

KIC 011075456

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})
011075456-01	OBS	No	373.934148	304.024730	205.1	15.000	37.3	-1.0	1.43	6514	2.06	2.83
011075456-02	OBS	No	370.628933	262.943077	361.9	4.684	35.2	19.2	1.43	6514	3.93	2.86
011075456-03	OBS	No	384.198606	296.791249	126.9	15.000	25.9	-1.0	1.43	6514	1.62	2.73
011075456-04	OBS	No	374.001138	260.171598	170.3	3.996	18.0	13.1	1.43	6514	2.24	2.83
011075456-05	OBS	No	373.109994	306.837750	133.3	15.000	26.7	-1.0	1.43	6514	1.66	2.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011075456-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
011075456-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
011075456-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—CENT_SATURATED
011075456-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED—HALO_GHOST
011075456-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

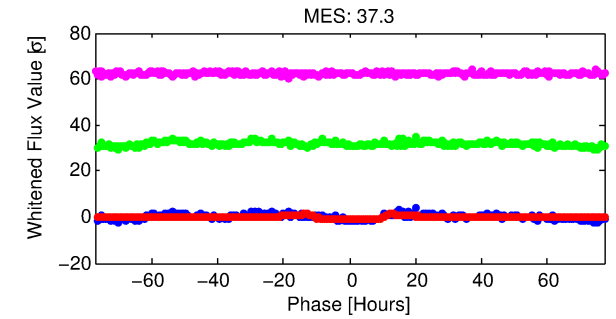
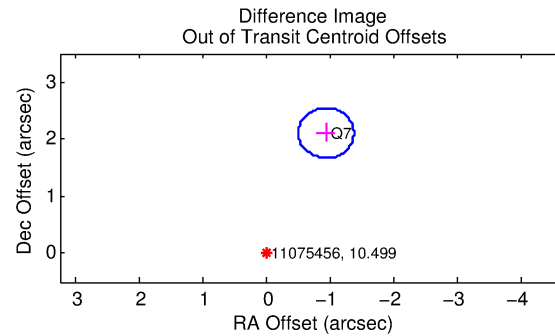
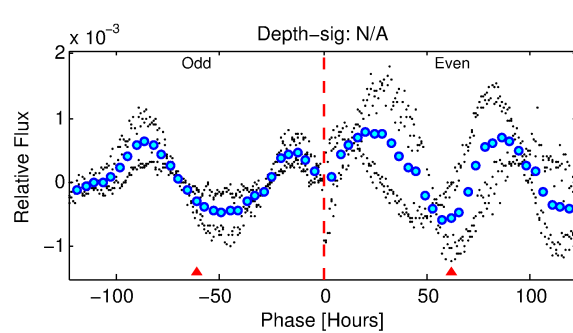
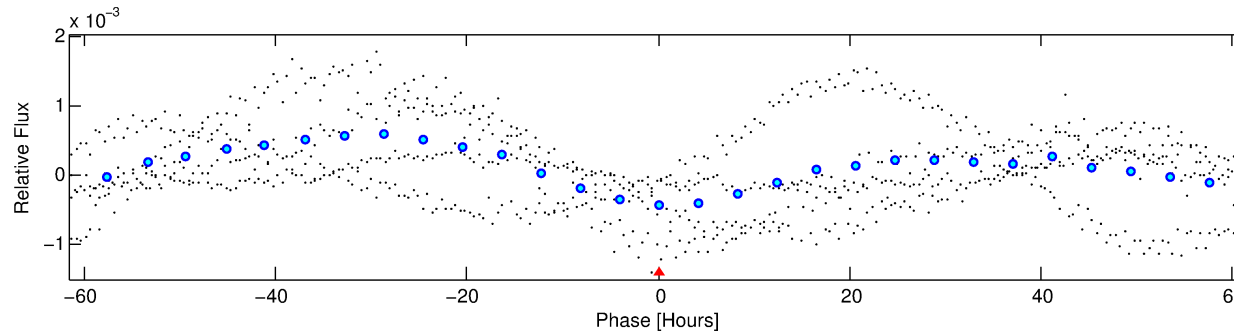
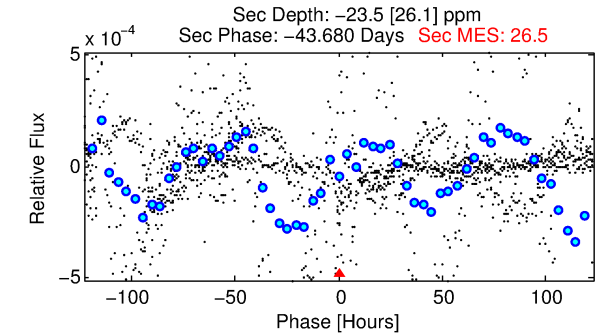
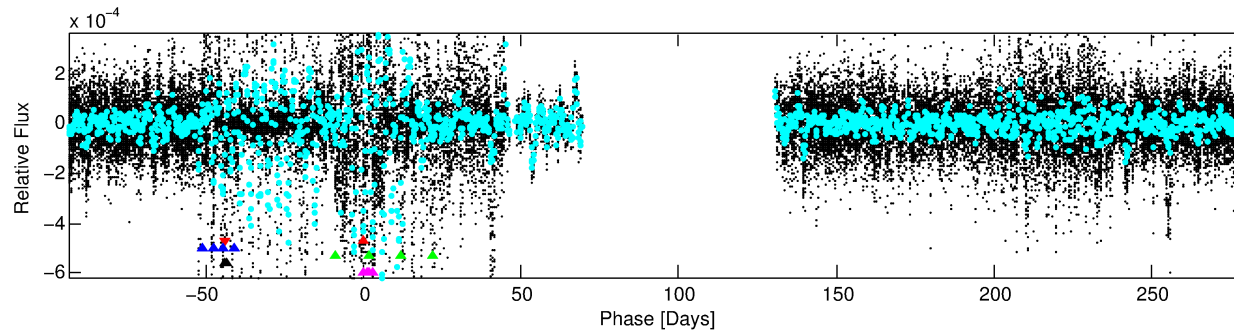
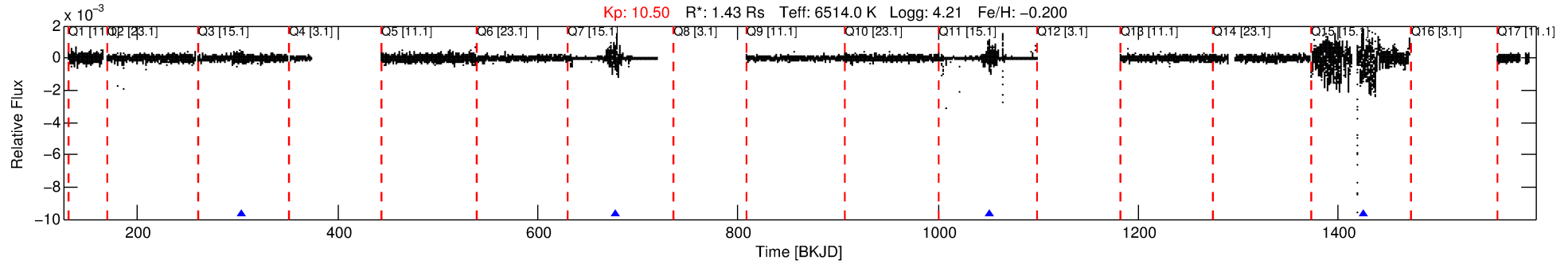
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011075456-01

No Significant Match Found

DV One-Page Summary

KIC: 11075456 Candidate: 1 of 5 Period: 373.934 d



TPS TCE Results:

Period = 373.93415 d
Epoch = 304.0247 BKJD

DV fit results are unavailable

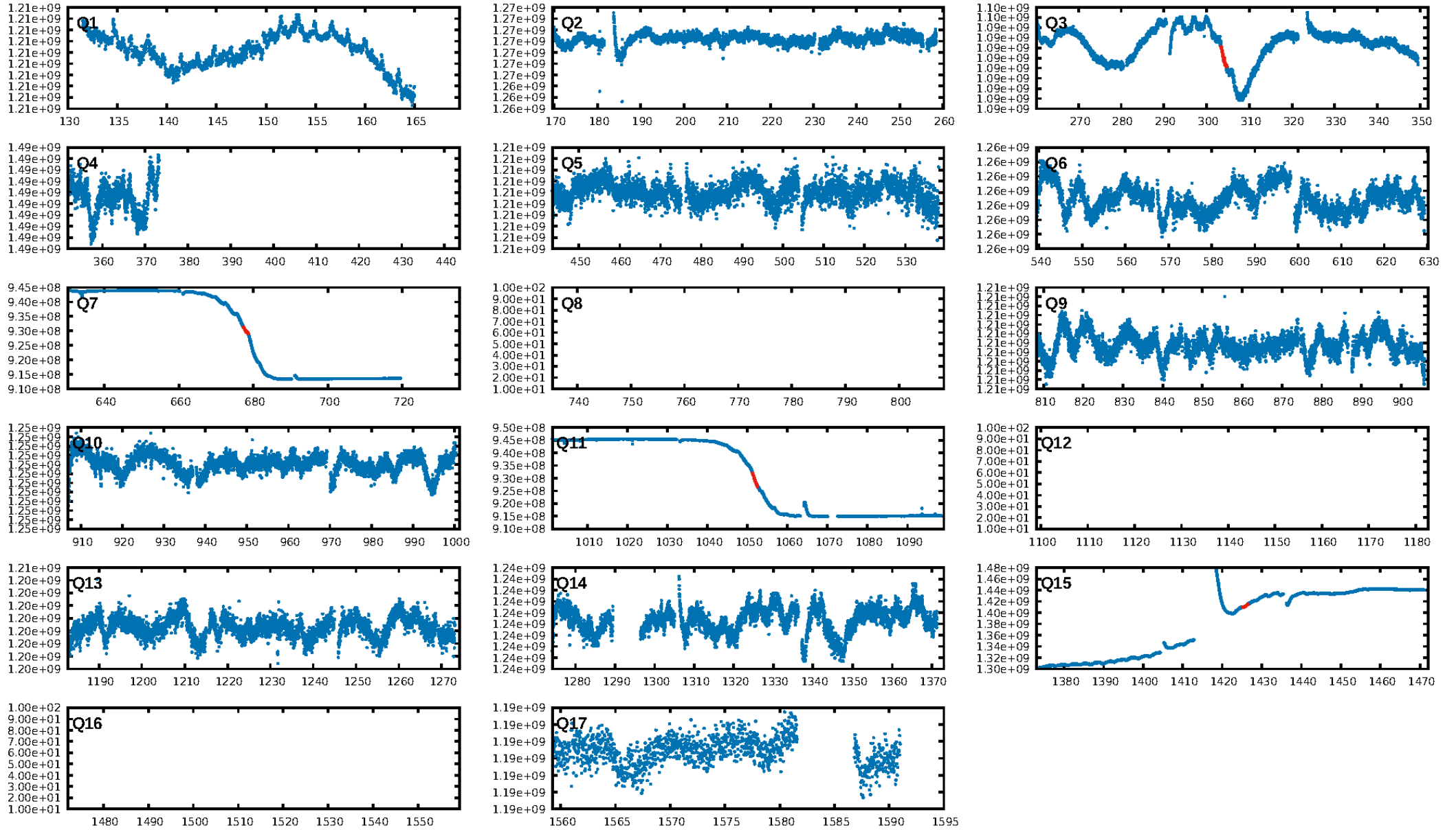
DV Diagnostic Results:

ShortPeriod-sig: 64.9% [0.93σ]
LongPeriod-sig: 8.2% [0.10σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.9742
Centroid-sig: 50.3%
Centroid-so: 2.880 arcsec [0.84σ]
OotOffset-rm: 2.306 arcsec [15.83σ]
KicOffset-rm: 2.016 arcsec [13.61σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 0.25 [1/4]

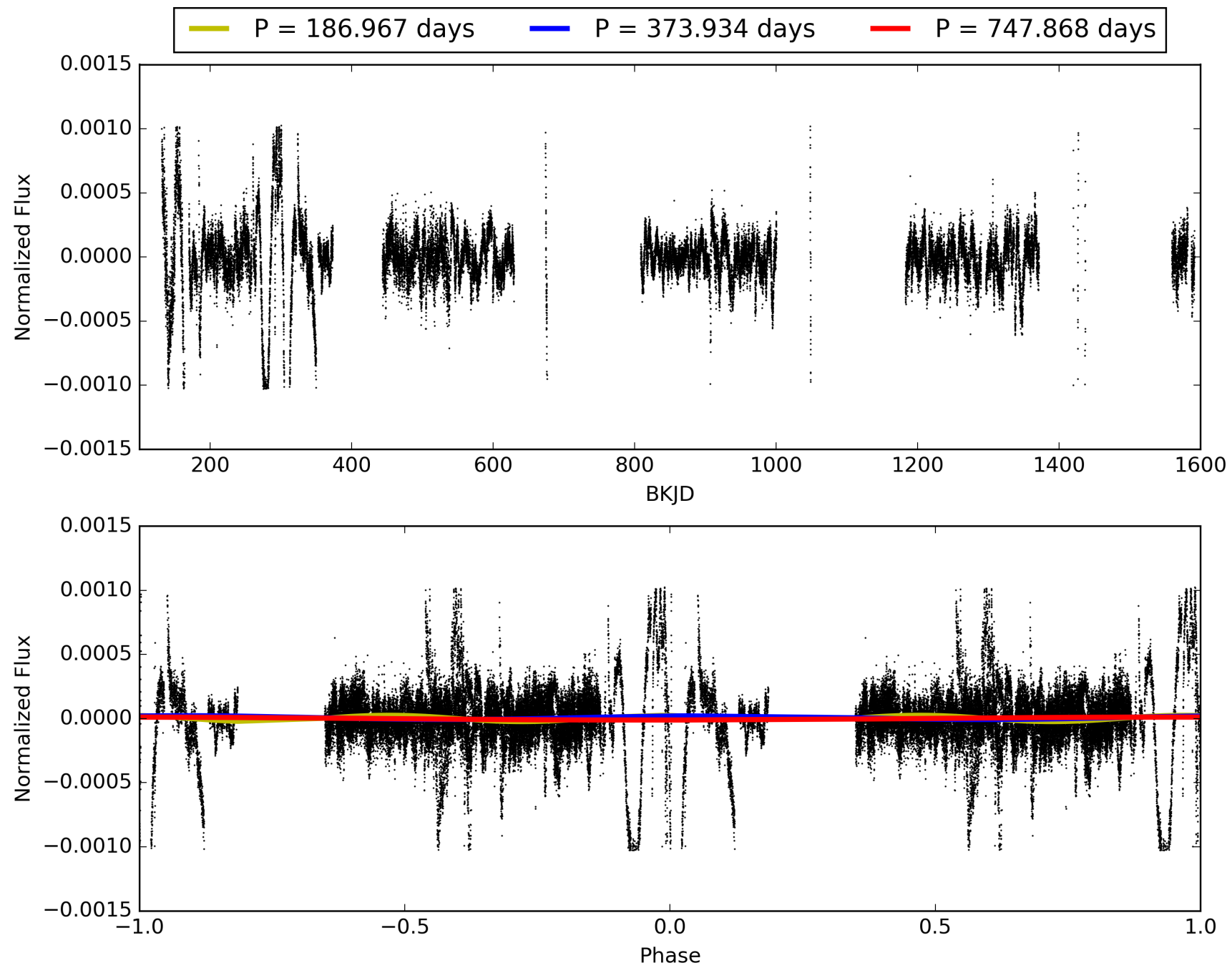
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:35:24 Z

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

TCE 011075456-01, PDC Light Curves

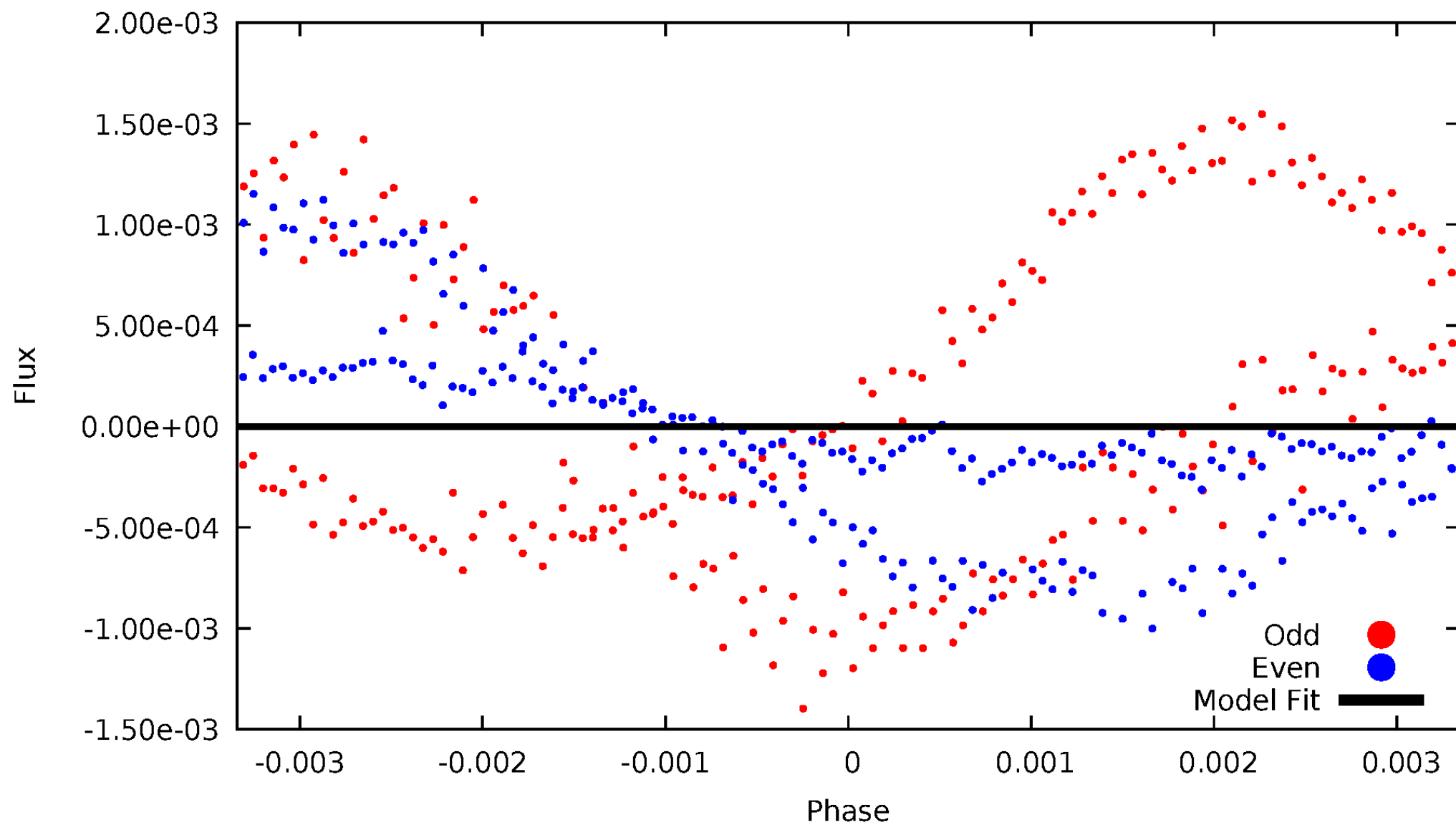


TCE 011075456-01



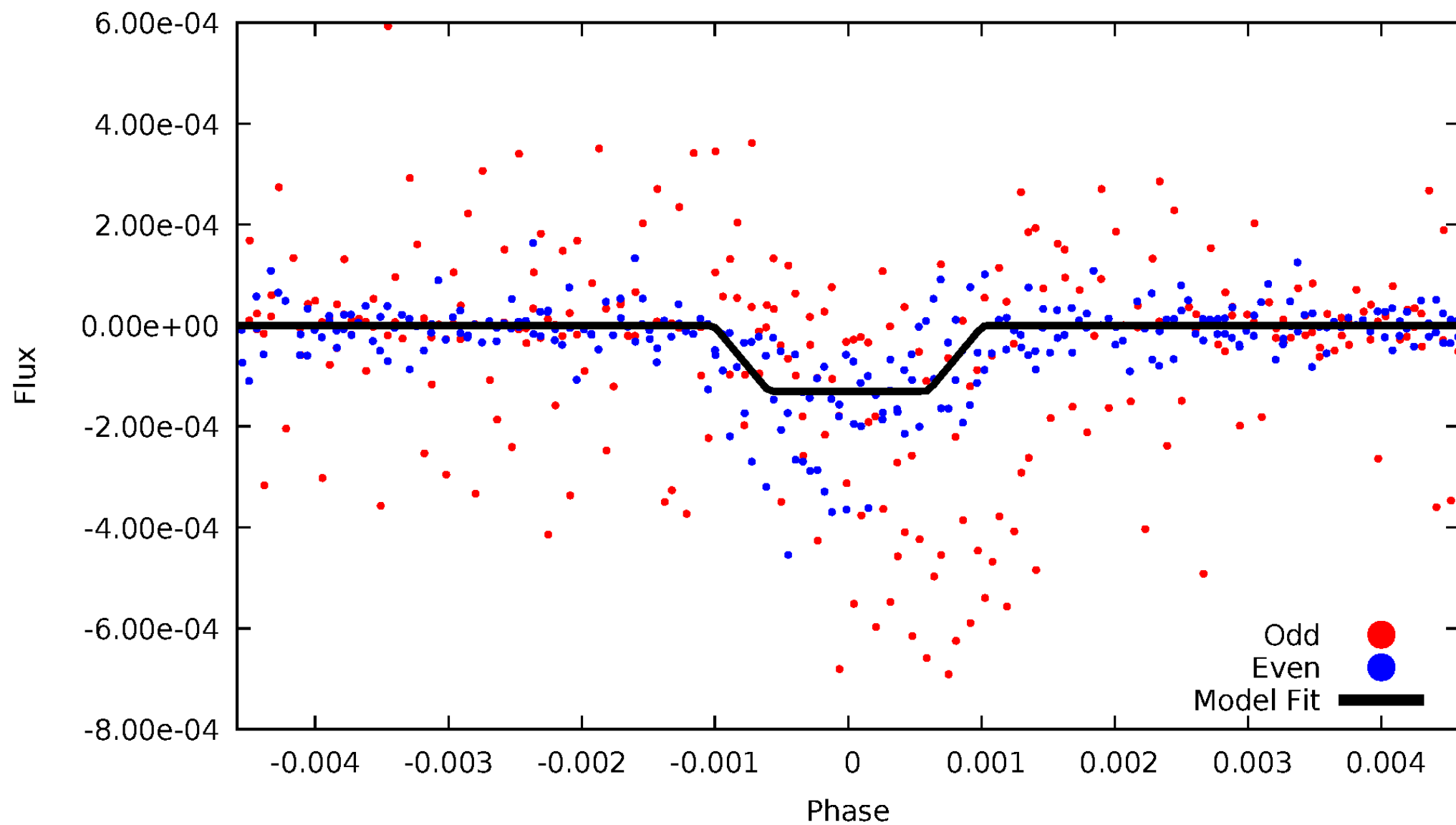
DV Odd/Even

TCE 011075456-01

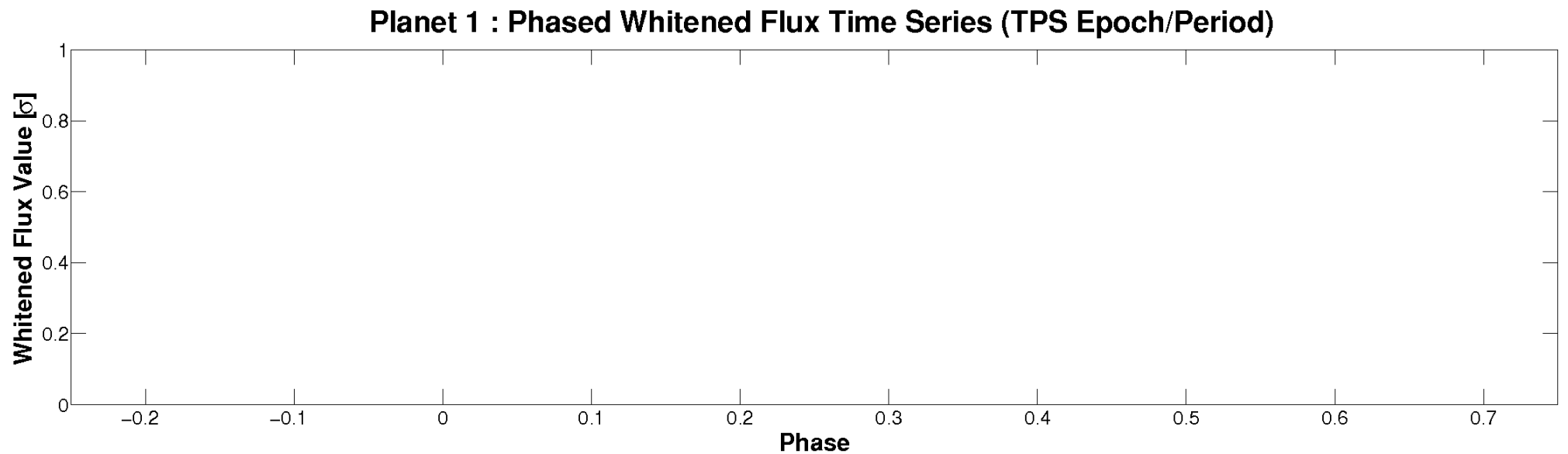
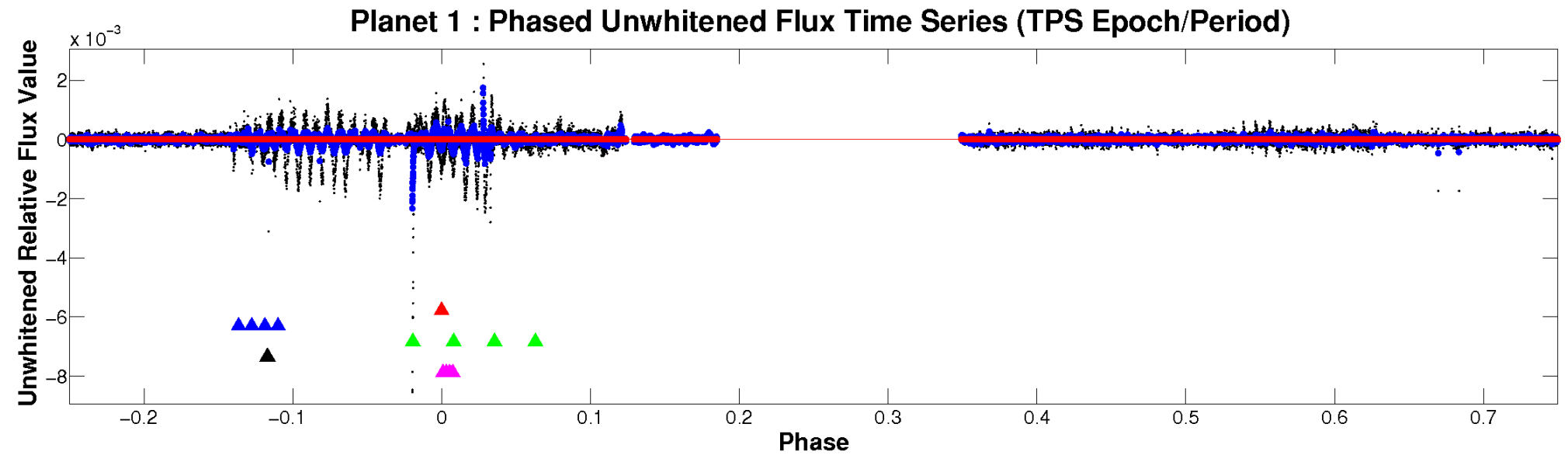


ALT Odd/Even

TCE 011075456-01

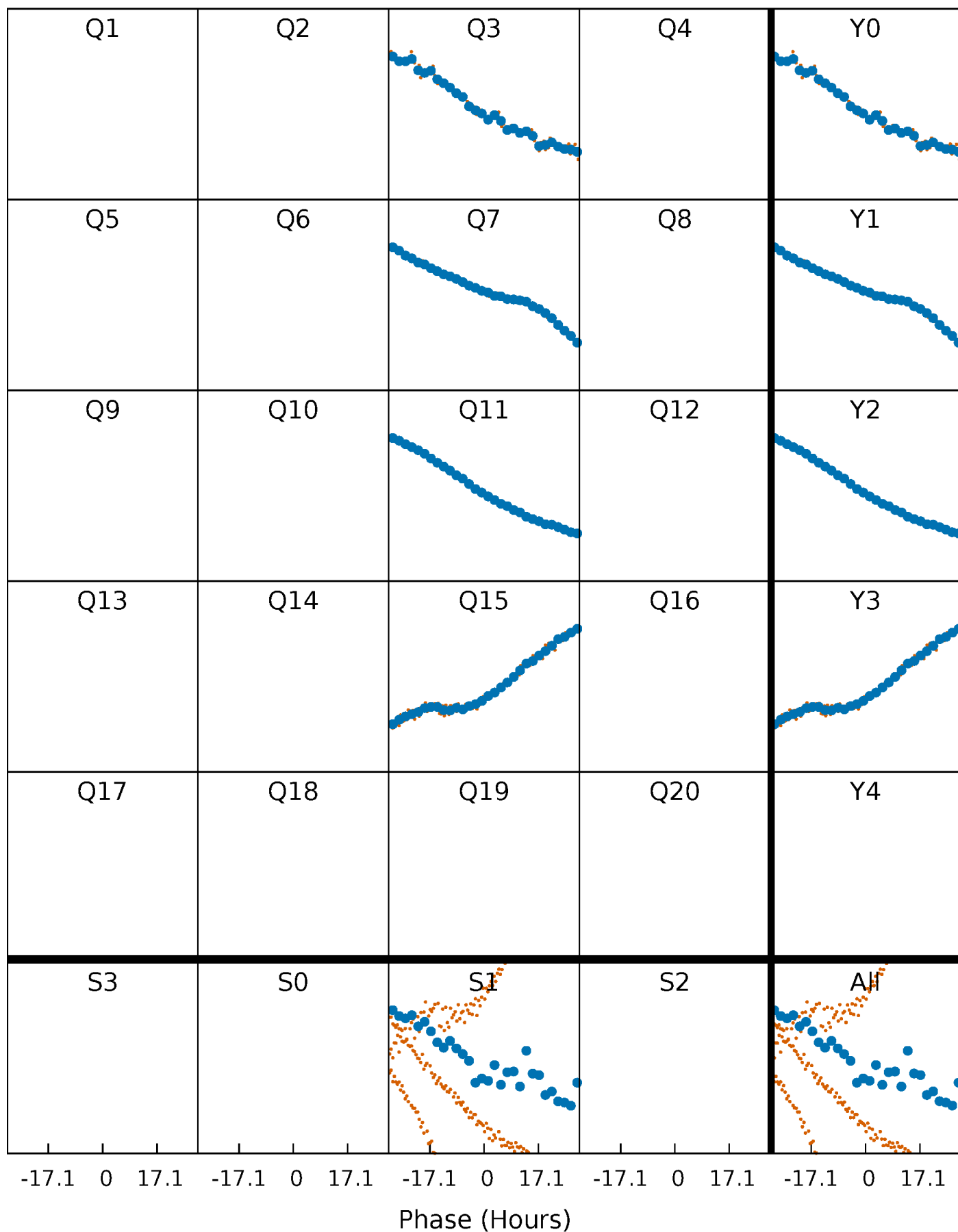


Non-Whitened Vs. Whitened Light Curve



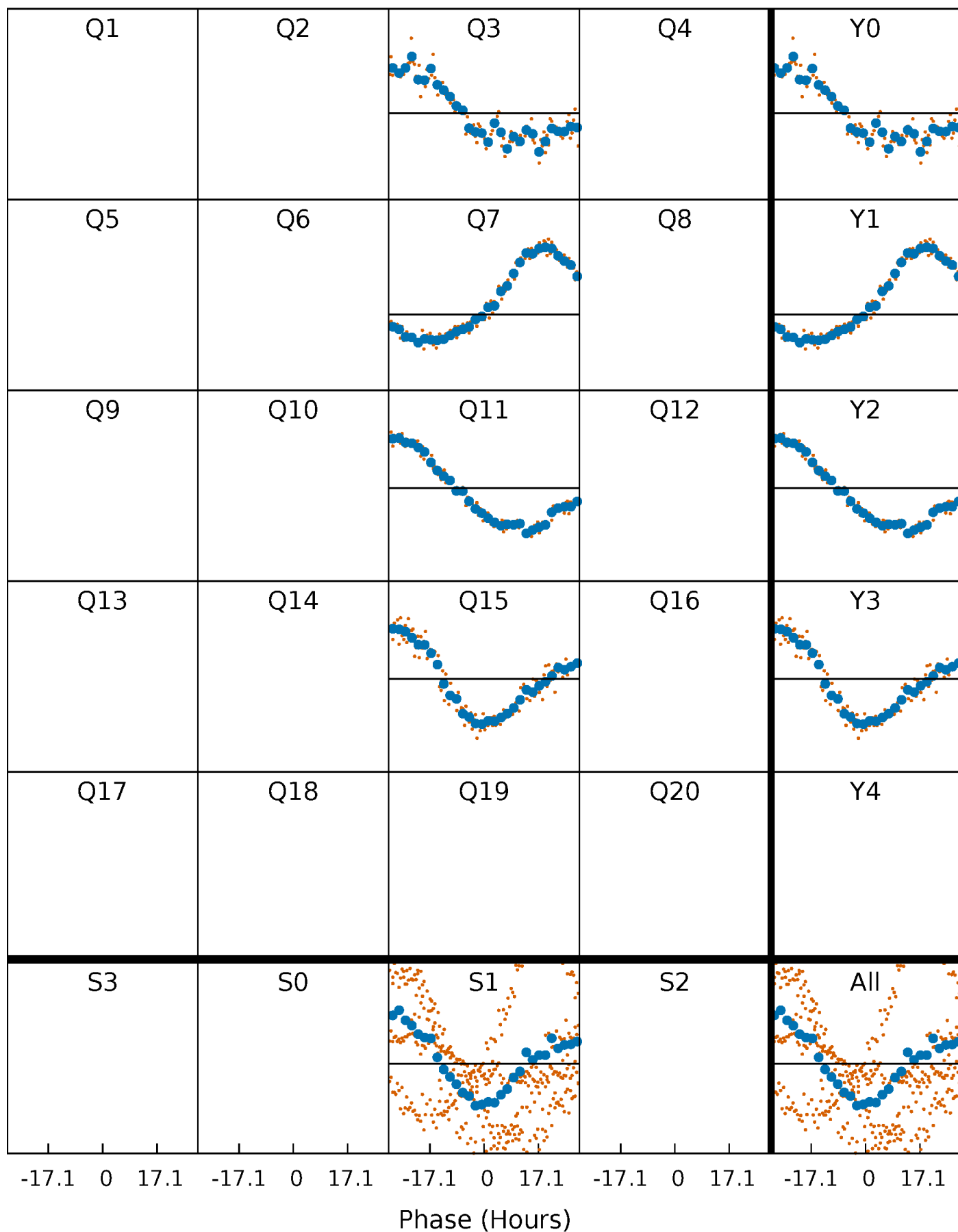
PDC Quarter-Phased Transit Curves

TCE 011075456-01 P=373.934148 Days $T_0=304.024730$ (BKJD)



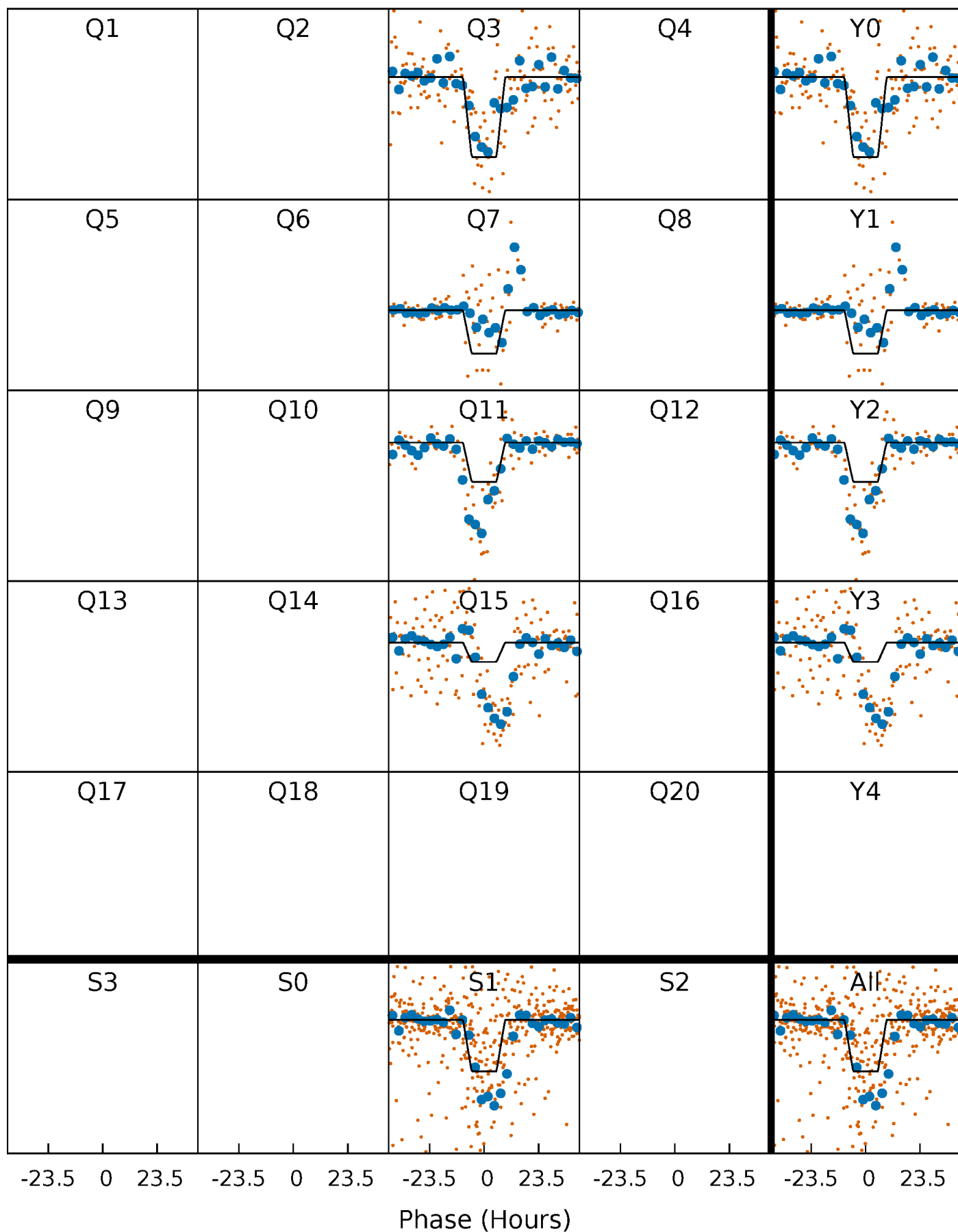
DV Quarter-Phased Transit Curves

TCE 011075456-01 P=373.934148 Days $T_0=304.024730$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

