

KIC 005607052

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})
005607052-01	OBS	No	382.889253	495.911446	795.4	3.485	17.3	6.1	0.71	5157	1.97	0.37
005607052-02	OBS	No	573.278654	358.271437	1186.2	4.292	17.2	8.8	0.71	5157	2.54	0.22
005607052-03	OBS	No	287.779482	342.287953	1009.9	6.532	16.5	8.0	0.71	5157	2.57	0.55
005607052-04	OBS	No	556.106136	343.318465	1035.2	4.761	13.6	6.9	0.71	5157	2.36	0.23
005607052-05	OBS	No	680.366862	175.998293	1012.9	5.022	11.7	7.5	0.71	5157	2.30	0.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005607052-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
005607052-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005607052-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
005607052-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005607052-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

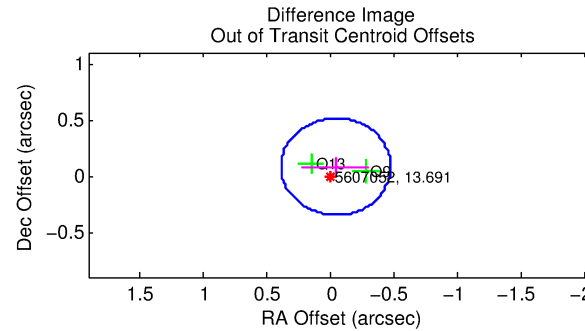
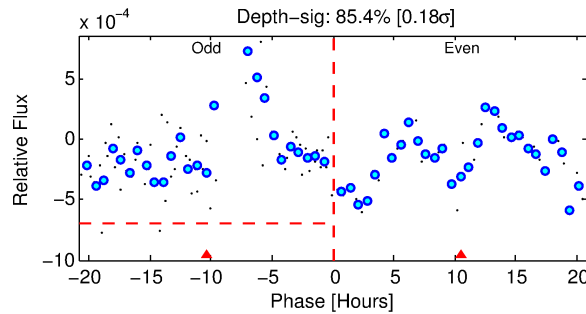
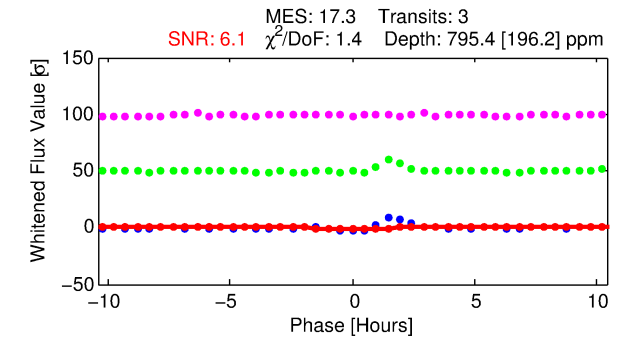
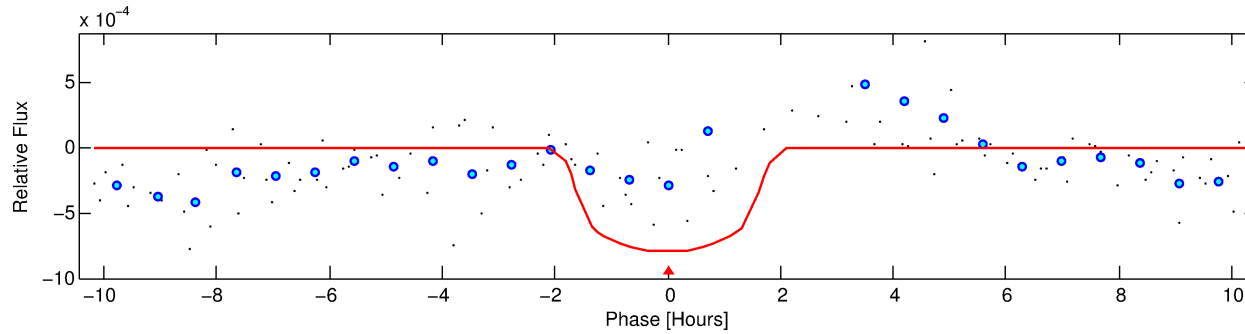
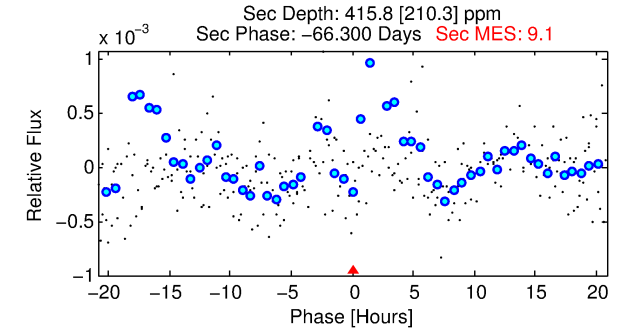
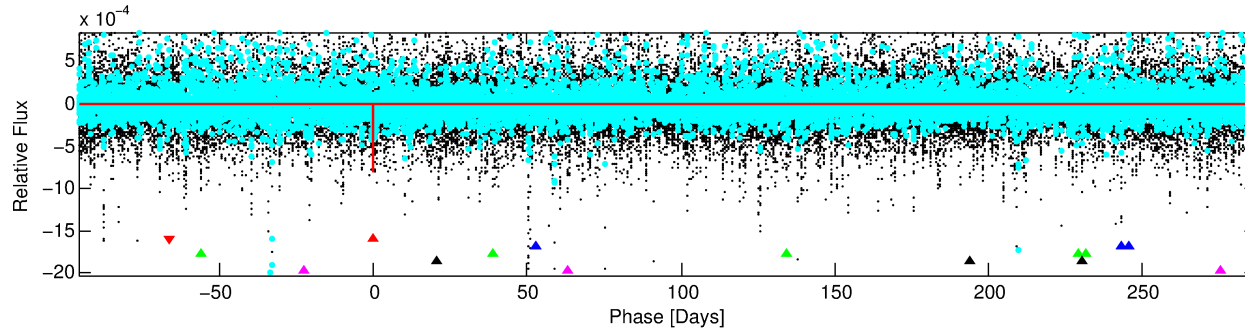
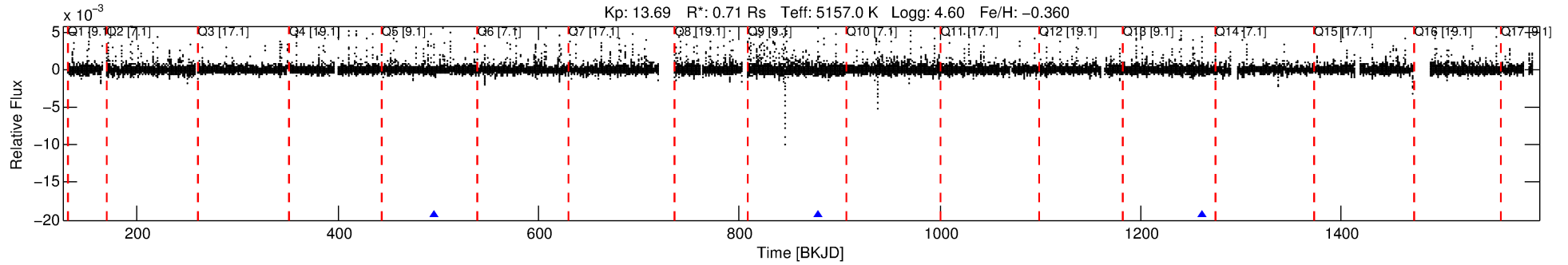
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005607052-01

No Significant Match Found

DV One-Page Summary

KIC: 5607052 Candidate: 1 of 5 Period: 382.889 d



DV Fit Results:

Period = 382.88925 [0.00581] d
Epoch = 495.9114 [0.0077] BKJD
Rp/R* = 0.0253 [0.1045]
a/R* = 852.56 [13286.23]
b = 0.14 [11.21]
Seff = 0.37 [0.07]
Teq = 199 [9] K
Rp = 1.97 [8.13] Re
a = 0.9300 [0.0899] AU
Ag = 50908.30 [420690.63] [0.12 σ]
Teffp = 4626 [9558] K [0.46 σ]

