

KIC 011495766

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})
011495766-01	OBS	No	435.089863	161.582903	200.9	24.178	33.6	7.1	0.94	5910	2.23	0.75
011495766-02	OBS	No	311.478888	291.266007	440.0	6.241	12.8	10.7	0.94	5910	2.25	1.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011495766-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011495766-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—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.

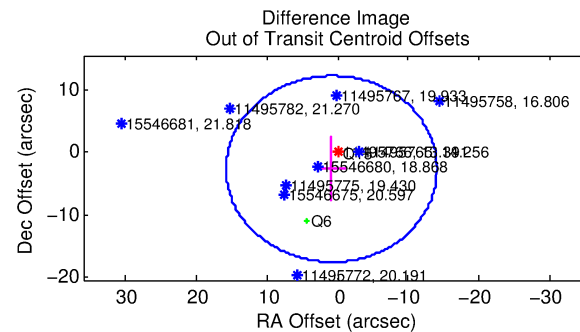
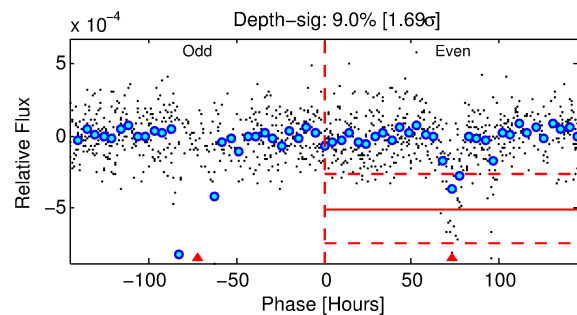
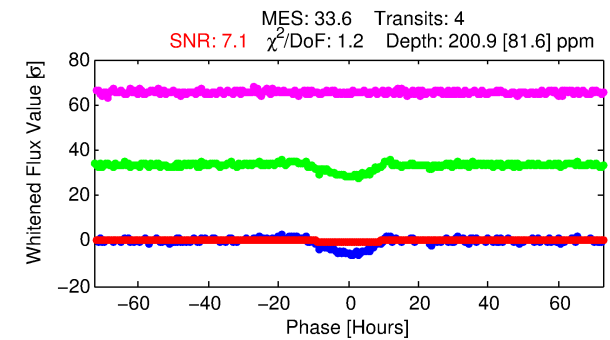
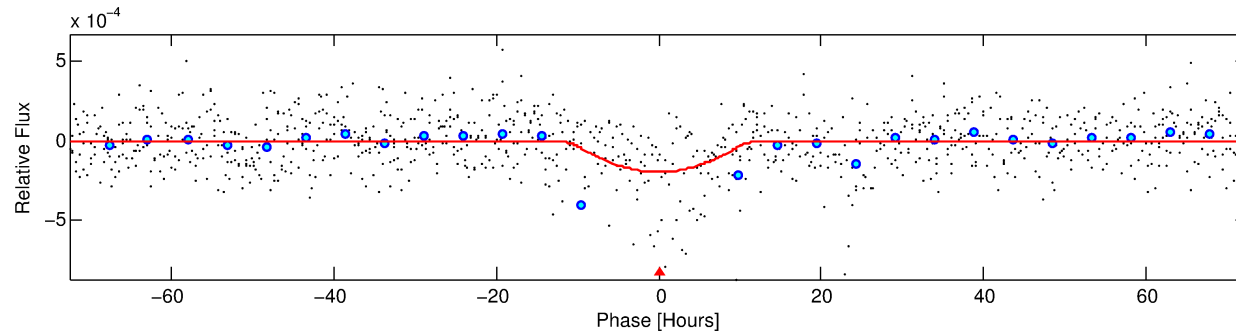
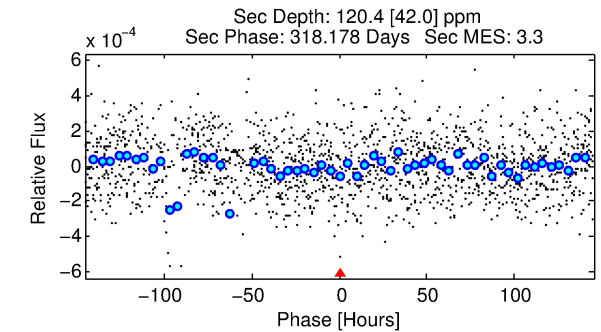
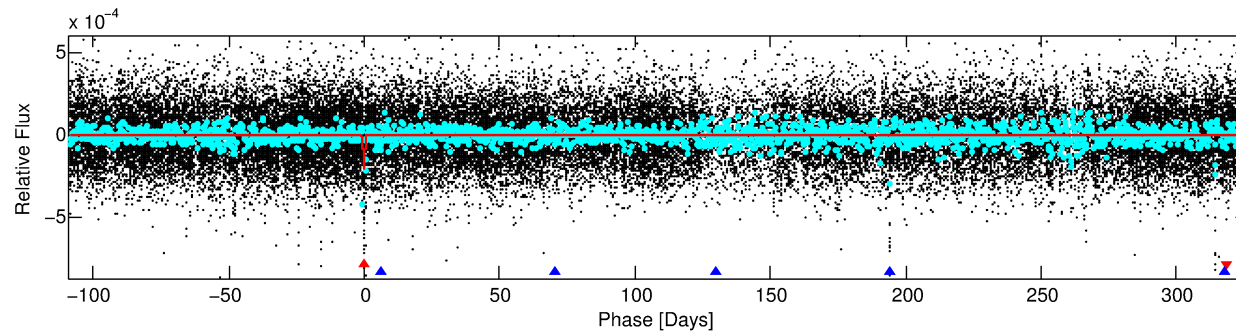
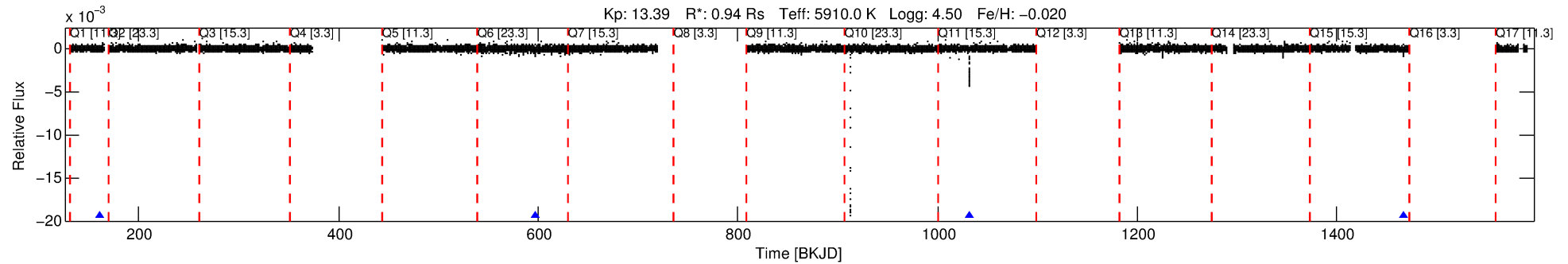
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011495766-01

No Significant Match Found

DV One-Page Summary

KIC: 11495766 Candidate: 1 of 2 Period: 435.090 d
KOI: K02630 Corr: No Ephemeris Match



DV Fit Results:

Period = 435.08986 [0.03355] d
Epoch = 161.5829 [0.0657] BKJD
Rp/R* = 0.0217 [0.0436]
a/R* = 33.55 [25.21]
b = 0.99 [0.08]
Seff = 0.75 [0.30]
Teq = 237 [24] K
Rp = 2.23 [4.52] Re
a = 1.1355 [0.2906] AU
Ag = 17181.15 [69439.63] [0.25] σ
Teff = 4199 [4227] K [0.94] σ

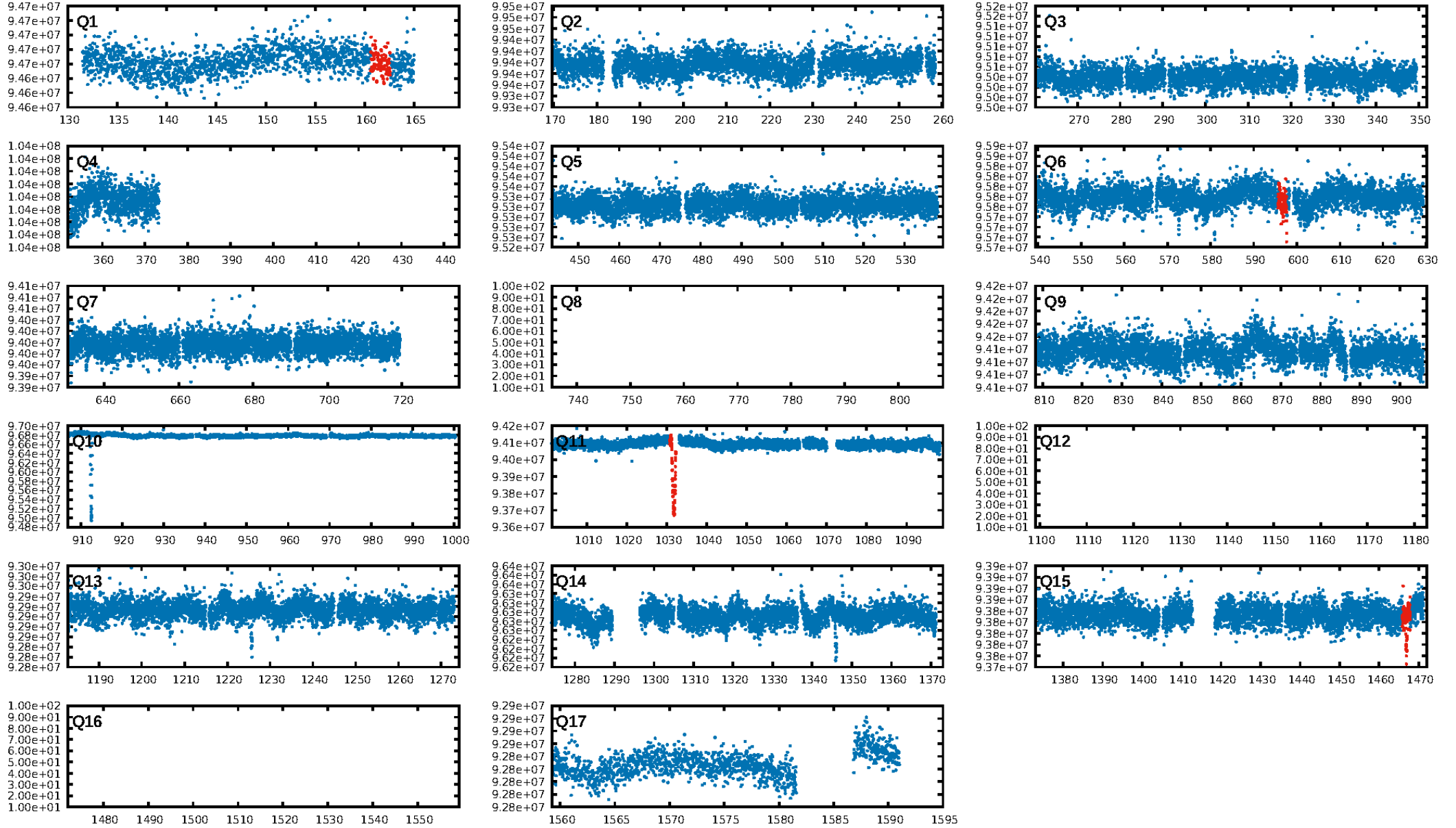
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [118.81] σ
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 3.29e-122
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -5.947
Centroid-sig: 41.0%
Centroid-so: 1.403 arcsec [1.08] σ
OotOffset-rm: 2.835 arcsec [0.57] σ
OotOffset-st: 1/1/0/0 [2]
KicOffset-rm: 2.810 arcsec [0.57] σ
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

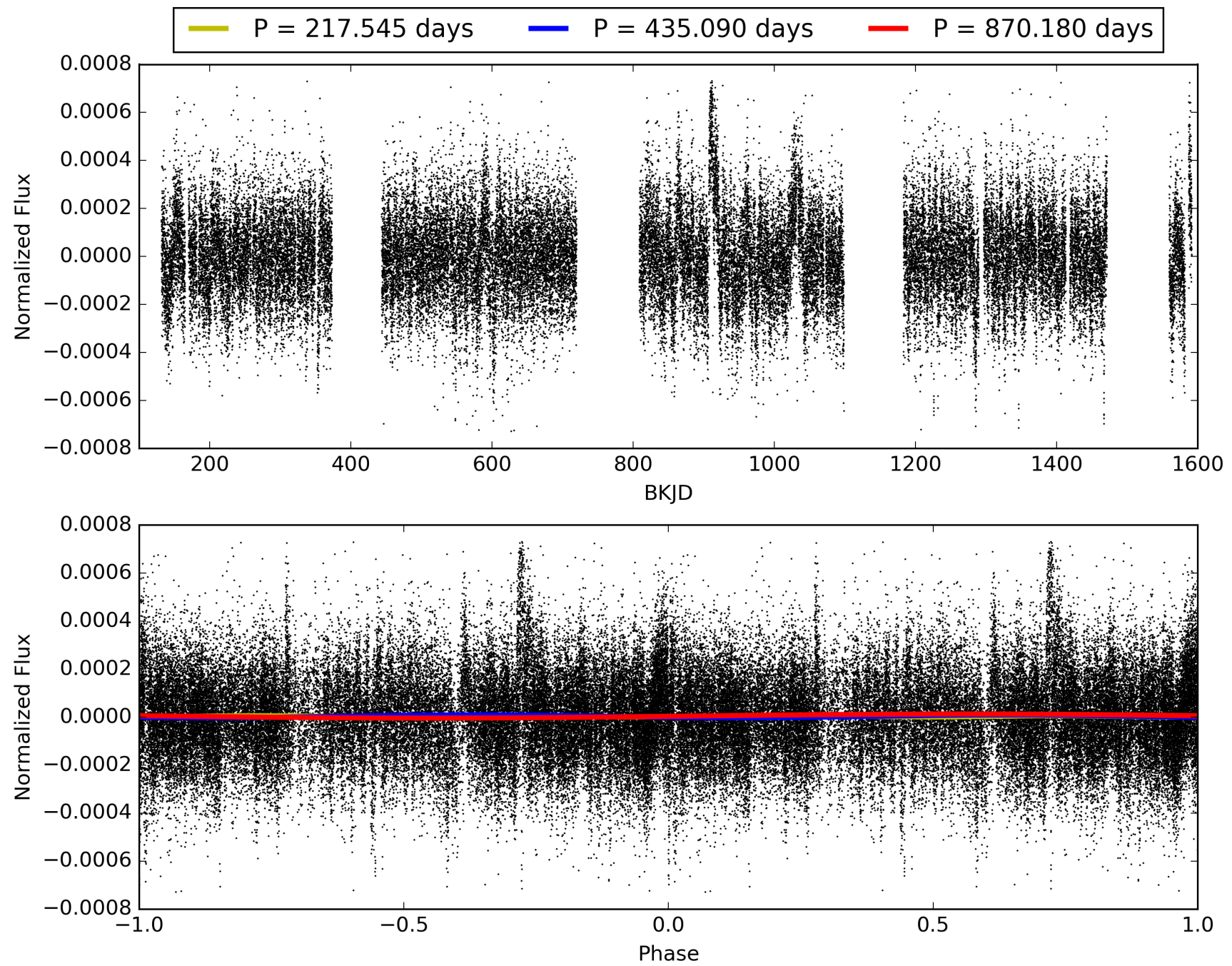
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:23:18 Z

