

KIC 007448057

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})
007448057-01	OBS	No	374.765264	459.828622	2948.7	4.749	11.7	6.4	0.55	3882	2.94	0.09
007448057-02	OBS	No	322.556820	347.473977	3129.0	4.198	12.8	6.4	0.55	3882	5.95	0.11
007448057-03	OBS	No	154.835588	263.188378	1773.3	6.182	11.9	6.7	0.55	3882	2.64	0.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007448057-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
007448057-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007448057-03	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

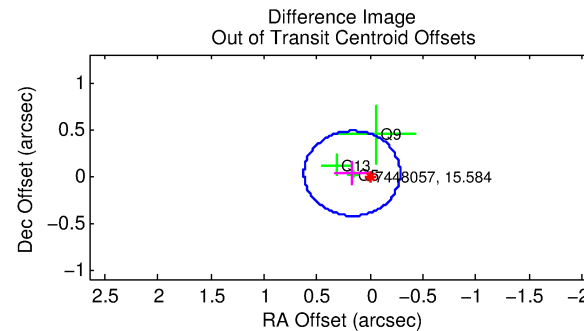
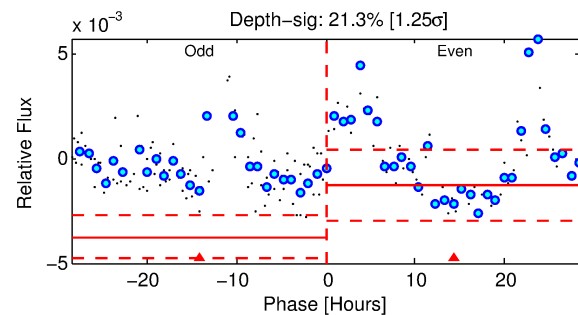
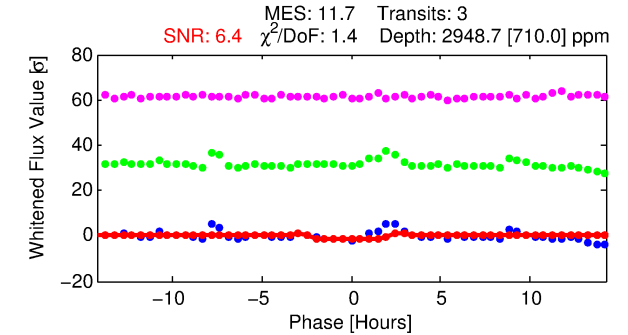
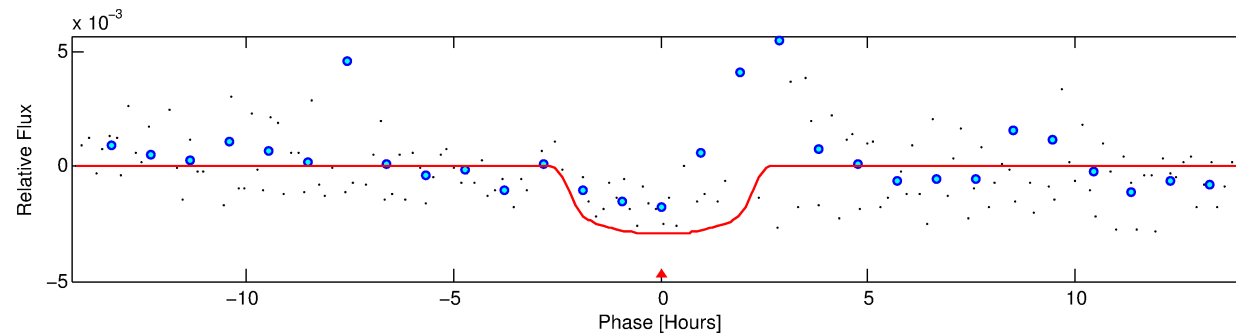
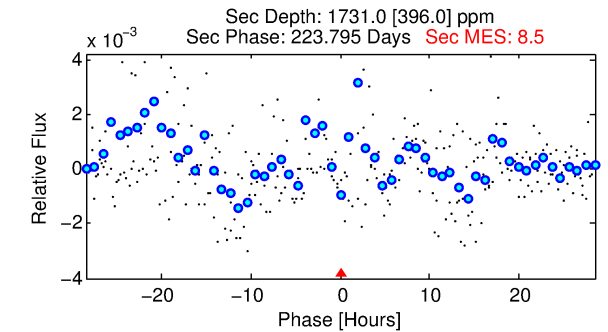
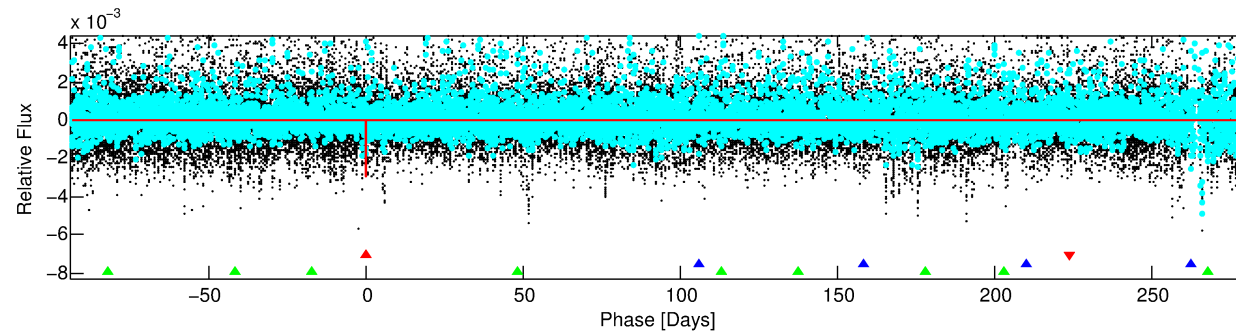
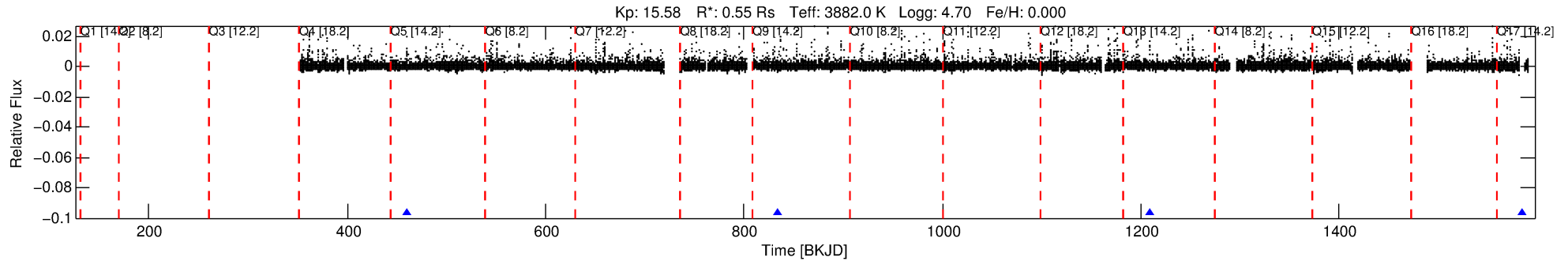
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 007448057-01

No Significant Match Found

KIC: 7448057 Candidate: 1 of 3 Period: 374.765 d



DV Fit Results:

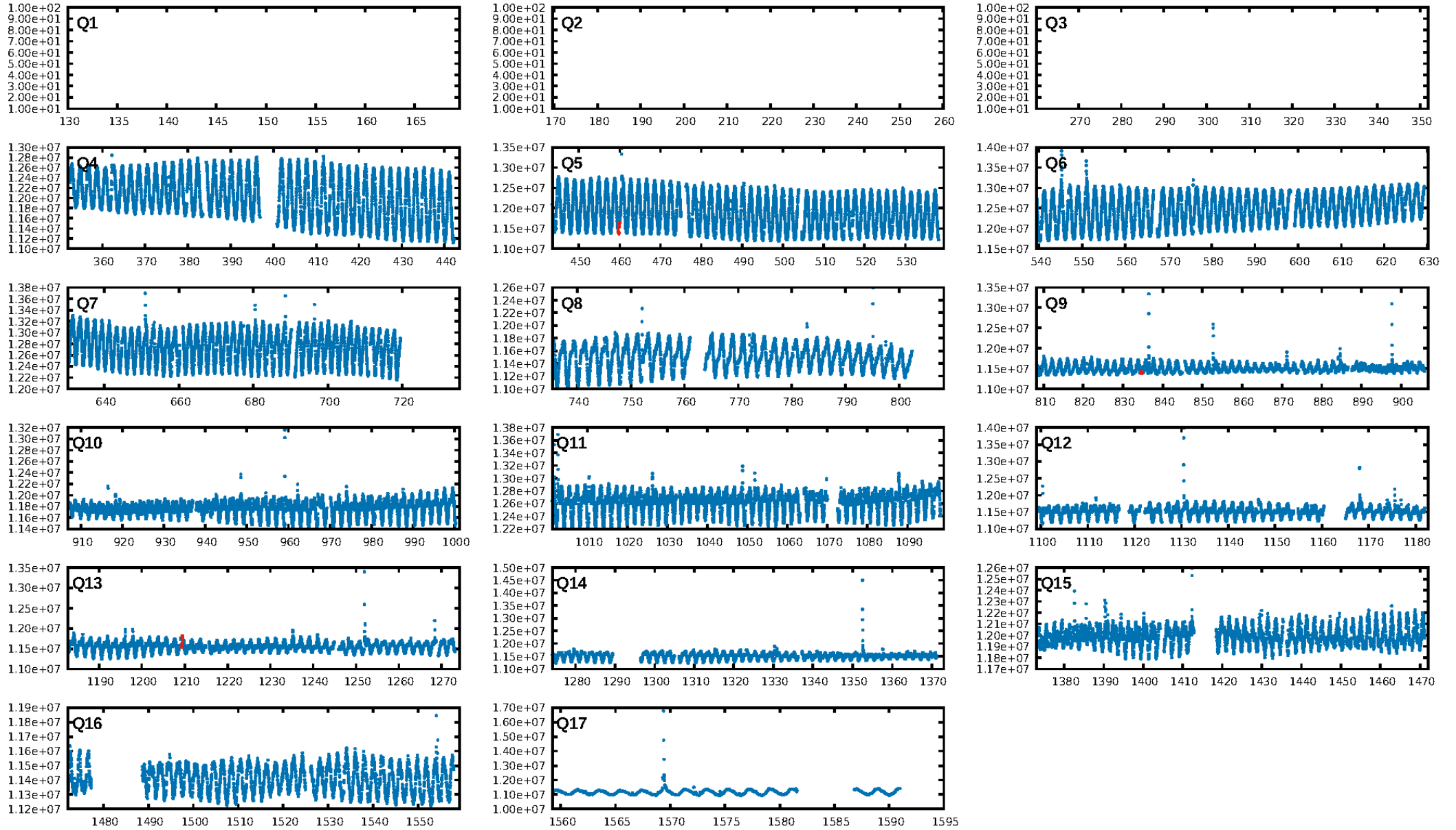
Period = 374.76526 [0.00792] d
Epoch = 459.8286 [0.0093] BKJD
Rp/R* = 0.0487 [0.0910]
a/R* = 631.89 [4419.91]
b = 0.03 [210.62]
Seff = 0.09 [0.01]
Teq = 139 [3] K
Rp = 2.94 [5.49] Re
a = 0.8401 [0.0360] AU
Ag = 77944.32 [291931.71] [0.270]
Teffp = 3589 [3361] K [1.03σ]

DV Diagnostic Results:

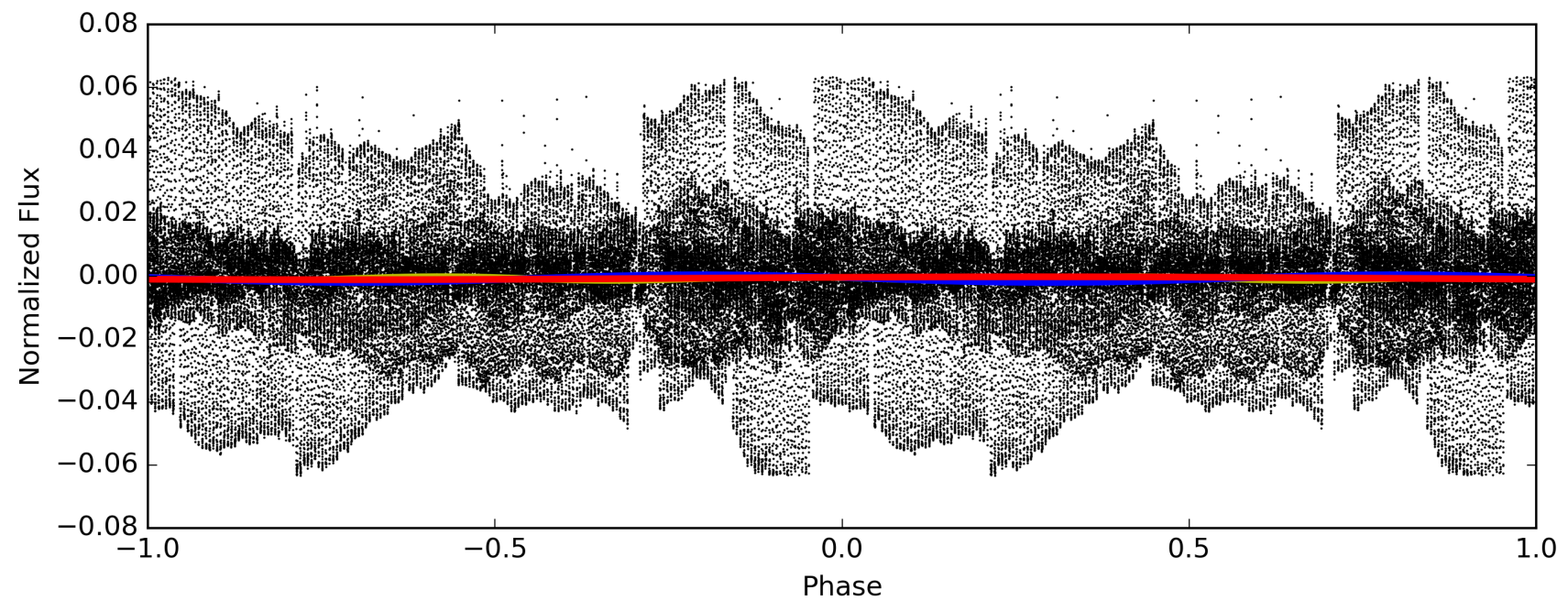
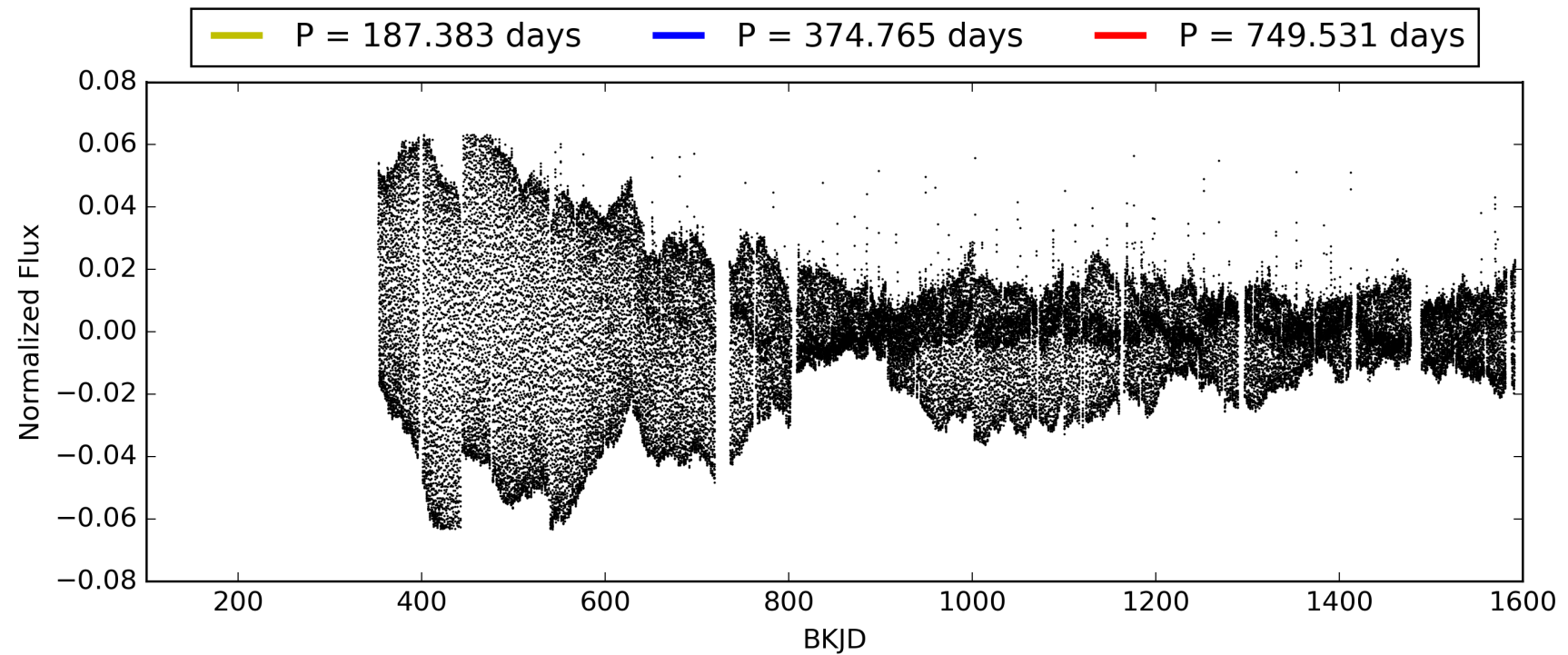
ShortPeriod-sig: 100.0% [197.68σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 19.6%
ModelChiSquareGof-sig: 89.4%
Bootstrap-pfa: 1.42e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.459

Centroid-sig: N/A
Centroid-so: 1.462 arcsec [1.63σ]
OotOffset-rm: 0.171 arcsec [1.14σ]
KicOffset-rm: 0.262 arcsec [1.84σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 007448057-01, PDC Light Curves