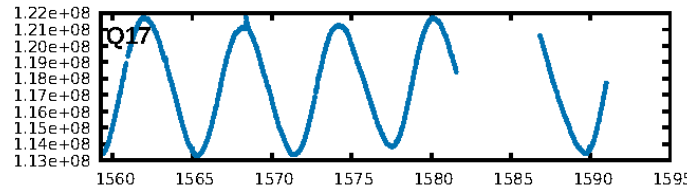
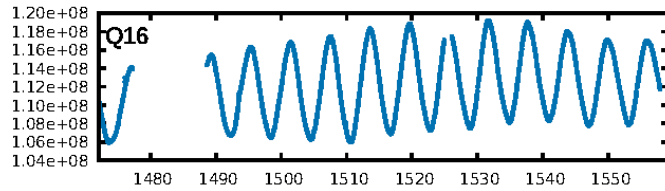
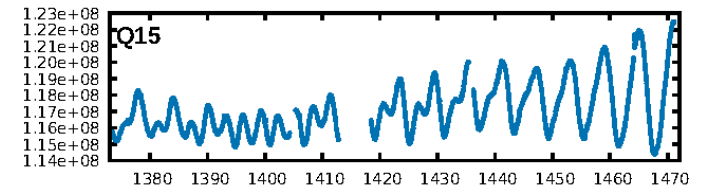
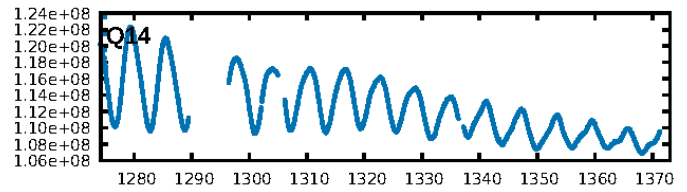
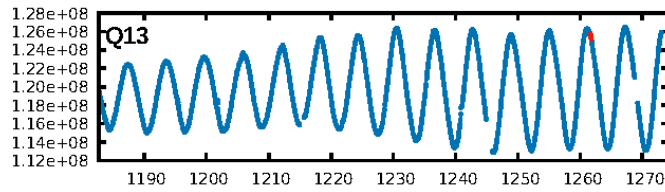
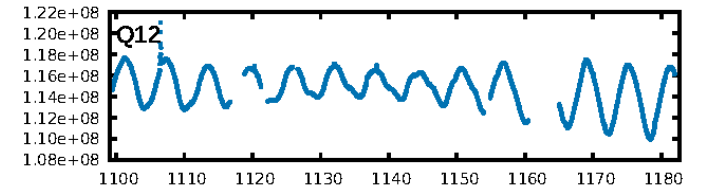
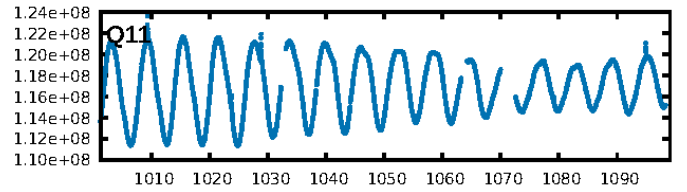
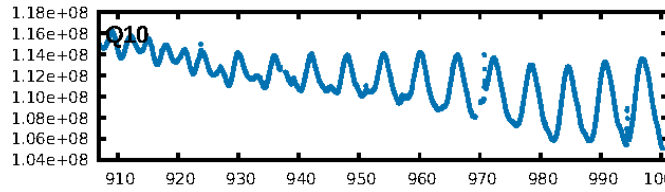
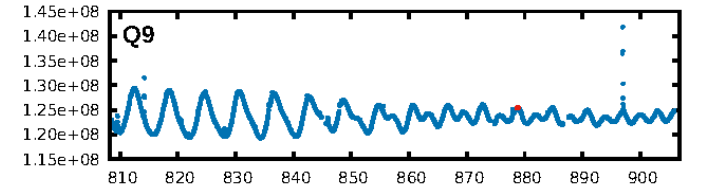
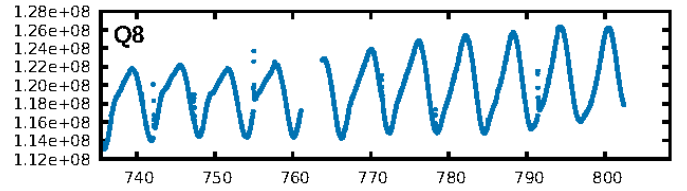
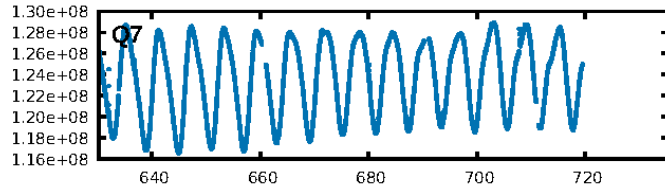
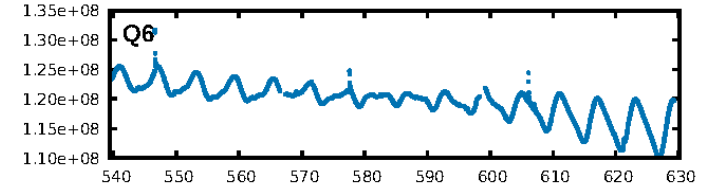
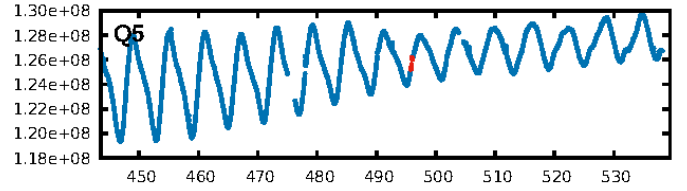
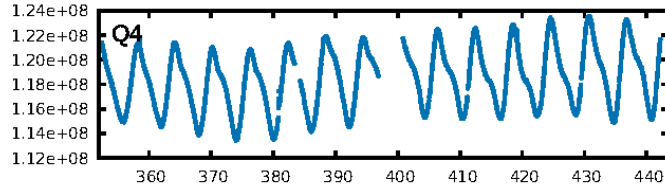
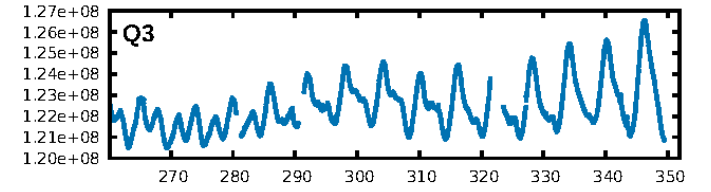
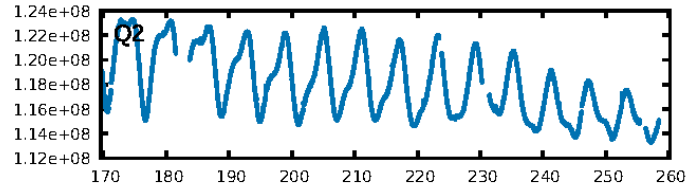
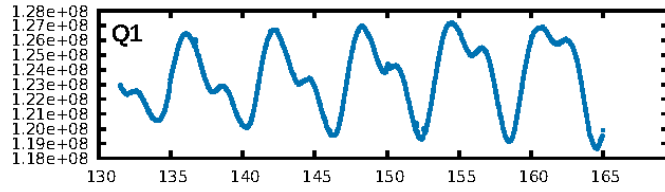
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [308.30 σ]
LongPeriod-sig: 100.0% [704.54 σ]
ModelChiSquare2-sig: 1.8%
ModelChiSquareGof-sig: 80.6%
Bootstrap-pfa: 3.71e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.1373
Centroid-sig: 9.2%
Centroid-so: 1.129 arcsec [2.28 σ]
OotOffset-rm: 0.093 arcsec [0.65 σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-rm: 0.307 arcsec [1.93 σ]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

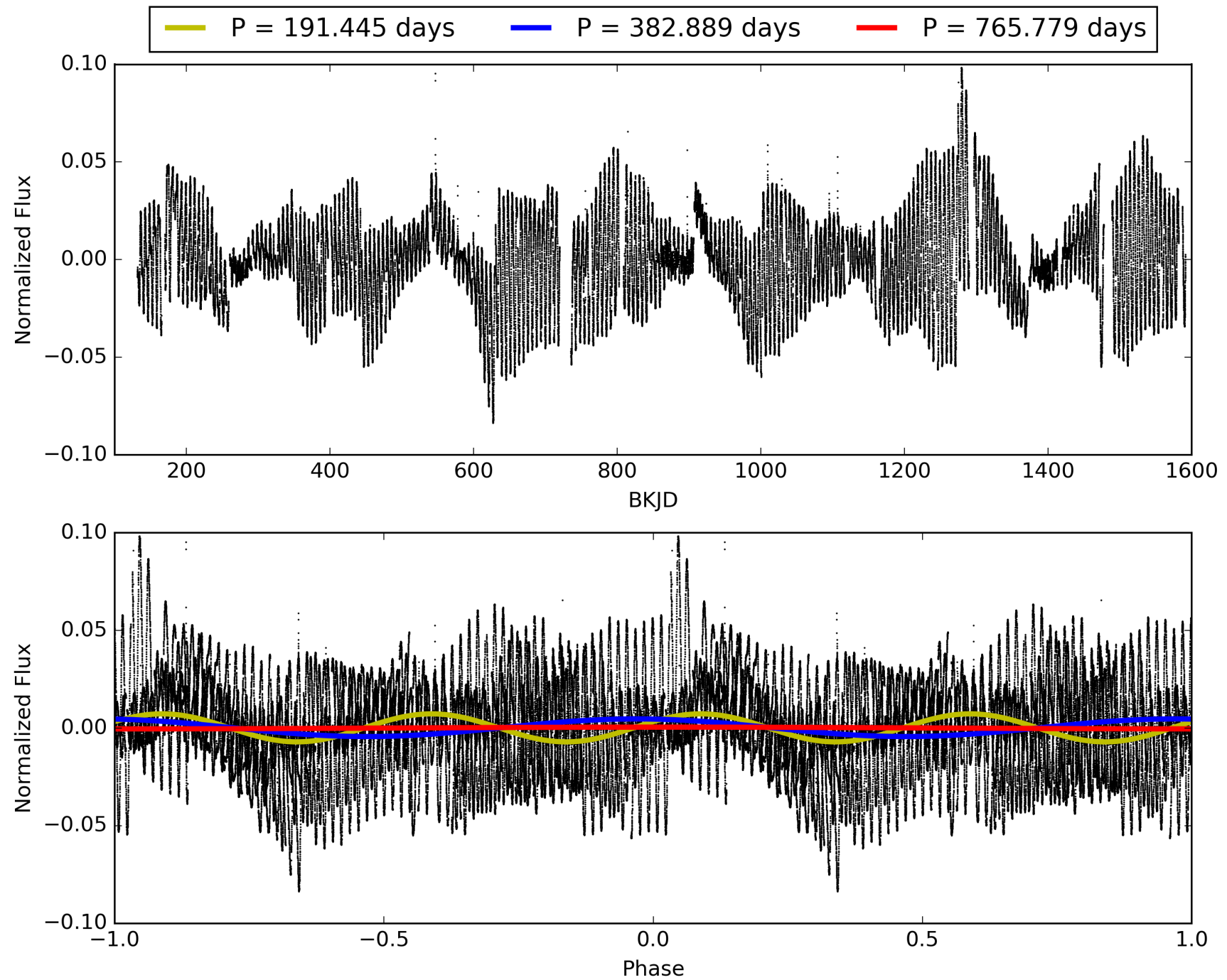
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:48:42 Z

