

KIC 011133900

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})
011133900-01	OBS	No	1.396387	132.403533	93.1	4.841	7.5	5.0	0.74	4595	0.88	448.25
011133900-02	OBS	No	199.738693	293.112162	3829.6	5.469	9.2	7.4	0.74	4595	5.83	0.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011133900-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV
011133900-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_KIC_POS—HALO_GHOST

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

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

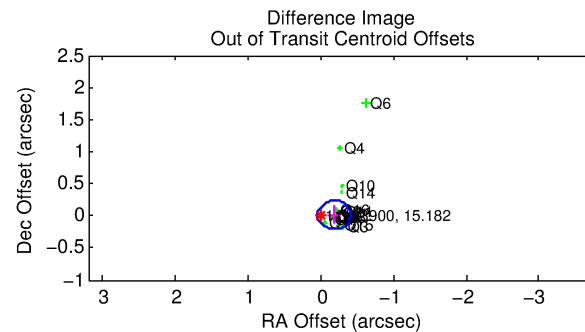
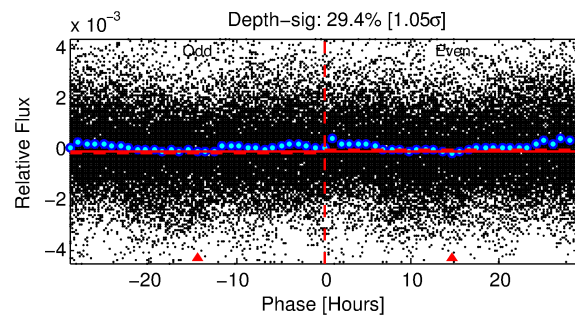
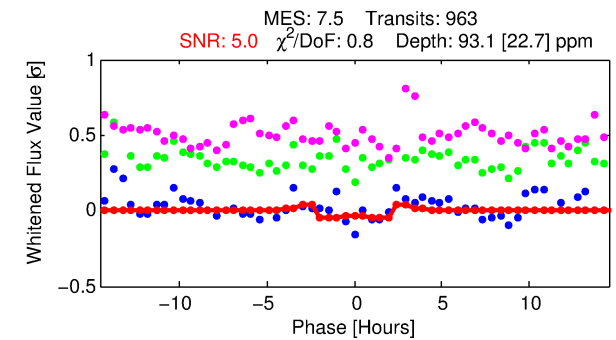
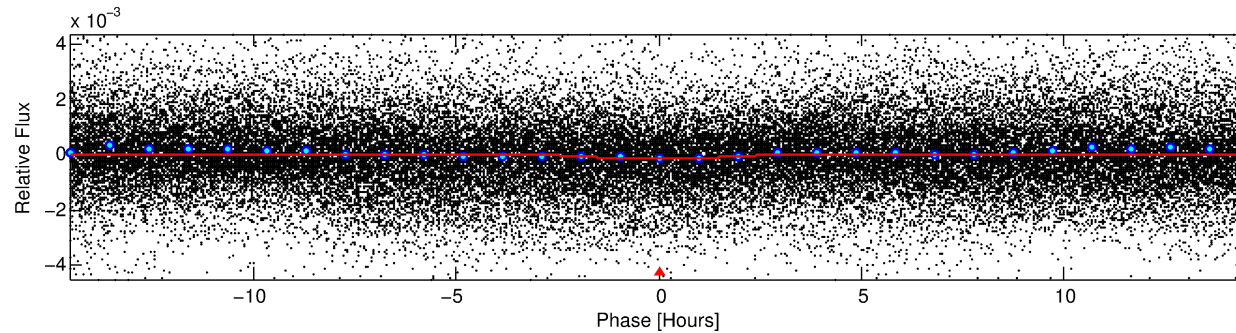
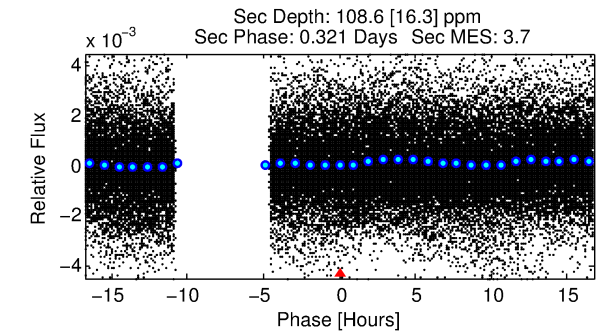
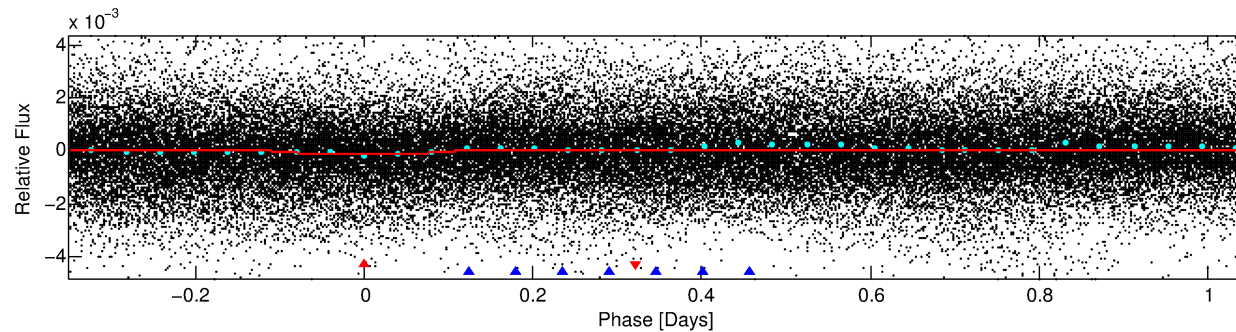
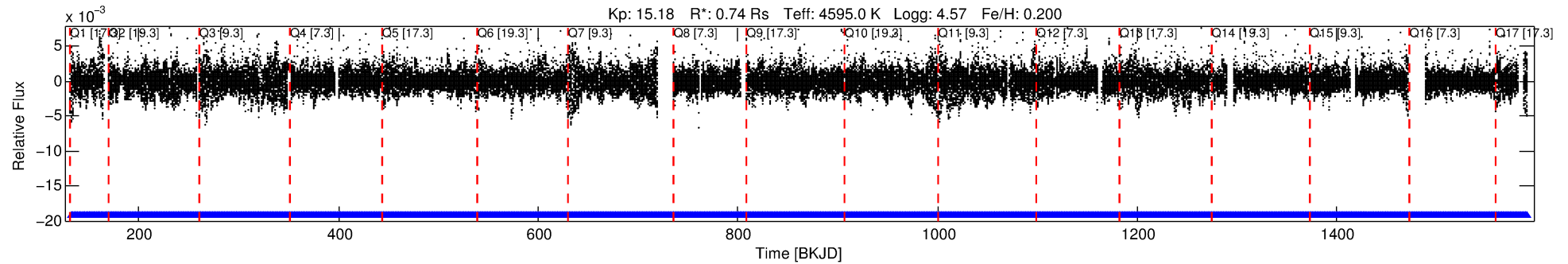
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011133900-01

No Significant Match Found

DV One-Page Summary

KIC: 11133900 Candidate: 1 of 2 Period: 1.396 d



DV Fit Results:

Period = 1.39639 [0.00002] d
Epoch = 132.4035 [0.0040] BKJD
Rp/R* = 0.0109 [0.0044]
a/R* = 1.38 [0.95]
b = 0.90 [0.31]
Seff = 448.25 [75.03]
Teq = 1173 [49] K
Rp = 0.88 [0.36] Re
a = 0.0221 [0.0016] AU
Ag = 37.57 [30.94] [1.18σ]
Teffp = 4491 [929] K [3.57σ]

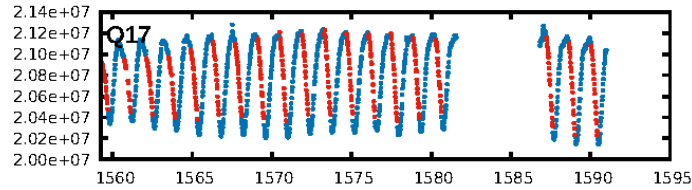
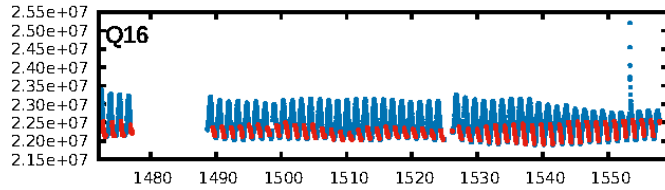
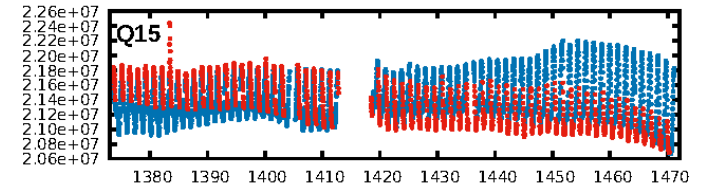
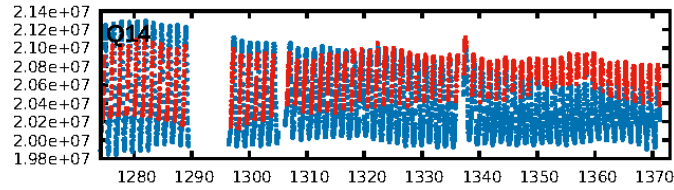
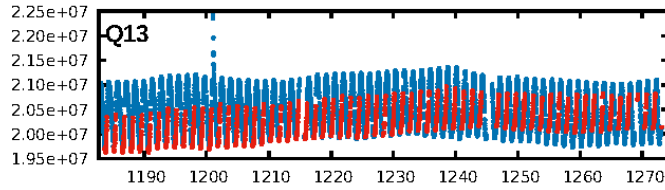
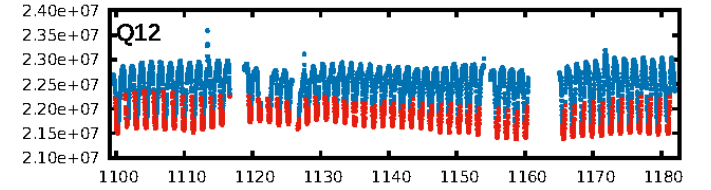
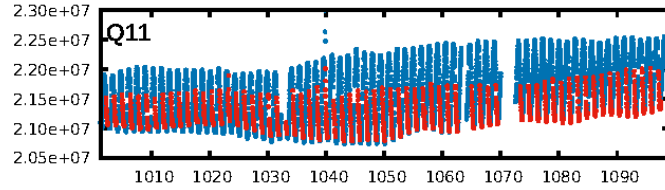
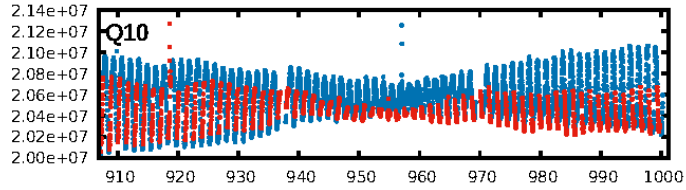
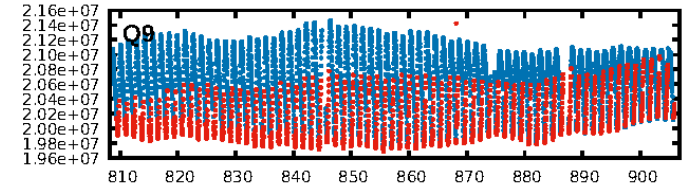
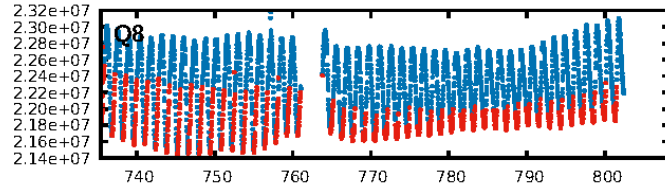
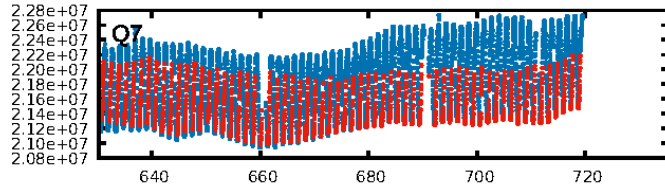
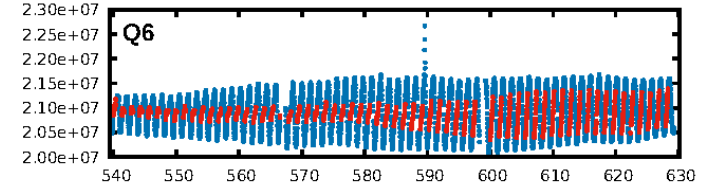
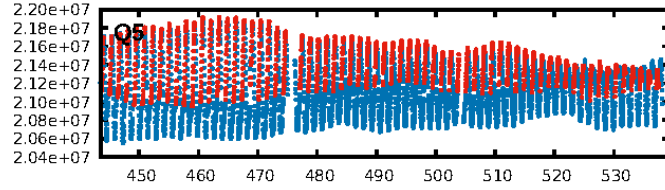
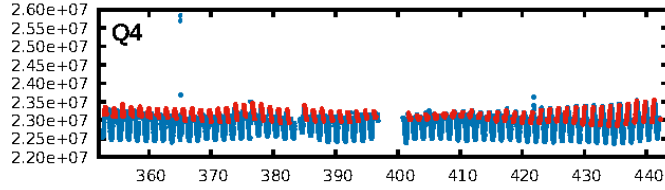
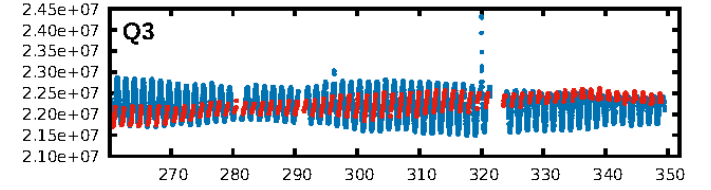
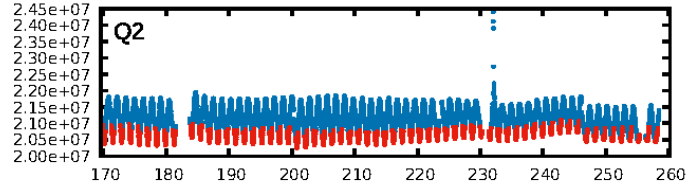
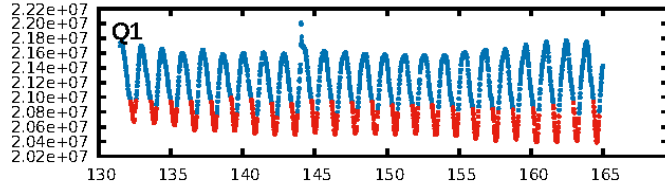
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [651.76σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.82e-11
RollingBand-fgt: 1.00 [920/920]
GhostDiagnostic-chr: 0.7004
Centroid-sig: 1.5%
Centroid-so: 2.247 arcsec [2.55σ]
OotOffset-rm: 0.184 arcsec [2.45σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.468 arcsec [6.55σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.71 [12/17]
DiffImageOverlap-fno: 1.00 [17/17]

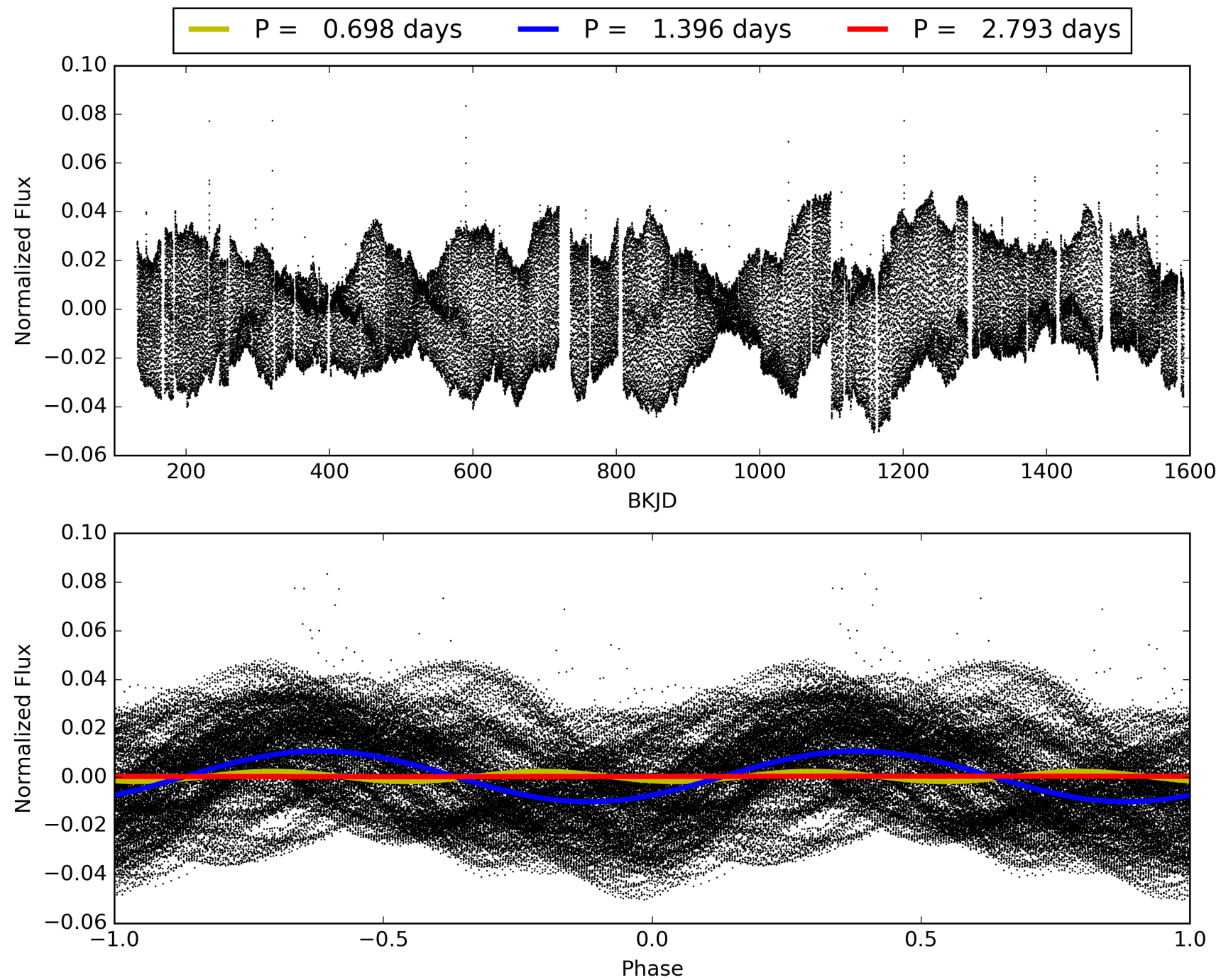
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011133900-01, PDC Light Curves