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

TCE 011495766-01, PDC Light Curves

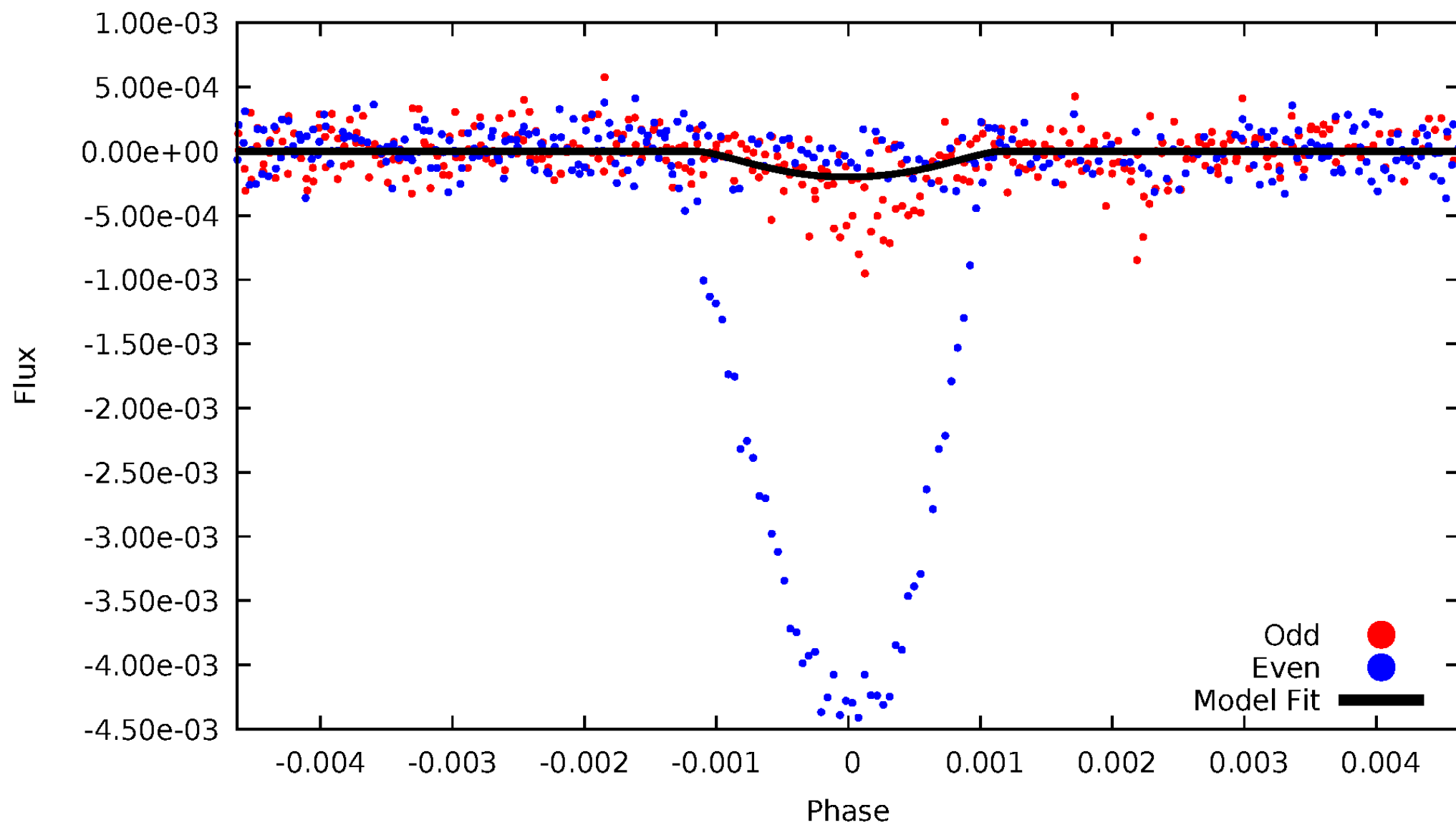


TCE 011495766-01



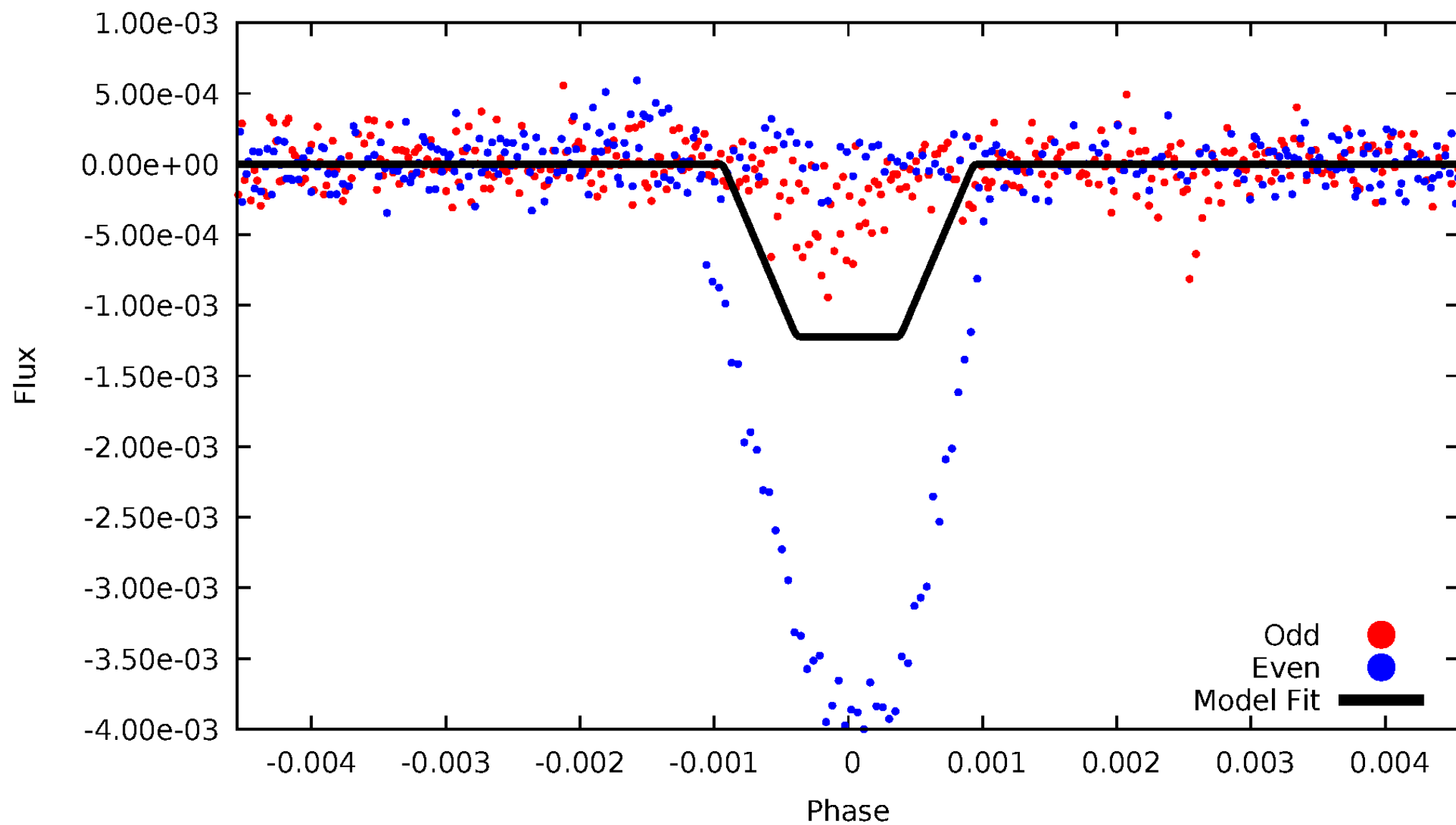
DV Odd/Even

TCE 011495766-01

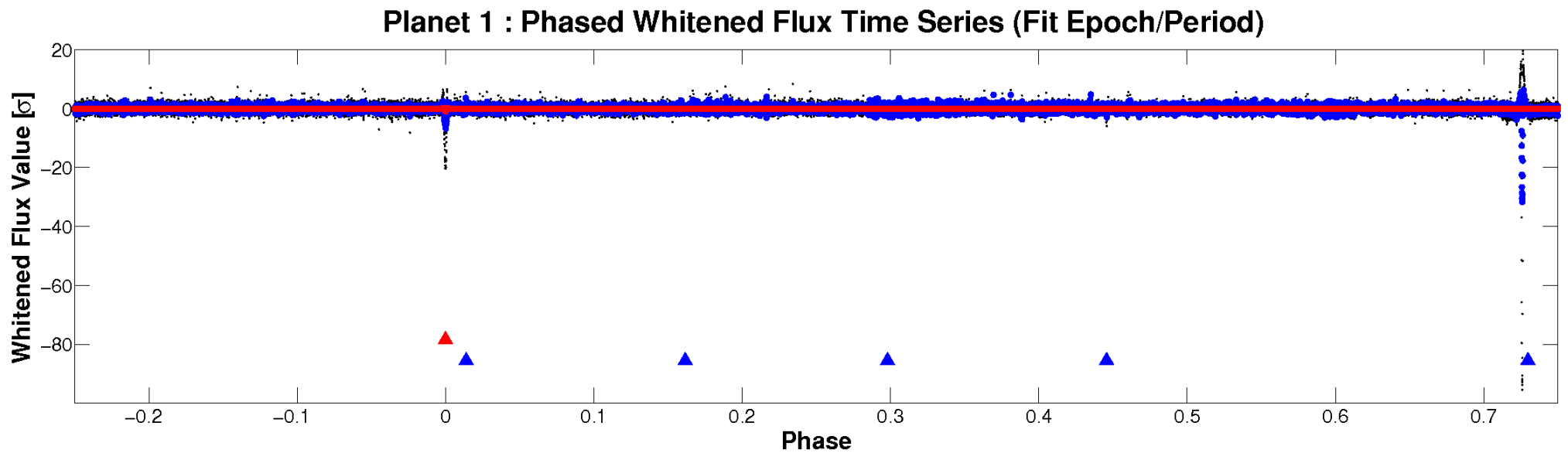
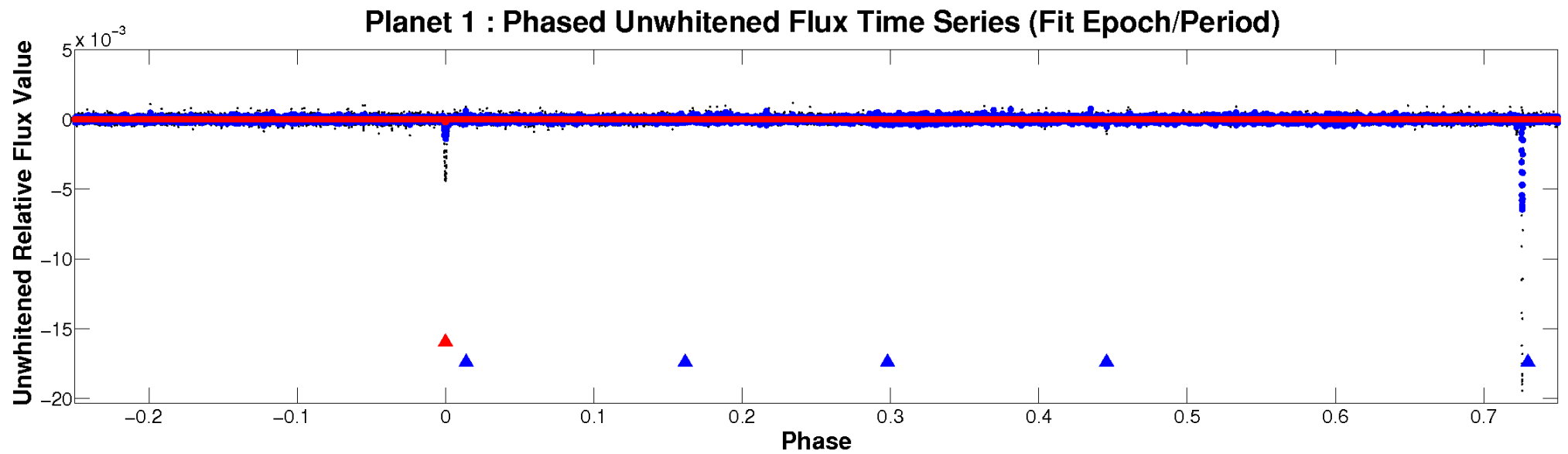


ALT Odd/Even

TCE 011495766-01

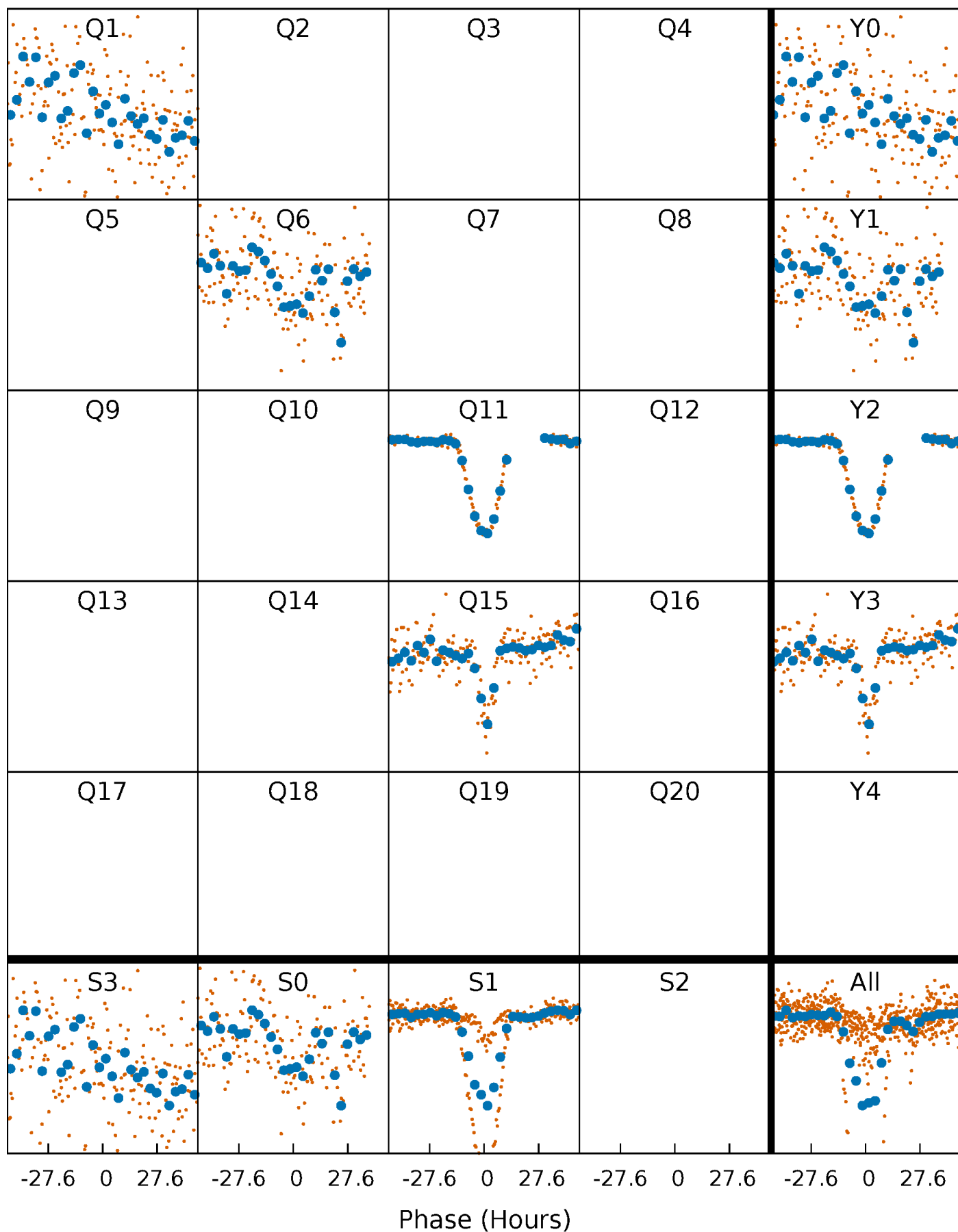


Non-Whitened Vs. Whitened Light Curve



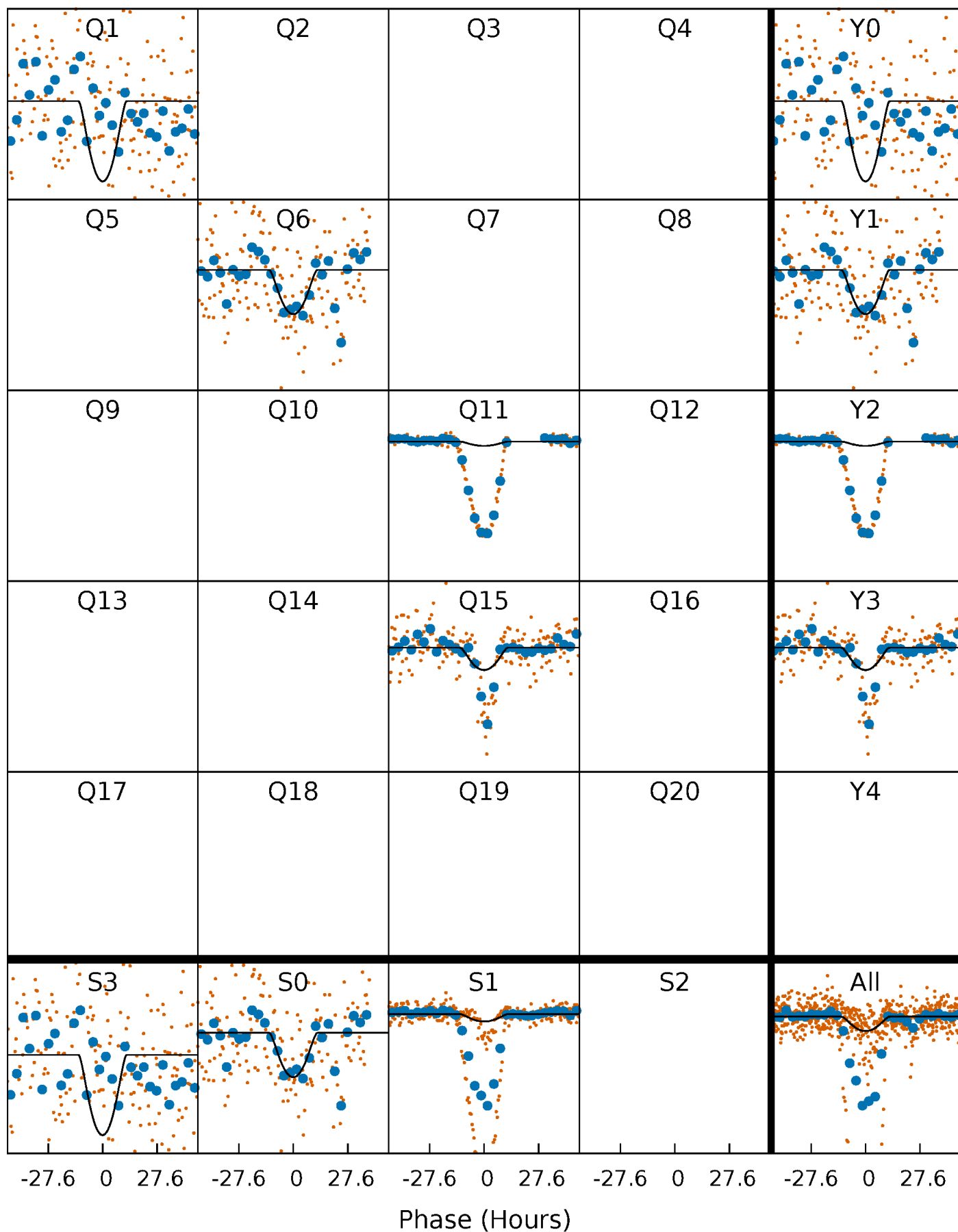
PDC Quarter-Phased Transit Curves

TCE 011495766-01 P=435.089863 Days $T_0=161.582903$ (BKJD)



