

KIC 008690001

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})
008690001-01	OBS	7075.01	19.356050	134.501105	384523.0	7.500	7491.8	-1.0	1.57	6198	81.14	186.58
008690001-02	OBS	No	19.359680	141.884855	369017.6	9.273	7202.6	3789.2	1.57	6198	106.05	186.53
008690001-03	OBS	No	18.391135	148.725781	6879.5	3.000	158.5	-1.0	1.57	6198	13.08	199.74
008690001-04	OBS	No	20.340649	145.003955	6883.2	3.500	116.4	-1.0	1.57	6198	13.08	174.63
008690001-05	OBS	No	19.331511	134.339462	4635.2	27.205	106.9	39.8	1.57	6198	19.23	186.89
008690001-07	OBS	No	19.754768	146.917898	2362.6	15.000	38.5	-1.0	1.57	6198	7.66	181.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008690001-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
008690001-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_FEW_DIFFS
008690001-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008690001-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008690001-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
008690001-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

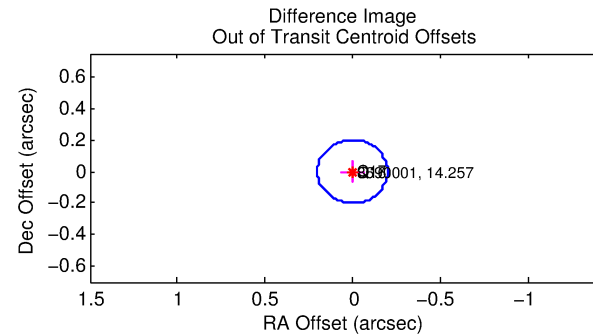
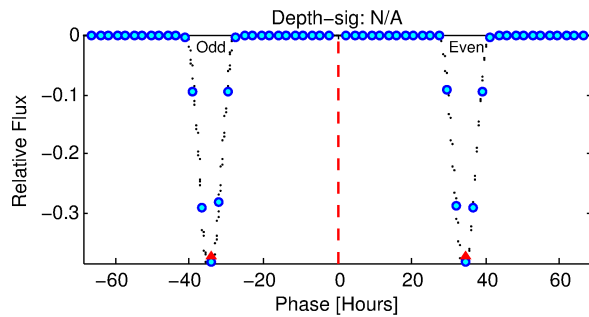
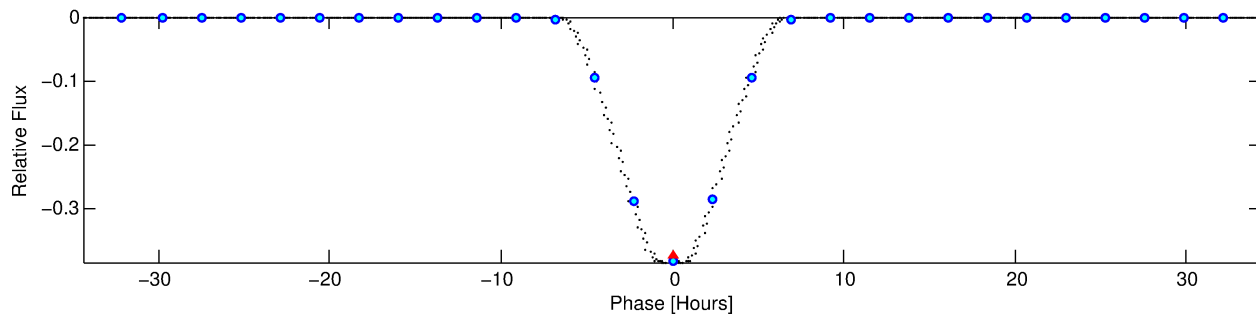
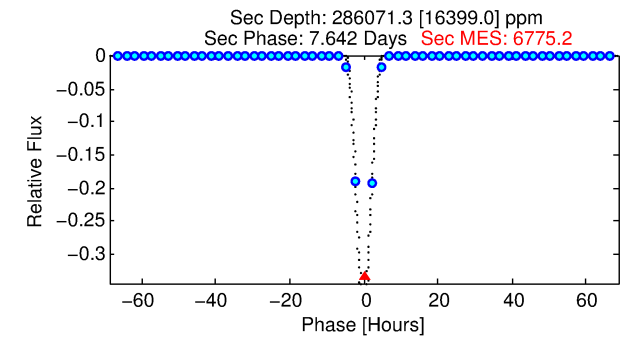
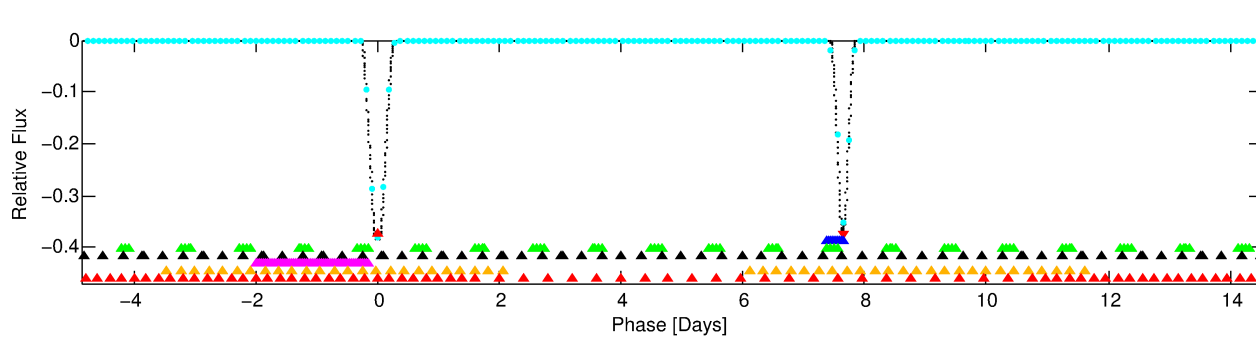
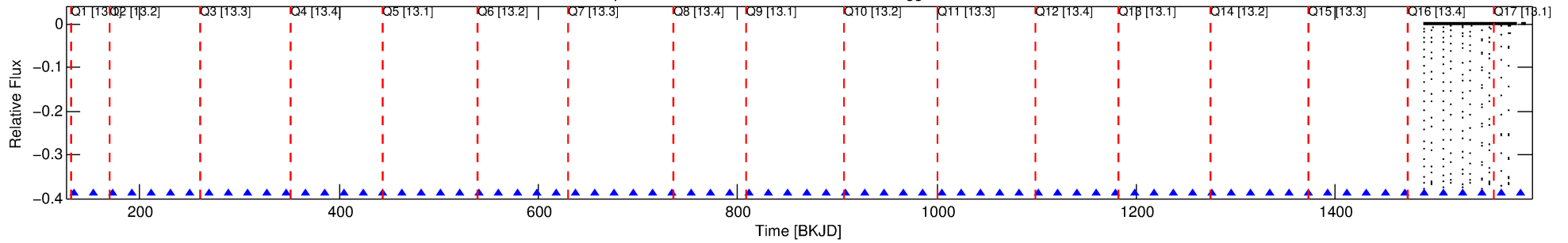
Ephemeris Match Information For 008690001-01

No Significant Match Found

DV One-Page Summary

KIC: 8690001 Candidate: 1 of 7 Period: 19.356 d
KOI: K07075 Corr: No Ephemeris Match

Kp: 14.26 R*: 1.57 Rs Teff: 6198.0 K Logg: 3.96 Fe/H: -1.180



TPS TCE Results:

Period = 19.35605 d
Epoch = 134.5011 BKJD

DV fit results are unavailable

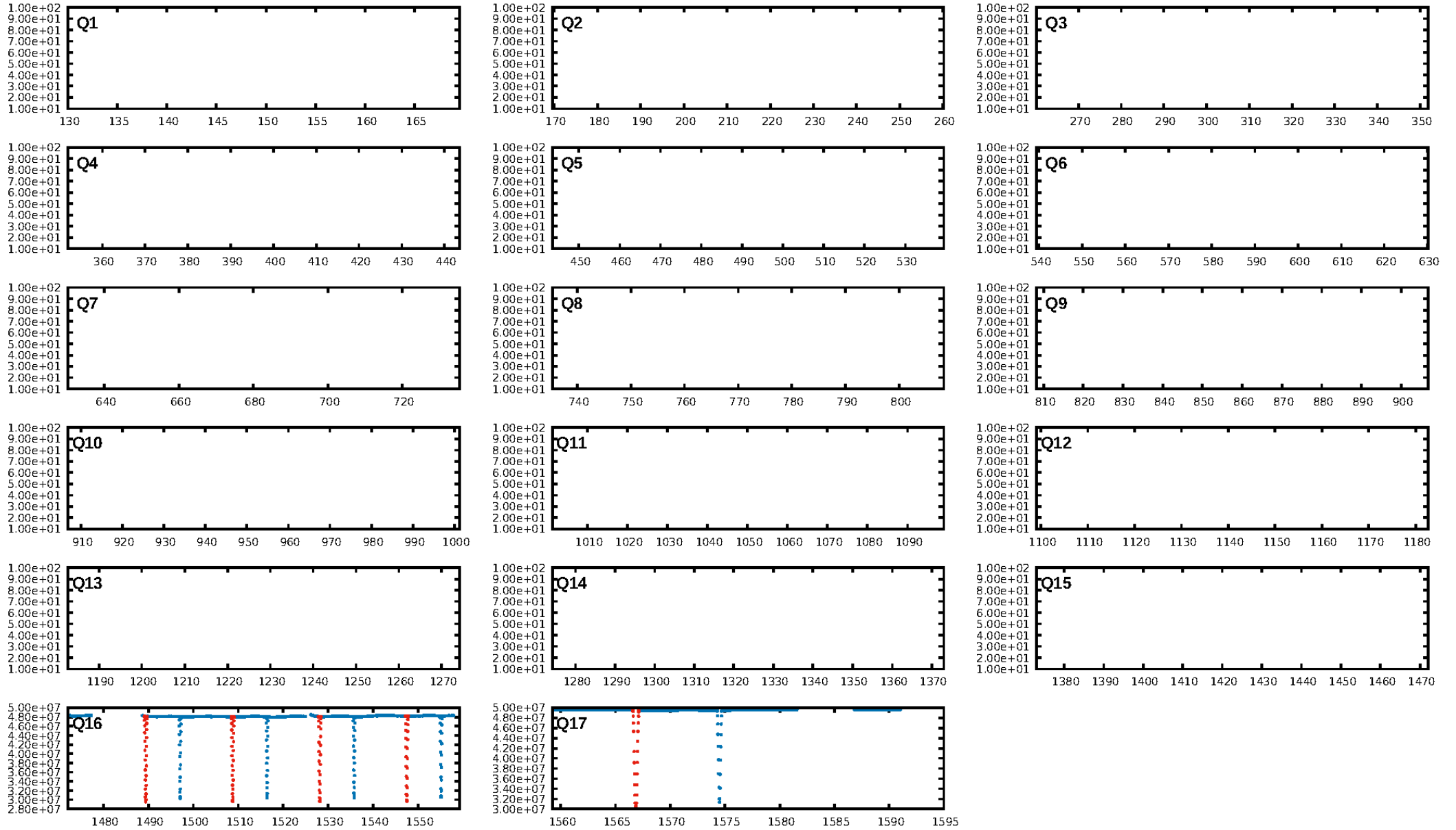
DV Diagnostic Results:

ShortPeriod-sig: 1.7% [0.02 σ]
LongPeriod-sig: 0.6% [0.01 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.703
Centroid-sig: N/A
Centroid-so: 0.476 arcsec [288.14 σ]
OotOffset-rm: 0.003 arcsec [0.05 σ]
KicOffset-rm: 0.268 arcsec [2.92 σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 0.00 [0/2]

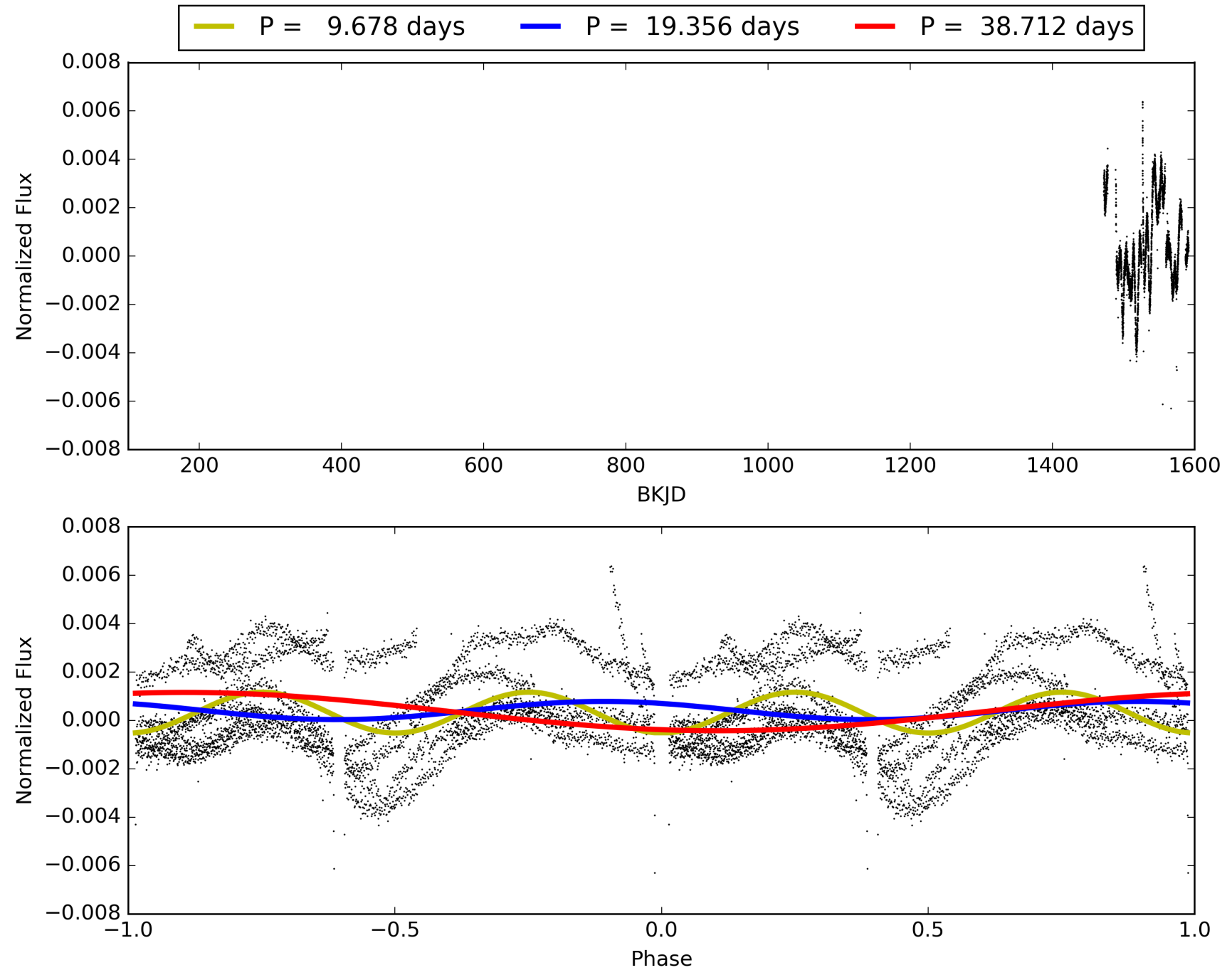
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 17:11:28 Z

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

TCE 008690001-01, PDC Light Curves

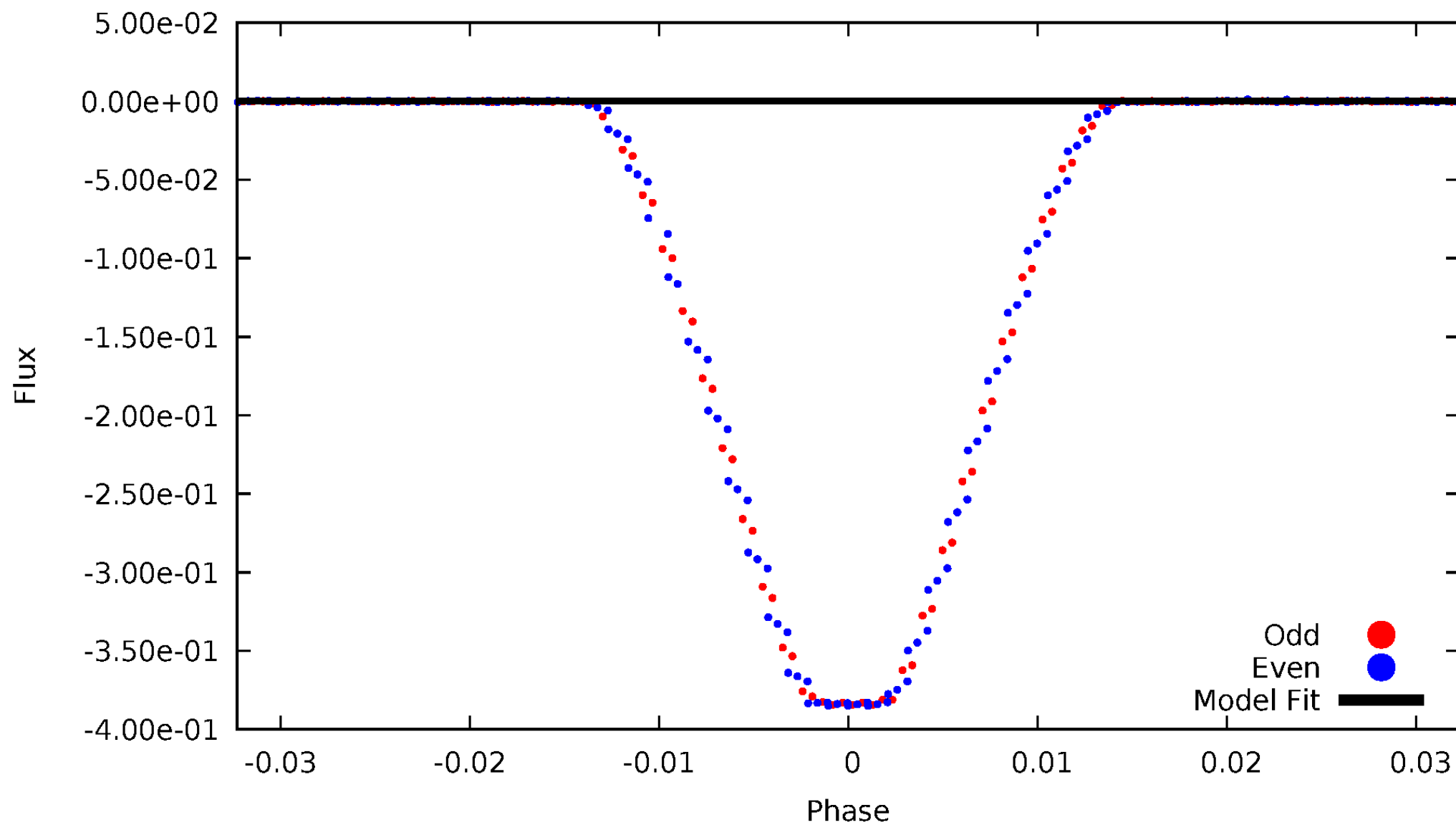


TCE 008690001-01



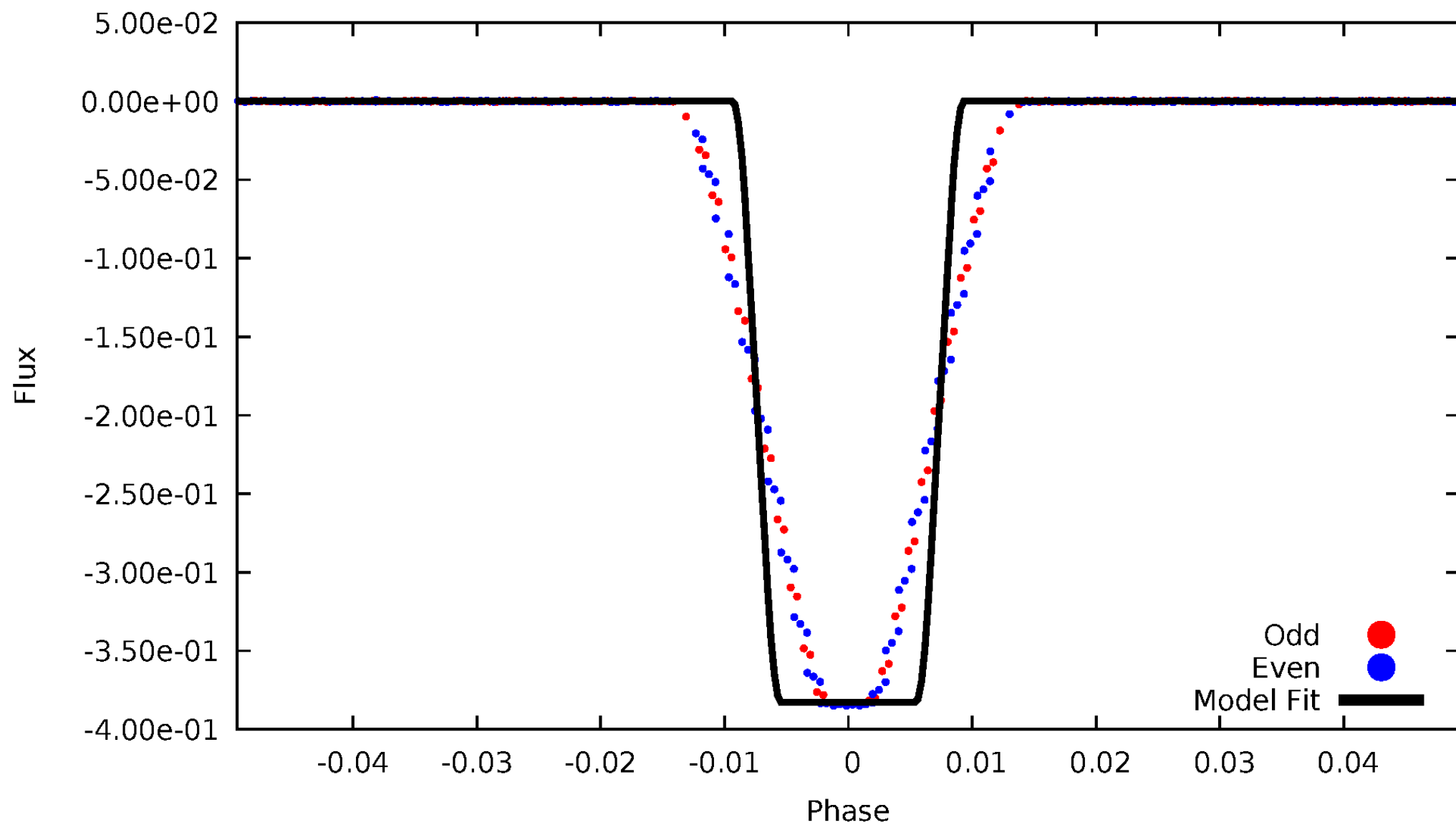
DV Odd/Even

TCE 008690001-01



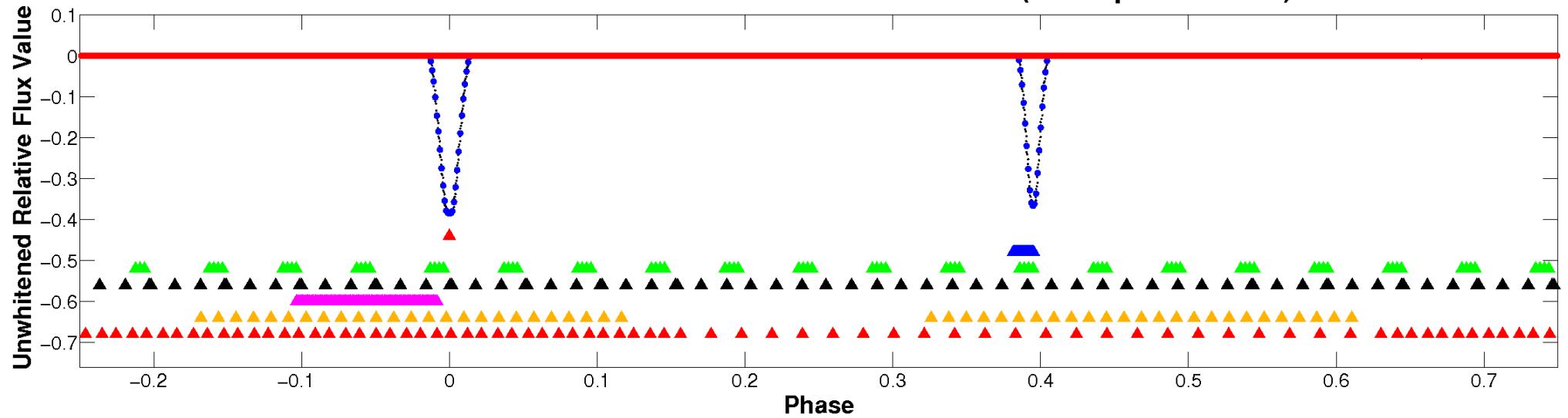
ALT Odd/Even

TCE 008690001-01



Non-Whitened Vs. Whitened Light Curve

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

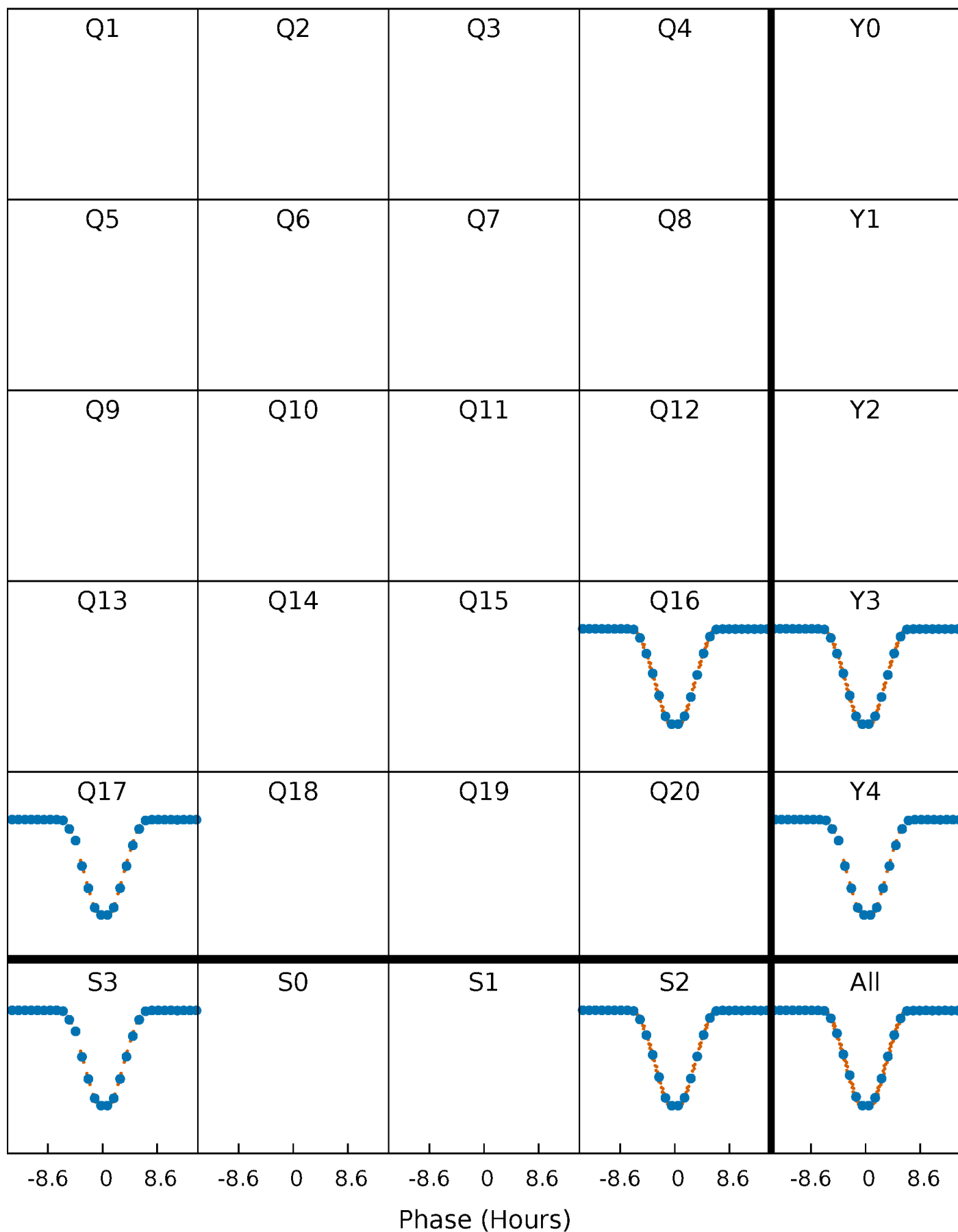


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



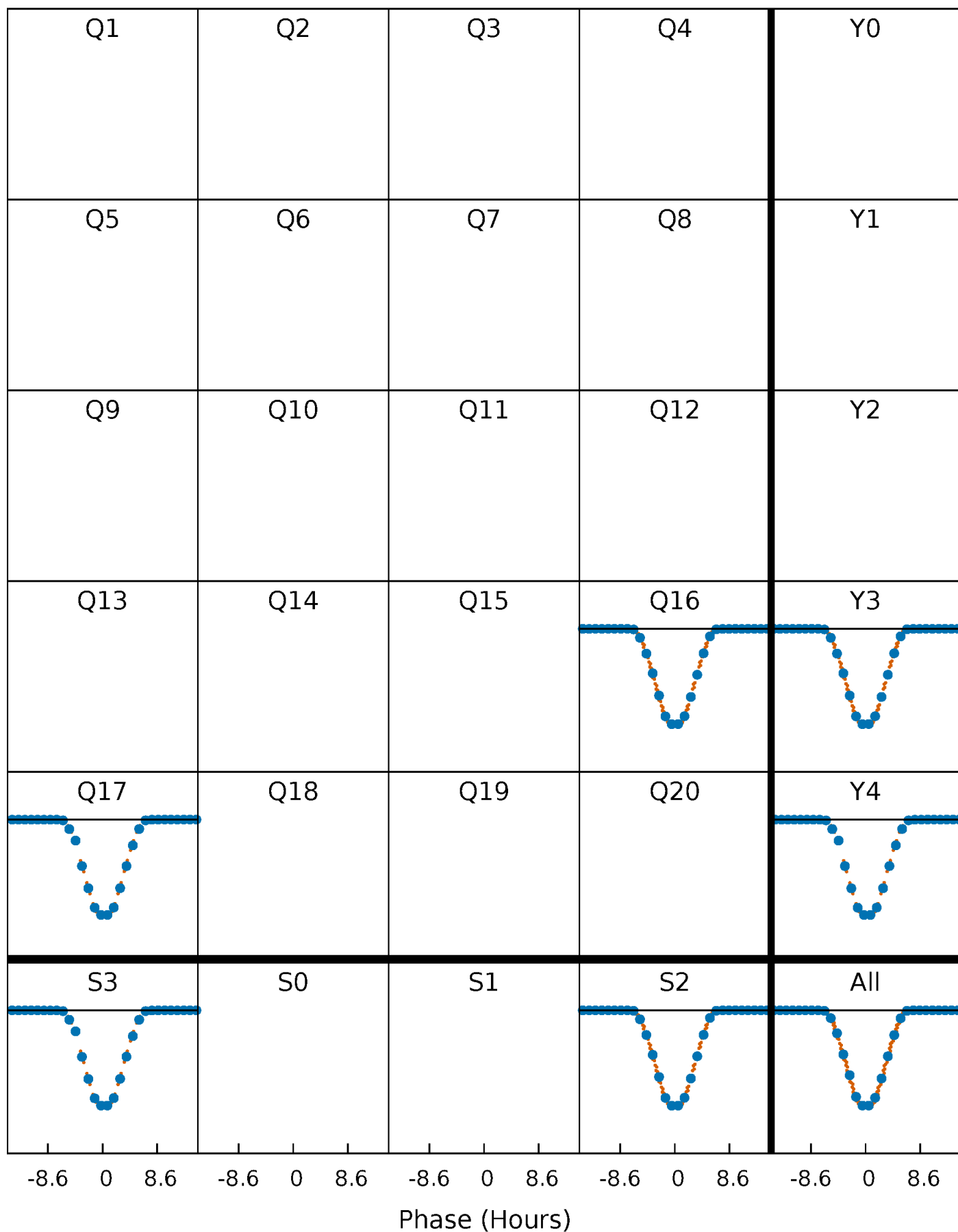
PDC Quarter-Phased Transit Curves

TCE 008690001-01 P= 19.356050 Days $T_0=134.501105$ (BKJD)



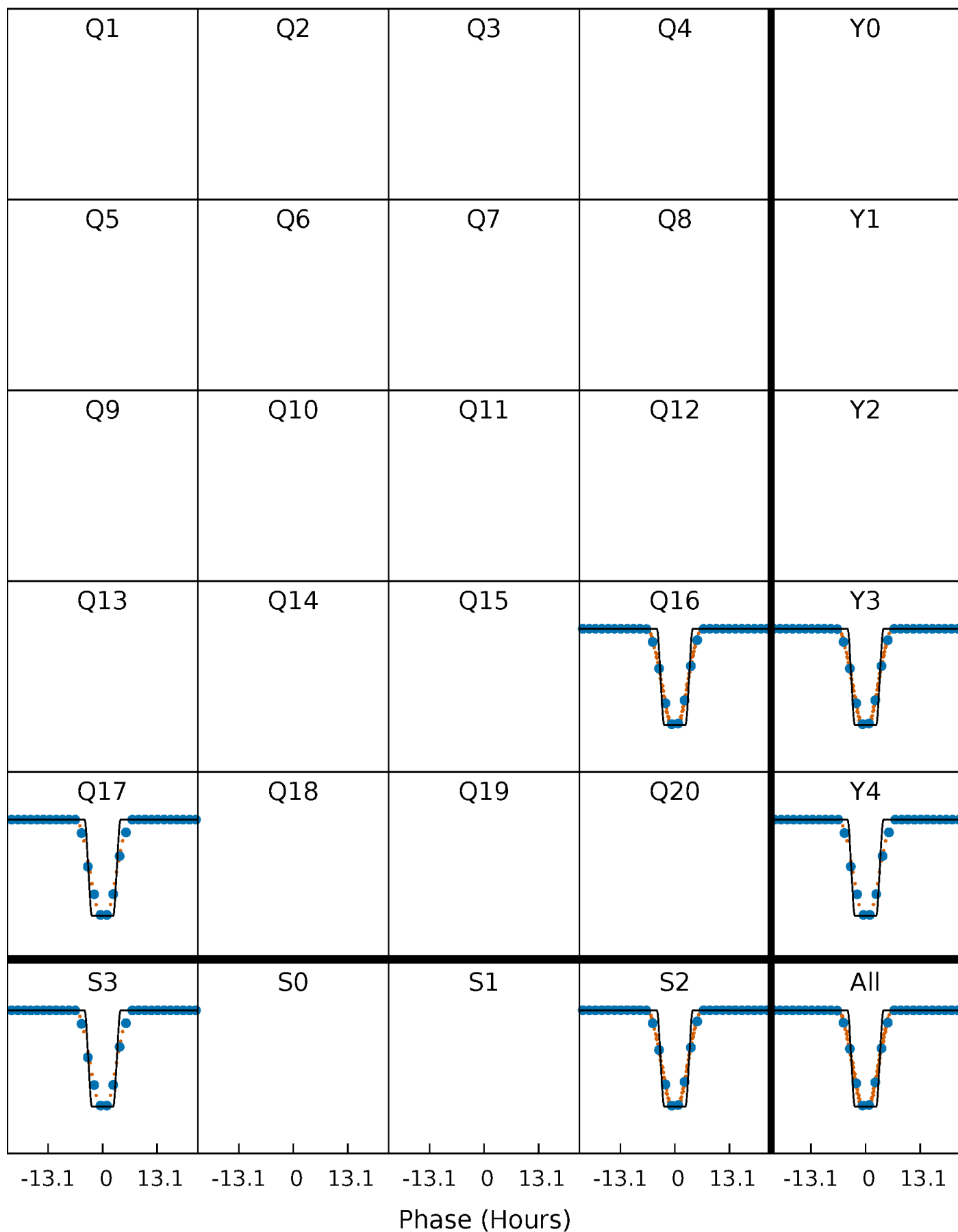
DV Quarter-Phased Transit Curves

TCE 008690001-01 P= 19.356050 Days $T_0=134.501105$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

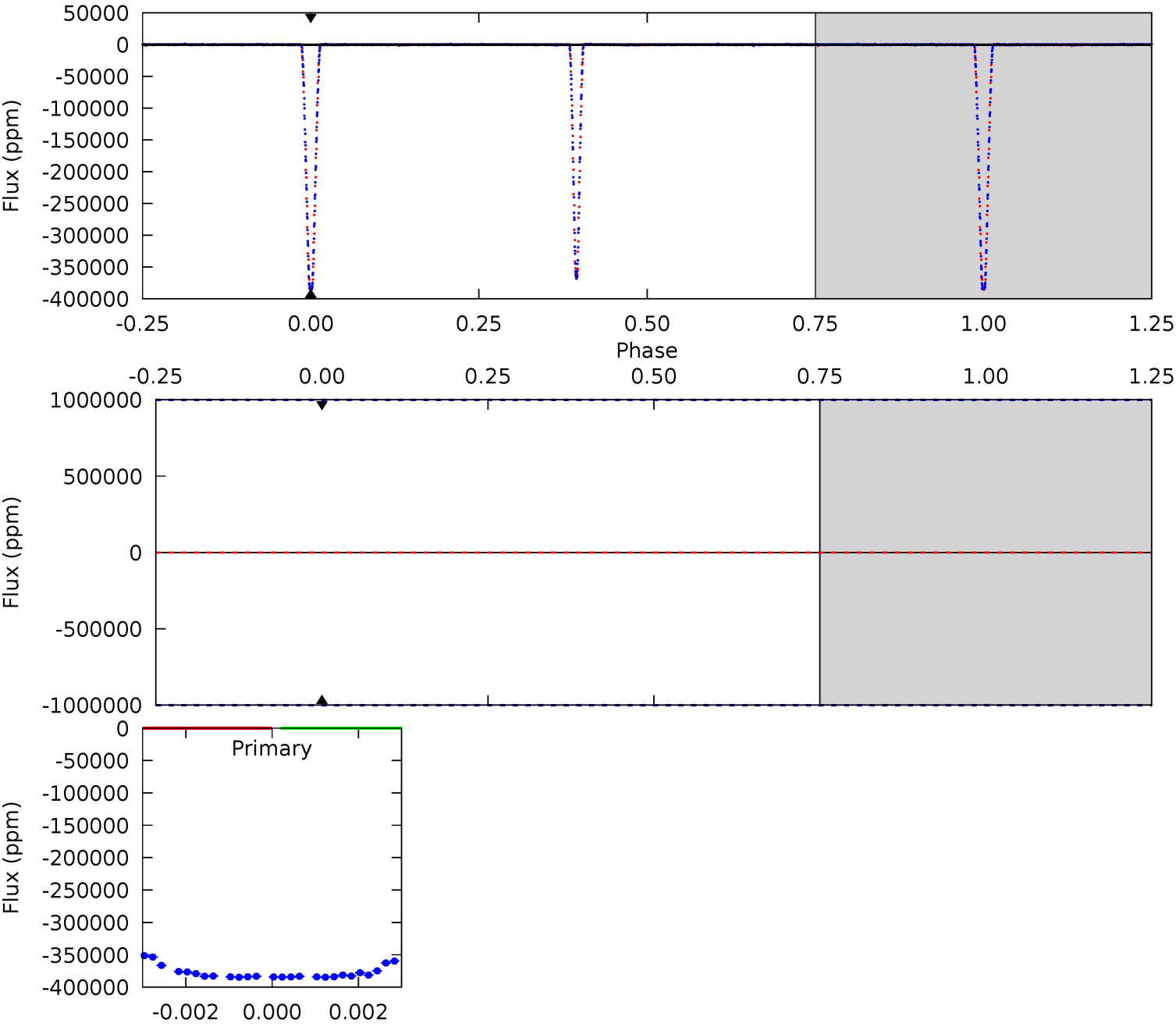
TCE 008690001-01 P= 19.356050 Days $T_0=134.503489$ (BKJD)



DV Model-Shift Uniqueness Test

008690001-01, P = 19.356050 Days, E = 134.501105 Days

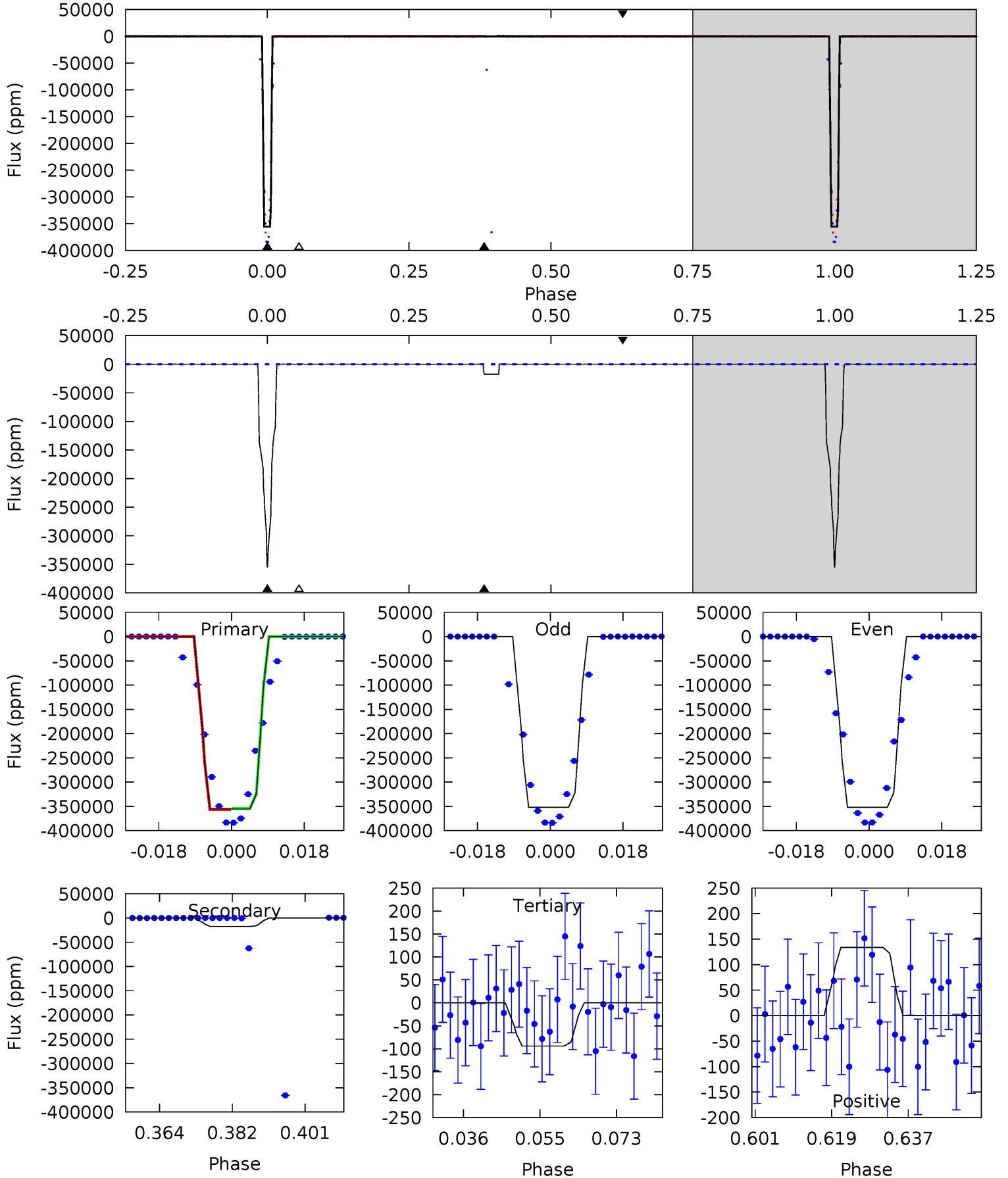
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008690001-01, P = 19.356050 Days, E = 134.503489 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9004	442.0	2.38	3.39	4.91	2.36	23.5	9002	9001	439.6	438.6	4.26	1.00	0.00	0



Stellar Parameters For KIC 008690001

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6198^{+204}_{-204}	$3.960^{+0.570}_{-0.190}$	$-1.180^{+0.350}_{-0.250}$	$1.567^{+0.509}_{-0.764}$	$0.817^{+0.078}_{-0.062}$	$0.299^{+1.878}_{-0.159}$
	+3%/-3%	+14%/-5%	+30%/-21%	+32%/-49%	+10%/-8%	+629%/-53%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008690001-01 / KOI 7075.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$77.13^{+23.76}_{-25.15}$	1292^{+124}_{-182}	2062^{+3217}_{-7098}	$0.606^{+194.320}_{-161.496}$
Alt.	-17448 ± 39	$99.30^{+29.34}_{-28.32}$	1284^{+126}_{-172}	3379^{+231}_{-160}	17^{+16}_{-7}

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

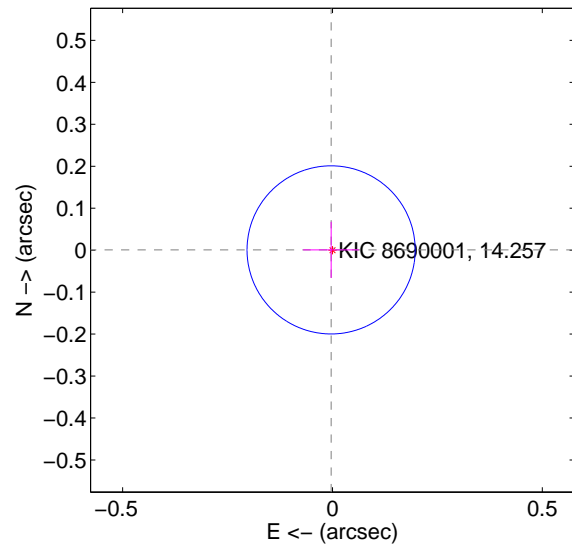
Supplemental centroid analysis for 008690001-01. Kepler magnitude: 14.26. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

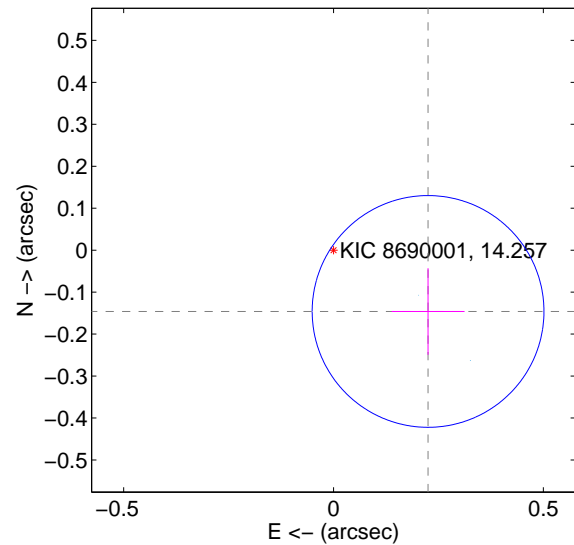
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.003 ± 0.067	0.05	0.003 ± 0.067	0.001 ± 0.067
PRF-fit source offset from KIC position	0.268 ± 0.092	2.92	-0.225 ± 0.087	-0.146 ± 0.103
photometric centroid source offset	0.48 ± 0.00	288.14	-0.31 ± 0.00	-0.36 ± 0.00

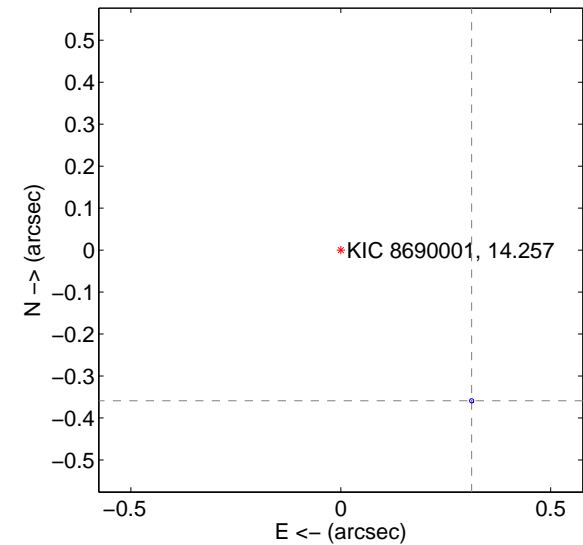
offset from difference PRF-fit to OOT PRF-fit



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.