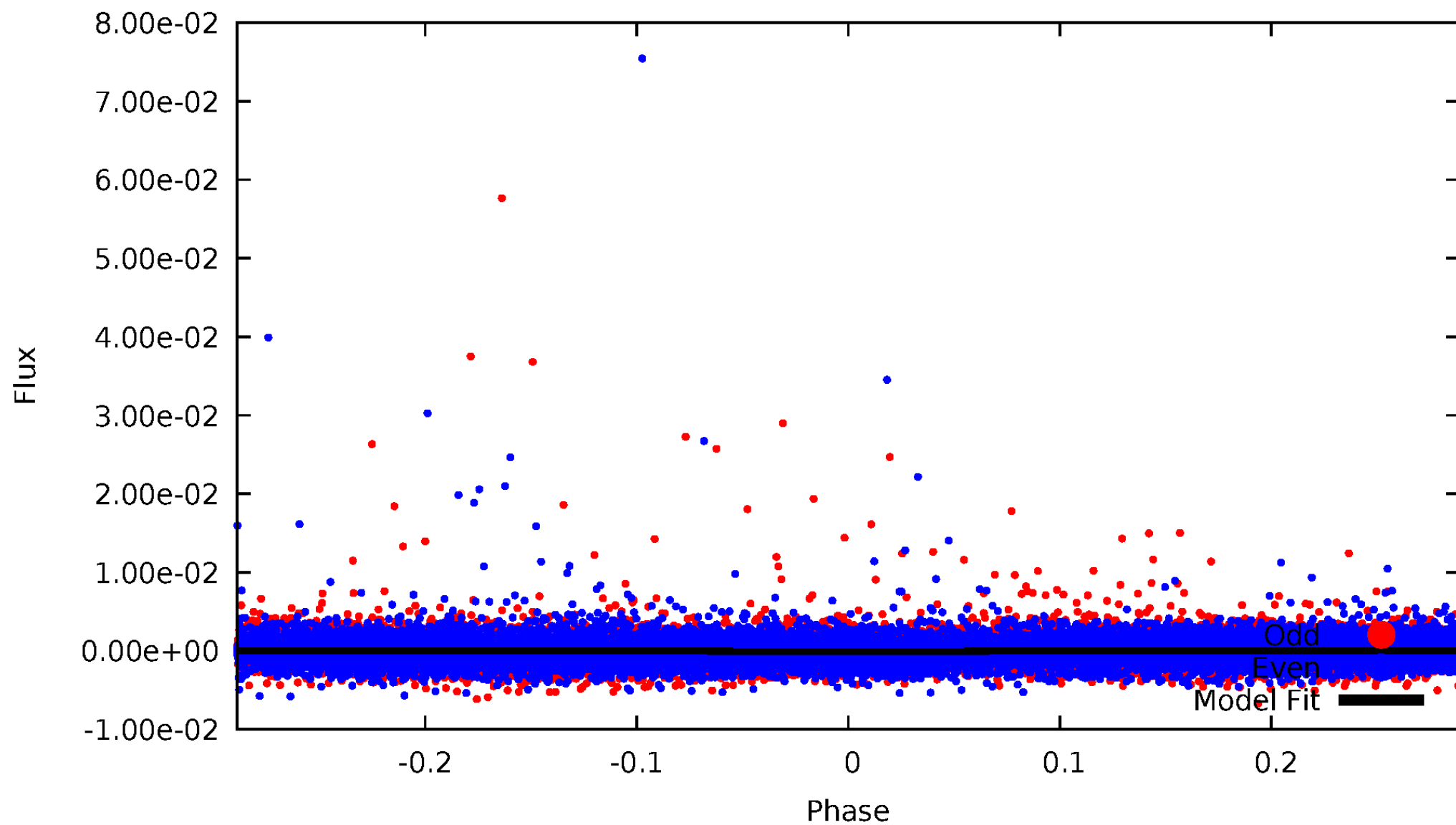


TCE 011133900-01



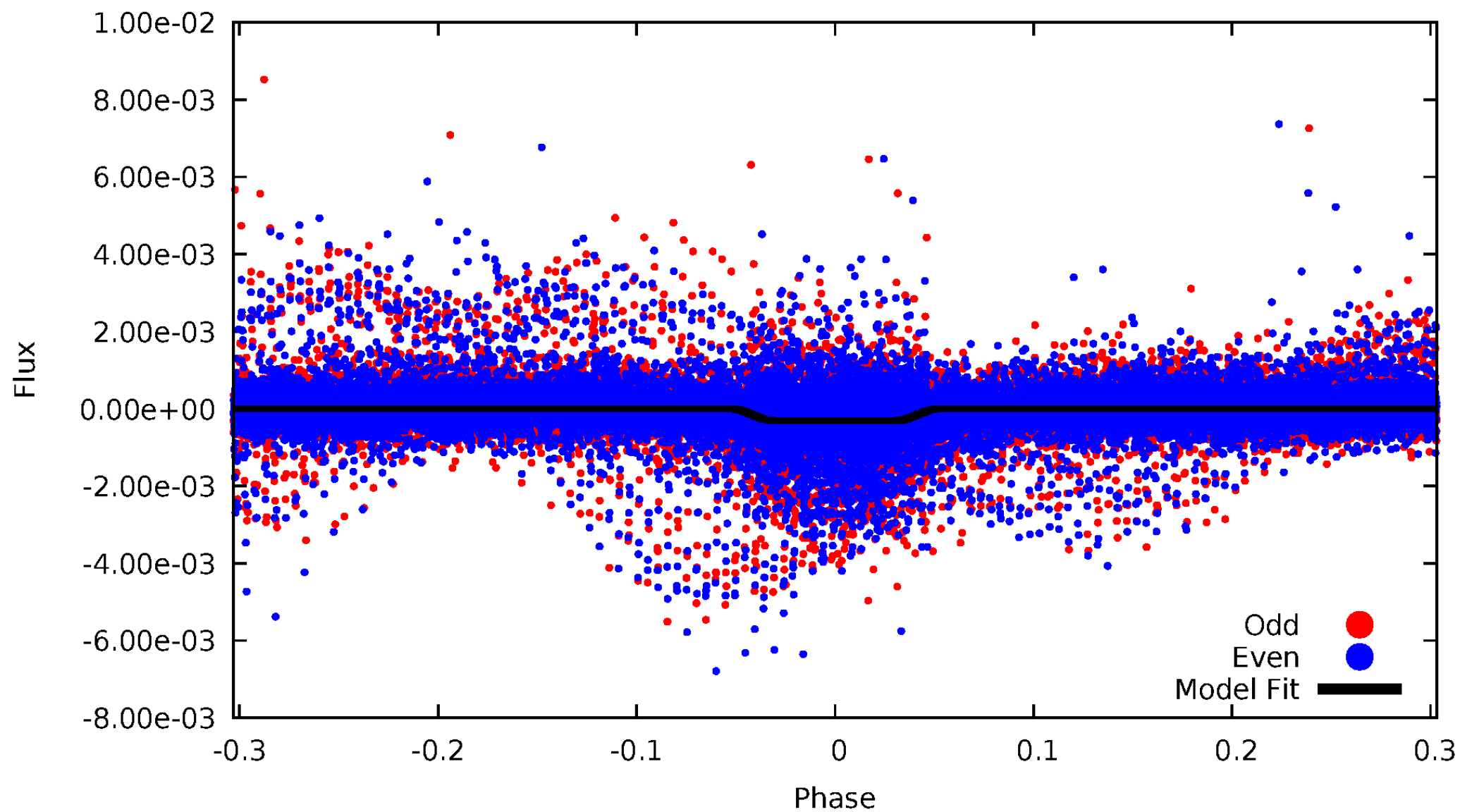
DV Odd/Even

TCE 011133900-01



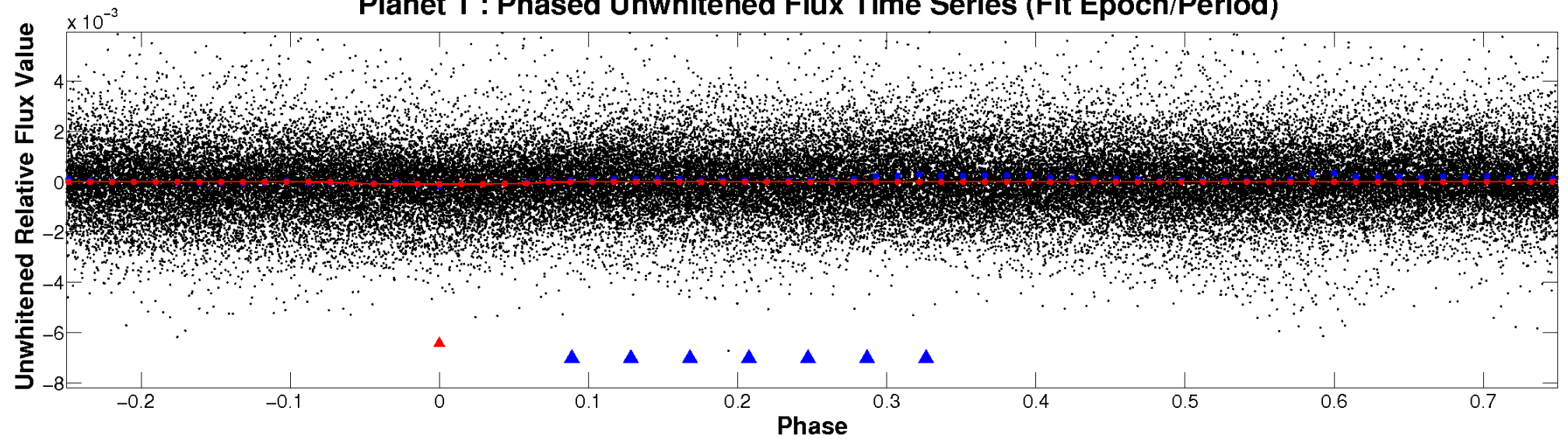
ALT Odd/Even

TCE 011133900-01

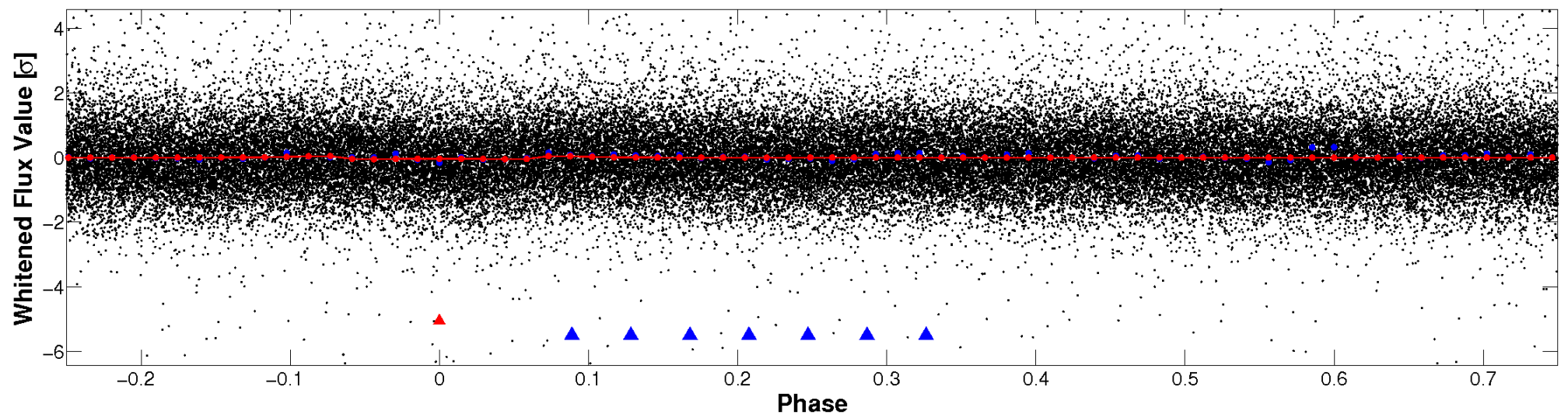


Non-Whitened Vs. Whitened Light Curve

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

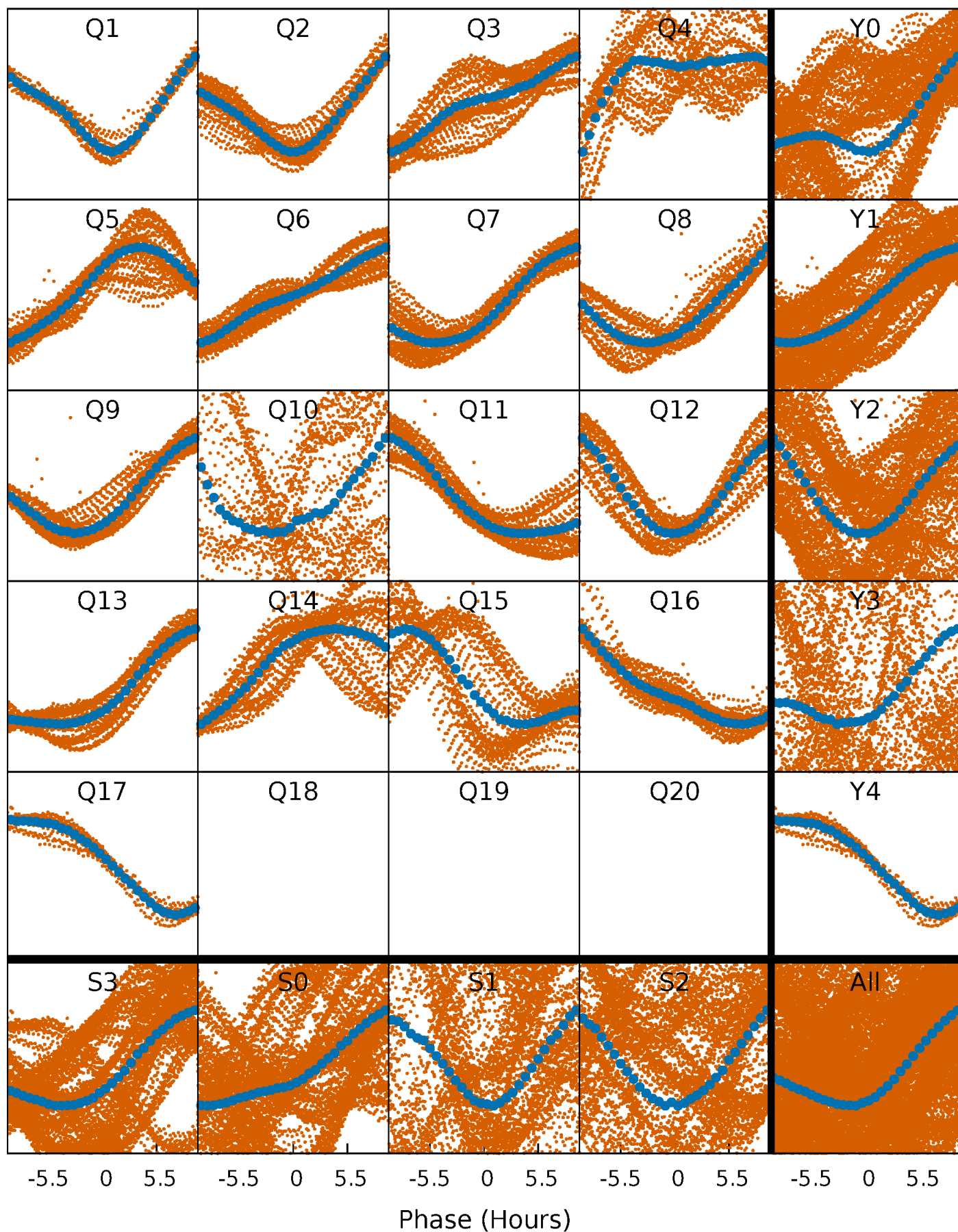


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



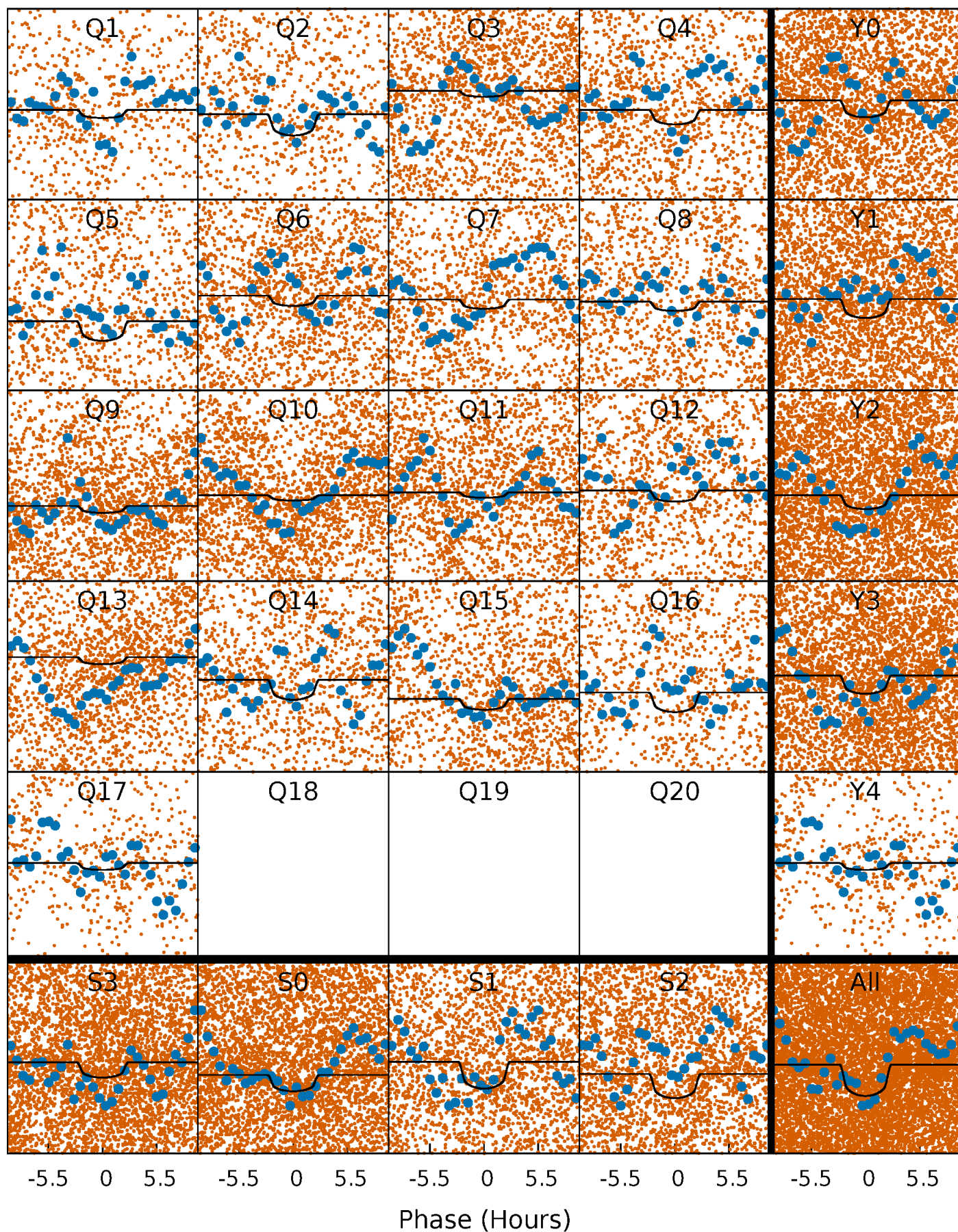
PDC Quarter-Phased Transit Curves

TCE 011133900-01 P= 1.396387 Days $T_0=132.403533$ (BKJD)



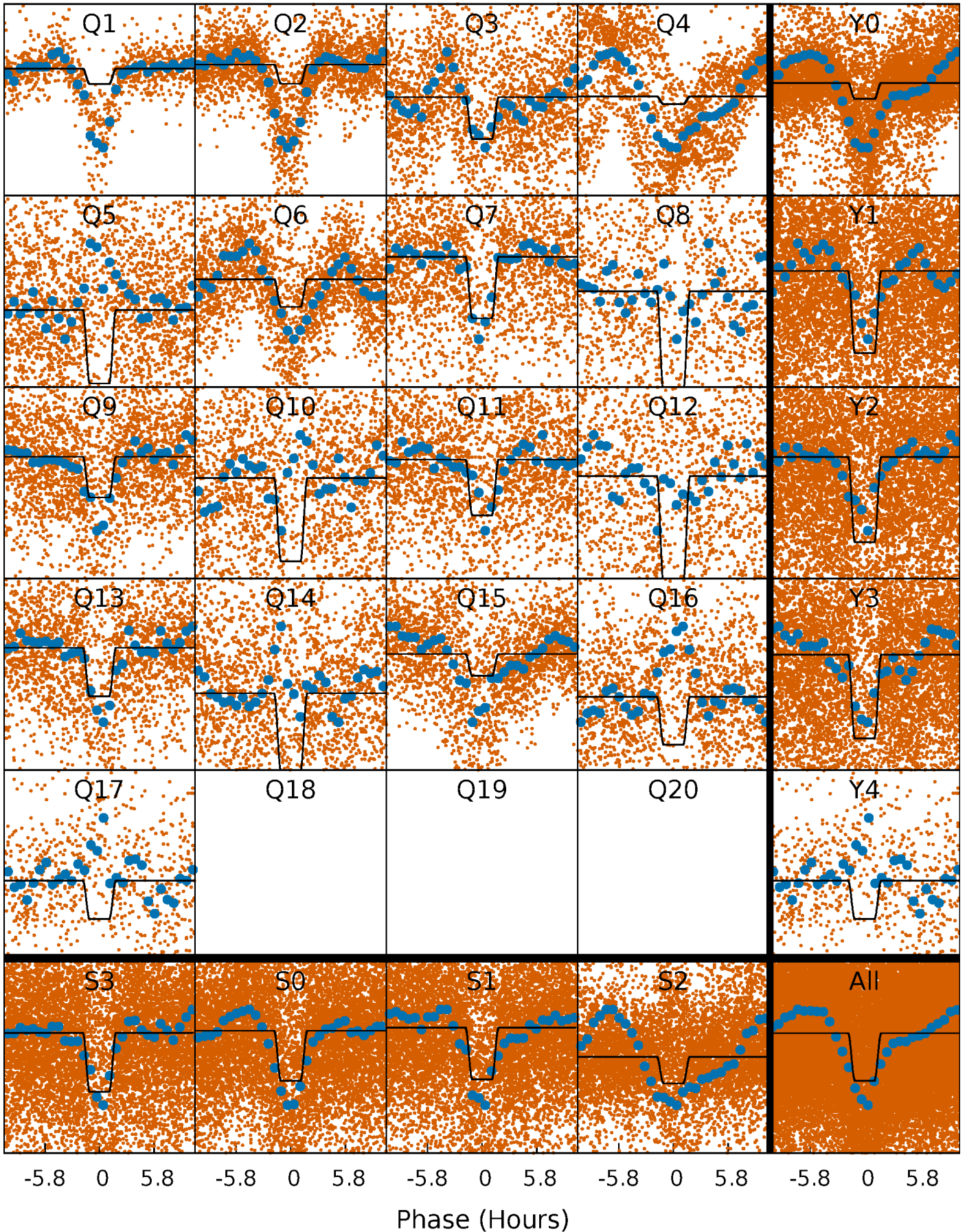
DV Quarter-Phased Transit Curves

TCE 011133900-01 P= 1.396387 Days $T_0=132.403533$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

