

KIC 007026651

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})
007026651-01	OBS	No	368.137038	310.204869	1099.9	16.377	8.1	8.0	1.13	6373	3.81	1.68
007026651-02	OBS	No	373.967052	307.052222	999.9	16.566	7.6	7.9	1.13	6373	3.59	1.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007026651-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007026651-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—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.

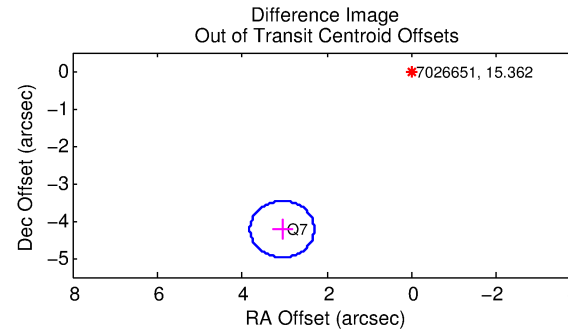
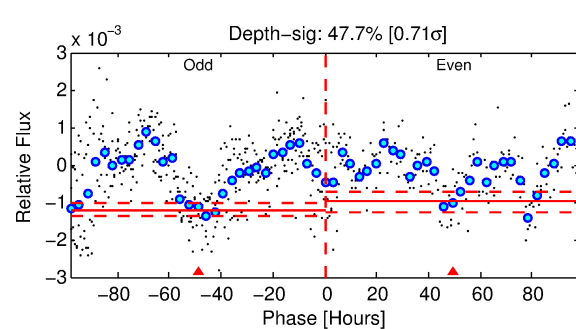
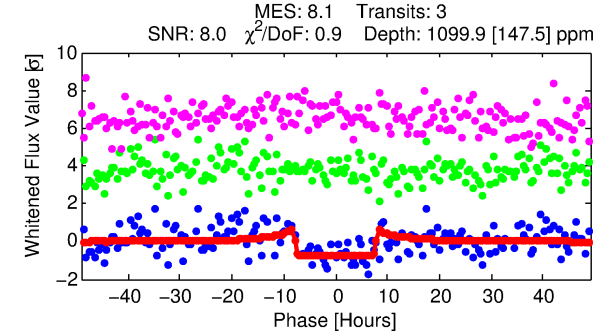
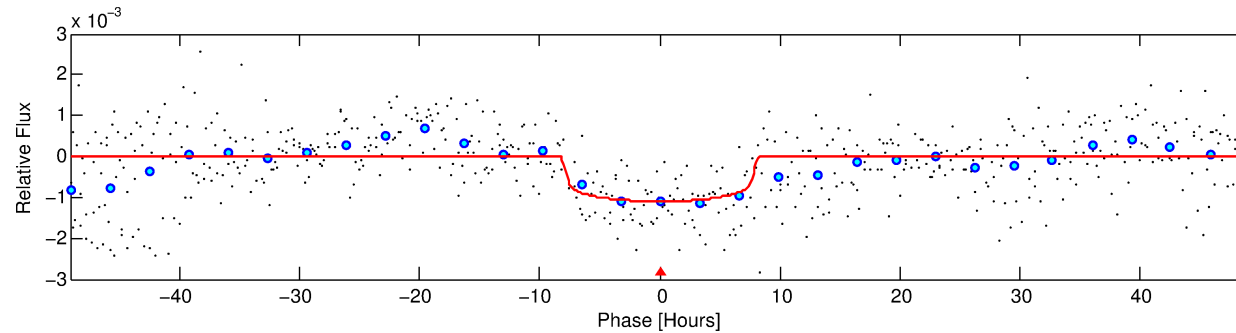
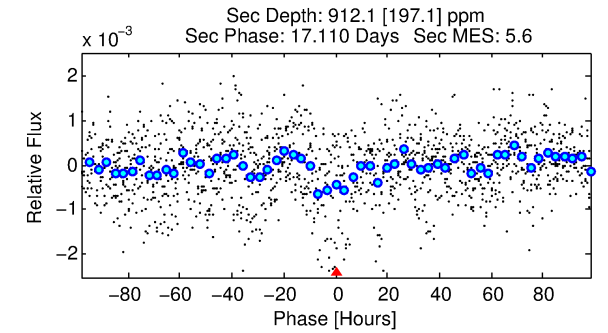
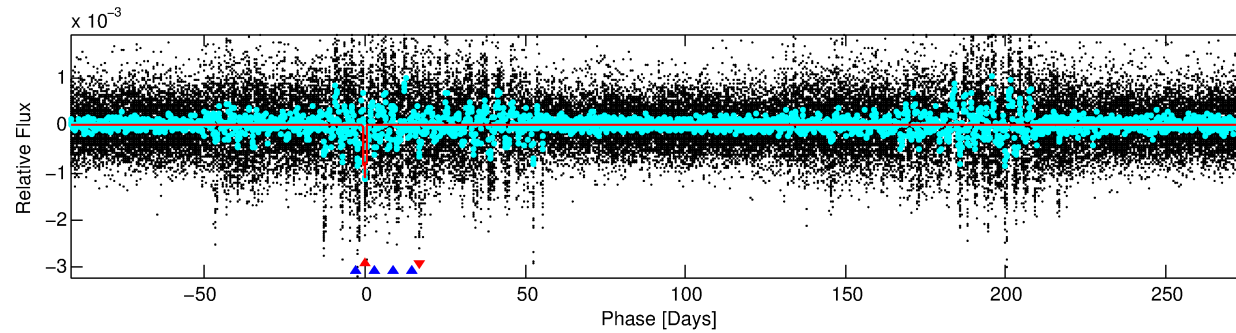
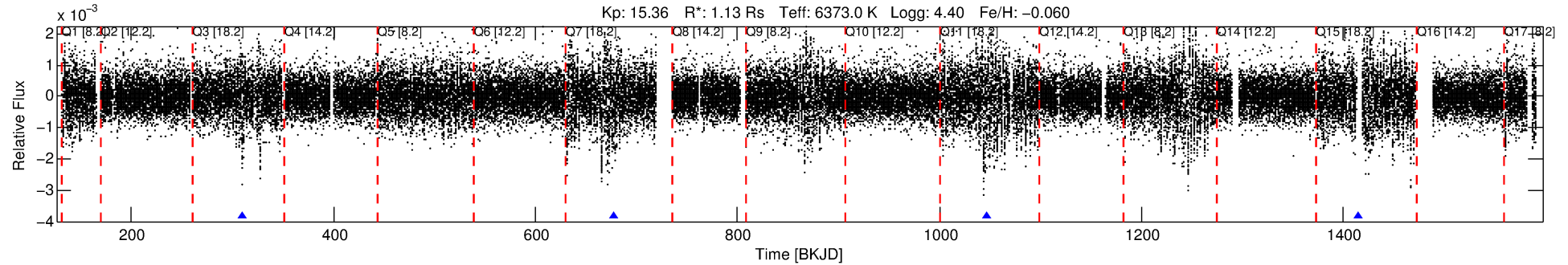
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007026651-01

No Significant Match Found

DV One-Page Summary

KIC: 7026651 Candidate: 1 of 2 Period: 368.137 d



DV Fit Results:

Period = 368.13704 [0.01095] d
Epoch = 310.2049 [0.0131] BKJD
Rp/R* = 0.0310 [0.0076]
a/R* = 162.74 [192.24]
b = 0.41 [2.44]
Seff = 1.67 [0.72]
Teq = 290 [31] K
Rp = 3.81 [1.62] Re
a = 1.0578 [0.3002] AU
Ag = 38704.54 [26036.54] [1.49σ]
Teff = 6291 [875] K [6.86σ]

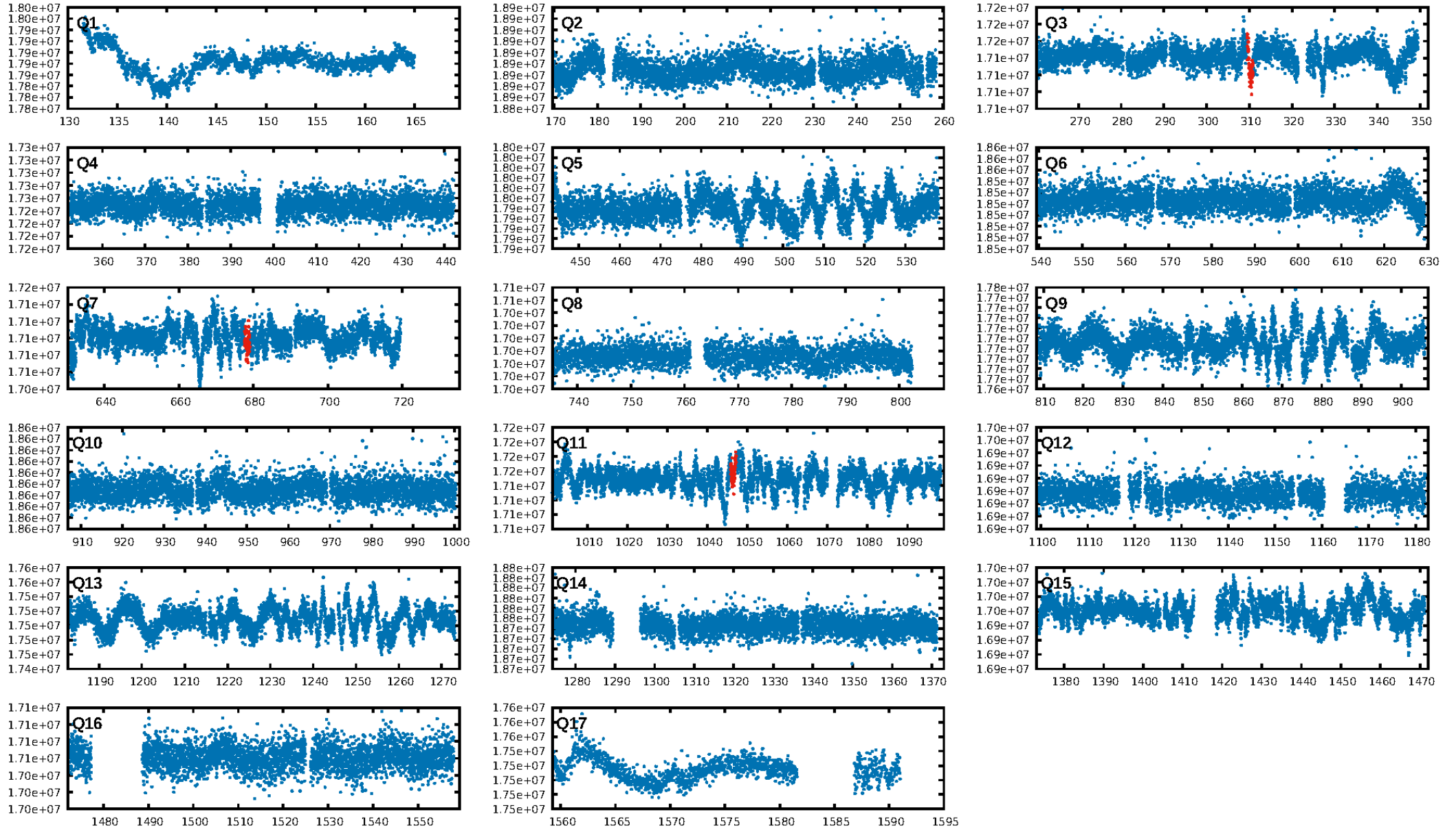
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [6.01σ]
ModelChiSquare2-sig: 19.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.03e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.917
Centroid-sig: 43.0%
Centroid-so: 1.511 arcsec [0.64σ]
OotOffset-rm: 5.214 arcsec [20.67σ]
KicOffset-rm: 5.173 arcsec [20.48σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

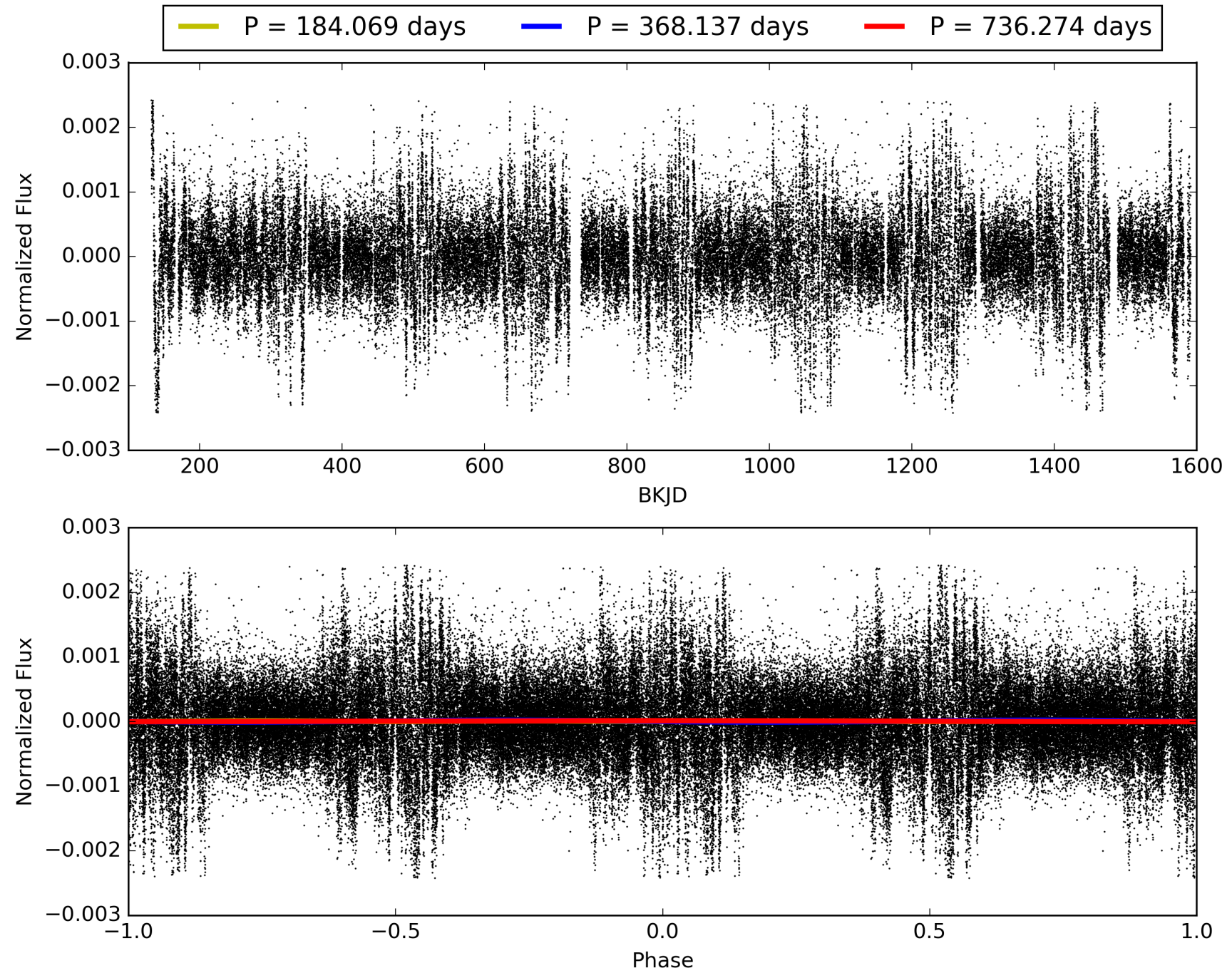
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:16:02 Z

