

KIC 011189311

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})
011189311-01	OBS	3220.01	81.416102	160.863068	649.2	12.103	32.5	34.2	1.40	6352	3.71	17.56
011189311-02	OBS	No	252.748846	162.533633	333.7	13.070	9.2	9.9	1.40	6352	3.07	3.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011189311-01	OBS	PC	0.90	0	0	0	0	NO_COMMENT
011189311-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV

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

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

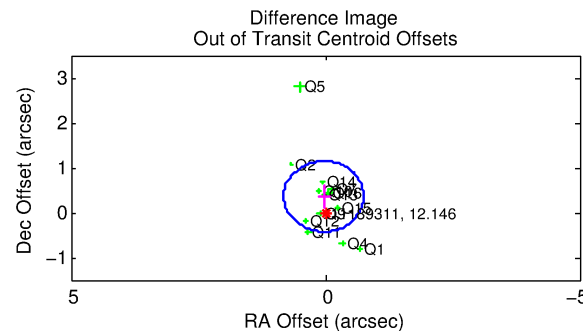
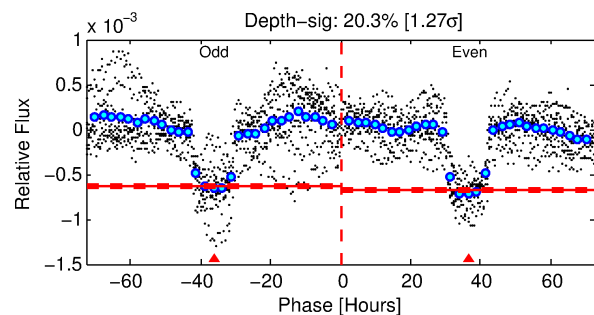
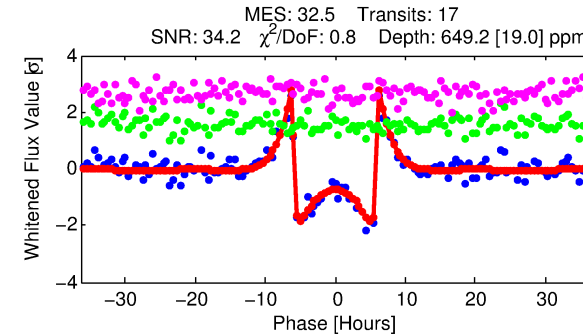
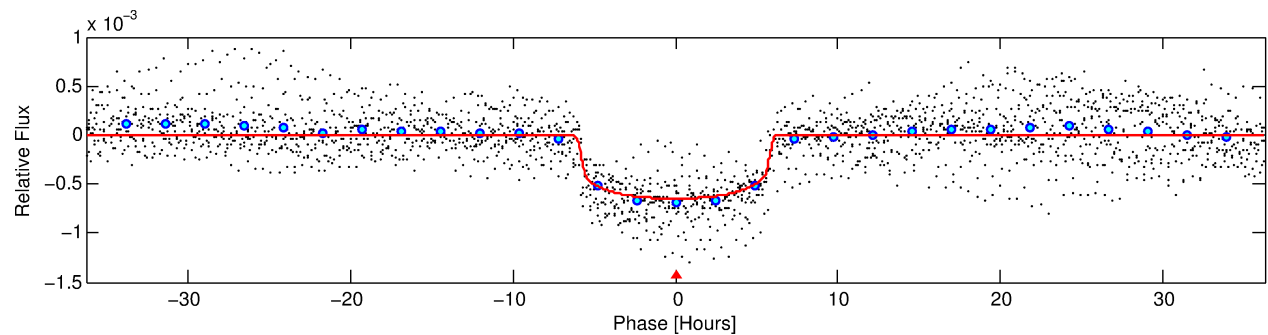
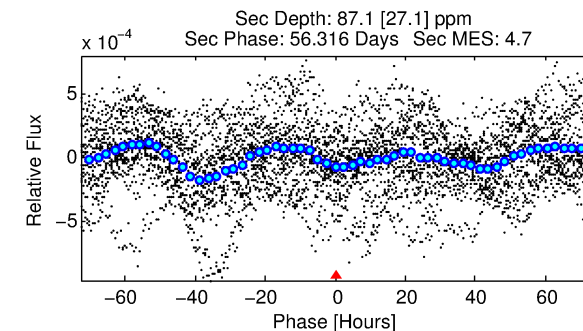
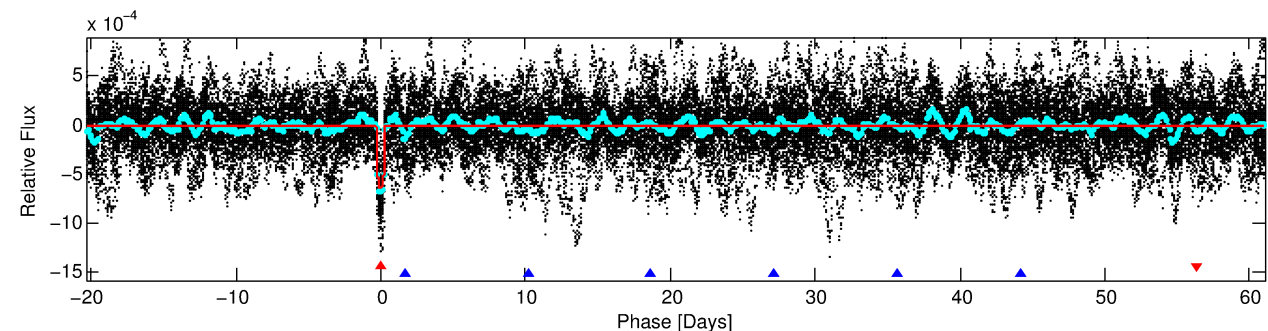
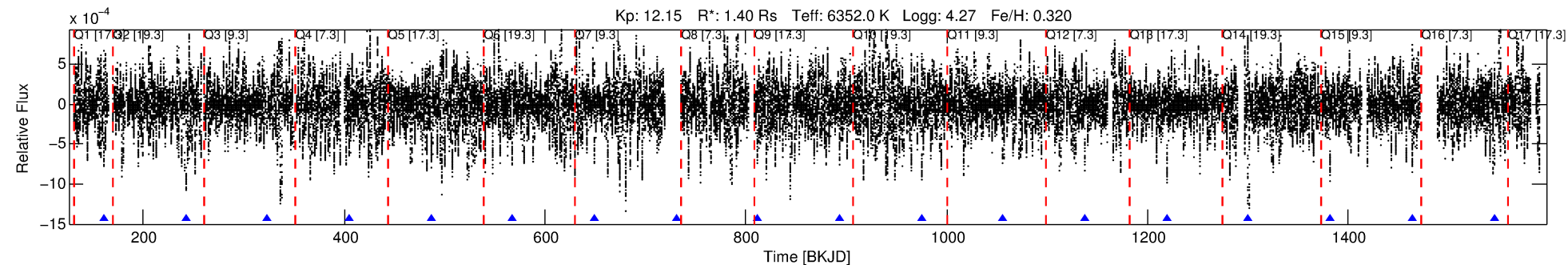
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011189311-01

No Significant Match Found

DV One-Page Summary

KIC: 11189311 Candidate: 1 of 2 Period: 81.416 d
KOI: K03220.01 Corr: 0.997



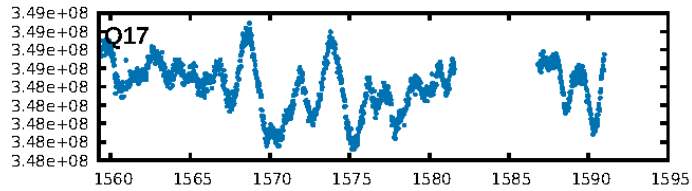
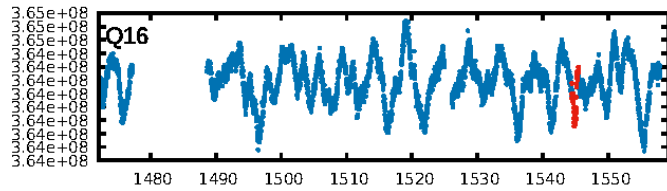
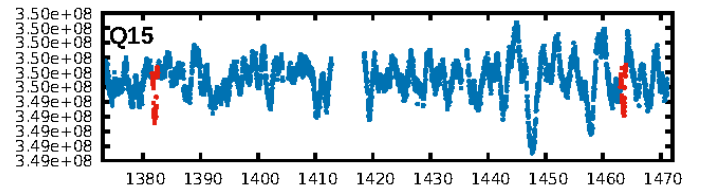
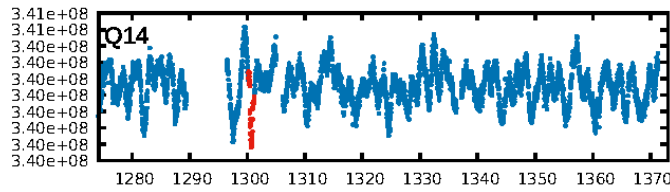
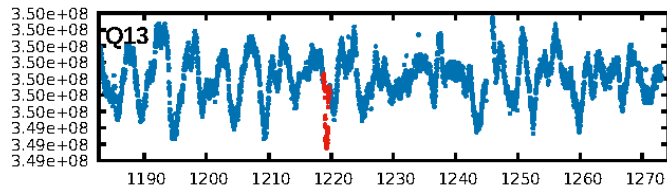
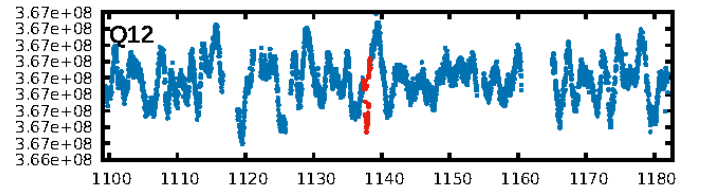
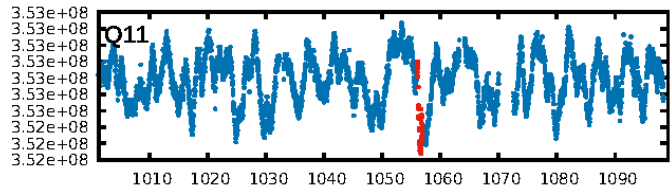
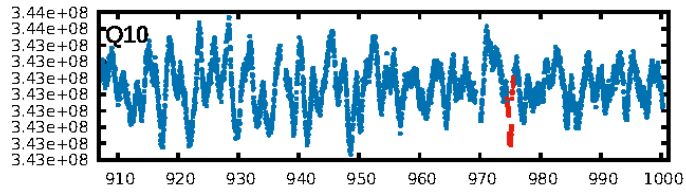
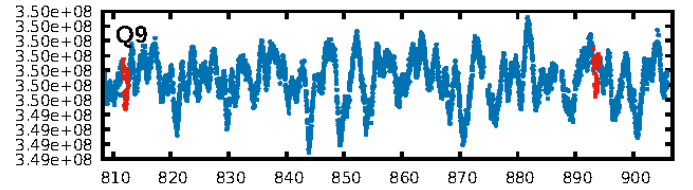
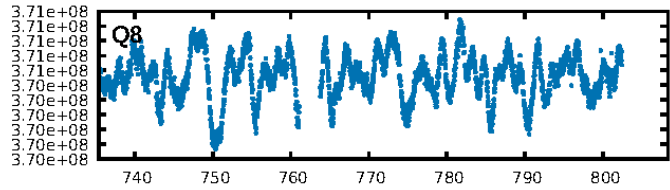
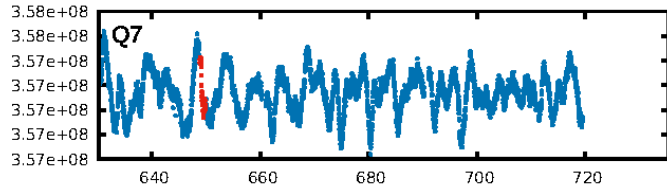
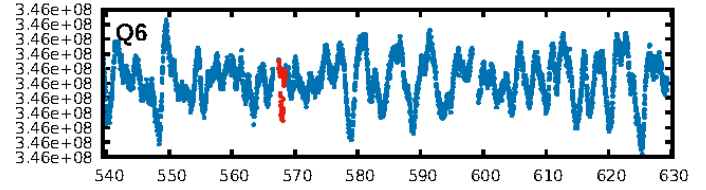
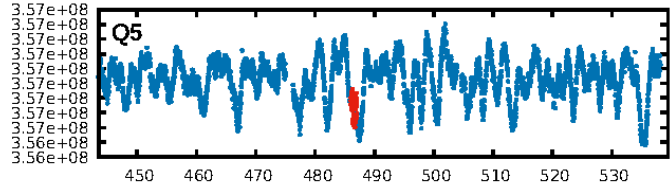
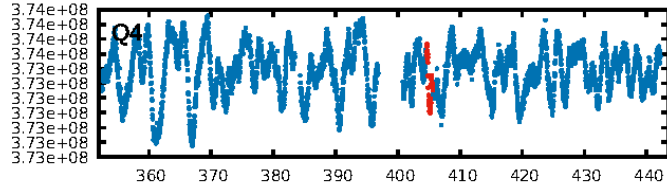
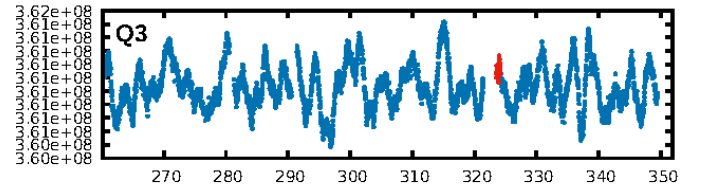
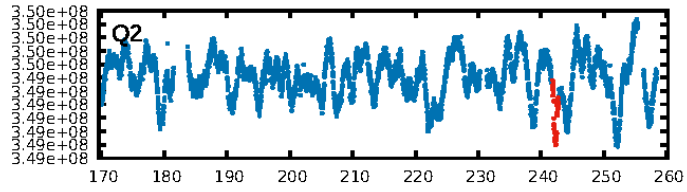
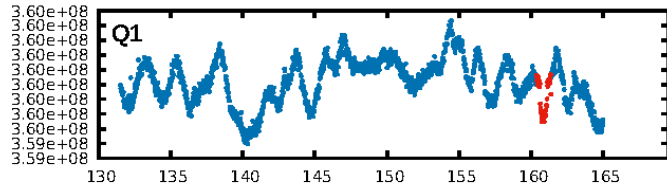
DV Fit Results:

Period = 81.41610 [0.00015] d
Epoch = 160.8631 [0.0016] BKJD
Rp/R* = 0.0243 [0.0011]
a/R* = 43.82 [8.87]
b = 0.57 [0.24]
Seff = 17.56 [4.14]
Teq = 522 [31] K
Rp = 3.71 [0.72] Re
a = 0.4038 [0.0622] AU
Ag = 568.61 [222.46] [2.55 σ]
Teffp = 3941 [331] K [10.29 σ]

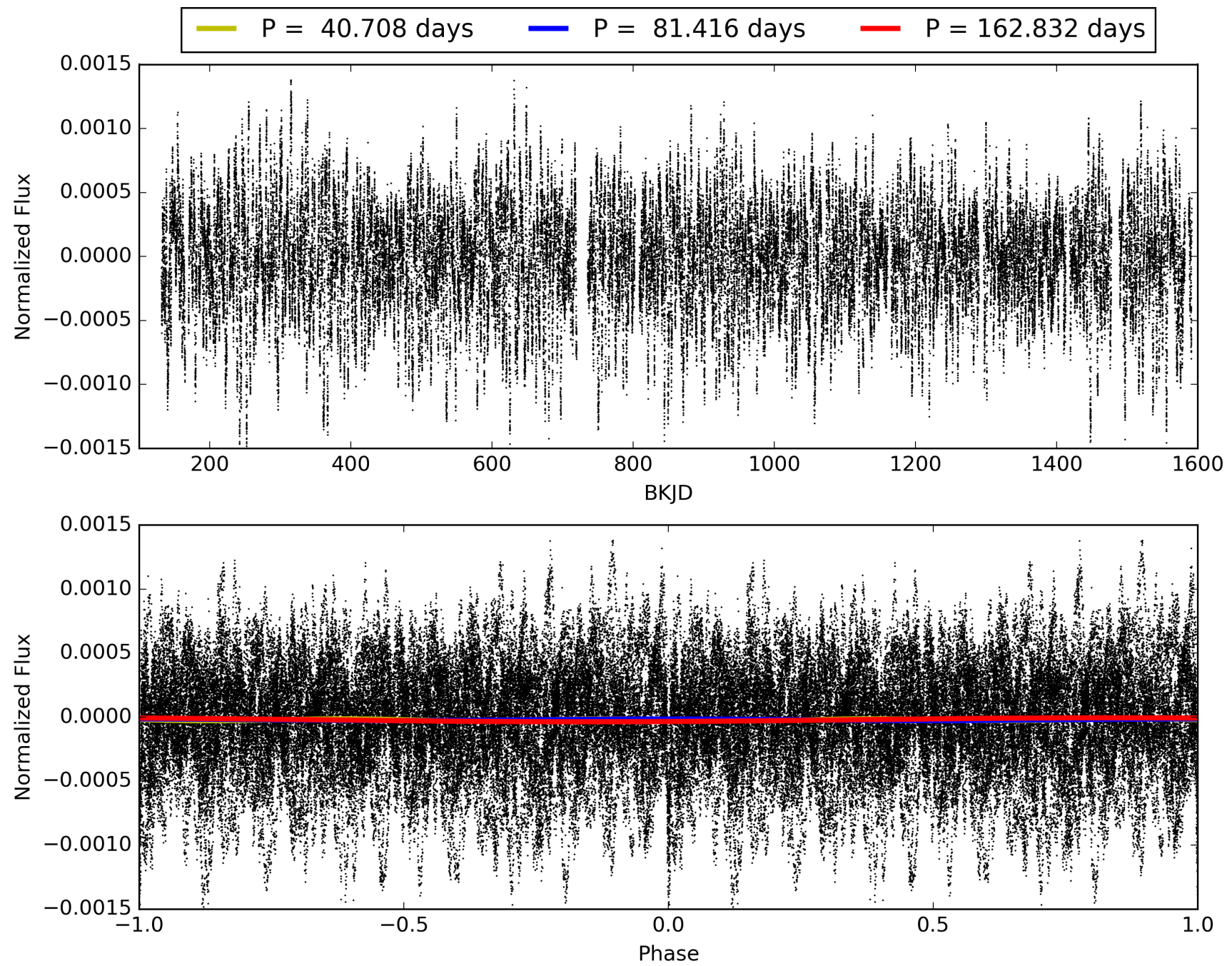
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [230.84 σ]
ModelChiSquare2-sig: 45.3%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 4.88e-211
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: 2.534
Centroid-sig: 0.4%
Centroid-so: 0.161 arcsec [2.06 σ]
OotOffset-rm: 0.361 arcsec [1.38 σ]
KicOffset-rm: 0.446 arcsec [1.92 σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 011189311-01, PDC Light Curves