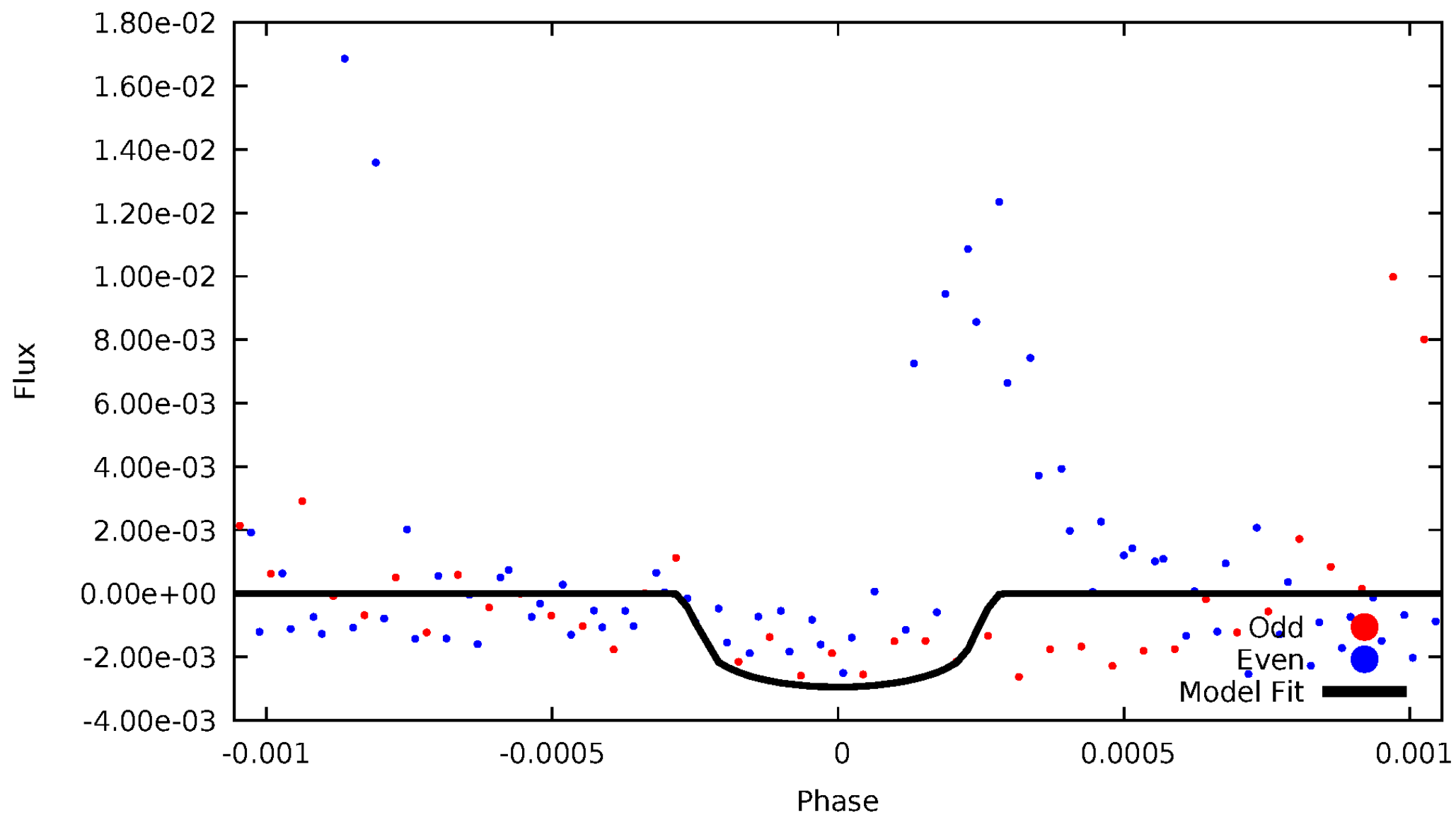


TCE 007448057-01



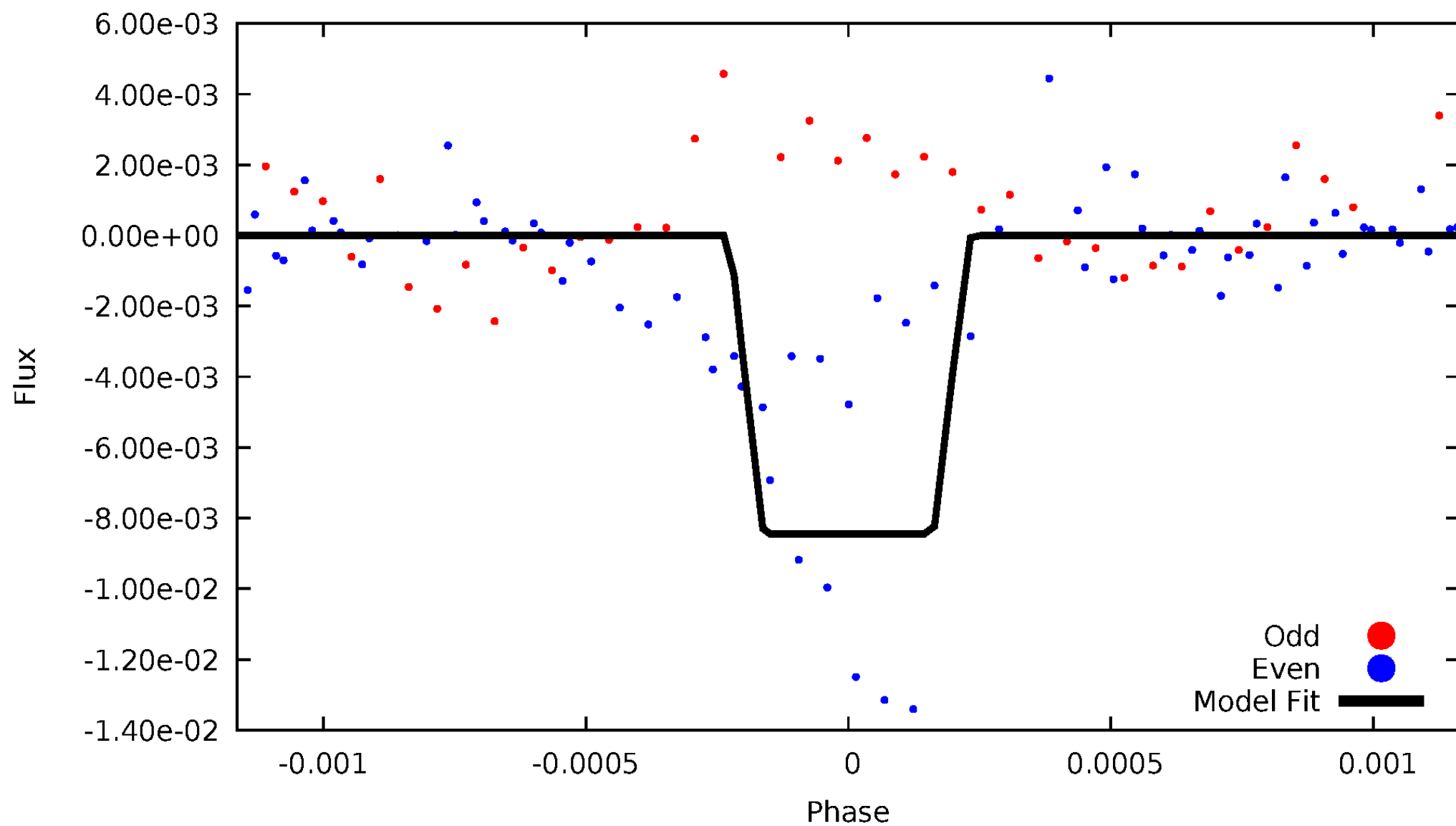
DV Odd/Even

TCE 007448057-01



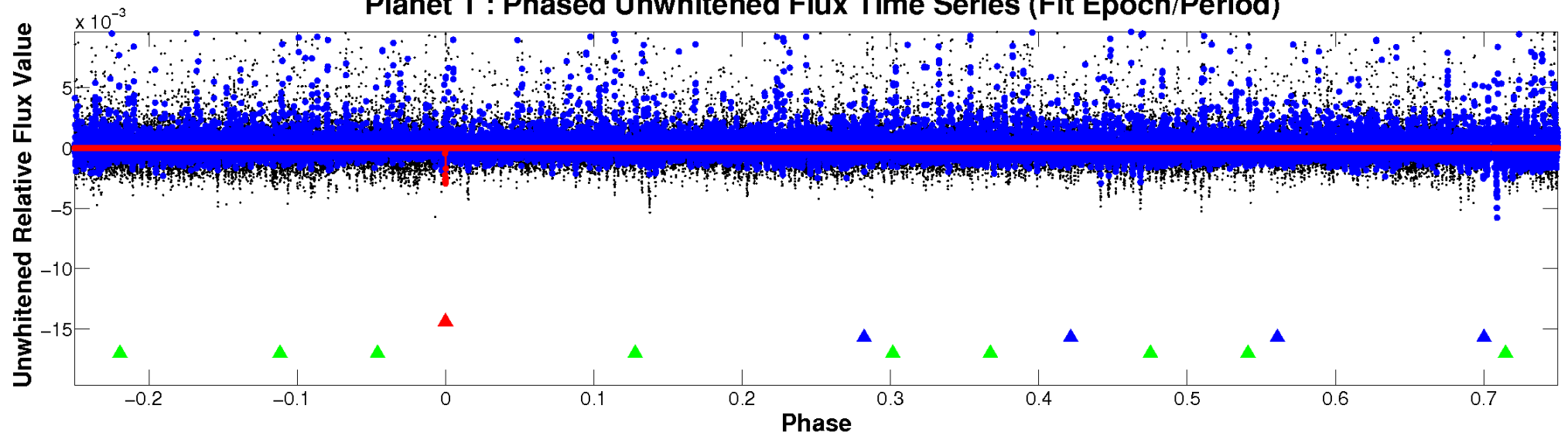
ALT Odd/Even

TCE 007448057-01

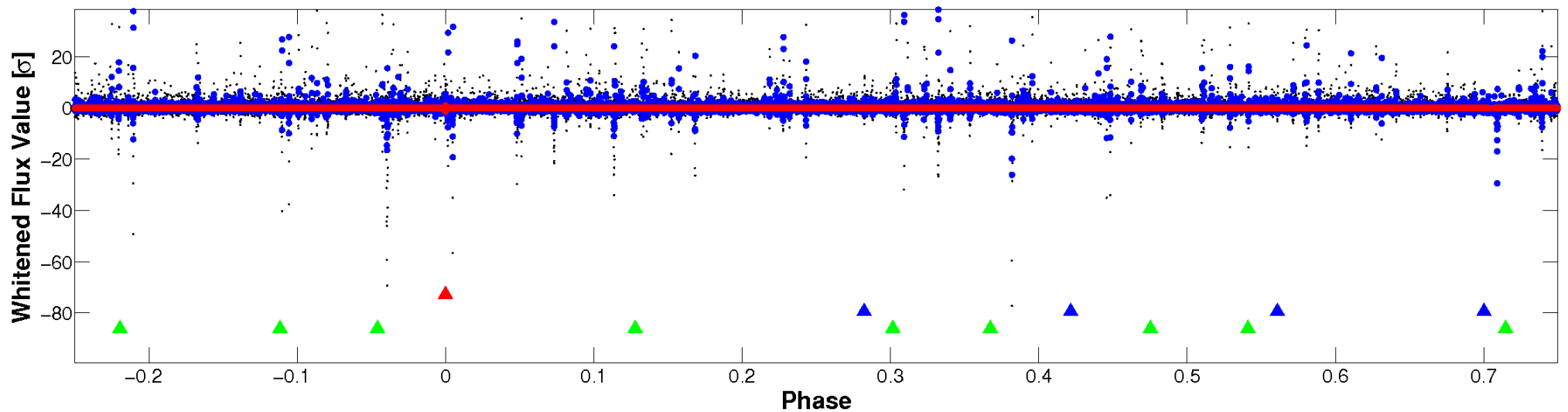


Non-Whitened Vs. Whitened Light Curve

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

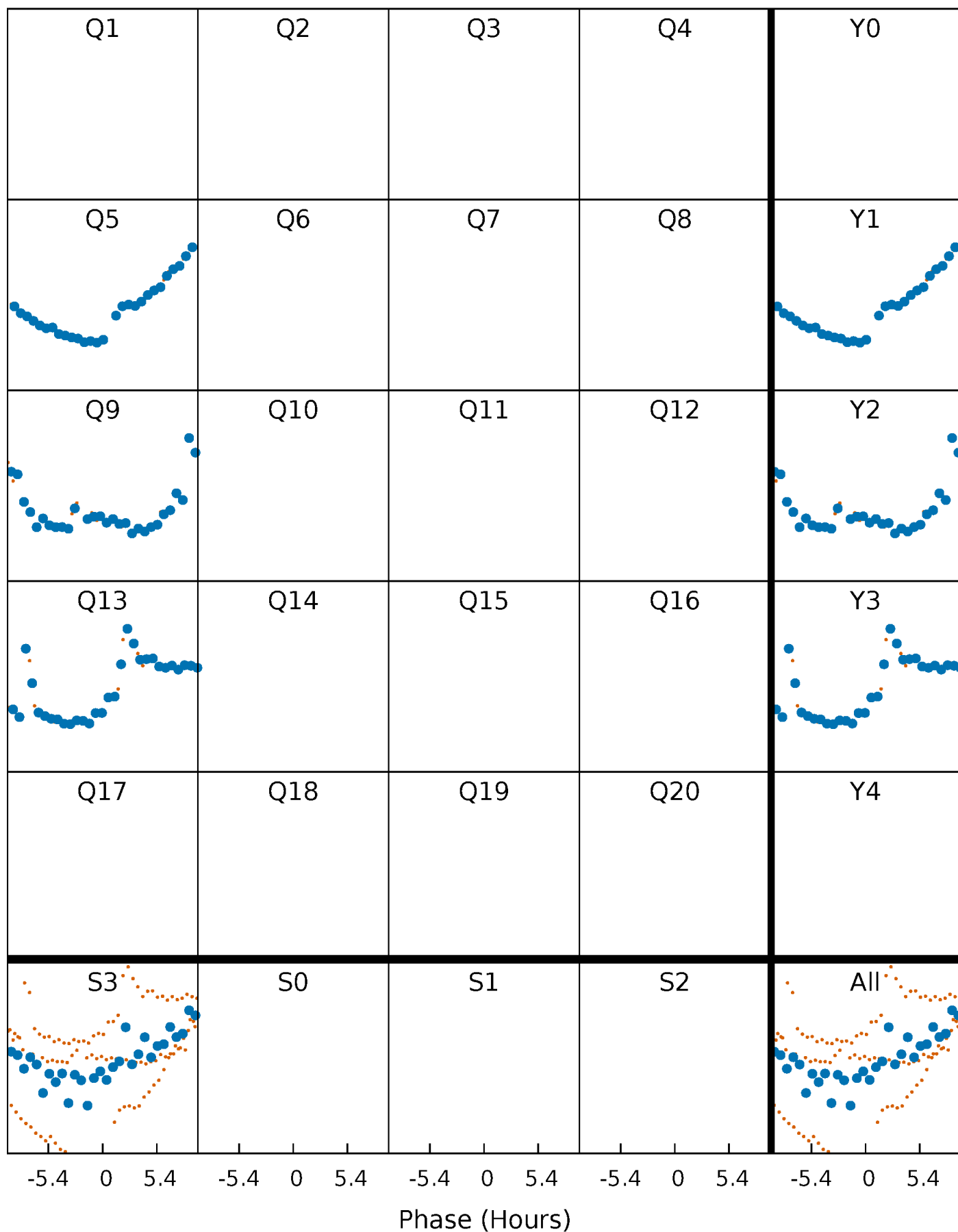


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



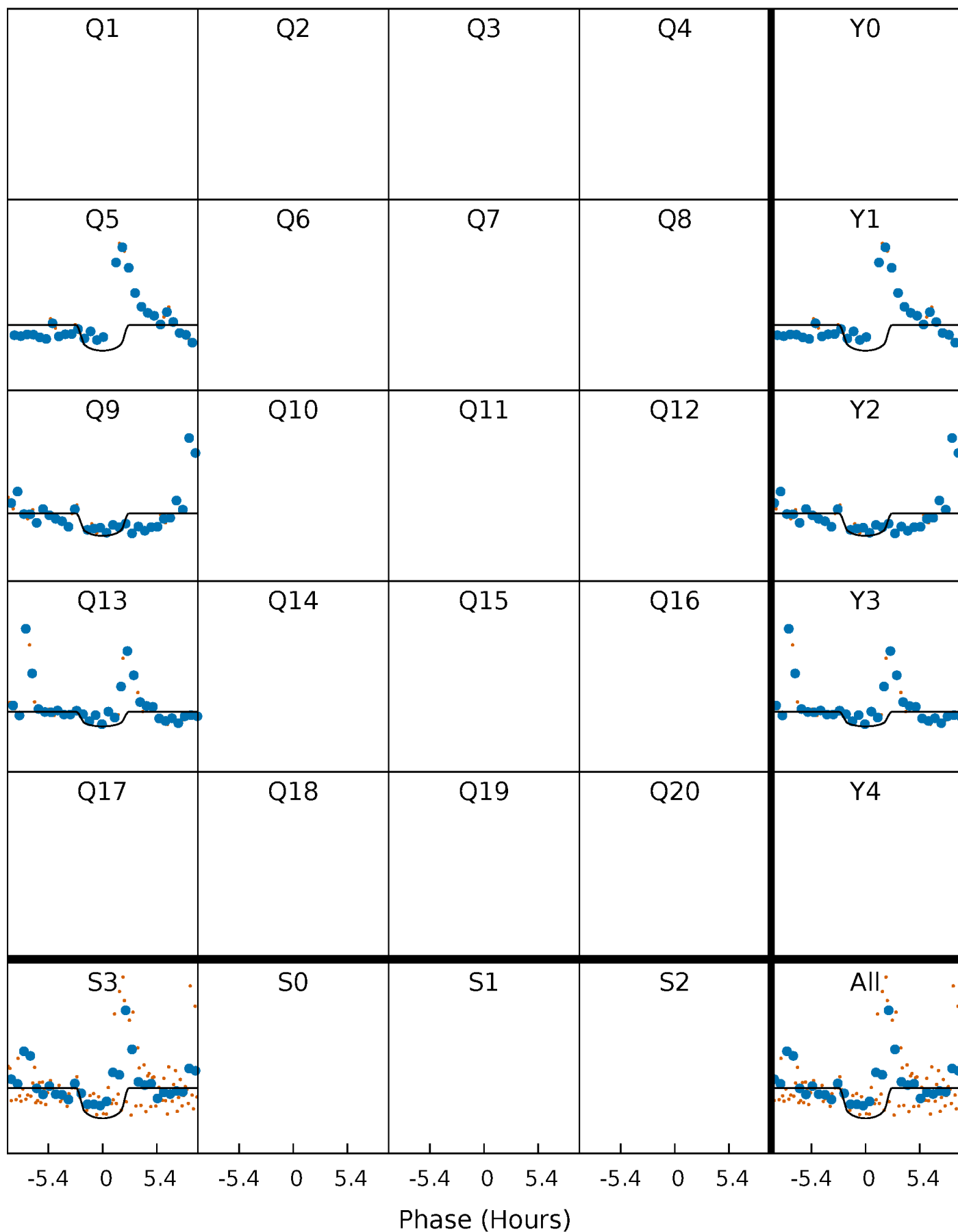
PDC Quarter-Phased Transit Curves

TCE 007448057-01 $P=374.765264$ Days $T_0=459.828622$ (BKJD)



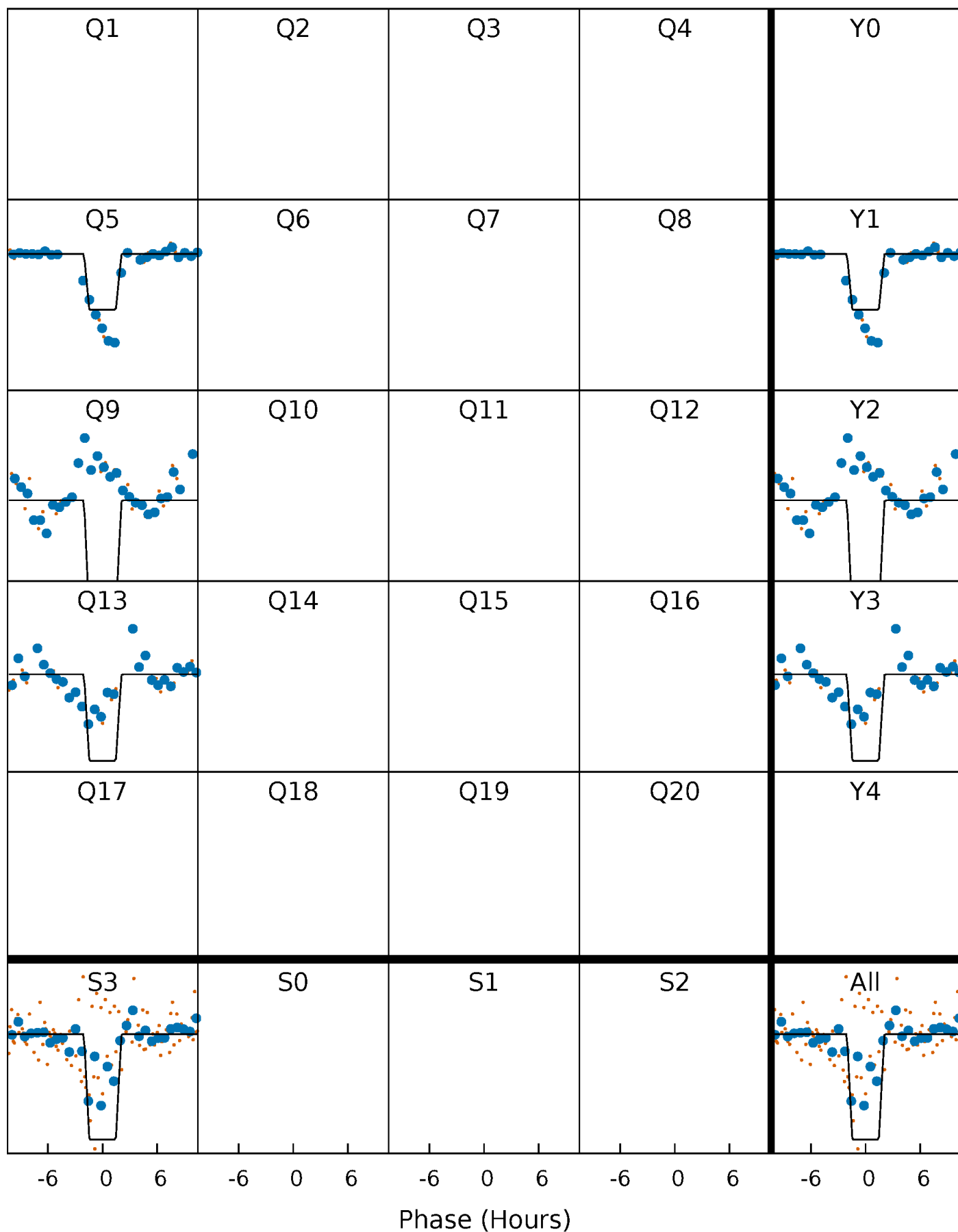
DV Quarter-Phased Transit Curves

TCE 007448057-01 P=374.765264 Days $T_0=459.828622$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

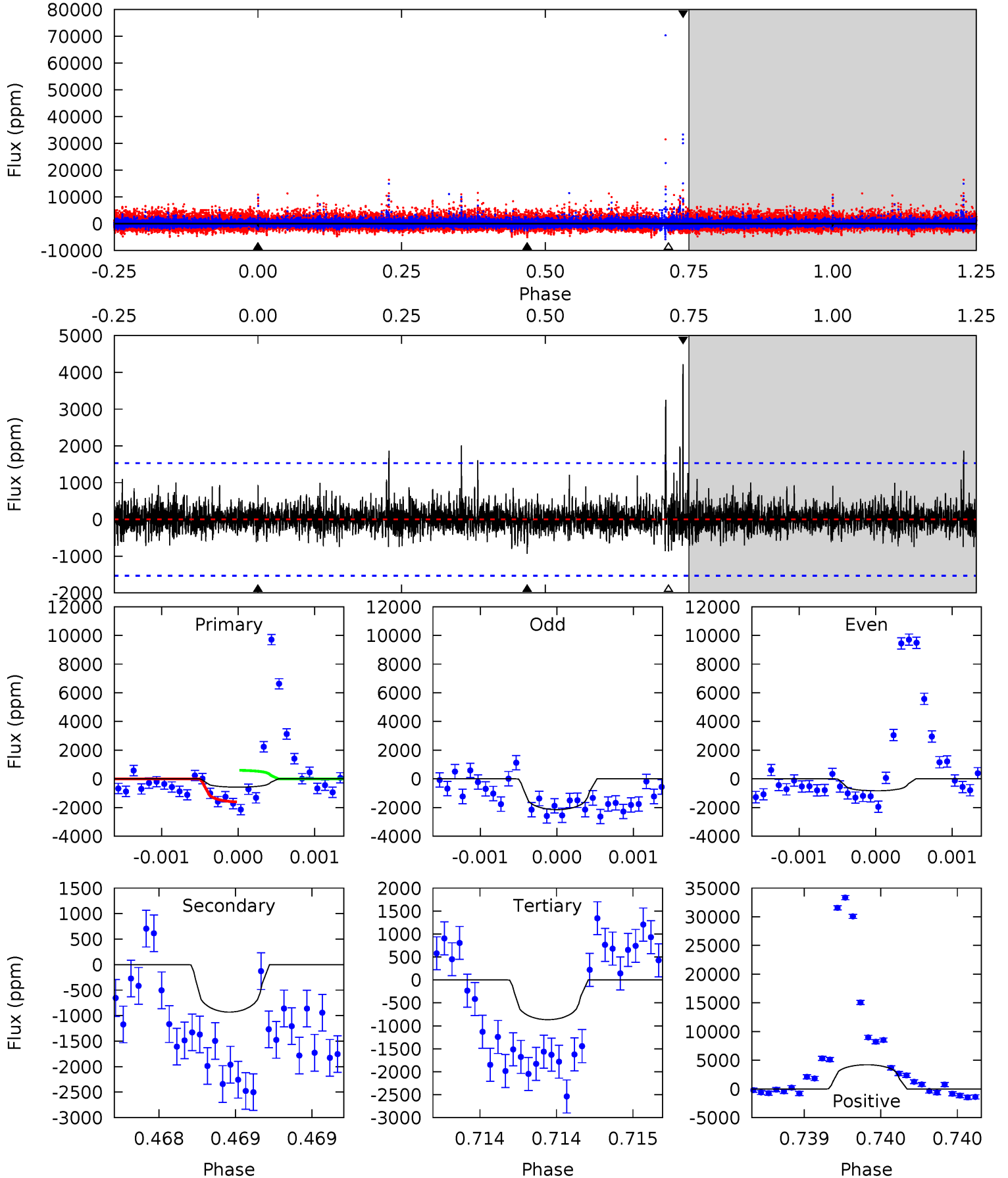
TCE 007448057-01 P=374.785546 Days $T_0=459.791251$ (BKJD)



DV Model-Shift Uniqueness Test

007448057-01, $P = 374.765264$ Days, $E = 85.063358$ Days

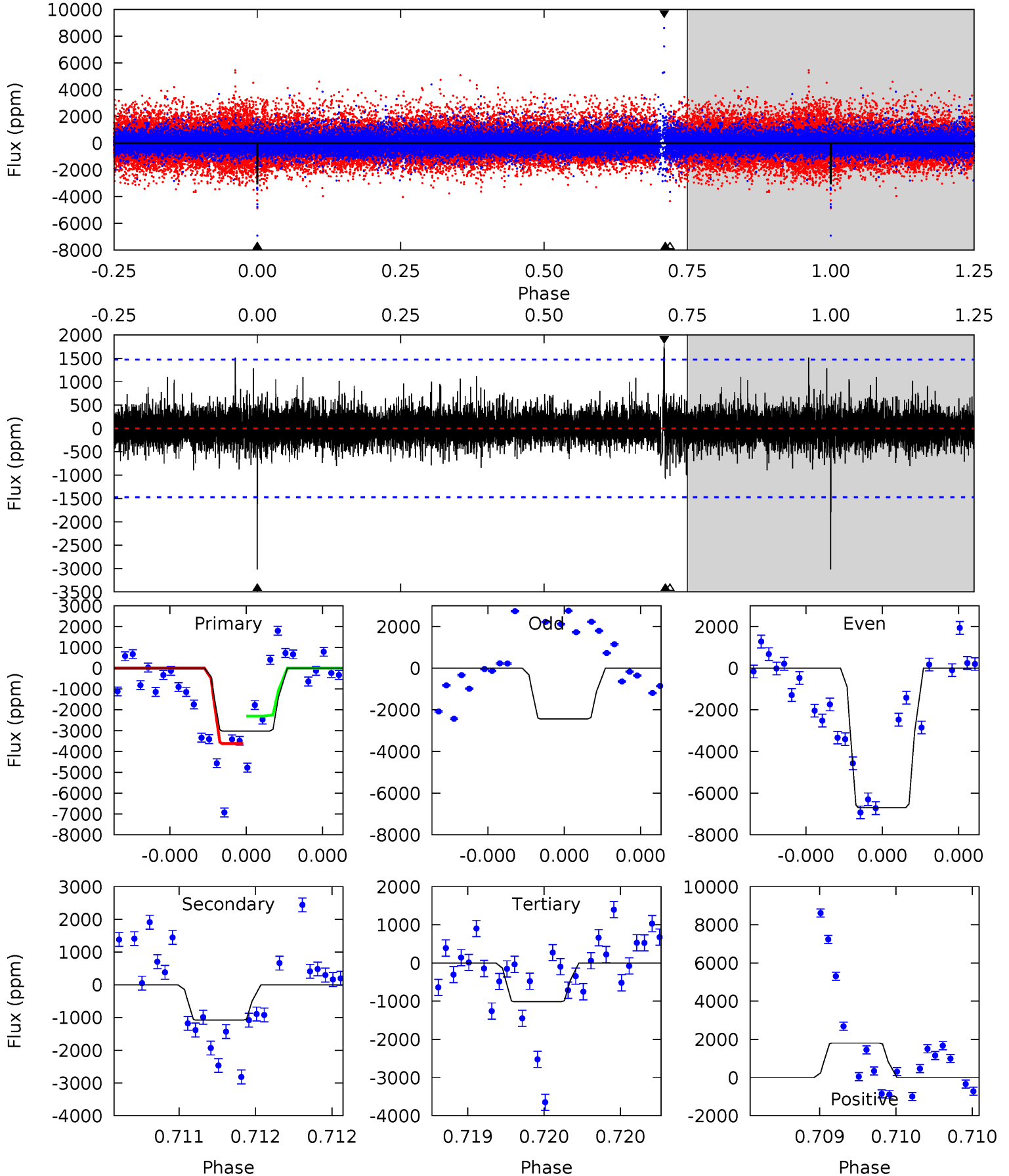
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.10	3.38	3.14	15.3	5.55	3.45	1.01	-1.04	-13.2	0.24	-11.9	1.38	1.48	0.82	1.92



Alt Model-Shift Uniqueness Test

007448057-01, $P = 374.785546$ Days, $E = 85.005705$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	4.09	3.84	6.84	5.58	3.50	0.87	7.59	4.59	0.26	-2.75	9.63	1.20	0.37	2.51



Stellar Parameters For KIC 007448057

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3882^{+77}_{-77}	$4.703^{+0.030}_{-0.020}$	$0.000^{+0.100}_{-0.100}$	$0.553^{+0.025}_{-0.030}$	$0.562^{+0.029}_{-0.029}$	$4.692^{+0.619}_{-0.372}$
	+2%/-2%	+1%/-0%	+inf%/-inf%	+5%/-5%	+5%/-5%	+13%/-8%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 007448057-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-931 ± 276	$4.81^{+4.43}_{-3.29}$	194^{+5}_{-4}	2882^{+1241}_{-449}	$15360^{+130032}_{-11407}$
Alt.	-1081 ± 264	$7.11^{+4.88}_{-4.21}$	194^{+4}_{-4}	2653^{+723}_{-326}	8325^{+37702}_{-5666}

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 $A_{obs} \gg 1.0$

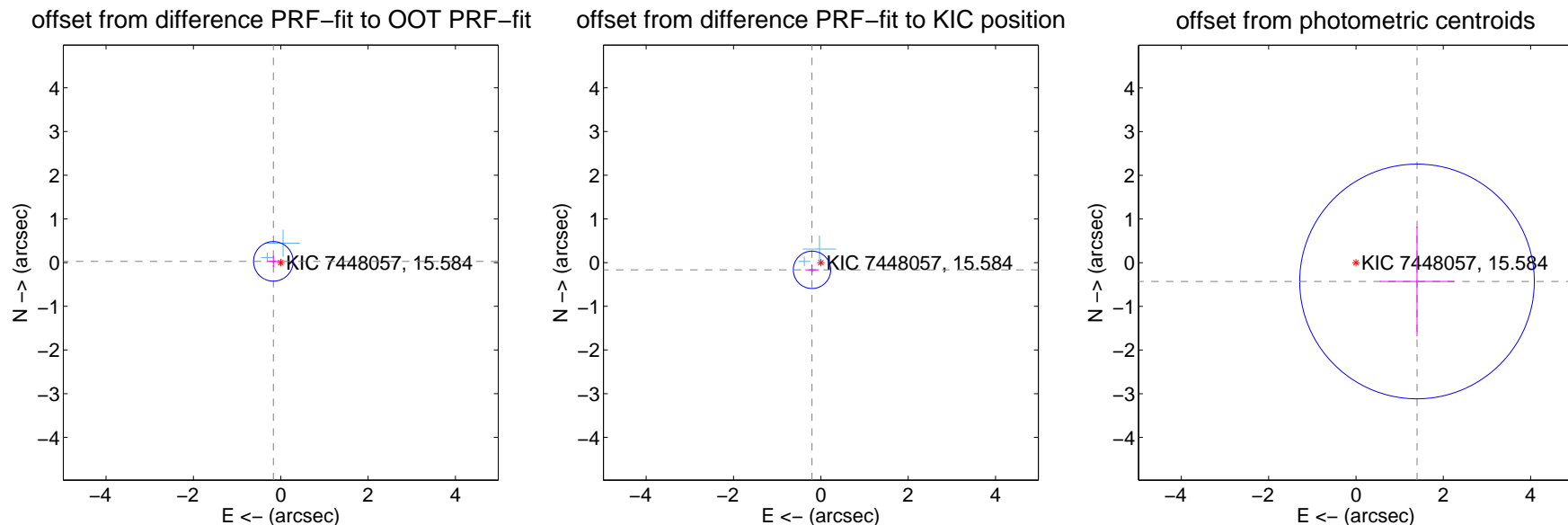
DV Centroid Data

Supplemental centroid analysis for 007448057-01. Kepler magnitude: 15.58. Transit SNR 6.39

