

KIC 009269688

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})
009269688-01	OBS	No	581.502887	283.158935	2288.2	12.562	13.3	6.6	0.75	4547	3.53	0.14
009269688-02	OBS	No	384.188063	367.429381	1659.1	4.964	13.7	6.2	0.75	4547	2.98	0.24
009269688-03	OBS	No	517.914529	150.527827	2274.4	4.211	15.1	6.6	0.75	4547	3.69	0.16
009269688-04	OBS	No	419.831203	421.504164	2024.4	2.425	15.7	6.2	0.75	4547	3.96	0.22
009269688-05	OBS	No	373.871939	390.869589	1511.6	3.000	12.0	-1.0	0.75	4547	2.77	0.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009269688-01	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
009269688-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
009269688-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269688-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269688-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

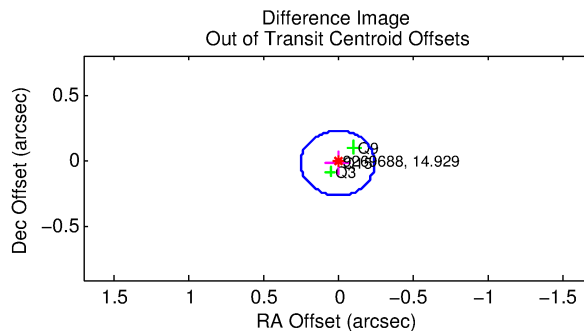
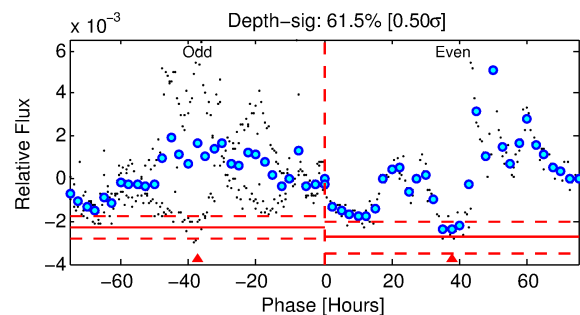
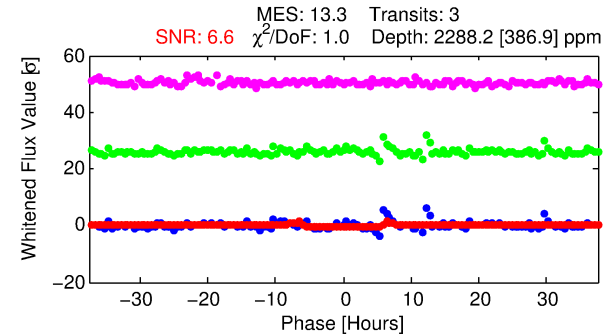
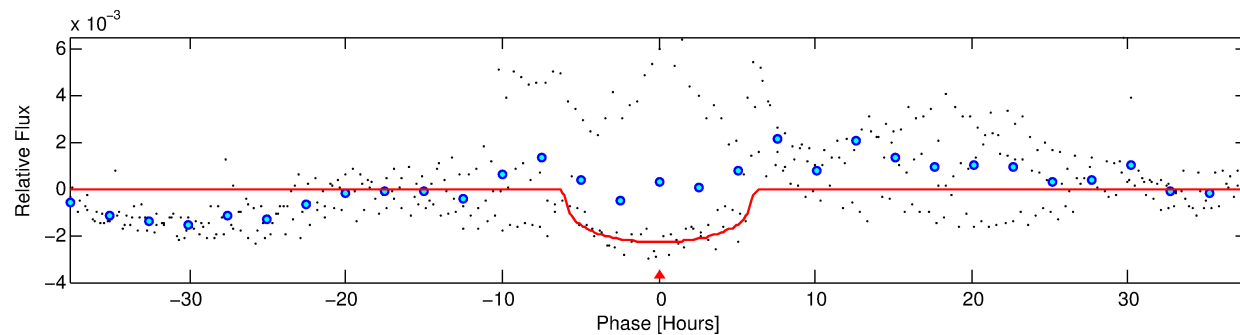
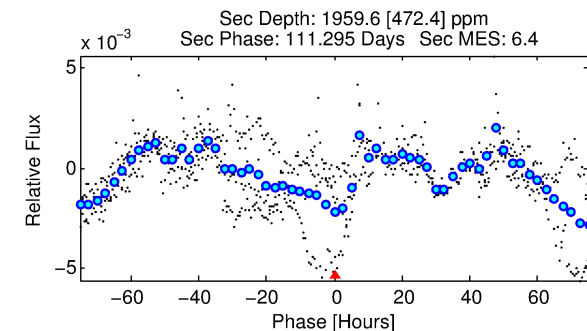
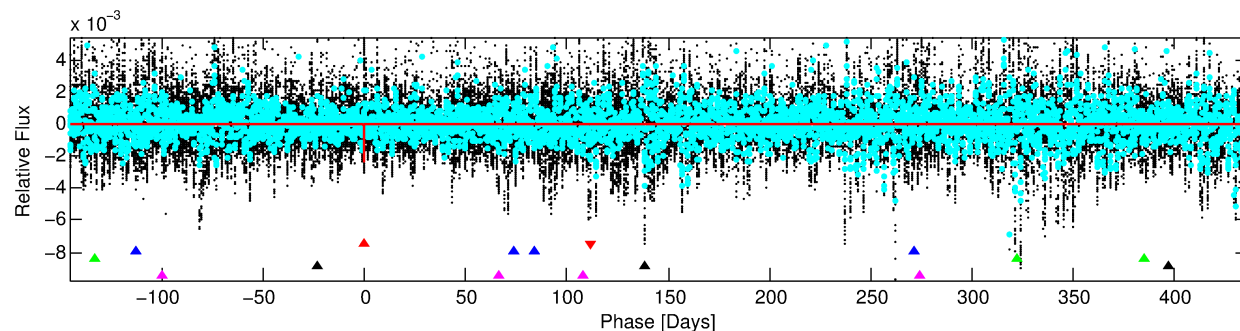
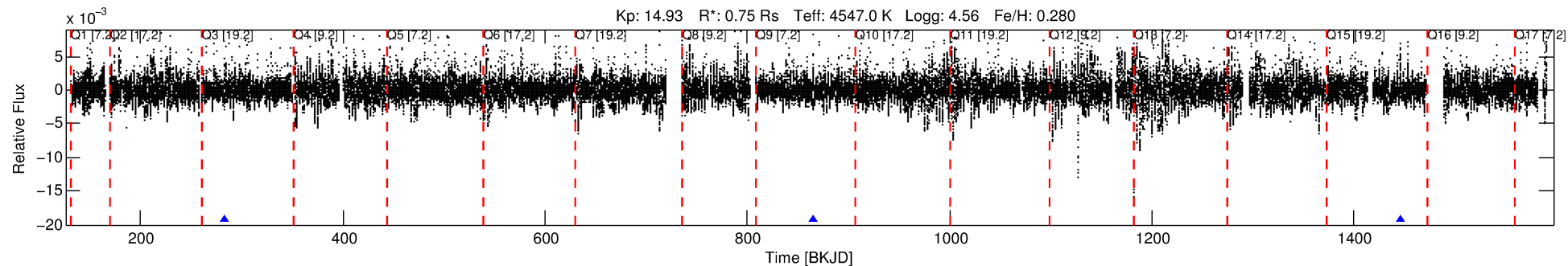
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009269688-01

No Significant Match Found

DV One-Page Summary

KIC: 9269688 Candidate: 1 of 5 Period: 581.503 d



DV Fit Results:

Period = 581.50289 [0.00748] d
Epoch = 283.1589 [0.0114] BKJD
Rp/R* = 0.0433 [0.0112]
a/R* = 334.46 [236.00]
b = 0.44 [1.30]
Seff = 0.14 [0.02]
Teq = 156 [6] K
Rp = 3.53 [0.96] Re
a = 1.2320 [0.0887] AU
Ag = 131361.00 [76280.80] [1.72 σ]
Teffp = 4598 [670] K [6.62 σ]

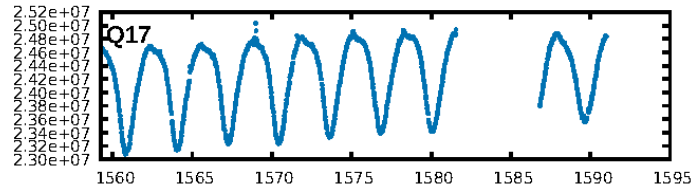
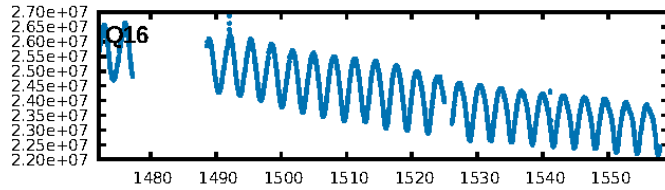
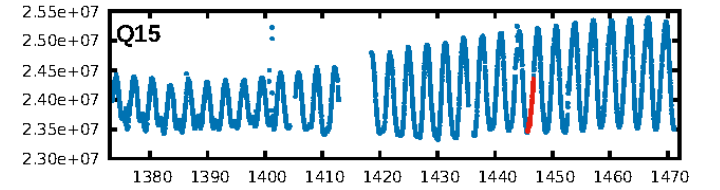
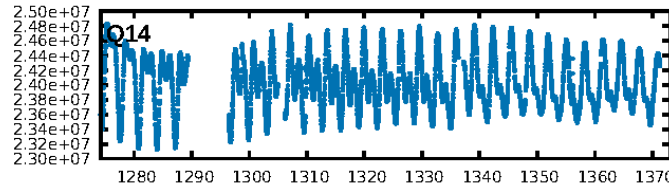
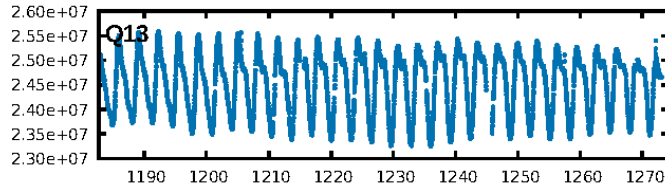
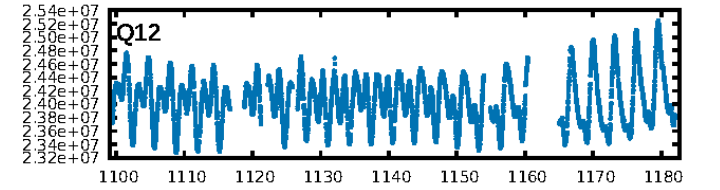
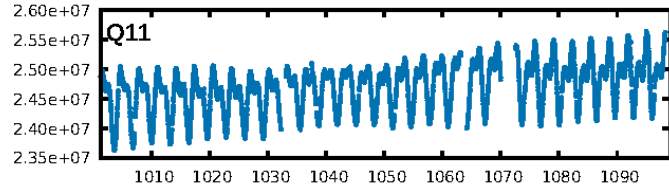
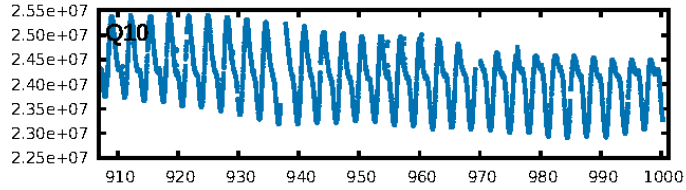
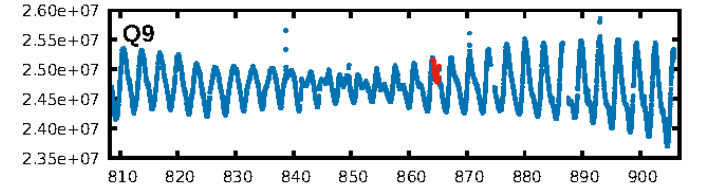
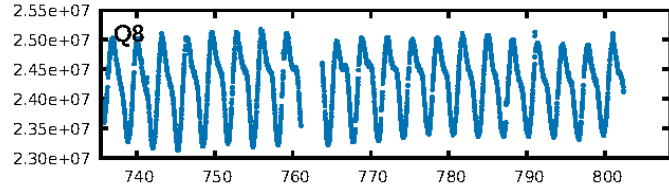
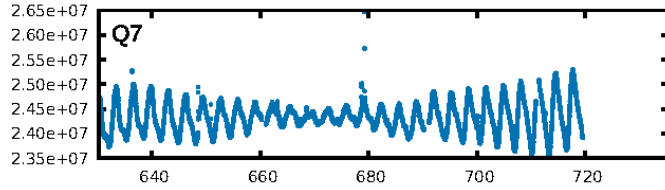
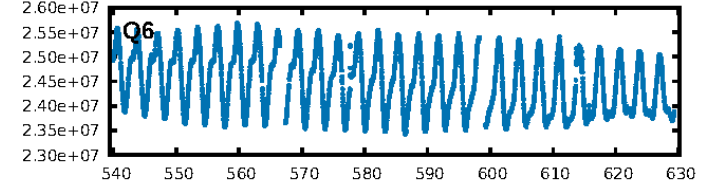
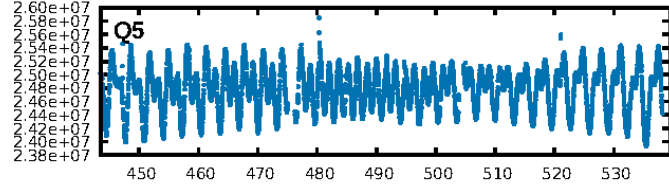
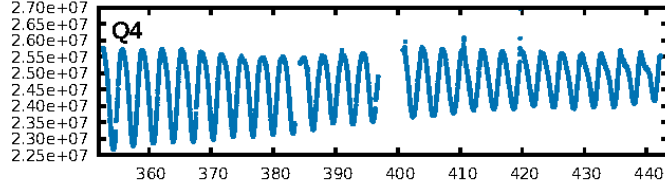
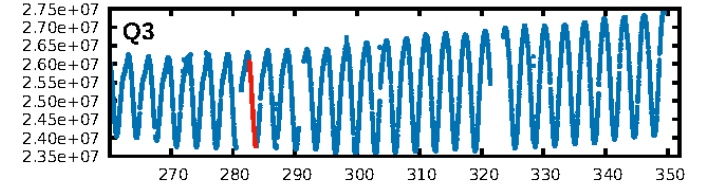
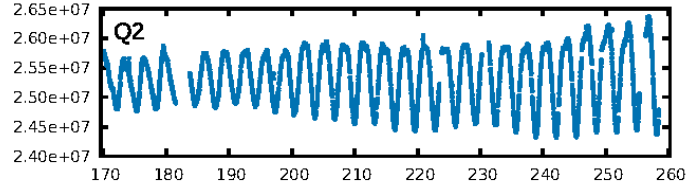
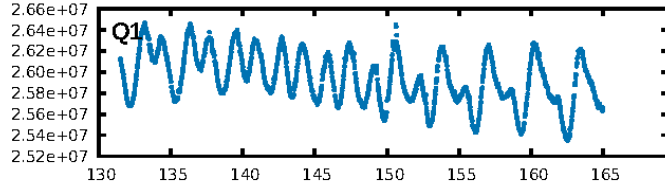
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [115.18 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 45.7%
ModelChiSquareGof-sig: 97.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.3219
Centroid-sig: 36.0%
Centroid-so: 0.141 arcsec [0.35 σ]
OotOffset-rm: 0.016 arcsec [0.19 σ]
OotOffset-st: 0/2/0/1 [3]
KicOffset-rm: 0.149 arcsec [1.67 σ]
KicOffset-st: 0/2/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

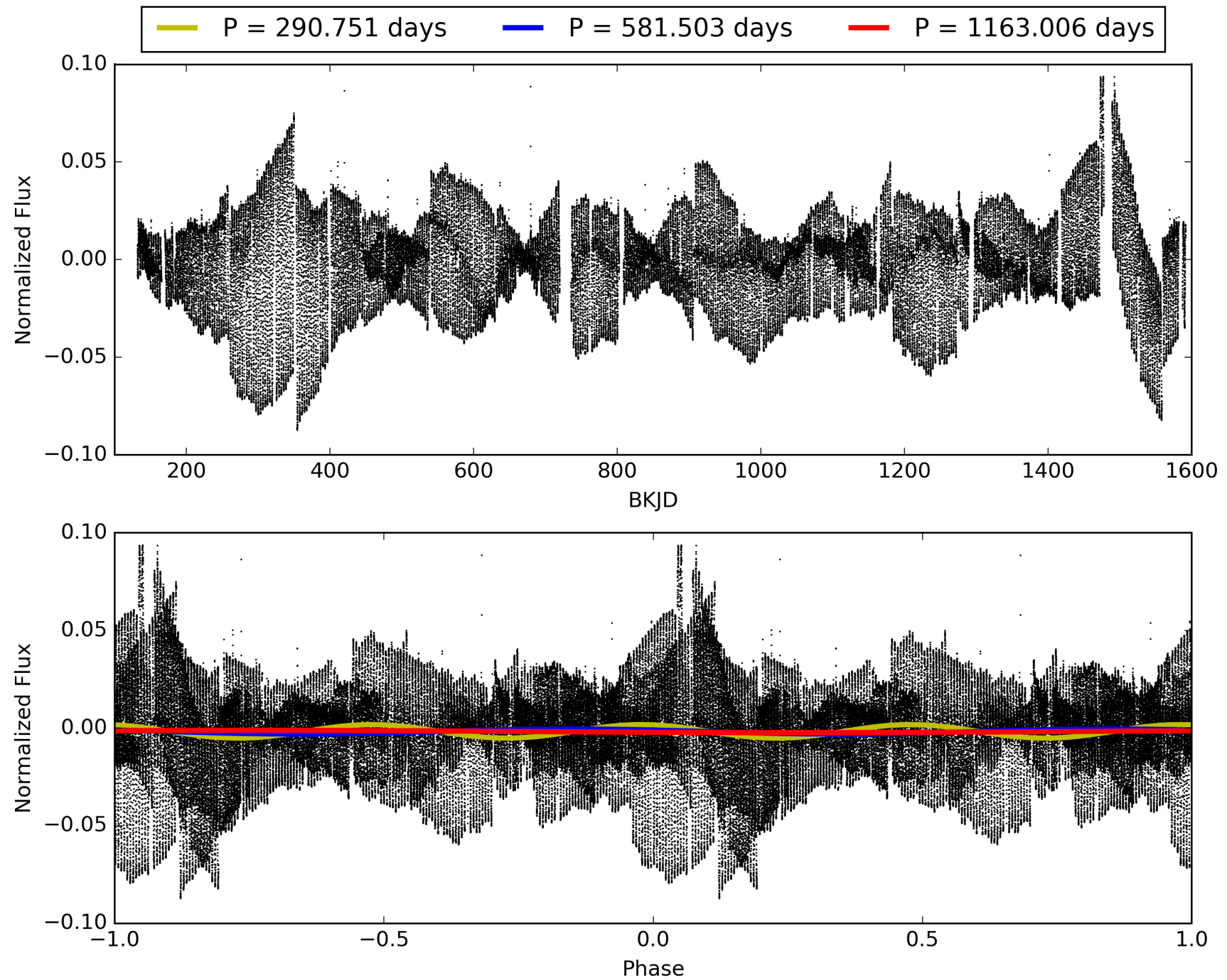
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009269688-01, PDC Light Curves

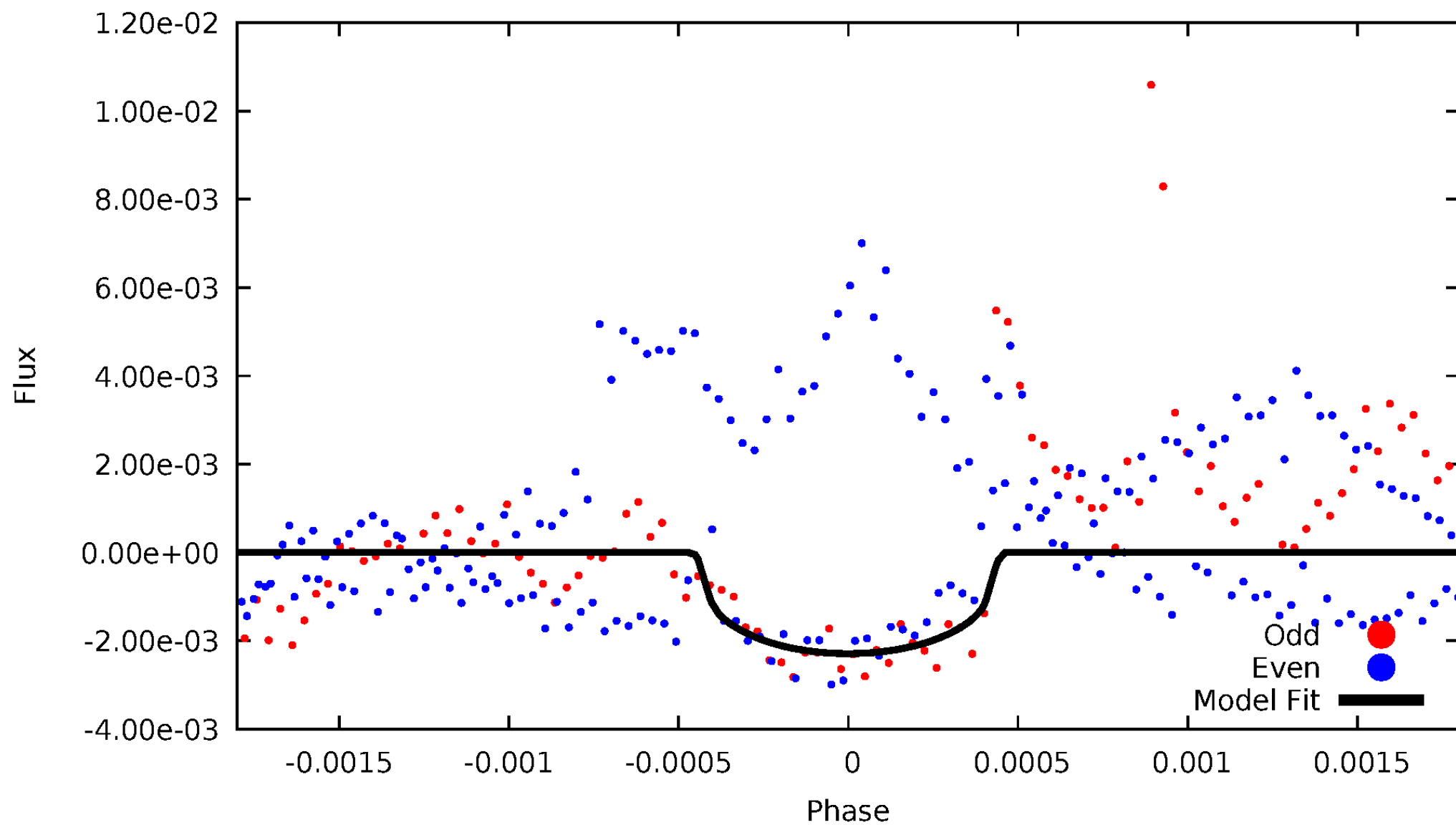


TCE 009269688-01



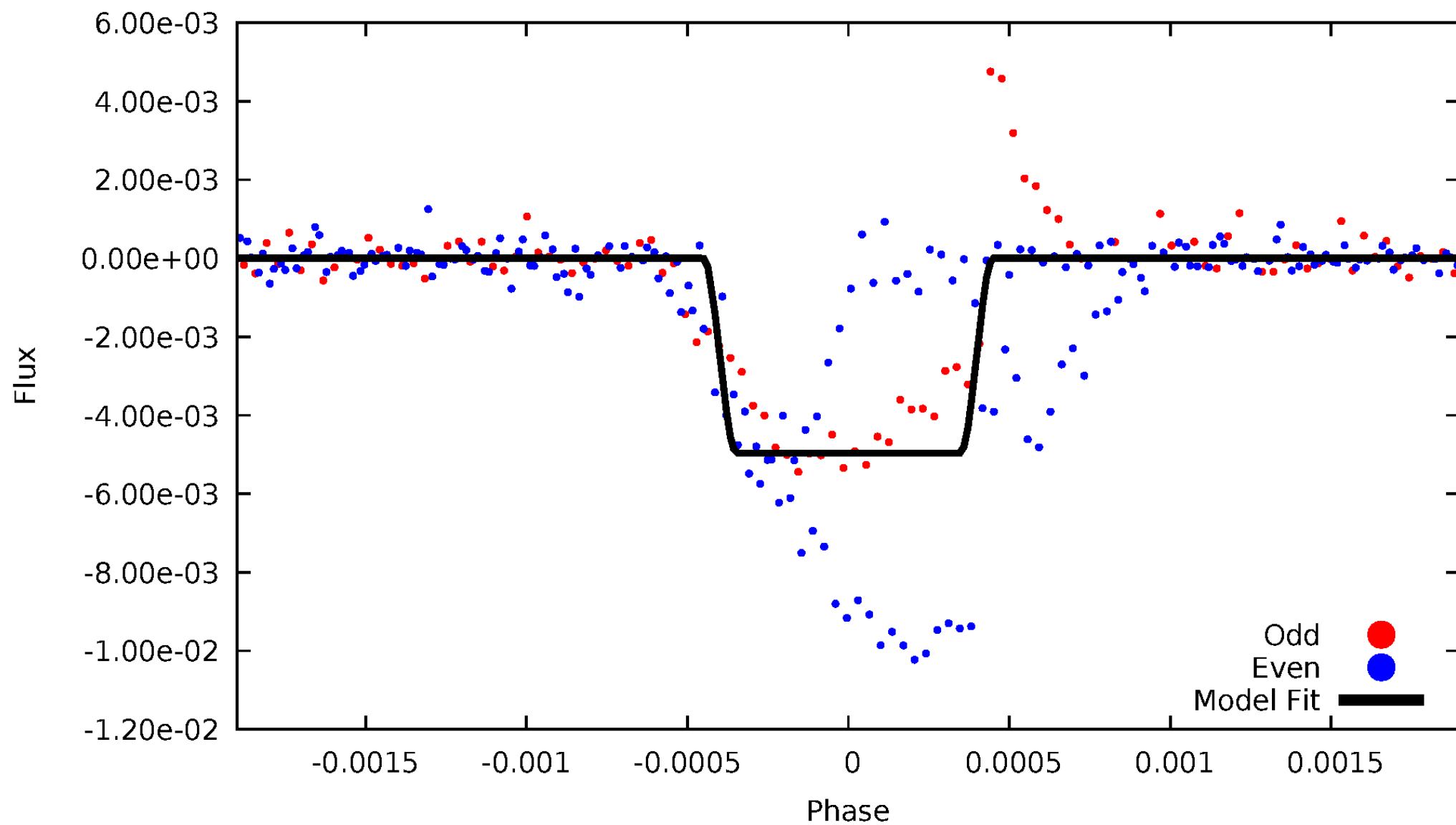
DV Odd/Even

TCE 009269688-01



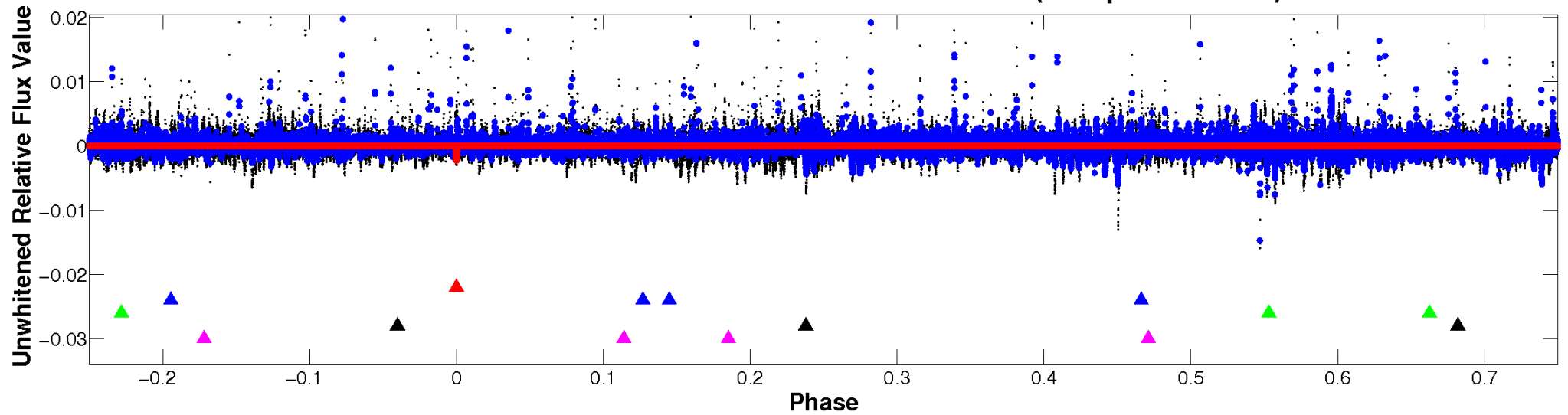
ALT Odd/Even

TCE 009269688-01

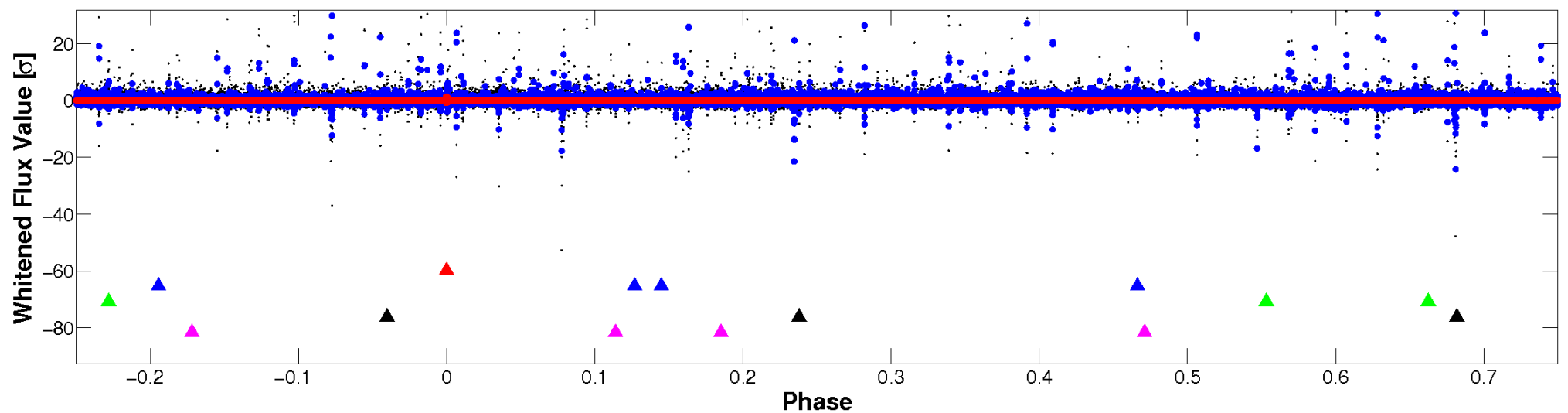


Non-Whitened Vs. Whitened Light Curve

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

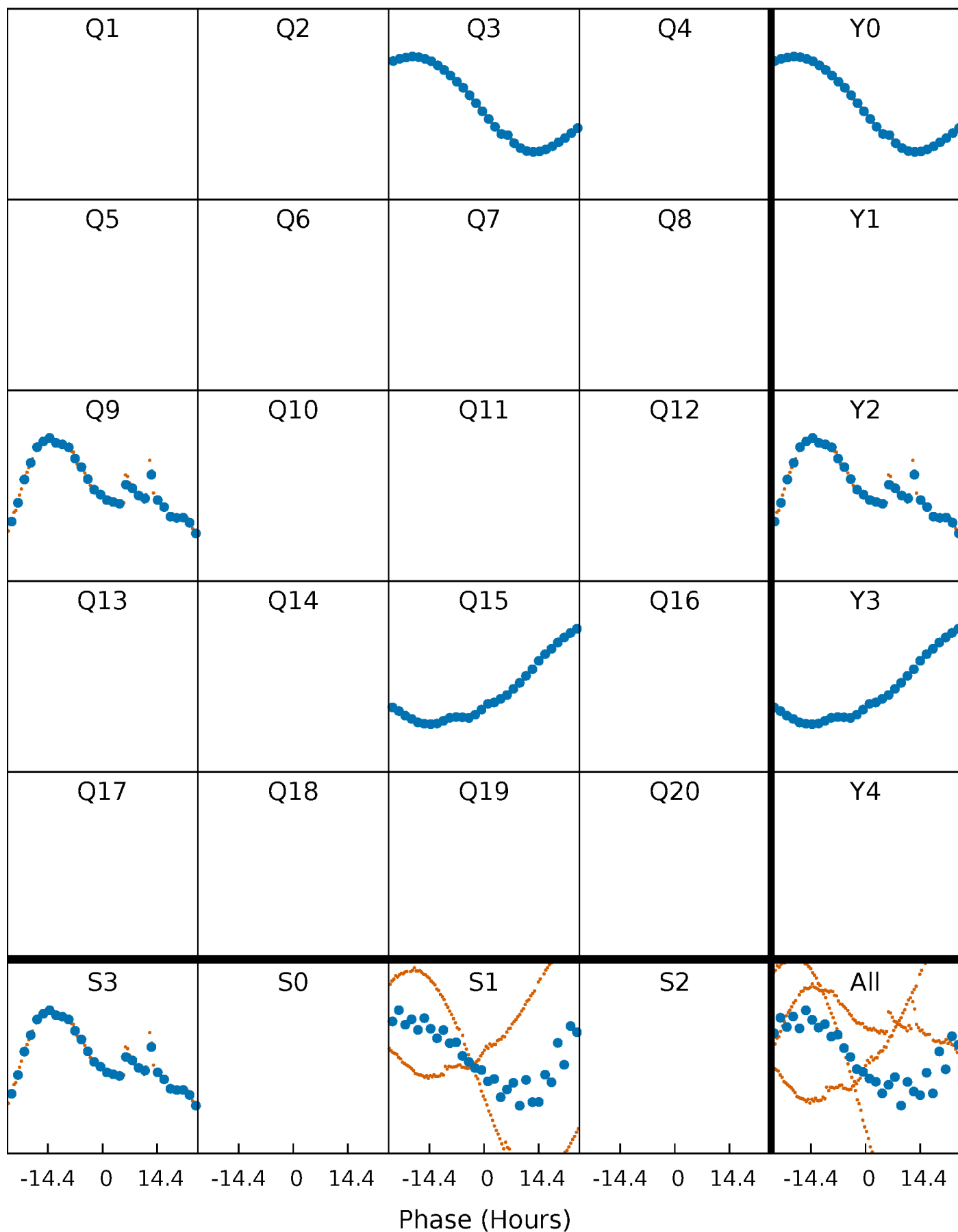


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



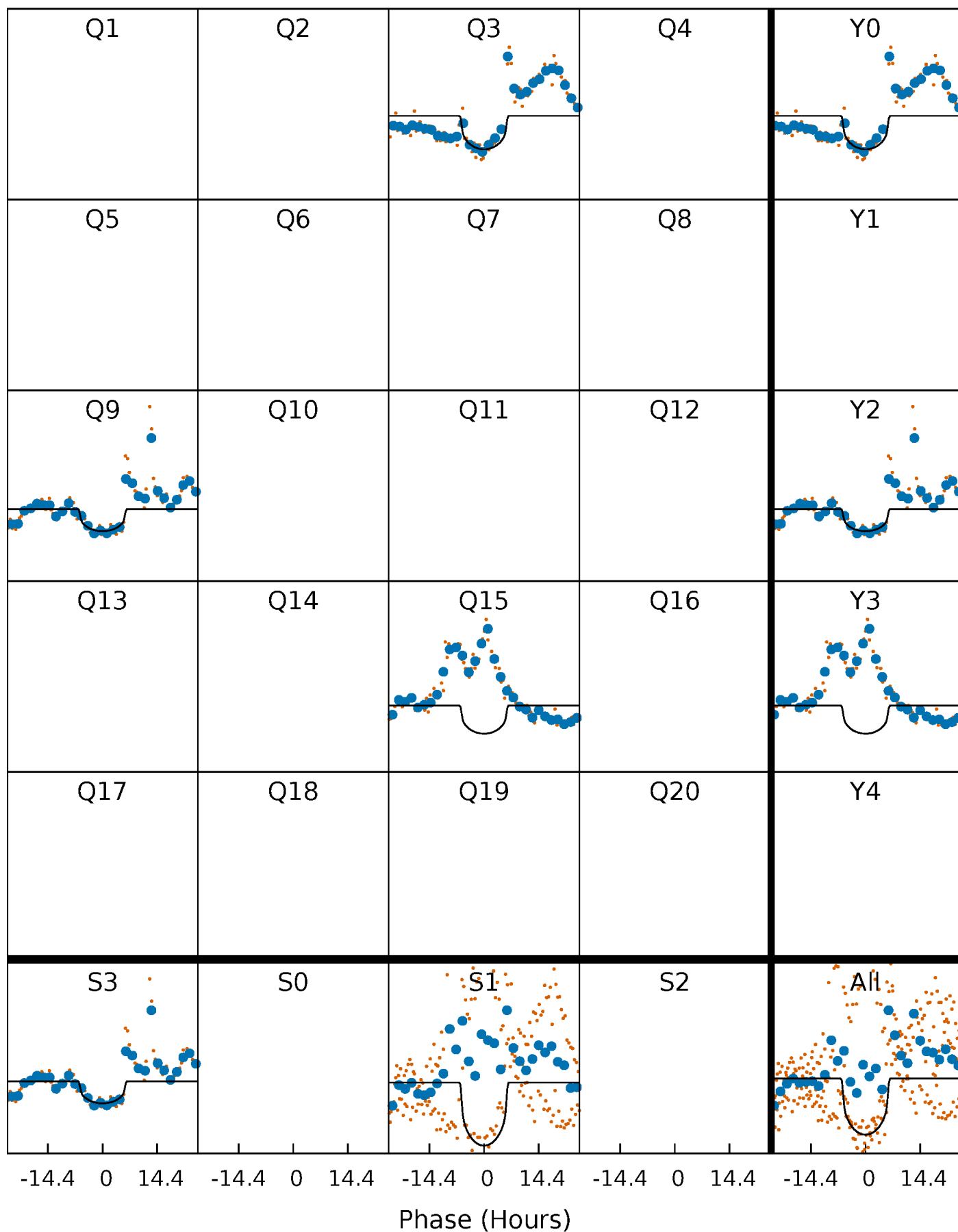
PDC Quarter-Phased Transit Curves

TCE 009269688-01 P=581.502887 Days $T_0=283.158934$ (BKJD)



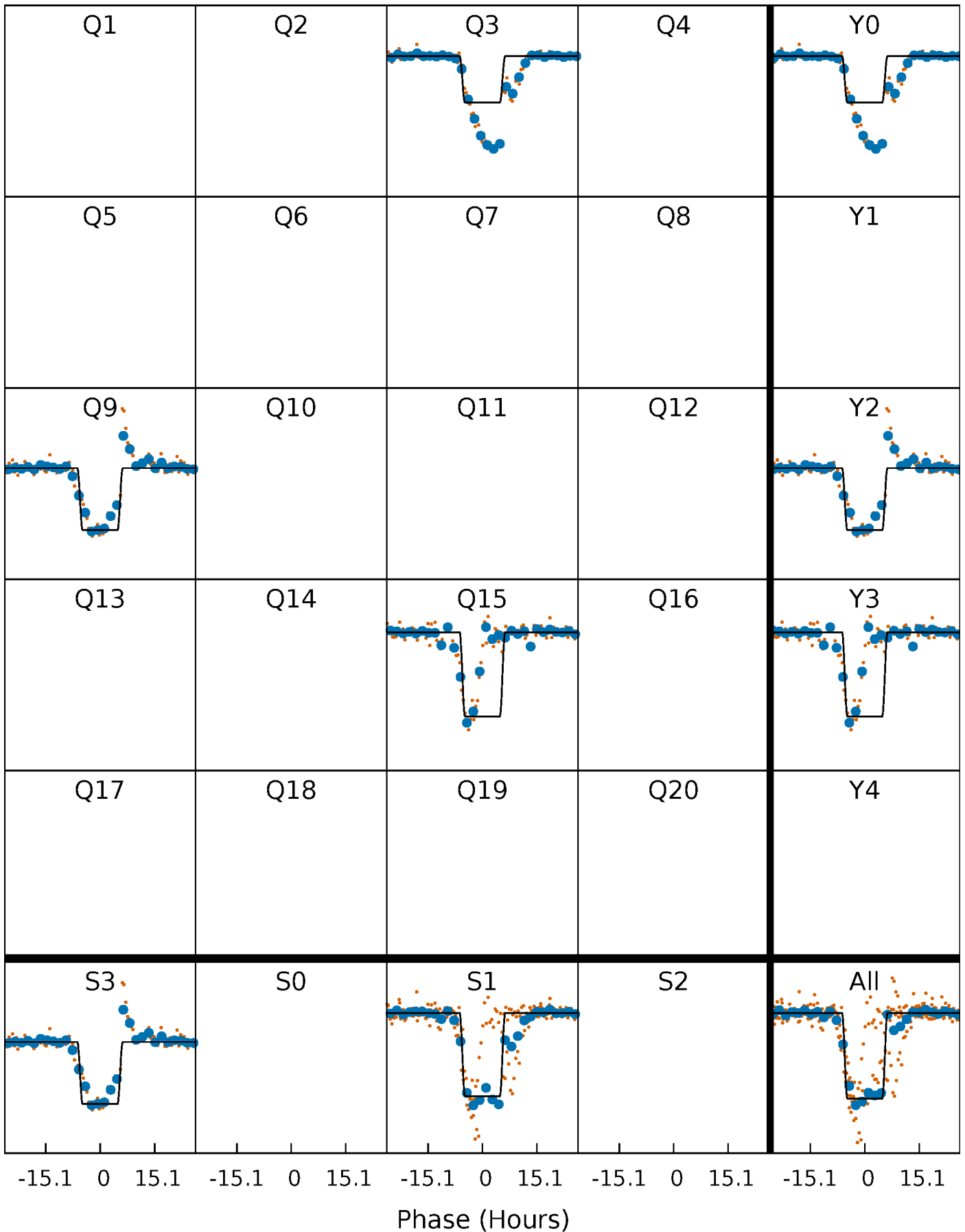
DV Quarter-Phased Transit Curves

TCE 009269688-01 P=581.502887 Days $T_0=283.158934$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

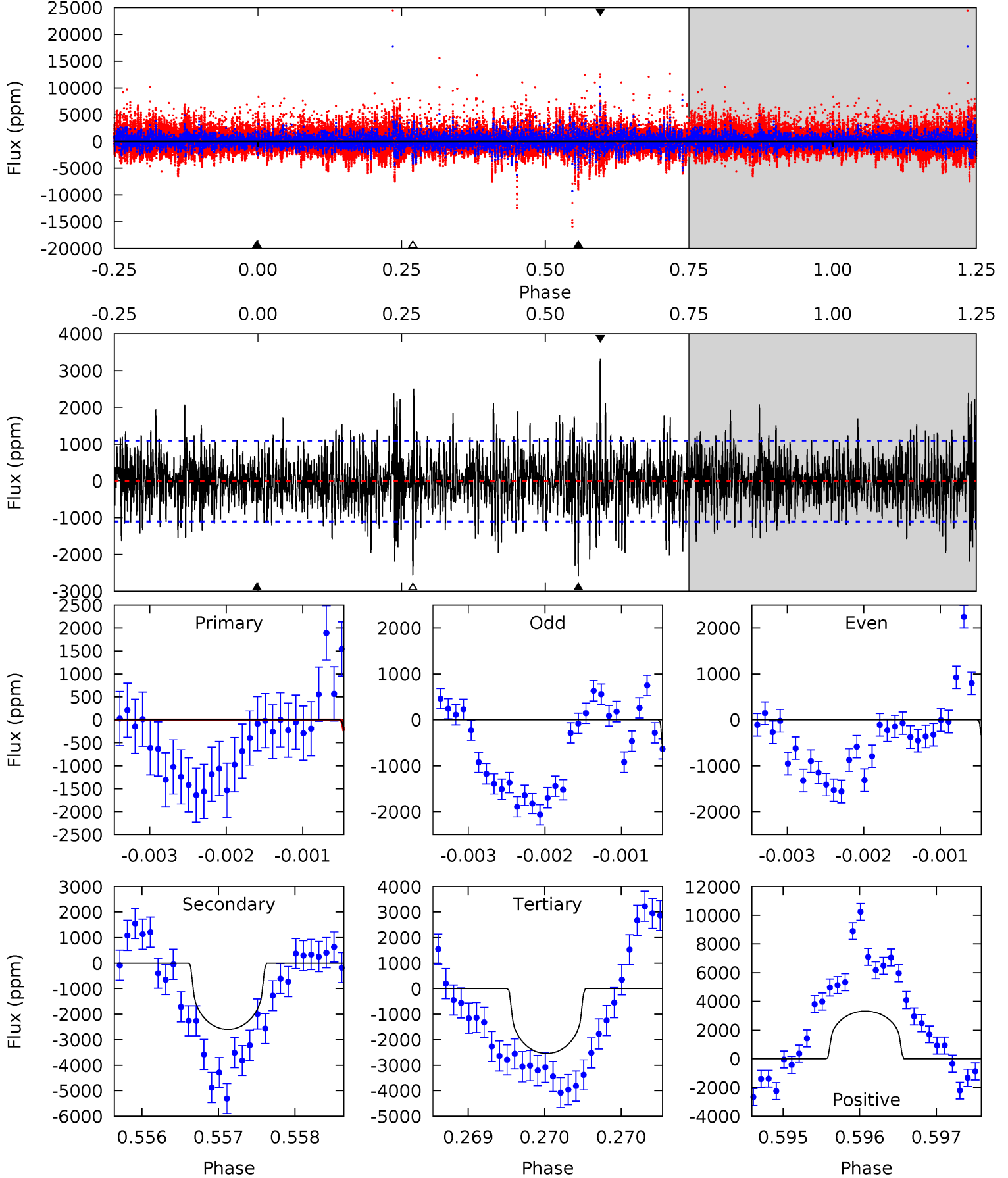
TCE 009269688-01 P=581.505062 Days $T_0=283.152939$ (BKJD)