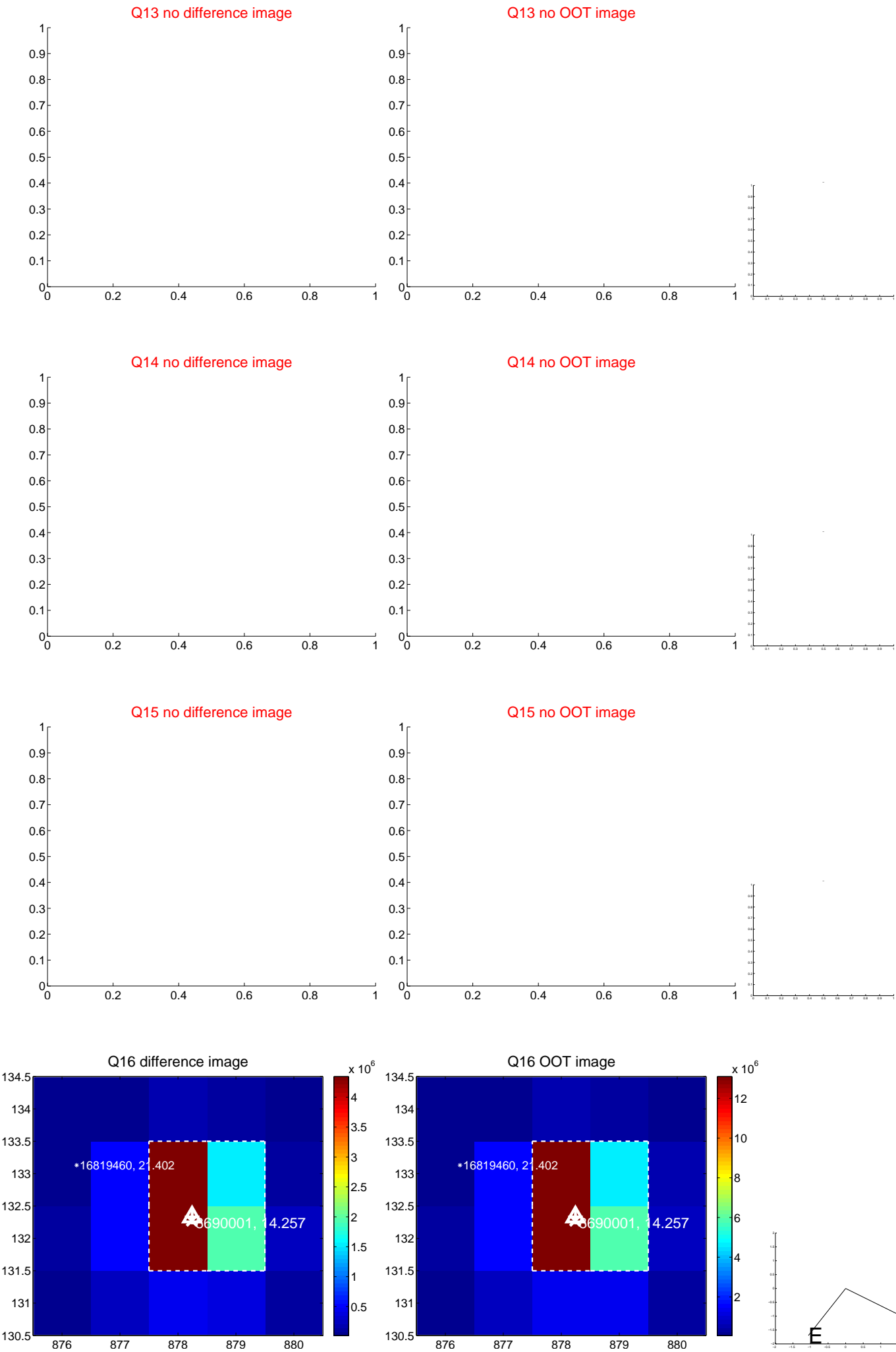
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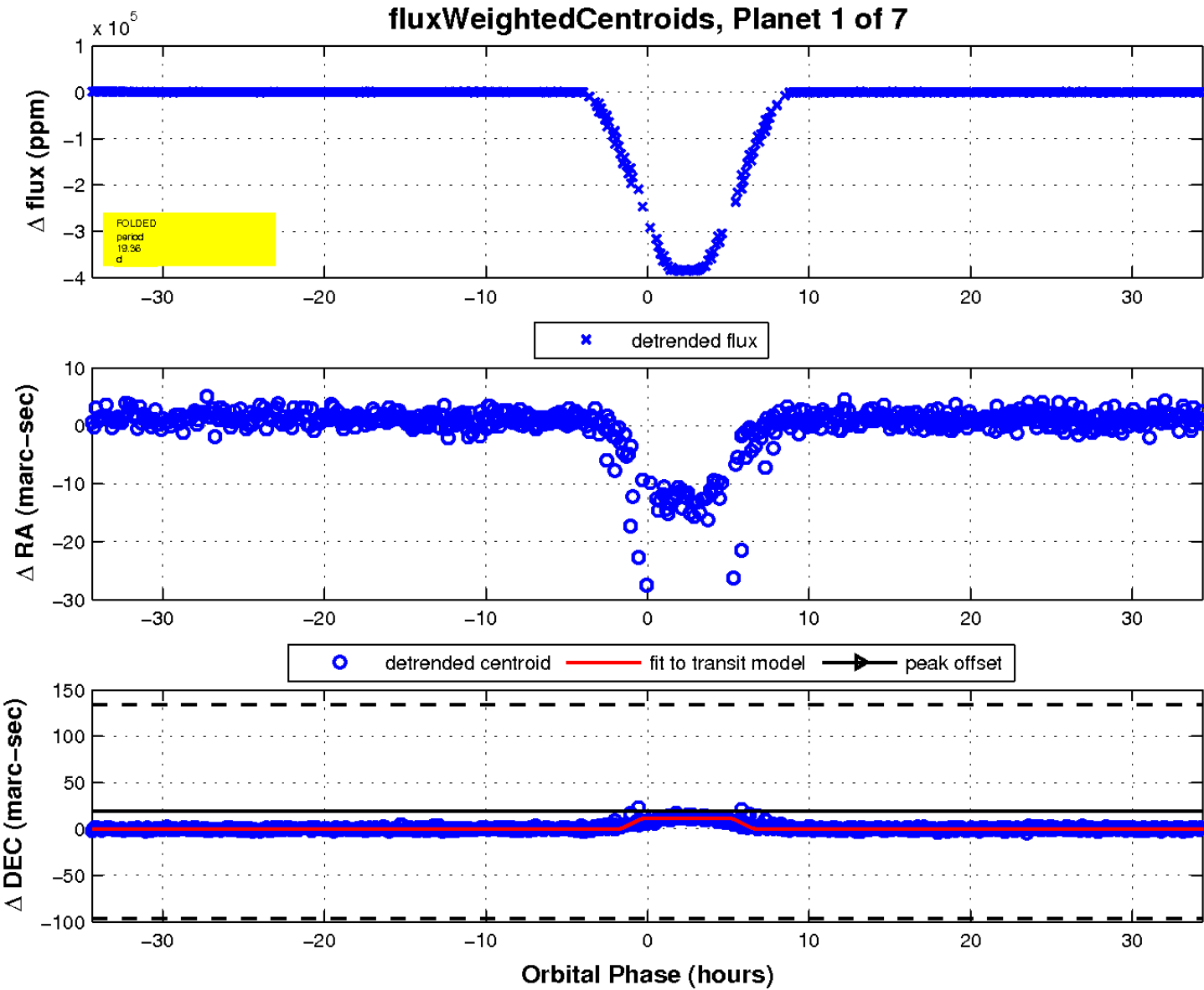
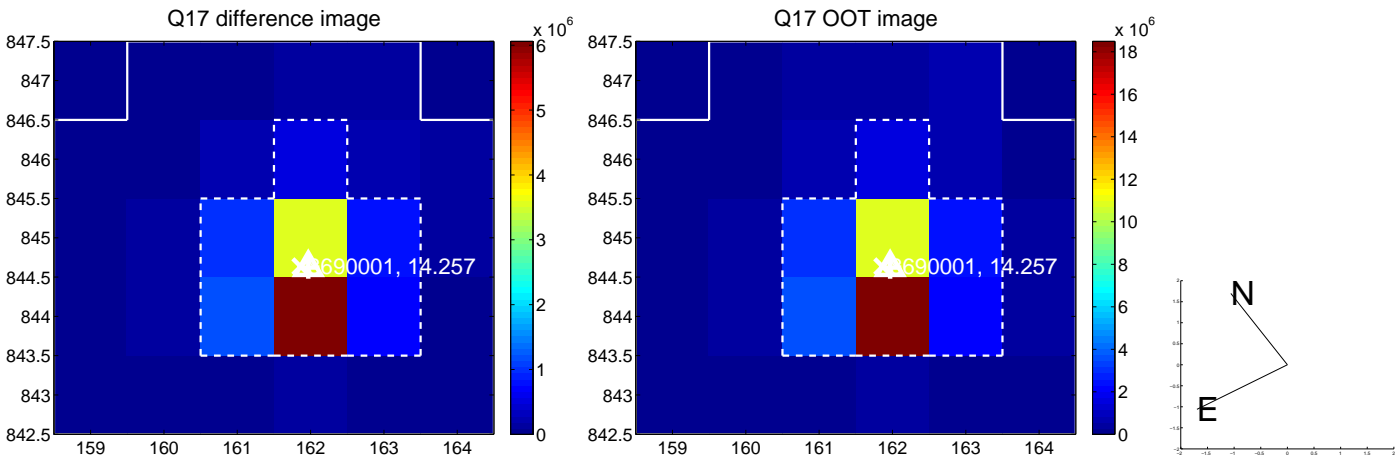
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white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

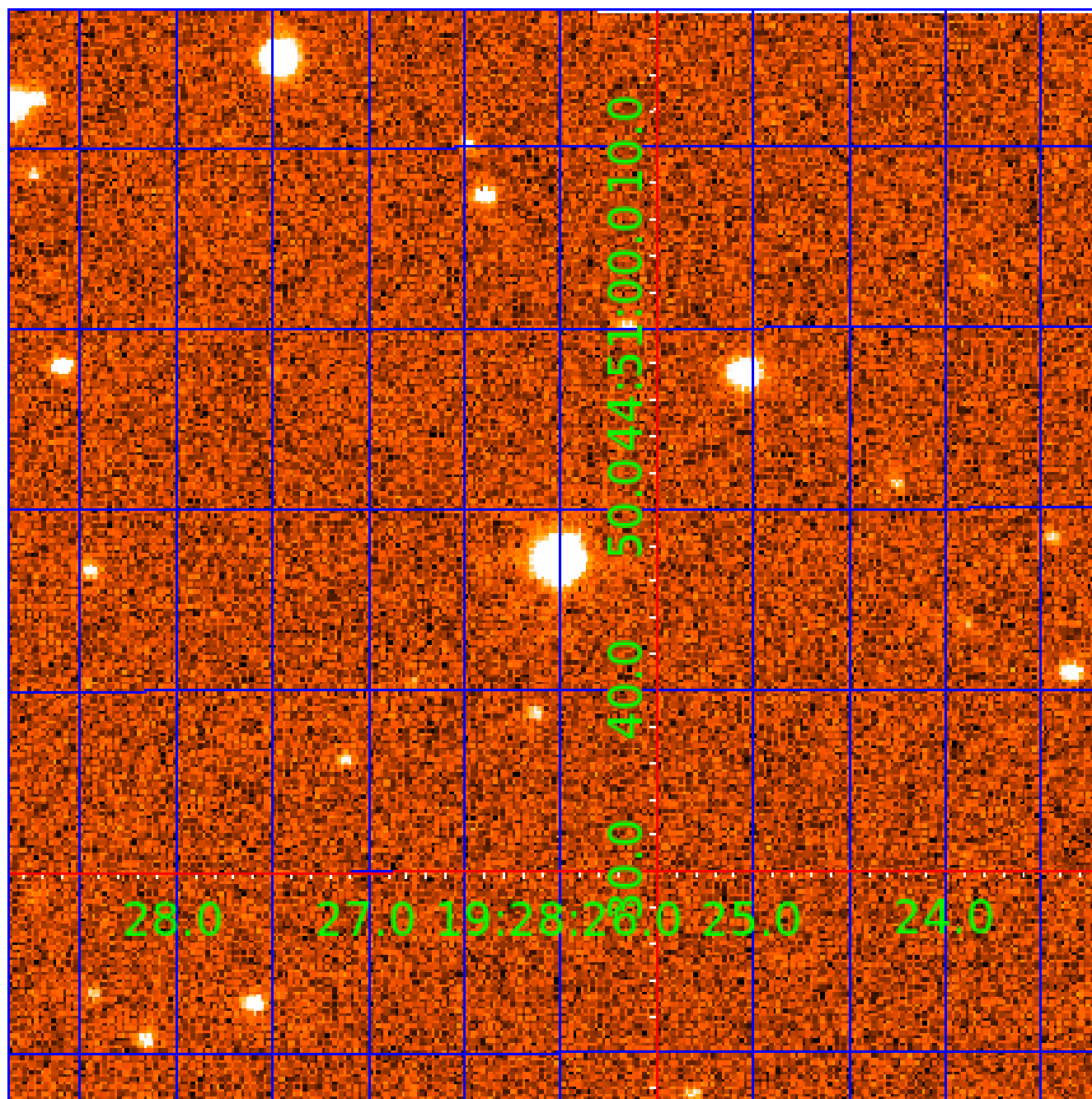


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008690001

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
008690001-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
008690001-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_FEW_DIFFS
008690001-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008690001-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008690001-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
008690001-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

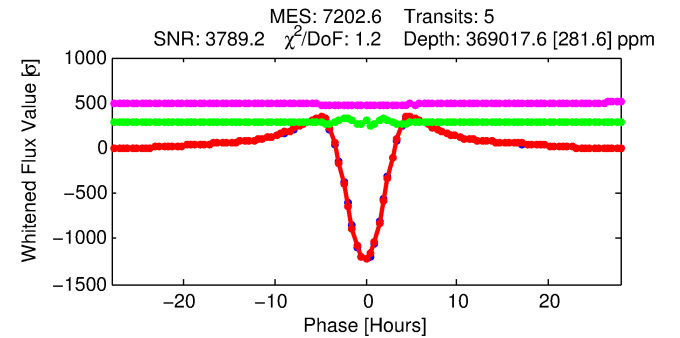
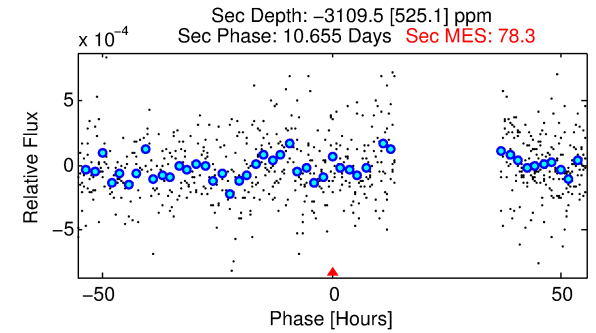
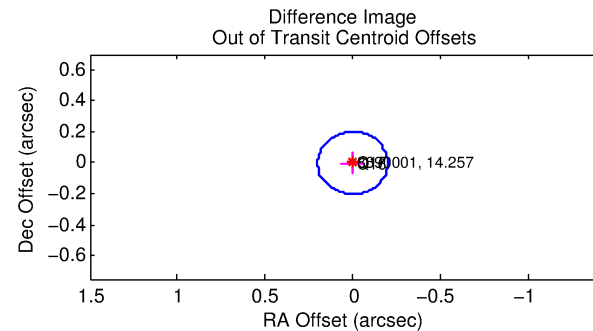
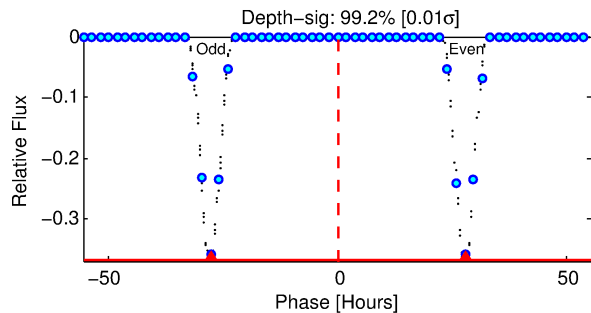
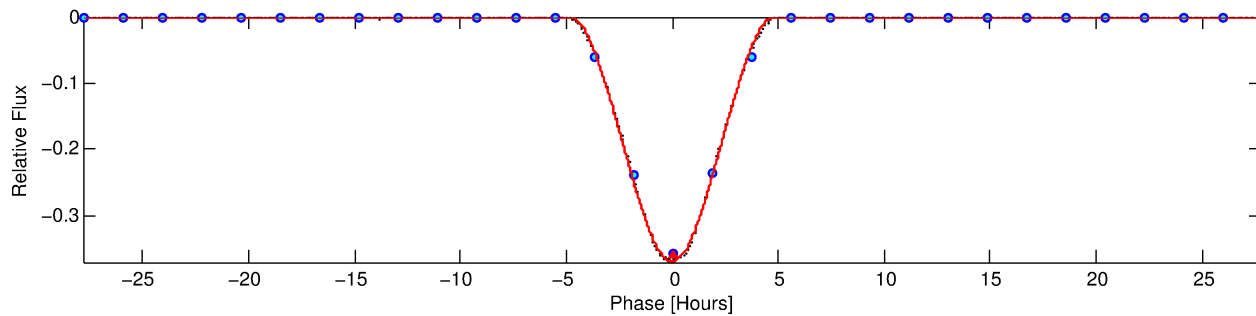
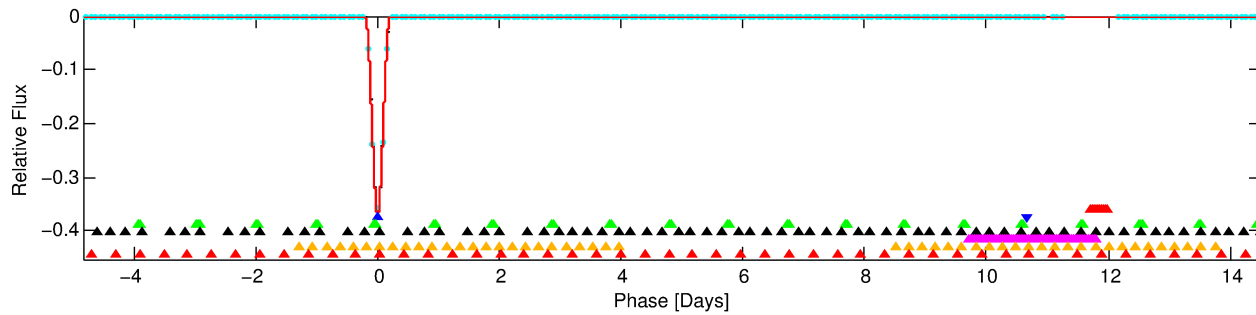
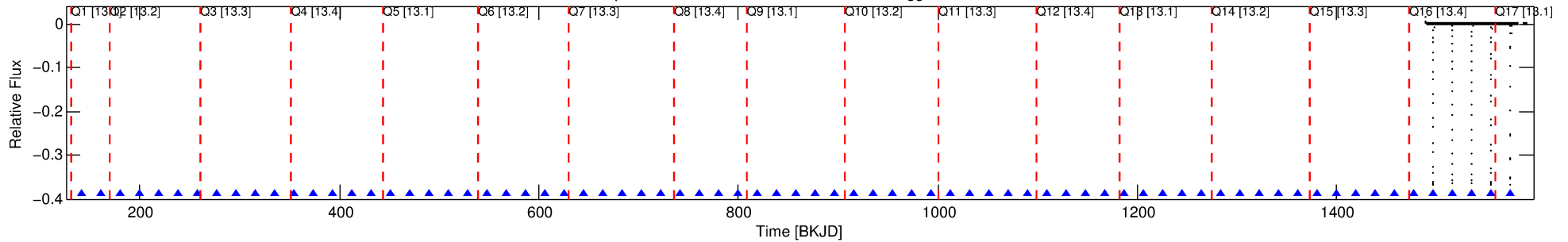
Ephemeris Match Information For 008690001-02

No Significant Match Found

DV One-Page Summary

KIC: 8690001 Candidate: 2 of 7 Period: 19.360 d
KOI: K07075 Corr: No Ephemeris Match

Kp: 14.26 R*: 1.57 Rs Teff: 6198.0 K Logg: 3.96 Fe/H: -1.180



DV Fit Results:

Period = 19.35968 [0.00002] d
Epoch = 141.8849 [0.0015] BKJD
Rp/R* = 0.6202 [0.0065]
a/R* = 24.54 [0.04]
b = 0.51 [0.01]
Seff = 186.53 [175.83]
Teff = 942 [222] K
Rp = 106.05 [51.72] Re
a = 0.1319 [0.0719] AU
Ag = N/A
Teffp = N/A

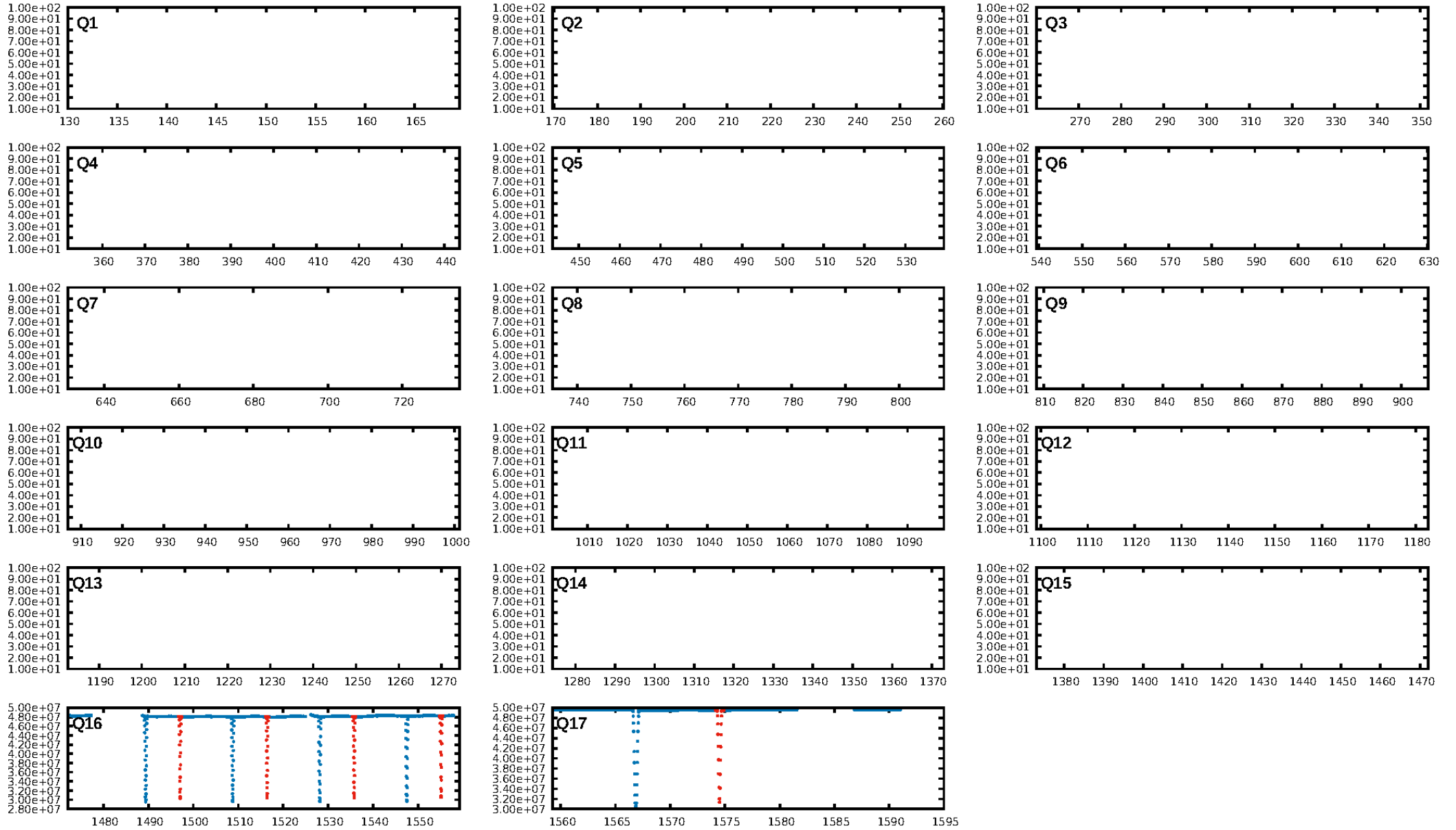
DV Diagnostic Results:

ShortPeriod-sig: 0.6% [0.01σ]
LongPeriod-sig: 40.9% [0.54σ]
ModelChiSquare2-sig: 23.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.171
Centroid-sig: N/A
Centroid-so: 0.482 arcsec [238.55σ]
OotOffset-rm: 0.002 arcsec [0.04σ]
KicOffset-rm: 0.267 arcsec [2.94σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

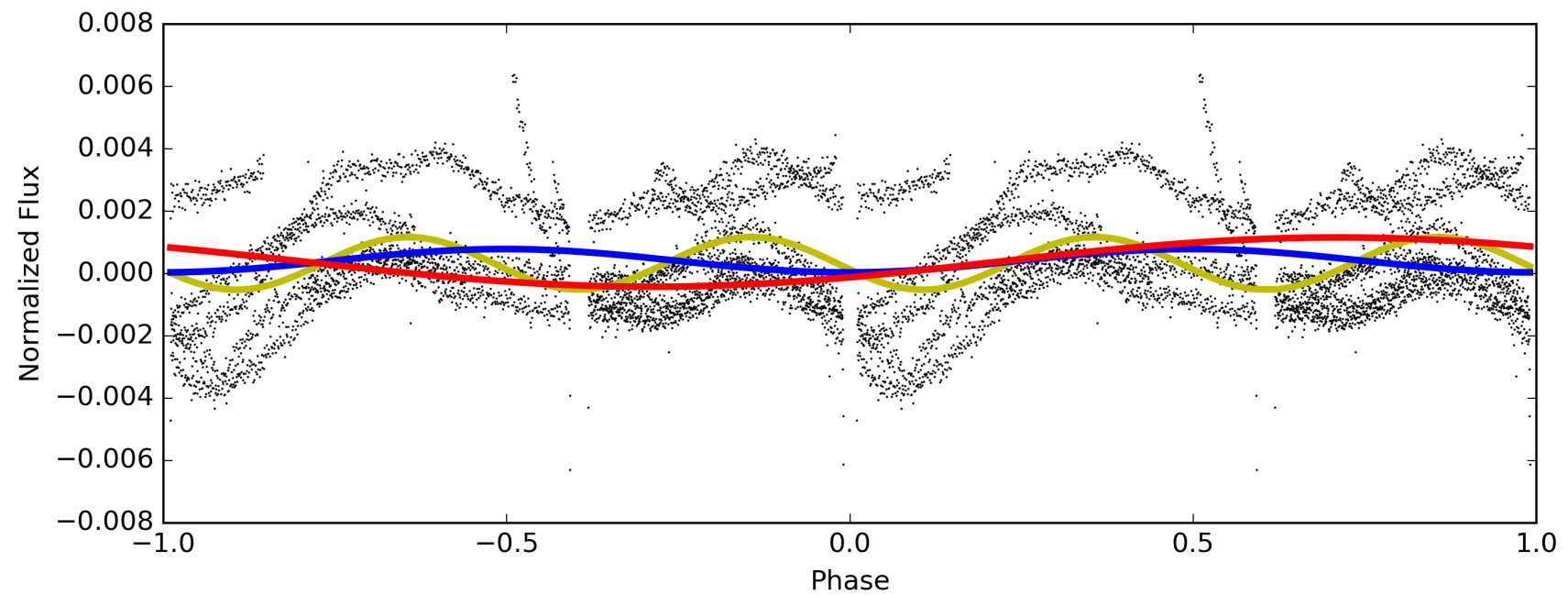
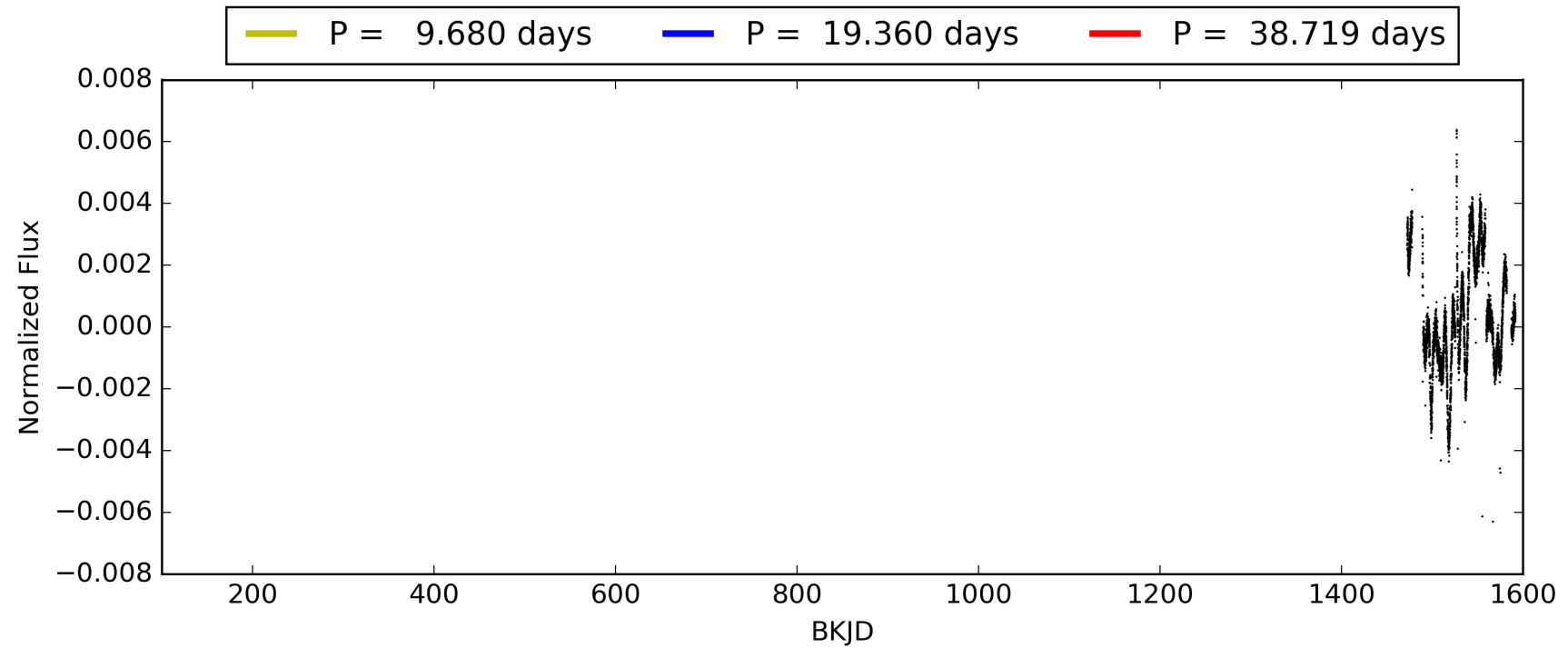
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 17:11:31 Z