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

TCE 005607052-01, PDC Light Curves

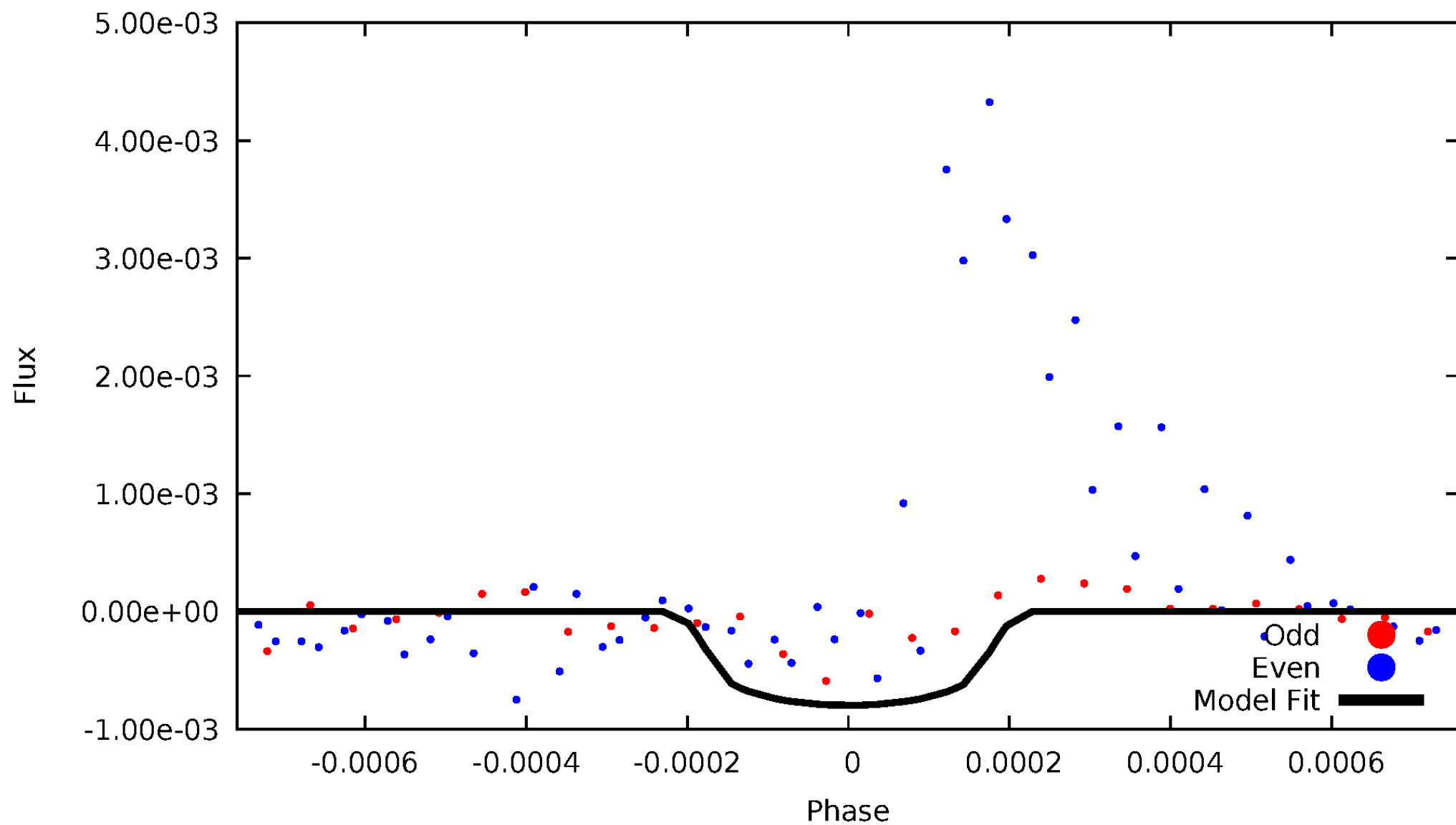


TCE 005607052-01



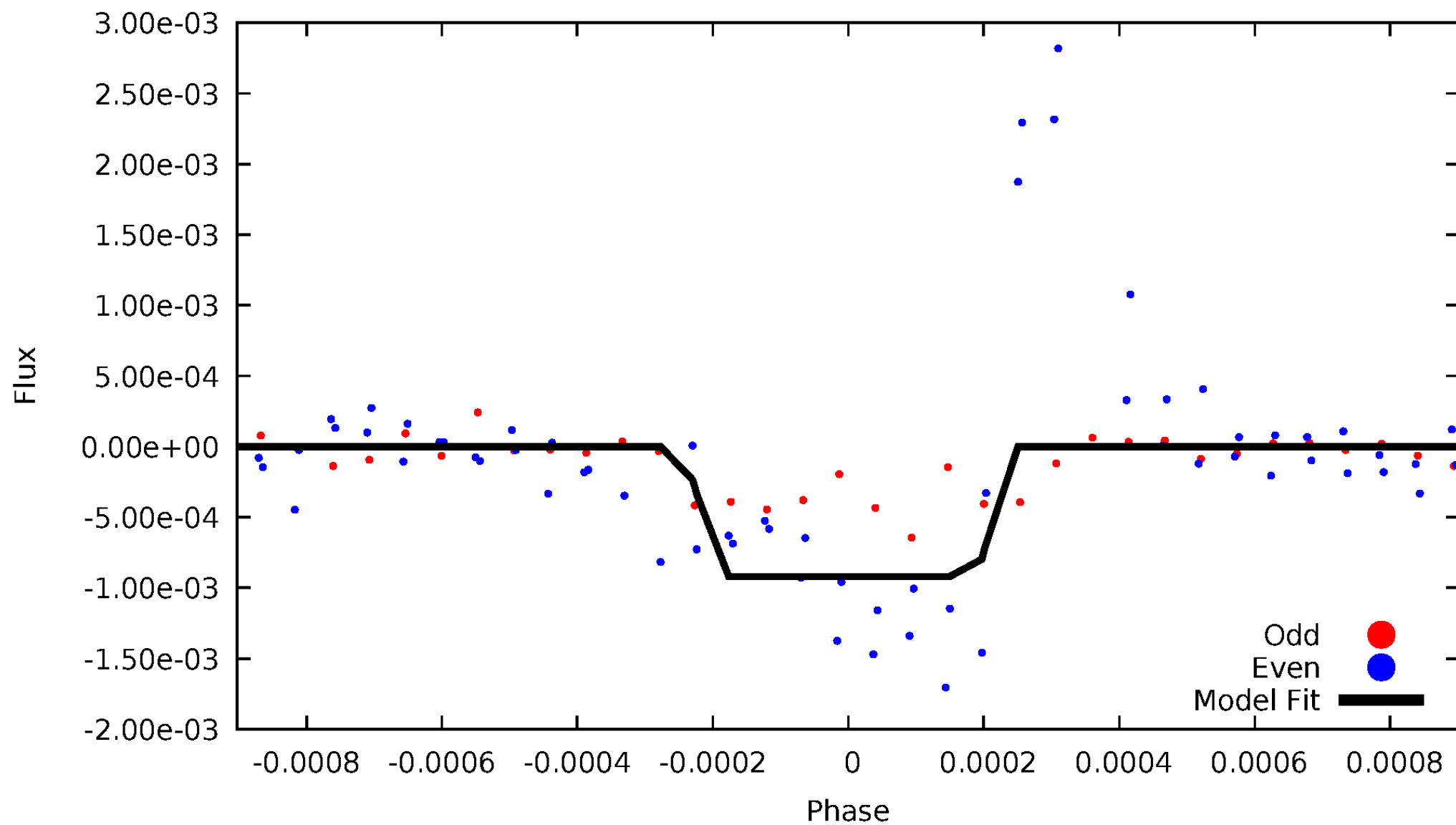
DV Odd/Even

TCE 005607052-01

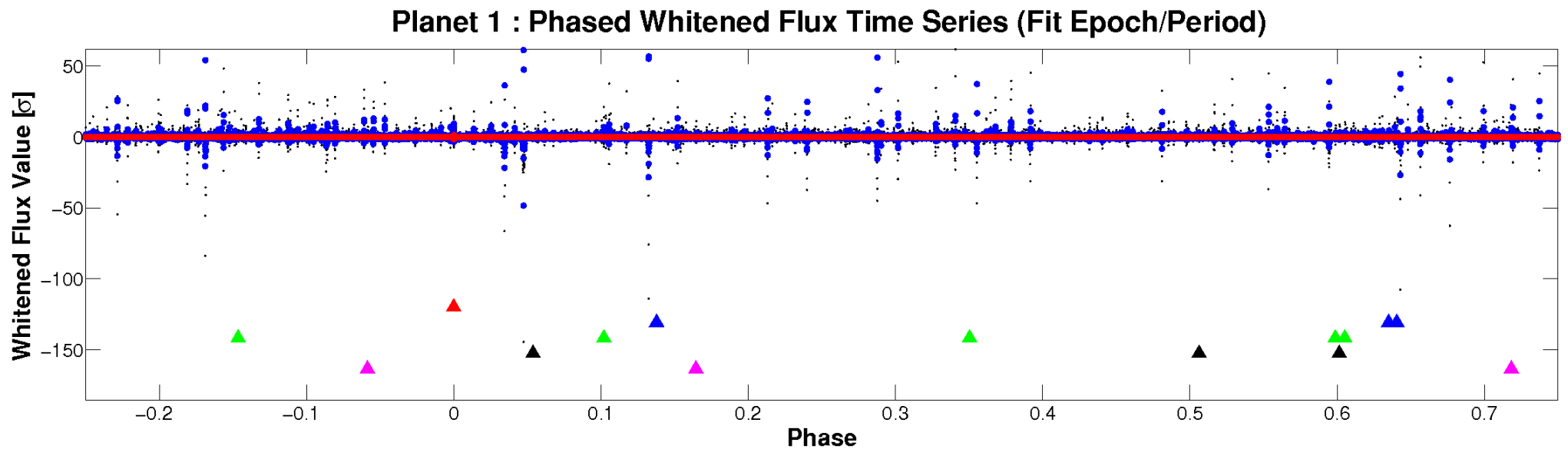
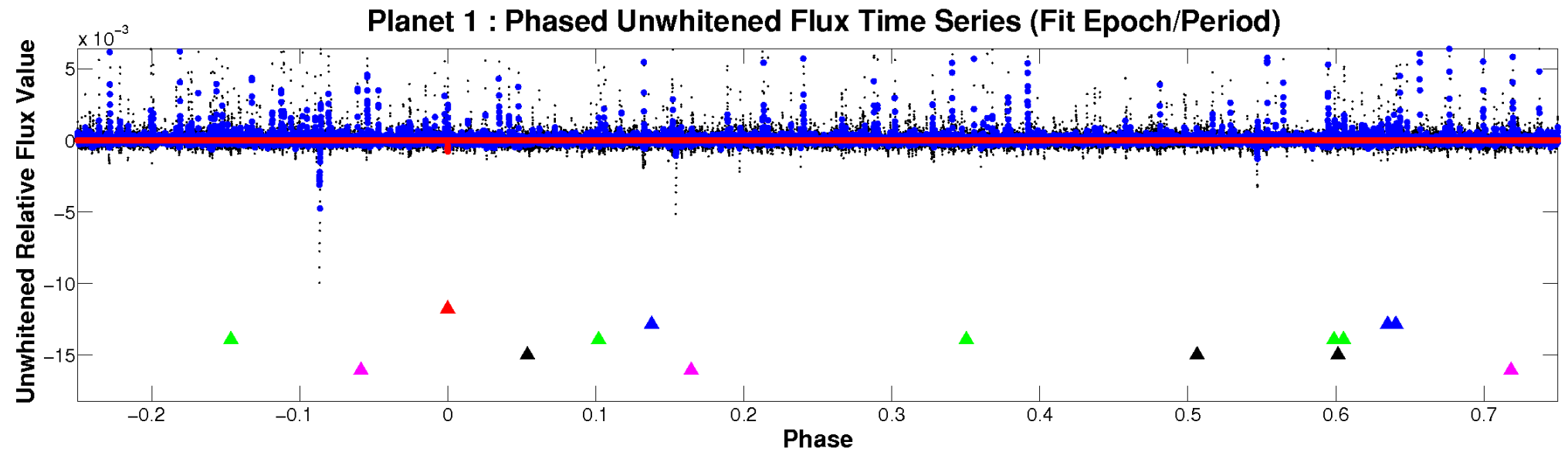