DV Model-Shift Uniqueness Test

009269688-01, P = 581.502887 Days, E = 283.158934 Days

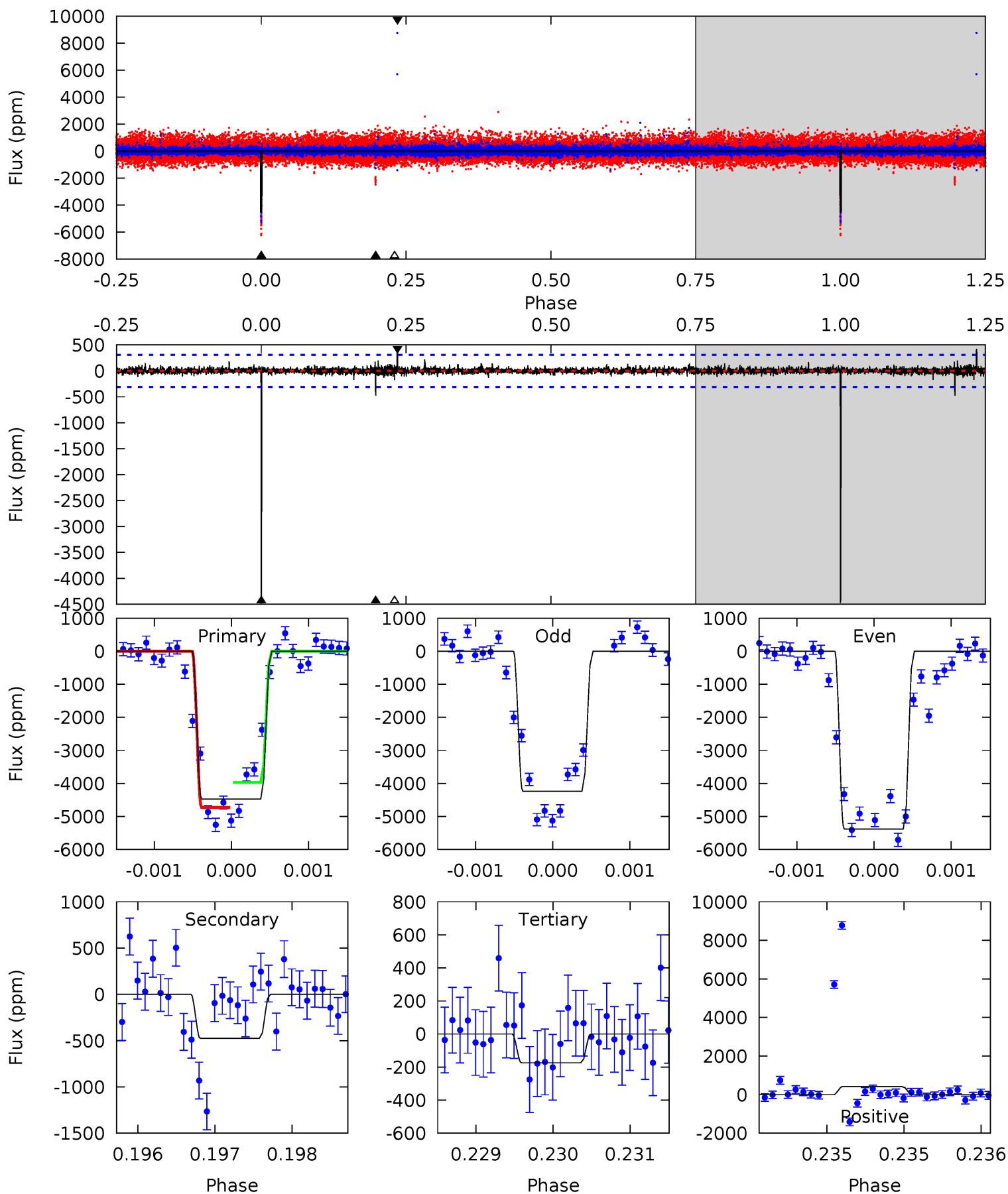
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.14	12.9	12.7	16.6	5.47	3.32	3.12	-8.51	-12.4	0.28	-3.64	2.38	-0.04	0.56	0.22



Alt Model-Shift Uniqueness Test

009269688-01, P = 581.505062 Days, E = 283.152939 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
79.2	8.42	3.08	7.31	5.47	3.32	0.59	76.2	71.9	5.34	1.11	11.4	1.13	0.08	0



Stellar Parameters For KIC 009269688

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4547^{+137}_{-137}	$4.559^{+0.060}_{-0.020}$	$0.280^{+0.150}_{-0.300}$	$0.747^{+0.026}_{-0.062}$	$0.737^{+0.048}_{-0.048}$	$2.493^{+0.631}_{-0.181}$
	+3%/-3%	+1%/-0%	+54%/-107%	+3%/-8%	+7%/-7%	+25%/-7%
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 009269688-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2597 ± 201	$3.42^{+0.99}_{-0.87}$	216^{+7}_{-7}	4887^{+731}_{-483}	$186539^{+152280}_{-73585}$
Alt.	-475 ± 56	$5.72^{+0.91}_{-0.90}$	217^{+8}_{-7}	3078^{+168}_{-162}	12312^{+5285}_{-3571}

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

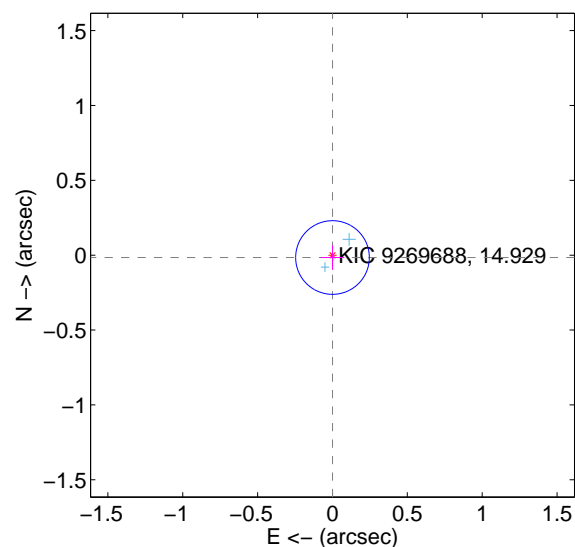
Supplemental centroid analysis for 009269688-01. Kepler magnitude: 14.93. Transit SNR 6.58

There are 3 quarters with good PRF difference image offsets

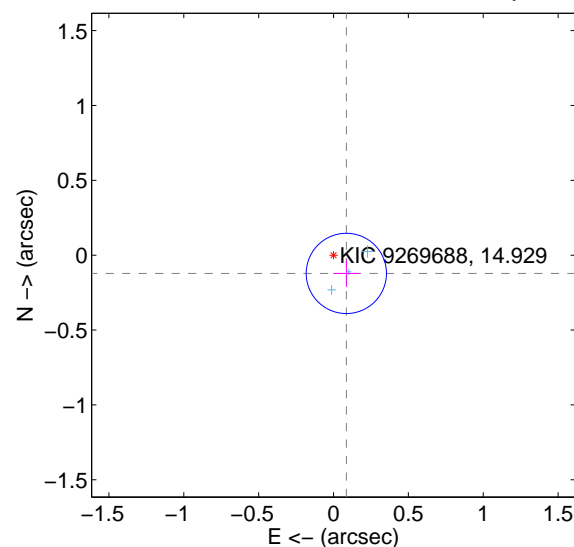
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.016 ± 0.082	0.19	-0.000 ± 0.079	-0.016 ± 0.082
PRF-fit source offset from KIC position	0.149 ± 0.089	1.67	-0.086 ± 0.087	-0.122 ± 0.091
photometric centroid source offset	0.14 ± 0.40	0.35	0.04 ± 0.31	0.14 ± 0.41

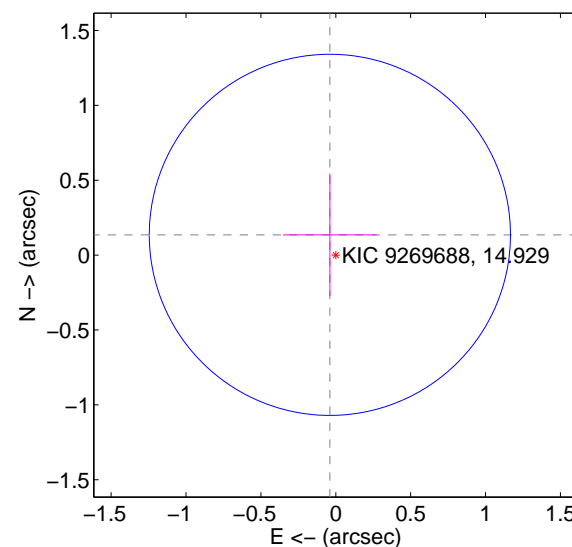
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

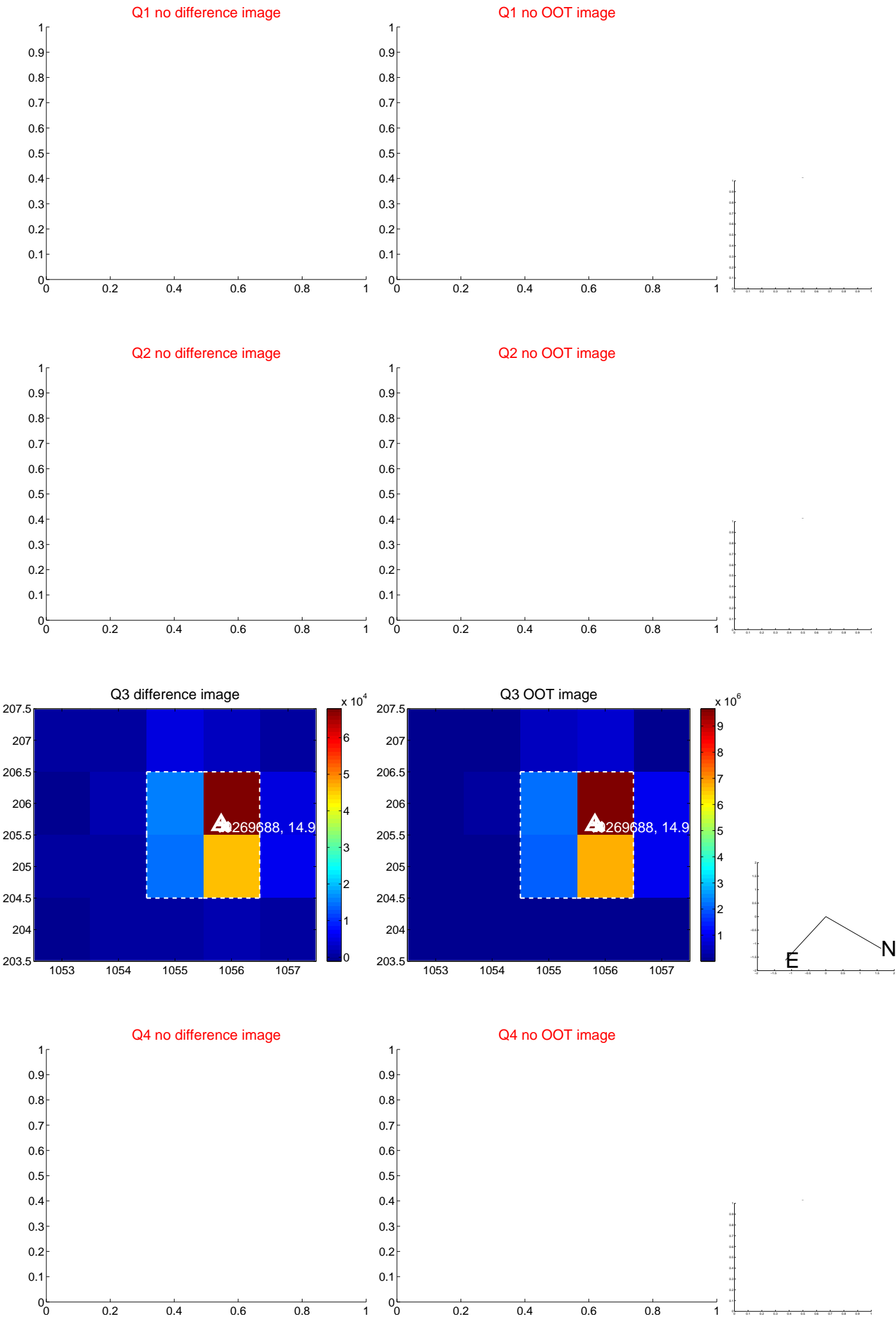


offset from photometric centroids



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.

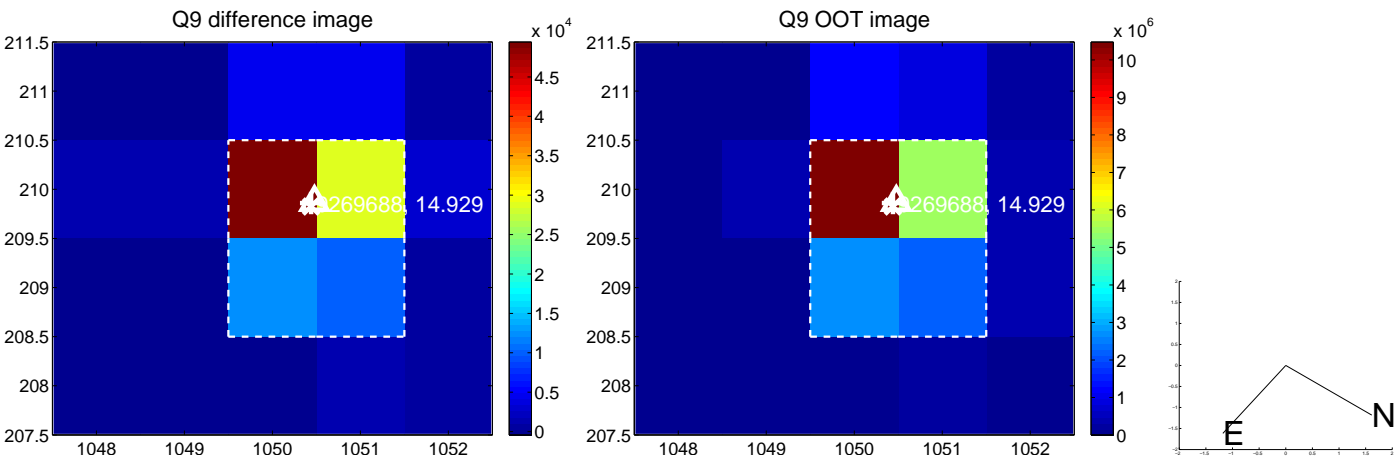
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



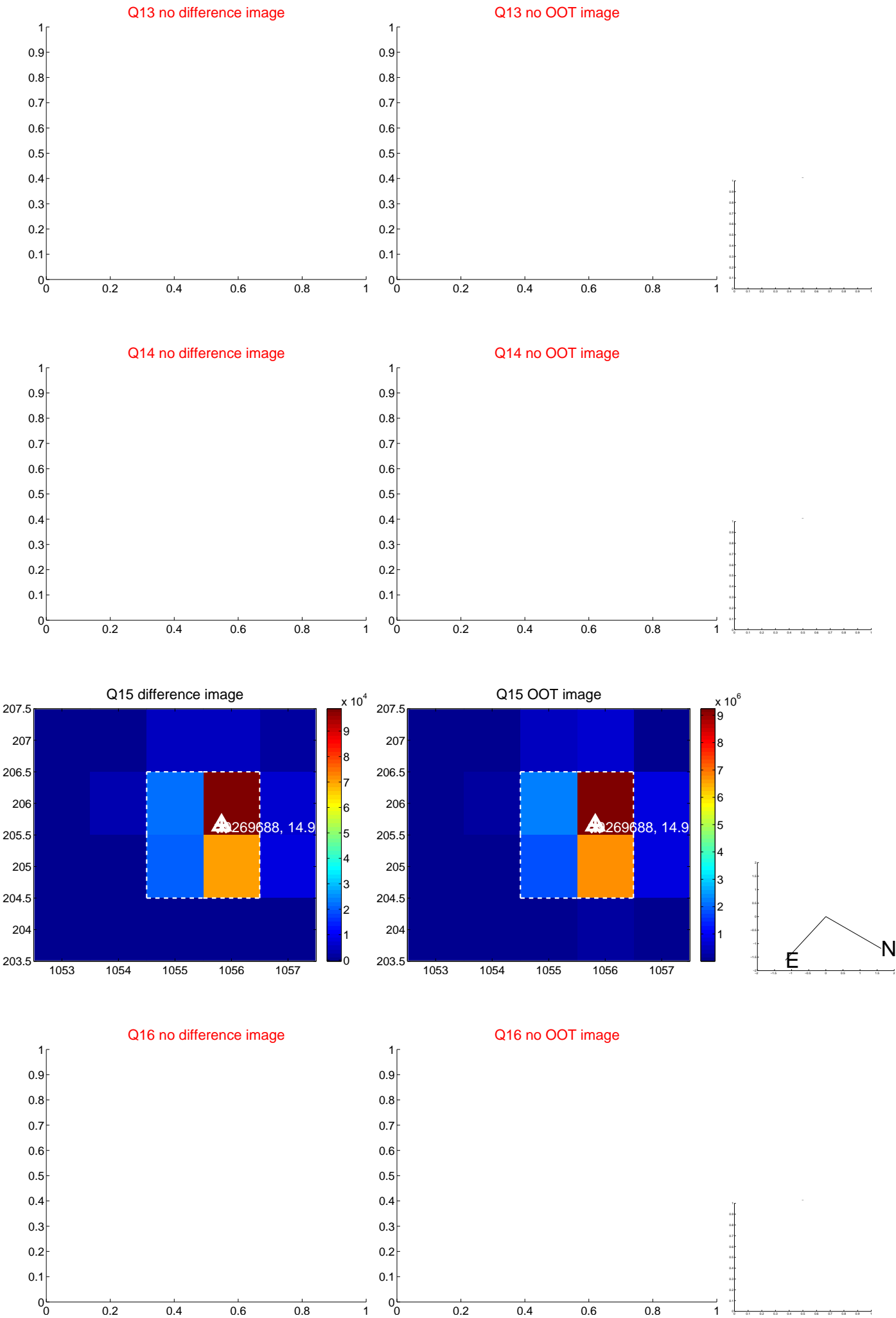
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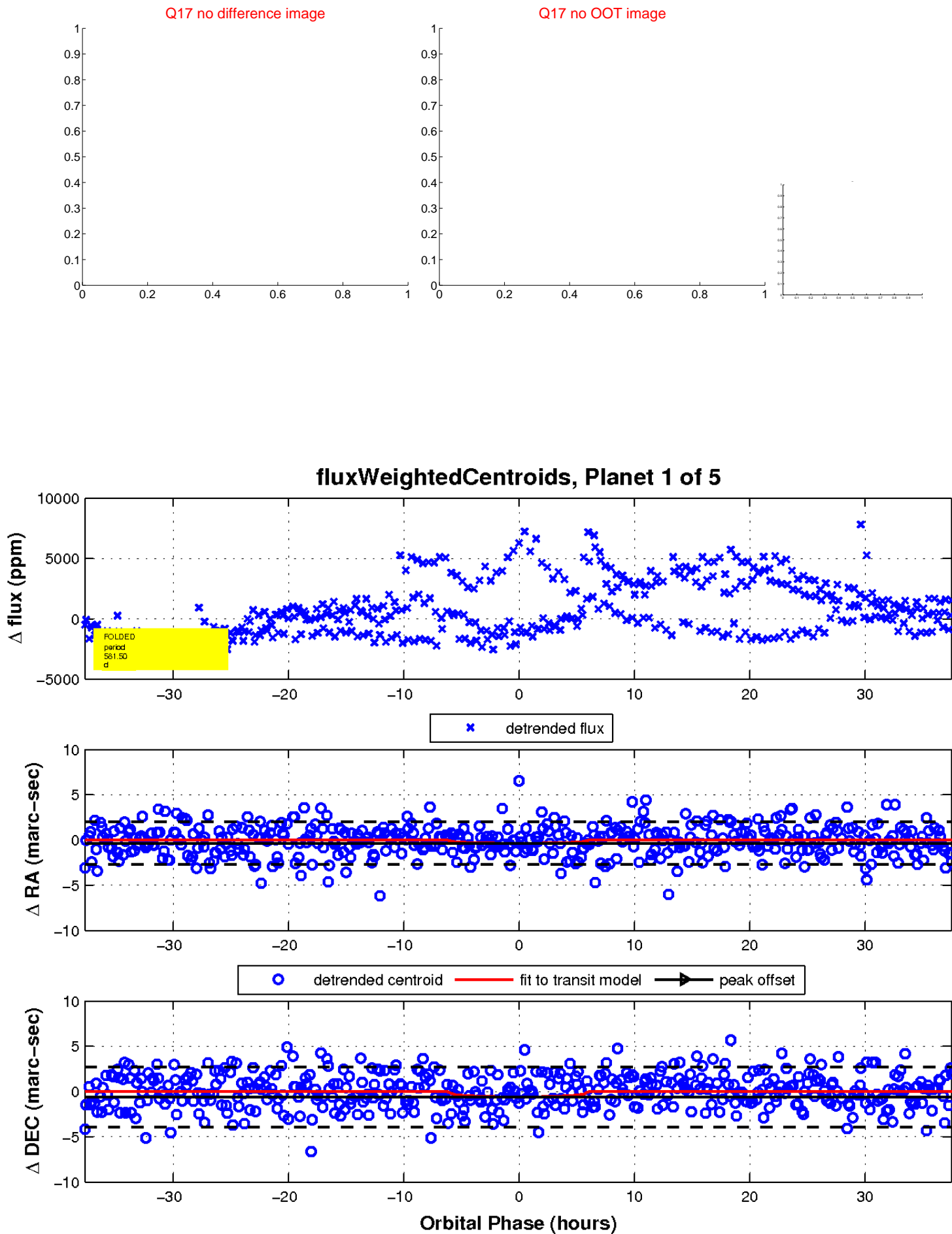
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

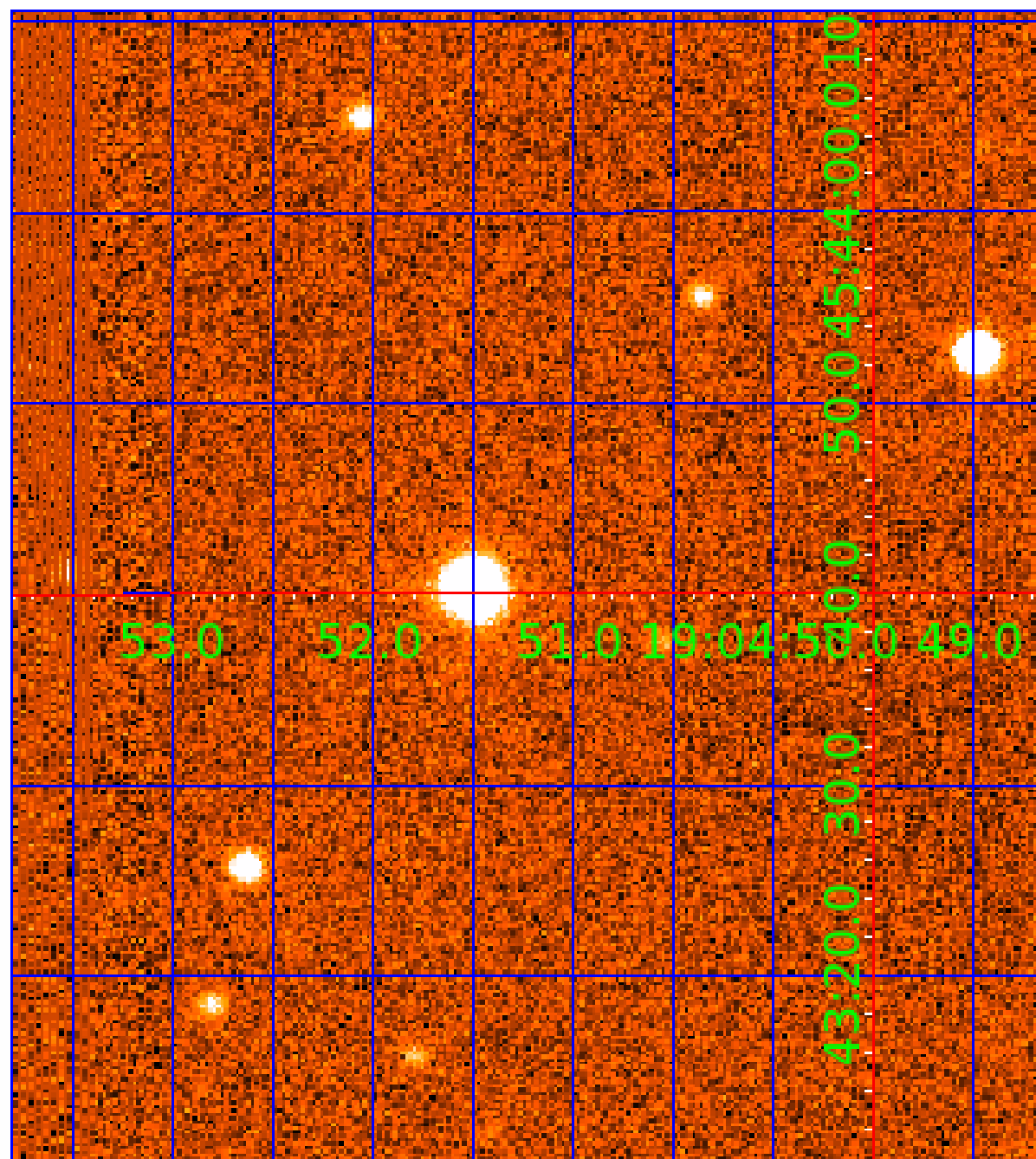


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009269688

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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Robovetter Results

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009269688-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269688-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269688-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

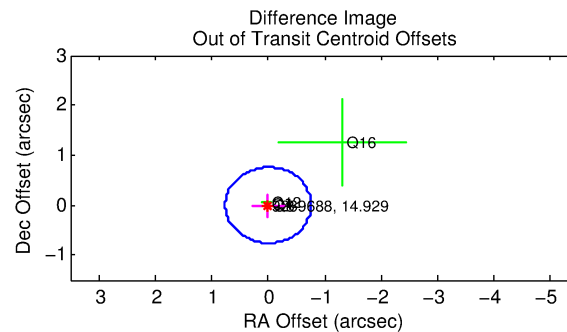
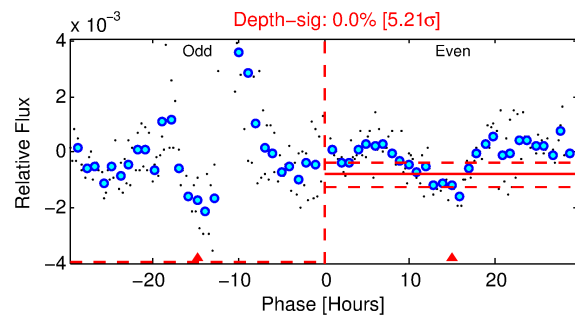
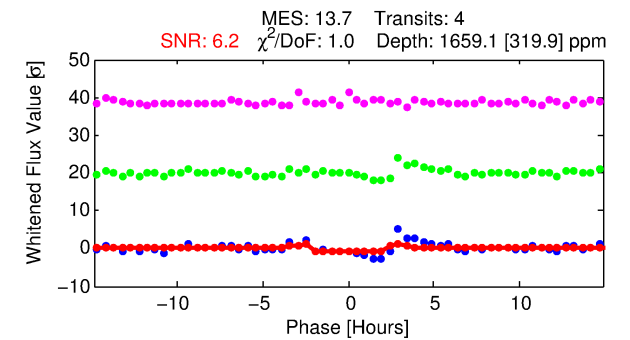
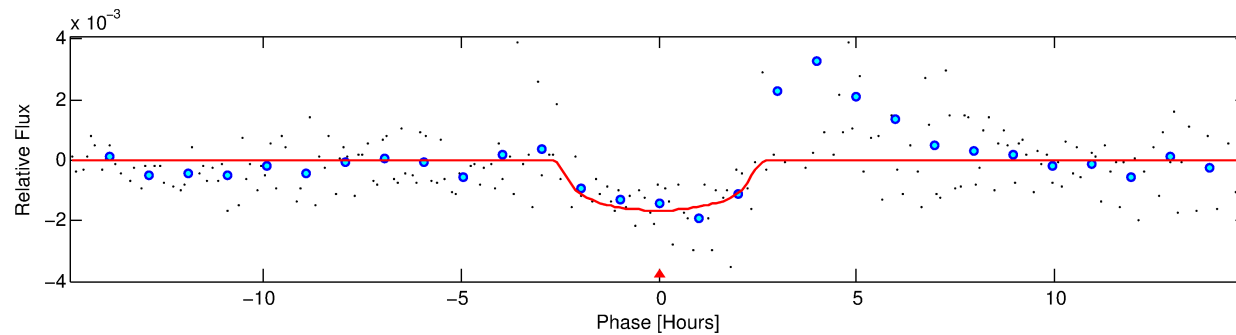
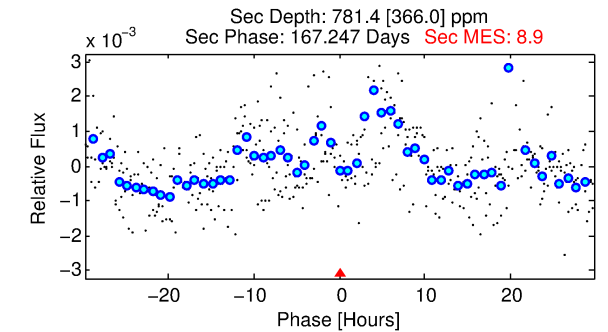
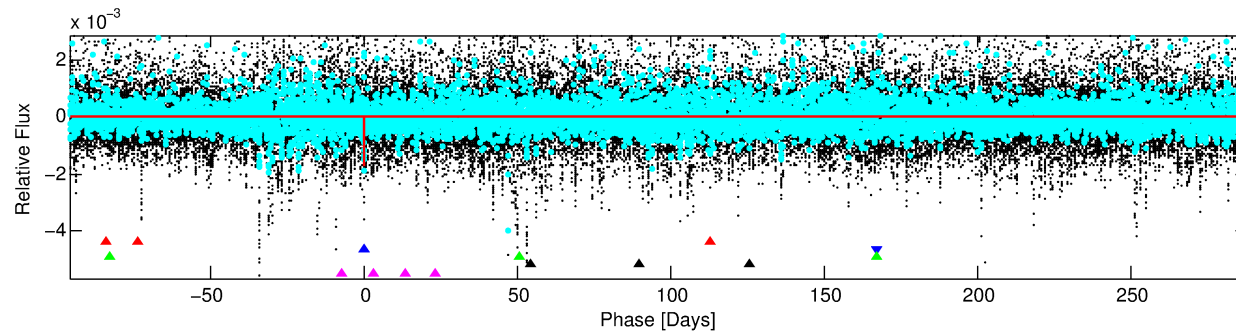
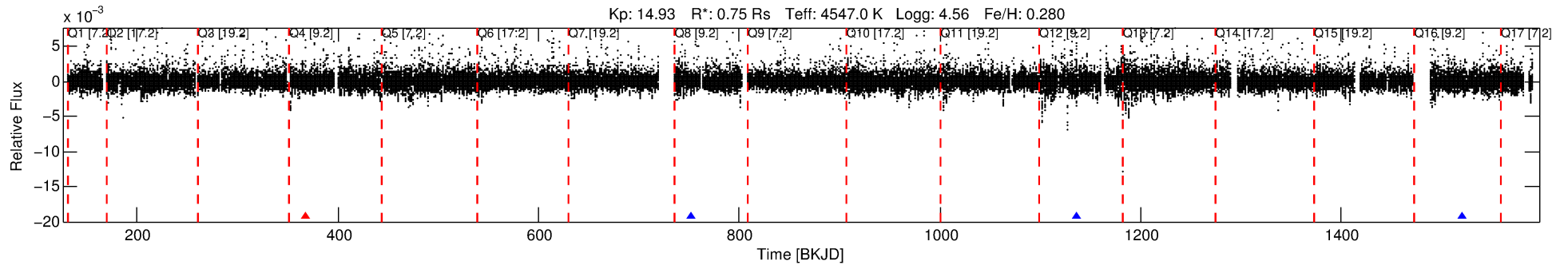
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009269688-02

No Significant Match Found

DV One-Page Summary

KIC: 9269688 Candidate: 2 of 5 Period: 384.188 d



DV Fit Results:

Period = 384.18806 [0.00467] d
Epoch = 367.4294 [0.0101] BKJD
Rp/R* = 0.0365 [0.0377]
a/R* = 569.84 [1704.26]
b = 0.38 [6.86]
Seff = 0.24 [0.04]
Teq = 179 [7] K
Rp = 2.98 [3.08] Re
a = 0.9346 [0.0673] AU
Ag = 42384.13 [89783.63] [0.47 σ]
Teffp = 3979 [2108] K [1.80 σ]

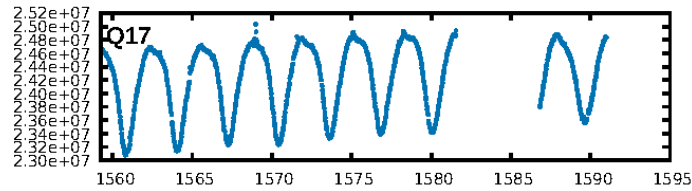
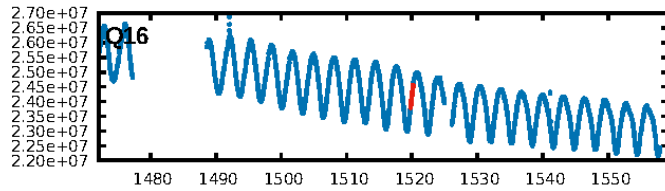
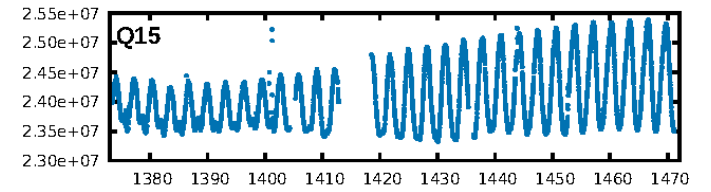
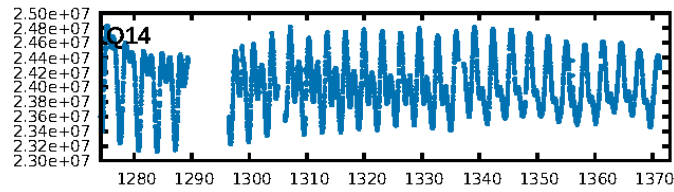
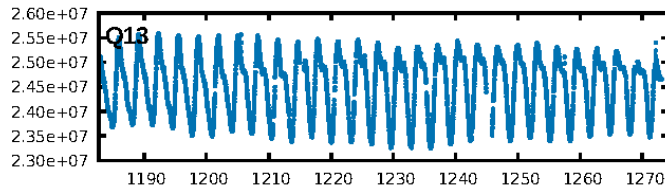
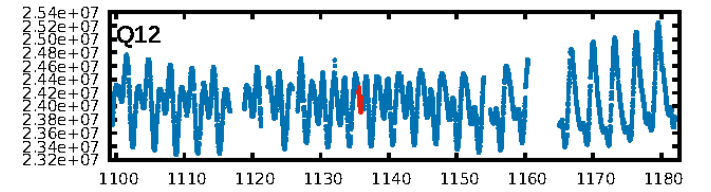
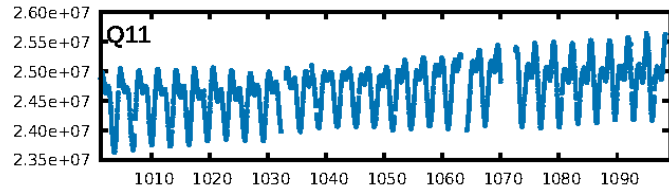
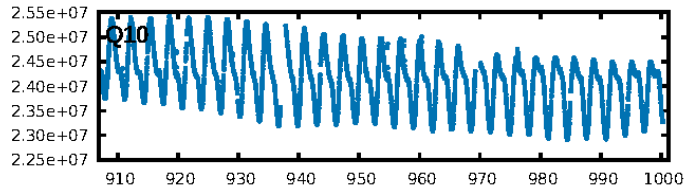
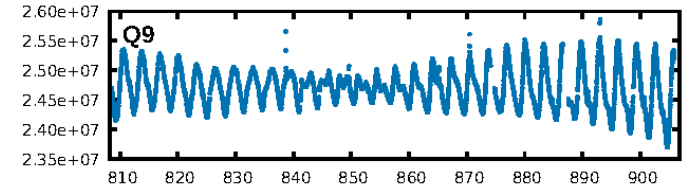
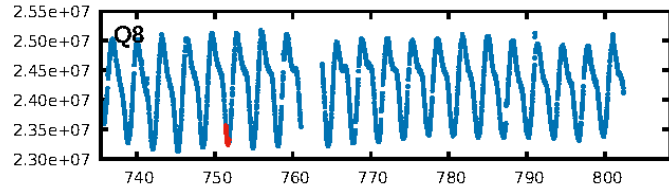
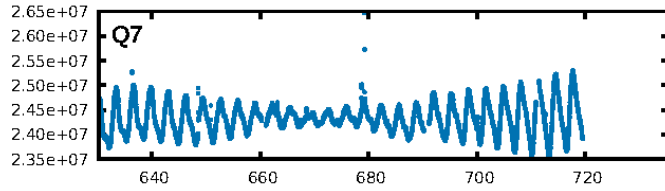
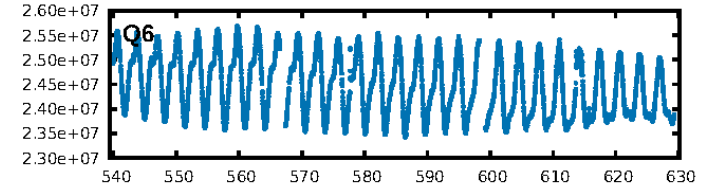
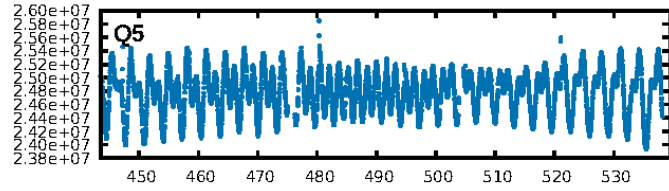
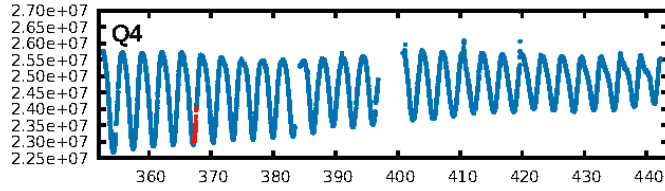
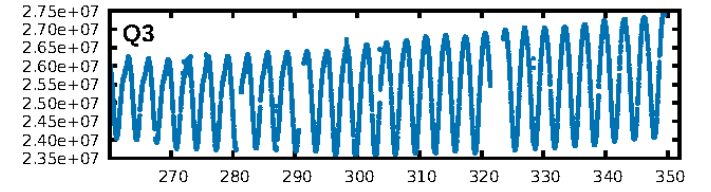
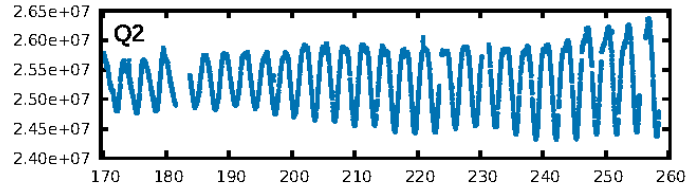
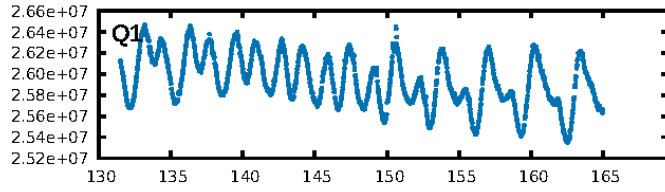
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [42.69 σ]
LongPeriod-sig: 100.0% [154.84 σ]
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 91.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 1.928
Centroid-sig: 58.1%
Centroid-so: 0.561 arcsec [0.92 σ]
OotOffset-rm: 0.003 arcsec [0.01 σ]
OotOffset-st: 0/0/4/0 [4]
KicOffset-rm: 0.160 arcsec [0.62 σ]
KicOffset-st: 0/0/4/0 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

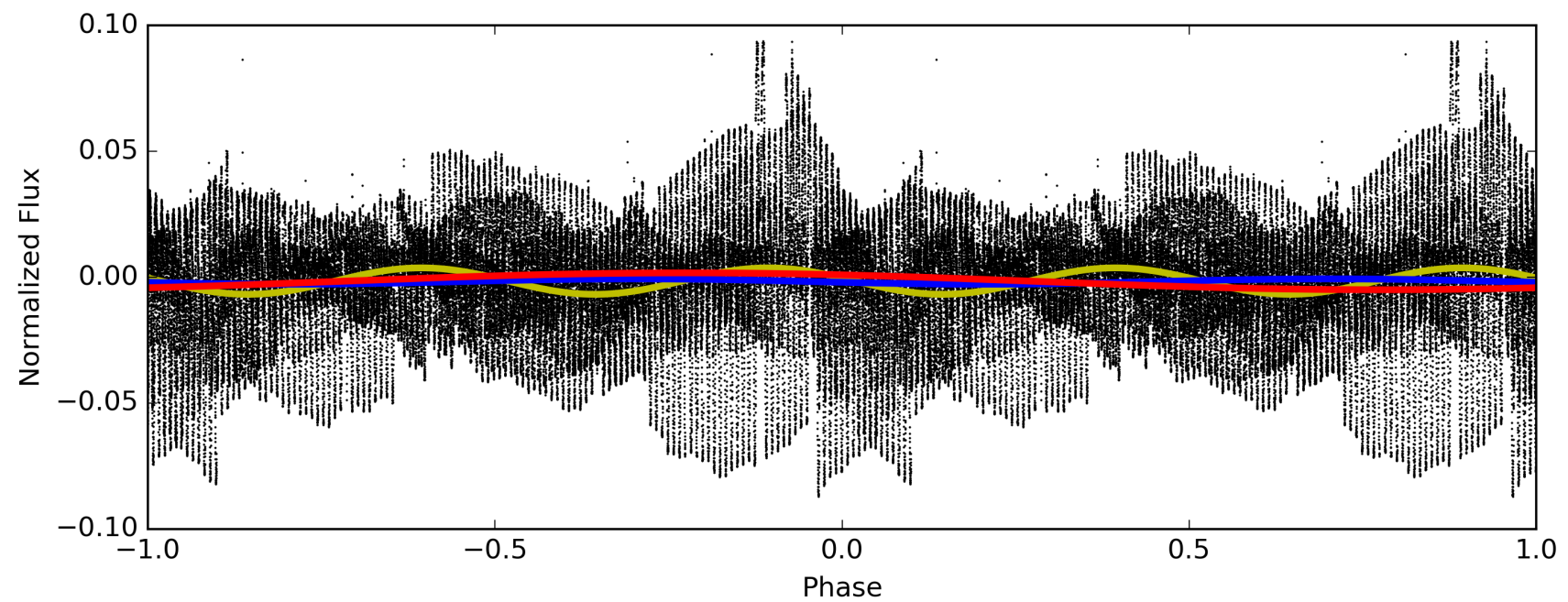
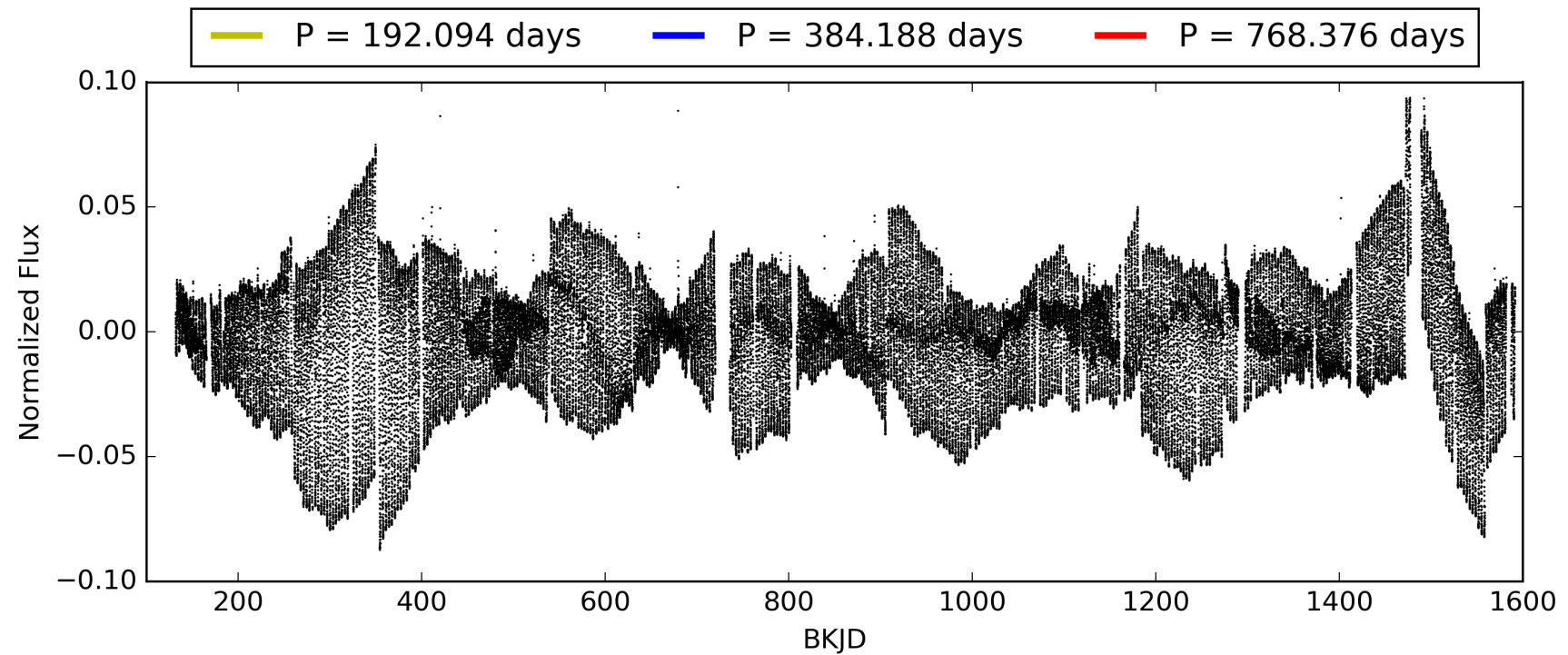
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:00:23 Z

