

KIC 010556064

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})
010556064-01	OBS	No	0.658447	131.805636	78.7	2.420	7.7	7.2	1.72	7184	1.77	24183.11
010556064-02	OBS	No	171.335505	149.568046	4495.9	4.141	8.5	9.0	1.72	7184	20.68	14.56
010556064-03	OBS	No	363.680963	420.052275	5103.4	4.938	8.5	8.6	1.72	7184	21.86	5.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010556064-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
010556064-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010556064-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

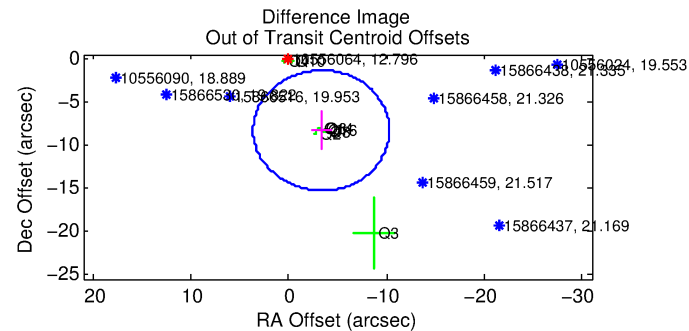
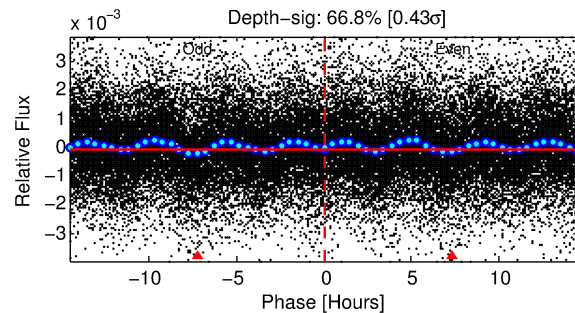
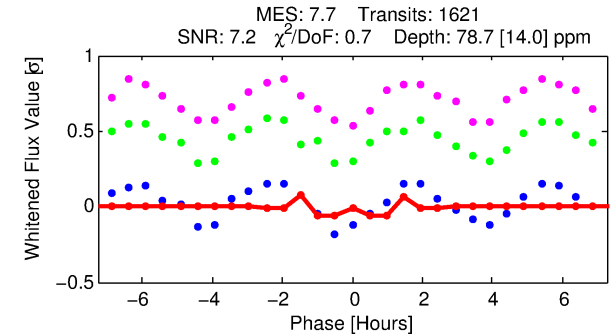
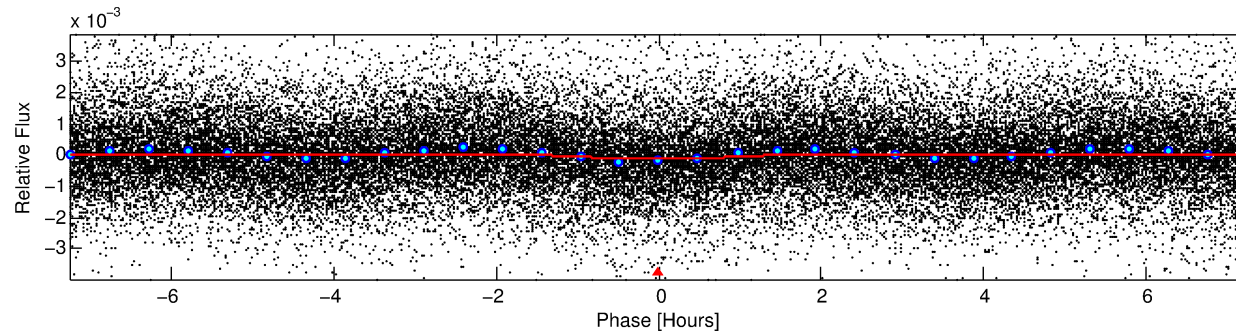
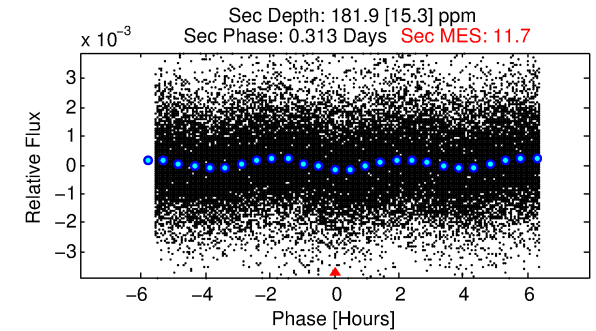
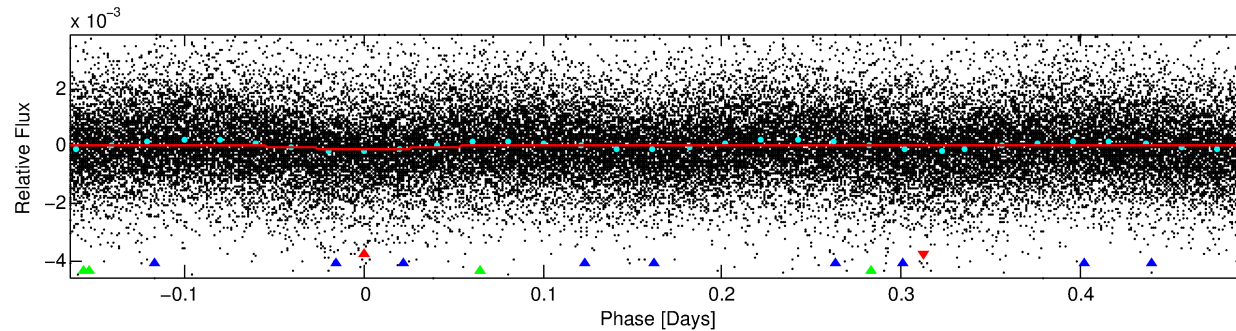
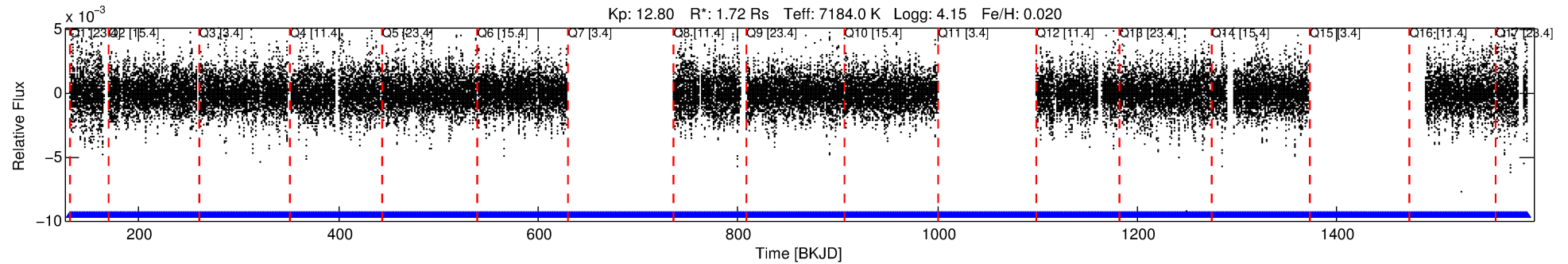
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010556064-01

No Significant Match Found

DV One-Page Summary

KIC: 10556064 Candidate: 1 of 3 Period: 0.658 d



DV Fit Results:

Period = 0.65845 [0.00001] d
Epoch = 131.8056 [0.0013] BKJD
Rp/R* = 0.0094 [0.0021]
a/R* = 1.34 [0.72]
b = 0.90 [0.26]
Seff = 24183.11 [9619.67]
Teq = 3180 [316] K
Rp = 1.77 [0.71] Re
a = 0.0171 [0.0045] AU
Ag = 9.31 [5.45] [1.53σ]
Teffp = 8589 [1051] K [4.93σ]

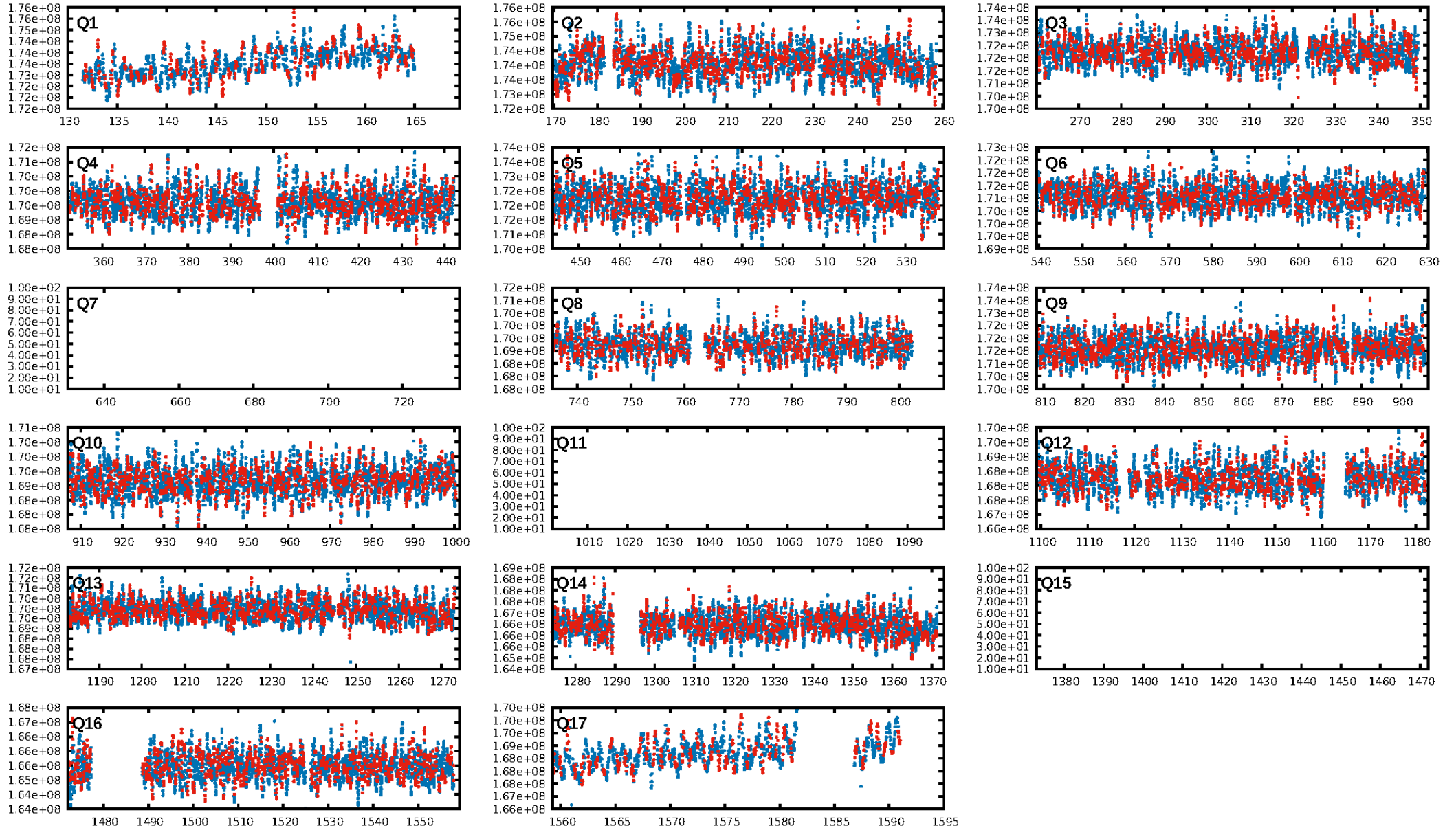
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [854.12σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.11e-13
RollingBand-fgt: 1.00 [1529/1529]
GhostDiagnostic-chr: 19.61
Centroid-sig: 0.0%
Centroid-so: 2.269 arcsec [1.58σ]
OotOffset-rm: 8.954 arcsec [3.86σ]
KicOffset-rm: 0.219 arcsec [0.12σ]
OotOffset-st: 4/1/3/0 [8]
KicOffset-st: 4/1/3/3 [11]
DiffImageQuality-fgm: 0.73 [8/11]
DiffImageOverlap-fno: 1.00 [14/14]

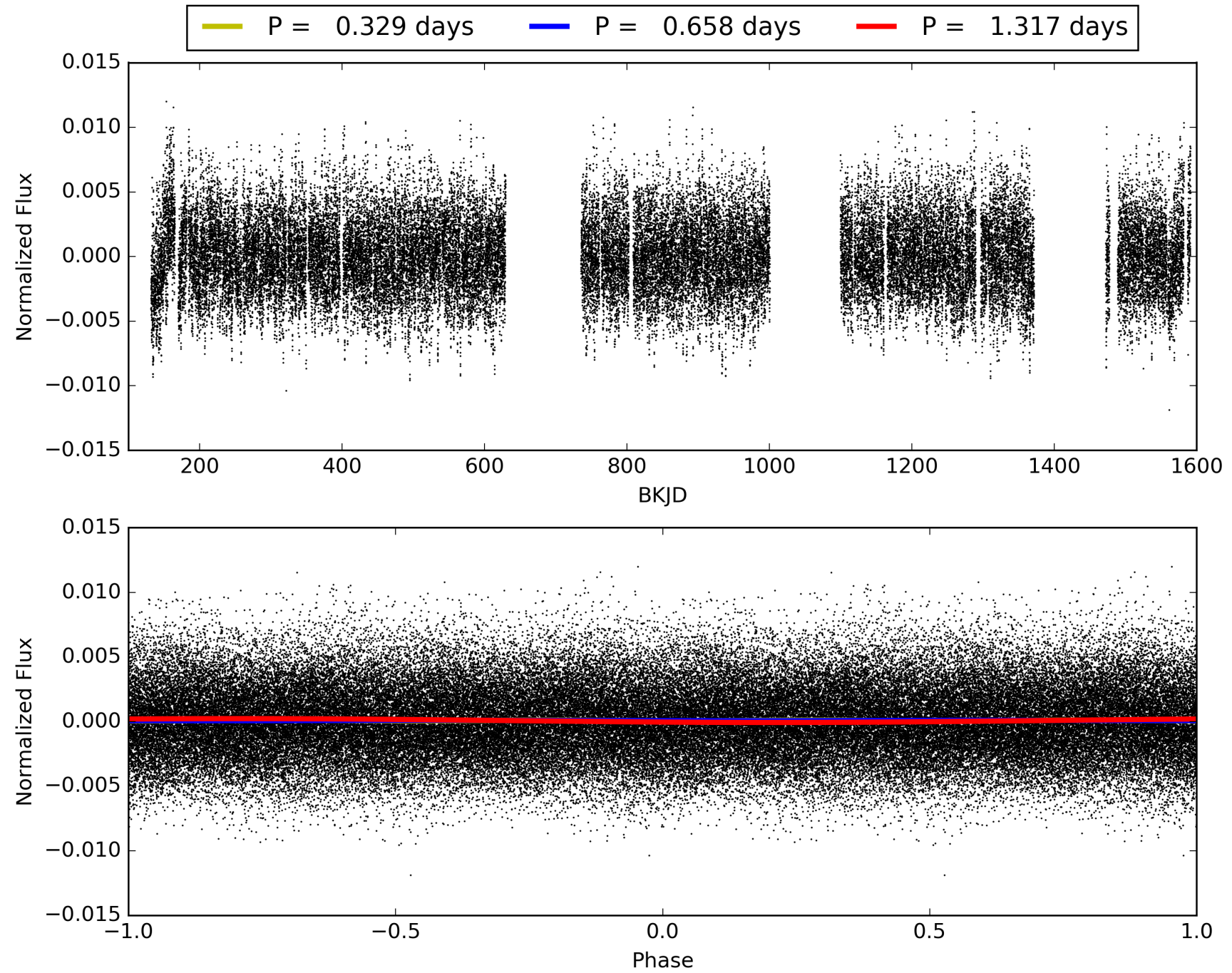
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 02:48:03 Z

