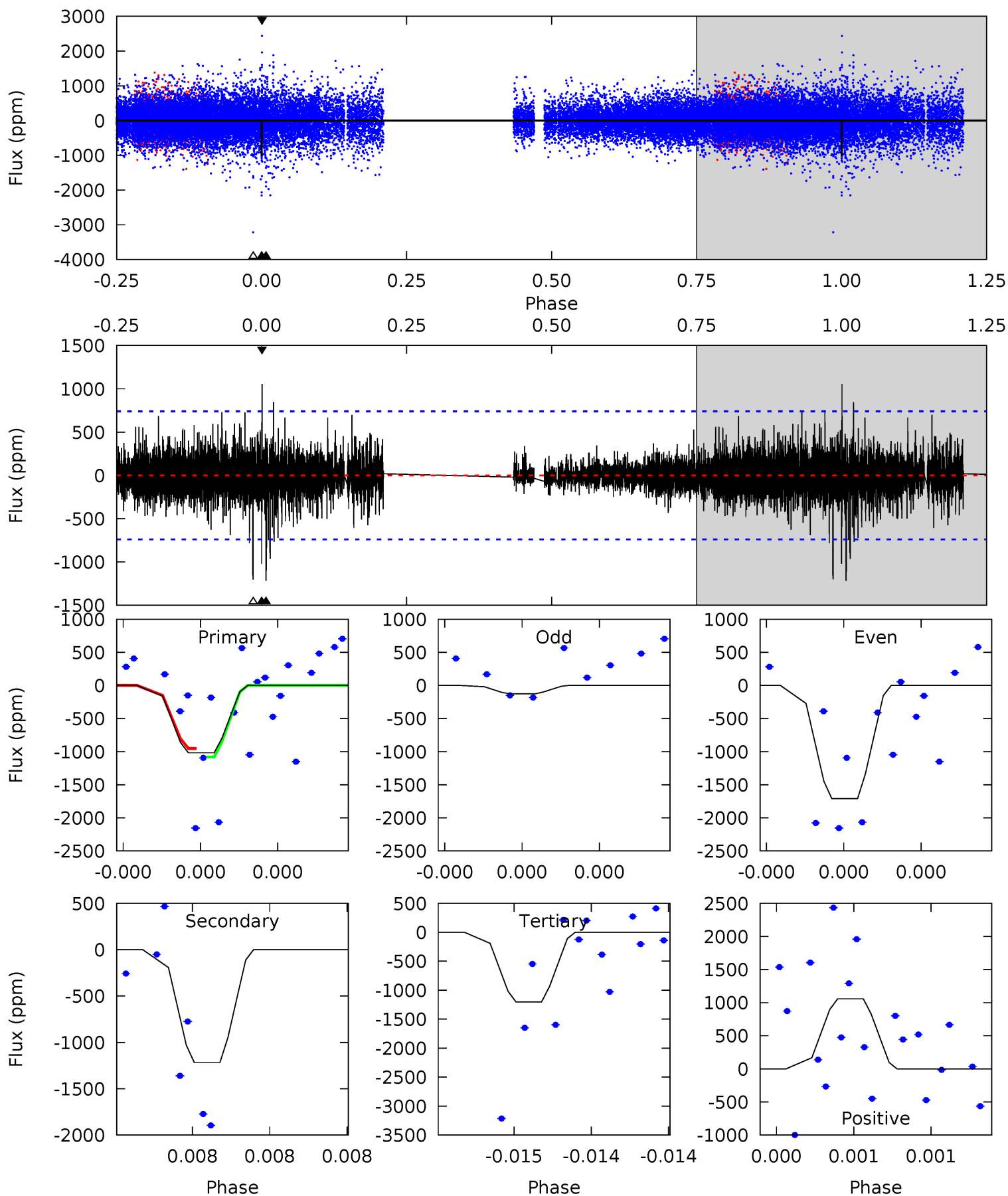
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.38	7.79	7.18	6.59	5.75	3.75	1.29	2.20	2.78	0.61	1.19	3.42	1.00	0.41	0.49



Alt Model-Shift Uniqueness Test

011756821-03, P = 415.795701 Days, E = 262.160886 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.95	9.52	9.38	8.26	5.78	3.80	1.14	-1.43	-0.31	0.14	1.25	5.96	1.40	0.46	0.48