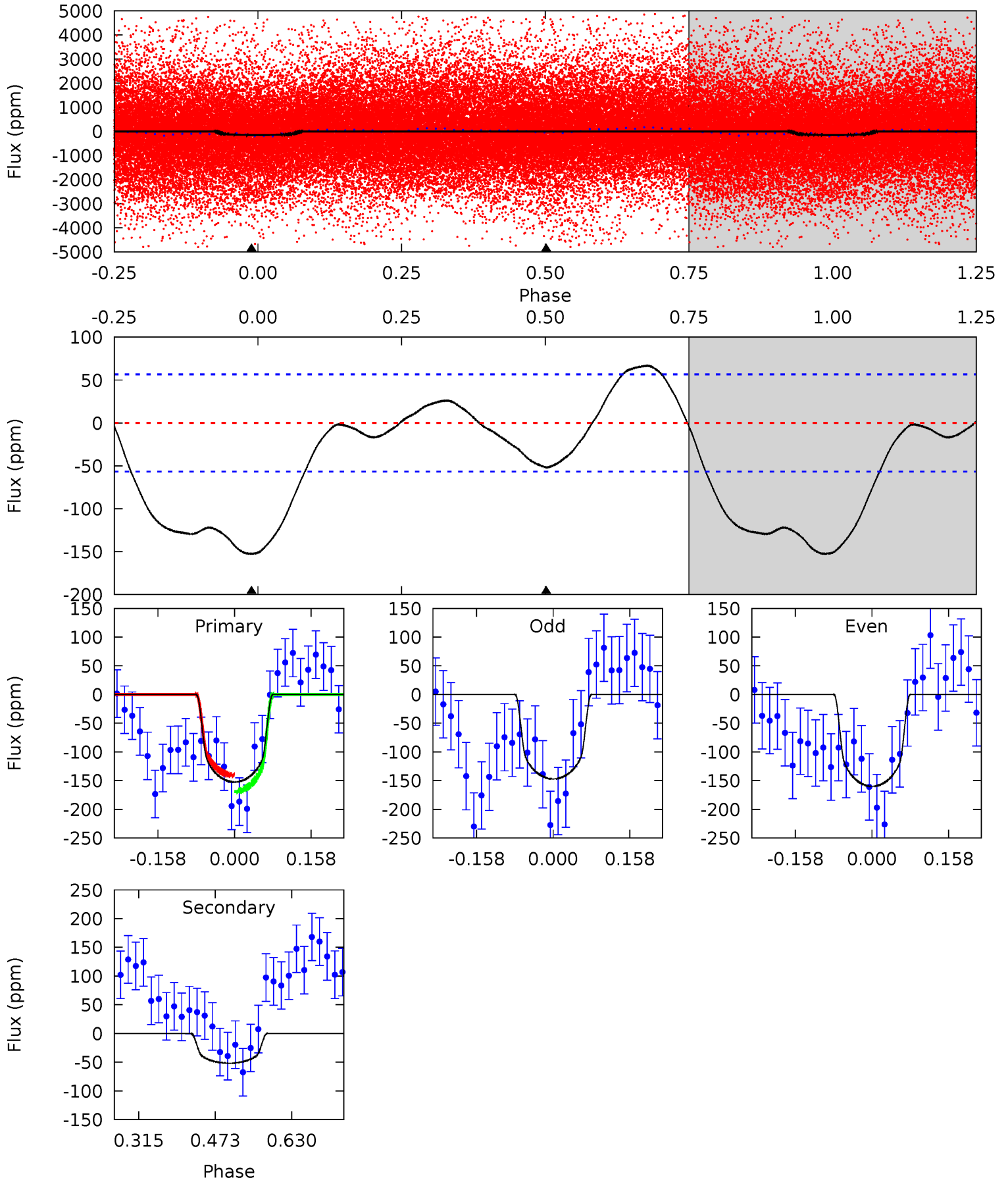
TCE 011133900-01 P= 1.396372 Days $T_0=132.428894$ (BKJD)



DV Model-Shift Uniqueness Test

011133900-01, P = 1.396387 Days, E = 131.007146 Days

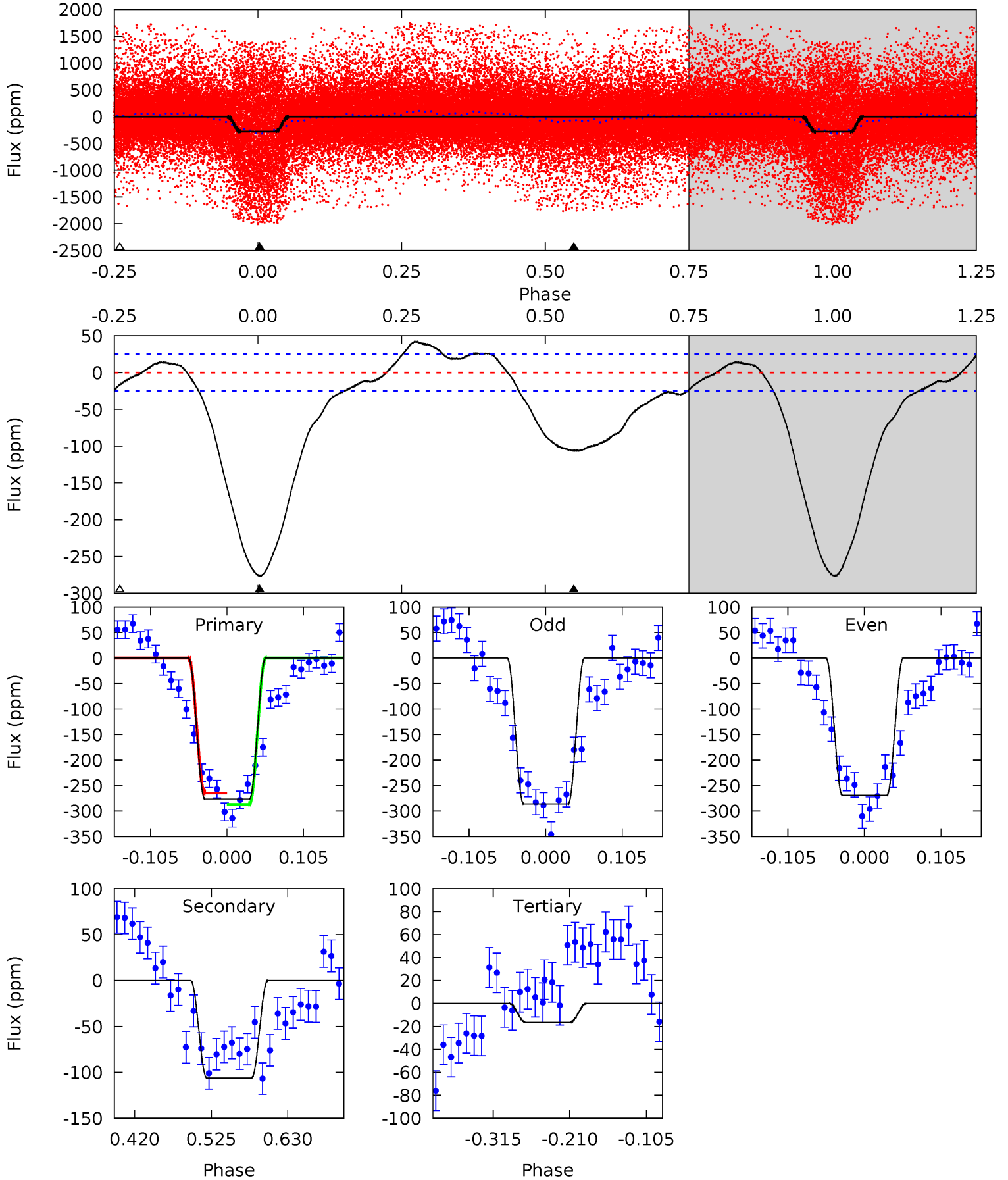
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	4.09	0	0	4.47	1.41	3.62	12.0	12.0	4.09	4.09	0.51	1.02	0.30	1.15



Alt Model-Shift Uniqueness Test

011133900-01, P = 1.396372 Days, E = 131.032522 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.5	19.4	3.00	0	4.55	1.62	4.57	47.5	50.5	16.4	19.4	1.58	1.58	0.13	1.99



Stellar Parameters For KIC 011133900

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4595^{+152}_{-152}	$4.567^{+0.056}_{-0.024}$	$0.200^{+0.200}_{-0.300}$	$0.740^{+0.036}_{-0.062}$	$0.737^{+0.057}_{-0.051}$	$2.564^{+0.595}_{-0.235}$
	+3%/-3%	+1%/-1%	+100%/-150%	+5%/-8%	+8%/-7%	+23%/-9%
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 011133900-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-52 ± 13	$0.90^{+0.35}_{-0.35}$	1627^{+58}_{-62}	3883^{+854}_{-464}	17^{+31}_{-9}
Alt.	-106 ± 5	$1.41^{+0.36}_{-0.36}$	1628^{+59}_{-58}	3765^{+425}_{-269}	15^{+11}_{-5}

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

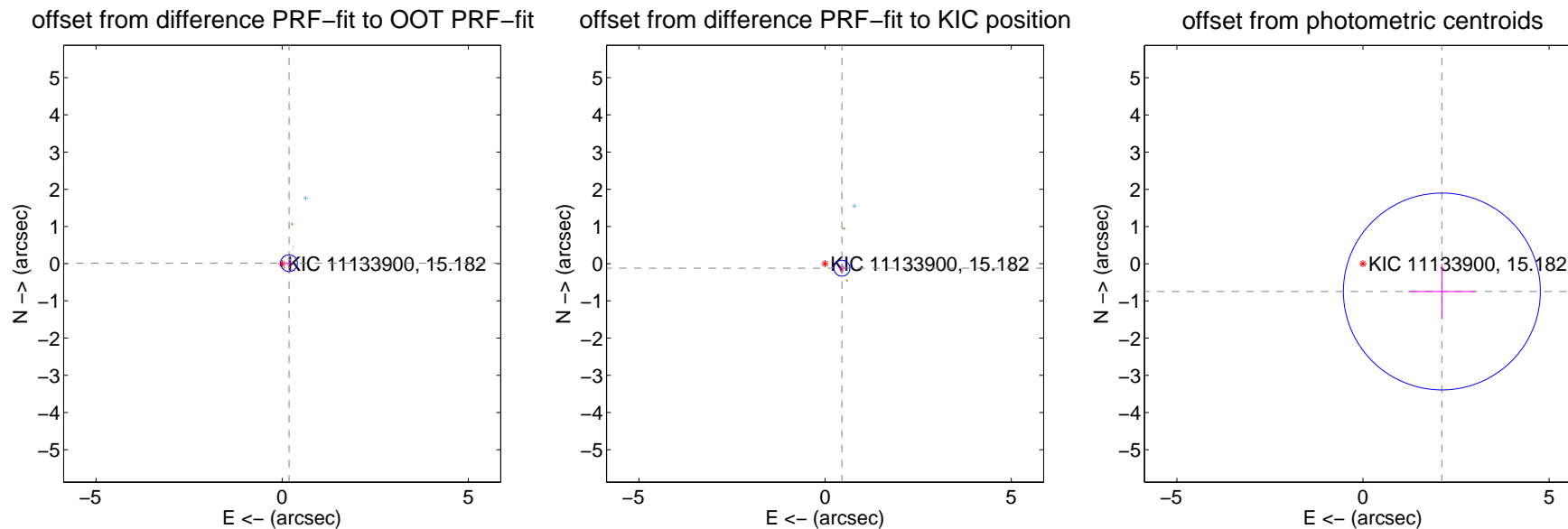
DV Centroid Data

Supplemental centroid analysis for 011133900-01. Kepler magnitude: 15.18. Transit SNR 4.96

There are 12 quarters with good PRF difference image offsets

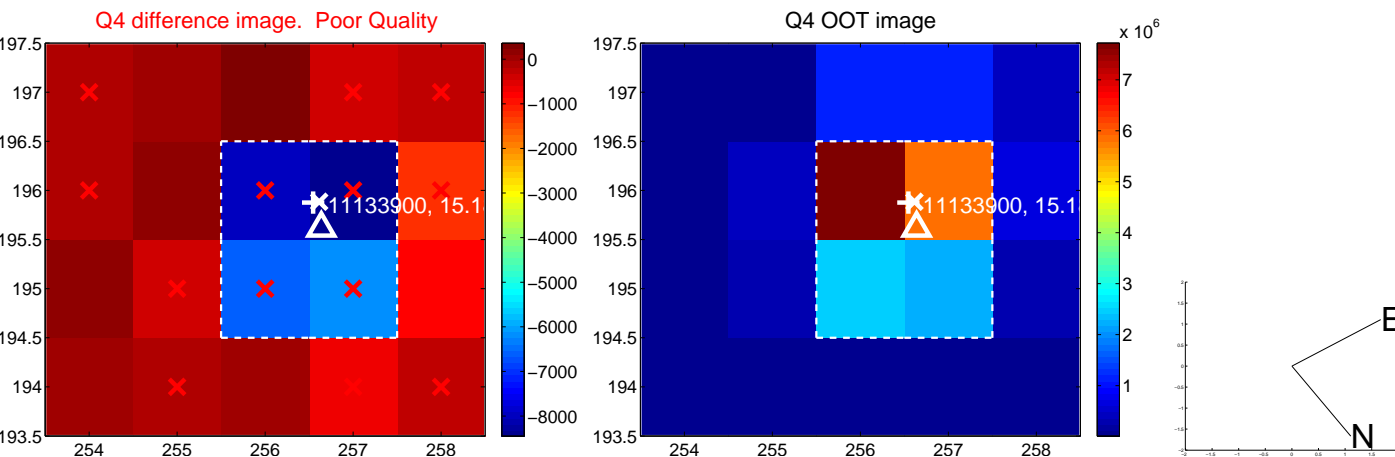
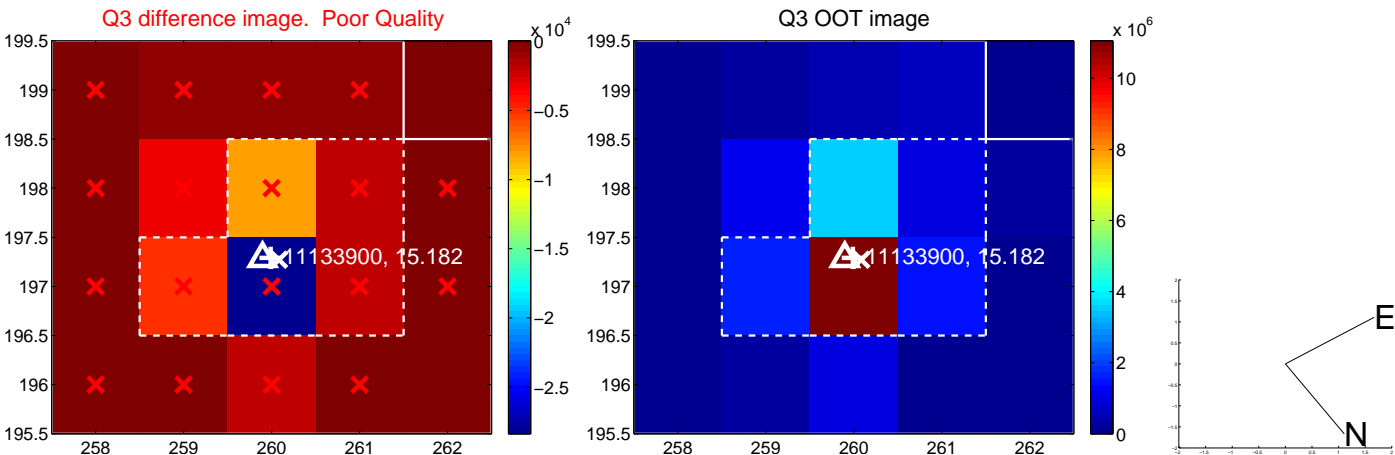
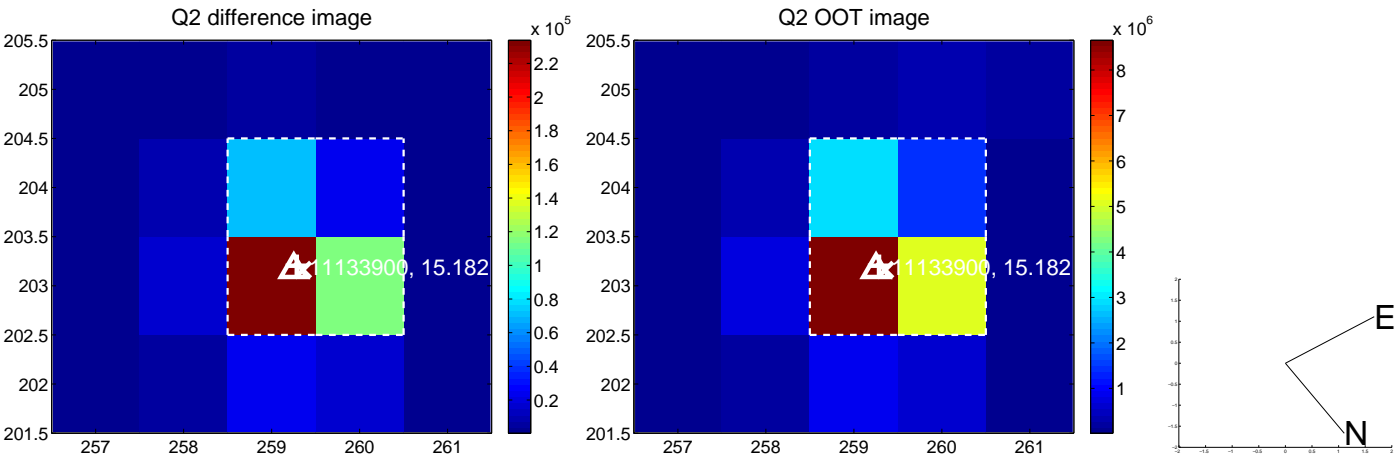
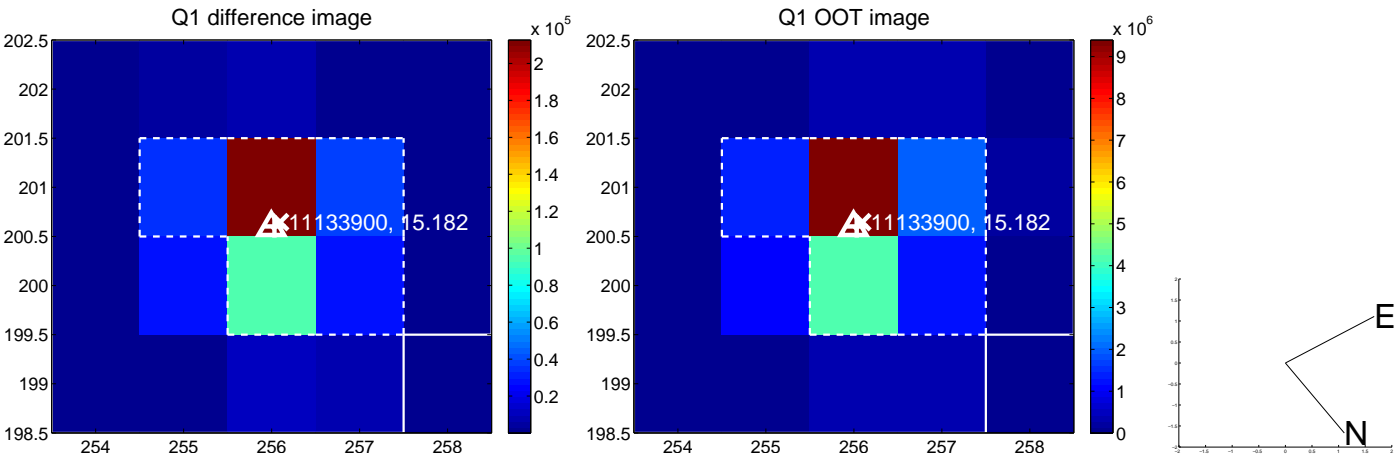
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.184 ± 0.075	2.45	-0.184 ± 0.072	0.013 ± 0.132
PRF-fit source offset from KIC position	0.468 ± 0.071	6.55	-0.452 ± 0.071	-0.121 ± 0.136
photometric centroid source offset	2.25 ± 0.88	2.55	-2.12 ± 0.90	-0.75 ± 0.74