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

TCE 010556064-01, PDC Light Curves

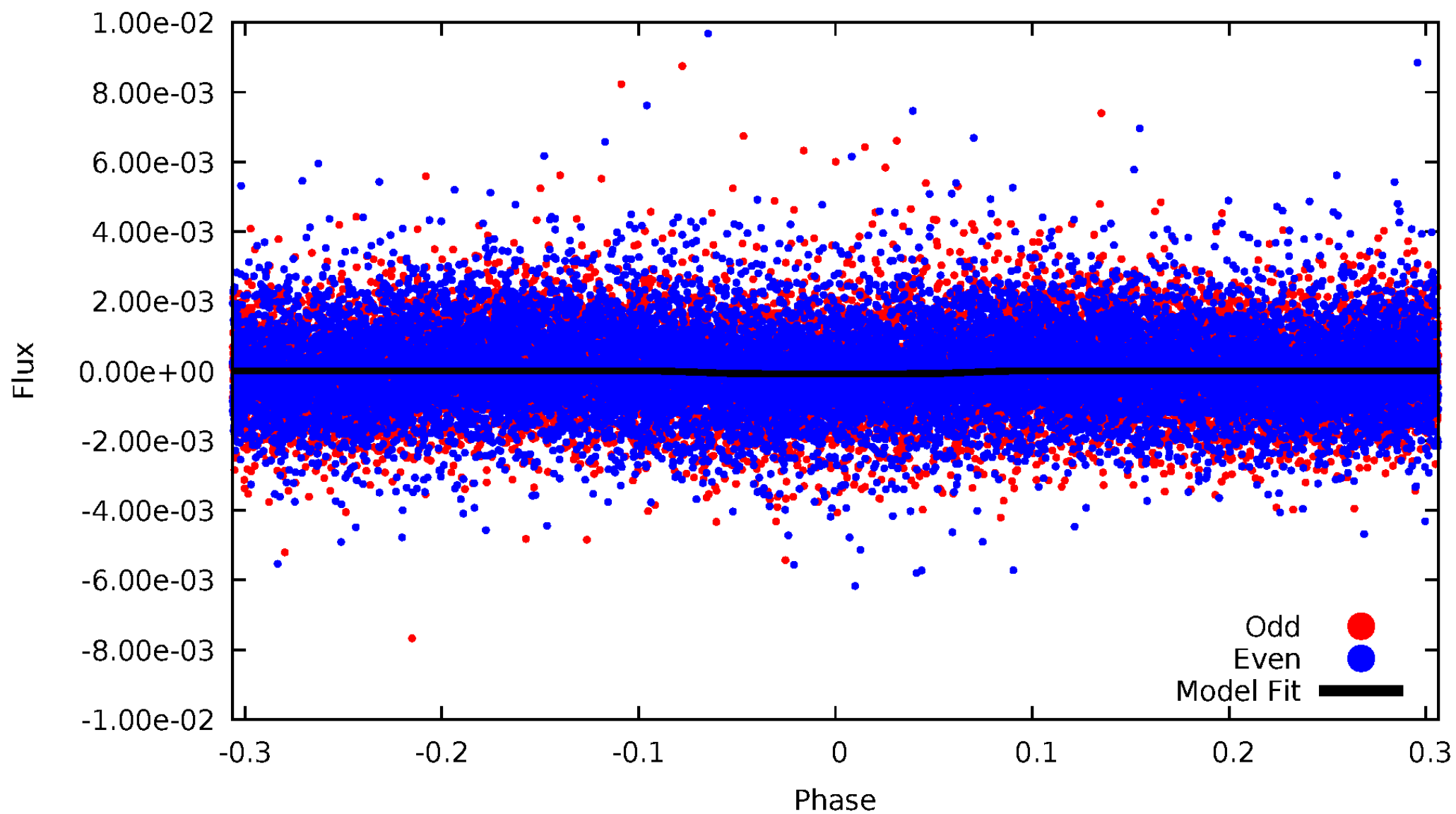


TCE 010556064-01



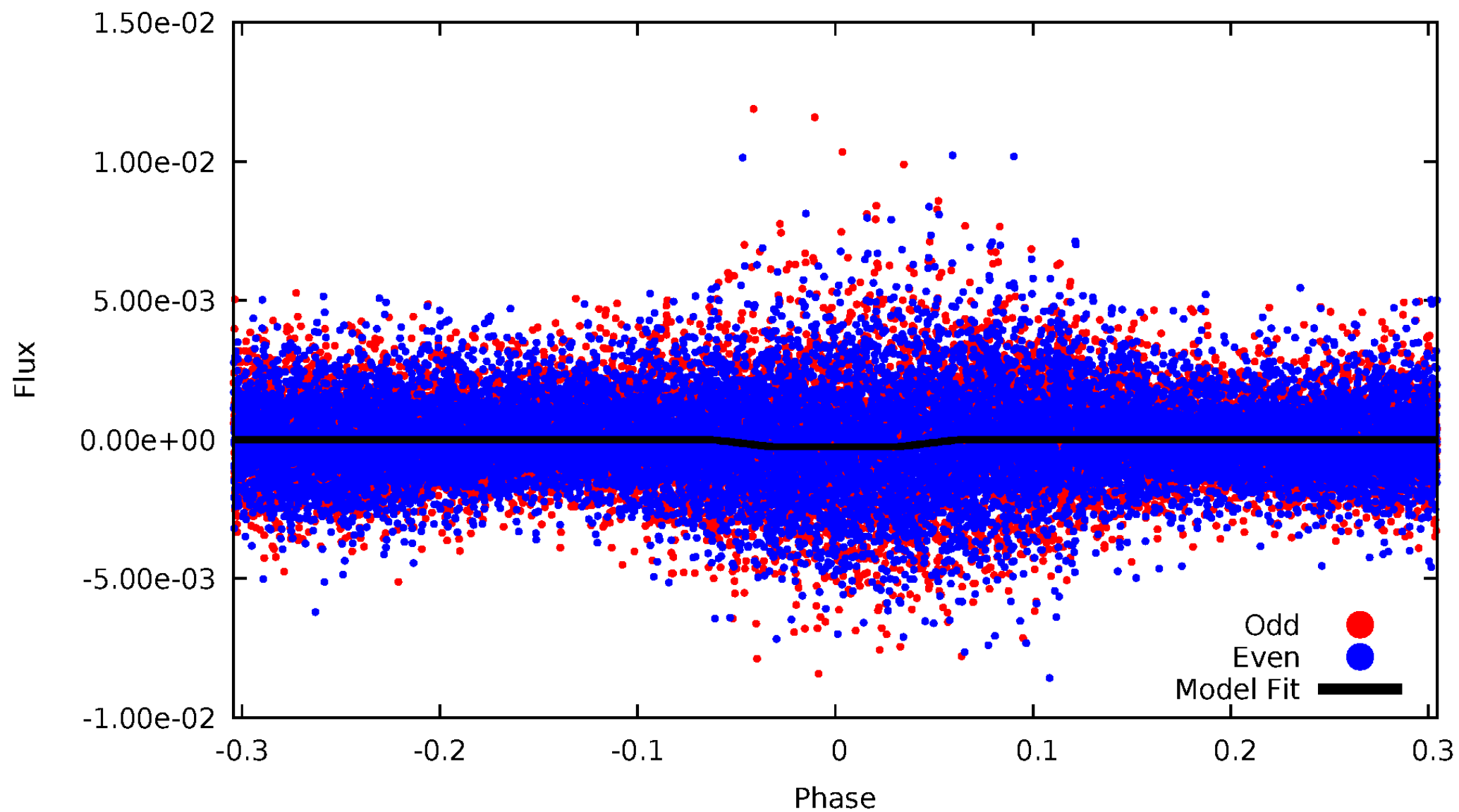
DV Odd/Even

TCE 010556064-01



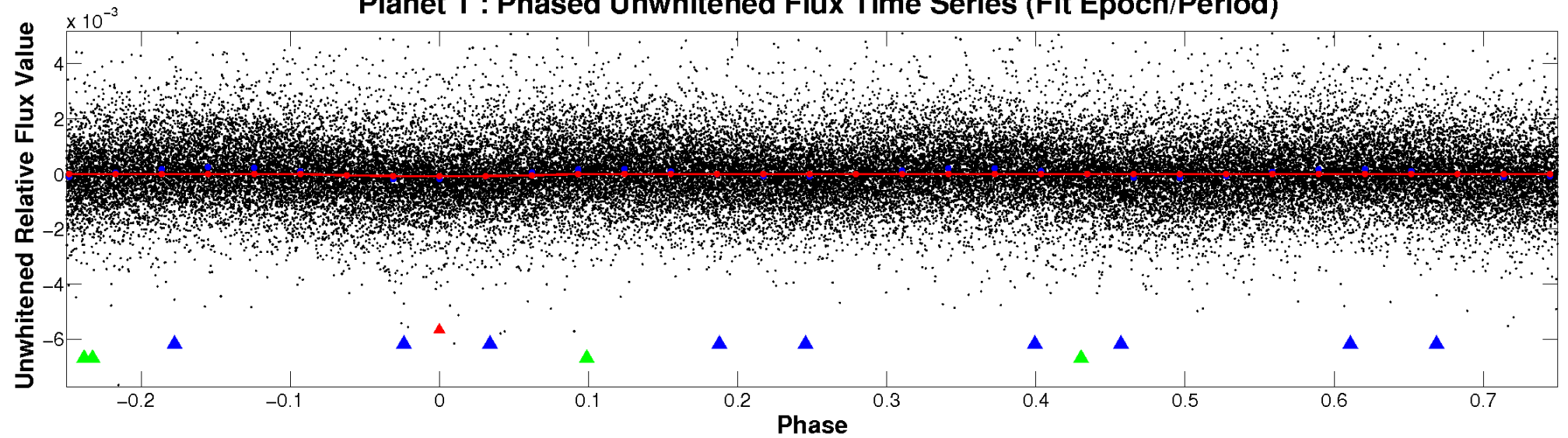
ALT Odd/Even

TCE 010556064-01

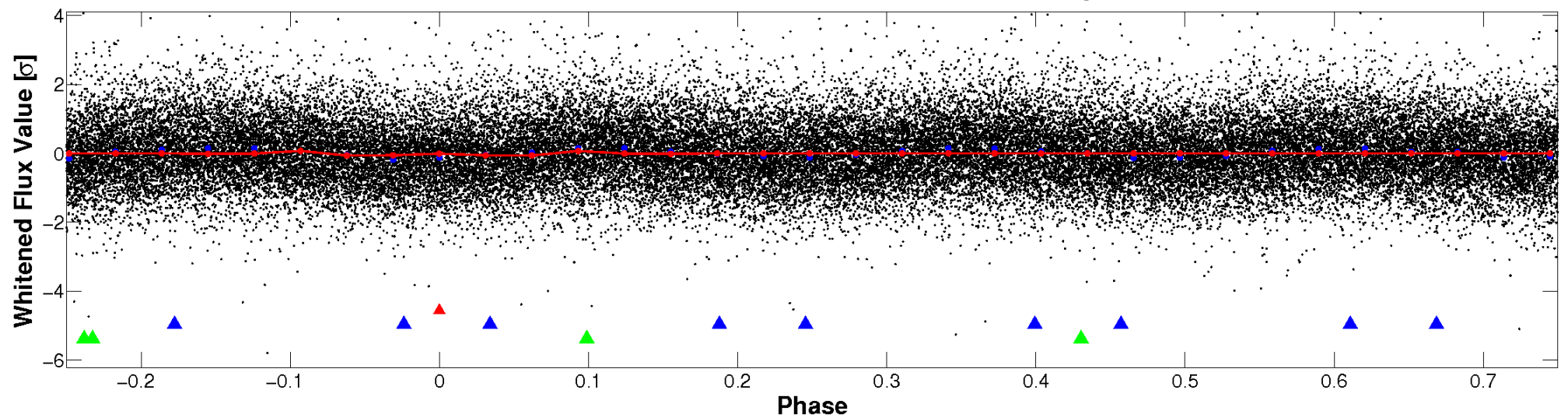


Non-Whitened Vs. Whitened Light Curve

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

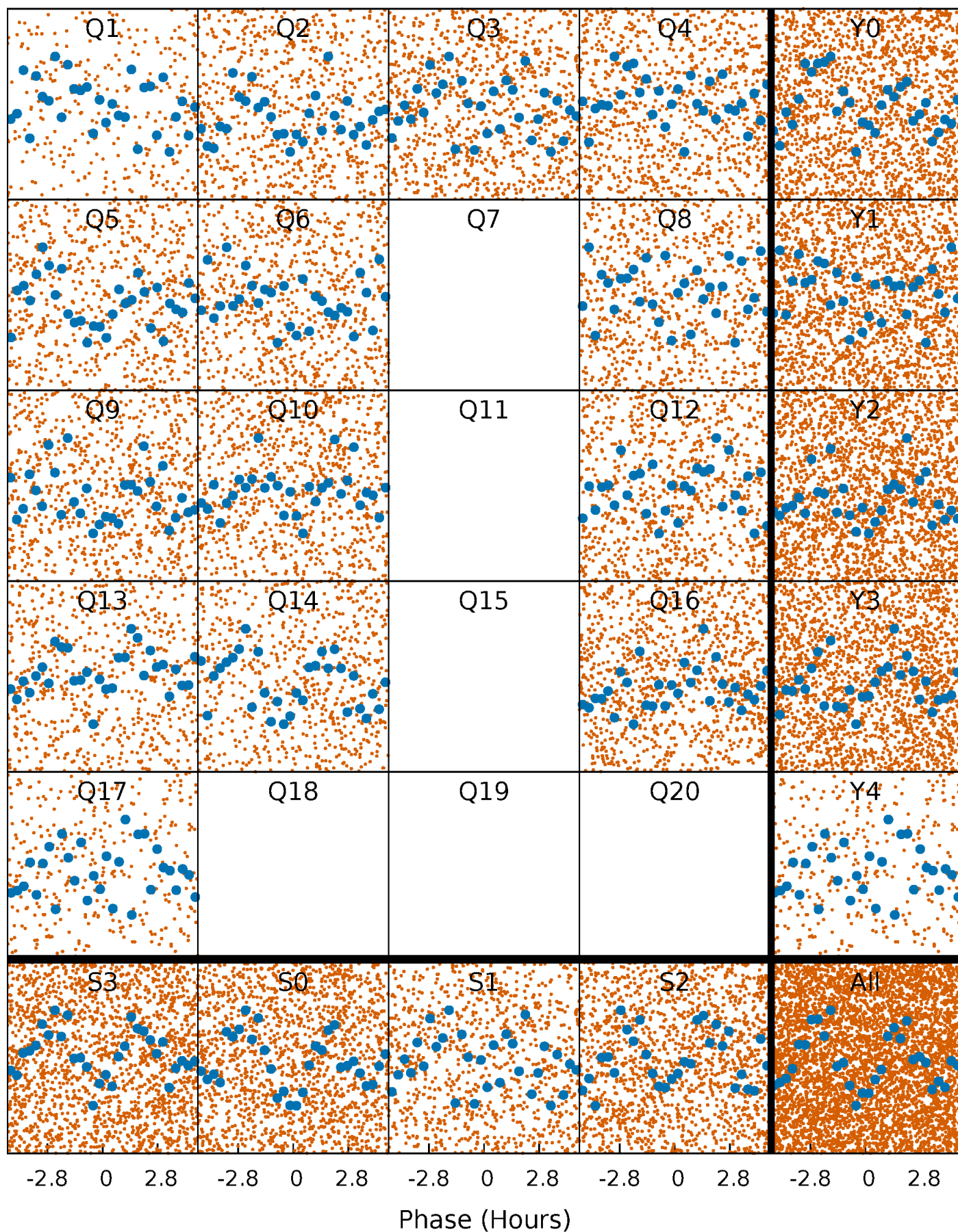


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



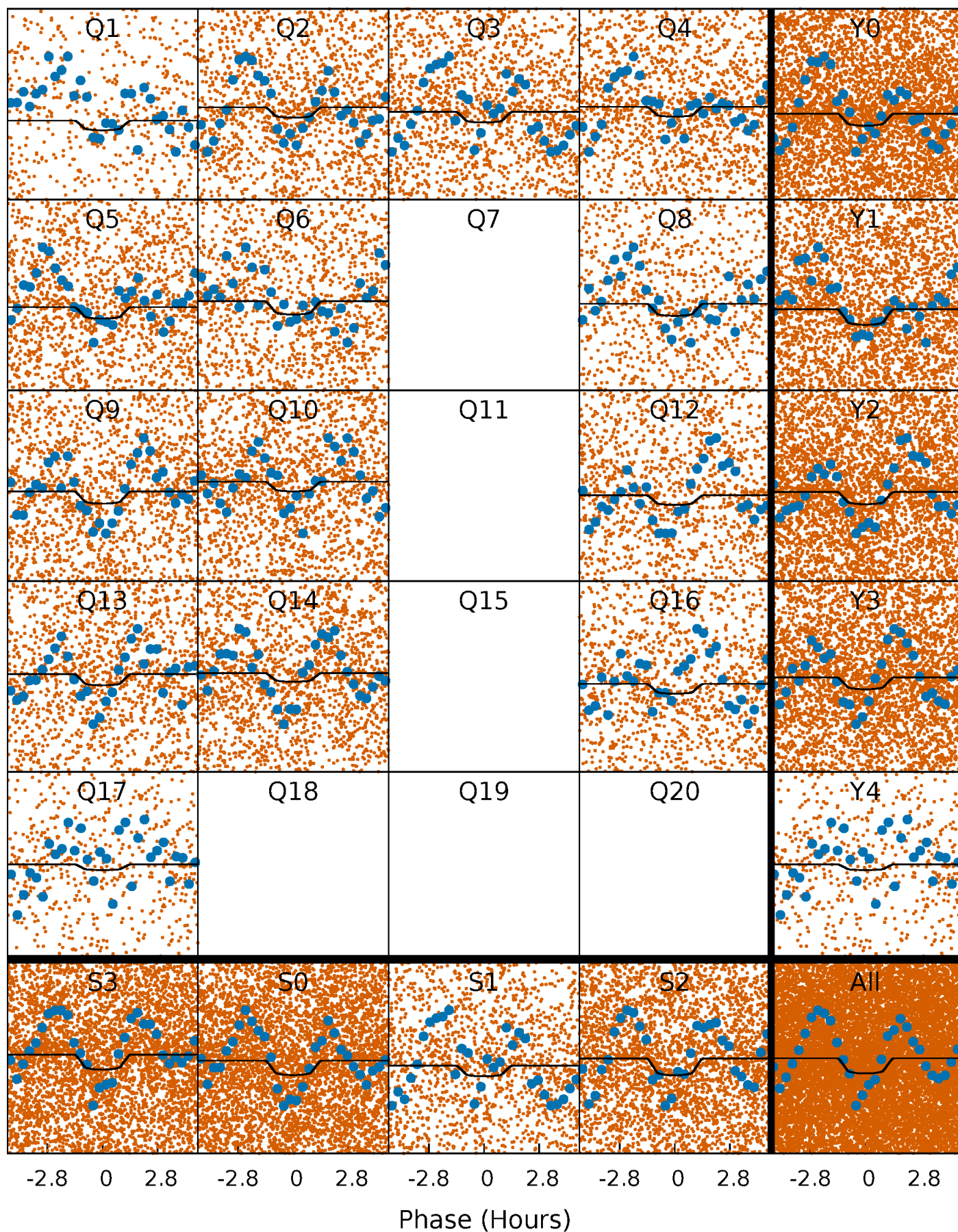
PDC Quarter-Phased Transit Curves

TCE 010556064-01 P= 0.658447 Days $T_0=131.805636$ (BKJD)



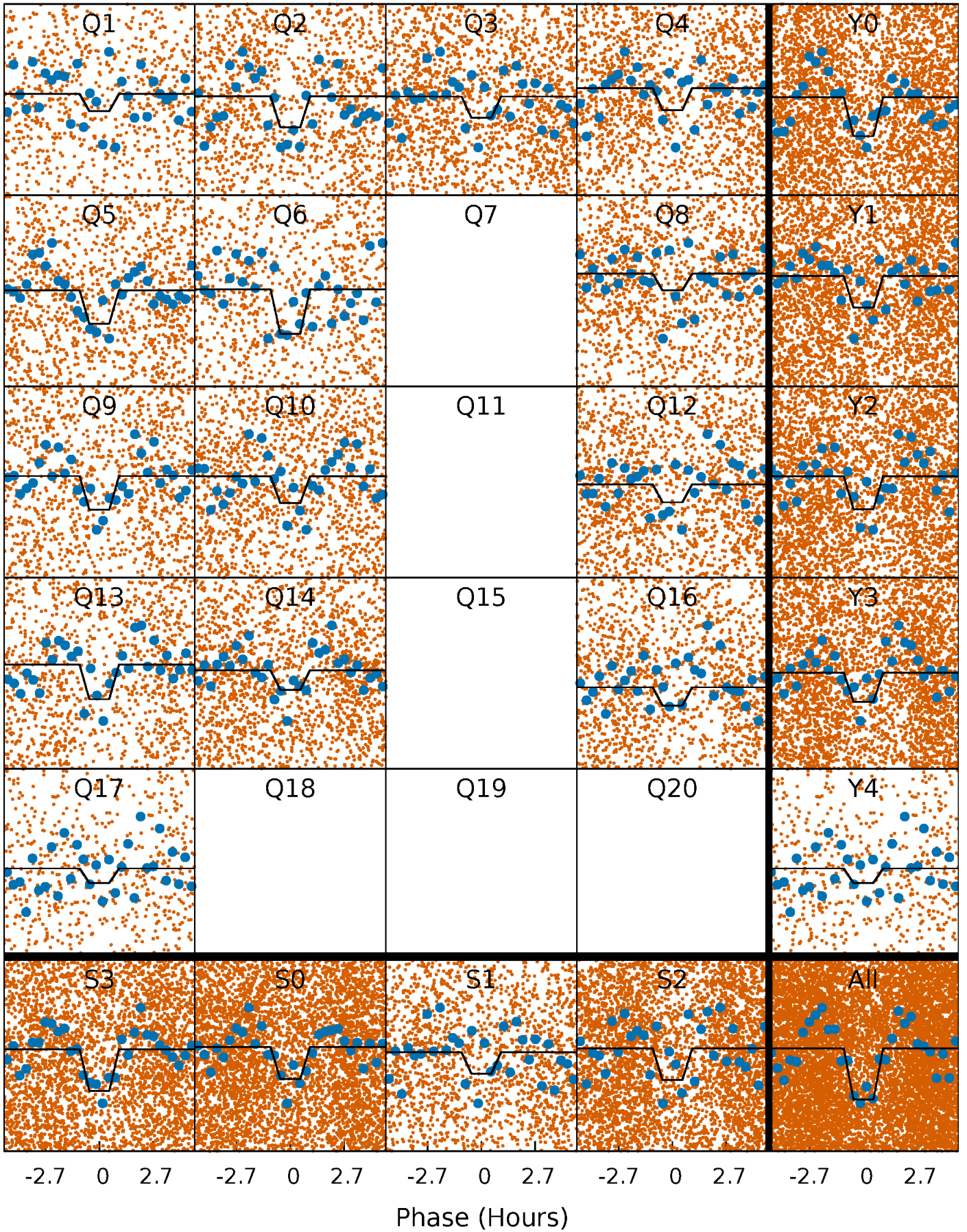
DV Quarter-Phased Transit Curves

TCE 010556064-01 P= 0.658447 Days $T_0=131.805636$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

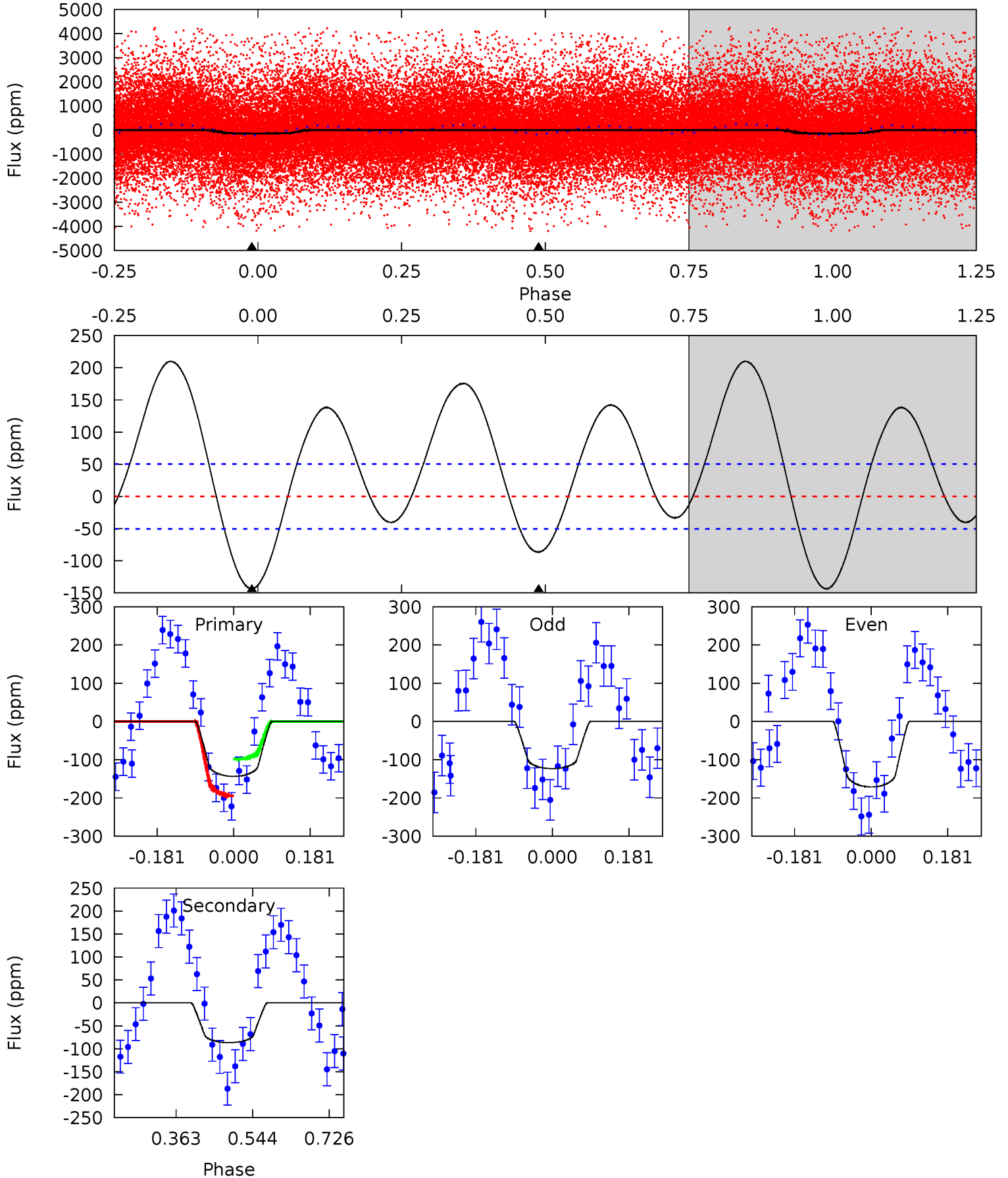
TCE 010556064-01 P= 0.658443 Days $T_0=131.800066$ (BKJD)



DV Model-Shift Uniqueness Test

010556064-01, P = 0.658447 Days, E = 131.147189 Days

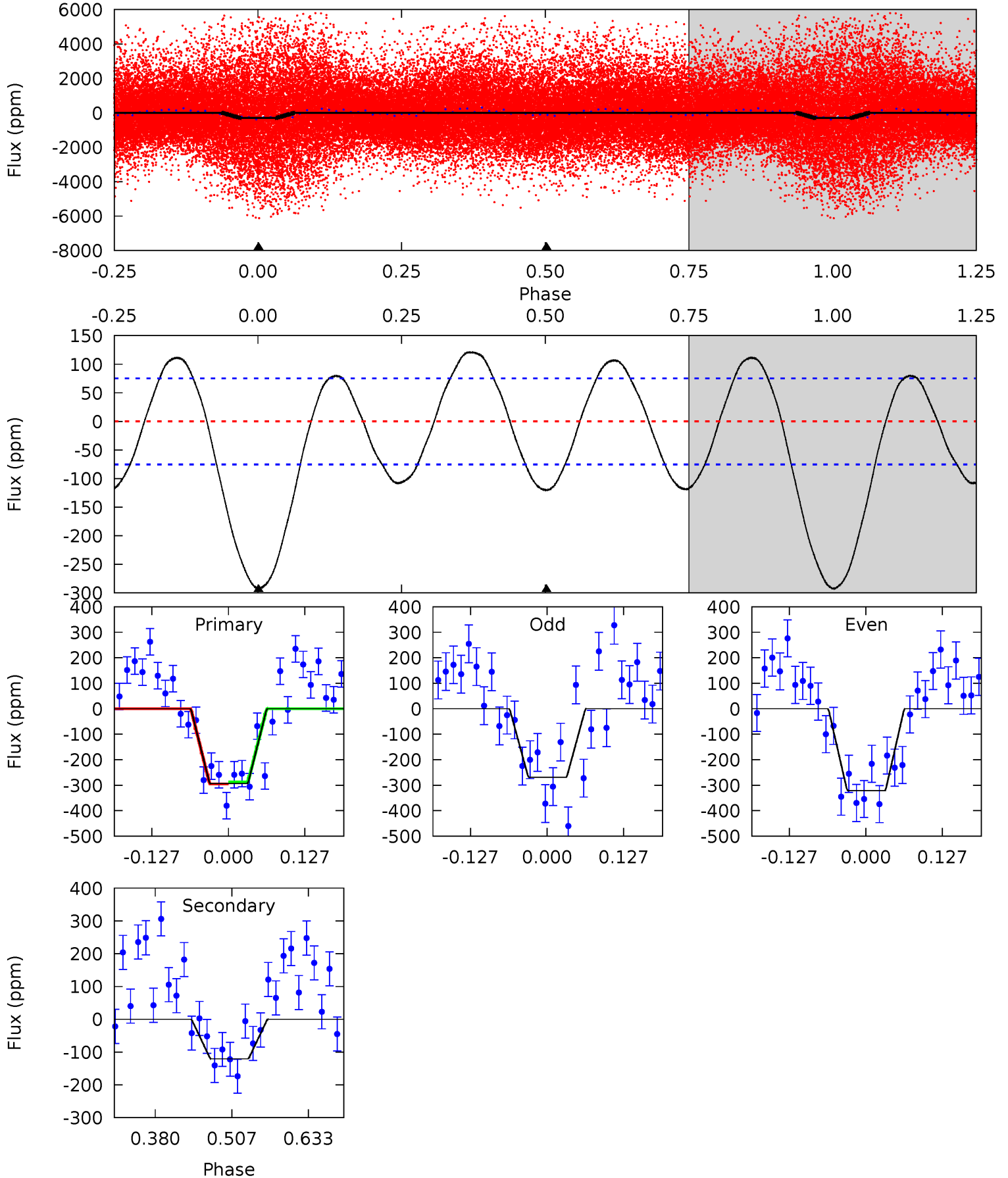
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	7.62	0	0	4.44	1.34	4.00	12.6	12.6	7.62	7.62	2.12	1.01	0.59	0



Alt Model-Shift Uniqueness Test

010556064-01, P = 0.658443 Days, E = 131.141623 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	7.22	0	0	4.51	1.53	4.74	17.6	17.6	7.22	7.22	1.51	0.97	0.29	0.23



Stellar Parameters For KIC 010556064

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7184^{+200}_{-300}	$4.152^{+0.124}_{-0.186}$	$0.020^{+0.200}_{-0.350}$	$1.717^{+0.569}_{-0.306}$	$1.527^{+0.226}_{-0.226}$	$0.424^{+0.266}_{-0.222}$
	+3%/-4%	+3%/-4%	+1000%/-1750%	+33%/-18%	+15%/-15%	+63%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010556064-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-87 ± 11	$1.78^{+0.46}_{-0.43}$	4470^{+302}_{-286}	6985^{+1362}_{-896}	$4.370^{+3.385}_{-1.702}$
Alt.	-120 ± 17	$3.07^{+0.66}_{-0.49}$	4450^{+309}_{-284}	5569^{+572}_{-468}	$2.006^{+0.907}_{-0.659}$

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 $A_{obs} \gg 1.0$

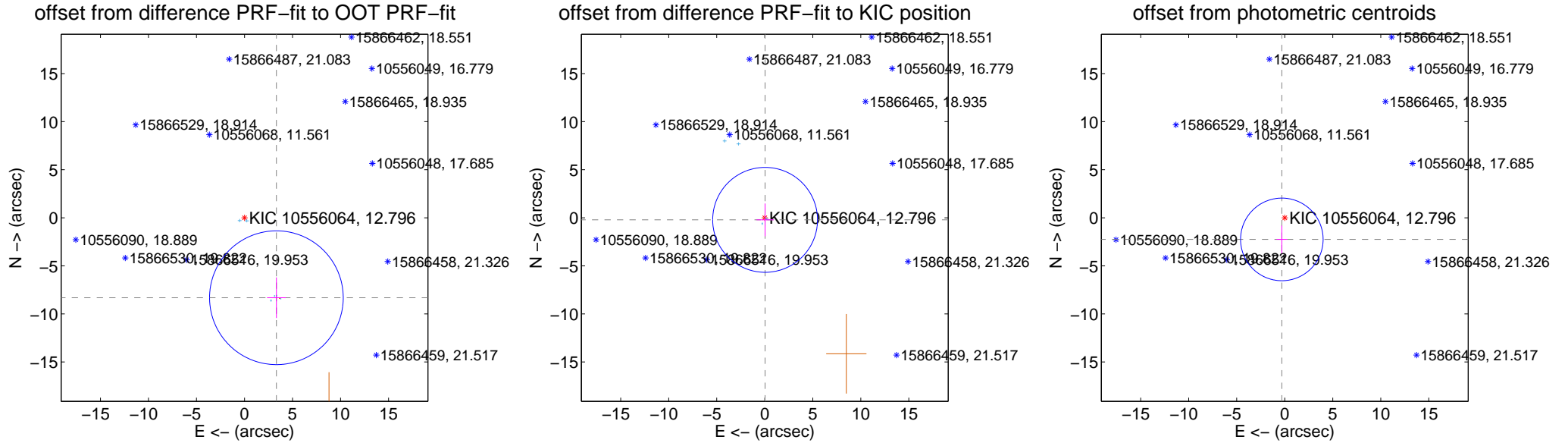
DV Centroid Data

Supplemental centroid analysis for 010556064-01. Kepler magnitude: 12.80. Transit SNR 7.21

There are 8 quarters with good PRF difference image offsets

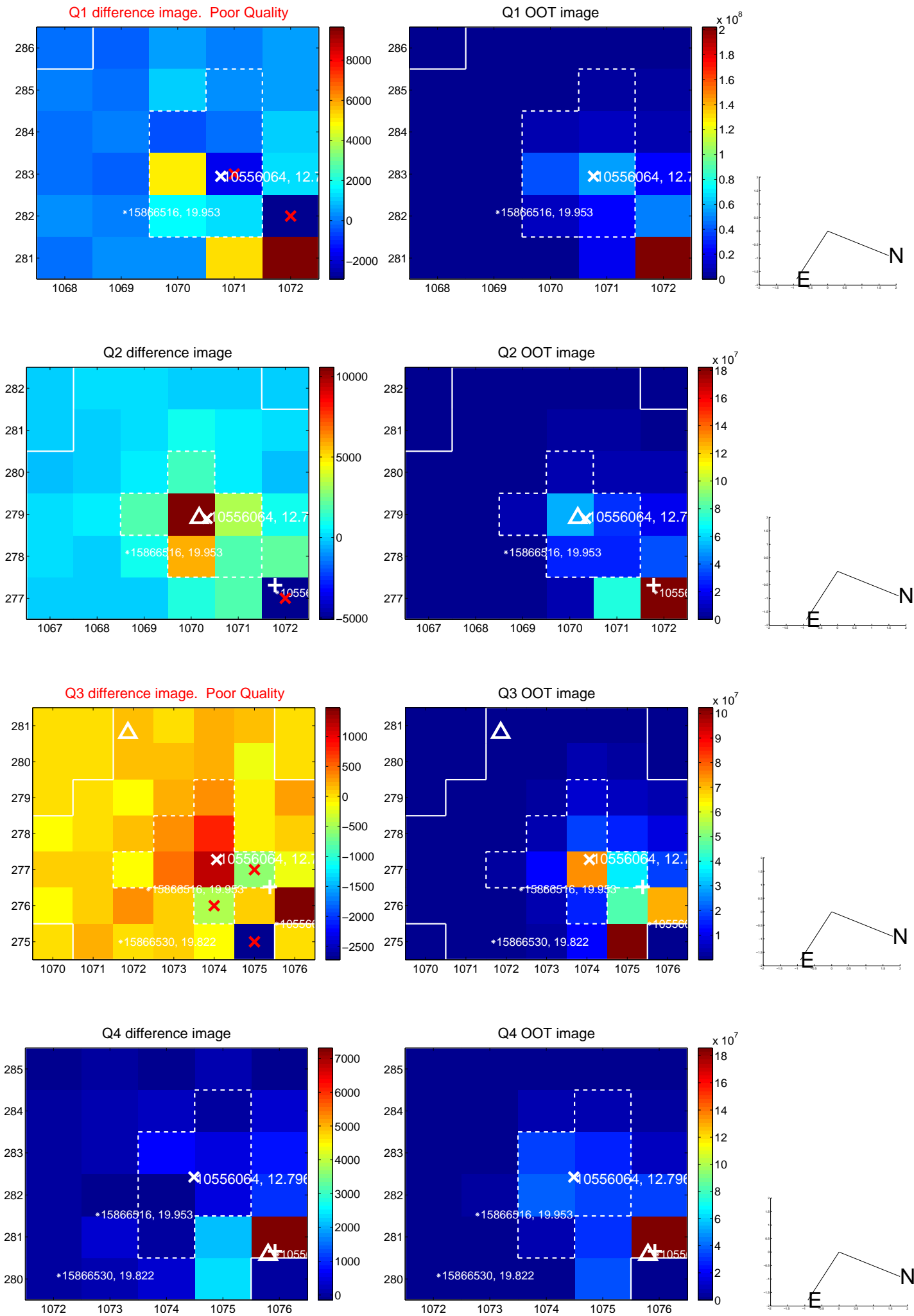
The OOT PRF centroid is offset from the target star catalog position by about 9.14 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.954 ± 2.319	3.86	-3.320 ± 0.976	-8.315 ± 2.111
PRF-fit source offset from KIC position	0.219 ± 1.819	0.12	-0.035 ± 0.897	-0.216 ± 1.700
photometric centroid source offset	2.27 ± 1.43	1.58	0.30 ± 0.55	-2.25 ± 1.44

