

KIC 007047141

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})
007047141-01	OBS	No	596.094936	236.457900	1445.8	9.720	12.0	8.4	3.04	8450	11.98	13.90
007047141-02	OBS	No	466.550020	466.390240	1111.8	6.067	9.4	6.2	3.04	8450	11.93	19.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007047141-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
007047141-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

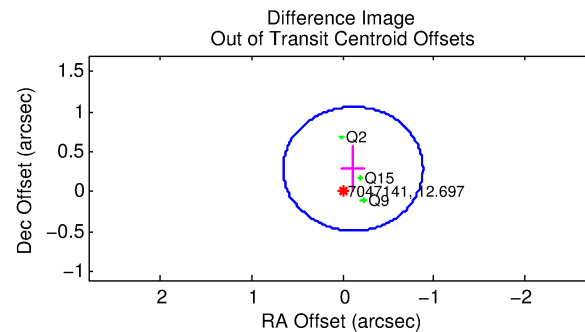
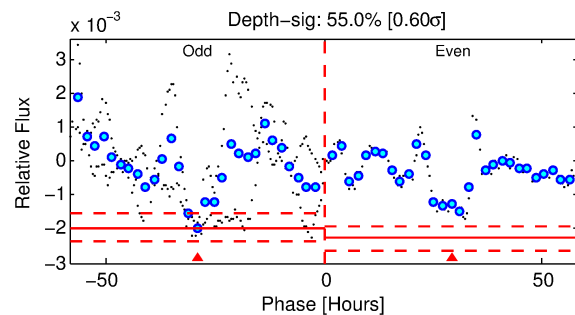
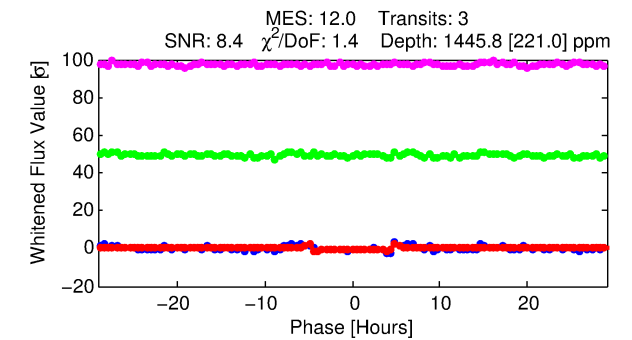
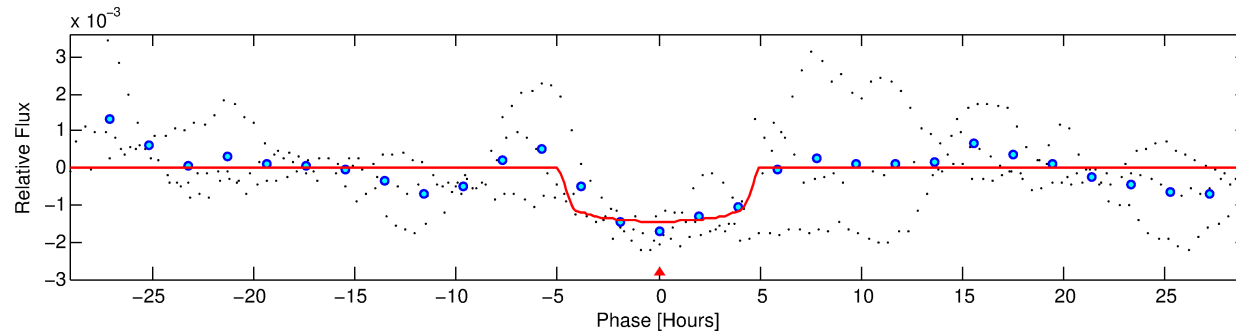
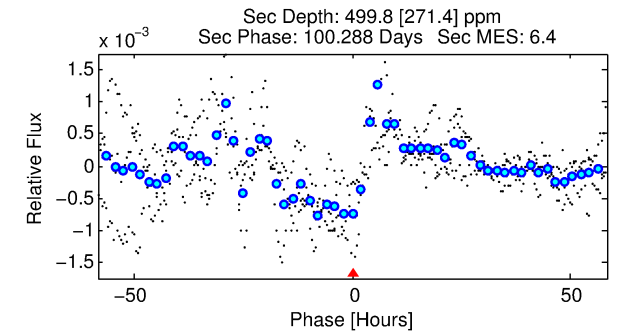
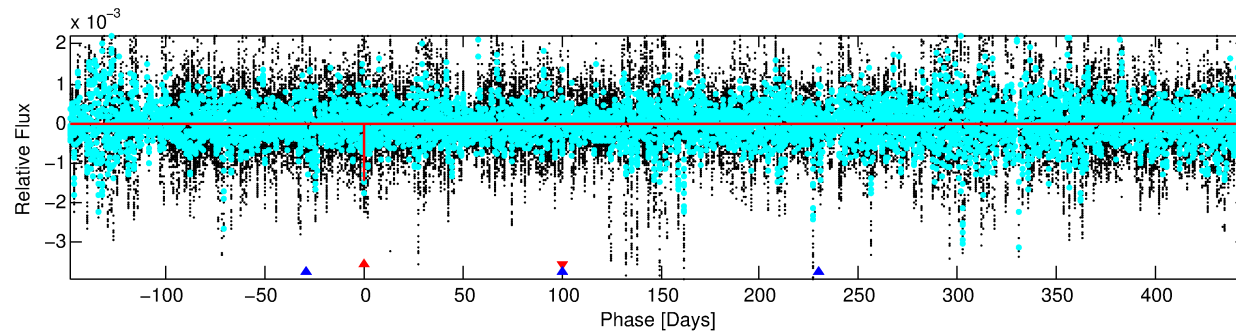
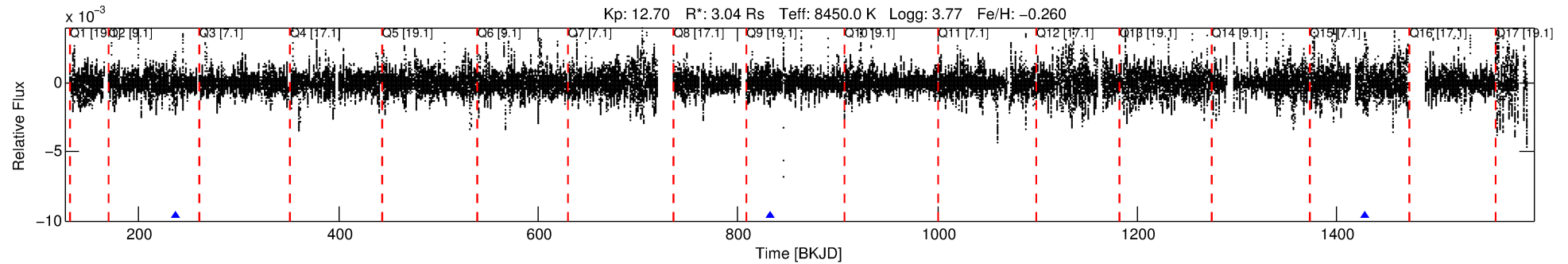
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007047141-01

No Significant Match Found

DV One-Page Summary

KIC: 7047141 Candidate: 1 of 2 Period: 596.095 d



DV Fit Results:

Period = 596.09494 [0.00298] d
Epoch = 236.4579 [0.0038] BKJD
Rp/R* = 0.0361 [0.0048]
a/R* = 427.73 [209.97]
b = 0.49 [0.76]
Seff = 13.90 [10.06]
Teq = 492 [89] K
Rp = 11.98 [5.84] Re
a = 1.7424 [0.7706] AU
Ag = 5812.10 [5375.60] [1.08 σ]
Teffp = 6647 [1050] K [5.84 σ]

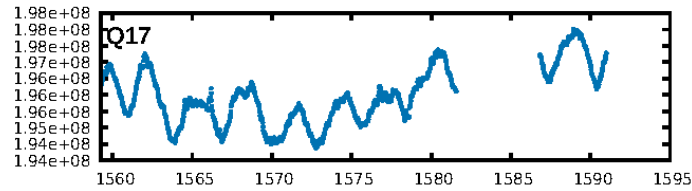
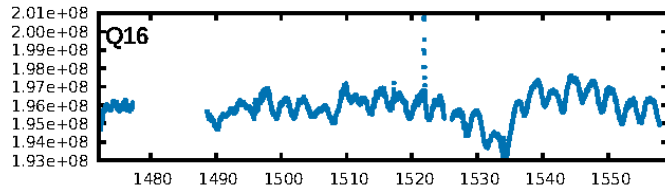
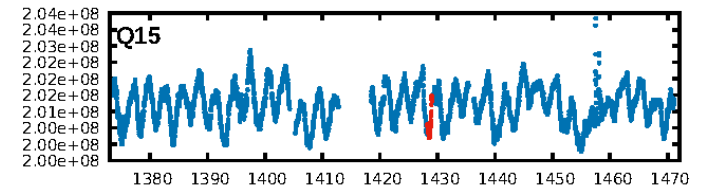
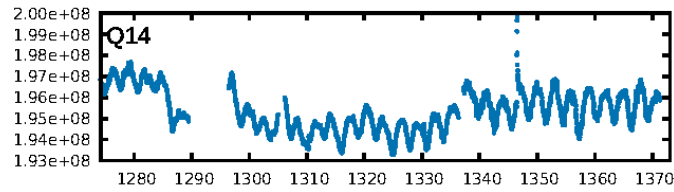
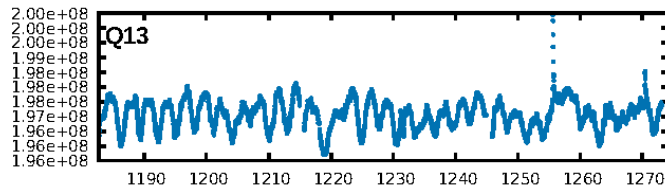
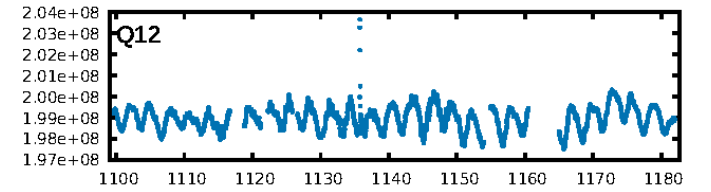
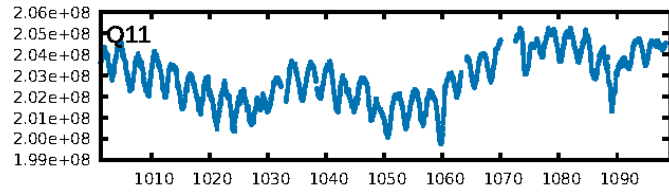
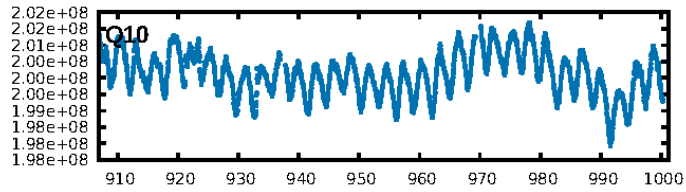
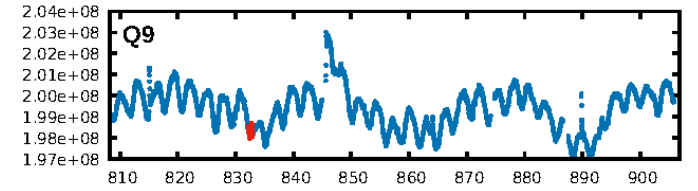
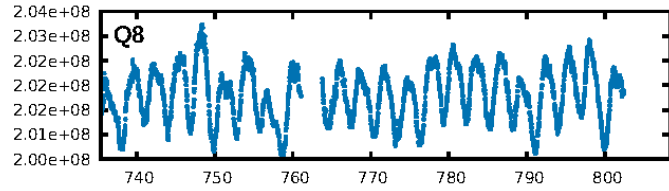
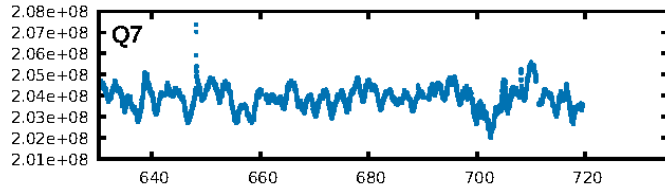
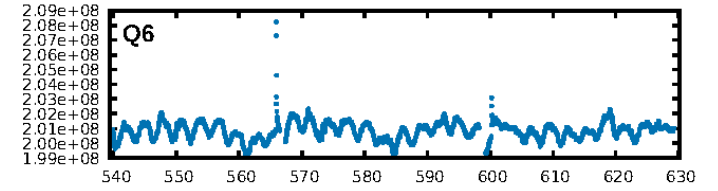
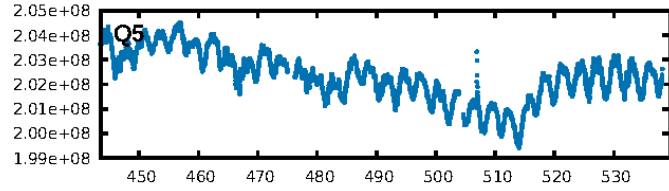
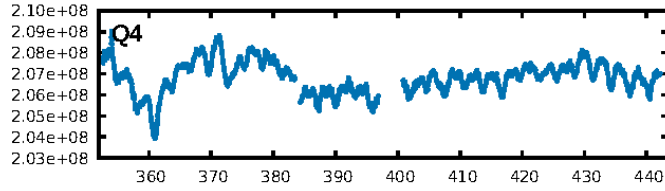
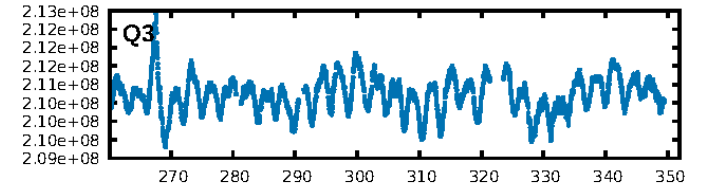
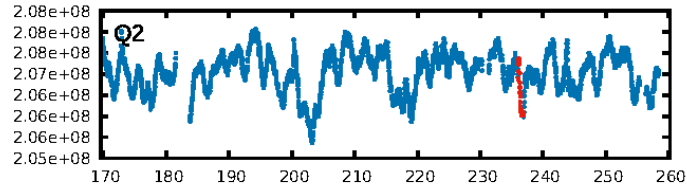
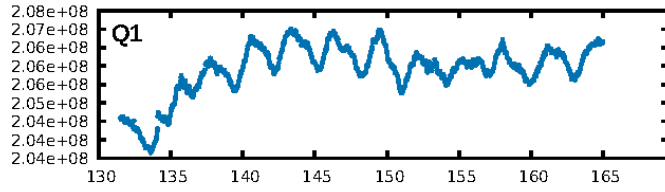
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [271.33 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 85.1%
ModelChiSquareGof-sig: 84.1%
Bootstrap-pfa: 2.32e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.623
Centroid-sig: 0.0%
Centroid-so: 0.358 arcsec [2.25 σ]
OotOffset-rm: 0.307 arcsec [1.20 σ]
KicOffset-rm: 0.184 arcsec [0.86 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

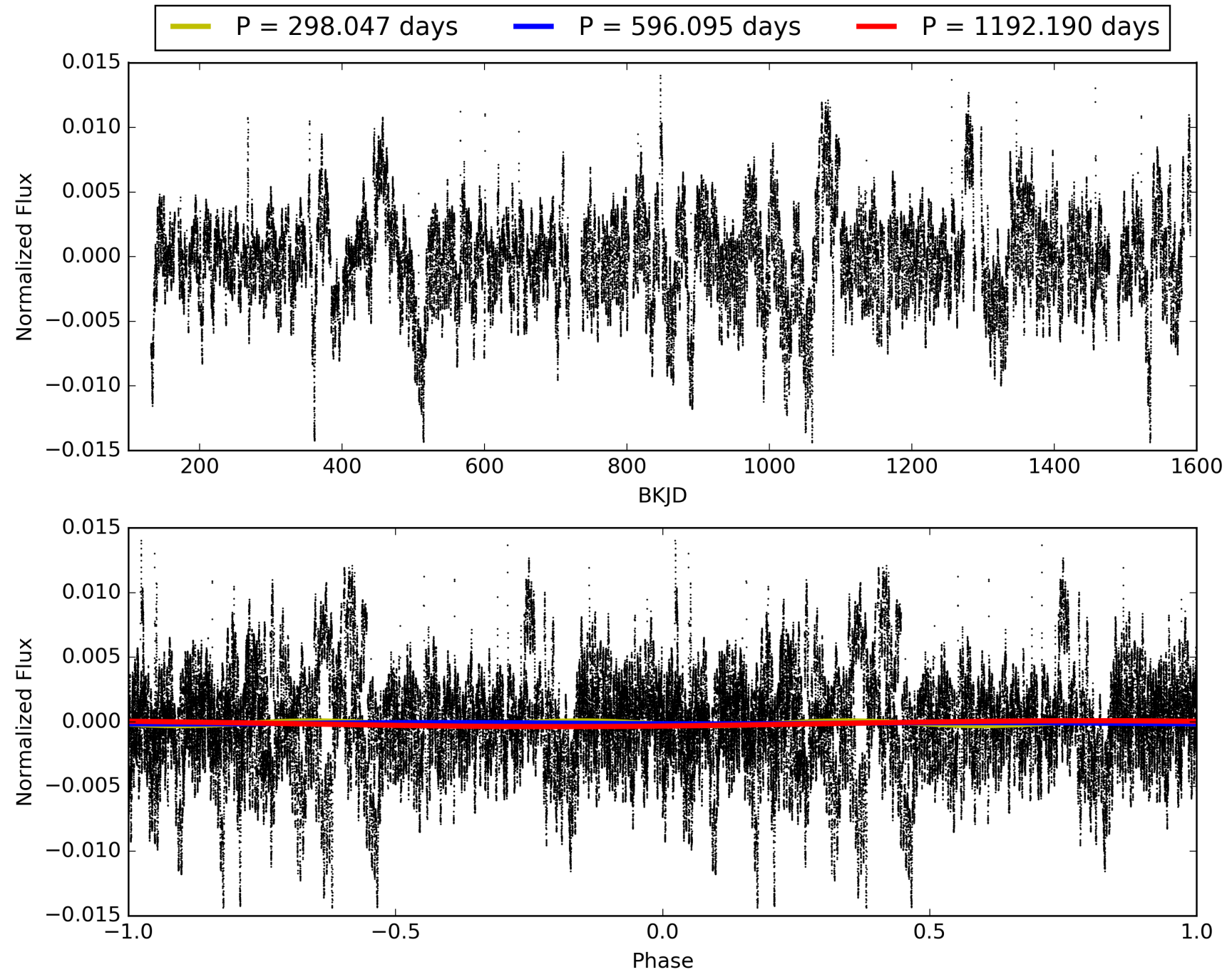
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007047141-01, PDC Light Curves