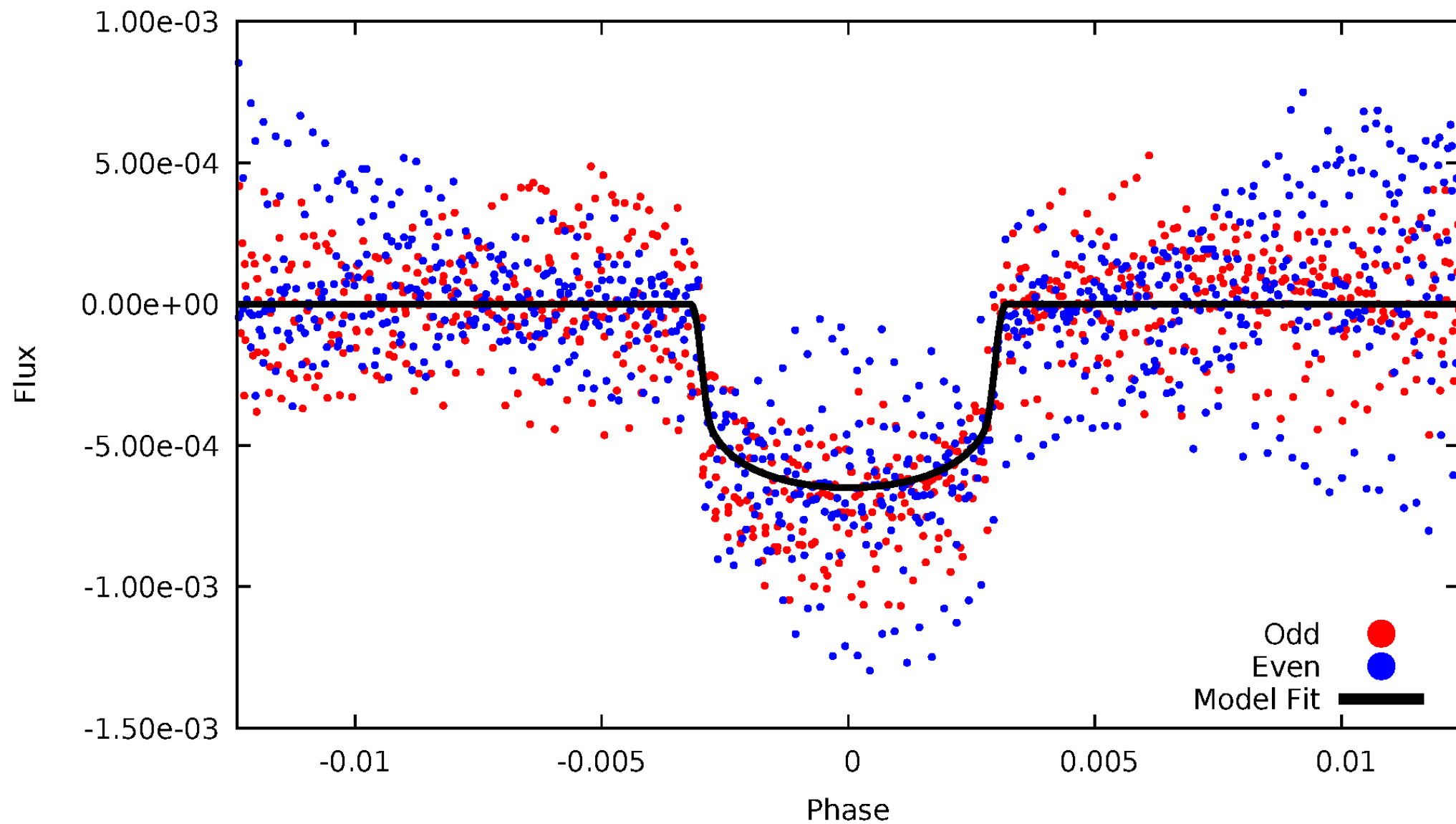


TCE 011189311-01



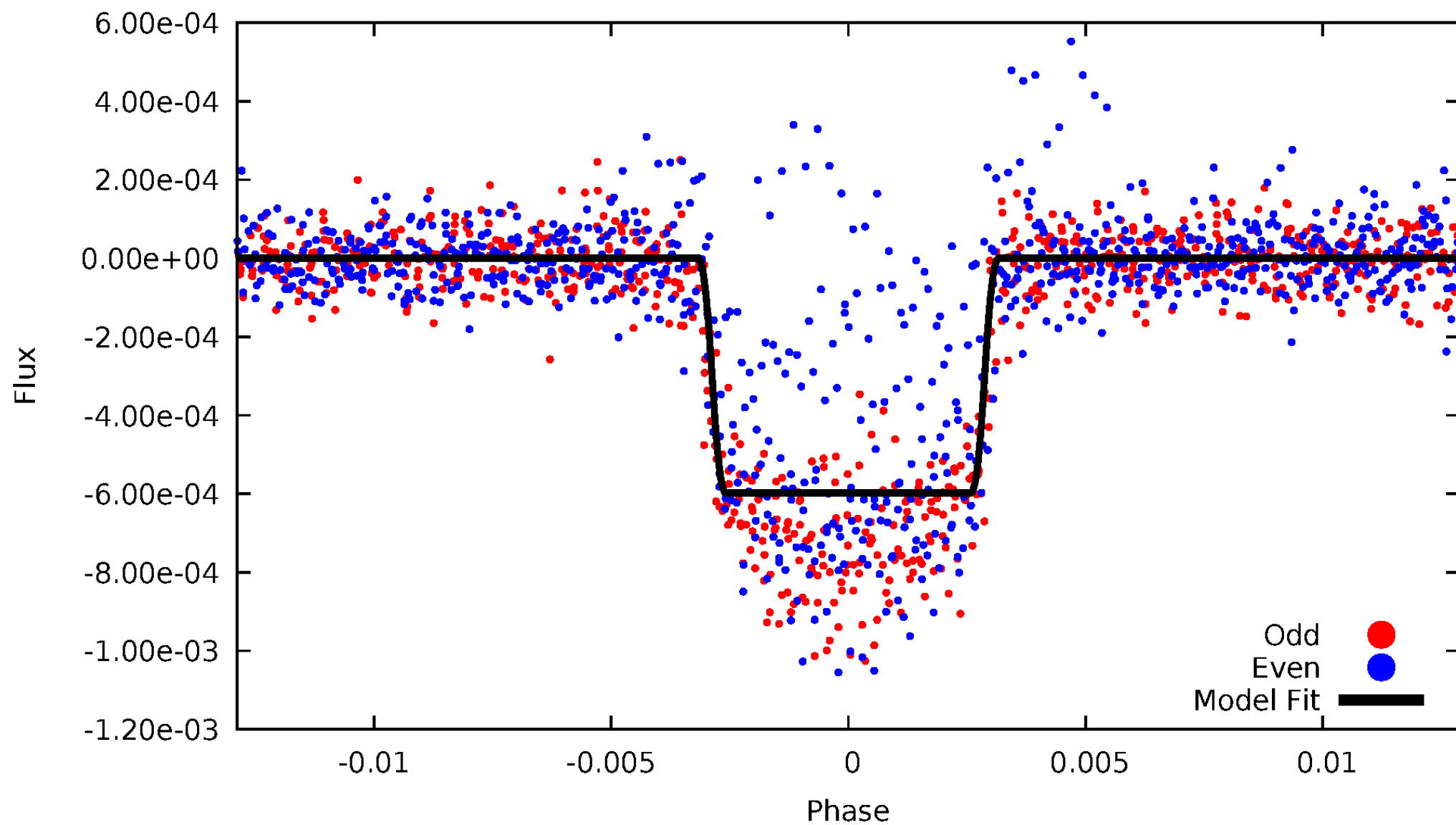
DV Odd/Even

TCE 011189311-01



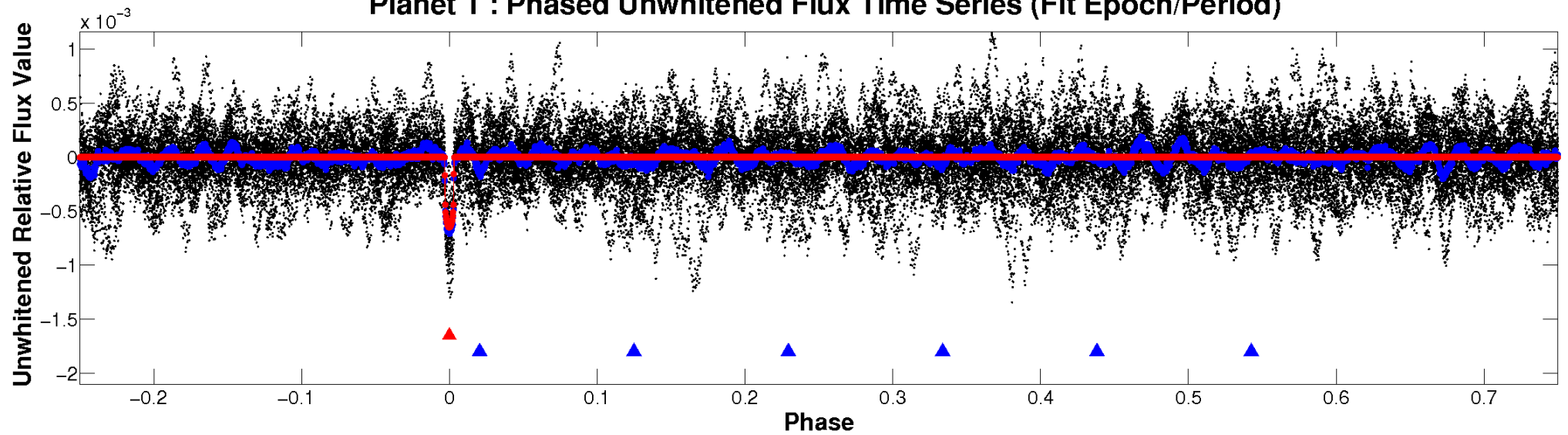
ALT Odd/Even

TCE 011189311-01

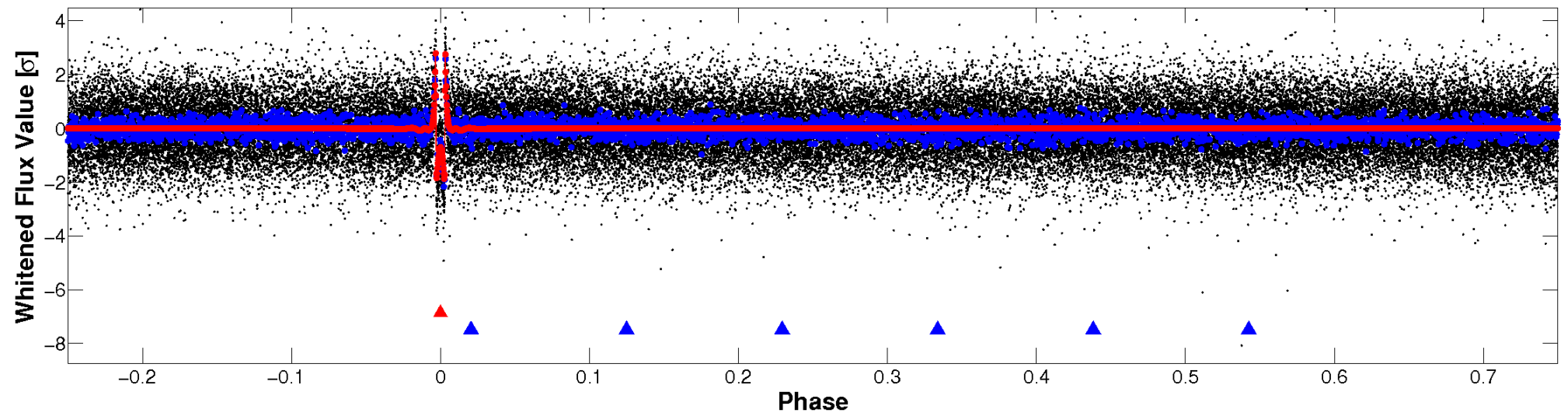


Non-Whitened Vs. Whitened Light Curve

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

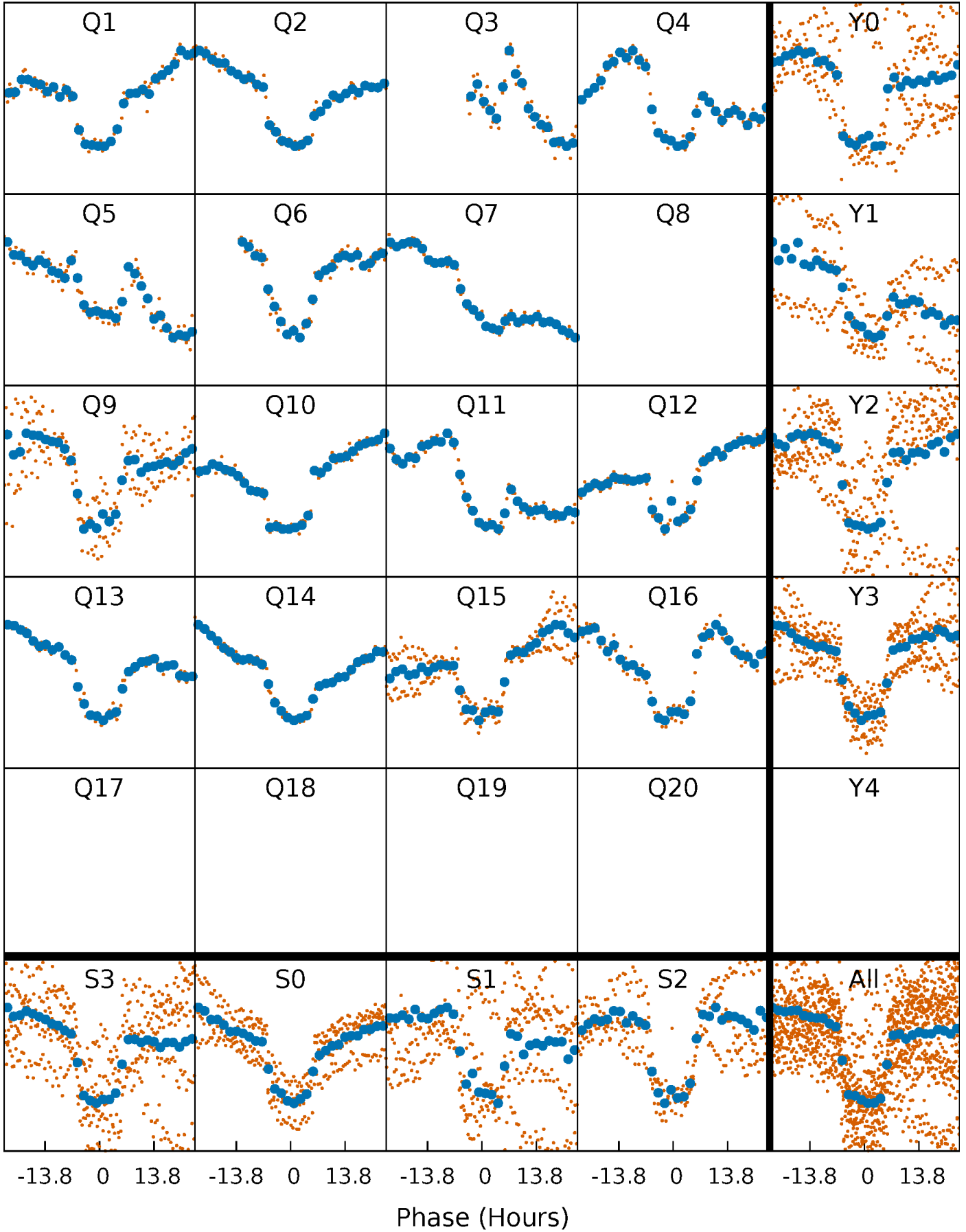


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



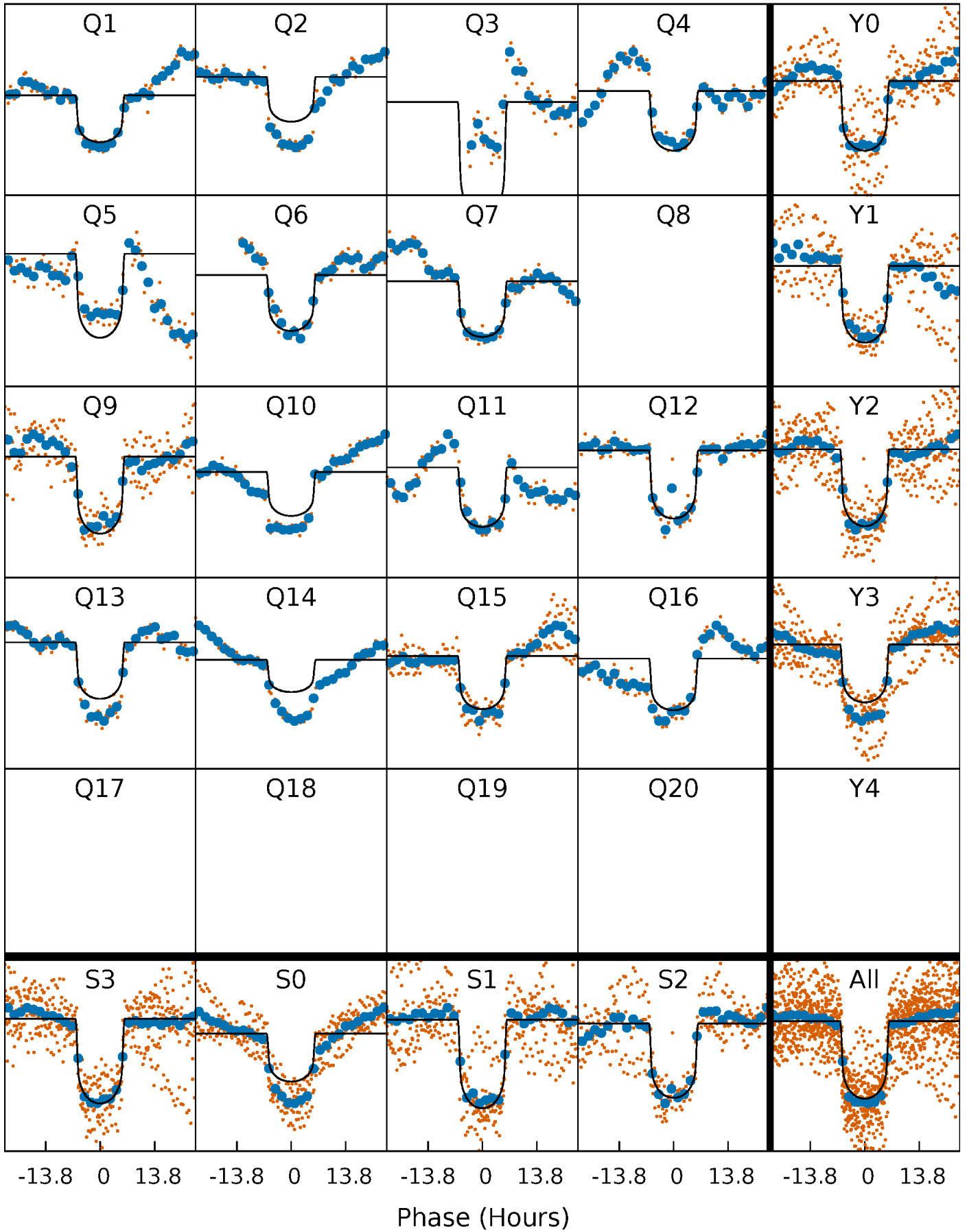
PDC Quarter-Phased Transit Curves

TCE 011189311-01 P= 81.416102 Days $T_0=160.863068$ (BKJD)



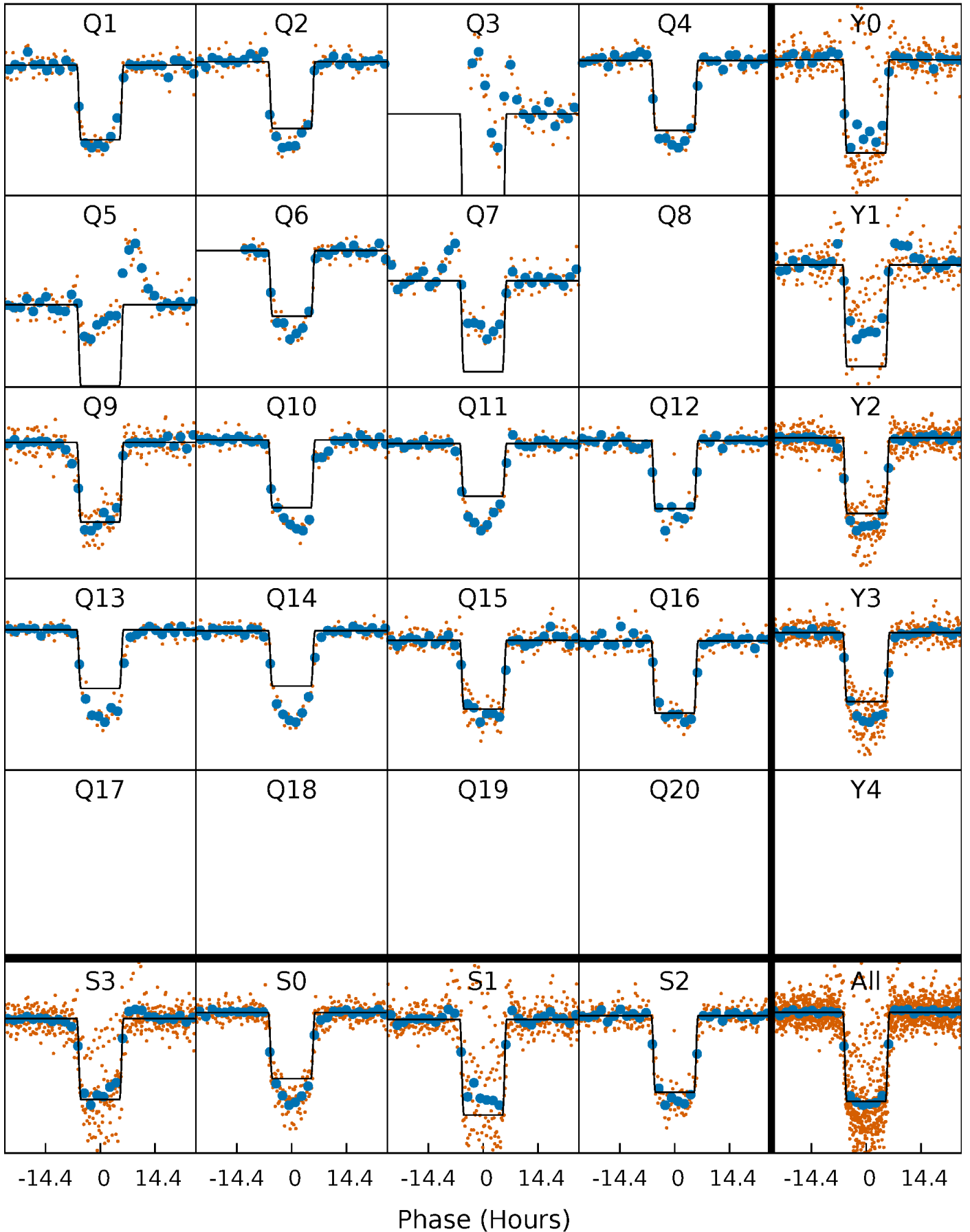
DV Quarter-Phased Transit Curves

TCE 011189311-01 P= 81.416102 Days $T_0=160.863068$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