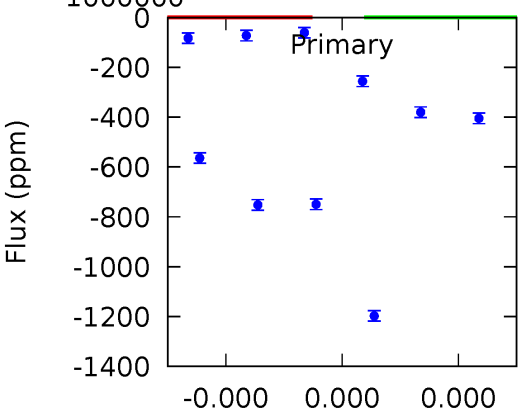
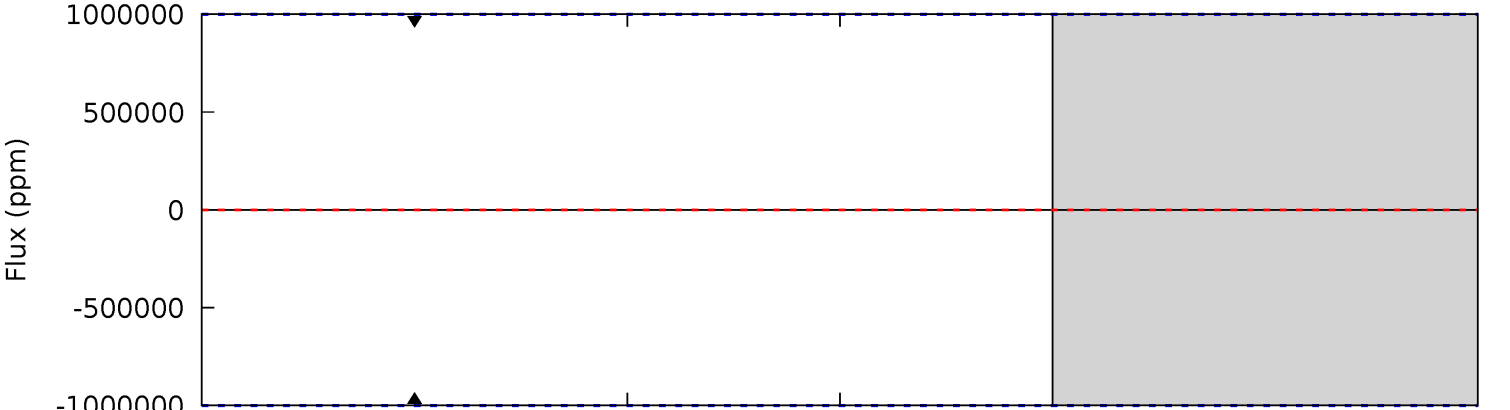
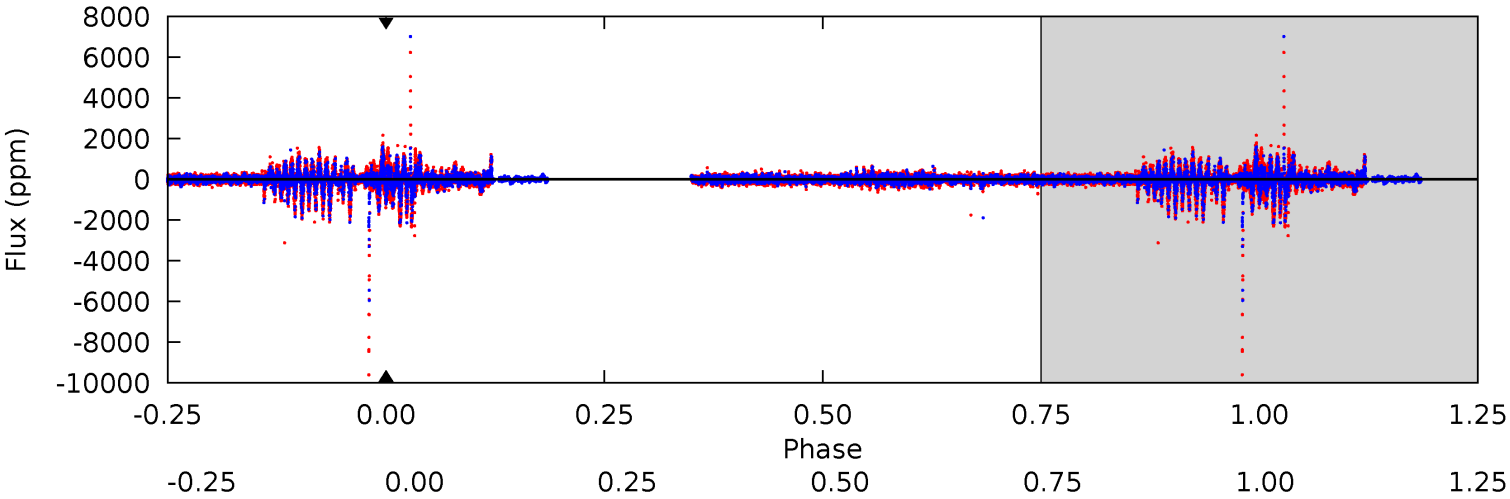
TCE 011075456-01 P=373.934148 Days $T_0=303.957286$ (BKJD)



DV Model-Shift Uniqueness Test

011075456-01, P = 373.934148 Days, E = 304.024730 Days

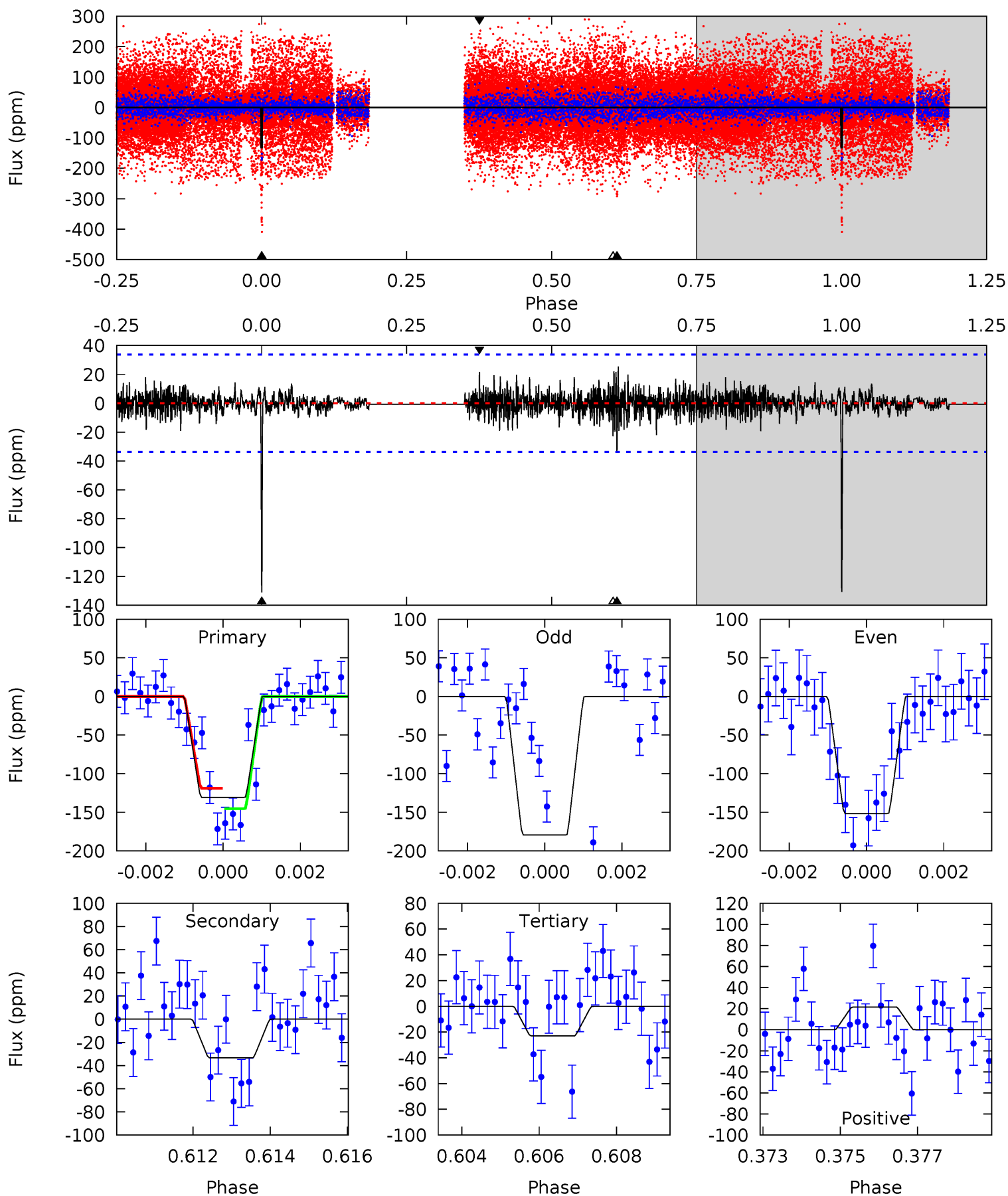
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011075456-01, P = 373.934148 Days, E = 303.957286 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	5.27	3.63	3.41	5.32	3.09	0.90	17.0	17.3	1.64	1.85	1.98	1.09	0.16	2.12



Stellar Parameters For KIC 011075456

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6514^{+58}_{-58}	$4.207^{+0.020}_{-0.018}$	$-0.200^{+0.300}_{-0.200}$	$1.430^{+0.078}_{-0.095}$	$1.205^{+0.120}_{-0.147}$	$0.580^{+0.062}_{-0.046}$
	+1%/-1%	+0%/-0%	+150%/-100%	+5%/-7%	+10%/-12%	+11%/-8%
Source	PHO10	AST10	PHO10	DSEP		

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

Secondary Eclipse Parameters for KIC 011075456-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$12.06^{+11.84}_{-8.28}$	462^{+6}_{-6}	-4163^{+33132}_{-21665}	$-3191.254^{+885198.752}_{-762208.617}$
Alt.	-33 ± 6	$11.00^{+12.18}_{-7.80}$	462^{+6}_{-6}	2653^{+1140}_{-432}	173^{+1795}_{-134}

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

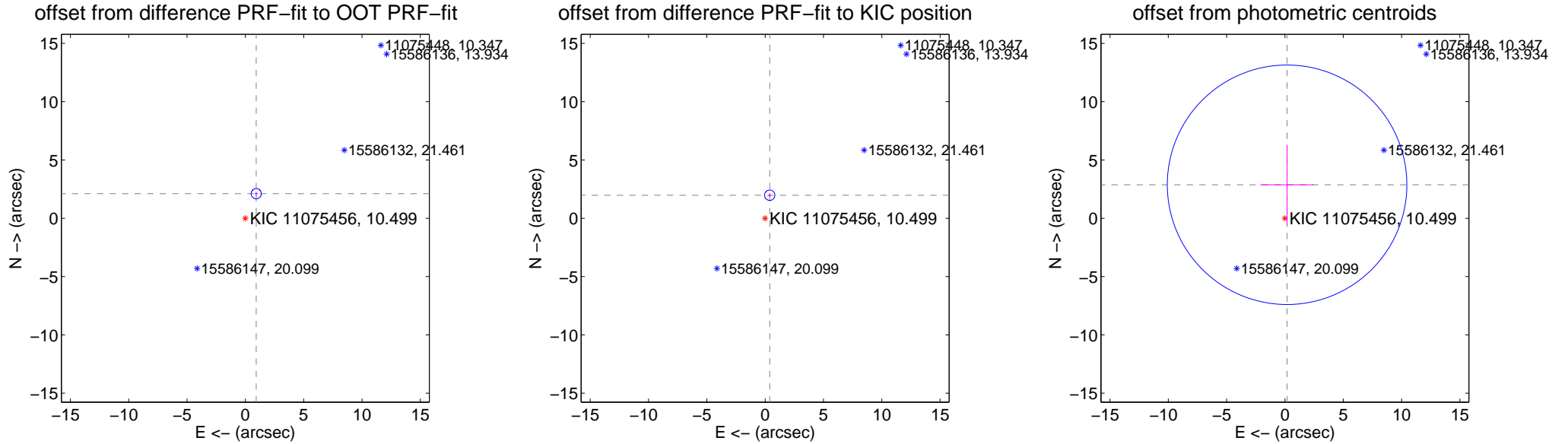
DV Centroid Data

Supplemental centroid analysis for 011075456-01. **Kepler magnitude: 10.50.** 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 0.56 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.306 ± 0.146	15.83	-0.933 ± 0.129	2.108 ± 0.149
PRF-fit source offset from KIC position	2.016 ± 0.148	13.61	-0.393 ± 0.129	1.977 ± 0.149
photometric centroid source offset	2.88 ± 3.42	0.84	-0.18 ± 2.30	2.87 ± 3.43



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



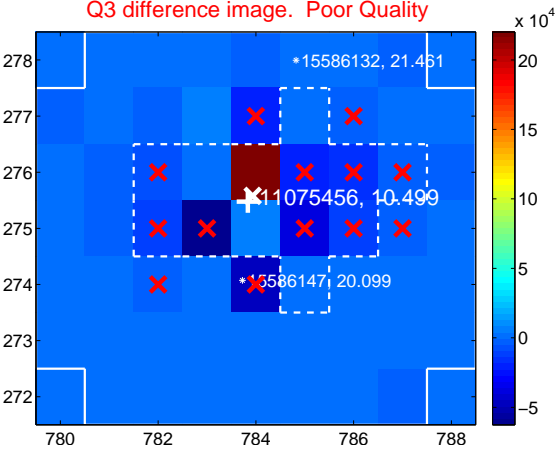
Q2 no difference image



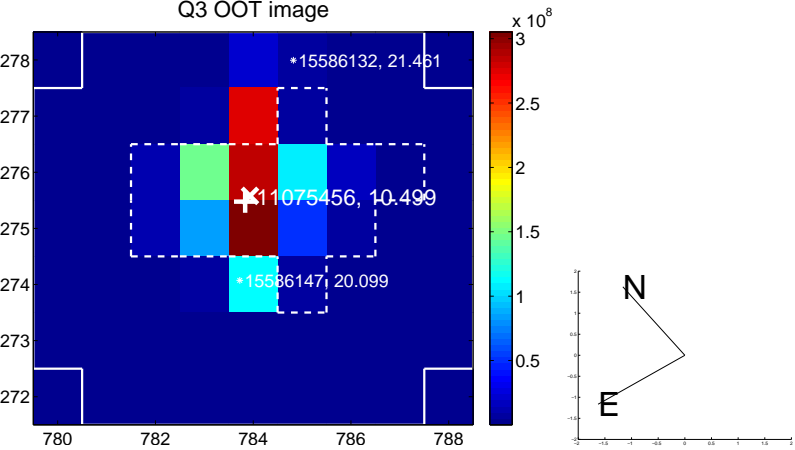
Q2 no OOT image



Q3 difference image. Poor Quality



Q3 OOT image



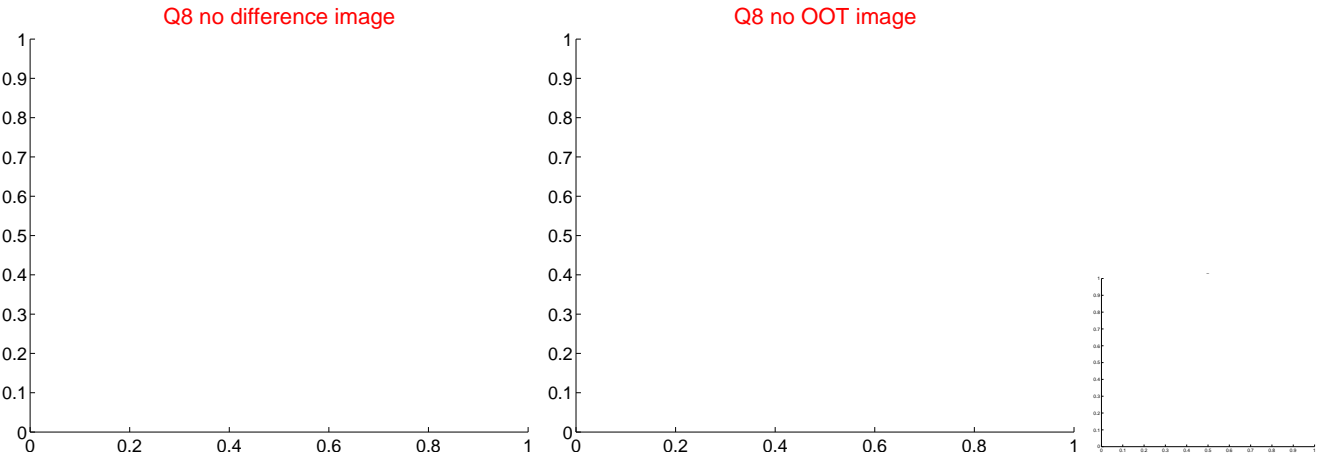
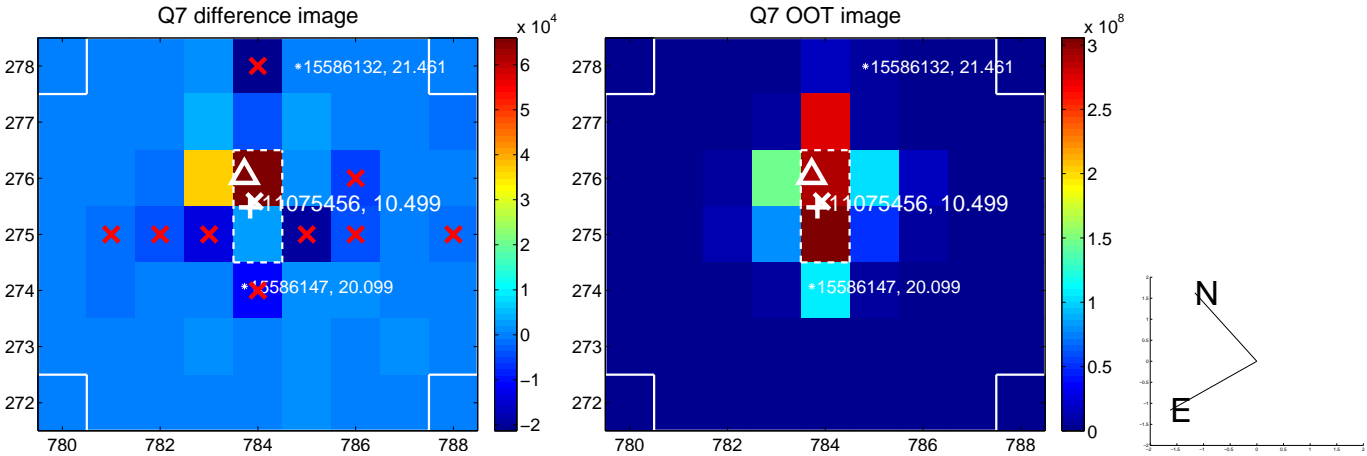
Q4 no difference image



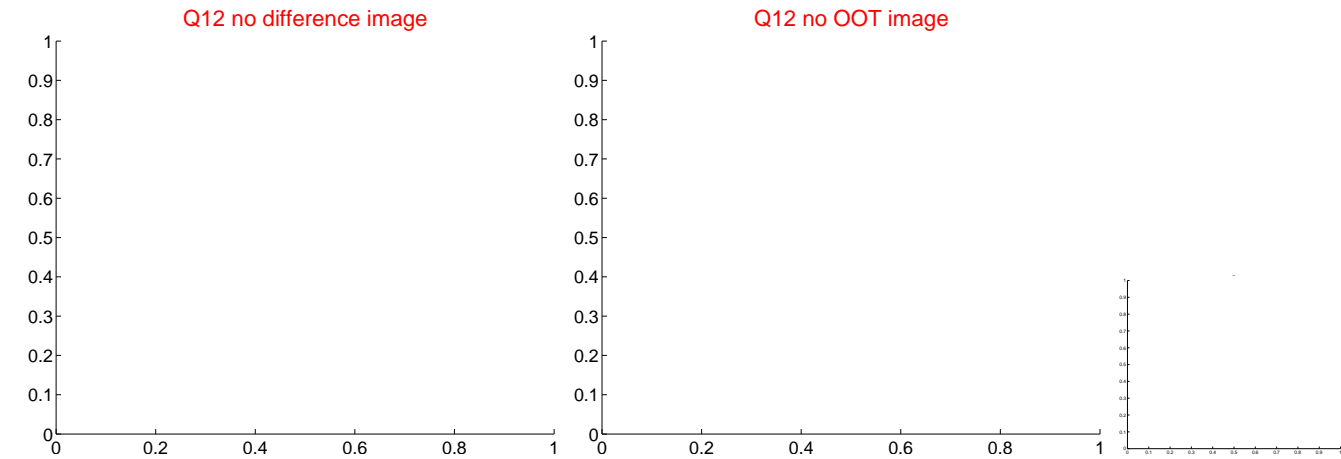
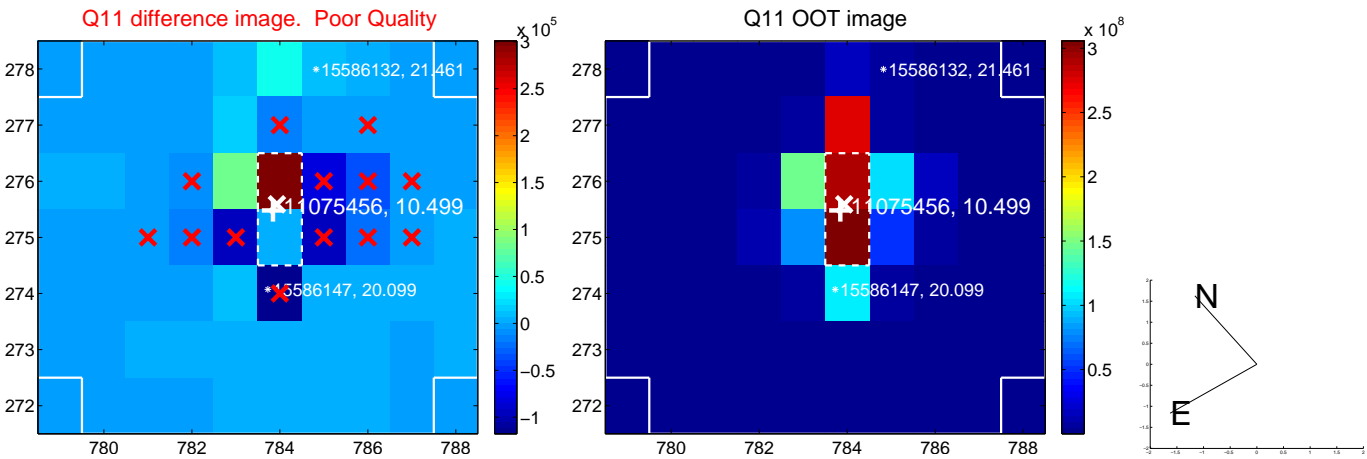
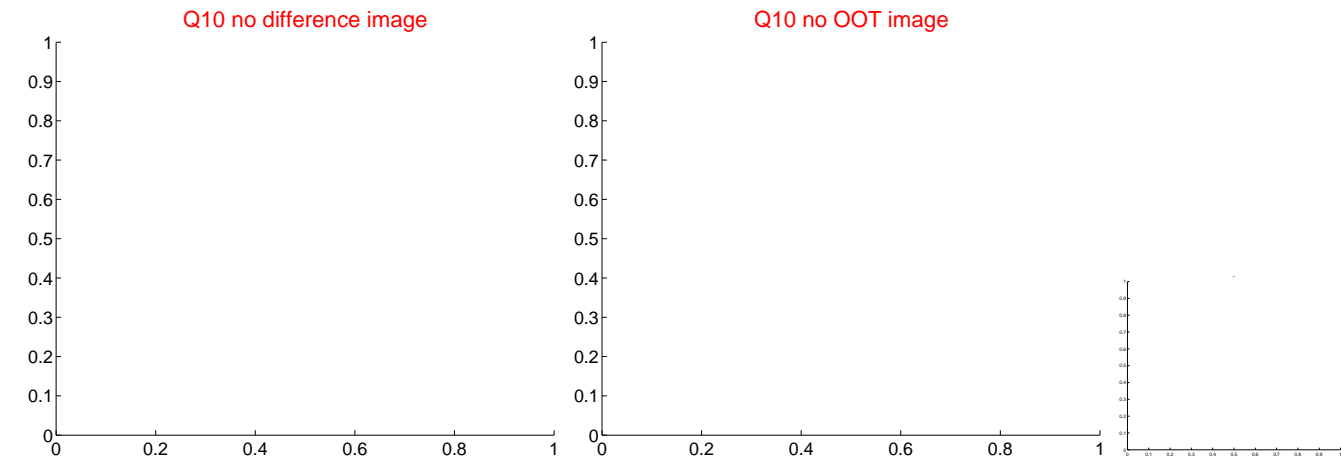
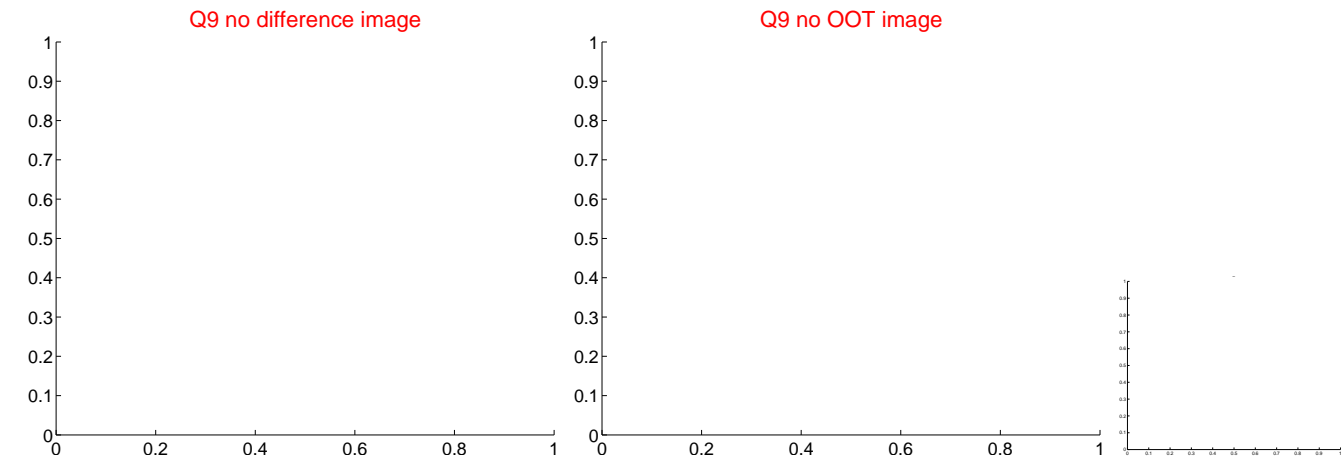
Q4 no OOT image



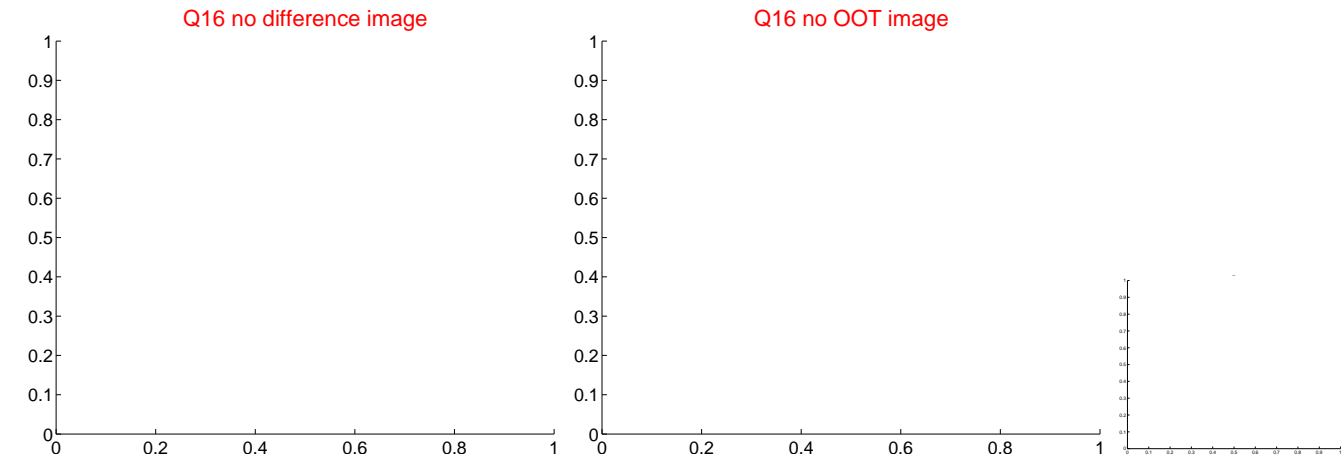
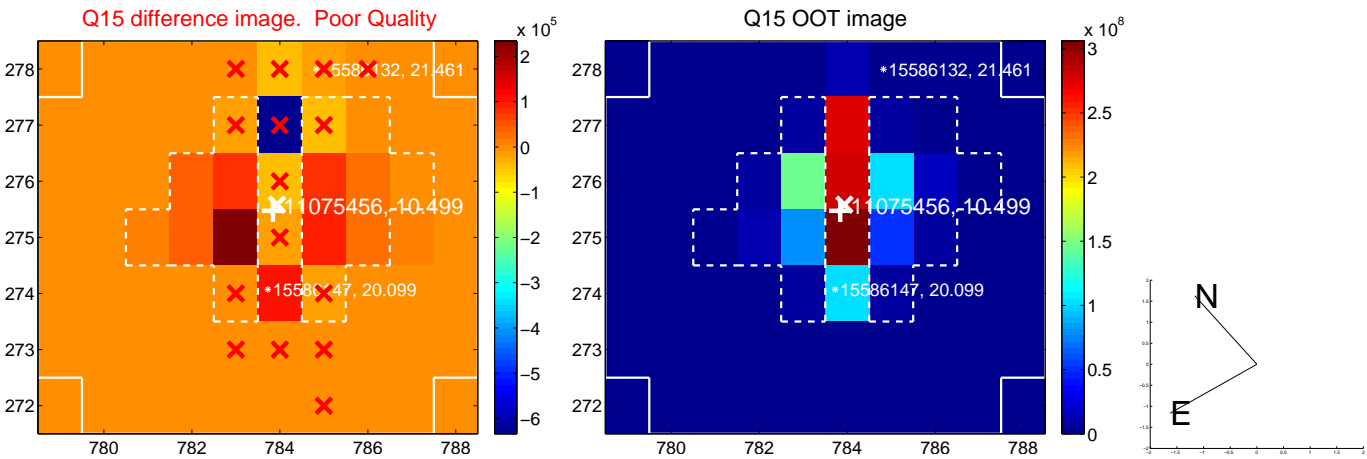
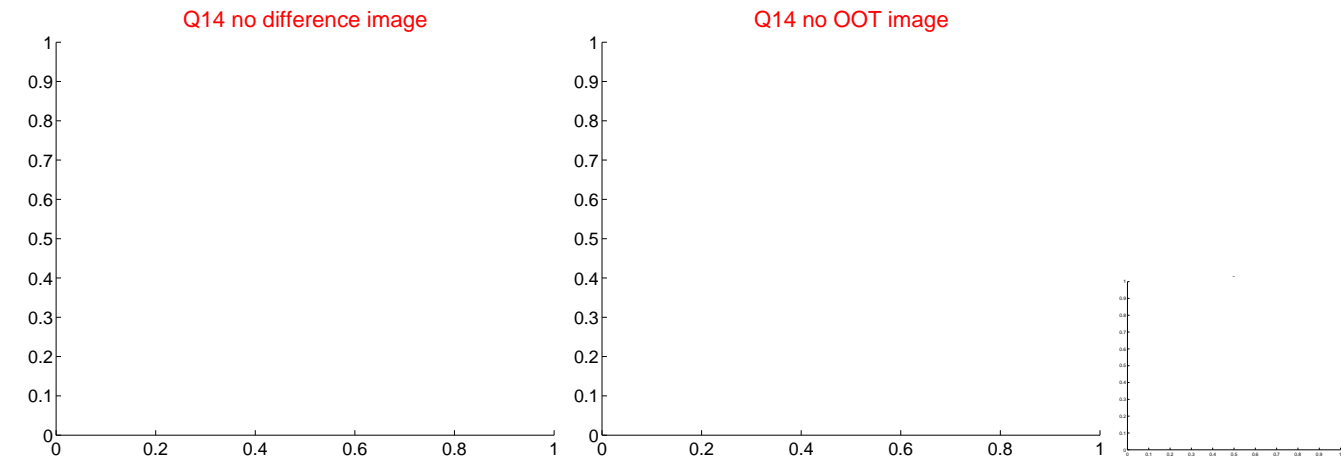
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



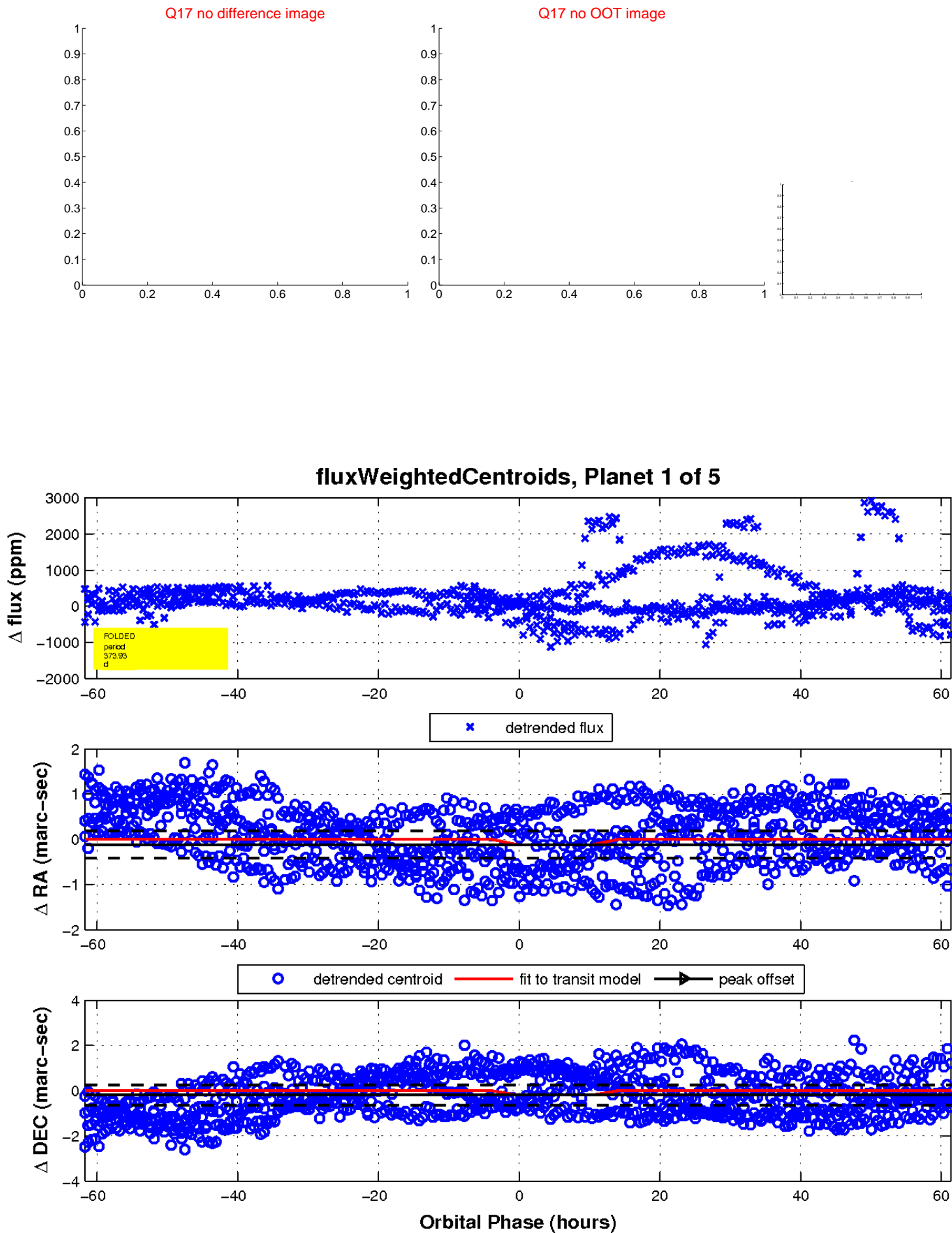
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



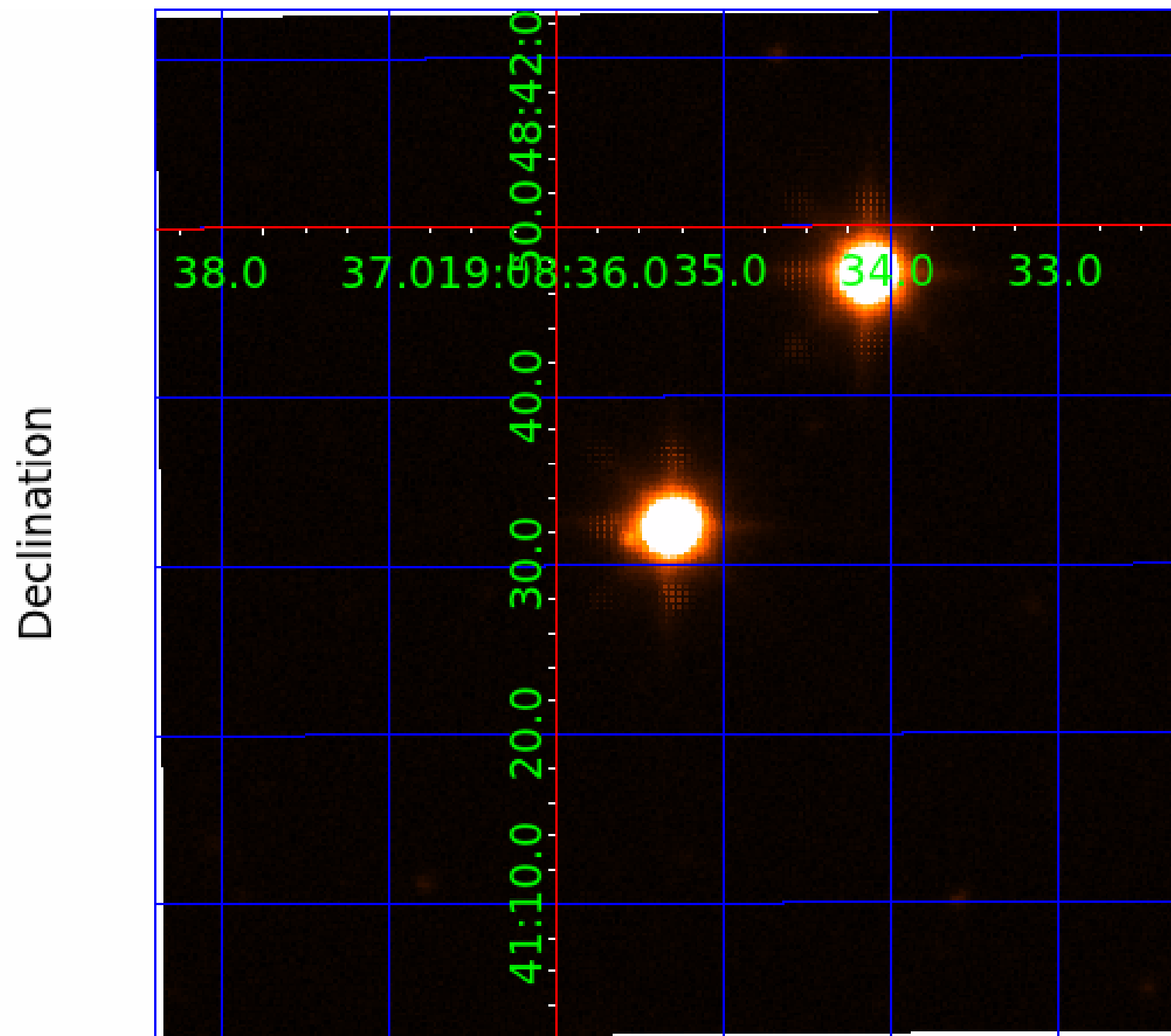
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 011075456

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})
011075456-01	OBS	No	373.934148	304.024730	205.1	15.000	37.3	-1.0	1.43	6514	2.06	2.83
011075456-02	OBS	No	370.628933	262.943077	361.9	4.684	35.2	19.2	1.43	6514	3.93	2.86
011075456-03	OBS	No	384.198606	296.791249	126.9	15.000	25.9	-1.0	1.43	6514	1.62	2.73
011075456-04	OBS	No	374.001138	260.171598	170.3	3.996	18.0	13.1	1.43	6514	2.24	2.83
011075456-05	OBS	No	373.109994	306.837750	133.3	15.000	26.7	-1.0	1.43	6514	1.66	2.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011075456-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
011075456-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
011075456-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—CENT_SATURATED
011075456-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED—HALO_GHOST
011075456-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