ALT Odd/Even

TCE 005607052-01

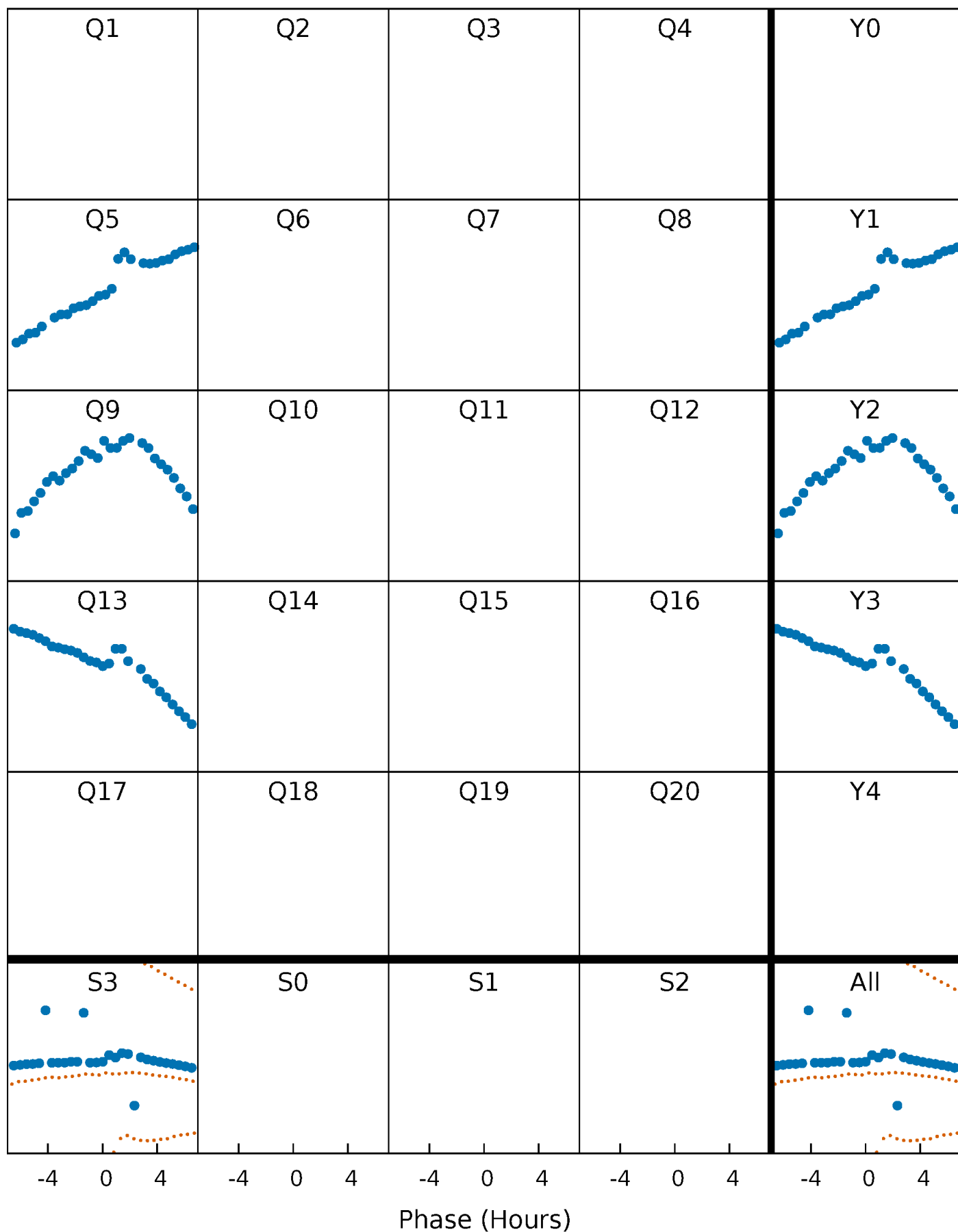


Non-Whitened Vs. Whitened Light Curve



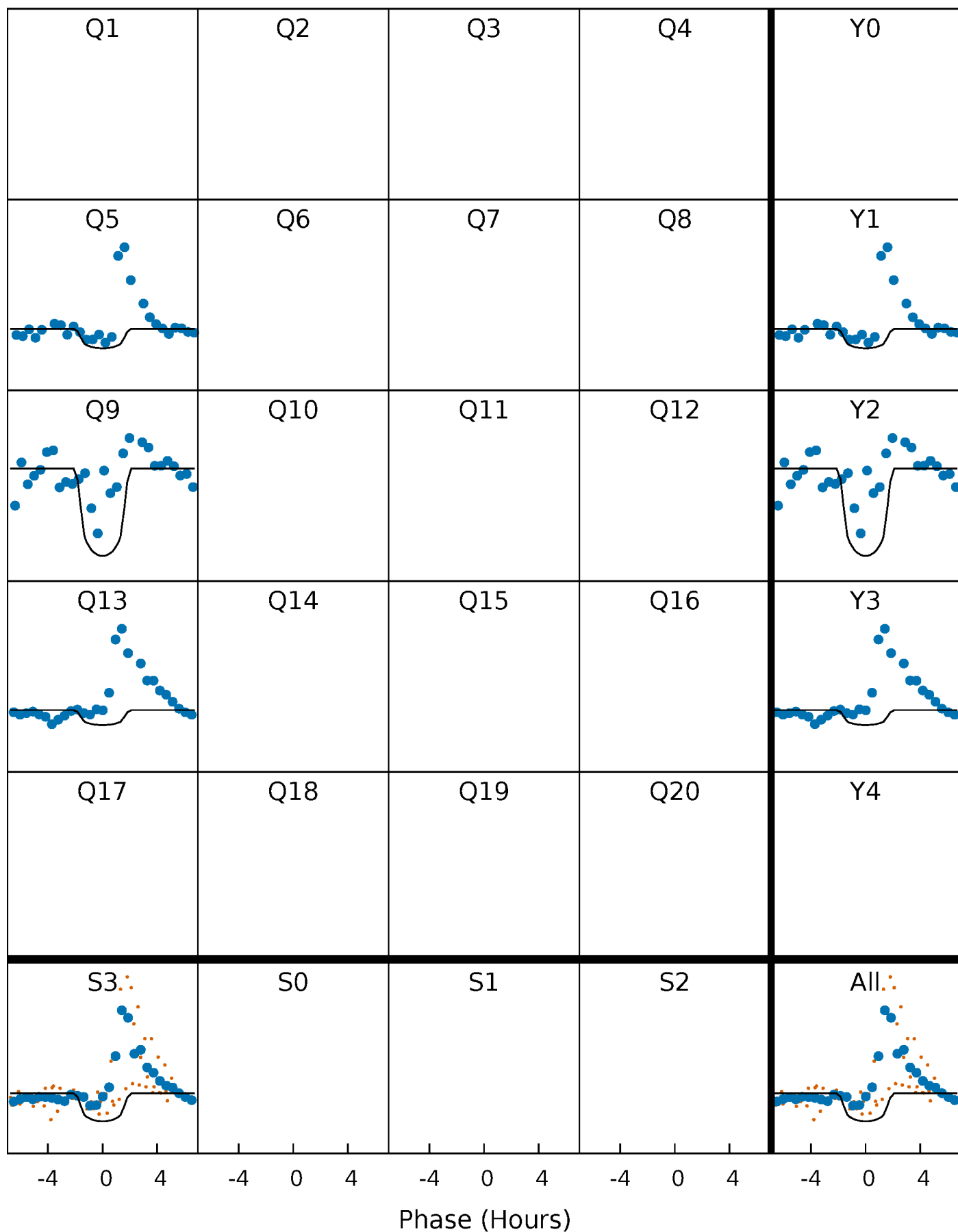
PDC Quarter-Phased Transit Curves

TCE 005607052-01 P=382.889253 Days $T_0=495.911446$ (BKJD)



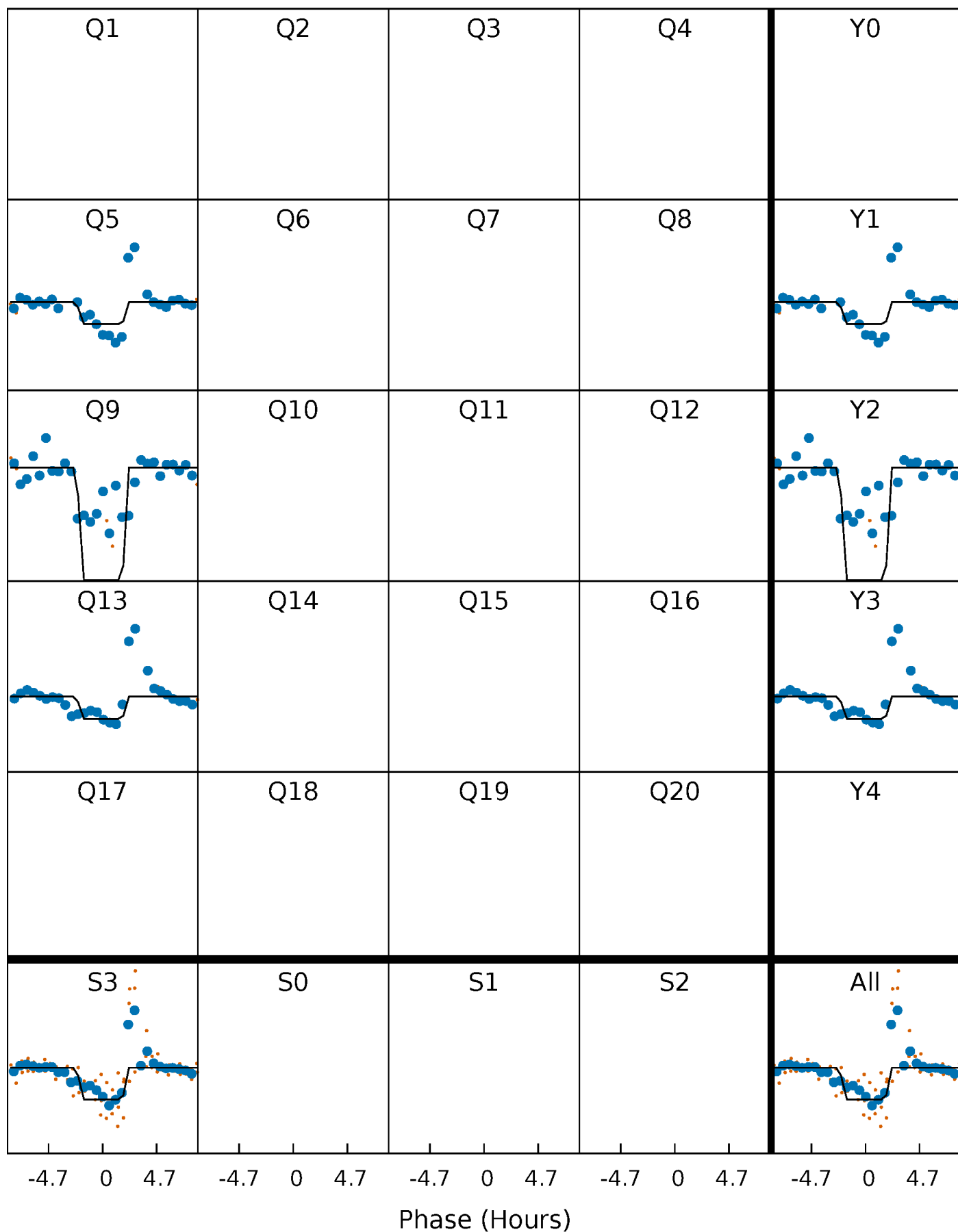
DV Quarter-Phased Transit Curves

TCE 005607052-01 $P=382.889253$ Days $T_0=495.911446$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

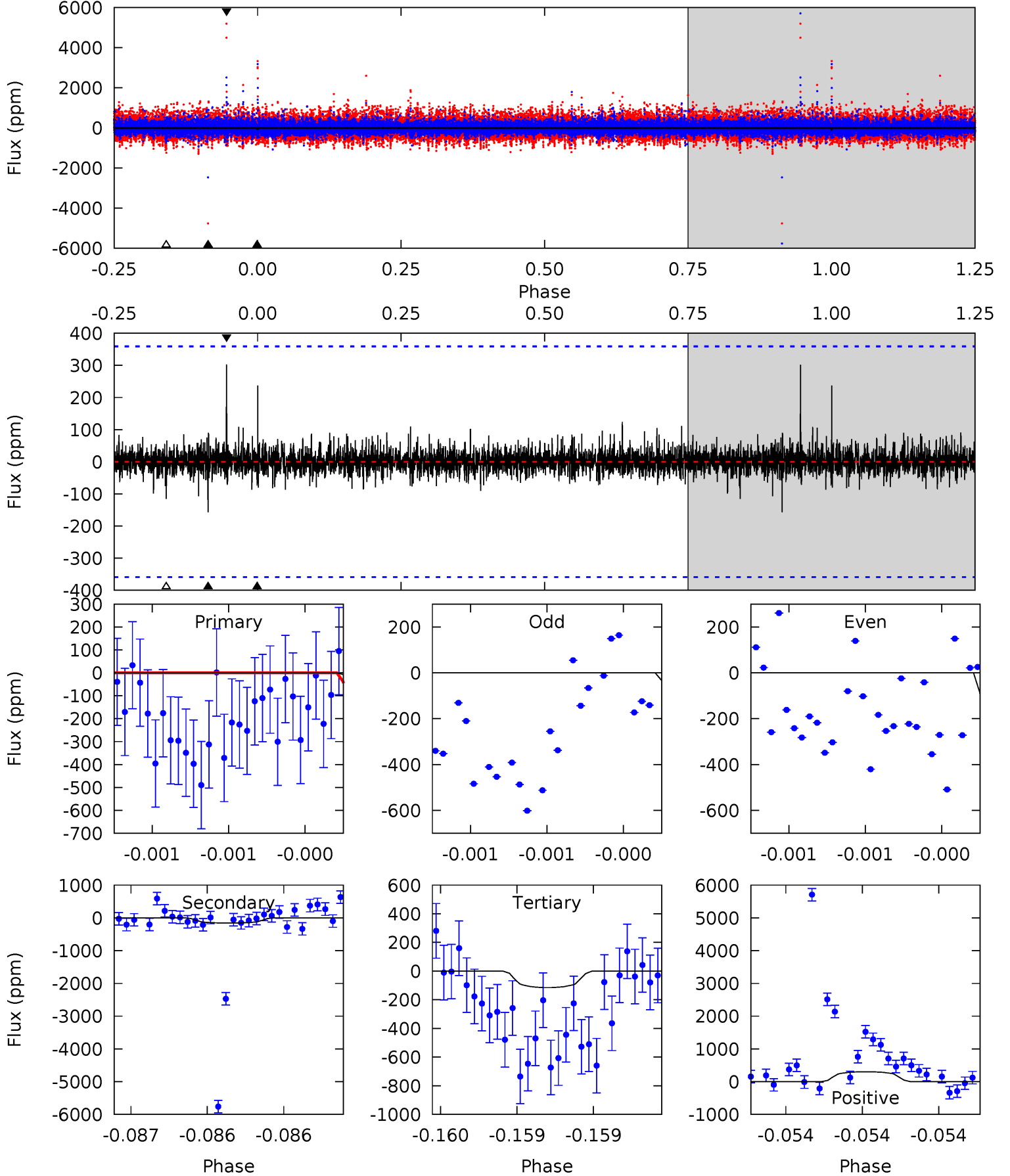
TCE 005607052-01 P=382.884047 Days $T_0=495.870272$ (BKJD)



