

KIC 006286161

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})
006286161-01	OBS	No	14.541795	137.583933	347935.3	5.969	3431.0	2162.3	1.15	5997	69.25	114.75
006286161-02	OBS	3501.01	14.541654	144.275158	107659.2	7.500	1541.0	-1.0	1.15	5997	37.77	114.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006286161-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
006286161-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_NOFITS

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.

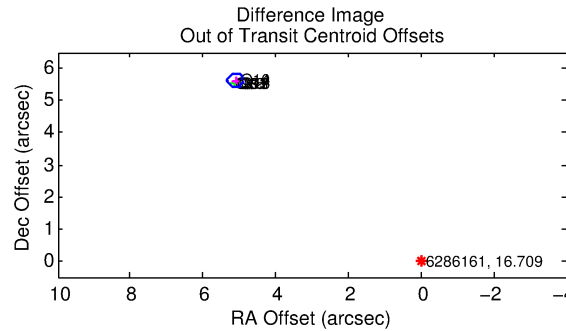
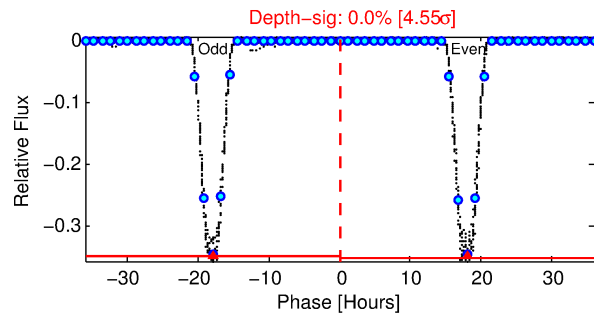
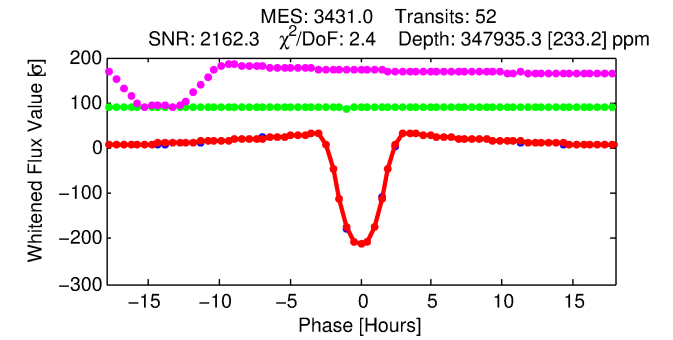
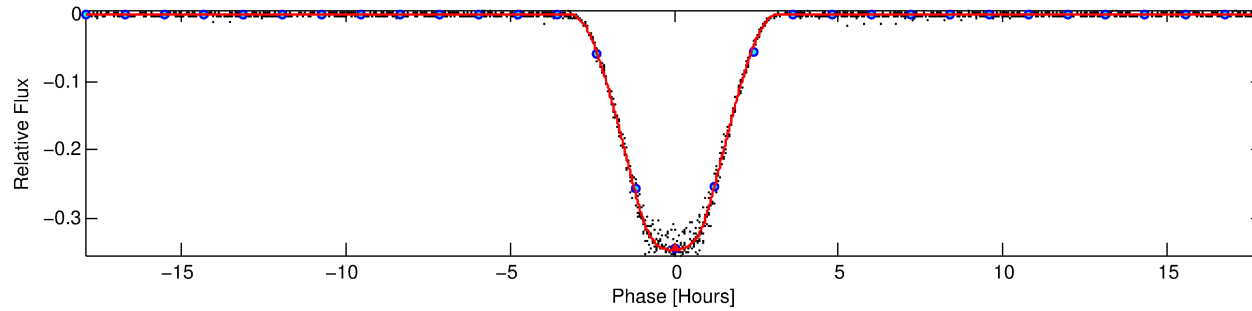
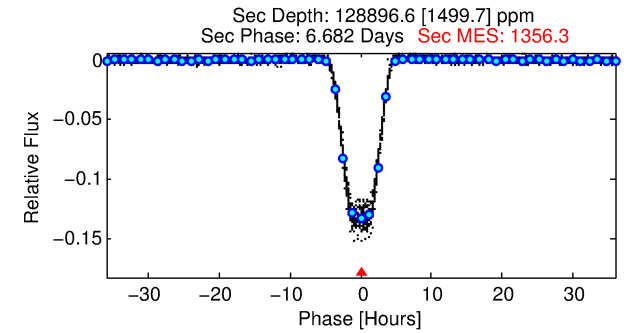
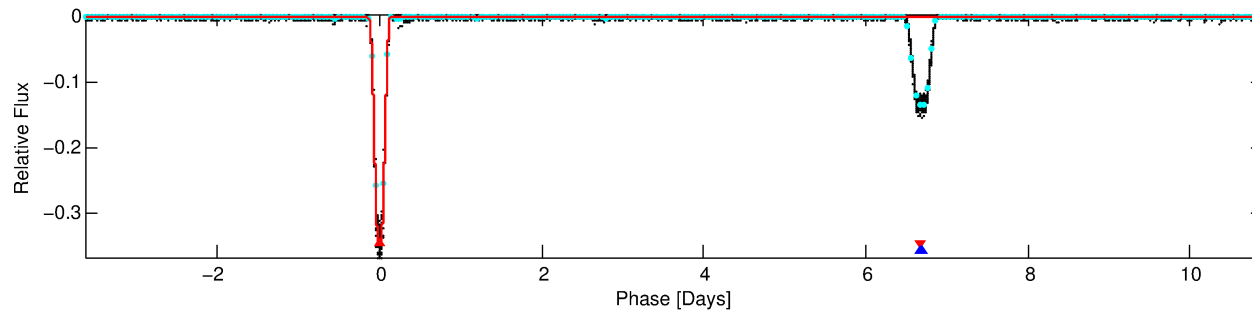
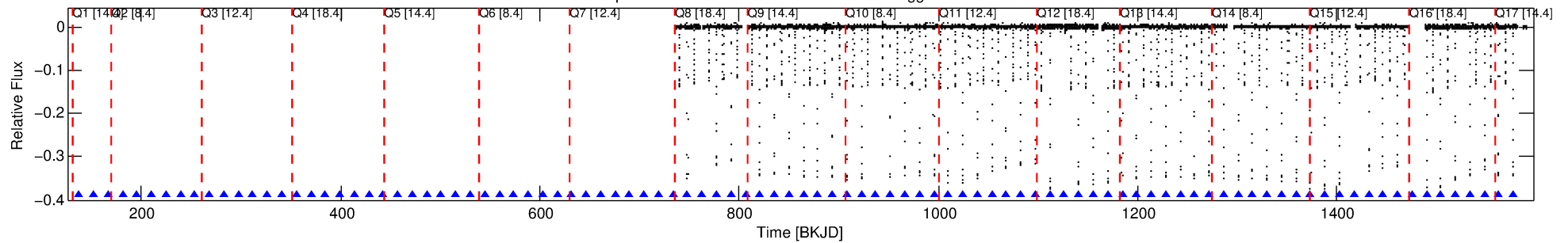
Ephemeris Match Information For 006286161-01

No Significant Match Found

DV One-Page Summary

KIC: 6286161 Candidate: 1 of 2 Period: 14.542 d
KOI: K03501 Corr: No Ephemeris Match

Kp: 16.71 R*: 1.15 Rs Teff: 5997.0 K Logg: 4.30 Fe/H: -0.200



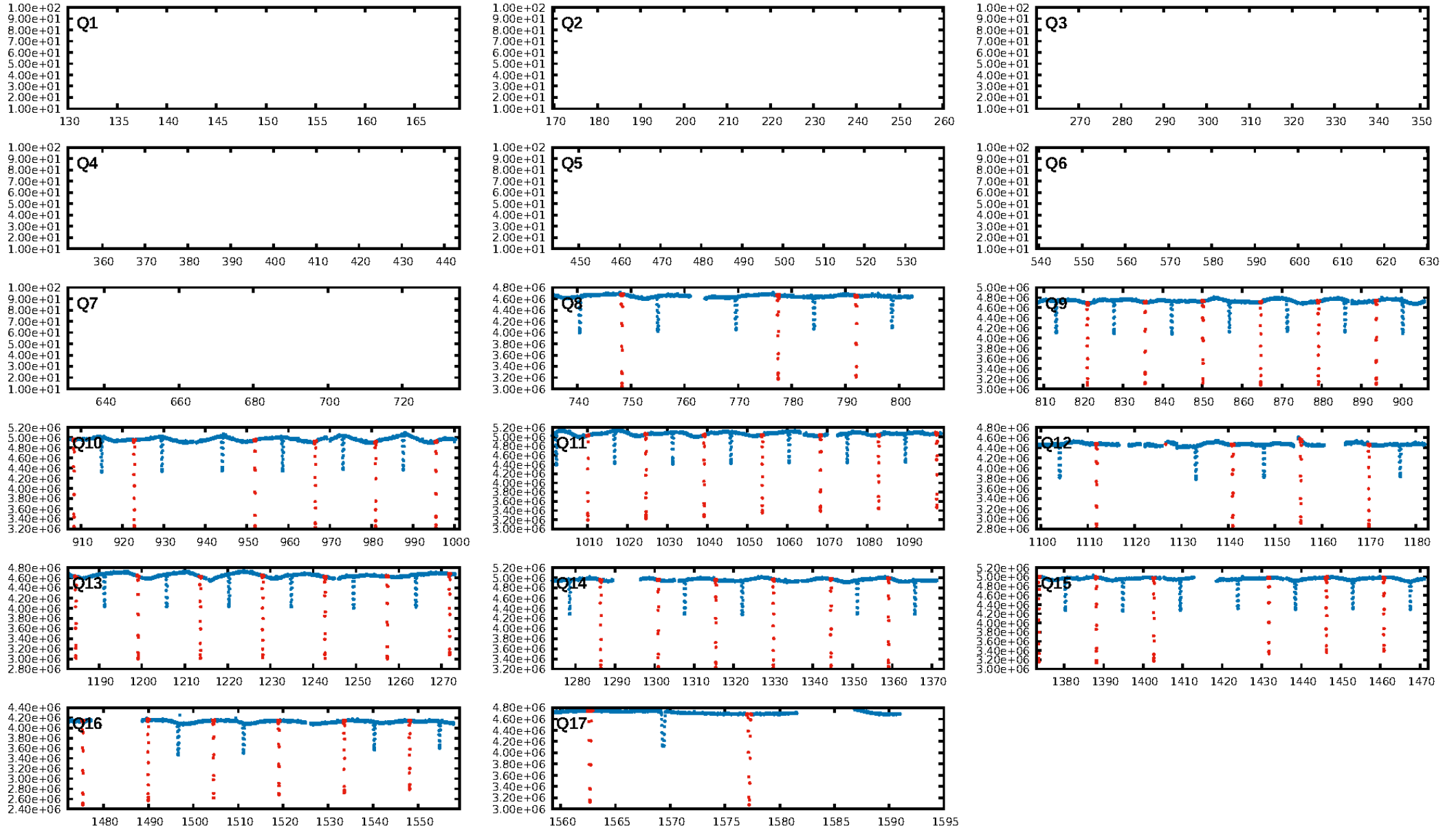
DV Fit Results:

Period = 14.54179 [0.00000] d
Epoch = 137.5839 [0.0001] BKJD
Rp/R* = 0.5528 [0.0003]
a/R* = 28.62 [0.02]
b = 0.22 [0.00]
Seff = 114.75 [42.31]
Teq = 835 [77] K
Rp = 69.25 [20.81] Re
a = 0.1154 [0.0281] AU
Ag = 196.82 [67.21] [2.91sigma]
Teff = 4833 [169] K [21.53sigma]

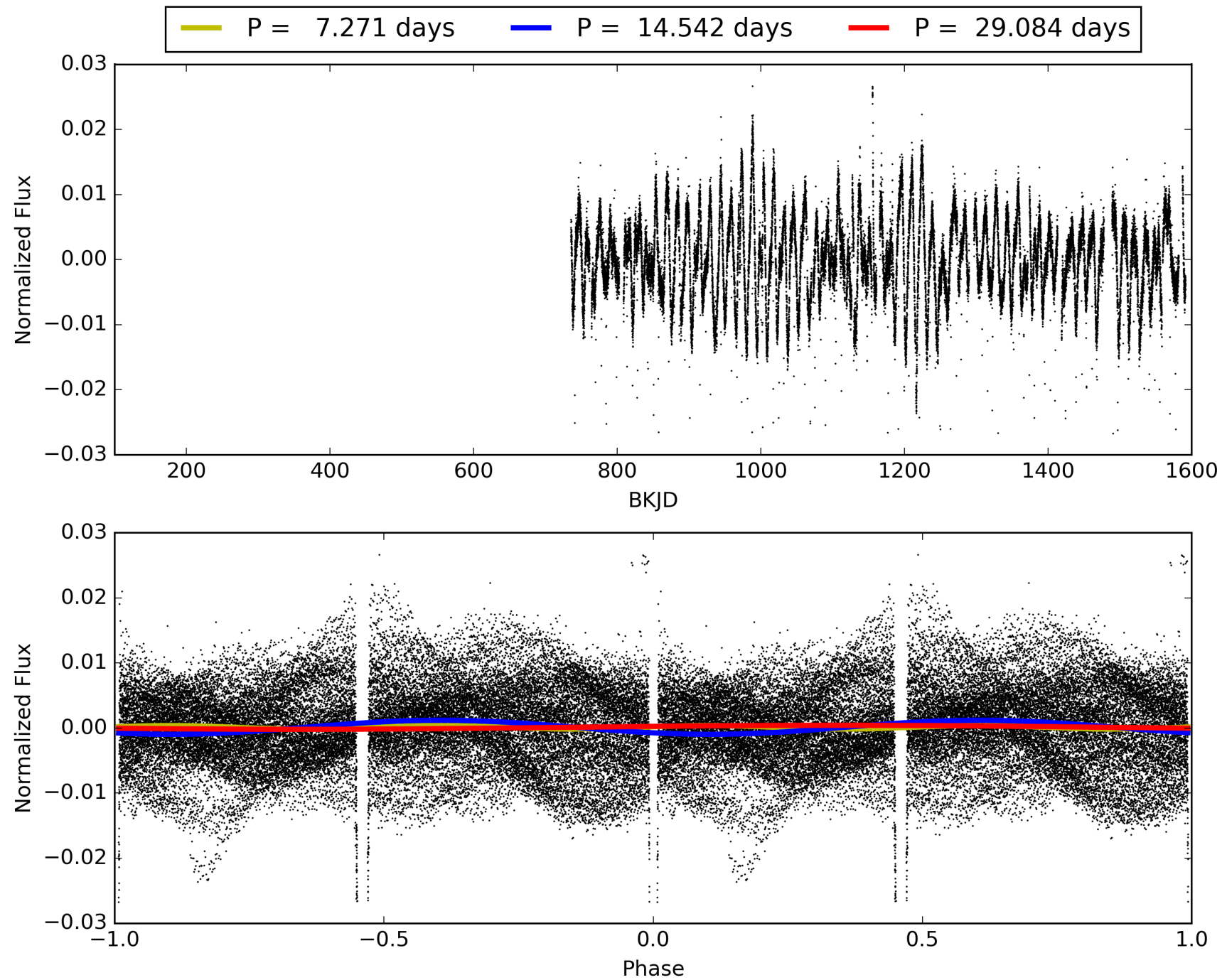
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00sigma]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [50/50]
GhostDiagnostic-chr: 2.247
Centroid-sig: 0.0%
Centroid-so: 3.054 arcsec [3221.94sigma]
OotOffset-rm: 7.595 arcsec [107.94sigma]
KicOffset-rm: 0.115 arcsec [1.70sigma]
OotOffset-st: 2/2/3/3 [10]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