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

TCE 008690001-02, PDC Light Curves

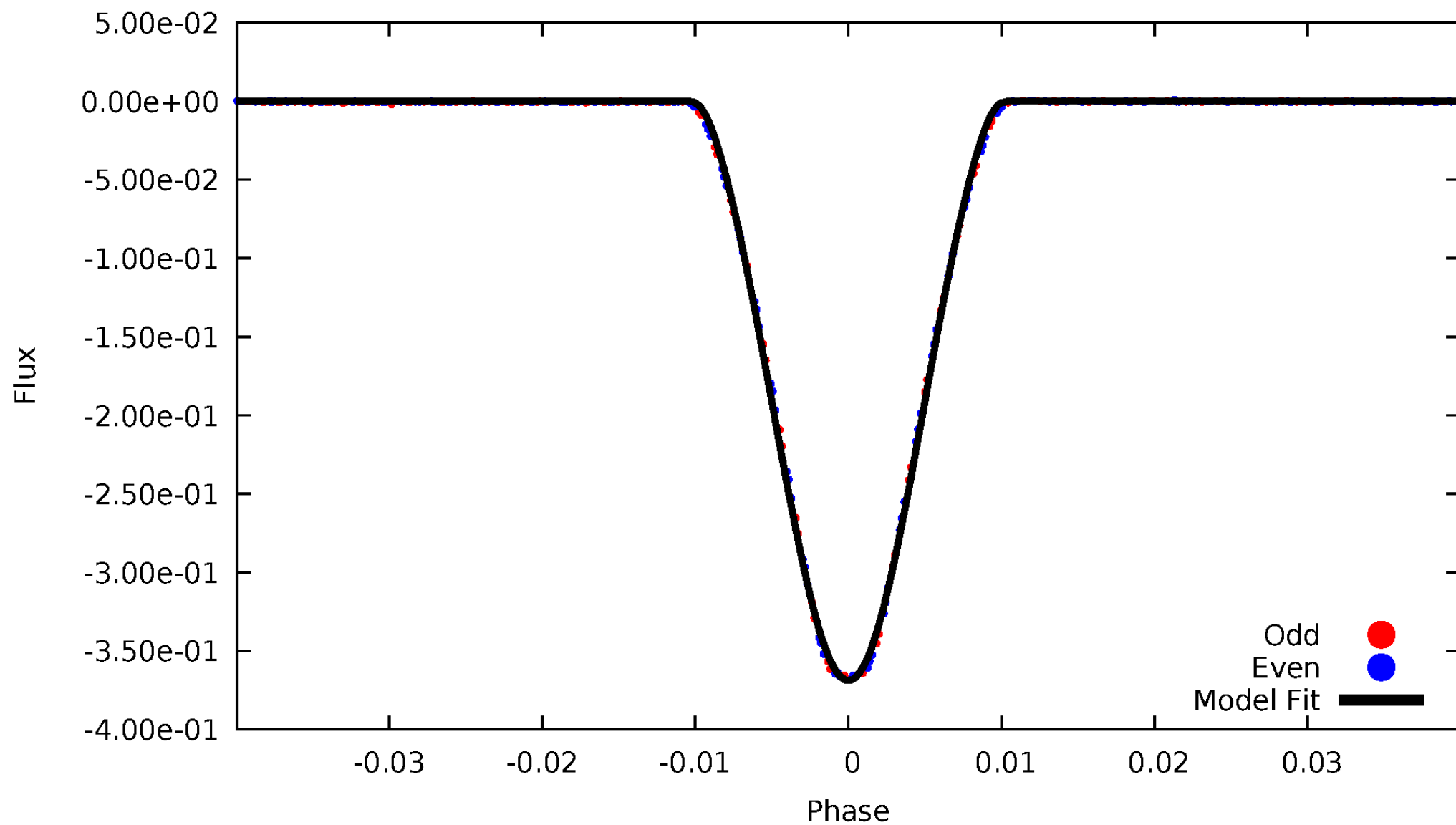


TCE 008690001-02



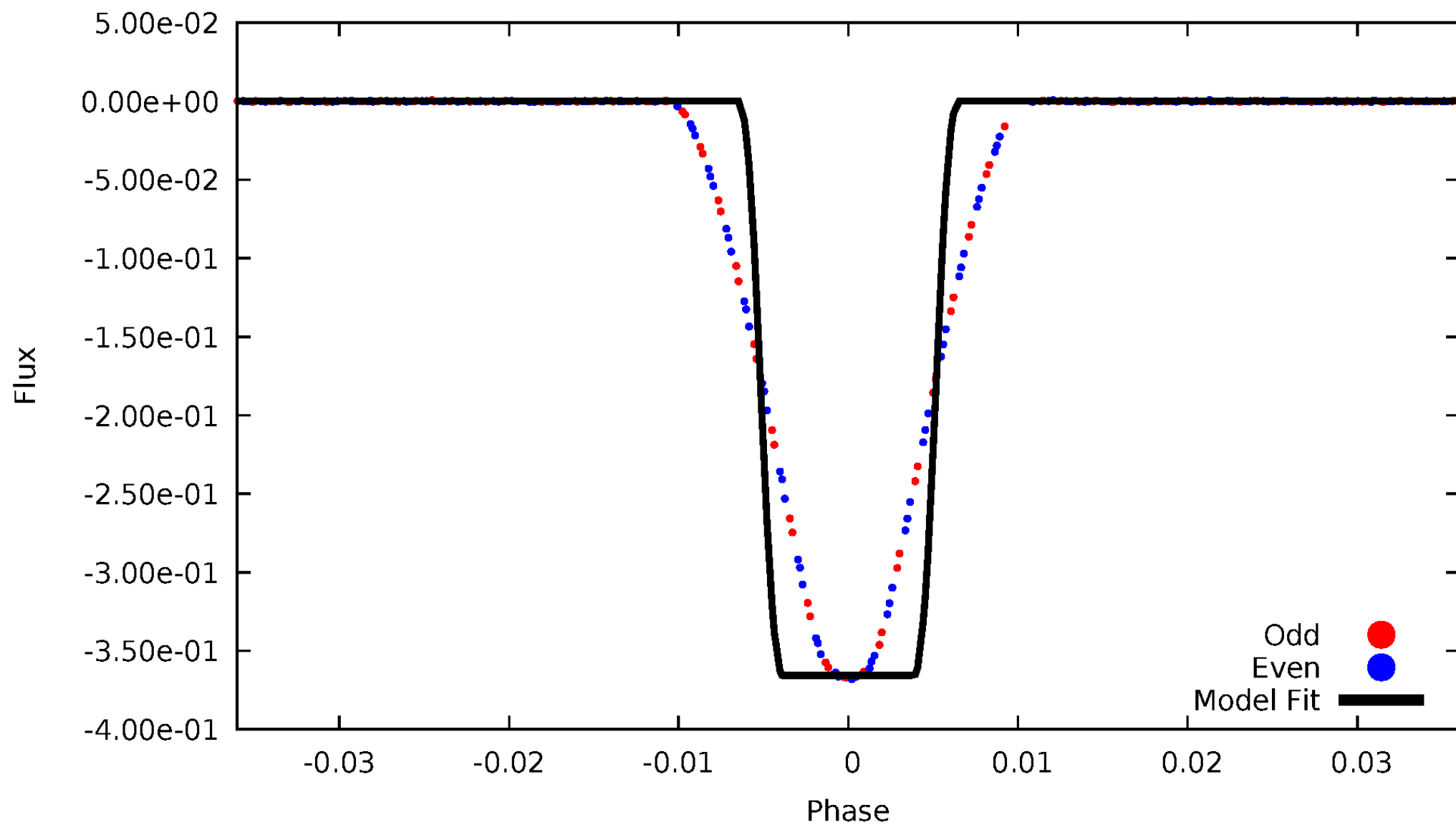
DV Odd/Even

TCE 008690001-02



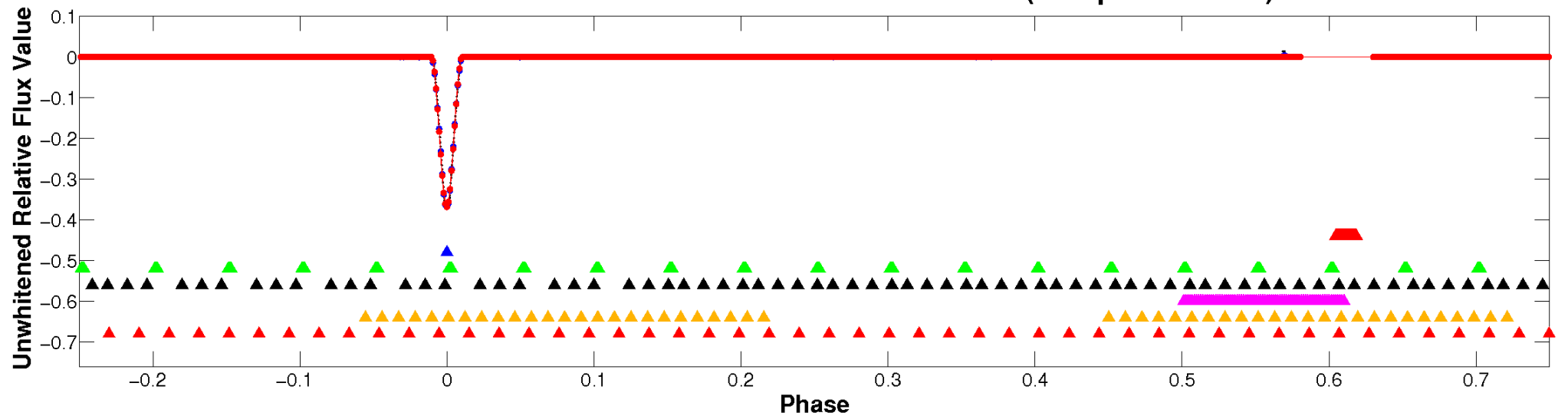
ALT Odd/Even

TCE 008690001-02

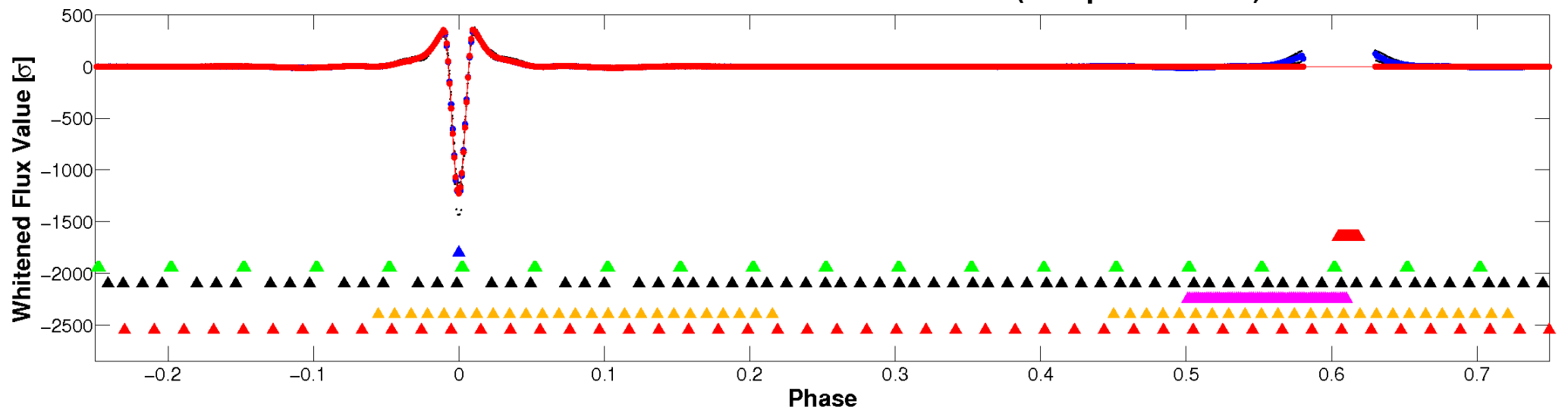


Non-Whitened Vs. Whitened Light Curve

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

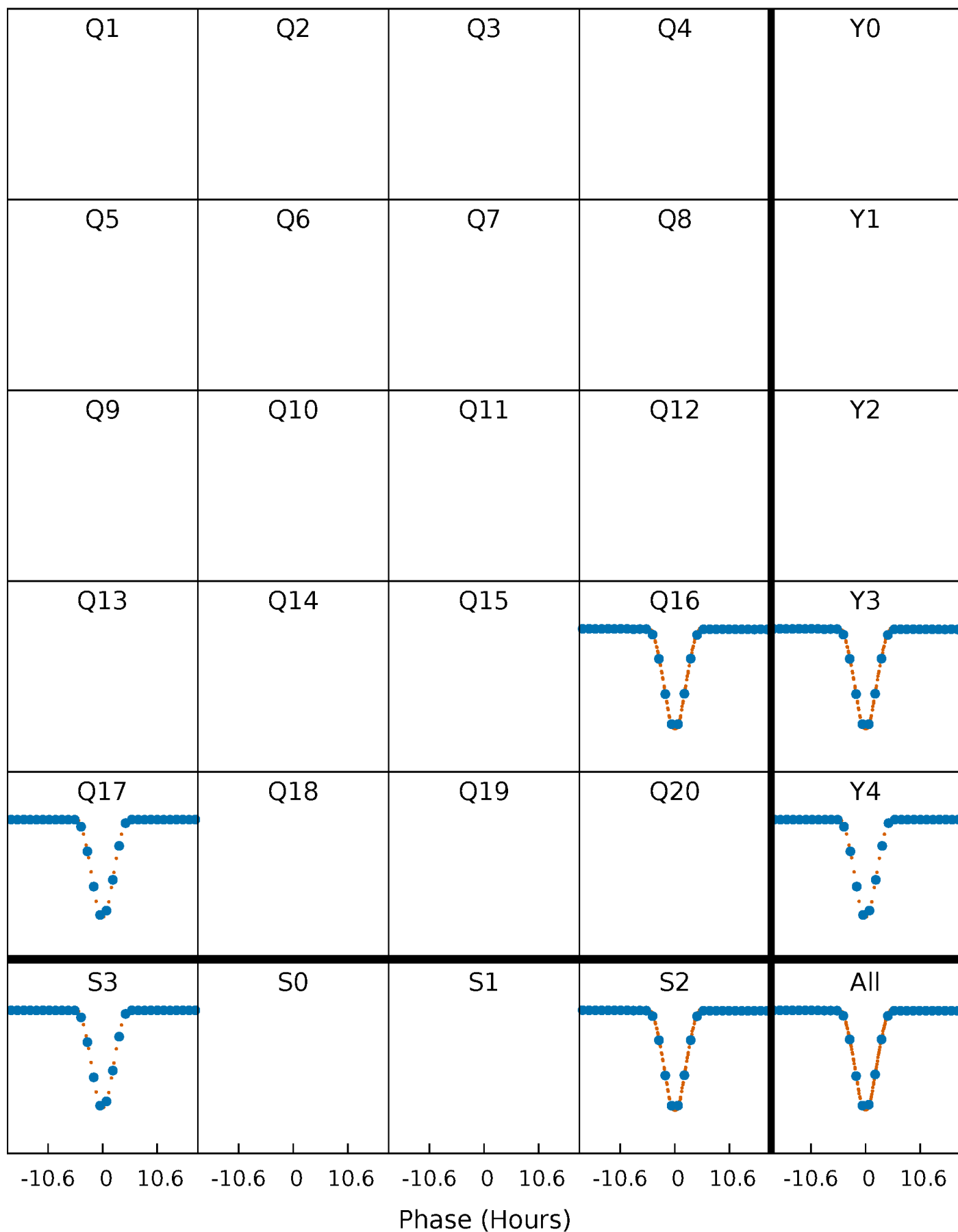


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



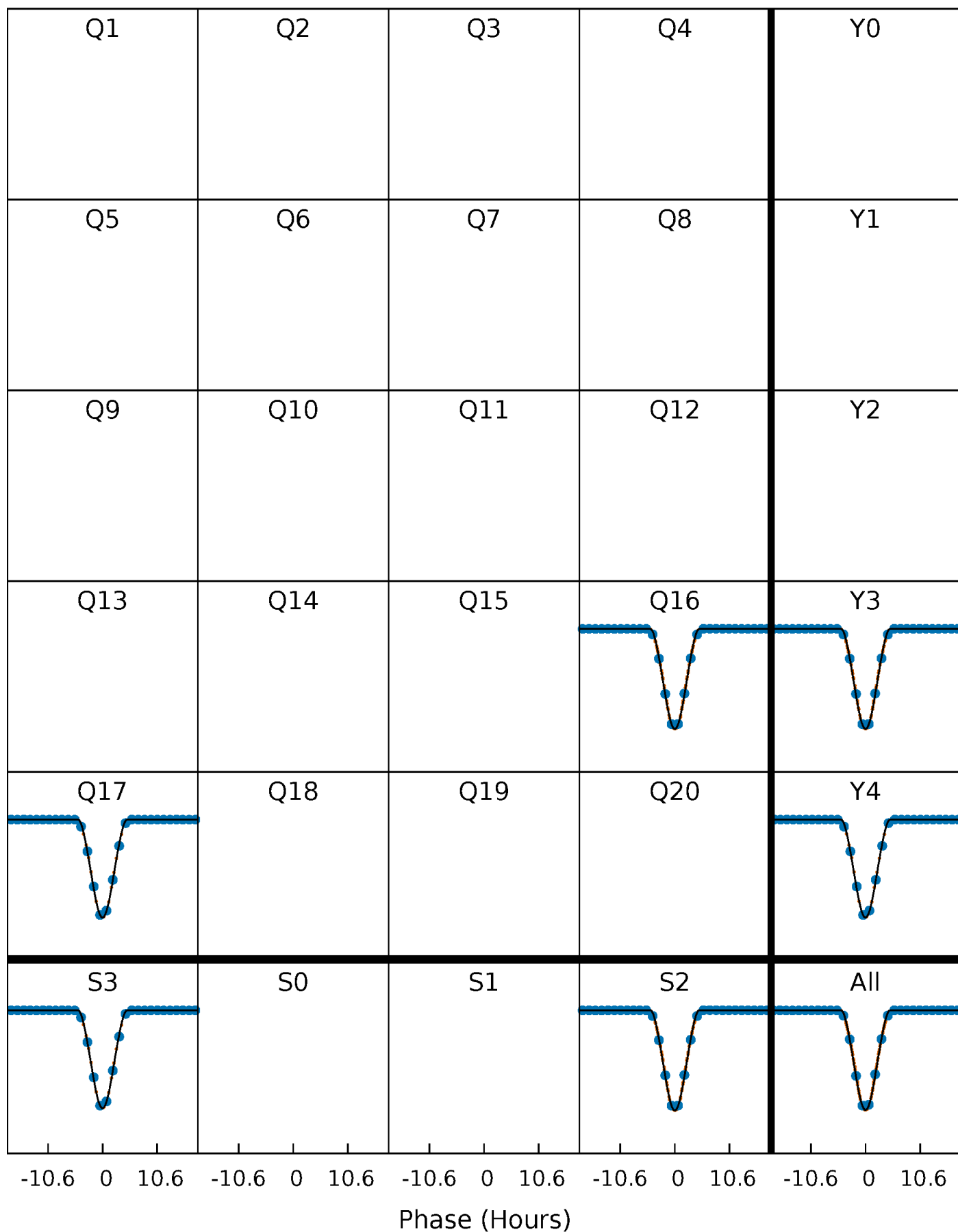
PDC Quarter-Phased Transit Curves

TCE 008690001-02 P= 19.359680 Days $T_0=141.884855$ (BKJD)



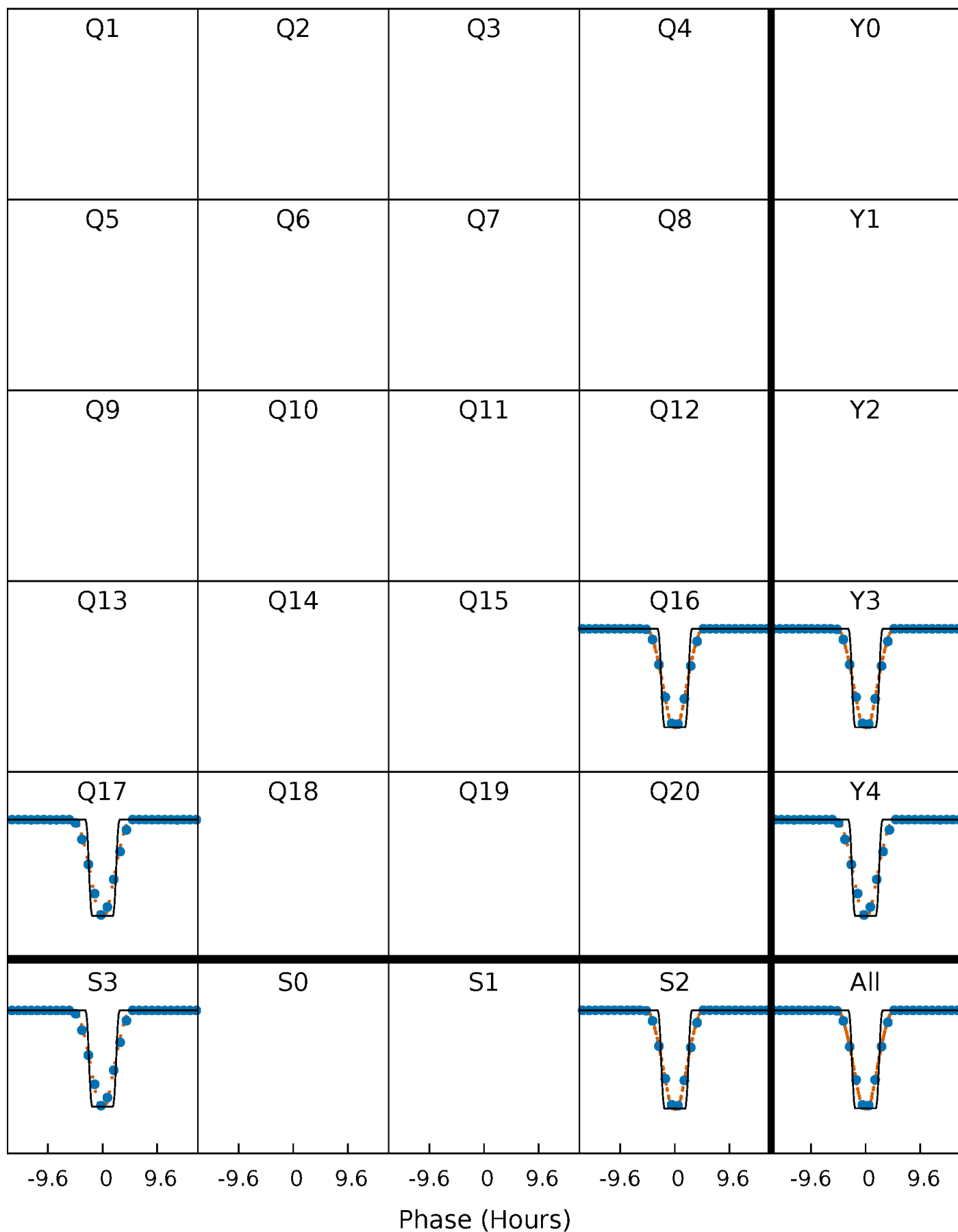
DV Quarter-Phased Transit Curves

TCE 008690001-02 P= 19.359680 Days $T_0=141.884855$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

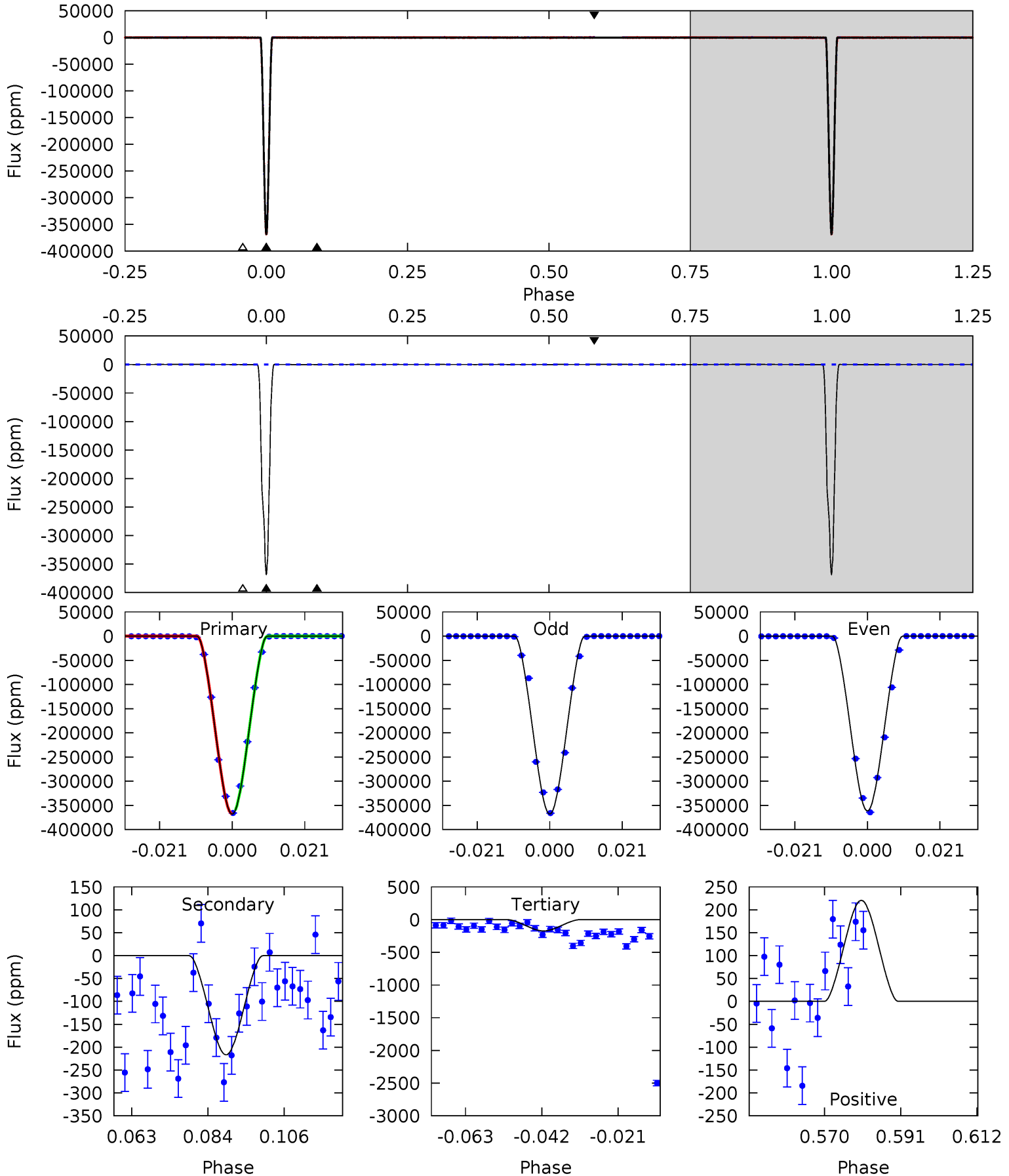
TCE 008690001-02 P= 19.359744 Days $T_0=141.880469$ (BKJD)



DV Model-Shift Uniqueness Test

008690001-02, P = 19.359680 Days, E = 141.884855 Days

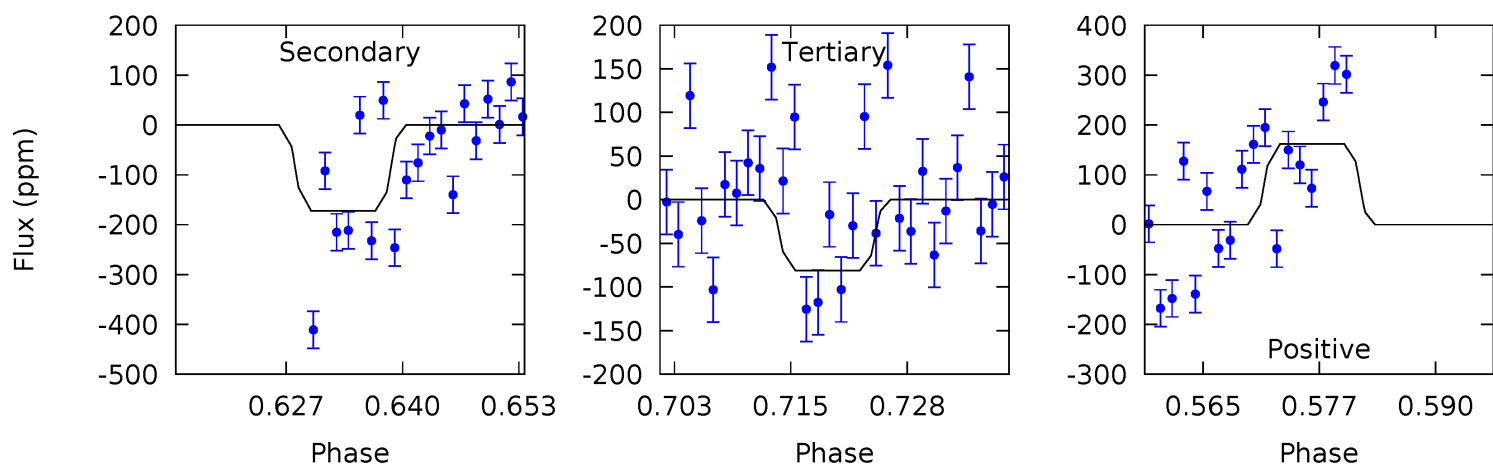
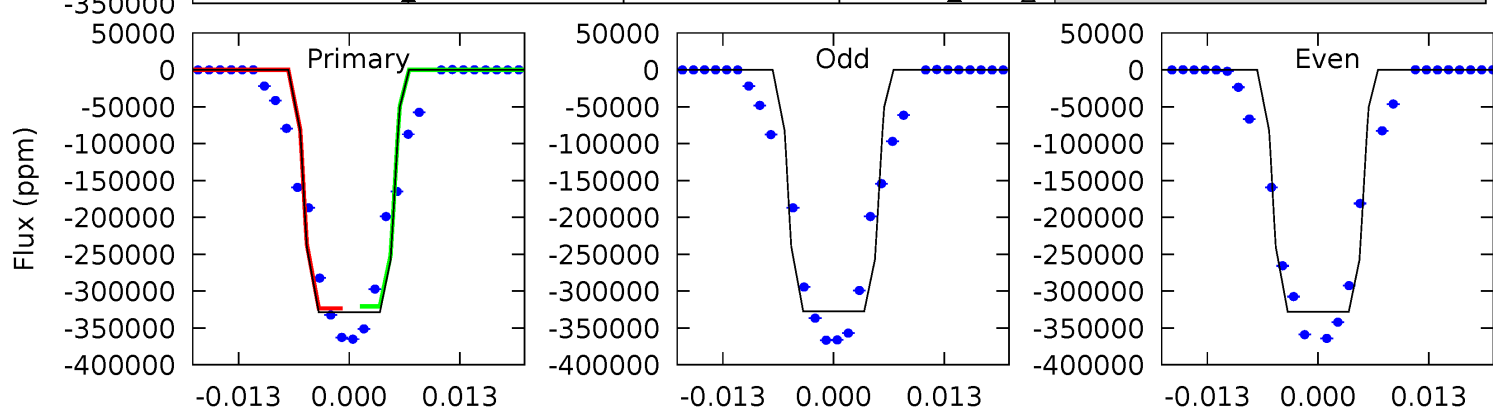
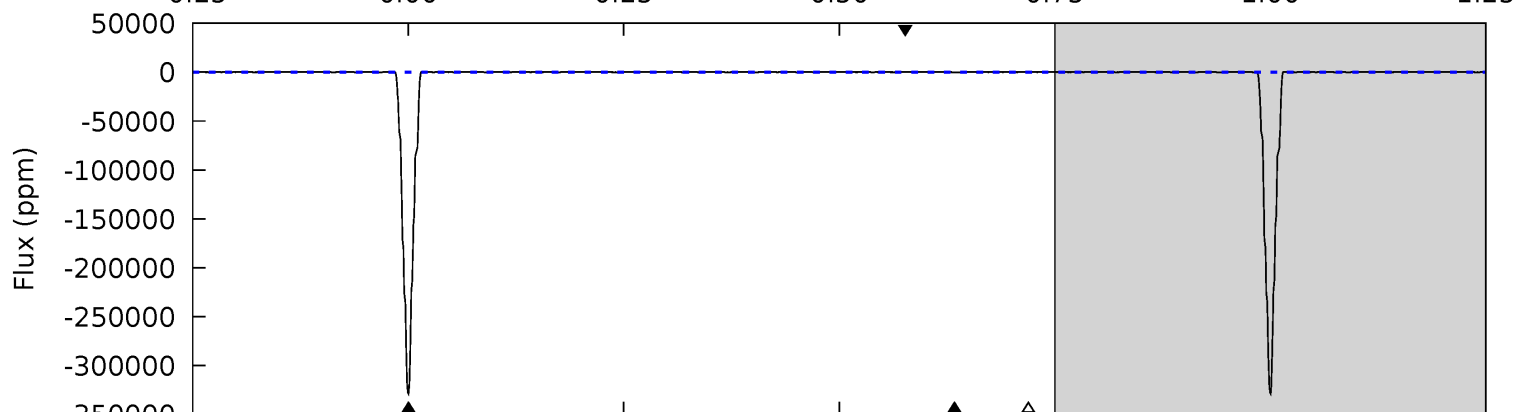
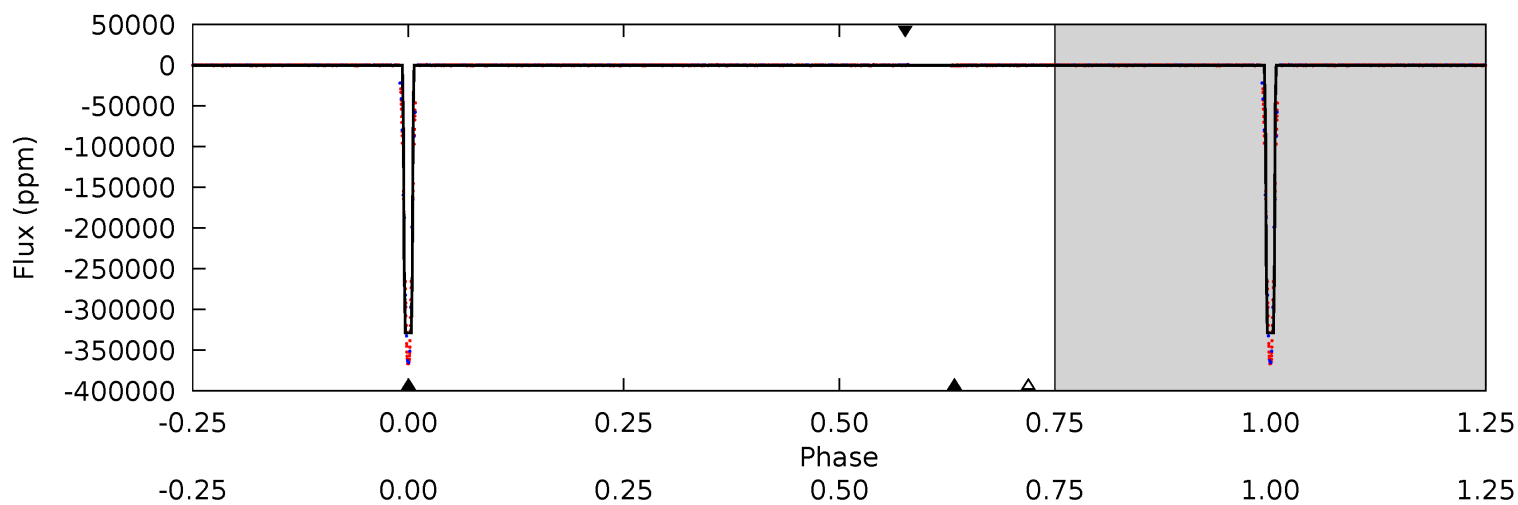
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12220	7.20	5.73	7.32	4.88	2.31	2.81	12214	12213	1.46	-0.13	99.0	1.00	0.00	131.0



Alt Model-Shift Uniqueness Test

008690001-02, P = 19.359744 Days, E = 141.880469 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9837	5.15	2.44	4.84	4.98	2.50	28.2	9835	9832	2.71	0.31	11.5	1.00	0.00	0



Stellar Parameters For KIC 008690001

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6198^{+204}_{-204}	$3.960^{+0.570}_{-0.190}$	$-1.180^{+0.350}_{-0.250}$	$1.567^{+0.509}_{-0.764}$	$0.817^{+0.078}_{-0.062}$	$0.299^{+1.878}_{-0.159}$
	+3%/-3%	+14%/-5%	+30%/-21%	+32%/-49%	+10%/-8%	+629%/-53%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008690001-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-217 ± 30	$103.42^{+19.59}_{-27.20}$	1288^{+132}_{-179}	-1840^{+3534}_{-159}	$0.200^{+0.175}_{-0.064}$
Alt.	-172 ± 33	$99.56^{+19.01}_{-24.52}$	1289^{+129}_{-172}	-1889^{+3226}_{-134}	$0.164^{+0.140}_{-0.056}$

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 $A_{obs} \gg 1.0$

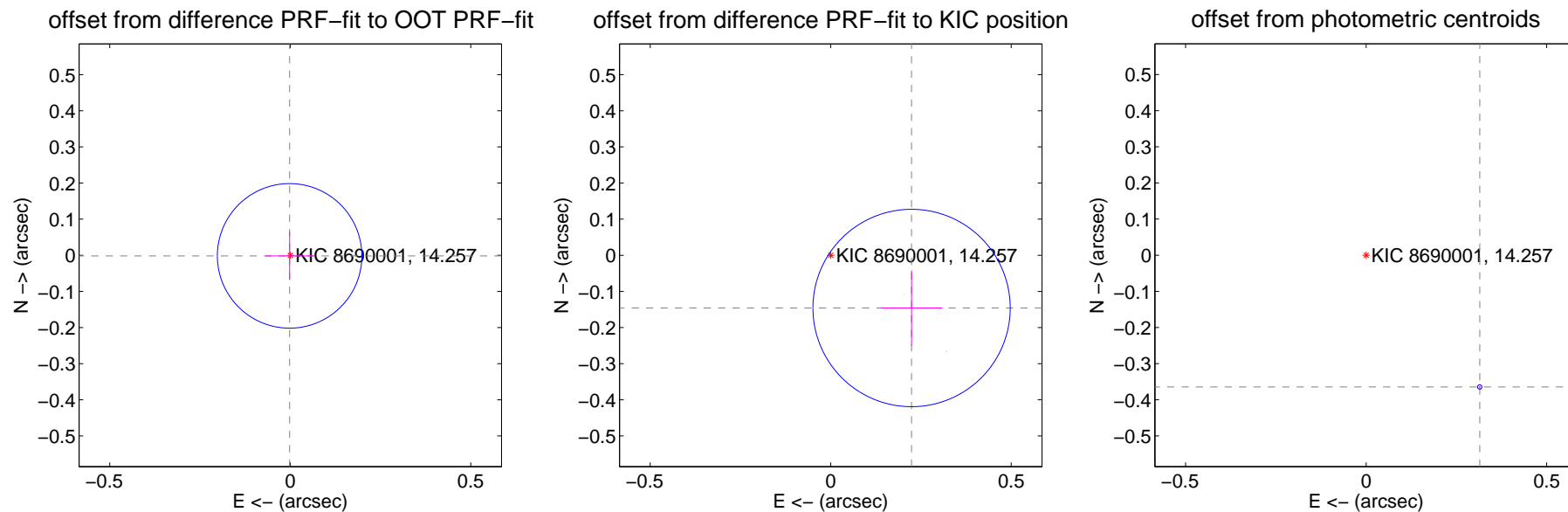
DV Centroid Data

Supplemental centroid analysis for 008690001-02. Kepler magnitude: 14.26. Transit SNR 3789.24

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.002 ± 0.067	0.04	0.002 ± 0.067	-0.002 ± 0.067
PRF-fit source offset from KIC position	0.267 ± 0.091	2.94	-0.224 ± 0.085	-0.146 ± 0.104
photometric centroid source offset	0.48 ± 0.00	238.55	-0.31 ± 0.00	-0.36 ± 0.00



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

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



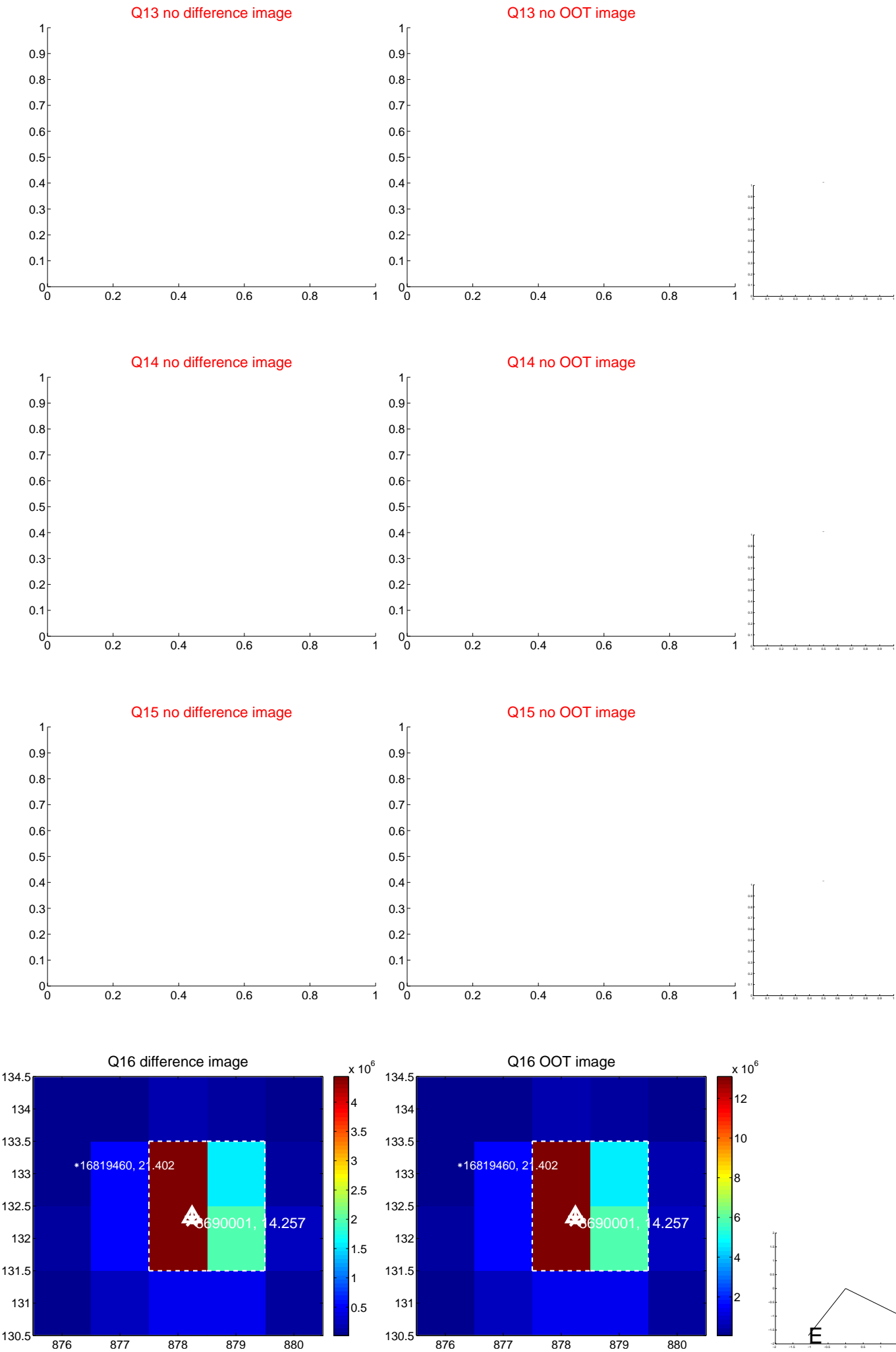
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



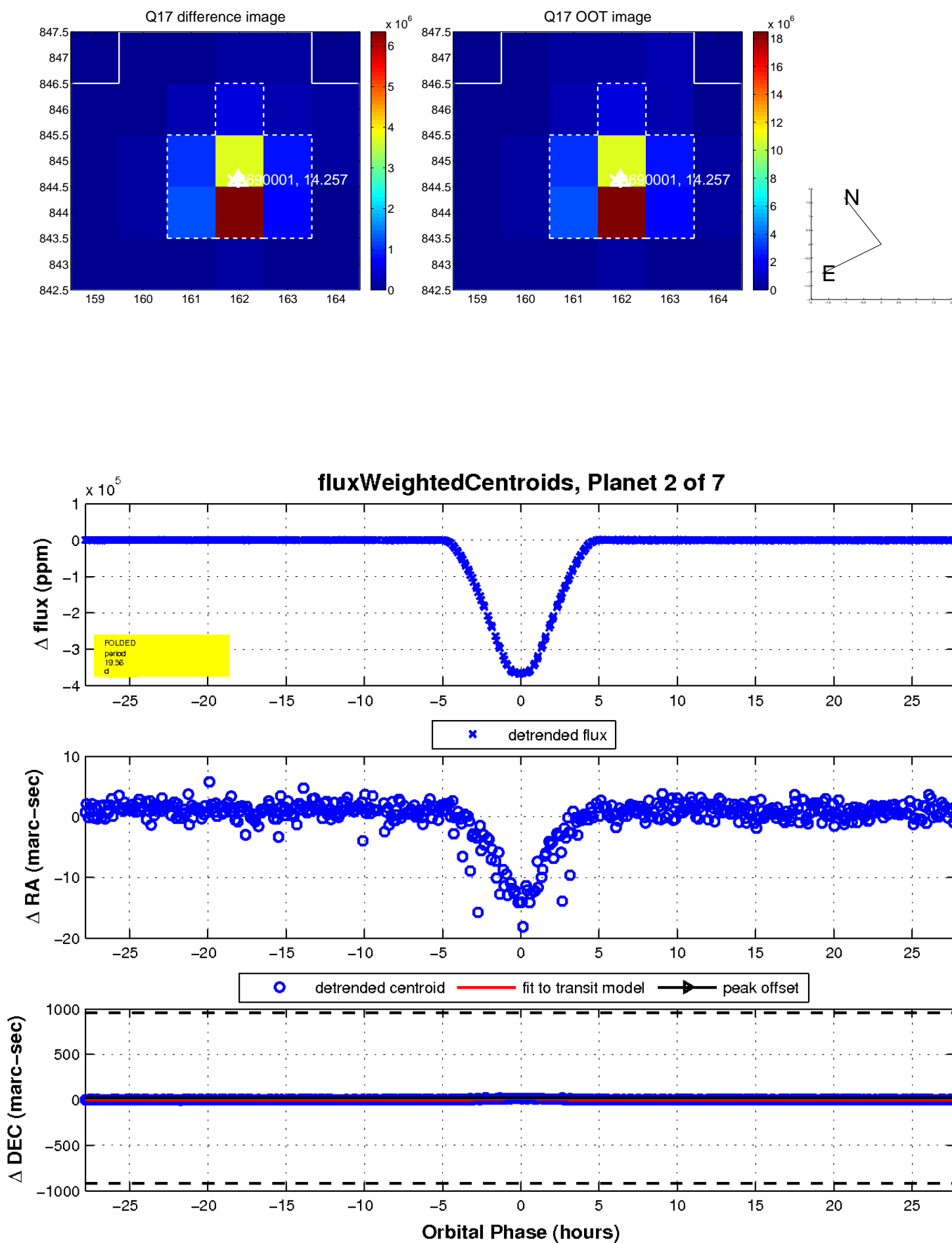
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

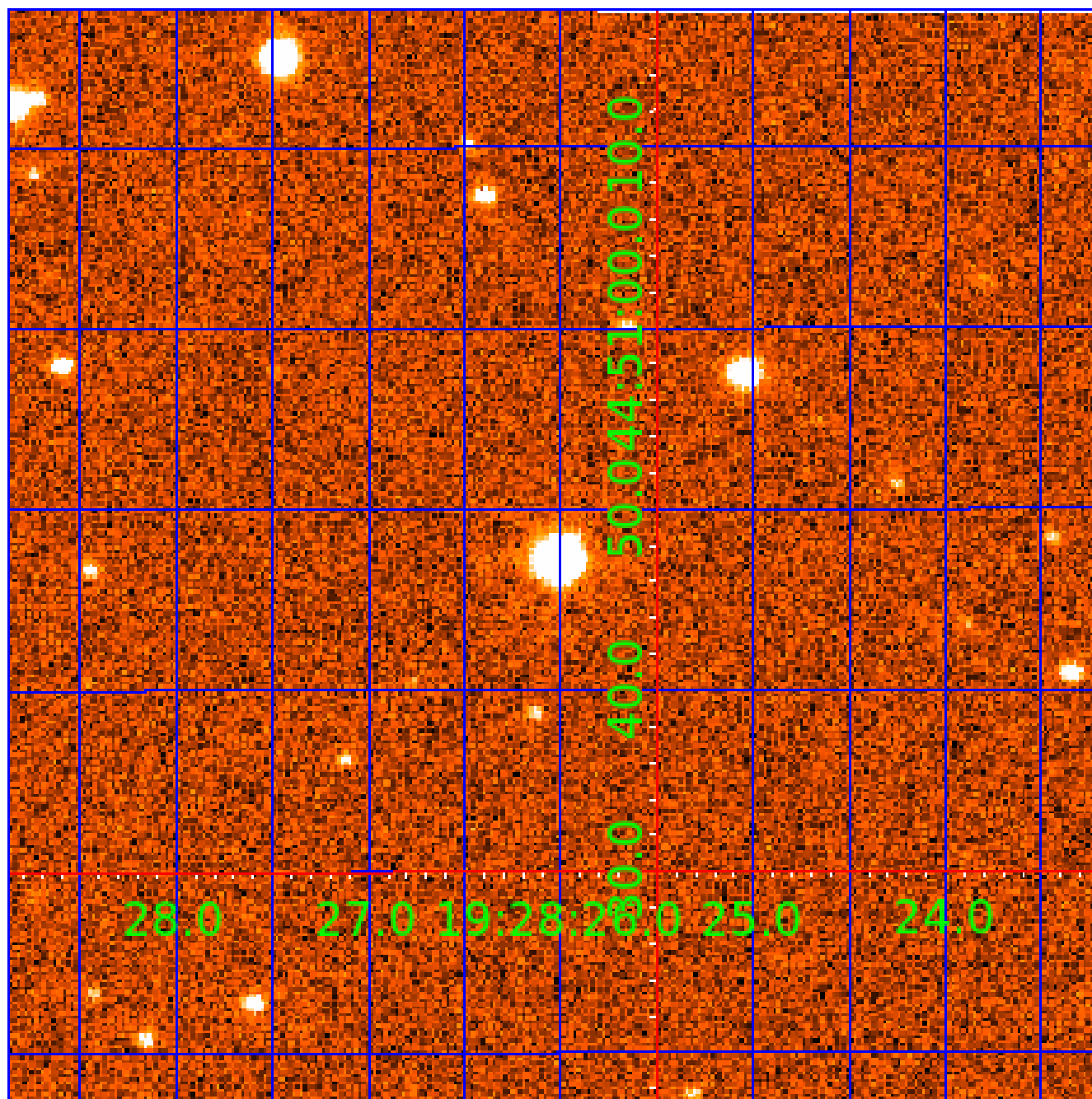


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008690001

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})
008690001-01	OBS	7075.01	19.356050	134.501105	384523.0	7.500	7491.8	-1.0	1.57	6198	81.14	186.58
008690001-02	OBS	No	19.359680	141.884855	369017.6	9.273	7202.6	3789.2	1.57	6198	106.05	186.53
008690001-03	OBS	No	18.391135	148.725781	6879.5	3.000	158.5	-1.0	1.57	6198	13.08	199.74
008690001-04	OBS	No	20.340649	145.003955	6883.2	3.500	116.4	-1.0	1.57	6198	13.08	174.63
008690001-05	OBS	No	19.331511	134.339462	4635.2	27.205	106.9	39.8	1.57	6198	19.23	186.89
008690001-07	OBS	No	19.754768	146.917898	2362.6	15.000	38.5	-1.0	1.57	6198	7.66	181.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008690001-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
008690001-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_FEW_DIFFS
008690001-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008690001-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008690001-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
008690001-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

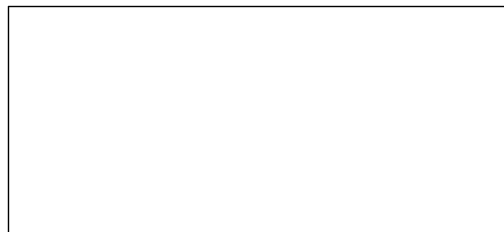
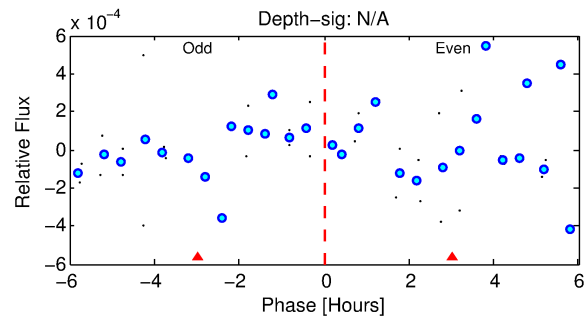
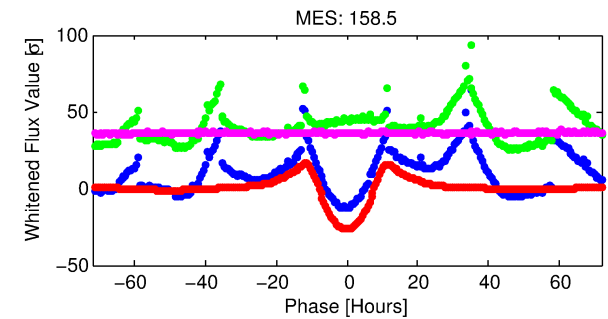
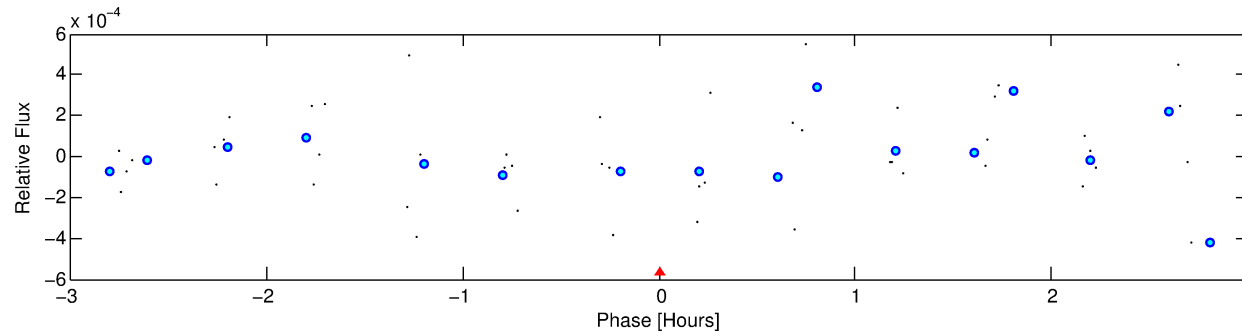
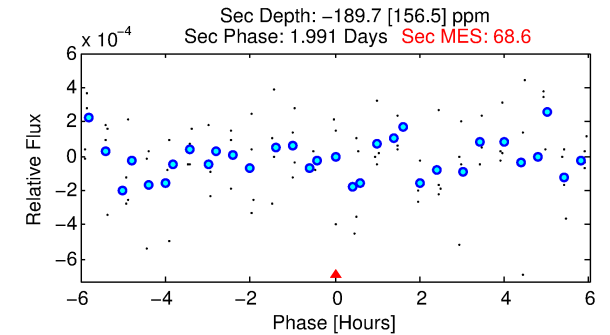
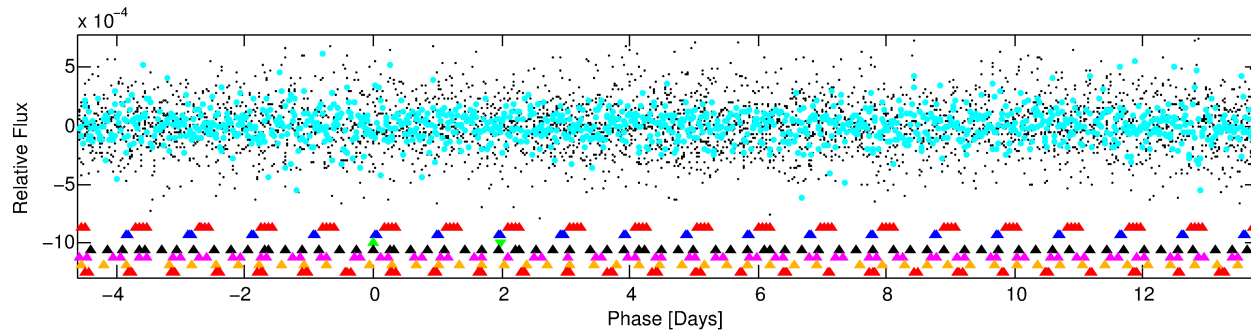
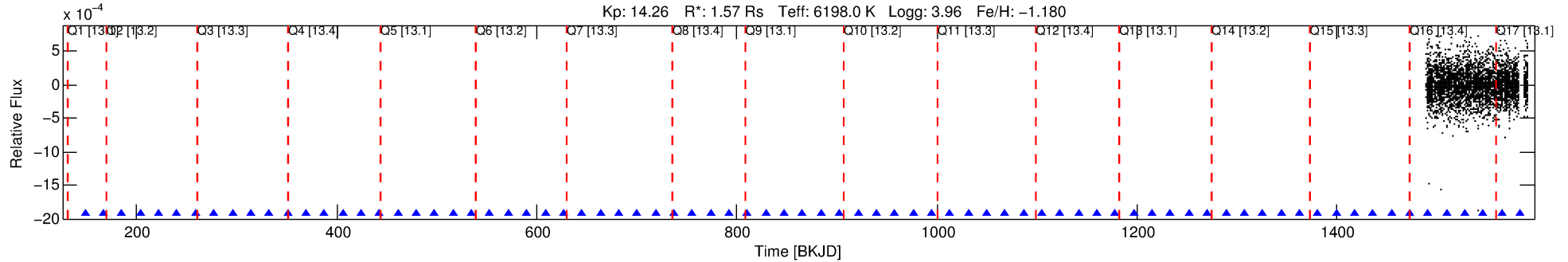
Ephemeris Match Information For 008690001-03