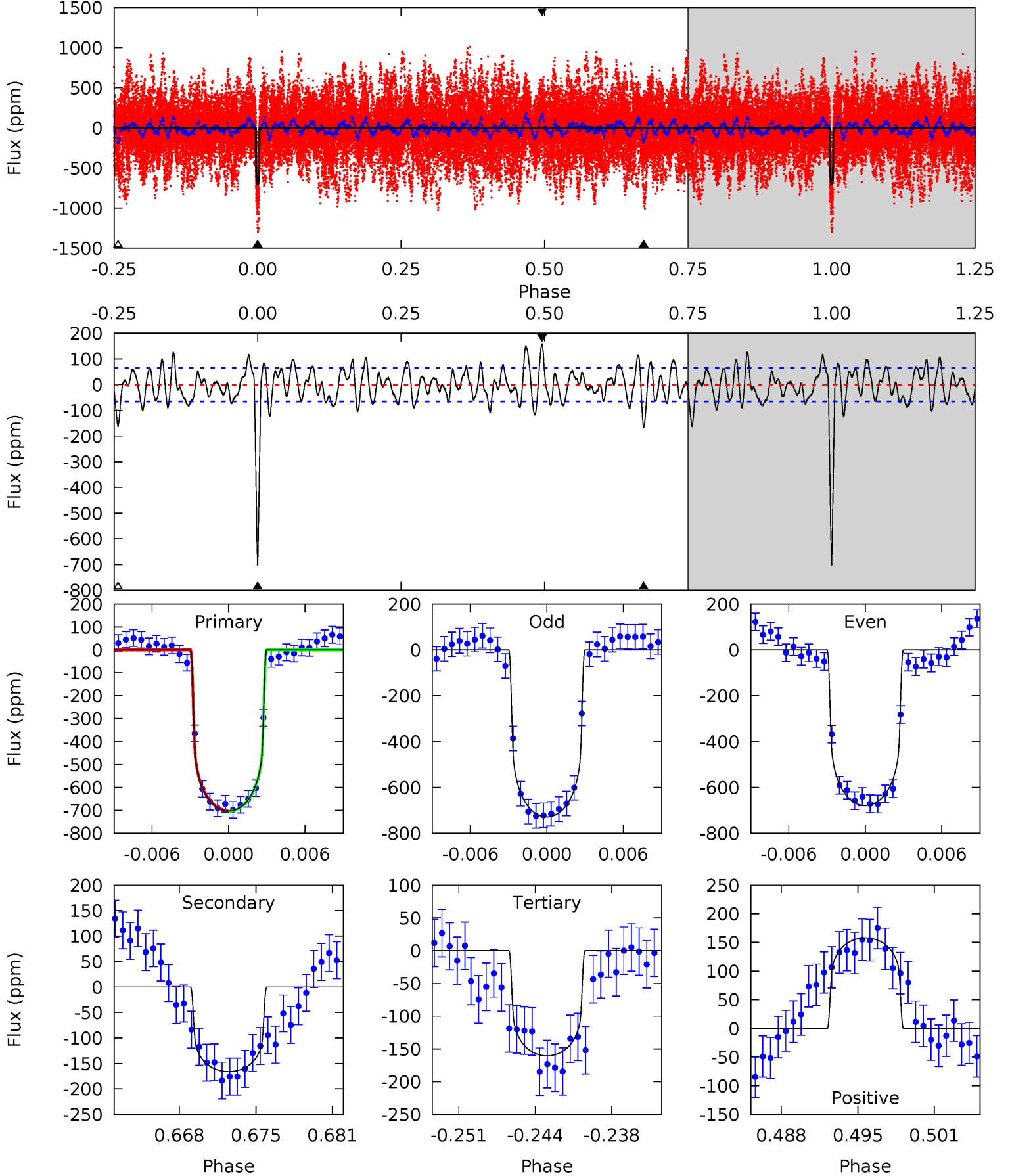
TCE 011189311-01 P= 81.414861 Days $T_0=160.871558$ (BKJD)



DV Model-Shift Uniqueness Test

011189311-01, P = 81.416102 Days, E = 79.446966 Days

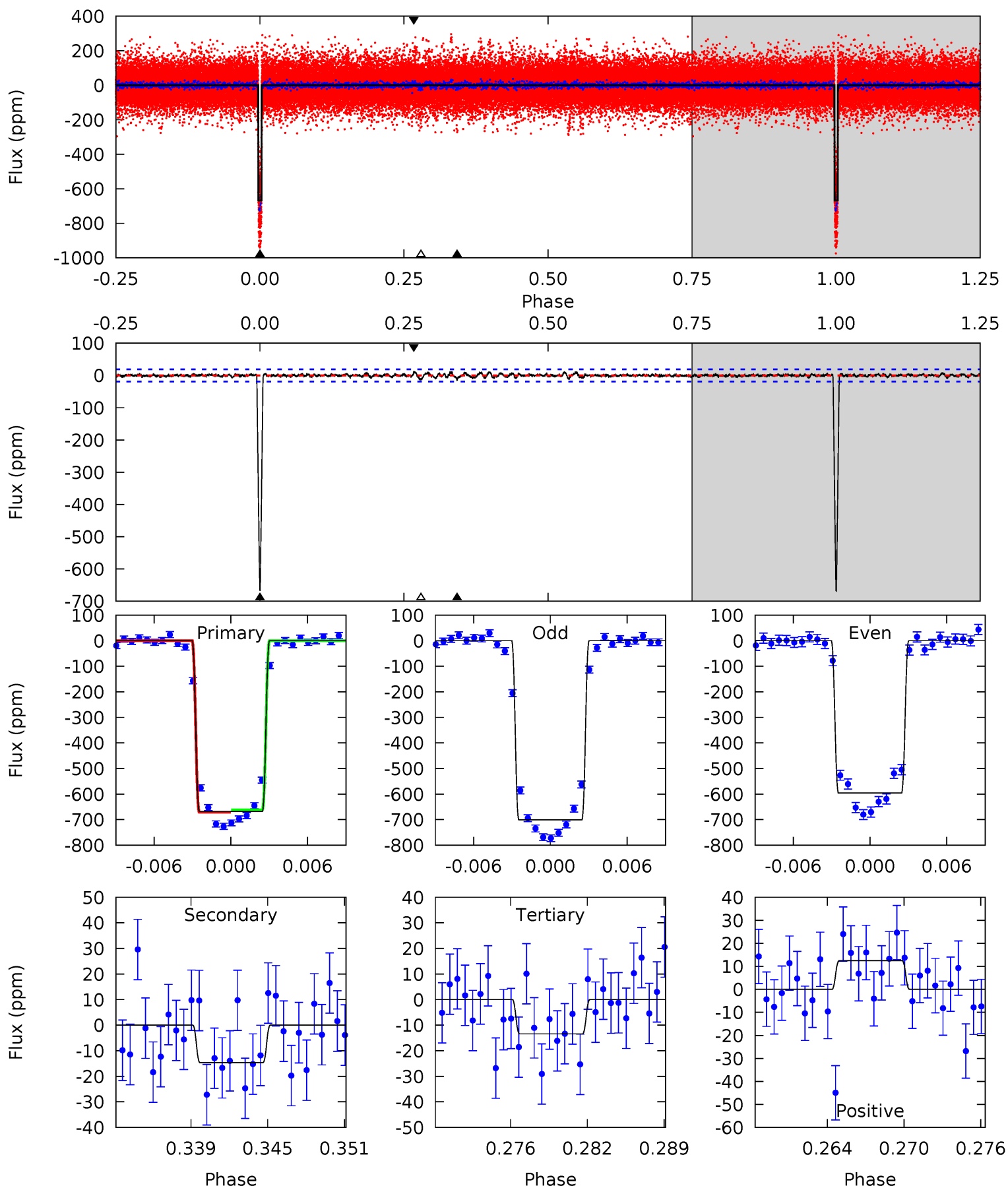
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
55.0	13.0	12.6	12.4	5.11	2.73	4.14	42.4	42.6	0.43	0.65	1.95	1.06	0.18	0.13



Alt Model-Shift Uniqueness Test

011189311-01, P = 81.414861 Days, E = 79.456697 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
180.4	3.96	3.63	3.36	5.12	2.73	0.88	176.8	177.1	0.33	0.59	14.2	0.91	0.02	1.29



Stellar Parameters For KIC 011189311

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6352^{+113}_{-139}	$4.267^{+0.063}_{-0.117}$	$0.320^{+0.100}_{-0.200}$	$1.401^{+0.263}_{-0.132}$	$1.323^{+0.098}_{-0.088}$	$0.678^{+0.188}_{-0.249}$
	+2%/-2%	+1%/-3%	+31%/-62%	+19%/-9%	+7%/-7%	+28%/-37%
Source	SPE59	SPE59	SPE59	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011189311-01 / KOI 3220.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-166 ± 13	$3.74^{+0.40}_{-0.28}$	734^{+33}_{-28}	4765^{+144}_{-142}	1056^{+207}_{-189}
Alt.	-15 ± 4	$3.79^{+0.36}_{-0.31}$	732^{+34}_{-25}	3136^{+113}_{-154}	91^{+30}_{-25}

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 $A_{obs} \gg 1.0$

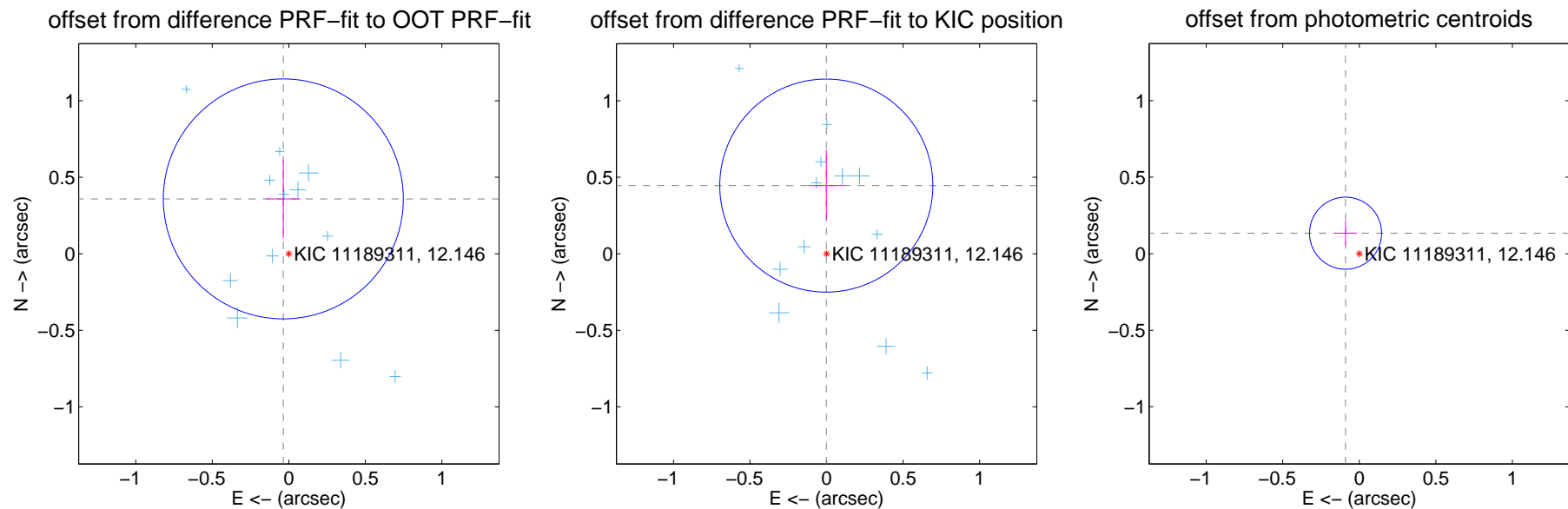
DV Centroid Data

Supplemental centroid analysis for 011189311-01. Kepler magnitude: 12.15. Transit SNR 34.19

There are 13 quarters with good PRF difference image offsets

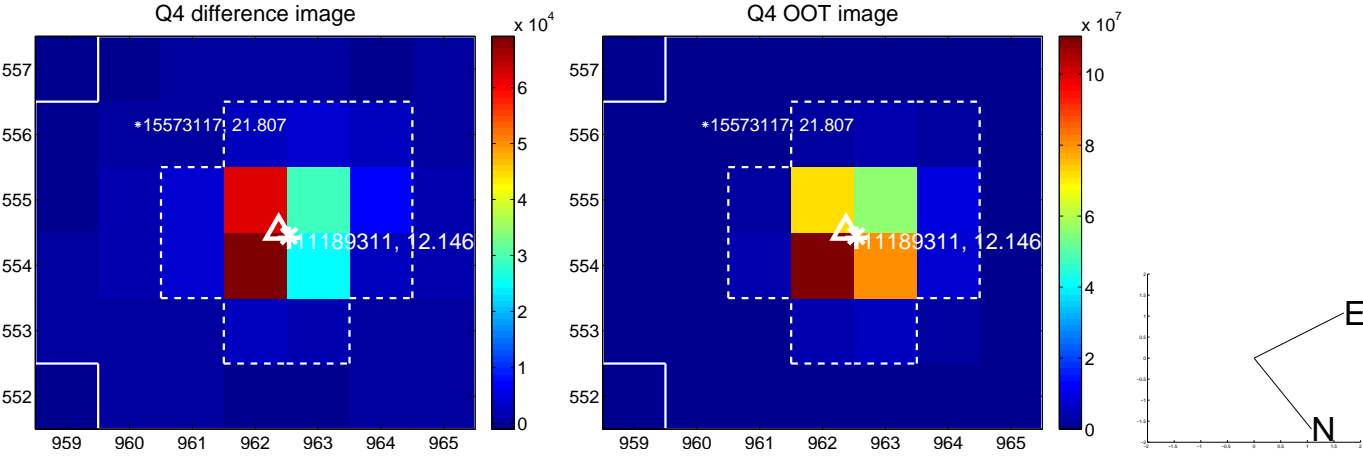
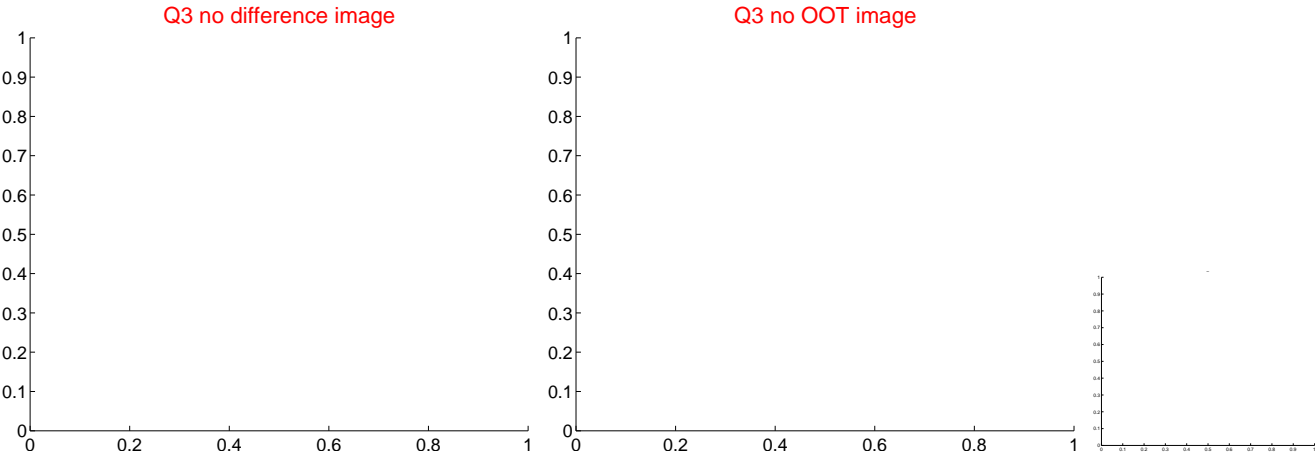
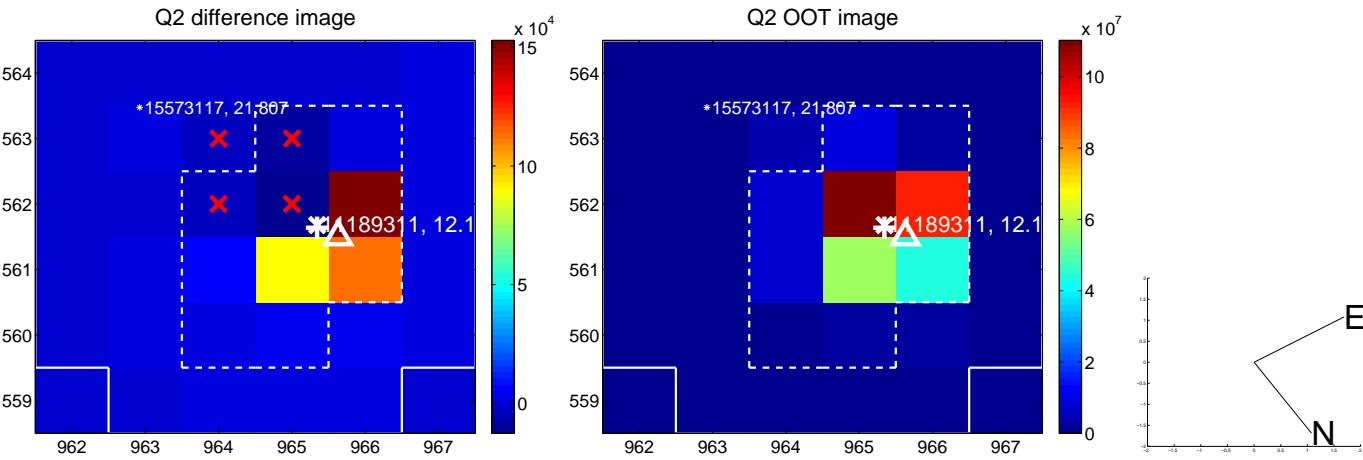
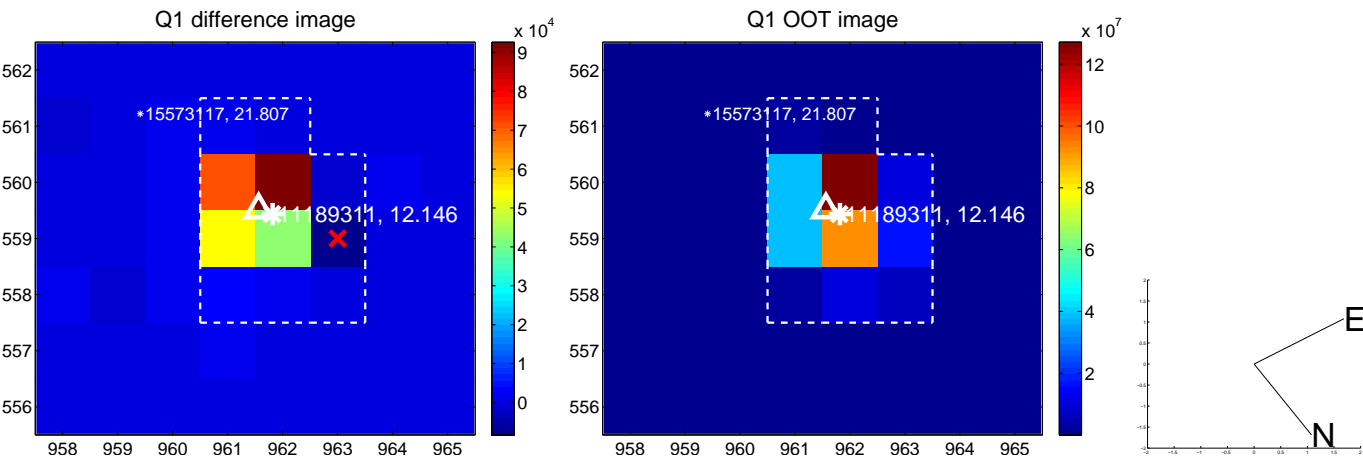
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.361 ± 0.261	1.38	0.036 ± 0.111	0.359 ± 0.257
PRF-fit source offset from KIC position	0.446 ± 0.232	1.92	0.002 ± 0.117	0.446 ± 0.232
photometric centroid source offset	0.16 ± 0.08	2.06	0.09 ± 0.08	0.13 ± 0.08