TCE 006286161-01, PDC Light Curves

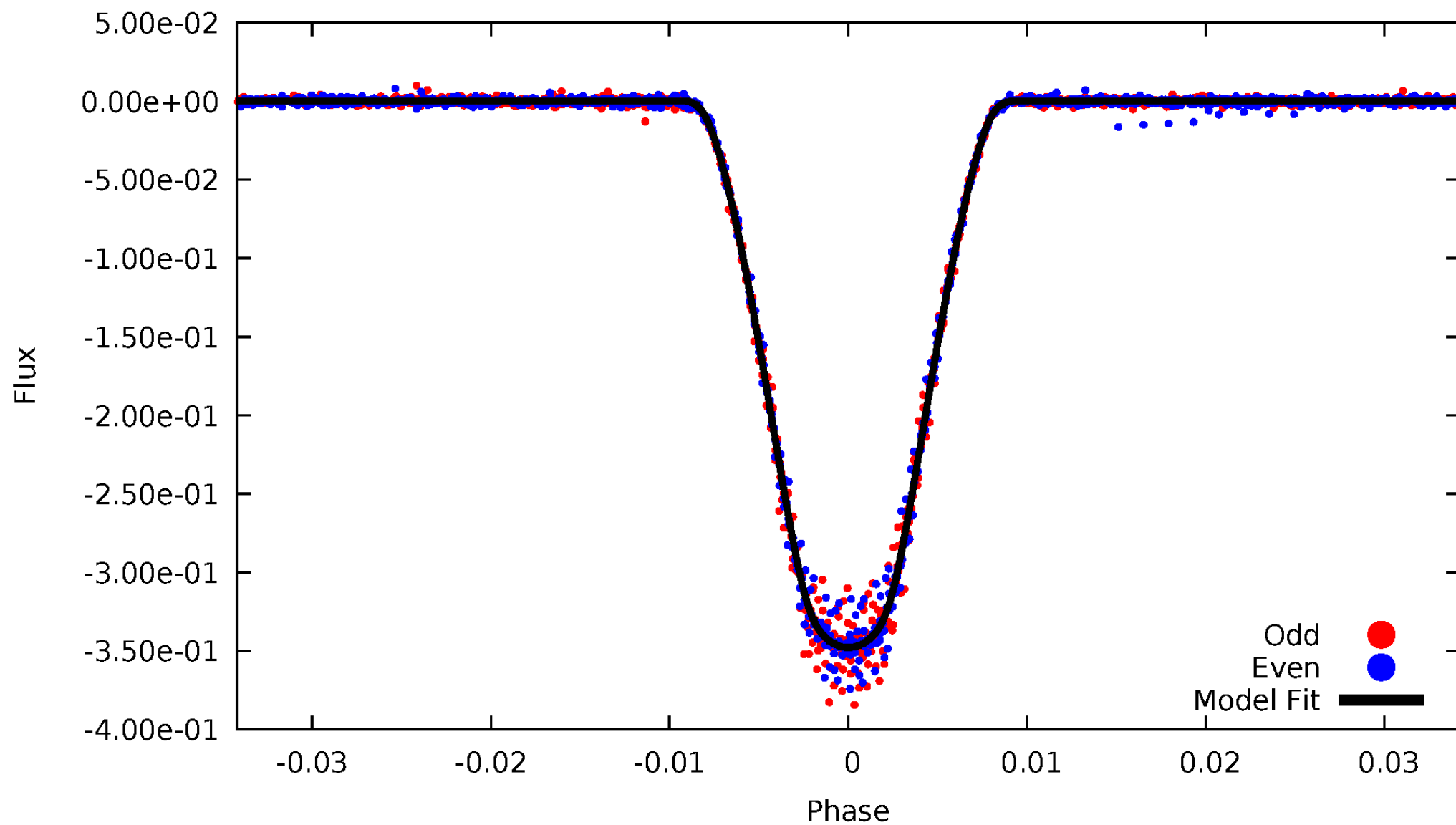


TCE 006286161-01



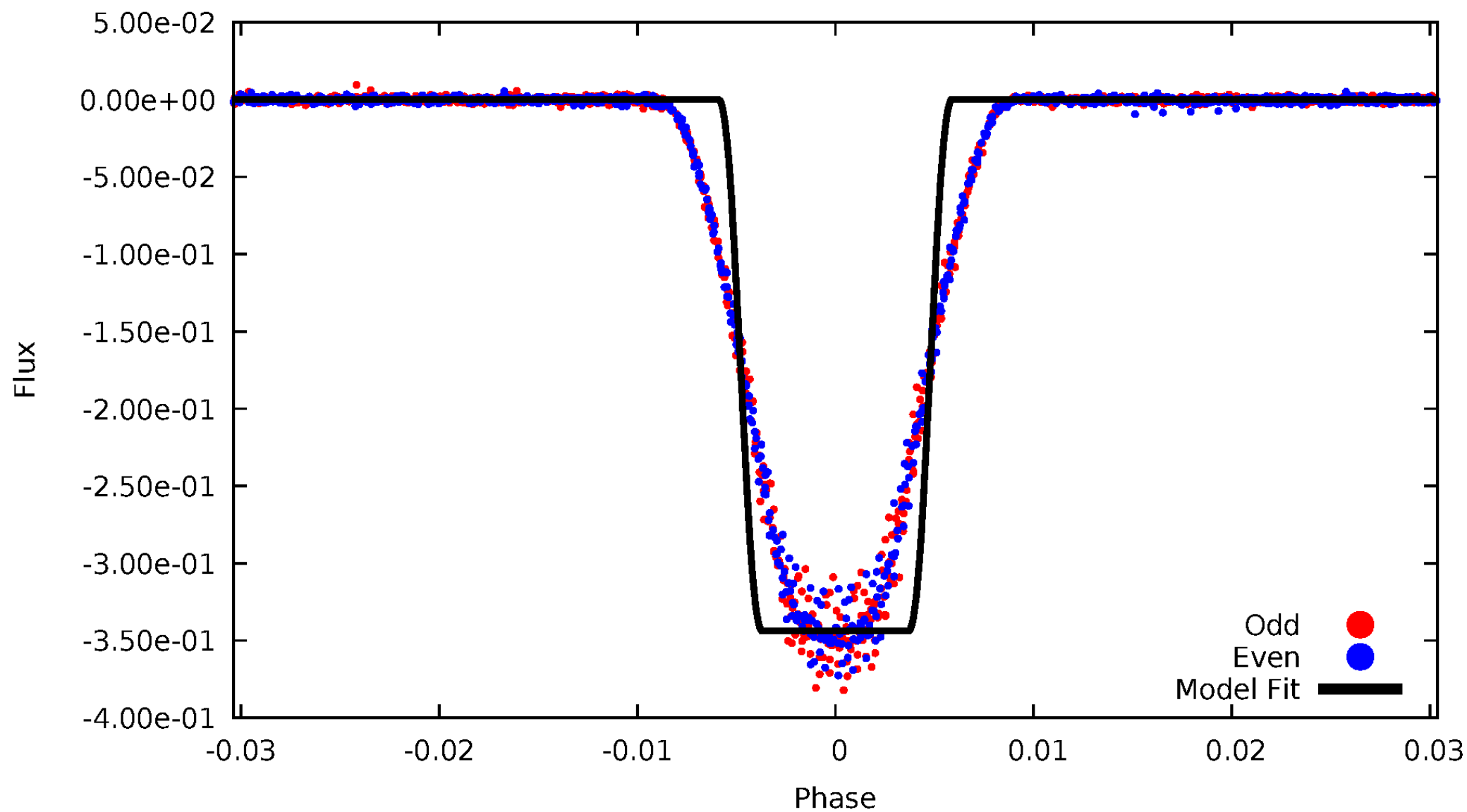
DV Odd/Even

TCE 006286161-01



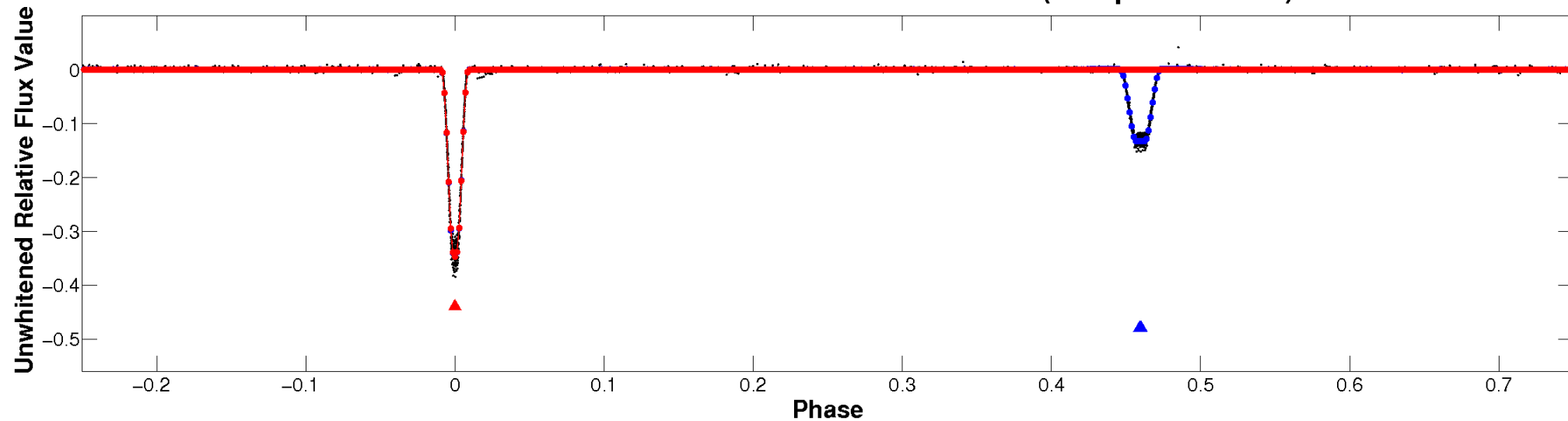
ALT Odd/Even

TCE 006286161-01

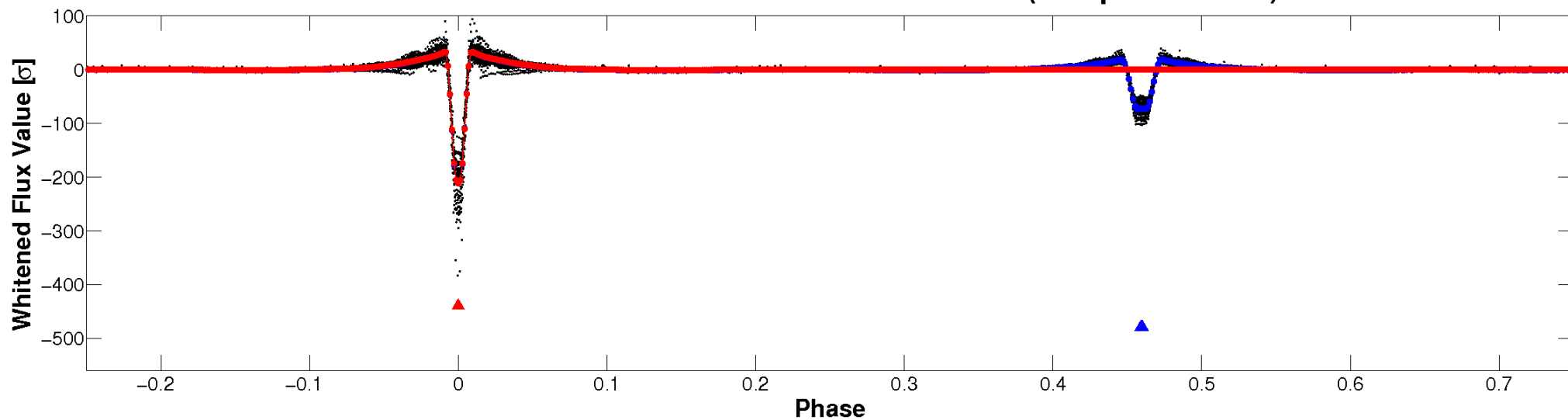


Non-Whitened Vs. Whitened Light Curve

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

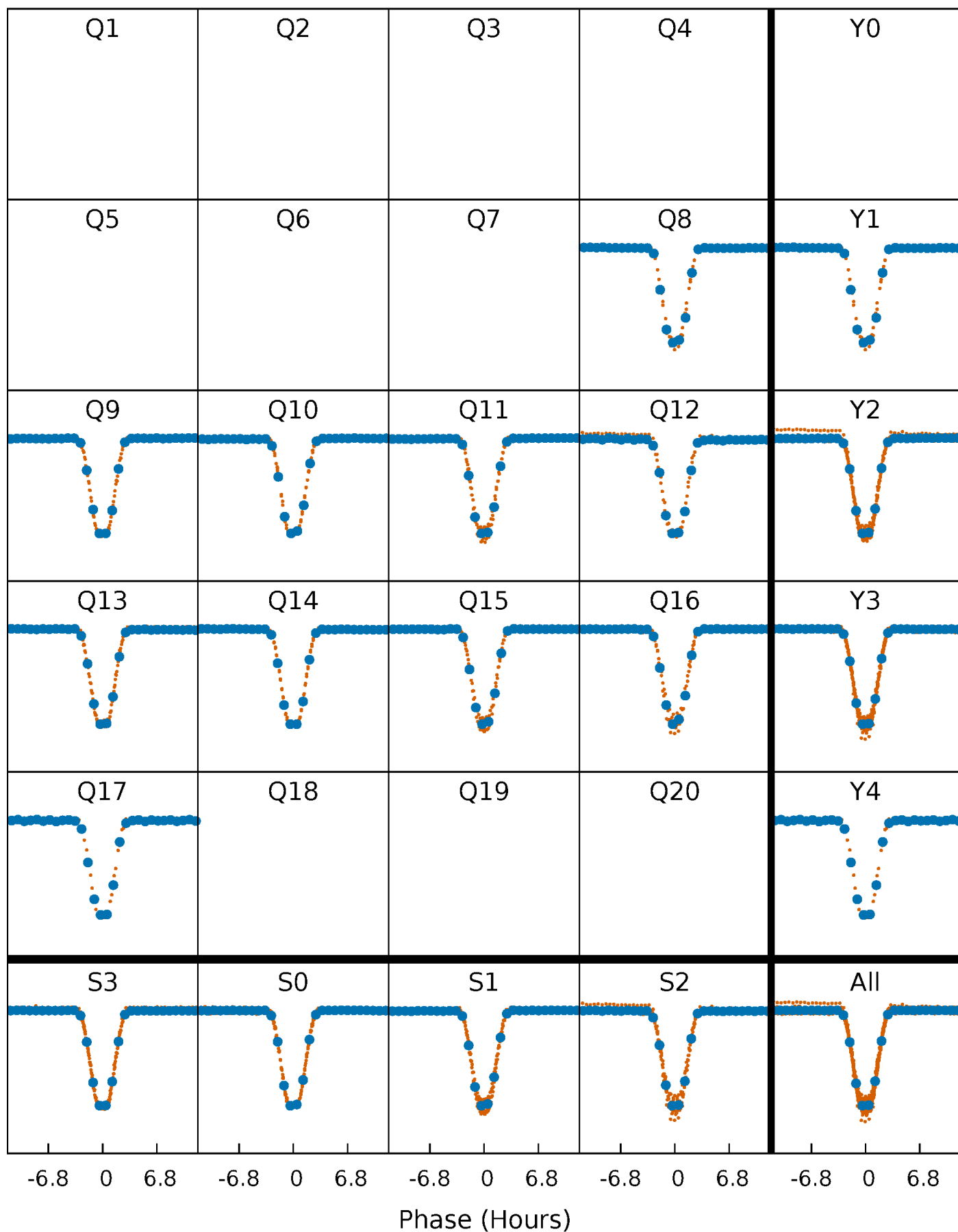


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



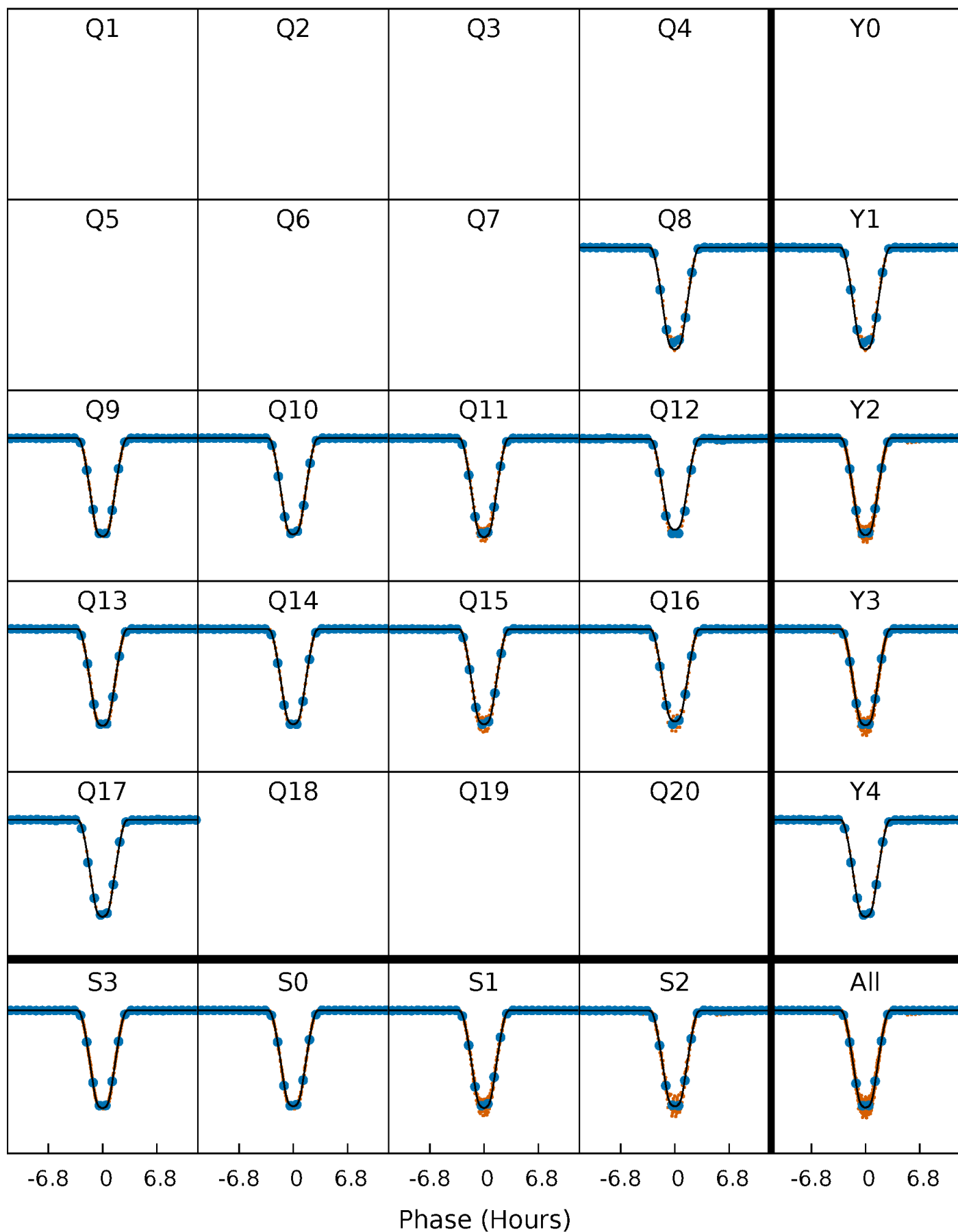
PDC Quarter-Phased Transit Curves

TCE 006286161-01 P= 14.541795 Days $T_0=137.583933$ (BKJD)



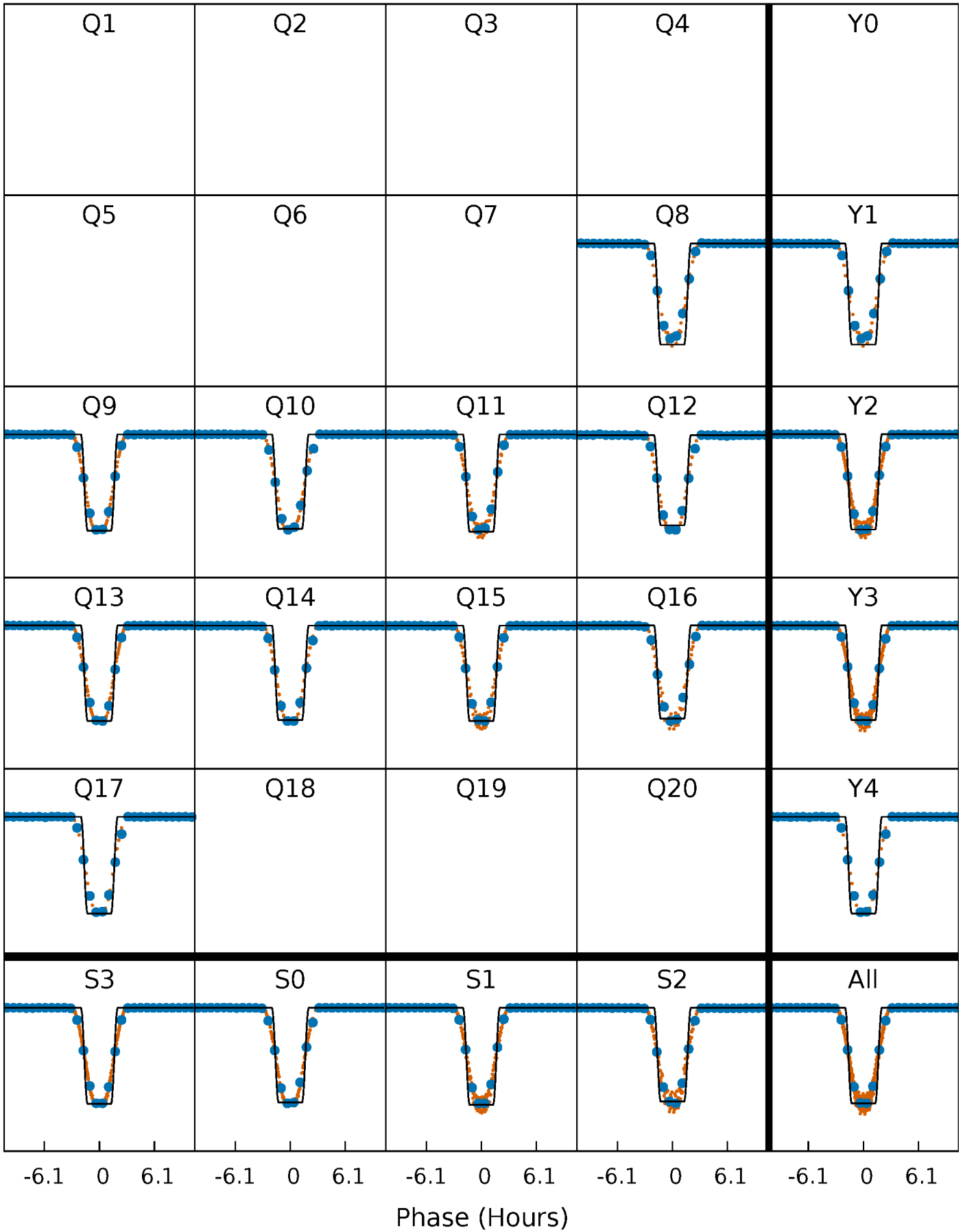
DV Quarter-Phased Transit Curves

TCE 006286161-01 P= 14.541795 Days $T_0=137.583933$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