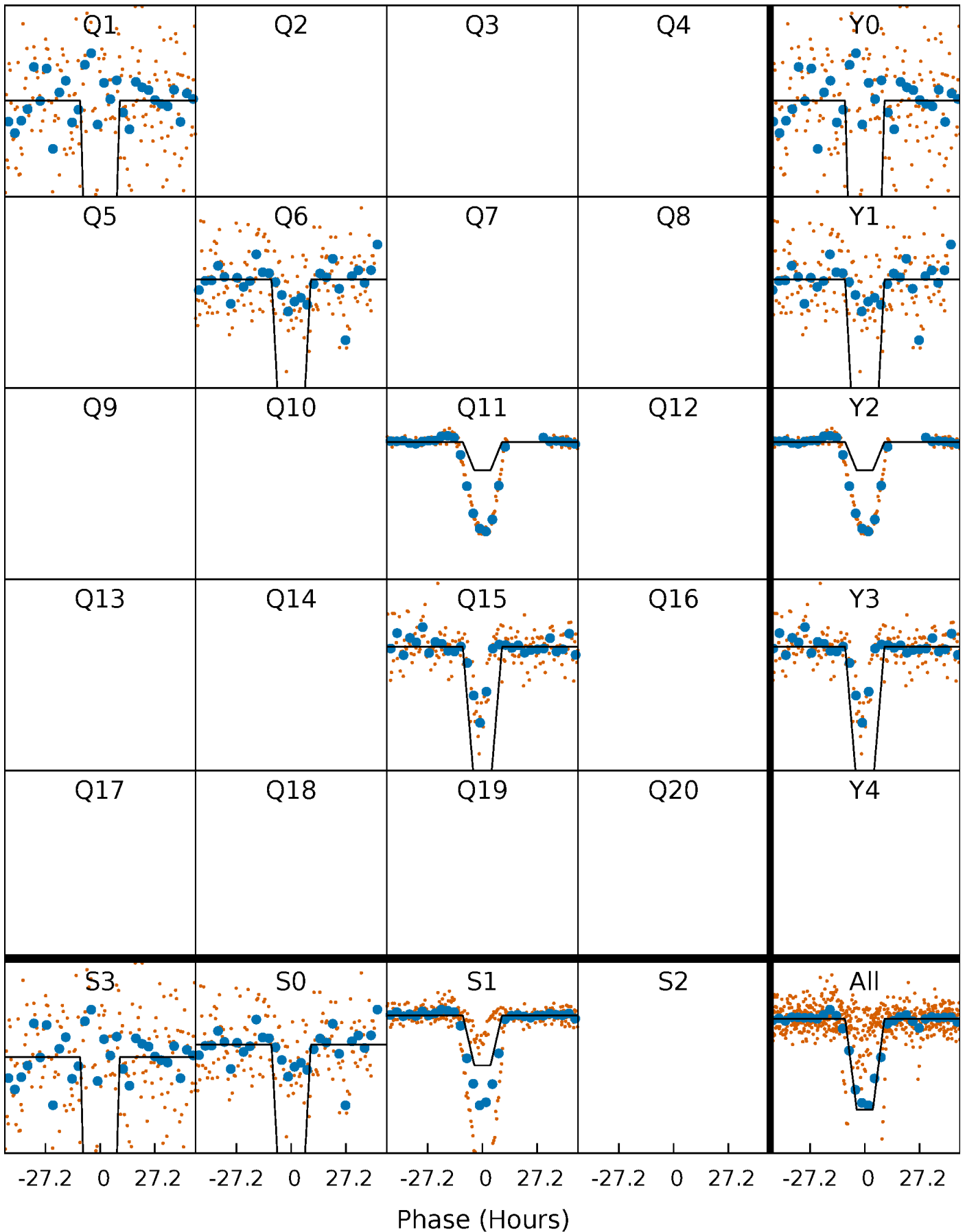
DV Quarter-Phased Transit Curves

TCE 011495766-01 P=435.089863 Days $T_0=161.582903$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

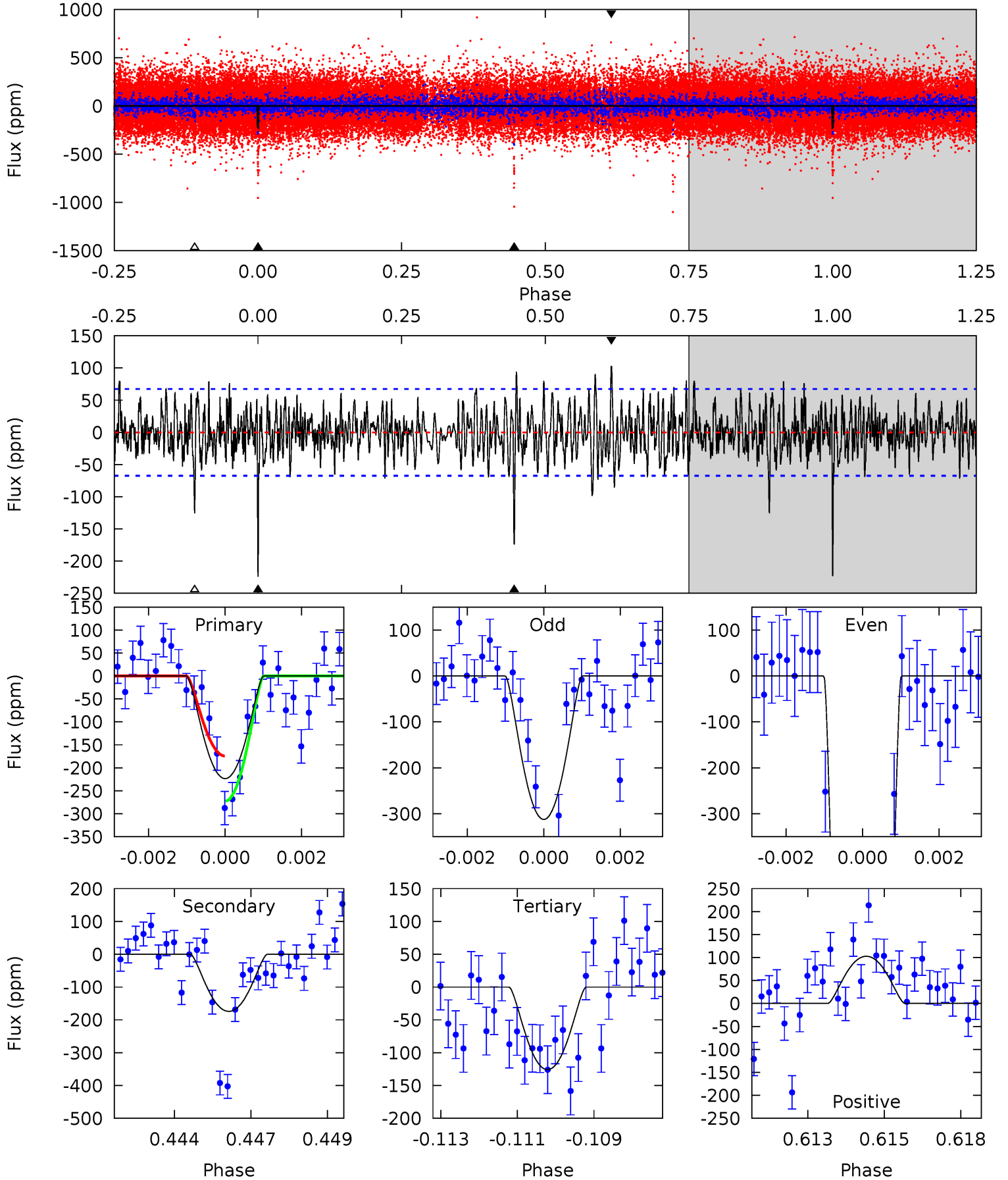
TCE 011495766-01 P=435.228017 Days $T_0=161.289674$ (BKJD)



DV Model-Shift Uniqueness Test

011495766-01, P = 435.089863 Days, E = 161.582903 Days

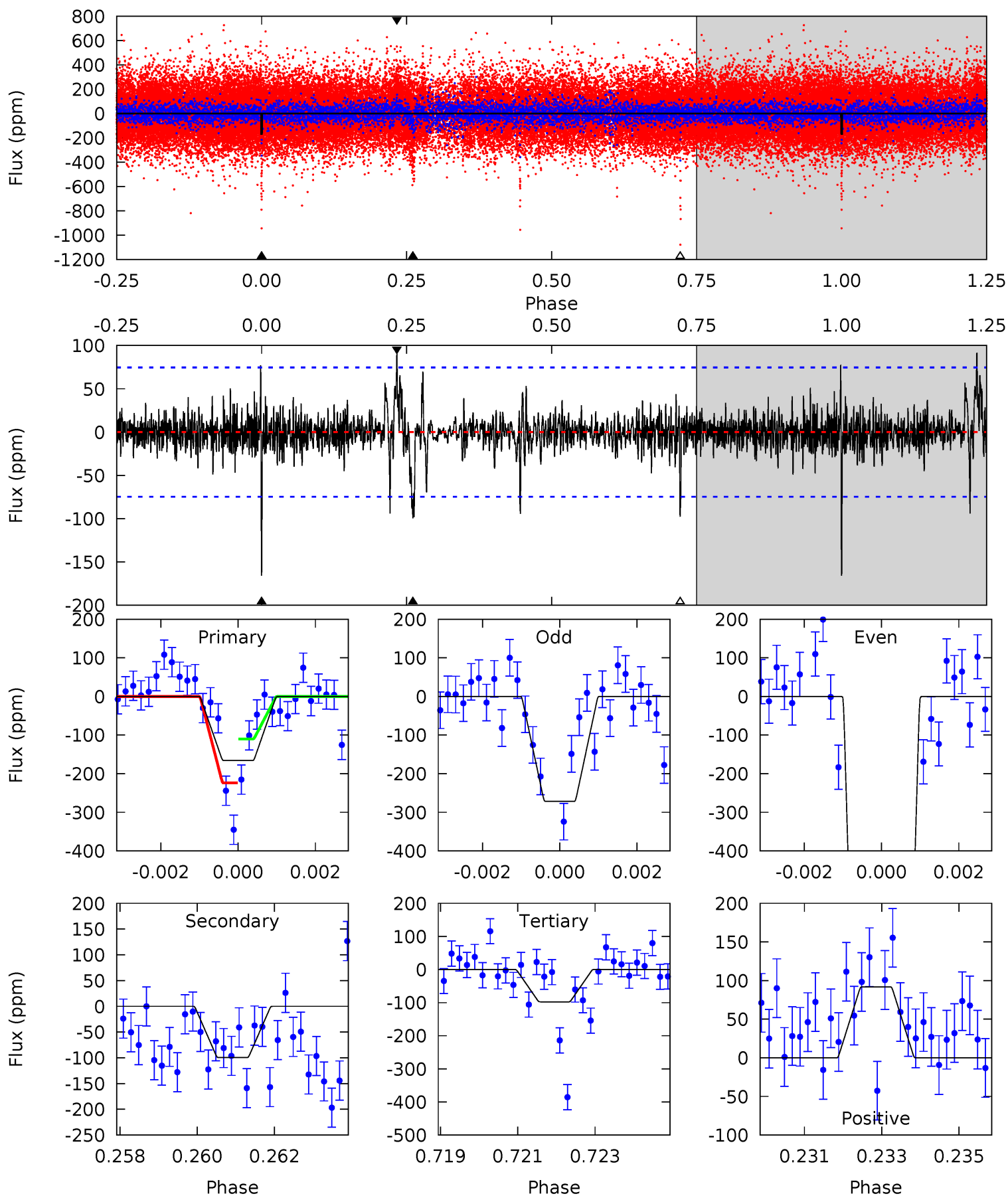
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	13.7	9.90	8.08	5.30	3.05	2.31	7.68	9.50	3.80	5.62	86.7	4.09	0.31	3.88



Alt Model-Shift Uniqueness Test

011495766-01, P = 435.228017 Days, E = 161.289674 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	7.11	6.97	6.55	5.34	3.11	1.25	4.89	5.31	0.14	0.56	72.1	4.02	0.36	4.07



Stellar Parameters For KIC 011495766

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5910^{+140}_{-193}	$4.505^{+0.039}_{-0.208}$	$-0.020^{+0.250}_{-0.300}$	$0.940^{+0.282}_{-0.094}$	$1.032^{+0.115}_{-0.140}$	$1.750^{+0.365}_{-0.930}$
	+2%/-3%	+1%/-5%	+1250%/-1500%	+30%/-10%	+11%/-14%	+21%/-53%
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 011495766-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-174 ± 13	$4.17^{+3.52}_{-2.62}$	339^{+24}_{-15}	3834^{+1801}_{-681}	7007^{+42862}_{-5040}
Alt.	-99 ± 14	$5.12^{+4.66}_{-3.26}$	340^{+23}_{-15}	3267^{+1383}_{-546}	2572^{+17987}_{-1876}

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 $A_{obs} \gg 1.0$

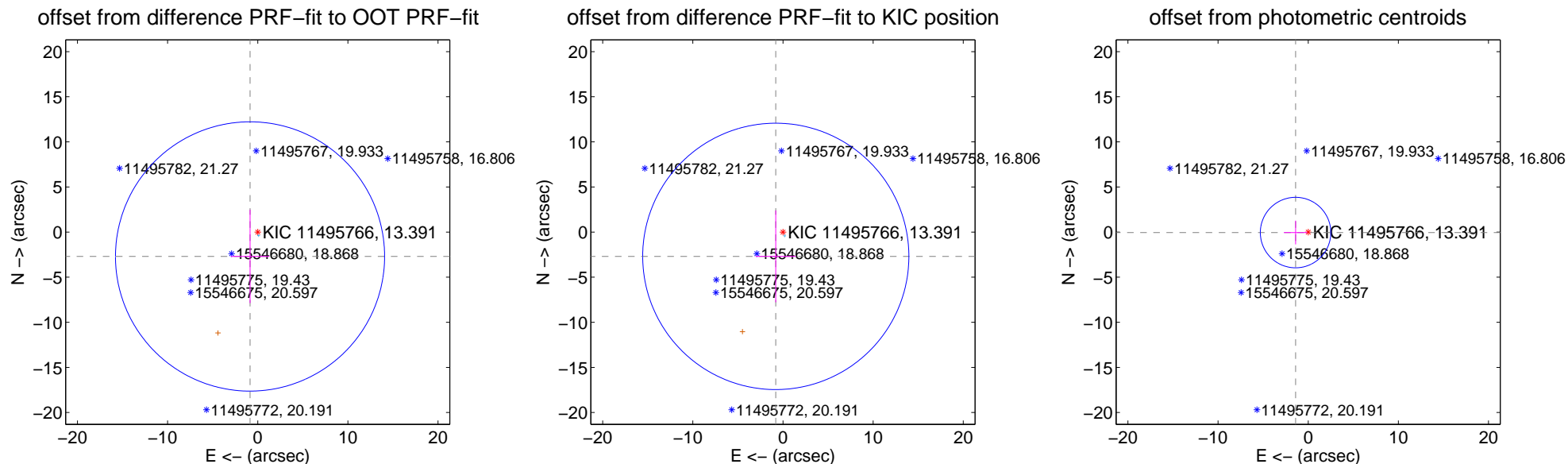
DV Centroid Data

Supplemental centroid analysis for 011495766-01. Kepler magnitude: 13.39. Transit SNR 7.06

There are 1 quarters with good PRF difference image offsets

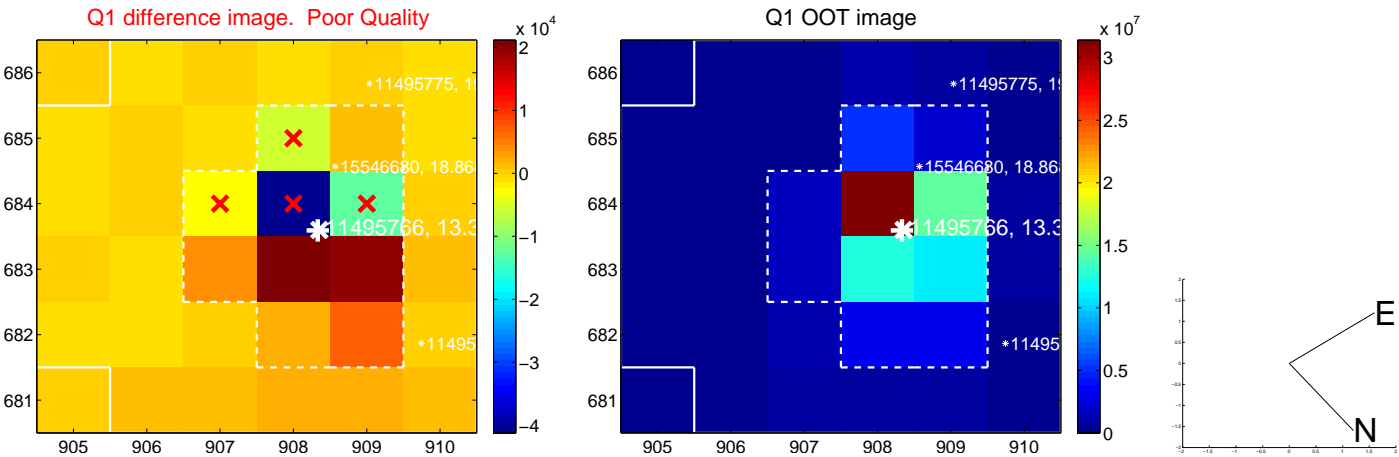
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.835 ± 4.975	0.57	0.856 ± 2.145	-2.703 ± 5.175
PRF-fit source offset from KIC position	2.810 ± 4.921	0.57	0.799 ± 2.231	-2.694 ± 5.090
photometric centroid source offset	1.40 ± 1.30	1.08	1.40 ± 1.30	-0.05 ± 1.32