No Significant Match Found

DV One-Page Summary

KIC: 8690001 Candidate: 3 of 7 Period: 18.391 d
KOI: K07075 Corr: No Ephemeris Match

Kp: 14.26 R*: 1.57 Rs Teff: 6198.0 K Logg: 3.96 Fe/H: -1.180



TPS TCE Results:

Period = 18.39113 d
Epoch = 148.7258 BKJD

DV fit results are unavailable

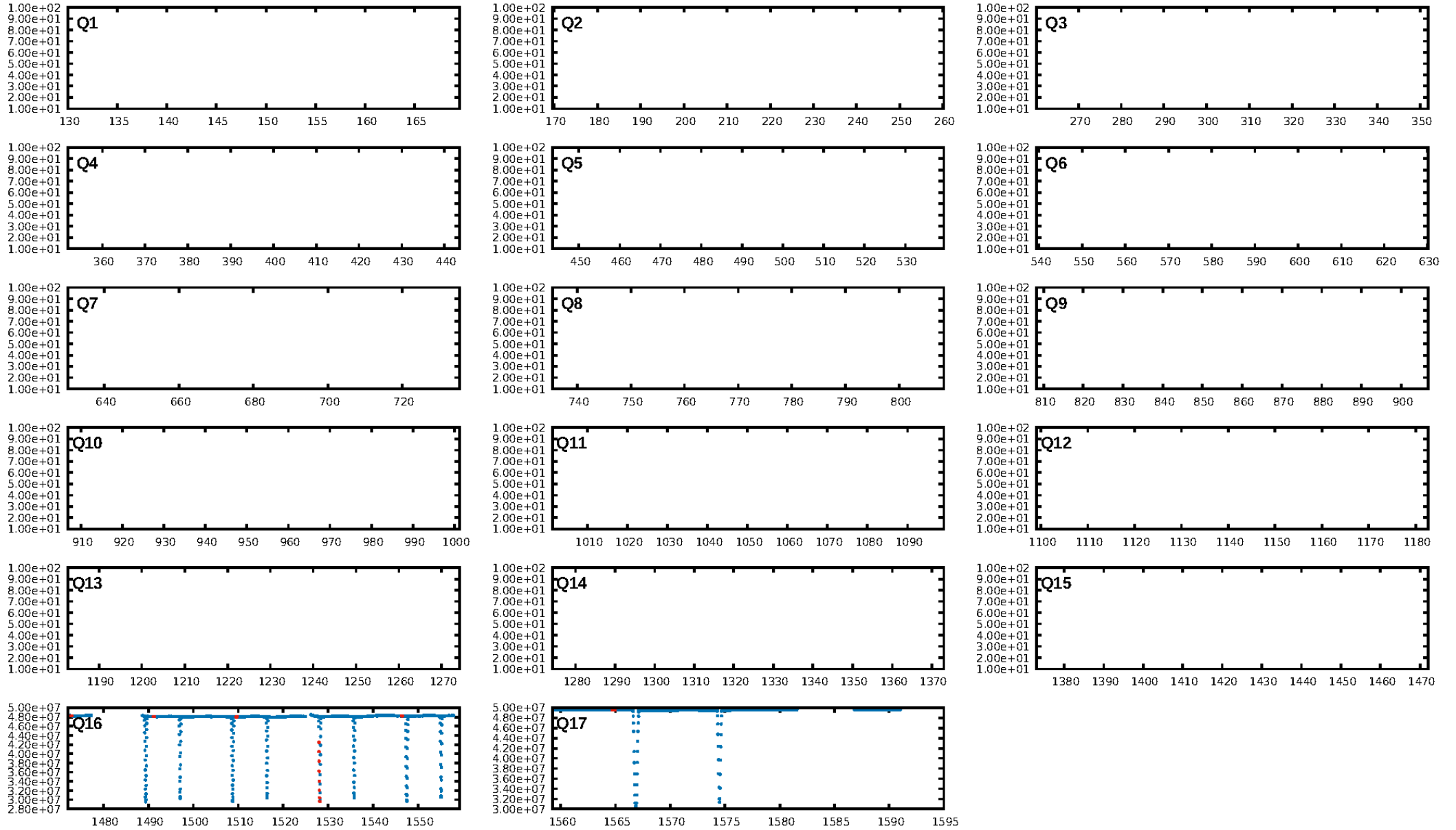
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 59.0% [0.82σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.8376
Centroid-sig: N/A
Centroid-so: 11.262 arcsec [0.72σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: N/A

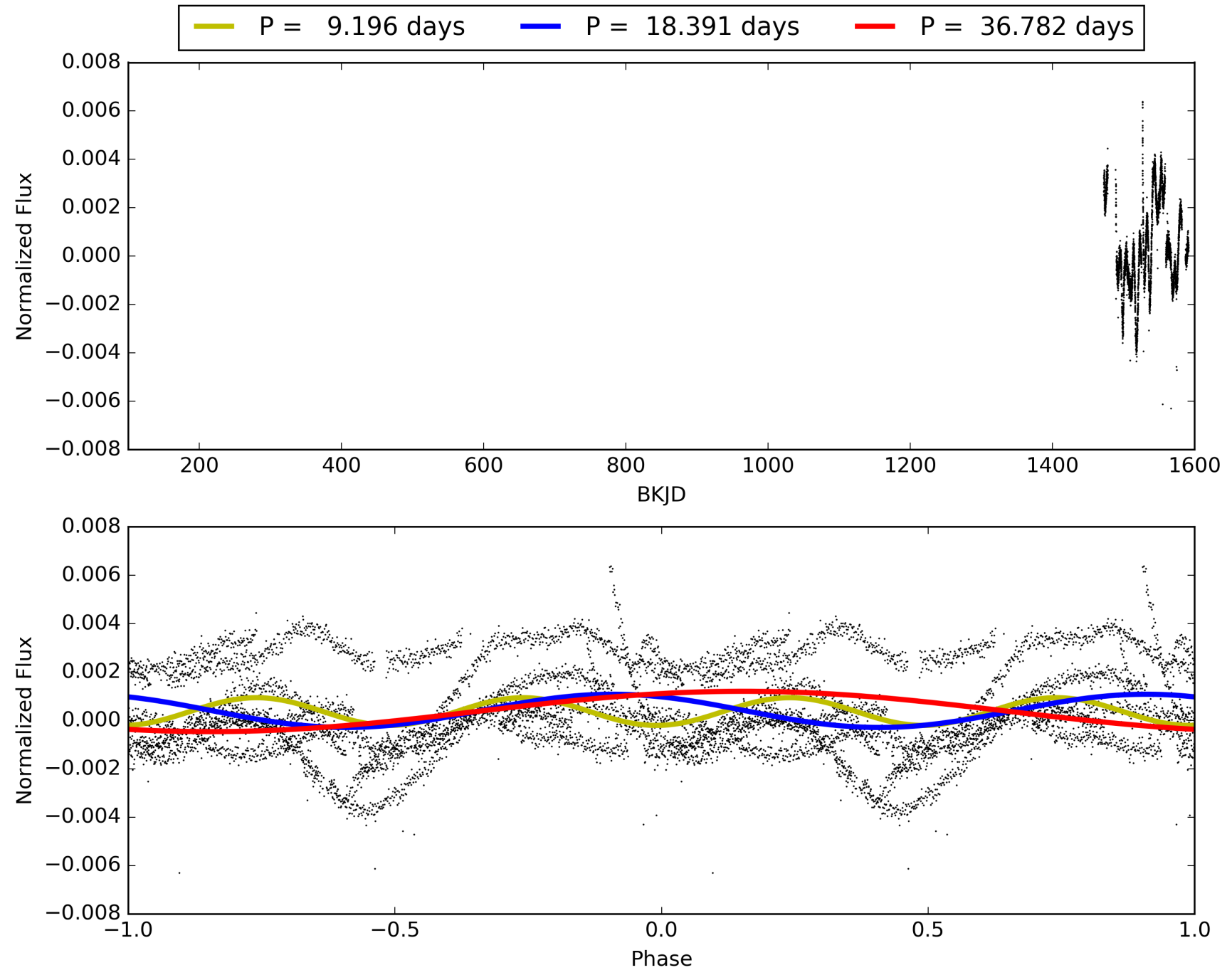
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 17:11:34 Z

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

TCE 008690001-03, PDC Light Curves

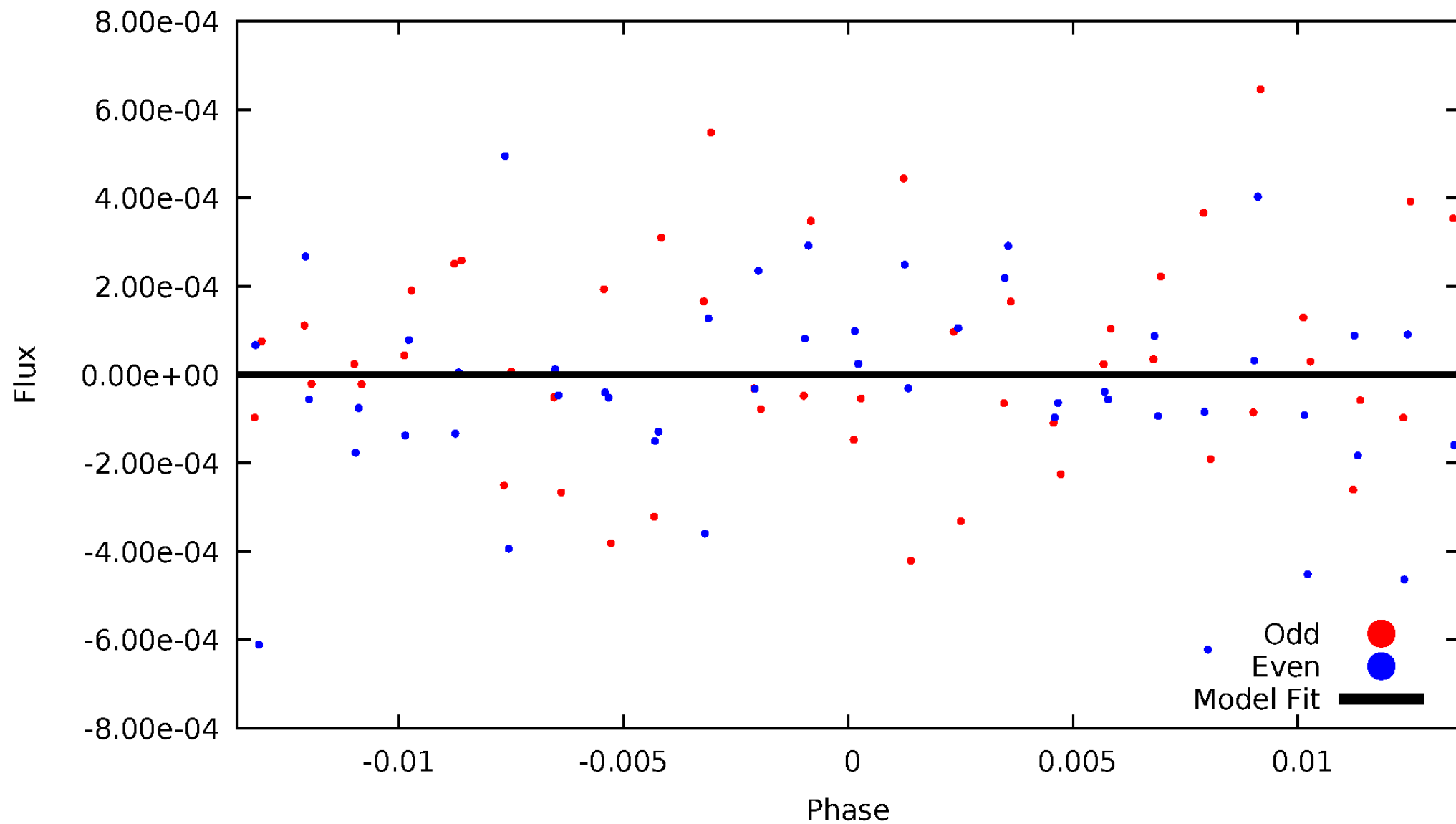


TCE 008690001-03



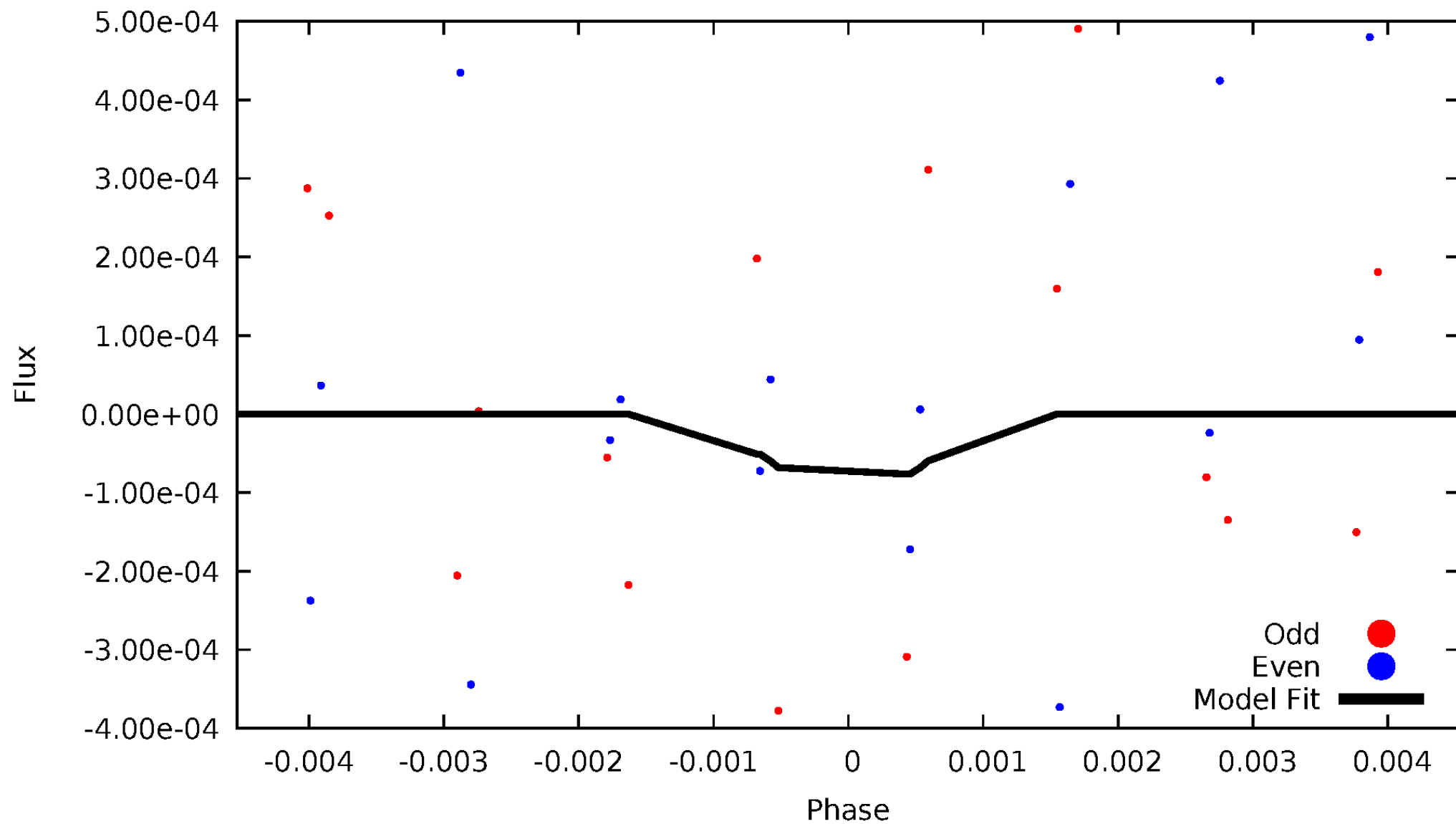
DV Odd/Even

TCE 008690001-03

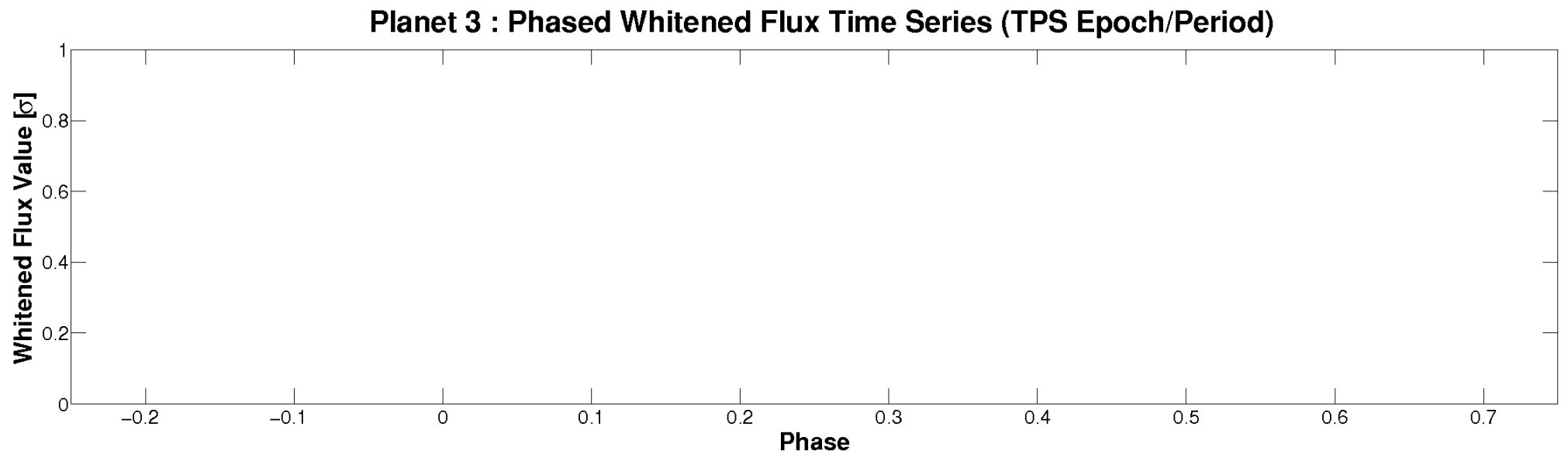
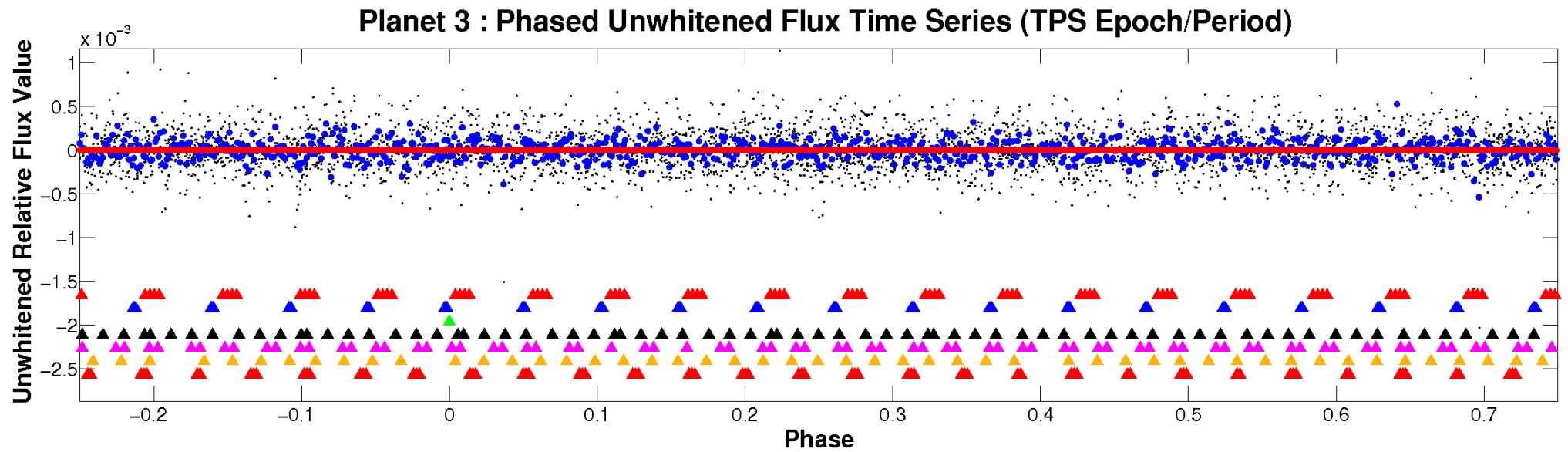


ALT Odd/Even

TCE 008690001-03

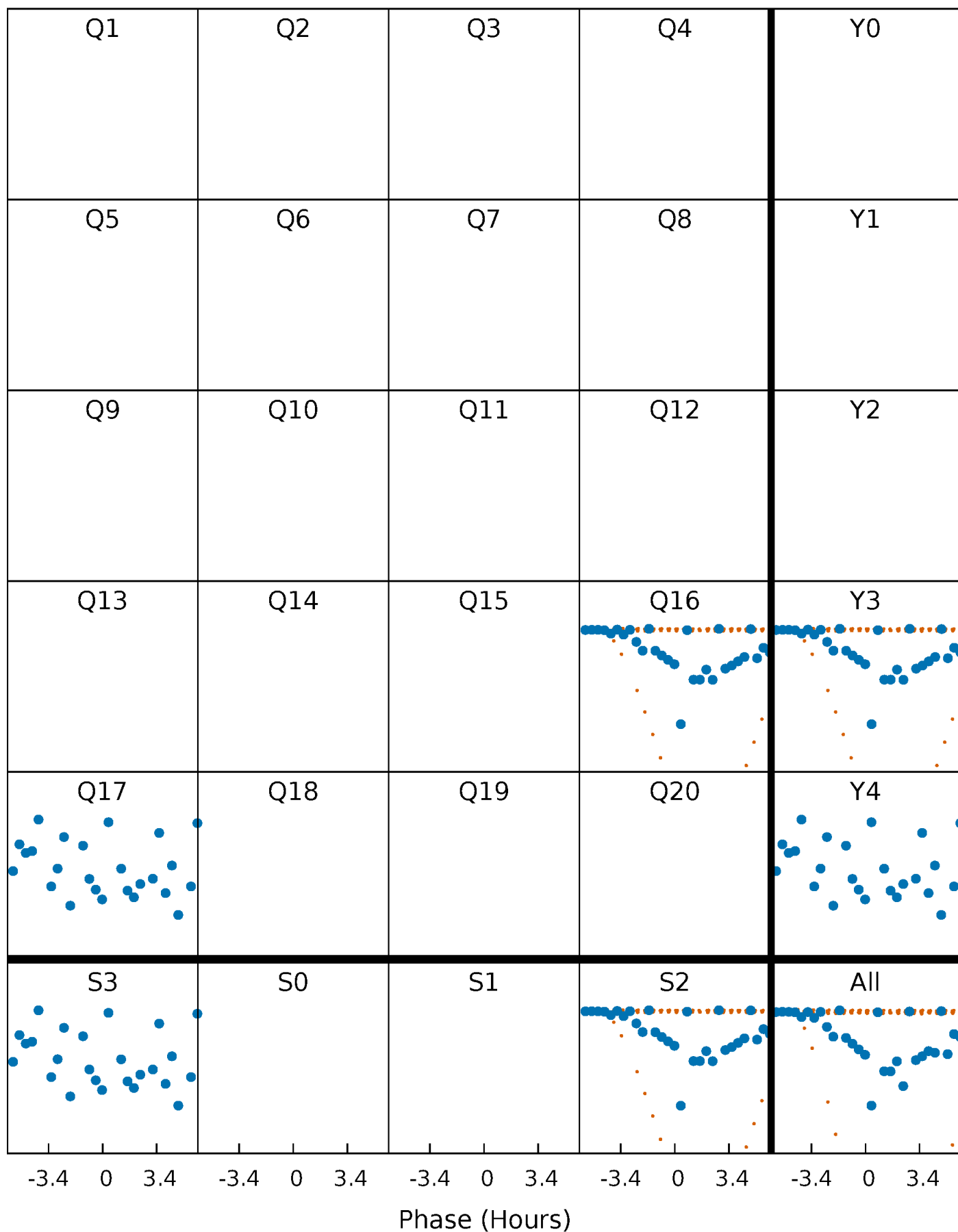


Non-Whitened Vs. Whitened Light Curve



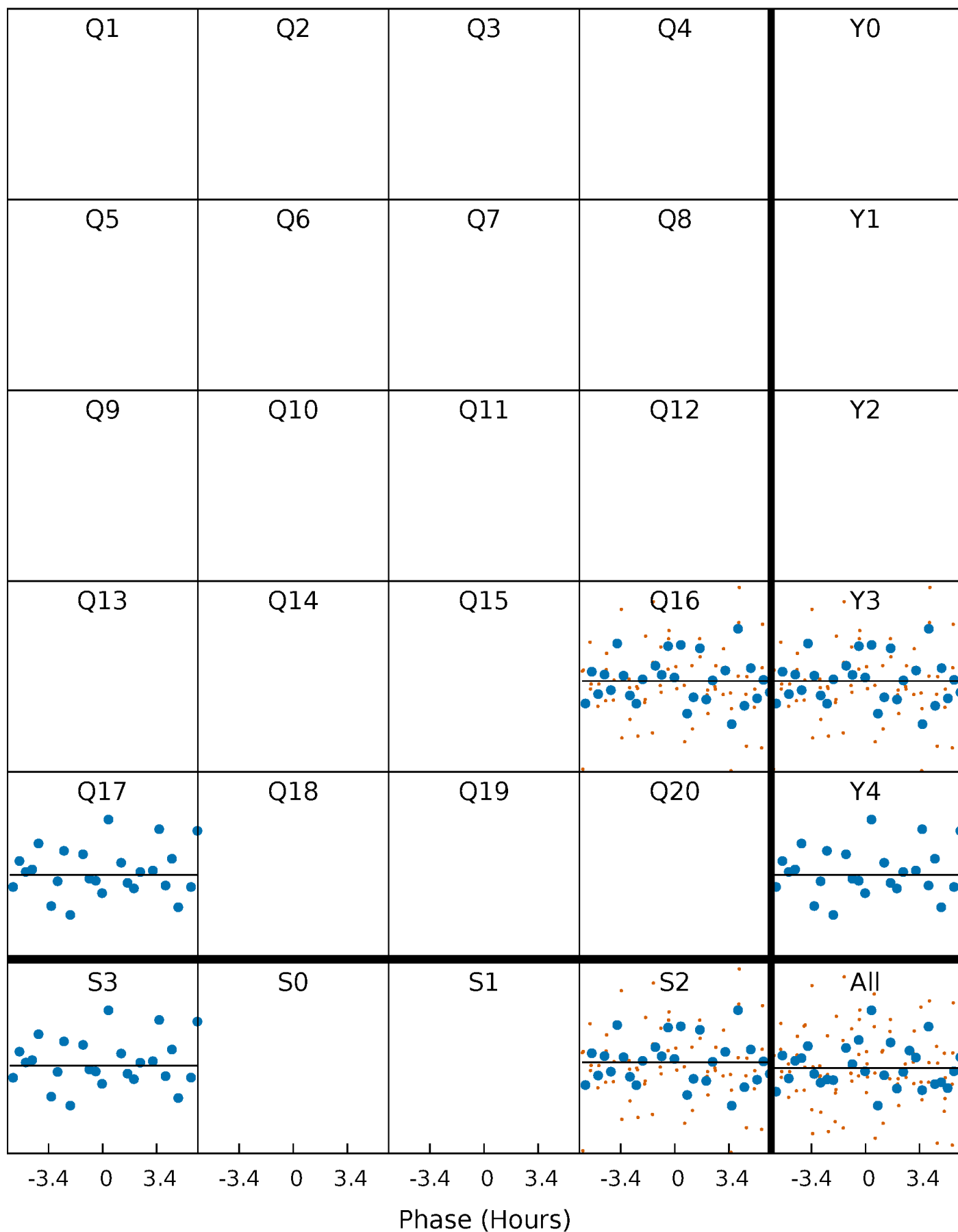
PDC Quarter-Phased Transit Curves

TCE 008690001-03 P= 18.391135 Days $T_0=148.725781$ (BKJD)



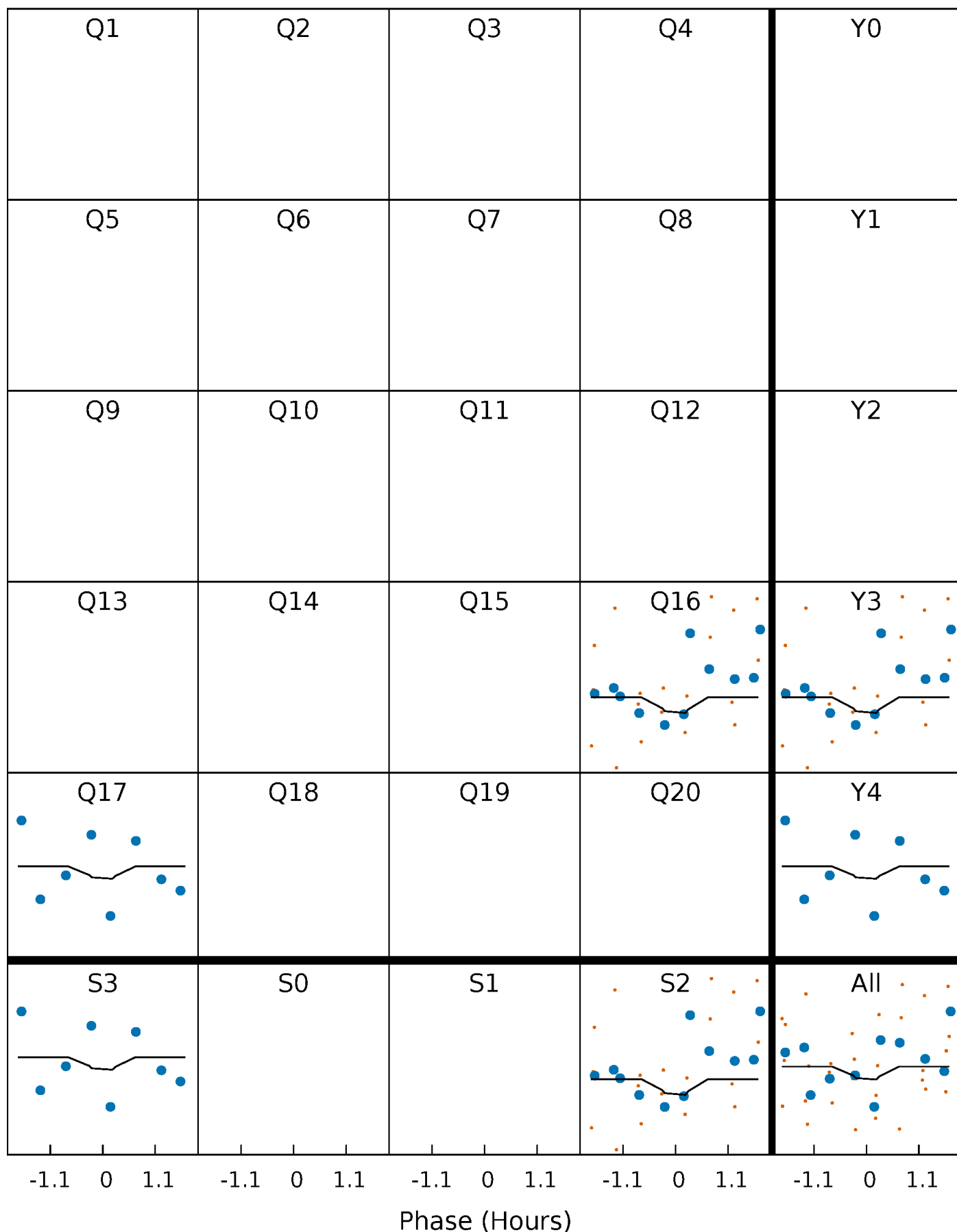
DV Quarter-Phased Transit Curves

TCE 008690001-03 P= 18.391135 Days $T_0=148.725781$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

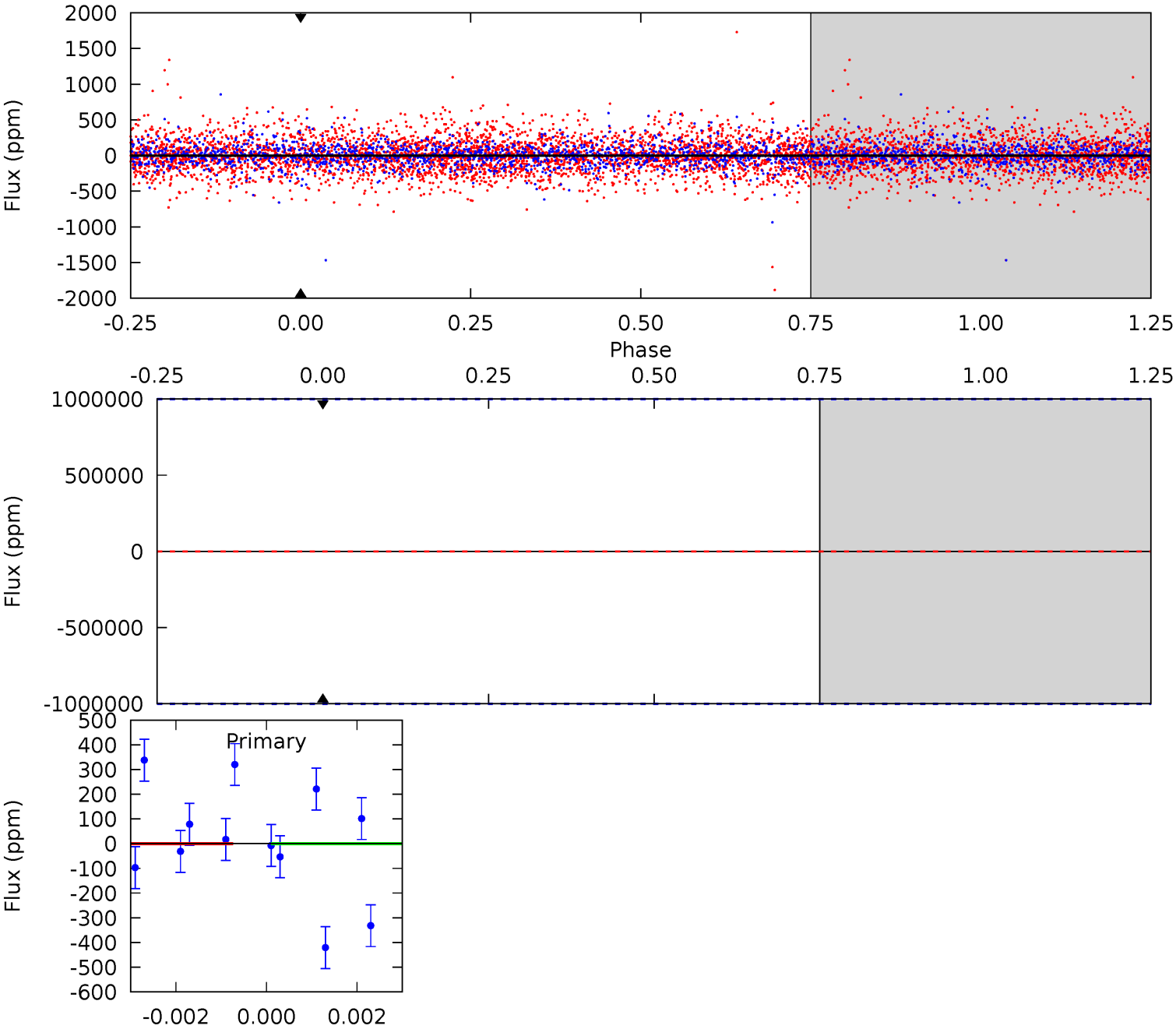
TCE 008690001-03 P= 18.391135 Days $T_0=148.638308$ (BKJD)



DV Model-Shift Uniqueness Test

008690001-03, P = 18.391135 Days, E = 148.725781 Days

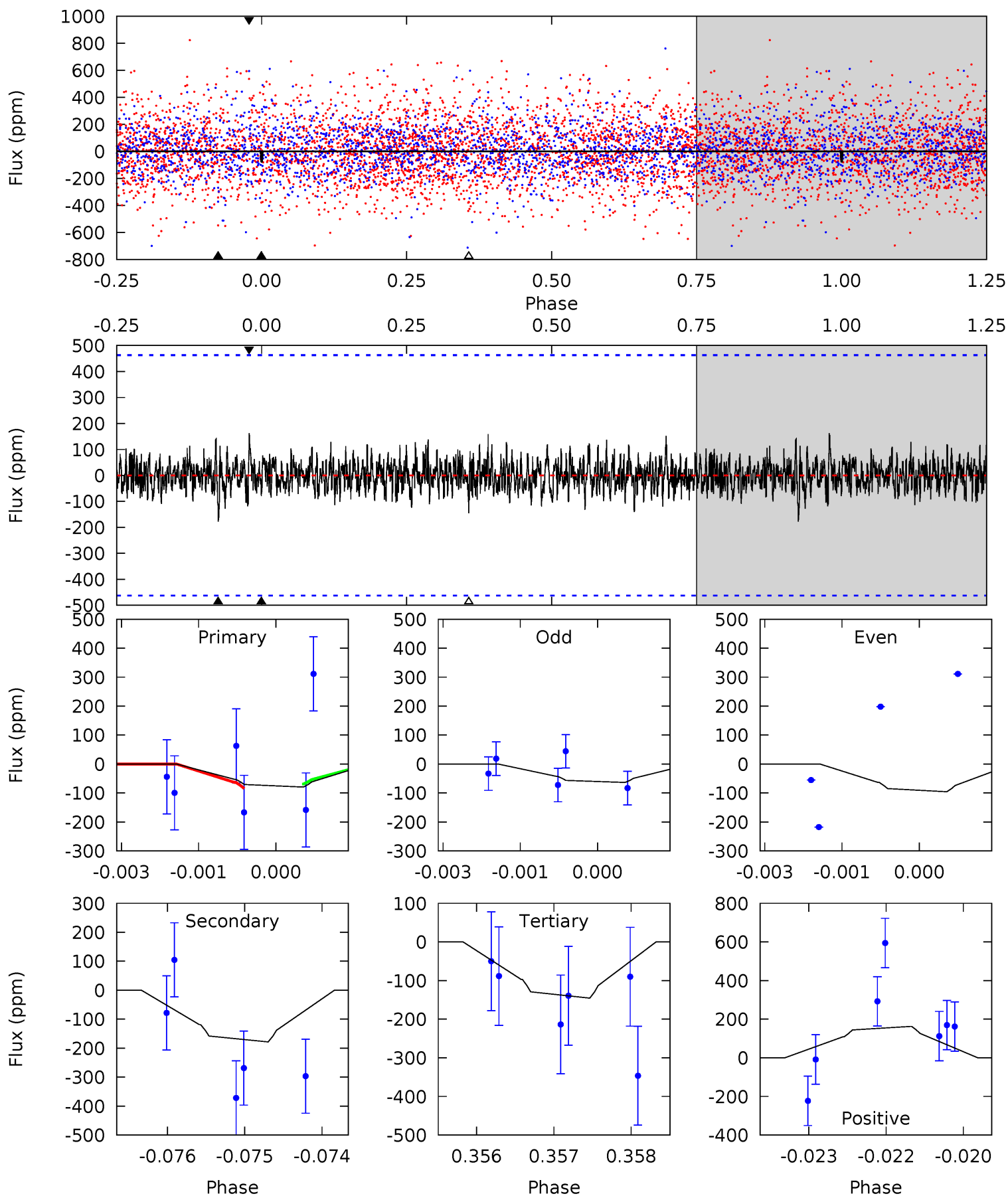
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008690001-03, P = 18.391135 Days, E = 148.638308 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.93	2.08	1.70	1.90	5.41	3.22	0.55	-0.77	-0.97	0.38	0.18	0.17	0.83	0.48	0.09



Stellar Parameters For KIC 008690001

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6198^{+204}_{-204}	$3.960^{+0.570}_{-0.190}$	$-1.180^{+0.350}_{-0.250}$	$1.567^{+0.509}_{-0.764}$	$0.817^{+0.078}_{-0.062}$	$0.299^{+1.878}_{-0.159}$
	+3%/-3%	+14%/-5%	+30%/-21%	+32%/-49%	+10%/-8%	+629%/-53%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008690001-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$16.37^{+15.21}_{-10.95}$	1324^{+118}_{-197}	4694^{+13150}_{-18923}	102^{+6108}_{-4609}
Alt.	-178 ± 86	$11.14^{+13.37}_{-7.87}$	1312^{+134}_{-191}	3223^{+1711}_{-690}	12^{+125}_{-10}

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

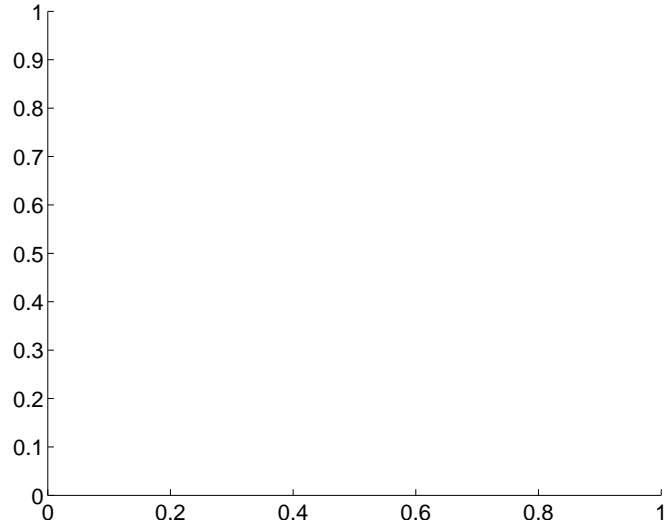
Supplemental centroid analysis for 008690001-03. Kepler magnitude: 14.26. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

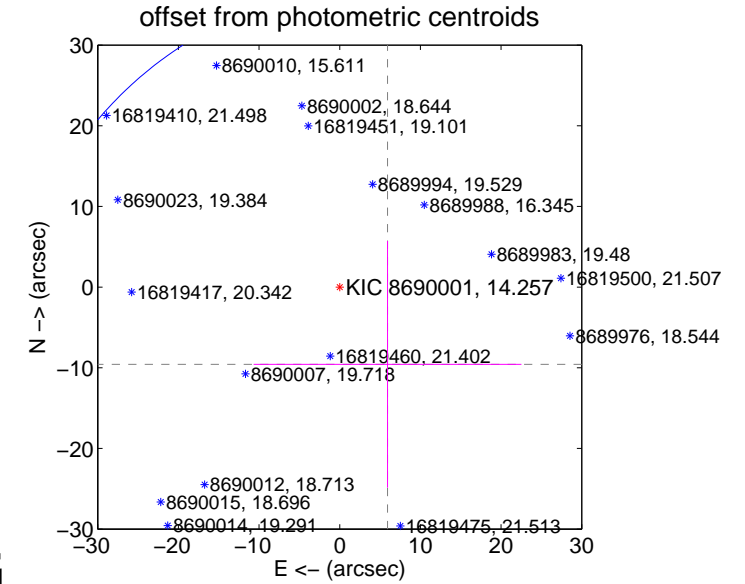
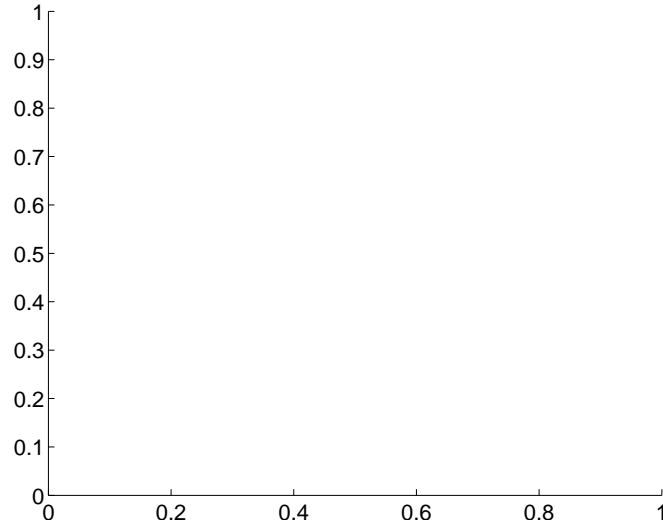
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	11.26 ± 15.67	0.72	-5.93 ± 16.60	-9.58 ± 15.29

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC



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.



