

KIC 011704044

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})
011704044-01	OBS	7472.01	6.882723	134.044755	384627.6	3.500	9152.4	-1.0	0.95	5704	51.72	170.27
011704044-02	OBS	No	10.323939	137.496540	2429.6	24.094	476.1	43.2	0.95	5704	5.09	99.17
011704044-03	OBS	No	10.323983	140.699285	19797.8	15.000	419.7	-1.0	0.95	5704	13.18	99.16
011704044-04	OBS	No	108.872282	151.844034	1143.0	13.549	39.3	7.0	0.95	5704	6.14	4.29
011704044-05	OBS	No	217.007274	308.408522	3739.0	10.472	40.8	15.4	0.95	5704	9.69	1.71
011704044-06	OBS	No	20.645940	132.028644	1270.6	10.500	21.8	-1.0	0.95	5704	3.33	39.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011704044-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
011704044-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—HALO_GHOST
011704044-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS
011704044-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011704044-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011704044-06	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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

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

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

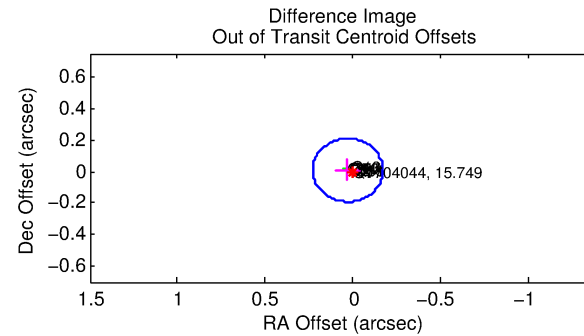
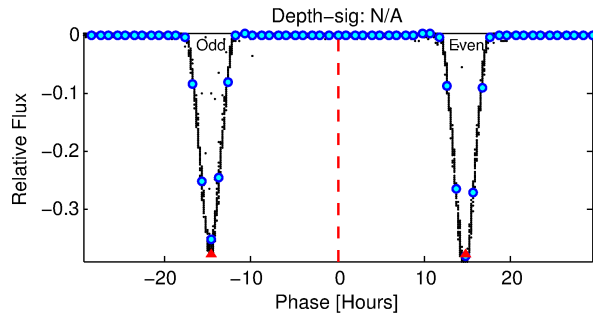
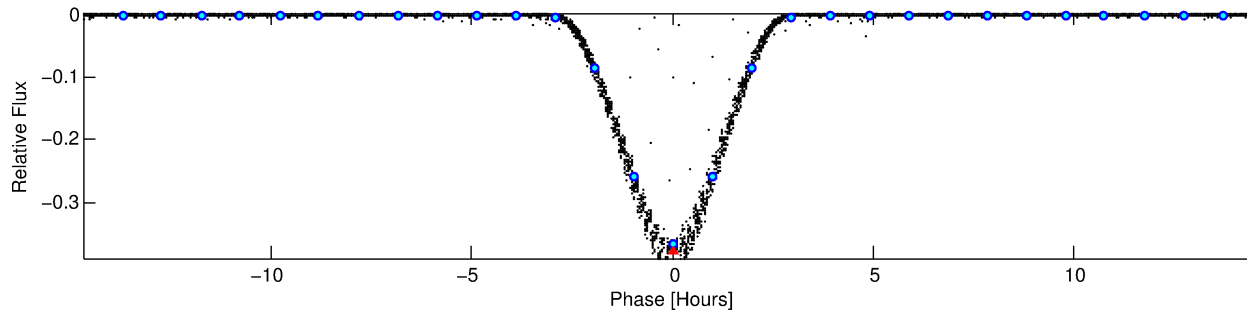
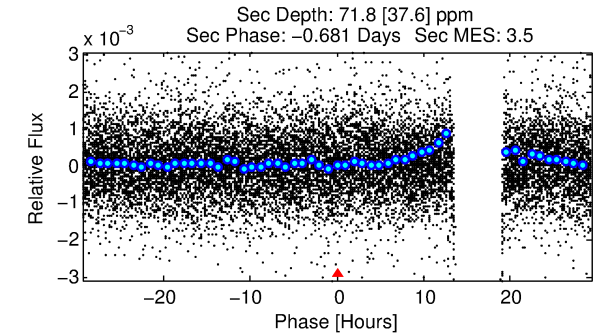
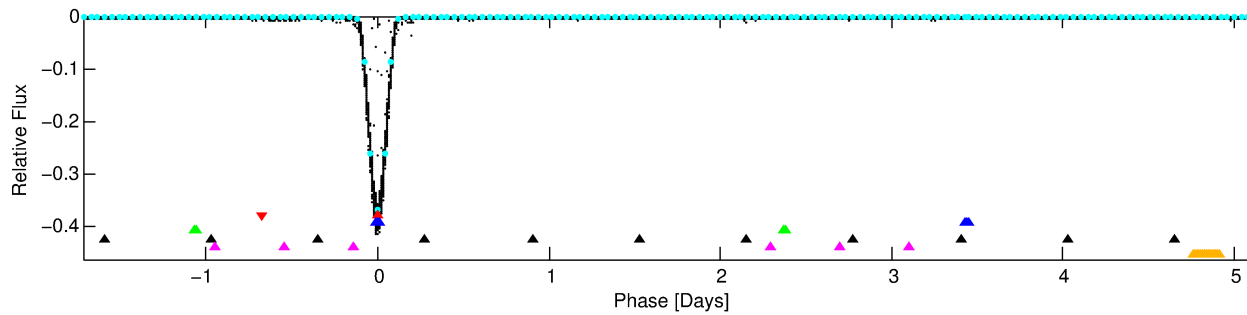
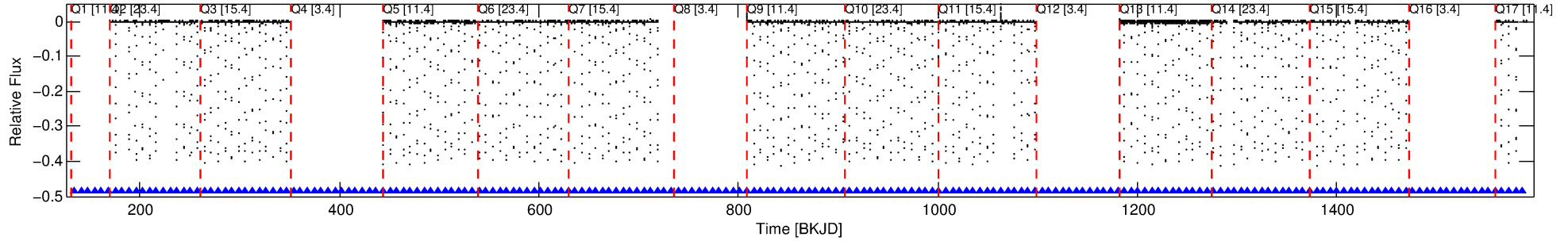
Ephemeris Match Information For 011704044-01

No Significant Match Found

DV One-Page Summary

KIC: 11704044 Candidate: 1 of 6 Period: 6.883 d
KOI: K07472.01 Corr: 0.799

Kp: 15.75 R*: 0.95 Rs Teff: 5704.0 K Logg: 4.48 Fe/H: 0.100



TPS TCE Results:

Period = 6.88272 d
Epoch = 134.0448 BKJD

DV fit results are unavailable

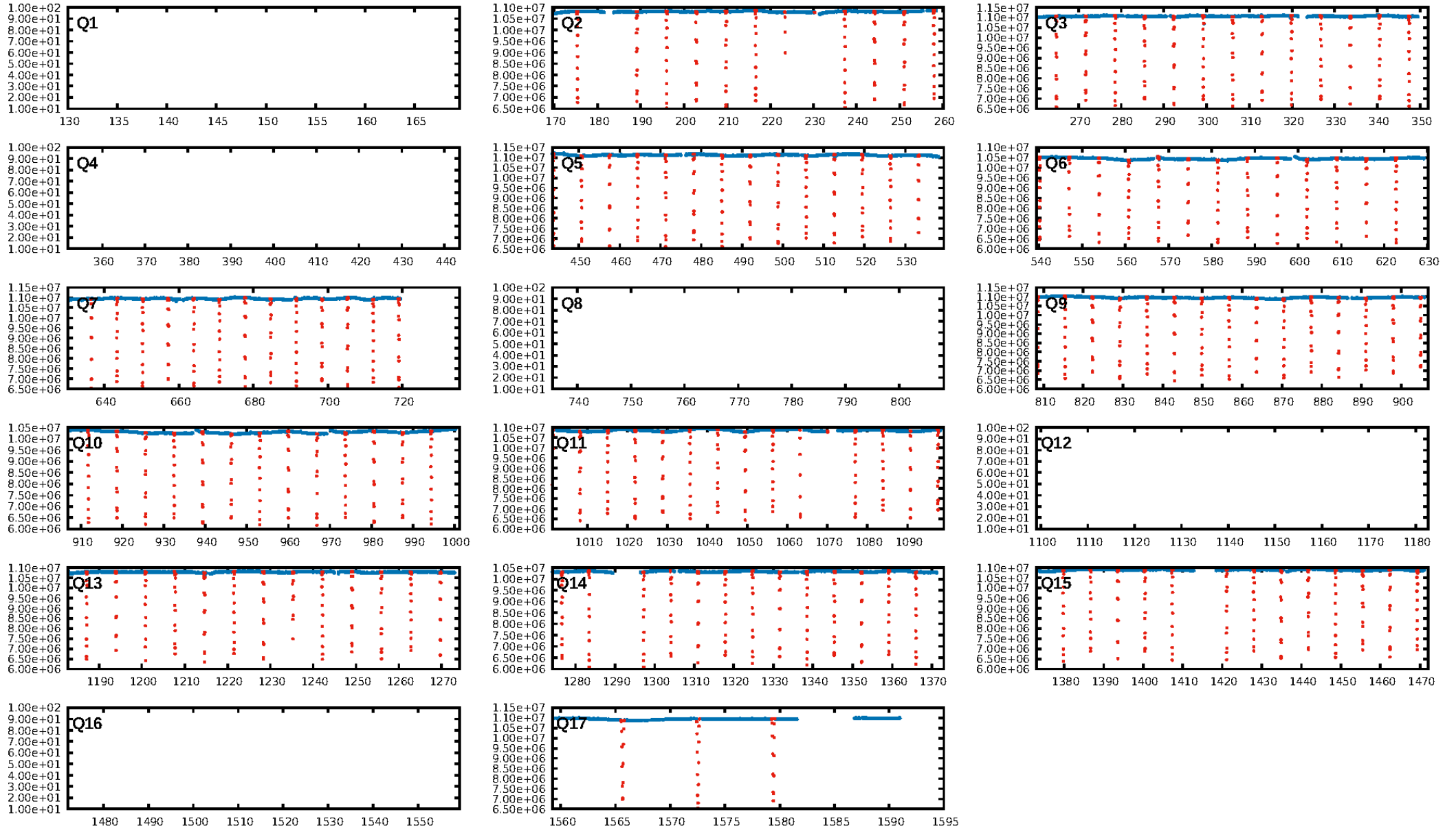
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.9% [3.39 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [145/145]
GhostDiagnostic-chr: 2.164
Centroid-sig: 0.0%
Centroid-so: 0.176 arcsec [150.02 σ]
OotOffset-rm: 0.032 arcsec [0.48 σ]
KicOffset-rm: 0.137 arcsec [1.86 σ]
OotOffset-st: 4/4/0/4 [12]
KicOffset-st: 4/4/0/4 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [12/12]

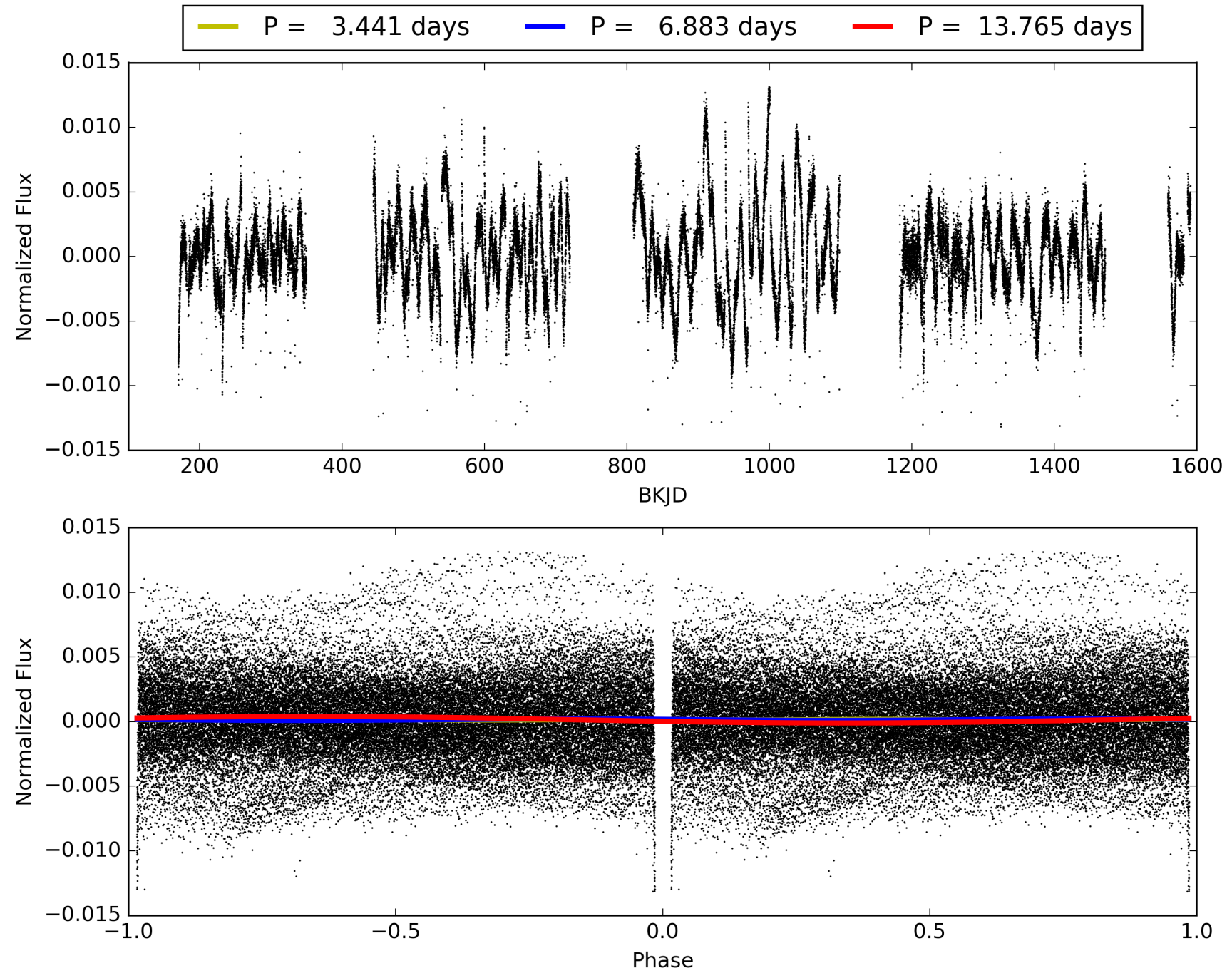
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 10:27:12 Z

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

TCE 011704044-01, PDC Light Curves

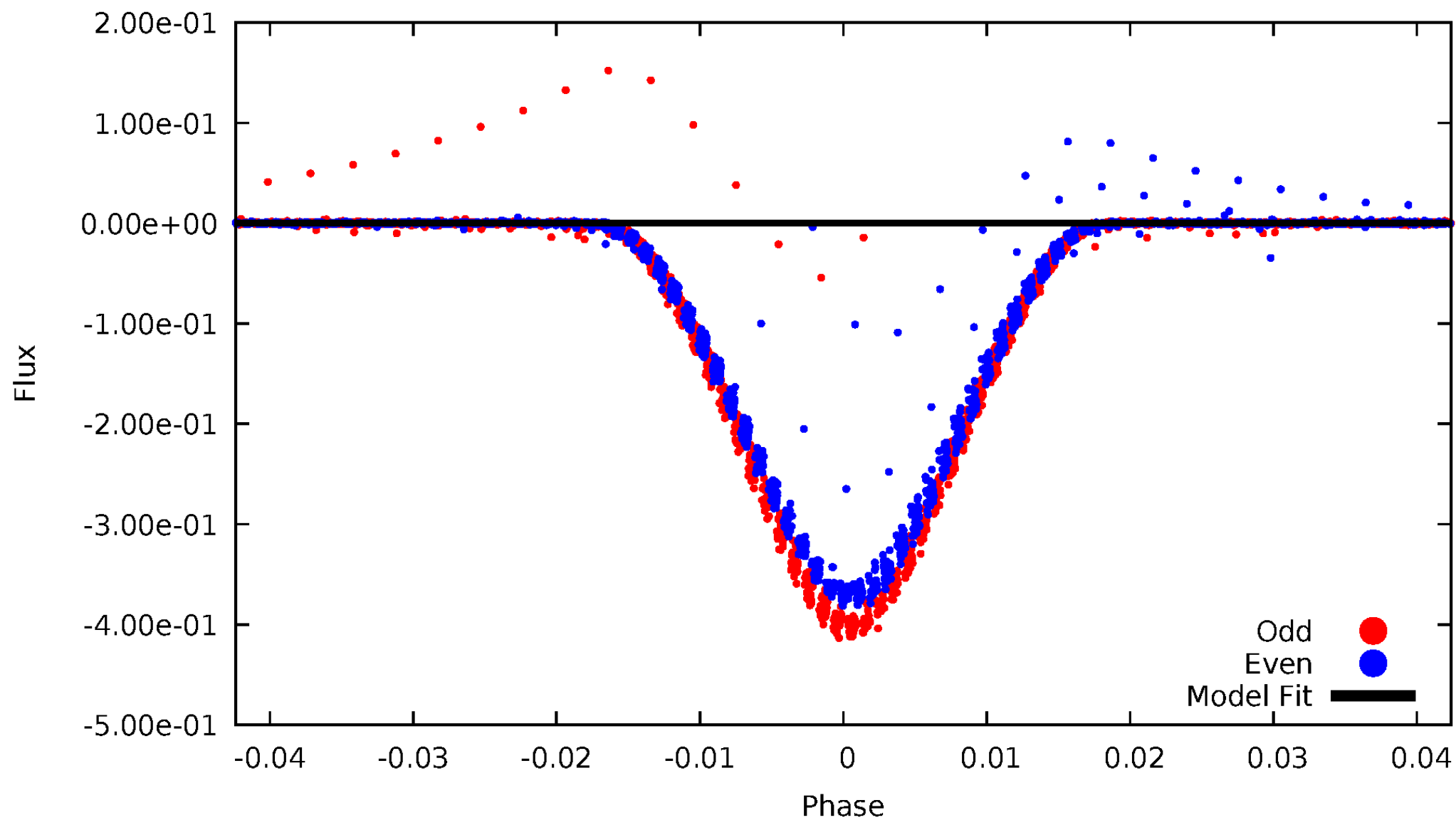


TCE 011704044-01



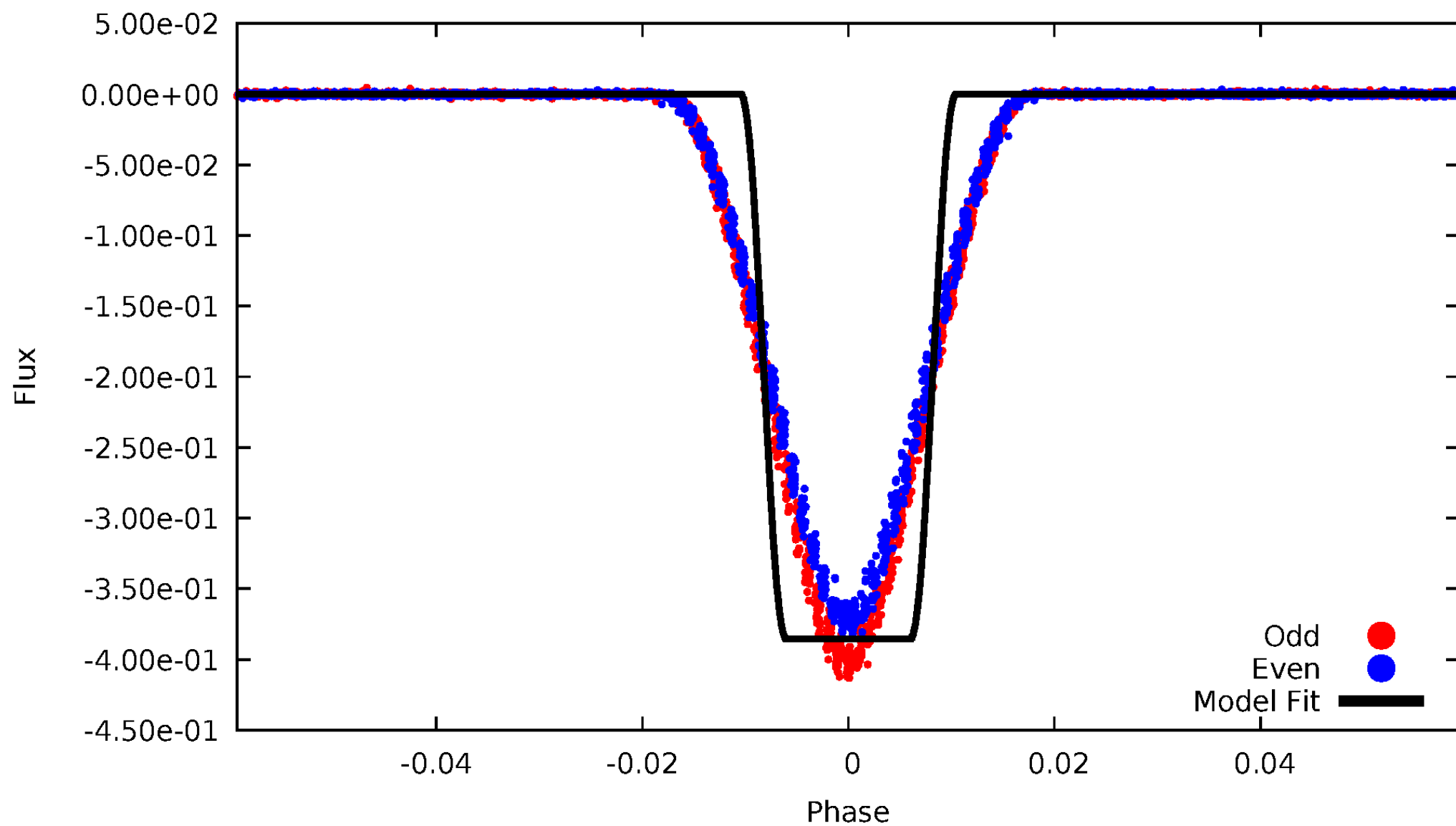
DV Odd/Even

TCE 011704044-01



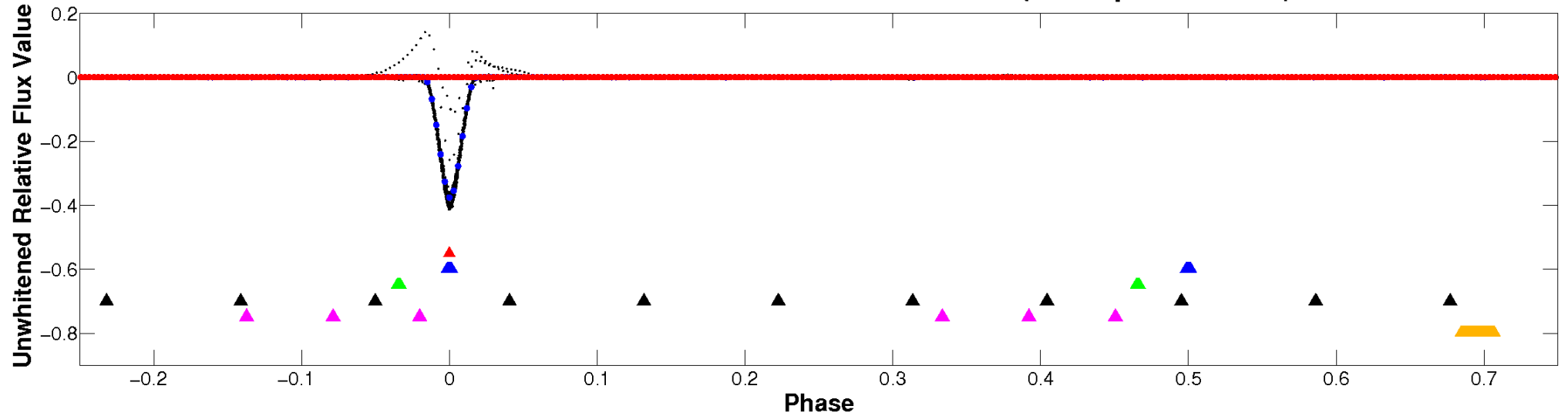
ALT Odd/Even

TCE 011704044-01

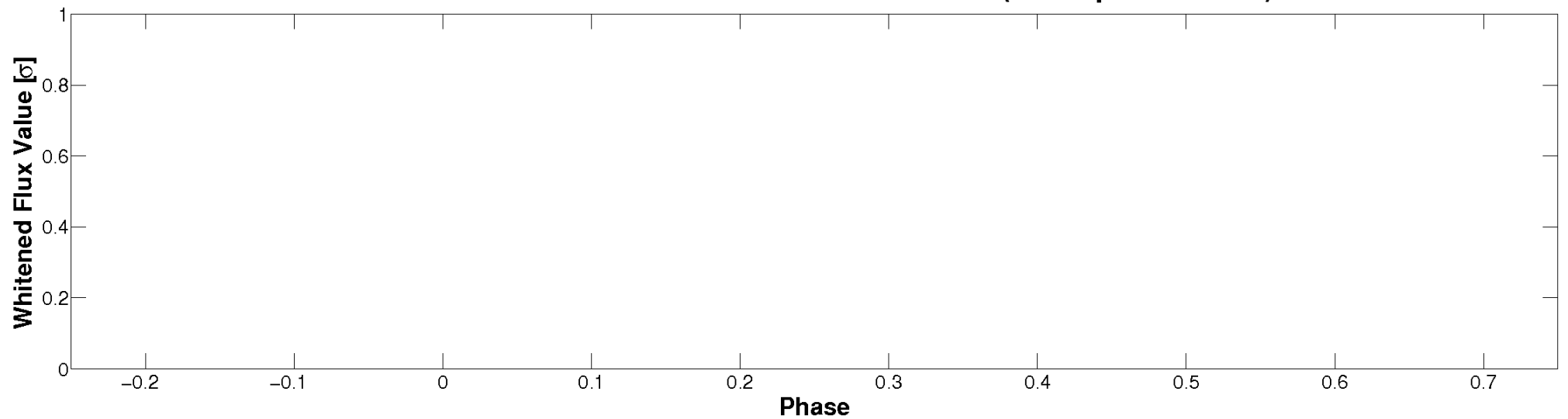


Non-Whitened Vs. Whitened Light Curve

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

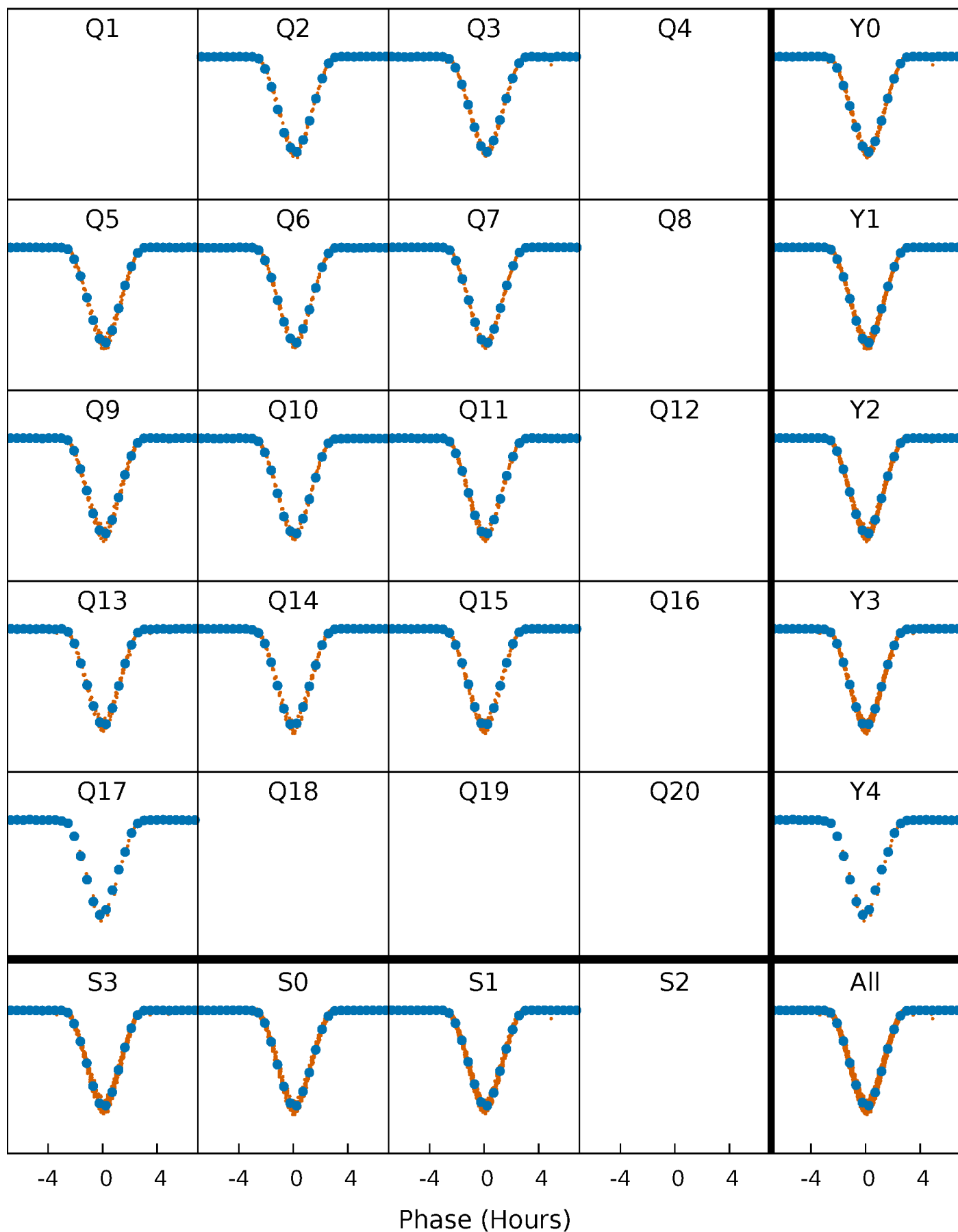


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



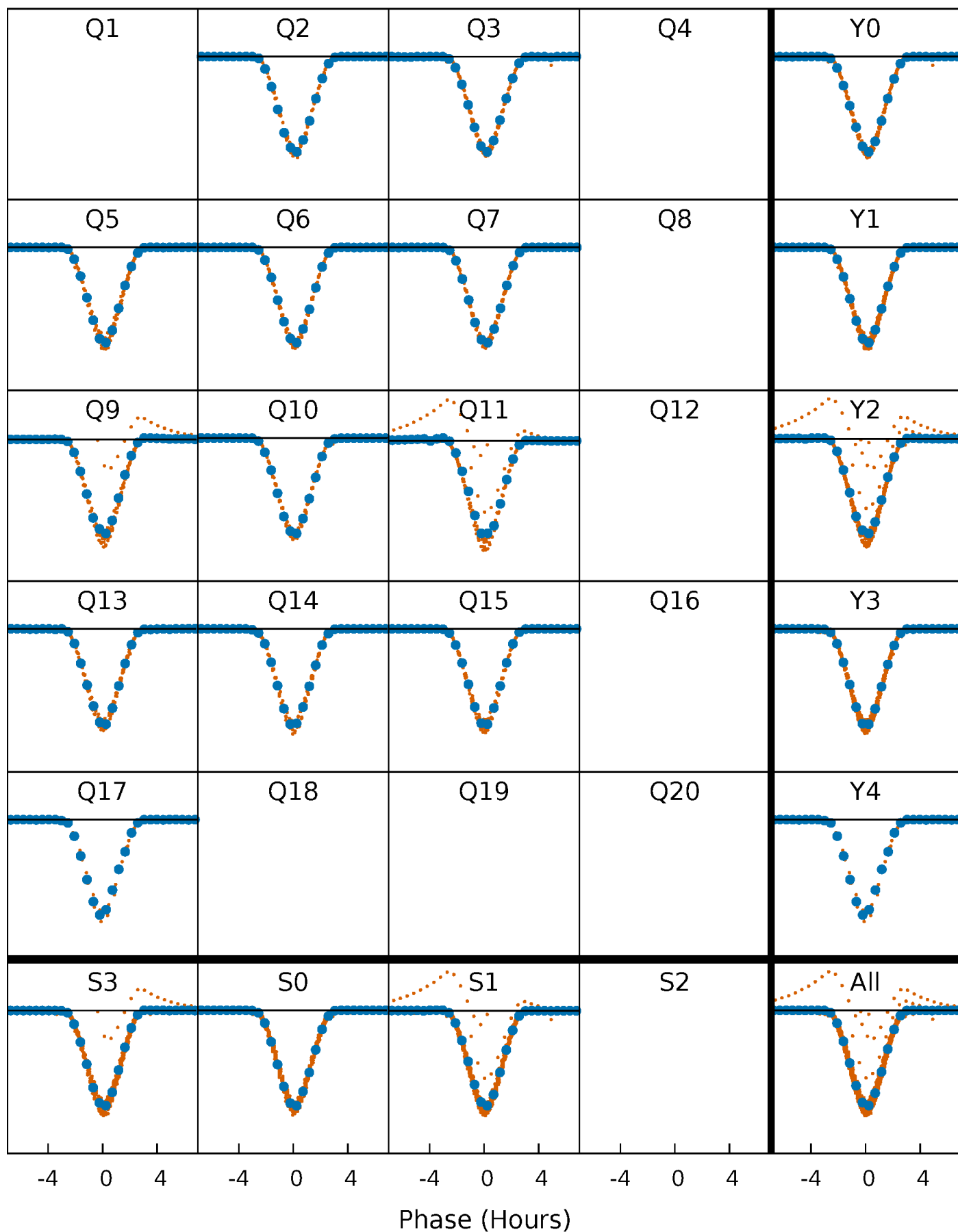
PDC Quarter-Phased Transit Curves

TCE 011704044-01 P= 6.882723 Days $T_0=134.044755$ (BKJD)



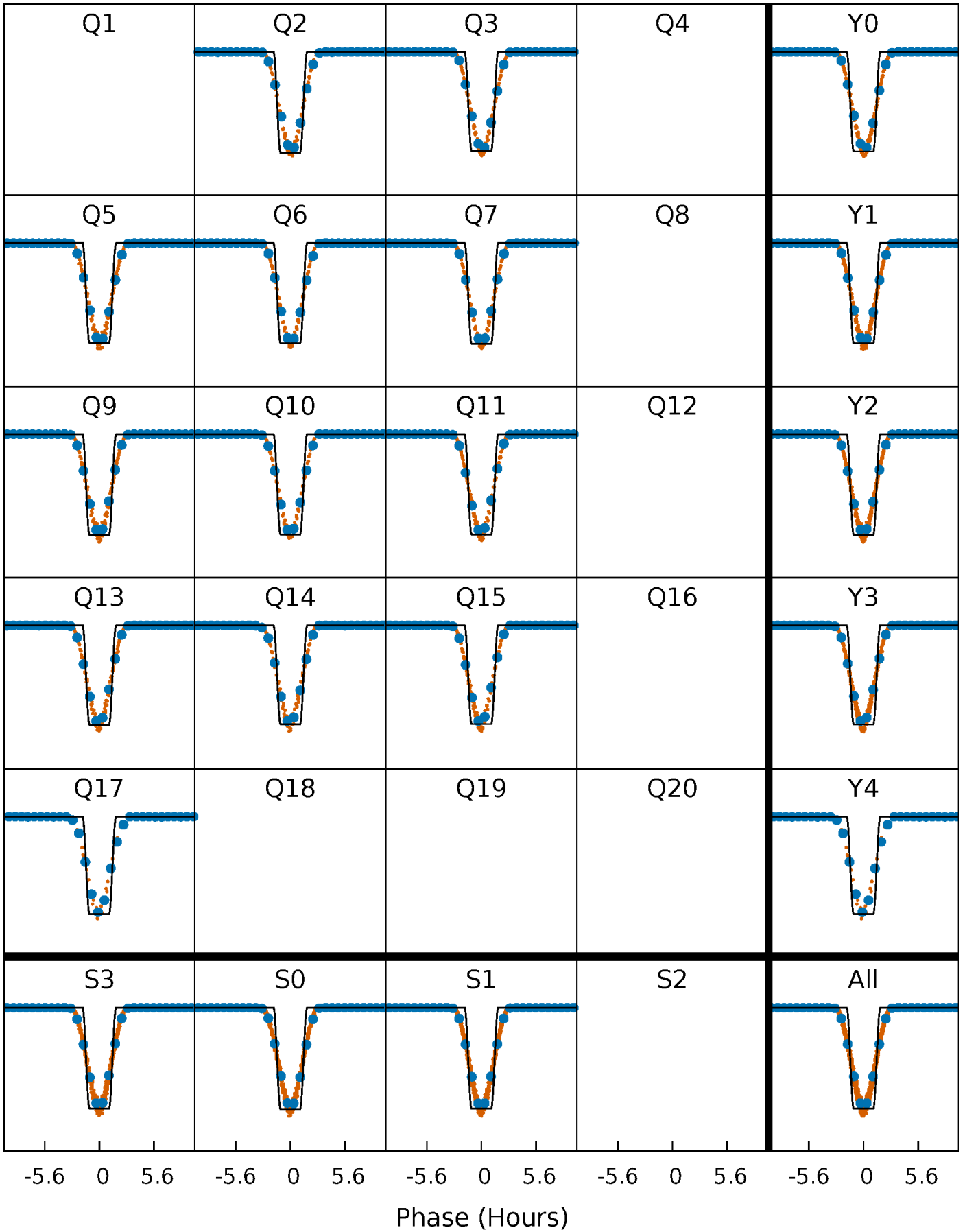
DV Quarter-Phased Transit Curves

TCE 011704044-01 P= 6.882723 Days $T_0=134.044755$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

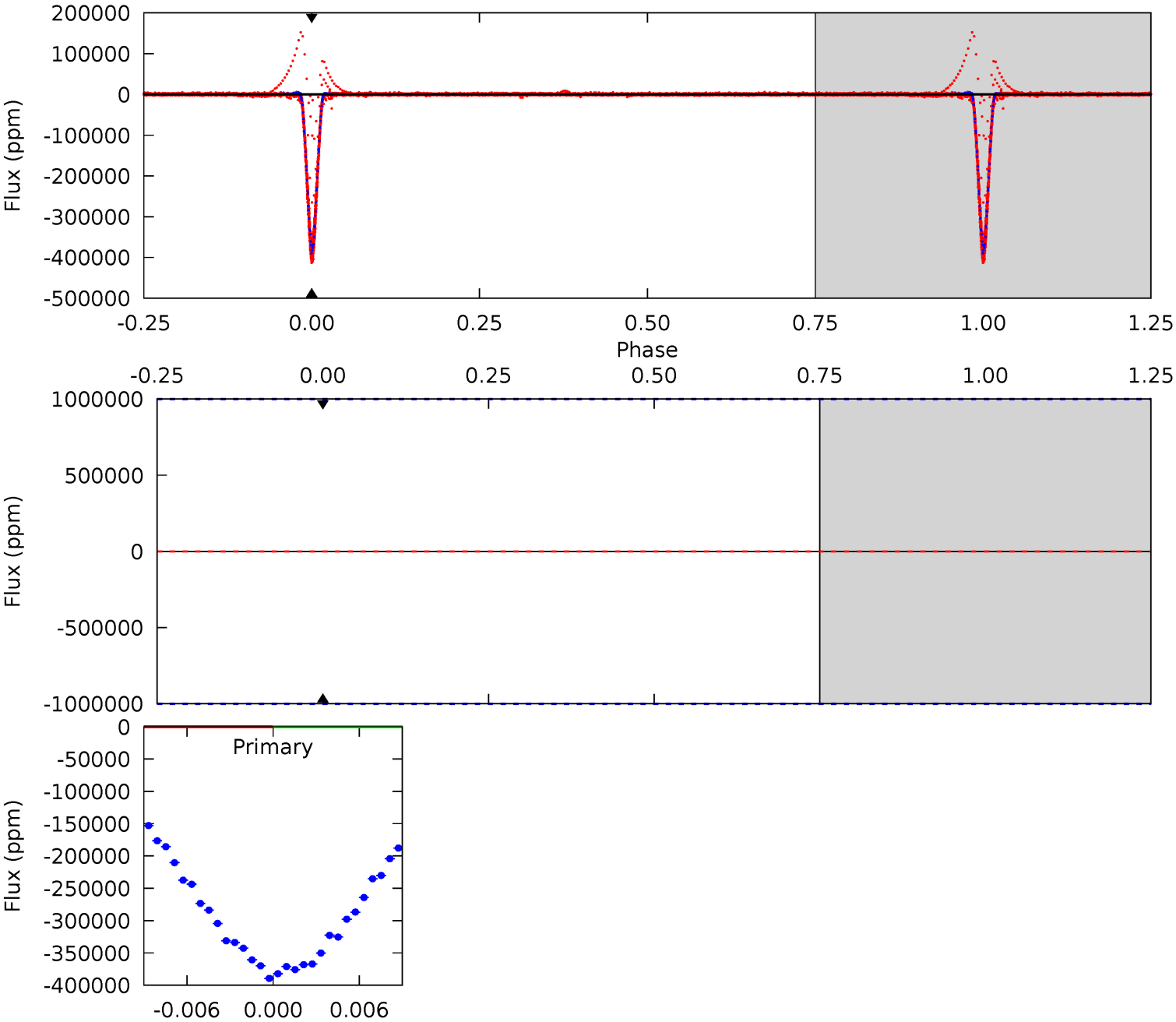
TCE 011704044-01 P= 6.882723 Days $T_0=134.048506$ (BKJD)



DV Model-Shift Uniqueness Test

011704044-01, P = 6.882723 Days, E = 134.044755 Days

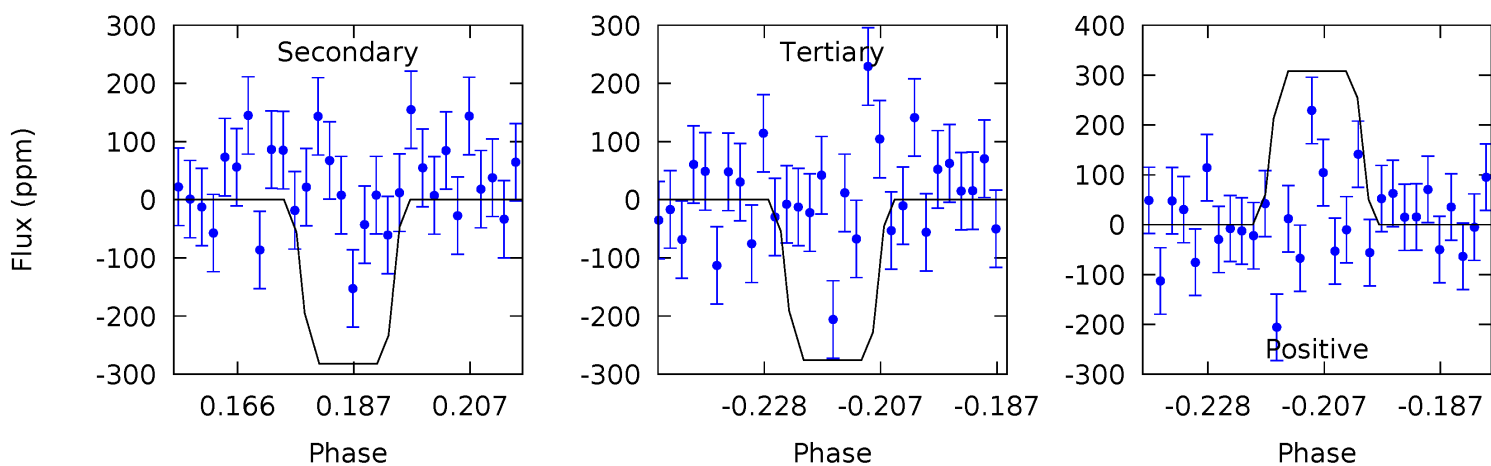
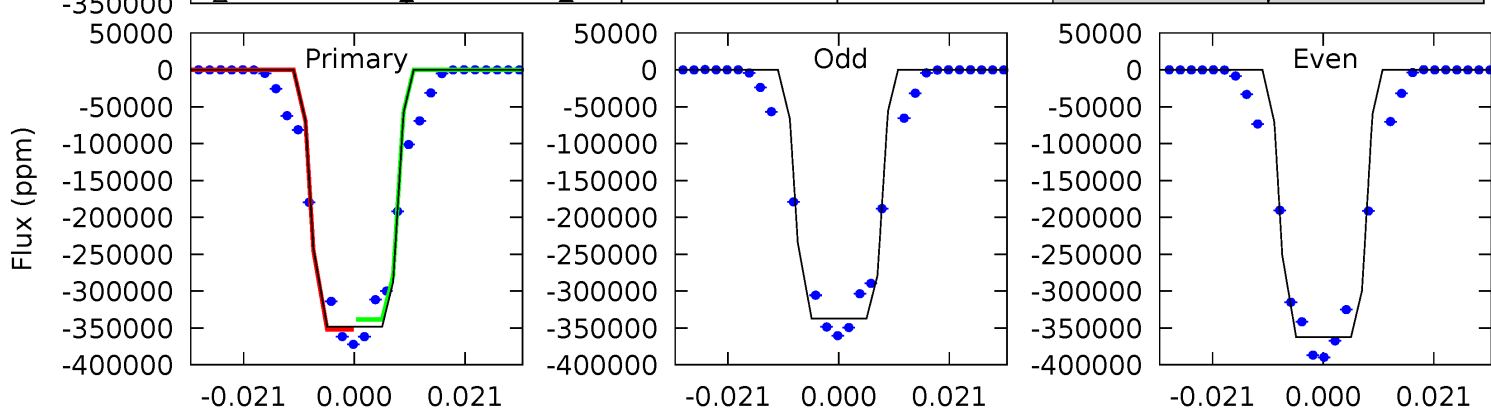
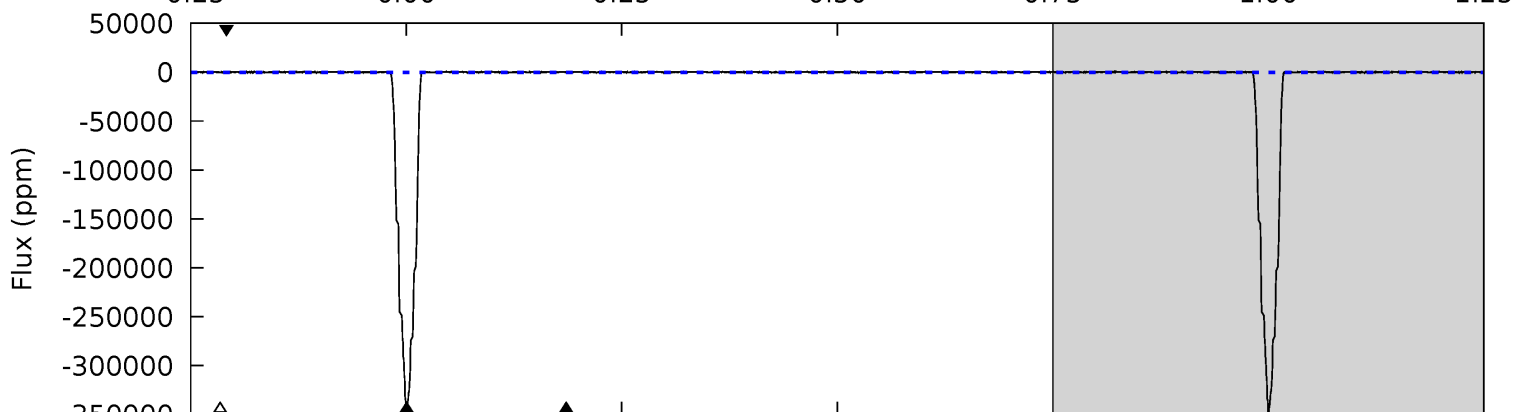
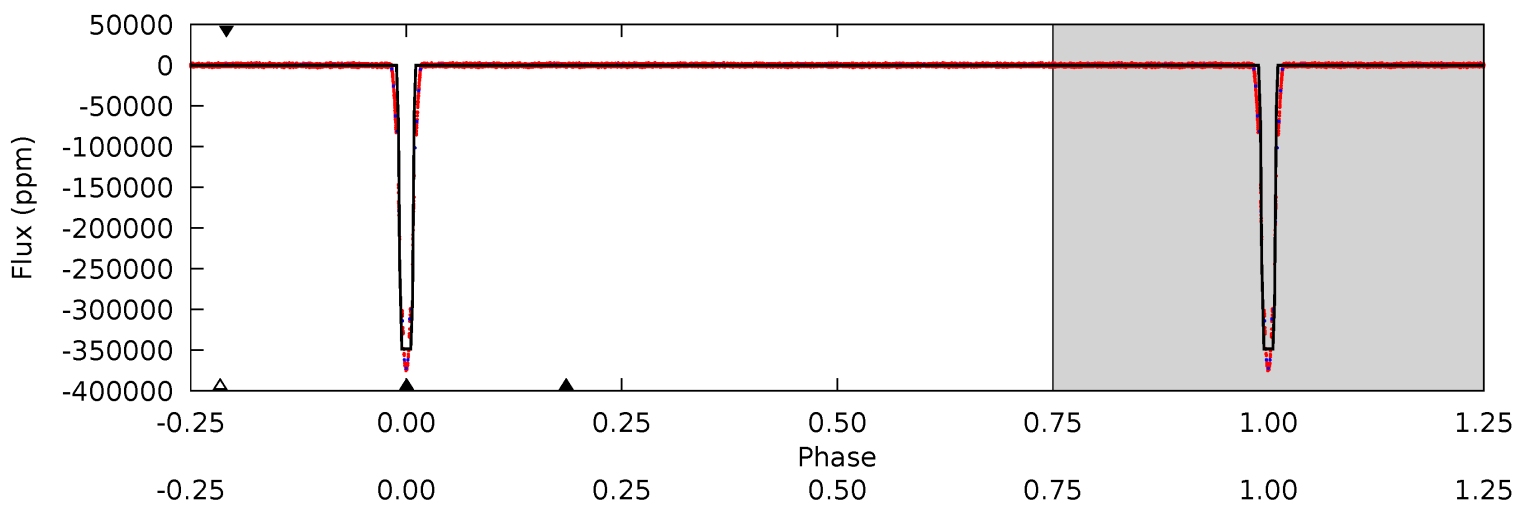
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011704044-01, P = 6.882723 Days, E = 134.048506 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4902	3.97	3.88	4.33	4.88	2.31	1.14	4898	4897	0.09	-0.36	201.9	1.00	0.00	0



Stellar Parameters For KIC 011704044

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5704^{+171}_{-206}	$4.483^{+0.052}_{-0.195}$	$0.100^{+0.250}_{-0.300}$	$0.948^{+0.279}_{-0.093}$	$0.996^{+0.111}_{-0.111}$	$1.646^{+0.459}_{-0.867}$
	+3%/-4%	+1%/-4%	+250%/-300%	+29%/-10%	+11%/-11%	+28%/-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 011704044-01 / KOI 7472.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$53.66^{+13.37}_{-11.52}$	1315^{+91}_{-72}	-2675^{+7425}_{-1961}	$-2.760^{+103.318}_{-89.670}$
Alt.	-282 ± 71	$67.38^{+13.68}_{-11.94}$	1314^{+85}_{-63}	-1894^{+208}_{-111}	$0.167^{+0.094}_{-0.063}$

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 $A_{obs} \gg 1.0$

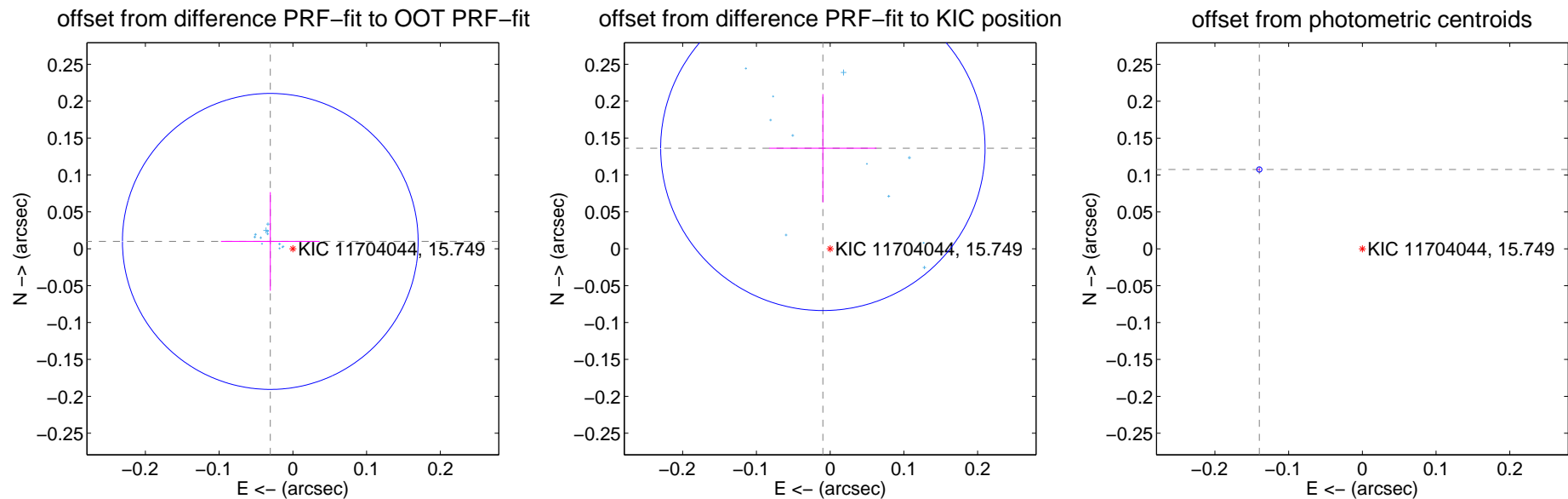
DV Centroid Data

Supplemental centroid analysis for 011704044-01. Kepler magnitude: 15.75. Transit SNR -1.00

There are 12 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

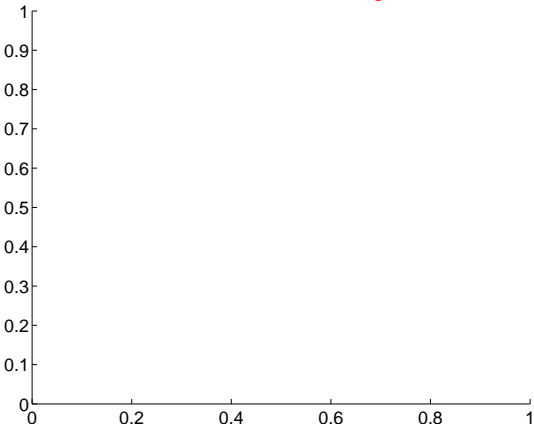
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.032 ± 0.067	0.48	0.031 ± 0.067	0.010 ± 0.067
PRF-fit source offset from KIC position	0.137 ± 0.073	1.86	0.010 ± 0.073	0.136 ± 0.073
photometric centroid source offset	0.18 ± 0.00	150.02	0.14 ± 0.00	0.11 ± 0.00



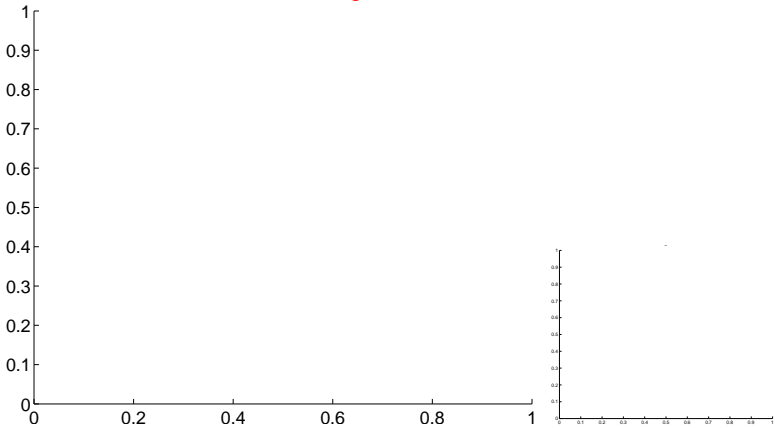
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