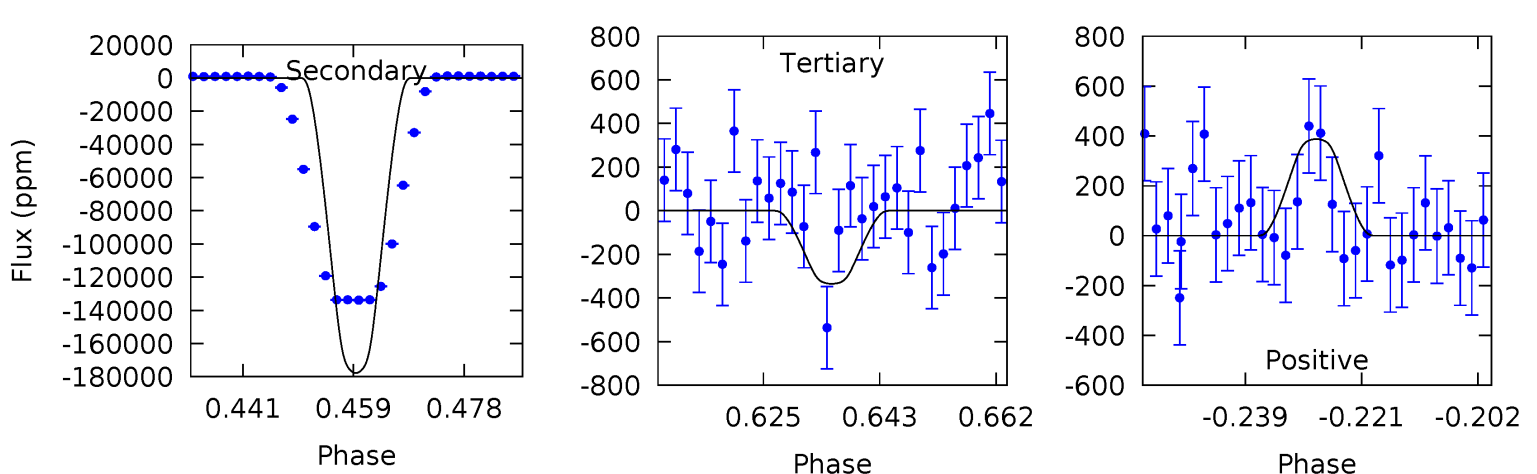
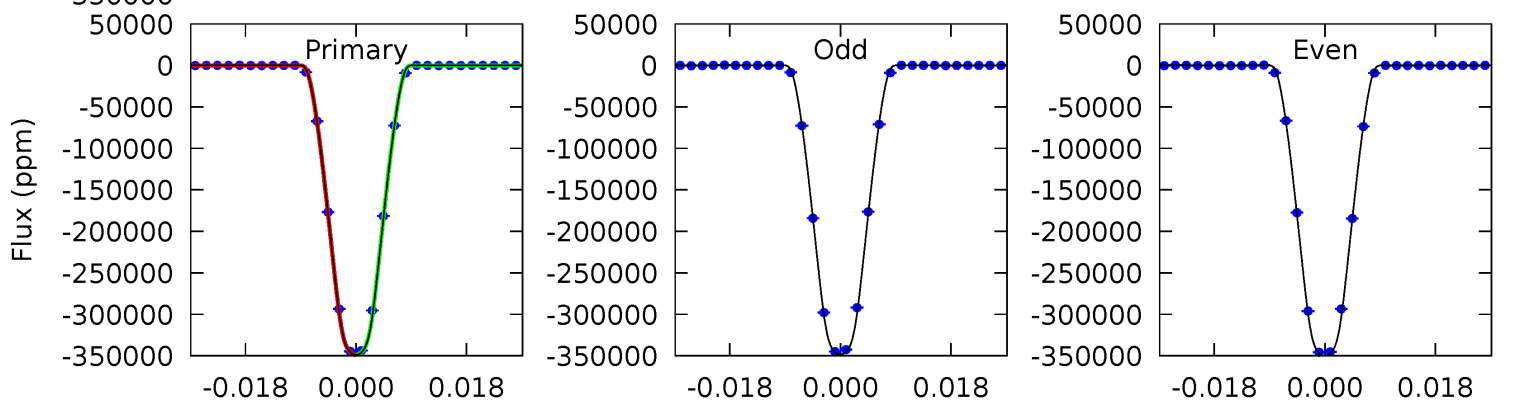
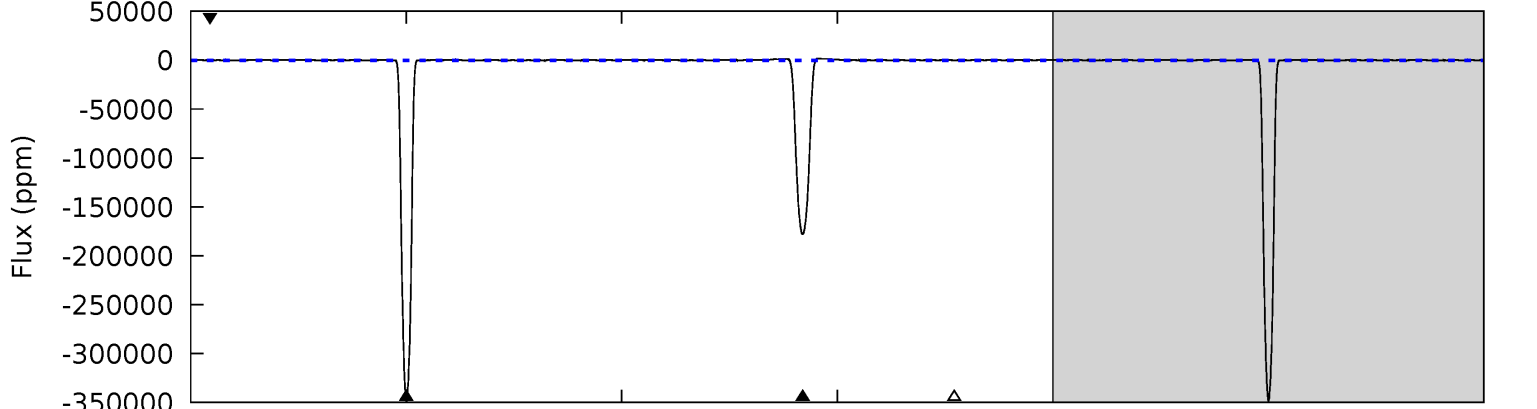
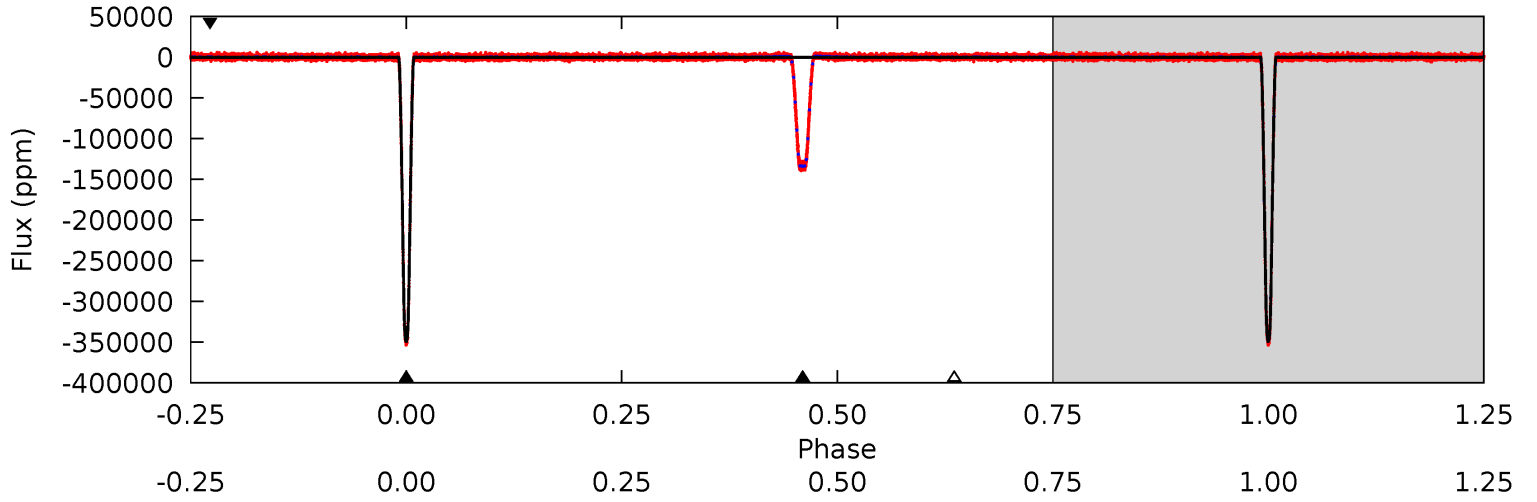
TCE 006286161-01 P= 14.541749 Days $T_0=137.587004$ (BKJD)



DV Model-Shift Uniqueness Test

006286161-01, P = 14.541795 Days, E = 137.583933 Days

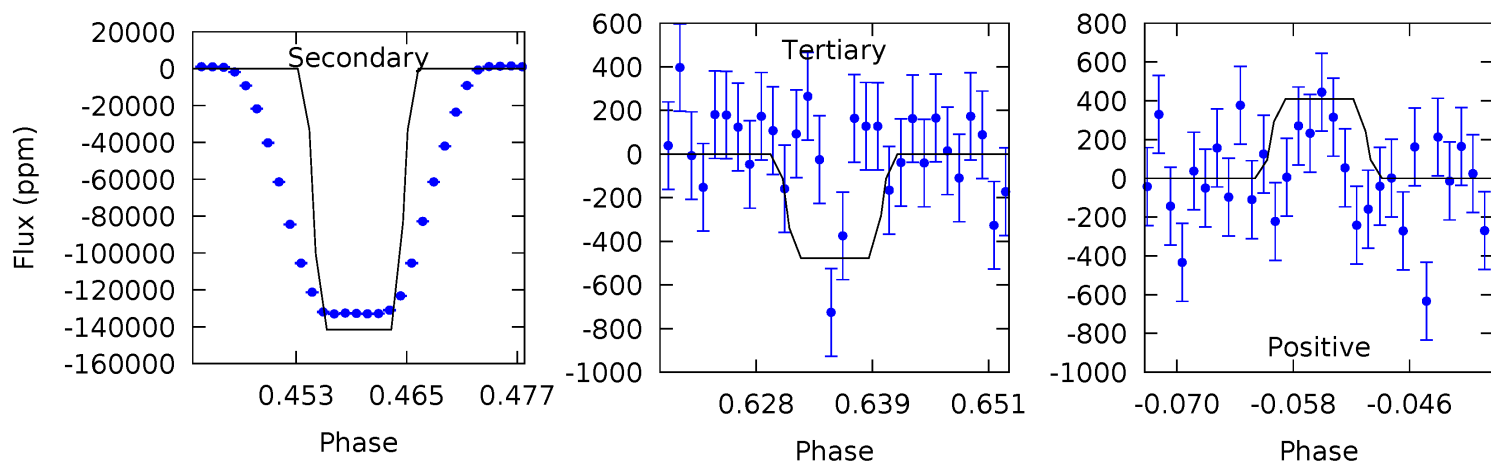
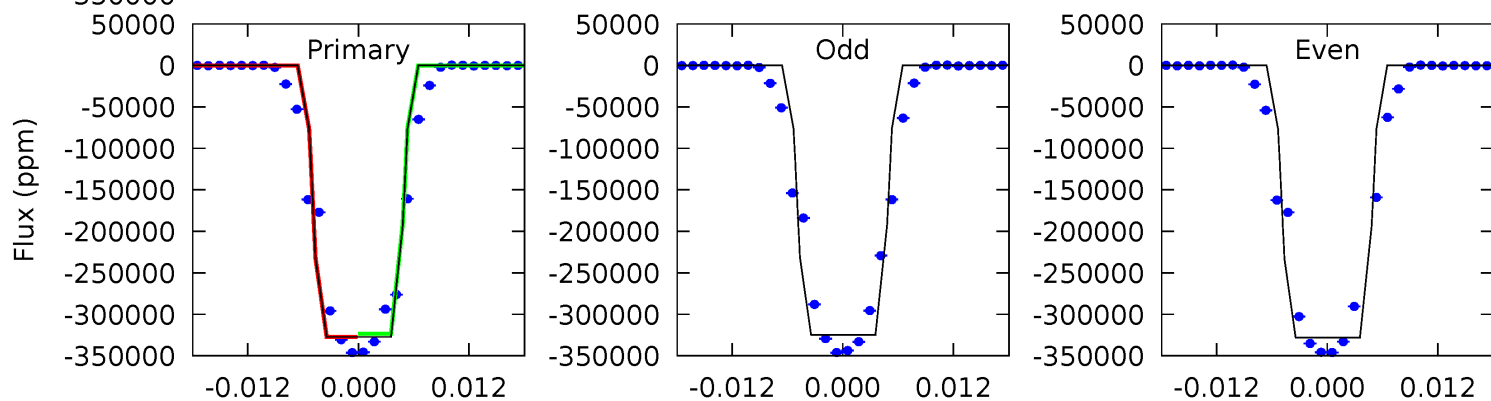
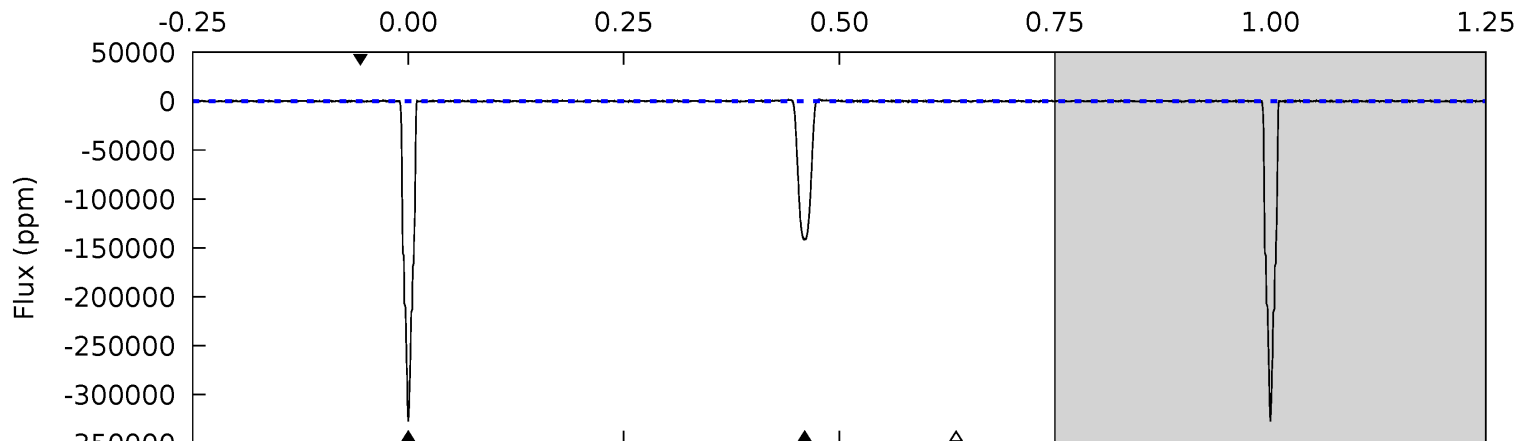
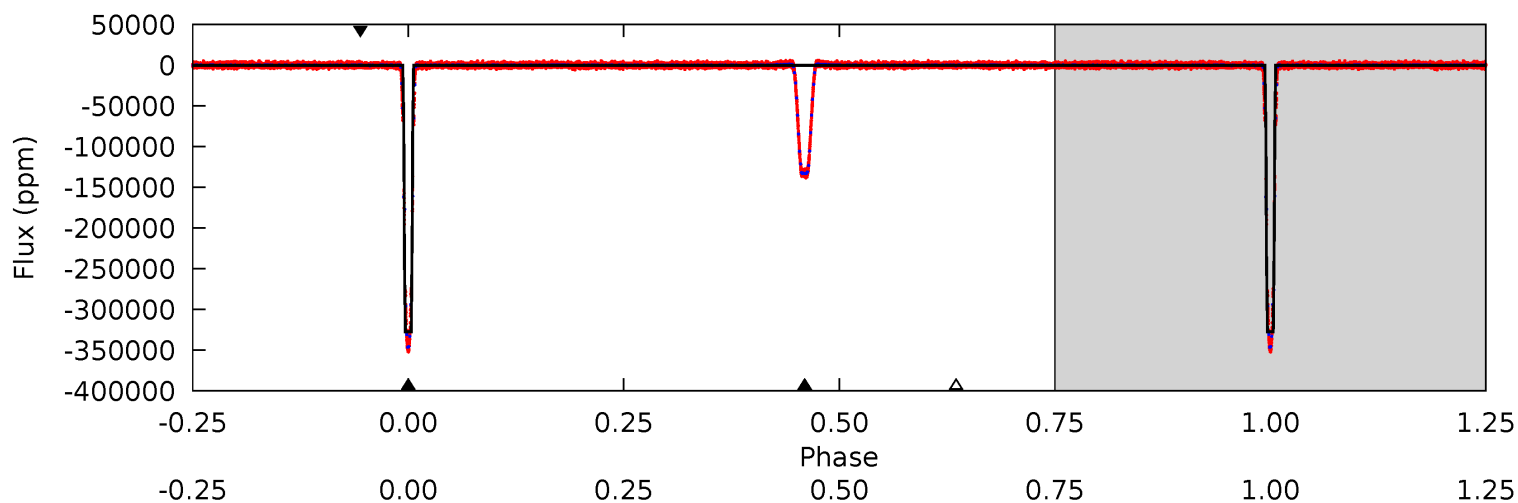
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5360	2731	5.15	5.95	4.91	2.36	3.97	5355	5354	2726	2725	14.3	1.00	0.00	0.20



Alt Model-Shift Uniqueness Test

006286161-01, P = 14.541749 Days, E = 137.587004 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2813	1216	4.10	3.53	5.00	2.52	3.63	2808	2809	1212	1213	12.0	1.00	0.00	0



Stellar Parameters For KIC 006286161

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5997^{+188}_{-209}	$4.304^{+0.162}_{-0.180}$	$-0.200^{+0.300}_{-0.300}$	$1.148^{+0.345}_{-0.230}$	$0.968^{+0.157}_{-0.118}$	$0.901^{+0.749}_{-0.448}$
	+3%/-3%	+4%/-4%	+150%/-150%	+30%/-20%	+16%/-12%	+83%/-50%
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 006286161-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-177751 ± 65	$69.10^{+11.84}_{-7.92}$	1168^{+89}_{-80}	5530^{+167}_{-188}	330^{+86}_{-82}
Alt.	-141534 ± 116	$73.20^{+12.75}_{-8.69}$	1166^{+83}_{-71}	5071^{+136}_{-148}	222^{+60}_{-50}

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

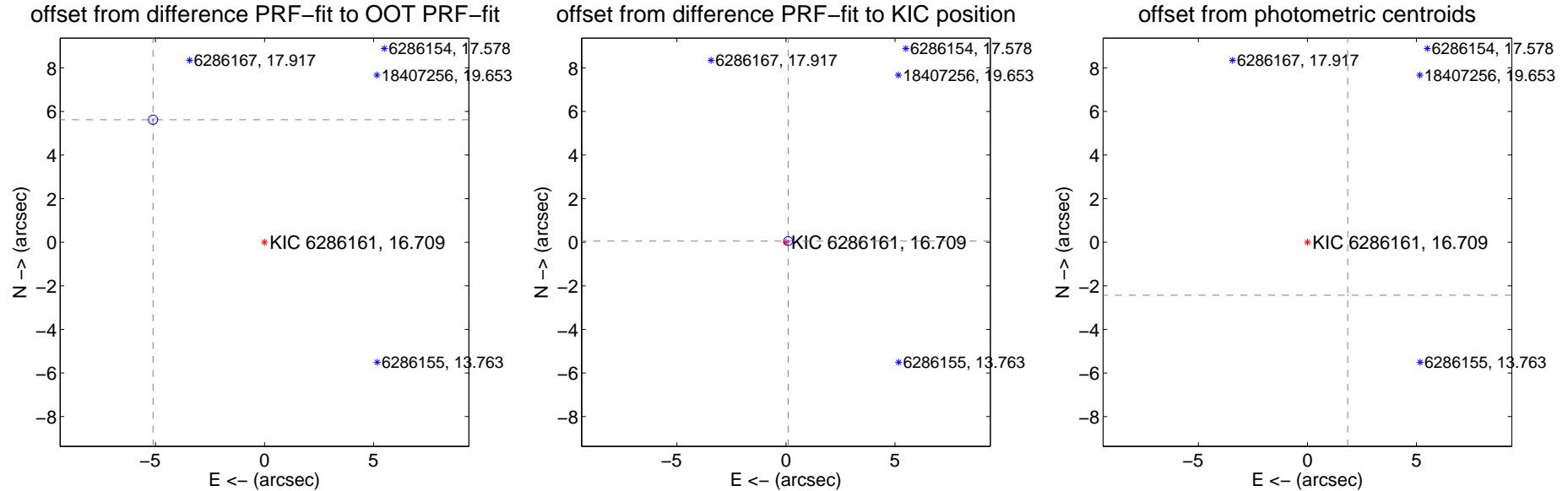
DV Centroid Data

Supplemental centroid analysis for 006286161-01. Kepler magnitude: 16.71. Transit SNR 2162.29

There are 10 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 7.62 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.595 \pm 0.070	107.94	5.109 \pm 0.068	5.620 \pm 0.072
PRF-fit source offset from KIC position	0.115 \pm 0.068	1.70	-0.102 \pm 0.068	0.053 \pm 0.068
photometric centroid source offset	3.05 \pm 0.00	3221.95	-1.84 \pm 0.00	-2.43 \pm 0.00