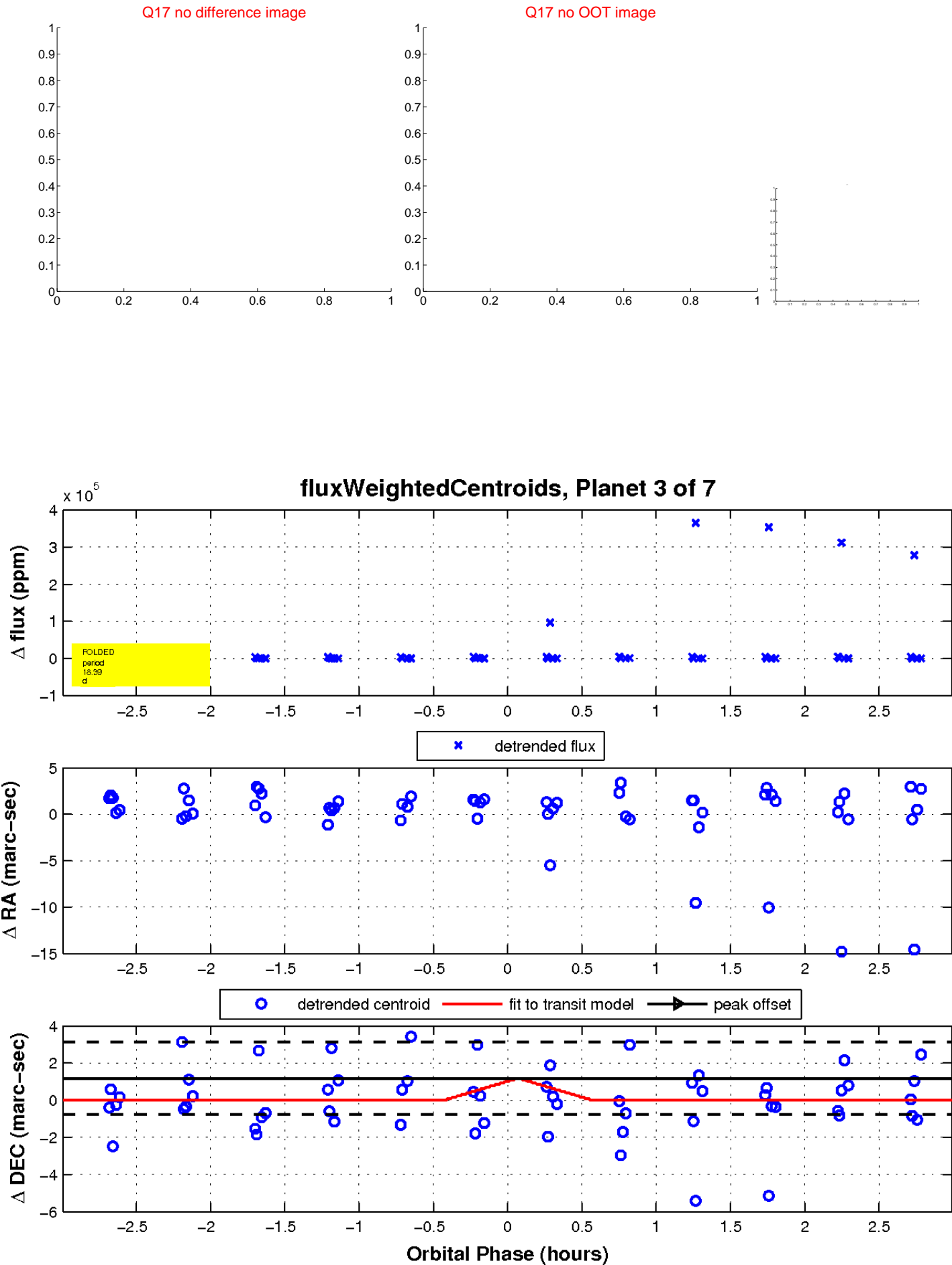
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

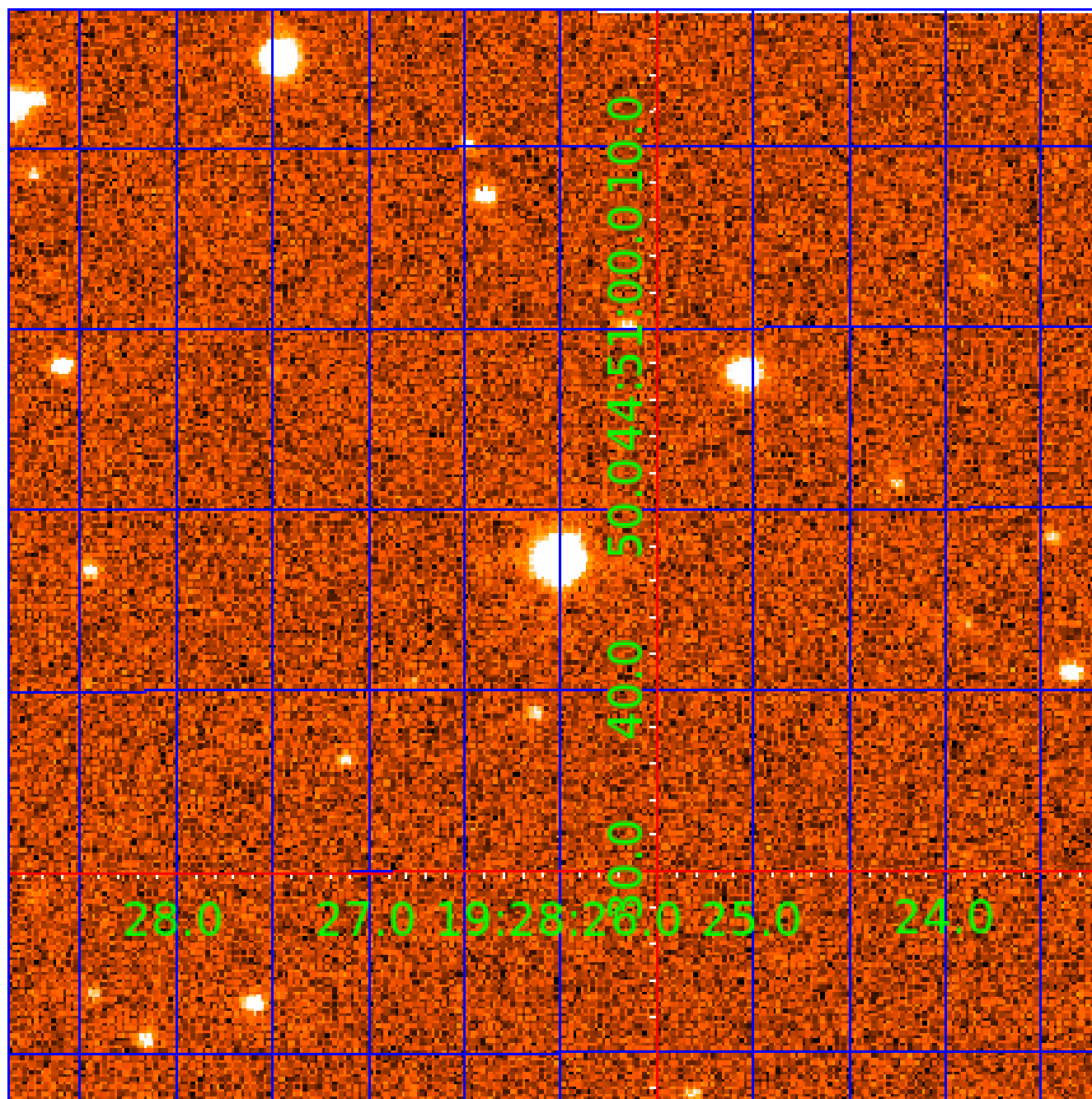


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008690001

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})
008690001-01	OBS	7075.01	19.356050	134.501105	384523.0	7.500	7491.8	-1.0	1.57	6198	81.14	186.58
008690001-02	OBS	No	19.359680	141.884855	369017.6	9.273	7202.6	3789.2	1.57	6198	106.05	186.53
008690001-03	OBS	No	18.391135	148.725781	6879.5	3.000	158.5	-1.0	1.57	6198	13.08	199.74
008690001-04	OBS	No	20.340649	145.003955	6883.2	3.500	116.4	-1.0	1.57	6198	13.08	174.63
008690001-05	OBS	No	19.331511	134.339462	4635.2	27.205	106.9	39.8	1.57	6198	19.23	186.89
008690001-07	OBS	No	19.754768	146.917898	2362.6	15.000	38.5	-1.0	1.57	6198	7.66	181.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008690001-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
008690001-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_FEW_DIFFS
008690001-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008690001-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008690001-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
008690001-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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 008690001-04

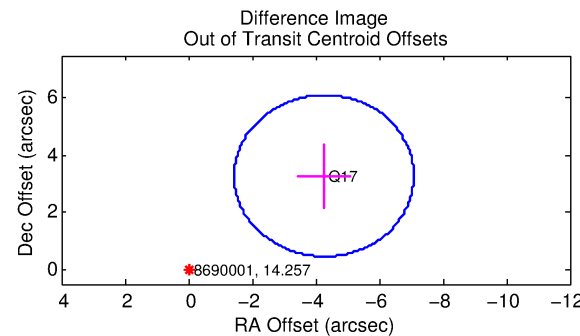
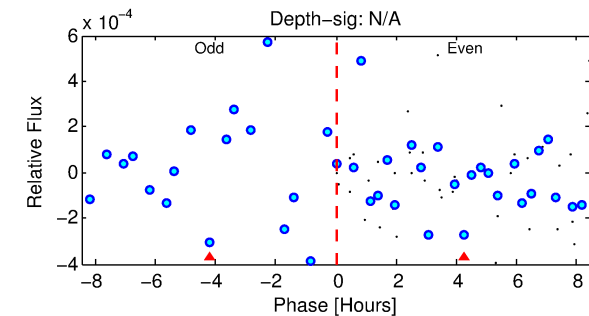
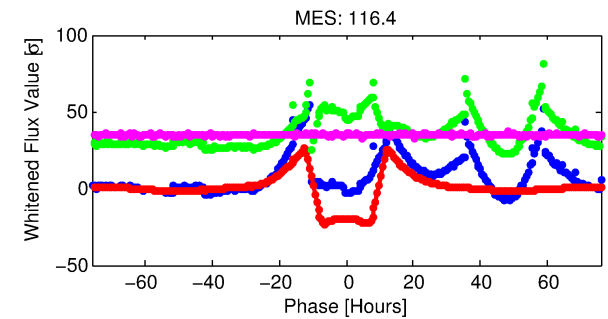
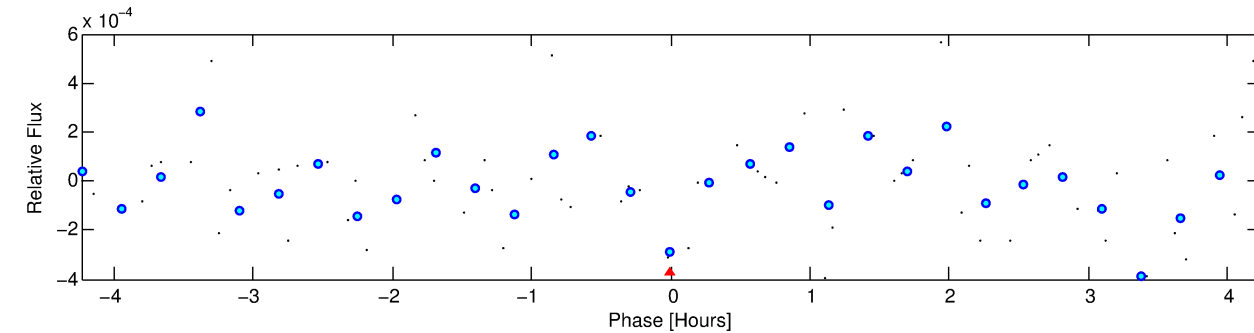
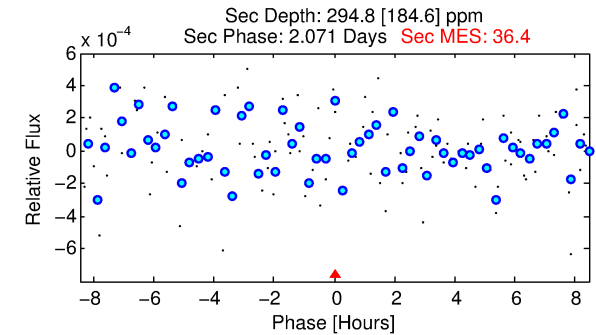
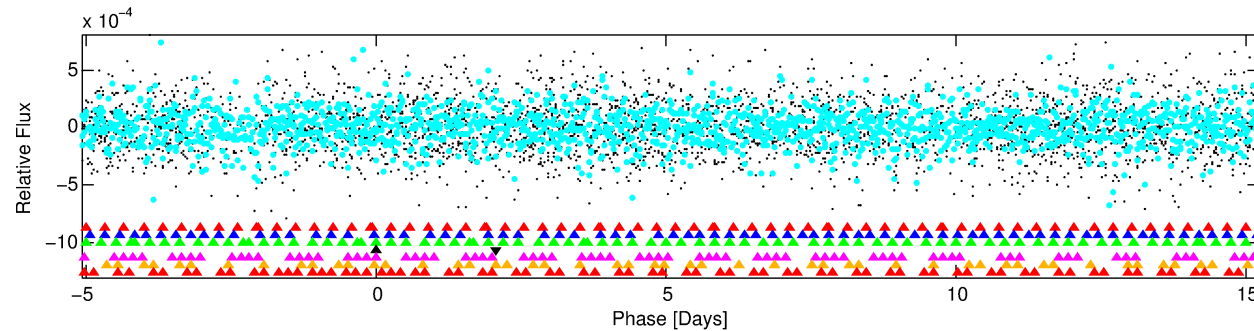
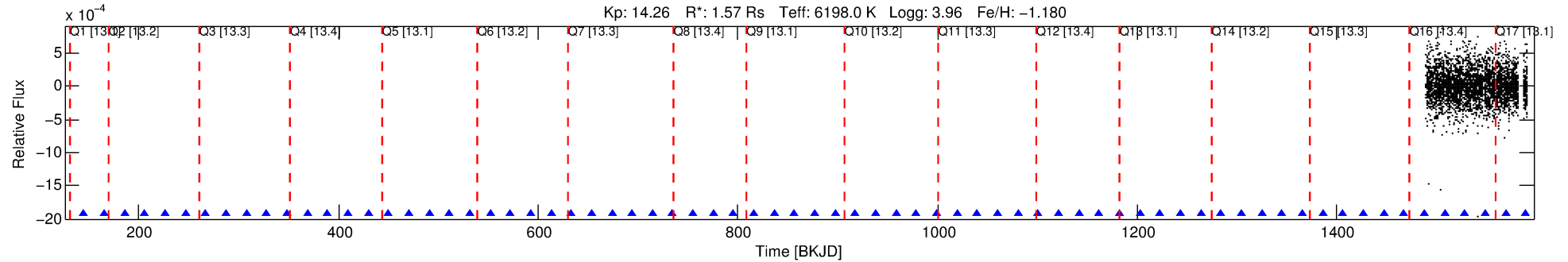
No Significant Match Found

DV One-Page Summary

KIC: 8690001 Candidate: 4 of 7 Period: 20.341 d

KOI: K07075 Corr: No Ephemeris Match

Kp: 14.26 R*: 1.57 Rs Teff: 6198.0 K Logg: 3.96 Fe/H: -1.180



TPS TCE Results:

Period = 20.34065 d
Epoch = 145.0040 BKJD

DV fit results are unavailable

DV Diagnostic Results:

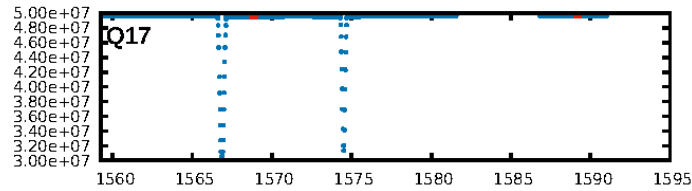
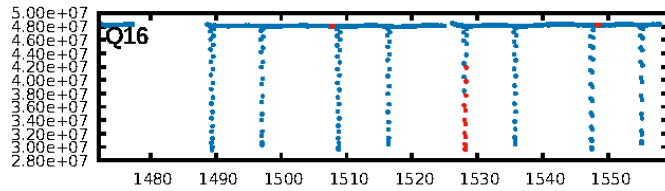
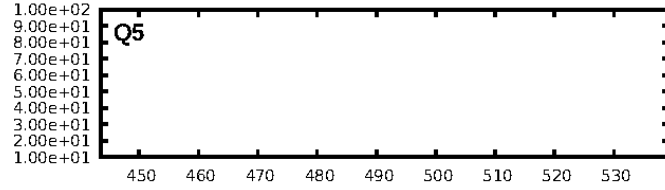
ShortPeriod-sig: 63.9% [0.91σ]
LongPeriod-sig: 100.0% [16.91σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 16.33

Centroid-sig: N/A
Centroid-so: 7.715 arcsec [0.53σ]
OotOffset-rm: 5.384 arcsec [5.72σ]
KicOffset-rm: 5.485 arcsec [5.95σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

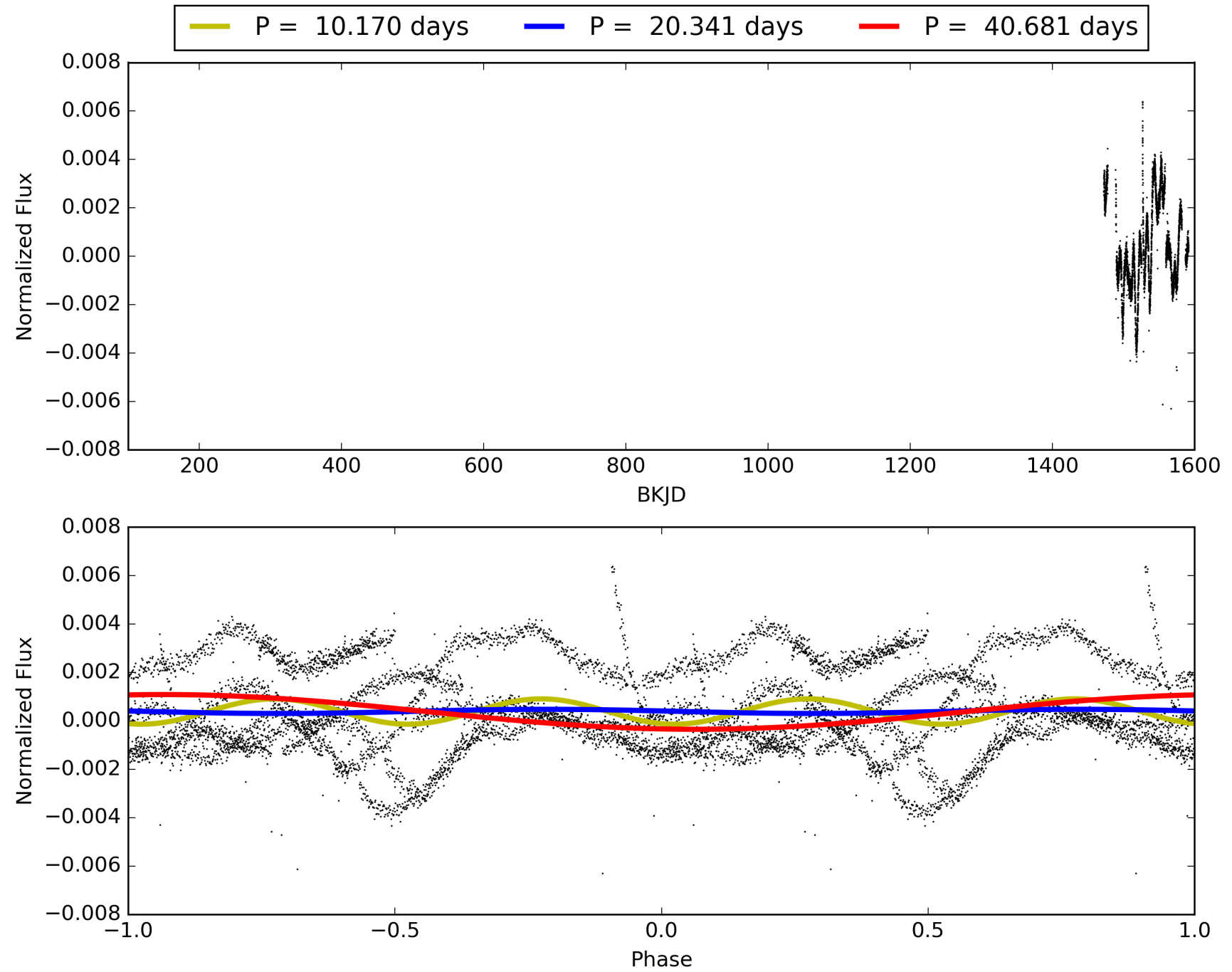
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 17:11:36 Z

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

TCE 008690001-04, PDC Light Curves

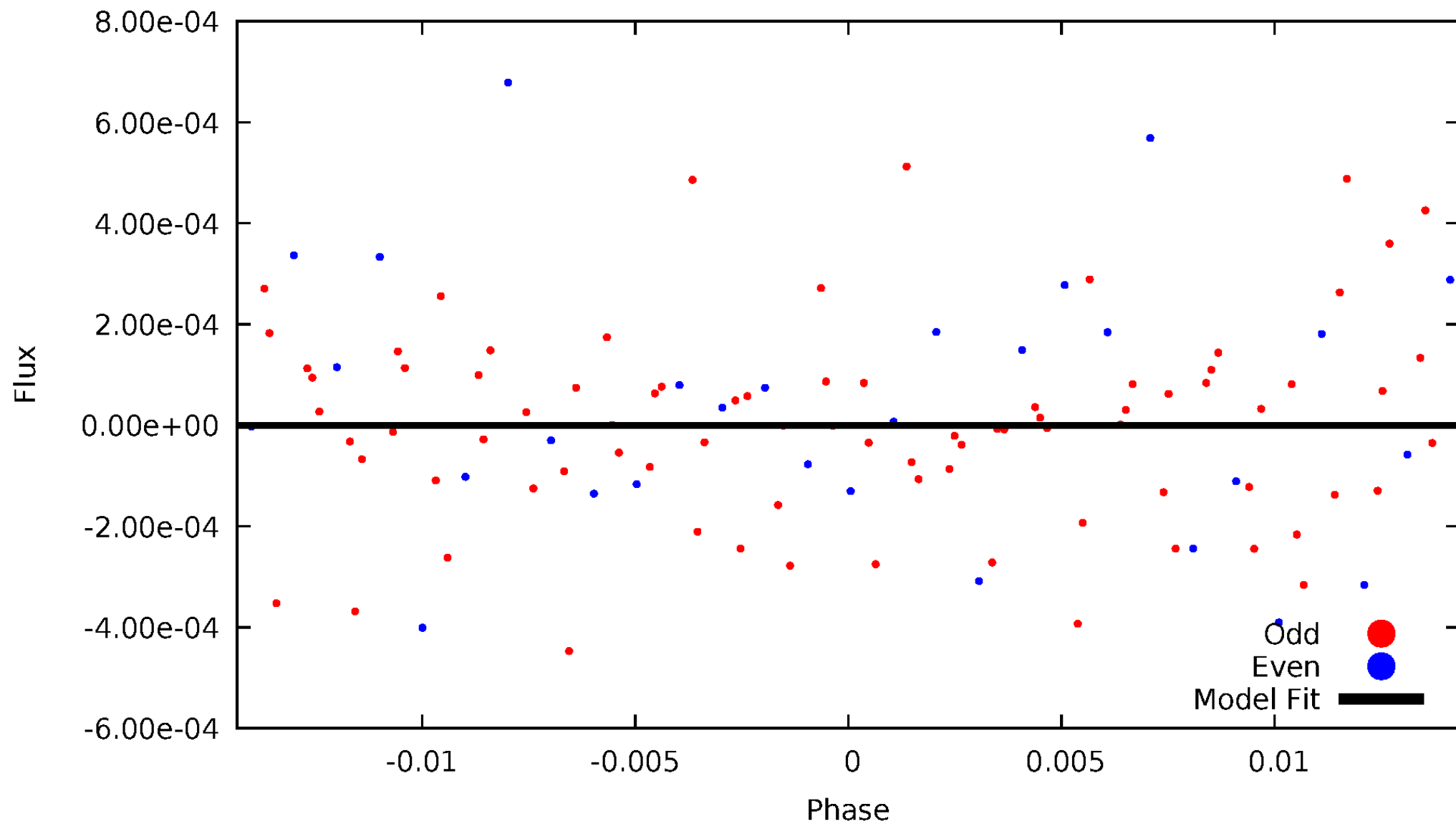


TCE 008690001-04



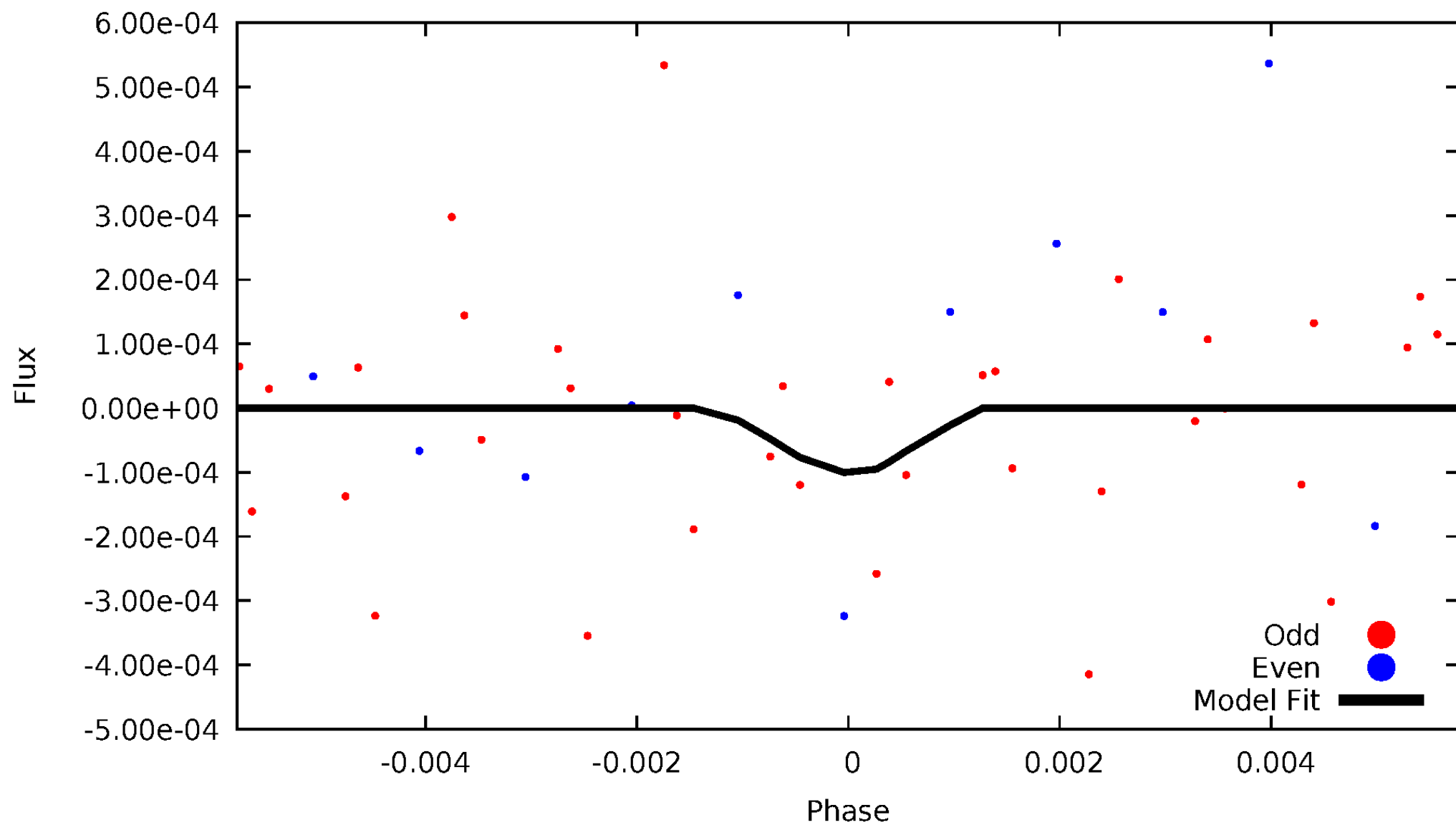
DV Odd/Even

TCE 008690001-04



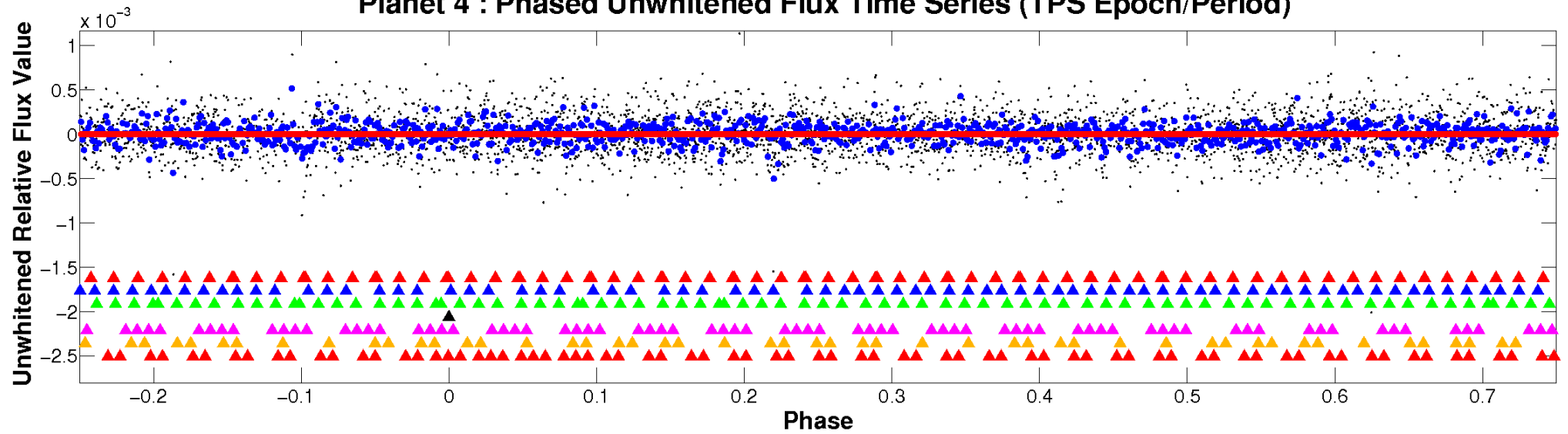
ALT Odd/Even

TCE 008690001-04

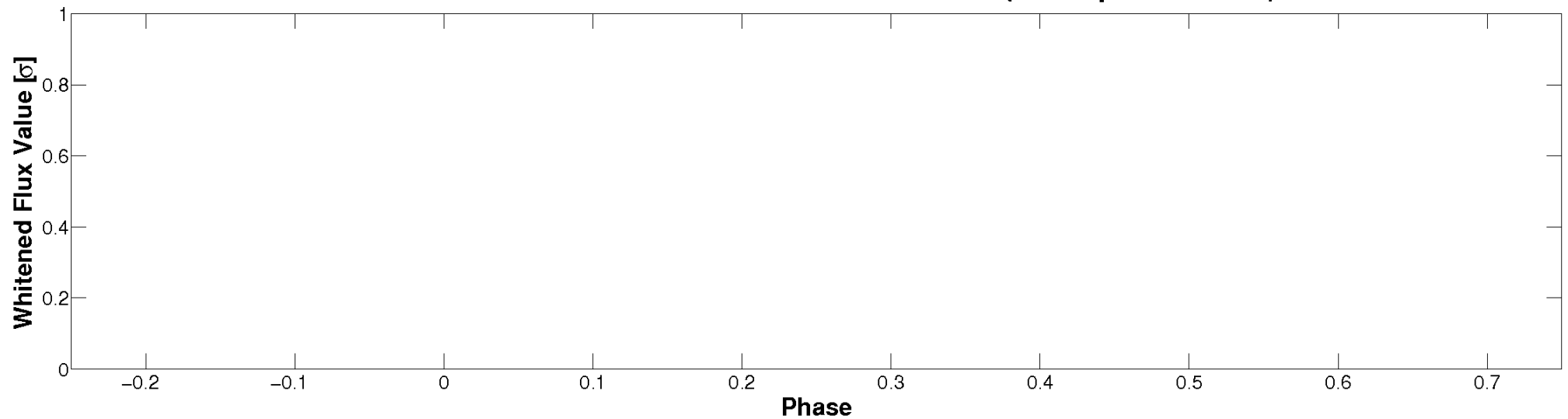


Non-Whitened Vs. Whitened Light Curve

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

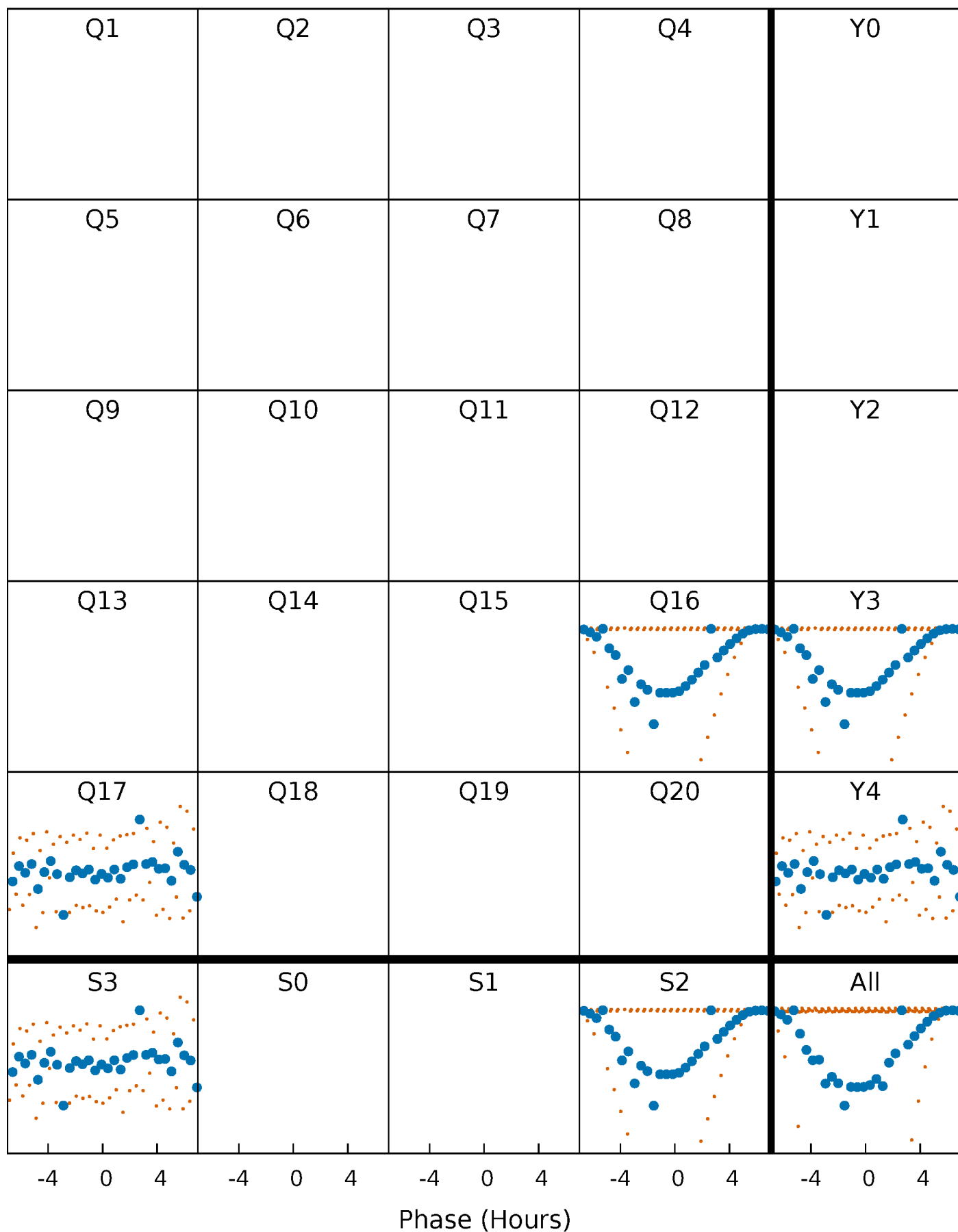


Planet 4 : Phased Whitened Flux Time Series (TPS Epoch/Period)



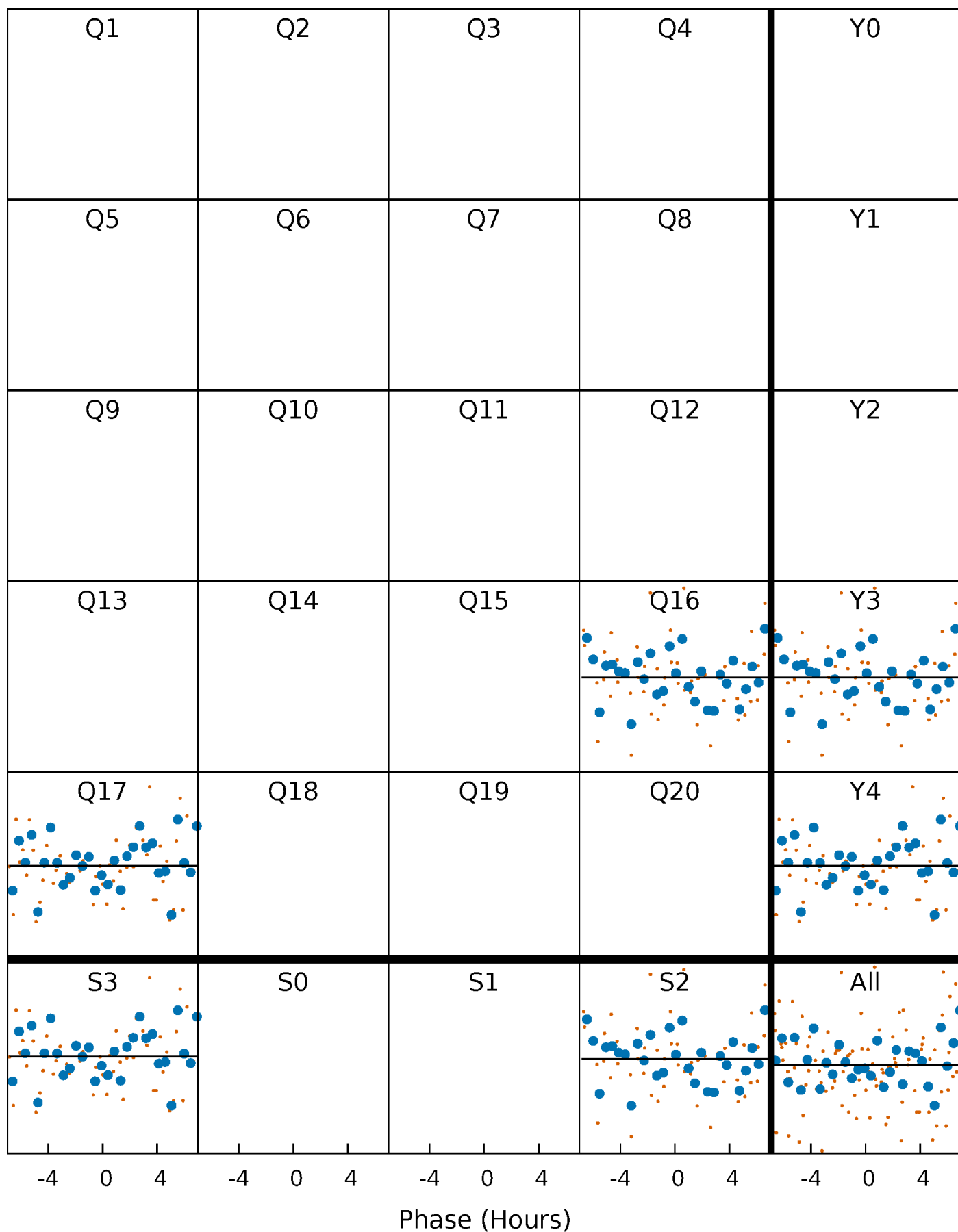
PDC Quarter-Phased Transit Curves

TCE 008690001-04 P= 20.340649 Days $T_0=145.003955$ (BKJD)



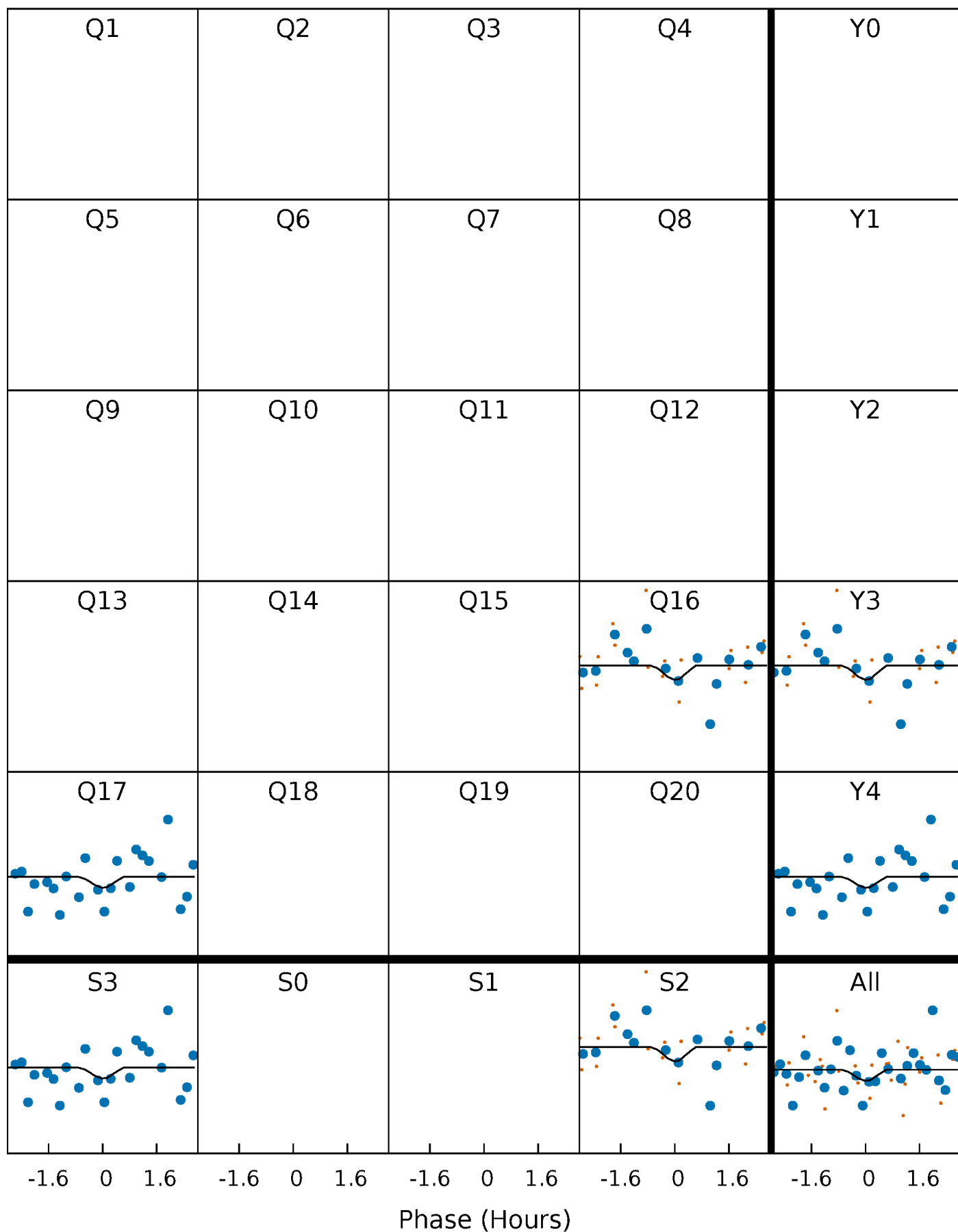
DV Quarter-Phased Transit Curves

TCE 008690001-04 P= 20.340649 Days $T_0=145.003955$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

