

KIC 007188204

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})
007188204-01	OBS	No	380.575191	302.176169	2320.8	4.677	13.3	10.7	0.68	4990	3.23	0.30
007188204-02	OBS	No	616.739369	311.442939	1628.6	7.173	12.1	7.9	0.68	4990	3.50	0.16
007188204-03	OBS	No	468.849974	510.714898	1552.5	12.958	9.6	6.1	0.68	4990	2.62	0.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007188204-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007188204-02	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—CENT_FEW_DIFFS
007188204-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

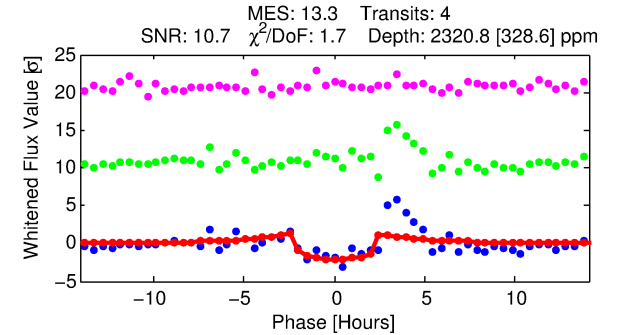
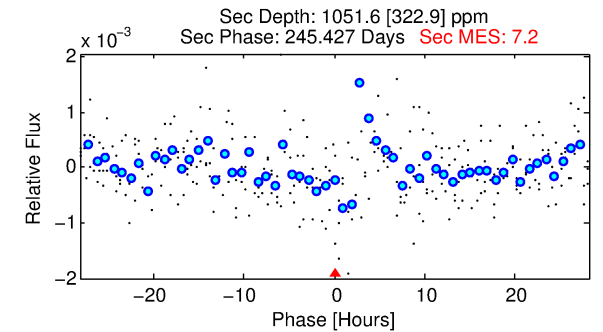
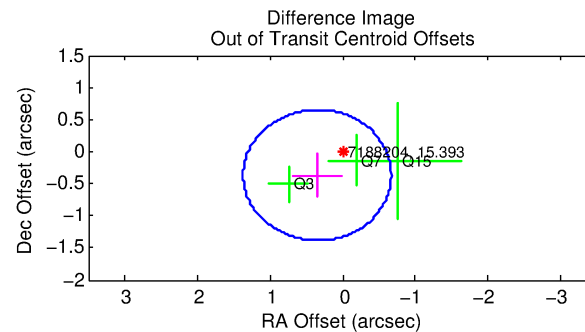
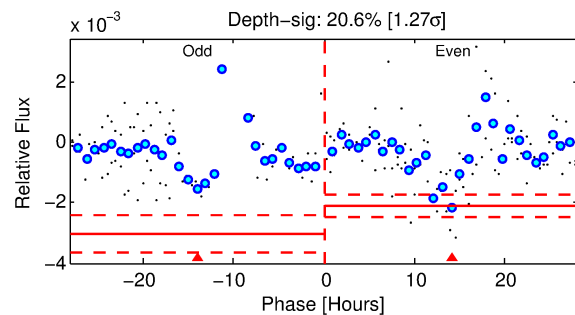
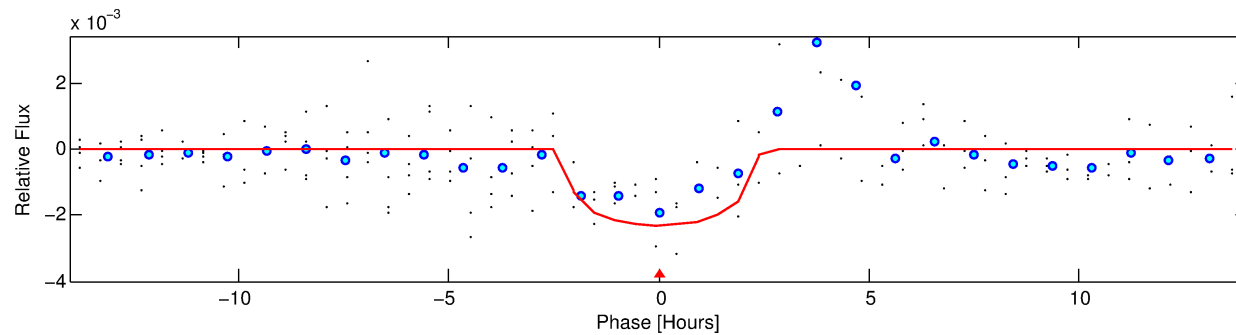
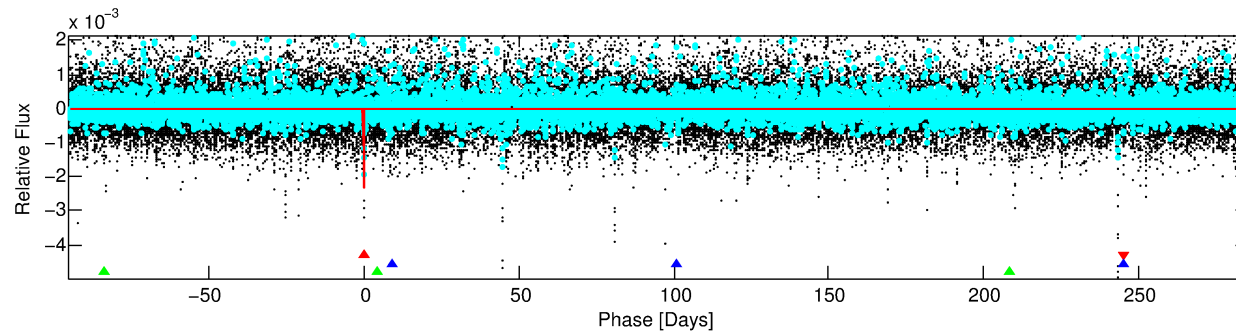
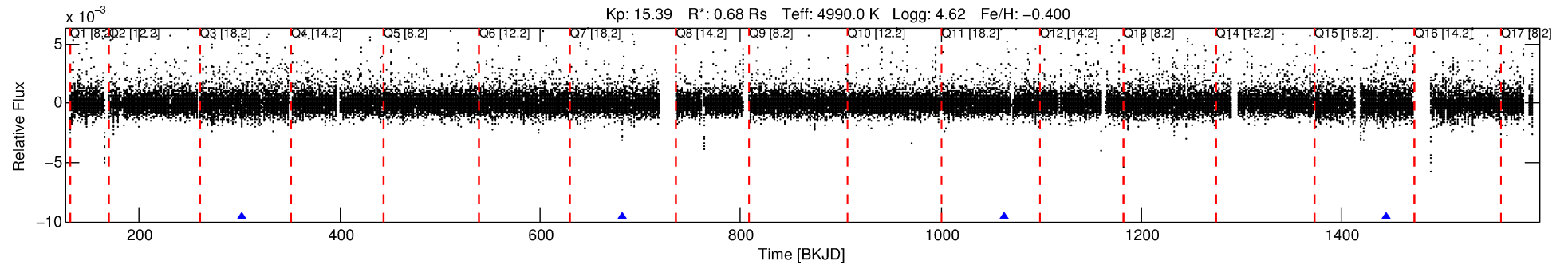
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007188204-01

No Significant Match Found

DV One-Page Summary

KIC: 7188204 Candidate: 1 of 3 Period: 380.575 d



DV Fit Results:

Period = 380.57519 [0.00593] d
Epoch = 302.1762 [0.0079] BKJD
Rp/R* = 0.0438 [0.0626]
a/R* = 606.05 [3036.86]
b = 0.37 [11.72]
Seff = 0.30 [0.05]
Teq = 189 [8] K
Rp = 3.23 [4.63] Re
a = 0.9126 [0.0797] AU
Ag = 46160.51 [132711.17] [0.35 σ]
Teffp = 4294 [3086] K [1.33 σ]

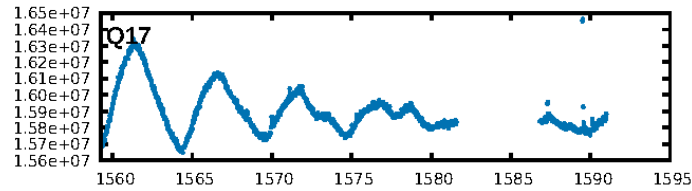
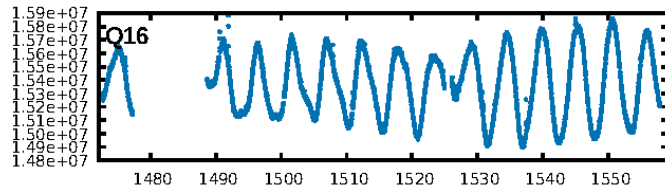
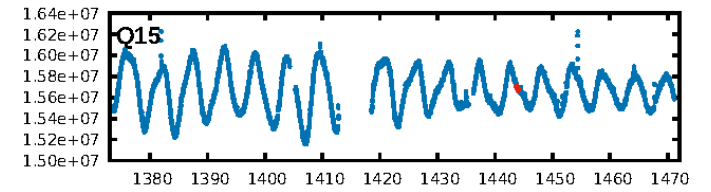
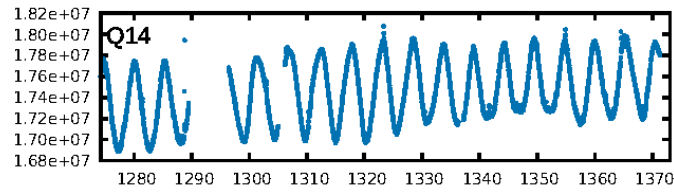
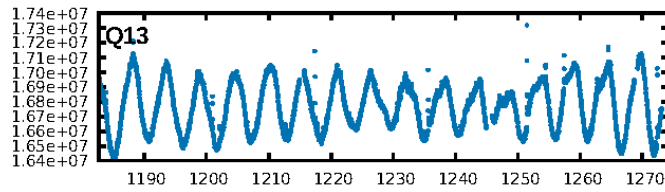
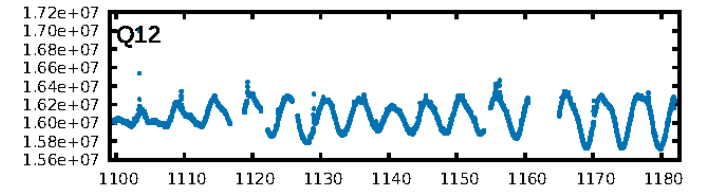
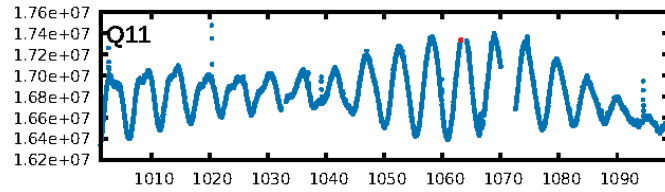
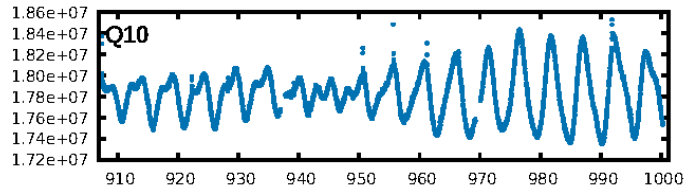
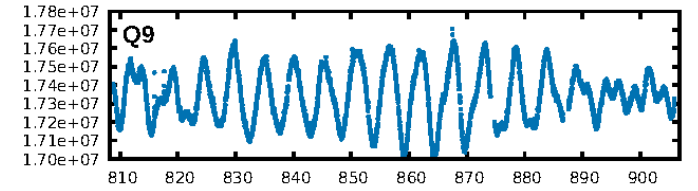
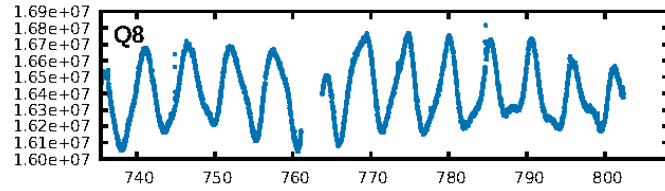
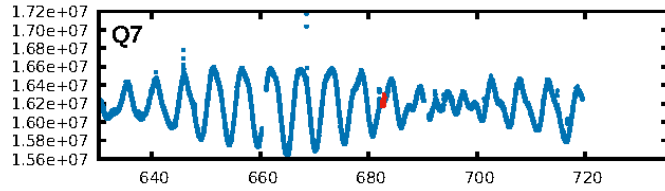
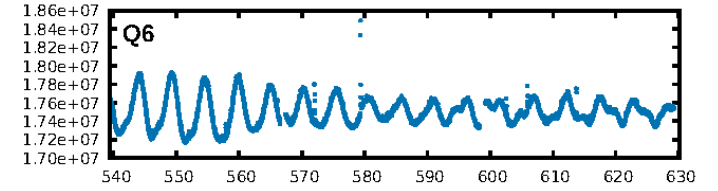
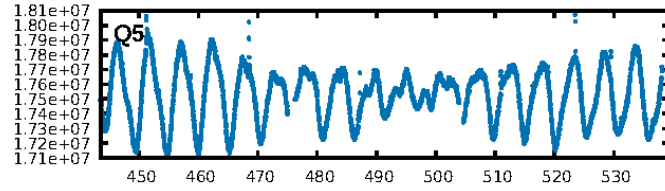
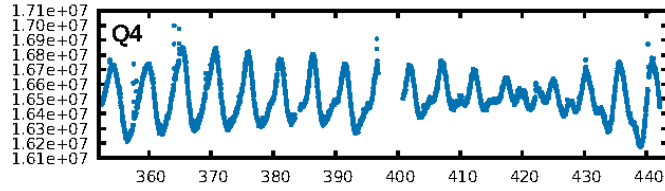
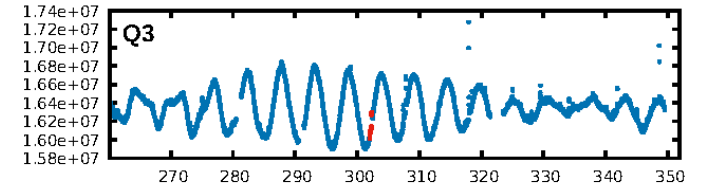
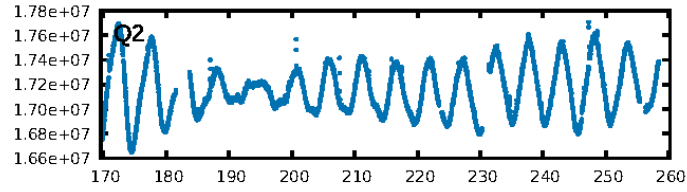
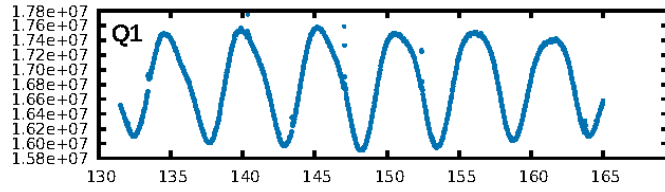
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [153.79 σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 61.4%
Bootstrap-pfa: 2.03e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 5.947
Centroid-sig: 43.5%
Centroid-so: 1.375 arcsec [1.37 σ]
OotOffset-rm: 0.507 arcsec [1.49 σ]
OotOffset-st: 0/3/0/0 [3]
KicOffset-rm: 0.543 arcsec [1.50 σ]
KicOffset-st: 0/3/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

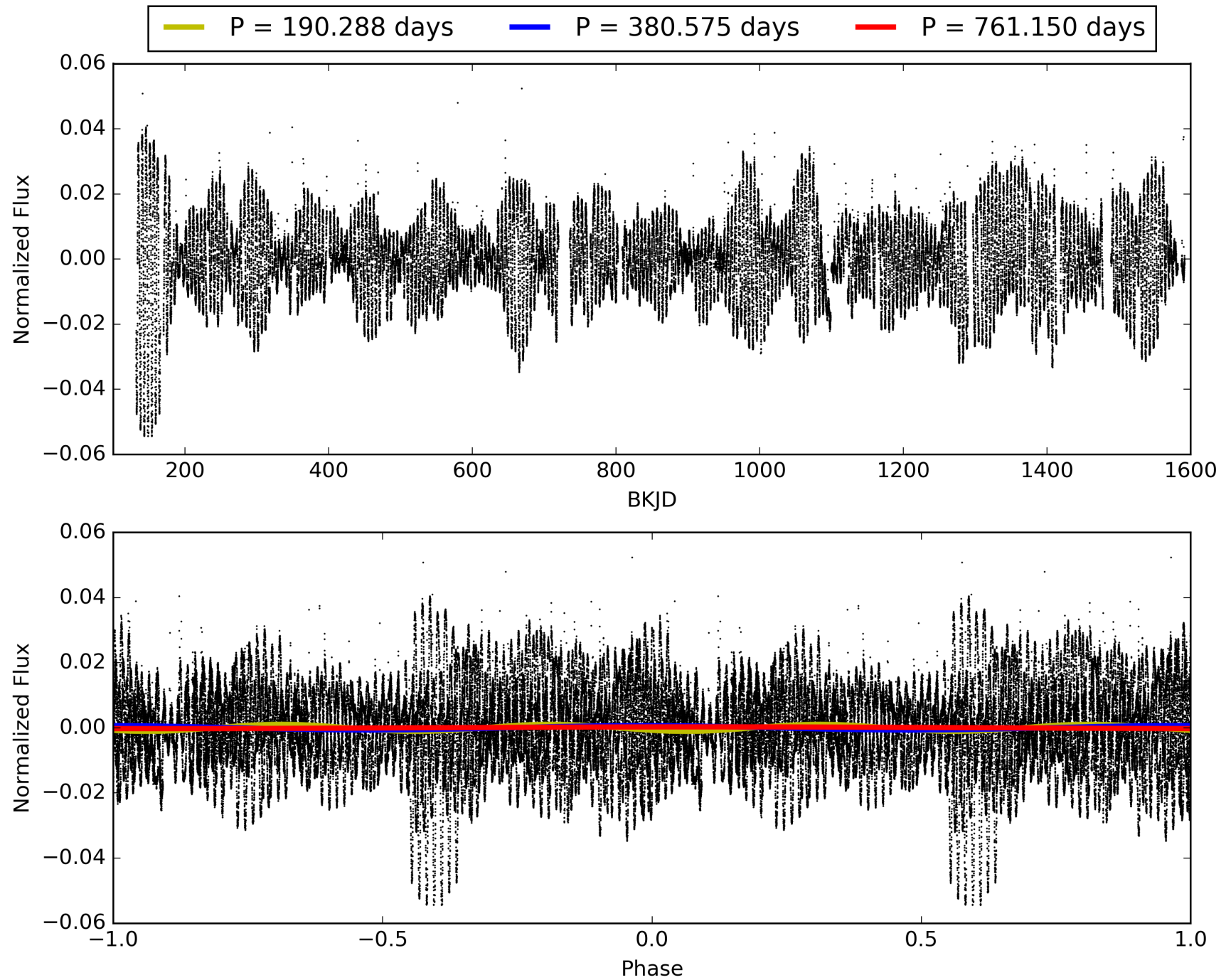
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007188204-01, PDC Light Curves