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

TCE 007026651-01, PDC Light Curves

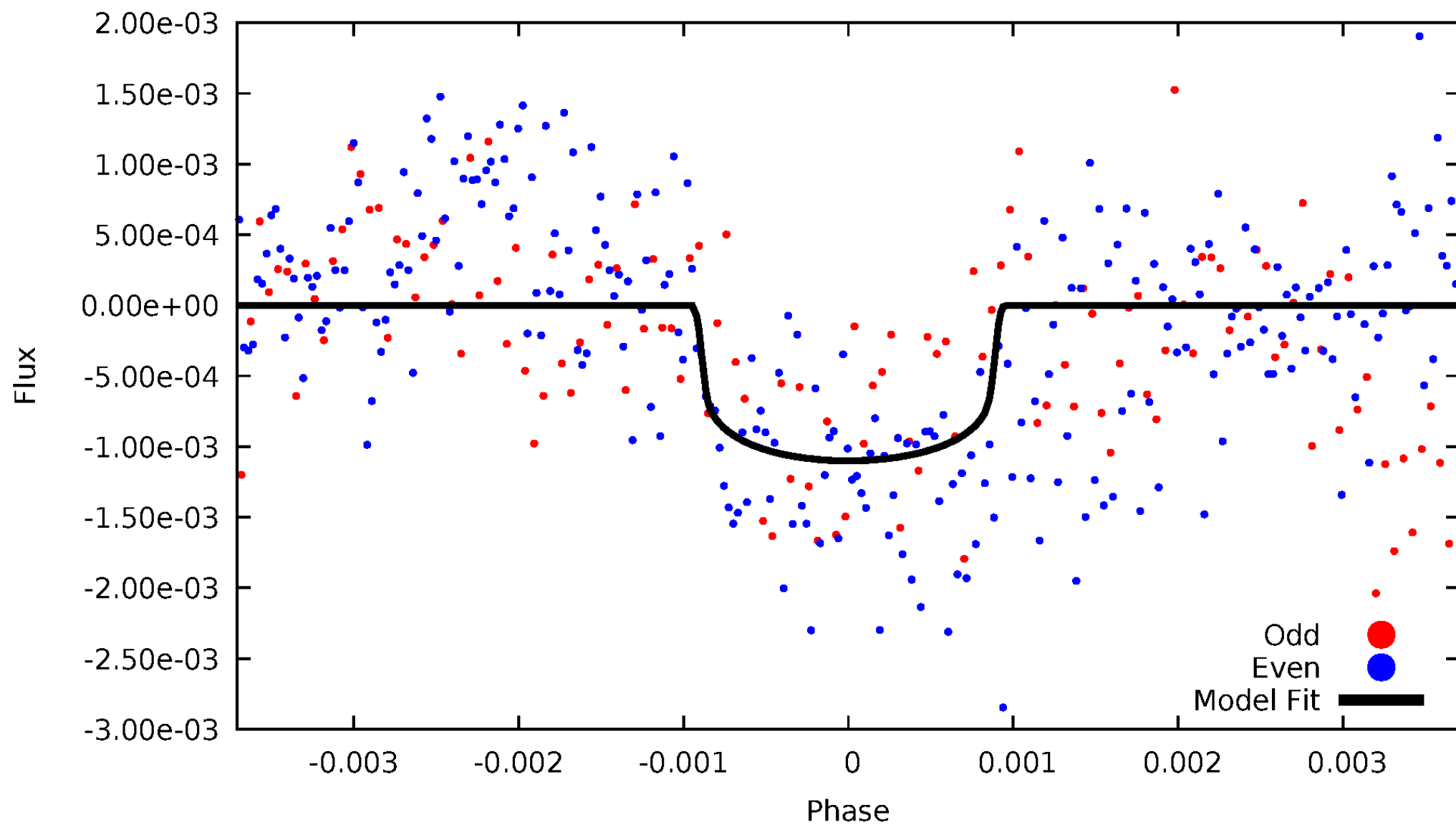


TCE 007026651-01



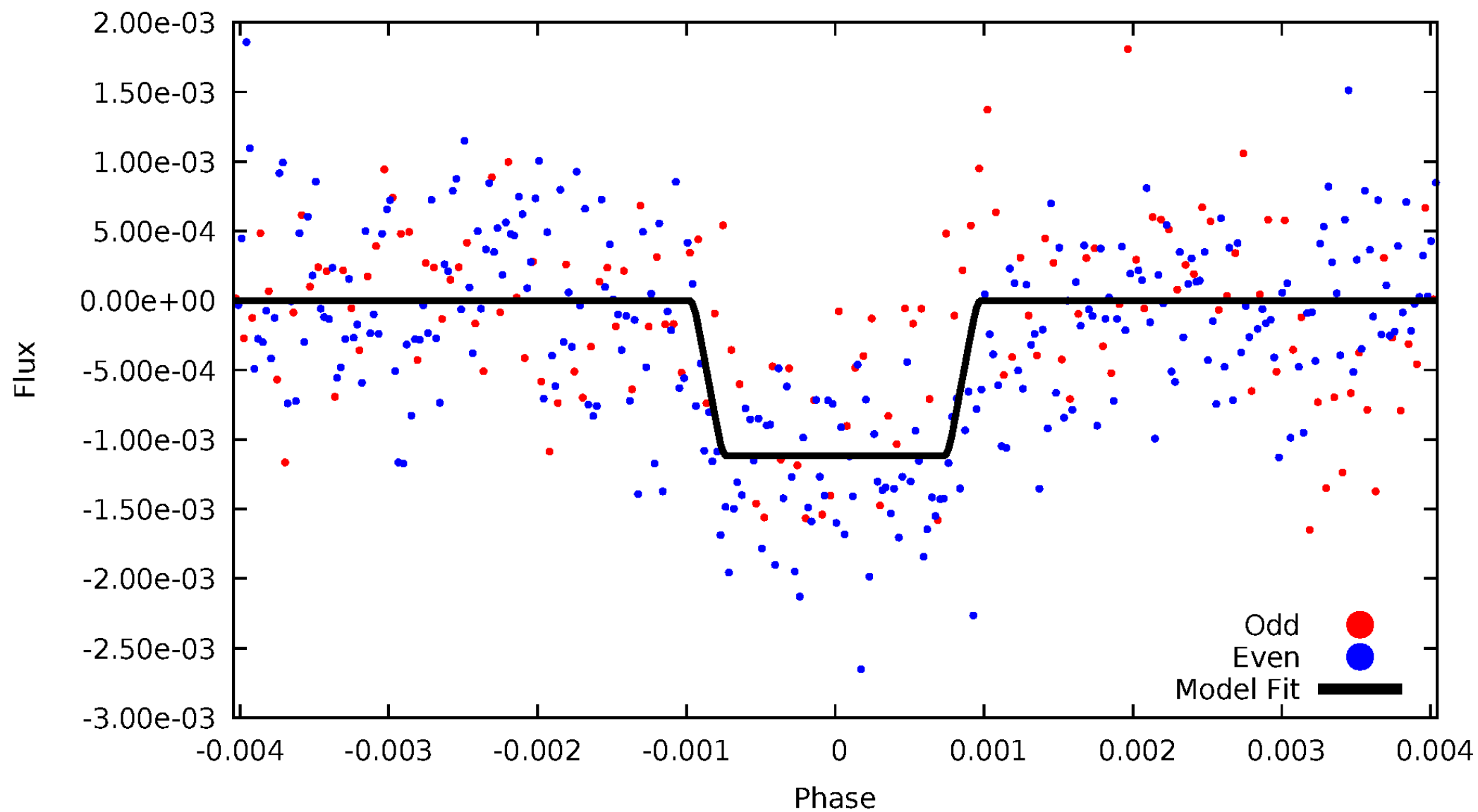
DV Odd/Even

TCE 007026651-01



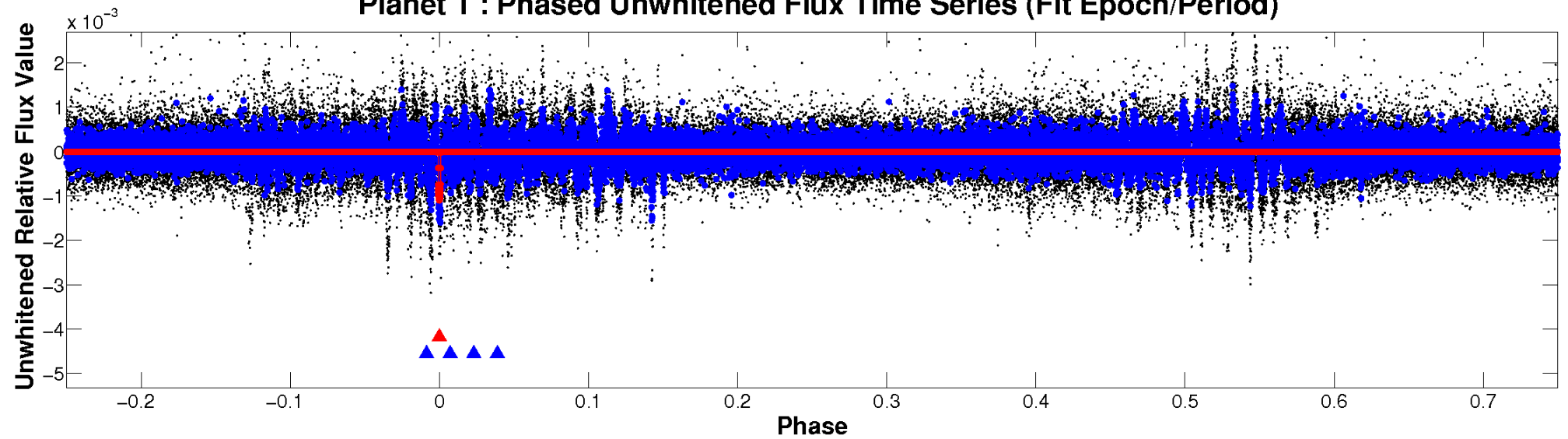
ALT Odd/Even

TCE 007026651-01

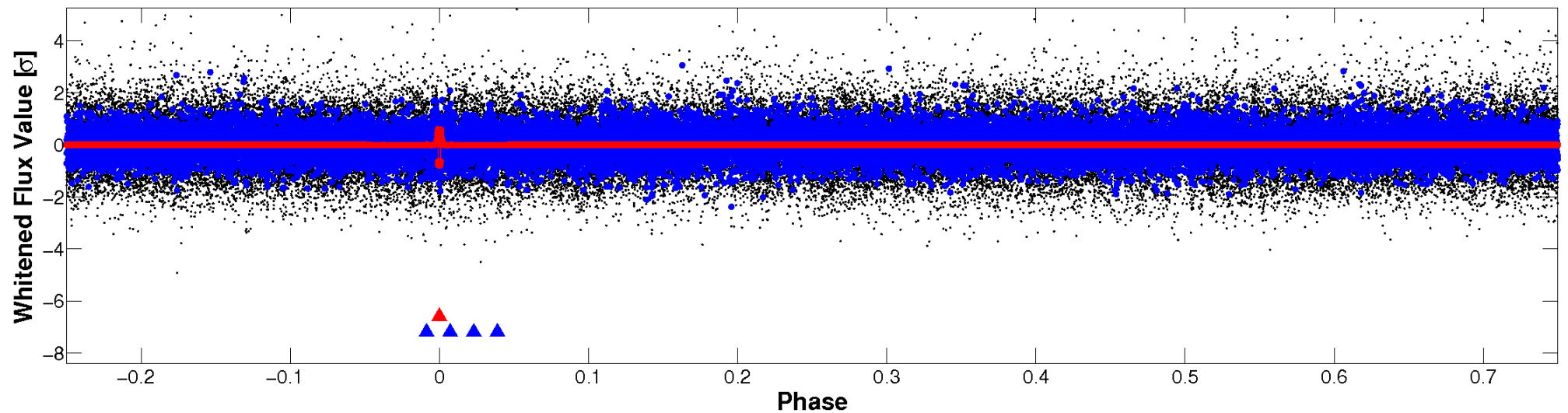


Non-Whitened Vs. Whitened Light Curve

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 007026651-01 P=368.137038 Days $T_0=310.204869$ (BKJD)



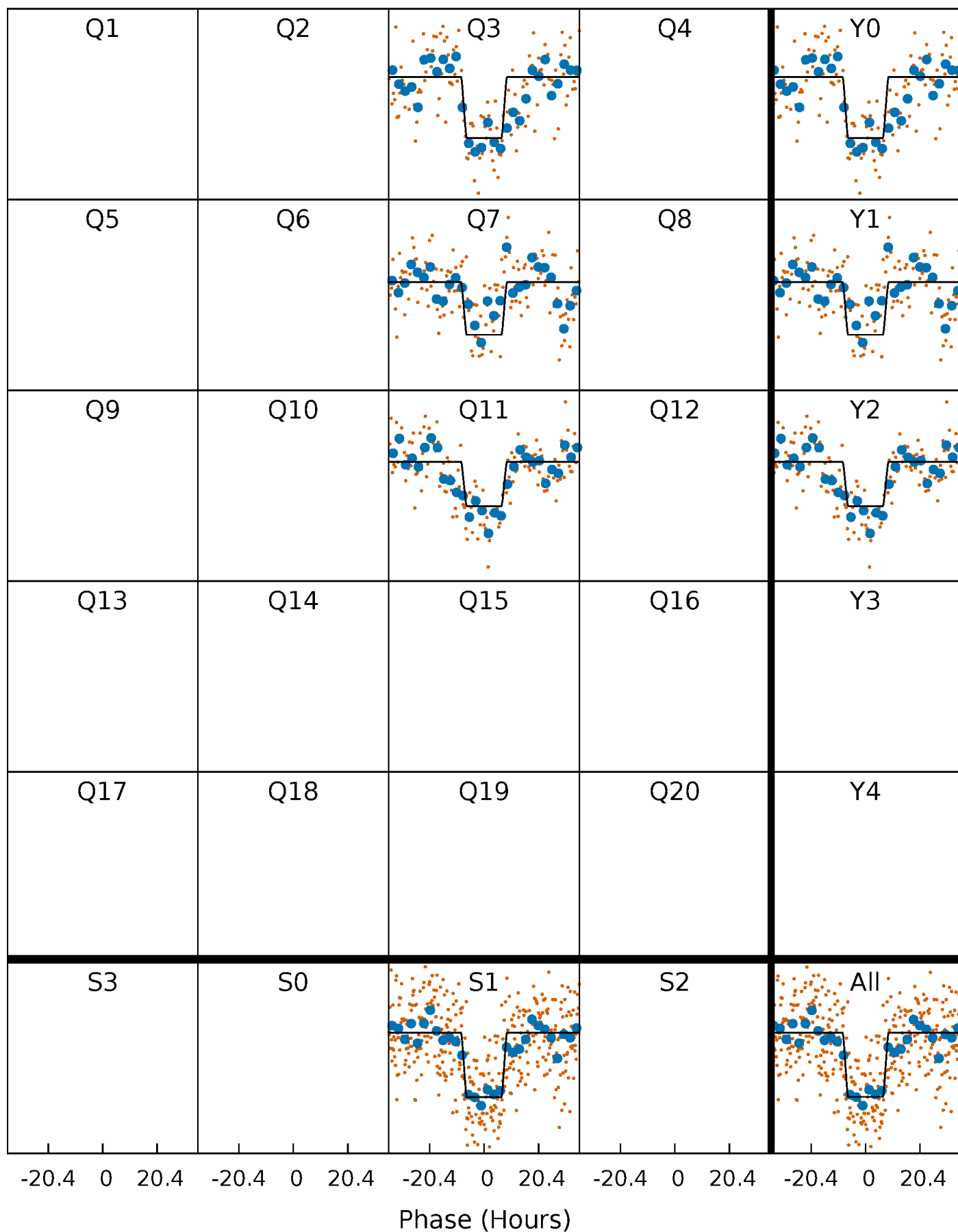
DV Quarter-Phased Transit Curves

TCE 007026651-01 P=368.137038 Days $T_0=310.204869$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