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

TCE 009269688-02, PDC Light Curves

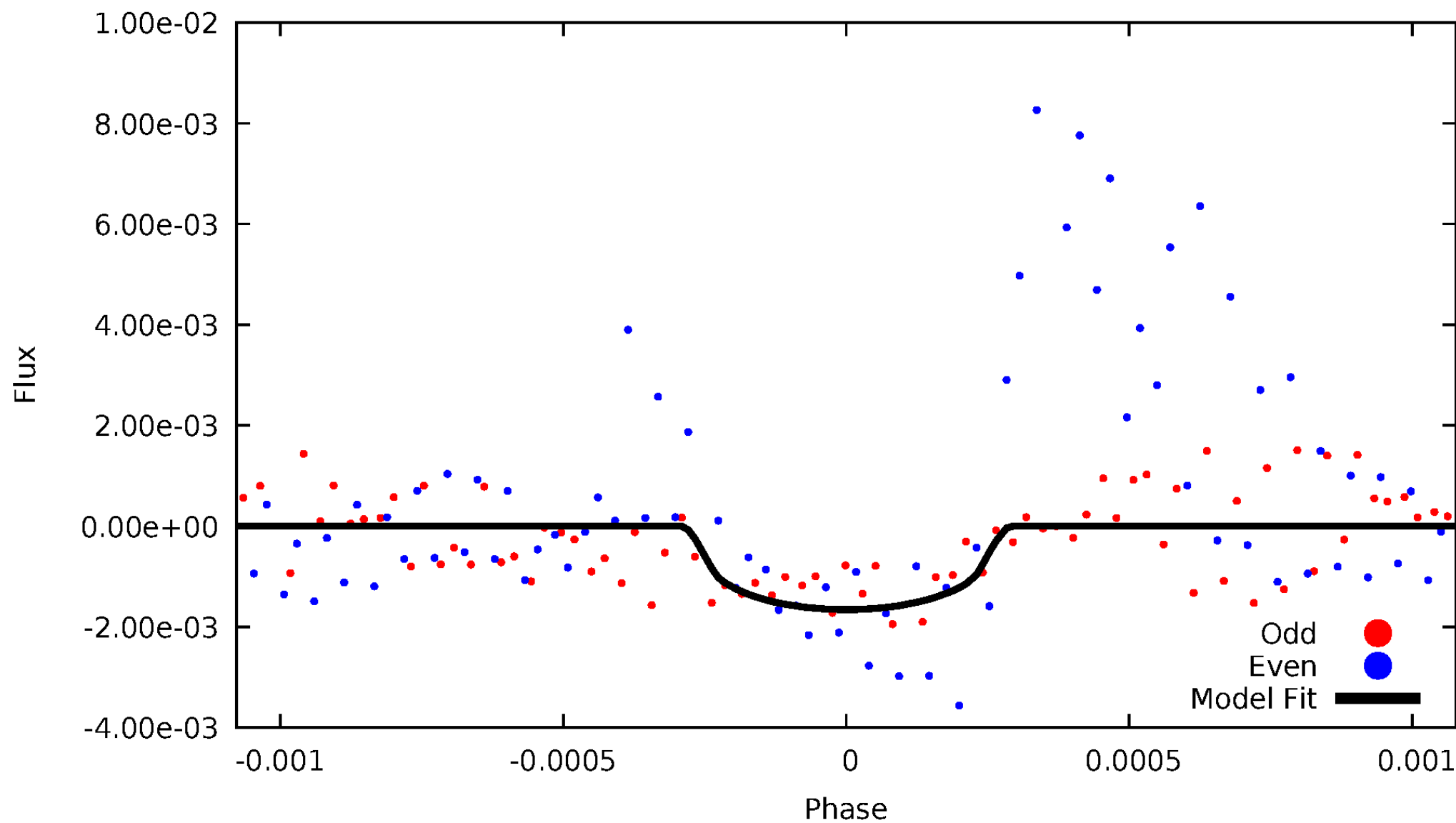


TCE 009269688-02



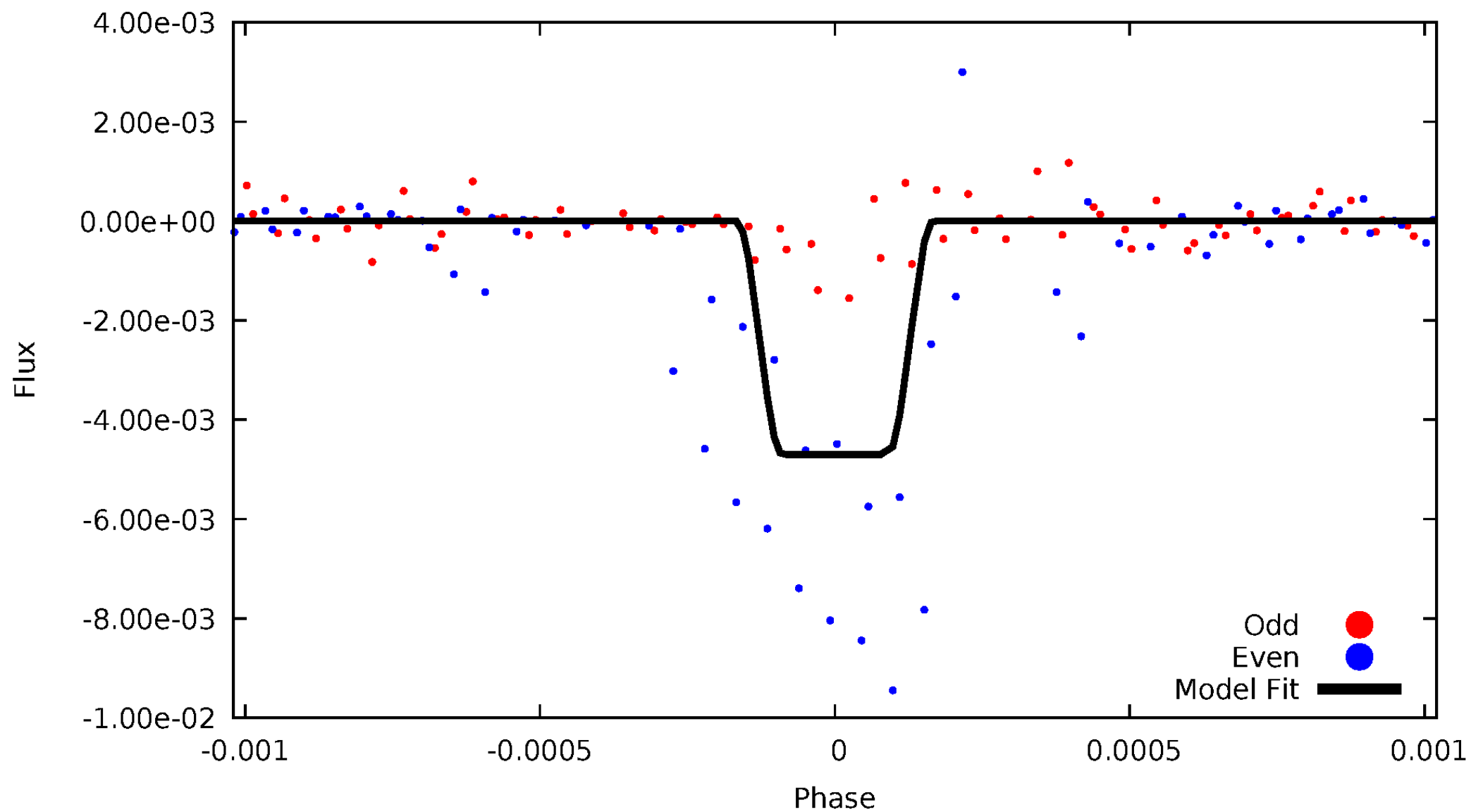
DV Odd/Even

TCE 009269688-02



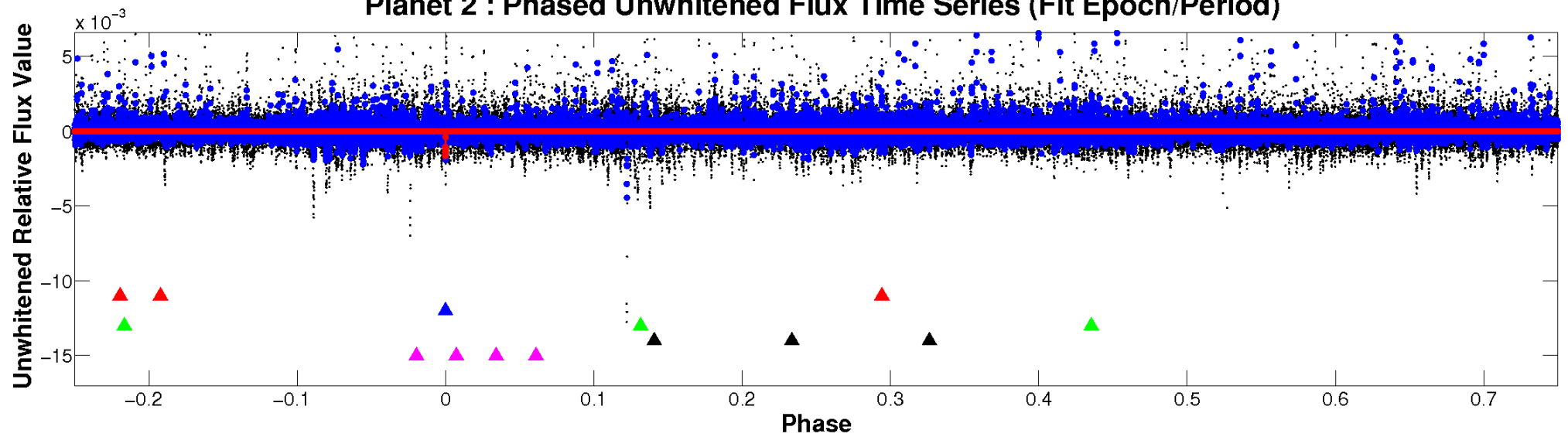
ALT Odd/Even

TCE 009269688-02

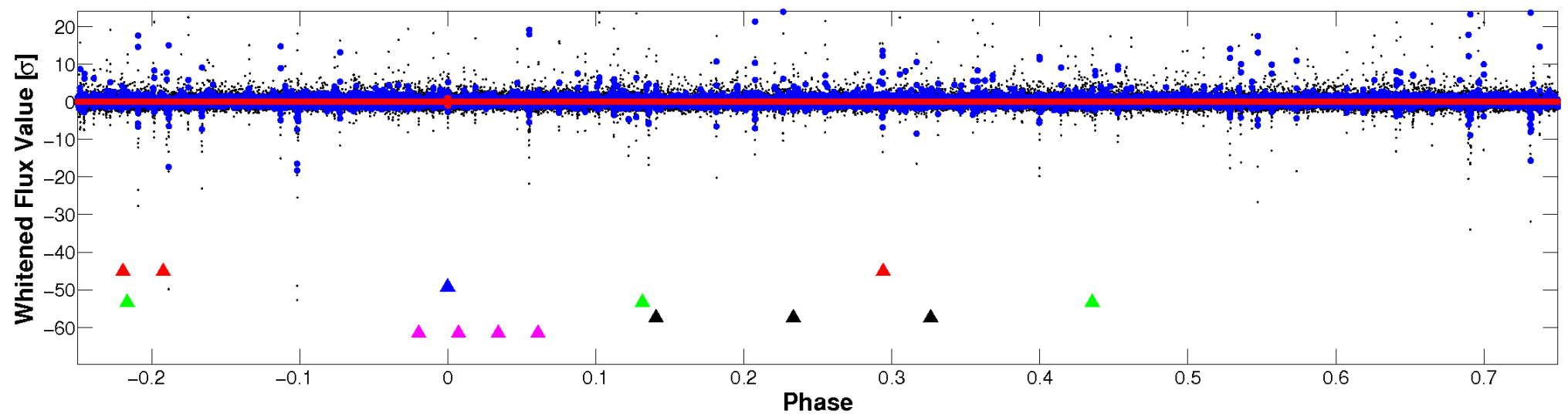


Non-Whitened Vs. Whitened Light Curve

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

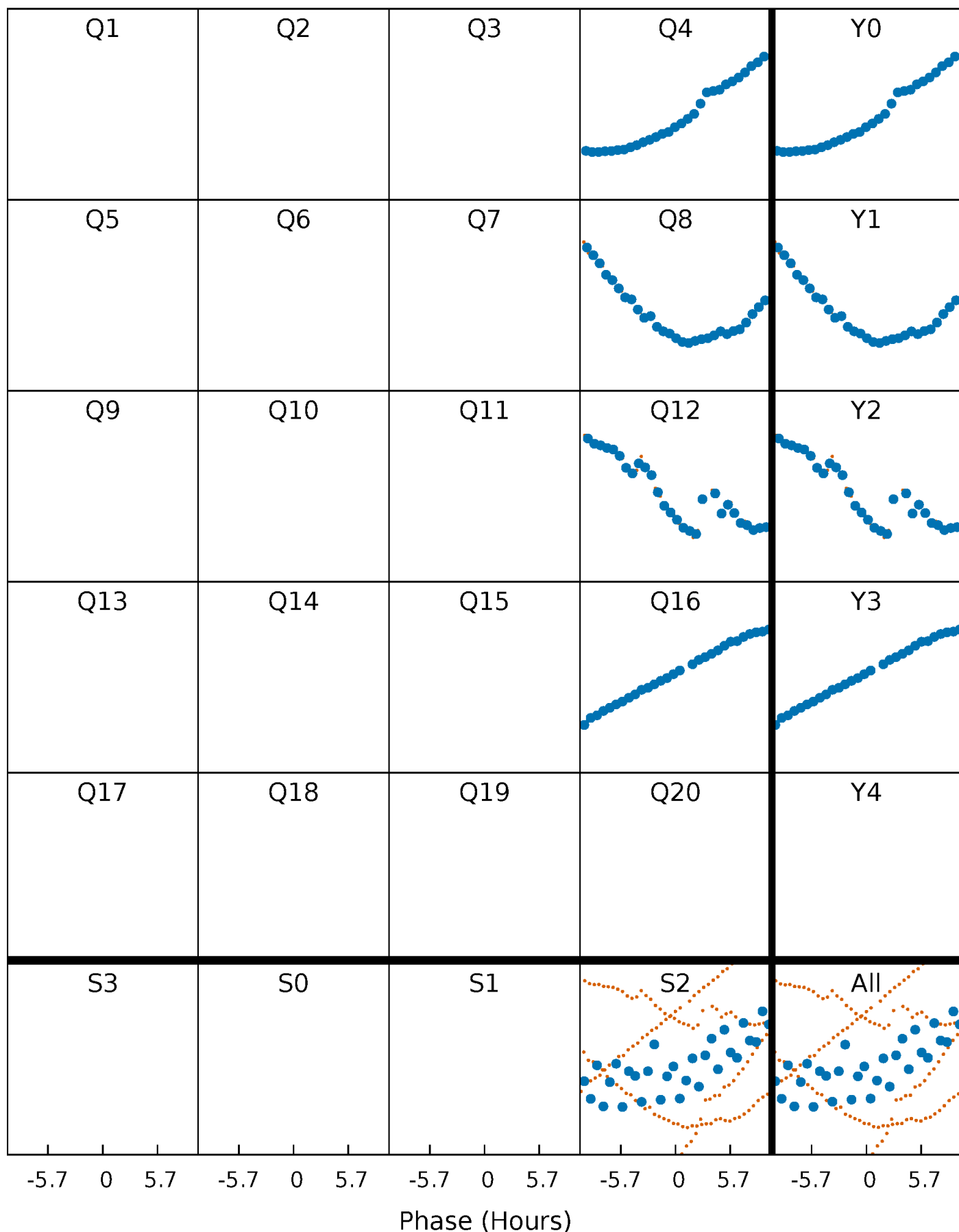


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



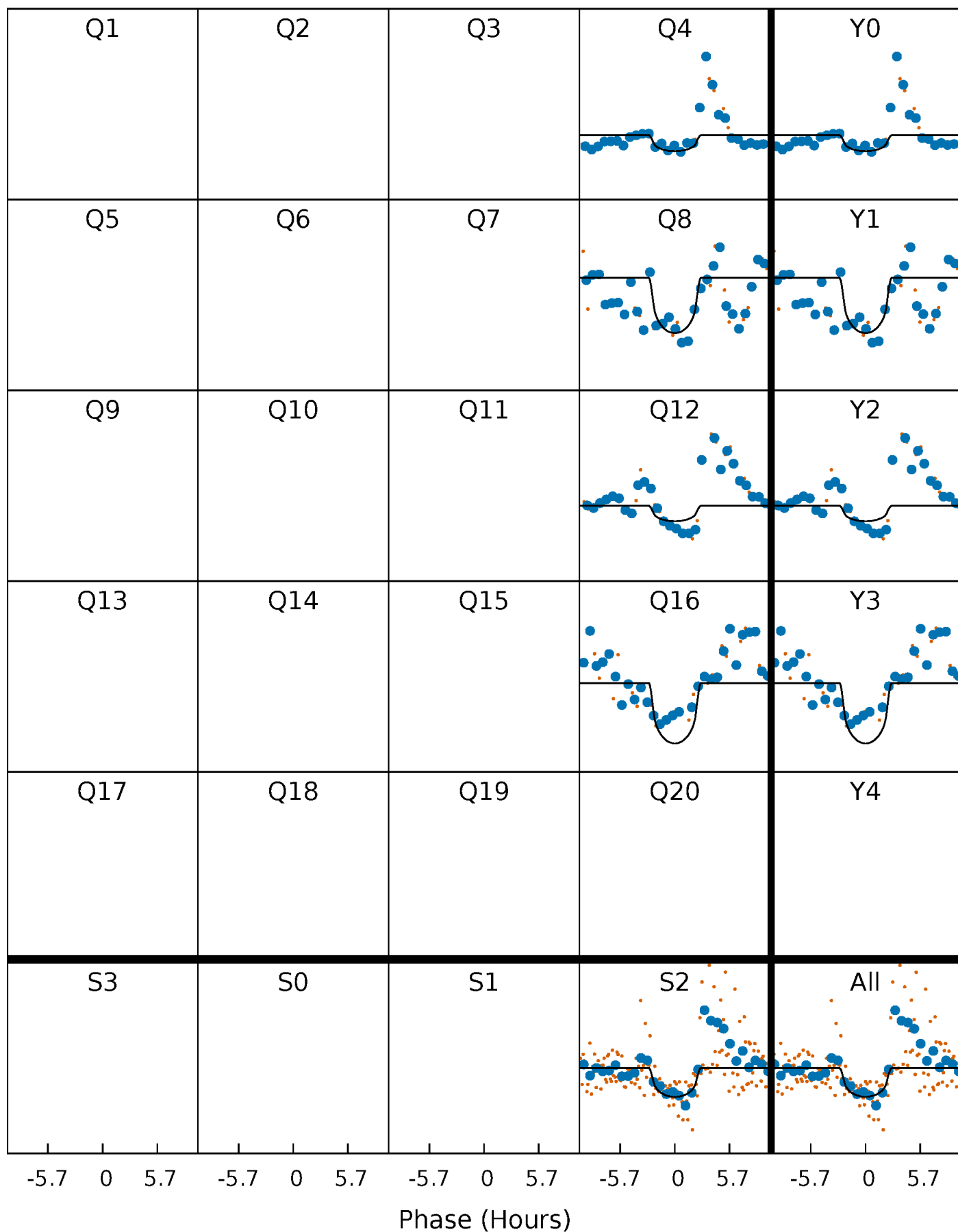
PDC Quarter-Phased Transit Curves

TCE 009269688-02 $P=384.188063$ Days $T_0=367.429381$ (BKJD)



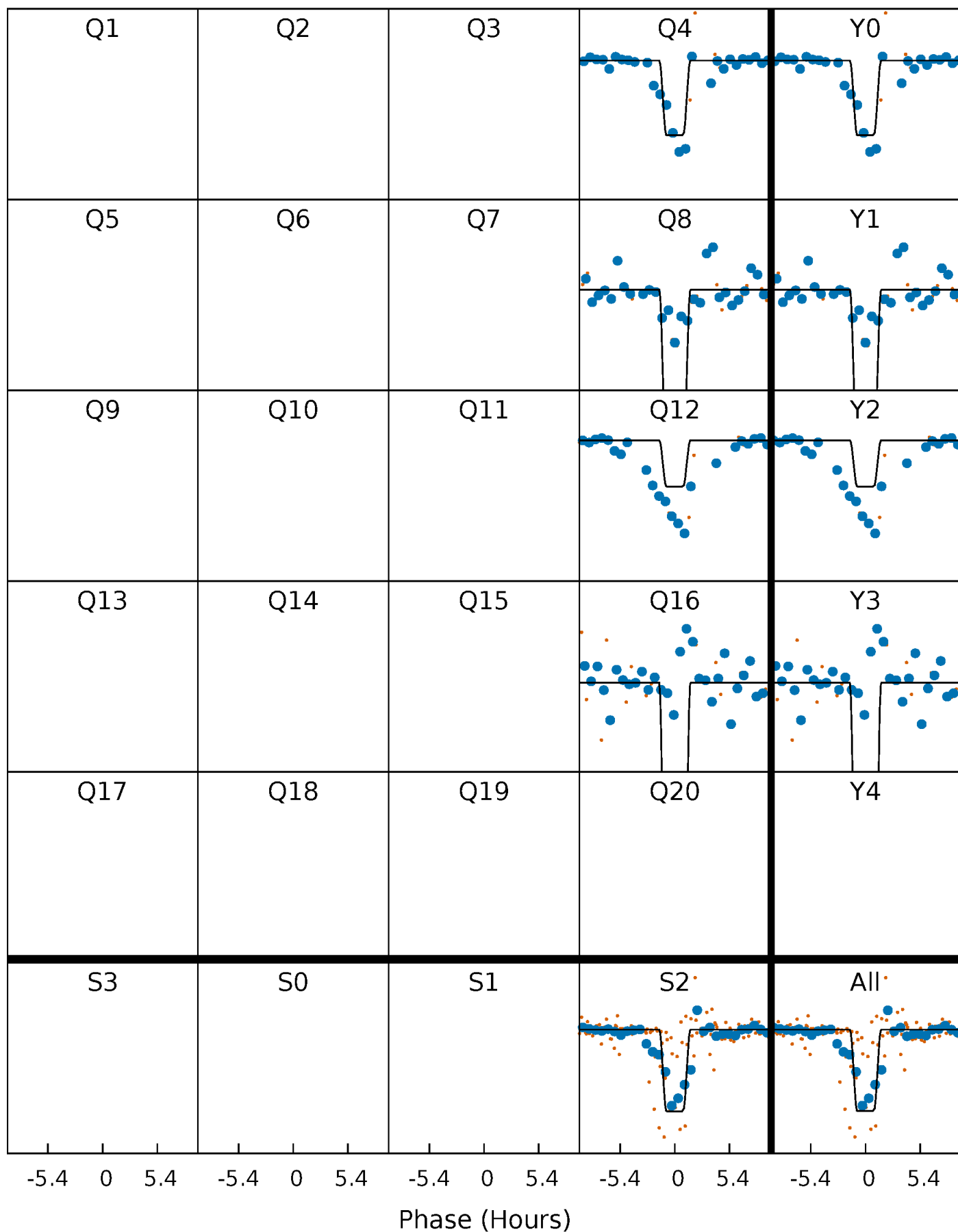
DV Quarter-Phased Transit Curves

TCE 009269688-02 $P=384.188063$ Days $T_0=367.429381$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

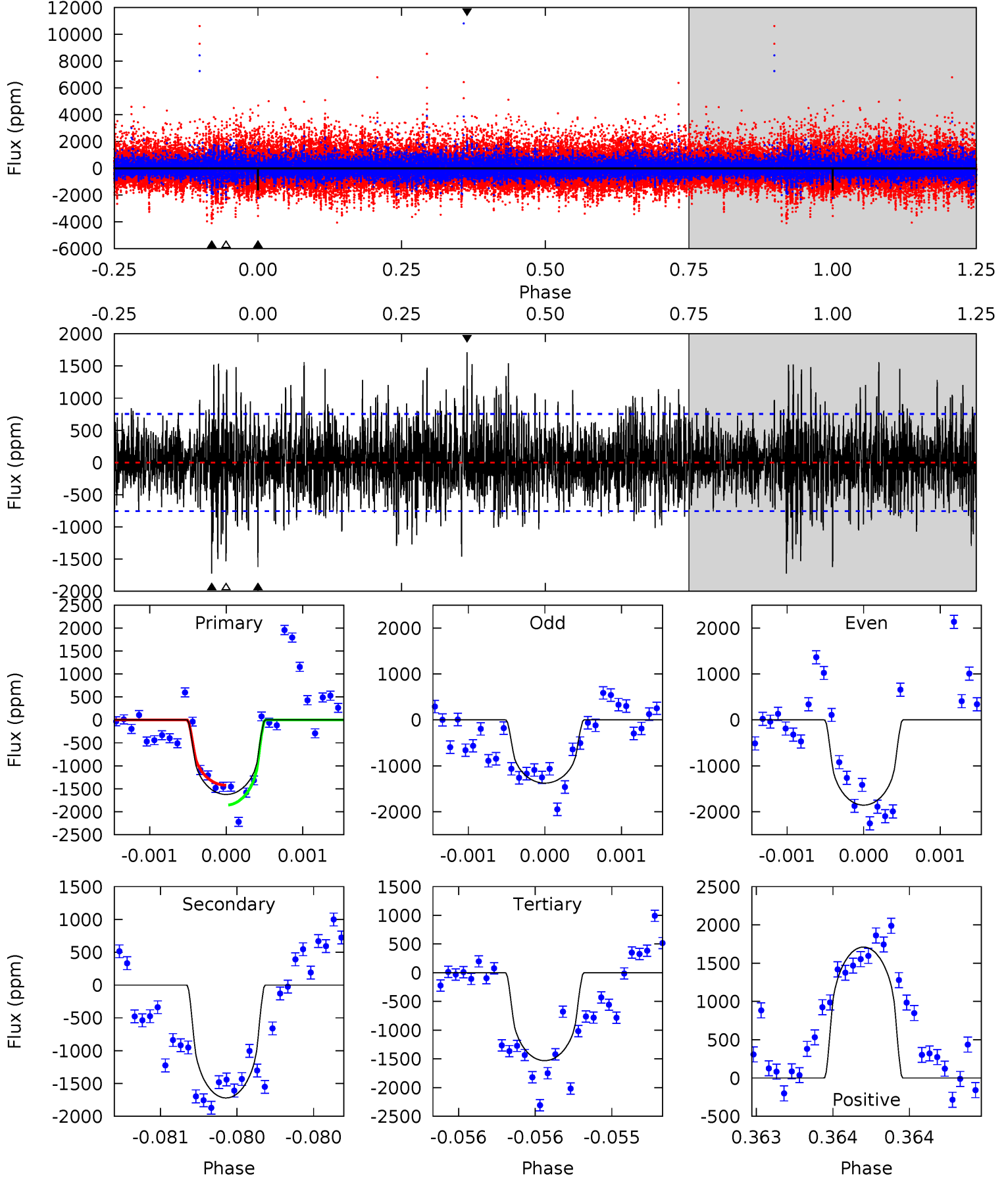
TCE 009269688-02 $P=384.184441$ Days $T_0=367.475516$ (BKJD)



DV Model-Shift Uniqueness Test

009269688-02, P = 384.188063 Days, E = 367.429381 Days

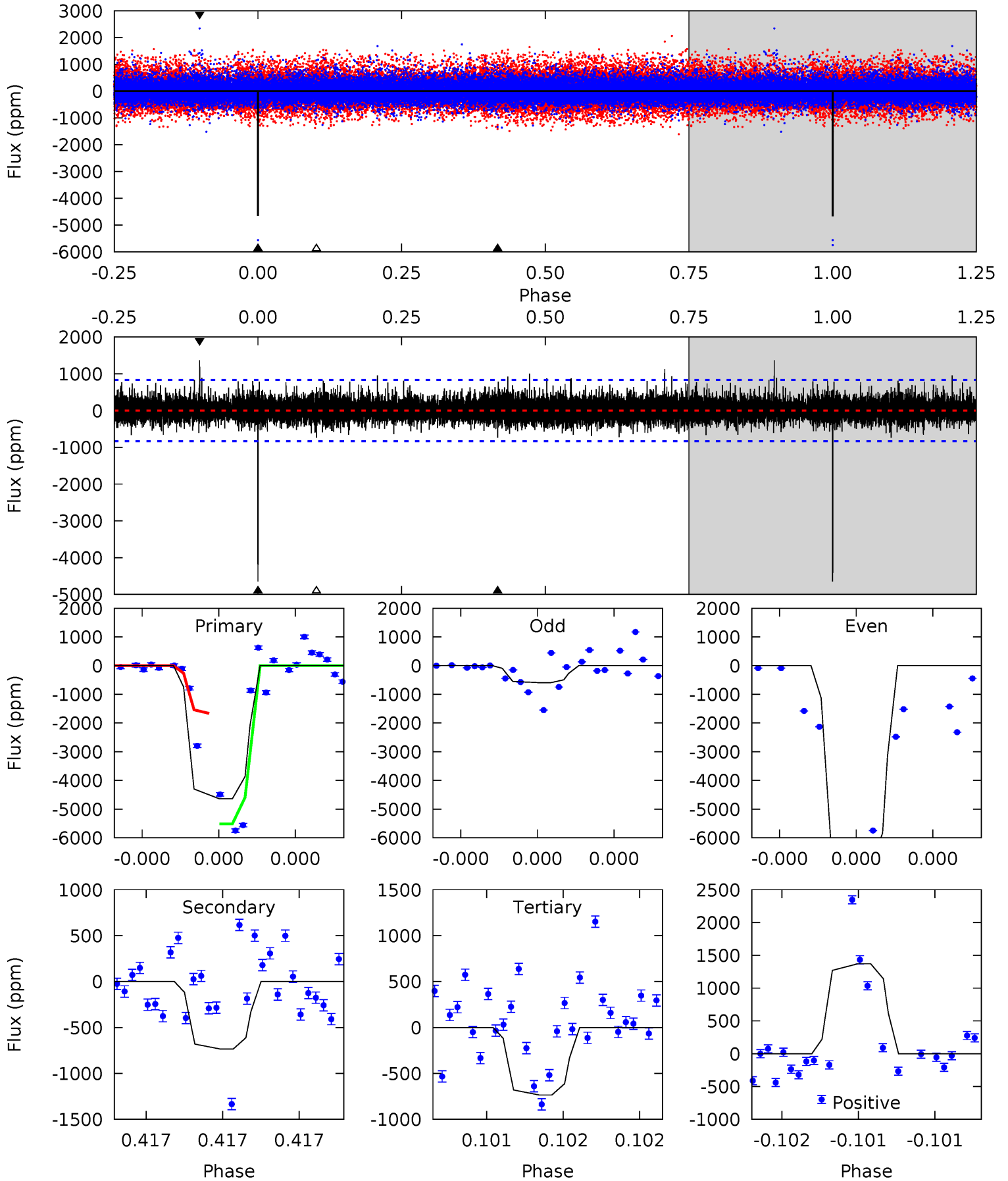
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	12.7	11.3	12.6	5.55	3.44	2.89	0.69	-0.64	1.40	0.08	1.58	1.09	0.50	1.59



Alt Model-Shift Uniqueness Test

009269688-02, P = 384.184441 Days, E = 367.475516 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.5	4.99	4.99	9.31	5.65	3.60	1.23	26.5	22.2	0.00	-4.32	38.0	1.20	0.23	0



Stellar Parameters For KIC 009269688

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4547^{+137}_{-137}	$4.559^{+0.060}_{-0.020}$	$0.280^{+0.150}_{-0.300}$	$0.747^{+0.026}_{-0.062}$	$0.737^{+0.048}_{-0.048}$	$2.493^{+0.631}_{-0.181}$
	+3%/-3%	+1%/-0%	+54%/-107%	+3%/-8%	+7%/-7%	+25%/-7%
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 009269688-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1721 ± 136	$3.69^{+2.67}_{-2.26}$	248^{+8}_{-9}	4410^{+2364}_{-811}	$61790^{+345574}_{-41699}$
Alt.	-735 ± 147	$5.49^{+3.07}_{-2.67}$	249^{+8}_{-9}	3346^{+773}_{-433}	12416^{+33490}_{-7617}

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

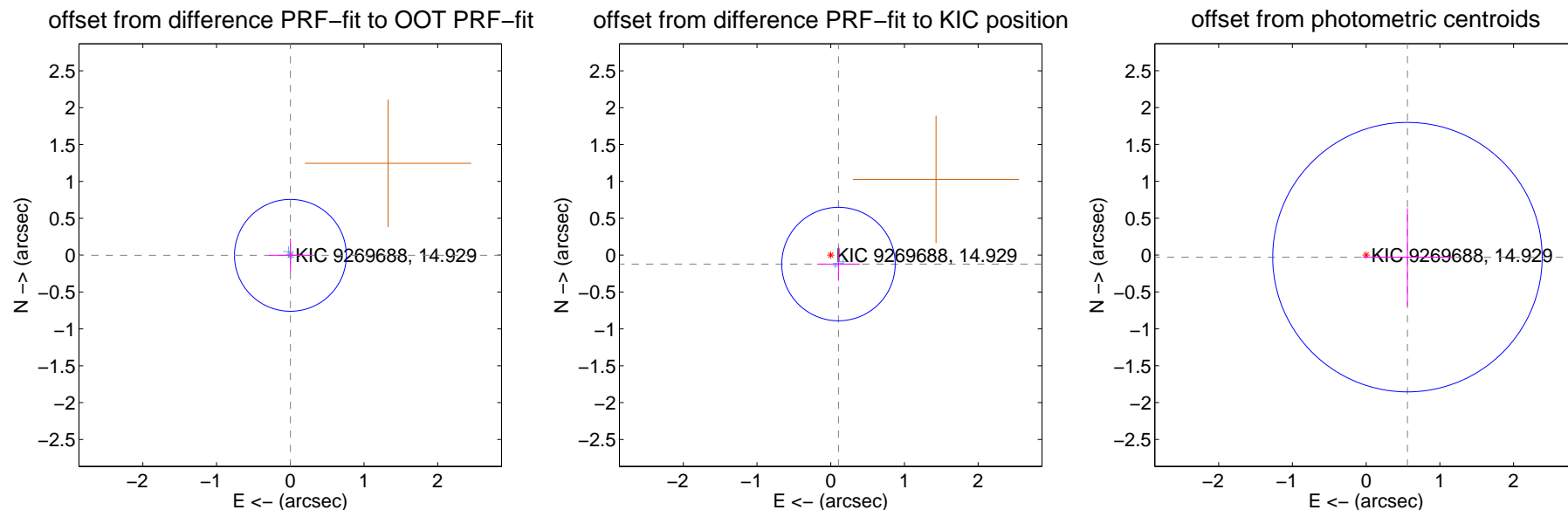
DV Centroid Data

Supplemental centroid analysis for 009269688-02. Kepler magnitude: 14.93. Transit SNR 6.20

There are 3 quarters with good PRF difference image offsets

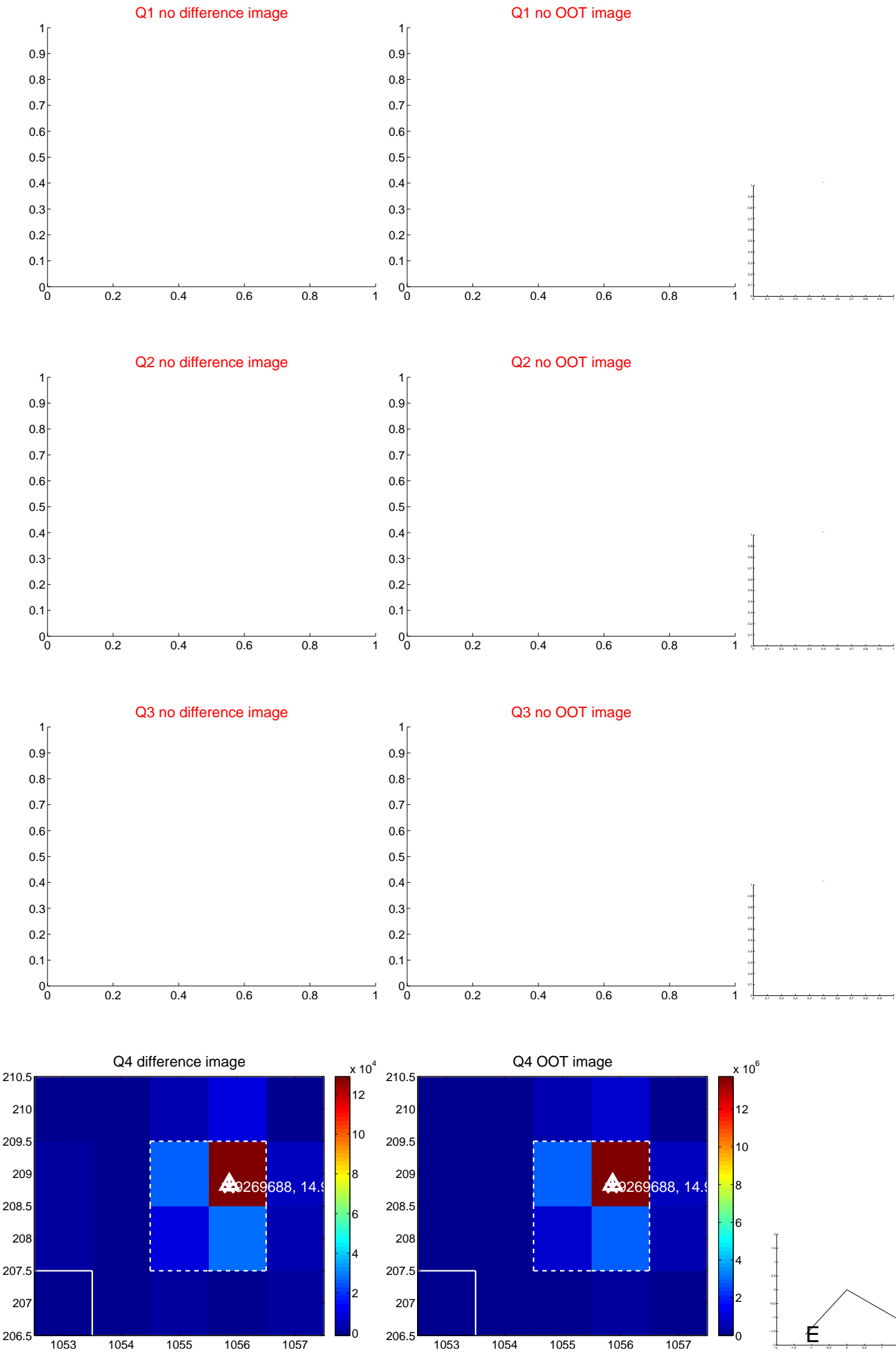
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.003 ± 0.253	0.01	-0.002 ± 0.291	-0.003 ± 0.227
PRF-fit source offset from KIC position	0.160 ± 0.256	0.62	-0.105 ± 0.291	-0.121 ± 0.227
photometric centroid source offset	0.56 ± 0.61	0.92	-0.56 ± 0.61	-0.03 ± 0.66

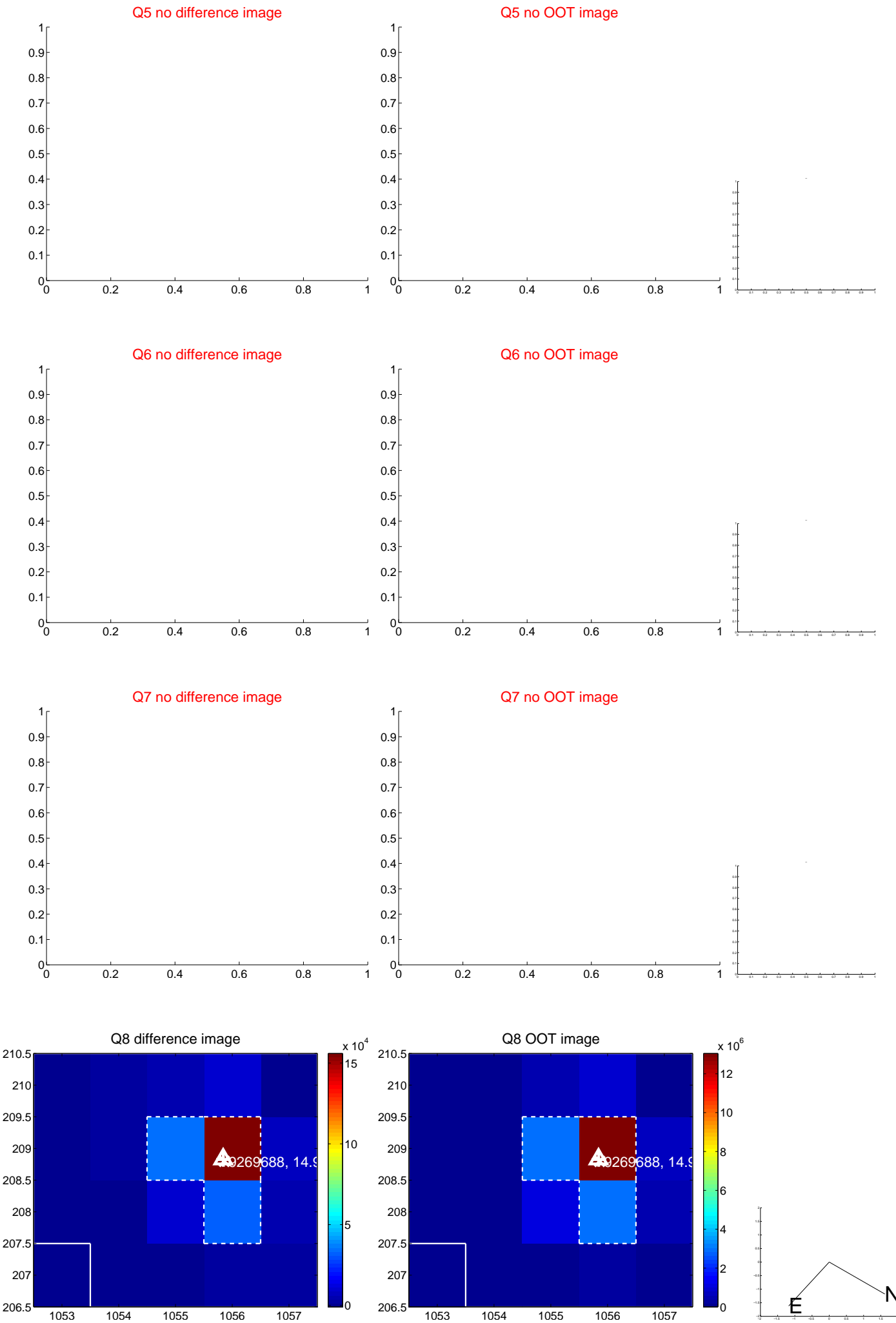


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

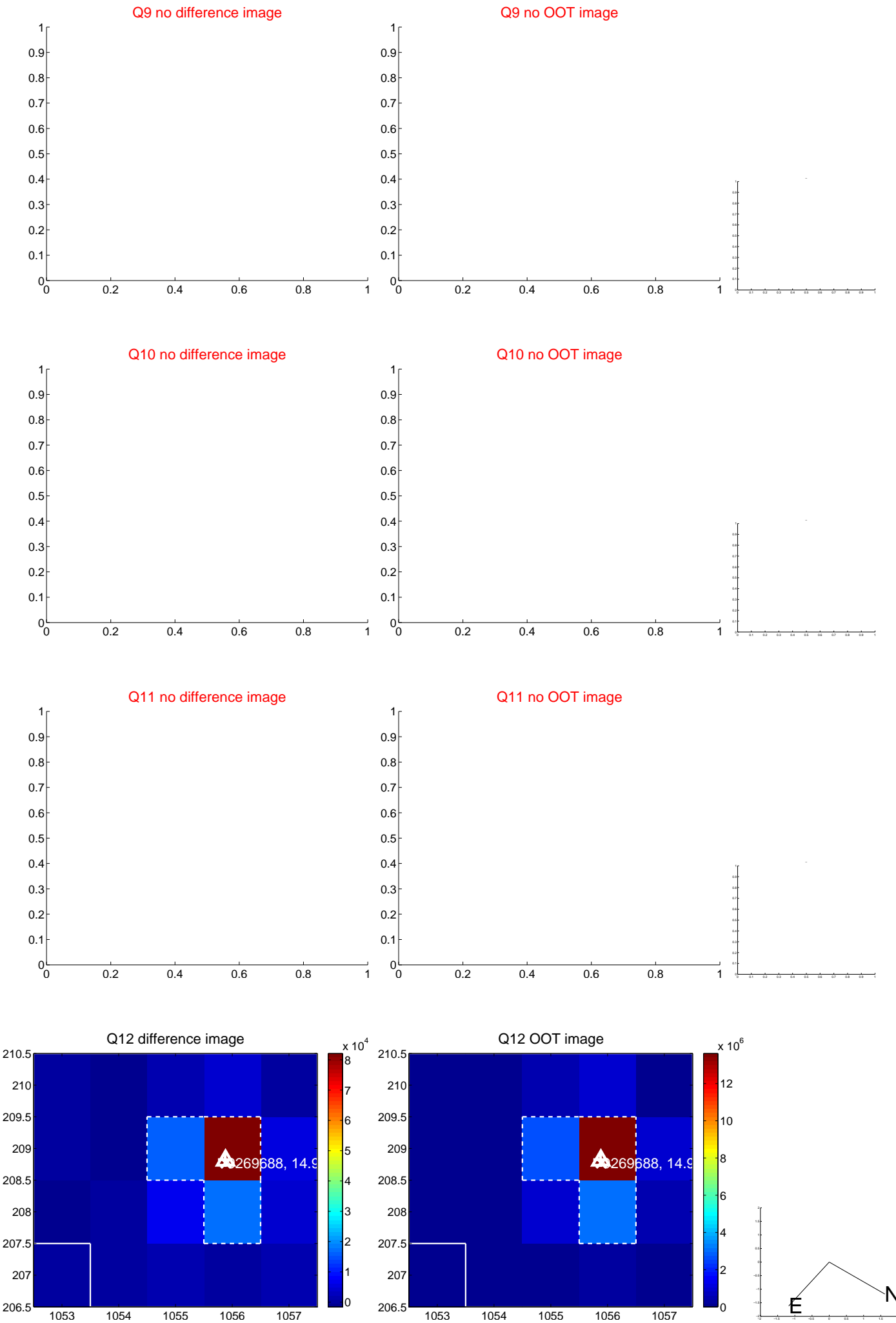
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



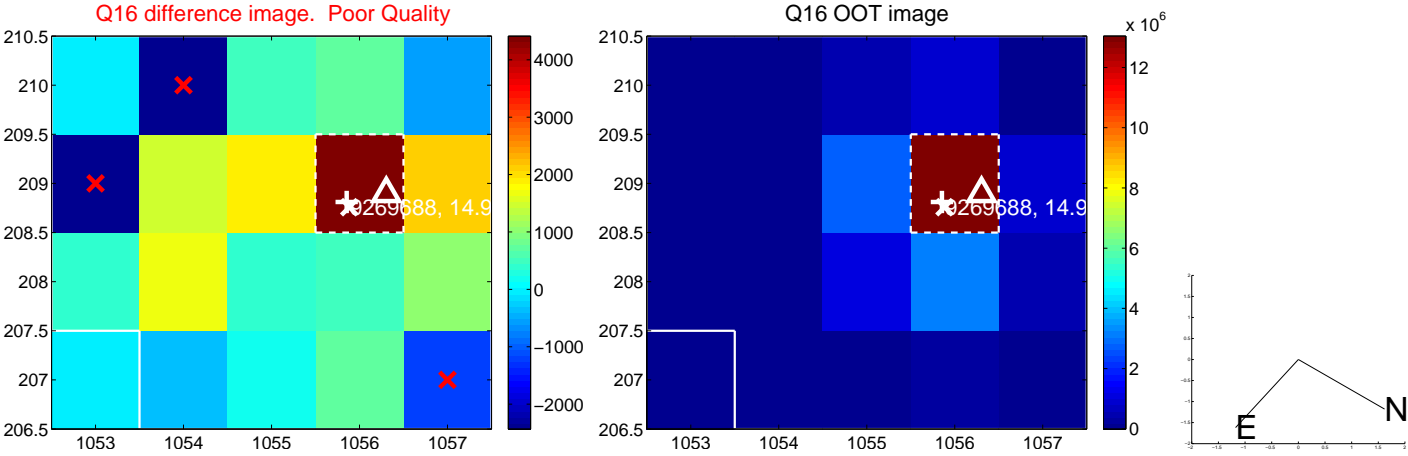
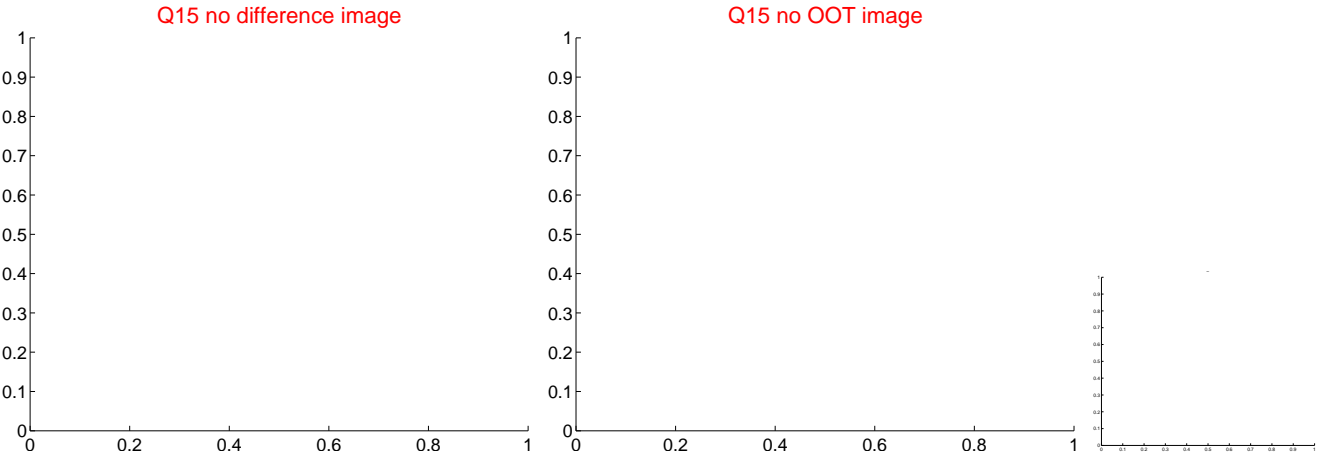
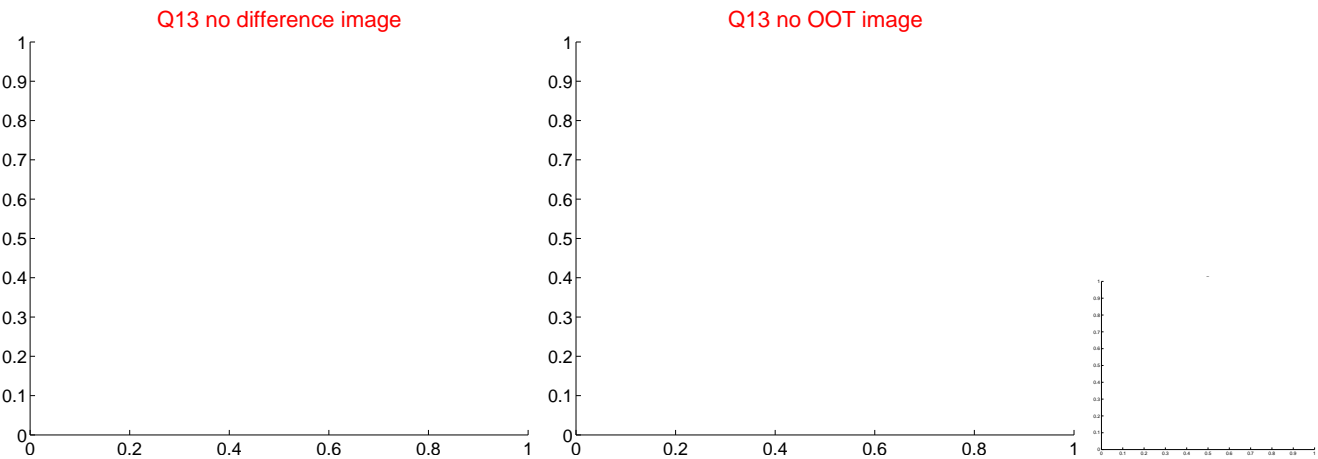
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