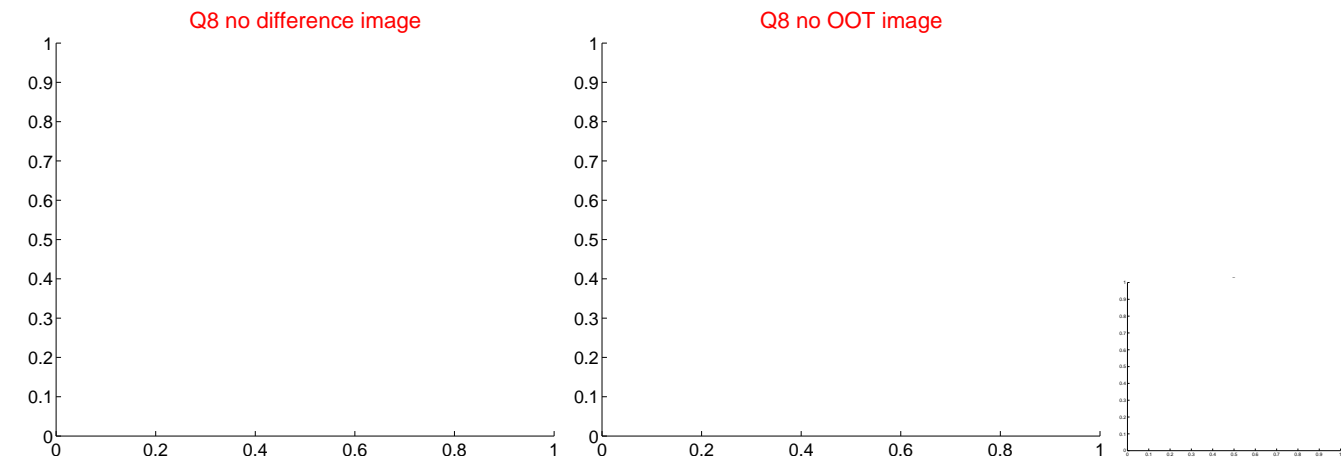
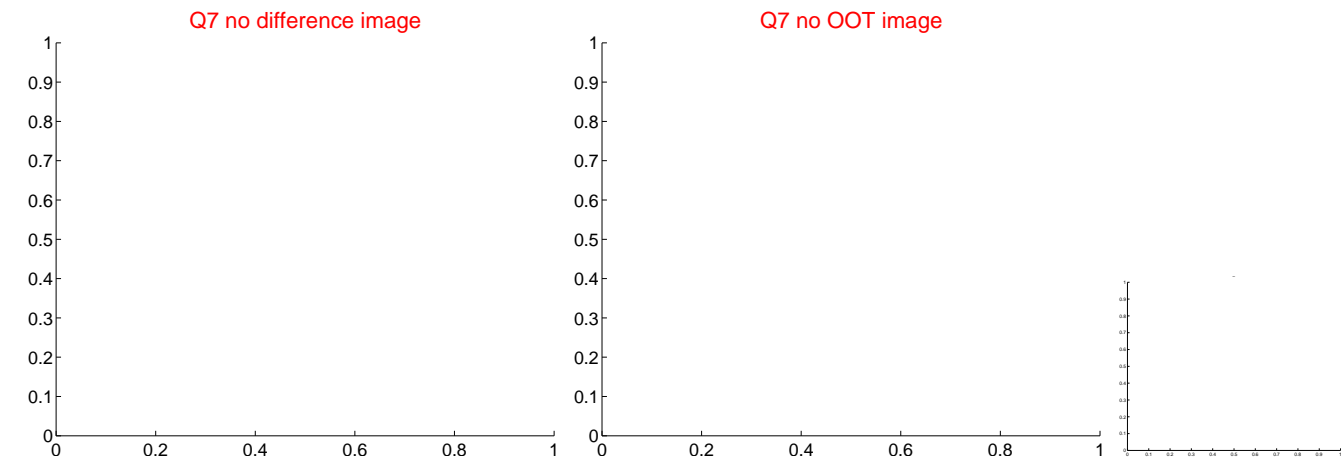
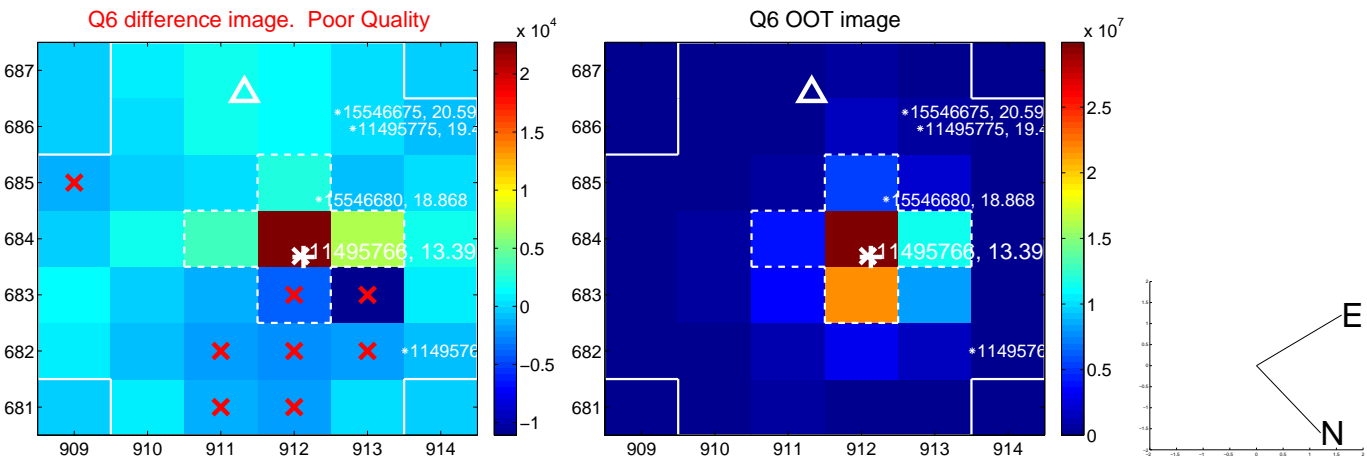


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



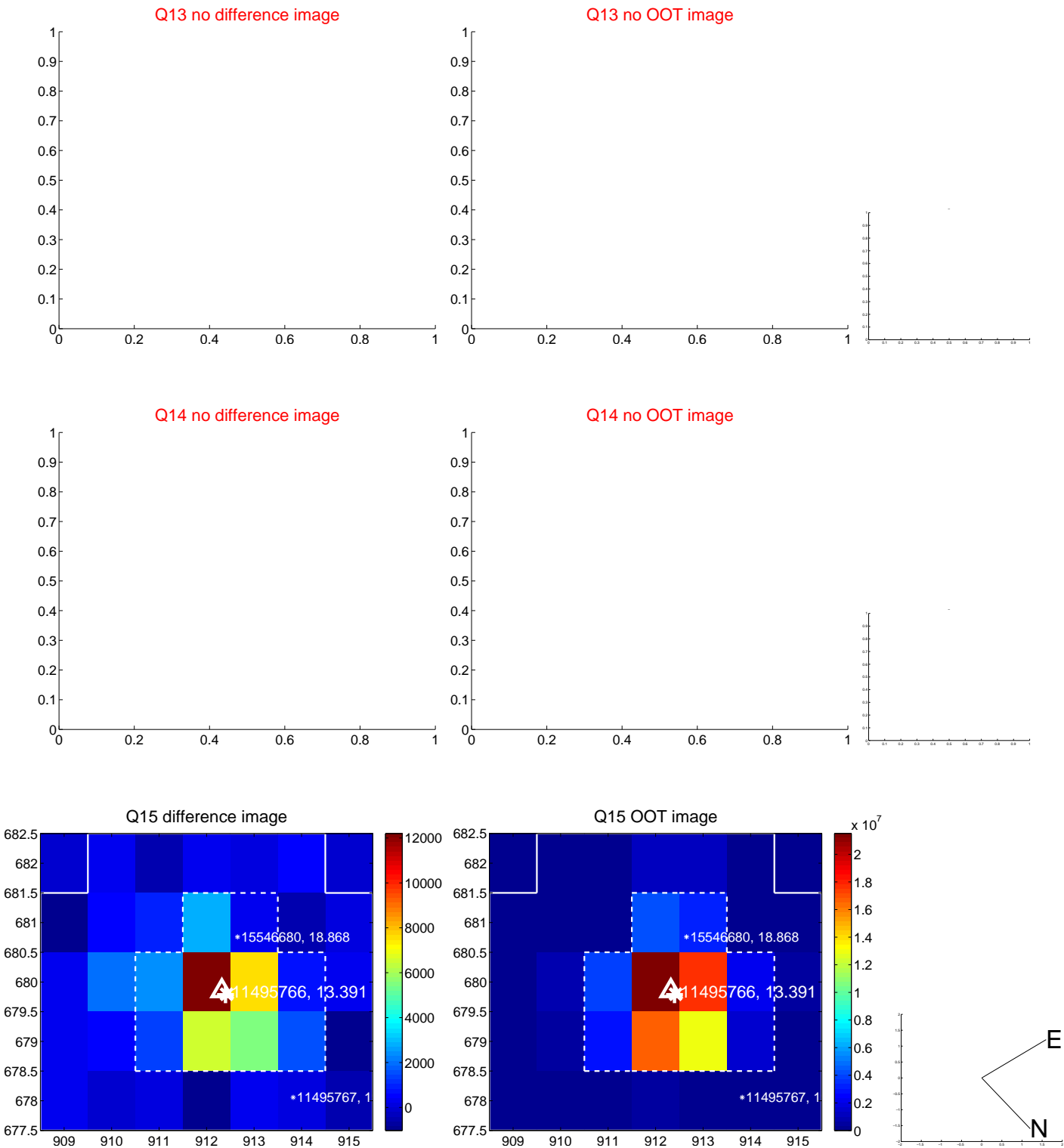
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



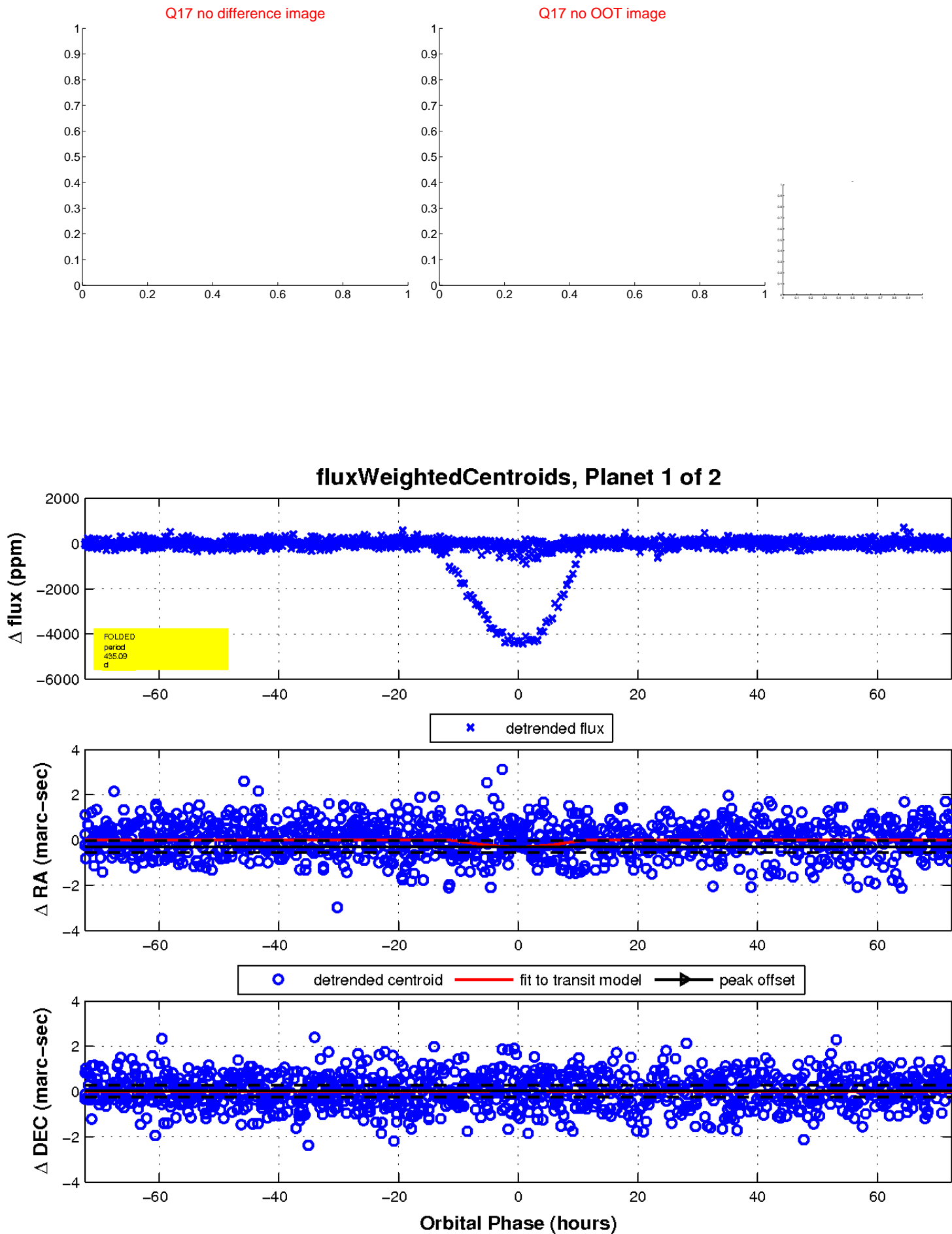
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

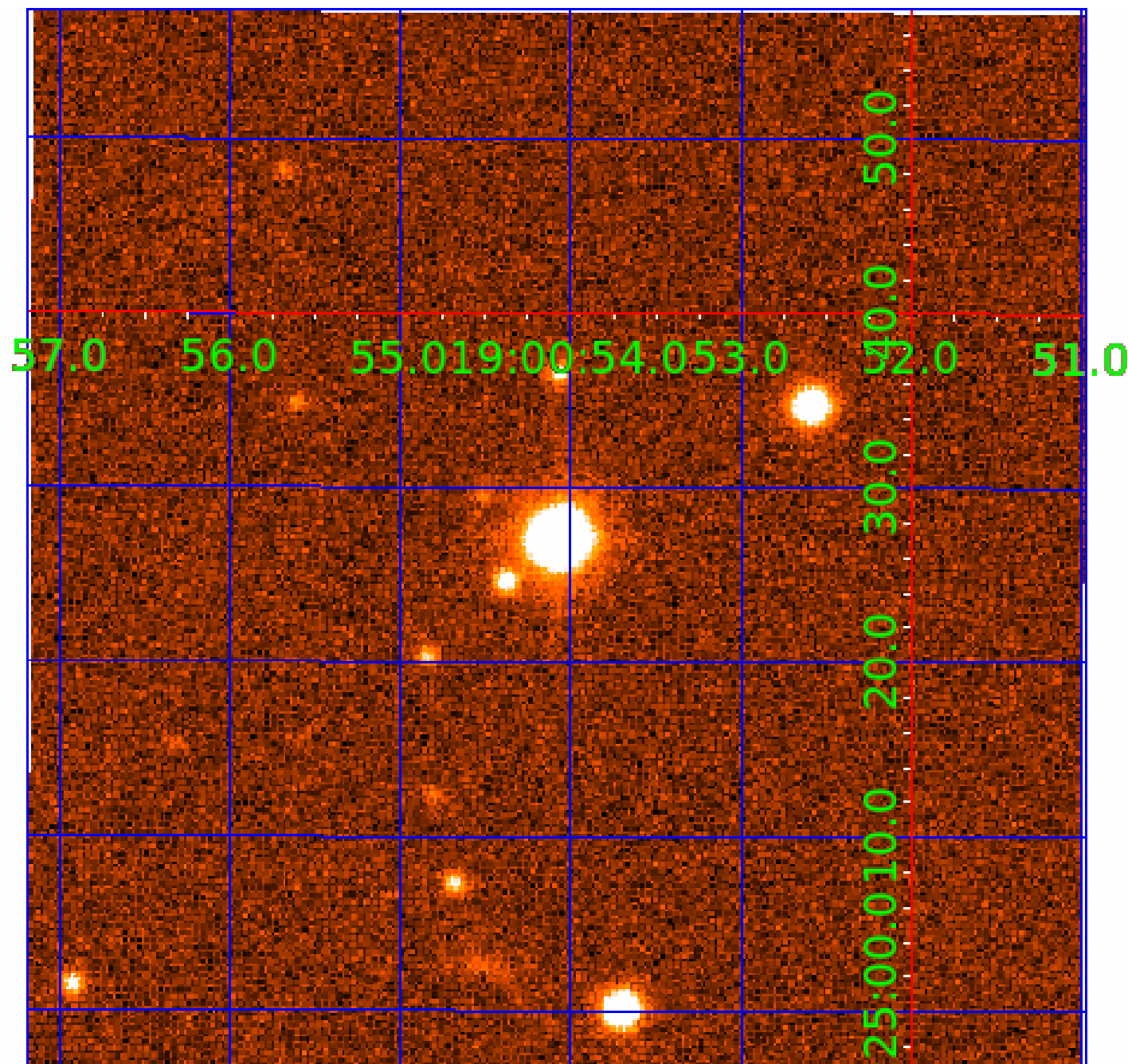


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011495766

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})
011495766-01	OBS	No	435.089863	161.582903	200.9	24.178	33.6	7.1	0.94	5910	2.23	0.75
011495766-02	OBS	No	311.478888	291.266007	440.0	6.241	12.8	10.7	0.94	5910	2.25	1.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011495766-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011495766-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—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.

