

KIC 011362071

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})
011362071-01	OBS	No	390.164116	152.322836	167.3	39.609	27.9	6.3	1.61	5927	2.74	2.60
011362071-03	OBS	No	640.047358	173.931863	1041.6	67.586	14.1	19.7	1.61	5927	9.96	1.35
011362071-04	OBS	No	390.812297	373.639894	547.5	21.545	9.3	12.6	1.61	5927	7.37	2.60
011362071-05	OBS	No	265.167649	347.599011	208.6	17.832	8.4	7.3	1.61	5927	2.72	4.36
011362071-06	OBS	No	384.353756	251.553191	481.6	31.407	8.2	12.3	1.61	5927	4.10	2.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011362071-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011362071-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011362071-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011362071-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
011362071-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_TER_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.

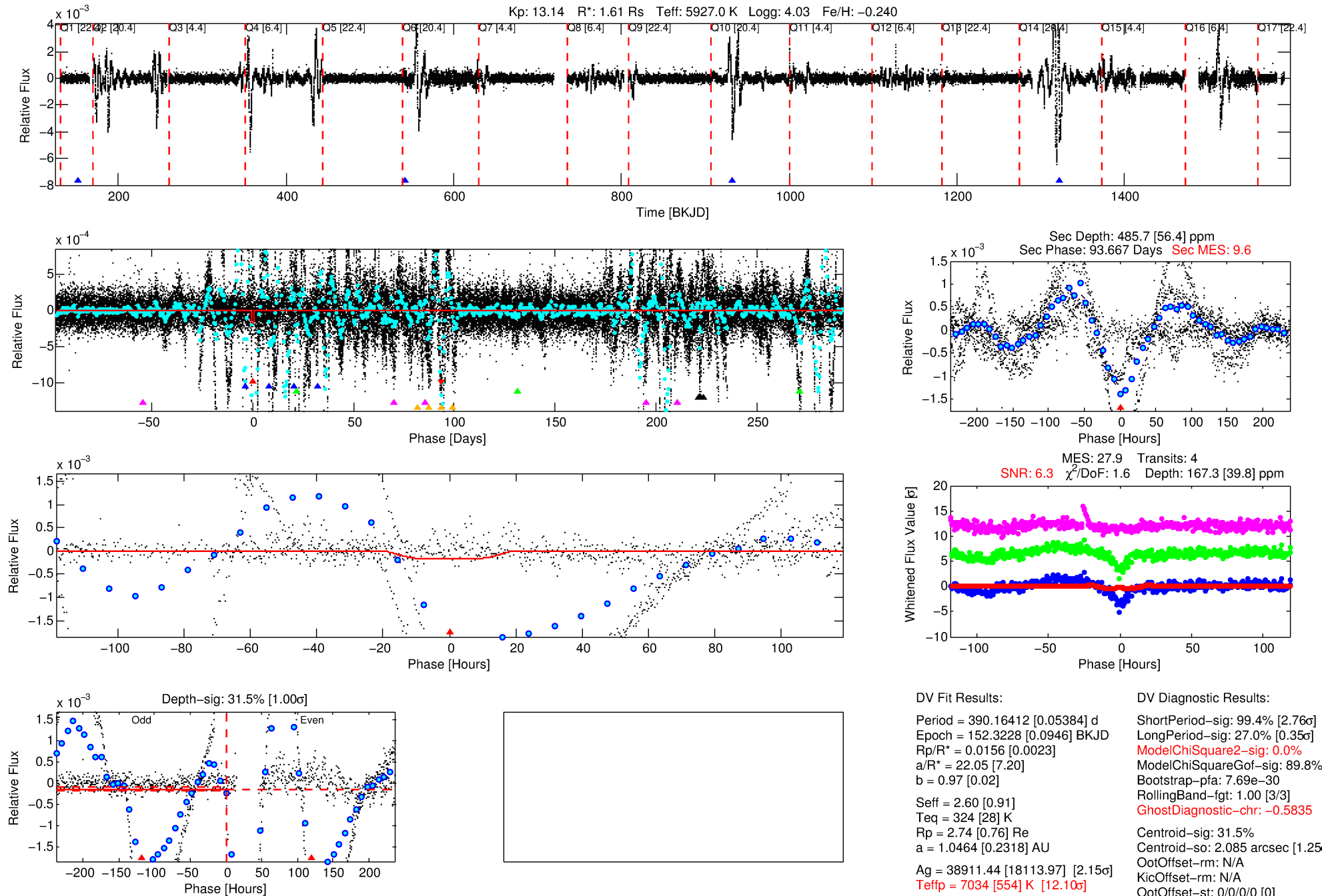
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011362071-01

No Significant Match Found

DV One-Page Summary

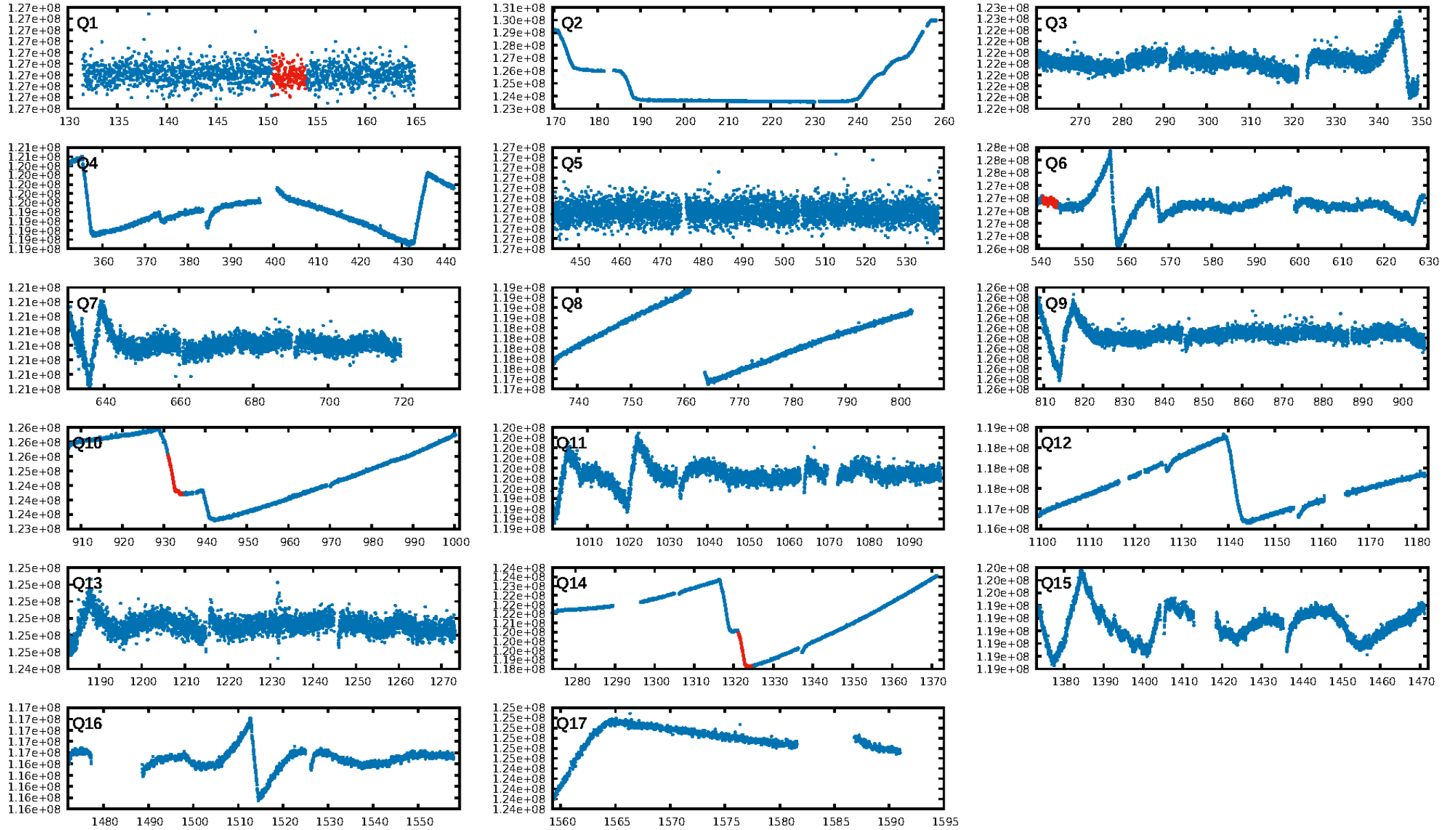
KIC: 11362071 Candidate: 1 of 6 Period: 390.164 d



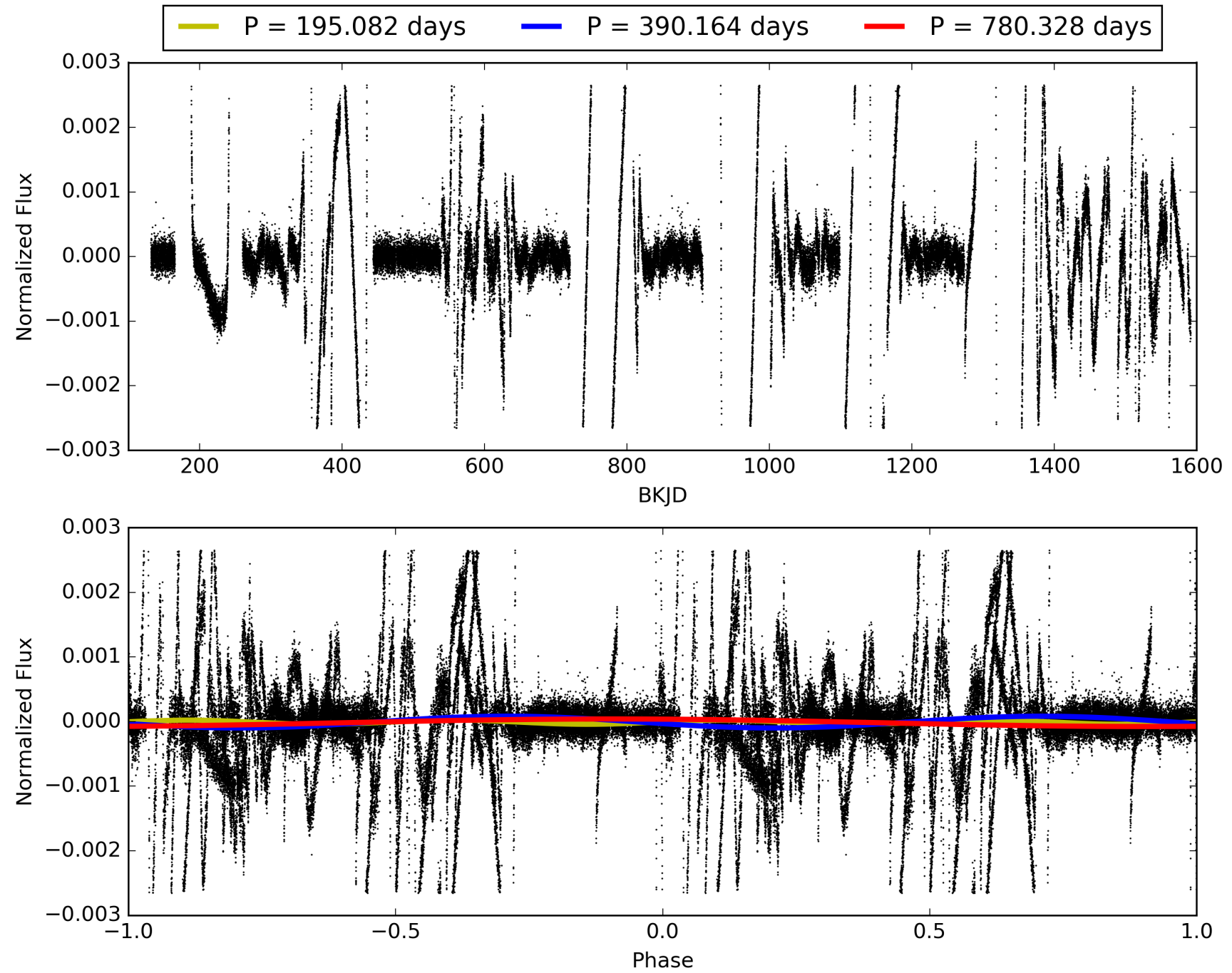
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:58:38 Z

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

TCE 011362071-01, PDC Light Curves

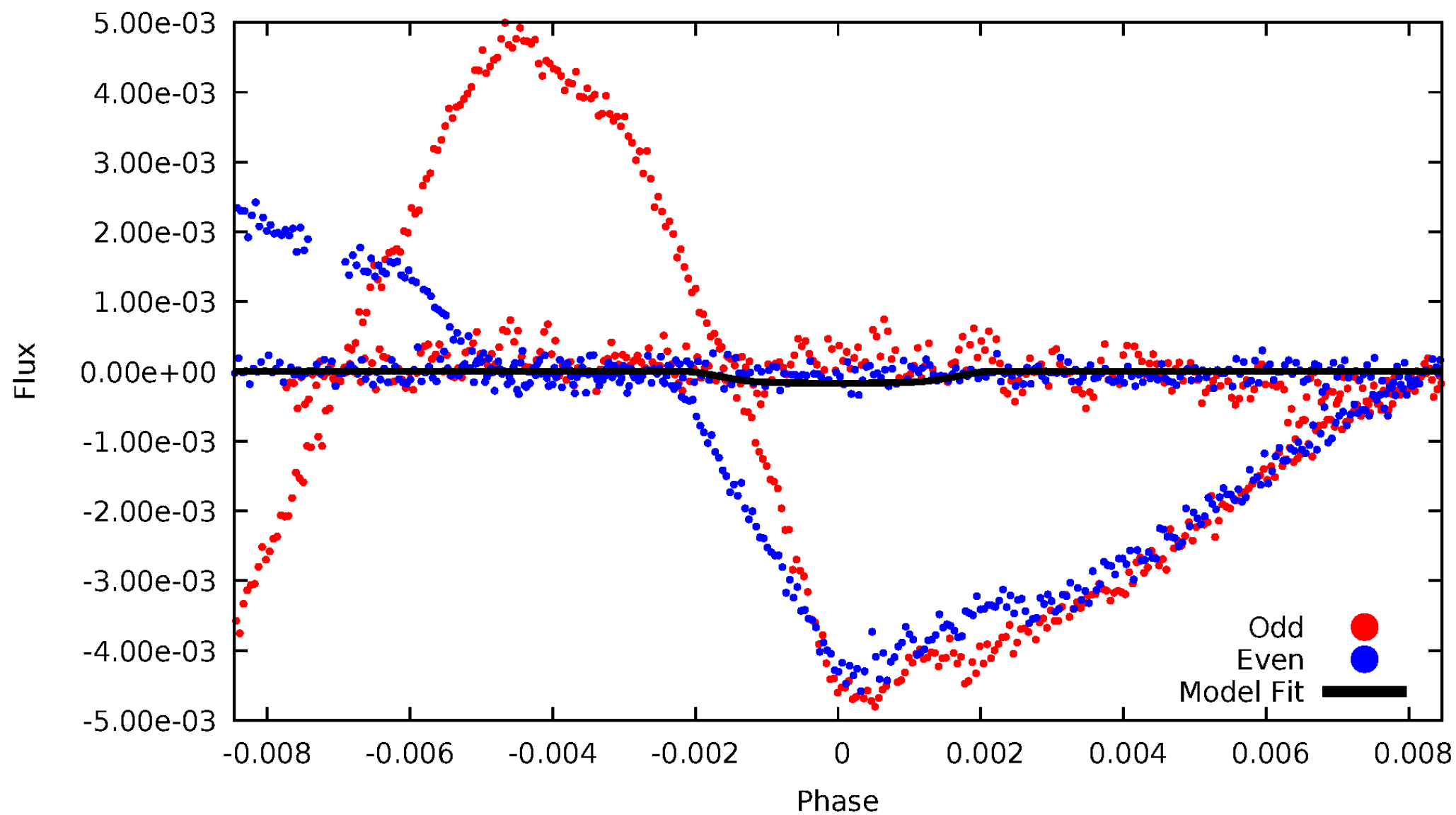


TCE 011362071-01



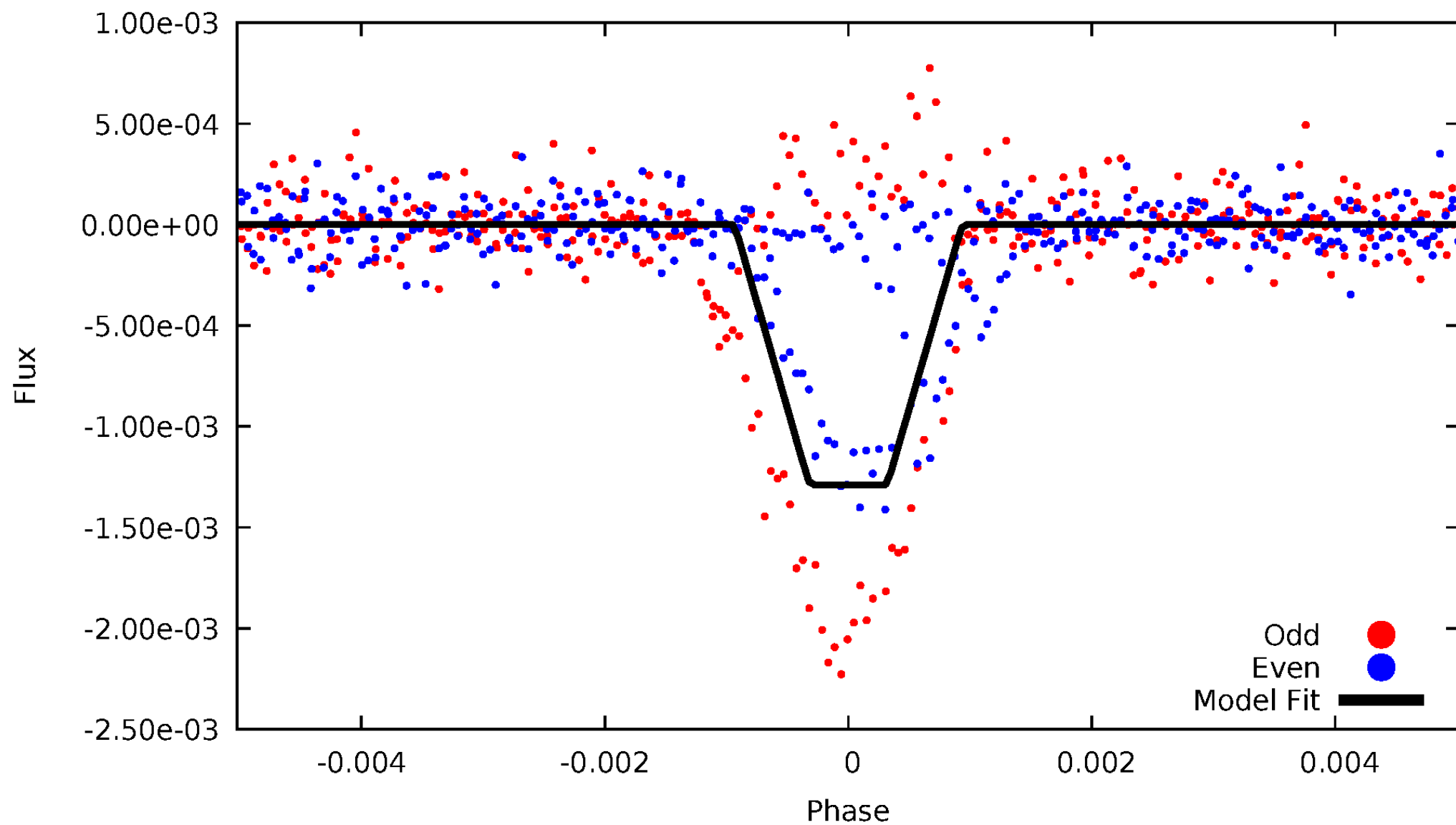
DV Odd/Even

TCE 011362071-01

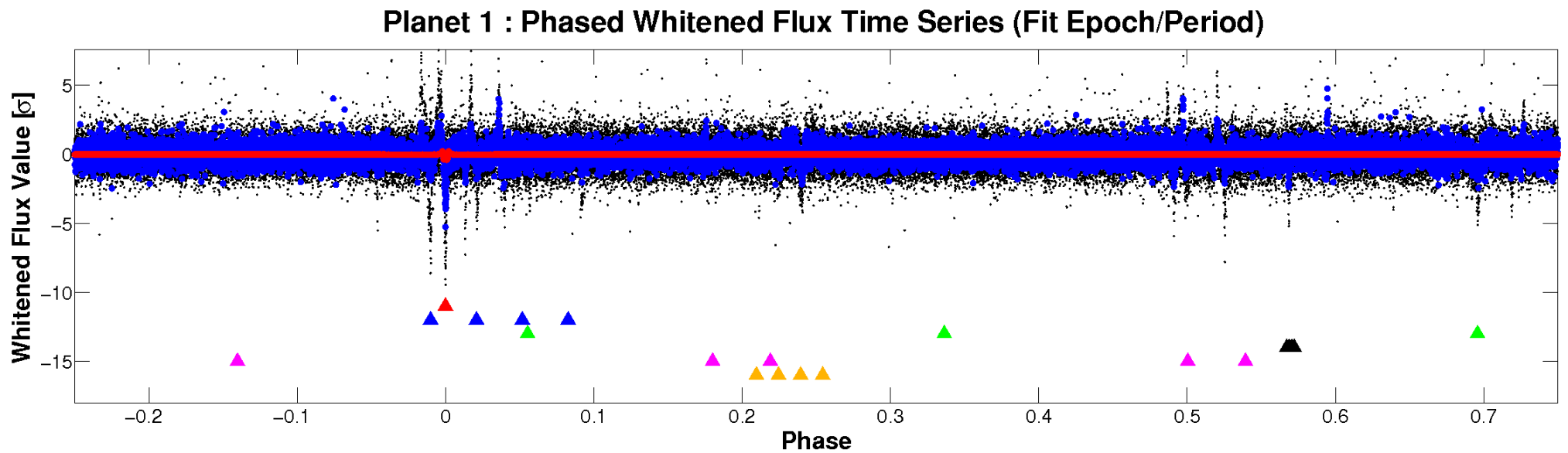
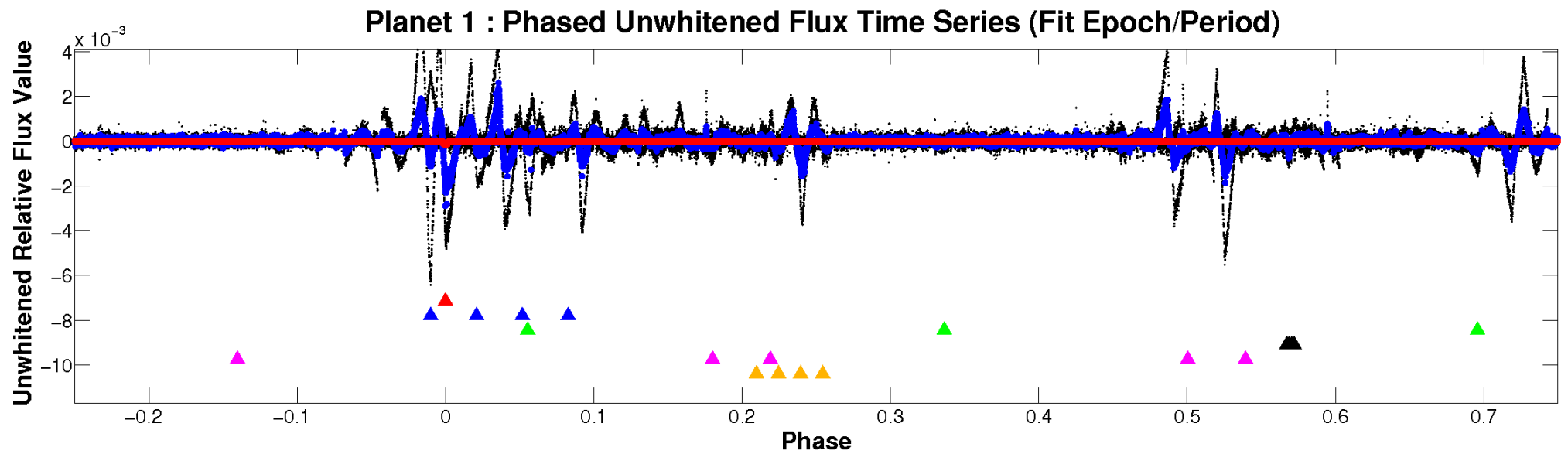


ALT Odd/Even

TCE 011362071-01

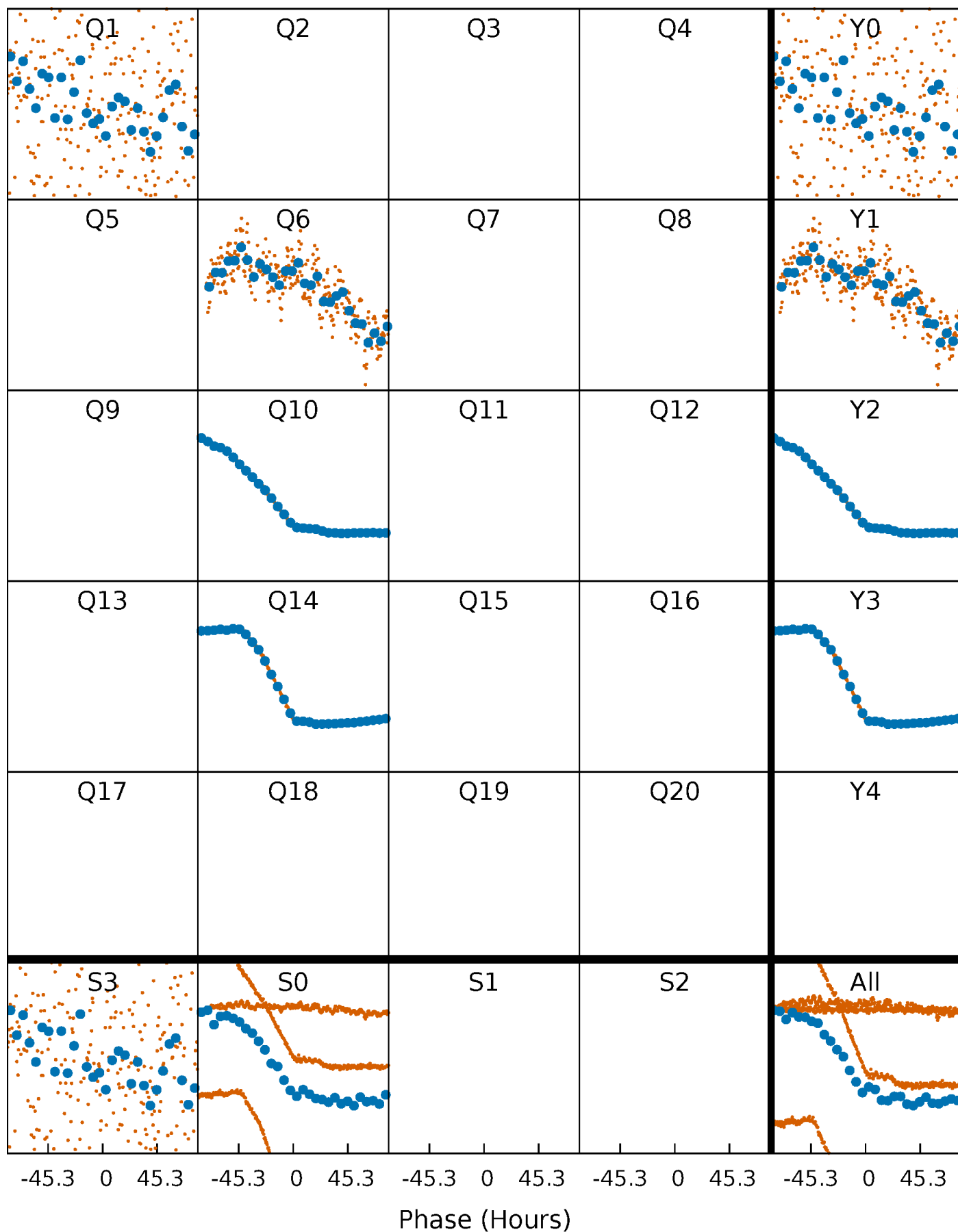


Non-Whitened Vs. Whitened Light Curve



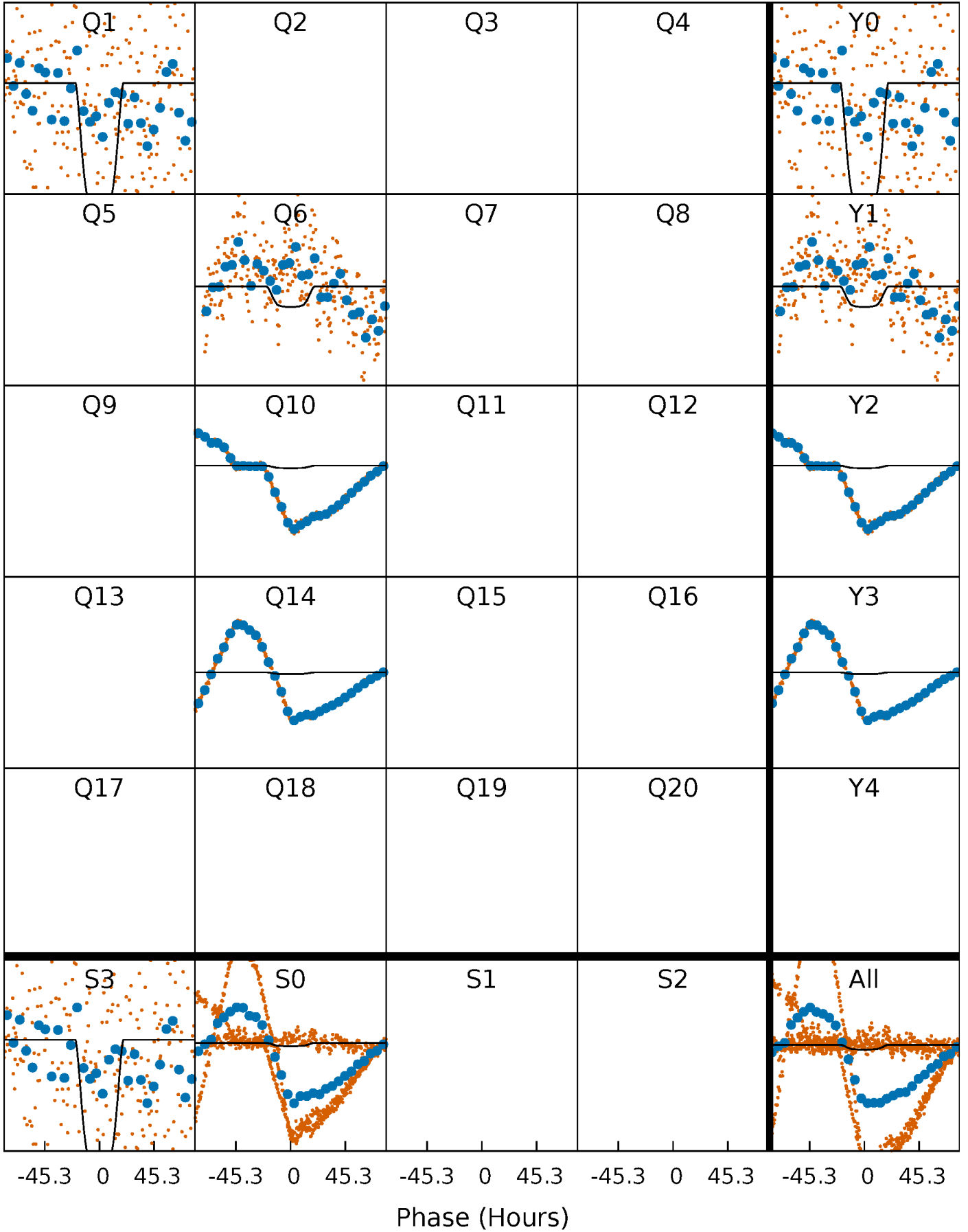
PDC Quarter-Phased Transit Curves

TCE 011362071-01 P=390.164116 Days $T_0=152.322836$ (BKJD)



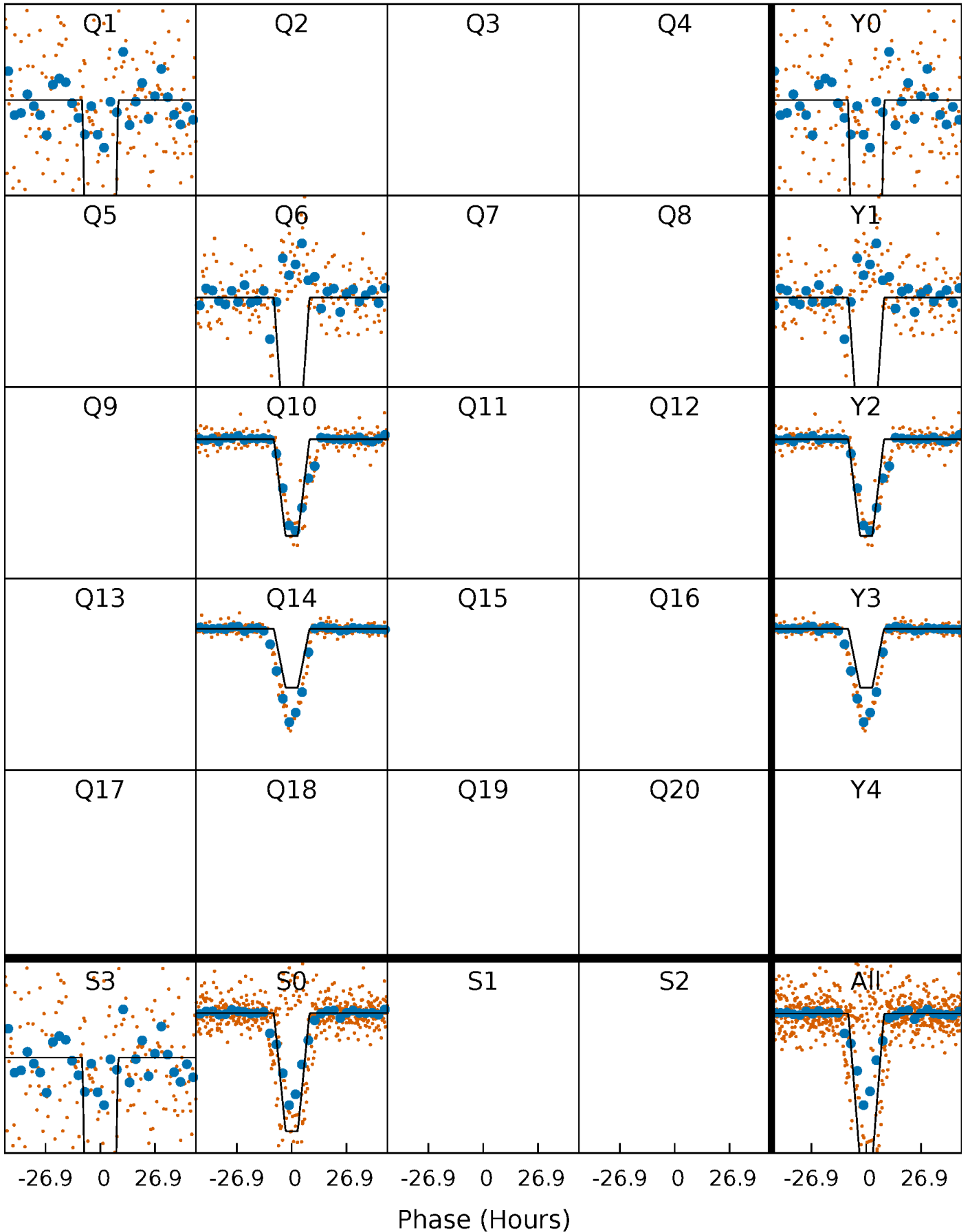
DV Quarter-Phased Transit Curves

TCE 011362071-01 P=390.164116 Days $T_0=152.322836$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

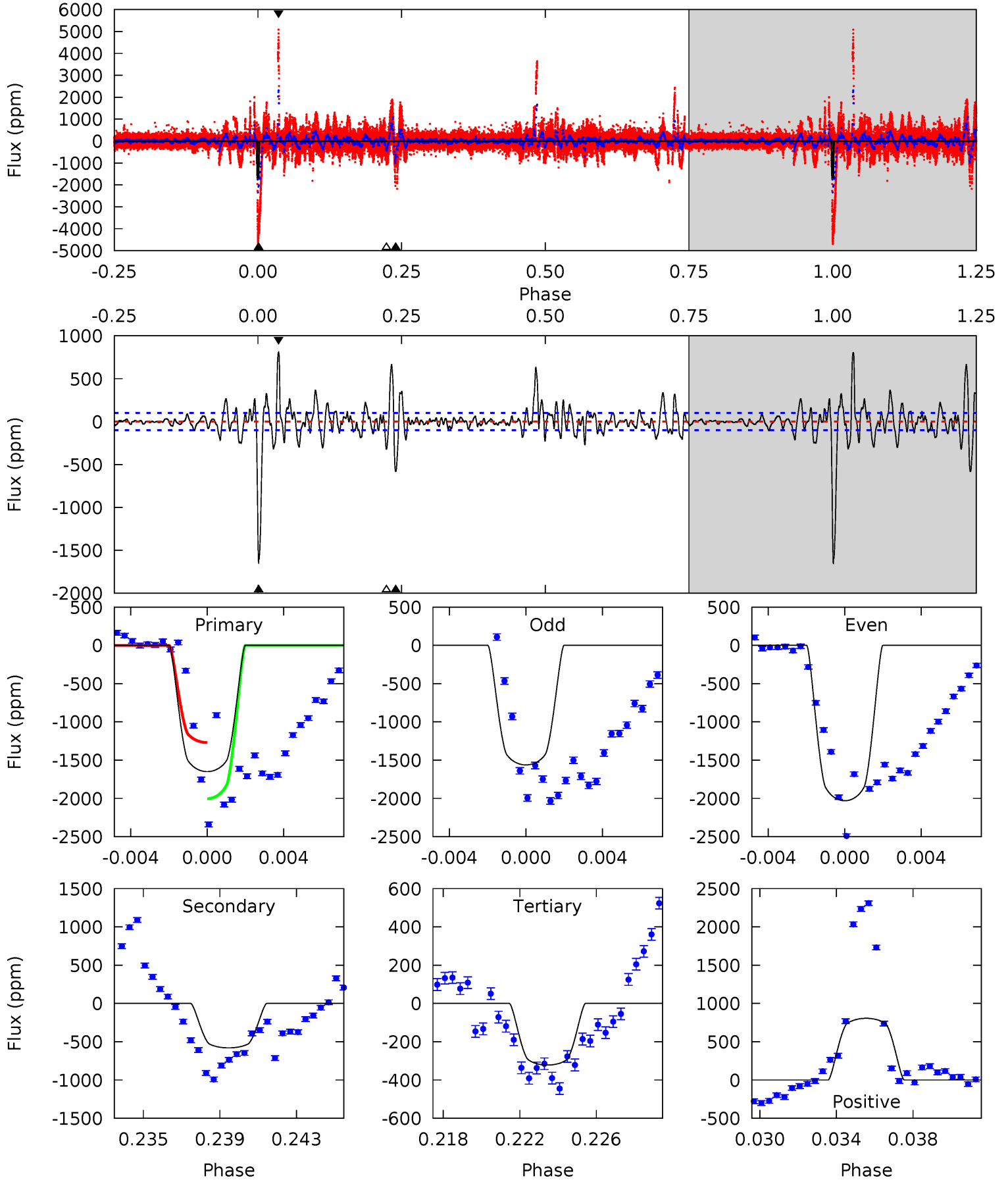
TCE 011362071-01 P=390.178828 Days $T_0=152.299741$ (BKJD)