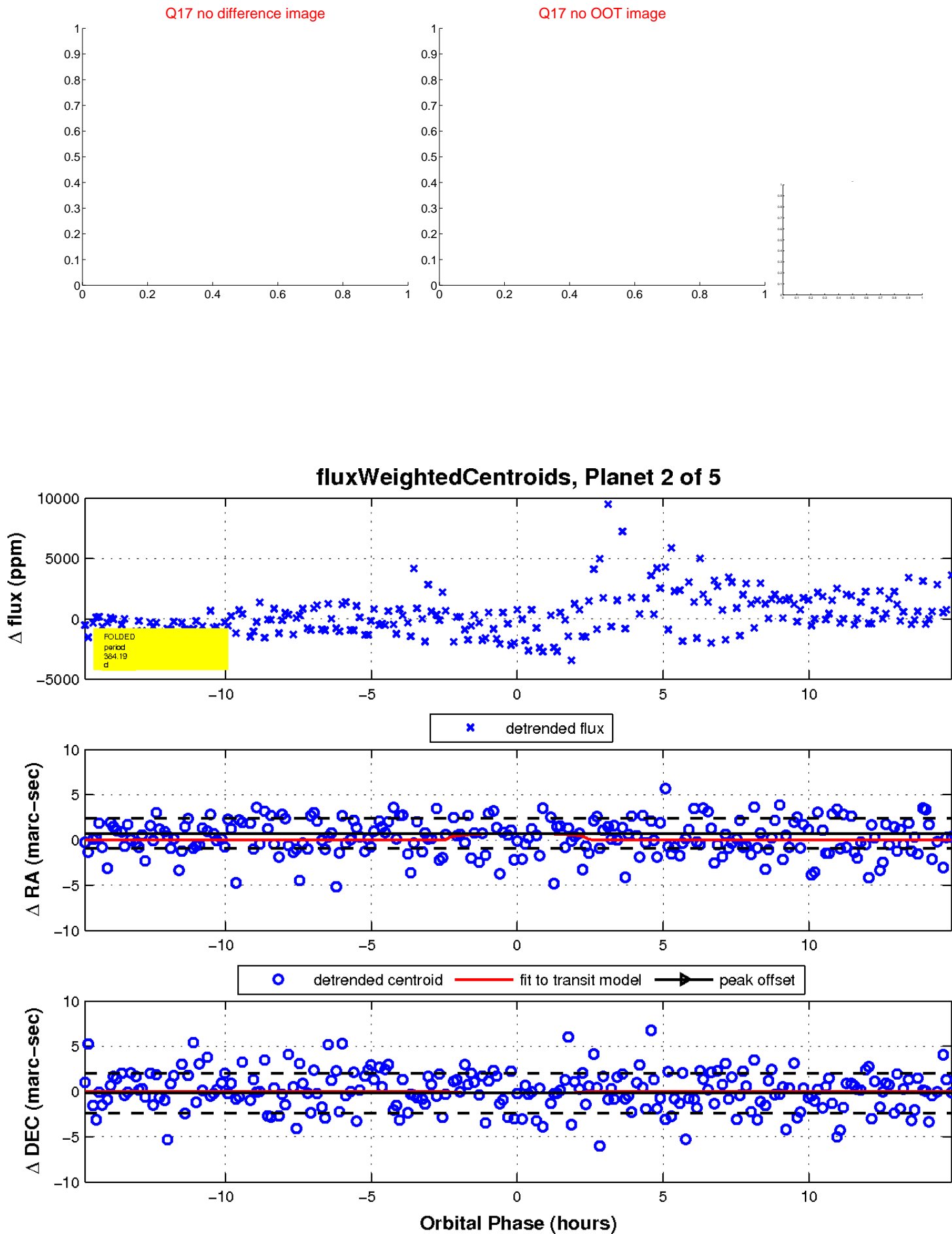
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

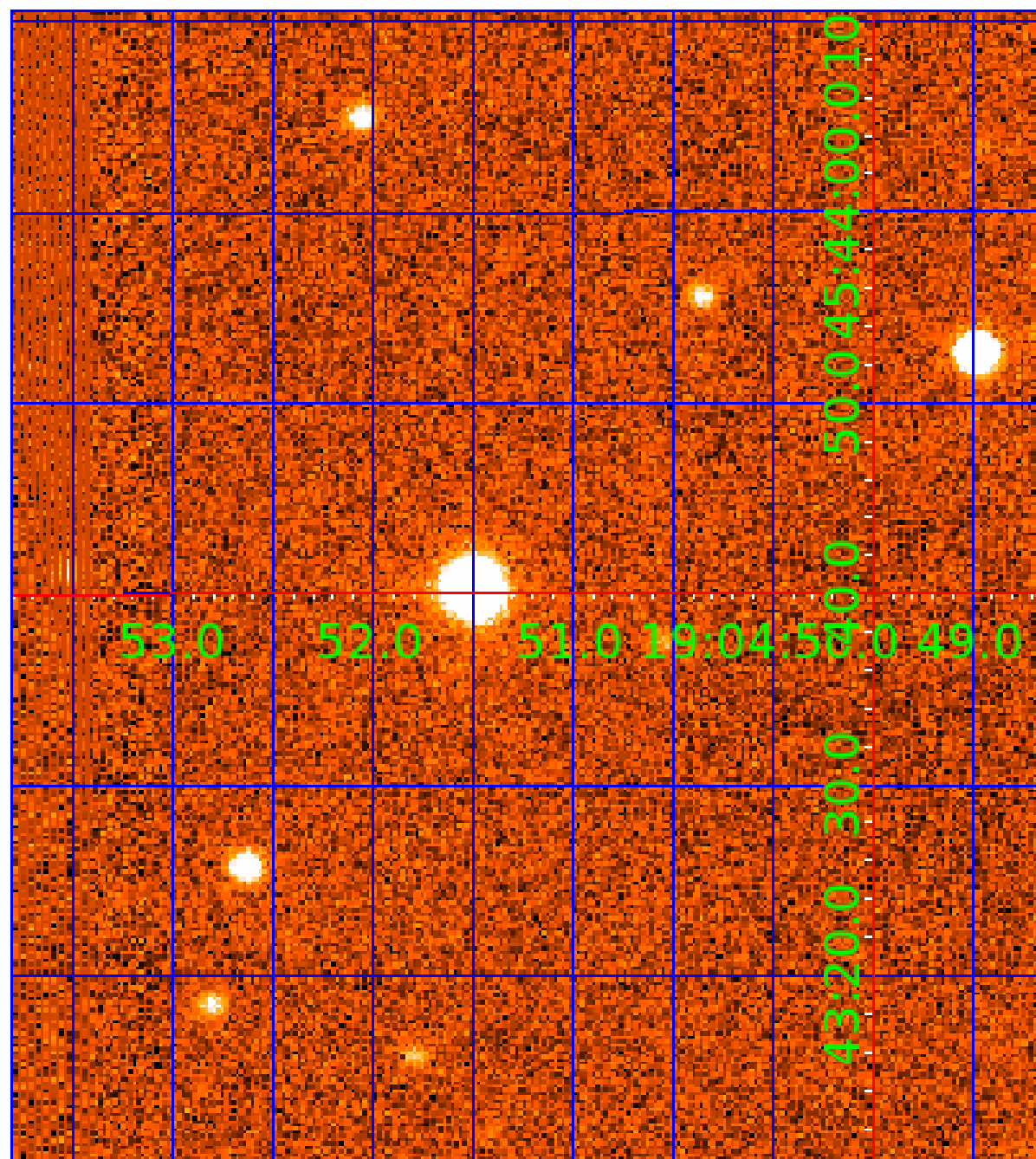


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009269688

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})
009269688-01	OBS	No	581.502887	283.158935	2288.2	12.562	13.3	6.6	0.75	4547	3.53	0.14
009269688-02	OBS	No	384.188063	367.429381	1659.1	4.964	13.7	6.2	0.75	4547	2.98	0.24
009269688-03	OBS	No	517.914529	150.527827	2274.4	4.211	15.1	6.6	0.75	4547	3.69	0.16
009269688-04	OBS	No	419.831203	421.504164	2024.4	2.425	15.7	6.2	0.75	4547	3.96	0.22
009269688-05	OBS	No	373.871939	390.869589	1511.6	3.000	12.0	-1.0	0.75	4547	2.77	0.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009269688-01	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
009269688-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
009269688-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269688-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269688-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

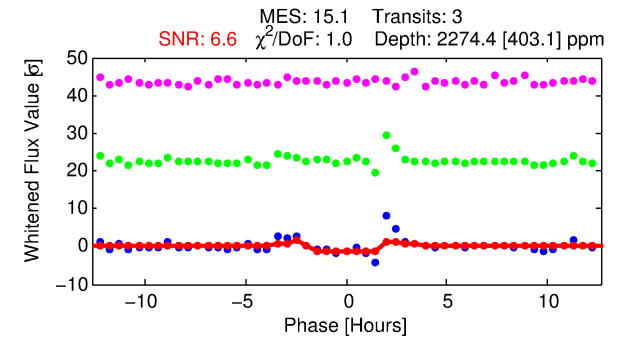
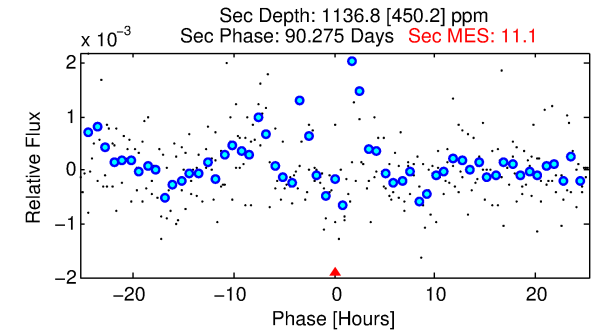
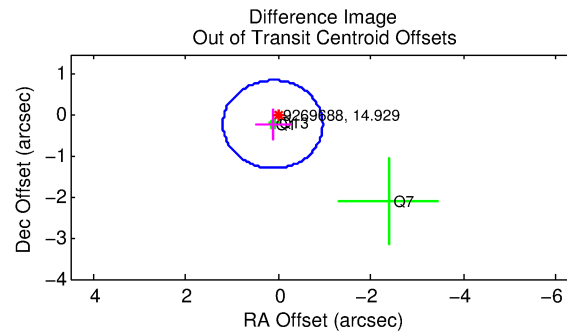
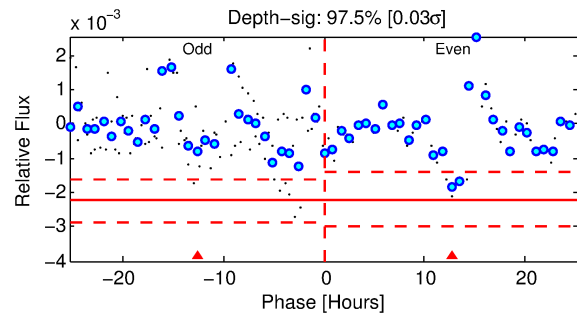
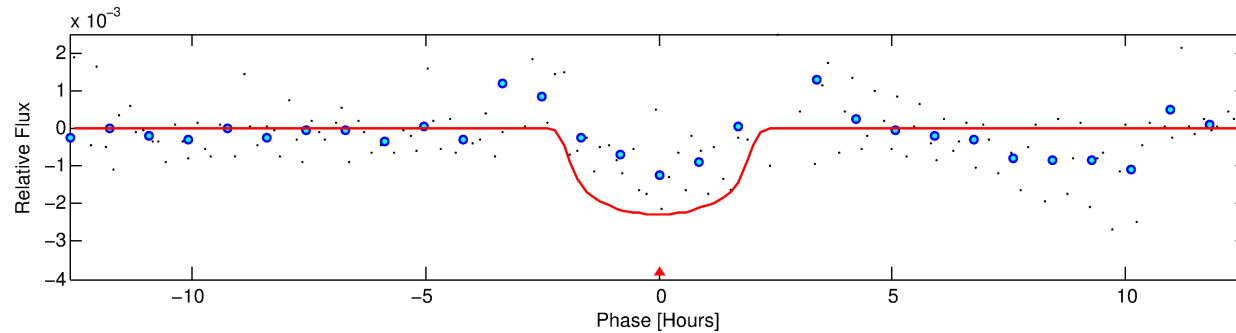
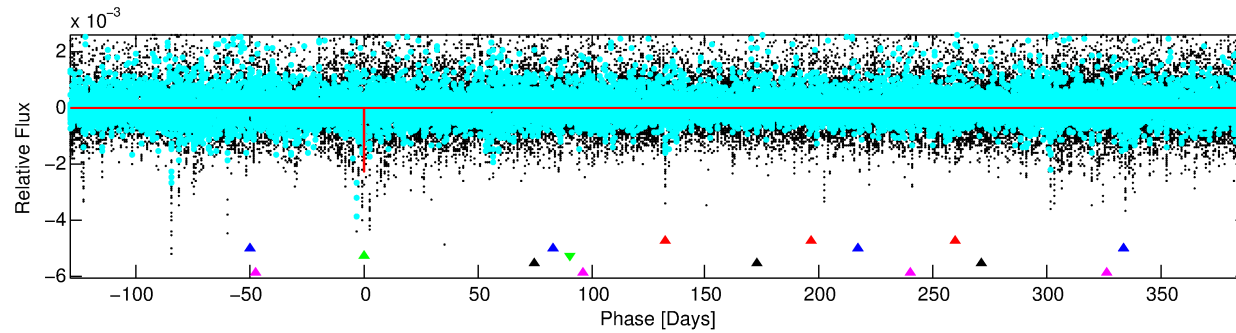
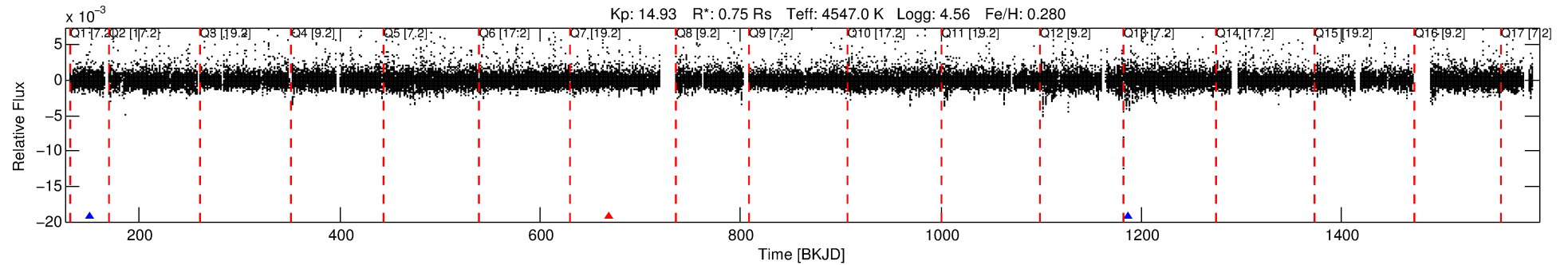
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009269688-03

No Significant Match Found

DV One-Page Summary

KIC: 9269688 Candidate: 3 of 5 Period: 517.915 d



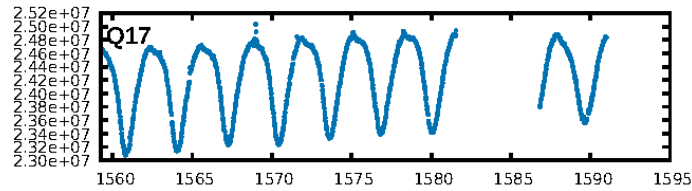
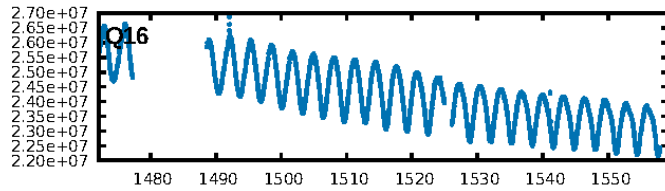
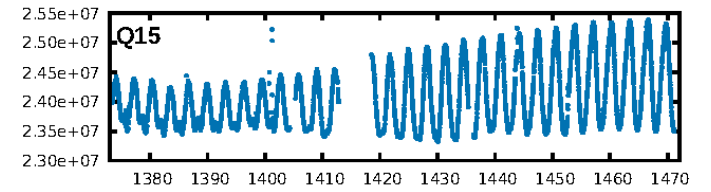
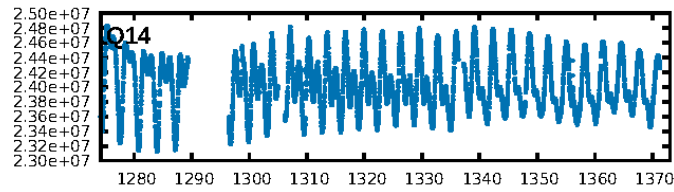
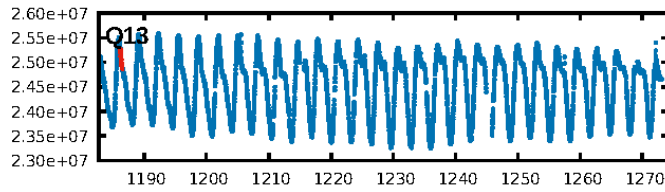
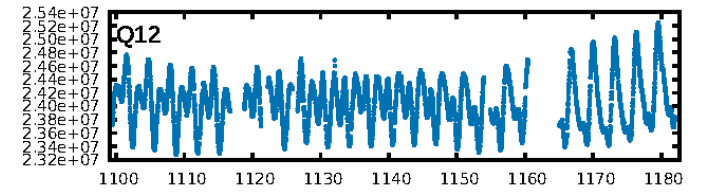
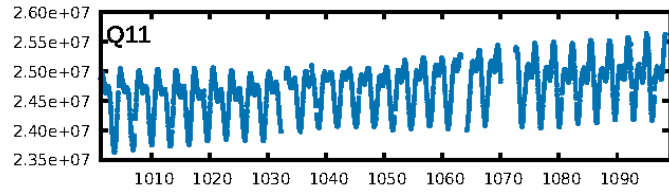
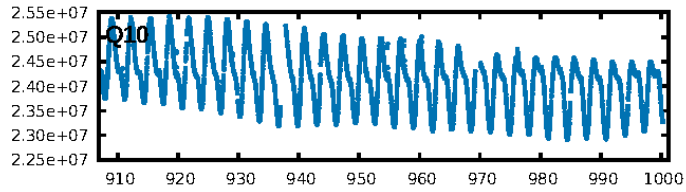
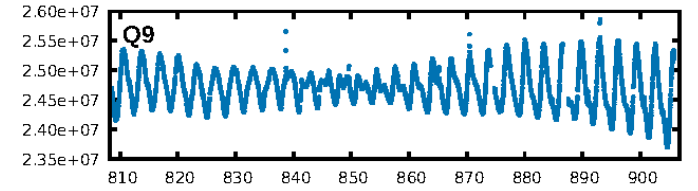
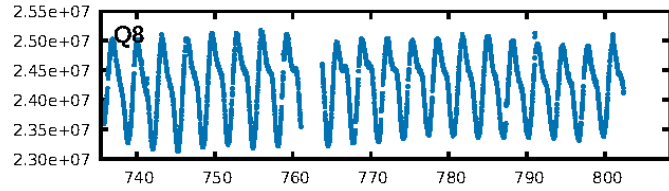
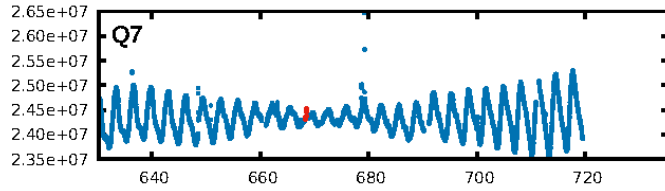
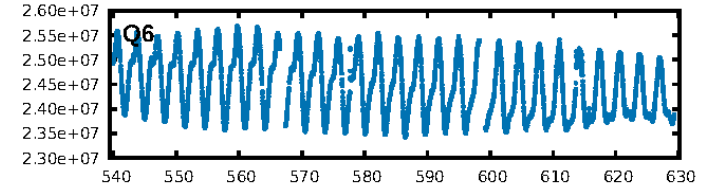
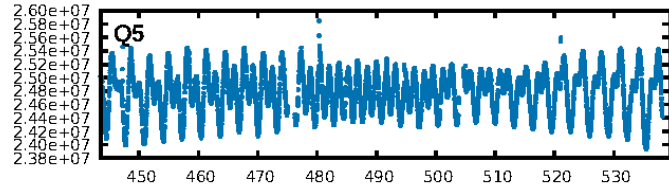
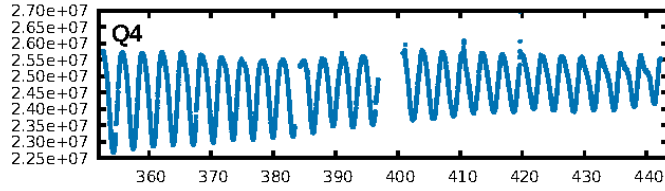
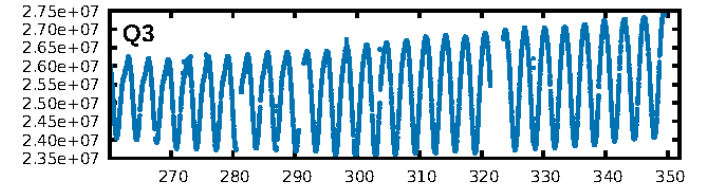
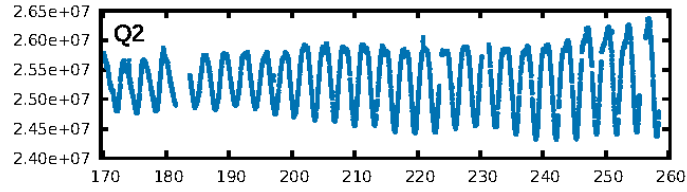
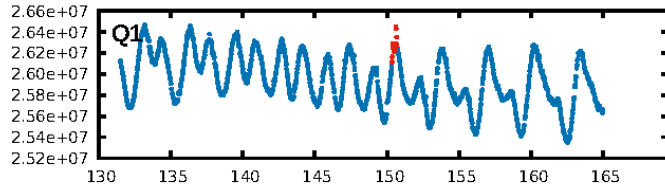
DV Fit Results:

Period = 517.91453 [0.00583] d
Epoch = 150.5278 [0.0067] BKJD
Rp/R* = 0.0452 [0.0298]
a/R* = 792.28 [1514.74]
b = 0.62 [1.97]
Seff = 0.16 [0.03]
Teq = 162 [7] K
Rp = 3.68 [2.45] Re
a = 1.1405 [0.0821] AU
Ag = 59912.59 [82686.42] [0.72 σ]
Teffp = 3927 [1356] K [2.78 σ]

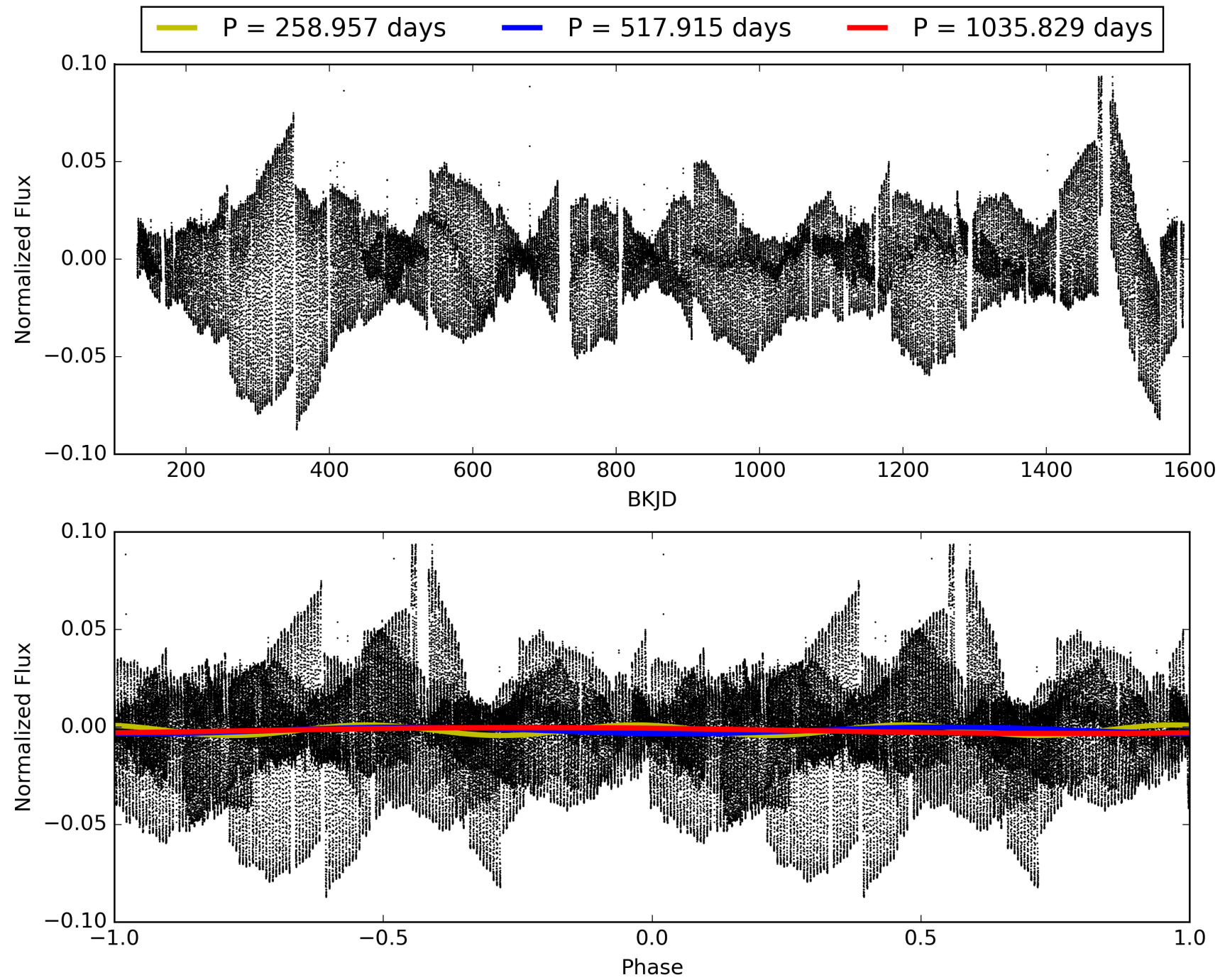
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [484.40 σ]
LongPeriod-sig: 100.0% [115.18 σ]
ModelChiSquare2-sig: 91.8%
ModelChiSquareGof-sig: 98.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.50 [1/2]
GhostDiagnostic-chr: 0.8776
Centroid-sig: 21.6%
Centroid-so: 0.436 arcsec [0.97 σ]
OotOffset-rm: 0.245 arcsec [0.68 σ]
OotOffset-st: 0/1/0/2 [3]
KicOffset-rm: 0.315 arcsec [0.87 σ]
KicOffset-st: 0/1/0/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 009269688-03, PDC Light Curves

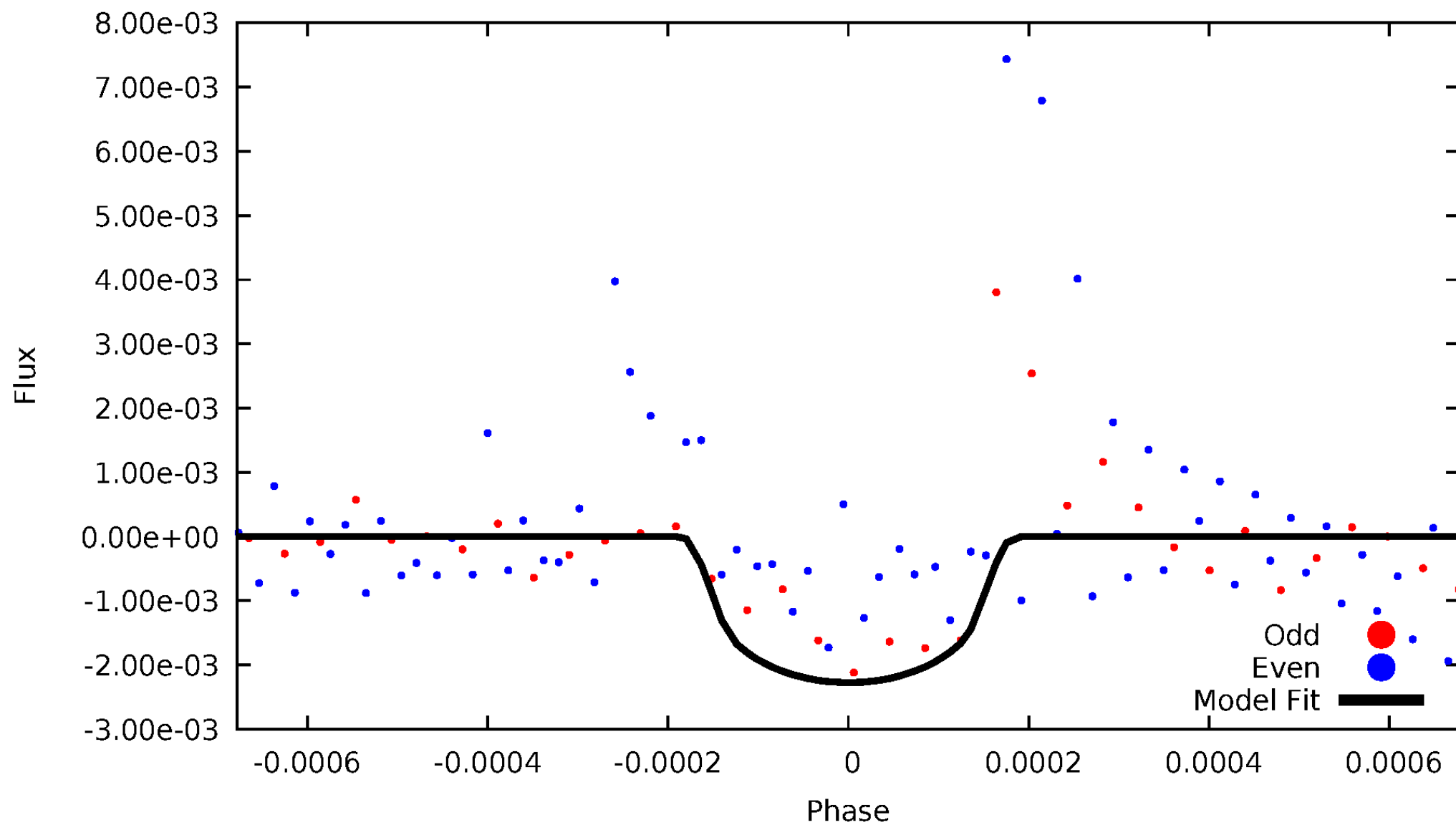


TCE 009269688-03



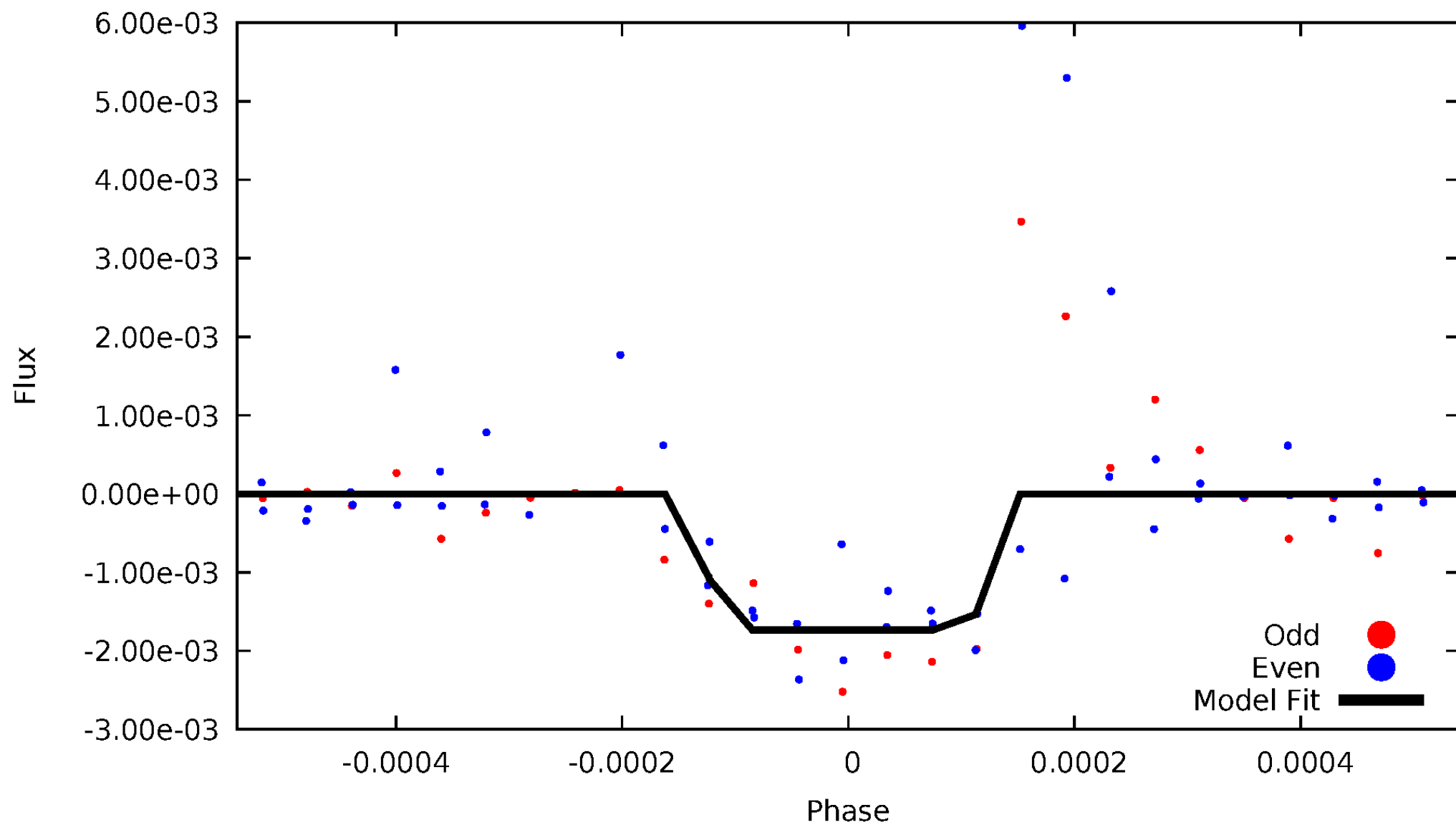
DV Odd/Even

TCE 009269688-03



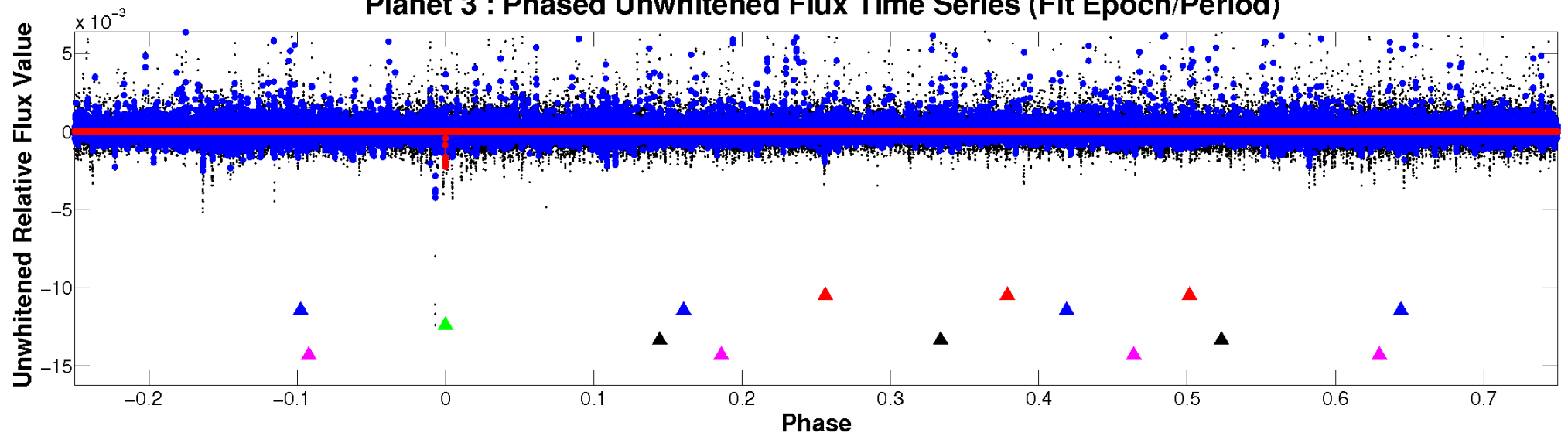
ALT Odd/Even

TCE 009269688-03

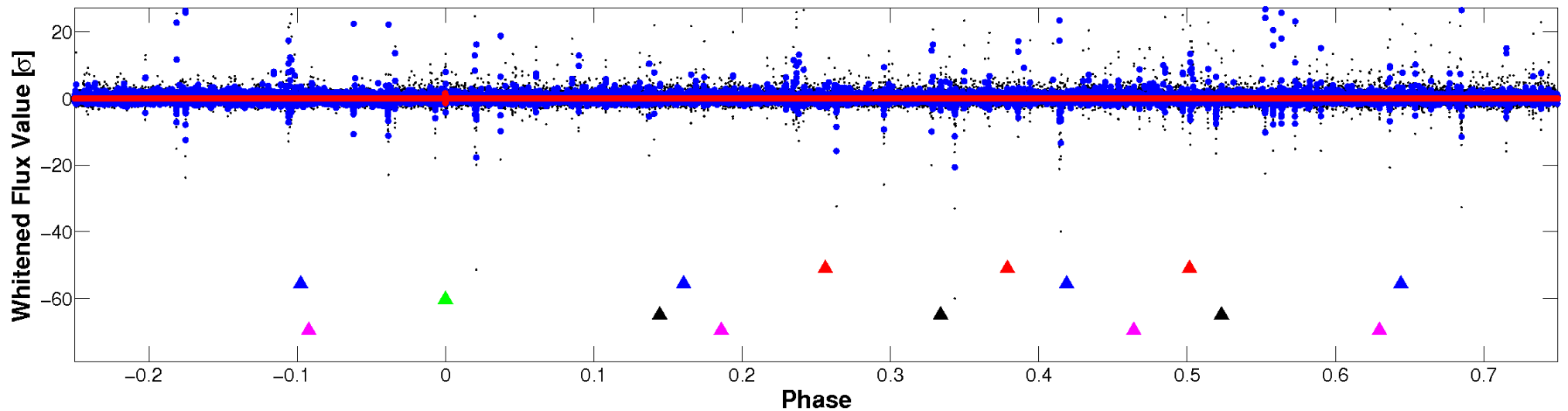


Non-Whitened Vs. Whitened Light Curve

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

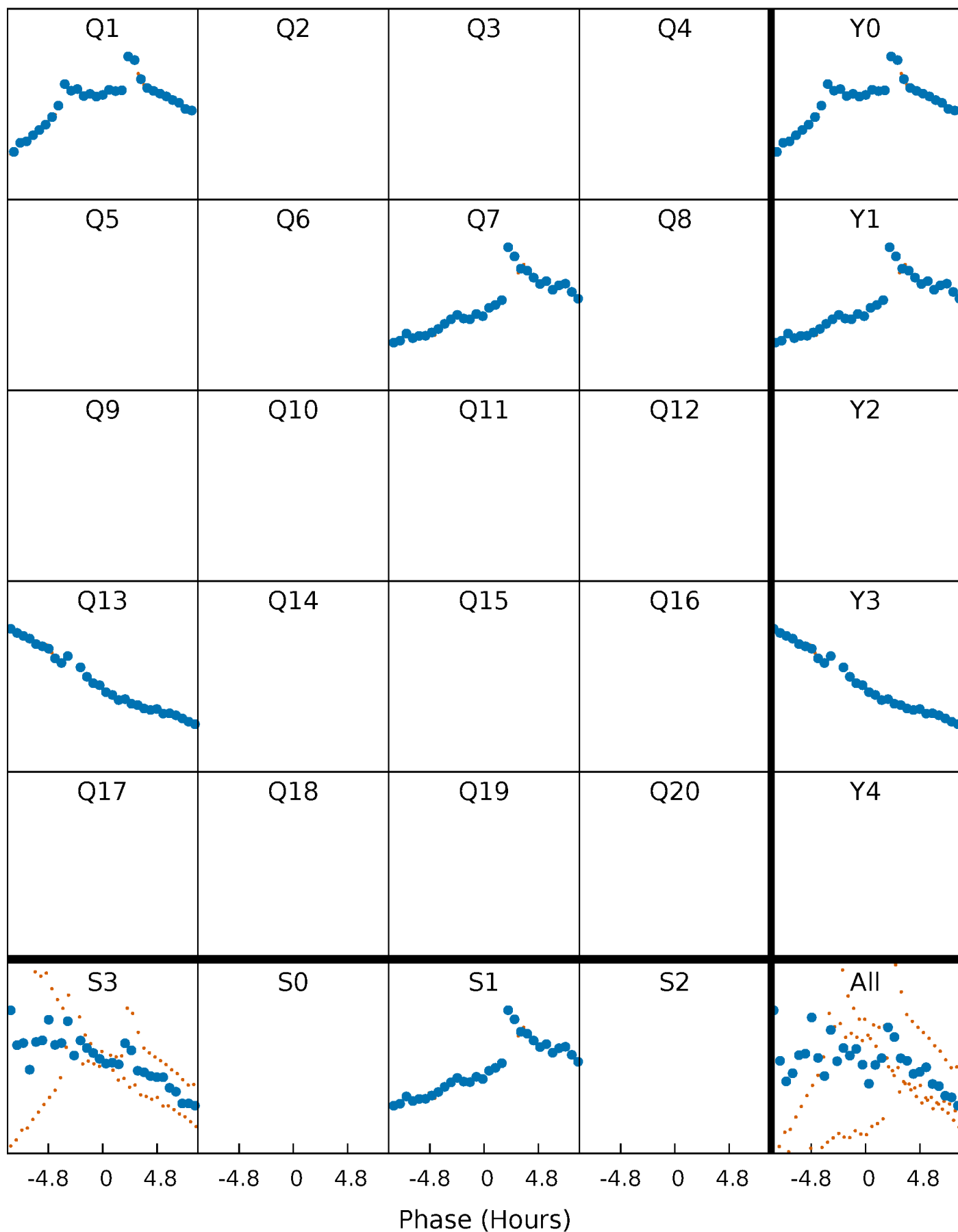


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



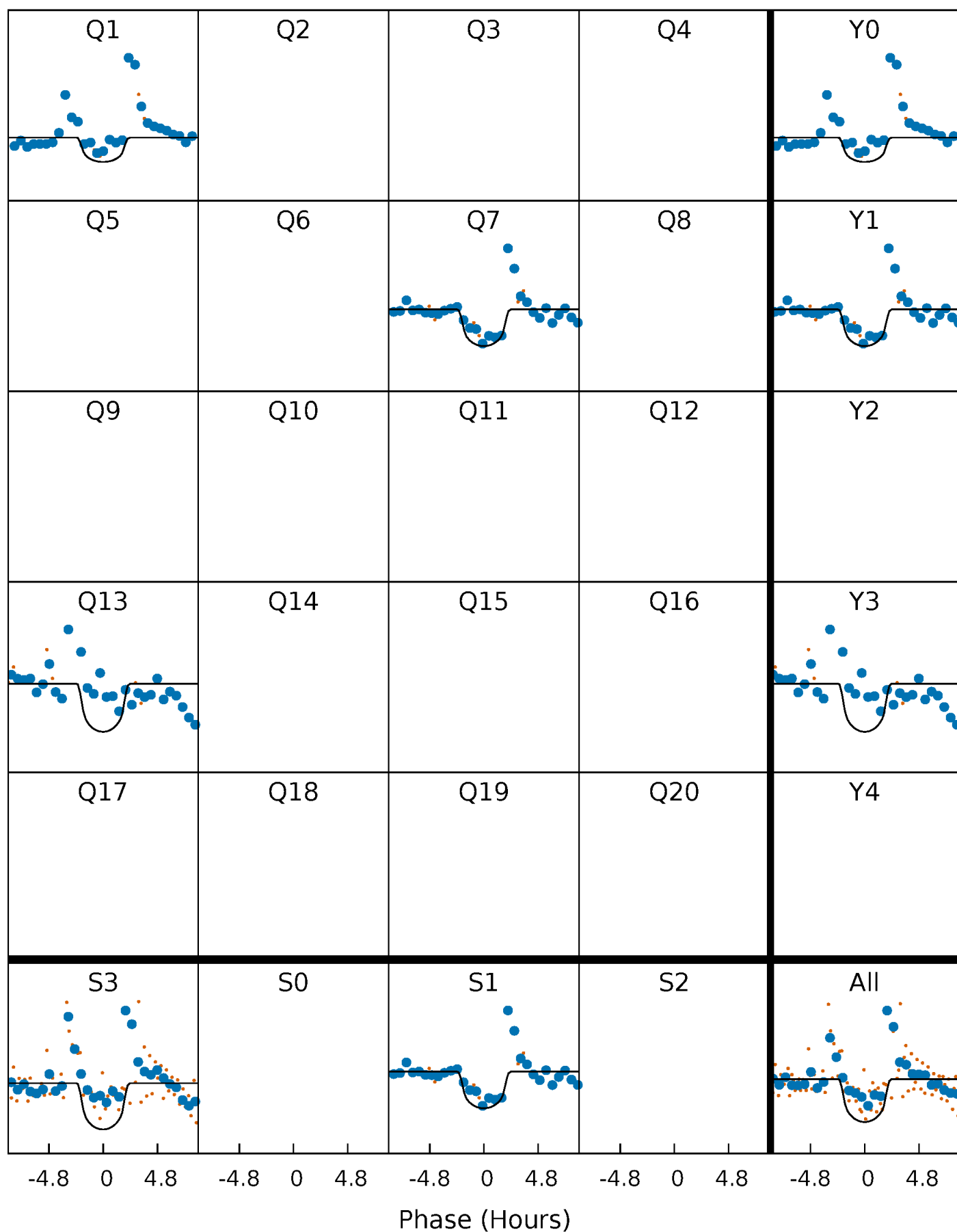
PDC Quarter-Phased Transit Curves

TCE 009269688-03 $P=517.914529$ Days $T_0=150.527827$ (BKJD)