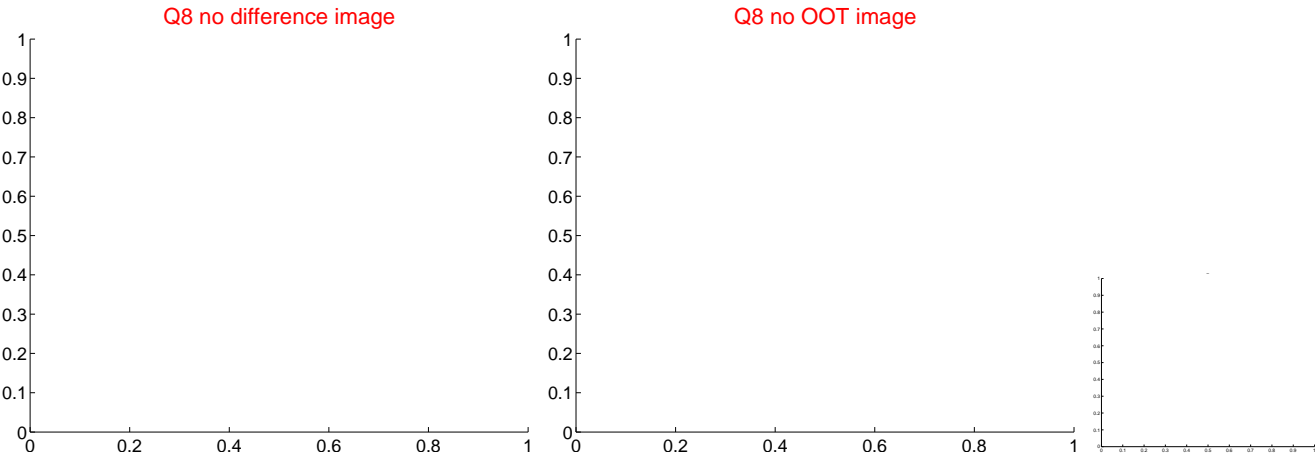
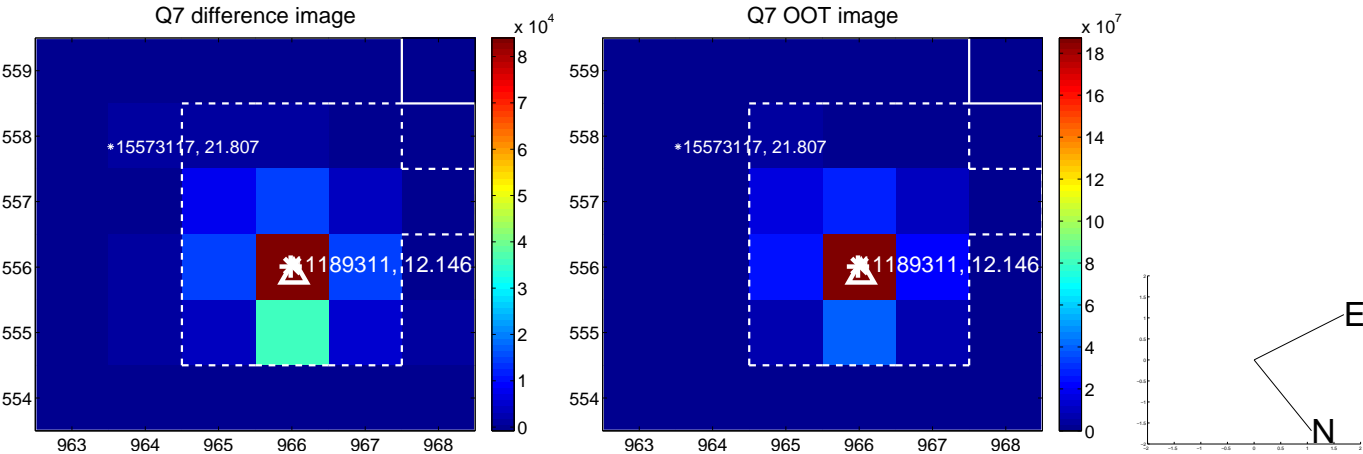
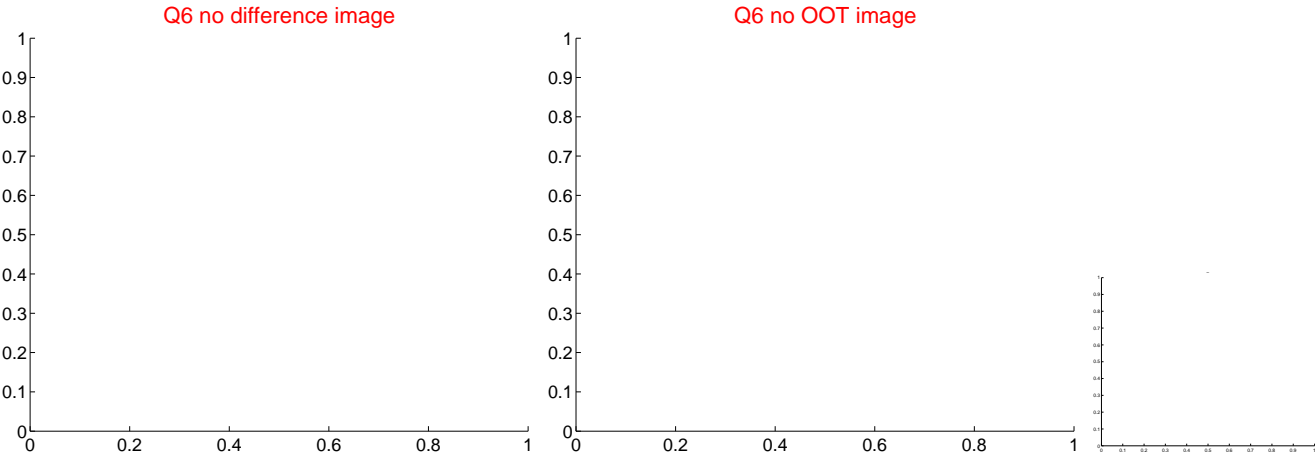
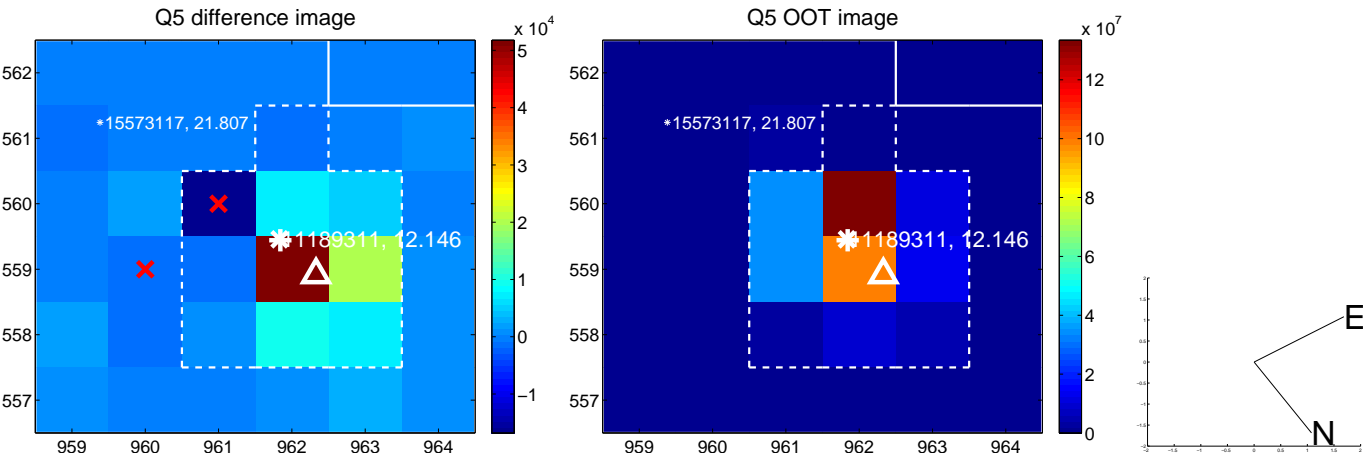


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

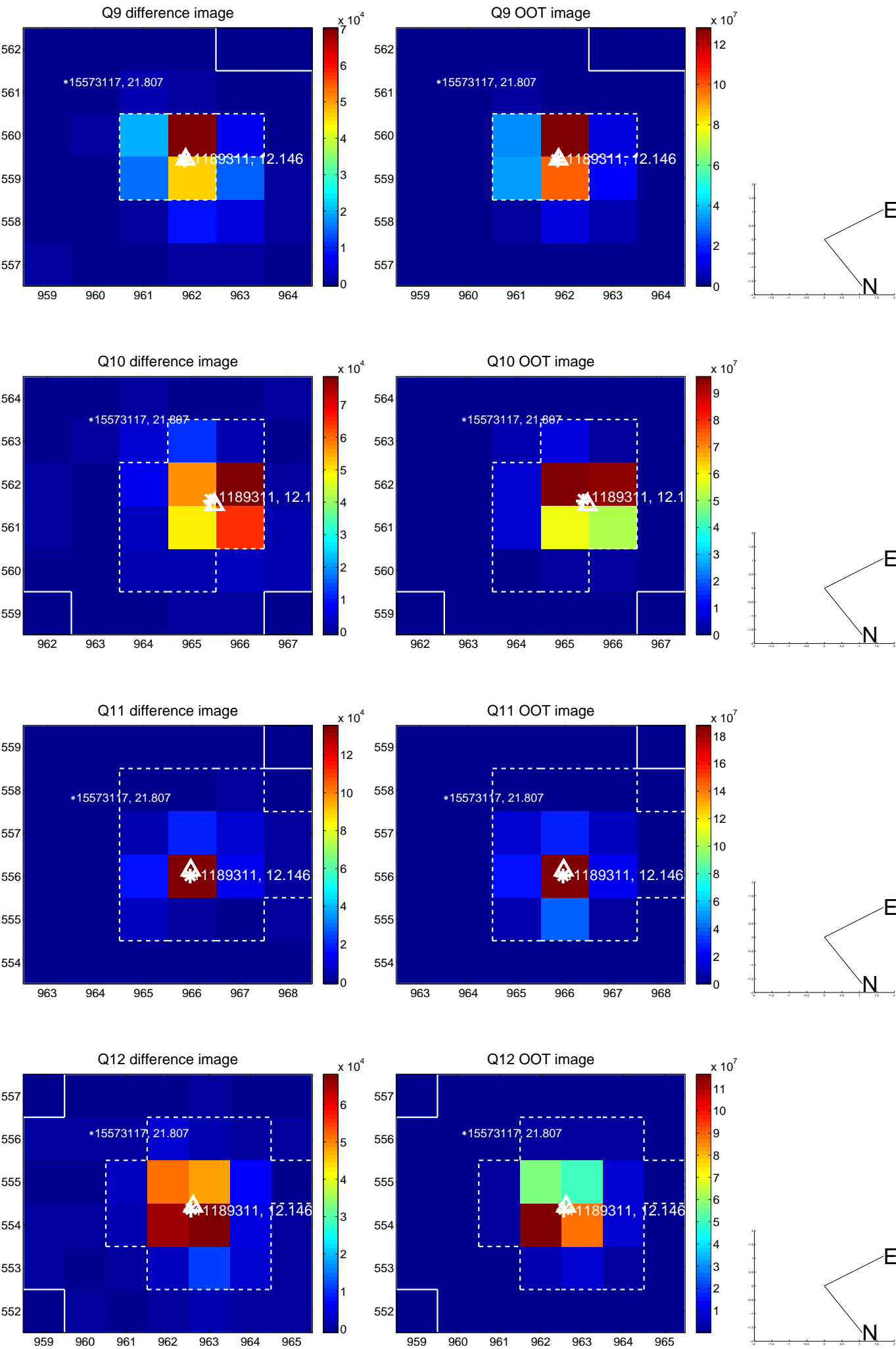
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



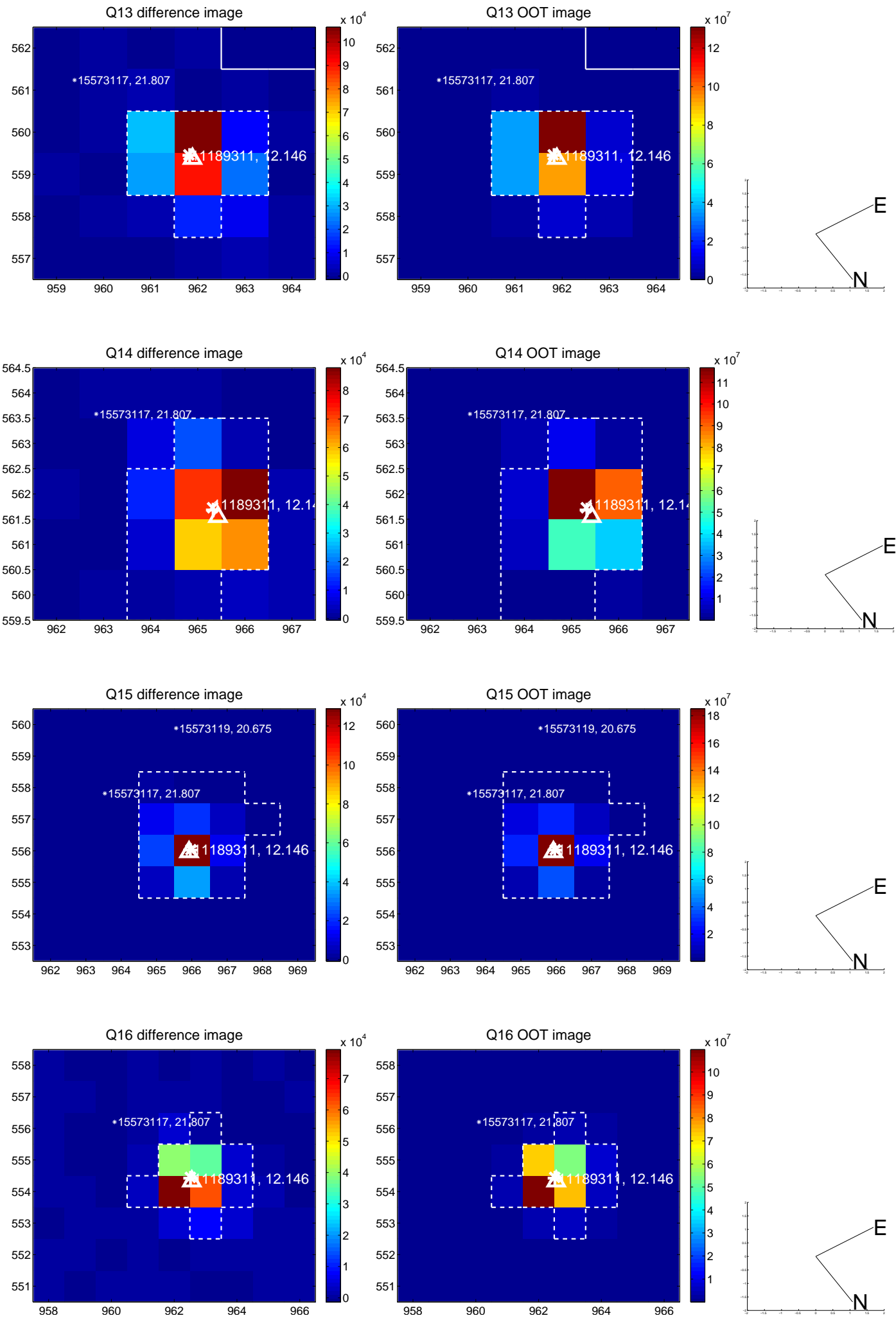
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



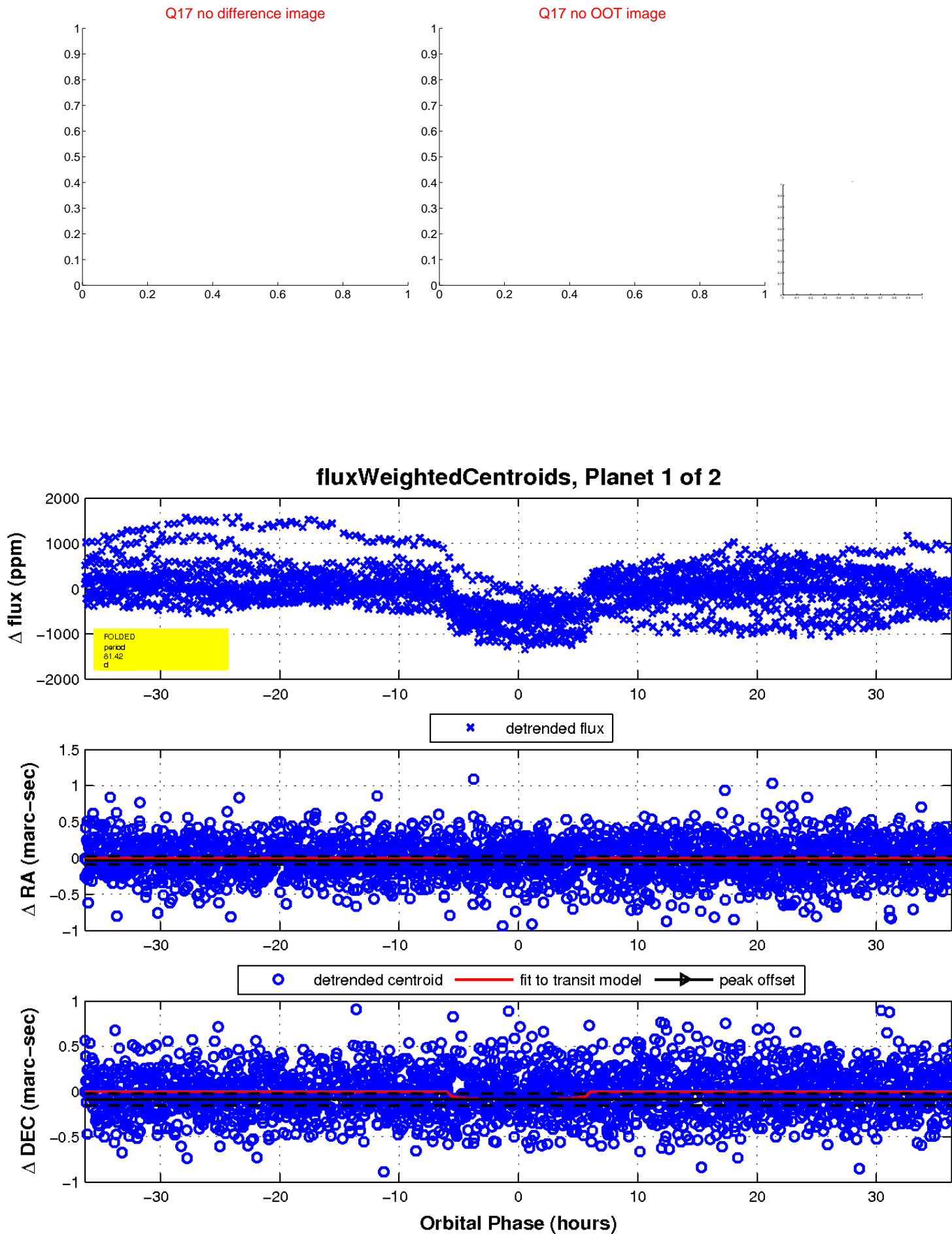
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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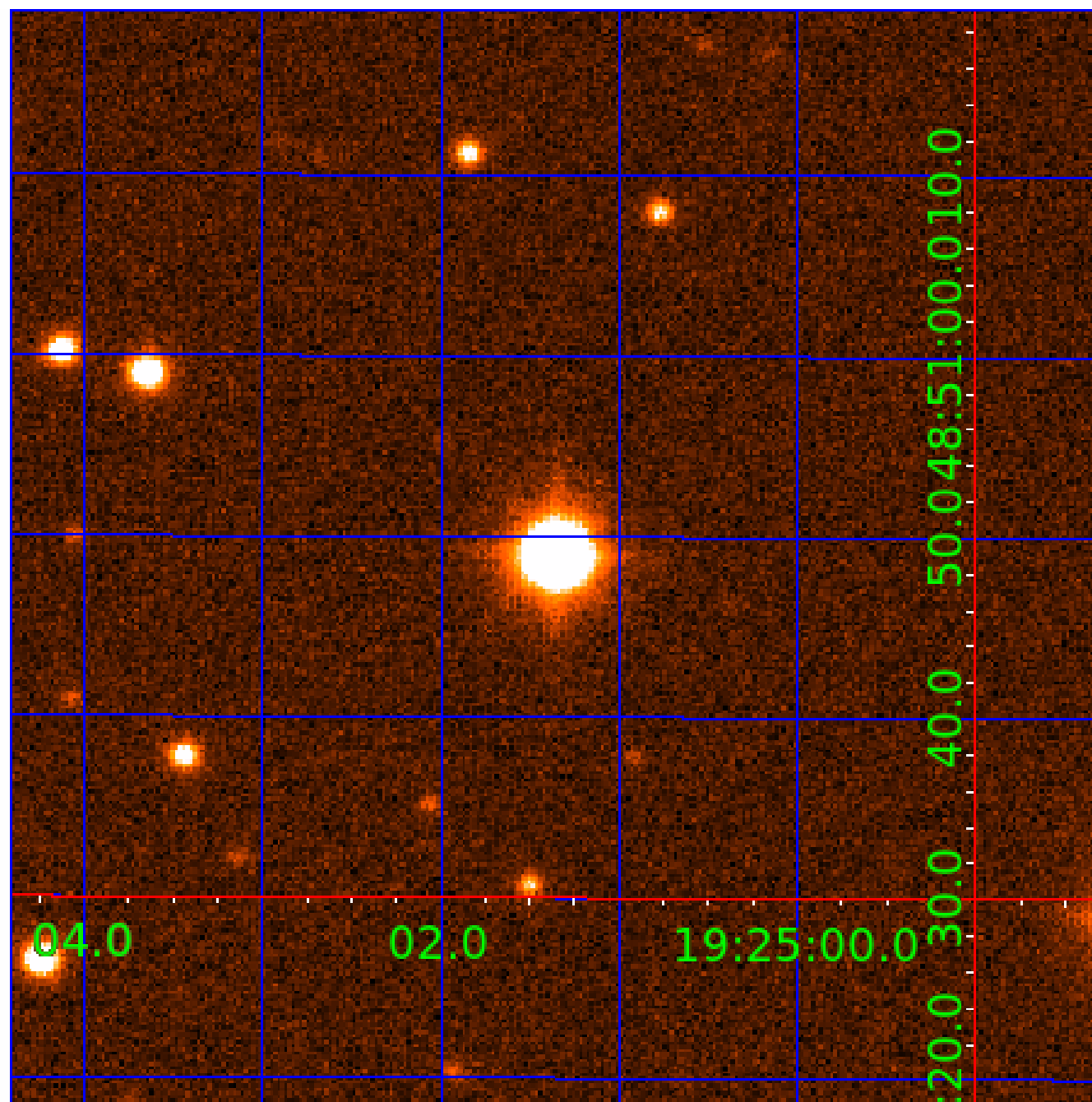