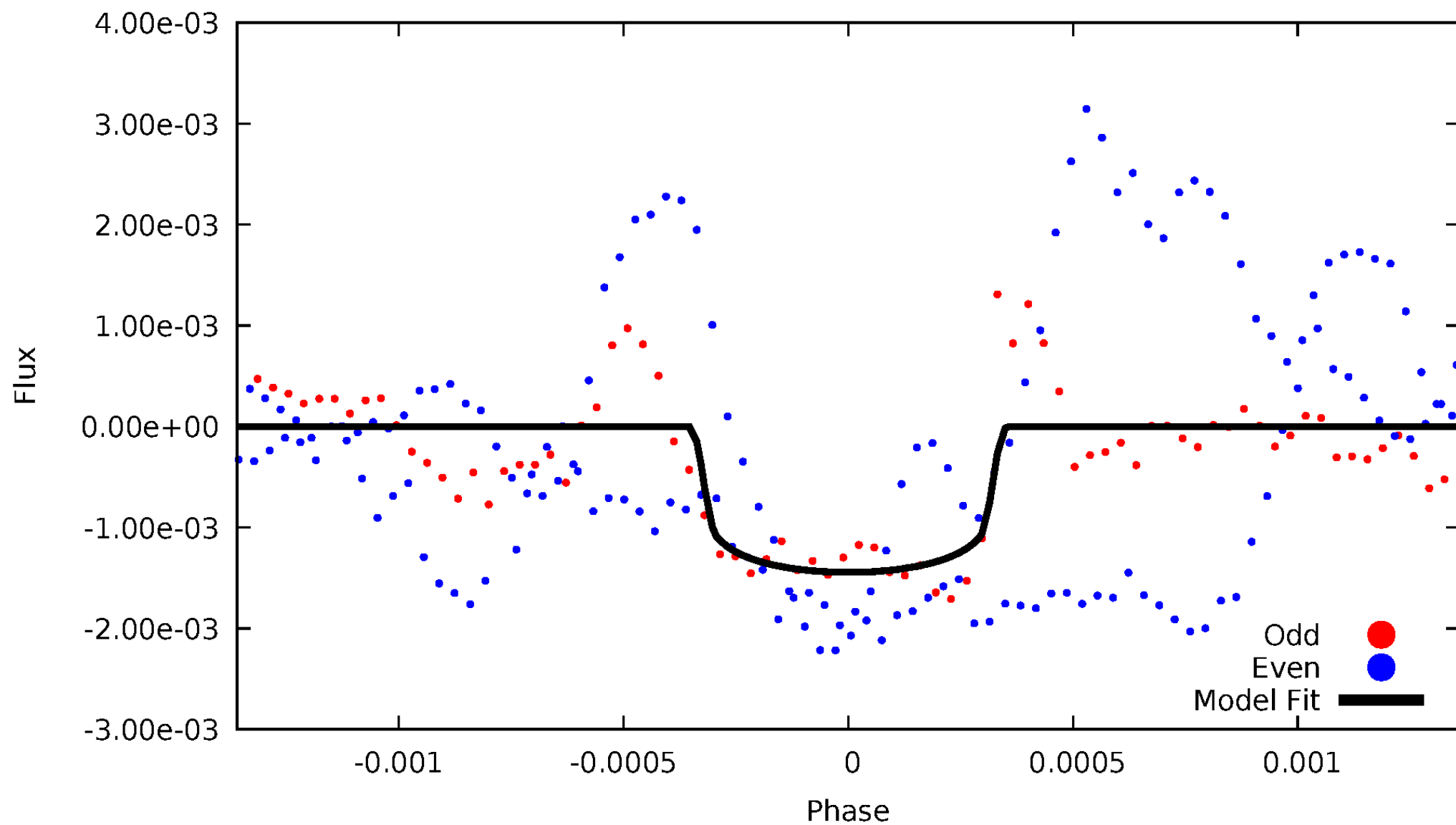


TCE 007047141-01



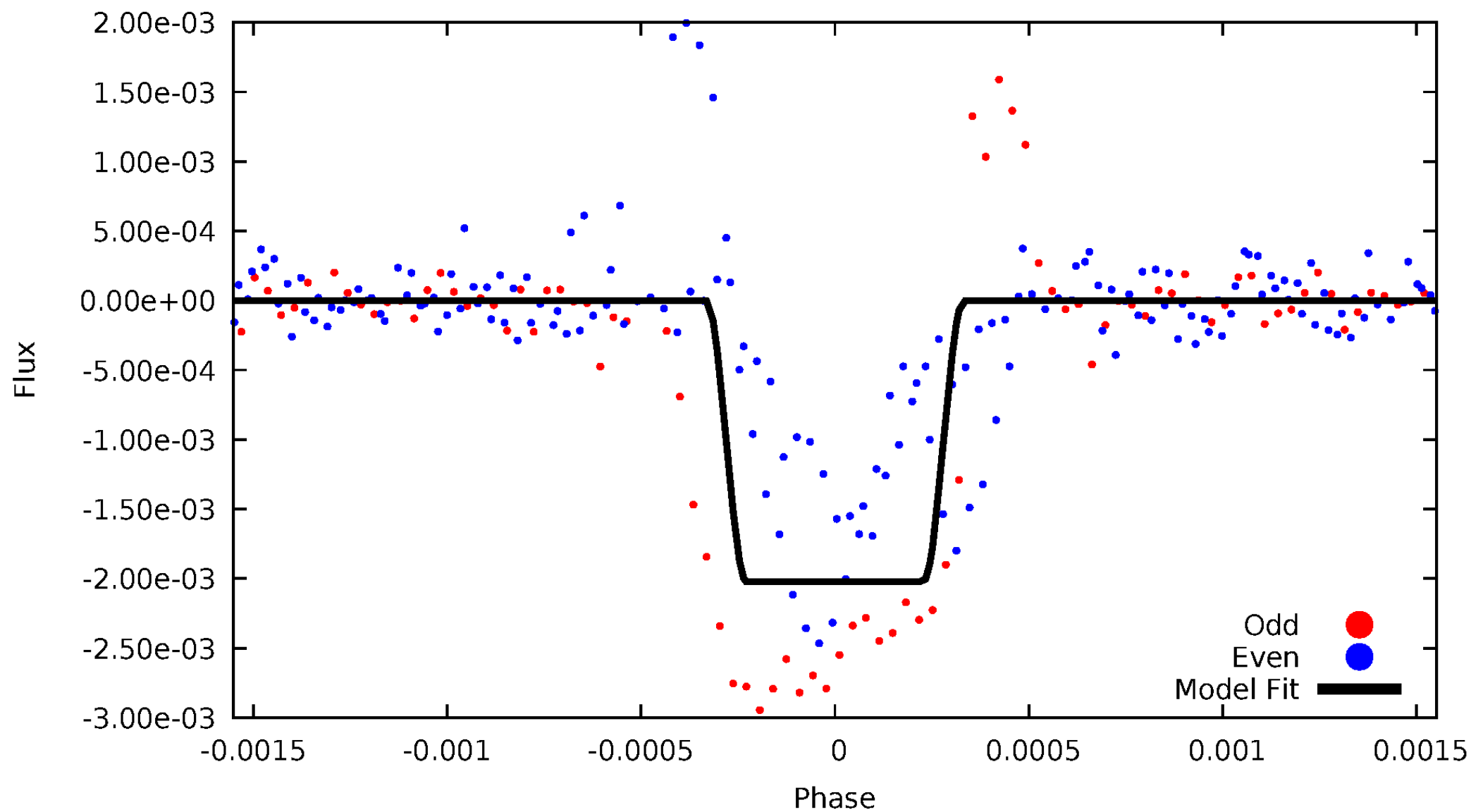
DV Odd/Even

TCE 007047141-01



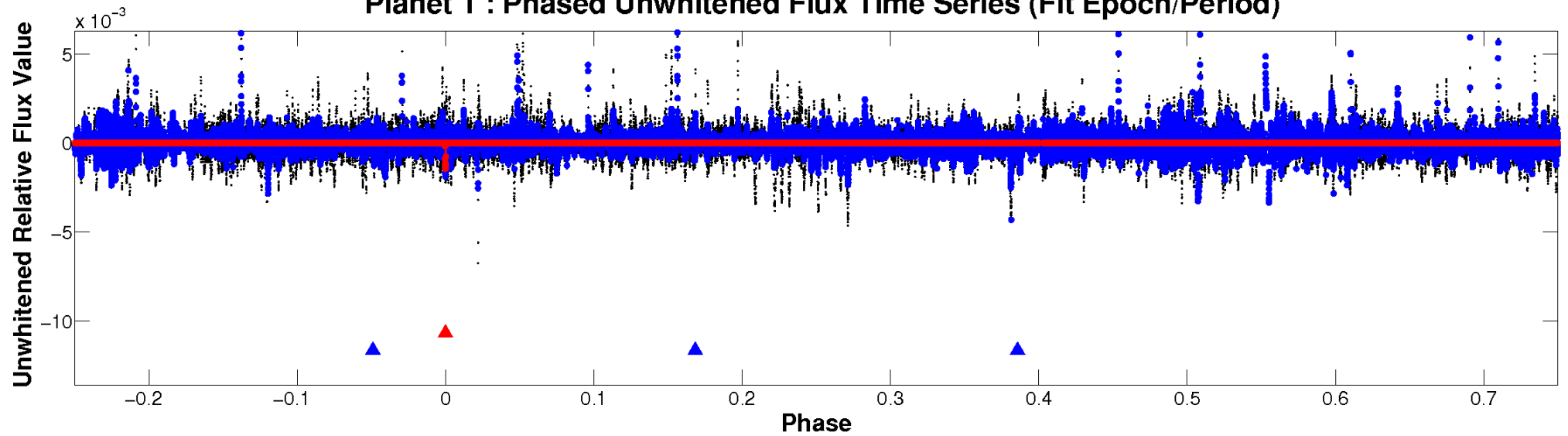
ALT Odd/Even

TCE 007047141-01

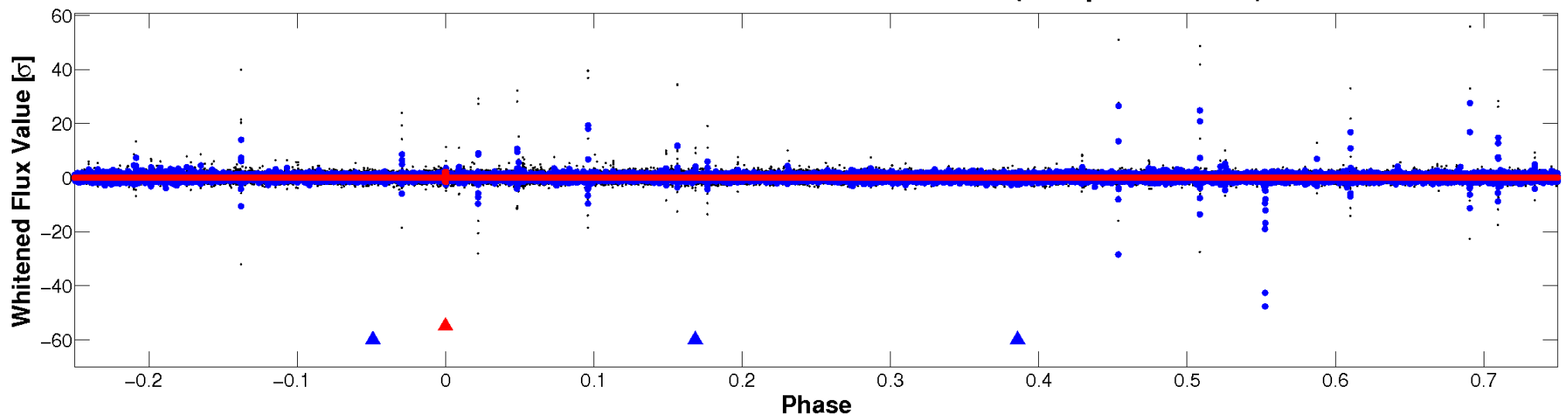


Non-Whitened Vs. Whitened Light Curve

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

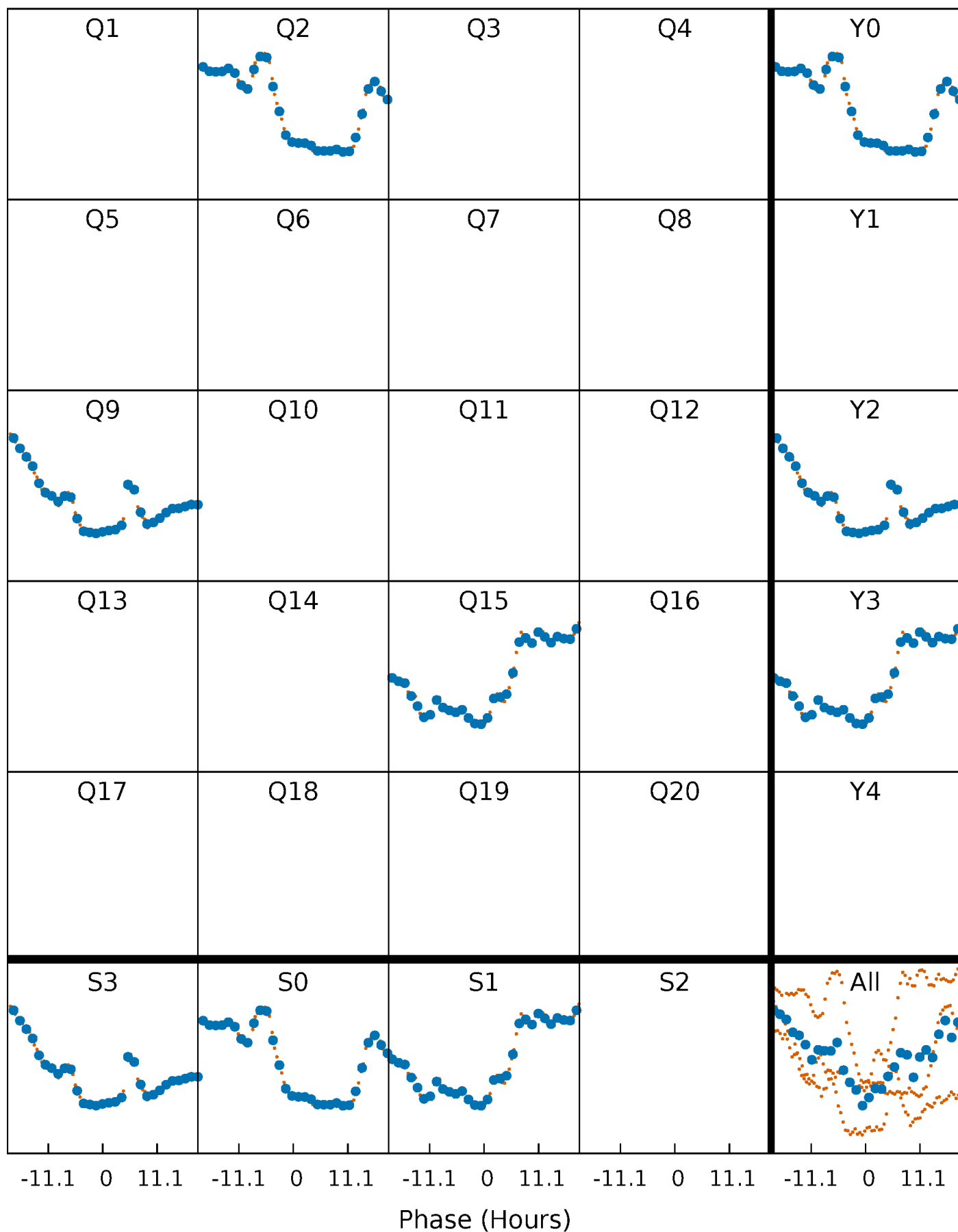


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 007047141-01 P=596.094936 Days $T_0=236.457900$ (BKJD)



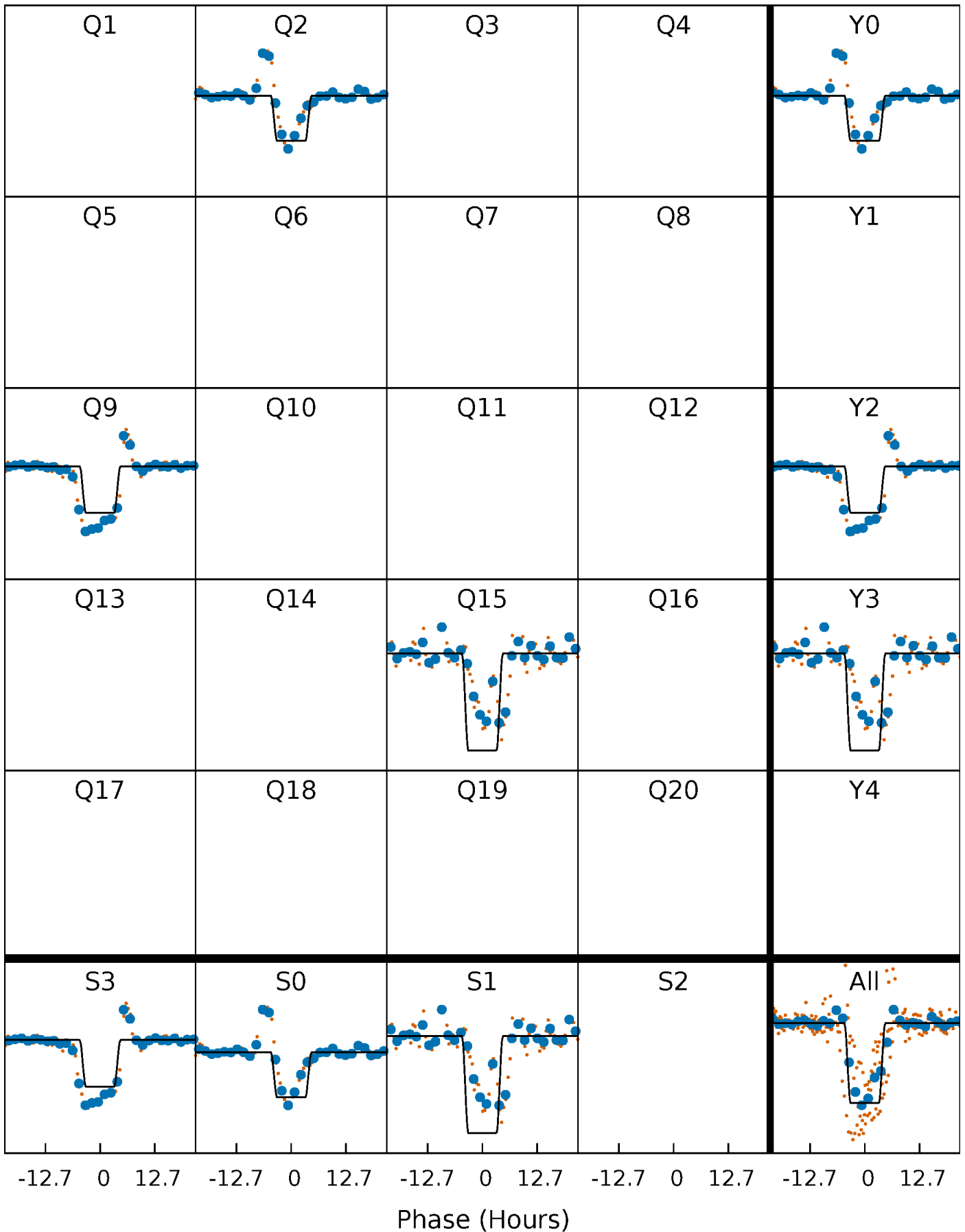
DV Quarter-Phased Transit Curves

TCE 007047141-01 P=596.094936 Days $T_0=236.457900$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