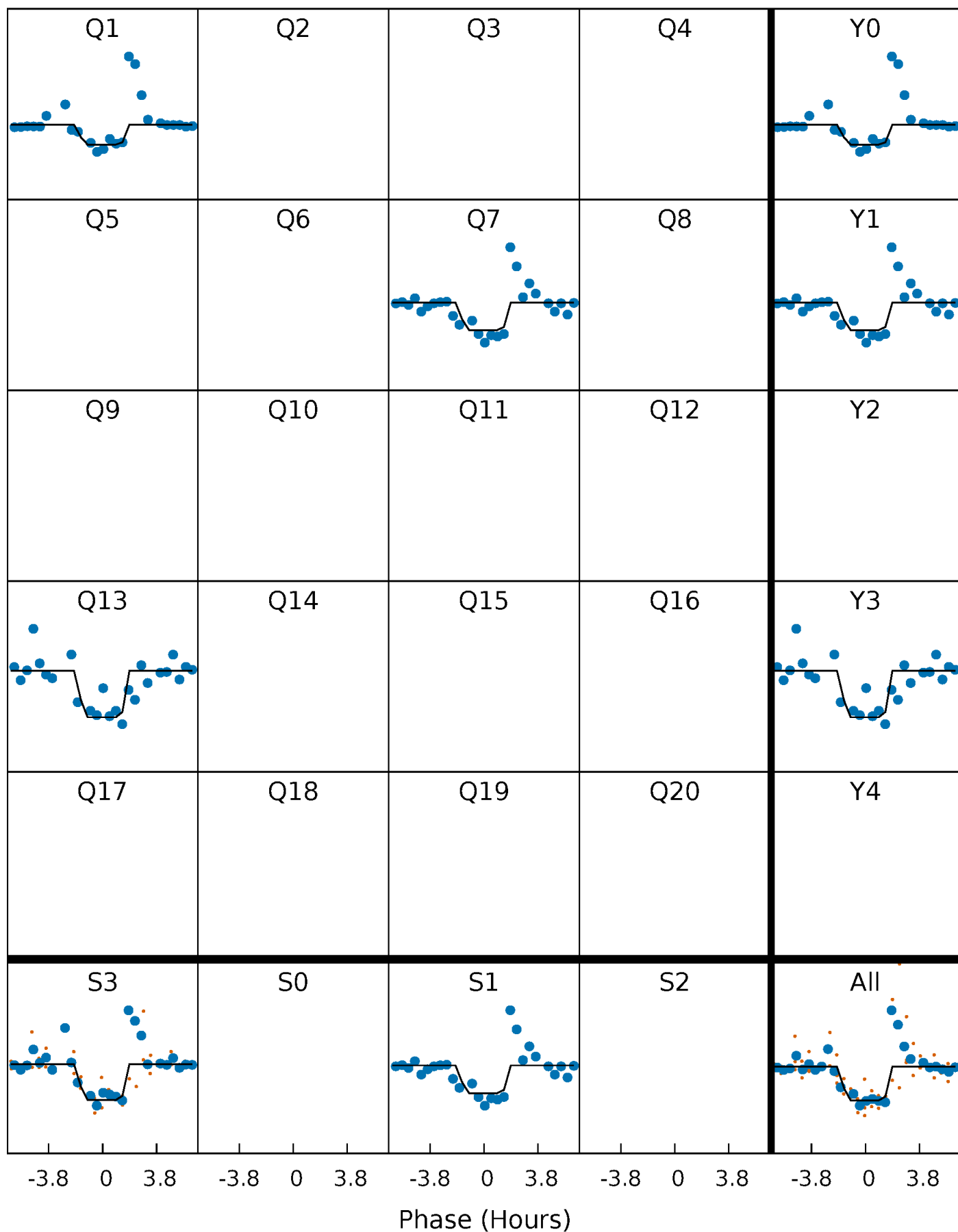
DV Quarter-Phased Transit Curves

TCE 009269688-03 $P=517.914529$ Days $T_0=150.527827$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

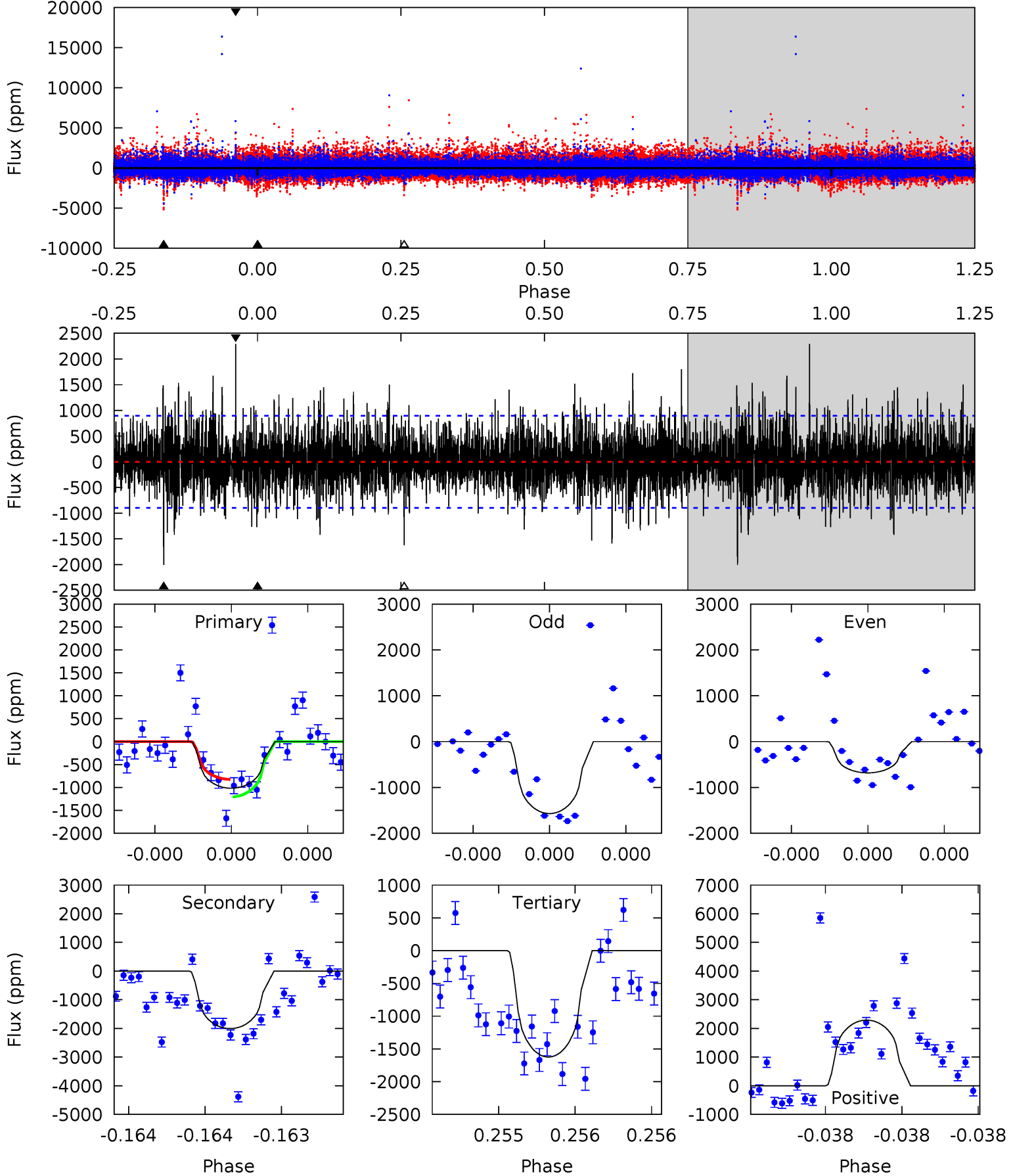
TCE 009269688-03 P=517.909012 Days $T_0=150.539099$ (BKJD)



DV Model-Shift Uniqueness Test

009269688-03, P = 517.914529 Days, E = 150.527827 Days

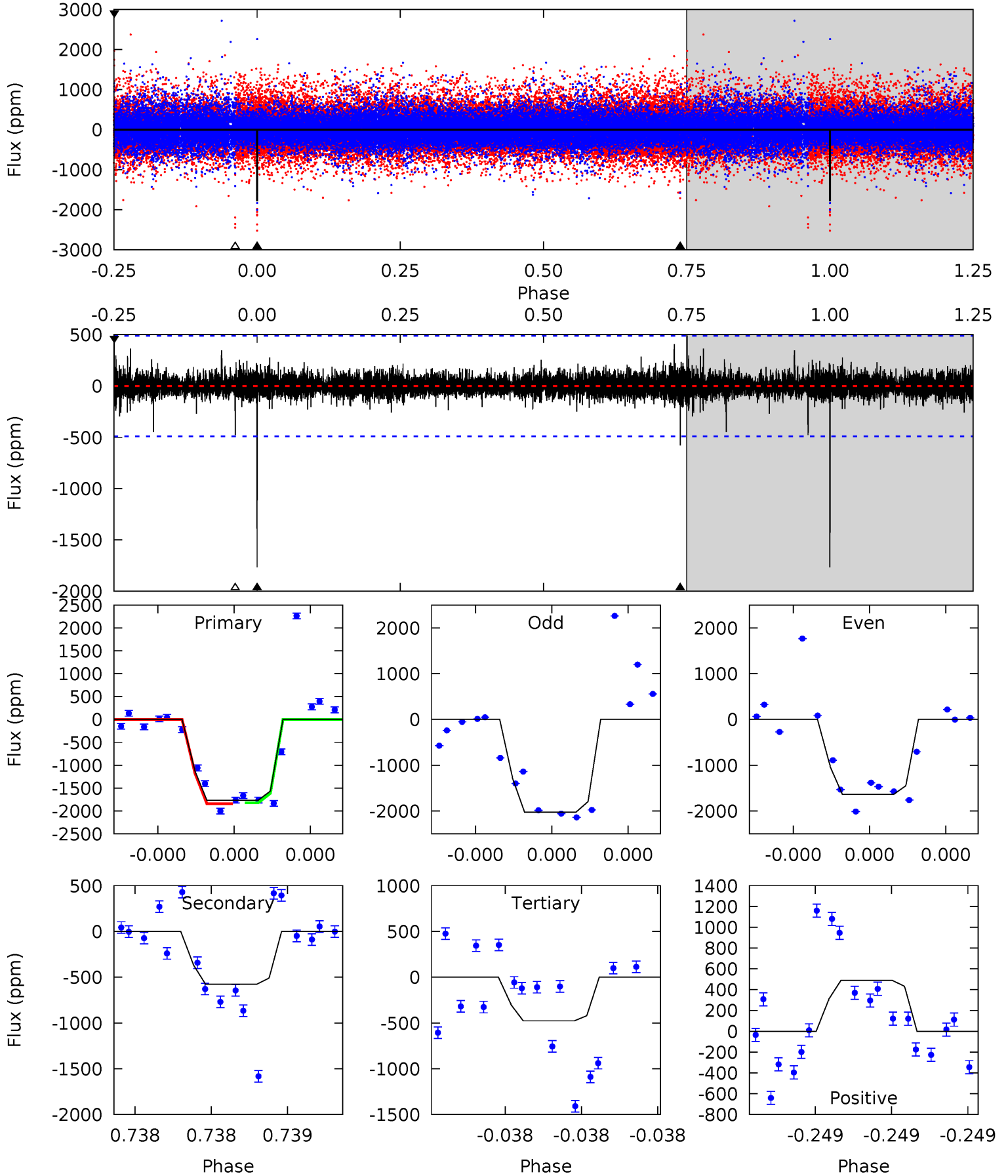
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.40	12.6	10.2	14.4	5.63	3.57	2.43	-3.82	-8.00	2.40	-1.78	2.15	1.10	0.53	1.20



Alt Model-Shift Uniqueness Test

009269688-03, P = 517.909012 Days, E = 150.539099 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	6.72	5.55	5.69	5.70	3.68	0.70	15.0	14.9	1.17	1.03	2.01	1.02	0.22	0.10



Stellar Parameters For KIC 009269688

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4547^{+137}_{-137}	$4.559^{+0.060}_{-0.020}$	$0.280^{+0.150}_{-0.300}$	$0.747^{+0.026}_{-0.062}$	$0.737^{+0.048}_{-0.048}$	$2.493^{+0.631}_{-0.181}$
	+3%/-3%	+1%/-0%	+54%/-107%	+3%/-8%	+7%/-7%	+25%/-7%
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 009269688-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2006 ± 159	$3.71^{+2.22}_{-2.14}$	225^{+8}_{-8}	4543^{+2074}_{-770}	$107971^{+479972}_{-67824}$
Alt.	-577 ± 86	$3.67^{+2.21}_{-2.02}$	225^{+8}_{-8}	3613^{+1219}_{-490}	$31895^{+118184}_{-19918}$

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

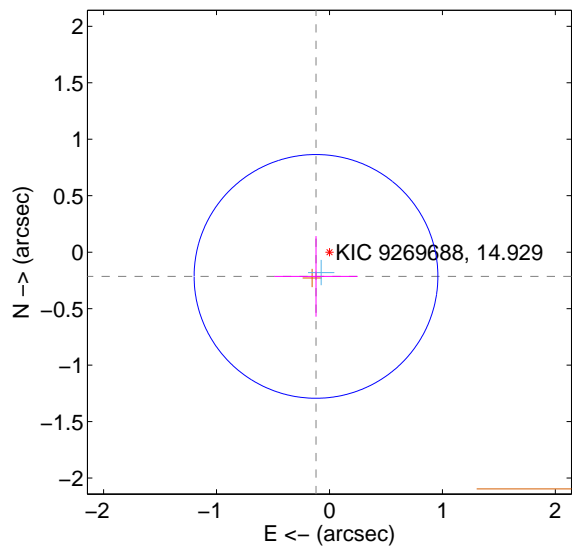
Supplemental centroid analysis for 009269688-03. Kepler magnitude: 14.93. Transit SNR 6.57

There are 1 quarters with good PRF difference image offsets

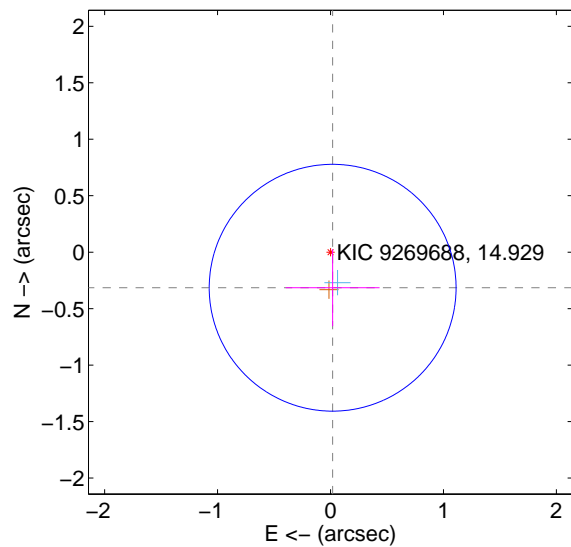
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.245 ± 0.360	0.68	0.119 ± 0.368	-0.215 ± 0.357
PRF-fit source offset from KIC position	0.315 ± 0.364	0.87	-0.019 ± 0.416	-0.315 ± 0.341
photometric centroid source offset	0.44 ± 0.45	0.97	0.43 ± 0.45	0.08 ± 0.53

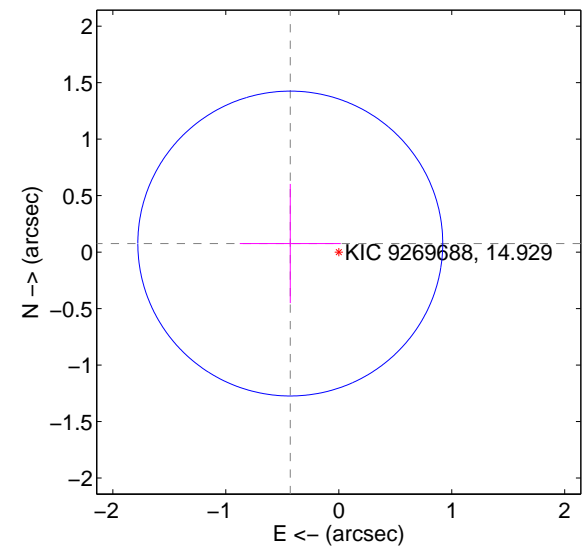
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

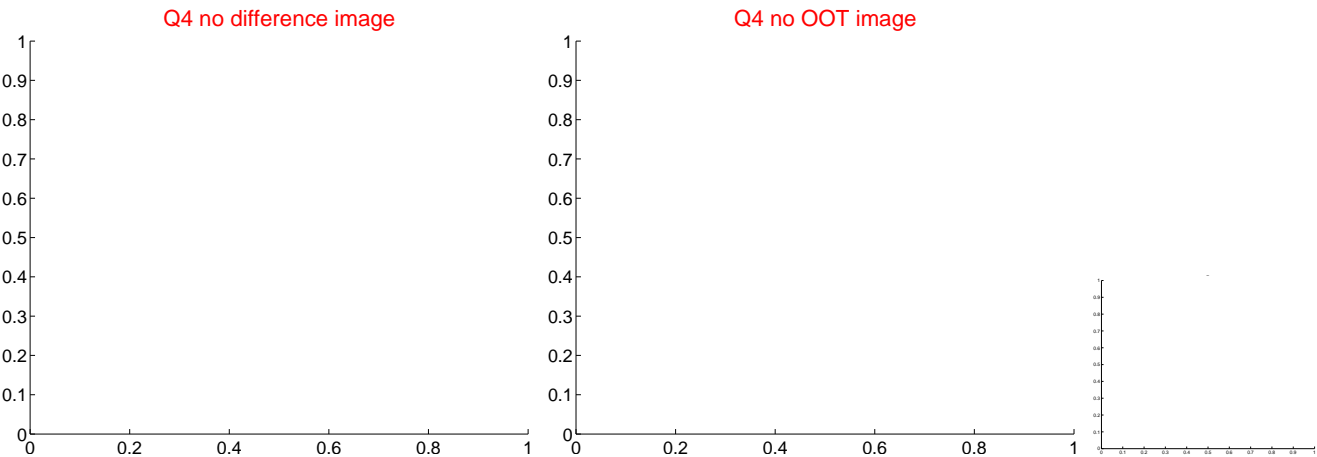
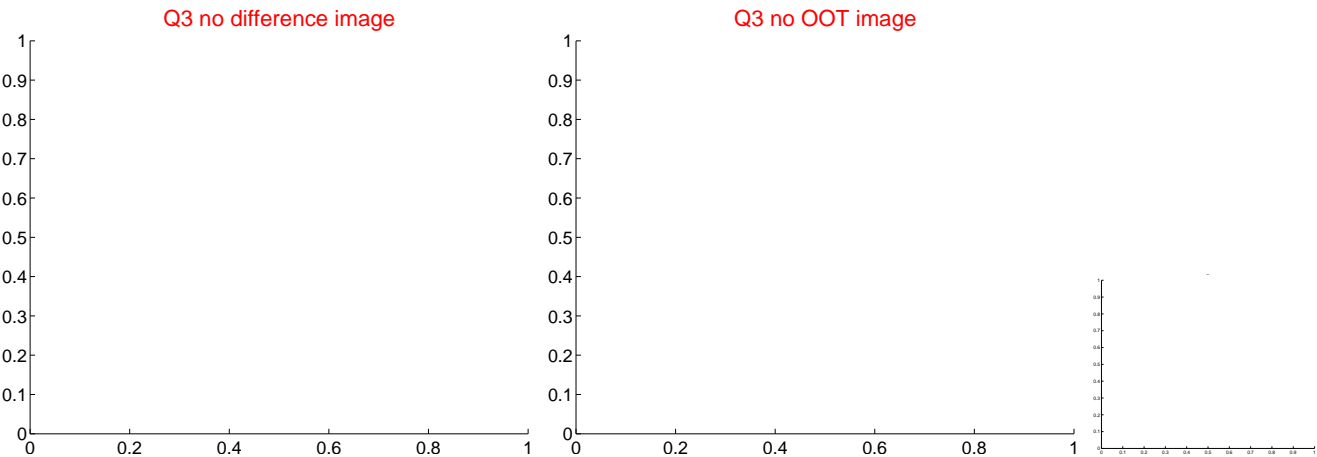
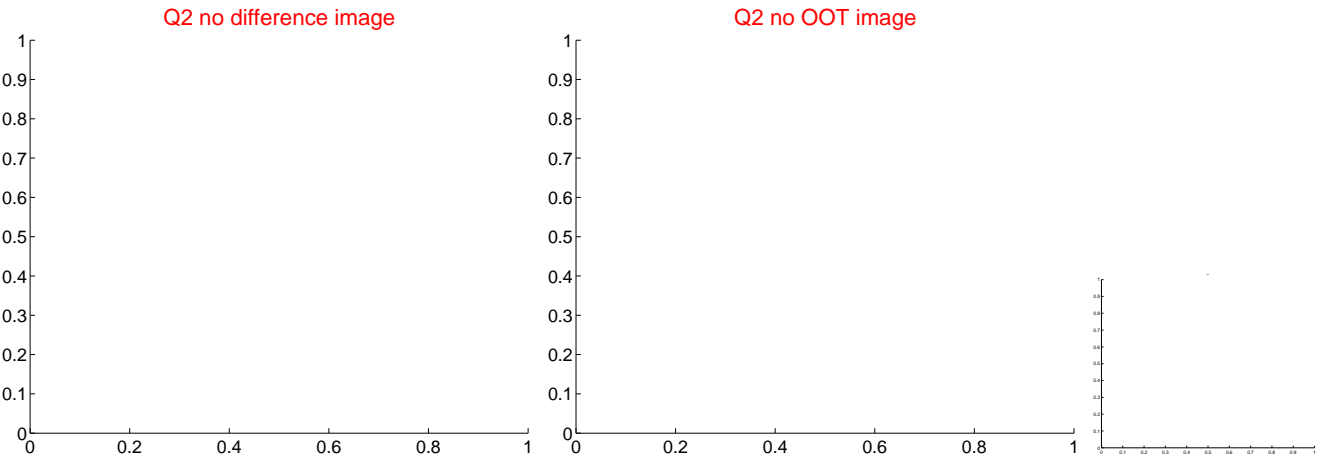
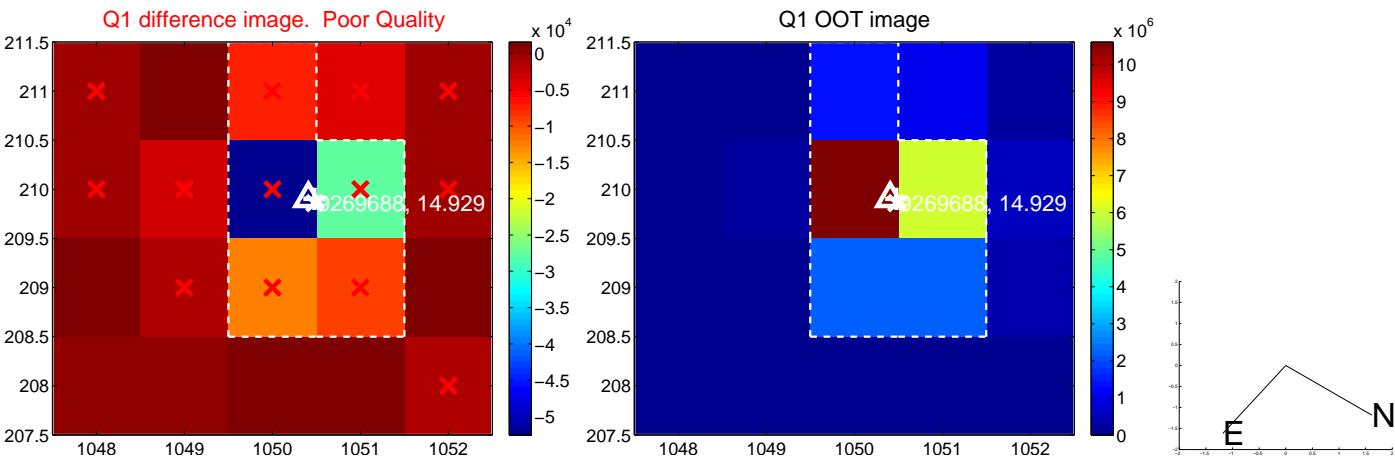


offset from photometric centroids



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.

Q5 no difference image



Q5 no OOT image



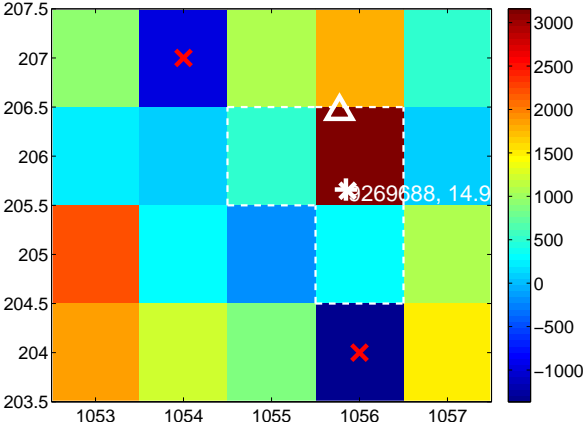
Q6 no difference image



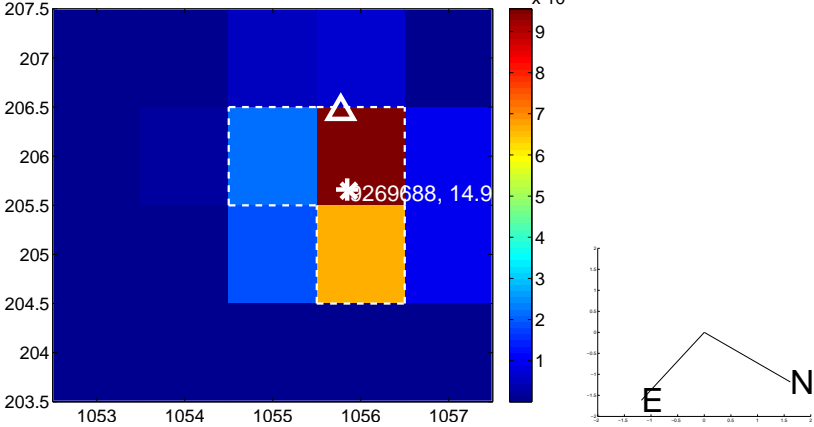
Q6 no OOT image



Q7 difference image. Poor Quality



Q7 OOT image



Q8 no difference image



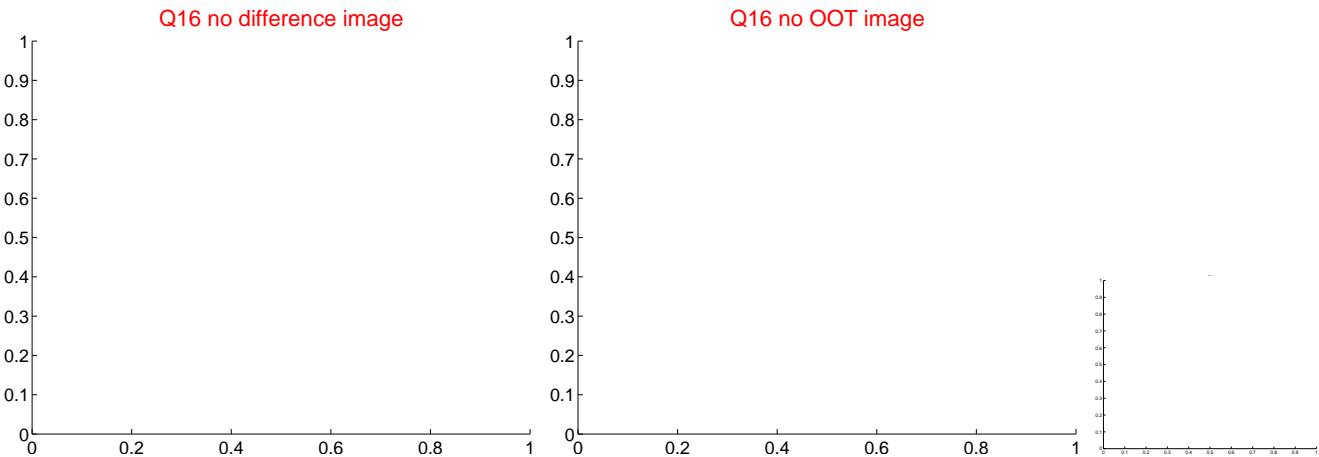
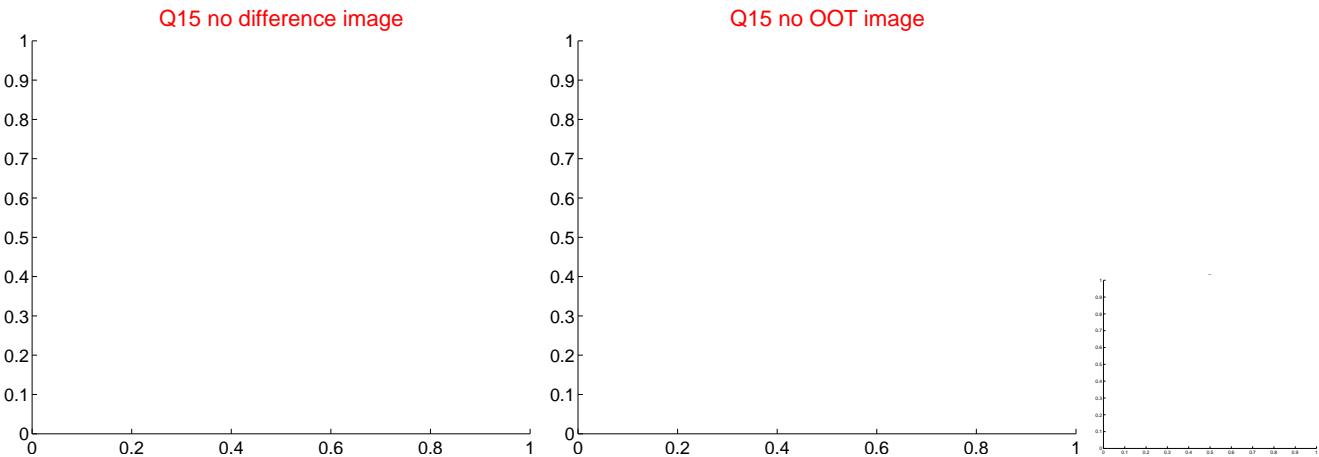
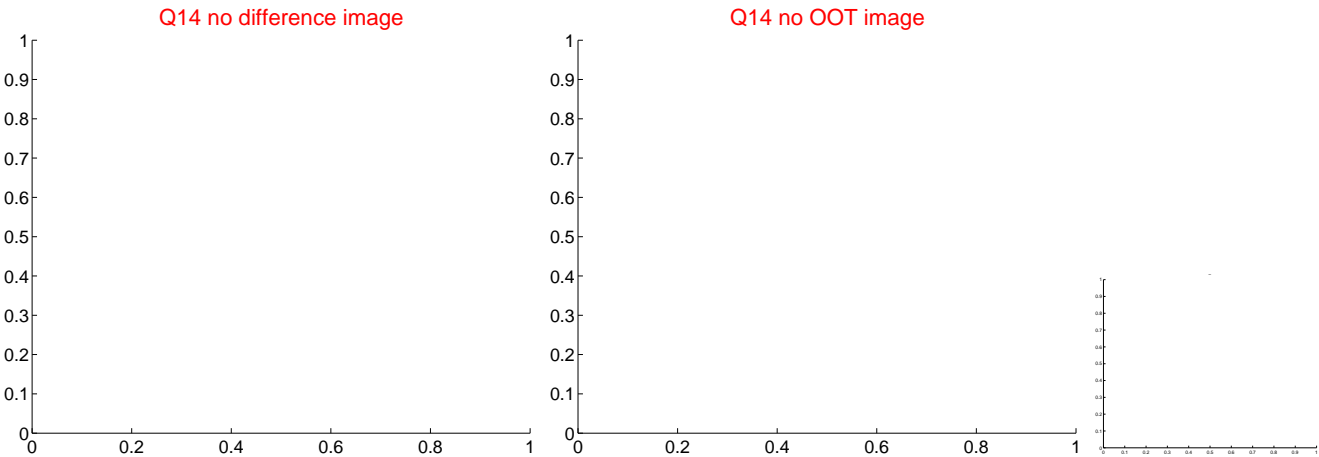
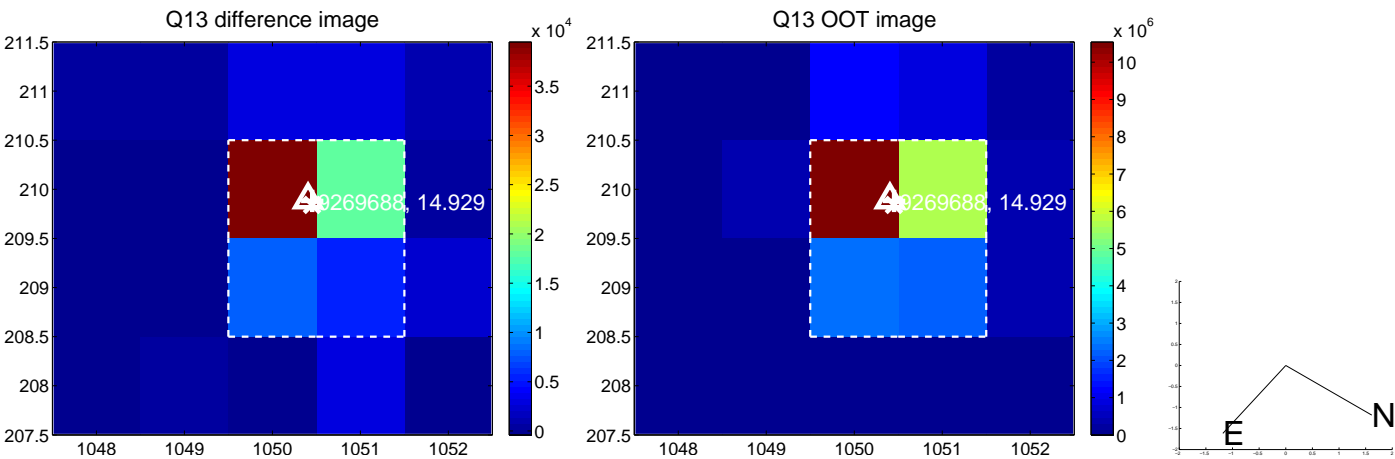
Q8 no OOT image



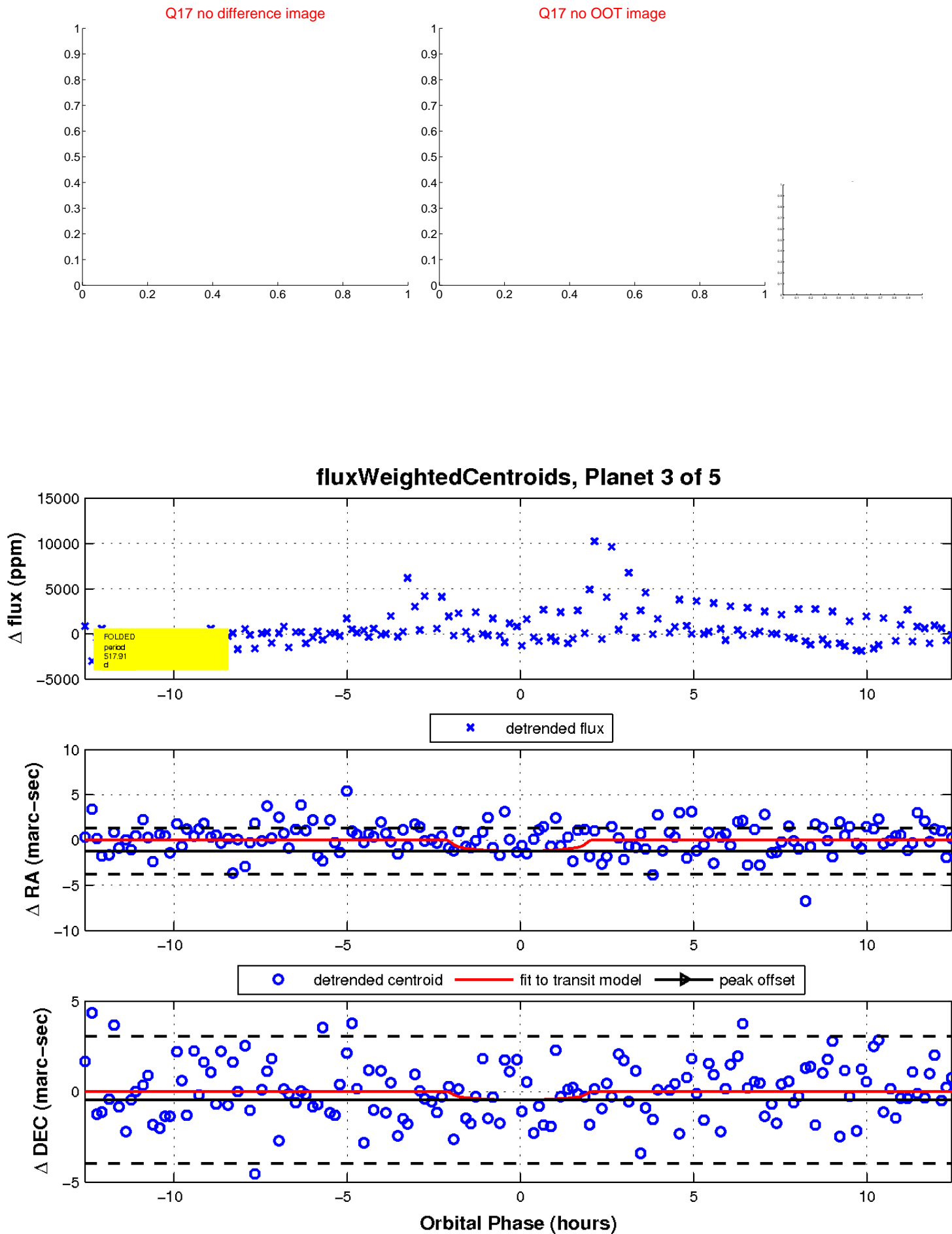
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

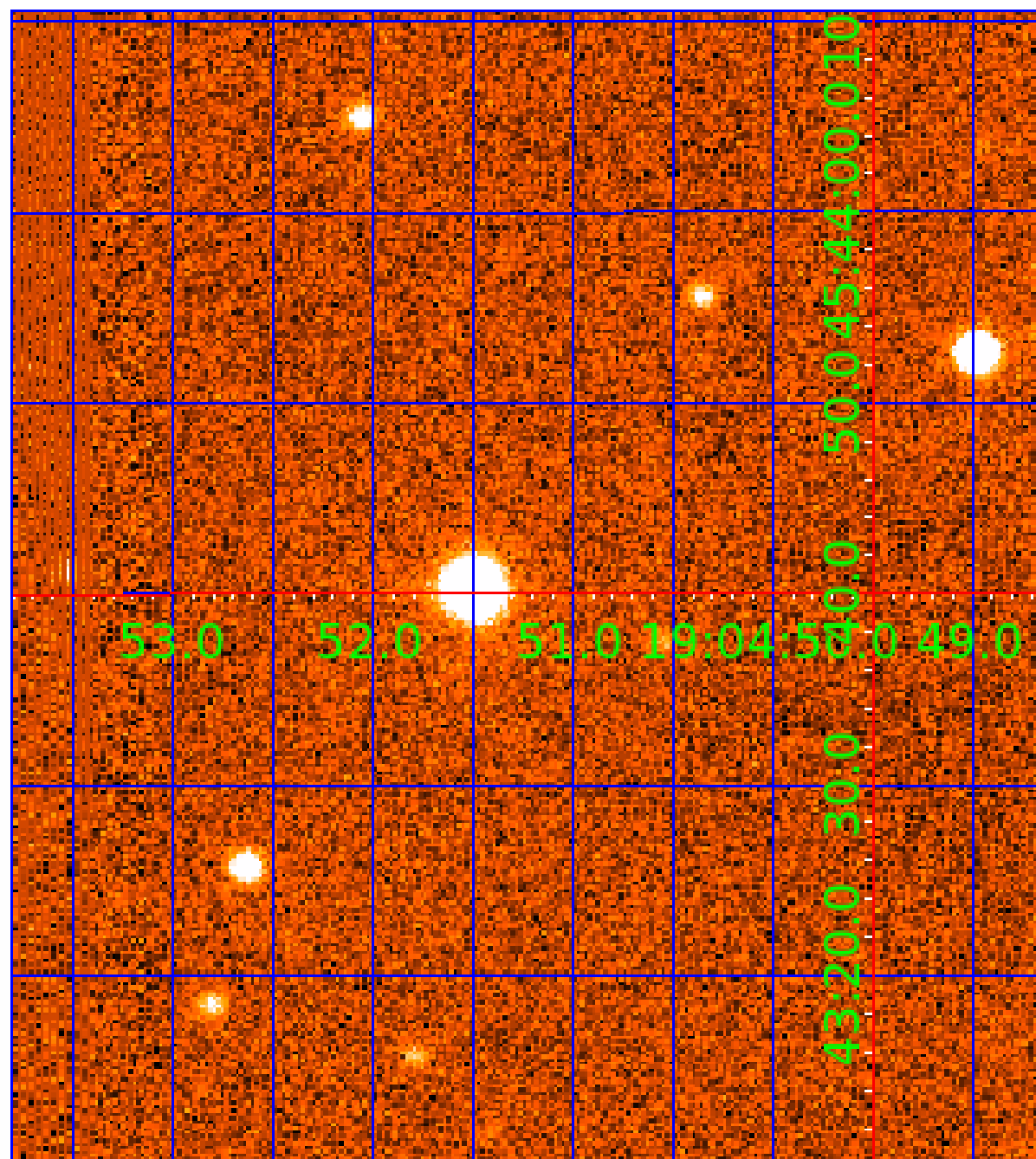


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009269688

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})
009269688-01	OBS	No	581.502887	283.158935	2288.2	12.562	13.3	6.6	0.75	4547	3.53	0.14
009269688-02	OBS	No	384.188063	367.429381	1659.1	4.964	13.7	6.2	0.75	4547	2.98	0.24
009269688-03	OBS	No	517.914529	150.527827	2274.4	4.211	15.1	6.6	0.75	4547	3.69	0.16
009269688-04	OBS	No	419.831203	421.504164	2024.4	2.425	15.7	6.2	0.75	4547	3.96	0.22
009269688-05	OBS	No	373.871939	390.869589	1511.6	3.000	12.0	-1.0	0.75	4547	2.77	0.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009269688-01	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
009269688-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
009269688-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269688-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269688-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