Stellar Parameters For KIC 011756821

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4608^{+163}_{-163}	$4.648^{+0.024}_{-0.056}$	$-0.040^{+0.300}_{-0.300}$	$0.658^{+0.069}_{-0.040}$	$0.730^{+0.051}_{-0.077}$	$3.606^{+0.423}_{-0.823}$
	+4%/-4%	+1%/-1%	+750%/-750%	+10%/-6%	+7%/-11%	+12%/-23%
Source	KIC0	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 011756821-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-987 ± 127	$8.58^{+9.44}_{-5.85}$	236^{+9}_{-9}	2979^{+1314}_{-527}	7058^{+60116}_{-5539}
Alt.	-1217 ± 128	$9.04^{+9.15}_{-5.98}$	237^{+9}_{-10}	3037^{+1277}_{-510}	7802^{+61246}_{-5842}

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

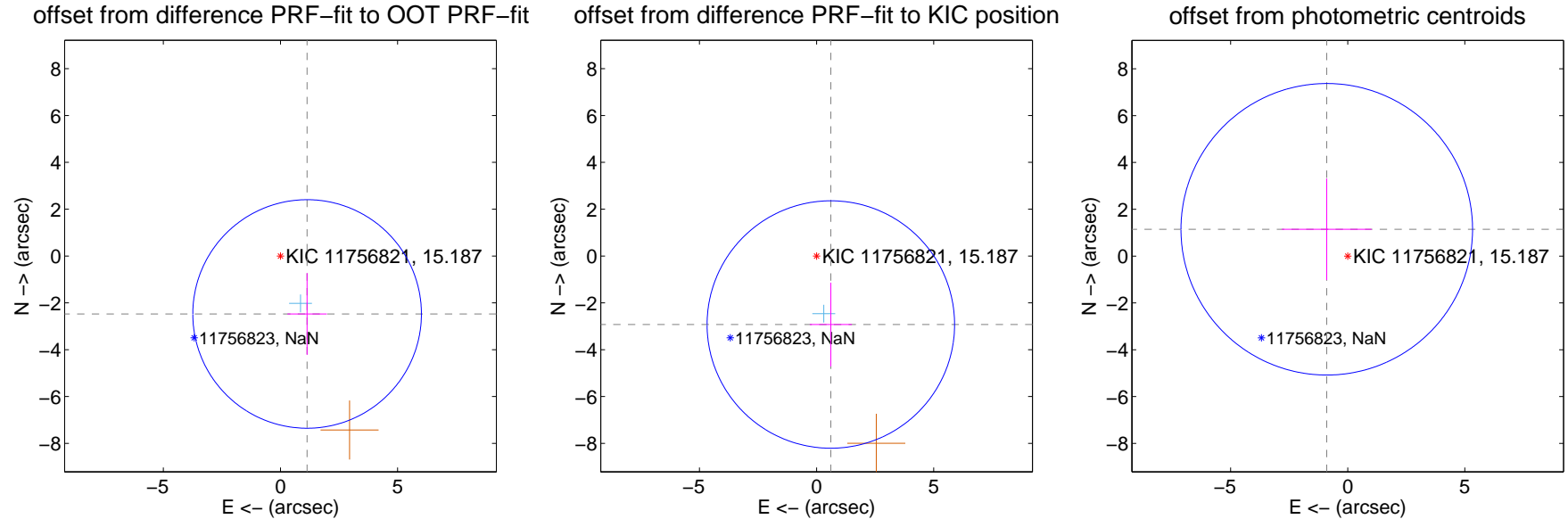
DV Centroid Data

Supplemental centroid analysis for 011756821-03. Kepler magnitude: 15.19. Transit SNR 6.20