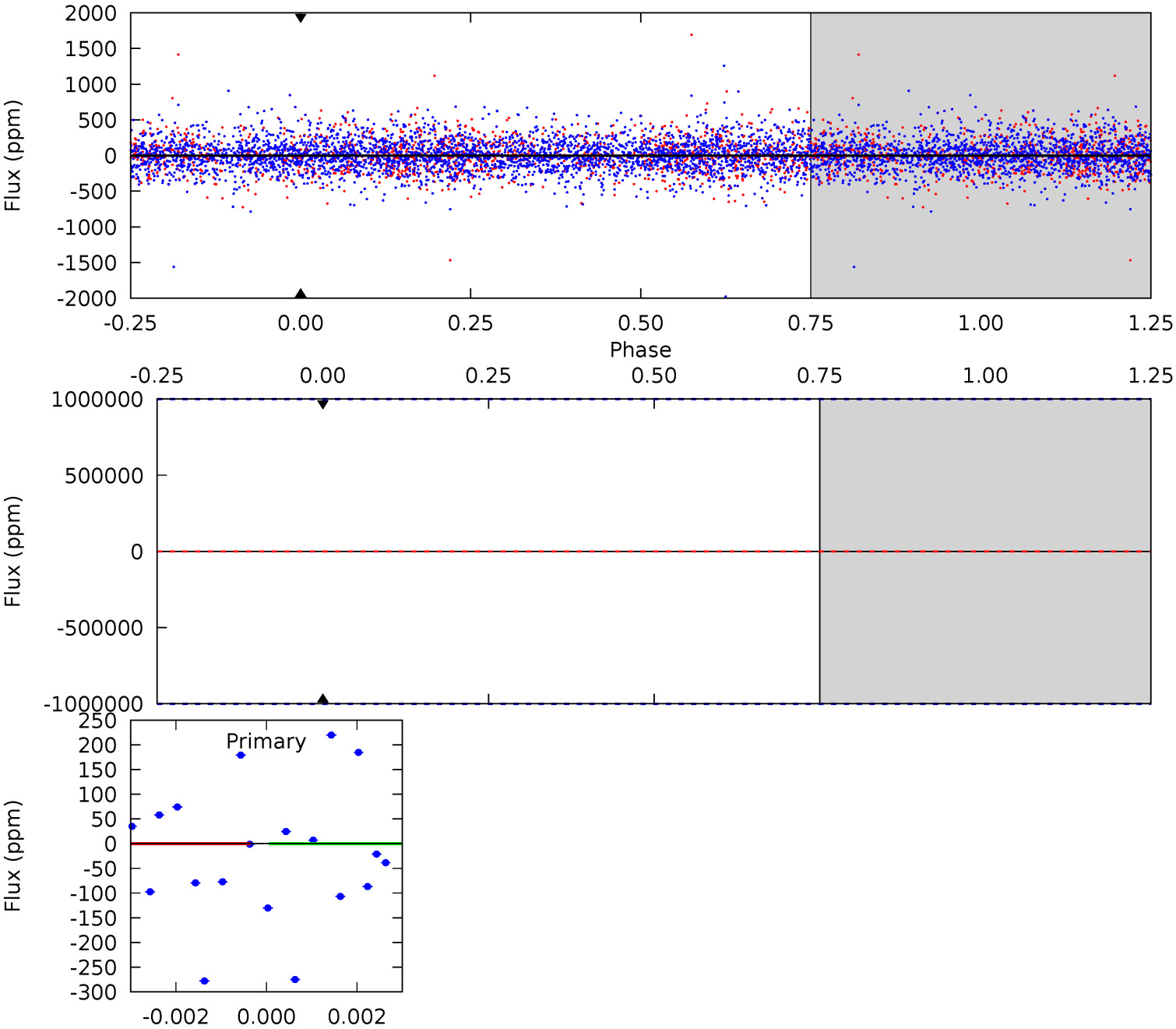
TCE 008690001-04 P= 20.340649 Days $T_0=145.067195$ (BKJD)



DV Model-Shift Uniqueness Test

008690001-04, P = 20.340649 Days, E = 145.003955 Days

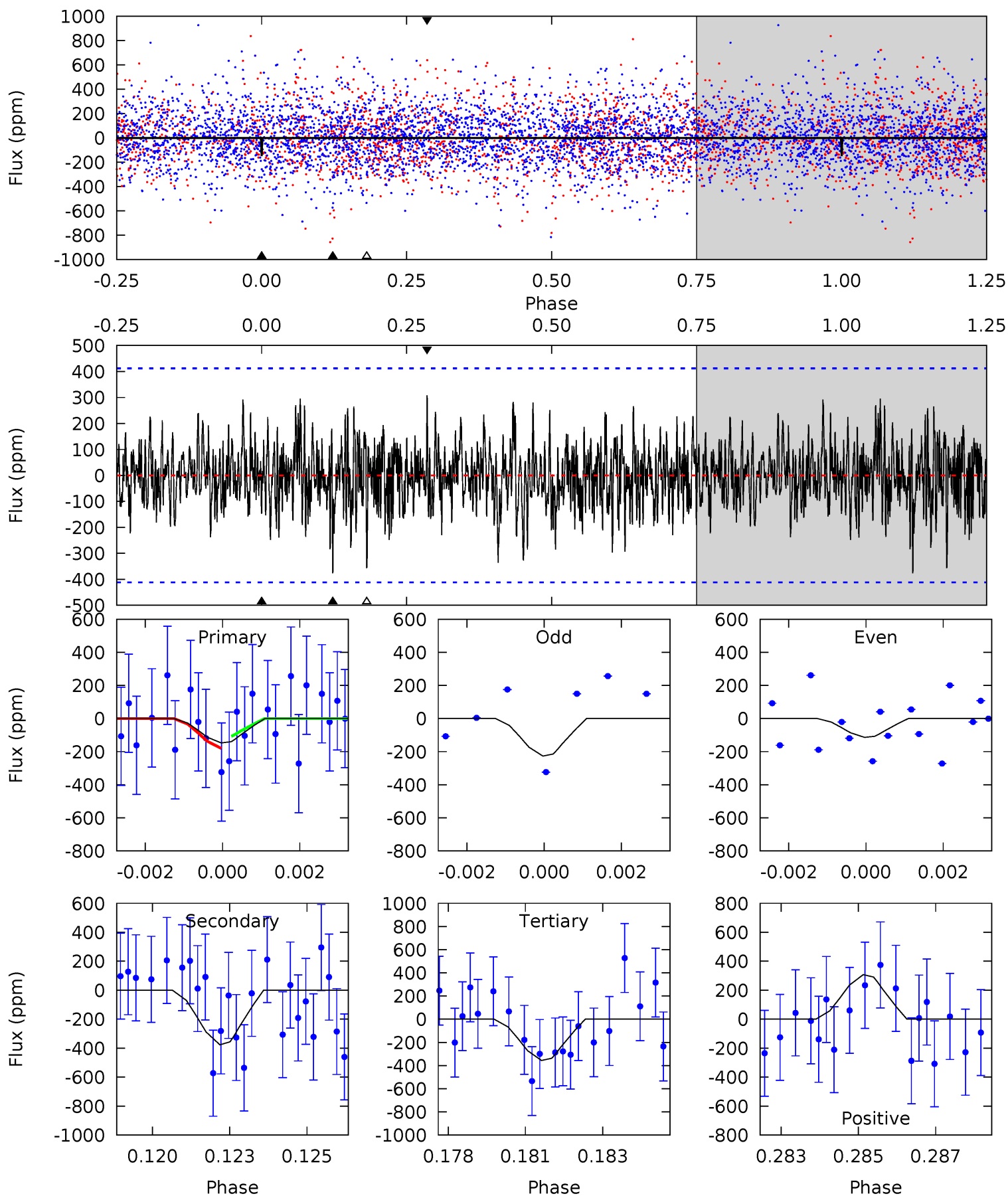
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008690001-04, P = 20.340649 Days, E = 145.067195 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.90	4.85	4.59	3.96	5.30	3.05	1.31	-2.69	-2.06	0.26	0.89	0.63	0.76	0.45	0.47



Stellar Parameters For KIC 008690001

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6198^{+204}_{-204}	$3.960^{+0.570}_{-0.190}$	$-1.180^{+0.350}_{-0.250}$	$1.567^{+0.509}_{-0.764}$	$0.817^{+0.078}_{-0.062}$	$0.299^{+1.878}_{-0.159}$
	+3%/-3%	+14%/-5%	+30%/-21%	+32%/-49%	+10%/-8%	+629%/-53%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008690001-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$14.80^{+15.53}_{-9.55}$	1270^{+115}_{-196}	-5117^{+21747}_{-11712}	$-172.807^{+7068.743}_{-6645.030}$
Alt.	-377 ± 78	$11.00^{+12.03}_{-7.90}$	1275^{+122}_{-183}	3701^{+2268}_{-759}	32^{+352}_{-25}

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

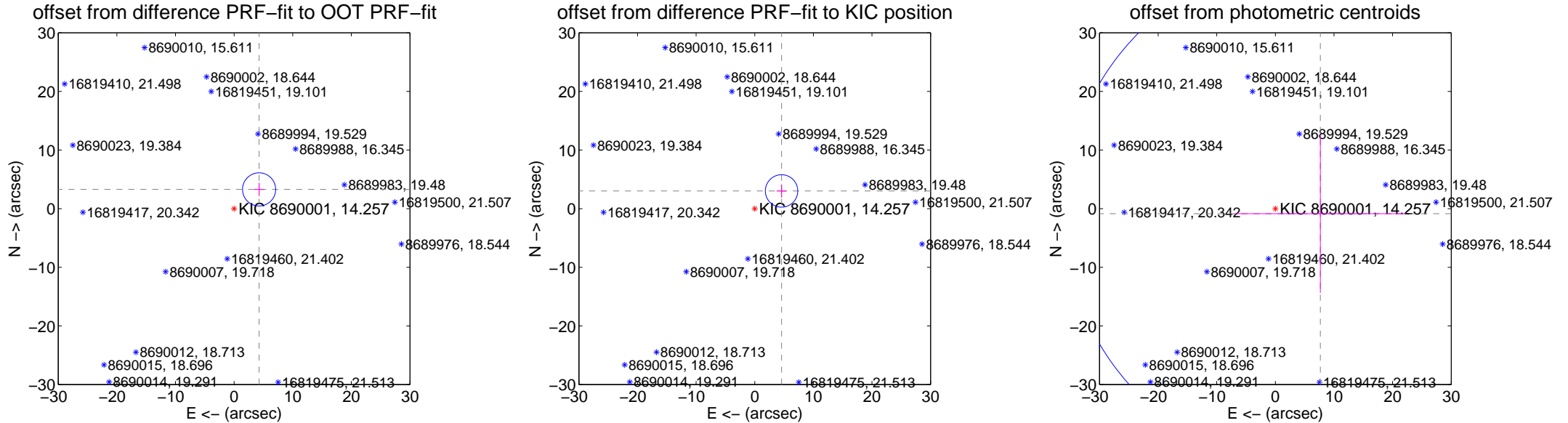
DV Centroid Data

Supplemental centroid analysis for 008690001-04. Kepler magnitude: 14.26. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.41 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.384 ± 0.942	5.72	-4.263 ± 0.828	3.288 ± 1.107
PRF-fit source offset from KIC position	5.485 ± 0.922	5.95	-4.576 ± 0.828	3.023 ± 1.107
photometric centroid source offset	7.72 ± 14.58	0.53	-7.67 ± 14.59	-0.86 ± 13.51



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.



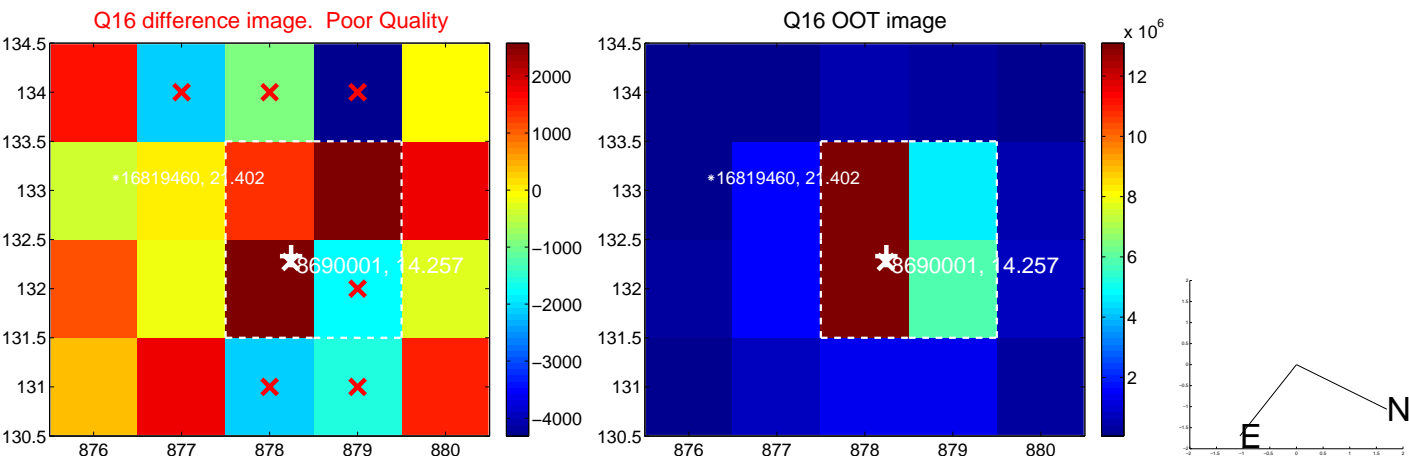
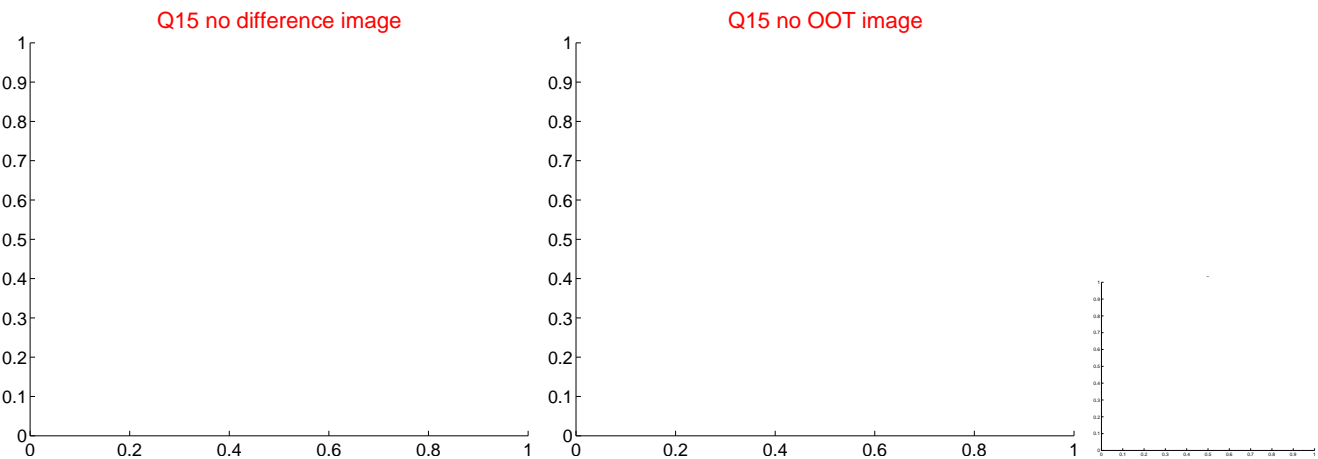
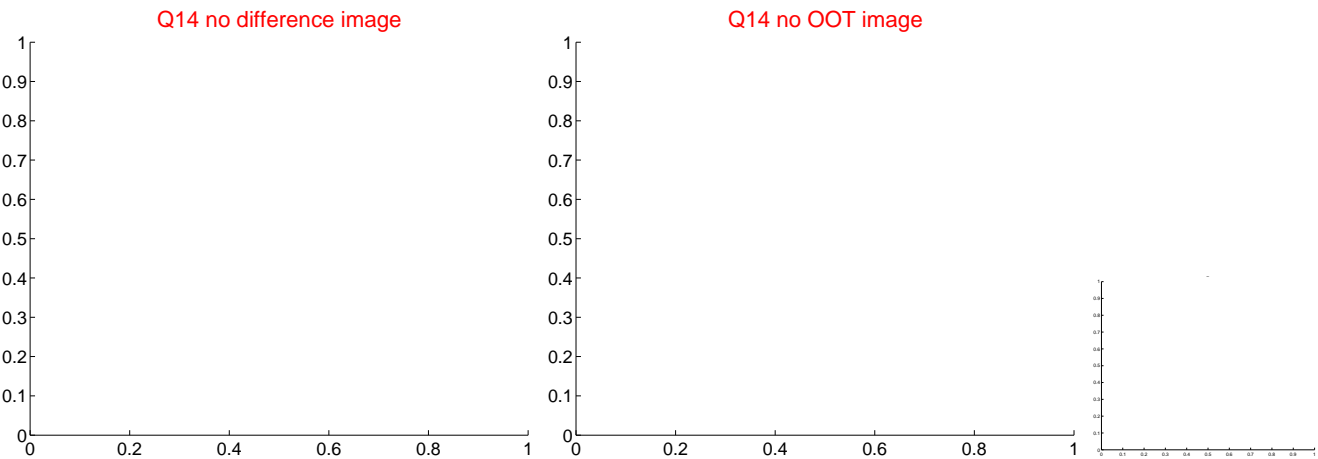
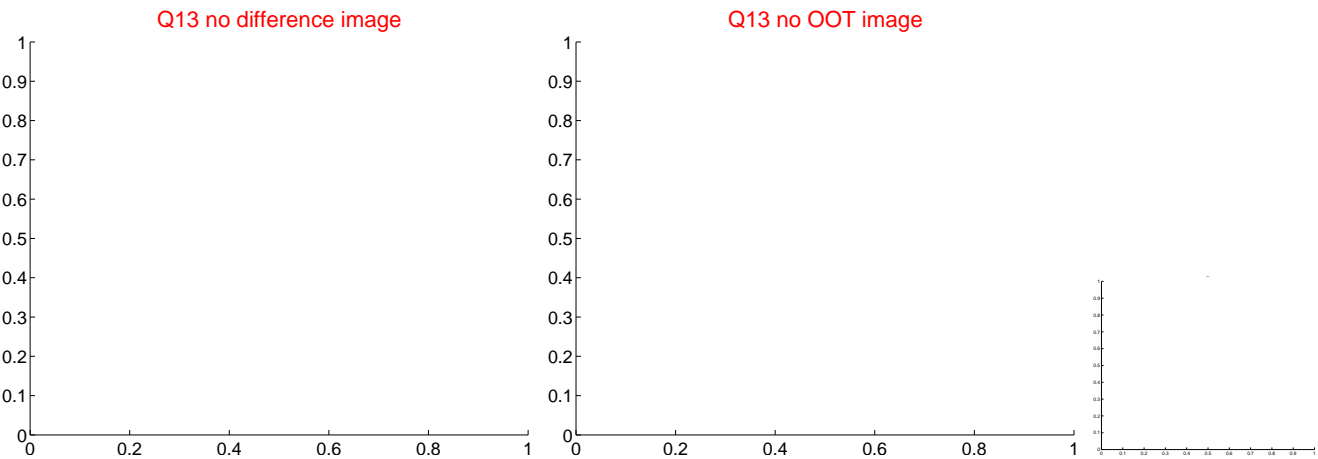
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



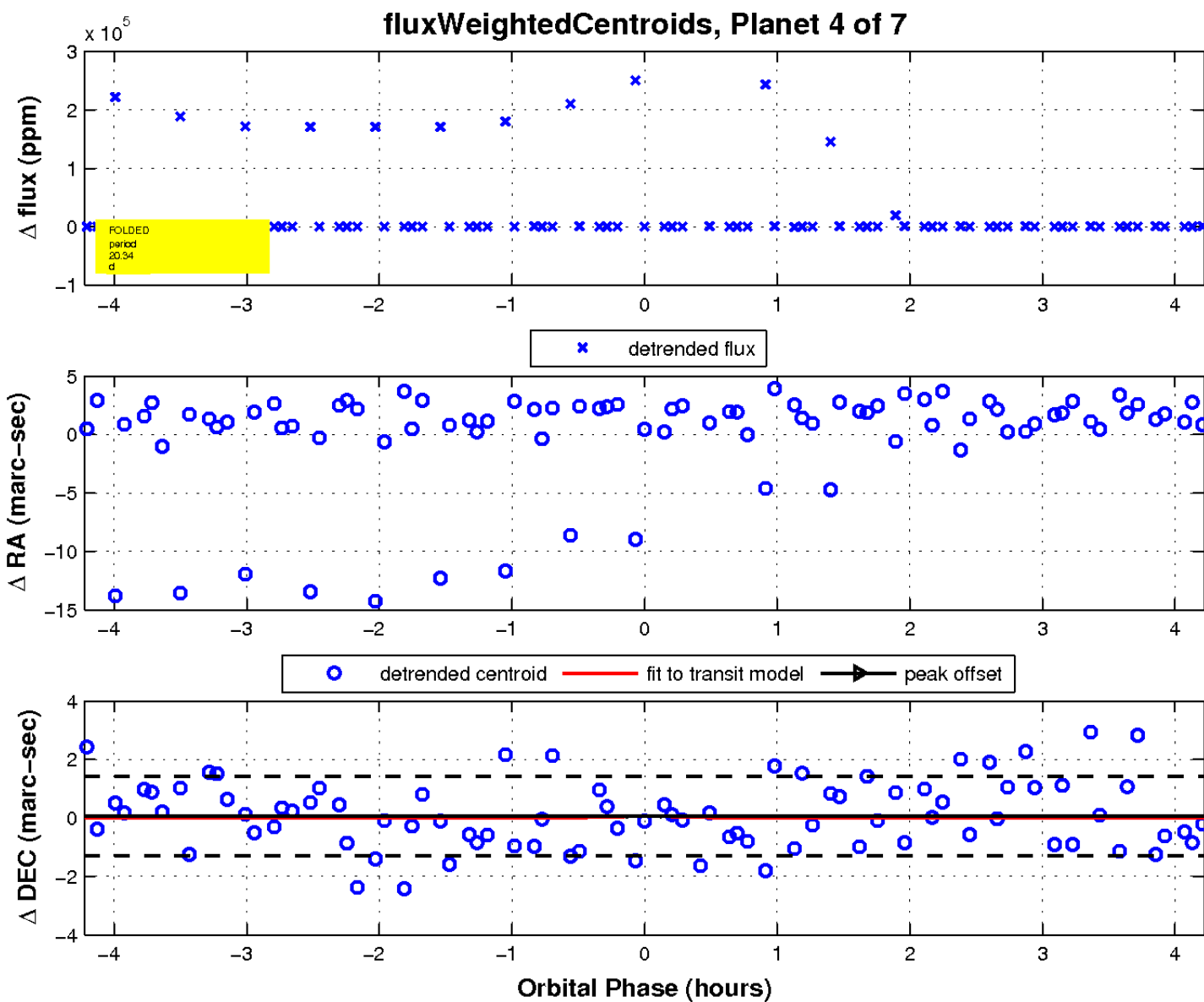
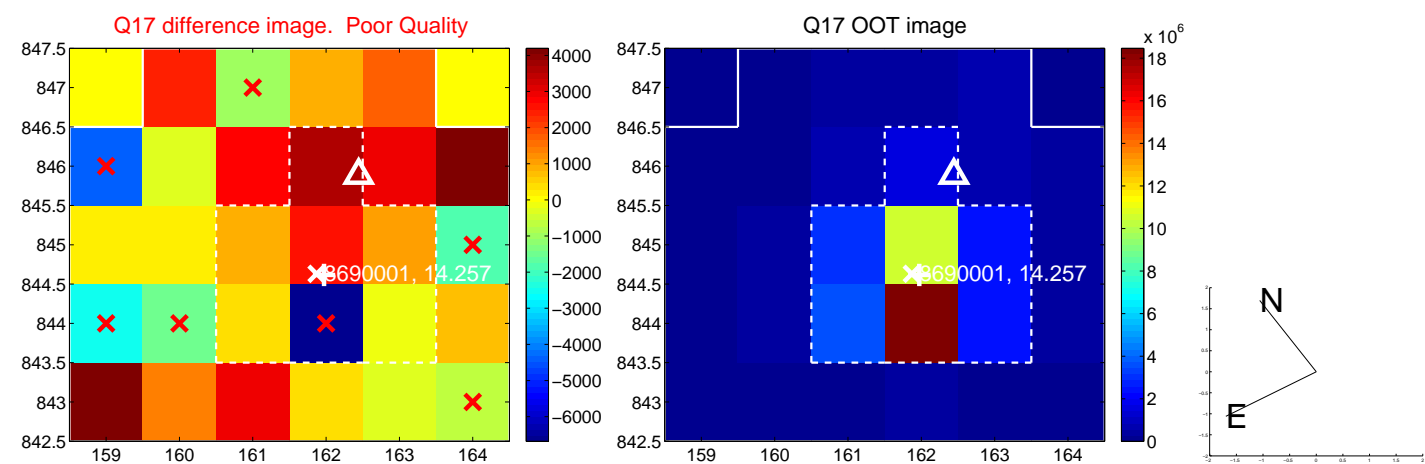
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

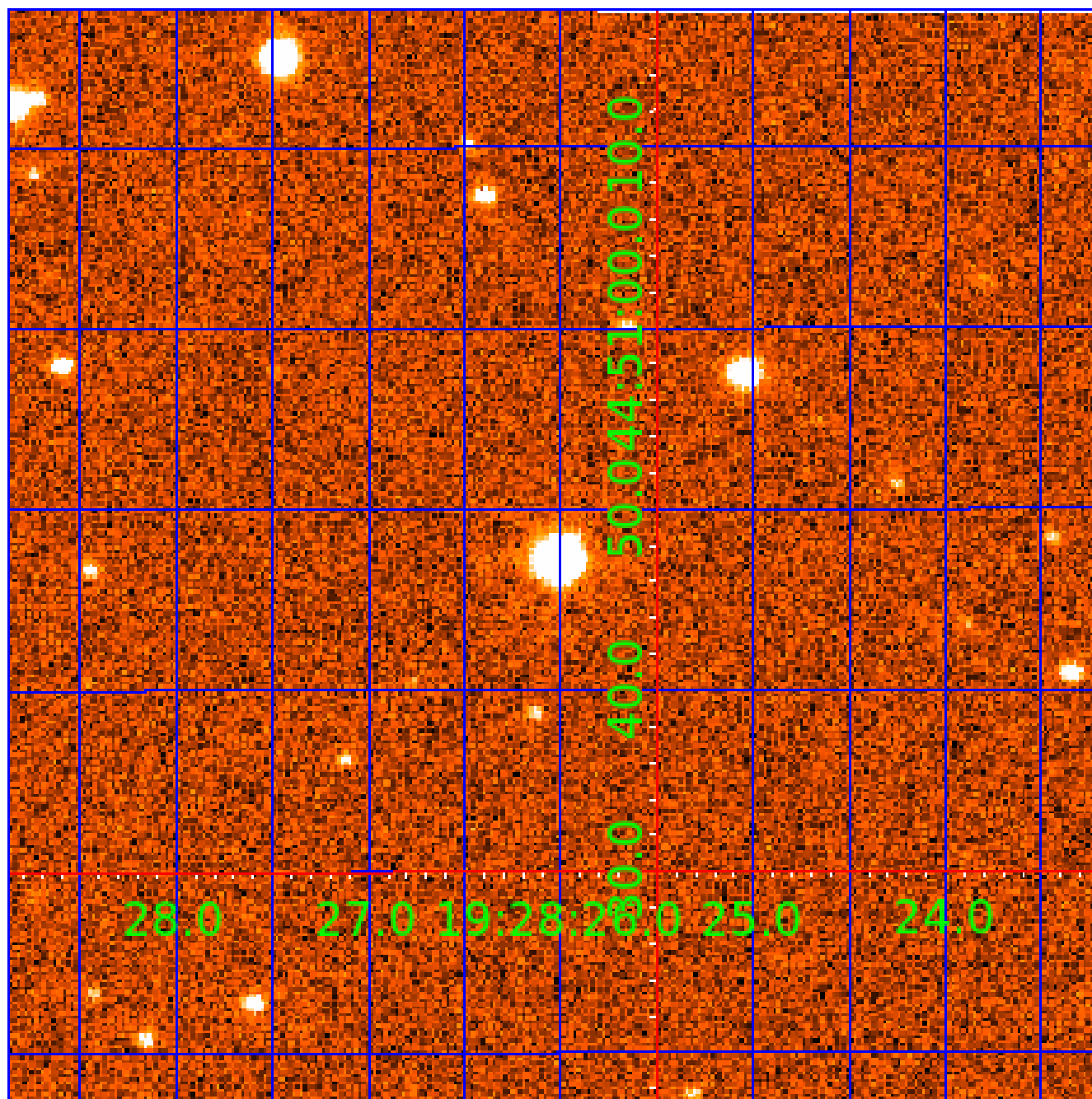


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008690001

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})
008690001-01	OBS	7075.01	19.356050	134.501105	384523.0	7.500	7491.8	-1.0	1.57	6198	81.14	186.58
008690001-02	OBS	No	19.359680	141.884855	369017.6	9.273	7202.6	3789.2	1.57	6198	106.05	186.53
008690001-03	OBS	No	18.391135	148.725781	6879.5	3.000	158.5	-1.0	1.57	6198	13.08	199.74
008690001-04	OBS	No	20.340649	145.003955	6883.2	3.500	116.4	-1.0	1.57	6198	13.08	174.63
008690001-05	OBS	No	19.331511	134.339462	4635.2	27.205	106.9	39.8	1.57	6198	19.23	186.89
008690001-07	OBS	No	19.754768	146.917898	2362.6	15.000	38.5	-1.0	1.57	6198	7.66	181.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008690001-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
008690001-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_FEW_DIFFS
008690001-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008690001-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008690001-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
008690001-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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 008690001-05

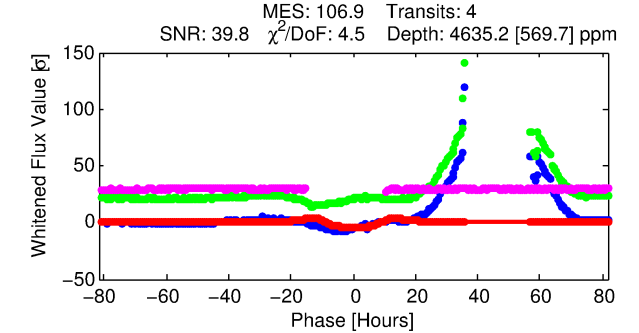
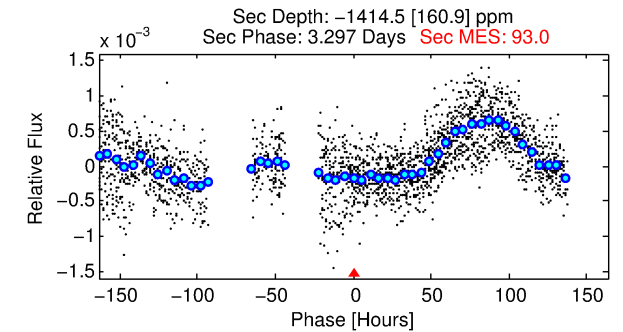
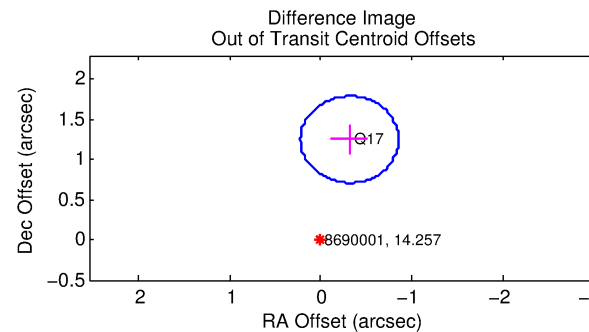
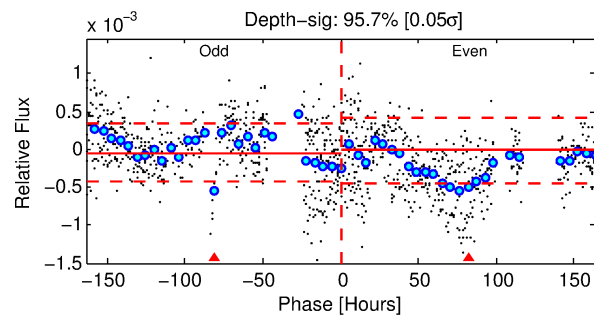
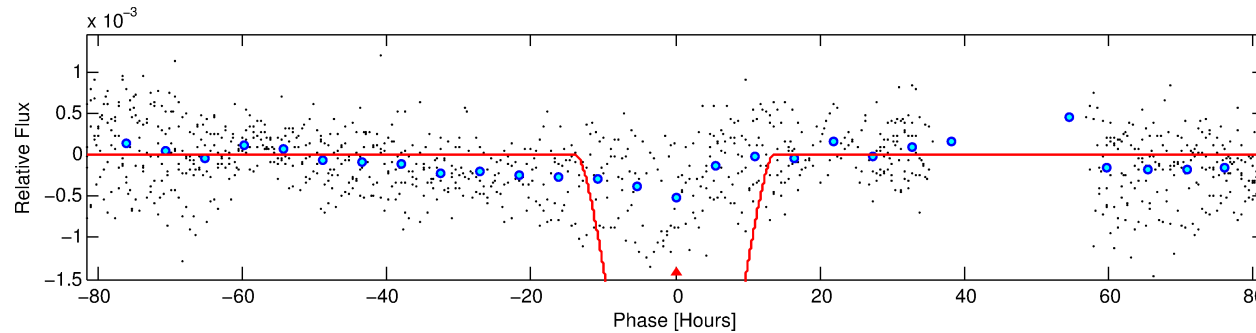
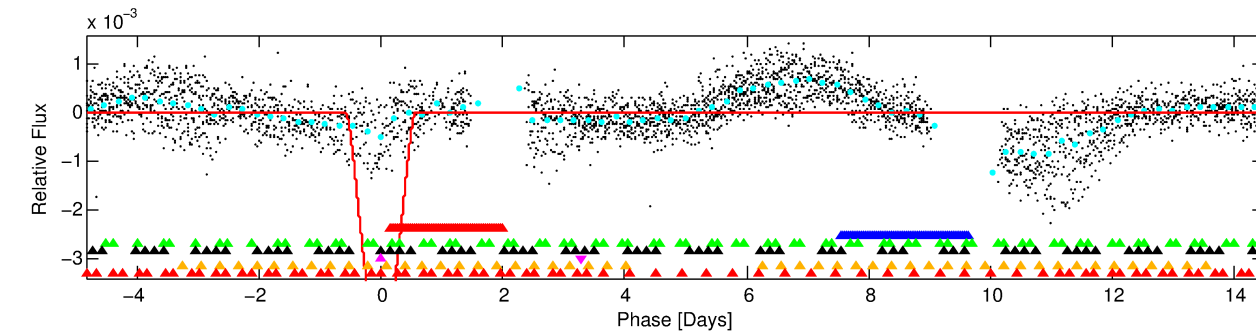
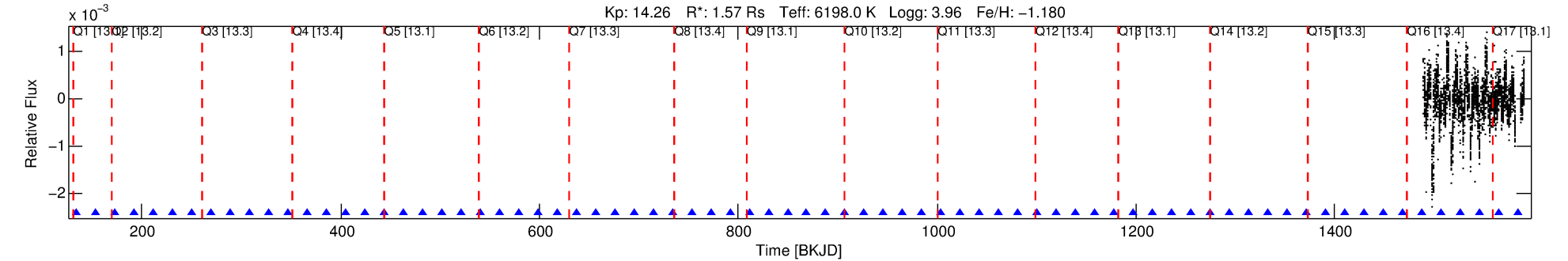
No Significant Match Found

DV One-Page Summary

KIC: 8690001 Candidate: 5 of 7 Period: 19.332 d

KOI: K07075 Corr: No Ephemeris Match

Kp: 14.26 R*: 1.57 Rs Teff: 6198.0 K Logg: 3.96 Fe/H: -1.180



DV Fit Results:

Period = 19.33151 [0.00733] d
Epoch = 134.3395 [0.5405] BKJD
Rp/R* = 0.1124 [0.1031]
a/R* = 2.84 [0.37]
b = 1.00 [0.14]
Seff = 186.89 [176.17]
Teff = 943 [222] K
Rp = 19.23 [19.96] Re
a = 0.1318 [0.0718] AU
Ag = N/A
Teffp = N/A

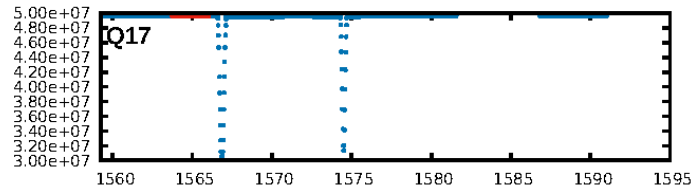
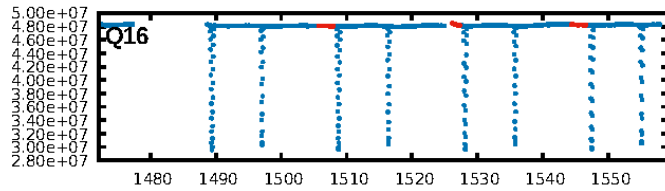
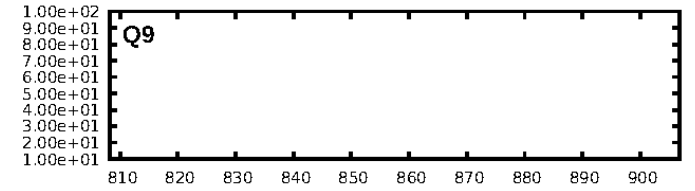
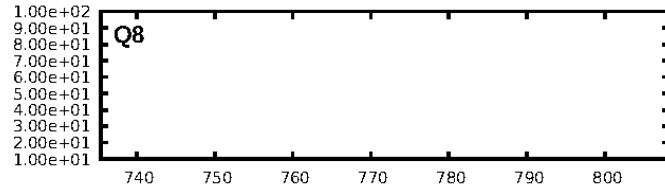
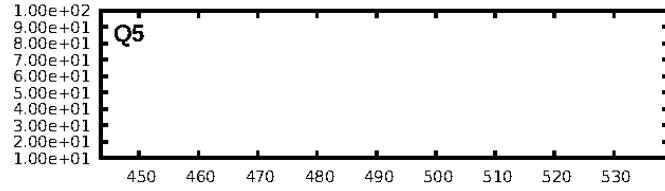
DV Diagnostic Results:

ShortPeriod-sig: 59.0% [0.82σ]
LongPeriod-sig: 1.7% [0.02σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.385
Centroid-sig: N/A
Centroid-so: 0.475 arcsec [4.26σ]
OotOffset-rm: 1.290 arcsec [7.16σ]
KicOffset-rm: 1.172 arcsec [6.34σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.00 [0/1]

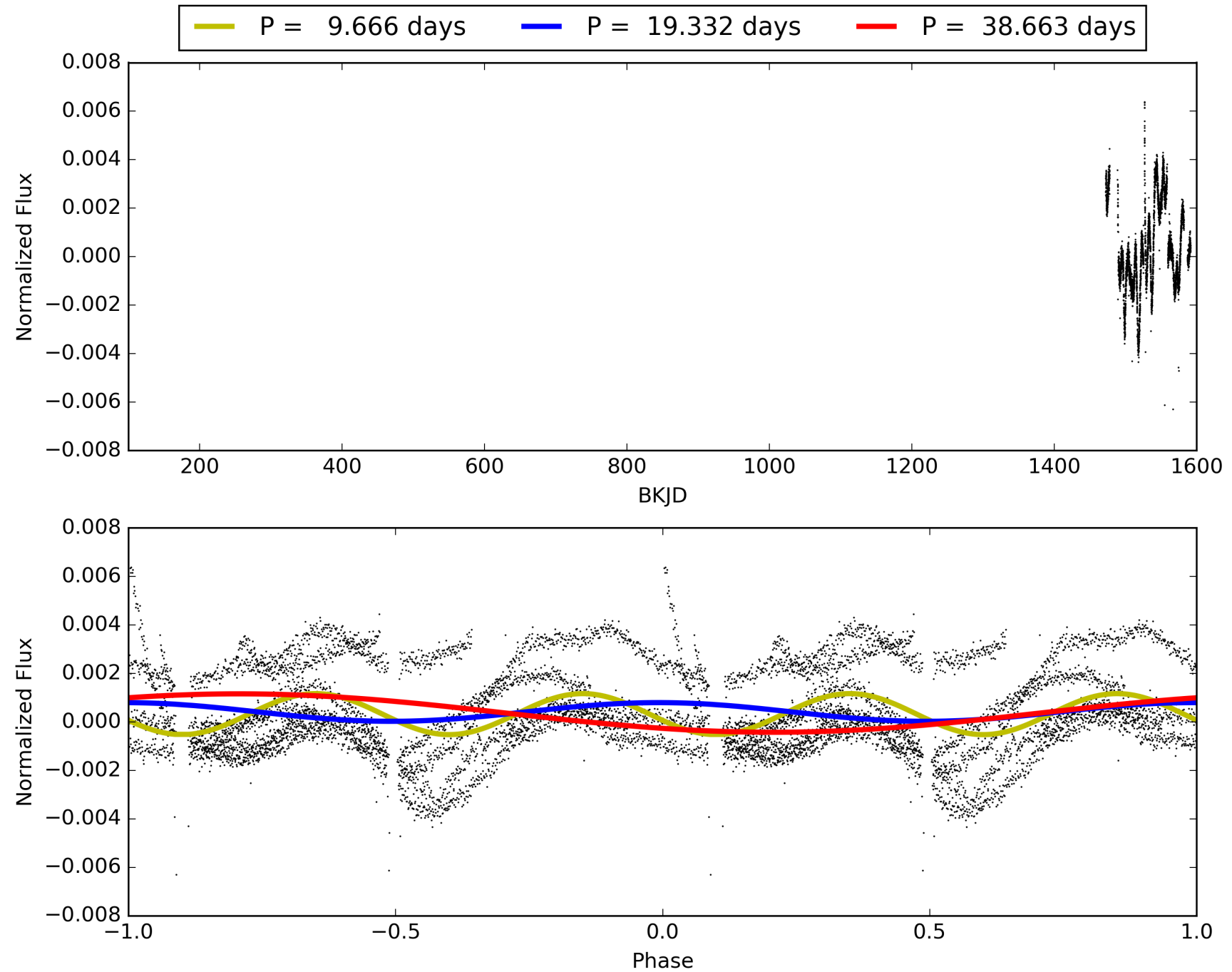
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 17:11:41 Z