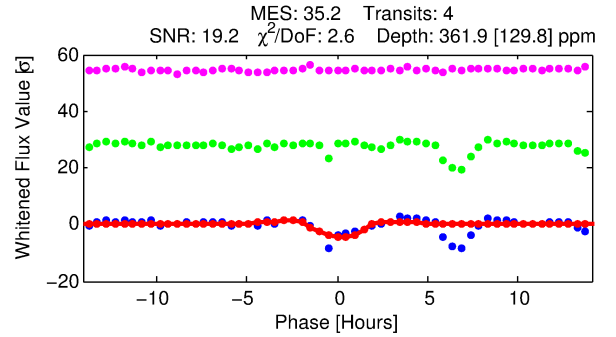
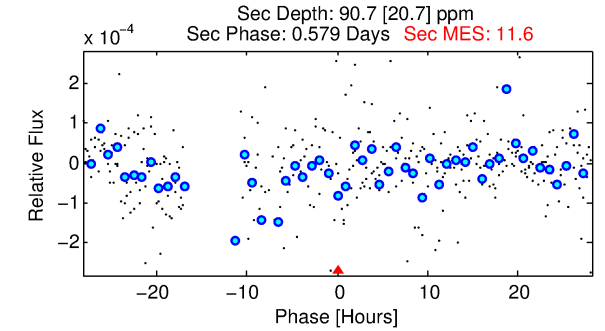
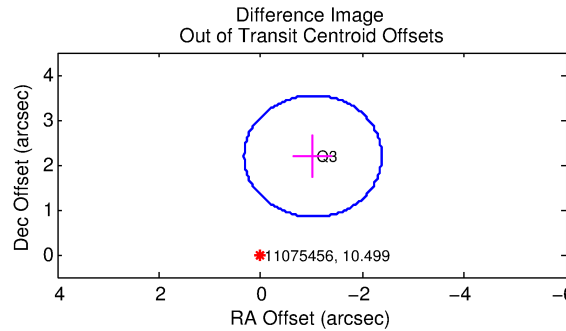
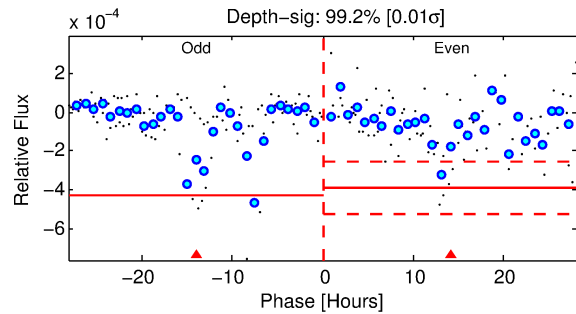
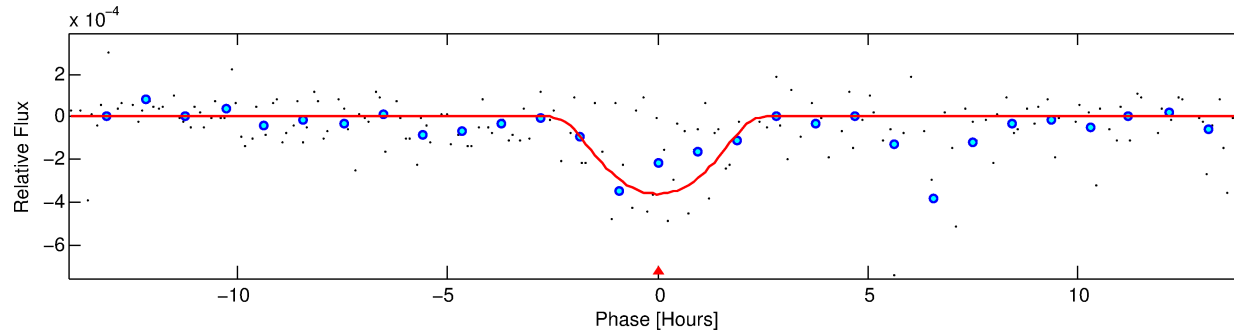
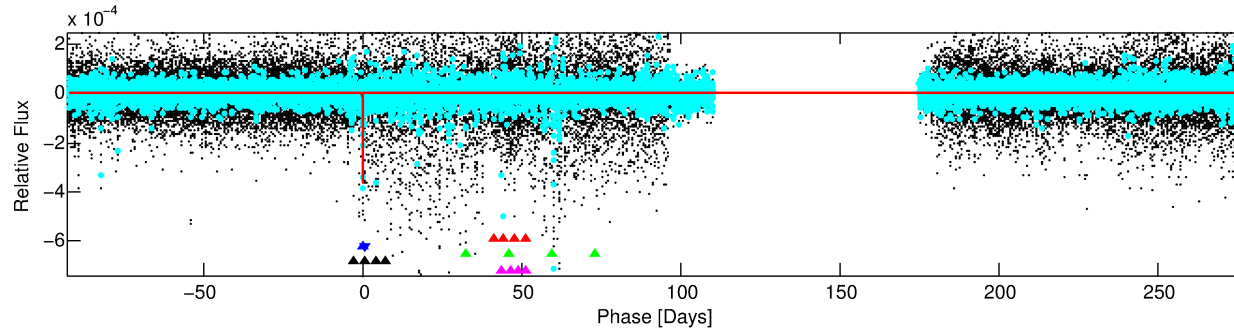
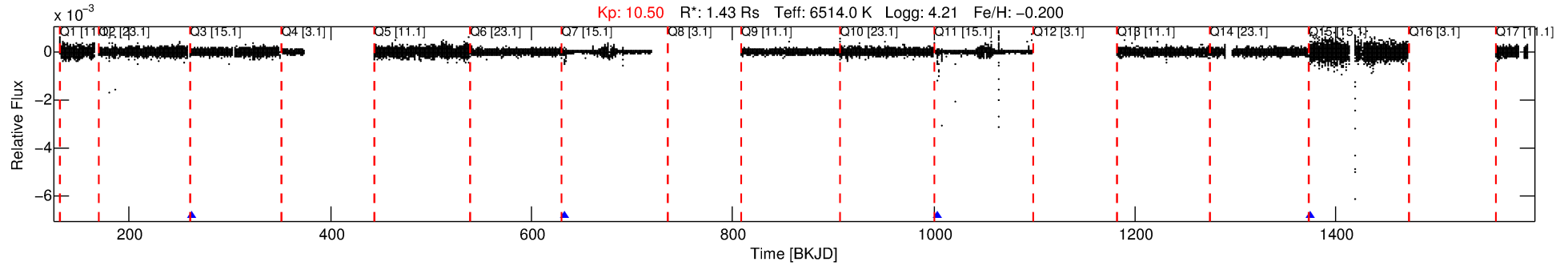
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011075456-02

No Significant Match Found

DV One-Page Summary

KIC: 11075456 Candidate: 2 of 5 Period: 370.629 d



DV Fit Results:

Period = 370.62893 [0.00675] d
Epoch = 262.9431 [0.0109] BKJD
Rp/R* = 0.0252 [0.0207]
a/R* = 173.14 [77.92]
b = 0.98 [0.05]
Seff = 2.86 [0.18]
Teq = 332 [5] K
Rp = 3.93 [3.25] Re
a = 1.0737 [0.0503] AU
Ag = 3719.83 [6184.18] [0.60 σ]
Teffp = 4004 [1664] K [2.21 σ]

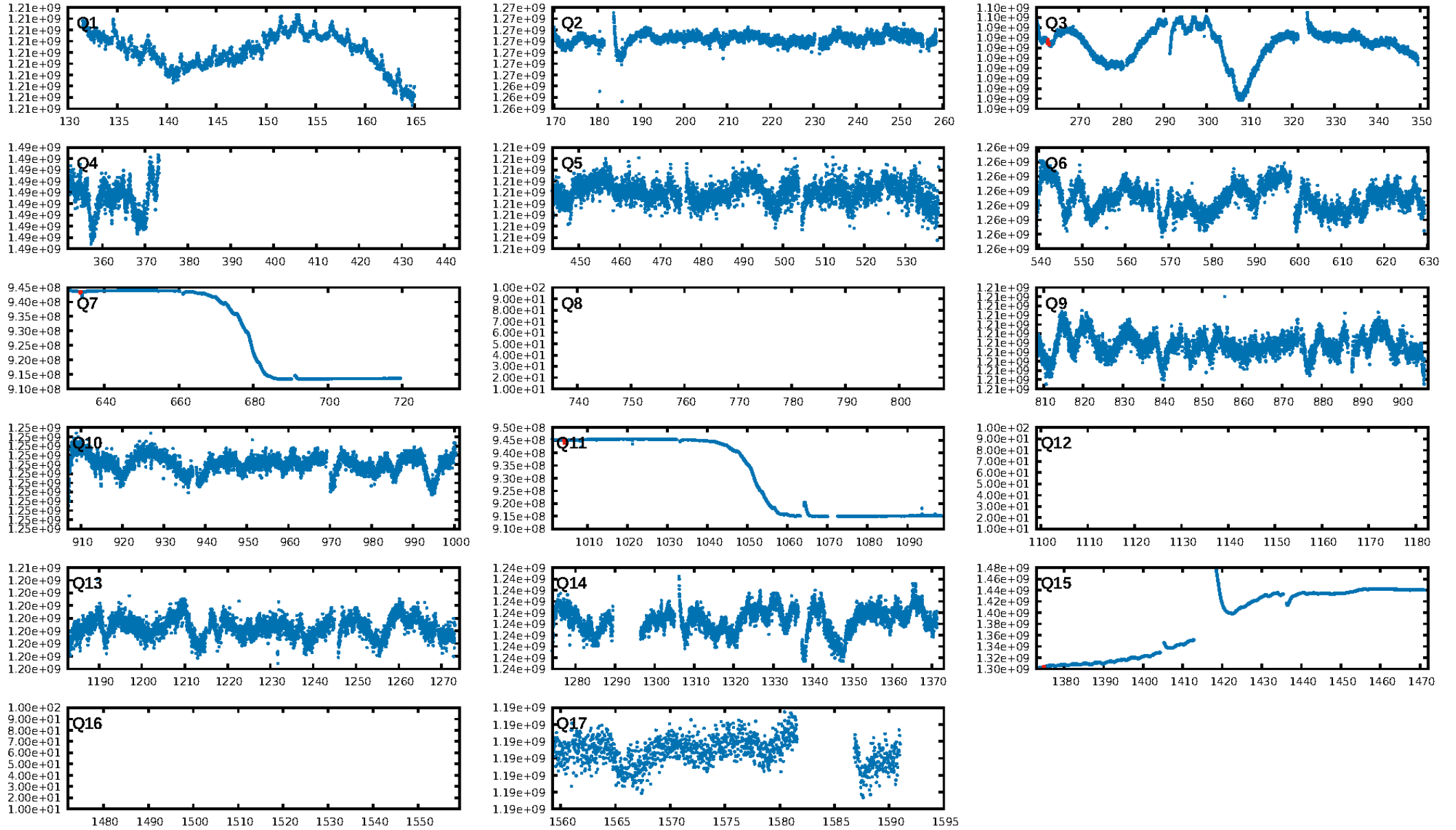
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [3.79 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.6918
Centroid-sig: 0.0%
Centroid-so: 2.855 arcsec [3.09 σ]
OotOffset-rm: 2.418 arcsec [5.36 σ]
KicOffset-rm: 2.180 arcsec [4.73 σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [1/1]

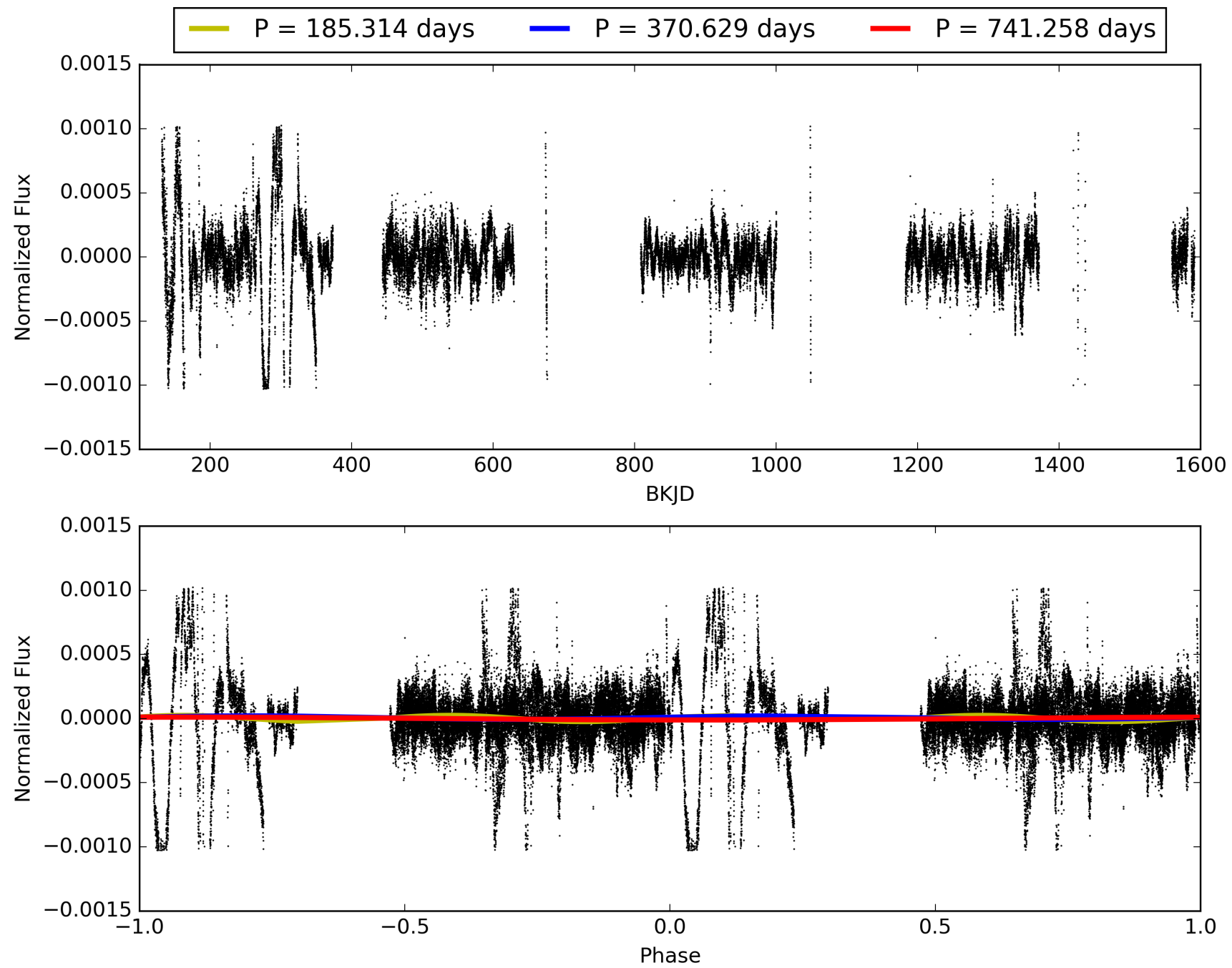
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:35:34 Z

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

TCE 011075456-02, PDC Light Curves

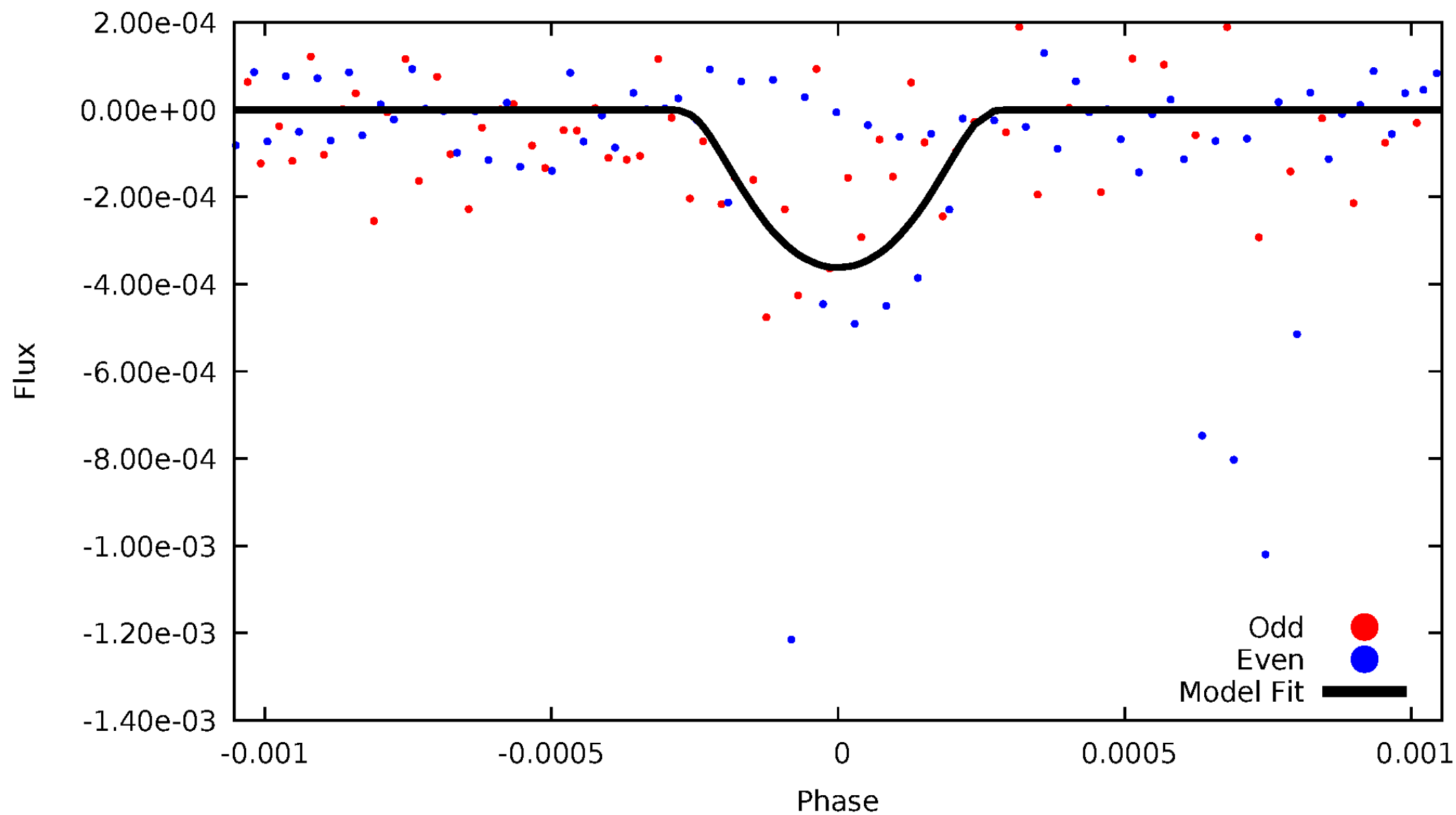


TCE 011075456-02



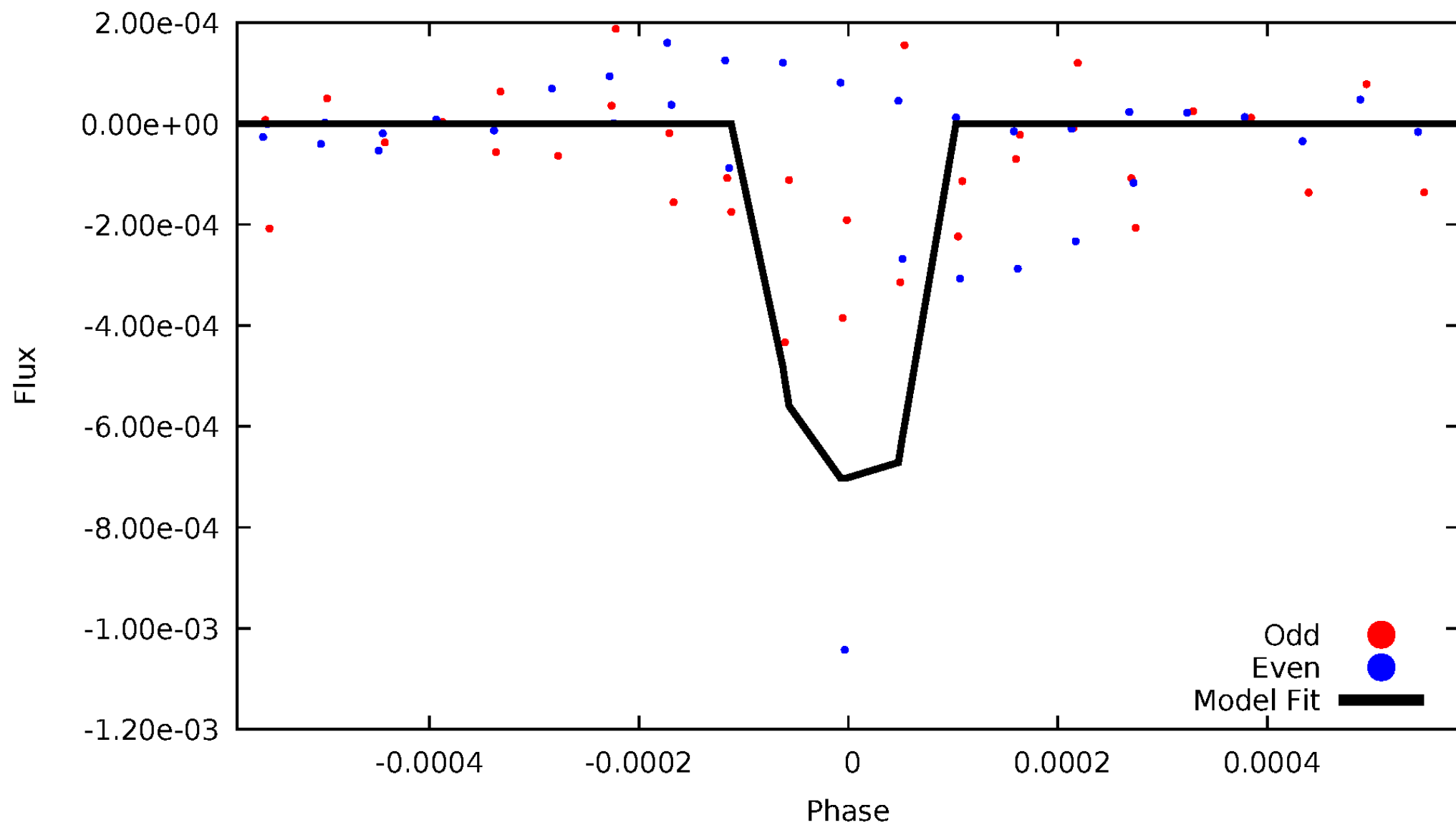
DV Odd/Even

TCE 011075456-02



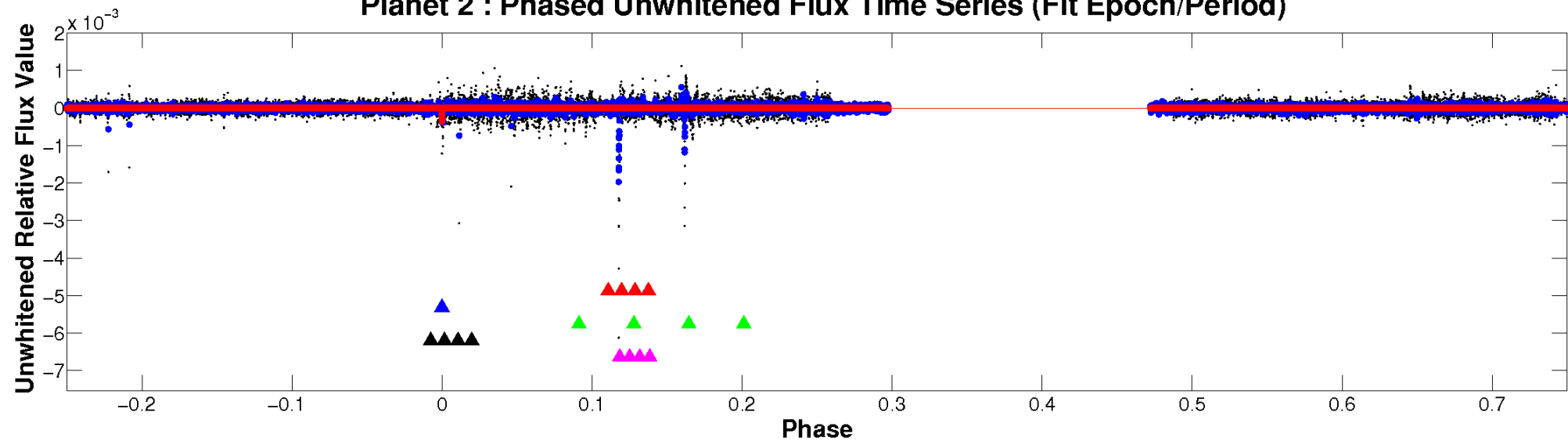
ALT Odd/Even

TCE 011075456-02

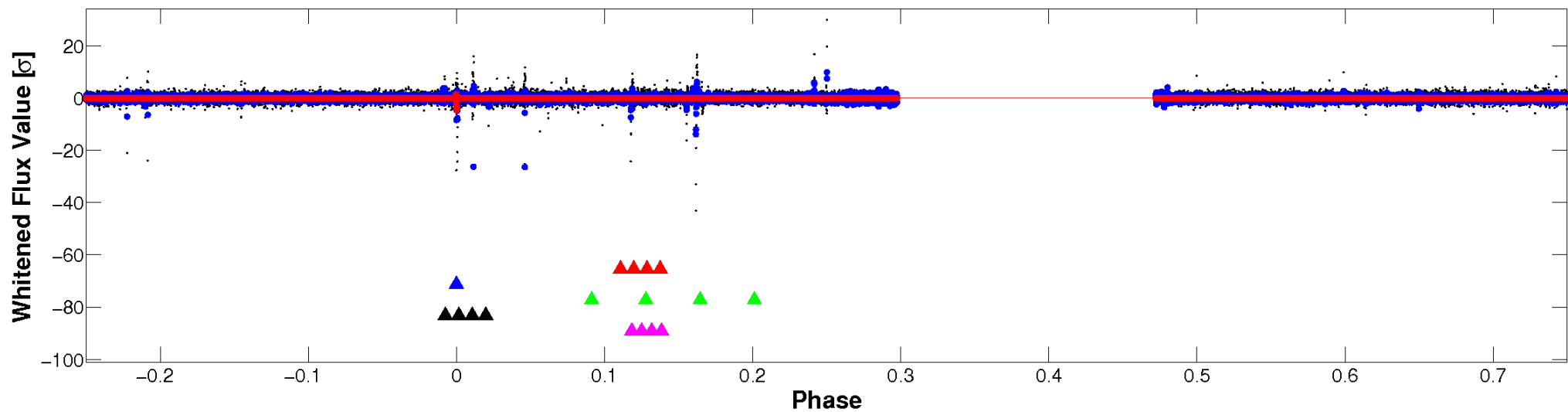


Non-Whitened Vs. Whitened Light Curve

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

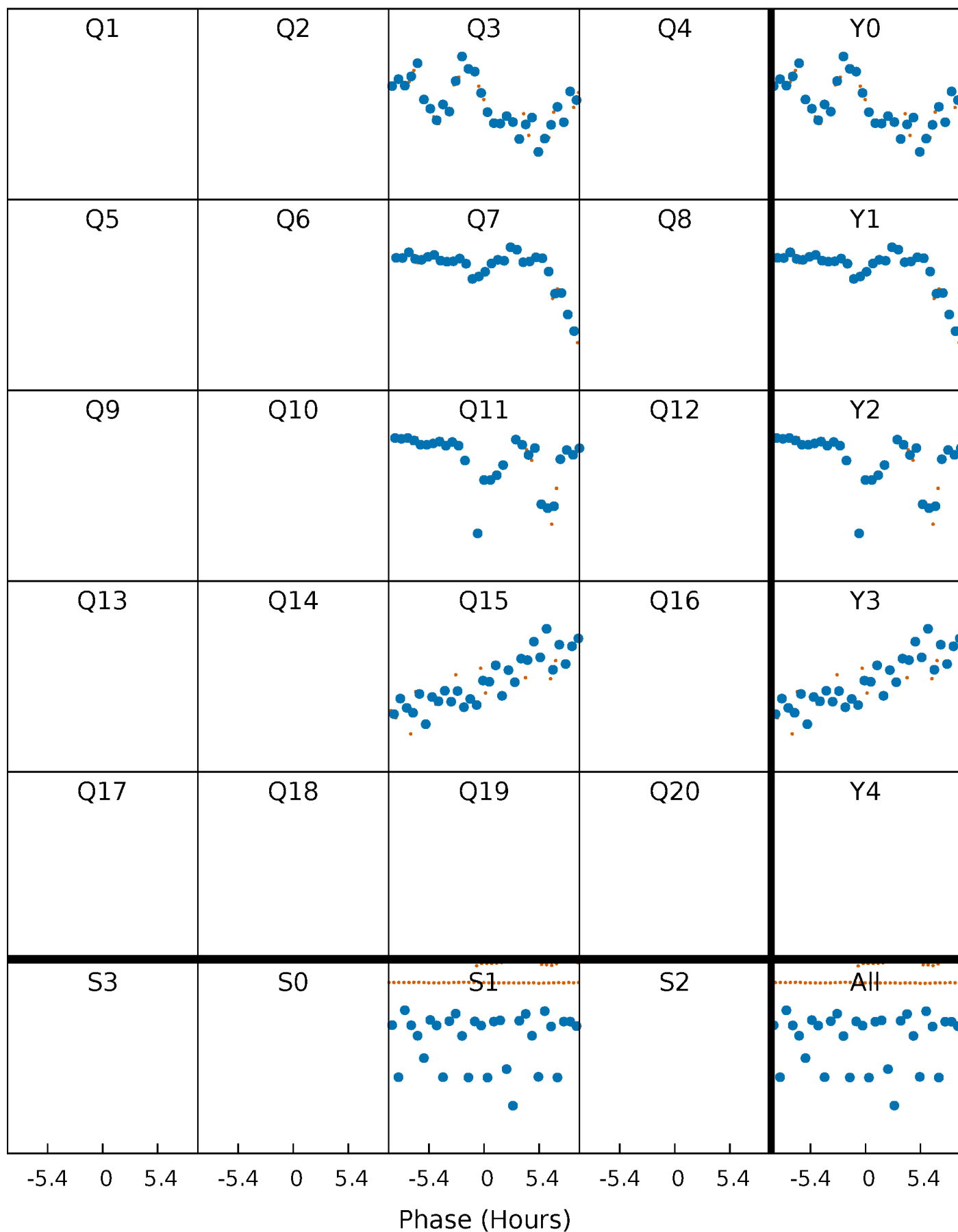


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



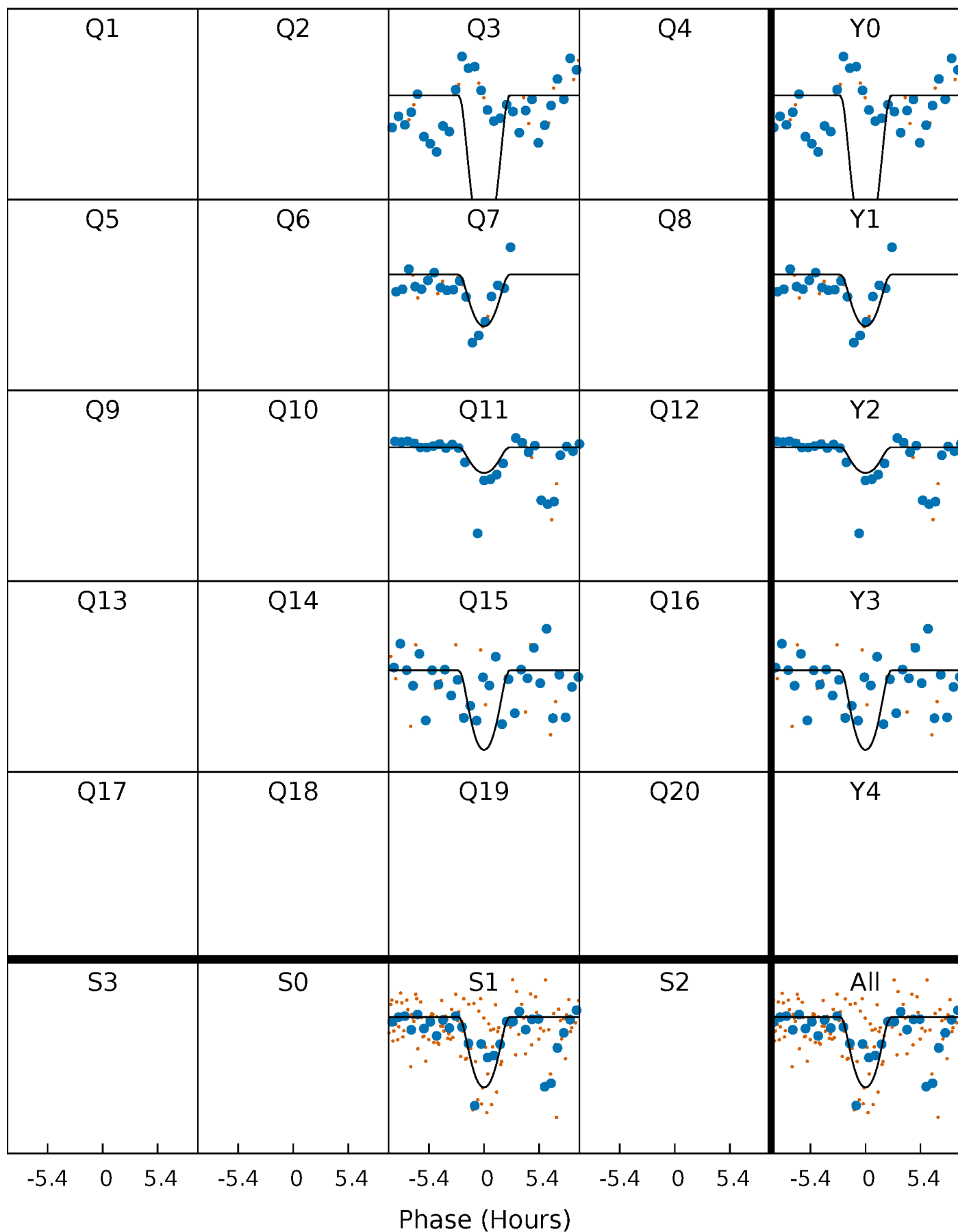
PDC Quarter-Phased Transit Curves

TCE 011075456-02 $P=370.628933$ Days $T_0=262.943077$ (BKJD)



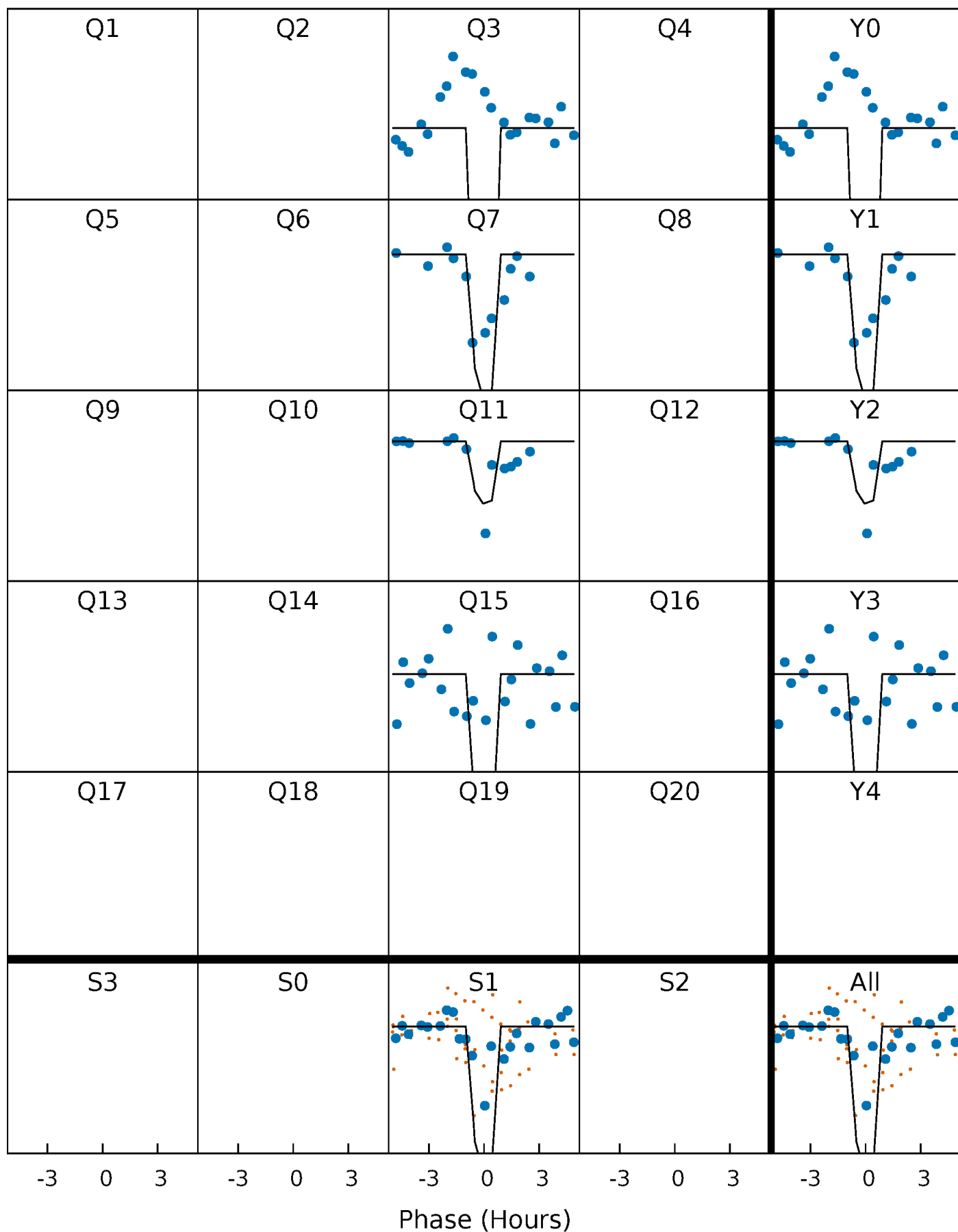
DV Quarter-Phased Transit Curves

TCE 011075456-02 $P=370.628933$ Days $T_0=262.943077$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

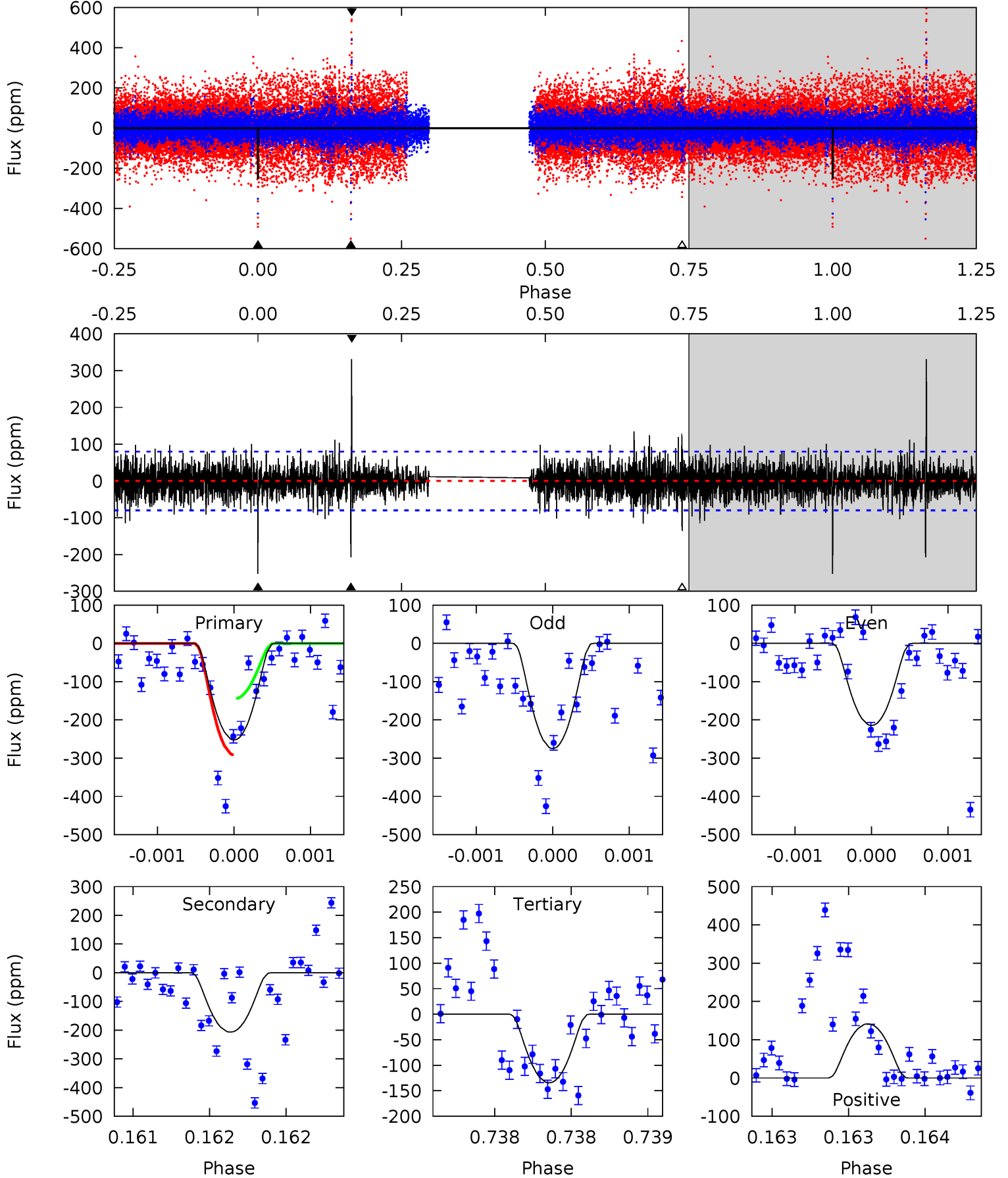
TCE 011075456-02 P=370.623911 Days $T_0=262.924269$ (BKJD)