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

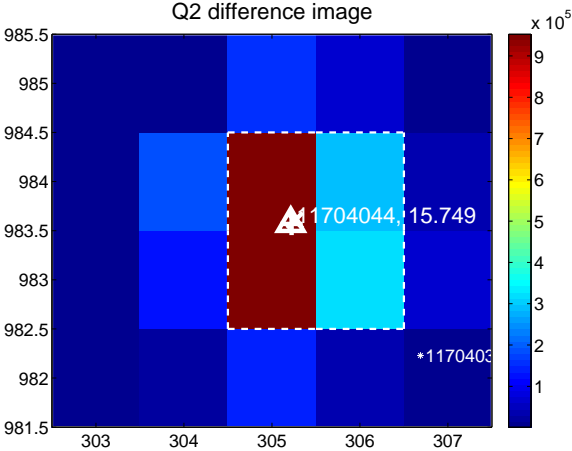
Q1 no difference image



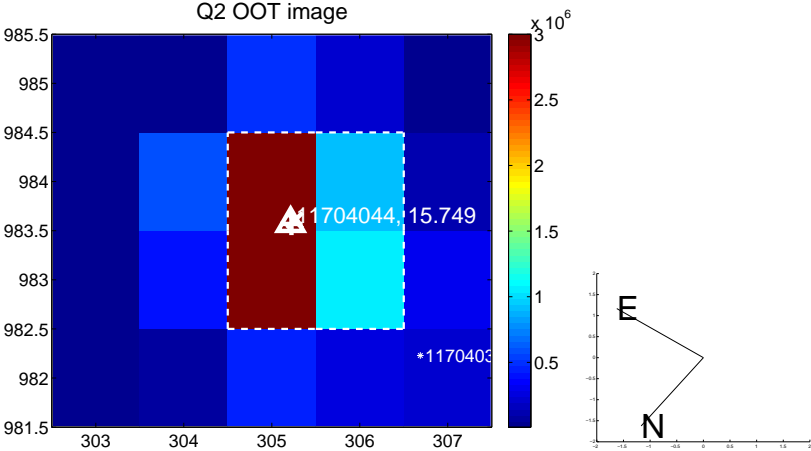
Q1 no OOT image



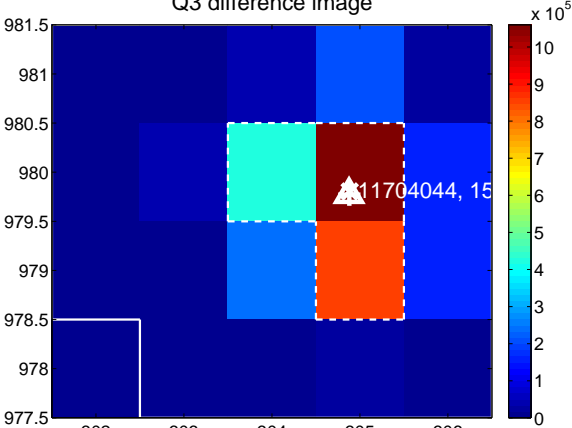
Q2 difference image



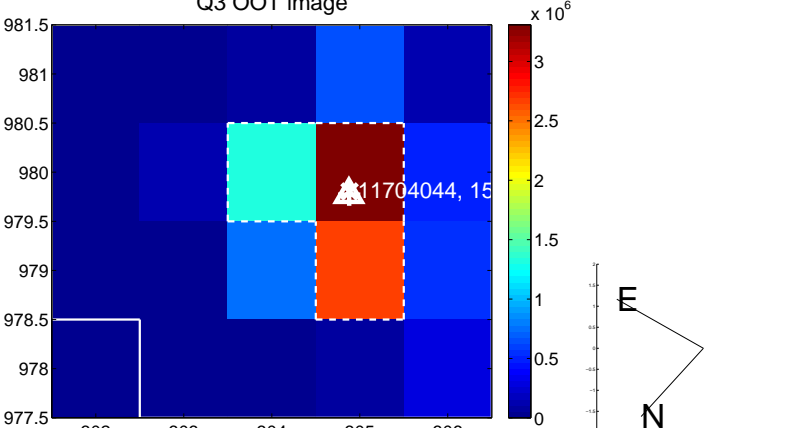
Q2 OOT image



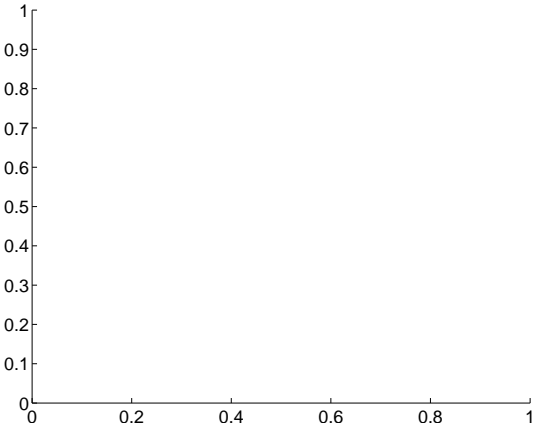
Q3 difference image



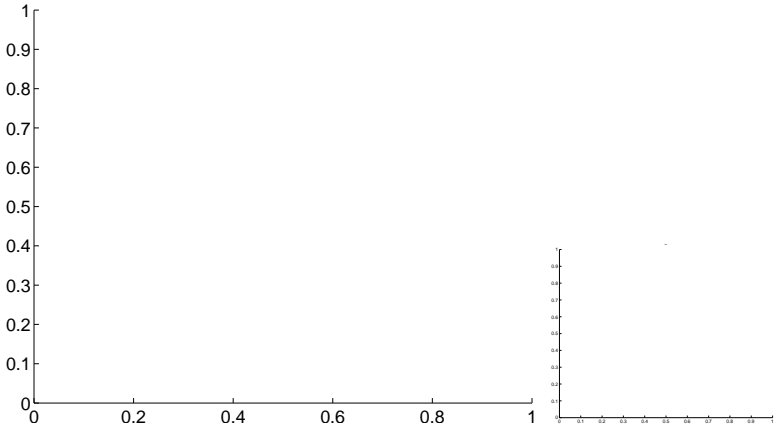
Q3 OOT image



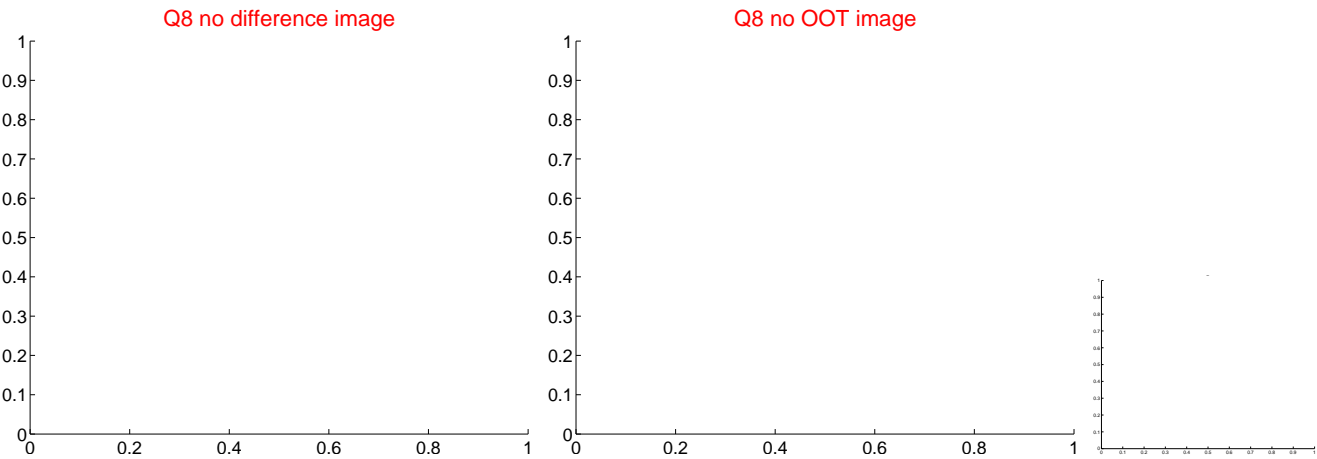
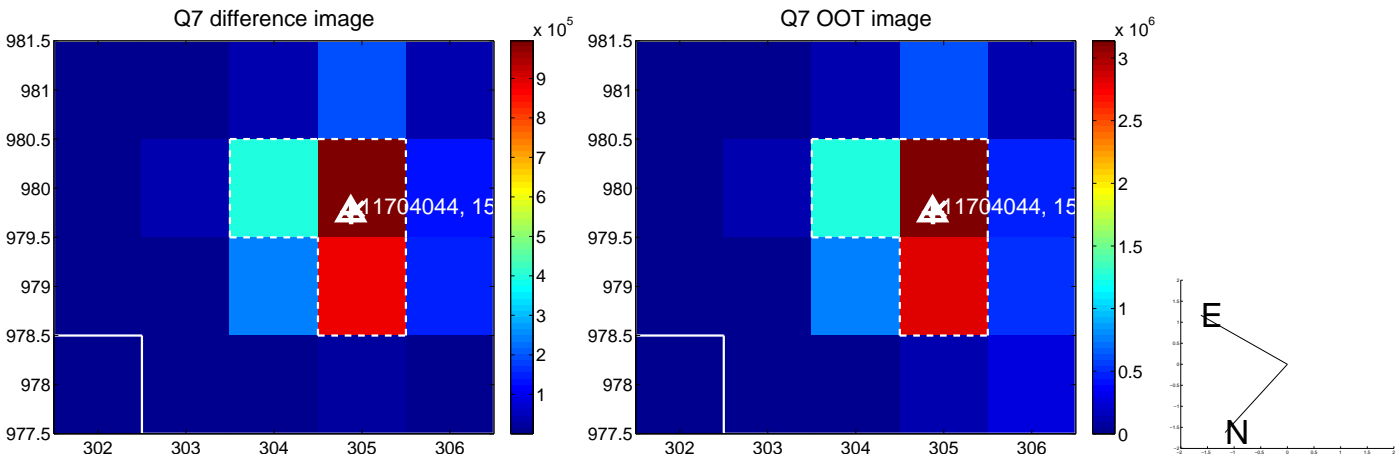
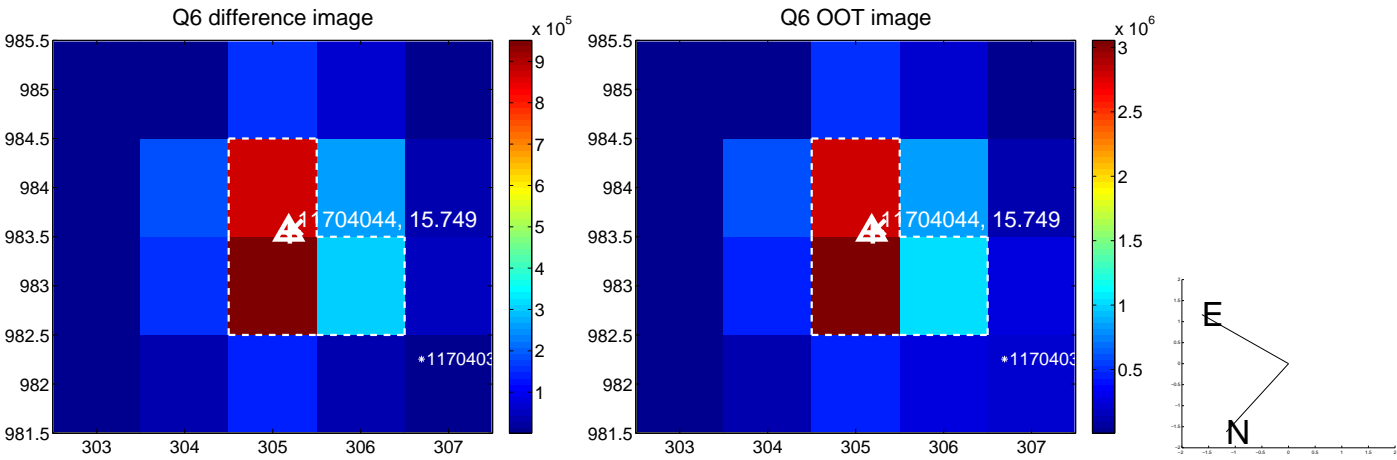
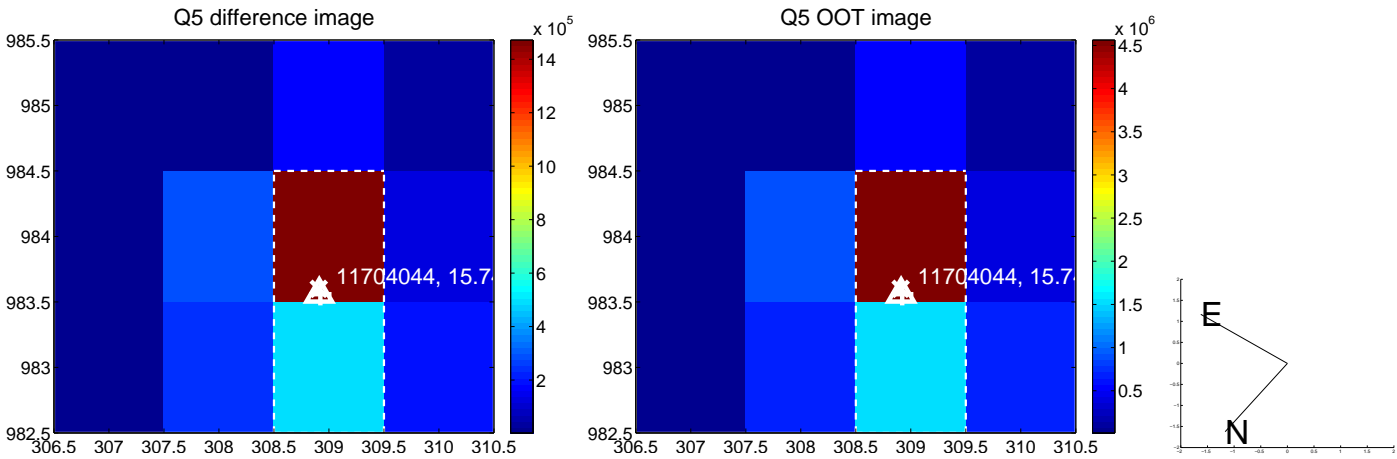
Q4 no difference image



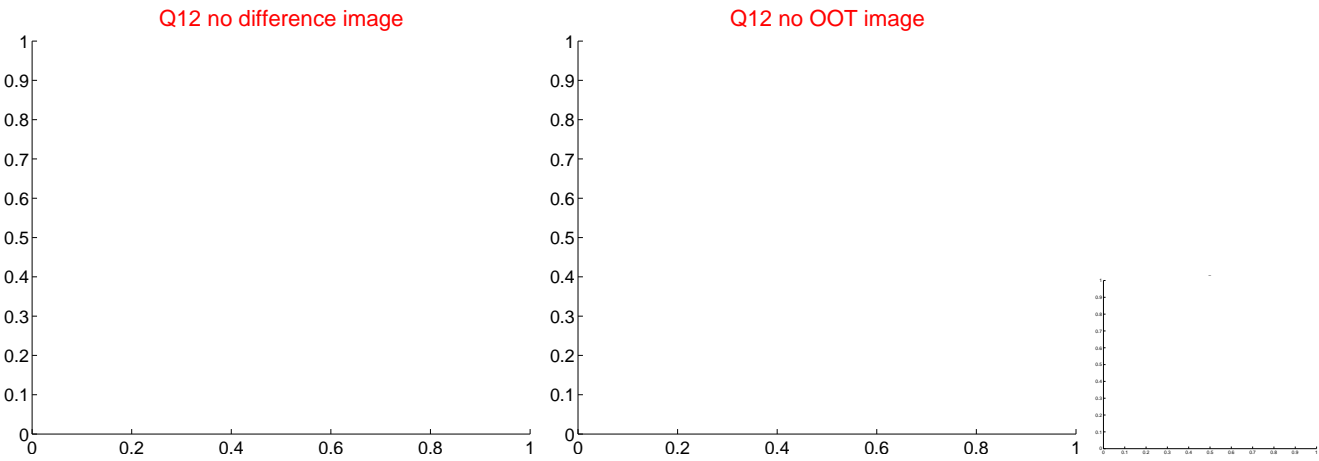
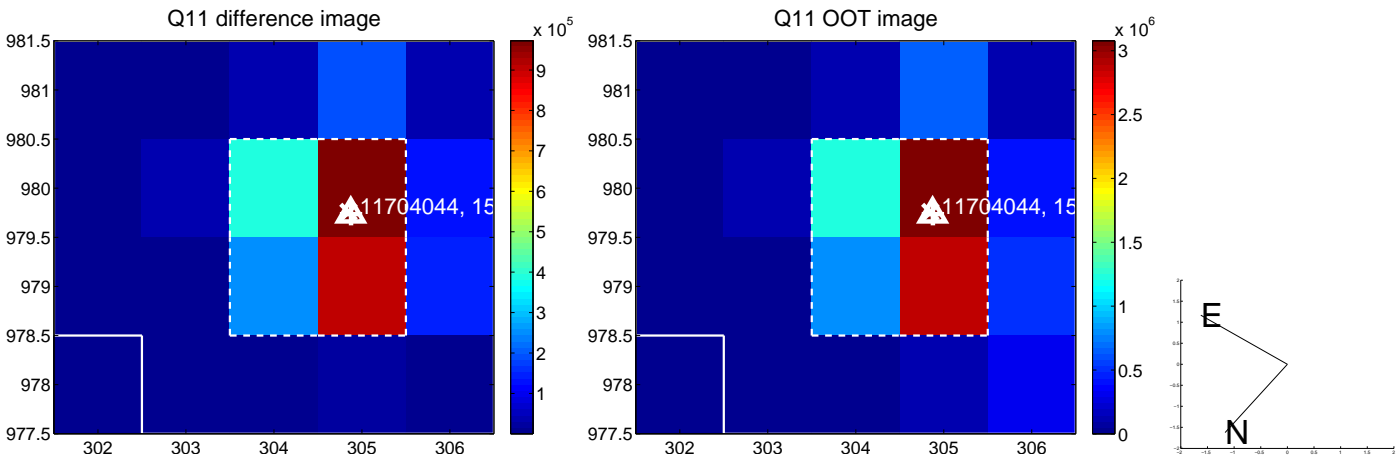
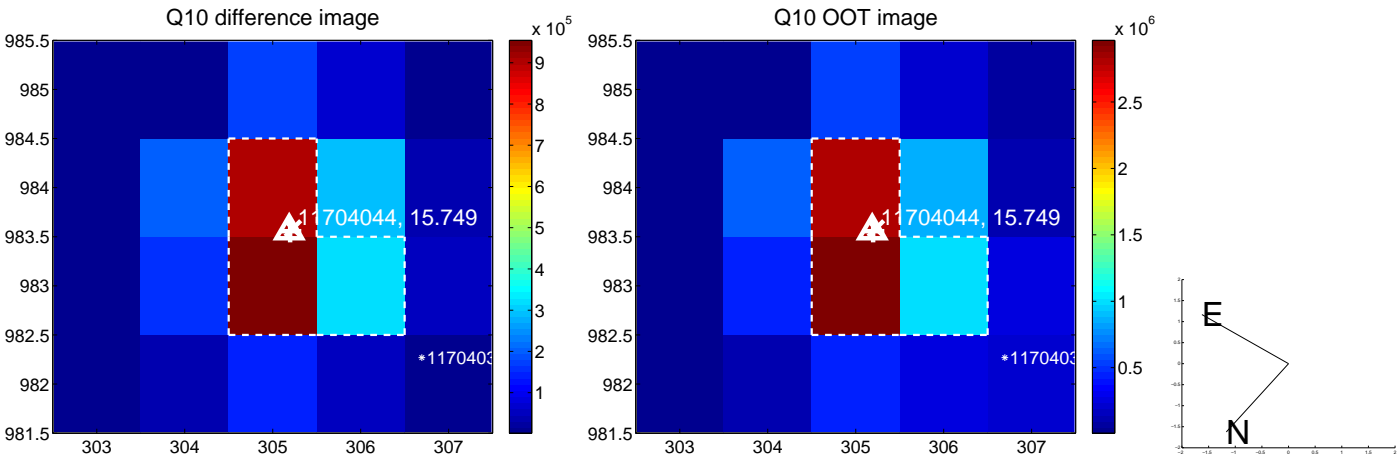
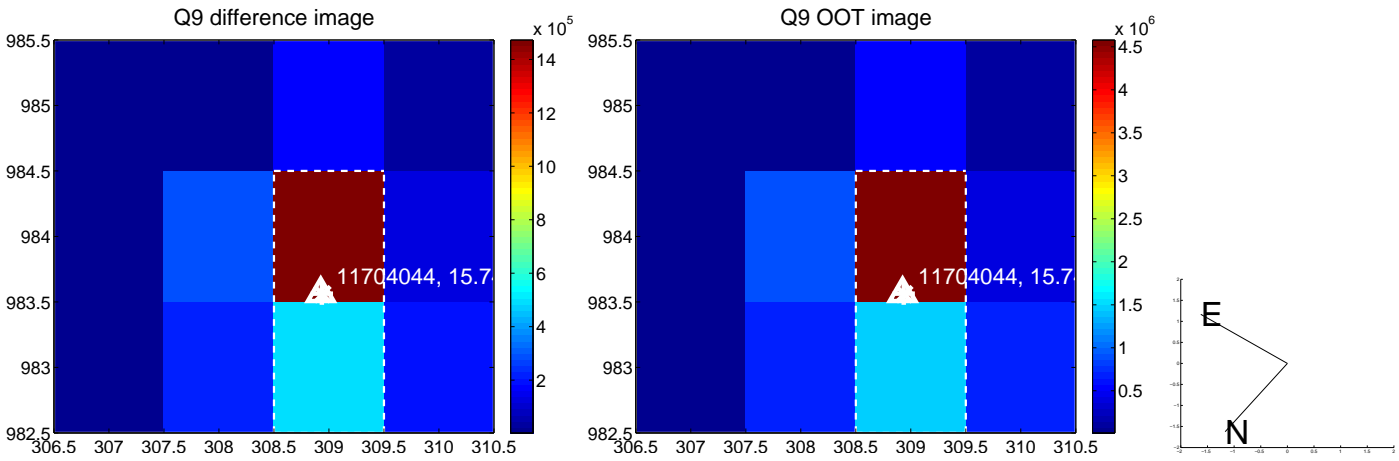
Q4 no OOT image



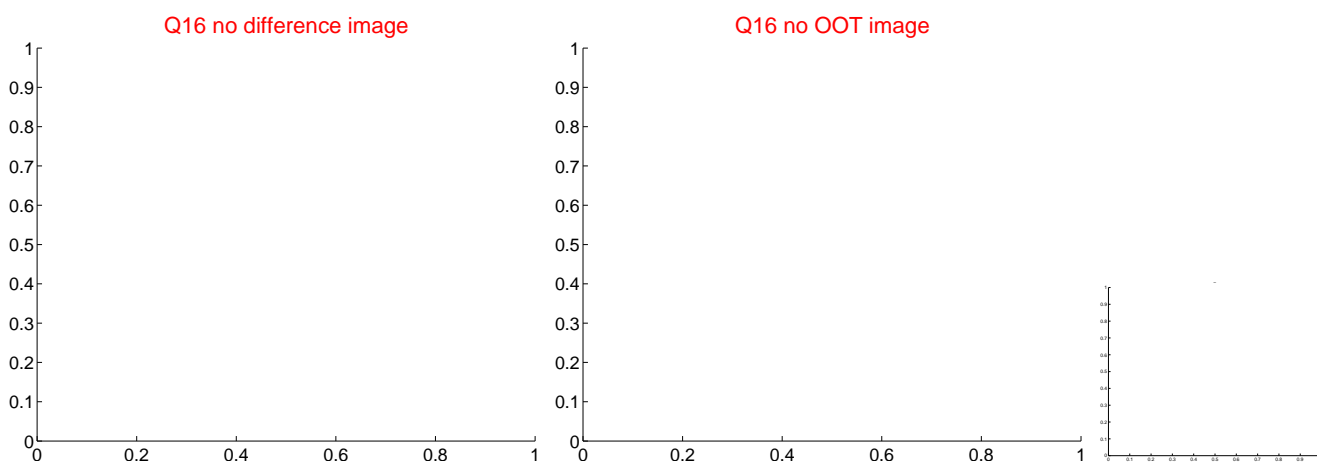
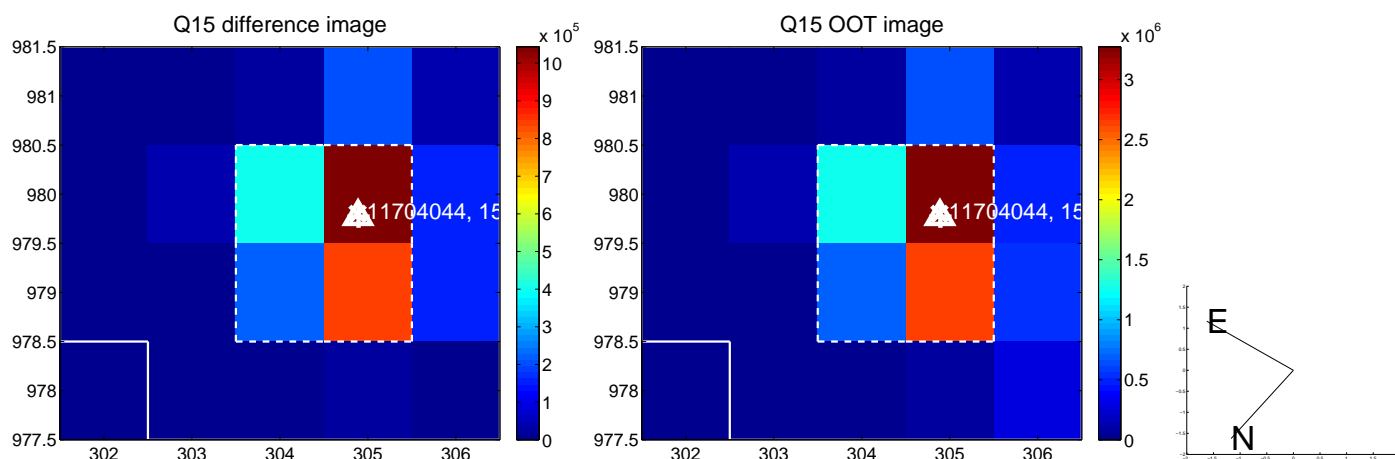
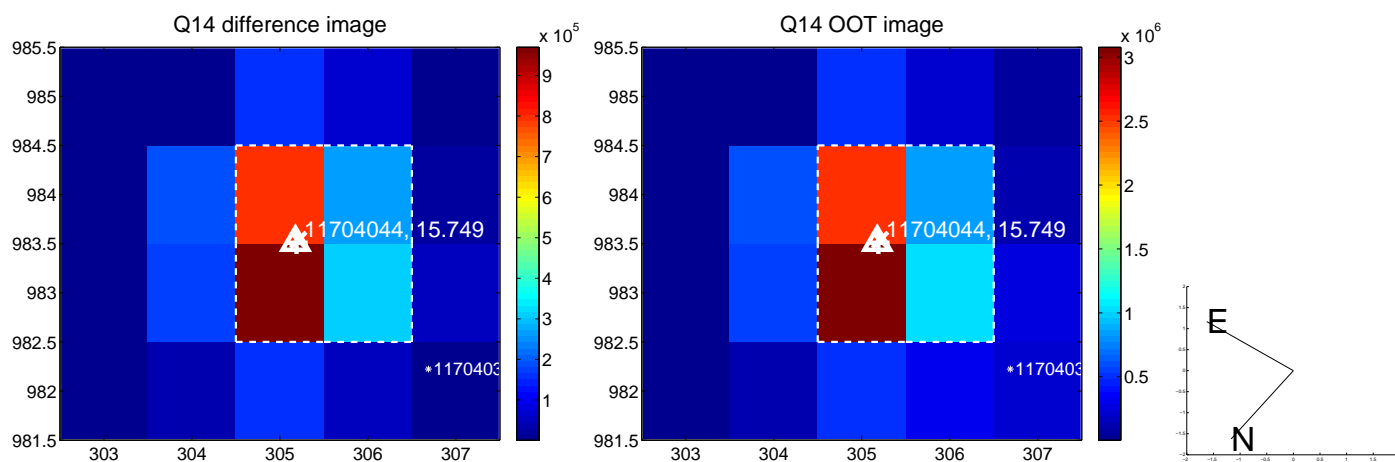
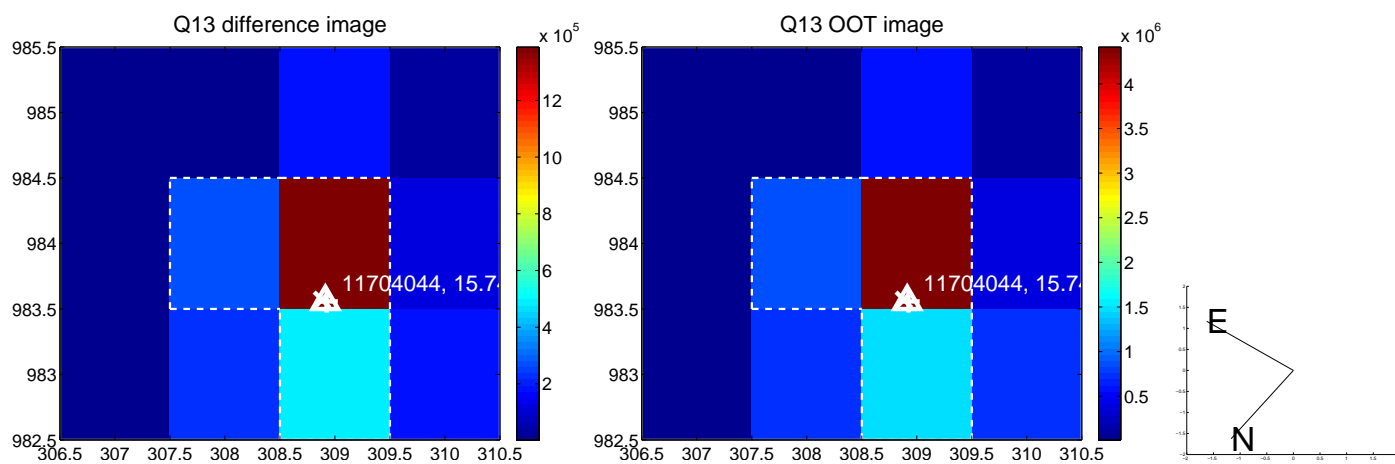
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



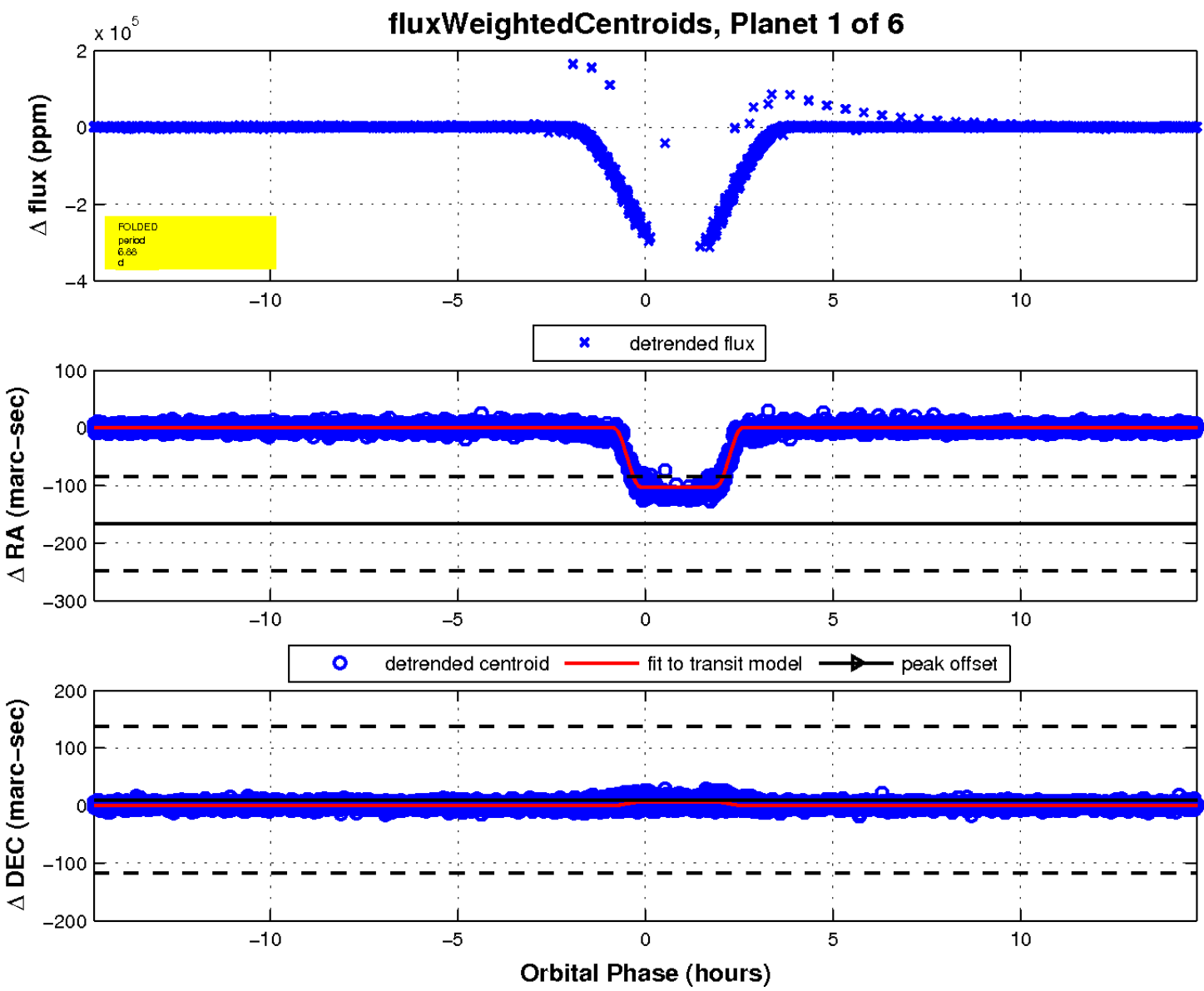
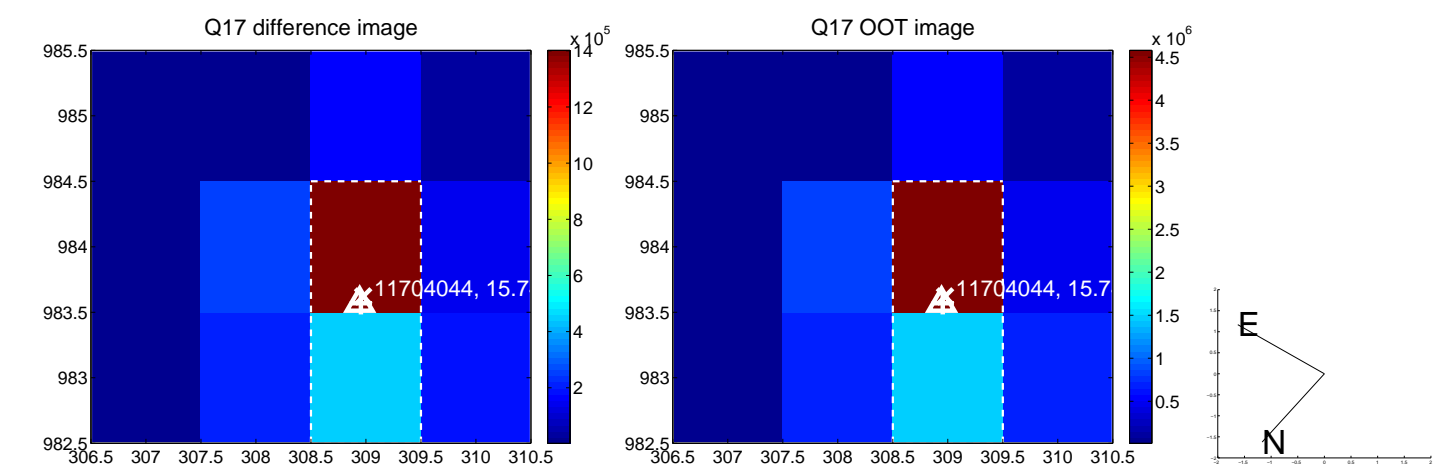
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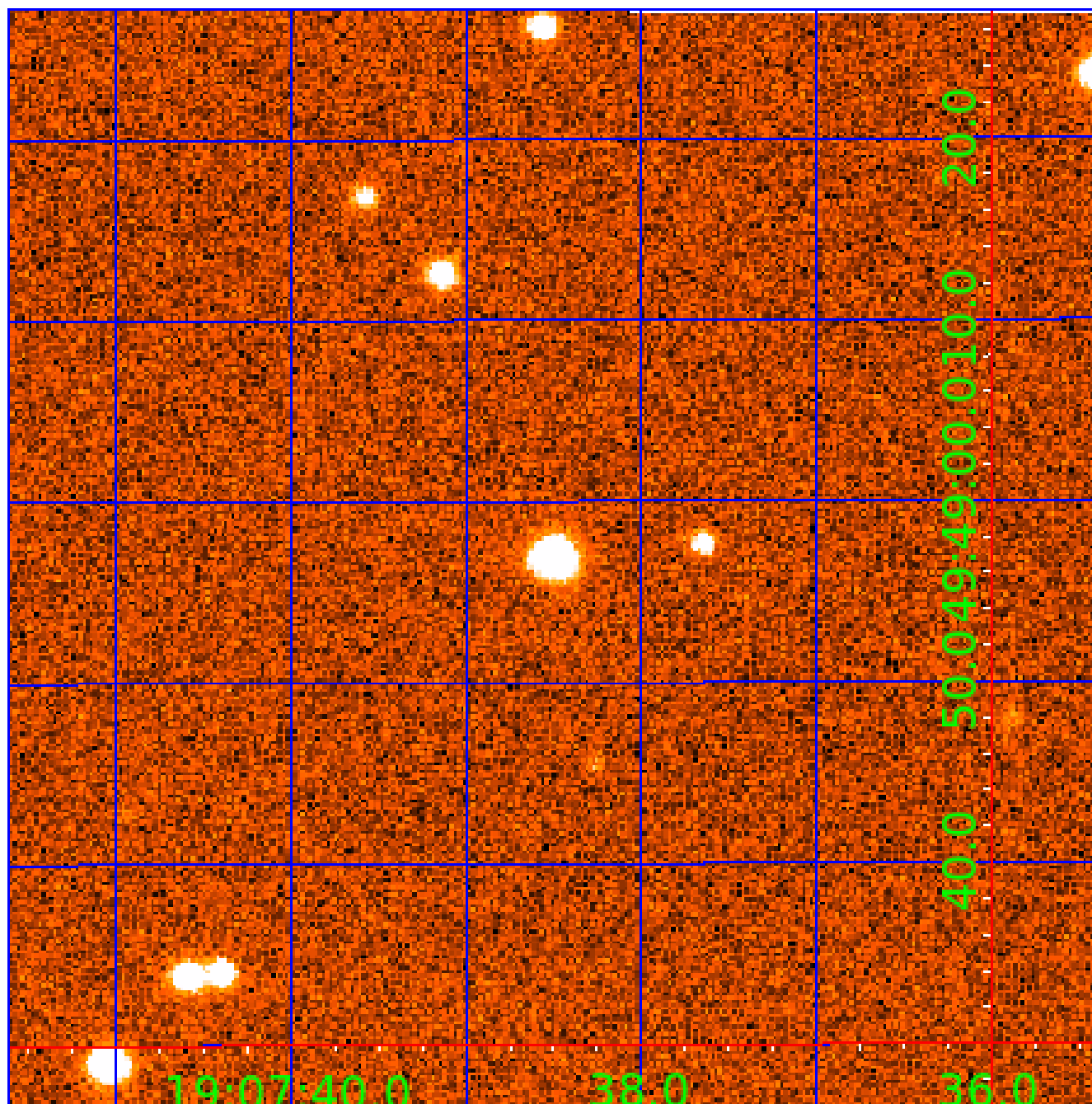


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UKIRT Image

Declination



KIC 011704044

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011704044-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—HALO_GHOST
011704044-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS
011704044-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011704044-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011704044-06	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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

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

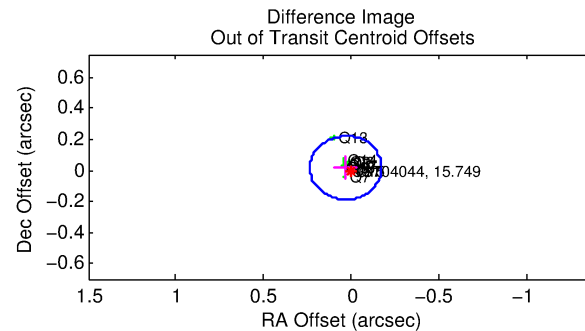
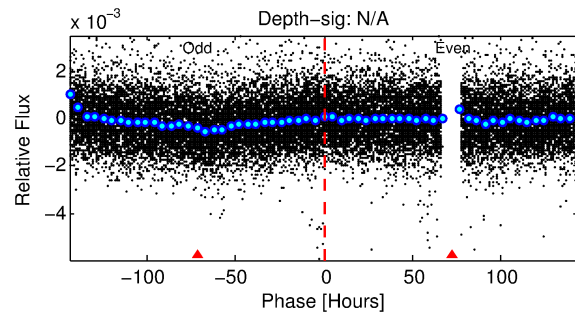
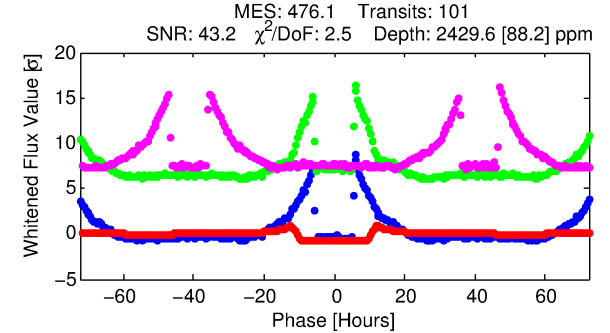
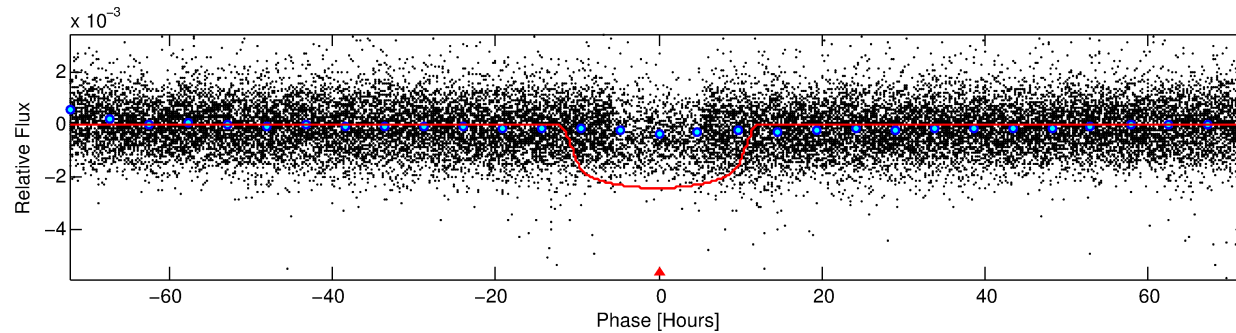
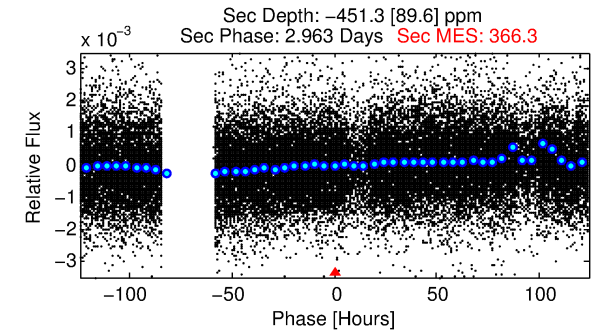
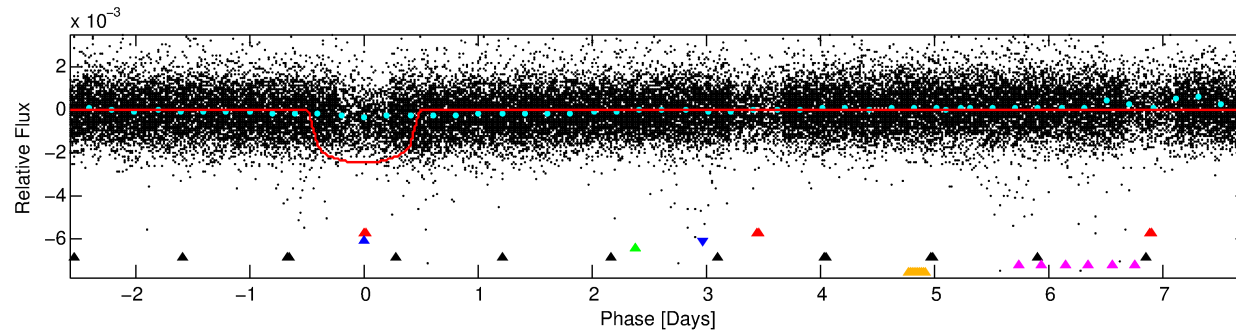
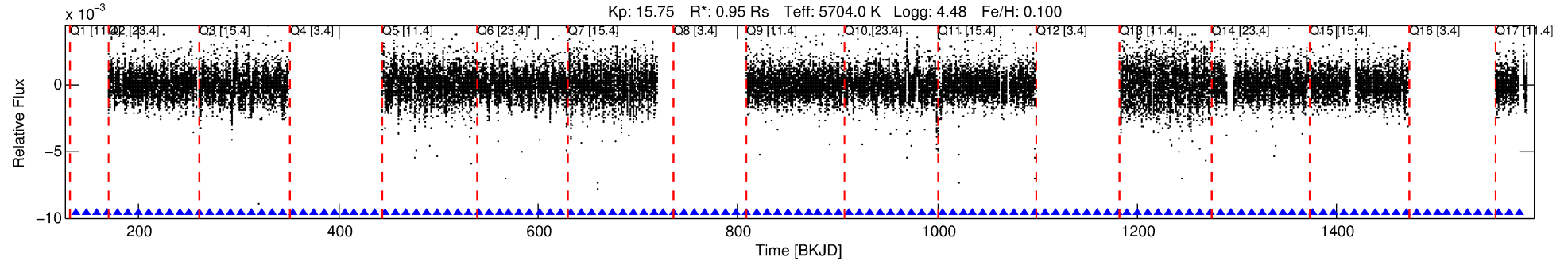
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011704044-02

No Significant Match Found

DV One-Page Summary

KIC: 11704044 Candidate: 2 of 6 Period: 10.324 d
KOI: K07472 Corr: No Ephemeris Match



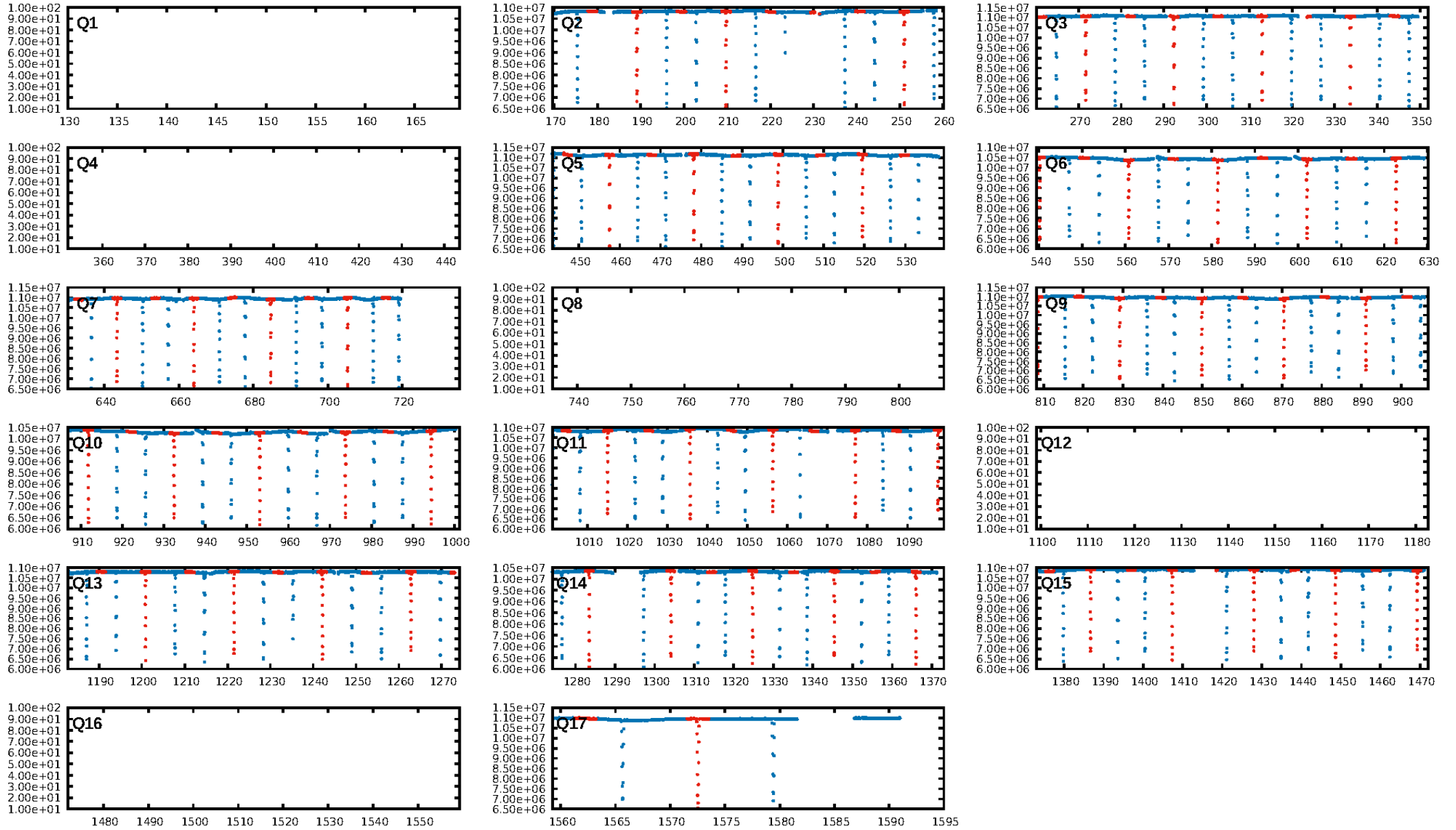
DV Fit Results:

Period = 10.32394 [0.00009] d
Epoch = 137.4965 [0.0072] BKJD
Rp/R* = 0.0492 [0.0013]
a/R* = 2.53 [0.14]
b = 0.76 [0.04]
Seff = 99.16 [38.27]
Teff = 805 [78] K
Rp = 5.09 [1.50] Re
a = 0.0927 [0.0229] AU
Ag = N/A
Teffp = N/A

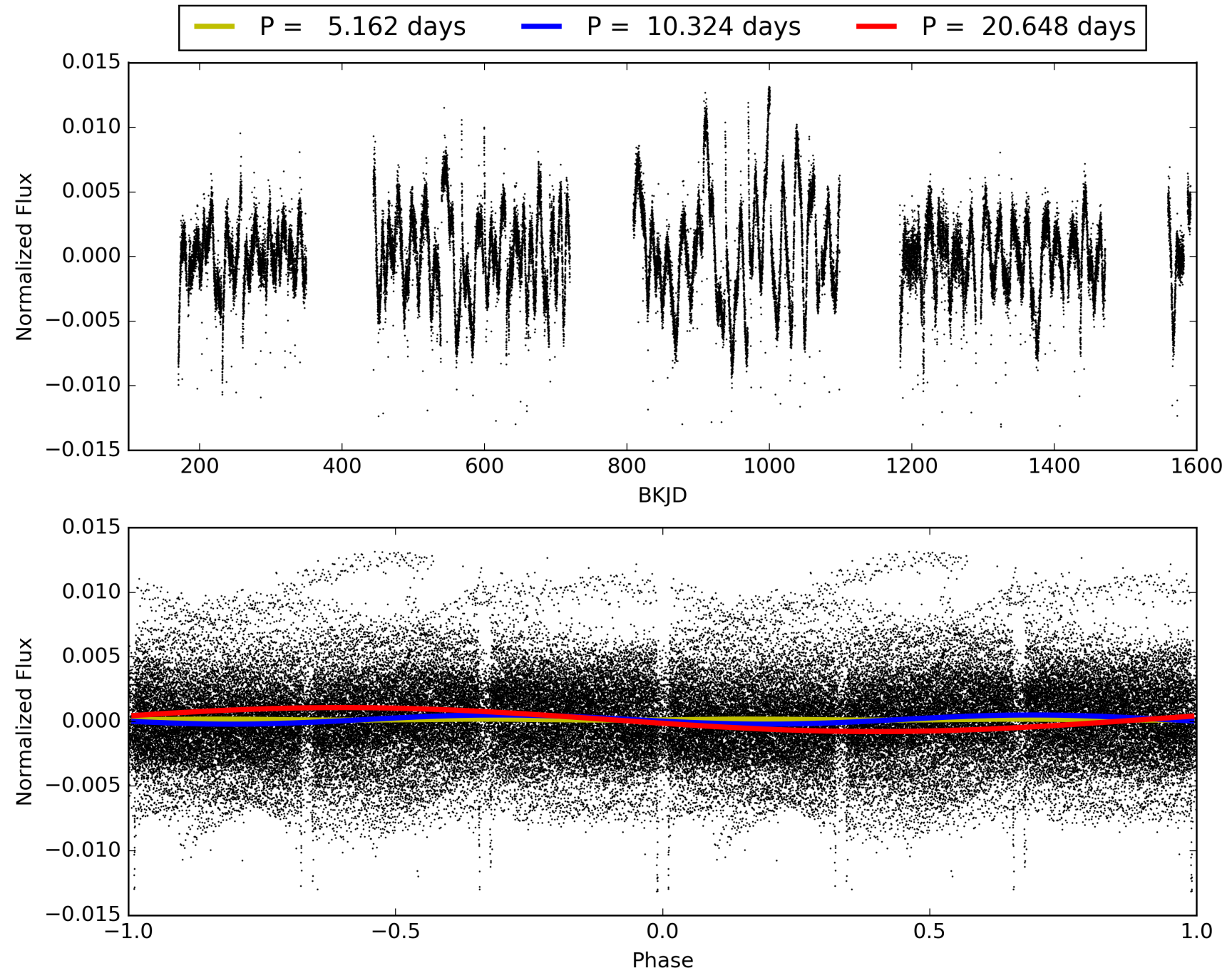
DV Diagnostic Results:

ShortPeriod-sig: 99.9% [3.39σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [99/99]
GhostDiagnostic-chr: -0.002239
Centroid-sig: 0.3%
Centroid-so: 0.084 arcsec [1.09σ]
OotOffset-rm: 0.037 arcsec [0.54σ]
KicOffset-rm: 0.158 arcsec [2.11σ]
OotOffset-st: 4/4/0/4 [12]
KicOffset-st: 4/4/0/4 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 0.00 [0/12]

TCE 011704044-02, PDC Light Curves

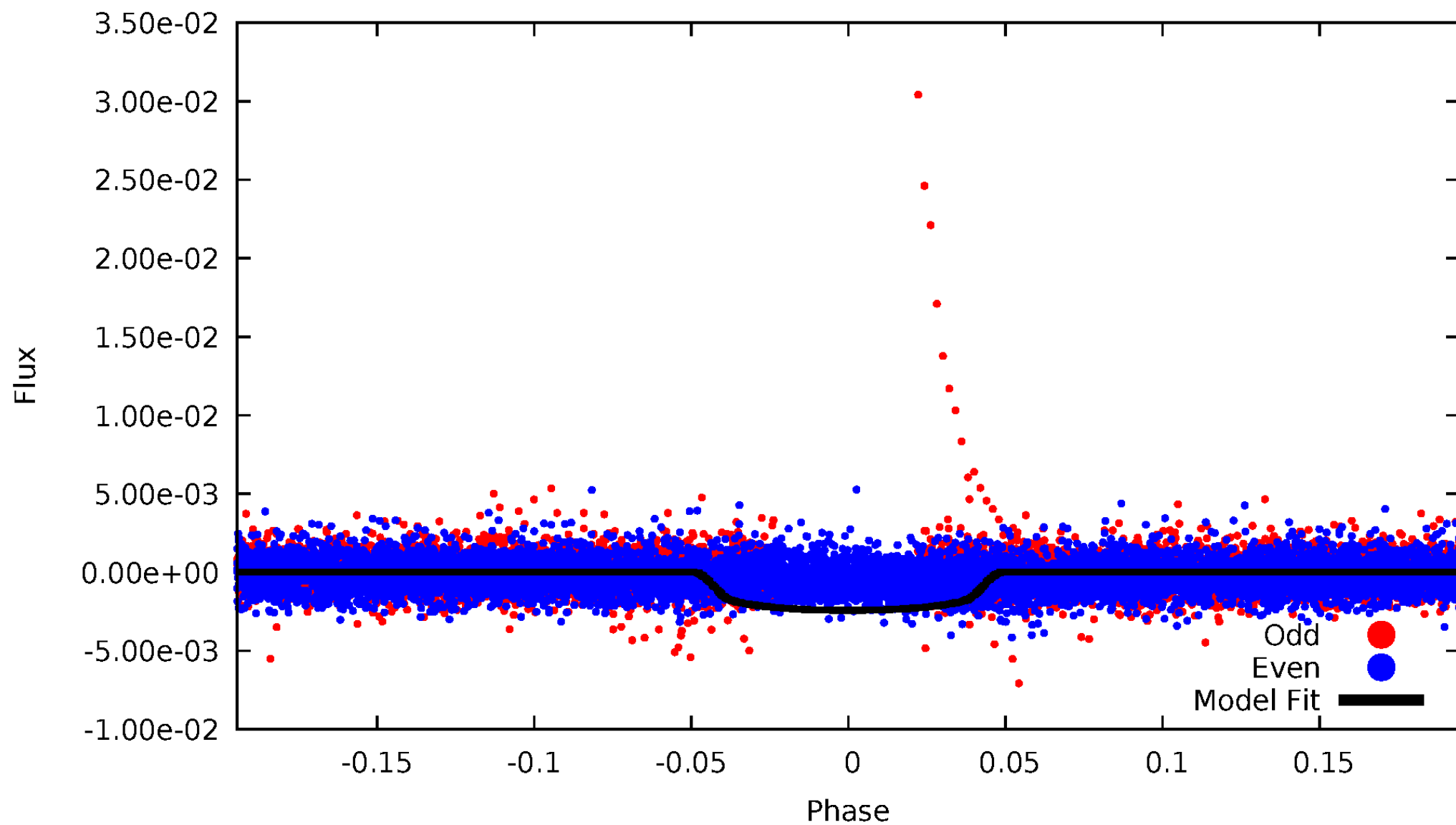


TCE 011704044-02



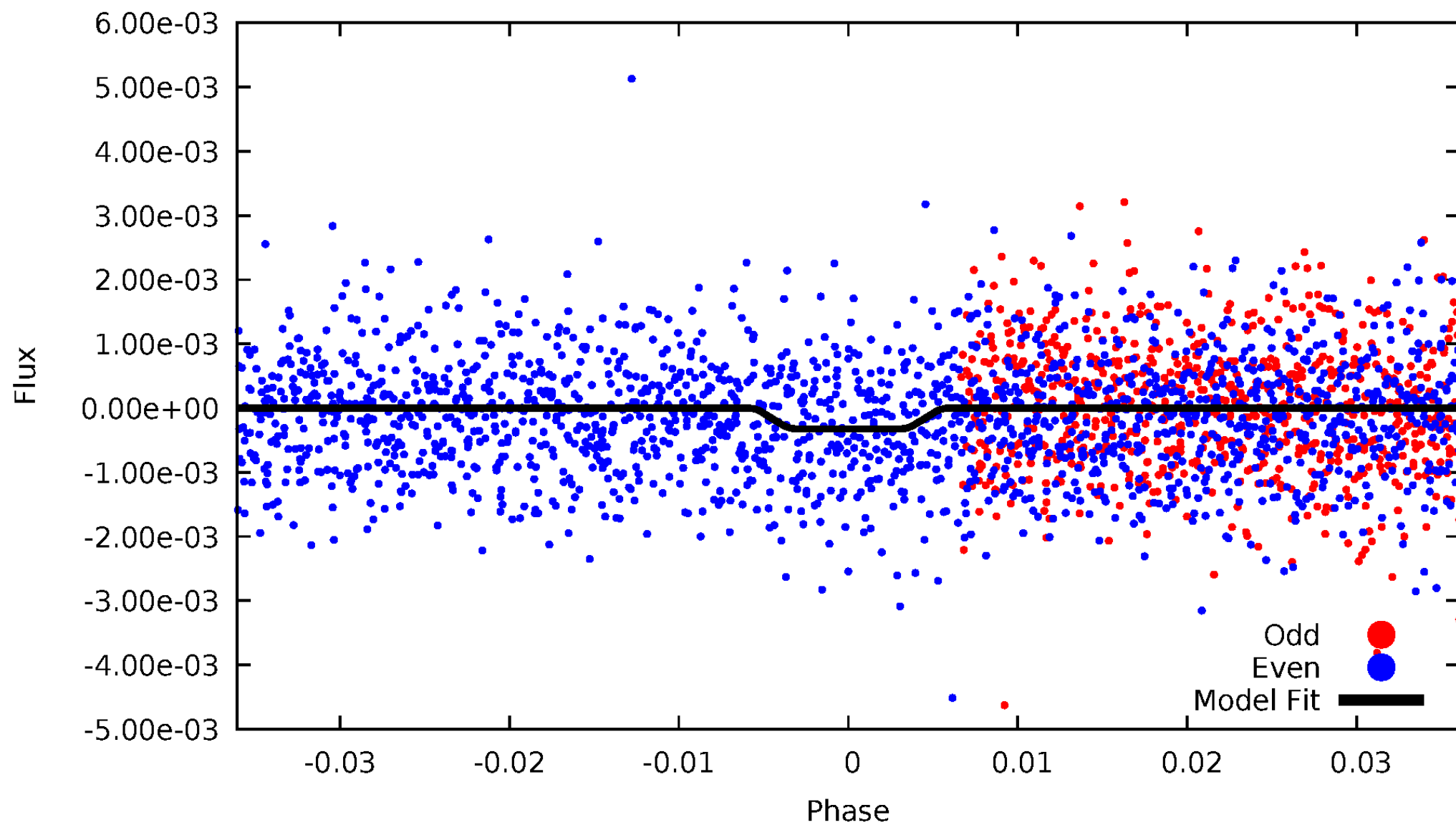
DV Odd/Even

TCE 011704044-02



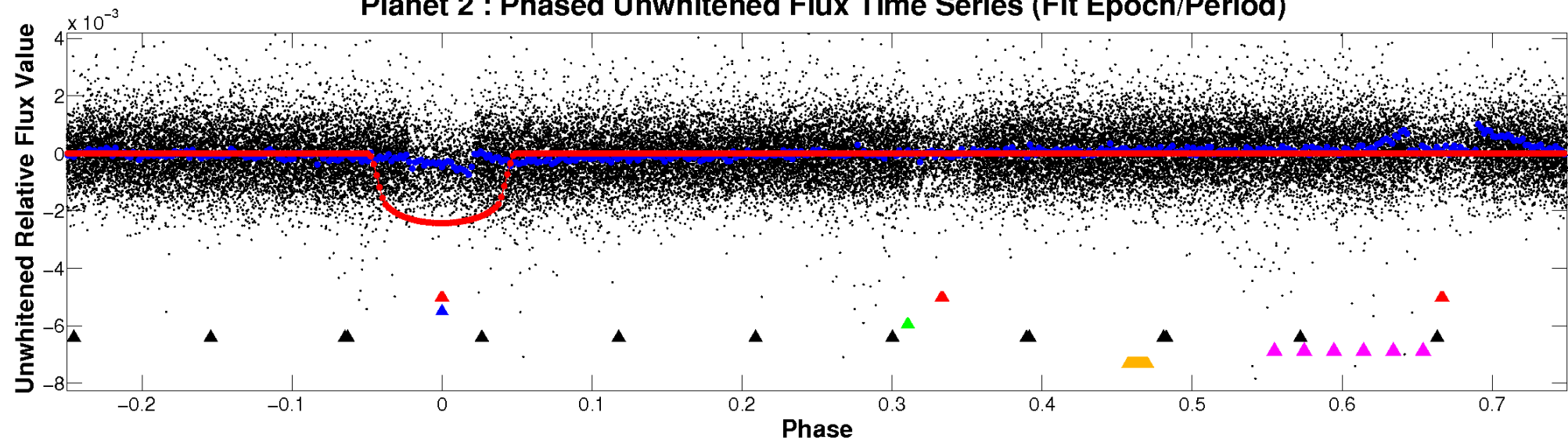
ALT Odd/Even

TCE 011704044-02

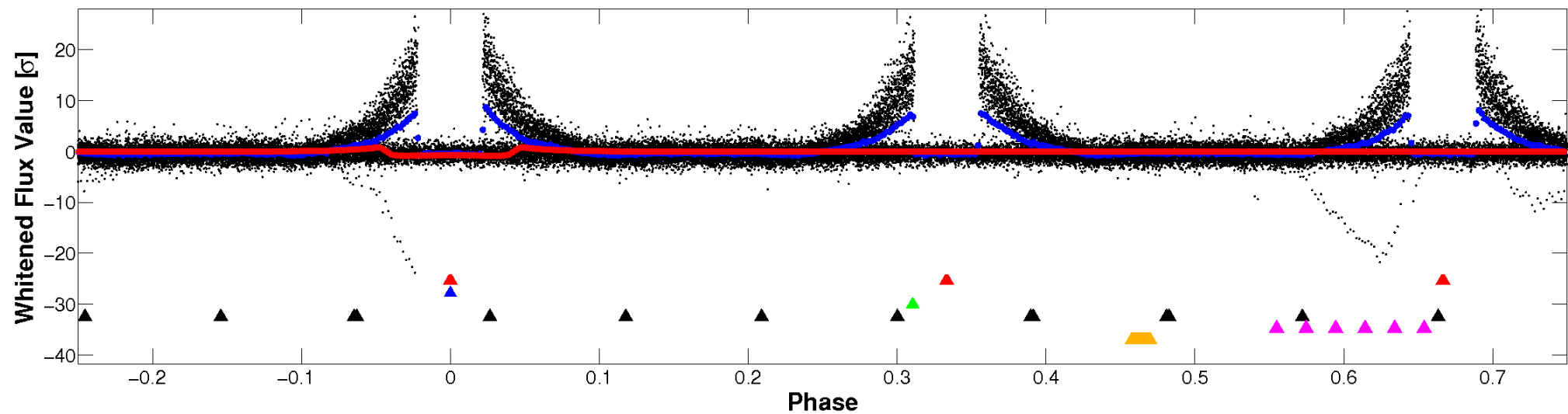


Non-Whitened Vs. Whitened Light Curve

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

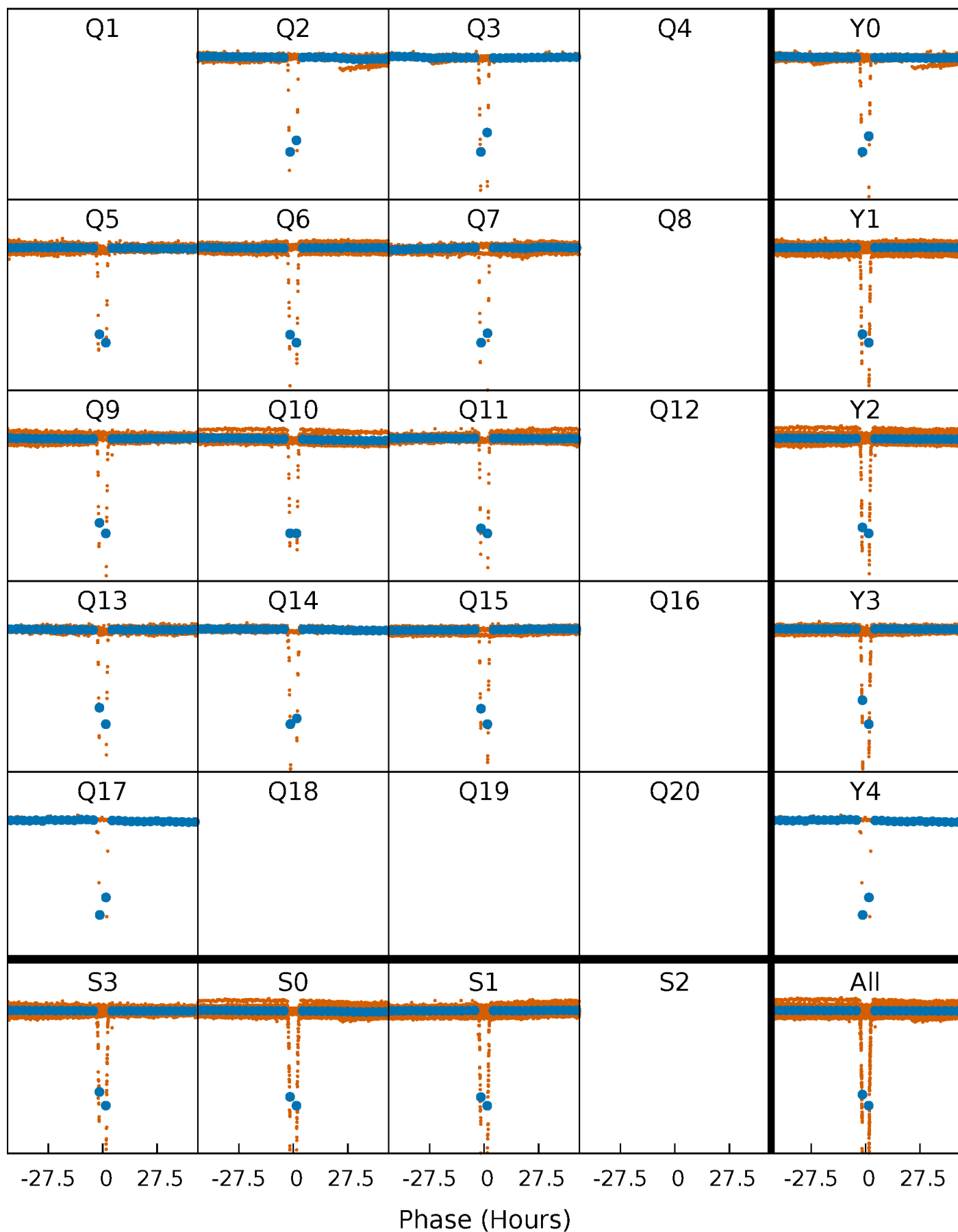


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



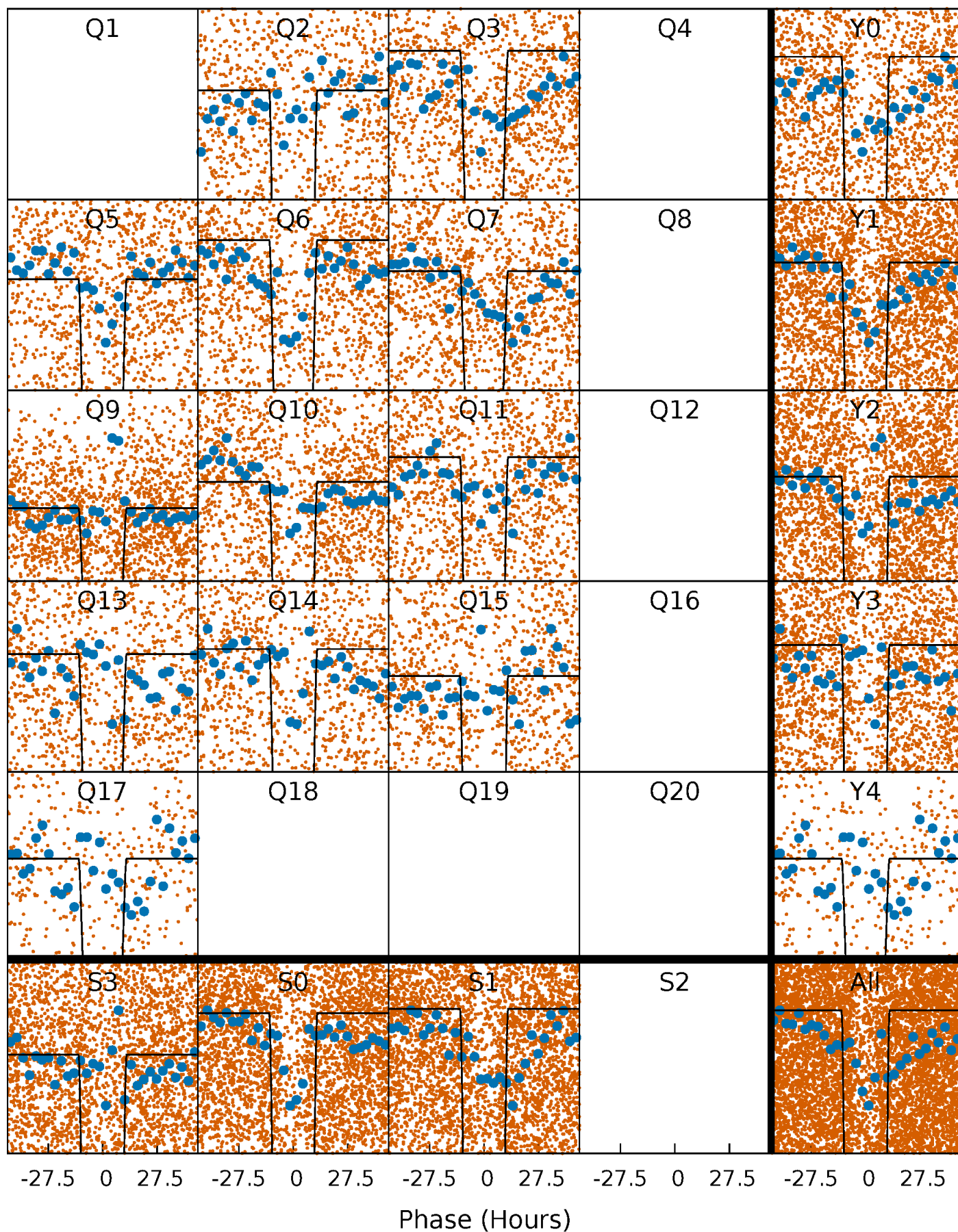
PDC Quarter-Phased Transit Curves

TCE 011704044-02 P= 10.323939 Days $T_0=137.496540$ (BKJD)