There are 3 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.171 ± 0.151	1.14	0.169 ± 0.152	0.028 ± 0.128
PRF-fit source offset from KIC position	0.262 ± 0.143	1.84	0.203 ± 0.152	-0.166 ± 0.128
photometric centroid source offset	1.46 ± 0.90	1.63	-1.40 ± 0.85	-0.43 ± 1.26

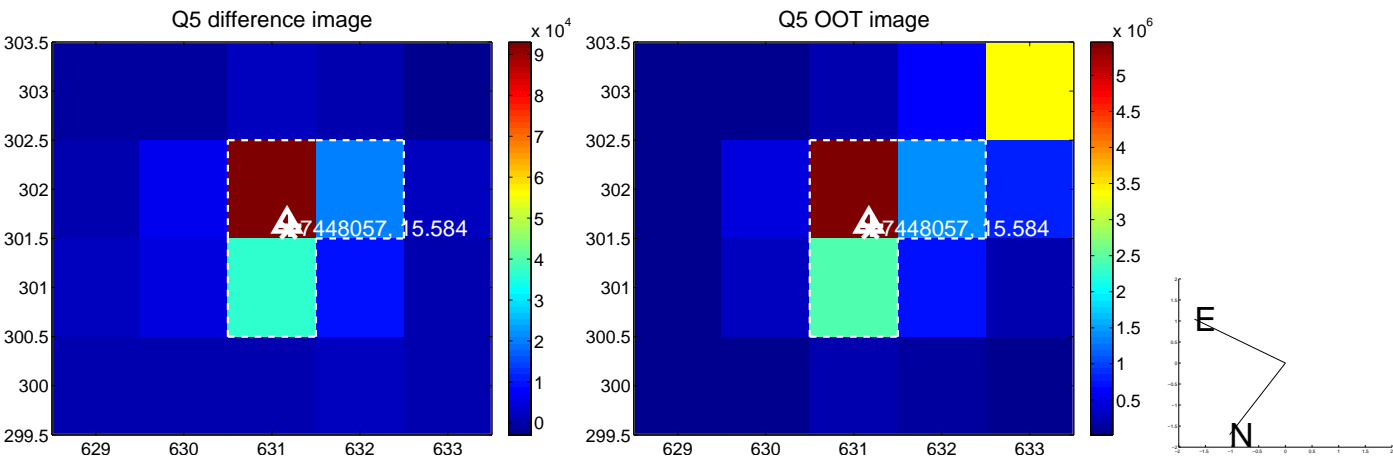


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

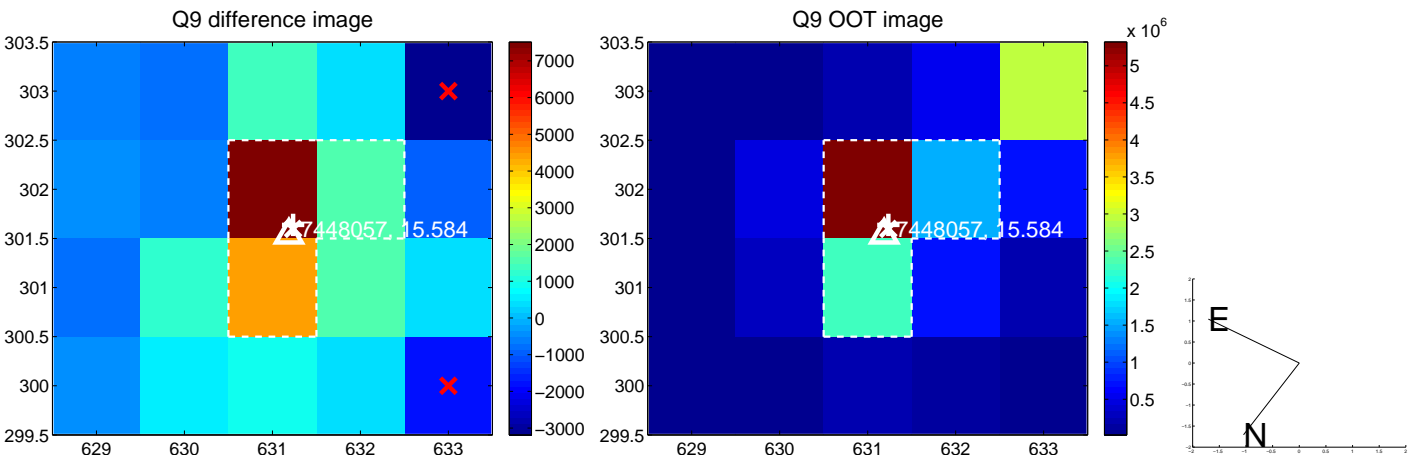
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



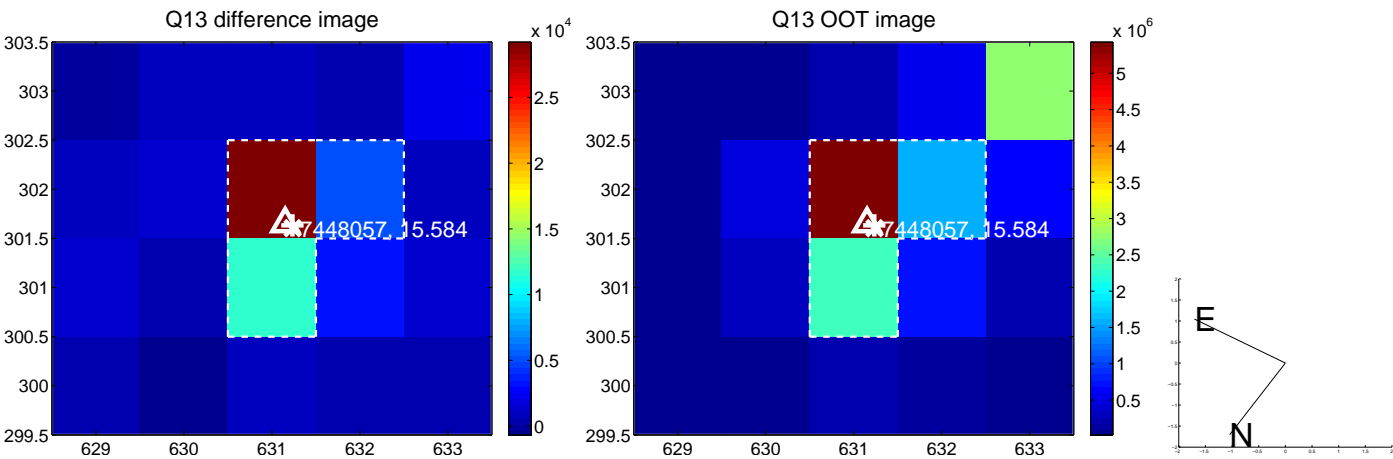
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



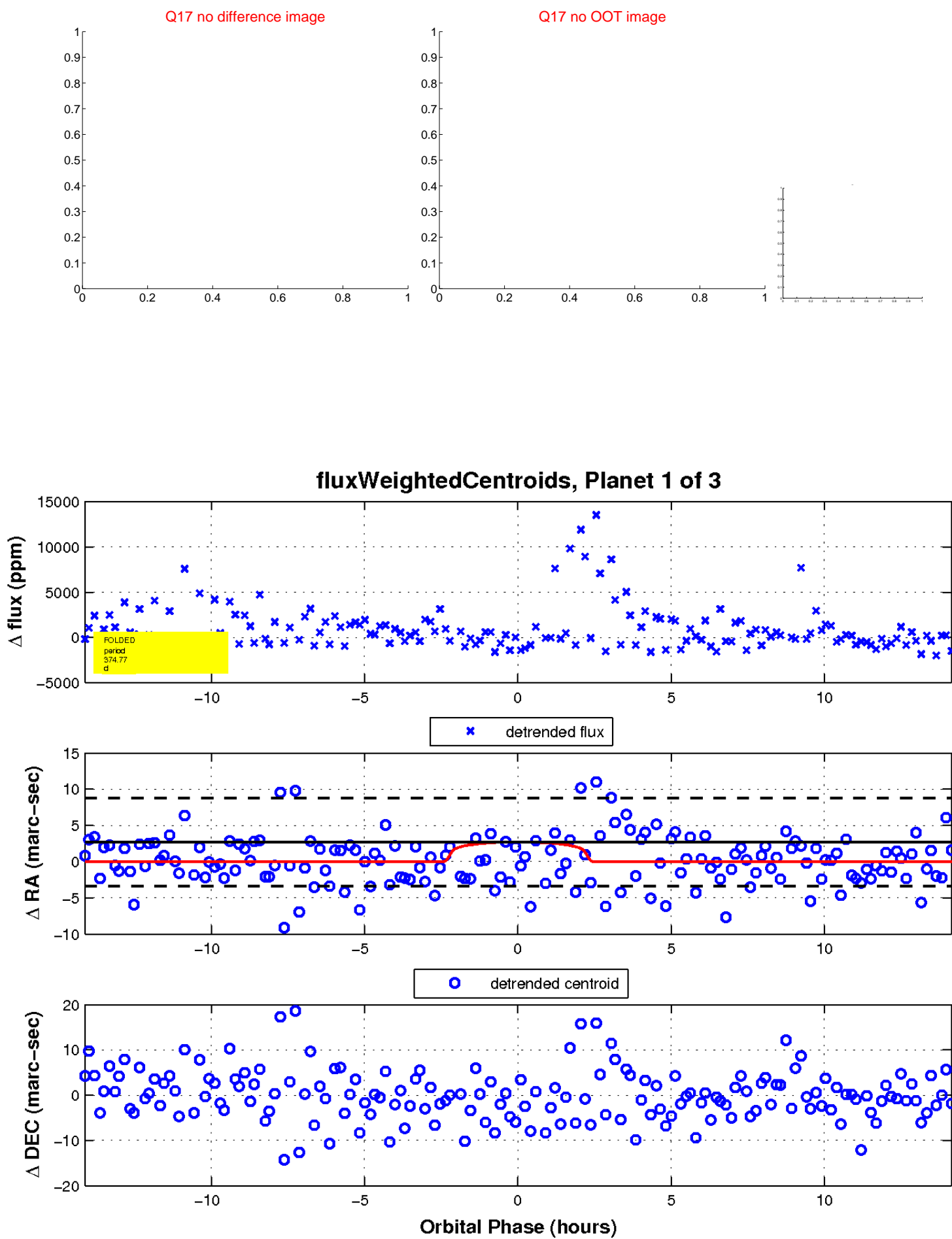
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

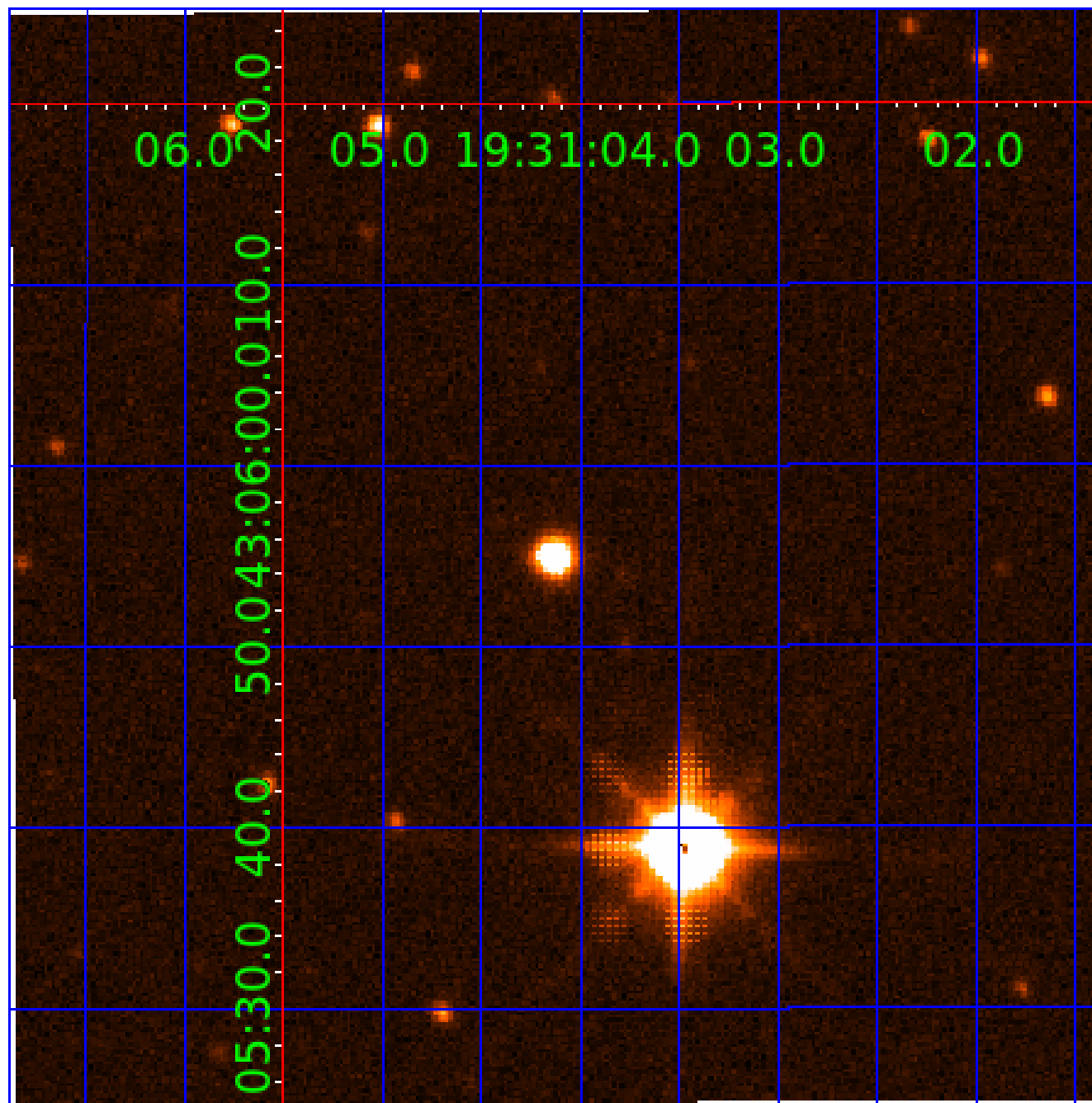


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007448057

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})
007448057-01	OBS	No	374.765264	459.828622	2948.7	4.749	11.7	6.4	0.55	3882	2.94	0.09
007448057-02	OBS	No	322.556820	347.473977	3129.0	4.198	12.8	6.4	0.55	3882	5.95	0.11
007448057-03	OBS	No	154.835588	263.188378	1773.3	6.182	11.9	6.7	0.55	3882	2.64	0.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007448057-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
007448057-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007448057-03	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

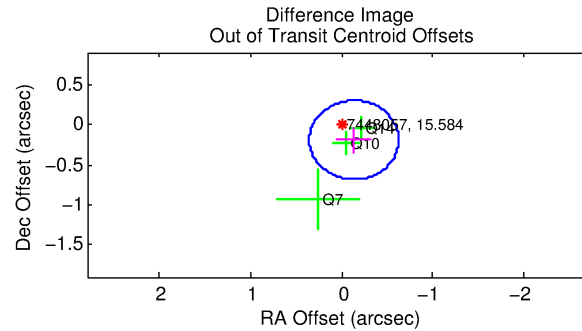
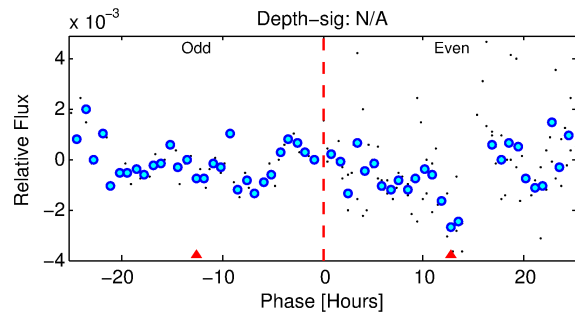
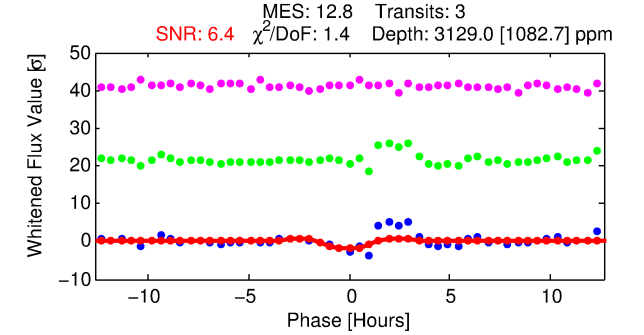
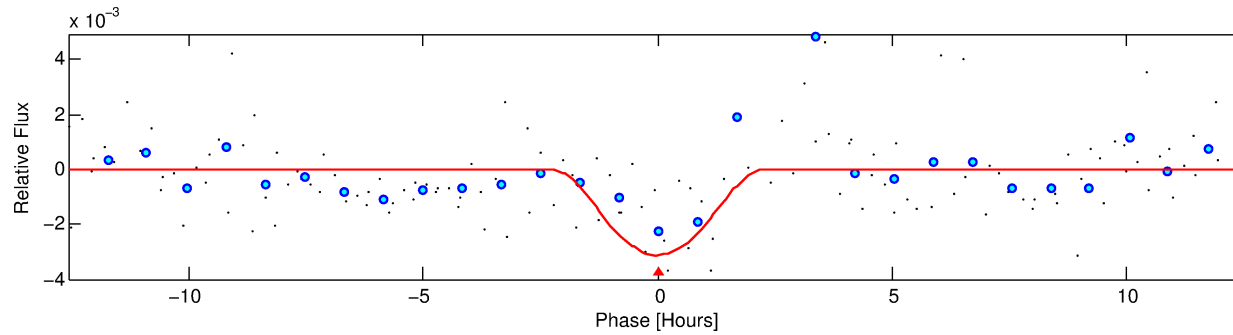
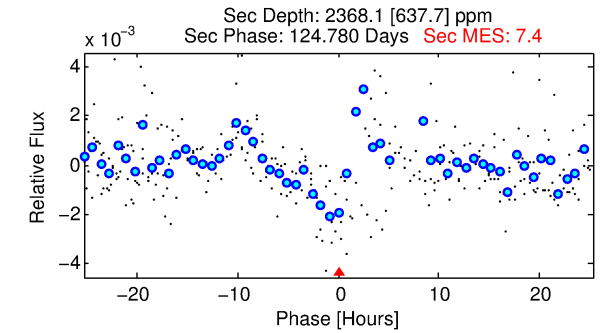
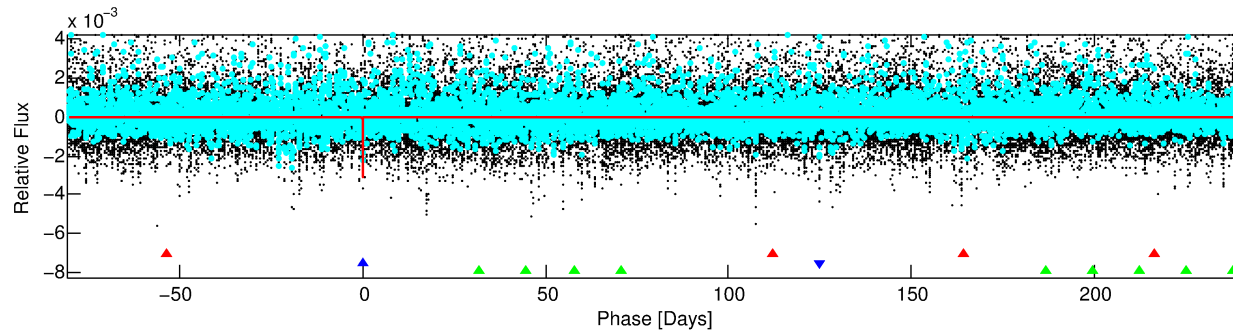
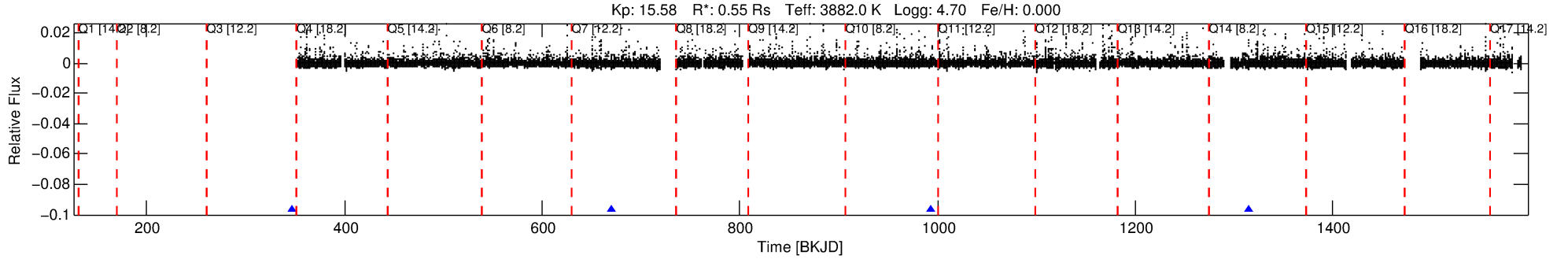
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007448057-02

No Significant Match Found

DV One-Page Summary

KIC: 7448057 Candidate: 2 of 3 Period: 322.557 d



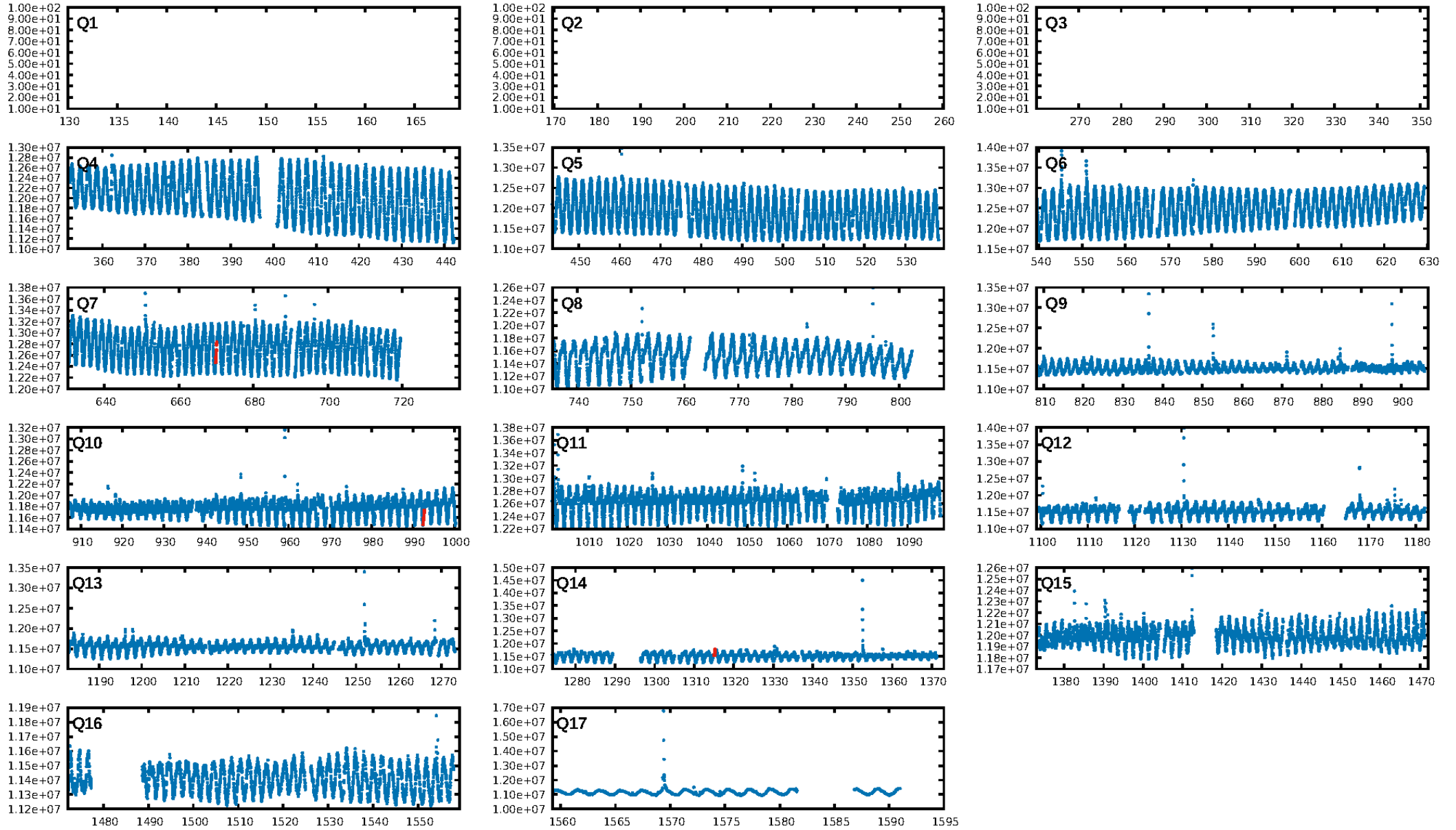
DV Fit Results:

Period = 322.55682 [0.01043] d
Epoch = 347.4740 [0.0203] BKJD
Rp/R* = 0.0985 [0.7095]
a/R* = 267.31 [373.57]
b = 1.00 [0.98]
Seff = 0.11 [0.01]
Teq = 146 [4] K
Rp = 5.95 [42.82] Re
a = 0.7602 [0.0326] AU
Ag = 21298.28 [306819.50] [0.07σ]
Teffp = 2728 [9826] K [0.26σ]

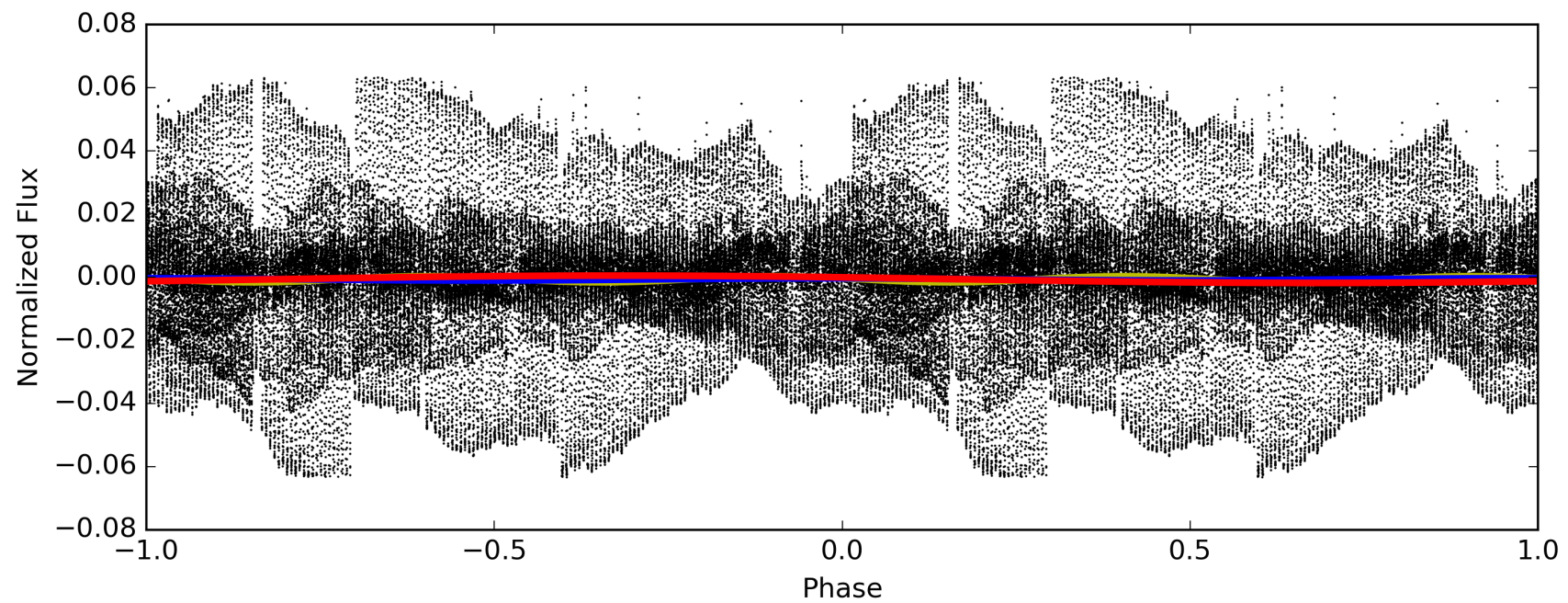
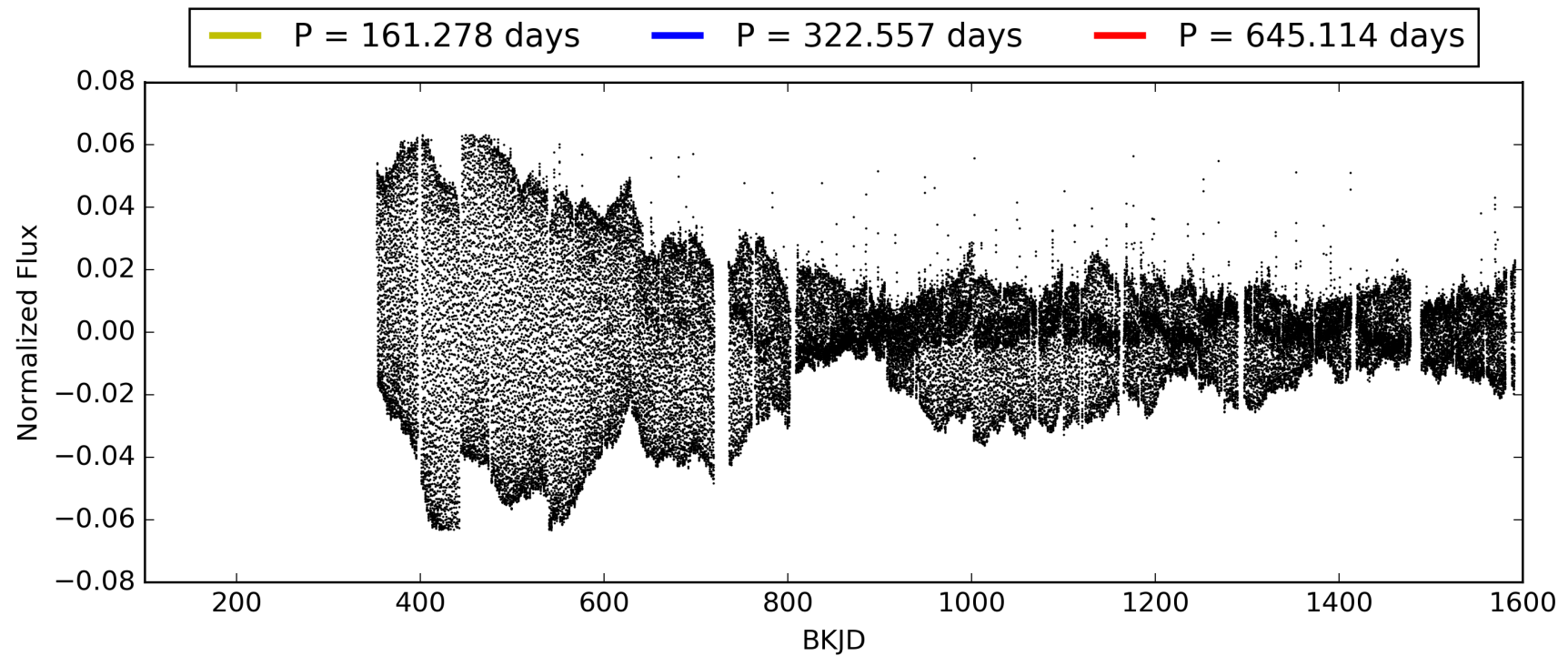
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [538.67σ]
LongPeriod-sig: 100.0% [197.68σ]
ModelChiSquare2-sig: 0.5%
ModelChiSquareGof-sig: 76.8%
Bootstrap-pfa: 1.00e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 13.73
Centroid-sig: N/A
Centroid-so: 0.364 arcsec [0.37σ]
OotOffset-rm: 0.235 arcsec [1.44σ]
KicOffset-rm: 0.323 arcsec [1.20σ]
OotOffset-st: 2/1/0/0 [3]
KicOffset-st: 2/1/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 007448057-02, PDC Light Curves

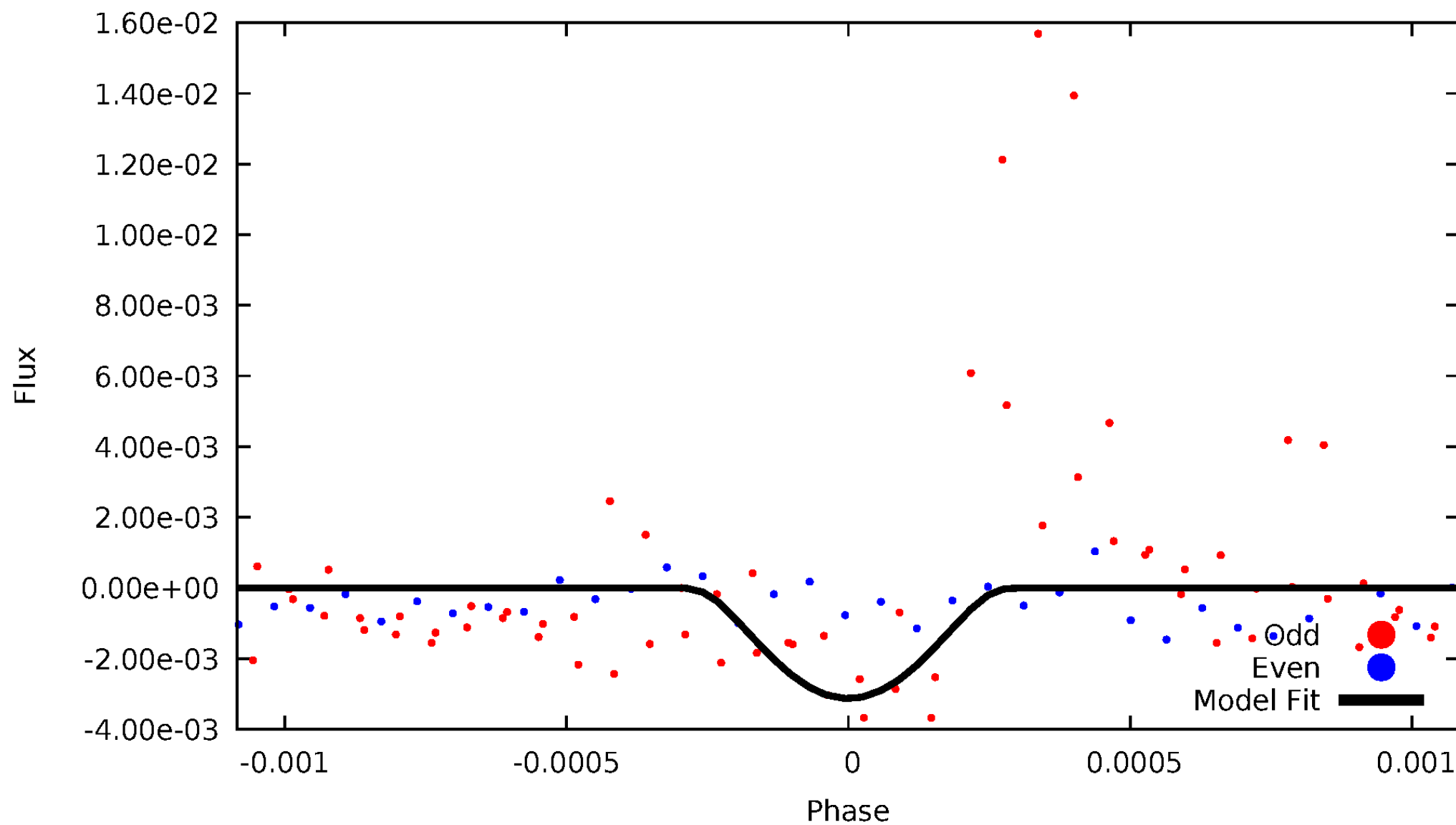


TCE 007448057-02



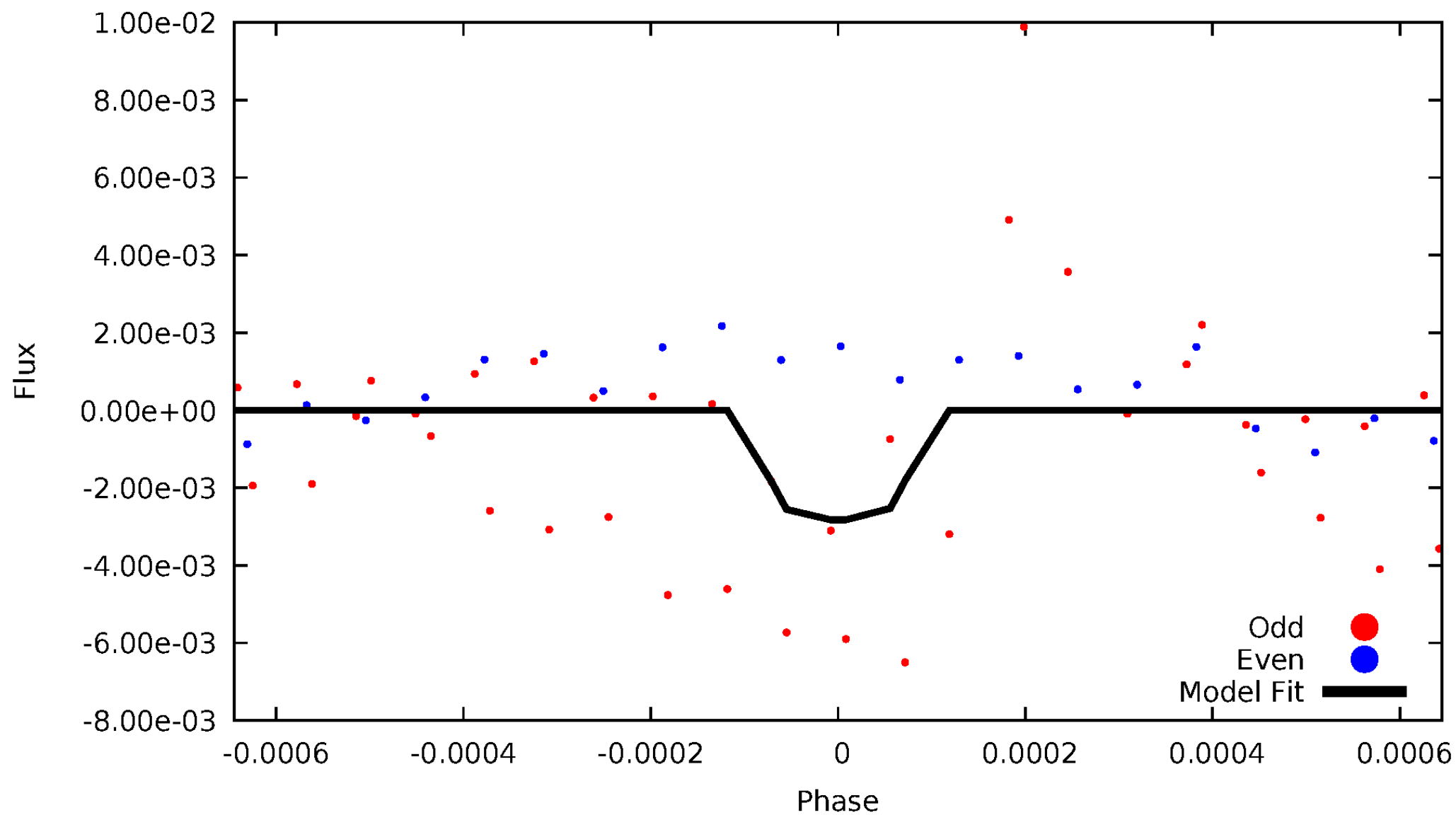
DV Odd/Even

TCE 007448057-02



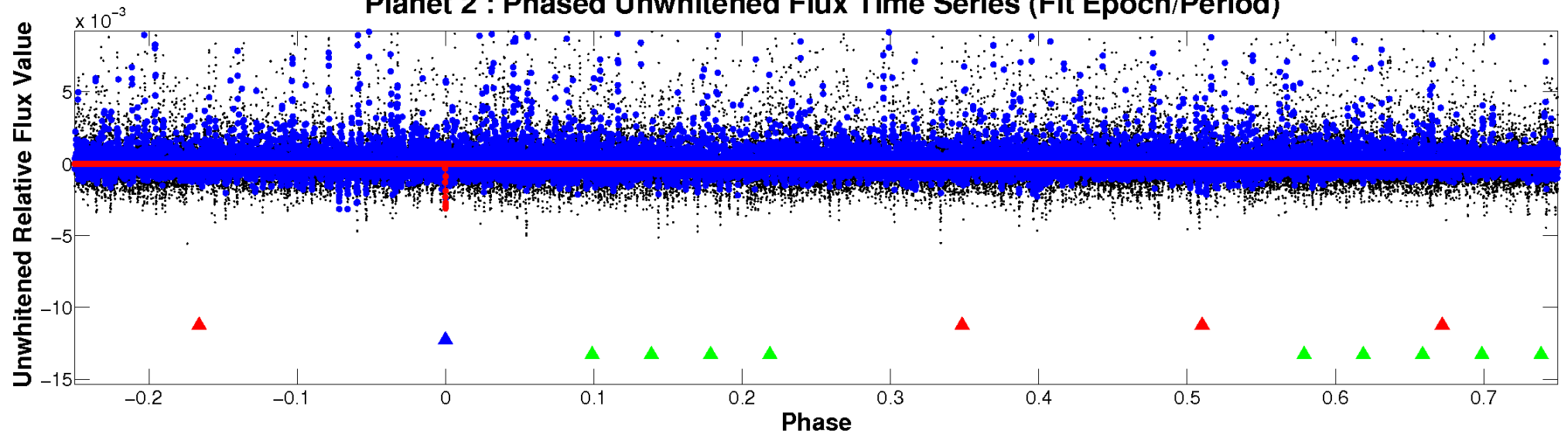
ALT Odd/Even

TCE 007448057-02

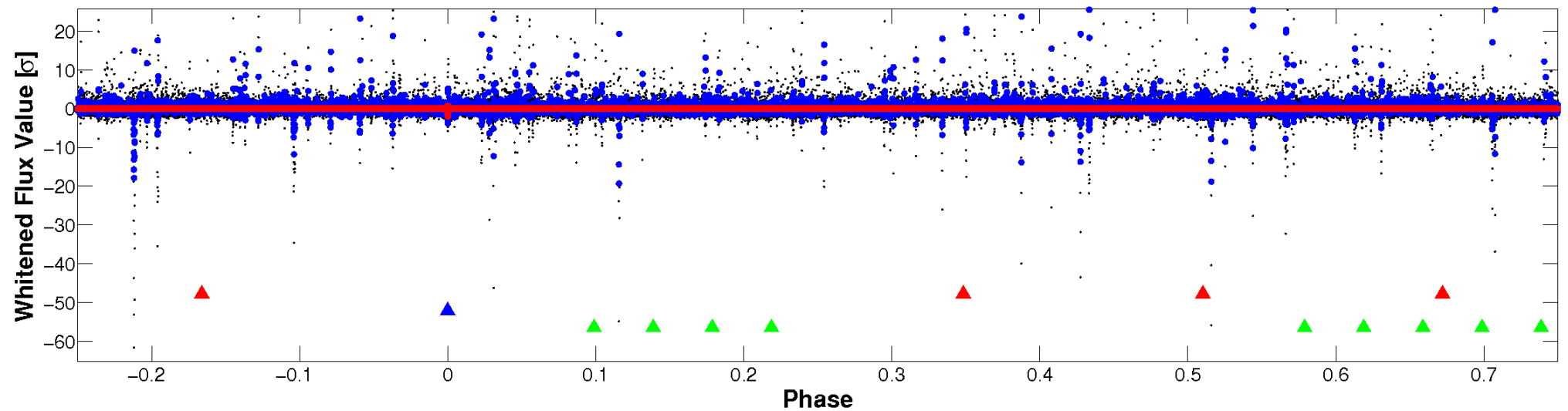


Non-Whitened Vs. Whitened Light Curve

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

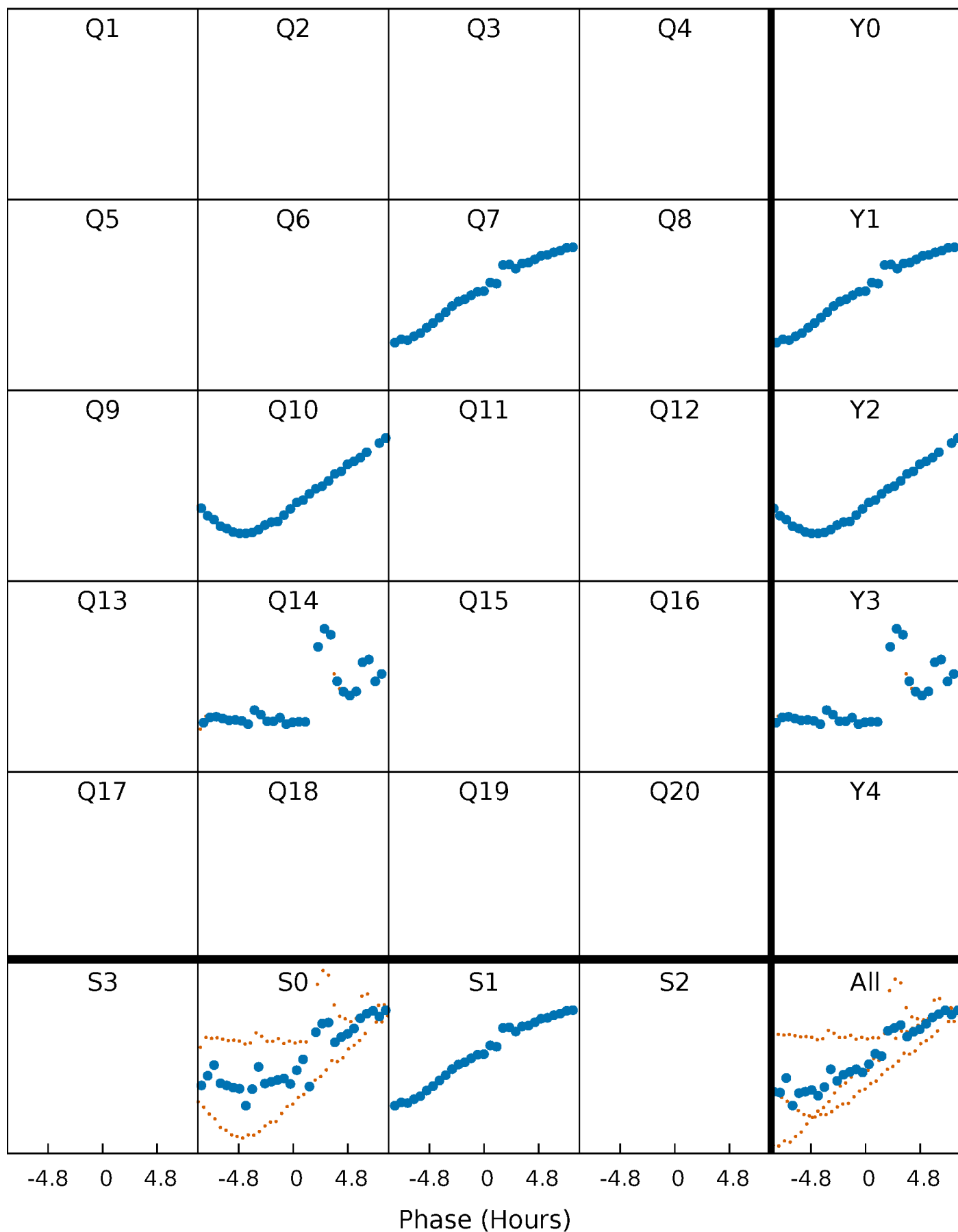


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



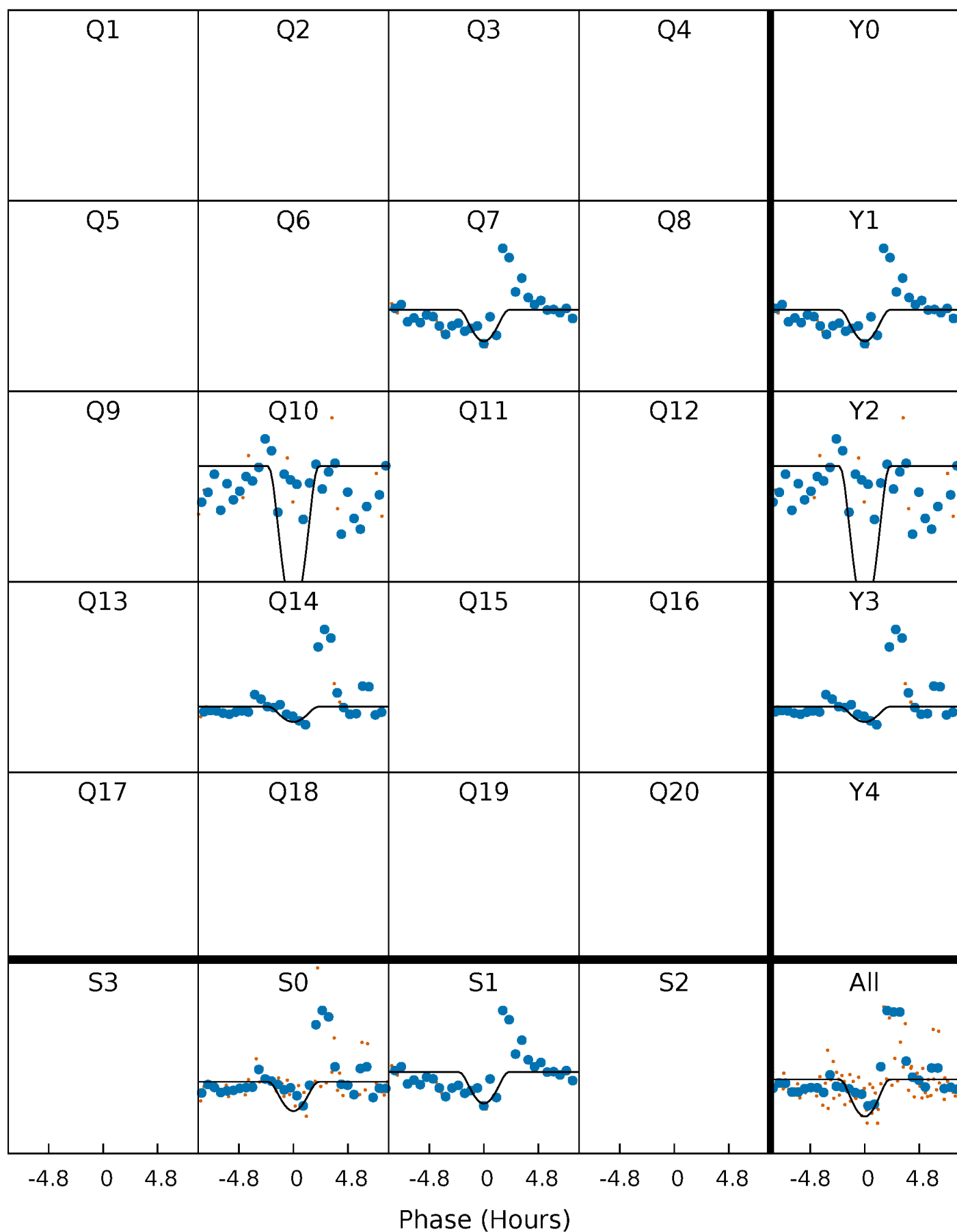
PDC Quarter-Phased Transit Curves

TCE 007448057-02 $P=322.556820$ Days $T_0=347.473977$ (BKJD)