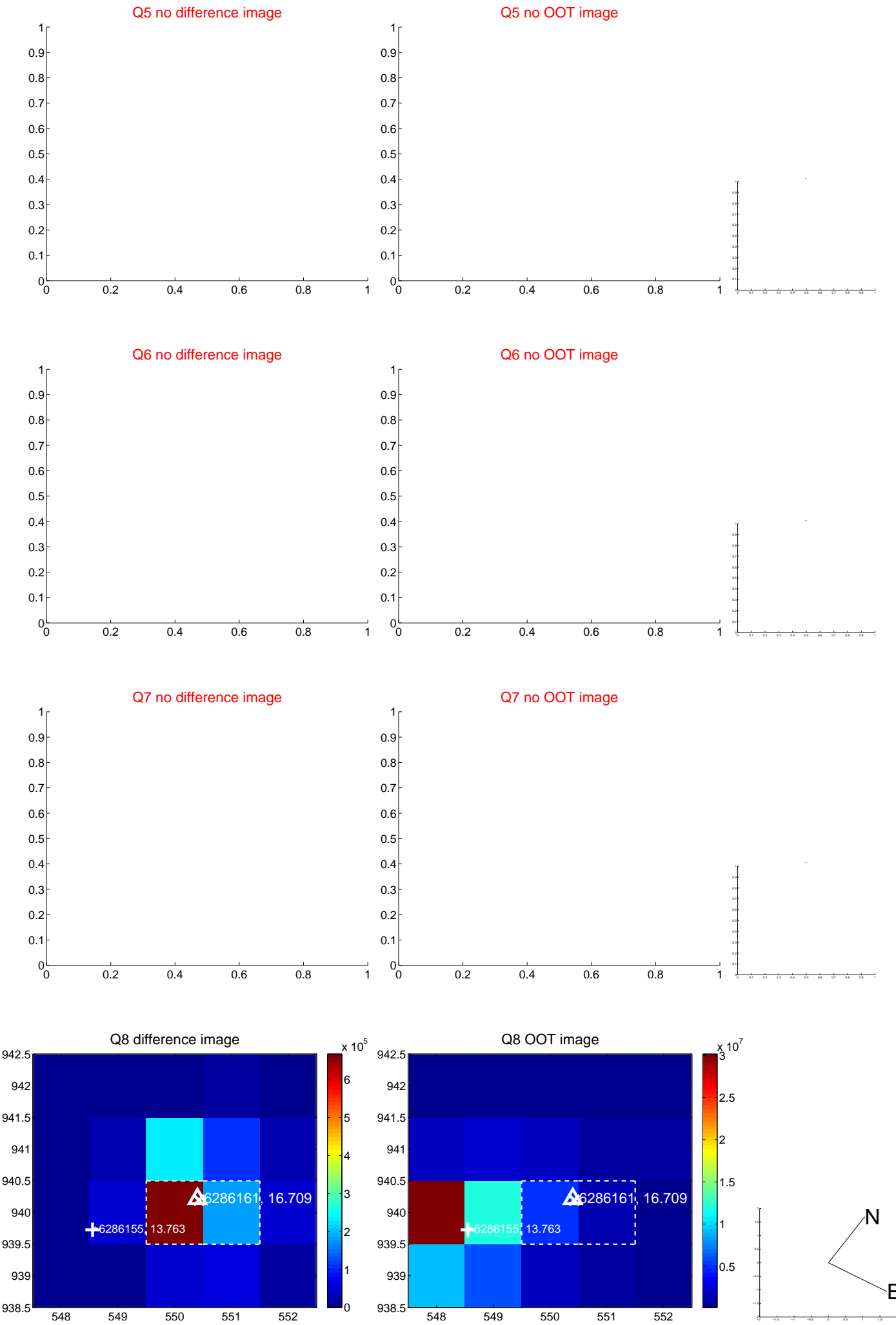


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

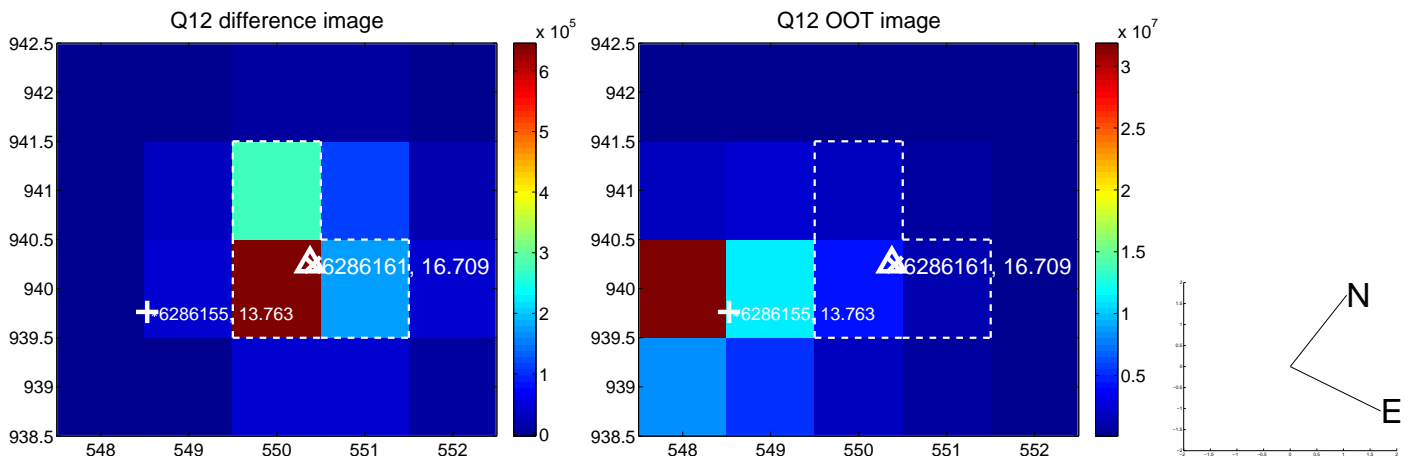
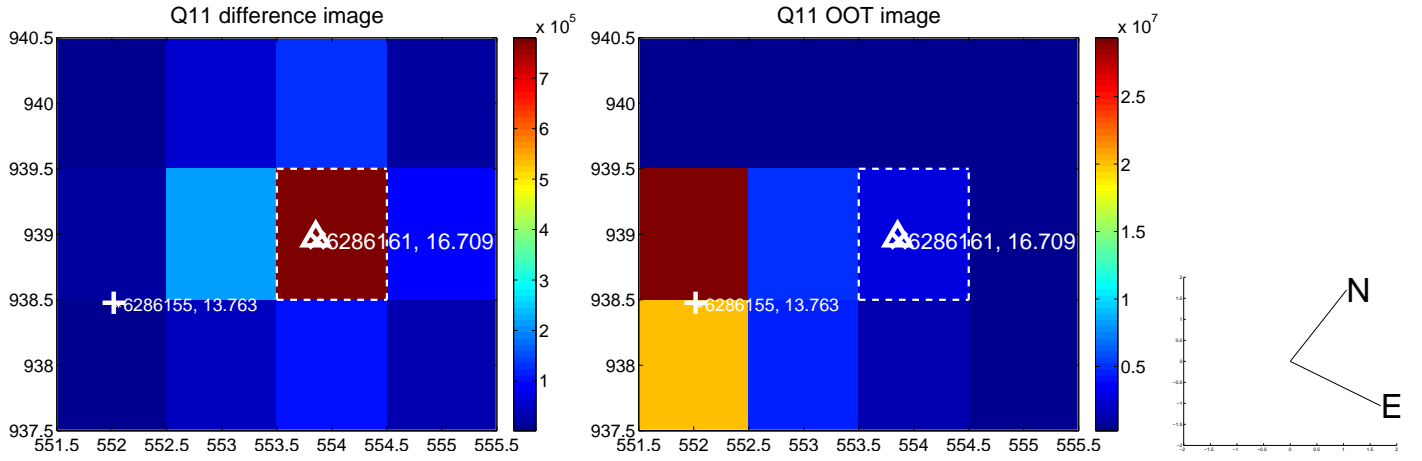
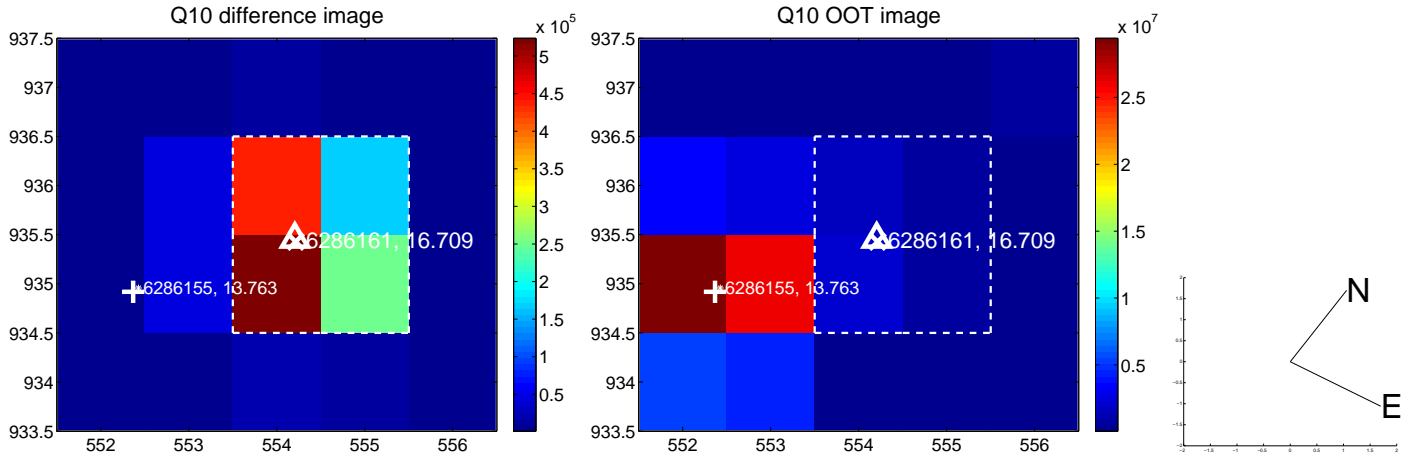
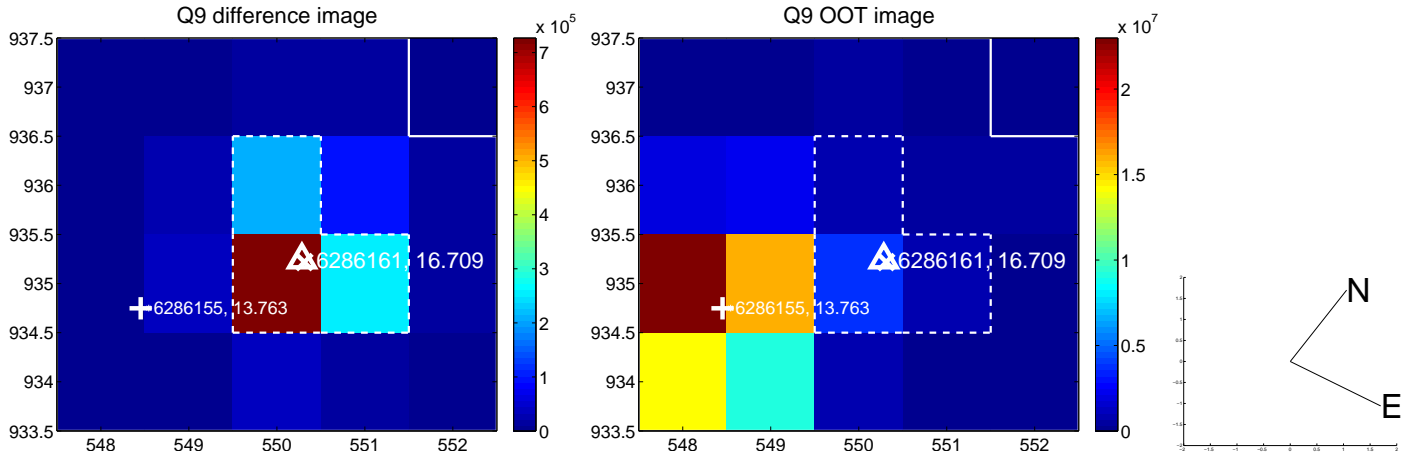
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



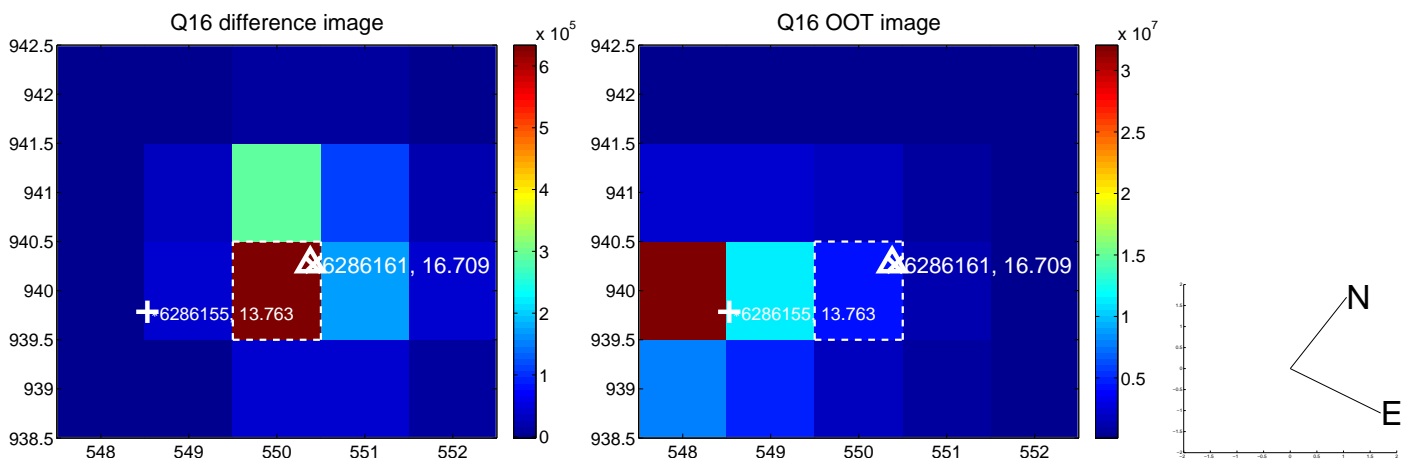
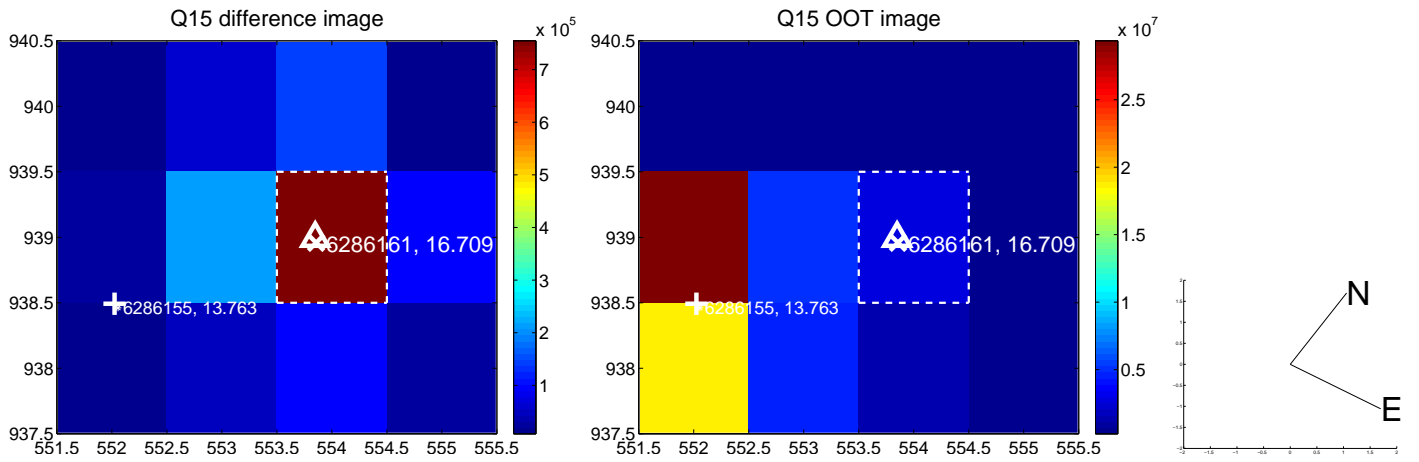
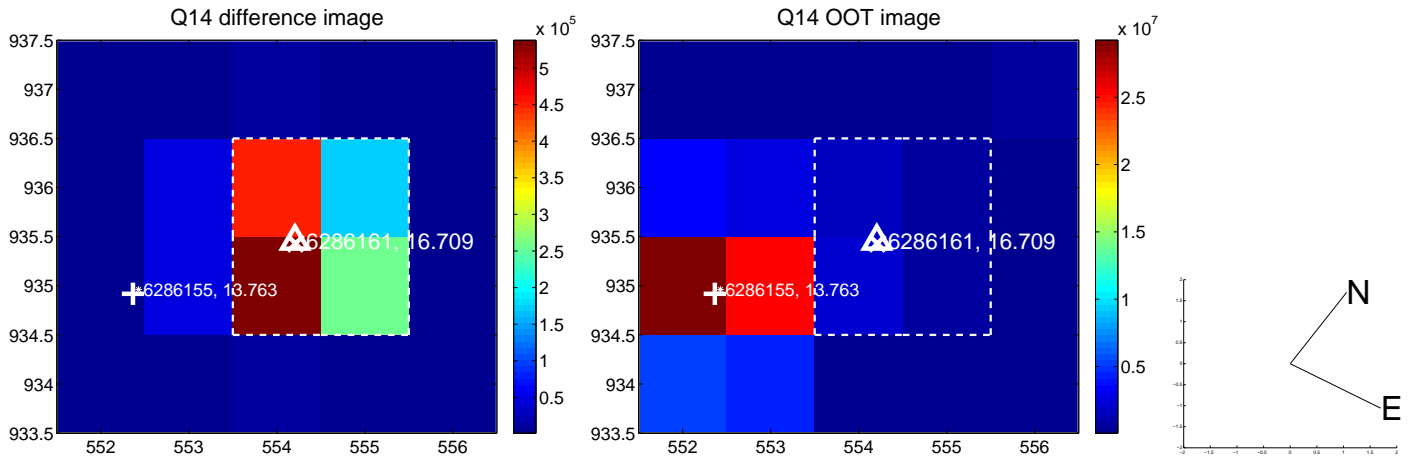
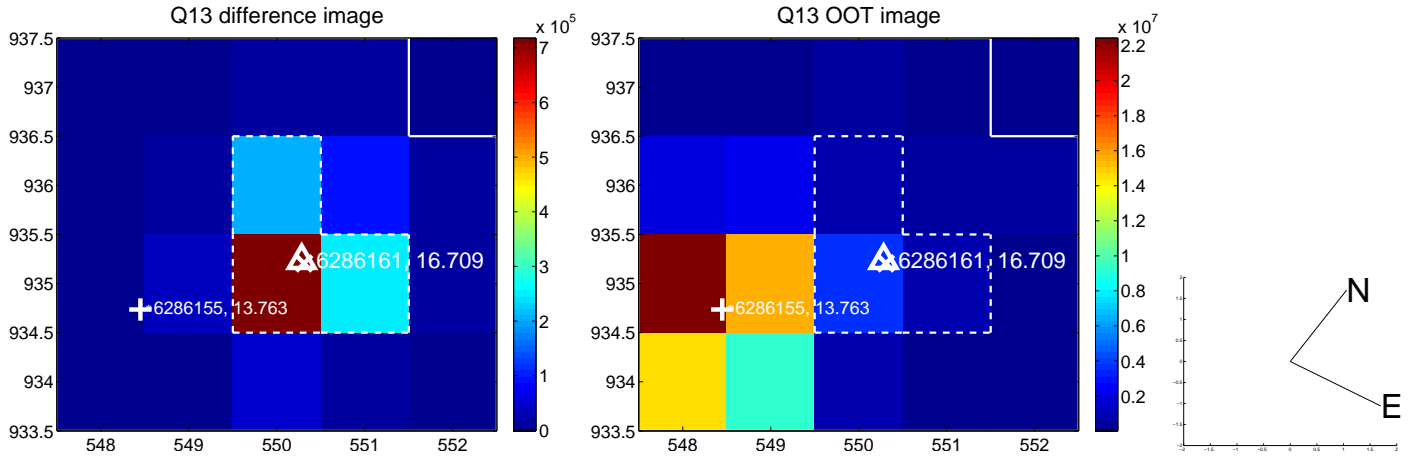
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



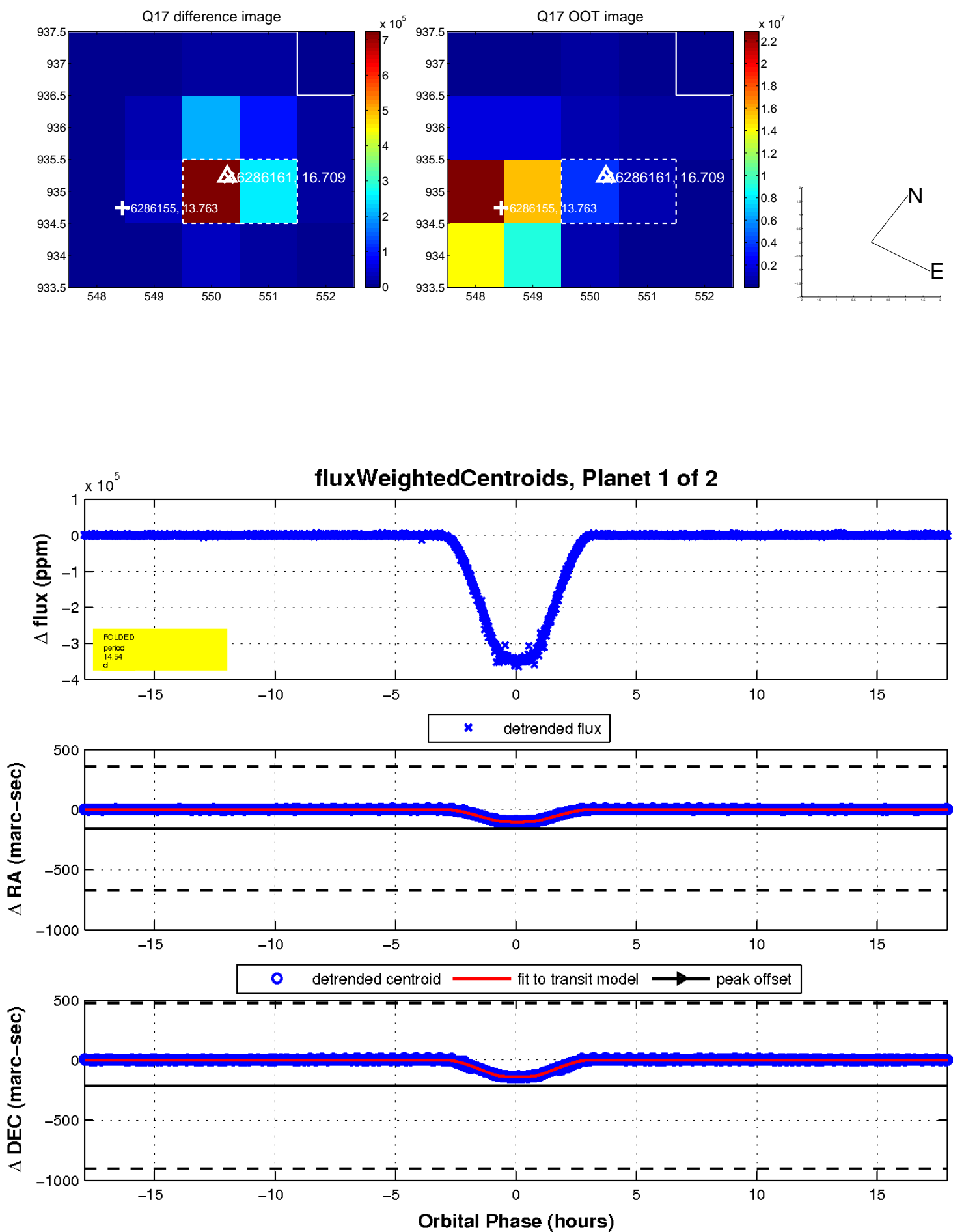
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