DV Model-Shift Uniqueness Test

011362071-01, P = 390.164116 Days, E = 152.322836 Days

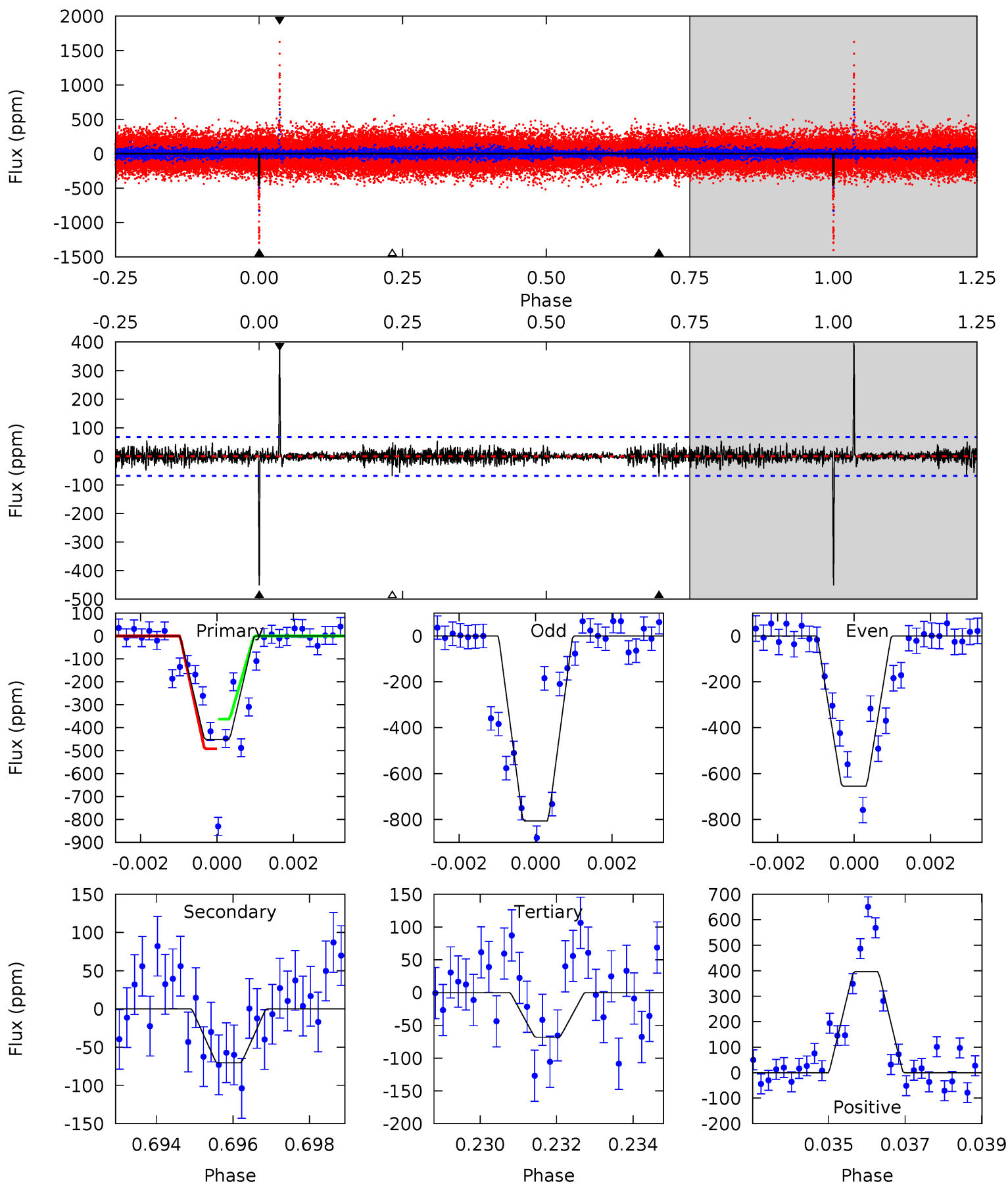
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
85.0	29.9	16.6	41.5	5.19	2.86	6.58	68.4	43.5	13.3	-11.6	7.18	1.01	0.33	18.8



Alt Model-Shift Uniqueness Test

011362071-01, P = 390.178828 Days, E = 152.299741 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.3	5.51	5.33	31.0	5.33	3.10	1.33	30.0	4.28	0.18	-25.5	7.11	1.20	0.47	5.17



Stellar Parameters For KIC 011362071

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5927^{+80}_{-80}	$4.028^{+0.201}_{-0.108}$	$-0.240^{+0.150}_{-0.150}$	$1.606^{+0.255}_{-0.383}$	$1.003^{+0.088}_{-0.088}$	$0.341^{+0.405}_{-0.110}$
	+1%/-1%	+5%/-3%	+62%/-62%	+16%/-24%	+9%/-9%	+119%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 011362071-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-580 ± 19	$2.70^{+0.50}_{-0.51}$	452^{+22}_{-29}	7447^{+818}_{-520}	48509^{+24274}_{-13768}
Alt.	-70 ± 13	$6.24^{+0.73}_{-0.80}$	451^{+21}_{-26}	3387^{+120}_{-119}	1107^{+378}_{-293}

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

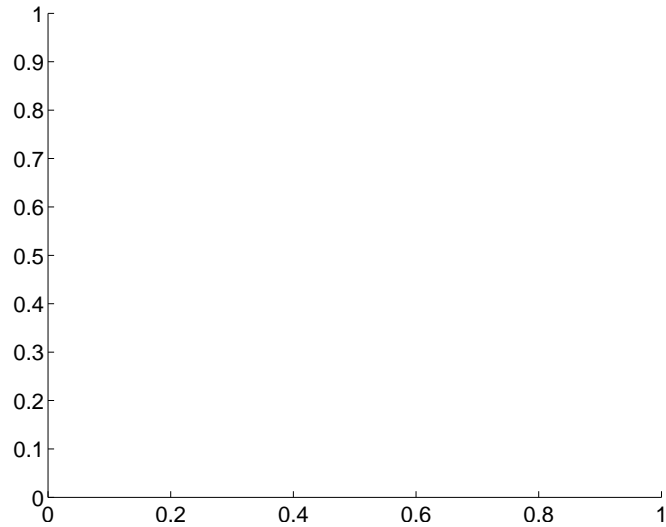
Supplemental centroid analysis for 011362071-01. Kepler magnitude: 13.13. Transit SNR 6.34

There are 0 quarters with good PRF difference image offsets

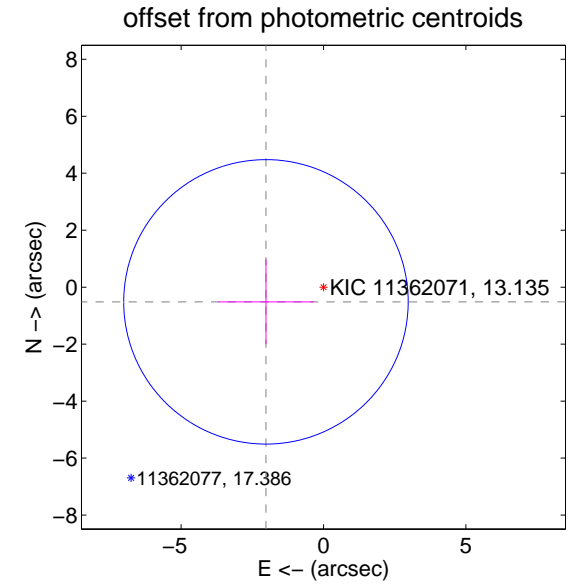
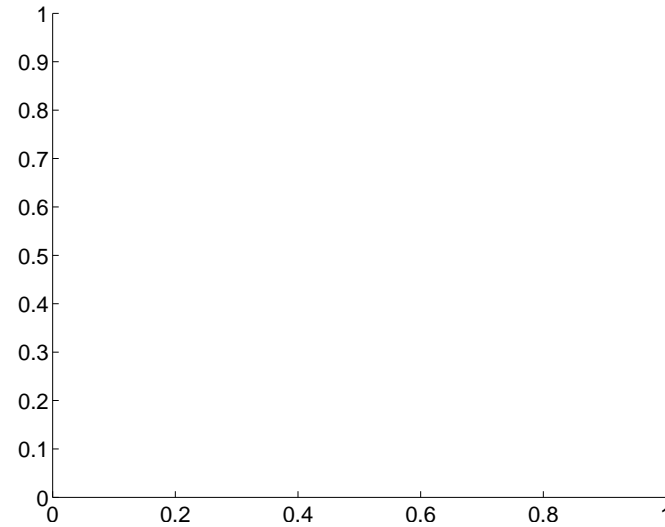
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	2.08 ± 1.66	1.25	2.02 ± 1.68	-0.52 ± 1.48

There is no PRF-fit offset from OOT-fit

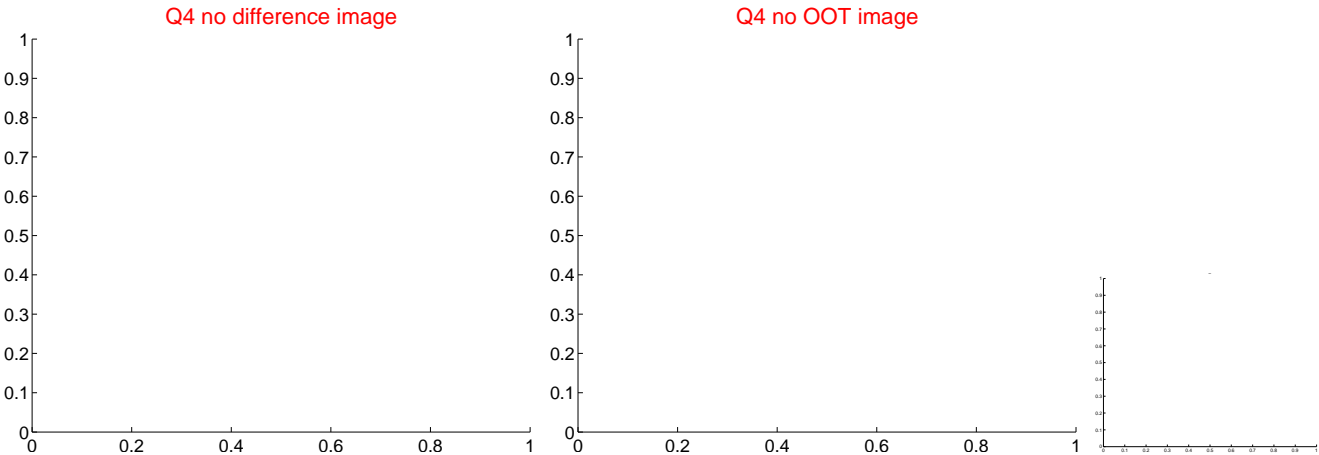
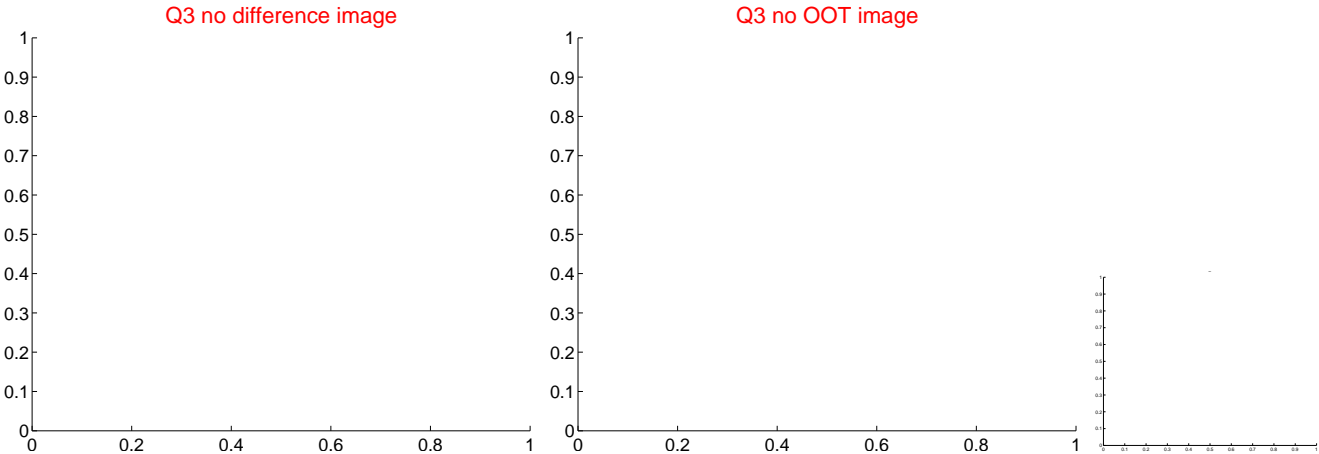
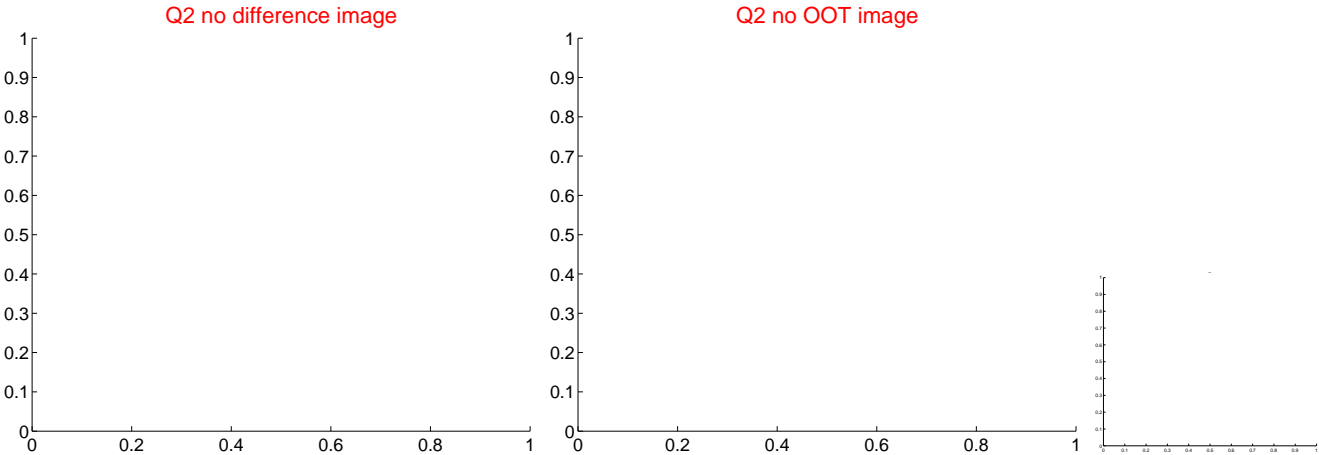
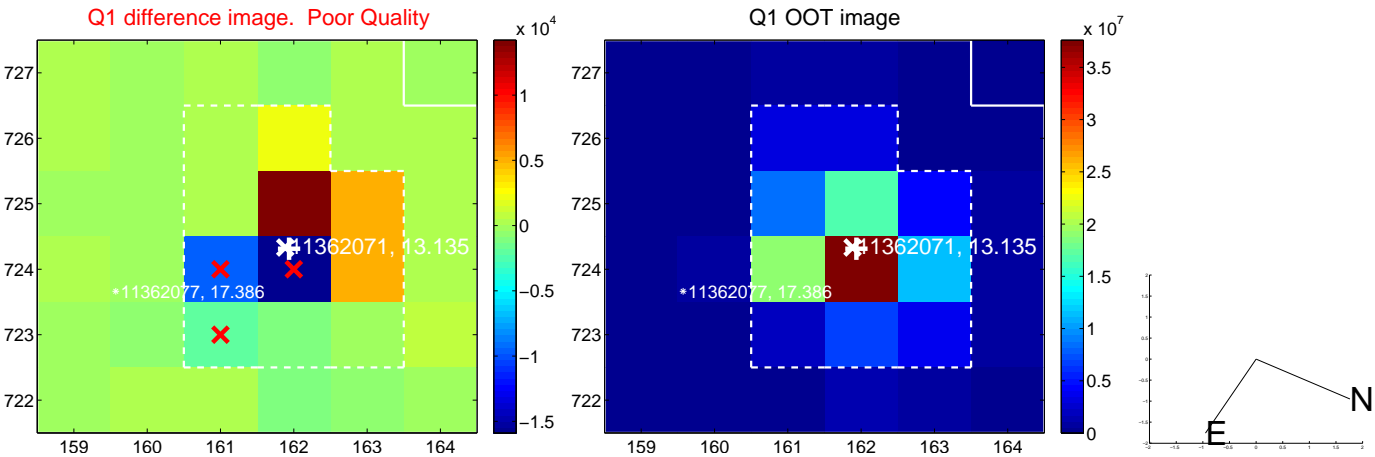


There is no PRF-fit offset from KIC



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.

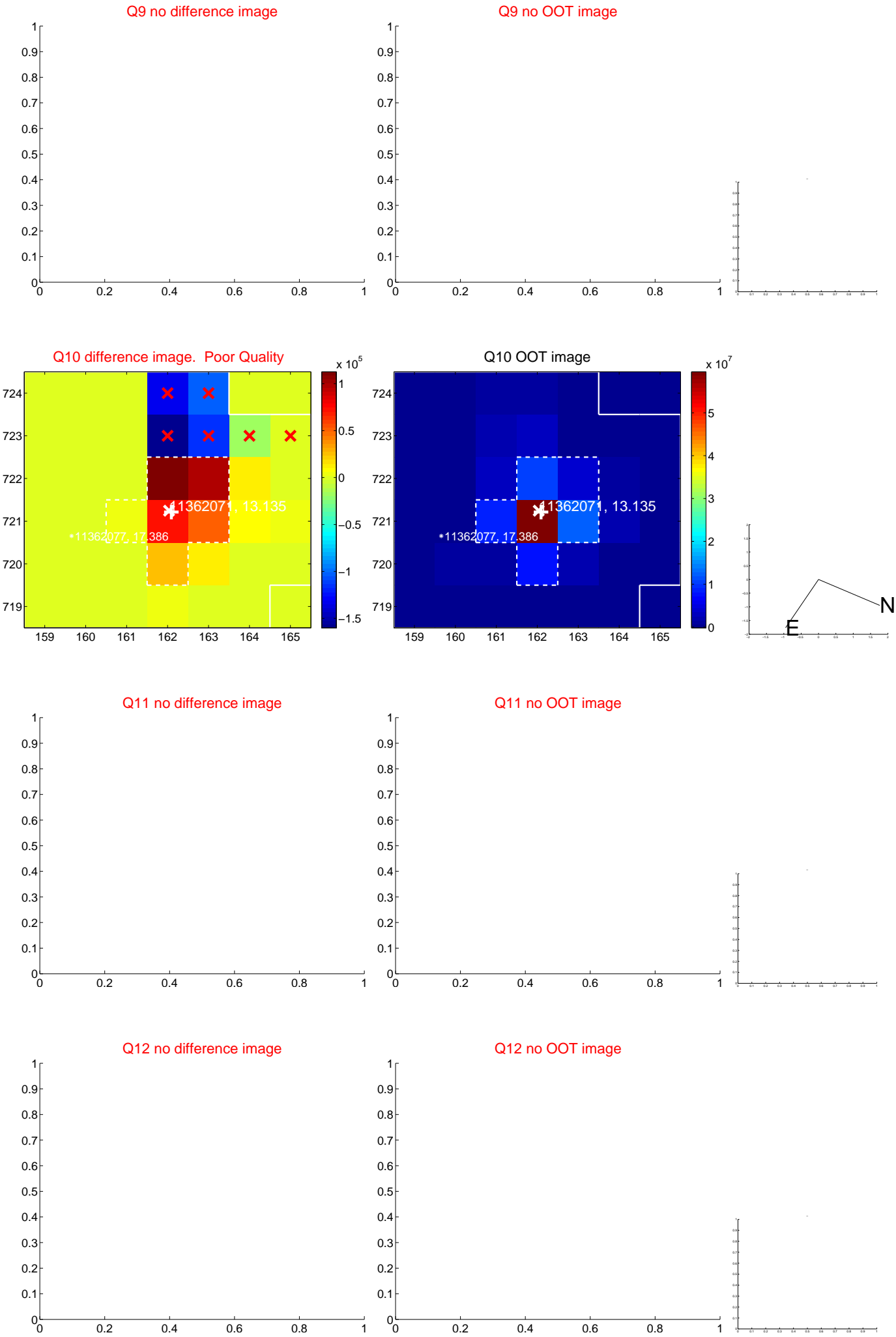
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



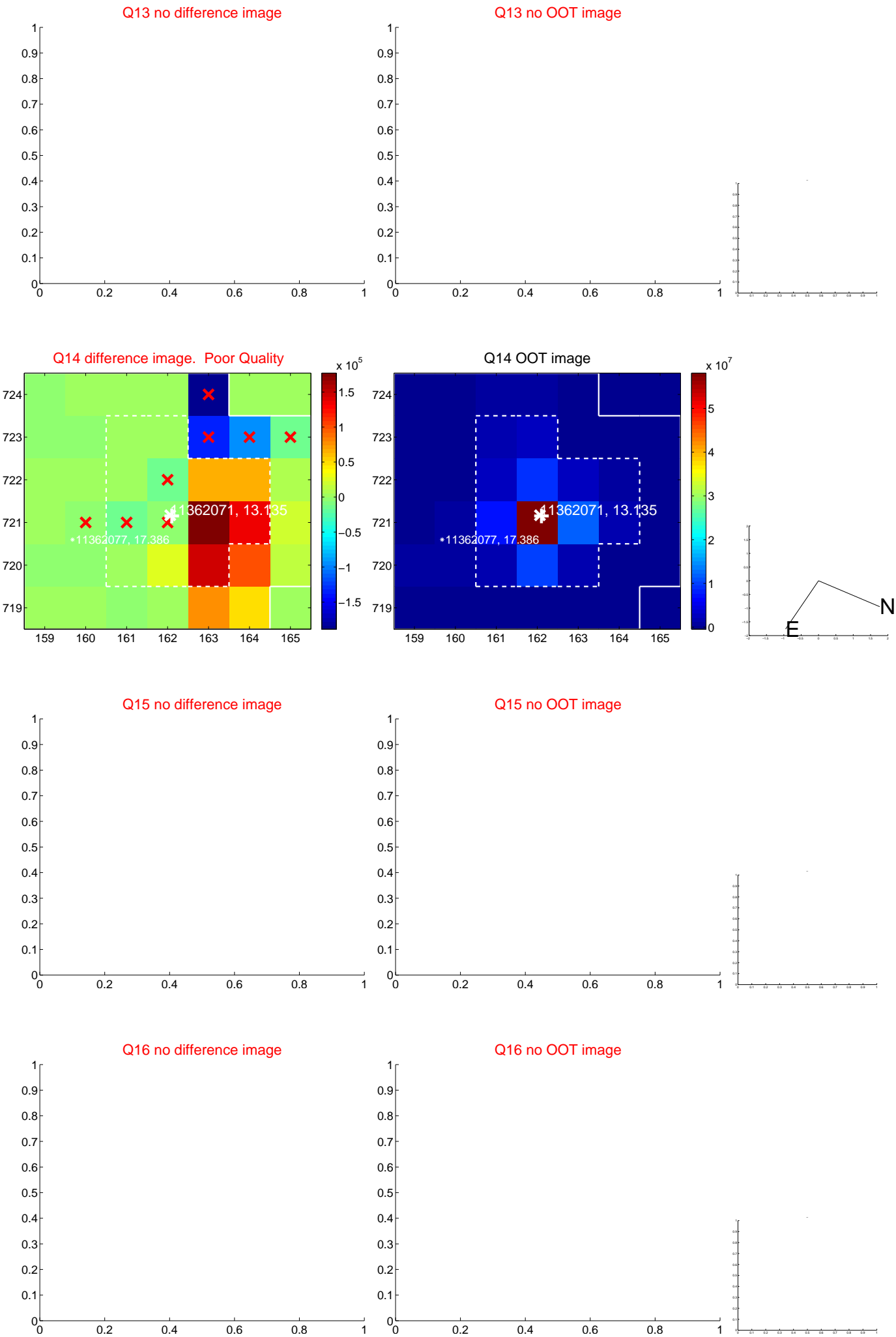
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



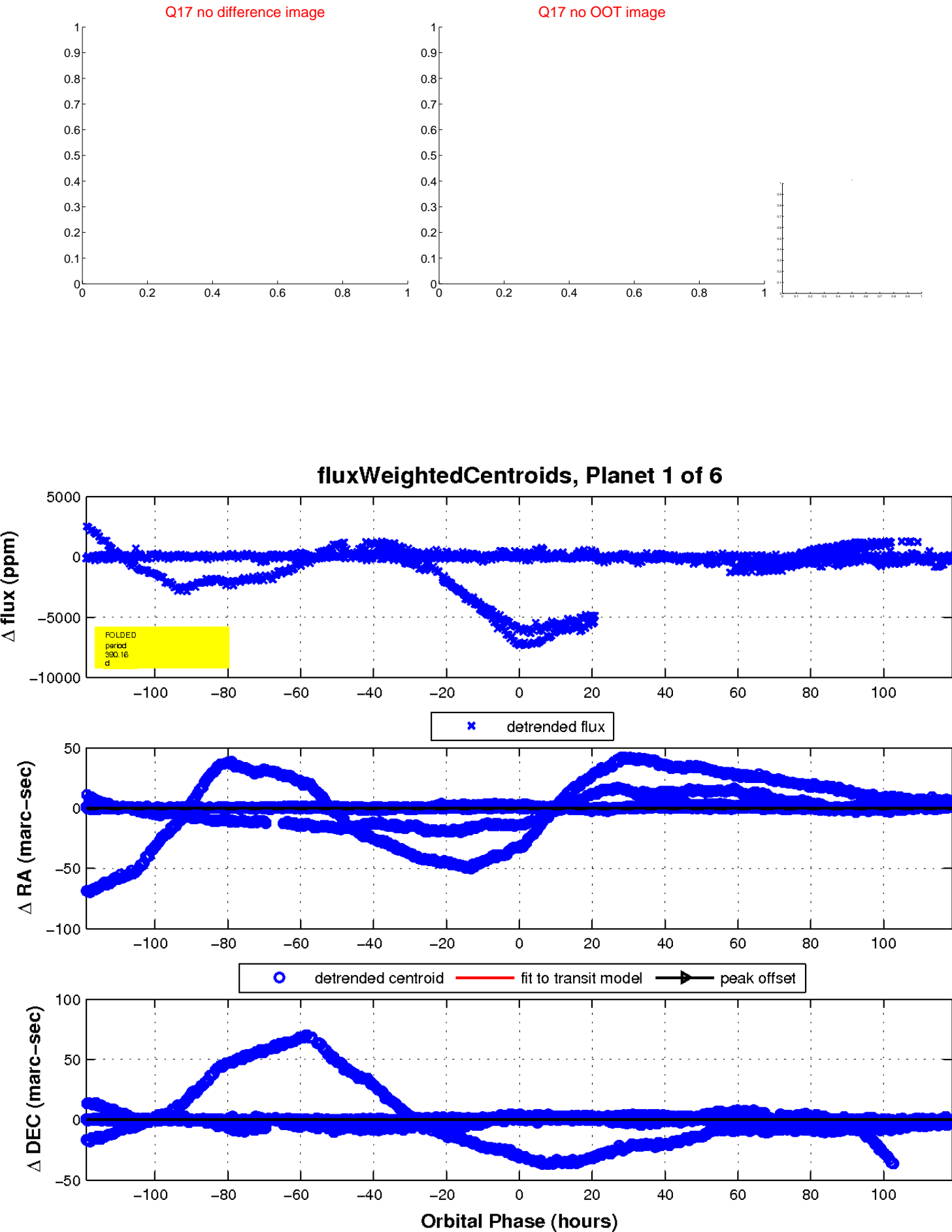
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

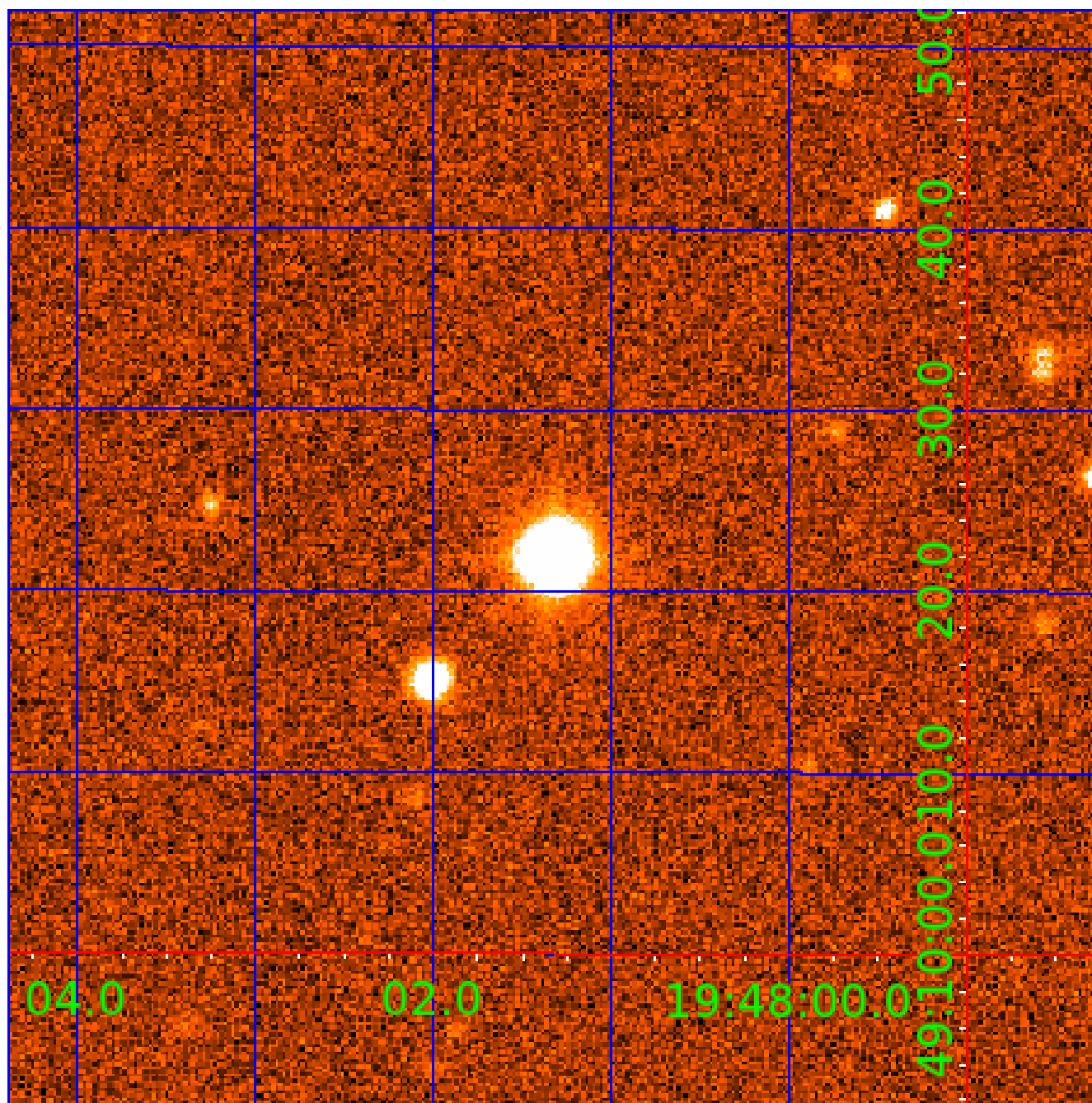


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011362071

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})
011362071-01	OBS	No	390.164116	152.322836	167.3	39.609	27.9	6.3	1.61	5927	2.74	2.60
011362071-03	OBS	No	640.047358	173.931863	1041.6	67.586	14.1	19.7	1.61	5927	9.96	1.35
011362071-04	OBS	No	390.812297	373.639894	547.5	21.545	9.3	12.6	1.61	5927	7.37	2.60
011362071-05	OBS	No	265.167649	347.599011	208.6	17.832	8.4	7.3	1.61	5927	2.72	4.36
011362071-06	OBS	No	384.353756	251.553191	481.6	31.407	8.2	12.3	1.61	5927	4.10	2.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011362071-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011362071-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011362071-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011362071-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
011362071-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_TER_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.

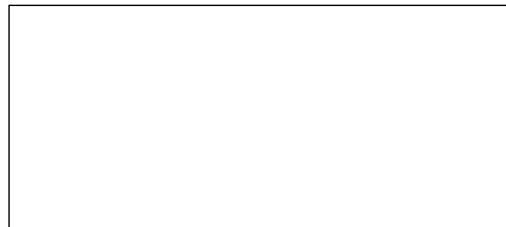
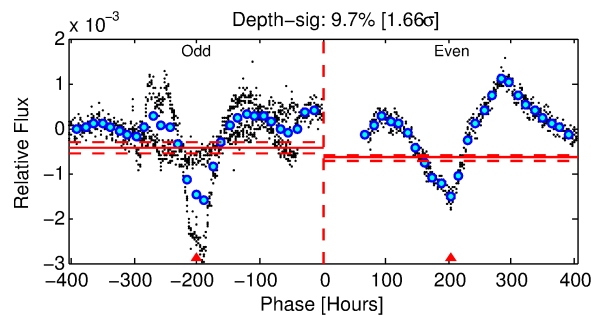
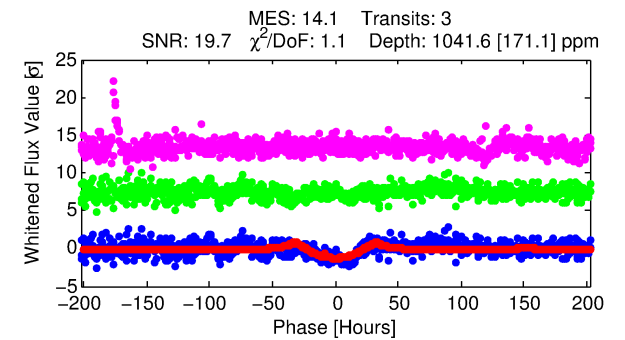
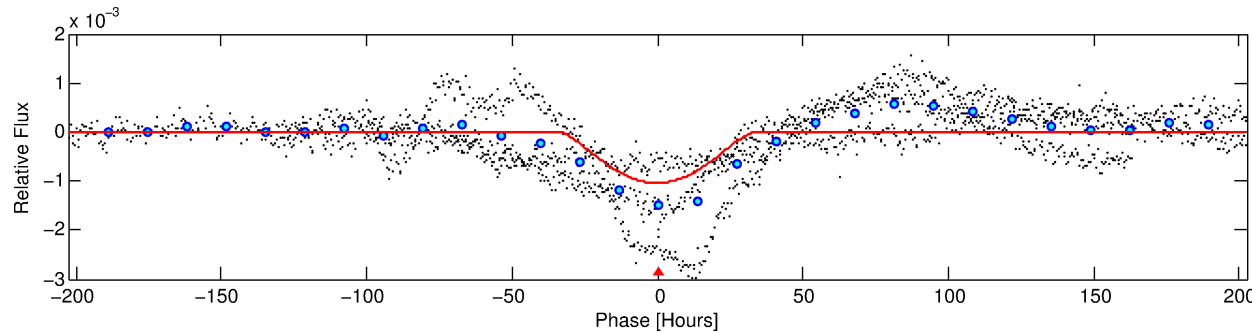
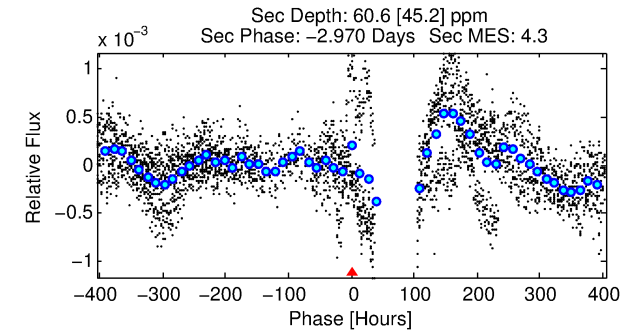
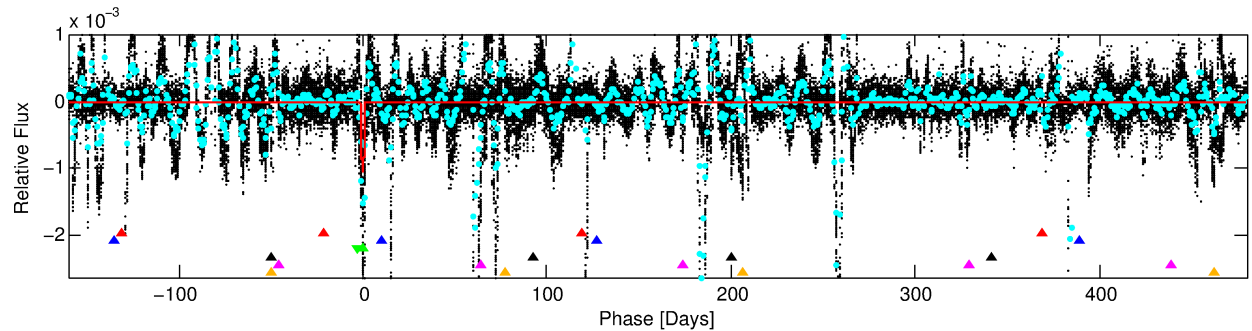
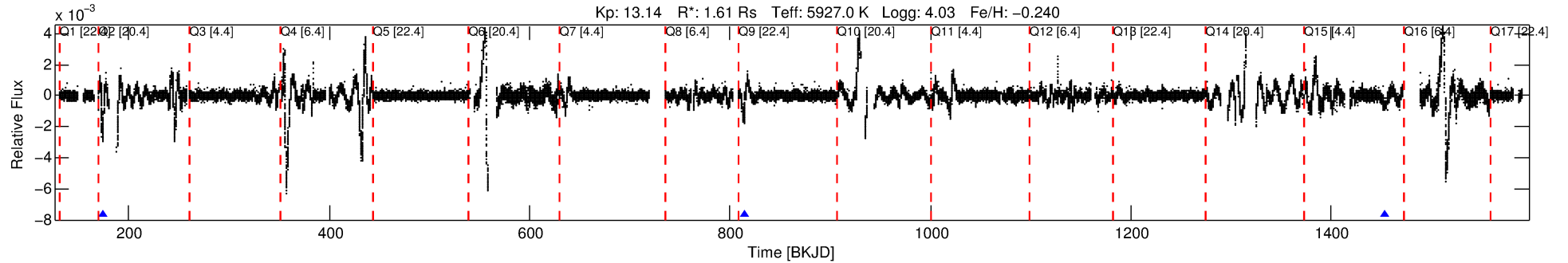
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011362071-03