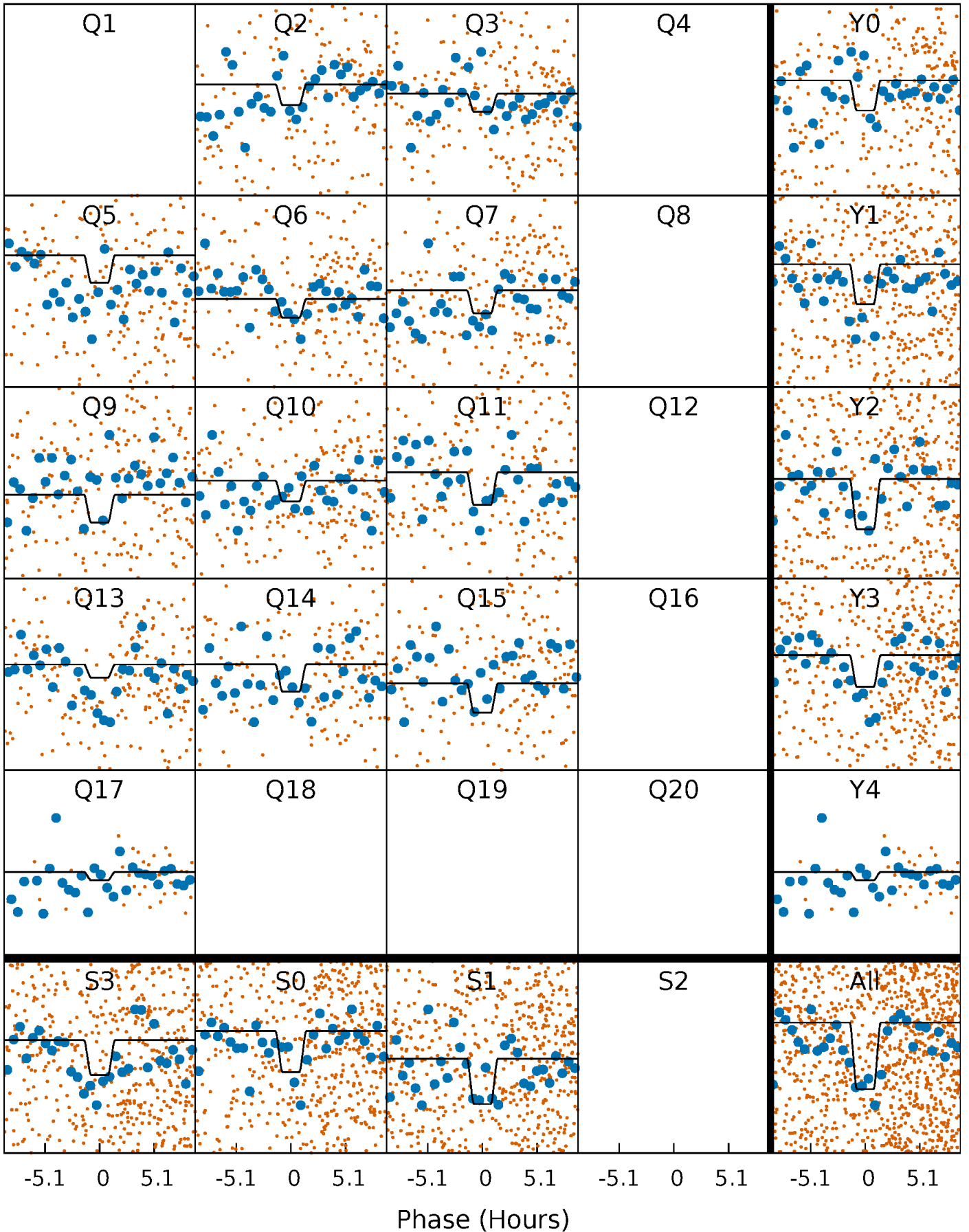
DV Quarter-Phased Transit Curves

TCE 011704044-02 P= 10.323939 Days $T_0=137.496540$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

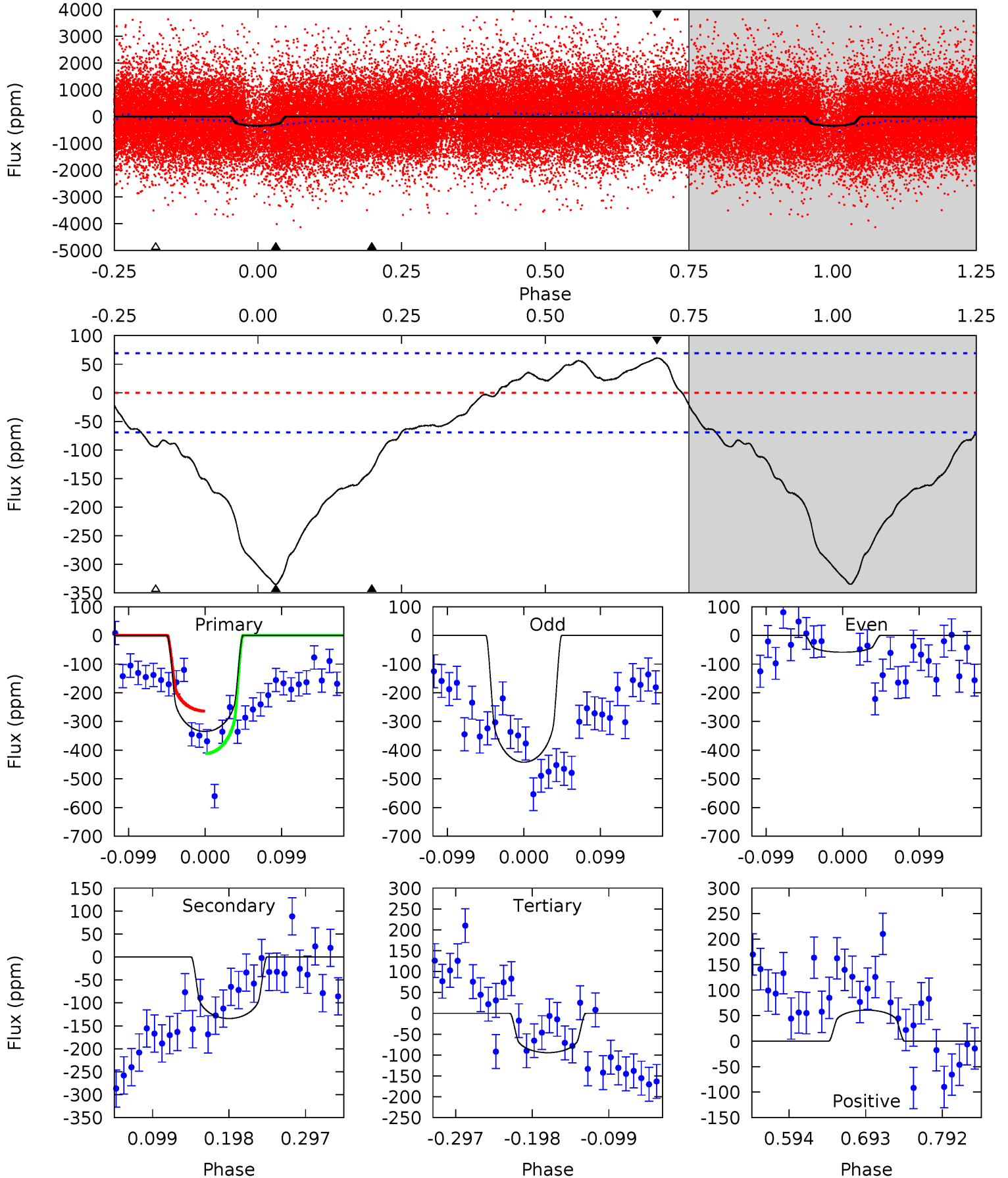
TCE 011704044-02 P= 10.323983 Days $T_0=137.650915$ (BKJD)



DV Model-Shift Uniqueness Test

011704044-02, P = 10.323939 Days, E = 137.496540 Days

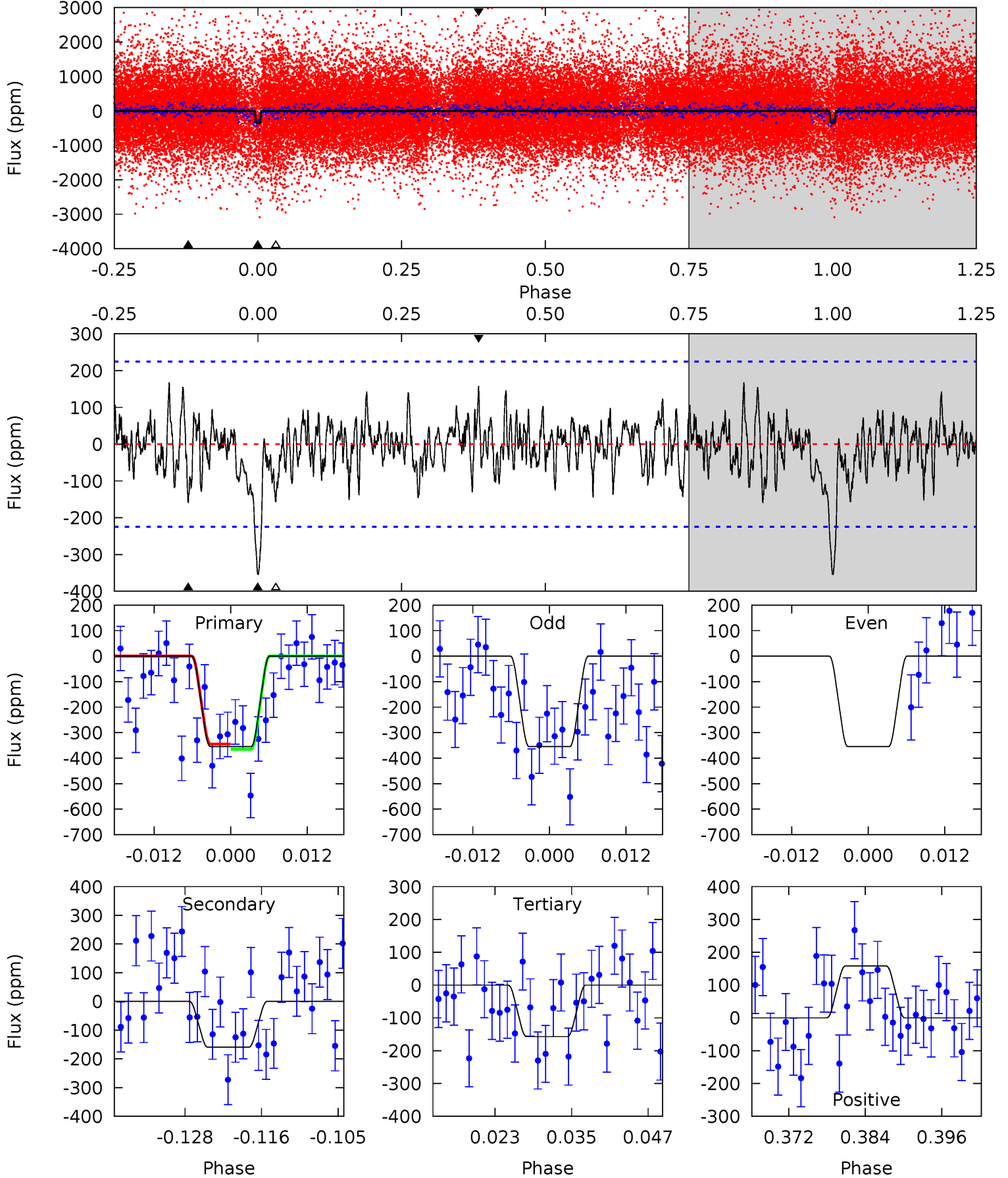
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.1	8.86	6.24	4.02	4.57	1.65	4.16	15.9	18.1	2.63	4.84	12.2	0.20	0.15	5.00



Alt Model-Shift Uniqueness Test

011704044-02, P = 10.323983 Days, E = 137.650915 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.89	3.56	3.50	3.52	5.00	2.52	1.20	4.39	4.37	0.06	0.03	0	1.09	0.32	0.23



Stellar Parameters For KIC 011704044

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5704^{+171}_{-206}	$4.483^{+0.052}_{-0.195}$	$0.100^{+0.250}_{-0.300}$	$0.948^{+0.279}_{-0.093}$	$0.996^{+0.111}_{-0.111}$	$1.646^{+0.459}_{-0.867}$
	+3%/-4%	+1%/-4%	+250%/-300%	+29%/-10%	+11%/-11%	+28%/-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 011704044-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-134 ± 15	$5.19^{+0.79}_{-0.35}$	1145^{+75}_{-55}	3295^{+102}_{-98}	22^{+4}_{-6}
Alt.	-160 ± 45	$1.93^{+0.28}_{-0.21}$	1142^{+79}_{-50}	4846^{+349}_{-356}	193^{+79}_{-63}

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

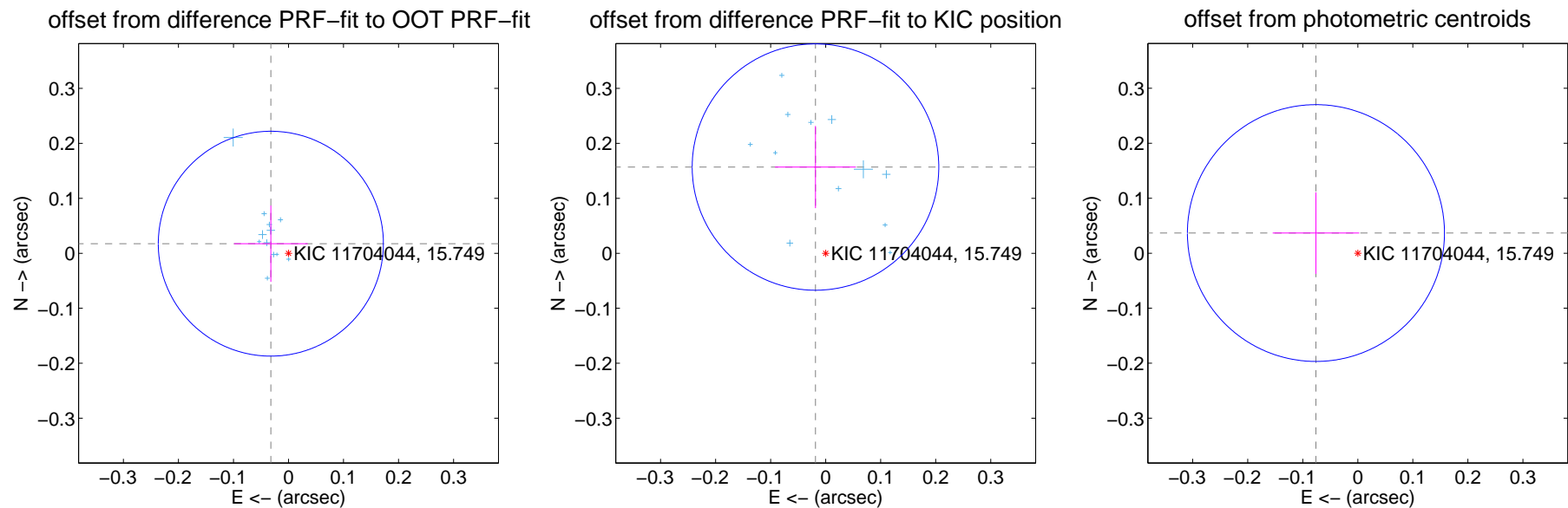
DV Centroid Data

Supplemental centroid analysis for 011704044-02. Kepler magnitude: 15.75. Transit SNR 43.17

There are 12 quarters with good PRF difference image offsets

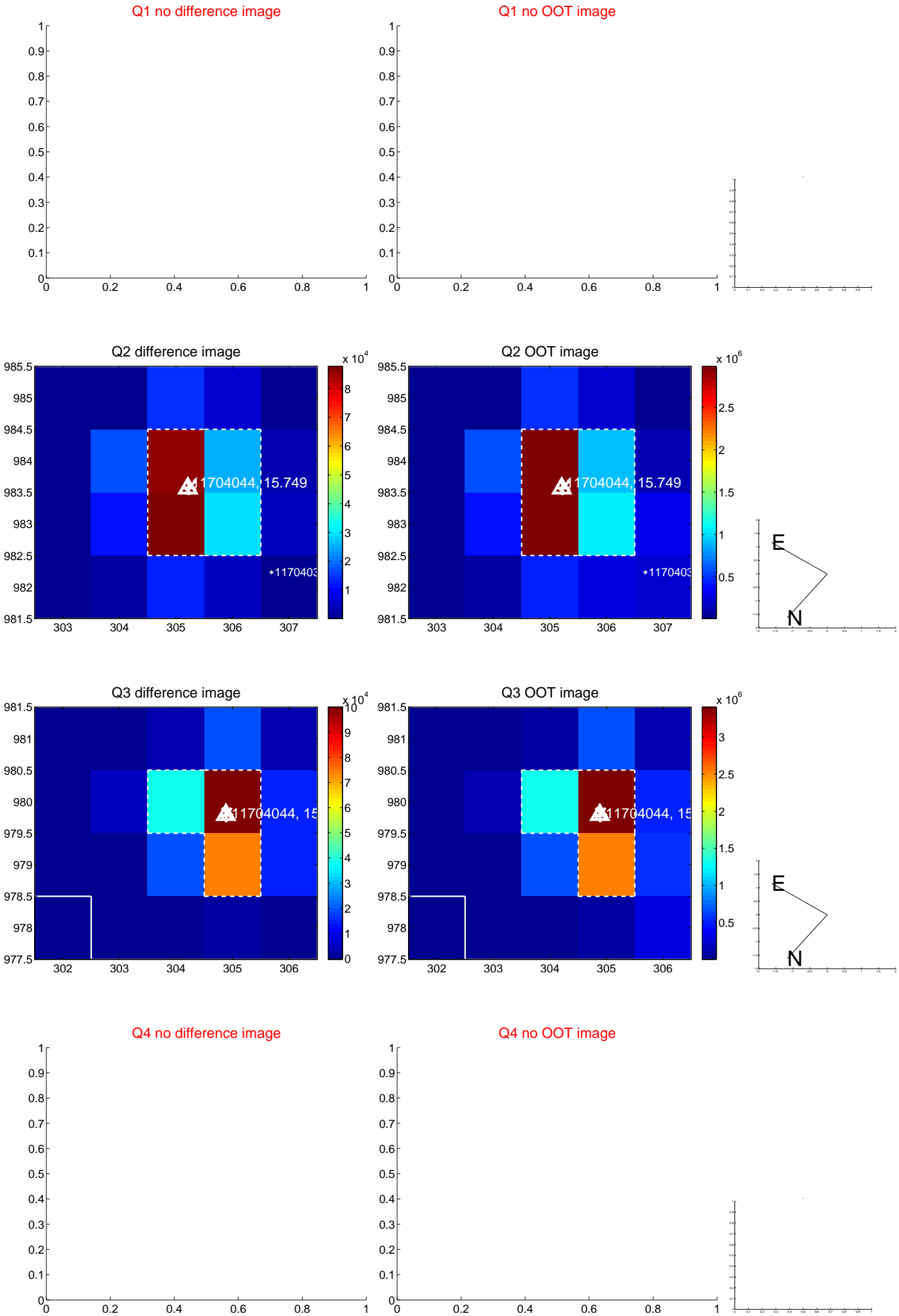
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.037 ± 0.068	0.54	0.032 ± 0.067	0.017 ± 0.069
PRF-fit source offset from KIC position	0.158 ± 0.075	2.11	0.018 ± 0.073	0.157 ± 0.075
photometric centroid source offset	0.08 ± 0.08	1.09	0.08 ± 0.08	0.04 ± 0.07

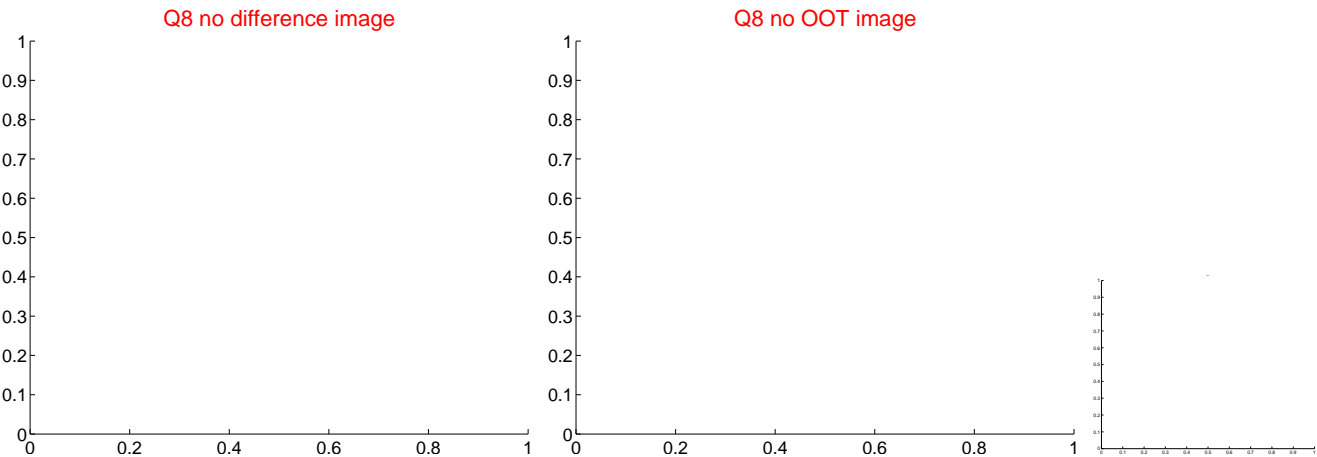
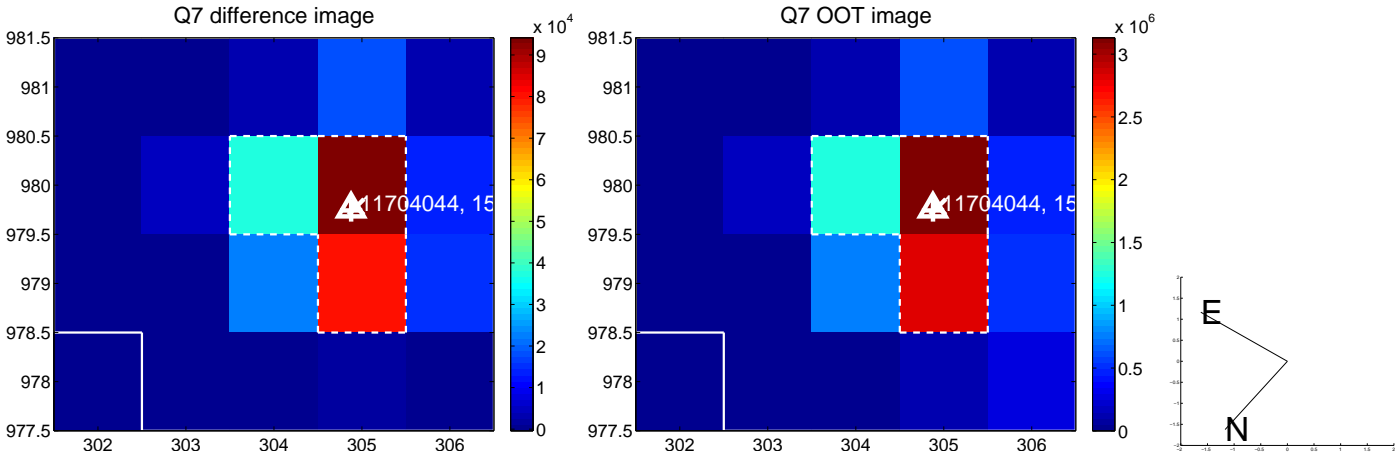
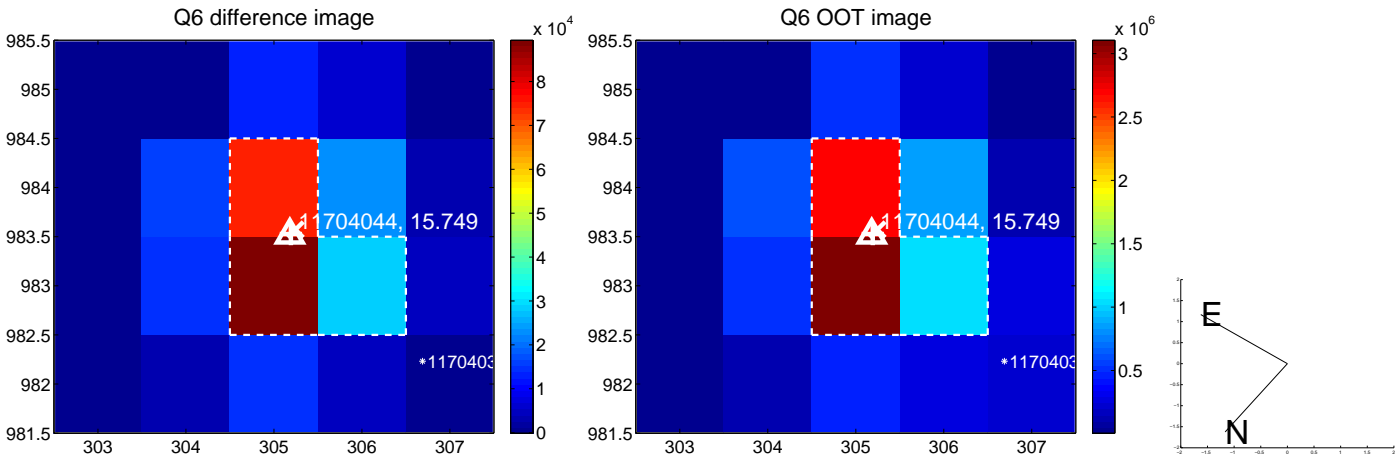
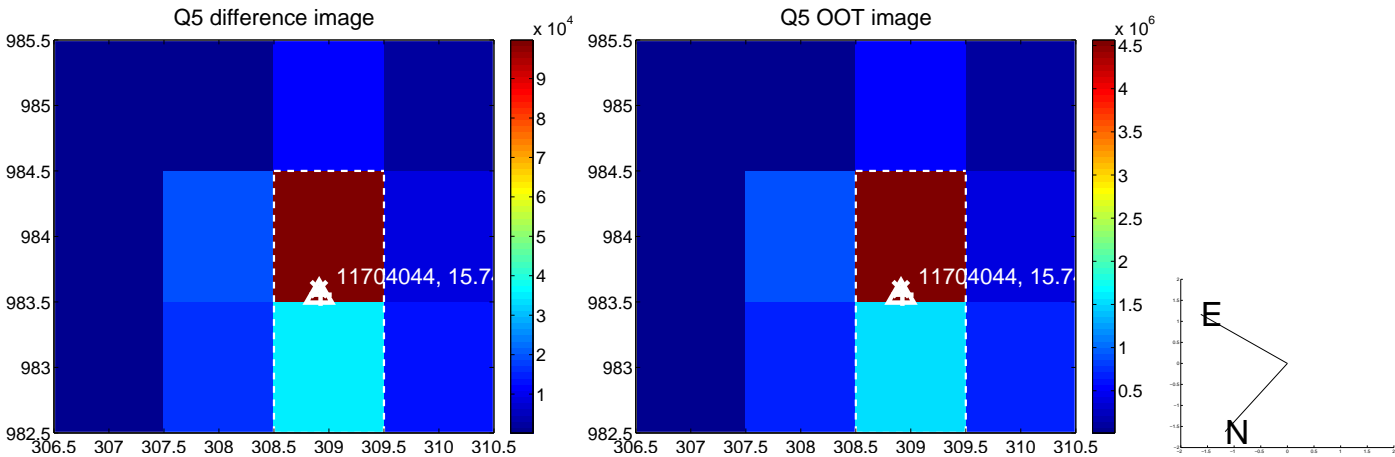


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

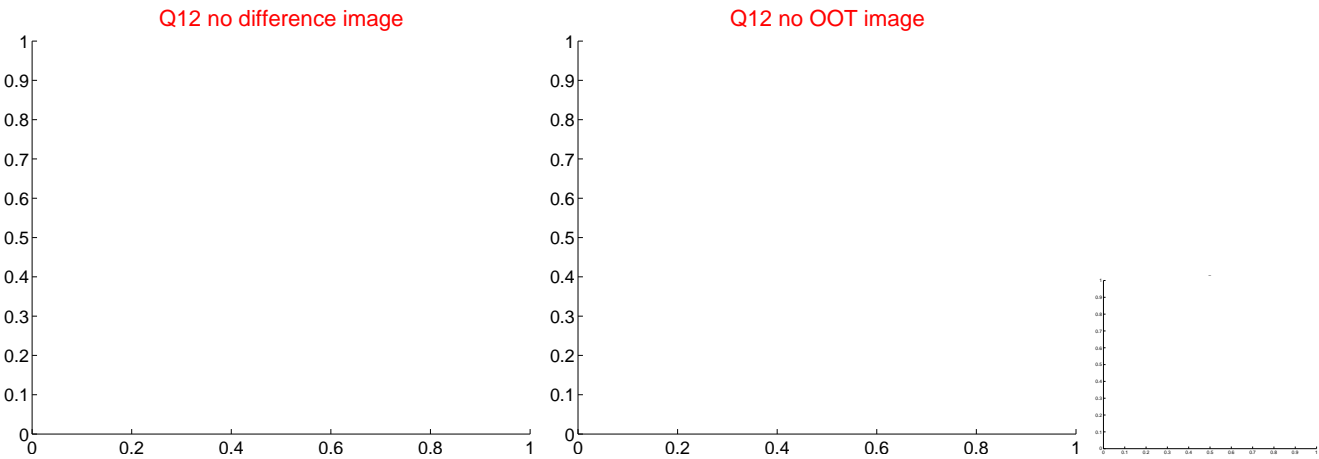
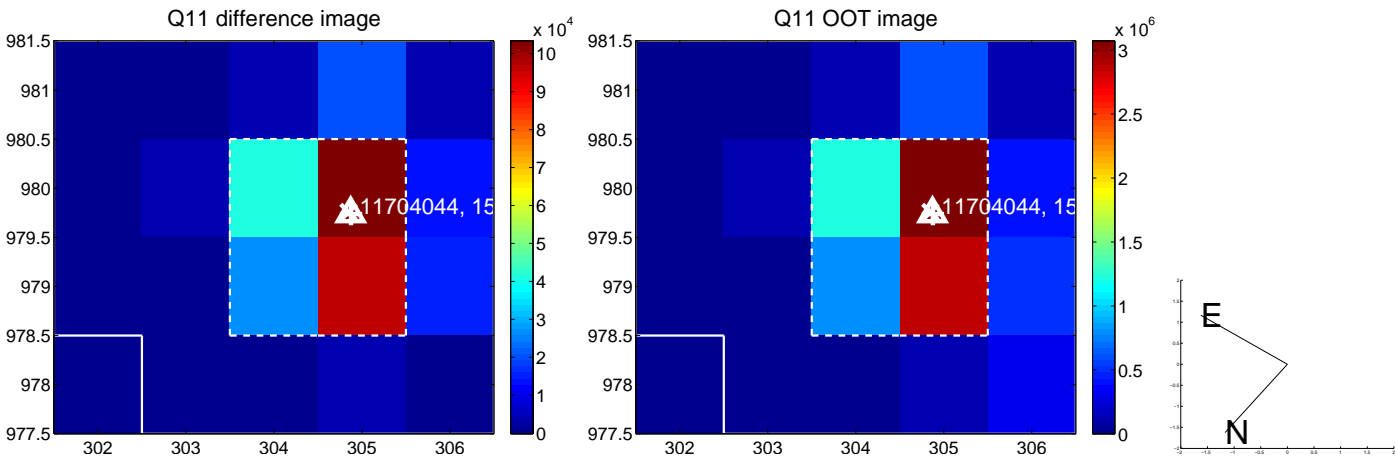
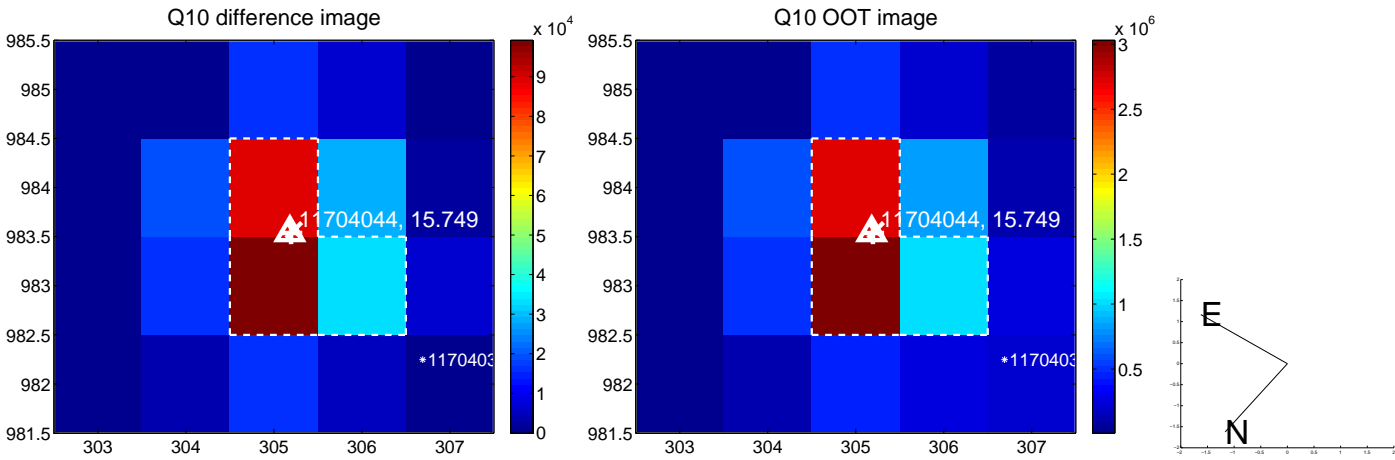
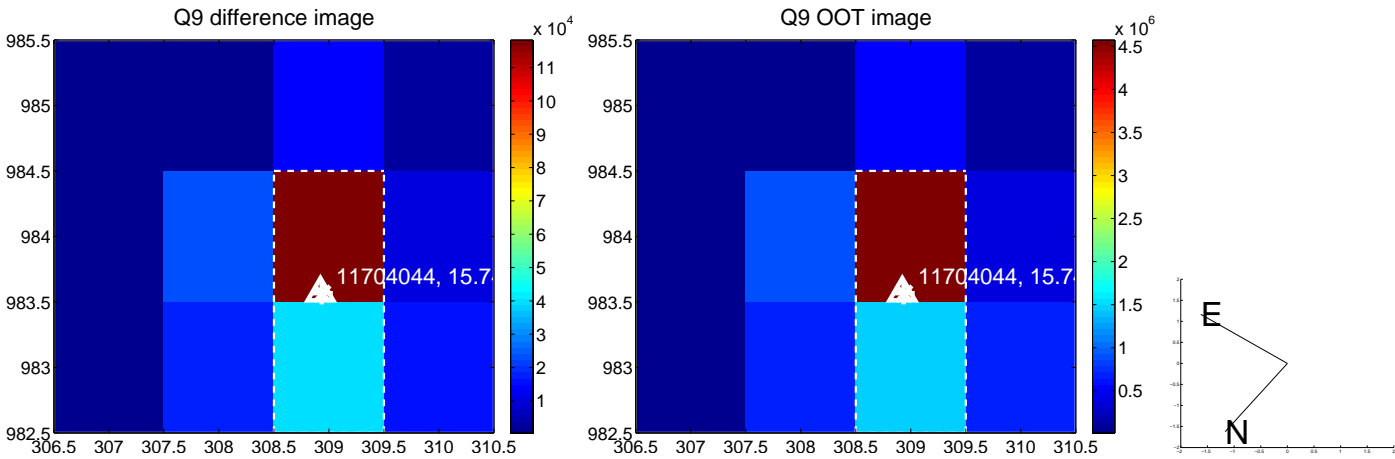
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



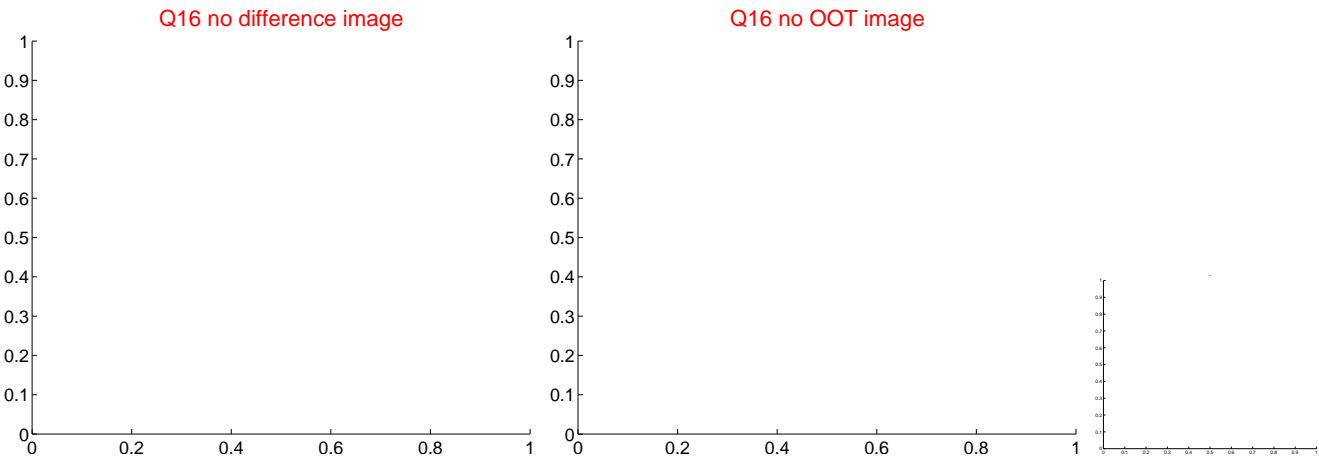
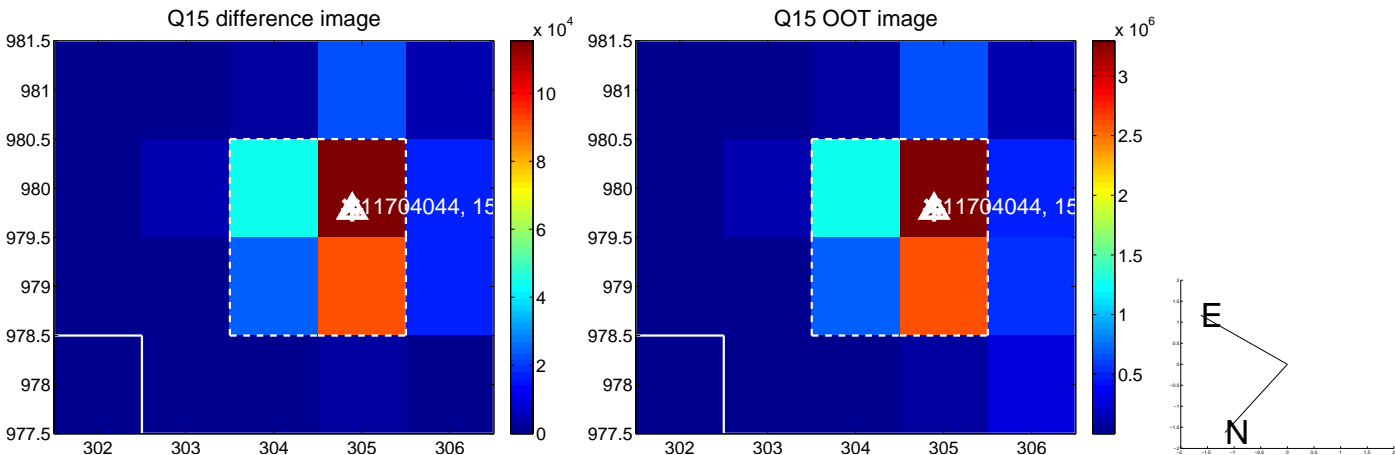
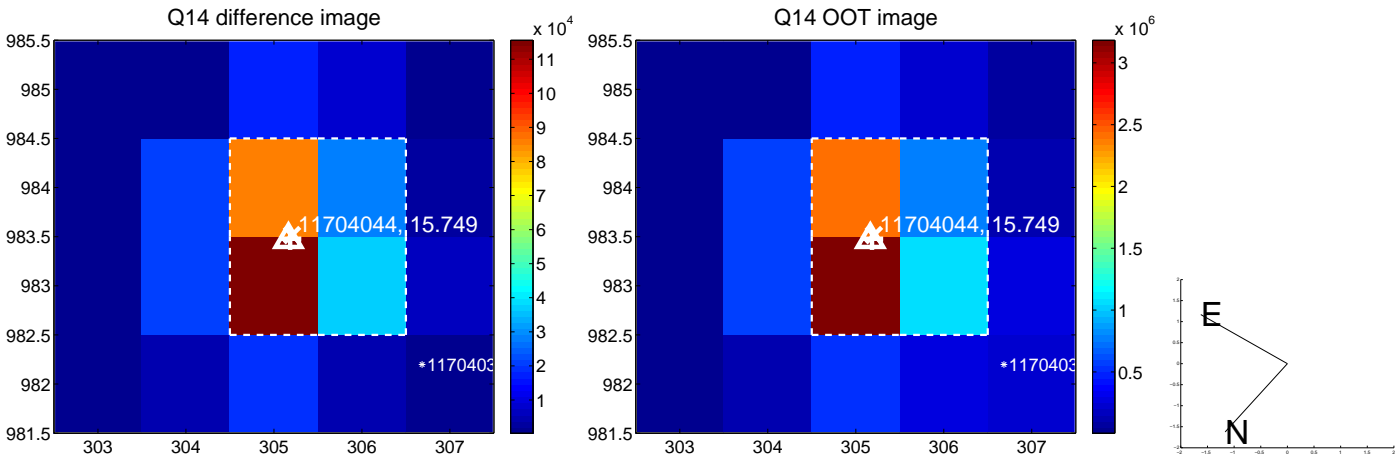
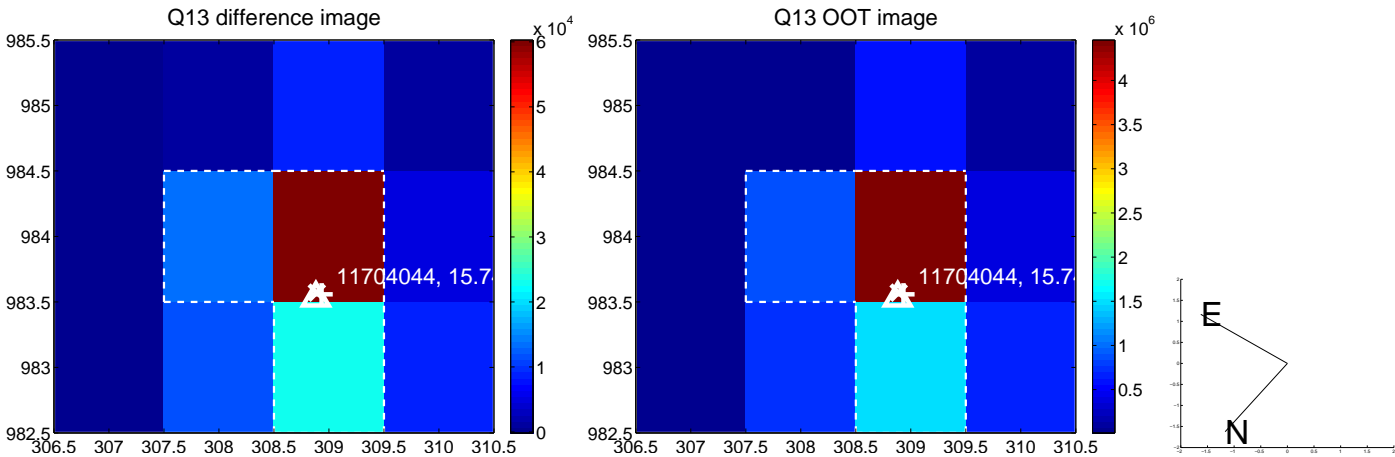
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



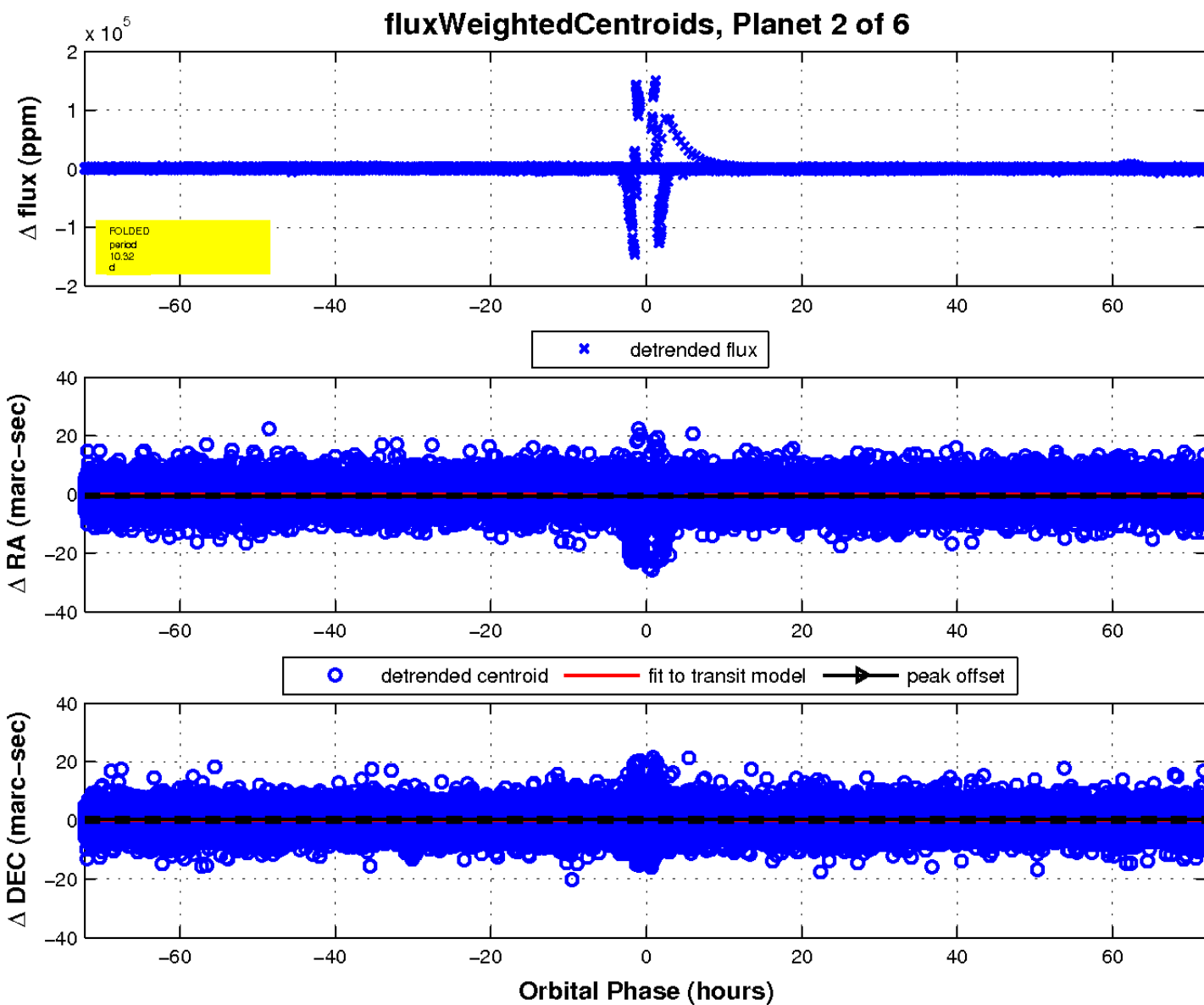
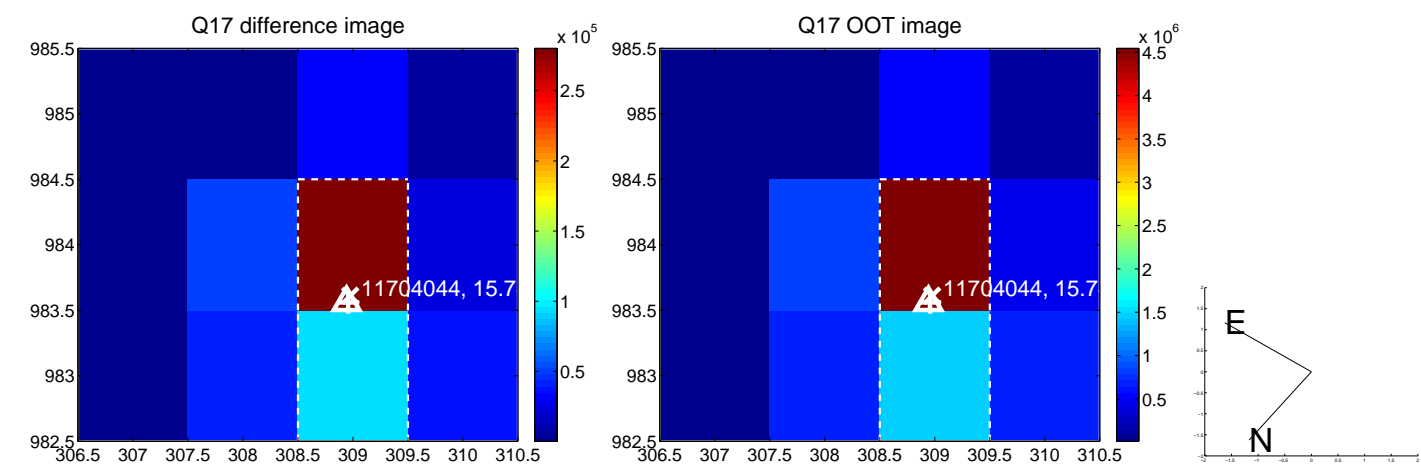
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

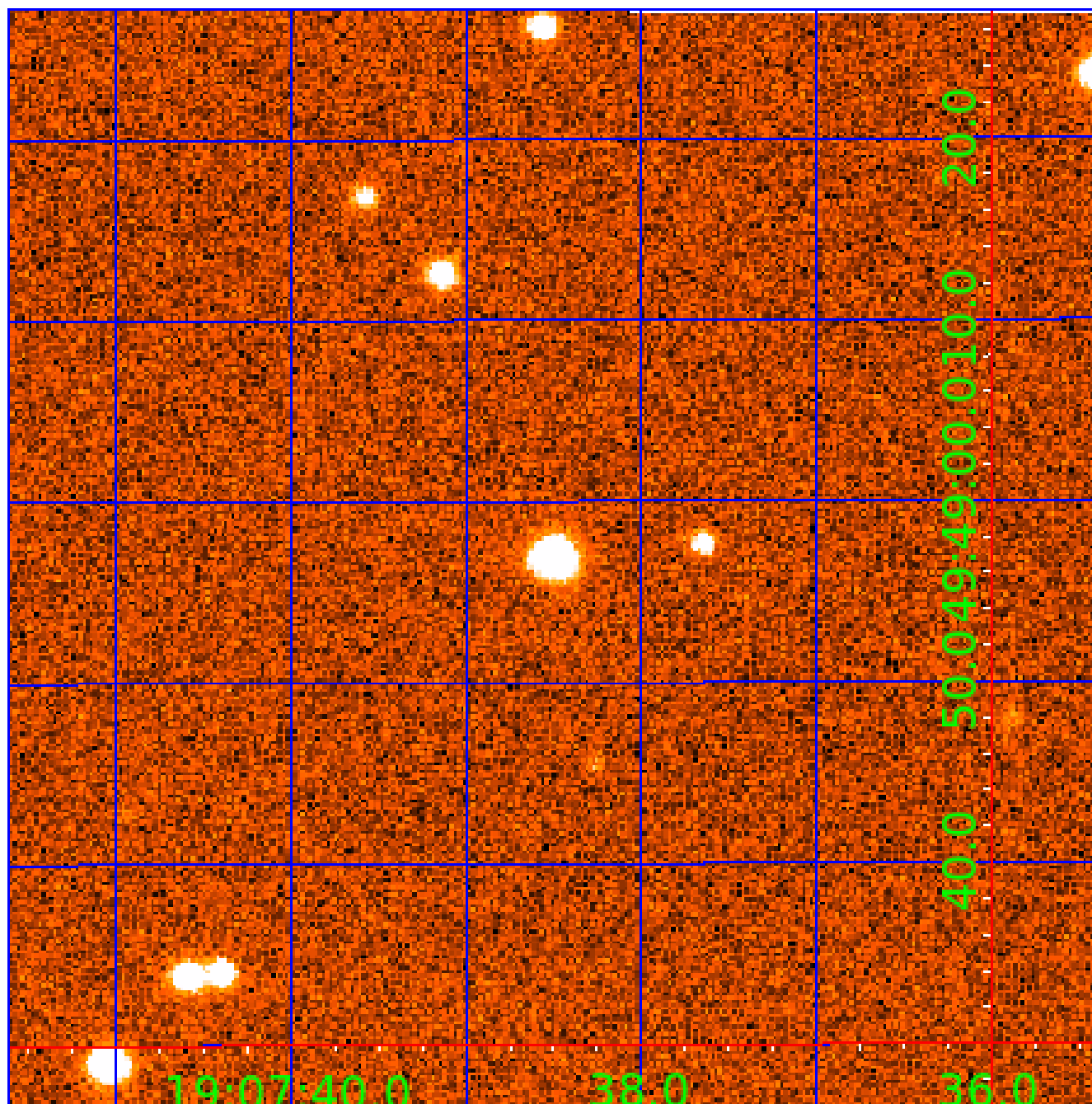


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011704044

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})
011704044-01	OBS	7472.01	6.882723	134.044755	384627.6	3.500	9152.4	-1.0	0.95	5704	51.72	170.27
011704044-02	OBS	No	10.323939	137.496540	2429.6	24.094	476.1	43.2	0.95	5704	5.09	99.17
011704044-03	OBS	No	10.323983	140.699285	19797.8	15.000	419.7	-1.0	0.95	5704	13.18	99.16
011704044-04	OBS	No	108.872282	151.844034	1143.0	13.549	39.3	7.0	0.95	5704	6.14	4.29
011704044-05	OBS	No	217.007274	308.408522	3739.0	10.472	40.8	15.4	0.95	5704	9.69	1.71
011704044-06	OBS	No	20.645940	132.028644	1270.6	10.500	21.8	-1.0	0.95	5704	3.33	39.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011704044-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
011704044-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—HALO_GHOST
011704044-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS
011704044-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011704044-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011704044-06	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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

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

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

Ephemeris Match Information For 011704044-03

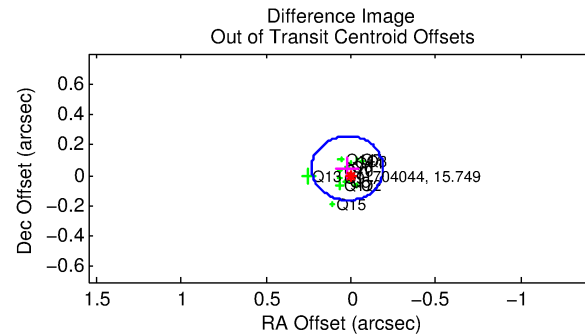
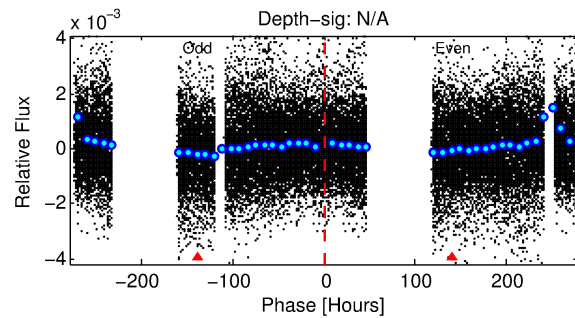
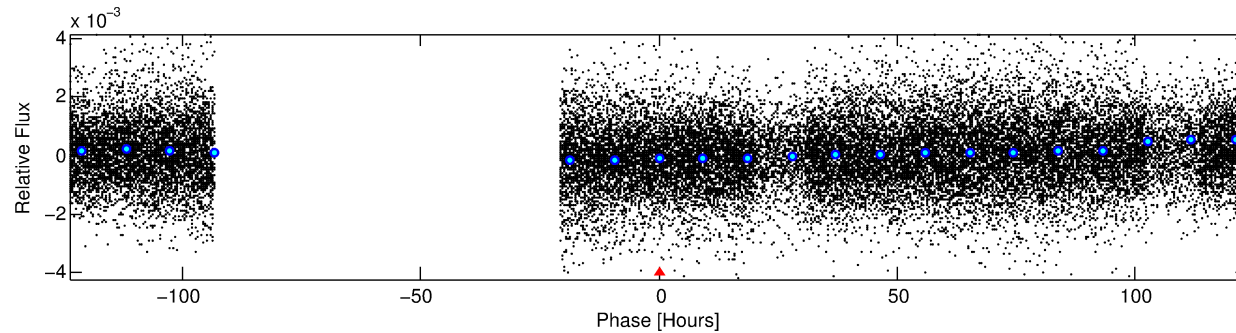
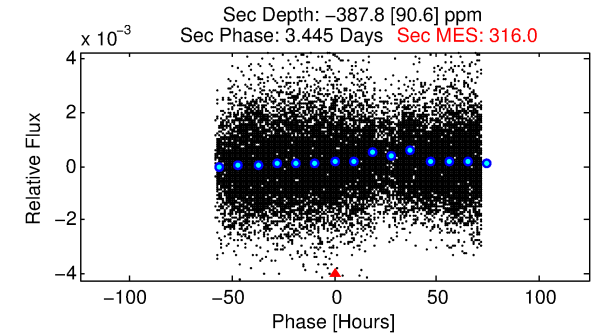
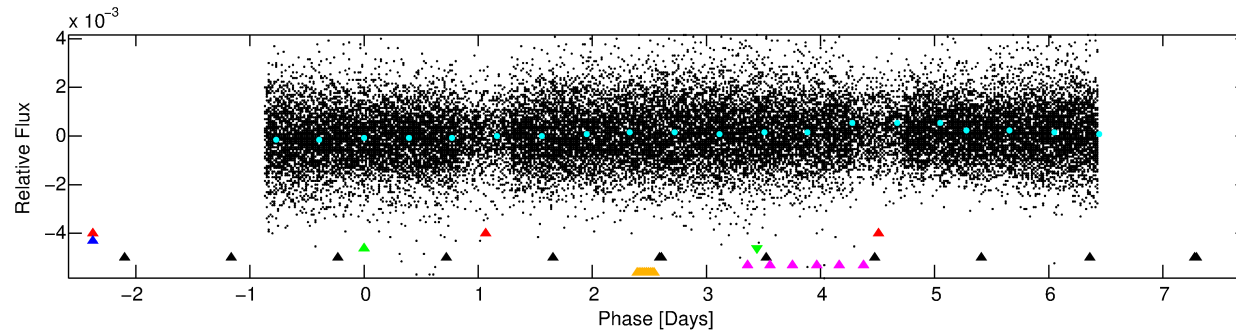
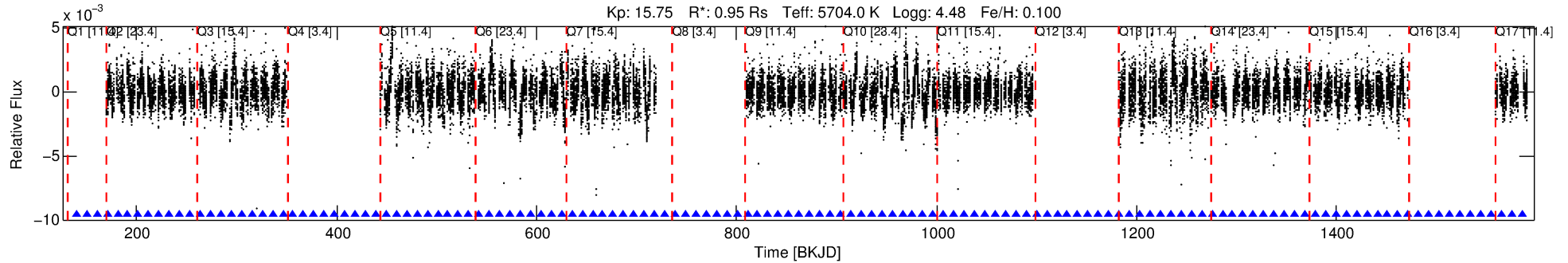
No Significant Match Found