DV Model-Shift Uniqueness Test

011075456-02, P = 370.628933 Days, E = 262.943077 Days

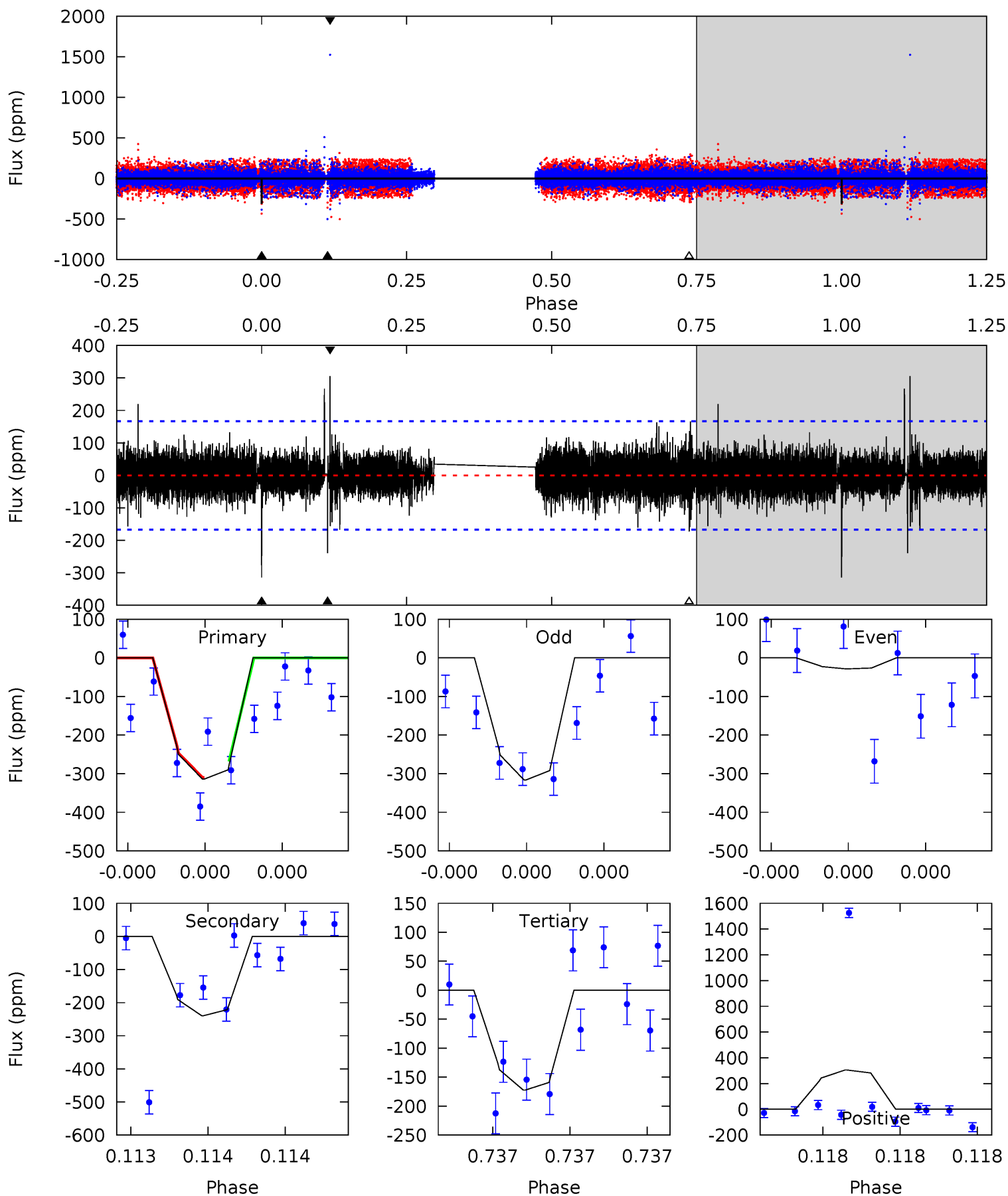
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	14.4	9.36	9.85	5.56	3.45	2.06	8.22	7.73	5.04	4.55	2.13	1.20	0.57	5.48



Alt Model-Shift Uniqueness Test

011075456-02, P = 370.623911 Days, E = 262.924269 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	8.27	5.95	10.5	5.76	3.77	1.19	4.89	0.29	2.32	-2.28	5.32	1.16	0.49	0.71



Stellar Parameters For KIC 011075456

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6514^{+58}_{-58}	$4.207^{+0.020}_{-0.018}$	$-0.200^{+0.300}_{-0.200}$	$1.430^{+0.078}_{-0.095}$	$1.205^{+0.120}_{-0.147}$	$0.580^{+0.062}_{-0.046}$
	+1%/-1%	+0%/-0%	+150%/-100%	+5%/-7%	+10%/-12%	+11%/-8%
Source	PHO10	AST10	PHO10	DSEP		

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

Secondary Eclipse Parameters for KIC 011075456-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-207 ± 14	$4.18^{+3.02}_{-2.27}$	463^{+6}_{-6}	4868^{+2319}_{-902}	7381^{+29574}_{-4860}
Alt.	-240 ± 29	$4.62^{+2.97}_{-2.64}$	463^{+6}_{-6}	4841^{+2468}_{-845}	7251^{+31019}_{-4620}

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 $A_{obs} \gg 1.0$

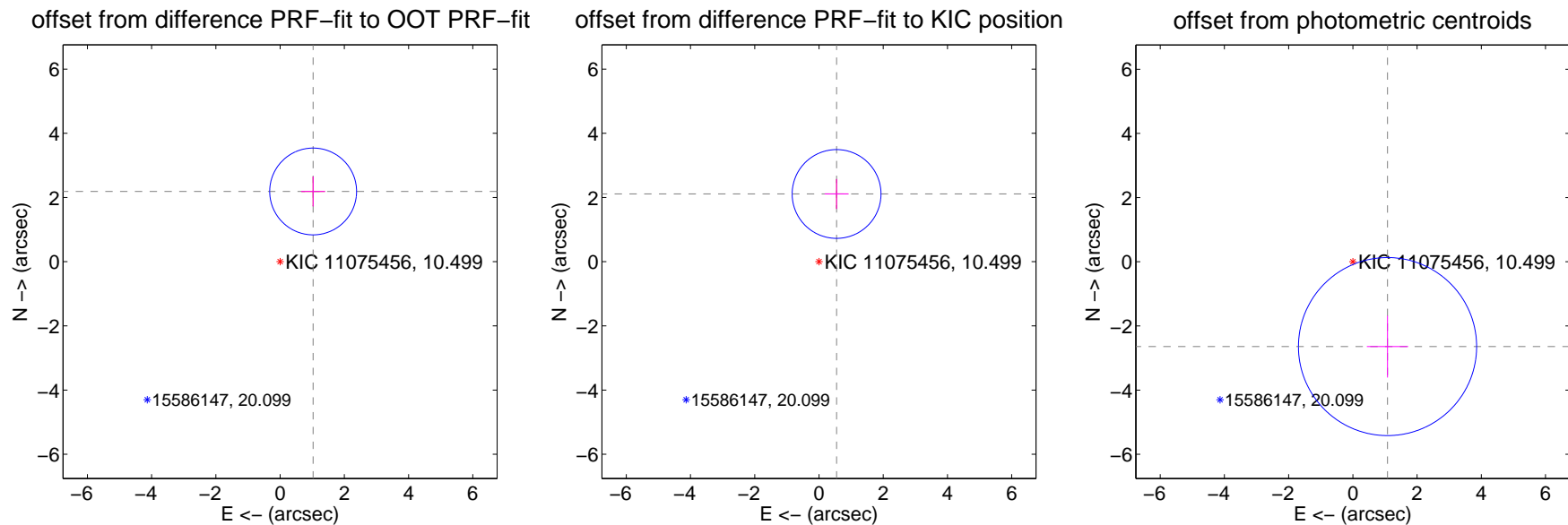
DV Centroid Data

Supplemental centroid analysis for 011075456-02. **Kepler magnitude: 10.50.** Transit SNR 19.17

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.49 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.418 ± 0.451	5.36	-1.029 ± 0.372	2.188 ± 0.466
PRF-fit source offset from KIC position	2.180 ± 0.461	4.73	-0.548 ± 0.372	2.110 ± 0.466
photometric centroid source offset	2.86 ± 0.92	3.09	-1.08 ± 0.64	-2.64 ± 0.96



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



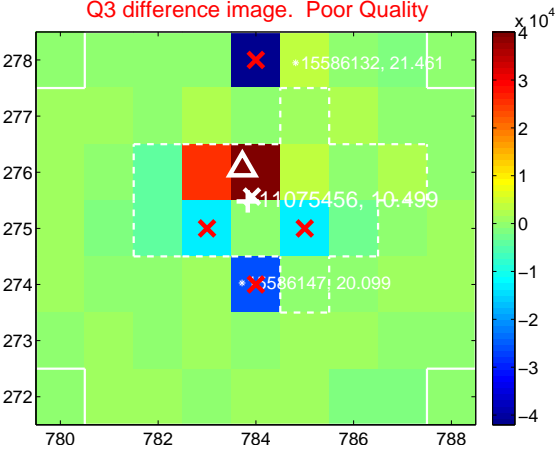
Q2 no difference image



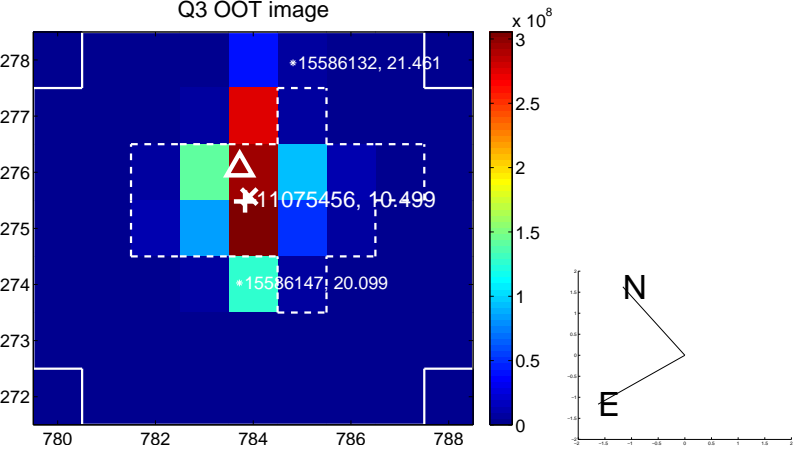
Q2 no OOT image



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.



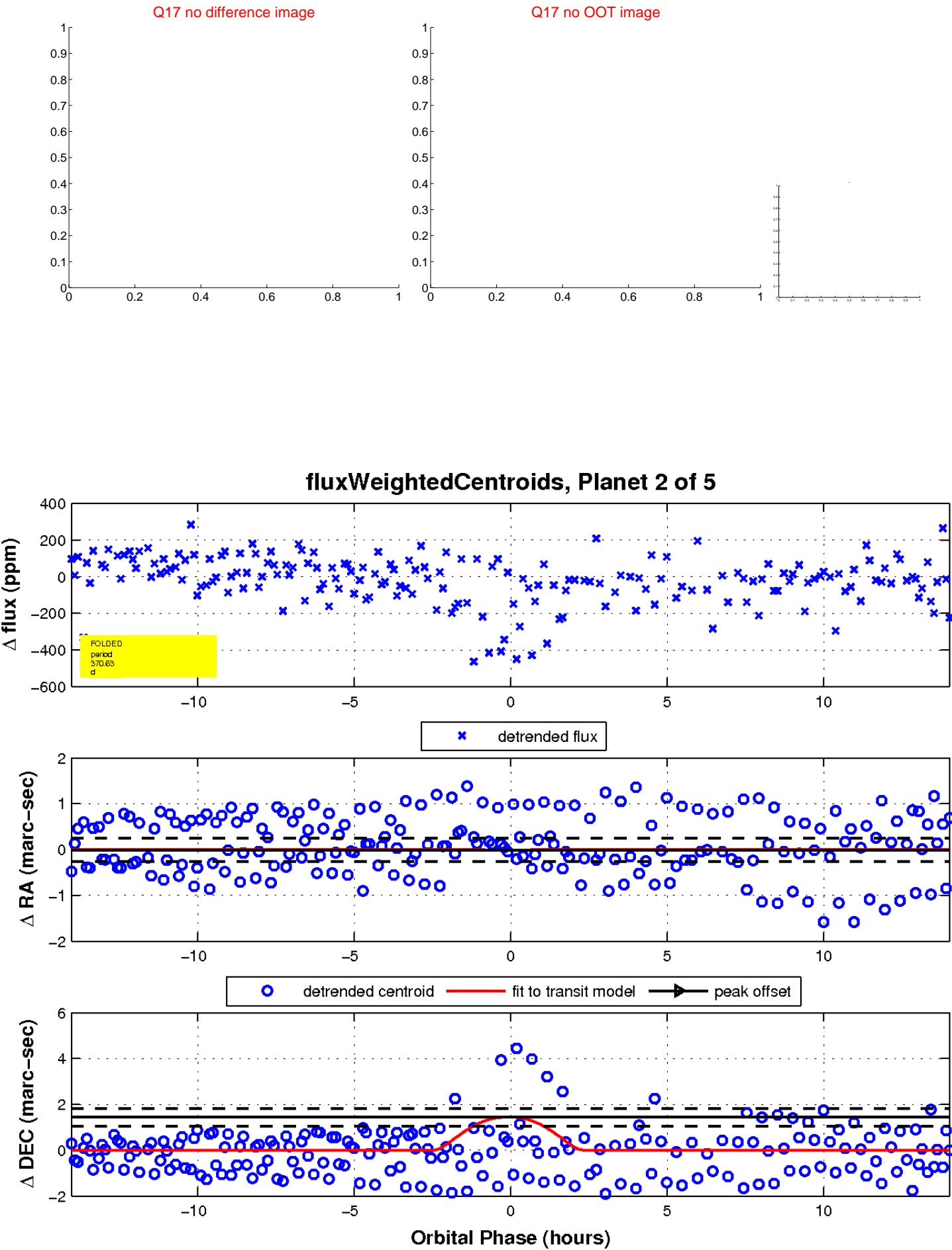
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



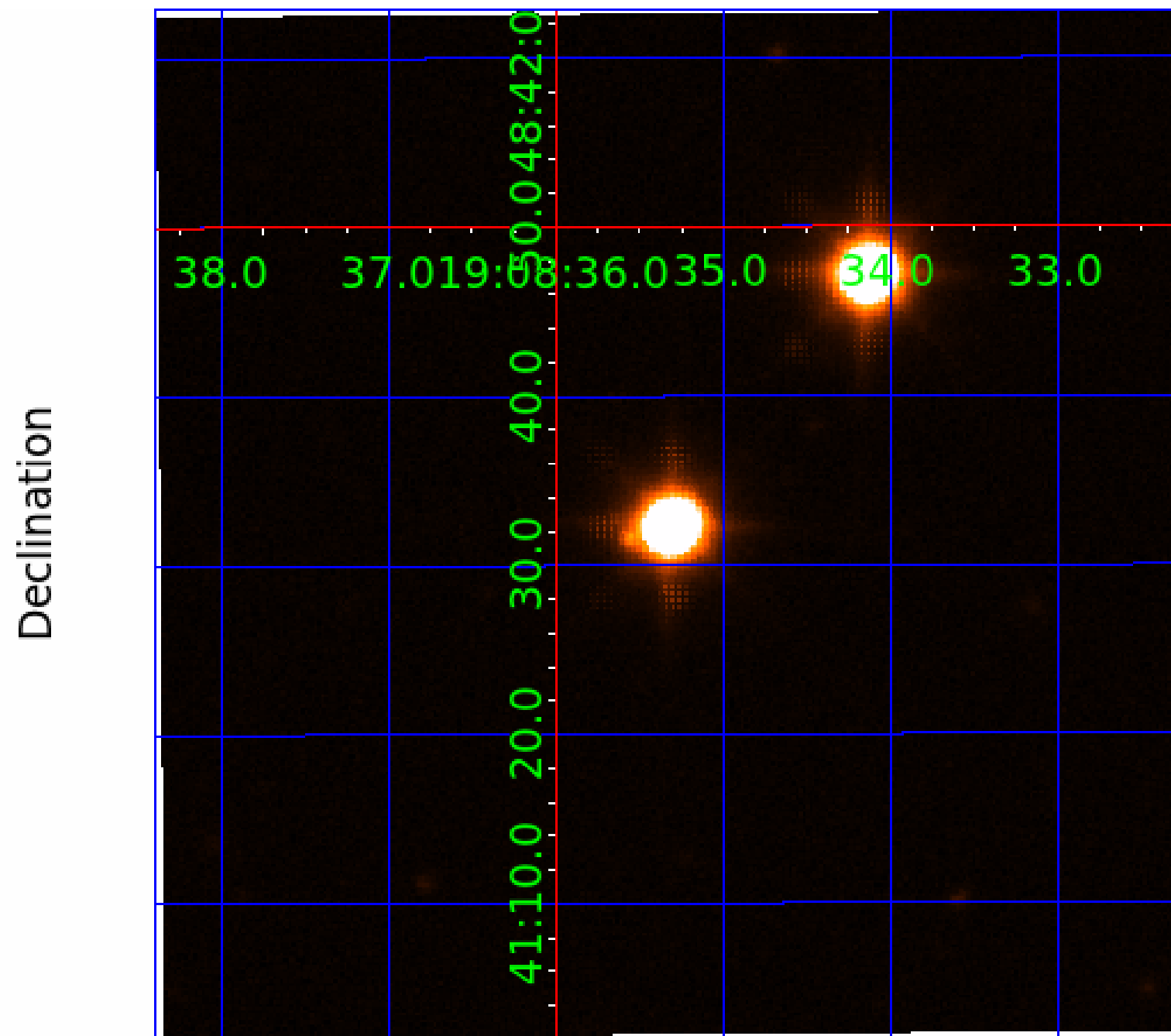
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 011075456

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})
011075456-01	OBS	No	373.934148	304.024730	205.1	15.000	37.3	-1.0	1.43	6514	2.06	2.83
011075456-02	OBS	No	370.628933	262.943077	361.9	4.684	35.2	19.2	1.43	6514	3.93	2.86
011075456-03	OBS	No	384.198606	296.791249	126.9	15.000	25.9	-1.0	1.43	6514	1.62	2.73
011075456-04	OBS	No	374.001138	260.171598	170.3	3.996	18.0	13.1	1.43	6514	2.24	2.83
011075456-05	OBS	No	373.109994	306.837750	133.3	15.000	26.7	-1.0	1.43	6514	1.66	2.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011075456-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
011075456-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
011075456-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—CENT_SATURATED
011075456-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED—HALO_GHOST
011075456-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

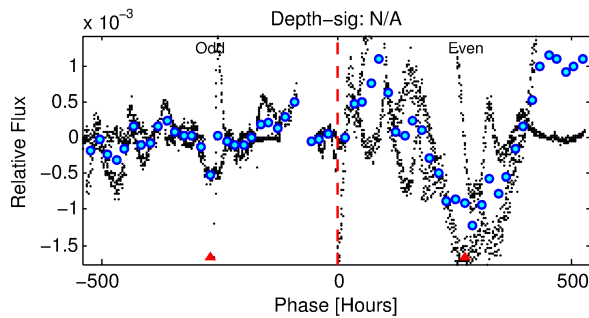
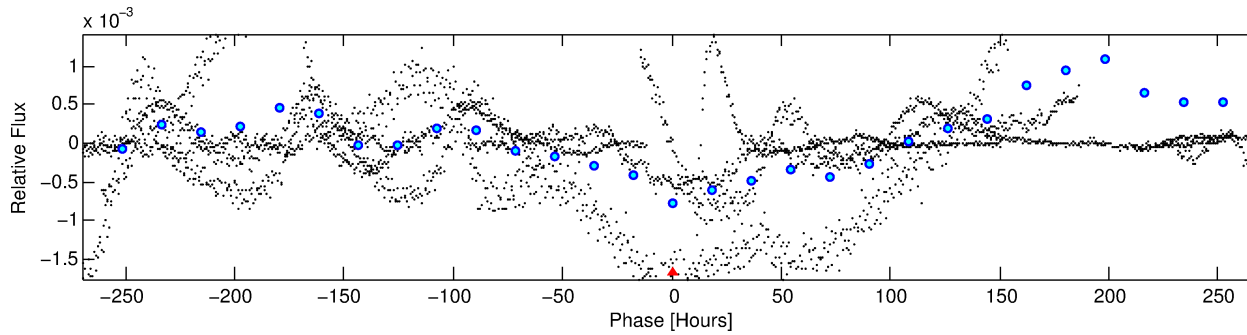
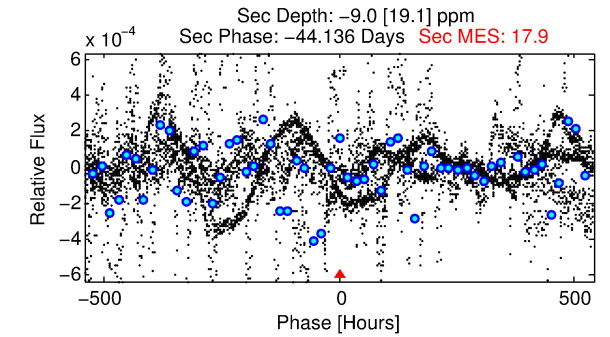
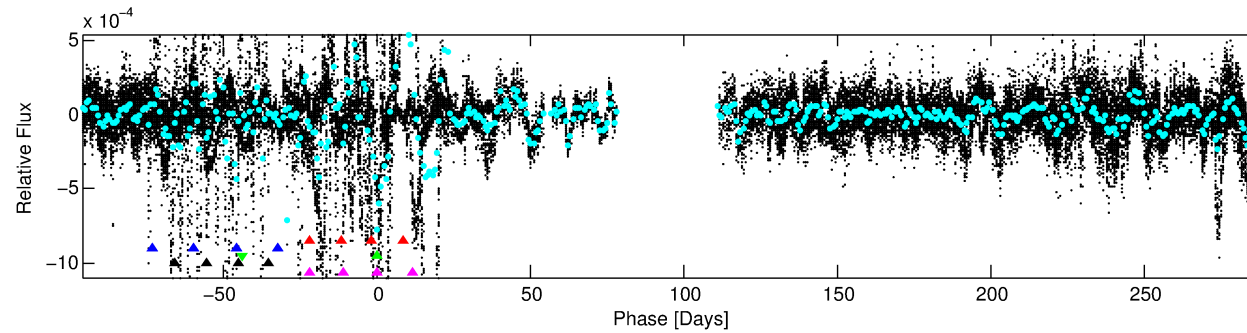
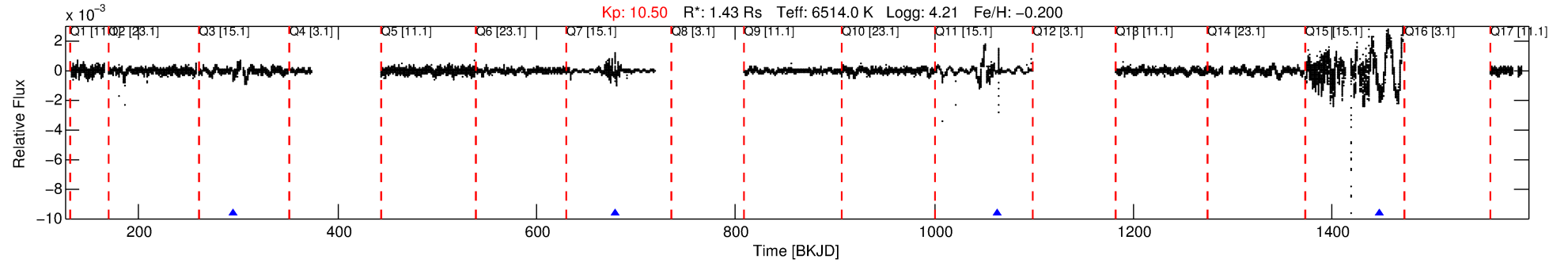
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011075456-03

No Significant Match Found

DV One-Page Summary

KIC: 11075456 Candidate: 3 of 5 Period: 384.199 d



TPS TCE Results:

Period = 384.19861 d
Epoch = 296.7912 BKJD

DV fit results are unavailable

DV Diagnostic Results:

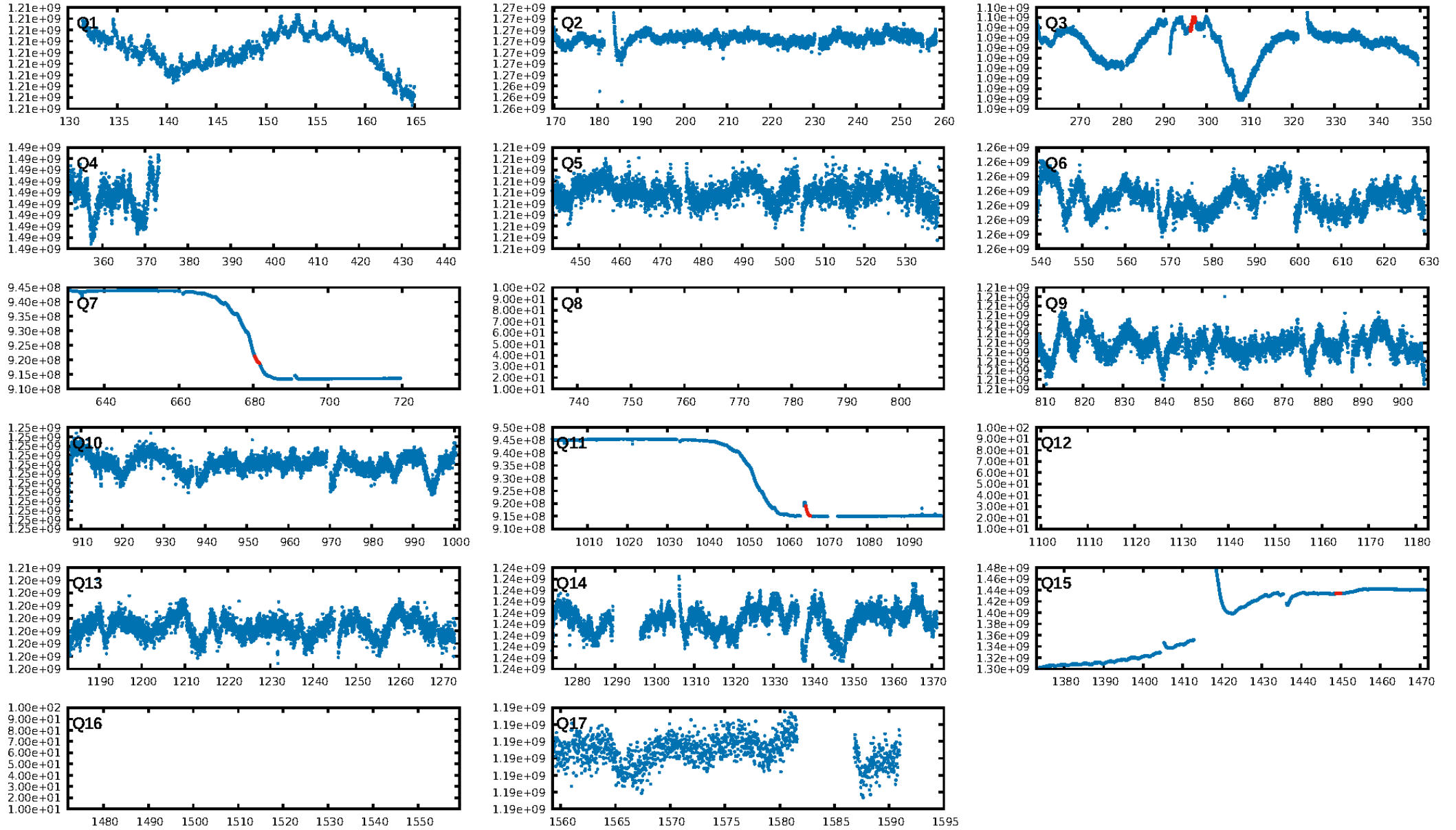
ShortPeriod-sig: 100.0% [15.77 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.7506

Centroid-sig: 38.6%
Centroid-so: 0.110 arcsec [0.08 σ]
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: 0.00 [0/1]

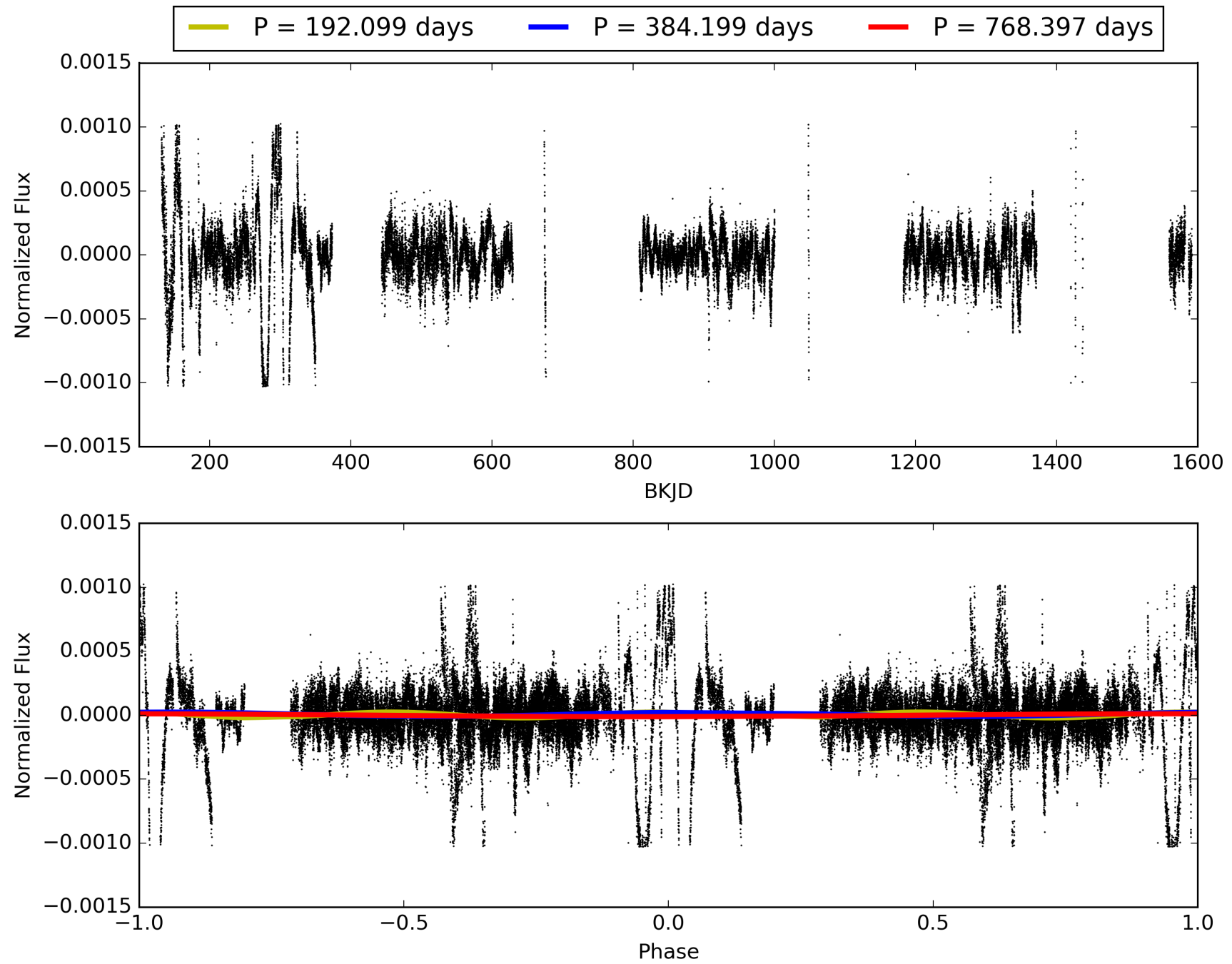
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:35:43 Z

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

TCE 011075456-03, PDC Light Curves

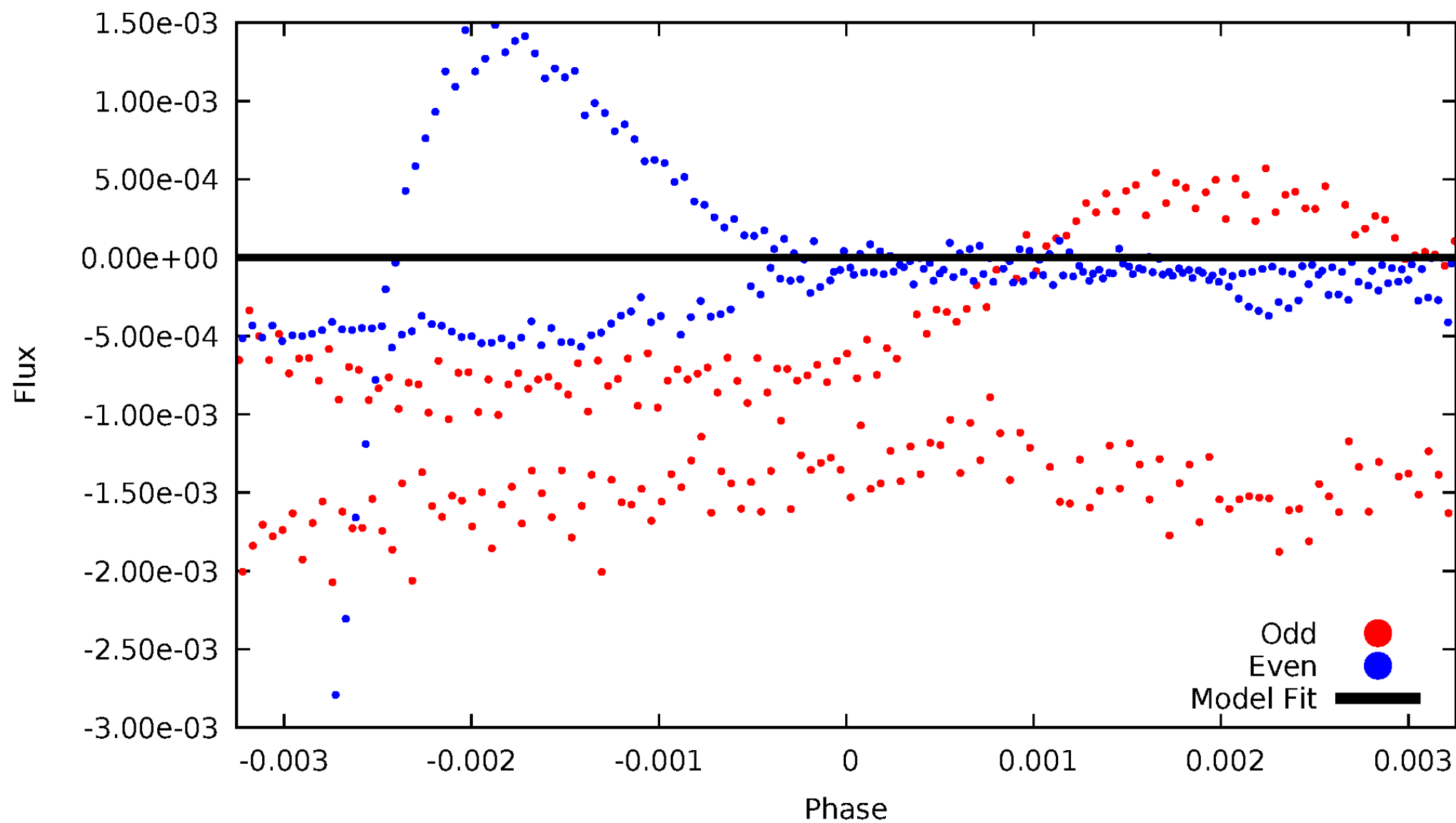


TCE 011075456-03



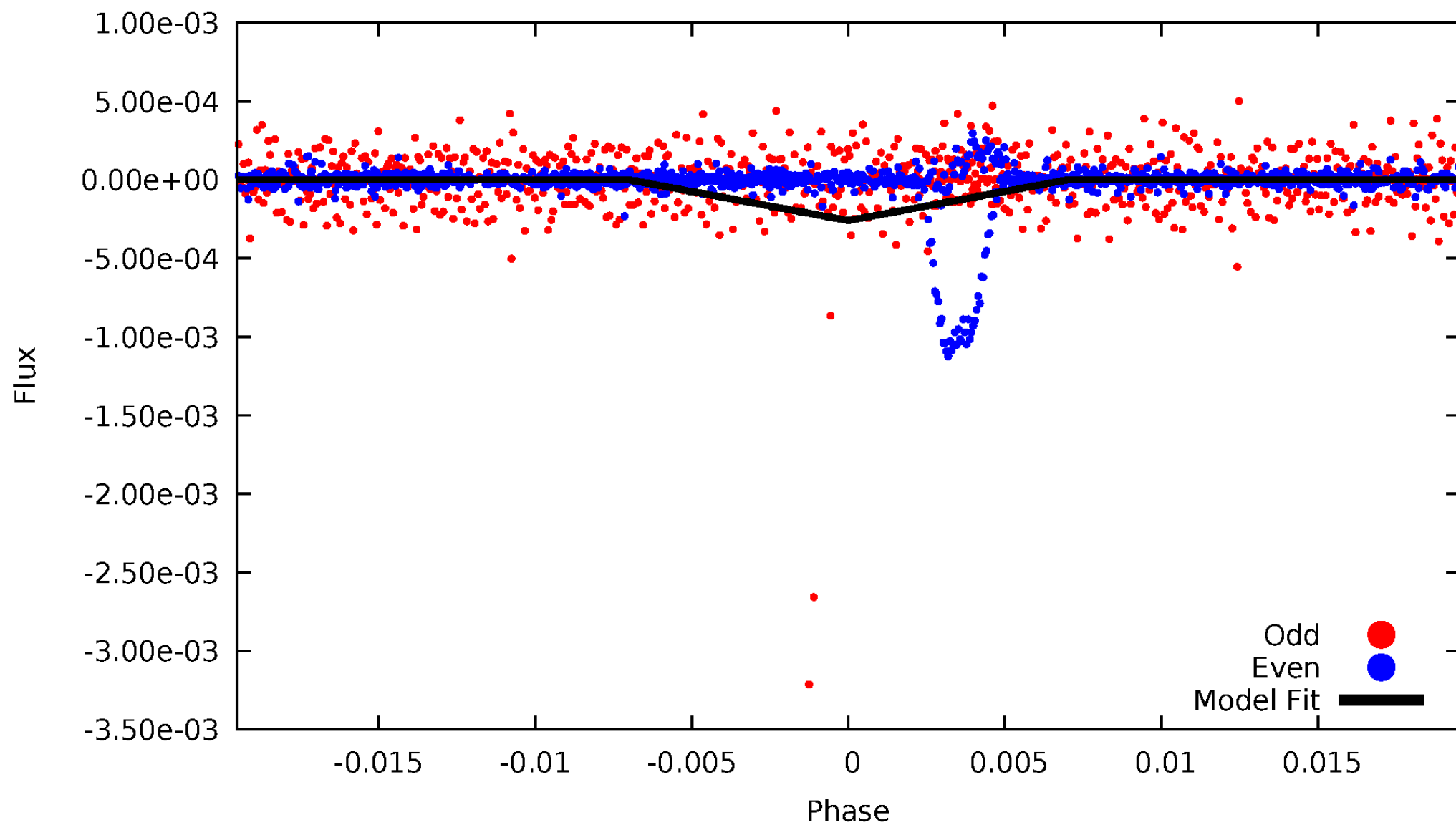
DV Odd/Even

TCE 011075456-03

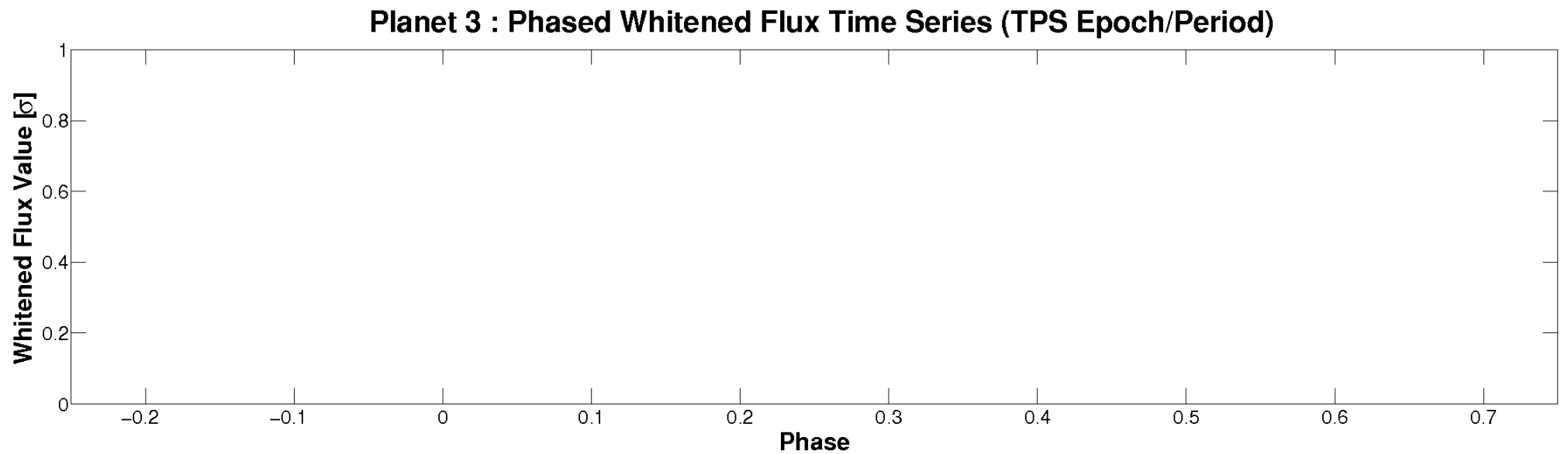
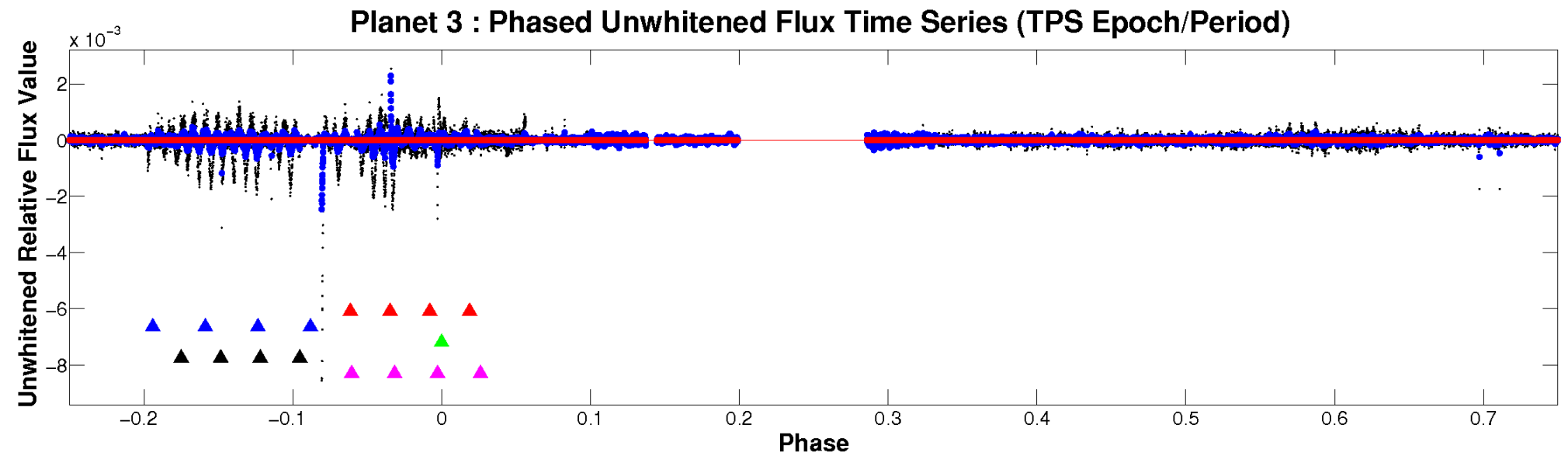