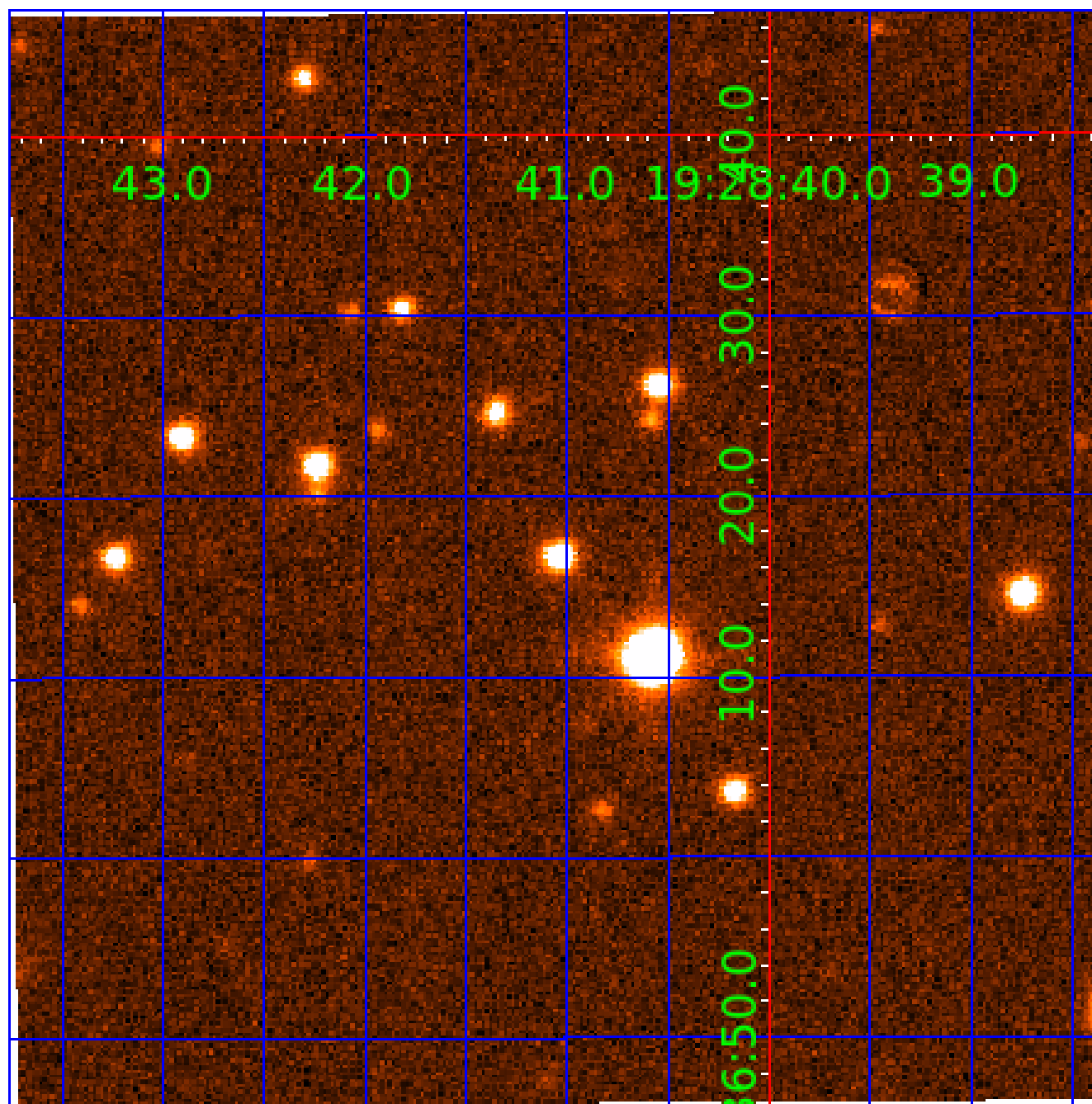


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006286161

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})
006286161-01	OBS	No	14.541795	137.583933	347935.3	5.969	3431.0	2162.3	1.15	5997	69.25	114.75
006286161-02	OBS	3501.01	14.541654	144.275158	107659.2	7.500	1541.0	-1.0	1.15	5997	37.77	114.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006286161-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
006286161-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_NOFITS

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.

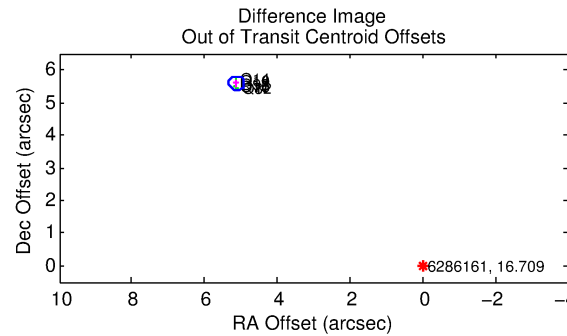
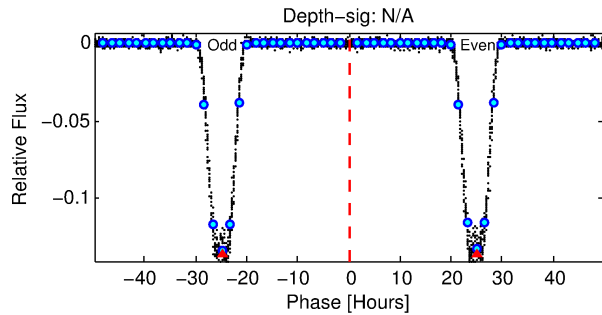
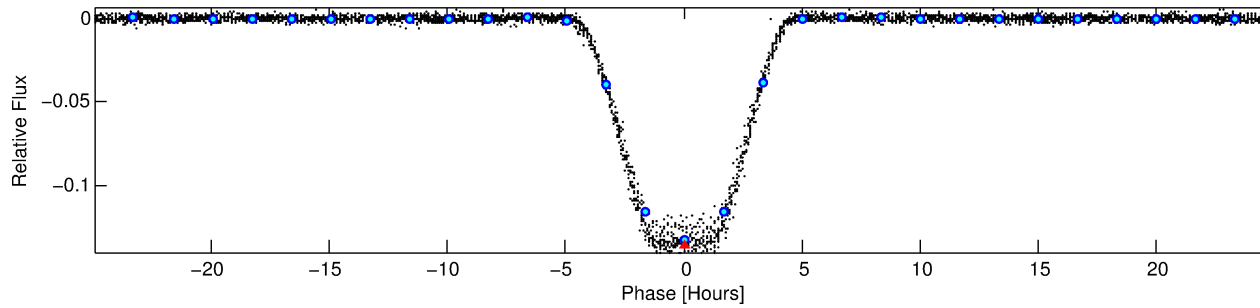
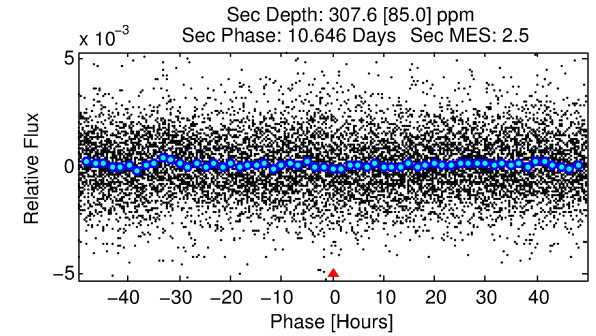
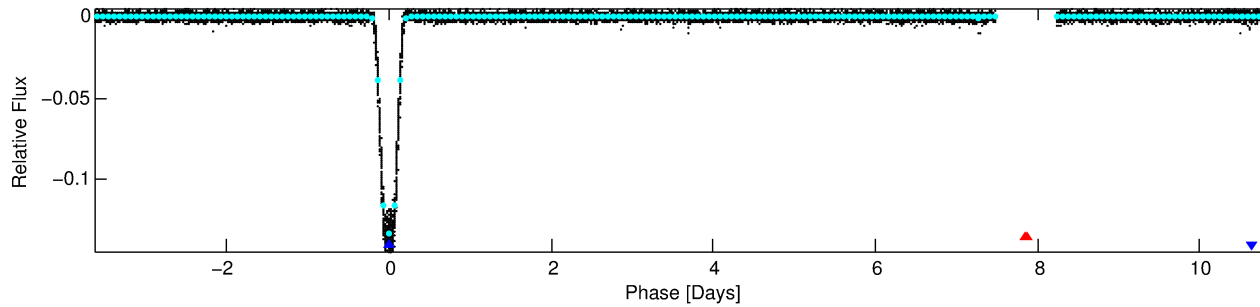
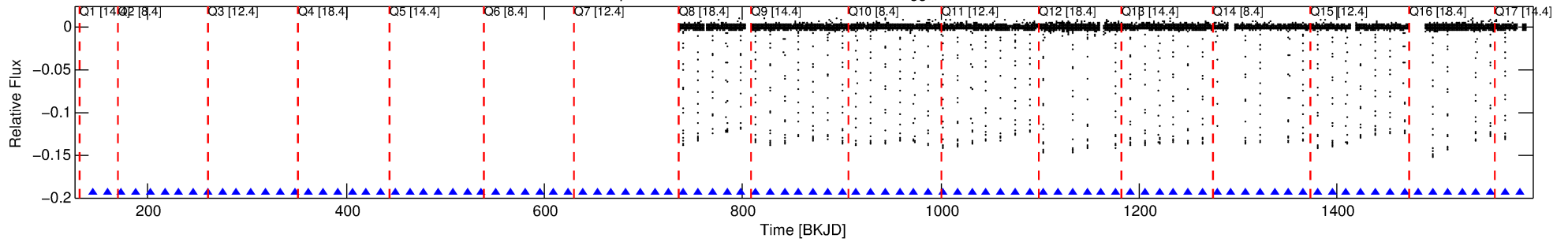
Ephemeris Match Information For 006286161-02

No Significant Match Found

DV One-Page Summary

KIC: 6286161 Candidate: 2 of 2 Period: 14.542 d
KOI: K03501.01 Corr: 0.908

Kp: 16.71 R*: 1.15 Rs Teff: 5997.0 K Logg: 4.30 Fe/H: -0.200



TPS TCE Results:

Period = 14.54165 d
Epoch = 144.2752 BKJD

DV fit results are unavailable

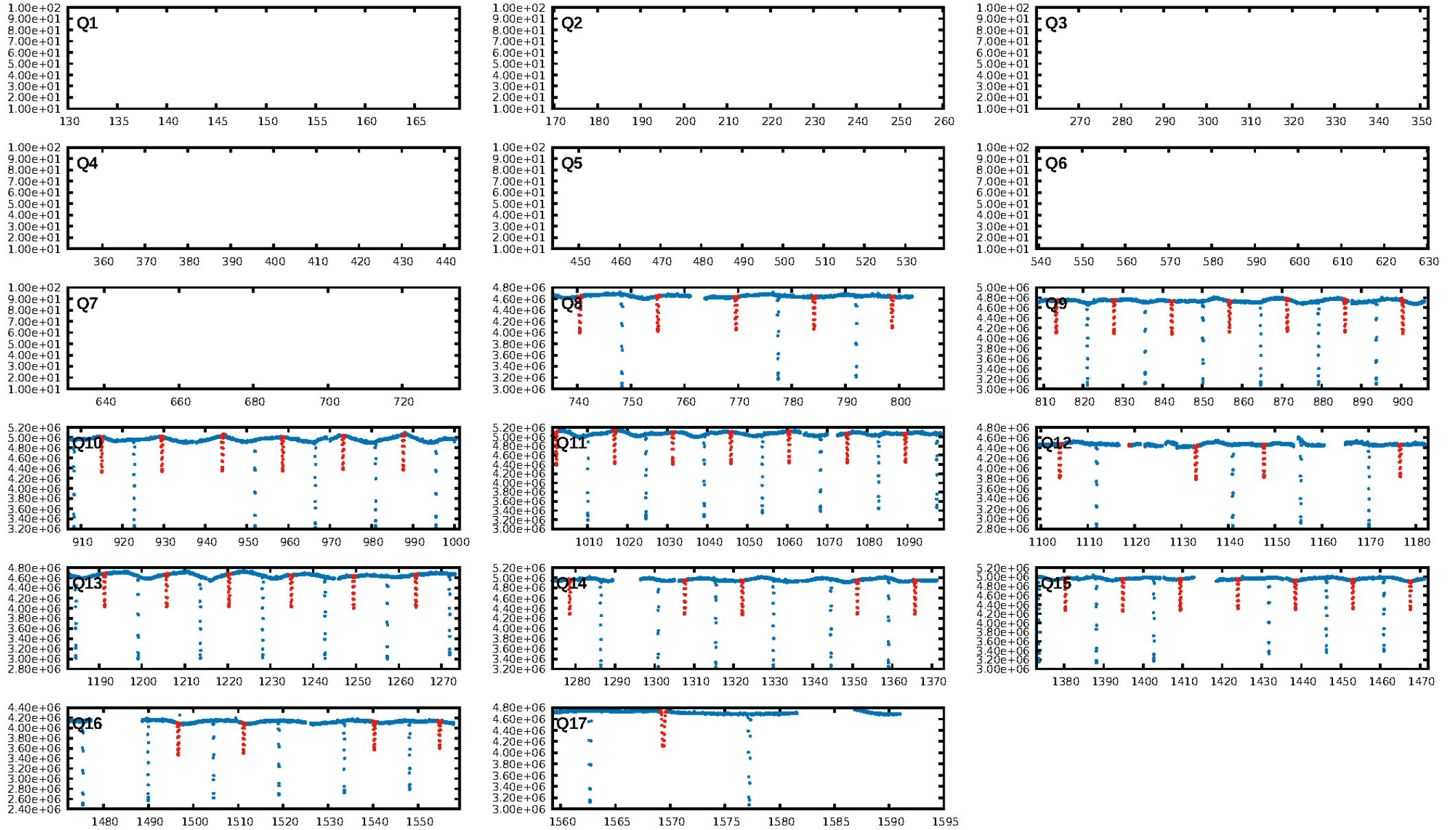
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [51/51]
GhostDiagnostic-chr: 1.85
Centroid-sig: 0.0%
Centroid-so: 3.113 arcsec [1751.78σ]
OotOffset-rm: 7.589 arcsec [104.85σ]
KicOffset-rm: 0.100 arcsec [1.41σ]
OotOffset-st: 2/2/3/3 [10]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

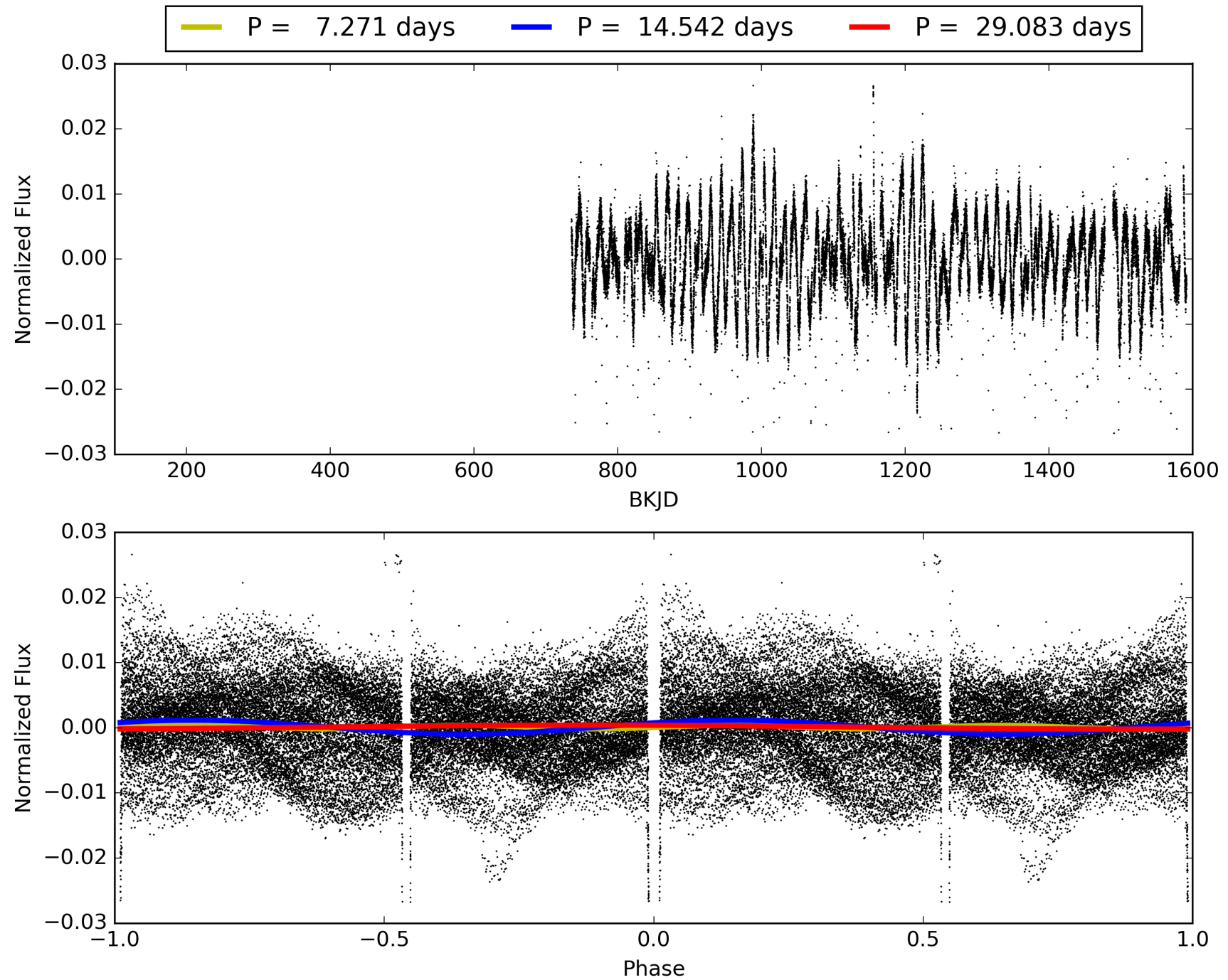
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:38:05 Z