DV One-Page Summary

KIC: 11704044 Candidate: 3 of 6 Period: 10.324 d

KOI: K07472 Corr: No Ephemeris Match

Kp: 15.75 R*: 0.95 Rs Teff: 5704.0 K Logg: 4.48 Fe/H: 0.100



TPS TCE Results:

Period = 10.32398 d
Epoch = 140.6993 BKJD

DV fit results are unavailable

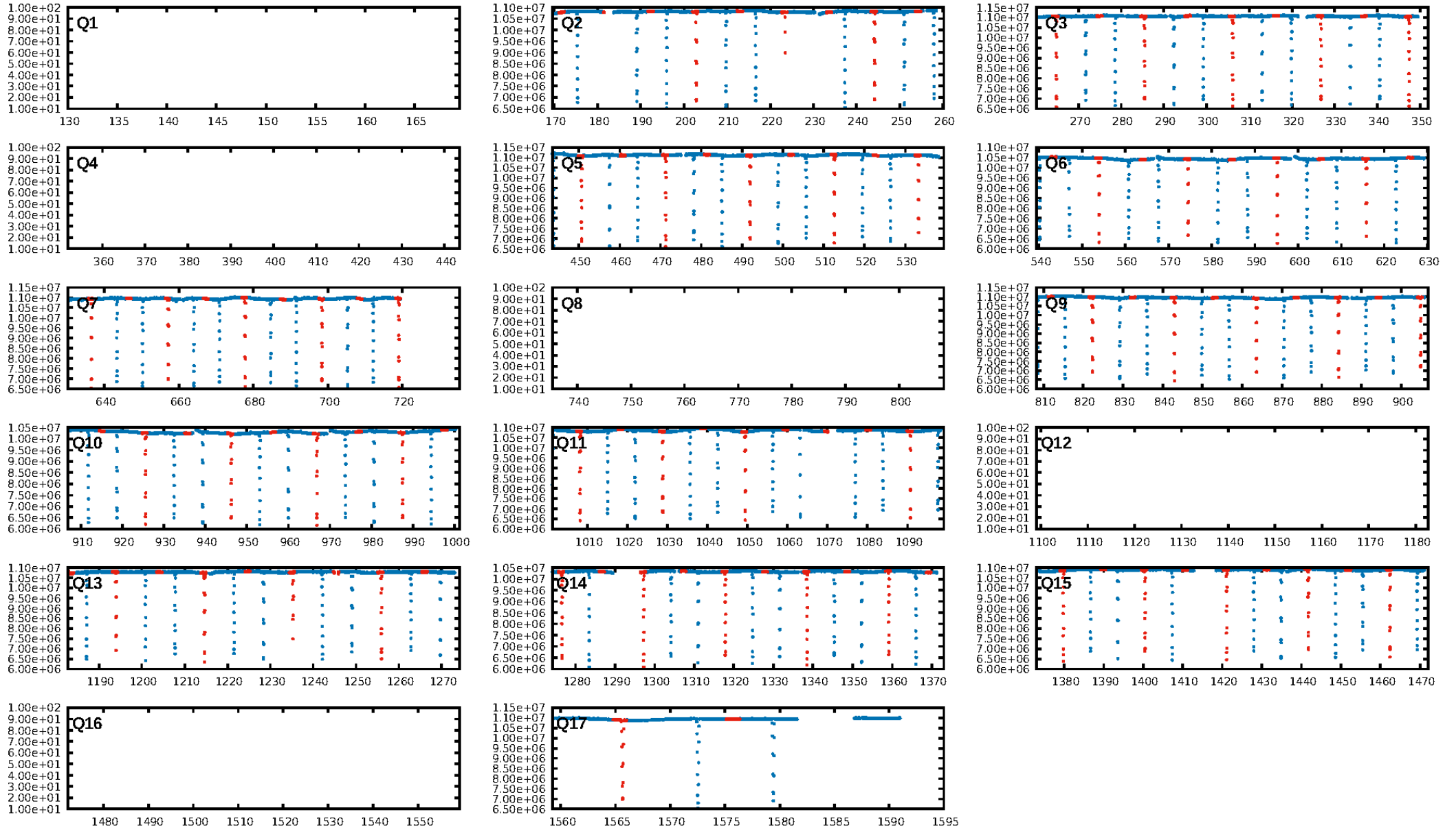
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 100.0% [13.53 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [102/102]
GhostDiagnostic-chr: -0.6023
Centroid-sig: 0.2%
Centroid-so: 4.621 arcsec [2.28 σ]
OotOffset-rm: 0.052 arcsec [0.74 σ]
KicOffset-rm: 0.175 arcsec [2.14 σ]
OotOffset-st: 4/4/0/4 [12]
KicOffset-st: 4/4/0/4 [12]
DiffImageQuality-fgm: 0.00 [0/12]
DiffImageOverlap-fno: 0.00 [0/12]

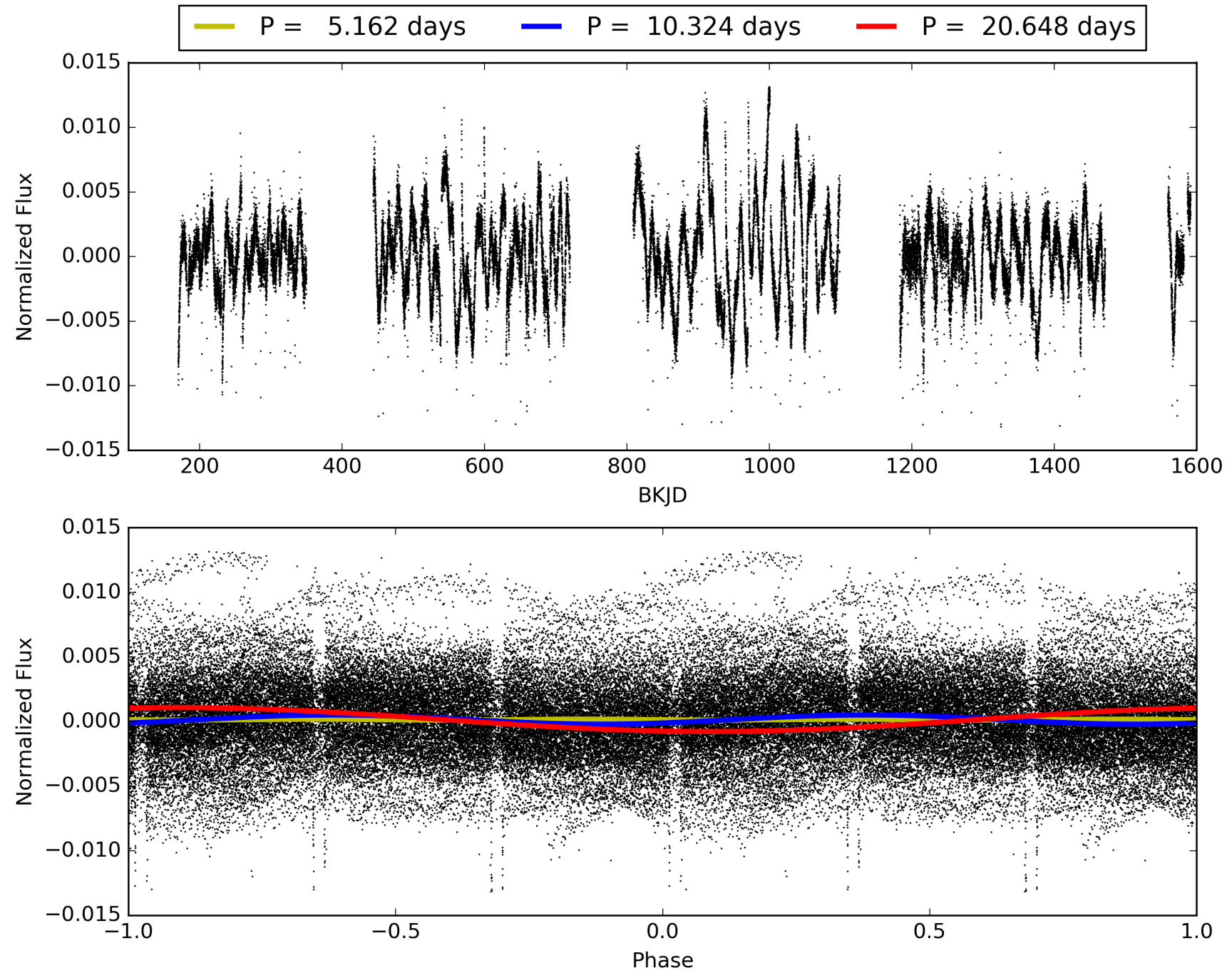
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 10:27:31 Z

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

TCE 011704044-03, PDC Light Curves

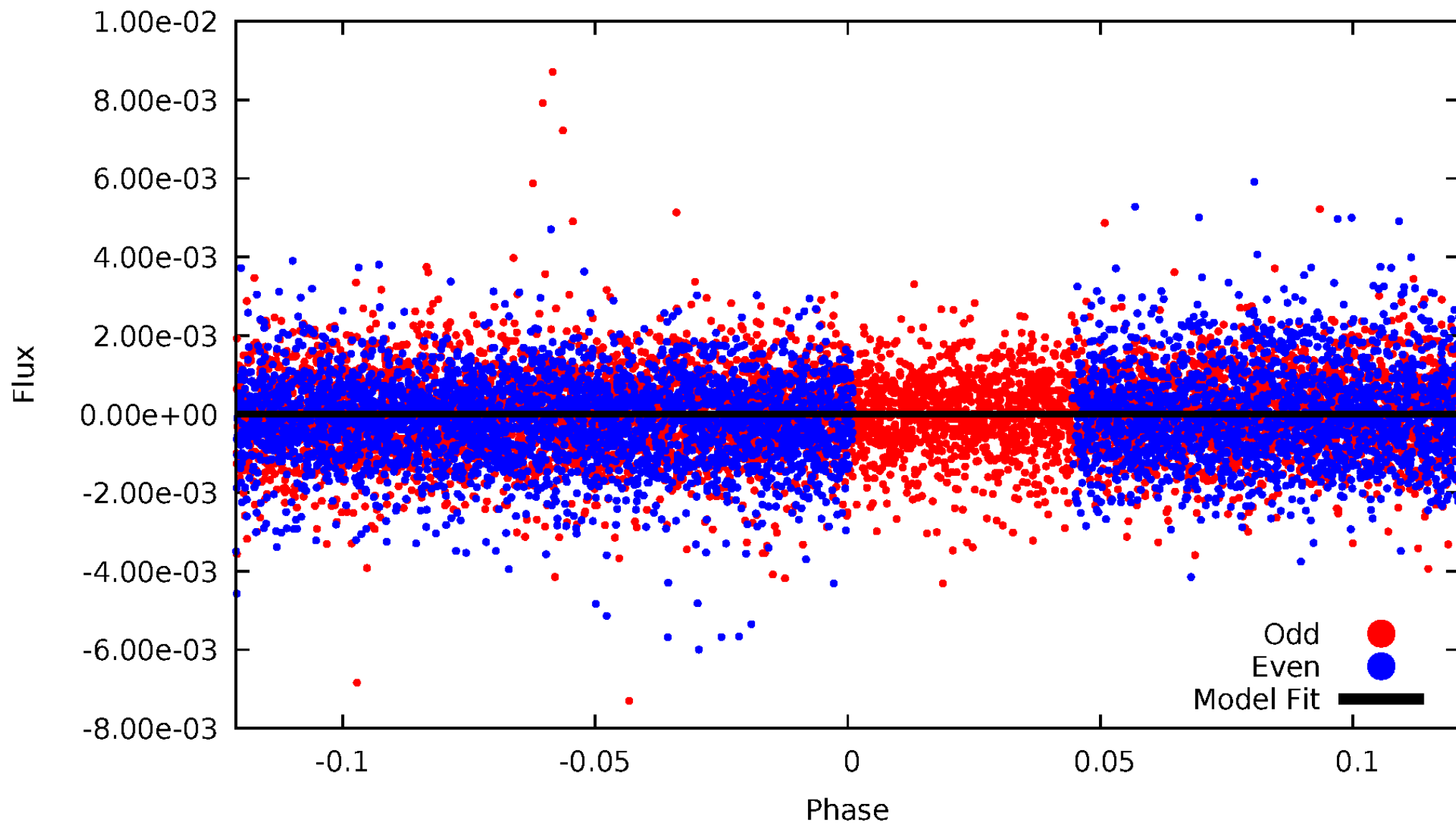


TCE 011704044-03



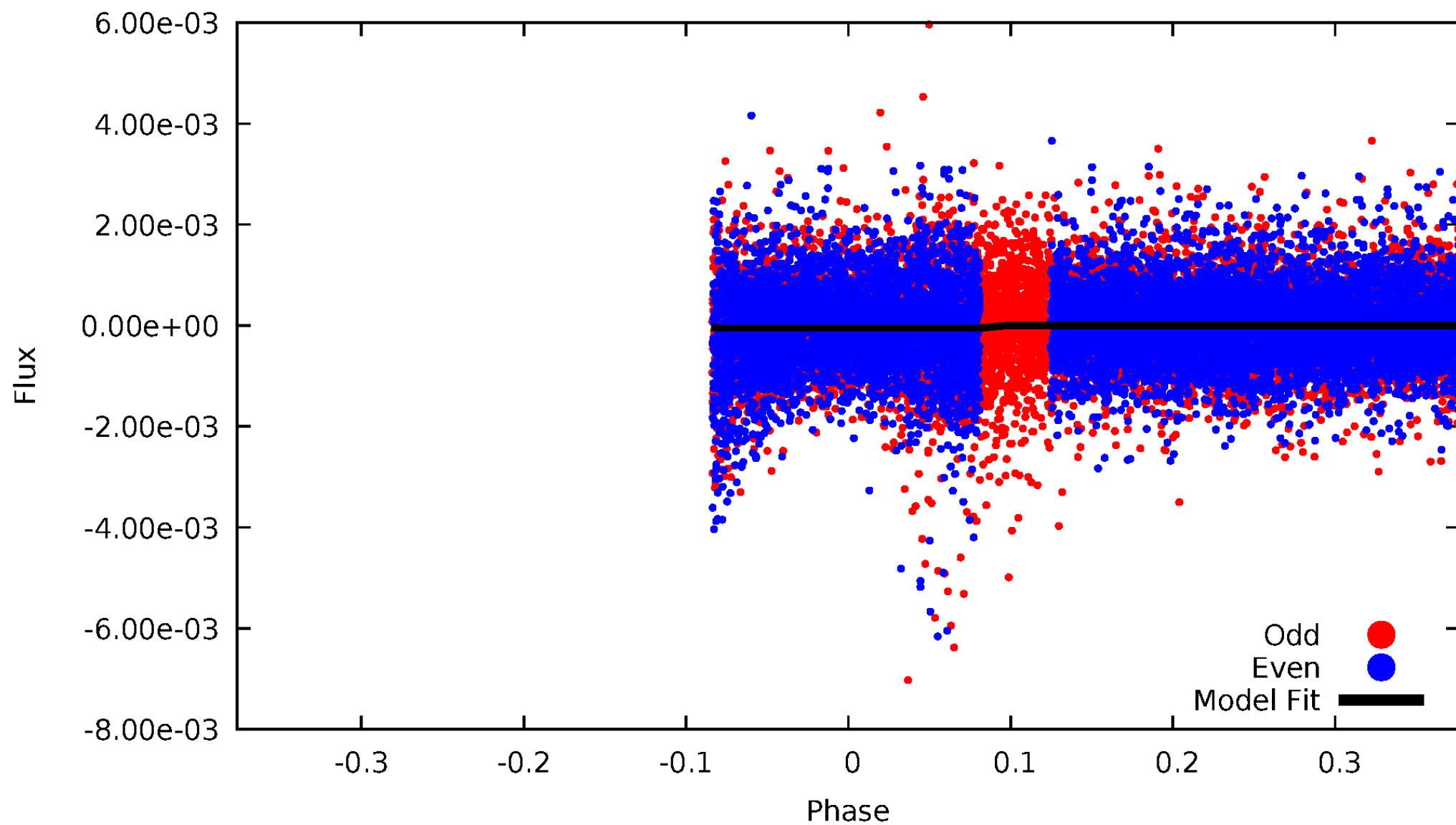
DV Odd/Even

TCE 011704044-03



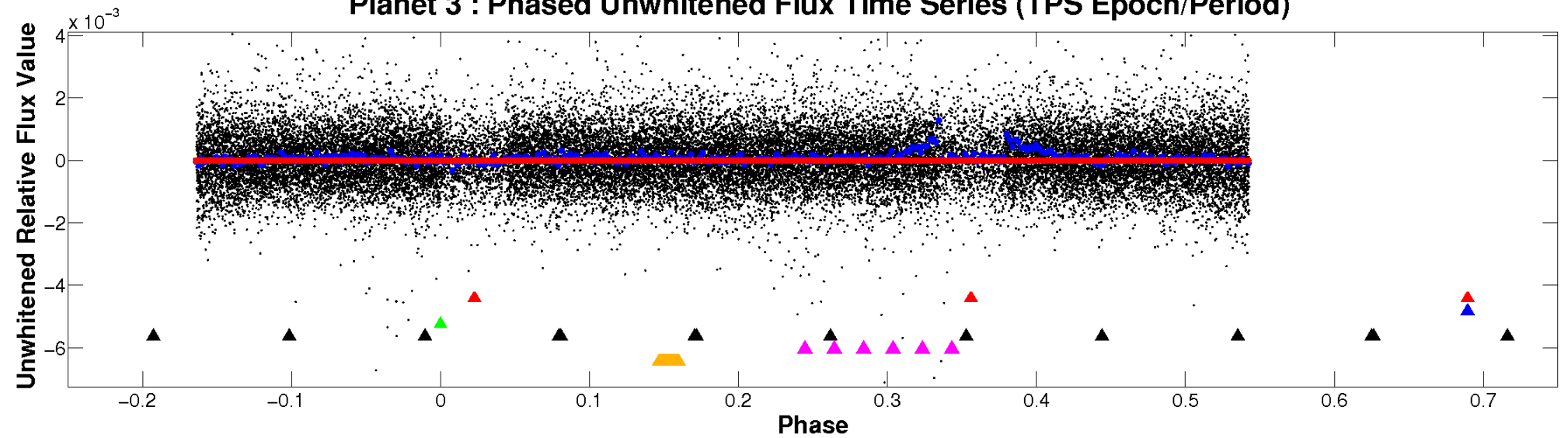
ALT Odd/Even

TCE 011704044-03

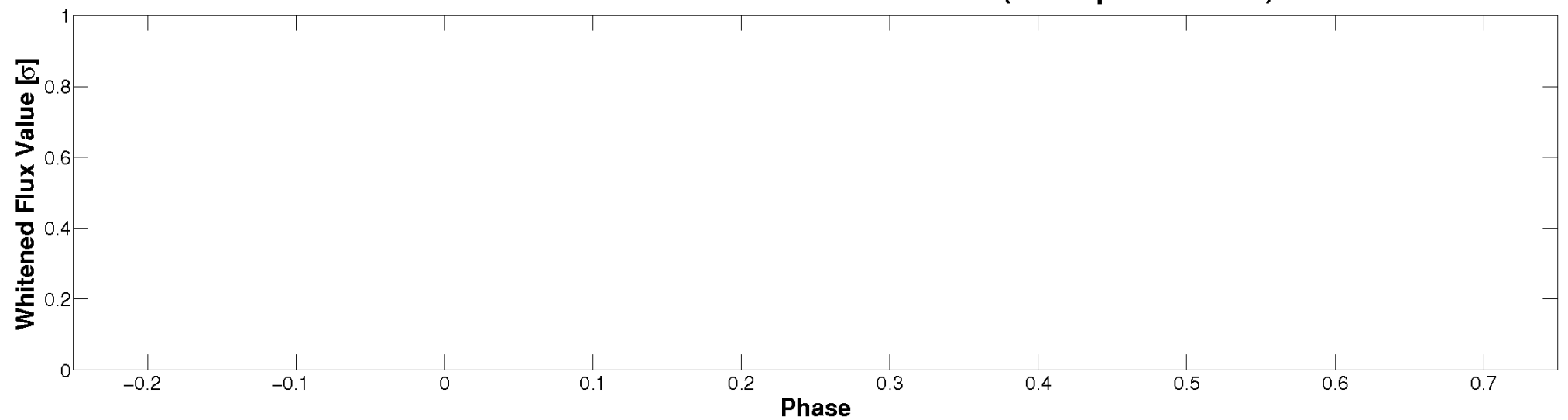


Non-Whitened Vs. Whitened Light Curve

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

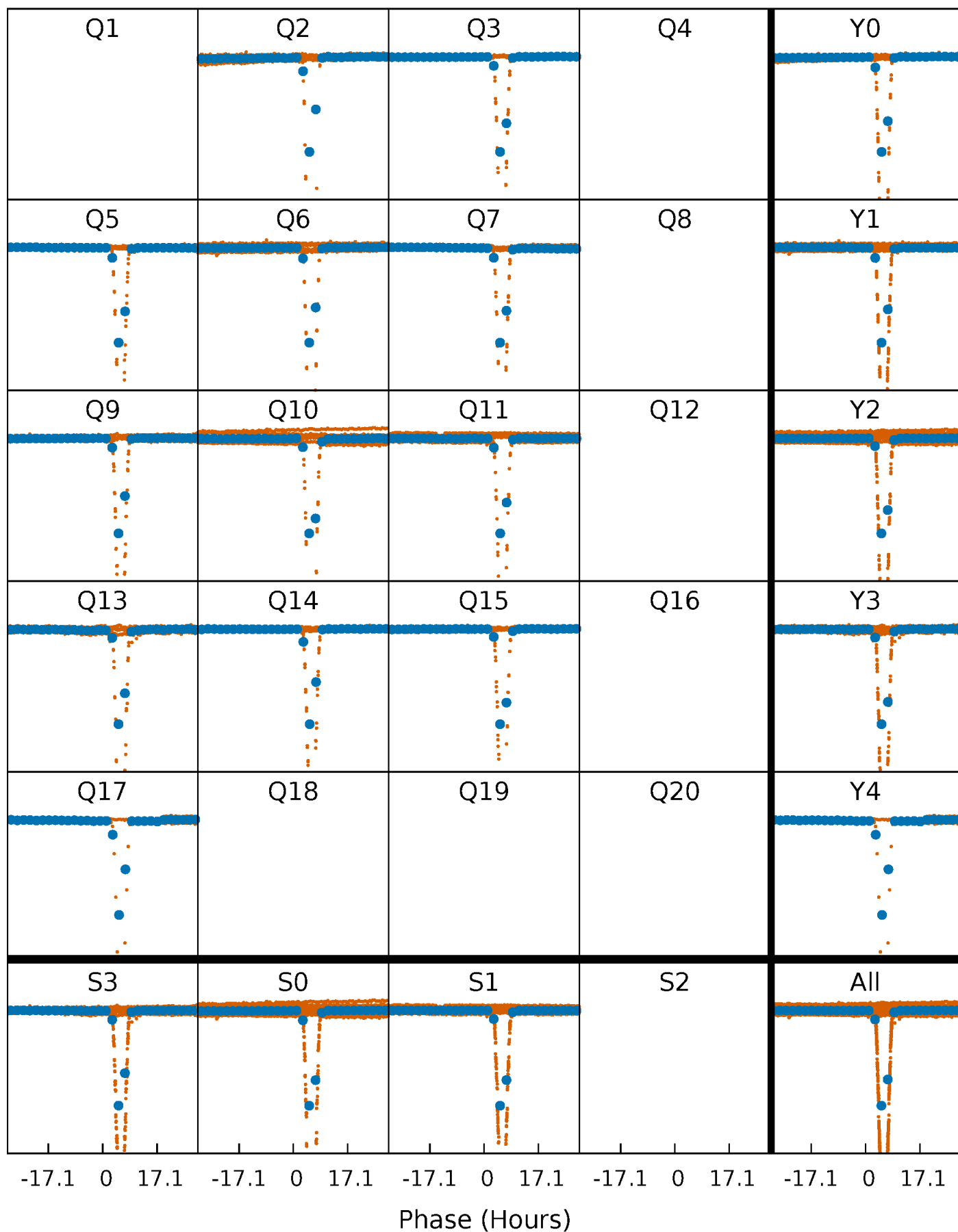


Planet 3 : Phased Whitened Flux Time Series (TPS Epoch/Period)



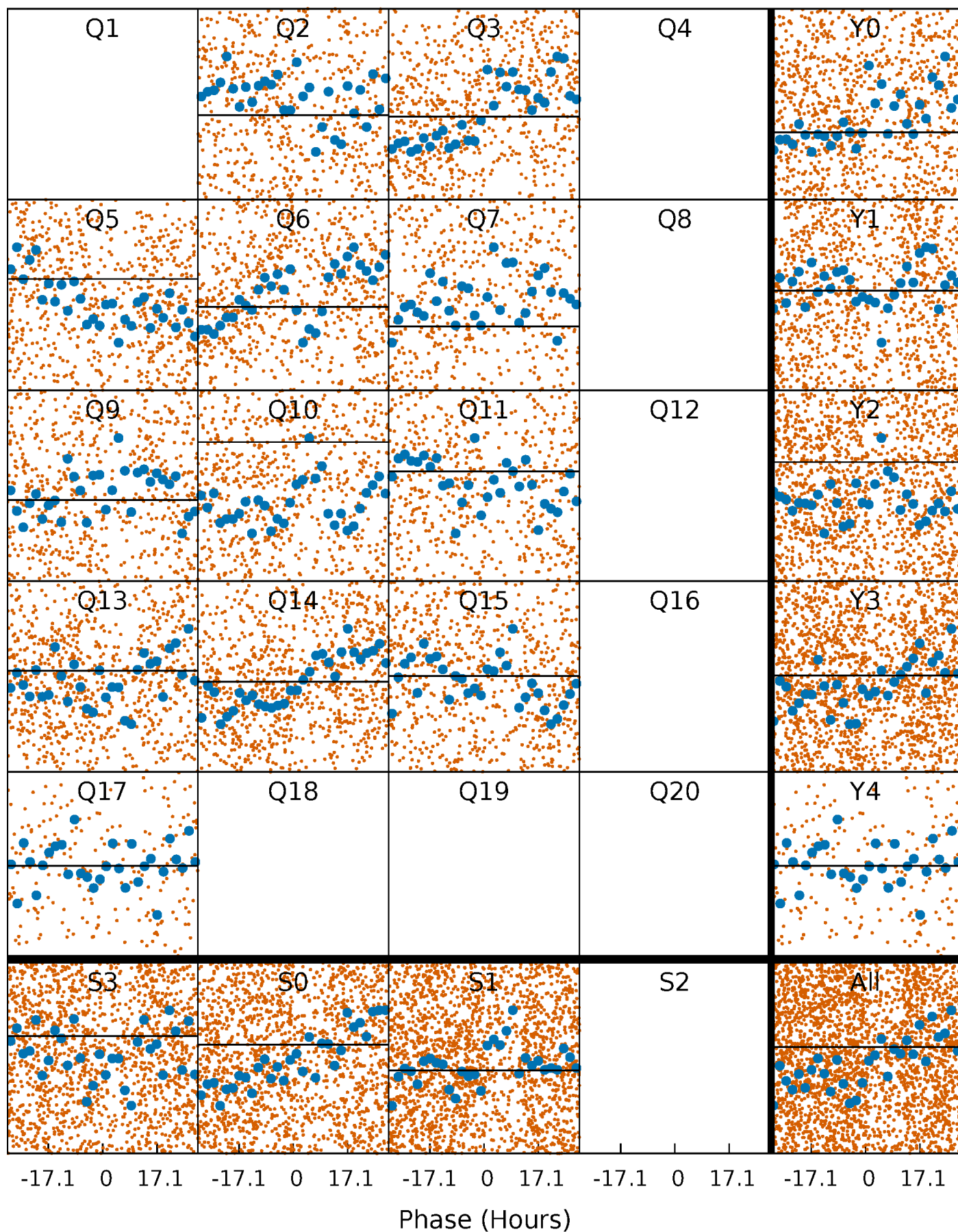
PDC Quarter-Phased Transit Curves

TCE 011704044-03 P= 10.323983 Days $T_0=140.699285$ (BKJD)



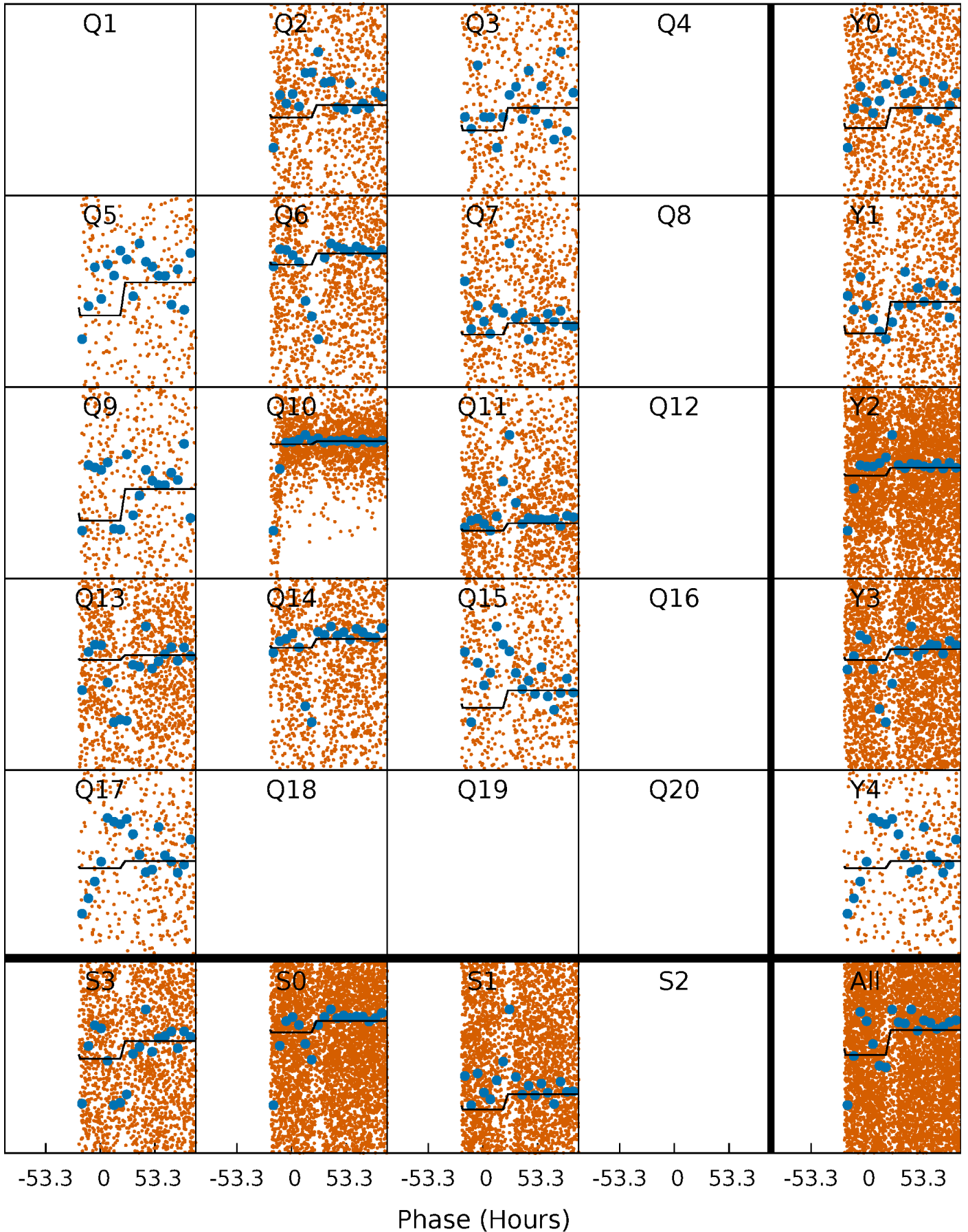
DV Quarter-Phased Transit Curves

TCE 011704044-03 P= 10.323983 Days $T_0=140.699285$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

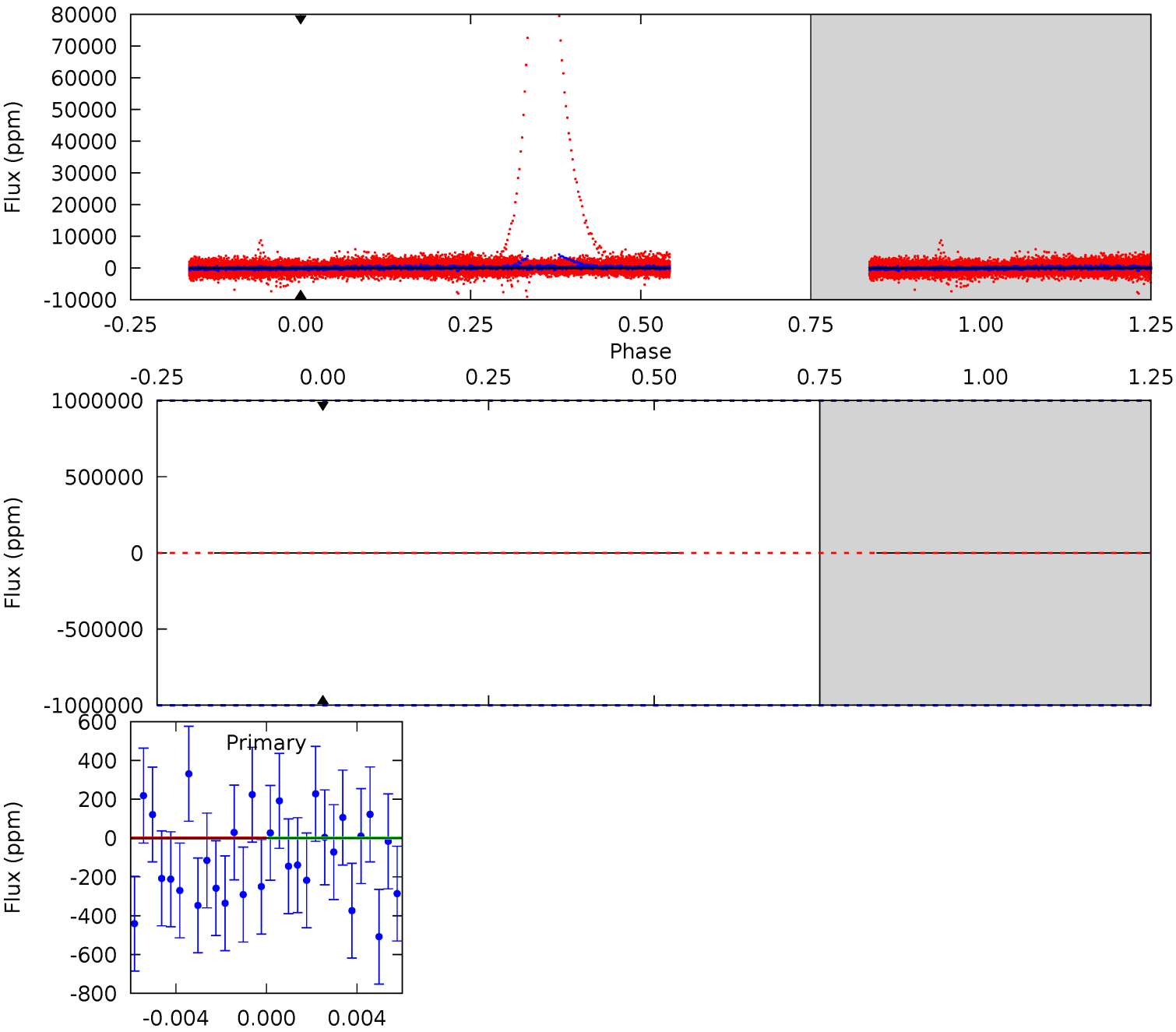
TCE 011704044-03 P= 10.323983 Days $T_0=139.872753$ (BKJD)



DV Model-Shift Uniqueness Test

011704044-03, P = 10.323983 Days, E = 140.699285 Days

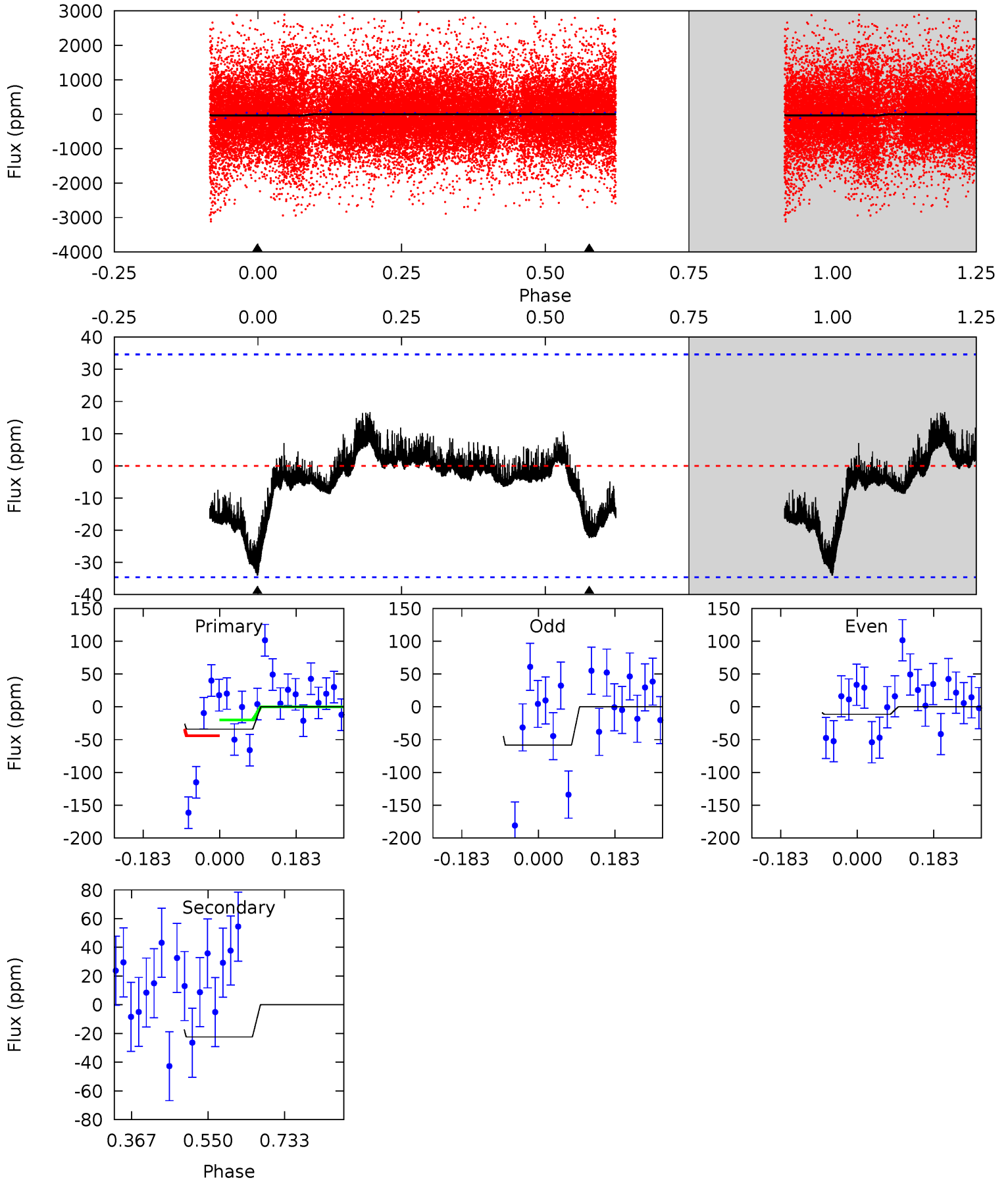
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011704044-03, P = 10.323983 Days, E = 139.872753 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.37	2.87	0	0	4.44	1.33	0.30	4.37	4.37	2.87	2.87	3.02	1.98	0.33	1.39



Stellar Parameters For KIC 011704044

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5704^{+171}_{-206}	$4.483^{+0.052}_{-0.195}$	$0.100^{+0.250}_{-0.300}$	$0.948^{+0.279}_{-0.093}$	$0.996^{+0.111}_{-0.111}$	$1.646^{+0.459}_{-0.867}$
	+3%/-4%	+1%/-4%	+250%/-300%	+29%/-10%	+11%/-11%	+28%/-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 011704044-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$14.68^{+11.07}_{-9.10}$	1146^{+84}_{-56}	4010^{+7672}_{-14274}	79^{+4055}_{-2936}
Alt.	-22 ± 8	$7.39^{+7.94}_{-5.24}$	1142^{+74}_{-52}	2300^{+924}_{-607}	$1.678^{+18.383}_{-1.309}$

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

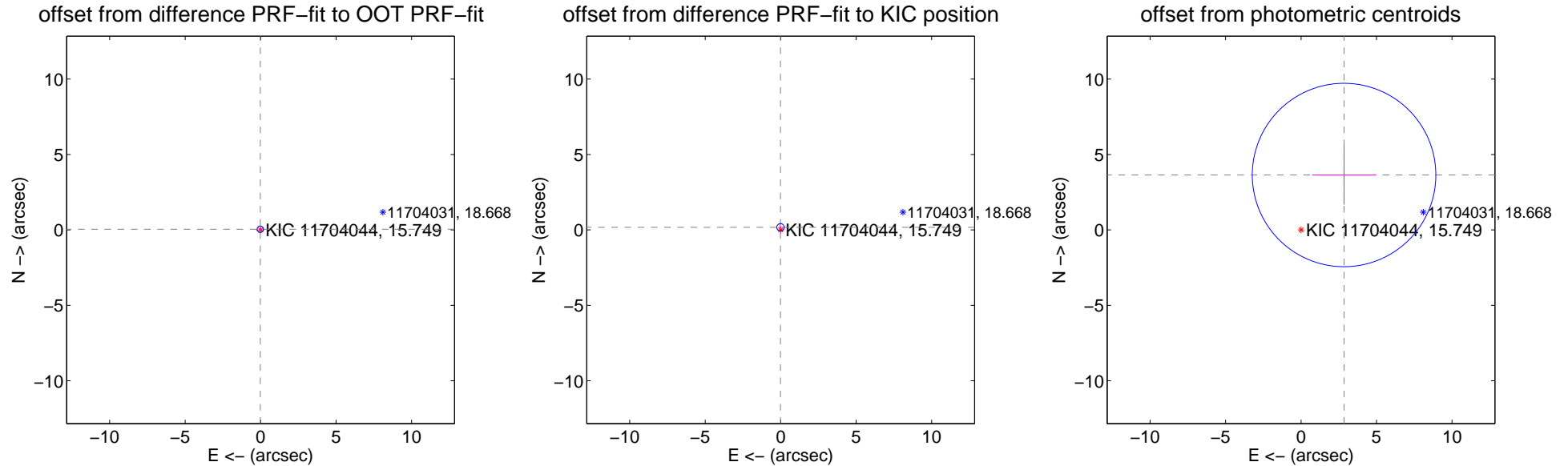
DV Centroid Data

Supplemental centroid analysis for 011704044-03. Kepler magnitude: 15.75. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

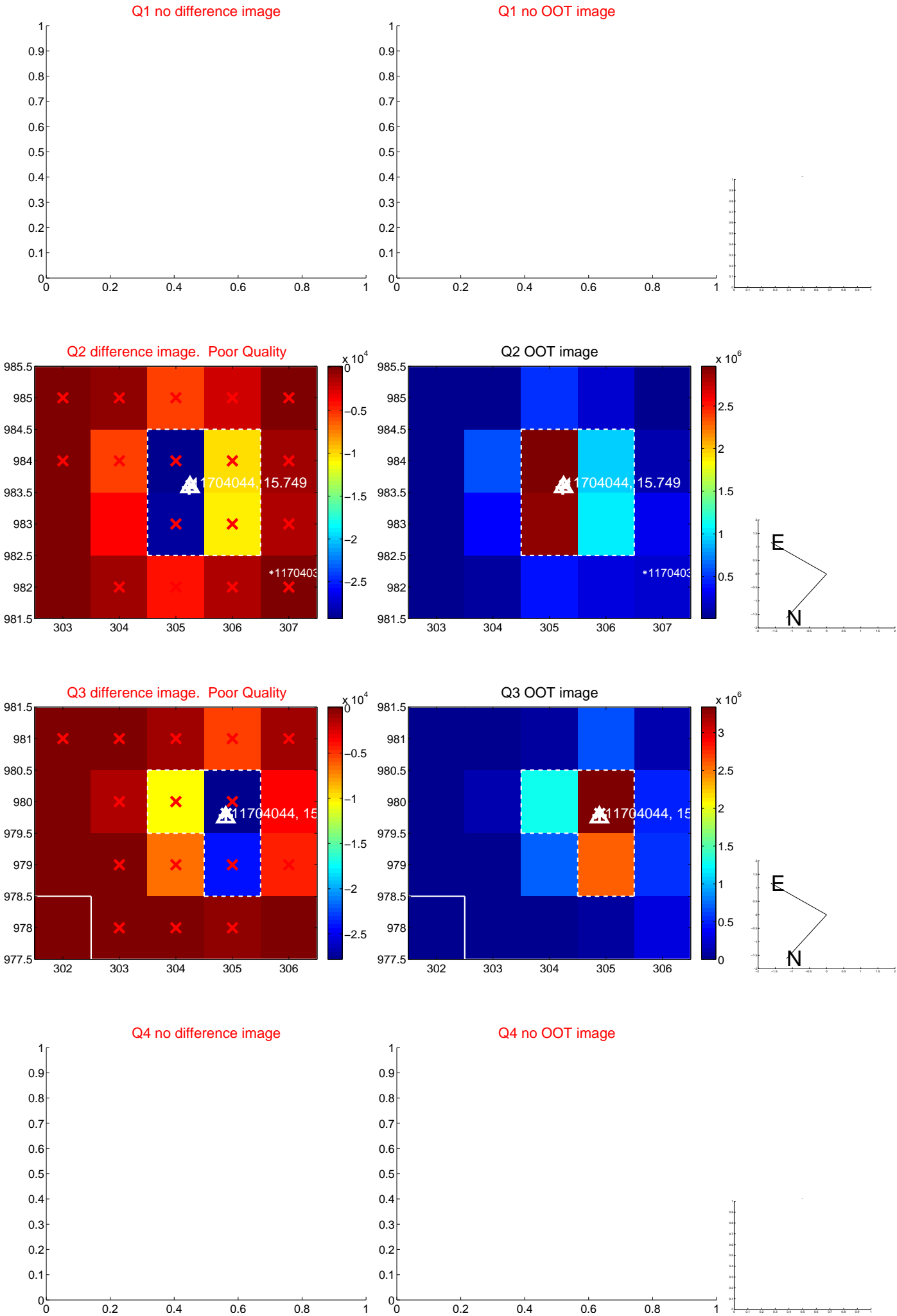
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.052 ± 0.071	0.74	0.022 ± 0.069	0.047 ± 0.071
PRF-fit source offset from KIC position	0.175 ± 0.082	2.14	0.012 ± 0.073	0.174 ± 0.082
photometric centroid source offset	4.62 ± 2.03	2.28	-2.85 ± 2.13	3.64 ± 1.96

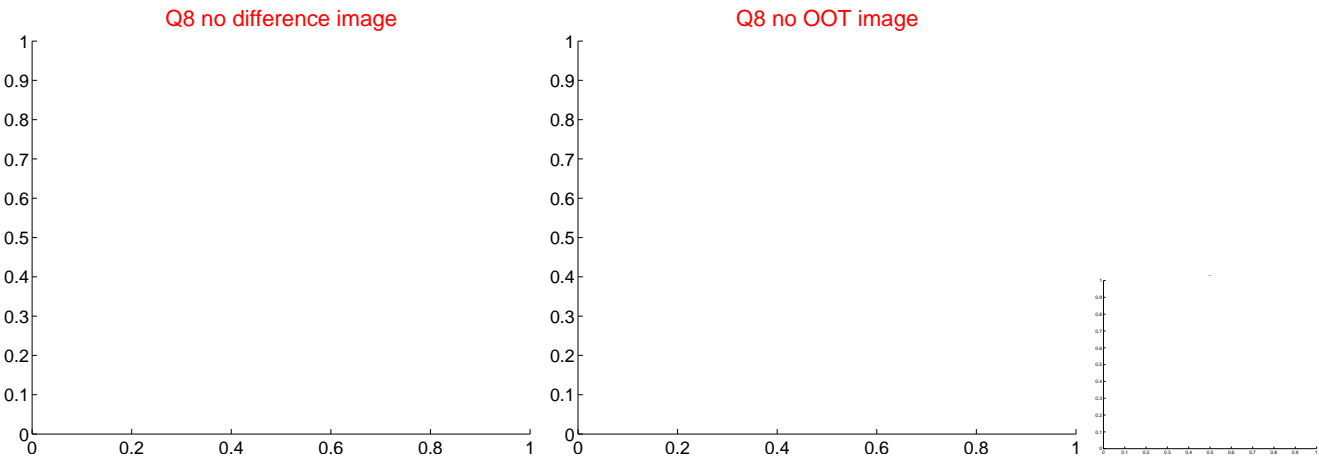
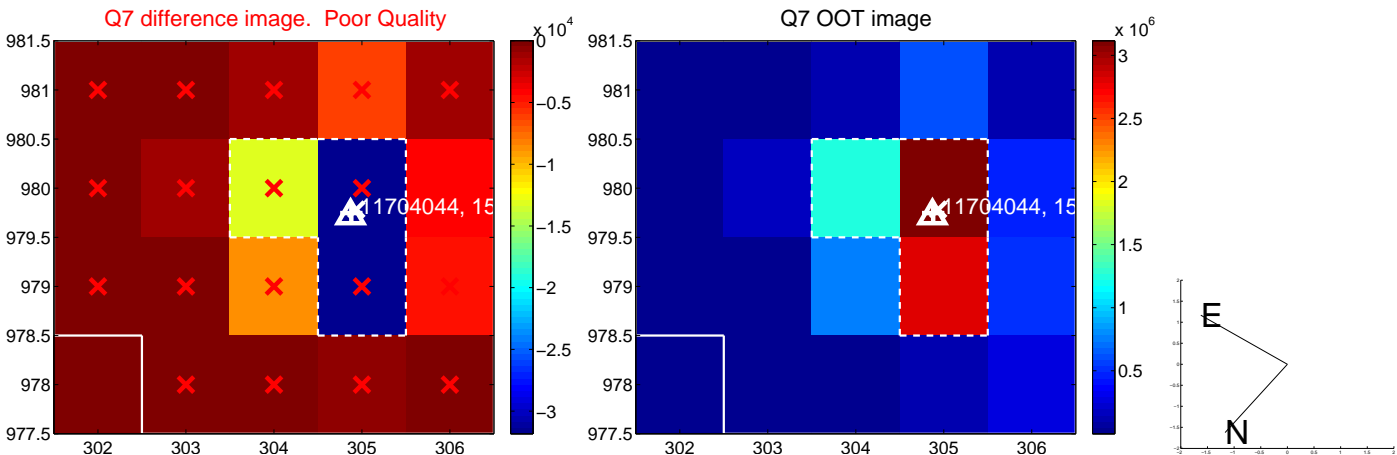
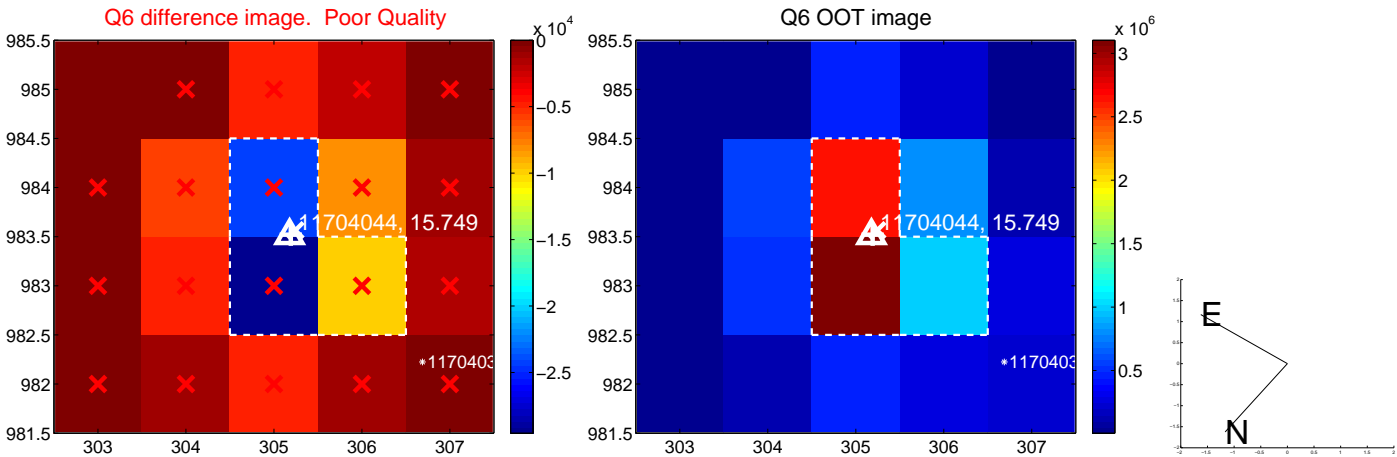
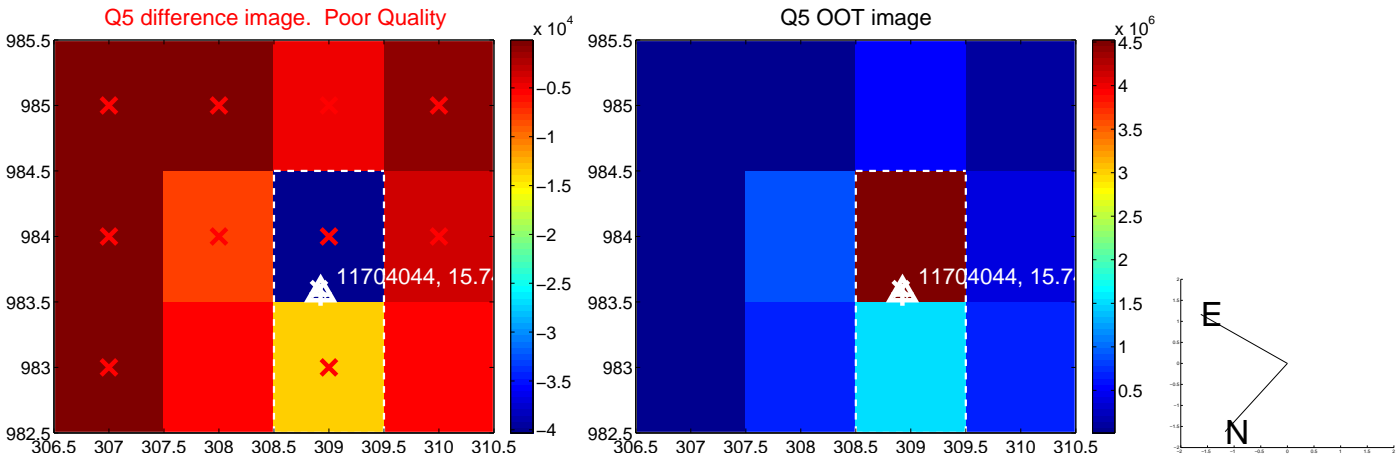


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

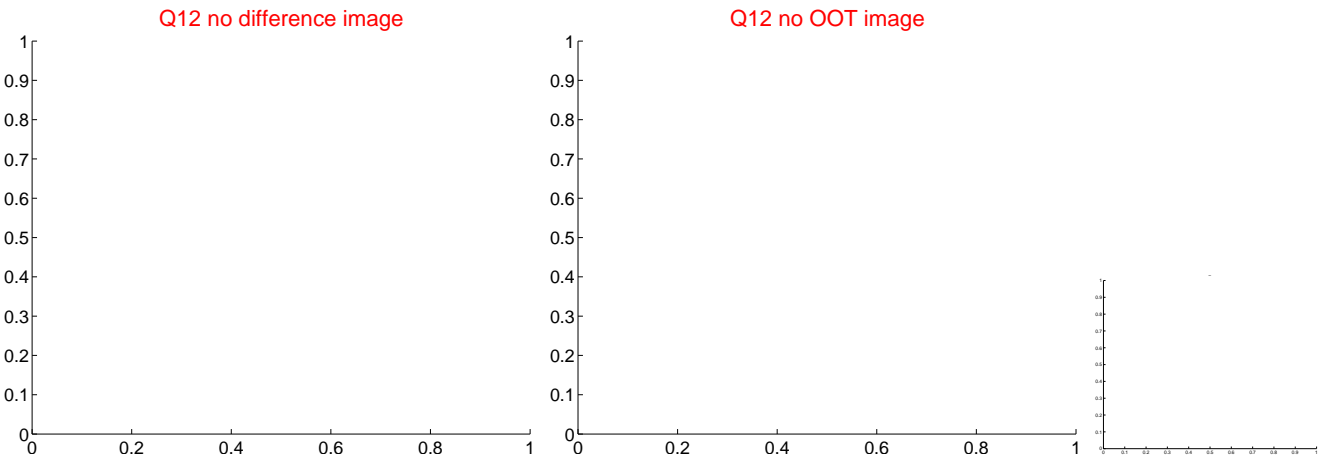
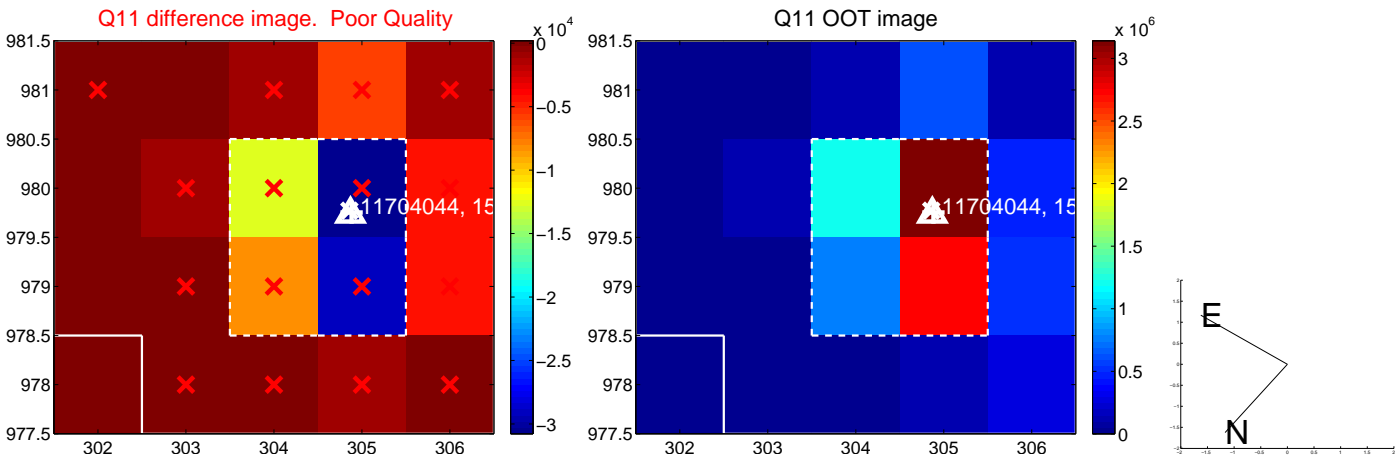
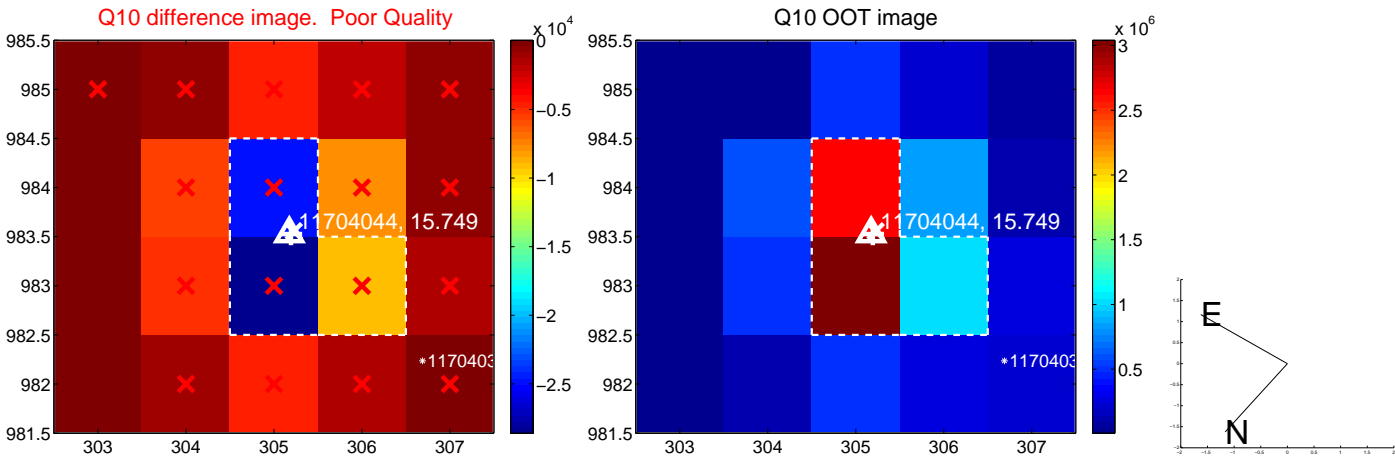
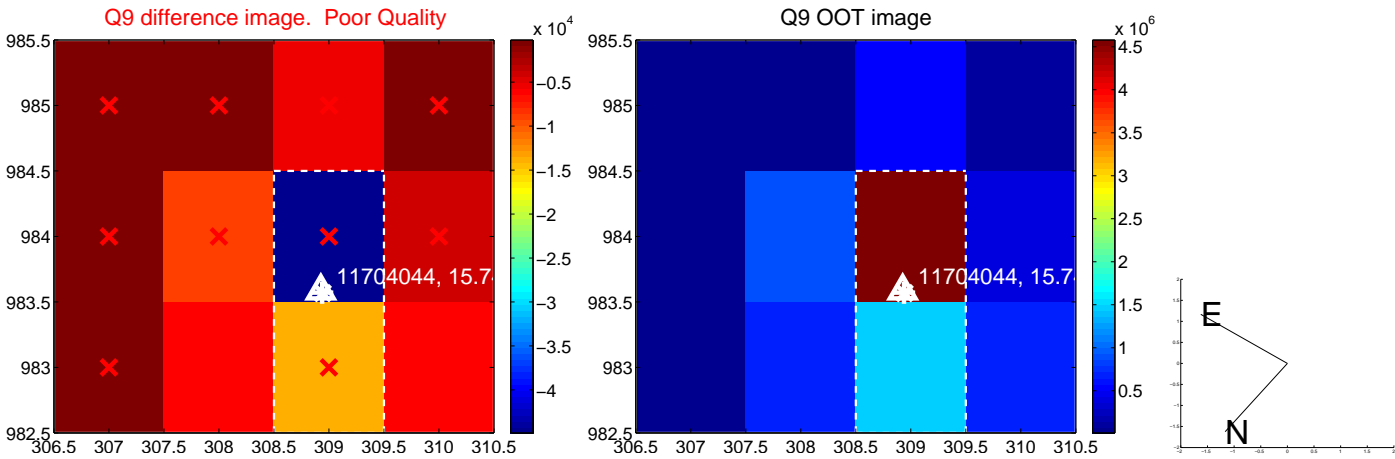
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