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

TCE 008690001-05, PDC Light Curves

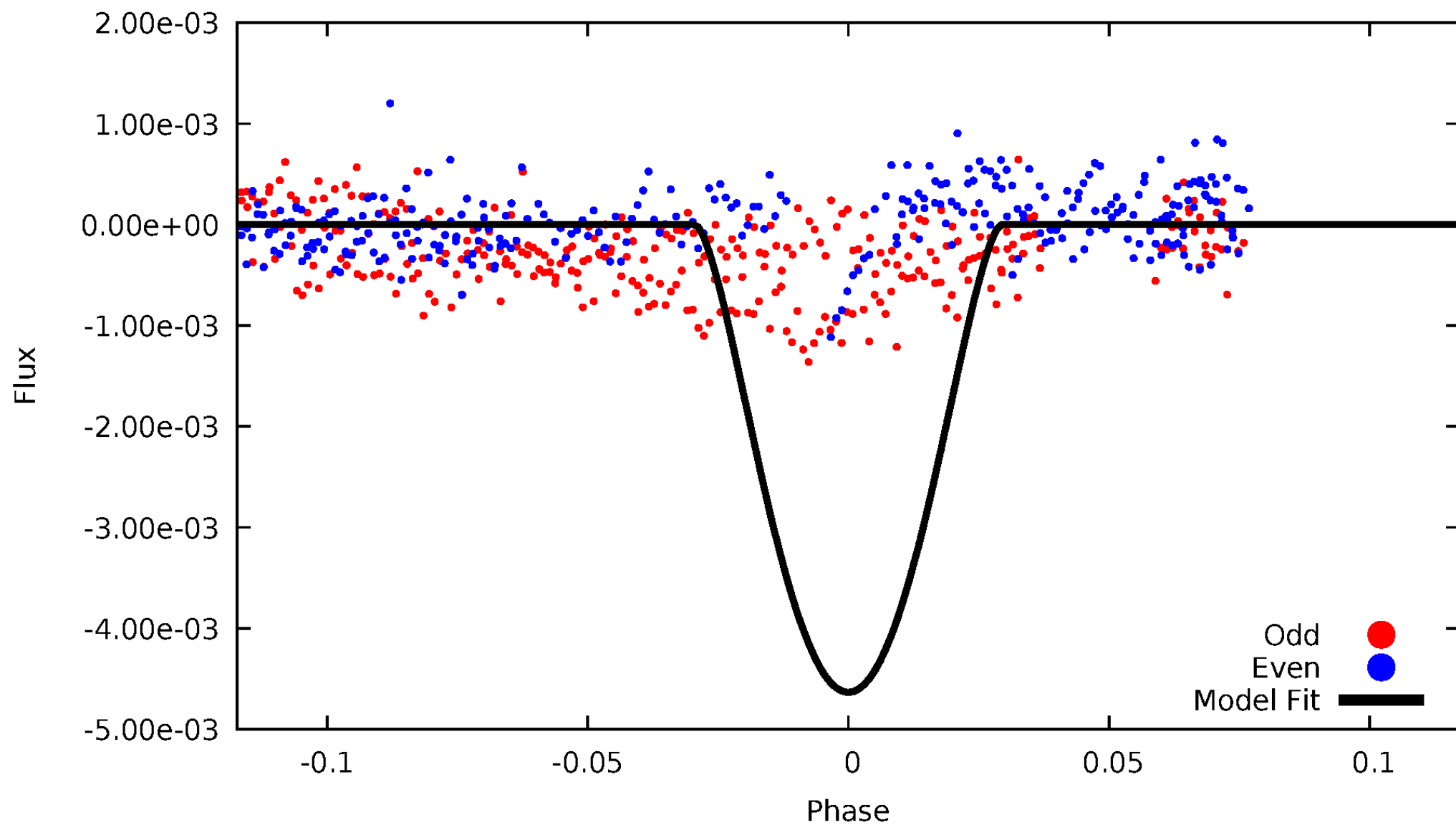


TCE 008690001-05



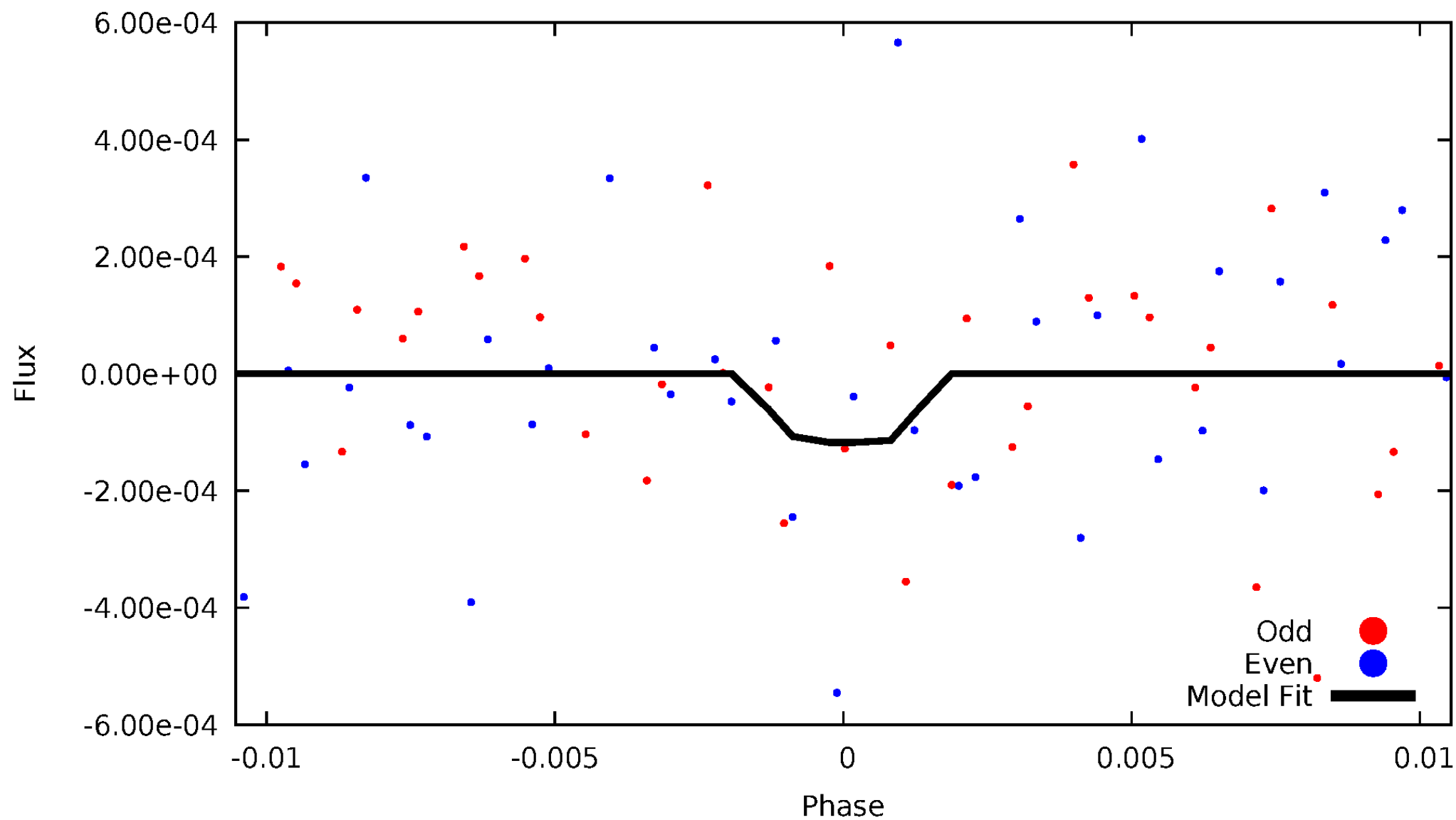
DV Odd/Even

TCE 008690001-05



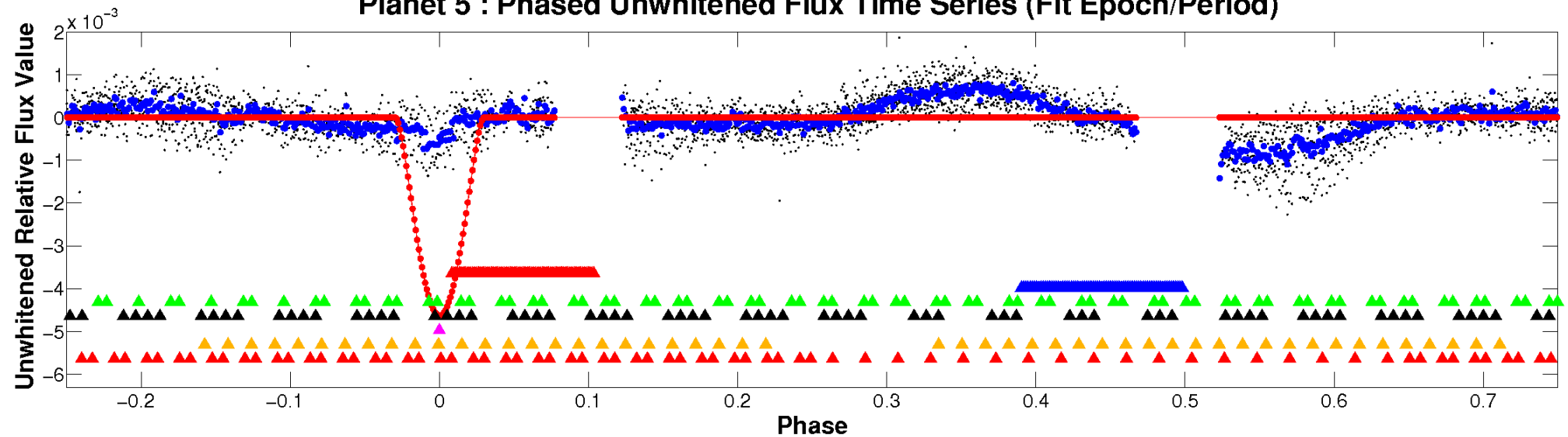
ALT Odd/Even

TCE 008690001-05

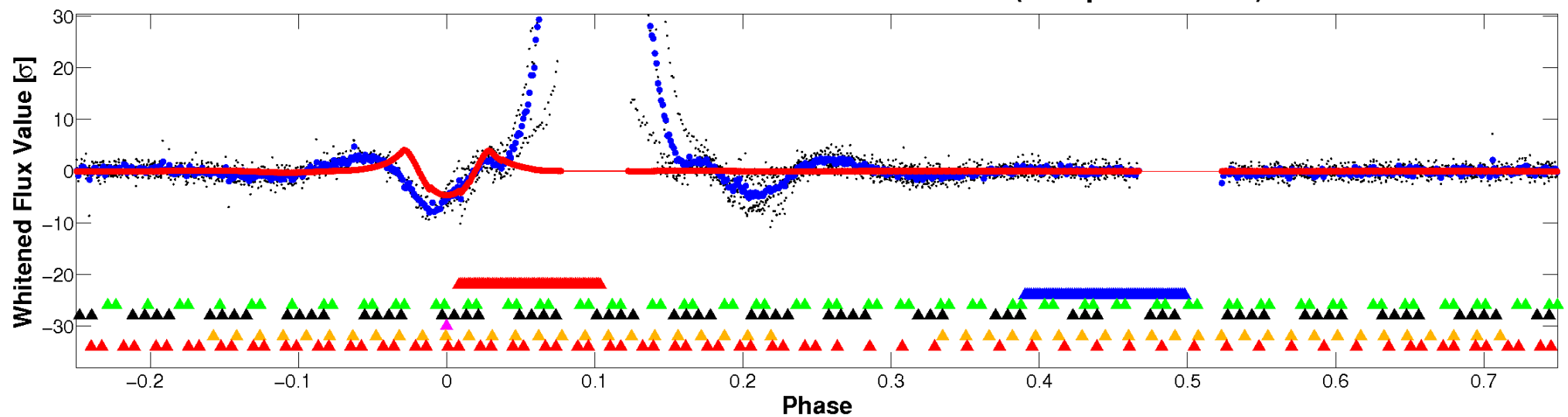


Non-Whitened Vs. Whitened Light Curve

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

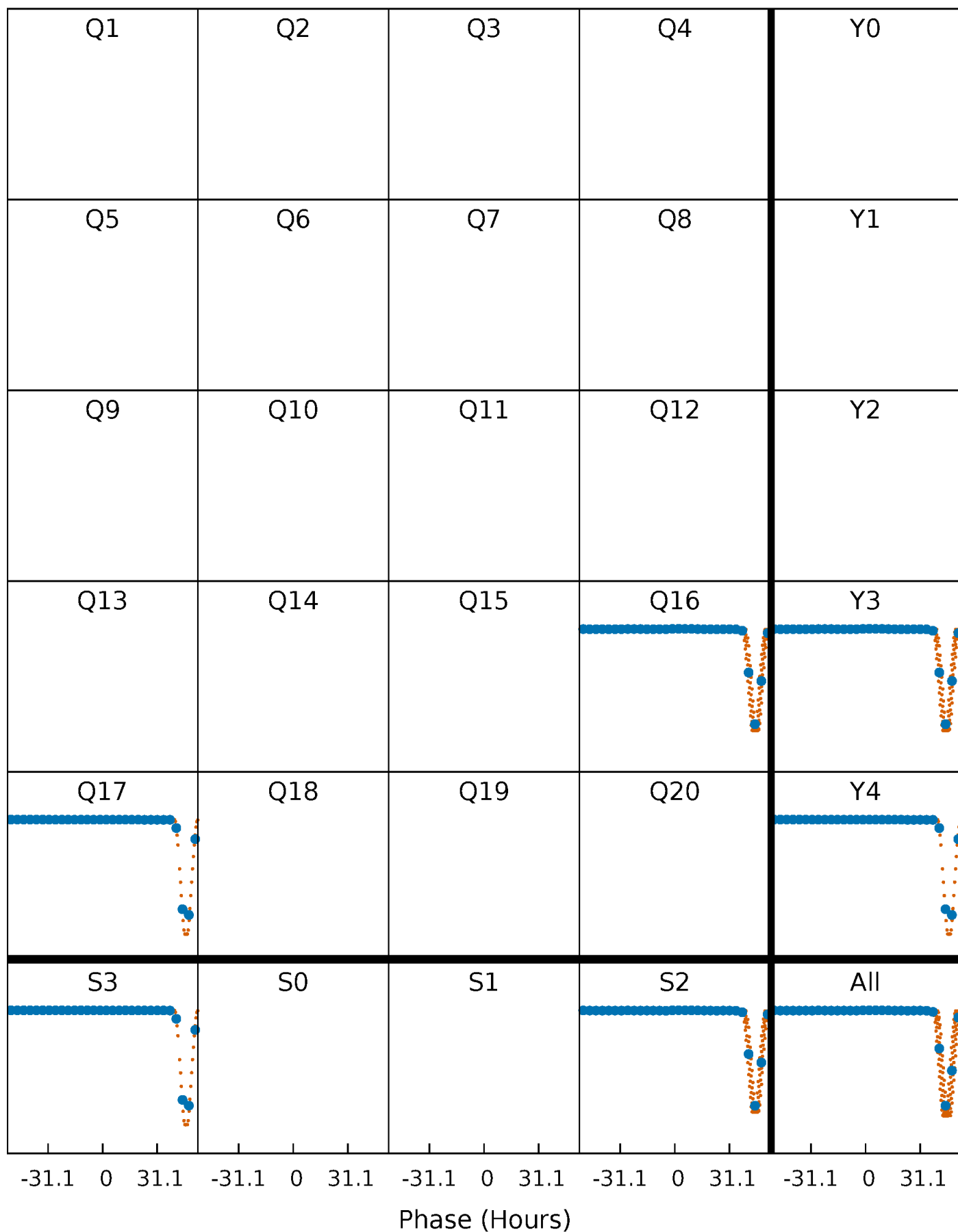


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 008690001-05 $P = 19.331511$ Days $T_0 = 134.339462$ (BKJD)



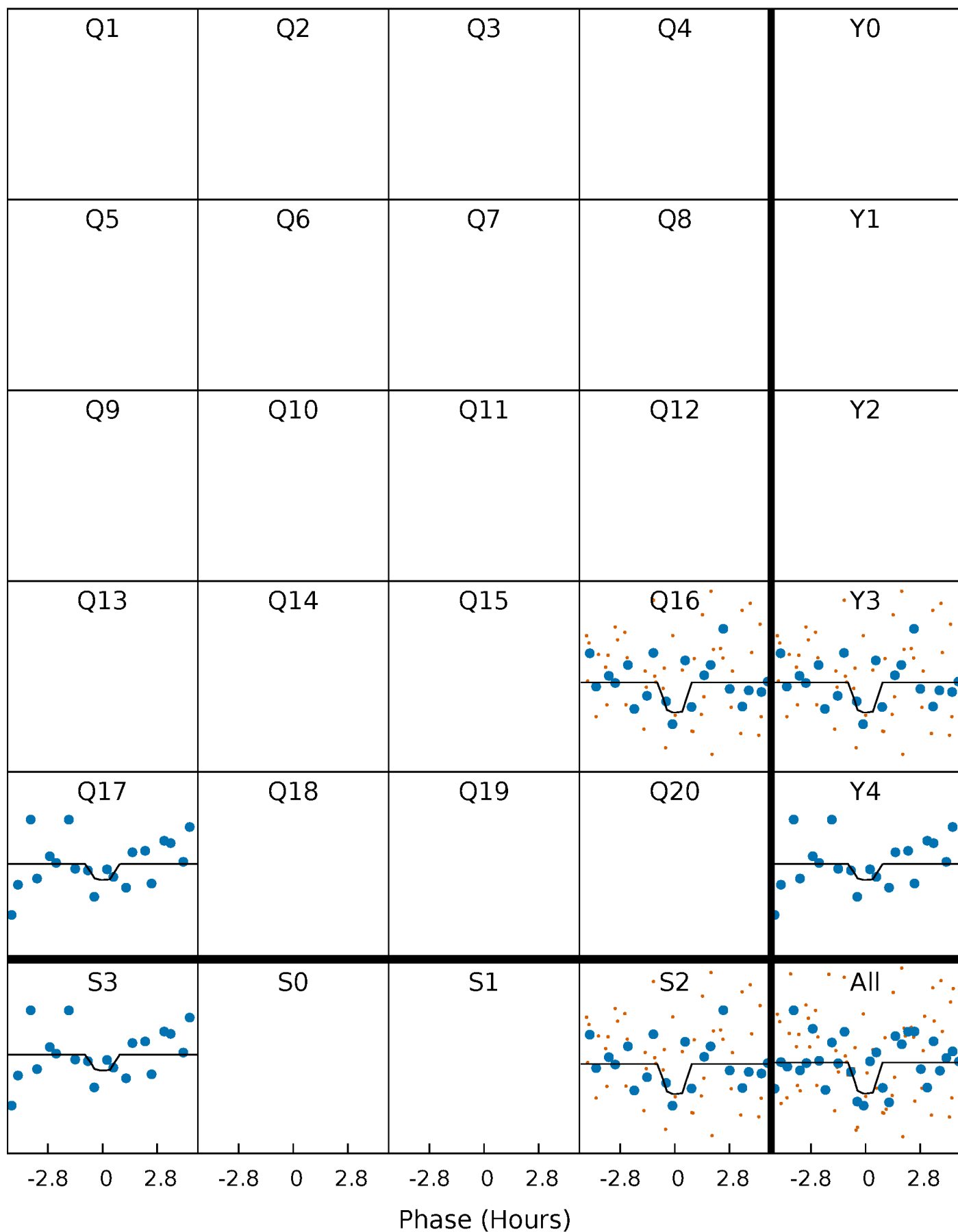
DV Quarter-Phased Transit Curves

TCE 008690001-05 P= 19.331511 Days $T_0=134.339462$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

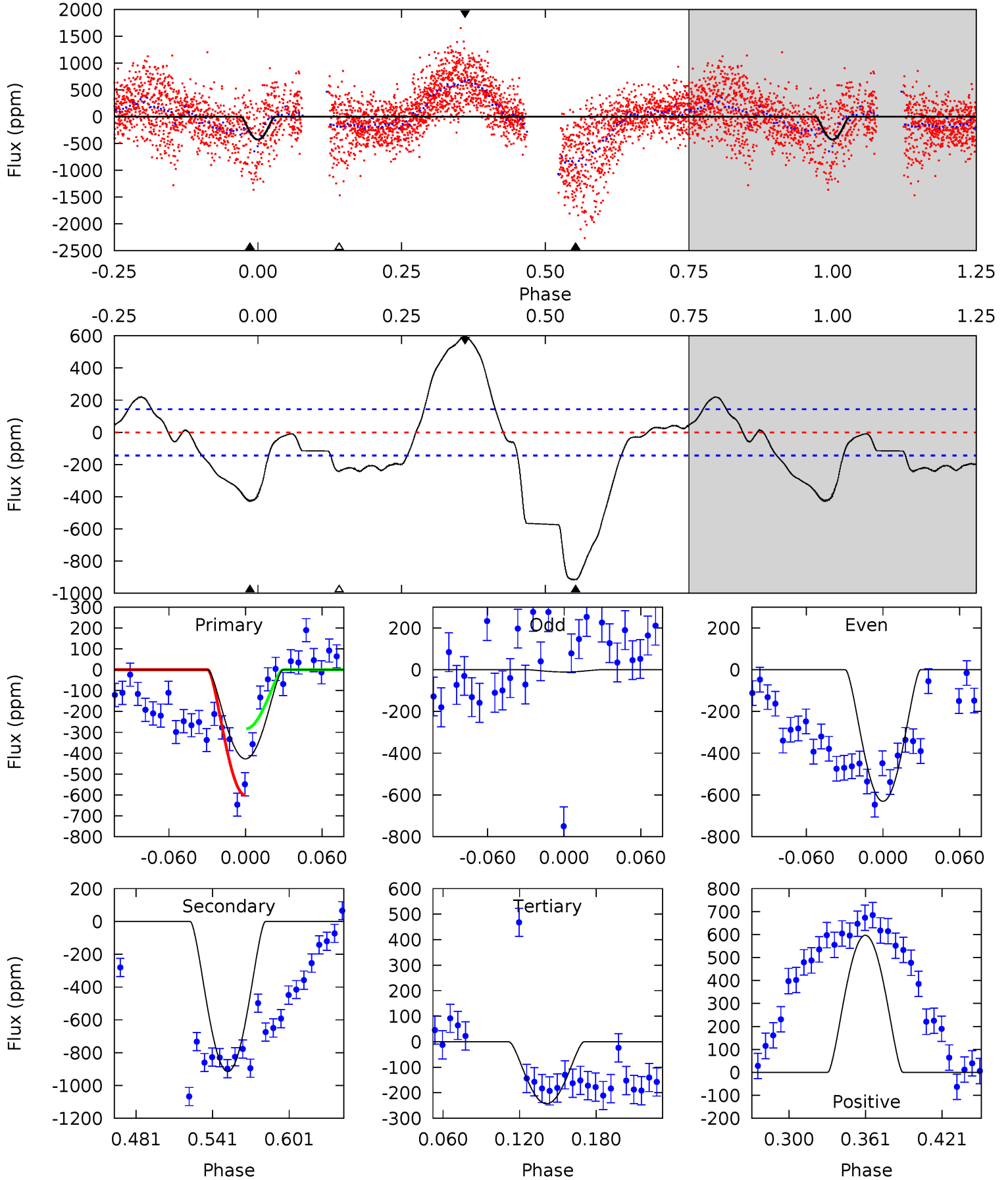
TCE 008690001-05 $P = 19.327806$ Days $T_0 = 134.993049$ (BKJD)



DV Model-Shift Uniqueness Test

008690001-05, P = 19.331511 Days, E = 134.339462 Days

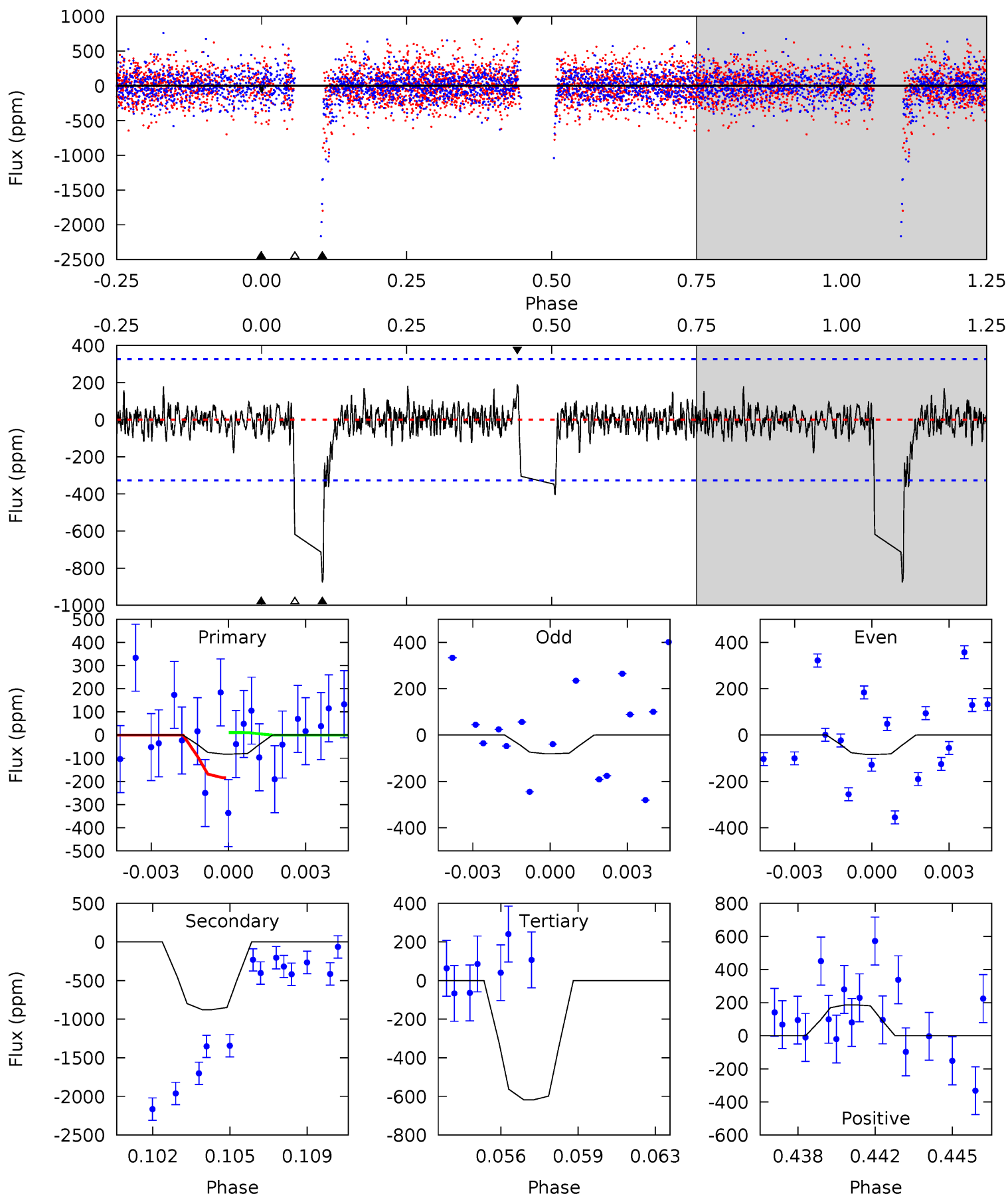
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	29.8	7.91	19.4	4.67	1.88	8.01	6.00	-5.52	21.9	10.4	9.19	1.44	0.39	5.15



Alt Model-Shift Uniqueness Test

008690001-05, P = 19.327806 Days, E = 134.993049 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.31	14.0	9.88	2.98	5.24	2.94	1.02	-8.57	-1.67	4.14	11.0	0.03	1.05	0.18	1.33



Stellar Parameters For KIC 008690001

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6198^{+204}_{-204}	$3.960^{+0.570}_{-0.190}$	$-1.180^{+0.350}_{-0.250}$	$1.567^{+0.509}_{-0.764}$	$0.817^{+0.078}_{-0.062}$	$0.299^{+1.878}_{-0.159}$
	+3%/-3%	+14%/-5%	+30%/-21%	+32%/-49%	+10%/-8%	+629%/-53%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008690001-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-915 ± 31	$20.89^{+17.51}_{-12.55}$	1300^{+117}_{-206}	3437^{+1338}_{-511}	20^{+107}_{-14}
Alt.	-876 ± 62	$11.34^{+12.27}_{-7.83}$	1298^{+126}_{-183}	4224^{+2793}_{-927}	66^{+637}_{-51}

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

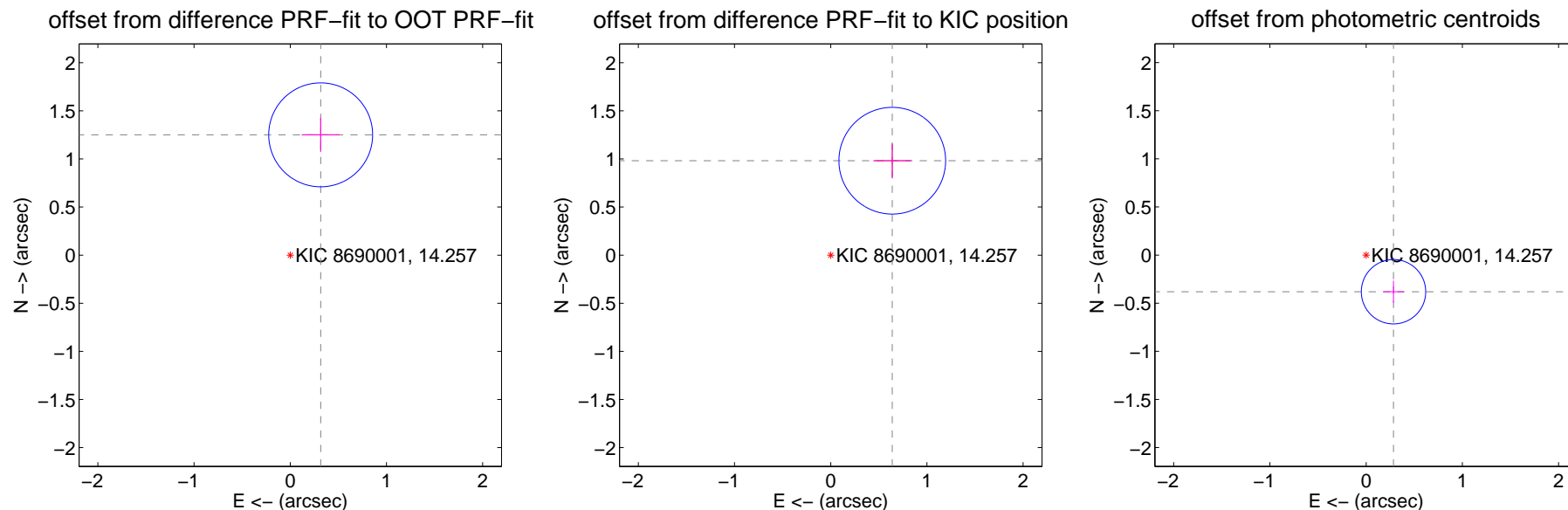
DV Centroid Data

Supplemental centroid analysis for 008690001-05. Kepler magnitude: 14.26. Transit SNR 39.81

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.290 ± 0.180	7.16	-0.316 ± 0.198	1.251 ± 0.179
PRF-fit source offset from KIC position	1.172 ± 0.185	6.34	-0.640 ± 0.198	0.981 ± 0.179
photometric centroid source offset	0.48 ± 0.11	4.26	-0.28 ± 0.11	-0.38 ± 0.11



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.



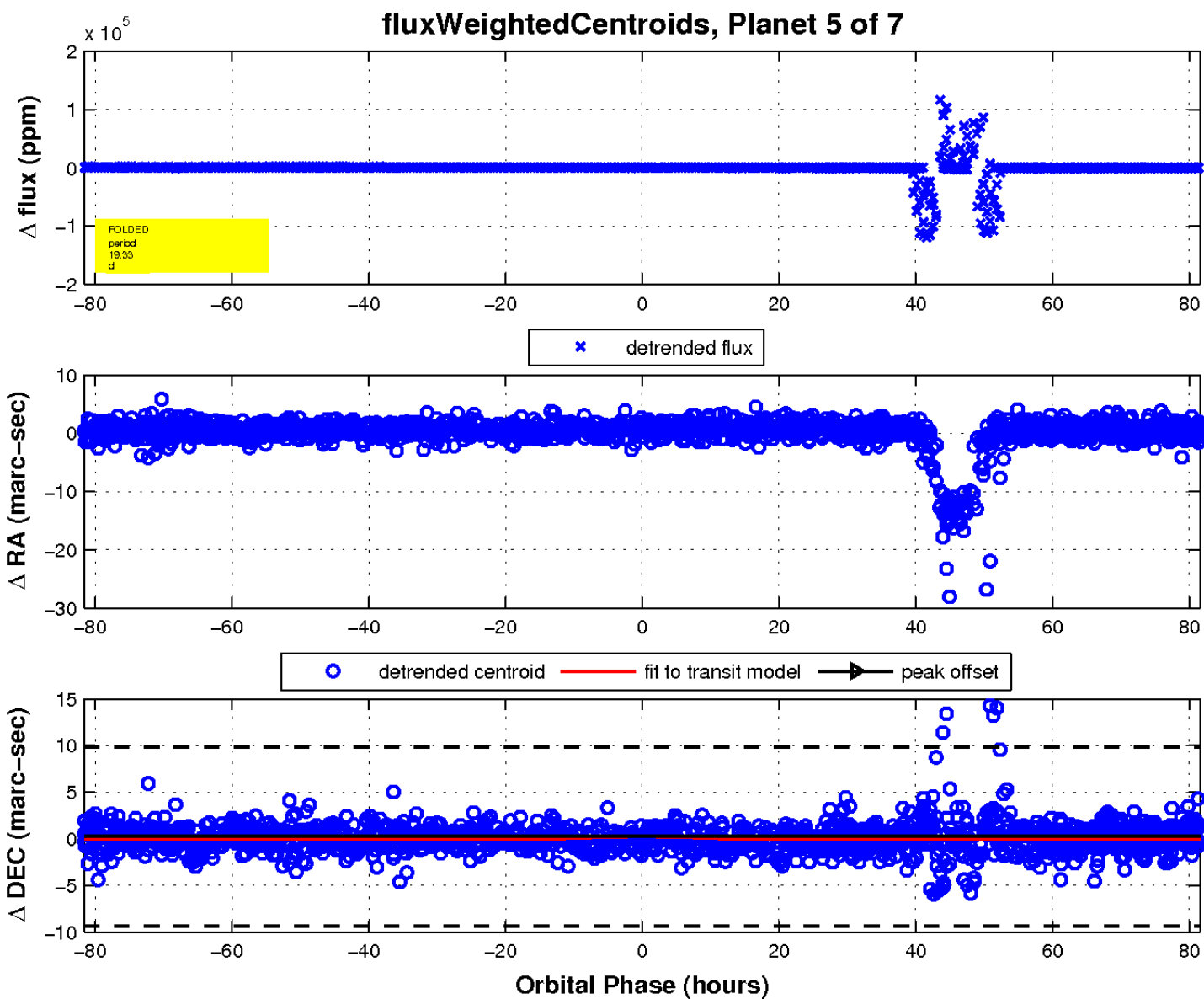
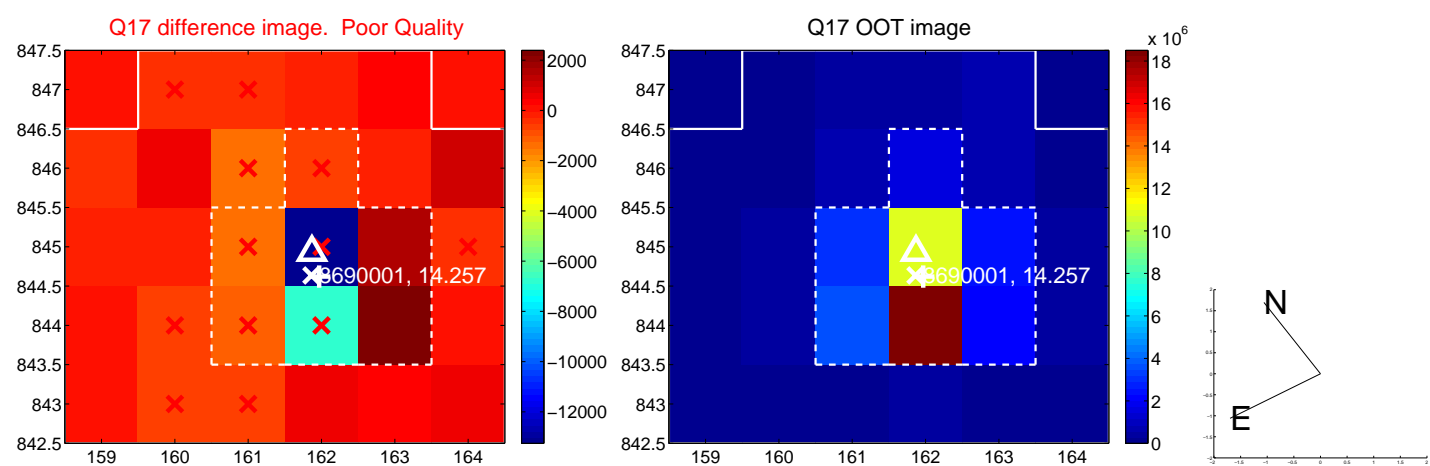
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

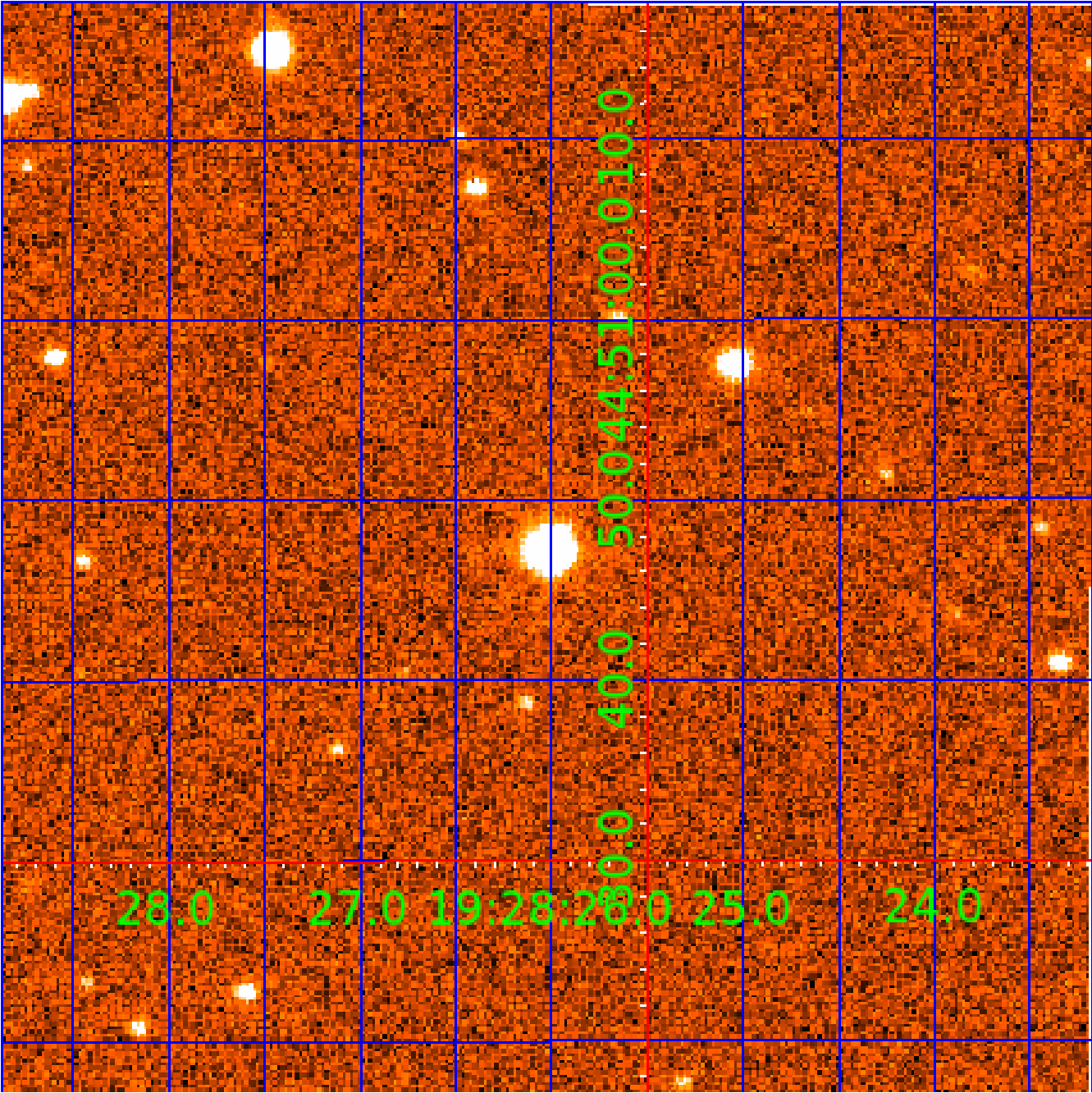


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008690001

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})
008690001-01	OBS	7075.01	19.356050	134.501105	384523.0	7.500	7491.8	-1.0	1.57	6198	81.14	186.58
008690001-02	OBS	No	19.359680	141.884855	369017.6	9.273	7202.6	3789.2	1.57	6198	106.05	186.53
008690001-03	OBS	No	18.391135	148.725781	6879.5	3.000	158.5	-1.0	1.57	6198	13.08	199.74
008690001-04	OBS	No	20.340649	145.003955	6883.2	3.500	116.4	-1.0	1.57	6198	13.08	174.63
008690001-05	OBS	No	19.331511	134.339462	4635.2	27.205	106.9	39.8	1.57	6198	19.23	186.89
008690001-07	OBS	No	19.754768	146.917898	2362.6	15.000	38.5	-1.0	1.57	6198	7.66	181.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008690001-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
008690001-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_FEW_DIFFS
008690001-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008690001-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008690001-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
008690001-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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 008690001-07

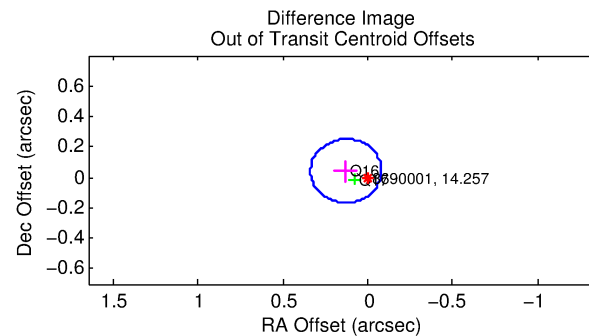
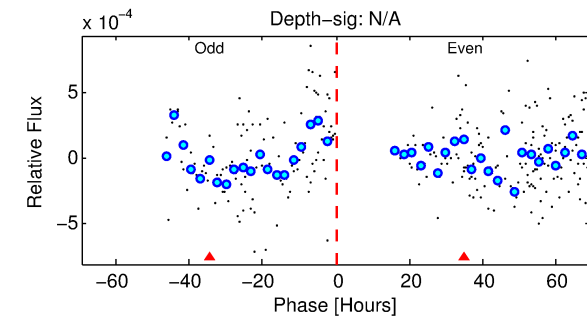
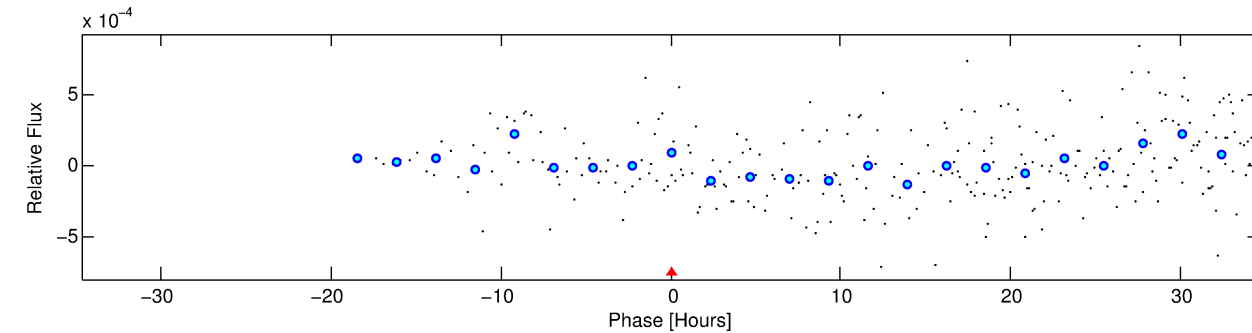
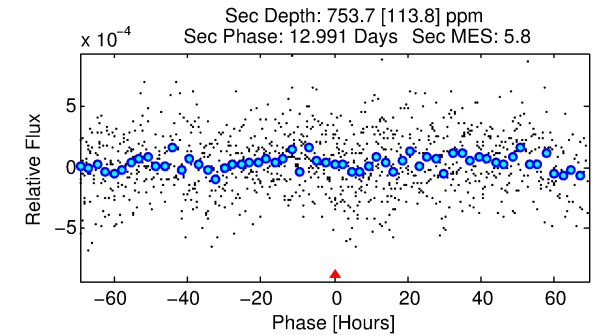
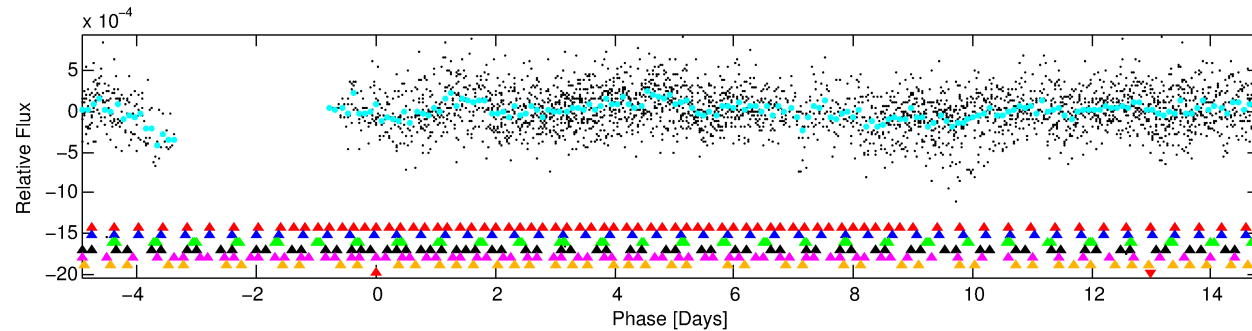
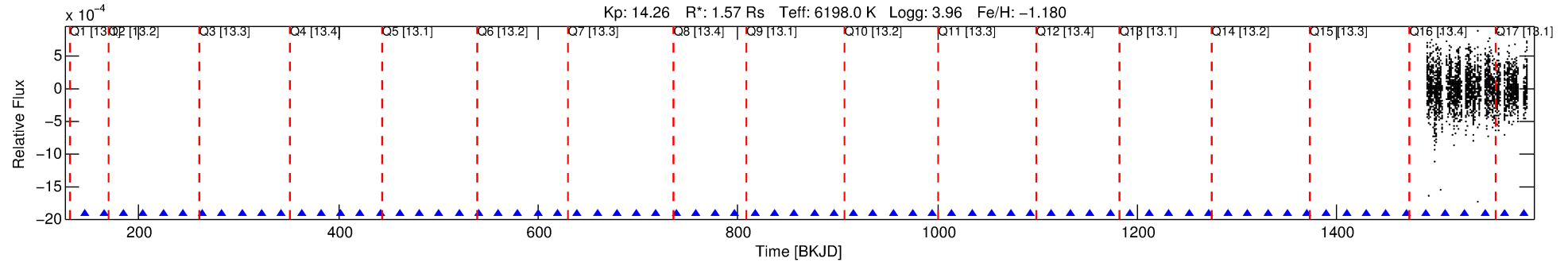
No Significant Match Found