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

TCE 006286161-02, PDC Light Curves

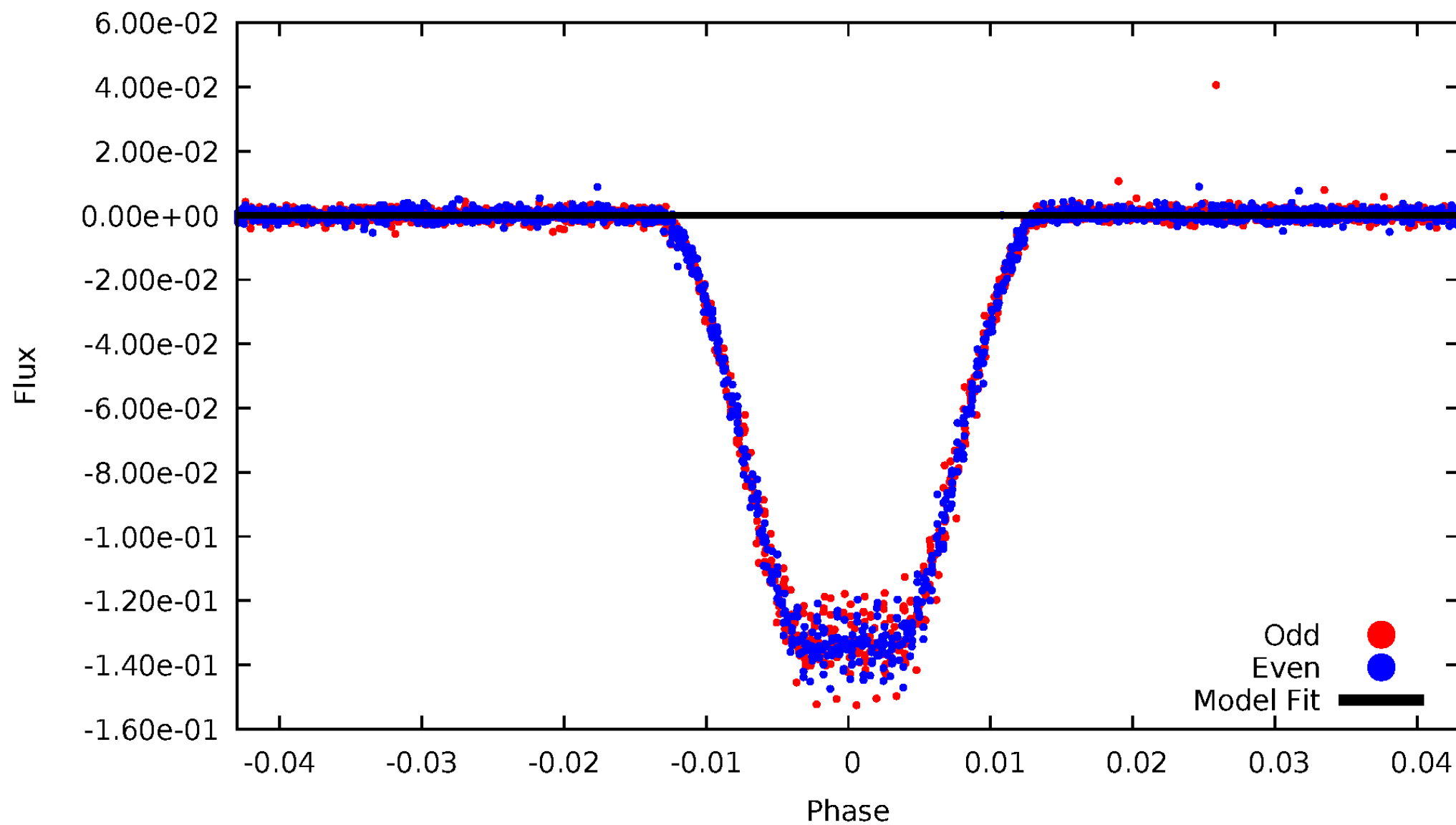


TCE 006286161-02



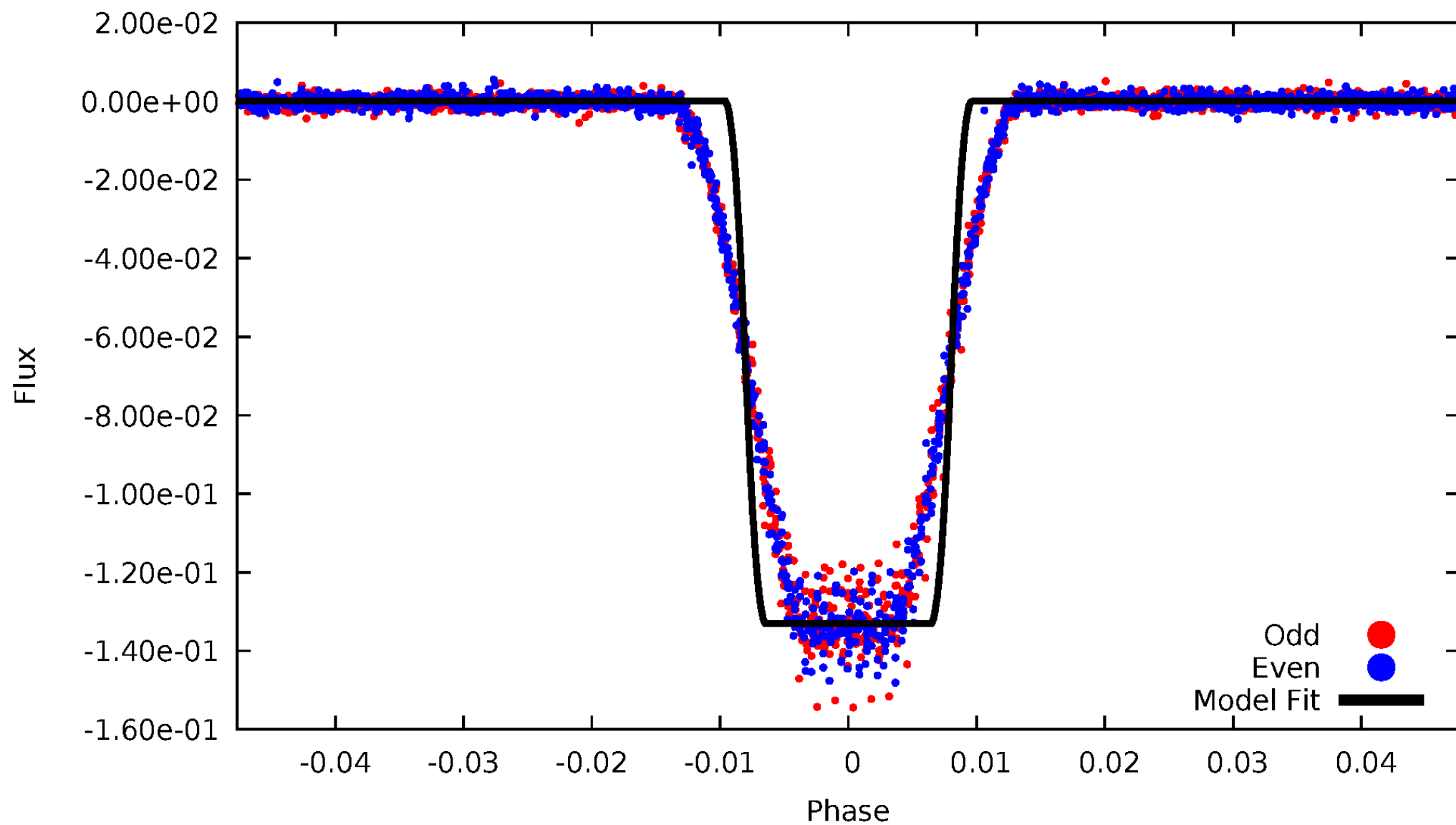
DV Odd/Even

TCE 006286161-02



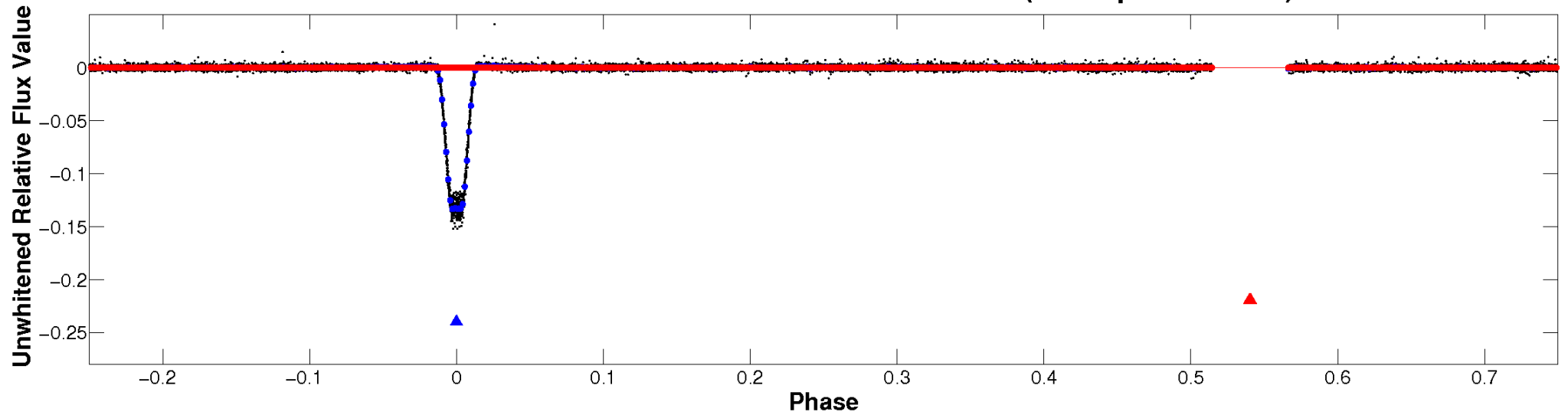
ALT Odd/Even

TCE 006286161-02

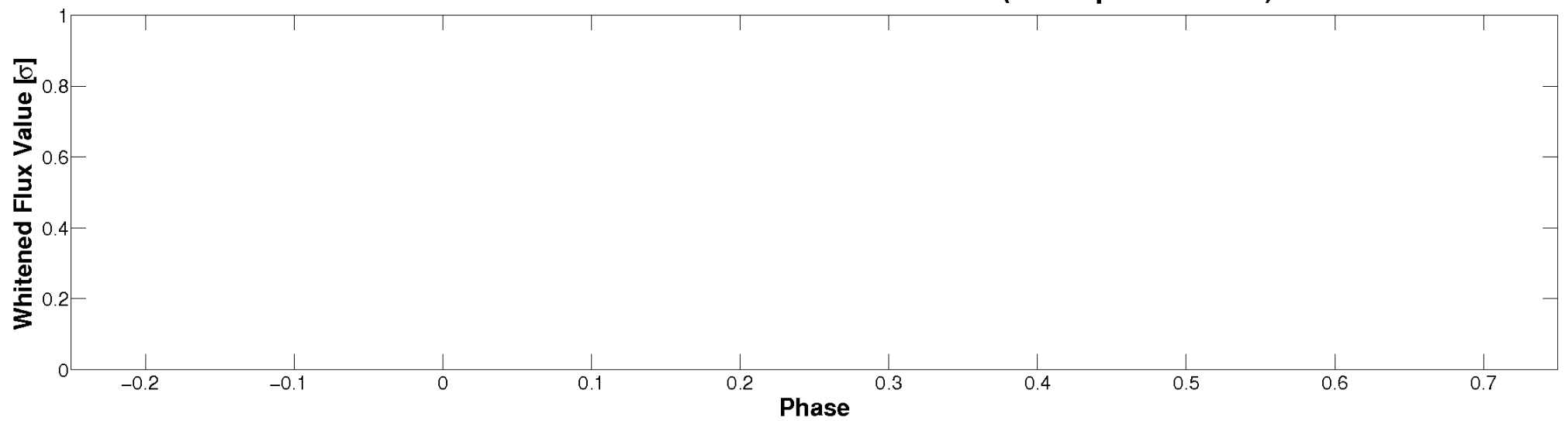


Non-Whitened Vs. Whitened Light Curve

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

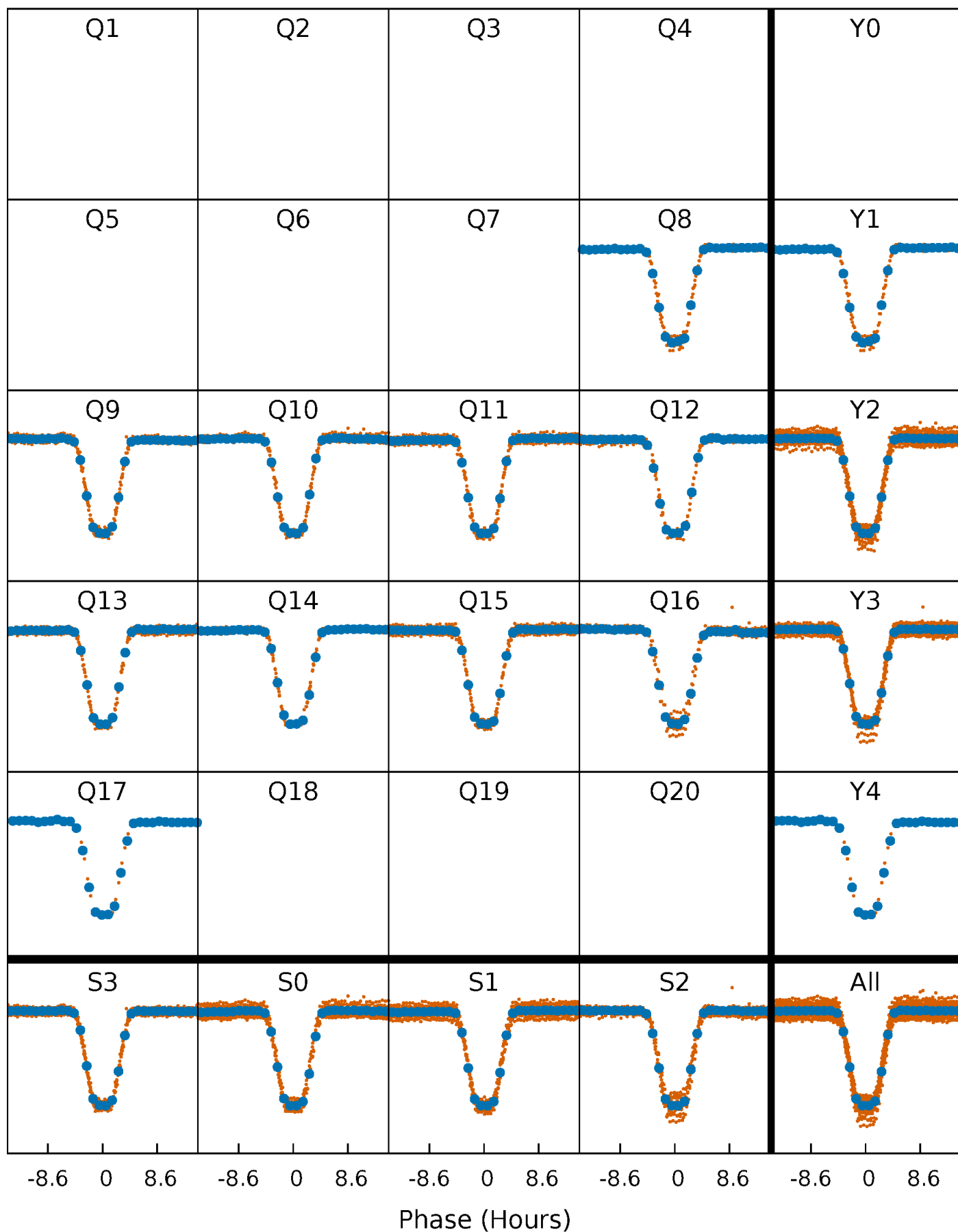


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



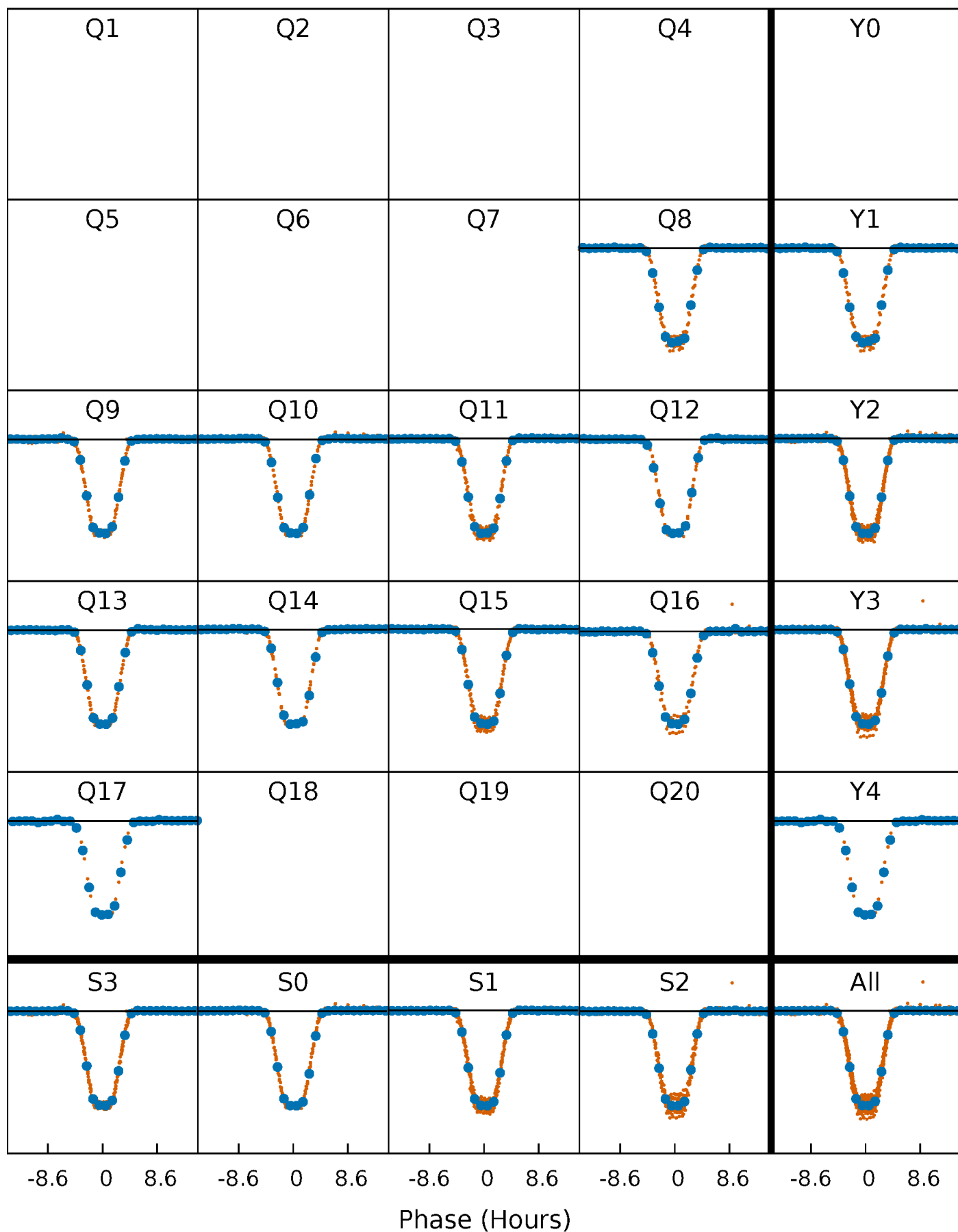
PDC Quarter-Phased Transit Curves

TCE 006286161-02 P= 14.541654 Days $T_0=144.275158$ (BKJD)



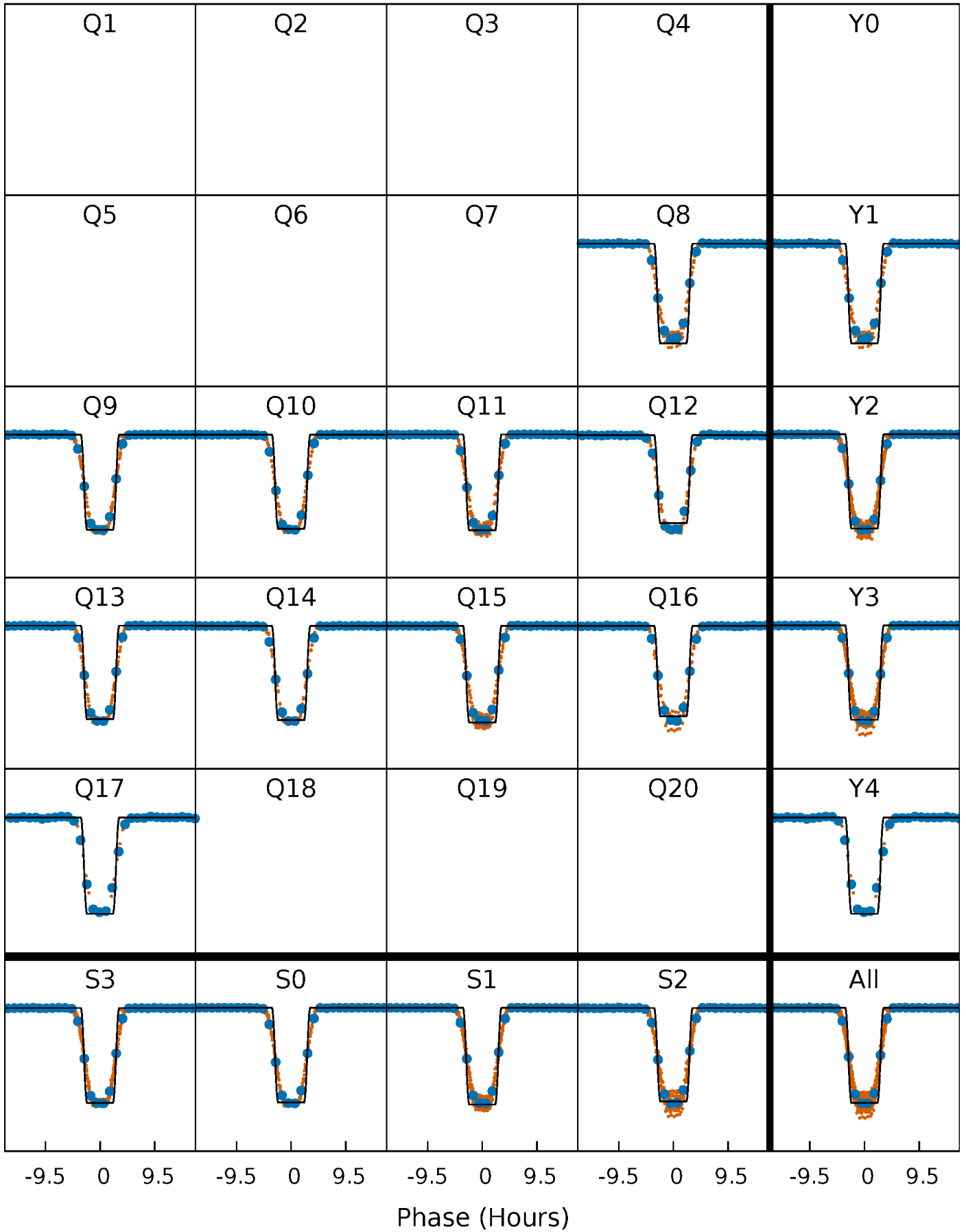
DV Quarter-Phased Transit Curves

TCE 006286161-02 P= 14.541654 Days $T_0=144.275158$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