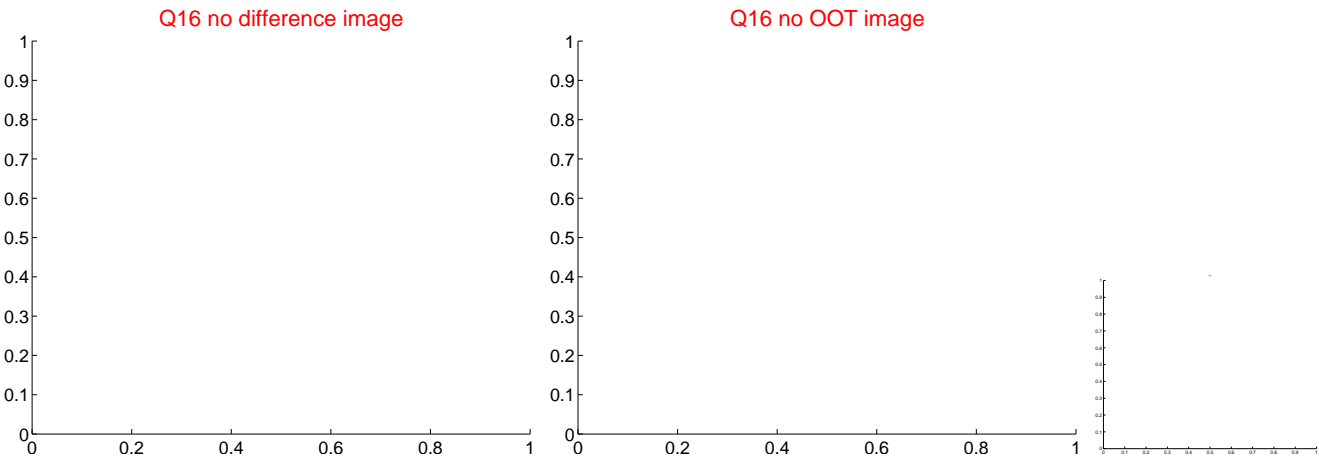
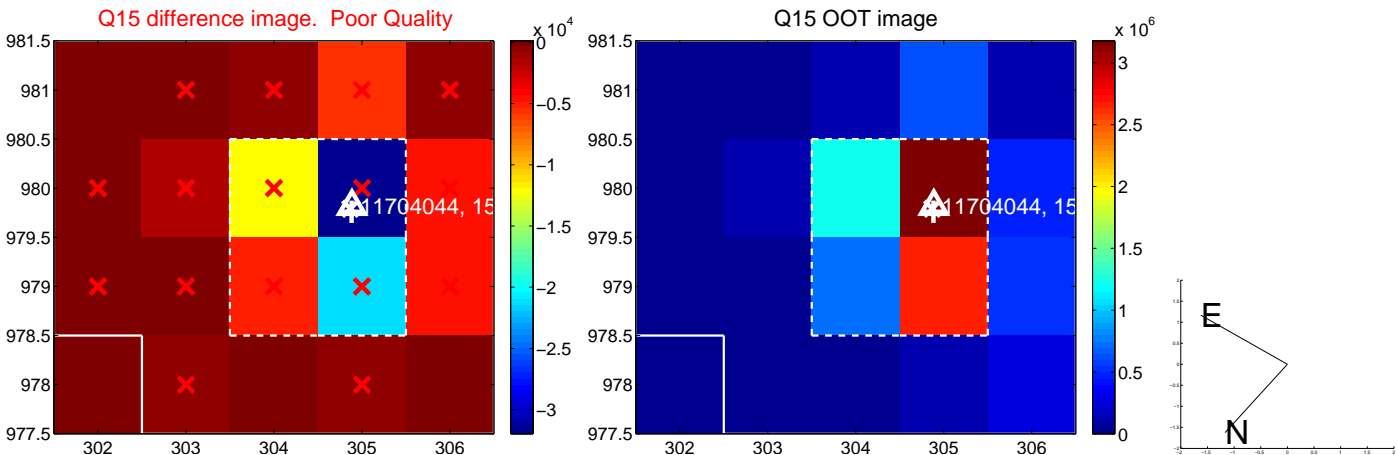
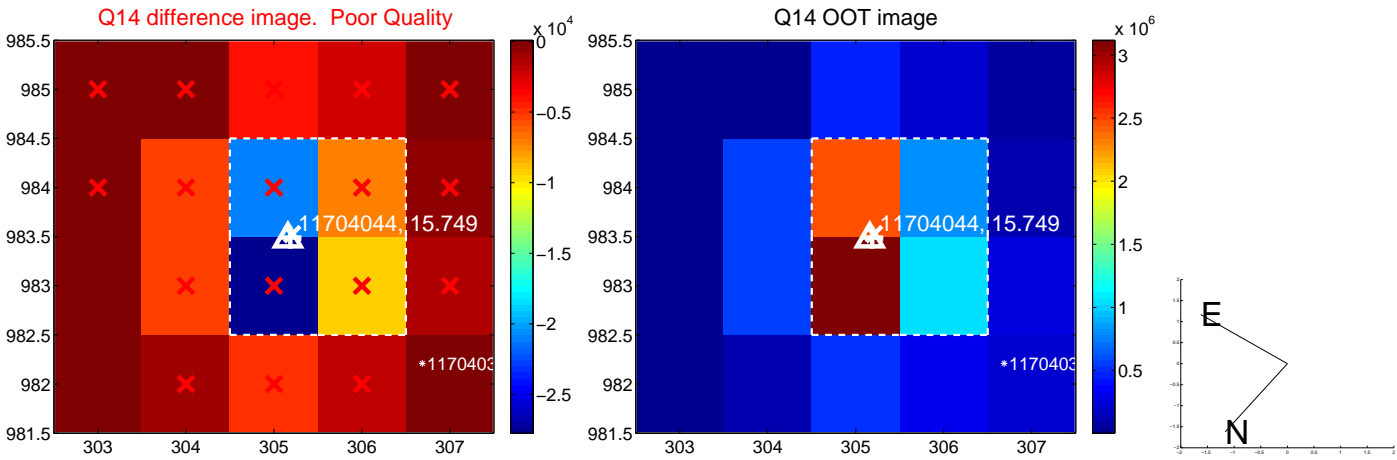
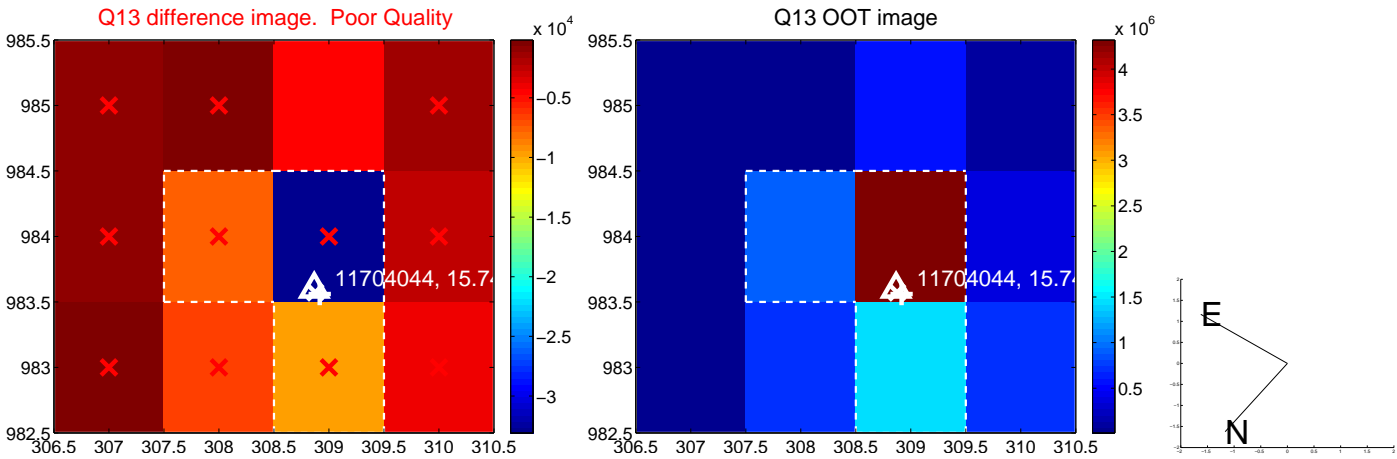
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



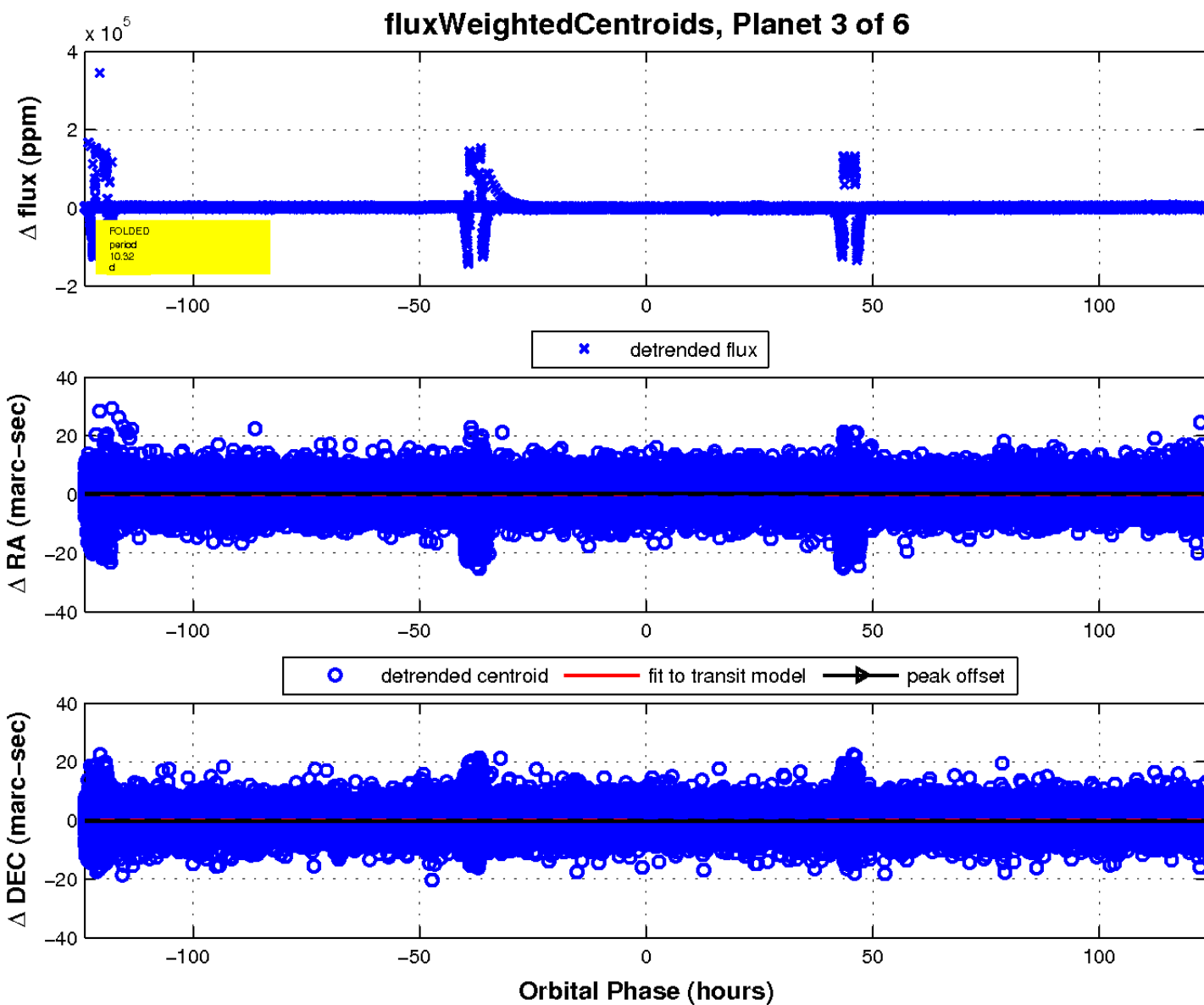
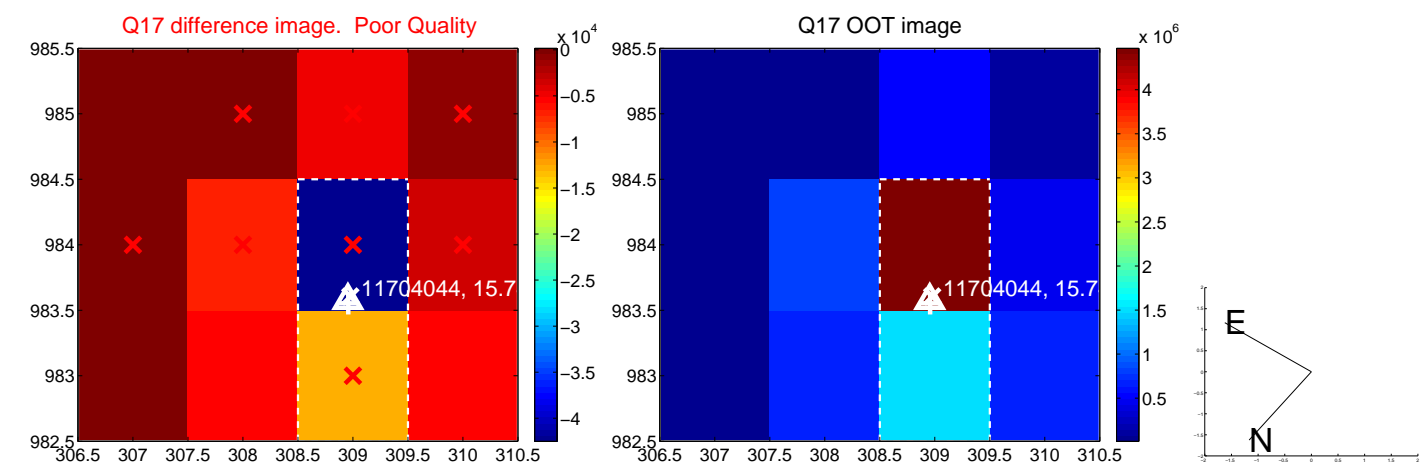
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

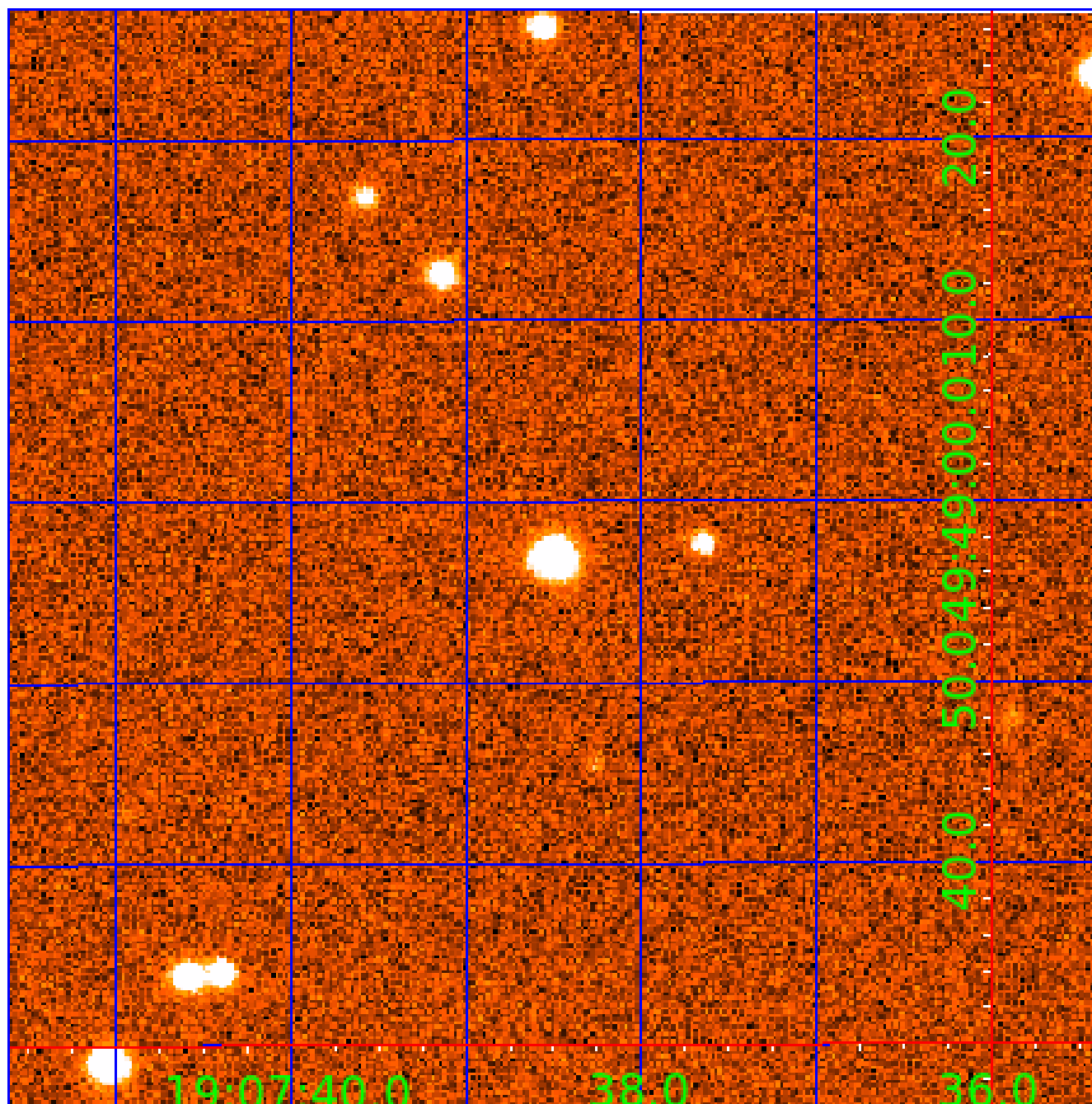


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011704044

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})
011704044-01	OBS	7472.01	6.882723	134.044755	384627.6	3.500	9152.4	-1.0	0.95	5704	51.72	170.27
011704044-02	OBS	No	10.323939	137.496540	2429.6	24.094	476.1	43.2	0.95	5704	5.09	99.17
011704044-03	OBS	No	10.323983	140.699285	19797.8	15.000	419.7	-1.0	0.95	5704	13.18	99.16
011704044-04	OBS	No	108.872282	151.844034	1143.0	13.549	39.3	7.0	0.95	5704	6.14	4.29
011704044-05	OBS	No	217.007274	308.408522	3739.0	10.472	40.8	15.4	0.95	5704	9.69	1.71
011704044-06	OBS	No	20.645940	132.028644	1270.6	10.500	21.8	-1.0	0.95	5704	3.33	39.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011704044-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
011704044-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—HALO_GHOST
011704044-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS
011704044-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011704044-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011704044-06	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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

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

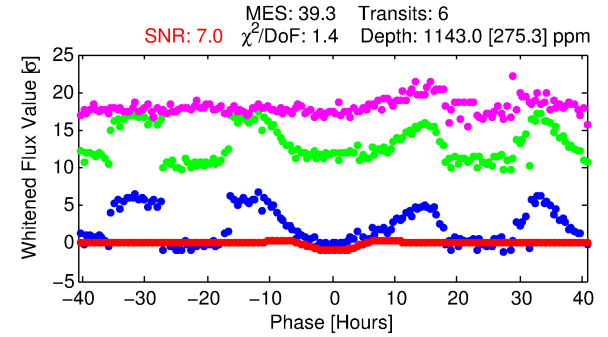
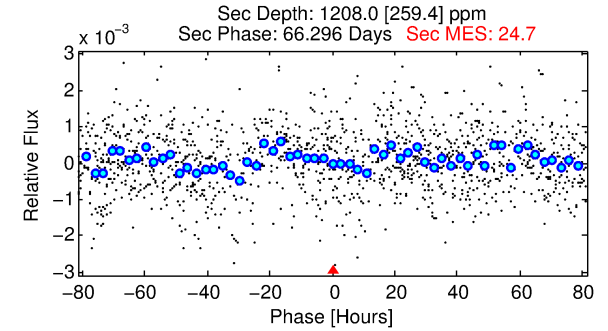
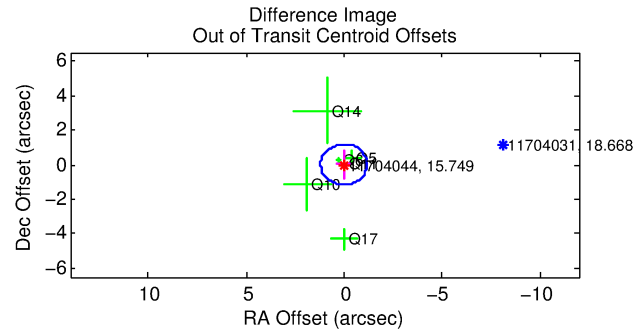
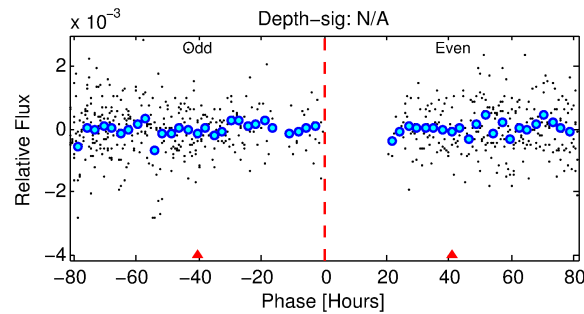
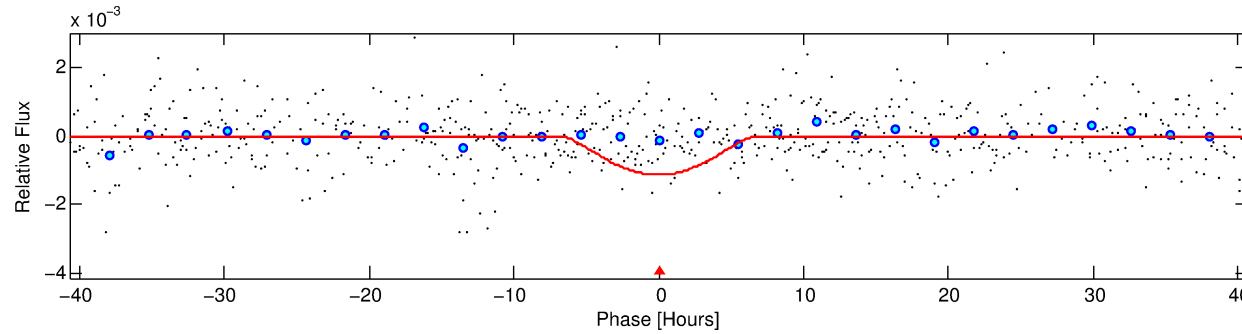
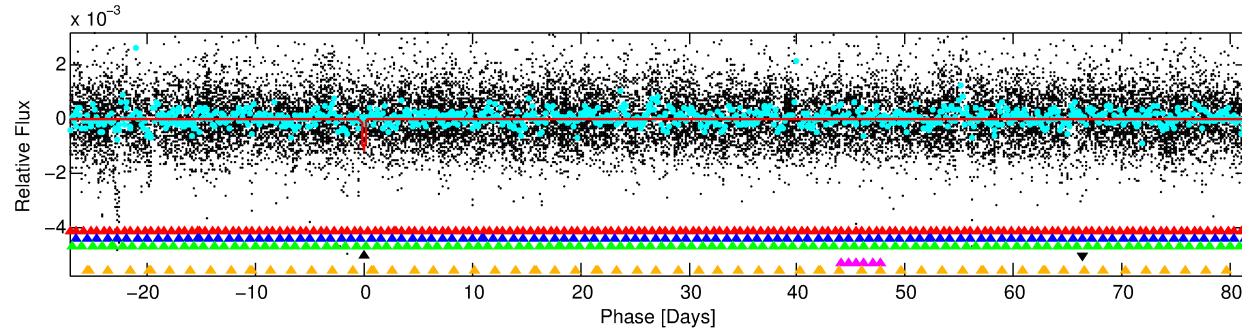
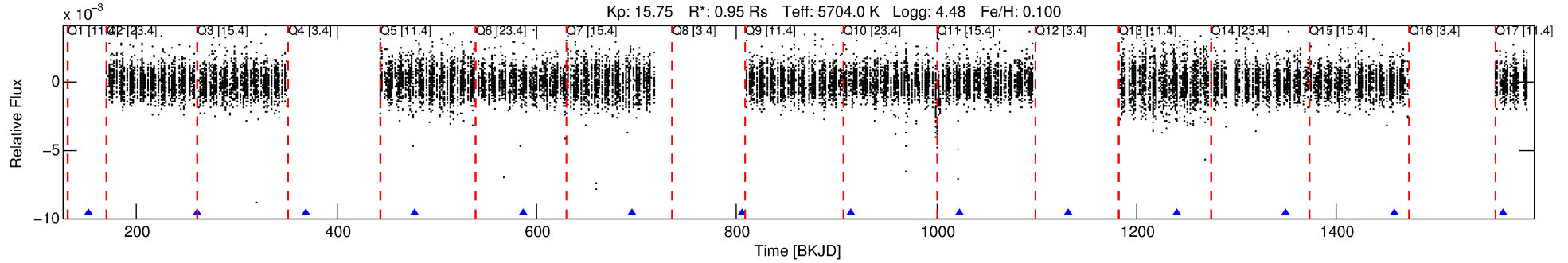
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011704044-04

No Significant Match Found

DV One-Page Summary

KIC: 11704044 Candidate: 4 of 6 Period: 108.872 d
KOI: K07472 Corr: No Ephemeris Match



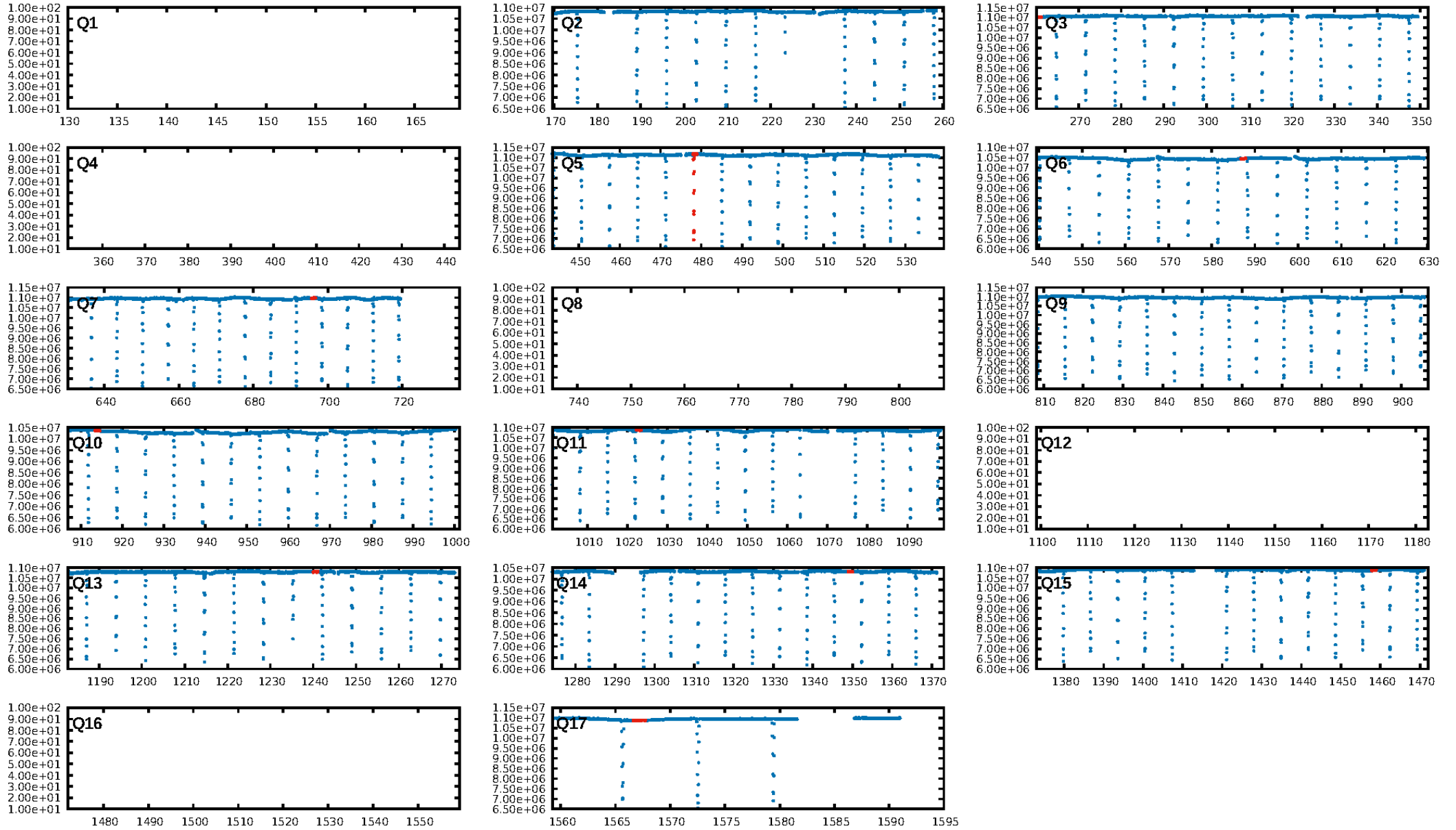
DV Fit Results:

Period = 108.87228 [0.01075] d
Epoch = 151.8440 [0.0946] BKJD
Rp/R* = 0.0593 [0.4255]
a/R* = 21.80 [37.21]
b = 1.00 [0.62]
Seff = 4.29 [1.66]
Teq = 367 [35] K
Rp = 6.14 [44.05] Re
a = 0.4458 [0.1100] AU
Ag = 3508.75 [50358.91] [0.07σ]
Teffp = 4366 [15663] K [0.26σ]

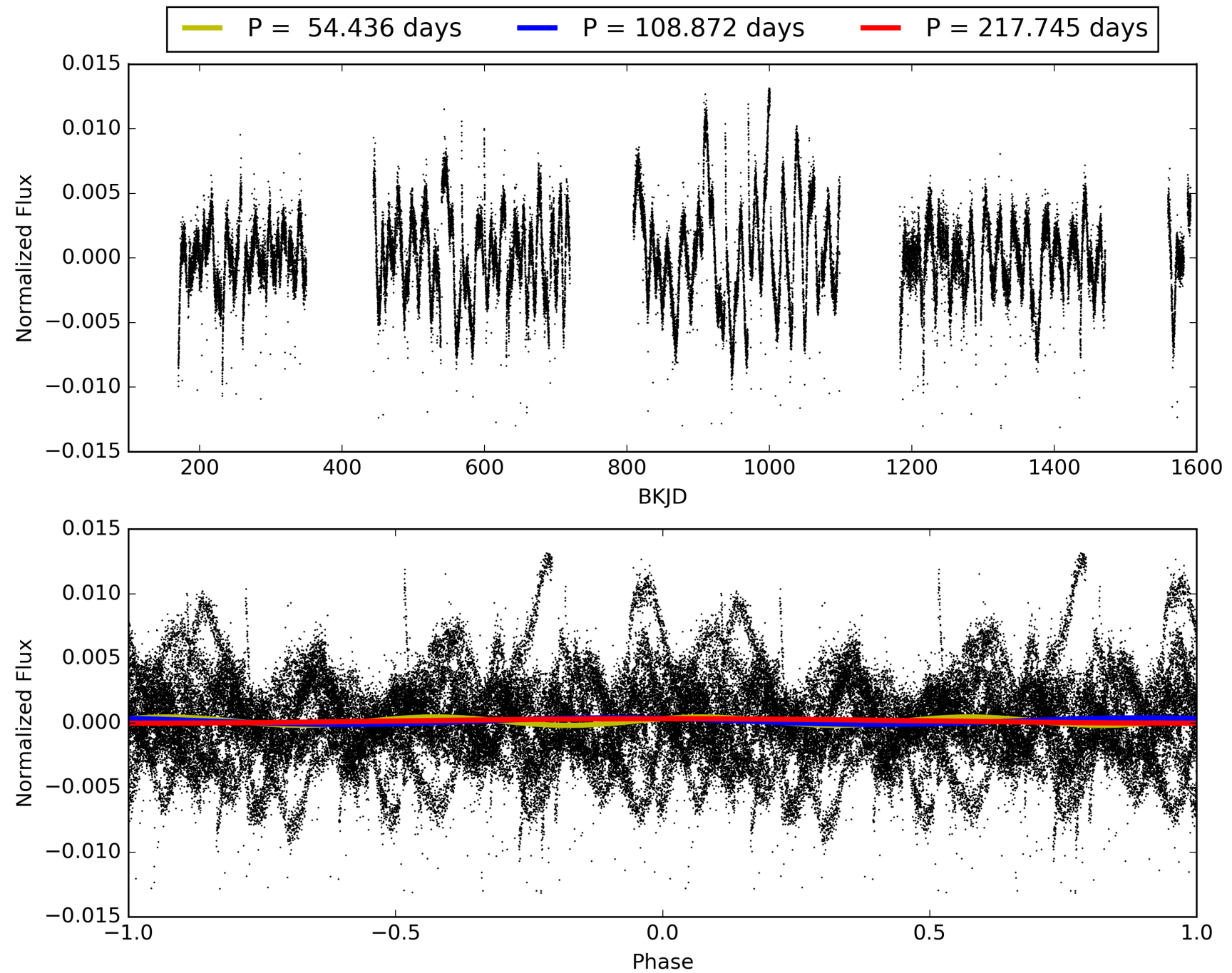
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [123.53σ]
LongPeriod-sig: 100.0% [151.56σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 2.075
Centroid-sig: 86.3%
Centroid-so: 0.167 arcsec [0.20σ]
OotOffset-rm: 0.031 arcsec [0.08σ]
KicOffset-rm: 0.141 arcsec [0.37σ]
OotOffset-st: 3/1/0/2 [6]
KicOffset-st: 3/1/0/2 [6]
DiffImageQuality-fgm: 0.17 [1/6]
DiffImageOverlap-fno: 0.12 [1/8]

TCE 011704044-04, PDC Light Curves

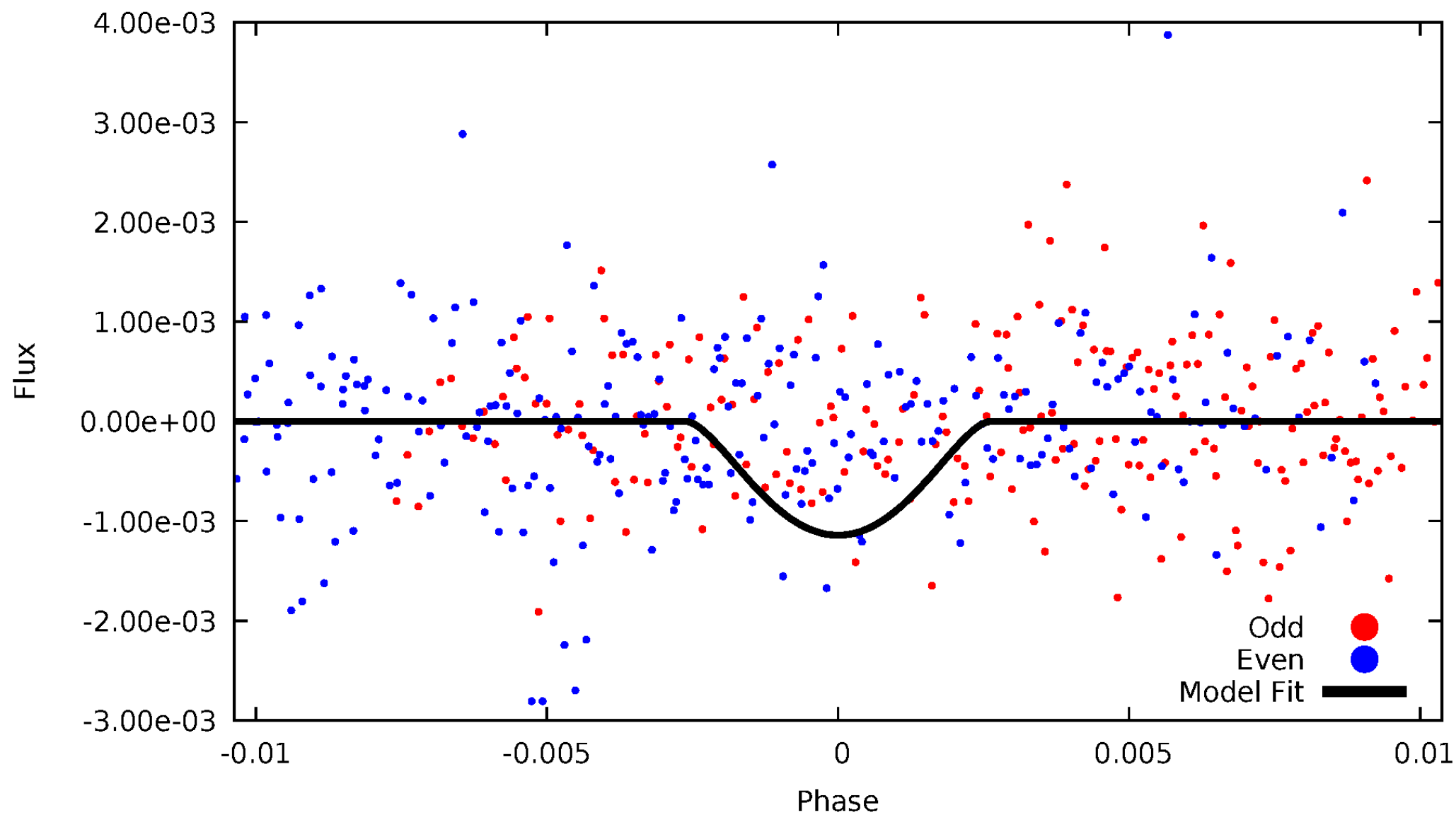


TCE 011704044-04



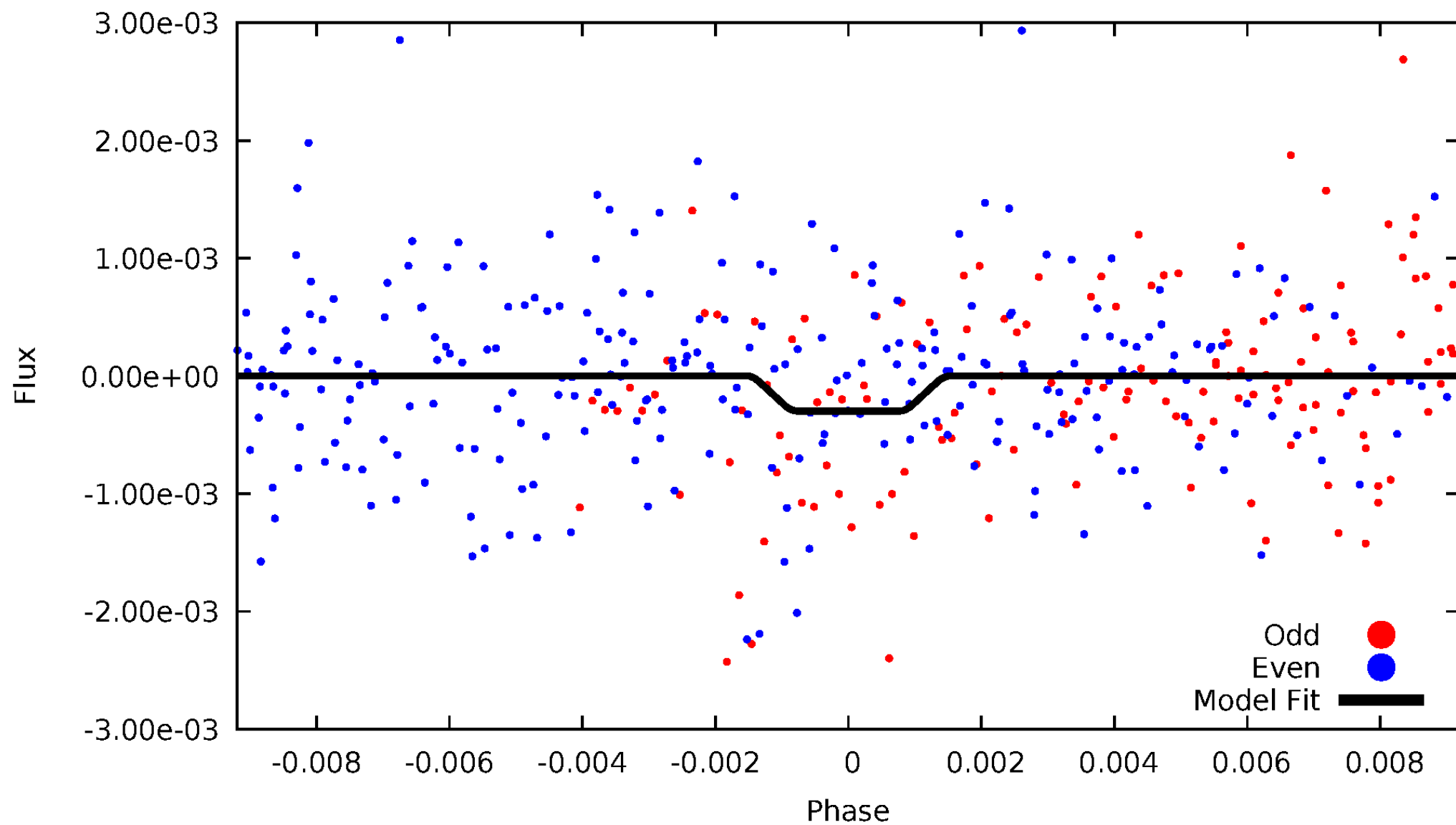
DV Odd/Even

TCE 011704044-04



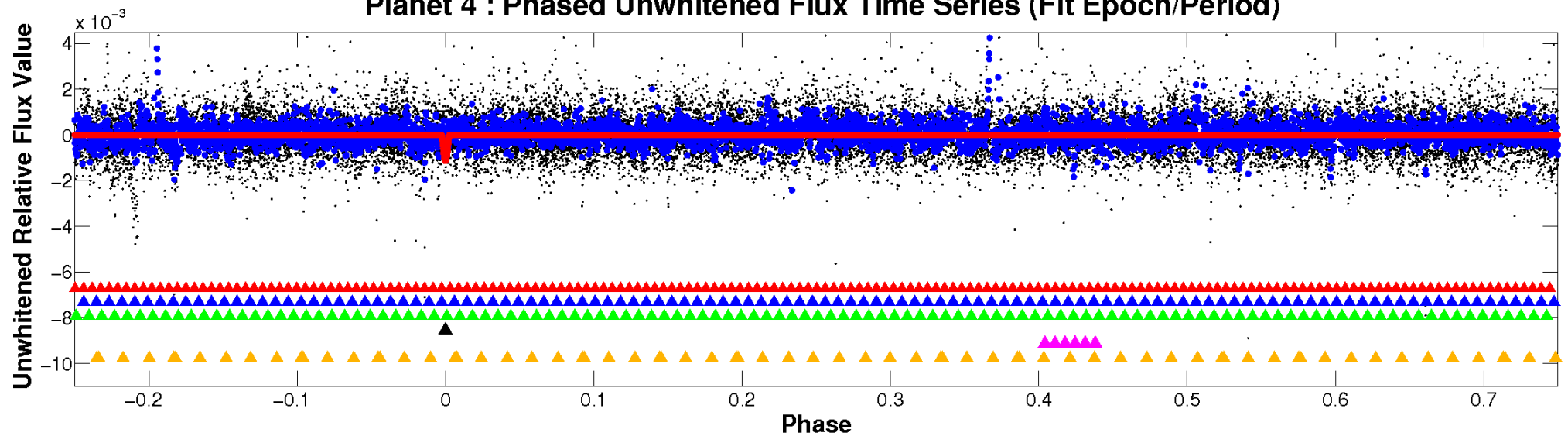
ALT Odd/Even

TCE 011704044-04

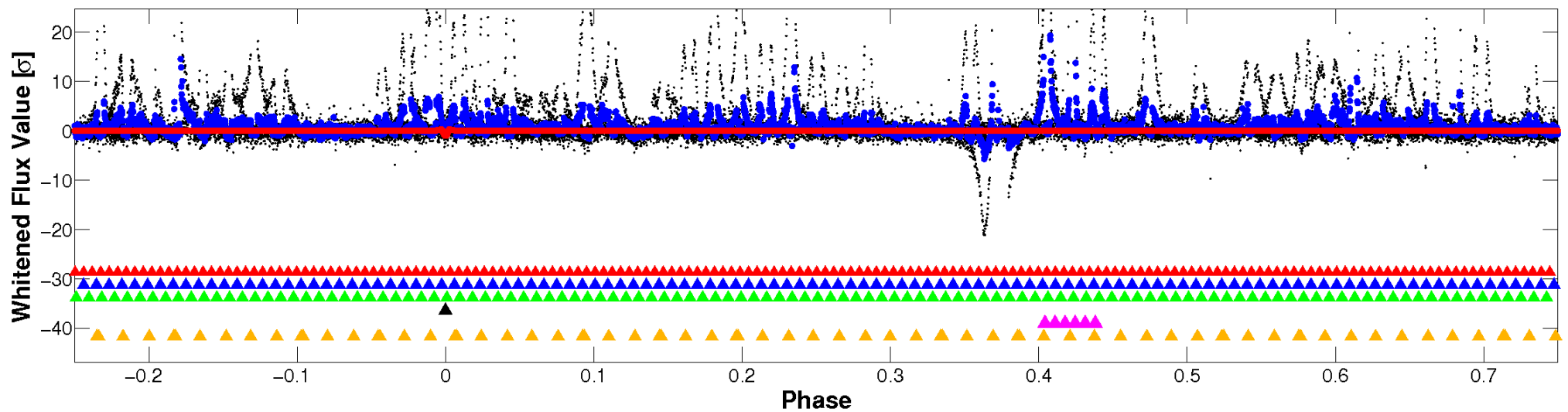


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

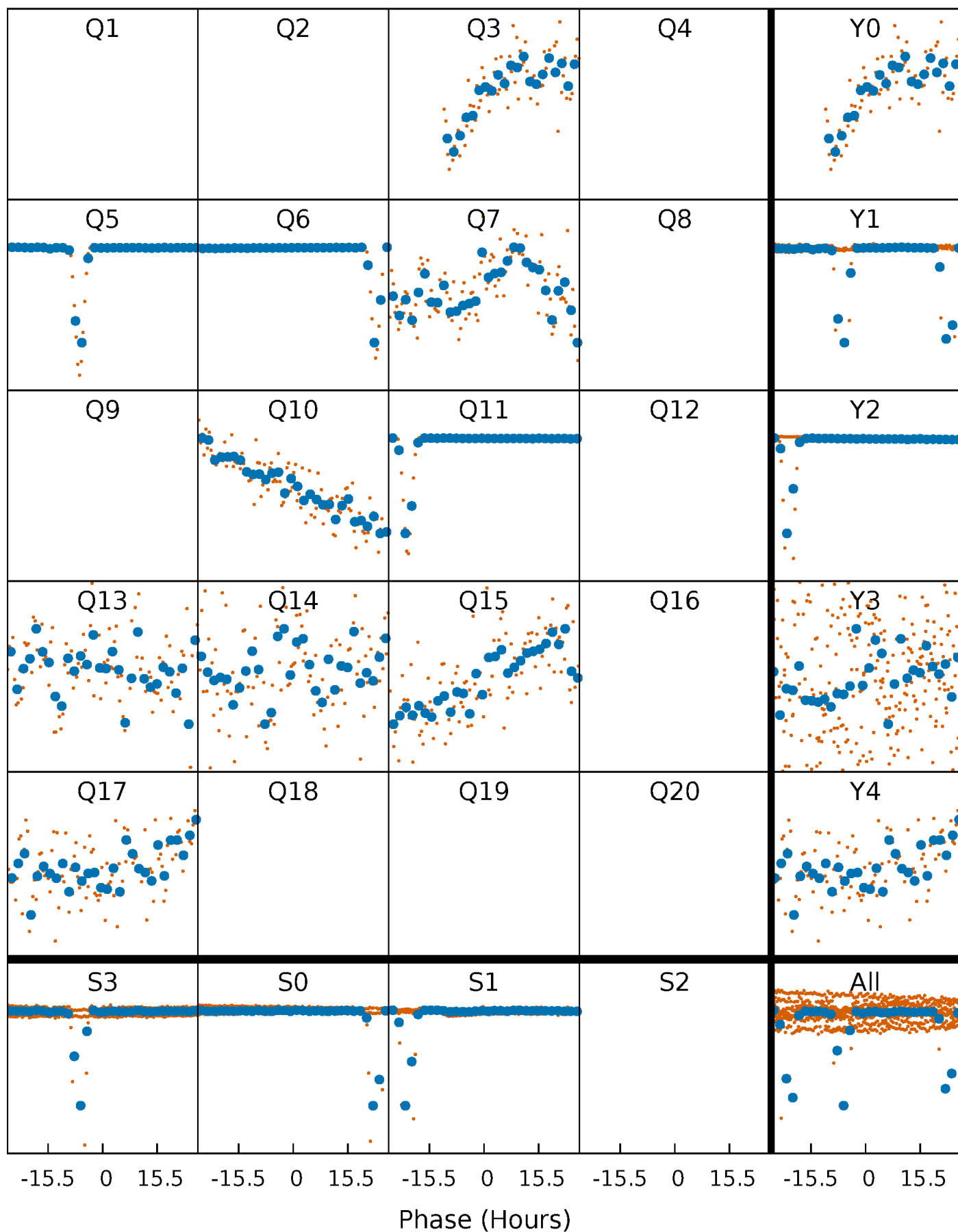


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



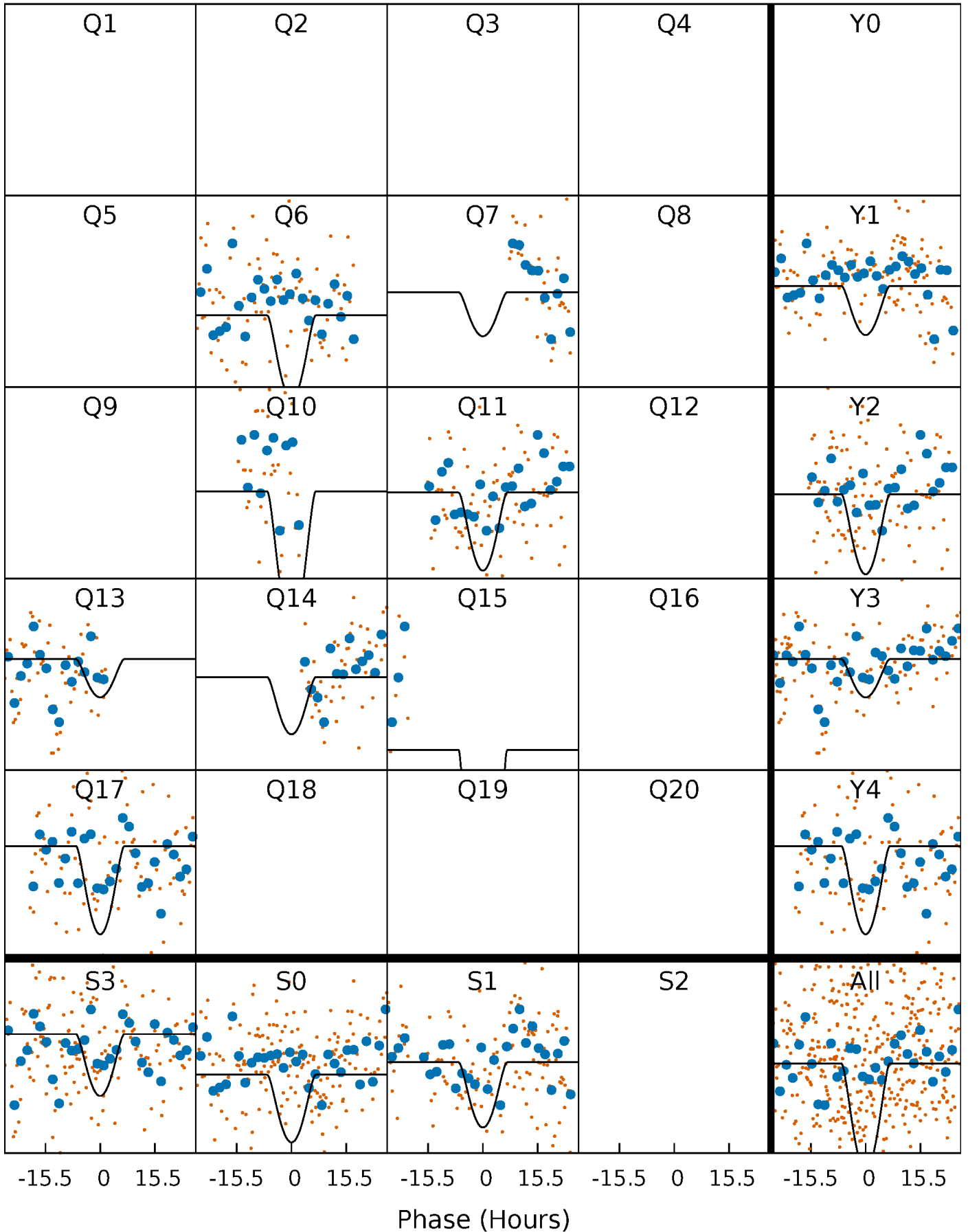
PDC Quarter-Phased Transit Curves

TCE 011704044-04 P=108.872282 Days $T_0=151.844034$ (BKJD)



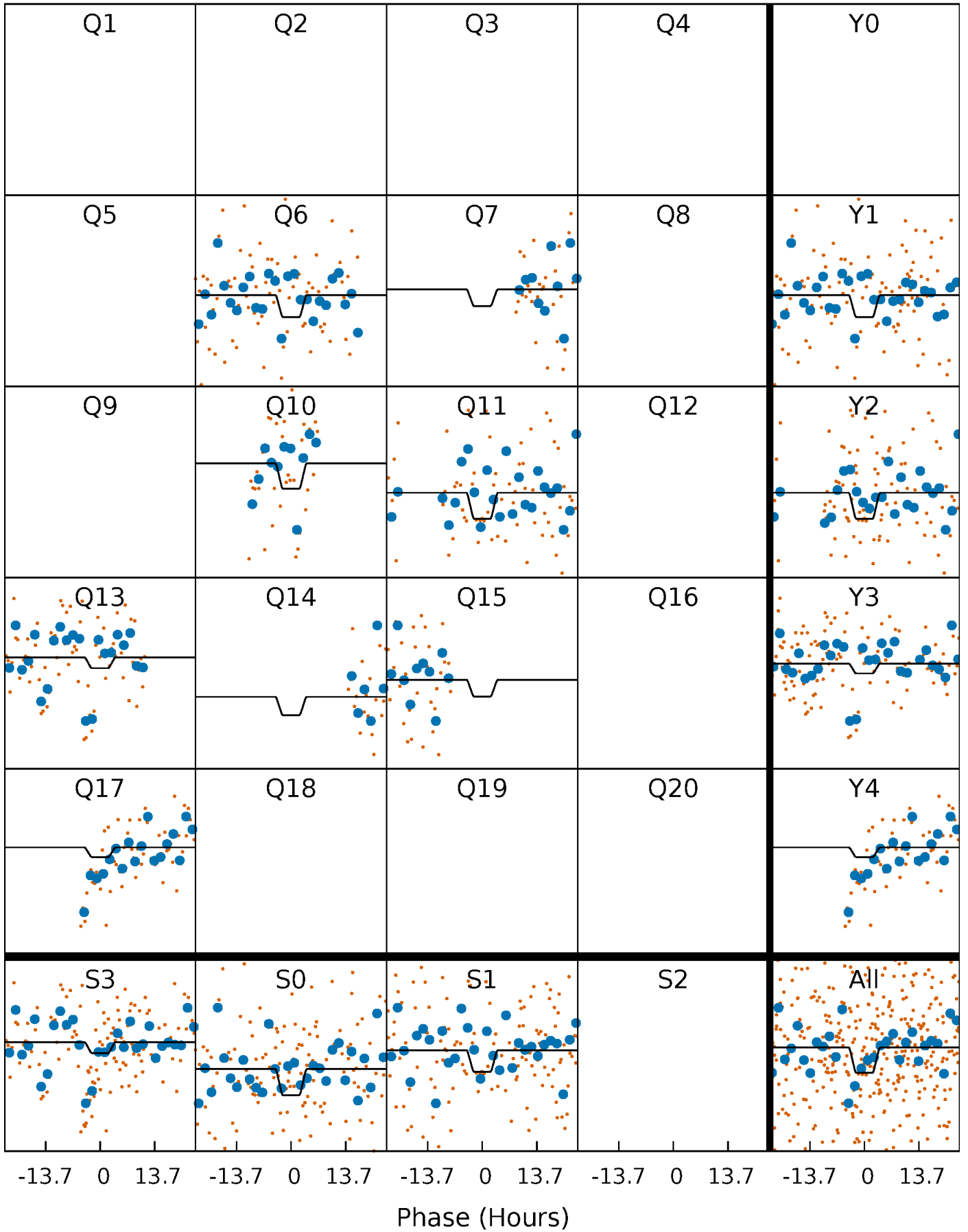
DV Quarter-Phased Transit Curves

TCE 011704044-04 P=108.872282 Days $T_0=151.844034$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

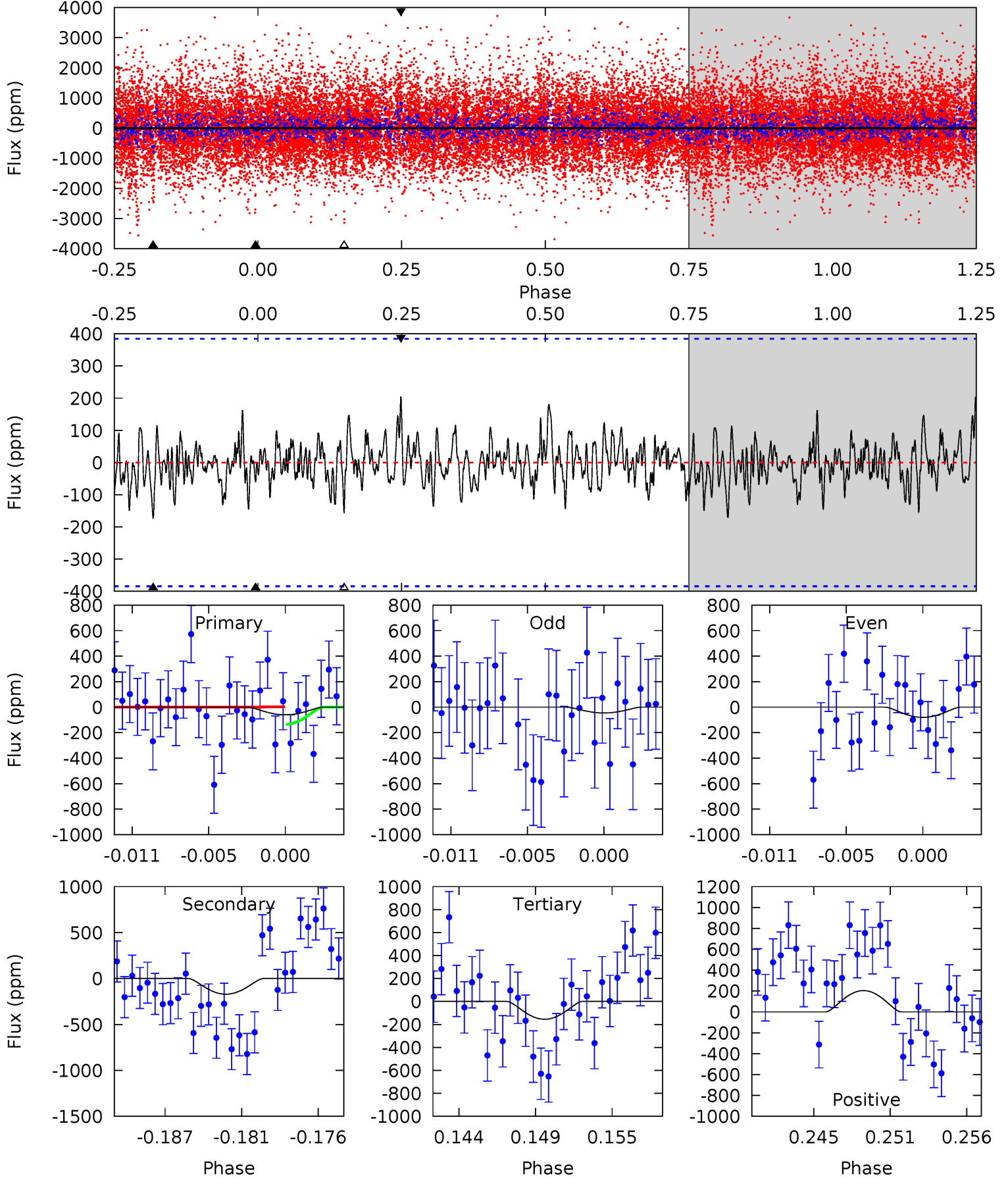
TCE 011704044-04 $P=108.799092$ Days $T_0=152.168831$ (BKJD)