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011189311

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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011189311-02	OBS	No	252.748846	162.533633	333.7	13.070	9.2	9.9	1.40	6352	3.07	3.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011189311-01	OBS	PC	0.90	0	0	0	0	NO_COMMENT
011189311-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV

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 011189311-02

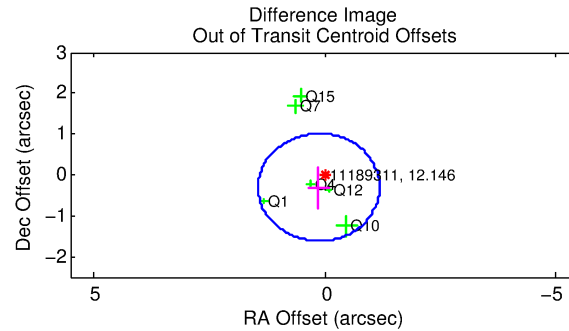
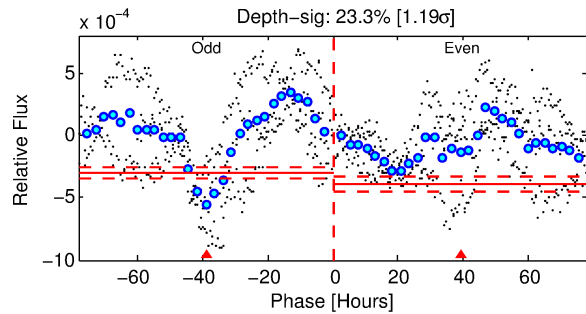
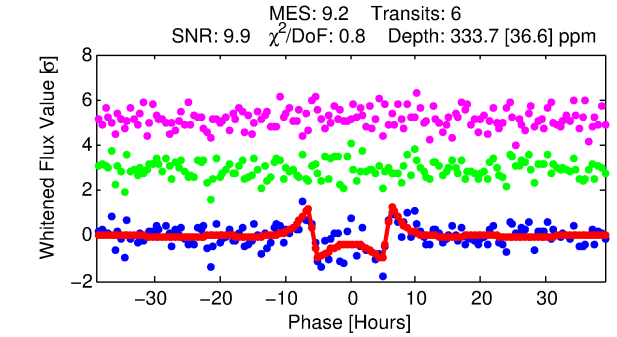
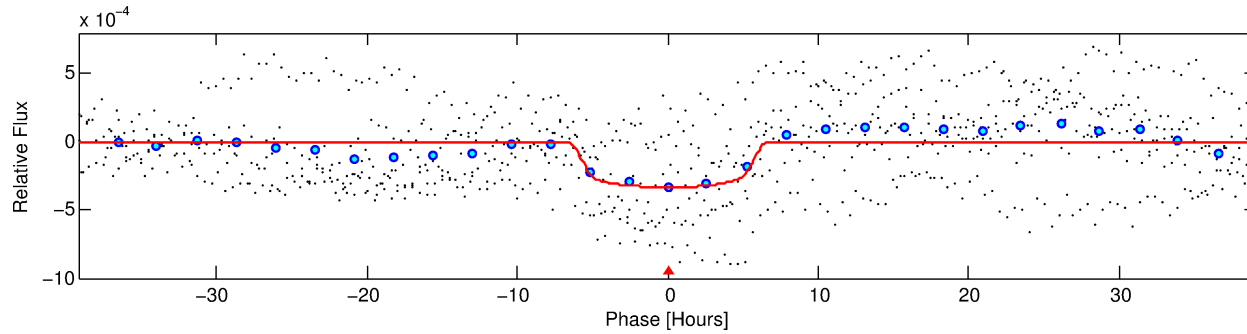
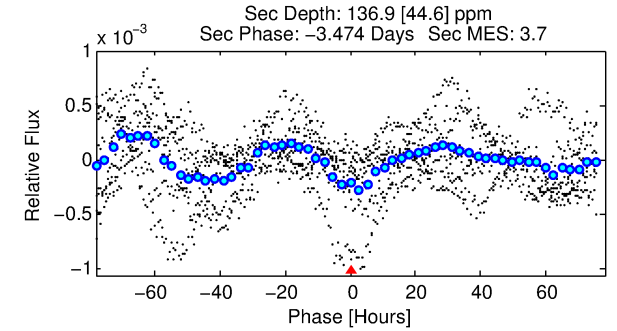
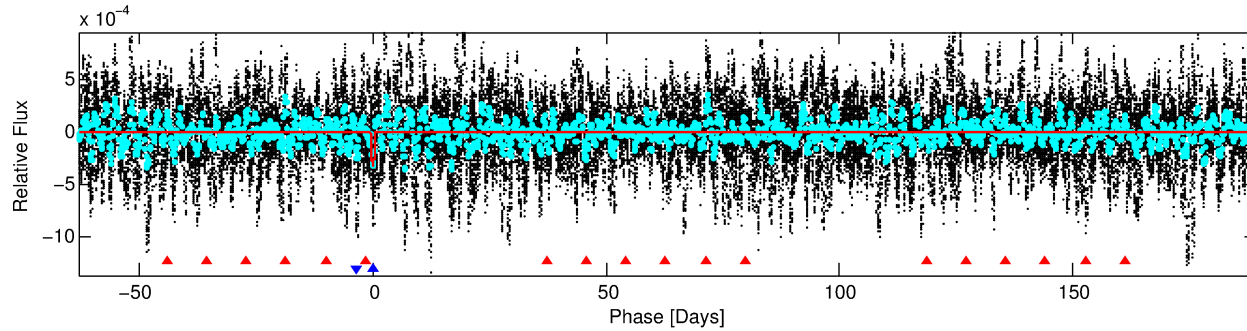
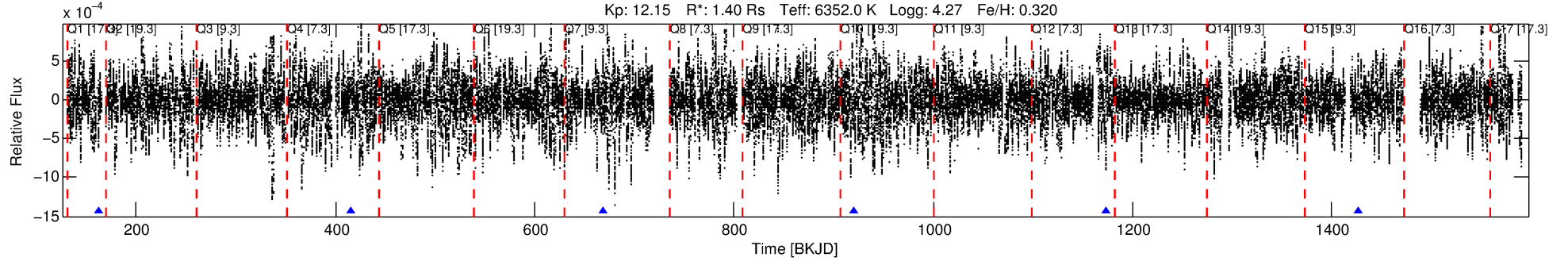
No Significant Match Found

DV One-Page Summary

KIC: 11189311 Candidate: 2 of 2 Period: 252.749 d

KOI: K03220 Corr: No Ephemeris Match

Kp: 12.15 R*: 1.40 Rs Teff: 6352.0 K Logg: 4.27 Fe/H: 0.320



DV Fit Results:

Period = 252.74885 [0.00235] d
Epoch = 162.5336 [0.0073] BKJD
Rp/R* = 0.0201 [0.0013]
a/R* = 64.70 [7.78]
b = 0.92 [0.02]
Seff = 3.88 [0.91]
Teq = 358 [21] K
Rp = 3.07 [0.61] Re
a = 0.8592 [0.1324] AU
Ag = 5884.25 [2431.89] [2.42σ]
Teffp = 4845 [438] K [10.24σ]

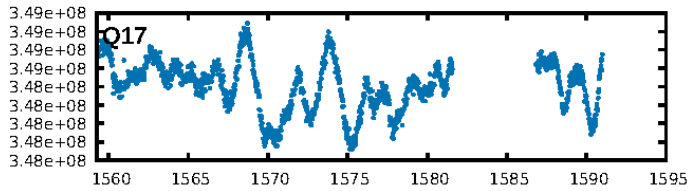
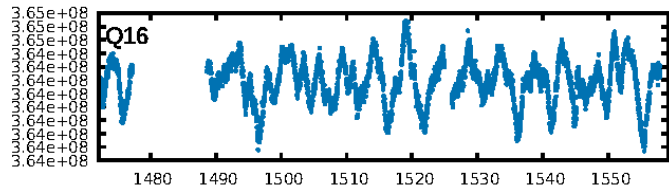
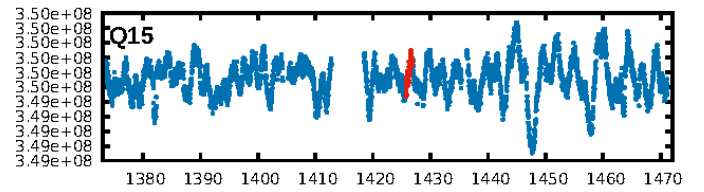
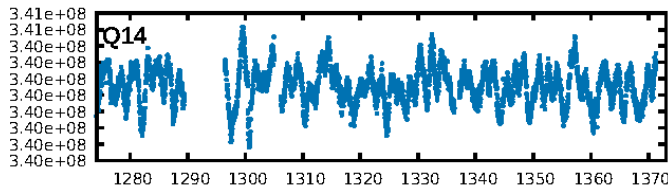
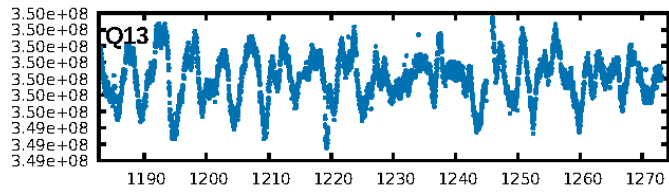
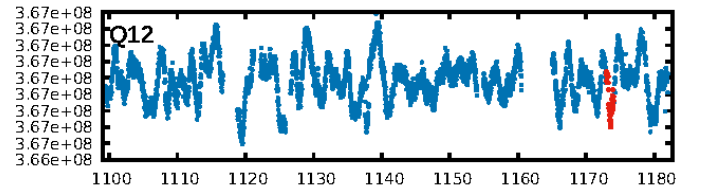
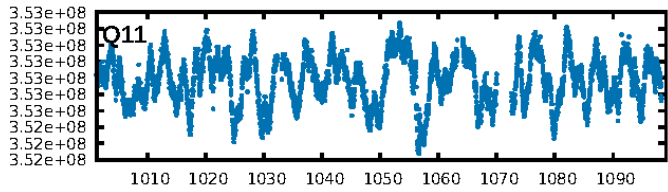
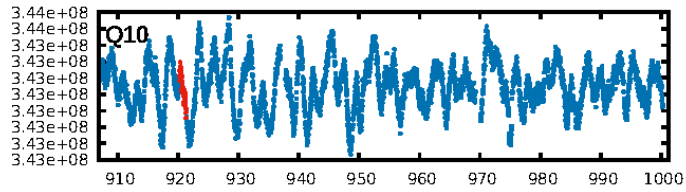
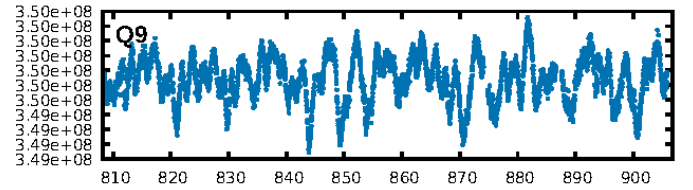
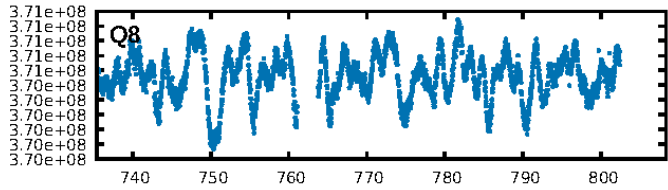
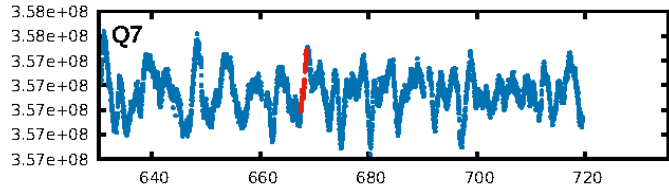
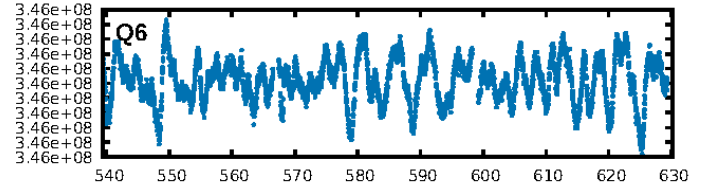
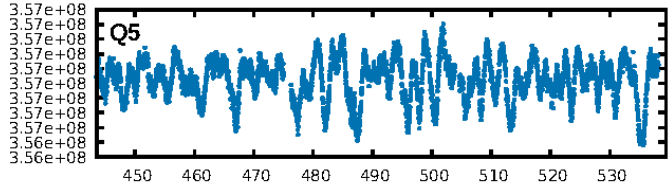
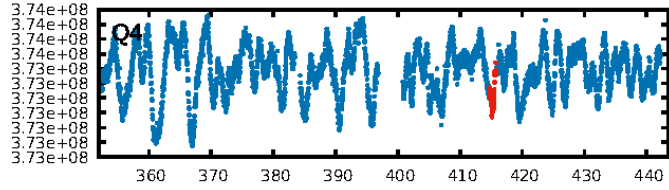
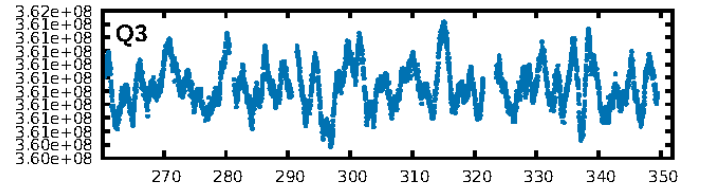
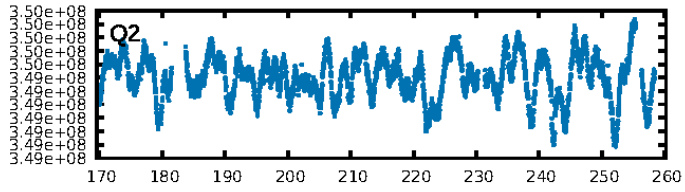
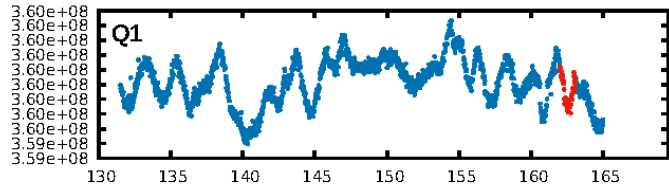
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [230.84σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 19.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.78e-18
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 1133
Centroid-sig: 18.0%
Centroid-so: 0.341 arcsec [1.37σ]
OotOffset-rm: 0.331 arcsec [0.75σ]
KicOffset-rm: 0.266 arcsec [0.60σ]
OotOffset-st: 1/2/2/1 [6]
KicOffset-st: 1/2/2/1 [6]
DiffImageQuality-fgm: 0.50 [3/6]
DiffImageOverlap-fno: 1.00 [6/6]

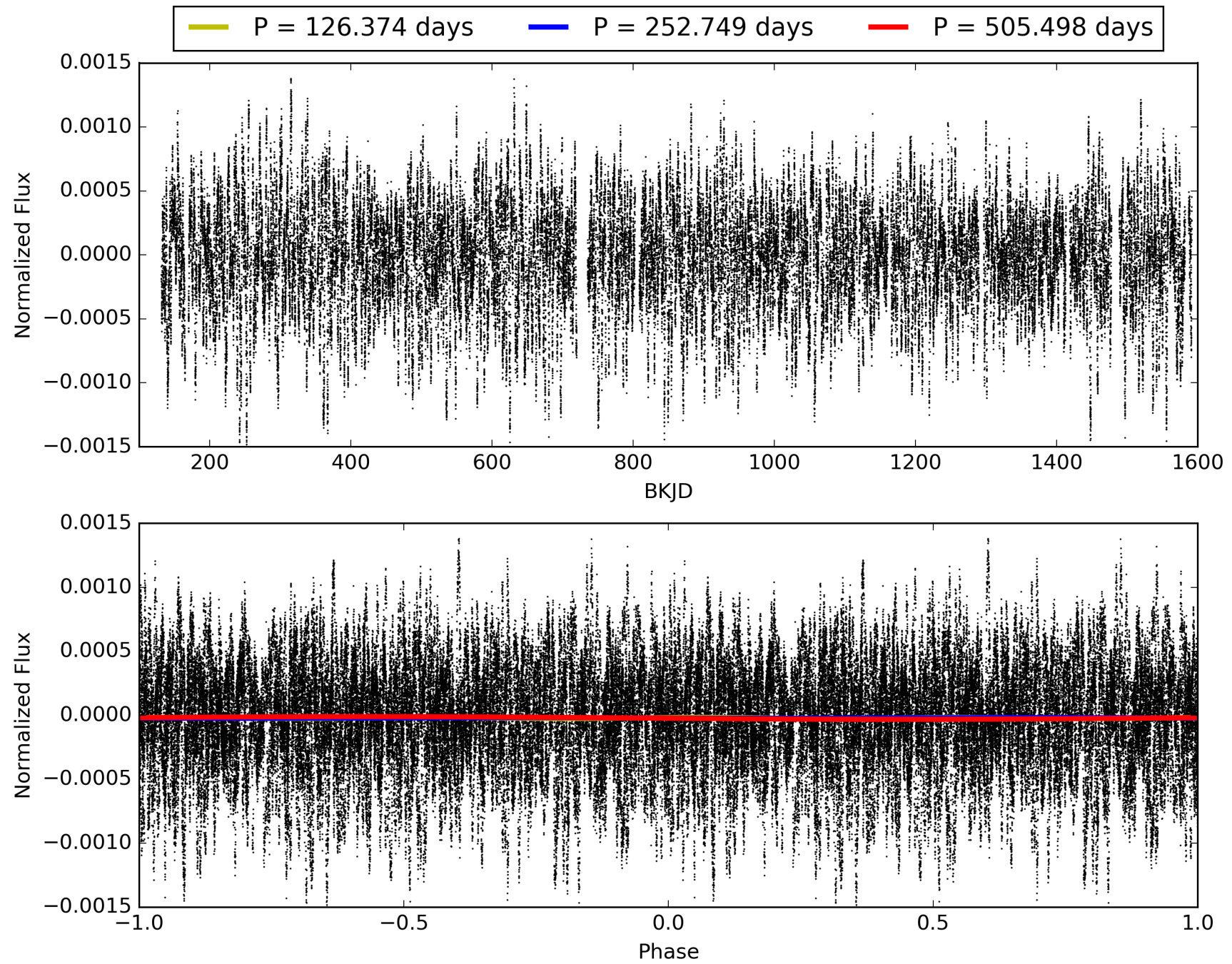
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:11:26 Z