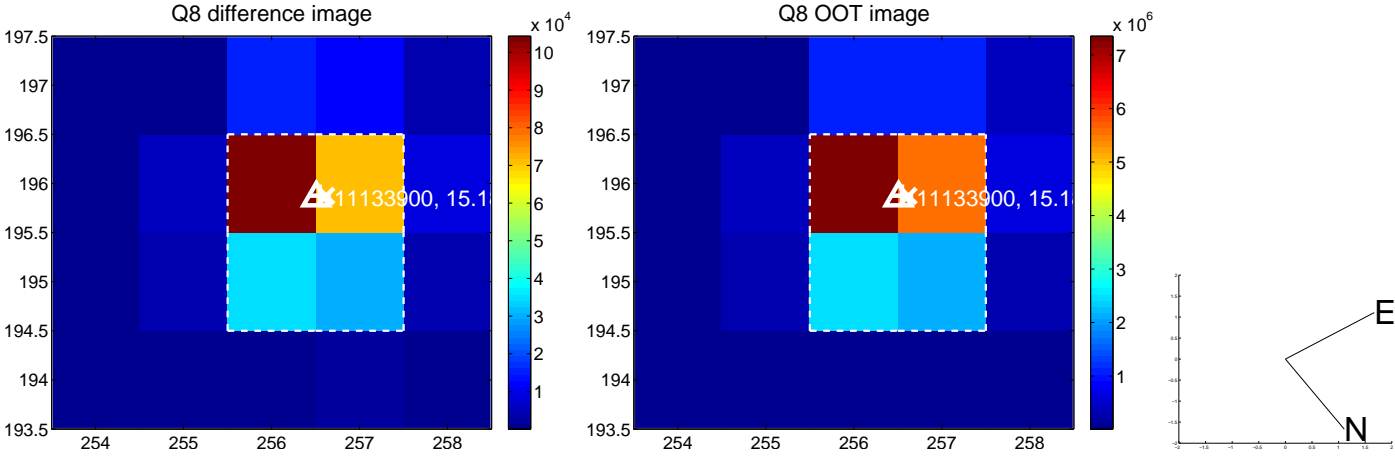
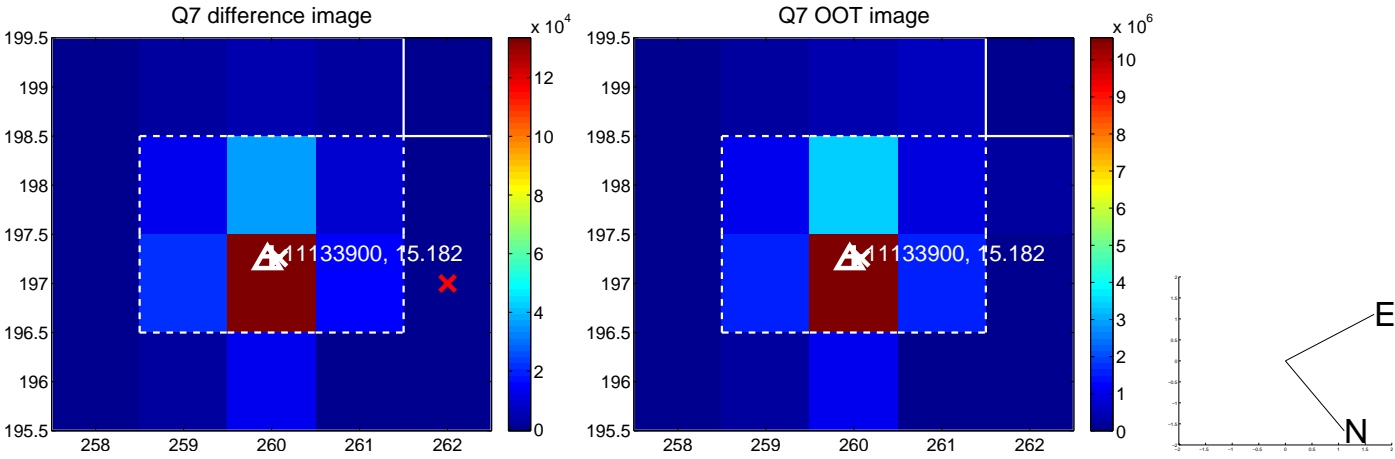
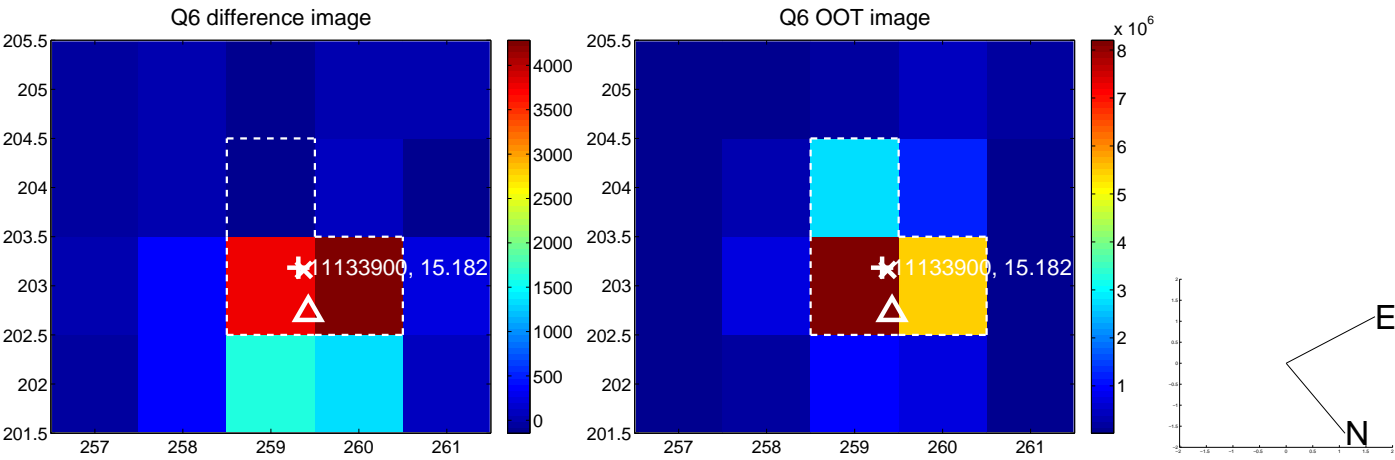
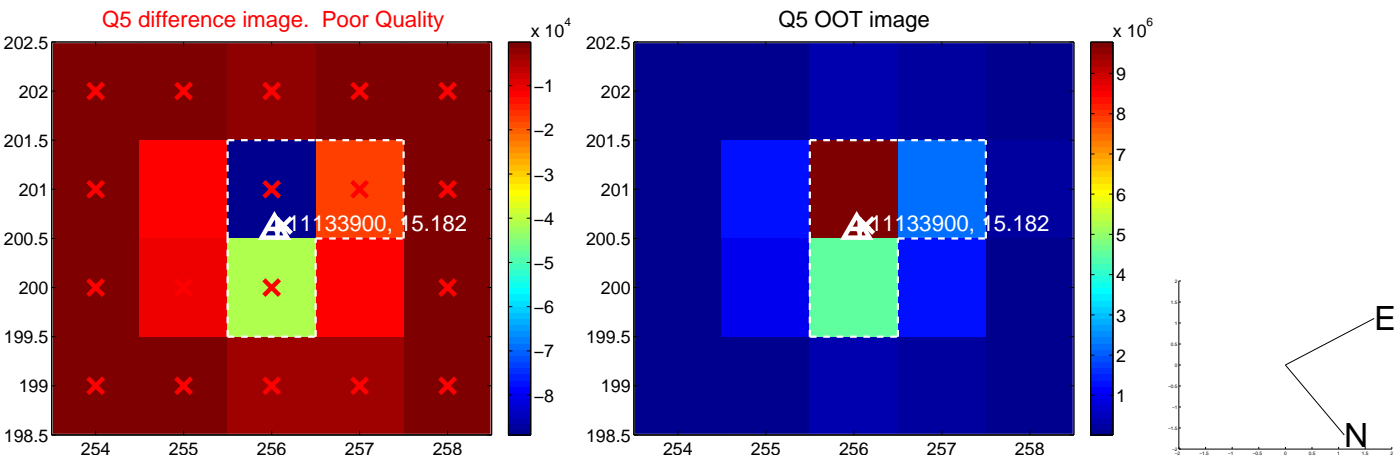


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

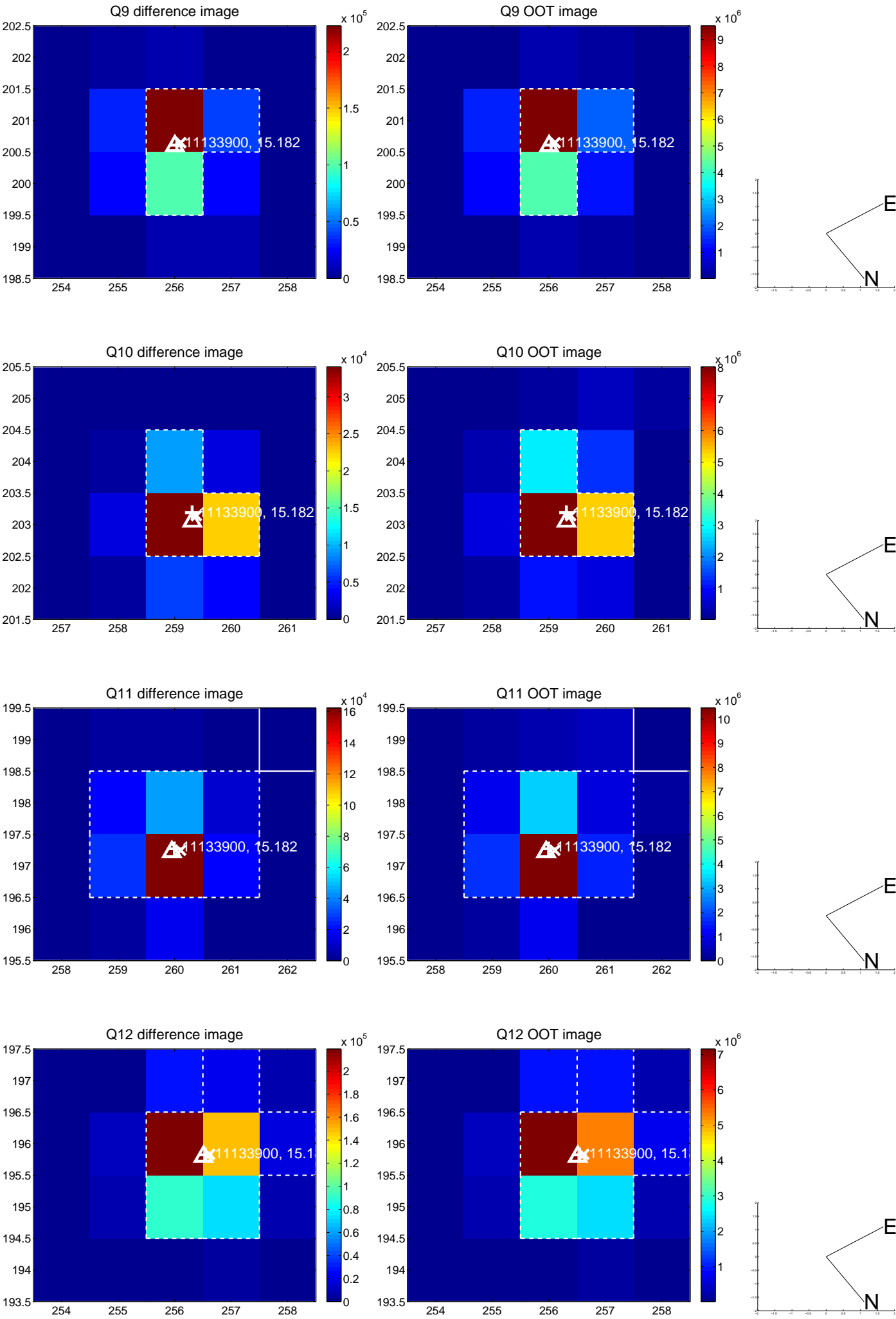
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



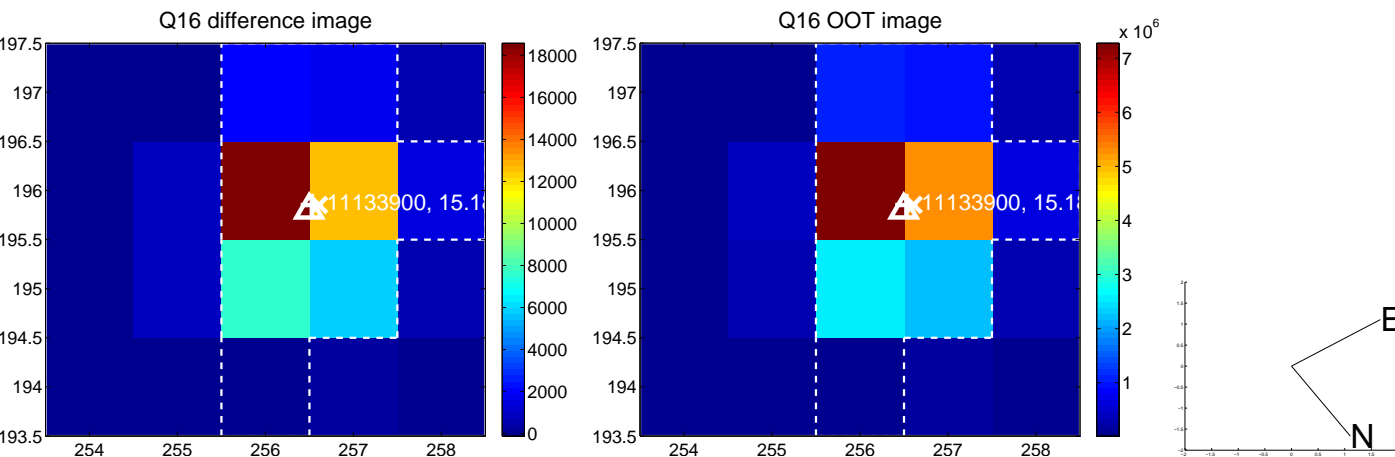
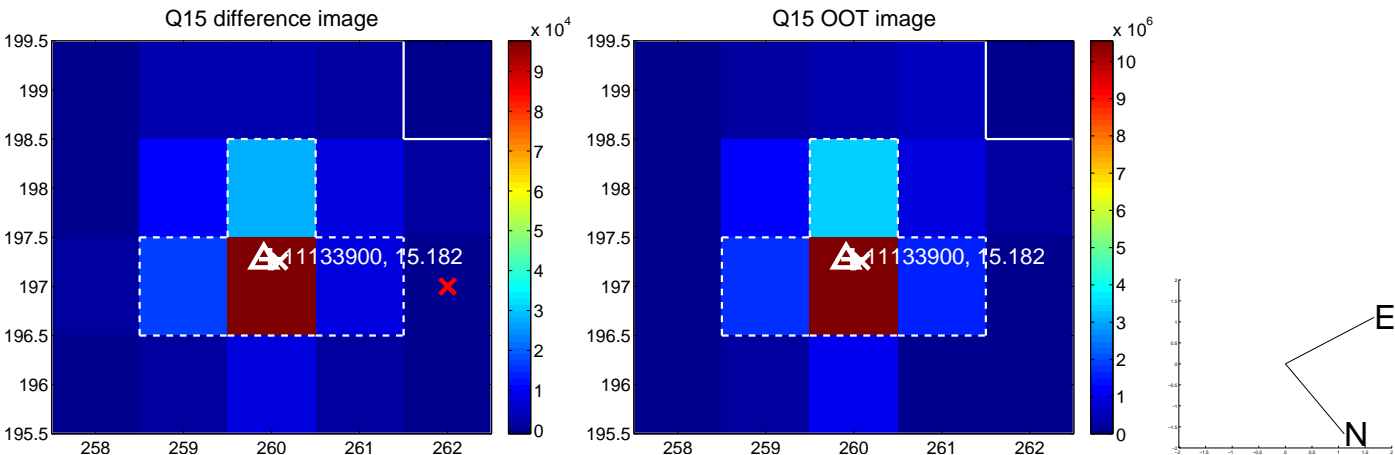
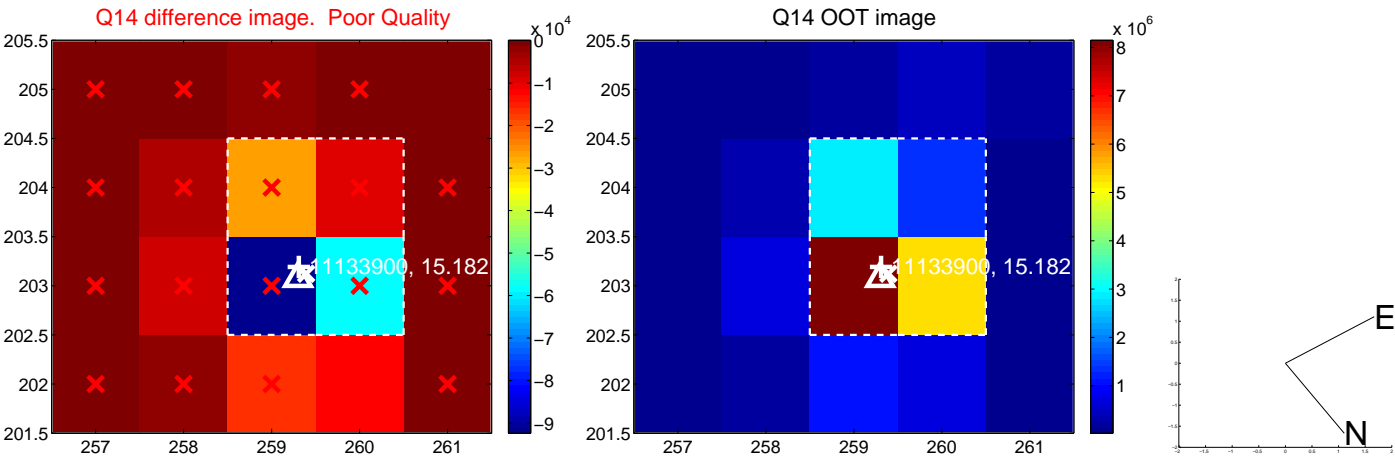
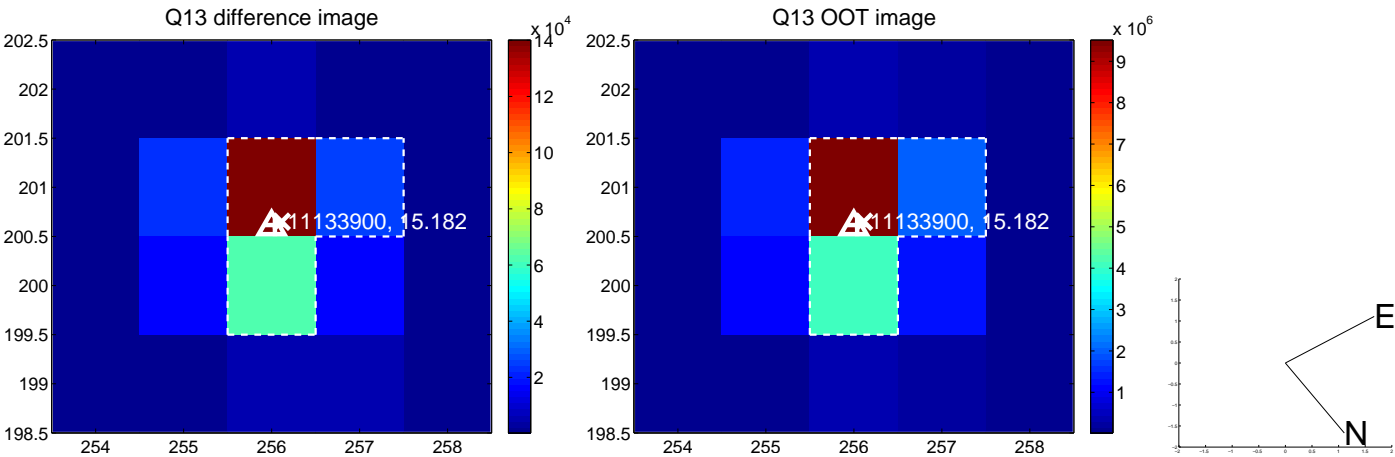
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



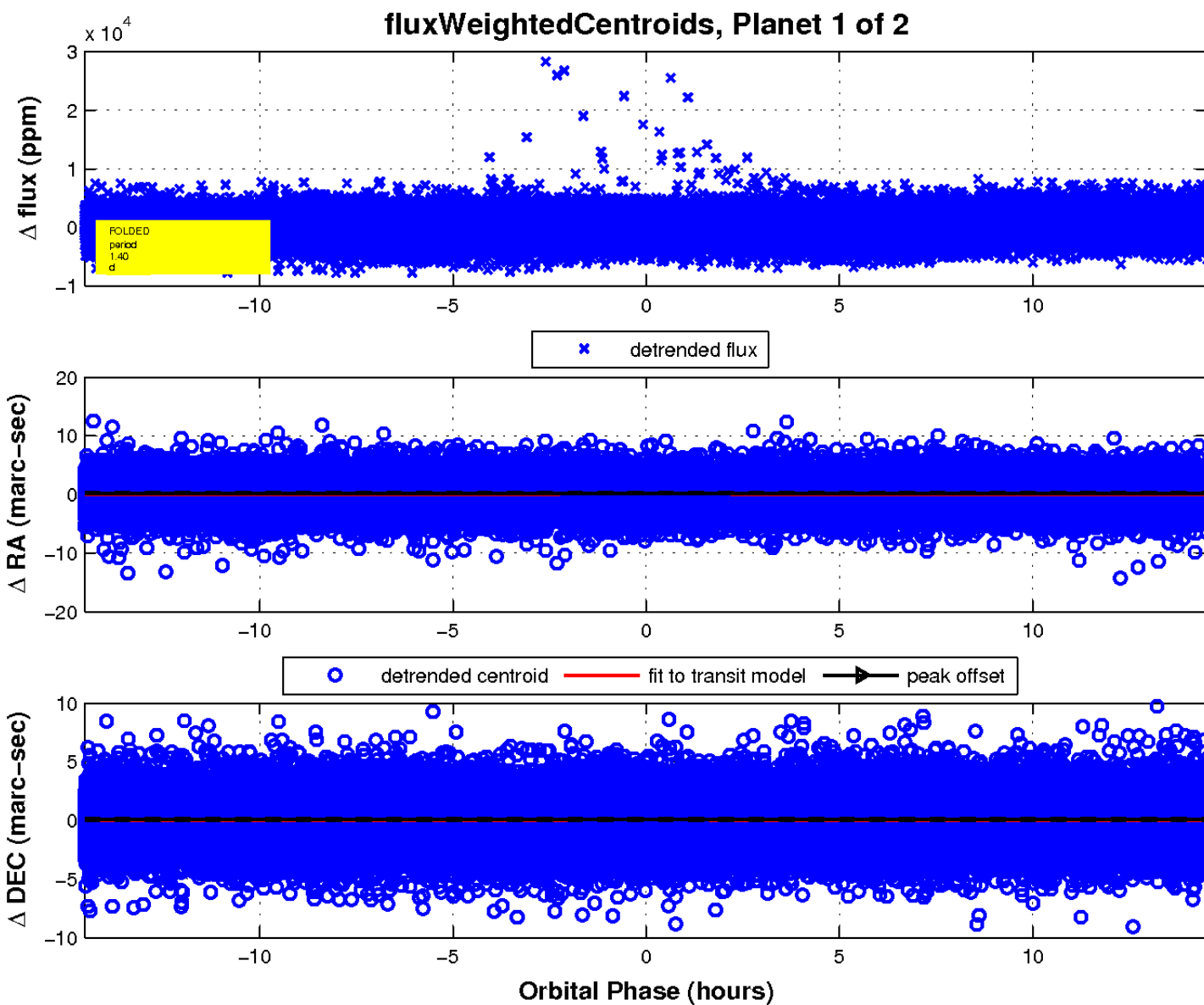
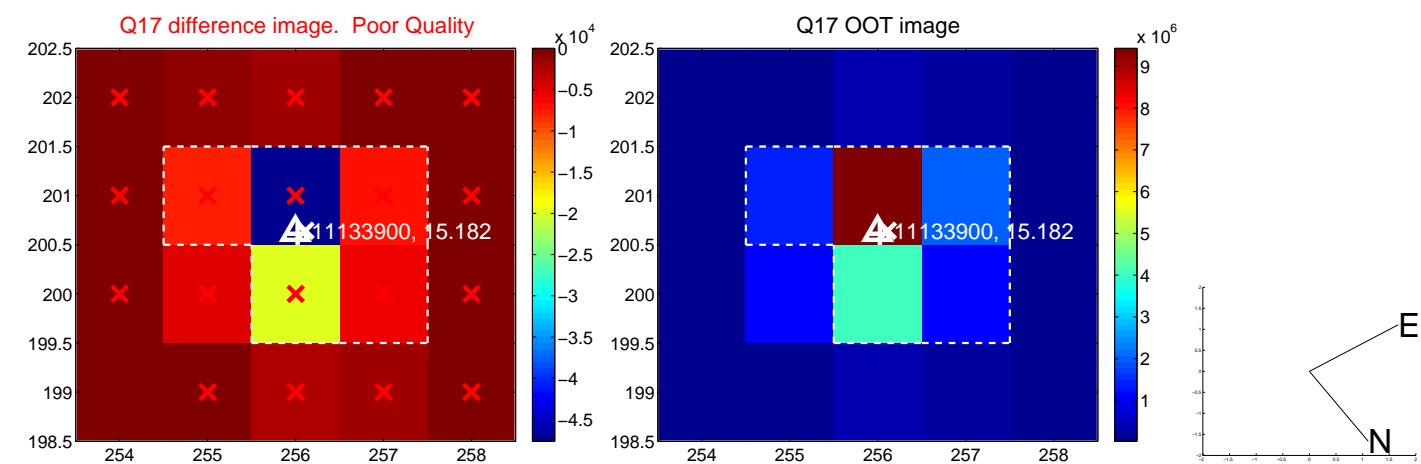
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