There are 1 quarters with good PRF difference image offsets

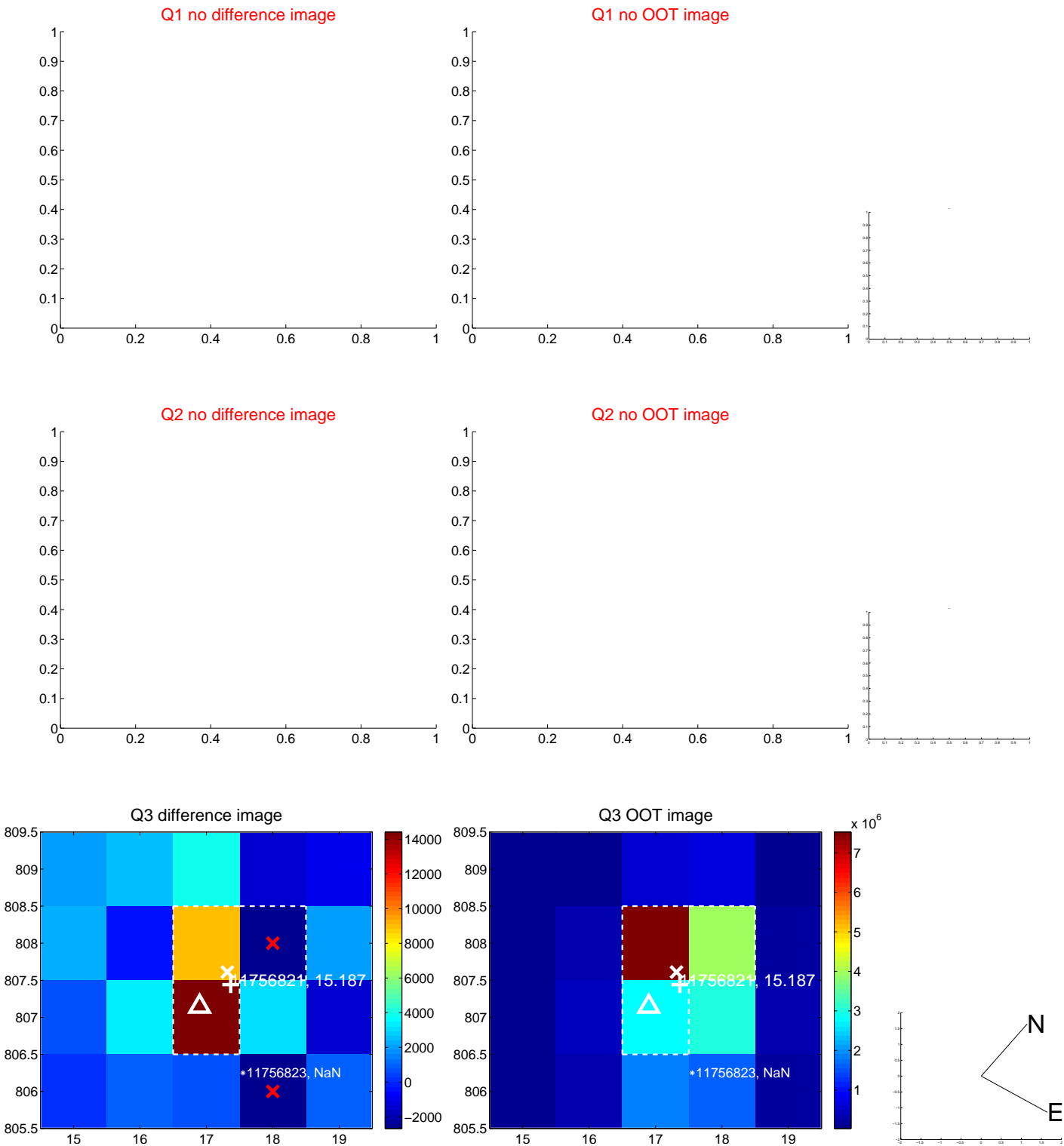
The direct PRF centroid is offset from the target star catalog position by about 0.69 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.723 ± 1.626	1.67	-1.138 ± 0.839	-2.474 ± 1.748
PRF-fit source offset from KIC position	2.987 ± 1.761	1.70	-0.609 ± 0.897	-2.925 ± 1.789
photometric centroid source offset	1.45 ± 2.08	0.70	0.89 ± 1.91	1.15 ± 2.17



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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