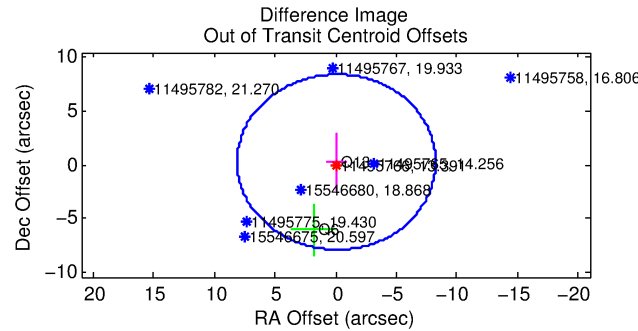
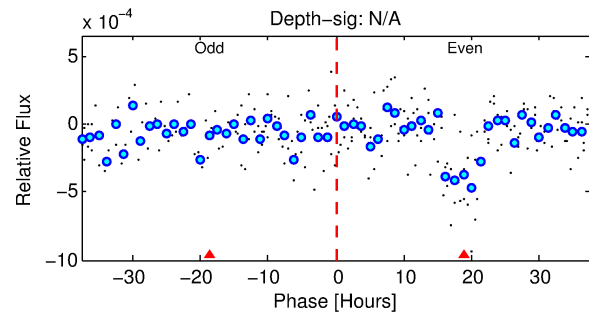
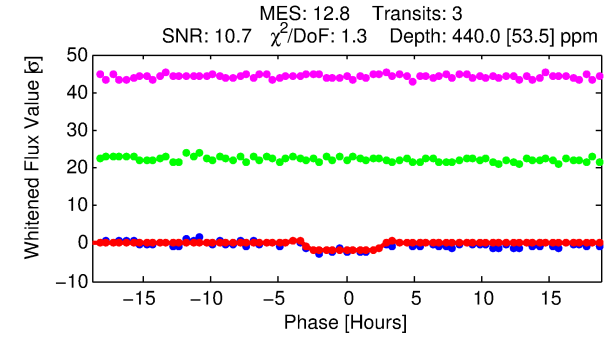
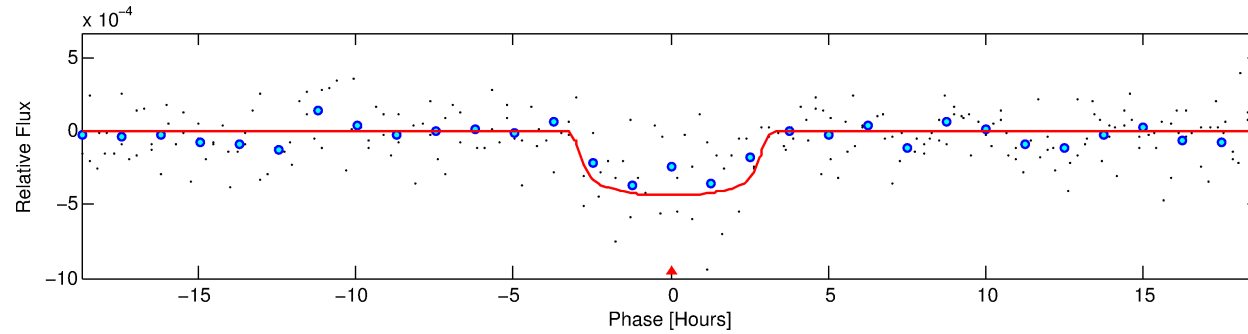
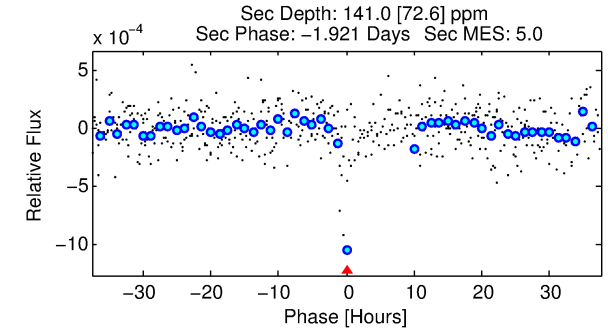
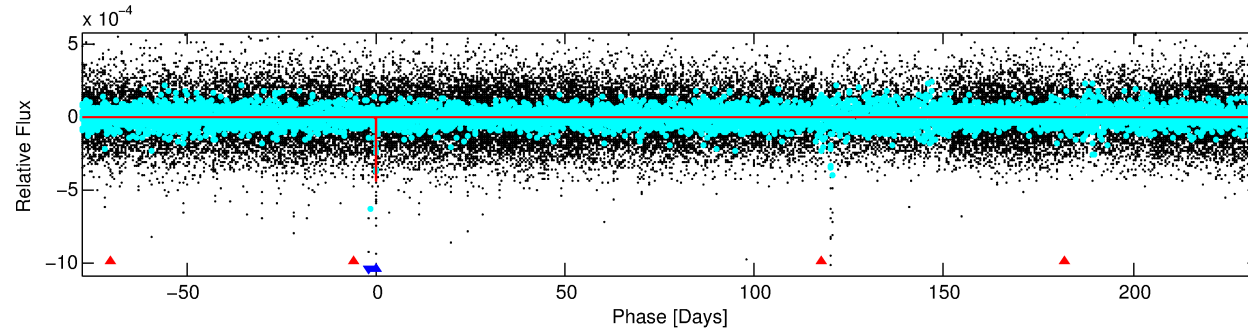
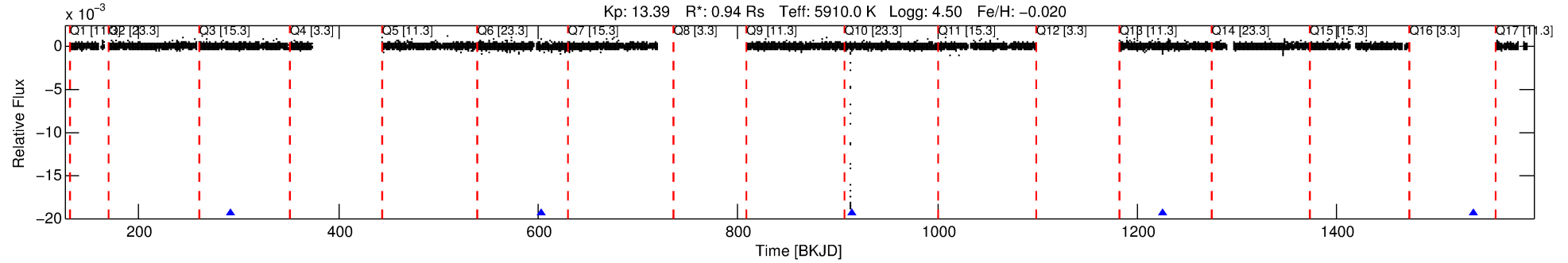
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011495766-02

No Significant Match Found

DV One-Page Summary

KIC: 11495766 Candidate: 2 of 2 Period: 311.479 d
KOI: K02630 Corr: No Ephemeris Match



DV Fit Results:

Period = 311.47889 [0.00850] d
Epoch = 291.2660 [0.0194] BKJD
Rp/R* = 0.0219 [0.0070]
a/R* = 216.39 [319.82]
b = 0.85 [0.49]
Seff = 1.17 [0.47]
Teff = 265 [26] K
Rp = 2.25 [0.98] Re
a = 0.9087 [0.2325] AU
Ag = 12687.37 [11447.04] [1.11] σ
Teffp = 4351 [903] K [4.52] σ

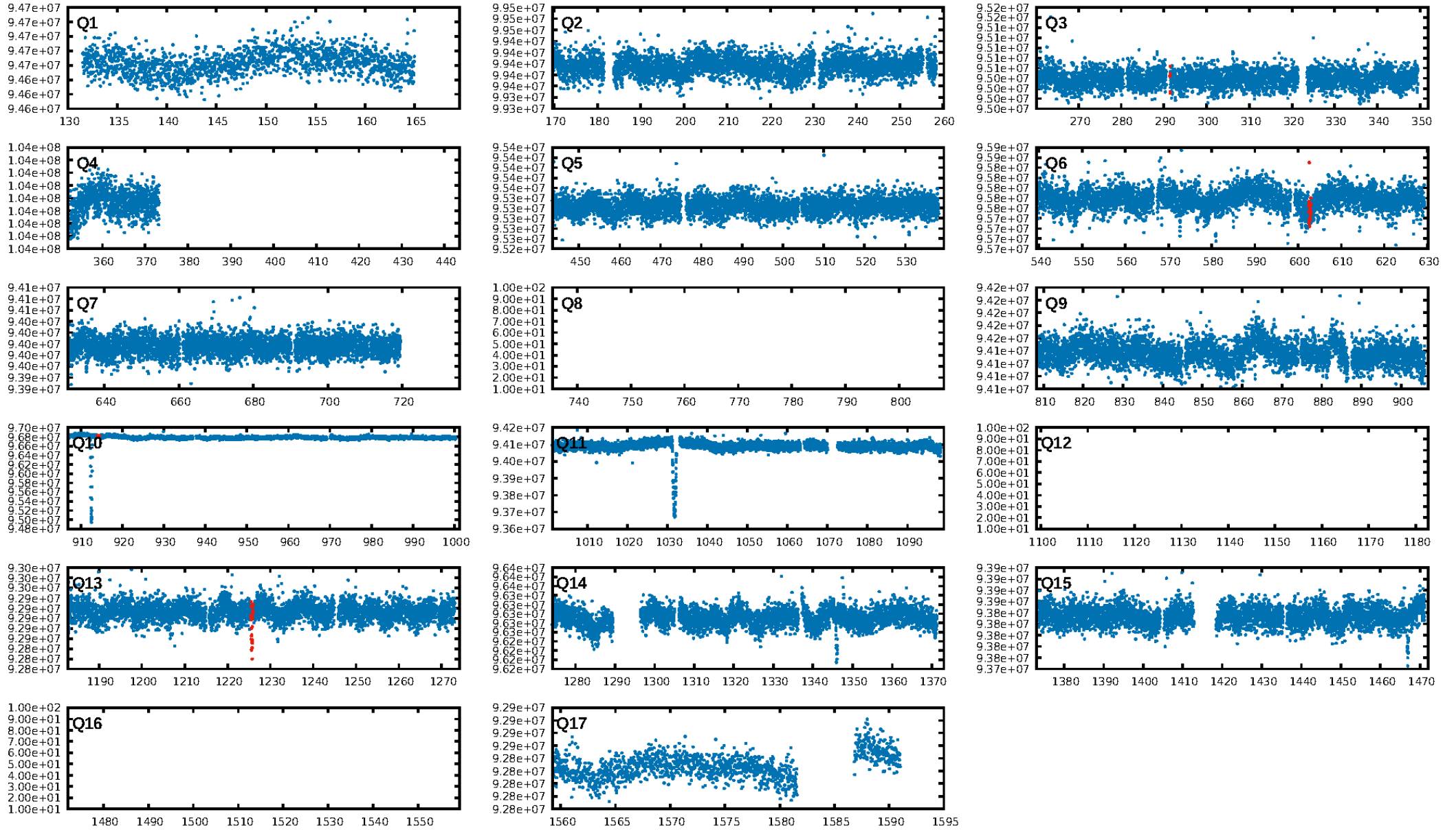
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [118.81] σ
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 89.2%
Bootstrap-pfa: 1.24e-18
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 11
Centroid-sig: 8.0%
Centroid-so: 1.587 arcsec [1.51] σ
OotOffset-rm: 0.255 arcsec [0.09] σ
KicOffset-rm: 0.285 arcsec [0.16] σ
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

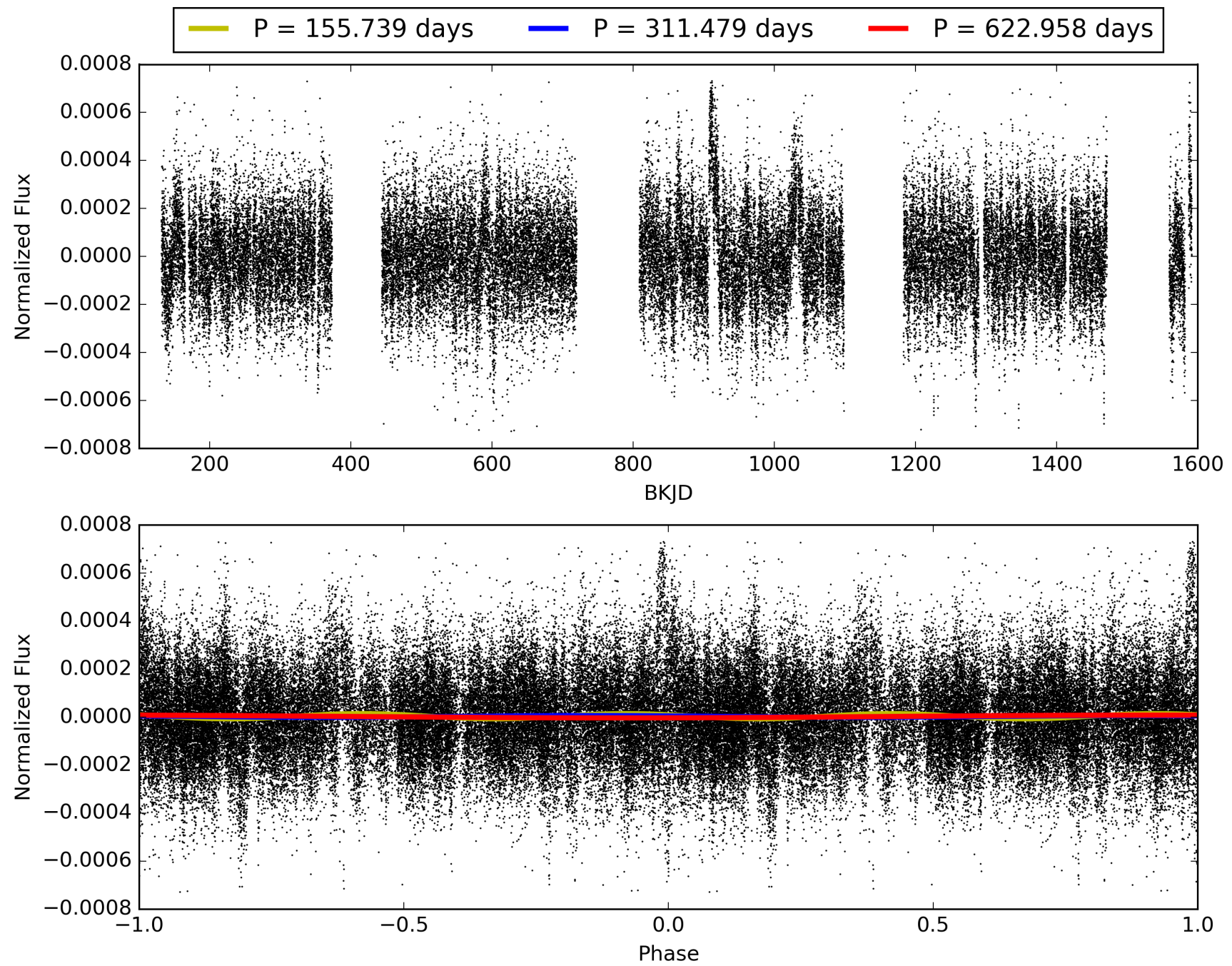
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011495766-02, PDC Light Curves