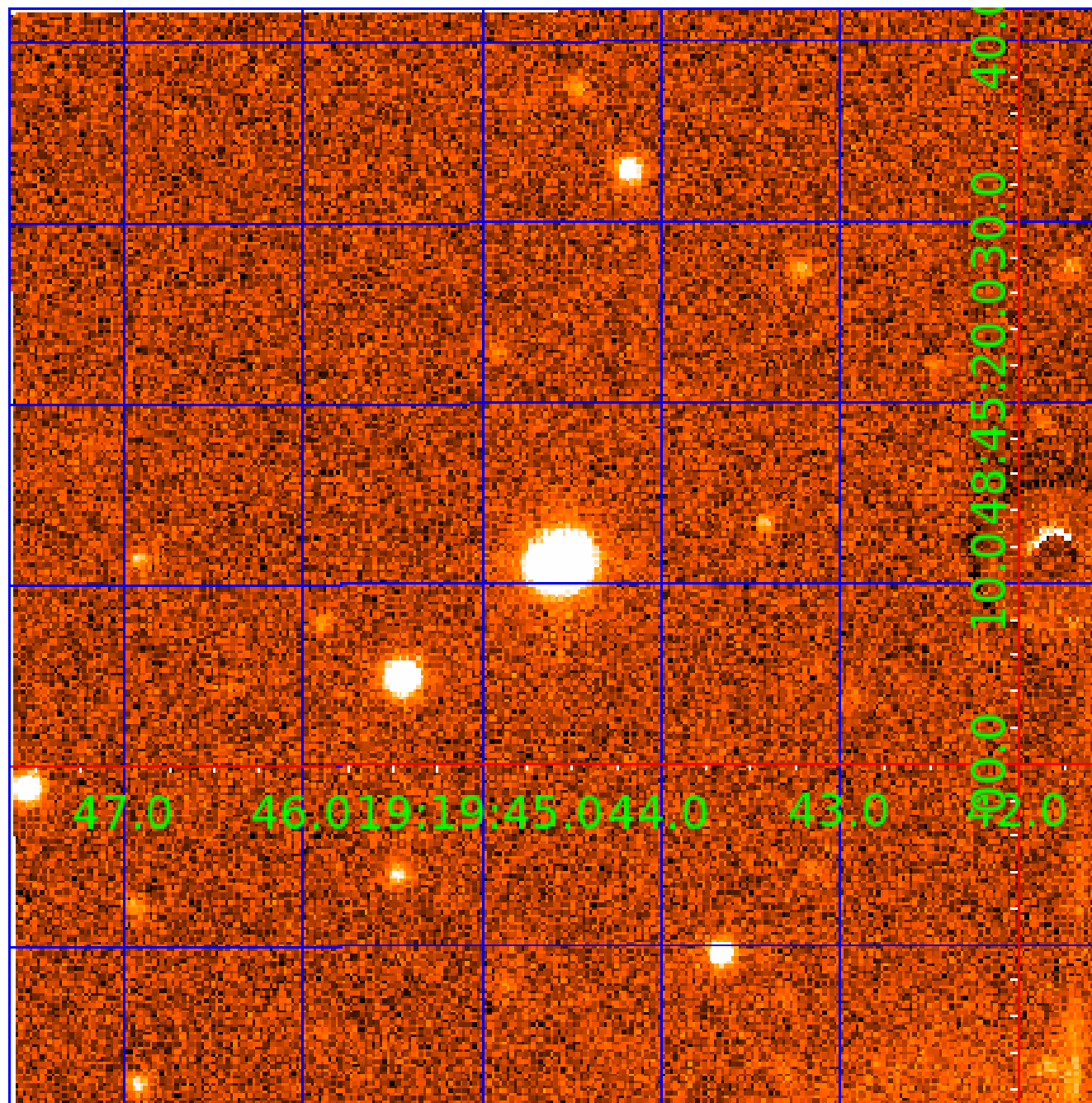


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011133900

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})
011133900-01	OBS	No	1.396387	132.403533	93.1	4.841	7.5	5.0	0.74	4595	0.88	448.25
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011133900-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV
011133900-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_KIC_POS—HALO_GHOST

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

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

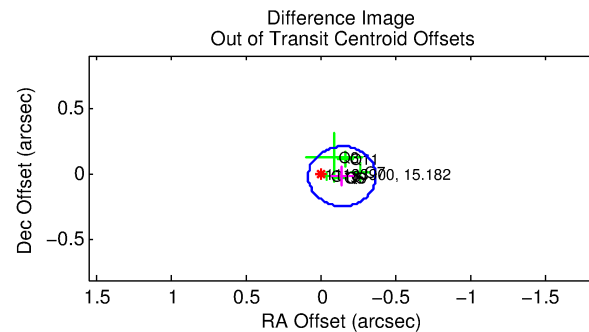
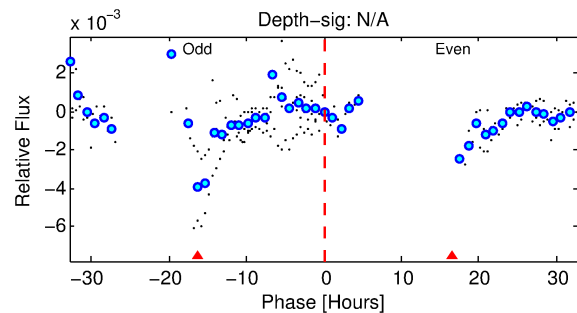
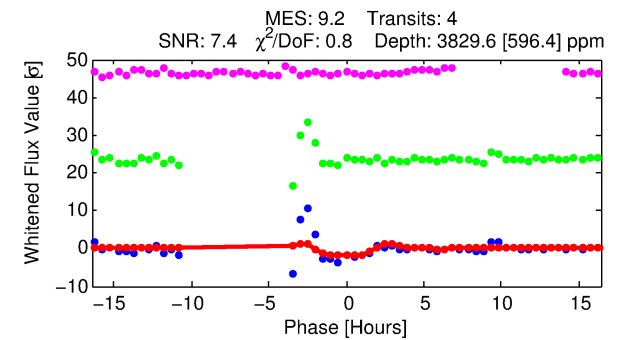
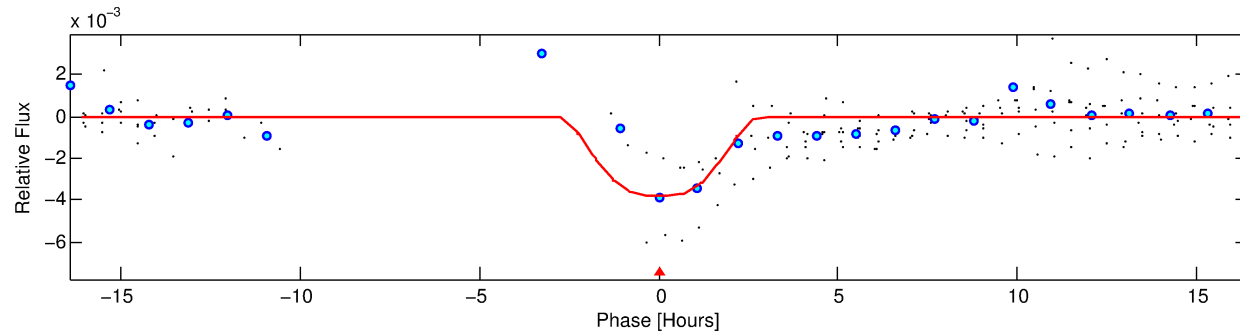
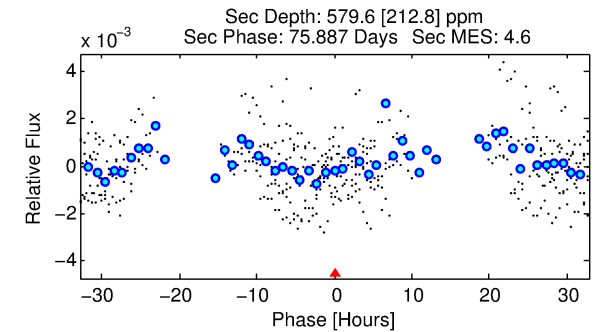
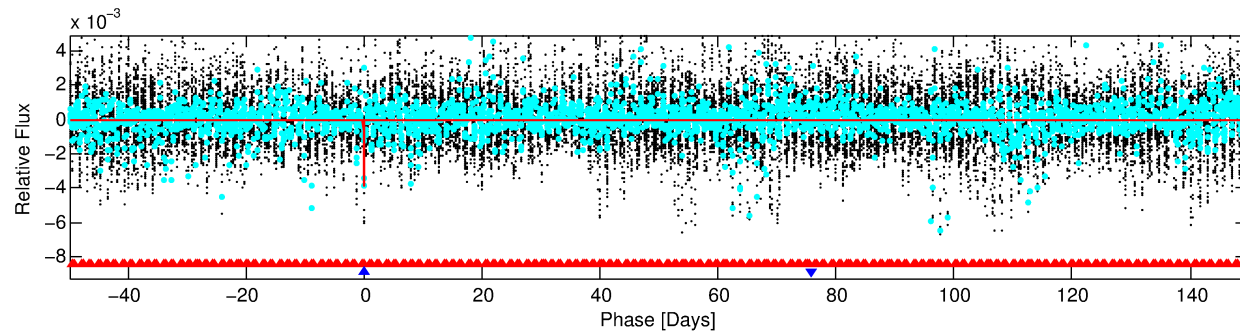
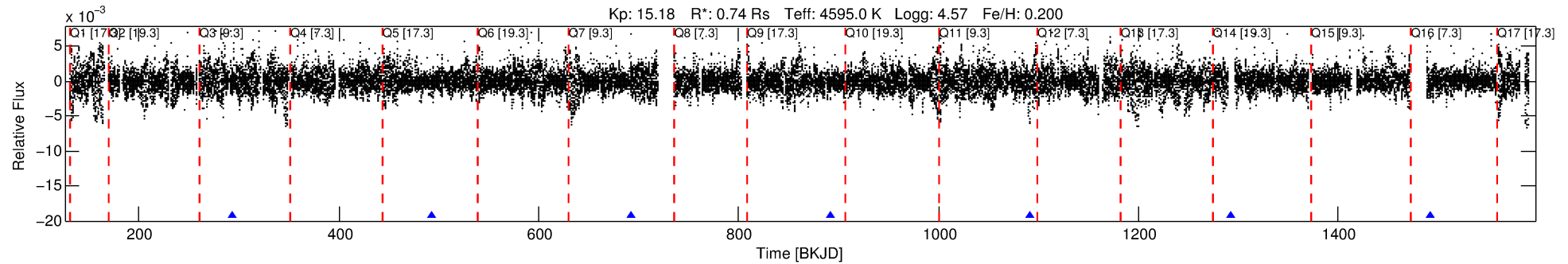
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011133900-02

No Significant Match Found

DV One-Page Summary

KIC: 11133900 Candidate: 2 of 2 Period: 199.739 d



DV Fit Results:

Period = 199.73869 [0.00376] d
Epoch = 293.1122 [0.0194] BKJD
Rp/R* = 0.0721 [0.0071]
a/R* = 155.64 [19.71]
b = 0.92 [0.02]
Seff = 0.60 [0.10]
Teq = 224 [9] K
Rp = 5.83 [0.75] Re
a = 0.6042 [0.0426] AU
Ag = 3429.45 [1469.36] [2.33] σ
Teffp = 2654 [290] K [8.38] σ

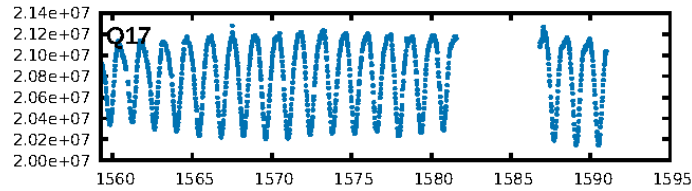
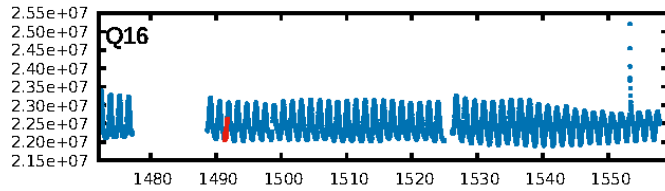
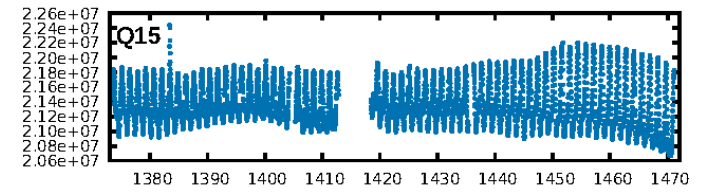
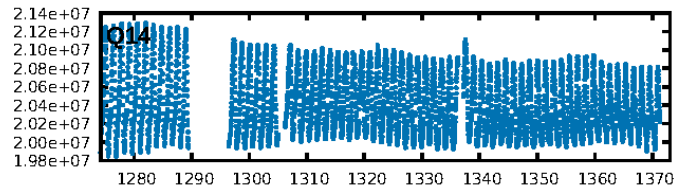
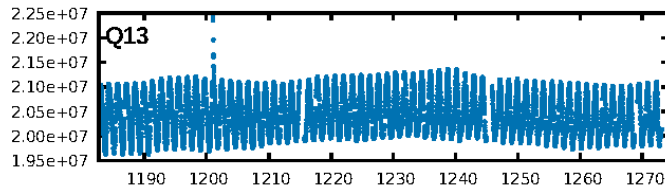
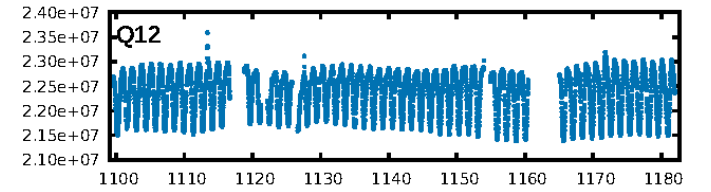
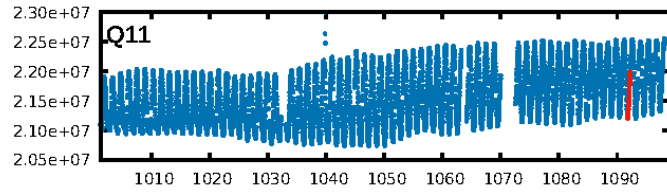
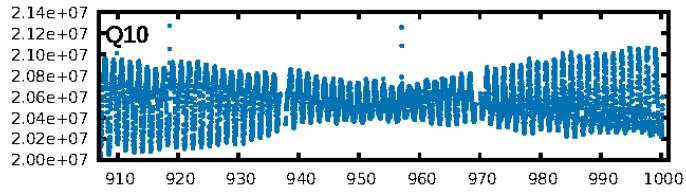
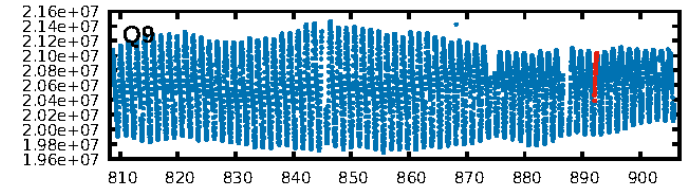
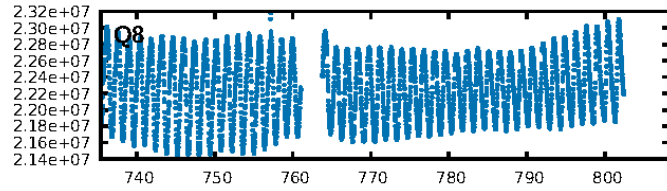
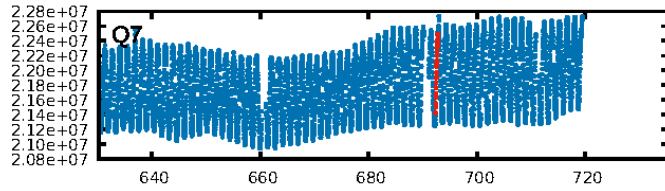
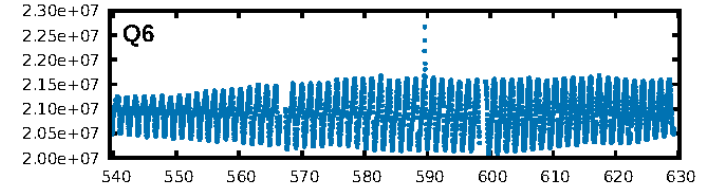
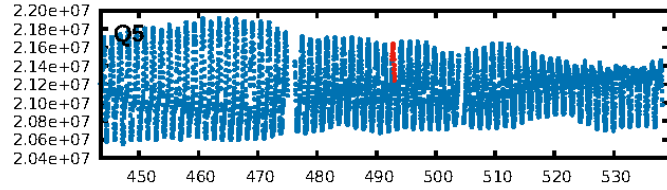
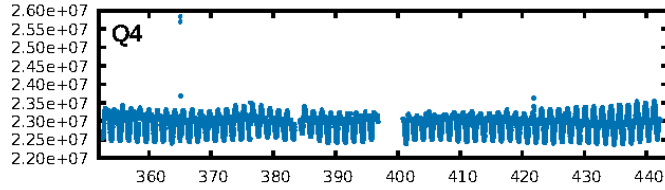
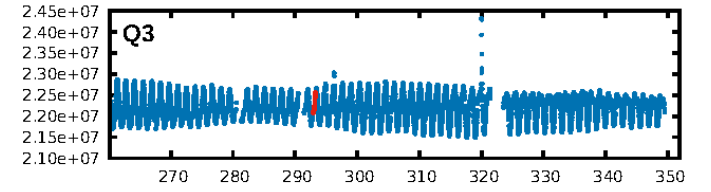
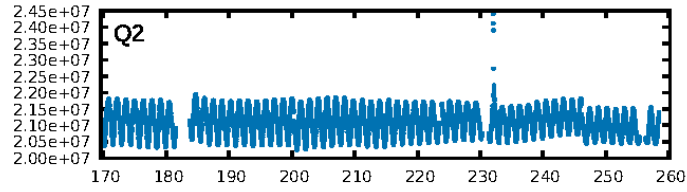
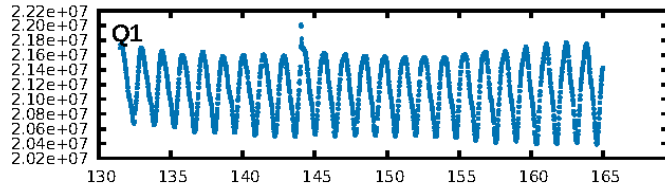
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [651.76] σ
LongPeriod-sig: N/A
ModelChiSquare2-sig: 89.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.39e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.1326
Centroid-sig: 12.0%
Centroid-so: 0.254 arcsec [0.80] σ
OotOffset-rm: 0.146 arcsec [1.94] σ
KicOffset-rm: 0.444 arcsec [5.86] σ
OotOffset-st: 0/3/1/2 [6]
KicOffset-st: 0/3/1/2 [6]
DiffImageQuality-fgm: 0.50 [3/6]
DiffImageOverlap-fno: 0.00 [0/6]