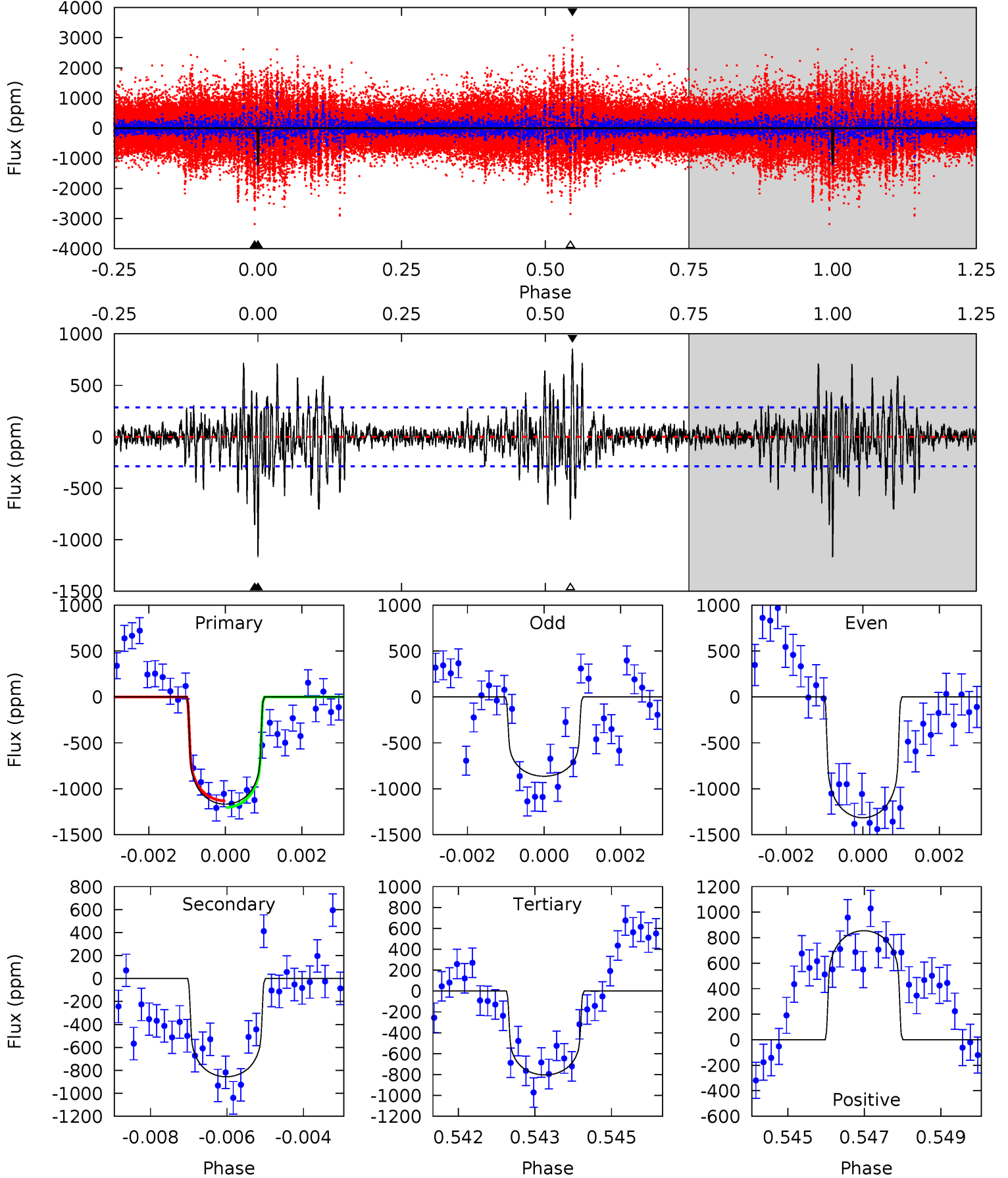
TCE 007026651-01 P=368.137828 Days $T_0=310.209286$ (BKJD)



DV Model-Shift Uniqueness Test

007026651-01, P = 368.137038 Days, E = 310.204869 Days

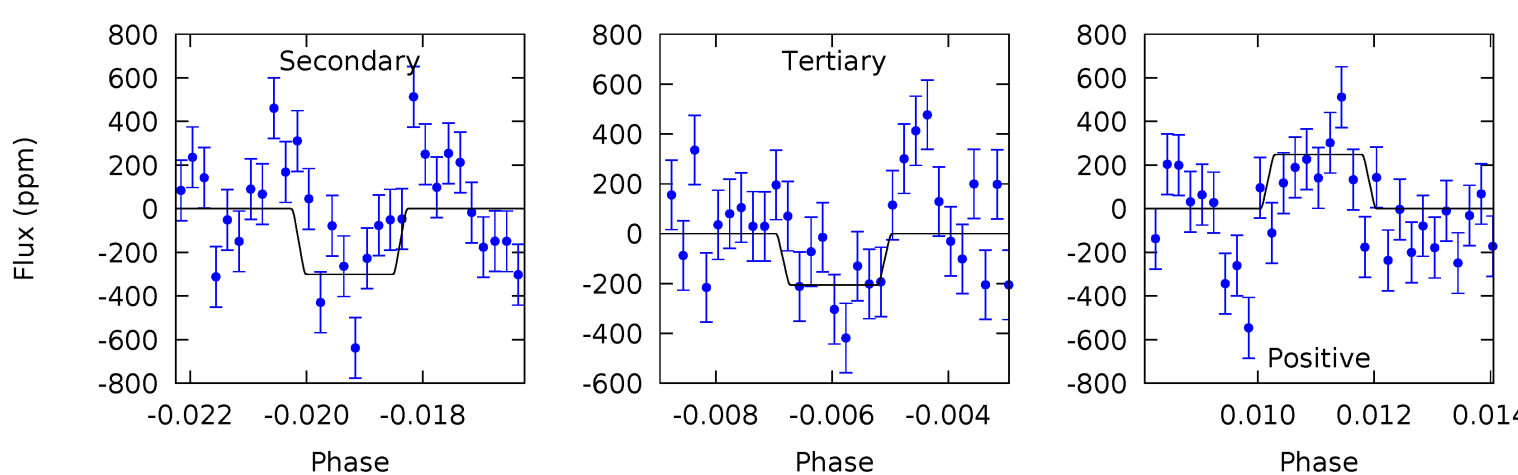
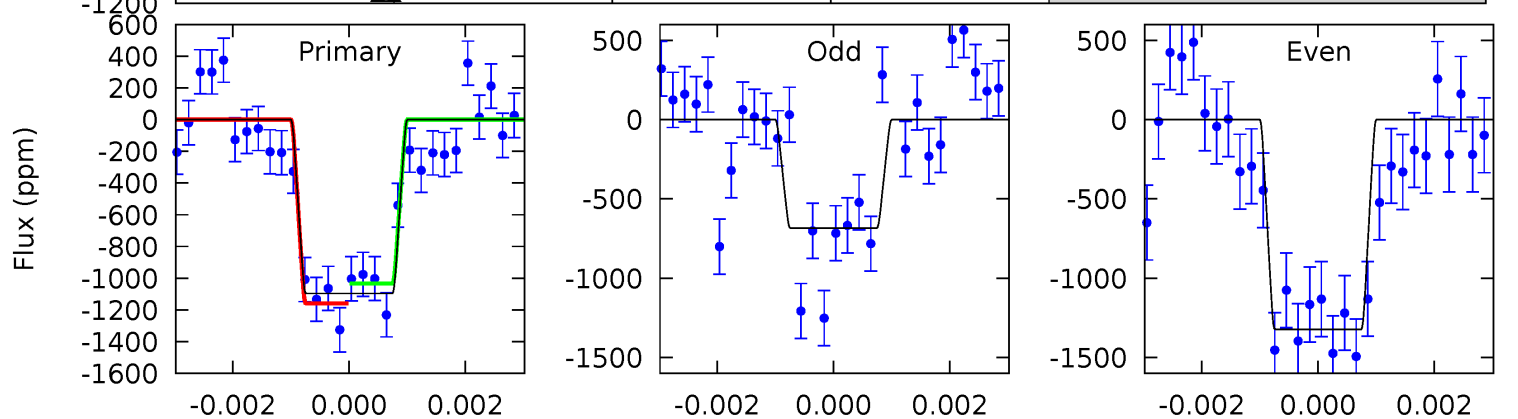
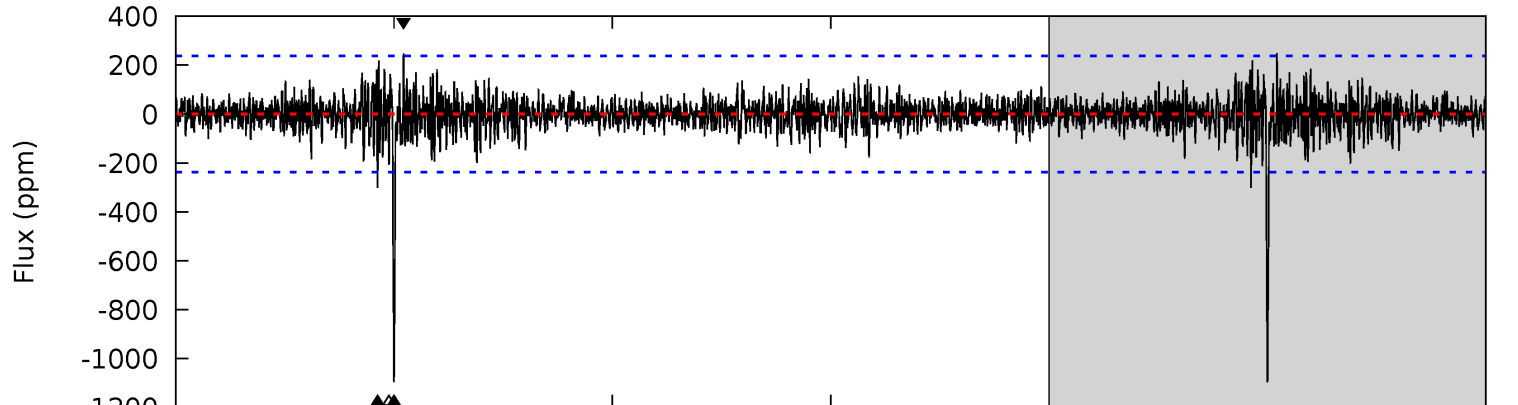
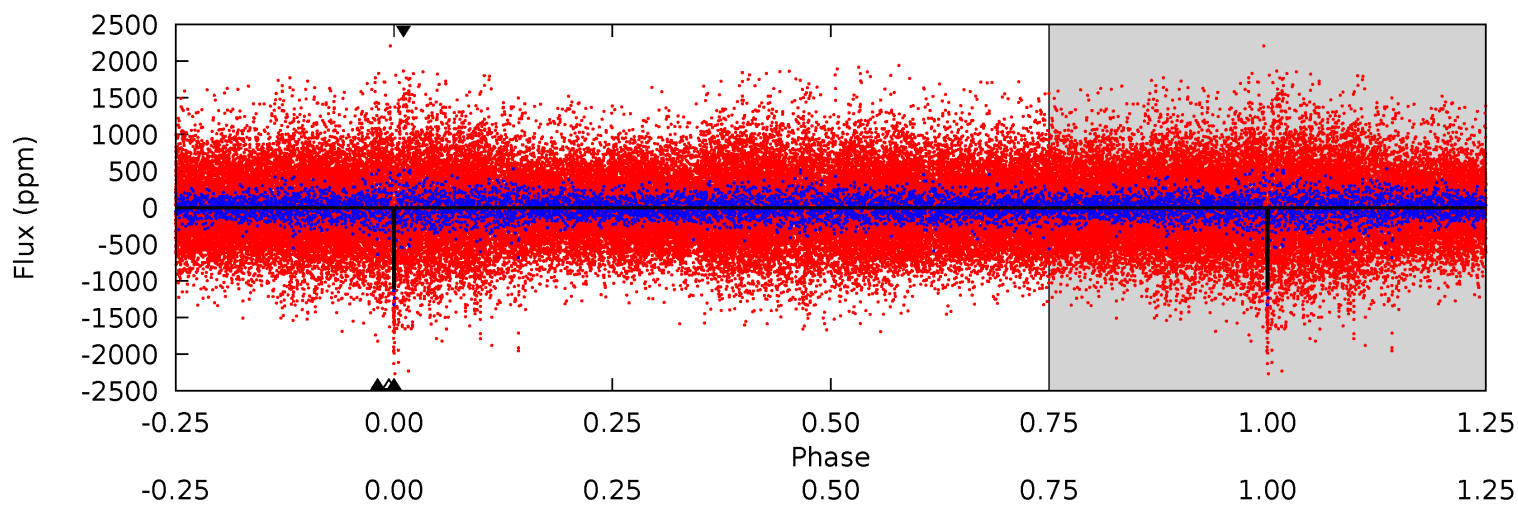
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.8	15.9	15.0	15.9	5.34	3.11	3.09	6.77	5.83	0.96	0.02	3.91	1.09	0.42	0.68



Alt Model-Shift Uniqueness Test

007026651-01, P = 368.137828 Days, E = 310.209286 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.6	6.74	4.63	5.57	5.33	3.10	1.10	19.9	19.0	2.11	1.17	6.72	0.90	0.18	1.40



Stellar Parameters For KIC 007026651

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6373^{+179}_{-224}	$4.401^{+0.067}_{-0.216}$	$-0.060^{+0.250}_{-0.300}$	$1.126^{+0.389}_{-0.130}$	$1.165^{+0.169}_{-0.152}$	$1.149^{+0.332}_{-0.607}$
	+3%/-4%	+2%/-5%	+417%/-500%	+35%/-12%	+15%/-13%	+29%/-53%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007026651-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-856 ± 54	$3.94^{+1.23}_{-0.93}$	412^{+33}_{-23}	6165^{+1021}_{-664}	33372^{+24895}_{-13806}
Alt.	-301 ± 45	$4.18^{+1.26}_{-1.07}$	411^{+33}_{-20}	4740^{+593}_{-416}	10152^{+8574}_{-4179}

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

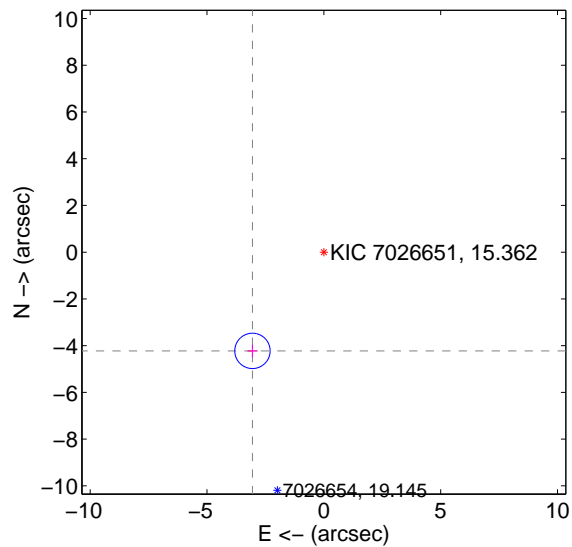
Supplemental centroid analysis for 007026651-01. Kepler magnitude: 15.36. Transit SNR 7.96

There are 0 quarters with good PRF difference image offsets

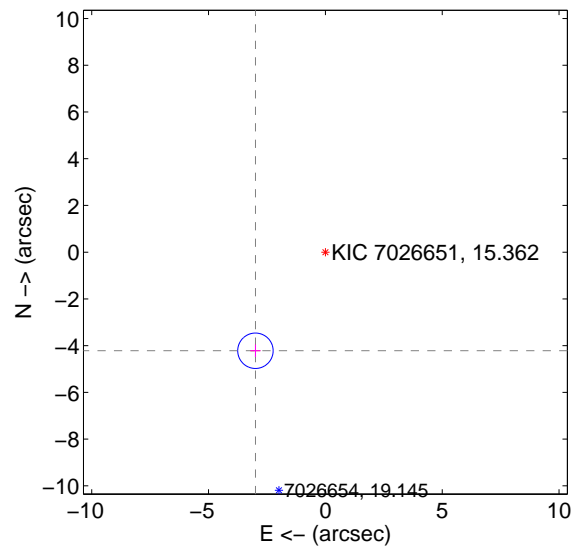
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.214 ± 0.252	20.67	3.055 ± 0.217	-4.225 ± 0.269
PRF-fit source offset from KIC position	5.173 ± 0.253	20.48	2.994 ± 0.217	-4.219 ± 0.269
photometric centroid source offset	1.51 ± 2.37	0.64	-0.18 ± 1.73	1.50 ± 2.38

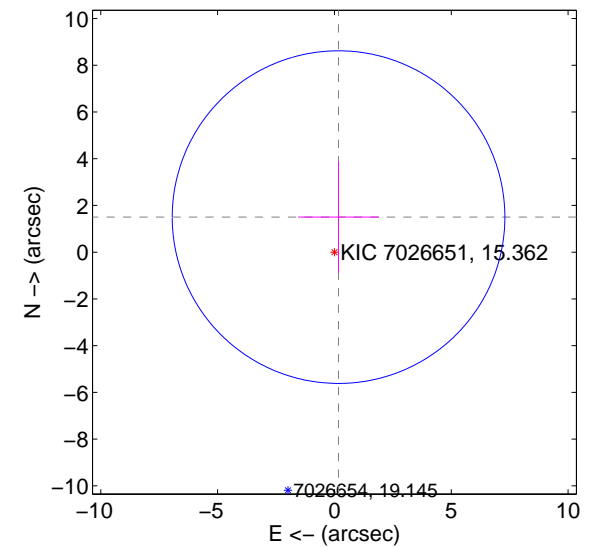
offset from difference PRF-fit to OOT PRF-fit



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.