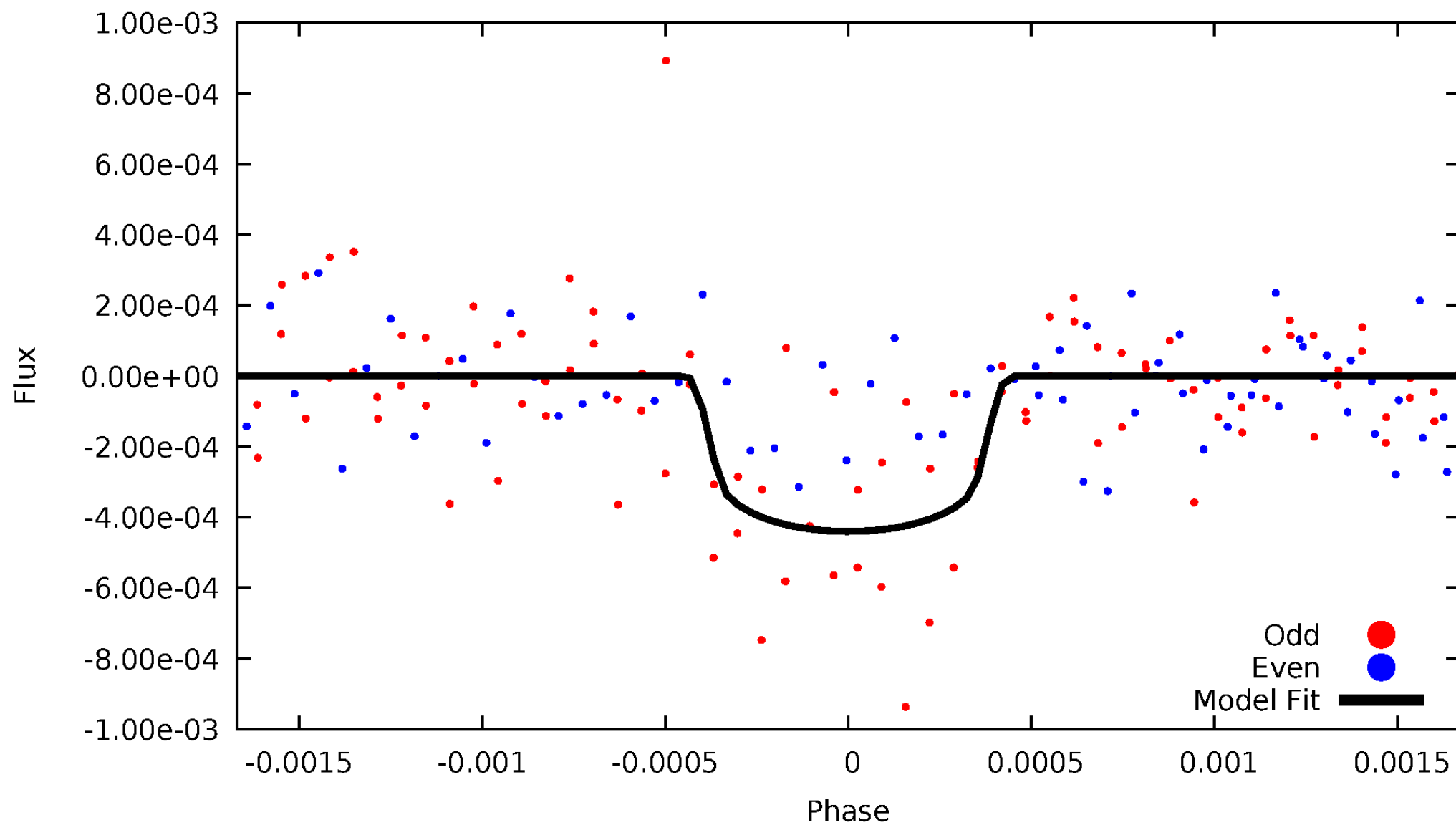


TCE 011495766-02



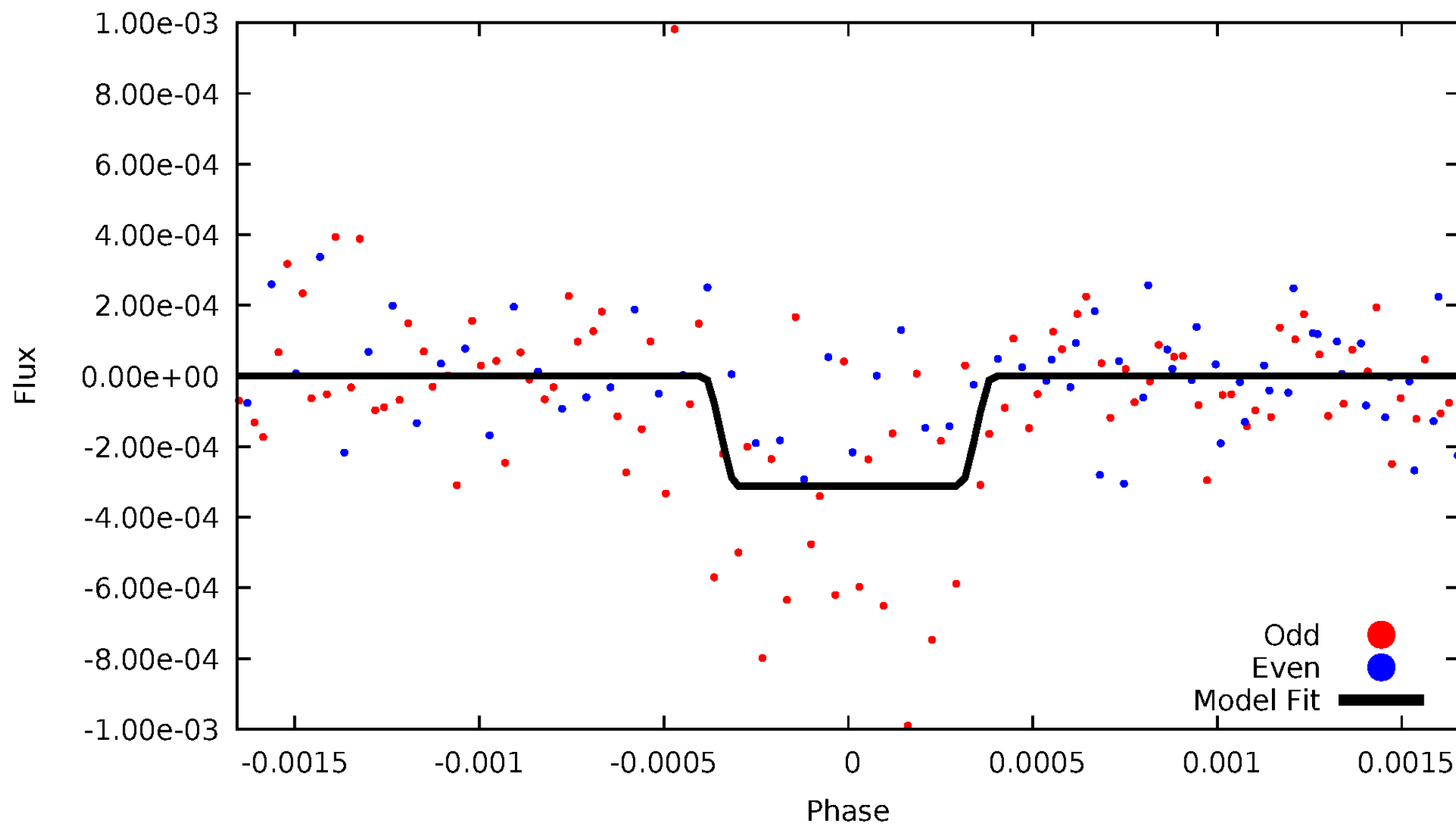
DV Odd/Even

TCE 011495766-02



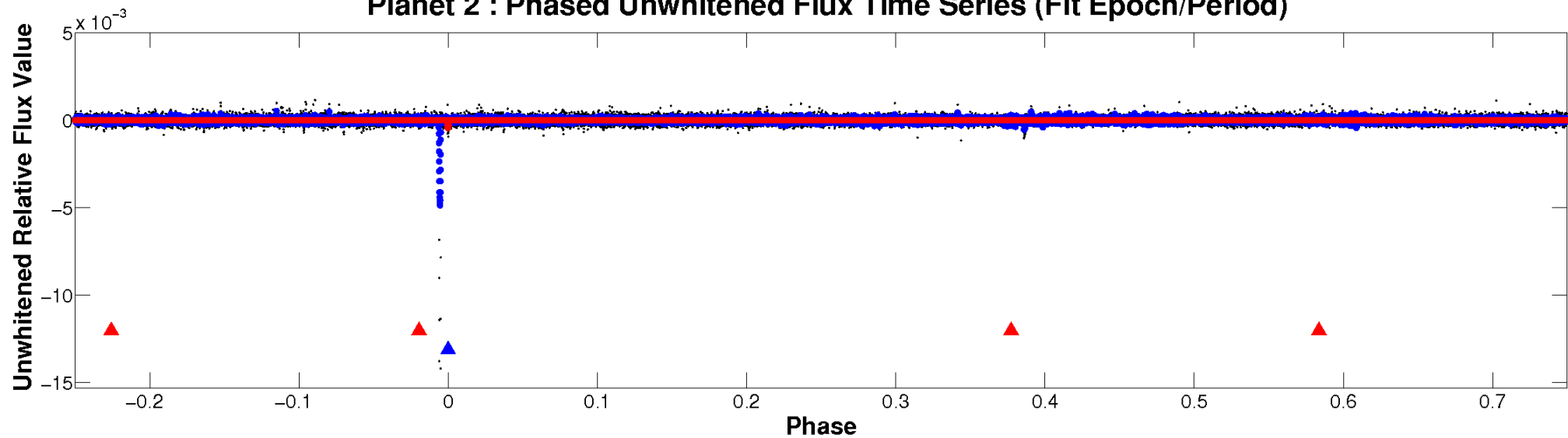
ALT Odd/Even

TCE 011495766-02

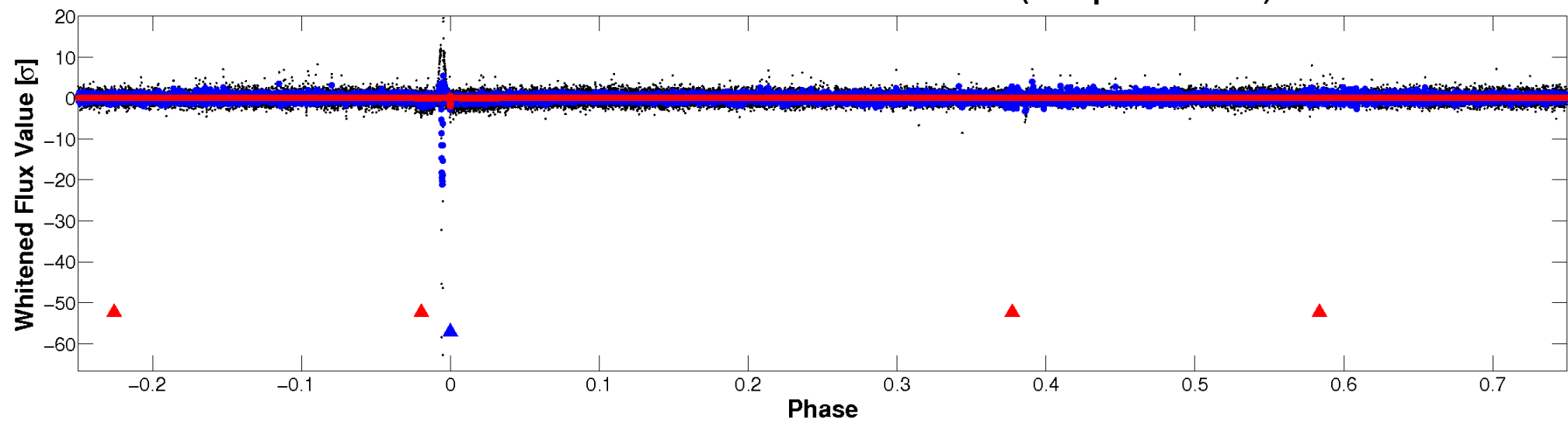


Non-Whitened Vs. Whitened Light Curve

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



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



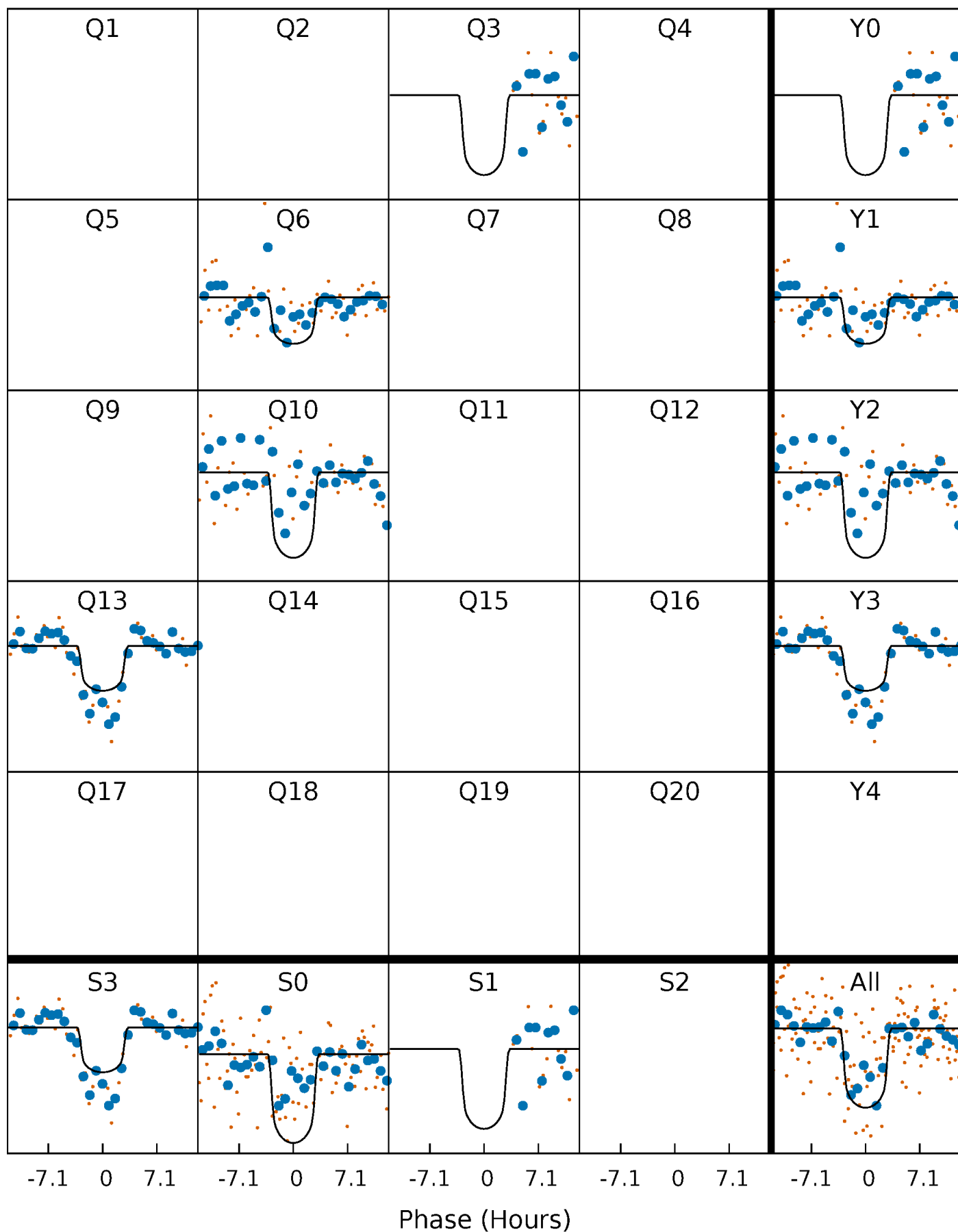
PDC Quarter-Phased Transit Curves

TCE 011495766-02 P=311.478888 Days $T_0=291.266007$ (BKJD)



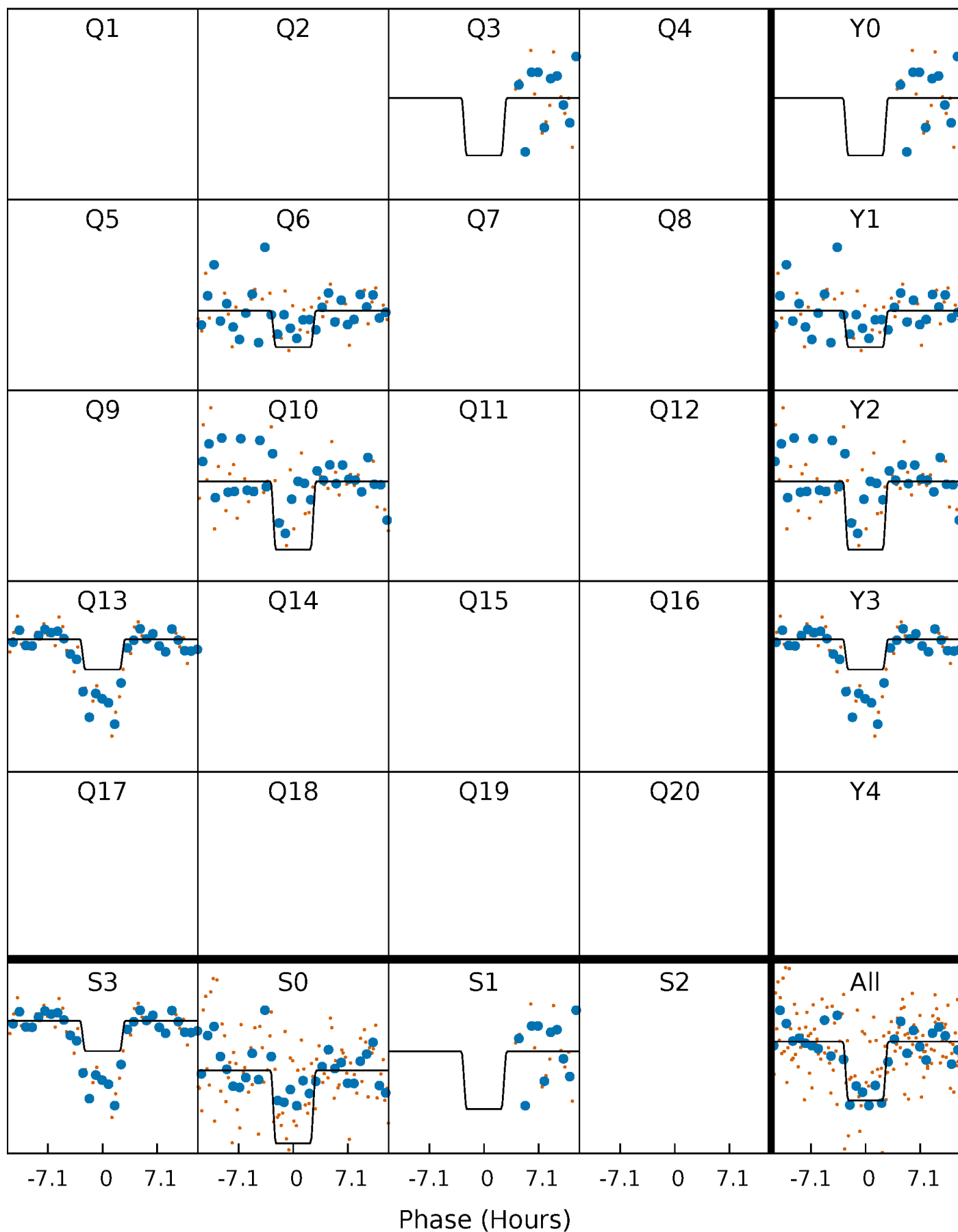
DV Quarter-Phased Transit Curves

TCE 011495766-02 $P=311.478888$ Days $T_0=291.266007$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