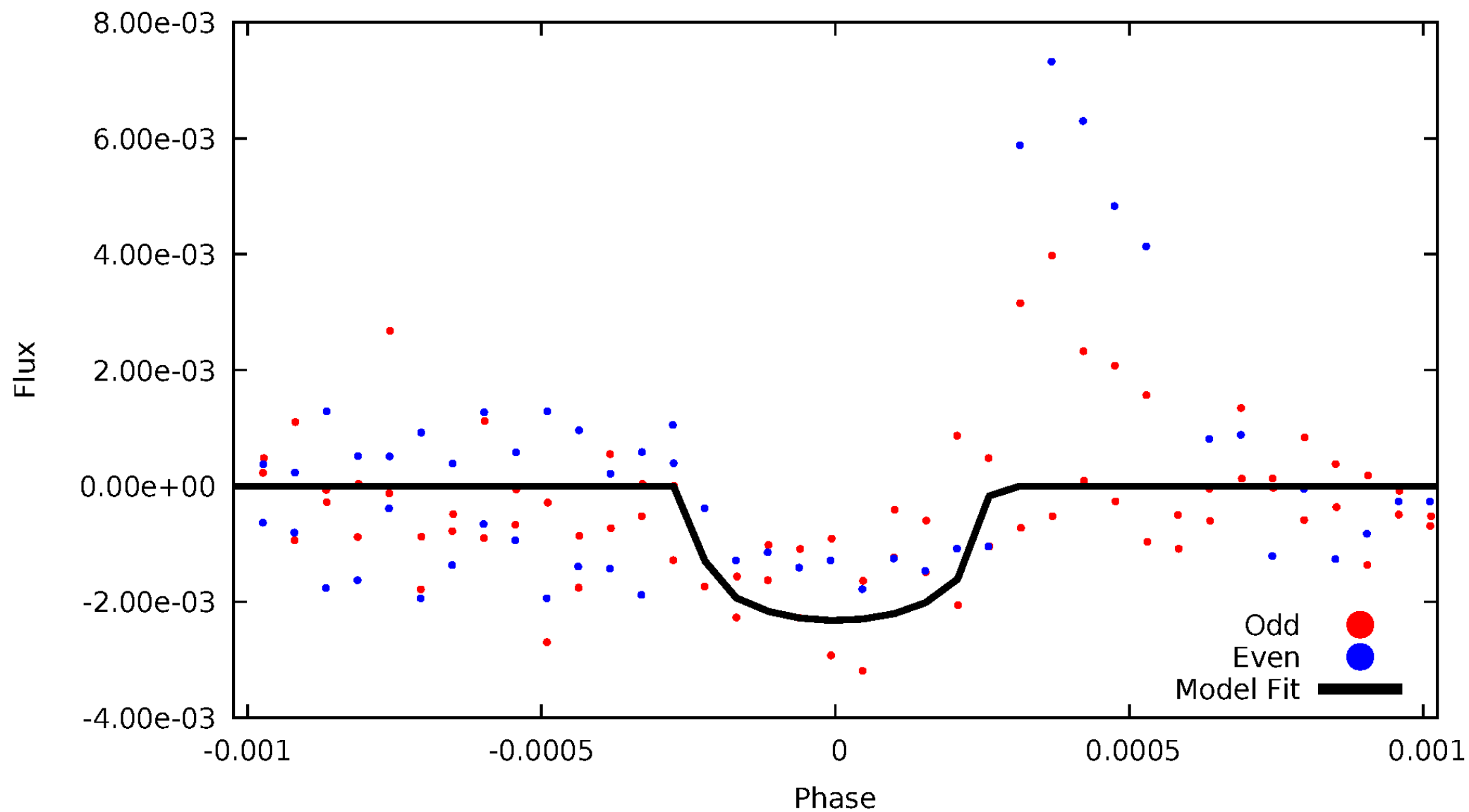


TCE 007188204-01



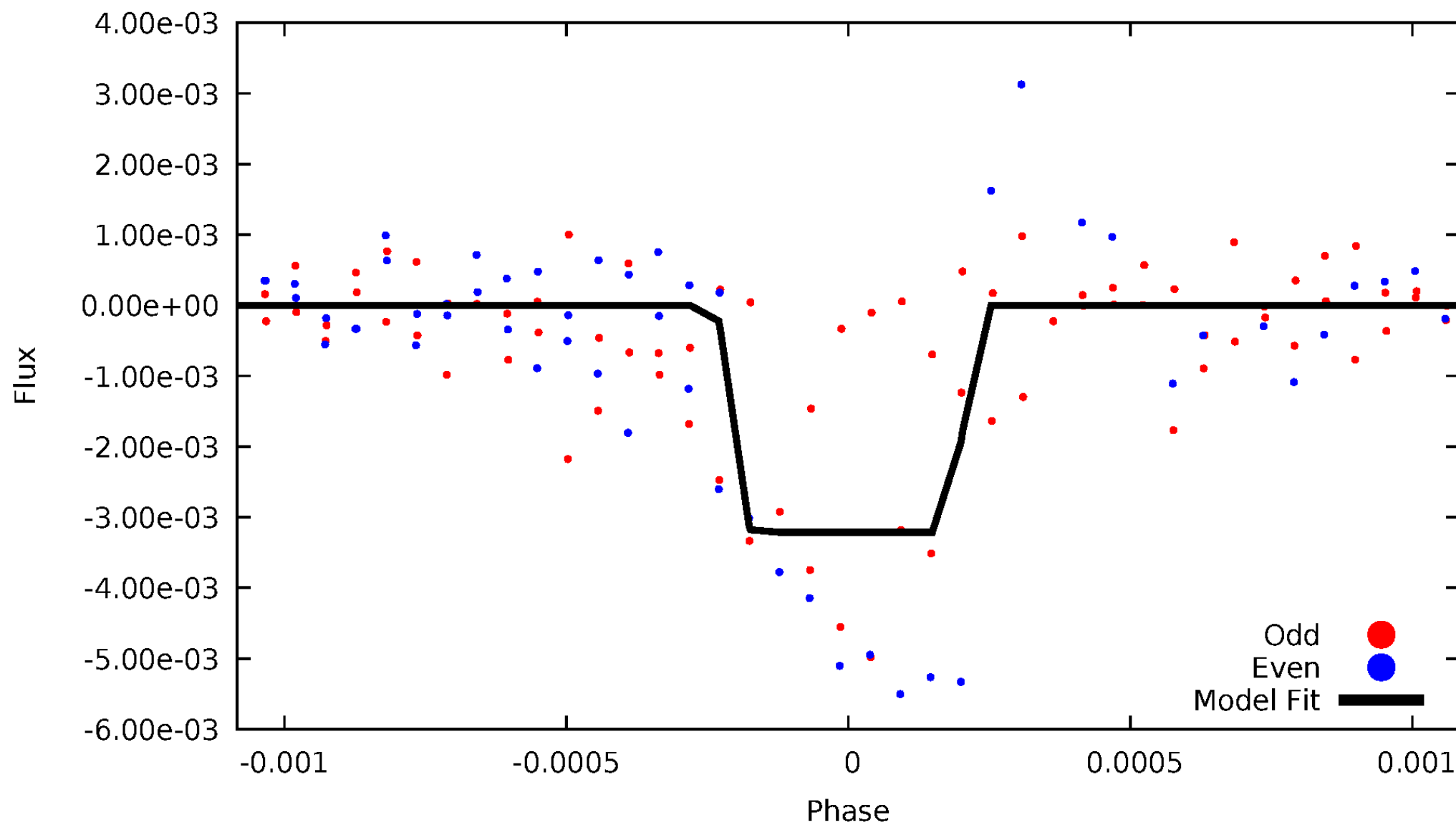
DV Odd/Even

TCE 007188204-01



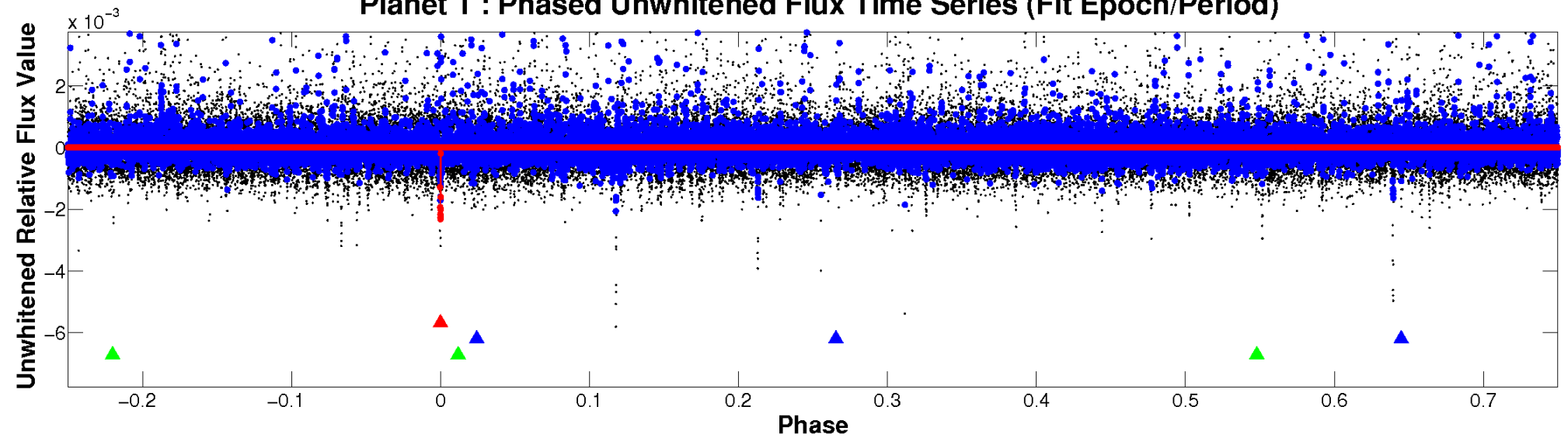
ALT Odd/Even

TCE 007188204-01

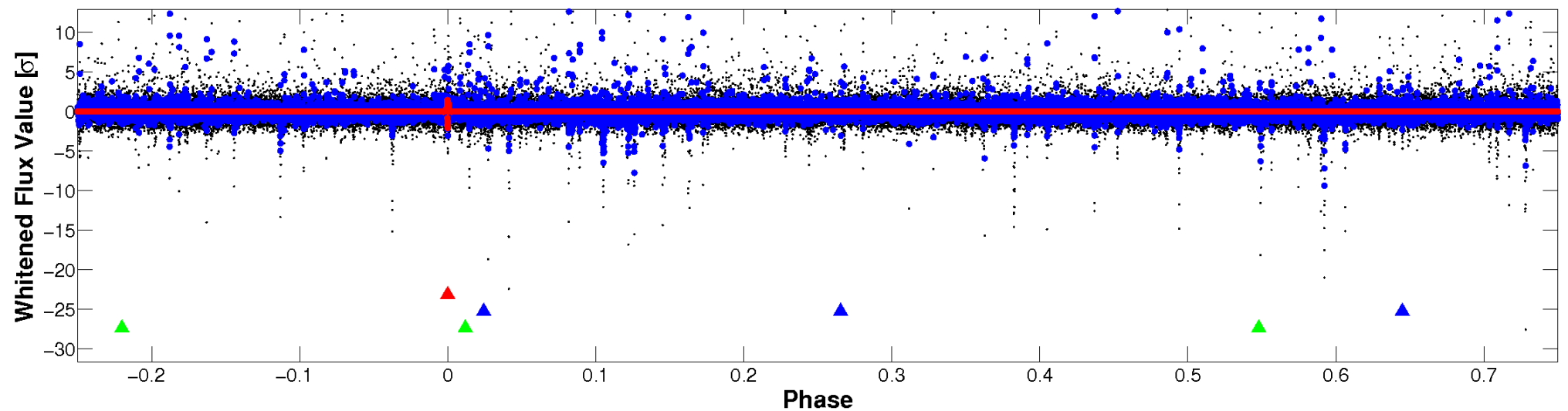


Non-Whitened Vs. Whitened Light Curve

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

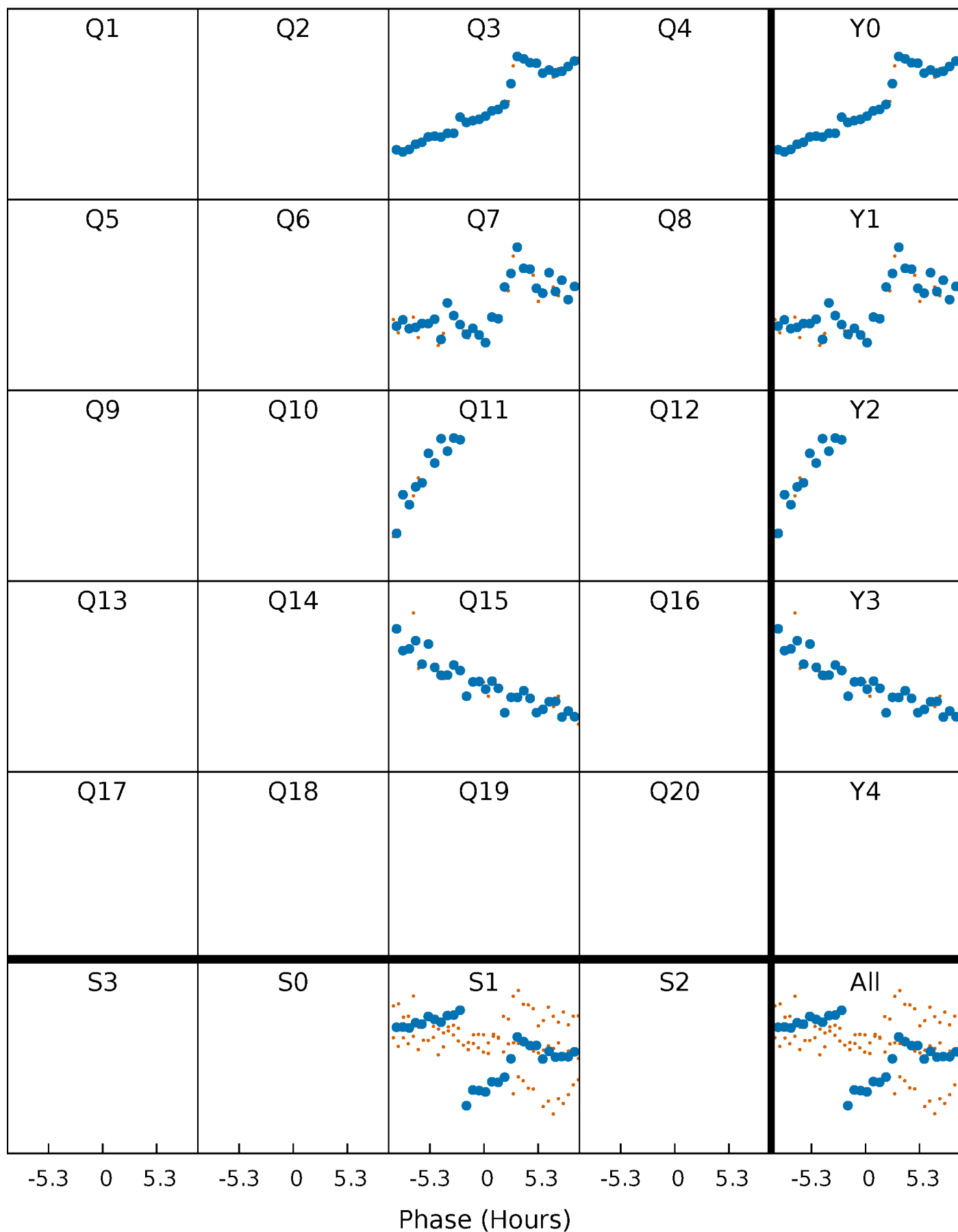


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



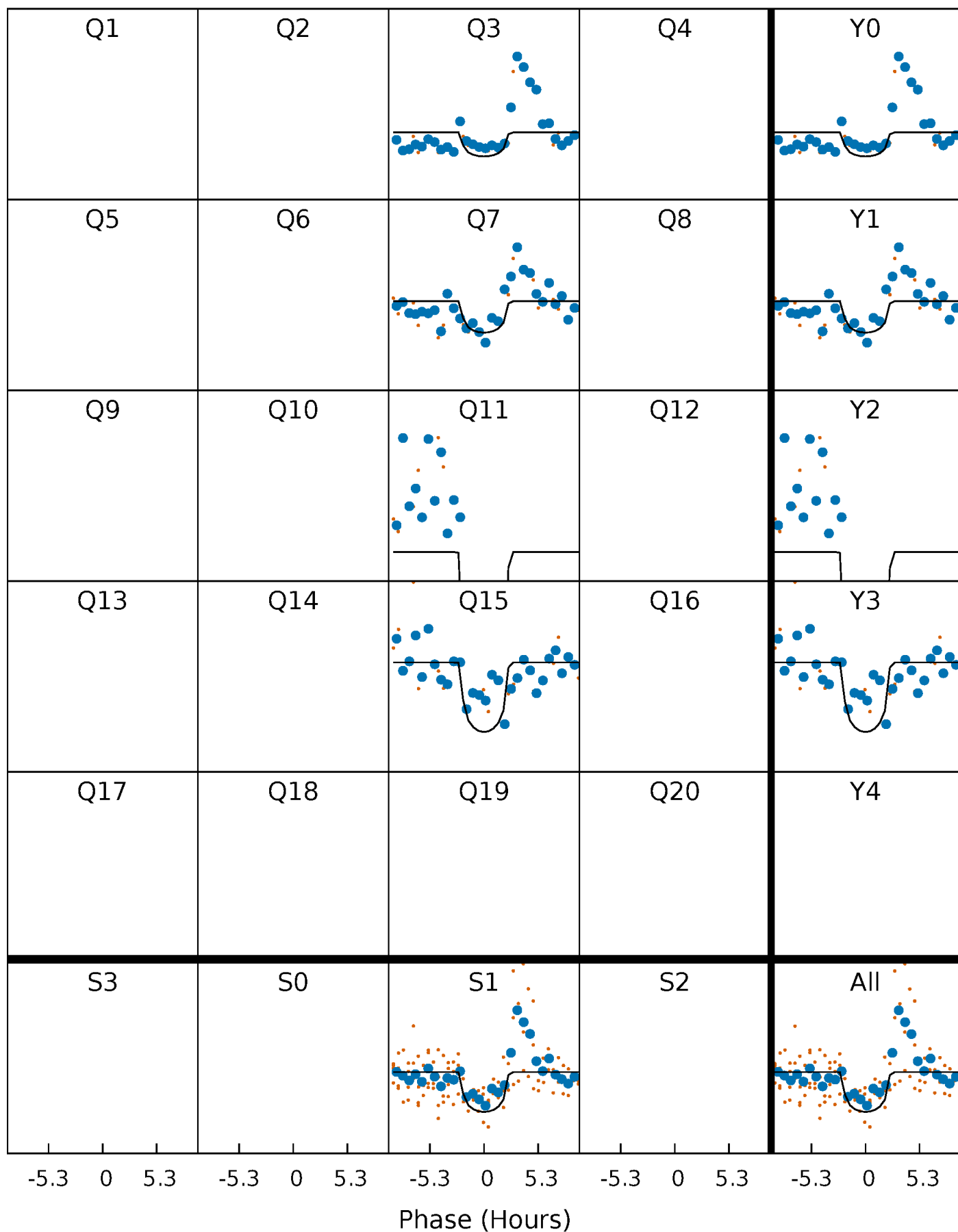
PDC Quarter-Phased Transit Curves

TCE 007188204-01 P=380.575191 Days $T_0=302.176169$ (BKJD)



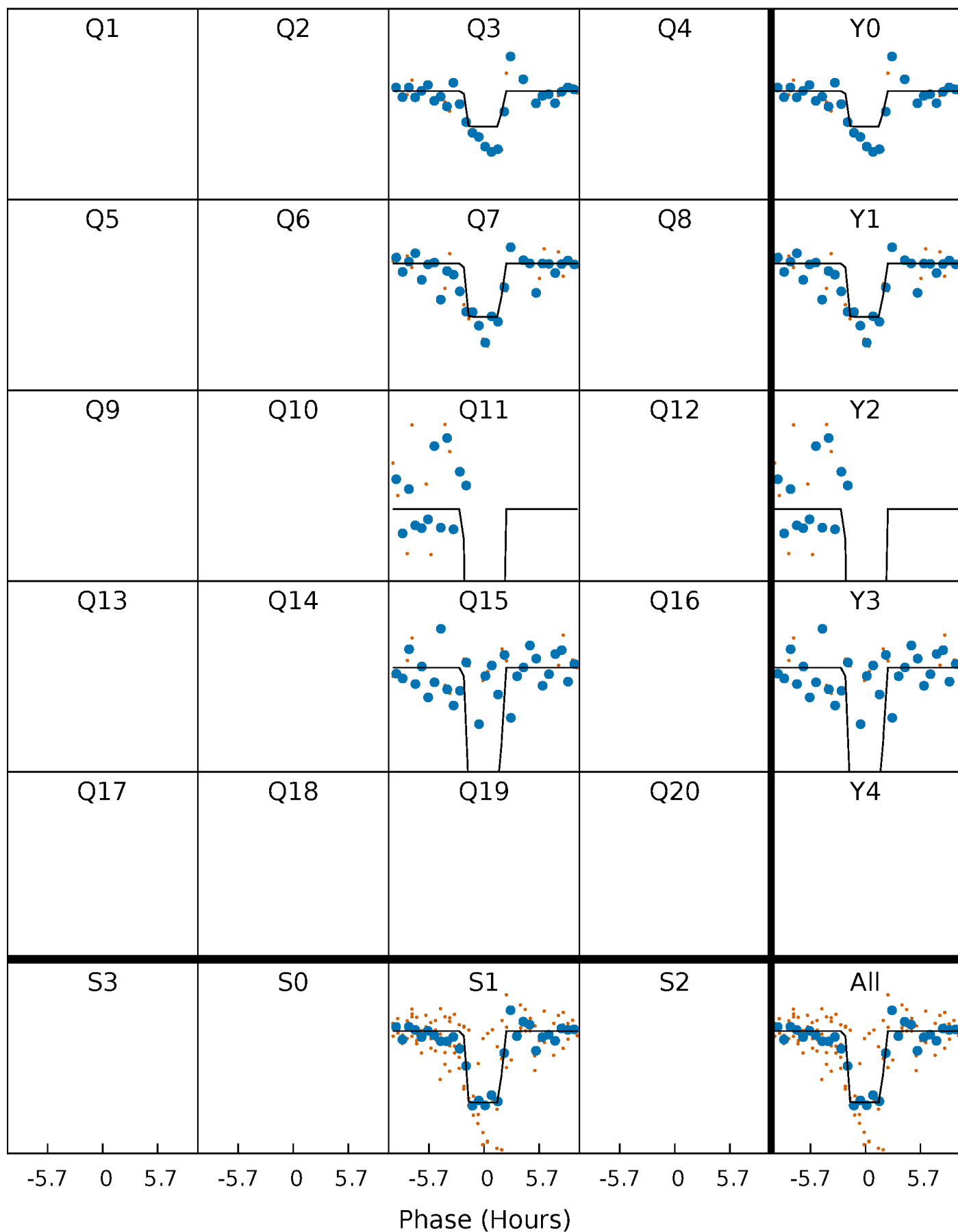
DV Quarter-Phased Transit Curves

TCE 007188204-01 P=380.575191 Days $T_0=302.176169$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

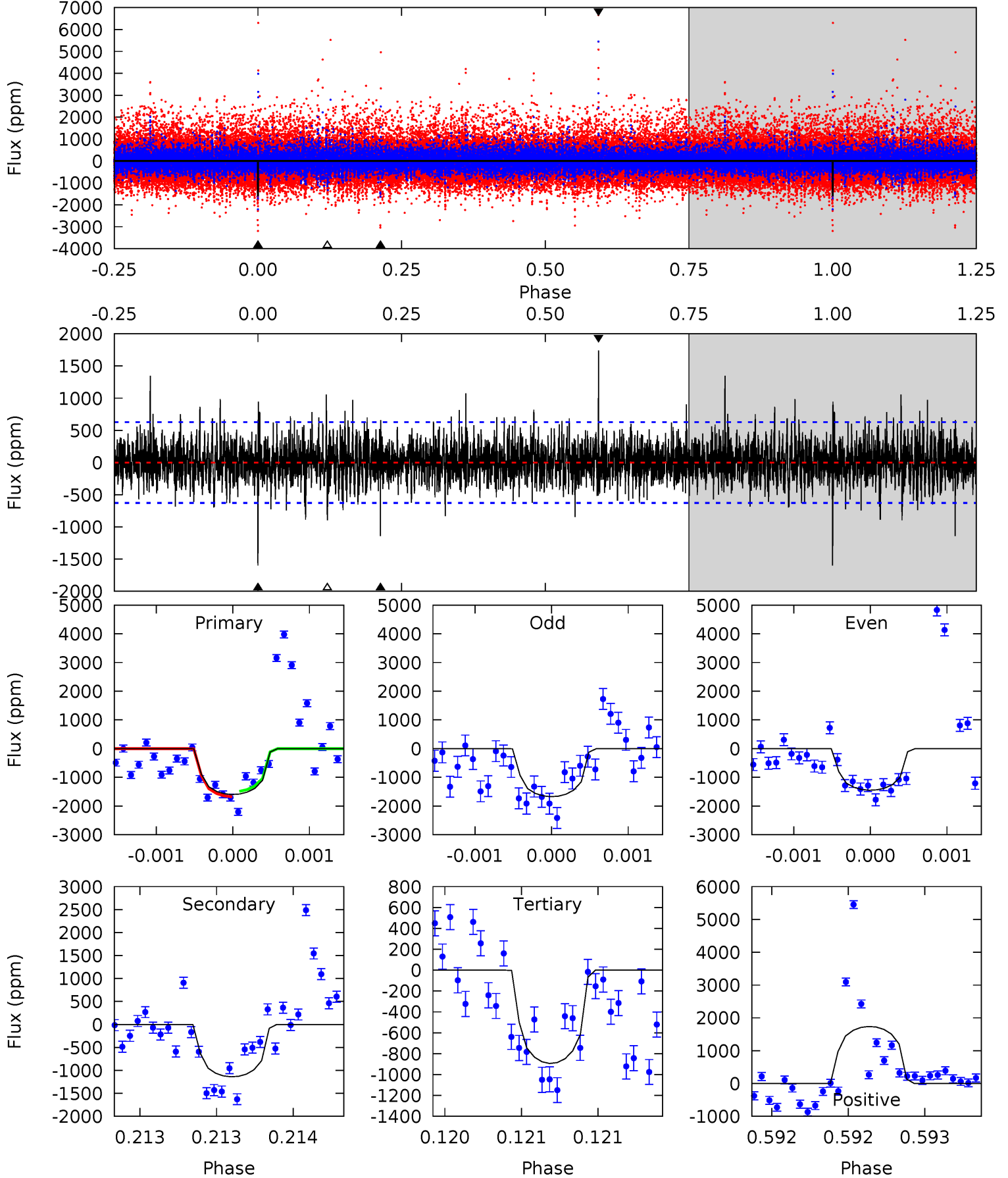
TCE 007188204-01 P=380.554621 Days $T_0=302.199297$ (BKJD)



DV Model-Shift Uniqueness Test

007188204-01, P = 380.575191 Days, E = 302.176169 Days

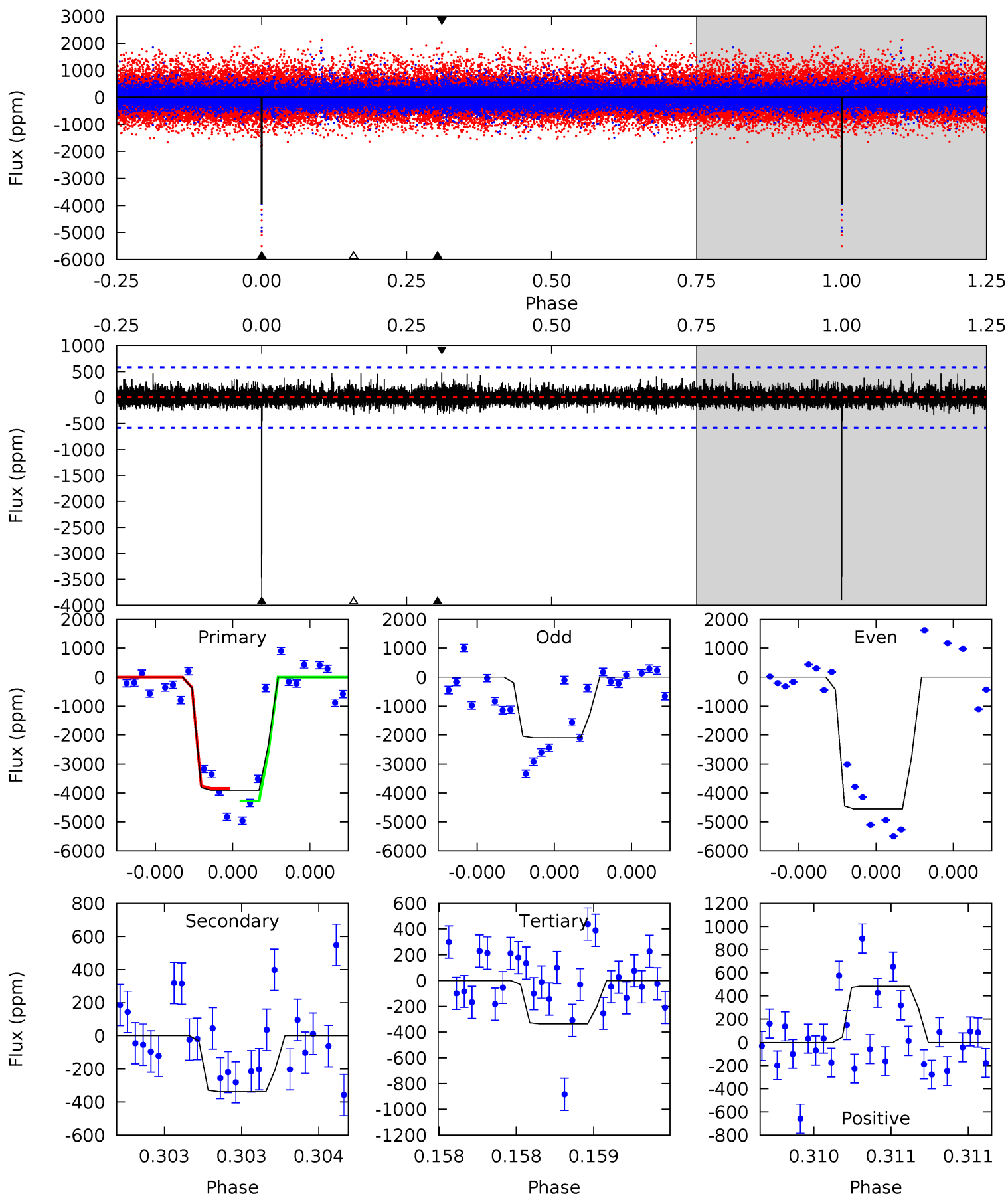
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	10.1	7.92	15.4	5.56	3.46	1.99	6.25	-1.23	2.18	-5.29	0.85	1.10	0.52	0.83



Alt Model-Shift Uniqueness Test

007188204-01, P = 380.554621 Days, E = 302.199297 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.4	3.23	3.22	4.63	5.60	3.52	0.84	34.1	32.7	0.01	-1.41	13.0	0.80	0.11	0



Stellar Parameters For KIC 007188204

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4990^{+136}_{-151}	$4.623^{+0.045}_{-0.054}$	$-0.400^{+0.300}_{-0.300}$	$0.676^{+0.078}_{-0.052}$	$0.698^{+0.078}_{-0.057}$	$3.189^{+0.654}_{-0.650}$
	+3%/-3%	+1%/-1%	+75%/-75%	+12%/-8%	+11%/-8%	+21%/-20%
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 007188204-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1140 ± 113	$5.09^{+4.16}_{-3.17}$	265^{+9}_{-9}	3830^{+1690}_{-644}	$20259^{+118760}_{-13959}$
Alt.	-337 ± 104	$5.36^{+4.01}_{-3.26}$	265^{+9}_{-10}	3131^{+1006}_{-507}	5642^{+30085}_{-4073}

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 $A_{obs} \gg 1.0$

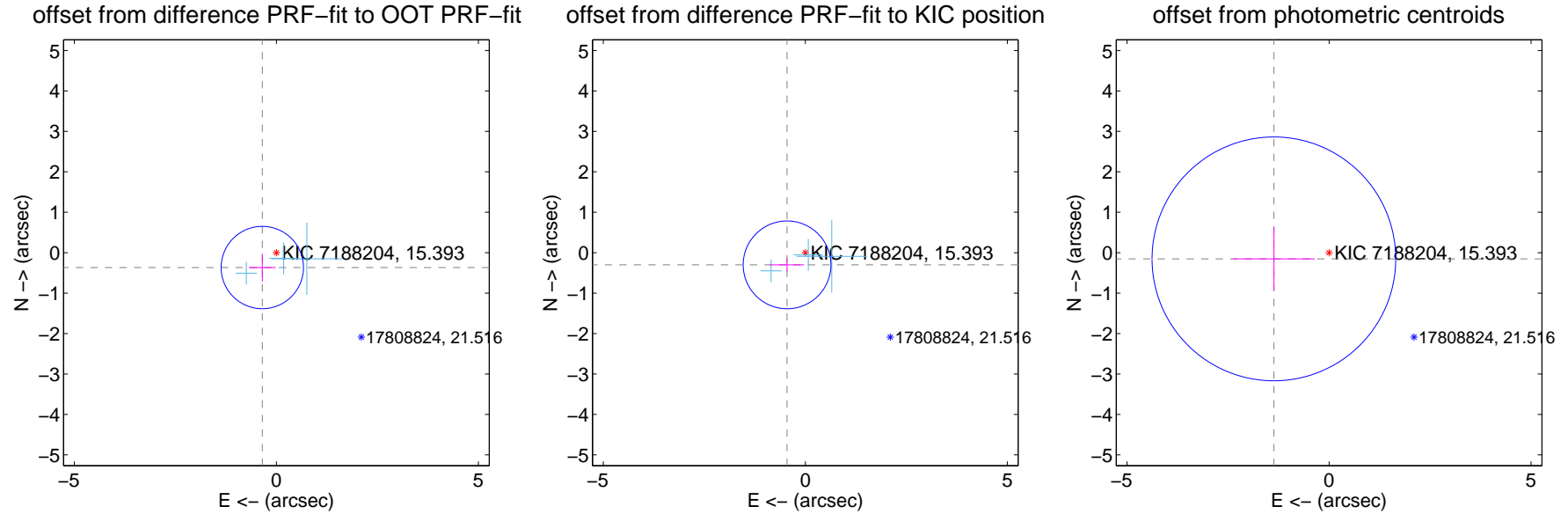
DV Centroid Data

Supplemental centroid analysis for 007188204-01. Kepler magnitude: 15.39. Transit SNR 10.68

There are 3 quarters with good PRF difference image offsets

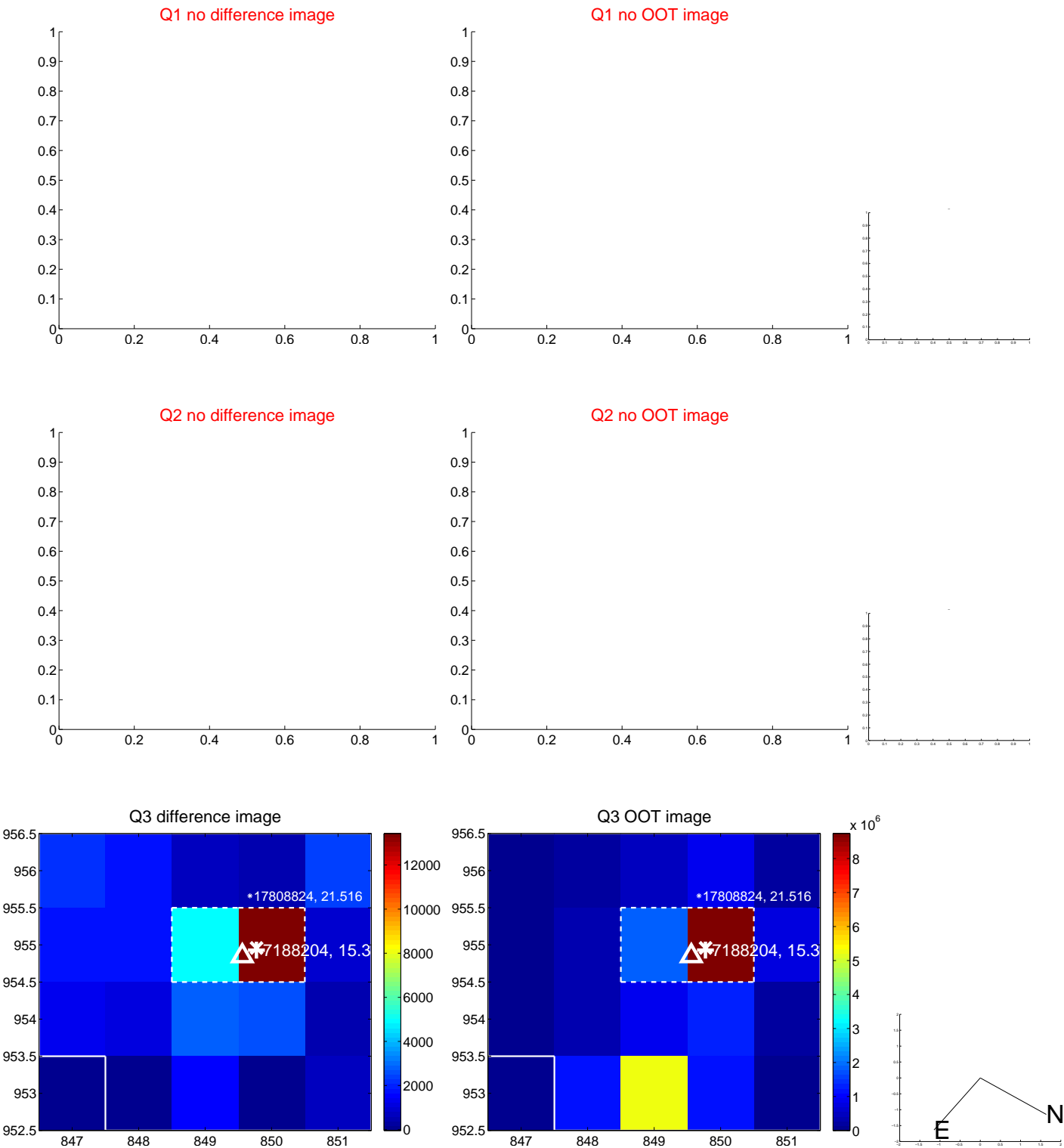
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.507 ± 0.340	1.49	0.349 ± 0.332	-0.368 ± 0.346
PRF-fit source offset from KIC position	0.543 ± 0.362	1.50	0.452 ± 0.421	-0.301 ± 0.161
photometric centroid source offset	1.37 ± 1.01	1.37	1.37 ± 1.01	-0.15 ± 0.78