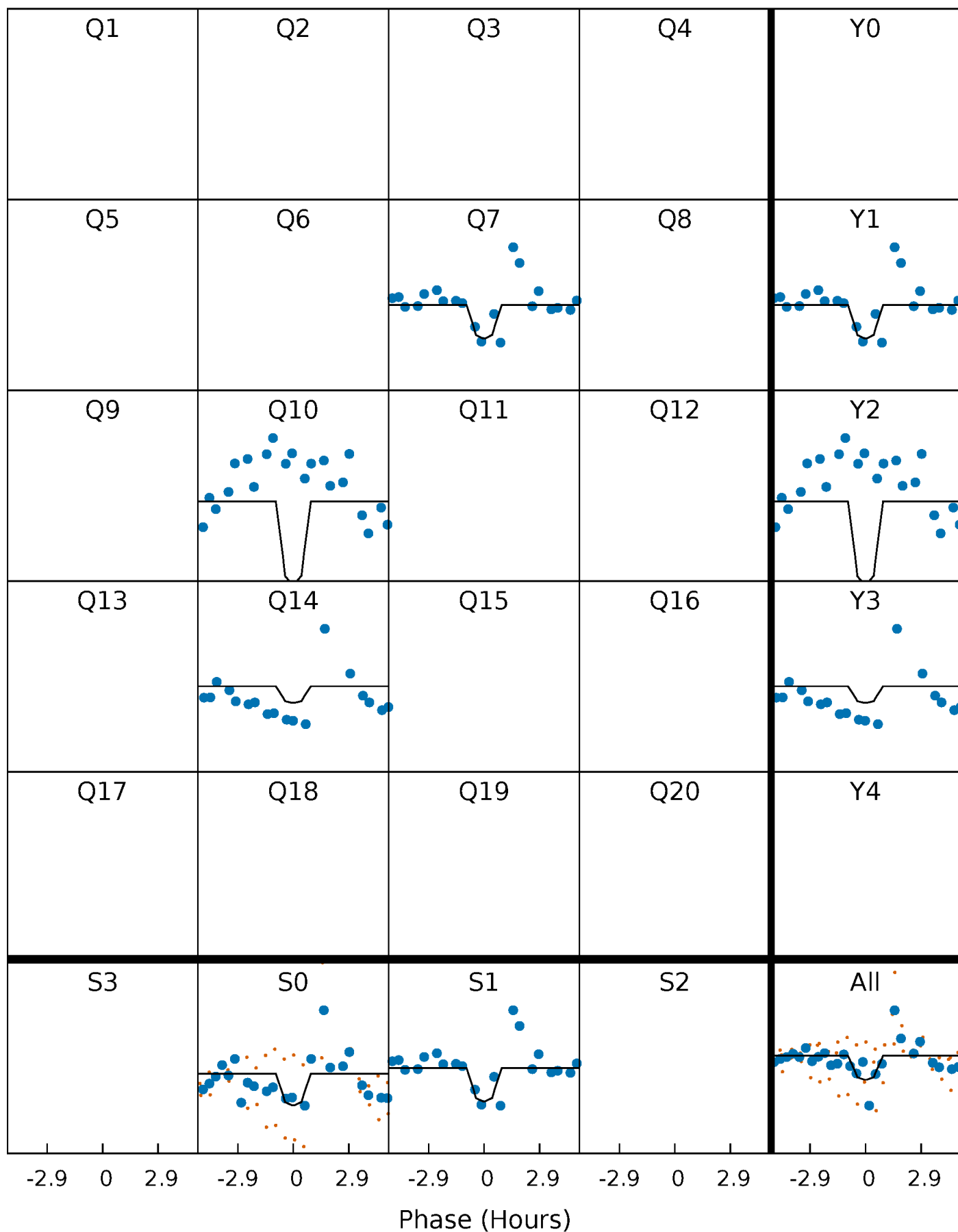
DV Quarter-Phased Transit Curves

TCE 007448057-02 $P=322.556820$ Days $T_0=347.473977$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

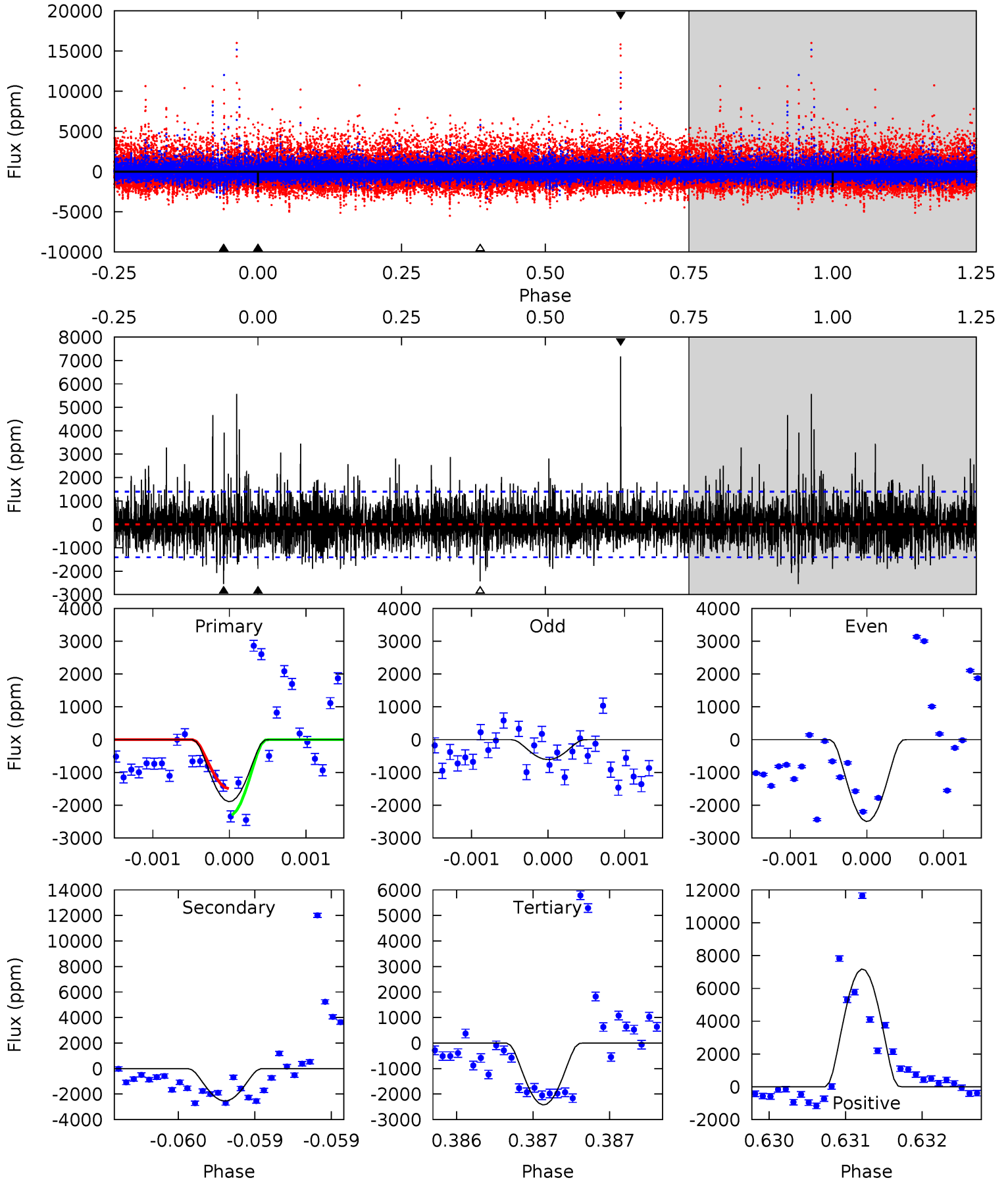
TCE 007448057-02 P=322.563237 Days $T_0=347.478973$ (BKJD)



DV Model-Shift Uniqueness Test

007448057-02, P = 322.556820 Days, E = 347.473977 Days

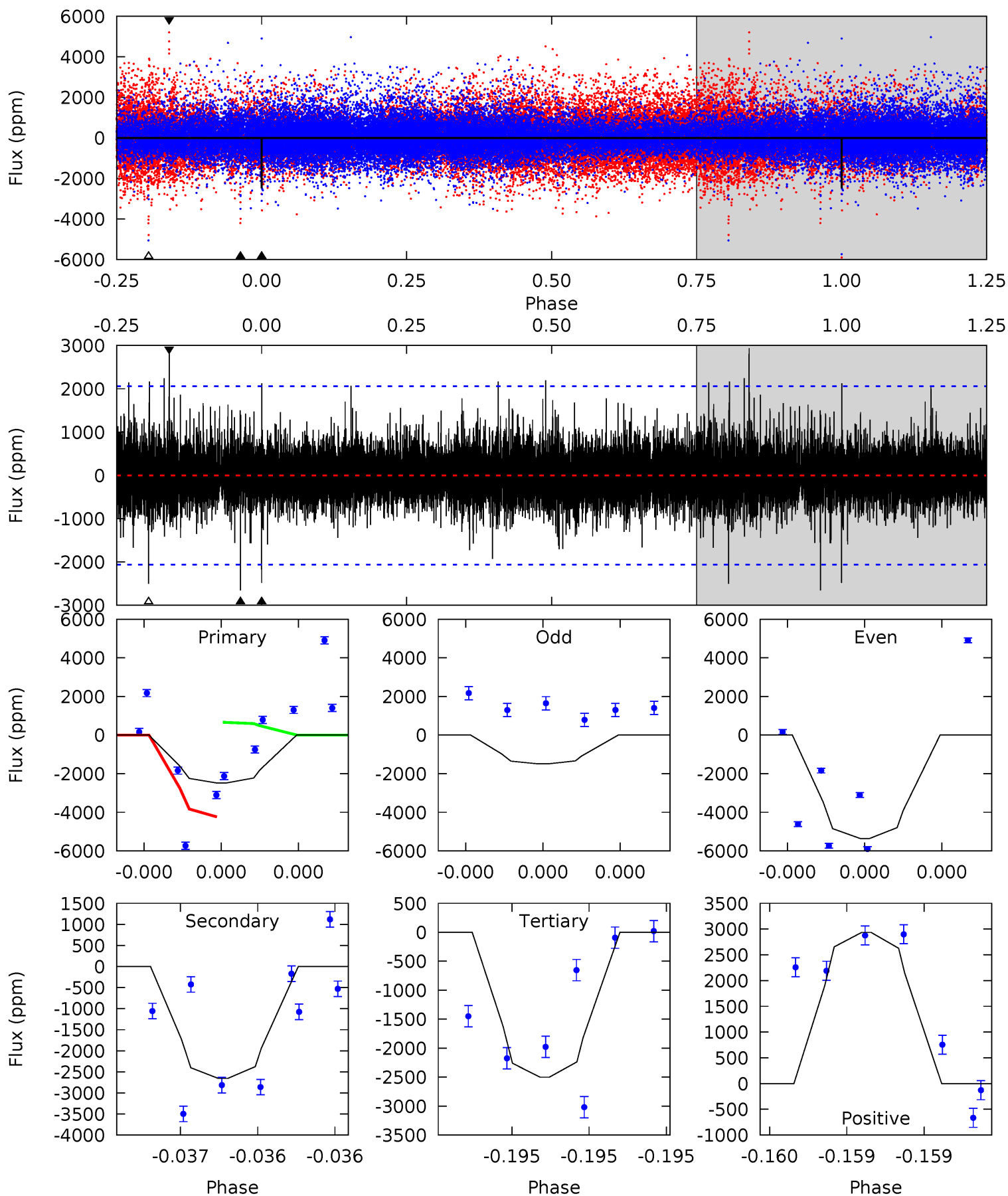
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.47	10.0	9.57	28.3	5.54	3.43	2.59	-2.10	-20.9	0.46	-18.3	2.36	0.76	0.74	1.60



Alt Model-Shift Uniqueness Test

007448057-02, P = 322.563237 Days, E = 347.478973 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.99	7.48	7.04	8.27	5.80	3.82	1.22	-0.05	-1.28	0.44	-0.79	4.64	1.13	0.52	4.49



Stellar Parameters For KIC 007448057

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3882^{+77}_{-77}	$4.703^{+0.030}_{-0.020}$	$0.000^{+0.100}_{-0.100}$	$0.553^{+0.025}_{-0.030}$	$0.562^{+0.029}_{-0.029}$	$4.692^{+0.619}_{-0.372}$
	+2%/-2%	+1%/-0%	+inf%/-inf%	+5%/-5%	+5%/-5%	+13%/-8%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 007448057-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2539 ± 253	$32.78^{+32.36}_{-22.79}$	204^{+5}_{-4}	2069^{+667}_{-267}	747^{+7708}_{-554}
Alt.	-2656 ± 355	$29.35^{+32.70}_{-20.21}$	204^{+4}_{-4}	2106^{+673}_{-282}	974^{+9230}_{-759}

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

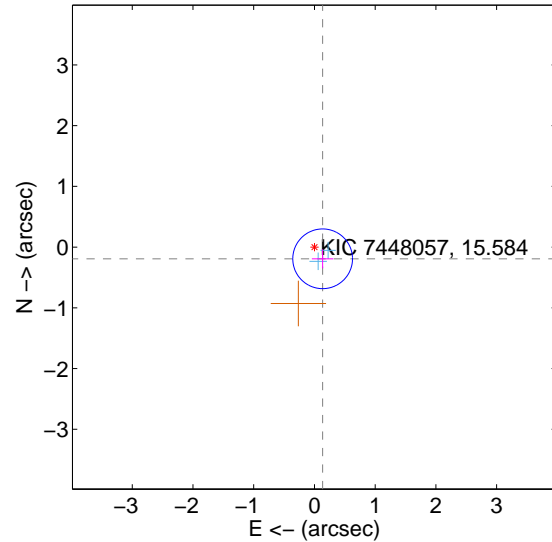
Supplemental centroid analysis for 007448057-02. Kepler magnitude: 15.58. Transit SNR 6.36

There are 2 quarters with good PRF difference image offsets

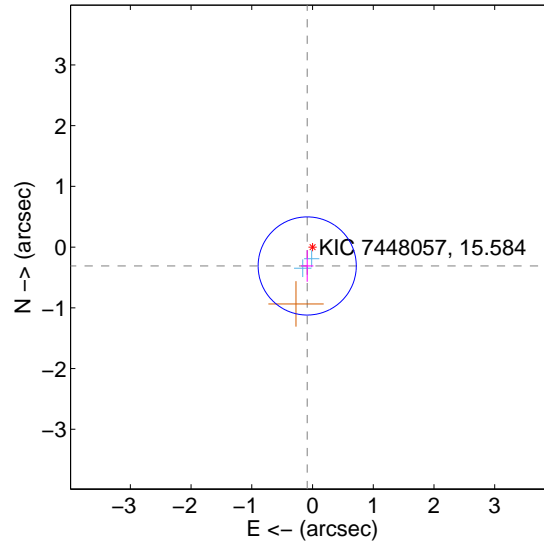
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.235 ± 0.164	1.44	-0.135 ± 0.178	-0.193 ± 0.157
PRF-fit source offset from KIC position	0.323 ± 0.269	1.20	0.087 ± 0.101	-0.311 ± 0.259
photometric centroid source offset	0.36 ± 0.99	0.37	-0.07 ± 0.74	-0.36 ± 0.99

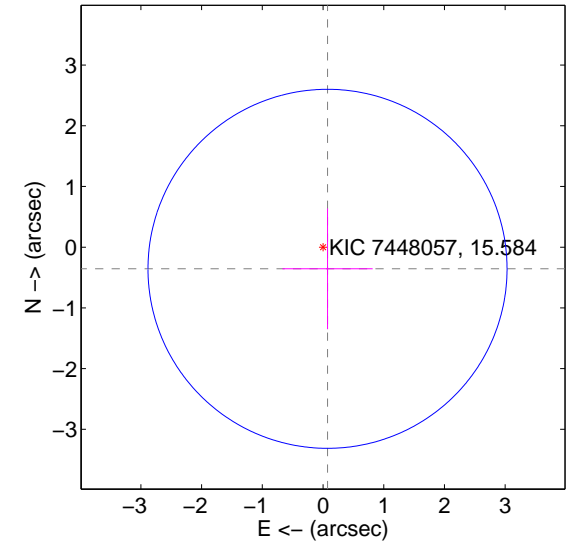
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

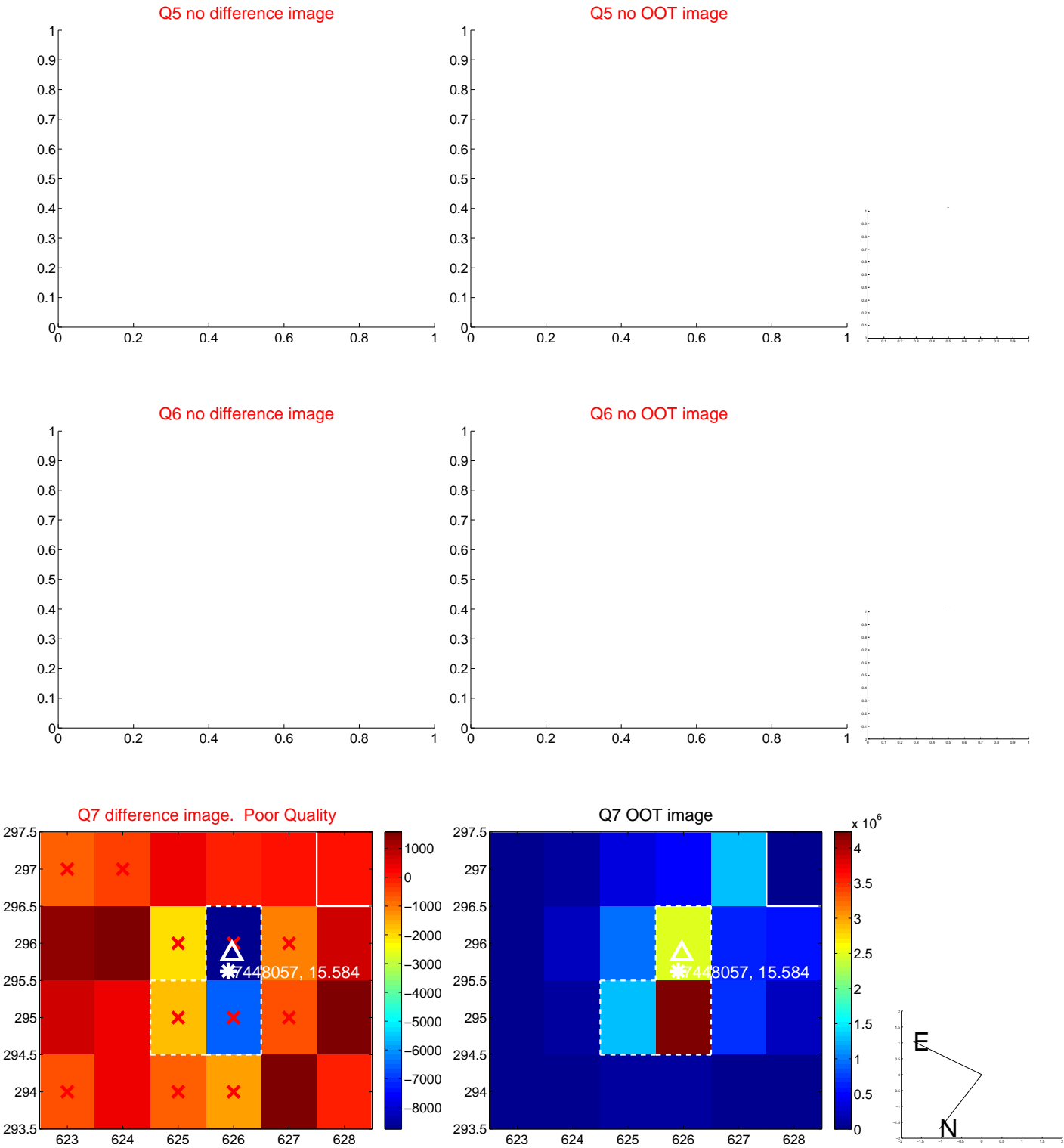


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

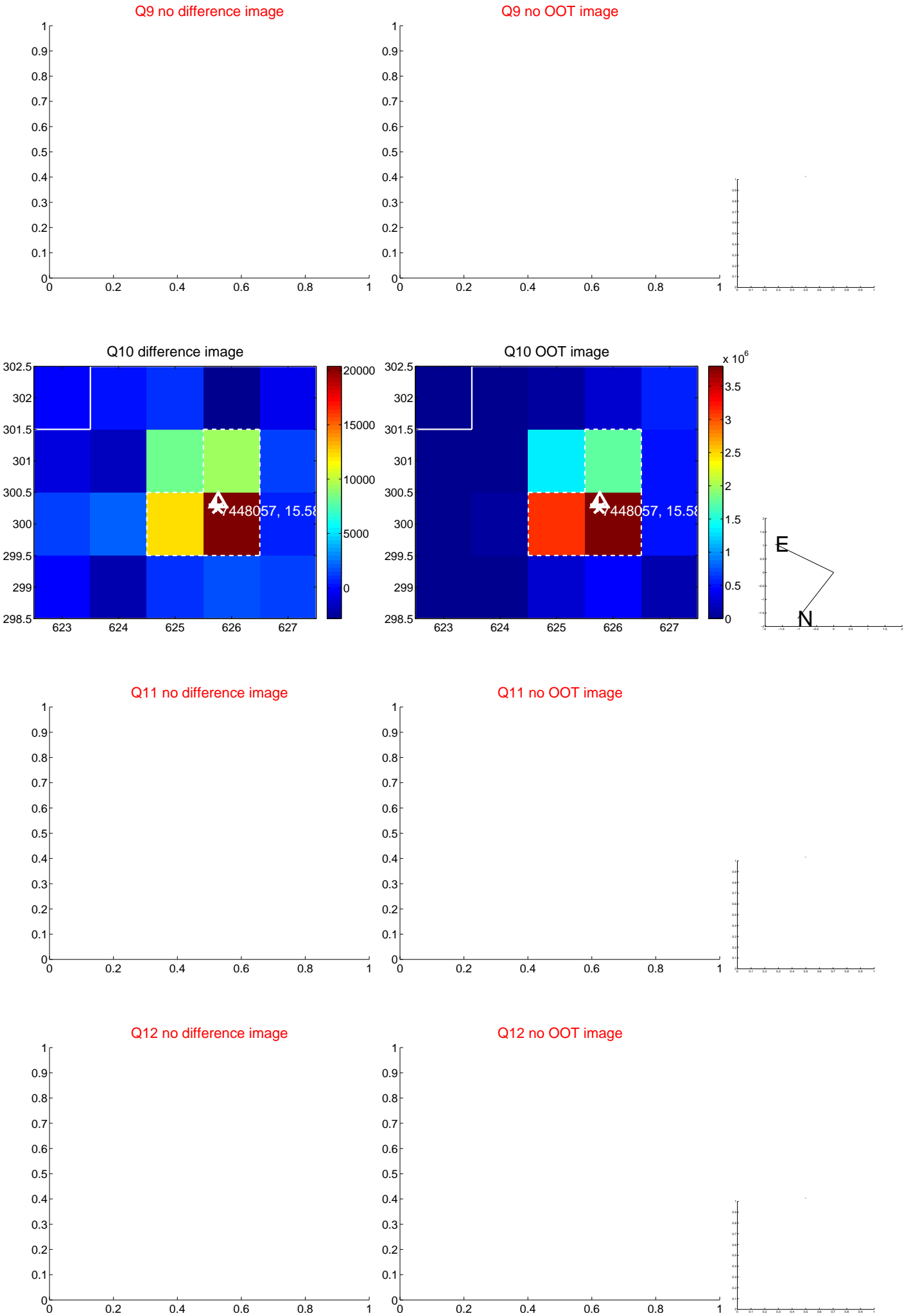
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