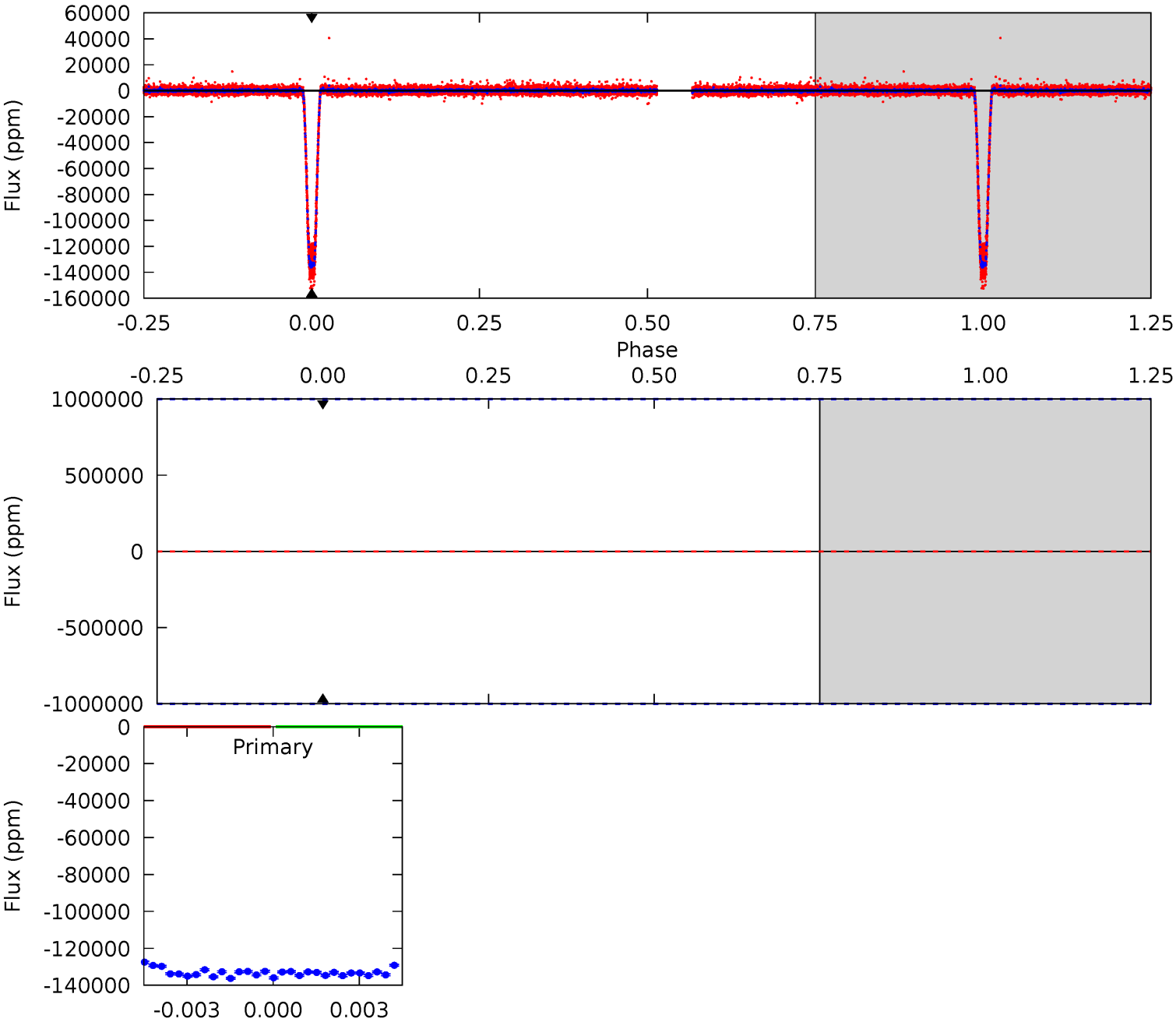
TCE 006286161-02 P= 14.541654 Days $T_0=144.278114$ (BKJD)



DV Model-Shift Uniqueness Test

006286161-02, P = 14.541654 Days, E = 144.275158 Days

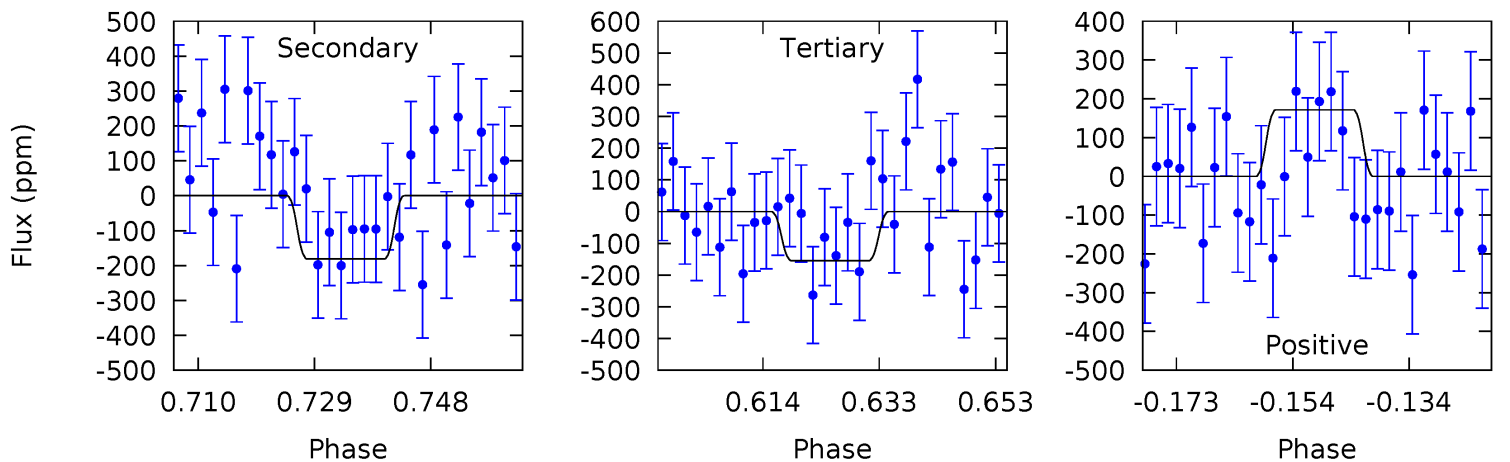
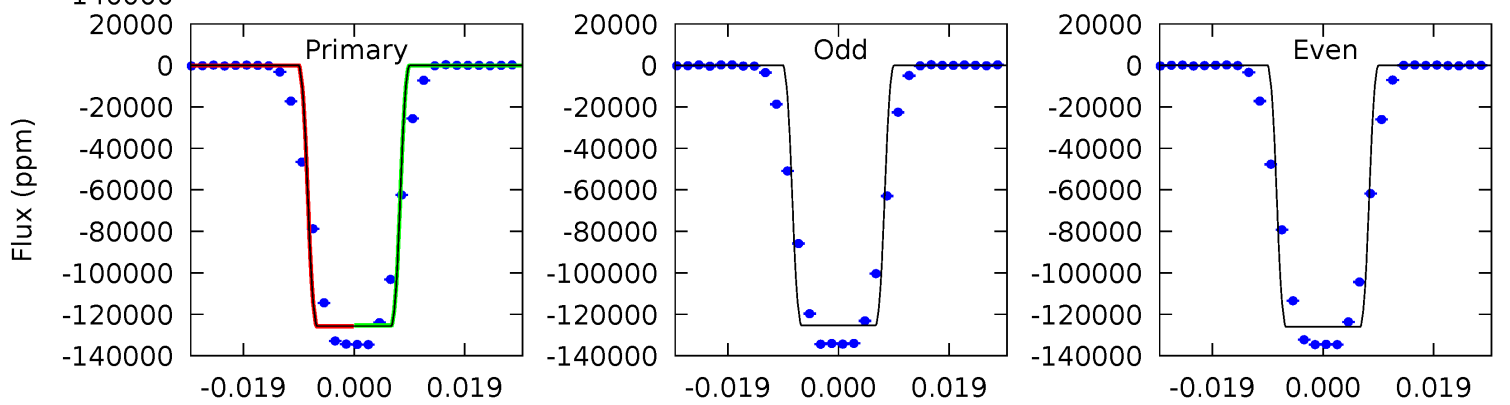
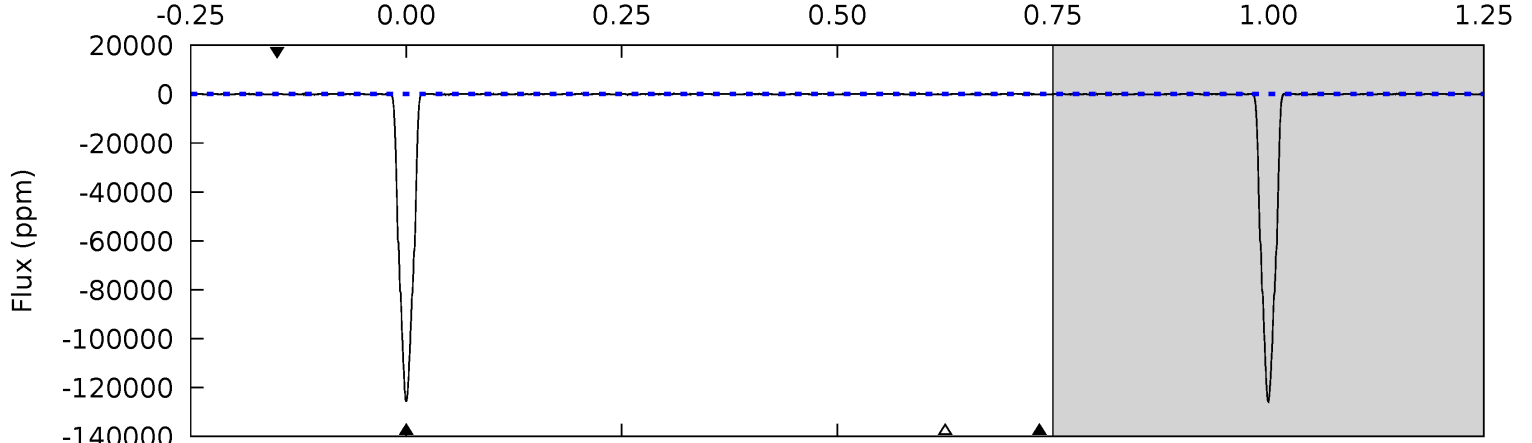
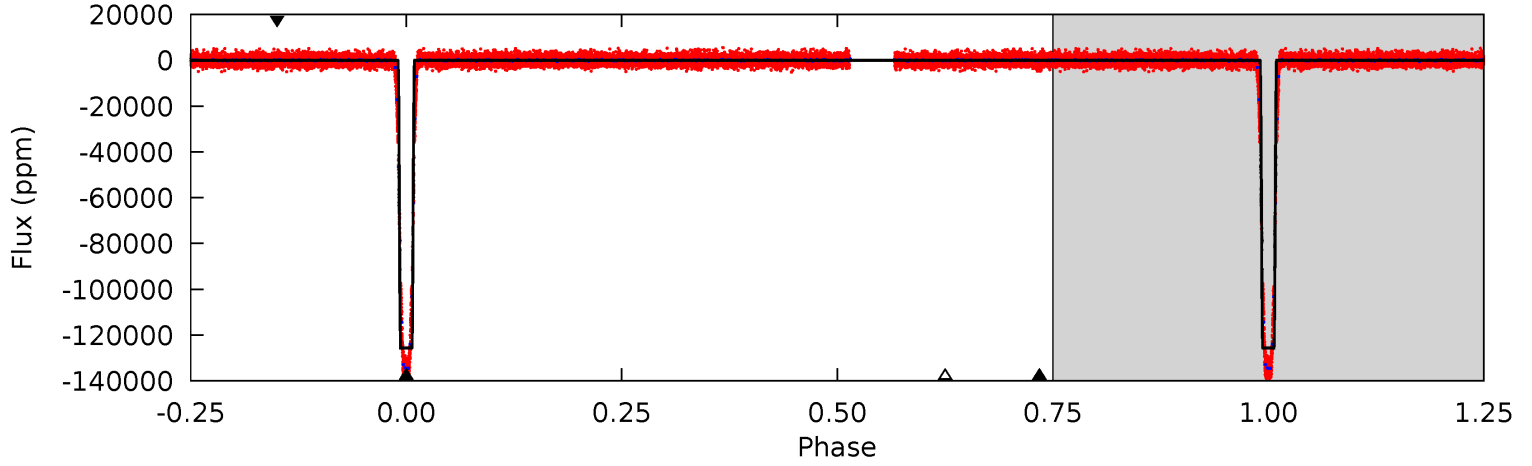
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006286161-02, P = 14.541654 Days, E = 144.278114 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1941	2.79	2.38	2.65	4.90	2.34	0.94	1939	1939	0.41	0.14	5.80	0.99	0.00	0



Stellar Parameters For KIC 006286161

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5997^{+188}_{-209}	$4.304^{+0.162}_{-0.180}$	$-0.200^{+0.300}_{-0.300}$	$1.148^{+0.345}_{-0.230}$	$0.968^{+0.157}_{-0.118}$	$0.901^{+0.749}_{-0.448}$
	+3%/-3%	+4%/-4%	+150%/-150%	+30%/-20%	+16%/-12%	+83%/-50%
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 006286161-02 / KOI 3501.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$37.51^{+13.89}_{-12.33}$	1165^{+85}_{-81}	3242^{+3306}_{-9380}	15^{+669}_{-558}
Alt.	-181 ± 65	$46.04^{+15.73}_{-12.81}$	1169^{+94}_{-80}	1956^{+268}_{-3320}	$0.589^{+0.677}_{-0.293}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

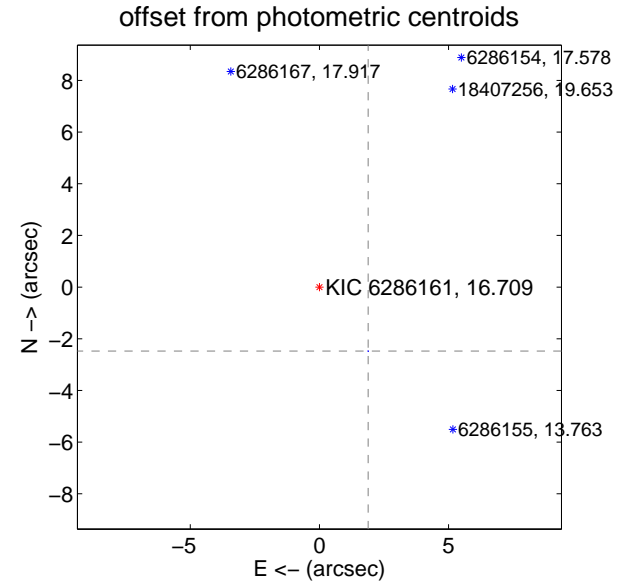
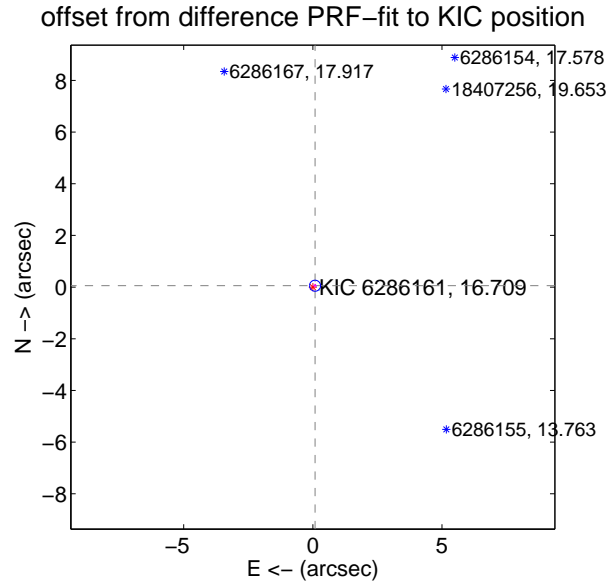
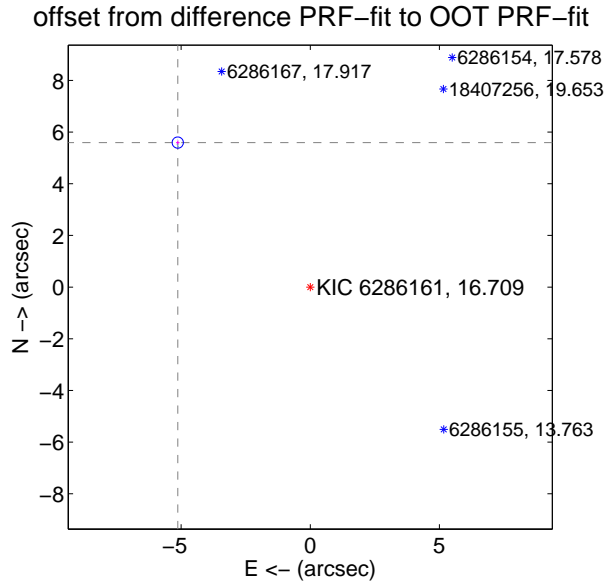
DV Centroid Data

Supplemental centroid analysis for 006286161-02. Kepler magnitude: 16.71. Transit SNR -1.00

There are 10 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 7.62 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.589 ± 0.072	104.85	5.129 ± 0.067	5.594 ± 0.077
PRF-fit source offset from KIC position	0.100 ± 0.071	1.41	-0.085 ± 0.071	0.053 ± 0.072
photometric centroid source offset	3.11 ± 0.00	1751.78	-1.89 ± 0.00	-2.48 ± 0.00