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

TCE 011189311-02, PDC Light Curves

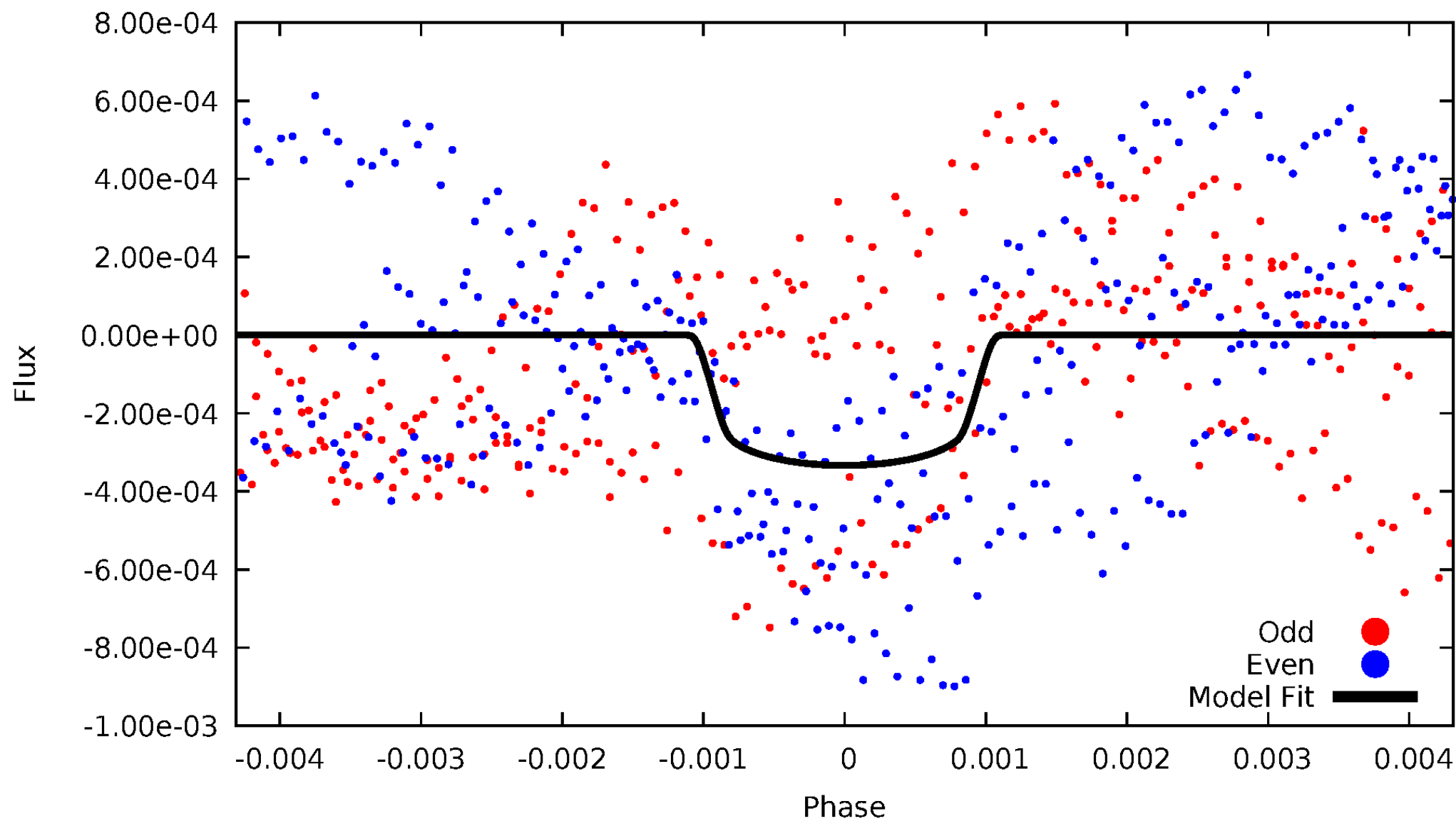


TCE 011189311-02



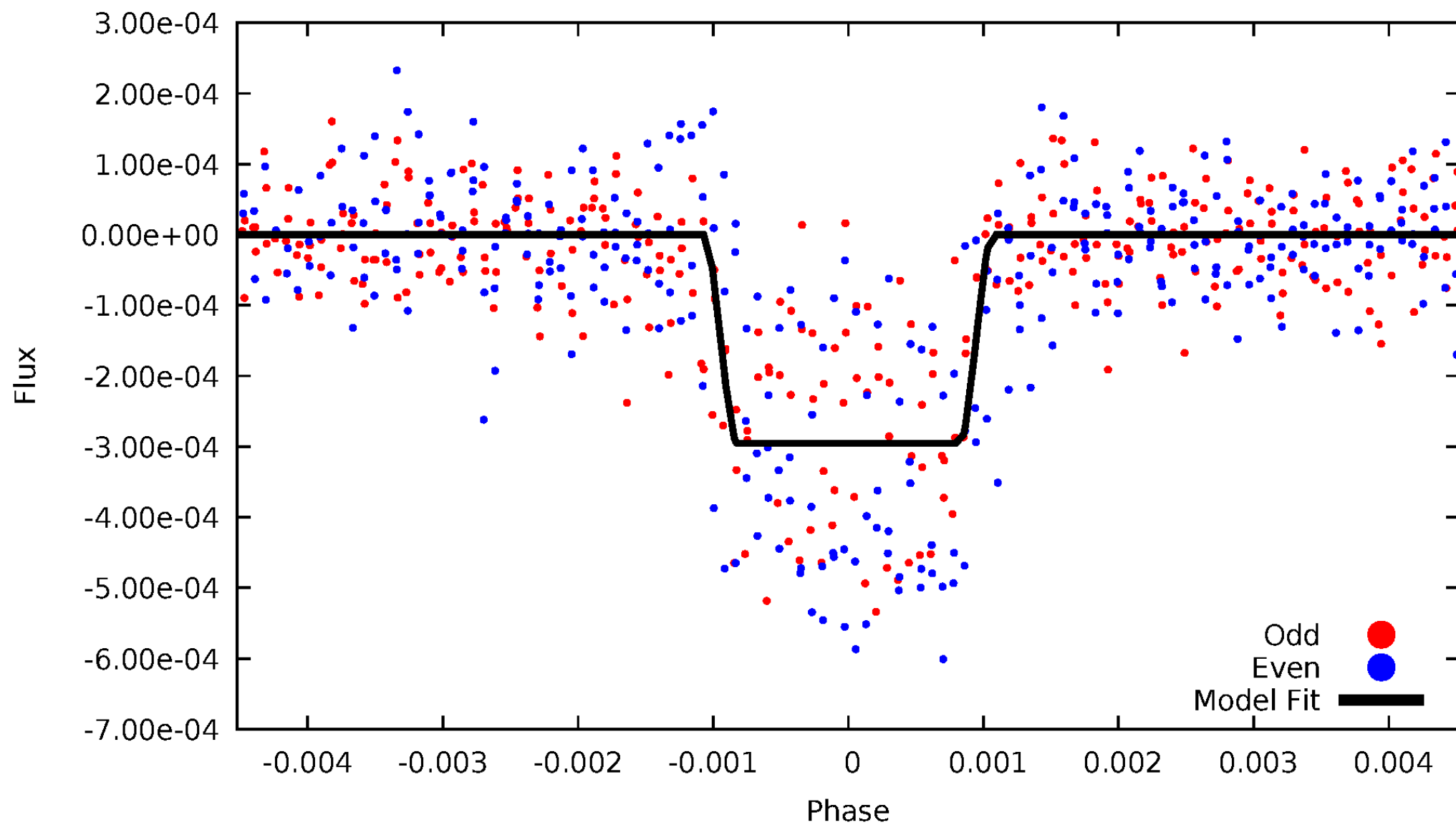
DV Odd/Even

TCE 011189311-02



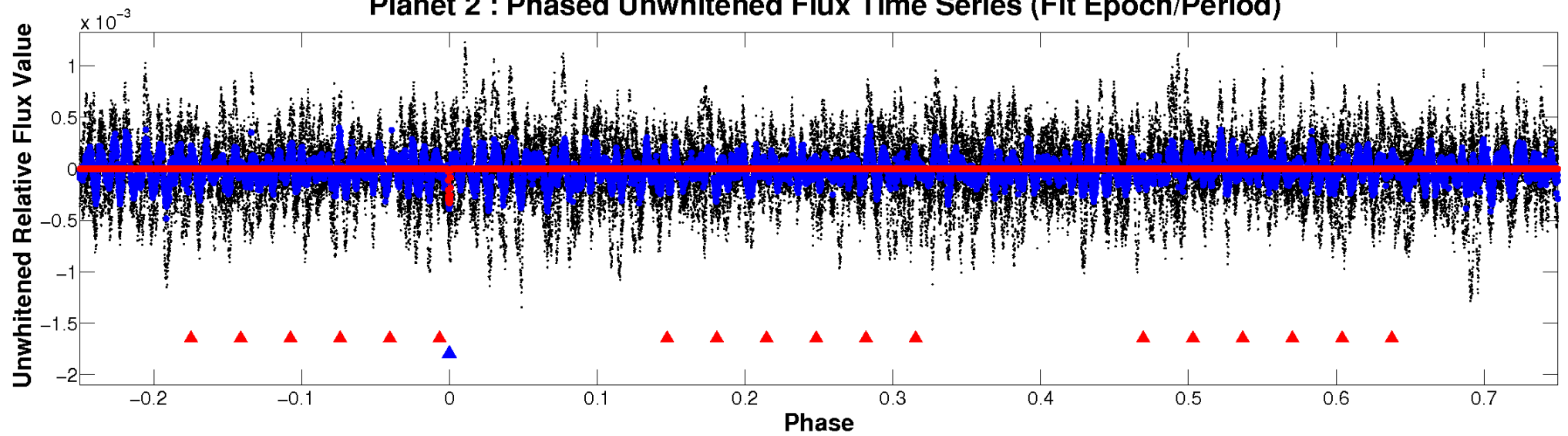
ALT Odd/Even

TCE 011189311-02

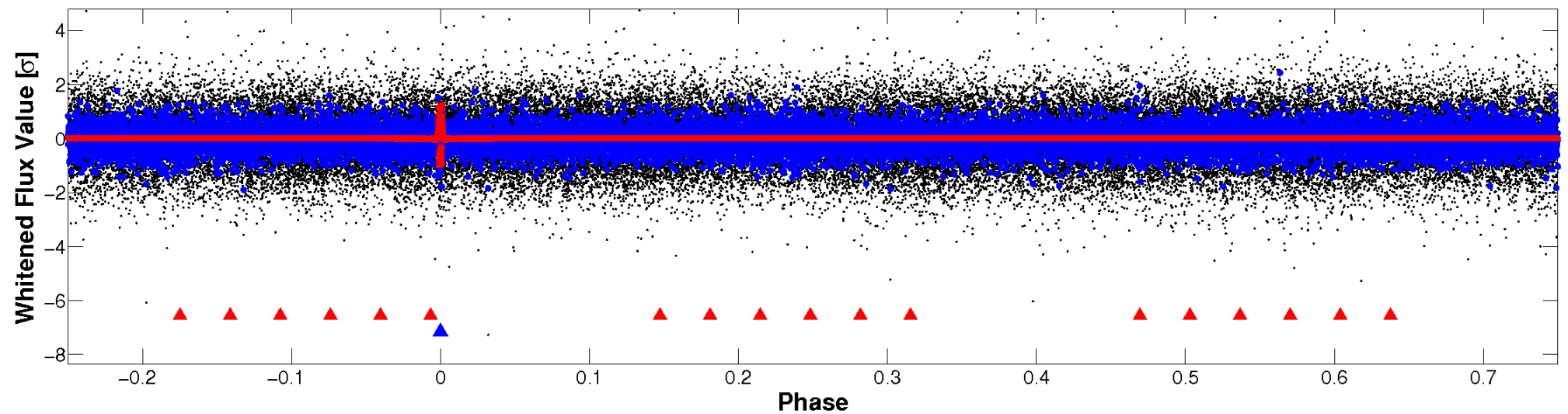


Non-Whitened Vs. Whitened Light Curve

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

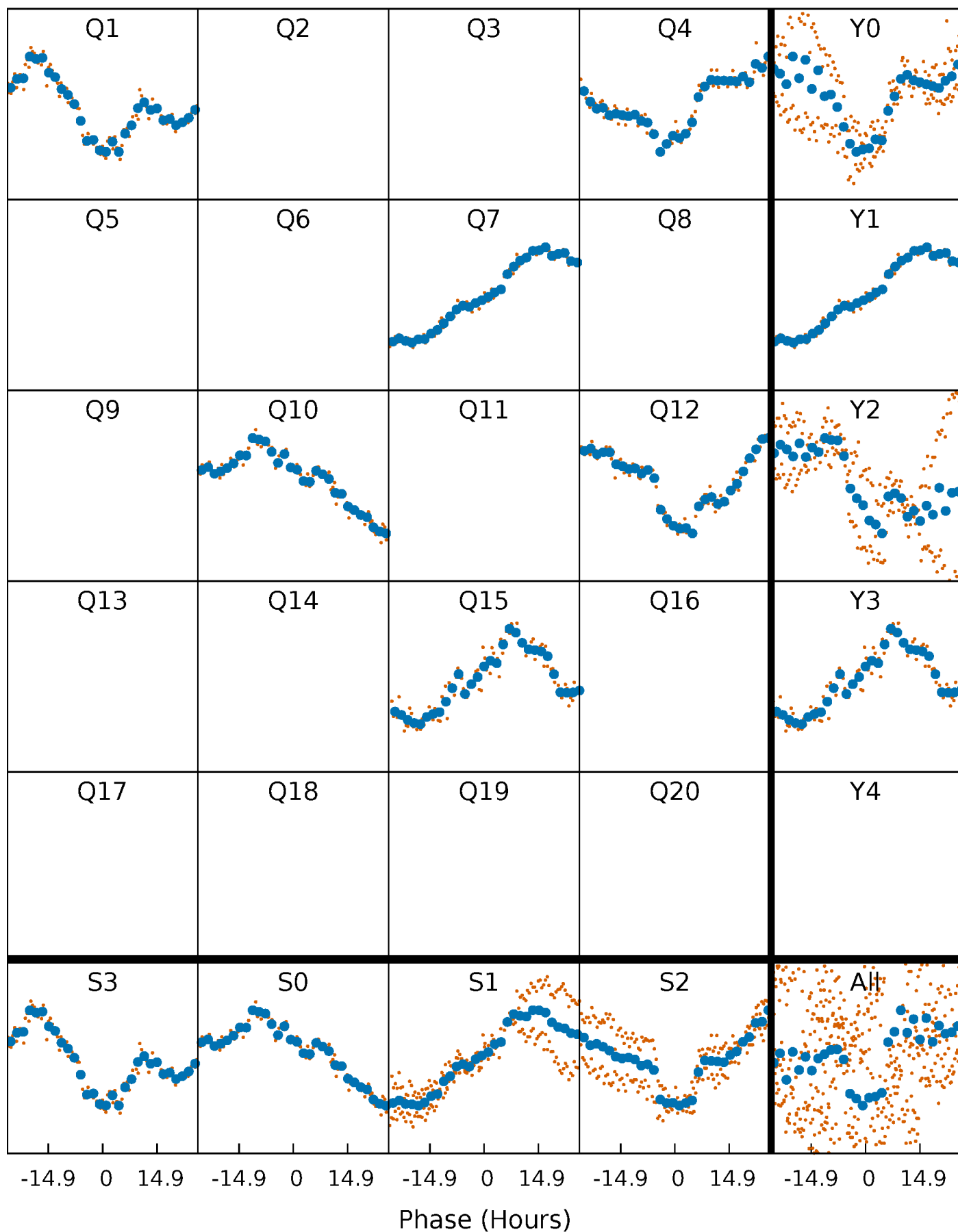


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



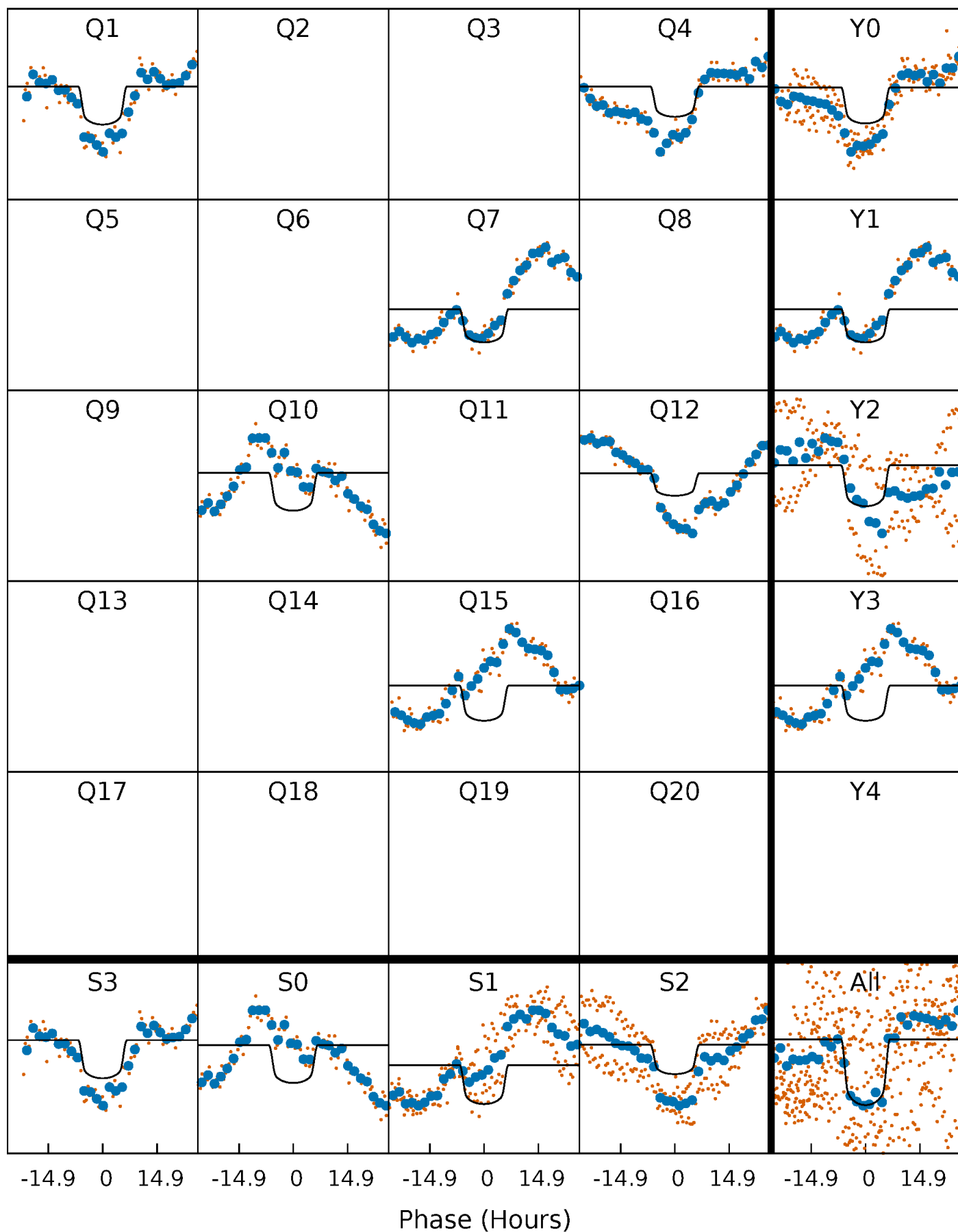
PDC Quarter-Phased Transit Curves

TCE 011189311-02 $P=252.748846$ Days $T_0=162.533633$ (BKJD)



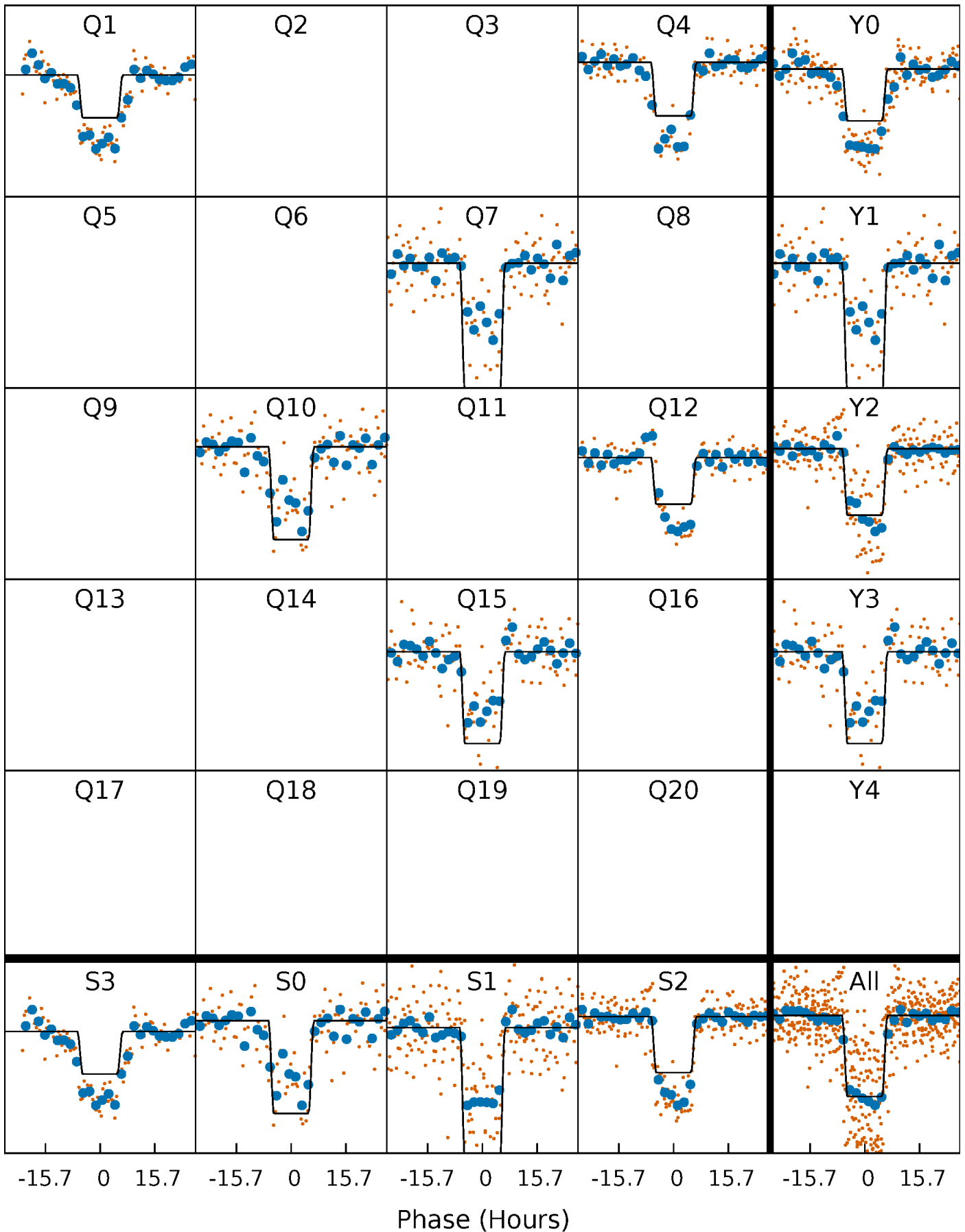
DV Quarter-Phased Transit Curves

TCE 011189311-02 P=252.748846 Days $T_0=162.533633$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