ALT Odd/Even

TCE 011075456-03

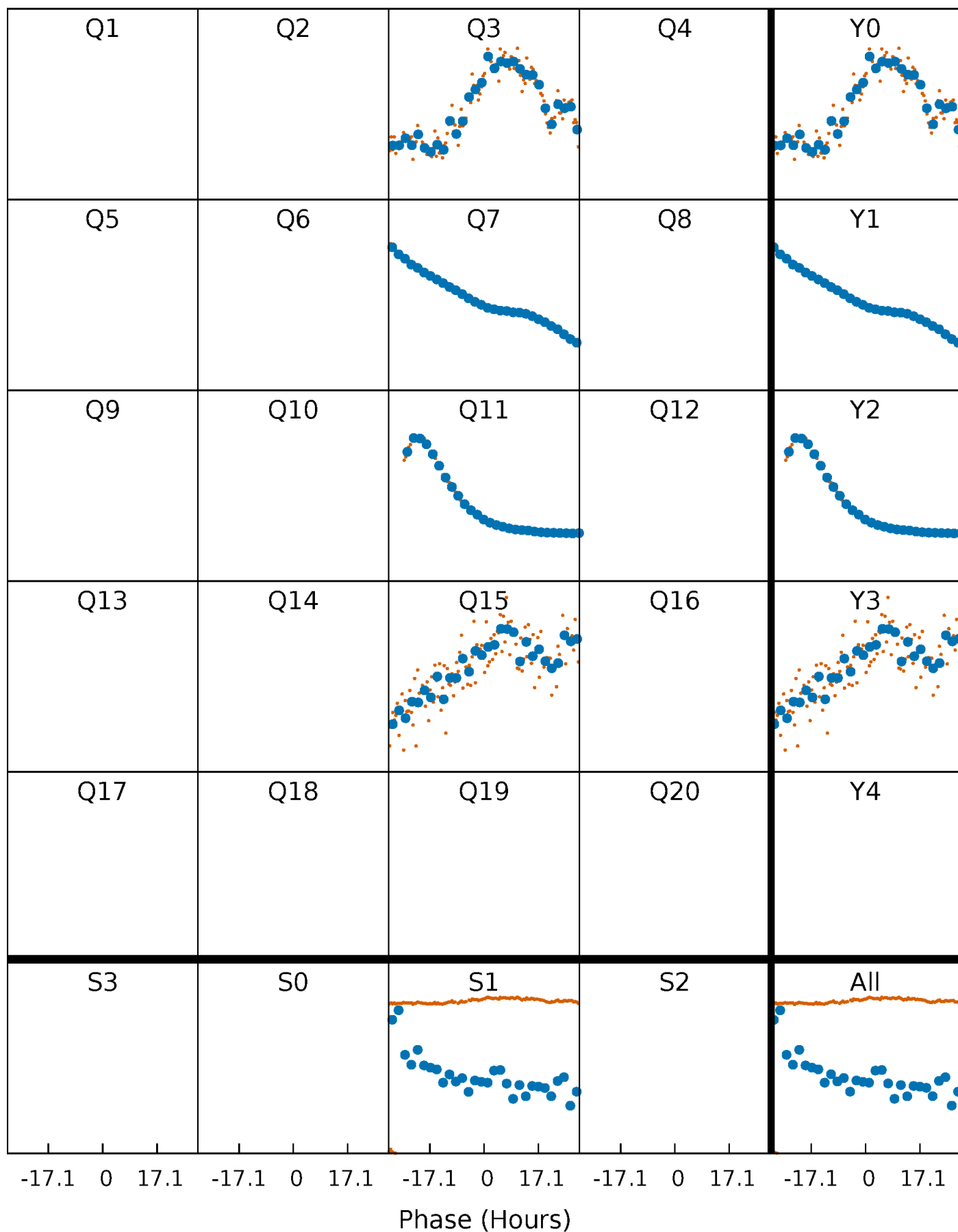


Non-Whitened Vs. Whitened Light Curve



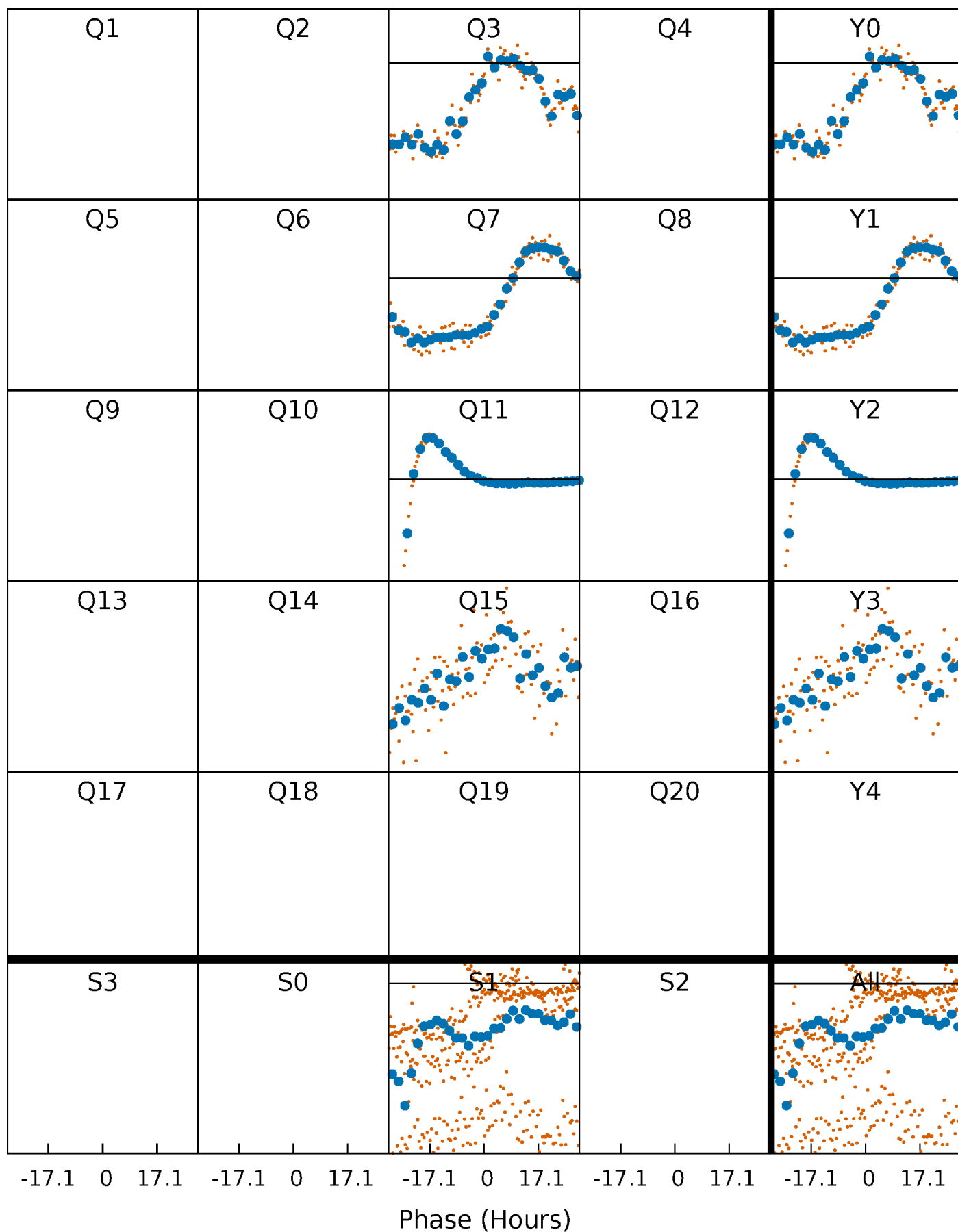
PDC Quarter-Phased Transit Curves

TCE 011075456-03 $P=384.198606$ Days $T_0=296.791249$ (BKJD)



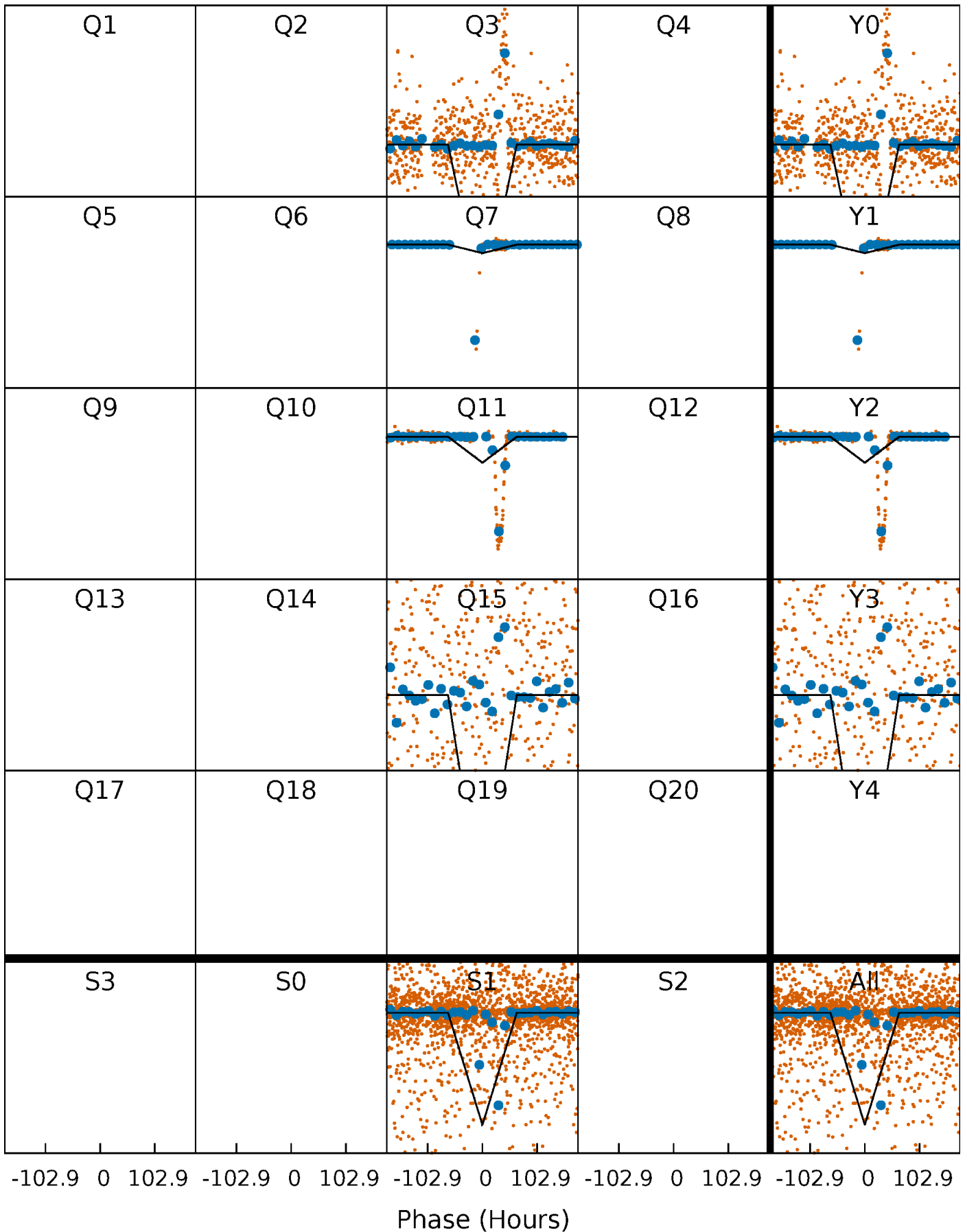
DV Quarter-Phased Transit Curves

TCE 011075456-03 $P=384.198606$ Days $T_0=296.791249$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

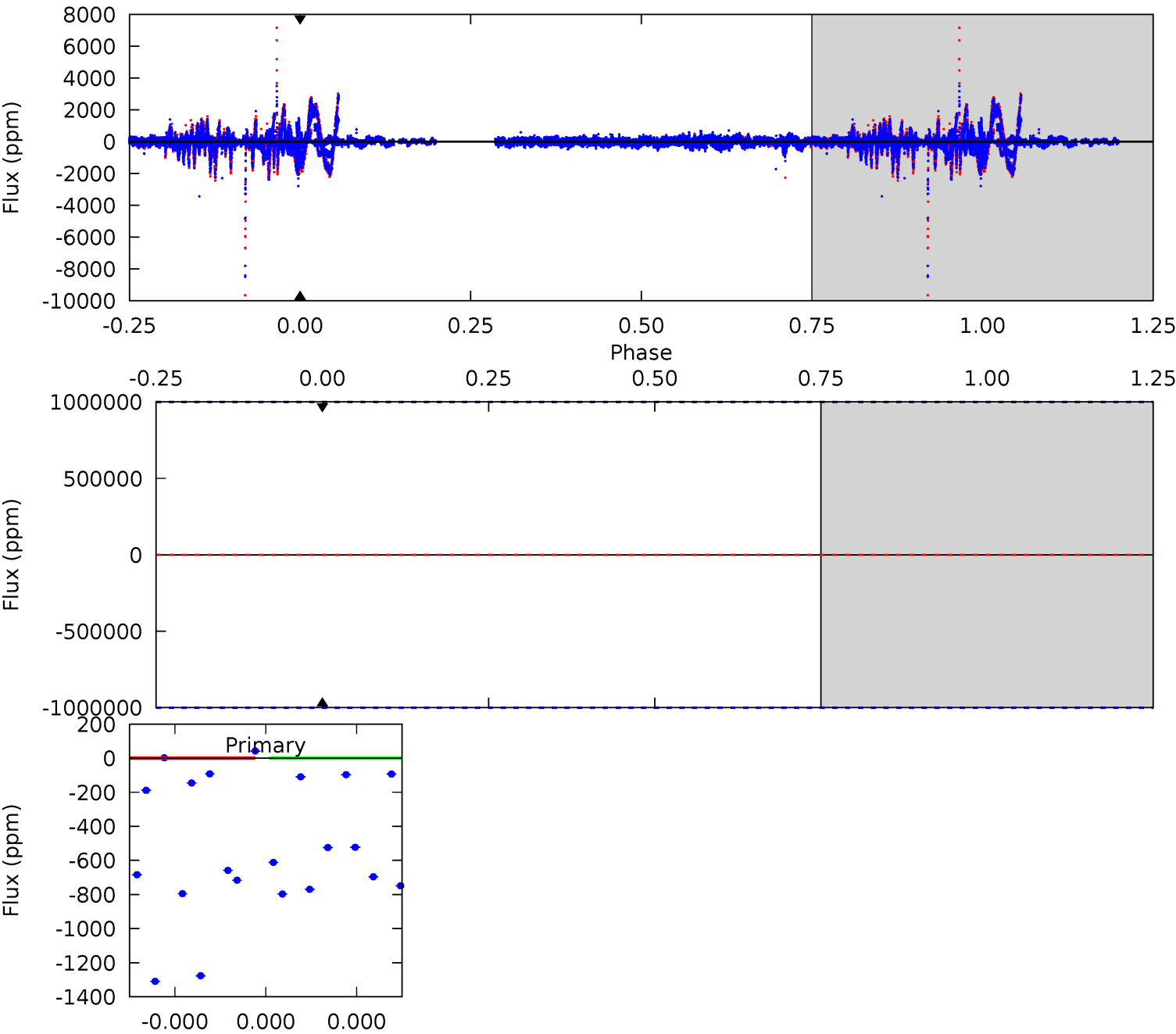
TCE 011075456-03 P=384.198606 Days $T_0=295.314988$ (BKJD)



DV Model-Shift Uniqueness Test

011075456-03, P = 384.198606 Days, E = 296.791249 Days

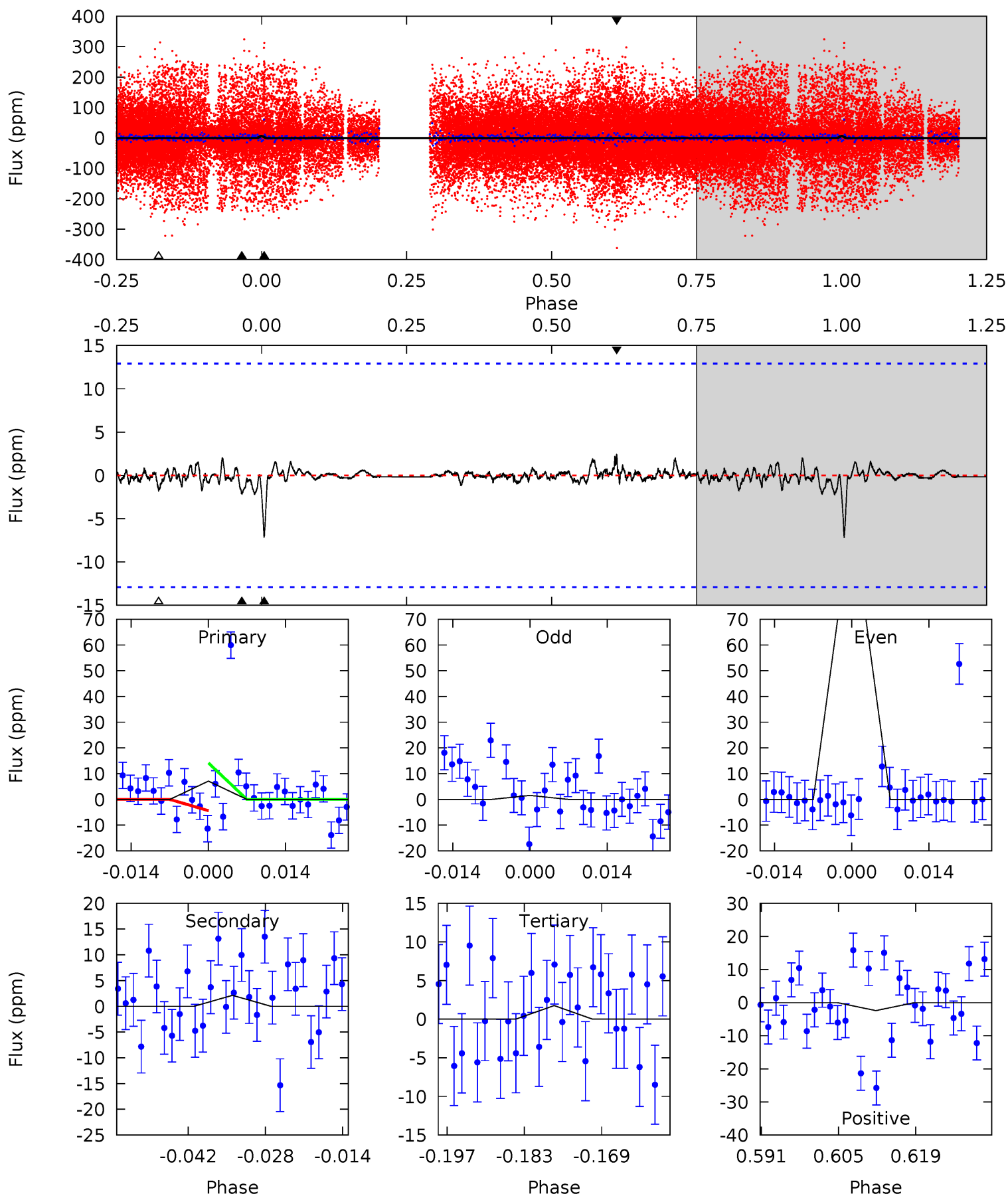
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011075456-03, P = 384.198606 Days, E = 295.314988 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.72	0.82	0.68	0.92	4.96	2.46	0.22	2.05	1.80	0.14	-0.11	19.5	1.32	0.25	1.93



Stellar Parameters For KIC 011075456

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6514^{+58}_{-58}	$4.207^{+0.020}_{-0.018}$	$-0.200^{+0.300}_{-0.200}$	$1.430^{+0.078}_{-0.095}$	$1.205^{+0.120}_{-0.147}$	$0.580^{+0.062}_{-0.046}$
	+1%/-1%	+0%/-0%	+150%/-100%	+5%/-7%	+10%/-12%	+11%/-8%
Source	PHO10	AST10	PHO10	DSEP		

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

Secondary Eclipse Parameters for KIC 011075456-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$11.22^{+11.62}_{-7.78}$	458^{+6}_{-6}	-3089^{+36389}_{-28379}	$-553.832^{+1137644.784}_{-1070021.283}$
Alt.	-2 ± 3	$12.20^{+11.60}_{-7.99}$	458^{+6}_{-7}	1830^{+587}_{-3441}	$6.556^{+77.861}_{-7.717}$

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

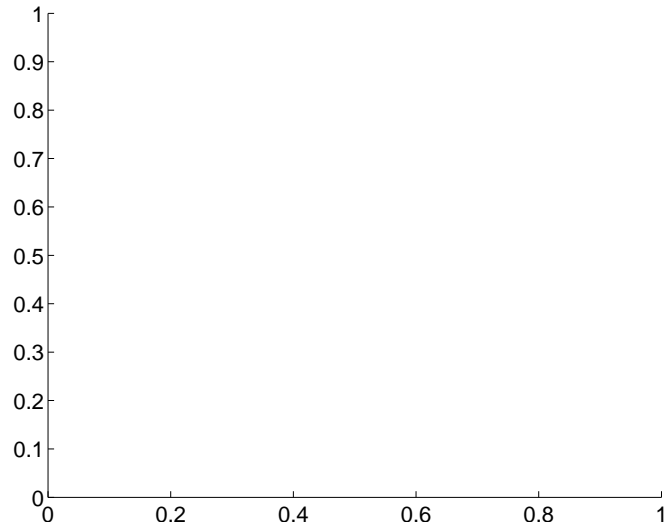
Supplemental centroid analysis for 011075456-03. **Kepler magnitude: 10.50.** Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

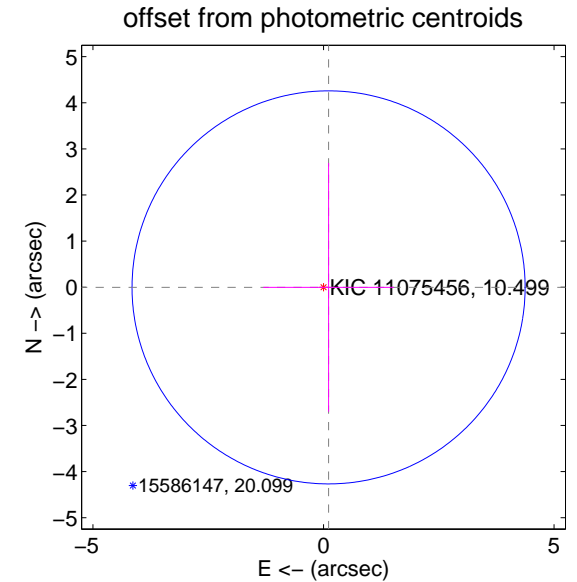
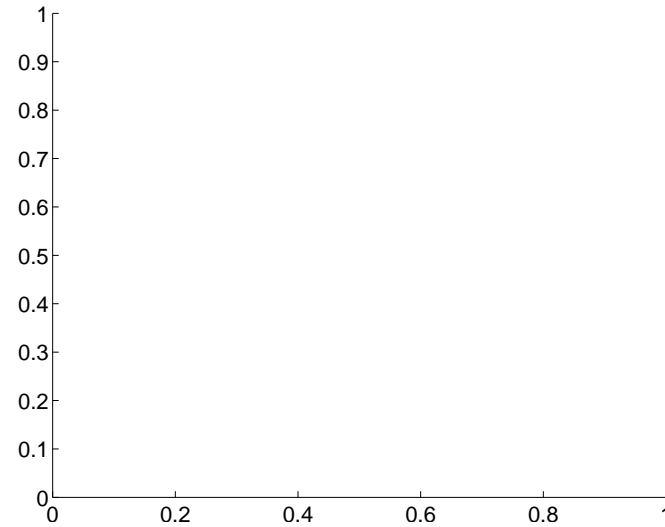
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	0.11 ± 1.42	0.08	-0.11 ± 1.42	-0.00 ± 2.70

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

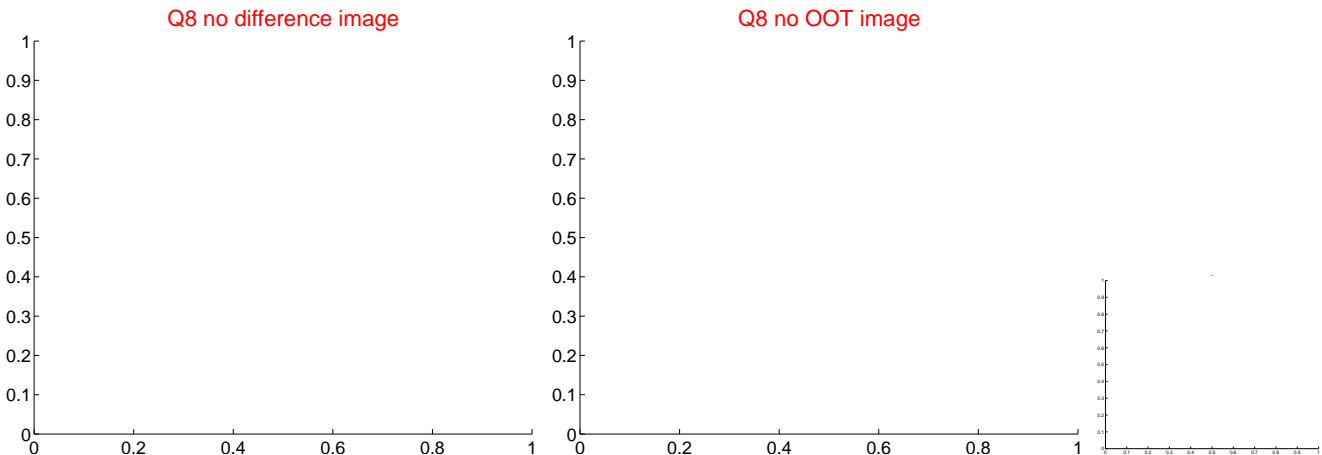
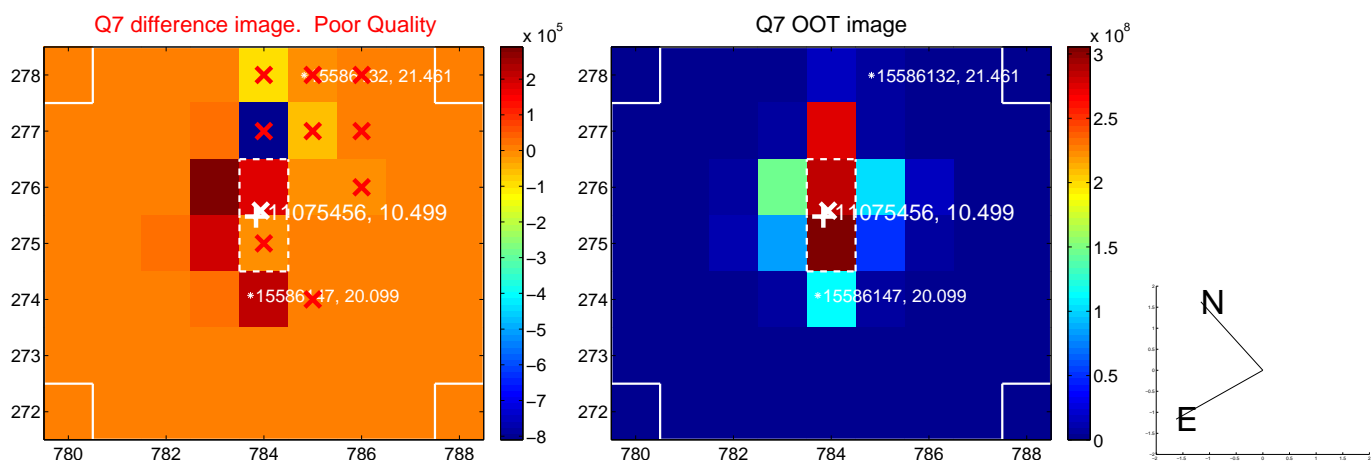
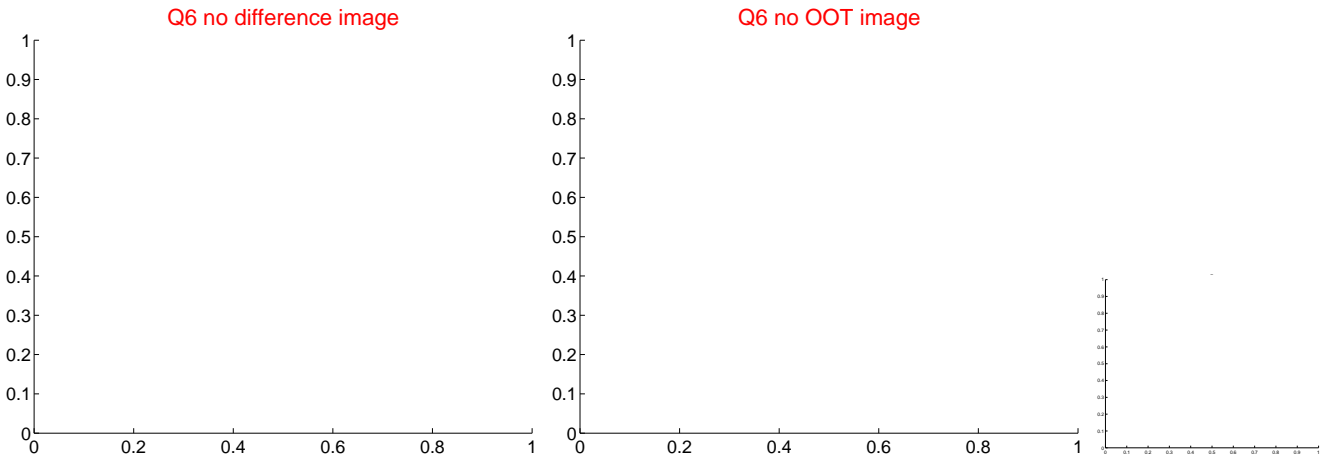
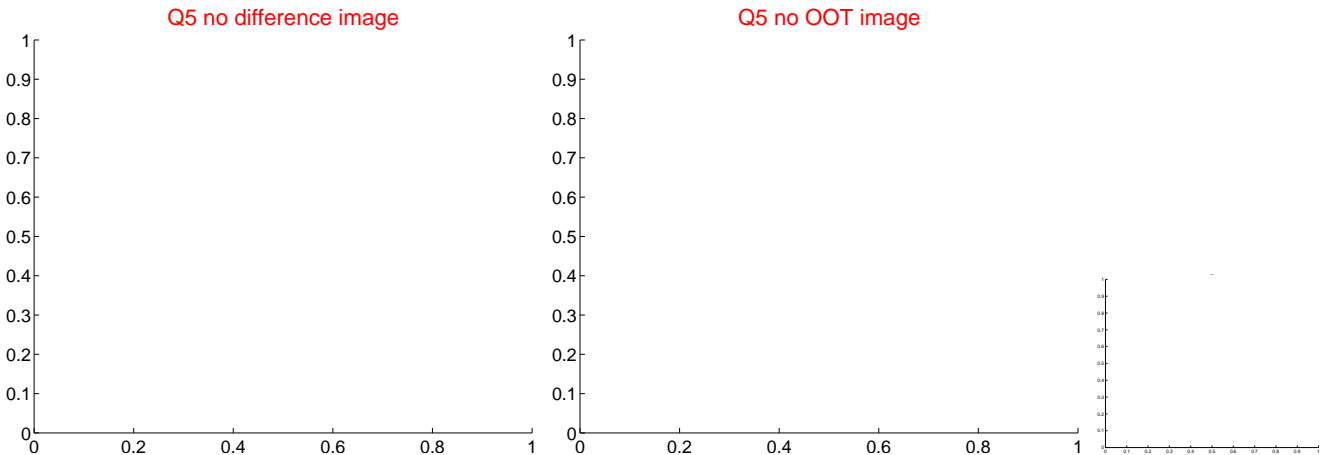


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



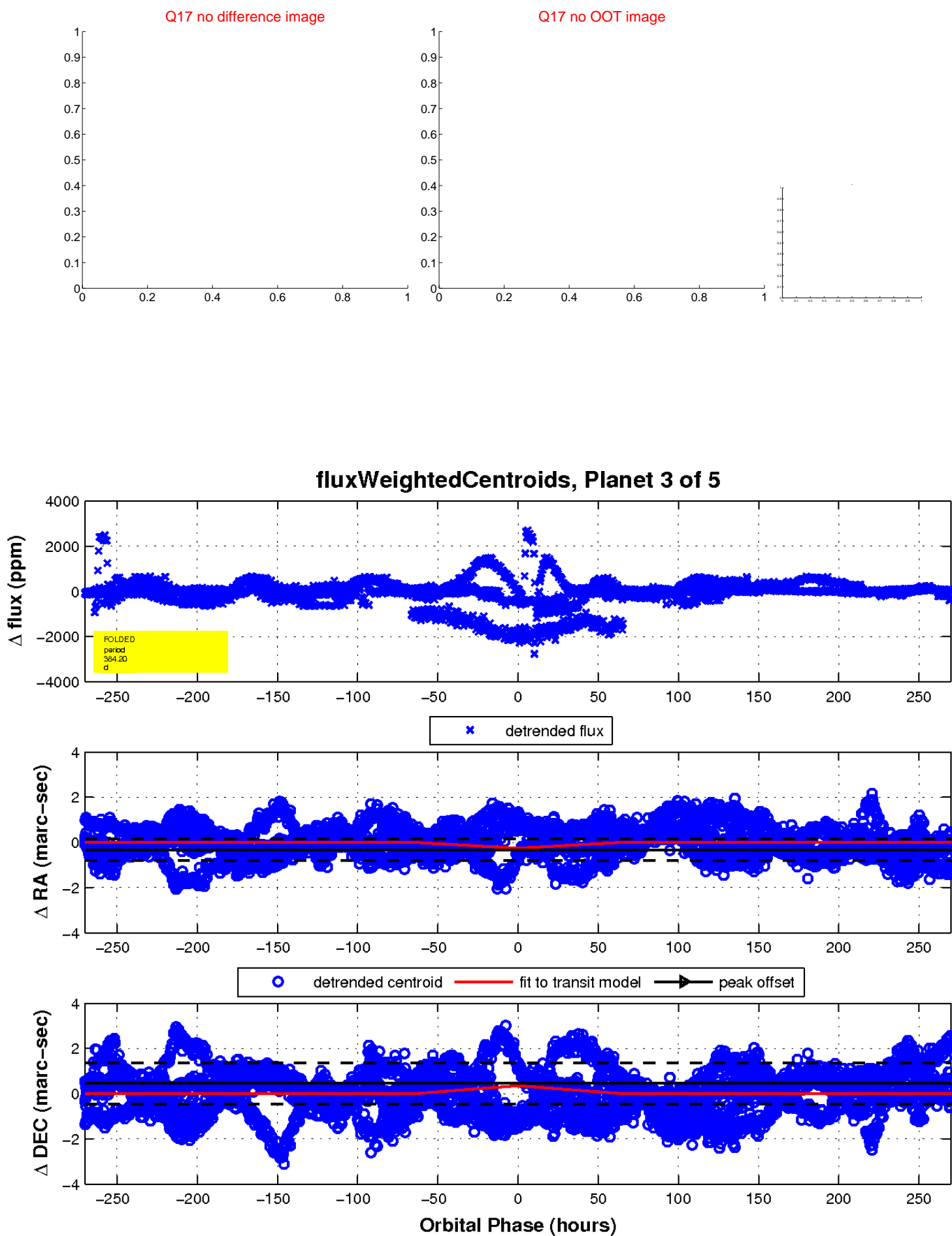
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



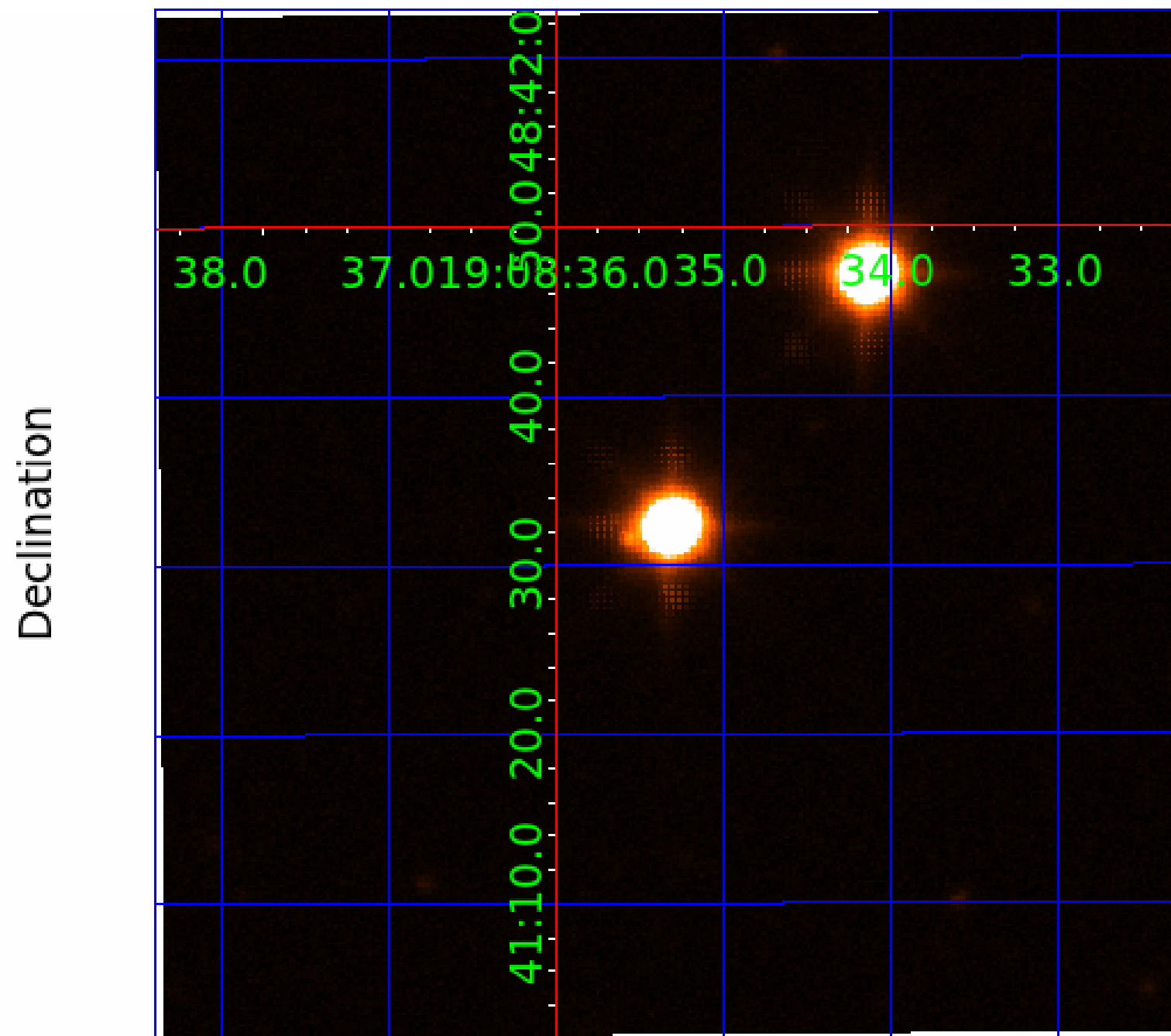
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 011075456

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})
011075456-01	OBS	No	373.934148	304.024730	205.1	15.000	37.3	-1.0	1.43	6514	2.06	2.83
011075456-02	OBS	No	370.628933	262.943077	361.9	4.684	35.2	19.2	1.43	6514	3.93	2.86
011075456-03	OBS	No	384.198606	296.791249	126.9	15.000	25.9	-1.0	1.43	6514	1.62	2.73
011075456-04	OBS	No	374.001138	260.171598	170.3	3.996	18.0	13.1	1.43	6514	2.24	2.83
011075456-05	OBS	No	373.109994	306.837750	133.3	15.000	26.7	-1.0	1.43	6514	1.66	2.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011075456-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
011075456-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
011075456-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—CENT_SATURATED
011075456-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED—HALO_GHOST
011075456-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