Q1 no difference image



Q1 no OOT image



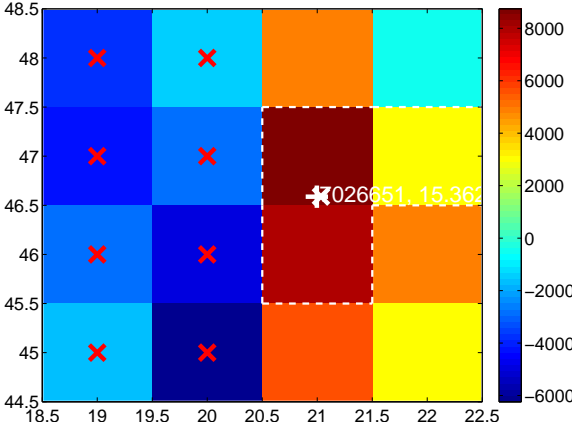
Q2 no difference image



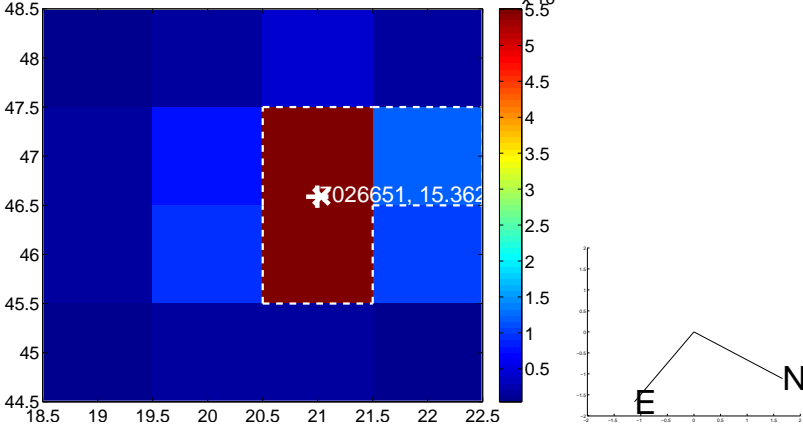
Q2 no OOT image



Q3 difference image. Poor Quality



Q3 OOT image



Q4 no difference image



Q4 no OOT image



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

Q5 no difference image



Q5 no OOT image



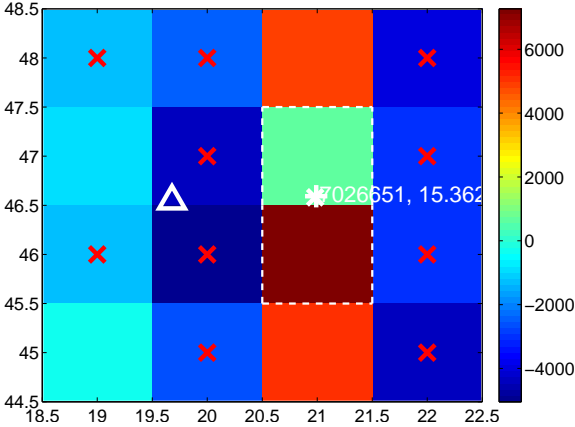
Q6 no difference image



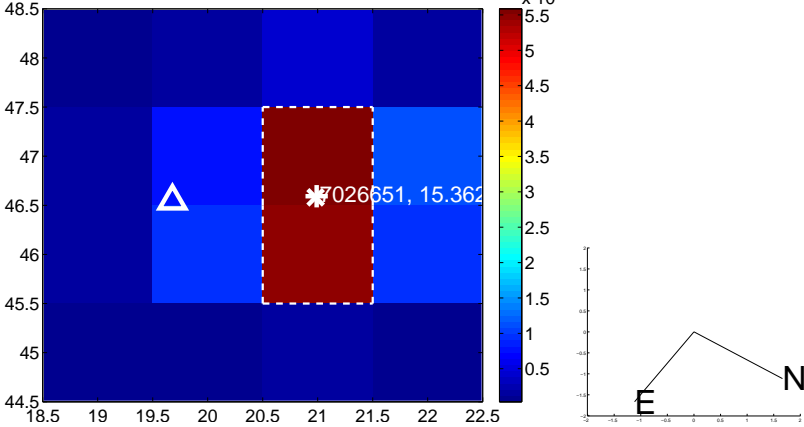
Q6 no OOT image



Q7 difference image. Poor Quality



Q7 OOT image



Q8 no difference image



Q8 no OOT image



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

Q9 no difference image



Q9 no OOT image



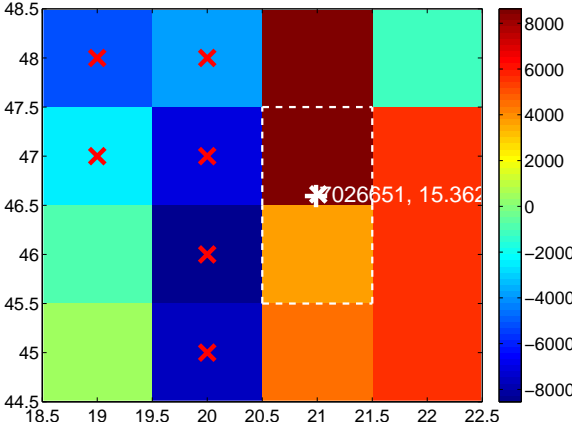
Q10 no difference image



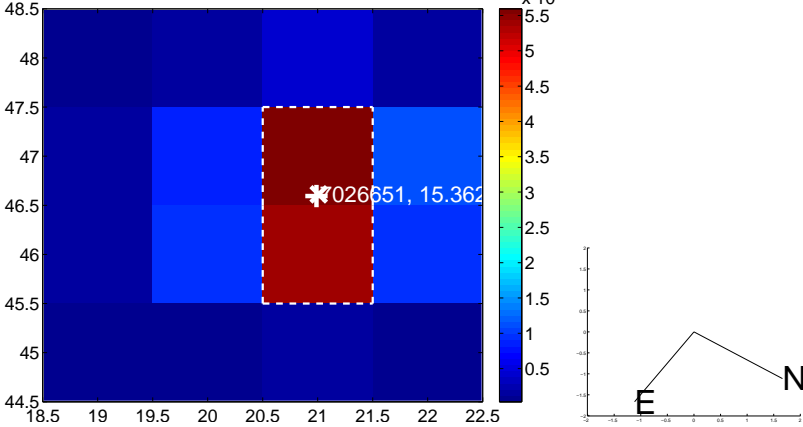
Q10 no OOT image



Q11 difference image. Poor Quality



Q11 OOT image



Q12 no difference image



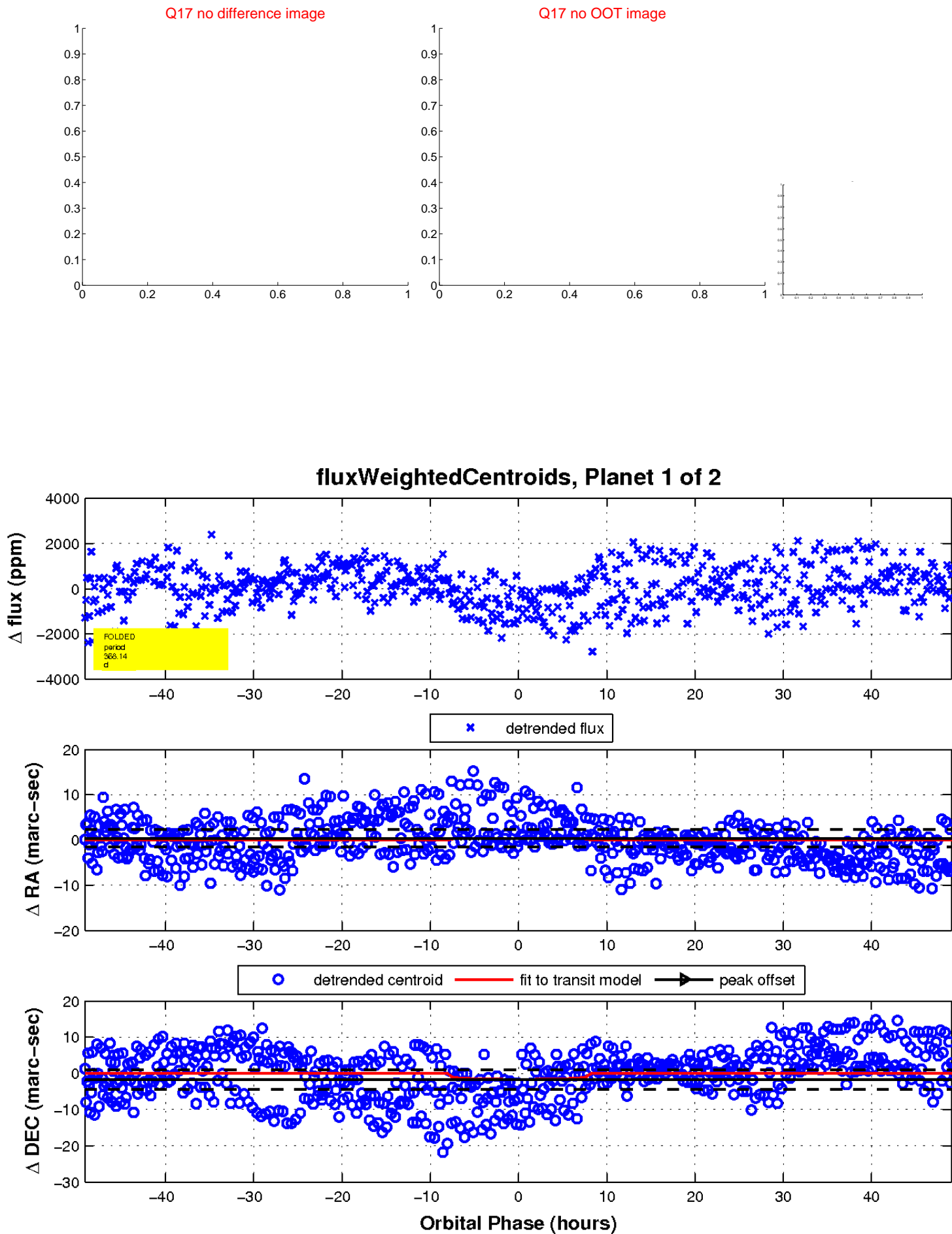
Q12 no OOT image



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

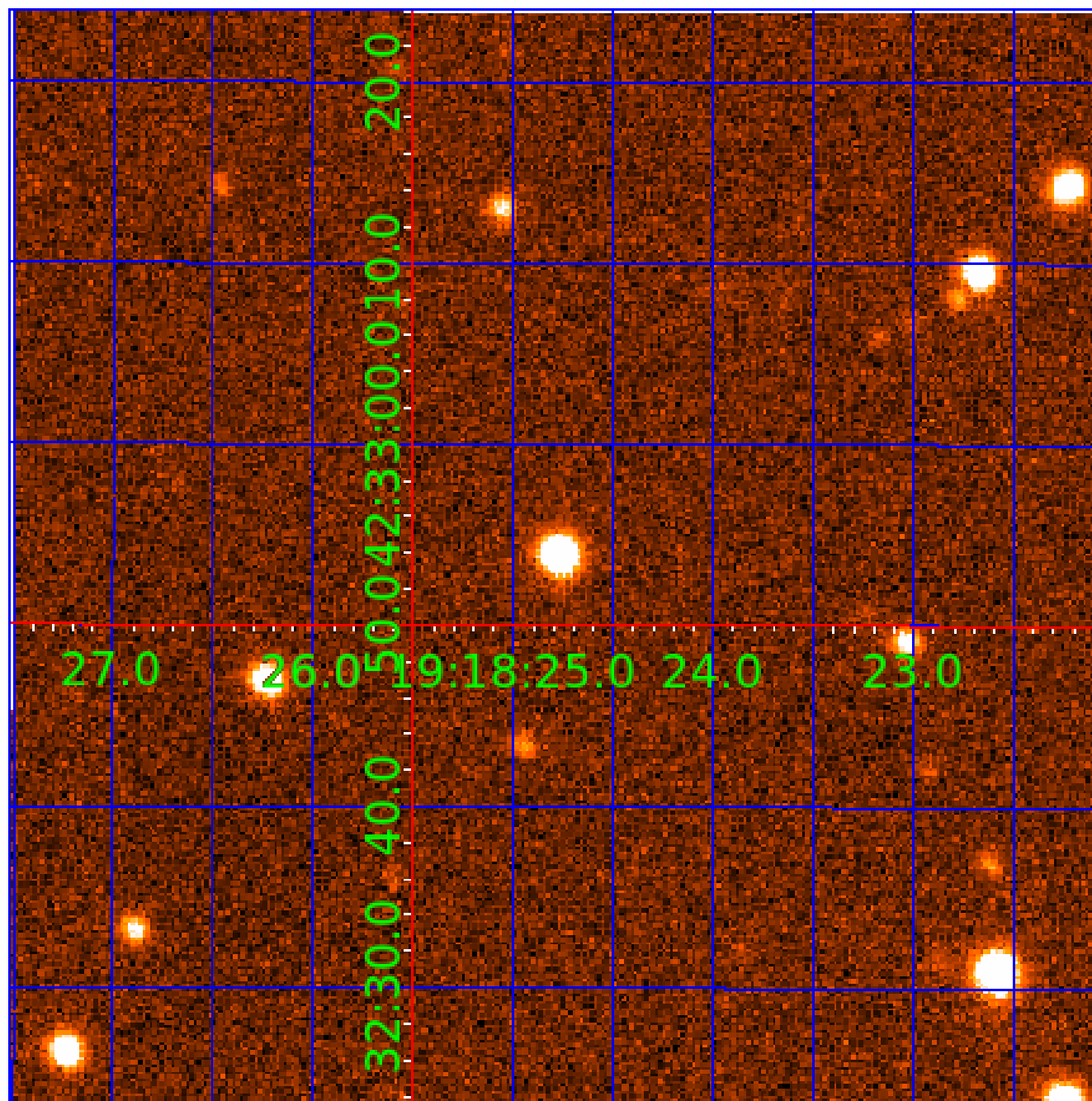


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007026651

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})
007026651-01	OBS	No	368.137038	310.204869	1099.9	16.377	8.1	8.0	1.13	6373	3.81	1.68
007026651-02	OBS	No	373.967052	307.052222	999.9	16.566	7.6	7.9	1.13	6373	3.59	1.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007026651-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007026651-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—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.