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



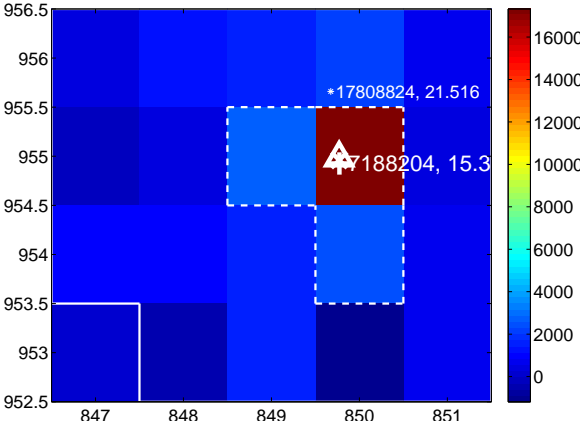
Q6 no difference image



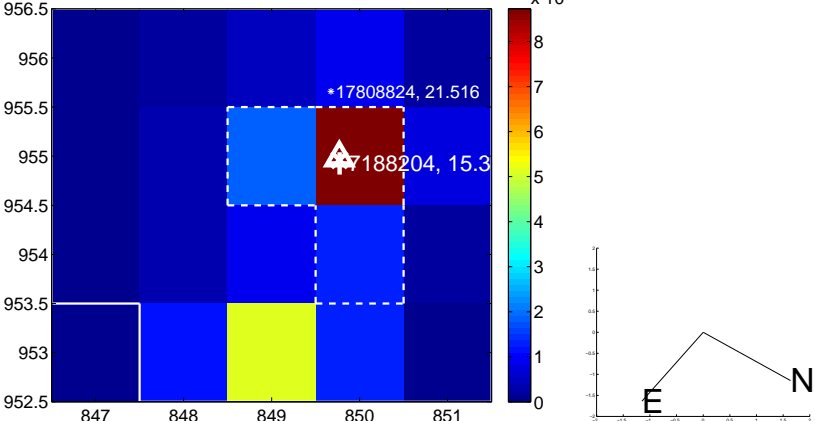
Q6 no OOT image



Q7 difference image



Q7 OOT image



Q8 no difference image



Q8 no OOT image

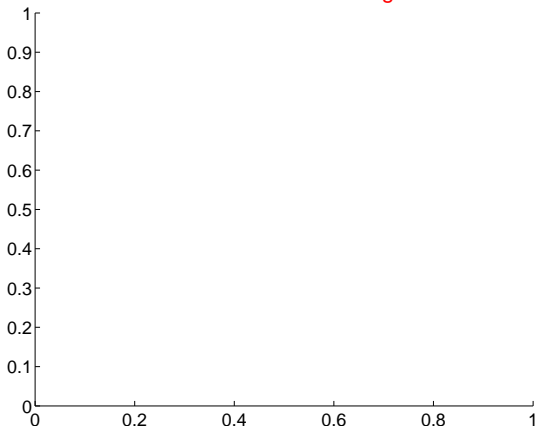


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

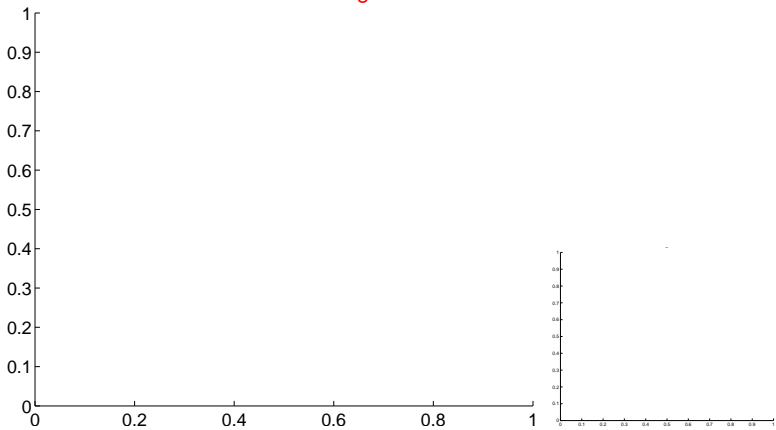


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

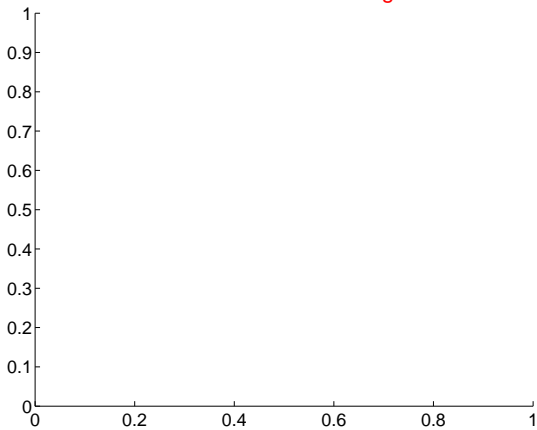
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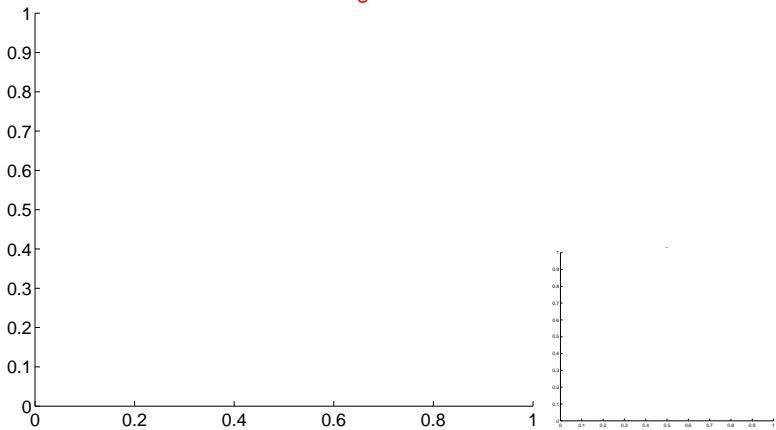
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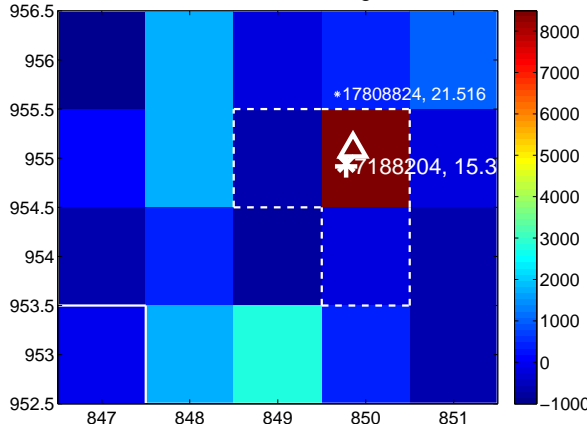
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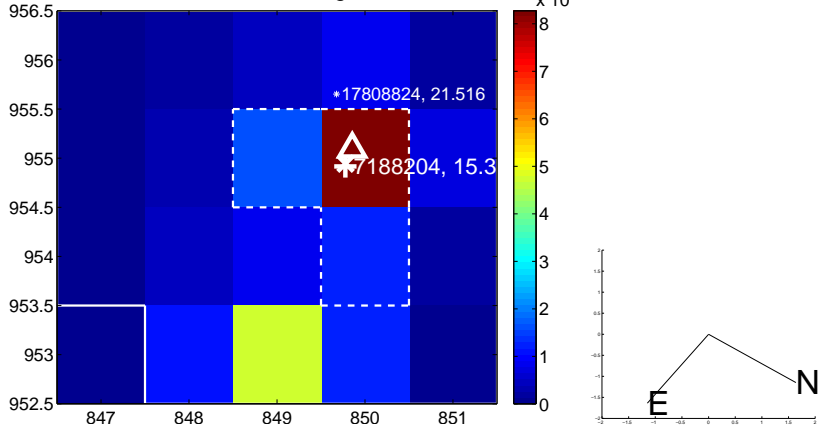
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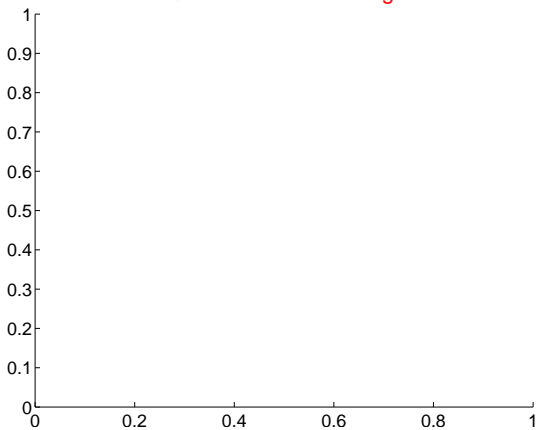
Q15 difference image



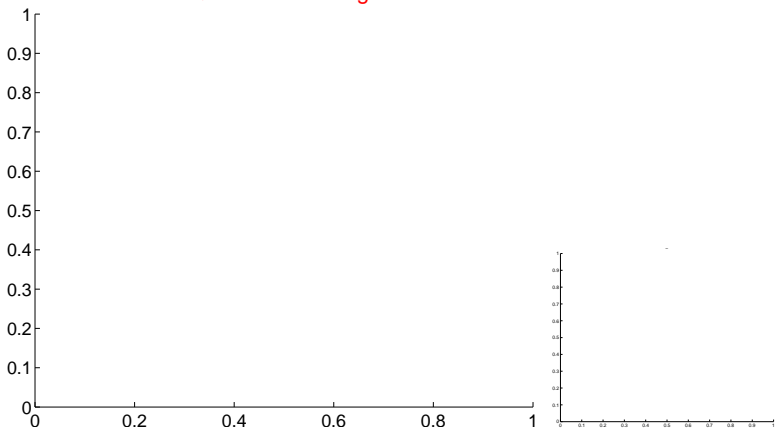
Q15 OOT image



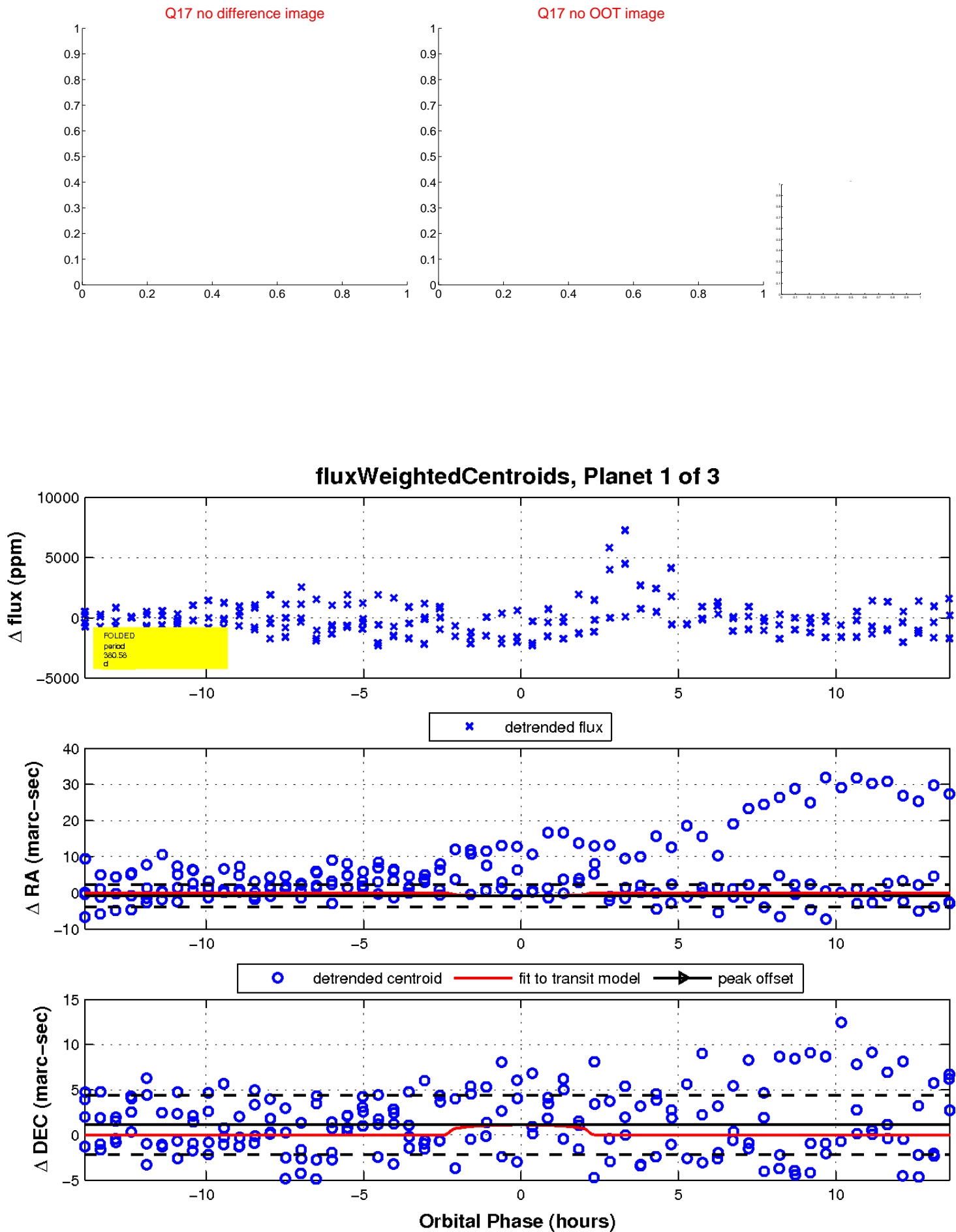
Q16 no difference image



Q16 no OOT image

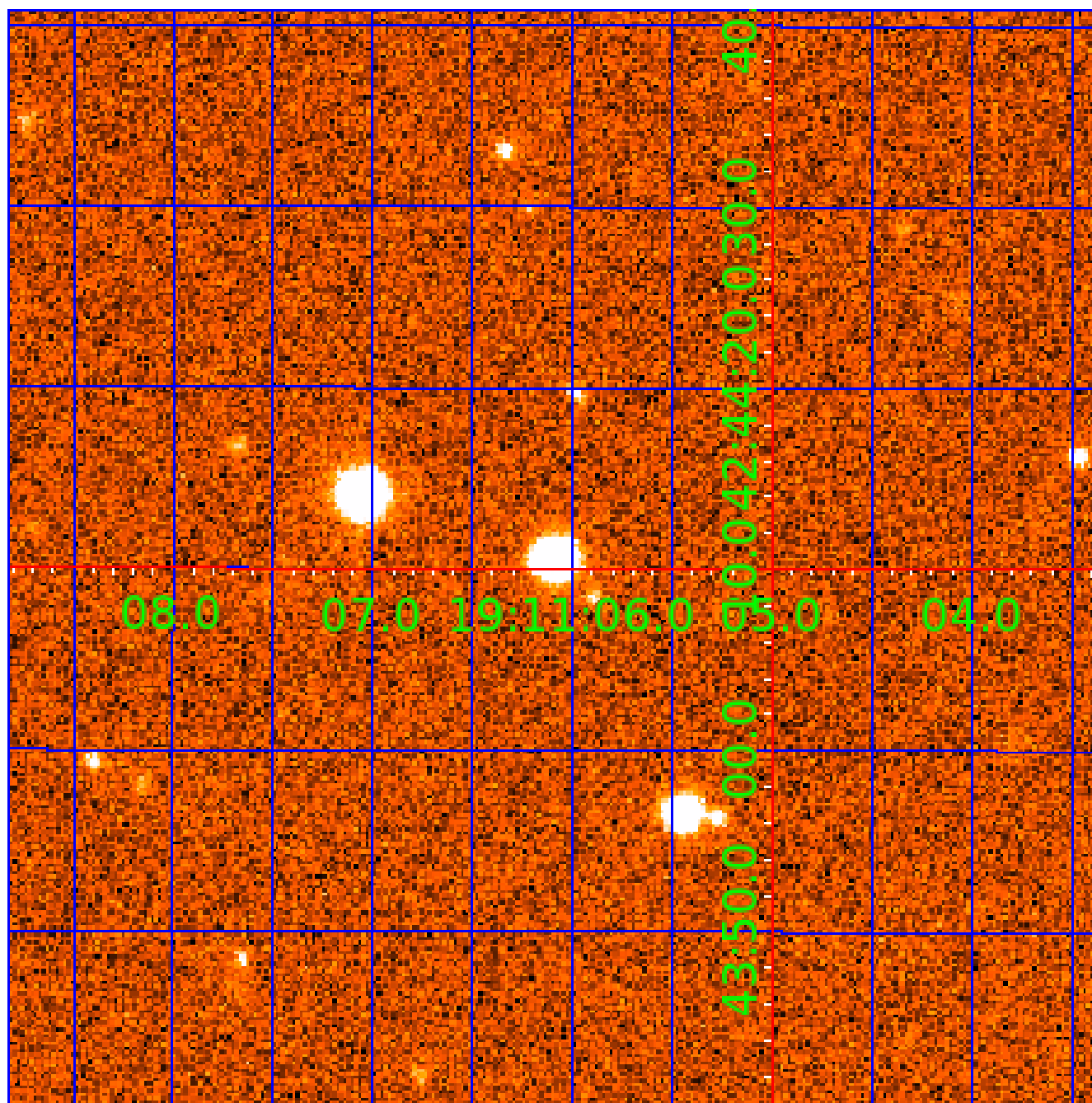


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007188204

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

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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007188204-02	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—CENT_FEW_DIFFS
007188204-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

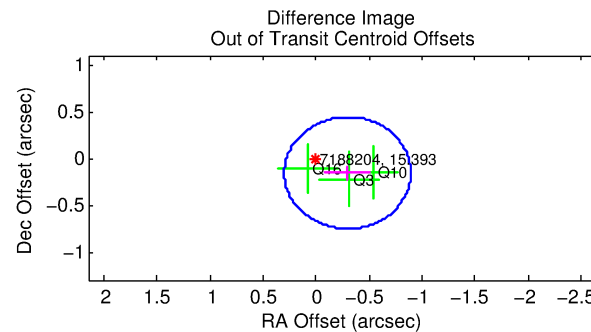
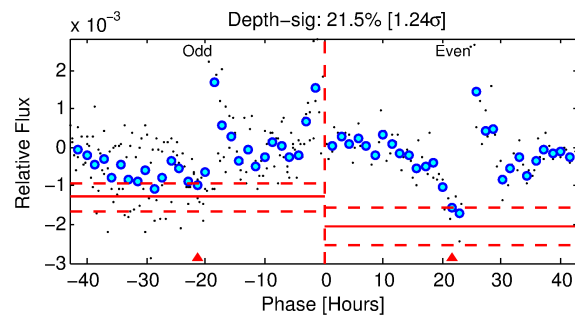
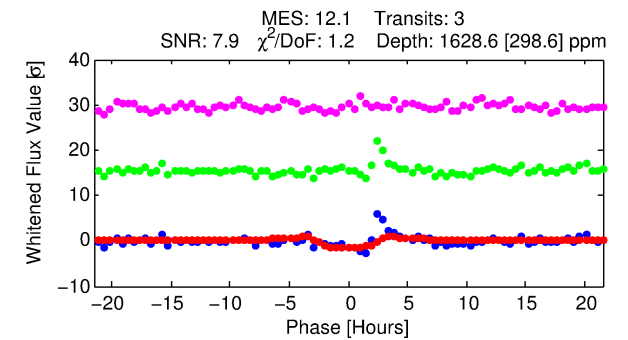
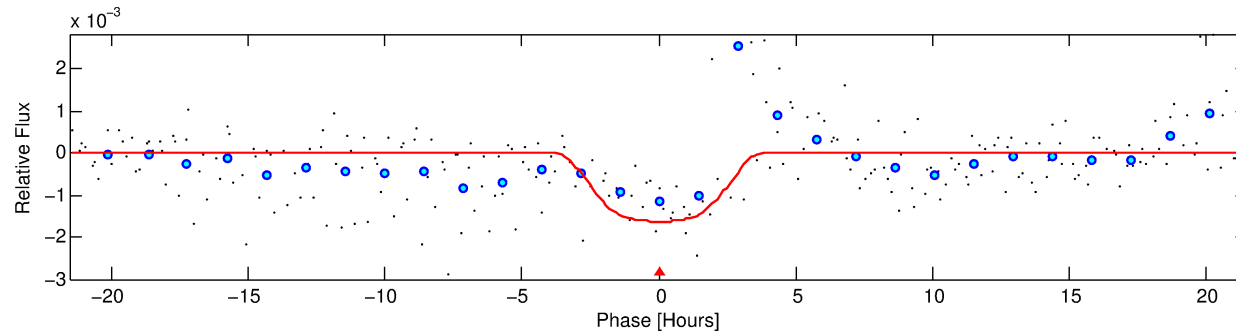
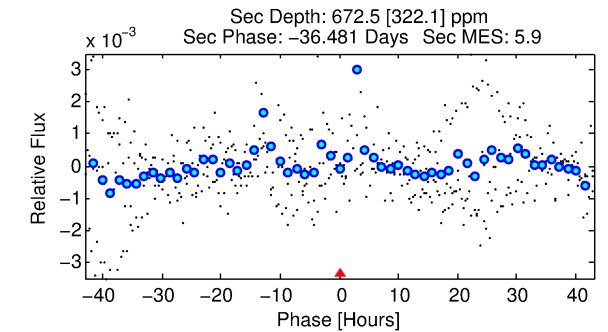
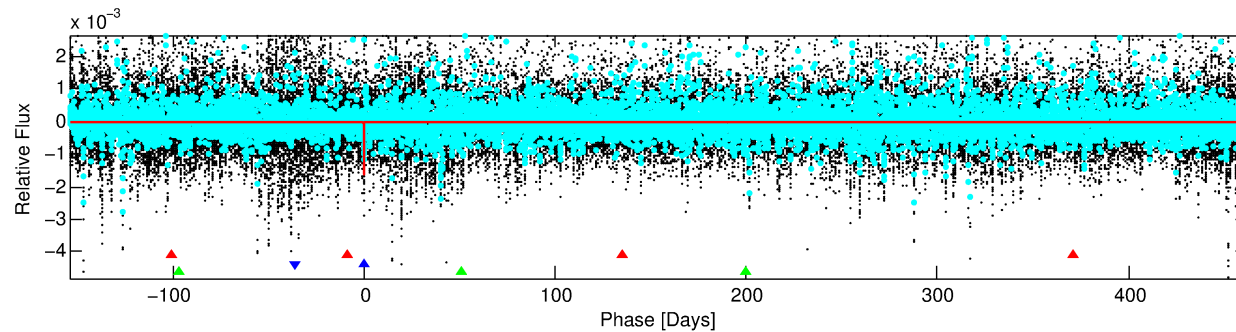
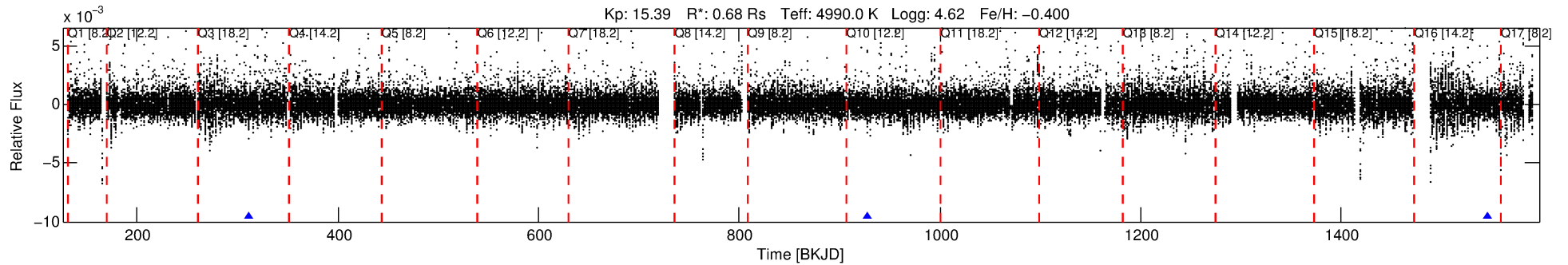
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007188204-02

No Significant Match Found

DV One-Page Summary

KIC: 7188204 Candidate: 2 of 3 Period: 616.739 d



DV Fit Results:

Period = 616.73937 [0.01333] d
Epoch = 311.4429 [0.0193] BKJD
Rp/R* = 0.0475 [0.0061]
a/R* = 307.28 [72.09]
b = 0.94 [0.03]
Seff = 0.16 [0.03]
Teq = 161 [7] K
Rp = 3.50 [0.61] Re
a = 1.2591 [0.1100] AU
Ag = 47856.97 [26587.18] [1.80 σ]
Teffp = 3689 [514] K [6.86 σ]