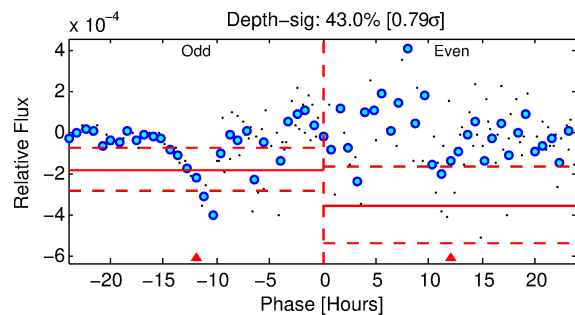
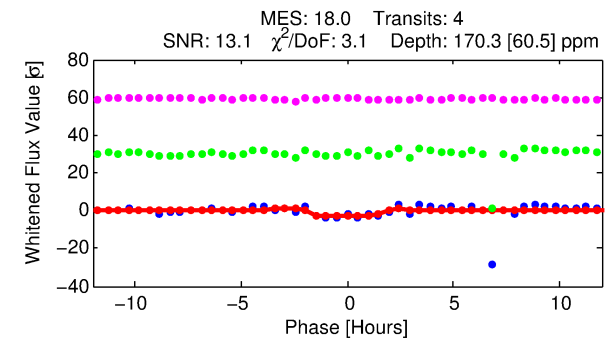
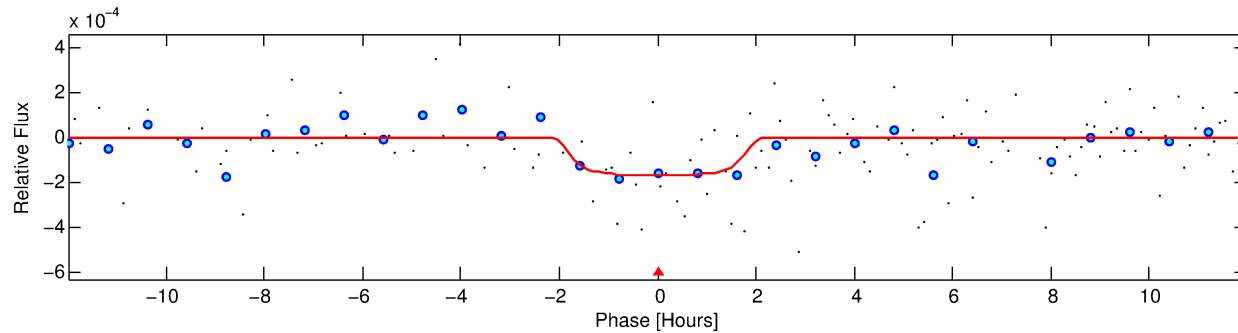
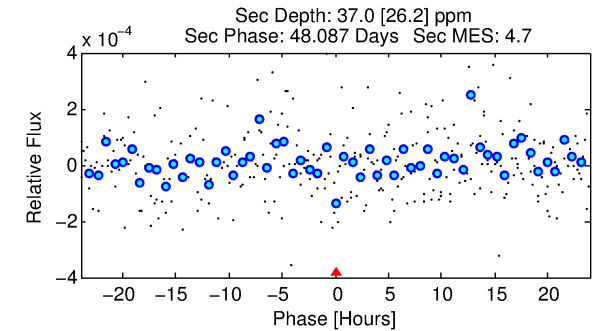
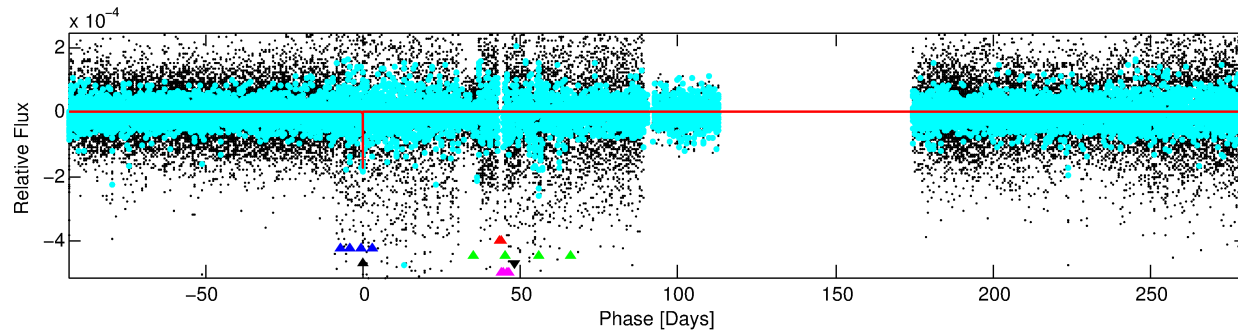
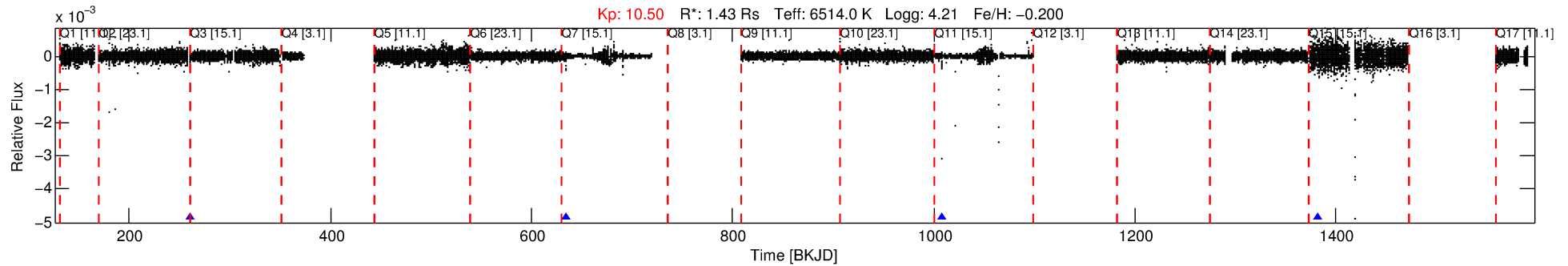
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011075456-04

No Significant Match Found

DV One-Page Summary

KIC: 11075456 Candidate: 4 of 5 Period: 374.001 d



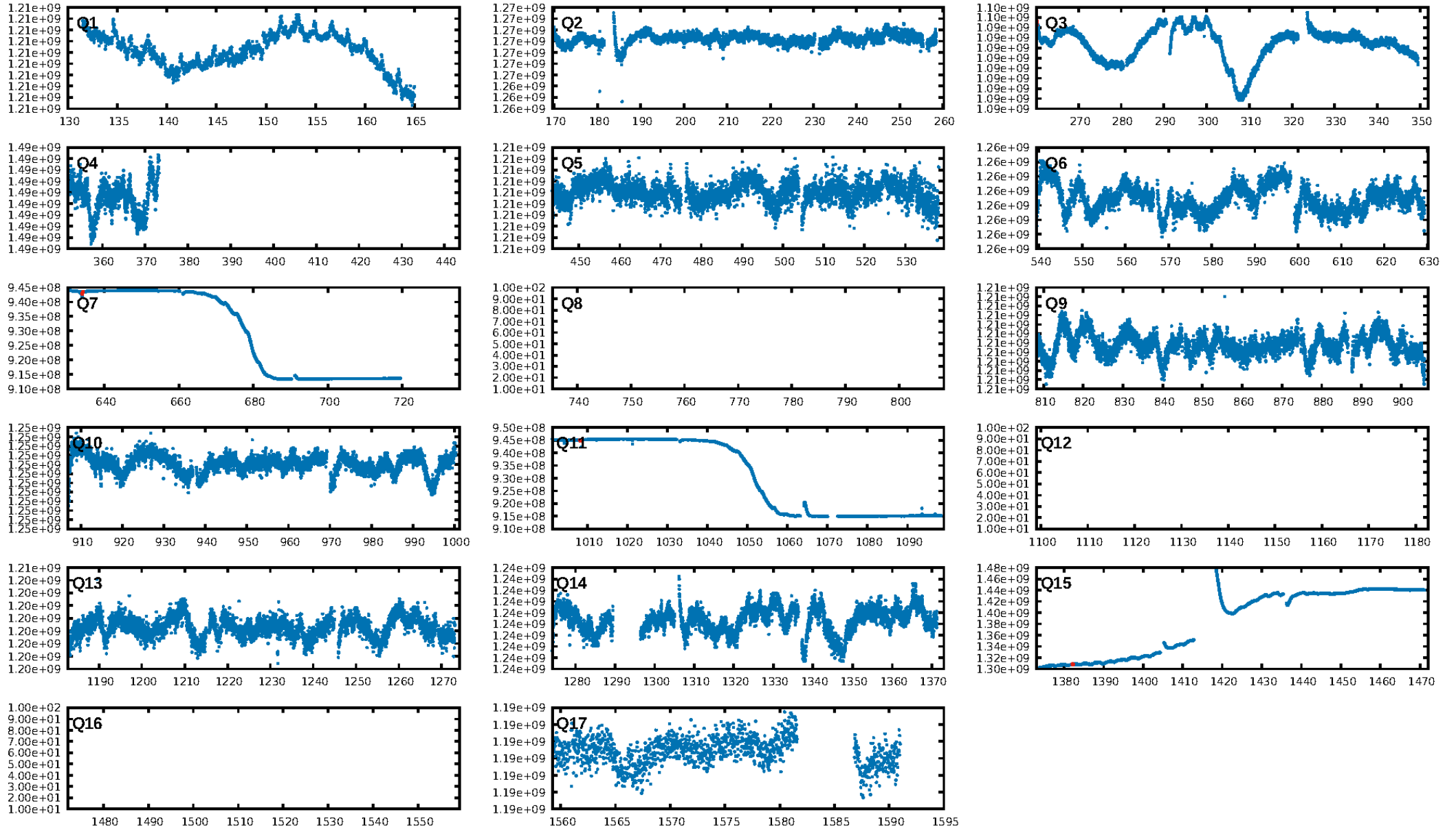
DV Fit Results:

Period = 374.00114 [0.02168] d
Epoch = 260.1716 [0.0408] BKJD
Rp/R* = 0.0144 [0.0110]
a/R* = 292.17 [1222.48]
b = 0.93 [0.63]
Seff = 2.83 [0.18]
Teq = 331 [5] K
Rp = 2.24 [1.72] Re
a = 1.0802 [0.0506] AU
Ag = 4735.50 [7987.70] [0.59σ]
Teffp = 4241 [1788] K [2.19σ]

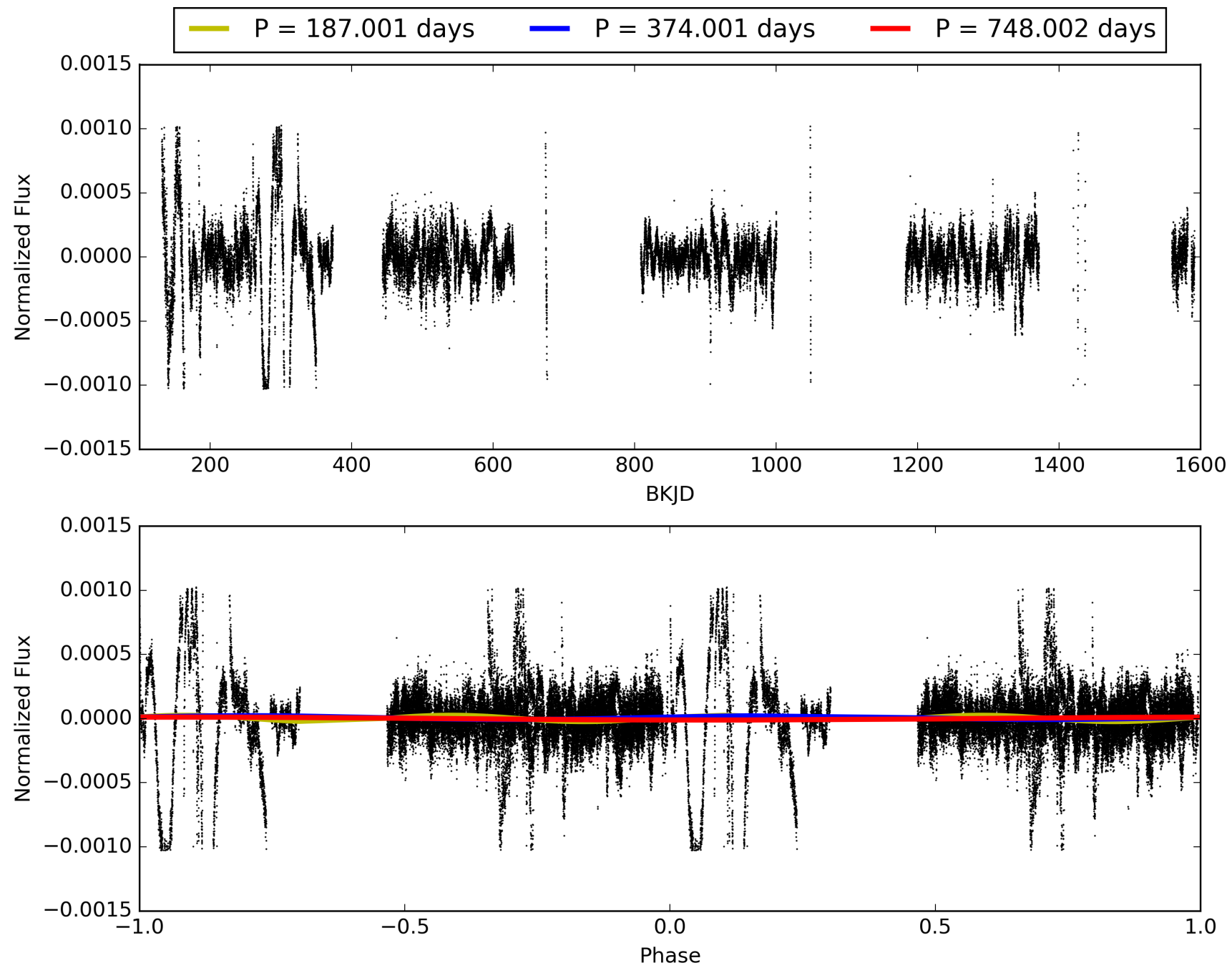
DV Diagnostic Results:

ShortPeriod-sig: 8.2% [0.10σ]
LongPeriod-sig: 100.0% [15.77σ]
ModelChiSquare2-sig: 14.9%
ModelChiSquareGof-sig: 0.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.06195
Centroid-sig: 14.4%
Centroid-so: 1.980 arcsec [1.29σ]
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: 1.00 [1/1]

TCE 011075456-04, PDC Light Curves

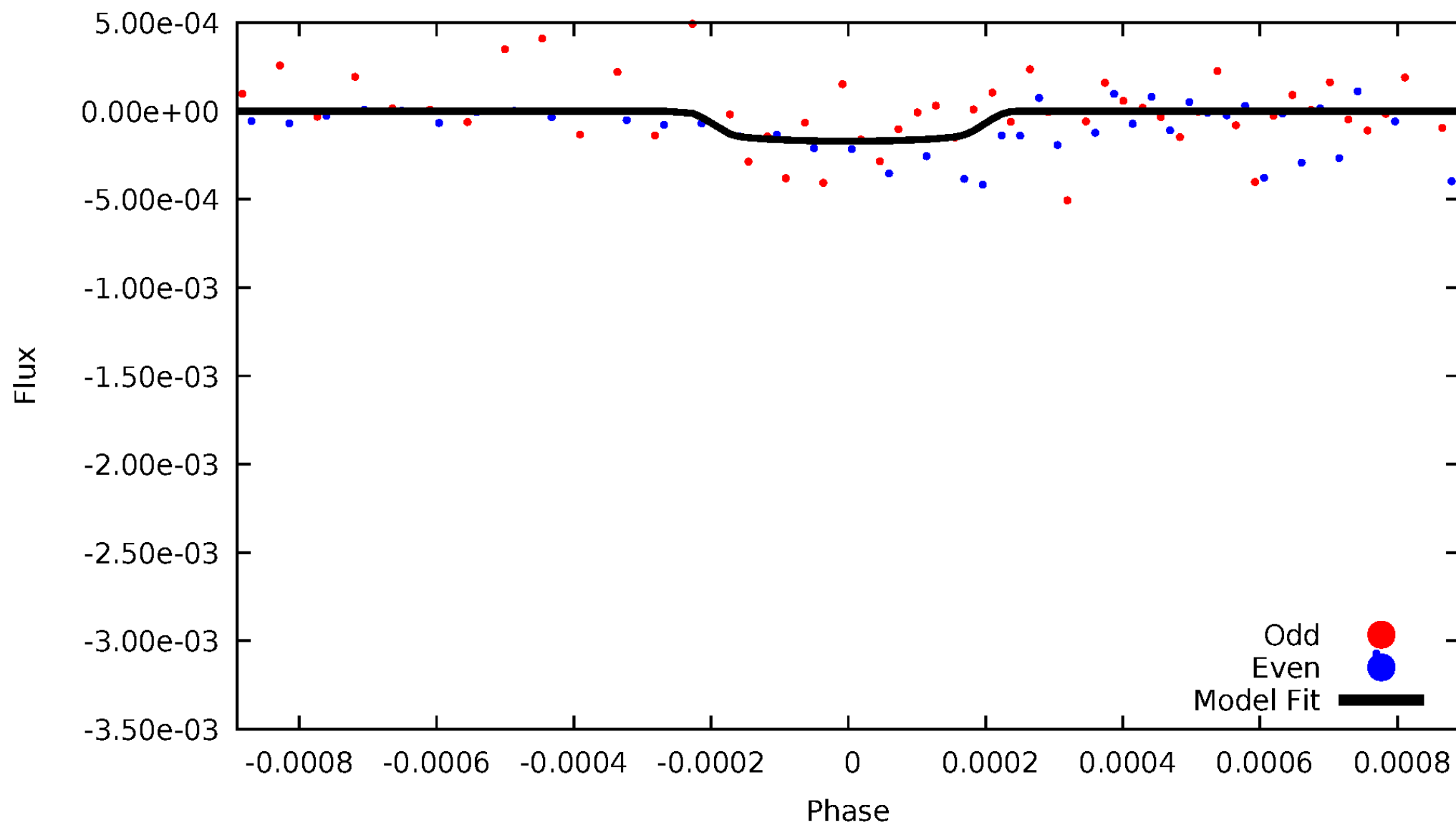


TCE 011075456-04



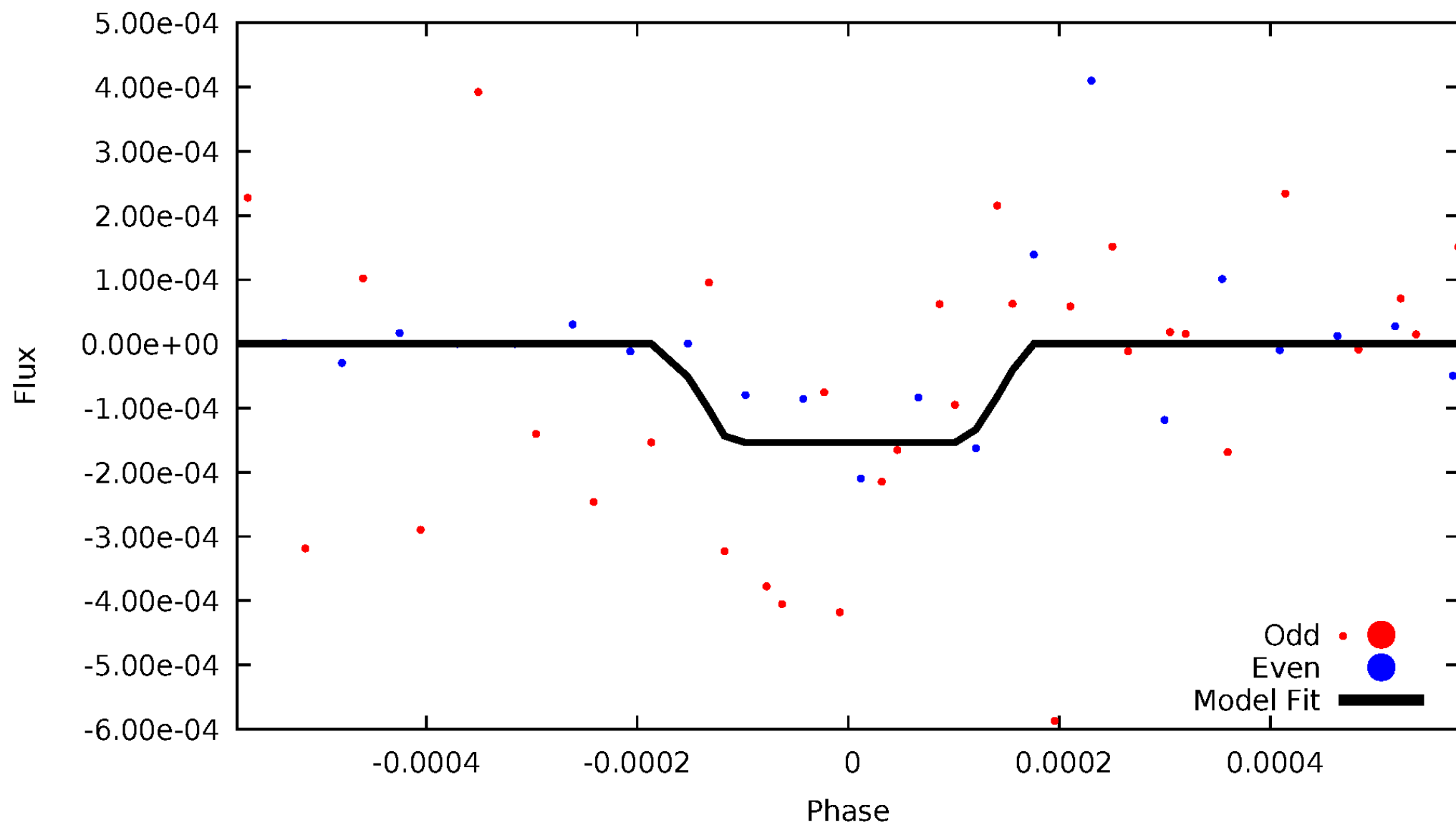
DV Odd/Even

TCE 011075456-04



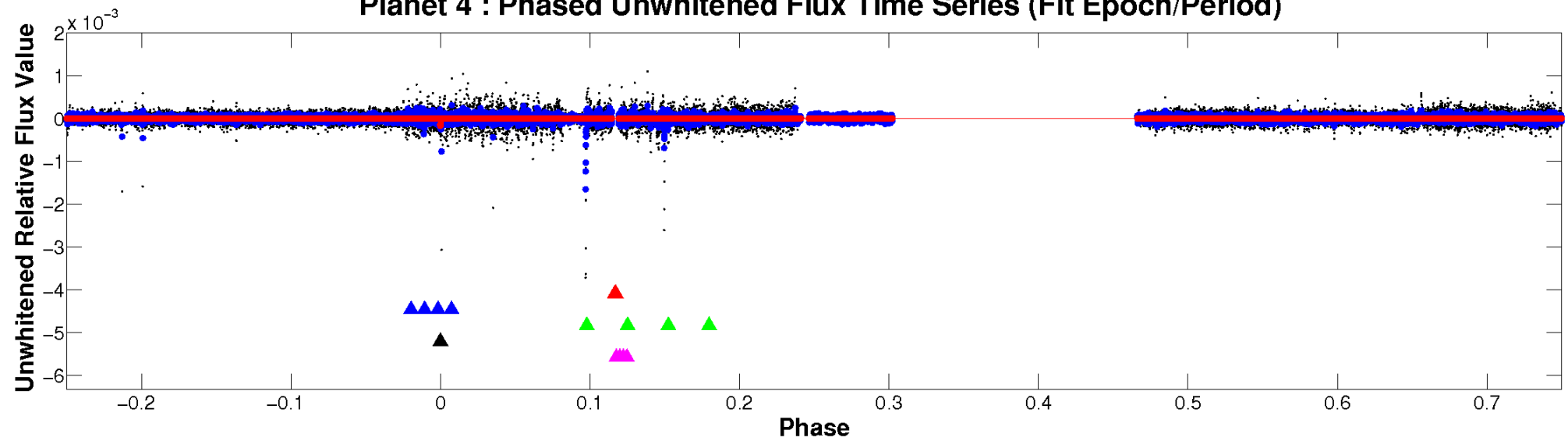
ALT Odd/Even

TCE 011075456-04

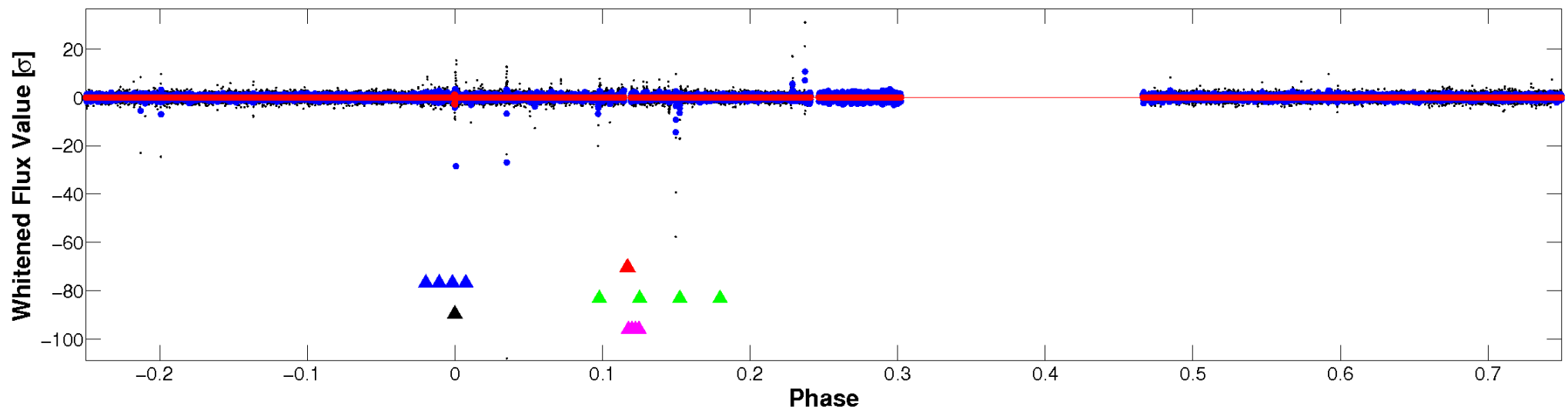


Non-Whitened Vs. Whitened Light Curve

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

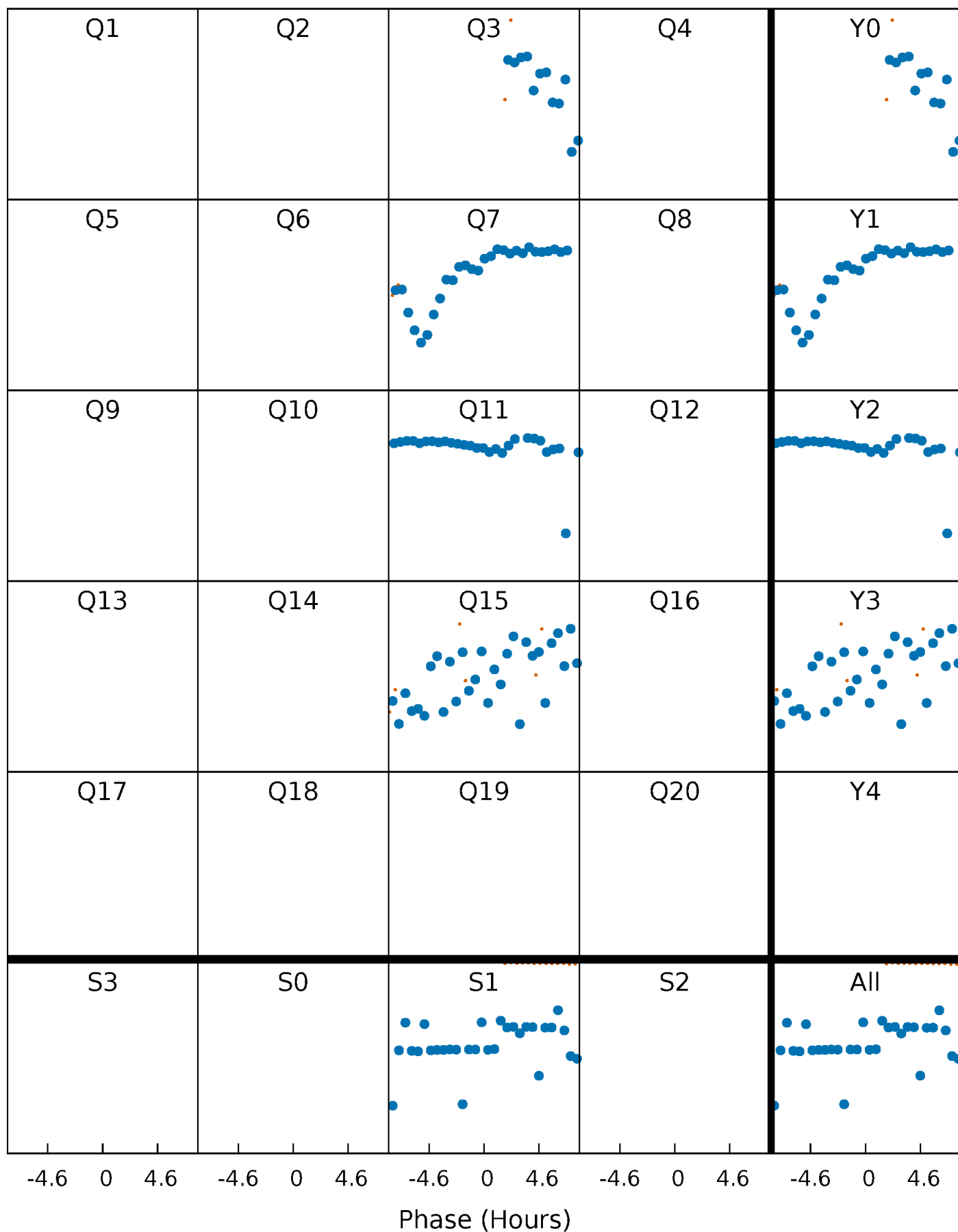


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



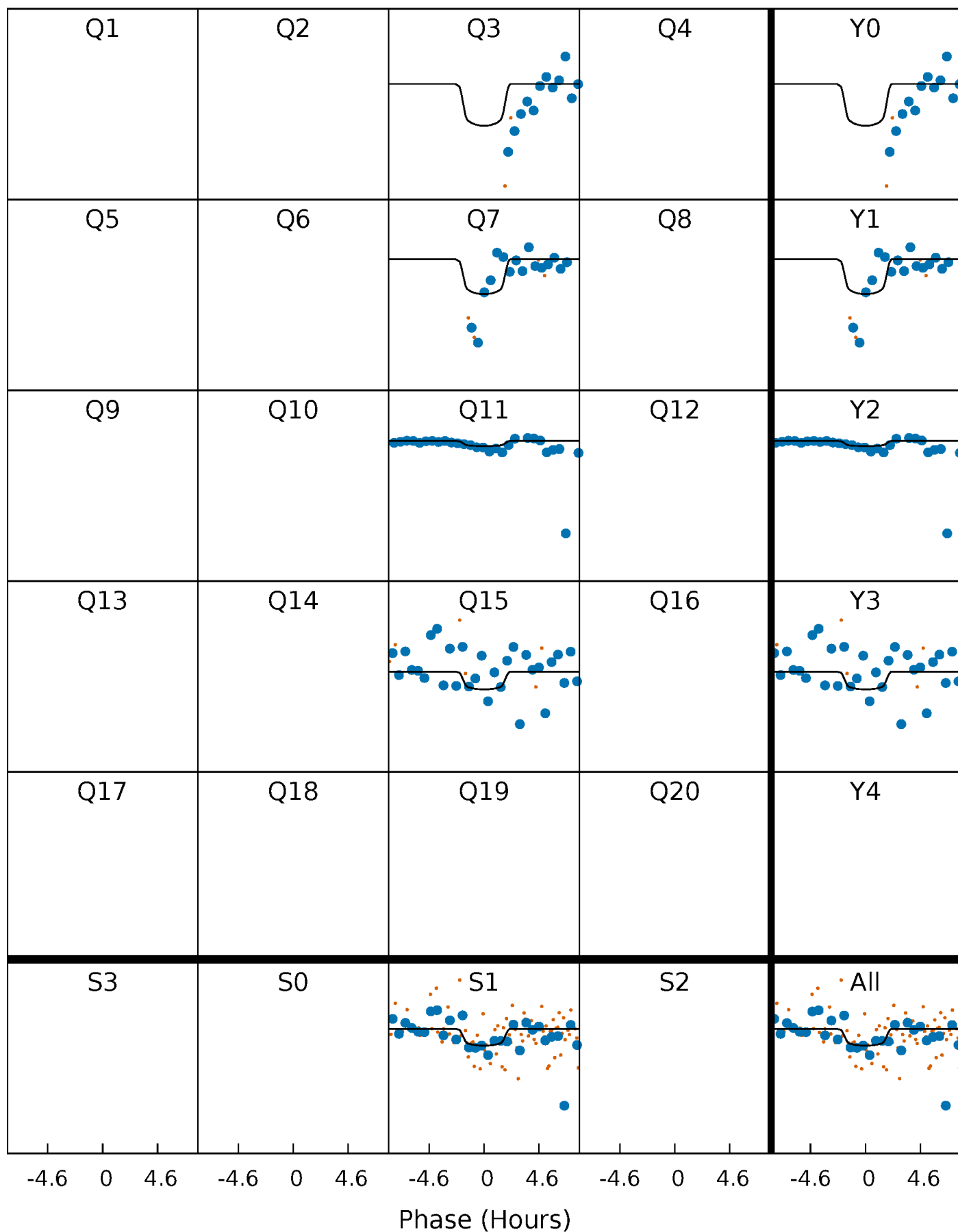
PDC Quarter-Phased Transit Curves

TCE 011075456-04 P=374.001138 Days $T_0=260.171598$ (BKJD)



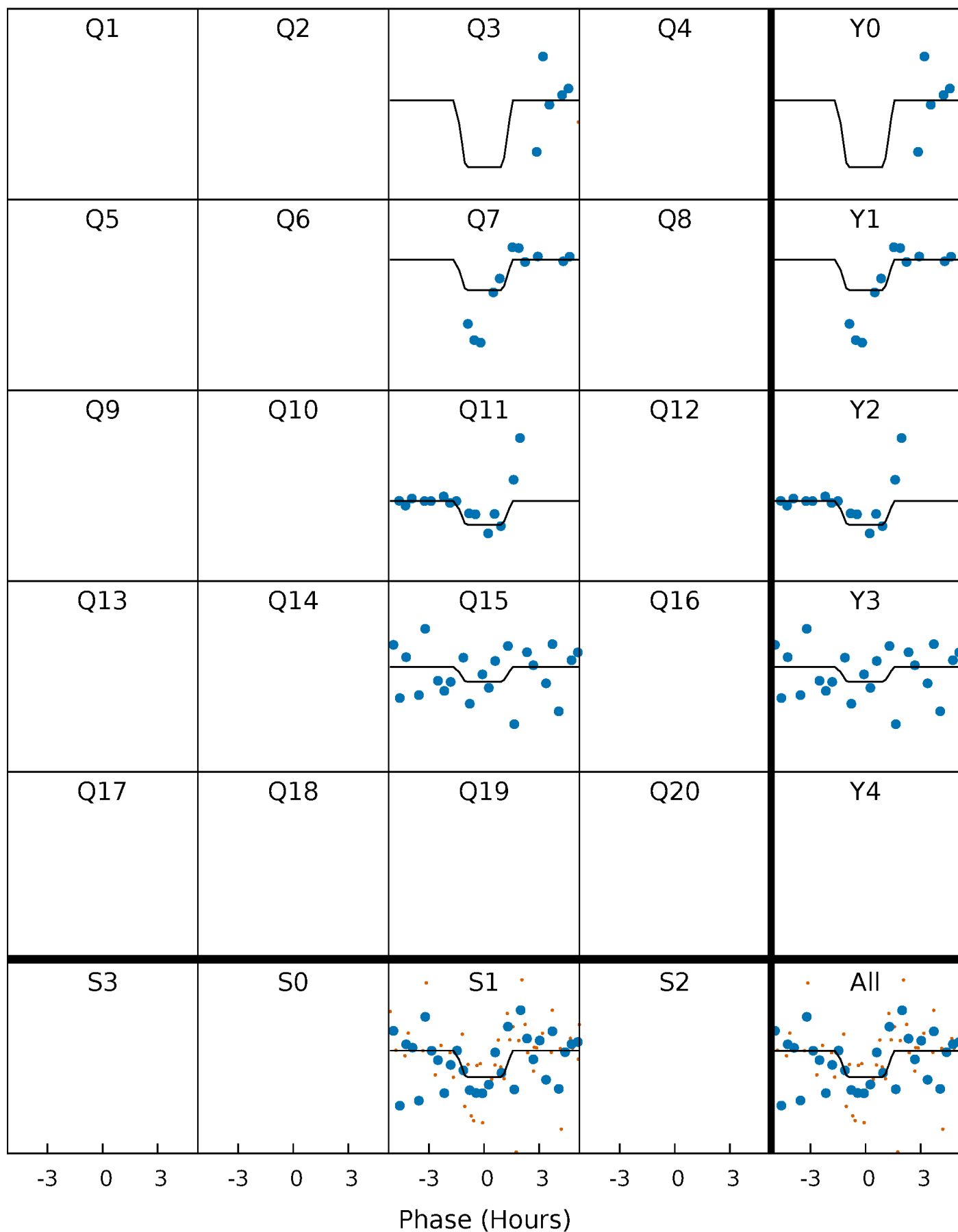
DV Quarter-Phased Transit Curves

TCE 011075456-04 P=374.001138 Days $T_0=260.171598$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

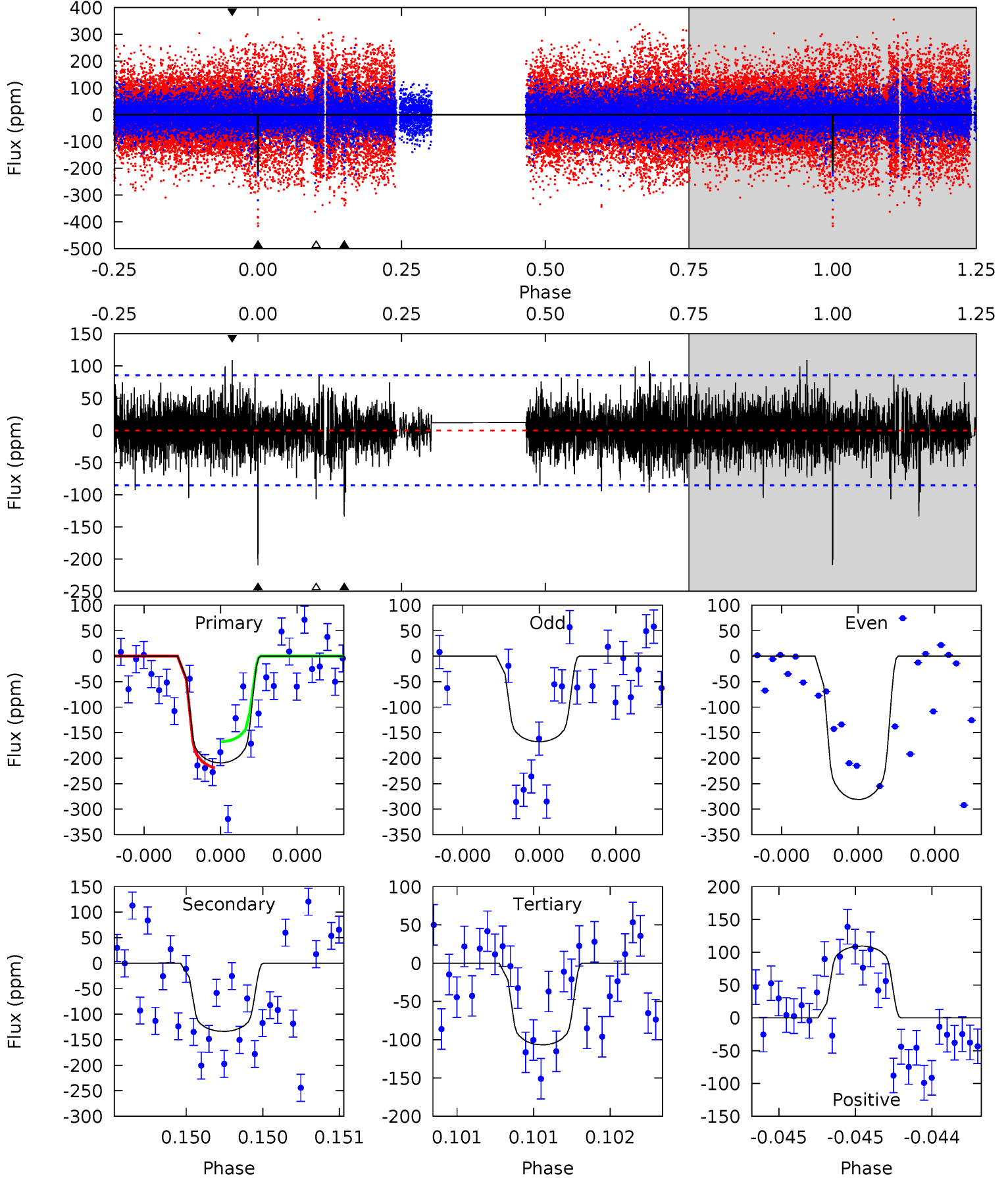
TCE 011075456-04 $P=374.029505$ Days $T_0=260.132695$ (BKJD)