DV Model-Shift Uniqueness Test

011704044-04, P = 108.872282 Days, E = 151.844034 Days

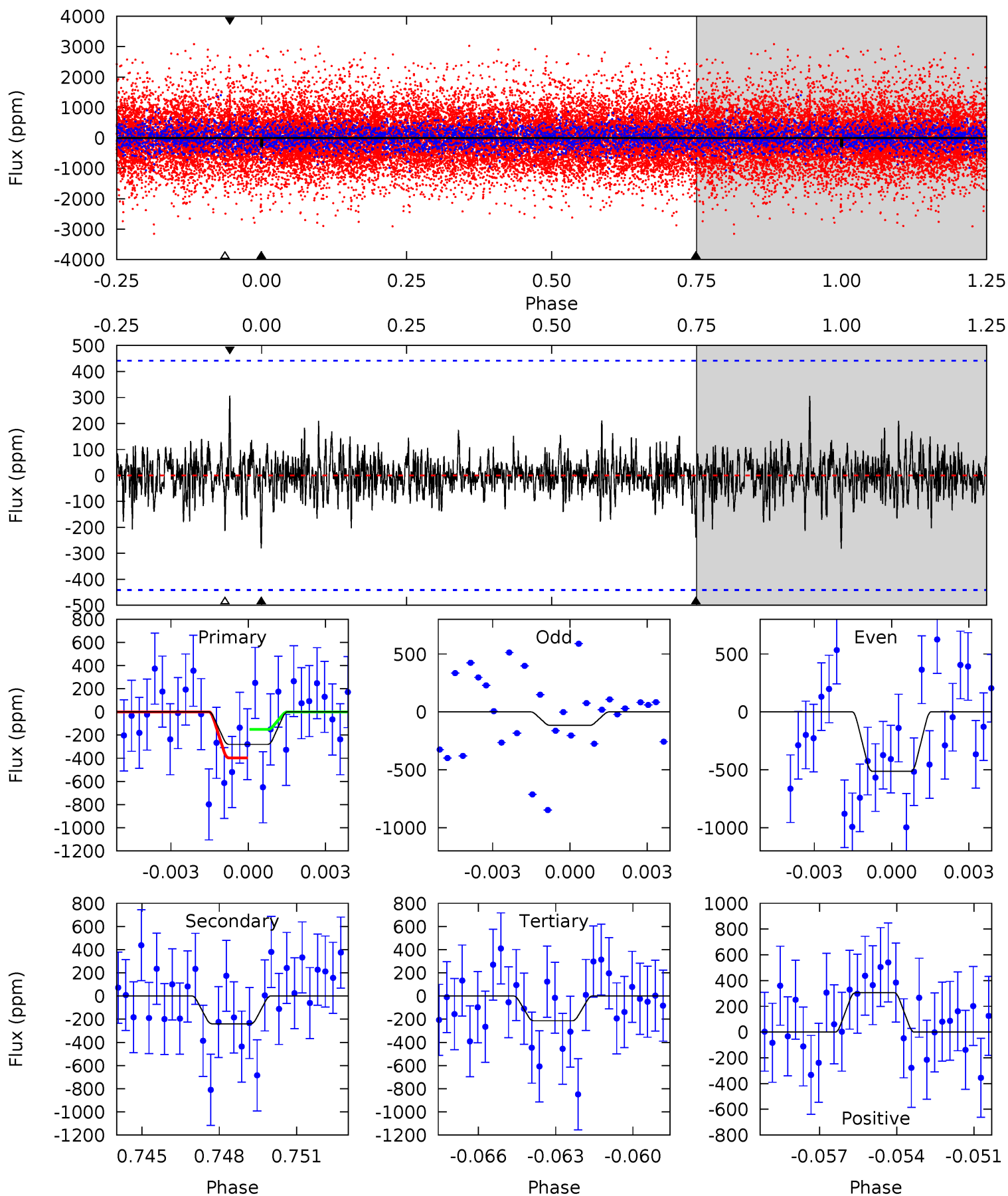
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.81	2.29	2.07	2.73	5.15	2.79	0.74	-1.27	-1.92	0.22	-0.44	0.23	-0.27	0.54	0.88



Alt Model-Shift Uniqueness Test

011704044-04, P = 108.799092 Days, E = 152.168831 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.34	2.85	2.54	3.63	5.25	2.97	0.70	0.80	-0.30	0.31	-0.79	2.32	1.54	0.52	1.47



Stellar Parameters For KIC 011704044

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5704^{+171}_{-206}	$4.483^{+0.052}_{-0.195}$	$0.100^{+0.250}_{-0.300}$	$0.948^{+0.279}_{-0.093}$	$0.996^{+0.111}_{-0.111}$	$1.646^{+0.459}_{-0.867}$
	+3%/-4%	+1%/-4%	+250%/-300%	+29%/-10%	+11%/-11%	+28%/-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 011704044-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-171 ± 75	$33.83^{+35.03}_{-23.73}$	522^{+40}_{-26}	2119^{+728}_{-325}	15^{+174}_{-11}
Alt.	-239 ± 84	$31.55^{+33.77}_{-22.24}$	522^{+38}_{-26}	2204^{+869}_{-308}	22^{+258}_{-17}

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

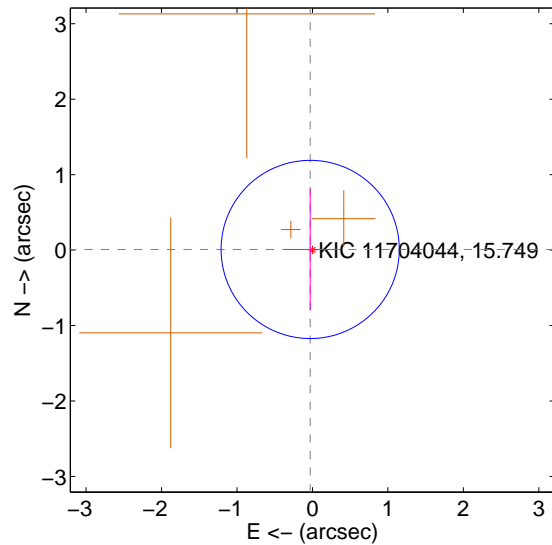
Supplemental centroid analysis for 011704044-04. Kepler magnitude: 15.75. Transit SNR 7.04

There are 1 quarters with good PRF difference image offsets

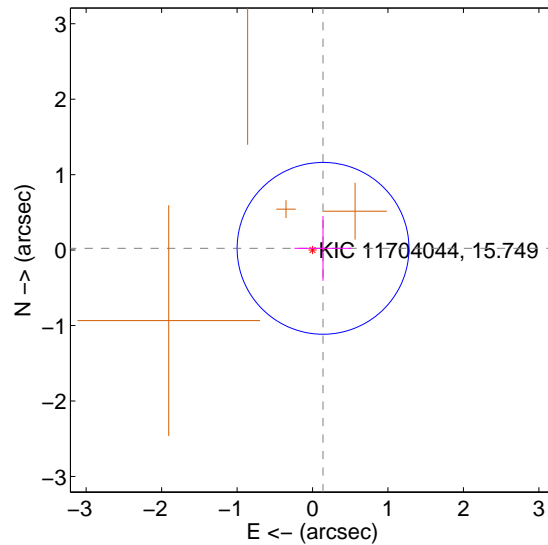
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.031 ± 0.393	0.08	0.030 ± 0.352	0.009 ± 0.803
PRF-fit source offset from KIC position	0.141 ± 0.379	0.37	-0.139 ± 0.378	0.023 ± 0.430
photometric centroid source offset	0.17 ± 0.84	0.20	-0.13 ± 0.87	-0.11 ± 0.78

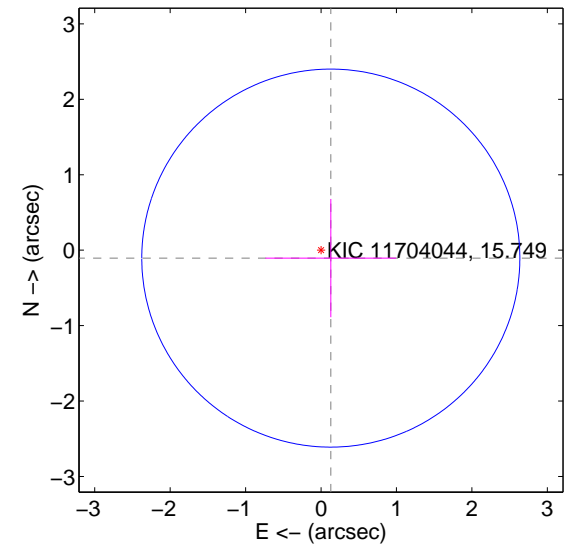
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

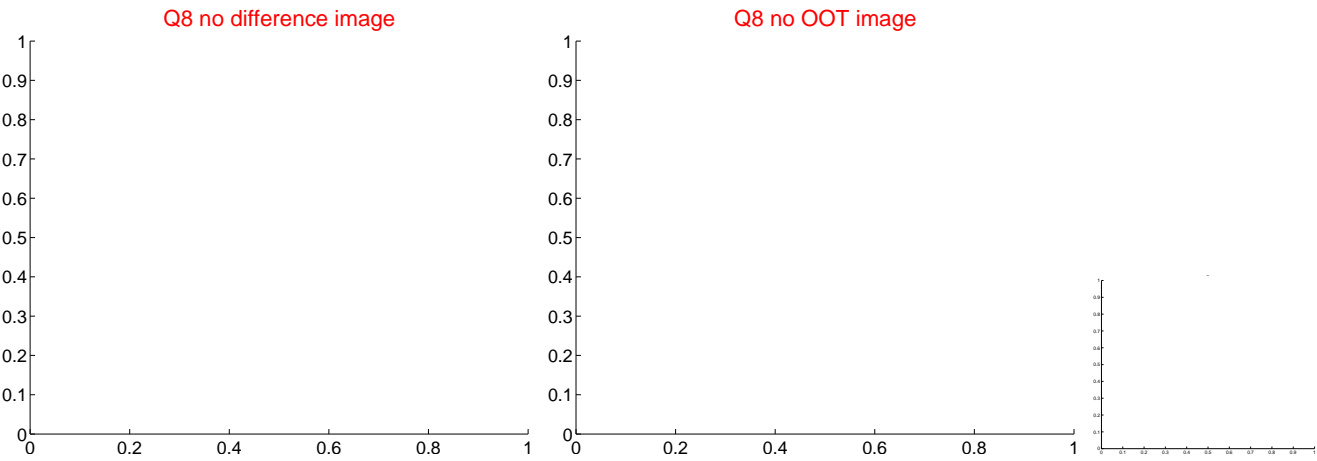
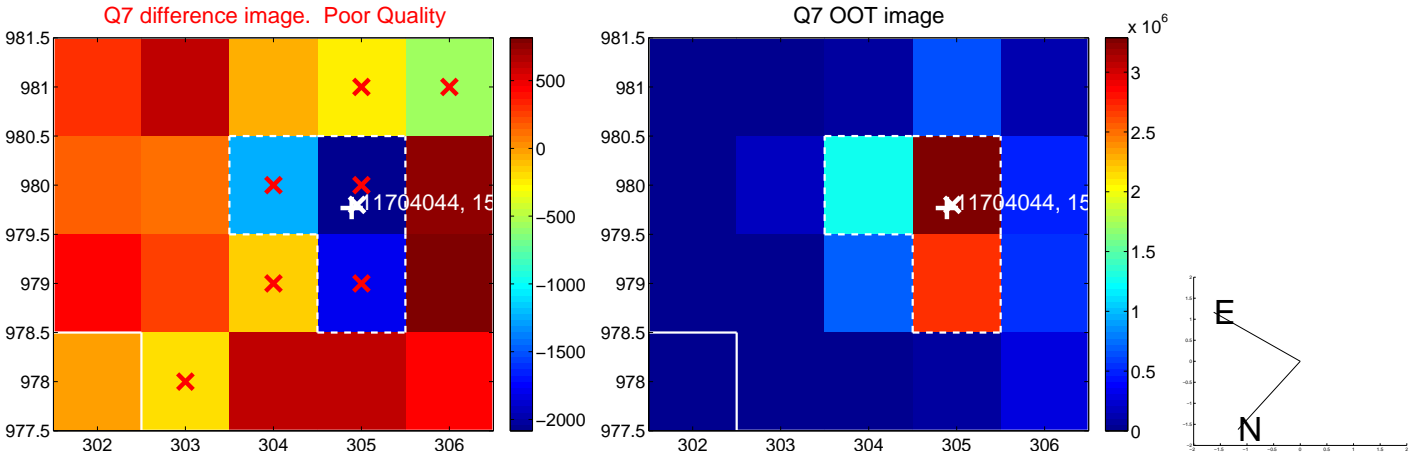
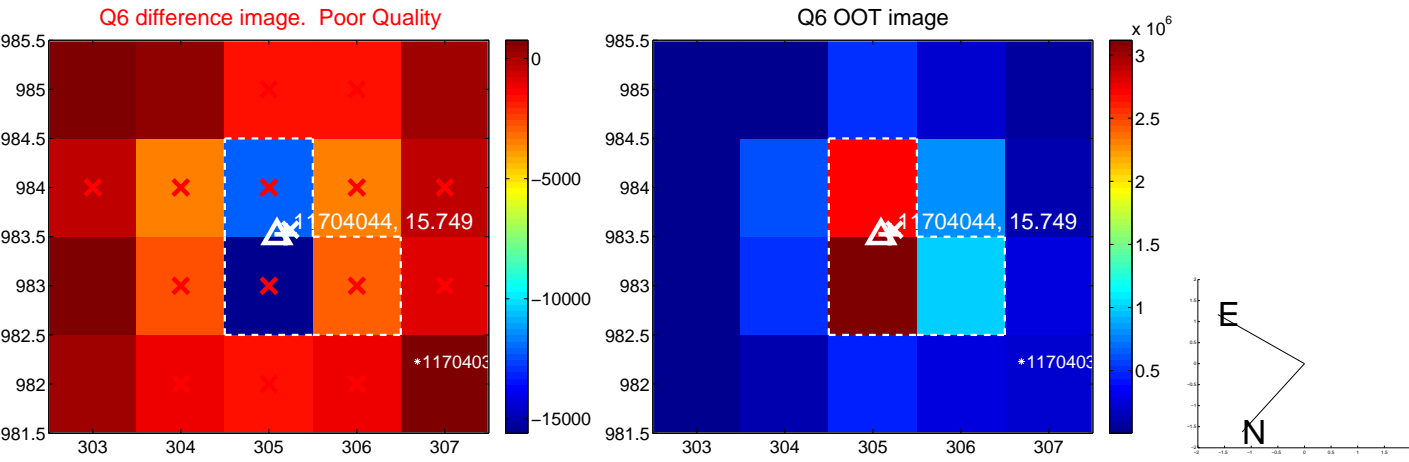
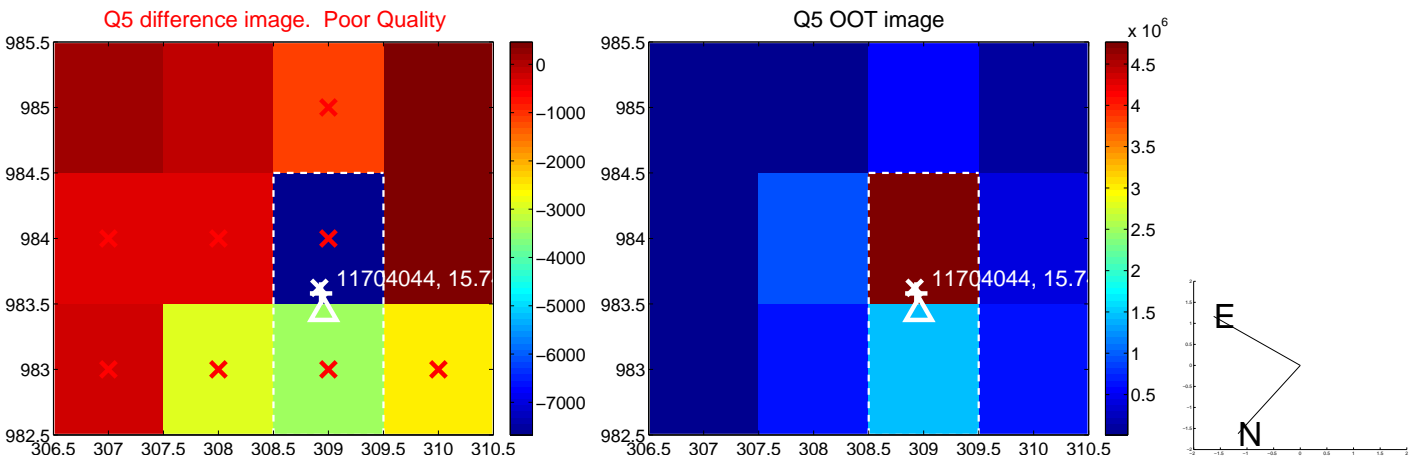


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

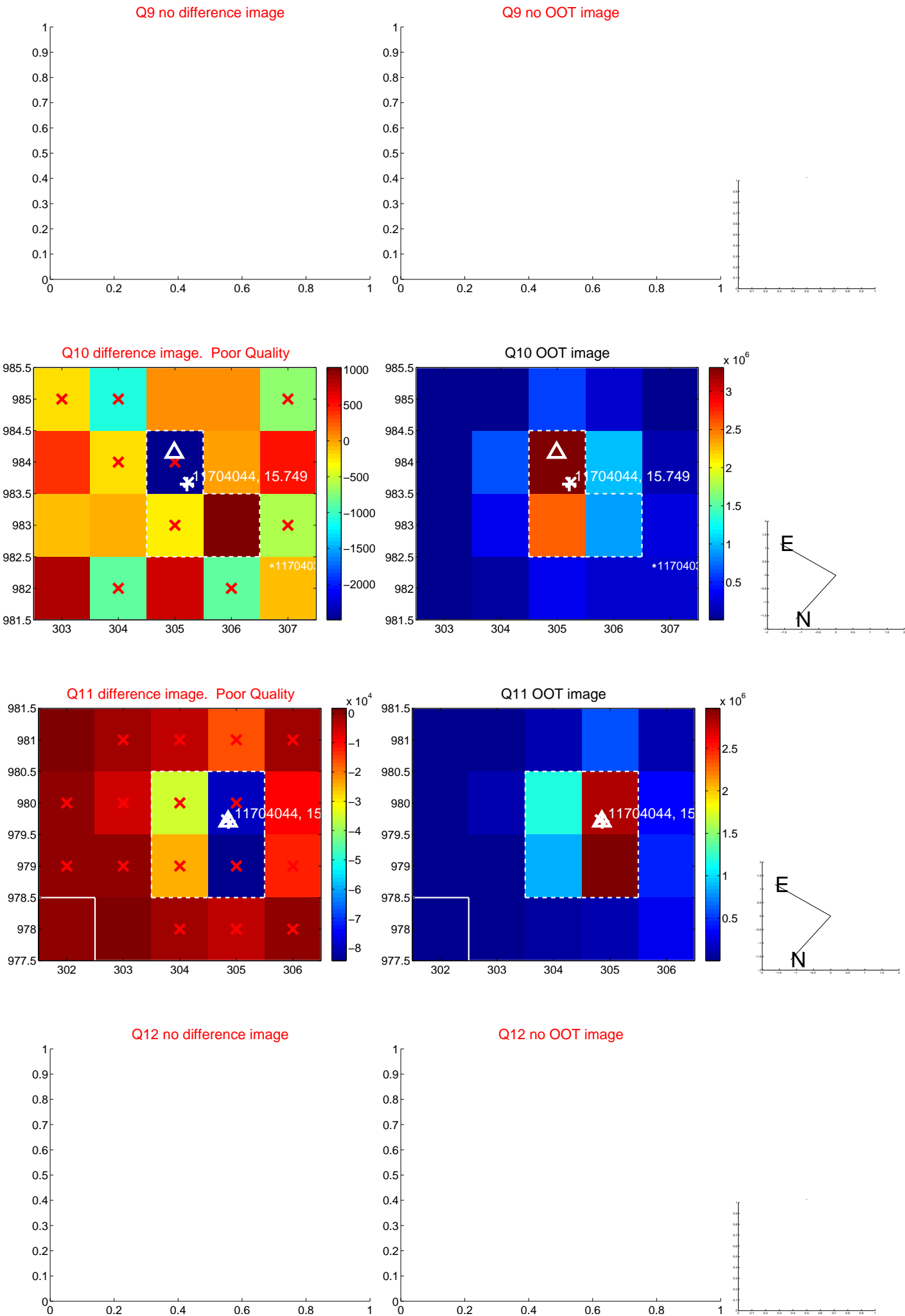
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



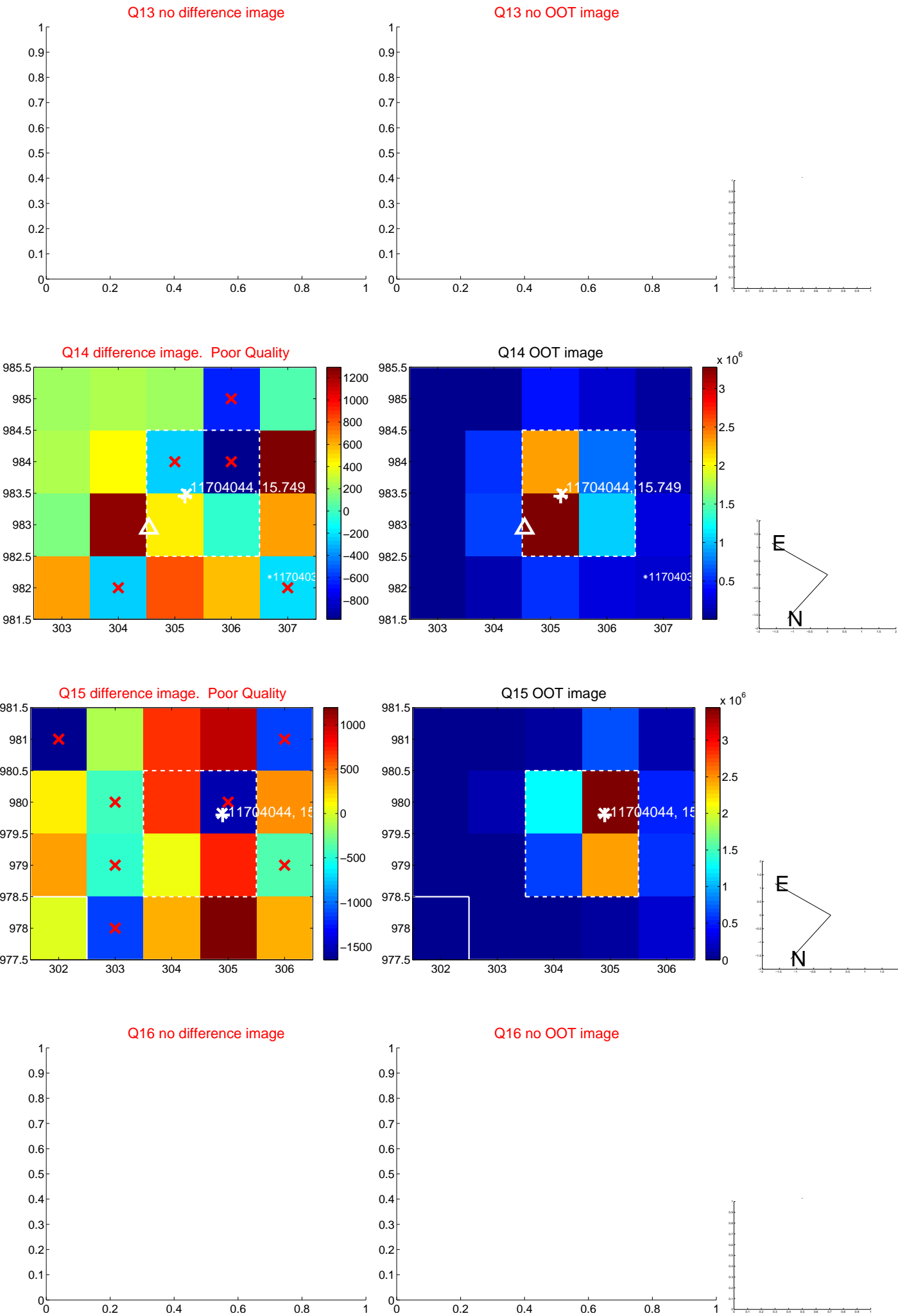
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



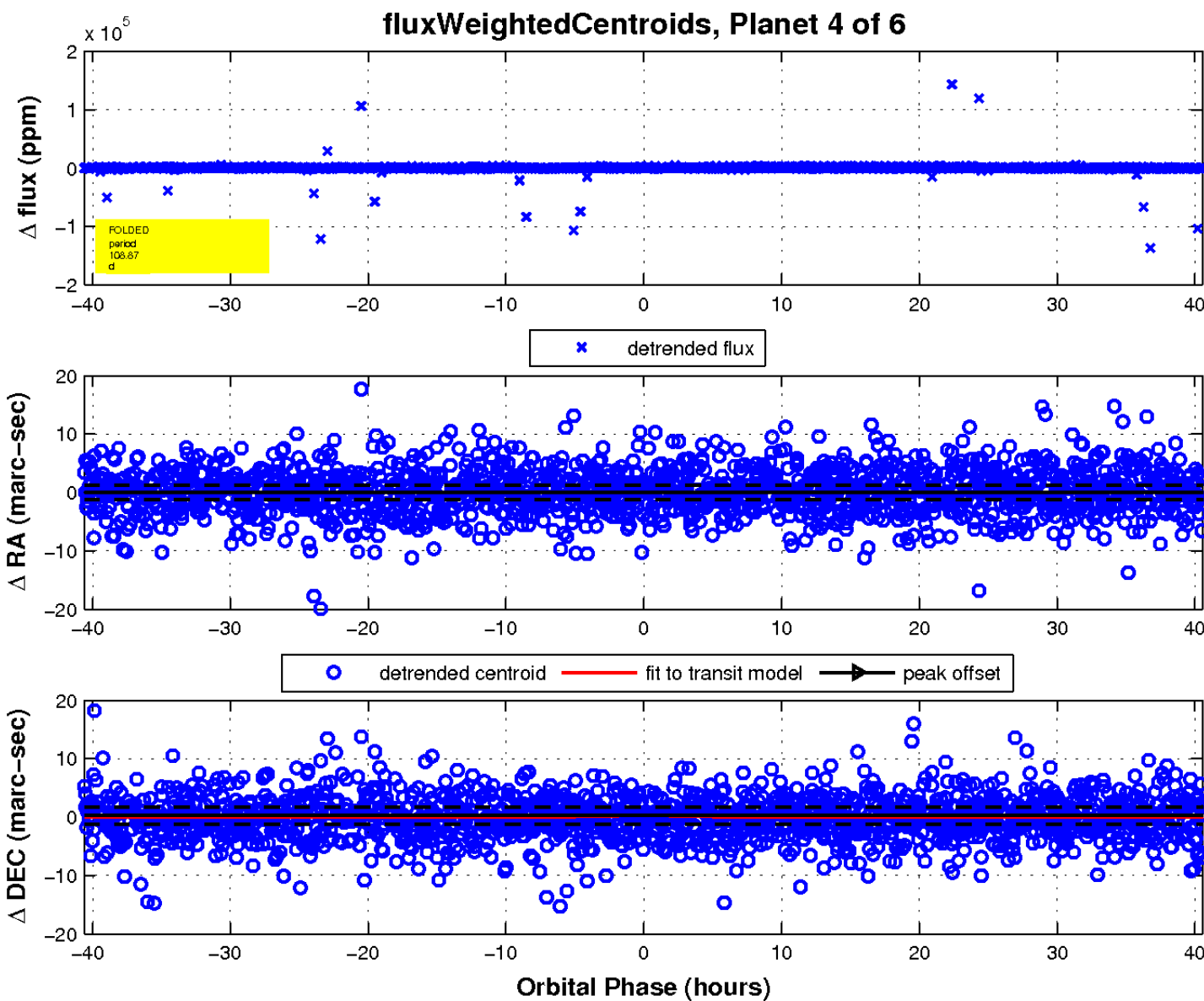
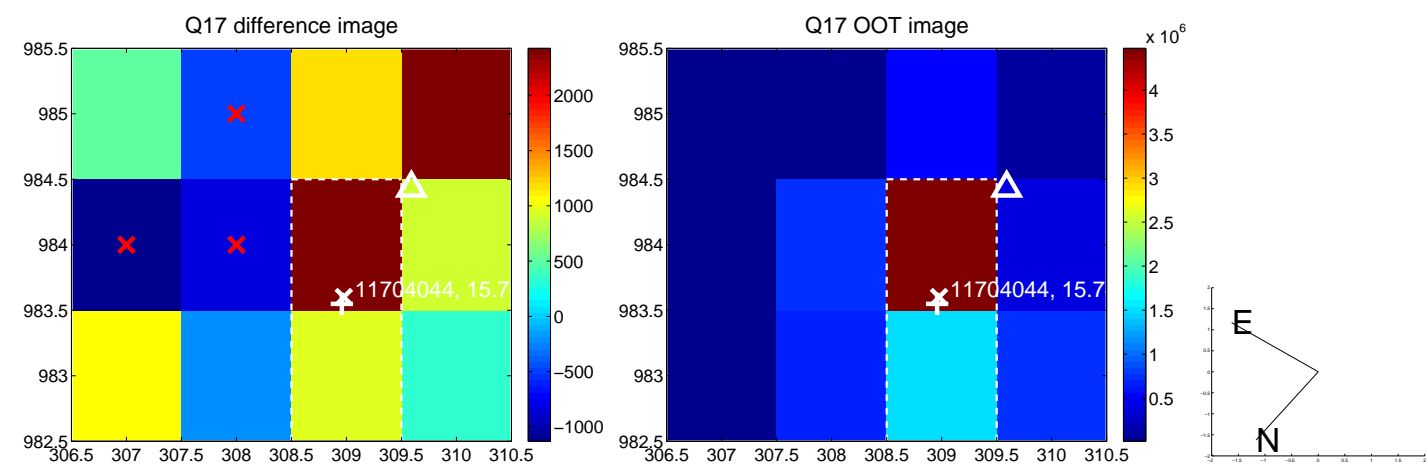
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

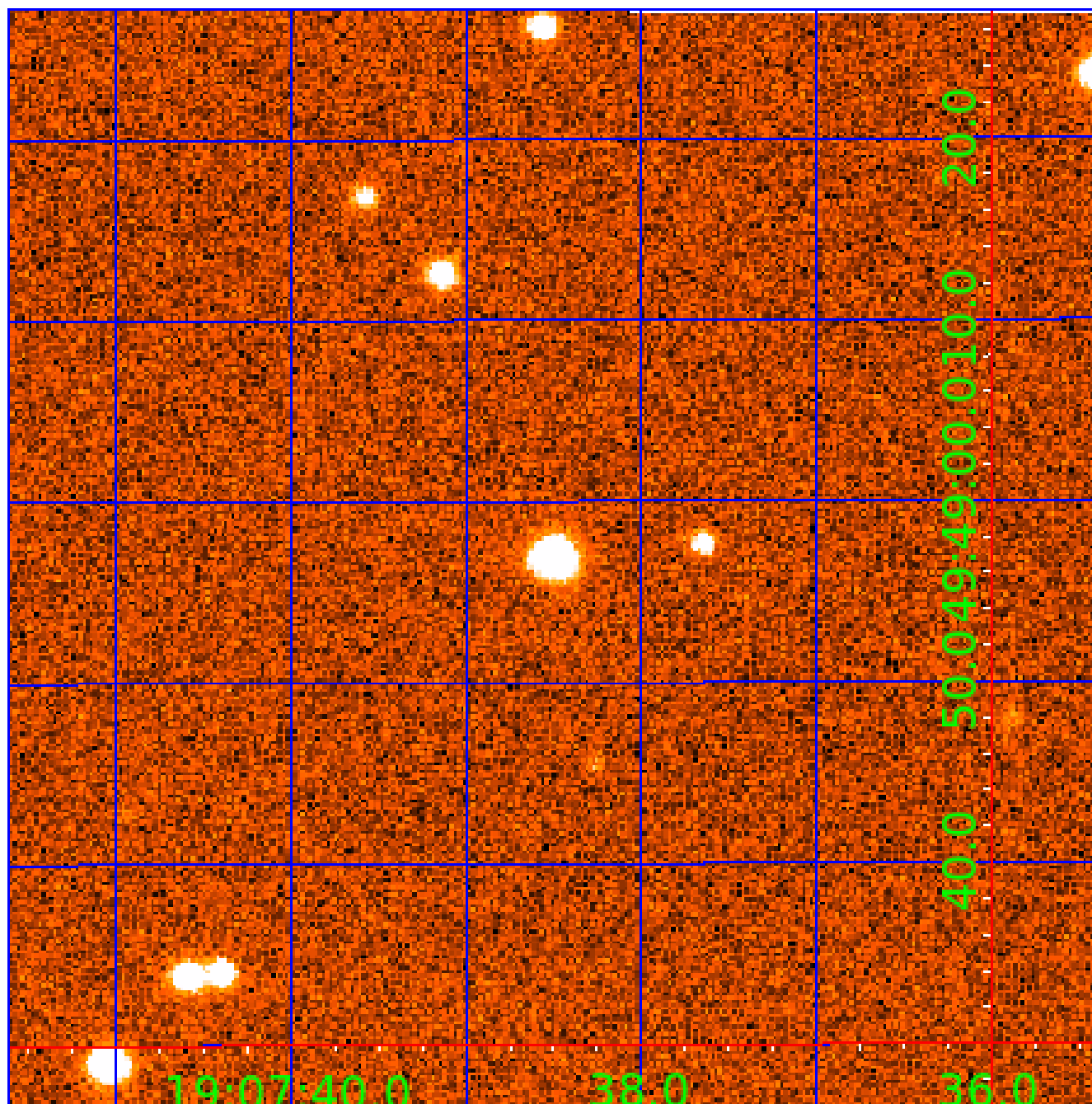


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011704044

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})
011704044-01	OBS	7472.01	6.882723	134.044755	384627.6	3.500	9152.4	-1.0	0.95	5704	51.72	170.27
011704044-02	OBS	No	10.323939	137.496540	2429.6	24.094	476.1	43.2	0.95	5704	5.09	99.17
011704044-03	OBS	No	10.323983	140.699285	19797.8	15.000	419.7	-1.0	0.95	5704	13.18	99.16
011704044-04	OBS	No	108.872282	151.844034	1143.0	13.549	39.3	7.0	0.95	5704	6.14	4.29
011704044-05	OBS	No	217.007274	308.408522	3739.0	10.472	40.8	15.4	0.95	5704	9.69	1.71
011704044-06	OBS	No	20.645940	132.028644	1270.6	10.500	21.8	-1.0	0.95	5704	3.33	39.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011704044-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
011704044-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—HALO_GHOST
011704044-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS
011704044-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011704044-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011704044-06	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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

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

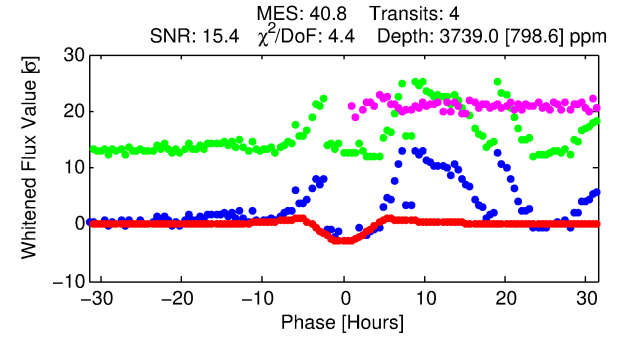
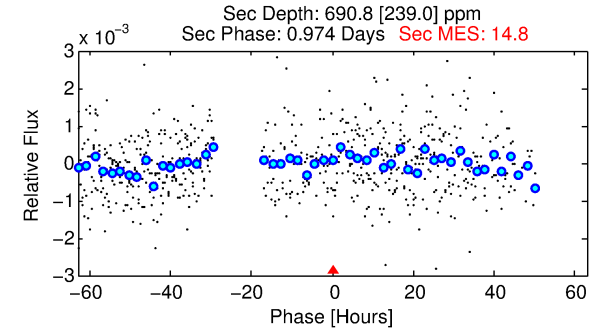
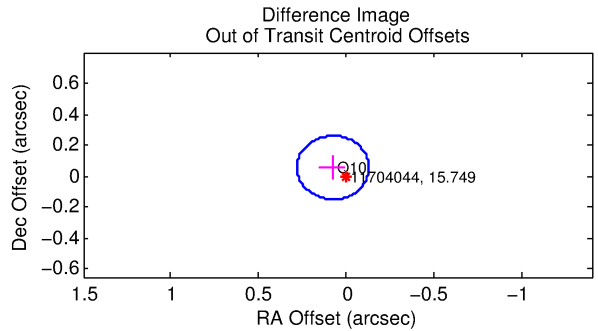
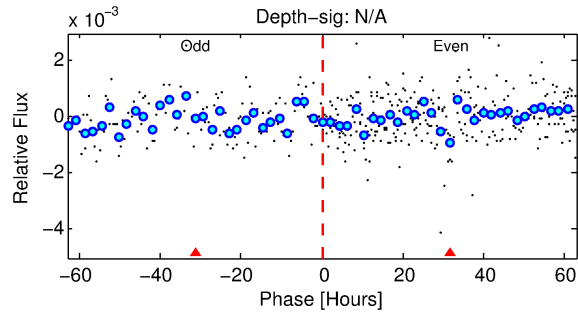
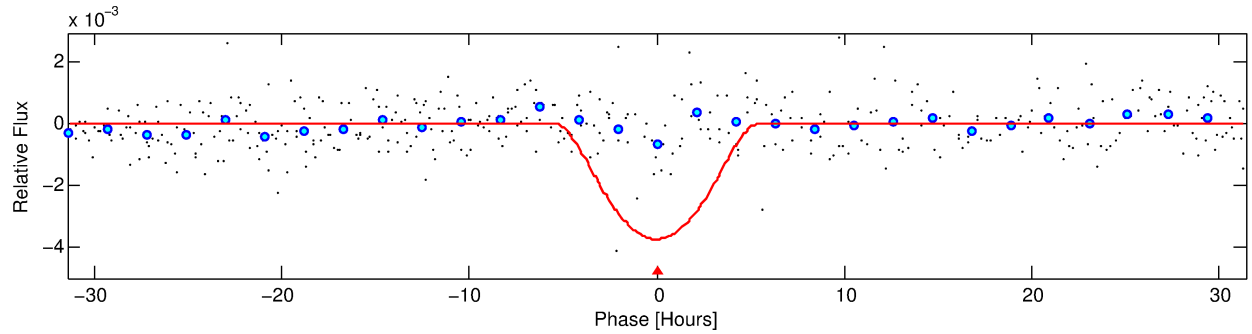
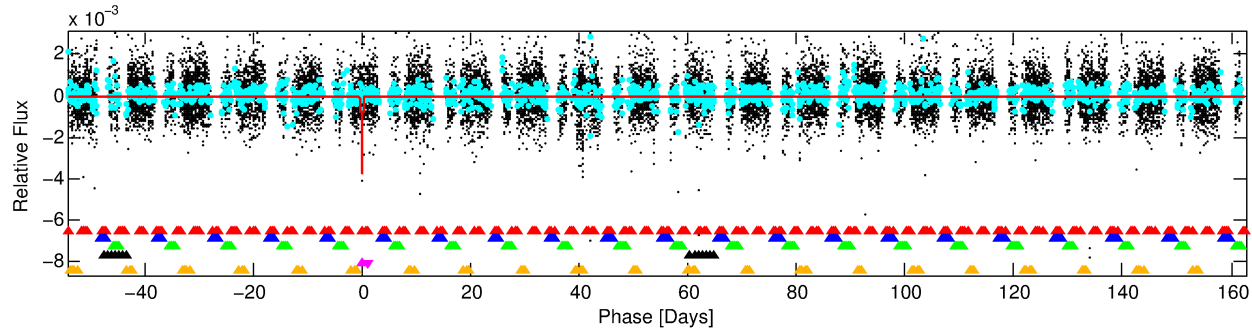
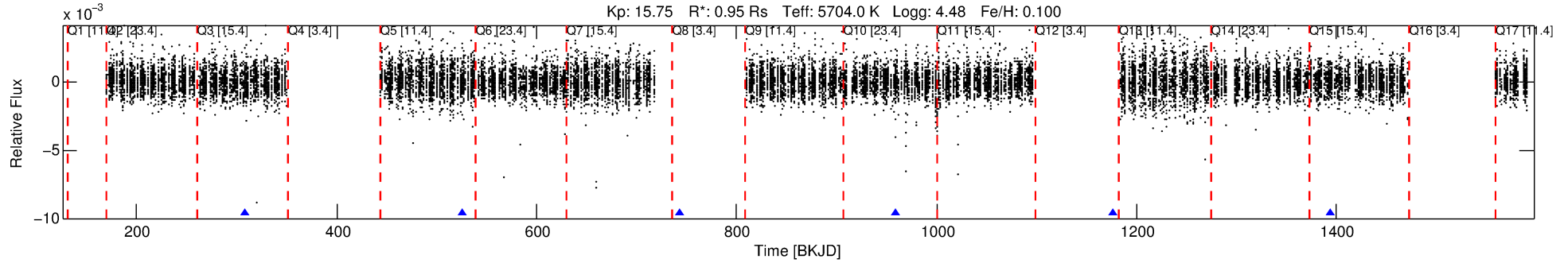
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011704044-05

No Significant Match Found

DV One-Page Summary

KIC: 11704044 Candidate: 5 of 6 Period: 217.007 d
KOI: K07472 Corr: No Ephemeris Match



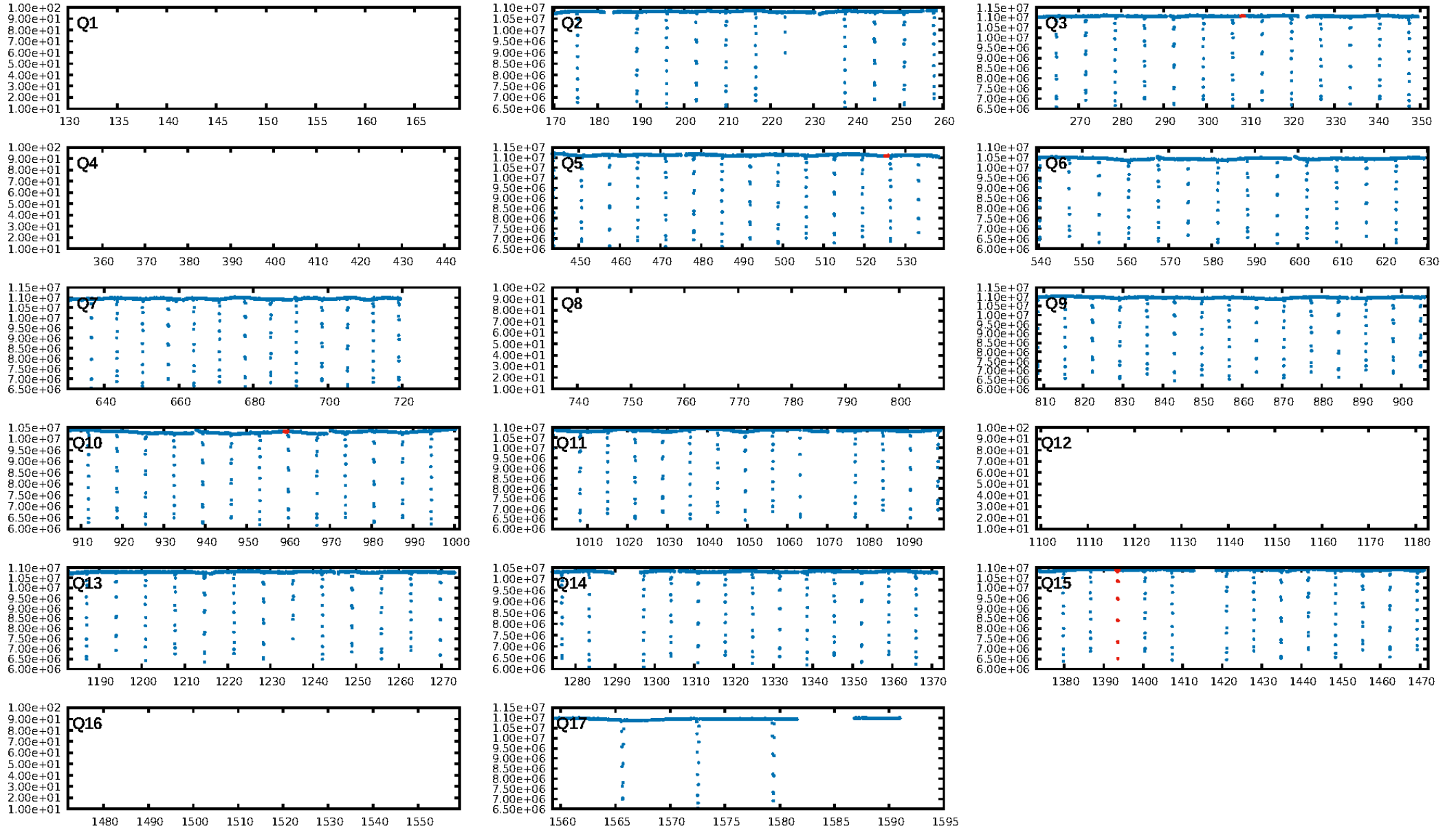
DV Fit Results:

Period = 217.00727 [0.01236] d
Epoch = 308.4085 [0.0327] BKJD
Rp/R* = 0.0937 [0.4021]
a/R* = 76.02 [77.42]
b = 0.98 [0.63]
Seff = 1.71 [0.66]
Teff = 292 [28] K
Rp = 9.69 [41.70] Re
a = 0.7061 [0.1743] AU
Ag = 2016.90 [17340.50] [0.12] σ
Teffp = 3021 [6489] K [0.42] σ

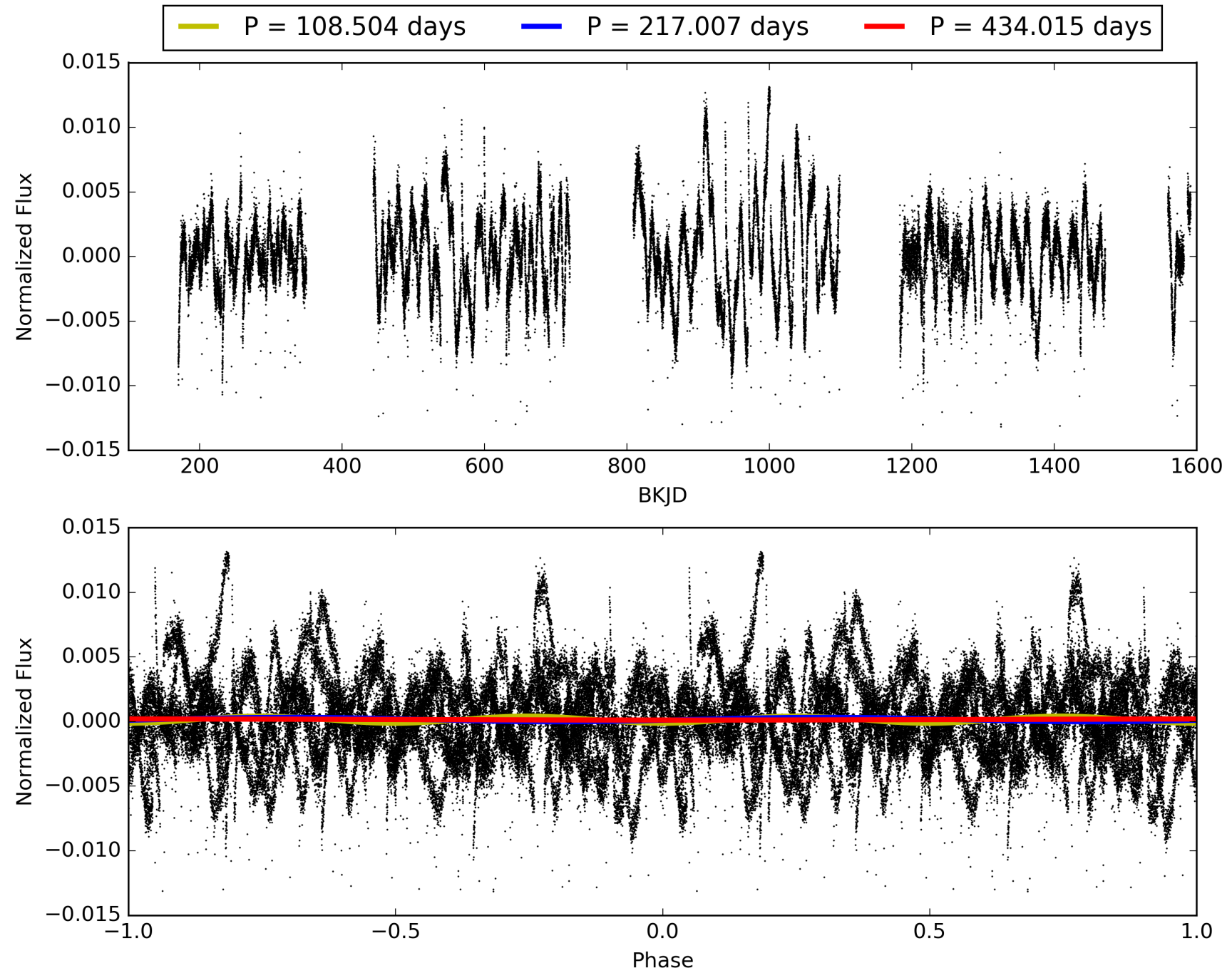
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [151.56 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.43
Centroid-sig: 44.8%
Centroid-so: 0.448 arcsec [1.00 σ]
OotOffset-rm: 0.096 arcsec [1.40 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-rm: 0.259 arcsec [3.79 σ]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.67 [2/3]

TCE 011704044-05, PDC Light Curves

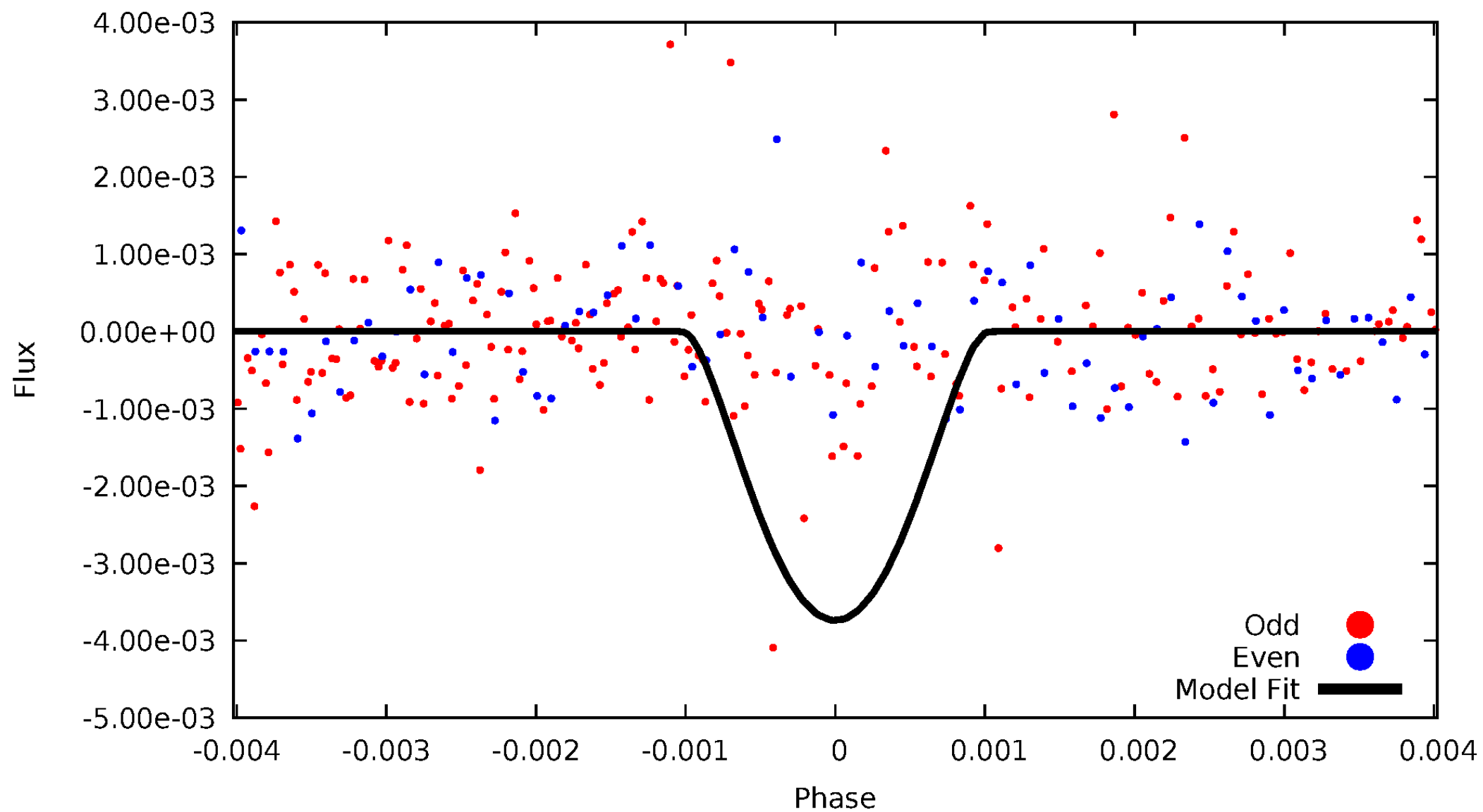


TCE 011704044-05



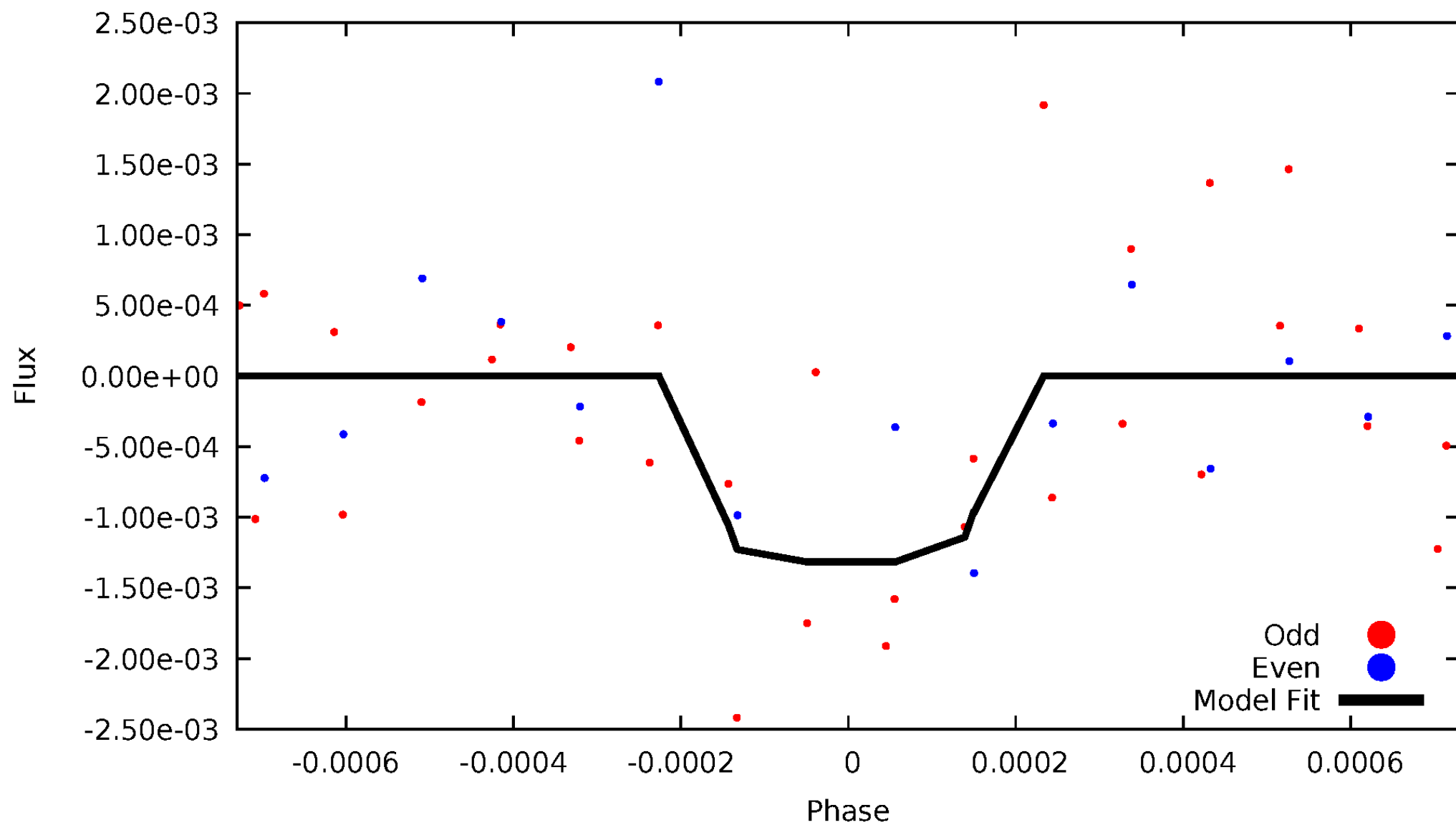
DV Odd/Even

TCE 011704044-05



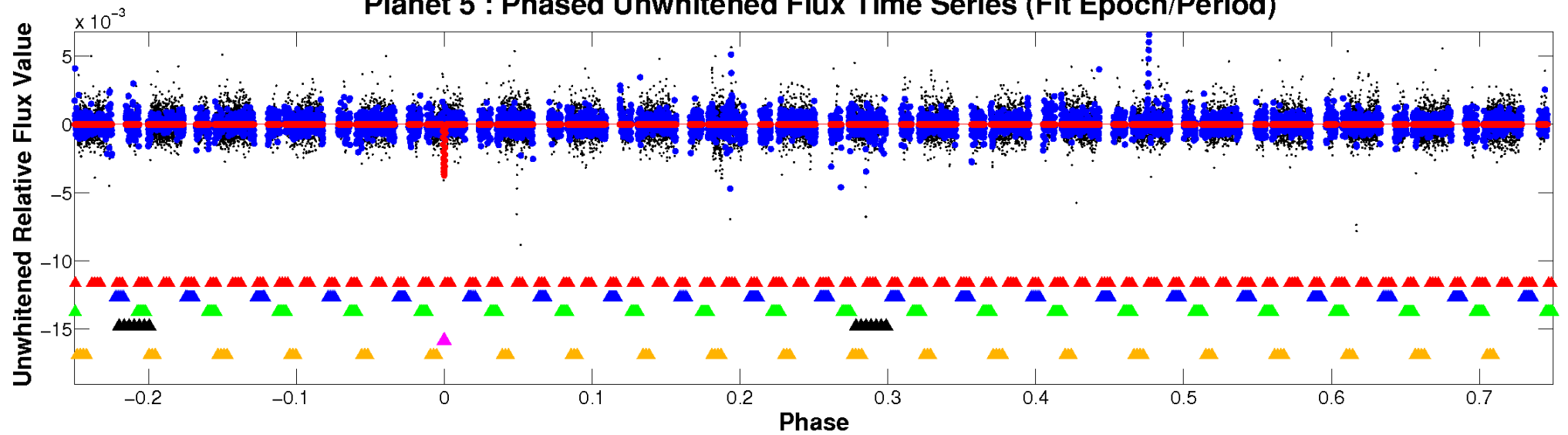
ALT Odd/Even

TCE 011704044-05

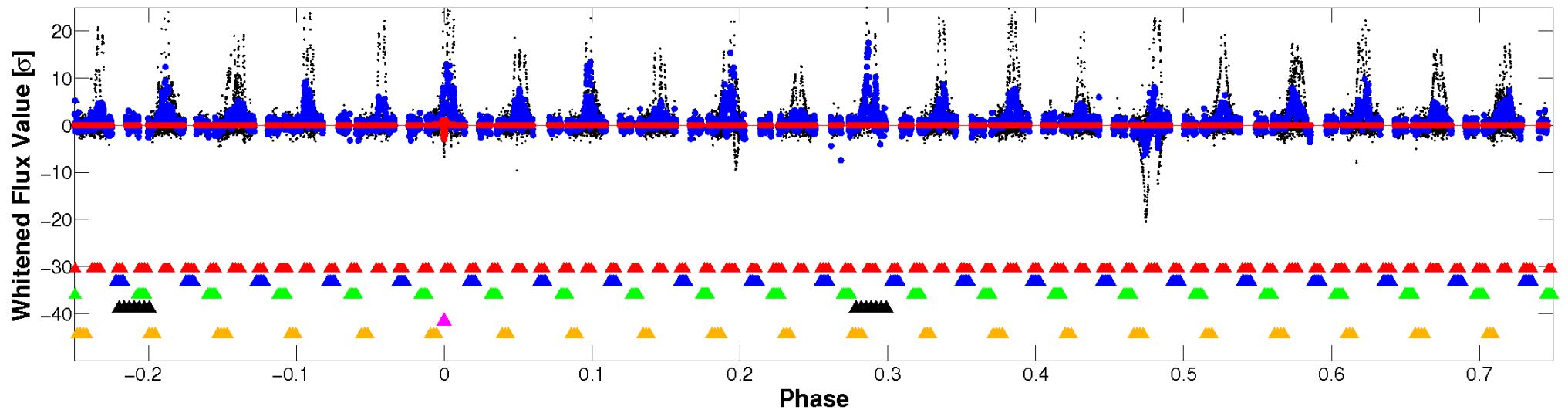


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

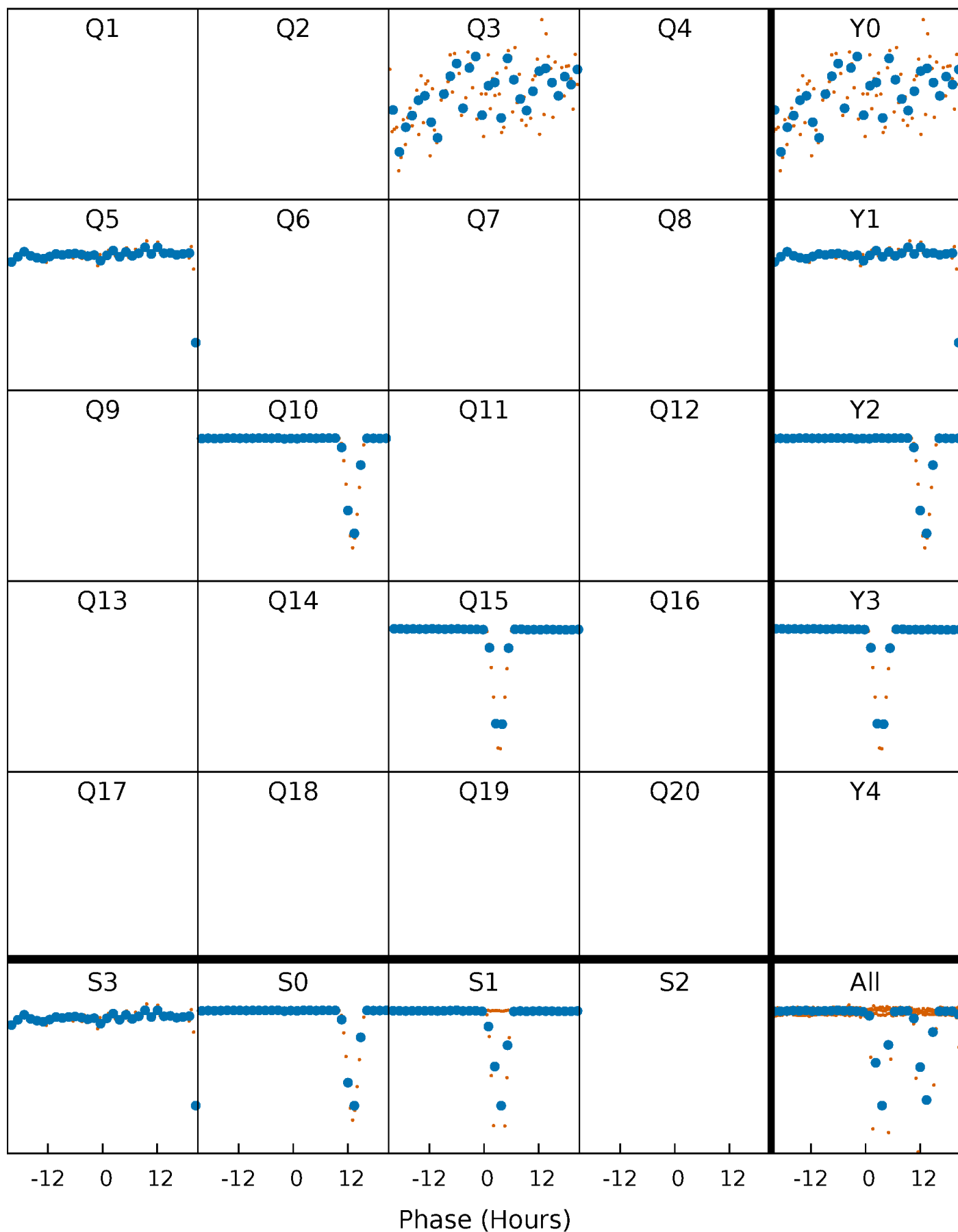


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



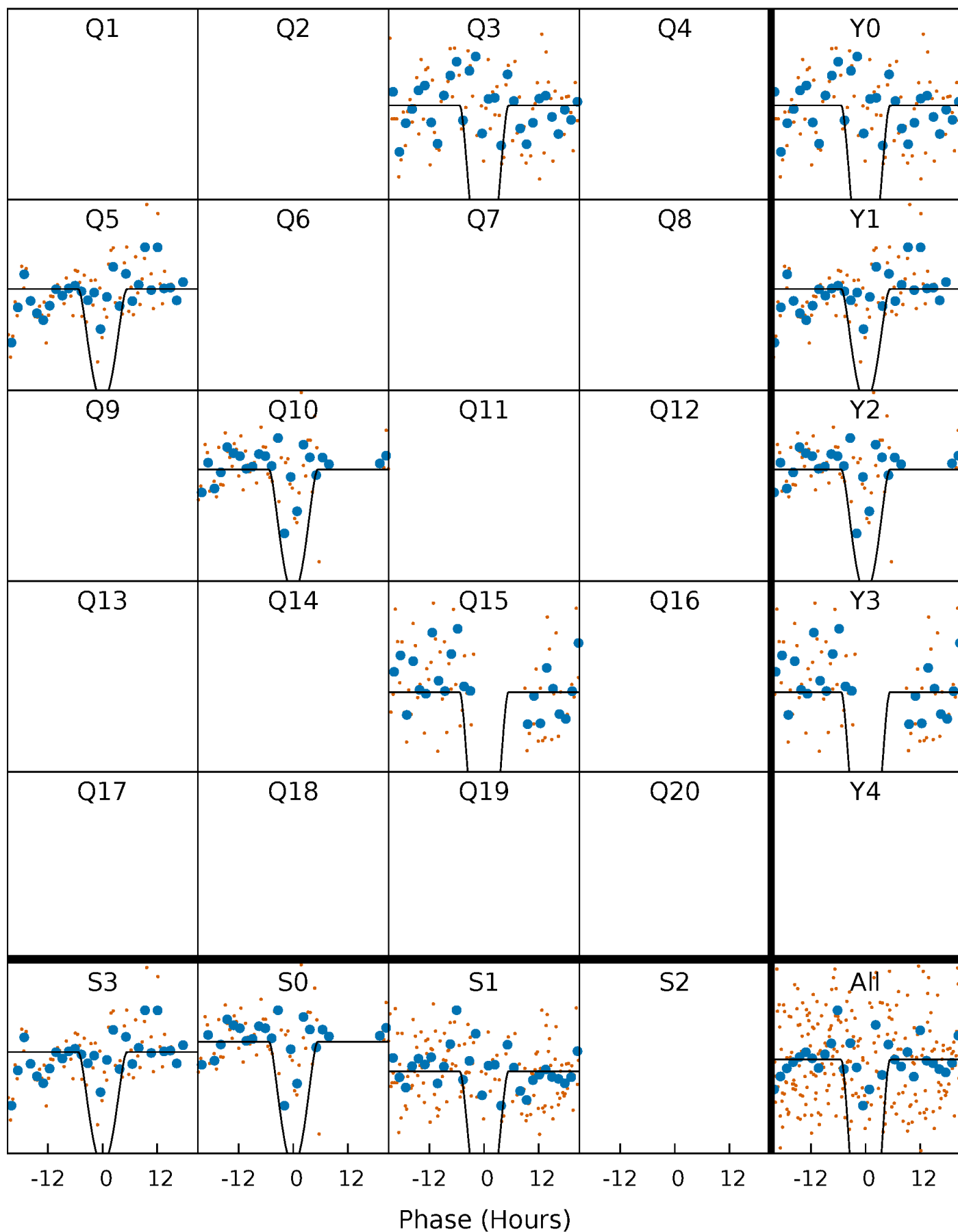
PDC Quarter-Phased Transit Curves

TCE 011704044-05 $P=217.007274$ Days $T_0=308.408522$ (BKJD)