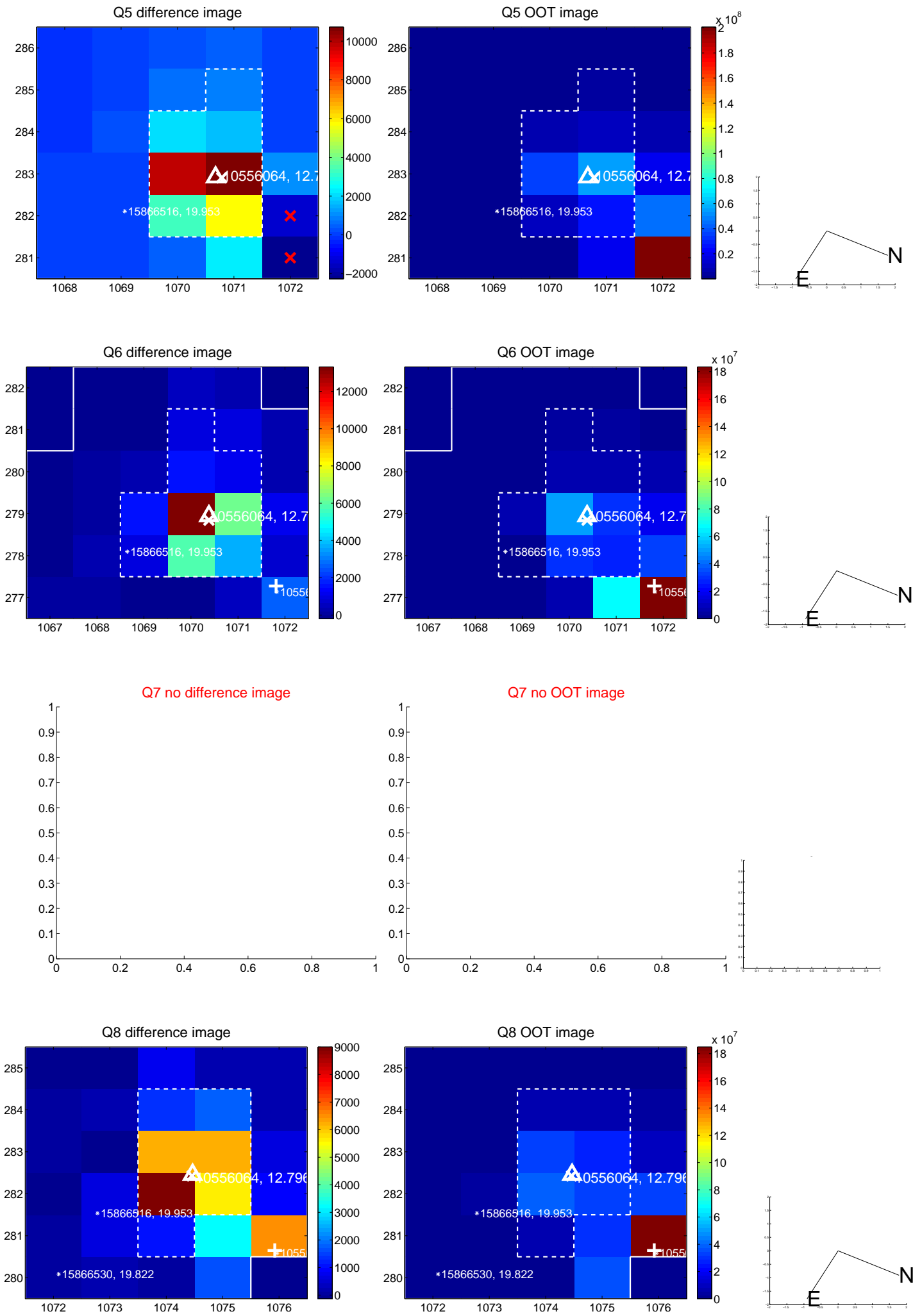


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

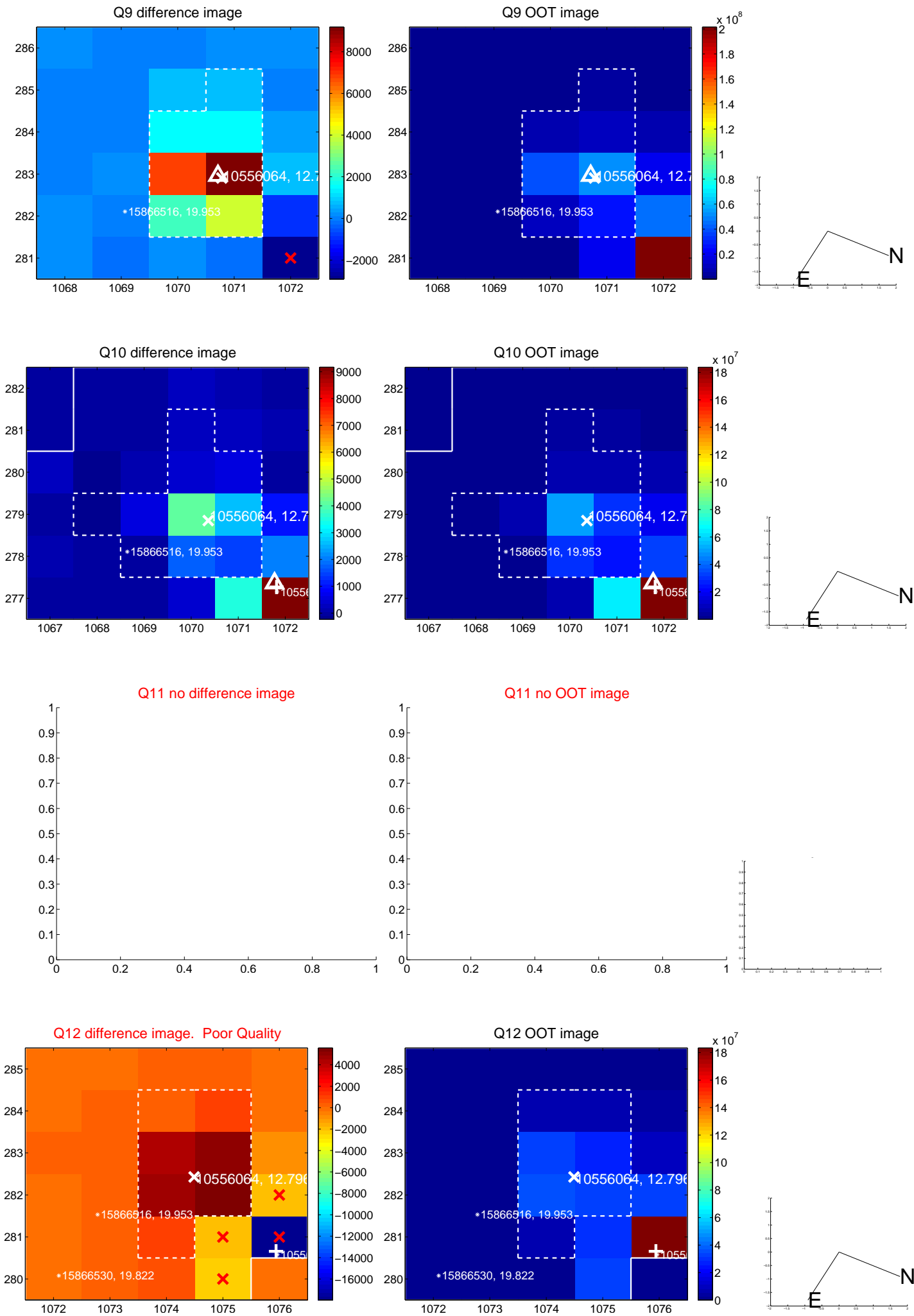
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



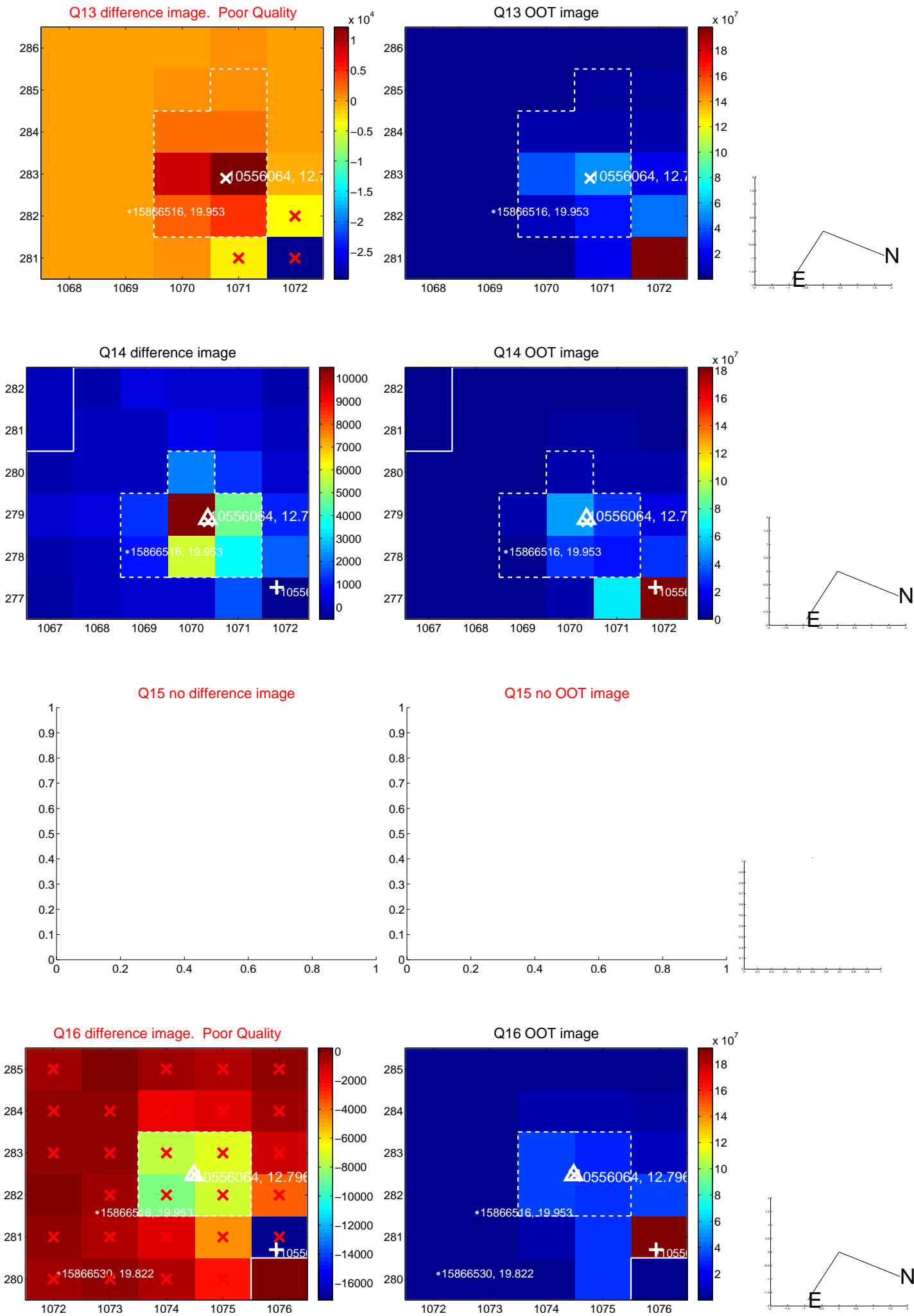
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



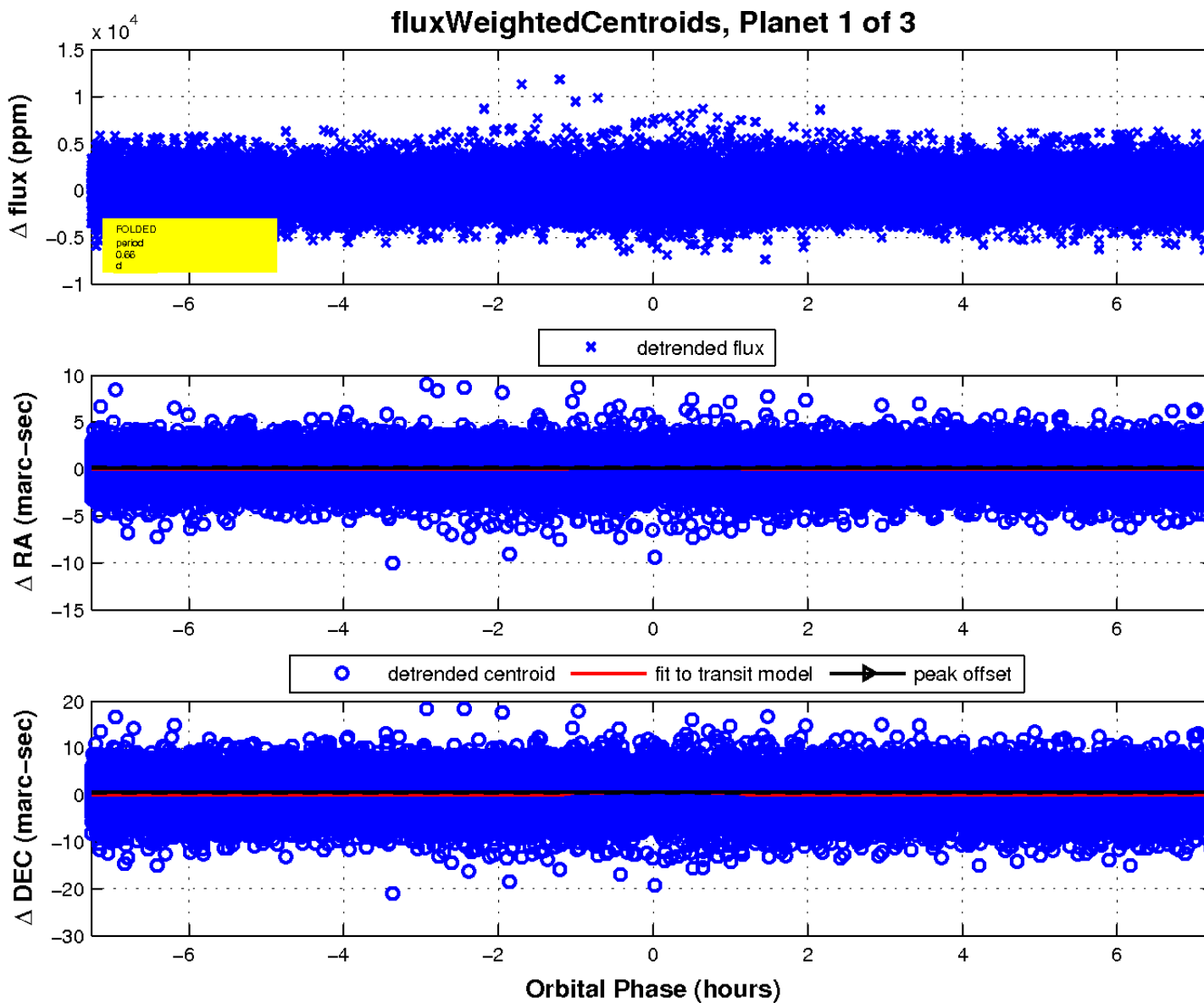
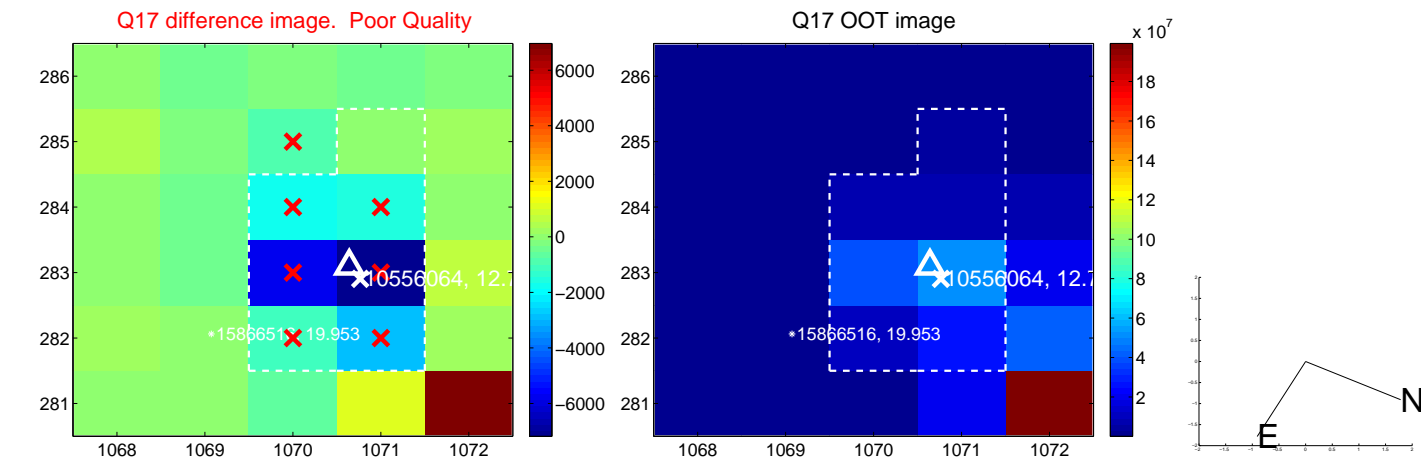
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

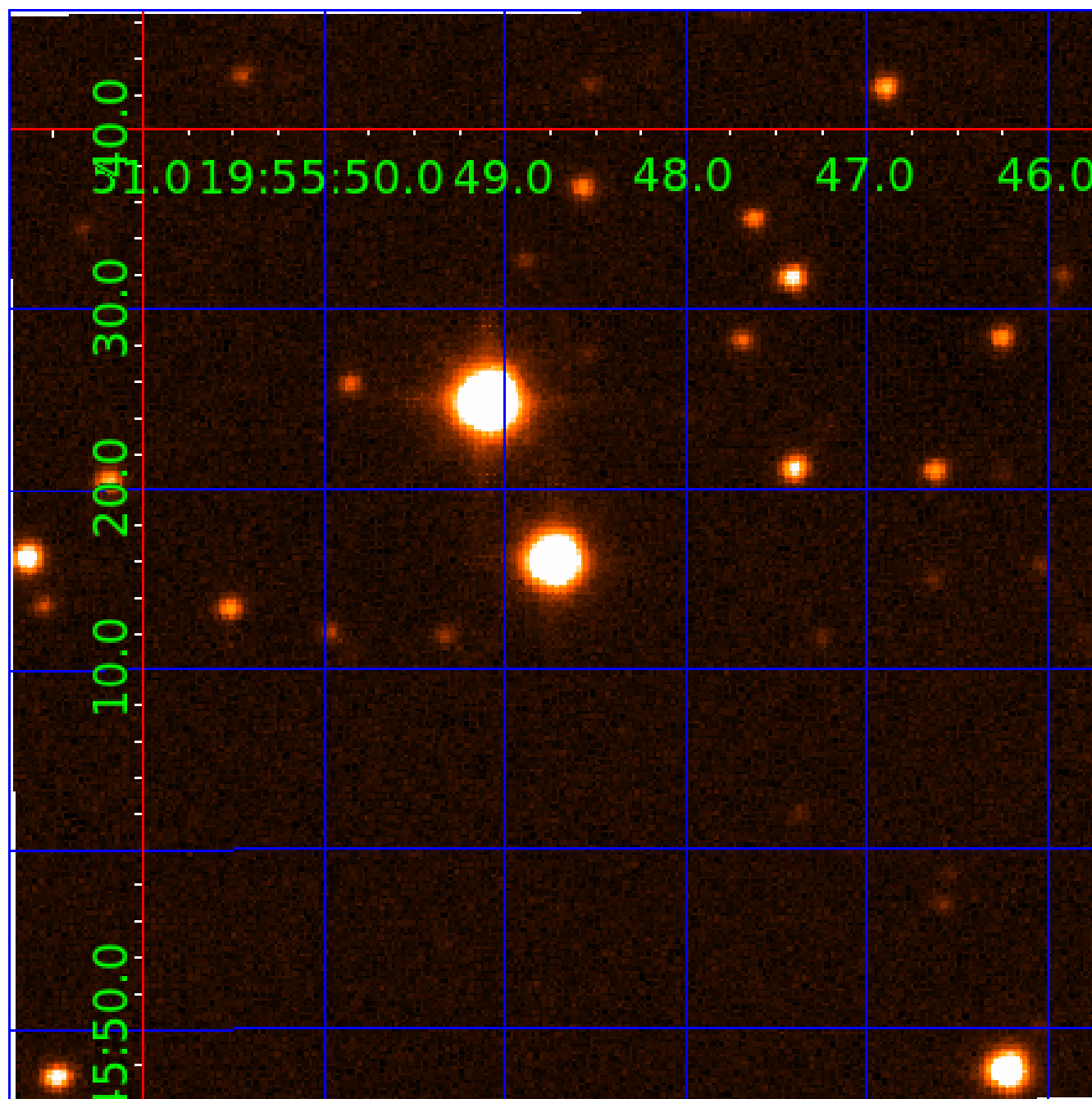


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010556064

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})
010556064-01	OBS	No	0.658447	131.805636	78.7	2.420	7.7	7.2	1.72	7184	1.77	24183.11
010556064-02	OBS	No	171.335505	149.568046	4495.9	4.141	8.5	9.0	1.72	7184	20.68	14.56
010556064-03	OBS	No	363.680963	420.052275	5103.4	4.938	8.5	8.6	1.72	7184	21.86	5.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010556064-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
010556064-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010556064-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

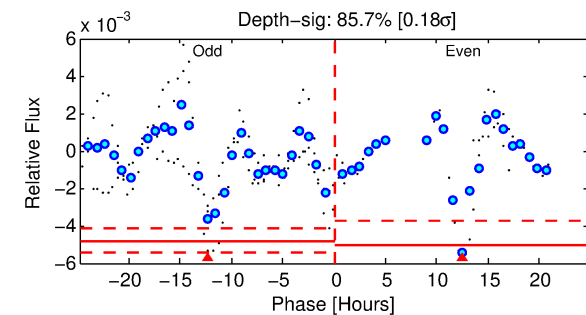
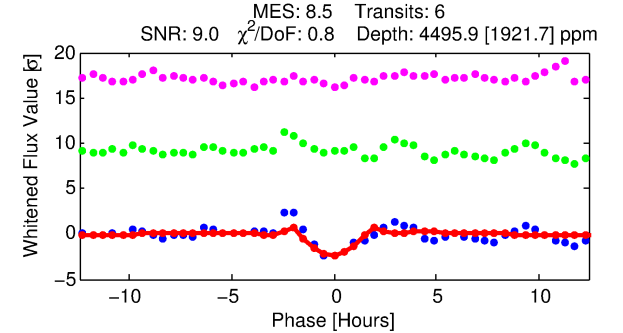
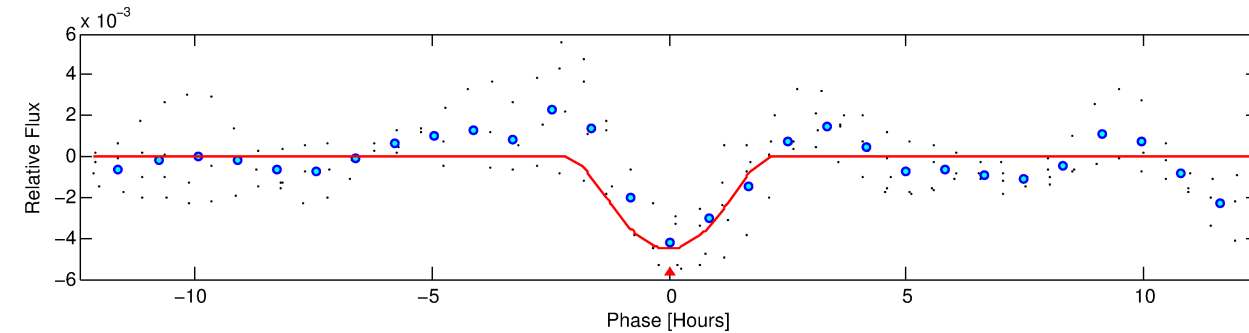
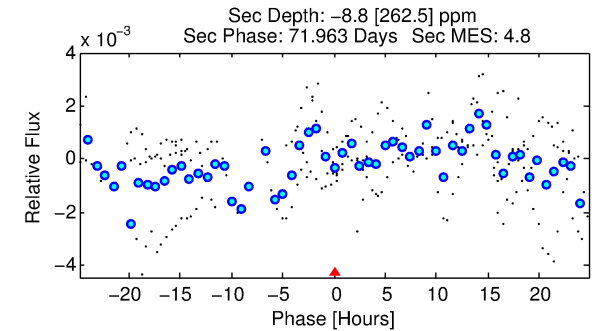
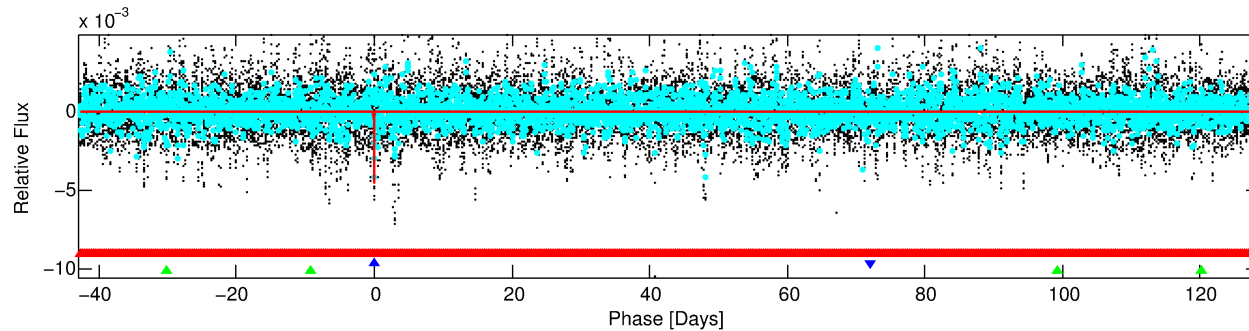
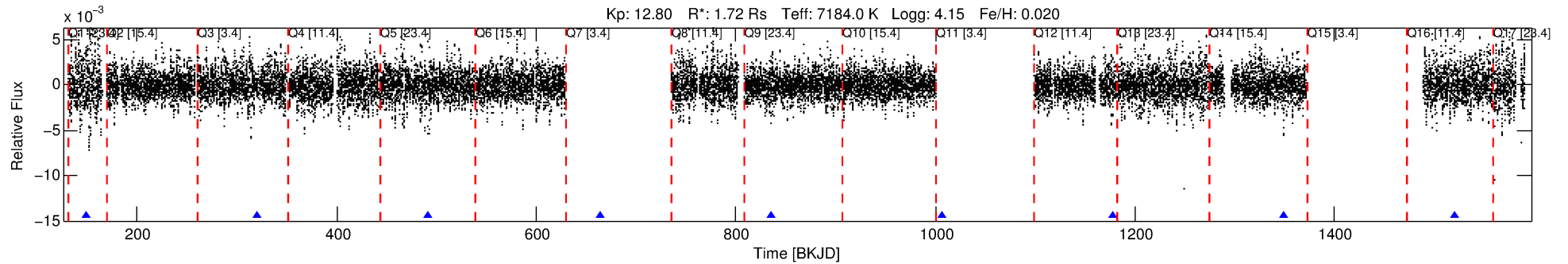
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010556064-02

No Significant Match Found

DV One-Page Summary

KIC: 10556064 Candidate: 2 of 3 Period: 171.336 d



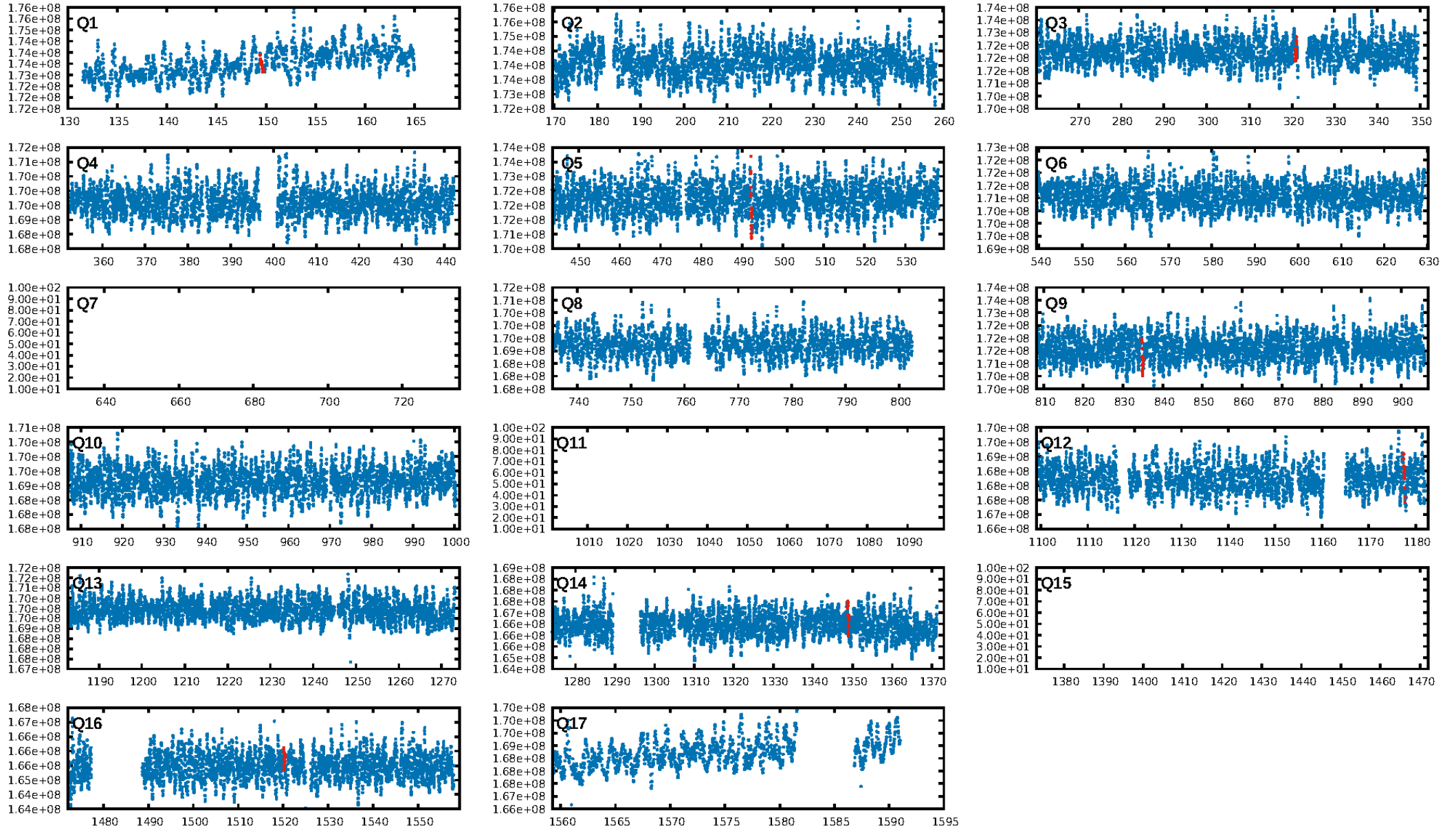
DV Fit Results:

Period = 171.33550 [0.00122] d
Epoch = 149.5680 [0.0067] BKJD
Rp/R* = 0.1104 [0.1576]
a/R* = 152.58 [41.64]
b = 1.00 [0.19]
Seff = 14.56 [5.79]
Teq = 498 [50] K
Rp = 20.68 [30.31] Re
a = 0.6952 [0.1829] AU
Ag = N/A
Teffp = N/A

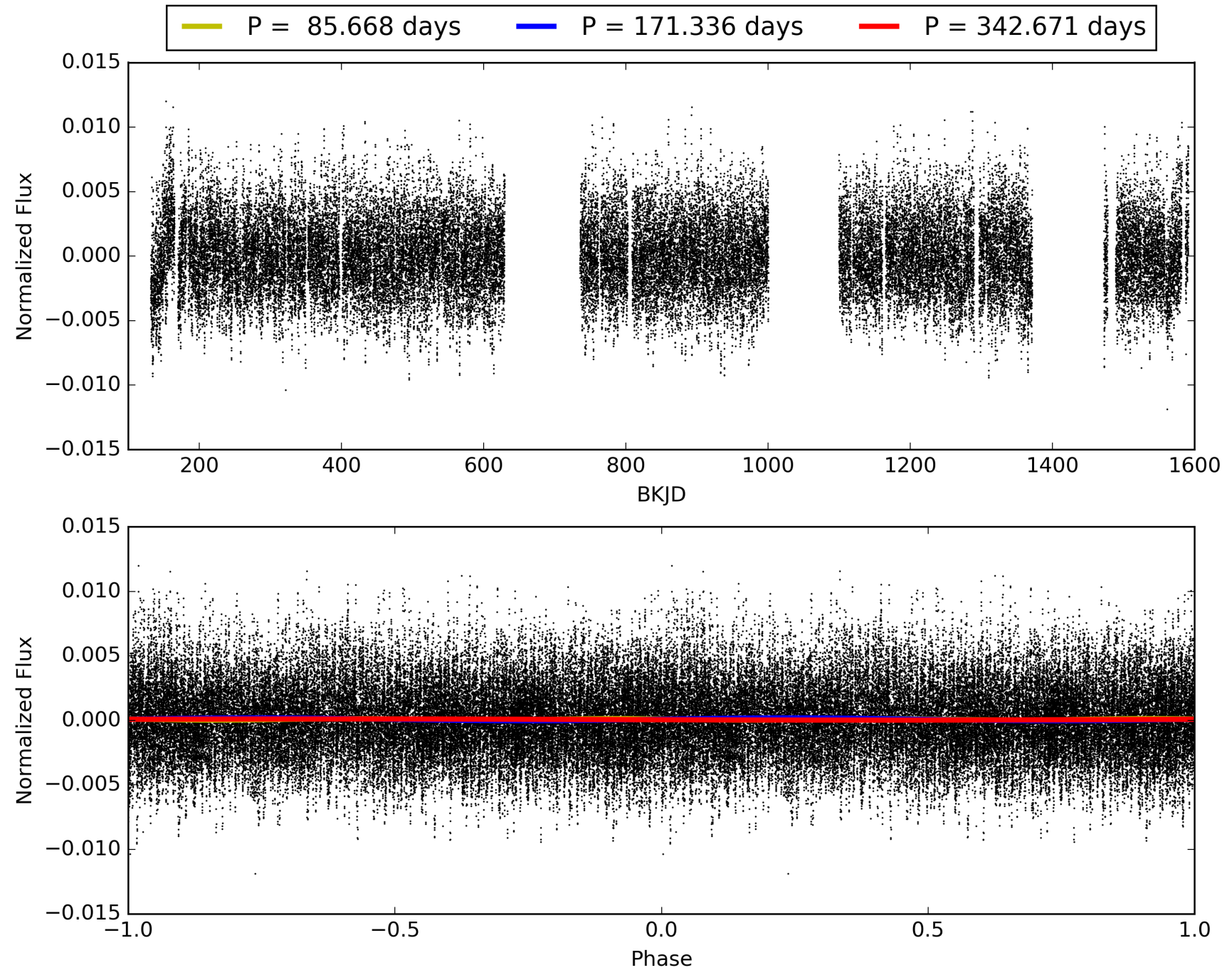
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [854.12 σ]
LongPeriod-sig: 100.0% [716.37 σ]
ModelChiSquare2-sig: 68.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.75e-10
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 0.4602
Centroid-sig: 86.5%
Centroid-so: 4.702 arcsec [9.56 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 [0/6]

TCE 010556064-02, PDC Light Curves

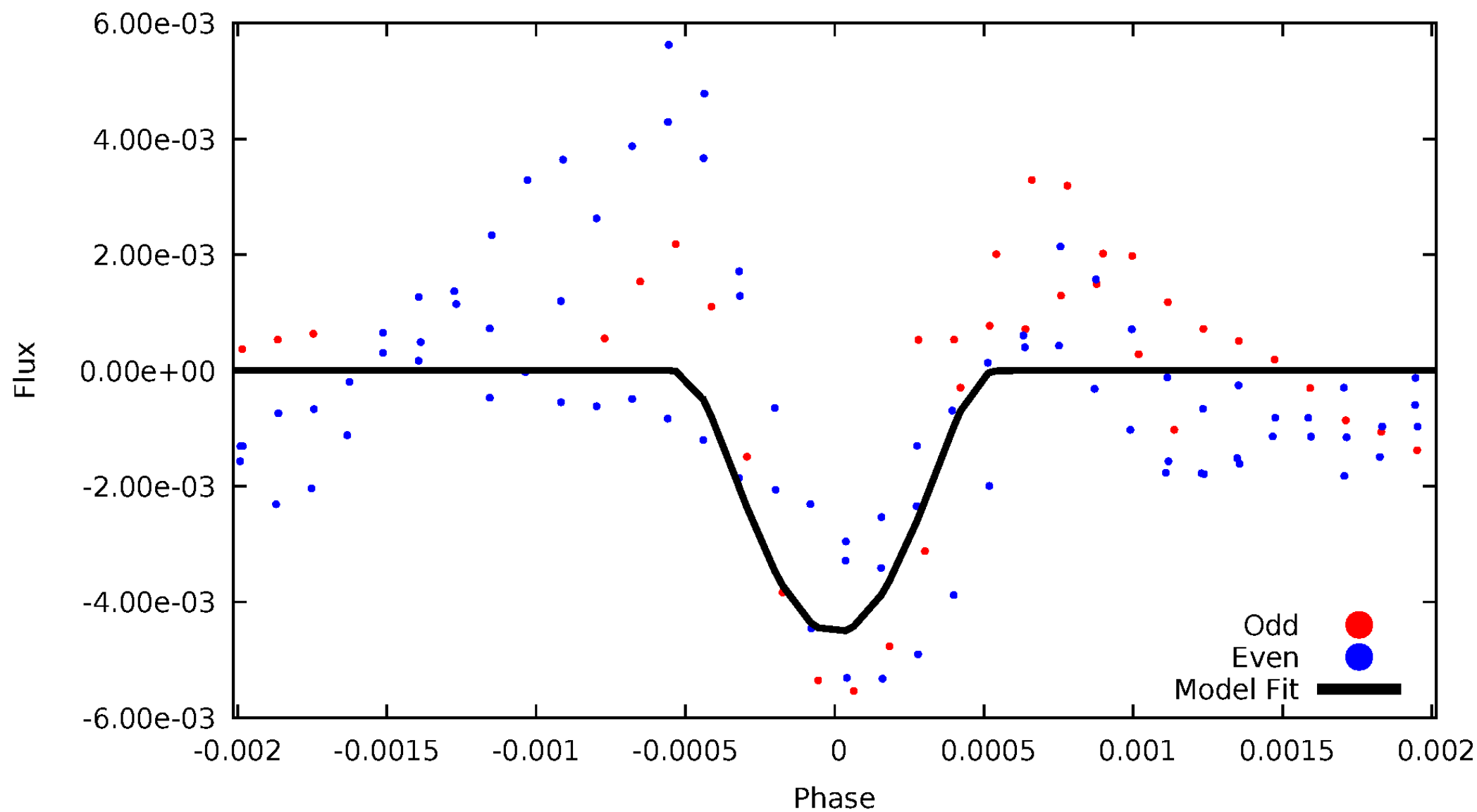


TCE 010556064-02



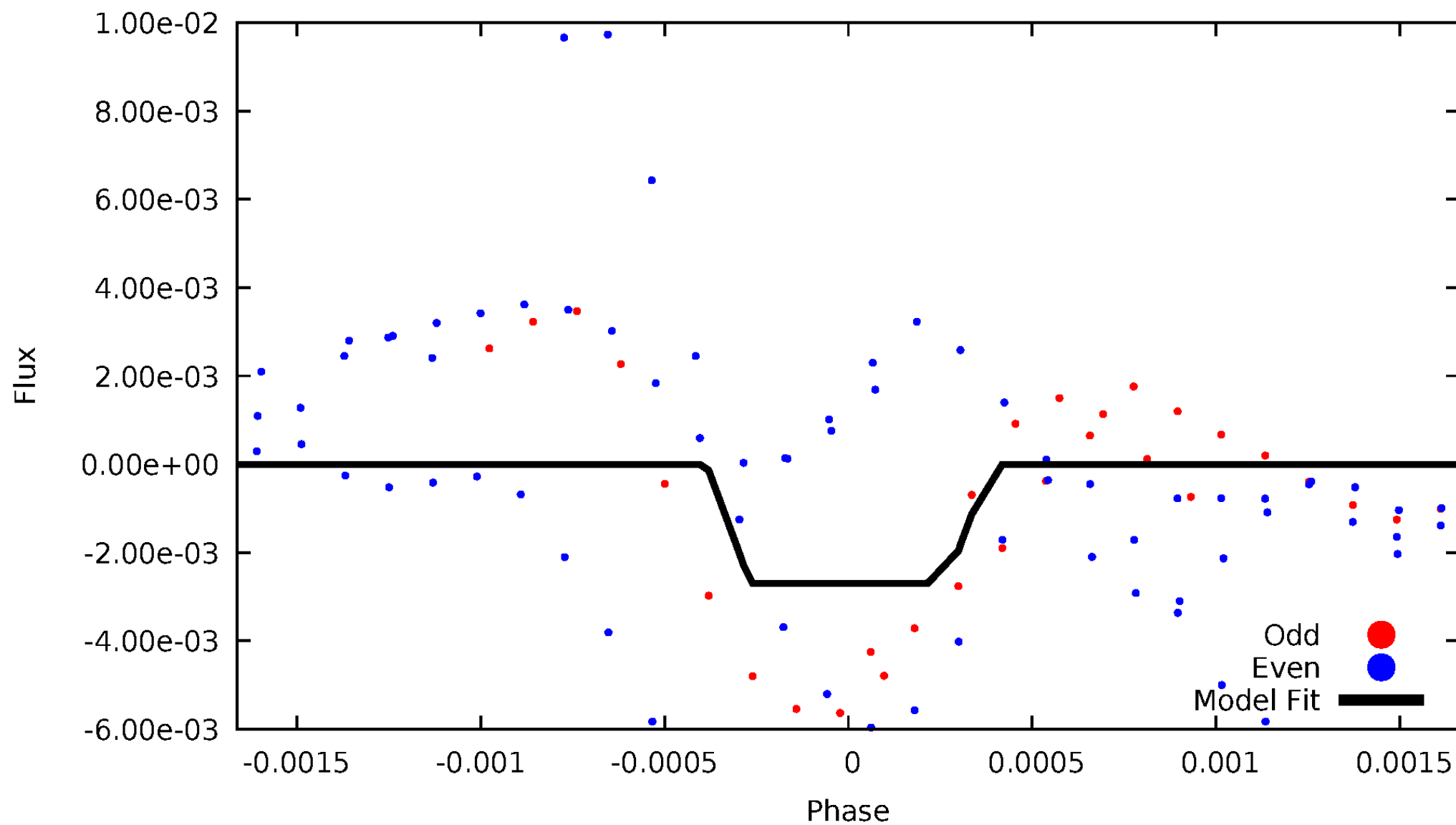
DV Odd/Even

TCE 010556064-02



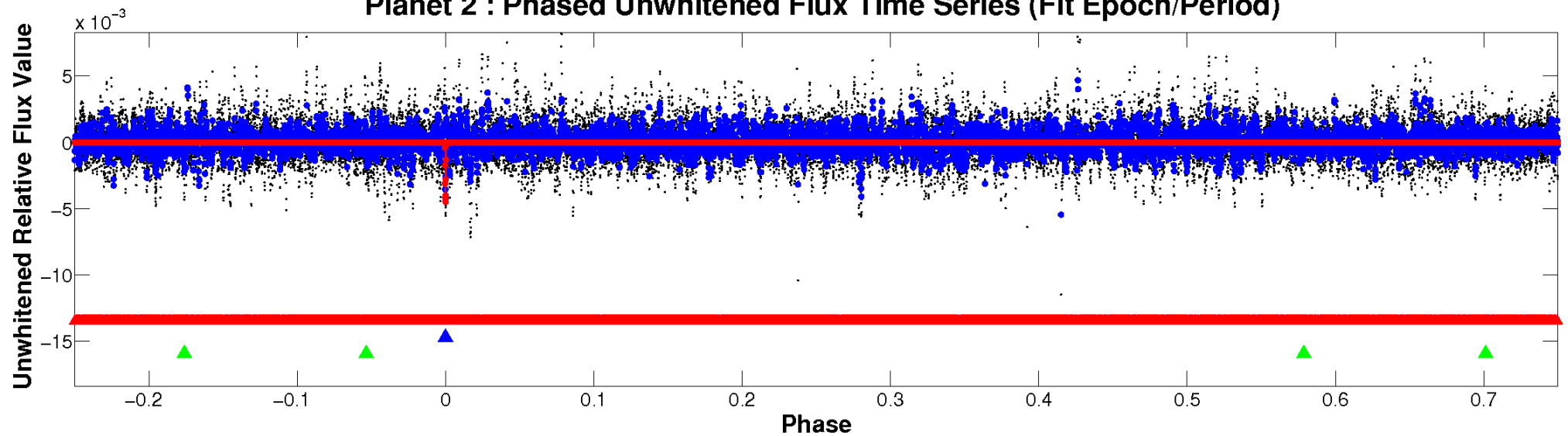
ALT Odd/Even

TCE 010556064-02

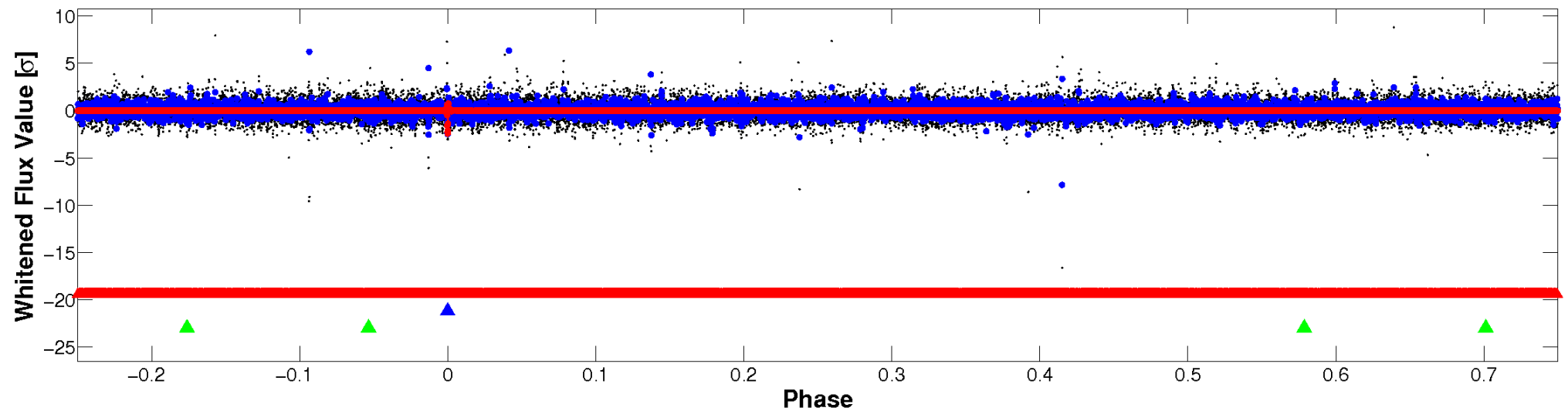


Non-Whitened Vs. Whitened Light Curve

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

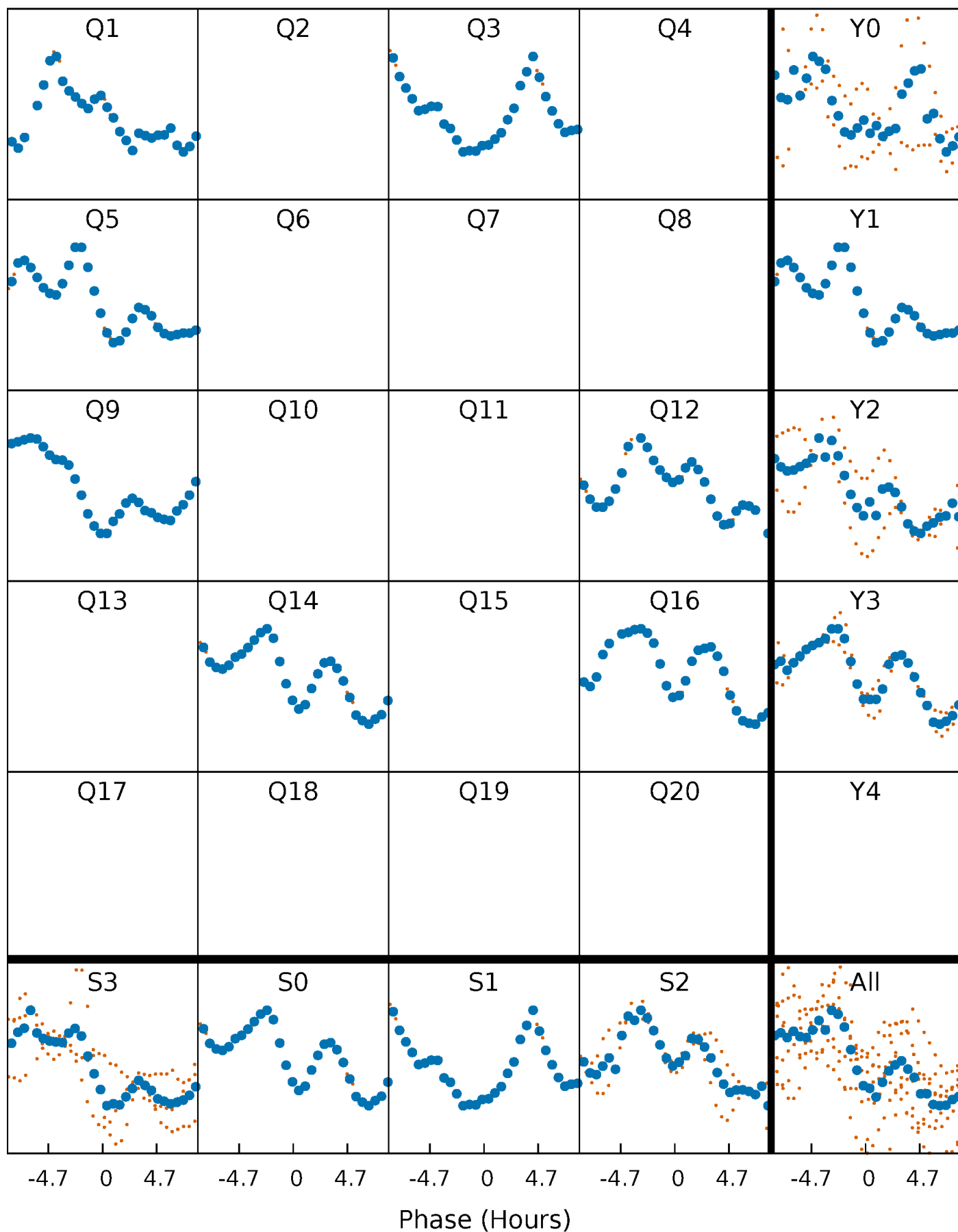


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



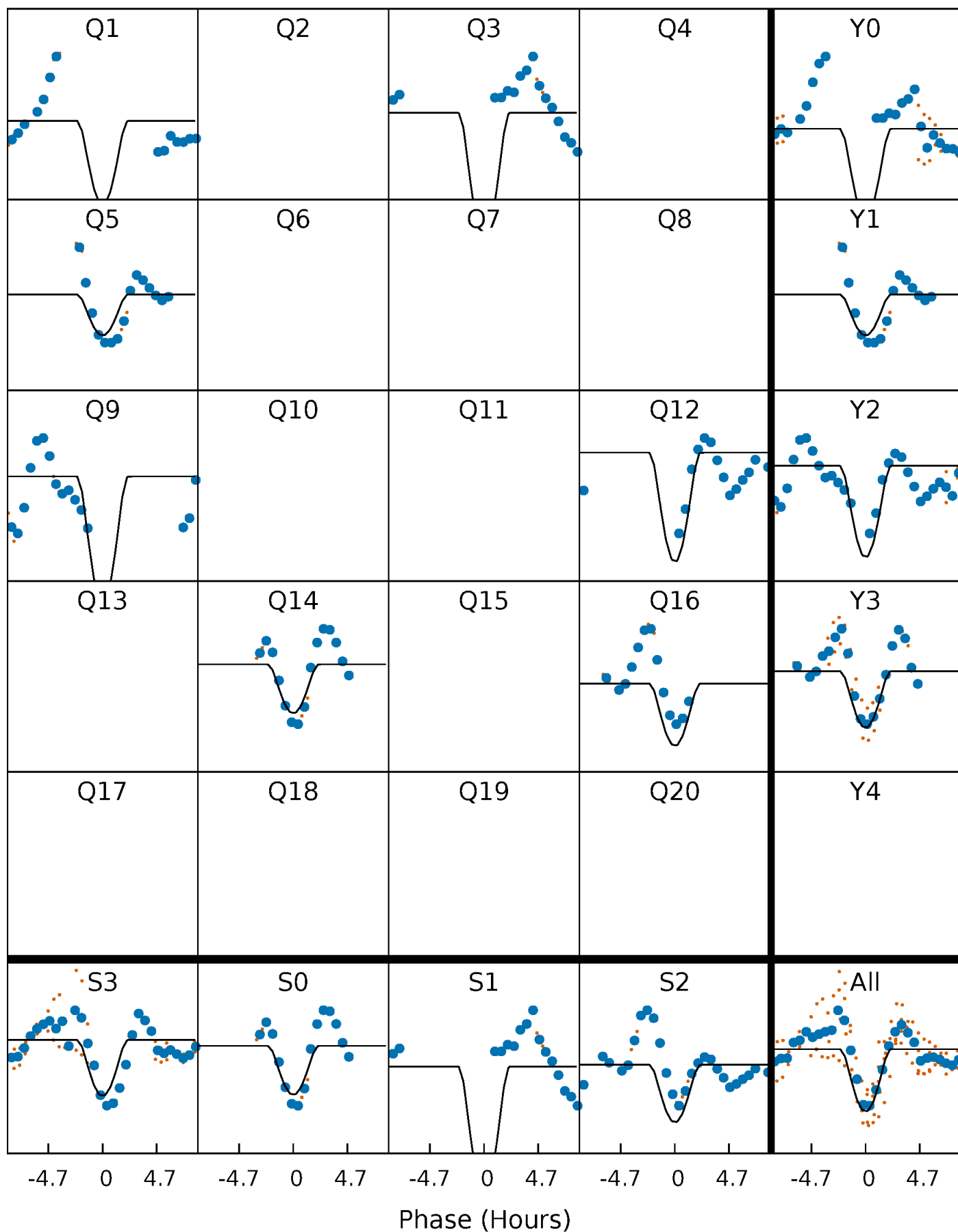
PDC Quarter-Phased Transit Curves

TCE 010556064-02 P=171.335505 Days $T_0=149.568046$ (BKJD)



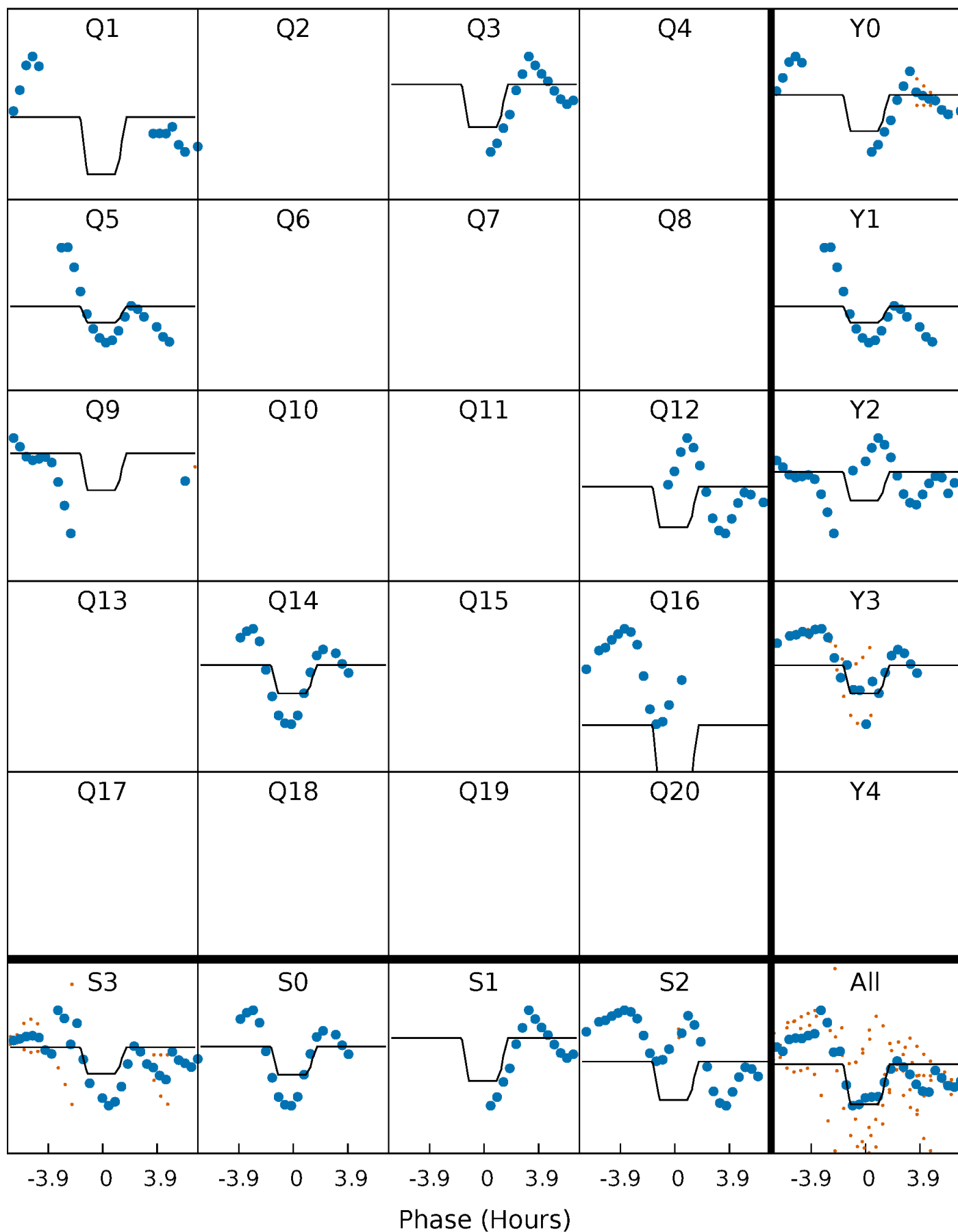
DV Quarter-Phased Transit Curves

TCE 010556064-02 P=171.335505 Days $T_0=149.568046$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