DV Model-Shift Uniqueness Test

005607052-01, P = 382.889253 Days, E = 113.022193 Days

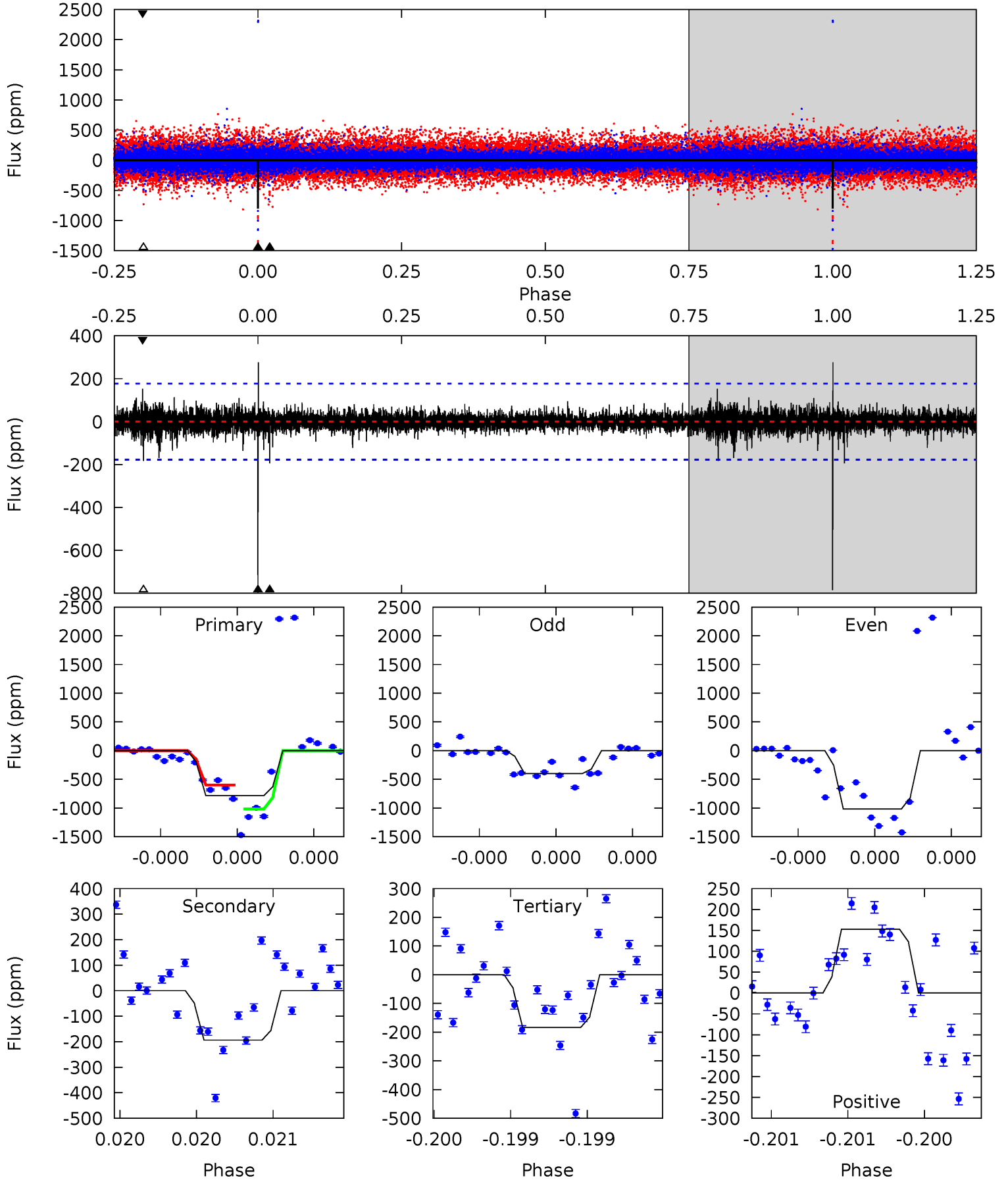
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.91	2.46	1.80	4.72	5.61	3.54	0.39	-0.90	-3.82	0.66	-2.27	1.20	1.98	0.66	0.98



Alt Model-Shift Uniqueness Test

005607052-01, P = 382.884047 Days, E = 112.986225 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.8	6.10	5.79	4.82	5.60	3.52	0.76	19.0	19.9	0.31	1.28	9.24	0.94	0.26	6.48



Stellar Parameters For KIC 005607052

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5157^{+179}_{-179}	$4.596^{+0.048}_{-0.066}$	$-0.360^{+0.300}_{-0.300}$	$0.713^{+0.088}_{-0.066}$	$0.732^{+0.088}_{-0.059}$	$2.841^{+0.652}_{-0.633}$
	+3%/-3%	+1%/-1%	+83%/-83%	+12%/-9%	+12%/-8%	+23%/-22%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 005607052-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-157 ± 64	$6.26^{+6.71}_{-4.36}$	280^{+12}_{-11}	2726^{+1239}_{-459}	1685^{+18243}_{-1328}
Alt.	-193 ± 32	$6.36^{+6.68}_{-4.21}$	279^{+12}_{-11}	2839^{+1154}_{-470}	2232^{+18672}_{-1698}

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

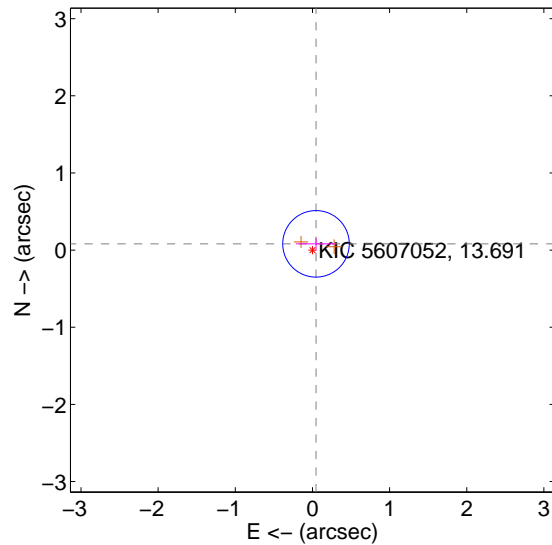
Supplemental centroid analysis for 005607052-01. Kepler magnitude: 13.69. Transit SNR 6.10

There are 0 quarters with good PRF difference image offsets

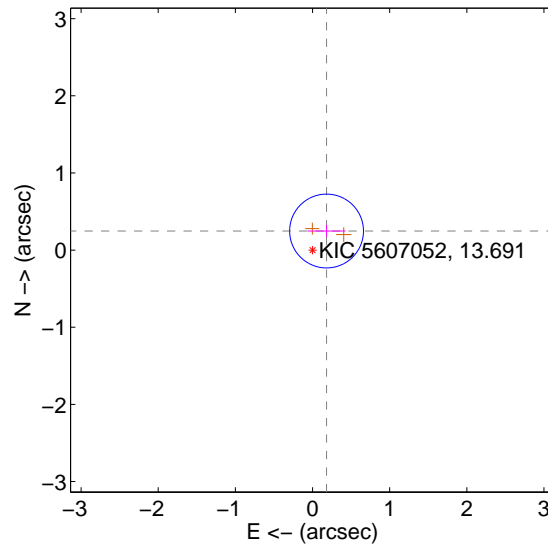
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.093 ± 0.144	0.65	-0.046 ± 0.259	0.081 ± 0.075
PRF-fit source offset from KIC position	0.307 ± 0.159	1.93	-0.182 ± 0.246	0.247 ± 0.080
photometric centroid source offset	1.13 ± 0.50	2.28	-1.09 ± 0.49	0.29 ± 0.51

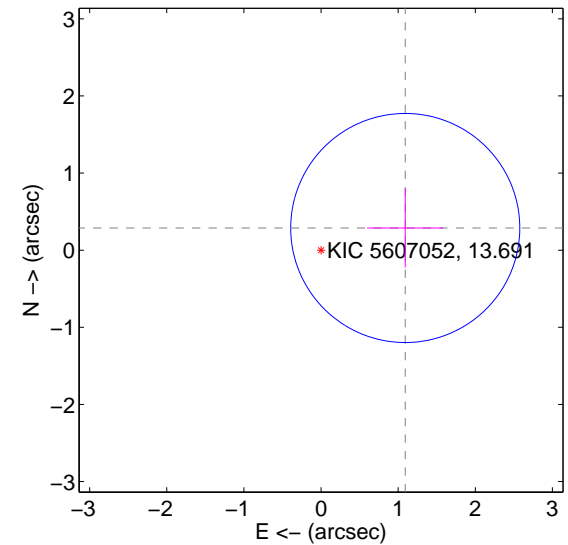
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