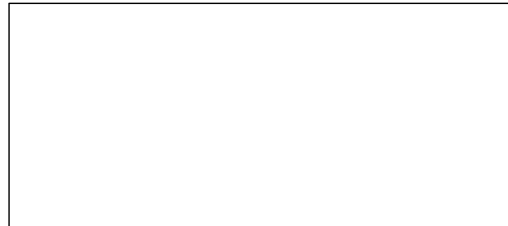
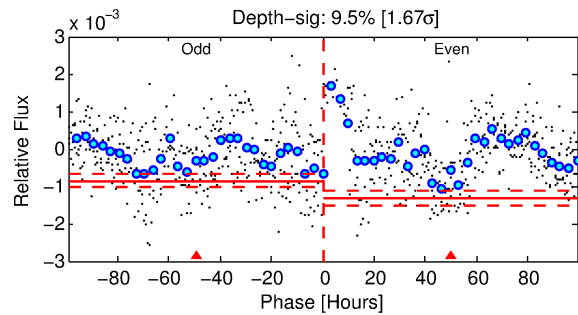
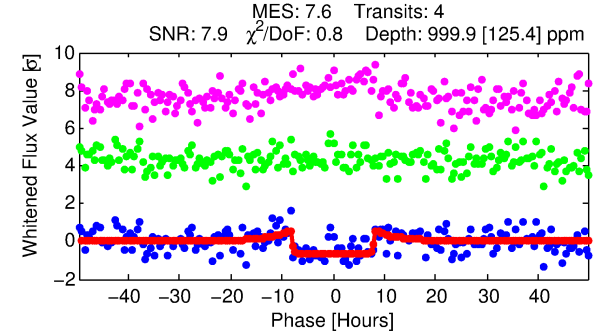
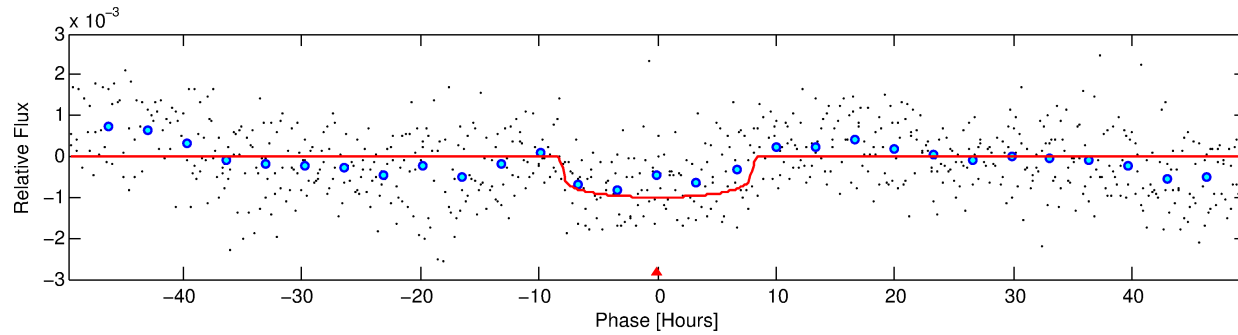
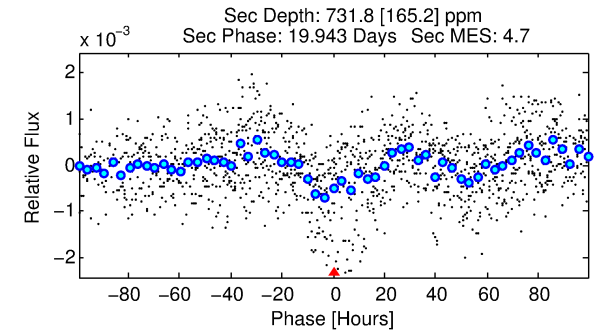
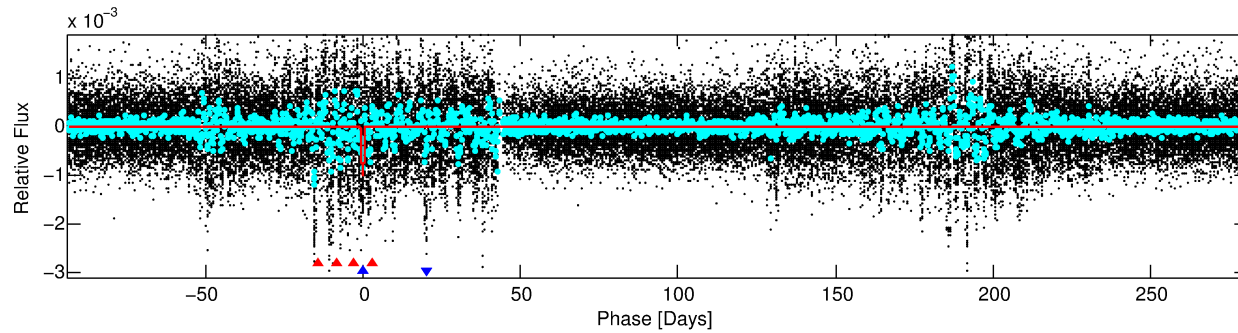
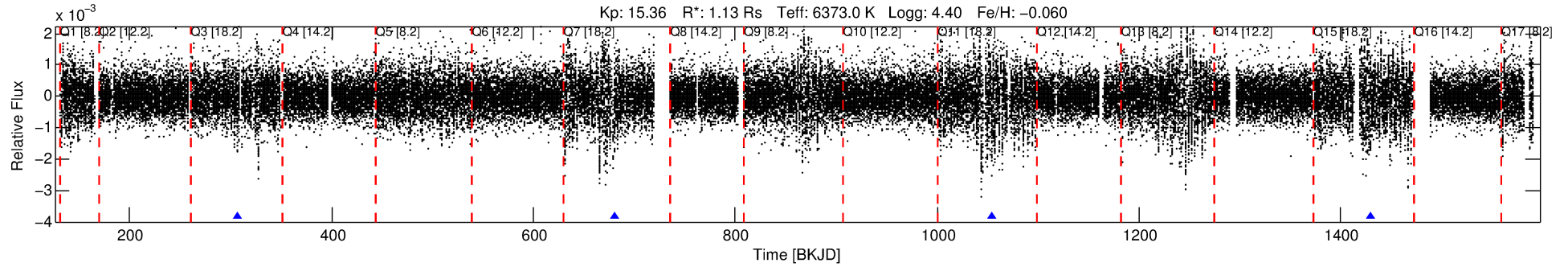
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007026651-02

No Significant Match Found

DV One-Page Summary

KIC: 7026651 Candidate: 2 of 2 Period: 373.967 d



DV Fit Results:

Period = 373.96705 [0.00677] d
Epoch = 307.0522 [0.0131] BKJD
Rp/R* = 0.0292 [0.0095]
a/R* = 172.05 [275.67]
b = 0.25 [5.95]
Seff = 1.64 [0.70]
Teq = 289 [31] K
Rp = 3.59 [1.70] Re
a = 1.0689 [0.3033] AU
Ag = 35669.58 [28419.65] [1.26σ]
Teffp = 6131 [1075] K [5.43σ]

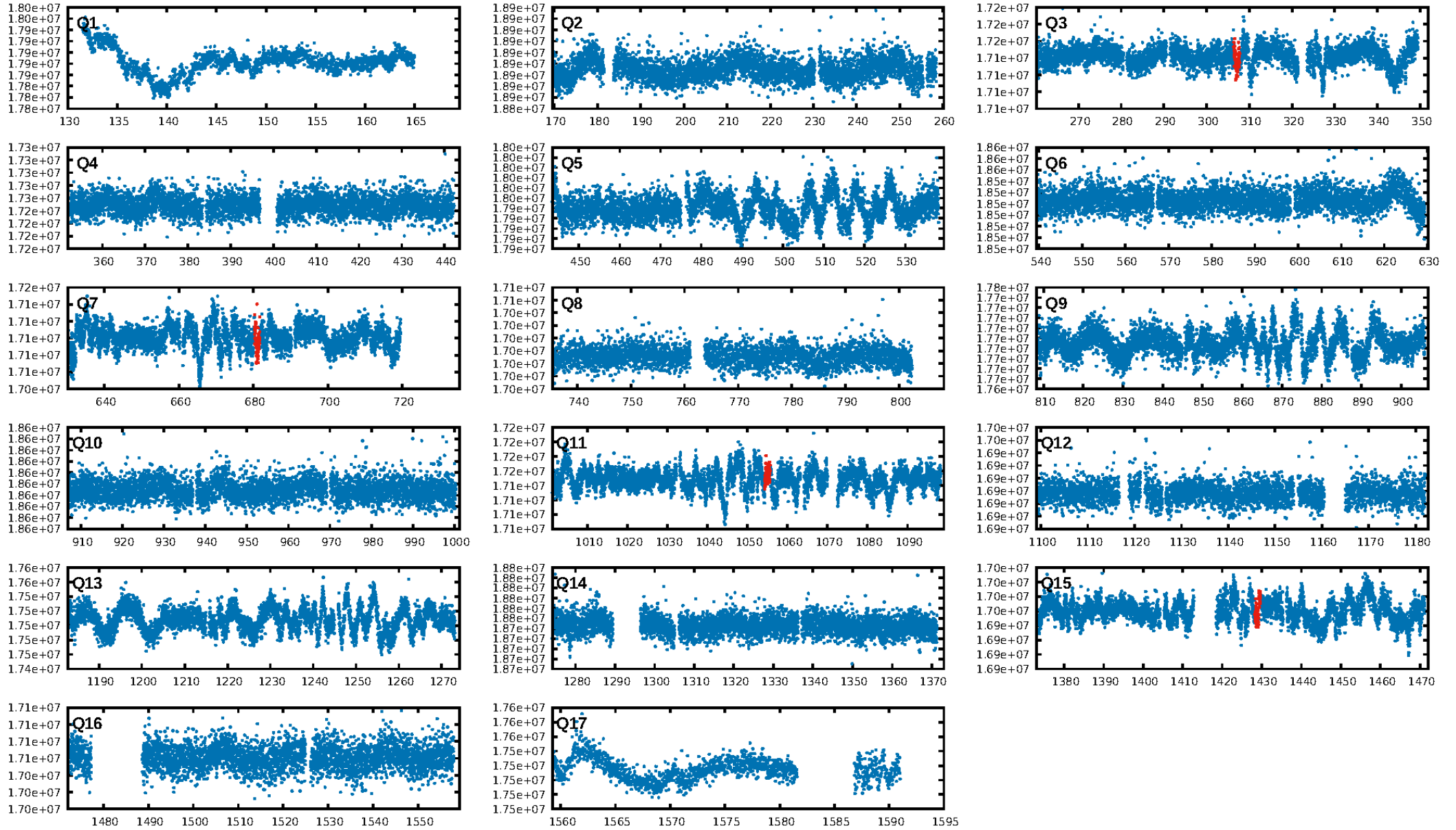
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [6.01σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 22.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.94e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.951
Centroid-sig: 3.8%
Centroid-so: 2.979 arcsec [1.29σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [4/4]

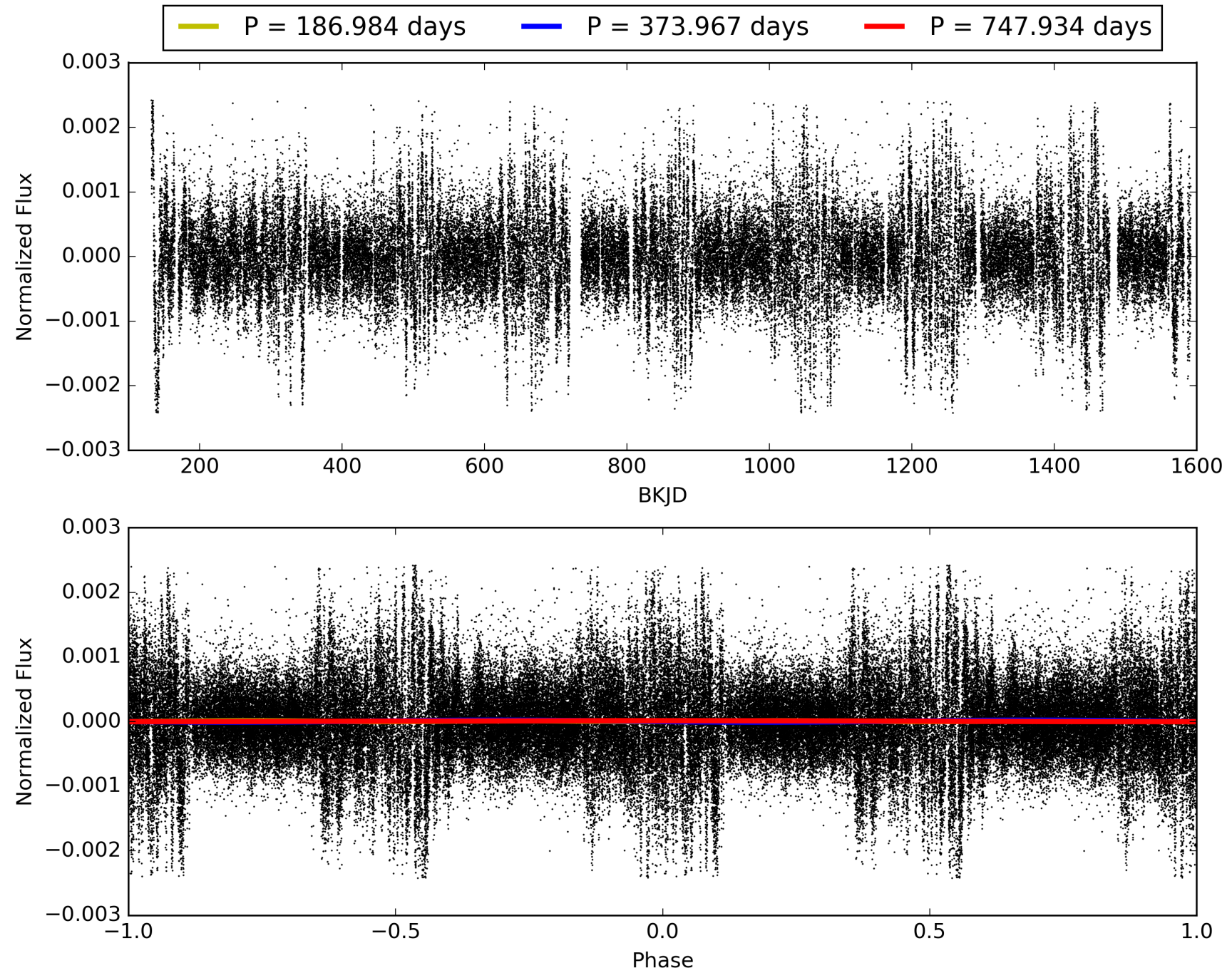
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:16:10 Z