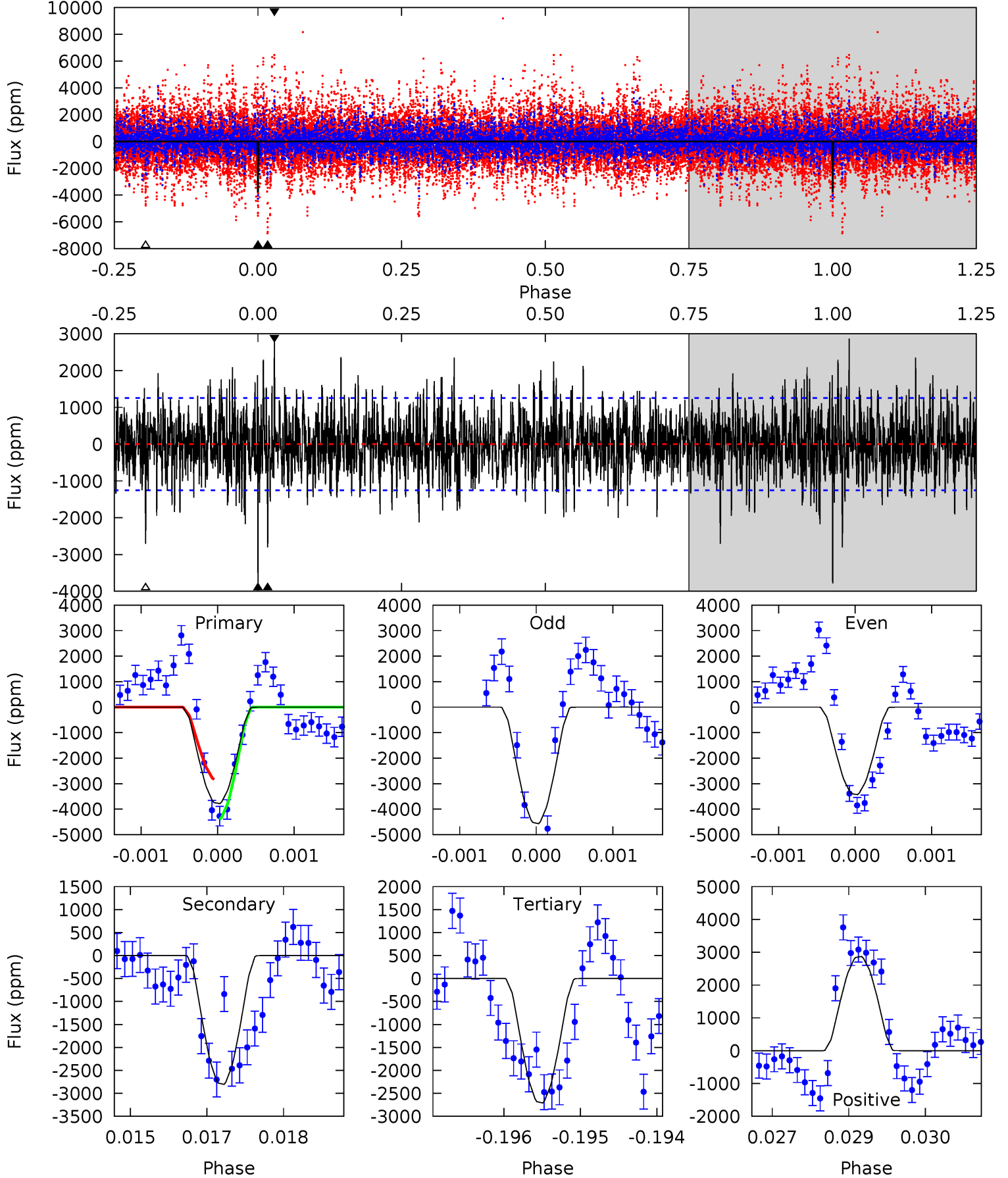
TCE 010556064-02 P=171.335085 Days $T_0=149.606180$ (BKJD)



DV Model-Shift Uniqueness Test

010556064-02, P = 171.335505 Days, E = 149.568046 Days

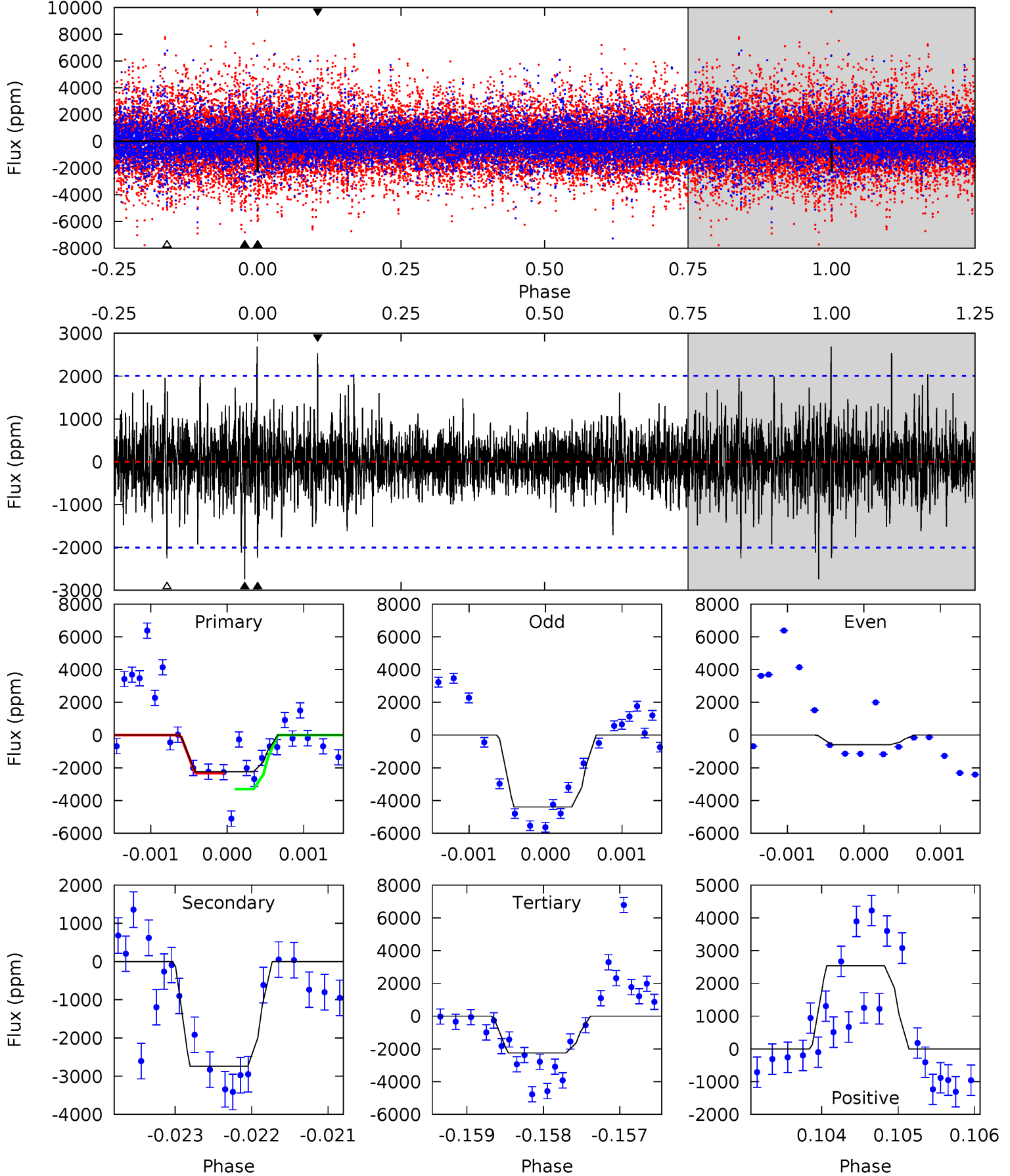
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.4	12.1	11.7	12.4	5.42	3.24	2.77	4.64	3.94	0.41	-0.29	2.43	0.77	0.43	3.33



Alt Model-Shift Uniqueness Test

010556064-02, P = 171.335085 Days, E = 149.606180 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.20	7.57	6.22	7.01	5.53	3.42	1.38	-0.01	-0.81	1.35	0.56	5.09	0.54	0.50	1.31



Stellar Parameters For KIC 010556064

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7184^{+200}_{-300}	$4.152^{+0.124}_{-0.186}$	$0.020^{+0.200}_{-0.350}$	$1.717^{+0.569}_{-0.306}$	$1.527^{+0.226}_{-0.226}$	$0.424^{+0.266}_{-0.222}$
	+3%/-4%	+3%/-4%	+1000%/-1750%	+33%/-18%	+15%/-15%	+63%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010556064-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2806 ± 231	$29.76^{+27.93}_{-20.77}$	698^{+52}_{-45}	4361^{+3145}_{-883}	845^{+8317}_{-624}
Alt.	-2741 ± 362	$24.93^{+24.31}_{-16.93}$	697^{+51}_{-43}	4657^{+3589}_{-1016}	1201^{+10296}_{-911}

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 $A_{obs} \gg 1.0$

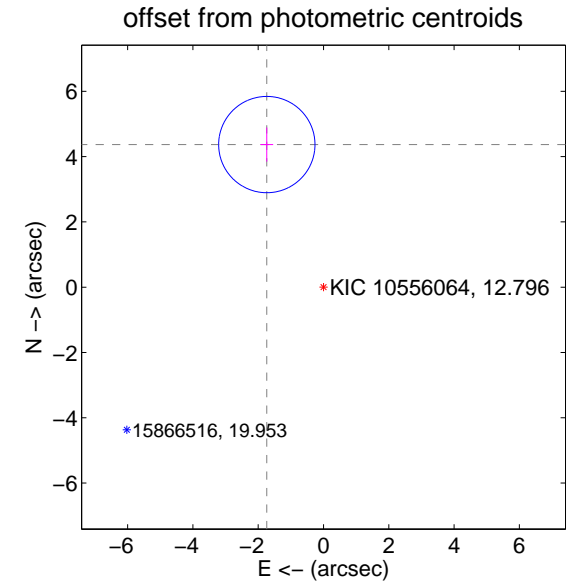
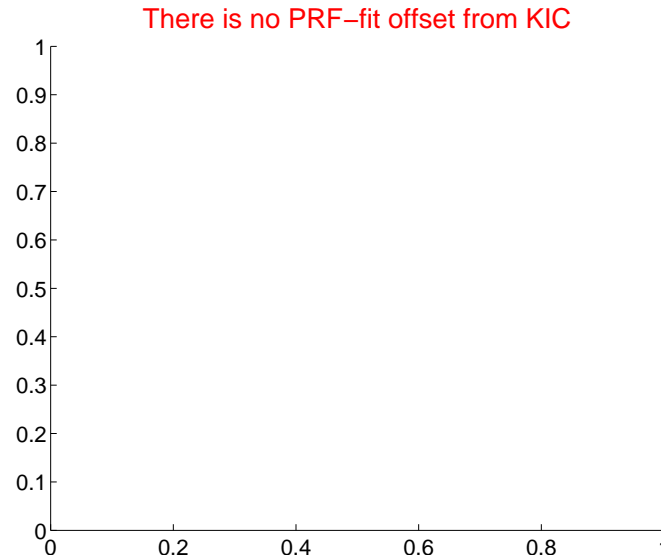
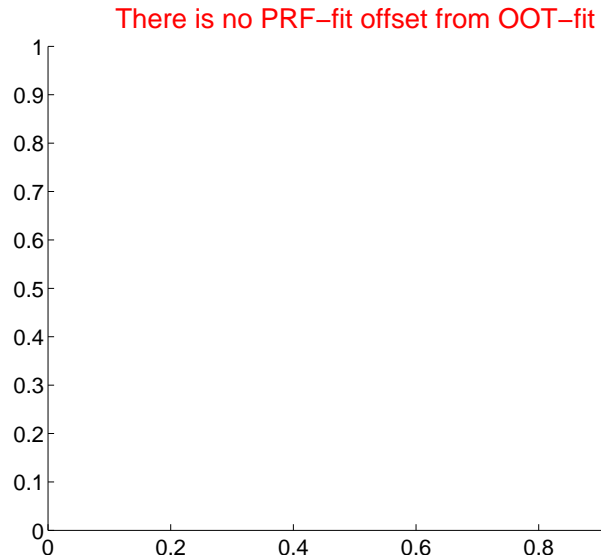
DV Centroid Data

Supplemental centroid analysis for 010556064-02. Kepler magnitude: 12.80. Transit SNR 8.99

There are 0 quarters with good PRF difference image offsets

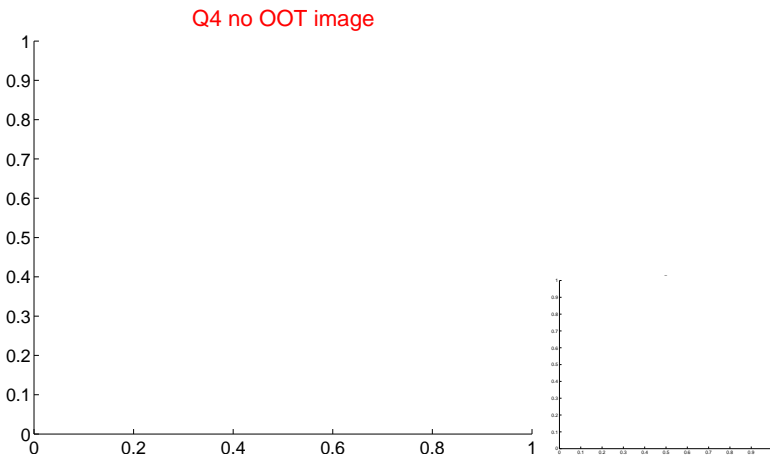
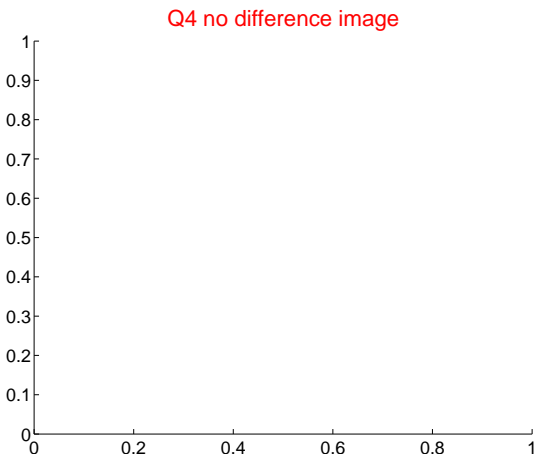
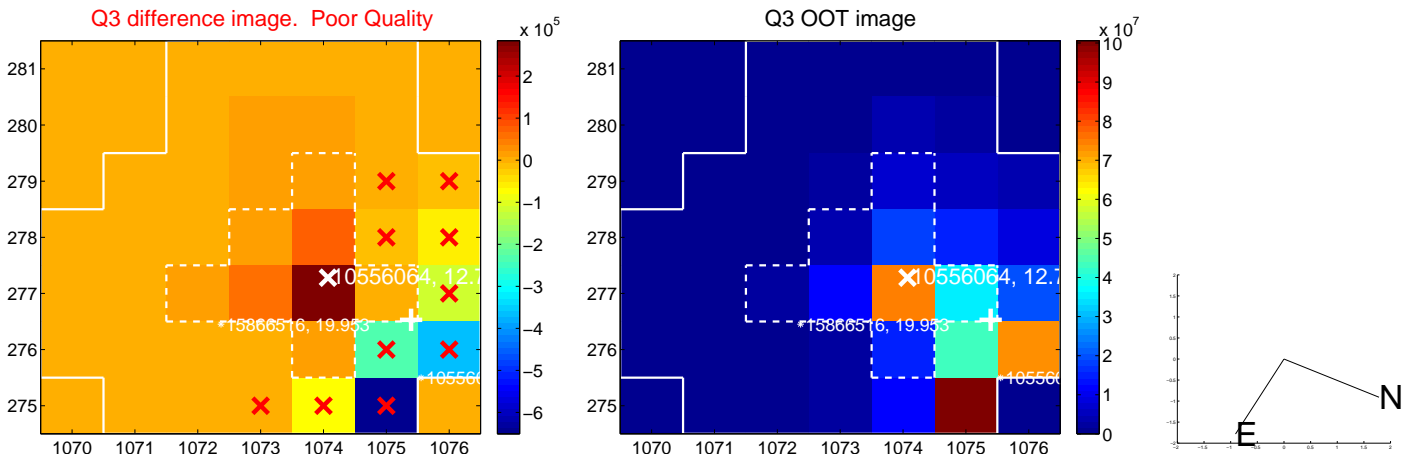
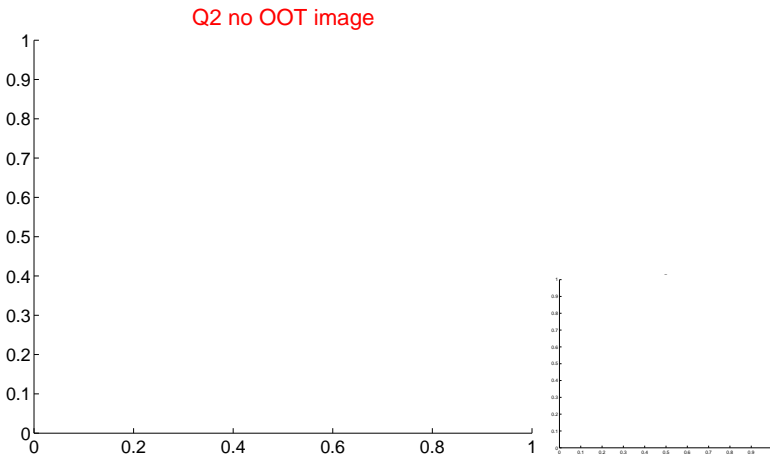
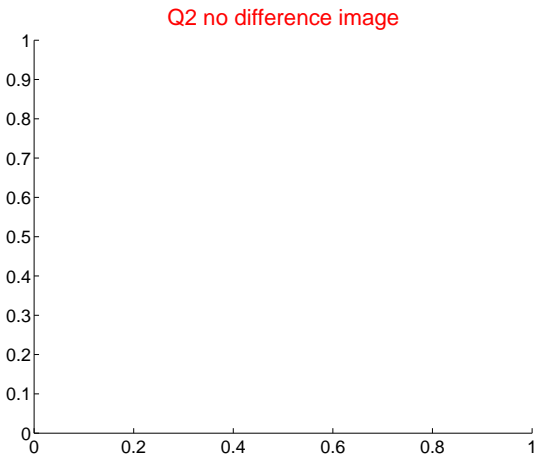
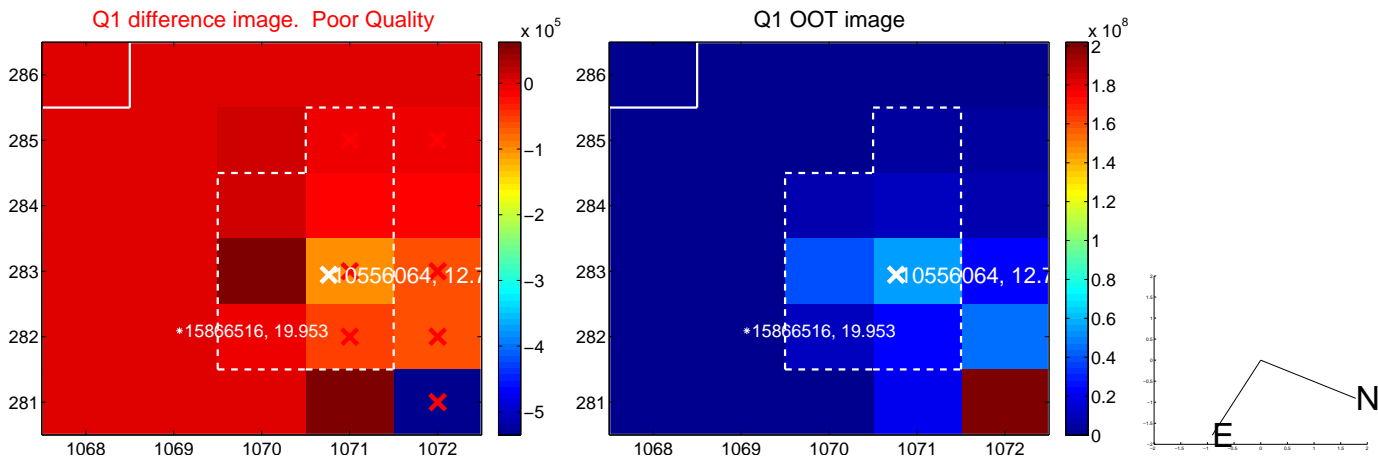
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	4.70 ± 0.49	9.56	1.74 ± 0.19	4.37 ± 0.52

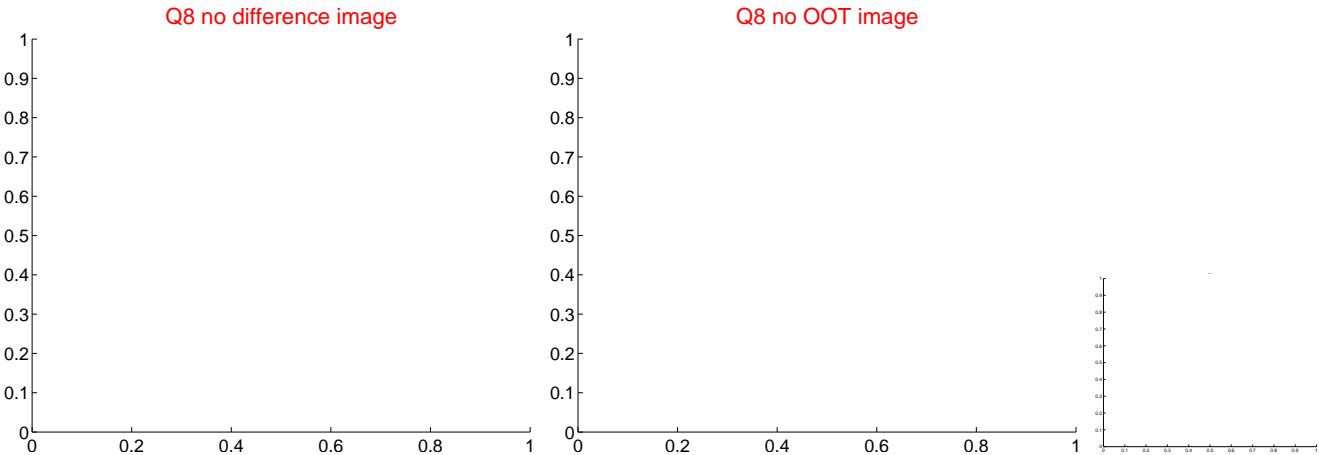
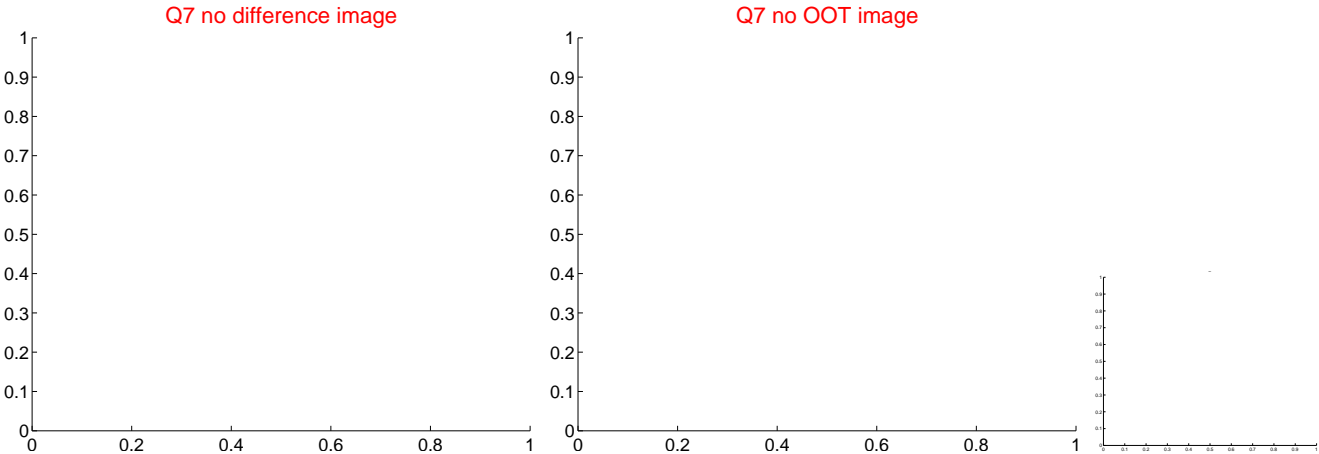
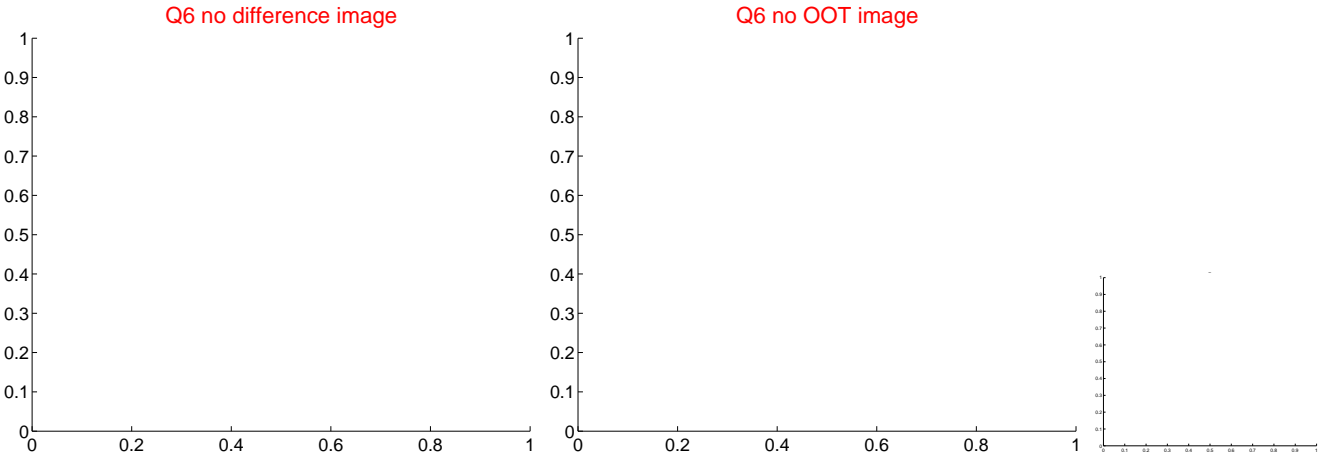
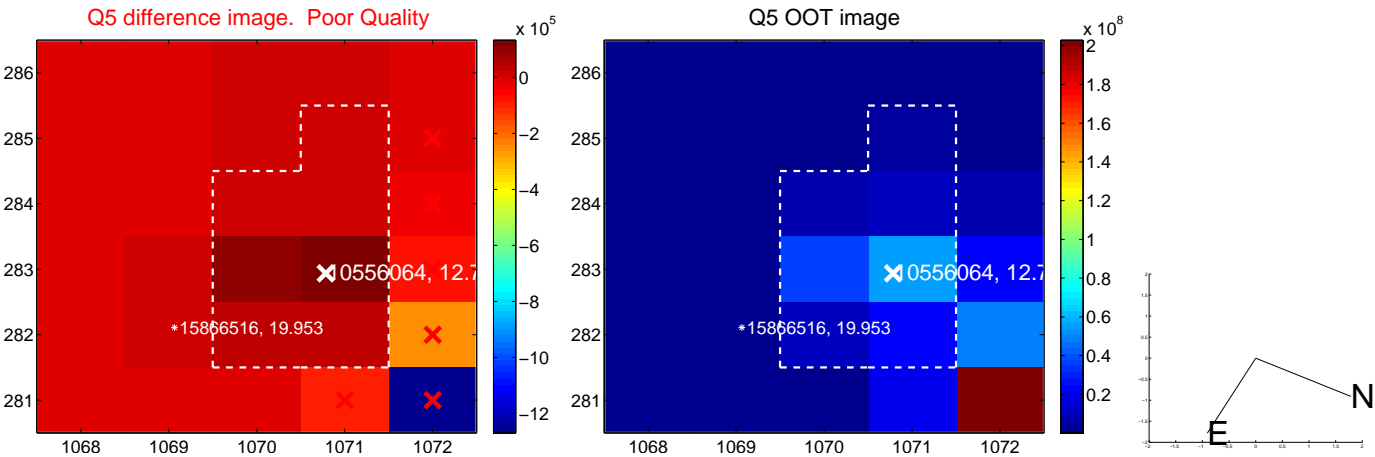