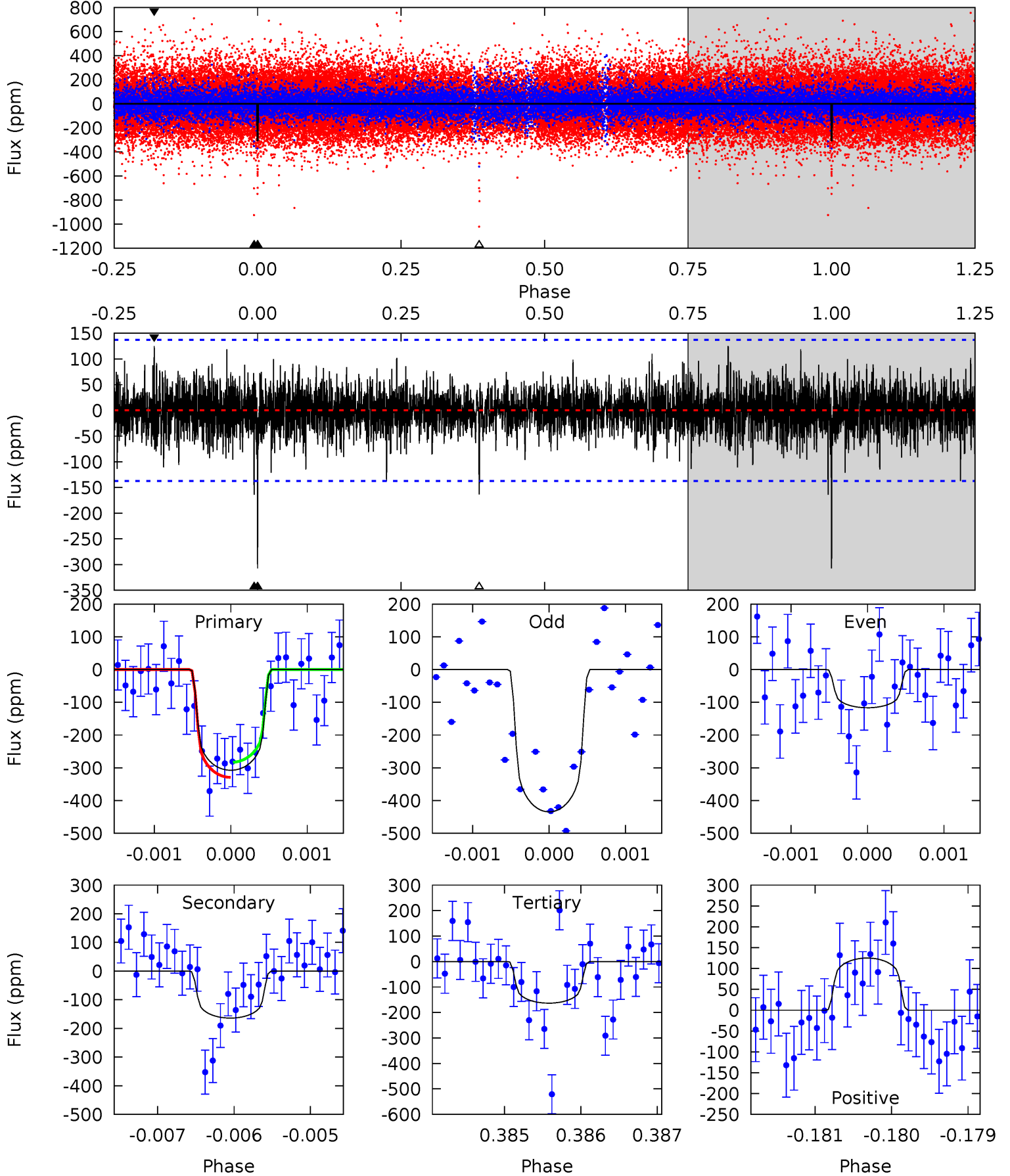
TCE 011495766-02 P=311.482377 Days $T_0=291.254011$ (BKJD)



DV Model-Shift Uniqueness Test

011495766-02, P = 311.478888 Days, E = 291.266007 Days

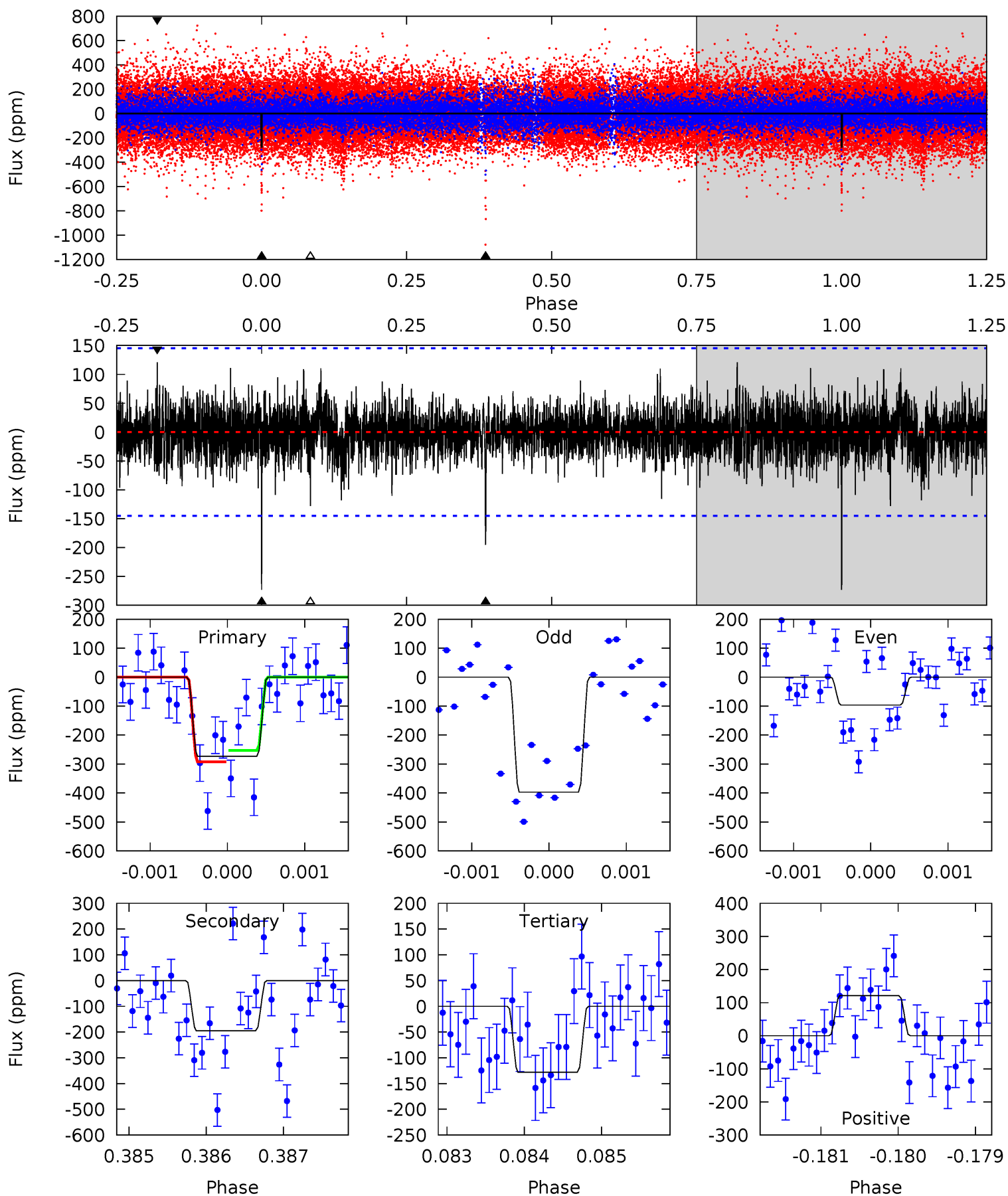
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	6.54	6.52	4.99	5.48	3.34	1.25	5.75	7.28	0.02	1.55	6.12	1.46	0.29	0.92



Alt Model-Shift Uniqueness Test

011495766-02, P = 311.482377 Days, E = 291.254011 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	7.39	4.85	4.58	5.50	3.36	1.11	5.50	5.78	2.54	2.81	5.58	2.42	0.31	0.74



Stellar Parameters For KIC 011495766

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R \text{ (R}_{\odot})$	$M(\text{M}_{\odot})$	$p_{\star} \text{ (g}\cdot\text{cm}^{-3})$
	5910^{+140}_{-193}	$4.505^{+0.039}_{-0.208}$	$-0.020^{+0.250}_{-0.300}$	$0.940^{+0.282}_{-0.094}$	$1.032^{+0.115}_{-0.140}$	$1.750^{+0.365}_{-0.930}$
	+2%/-3%	+1%/-5%	+1250%/-1500%	+30%/-10%	+11%/-14%	+21%/-53%
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 011495766-02 / KOI

Detrend	Depth (ppm)	$R_p \text{ (R}_{\oplus})$	$T_{\text{max}} \text{ (K)}$	$T_{\text{obs}} \text{ (K)}$	A_{obs}
DV	-164 ± 25	$2.37^{+0.90}_{-0.83}$	379^{+27}_{-17}	4666^{+880}_{-519}	13120^{+16173}_{-6427}
Alt.	-195 ± 26	$1.92^{+0.80}_{-0.76}$	378^{+28}_{-17}	5277^{+1351}_{-740}	24122^{+38766}_{-12672}

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

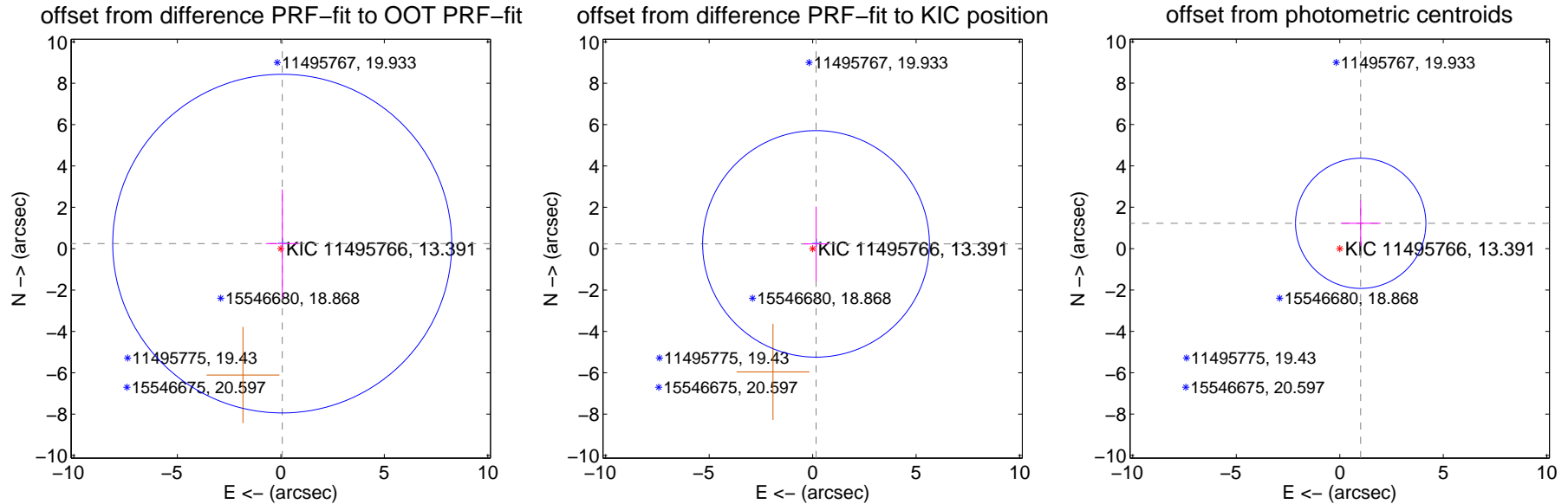
DV Centroid Data

Supplemental centroid analysis for 011495766-02. Kepler magnitude: 13.39. Transit SNR 10.69

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.255 ± 2.730	0.09	-0.068 ± 0.789	0.245 ± 2.615
PRF-fit source offset from KIC position	0.285 ± 1.826	0.16	-0.163 ± 0.613	0.233 ± 1.802
photometric centroid source offset	1.59 ± 1.05	1.51	-1.01 ± 0.96	1.22 ± 1.11