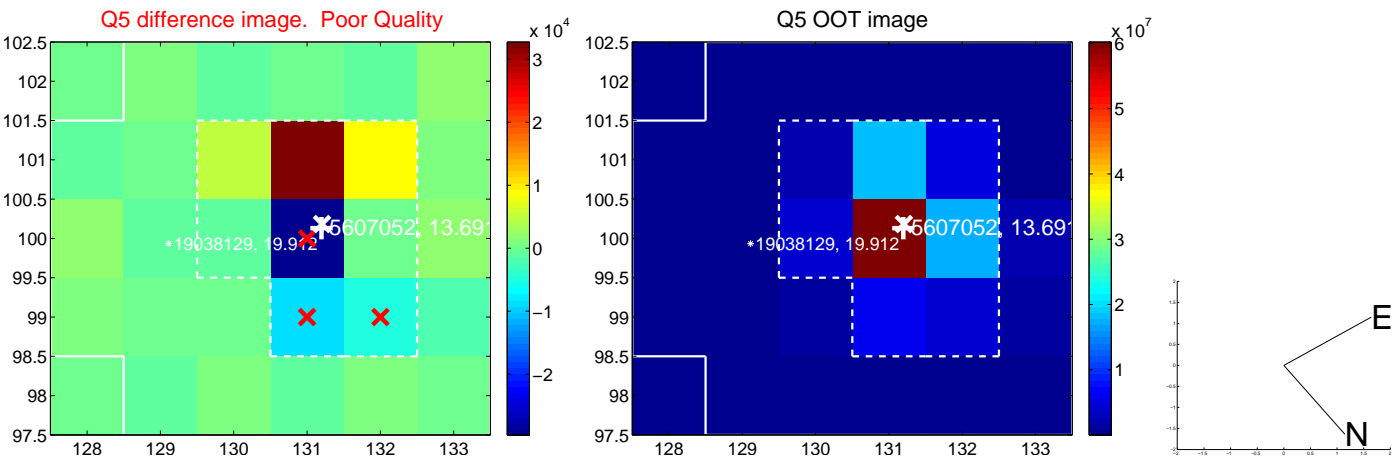


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

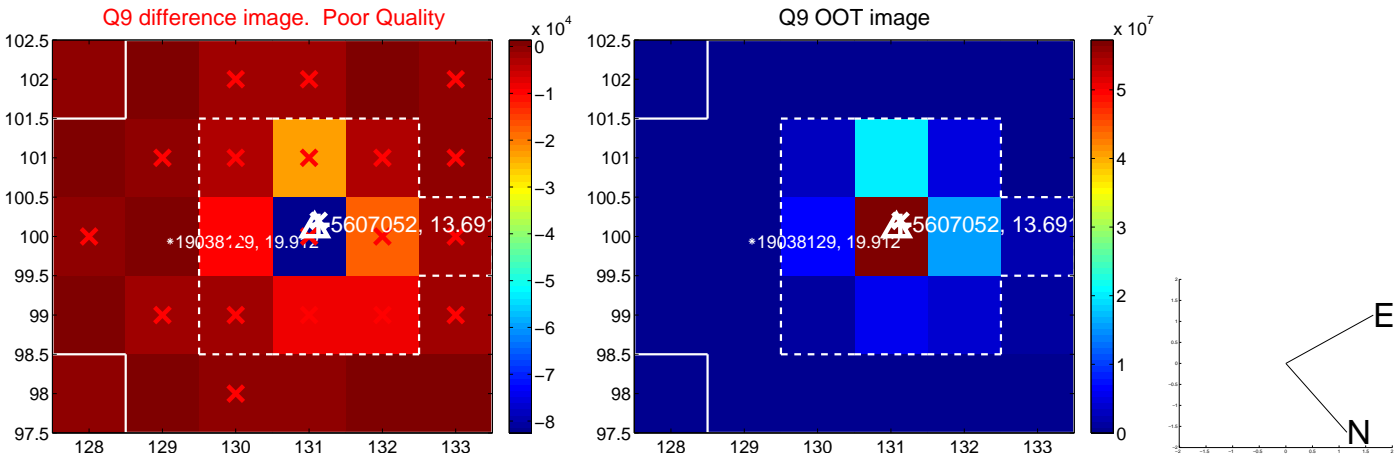
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



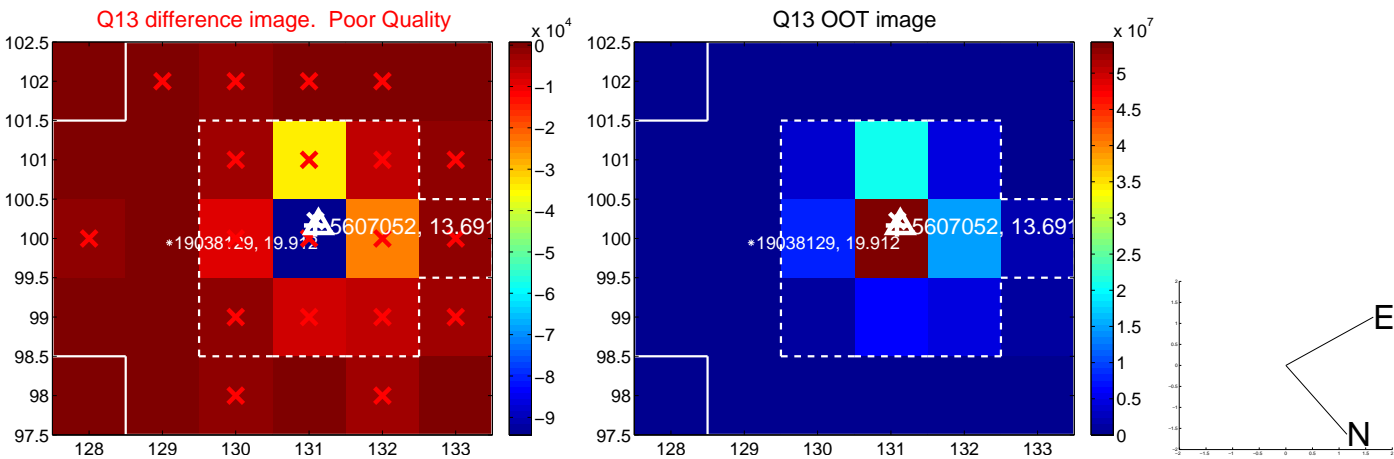
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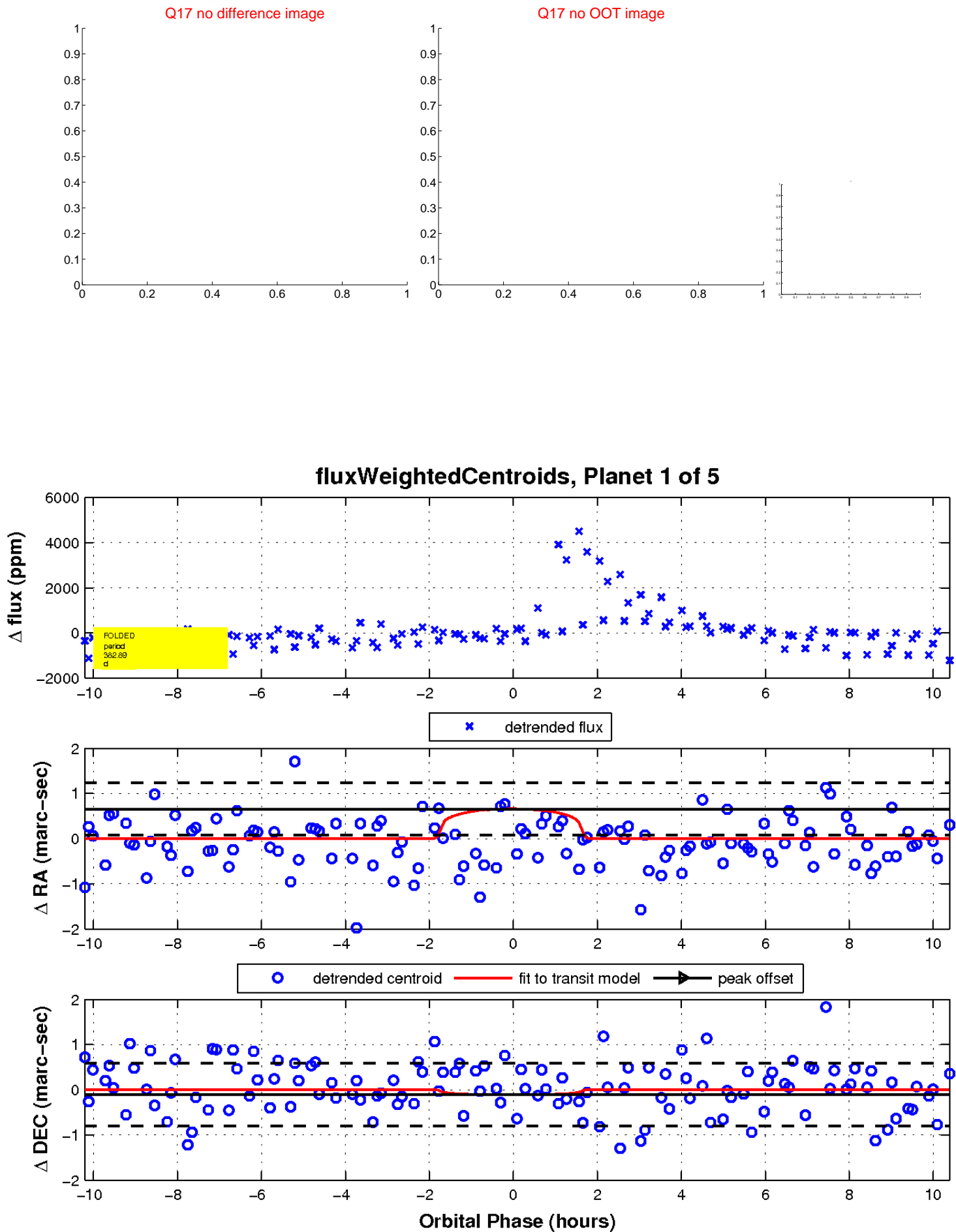
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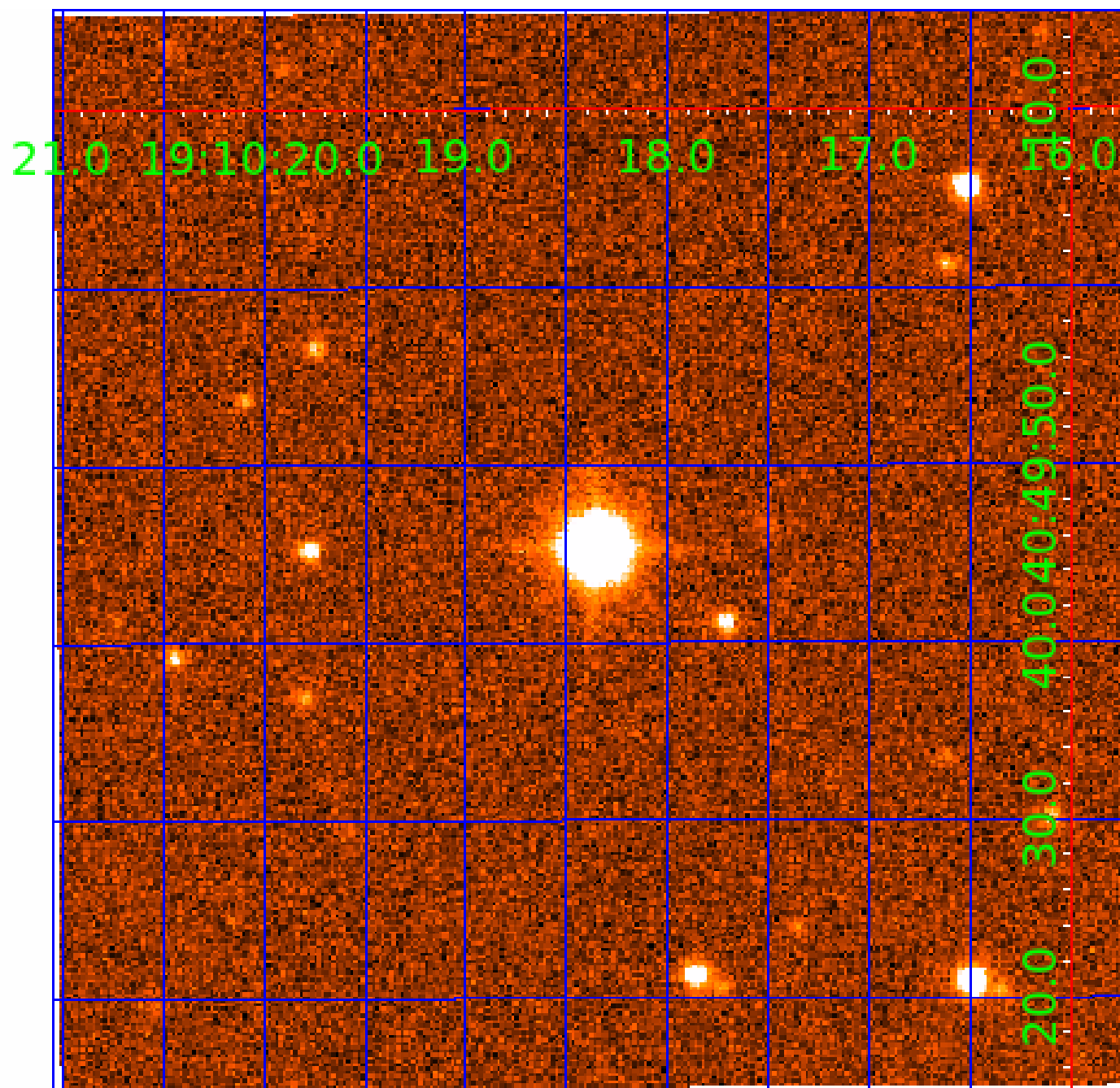