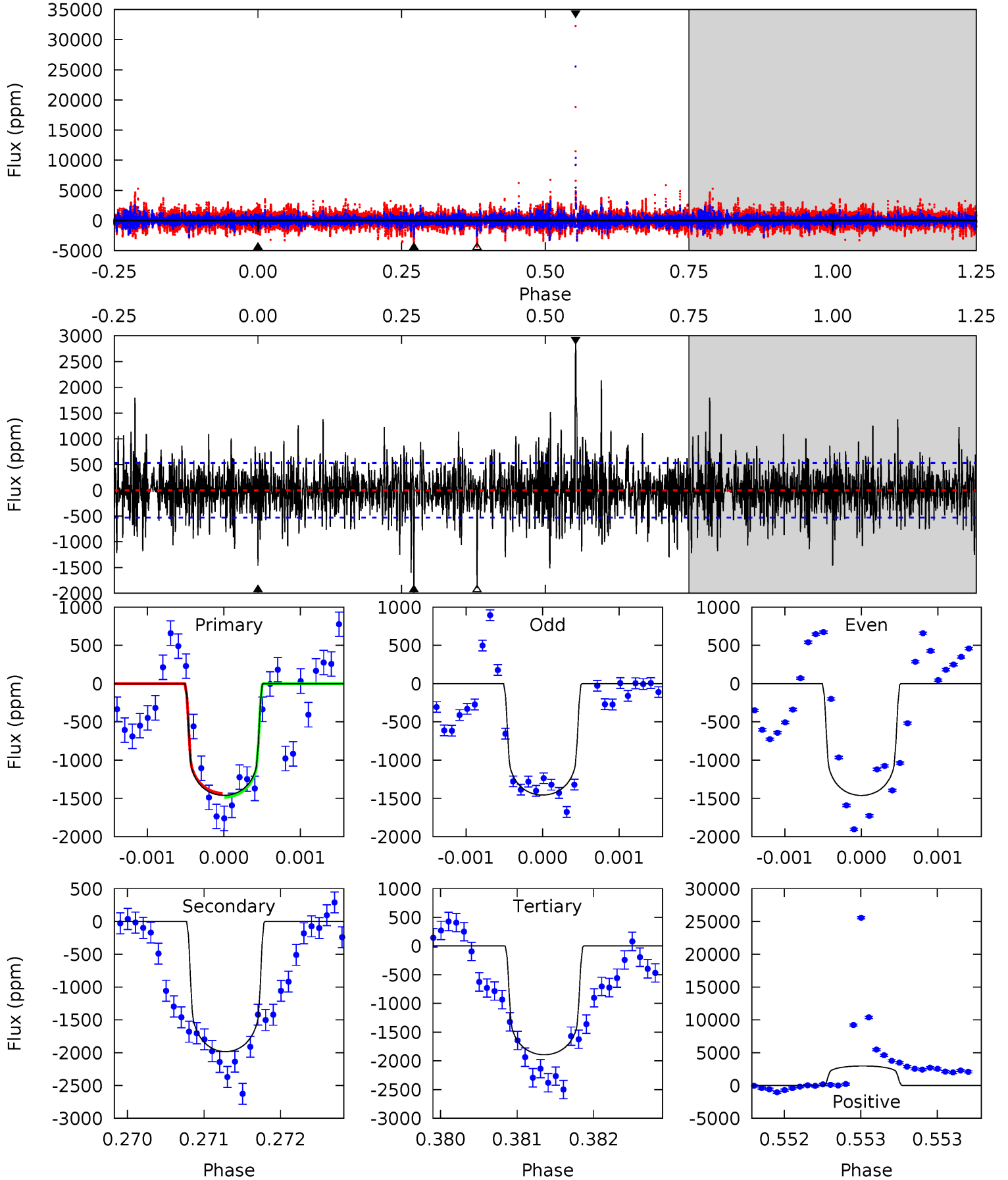
TCE 007047141-01 P=596.094624 Days $T_0=236.444582$ (BKJD)



DV Model-Shift Uniqueness Test

007047141-01, P = 596.094936 Days, E = 236.457900 Days

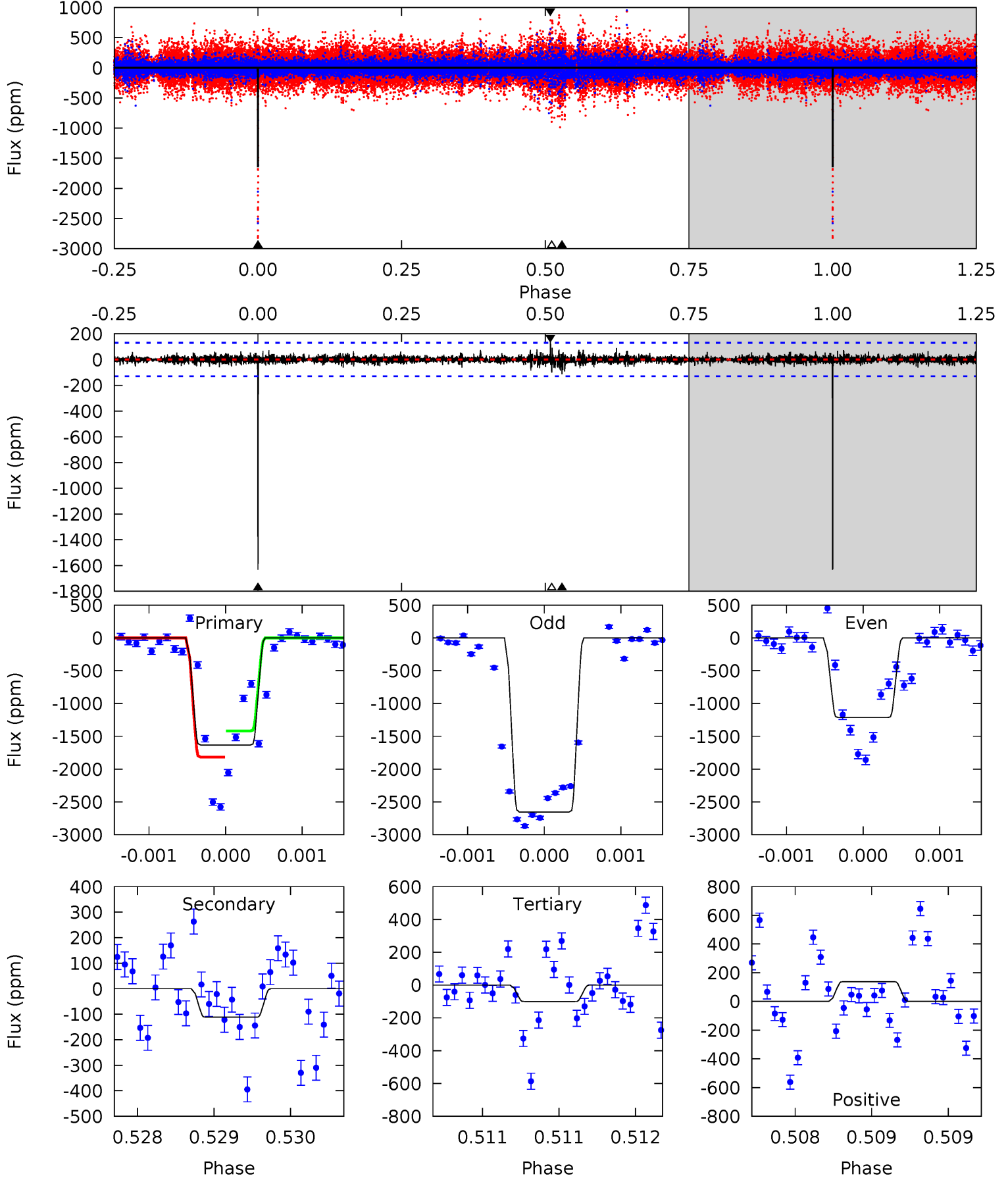
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	20.6	19.7	30.9	5.52	3.39	3.96	-4.51	-15.8	0.94	-10.3	0.02	1.00	0.60	0.27



Alt Model-Shift Uniqueness Test

007047141-01, P = 596.094624 Days, E = 236.444582 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
69.3	4.74	4.28	5.84	5.53	3.41	0.65	65.0	63.5	0.47	-1.10	32.4	1.17	0.08	8.26



Stellar Parameters For KIC 007047141

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8450^{+207}_{-385}	$3.770^{+0.408}_{-0.102}$	$-0.260^{+0.250}_{-0.350}$	$3.040^{+0.712}_{-1.424}$	$1.986^{+0.382}_{-0.466}$	$0.100^{+0.360}_{-0.037}$
	+2%/-5%	+11%/-3%	+96%/-135%	+23%/-47%	+19%/-23%	+361%/-37%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007047141-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1984 ± 96	$11.06^{+2.79}_{-2.71}$	662^{+51}_{-75}	9738^{+1072}_{-951}	27484^{+18779}_{-9606}
Alt.	-112 ± 24	$14.08^{+2.95}_{-3.52}$	664^{+51}_{-78}	4176^{+248}_{-241}	944^{+698}_{-322}

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

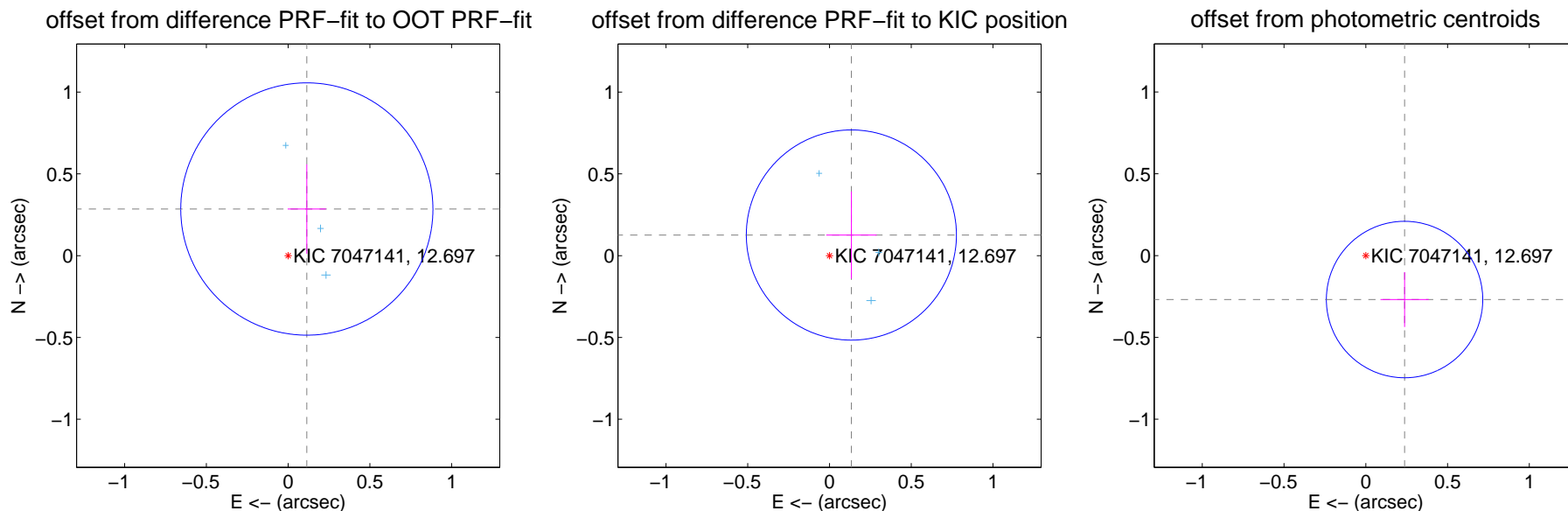
DV Centroid Data

Supplemental centroid analysis for 007047141-01. Kepler magnitude: 12.70. Transit SNR 8.43

There are 3 quarters with good PRF difference image offsets

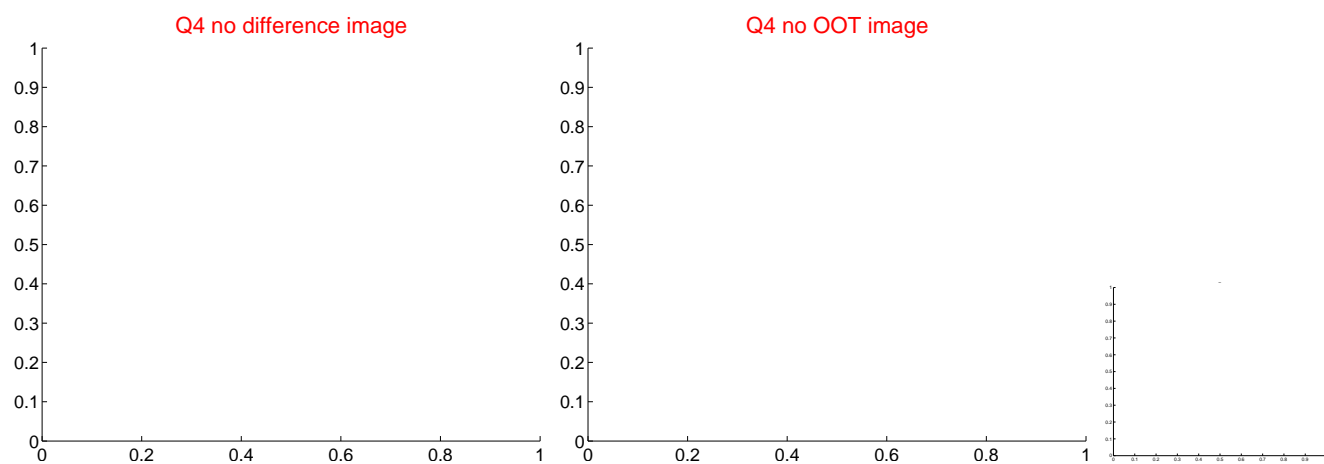
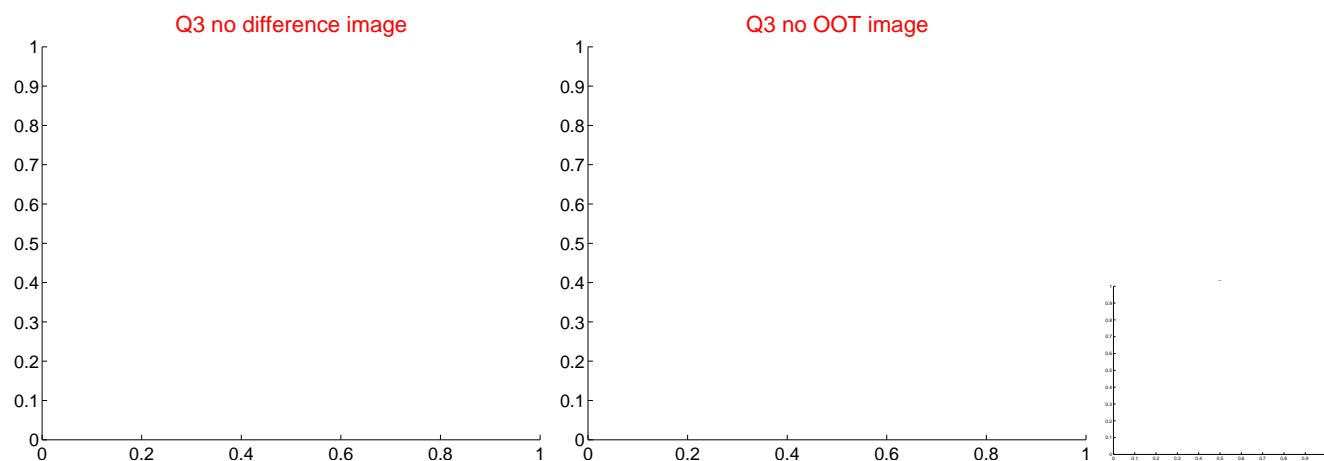
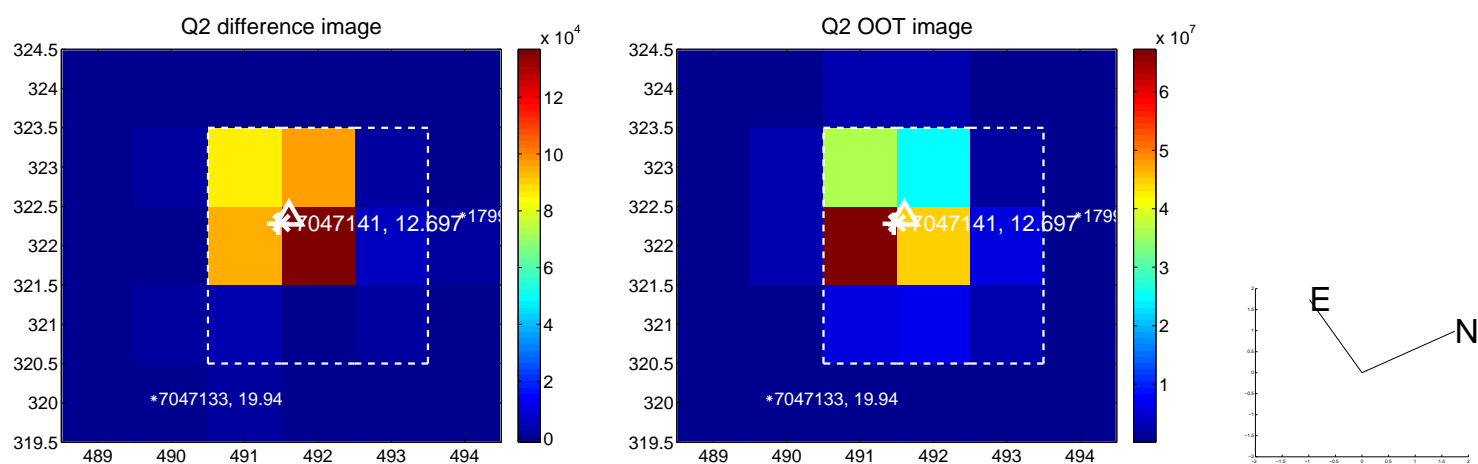
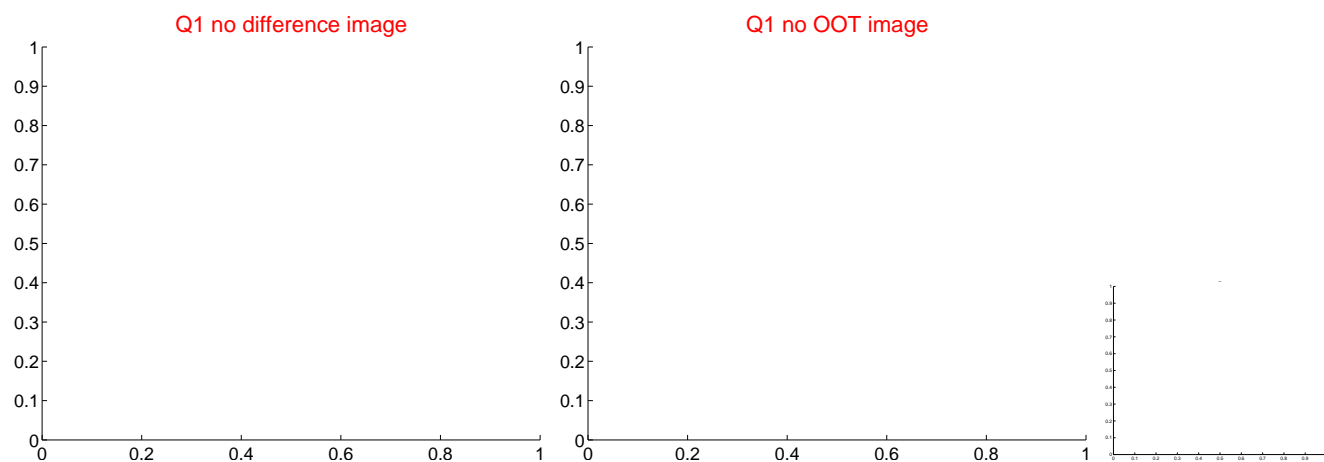
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.307 ± 0.257	1.20	-0.114 ± 0.118	0.285 ± 0.273
PRF-fit source offset from KIC position	0.184 ± 0.214	0.86	-0.134 ± 0.154	0.126 ± 0.266
photometric centroid source offset	0.36 ± 0.16	2.25	-0.24 ± 0.15	-0.27 ± 0.17