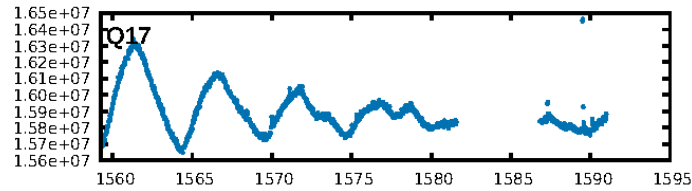
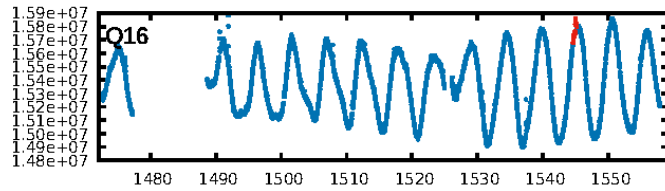
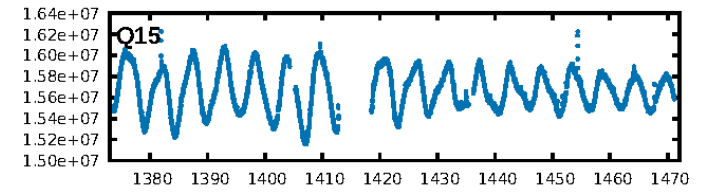
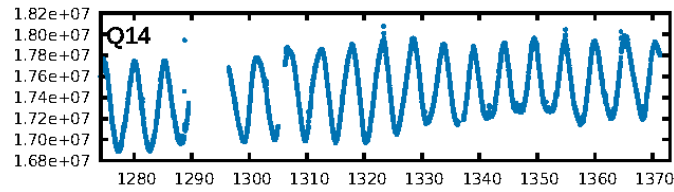
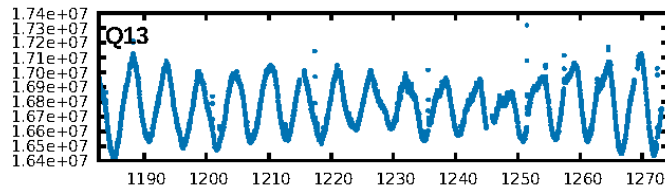
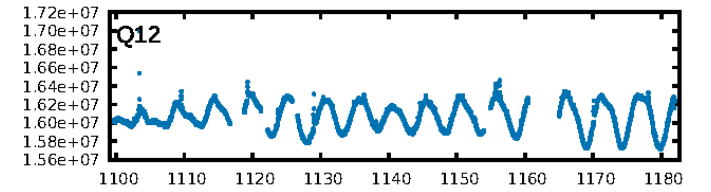
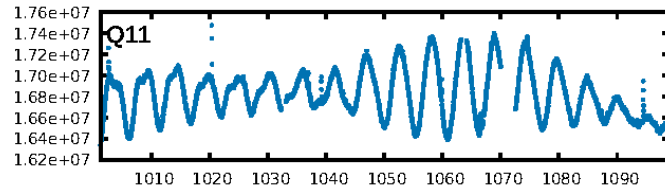
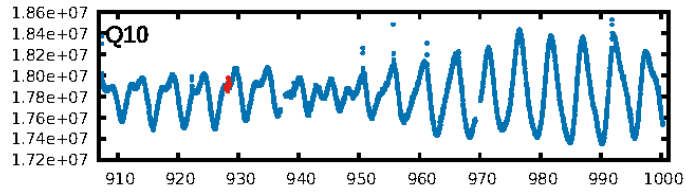
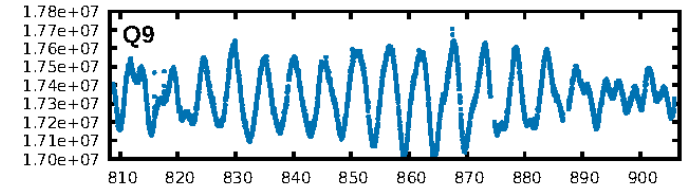
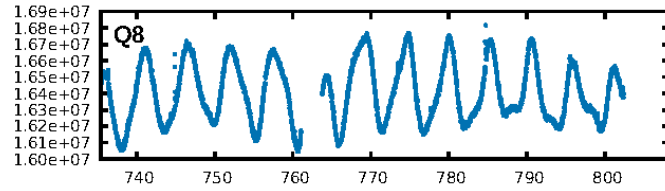
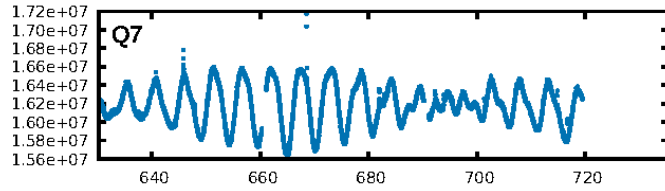
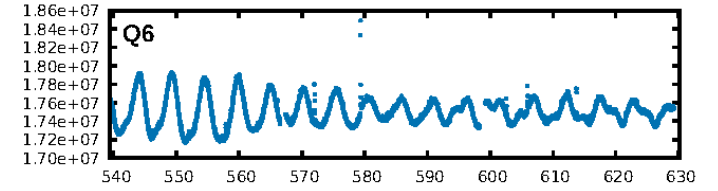
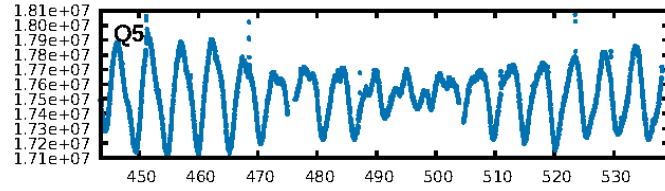
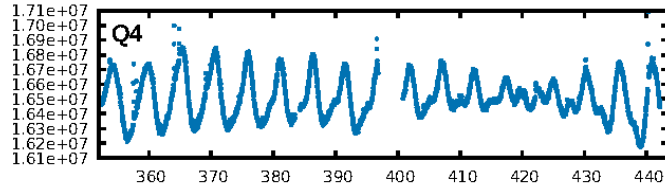
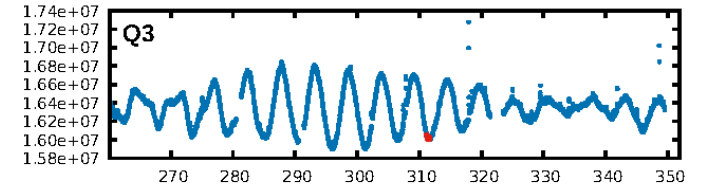
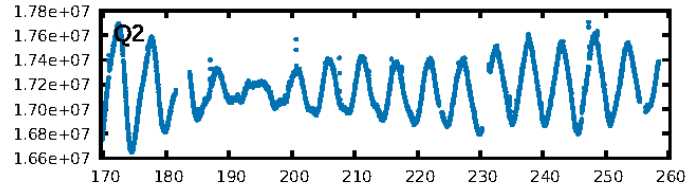
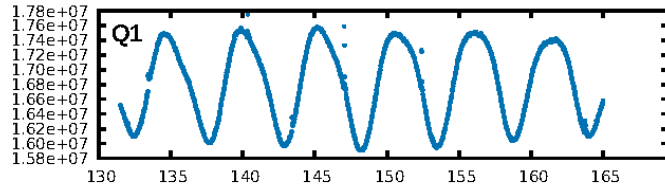
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [239.65 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.1%
ModelChiSquareGof-sig: 94.9%
Bootstrap-pfa: 2.80e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.4383
Centroid-sig: 1.4%
Centroid-so: 1.754 arcsec [2.10 σ]
OotOffset-rm: 0.335 arcsec [1.68 σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-rm: 0.232 arcsec [1.37 σ]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

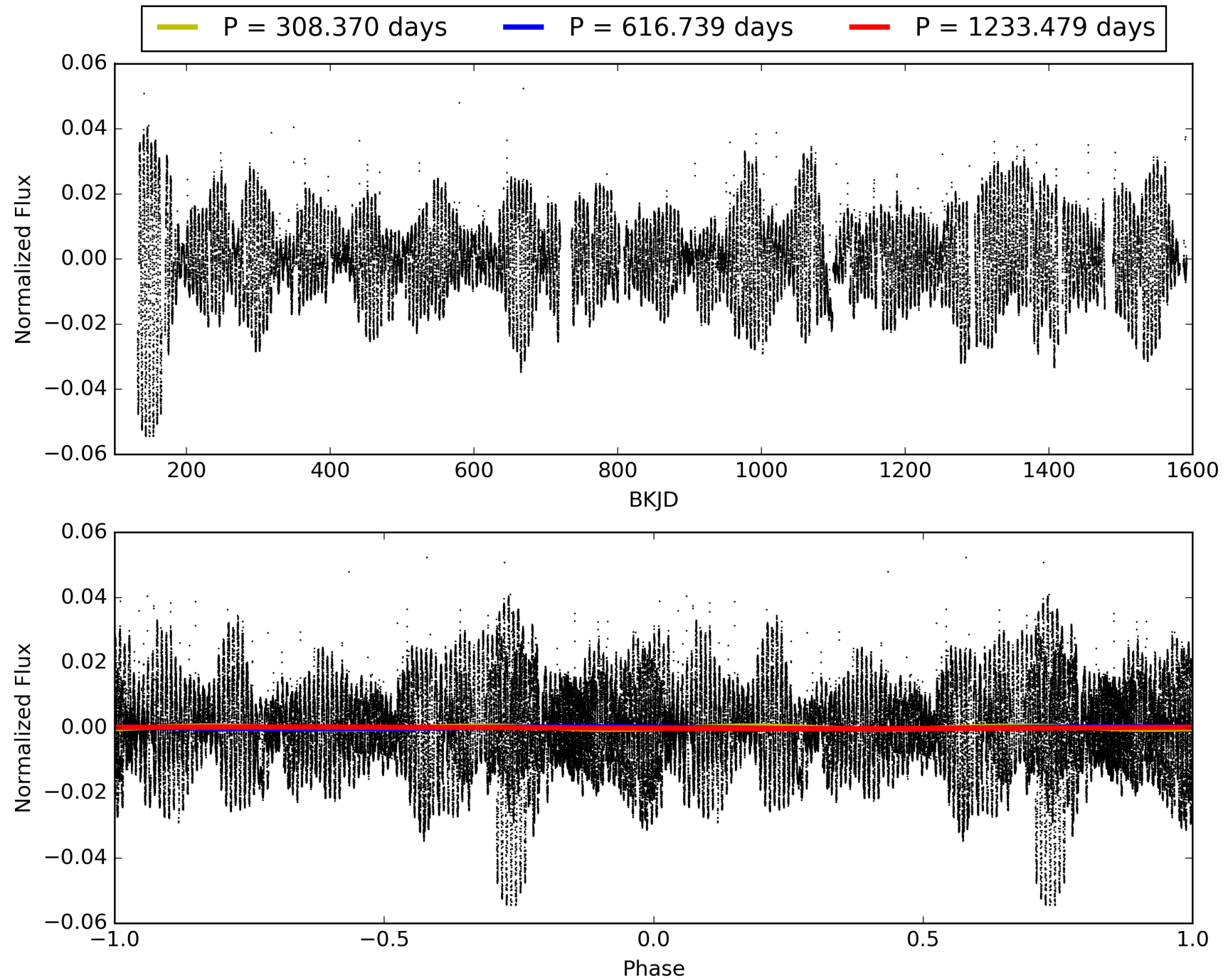
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 13:23:21 Z

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

TCE 007188204-02, PDC Light Curves

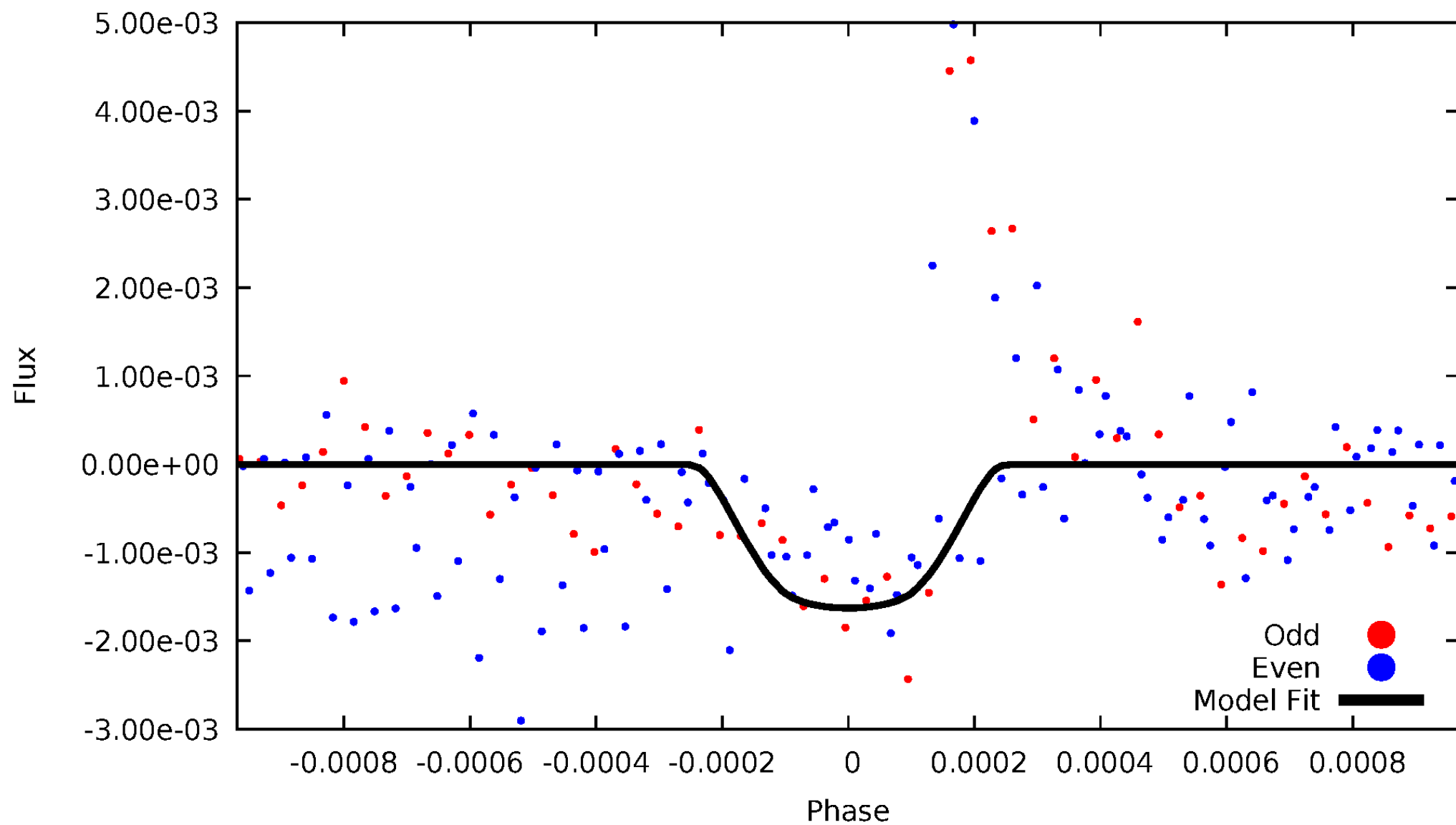


TCE 007188204-02



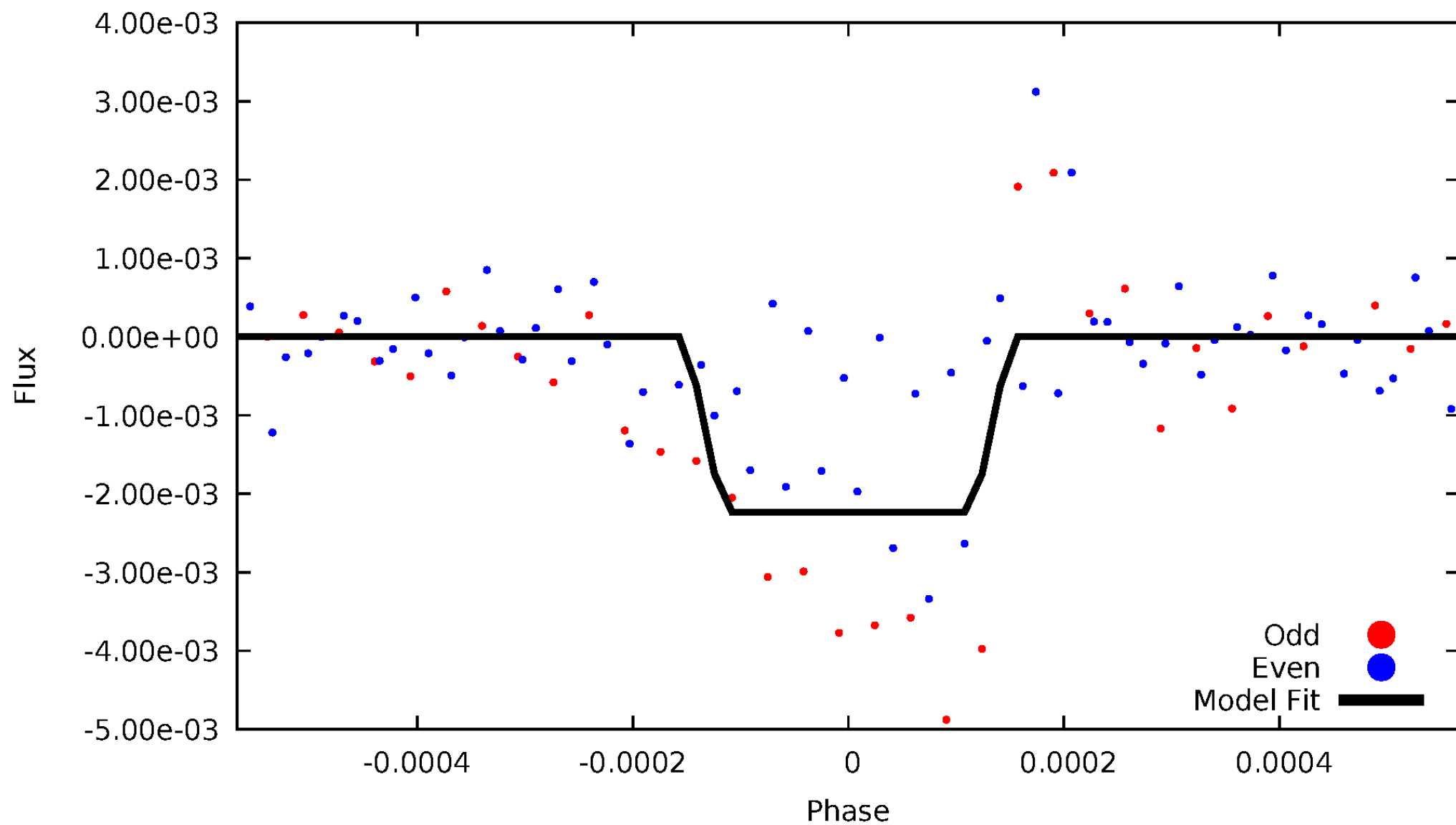
DV Odd/Even

TCE 007188204-02



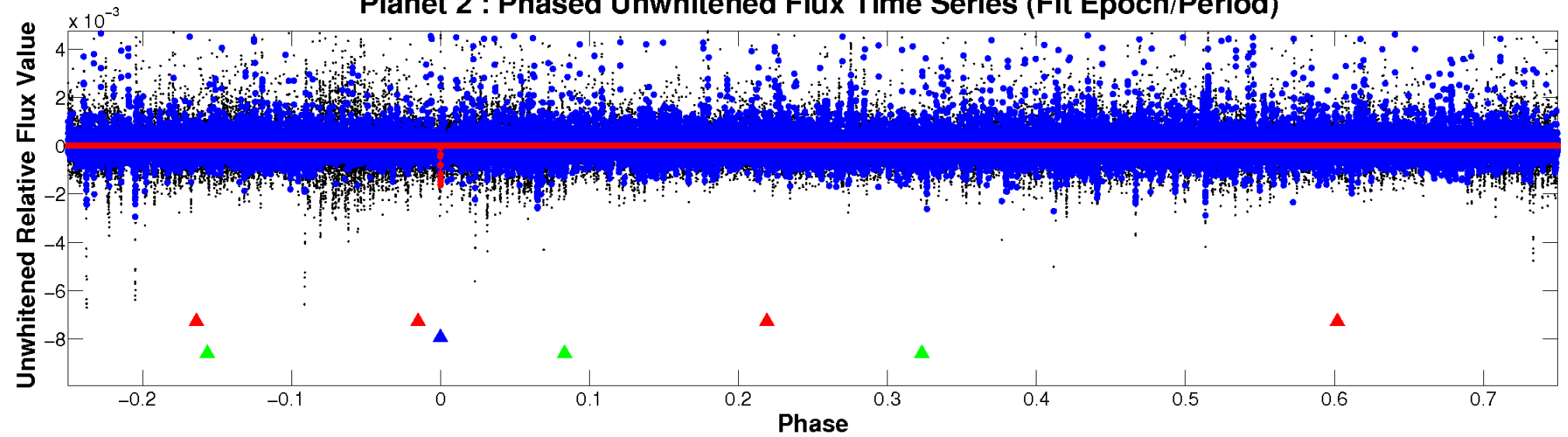
ALT Odd/Even

TCE 007188204-02

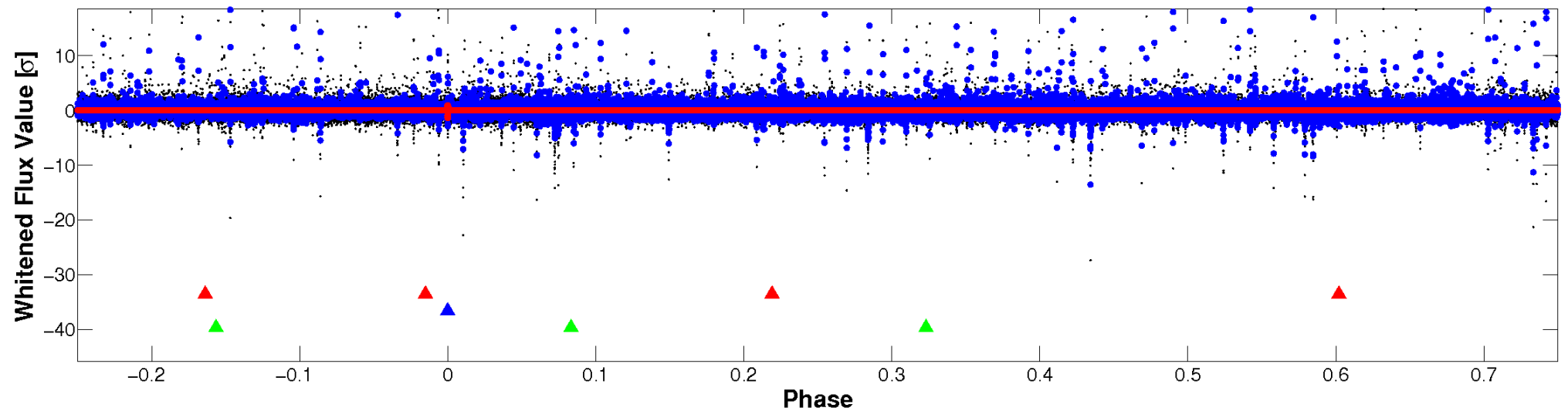


Non-Whitened Vs. Whitened Light Curve

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

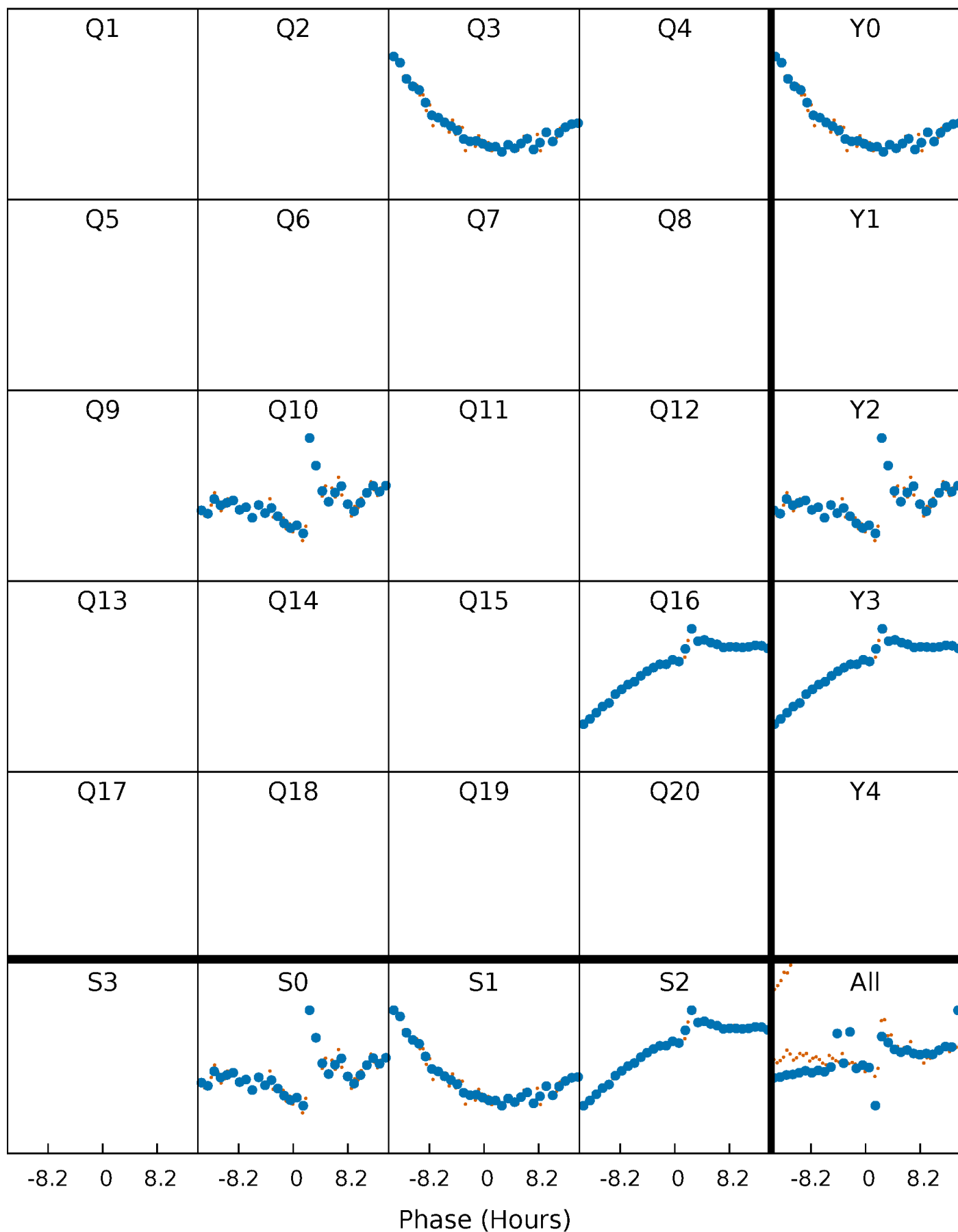


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



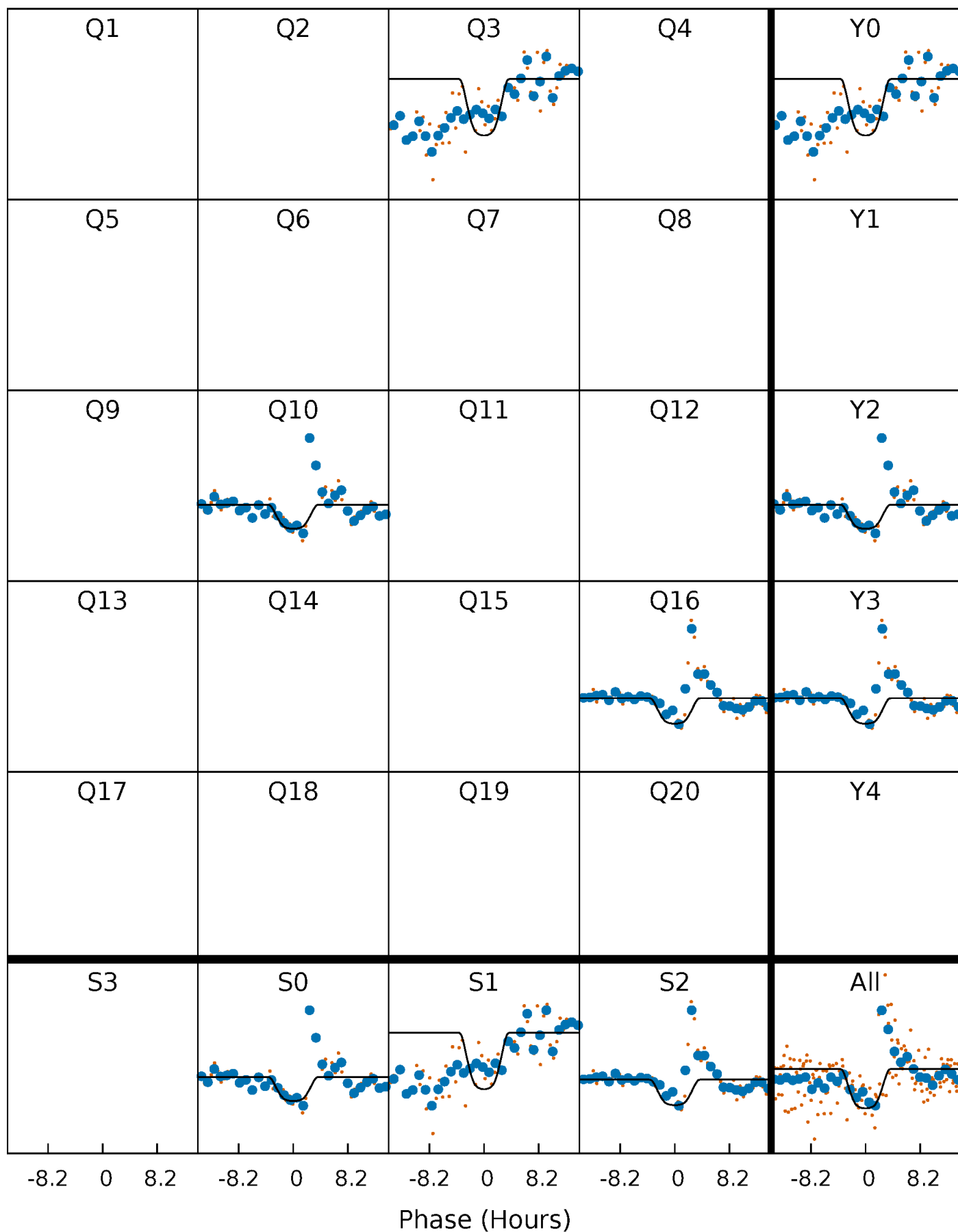
PDC Quarter-Phased Transit Curves

TCE 007188204-02 P=616.739369 Days $T_0=311.442939$ (BKJD)