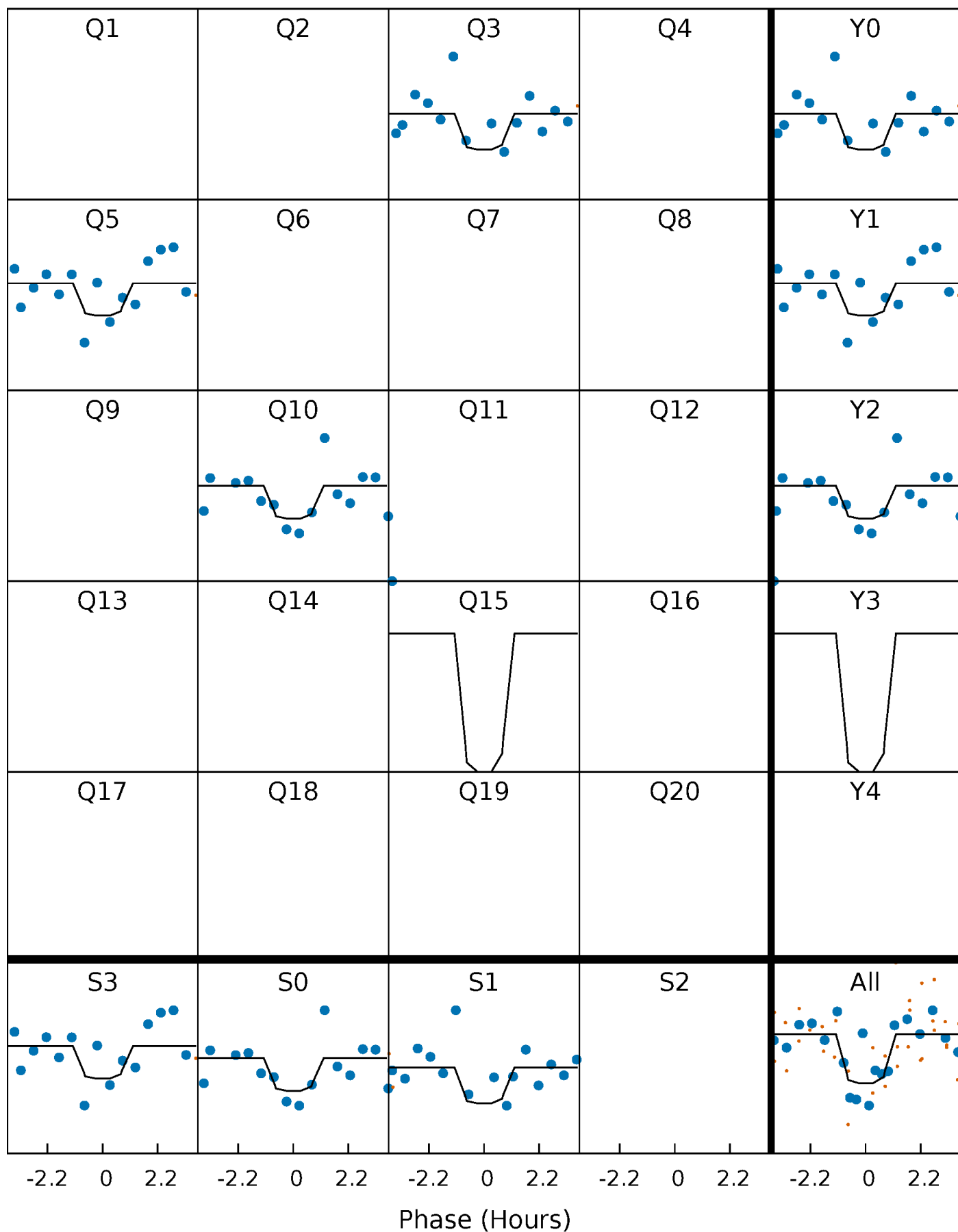
DV Quarter-Phased Transit Curves

TCE 011704044-05 $P=217.007274$ Days $T_0=308.408522$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

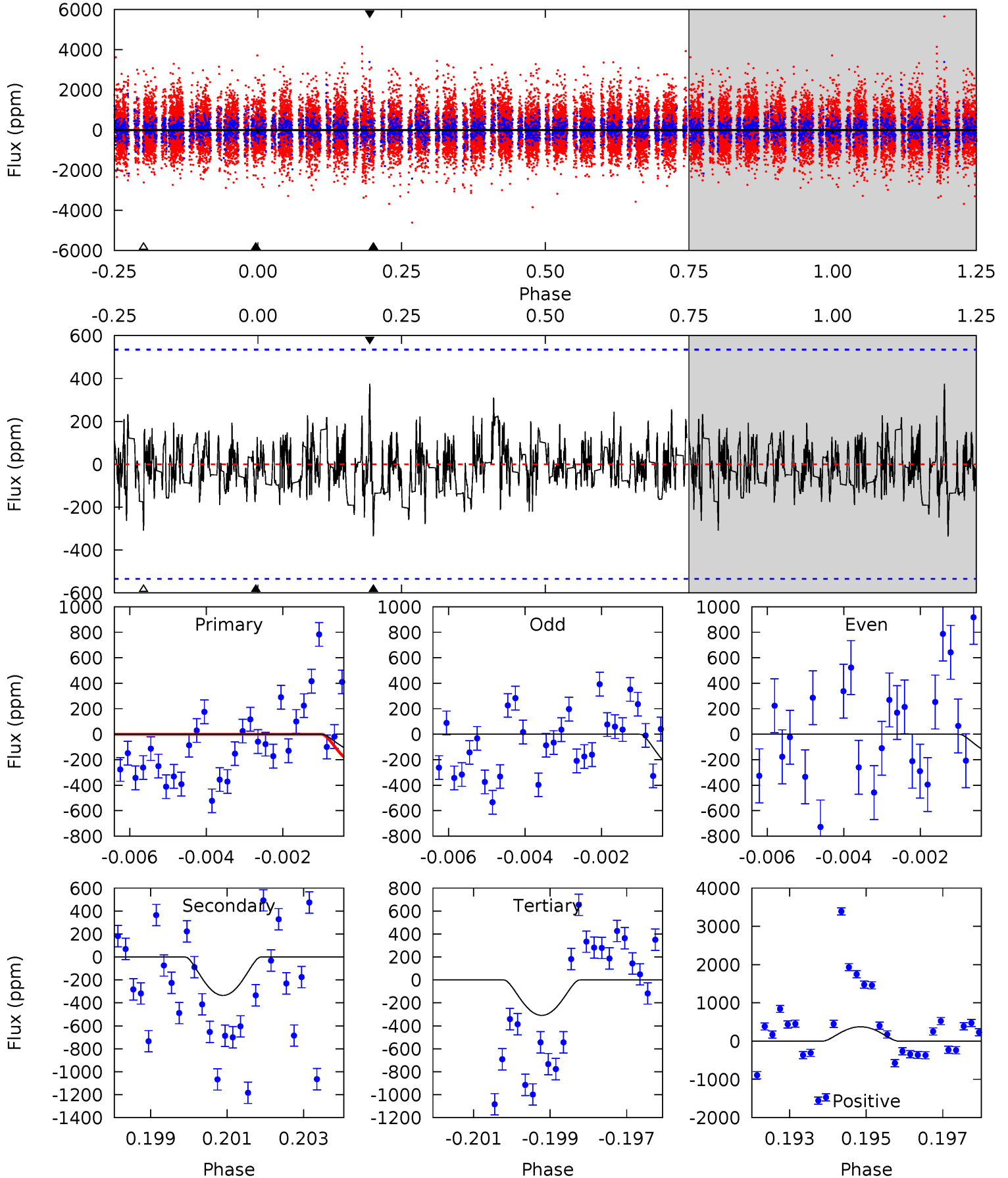
TCE 011704044-05 $P=217.026743$ Days $T_0=308.372687$ (BKJD)



DV Model-Shift Uniqueness Test

011704044-05, $P = 217.007274$ Days, $E = 91.401248$ Days

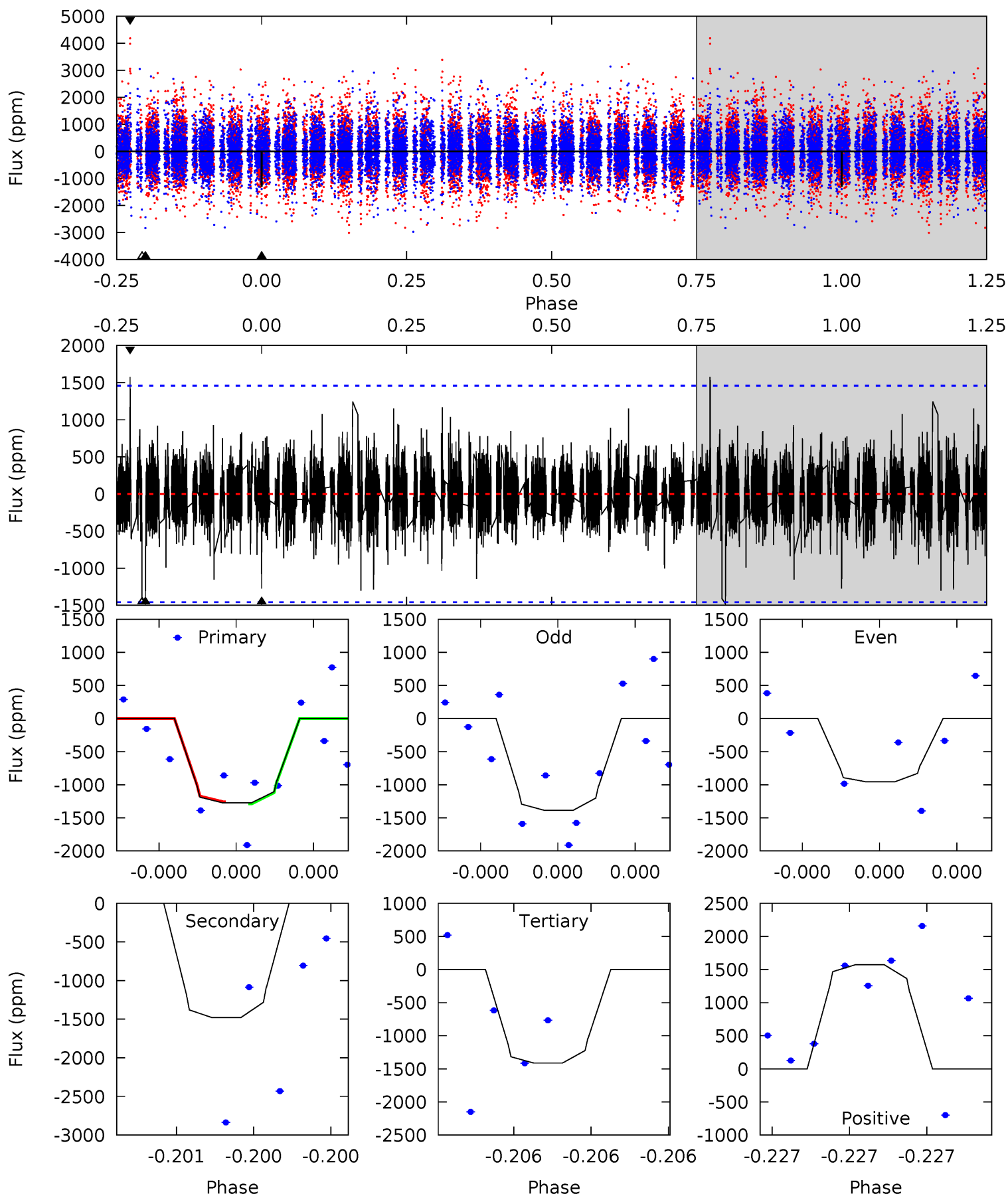
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.40	3.34	3.08	3.74	5.32	3.08	0.86	-1.68	-2.34	0.26	-0.40	0.52	1.06	0.53	1.05



Alt Model-Shift Uniqueness Test

011704044-05, P = 217.026743 Days, E = 91.345944 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.96	5.76	5.50	6.12	5.67	3.63	1.02	-0.54	-1.16	0.26	-0.36	0.70	1.00	0.52	0.06



Stellar Parameters For KIC 011704044

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5704^{+171}_{-206}	$4.483^{+0.052}_{-0.195}$	$0.100^{+0.250}_{-0.300}$	$0.948^{+0.279}_{-0.093}$	$0.996^{+0.111}_{-0.111}$	$1.646^{+0.459}_{-0.867}$
	+3%/-4%	+1%/-4%	+250%/-300%	+29%/-10%	+11%/-11%	+28%/-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 011704044-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-336 ± 100	$33.27^{+34.05}_{-22.78}$	416^{+30}_{-21}	2309^{+797}_{-341}	85^{+737}_{-67}
Alt.	-1479 ± 257	$31.13^{+33.52}_{-21.75}$	417^{+28}_{-21}	2791^{+1224}_{-443}	395^{+4171}_{-298}

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

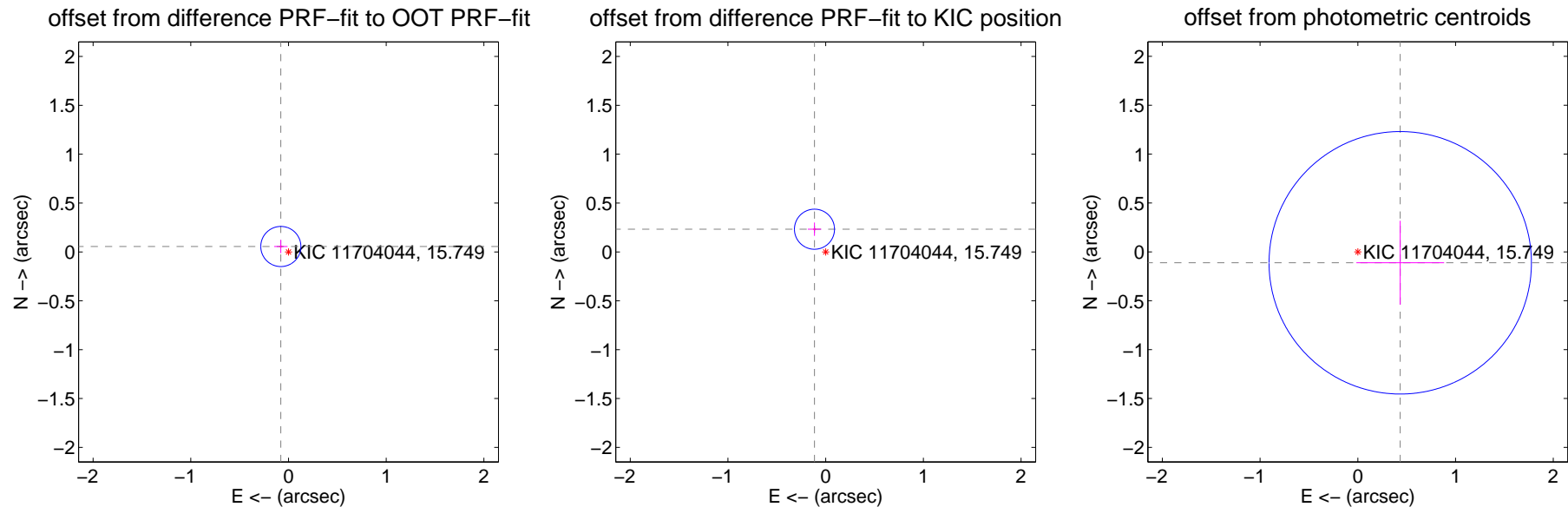
DV Centroid Data

Supplemental centroid analysis for 011704044-05. Kepler magnitude: 15.75. Transit SNR 15.43

There are 0 quarters with good PRF difference image offsets

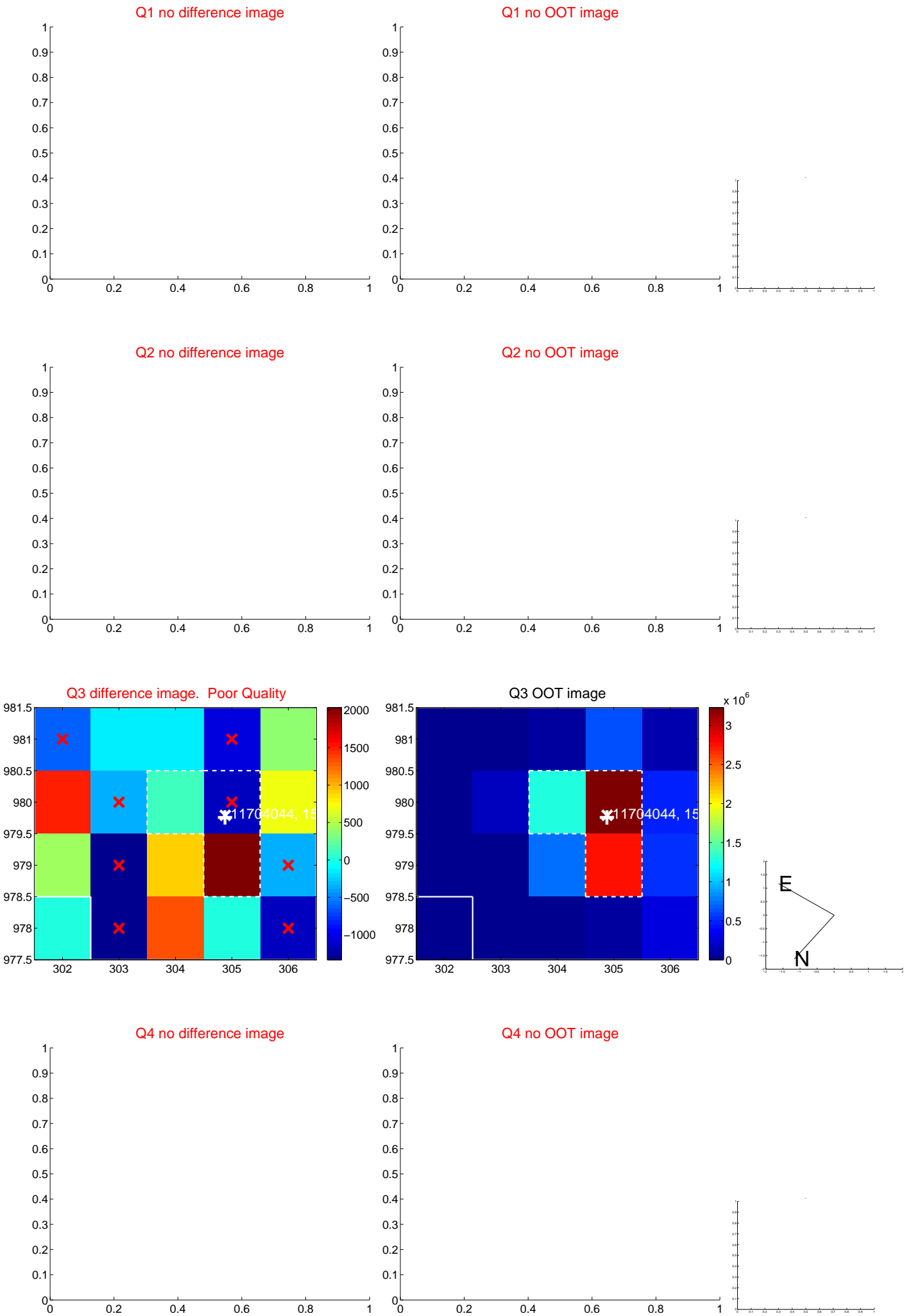
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.096 ± 0.068	1.40	0.078 ± 0.068	0.055 ± 0.068
PRF-fit source offset from KIC position	0.259 ± 0.068	3.79	0.114 ± 0.068	0.232 ± 0.068
photometric centroid source offset	0.45 ± 0.45	1.00	-0.43 ± 0.45	-0.11 ± 0.43

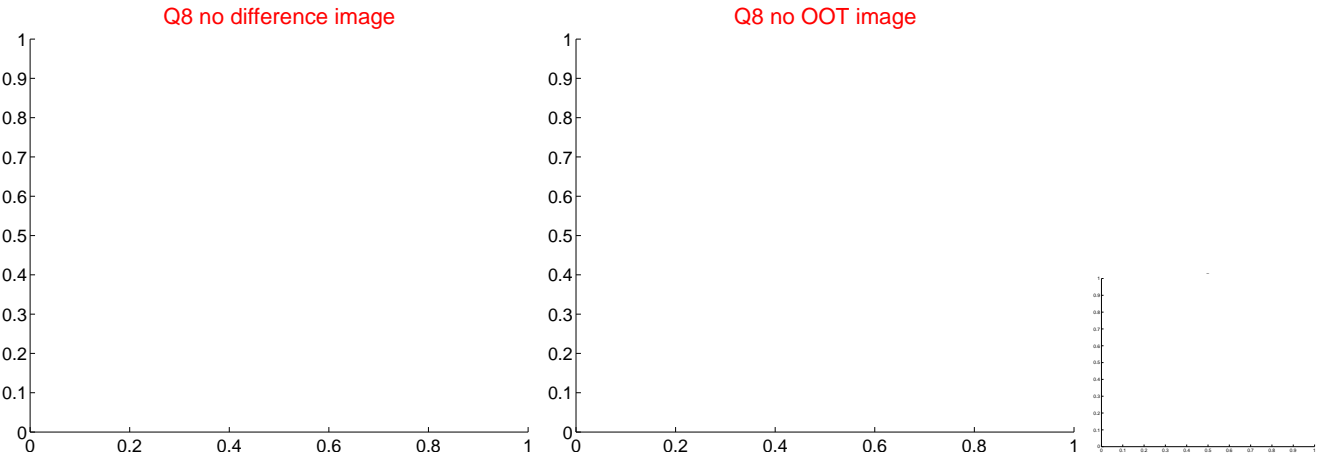
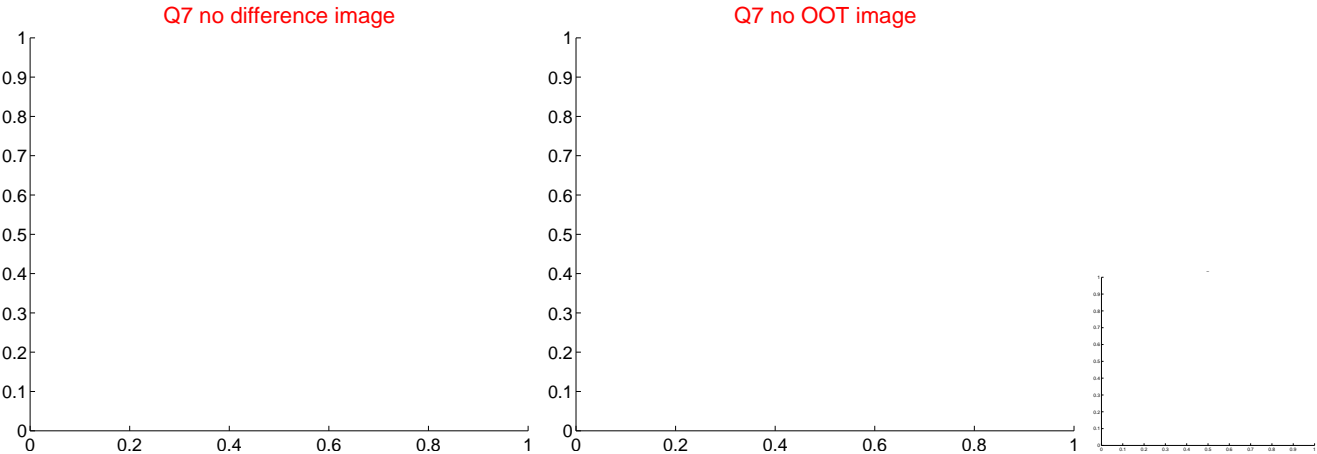
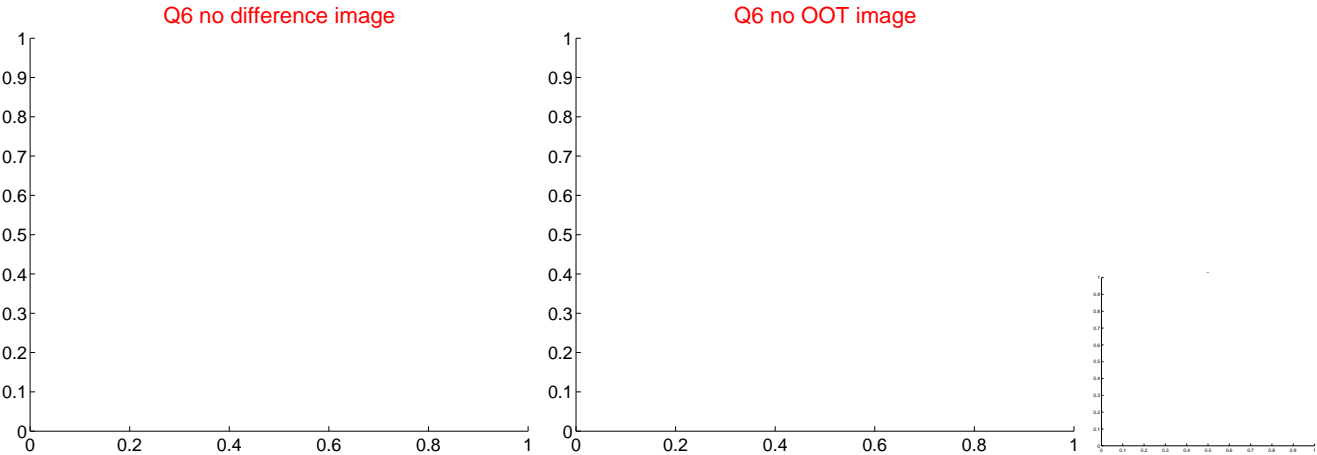
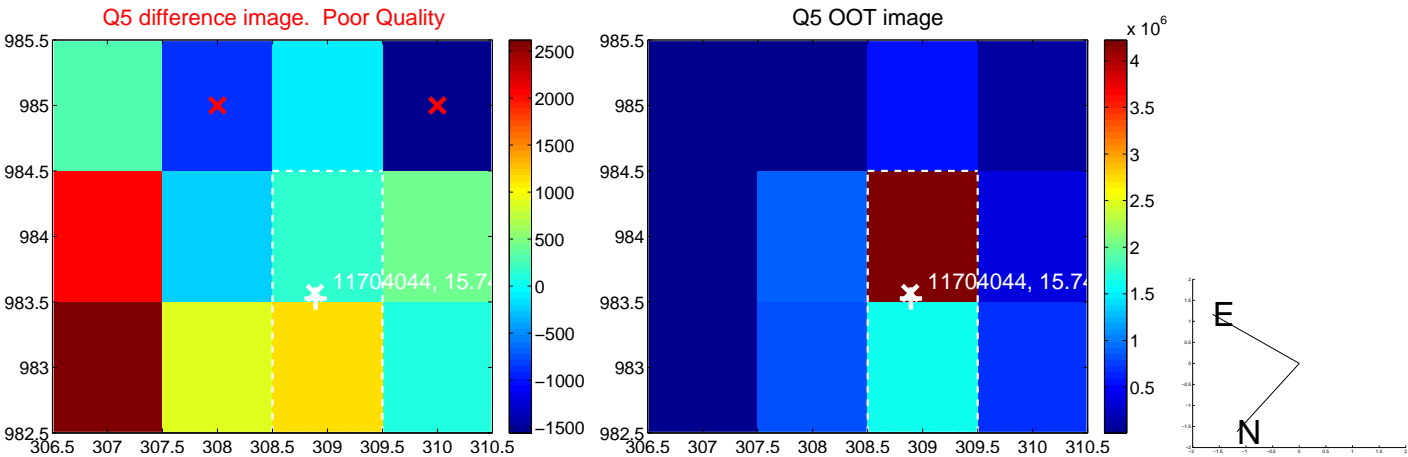


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

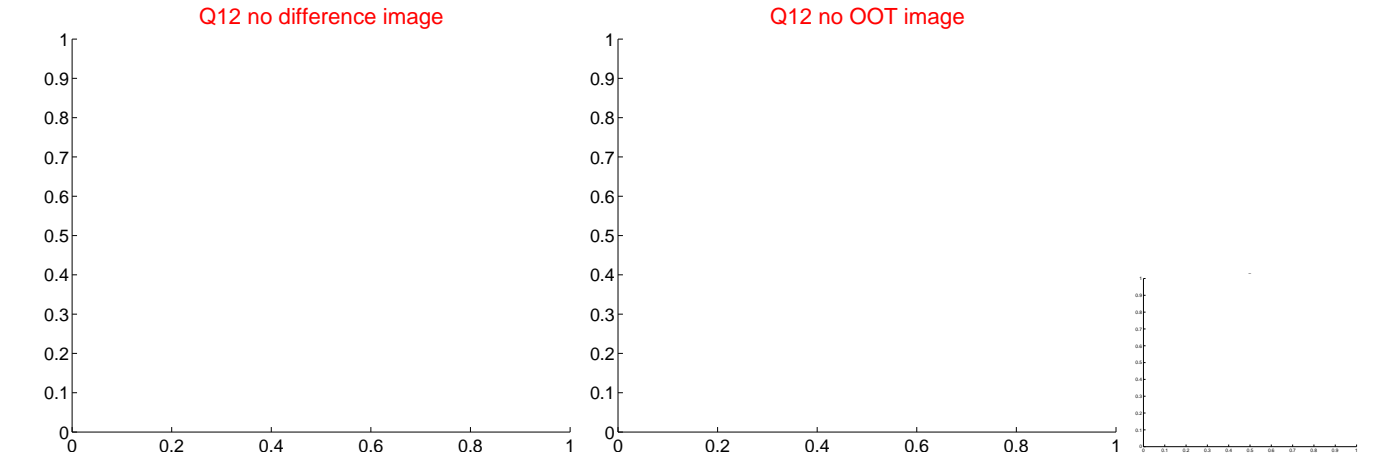
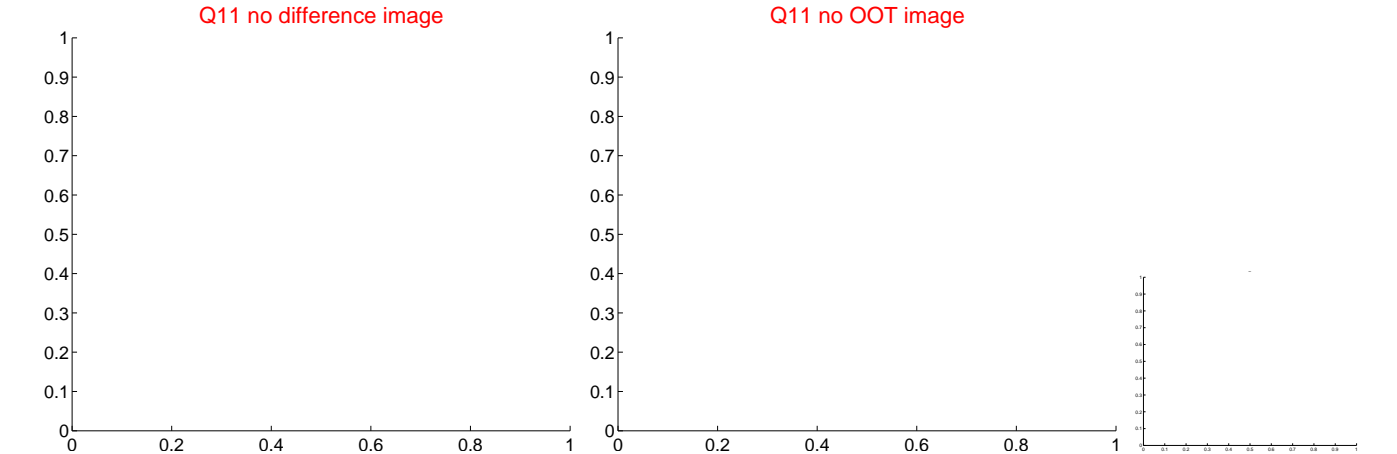
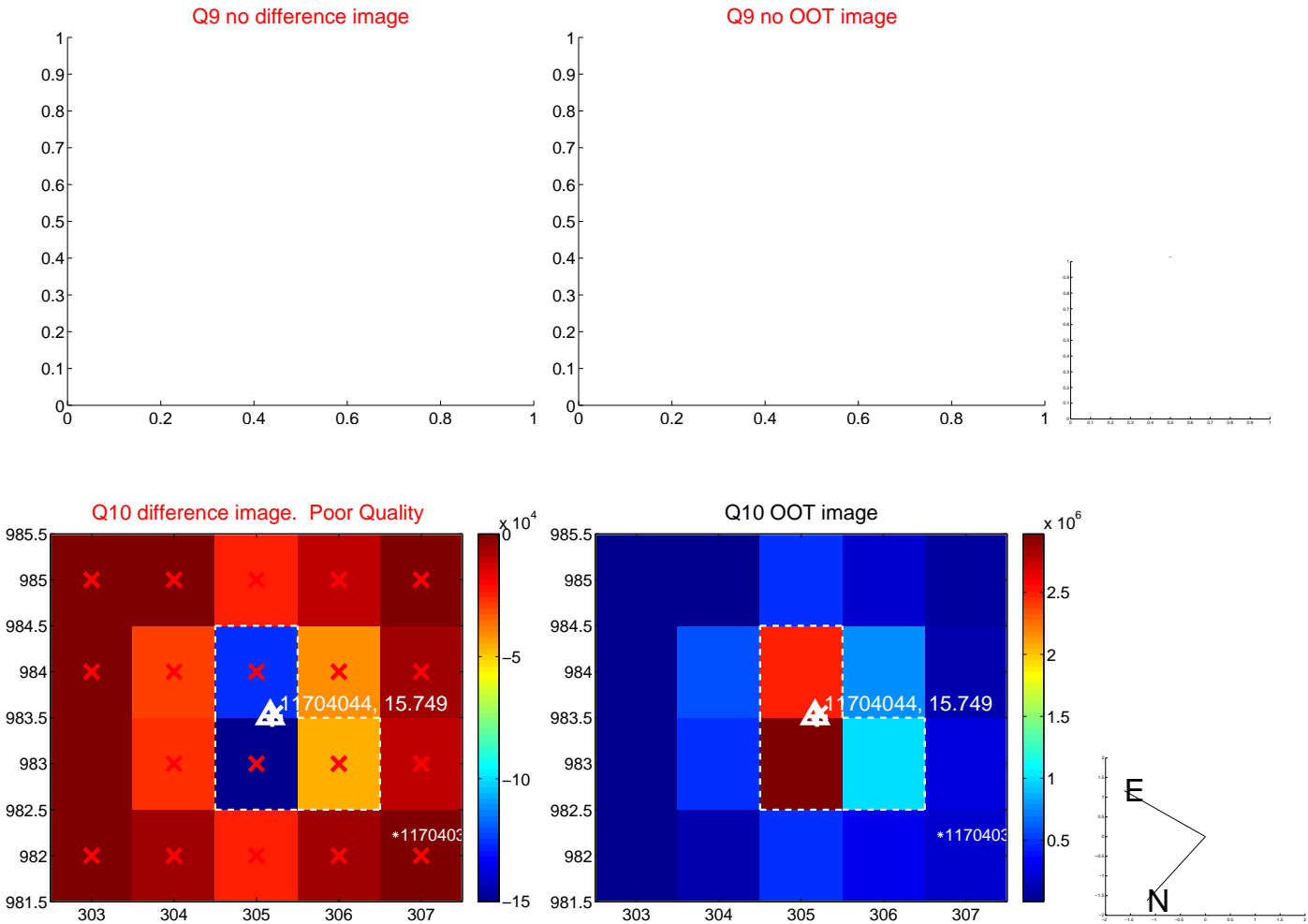
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



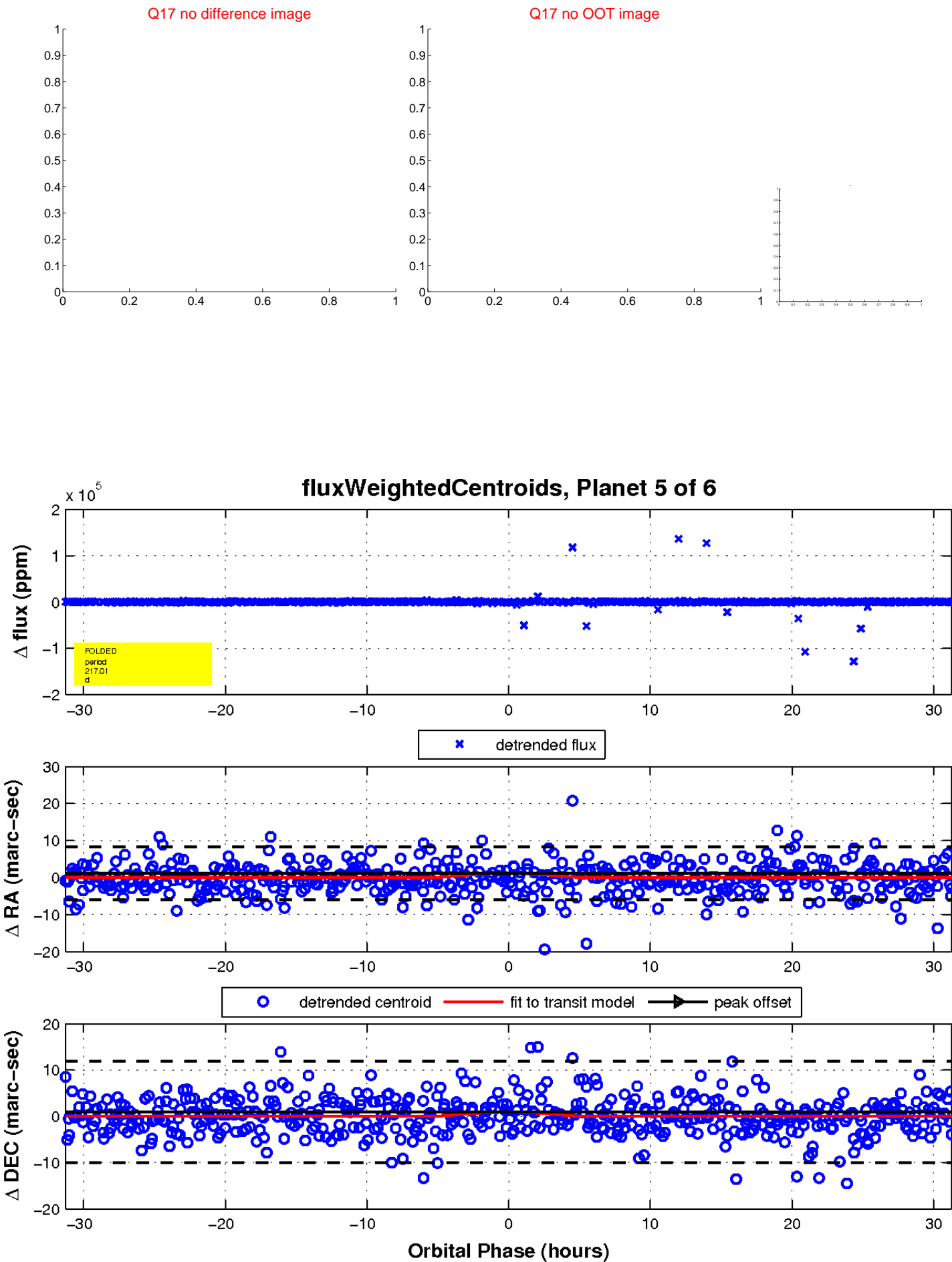
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

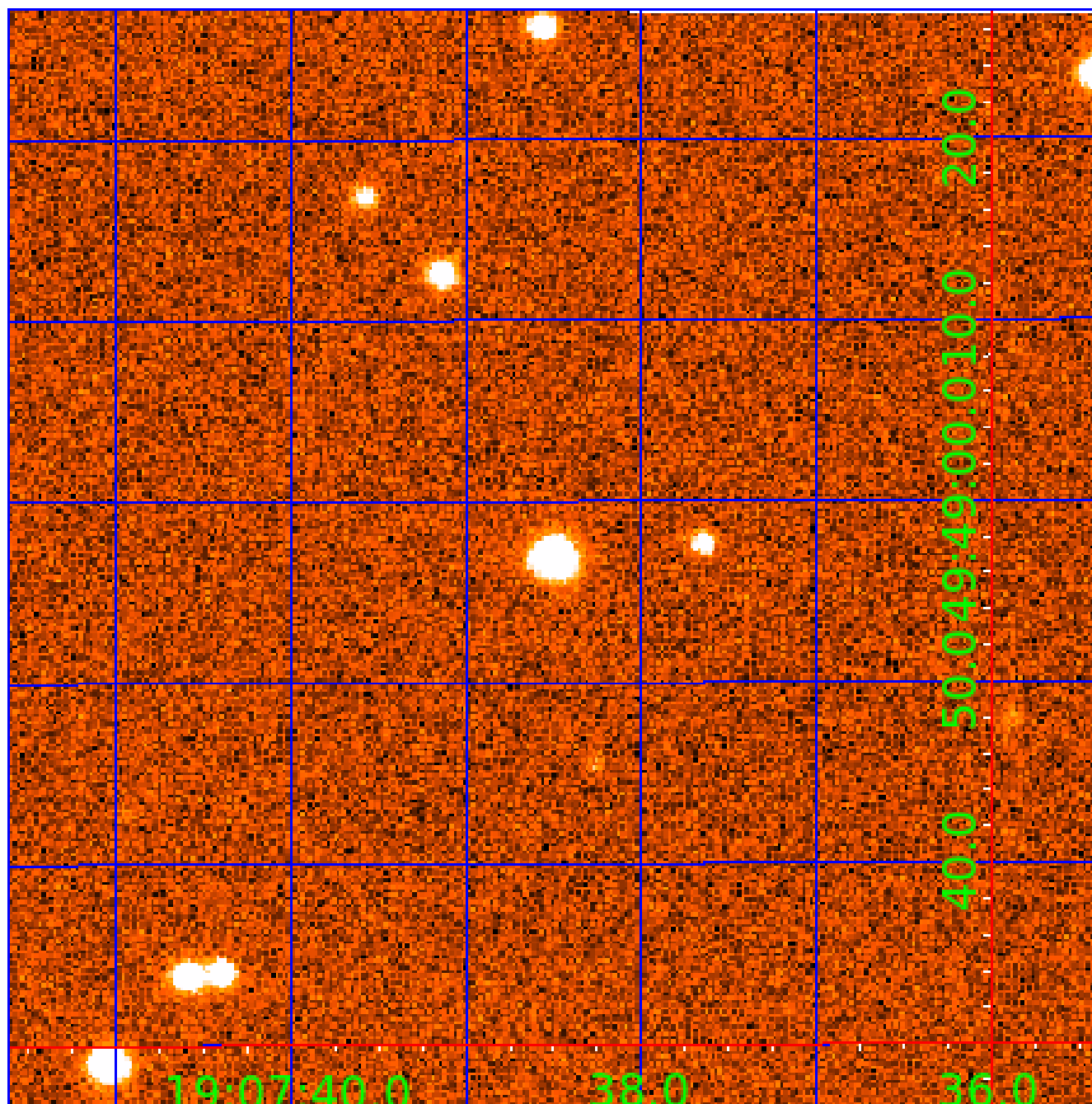


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011704044

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})
011704044-01	OBS	7472.01	6.882723	134.044755	384627.6	3.500	9152.4	-1.0	0.95	5704	51.72	170.27
011704044-02	OBS	No	10.323939	137.496540	2429.6	24.094	476.1	43.2	0.95	5704	5.09	99.17
011704044-03	OBS	No	10.323983	140.699285	19797.8	15.000	419.7	-1.0	0.95	5704	13.18	99.16
011704044-04	OBS	No	108.872282	151.844034	1143.0	13.549	39.3	7.0	0.95	5704	6.14	4.29
011704044-05	OBS	No	217.007274	308.408522	3739.0	10.472	40.8	15.4	0.95	5704	9.69	1.71
011704044-06	OBS	No	20.645940	132.028644	1270.6	10.500	21.8	-1.0	0.95	5704	3.33	39.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011704044-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
011704044-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—HALO_GHOST
011704044-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS
011704044-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011704044-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011704044-06	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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

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

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

Ephemeris Match Information For 011704044-06

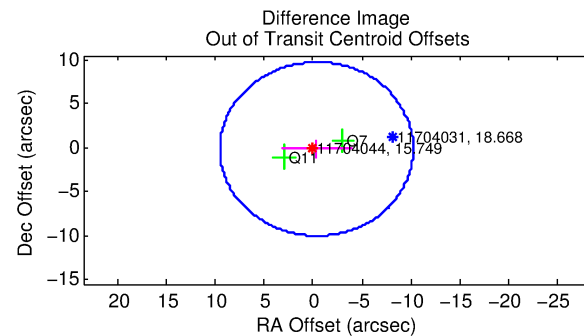
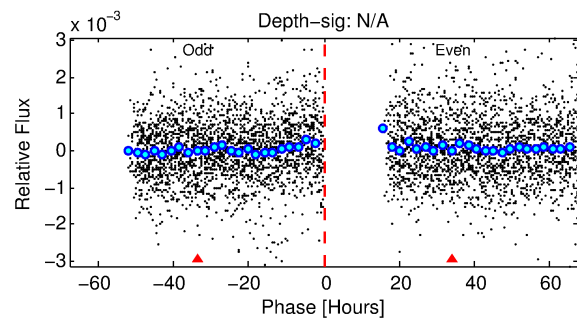
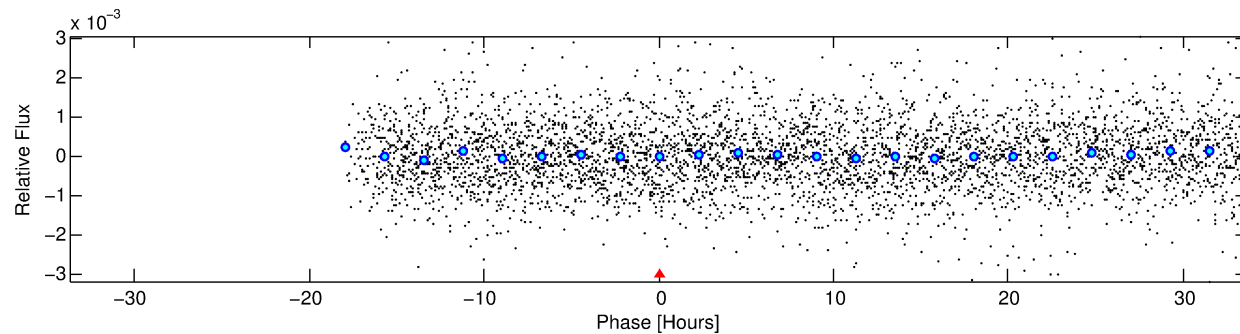
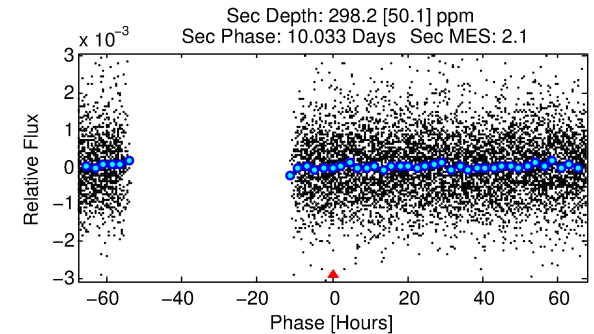
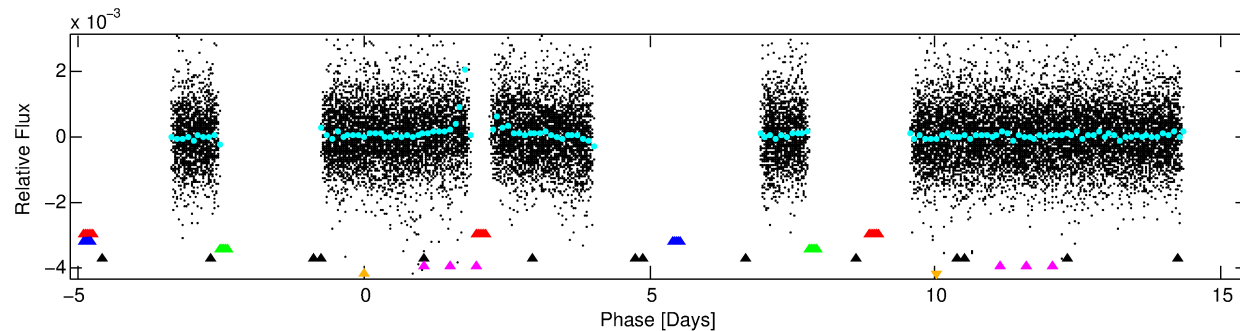
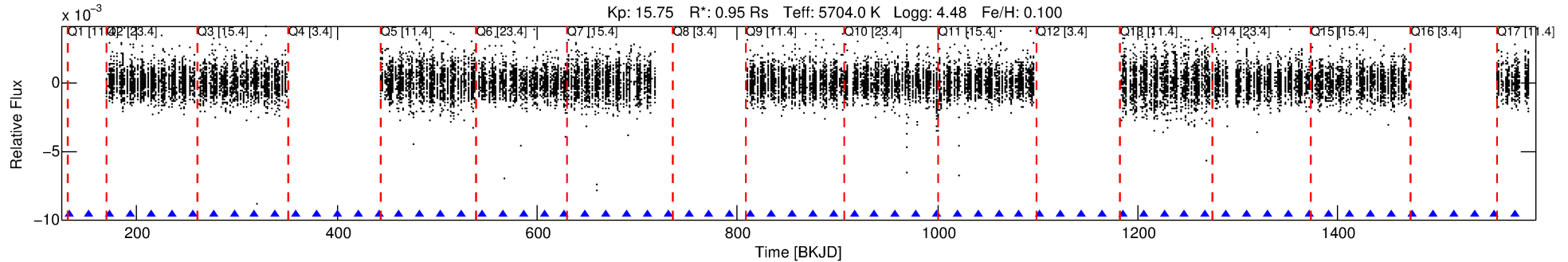
No Significant Match Found

DV One-Page Summary

KIC: 11704044 Candidate: 6 of 6 Period: 20.646 d

KOI: K07472 Corr: No Ephemeris Match

Kp: 15.75 R*: 0.95 Rs Teff: 5704.0 K Logg: 4.48 Fe/H: 0.100



TPS TCE Results:

Period = 20.64594 d
Epoch = 132.0286 BKJD

DV fit results are unavailable

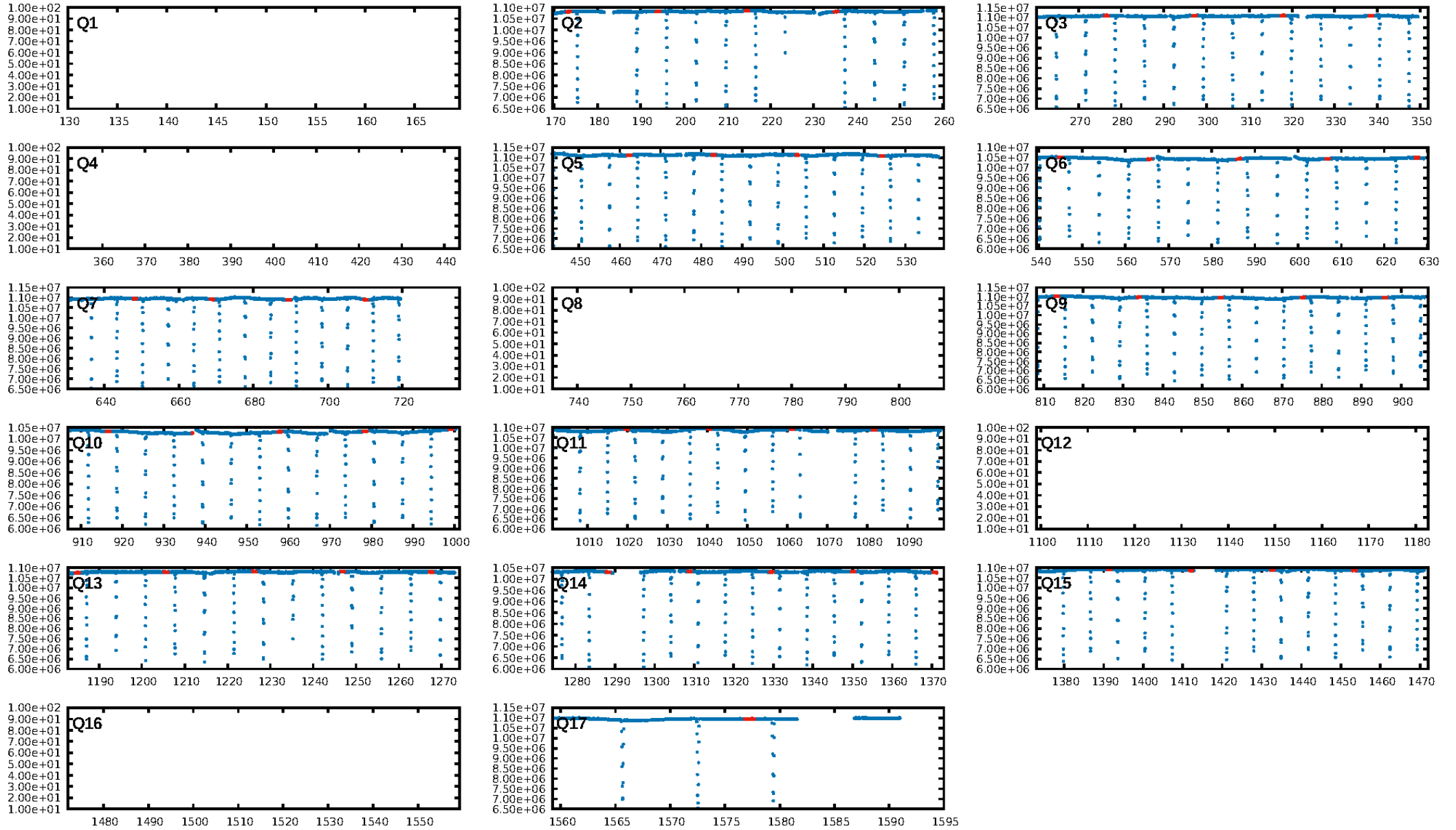
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [13.53σ]
LongPeriod-sig: 100.0% [123.53σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [48/48]
GhostDiagnostic-chr: -5.343
Centroid-sig: 15.5%
Centroid-so: 8.586 arcsec [1.14σ]
OotOffset-rm: 0.370 arcsec [0.11σ]
KicOffset-rm: 0.366 arcsec [0.11σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
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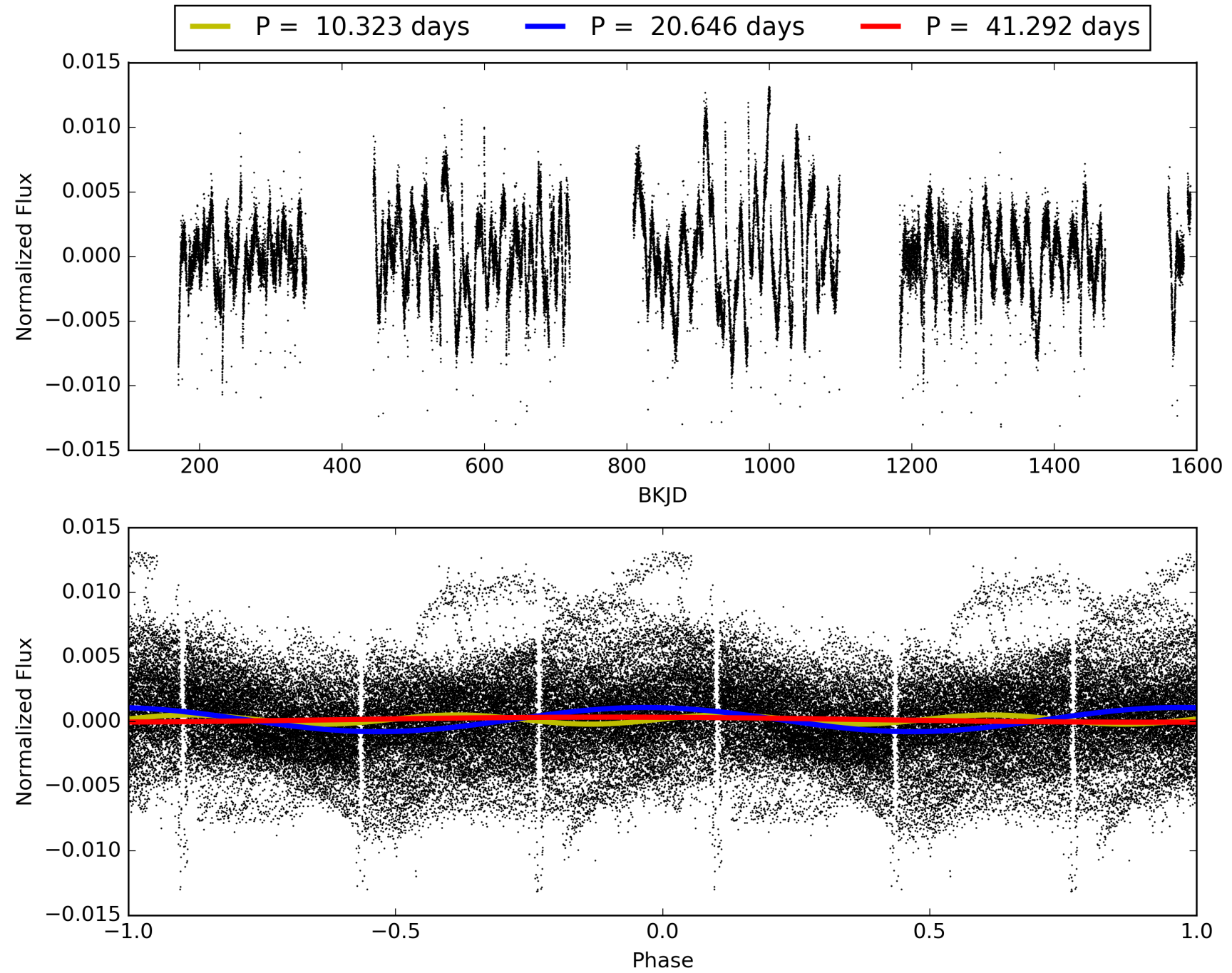
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 10:27:48 Z