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

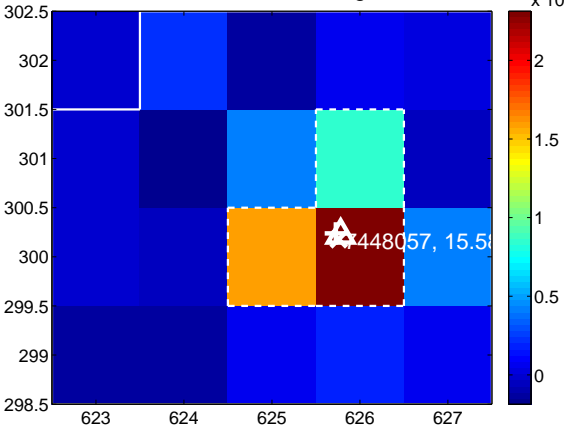
Q13 no difference image



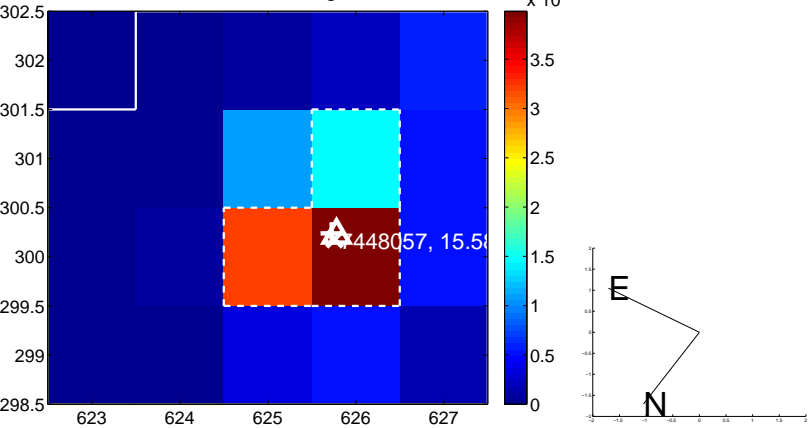
Q13 no OOT image



Q14 difference image



Q14 OOT image



Q15 no difference image



Q15 no OOT image



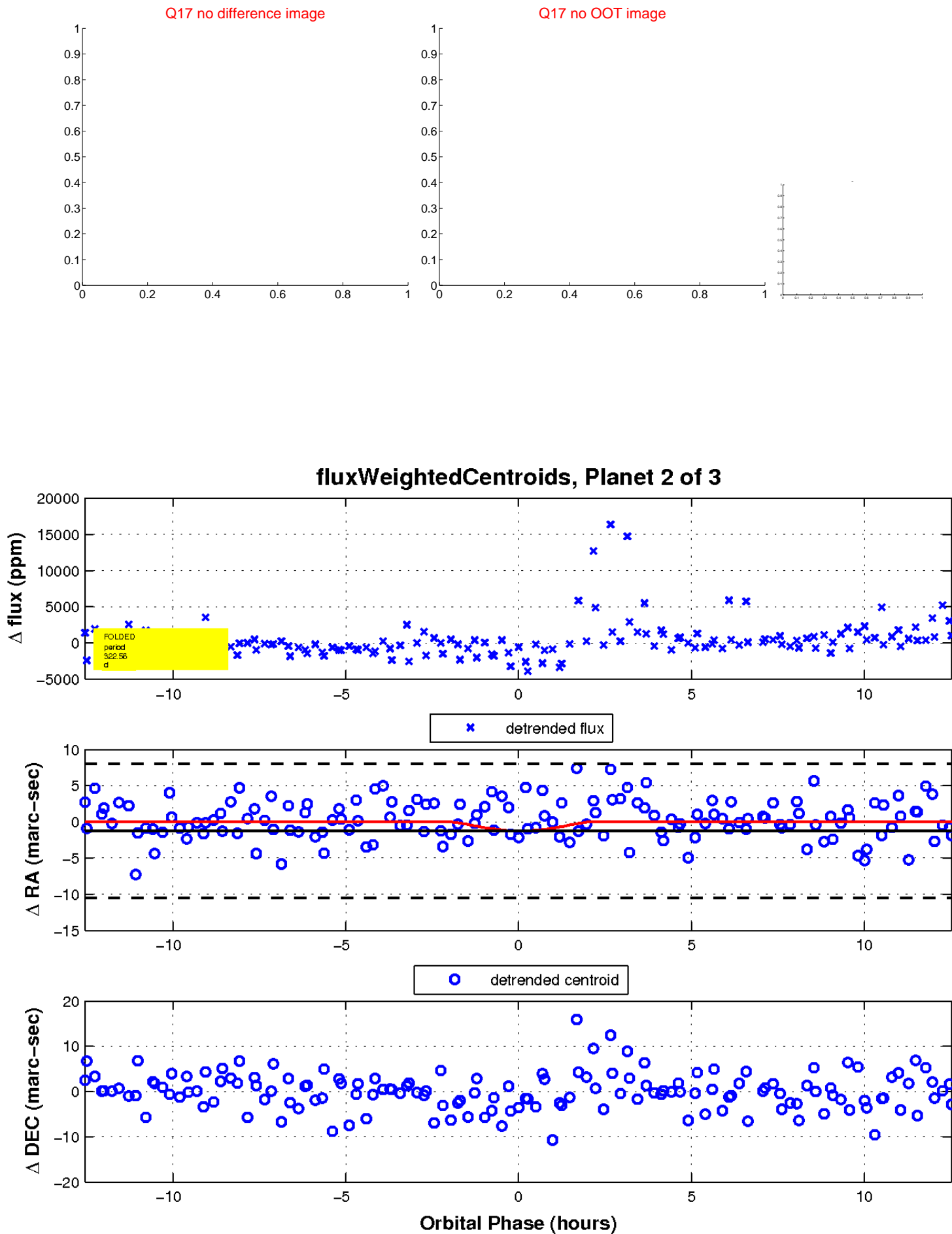
Q16 no difference image



Q16 no OOT image

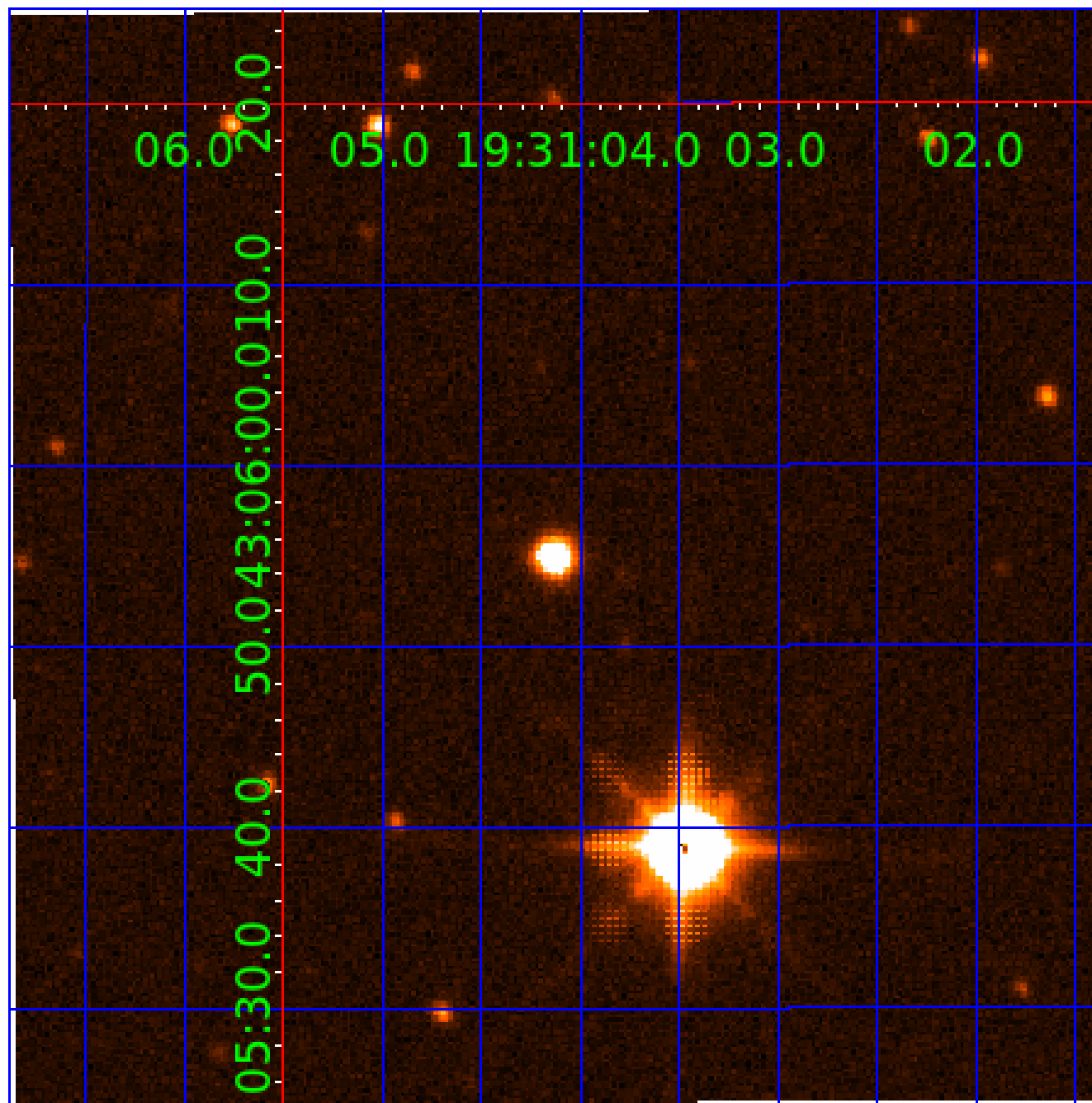


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007448057

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})
007448057-01	OBS	No	374.765264	459.828622	2948.7	4.749	11.7	6.4	0.55	3882	2.94	0.09
007448057-02	OBS	No	322.556820	347.473977	3129.0	4.198	12.8	6.4	0.55	3882	5.95	0.11
007448057-03	OBS	No	154.835588	263.188378	1773.3	6.182	11.9	6.7	0.55	3882	2.64	0.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007448057-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
007448057-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007448057-03	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

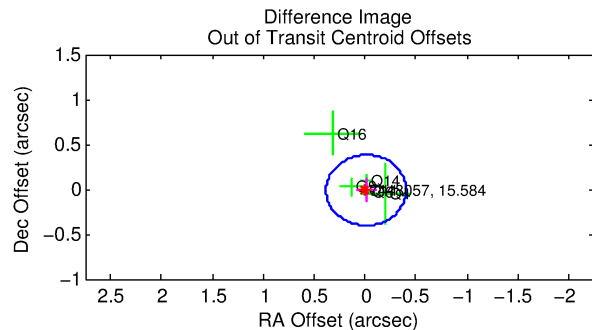
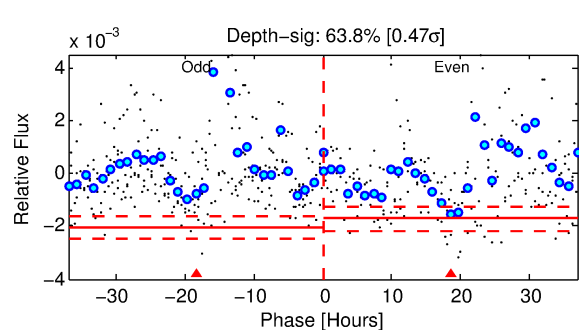
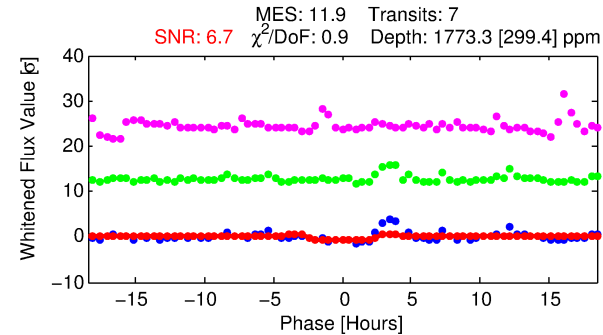
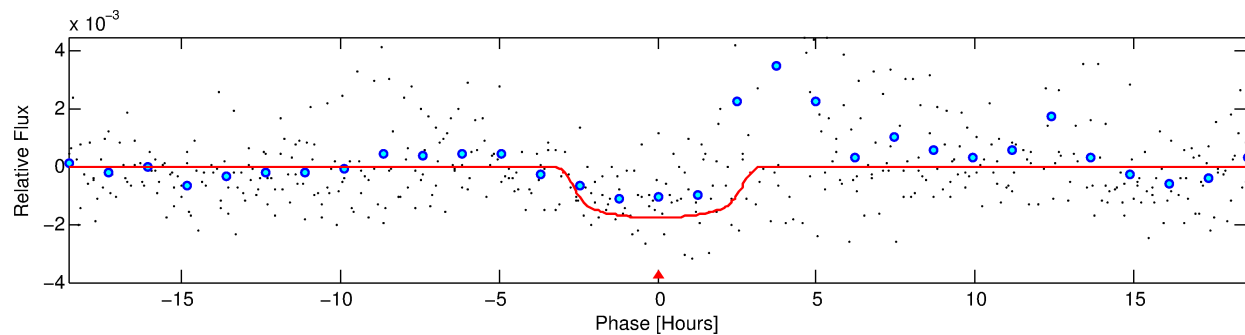
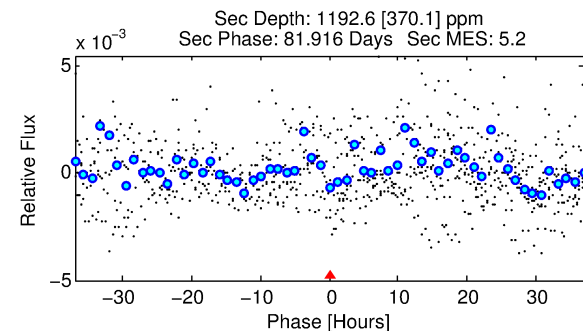
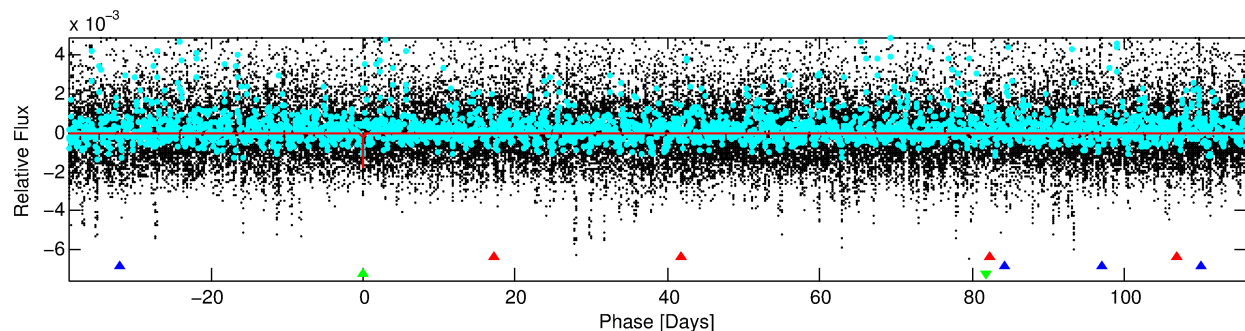
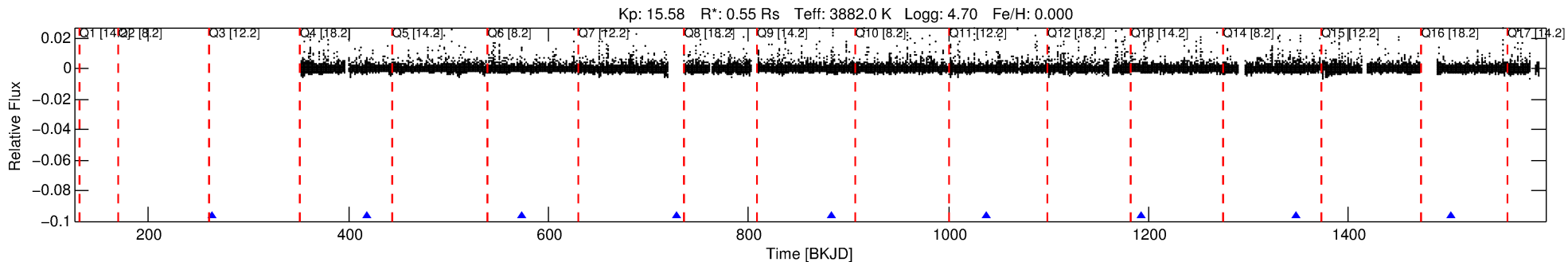
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007448057-03

No Significant Match Found

DV One-Page Summary

KIC: 7448057 Candidate: 3 of 3 Period: 154.836 d



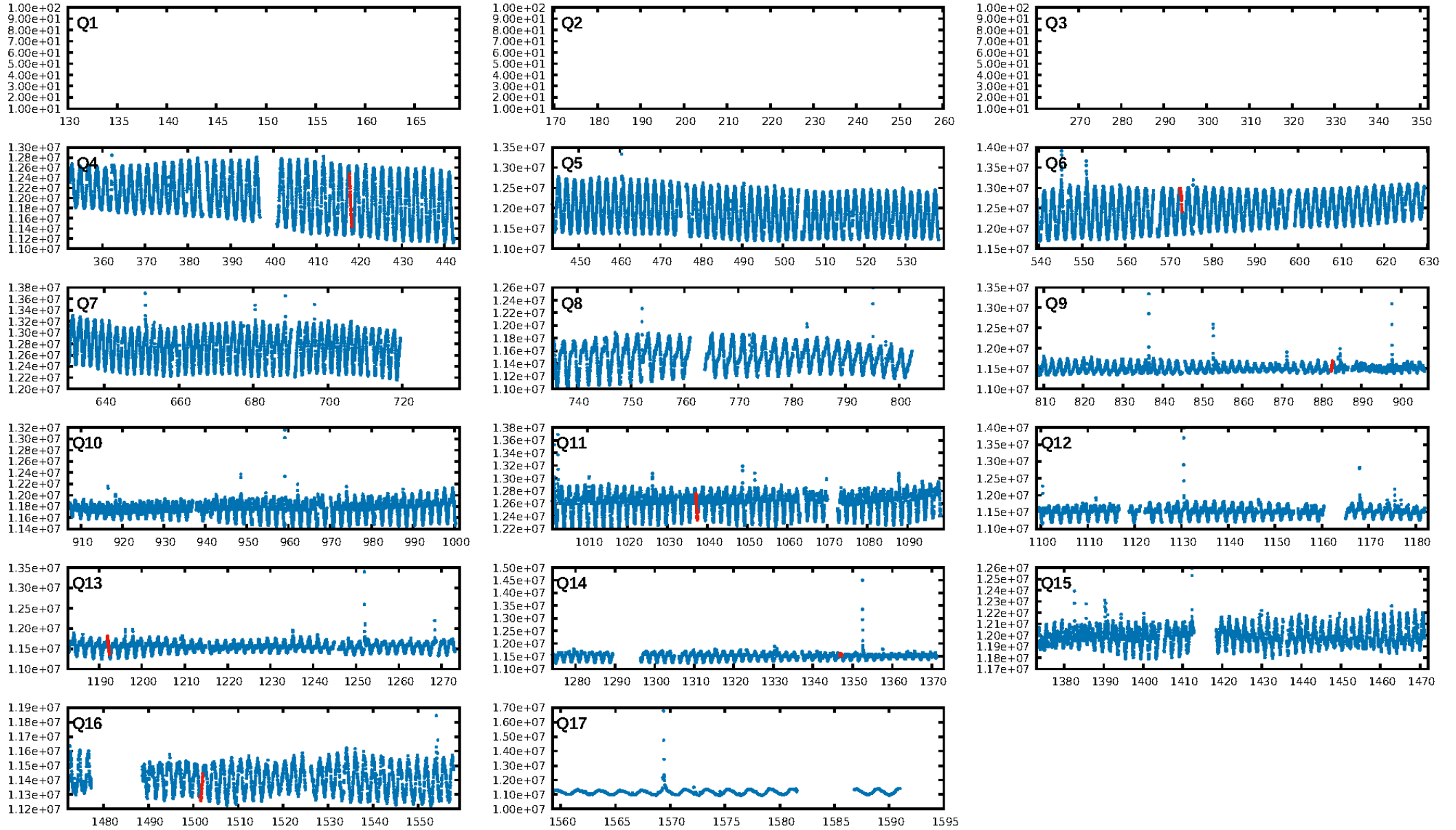
DV Fit Results:

Period = 154.83559 [0.00227] d
Epoch = 263.1884 [0.0122] BKJD
Rp/R* = 0.0437 [0.0067]
a/R* = 121.41 [54.19]
b = 0.83 [0.17]
Seff = 0.29 [0.03]
Teq = 187 [5] K
Rp = 2.64 [0.43] Re
a = 0.4660 [0.0200] AU
Ag = 20468.64 [8987.38] [2.28σ]
Teffp = 3450 [382] K [8.55σ]

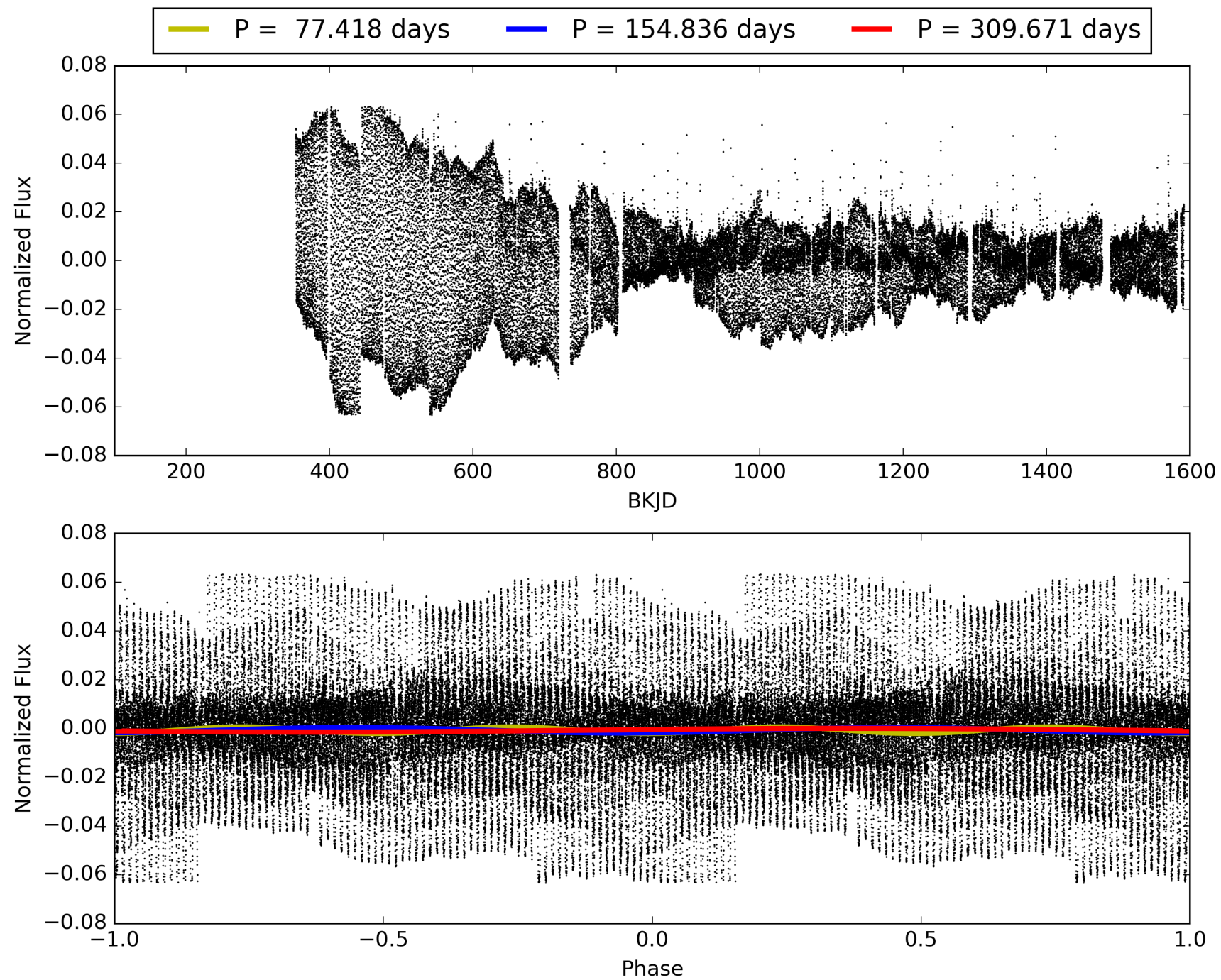
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [538.67σ]
ModelChiSquare2-sig: 26.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.71e-11
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -1.087
Centroid-sig: N/A
Centroid-so: 1.280 arcsec [1.32σ]
OotOffset-rm: 0.016 arcsec [0.12σ]
KicOffset-rm: 0.193 arcsec [2.07σ]
OotOffset-st: 2/1/2/1 [6]
KicOffset-st: 2/1/2/1 [6]
DiffImageQuality-fgm: 0.67 [4/6]
DiffImageOverlap-fno: 1.00 [6/6]