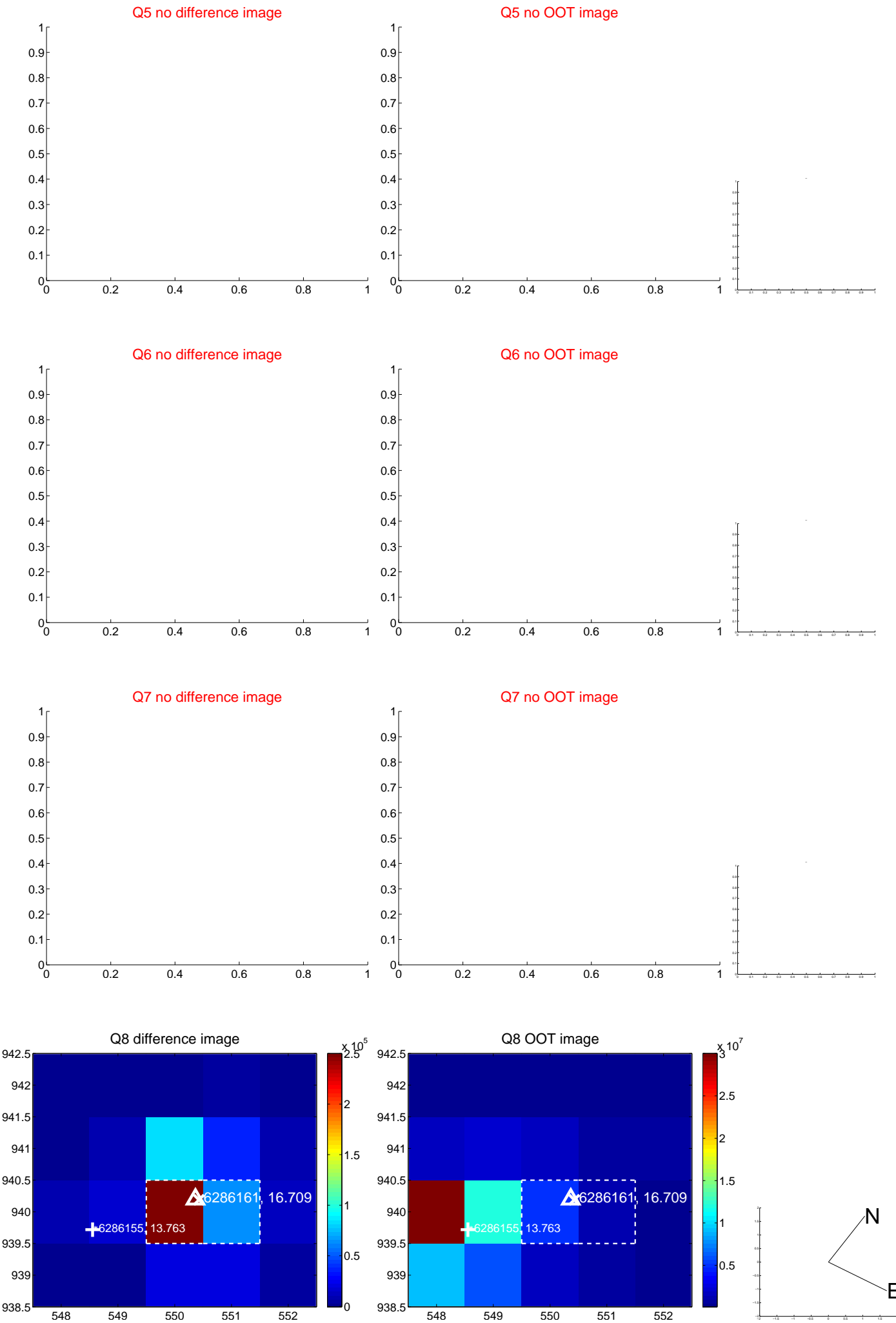


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

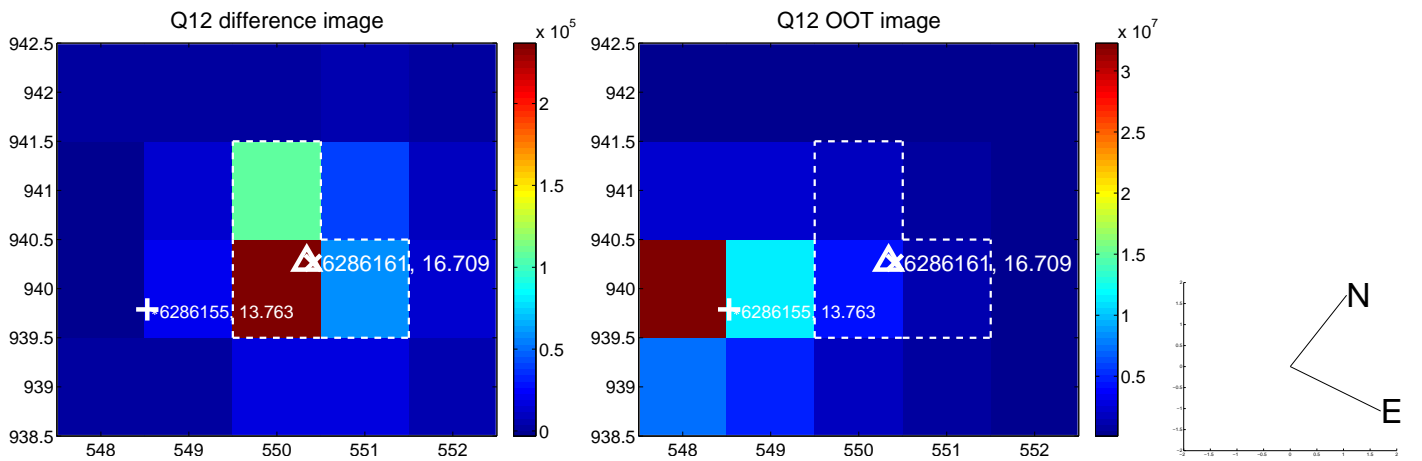
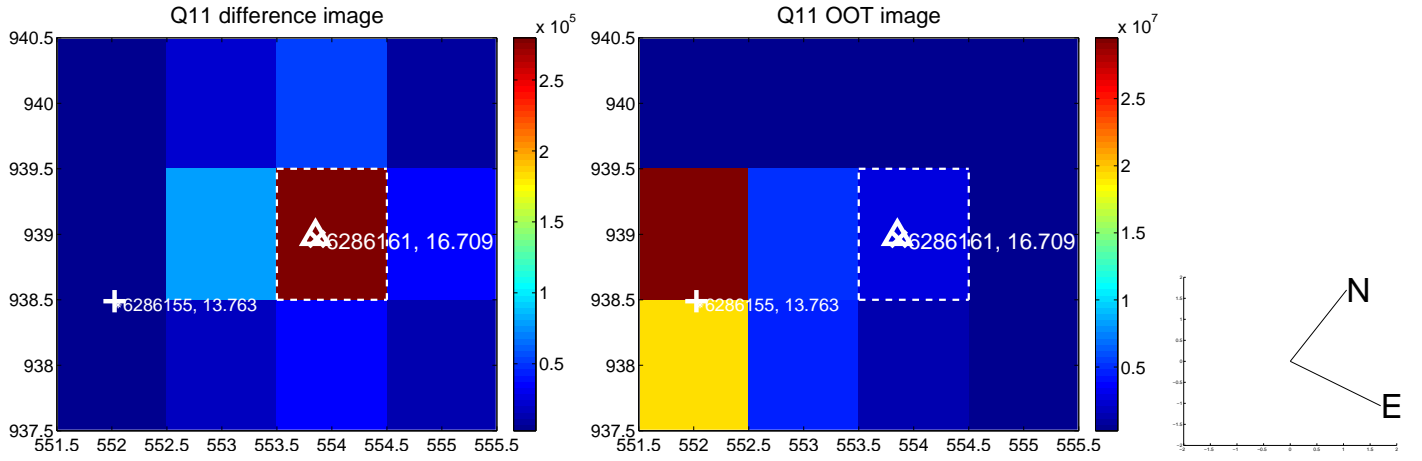
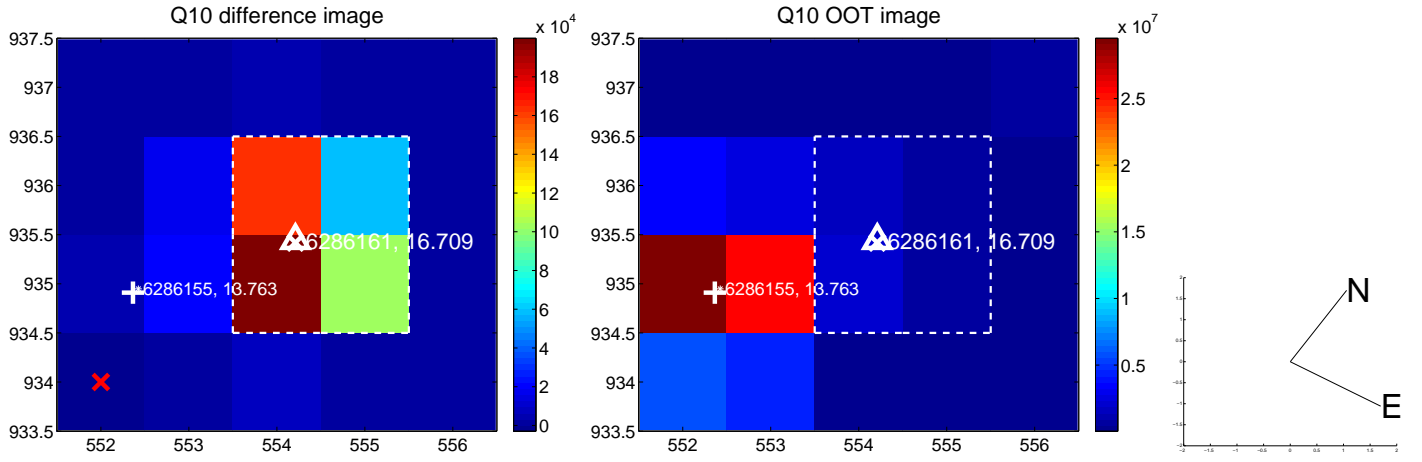
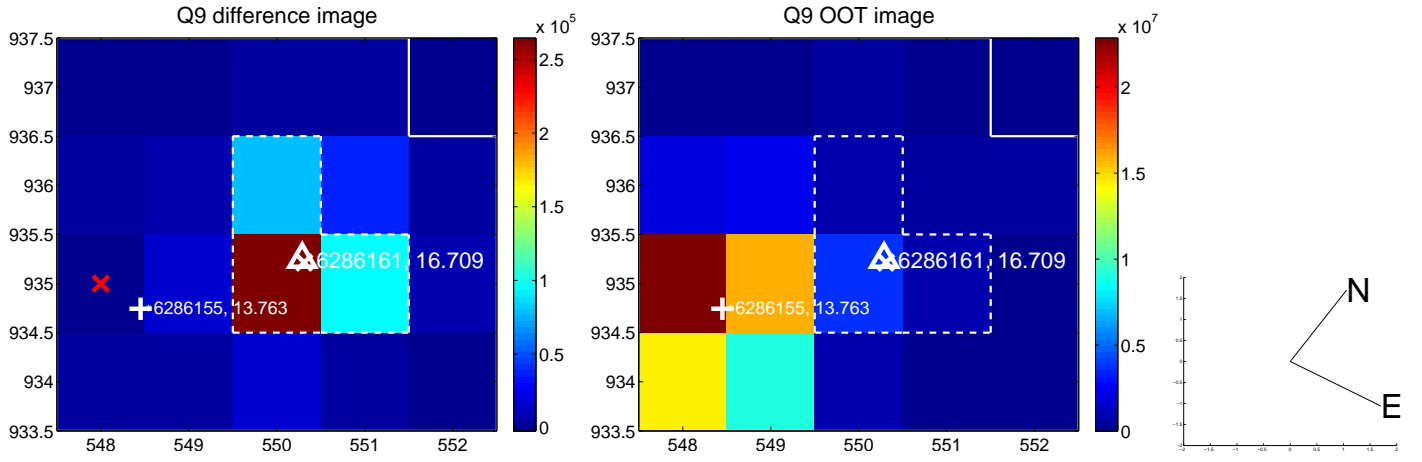
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



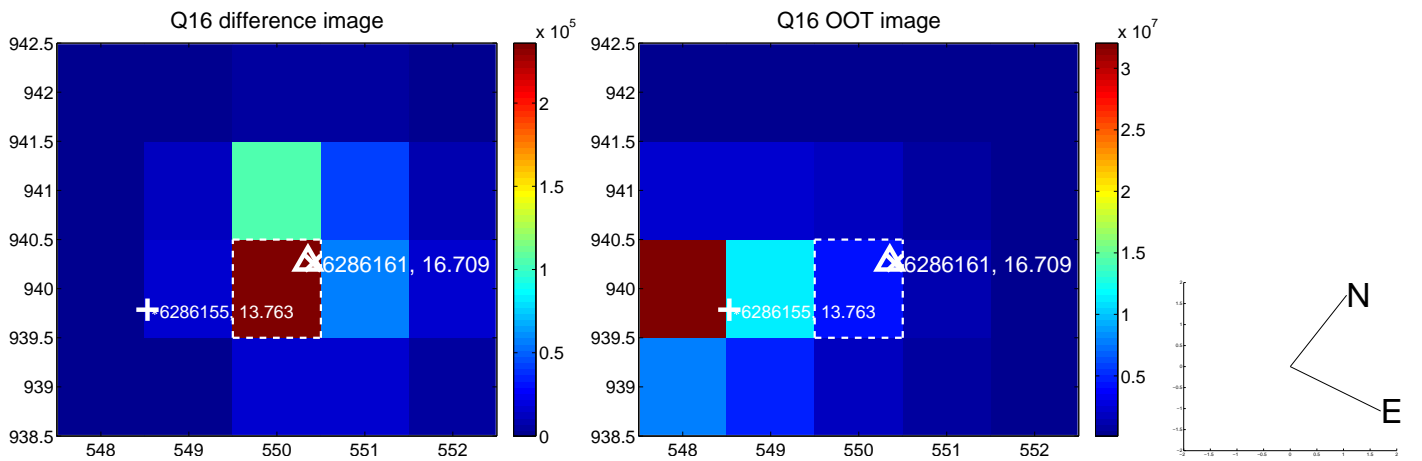
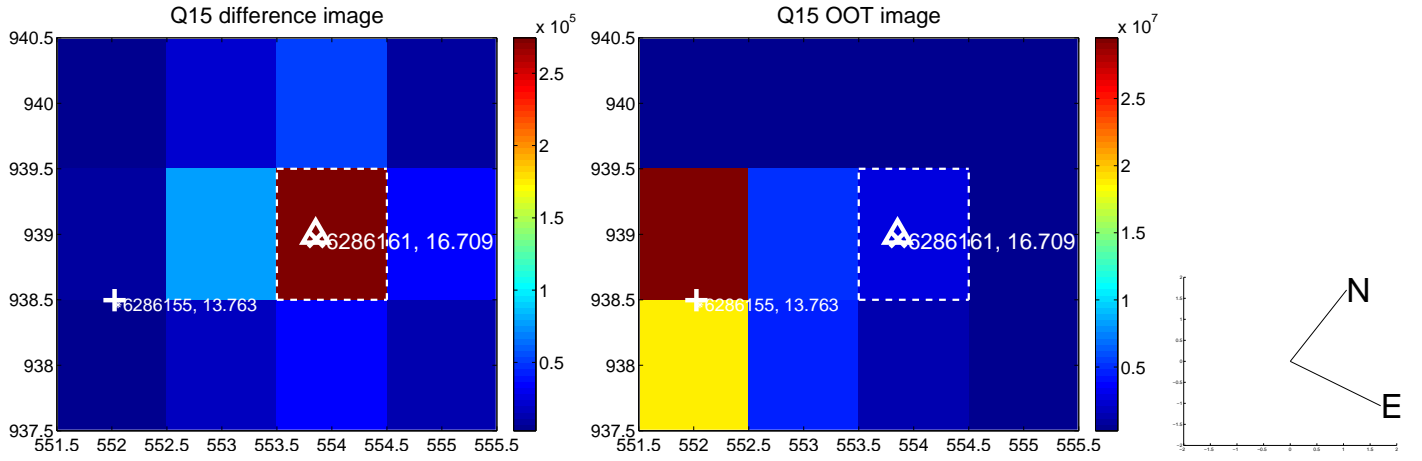
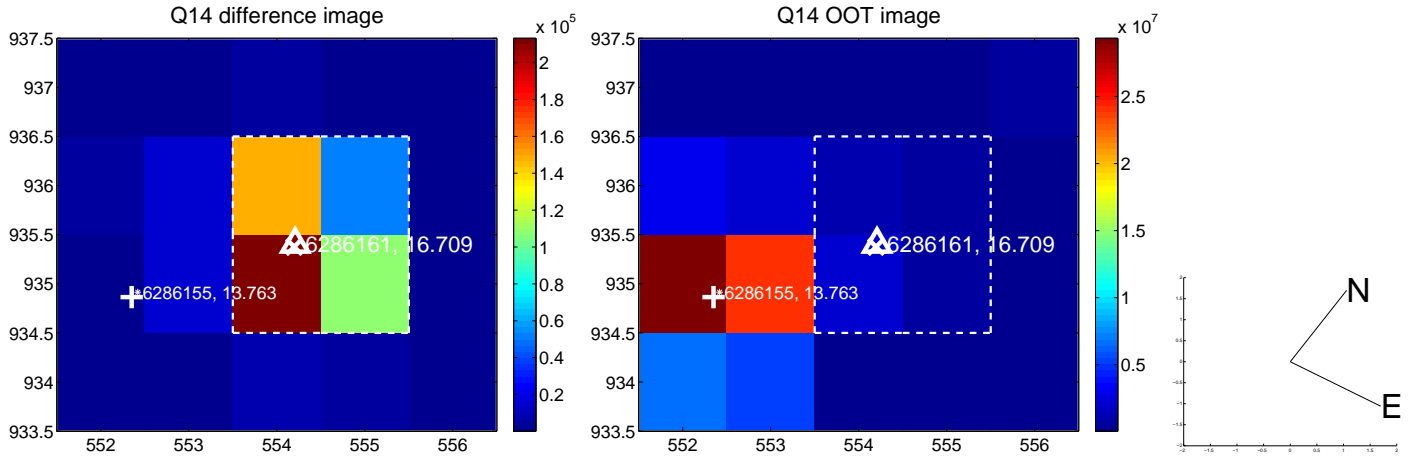
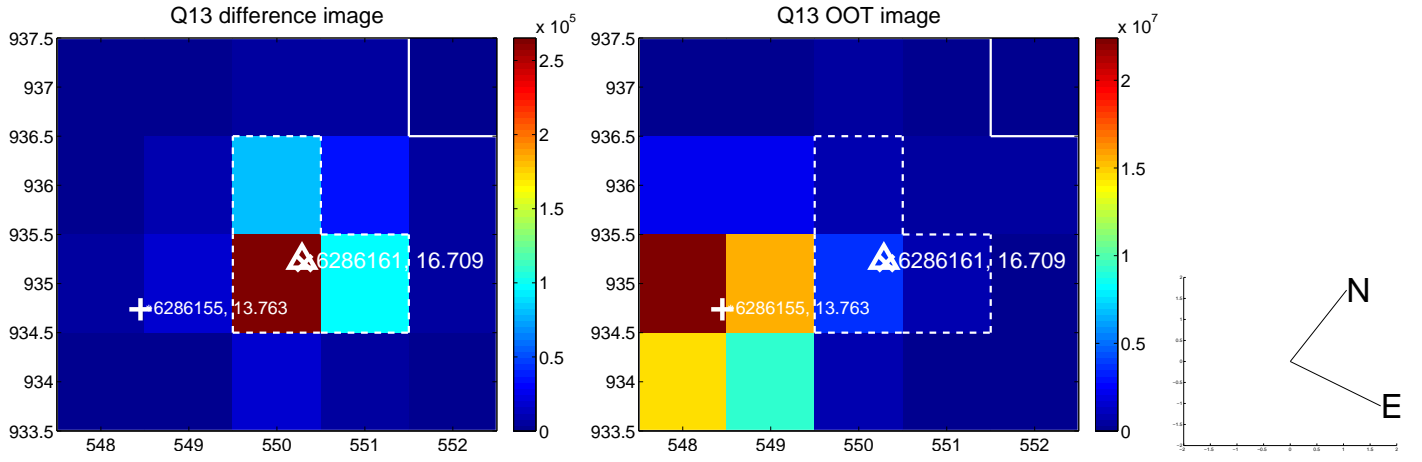
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



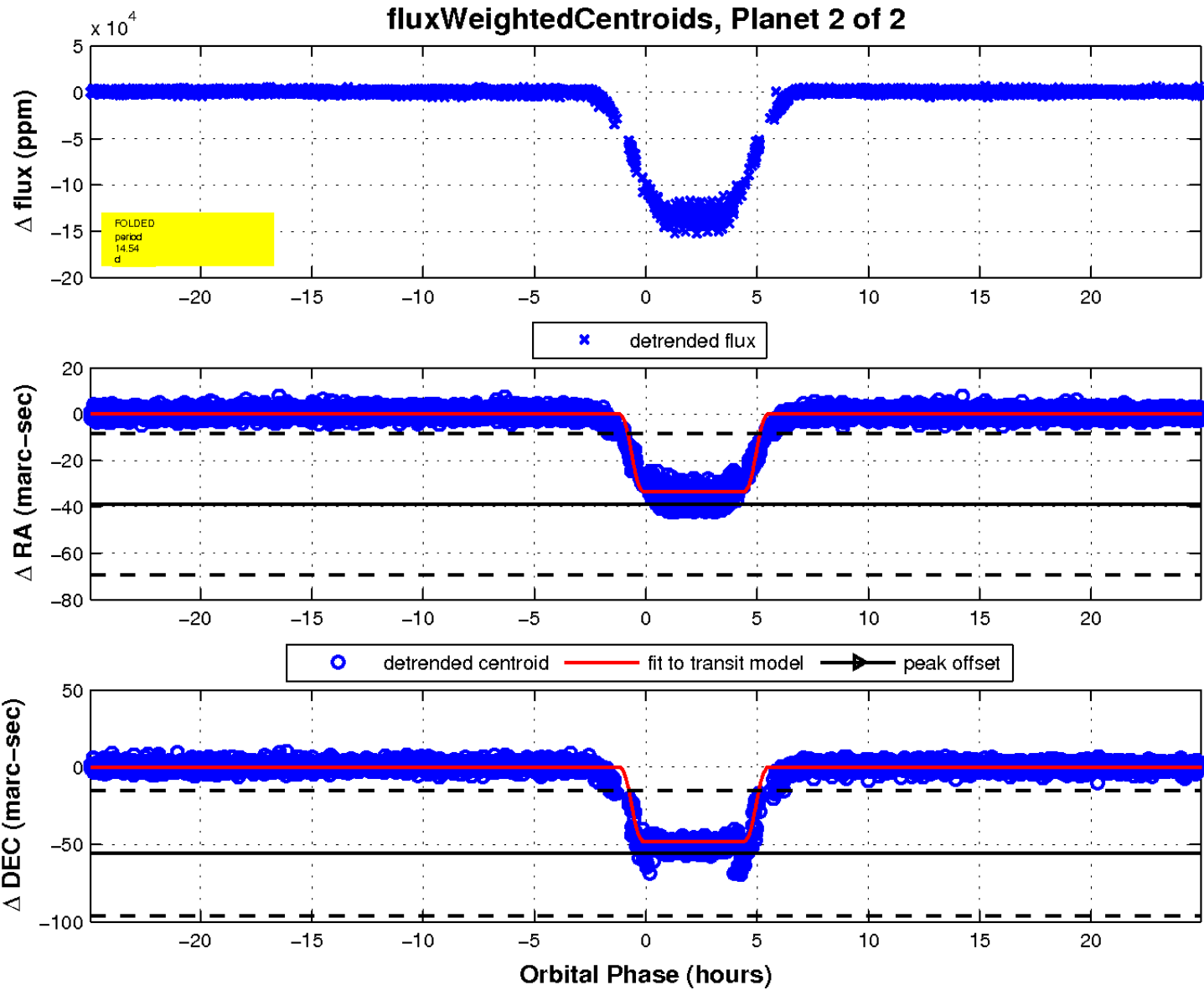
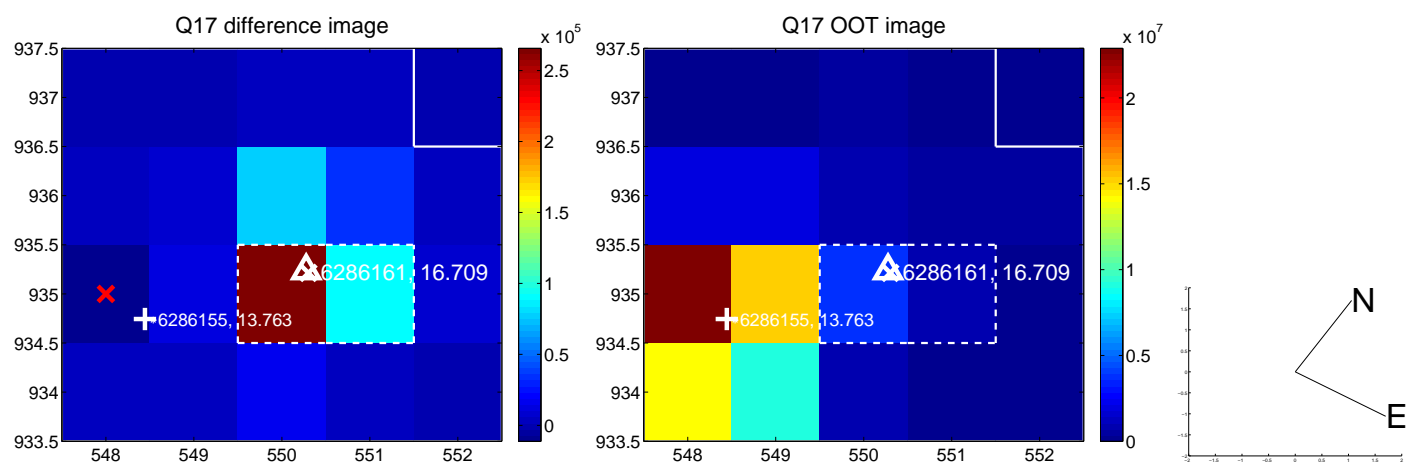
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