DV Model-Shift Uniqueness Test

011075456-04, P = 374.001138 Days, E = 260.171598 Days

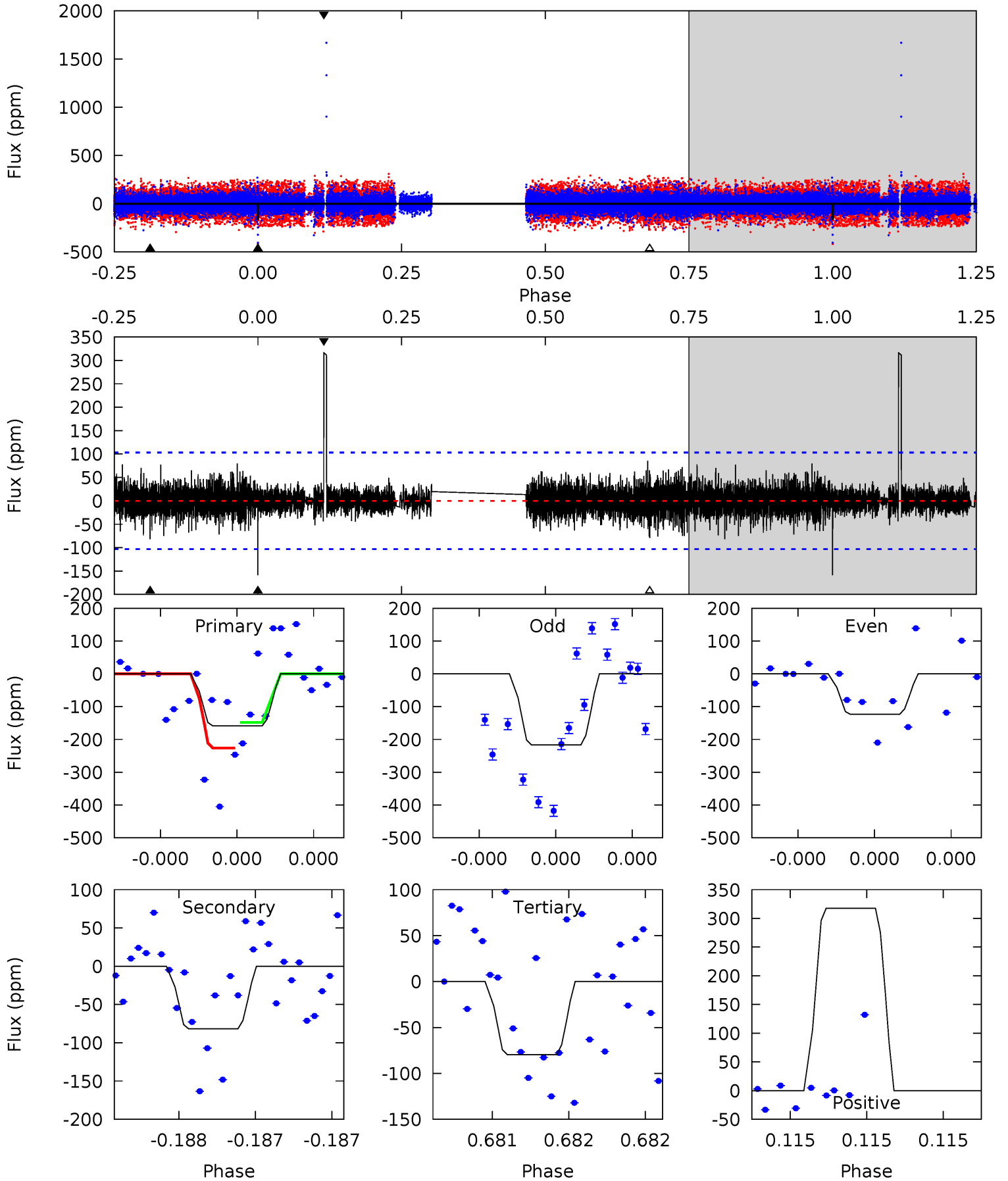
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	8.72	6.96	7.14	5.58	3.49	1.60	6.69	6.52	1.76	1.58	3.56	0.85	0.34	0



Alt Model-Shift Uniqueness Test

011075456-04, P = 374.029505 Days, E = 260.132695 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.71	4.48	4.36	17.4	5.66	3.61	1.08	4.35	-8.70	0.12	-12.9	2.46	1.33	0.67	2.05



Stellar Parameters For KIC 011075456

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6514^{+58}_{-58}	$4.207^{+0.020}_{-0.018}$	$-0.200^{+0.300}_{-0.200}$	$1.430^{+0.078}_{-0.095}$	$1.205^{+0.120}_{-0.147}$	$0.580^{+0.062}_{-0.046}$
	+1%/-1%	+0%/-0%	+150%/-100%	+5%/-7%	+10%/-12%	+11%/-8%
Source	PHO10	AST10	PHO10	DSEP		

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

Secondary Eclipse Parameters for KIC 011075456-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-134 ± 15	$2.44^{+1.40}_{-1.37}$	462^{+6}_{-7}	5654^{+3216}_{-1060}	14573^{+58933}_{-8955}
Alt.	-82 ± 18	$2.13^{+1.61}_{-1.26}$	462^{+6}_{-6}	5309^{+3368}_{-1079}	11369^{+56844}_{-7715}

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

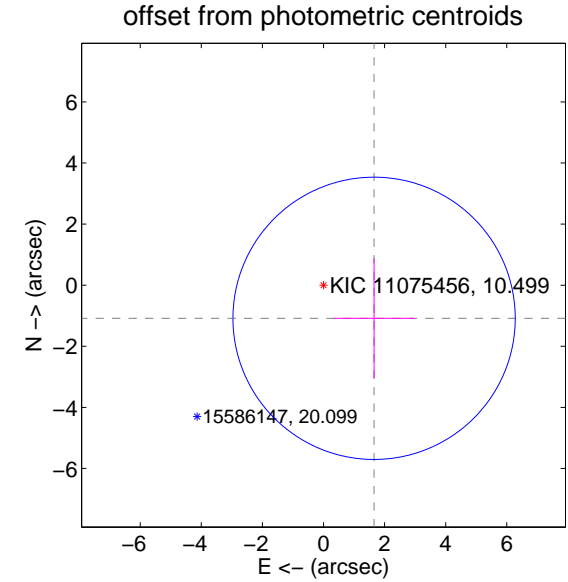
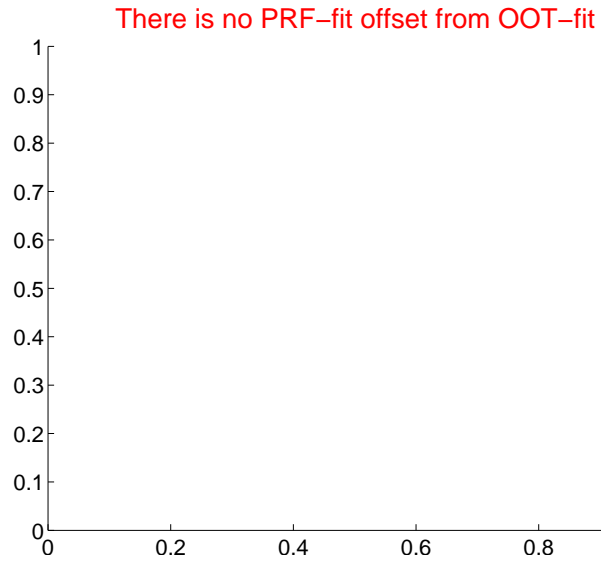
DV Centroid Data

Supplemental centroid analysis for 011075456-04. **Kepler magnitude: 10.50.** Transit SNR 13.10

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	1.98 ± 1.54	1.29	-1.66 ± 1.32	-1.08 ± 1.96



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.



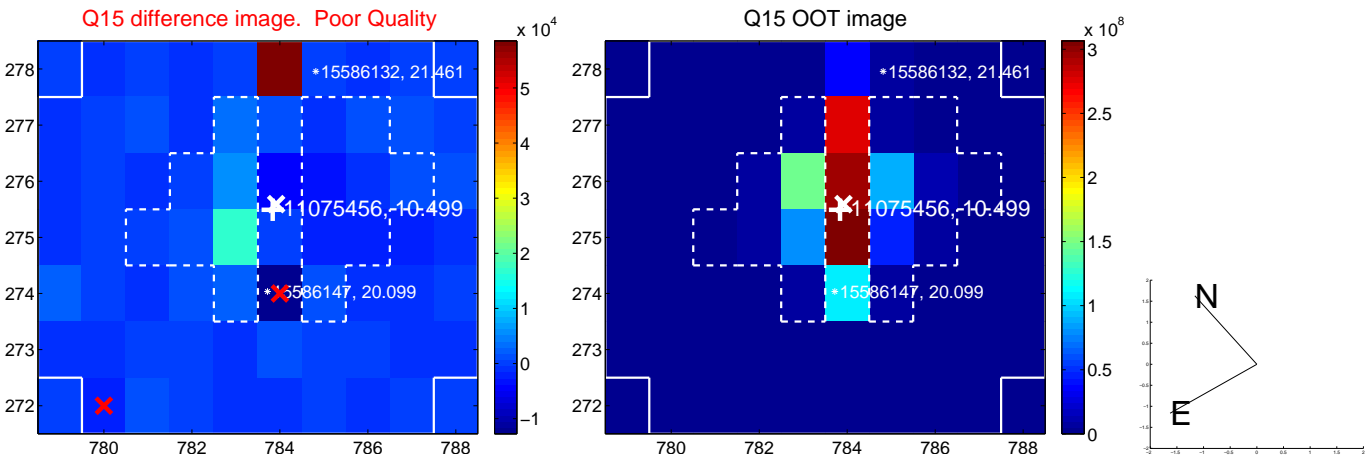
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



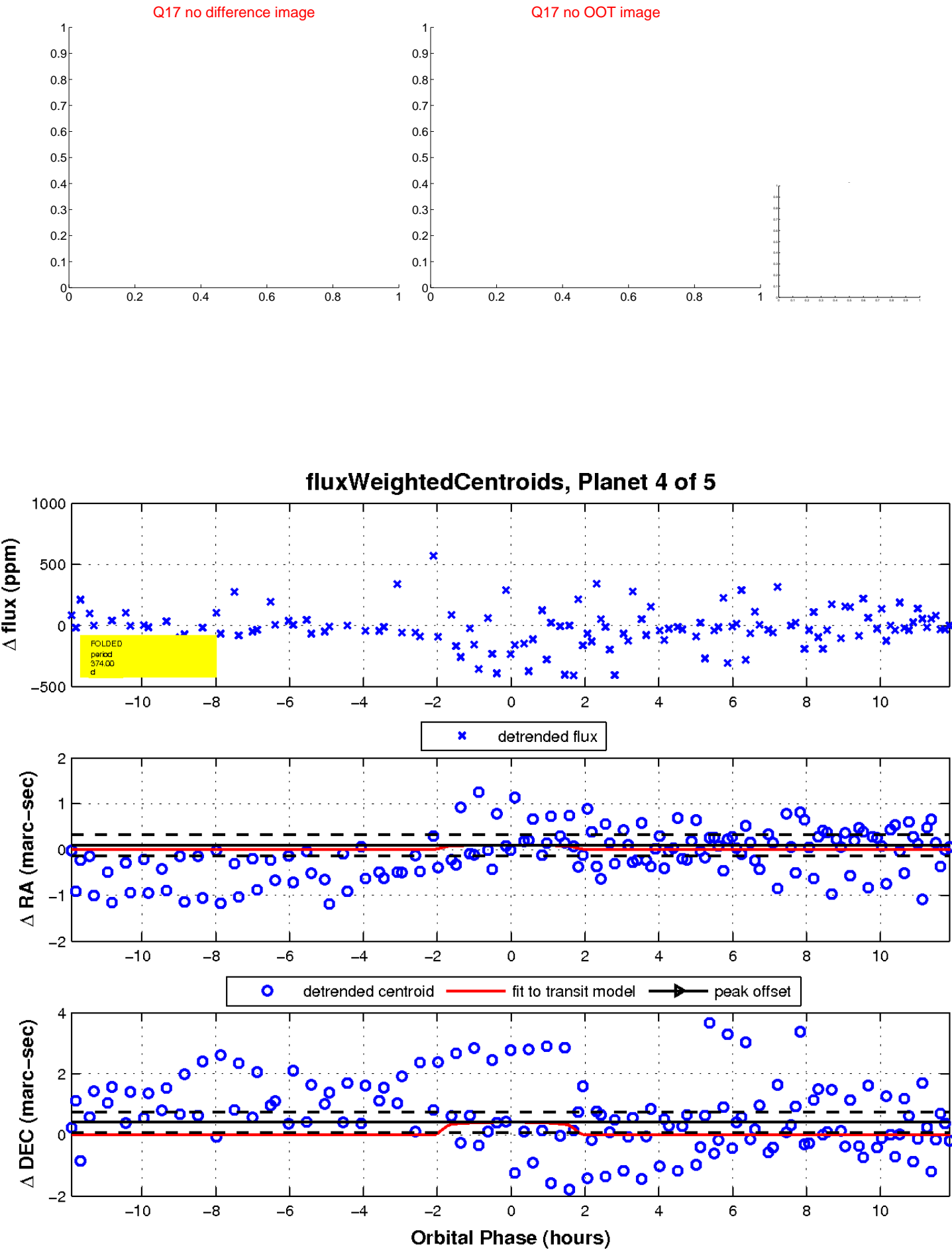
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



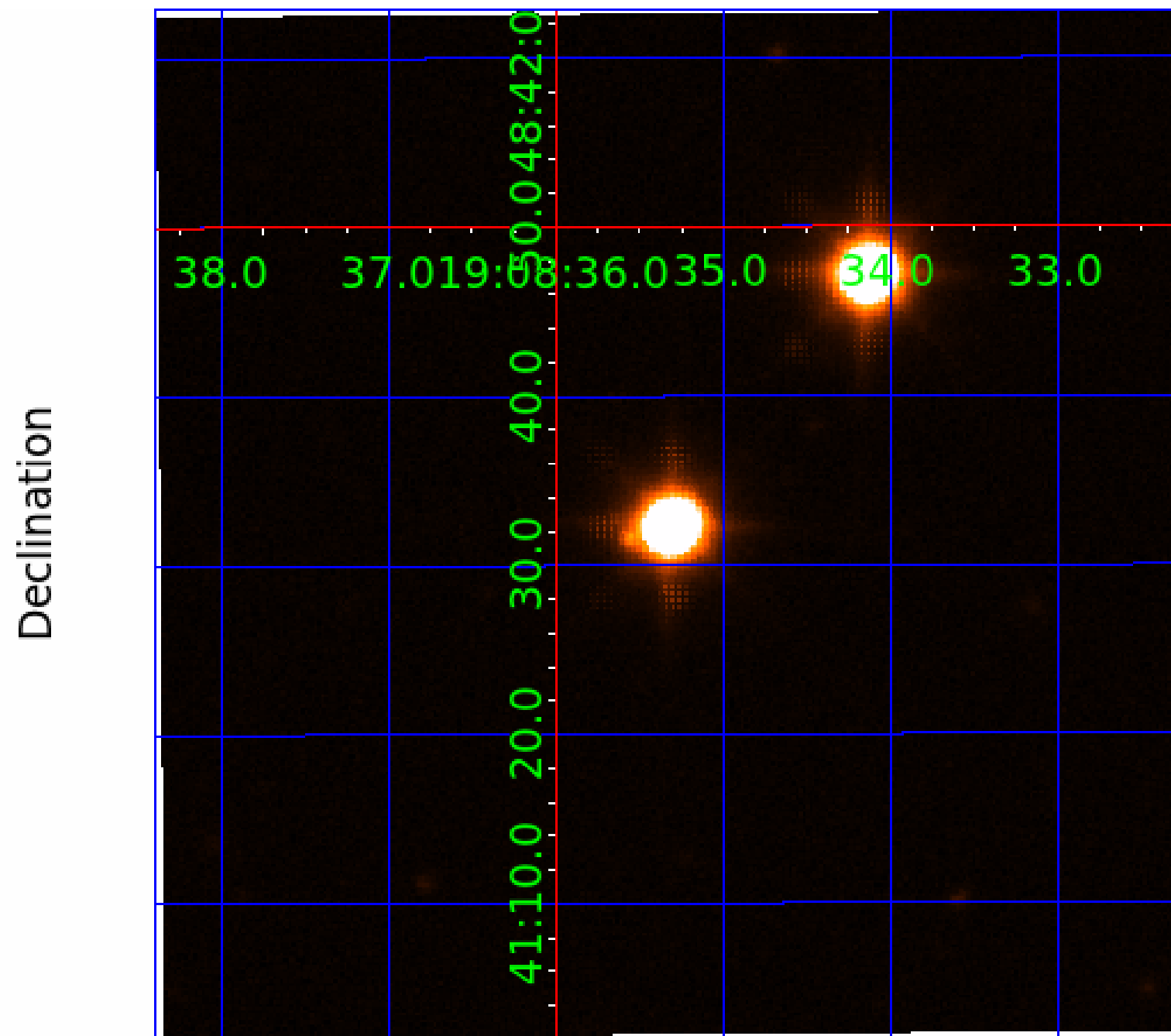
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 011075456

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})
011075456-01	OBS	No	373.934148	304.024730	205.1	15.000	37.3	-1.0	1.43	6514	2.06	2.83
011075456-02	OBS	No	370.628933	262.943077	361.9	4.684	35.2	19.2	1.43	6514	3.93	2.86
011075456-03	OBS	No	384.198606	296.791249	126.9	15.000	25.9	-1.0	1.43	6514	1.62	2.73
011075456-04	OBS	No	374.001138	260.171598	170.3	3.996	18.0	13.1	1.43	6514	2.24	2.83
011075456-05	OBS	No	373.109994	306.837750	133.3	15.000	26.7	-1.0	1.43	6514	1.66	2.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011075456-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
011075456-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
011075456-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—CENT_SATURATED
011075456-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED—HALO_GHOST
011075456-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

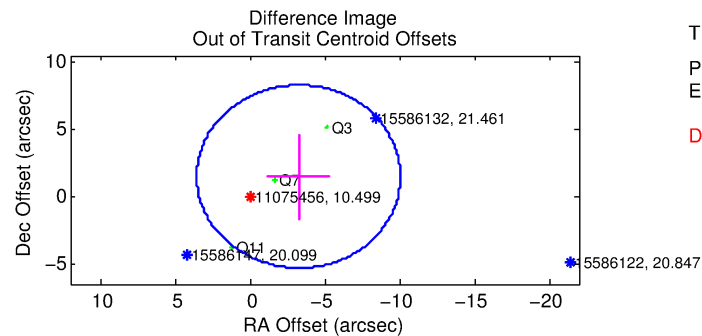
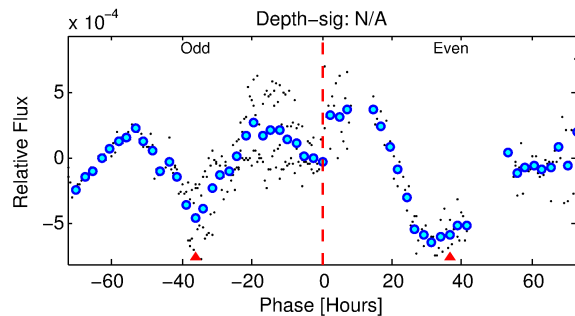
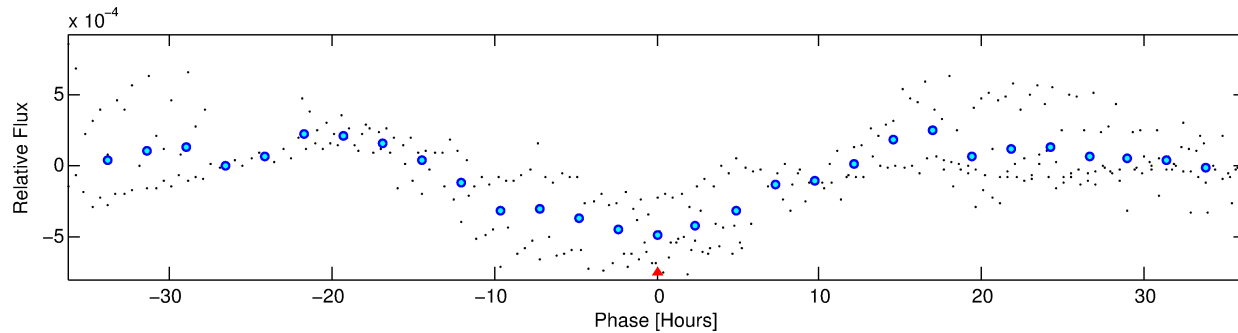
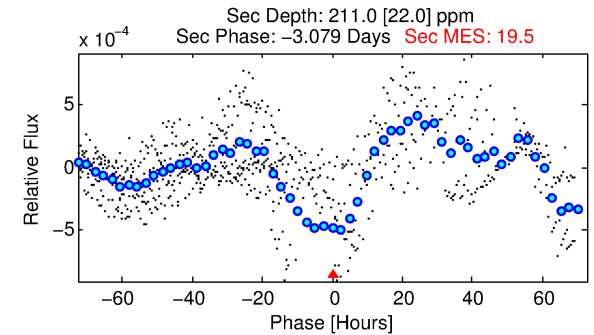
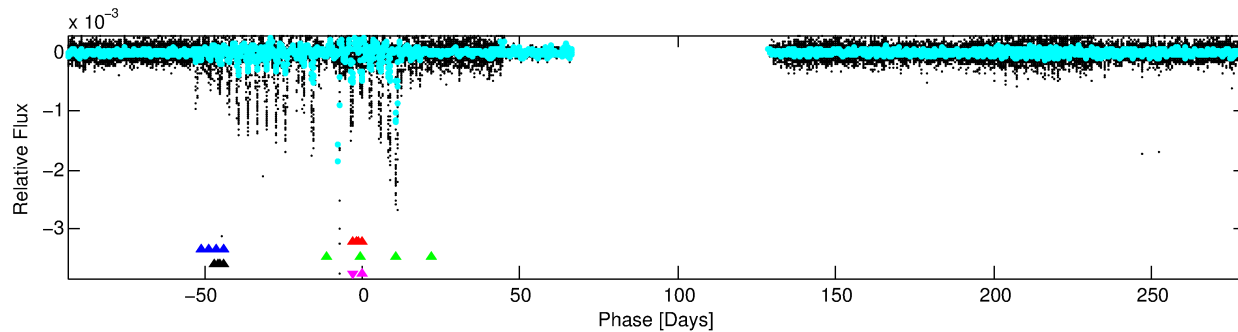
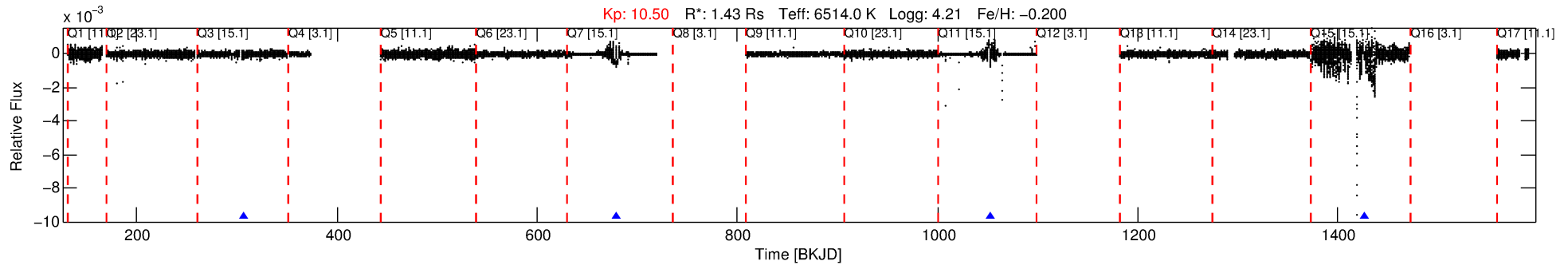
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011075456-05

No Significant Match Found

DV One-Page Summary

KIC: 11075456 Candidate: 5 of 5 Period: 373.110 d



TPS TCE Results:

Period = 373.10999 d
Epoch = 306.8377 BKJD

DV fit results are unavailable

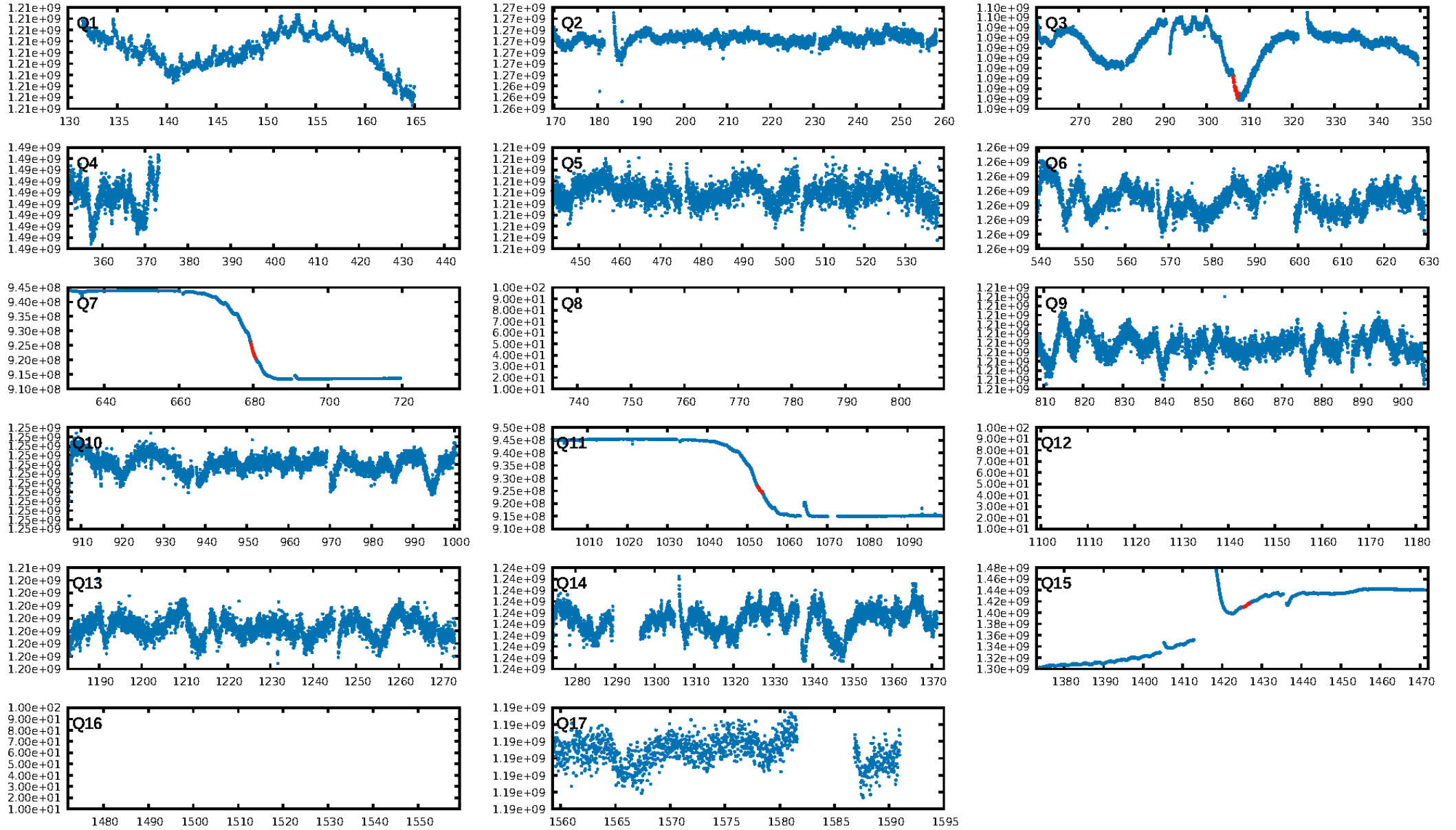
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [3.79 σ]
LongPeriod-sig: 64.9% [0.93 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.299
Centroid-sig: 76.3%
Centroid-so: 1.735 arcsec [18.62 σ]
OotOffset-rm: 3.590 arcsec [1.58 σ]
KicOffset-rm: 3.034 arcsec [1.18 σ]
OotOffset-st: 0/3/0/0 [3]
KicOffset-st: 0/3/0/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.25 [1/4]

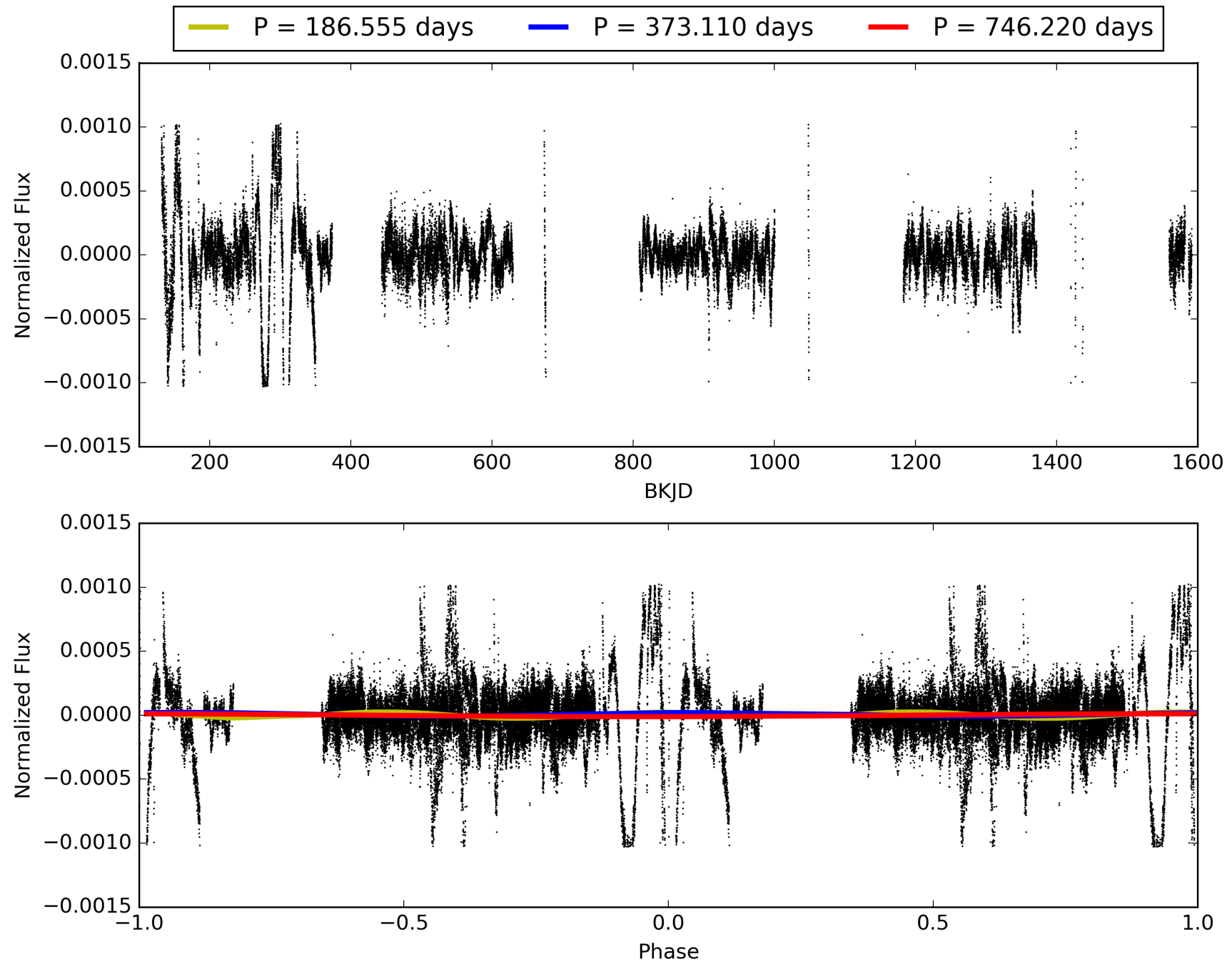
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:36:02 Z

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

TCE 011075456-05, PDC Light Curves

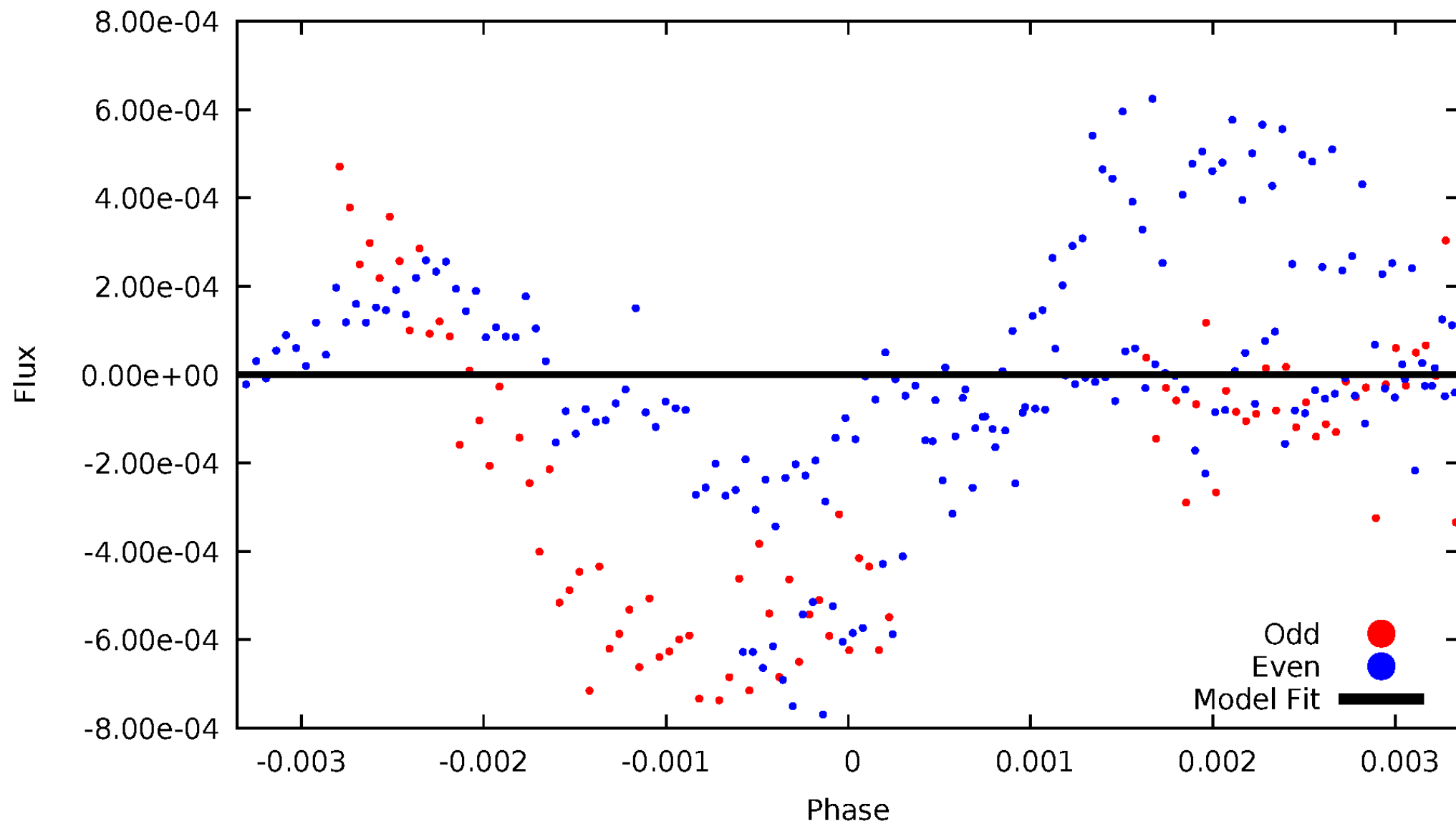


TCE 011075456-05



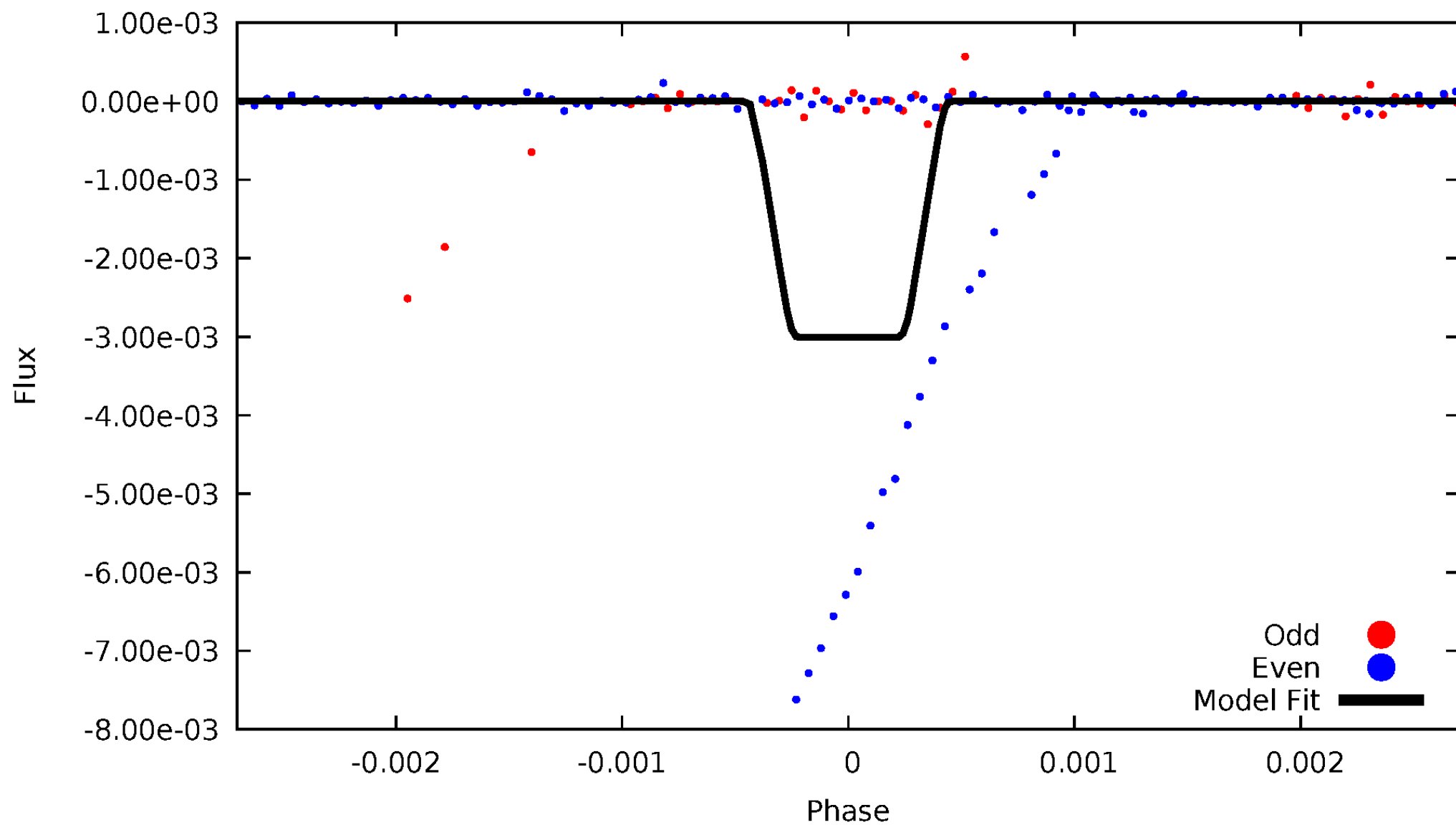
DV Odd/Even

TCE 011075456-05

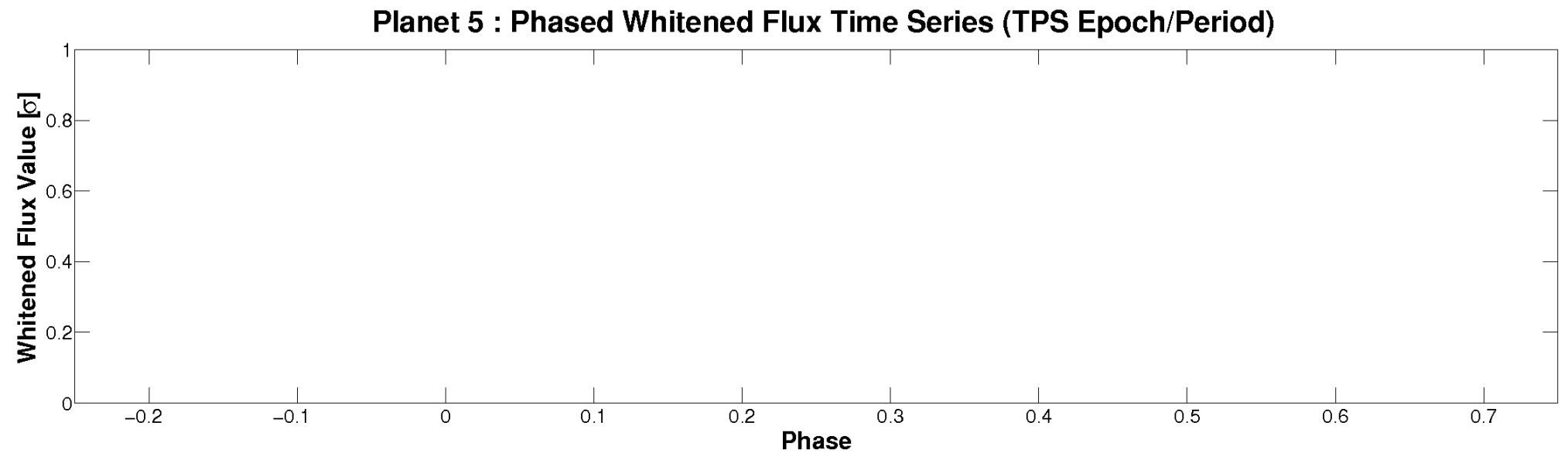
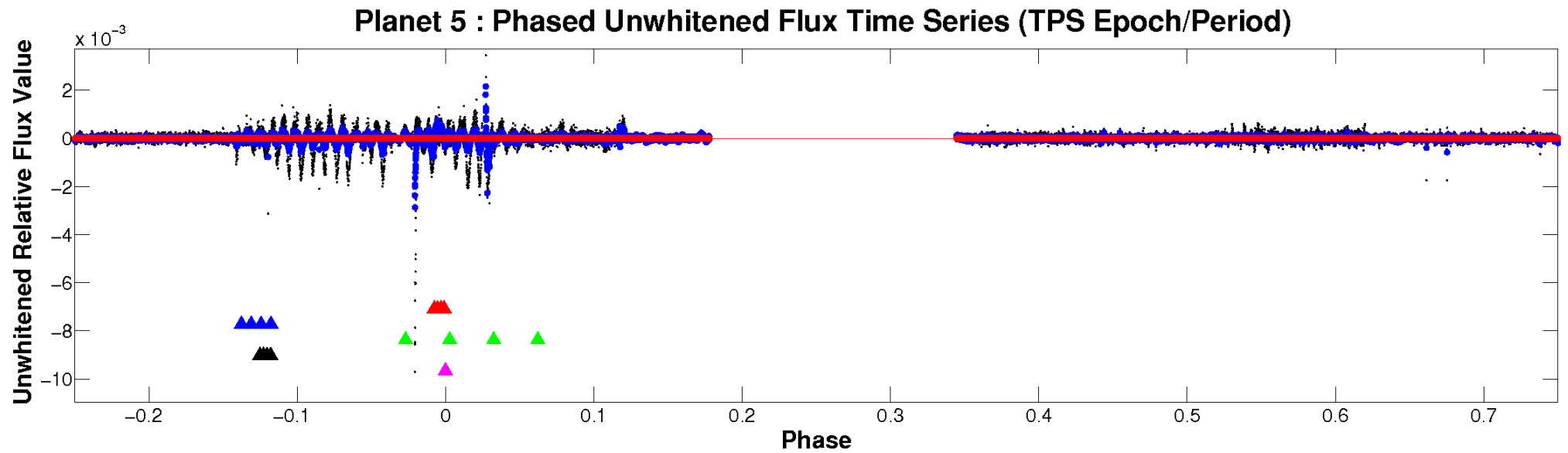