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005607052

Q1-17 DR25 TCE Parameters

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005607052-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
005607052-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005607052-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

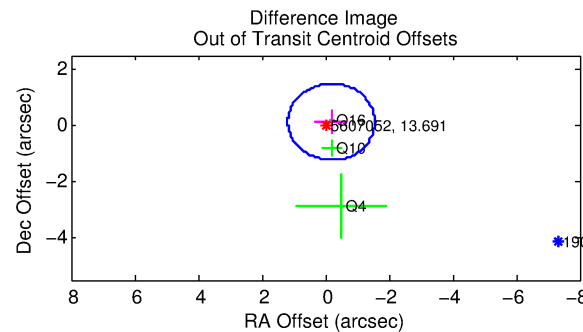
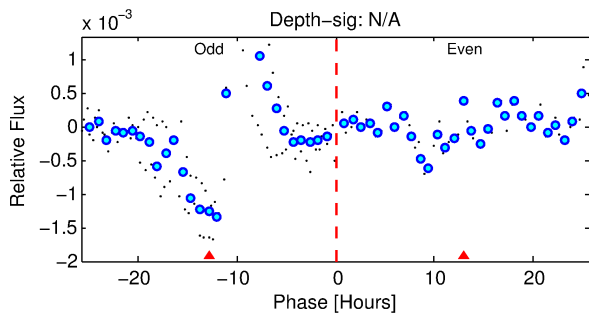
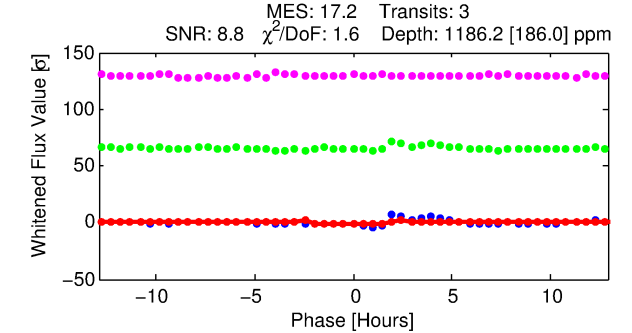
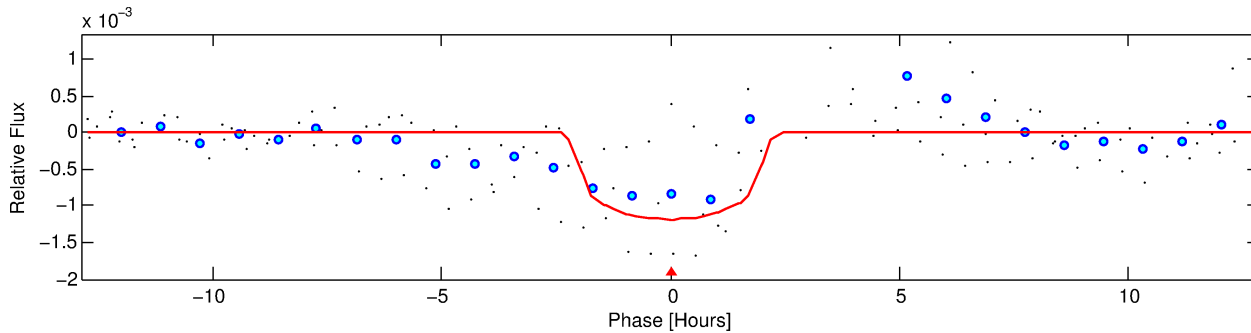
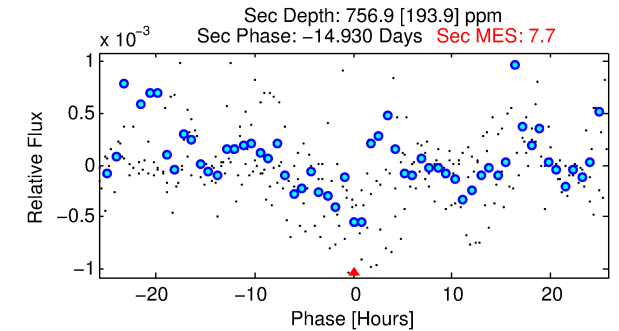
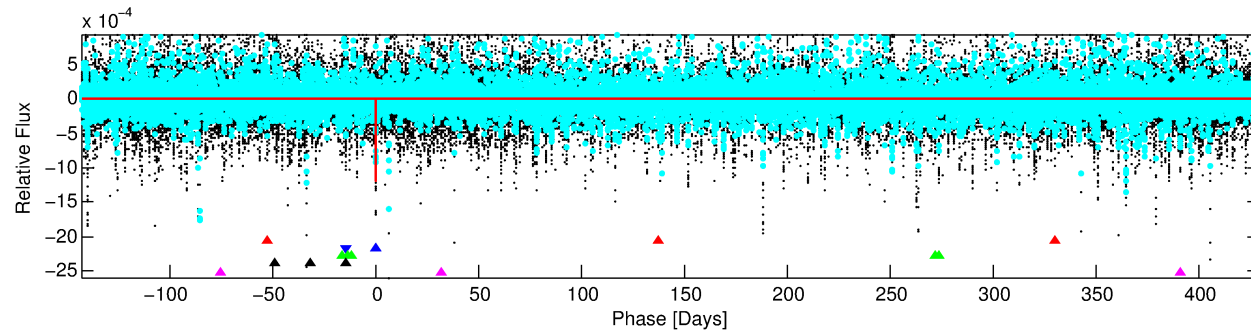
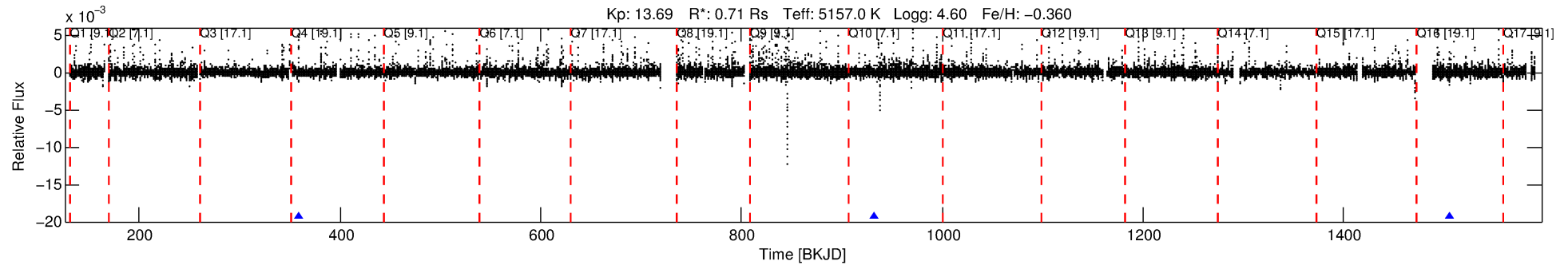
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005607052-02