No Significant Match Found

DV One-Page Summary

KIC: 11362071 Candidate: 3 of 6 Period: 640.047 d



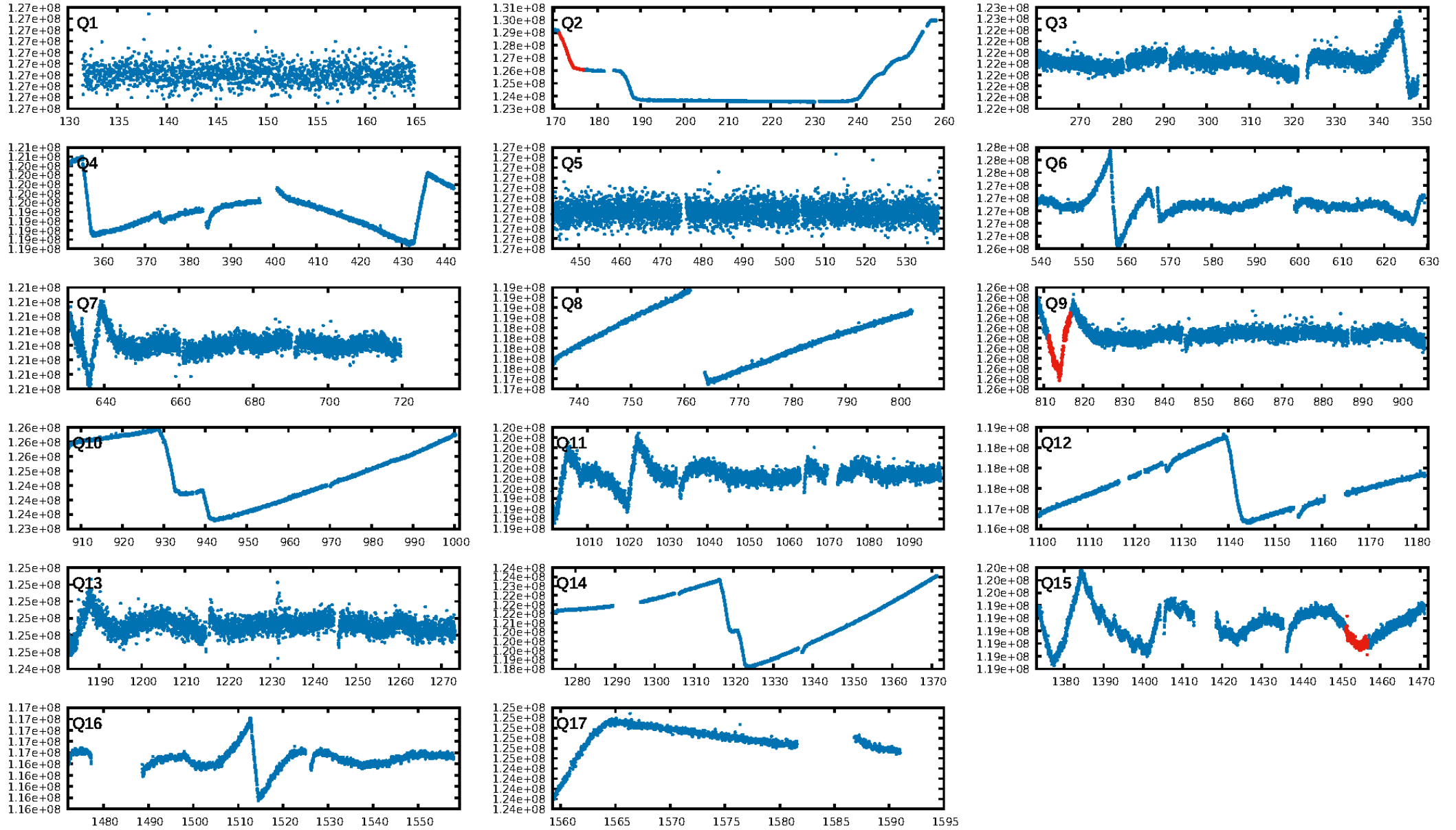
DV Fit Results:

Period = 640.04736 [0.05565] d
Epoch = 173.9319 [0.0567] BKJD
Rp/R* = 0.0568 [0.0473]
a/R* = 24.76 [4.82]
b = 1.00 [0.06]
Seff = 1.35 [0.47]
Teq = 275 [24] K
Rp = 9.96 [8.62] Re
a = 1.4555 [0.3224] AU
Ag = 712.13 [1322.33] [0.54σ]
Teffp = 2194 [1001] K [1.92σ]

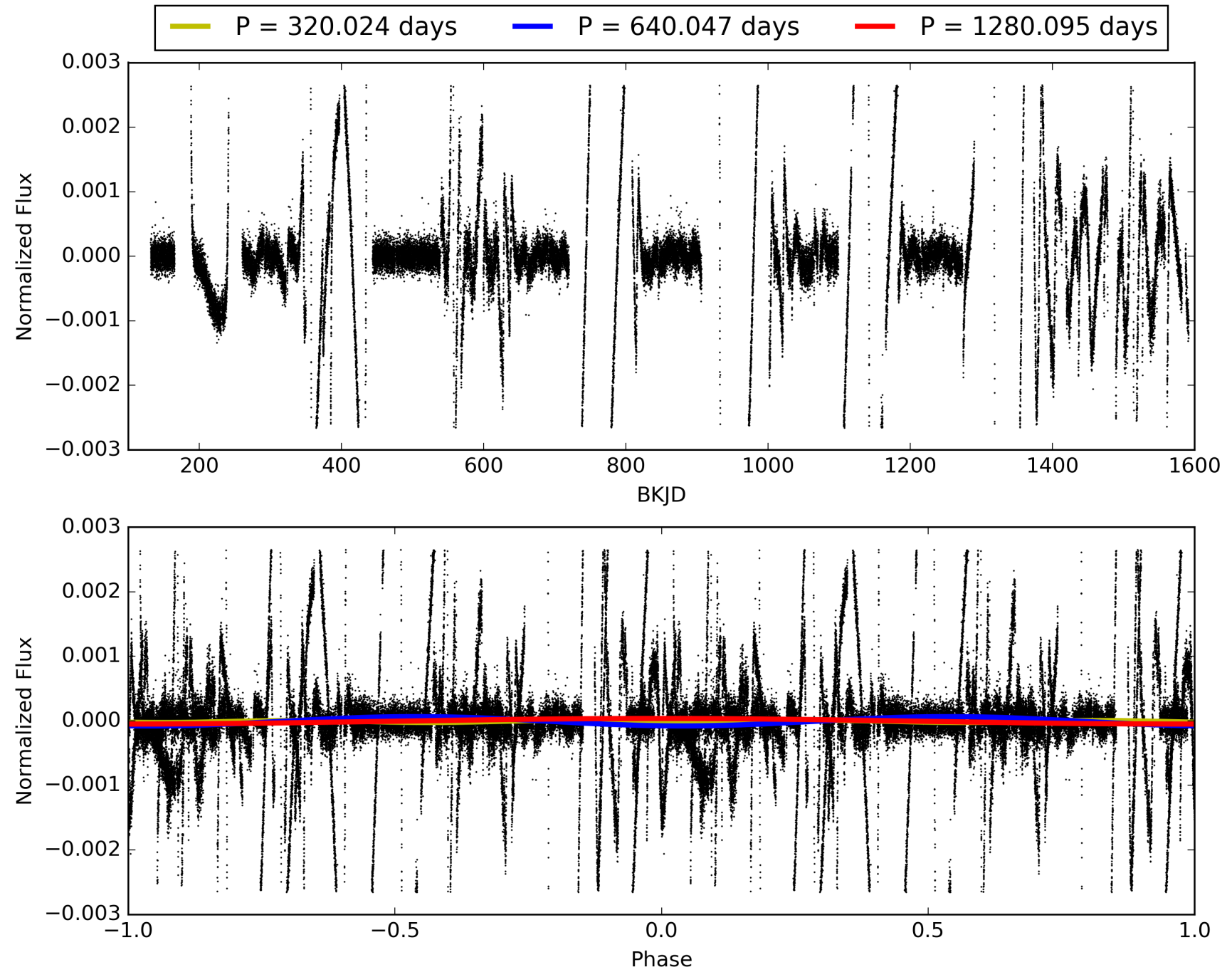
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [84.32σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 3.46e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.7574
Centroid-sig: 66.8%
Centroid-so: 2.612 arcsec [0.75σ]
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 [1/1]

TCE 011362071-03, PDC Light Curves

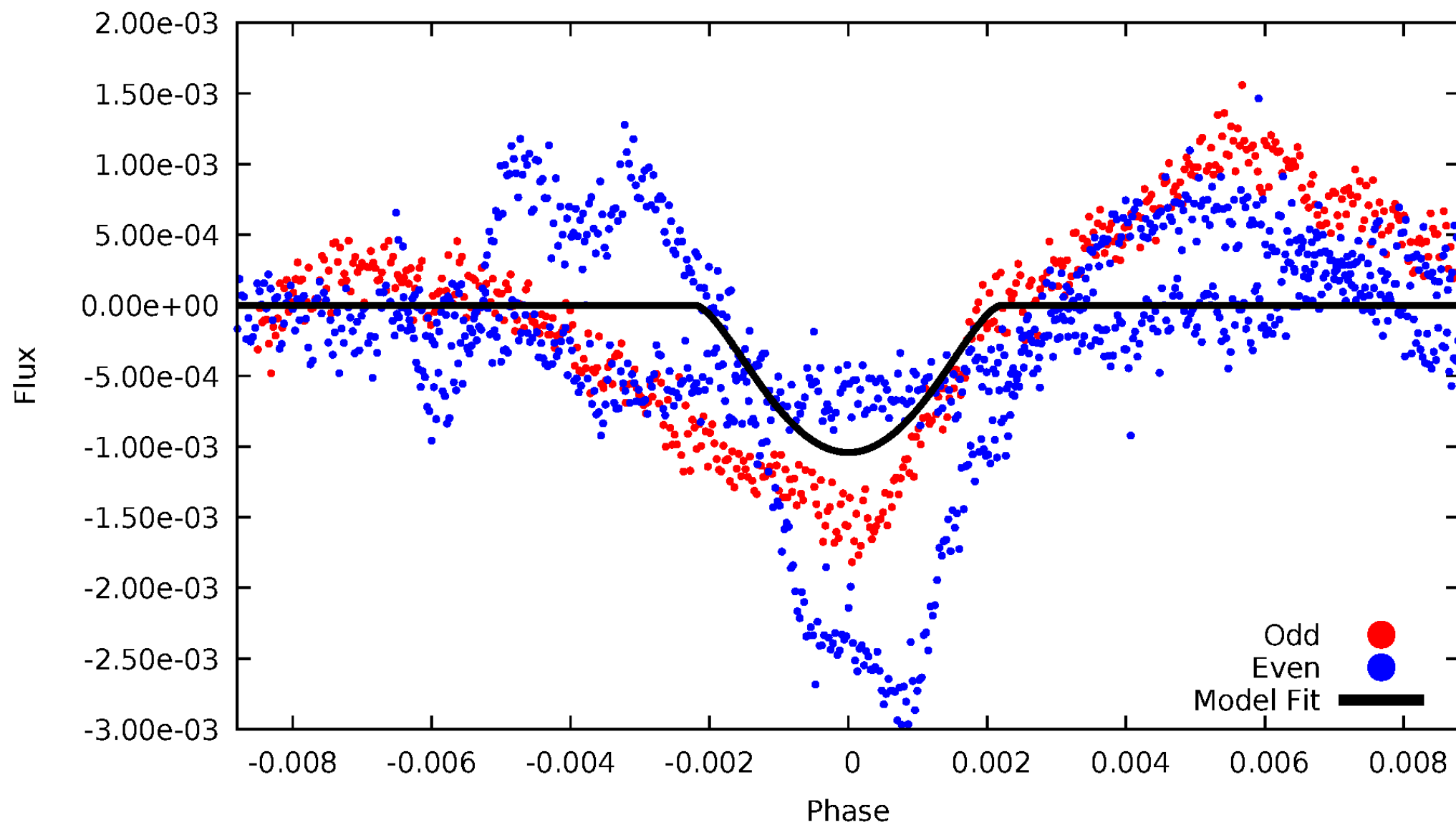


TCE 011362071-03



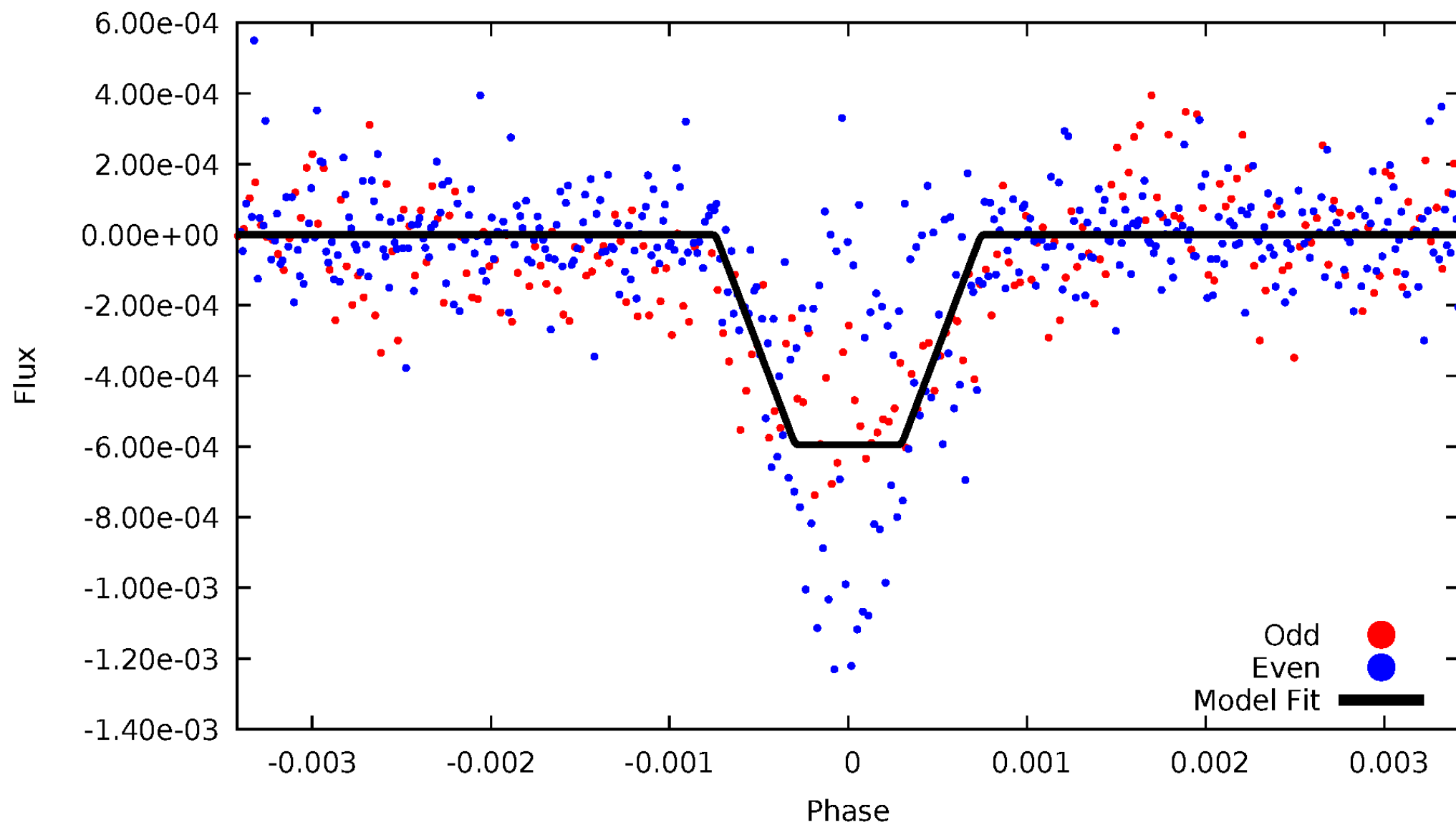
DV Odd/Even

TCE 011362071-03

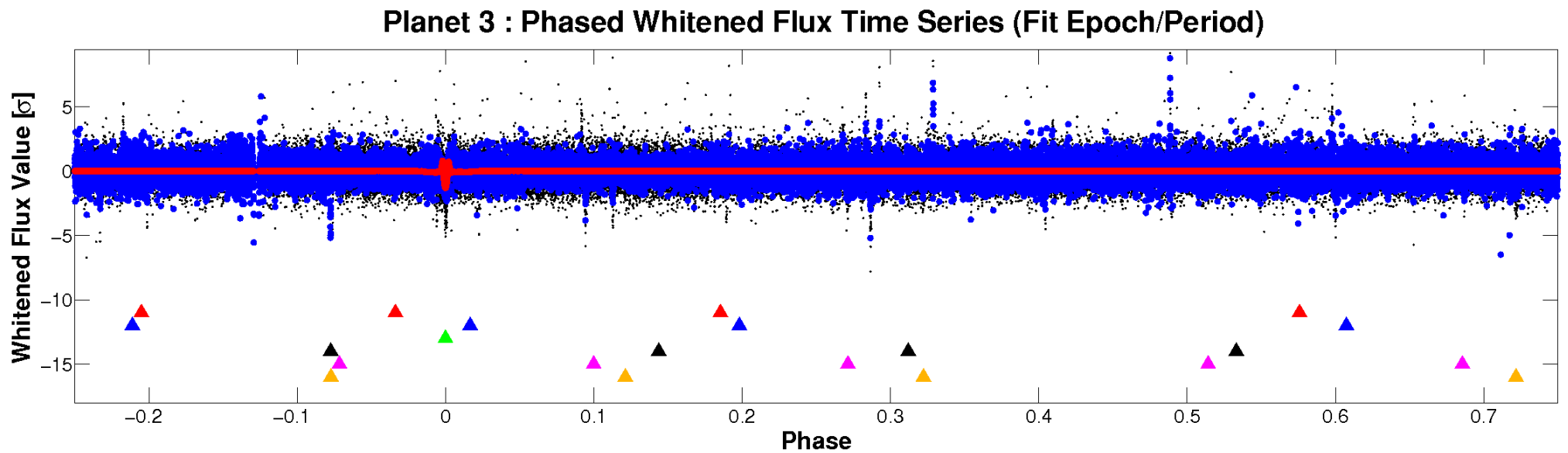
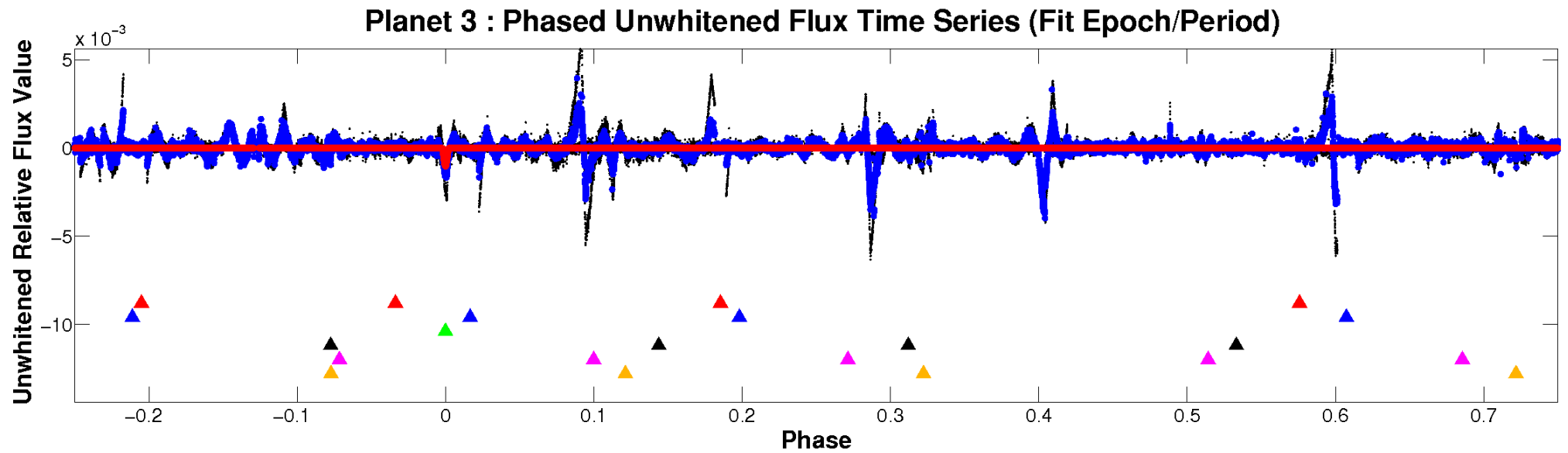


ALT Odd/Even

TCE 011362071-03

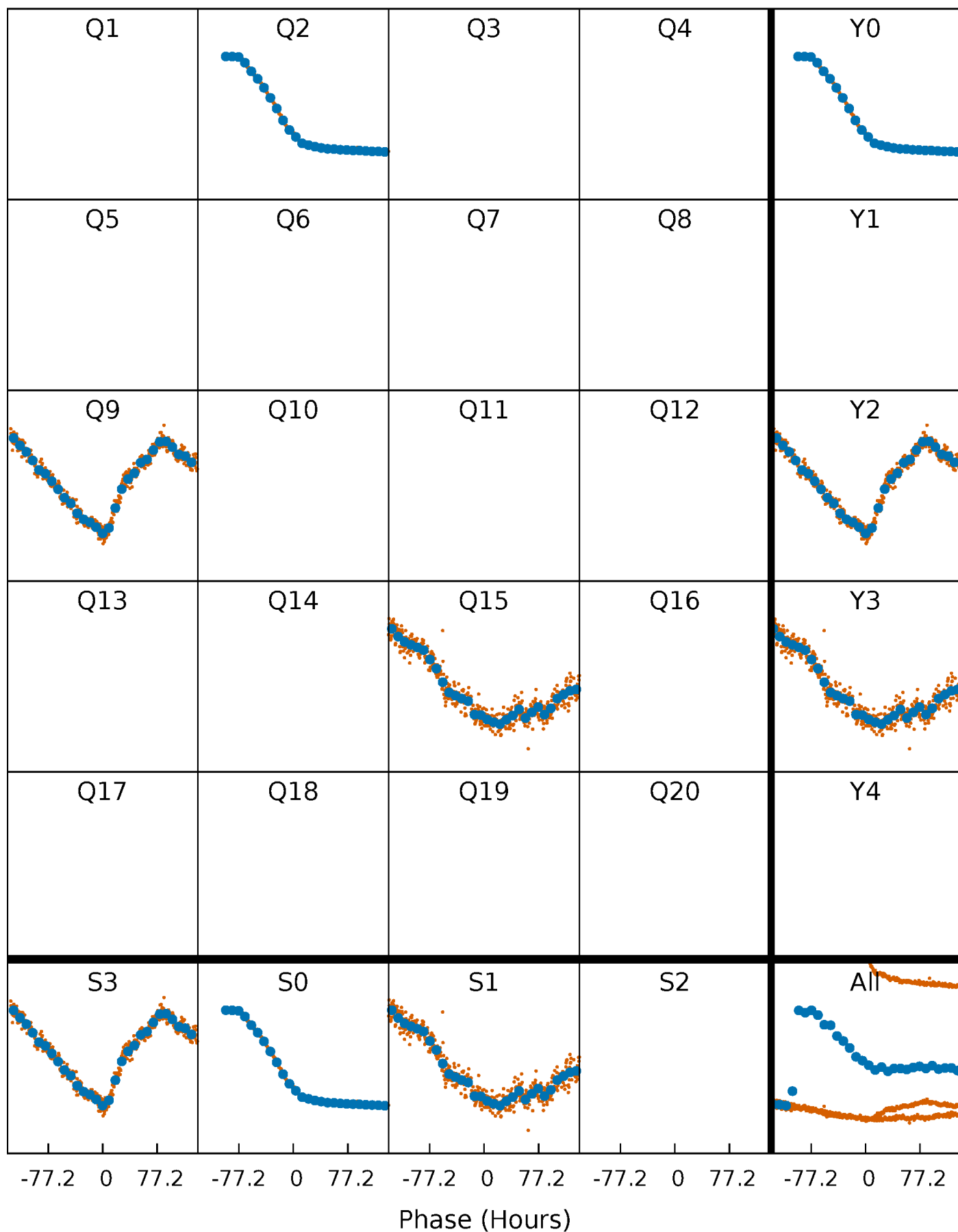


Non-Whitened Vs. Whitened Light Curve



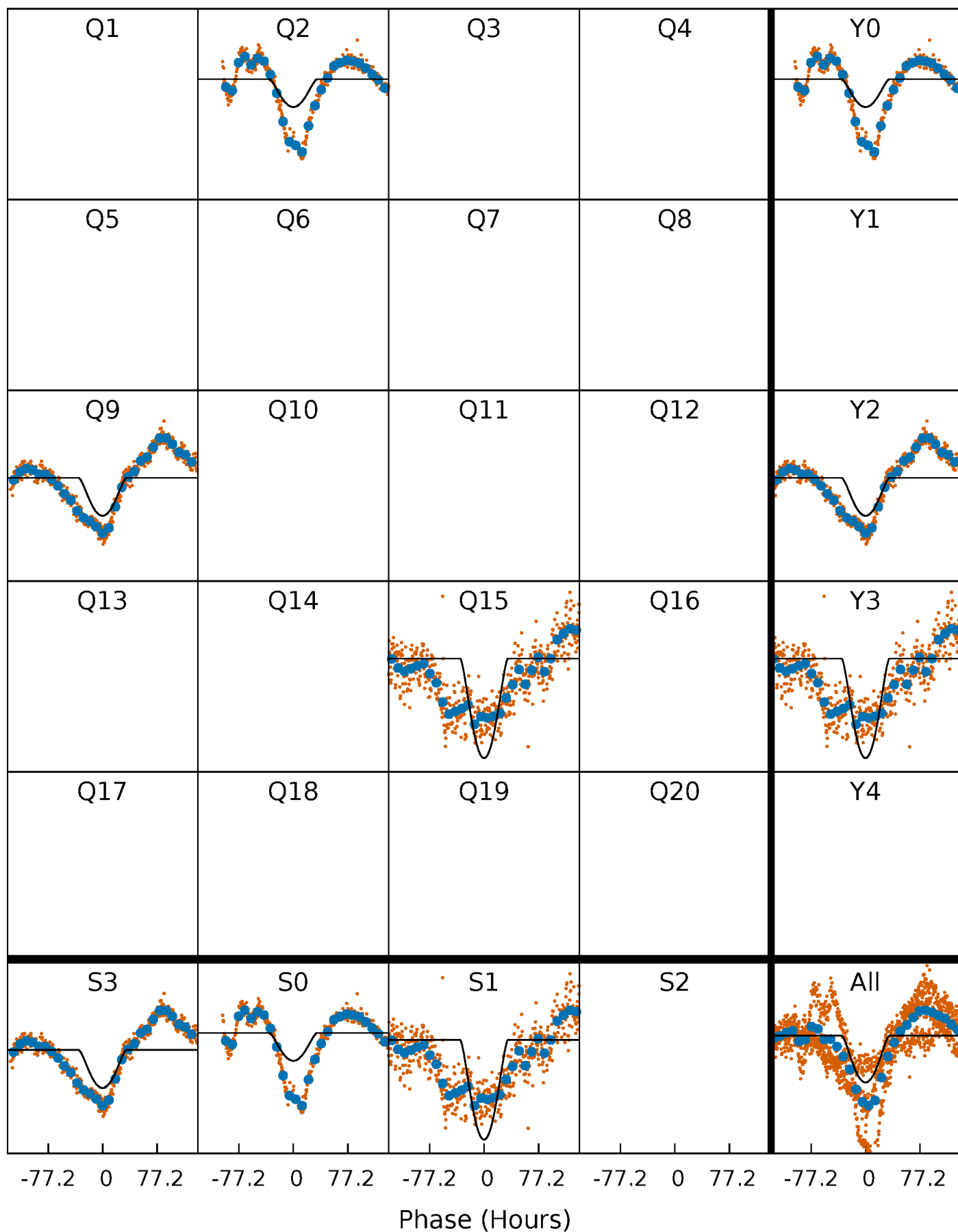
PDC Quarter-Phased Transit Curves

TCE 011362071-03 P=640.047358 Days $T_0=173.931863$ (BKJD)



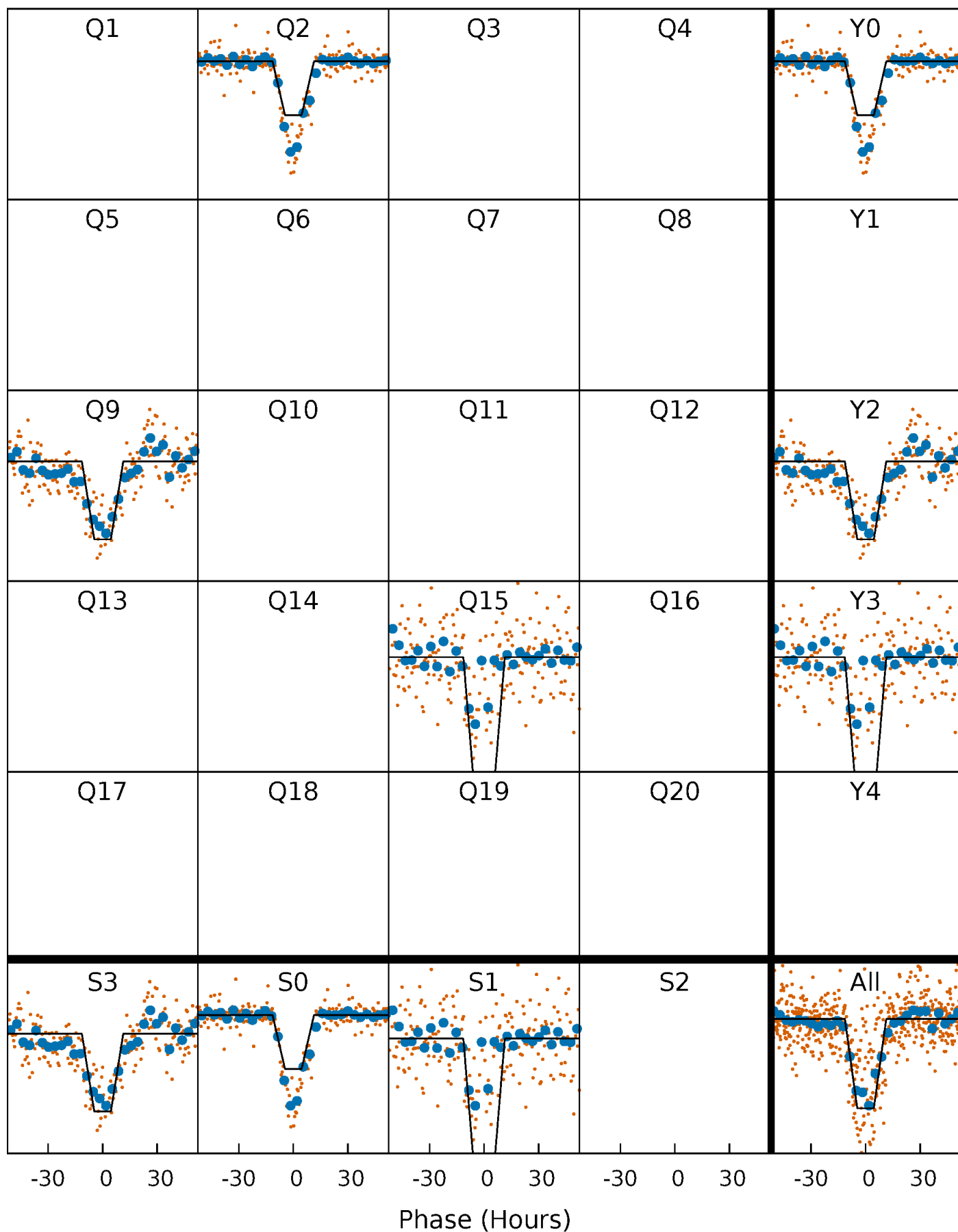
DV Quarter-Phased Transit Curves

TCE 011362071-03 P=640.047358 Days $T_0=173.931863$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

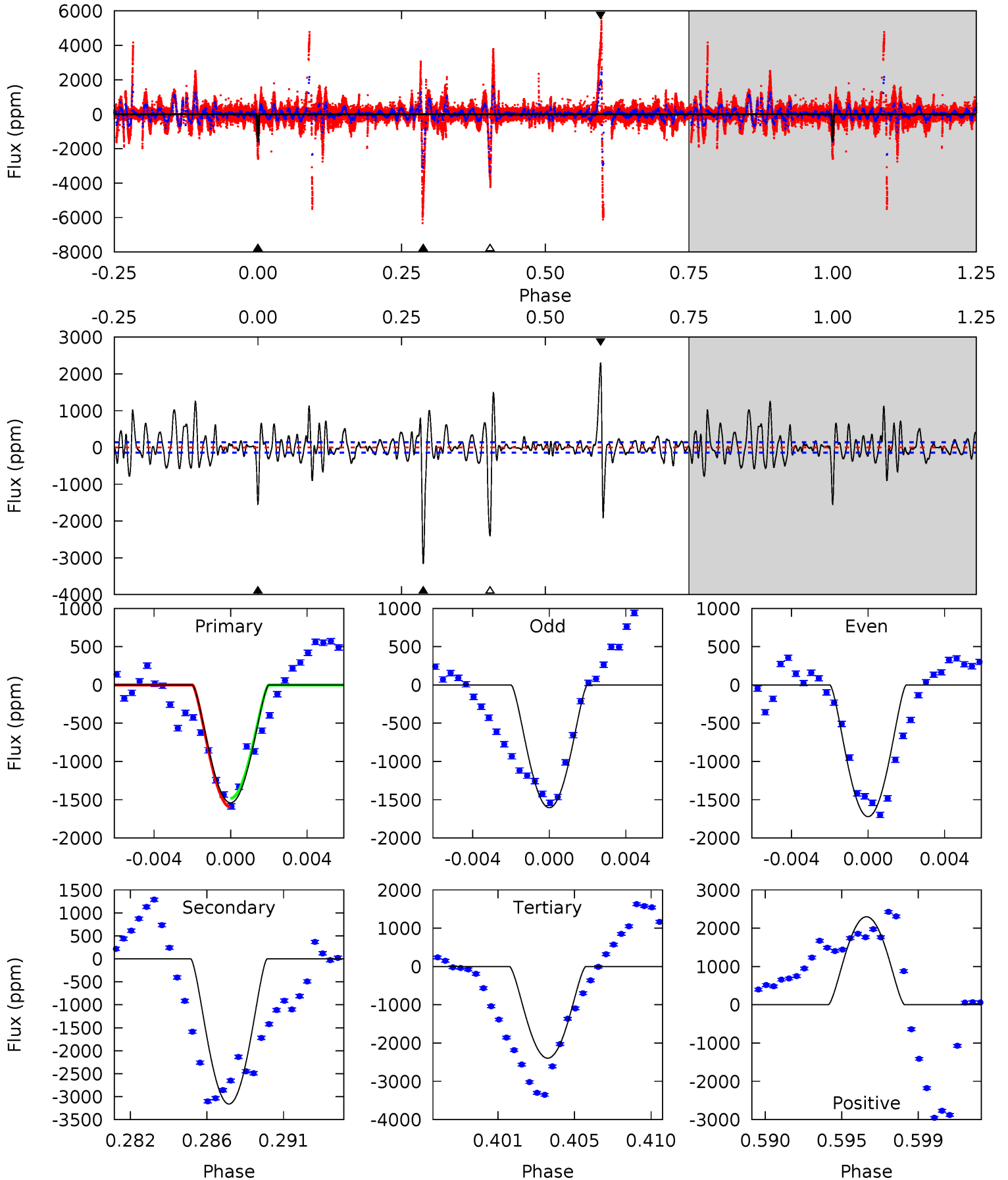
TCE 011362071-03 P=639.597673 Days $T_0=174.535461$ (BKJD)



DV Model-Shift Uniqueness Test

011362071-03, P = 640.047358 Days, E = 173.931863 Days

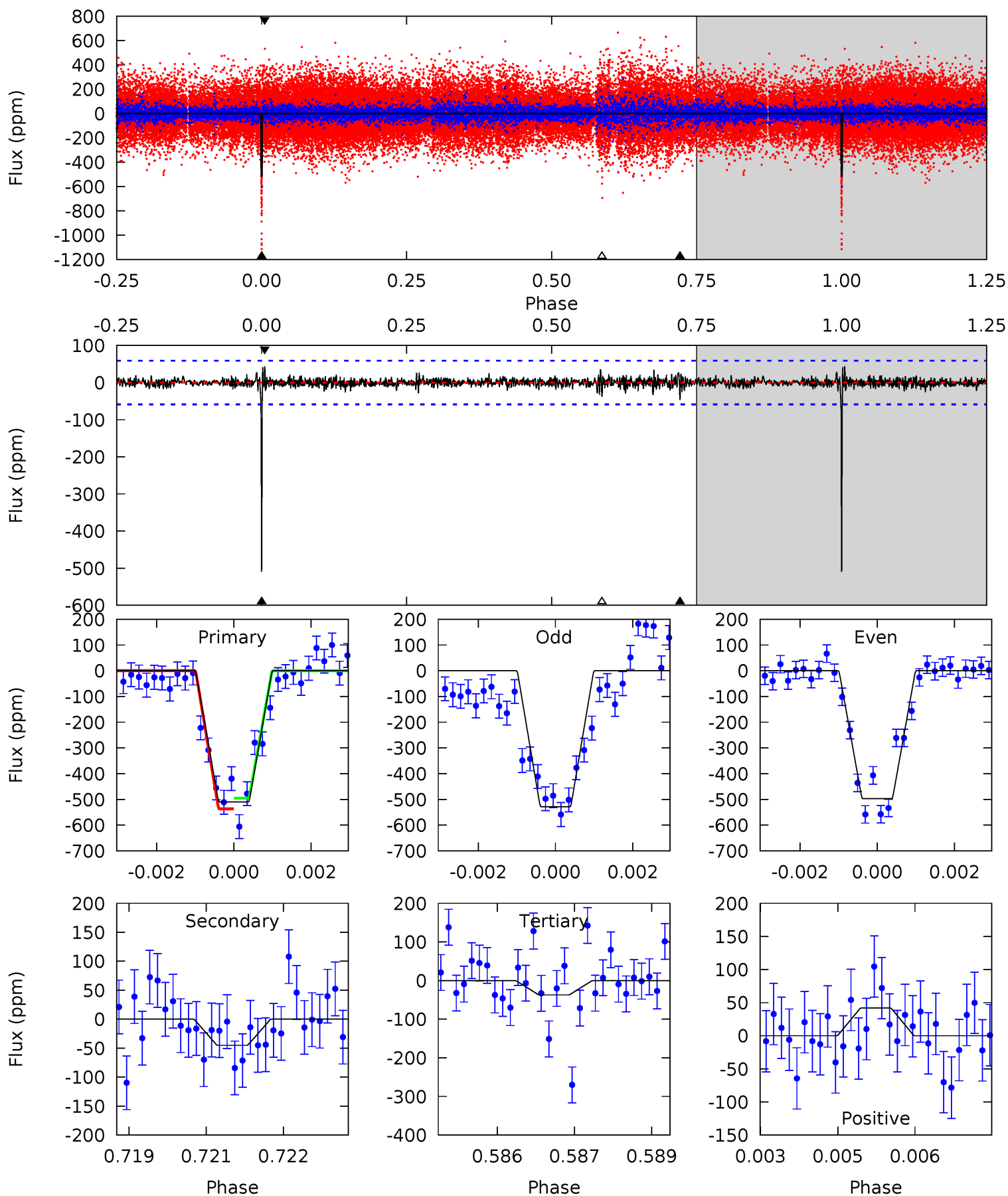
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
57.1	117.1	88.8	85.2	5.18	2.85	13.2	-31.7	-28.1	28.3	31.9	2.10	1.05	0.42	2.33



Alt Model-Shift Uniqueness Test

011362071-03, P = 639.597673 Days, E = 174.535461 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.6	4.13	3.39	3.83	5.38	3.17	0.71	43.2	42.8	0.74	0.31	1.38	0.98	0.08	1.90



Stellar Parameters For KIC 011362071

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5927^{+80}_{-80}	$4.028^{+0.201}_{-0.108}$	$-0.240^{+0.150}_{-0.150}$	$1.606^{+0.255}_{-0.383}$	$1.003^{+0.088}_{-0.088}$	$0.341^{+0.405}_{-0.110}$
	+1%/-1%	+5%/-3%	+62%/-62%	+16%/-24%	+9%/-9%	+119%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 011362071-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3160 ± 27	$10.81^{+7.65}_{-6.43}$	382^{+18}_{-24}	5637^{+3765}_{-1127}	$31509^{+159707}_{-20557}$
Alt.	-45 ± 11	$7.30^{+6.64}_{-4.80}$	383^{+17}_{-24}	3006^{+1274}_{-477}	969^{+7213}_{-708}

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 $A_{obs} \gg 1.0$

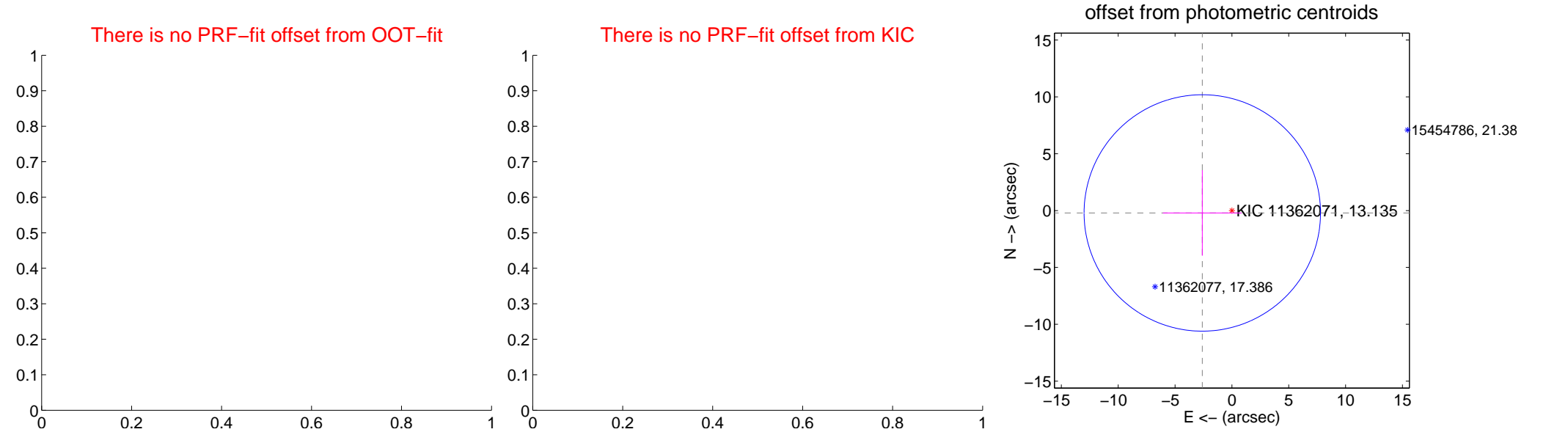
DV Centroid Data

Supplemental centroid analysis for 011362071-03. Kepler magnitude: 13.13. Transit SNR 19.68

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	2.61 ± 3.47	0.75	2.60 ± 3.46	-0.21 ± 3.76



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.