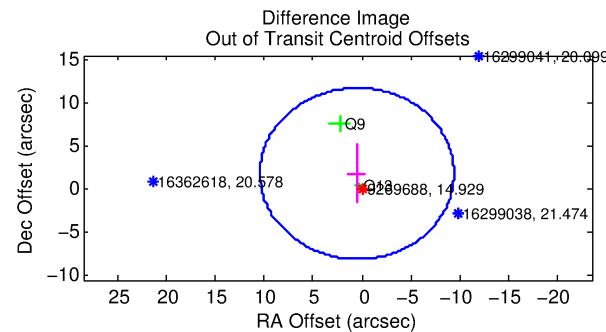
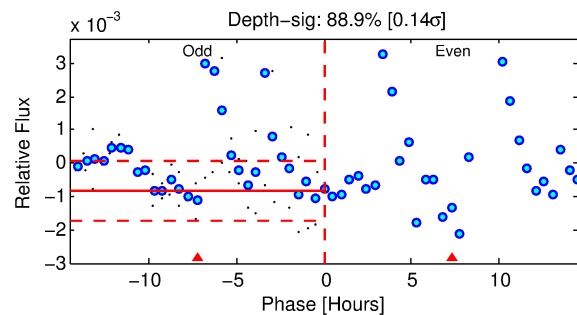
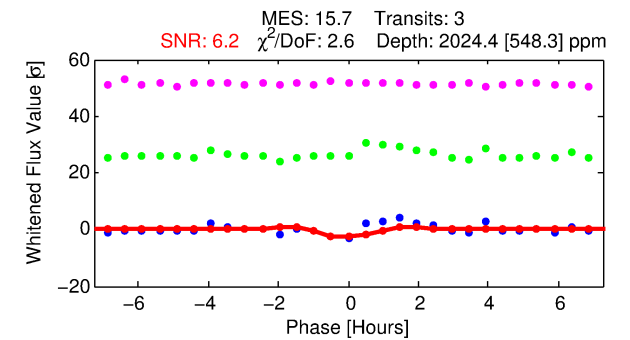
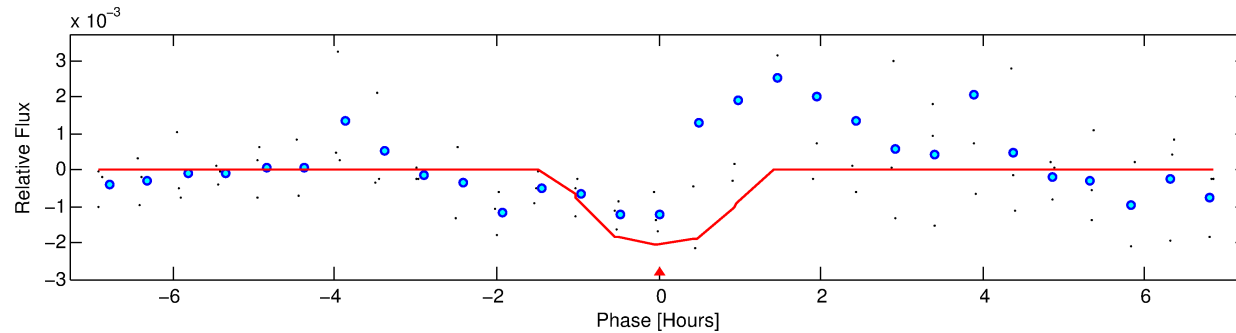
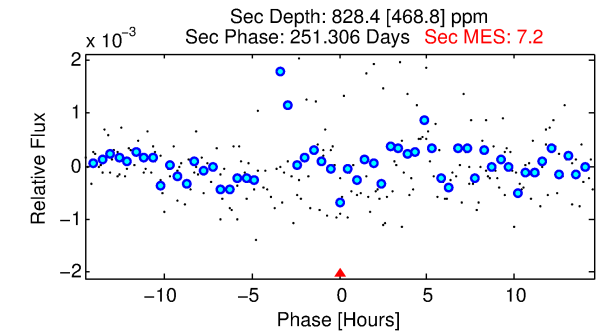
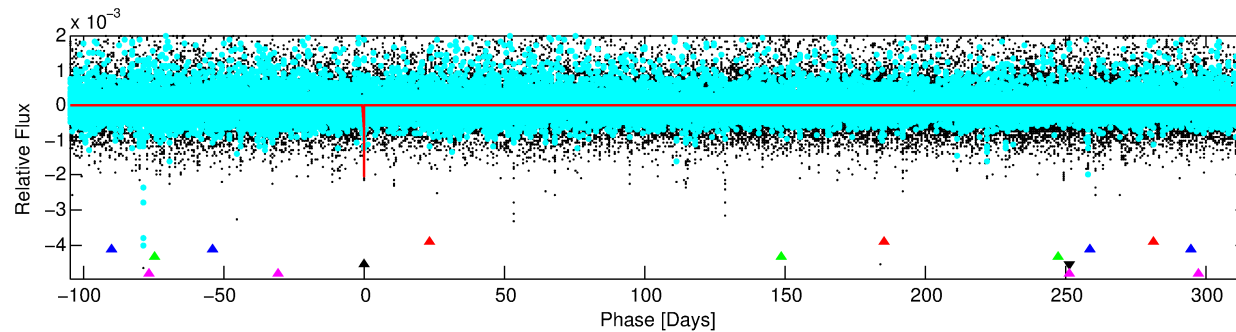
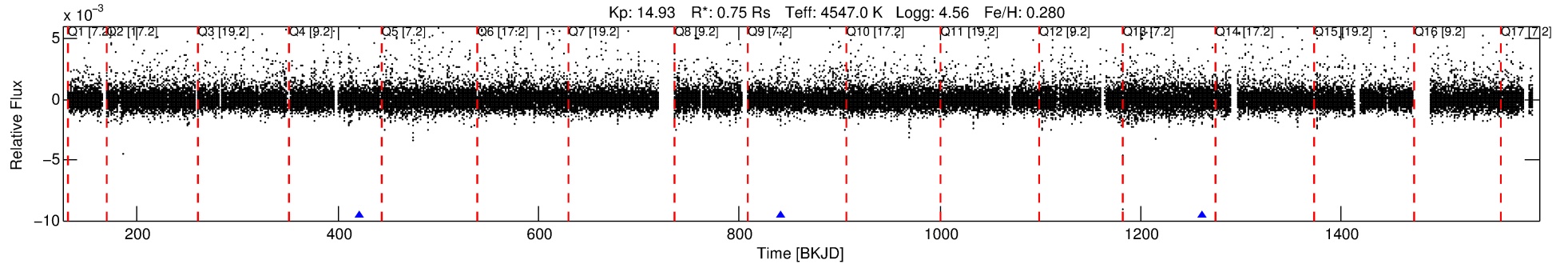
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009269688-04

No Significant Match Found

DV One-Page Summary

KIC: 9269688 Candidate: 4 of 5 Period: 419.831 d



DV Fit Results:

Period = 419.83120 [0.00686] d
Epoch = 421.5042 [0.0077] BKJD
Rp/R* = 0.0486 [0.1659]
a/R* = 808.17 [9065.78]
b = 0.85 [3.75]
Seff = 0.22 [0.04]
Teq = 174 [7] K
Rp = 3.96 [13.53] Re
a = 0.9915 [0.0714] AU
Ag = 28526.75 [195385.90] [0.15 σ]
Teffp = 3499 [5991] K [0.55 σ]

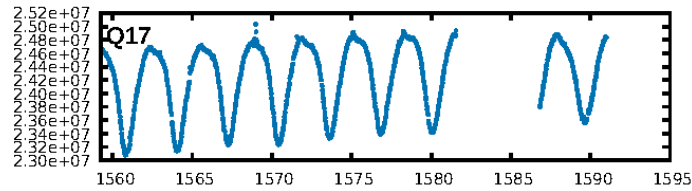
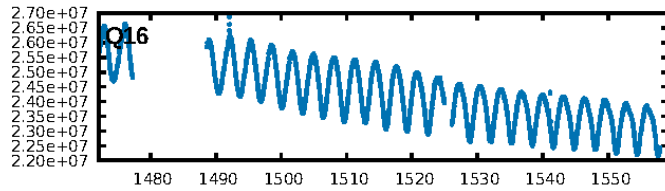
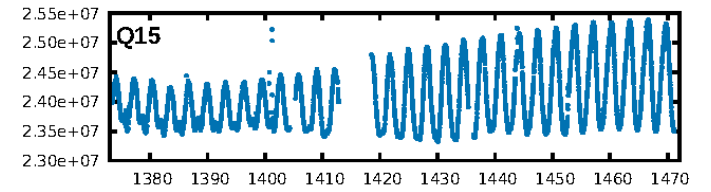
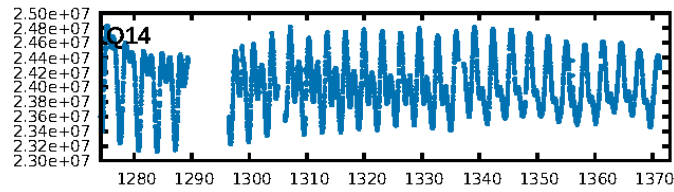
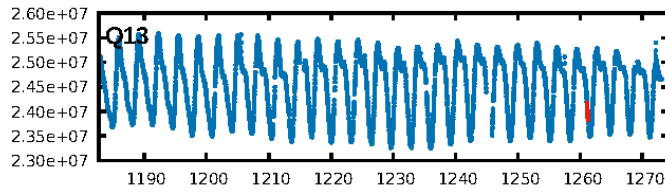
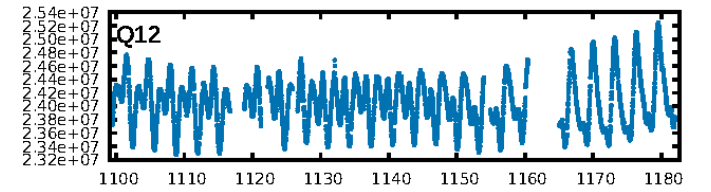
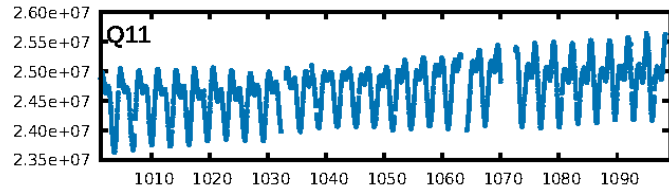
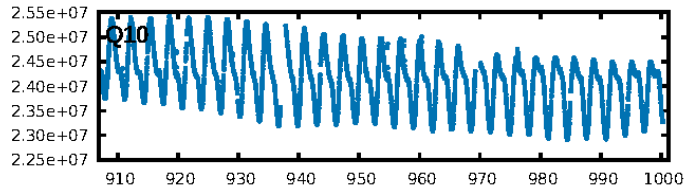
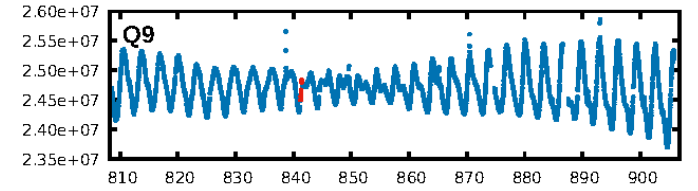
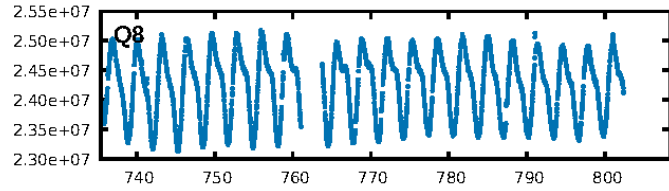
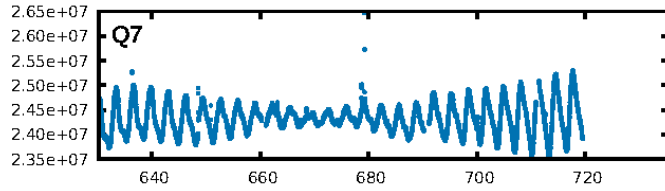
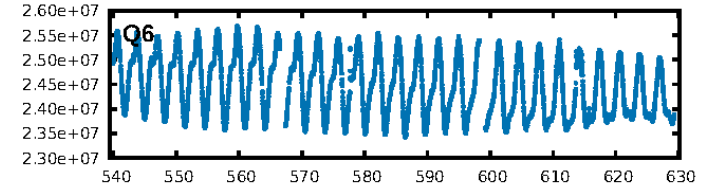
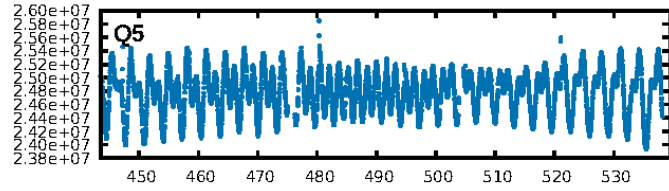
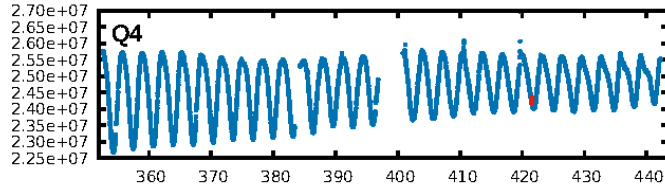
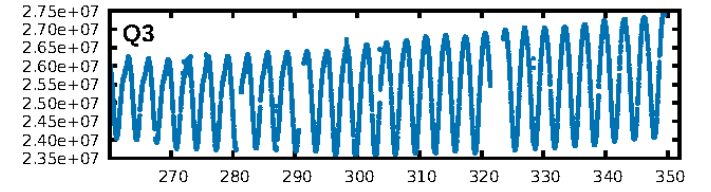
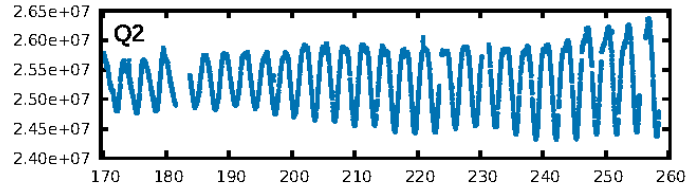
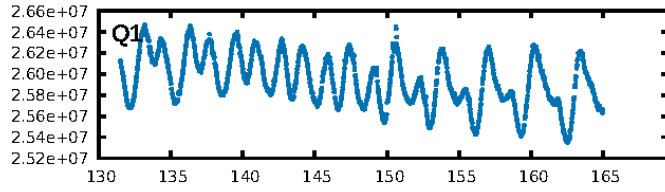
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [154.84 σ]
LongPeriod-sig: 100.0% [484.40 σ]
ModelChiSquare2-sig: 1.5%
ModelChiSquareGof-sig: 60.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.5741
Centroid-sig: 90.7%
Centroid-so: 0.086 arcsec [0.11 σ]
OotOffset-rm: 1.889 arcsec [0.57 σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-rm: 1.812 arcsec [0.54 σ]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

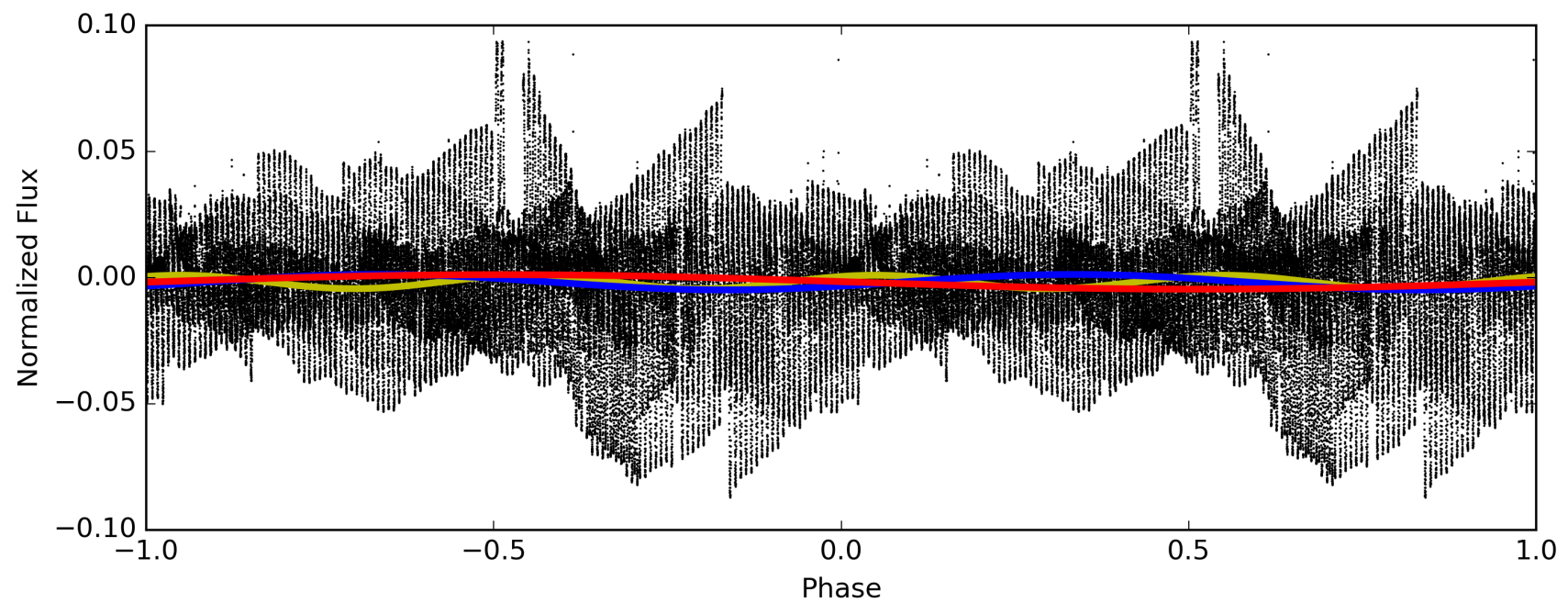
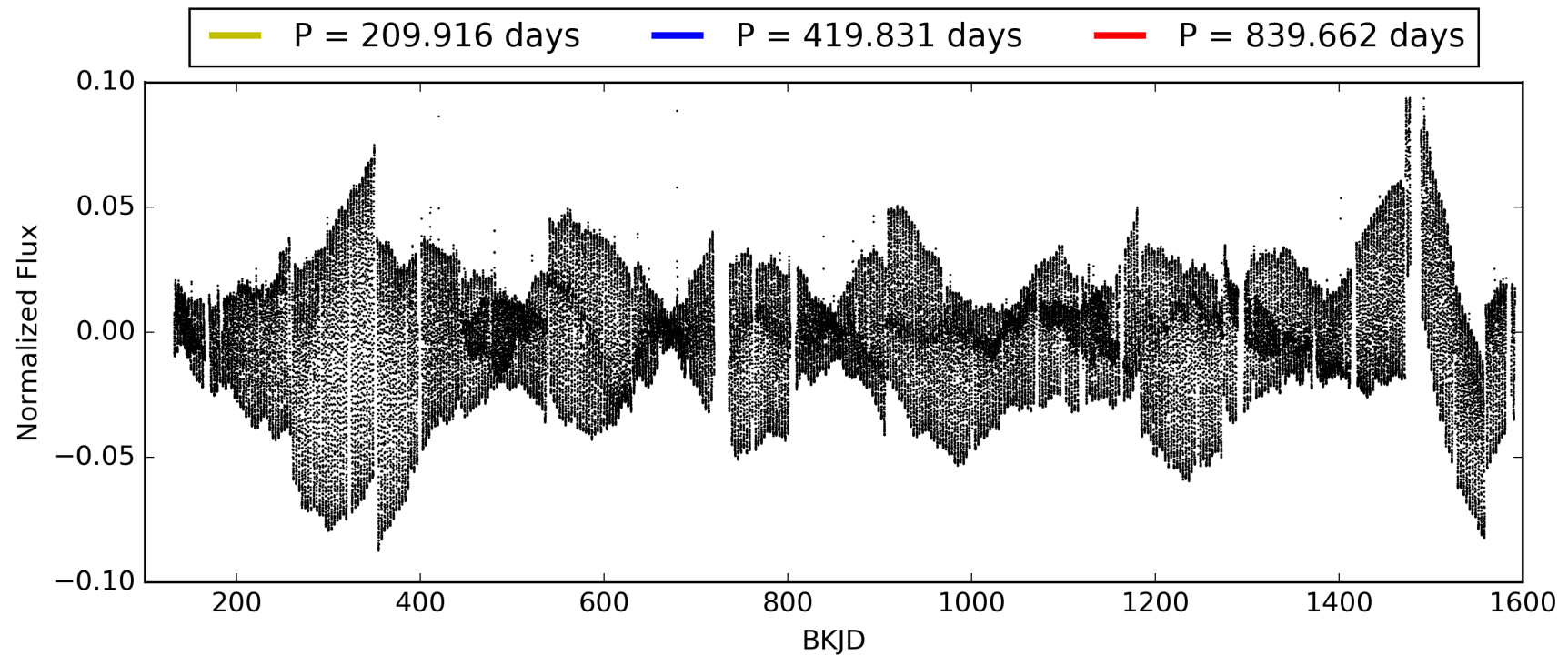
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:01:05 Z

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

TCE 009269688-04, PDC Light Curves

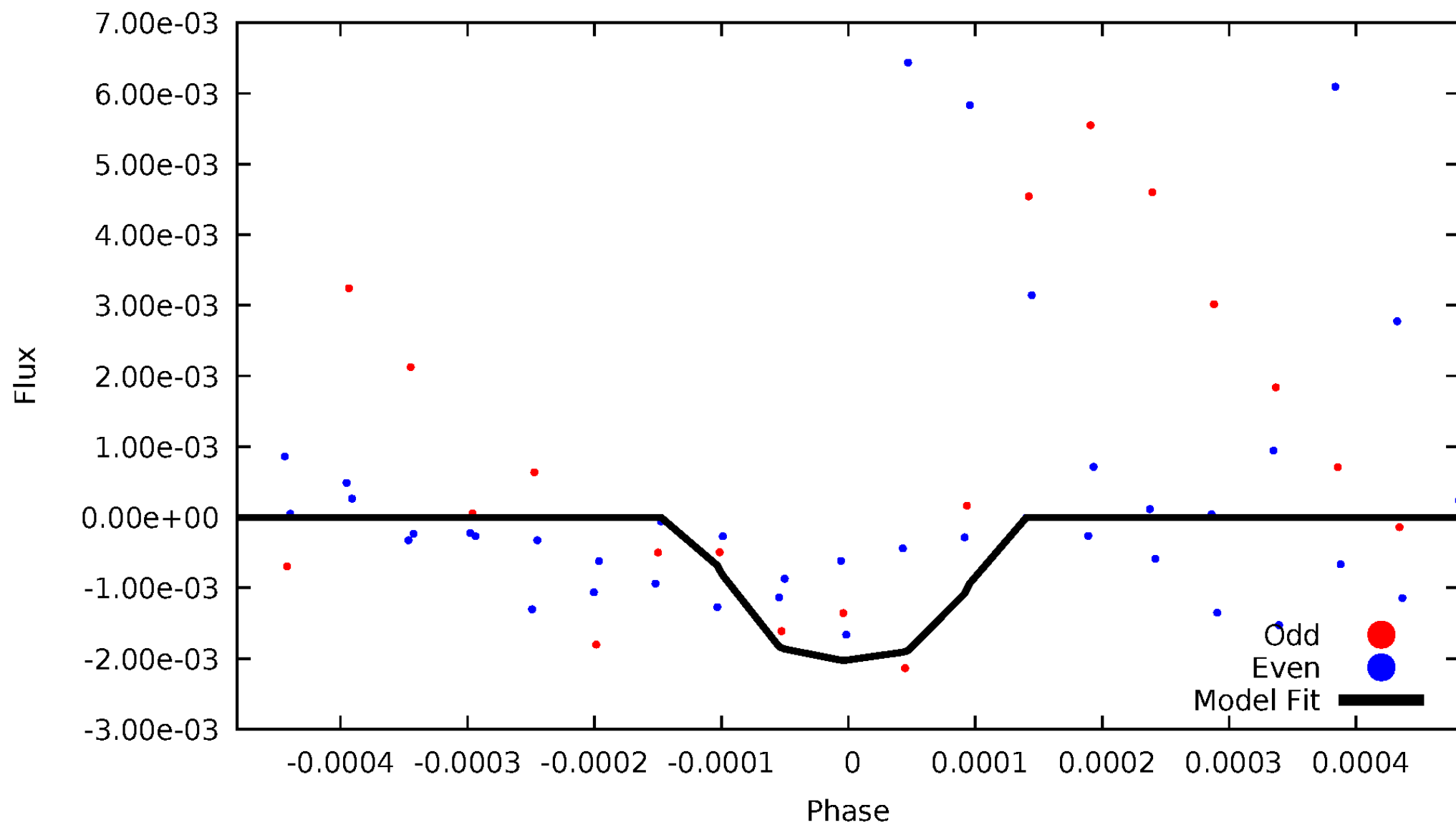


TCE 009269688-04



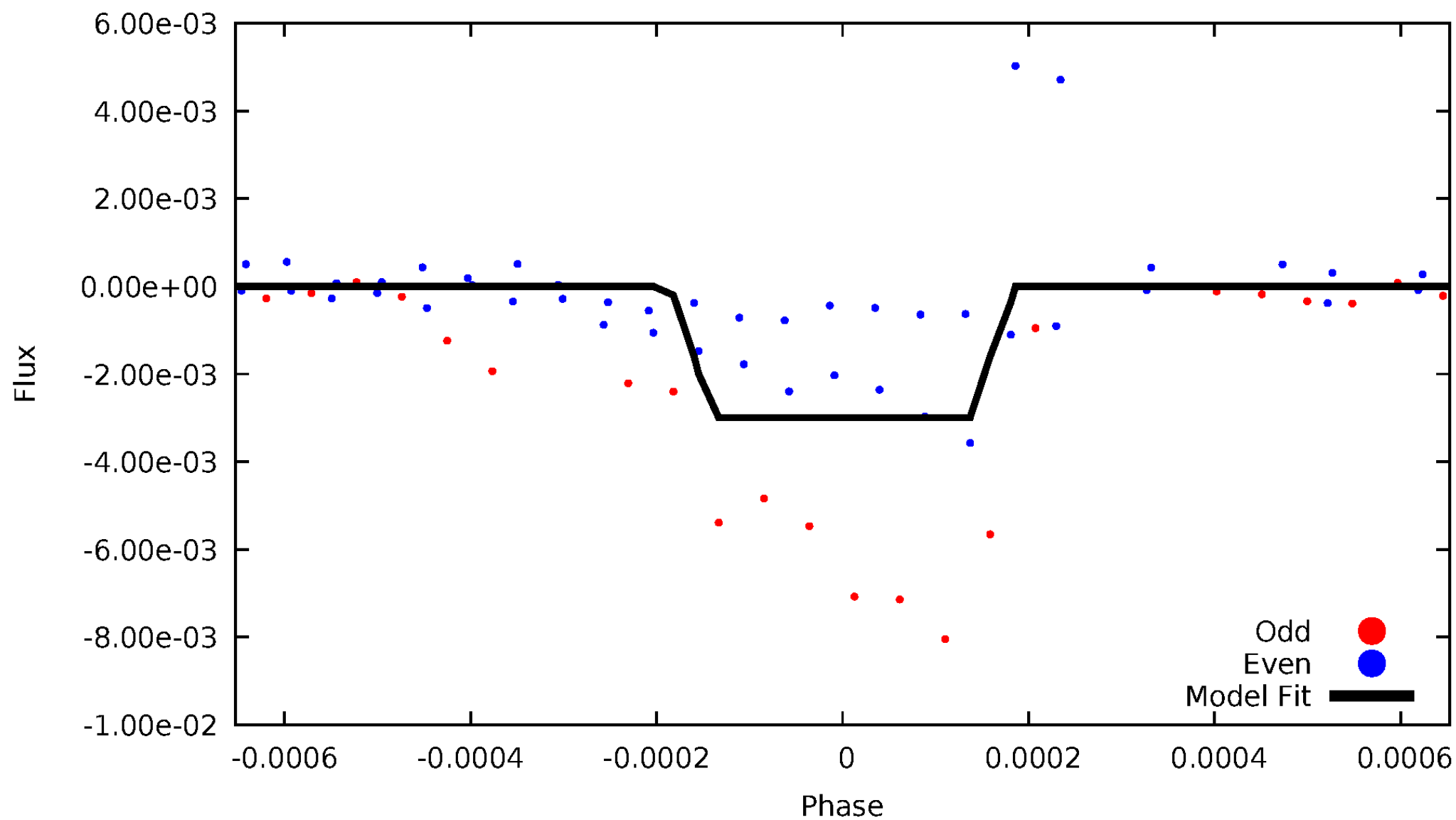
DV Odd/Even

TCE 009269688-04



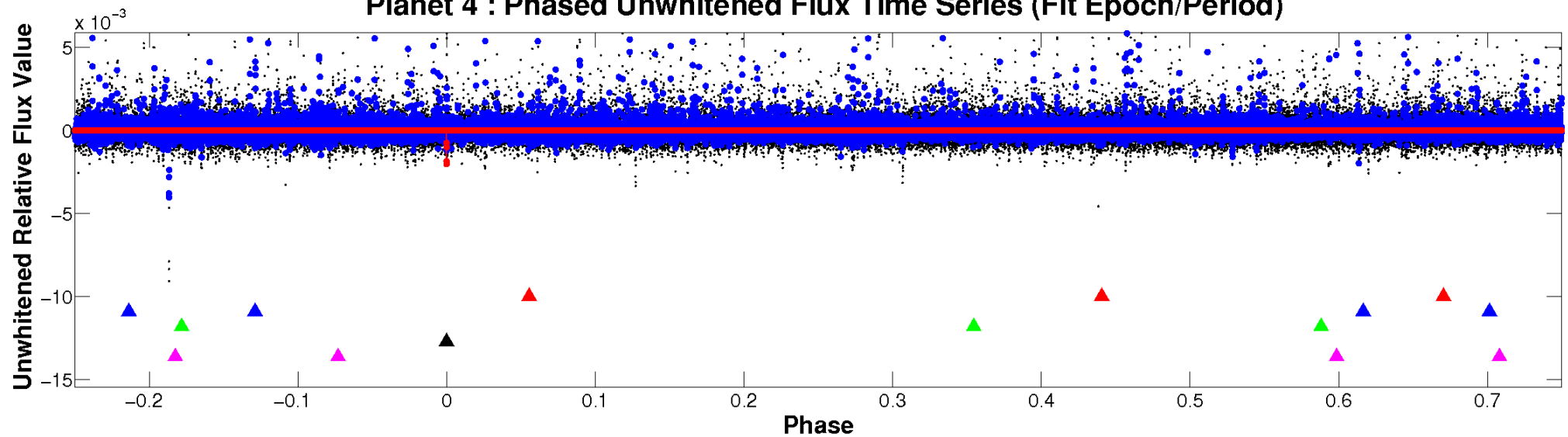
ALT Odd/Even

TCE 009269688-04

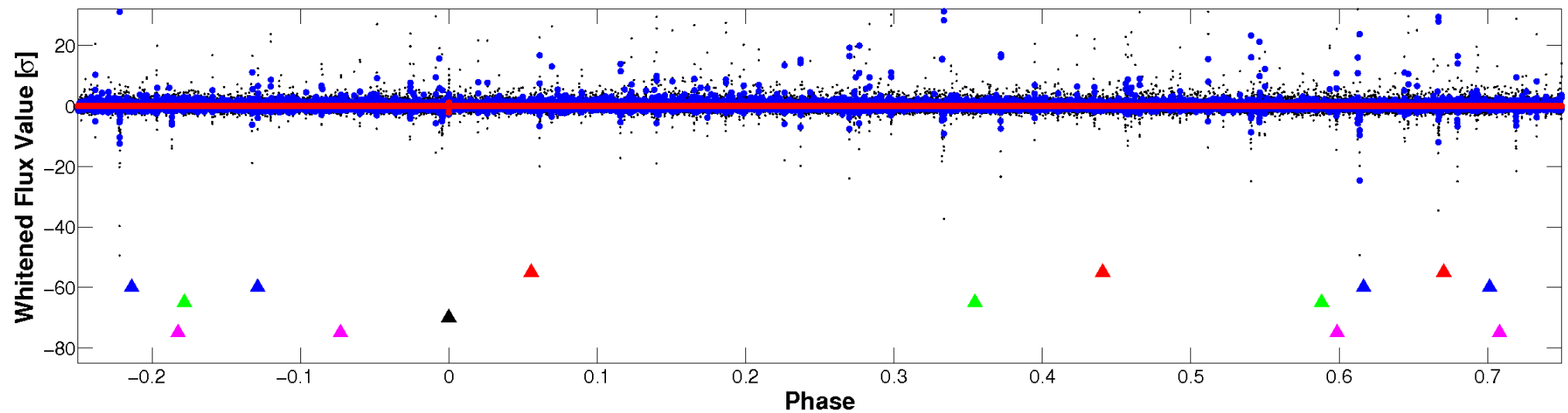


Non-Whitened Vs. Whitened Light Curve

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

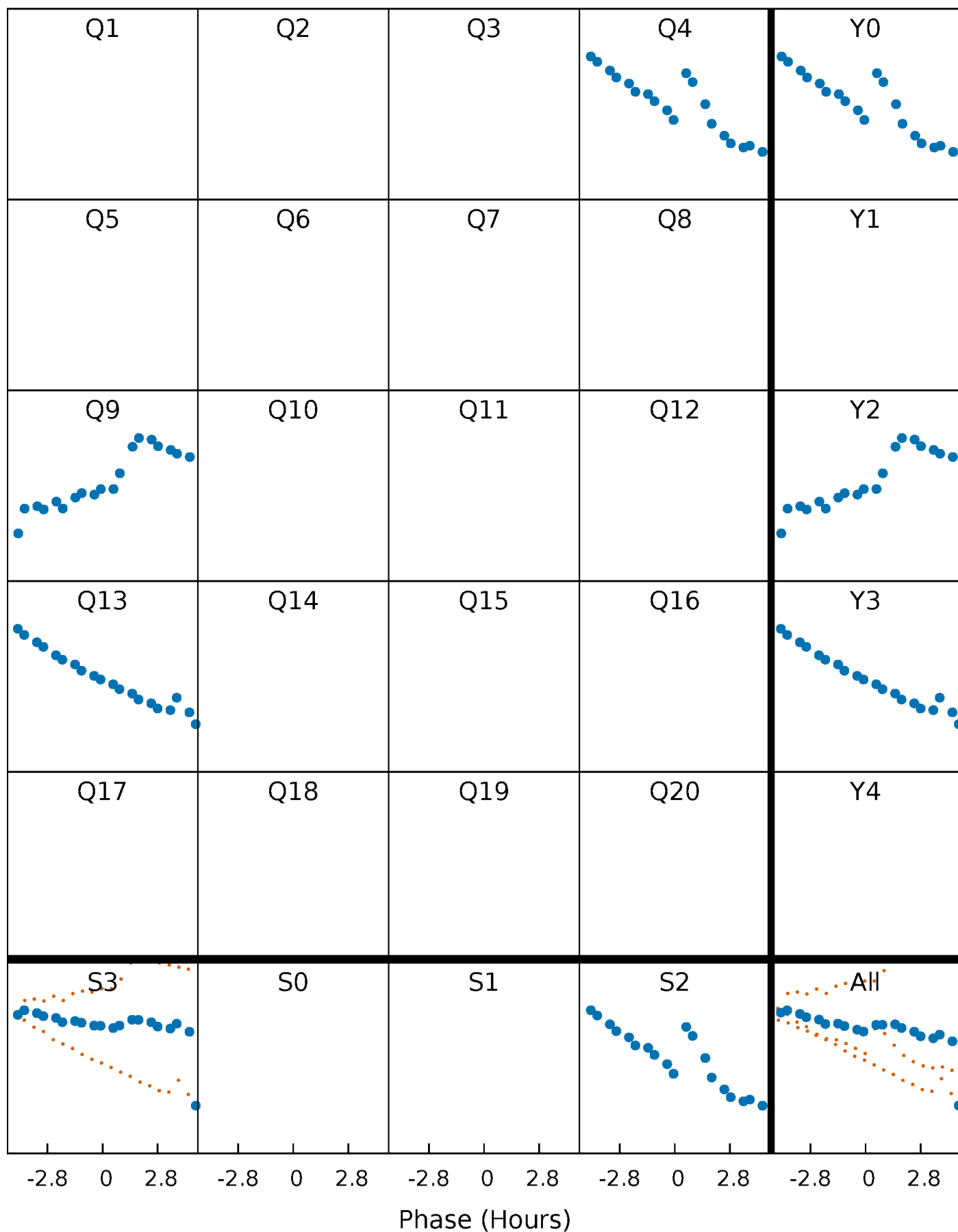


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



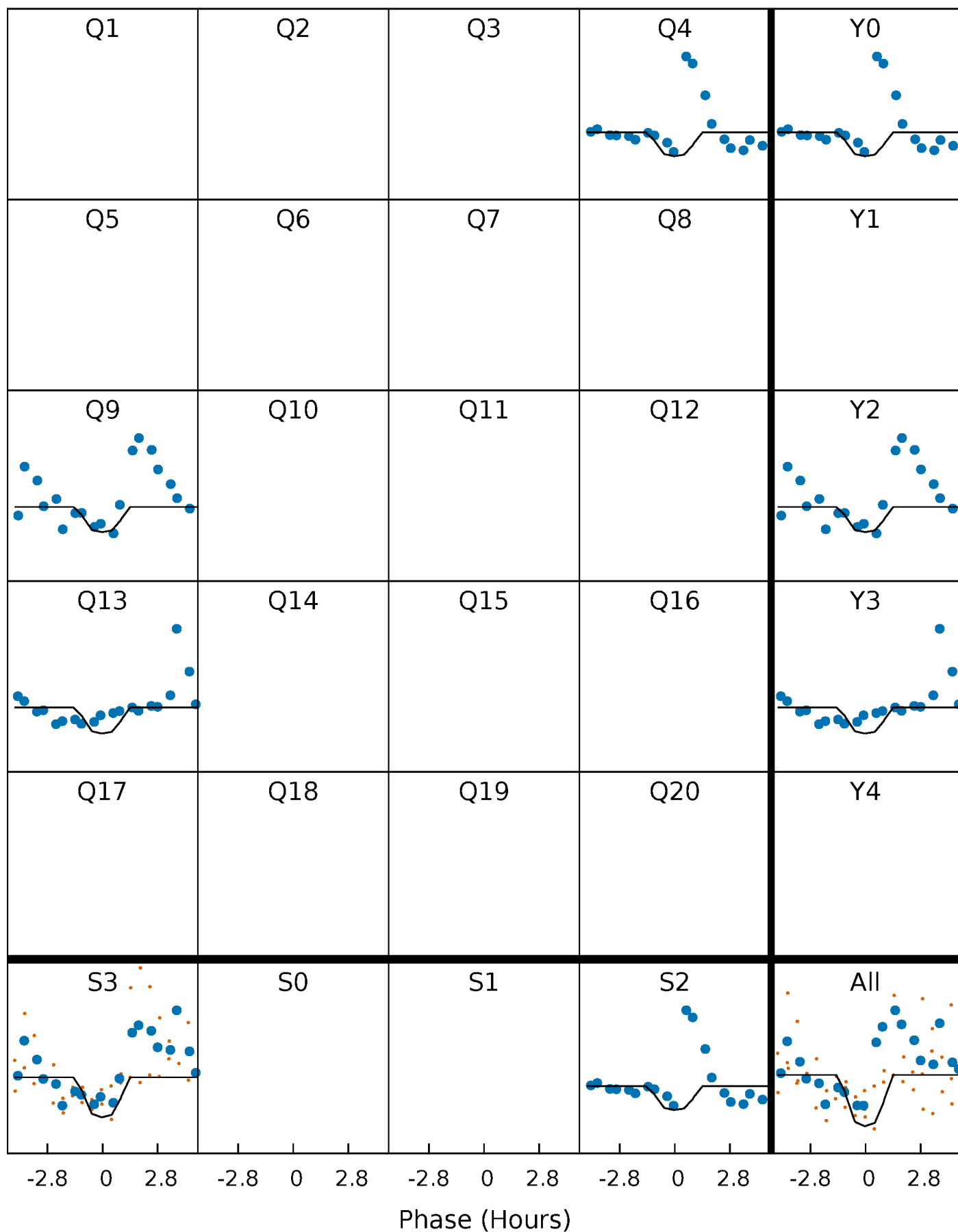
PDC Quarter-Phased Transit Curves

TCE 009269688-04 $P=419.831203$ Days $T_0=421.504164$ (BKJD)



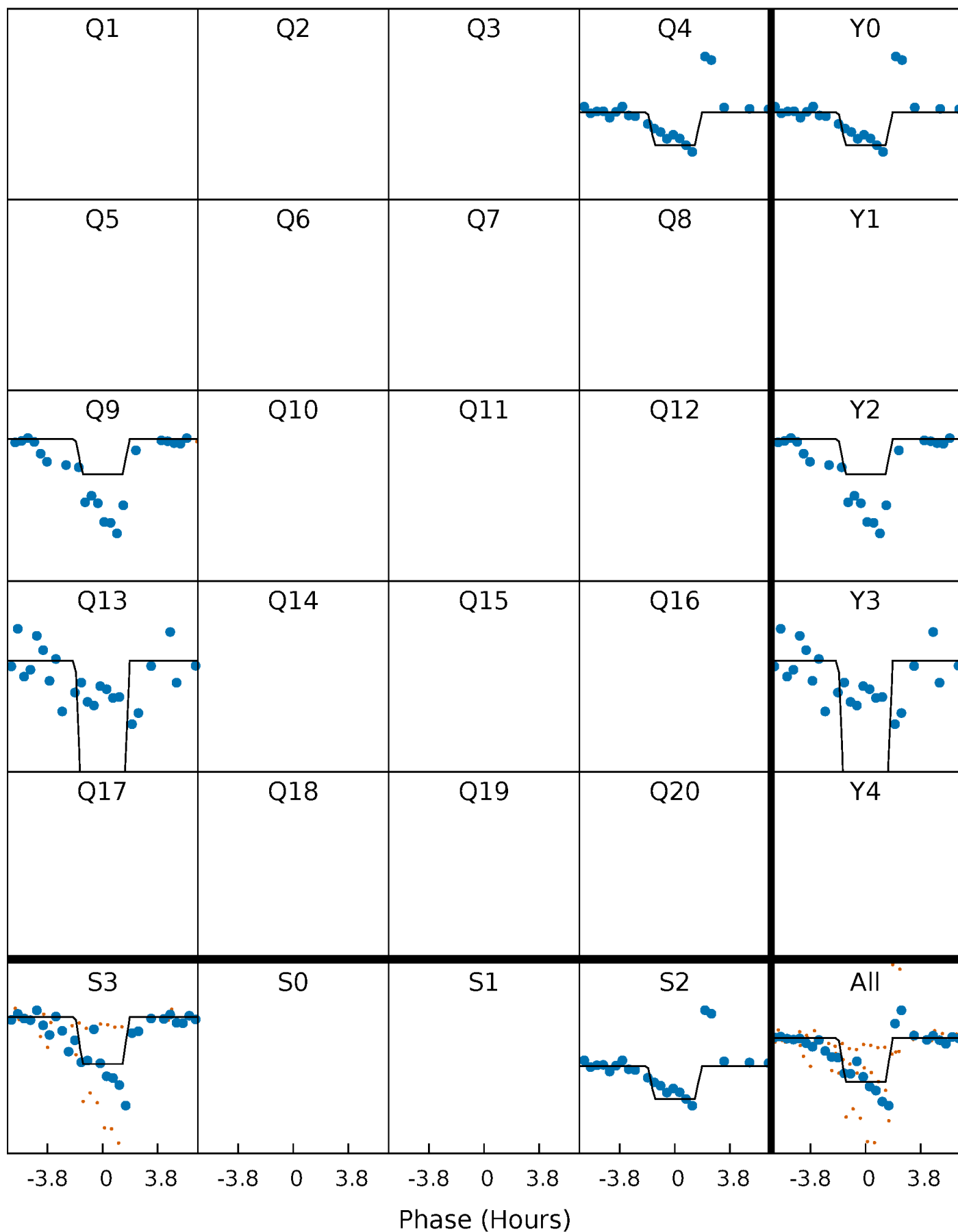
DV Quarter-Phased Transit Curves

TCE 009269688-04 $P=419.831203$ Days $T_0=421.504164$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

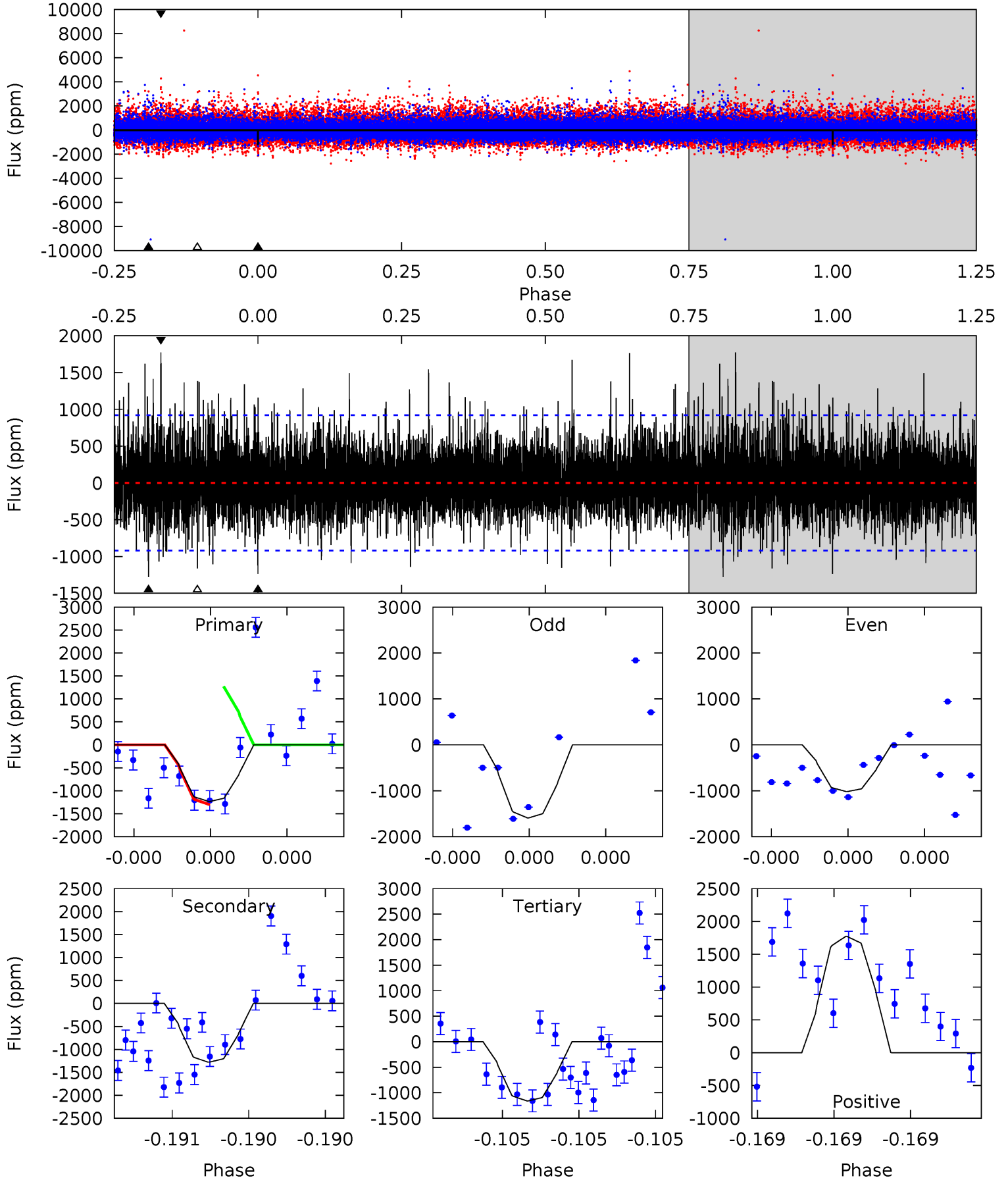
TCE 009269688-04 P=419.861980 Days $T_0=421.445900$ (BKJD)



DV Model-Shift Uniqueness Test

009269688-04, P = 419.831203 Days, E = 1.672961 Days

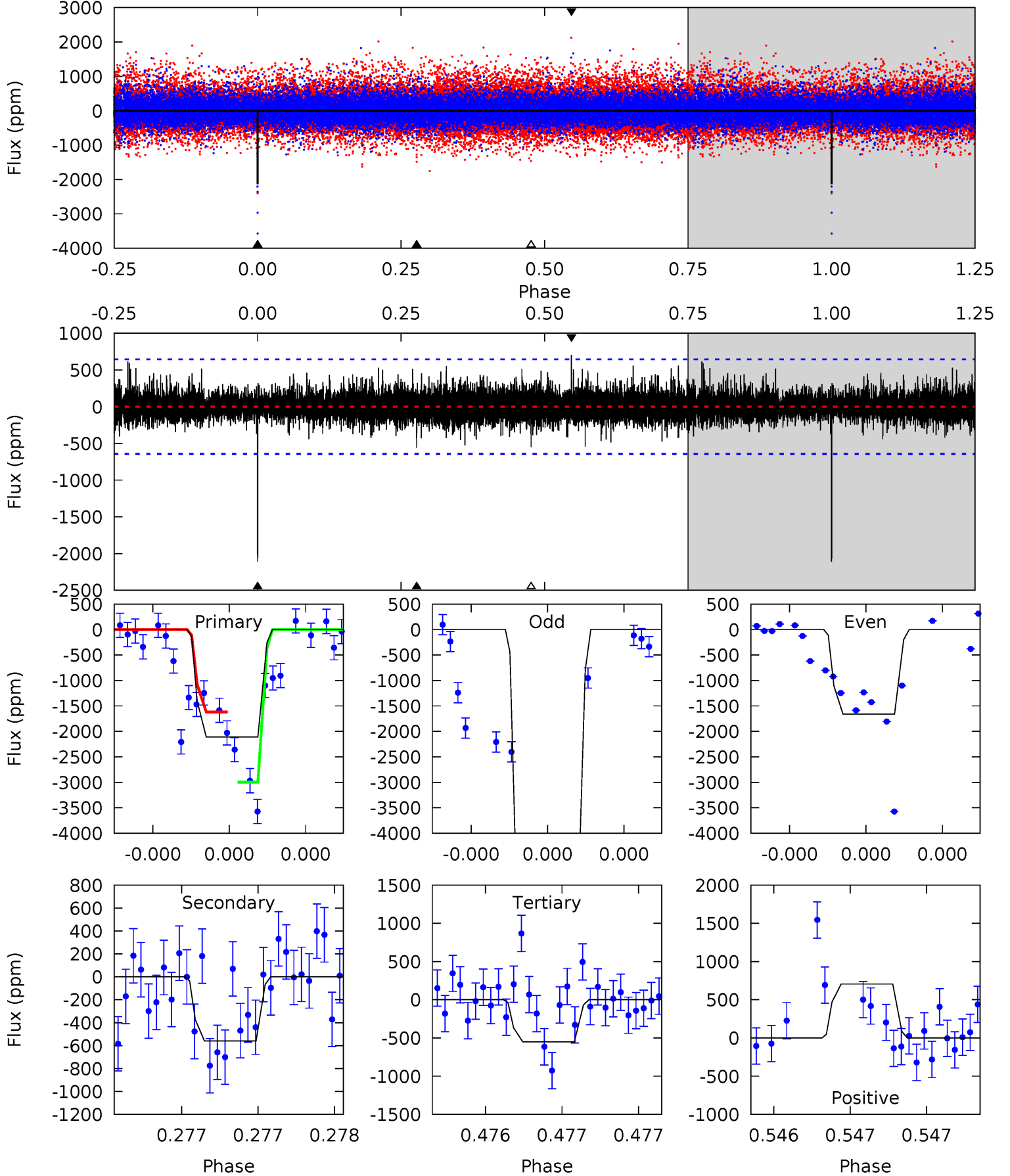
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.63	7.91	7.17	11.0	5.69	3.66	1.84	0.46	-3.33	0.73	-3.05	1.41	0.18	0.58	0.07