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

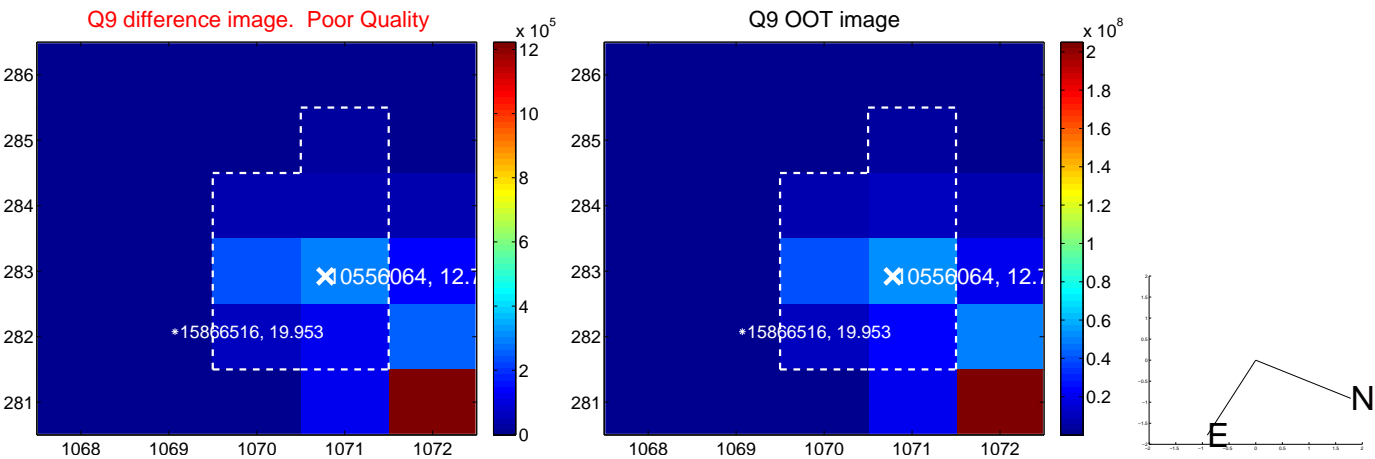
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



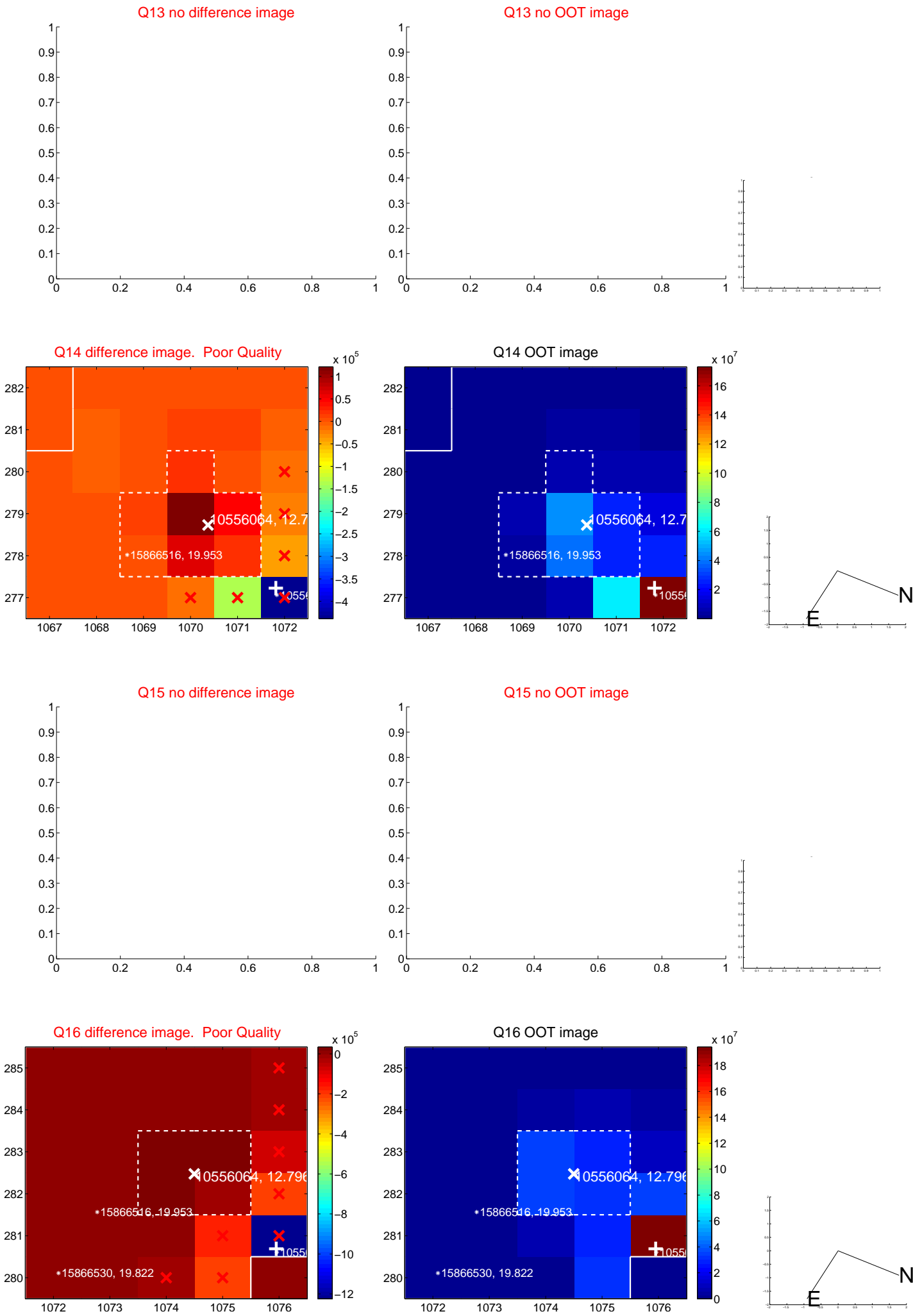
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



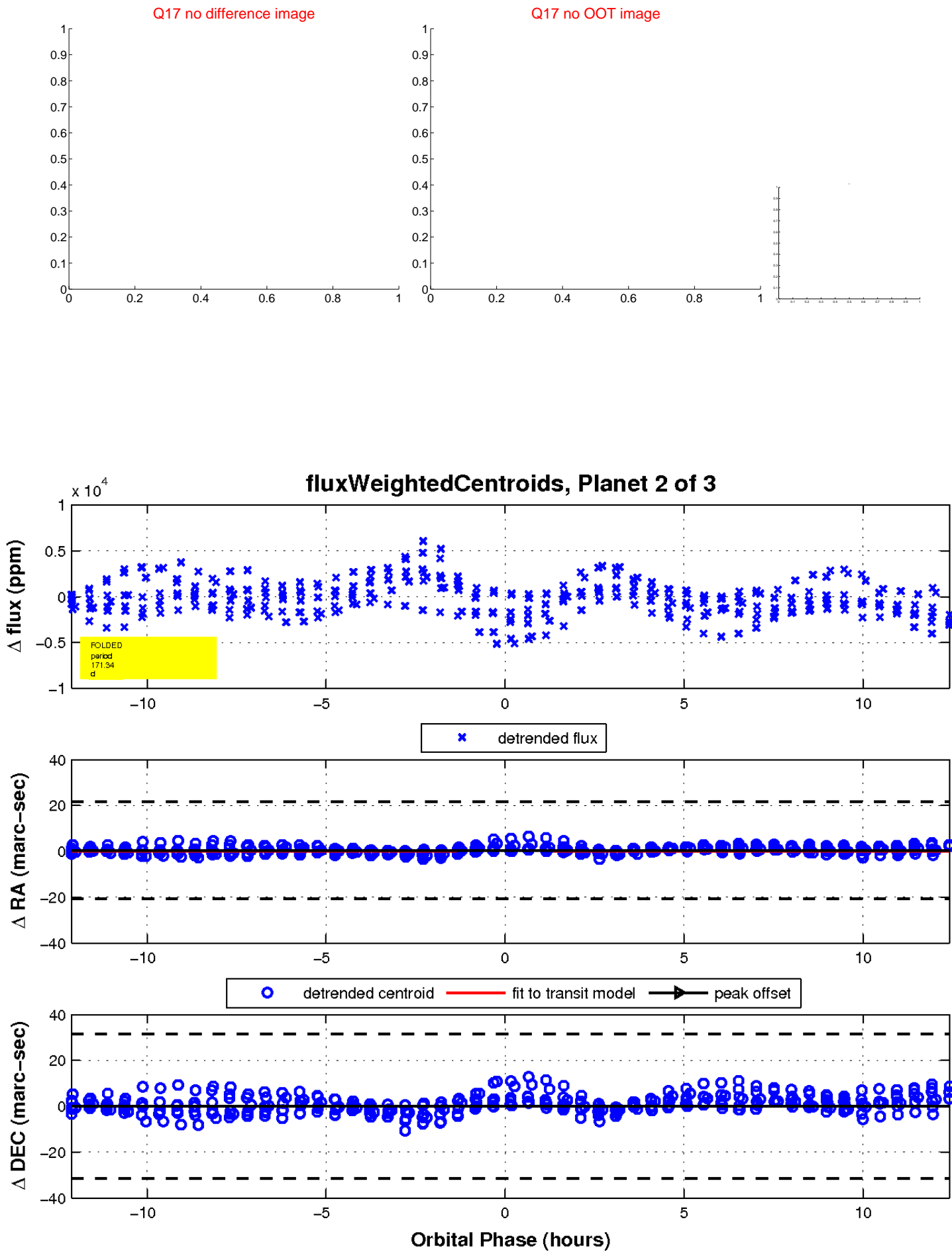
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

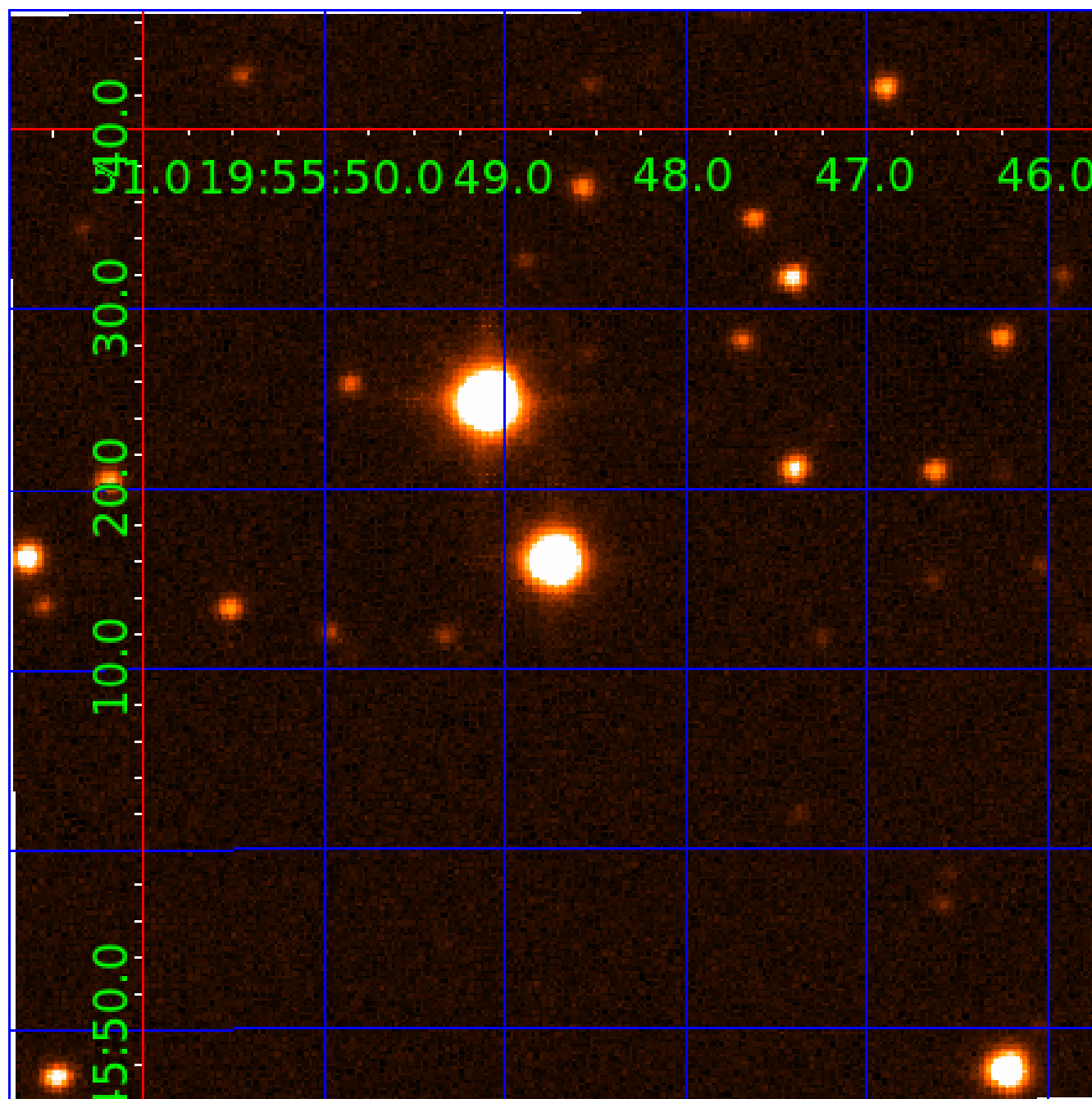


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010556064

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})
010556064-01	OBS	No	0.658447	131.805636	78.7	2.420	7.7	7.2	1.72	7184	1.77	24183.11
010556064-02	OBS	No	171.335505	149.568046	4495.9	4.141	8.5	9.0	1.72	7184	20.68	14.56
010556064-03	OBS	No	363.680963	420.052275	5103.4	4.938	8.5	8.6	1.72	7184	21.86	5.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010556064-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
010556064-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010556064-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

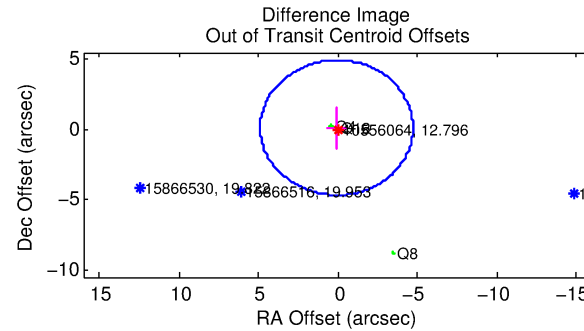
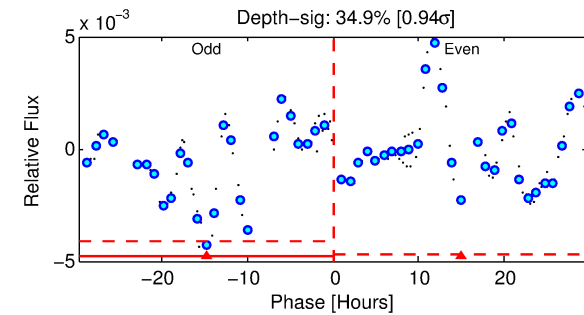
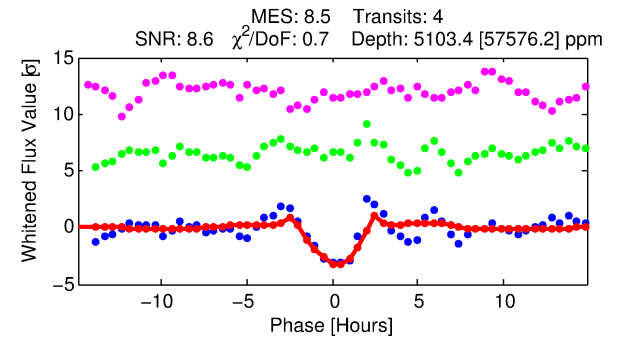
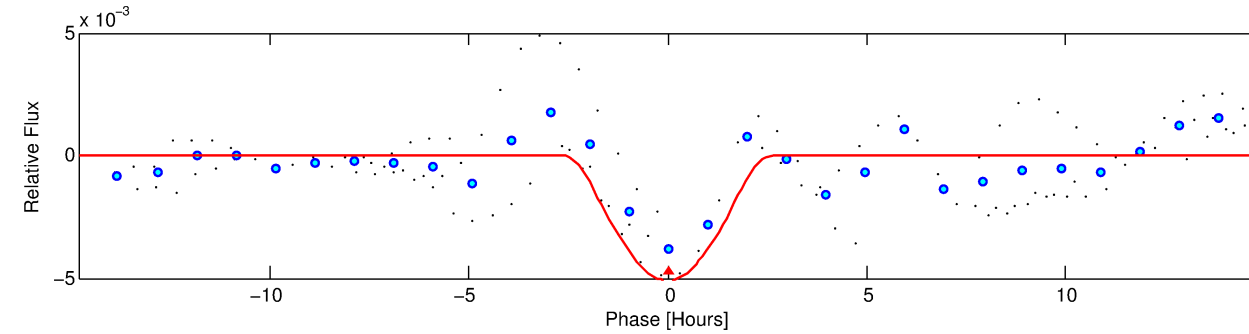
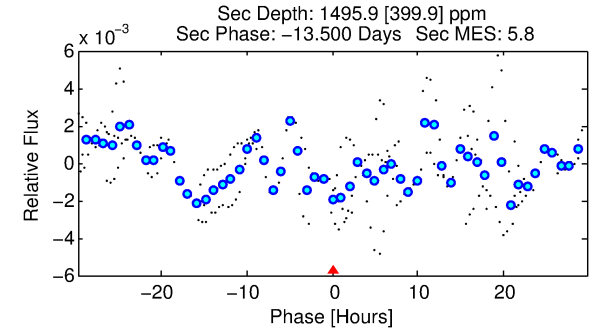
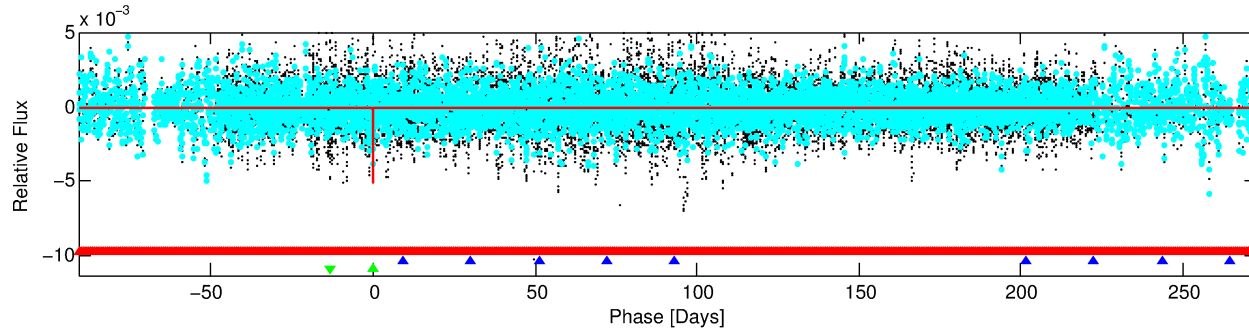
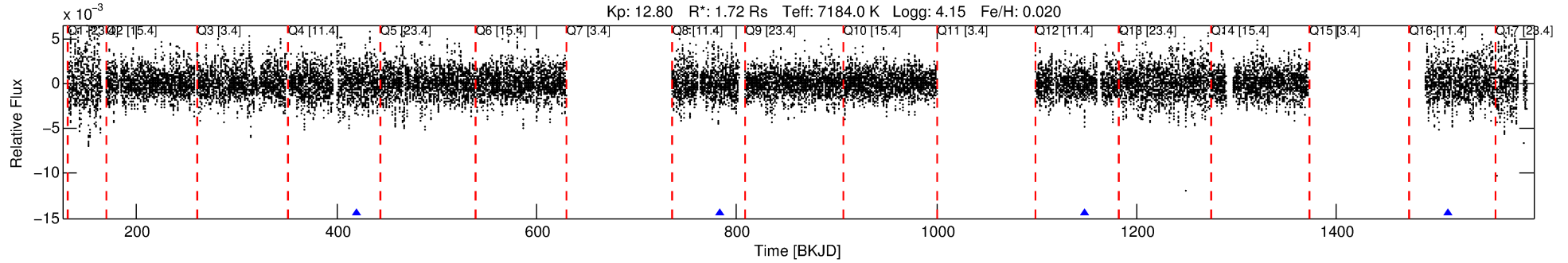
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010556064-03

No Significant Match Found

DV One-Page Summary

KIC: 10556064 Candidate: 3 of 3 Period: 363.681 d



DV Fit Results:

Period = 363.68096 [0.00438] d
Epoch = 420.0523 [0.0093] BKJD
Rp/R* = 0.1167 [0.1784]
a/R* = 279.60 [77.57]
b = 1.00 [0.64]
Seff = 5.34 [2.12]
Teq = 388 [39] K
Rp = 21.86 [34.20] Re
a = 1.1482 [0.3020] AU
Ag = 2271.22 [7020.28] [0.32σ]
Teffp = 4137 [3179] K [1.18σ]

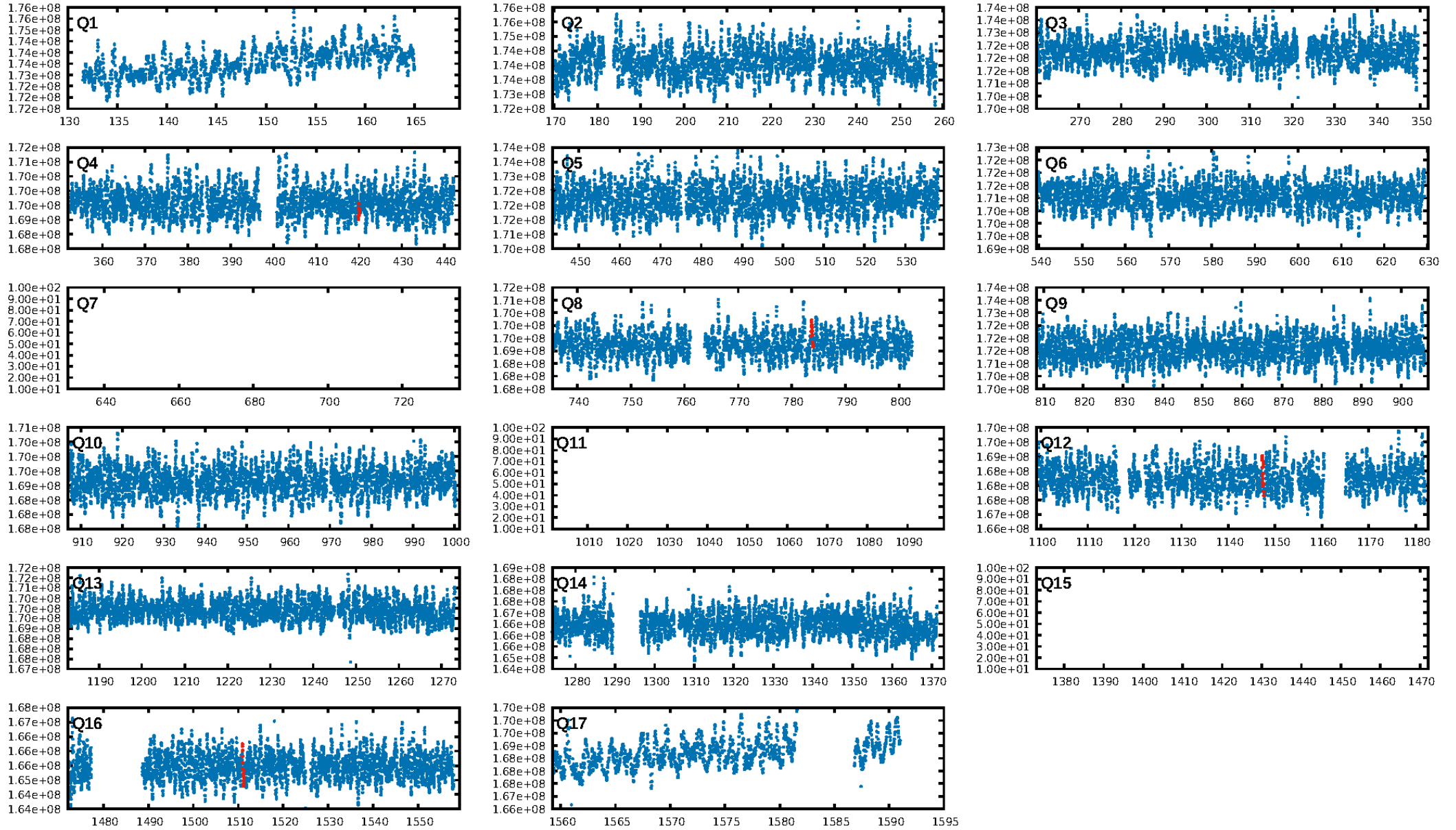
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [716.37σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.99e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 3.368
Centroid-sig: 37.4%
Centroid-so: 4.373 arcsec [7.51σ]
OotOffset-rm: 0.149 arcsec [0.09σ]
OotOffset-st: 0/0/4/0 [4]
KicOffset-rm: 9.275 arcsec [4.19σ]
KicOffset-st: 0/0/4/0 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.00 [0/4]

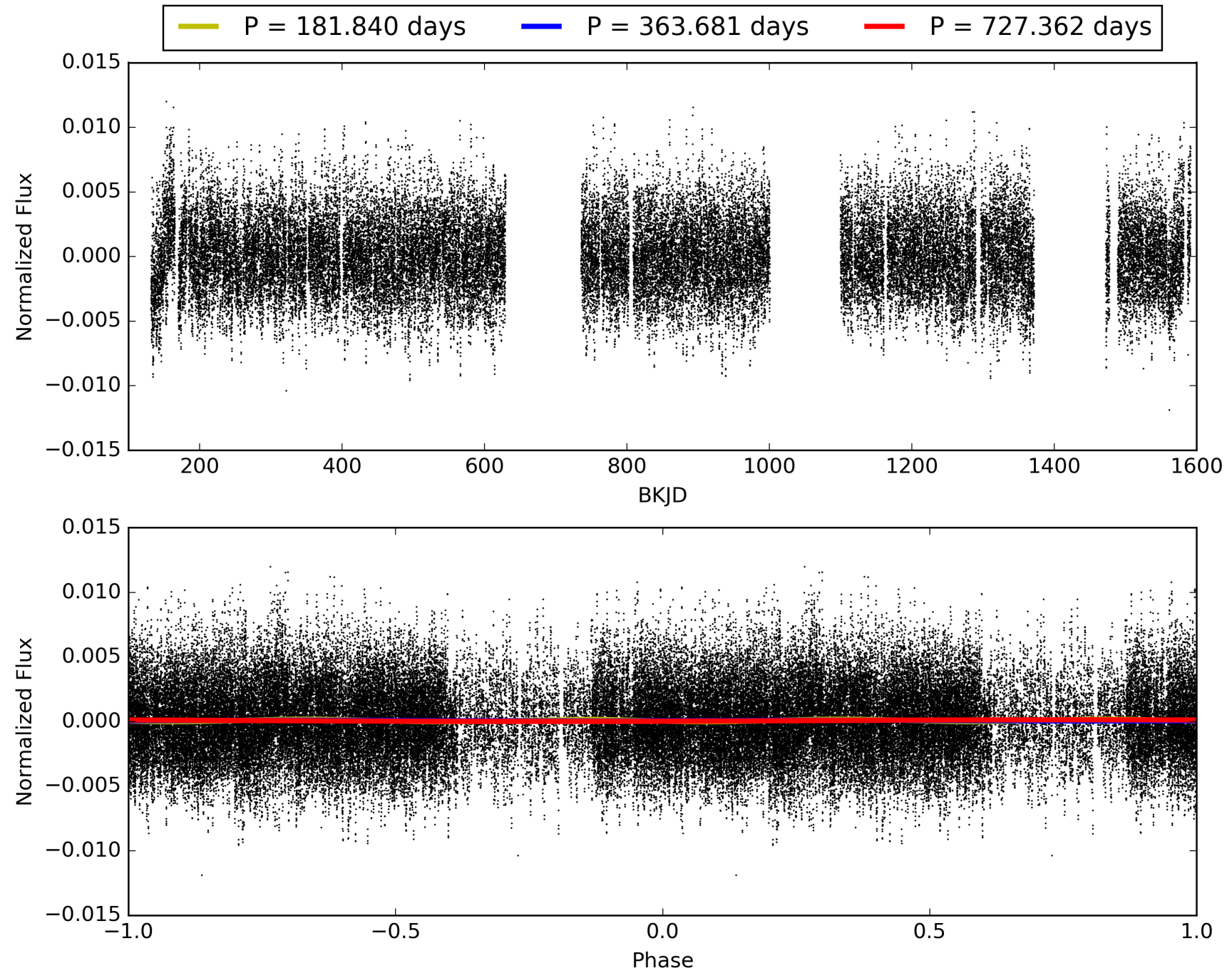
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 02:48:21 Z