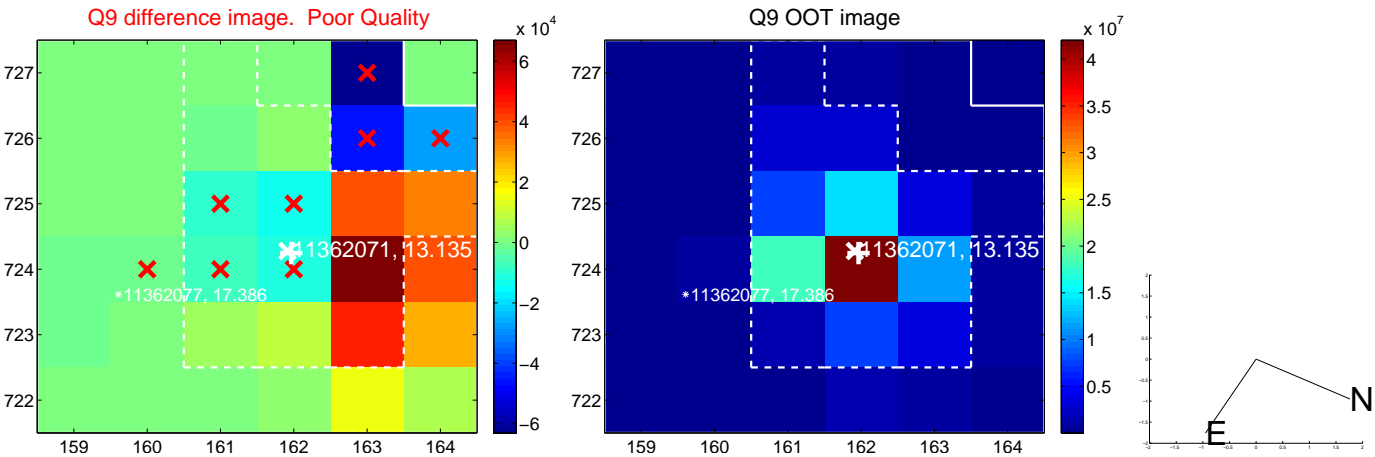
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



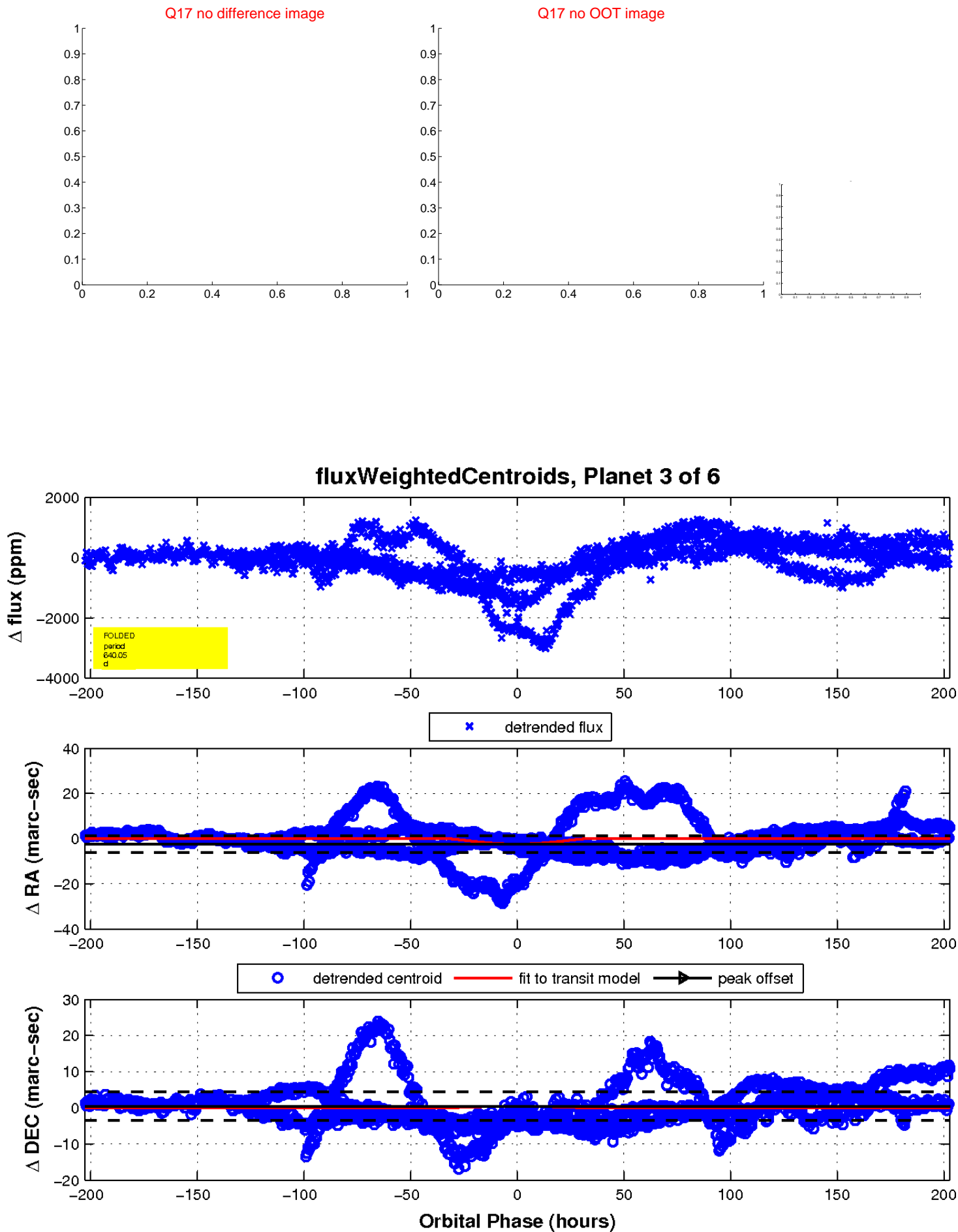
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

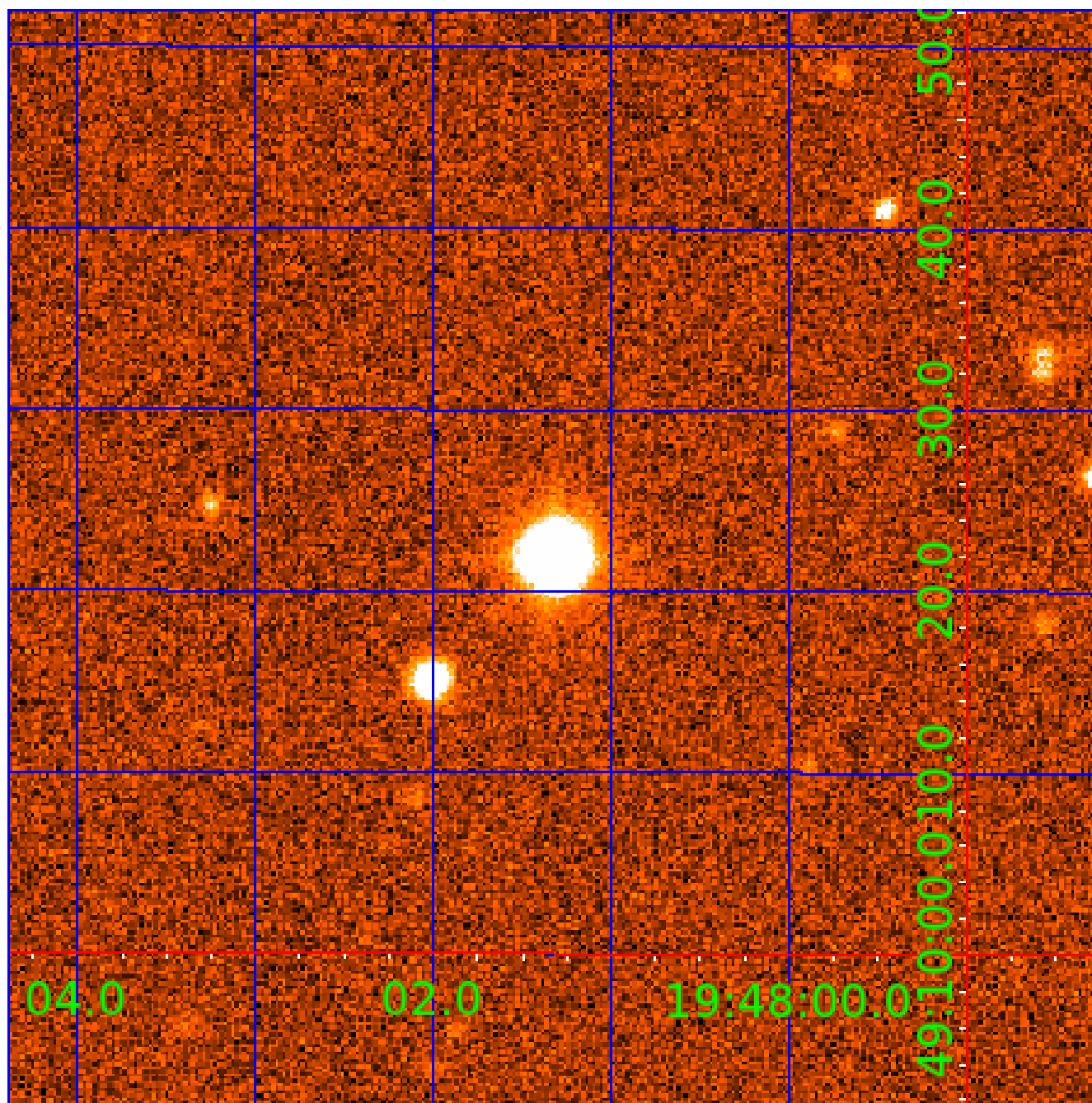


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011362071

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})
011362071-01	OBS	No	390.164116	152.322836	167.3	39.609	27.9	6.3	1.61	5927	2.74	2.60
011362071-03	OBS	No	640.047358	173.931863	1041.6	67.586	14.1	19.7	1.61	5927	9.96	1.35
011362071-04	OBS	No	390.812297	373.639894	547.5	21.545	9.3	12.6	1.61	5927	7.37	2.60
011362071-05	OBS	No	265.167649	347.599011	208.6	17.832	8.4	7.3	1.61	5927	2.72	4.36
011362071-06	OBS	No	384.353756	251.553191	481.6	31.407	8.2	12.3	1.61	5927	4.10	2.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011362071-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011362071-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011362071-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011362071-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
011362071-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_TER_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.

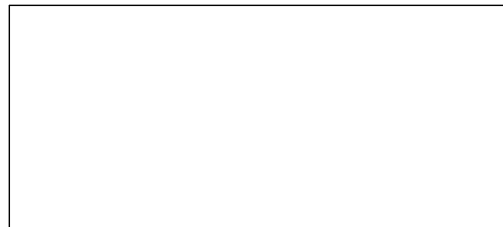
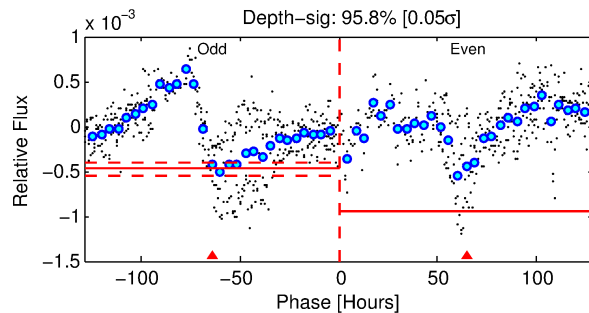
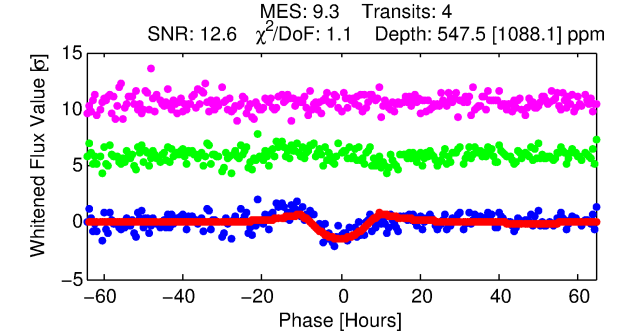
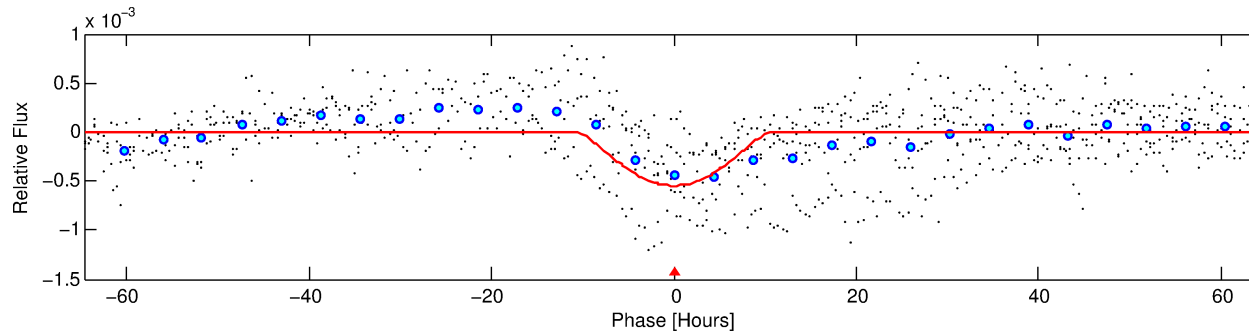
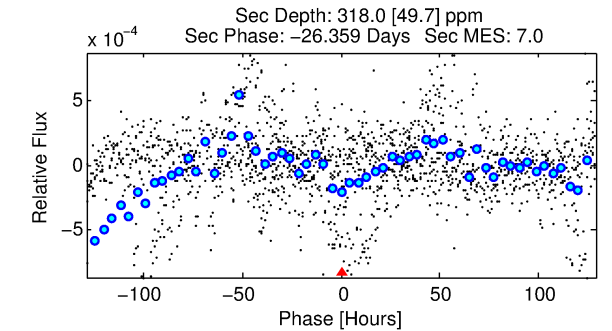
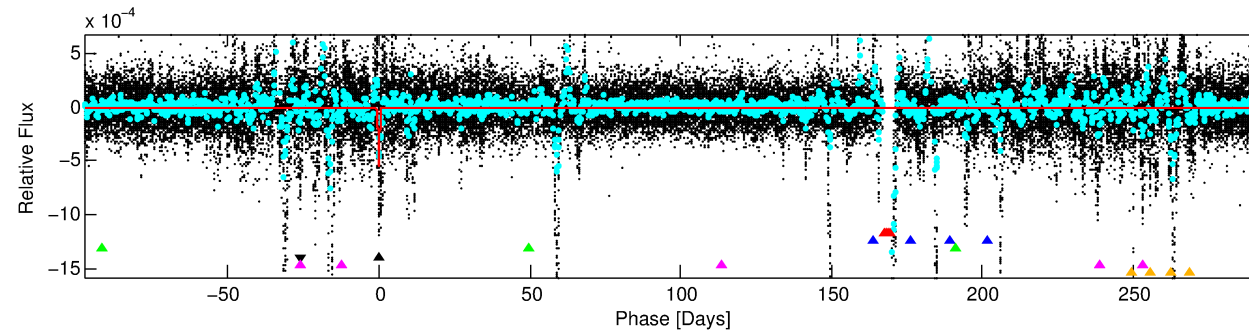
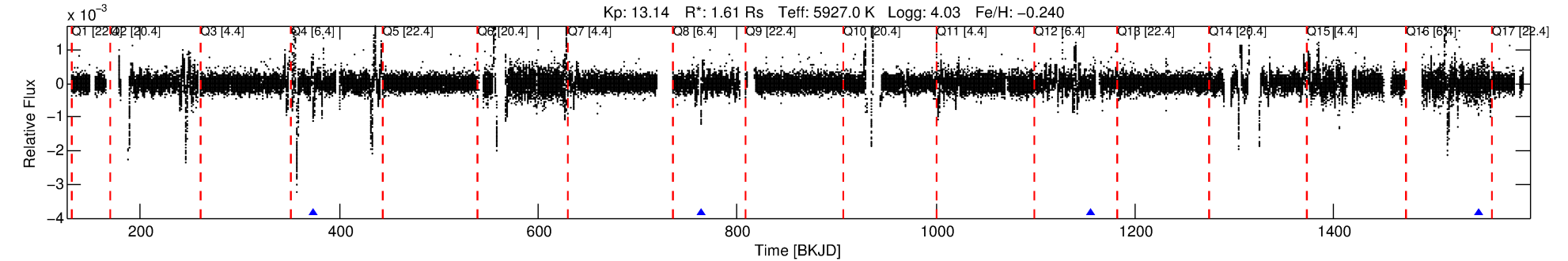
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011362071-04

No Significant Match Found

DV One-Page Summary

KIC: 11362071 Candidate: 4 of 6 Period: 390.812 d



DV Fit Results:

Period = 390.81230 [0.01897] d
Epoch = 373.6399 [0.0272] BKJD
Rp/R* = 0.0421 [0.0749]
a/R* = 40.63 [18.23]
b = 1.00 [0.16]
Seff = 2.60 [0.91]
Teq = 324 [28] K
Rp = 7.37 [13.24] Re
a = 1.0475 [0.2321] AU
Ag = 3532.35 [12647.74] [0.28σ]
Teffp = 3859 [3438] K [1.03σ]

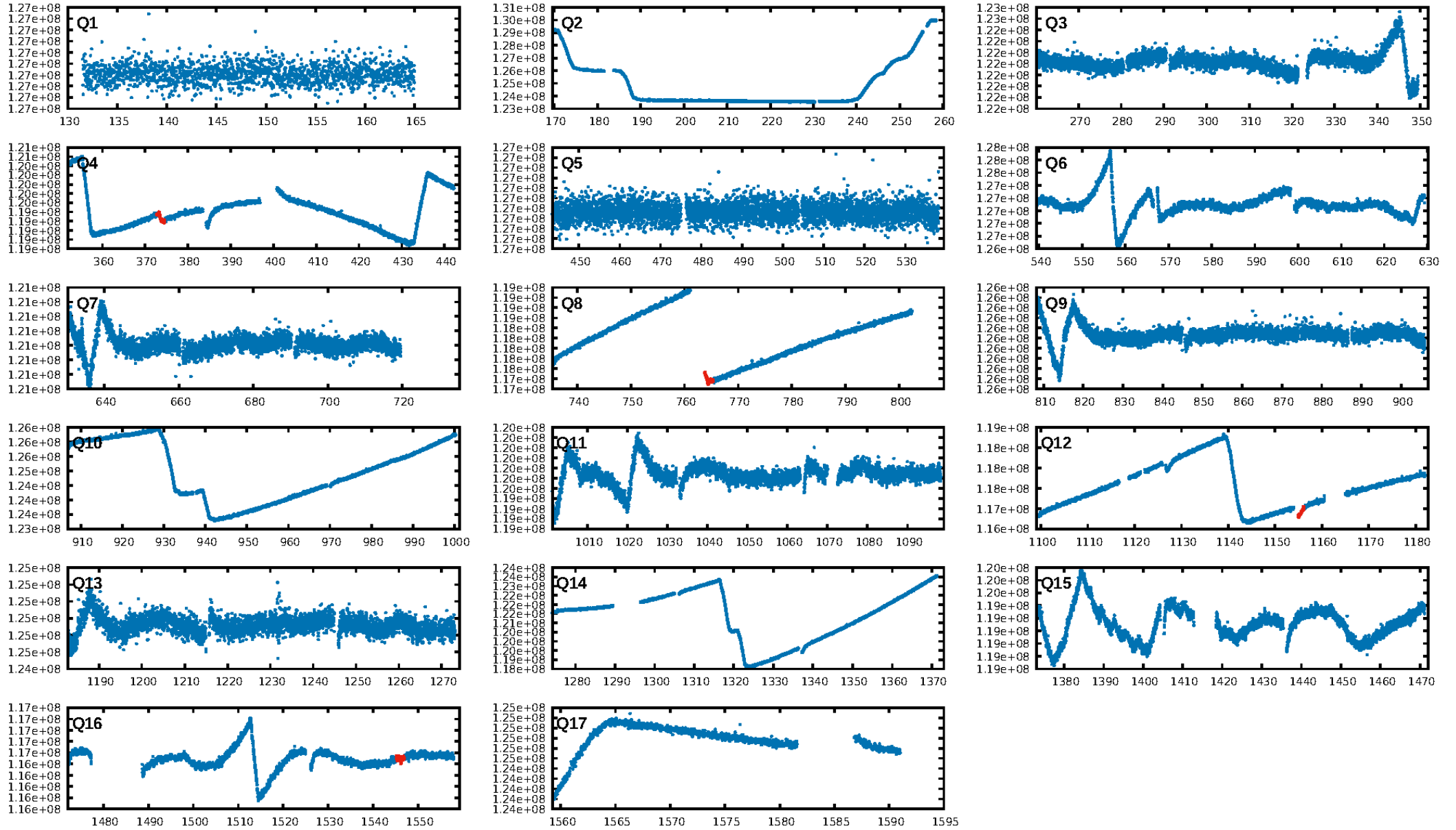
DV Diagnostic Results:

ShortPeriod-sig: 27.0% [0.35σ]
LongPeriod-sig: 100.0% [84.32σ]
ModelChiSquare2-sig: 1.1%
ModelChiSquareGof-sig: 86.6%
Bootstrap-pfa: 4.94e-08
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.4827
Centroid-sig: 2.2%
Centroid-so: 9.286 arcsec [2.14σ]
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: N/A

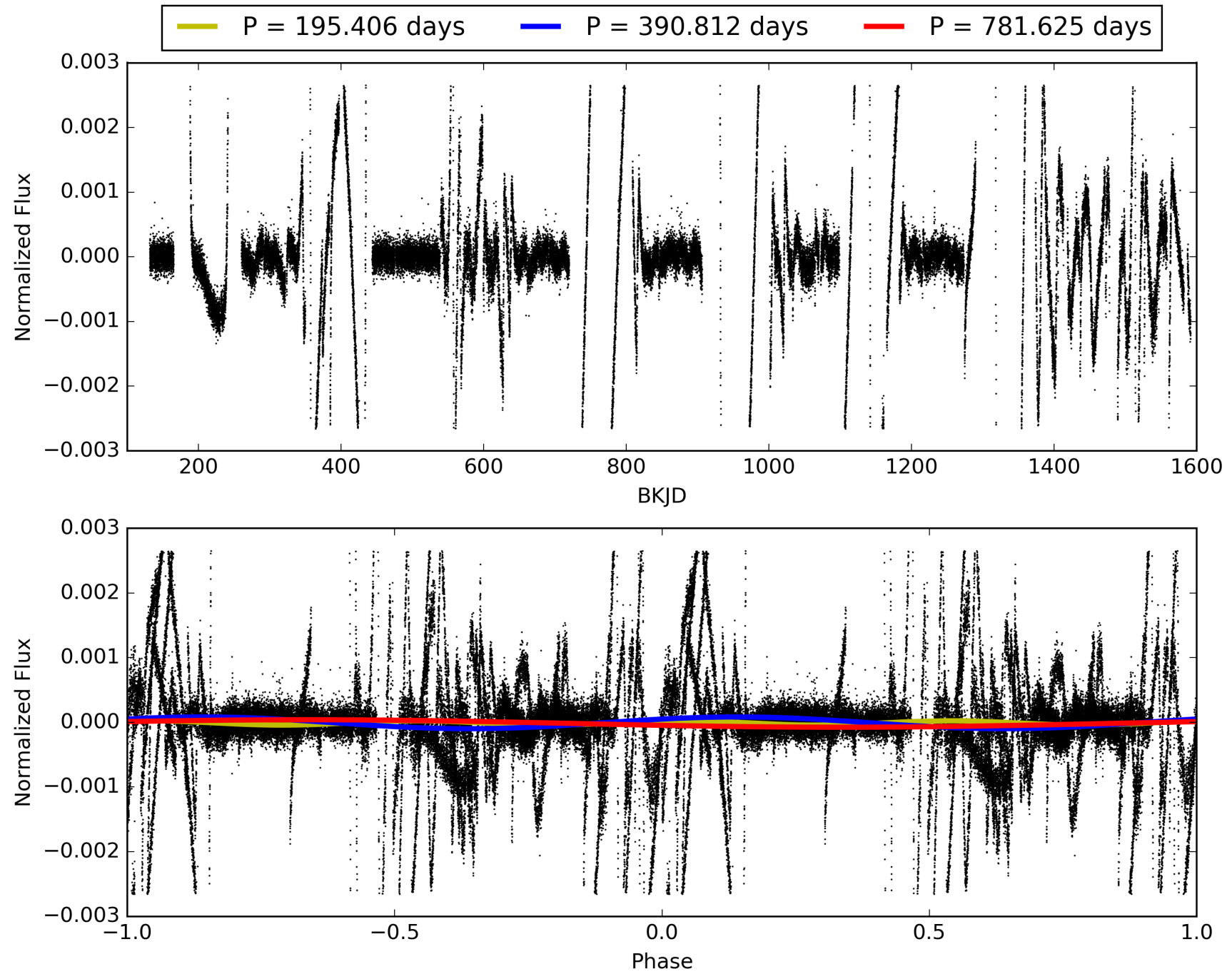
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:59:02 Z

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

TCE 011362071-04, PDC Light Curves

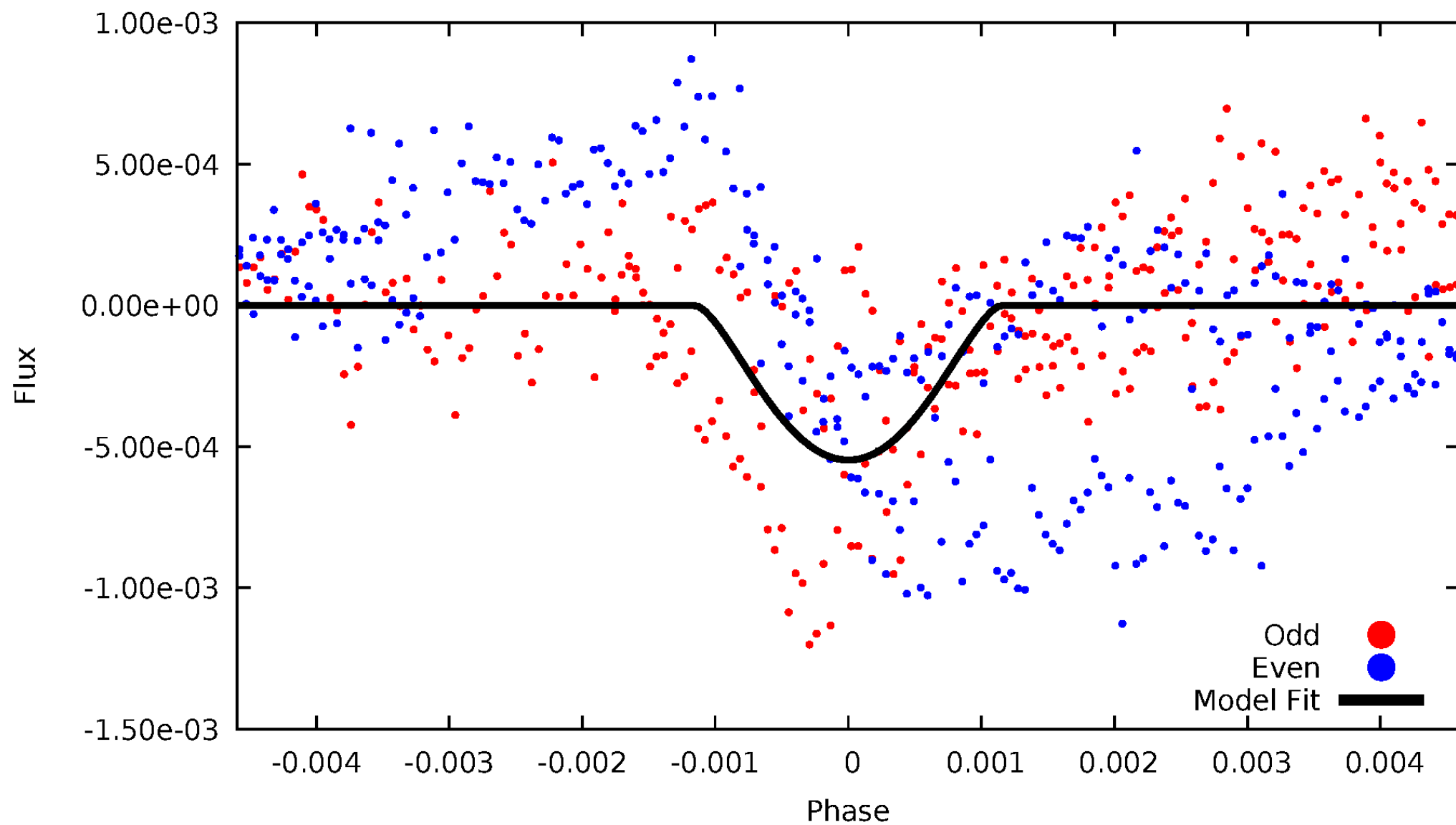


TCE 011362071-04



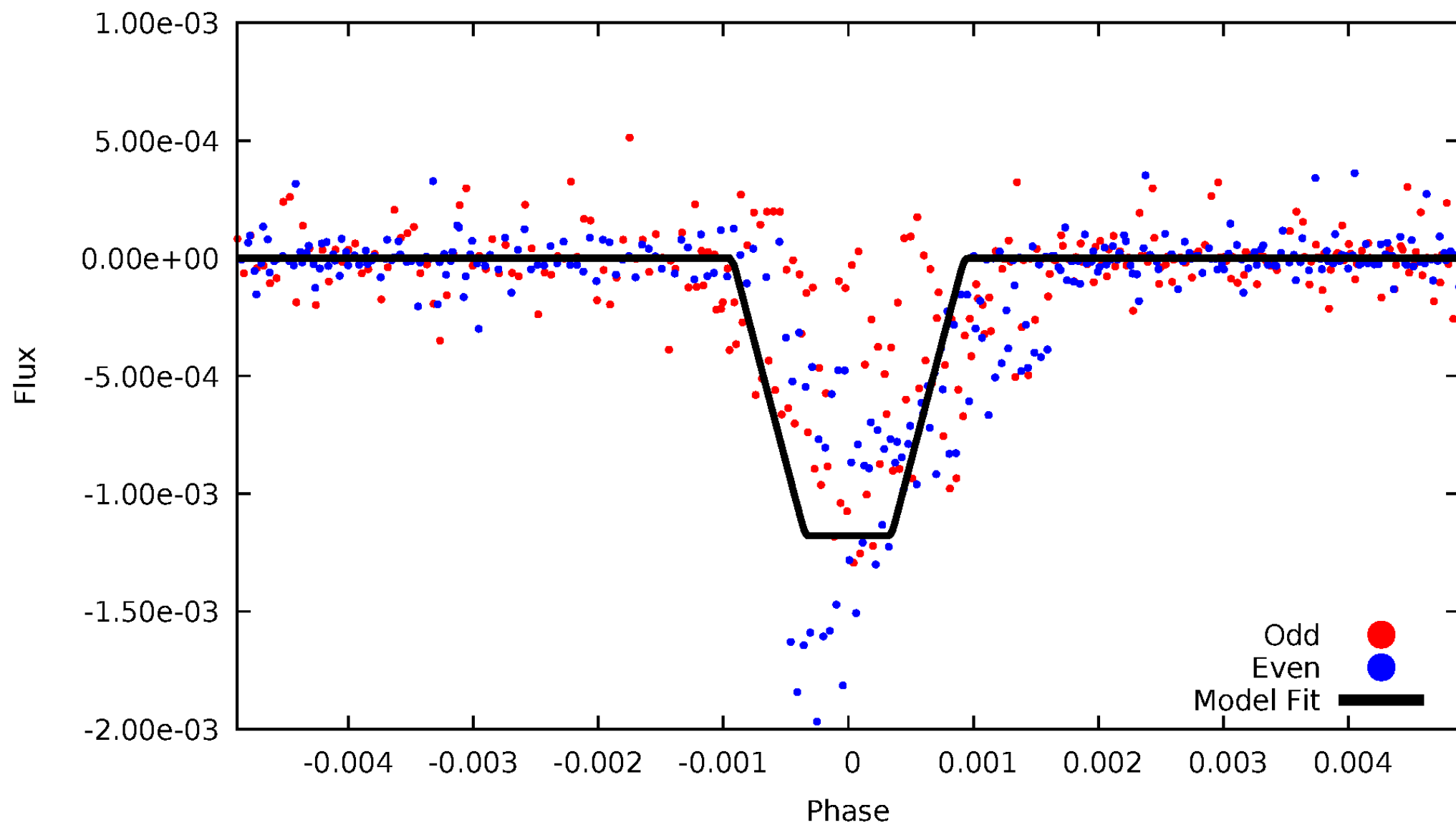
DV Odd/Even

TCE 011362071-04



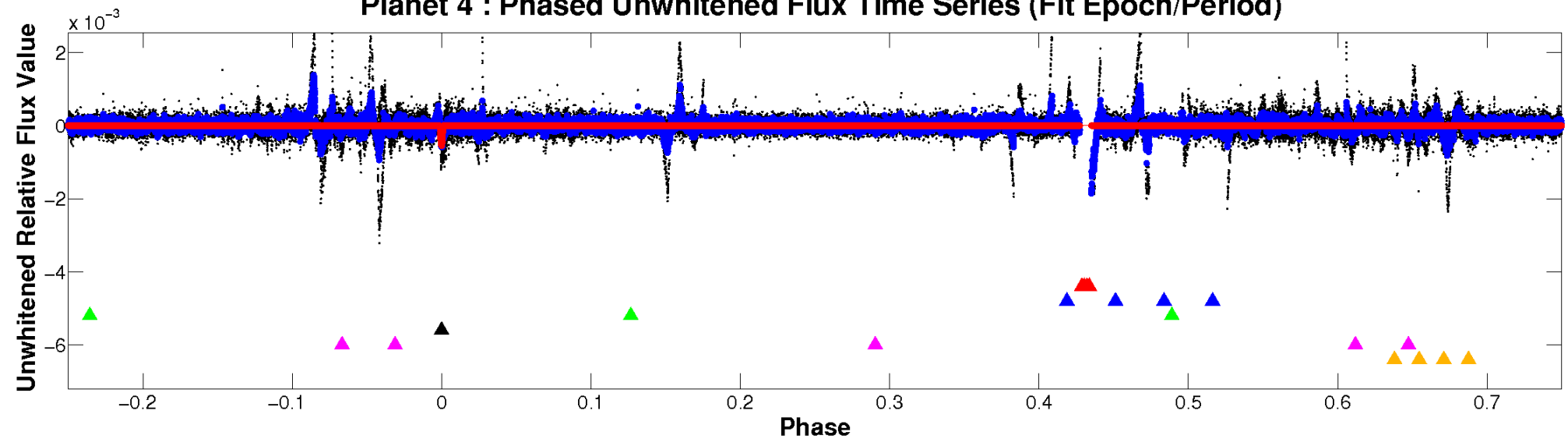
ALT Odd/Even

TCE 011362071-04

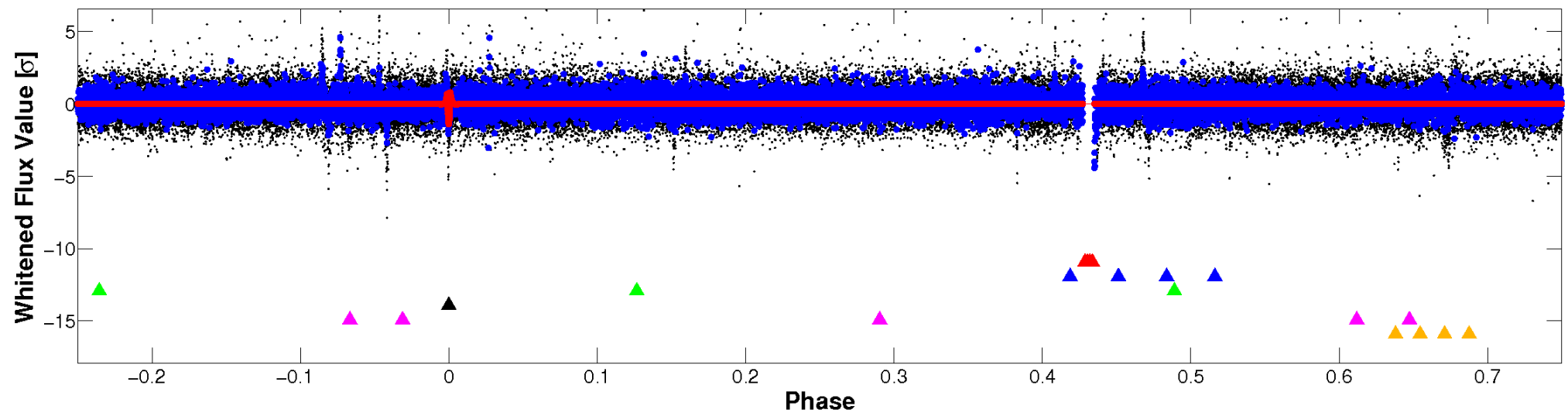


Non-Whitened Vs. Whitened Light Curve

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

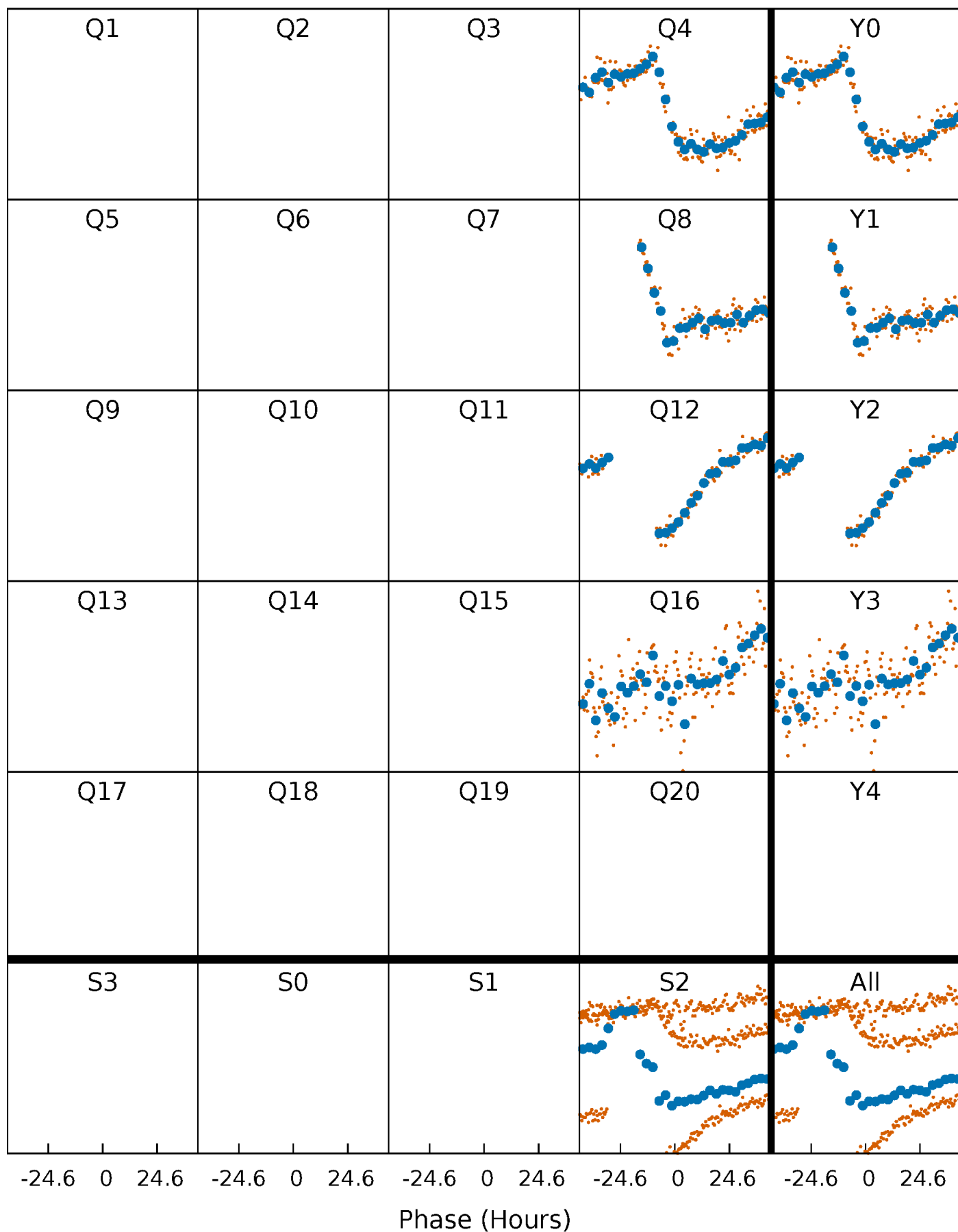


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 011362071-04 $P=390.812297$ Days $T_0=373.639895$ (BKJD)