Alt Model-Shift Uniqueness Test

009269688-04, P = 419.861980 Days, E = 1.583920 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	4.89	4.81	6.15	5.63	3.56	1.00	13.6	12.3	0.08	-1.26	27.1	1.29	0.25	5.89



Stellar Parameters For KIC 009269688

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4547^{+137}_{-137}	$4.559^{+0.060}_{-0.020}$	$0.280^{+0.150}_{-0.300}$	$0.747^{+0.026}_{-0.062}$	$0.737^{+0.048}_{-0.048}$	$2.493^{+0.631}_{-0.181}$
	+3%/-3%	+1%/-0%	+54%/-107%	+3%/-8%	+7%/-7%	+25%/-7%
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 009269688-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1279 ± 162	$10.54^{+10.14}_{-7.24}$	242^{+8}_{-9}	2979^{+1336}_{-490}	6285^{+58233}_{-4692}
Alt.	-560 ± 115	$11.32^{+10.71}_{-7.51}$	242^{+8}_{-9}	2609^{+899}_{-379}	2318^{+18195}_{-1711}

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 $A_{obs} \gg 1.0$

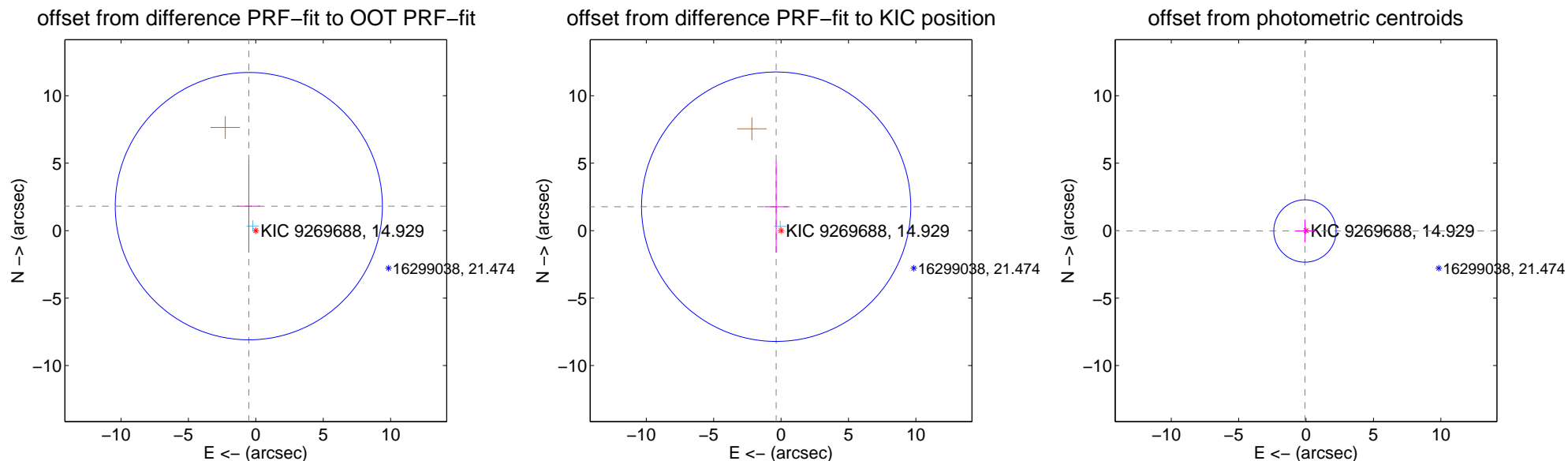
DV Centroid Data

Supplemental centroid analysis for 009269688-04. Kepler magnitude: 14.93. Transit SNR 6.20

There are 1 quarters with good PRF difference image offsets

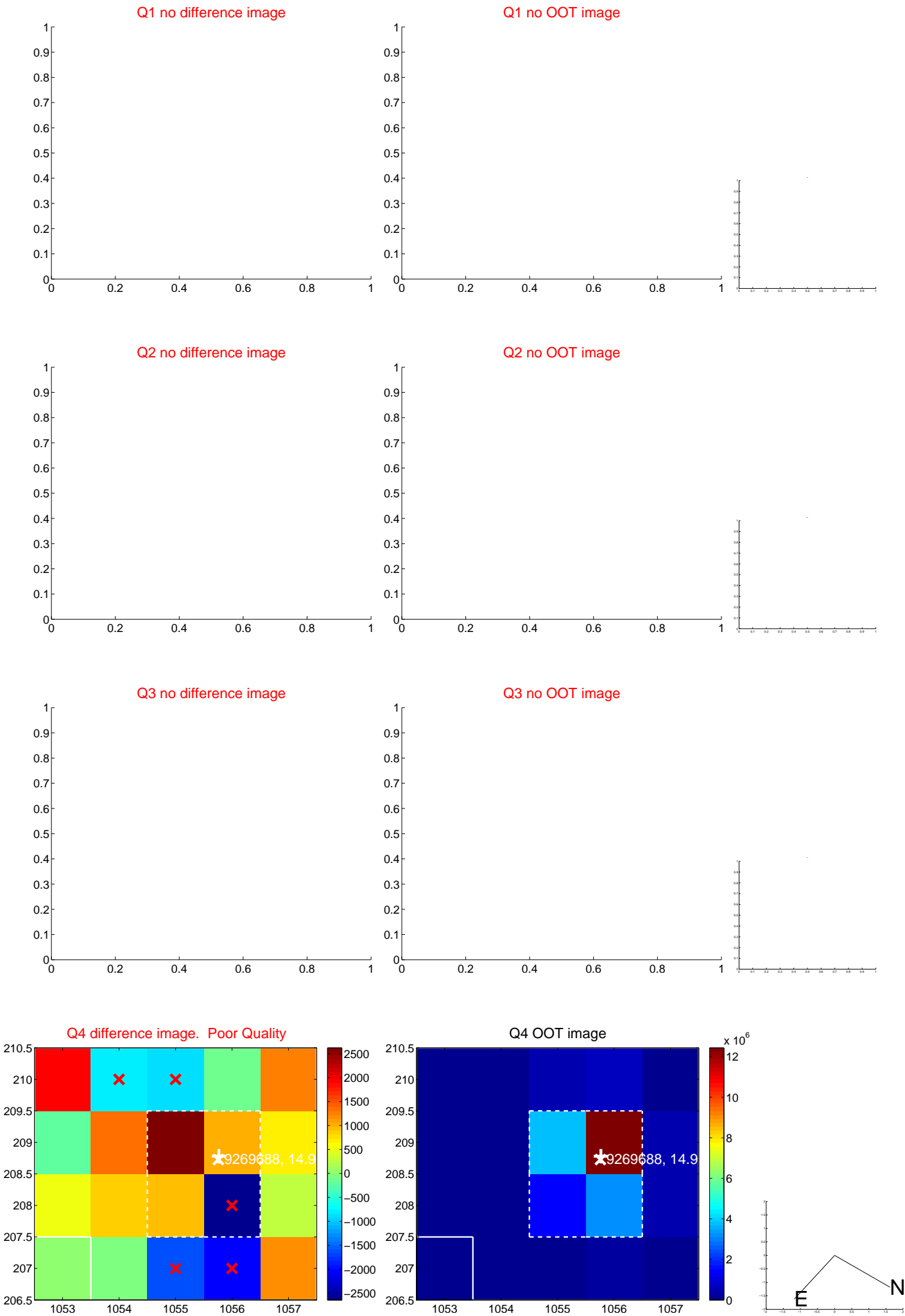
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.889 ± 3.304	0.57	0.520 ± 0.844	1.816 ± 3.429
PRF-fit source offset from KIC position	1.812 ± 3.330	0.54	0.367 ± 0.869	1.774 ± 3.395
photometric centroid source offset	0.09 ± 0.77	0.11	0.08 ± 0.76	-0.03 ± 0.85



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.

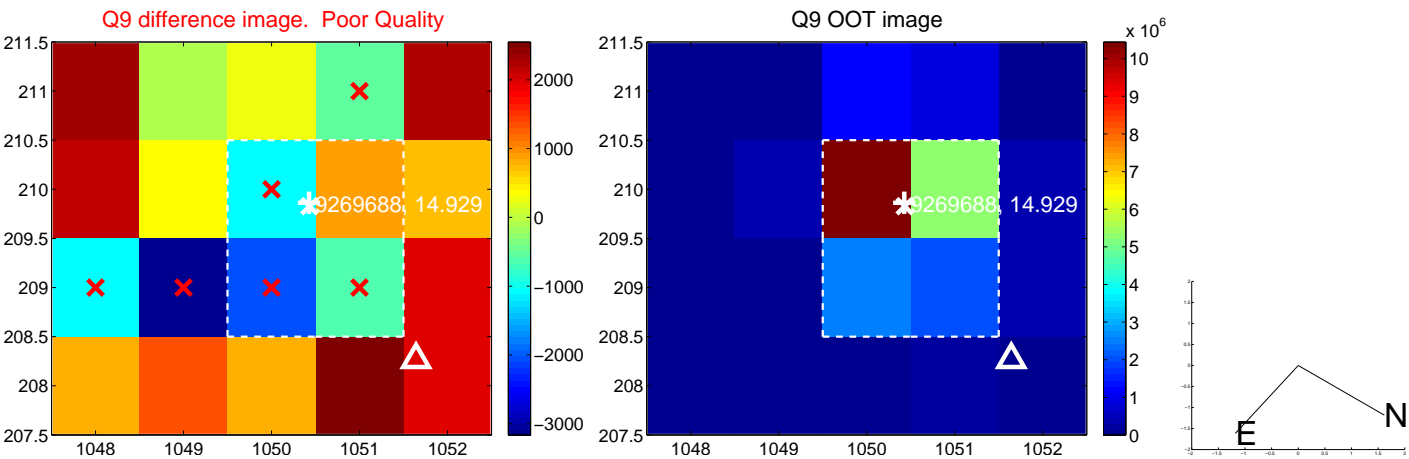
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



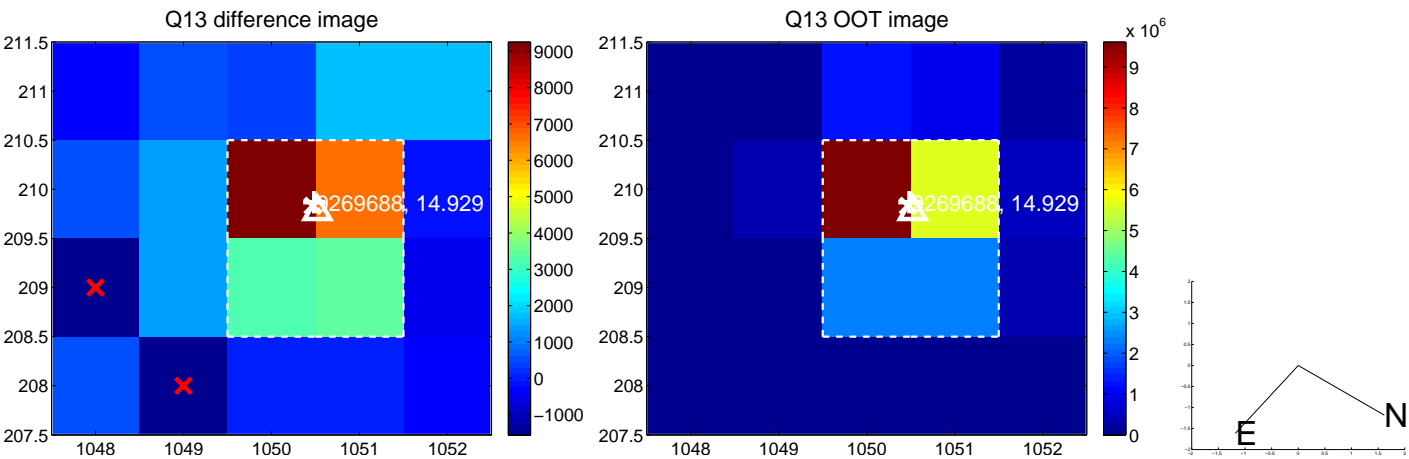
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



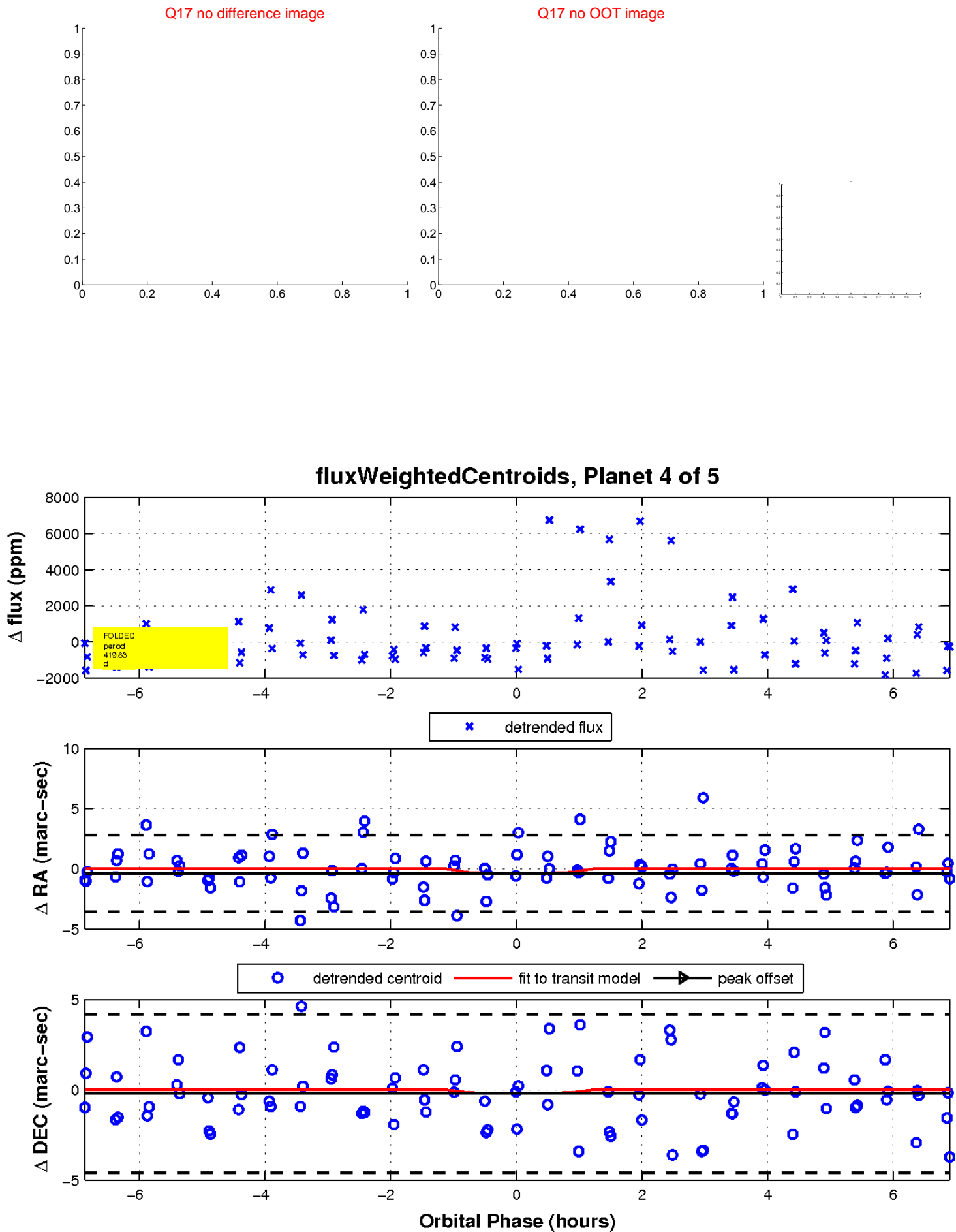
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

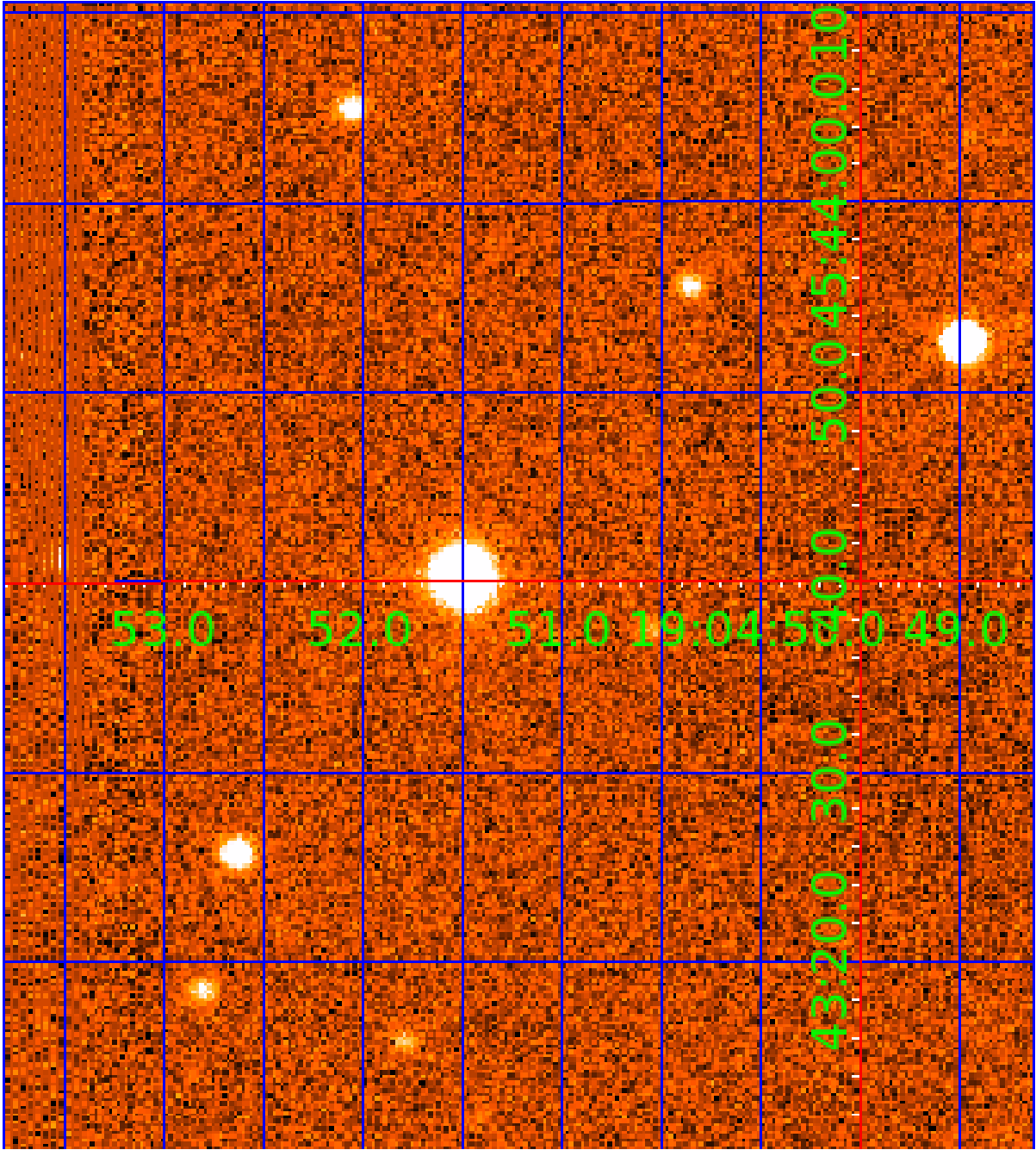


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009269688

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})
009269688-01	OBS	No	581.502887	283.158935	2288.2	12.562	13.3	6.6	0.75	4547	3.53	0.14
009269688-02	OBS	No	384.188063	367.429381	1659.1	4.964	13.7	6.2	0.75	4547	2.98	0.24
009269688-03	OBS	No	517.914529	150.527827	2274.4	4.211	15.1	6.6	0.75	4547	3.69	0.16
009269688-04	OBS	No	419.831203	421.504164	2024.4	2.425	15.7	6.2	0.75	4547	3.96	0.22
009269688-05	OBS	No	373.871939	390.869589	1511.6	3.000	12.0	-1.0	0.75	4547	2.77	0.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009269688-01	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
009269688-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
009269688-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269688-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269688-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

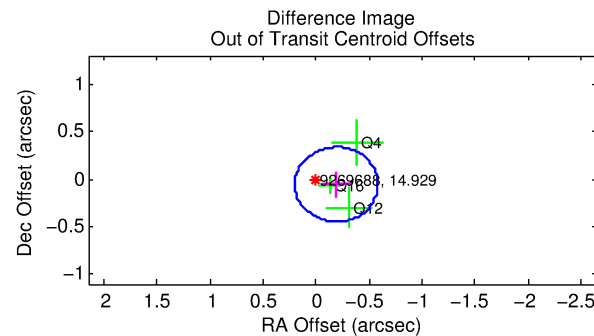
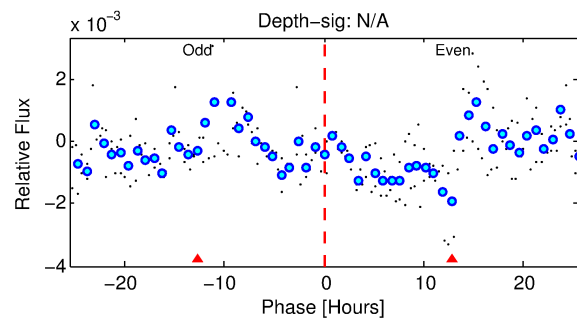
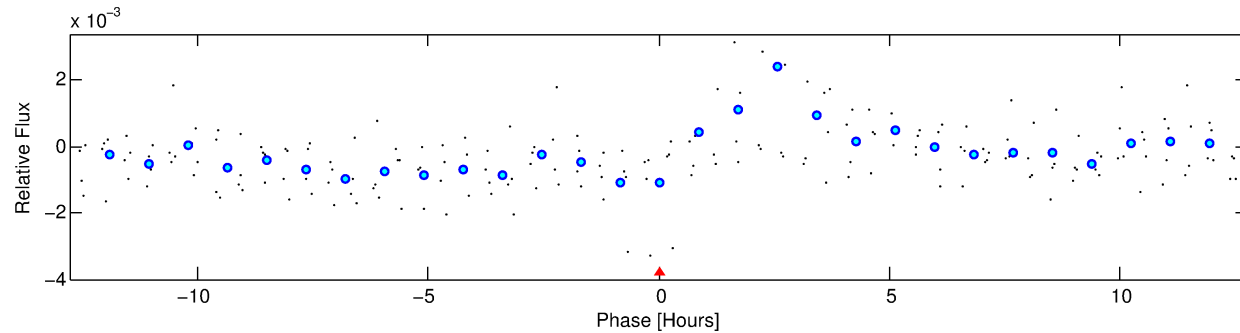
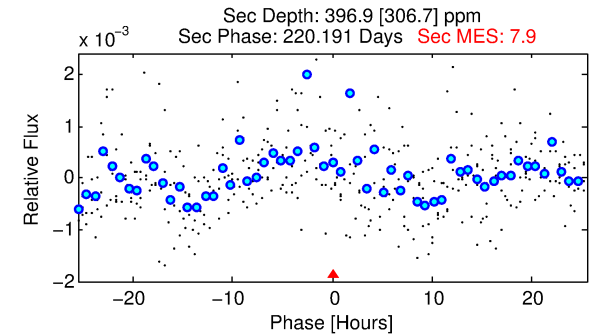
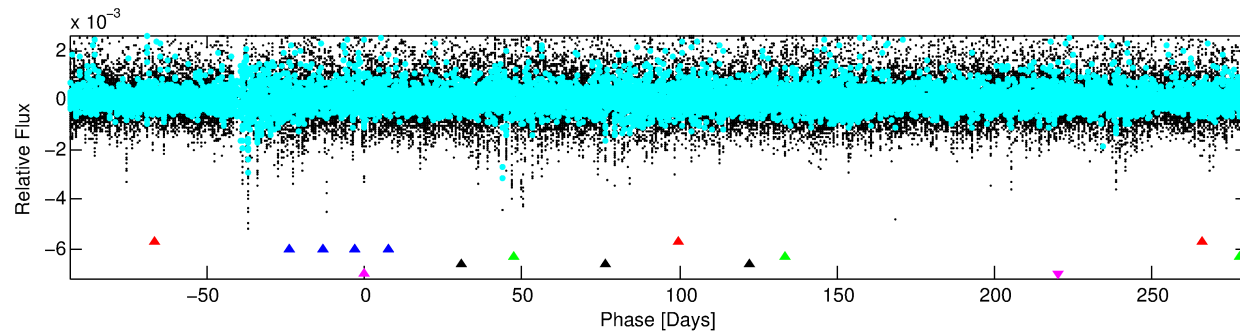
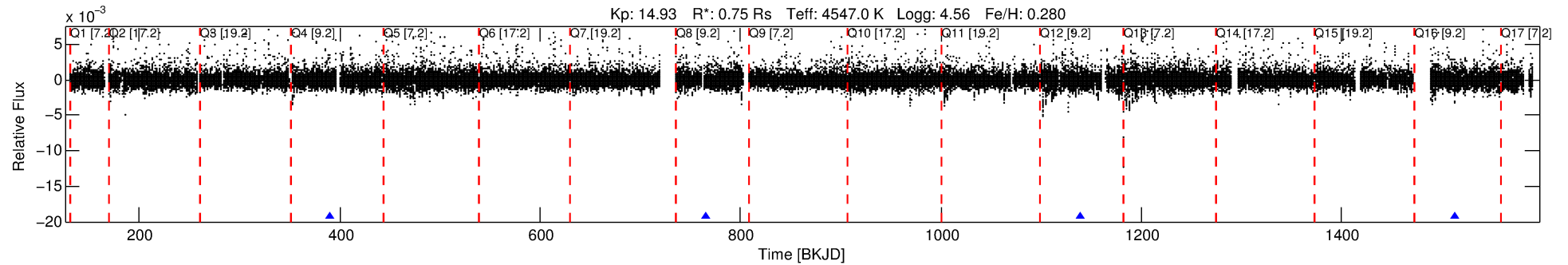
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009269688-05

No Significant Match Found

DV One-Page Summary

KIC: 9269688 Candidate: 5 of 5 Period: 373.872 d



TPS TCE Results:

Period = 373.87194 d
Epoch = 390.8696 BKJD

DV fit results are unavailable

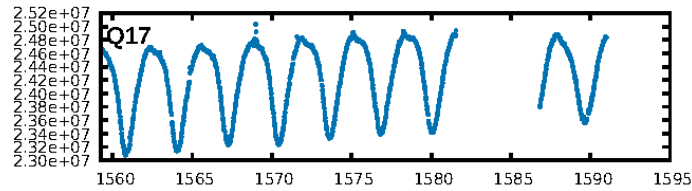
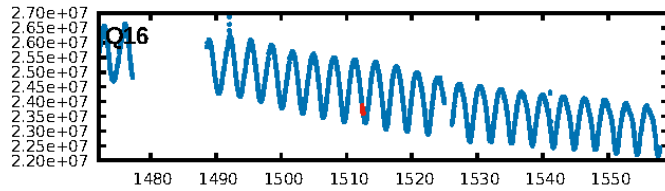
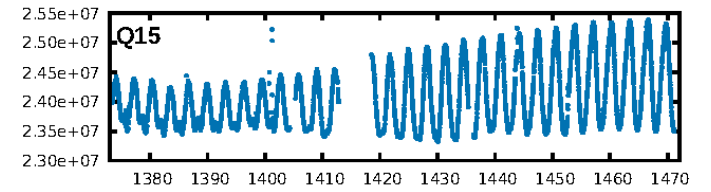
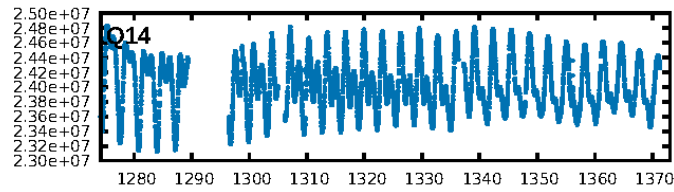
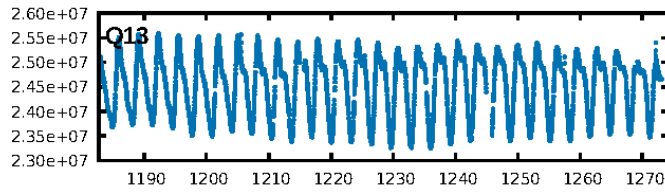
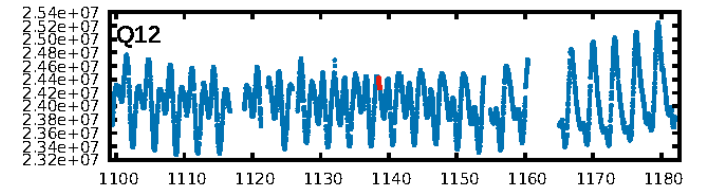
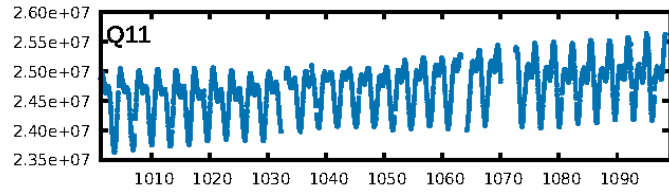
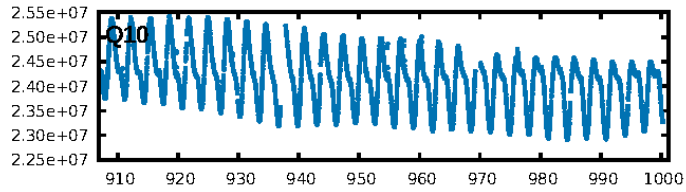
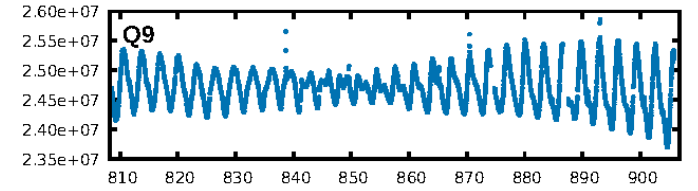
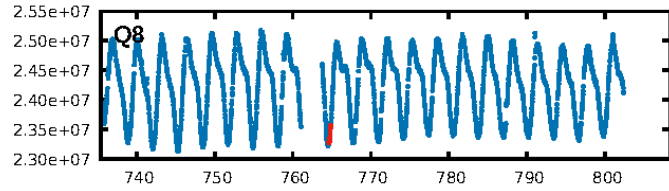
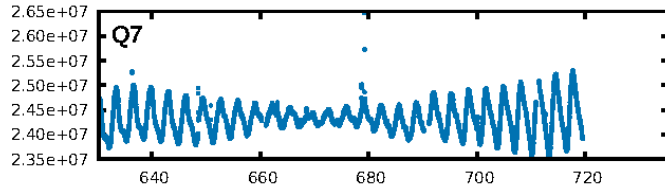
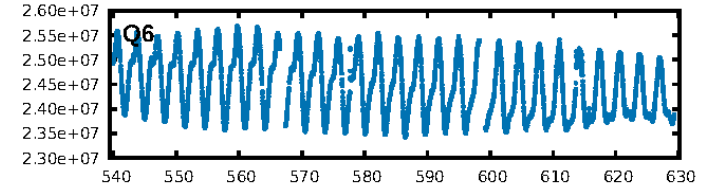
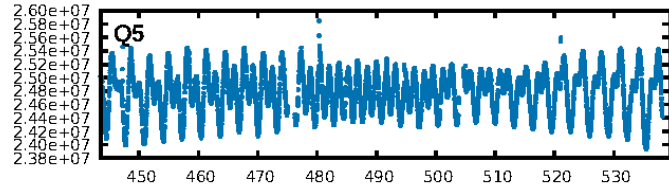
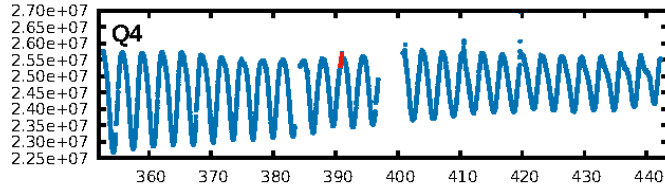
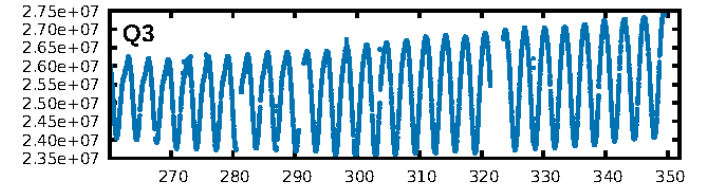
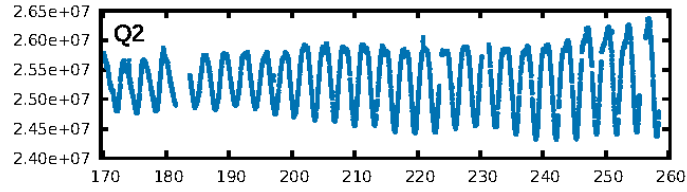
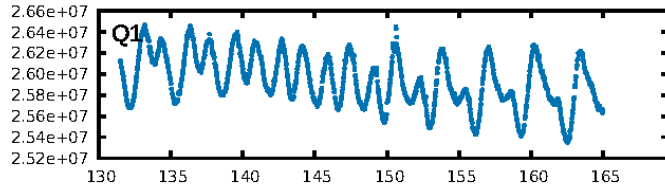
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [42.69σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -8.234
Centroid-sig: 85.7%
Centroid-so: 0.115 arcsec [0.30σ]
OotOffset-rm: 0.198 arcsec [1.51σ]
KicOffset-rm: 0.405 arcsec [2.68σ]
OotOffset-st: 0/0/3/0 [3]
KicOffset-st: 0/0/3/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

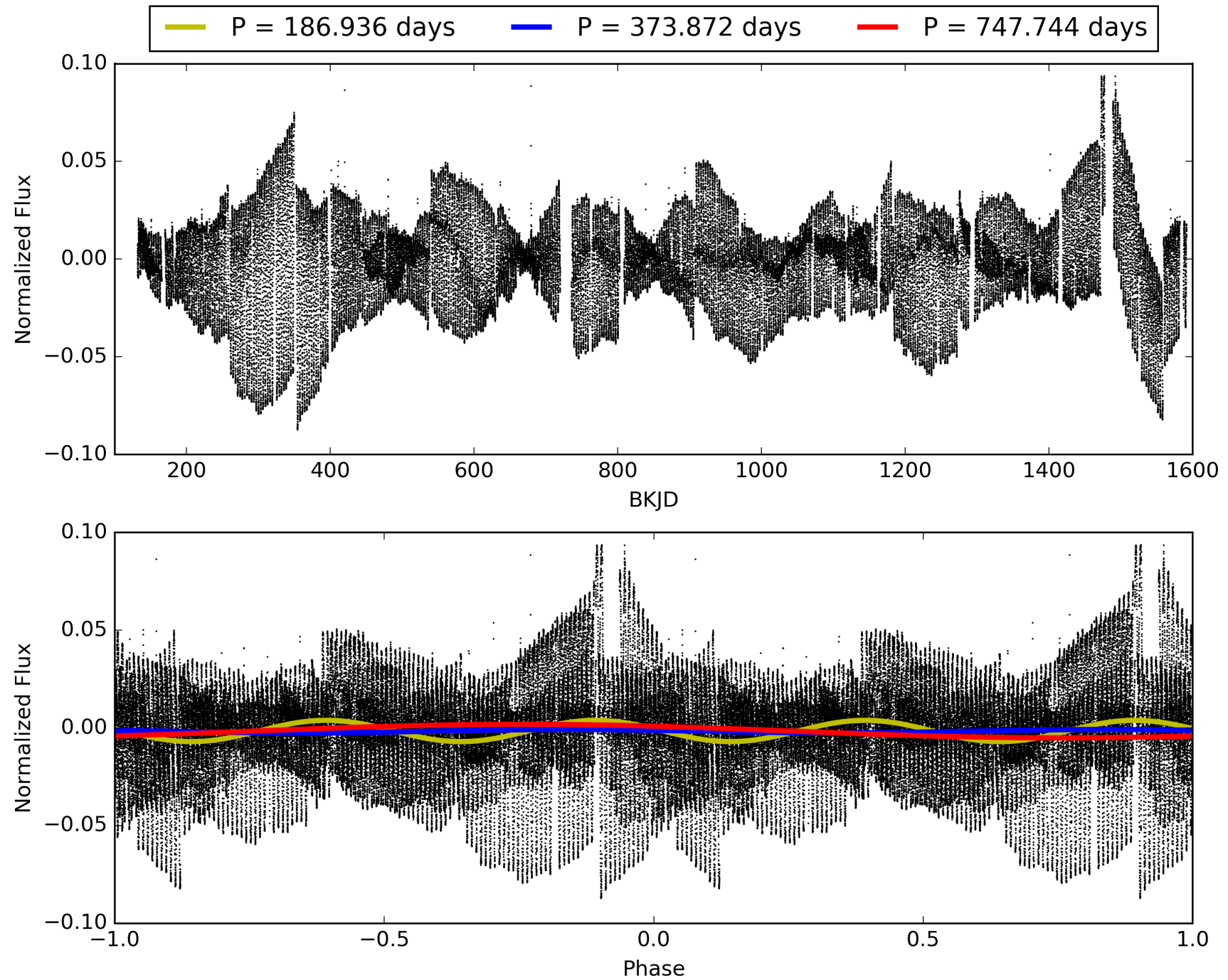
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:01:20 Z

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

TCE 009269688-05, PDC Light Curves

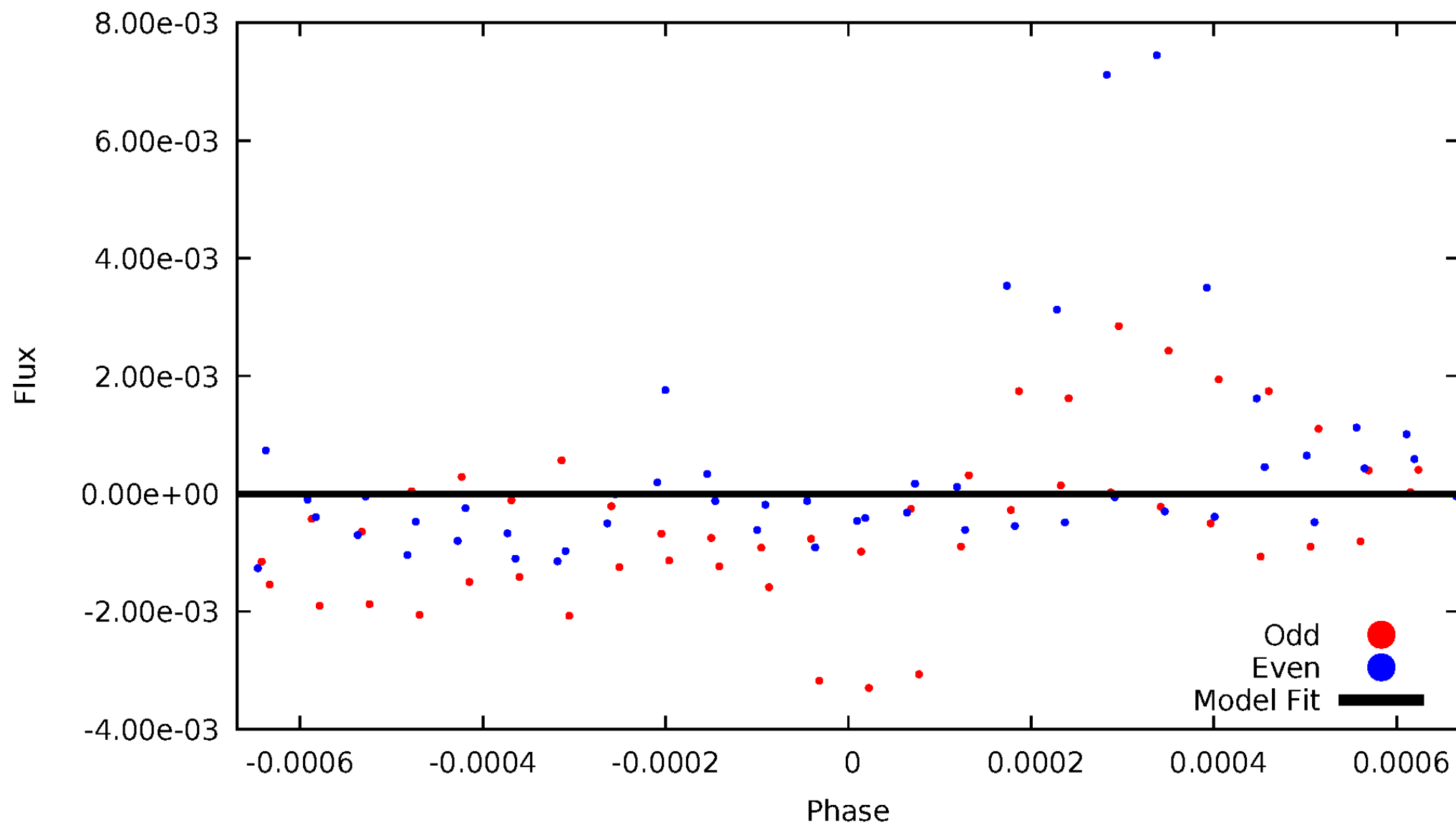


TCE 009269688-05



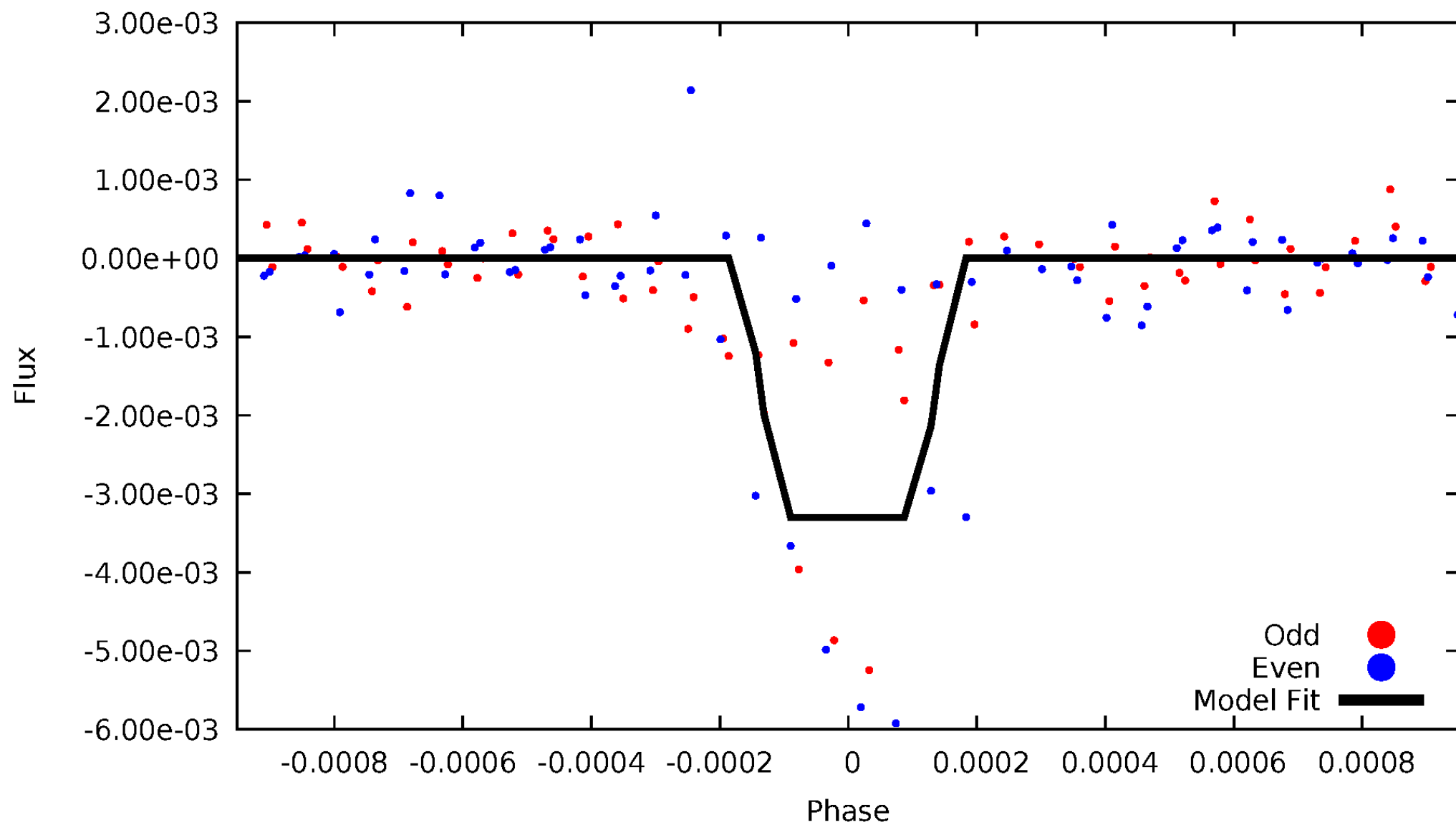
DV Odd/Even

TCE 009269688-05

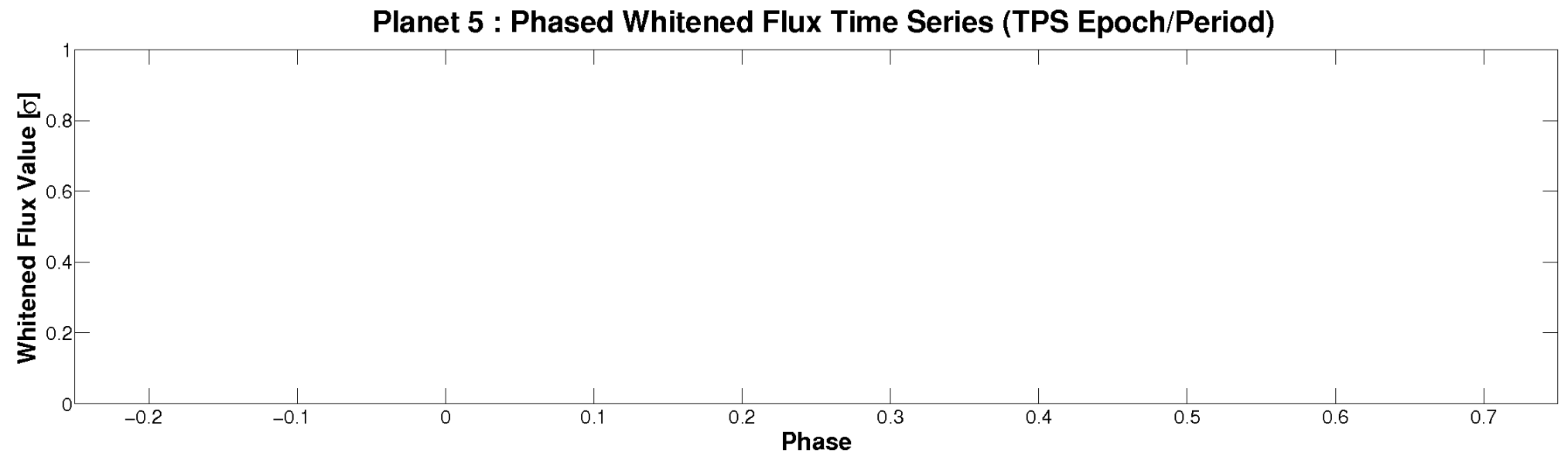
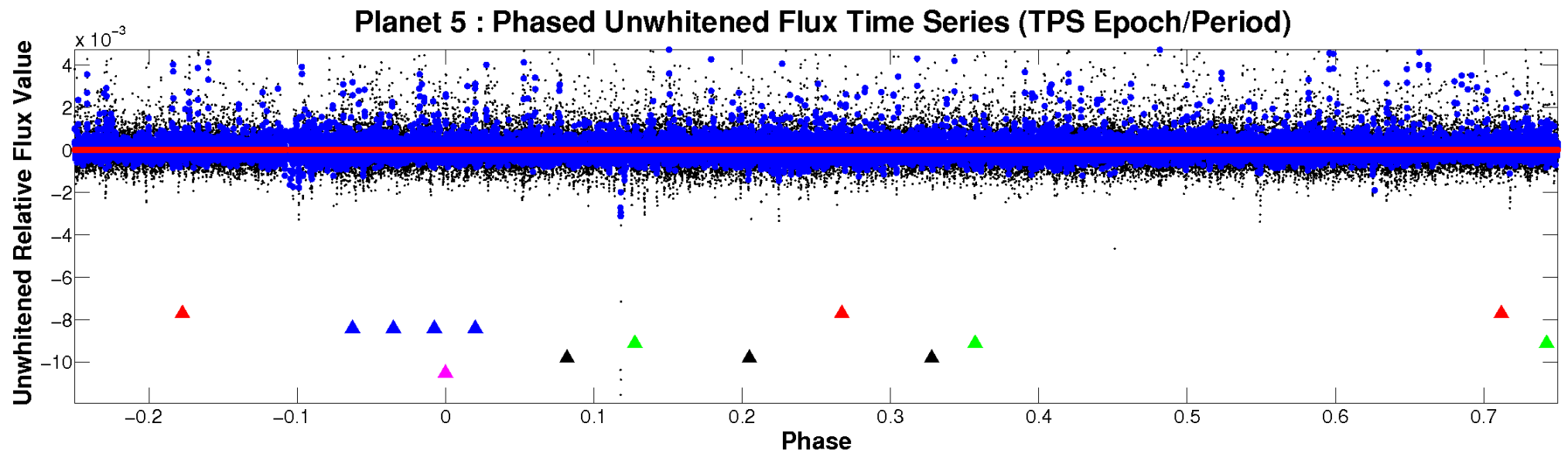