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

TCE 011704044-06, PDC Light Curves

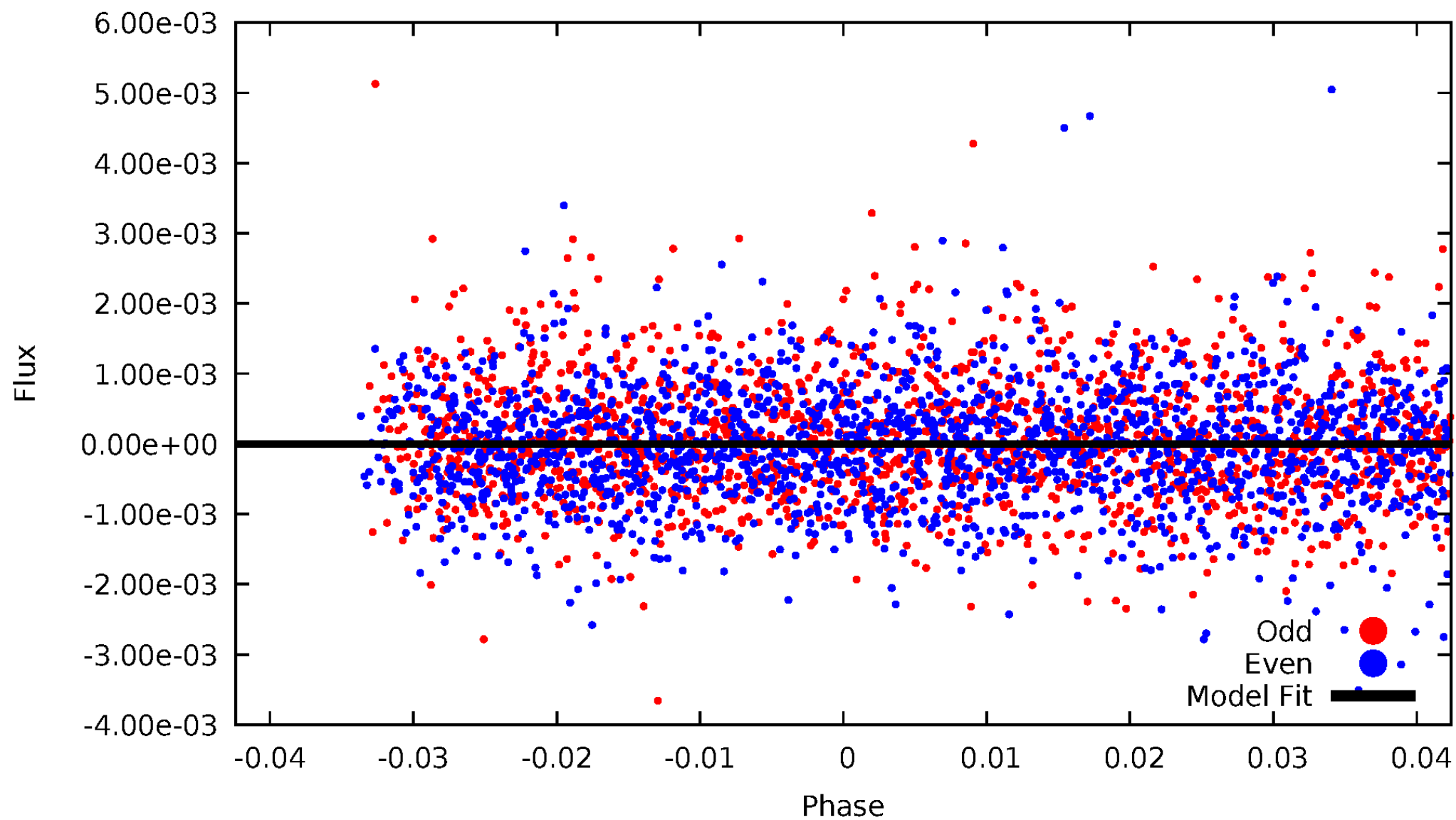


TCE 011704044-06



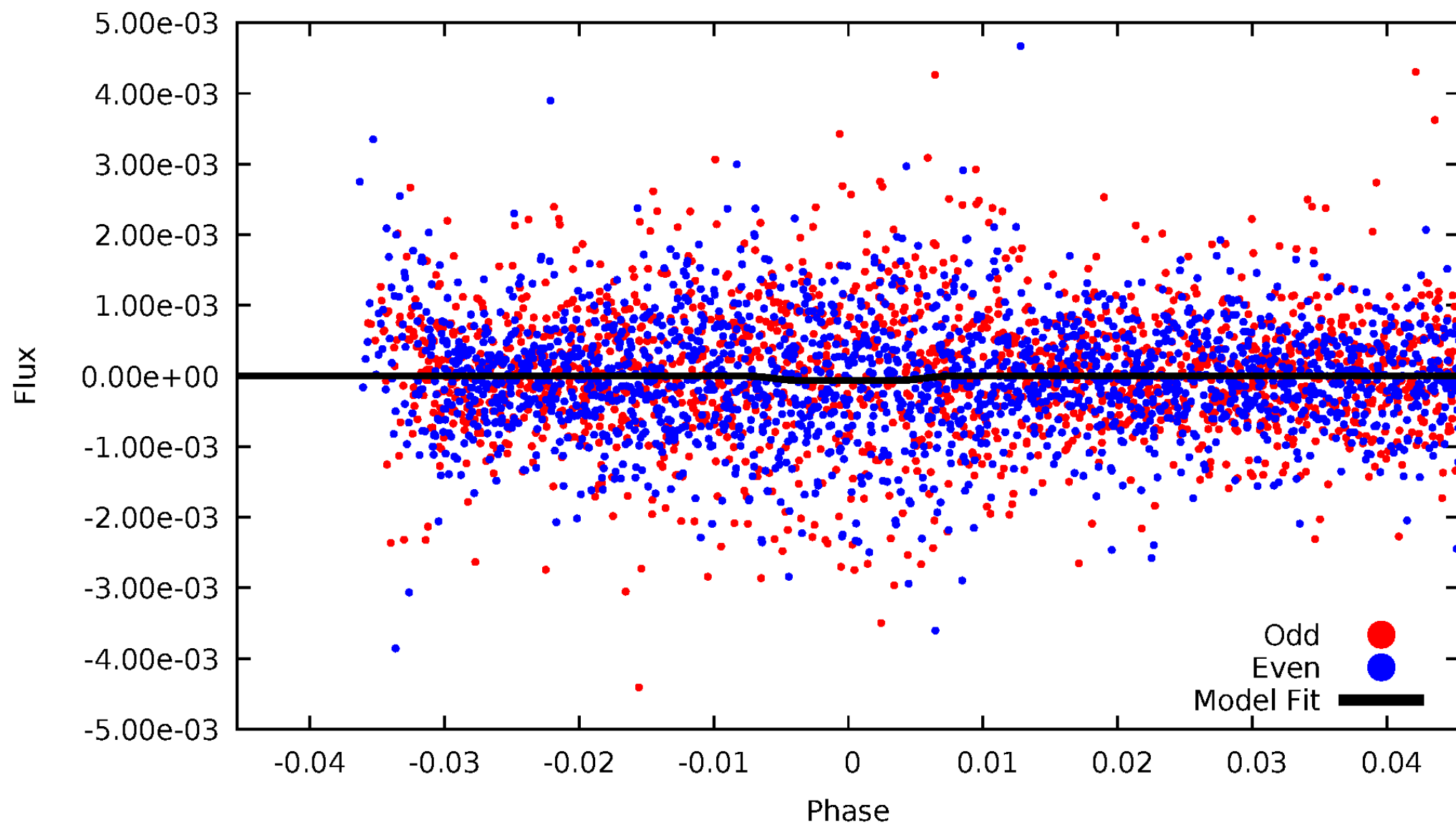
DV Odd/Even

TCE 011704044-06



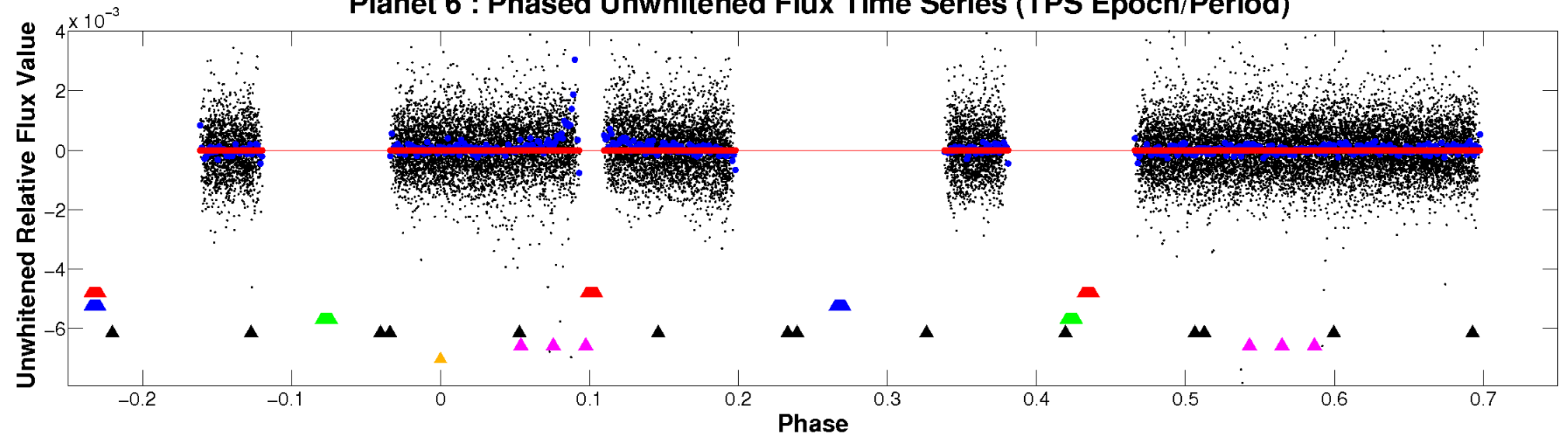
ALT Odd/Even

TCE 011704044-06

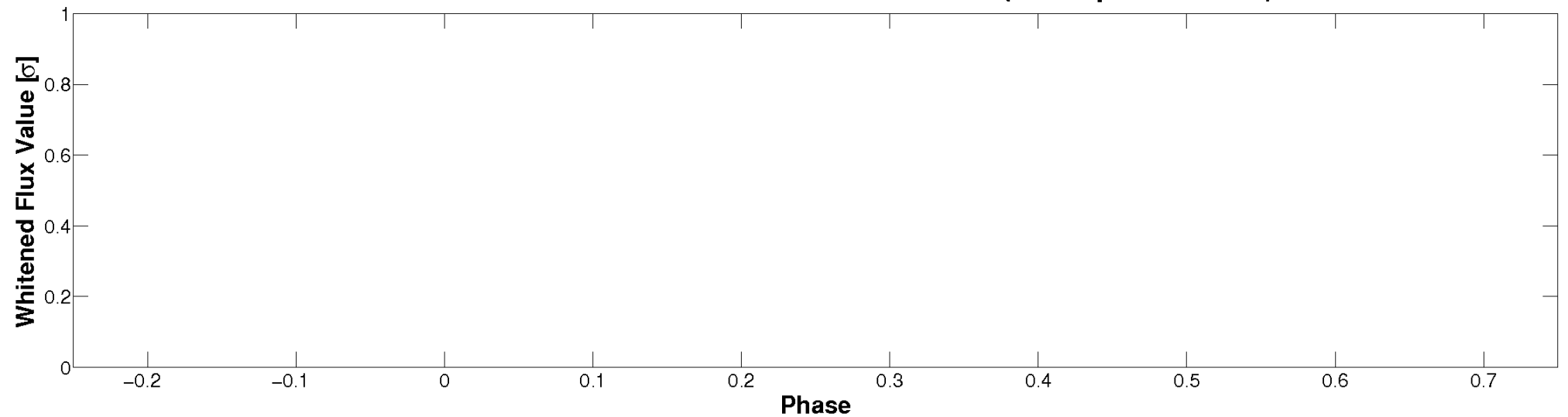


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

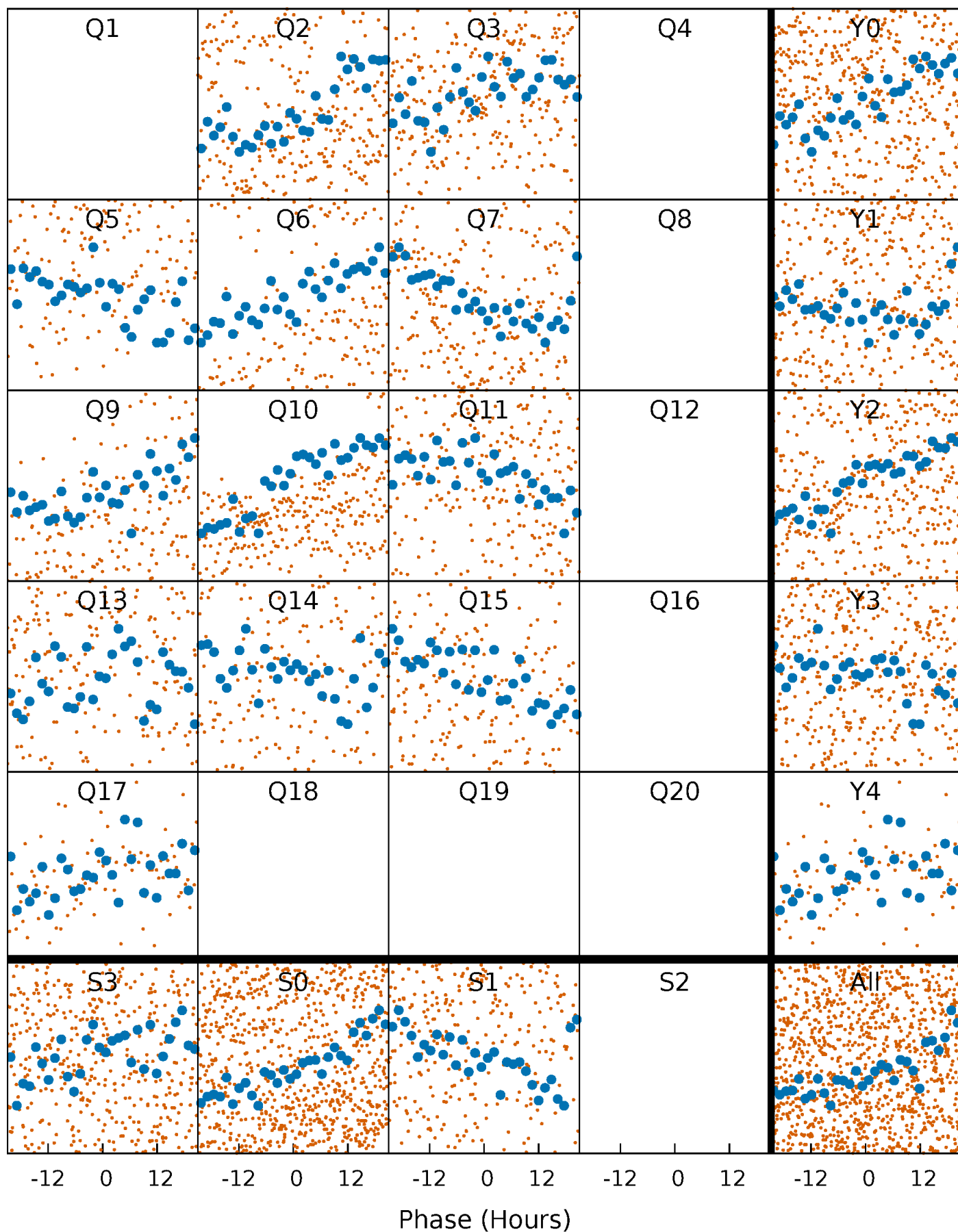


Planet 6 : Phased Whitened Flux Time Series (TPS Epoch/Period)



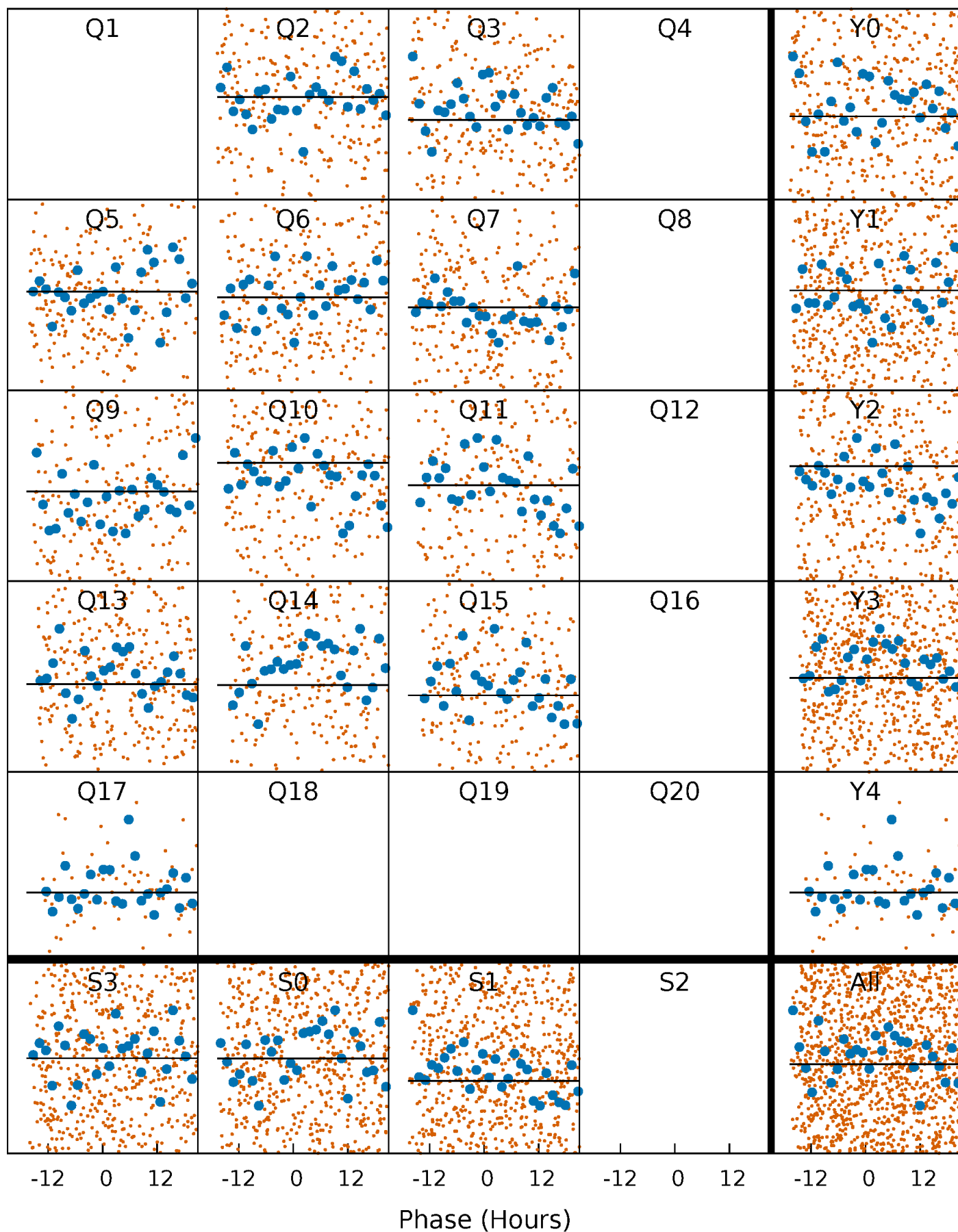
PDC Quarter-Phased Transit Curves

TCE 011704044-06 P= 20.645940 Days $T_0=132.028644$ (BKJD)



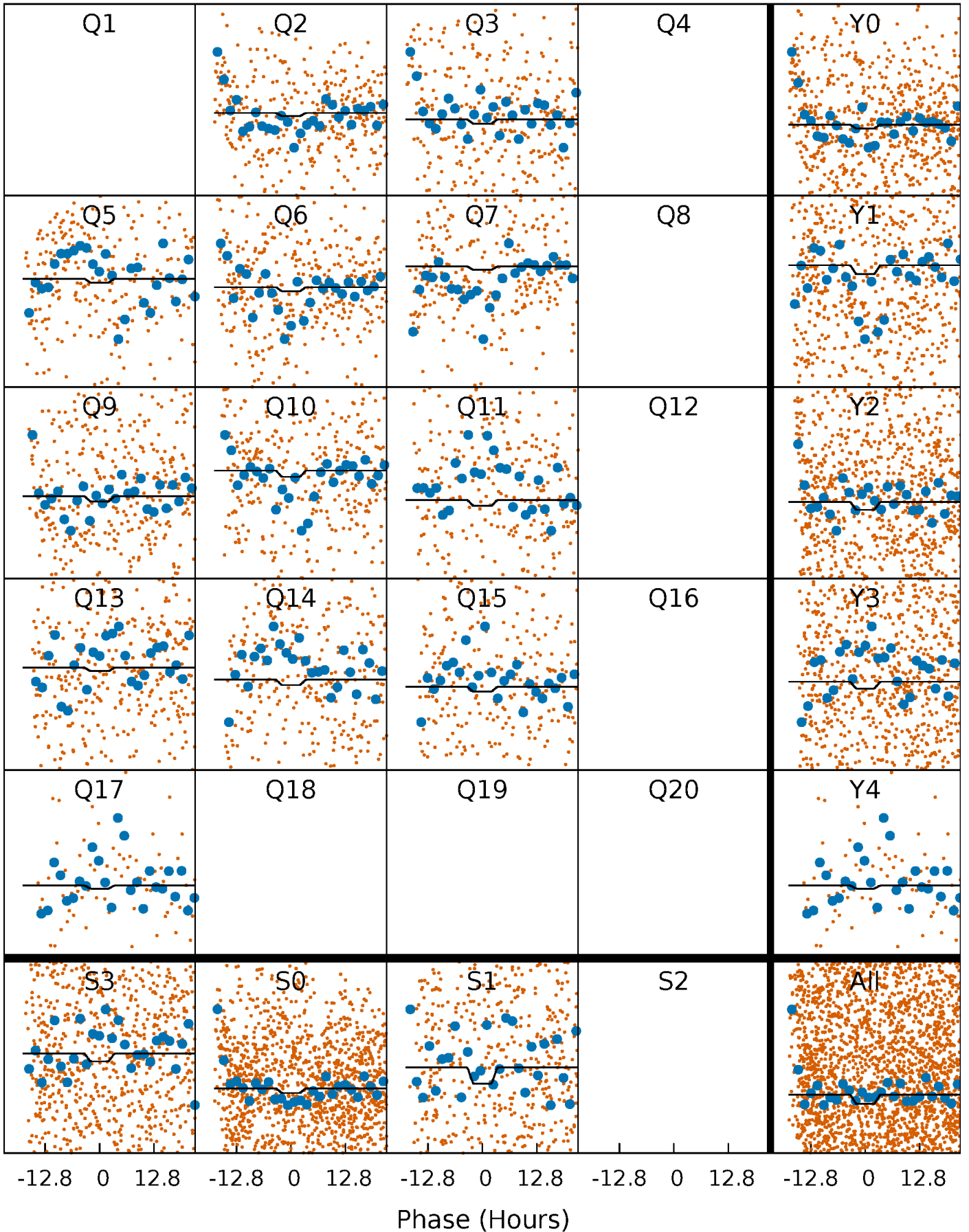
DV Quarter-Phased Transit Curves

TCE 011704044-06 P= 20.645940 Days $T_0=132.028644$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

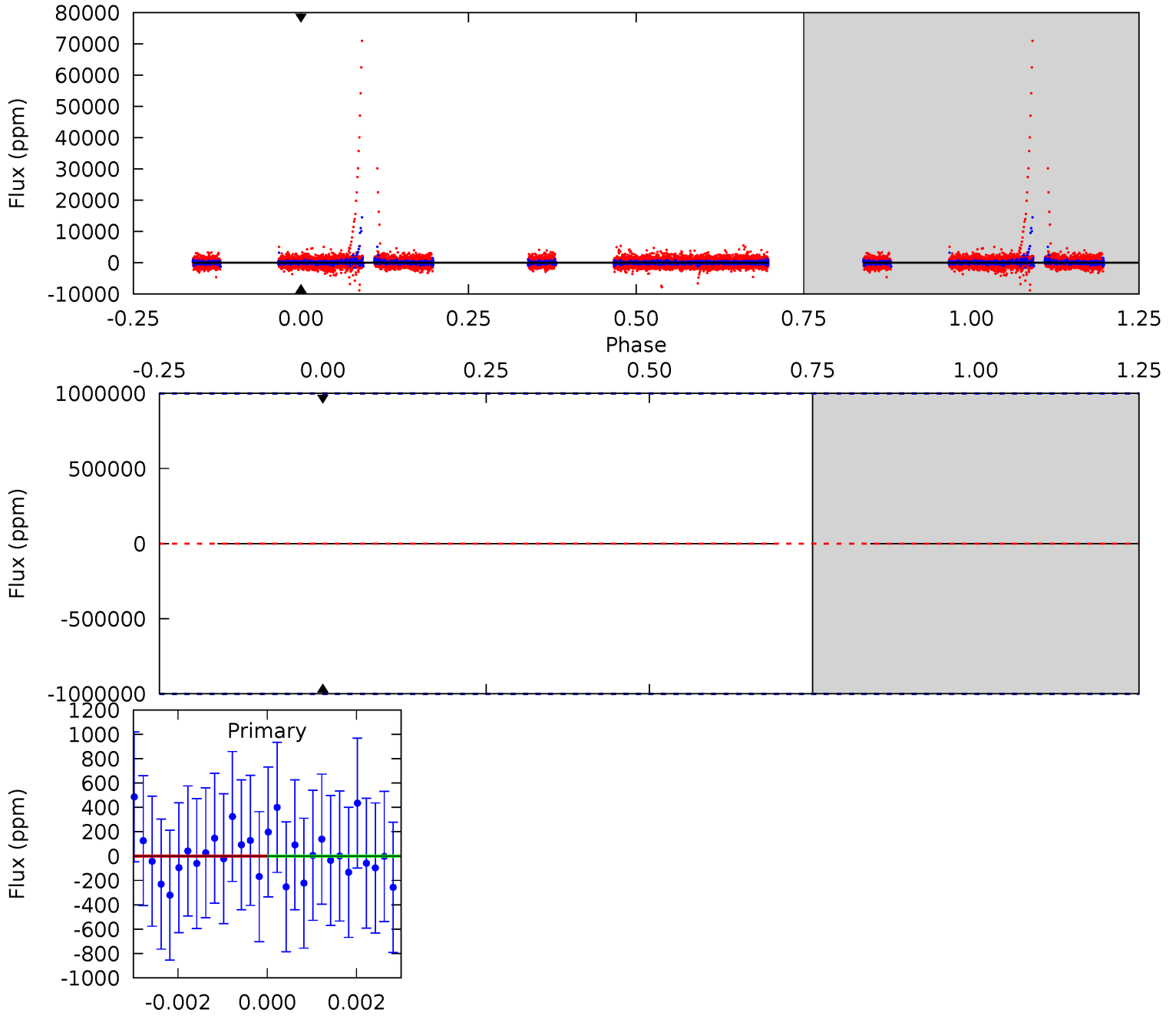
TCE 011704044-06 P= 20.645940 Days $T_0=132.082785$ (BKJD)



DV Model-Shift Uniqueness Test

011704044-06, P = 20.645940 Days, E = 132.028644 Days

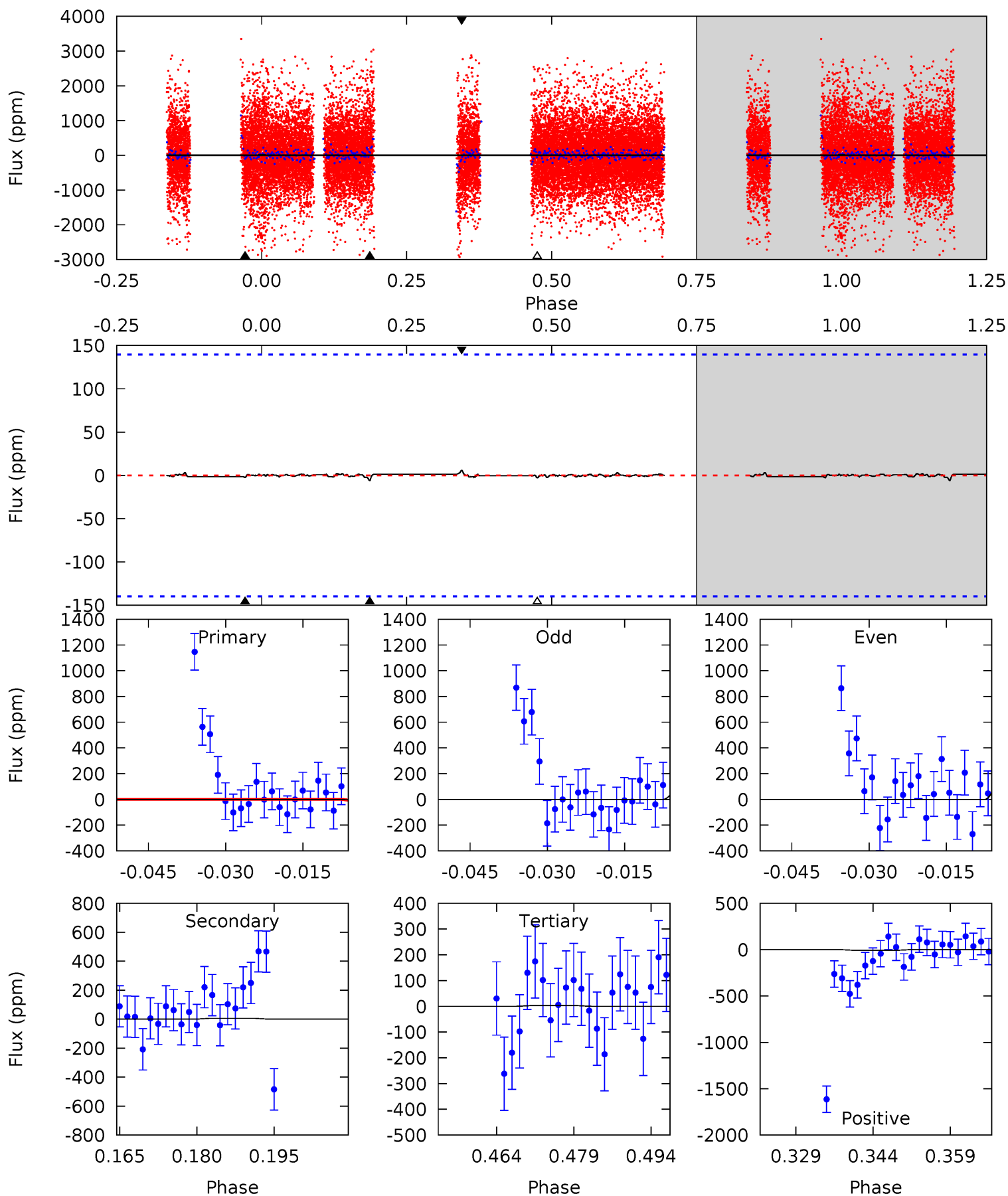
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011704044-06, P = 20.645940 Days, E = 132.082785 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.10	0.21	0.10	0.21	4.95	2.43	0.04	-0.01	-0.11	0.11	0.00	0.97	-0.48	0.50	0.05



Stellar Parameters For KIC 011704044

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5704^{+171}_{-206}	$4.483^{+0.052}_{-0.195}$	$0.100^{+0.250}_{-0.300}$	$0.948^{+0.279}_{-0.093}$	$0.996^{+0.111}_{-0.111}$	$1.646^{+0.459}_{-0.867}$
	+3%/-4%	+1%/-4%	+250%/-300%	+29%/-10%	+11%/-11%	+28%/-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 011704044-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$8.99^{+8.45}_{-6.09}$	908^{+59}_{-47}	3814^{+14804}_{-19305}	136^{+27688}_{-21046}
Alt.	-6 ± 28	$7.31^{+8.84}_{-5.04}$	907^{+65}_{-41}	1803^{+887}_{-4321}	$0.642^{+12.679}_{-7.676}$

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 $A_{obs} \gg 1.0$

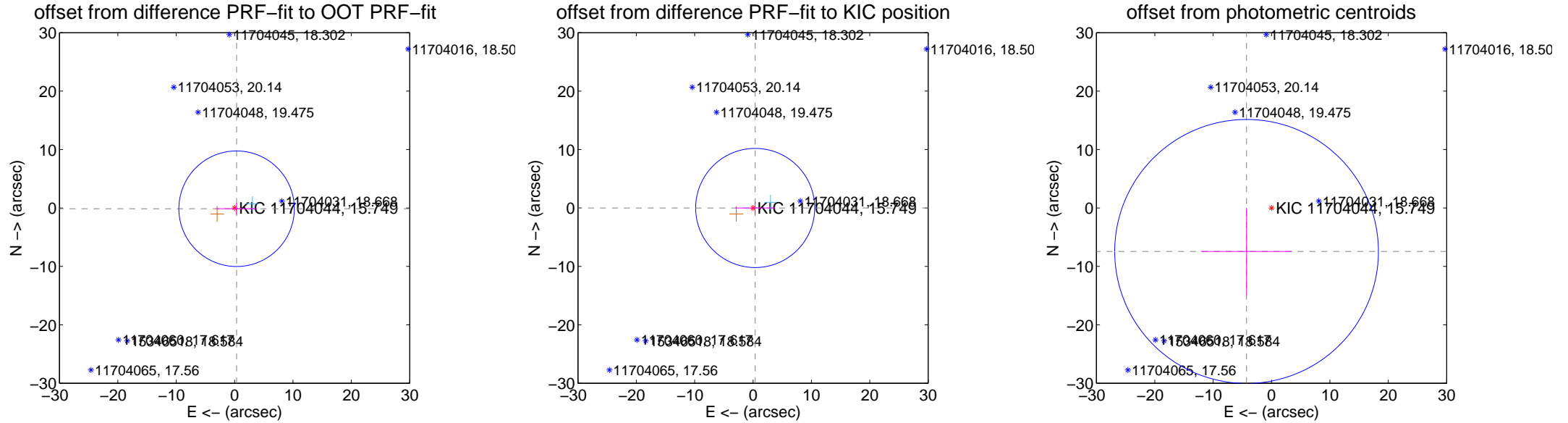
DV Centroid Data

Supplemental centroid analysis for 011704044-06. Kepler magnitude: 15.75. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

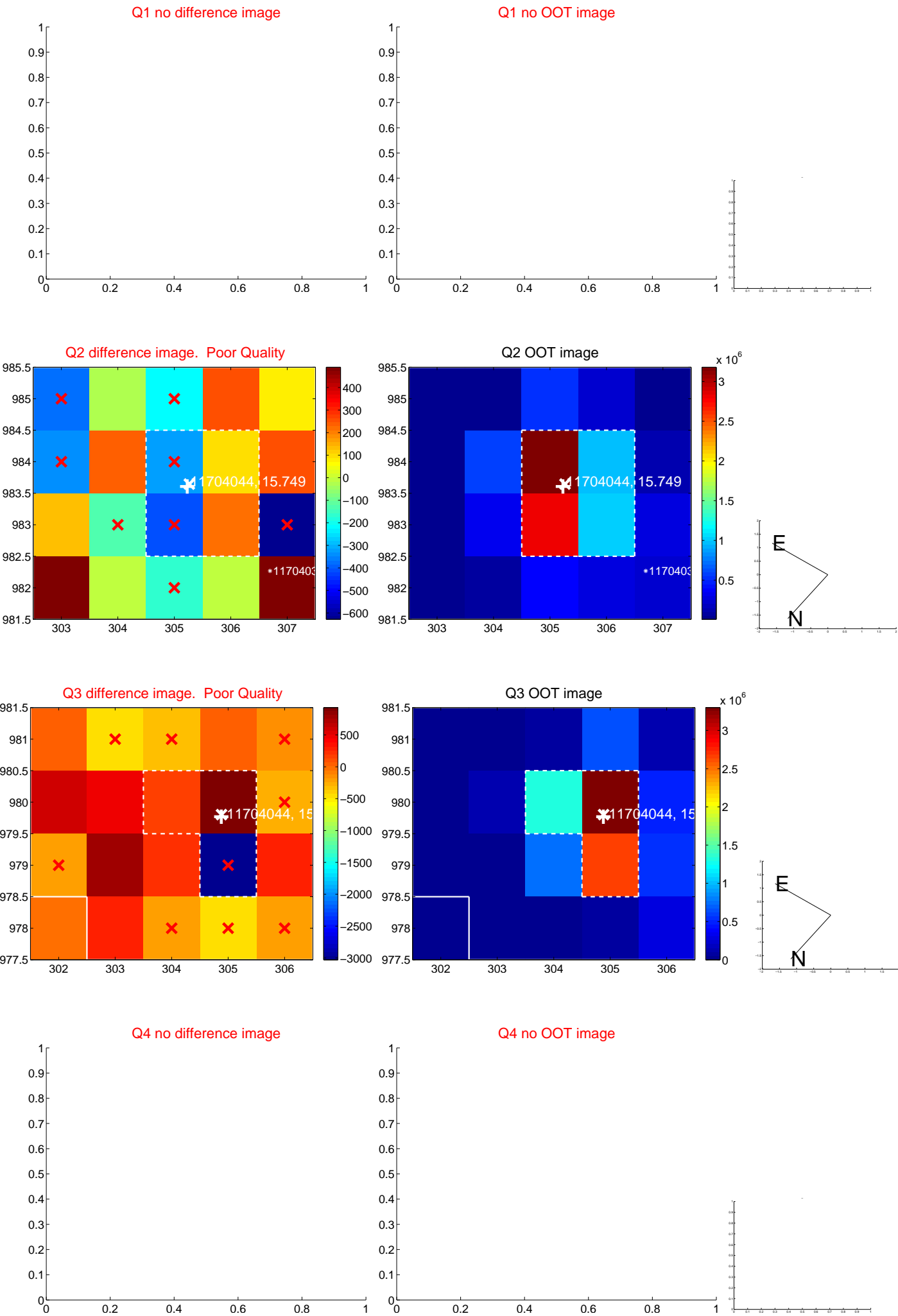
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.370 ± 3.296	0.11	-0.345 ± 3.512	-0.133 ± 1.025
PRF-fit source offset from KIC position	0.366 ± 3.399	0.11	-0.366 ± 3.399	-0.003 ± 1.164
photometric centroid source offset	8.59 ± 7.53	1.14	4.28 ± 7.79	-7.45 ± 7.44

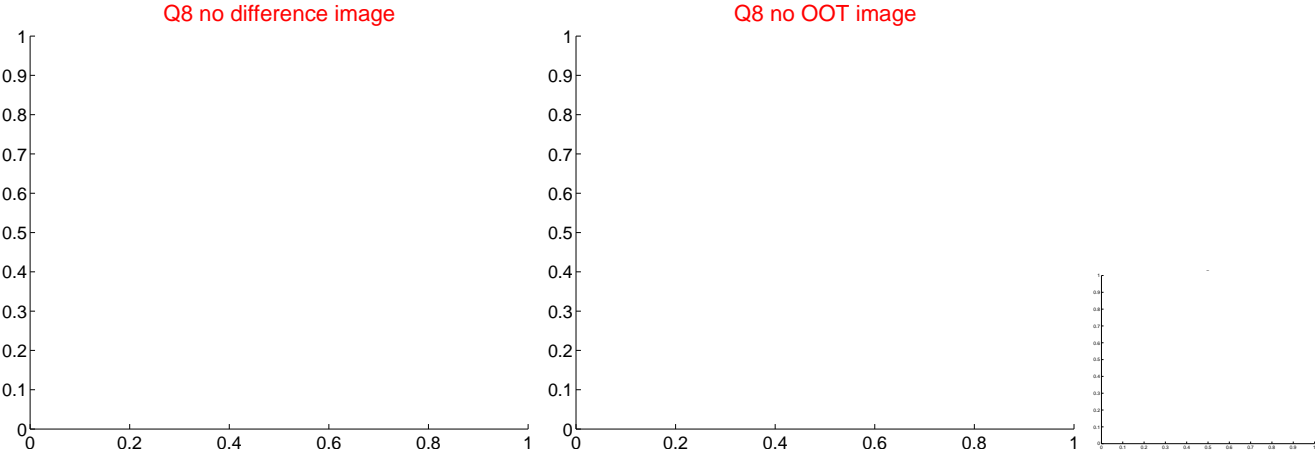
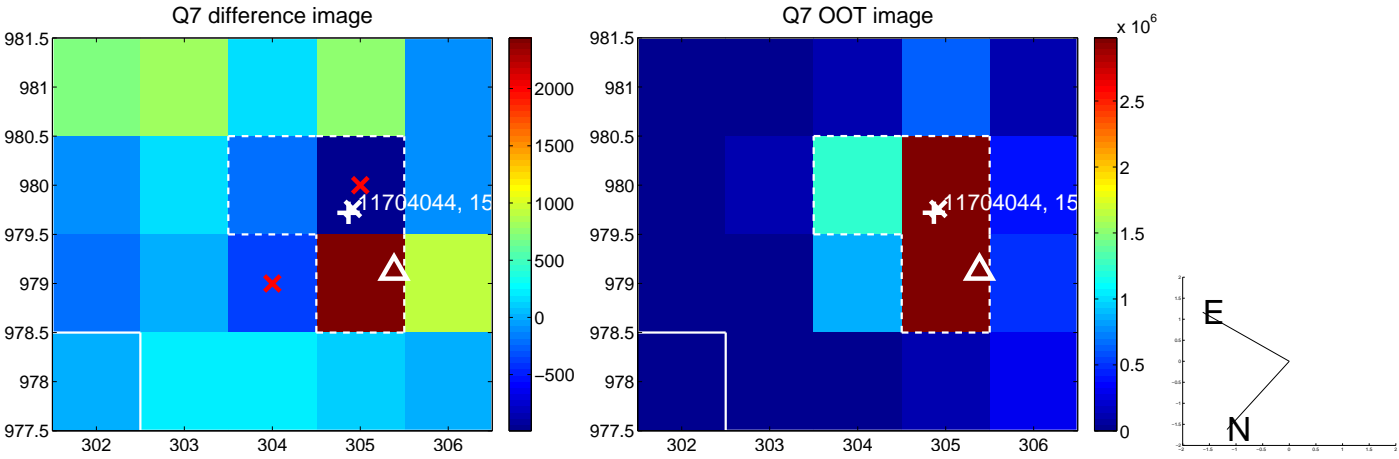
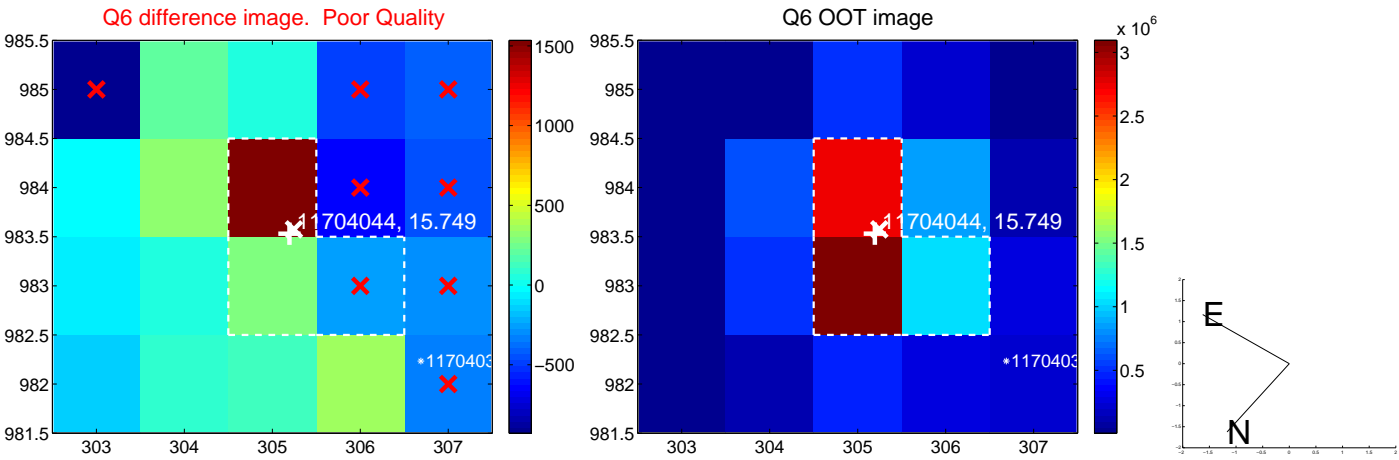
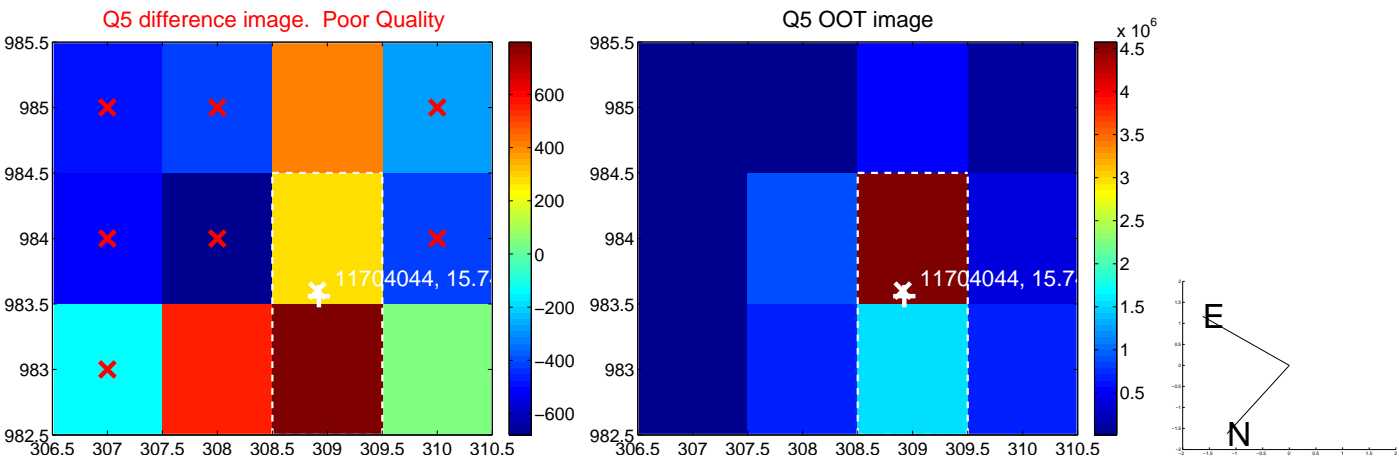


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

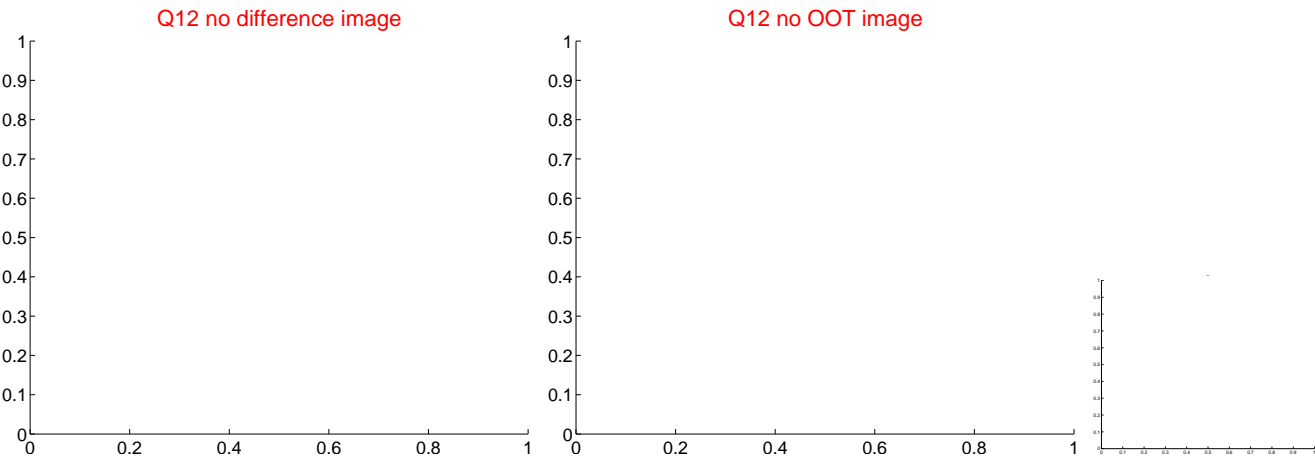
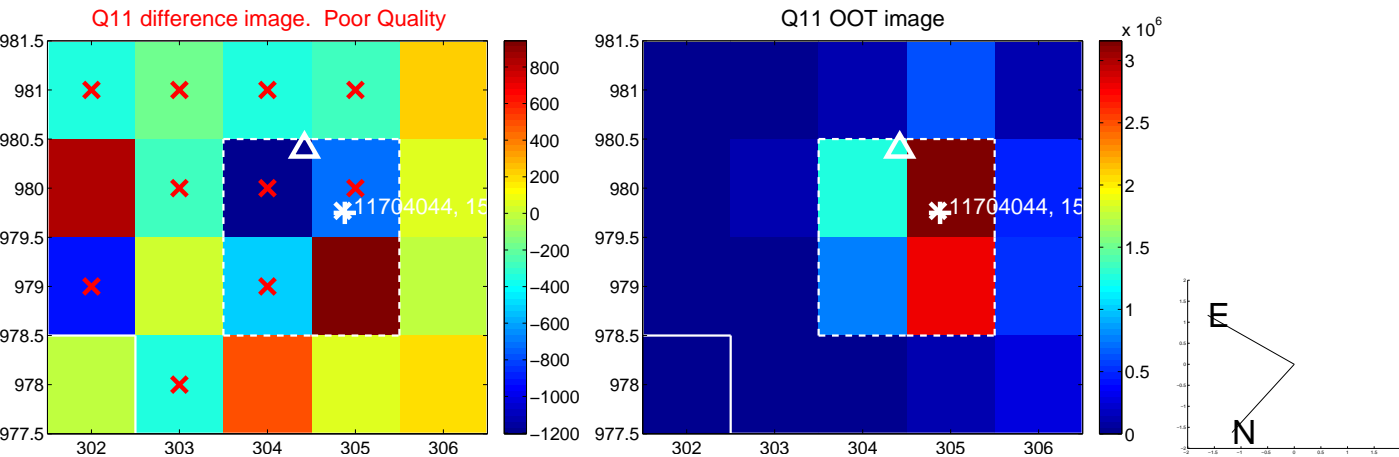
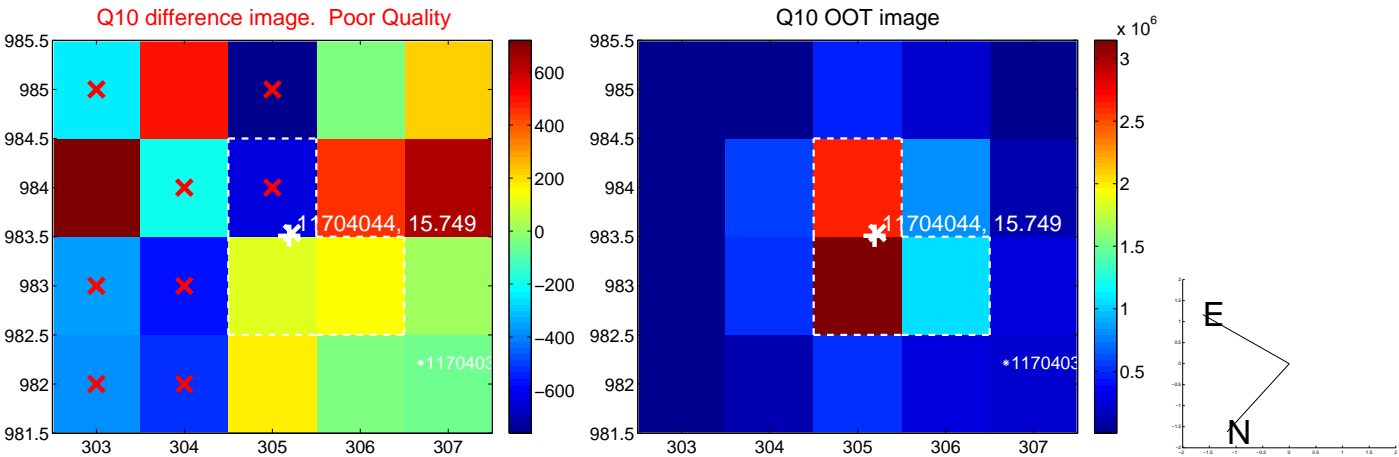
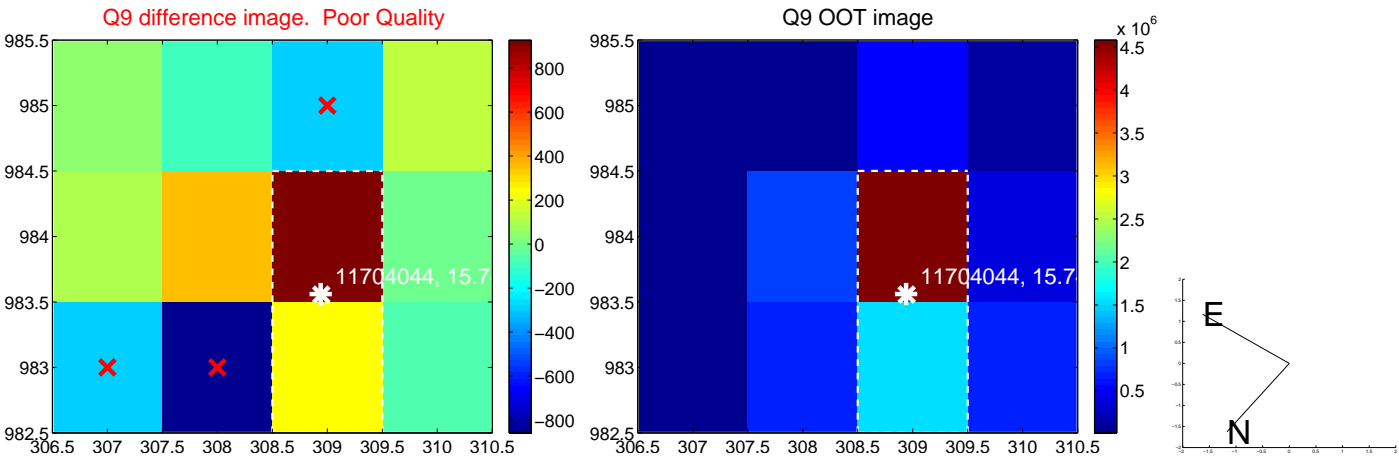
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



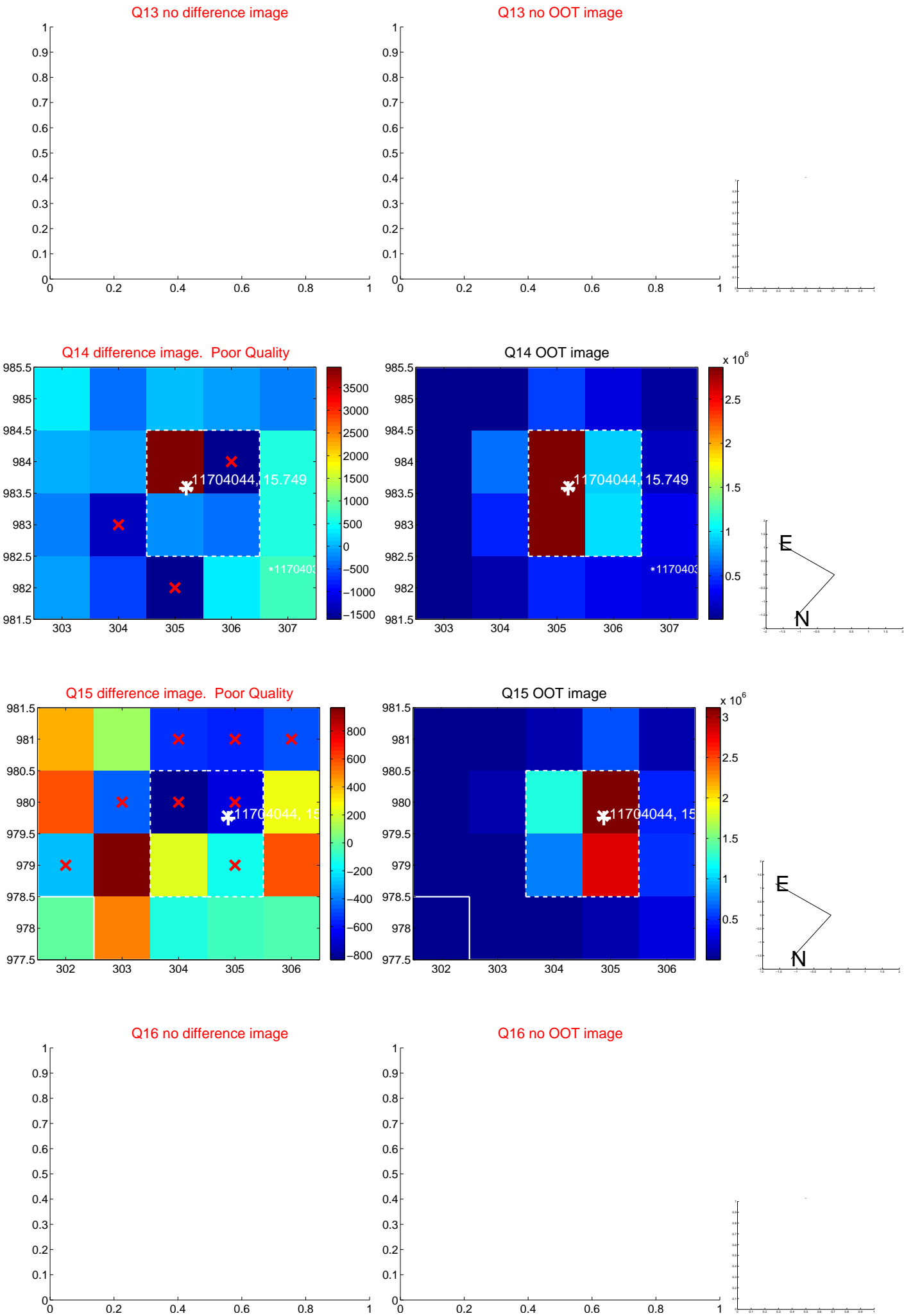
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



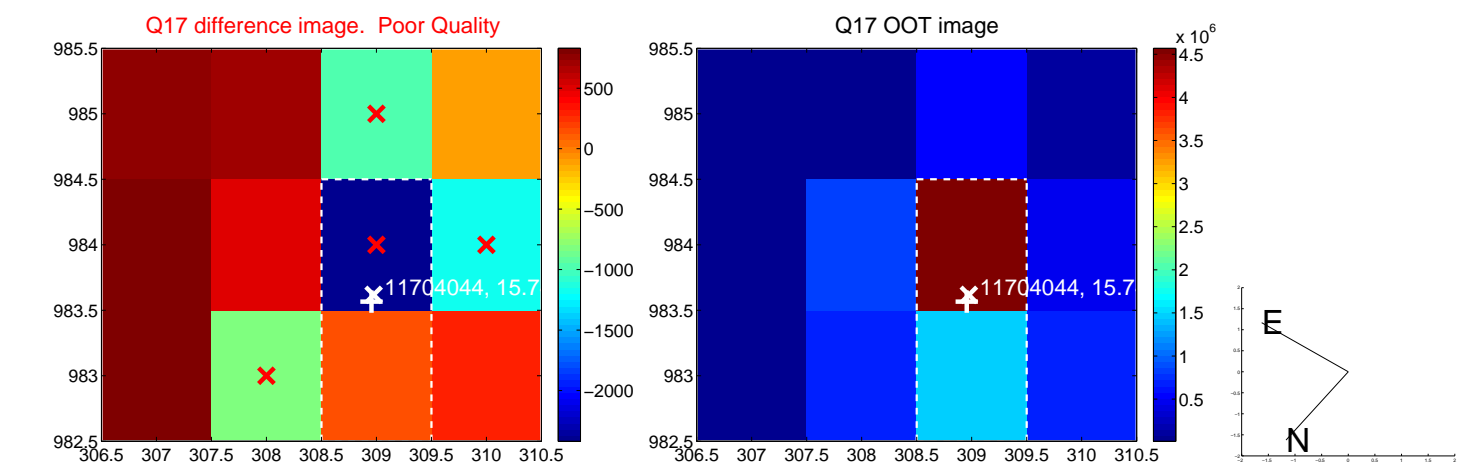
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



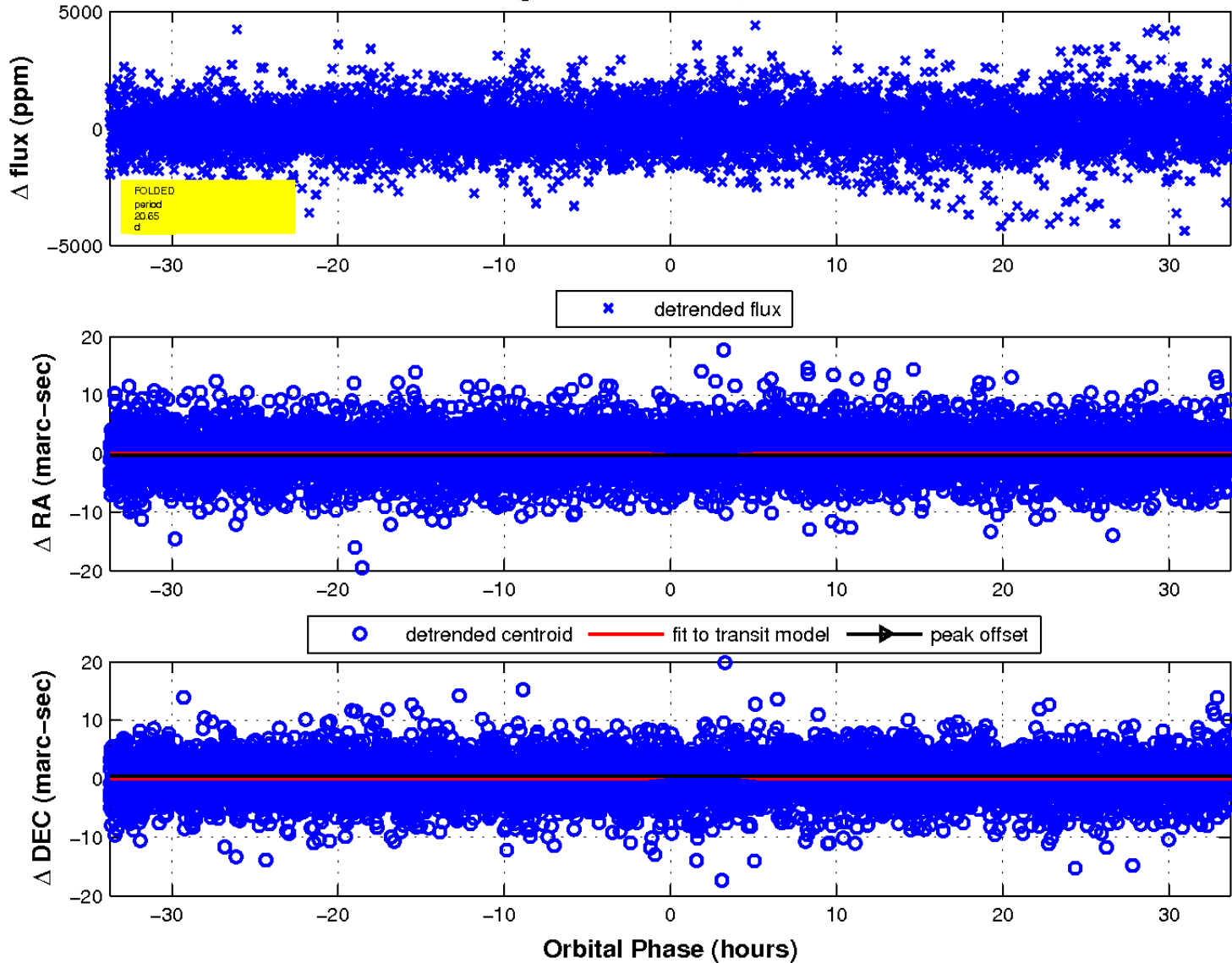
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 6 of 6



UKIRT Image

Declination