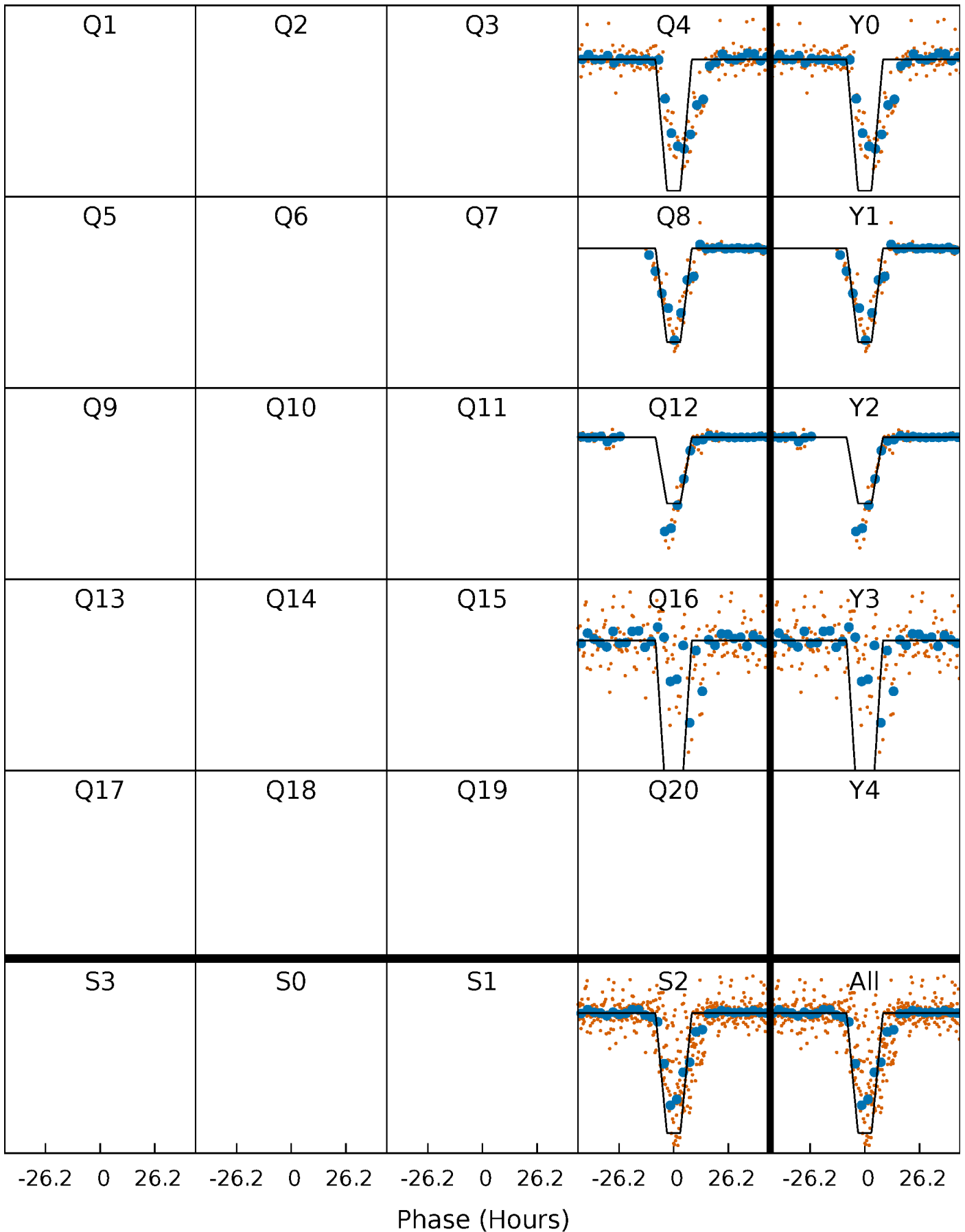
DV Quarter-Phased Transit Curves

TCE 011362071-04 P=390.812297 Days $T_0=373.639895$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

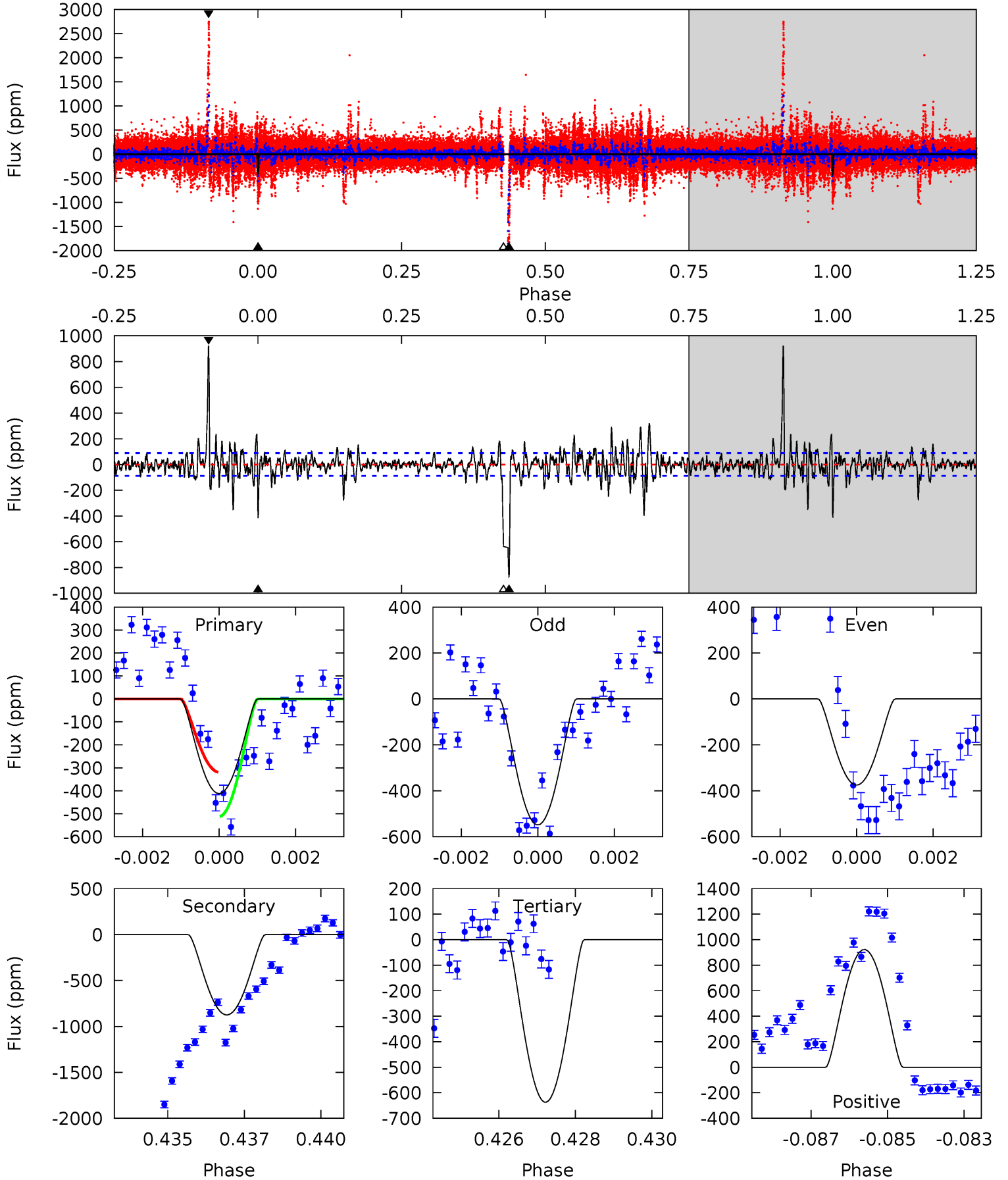
TCE 011362071-04 P=390.785024 Days $T_0=373.536614$ (BKJD)



DV Model-Shift Uniqueness Test

011362071-04, P = 390.812297 Days, E = 373.639895 Days

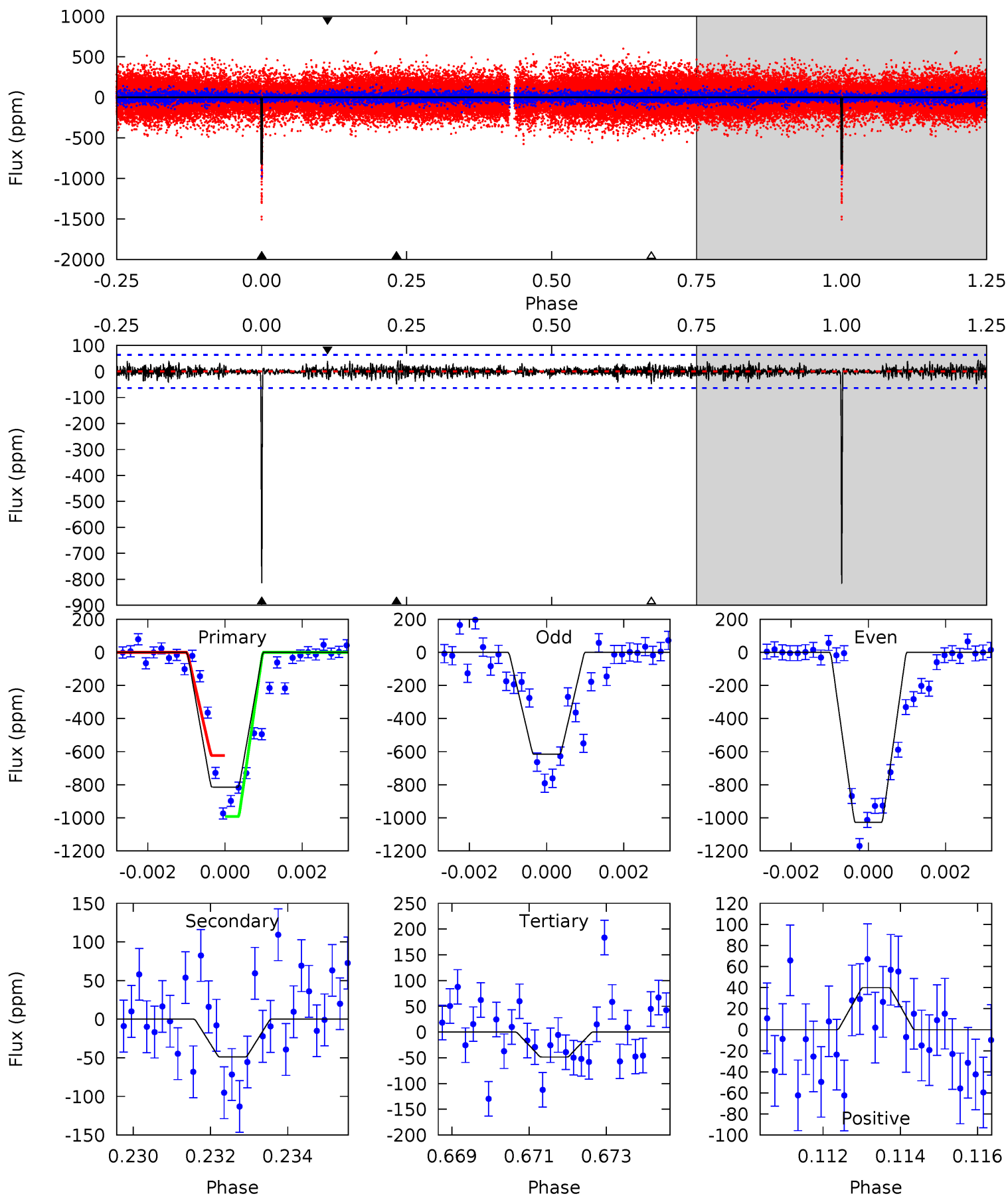
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.9	52.8	38.4	55.7	5.30	3.05	5.02	-13.6	-30.8	14.3	-2.90	4.24	1.15	0.51	5.86



Alt Model-Shift Uniqueness Test

011362071-04, P = 390.785024 Days, E = 373.536614 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
68.0	4.08	4.05	3.34	5.34	3.11	0.88	63.9	64.6	0.03	0.74	18.2	0.97	0.05	15.0



Stellar Parameters For KIC 011362071

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5927^{+80}_{-80}	$4.028^{+0.201}_{-0.108}$	$-0.240^{+0.150}_{-0.150}$	$1.606^{+0.255}_{-0.383}$	$1.003^{+0.088}_{-0.088}$	$0.341^{+0.405}_{-0.110}$
	+1%/-1%	+5%/-3%	+62%/-62%	+16%/-24%	+9%/-9%	+119%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 011362071-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-874 ± 17	$11.35^{+11.08}_{-7.67}$	451^{+21}_{-30}	4235^{+2775}_{-864}	4196^{+34976}_{-3149}
Alt.	-49 ± 12	$11.38^{+10.23}_{-7.84}$	450^{+20}_{-28}	2686^{+1081}_{-391}	213^{+1935}_{-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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

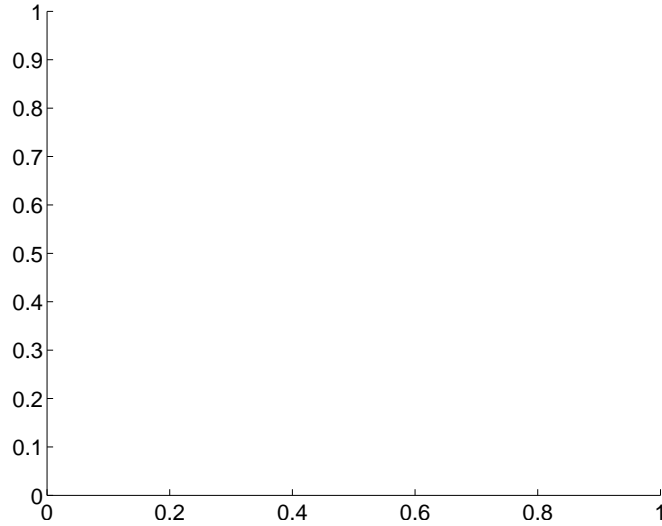
Supplemental centroid analysis for 011362071-04. Kepler magnitude: 13.13. Transit SNR 12.61

There are 0 quarters with good PRF difference image offsets

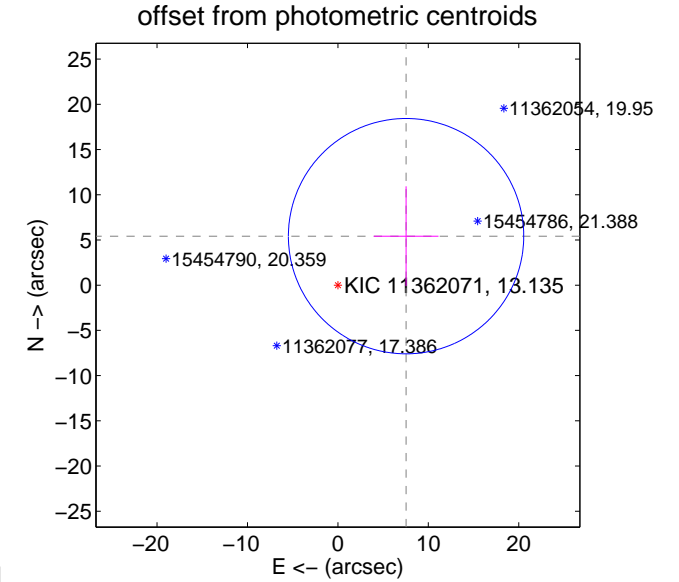
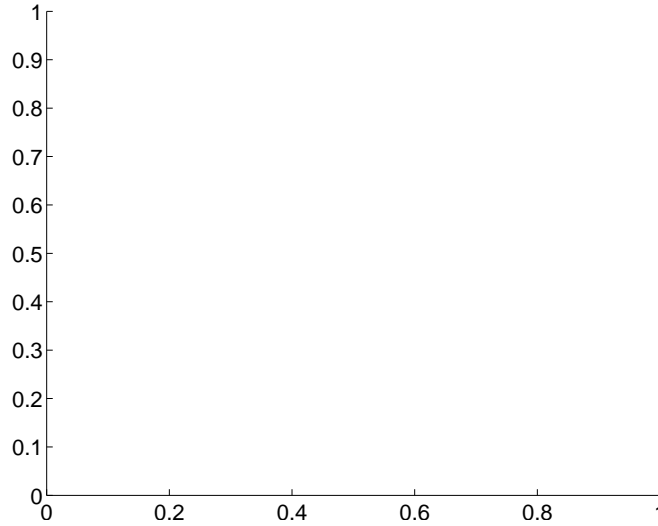
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	9.29 ± 4.34	2.14	-7.54 ± 3.58	5.42 ± 5.51

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.



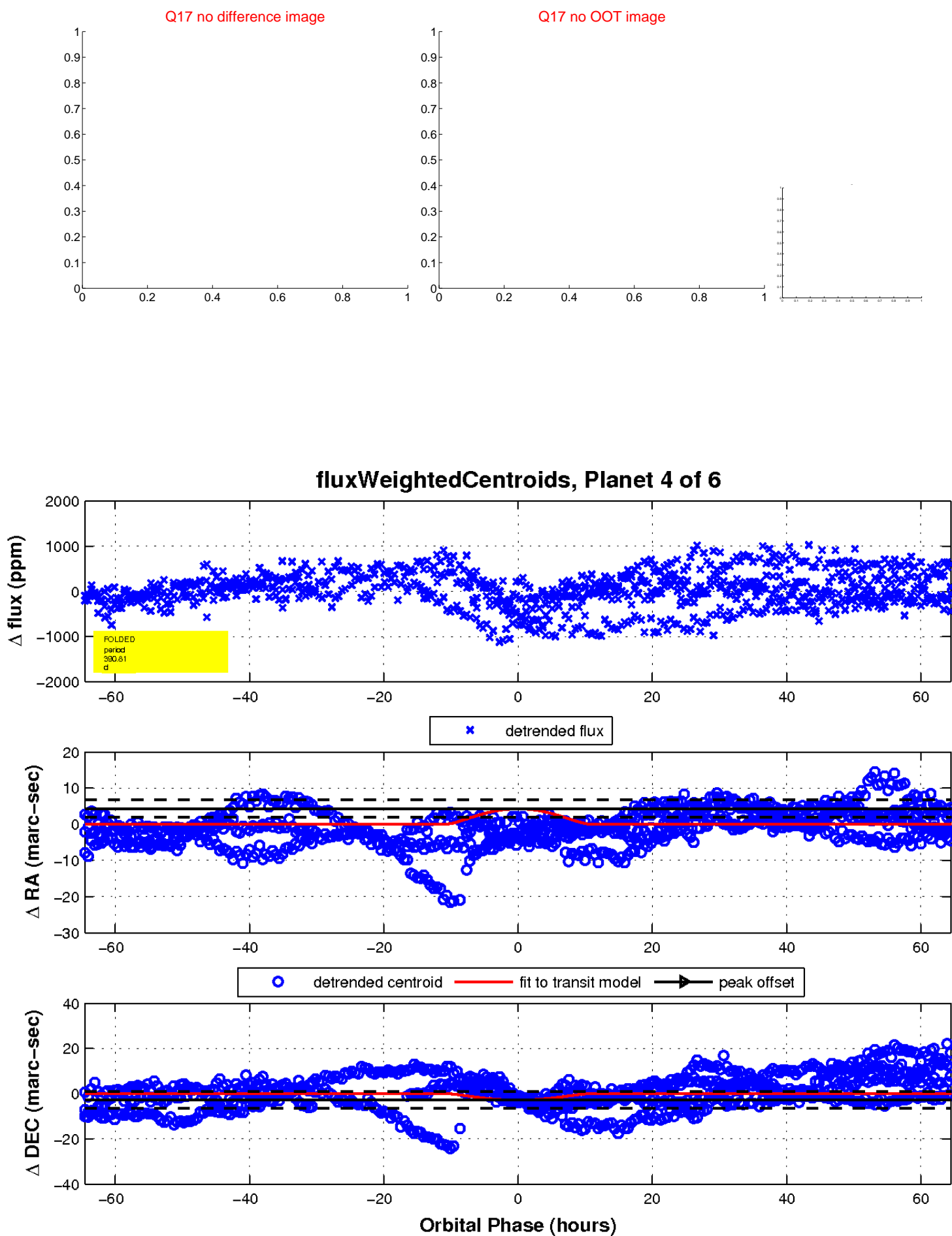
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

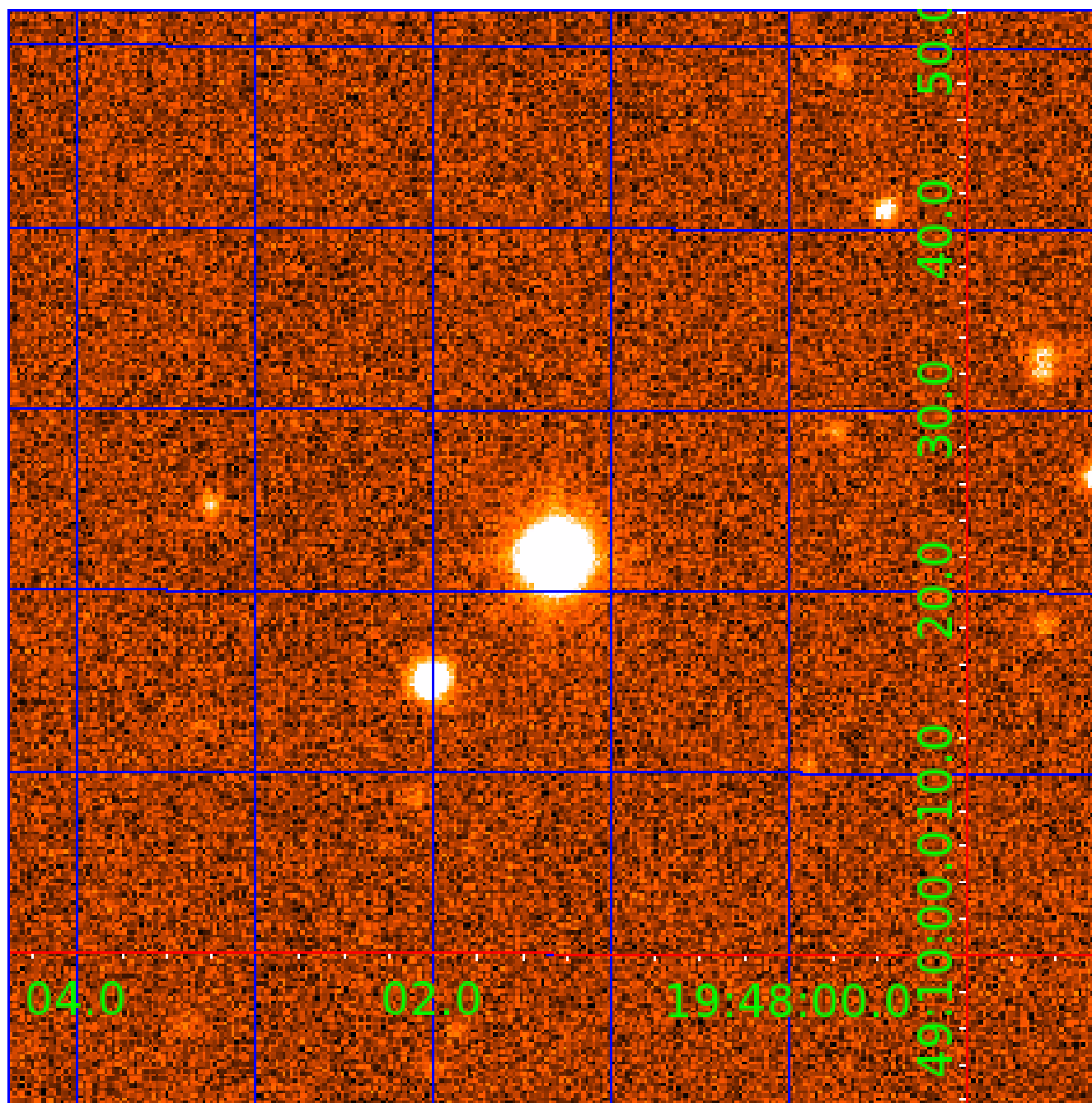


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011362071

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})
011362071-01	OBS	No	390.164116	152.322836	167.3	39.609	27.9	6.3	1.61	5927	2.74	2.60
011362071-03	OBS	No	640.047358	173.931863	1041.6	67.586	14.1	19.7	1.61	5927	9.96	1.35
011362071-04	OBS	No	390.812297	373.639894	547.5	21.545	9.3	12.6	1.61	5927	7.37	2.60
011362071-05	OBS	No	265.167649	347.599011	208.6	17.832	8.4	7.3	1.61	5927	2.72	4.36
011362071-06	OBS	No	384.353756	251.553191	481.6	31.407	8.2	12.3	1.61	5927	4.10	2.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011362071-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011362071-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011362071-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011362071-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
011362071-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_TER_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.

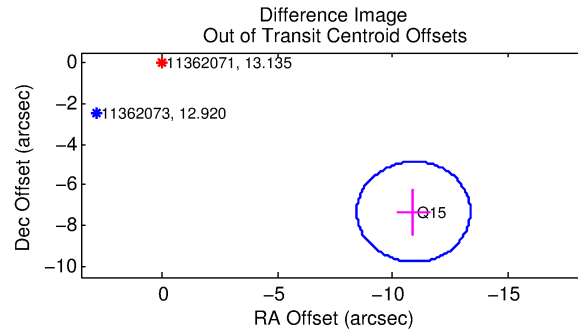
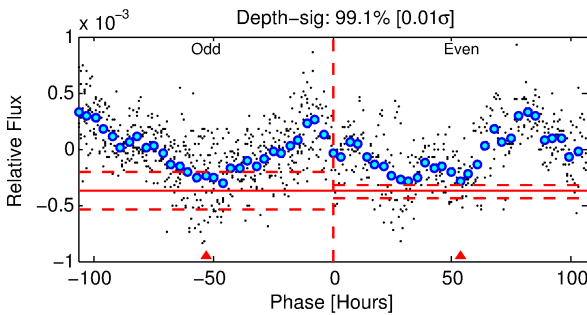
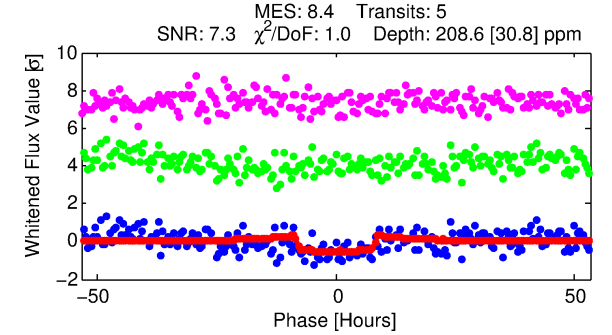
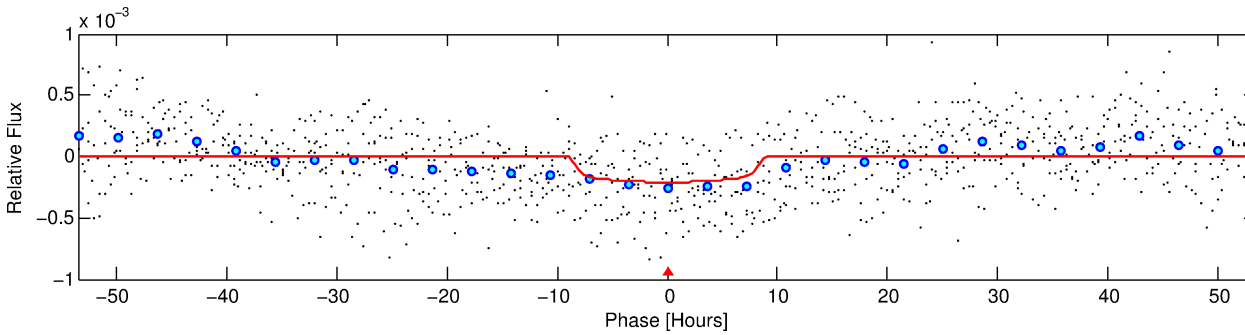
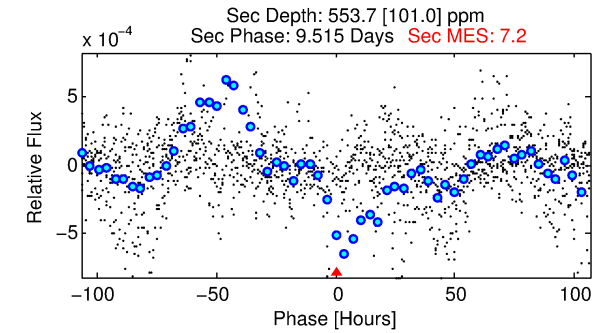
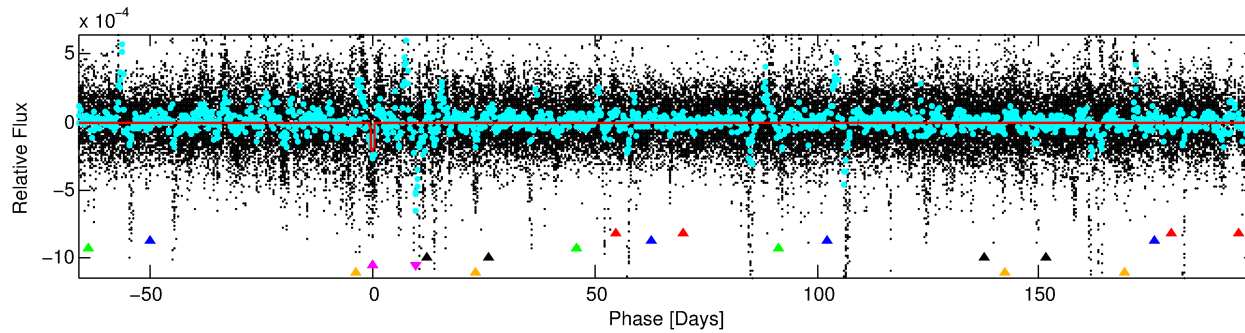
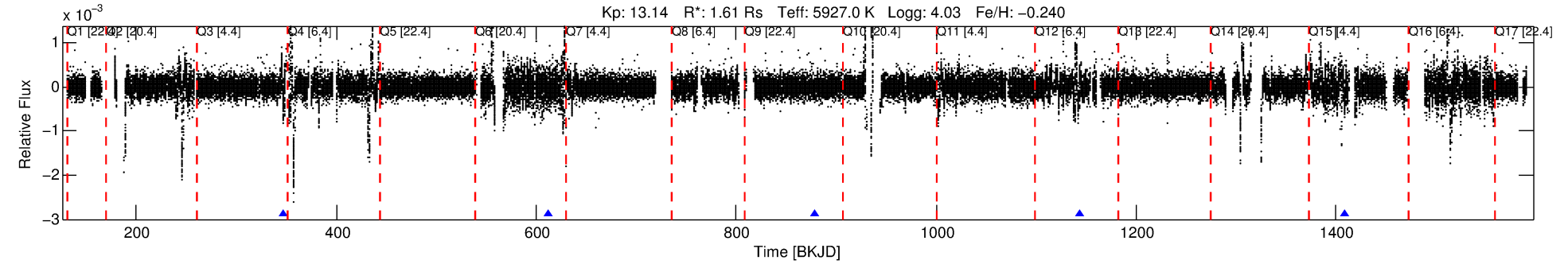
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011362071-05

No Significant Match Found

DV One-Page Summary

KIC: 11362071 Candidate: 5 of 6 Period: 265.168 d



DV Fit Results:

Period = 265.16765 [0.00981] d
Epoch = 347.5990 [0.0235] BKJD
Rp/R* = 0.0155 [0.0019]
a/R* = 54.95 [25.48]
b = 0.89 [0.11]
Seff = 4.36 [1.53]
Teq = 368 [32] K
Rp = 2.72 [0.73] Re
a = 0.8089 [0.1792] AU
Ag = 26977.13 [12432.48] [2.17σ]
Teffp = 7301 [562] K [12.31σ]

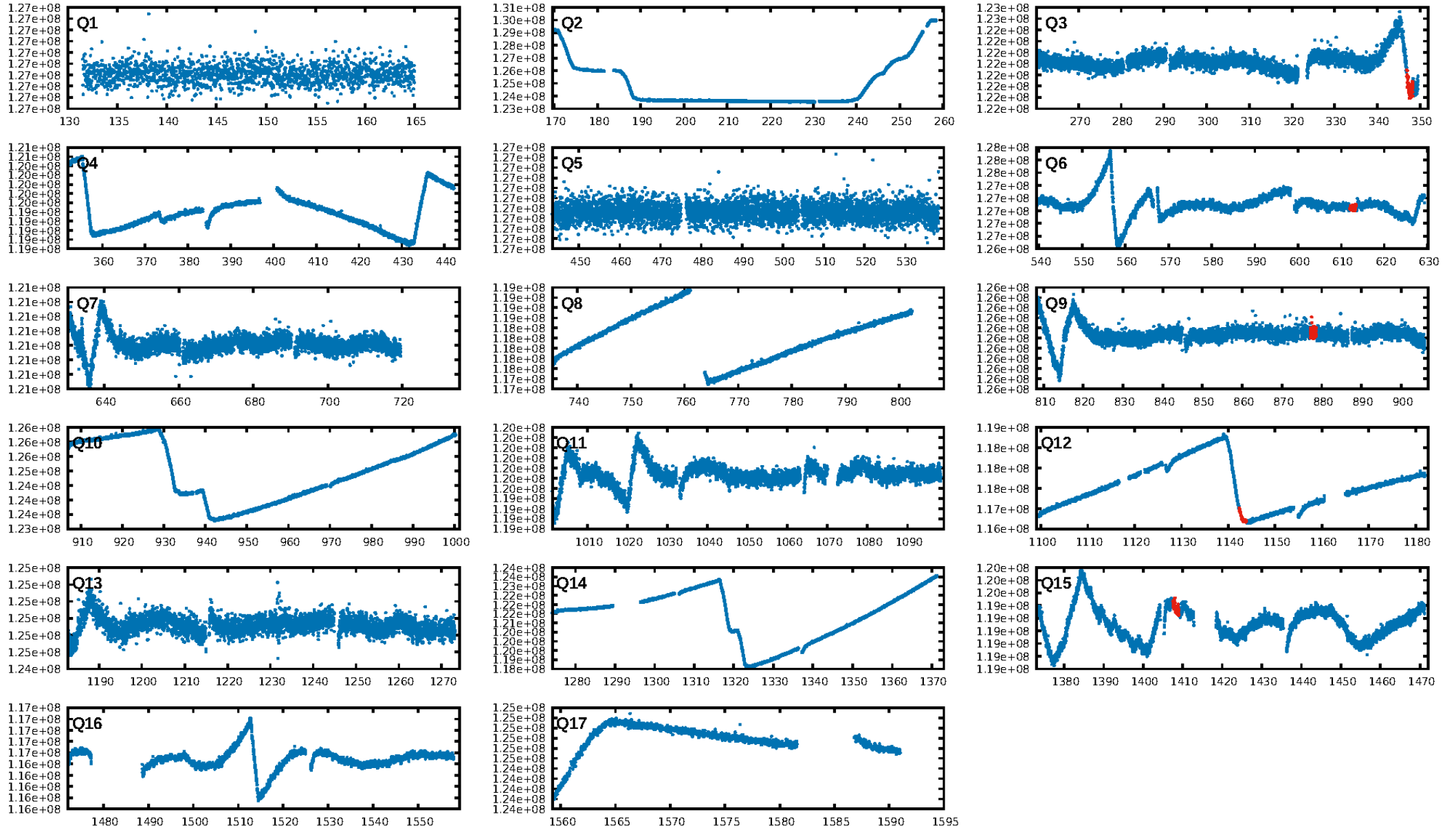
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [42.27σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 98.0%
Bootstrap-pfa: 2.18e-07
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 10.26
Centroid-sig: 50.5%
Centroid-so: 2.926 arcsec [0.71σ]
OotOffset-rm: 13.122 arcsec [16.04σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-rm: 12.919 arcsec [15.99σ]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [5/5]