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

TCE 007026651-02, PDC Light Curves

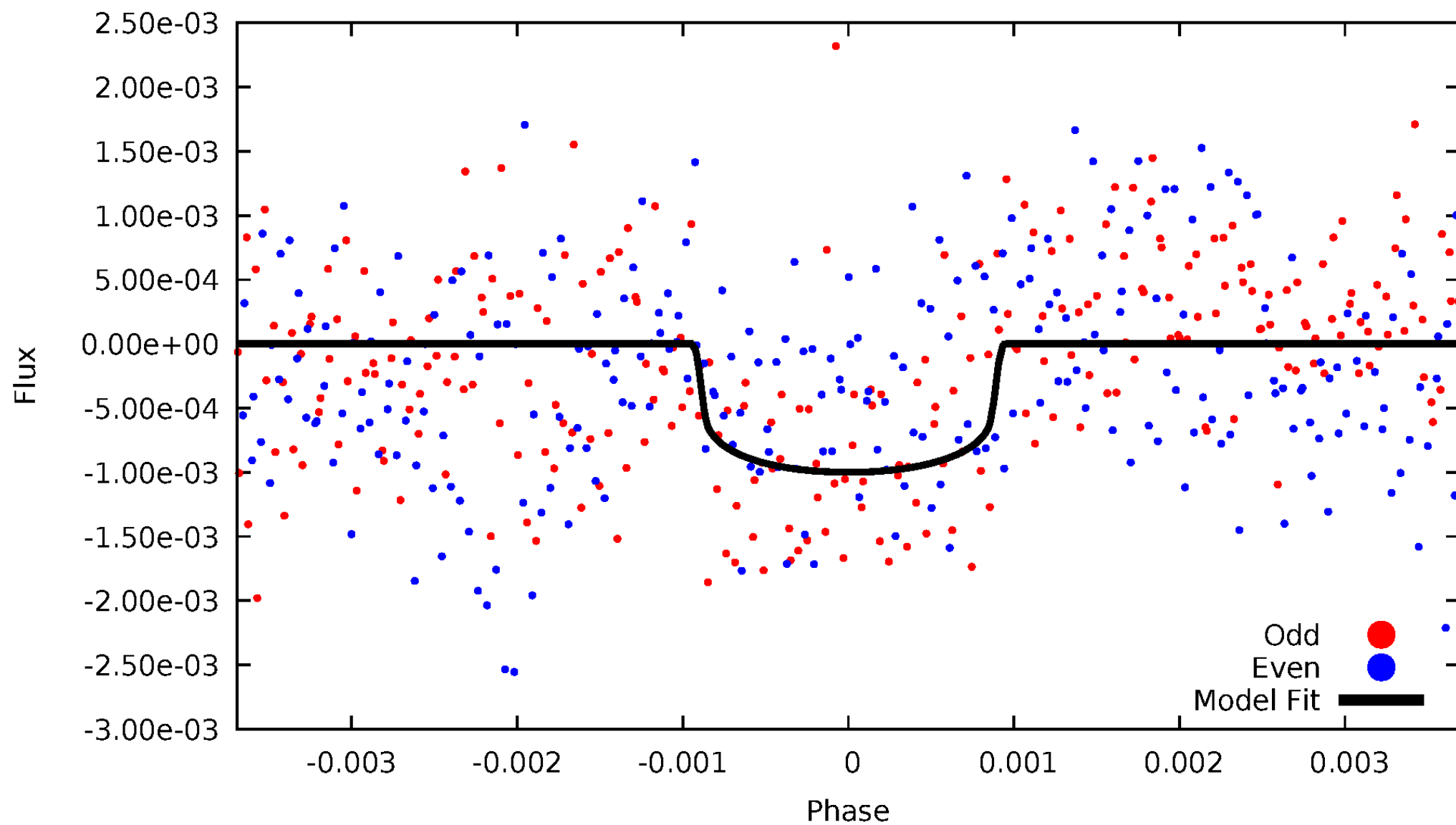


TCE 007026651-02



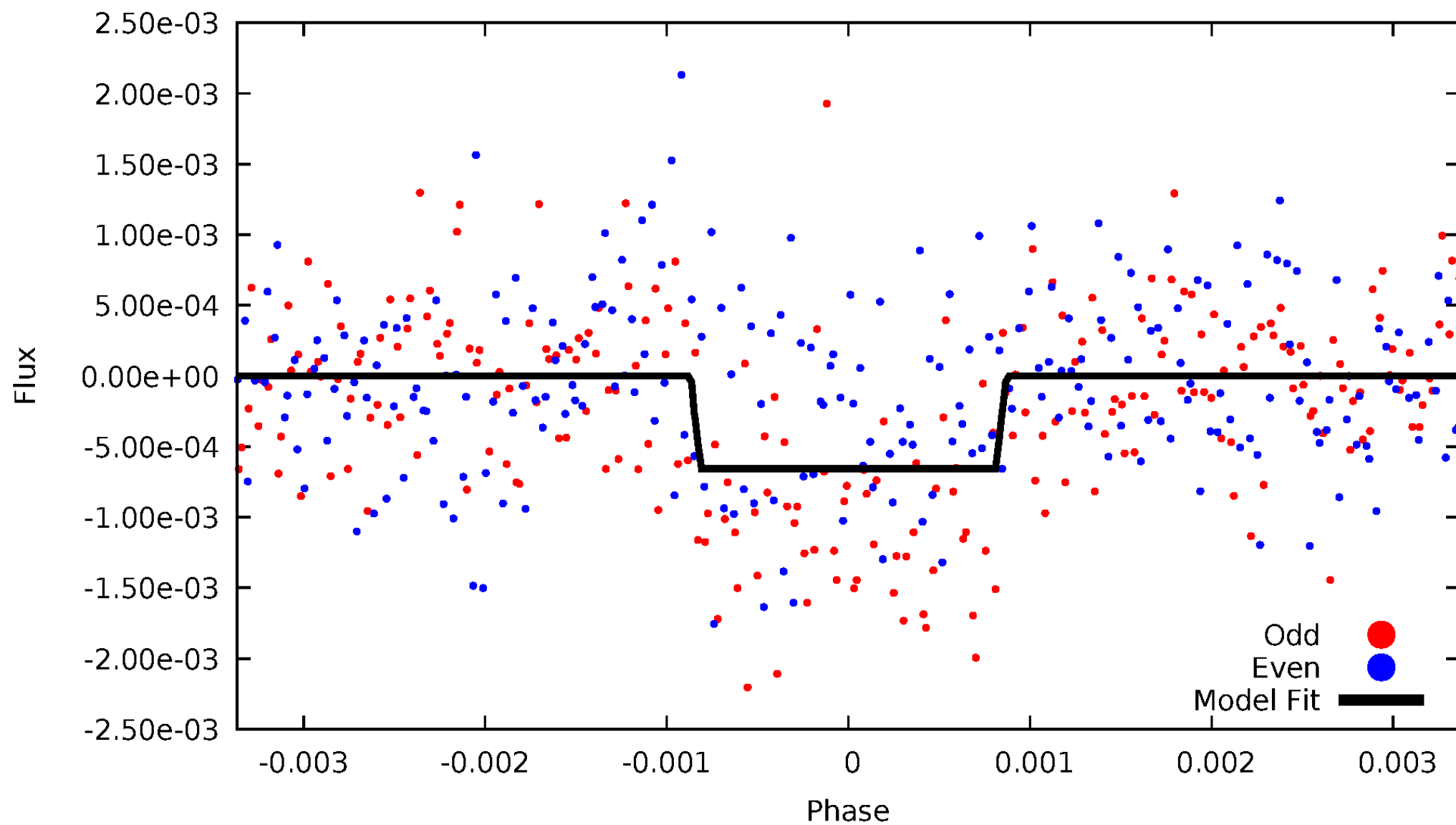
DV Odd/Even

TCE 007026651-02



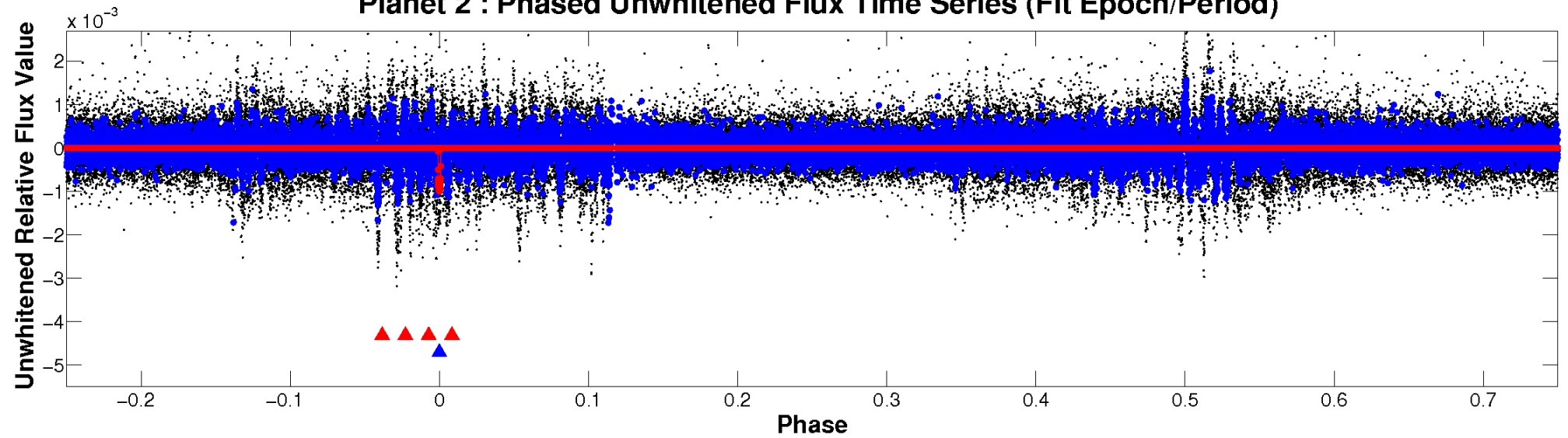
ALT Odd/Even

TCE 007026651-02

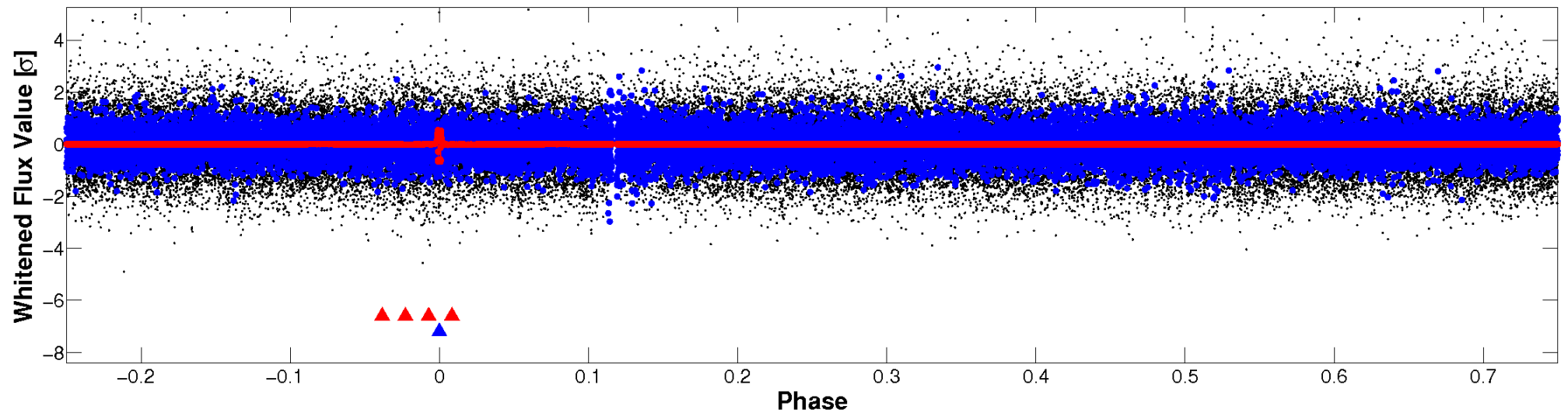


Non-Whitened Vs. Whitened Light Curve

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

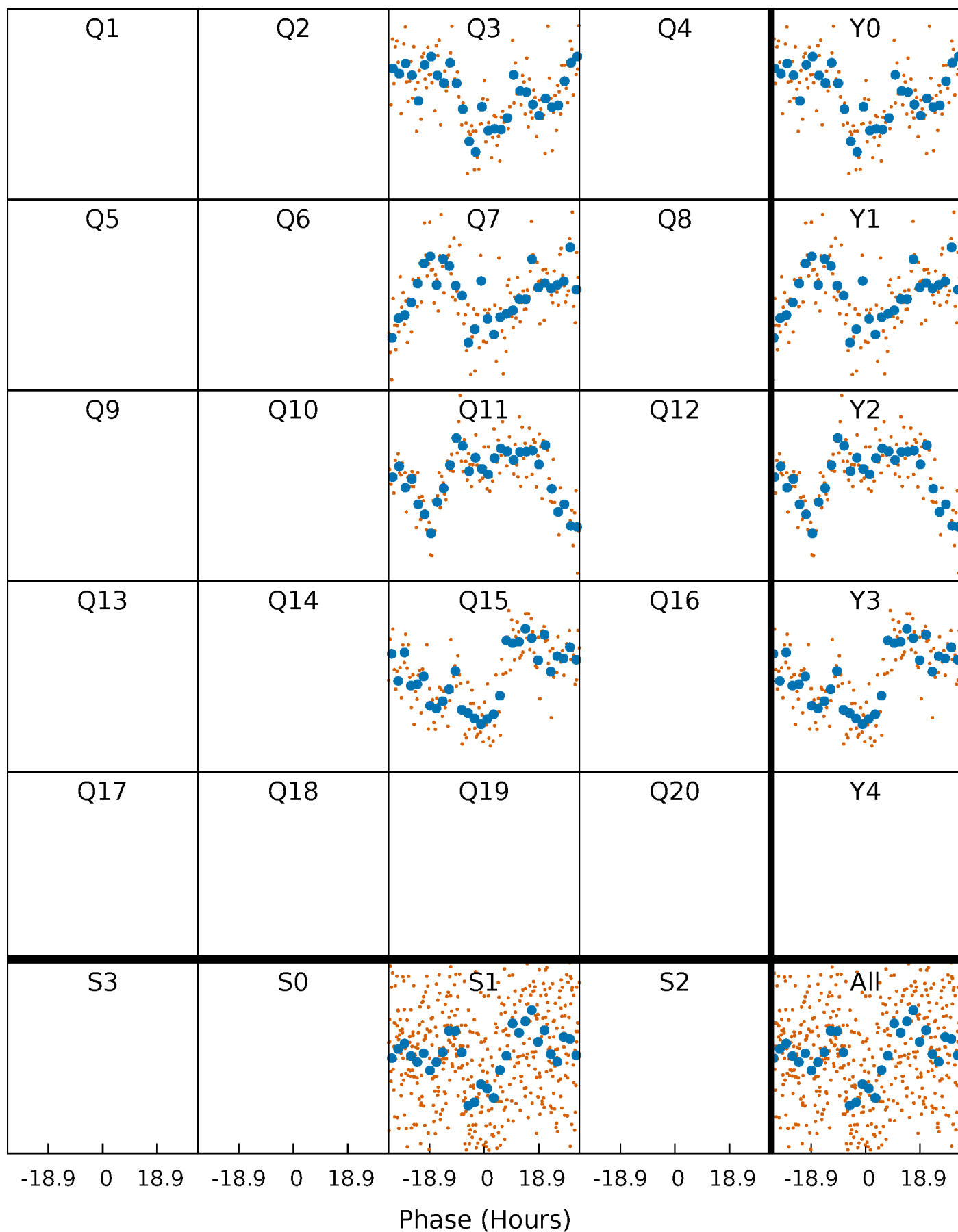


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



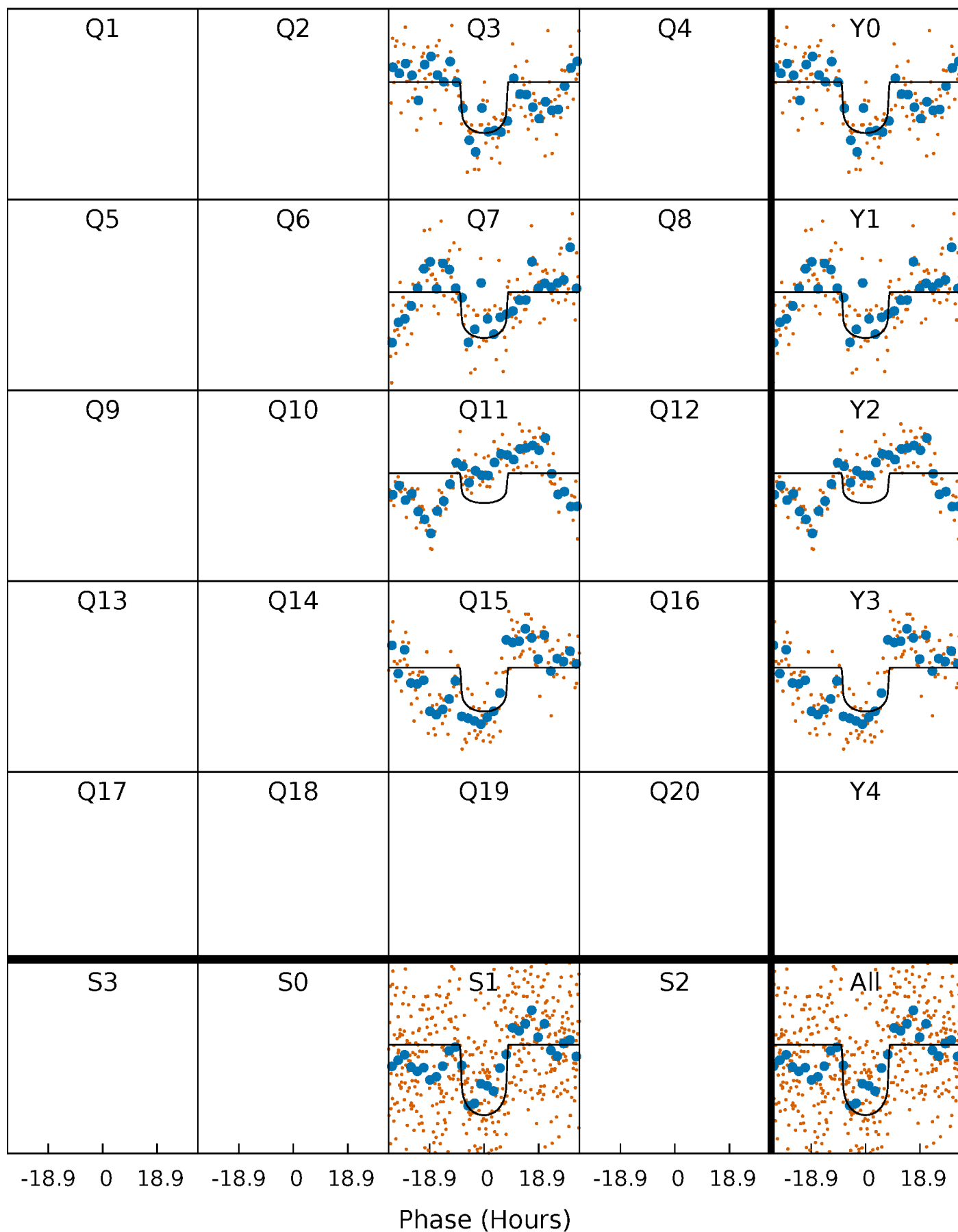
PDC Quarter-Phased Transit Curves

TCE 007026651-02 P=373.967052 Days $T_0=307.052222$ (BKJD)