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.

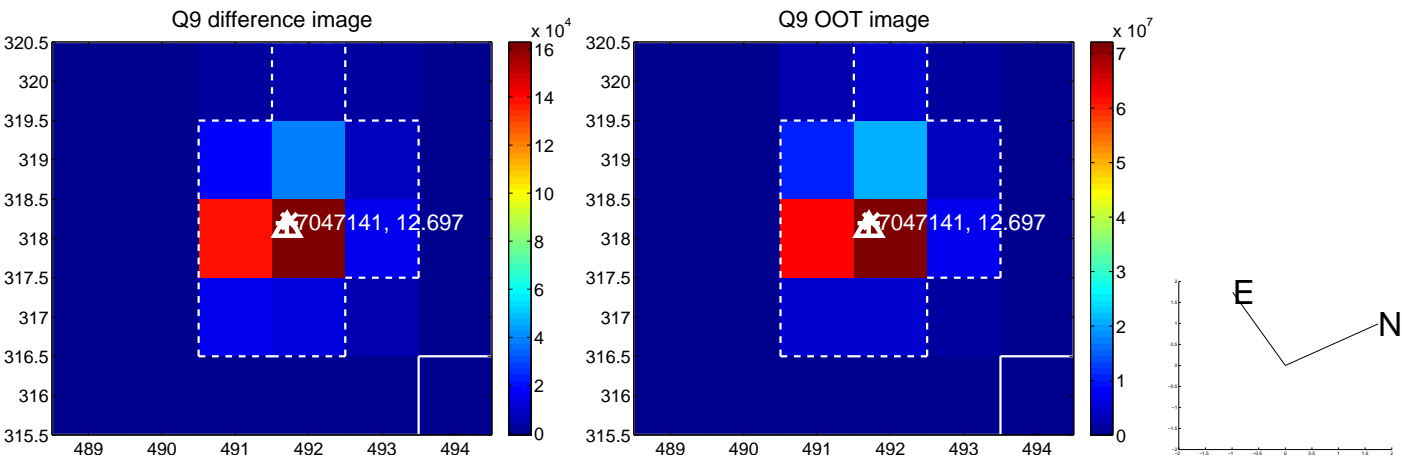
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



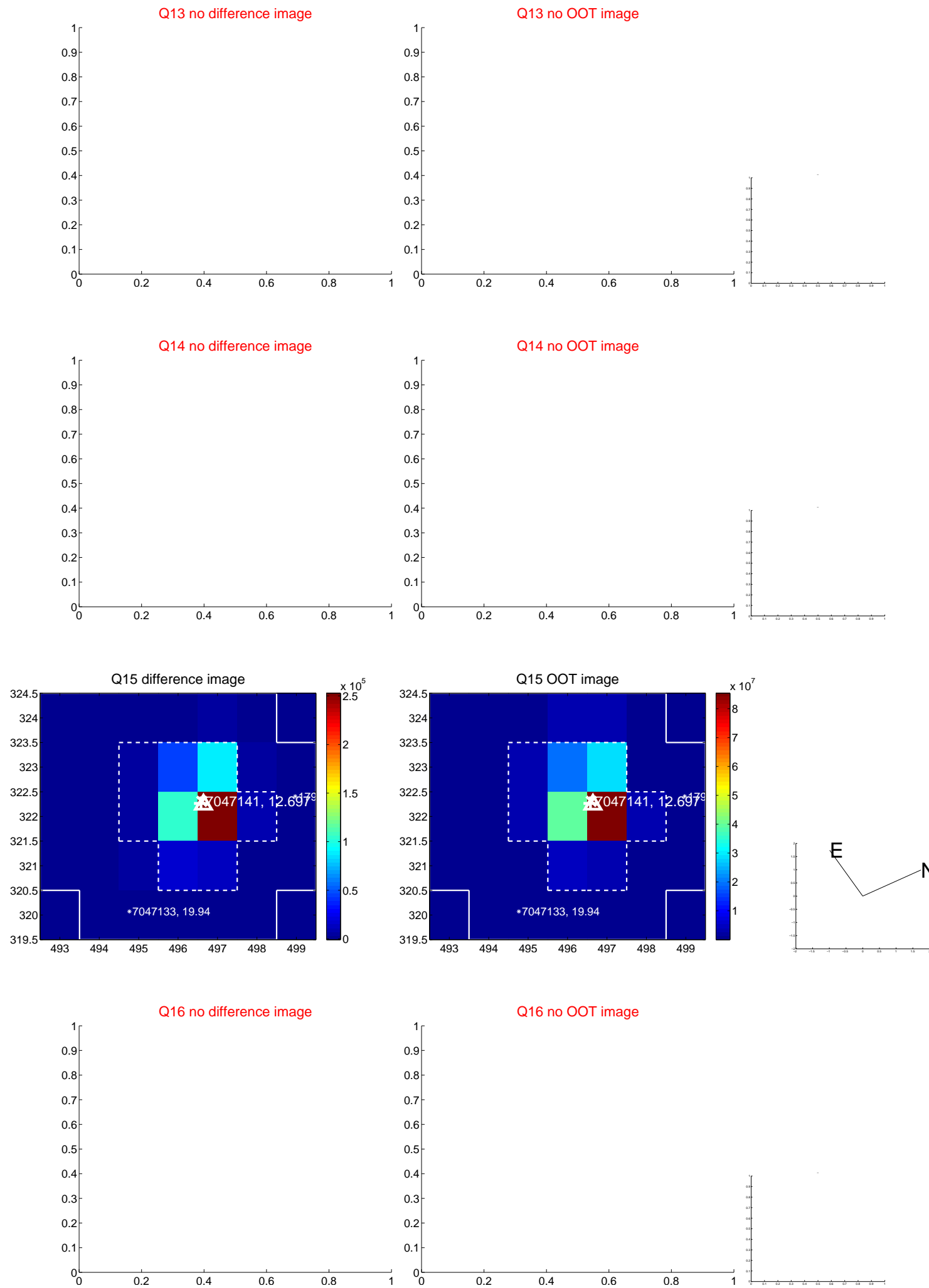
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



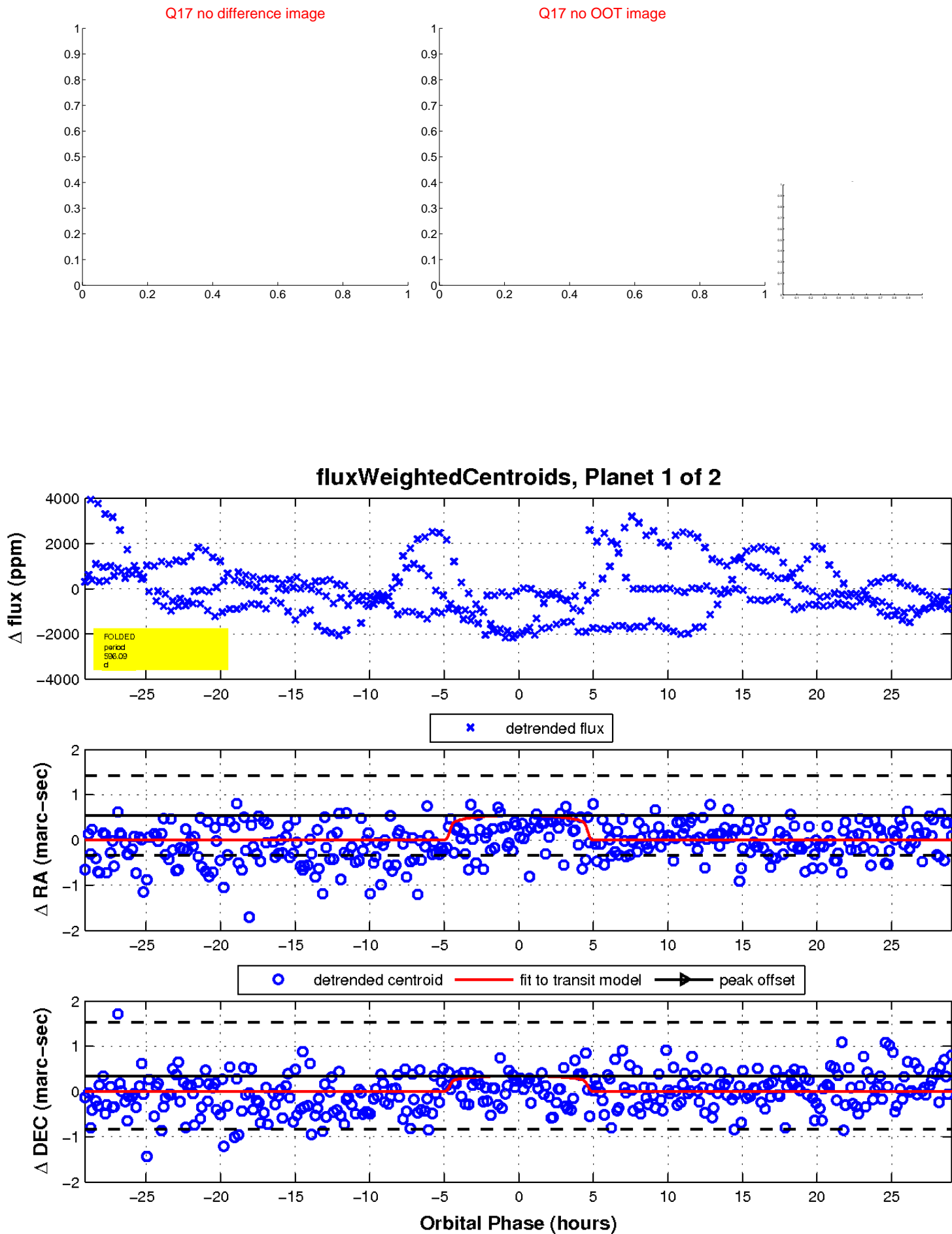
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



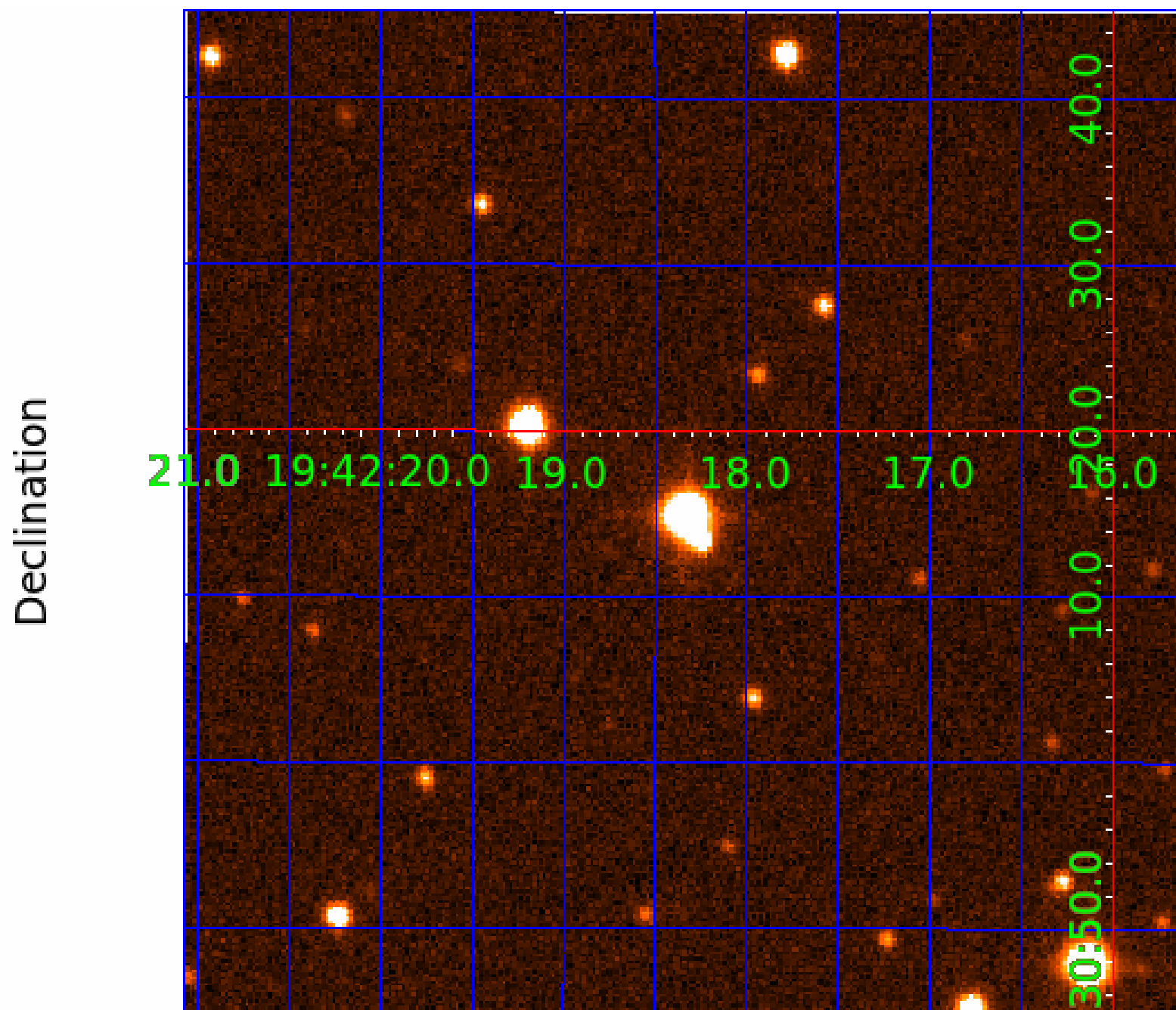
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 007047141

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})
007047141-01	OBS	No	596.094936	236.457900	1445.8	9.720	12.0	8.4	3.04	8450	11.98	13.90
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Robovetter Results

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007047141-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