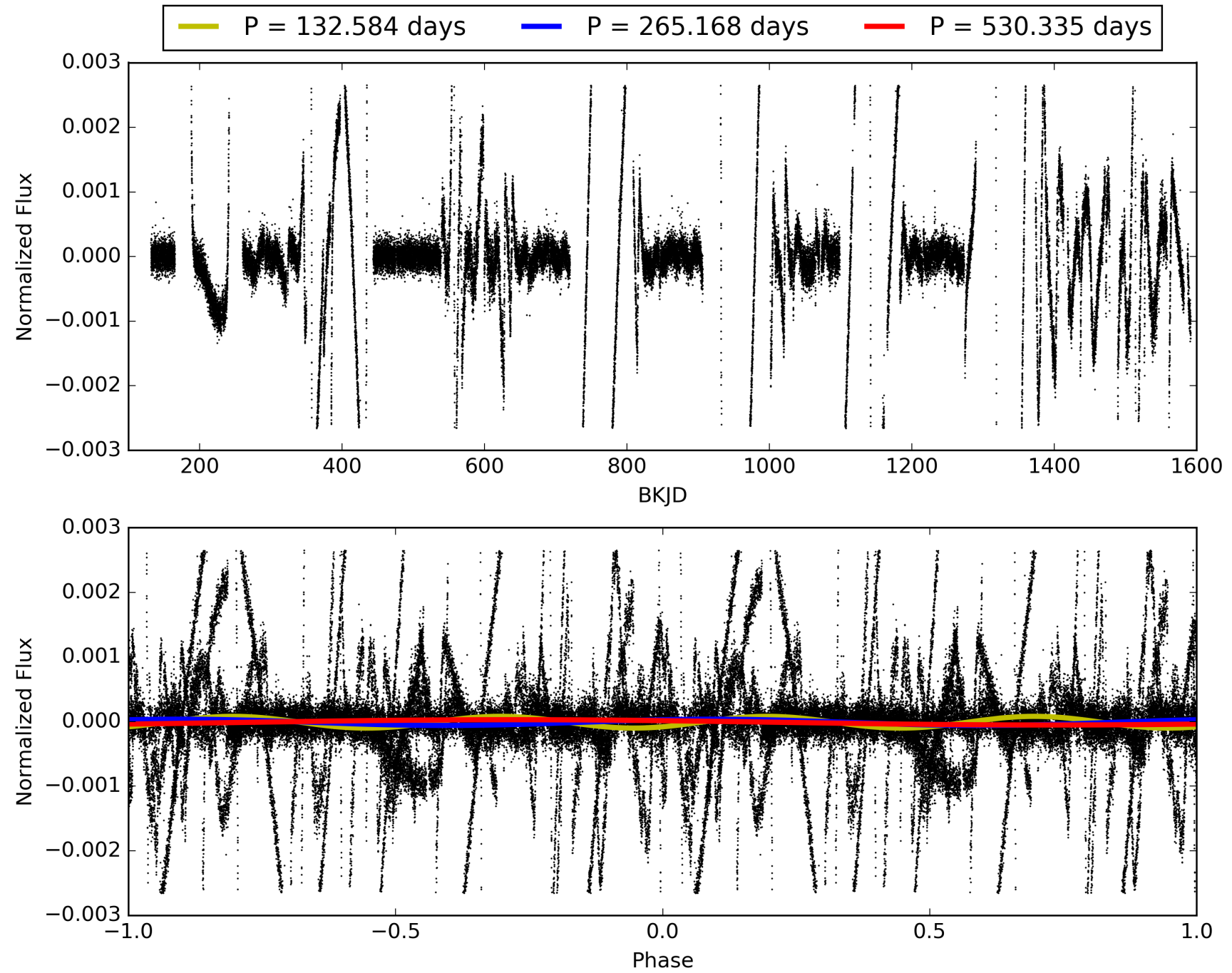
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:59:09 Z

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

TCE 011362071-05, PDC Light Curves

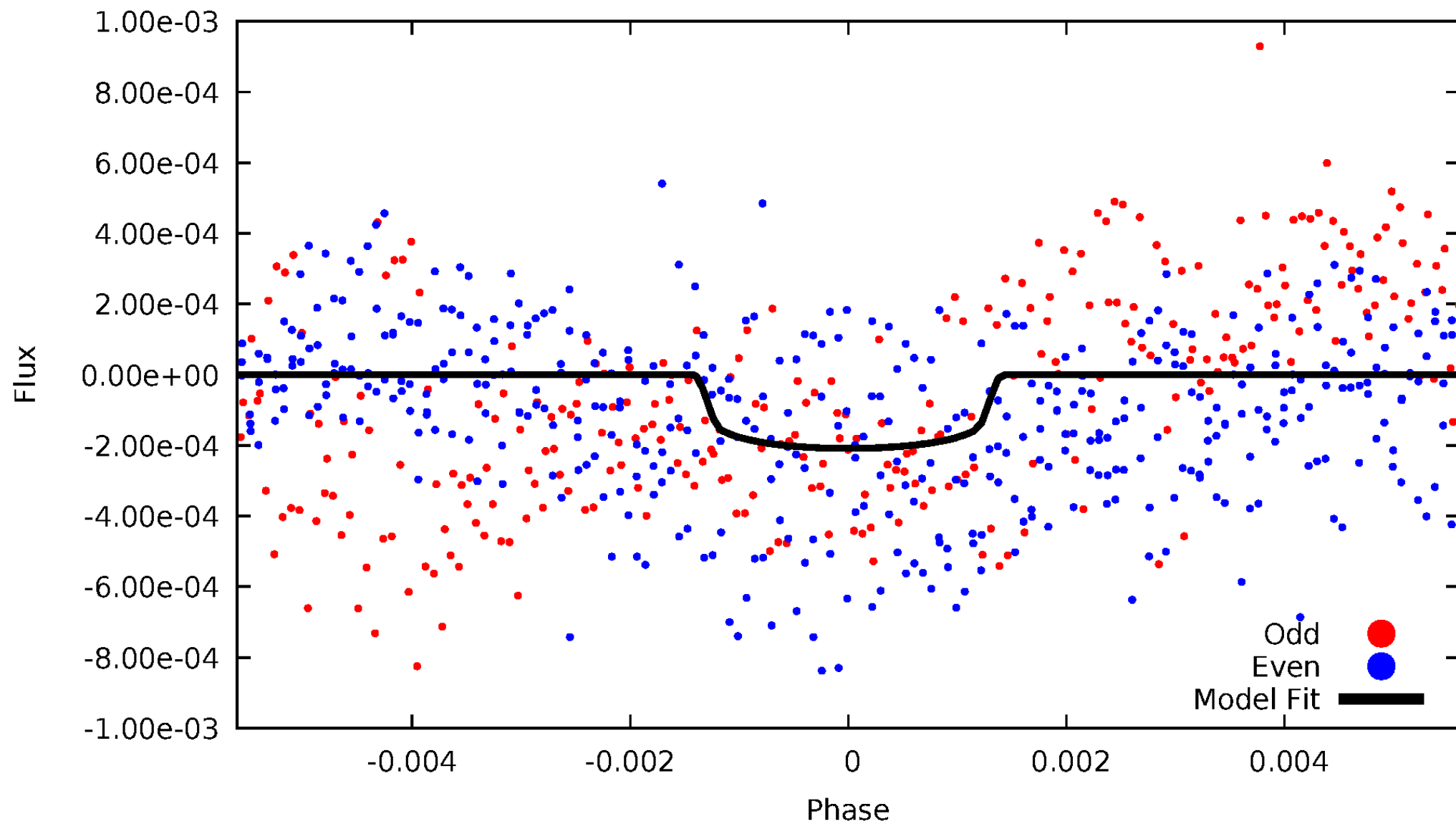


TCE 011362071-05



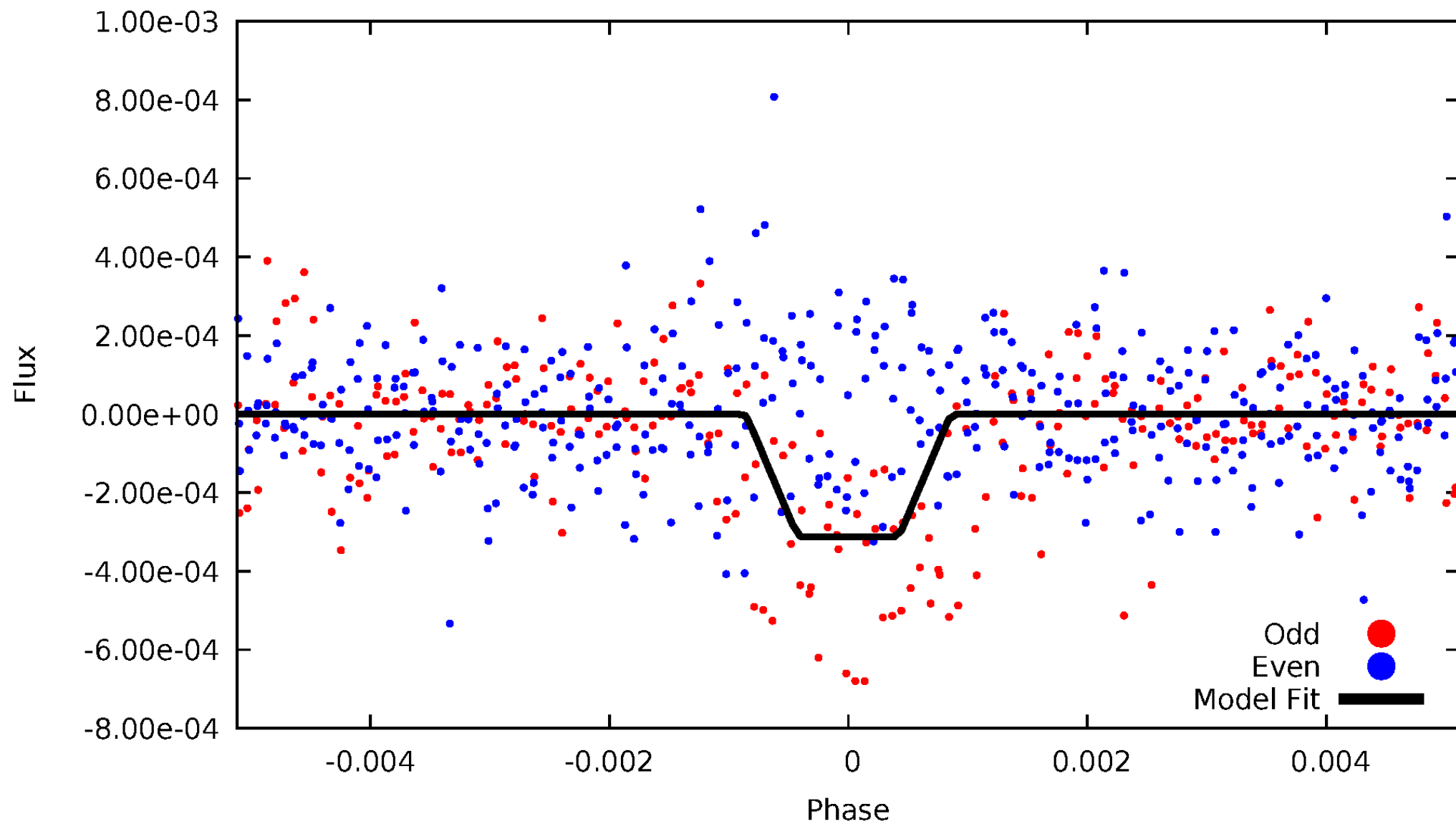
DV Odd/Even

TCE 011362071-05



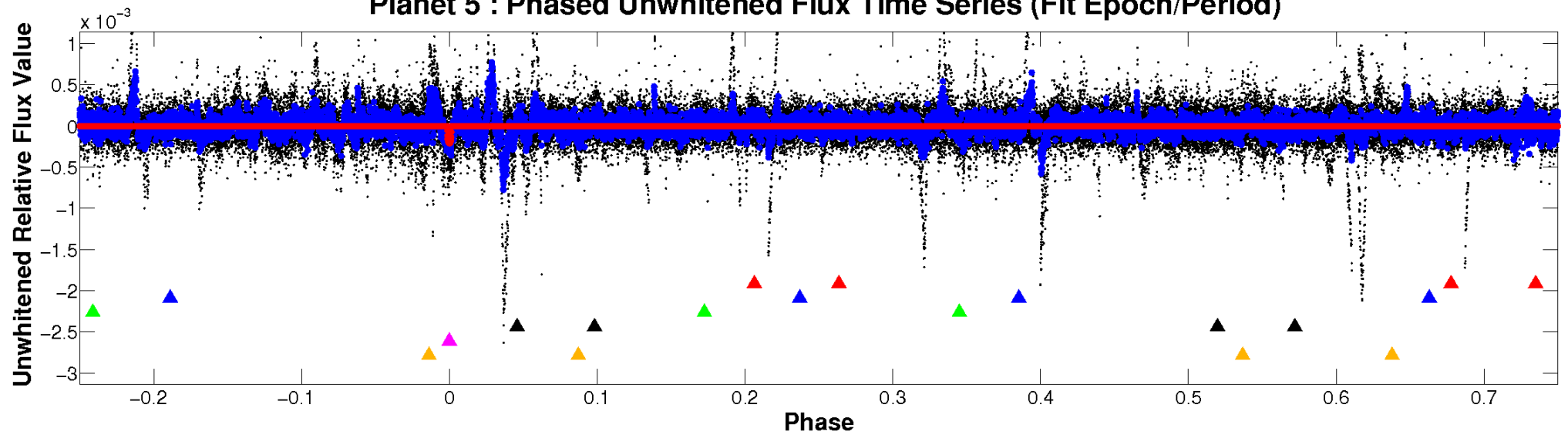
ALT Odd/Even

TCE 011362071-05

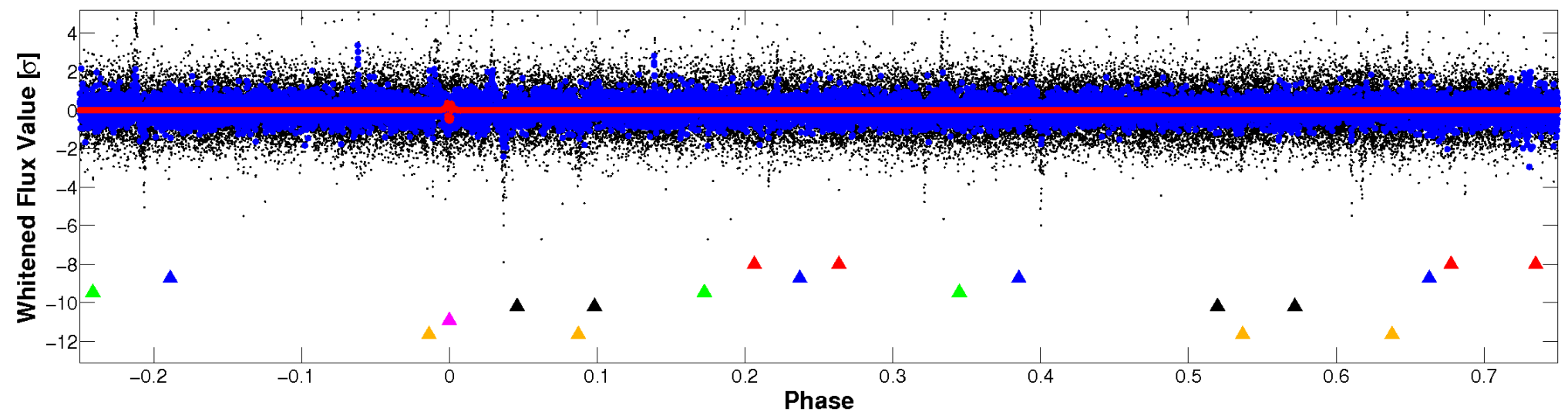


Non-Whitened Vs. Whitened Light Curve

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

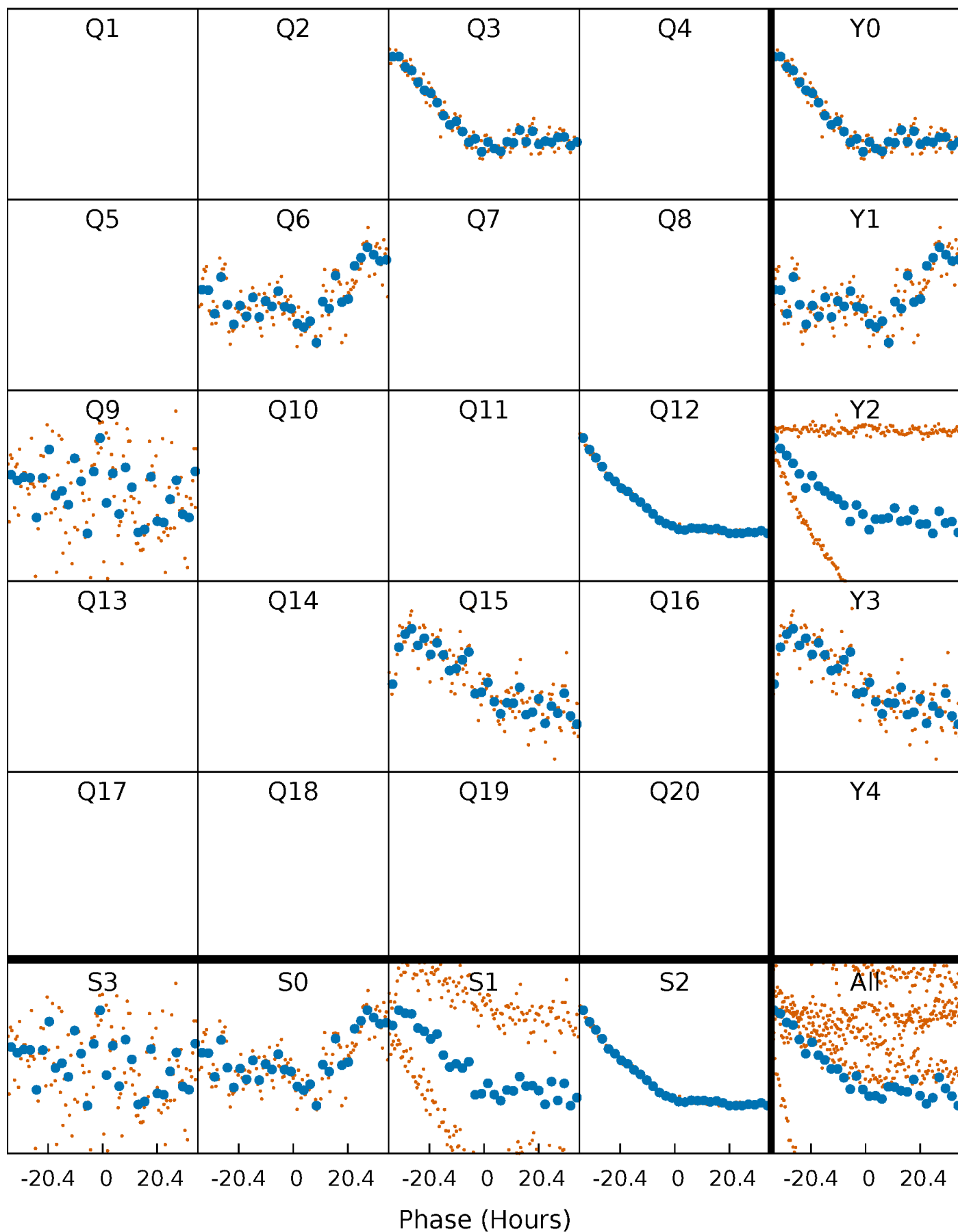


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



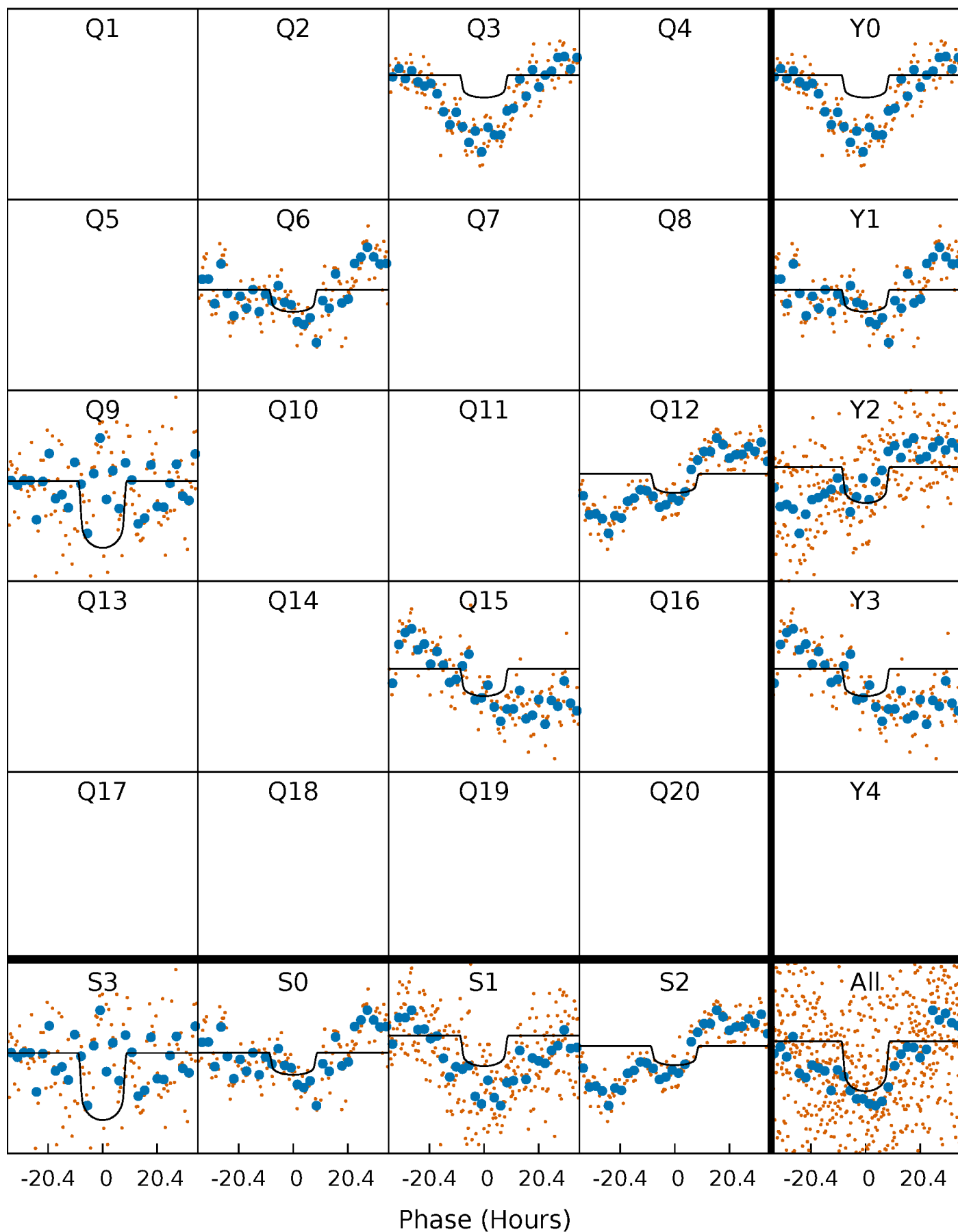
PDC Quarter-Phased Transit Curves

TCE 011362071-05 $P=265.167649$ Days $T_0=347.599011$ (BKJD)



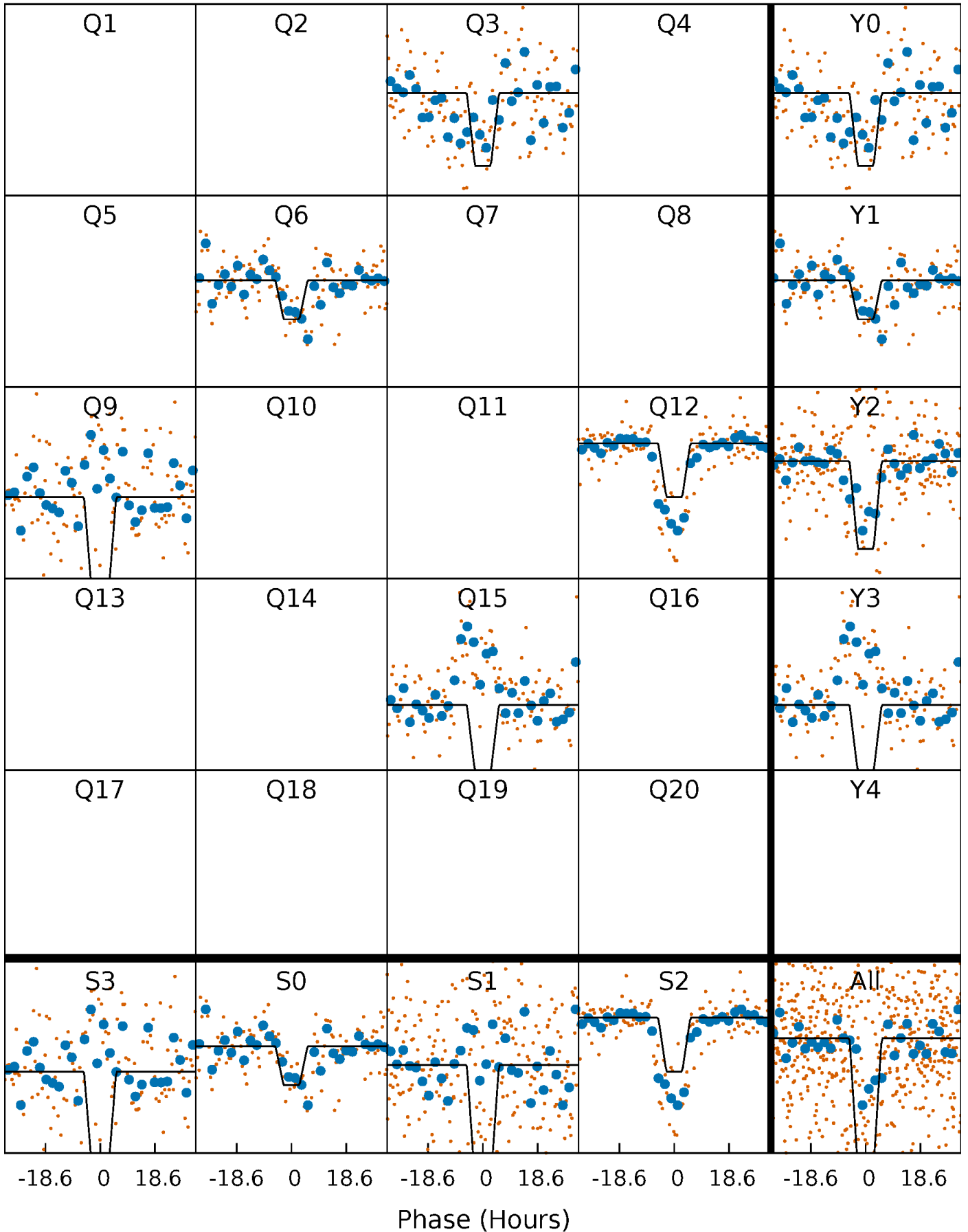
DV Quarter-Phased Transit Curves

TCE 011362071-05 $P=265.167649$ Days $T_0=347.599011$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

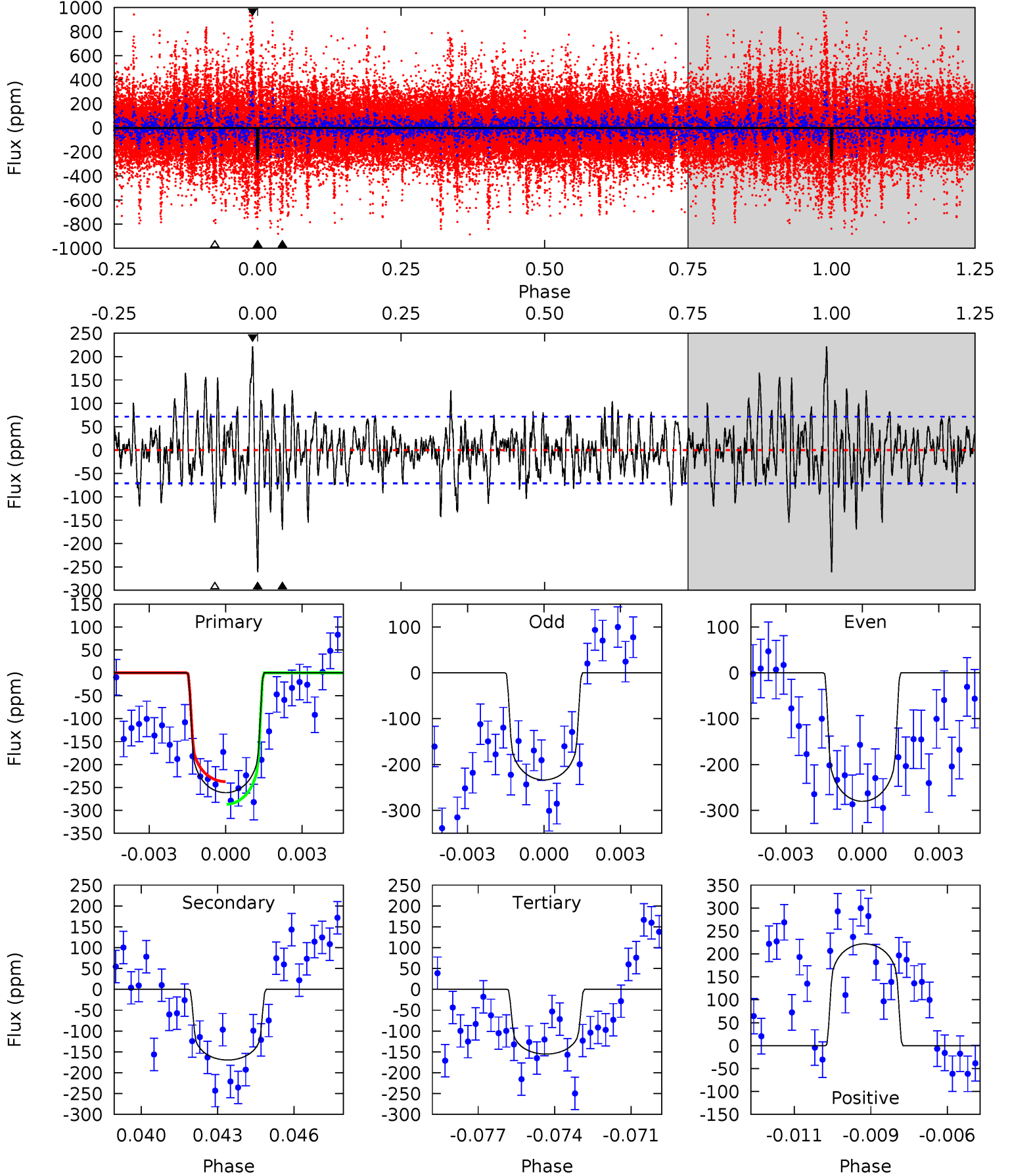
TCE 011362071-05 $P=265.105007$ Days $T_0=347.805568$ (BKJD)



DV Model-Shift Uniqueness Test

011362071-05, $P = 265.167649$ Days, $E = 82.431362$ Days

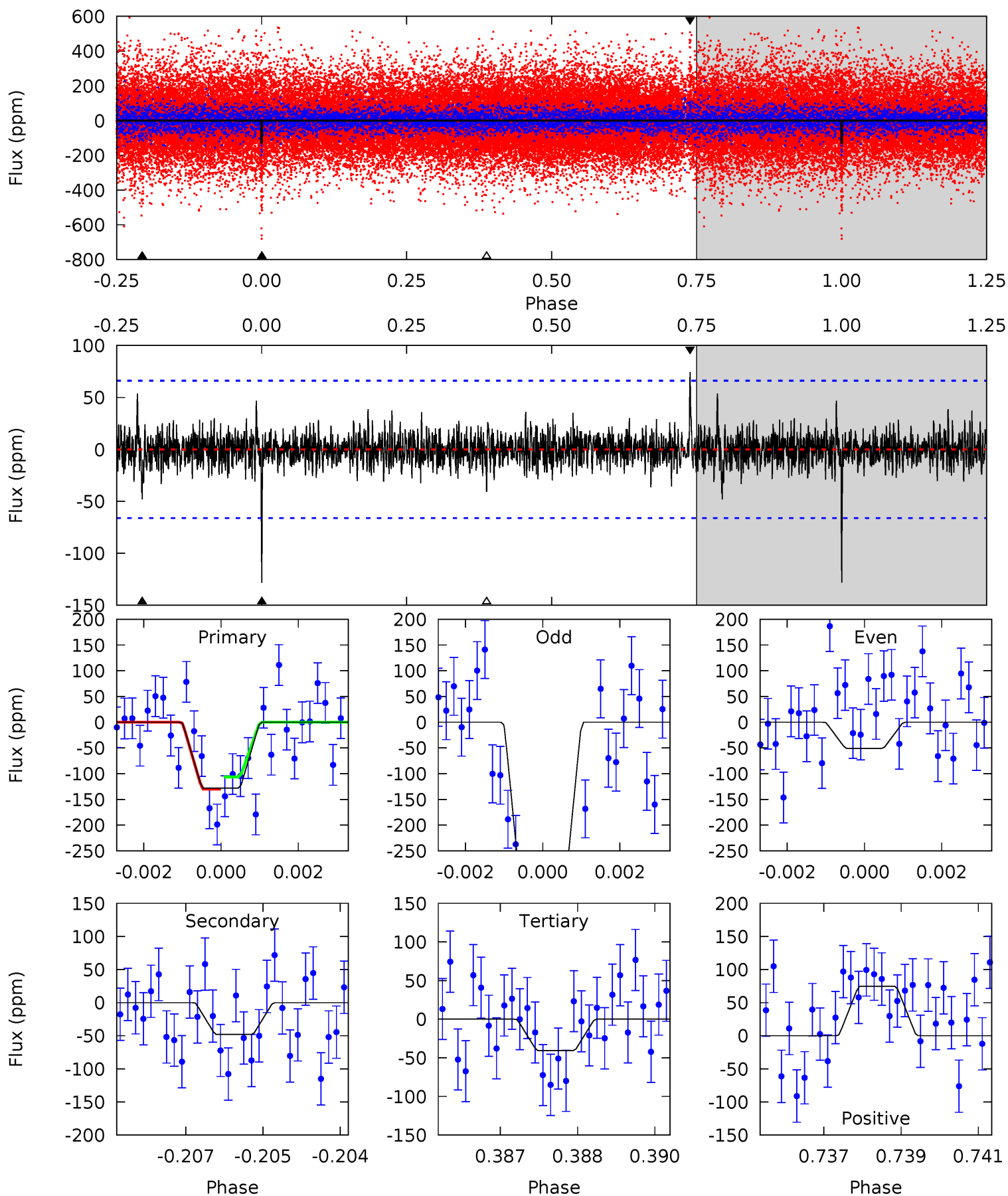
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.3	12.5	11.5	16.4	5.26	2.98	3.48	7.83	2.91	1.05	-3.86	1.52	1.22	0.46	1.84



Alt Model-Shift Uniqueness Test

011362071-05, P = 265.105007 Days, E = 82.700561 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	3.89	3.30	6.04	5.36	3.14	0.91	7.08	4.34	0.59	-2.15	13.3	0.70	0.37	0.94



Stellar Parameters For KIC 011362071

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5927^{+80}_{-80}	$4.028^{+0.201}_{-0.108}$	$-0.240^{+0.150}_{-0.150}$	$1.606^{+0.255}_{-0.383}$	$1.003^{+0.088}_{-0.088}$	$0.341^{+0.405}_{-0.110}$
	+1%/-1%	+5%/-3%	+62%/-62%	+16%/-24%	+9%/-9%	+119%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 011362071-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-170 ± 14	$2.67^{+0.41}_{-0.45}$	515^{+23}_{-37}	5479^{+355}_{-302}	8667^{+3688}_{-2267}
Alt.	-48 ± 12	$3.07^{+0.47}_{-0.49}$	512^{+24}_{-31}	4023^{+241}_{-261}	1863^{+938}_{-667}

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

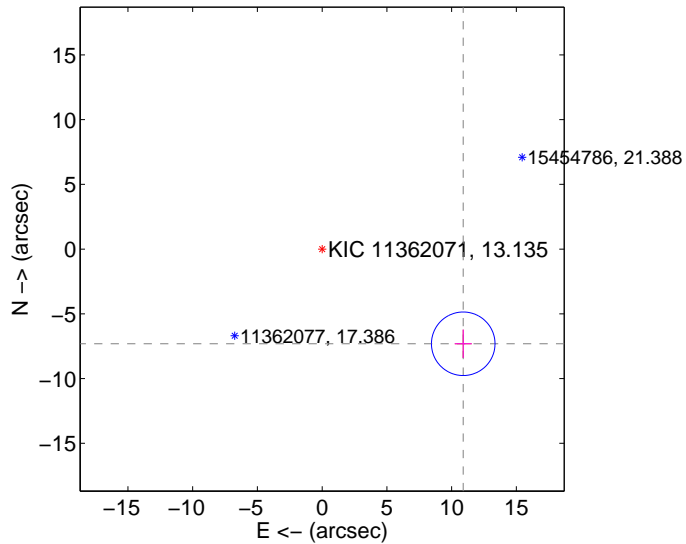
Supplemental centroid analysis for 011362071-05. Kepler magnitude: 13.13. Transit SNR 7.30

There are 0 quarters with good PRF difference image offsets

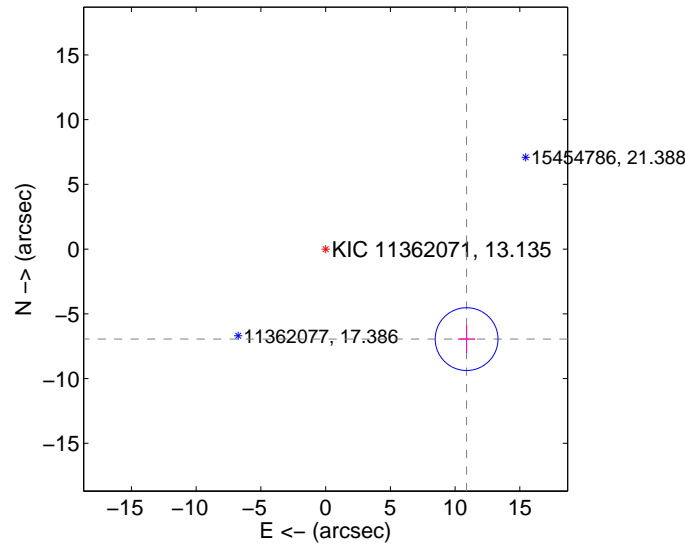
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	13.122 ± 0.818	16.04	-10.897 ± 0.657	-7.312 ± 1.094
PRF-fit source offset from KIC position	12.919 ± 0.808	15.99	-10.889 ± 0.657	-6.952 ± 1.094
photometric centroid source offset	2.93 ± 4.12	0.71	-1.77 ± 4.02	2.33 ± 4.17

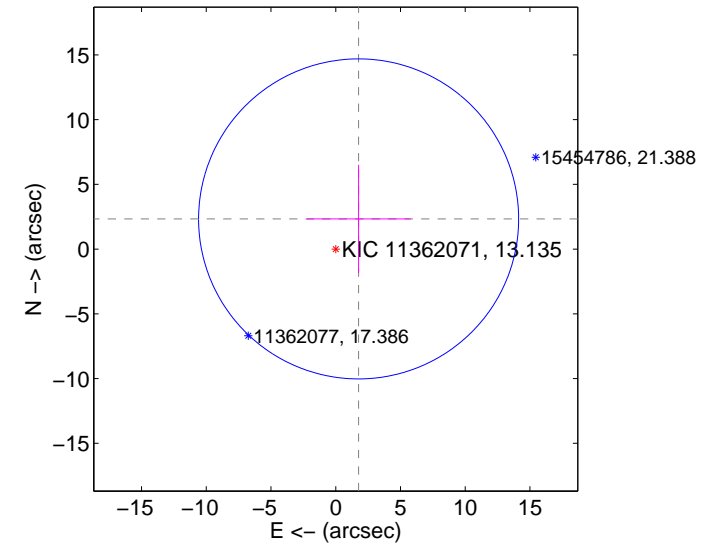
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