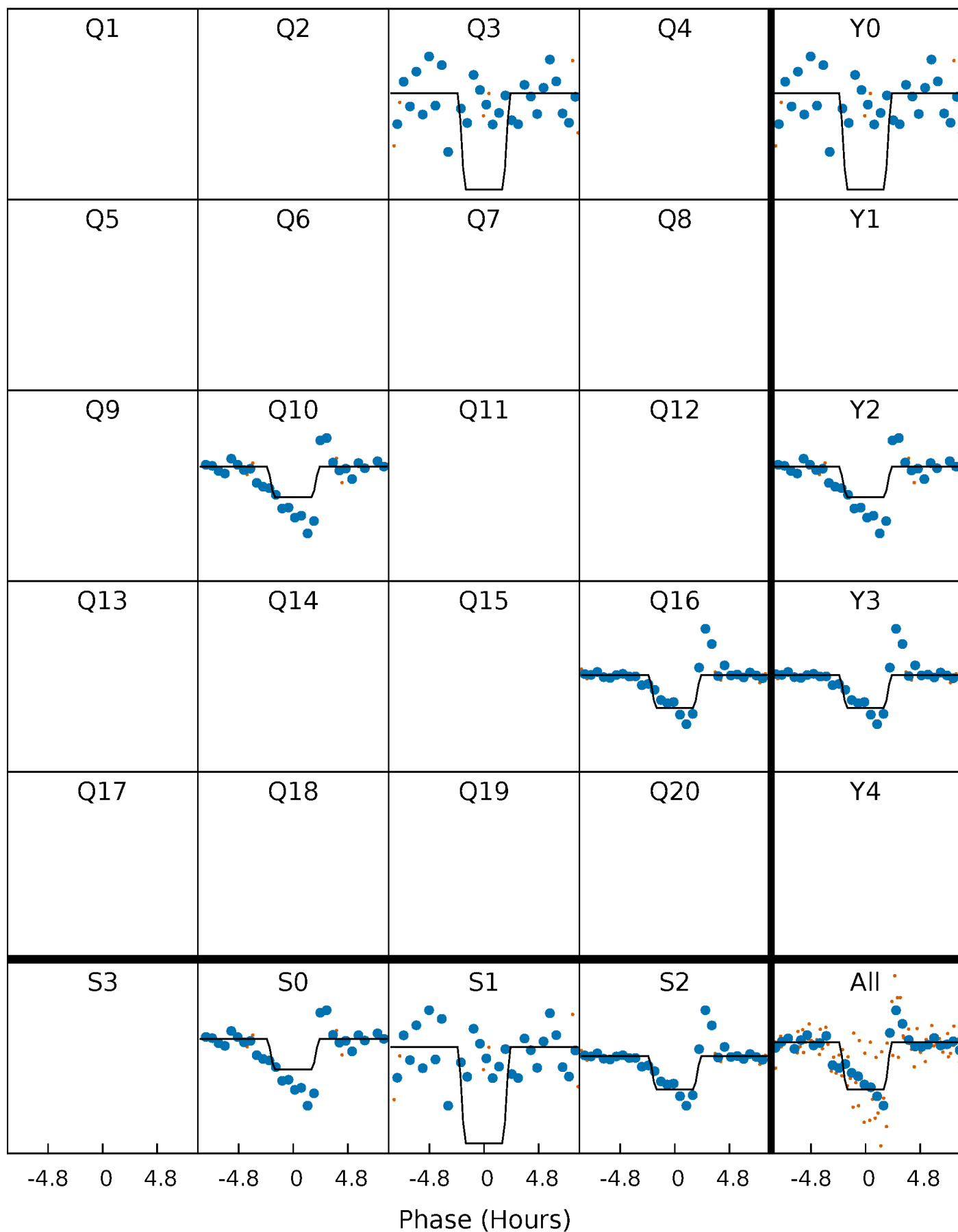
DV Quarter-Phased Transit Curves

TCE 007188204-02 P=616.739369 Days $T_0=311.442939$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

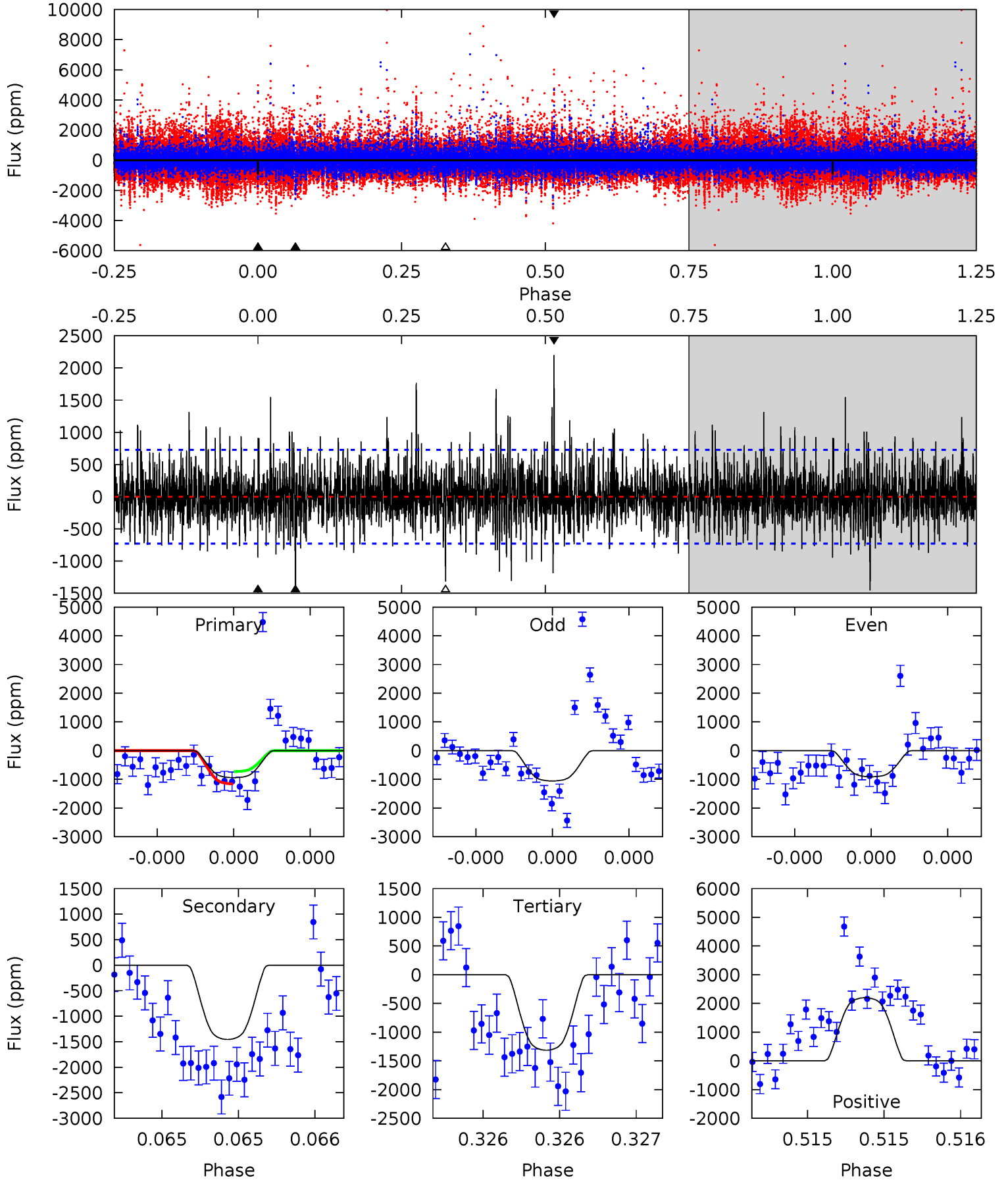
TCE 007188204-02 $P=616.732519$ Days $T_0=311.452051$ (BKJD)



DV Model-Shift Uniqueness Test

007188204-02, P = 616.739369 Days, E = 311.442939 Days

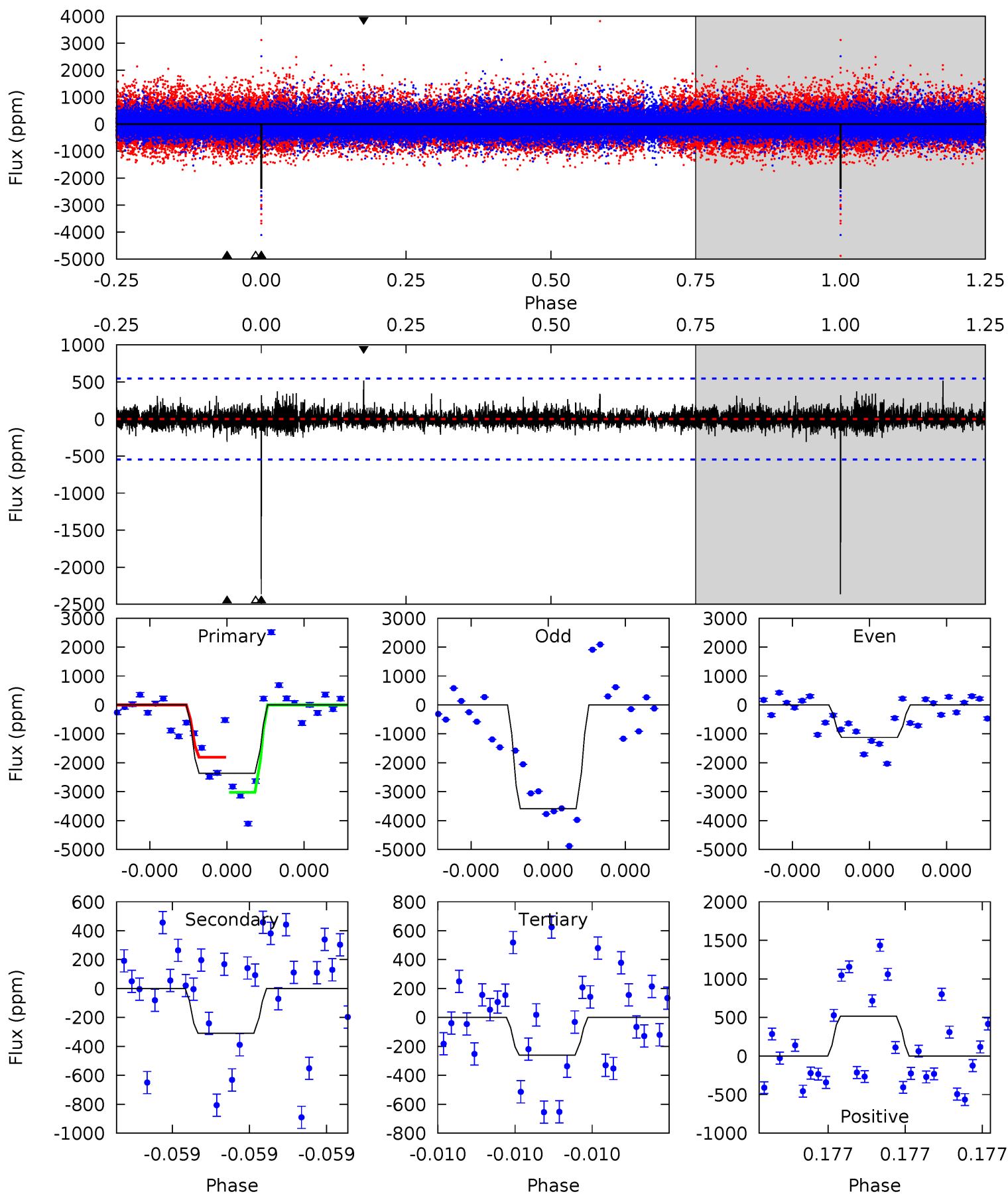
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.24	11.2	10.1	16.9	5.58	3.49	2.41	-2.84	-9.64	1.08	-5.71	0.44	0.83	0.60	1.65



Alt Model-Shift Uniqueness Test

007188204-02, P = 616.732519 Days, E = 311.452051 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.5	3.21	2.70	5.38	5.66	3.62	0.63	21.8	19.2	0.51	-2.17	13.6	0.93	0.18	6.32



Stellar Parameters For KIC 007188204

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4990^{+136}_{-151}	$4.623^{+0.045}_{-0.054}$	$-0.400^{+0.300}_{-0.300}$	$0.676^{+0.078}_{-0.052}$	$0.698^{+0.078}_{-0.057}$	$3.189^{+0.654}_{-0.650}$
	+3%/-3%	+1%/-1%	+75%/-75%	+12%/-8%	+11%/-8%	+21%/-20%
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 007188204-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1456 ± 130	$3.52^{+0.49}_{-0.54}$	226^{+8}_{-8}	4568^{+350}_{-260}	103267^{+39486}_{-25352}
Alt.	-309 ± 96	$3.49^{+0.50}_{-0.52}$	226^{+7}_{-8}	3460^{+247}_{-228}	21431^{+10518}_{-7494}

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

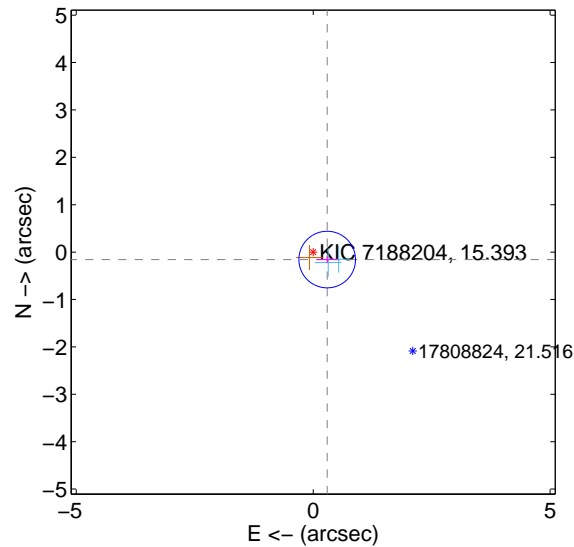
Supplemental centroid analysis for 007188204-02. Kepler magnitude: 15.39. Transit SNR 7.86

There are 2 quarters with good PRF difference image offsets

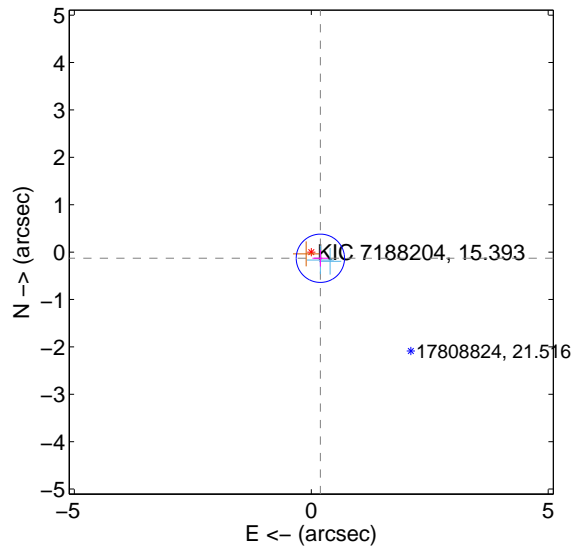
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.335 ± 0.199	1.68	-0.296 ± 0.218	-0.157 ± 0.072
PRF-fit source offset from KIC position	0.232 ± 0.170	1.37	-0.192 ± 0.167	-0.130 ± 0.175
photometric centroid source offset	1.75 ± 0.83	2.10	0.66 ± 0.88	1.62 ± 0.83

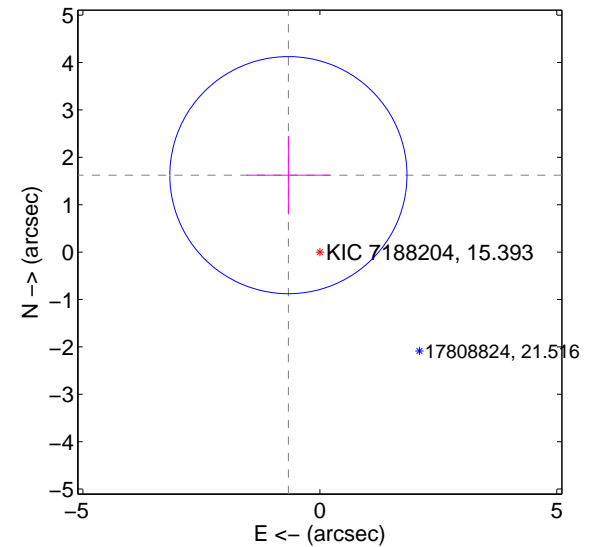
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

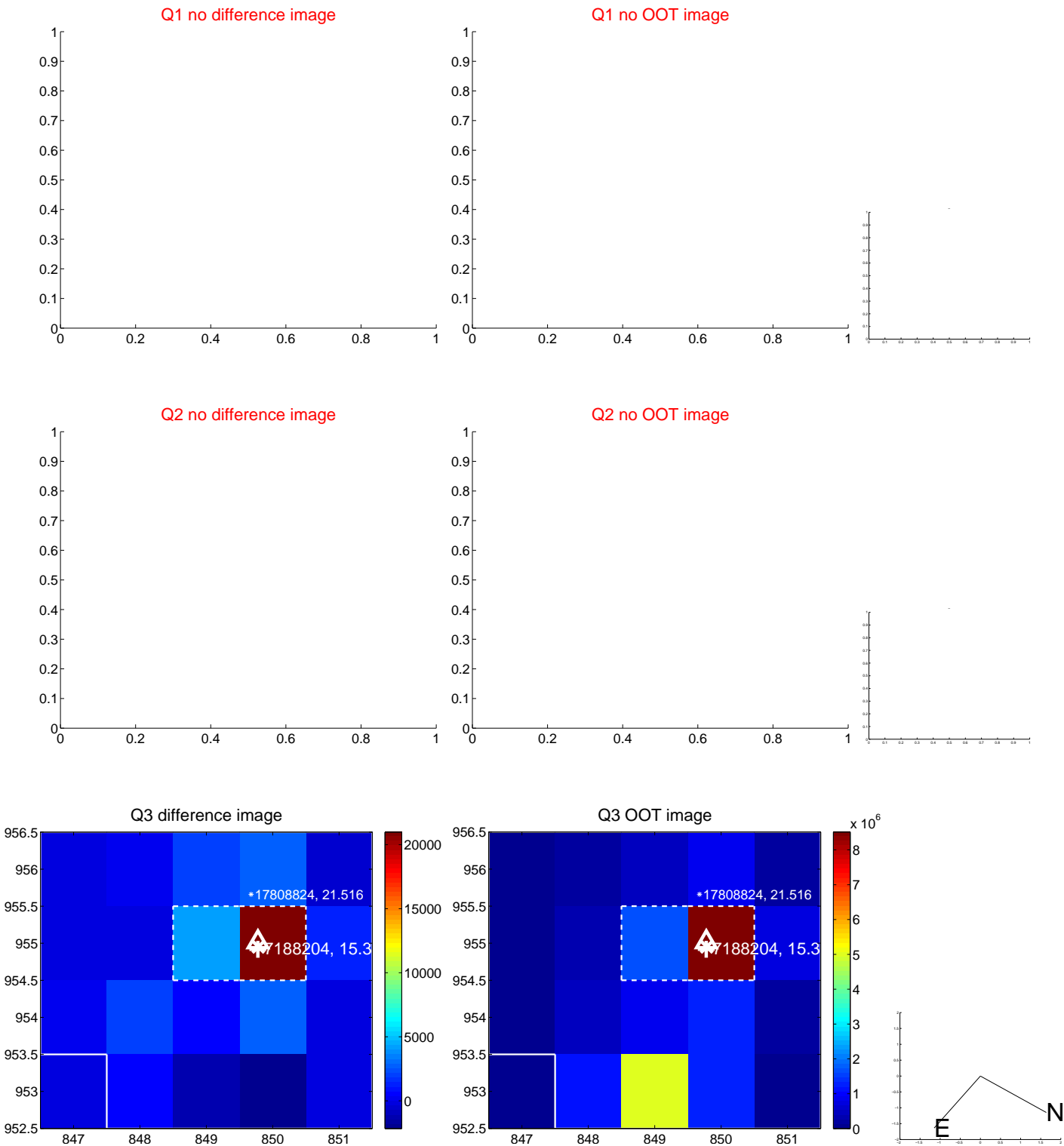


offset from photometric centroids



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

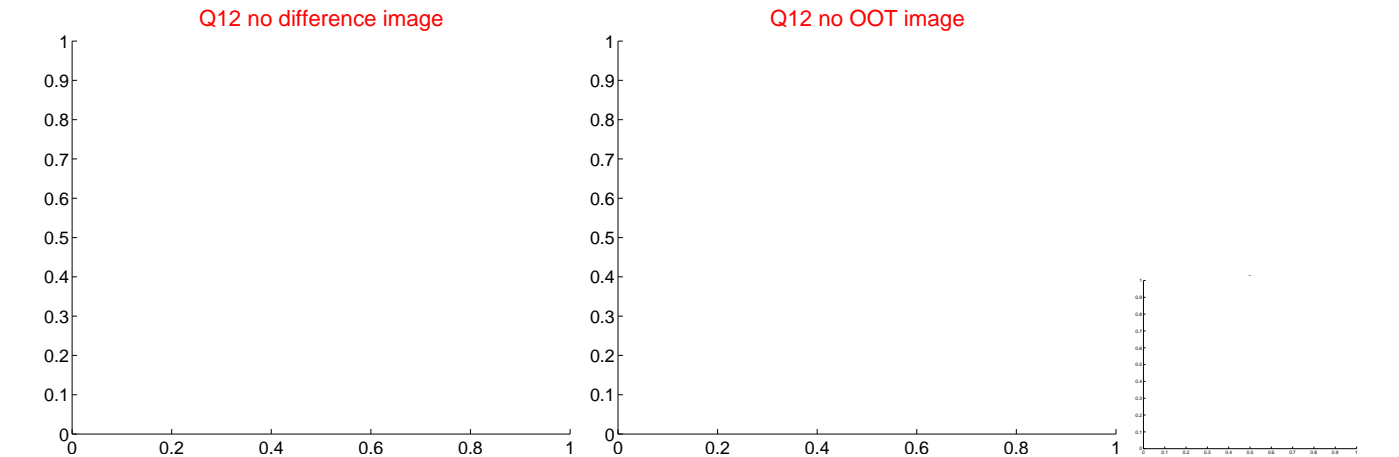
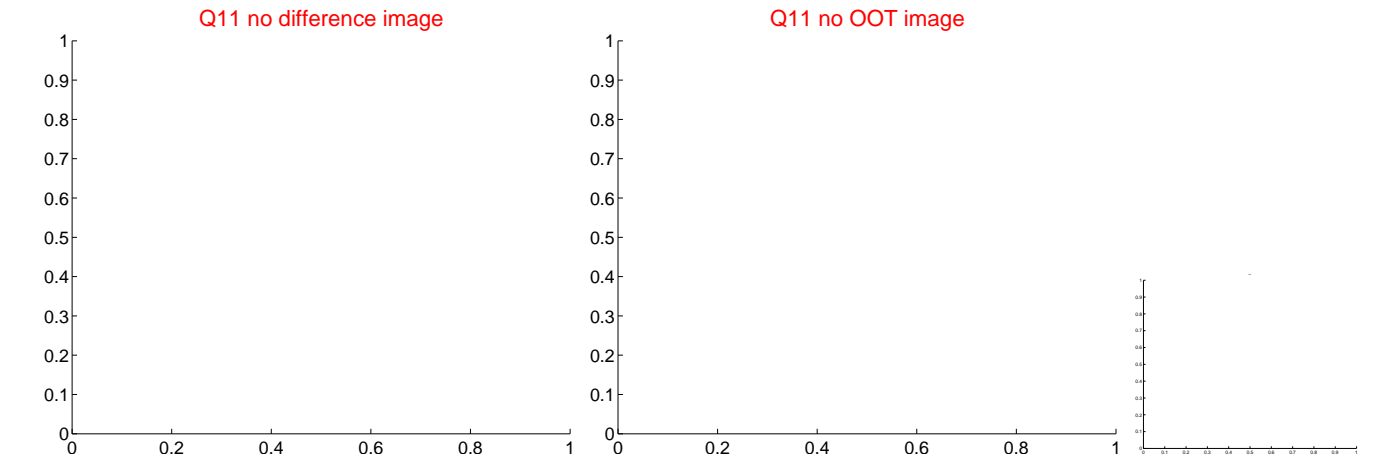
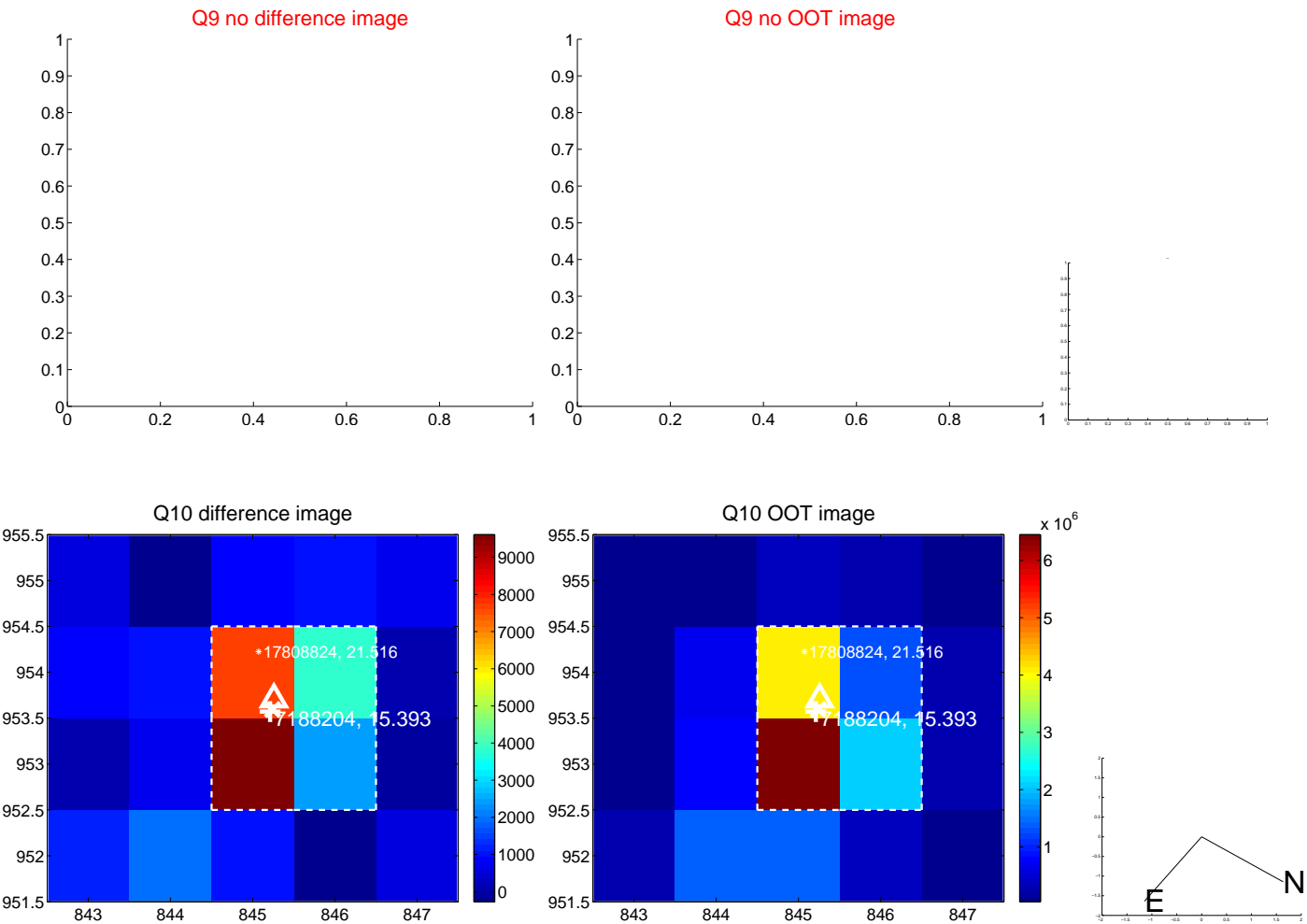
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



white ×: 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.