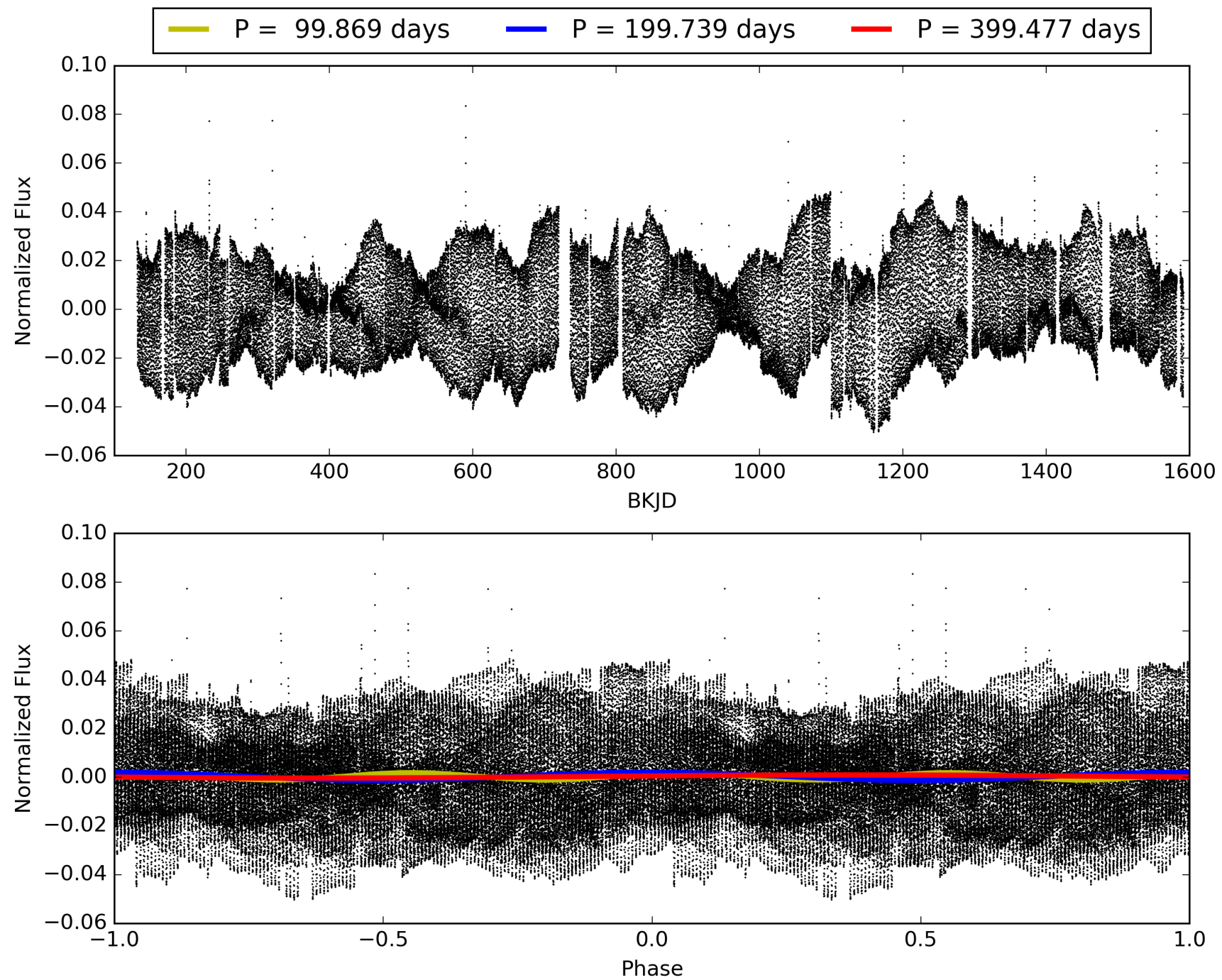
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:04:52 Z

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

TCE 011133900-02, PDC Light Curves

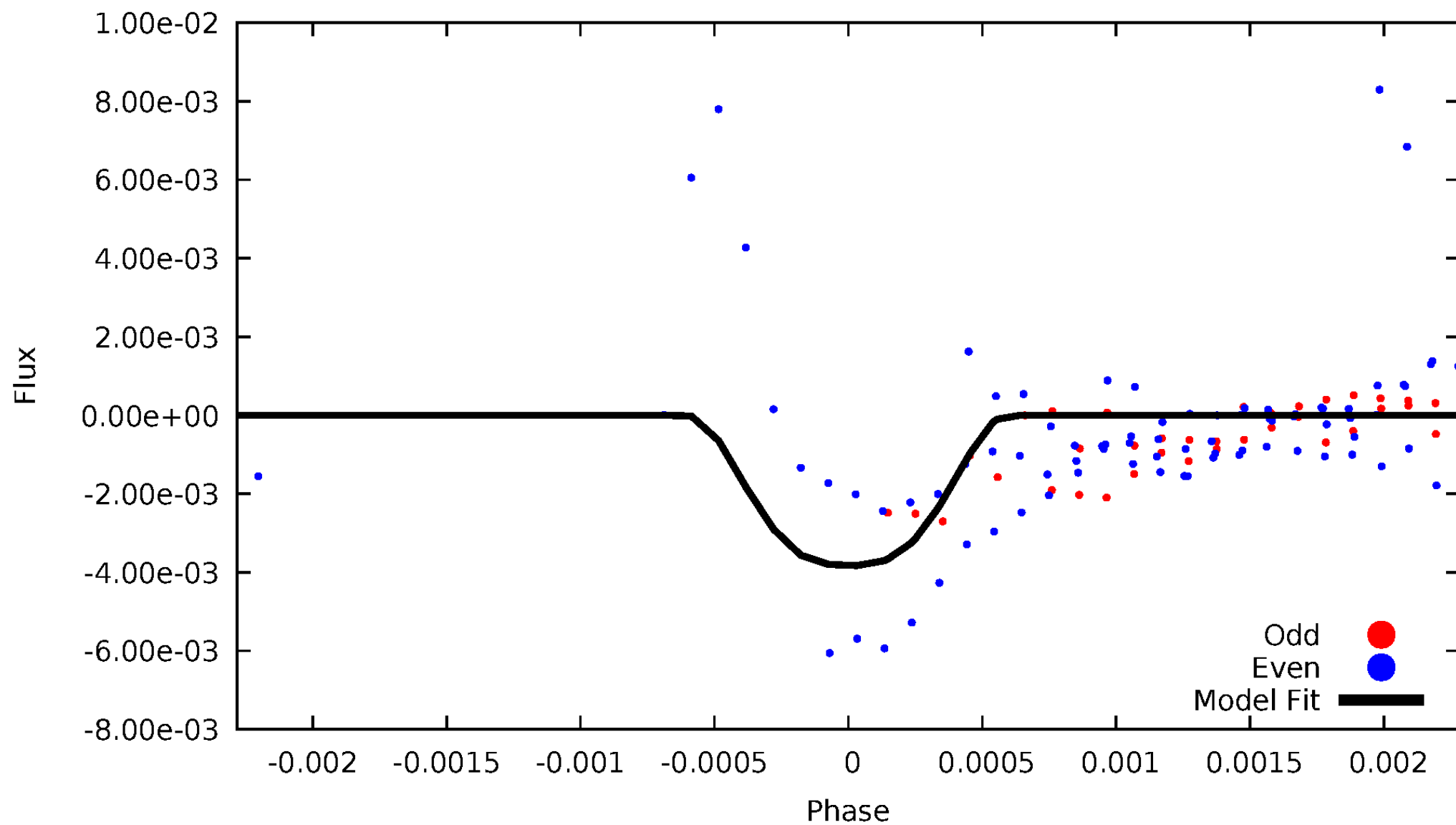


TCE 011133900-02



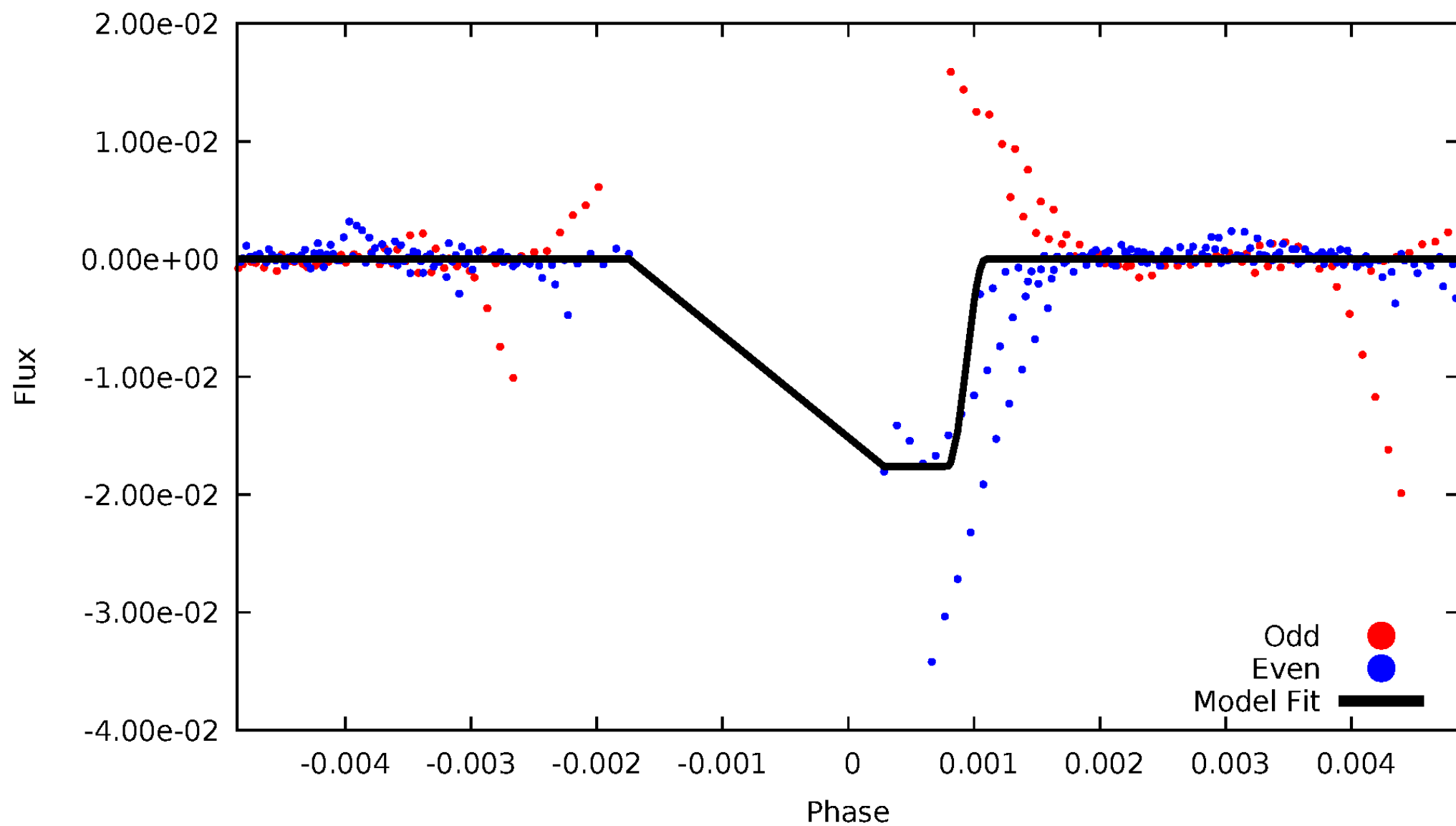
DV Odd/Even

TCE 011133900-02



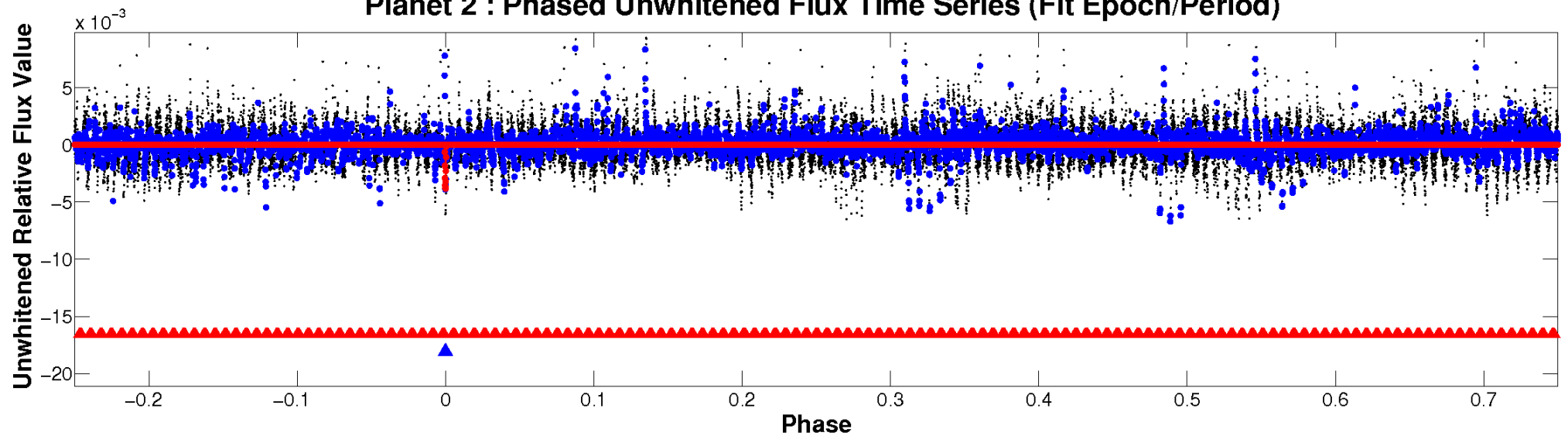
ALT Odd/Even

TCE 011133900-02

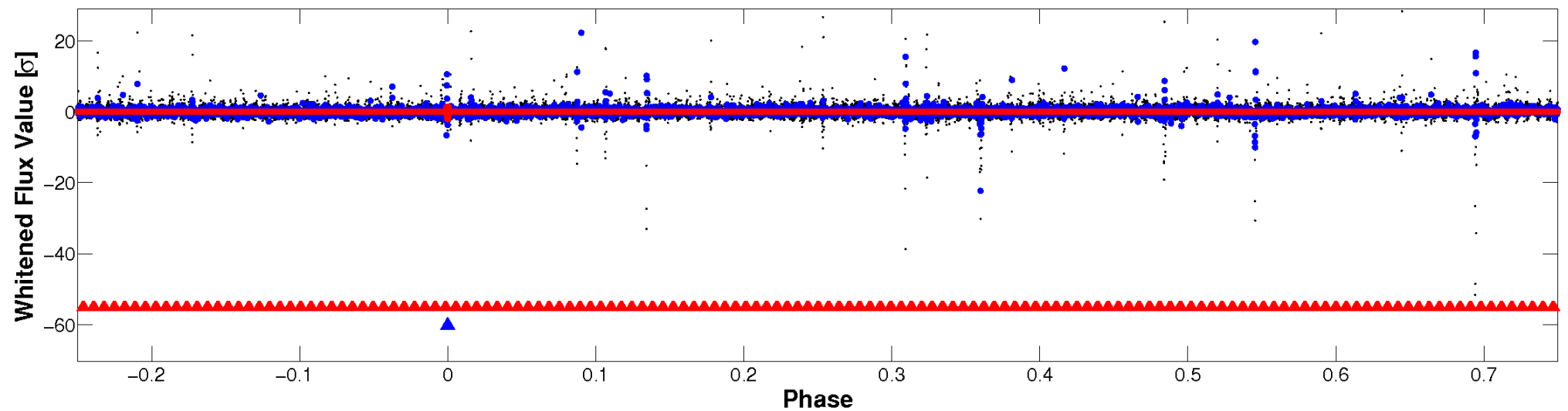


Non-Whitened Vs. Whitened Light Curve

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

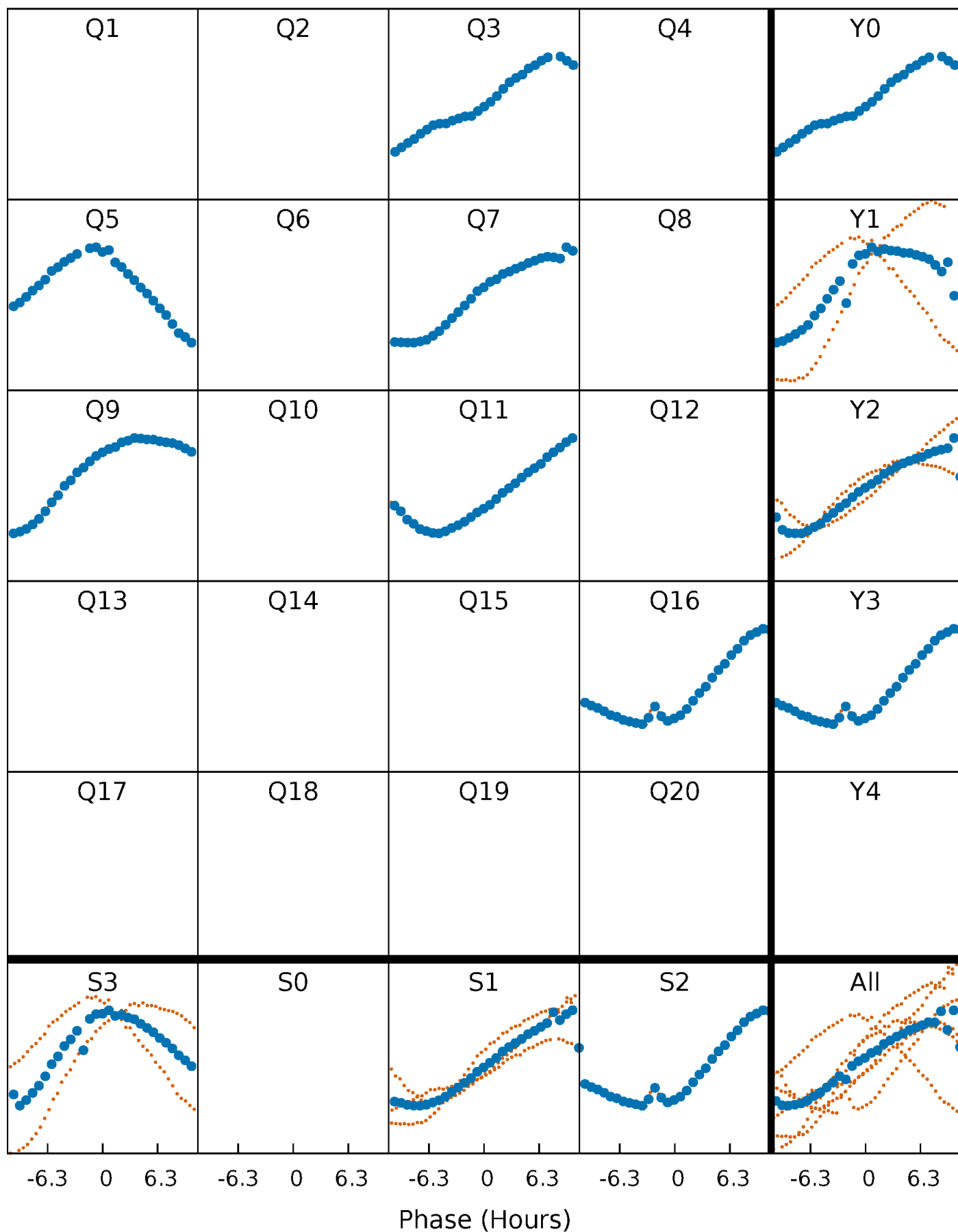


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



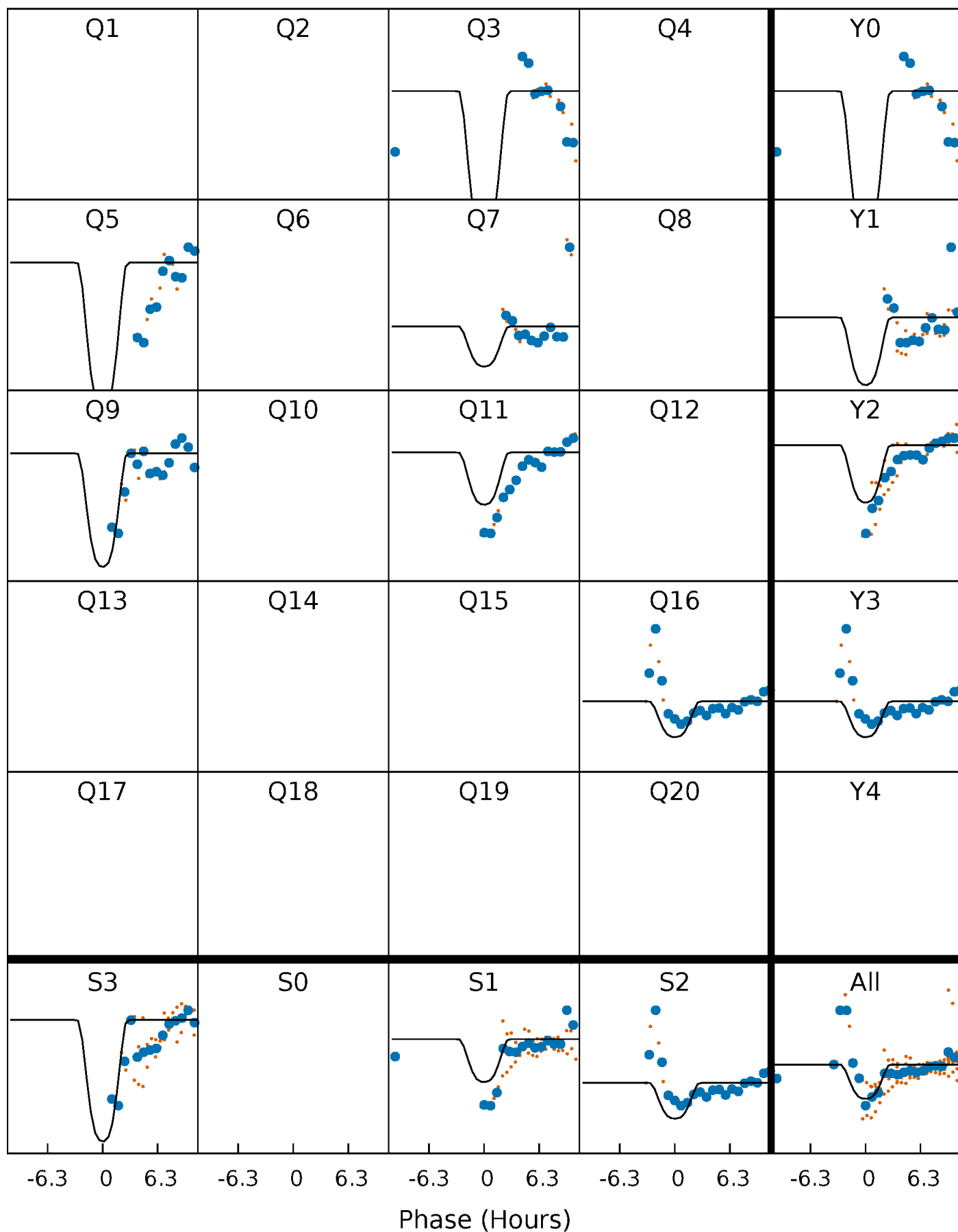
PDC Quarter-Phased Transit Curves

TCE 011133900-02 $P=199.738693$ Days $T_0=293.112162$ (BKJD)