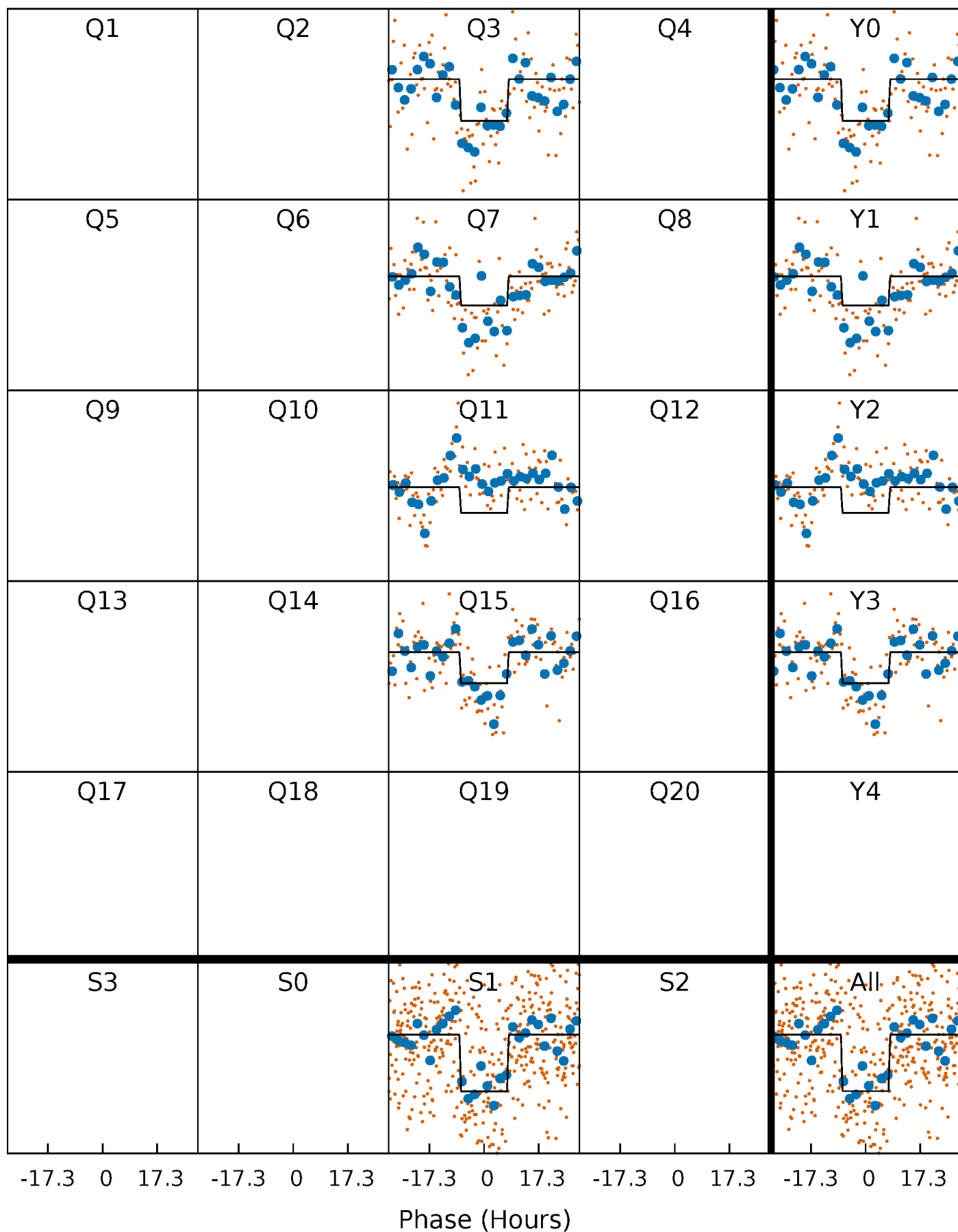
DV Quarter-Phased Transit Curves

TCE 007026651-02 $P=373.967052$ Days $T_0=307.052222$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

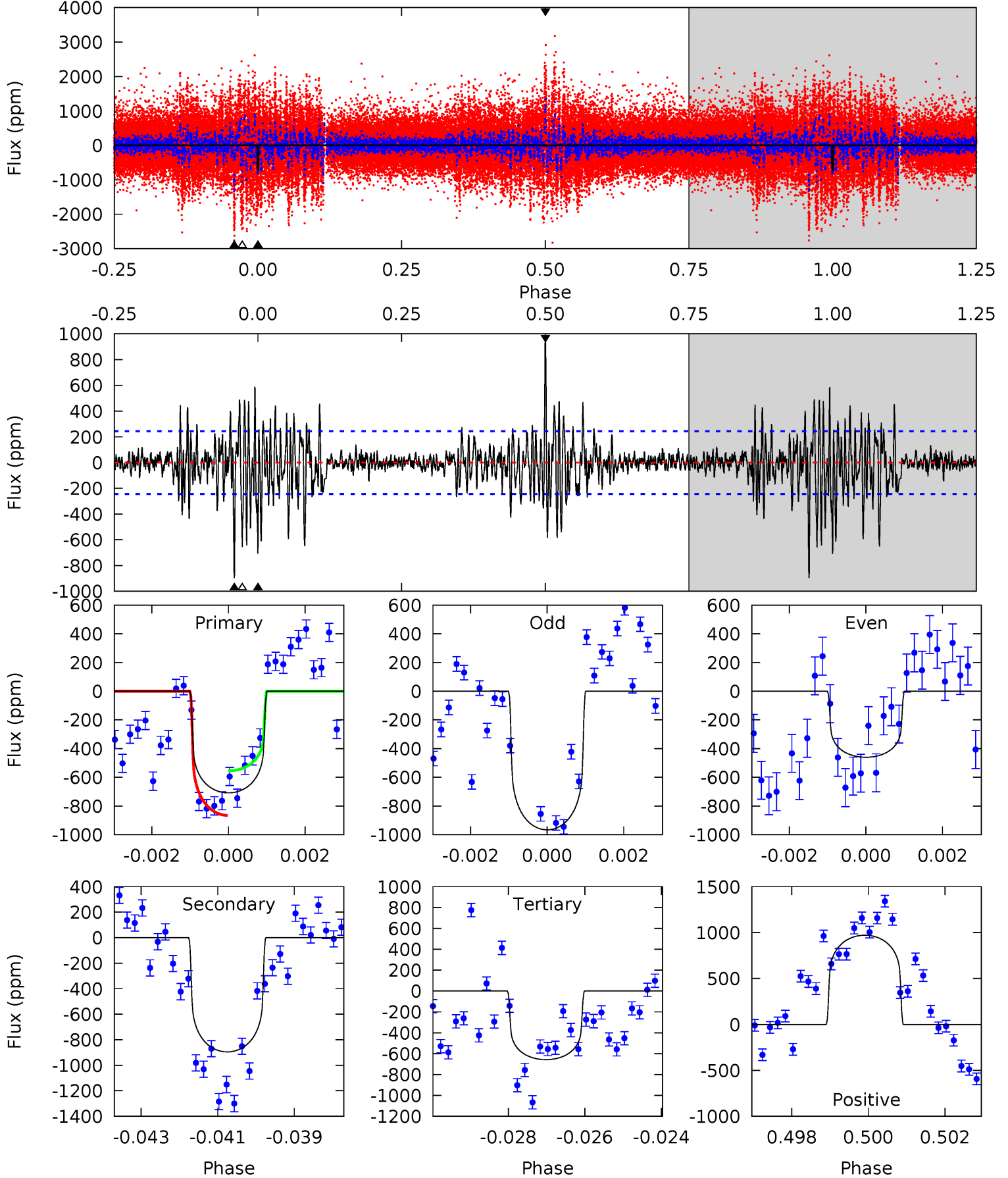
TCE 007026651-02 $P=373.947770$ Days $T_0=307.087732$ (BKJD)



DV Model-Shift Uniqueness Test

007026651-02, $P = 373.967052$ Days, $E = 307.052222$ Days

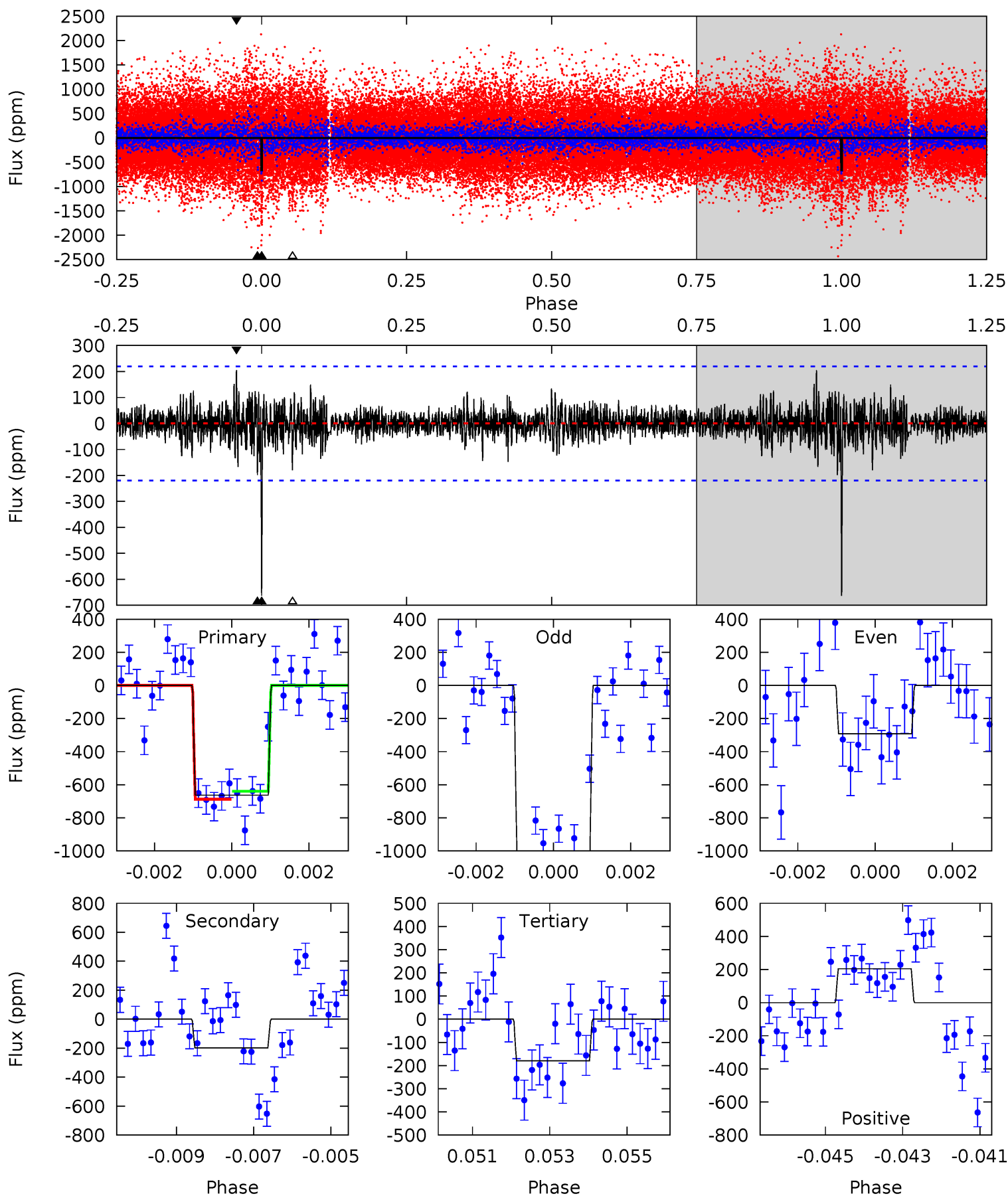
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	19.6	14.4	21.2	5.34	3.11	3.20	1.12	-5.73	5.20	-1.65	5.50	0.79	0.52	3.41



Alt Model-Shift Uniqueness Test

007026651-02, $P = 373.947770$ Days, $E = 307.087732$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	4.84	4.38	4.99	5.35	3.14	0.93	11.8	11.2	0.46	-0.15	8.89	0.73	0.24	0.58



Stellar Parameters For KIC 007026651

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6373^{+179}_{-224}	$4.401^{+0.067}_{-0.216}$	$-0.060^{+0.250}_{-0.300}$	$1.126^{+0.389}_{-0.130}$	$1.165^{+0.169}_{-0.152}$	$1.149^{+0.332}_{-0.607}$
	+3%/-4%	+2%/-5%	+417%/-500%	+35%/-12%	+15%/-13%	+29%/-53%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007026651-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-895 ± 46	$3.76^{+1.32}_{-1.29}$	411^{+30}_{-21}	6449^{+1640}_{-819}	39656^{+51784}_{-18393}
Alt.	-198 ± 41	$3.27^{+1.35}_{-1.15}$	411^{+30}_{-22}	4838^{+1063}_{-613}	11382^{+15828}_{-5954}

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

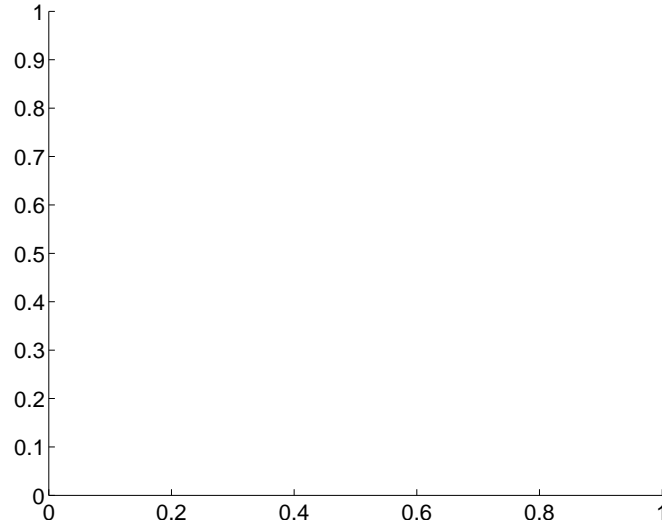
Supplemental centroid analysis for 007026651-02. Kepler magnitude: 15.36. Transit SNR 7.91

There are 0 quarters with good PRF difference image offsets

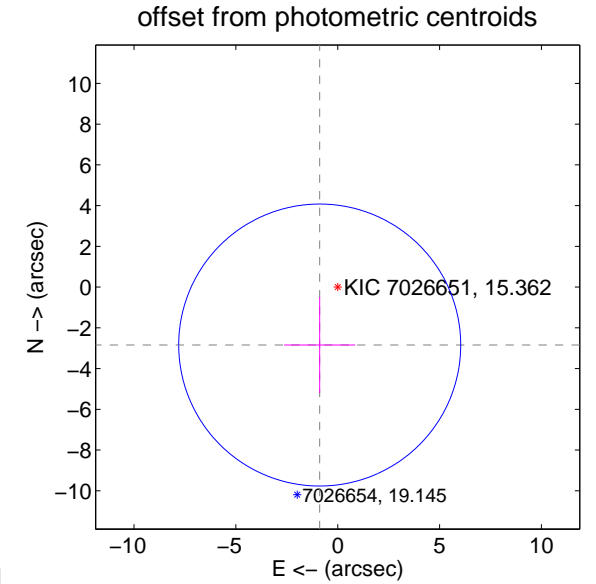
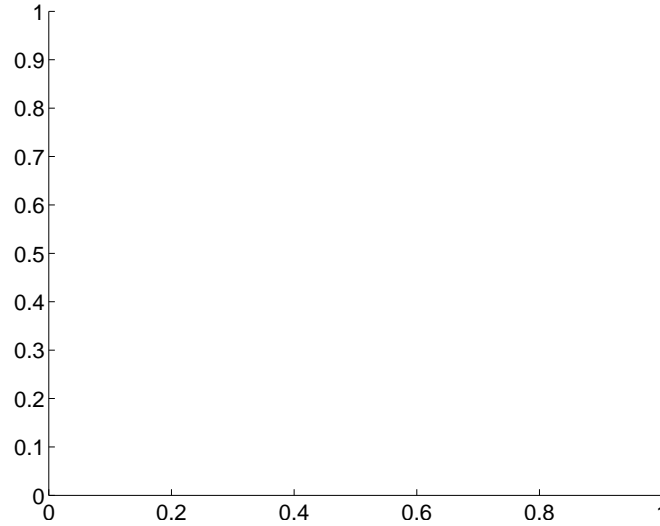
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	2.98 ± 2.31	1.29	0.88 ± 1.74	-2.84 ± 2.35

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.