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

TCE 010556064-03, PDC Light Curves

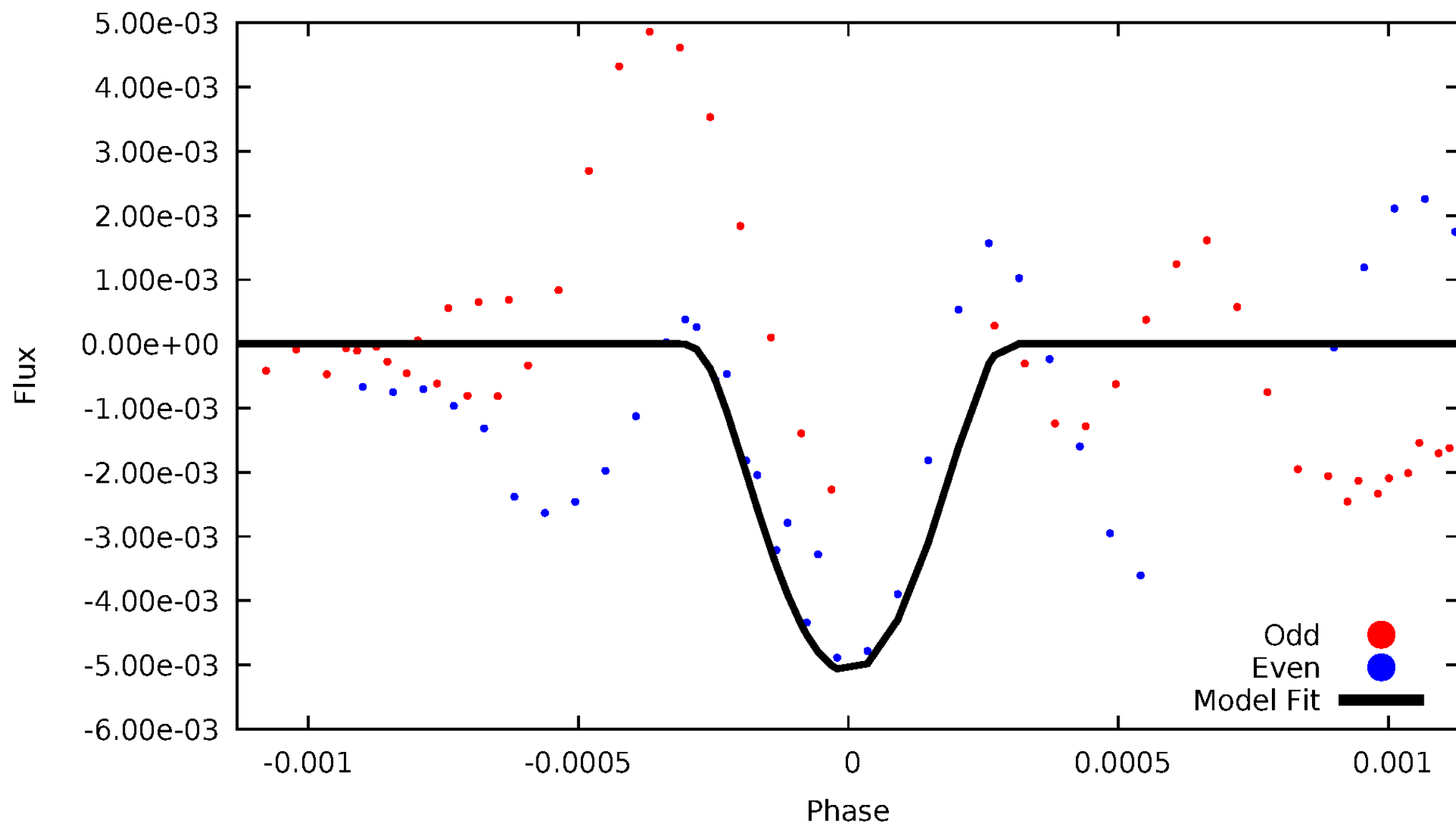


TCE 010556064-03



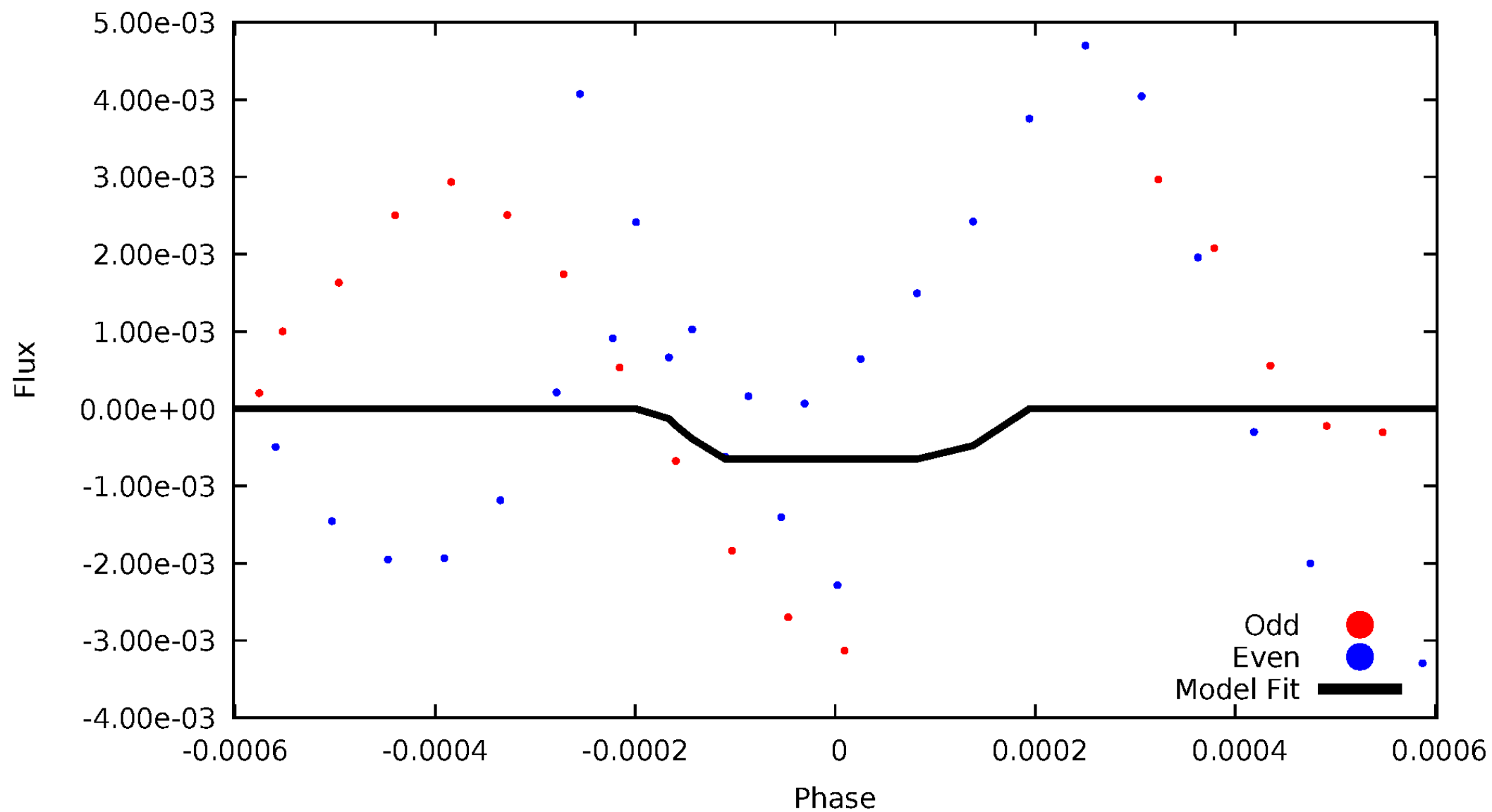
DV Odd/Even

TCE 010556064-03



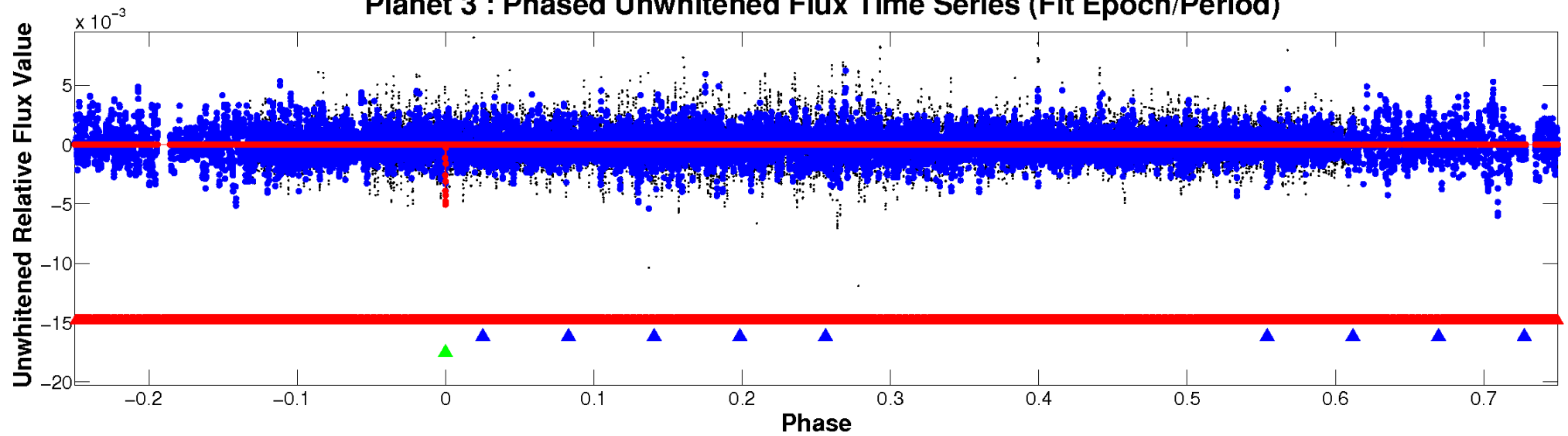
ALT Odd/Even

TCE 010556064-03

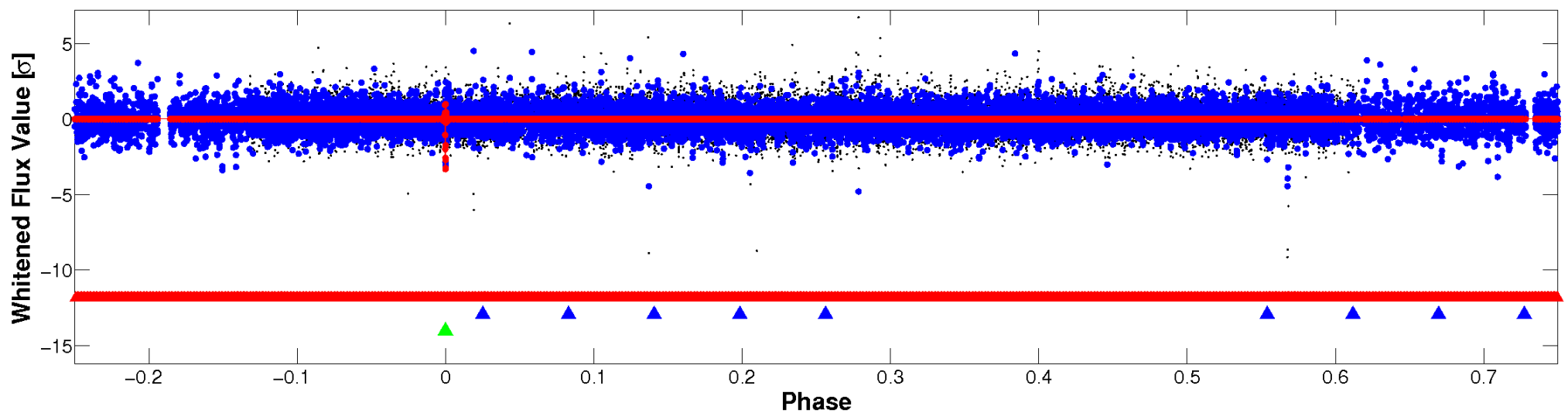


Non-Whitened Vs. Whitened Light Curve

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

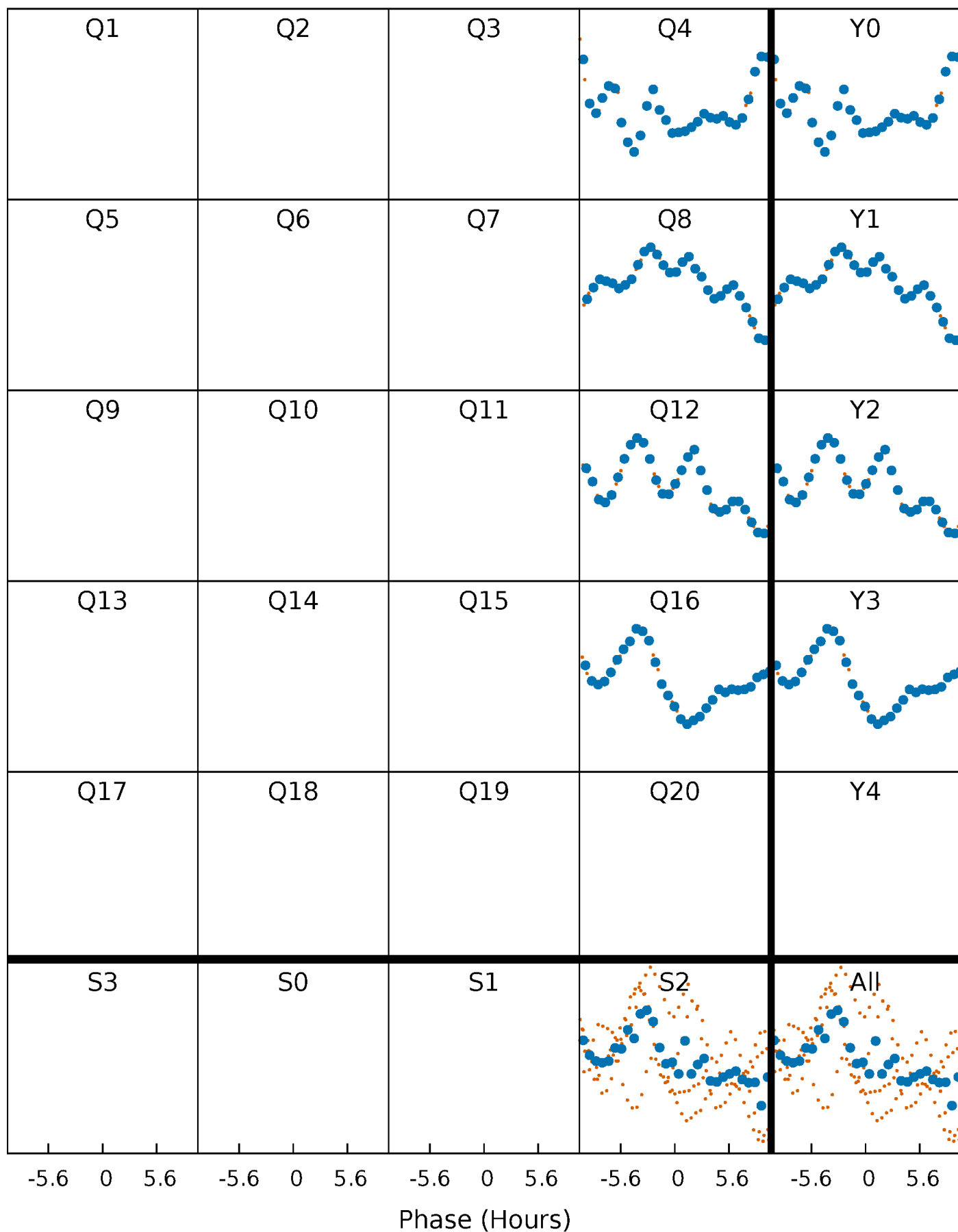


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



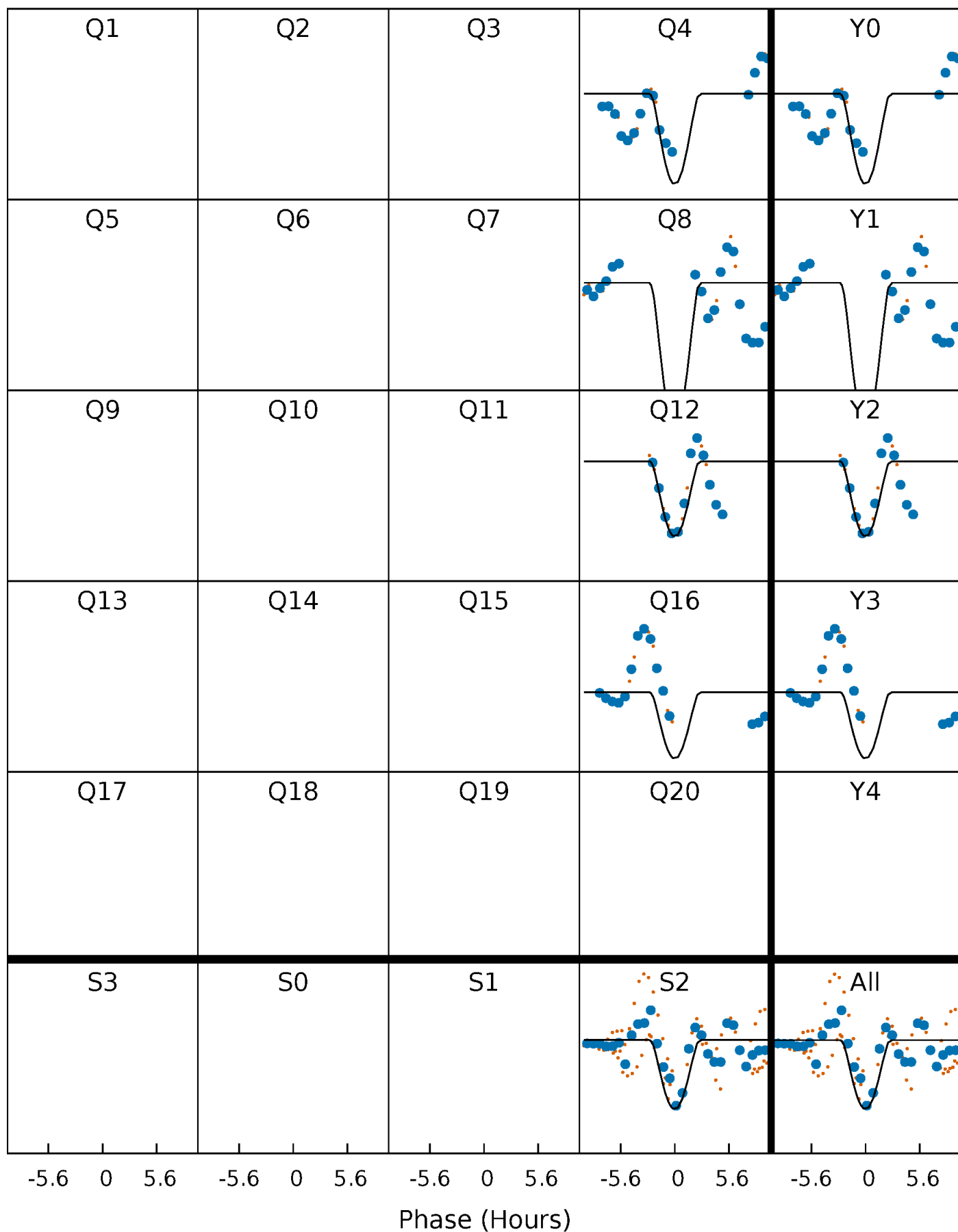
PDC Quarter-Phased Transit Curves

TCE 010556064-03 $P=363.680963$ Days $T_0=420.052275$ (BKJD)



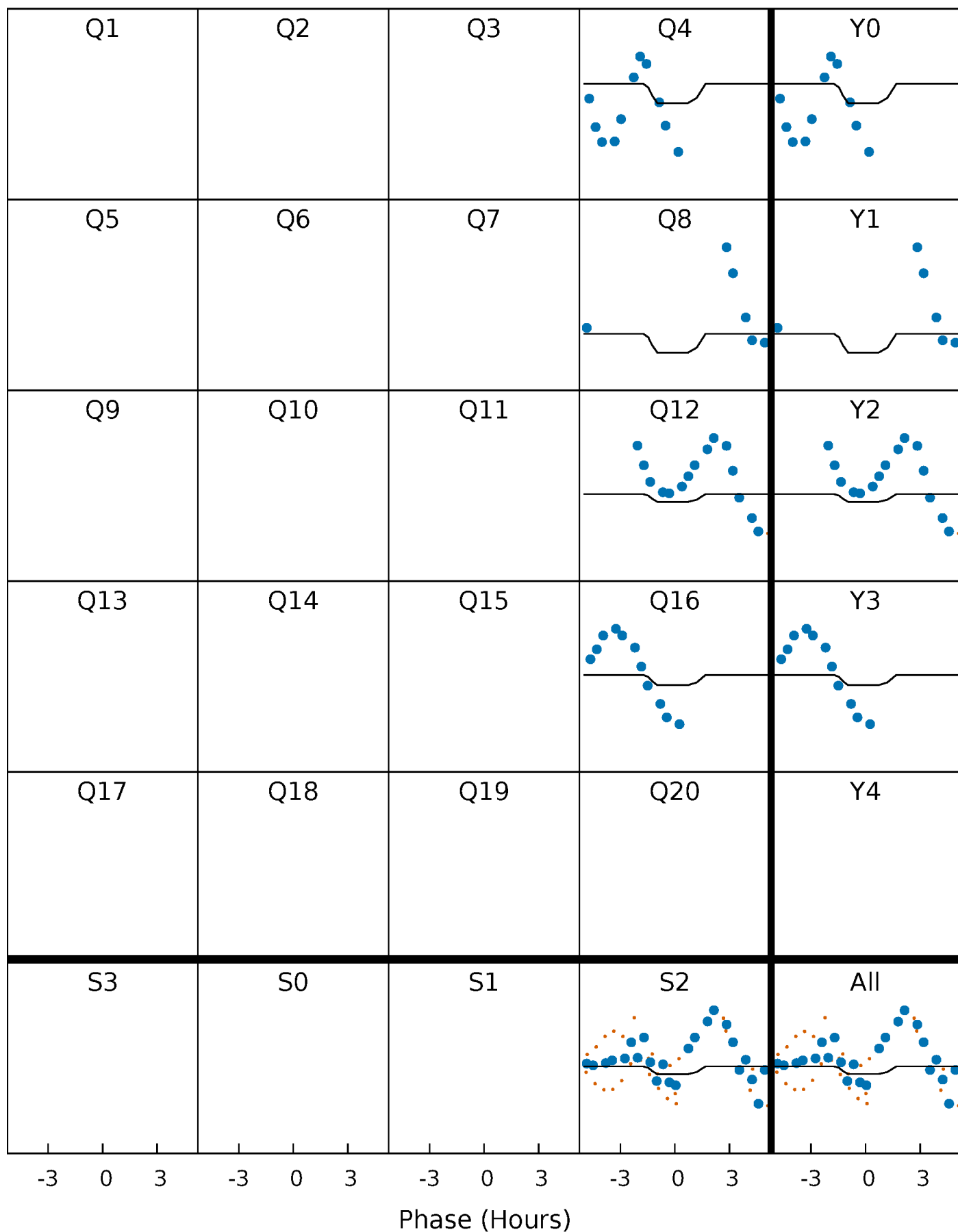
DV Quarter-Phased Transit Curves

TCE 010556064-03 $P=363.680963$ Days $T_0=420.052275$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

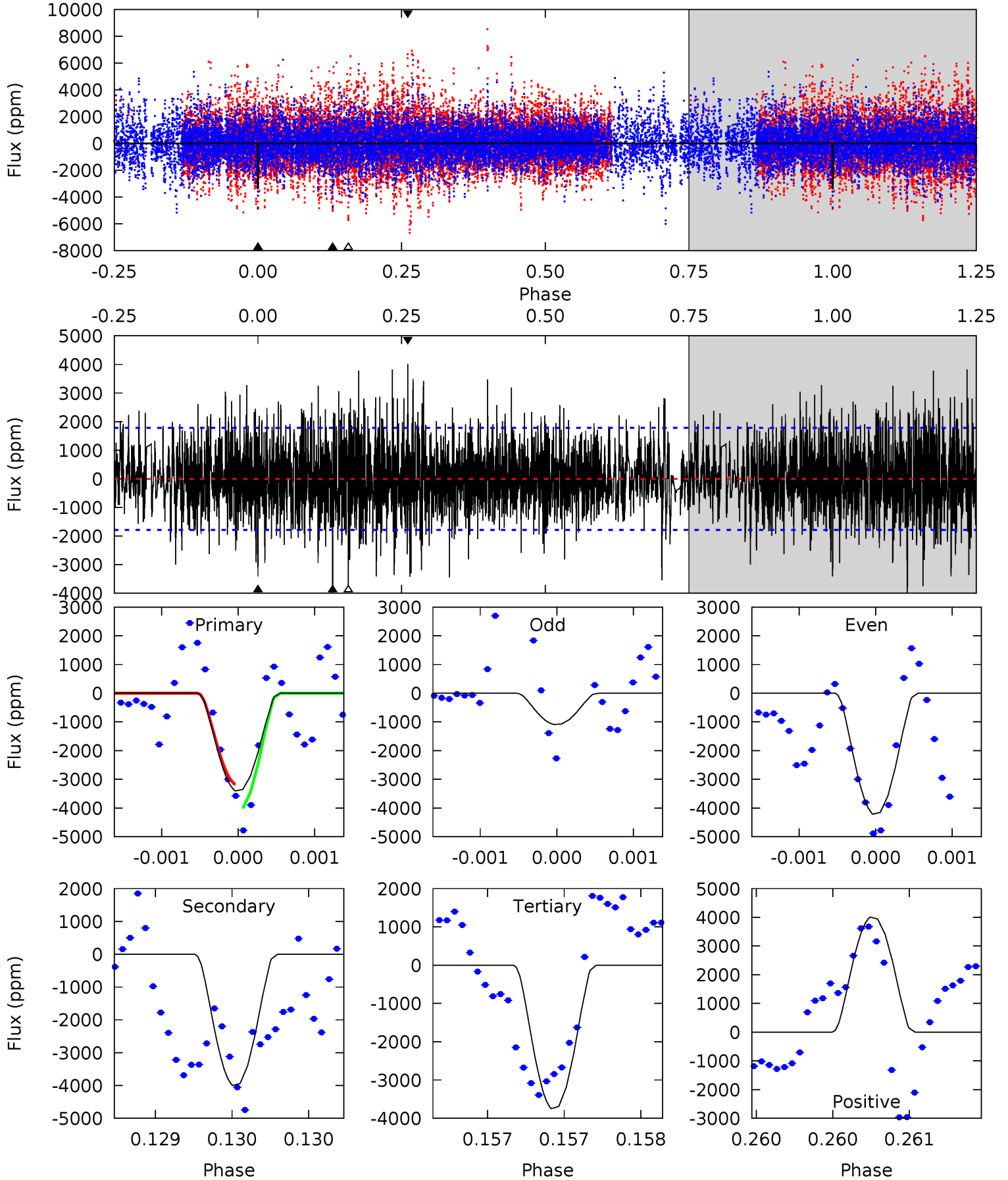
TCE 010556064-03 P=363.683186 Days $T_0=420.030965$ (BKJD)



DV Model-Shift Uniqueness Test

010556064-03, P = 363.680963 Days, E = 56.371312 Days

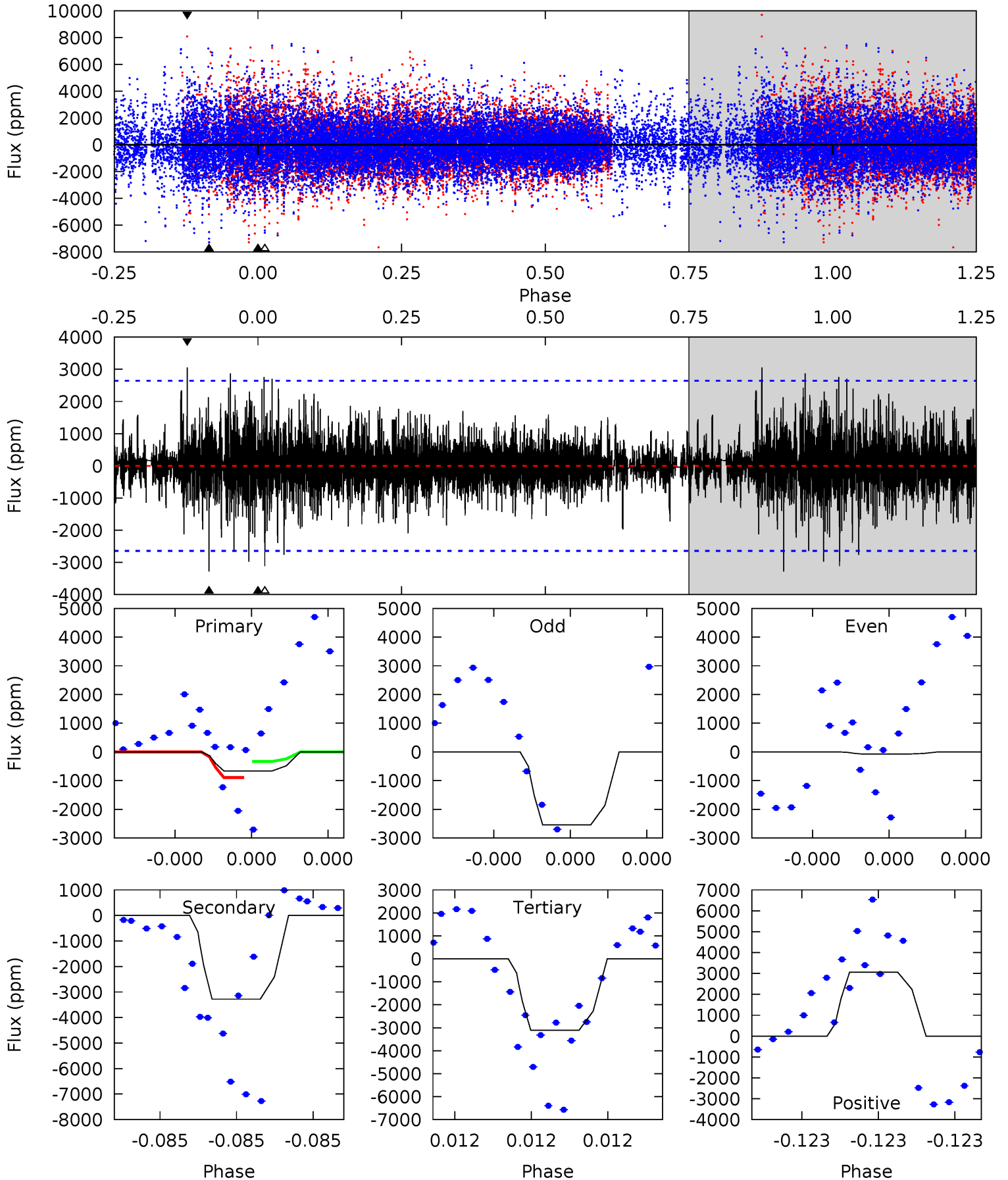
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	12.4	11.7	12.5	5.55	3.44	3.01	-1.07	-1.87	0.78	-0.03	4.12	0.86	0.50	1.11