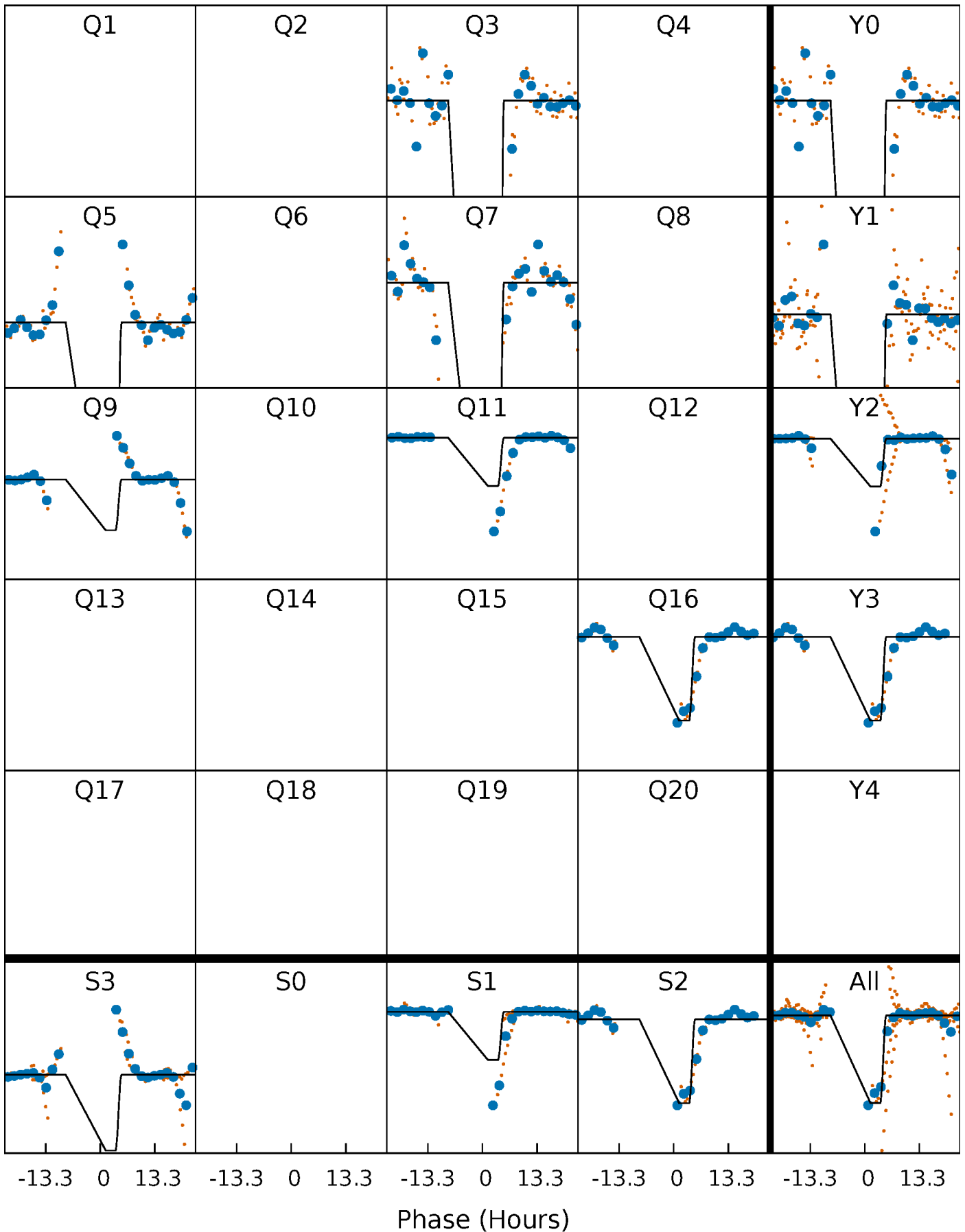
DV Quarter-Phased Transit Curves

TCE 011133900-02 $P=199.738693$ Days $T_0=293.112162$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

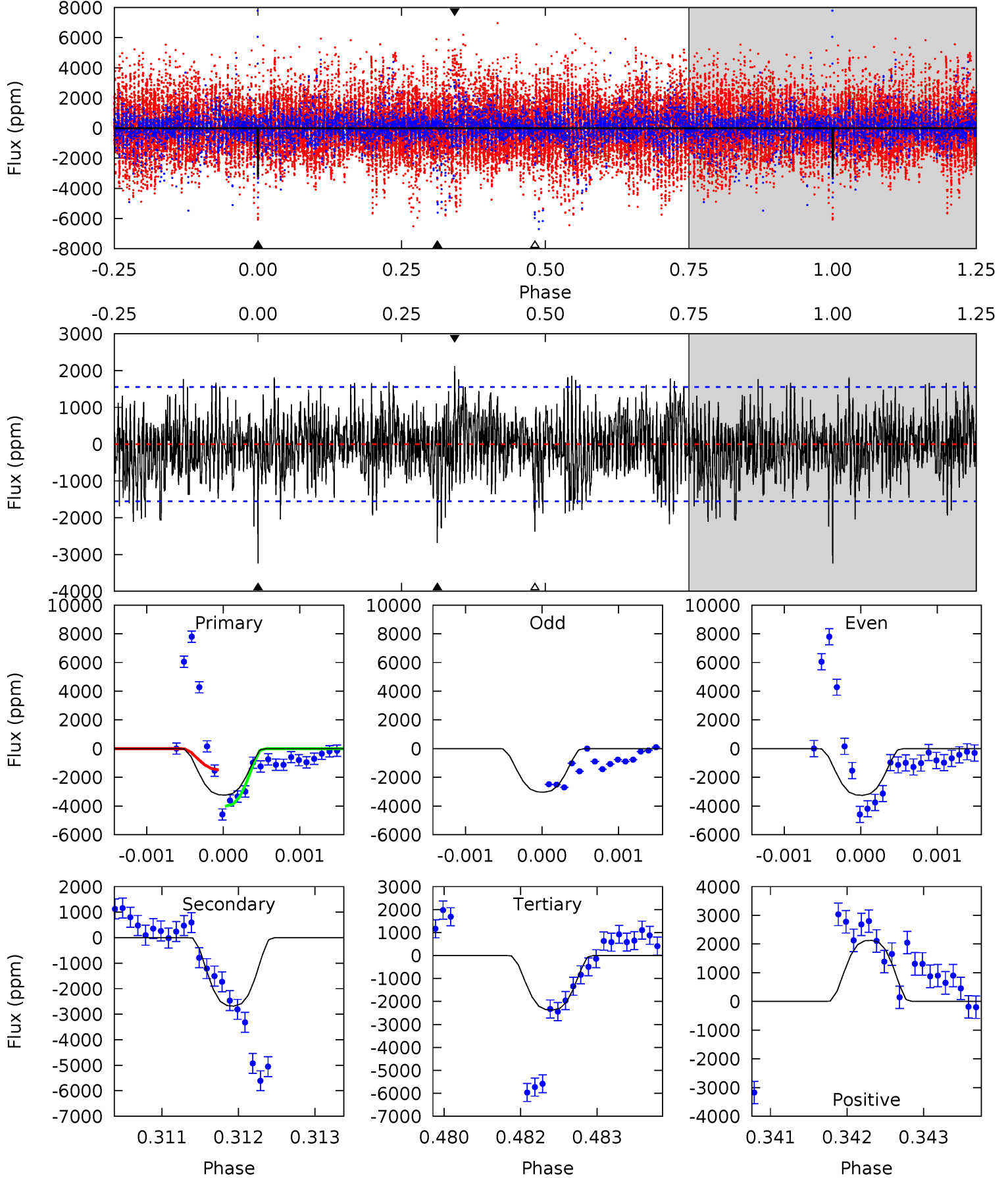
TCE 011133900-02 P=199.725022 Days $T_0=293.020256$ (BKJD)



DV Model-Shift Uniqueness Test

011133900-02, P = 199.738693 Days, E = 93.373469 Days

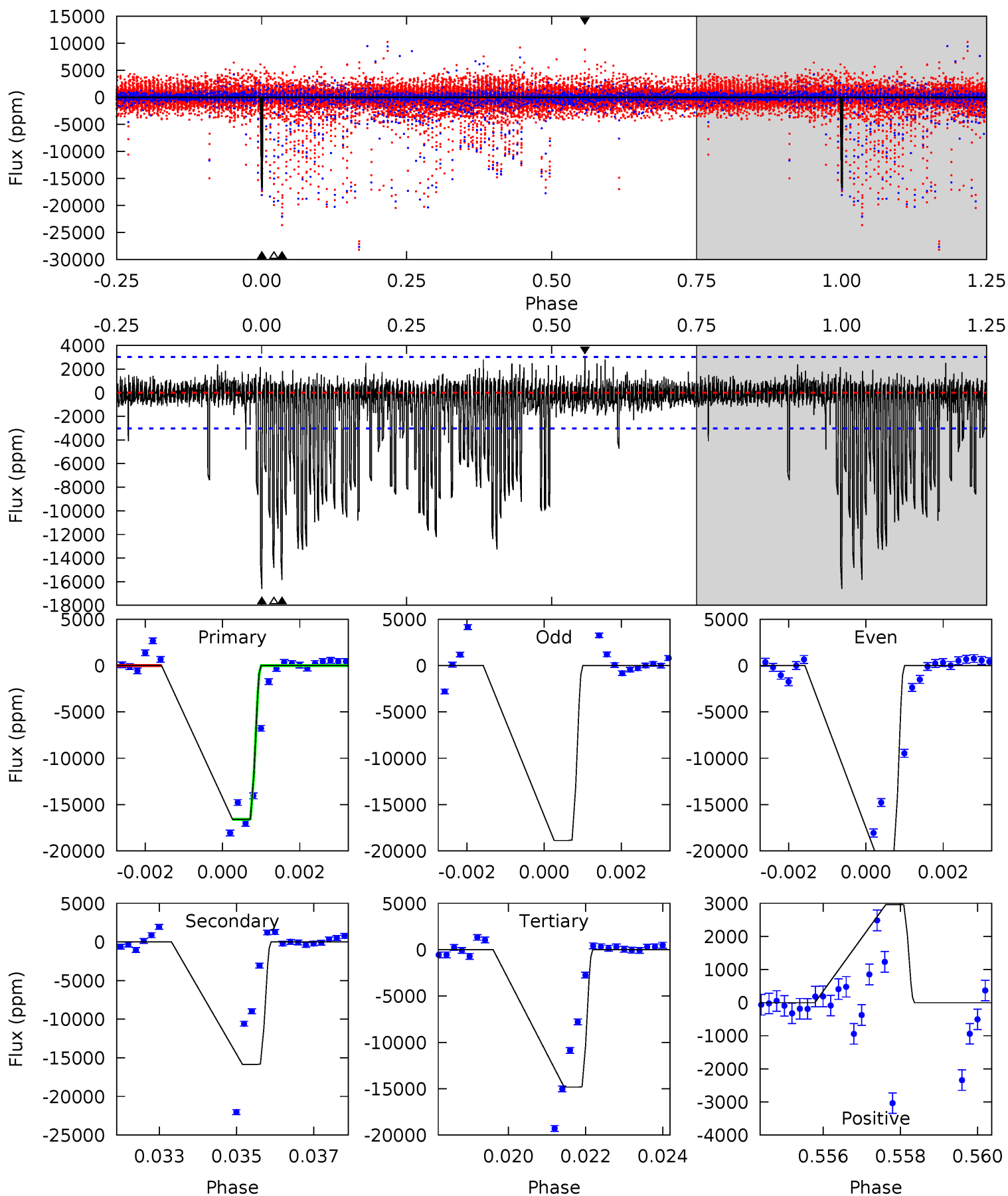
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	9.38	8.31	7.45	5.43	3.25	2.00	3.03	3.90	1.07	1.94	0.28	0.51	0.40	3.80



Alt Model-Shift Uniqueness Test

011133900-02, P = 199.725022 Days, E = 93.295234 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.1	27.8	26.0	5.19	5.31	3.06	1.96	3.10	23.9	1.79	22.6	1.19	0.63	0.15	0



Stellar Parameters For KIC 011133900

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4595^{+152}_{-152}	$4.567^{+0.056}_{-0.024}$	$0.200^{+0.200}_{-0.300}$	$0.740^{+0.036}_{-0.062}$	$0.737^{+0.057}_{-0.051}$	$2.564^{+0.595}_{-0.235}$
	+3%/-3%	+1%/-1%	+100%/-150%	+5%/-8%	+8%/-7%	+23%/-9%
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 011133900-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2681 ± 286	$5.82^{+0.66}_{-0.67}$	312^{+12}_{-12}	4056^{+221}_{-192}	16016^{+4669}_{-3228}
Alt.	-15853 ± 570	$10.67^{+0.69}_{-0.74}$	312^{+11}_{-11}	4517^{+184}_{-176}	28730^{+4257}_{-3460}

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

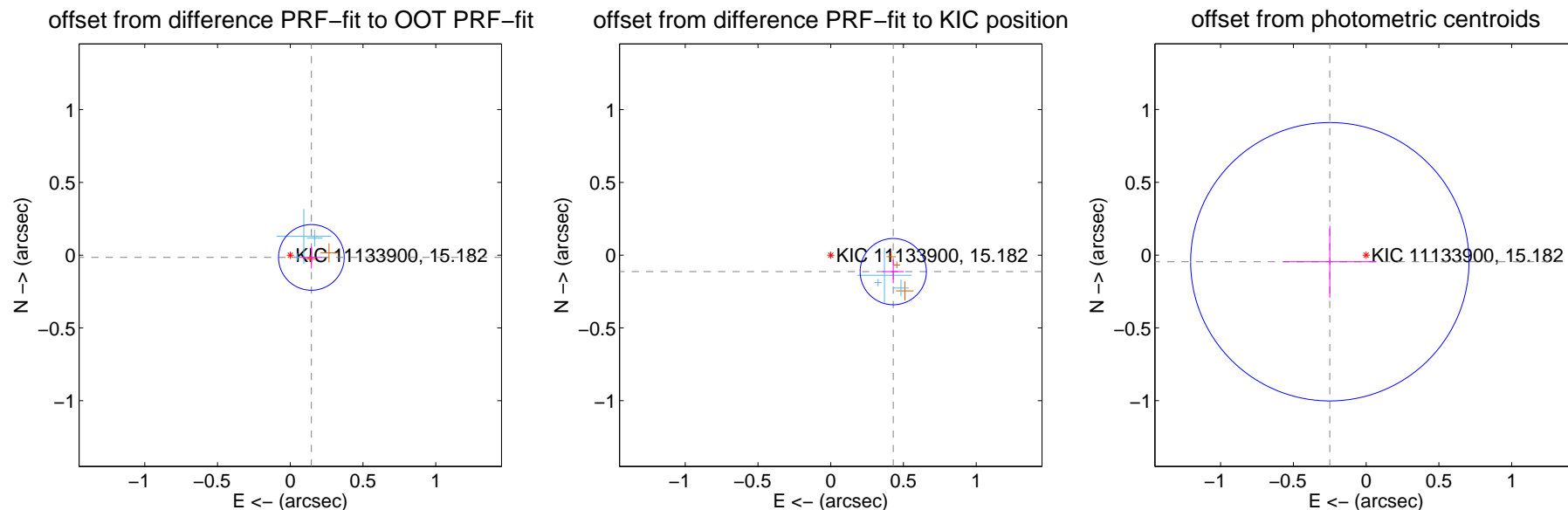
DV Centroid Data

Supplemental centroid analysis for 011133900-02. Kepler magnitude: 15.18. Transit SNR 7.39

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.146 ± 0.075	1.94	-0.145 ± 0.075	-0.016 ± 0.076
PRF-fit source offset from KIC position	0.444 ± 0.076	5.86	-0.430 ± 0.073	-0.113 ± 0.080
photometric centroid source offset	0.25 ± 0.32	0.80	0.25 ± 0.32	-0.05 ± 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.