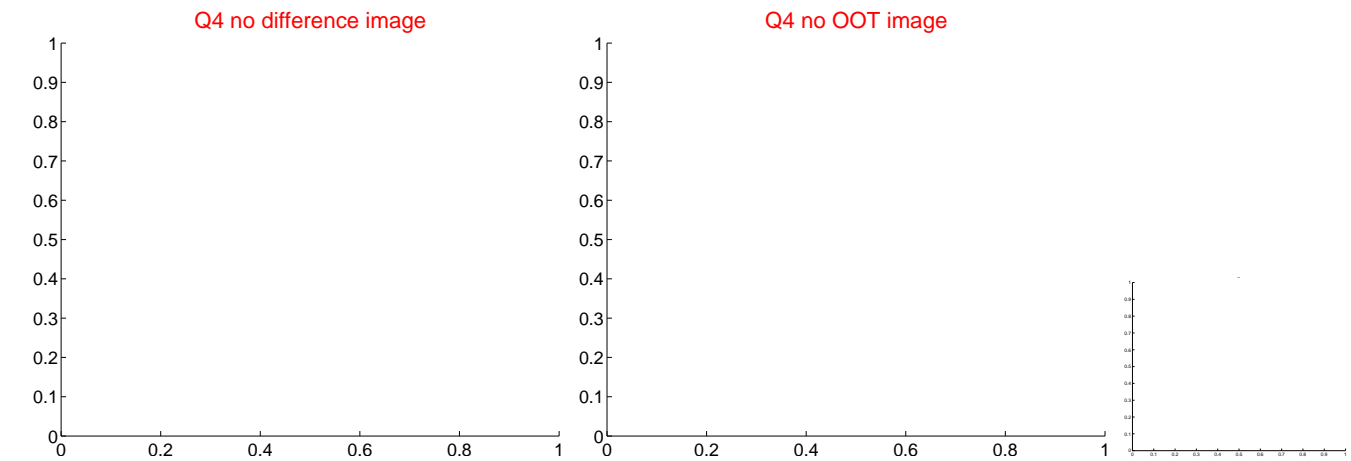
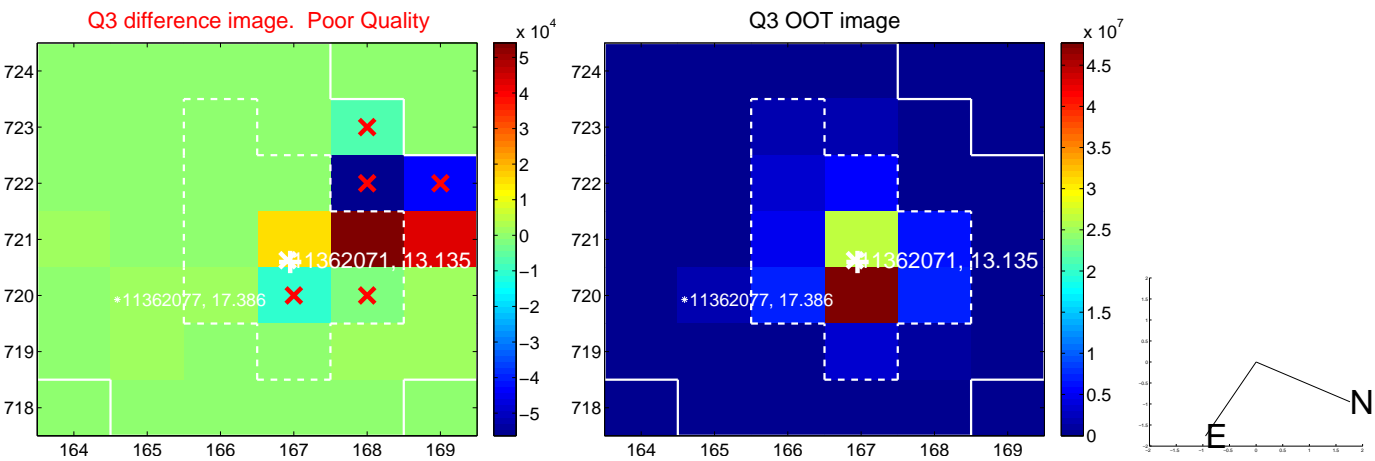
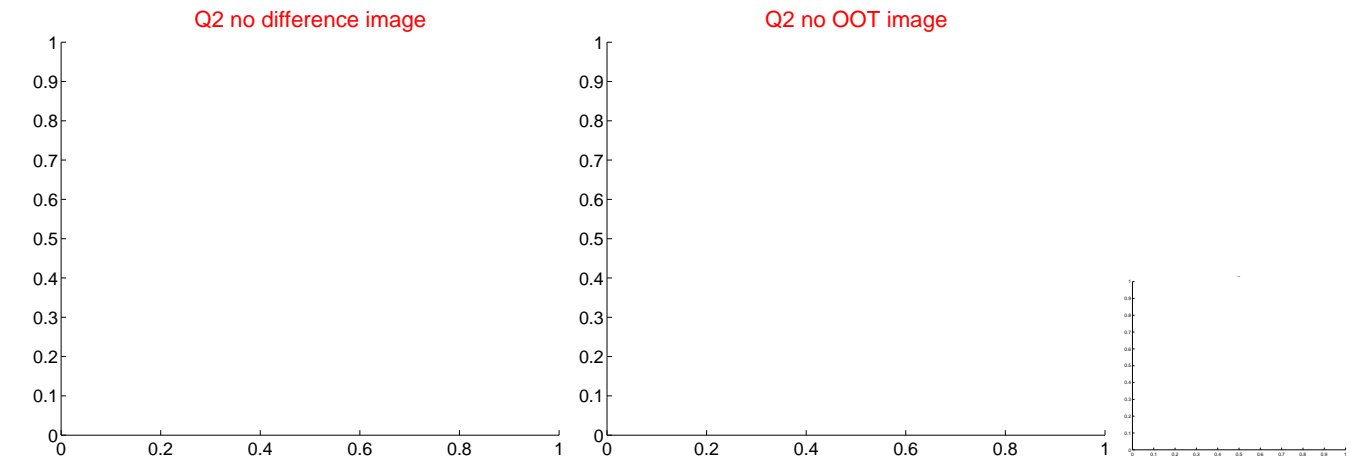
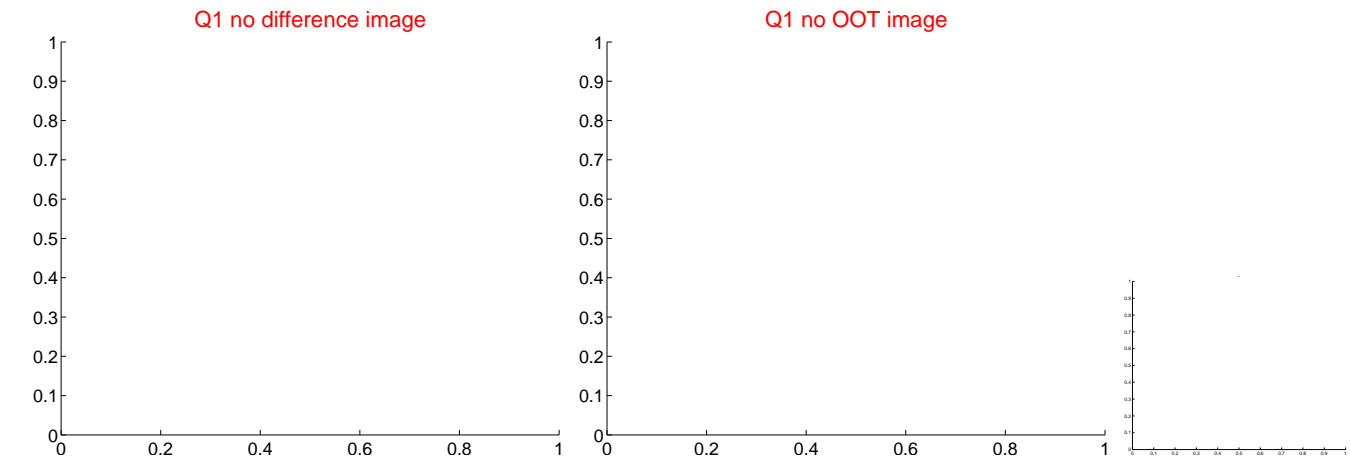


offset from photometric centroids



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 ×: 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.

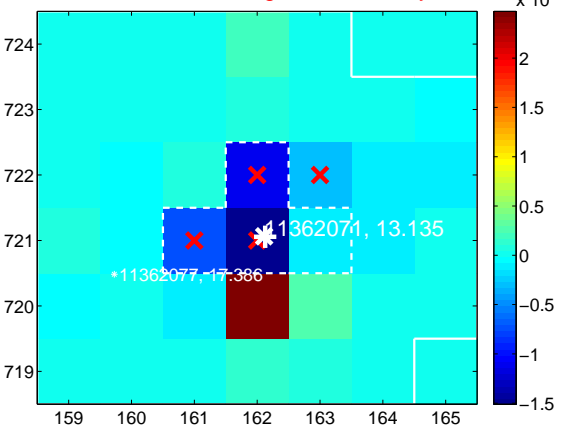
Q5 no difference image



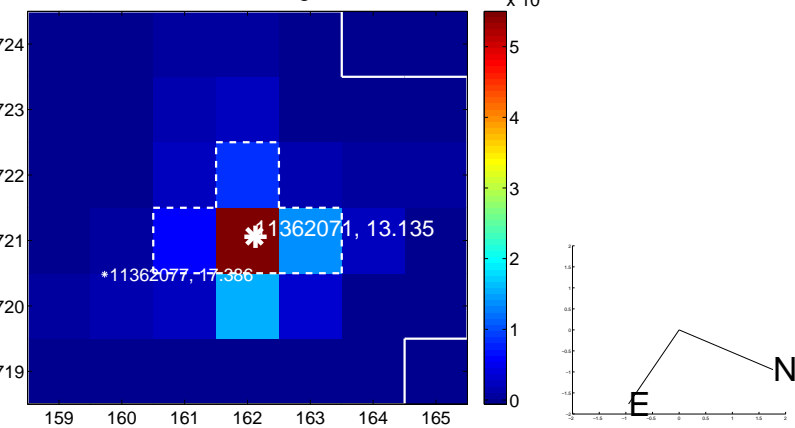
Q5 no OOT image



Q6 difference image. Poor Quality



Q6 OOT image



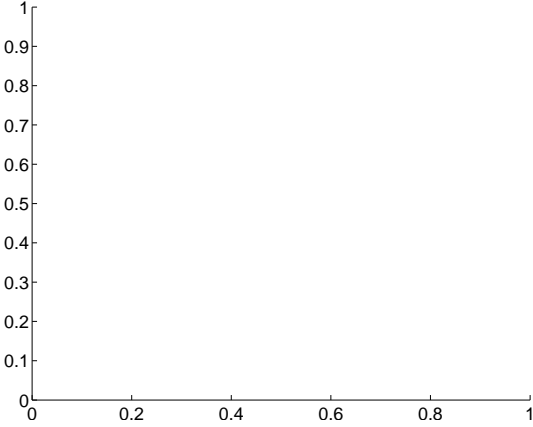
Q7 no difference image



Q7 no OOT image



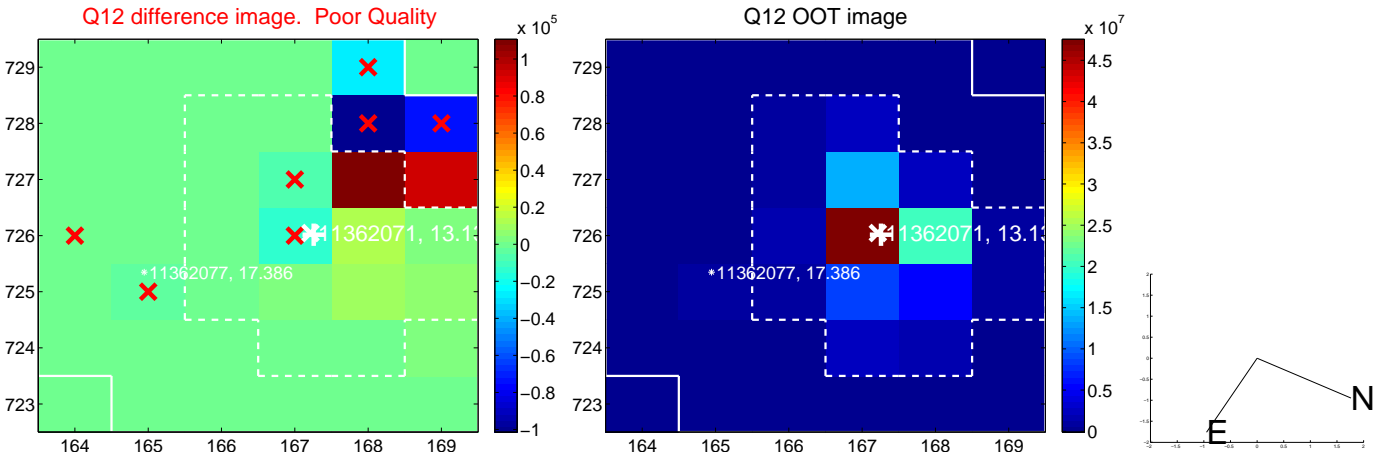
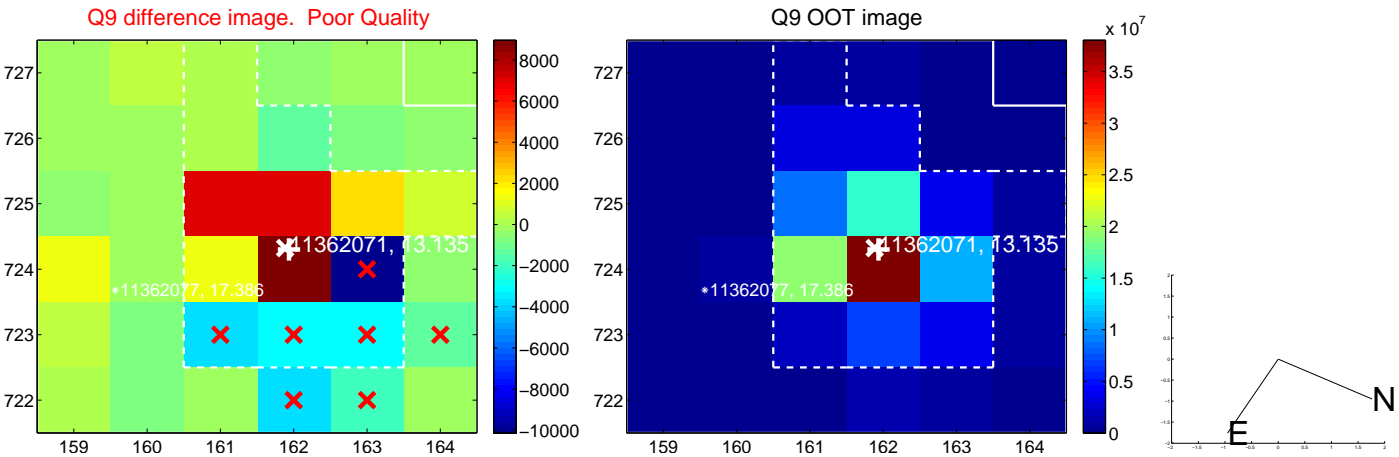
Q8 no difference image



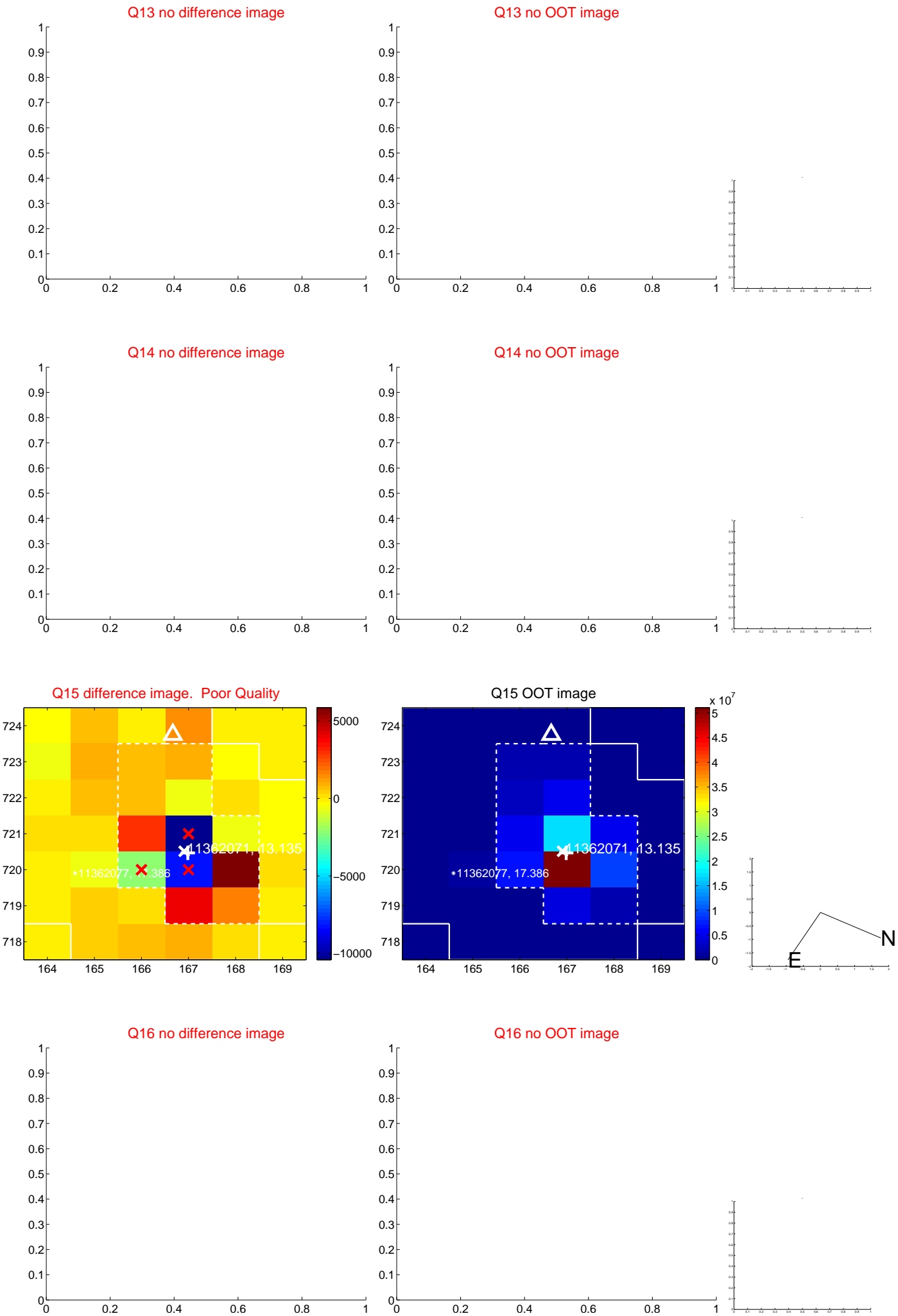
Q8 no OOT image



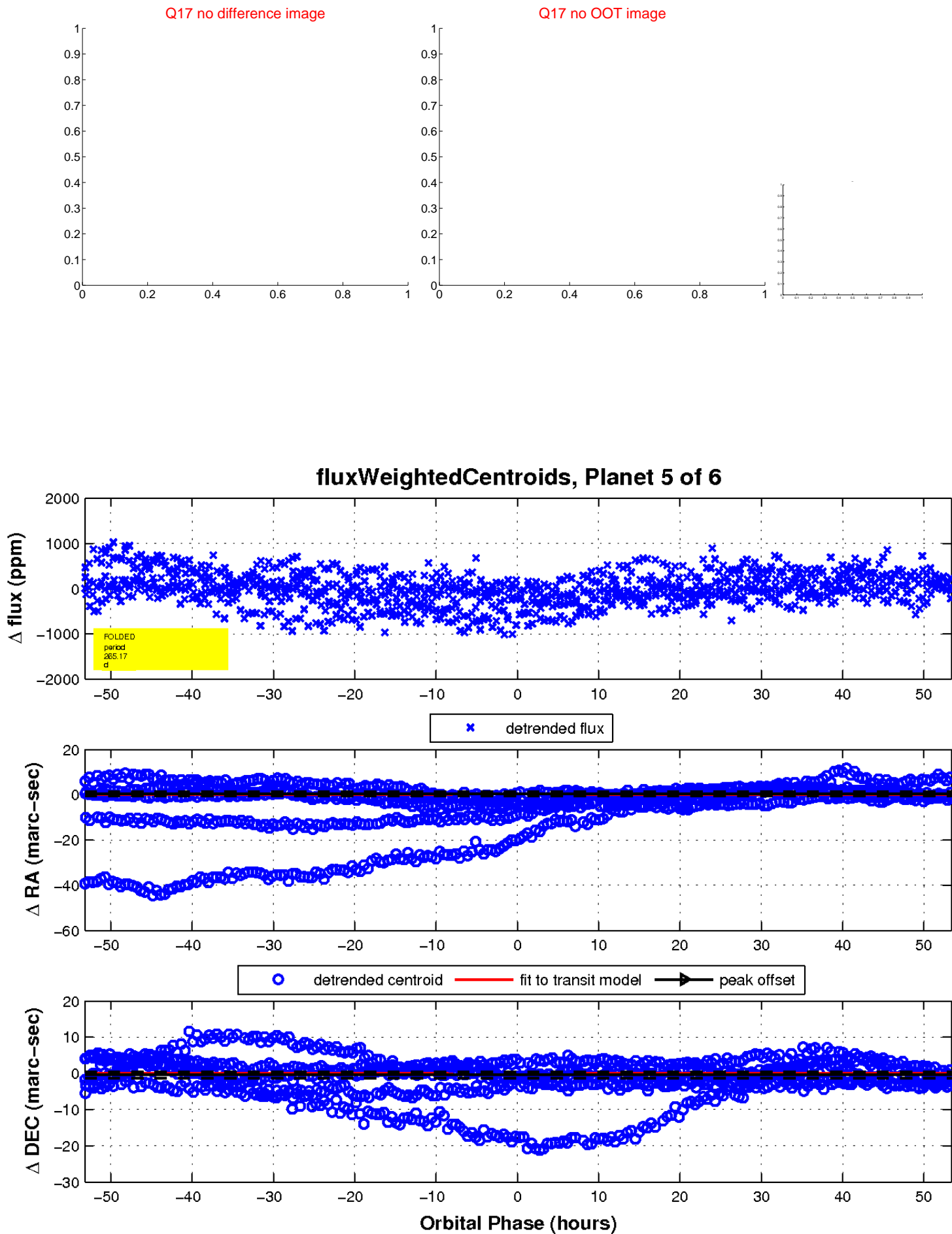
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

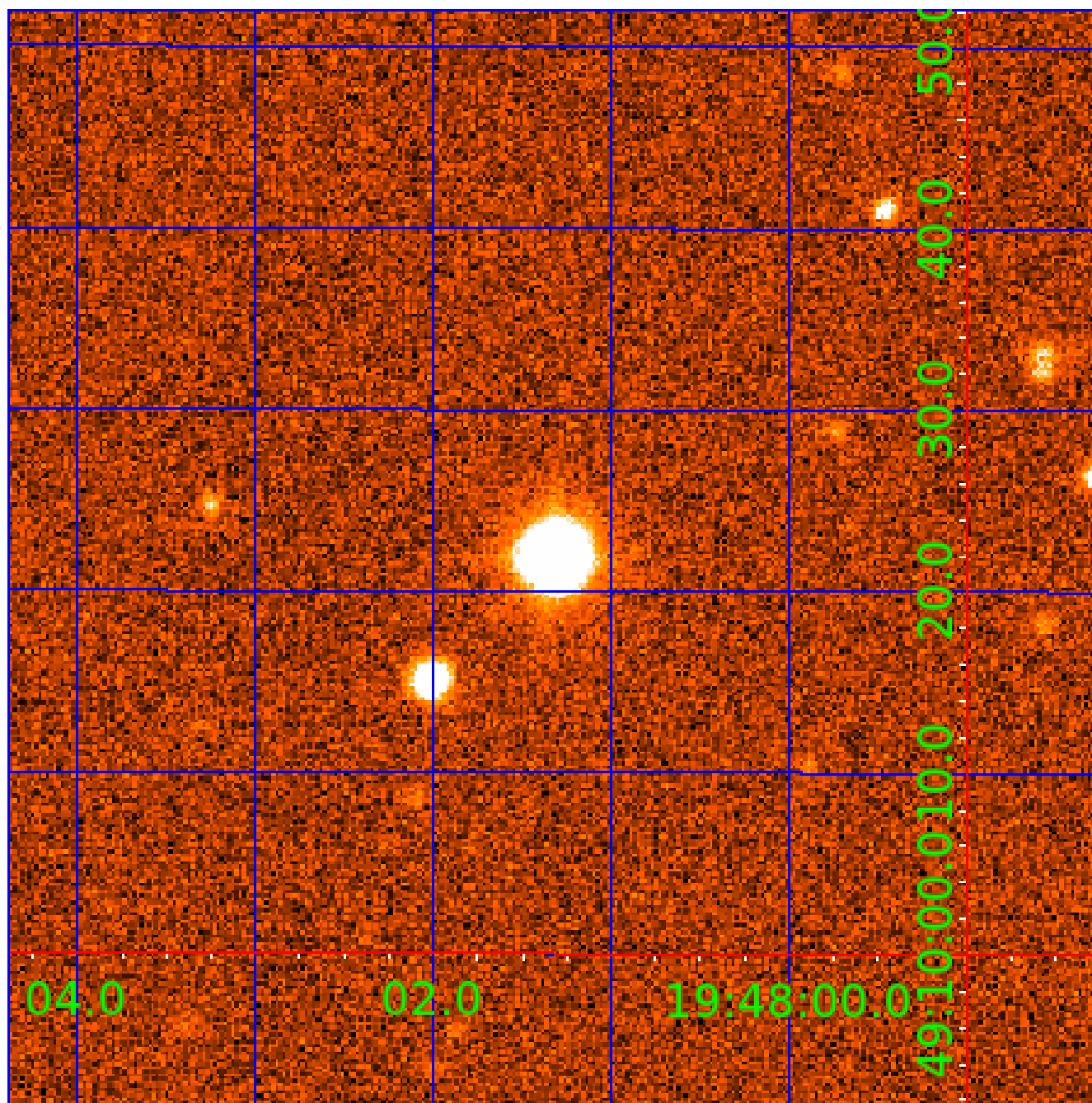


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011362071

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})
011362071-01	OBS	No	390.164116	152.322836	167.3	39.609	27.9	6.3	1.61	5927	2.74	2.60
011362071-03	OBS	No	640.047358	173.931863	1041.6	67.586	14.1	19.7	1.61	5927	9.96	1.35
011362071-04	OBS	No	390.812297	373.639894	547.5	21.545	9.3	12.6	1.61	5927	7.37	2.60
011362071-05	OBS	No	265.167649	347.599011	208.6	17.832	8.4	7.3	1.61	5927	2.72	4.36
011362071-06	OBS	No	384.353756	251.553191	481.6	31.407	8.2	12.3	1.61	5927	4.10	2.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011362071-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011362071-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011362071-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011362071-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
011362071-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_TER_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.

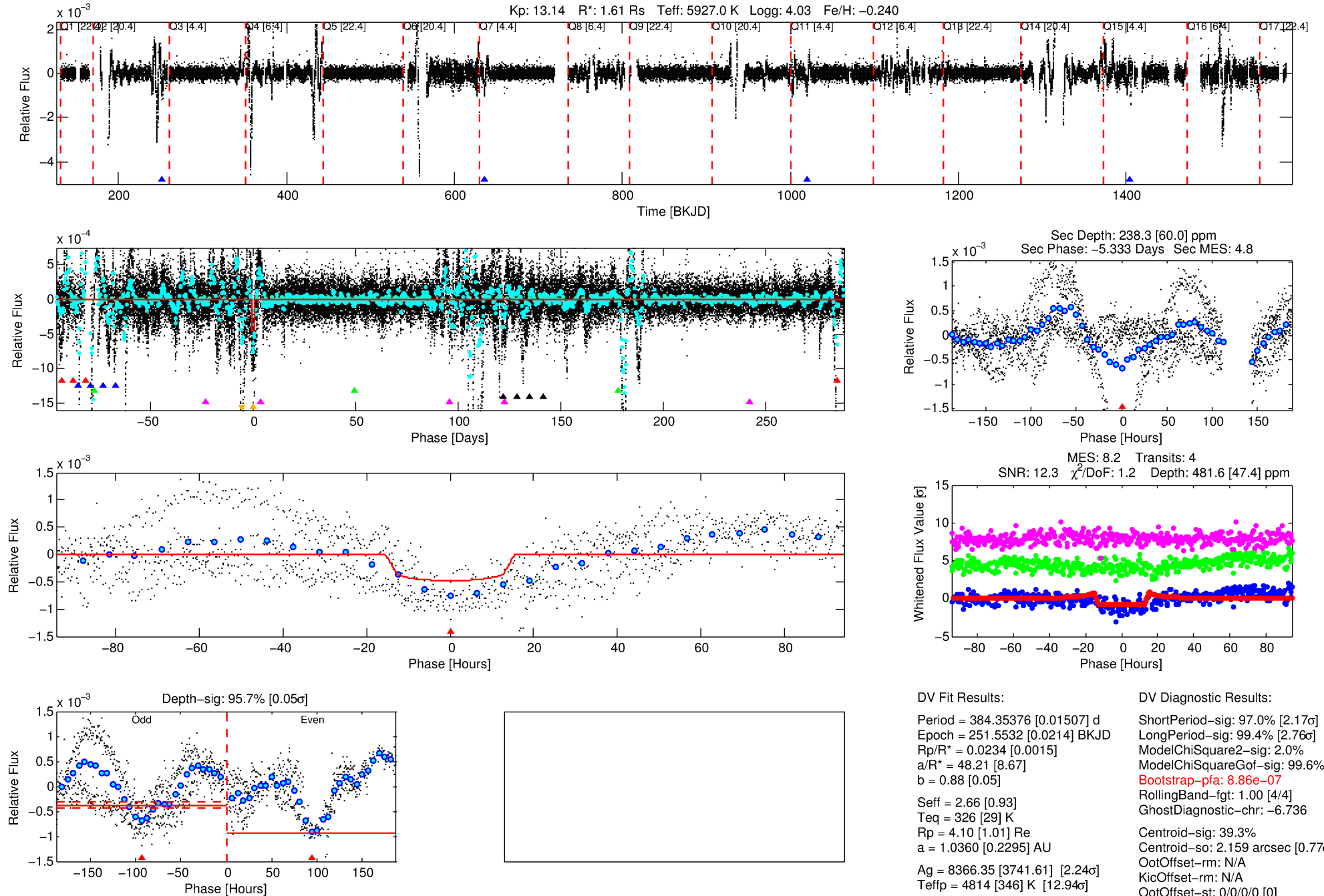
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011362071-06

No Significant Match Found

DV One-Page Summary

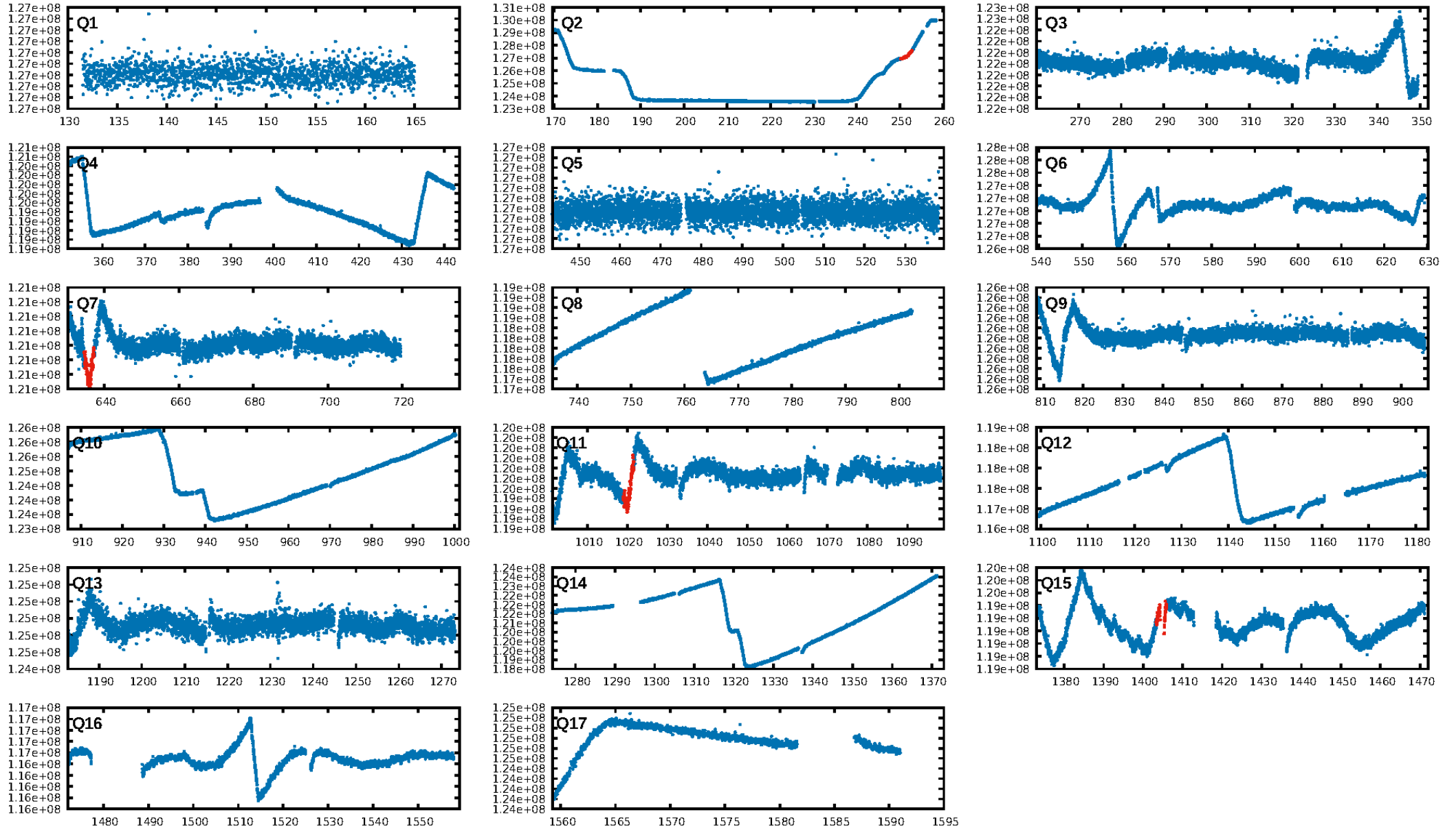
KIC: 11362071 Candidate: 6 of 6 Period: 384.354 d



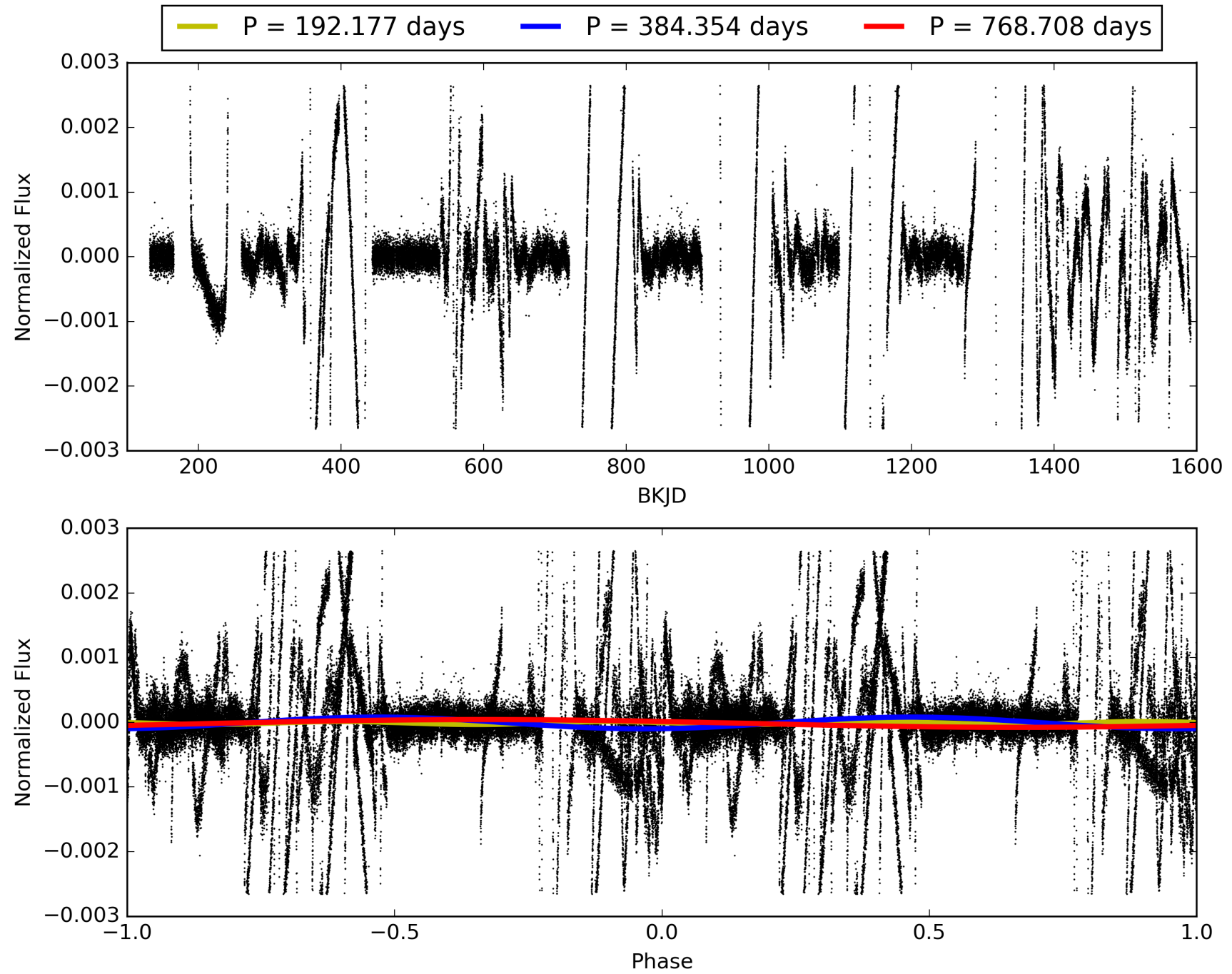
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:59:17 Z