ALT Odd/Even

TCE 011075456-05

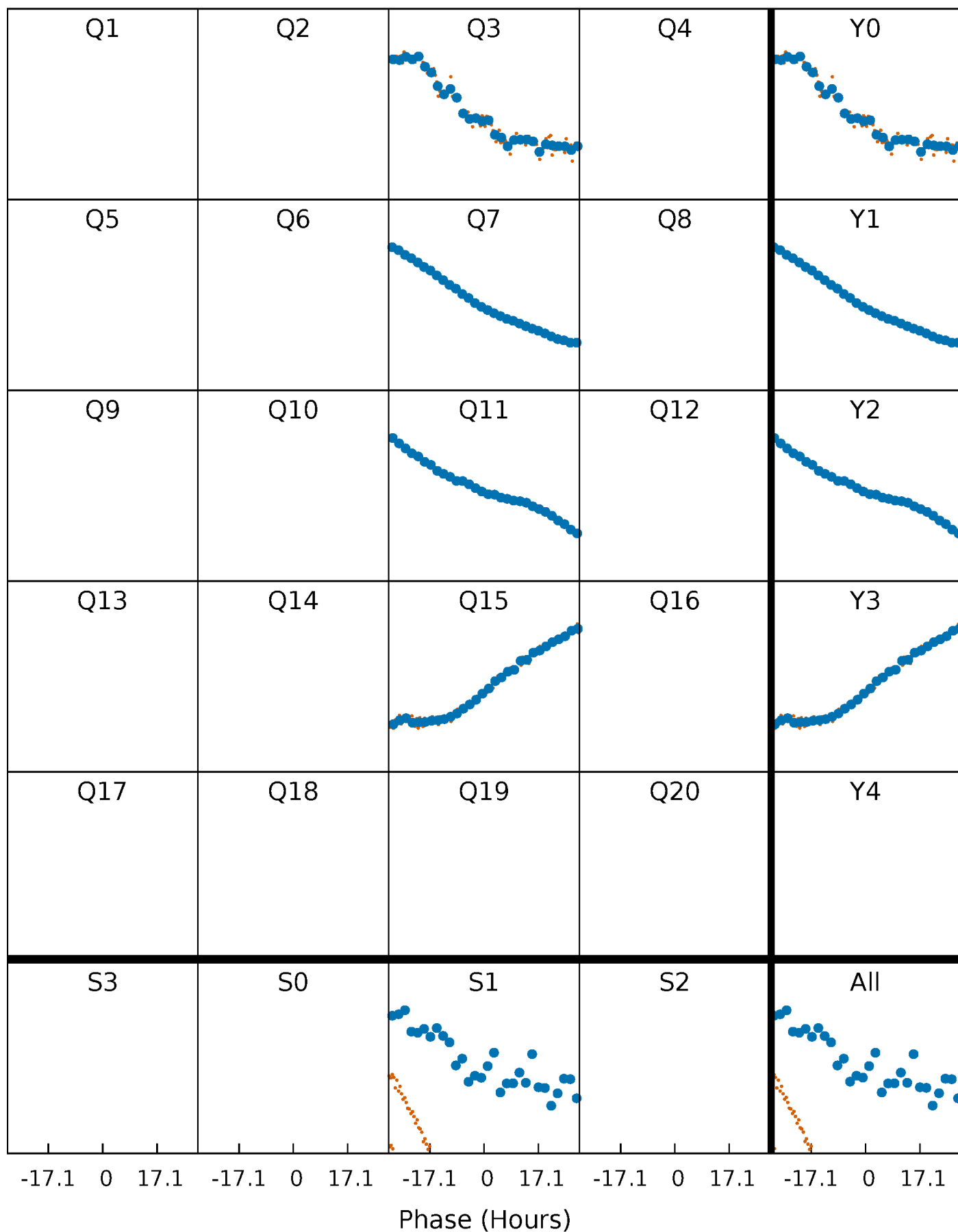


Non-Whitened Vs. Whitened Light Curve



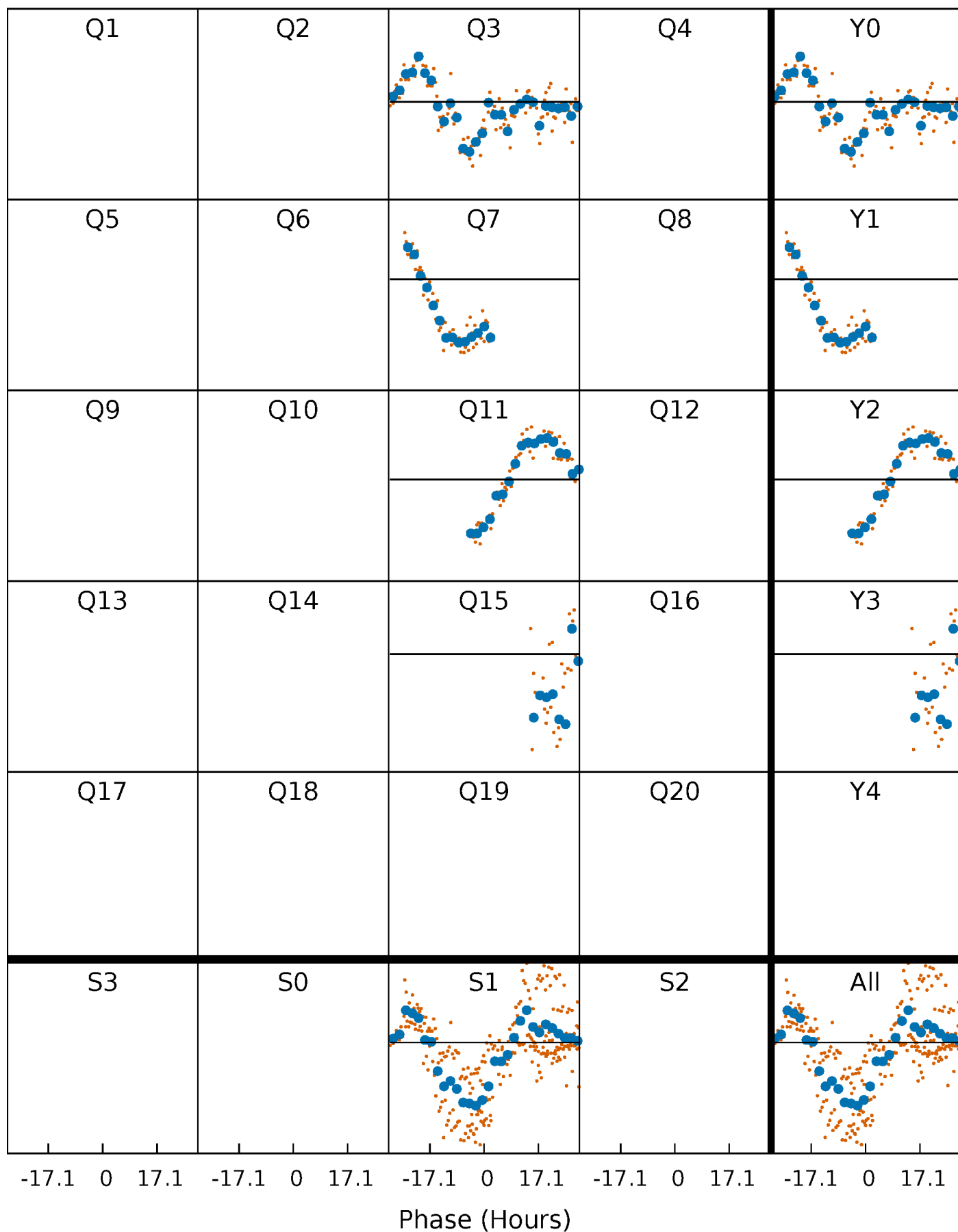
PDC Quarter-Phased Transit Curves

TCE 011075456-05 $P=373.109994$ Days $T_0=306.837750$ (BKJD)



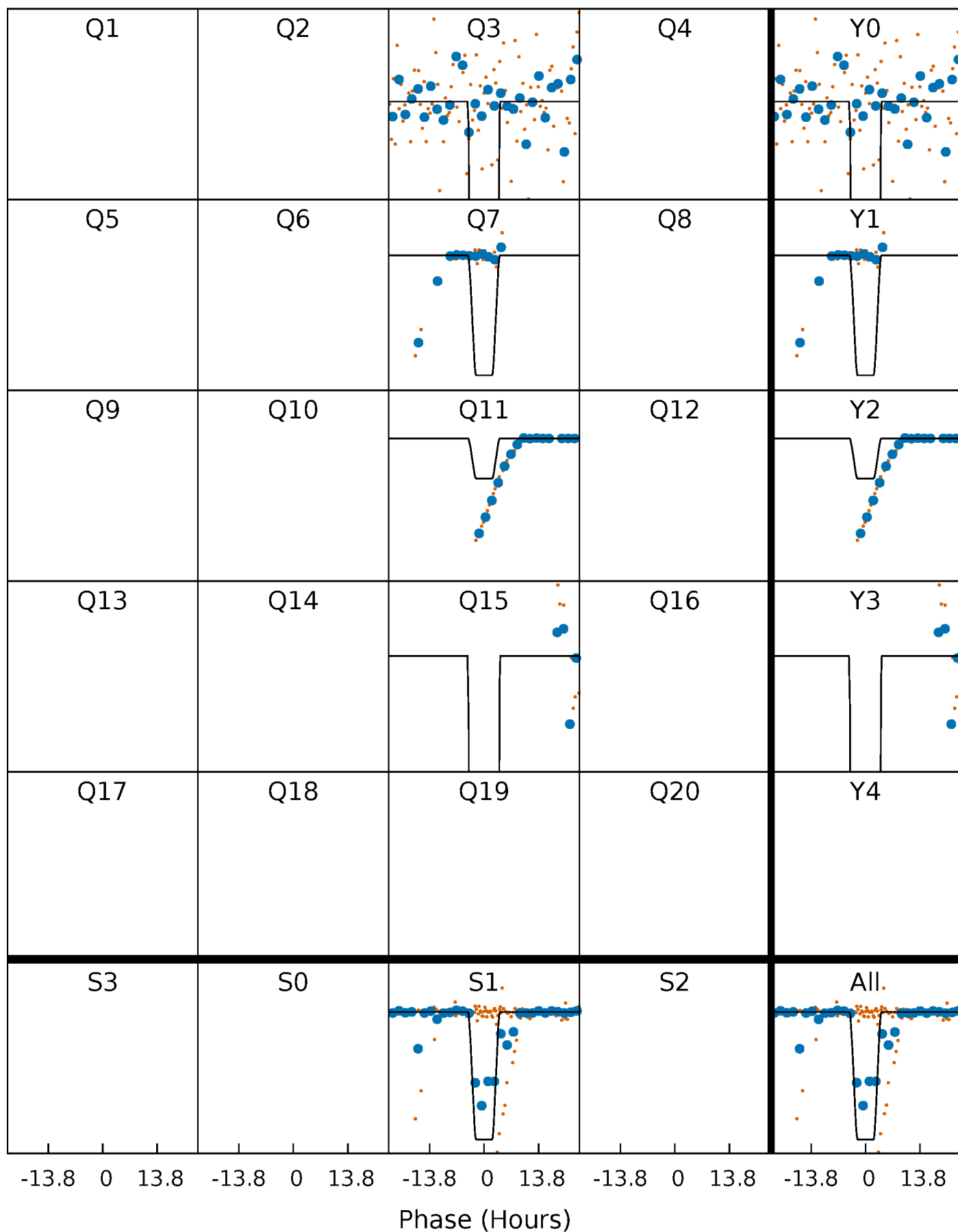
DV Quarter-Phased Transit Curves

TCE 011075456-05 $P=373.109994$ Days $T_0=306.837750$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

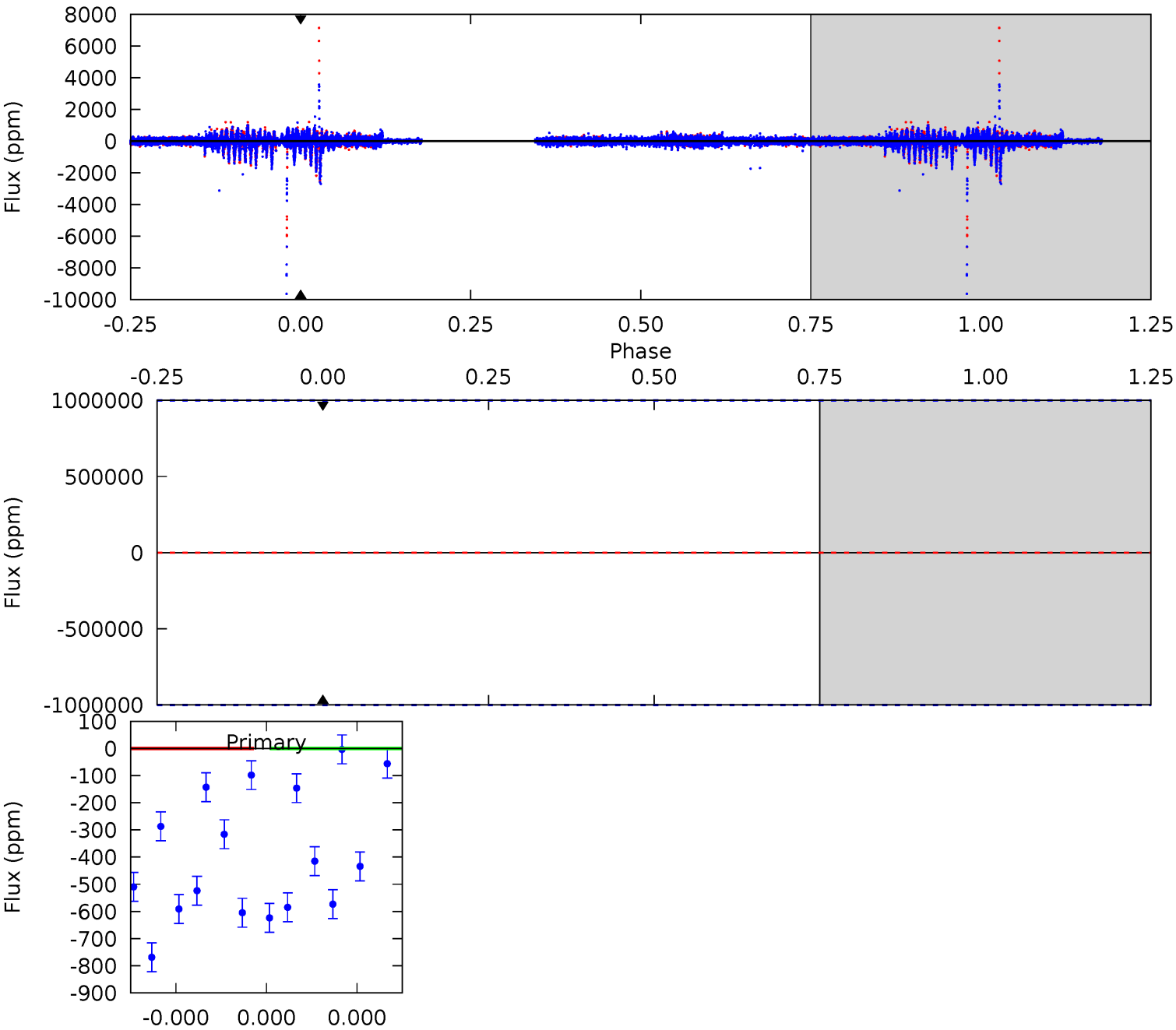
TCE 011075456-05 $P=373.109994$ Days $T_0=306.708180$ (BKJD)



DV Model-Shift Uniqueness Test

011075456-05, P = 373.109994 Days, E = 306.837750 Days

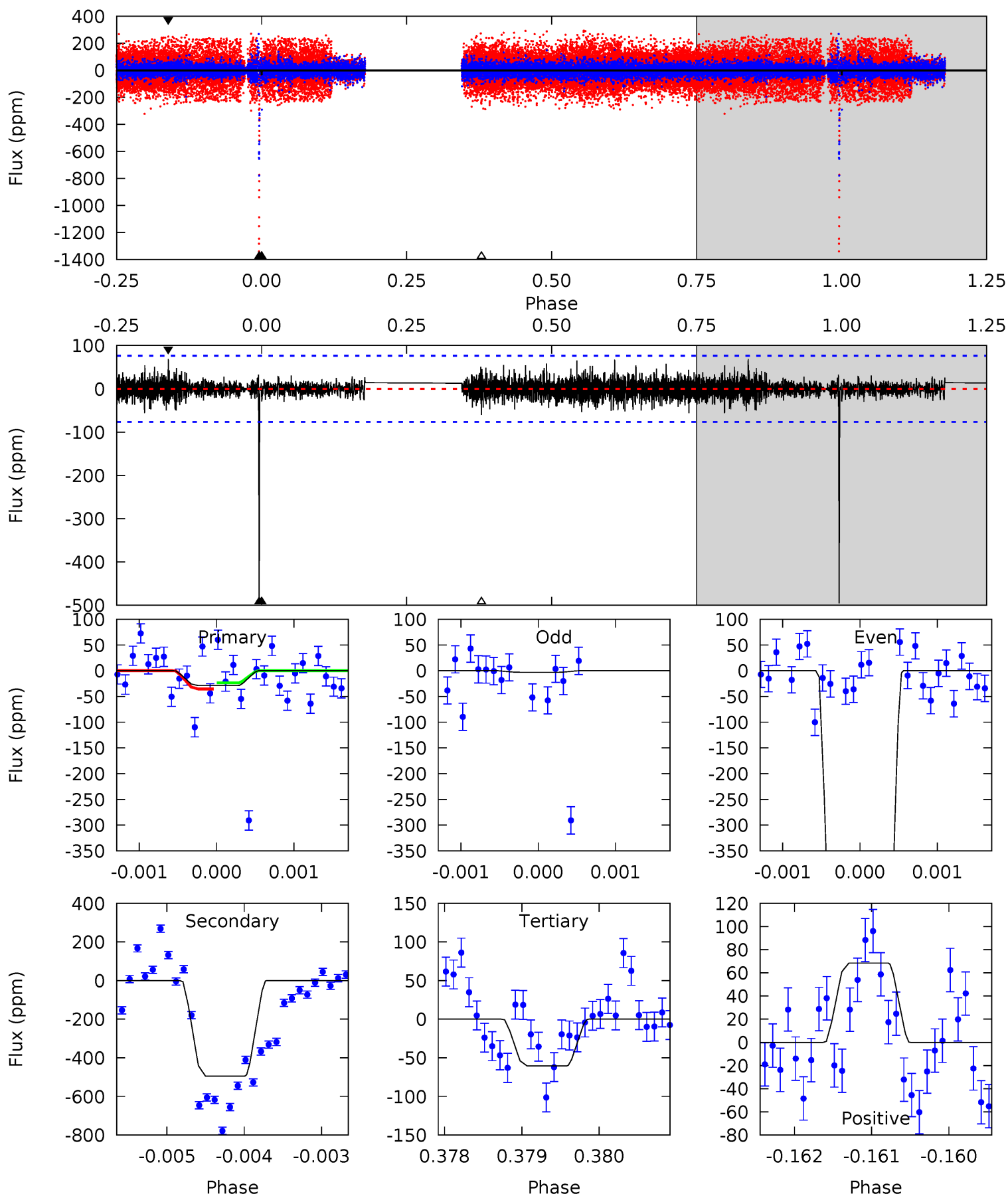
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011075456-05, P = 373.109994 Days, E = 306.708180 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.07	35.5	4.34	4.90	5.49	3.35	1.02	-2.27	-2.83	31.1	30.6	33.6	96.8	0.12	0



Stellar Parameters For KIC 011075456

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6514^{+58}_{-58}	$4.207^{+0.020}_{-0.018}$	$-0.200^{+0.300}_{-0.200}$	$1.430^{+0.078}_{-0.095}$	$1.205^{+0.120}_{-0.147}$	$0.580^{+0.062}_{-0.046}$
	+1%/-1%	+0%/-0%	+150%/-100%	+5%/-7%	+10%/-12%	+11%/-8%
Source	PHO10	AST10	PHO10	DSEP		

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

Secondary Eclipse Parameters for KIC 011075456-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$11.20^{+11.35}_{-8.02}$	462^{+6}_{-7}	-5072^{+32405}_{-26039}	$-9483.282^{+832924.568}_{-993339.844}$
Alt.	-495 ± 14	$13.56^{+13.37}_{-8.91}$	462^{+6}_{-6}	3708^{+1958}_{-699}	1717^{+12719}_{-1275}

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 $A_{obs} \gg 1.0$

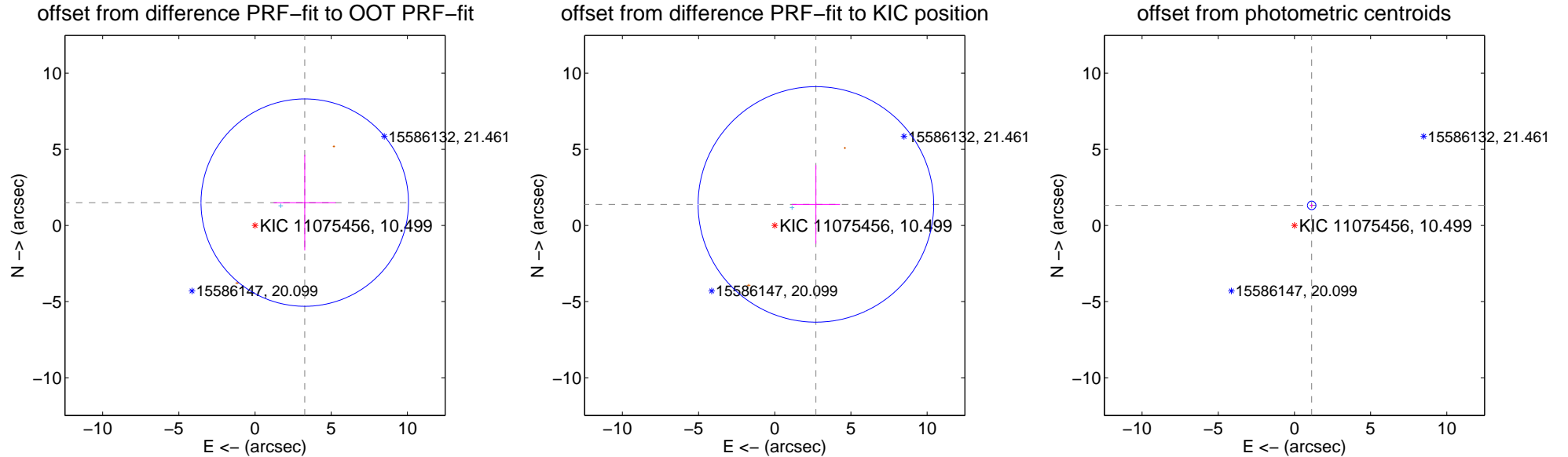
DV Centroid Data

Supplemental centroid analysis for 011075456-05. **Kepler magnitude: 10.50.** 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 0.56 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.590 ± 2.269	1.58	-3.262 ± 2.040	1.499 ± 3.135
PRF-fit source offset from KIC position	3.034 ± 2.577	1.18	-2.701 ± 1.583	1.381 ± 2.576
photometric centroid source offset	1.74 ± 0.09	18.62	-1.13 ± 0.07	1.32 ± 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.

Q1 no difference image



Q1 no OOT image



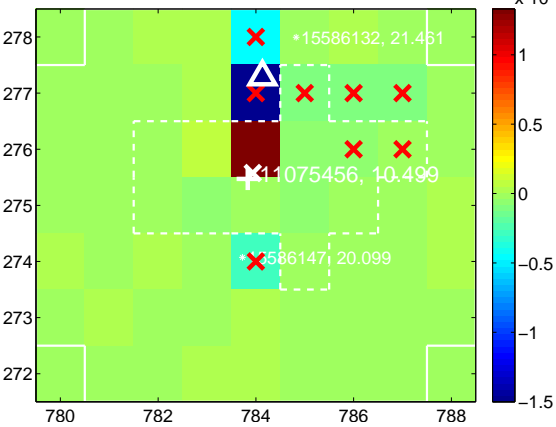
Q2 no difference image



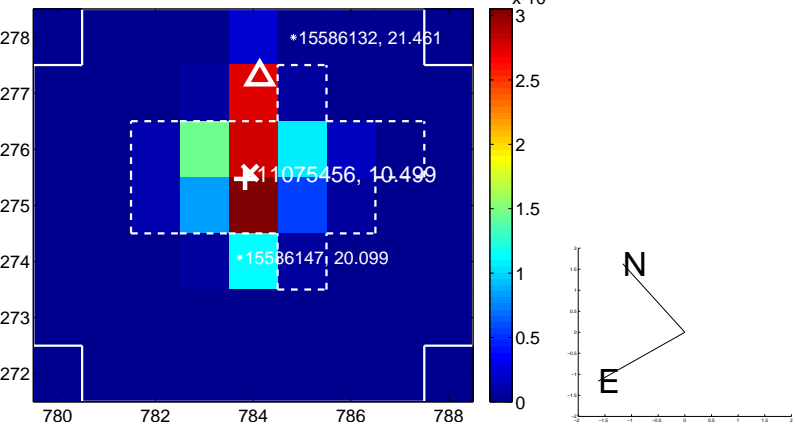
Q2 no OOT image



Q3 difference image. Poor Quality



Q3 OOT image



Q4 no difference image



Q4 no OOT image

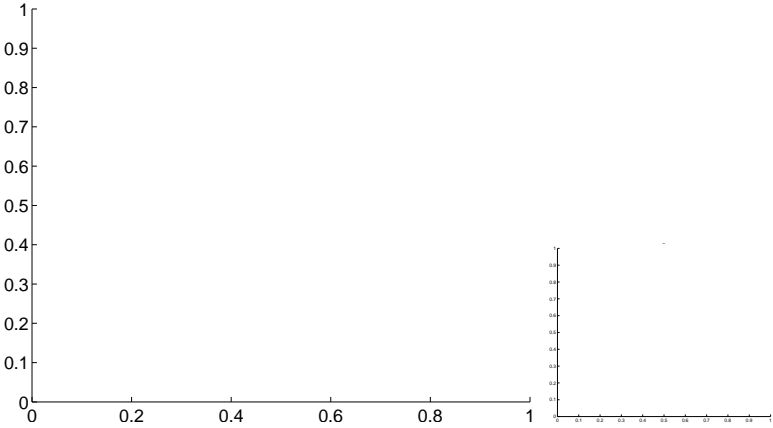


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q5 no difference image



Q5 no OOT image



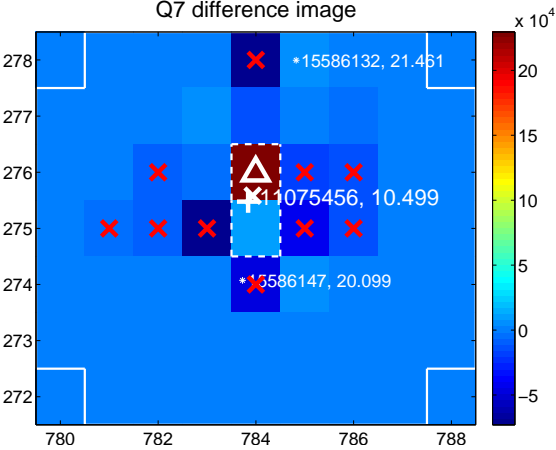
Q6 no difference image



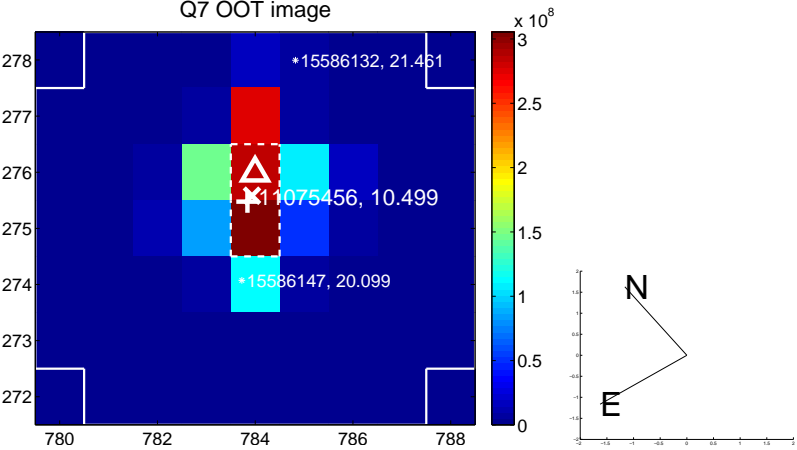
Q6 no OOT image



Q7 difference image



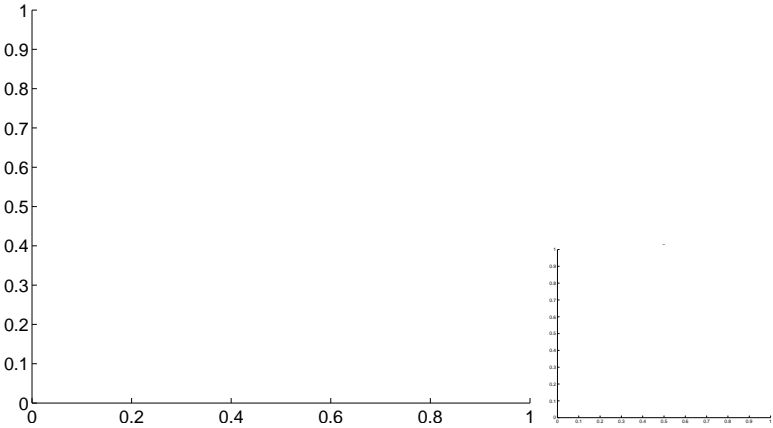
Q7 OOT image



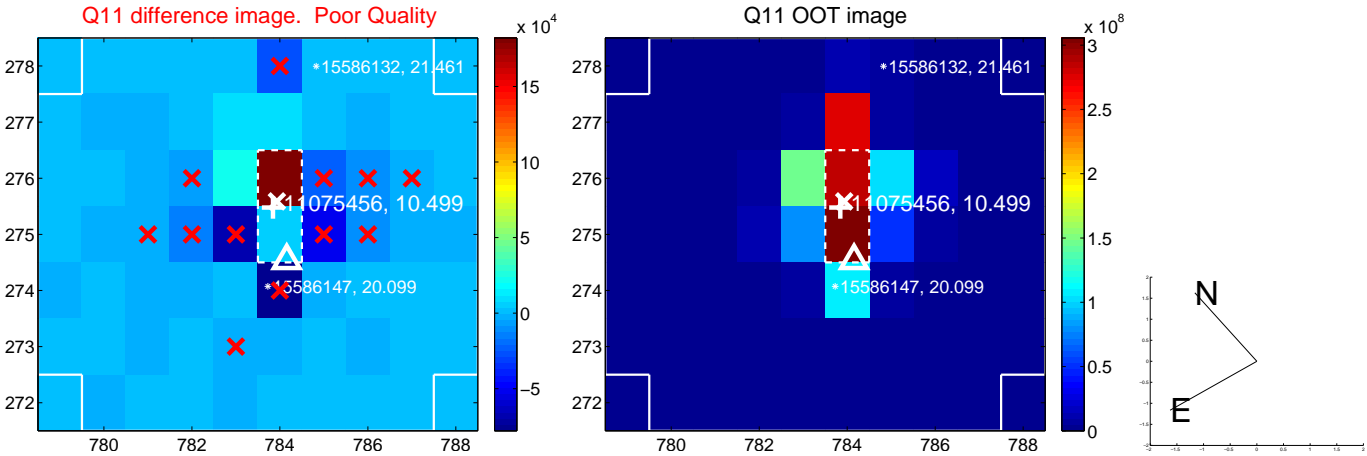
Q8 no difference image



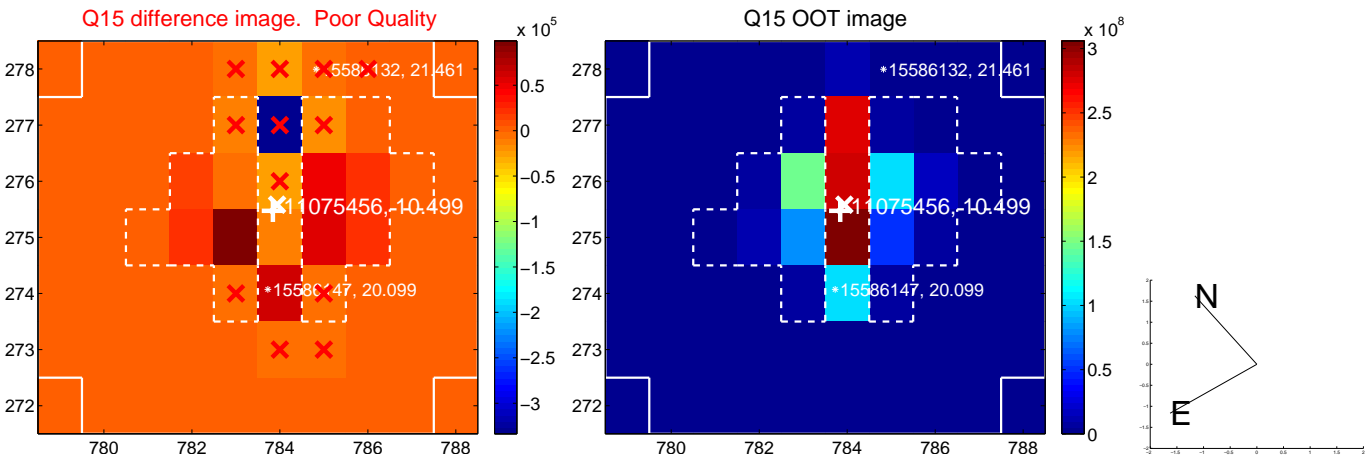
Q8 no OOT image



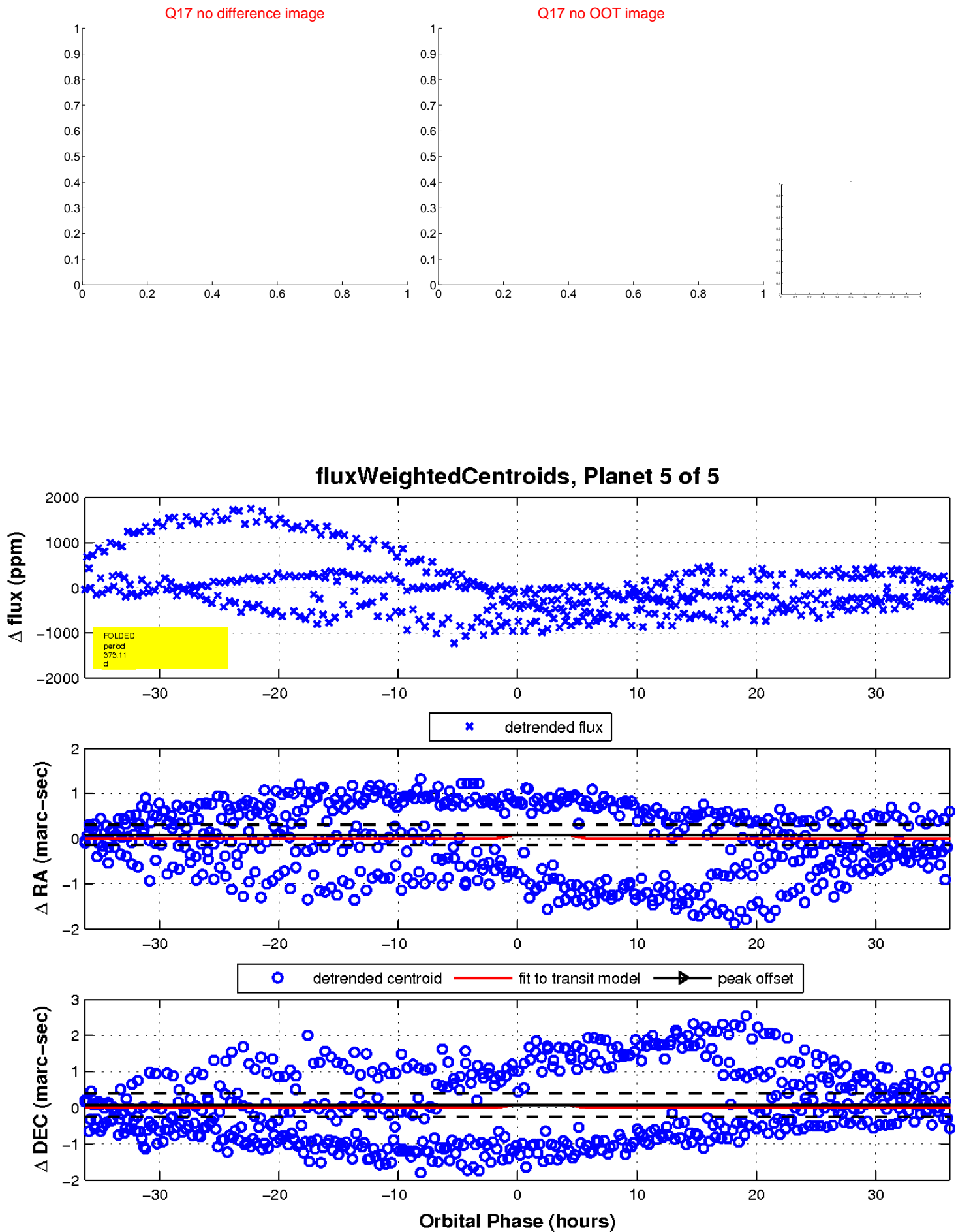
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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