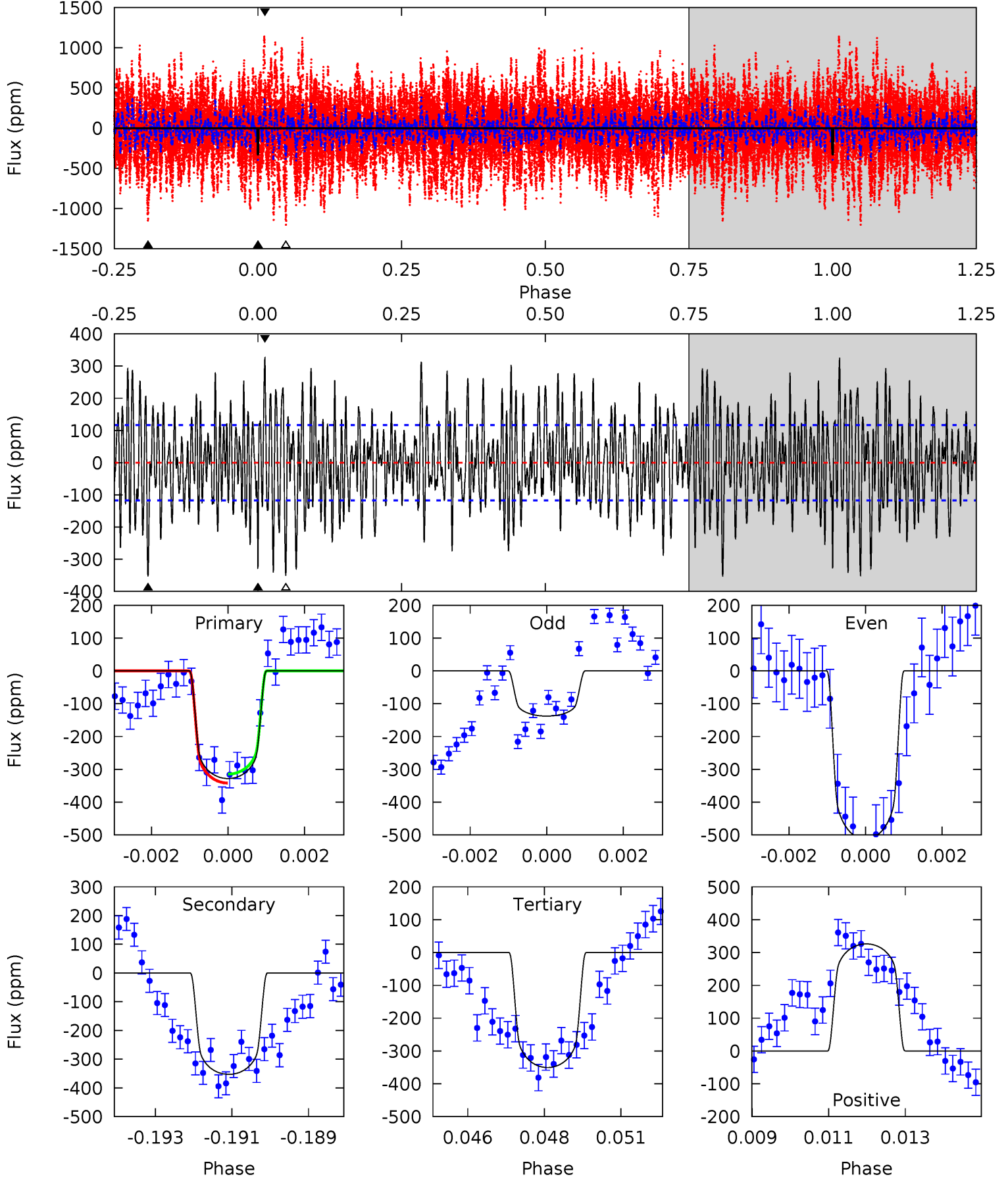
TCE 011189311-02 P=252.742704 Days $T_0=162.558241$ (BKJD)



DV Model-Shift Uniqueness Test

011189311-02, P = 252.748846 Days, E = 162.533633 Days

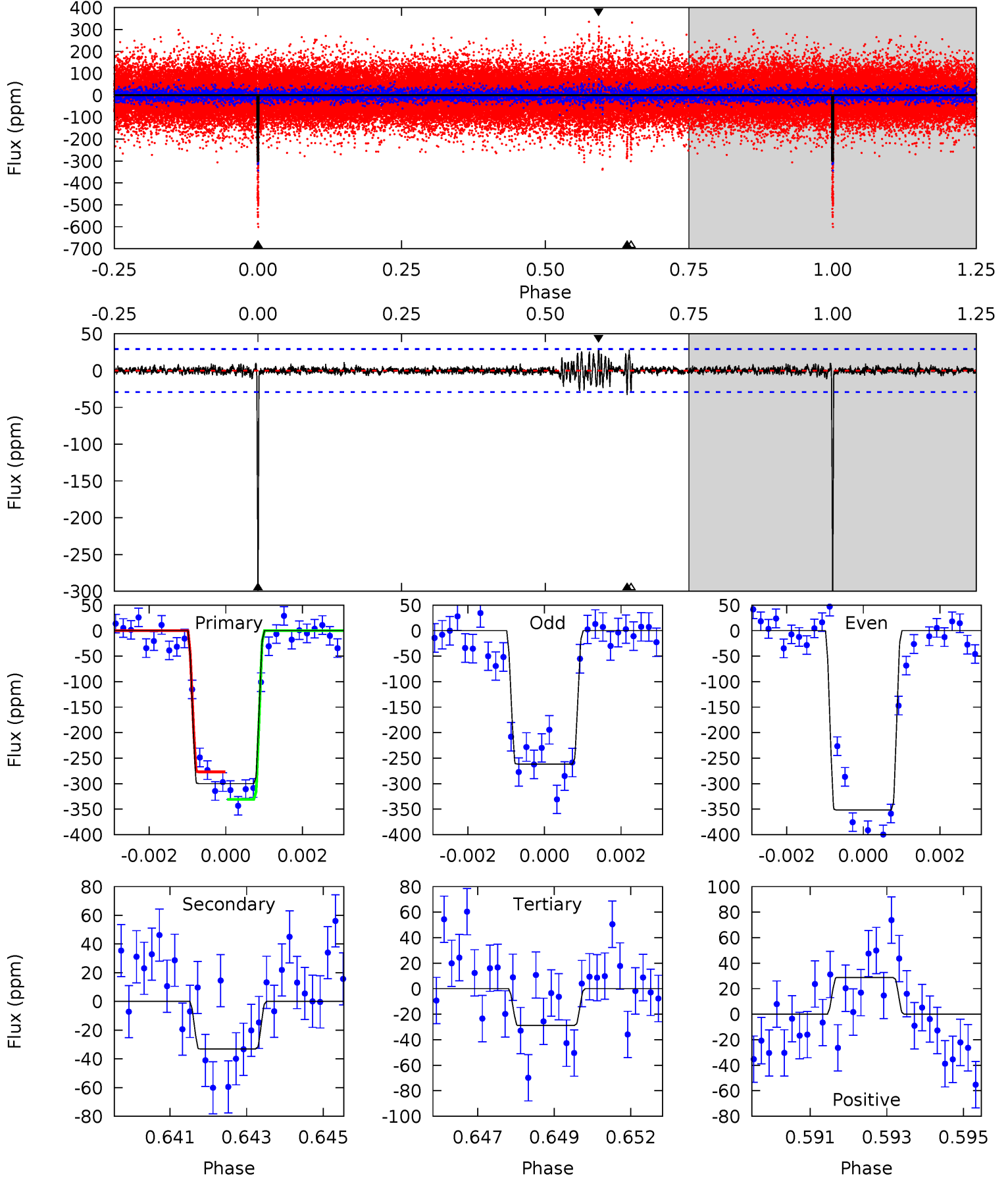
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	16.0	15.9	14.8	5.31	3.06	5.31	-1.02	0.09	0.11	1.22	8.54	0.85	0.48	0.62



Alt Model-Shift Uniqueness Test

011189311-02, P = 252.742704 Days, E = 162.558241 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.6	6.02	5.25	5.24	5.31	3.07	0.87	49.4	49.4	0.77	0.78	7.90	1.02	0.09	4.83



Stellar Parameters For KIC 011189311

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6352^{+113}_{-139}	$4.267^{+0.063}_{-0.117}$	$0.320^{+0.100}_{-0.200}$	$1.401^{+0.263}_{-0.132}$	$1.323^{+0.098}_{-0.088}$	$0.678^{+0.188}_{-0.249}$
	+2%/-2%	+1%/-3%	+31%/-62%	+19%/-9%	+7%/-7%	+28%/-37%
Source	SPE59	SPE59	SPE59	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011189311-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-353 ± 22	$3.09^{+0.35}_{-0.27}$	501^{+22}_{-17}	6123^{+285}_{-228}	14840^{+3084}_{-2749}
Alt.	-33 ± 5	$2.69^{+0.30}_{-0.28}$	502^{+23}_{-16}	3984^{+171}_{-163}	1861^{+554}_{-448}

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

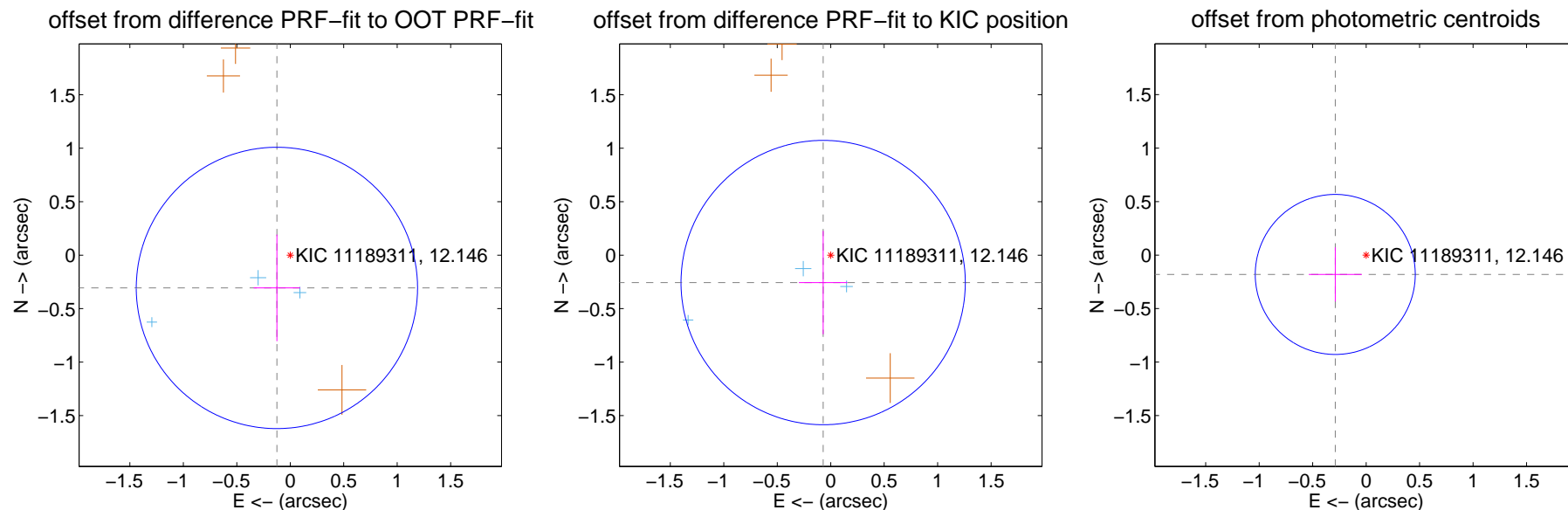
DV Centroid Data

Supplemental centroid analysis for 011189311-02. Kepler magnitude: 12.15. Transit SNR 9.94

There are 3 quarters with good PRF difference image offsets

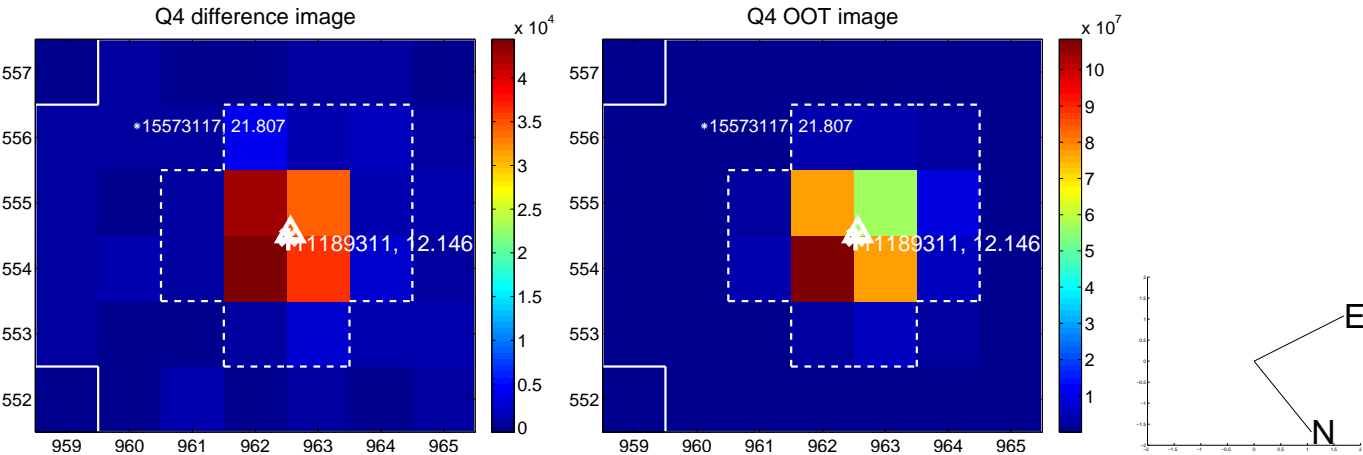
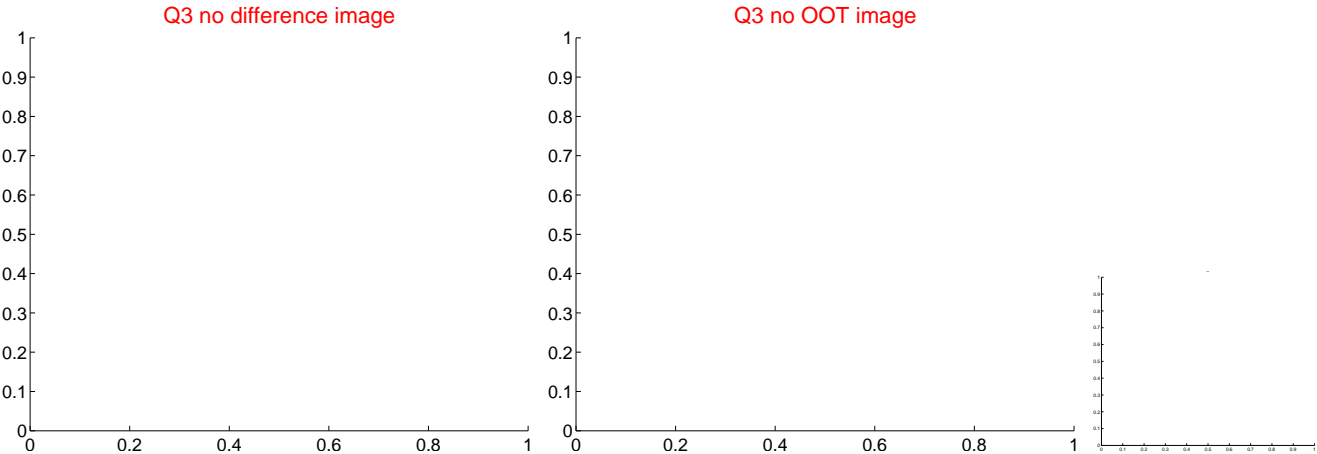
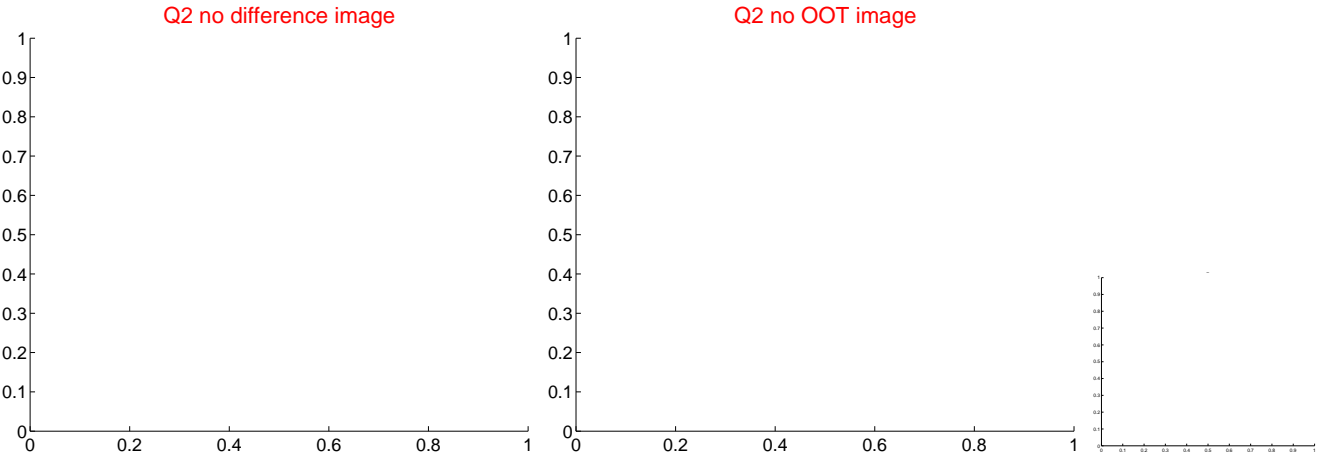
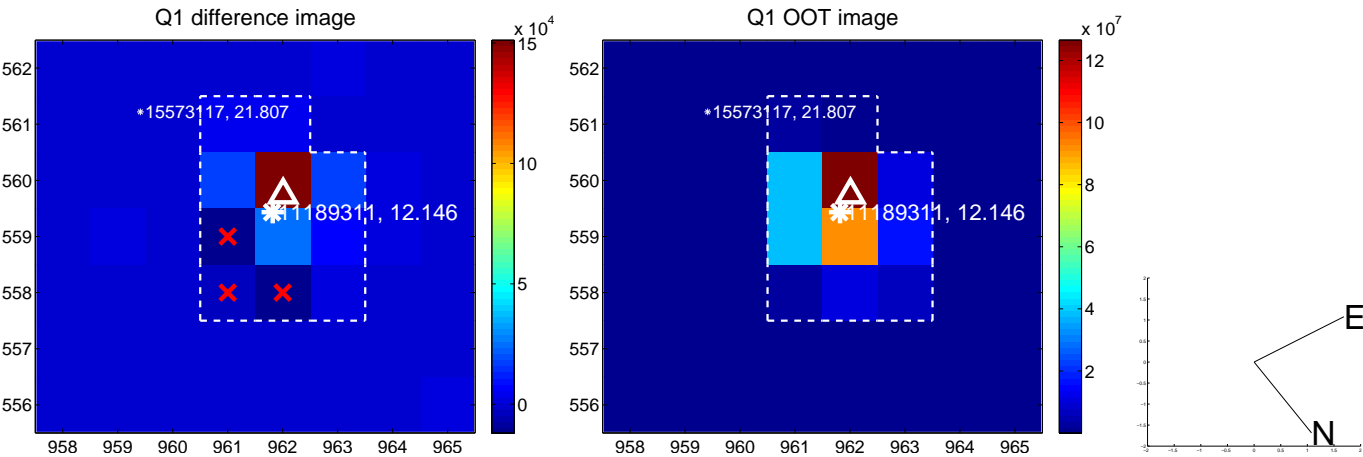
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.331 ± 0.438	0.75	0.125 ± 0.218	-0.306 ± 0.498
PRF-fit source offset from KIC position	0.266 ± 0.443	0.60	0.071 ± 0.227	-0.256 ± 0.482
photometric centroid source offset	0.34 ± 0.25	1.37	0.29 ± 0.25	-0.18 ± 0.25



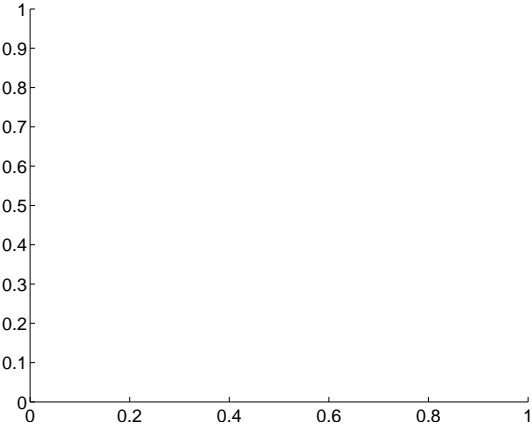
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