Alt Model-Shift Uniqueness Test

010556064-03, P = 363.683186 Days, E = 56.347779 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.42	7.02	6.66	6.54	5.66	3.61	1.30	-5.25	-5.12	0.36	0.48	2.47	0.71	0.48	0.57



Stellar Parameters For KIC 010556064

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7184^{+200}_{-300}	$4.152^{+0.124}_{-0.186}$	$0.020^{+0.200}_{-0.350}$	$1.717^{+0.569}_{-0.306}$	$1.527^{+0.226}_{-0.226}$	$0.424^{+0.266}_{-0.222}$
	+3%/-4%	+3%/-4%	+1000%/-1750%	+33%/-18%	+15%/-15%	+63%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010556064-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3999 ± 322	$32.85^{+26.39}_{-22.12}$	545^{+42}_{-34}	4483^{+2877}_{-857}	2573^{+21703}_{-1764}
Alt.	-3280 ± 467	$24.19^{+28.28}_{-17.16}$	543^{+39}_{-34}	4880^{+4670}_{-1217}	4158^{+44722}_{-3326}

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 $A_{obs} \gg 1.0$

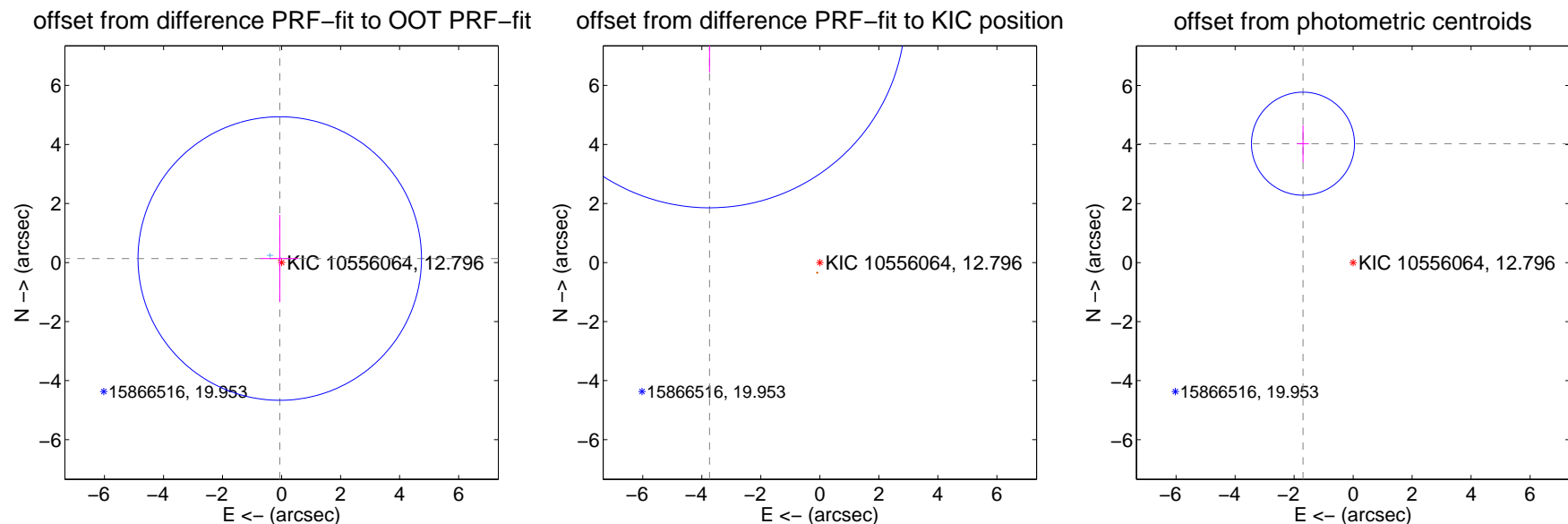
DV Centroid Data

Supplemental centroid analysis for 010556064-03. Kepler magnitude: 12.80. Transit SNR 8.57

There are 2 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 9.14 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.149 ± 1.601	0.09	0.062 ± 0.634	0.135 ± 1.473
PRF-fit source offset from KIC position	9.275 ± 2.212	4.19	3.737 ± 0.840	8.489 ± 2.048
photometric centroid source offset	4.37 ± 0.58	7.51	1.70 ± 0.20	4.03 ± 0.63



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

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

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



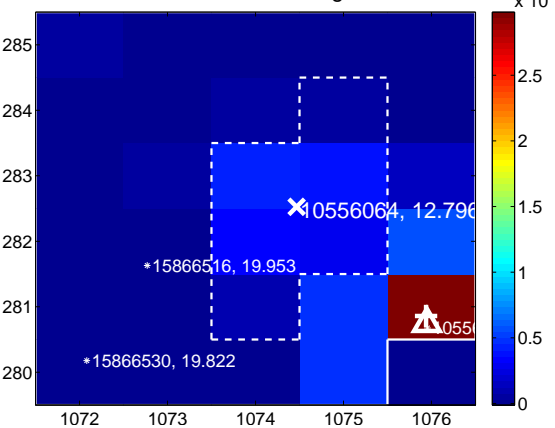
Q3 no difference image



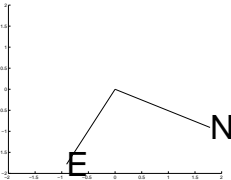
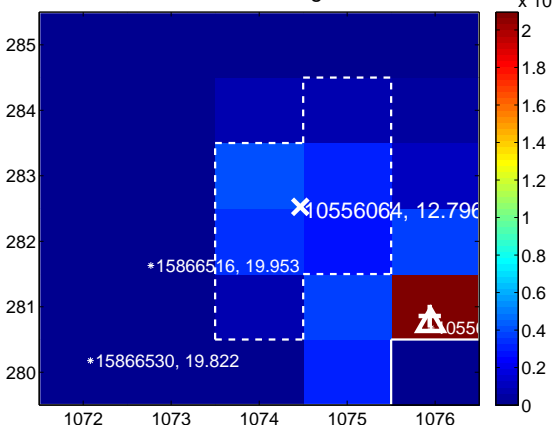
Q3 no OOT image



Q4 difference image



Q4 OOT image



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

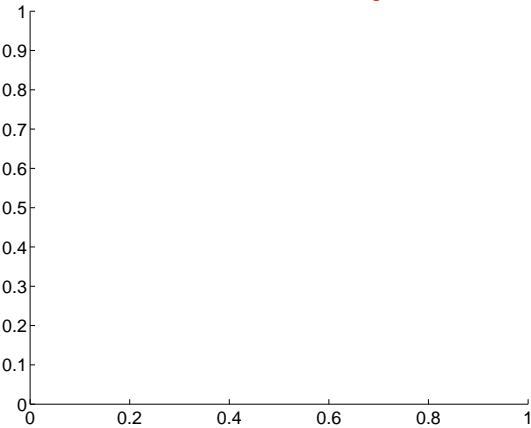
Q5 no difference image



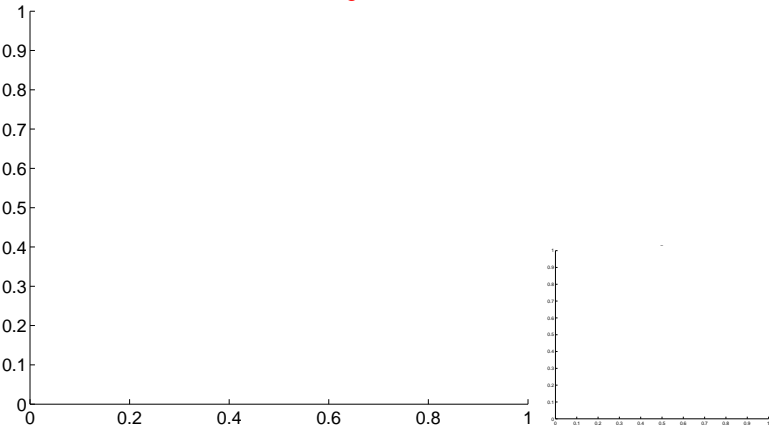
Q5 no OOT image



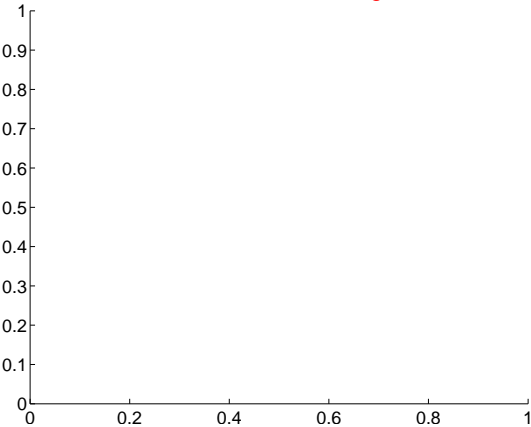
Q6 no difference image



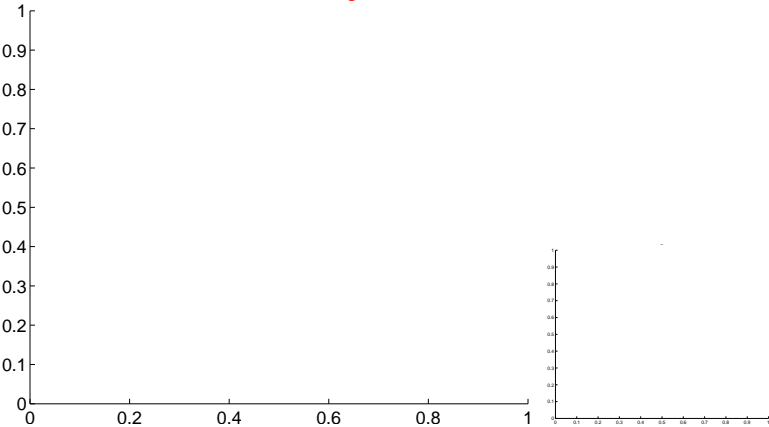
Q6 no OOT image



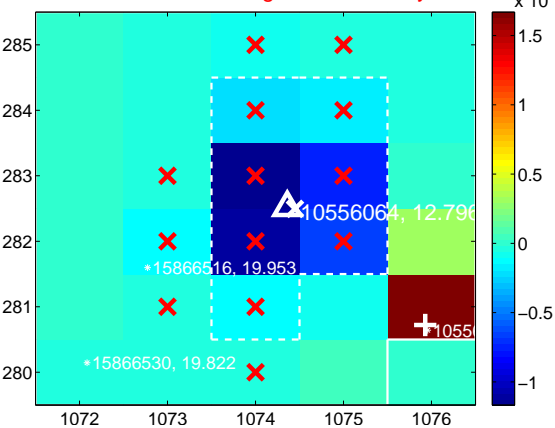
Q7 no difference image



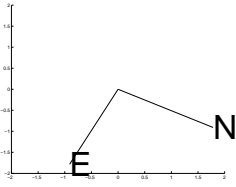
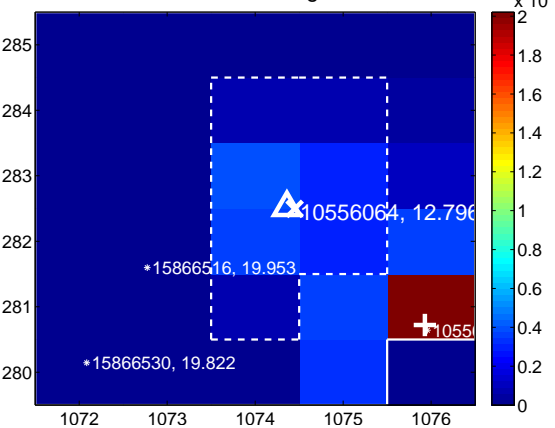
Q7 no OOT image



Q8 difference image. Poor Quality



Q8 OOT image



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

Q9 no difference image



Q9 no OOT image



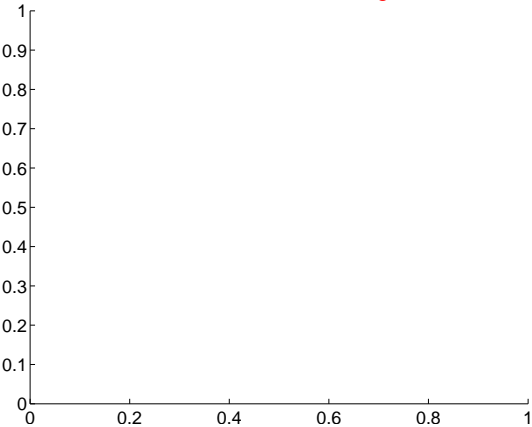
Q10 no difference image



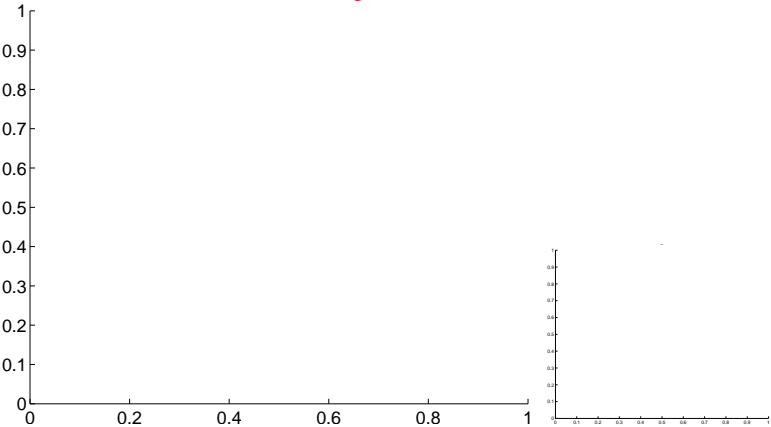
Q10 no OOT image



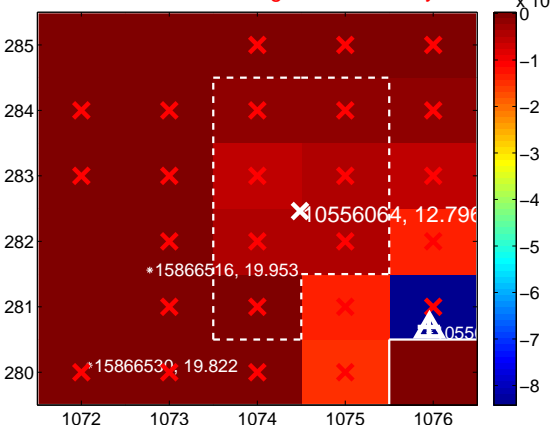
Q11 no difference image



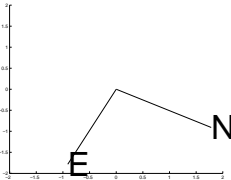
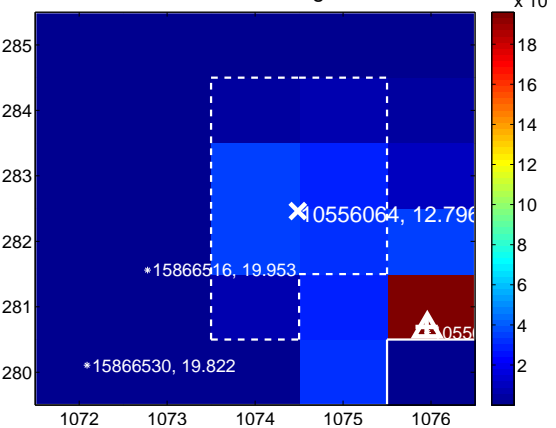
Q11 no OOT image



Q12 difference image. Poor Quality

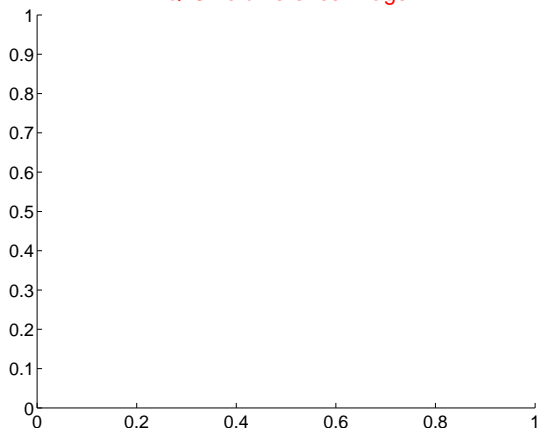


Q12 OOT image

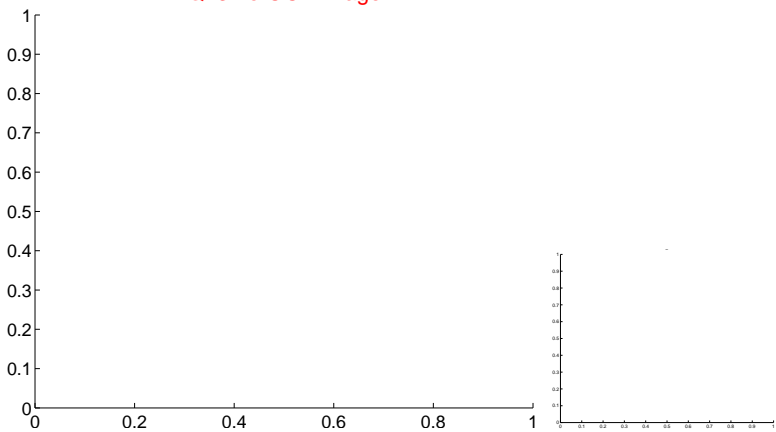


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

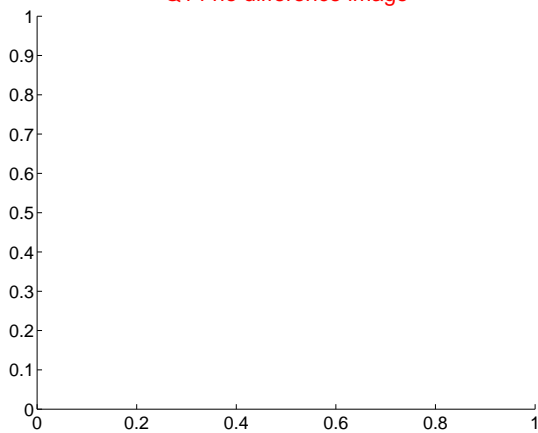
Q13 no difference image



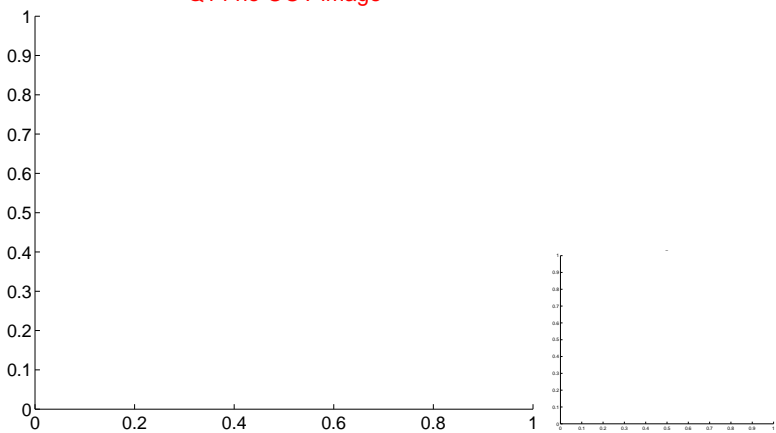
Q13 no OOT image



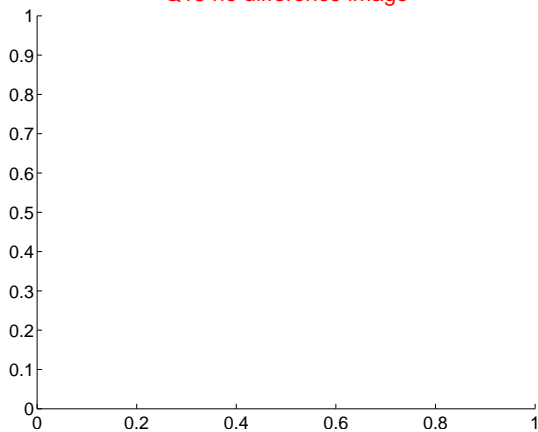
Q14 no difference image



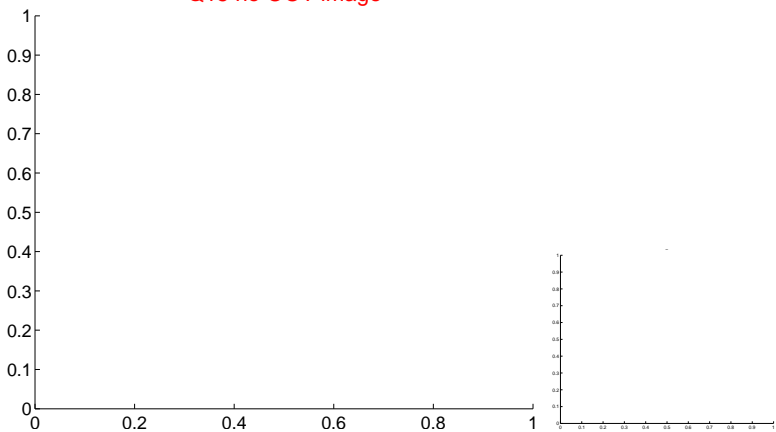
Q14 no OOT image



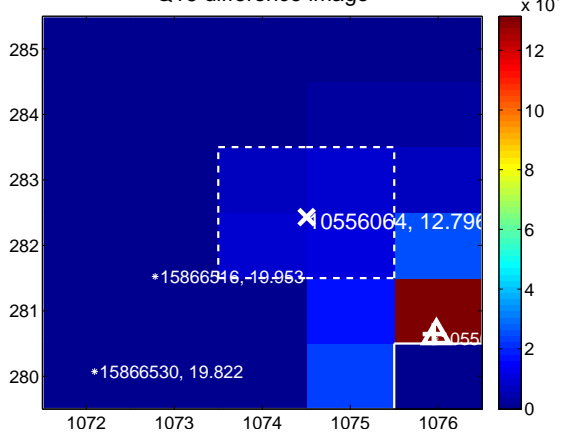
Q15 no difference image



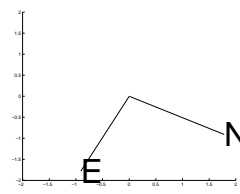
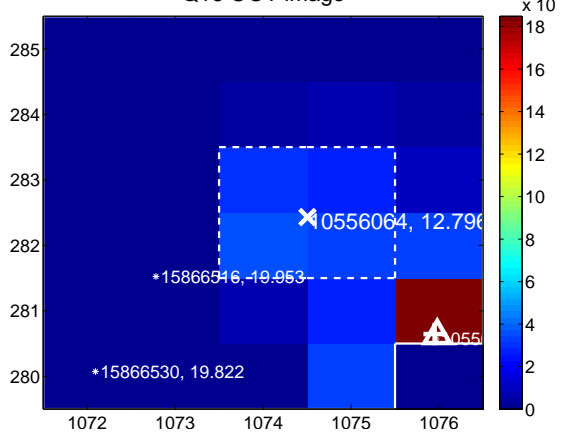
Q15 no OOT image



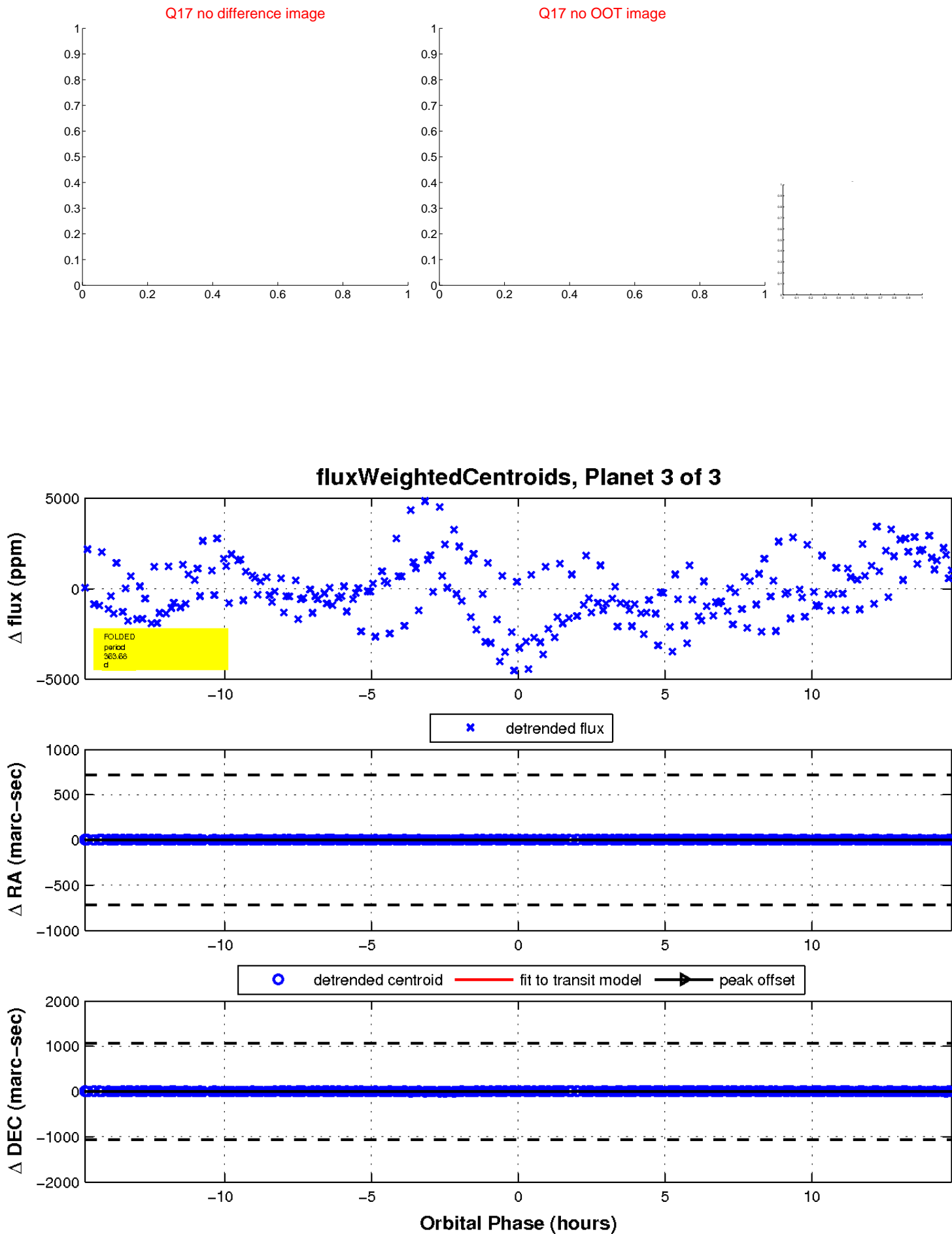
Q16 difference image



Q16 OOT image



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



UKIRT Image

Declination