Q13 no difference image



Q13 no OOT image



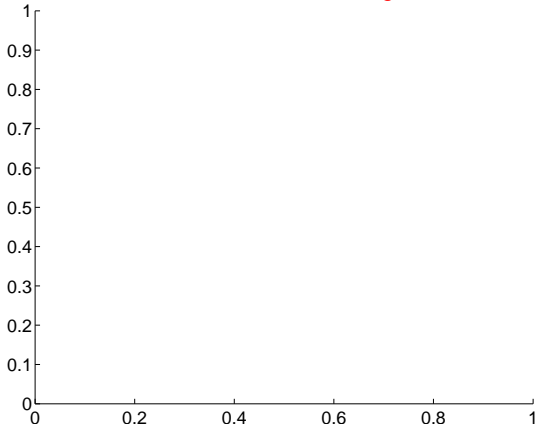
Q14 no difference image



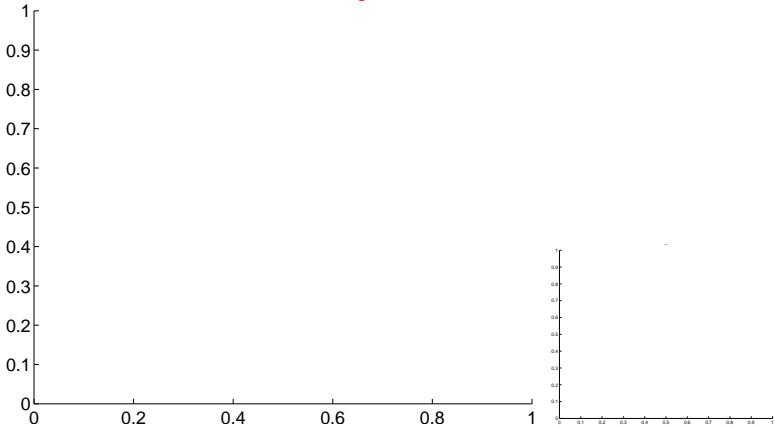
Q14 no OOT image



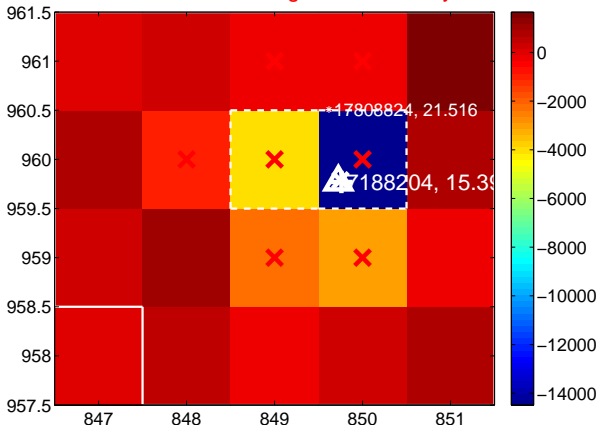
Q15 no difference image



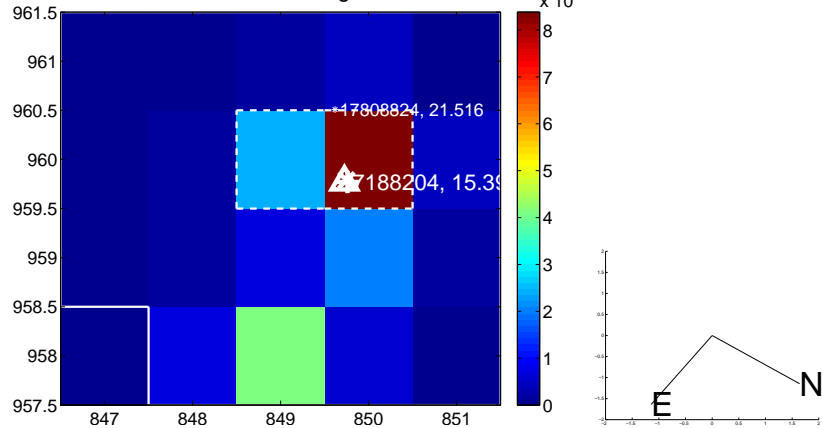
Q15 no OOT image



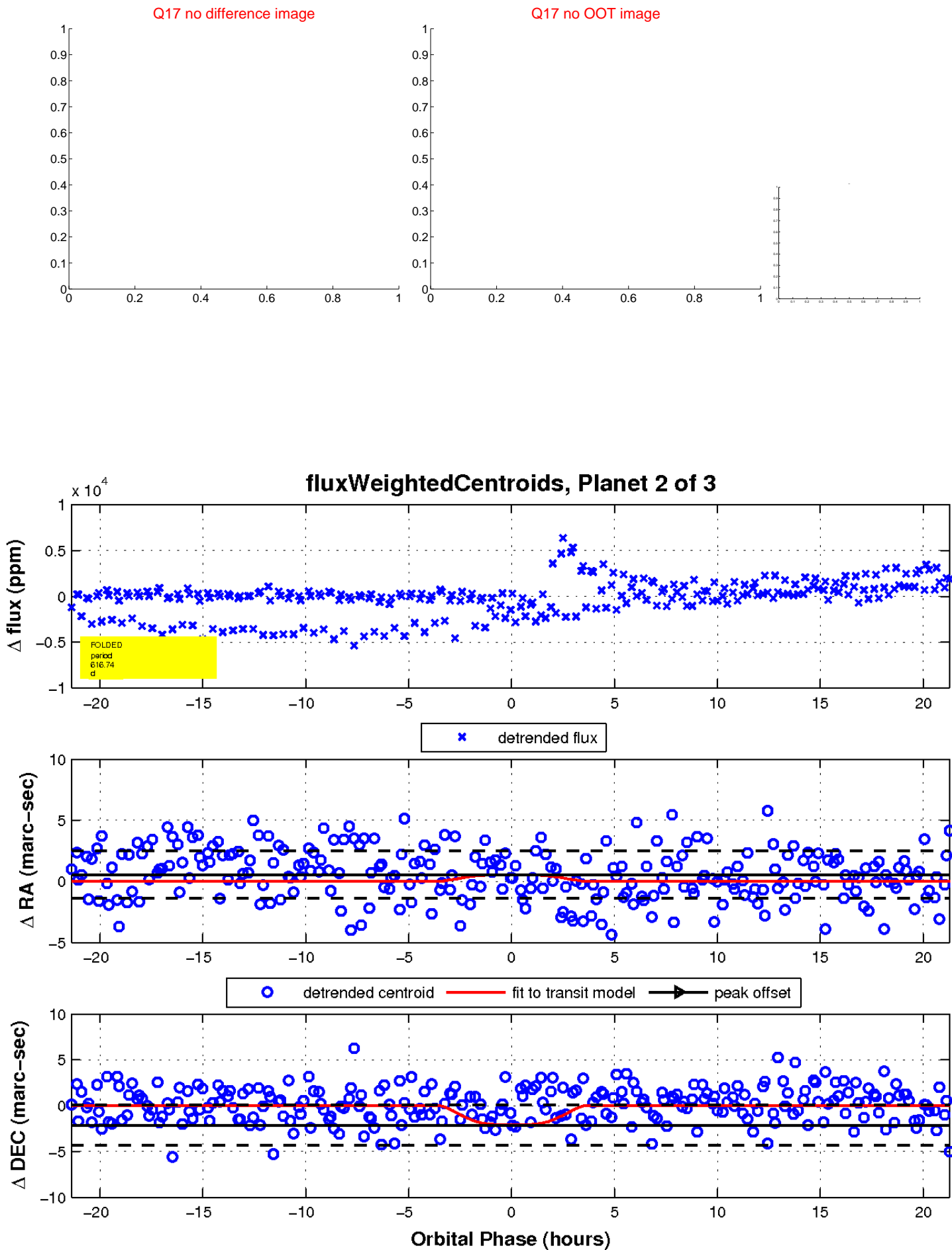
Q16 difference image. Poor Quality



Q16 OOT image

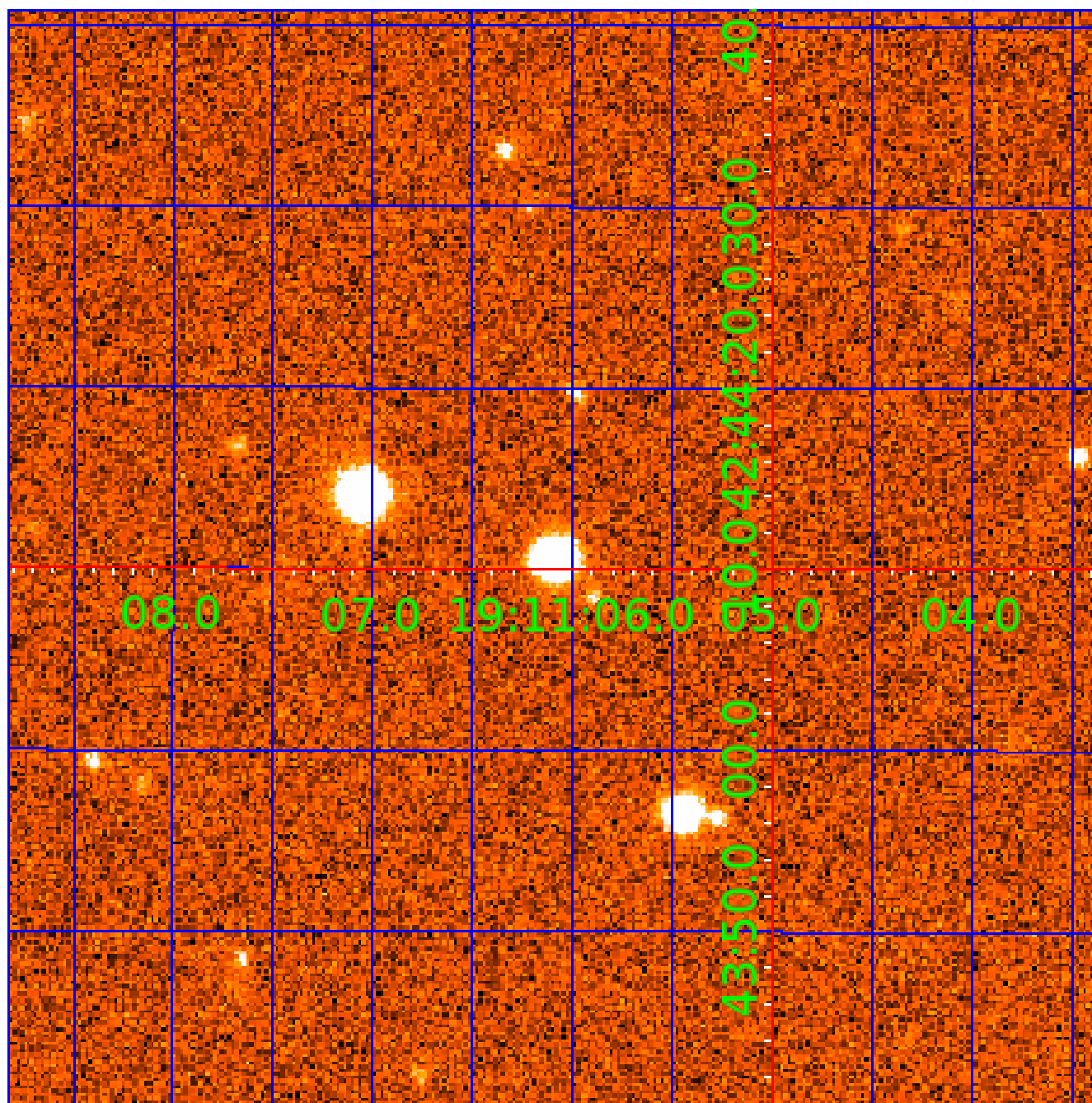


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007188204

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})
007188204-01	OBS	No	380.575191	302.176169	2320.8	4.677	13.3	10.7	0.68	4990	3.23	0.30
007188204-02	OBS	No	616.739369	311.442939	1628.6	7.173	12.1	7.9	0.68	4990	3.50	0.16
007188204-03	OBS	No	468.849974	510.714898	1552.5	12.958	9.6	6.1	0.68	4990	2.62	0.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007188204-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007188204-02	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—CENT_FEW_DIFFS
007188204-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

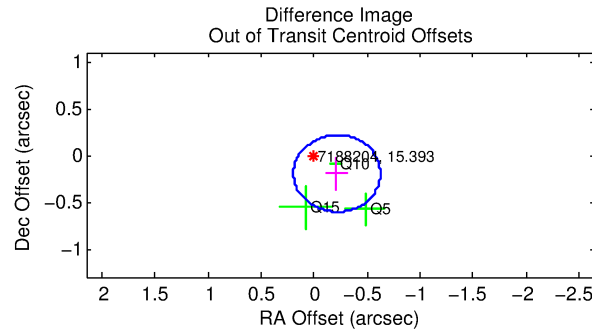
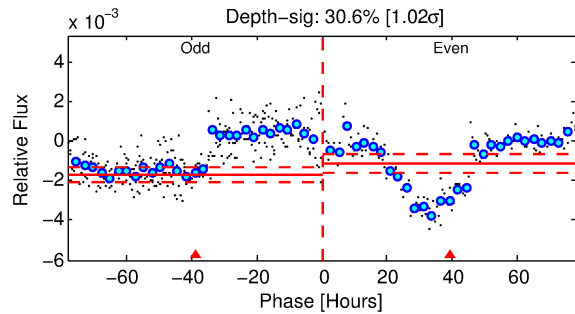
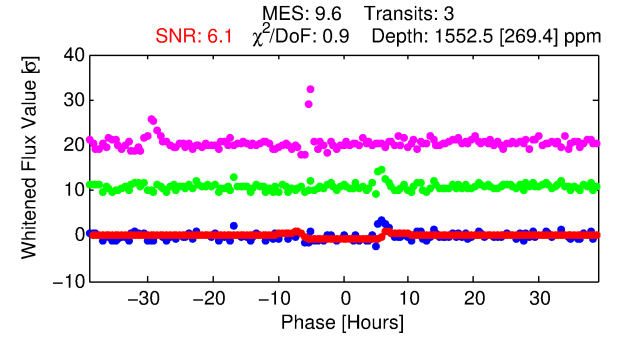
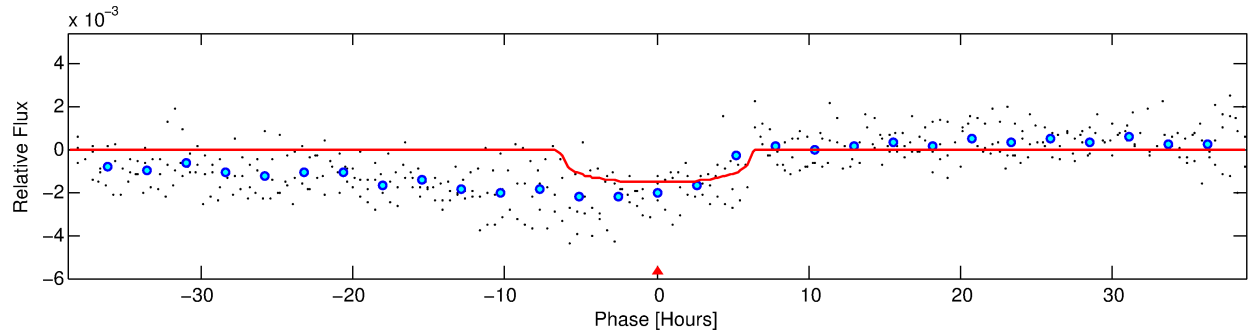
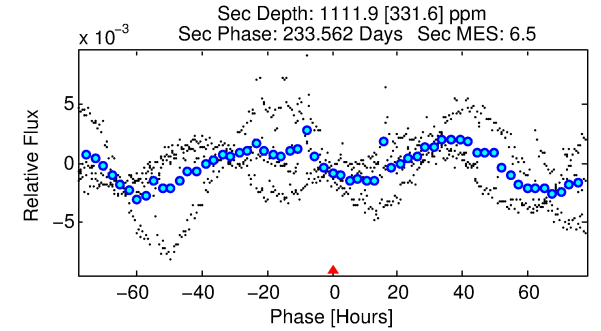
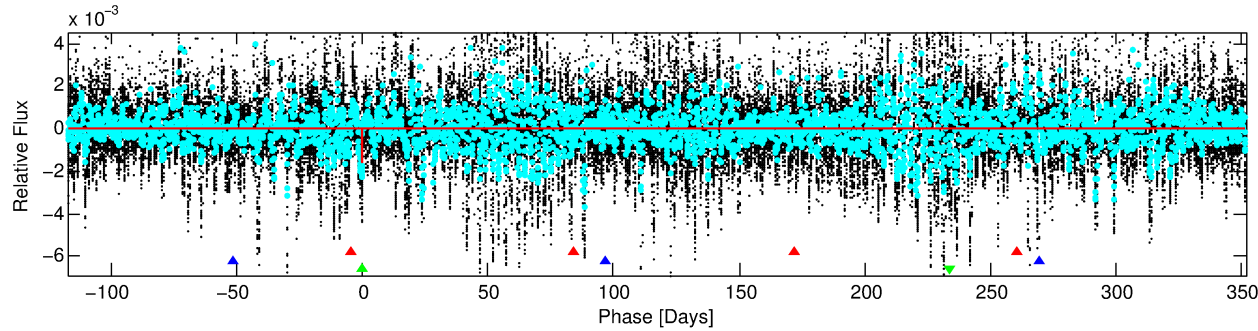
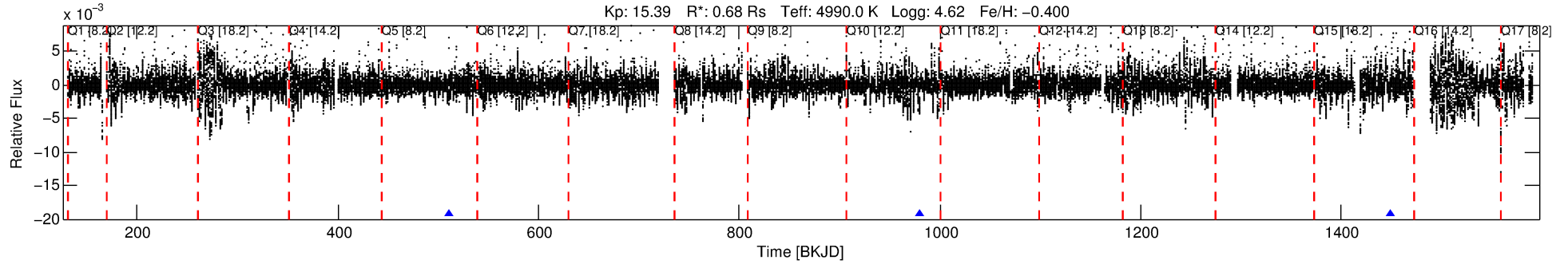
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007188204-03

No Significant Match Found

DV One-Page Summary

KIC: 7188204 Candidate: 3 of 3 Period: 468.850 d



DV Fit Results:

Period = 468.84997 [0.00960] d
Epoch = 510.7149 [0.0114] BKJD
Rp/R* = 0.0355 [0.0154]
a/R* = 275.82 [408.17]
b = 0.28 [4.99]
Seff = 0.23 [0.04]
Teq = 177 [7] K
Rp = 2.62 [1.18] Re
a = 1.0488 [0.0916] AU
Ag = 98359.83 [91030.47] [1.08 σ]
Teffp = 4839 [1121] K [4.16 σ]

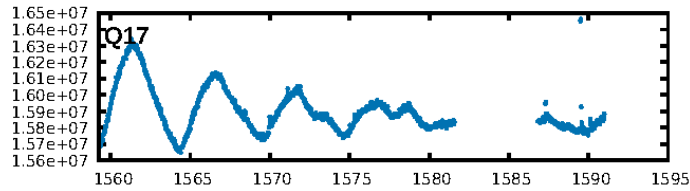
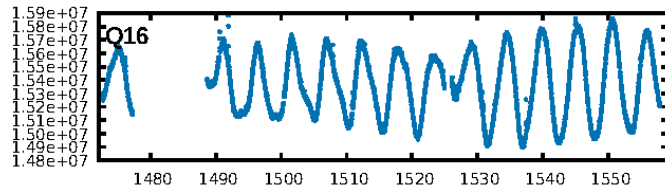
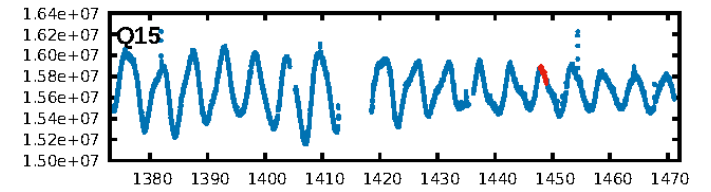
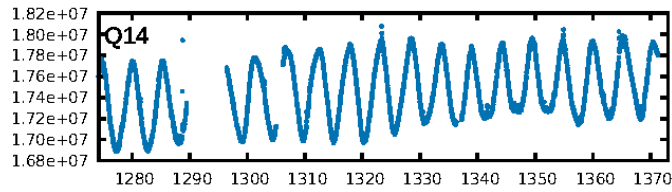
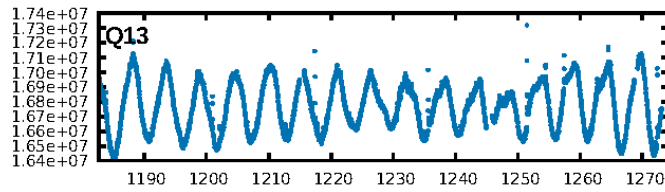
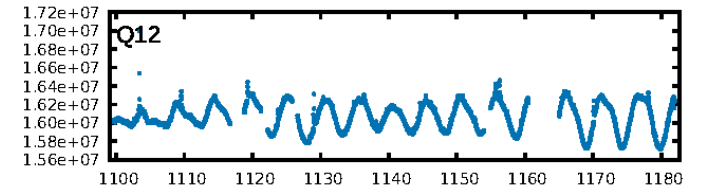
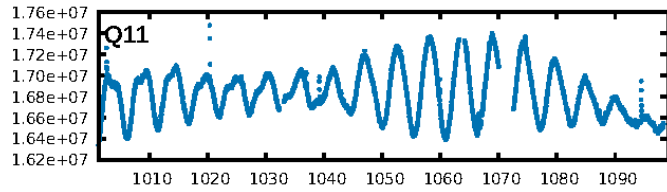
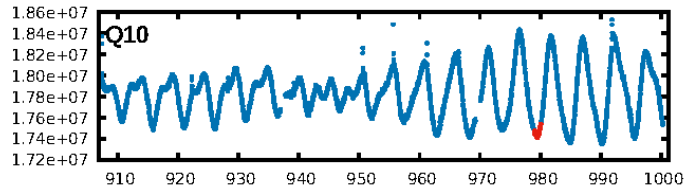
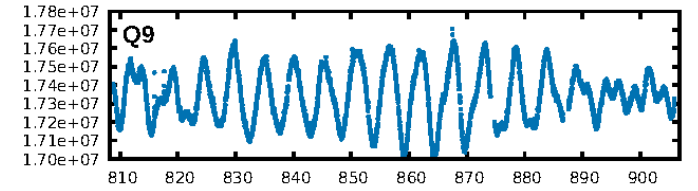
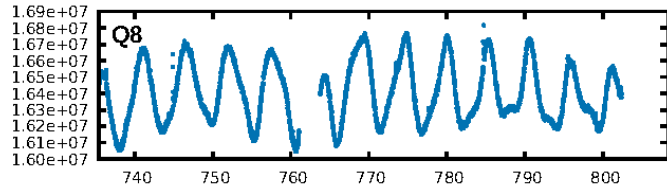
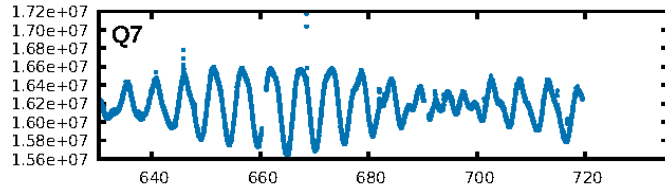
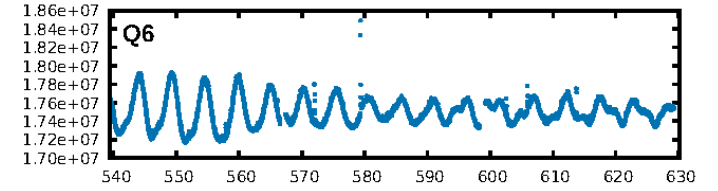
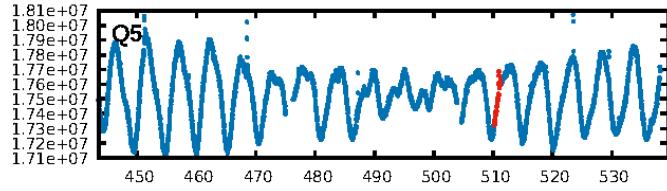
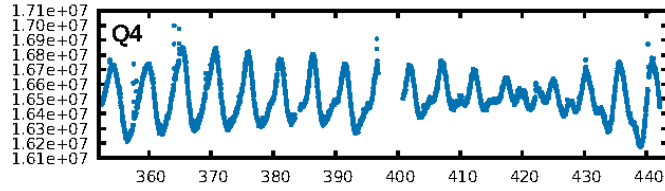
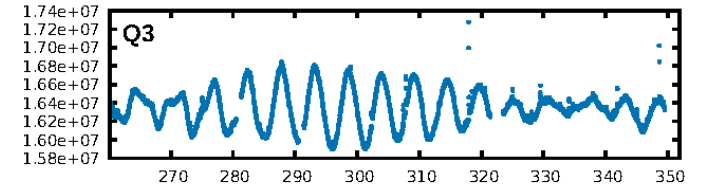
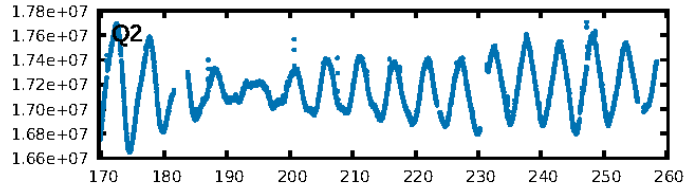
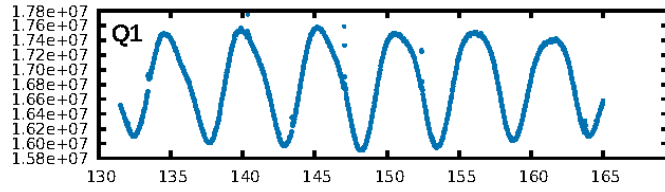
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [153.79 σ]
LongPeriod-sig: 100.0% [239.65 σ]
ModelChiSquare2-sig: 23.6%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 1.23e-07
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.98
Centroid-sig: 96.3%
Centroid-so: 1.164 arcsec [1.03 σ]
OotOffset-rm: 0.289 arcsec [2.12 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-rm: 0.247 arcsec [1.72 σ]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