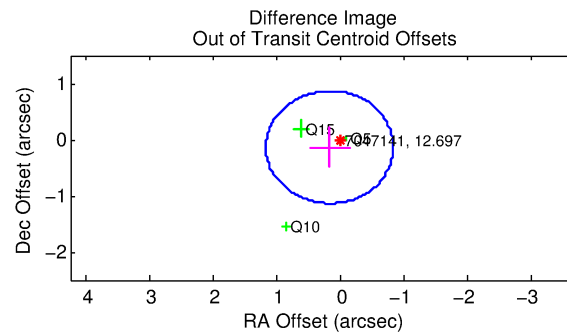
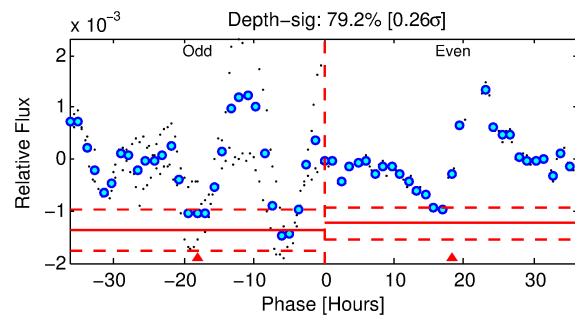
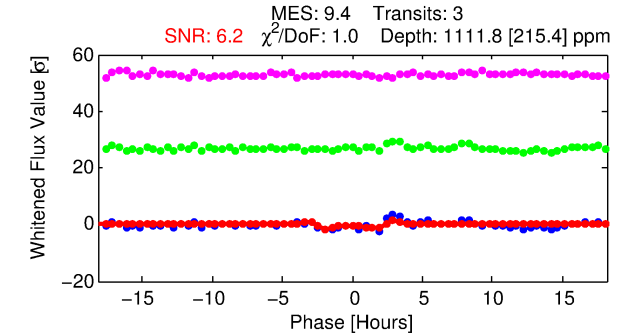
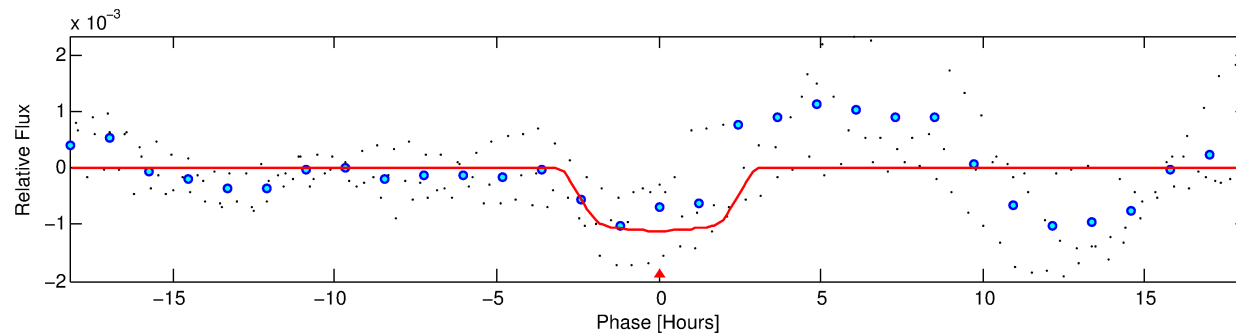
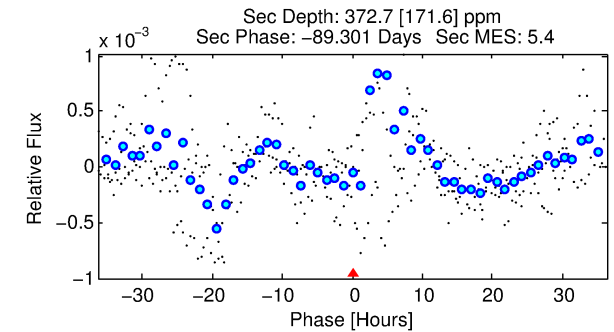
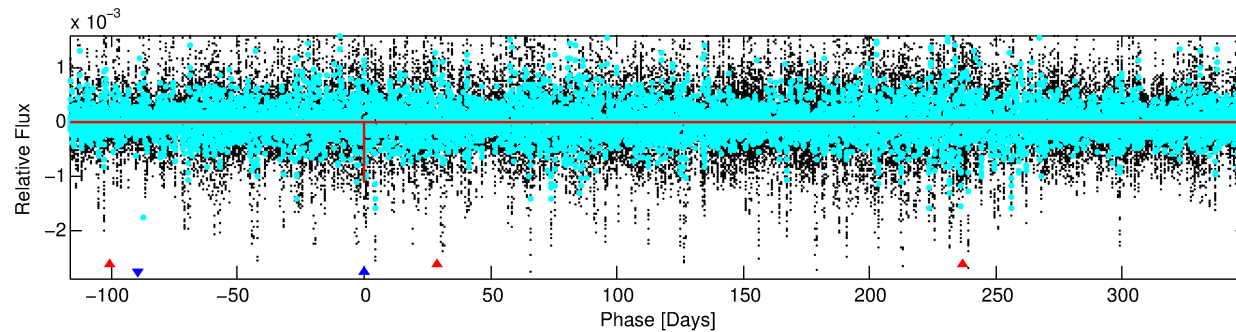
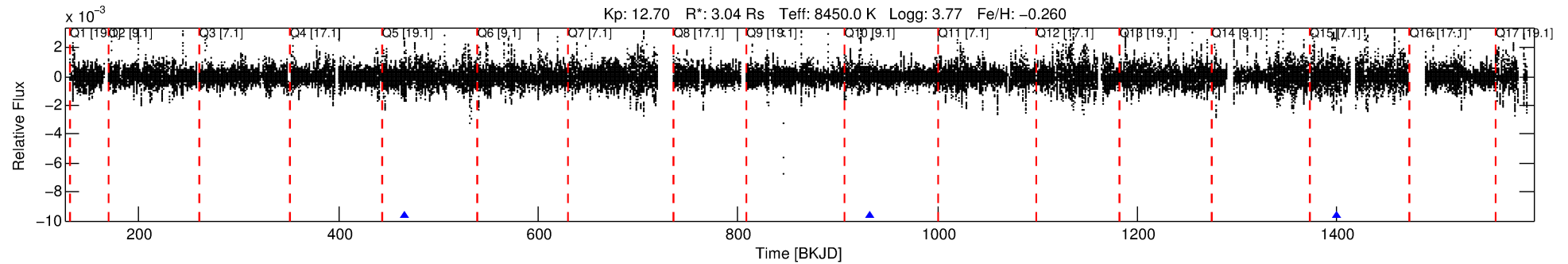
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007047141-02

No Significant Match Found

DV One-Page Summary

KIC: 7047141 Candidate: 2 of 2 Period: 466.550 d



DV Fit Results:

Period = 466.55002 [0.00473] d
Epoch = 466.3902 [0.0064] BKJD
Rp/R* = 0.0360 [0.0037]
a/R* = 283.70 [39.96]
b = 0.92 [0.03]
Seff = 19.28 [13.94]
Teq = 534 [97] K
Rp = 11.93 [5.72] Re
a = 1.4798 [0.6545] AU
Ag = 3156.65 [2724.26] [1.16 σ]
Teffp = 6192 [831] K [6.76 σ]

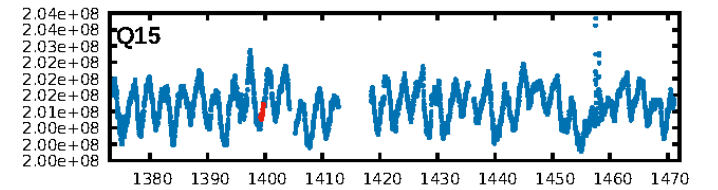
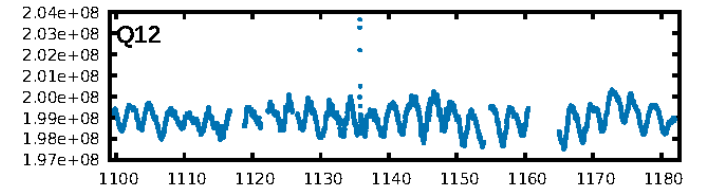
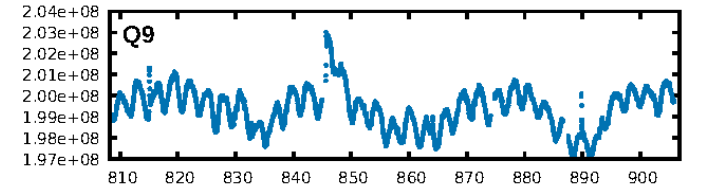
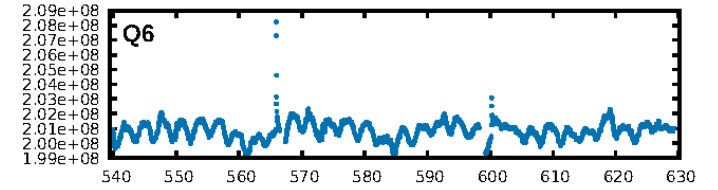
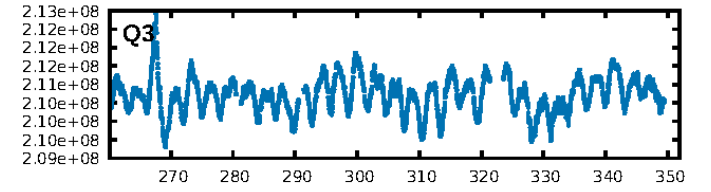
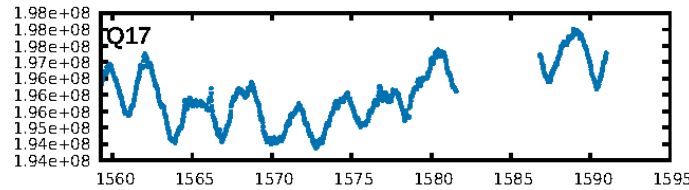
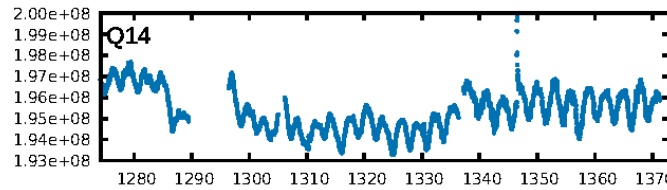
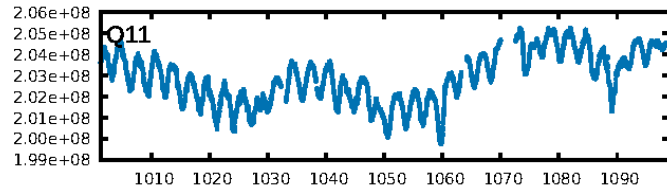
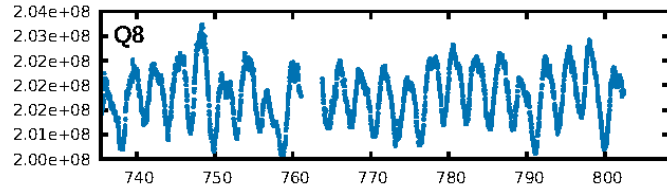
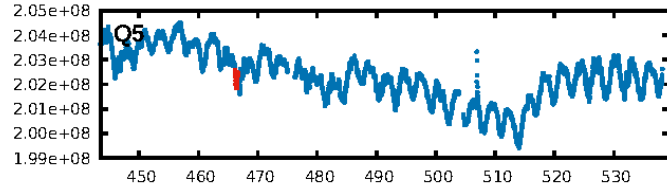
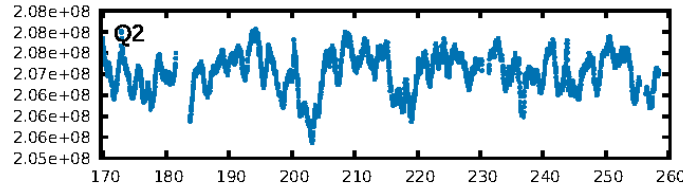
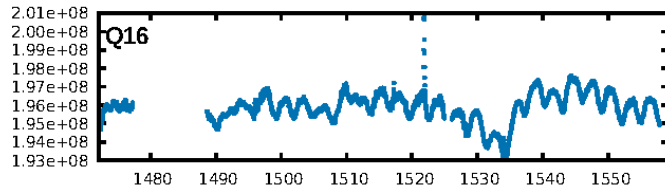
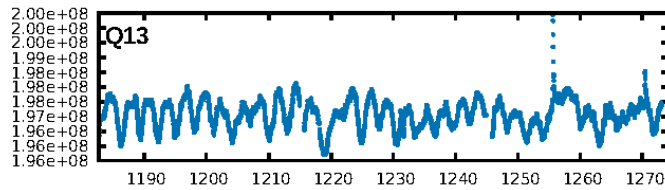
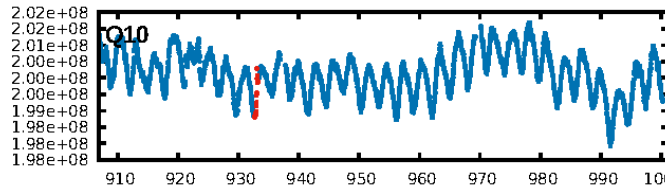
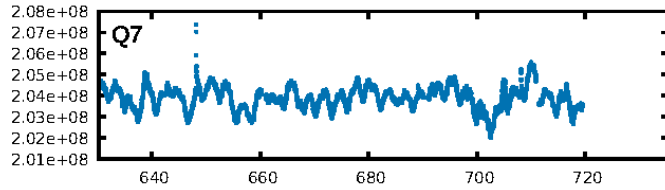
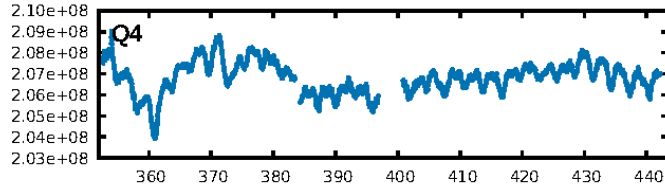
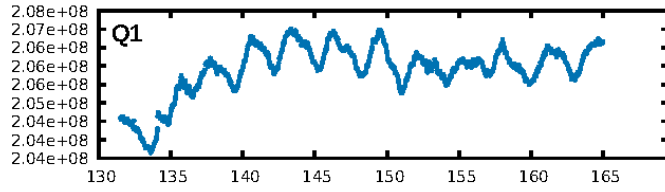
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [271.33 σ]
ModelChiSquare2-sig: 2.8%
ModelChiSquareGof-sig: 97.5%
Bootstrap-pfa: 4.05e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.9698
Centroid-sig: 25.8%
Centroid-so: 0.116 arcsec [0.52 σ]
OotOffset-rm: 0.219 arcsec [0.65 σ]
KicOffset-rm: 0.329 arcsec [0.52 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

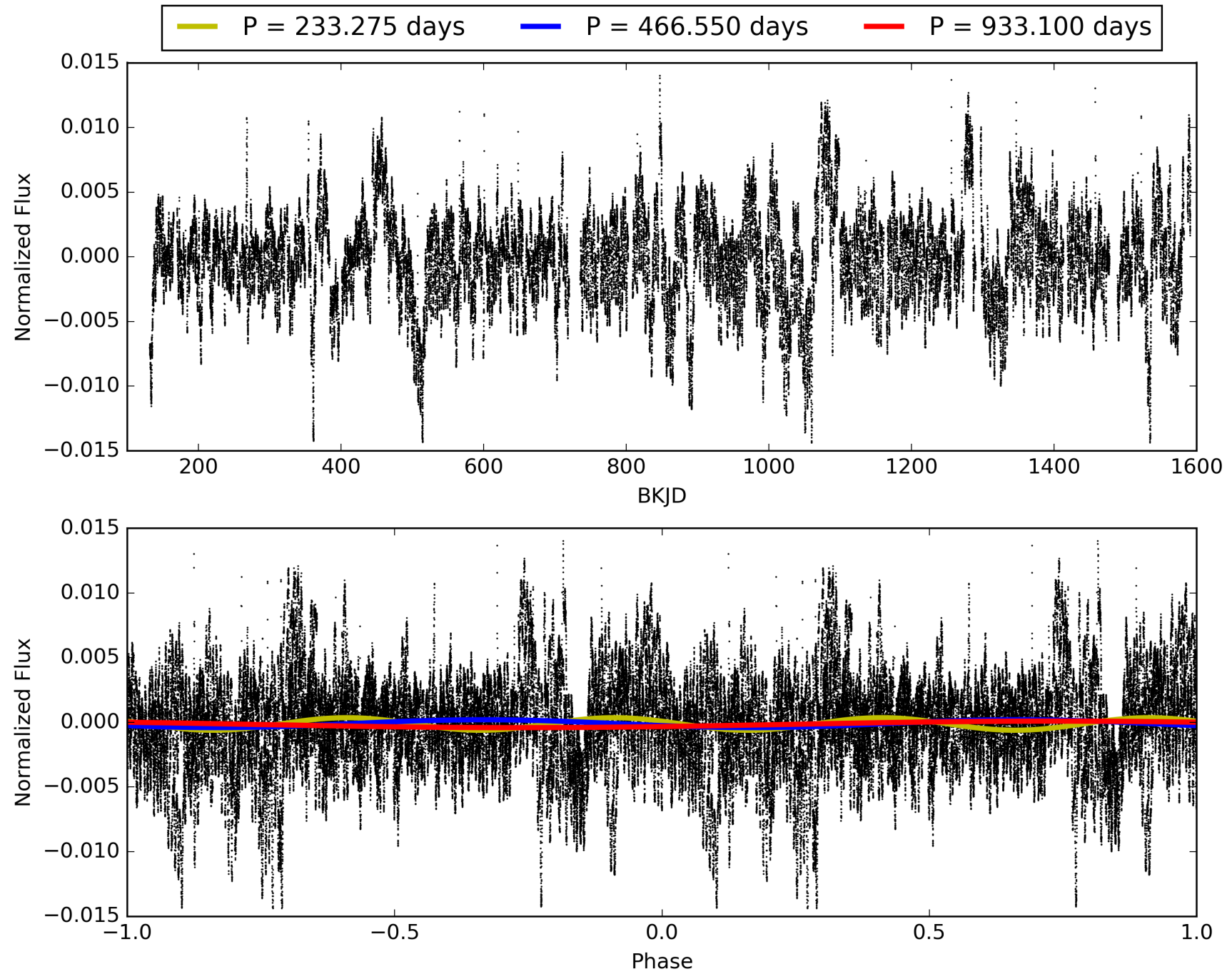
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:37:17 Z