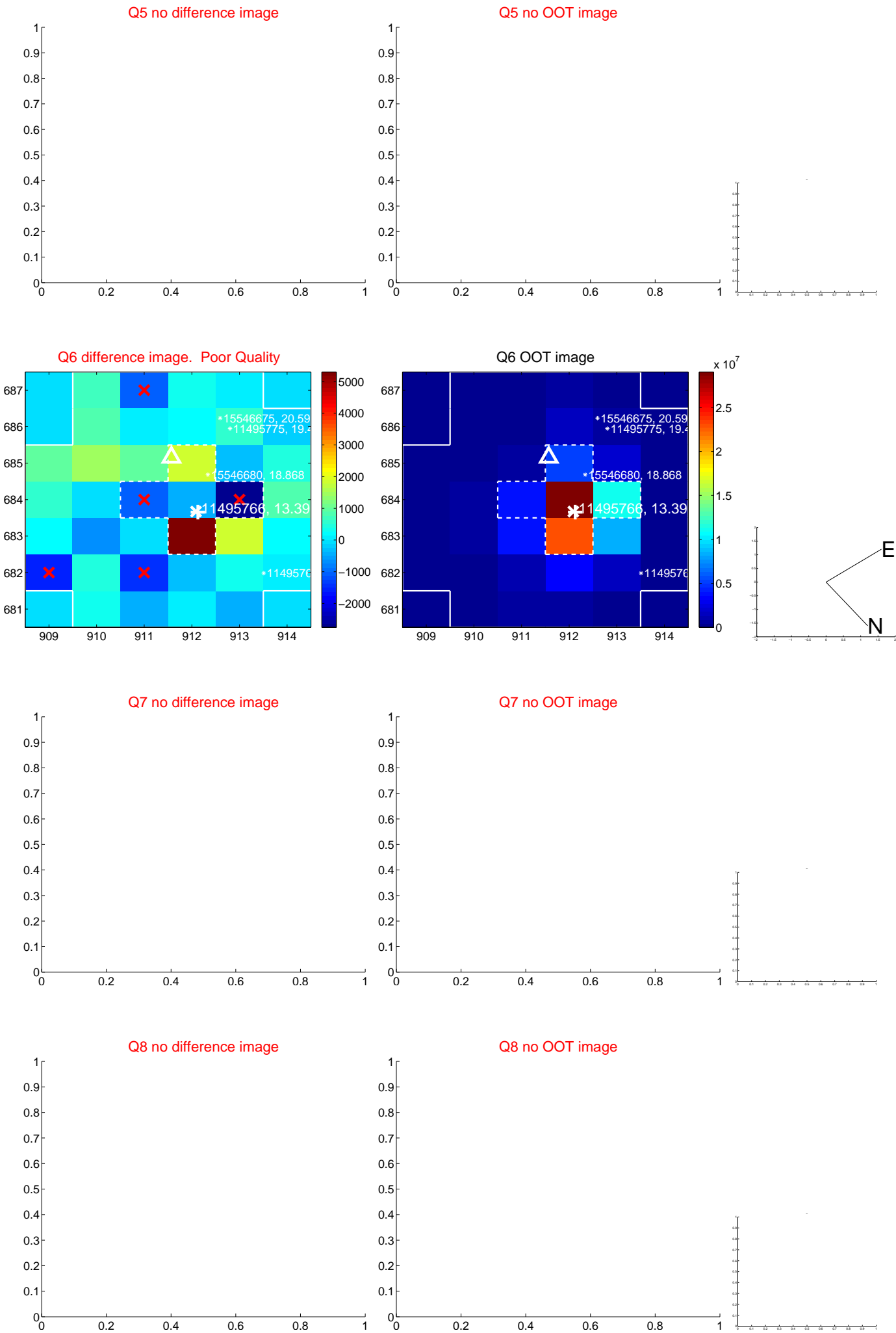


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

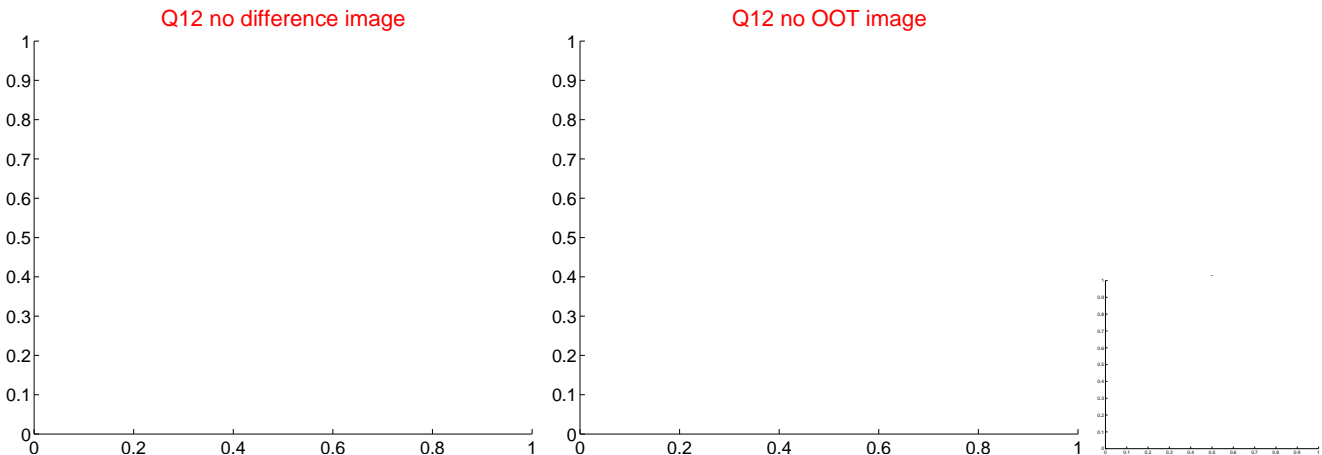
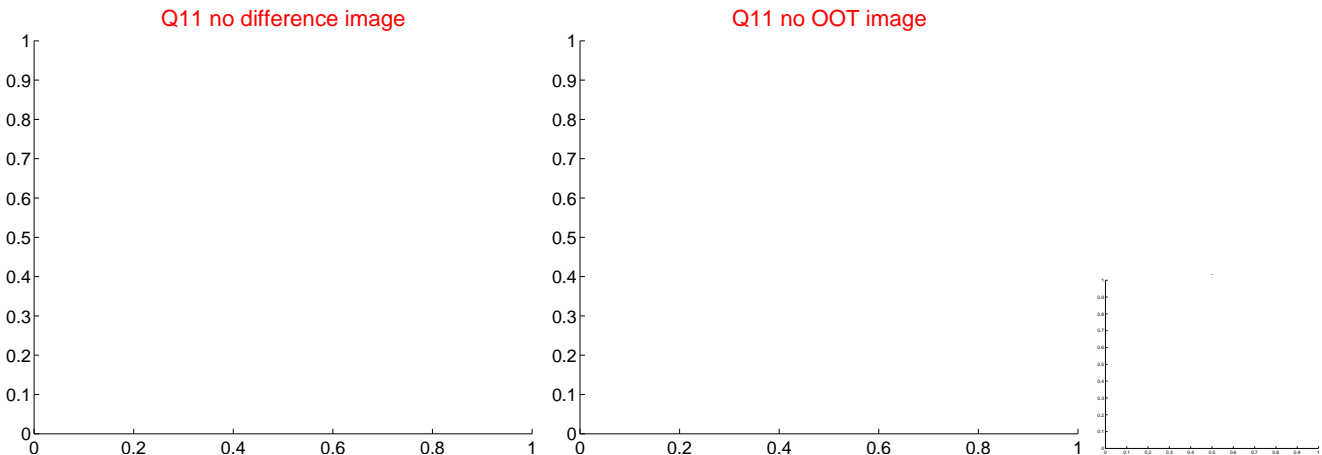
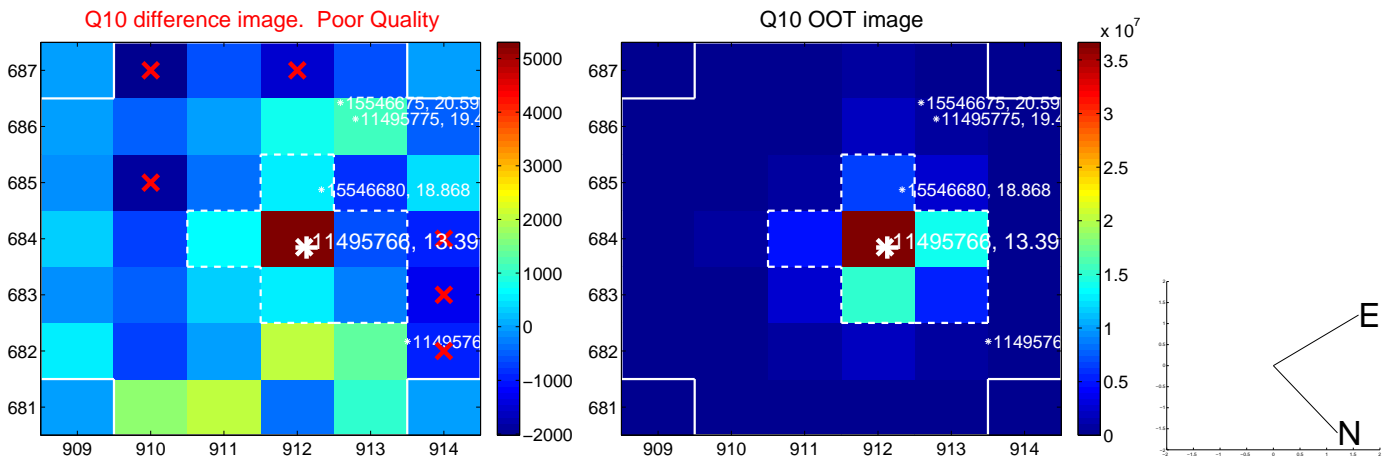
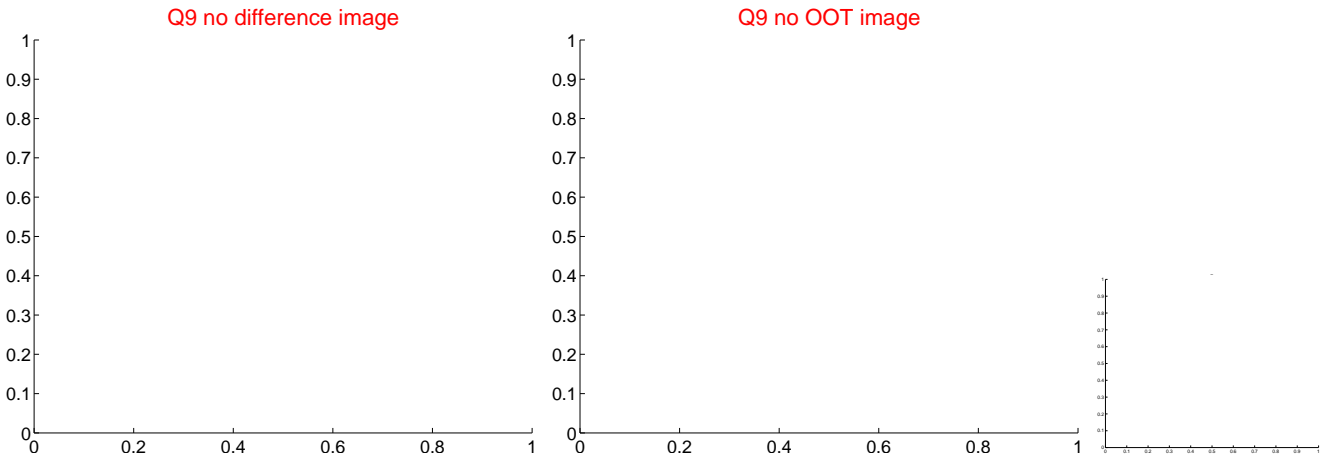
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



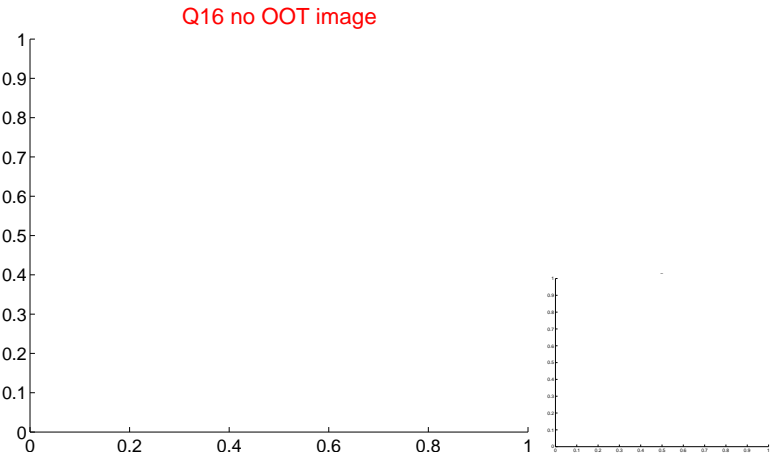
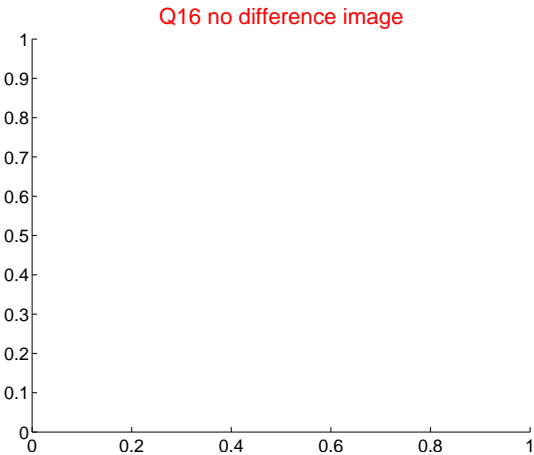
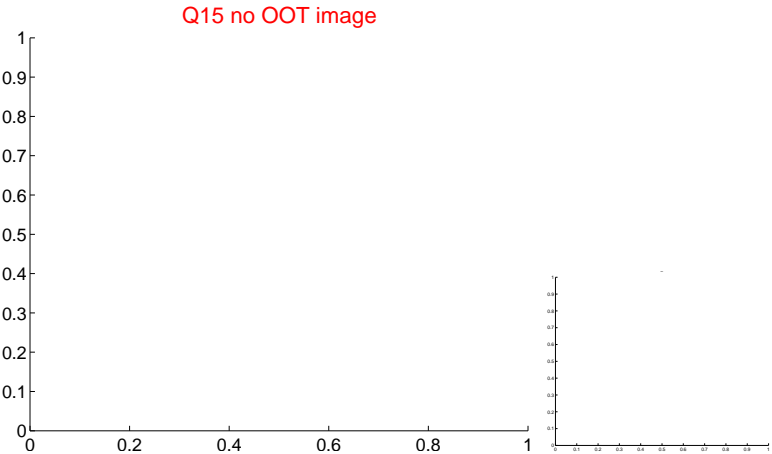
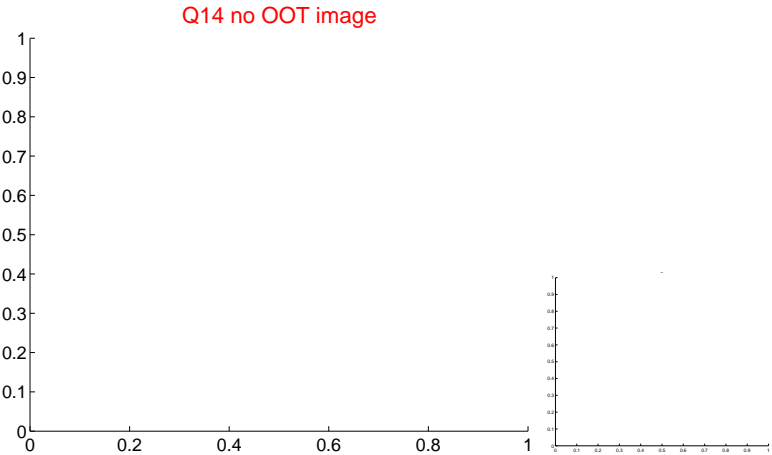
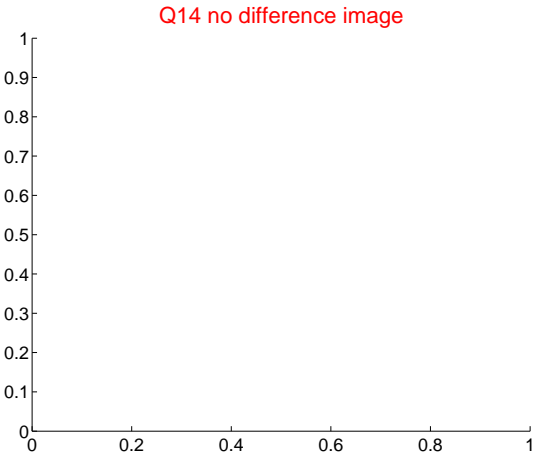
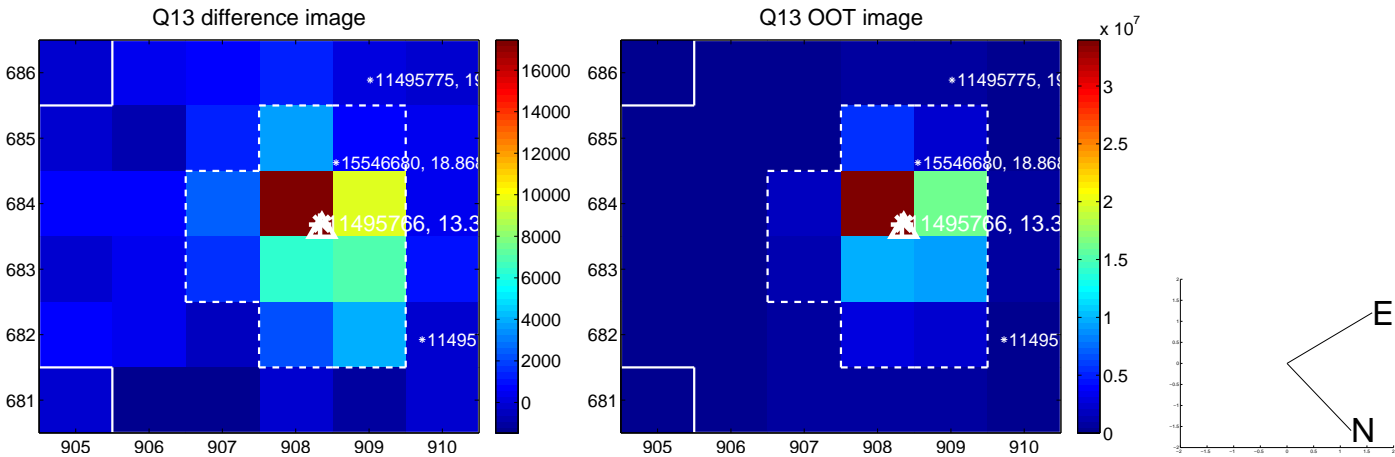
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



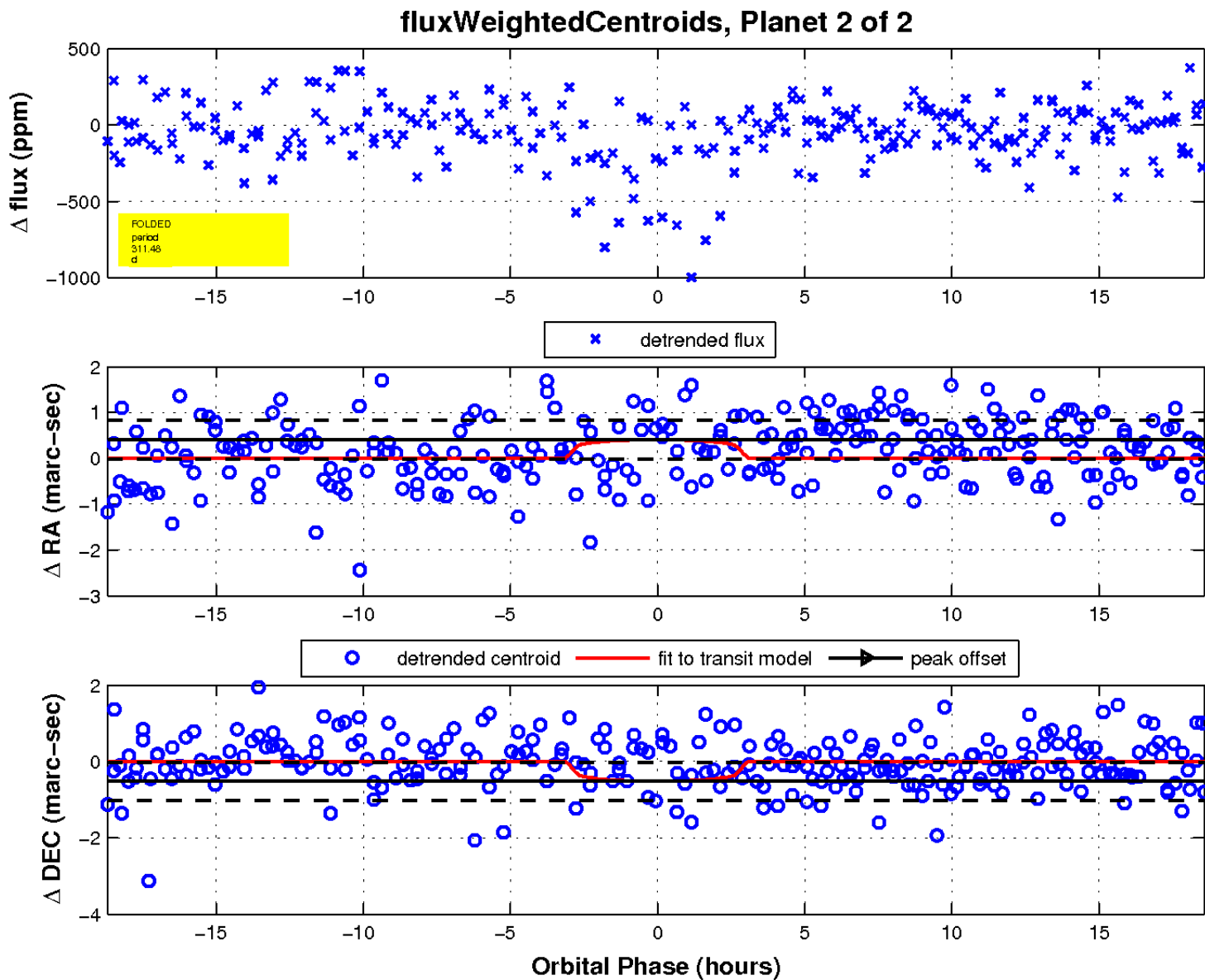
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



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



UKIRT Image

Declination