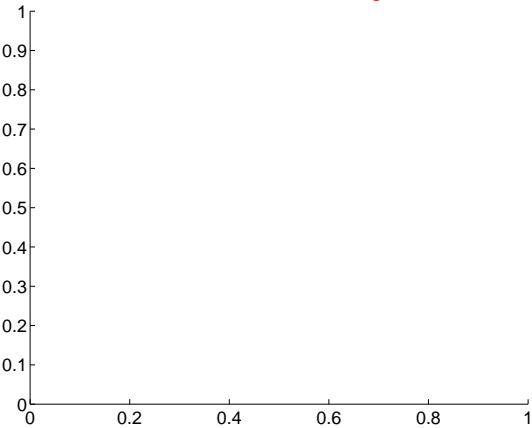
Q1 no difference image



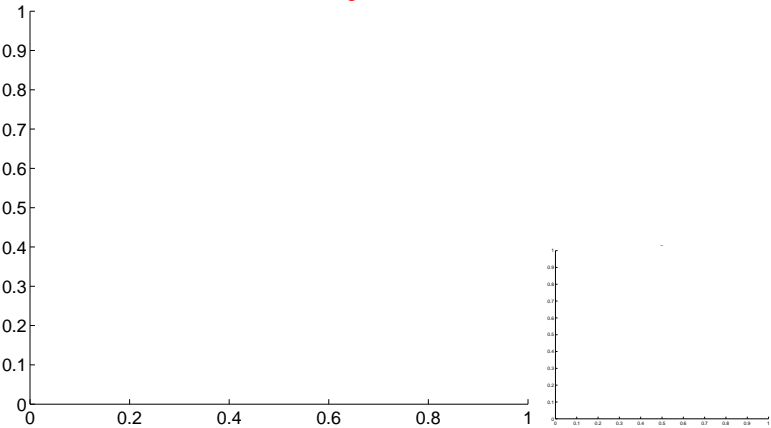
Q1 no OOT image



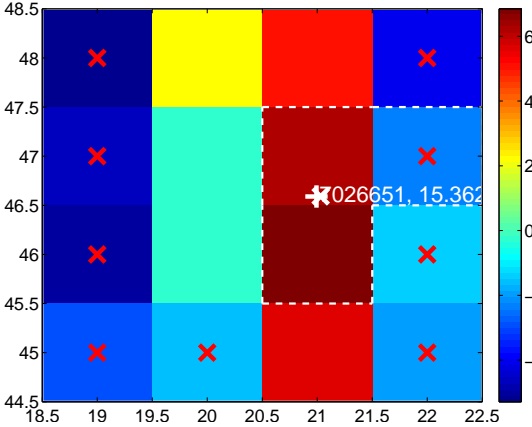
Q2 no difference image



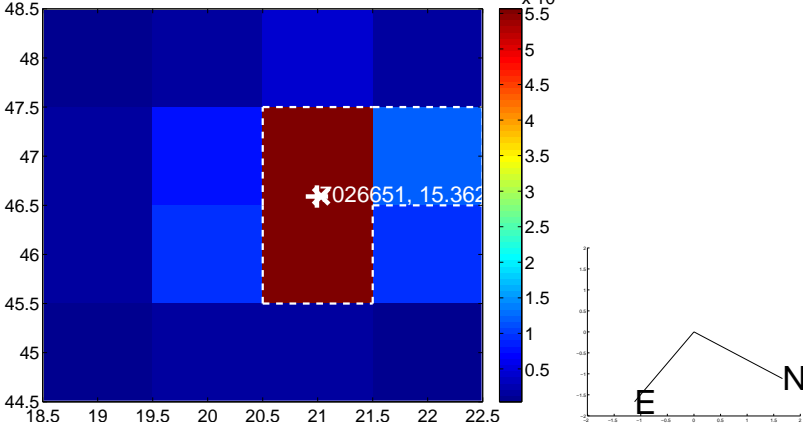
Q2 no OOT image



Q3 difference image. Poor Quality



Q3 OOT image



Q4 no difference image



Q4 no OOT image



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

Q5 no difference image



Q5 no OOT image



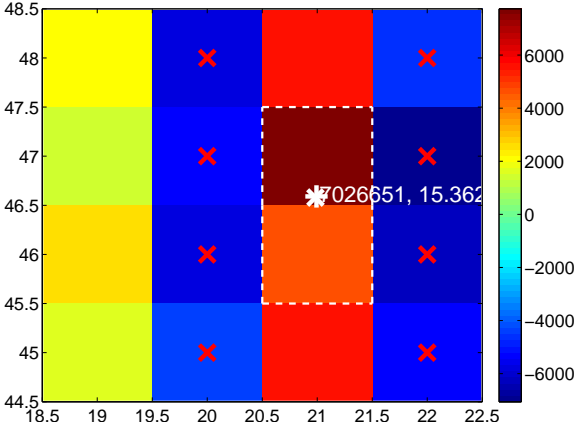
Q6 no difference image



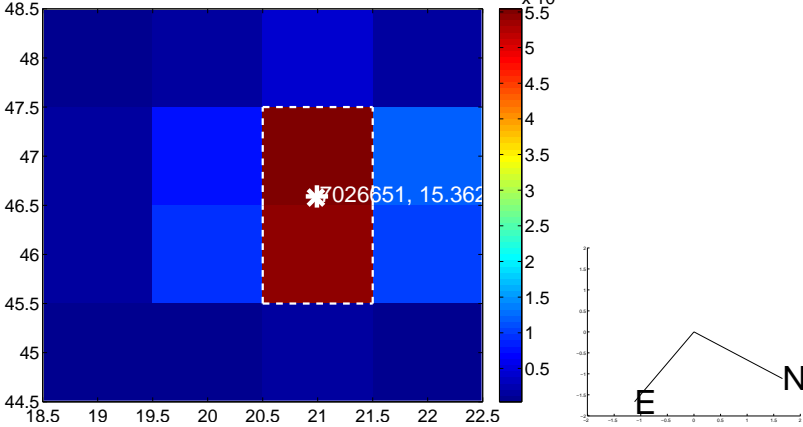
Q6 no OOT image



Q7 difference image. Poor Quality



Q7 OOT image



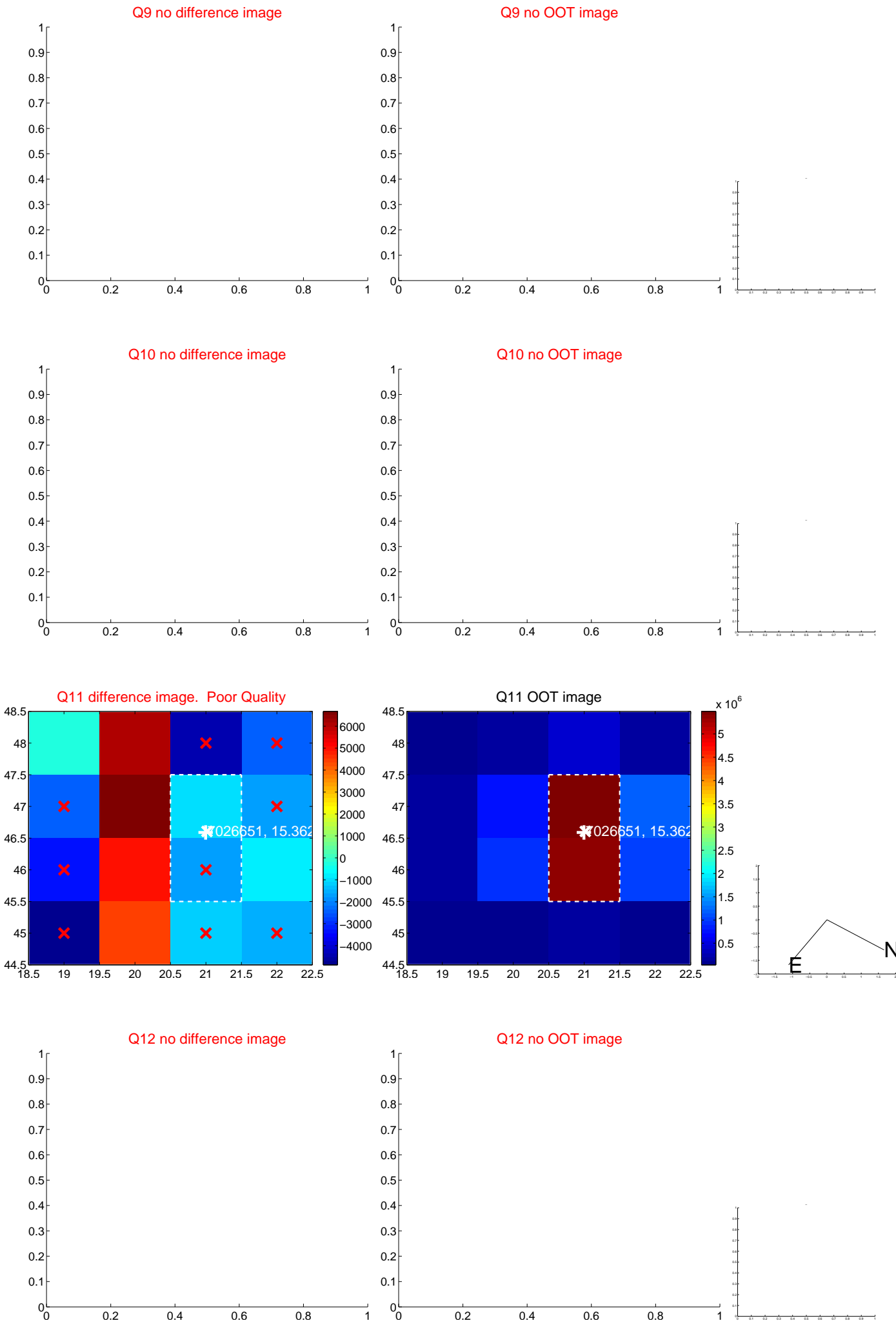
Q8 no difference image



Q8 no OOT image

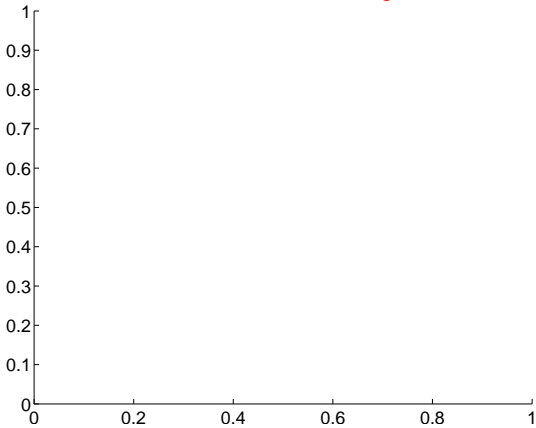


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

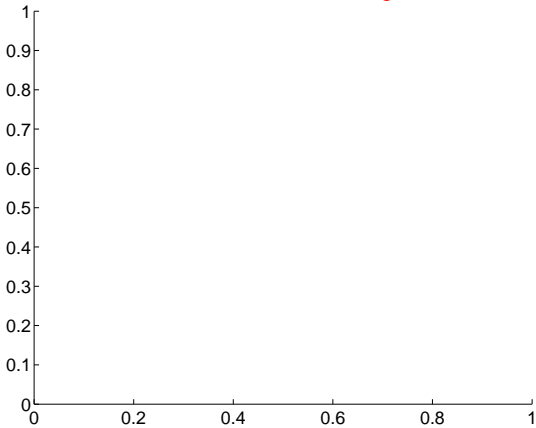
Q13 no difference image



Q13 no OOT image



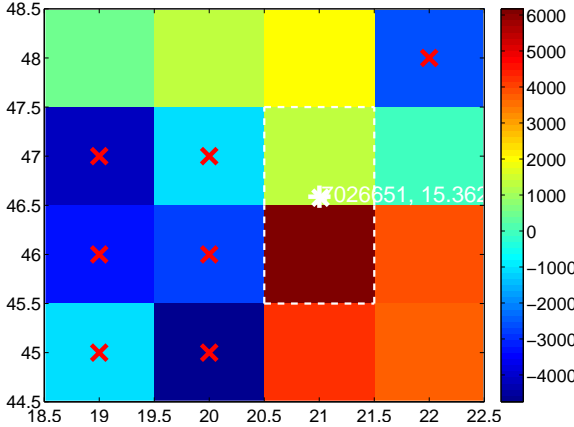
Q14 no difference image



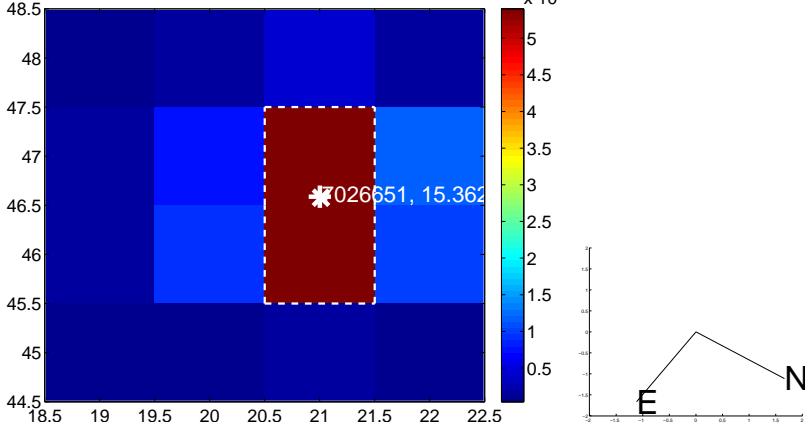
Q14 no OOT image



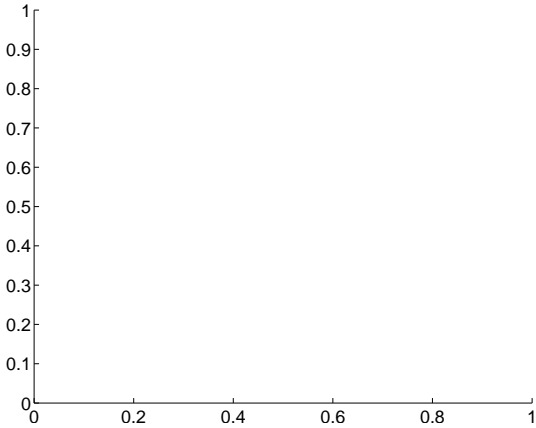
Q15 difference image. Poor Quality



Q15 OOT image



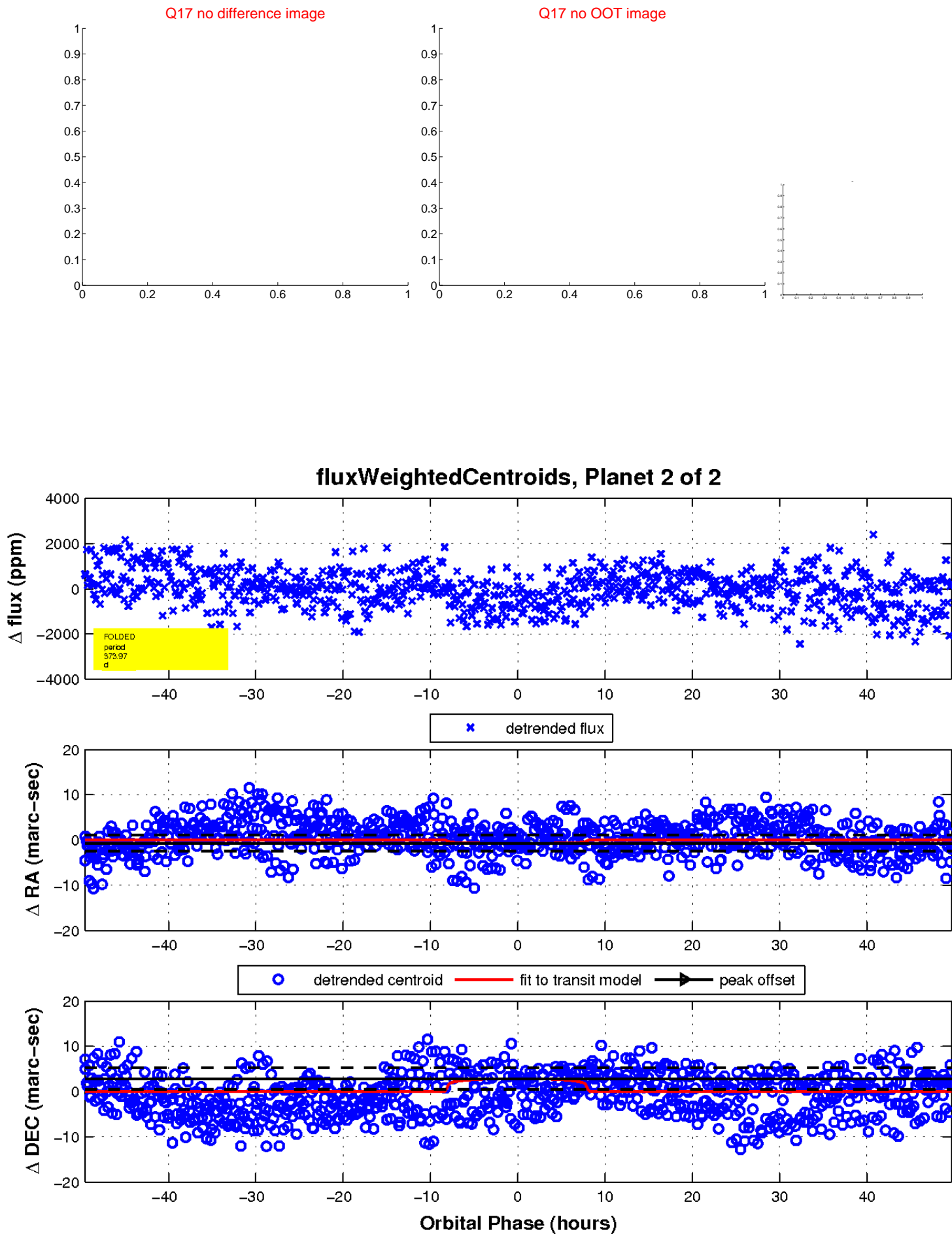
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