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

TCE 011362071-06, PDC Light Curves

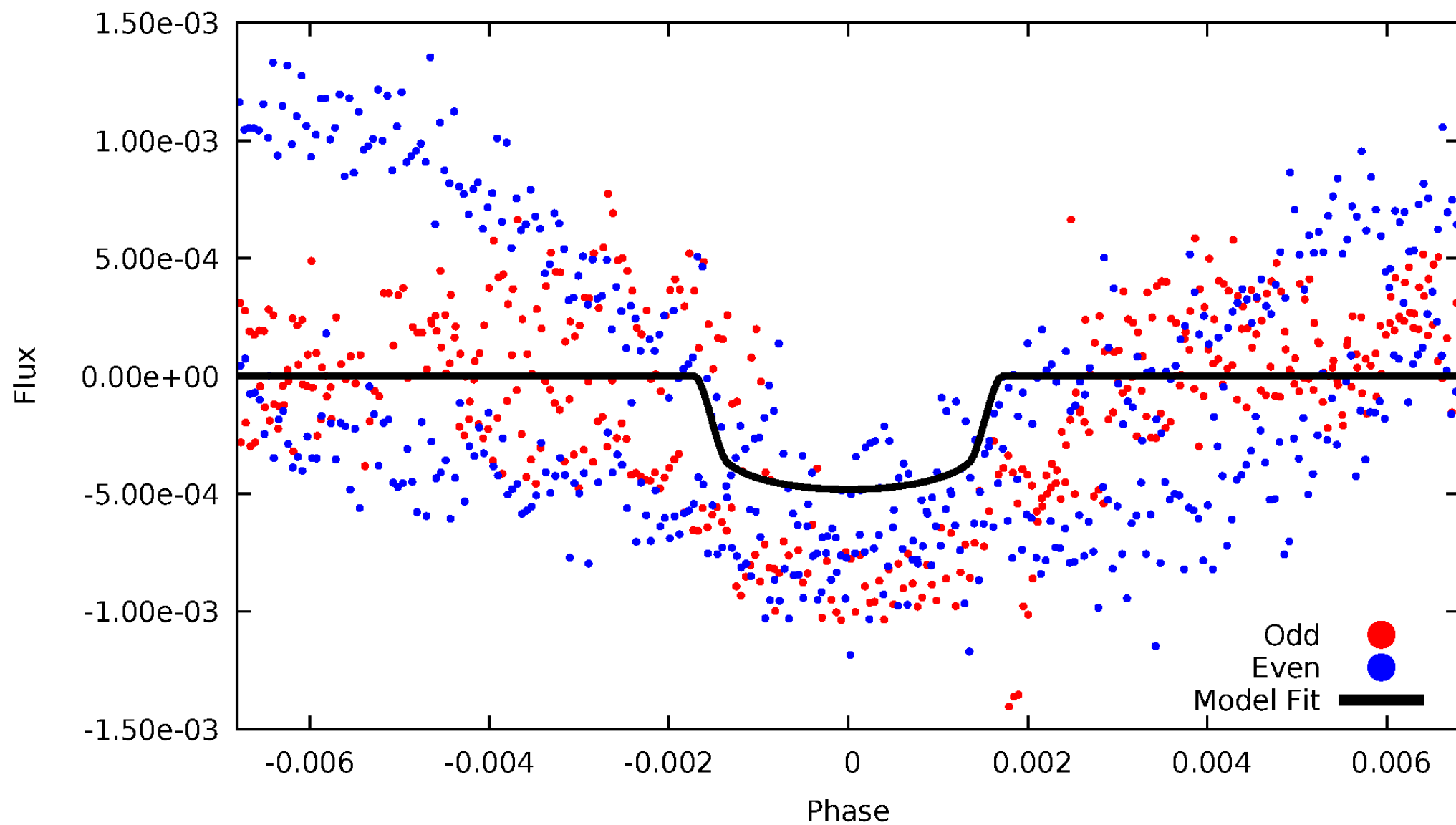


TCE 011362071-06



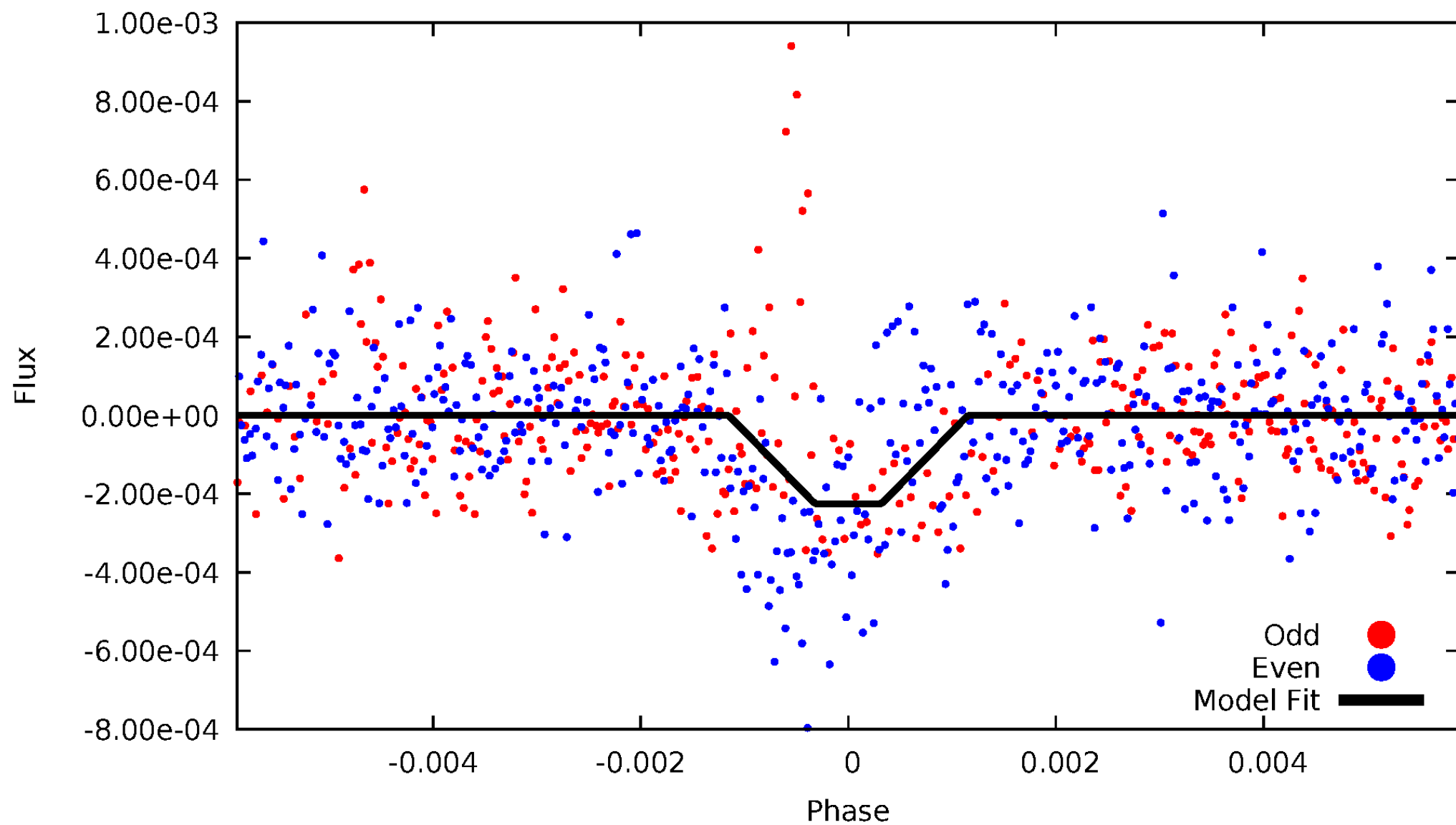
DV Odd/Even

TCE 011362071-06



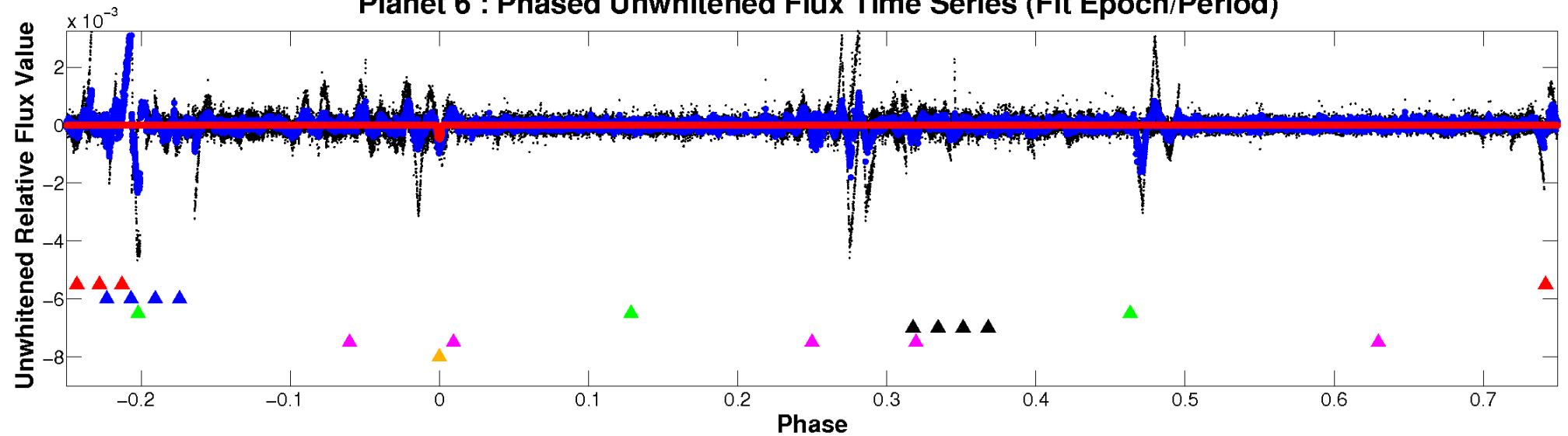
ALT Odd/Even

TCE 011362071-06

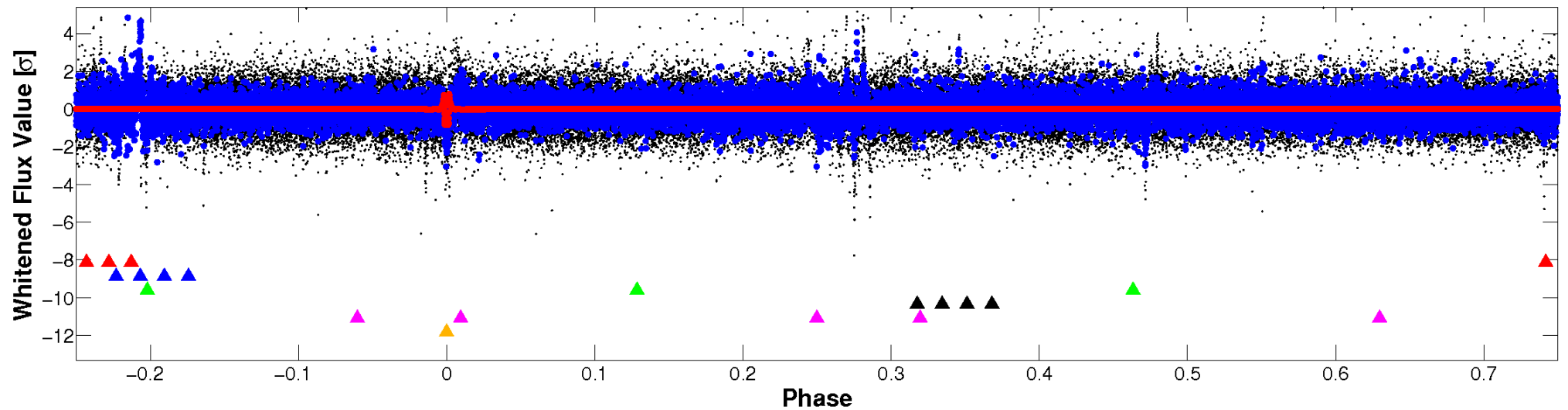


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

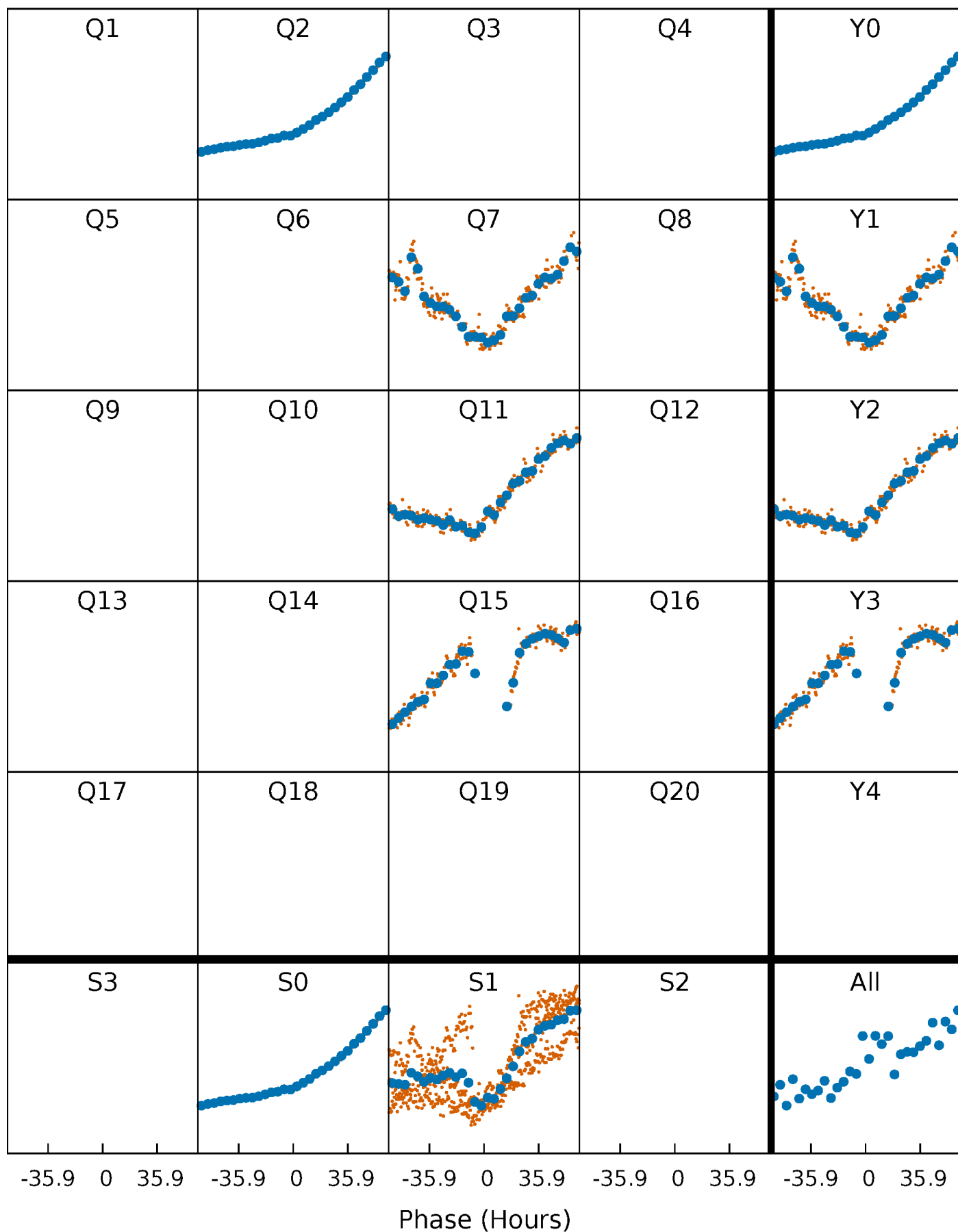


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



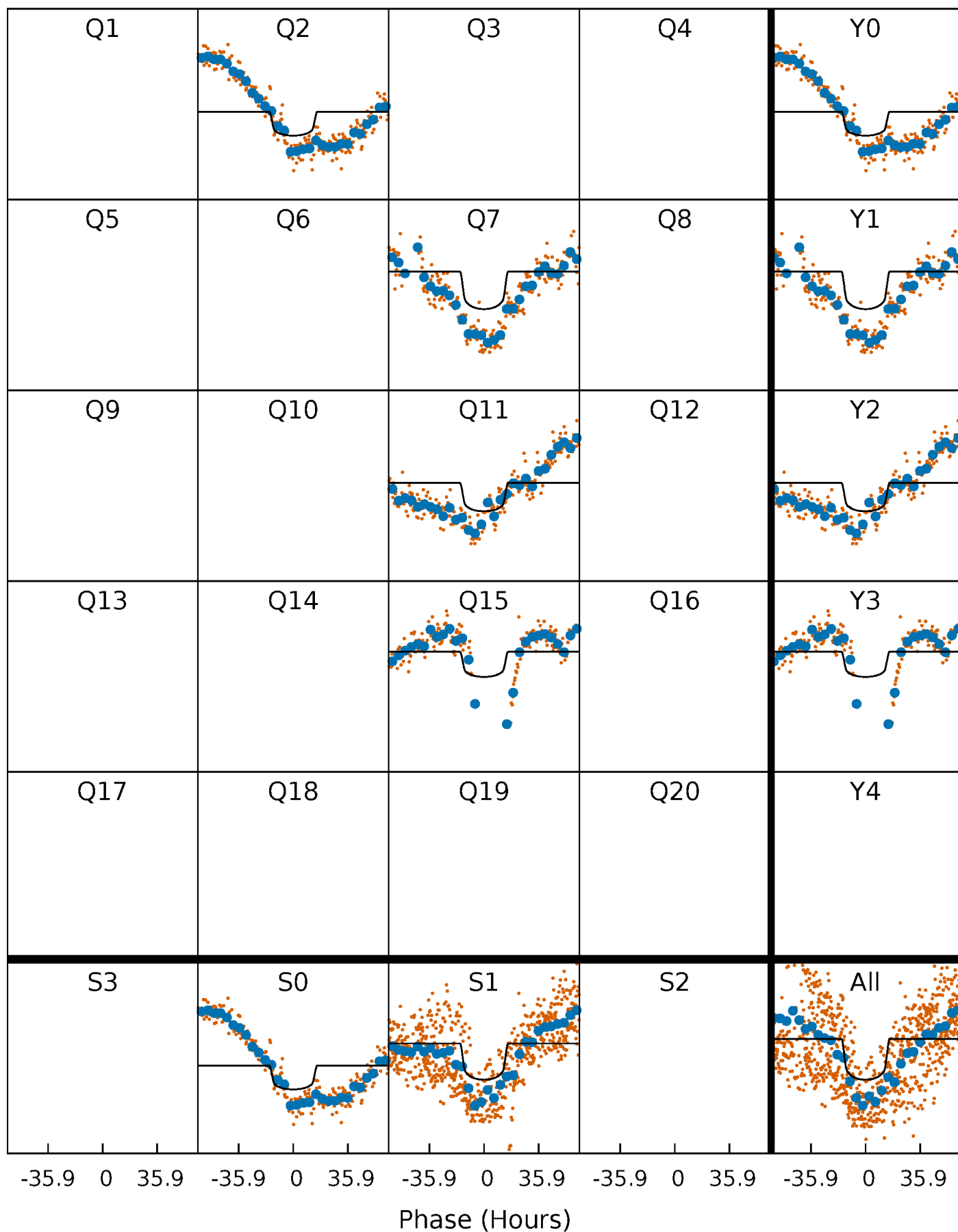
PDC Quarter-Phased Transit Curves

TCE 011362071-06 P=384.353756 Days $T_0=251.553191$ (BKJD)



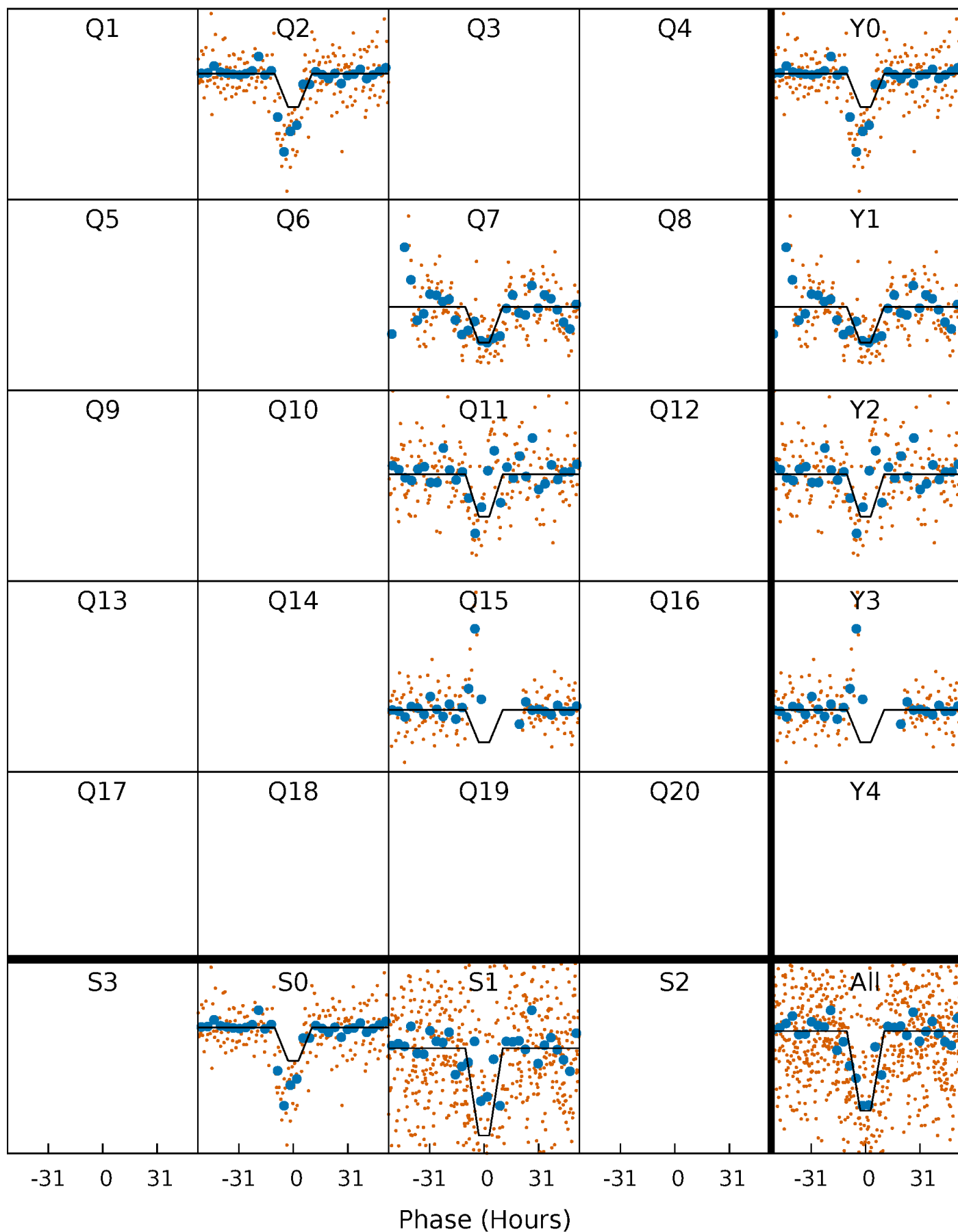
DV Quarter-Phased Transit Curves

TCE 011362071-06 P=384.353756 Days $T_0=251.553191$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

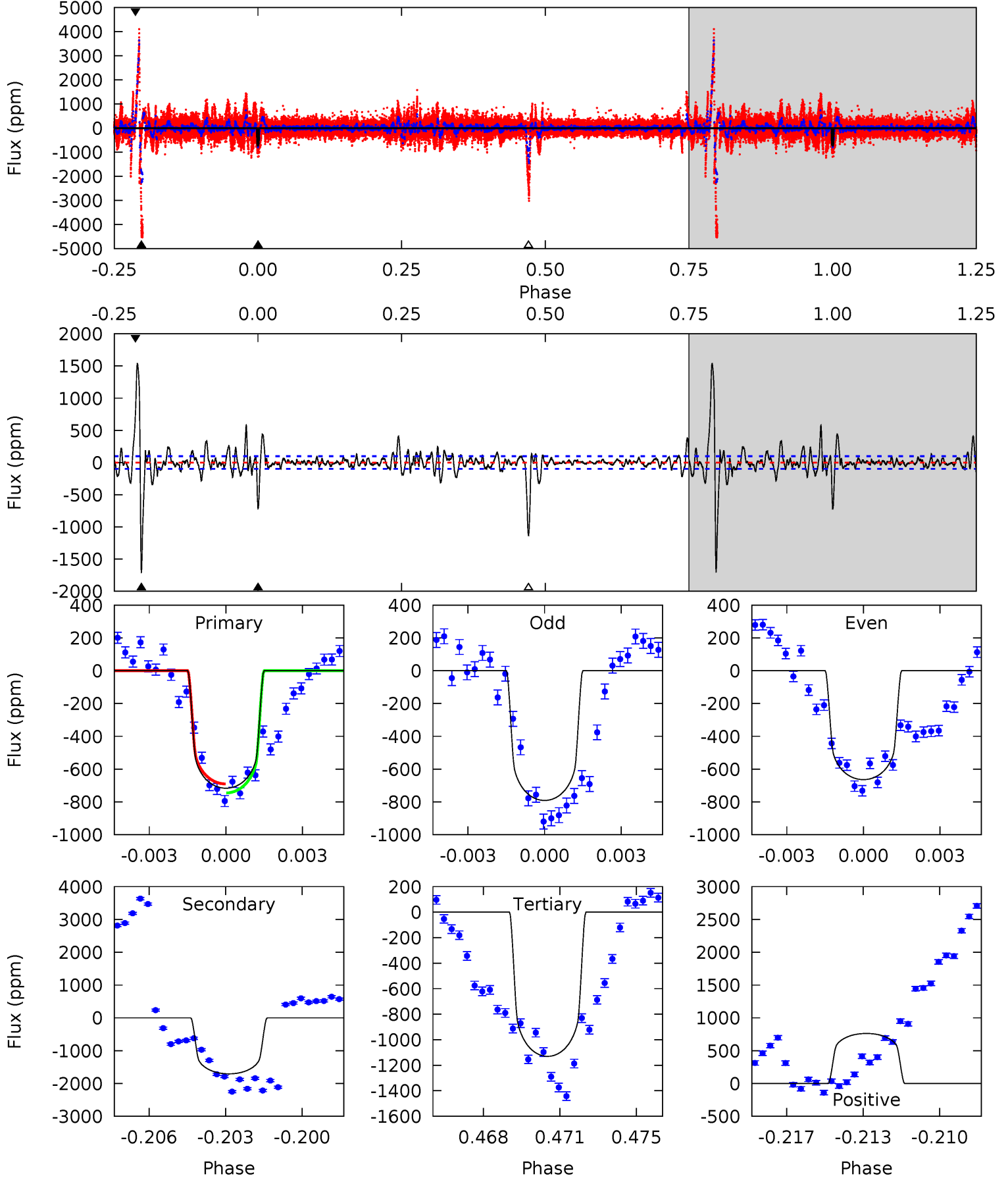
TCE 011362071-06 P=384.239473 Days $T_0=251.712117$ (BKJD)



DV Model-Shift Uniqueness Test

011362071-06, P = 384.353756 Days, E = 251.553191 Days

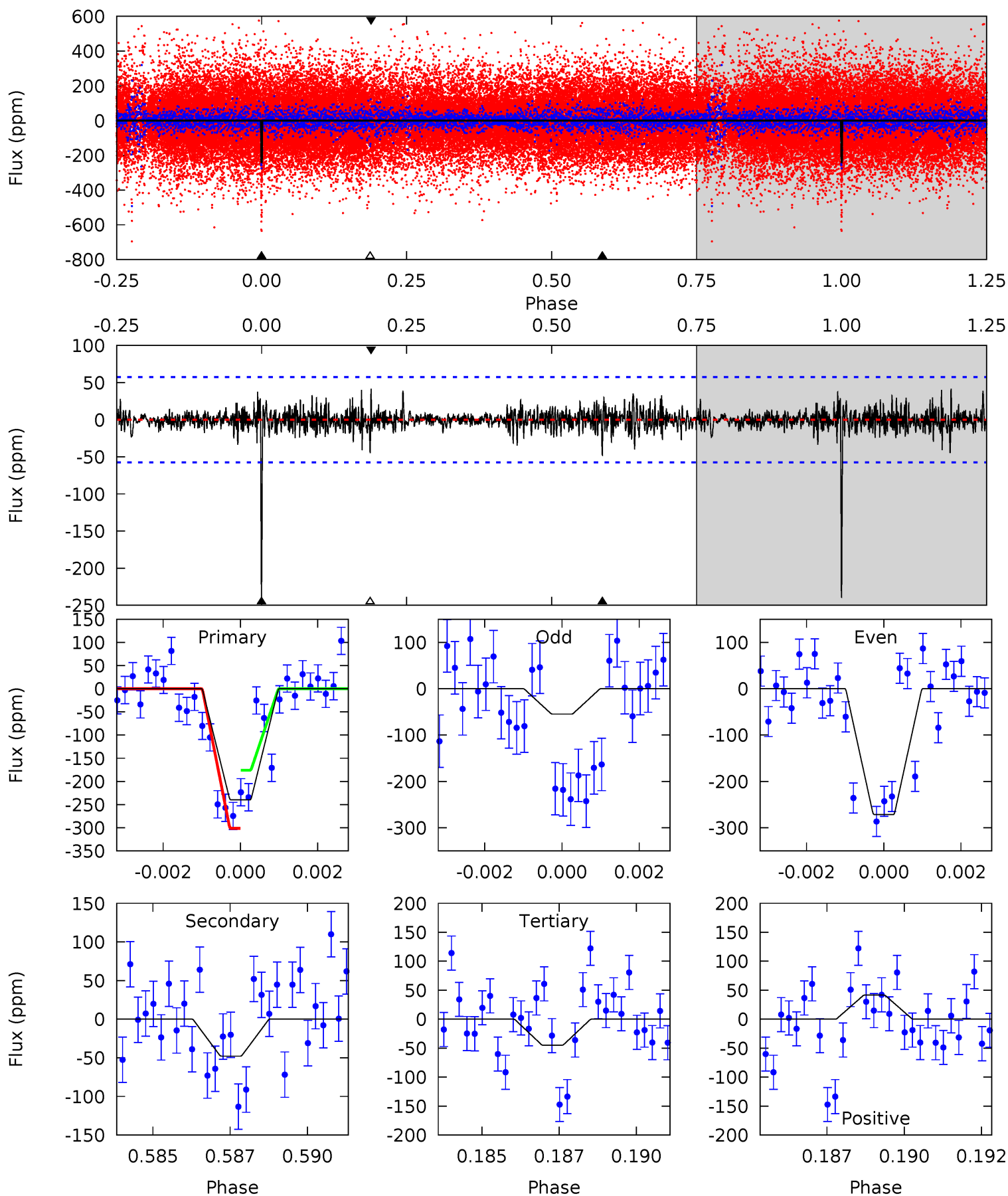
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.2	91.0	60.3	40.7	5.23	2.93	7.01	-22.1	-2.45	30.7	50.4	2.48	0.90	0.47	1.53



Alt Model-Shift Uniqueness Test

011362071-06, P = 384.239473 Days, E = 251.712117 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.1	4.41	4.13	3.83	5.30	3.04	0.87	18.0	18.3	0.28	0.58	9.87	0.17	0.15	5.80



Stellar Parameters For KIC 011362071

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5927^{+80}_{-80}	$4.028^{+0.201}_{-0.108}$	$-0.240^{+0.150}_{-0.150}$	$1.606^{+0.255}_{-0.383}$	$1.003^{+0.088}_{-0.088}$	$0.341^{+0.405}_{-0.110}$
	+1%/-1%	+5%/-3%	+62%/-62%	+16%/-24%	+9%/-9%	+119%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 011362071-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1706 ± 19	$4.03^{+0.52}_{-0.52}$	454^{+21}_{-30}	8102^{+401}_{-319}	62307^{+18655}_{-13259}
Alt.	-48 ± 11	$2.61^{+0.37}_{-0.41}$	452^{+22}_{-26}	4258^{+247}_{-223}	4233^{+1889}_{-1320}

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

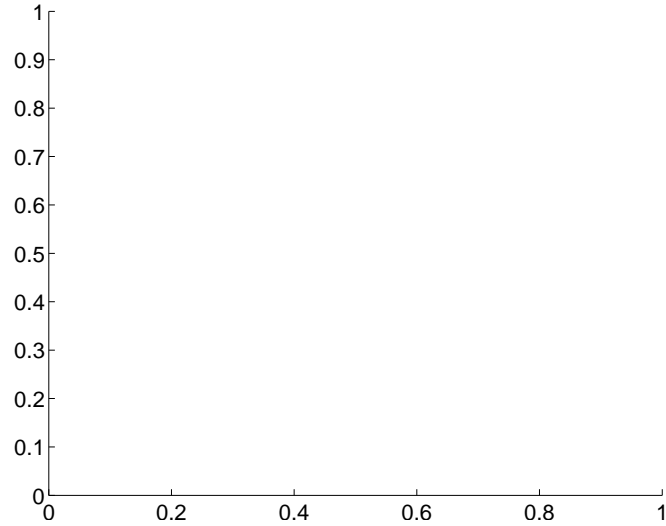
Supplemental centroid analysis for 011362071-06. Kepler magnitude: 13.13. Transit SNR 12.29

There are 0 quarters with good PRF difference image offsets

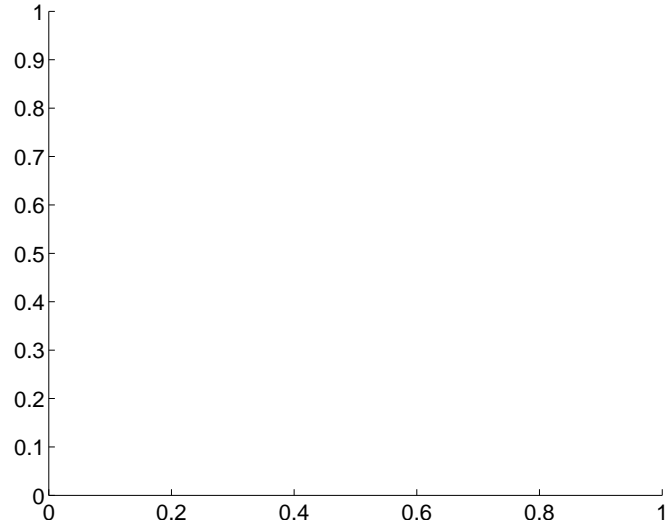
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	2.16 ± 2.81	0.77	-1.58 ± 2.97	-1.47 ± 2.62

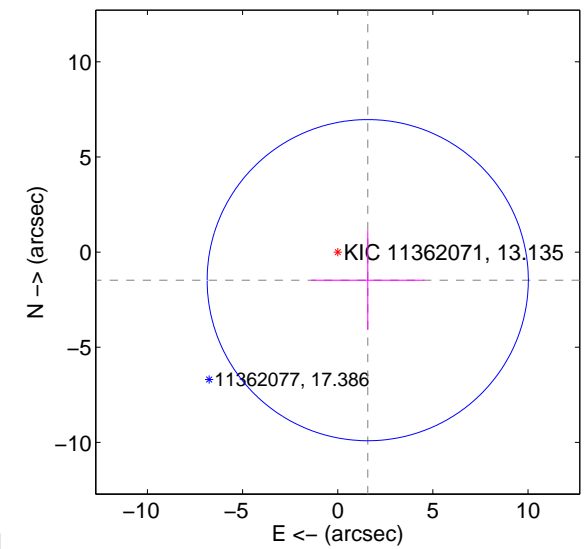
There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

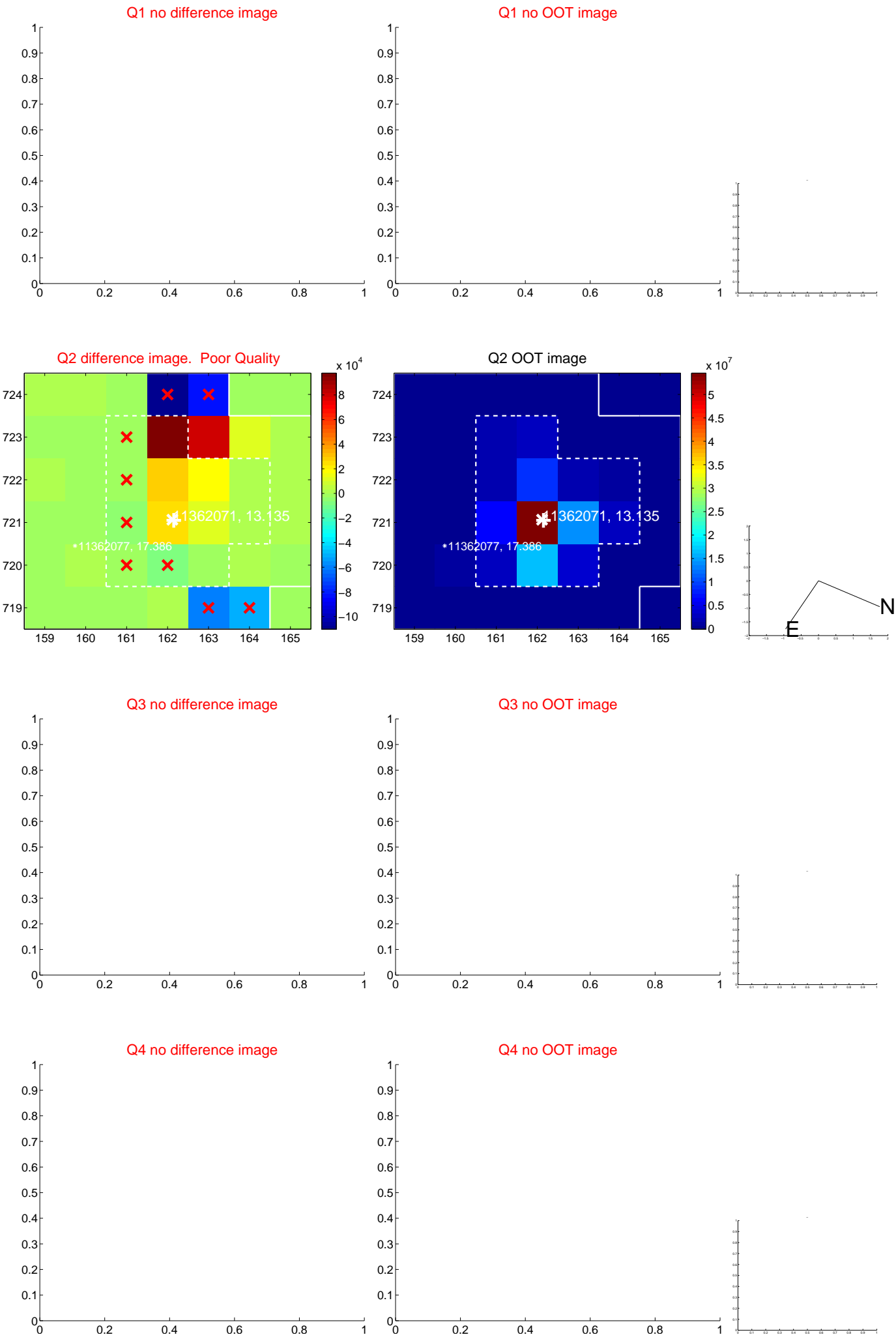


offset from photometric centroids



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

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



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



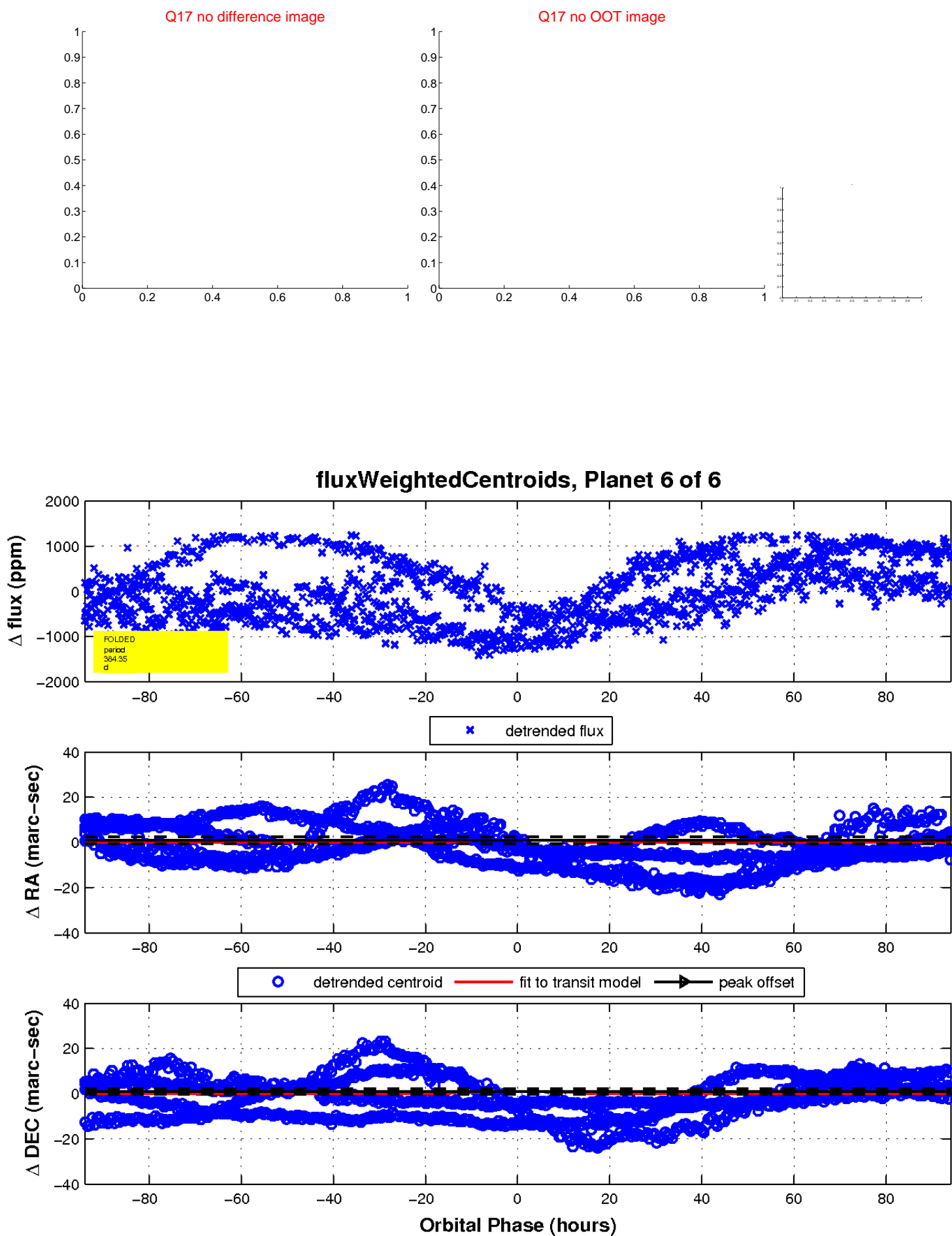
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