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

TCE 007047141-02, PDC Light Curves

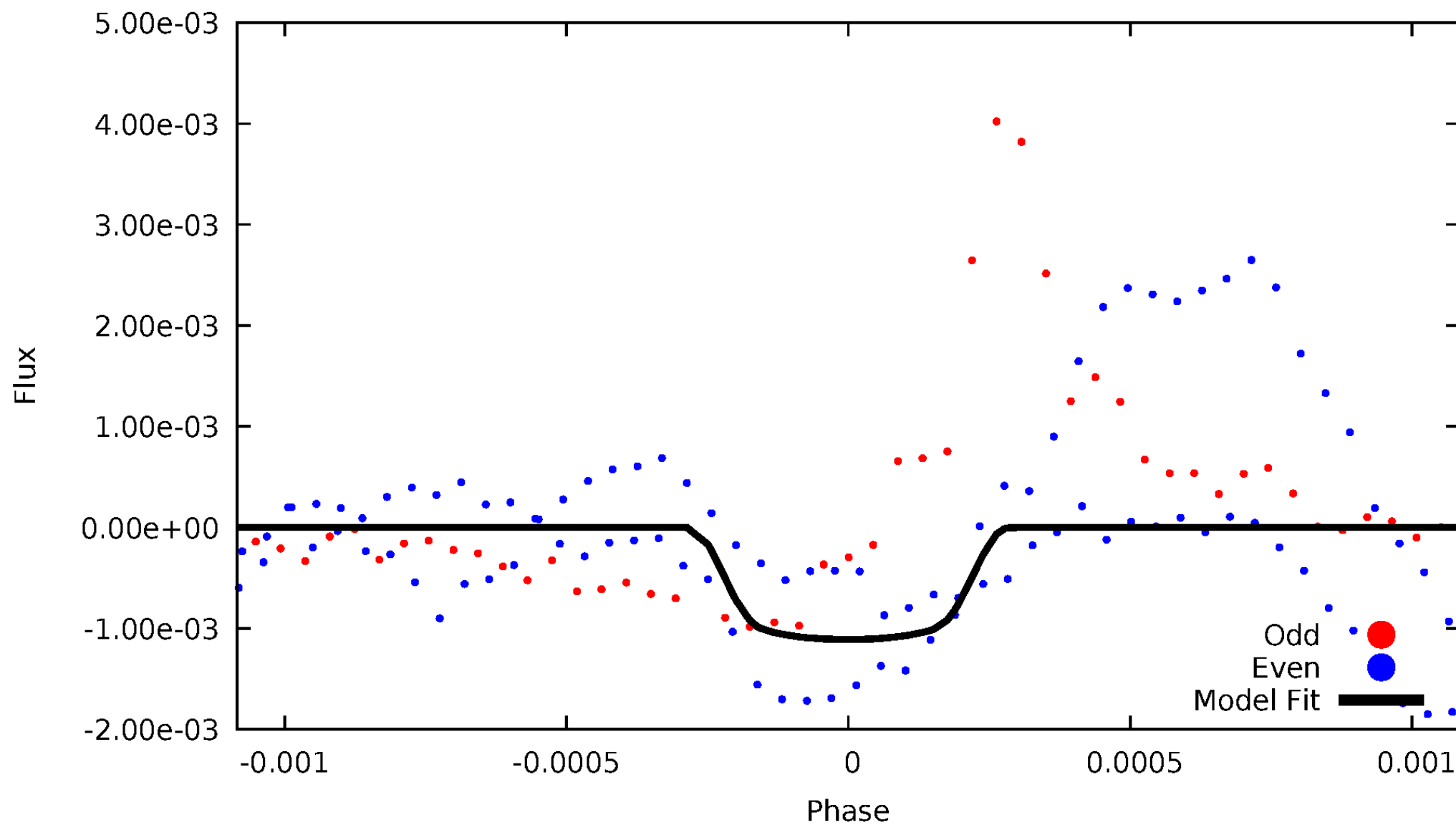


TCE 007047141-02



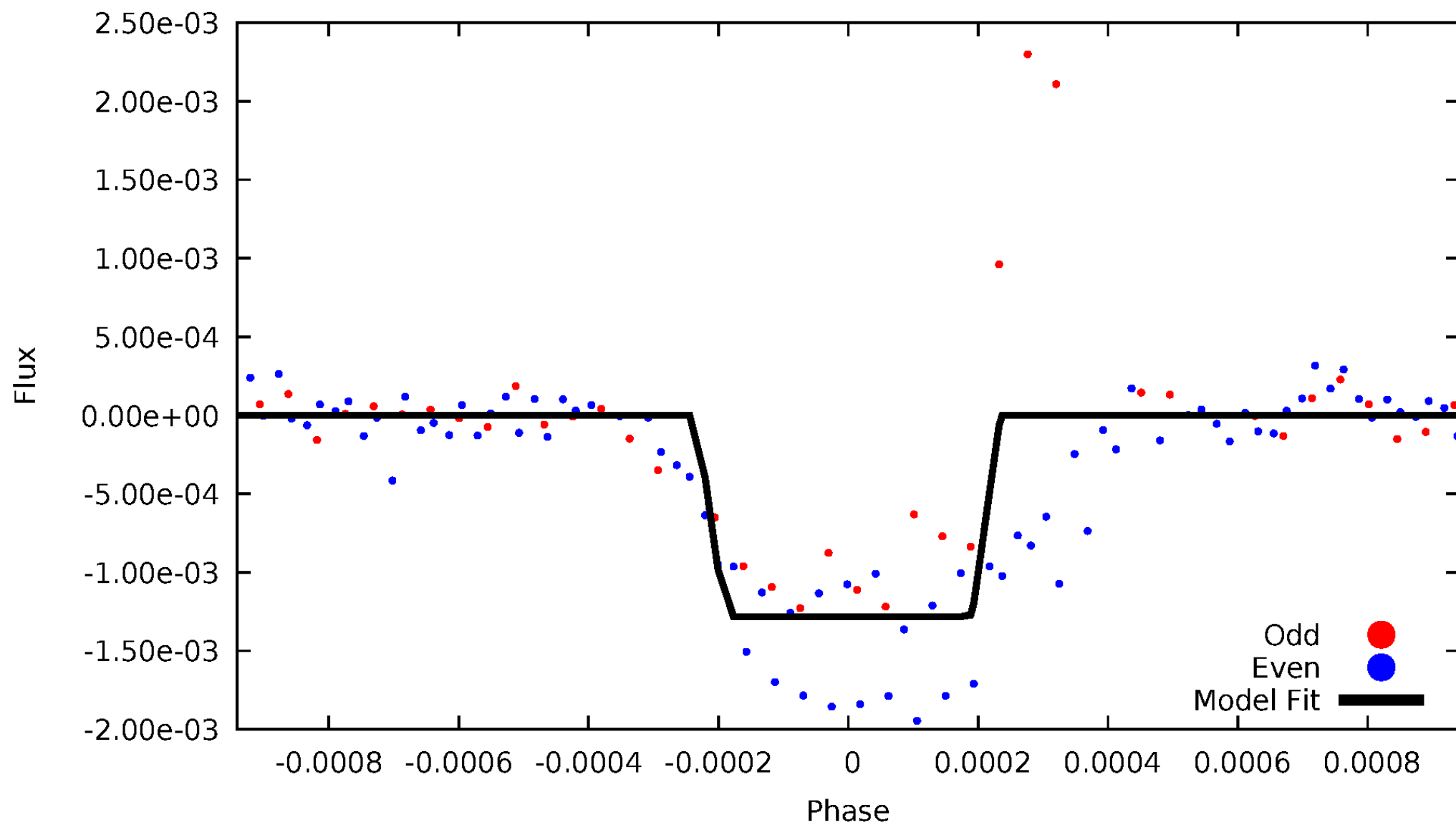
DV Odd/Even

TCE 007047141-02



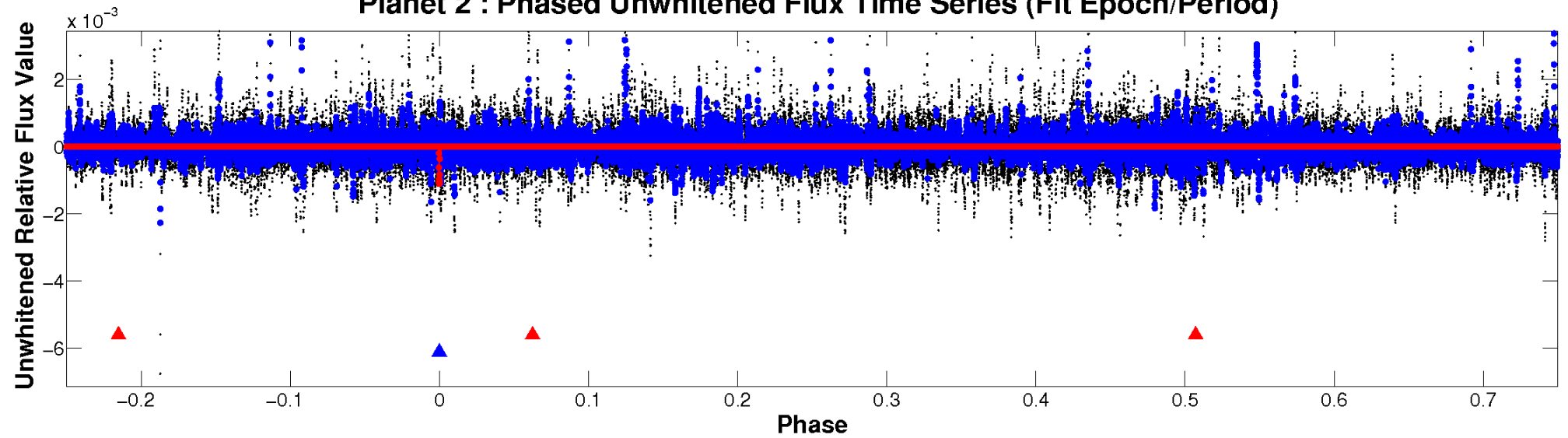
ALT Odd/Even

TCE 007047141-02

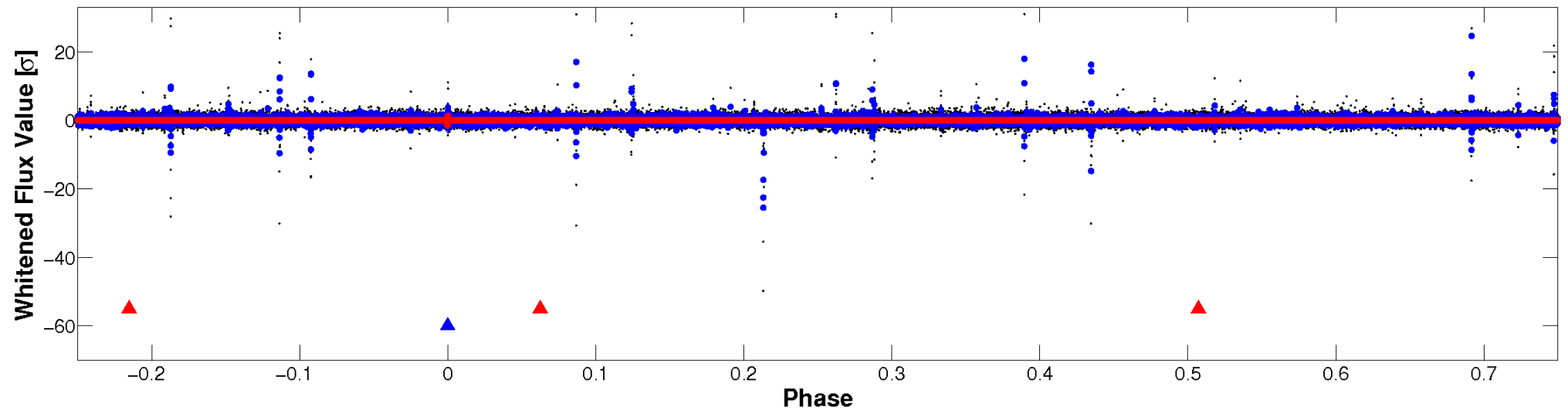


Non-Whitened Vs. Whitened Light Curve

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

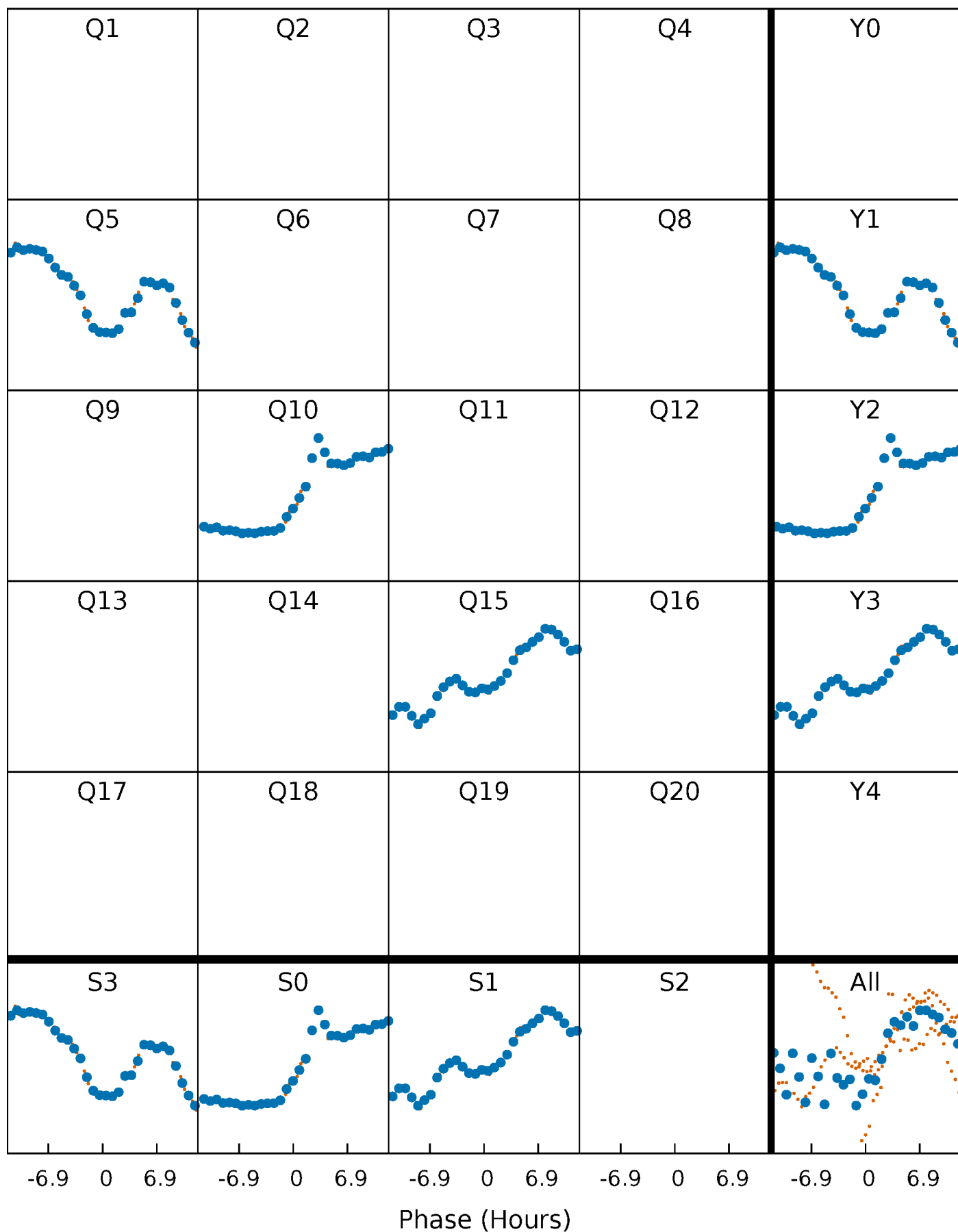


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



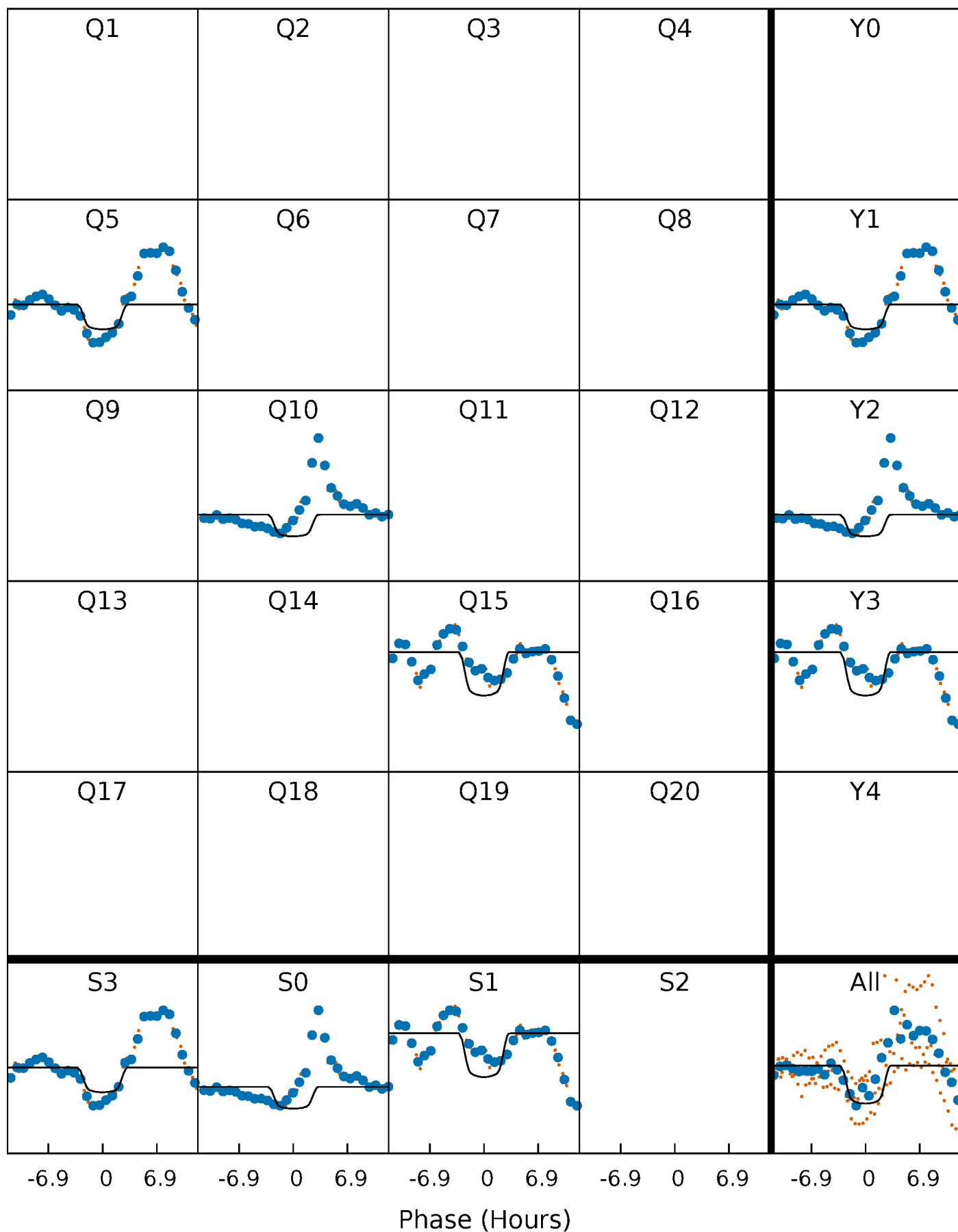
PDC Quarter-Phased Transit Curves

TCE 007047141-02 P=466.550020 Days $T_0=466.390240$ (BKJD)