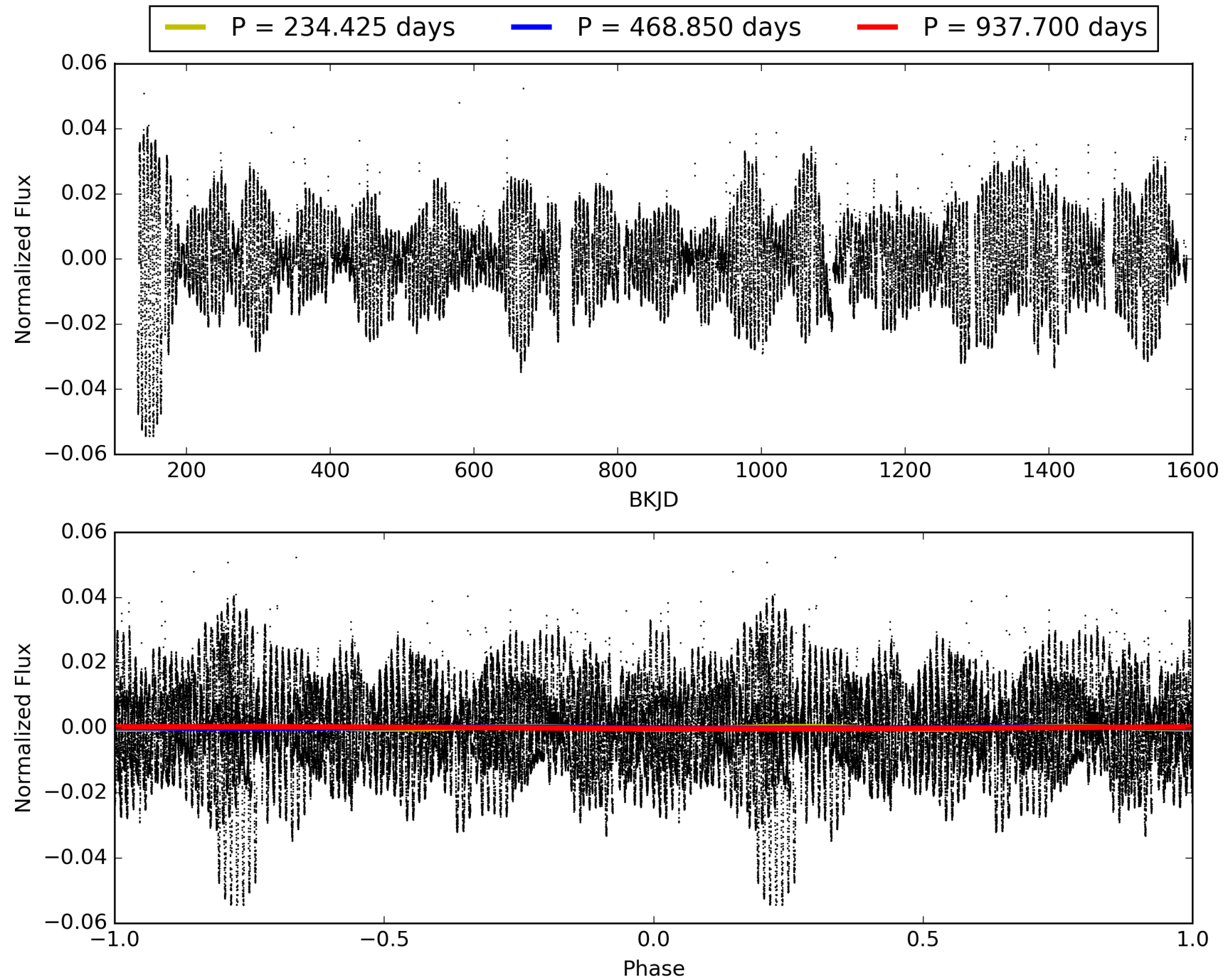
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 13:23:31 Z

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

TCE 007188204-03, PDC Light Curves

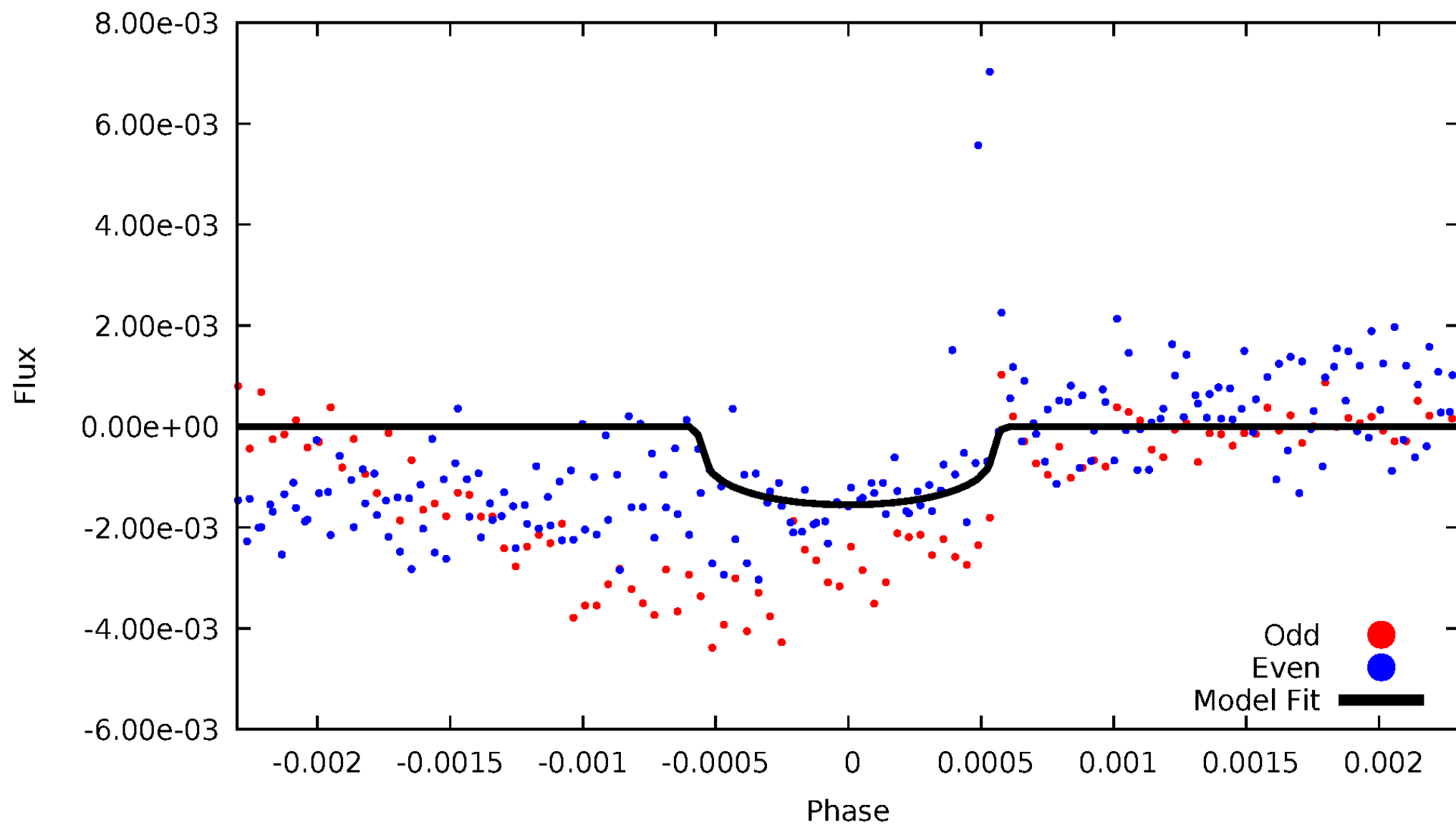


TCE 007188204-03



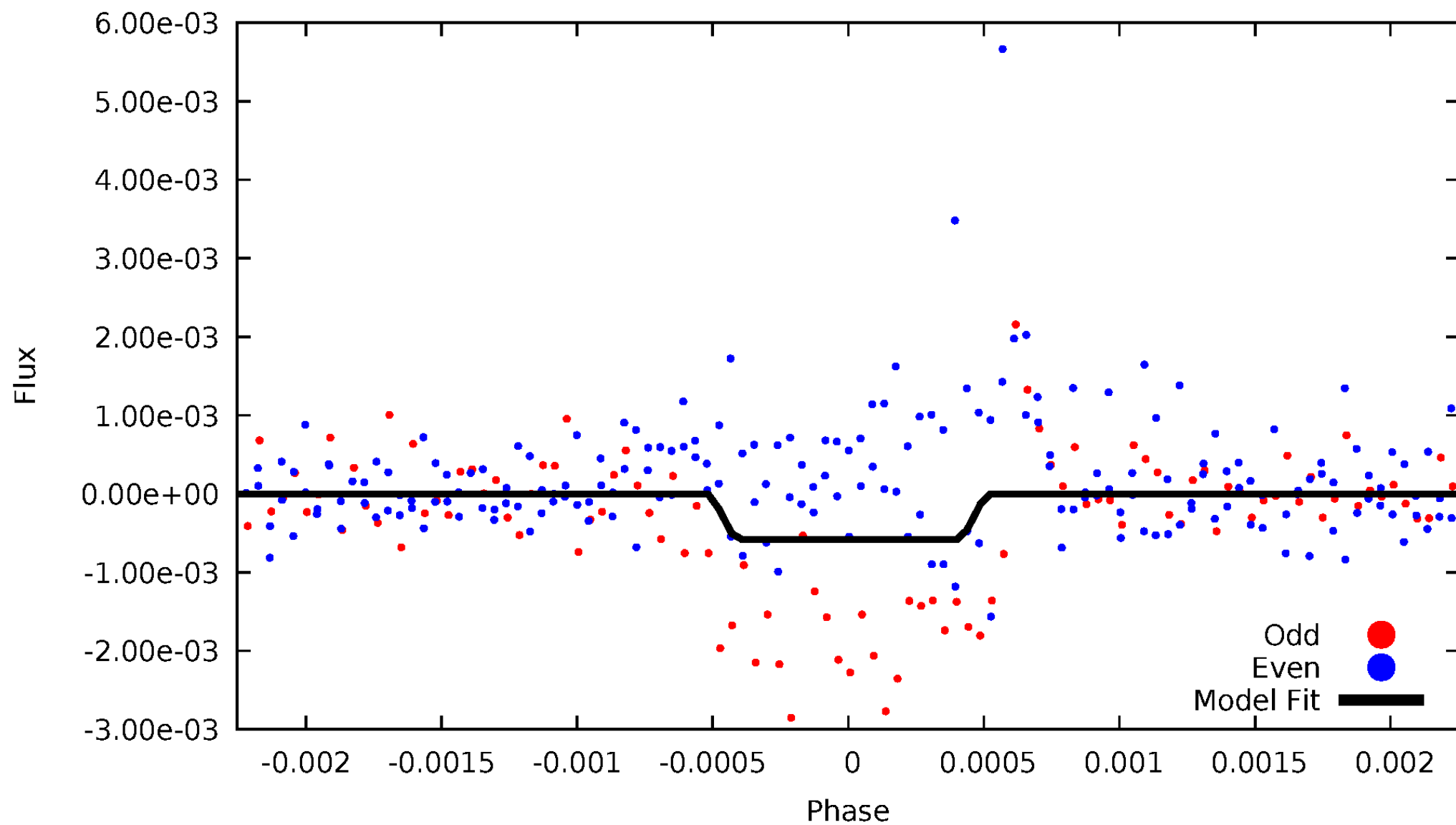
DV Odd/Even

TCE 007188204-03



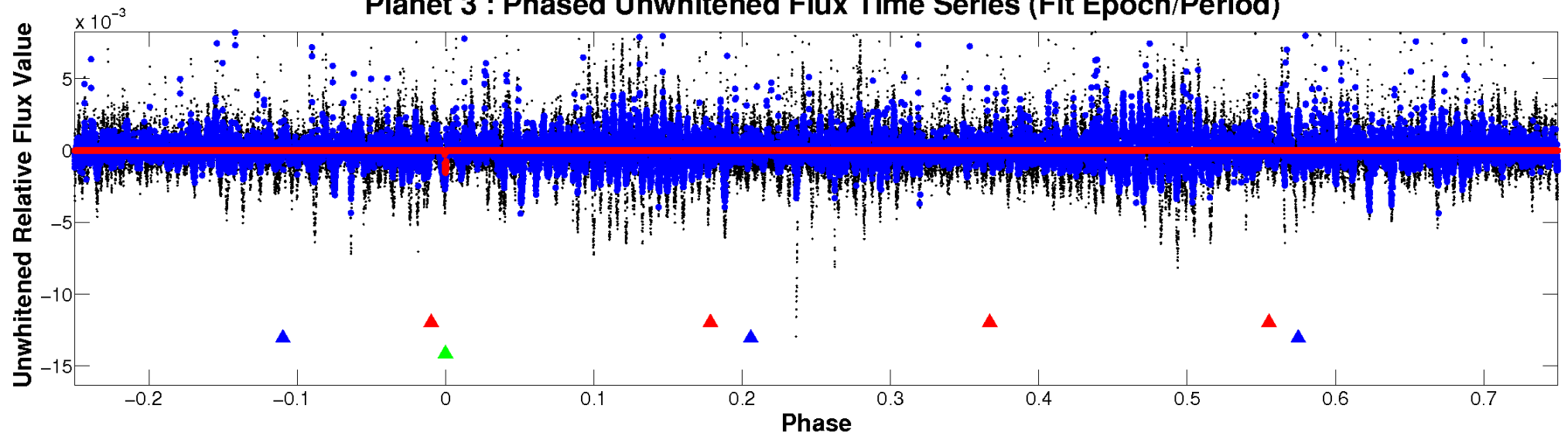
ALT Odd/Even

TCE 007188204-03

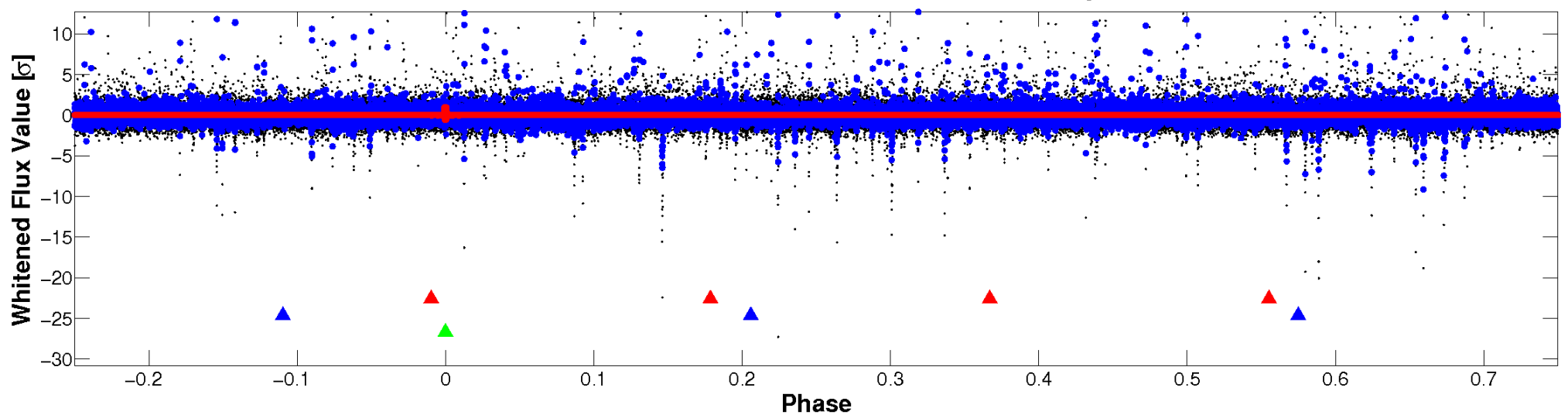


Non-Whitened Vs. Whitened Light Curve

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

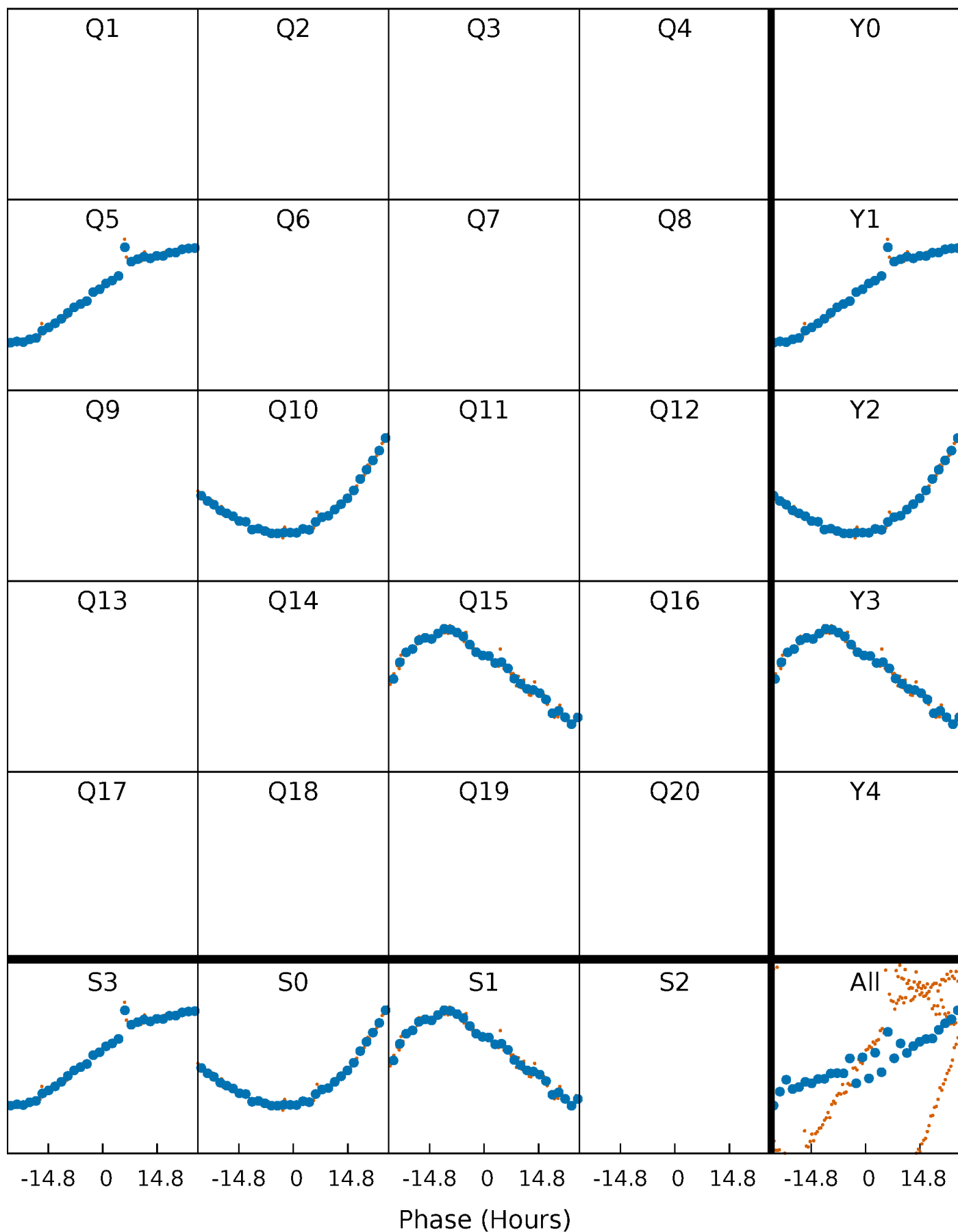


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



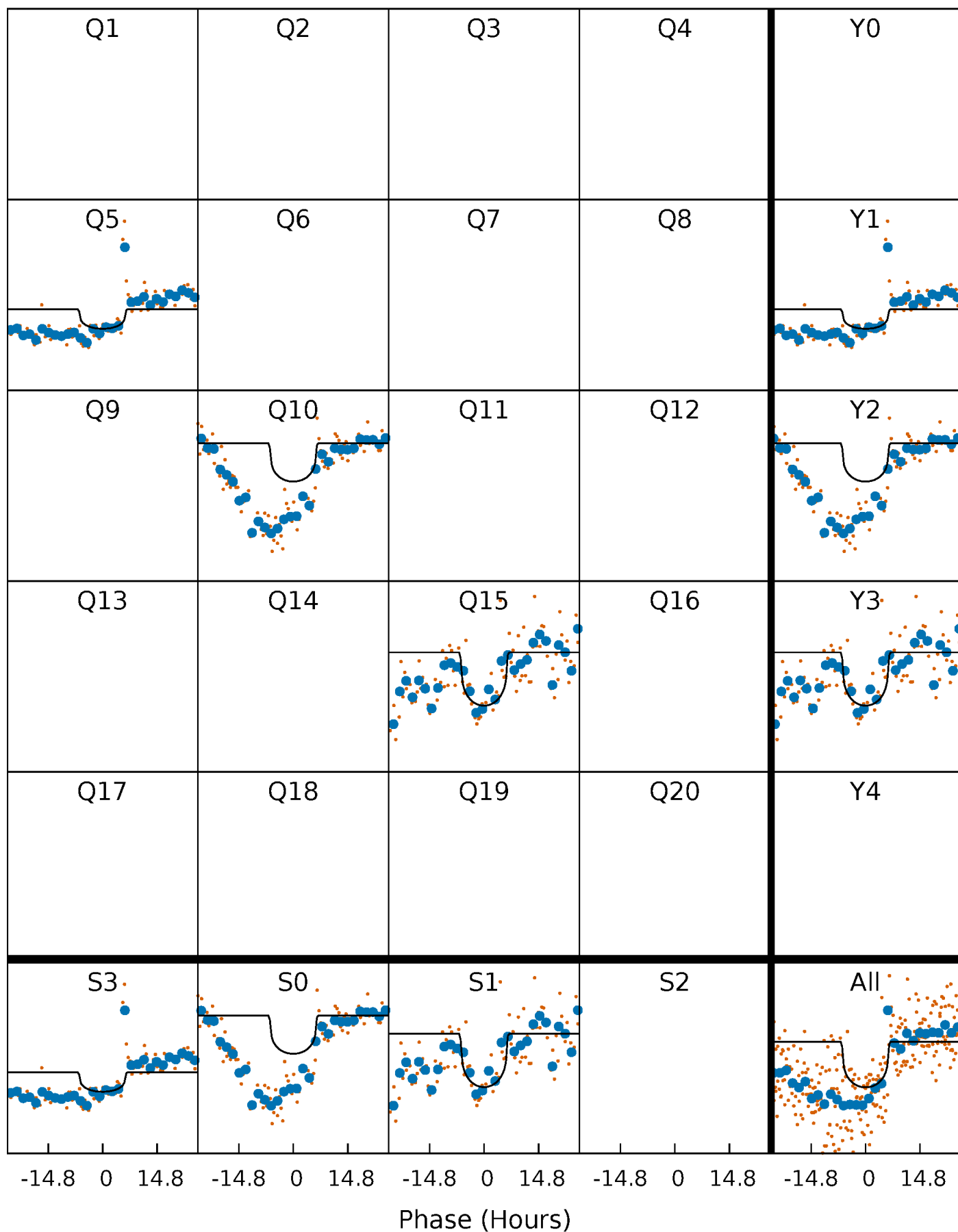
PDC Quarter-Phased Transit Curves

TCE 007188204-03 $P=468.849974$ Days $T_0=510.714898$ (BKJD)



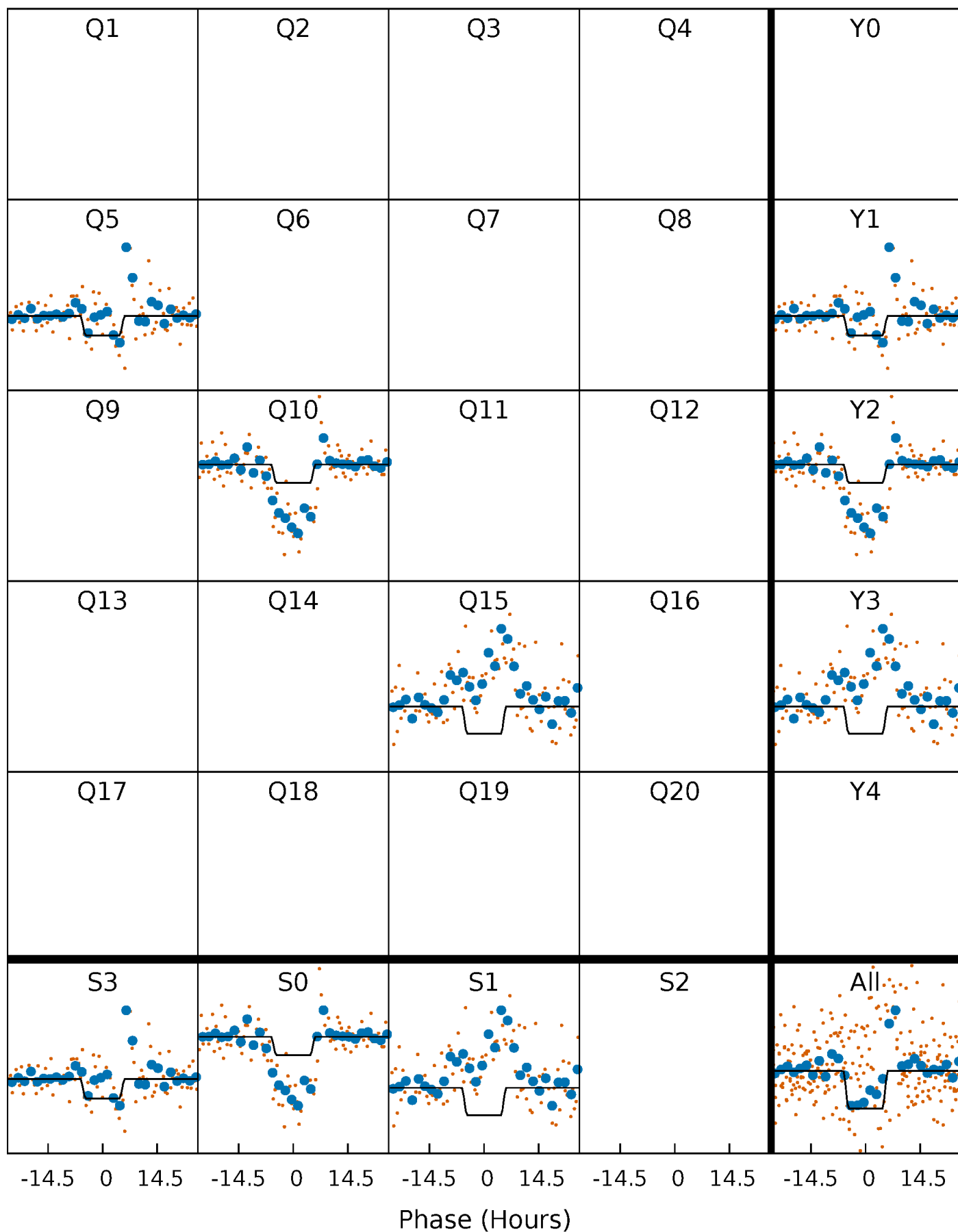
DV Quarter-Phased Transit Curves

TCE 007188204-03 P=468.849974 Days $T_0=510.714898$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

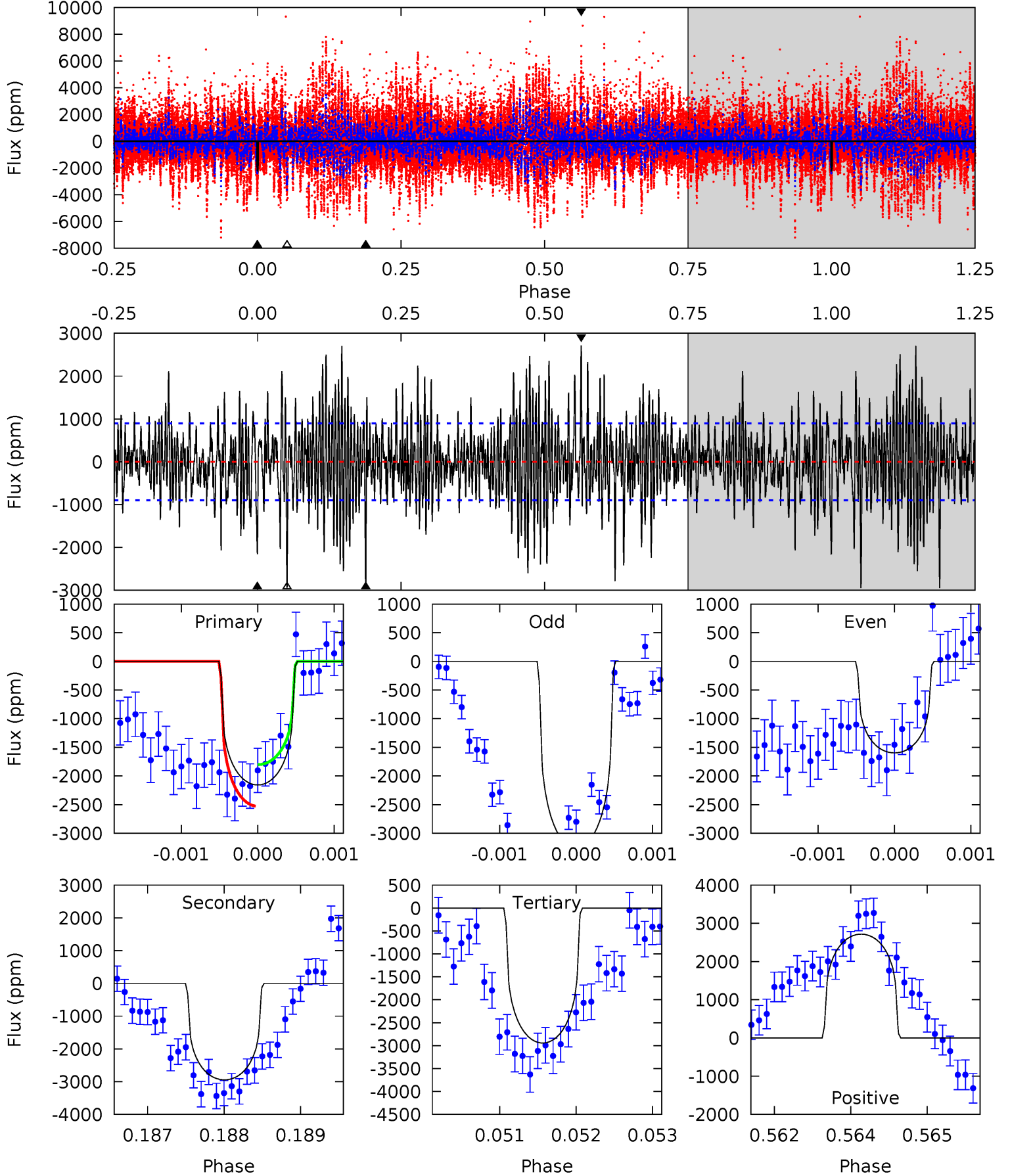
TCE 007188204-03 $P=468.868468$ Days $T_0=510.677509$ (BKJD)