Q1 no difference image



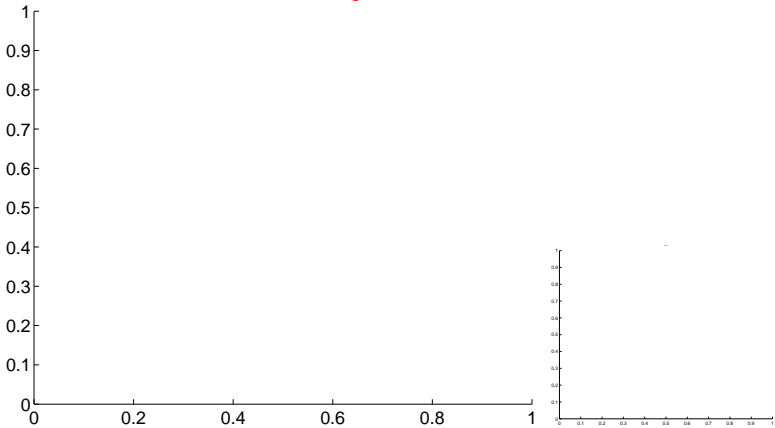
Q1 no OOT image



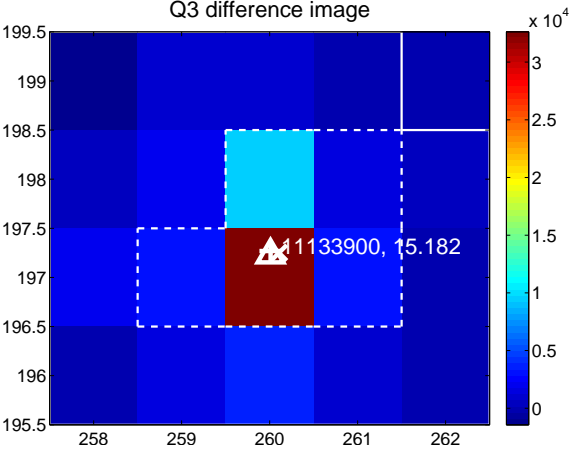
Q2 no difference image



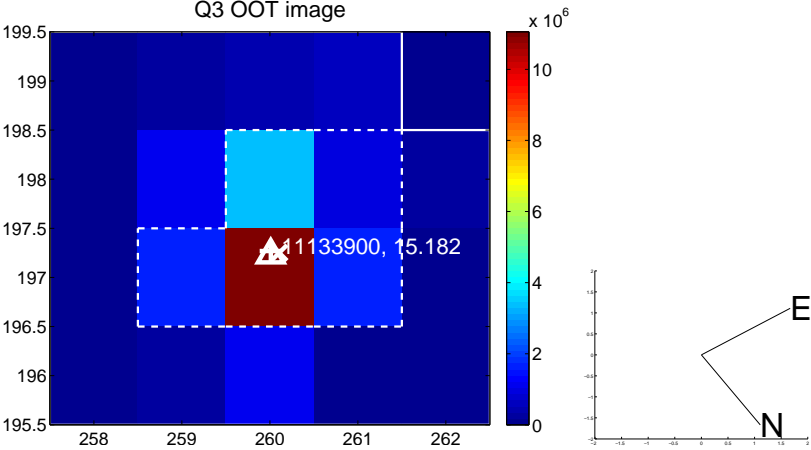
Q2 no OOT image



Q3 difference image



Q3 OOT image



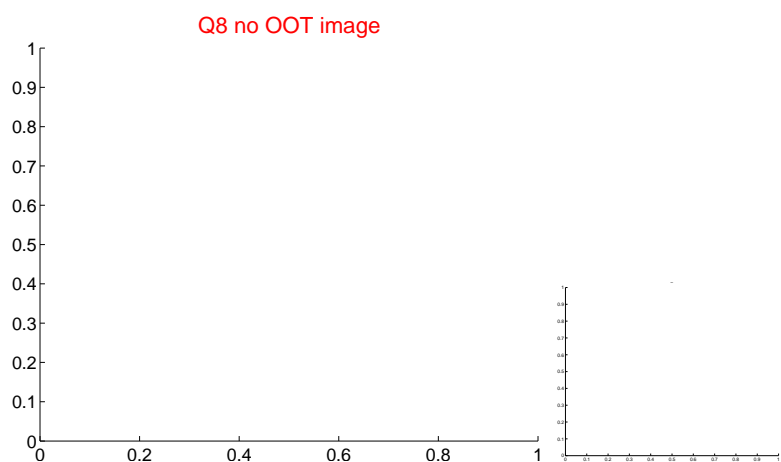
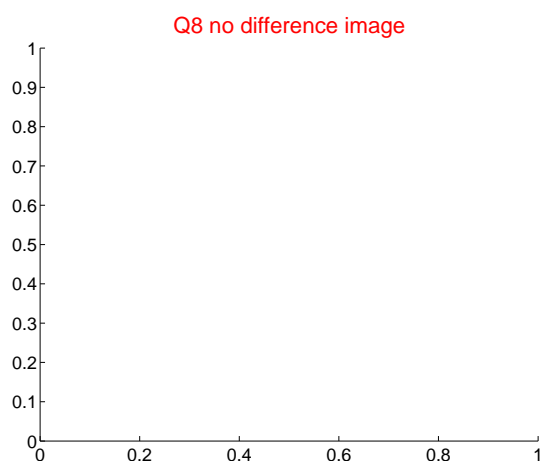
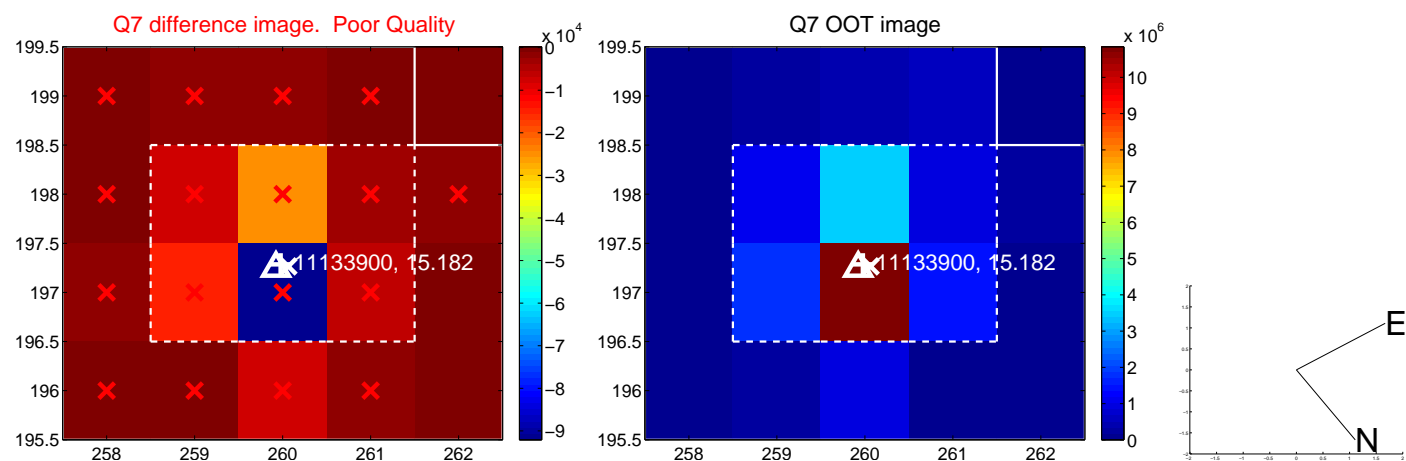
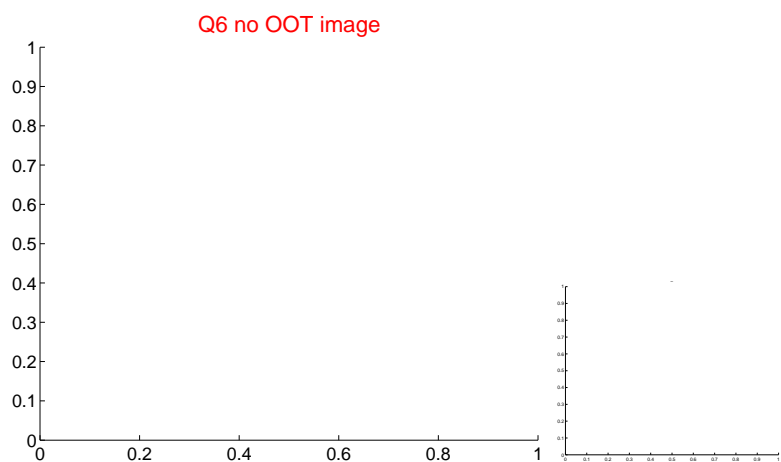
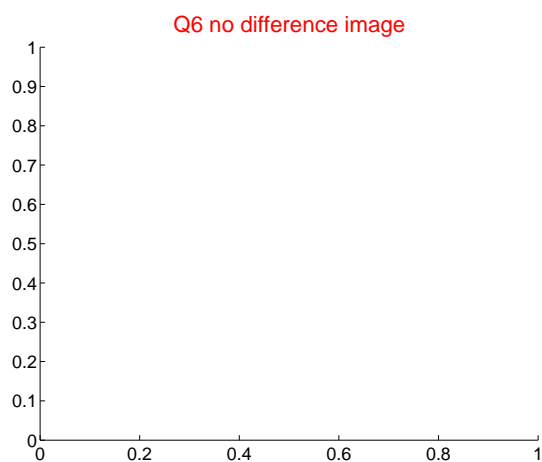
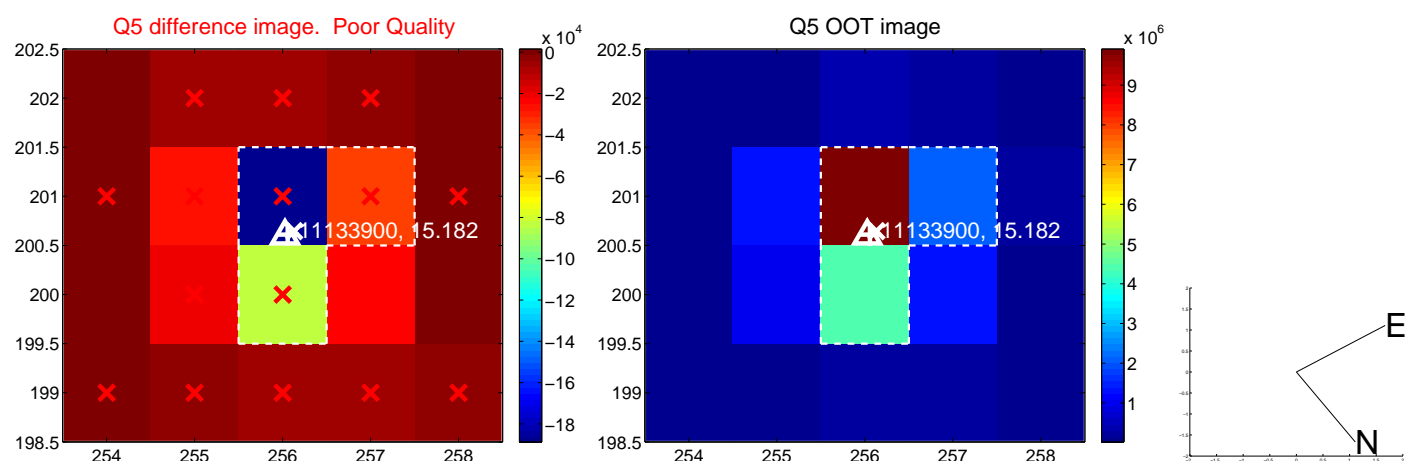
Q4 no difference image



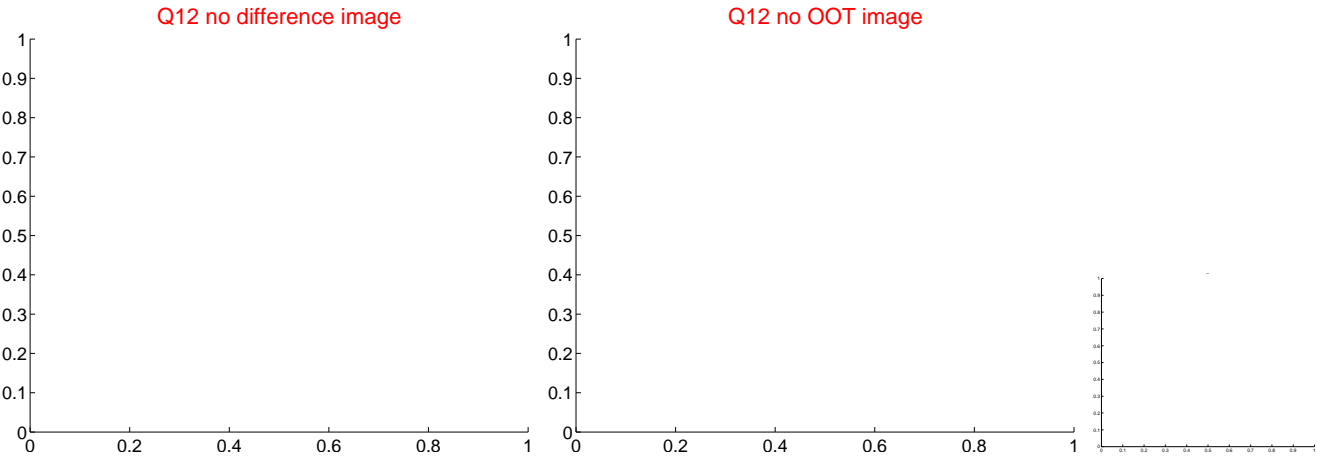
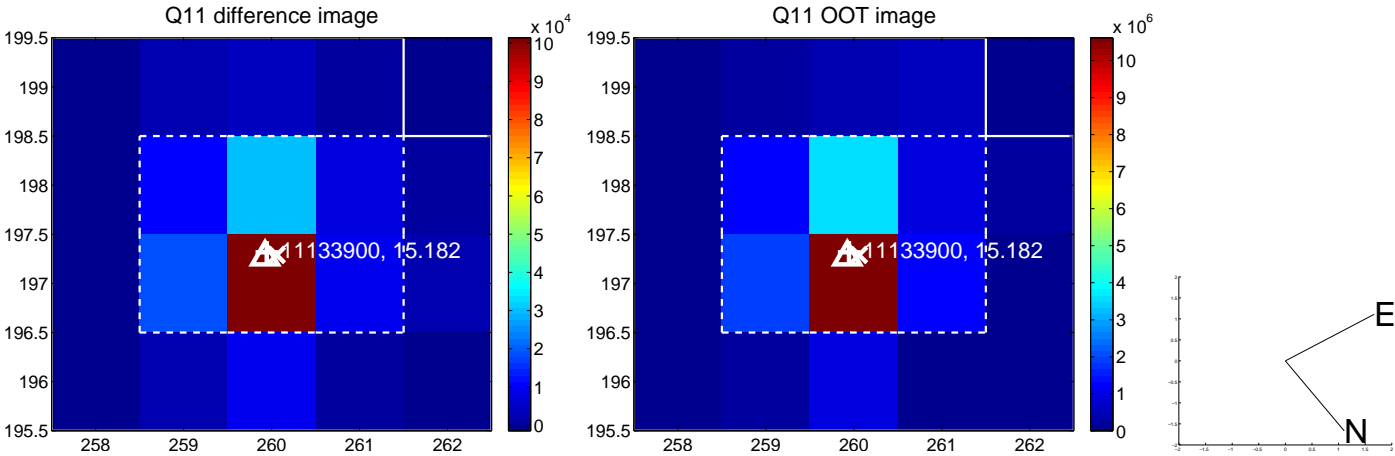
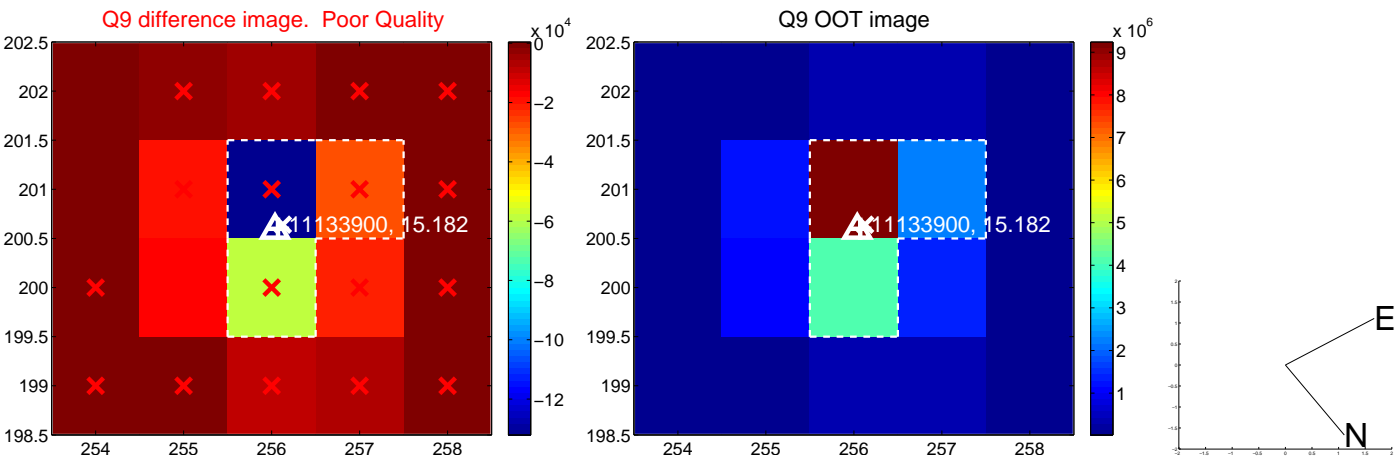
Q4 no OOT image



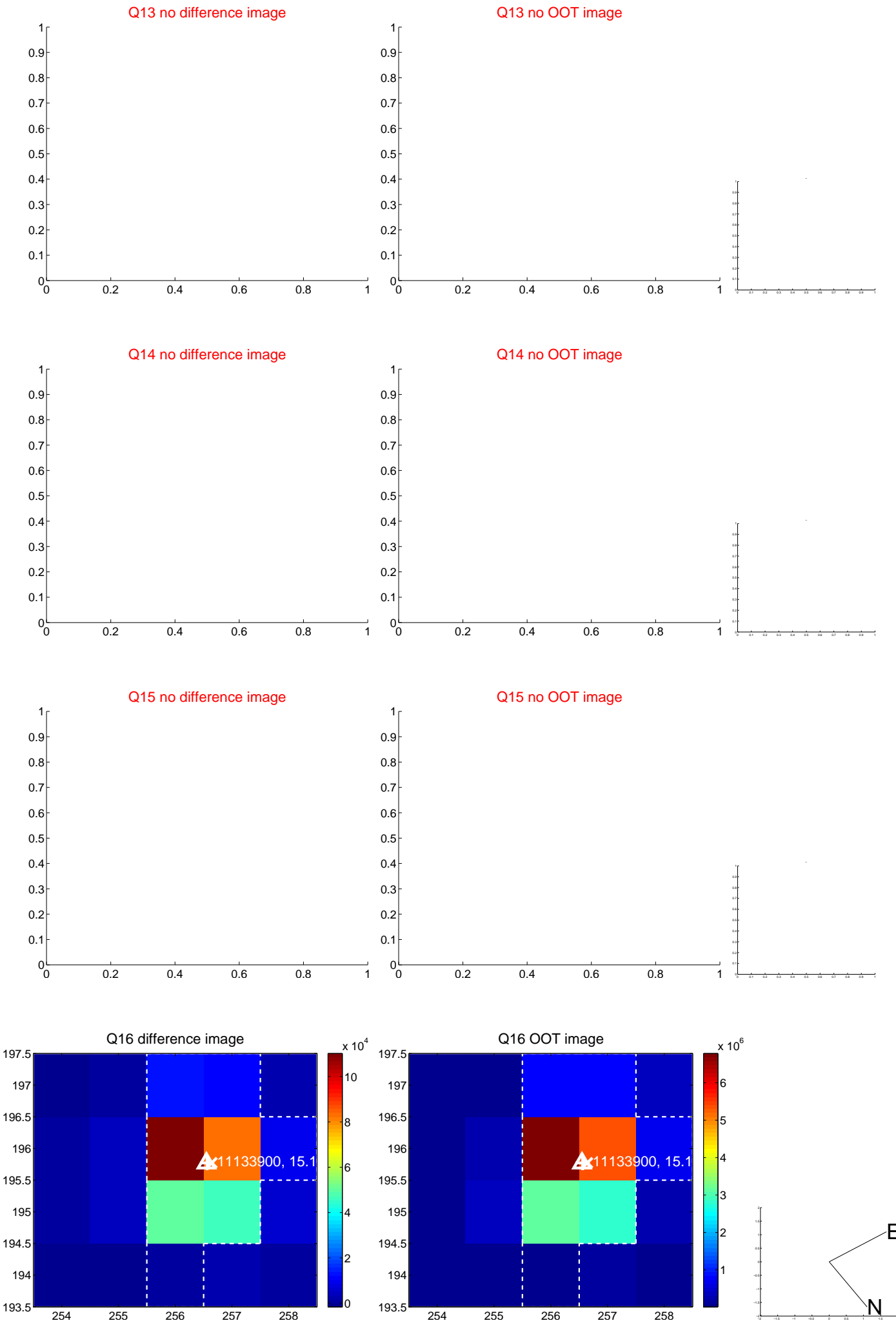
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



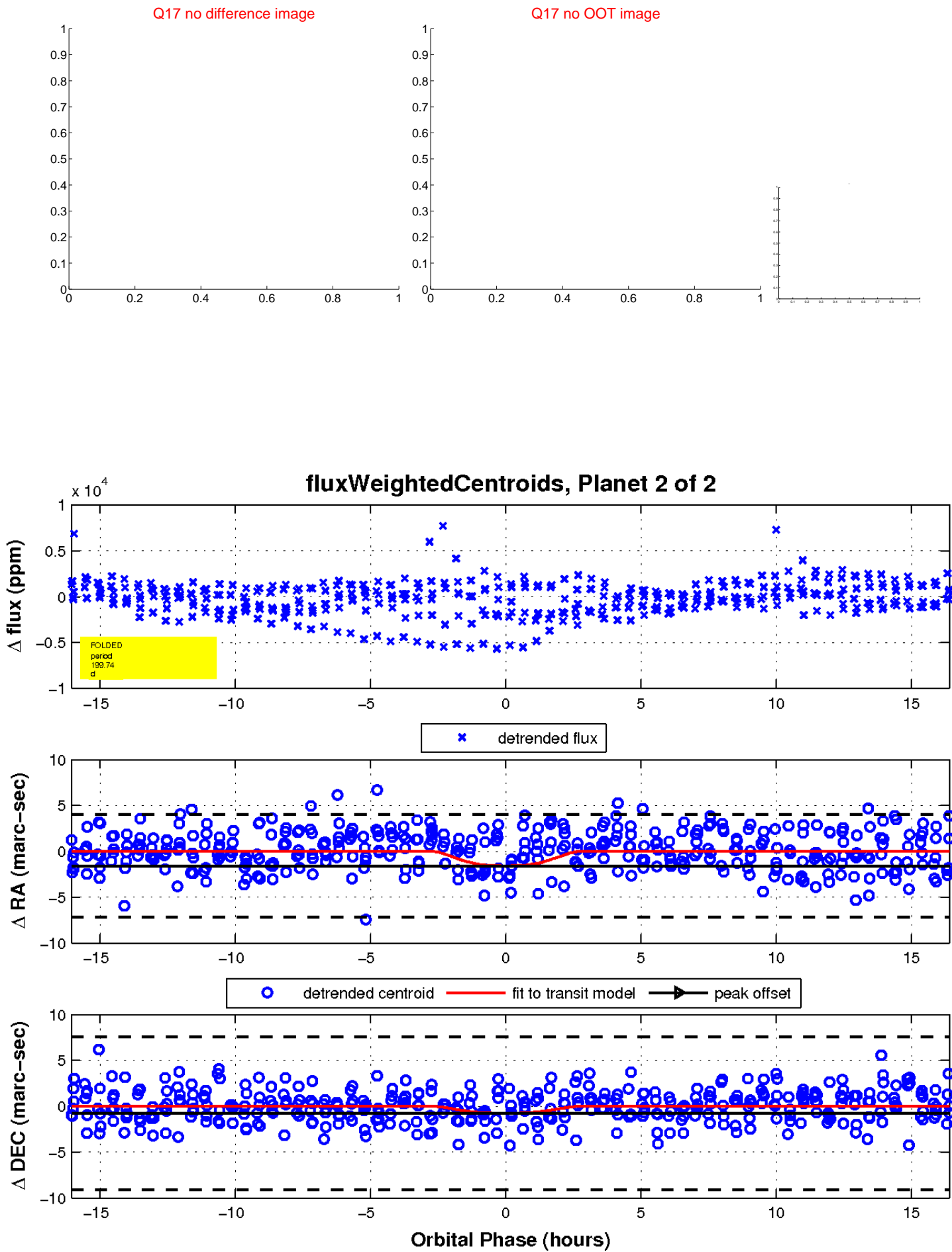
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