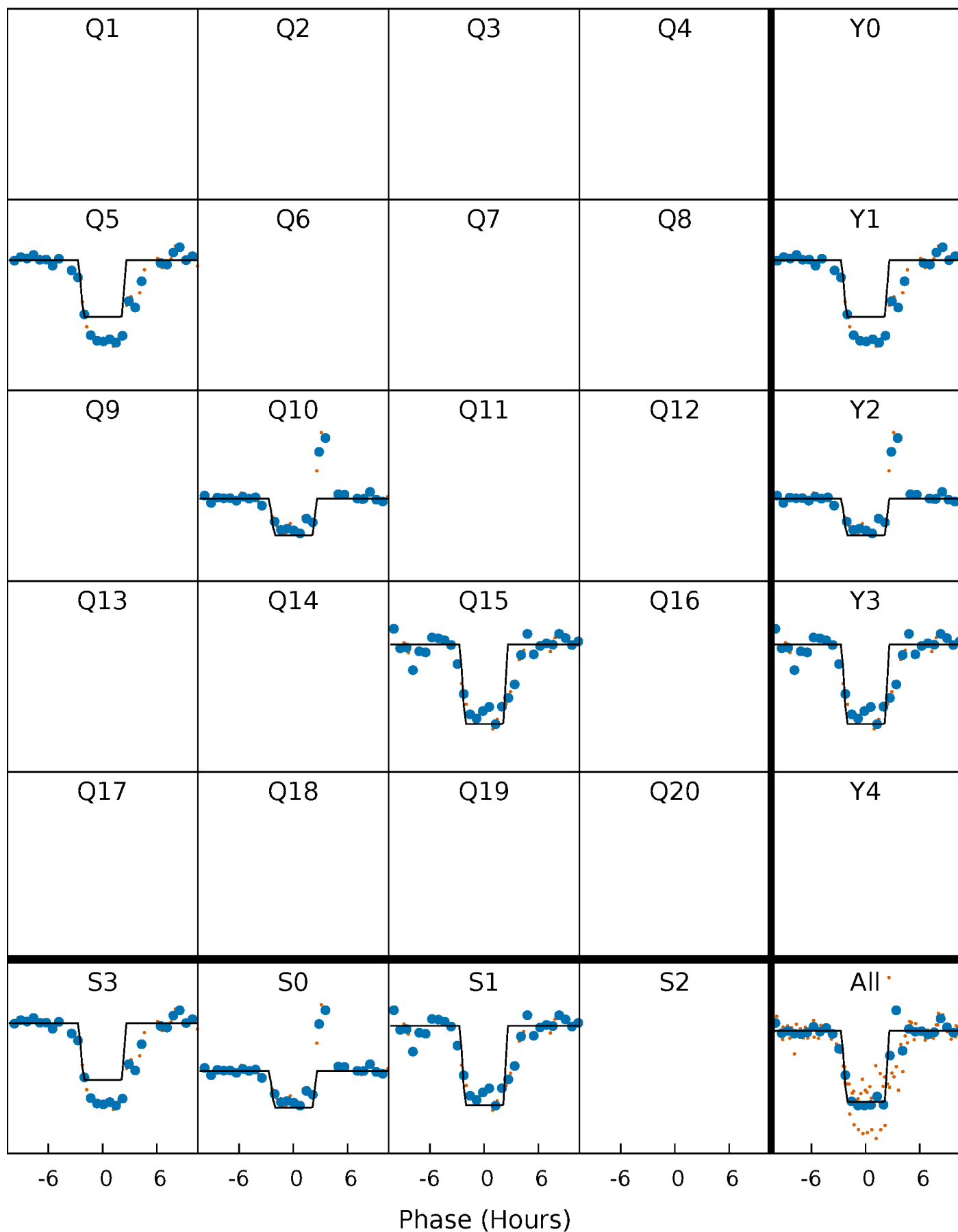
DV Quarter-Phased Transit Curves

TCE 007047141-02 P=466.550020 Days $T_0=466.390240$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

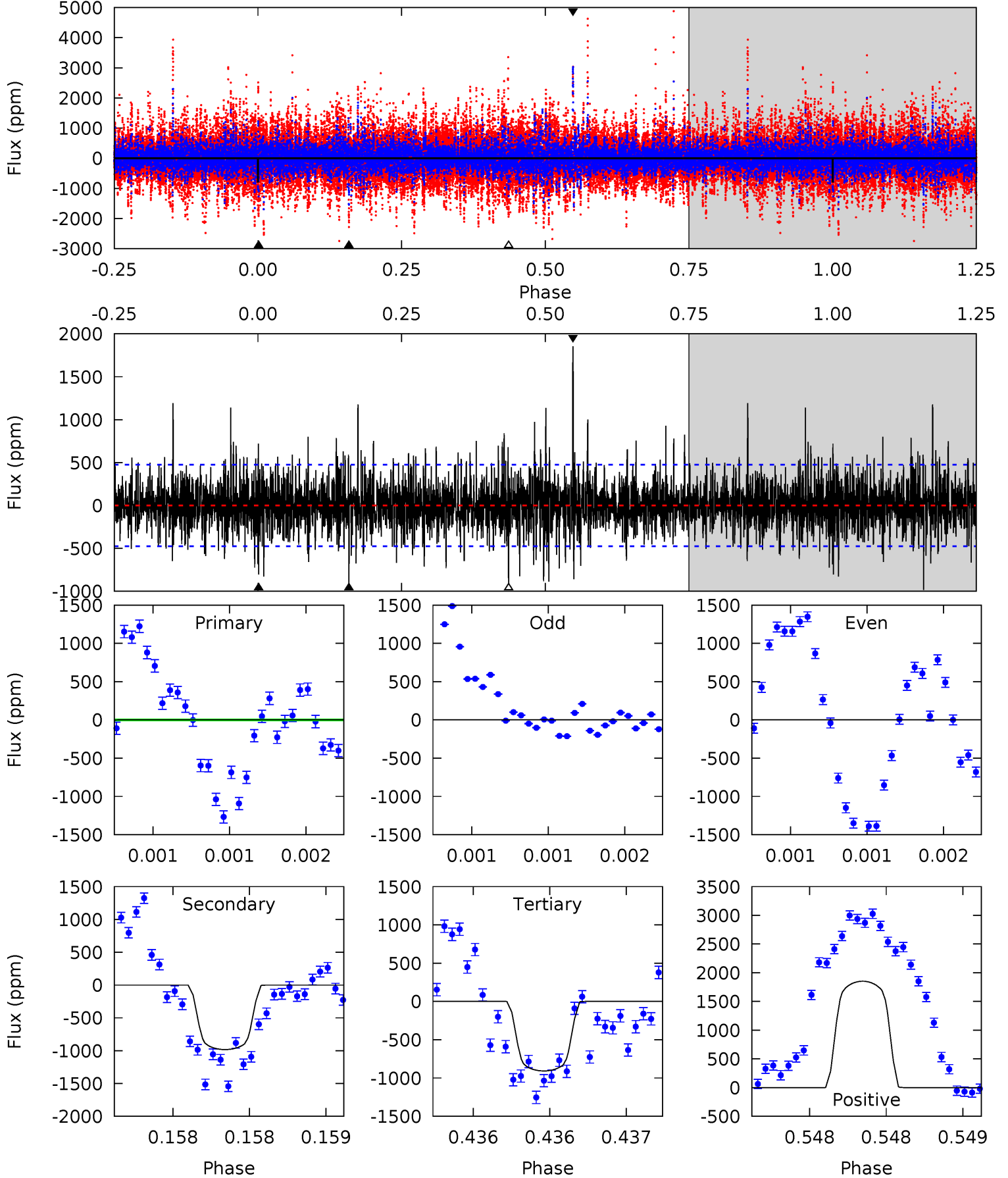
TCE 007047141-02 P=466.545853 Days $T_0=466.388271$ (BKJD)



DV Model-Shift Uniqueness Test

007047141-02, P = 466.550020 Days, E = 466.390240 Days

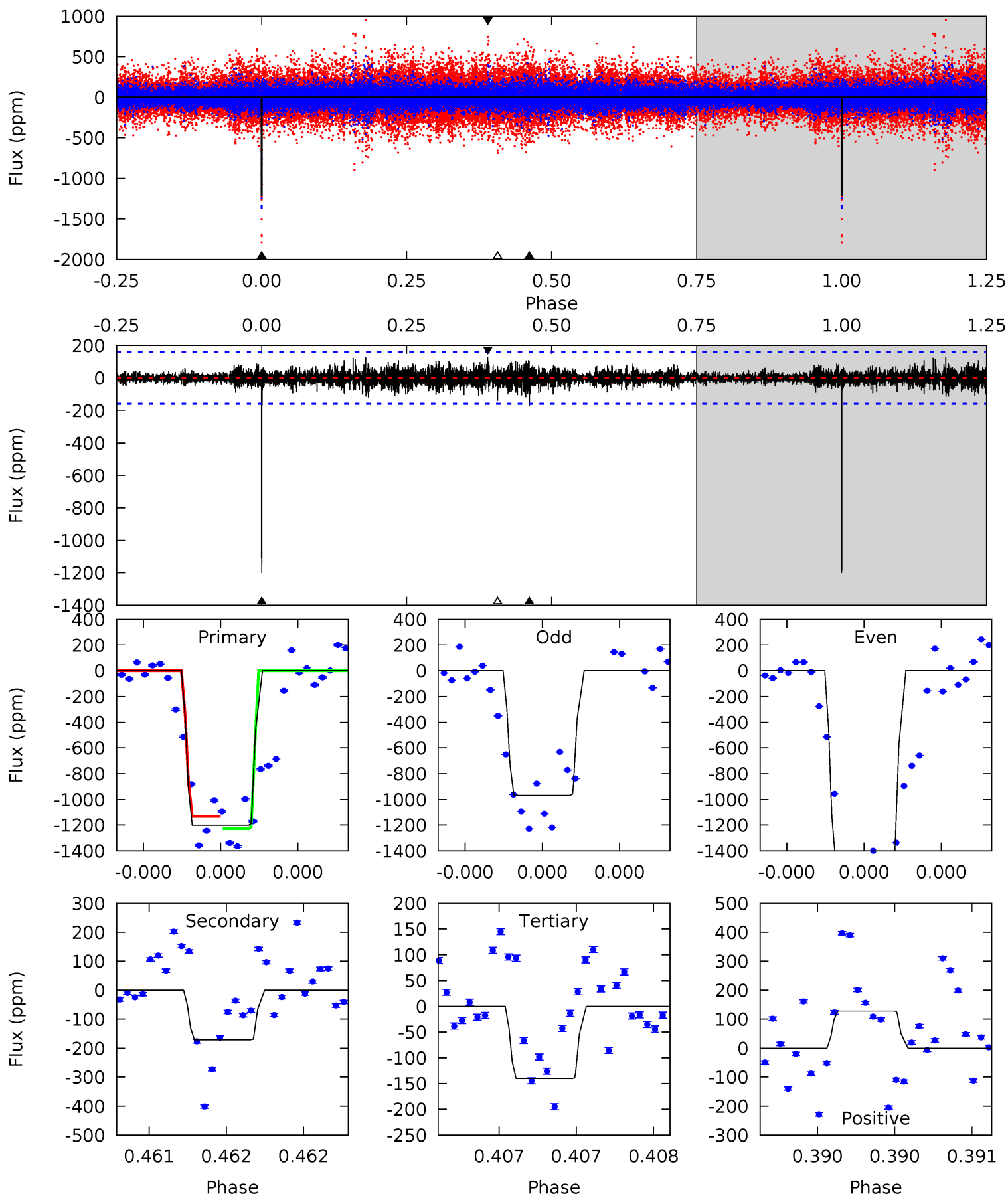
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.32	11.4	10.6	21.6	5.54	3.43	2.65	-1.24	-12.2	0.88	-10.1	5.14	1.23	0.65	2.55



Alt Model-Shift Uniqueness Test

007047141-02, P = 466.545853 Days, E = 466.388271 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.0	5.97	4.90	4.47	5.58	3.49	0.92	37.1	37.5	1.06	1.50	9.65	1.11	0.10	1.68



Stellar Parameters For KIC 007047141

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8450^{+207}_{-385}	$3.770^{+0.408}_{-0.102}$	$-0.260^{+0.250}_{-0.350}$	$3.040^{+0.712}_{-1.424}$	$1.986^{+0.382}_{-0.466}$	$0.100^{+0.360}_{-0.037}$
	+2%/-5%	+11%/-3%	+96%/-135%	+23%/-47%	+19%/-23%	+361%/-37%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007047141-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-983 ± 86	$11.14^{+2.39}_{-2.68}$	718^{+58}_{-80}	7732^{+678}_{-532}	9721^{+6290}_{-2981}
Alt.	-171 ± 29	$11.20^{+2.35}_{-2.69}$	718^{+55}_{-80}	4985^{+312}_{-300}	1652^{+1226}_{-511}

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 $A_{obs} \gg 1.0$

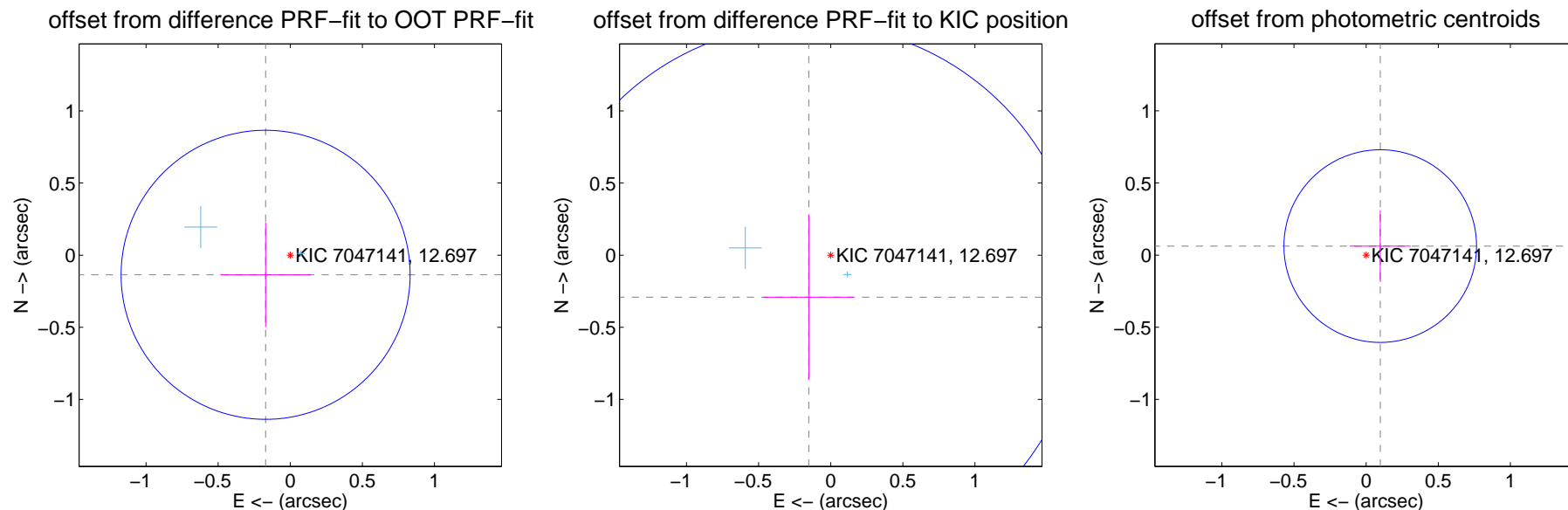
DV Centroid Data

Supplemental centroid analysis for 007047141-02. Kepler magnitude: 12.70. Transit SNR 6.21