TCE 007448057-03, PDC Light Curves

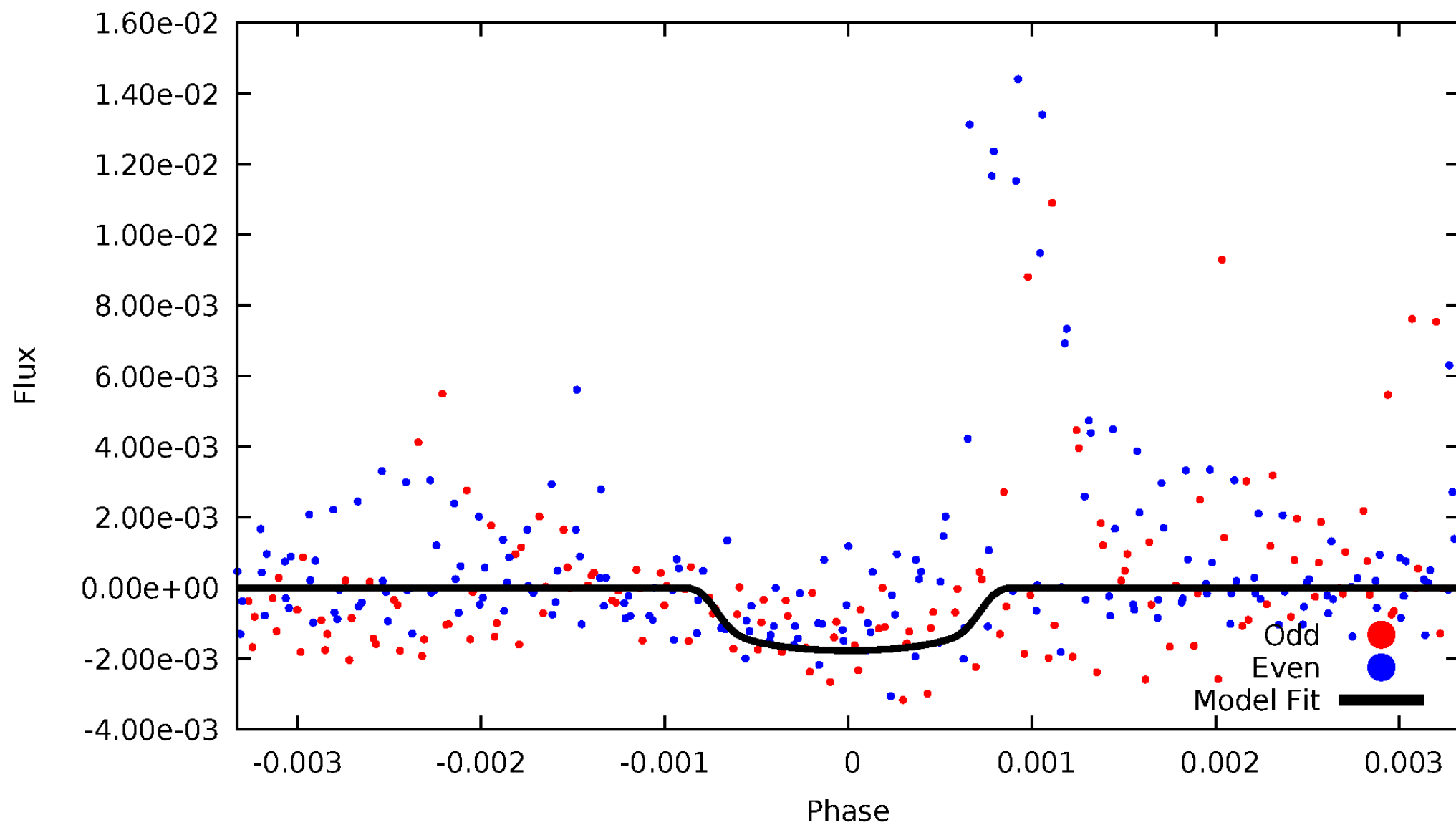


TCE 007448057-03



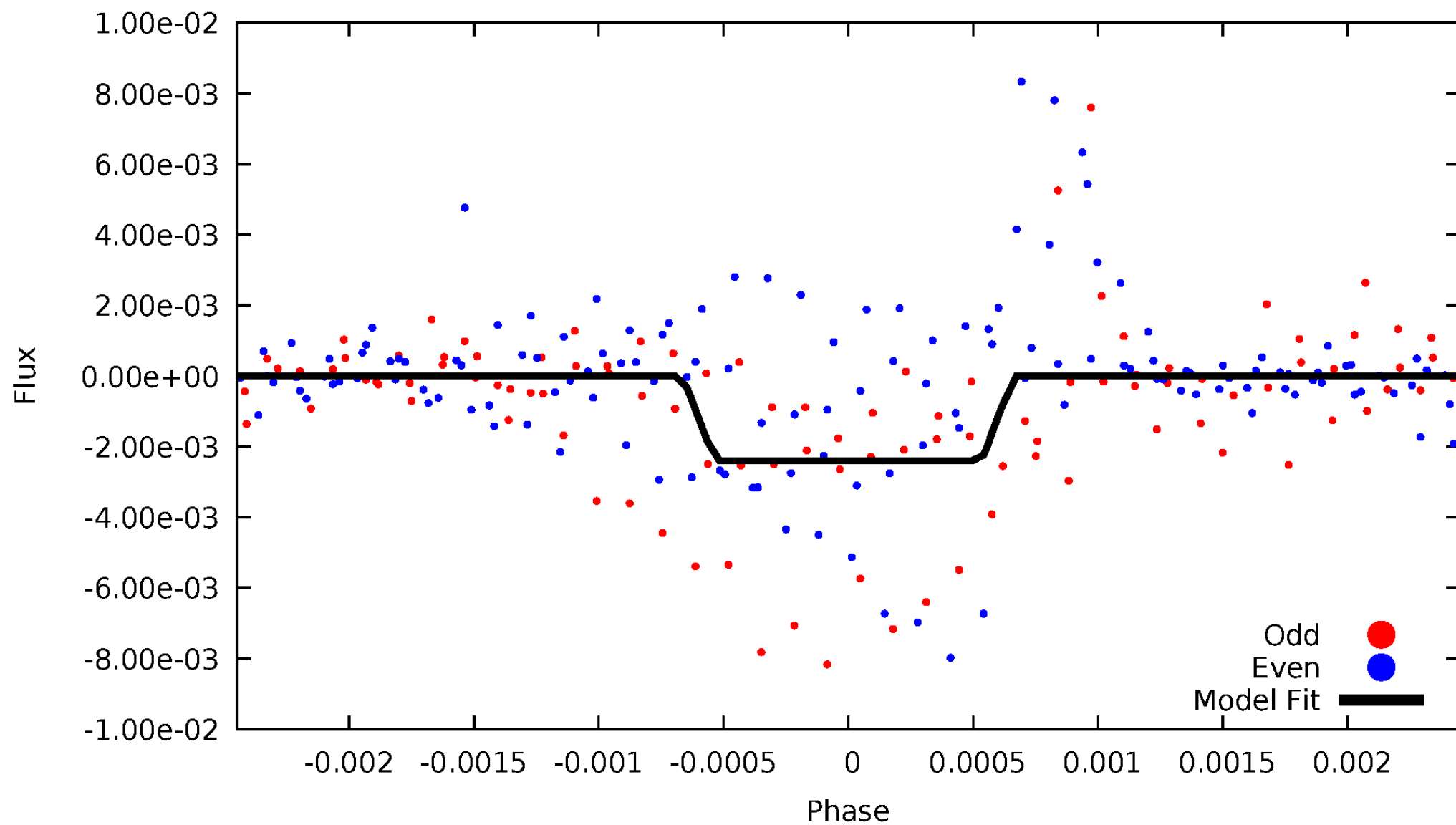
DV Odd/Even

TCE 007448057-03



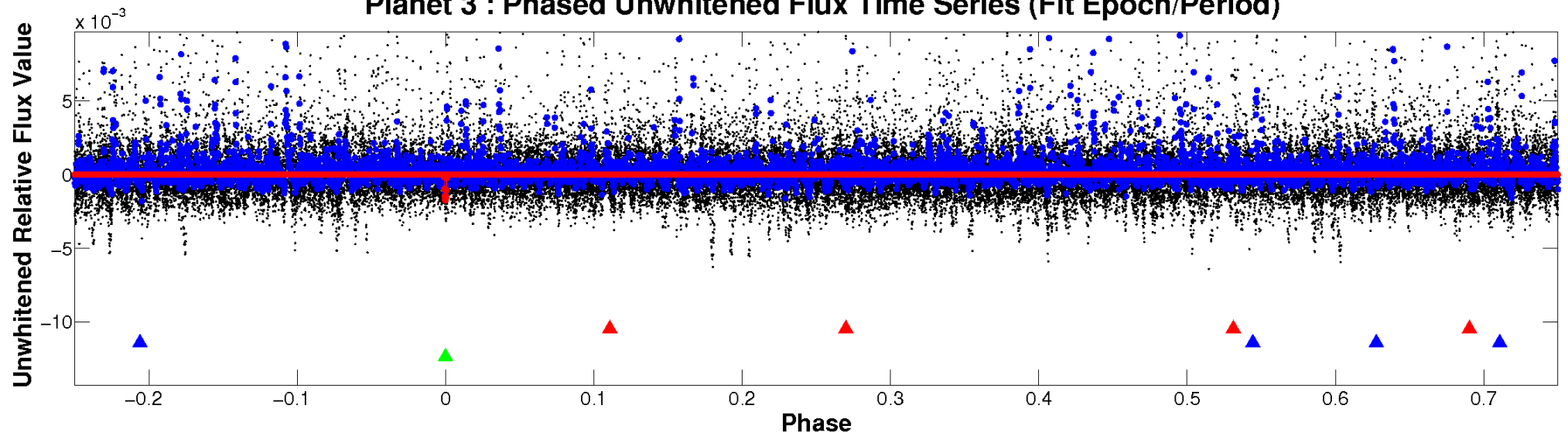
ALT Odd/Even

TCE 007448057-03

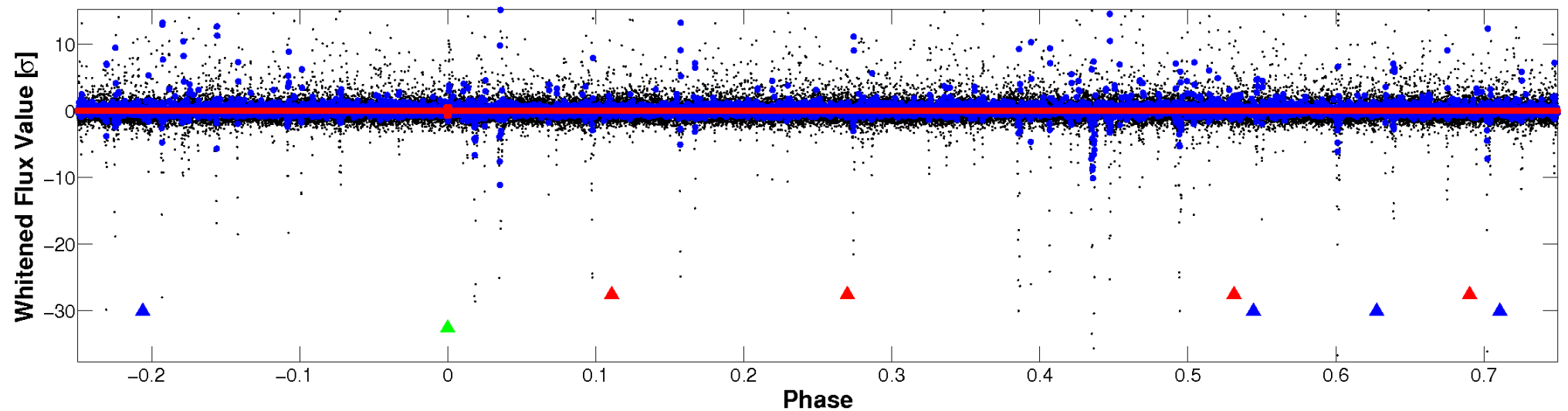


Non-Whitened Vs. Whitened Light Curve

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

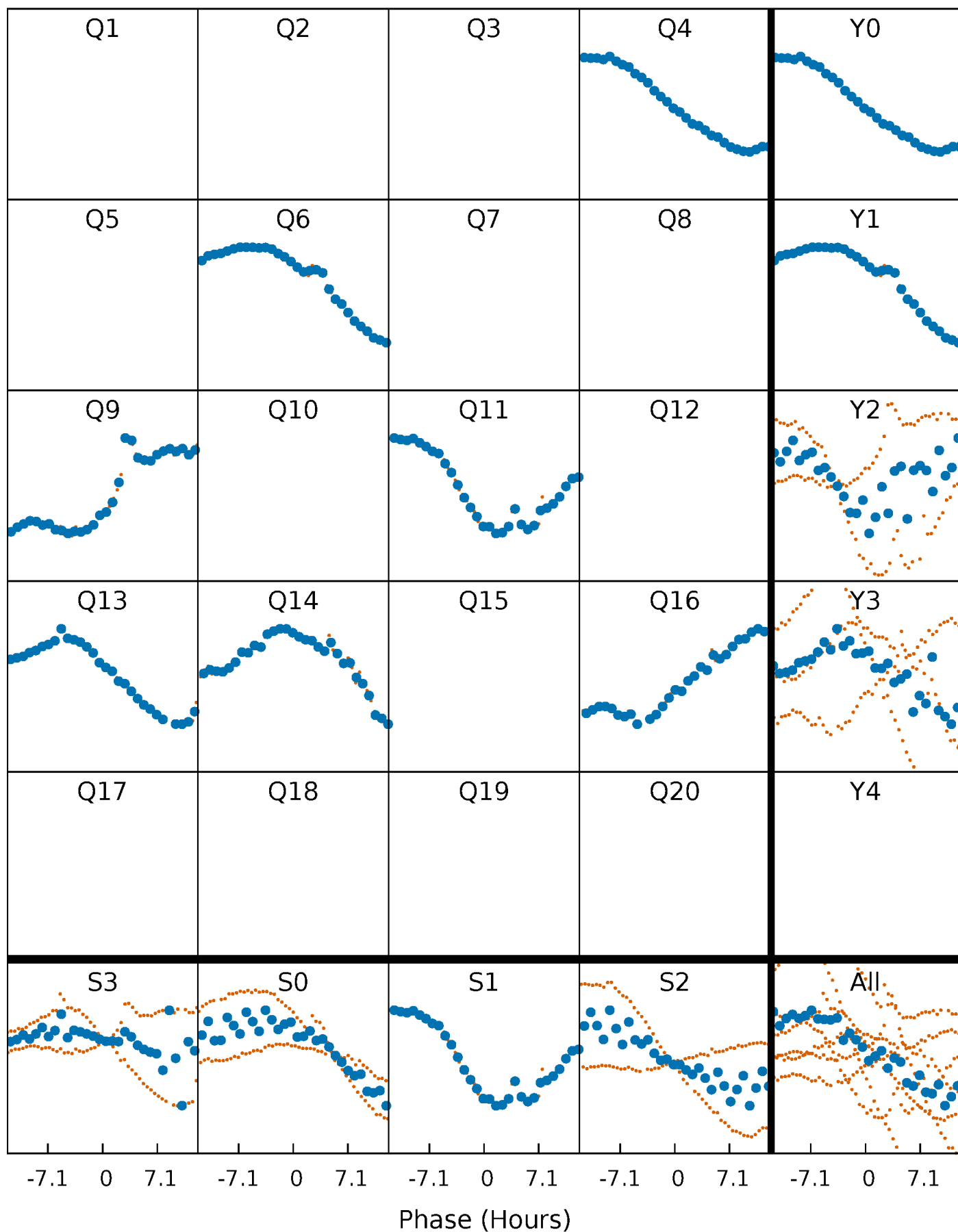


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



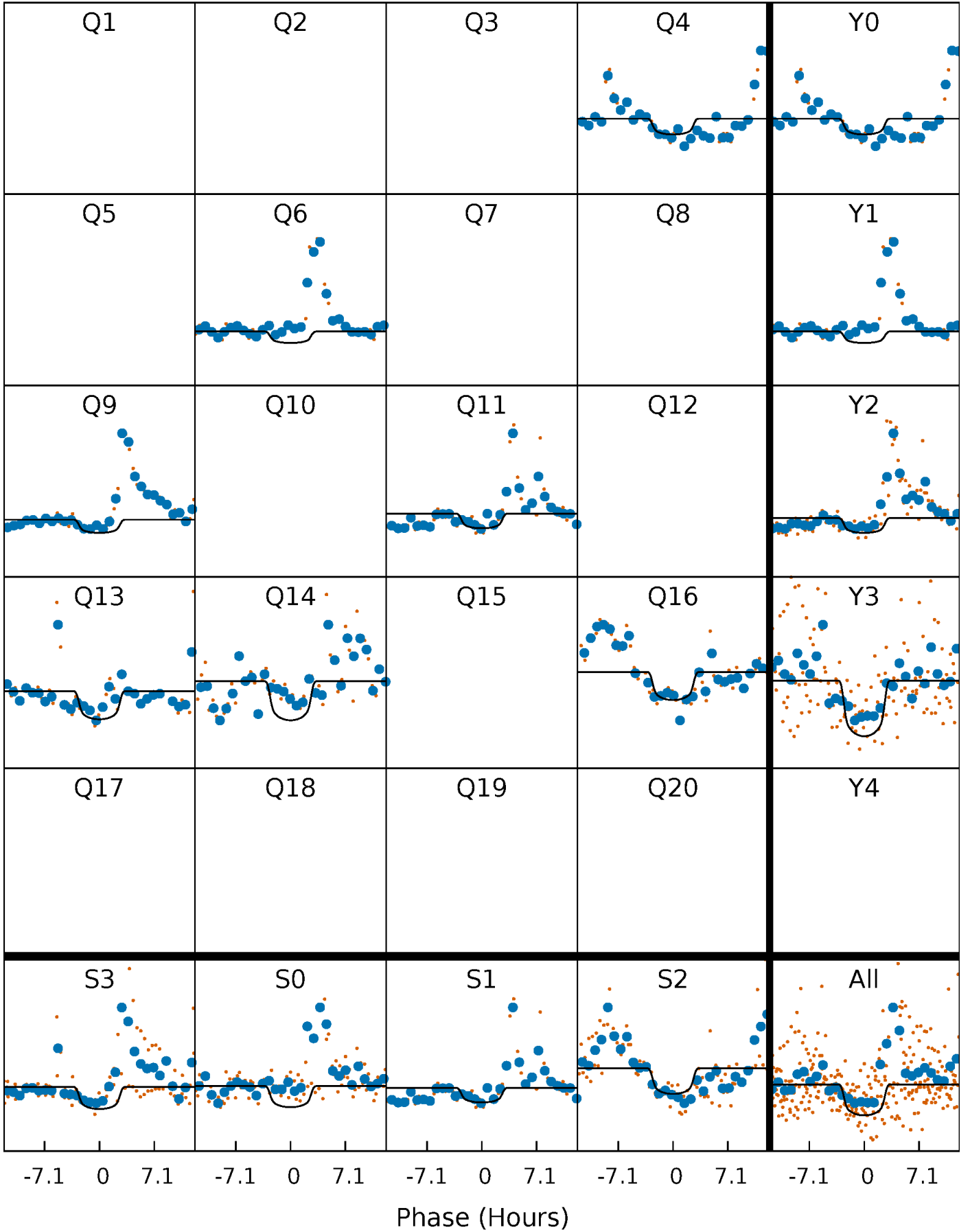
PDC Quarter-Phased Transit Curves

TCE 007448057-03 P=154.835588 Days $T_0=263.188378$ (BKJD)



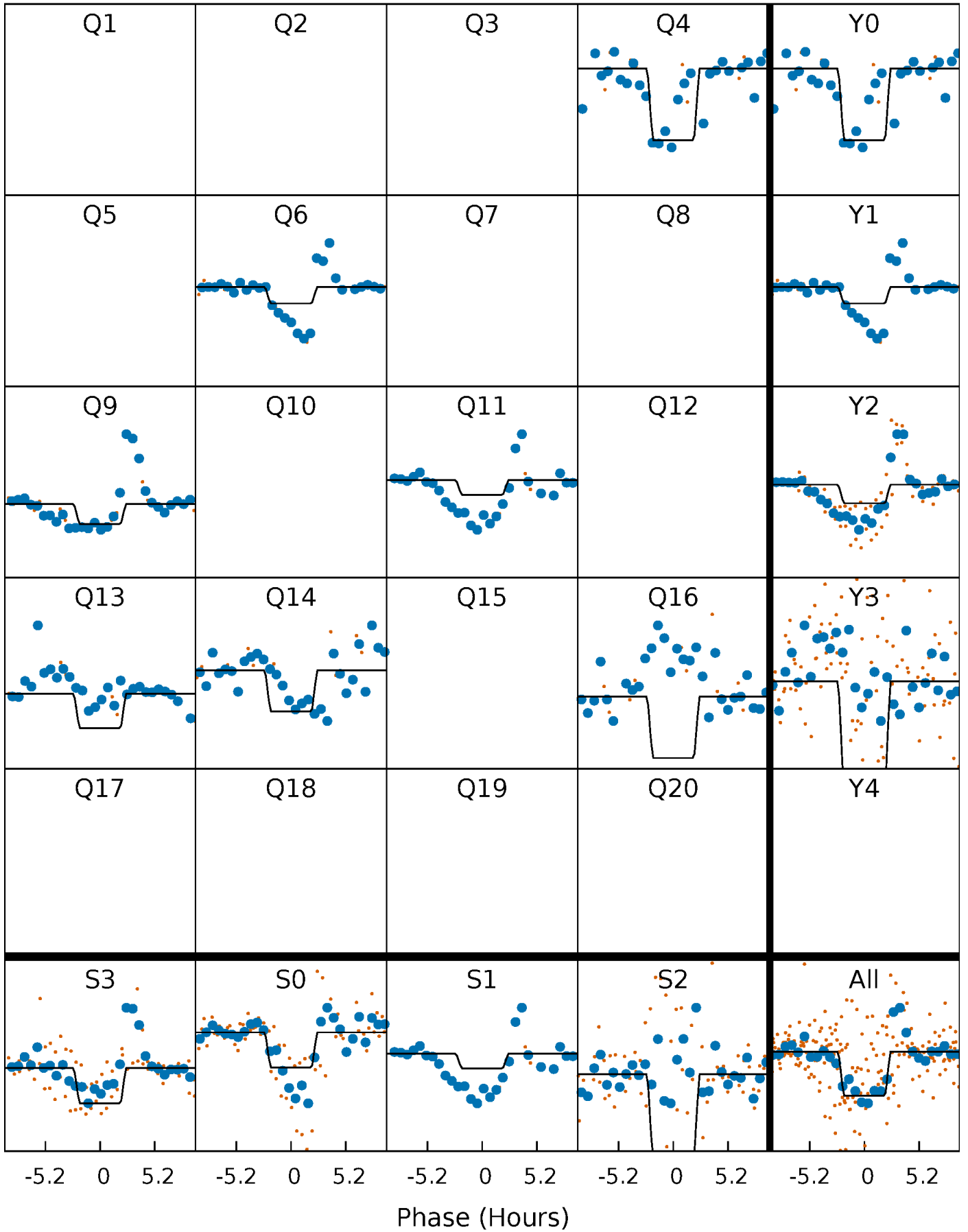
DV Quarter-Phased Transit Curves

TCE 007448057-03 $P=154.835588$ Days $T_0=263.188378$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

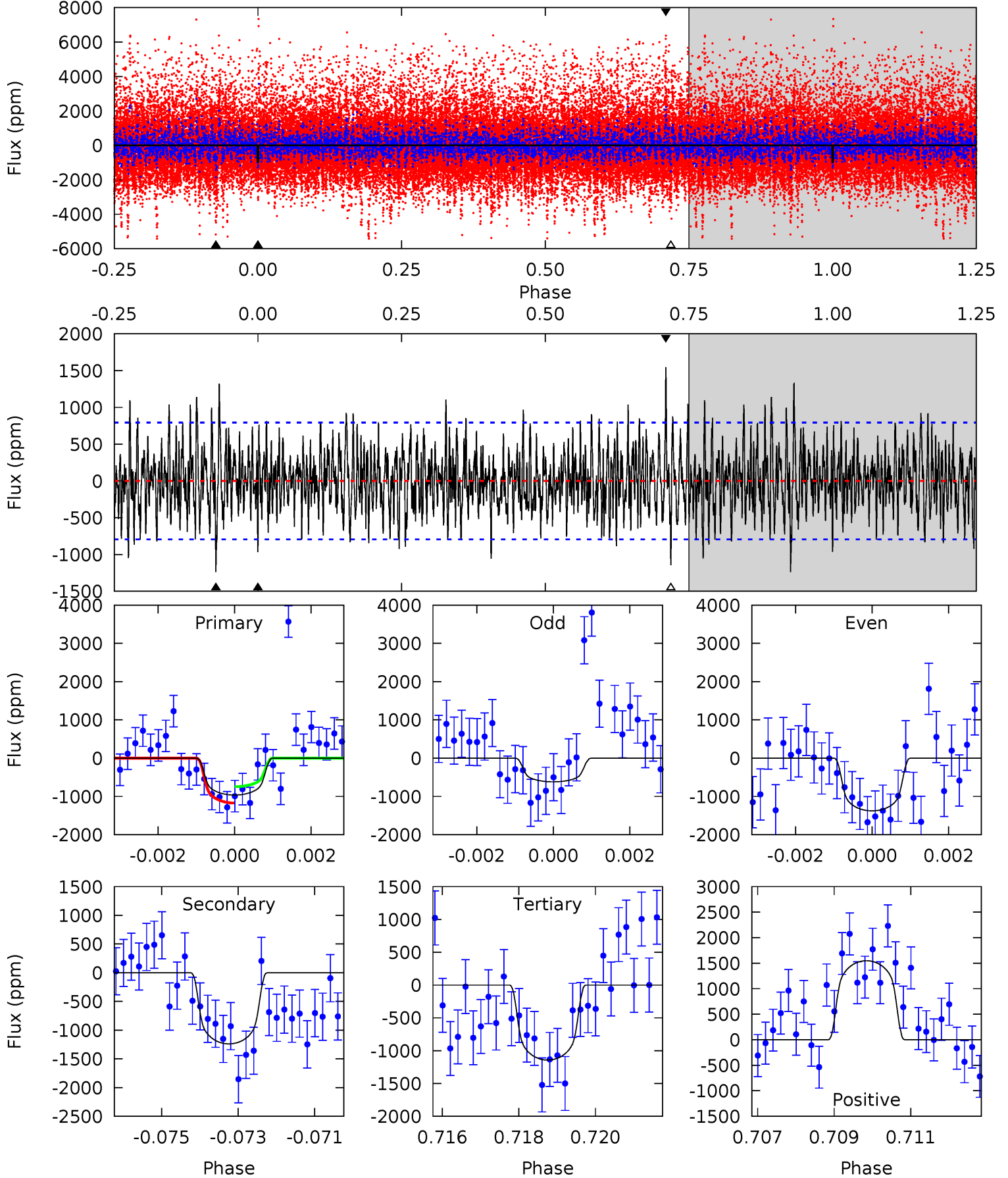
TCE 007448057-03 P=154.843411 Days $T_0=263.170722$ (BKJD)