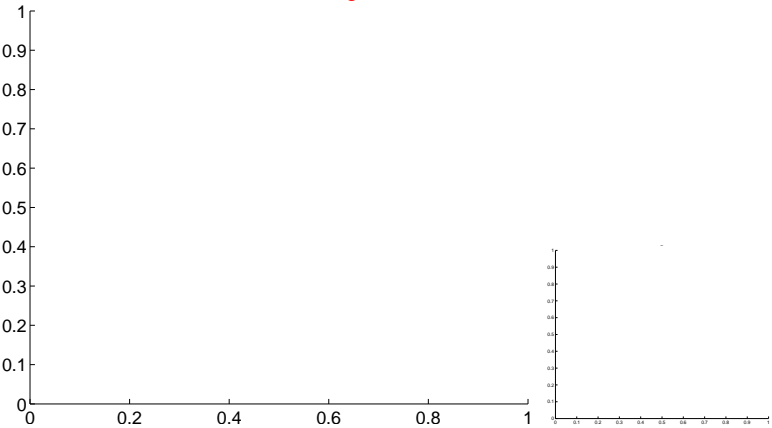


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

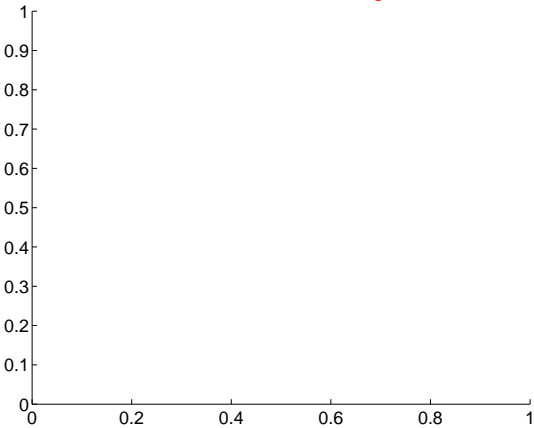
Q5 no difference image



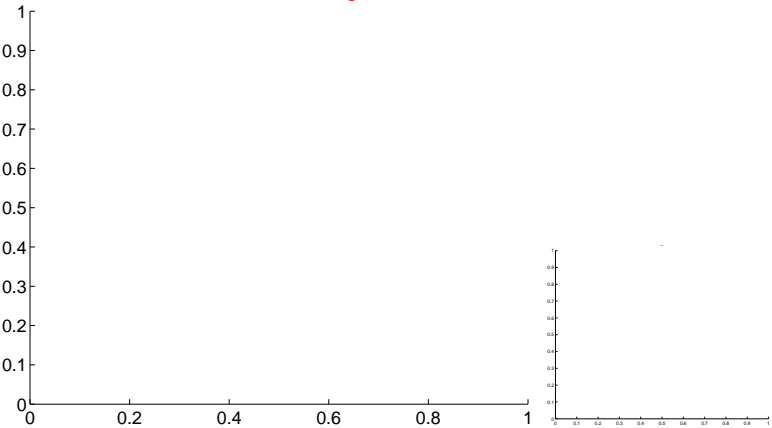
Q5 no OOT image



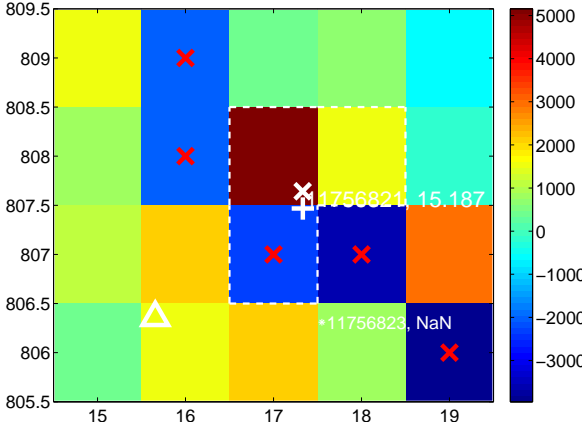
Q6 no difference image