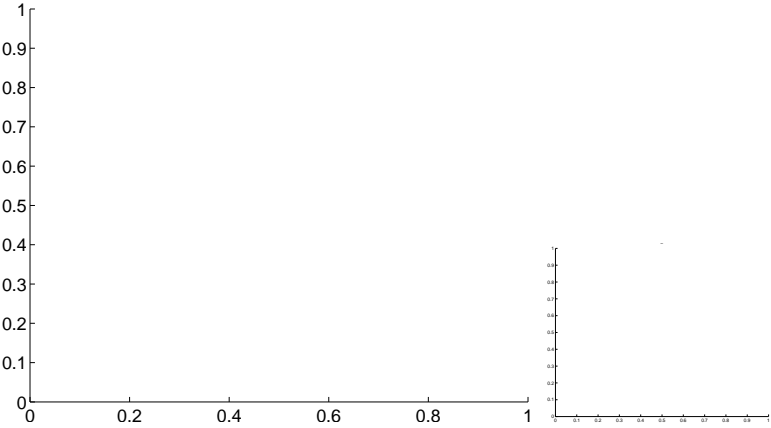


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

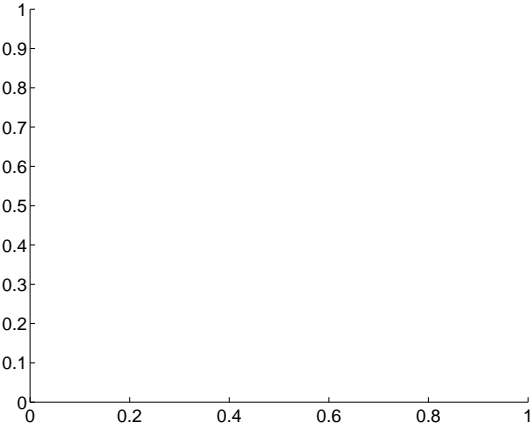
Q5 no difference image



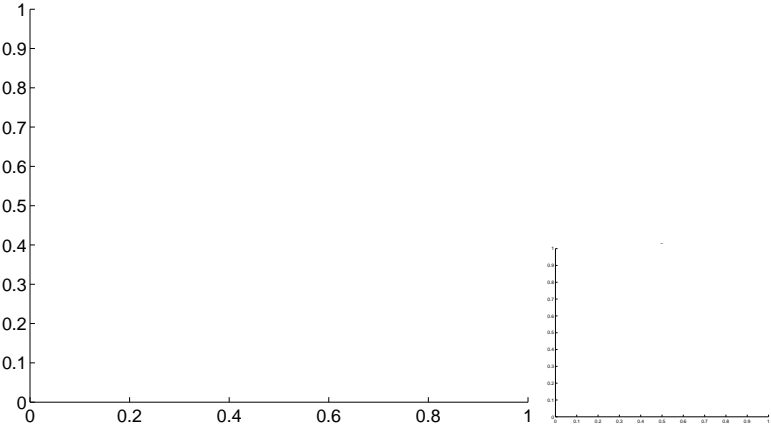
Q5 no OOT image



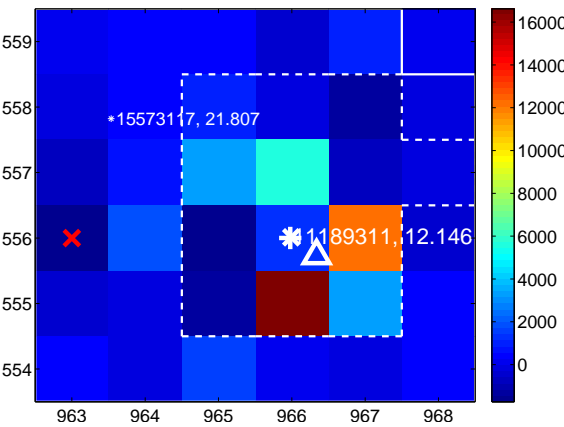
Q6 no difference image



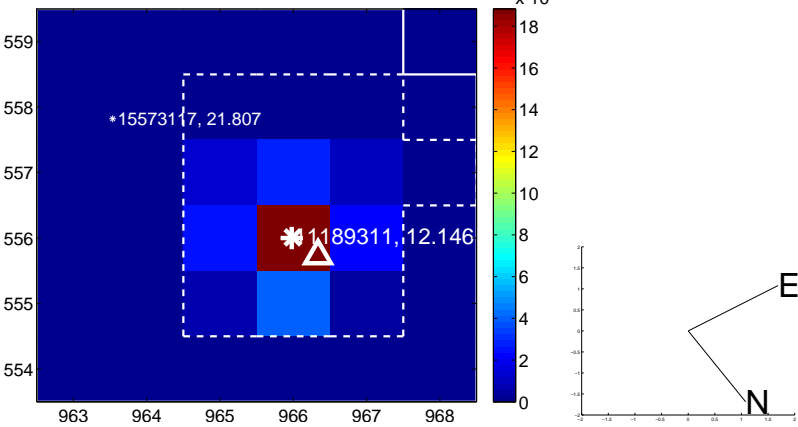
Q6 no OOT image



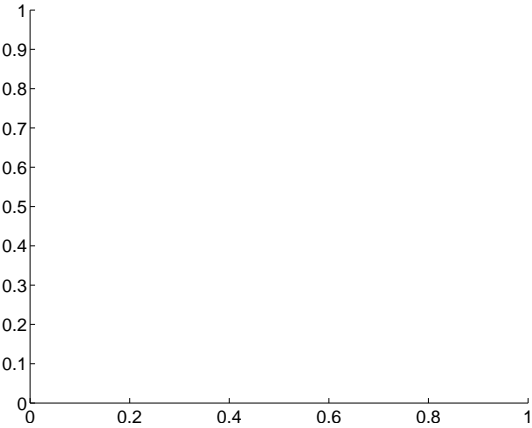
Q7 difference image. Poor Quality



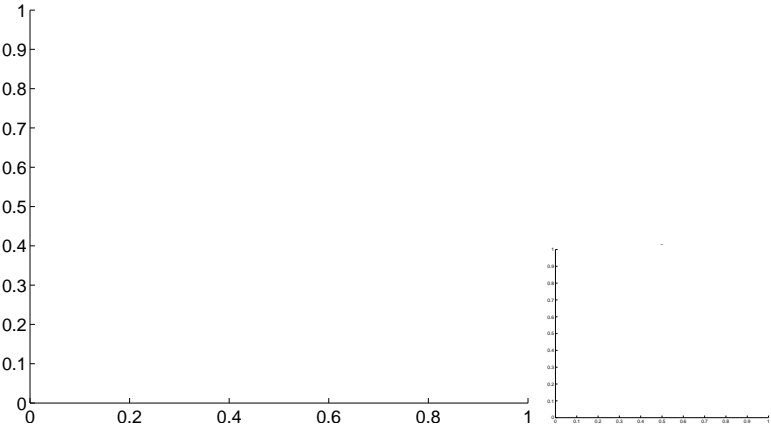
Q7 OOT image



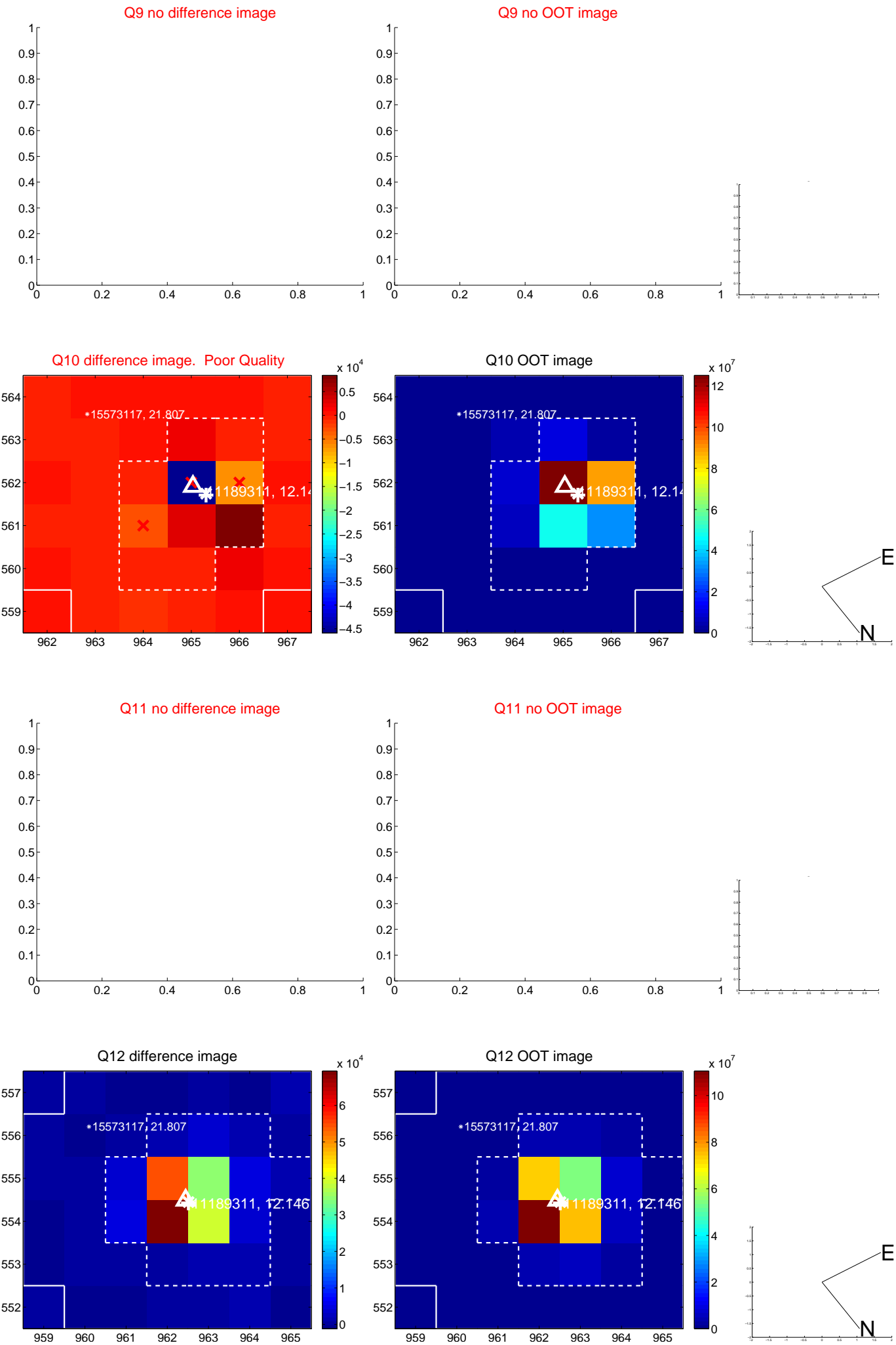
Q8 no difference image



Q8 no OOT image

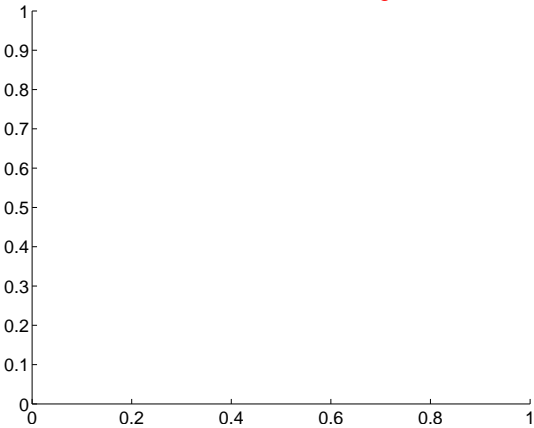


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.

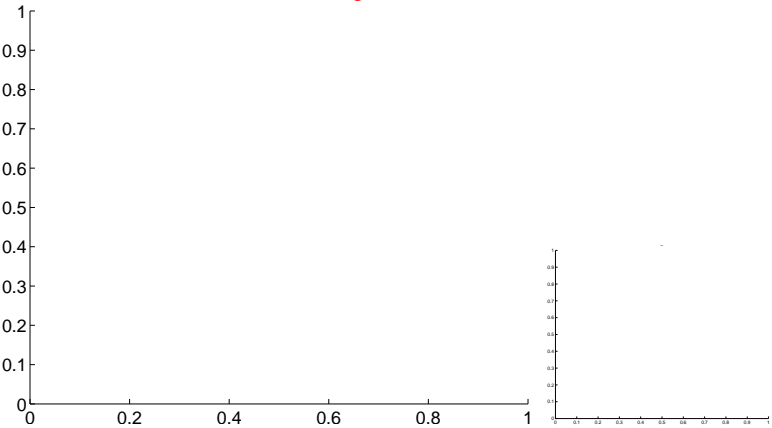


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

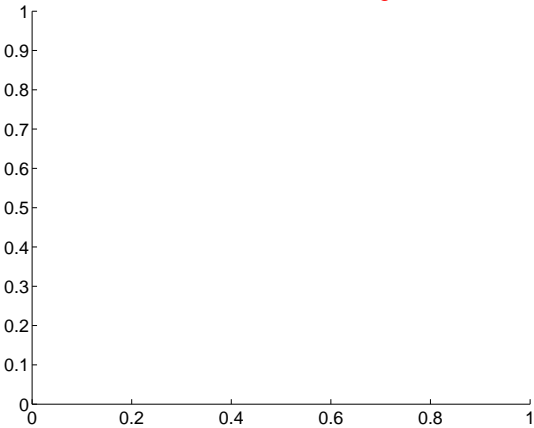
Q13 no difference image



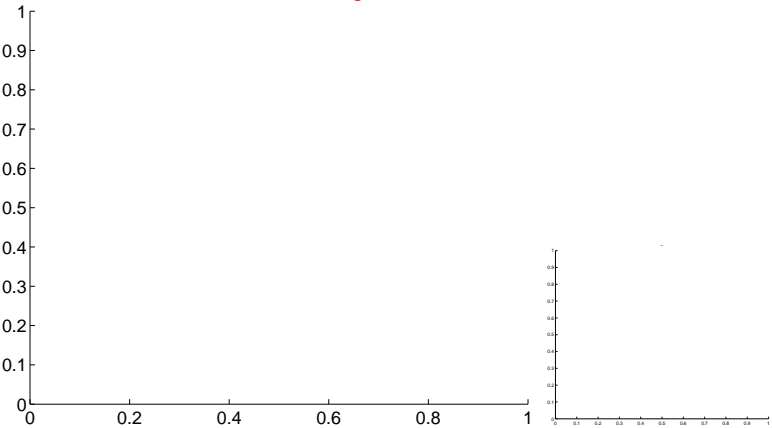
Q13 no OOT image



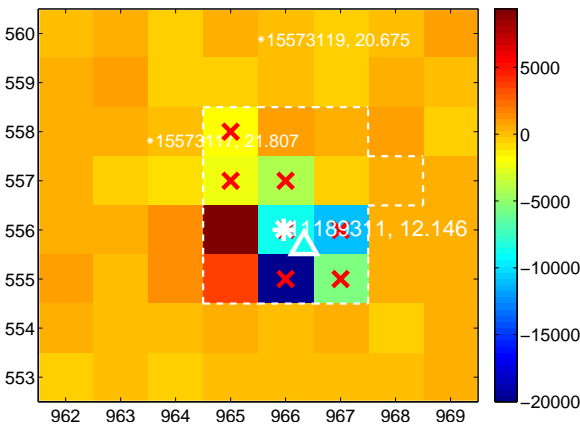
Q14 no difference image



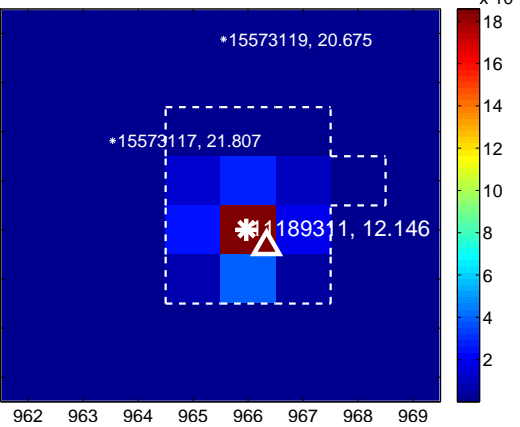
Q14 no OOT image



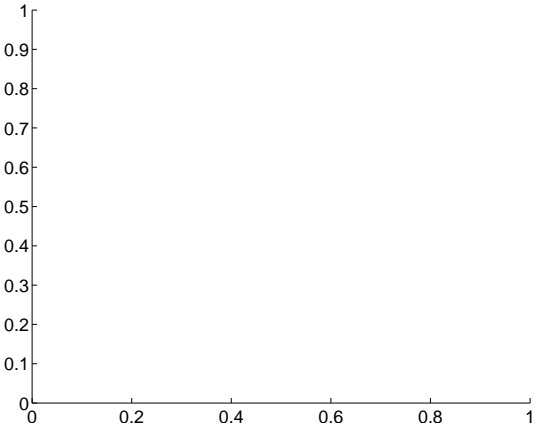
Q15 difference image. Poor Quality



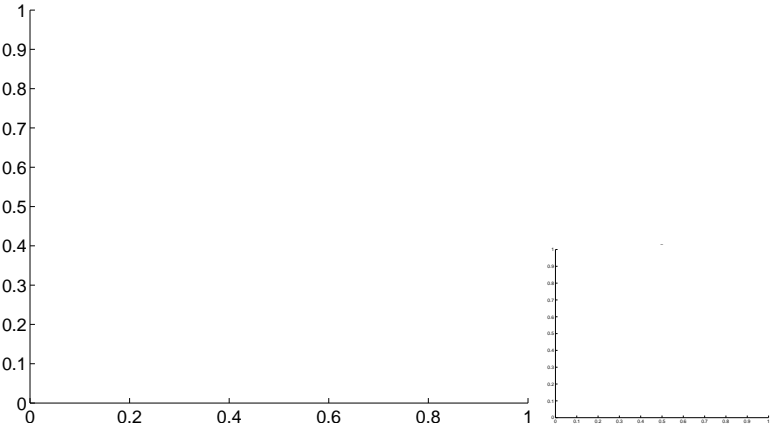
Q15 OOT image



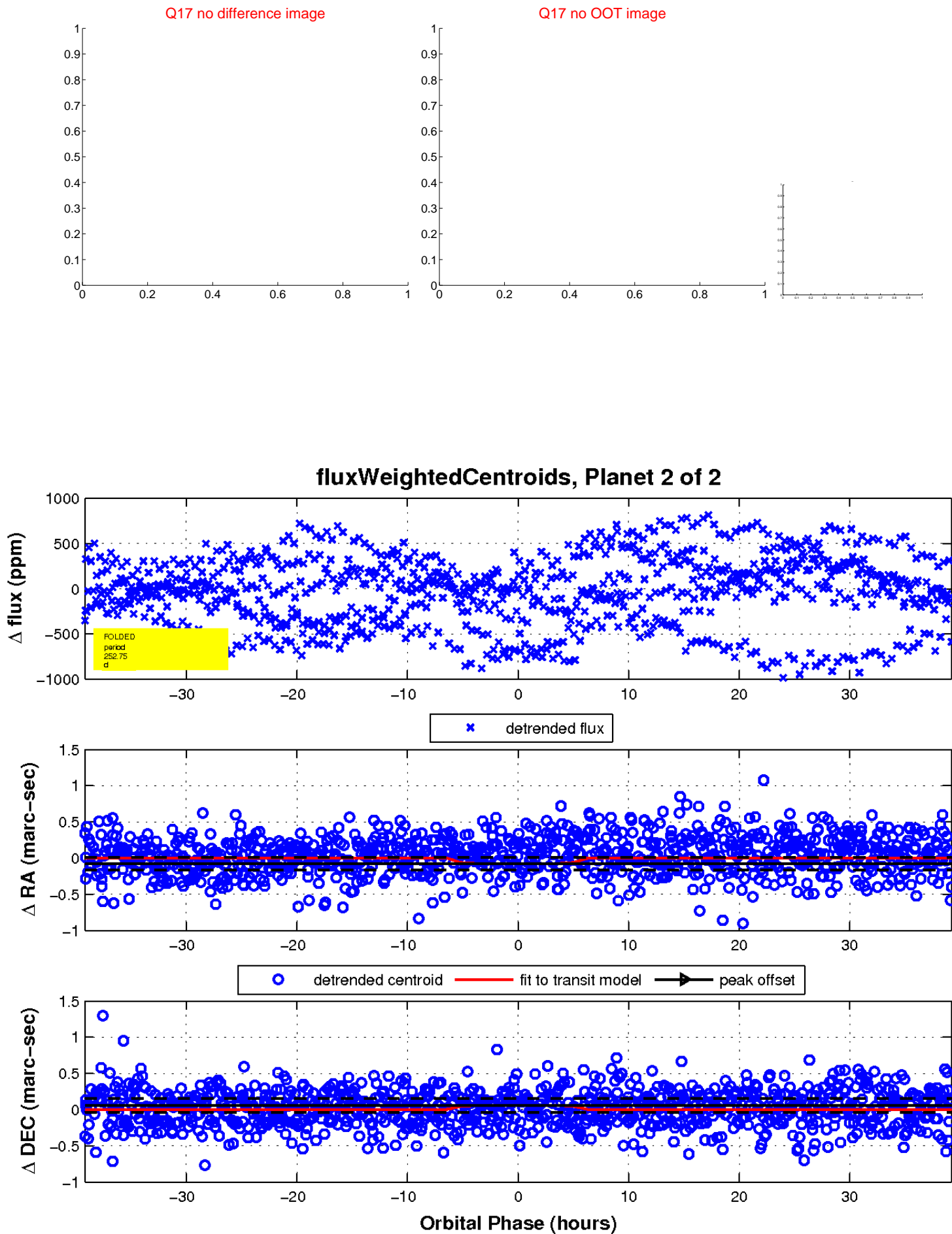
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