DV Model-Shift Uniqueness Test

007448057-03, P = 154.835588 Days, E = 263.188378 Days

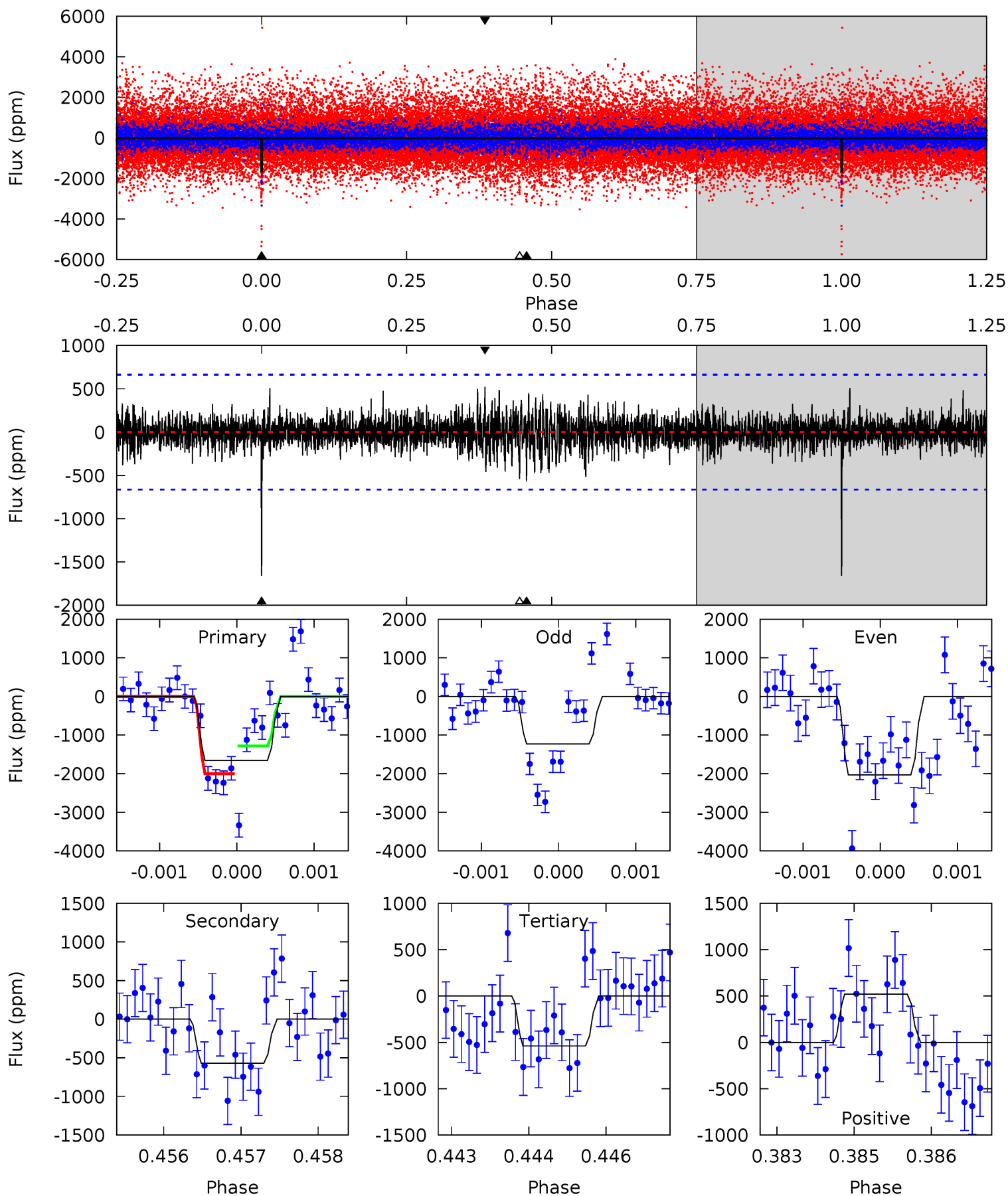
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.49	8.34	7.70	10.4	5.35	3.12	2.44	-1.21	-3.93	0.64	-2.08	2.48	0.85	0.56	1.45



Alt Model-Shift Uniqueness Test

007448057-03, P = 154.843411 Days, E = 263.170722 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	4.66	4.40	4.25	5.41	3.23	1.04	9.14	9.28	0.26	0.40	3.20	1.40	0.24	2.96



Stellar Parameters For KIC 007448057

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3882^{+77}_{-77}	$4.703^{+0.030}_{-0.020}$	$0.000^{+0.100}_{-0.100}$	$0.553^{+0.025}_{-0.030}$	$0.562^{+0.029}_{-0.029}$	$4.692^{+0.619}_{-0.372}$
	+2%/-2%	+1%/-0%	+inf%/-inf%	+5%/-5%	+5%/-5%	+13%/-8%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 007448057-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1239 ± 148	$2.64^{+0.41}_{-0.38}$	260^{+6}_{-6}	3604^{+201}_{-180}	21267^{+8318}_{-5702}
Alt.	-570 ± 122	$2.97^{+0.42}_{-0.39}$	260^{+5}_{-6}	3085^{+172}_{-162}	7612^{+3382}_{-2238}

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 $A_{obs} \gg 1.0$

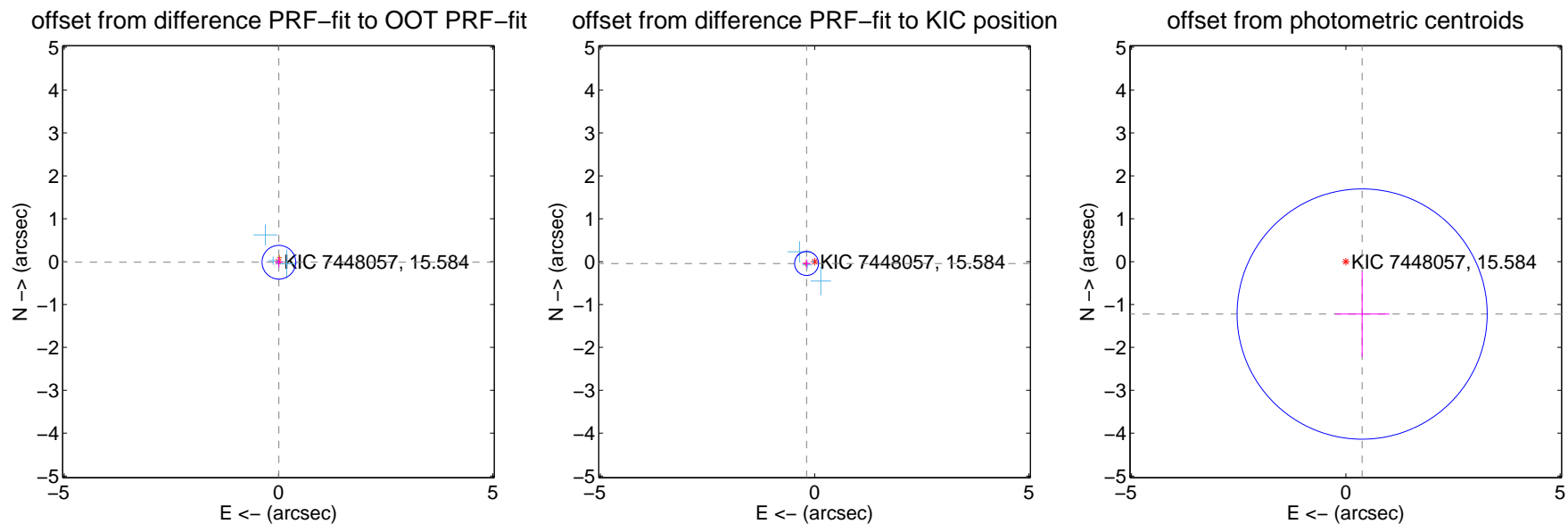
DV Centroid Data

Supplemental centroid analysis for 007448057-03. Kepler magnitude: 15.58. Transit SNR 6.66

There are 4 quarters with good PRF difference image offsets

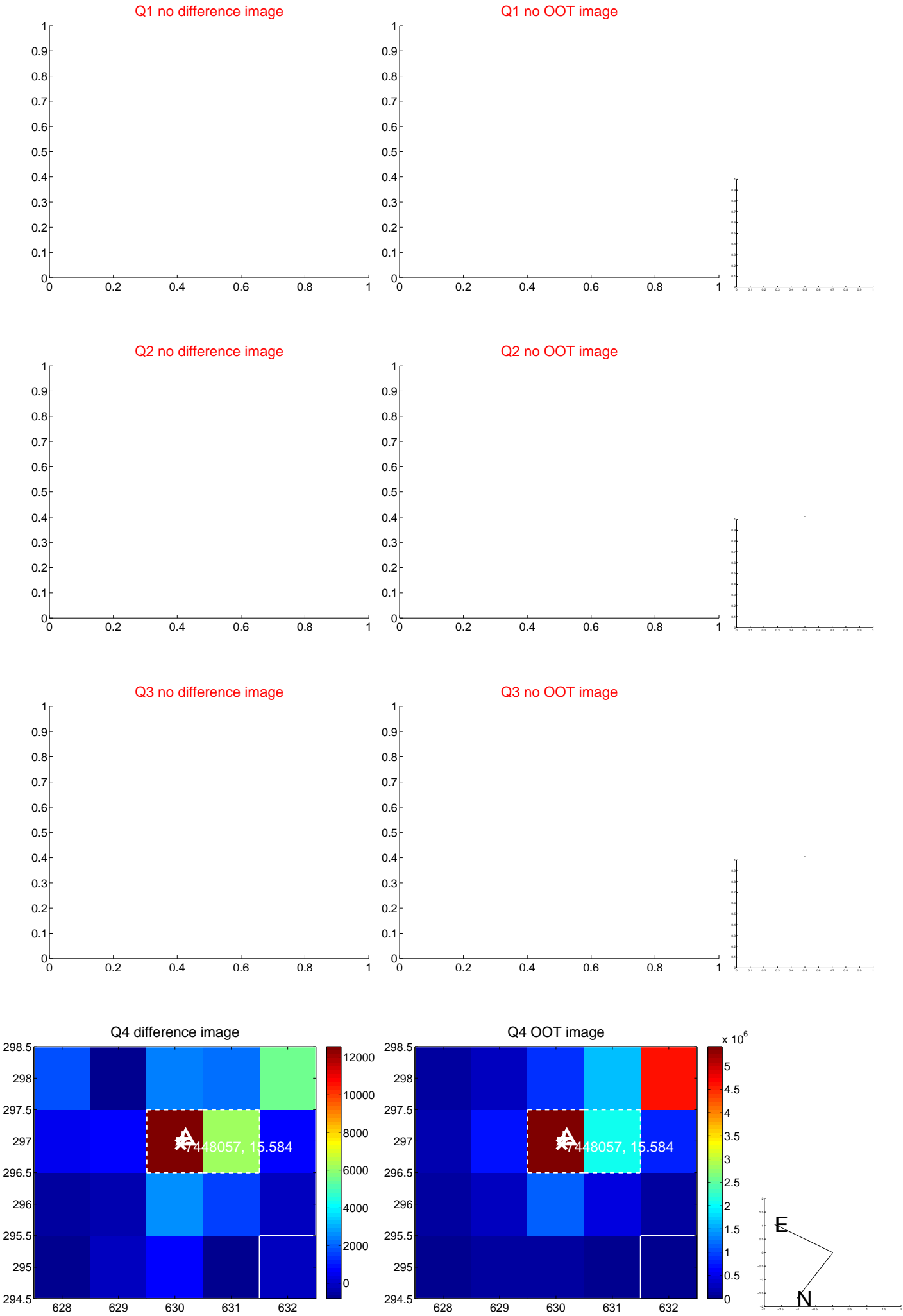
The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.016 ± 0.131	0.12	-0.009 ± 0.092	-0.013 ± 0.118
PRF-fit source offset from KIC position	0.193 ± 0.093	2.07	0.188 ± 0.093	-0.043 ± 0.098
photometric centroid source offset	1.28 ± 0.97	1.32	-0.38 ± 0.64	-1.22 ± 1.00

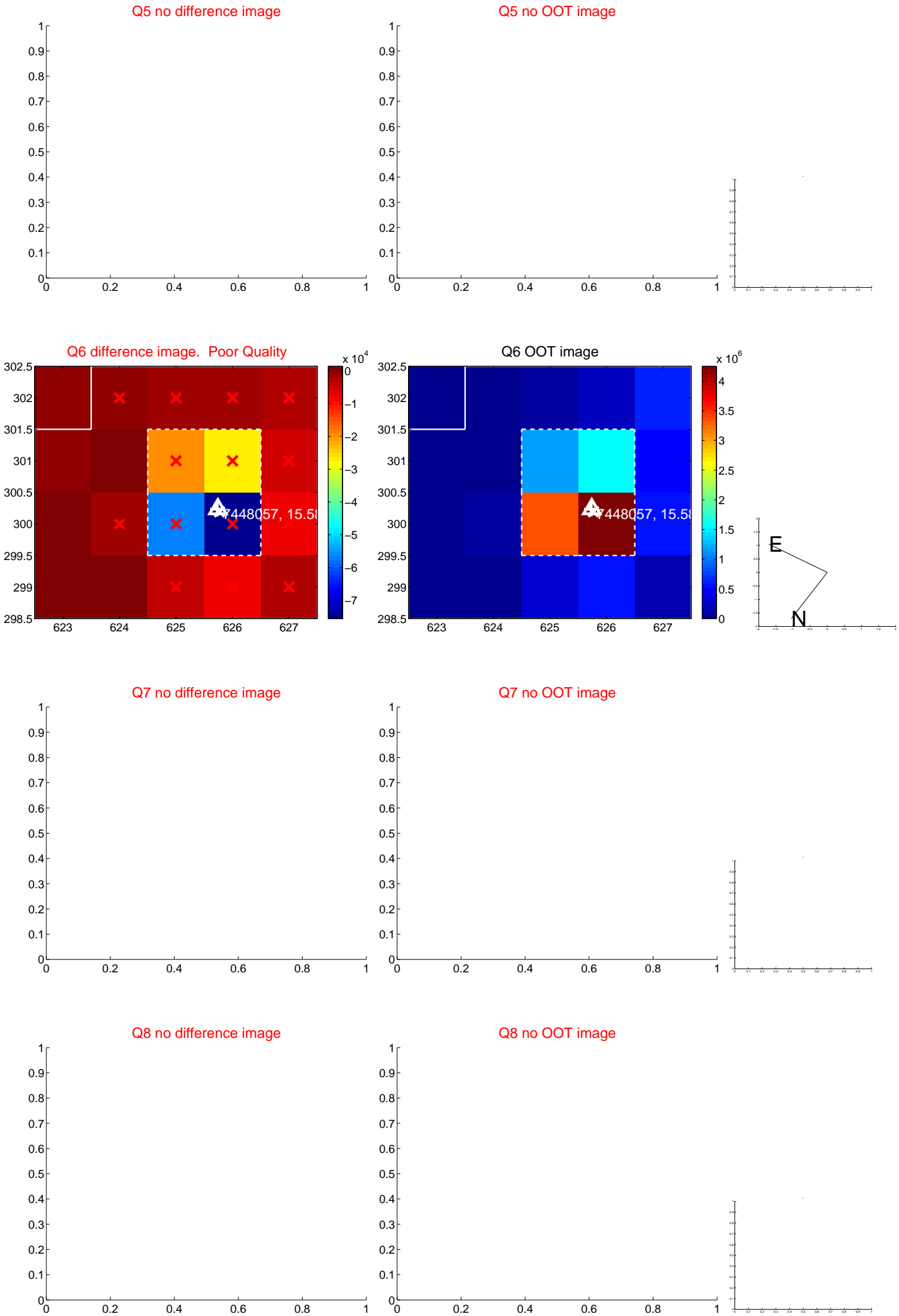


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

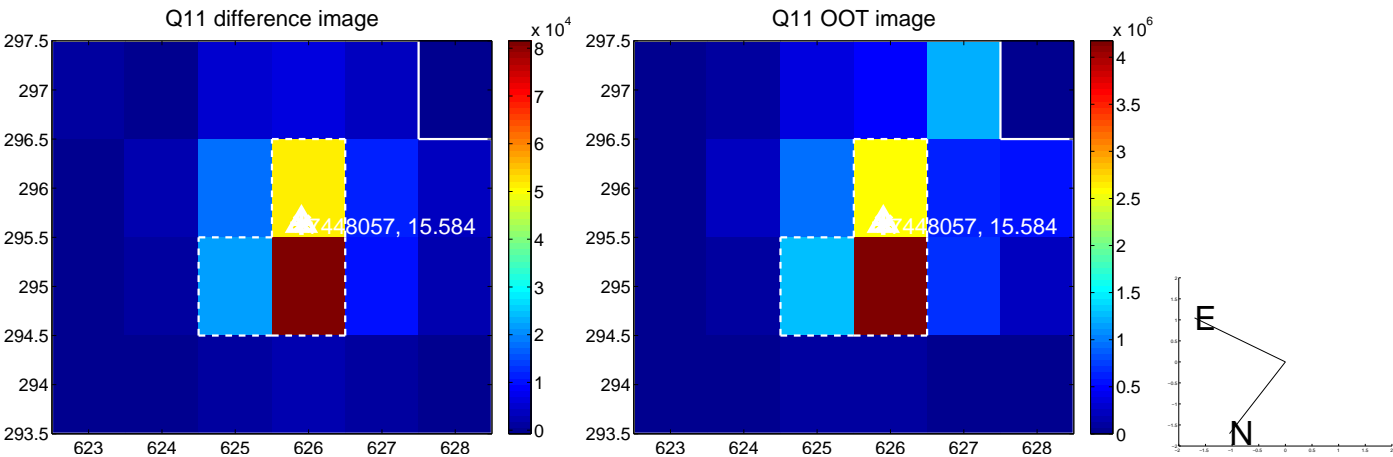
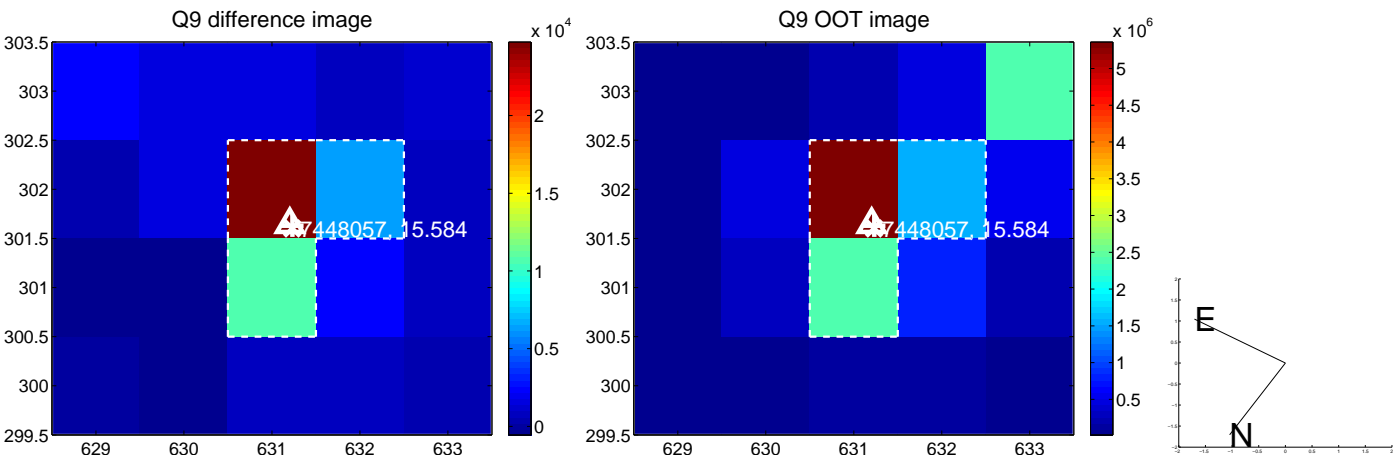
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



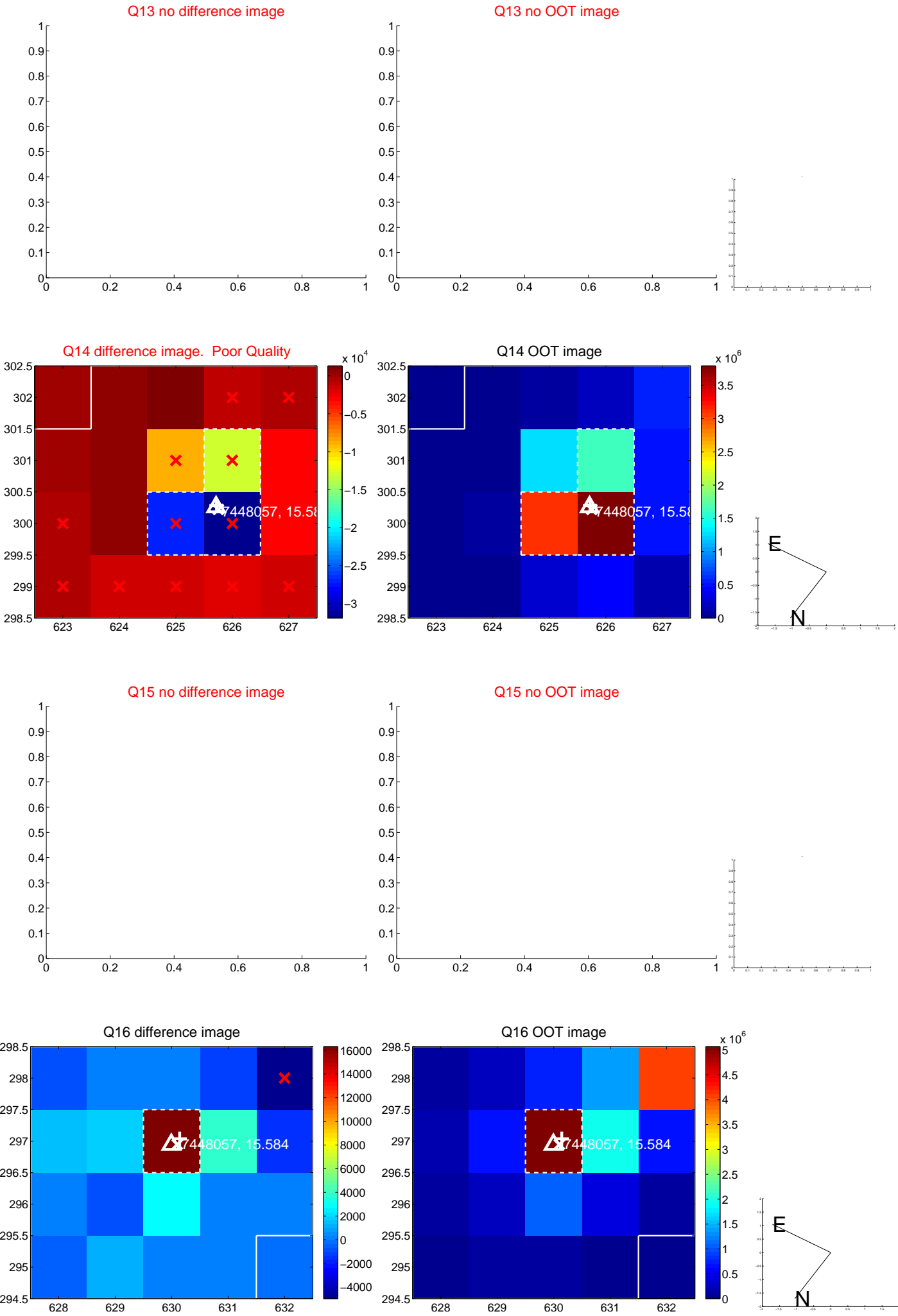
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



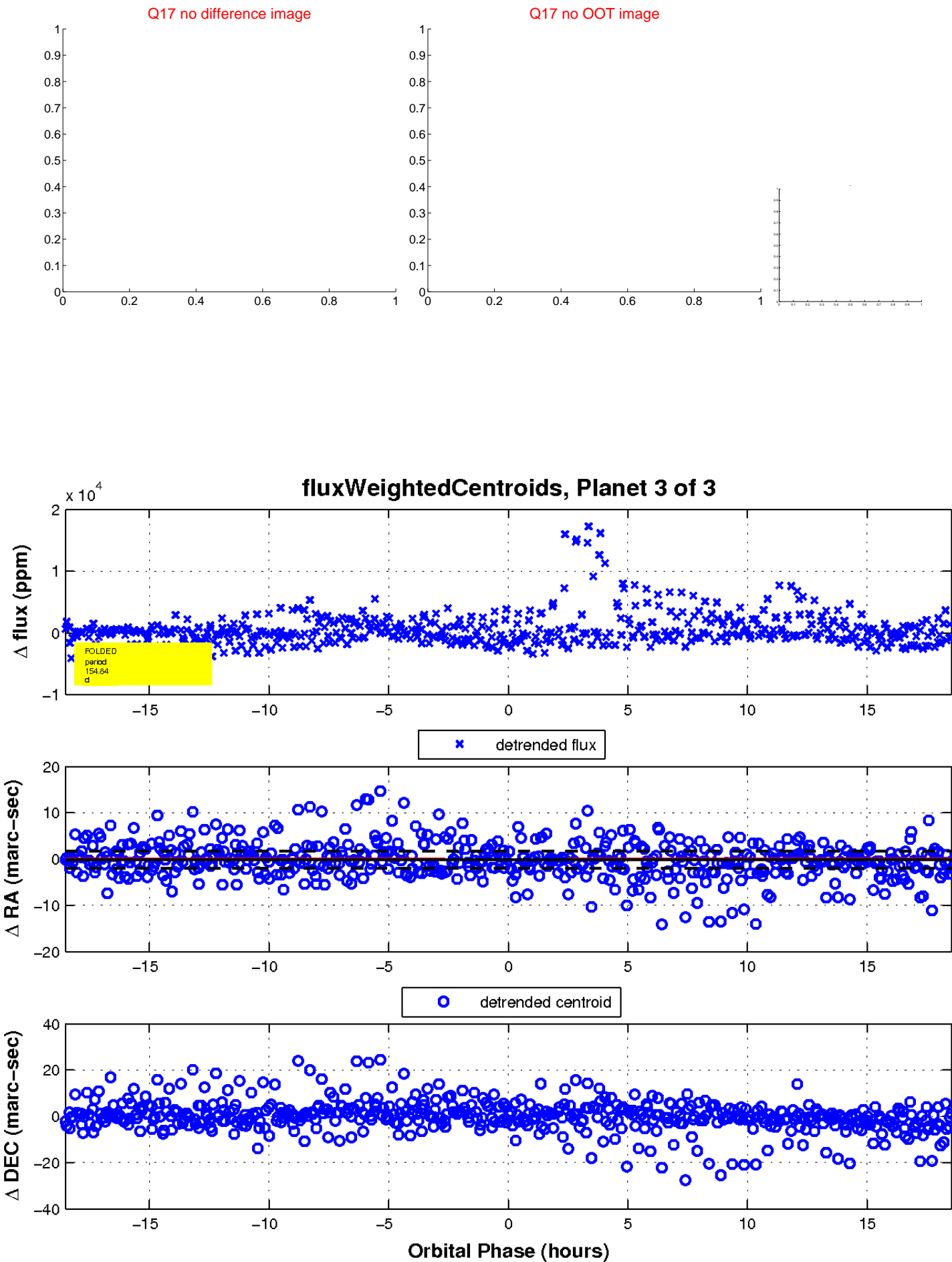
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \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