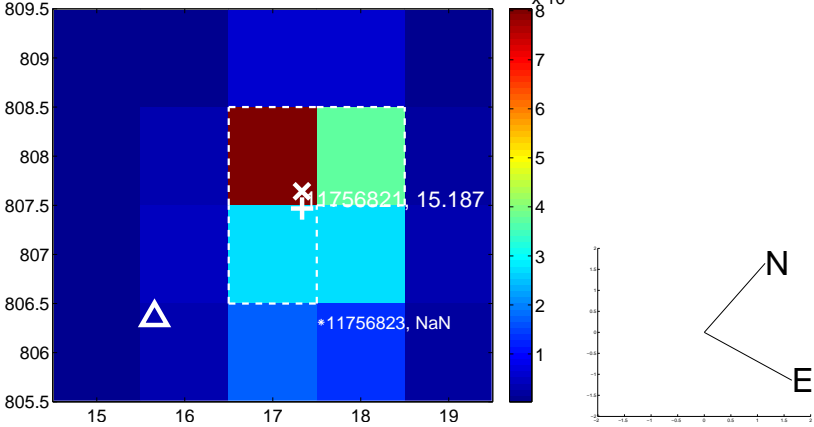
Q6 no OOT image



Q7 difference image. Poor Quality



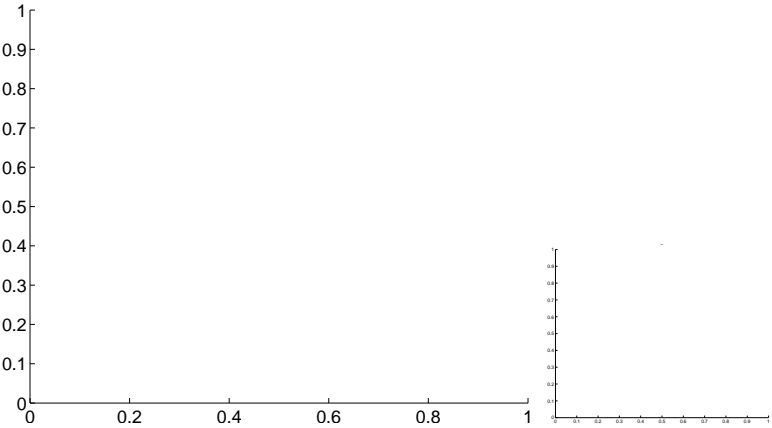
Q7 OOT image



Q8 no difference image



Q8 no OOT image



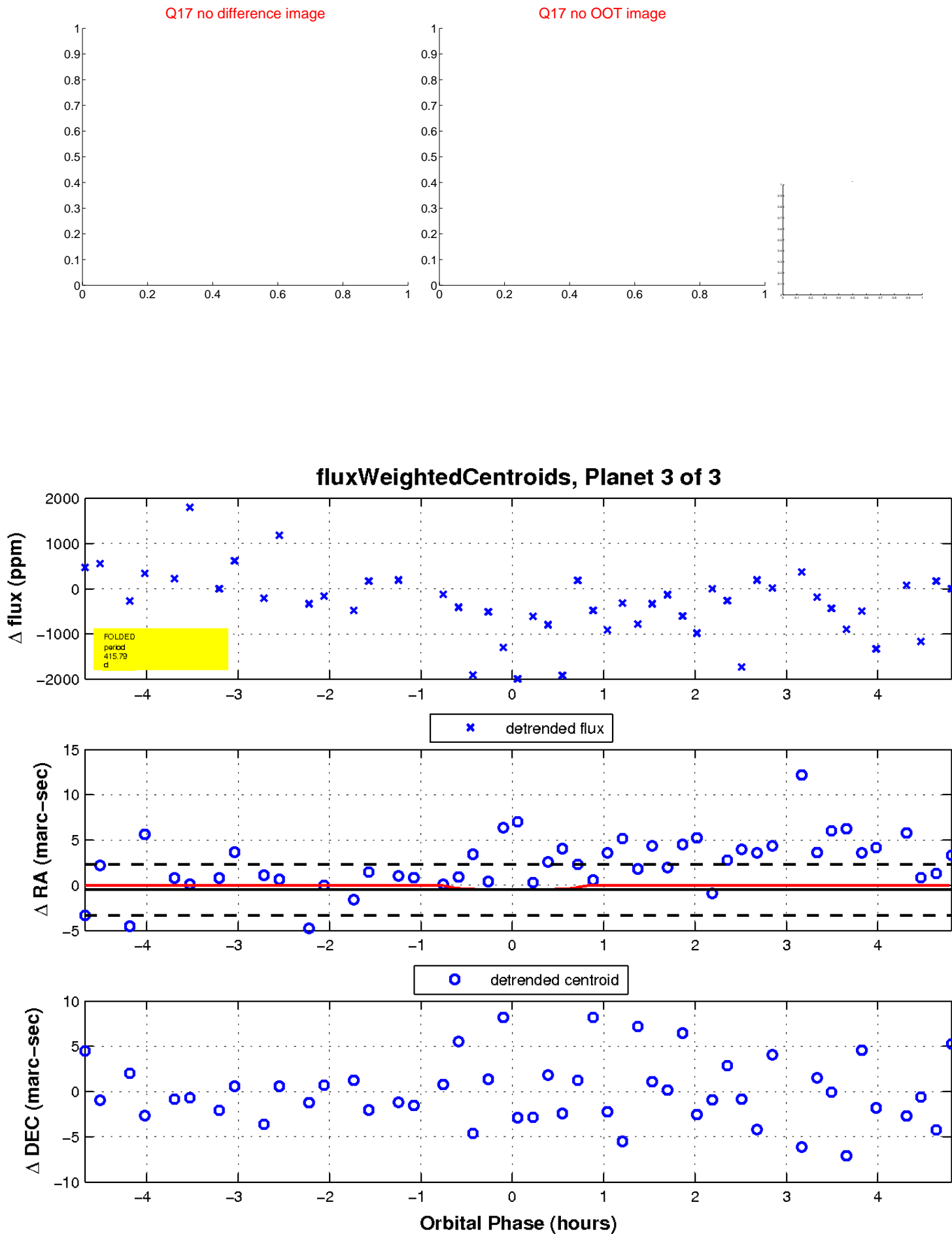
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