DV One-Page Summary

KIC: 8690001 Candidate: 7 of 7 Period: 19.755 d

KOI: K07075 Corr: No Ephemeris Match

Kp: 14.26 R*: 1.57 Rs Teff: 6198.0 K Logg: 3.96 Fe/H: -1.180



TPS TCE Results:

Period = 19.75477 d
Epoch = 146.9179 BKJD

DV fit results are unavailable

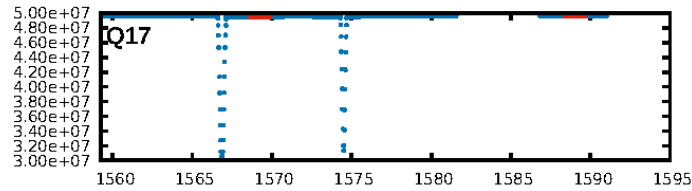
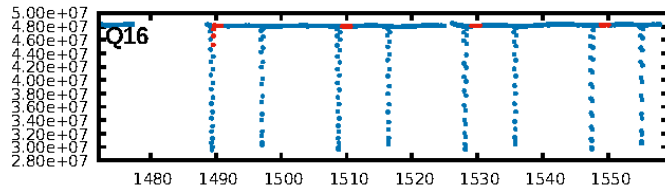
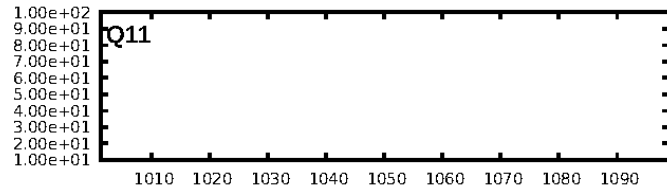
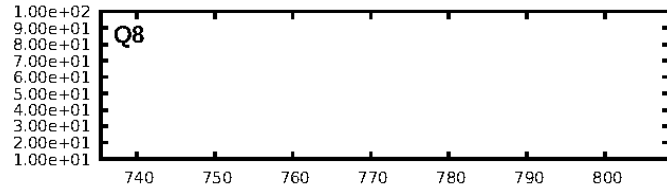
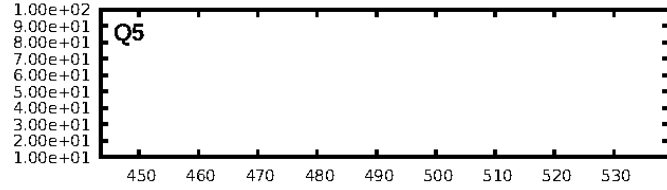
DV Diagnostic Results:

ShortPeriod-sig: 40.9% [0.54 σ]
LongPeriod-sig: 63.9% [0.91 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.81e-64
RollingBand-fgt: 1.00 [1/1]
GhostDiagnostic-chr: 17.84
Centroid-sig: N/A
Centroid-so: 0.796 arcsec [0.88 σ]
OotOffset-rm: 0.137 arcsec [1.96 σ]
KicOffset-rm: 0.102 arcsec [0.69 σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.00 [0/2]

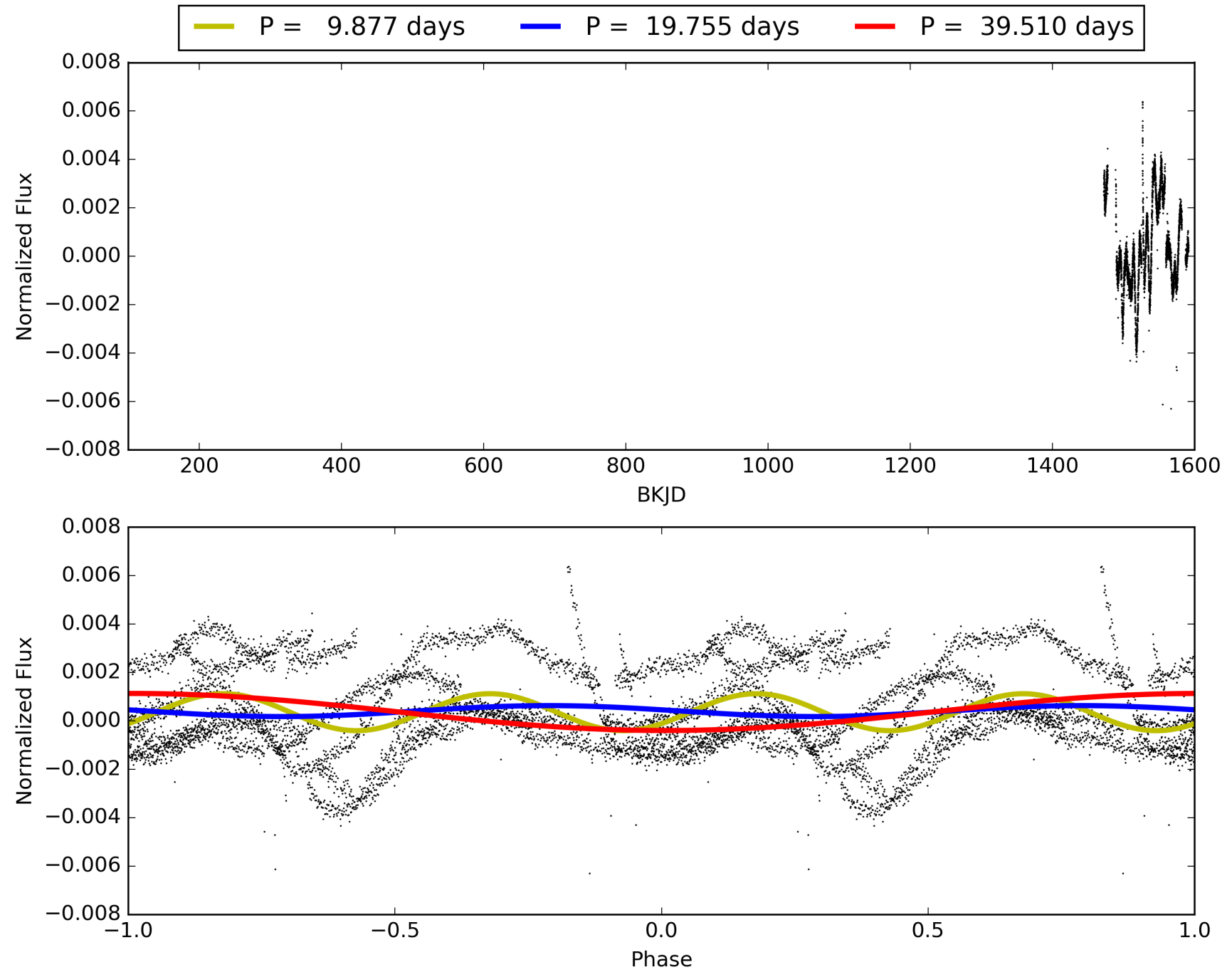
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 17:11:47 Z

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

TCE 008690001-07, PDC Light Curves

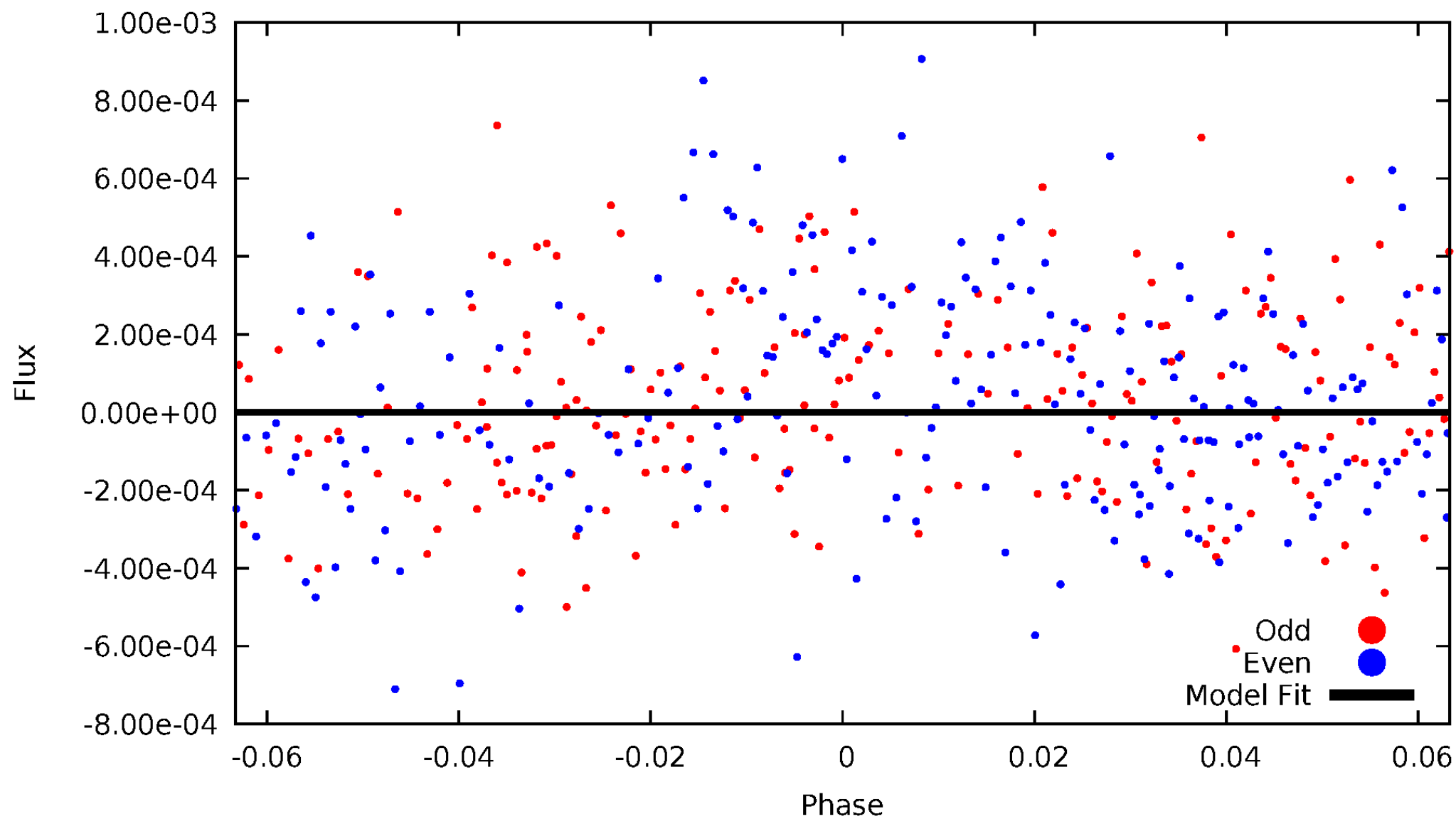


TCE 008690001-07



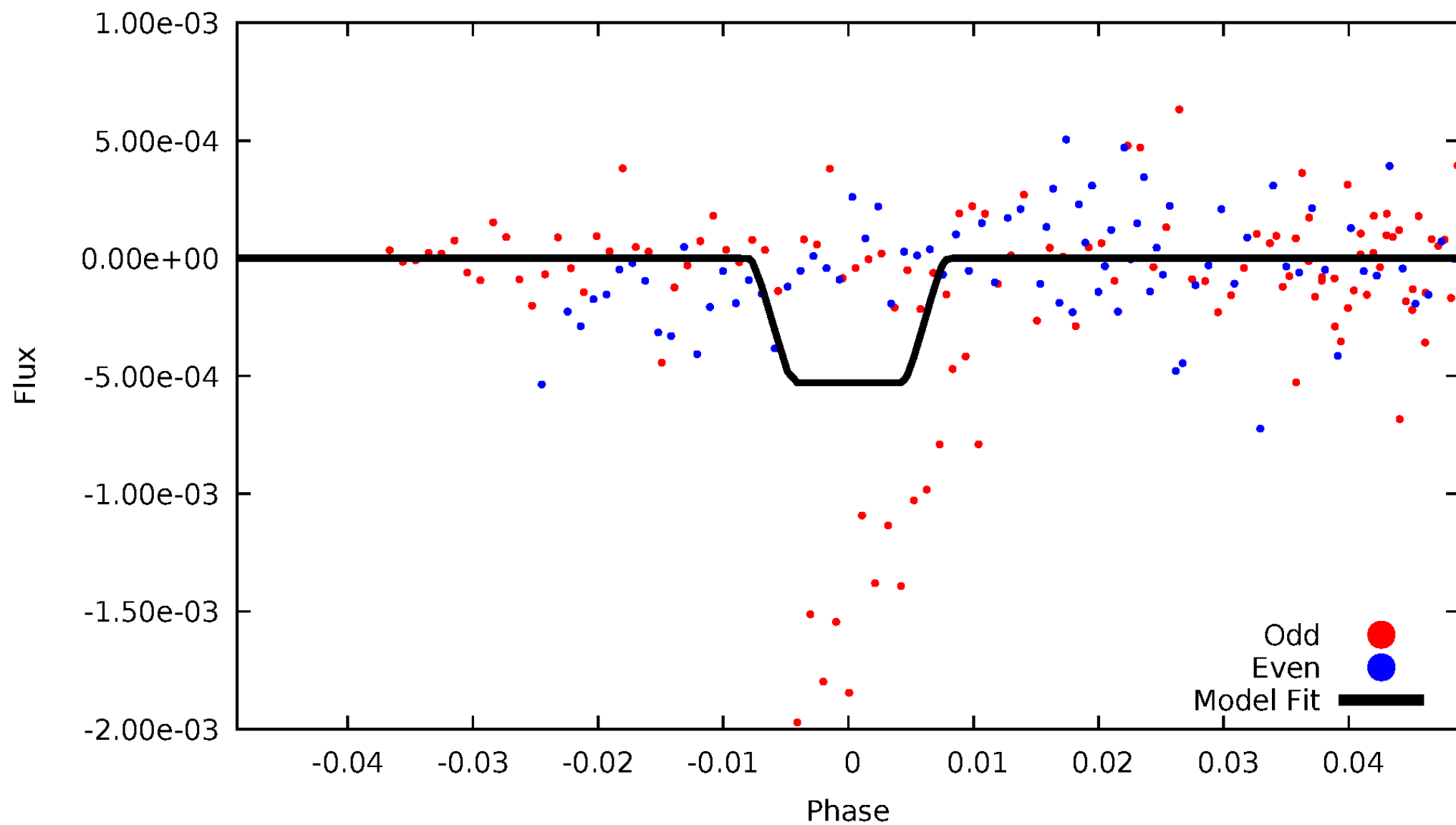
DV Odd/Even

TCE 008690001-07



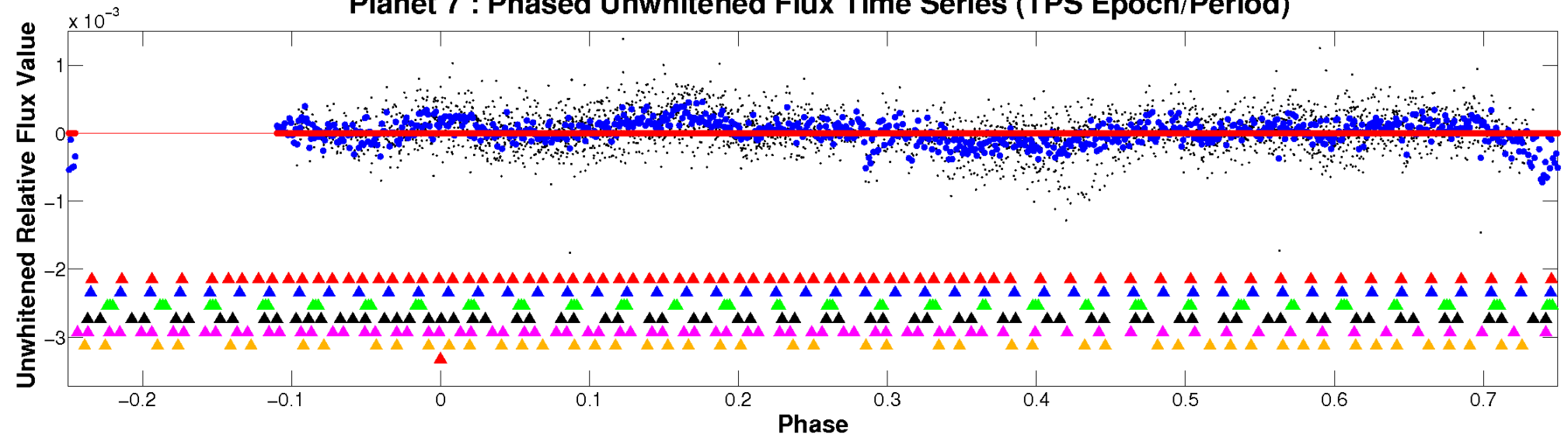
ALT Odd/Even

TCE 008690001-07



Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

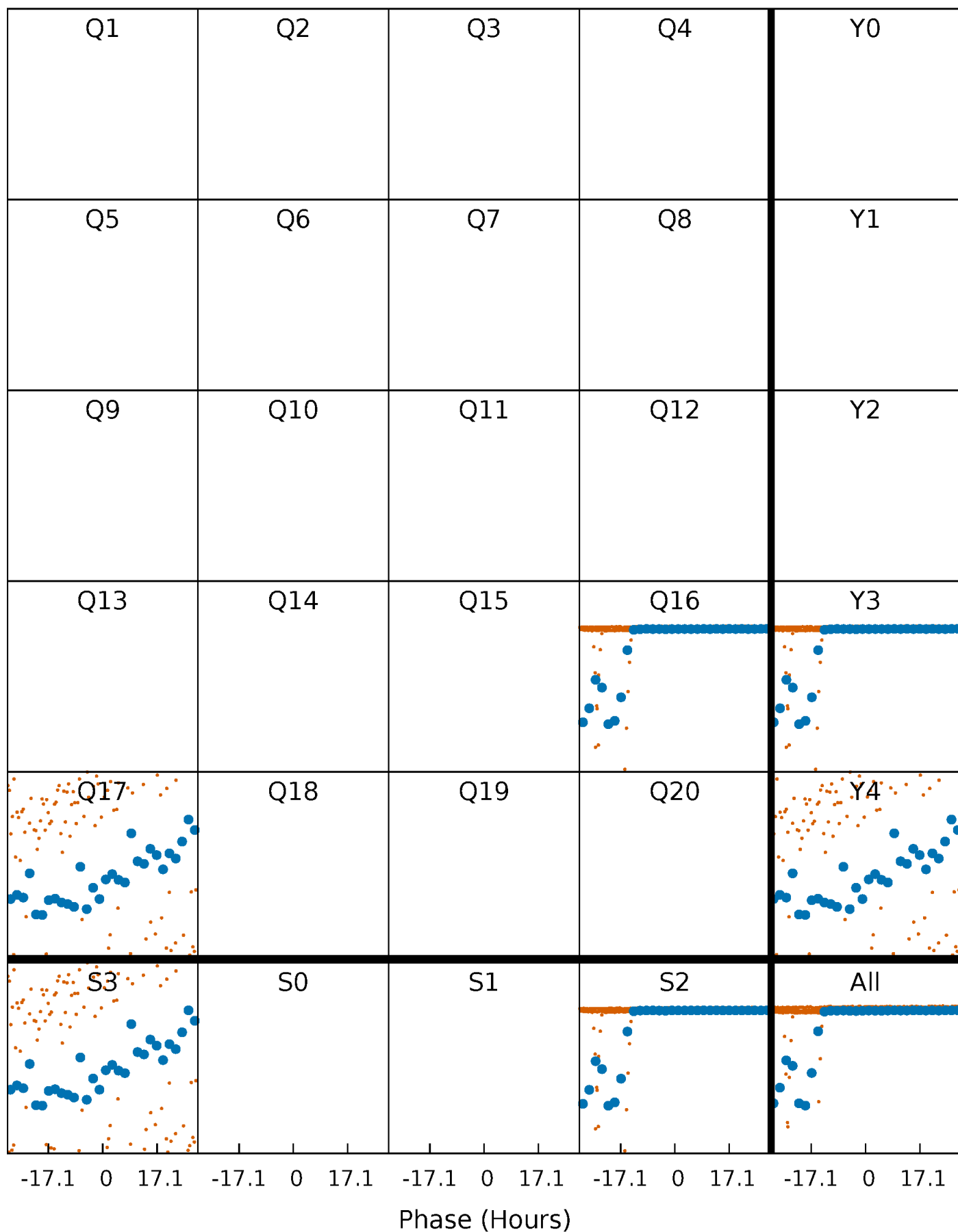


Planet 7 : Phased Whitened Flux Time Series (TPS Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 008690001-07 P= 19.754768 Days $T_0=146.917898$ (BKJD)



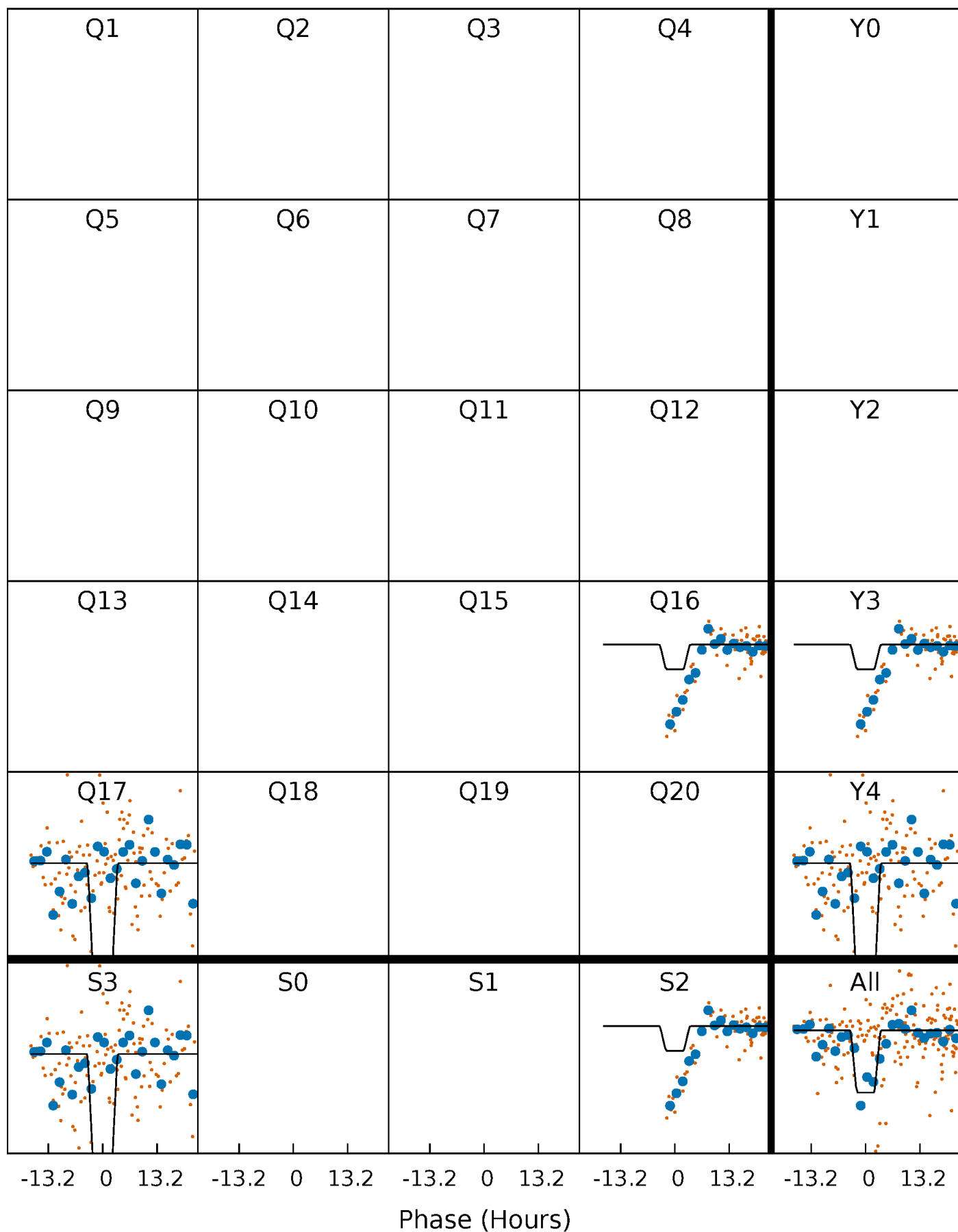
DV Quarter-Phased Transit Curves

TCE 008690001-07 $P = 19.754768$ Days $T_0 = 146.917898$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

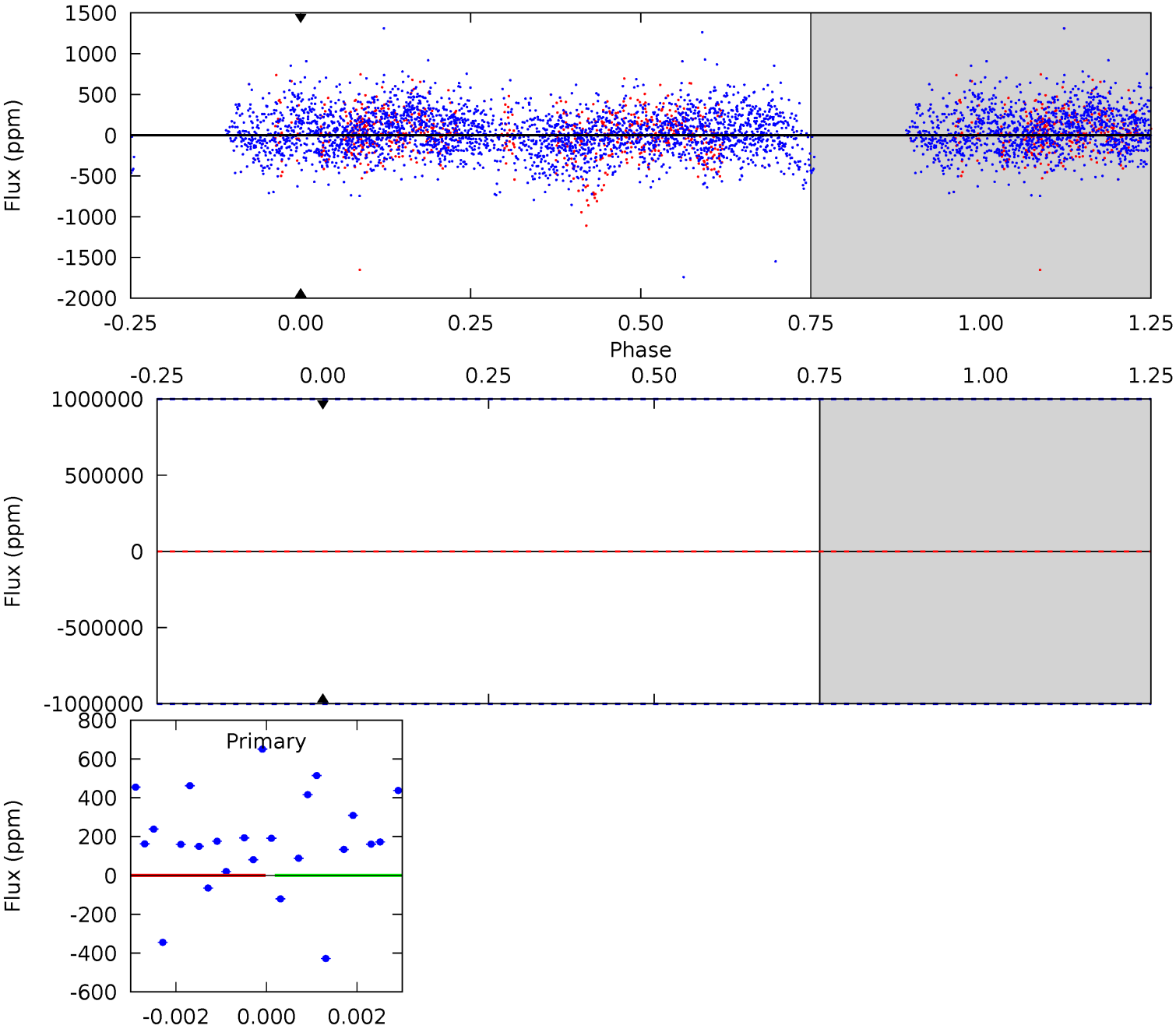
TCE 008690001-07 $P = 19.754768$ Days $T_0 = 145.479105$ (BKJD)



DV Model-Shift Uniqueness Test

008690001-07, P = 19.754768 Days, E = 146.917898 Days

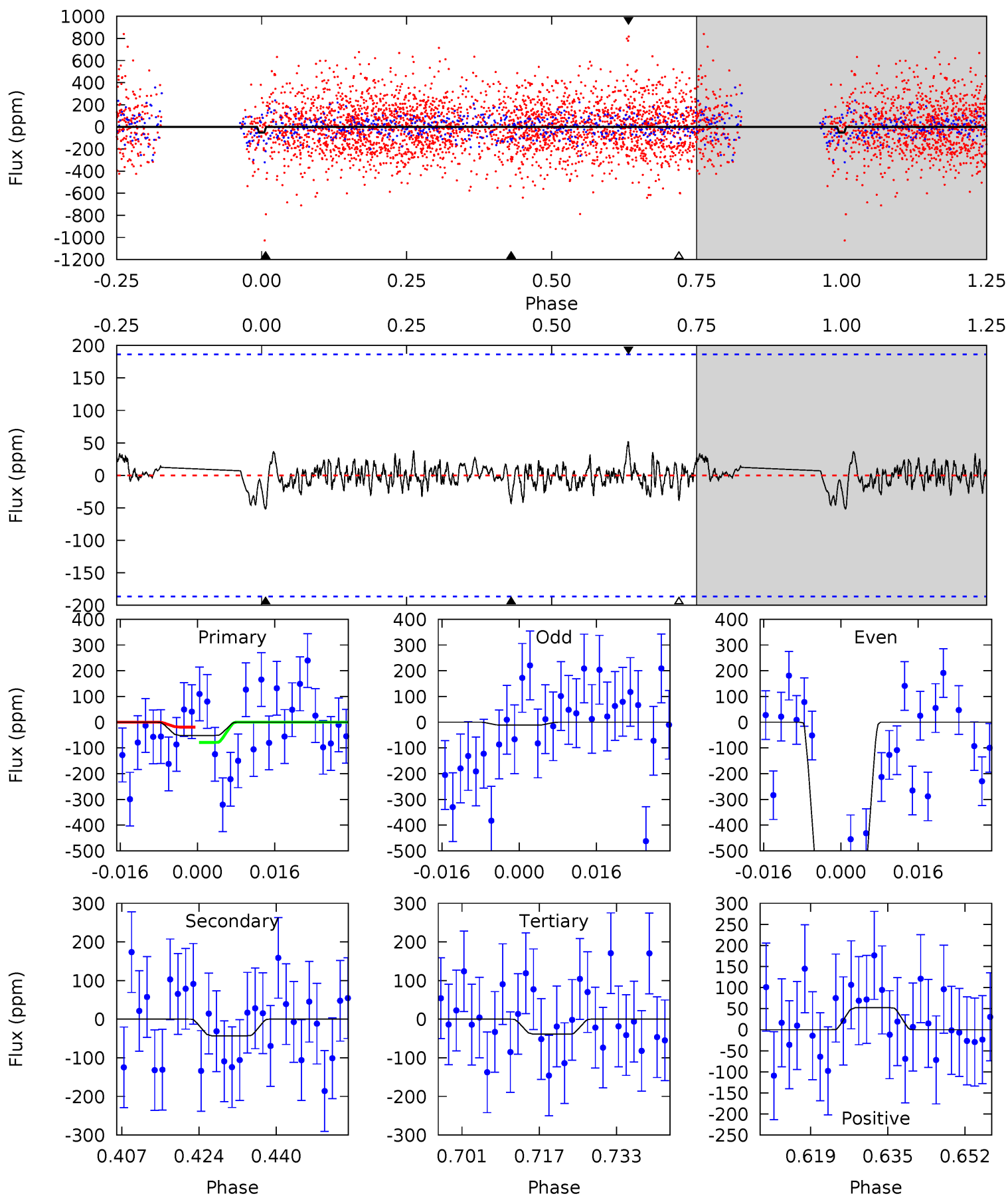
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008690001-07, P = 19.754768 Days, E = 145.479105 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.36	1.14	1.03	1.38	4.93	2.40	0.39	0.33	-0.02	0.11	-0.24	10.5	45.9	0.50	0.79



Stellar Parameters For KIC 008690001

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6198^{+204}_{-204}	$3.960^{+0.570}_{-0.190}$	$-1.180^{+0.350}_{-0.250}$	$1.567^{+0.509}_{-0.764}$	$0.817^{+0.078}_{-0.062}$	$0.299^{+1.878}_{-0.159}$
	+3%/-3%	+14%/-5%	+30%/-21%	+32%/-49%	+10%/-8%	+629%/-53%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008690001-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$13.75^{+13.54}_{-9.68}$	1292^{+130}_{-184}	-4674^{+24962}_{-15642}	$-118.271^{+9513.759}_{-8612.076}$
Alt.	-43 ± 38	$11.05^{+13.44}_{-7.38}$	1276^{+131}_{-178}	2514^{+1031}_{-4455}	$2.295^{+24.918}_{-2.154}$

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

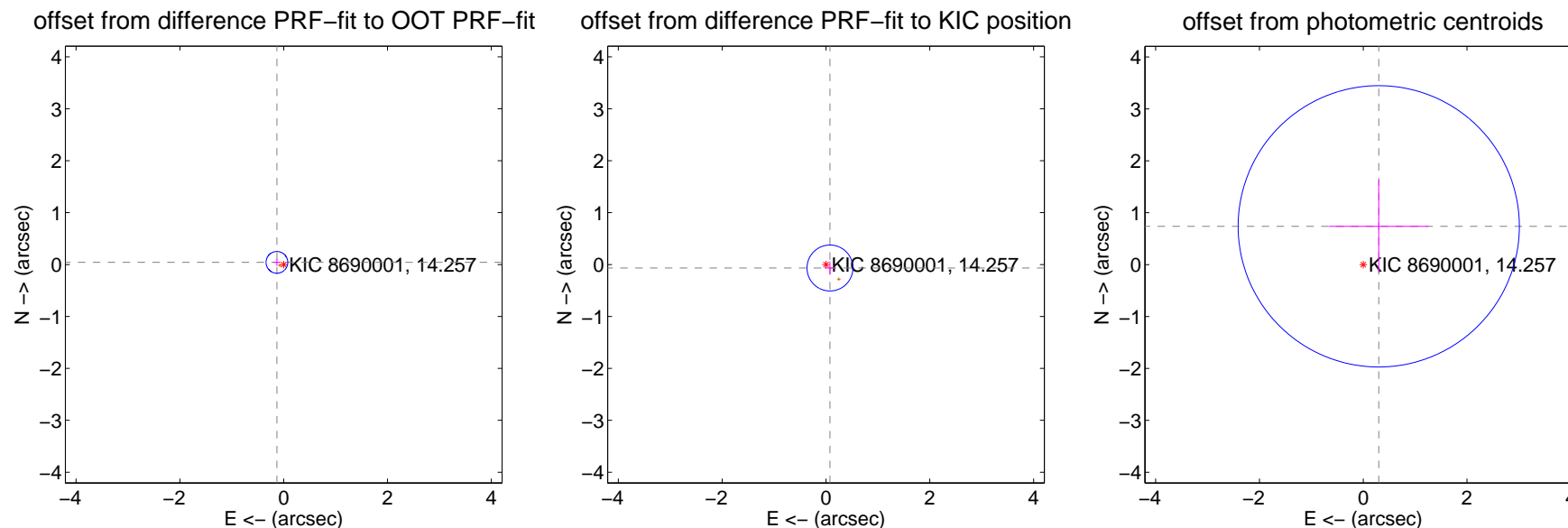
DV Centroid Data

Supplemental centroid analysis for 008690001-07. Kepler magnitude: 14.26. 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 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.137 ± 0.070	1.96	0.130 ± 0.069	0.042 ± 0.069
PRF-fit source offset from KIC position	0.102 ± 0.147	0.69	-0.077 ± 0.106	-0.067 ± 0.124
photometric centroid source offset	0.80 ± 0.90	0.88	-0.30 ± 0.96	0.74 ± 0.89



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.



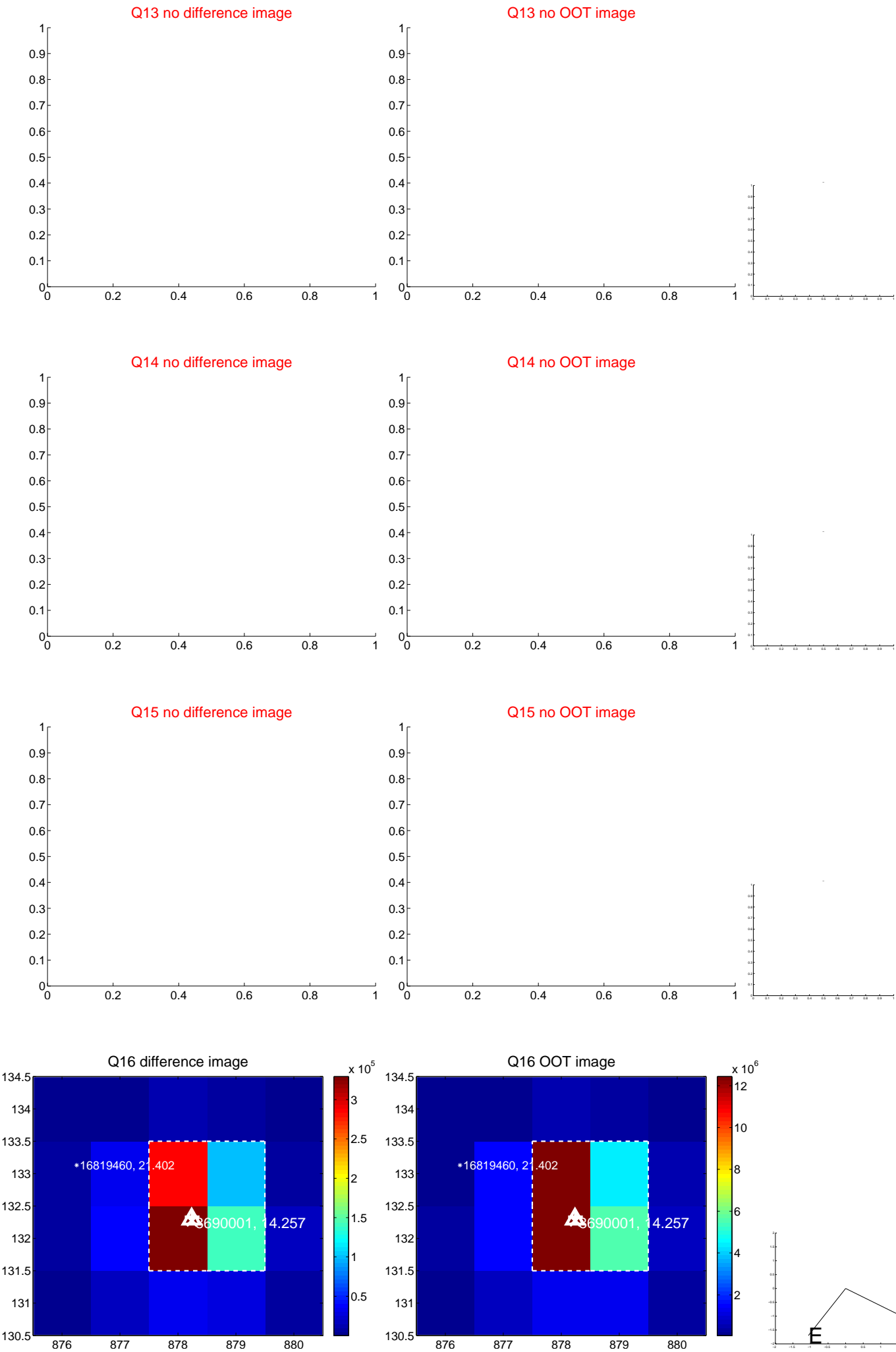
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



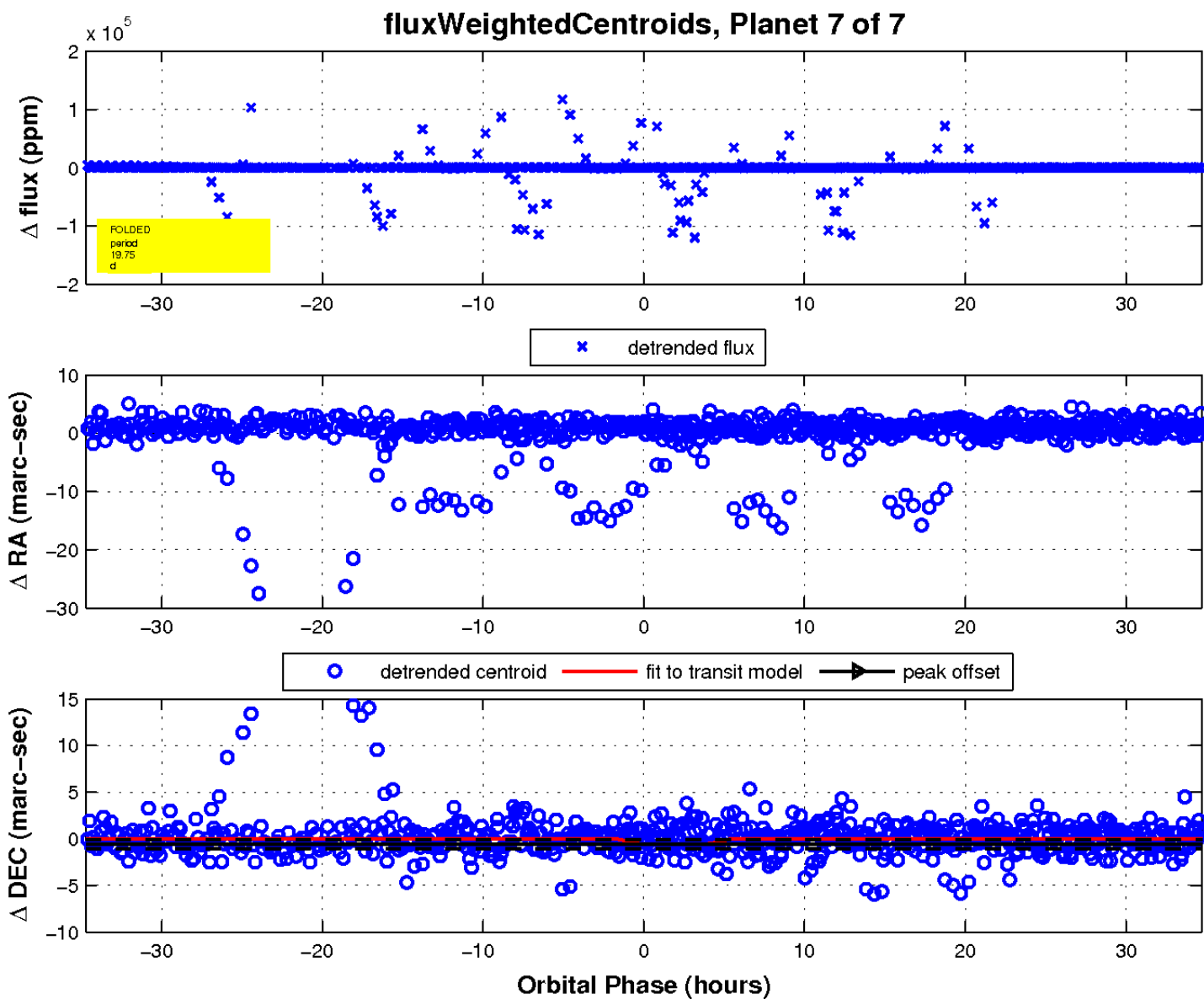
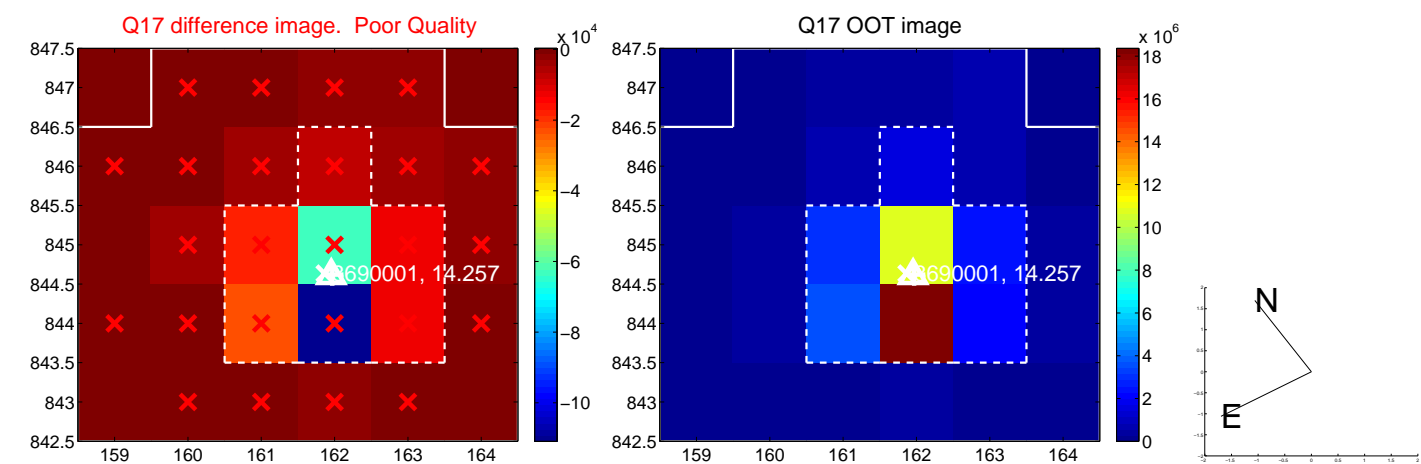
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