ALT Odd/Even

TCE 009269688-05

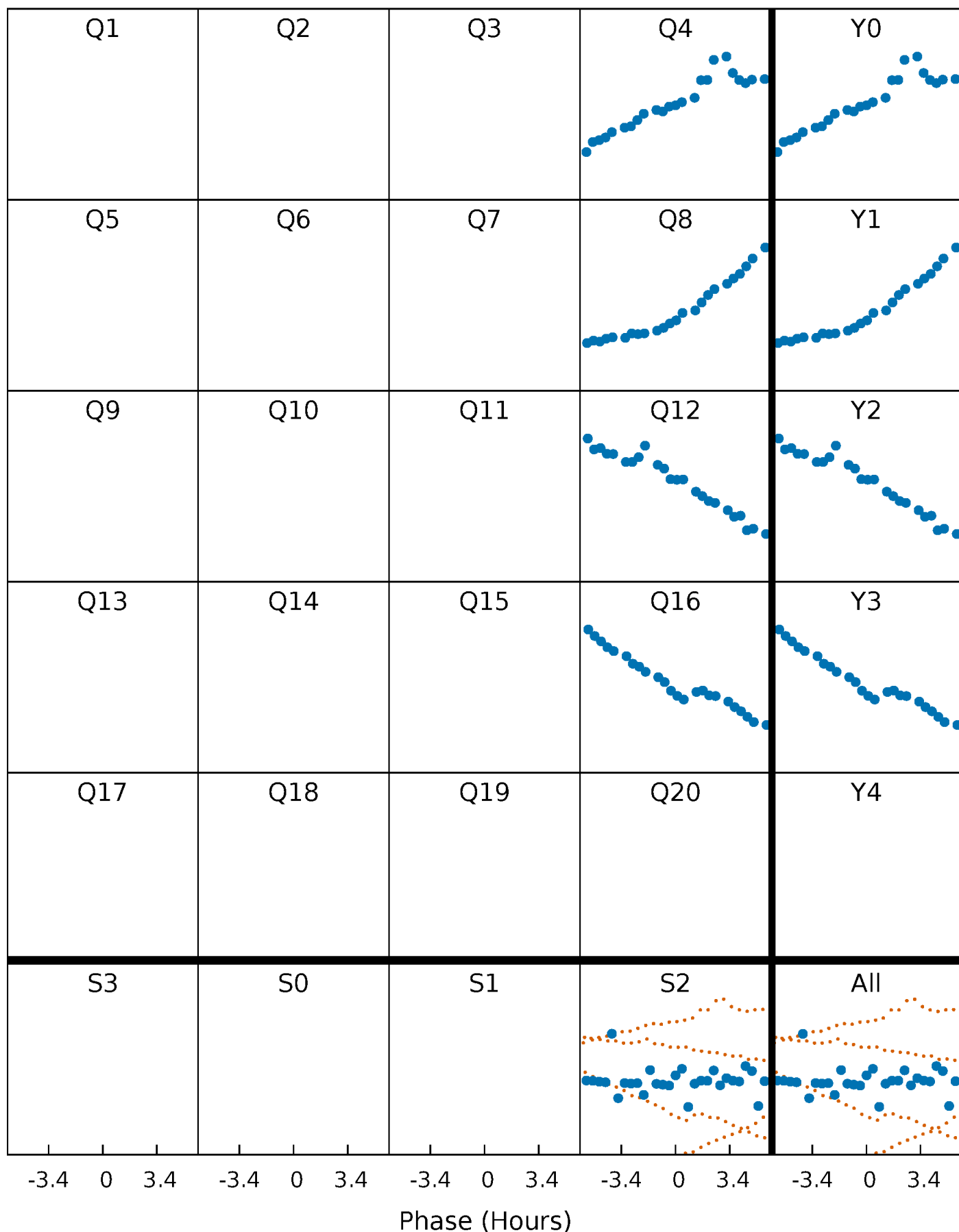


Non-Whitened Vs. Whitened Light Curve



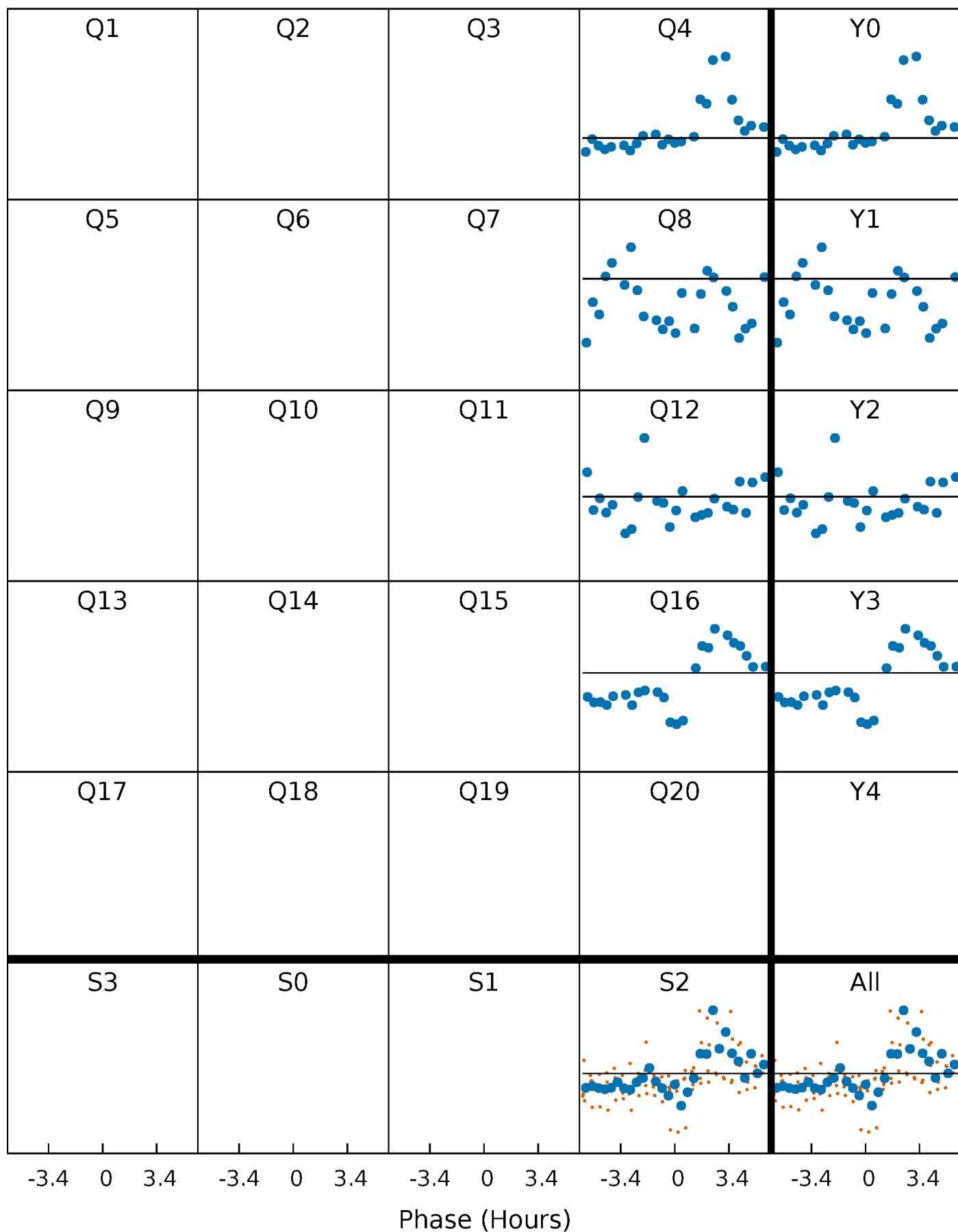
PDC Quarter-Phased Transit Curves

TCE 009269688-05 $P=373.871939$ Days $T_0=390.869589$ (BKJD)



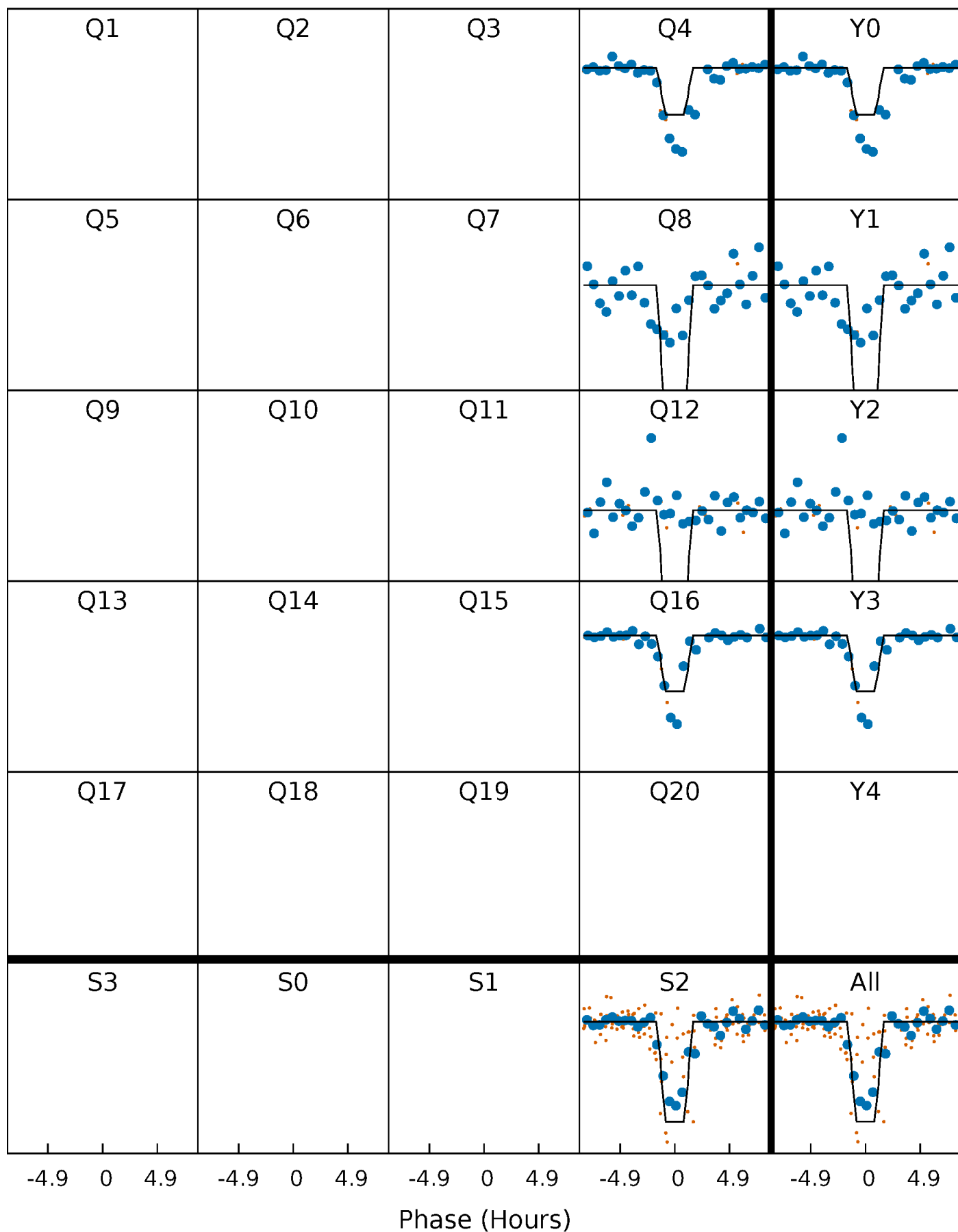
DV Quarter-Phased Transit Curves

TCE 009269688-05 $P=373.871939$ Days $T_0=390.869589$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

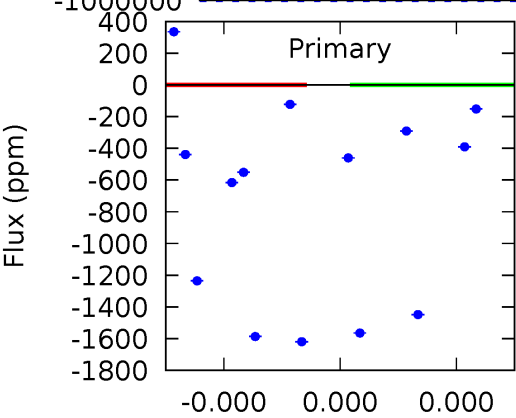
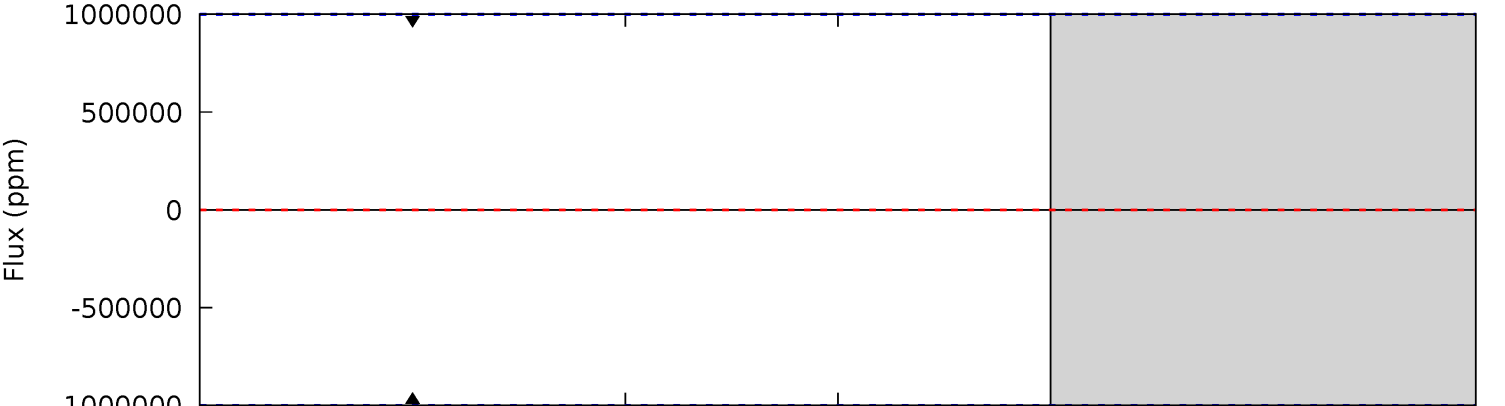
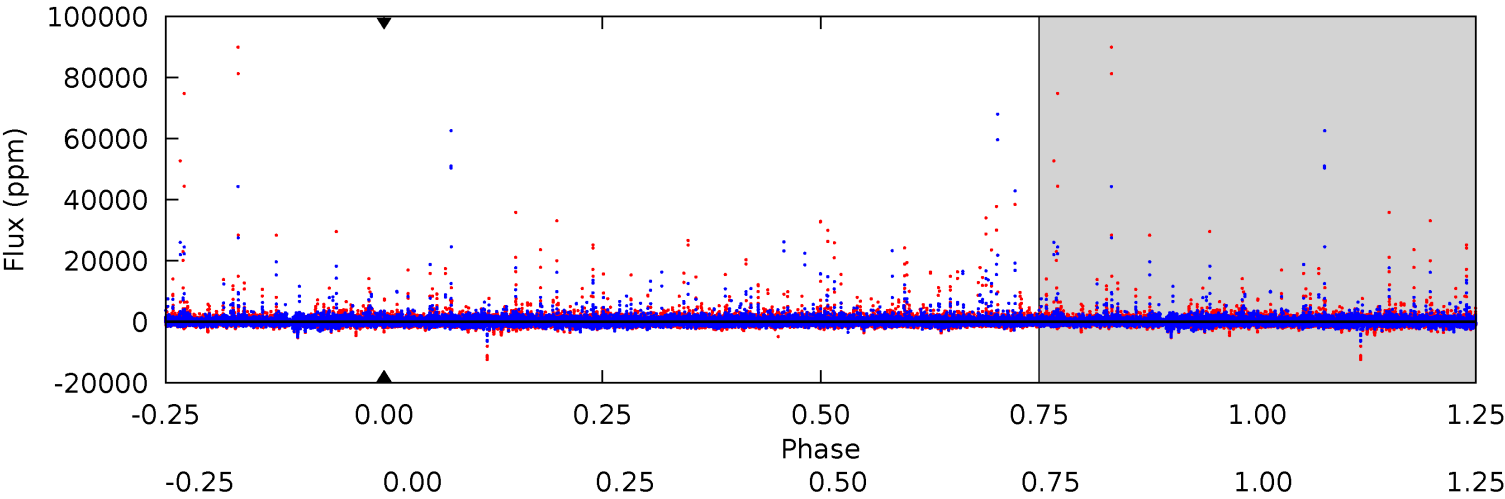
TCE 009269688-05 $P=373.871939$ Days $T_0=390.886347$ (BKJD)



DV Model-Shift Uniqueness Test

009269688-05, P = 373.871939 Days, E = 16.997650 Days

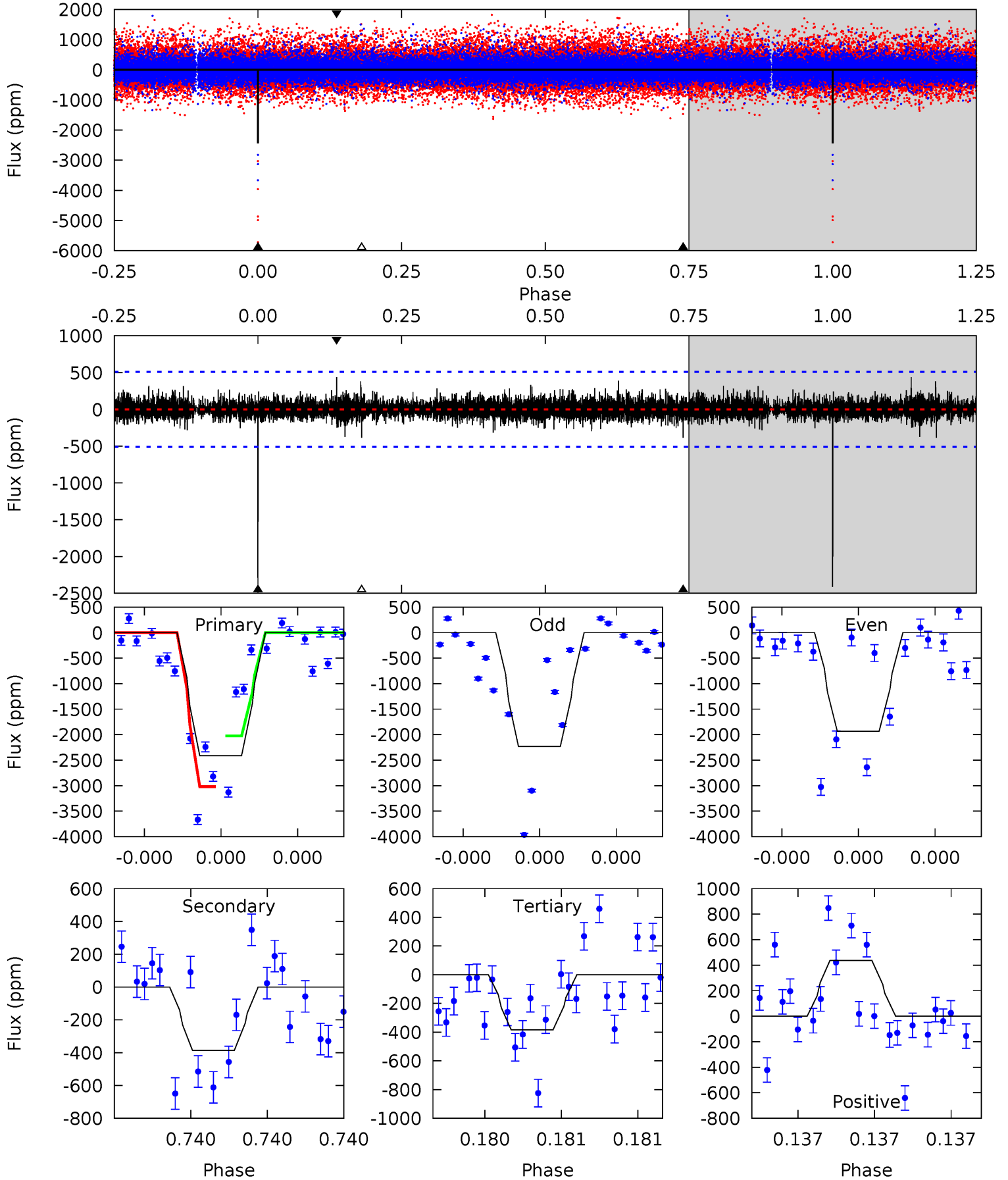
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

009269688-05, $P = 373.871939$ Days, $E = 17.014408$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.7	4.28	4.25	4.85	5.65	3.60	0.83	22.5	21.9	0.03	-0.57	1.66	1.04	0.15	4.97



Stellar Parameters For KIC 009269688

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4547^{+137}_{-137}	$4.559^{+0.060}_{-0.020}$	$0.280^{+0.150}_{-0.300}$	$0.747^{+0.026}_{-0.062}$	$0.737^{+0.048}_{-0.048}$	$2.493^{+0.631}_{-0.181}$
	+3%/-3%	+1%/-0%	+54%/-107%	+3%/-8%	+7%/-7%	+25%/-7%
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 009269688-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$6.64^{+6.58}_{-4.75}$	252^{+8}_{-9}	2917^{+9398}_{-12943}	$4226^{+2354305}_{-1476144}$
Alt.	-386 ± 90	$7.53^{+6.83}_{-4.89}$	251^{+9}_{-9}	2755^{+978}_{-410}	3117^{+21311}_{-2296}

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

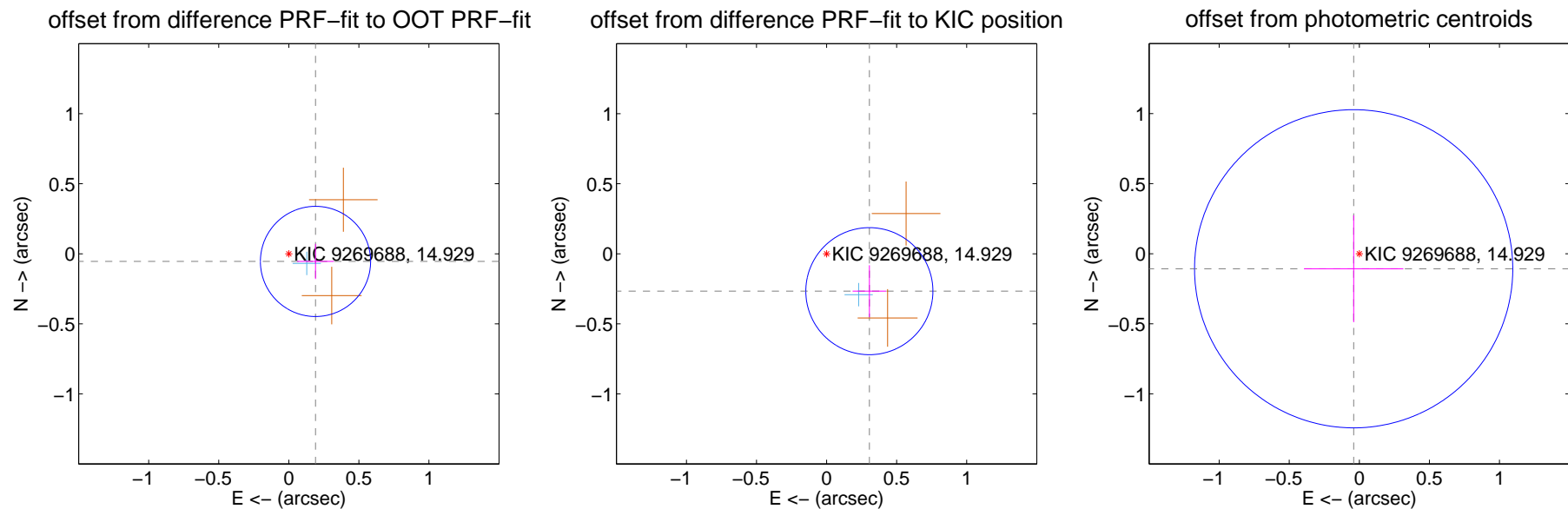
DV Centroid Data

Supplemental centroid analysis for 009269688-05. Kepler magnitude: 14.93. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

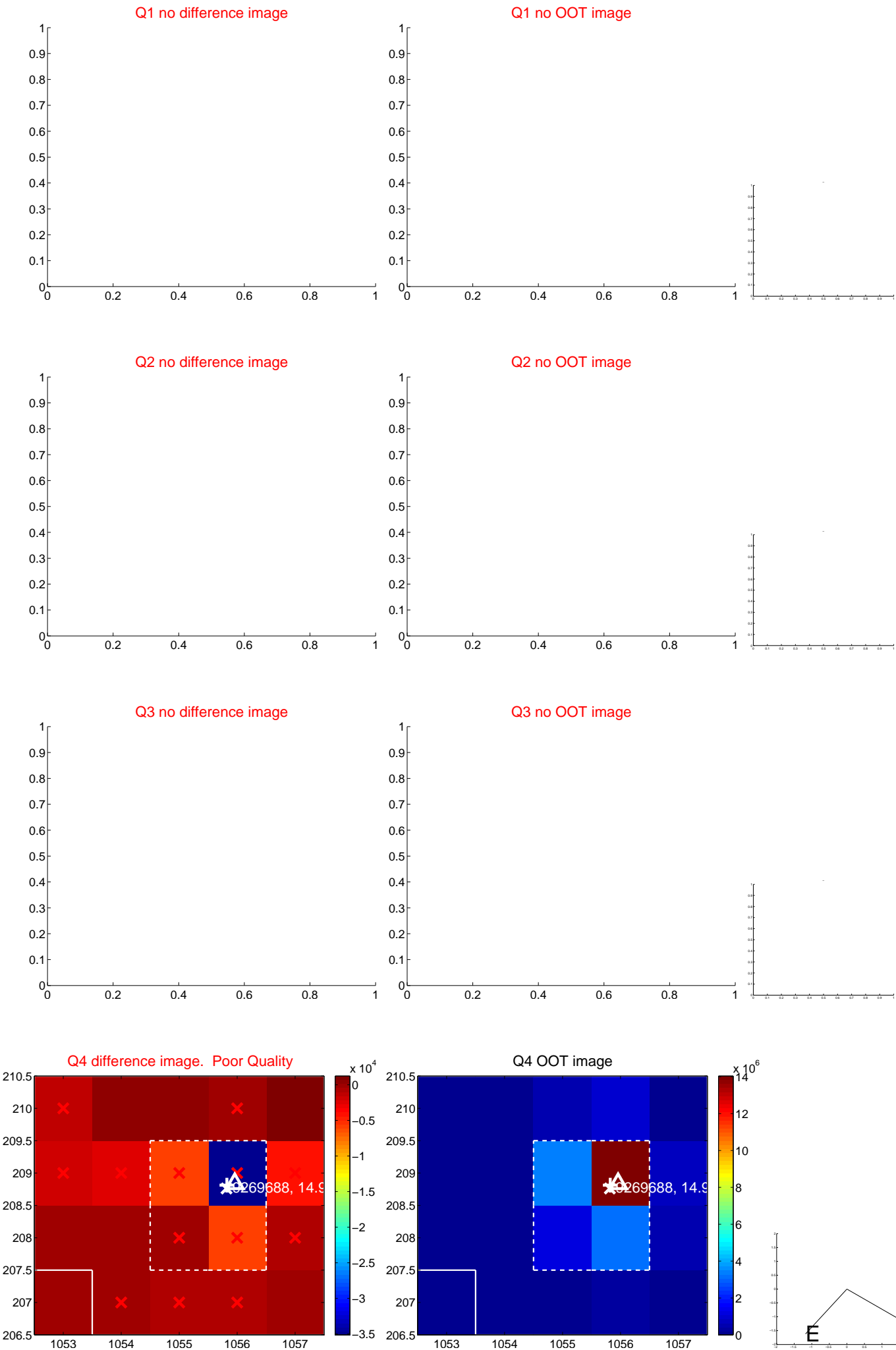
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.198 ± 0.131	1.51	-0.190 ± 0.131	-0.055 ± 0.125
PRF-fit source offset from KIC position	0.405 ± 0.151	2.68	-0.305 ± 0.119	-0.267 ± 0.185
photometric centroid source offset	0.11 ± 0.38	0.30	0.04 ± 0.35	-0.11 ± 0.38



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

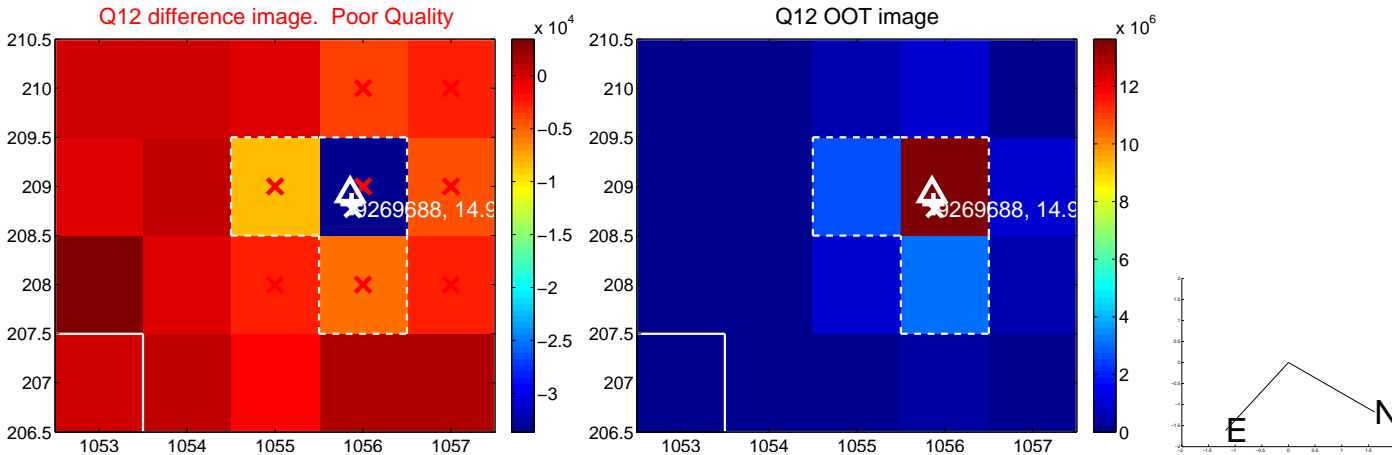
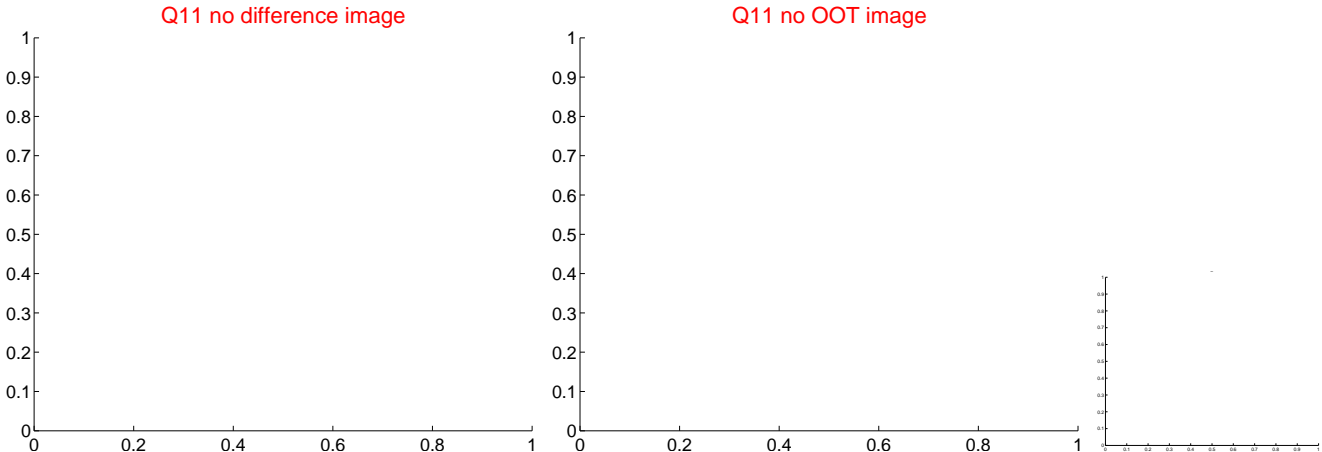
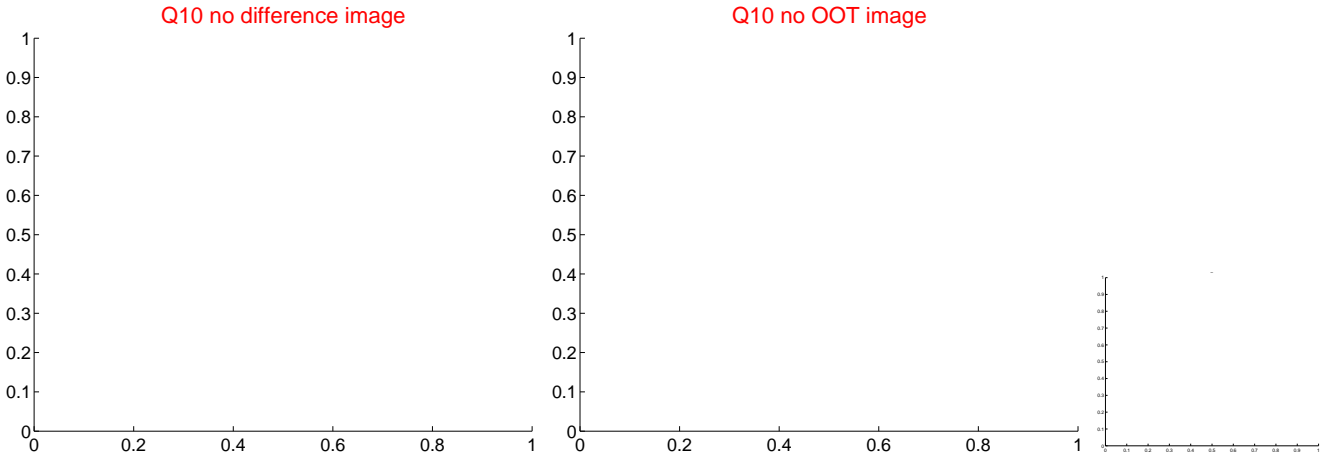
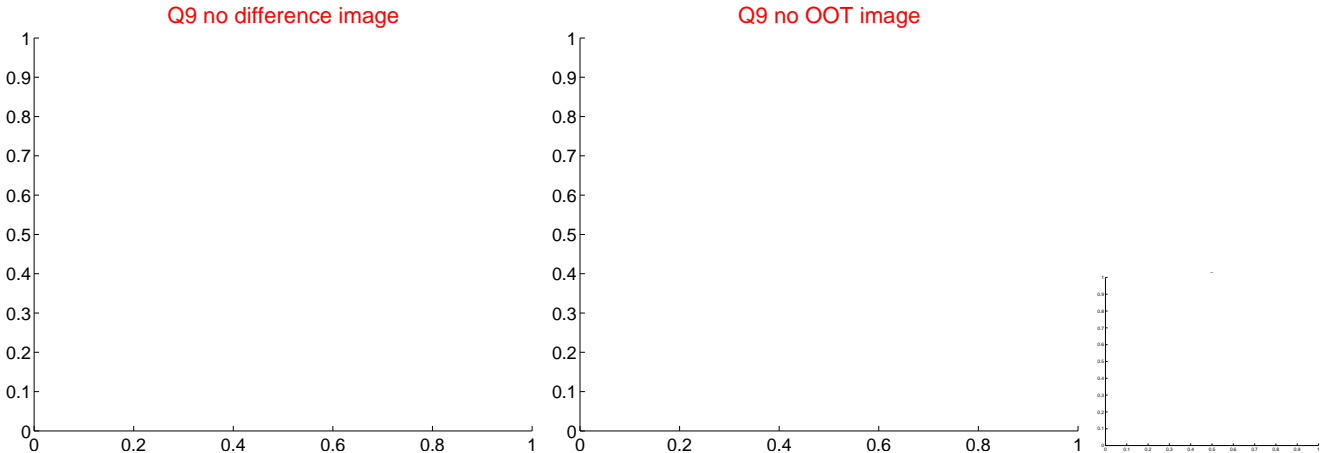
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



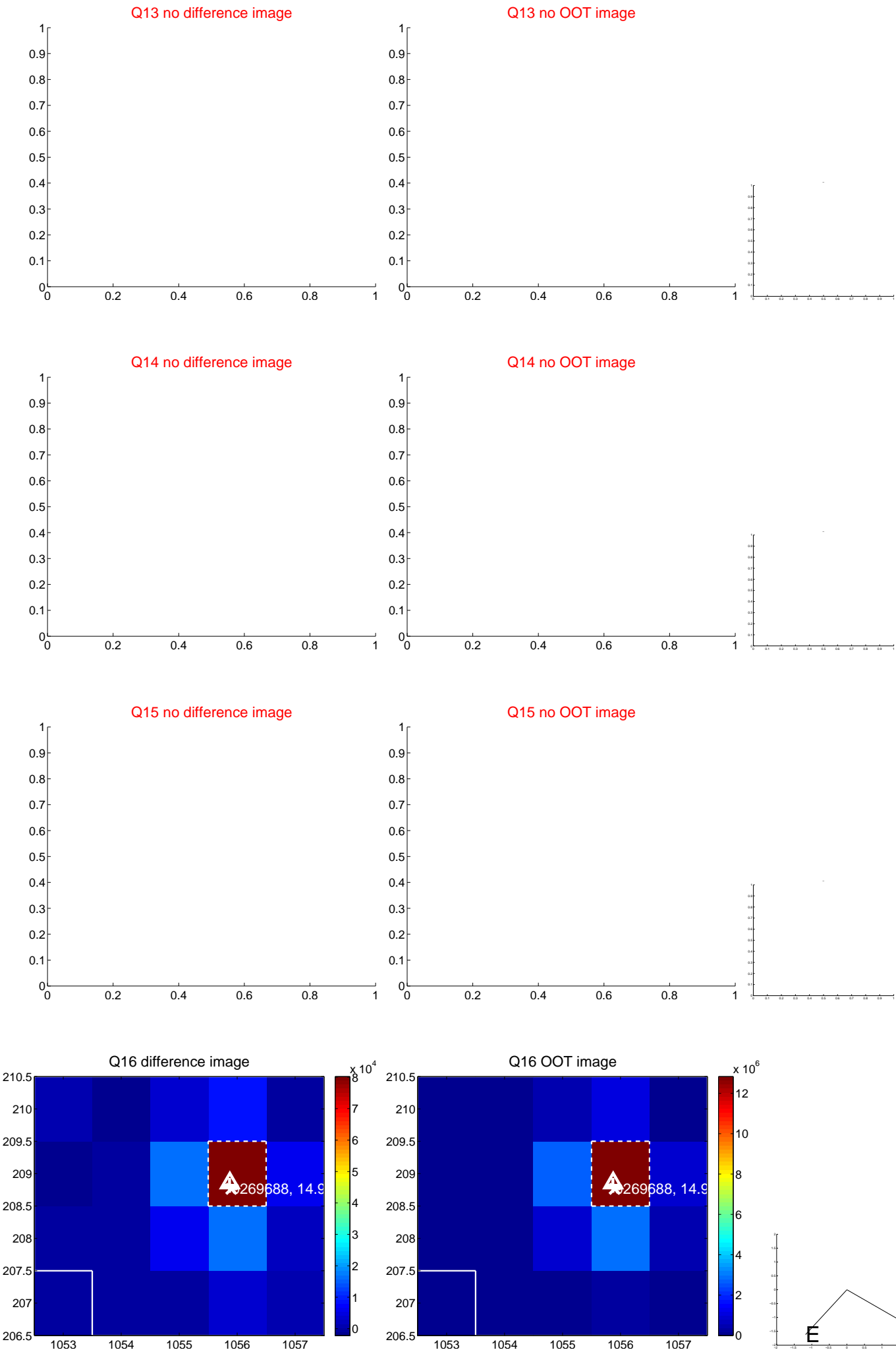
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



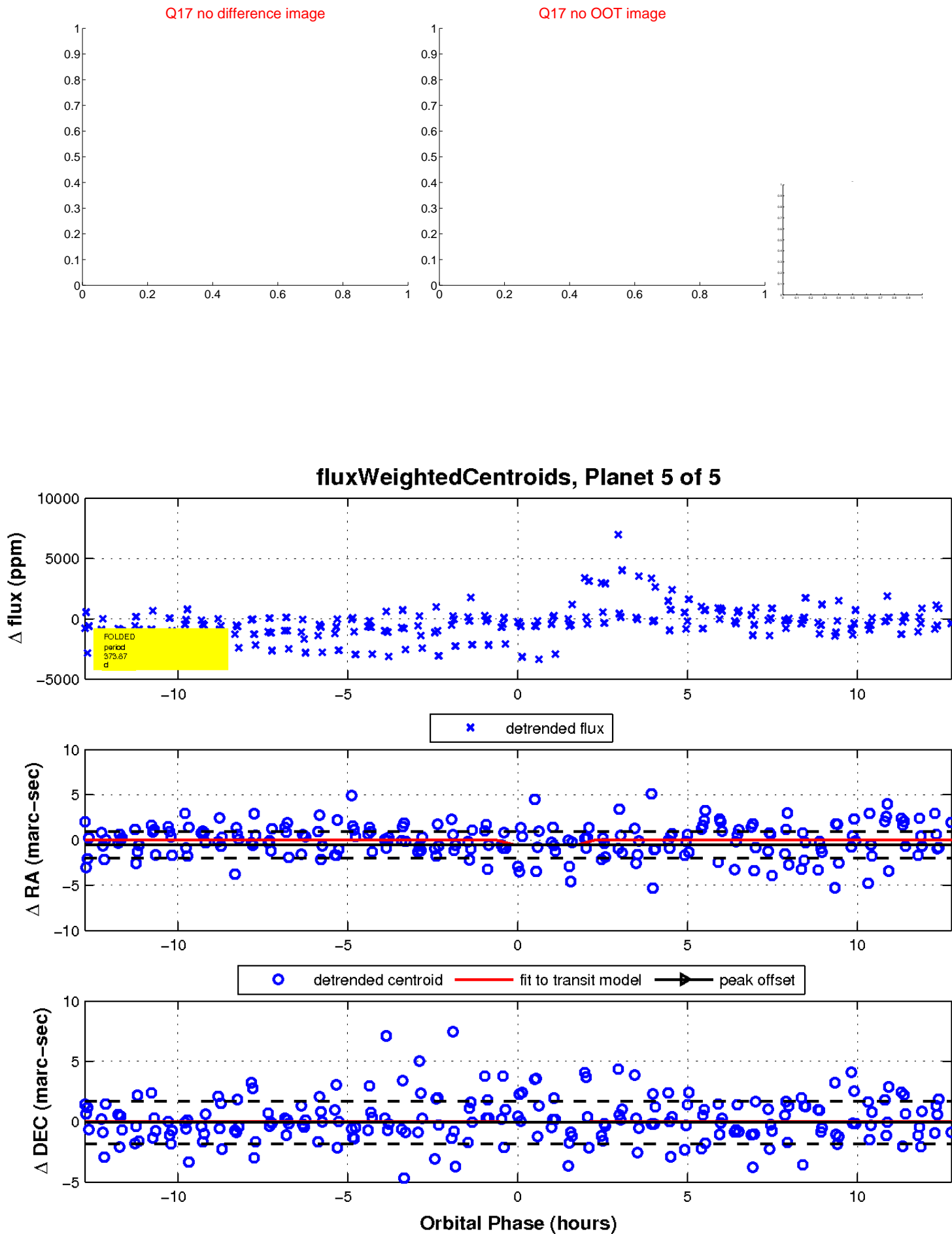
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



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



UKIRT Image

Declination