There are 3 quarters with good PRF difference image offsets

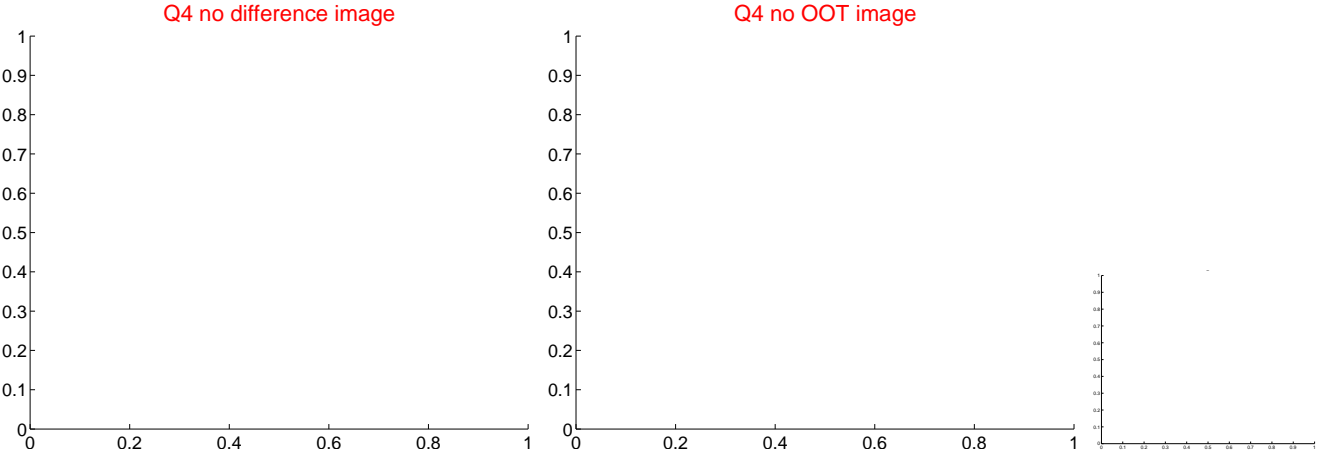
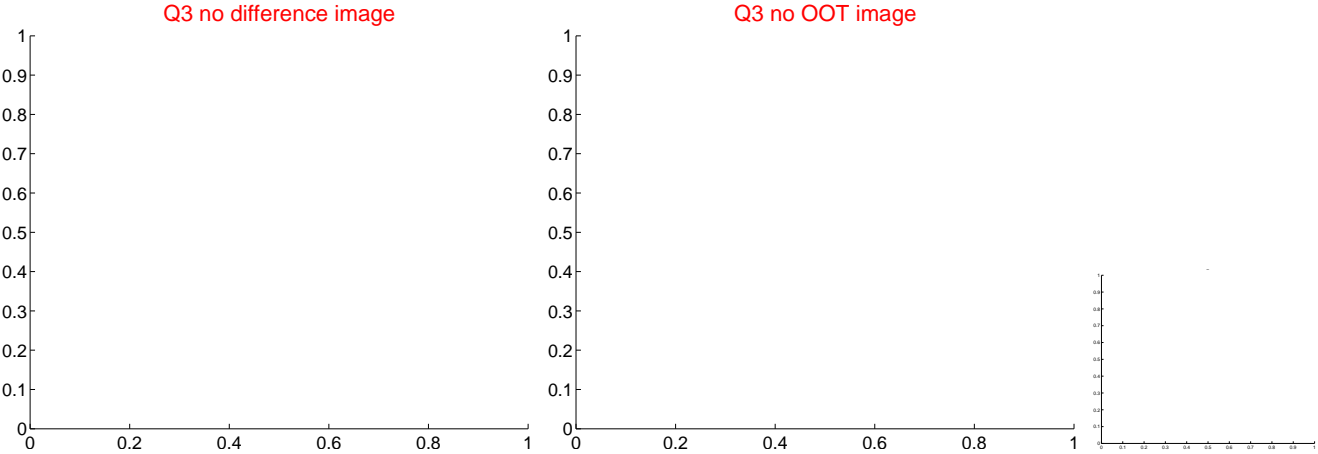
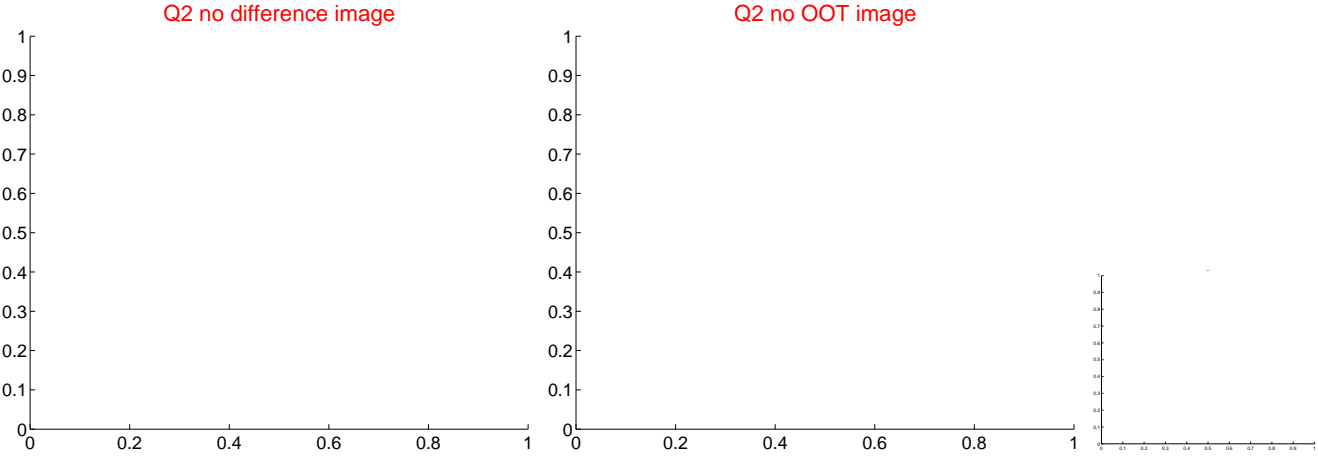
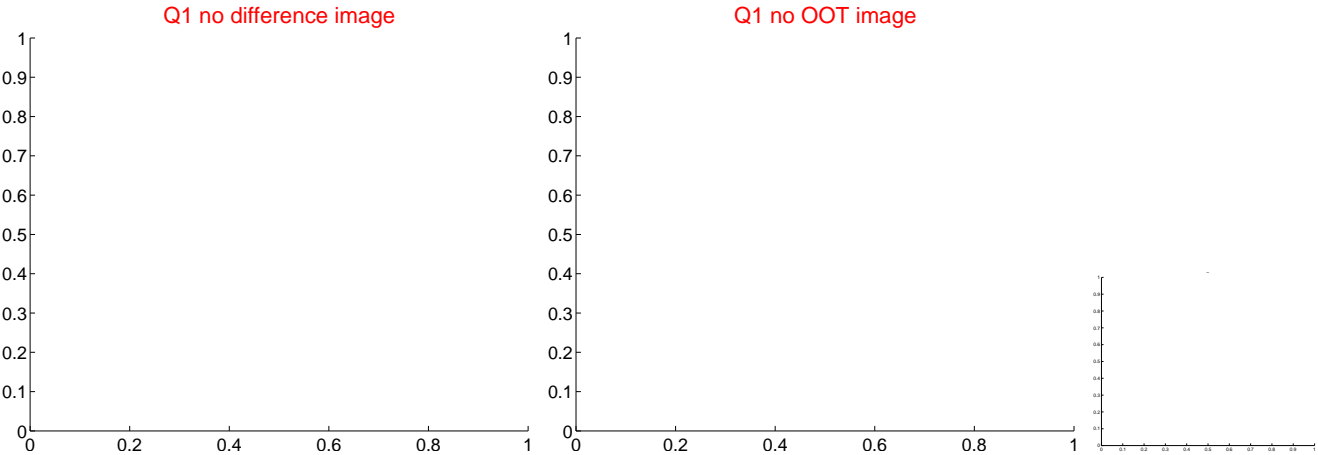
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.219 ± 0.334	0.65	0.171 ± 0.314	-0.136 ± 0.363
PRF-fit source offset from KIC position	0.329 ± 0.631	0.52	0.152 ± 0.312	-0.291 ± 0.571
photometric centroid source offset	0.12 ± 0.22	0.52	-0.10 ± 0.21	0.06 ± 0.25

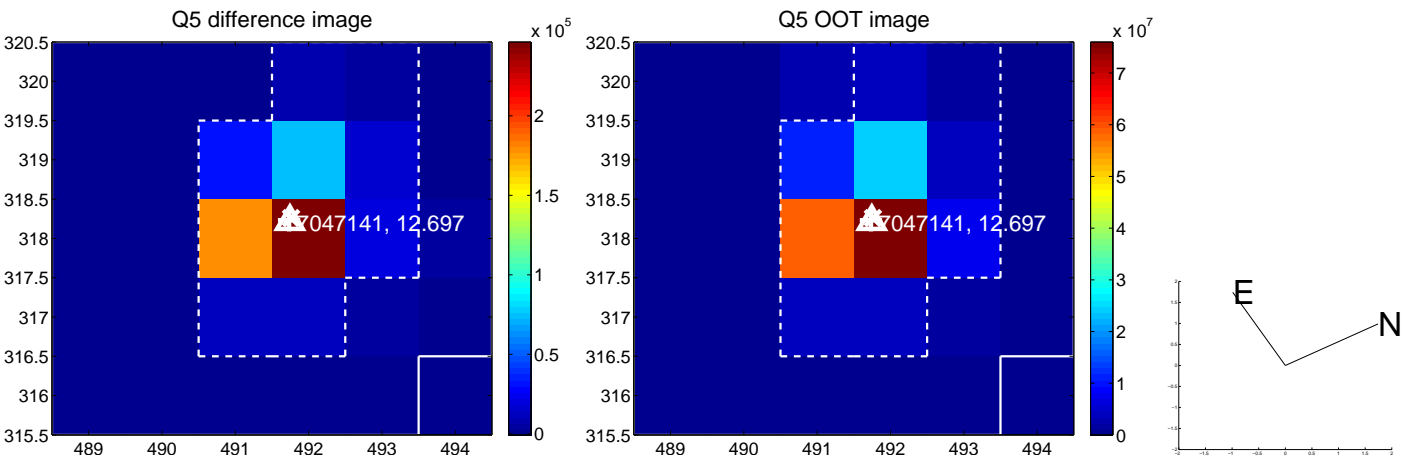


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

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



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



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

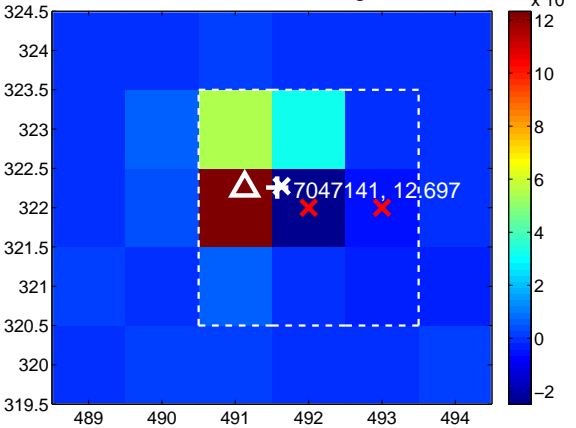
Q9 no difference image



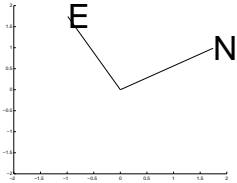
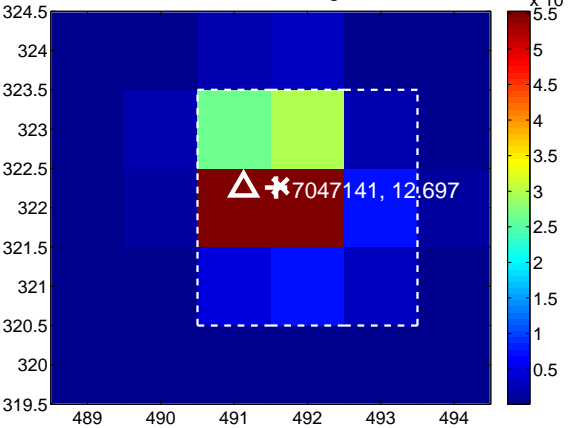
Q9 no OOT image



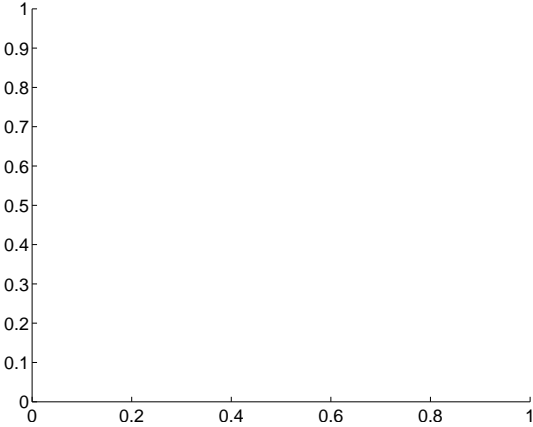
Q10 difference image



Q10 OOT image



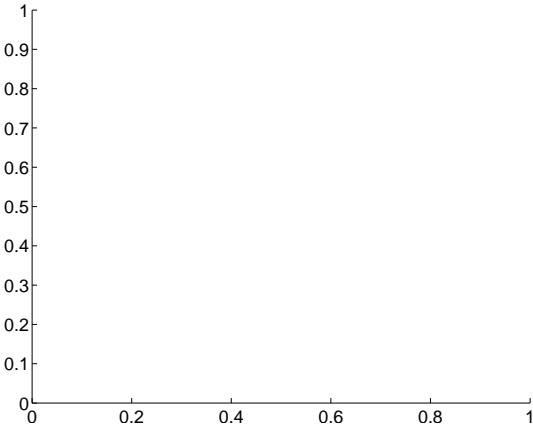
Q11 no difference image



Q11 no OOT image



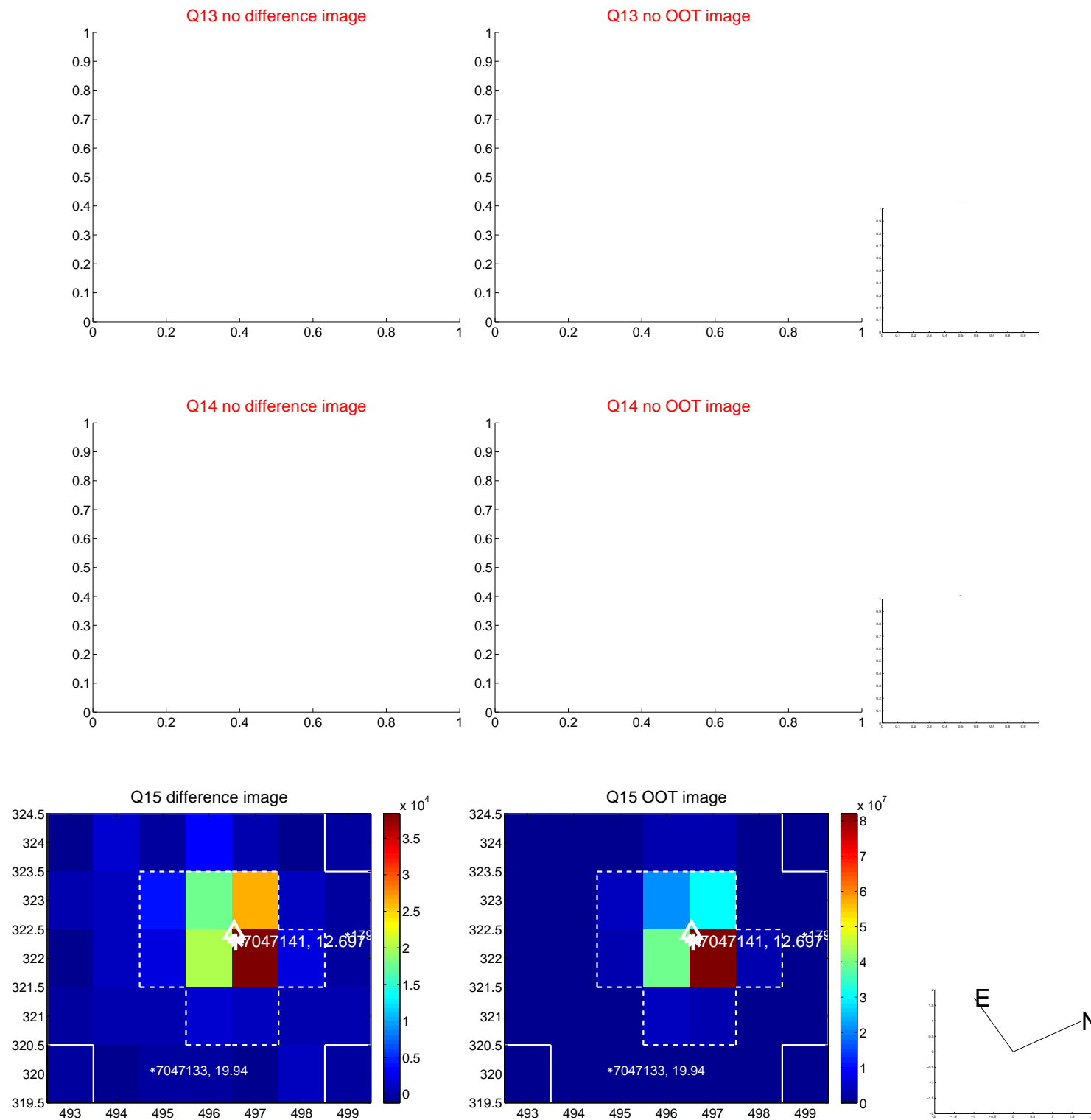
Q12 no difference image



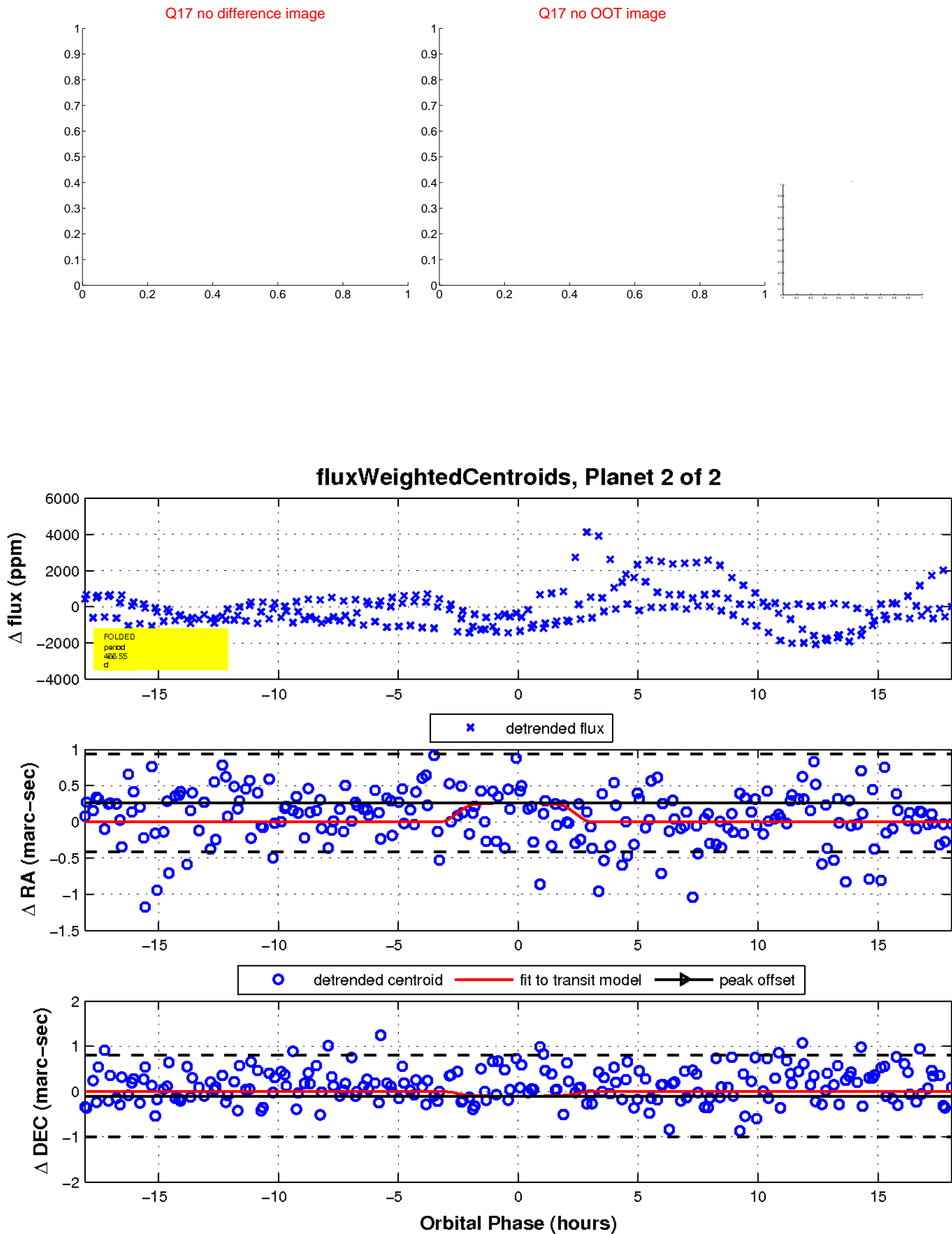
Q12 no OOT image



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.



UKIRT Image