DV Model-Shift Uniqueness Test

007188204-03, P = 468.849974 Days, E = 41.864924 Days

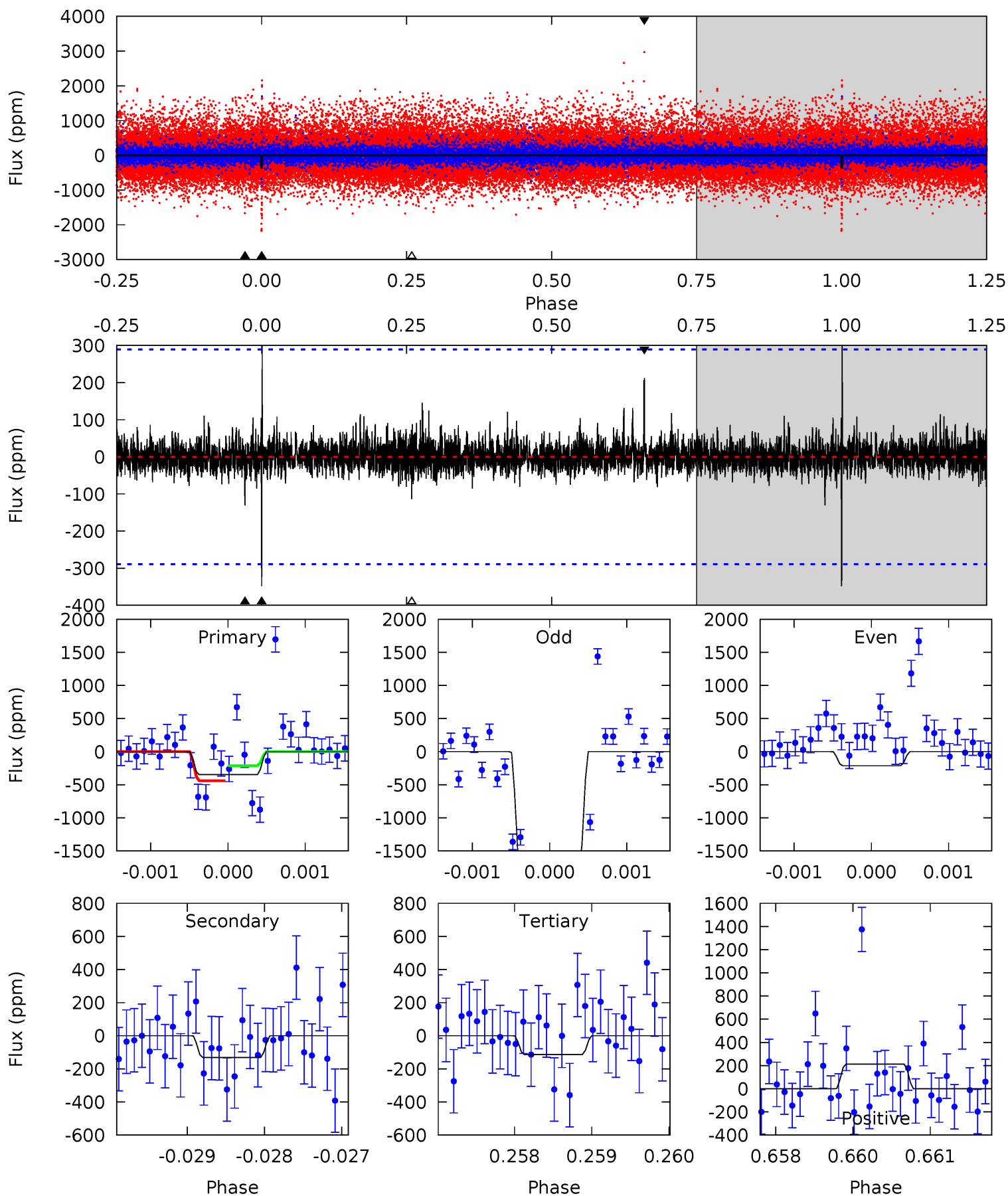
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	17.8	17.8	16.4	5.42	3.24	4.69	-4.75	-3.38	0.00	1.37	4.46	1.34	0.48	2.20



Alt Model-Shift Uniqueness Test

007188204-03, P = 468.868468 Days, E = 41.809041 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.55	2.46	2.13	3.99	5.44	3.28	0.49	4.42	2.56	0.33	-1.53	15.4	1.52	0.46	2.11



Stellar Parameters For KIC 007188204

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4990^{+136}_{-151}	$4.623^{+0.045}_{-0.054}$	$-0.400^{+0.300}_{-0.300}$	$0.676^{+0.078}_{-0.052}$	$0.698^{+0.078}_{-0.057}$	$3.189^{+0.654}_{-0.650}$
	+3%/-3%	+1%/-1%	+75%/-75%	+12%/-8%	+11%/-8%	+21%/-20%
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 007188204-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2944 ± 165	$2.63^{+1.21}_{-1.12}$	247^{+9}_{-9}	6047^{+2237}_{-996}	$256522^{+506354}_{-136187}$
Alt.	-131 ± 53	$1.82^{+1.17}_{-1.01}$	248^{+8}_{-9}	3714^{+1437}_{-585}	$22115^{+107446}_{-14660}$

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

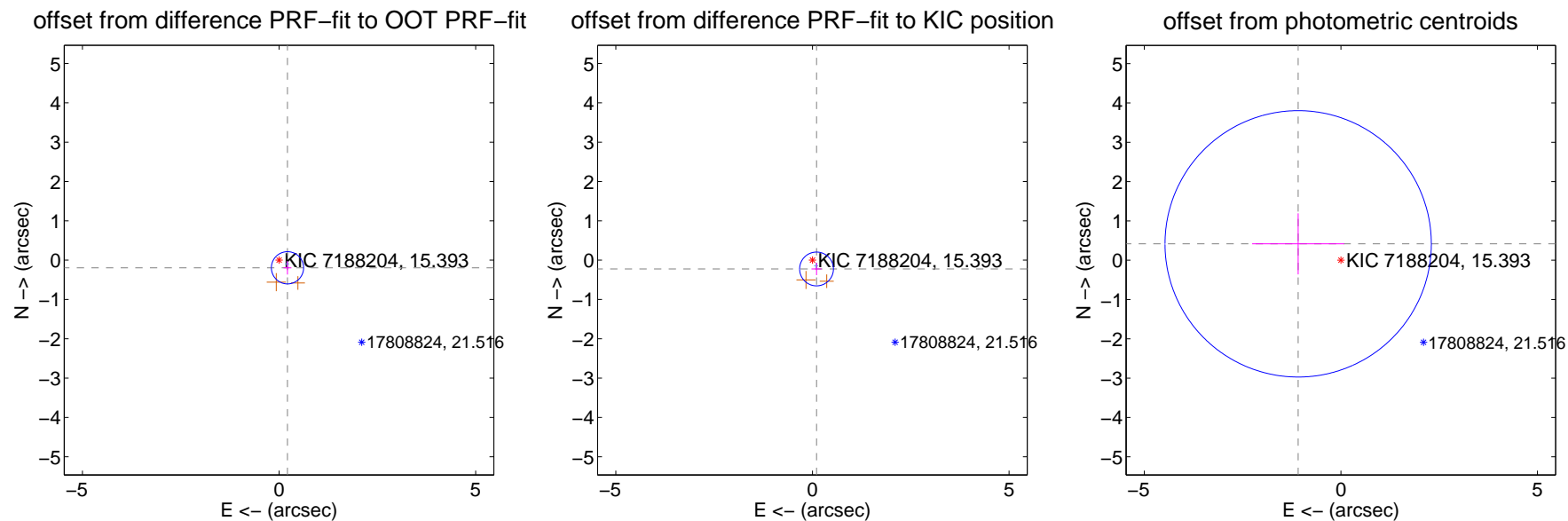
DV Centroid Data

Supplemental centroid analysis for 007188204-03. Kepler magnitude: 15.39. Transit SNR 6.12

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.289 ± 0.137	2.12	-0.215 ± 0.101	-0.194 ± 0.170
PRF-fit source offset from KIC position	0.247 ± 0.143	1.72	-0.104 ± 0.127	-0.224 ± 0.158
photometric centroid source offset	1.16 ± 1.13	1.03	1.09 ± 1.17	0.42 ± 0.78

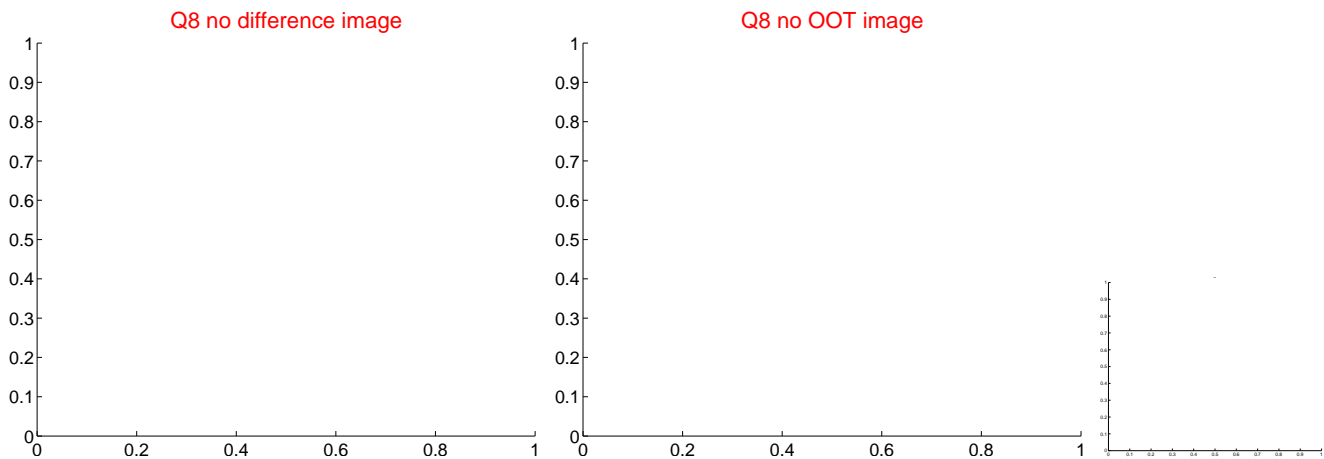
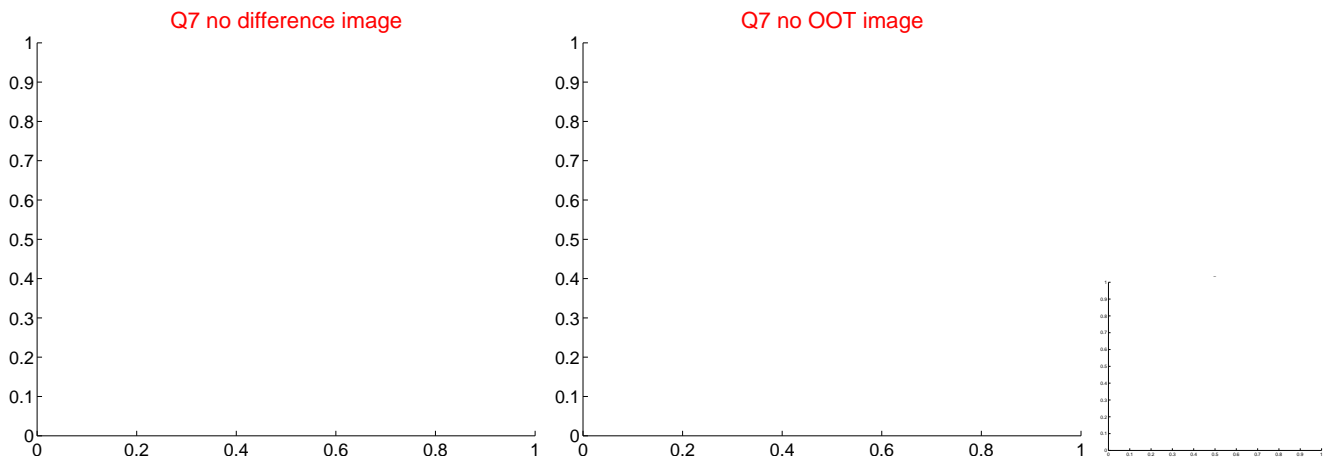
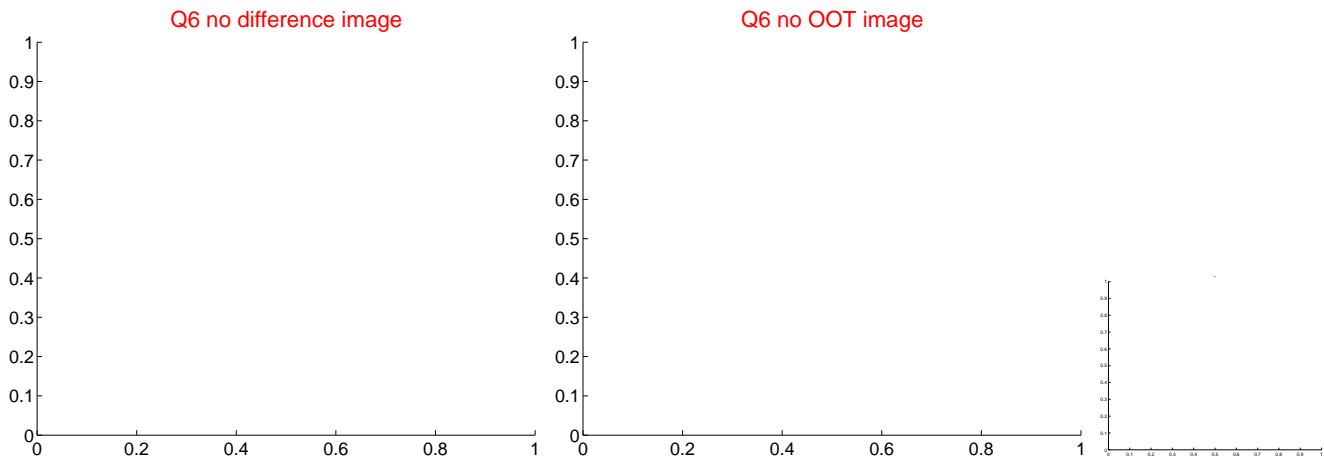
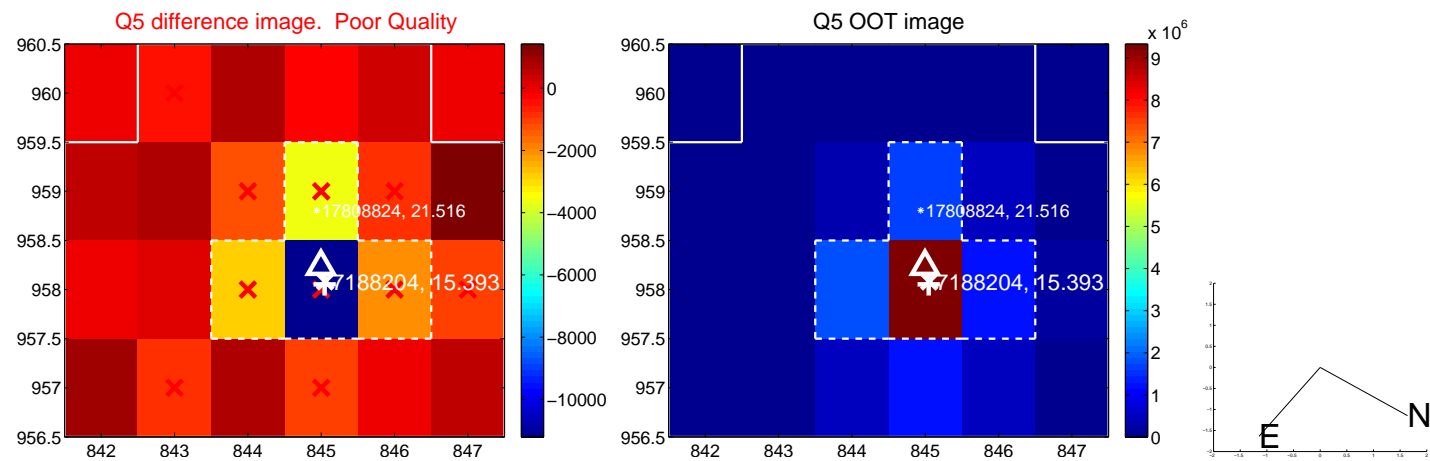


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

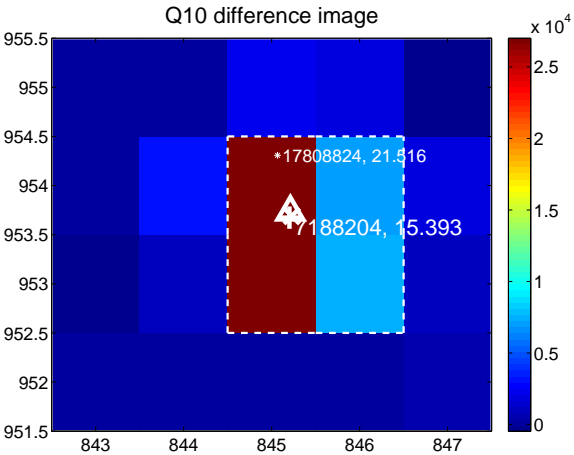
Q9 no difference image



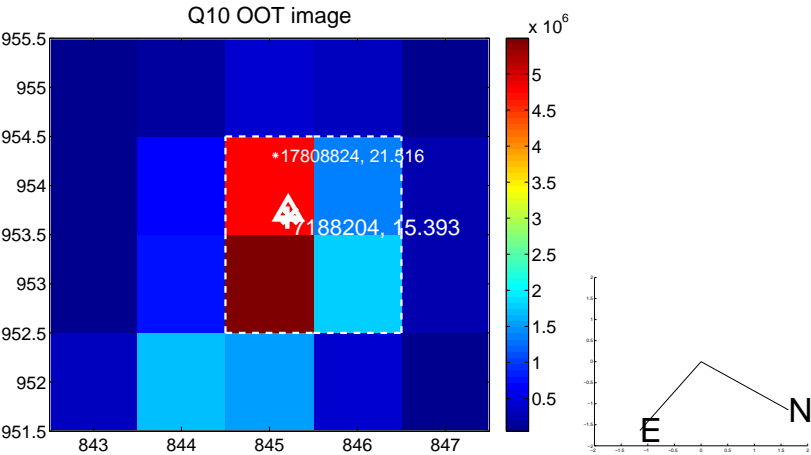
Q9 no OOT image



Q10 difference image



Q10 OOT image



Q11 no difference image



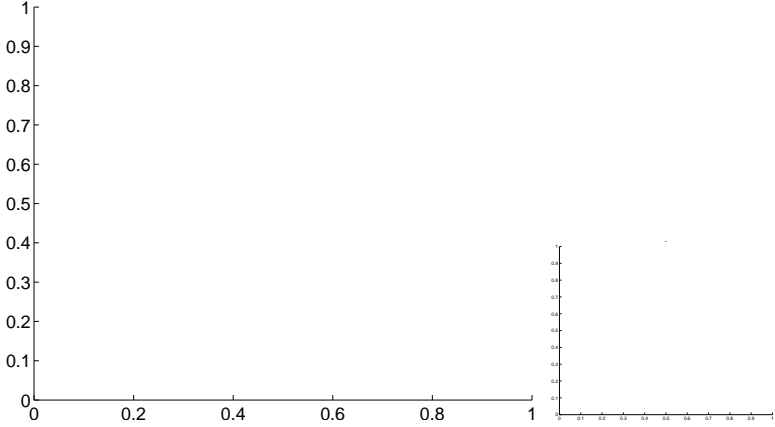
Q11 no OOT image



Q12 no difference image



Q12 no OOT image



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

Q13 no difference image



Q13 no OOT image



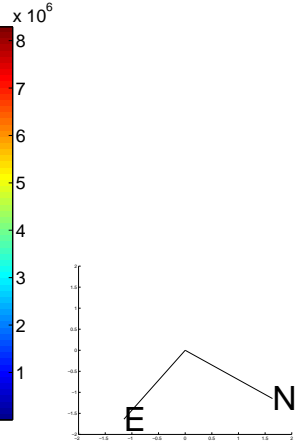
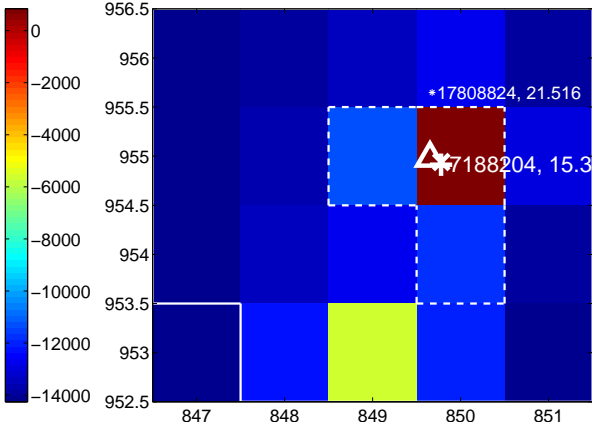
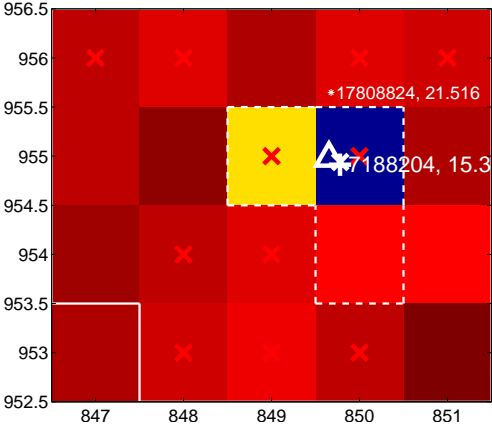
Q14 no difference image



Q14 no OOT image



Q15 difference image. Poor Quality



Q16 no difference image



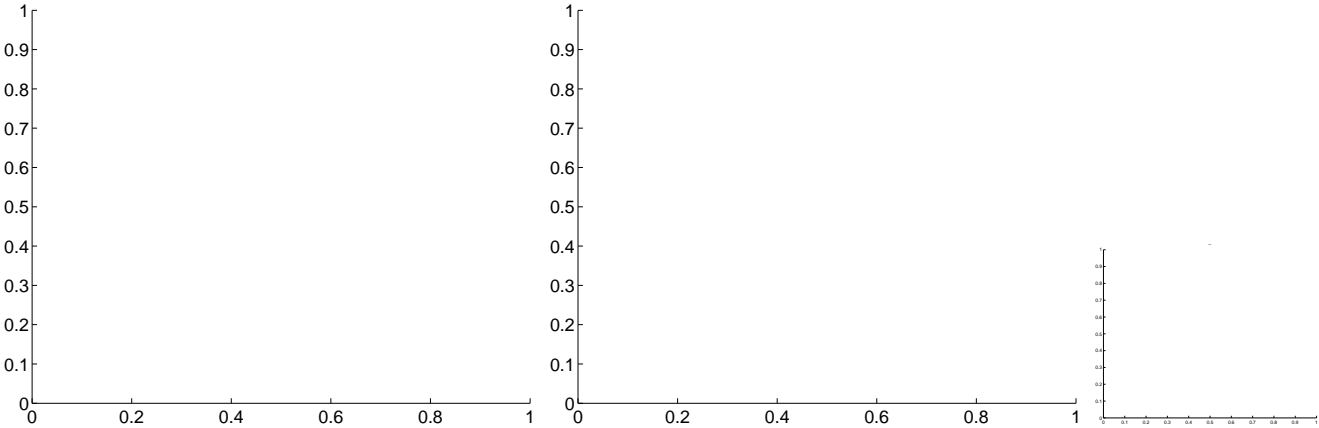
Q16 no OOT image



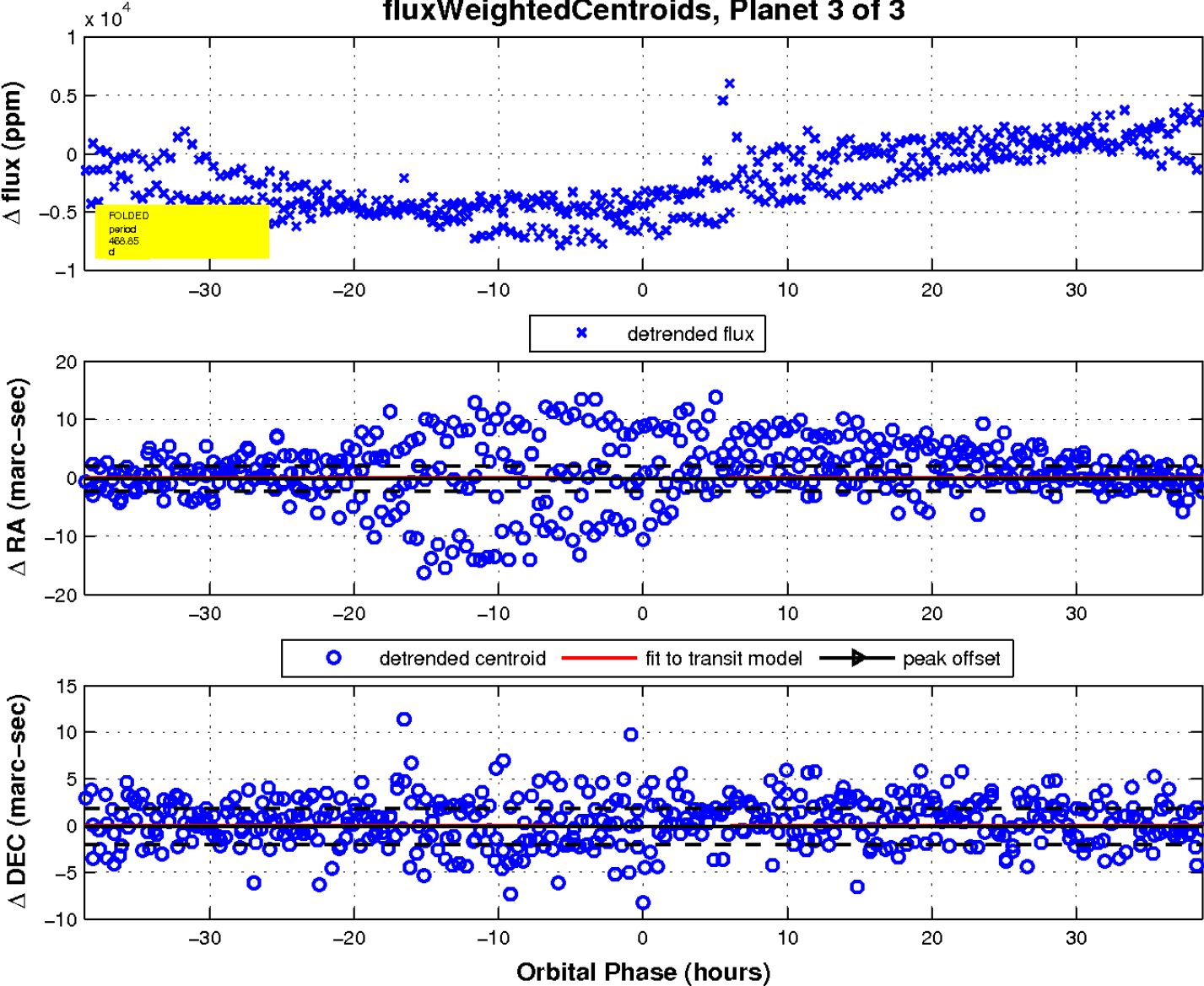
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