No Significant Match Found

DV One-Page Summary

KIC: 5607052 Candidate: 2 of 5 Period: 573.279 d



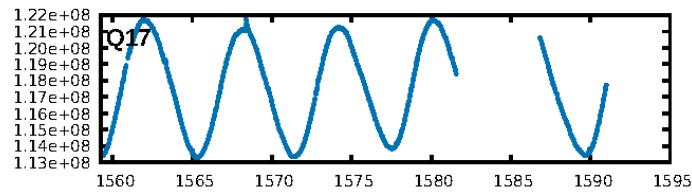
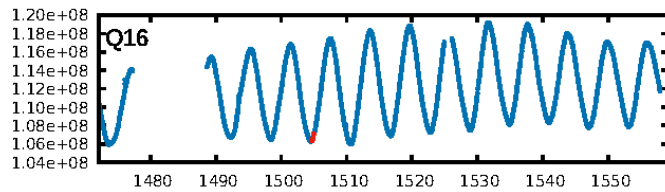
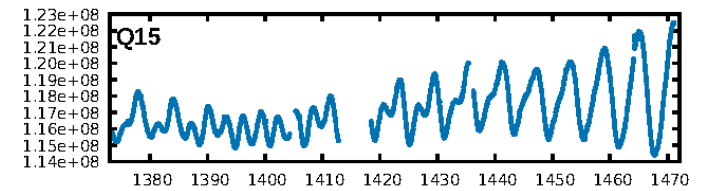
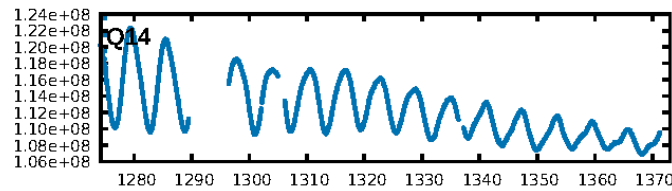
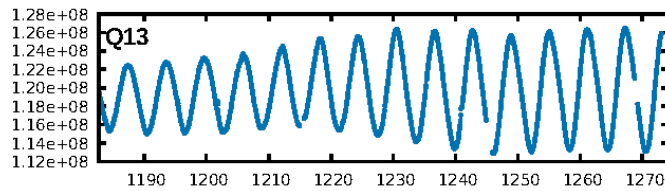
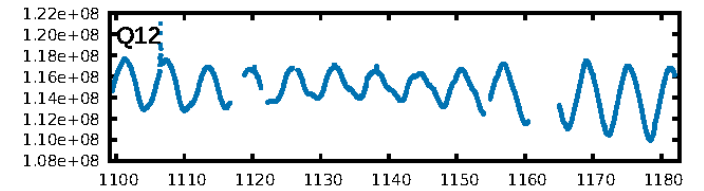
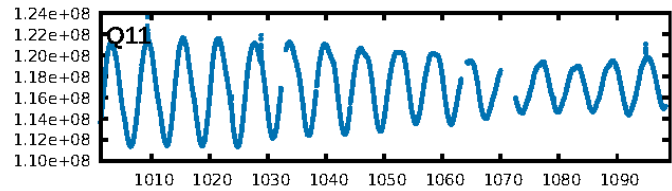
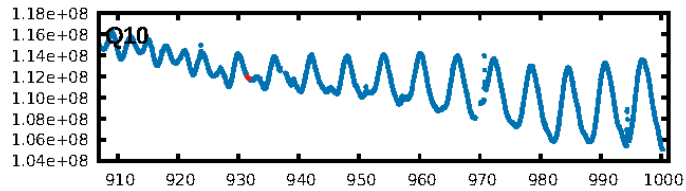
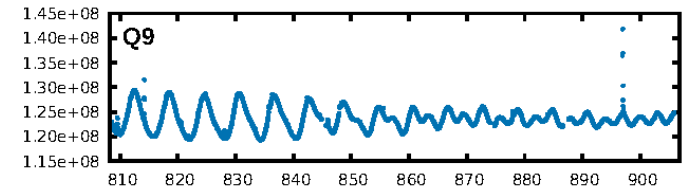
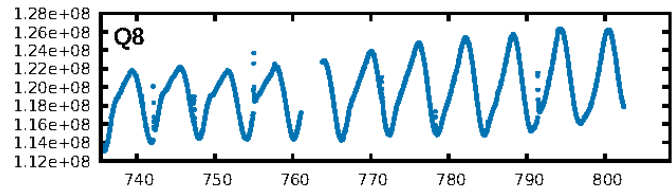
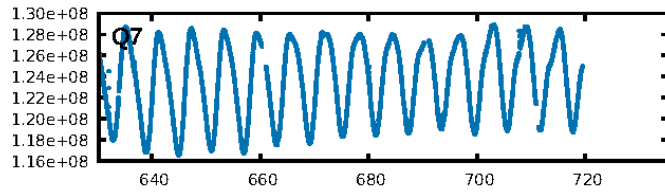
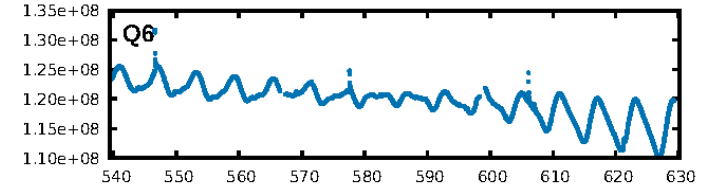
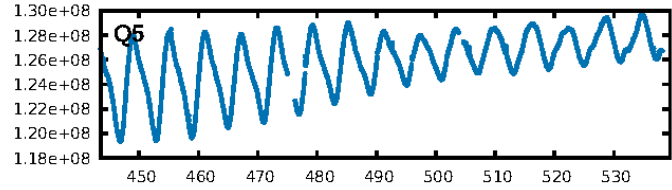
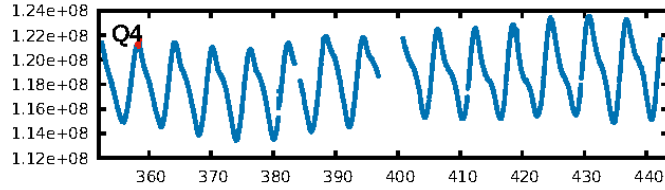
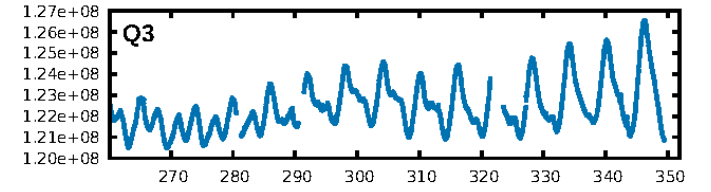
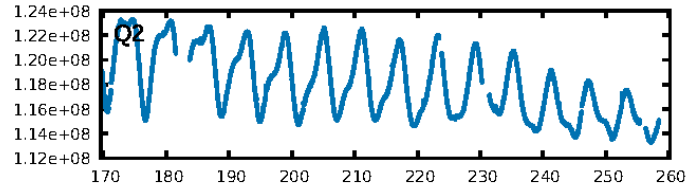
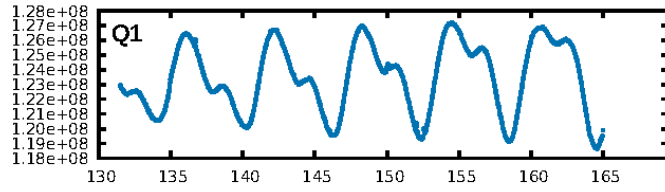
DV Fit Results:

Period = 573.27865 [0.00409] d
Epoch = 358.2714 [0.0060] BKJD
Rp/R* = 0.0326 [0.0643]
a/R* = 864.57 [6393.38]
b = 0.59 [8.32]
Seff = 0.22 [0.04]
Teq = 174 [8] K
Rp = 2.54 [5.01] Re
a = 1.2171 [0.1176] AU
Ag = 95850.04 [379014.17] [0.25σ]
Teffp = 4737 [4683] K [0.97σ]

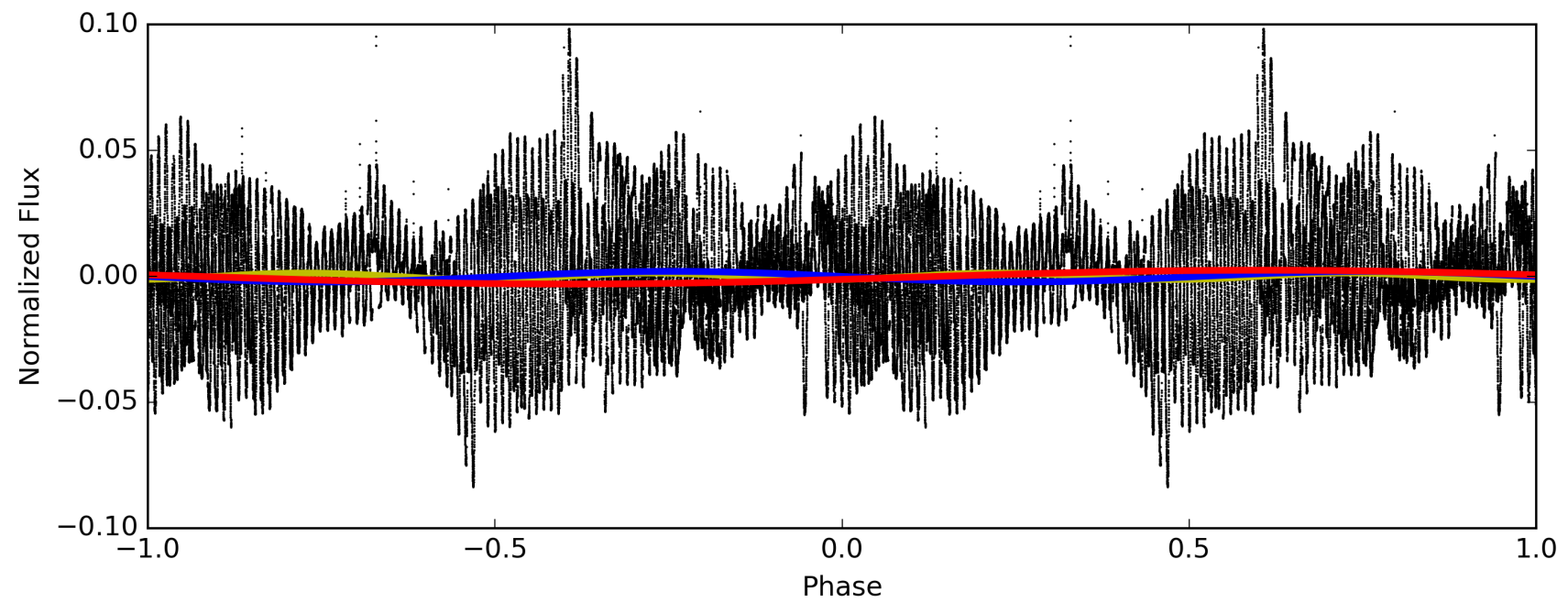
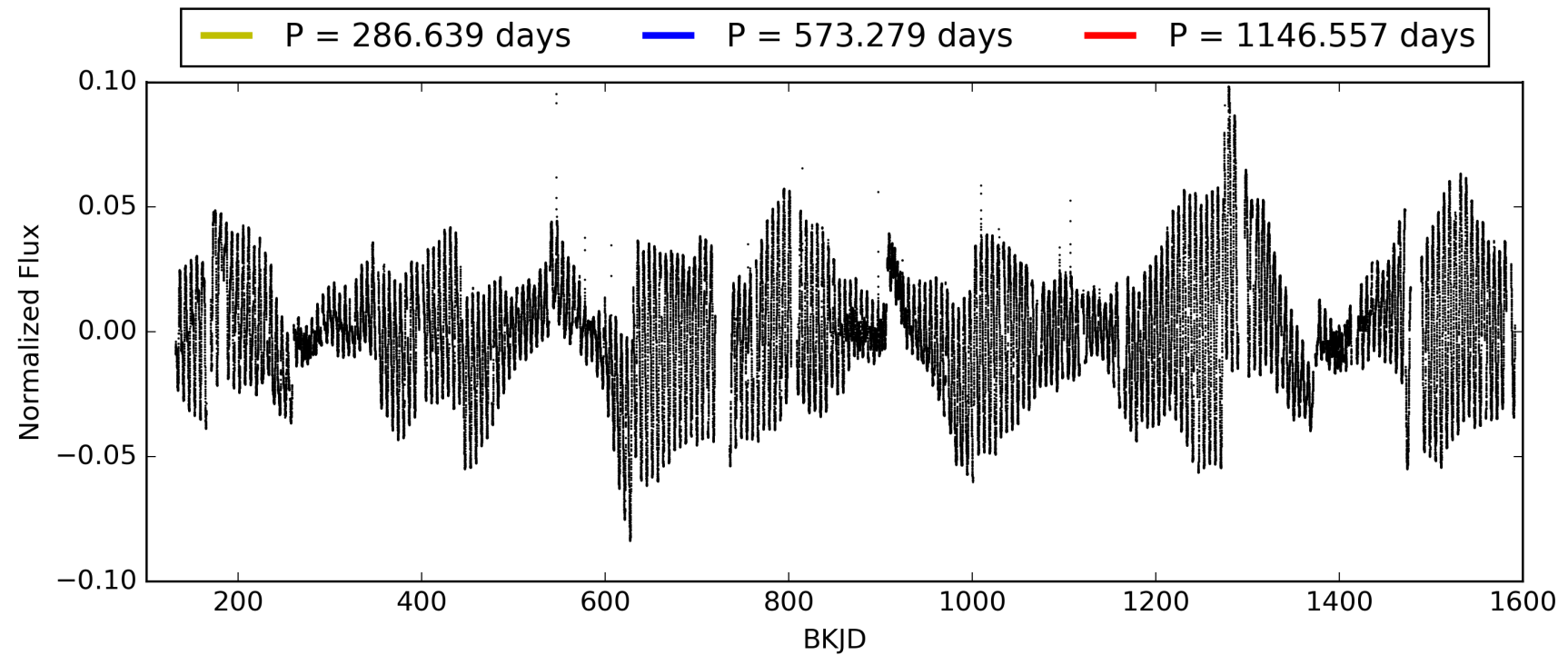
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [64.30σ]
LongPeriod-sig: 100.0% [389.06σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 4.1%
Bootstrap-pfa: 1.29e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.481
Centroid-sig: 21.3%
Centroid-so: 0.244 arcsec [0.79σ]
OotOffset-rm: 0.225 arcsec [0.50σ]
KicOffset-rm: 0.539 arcsec [1.14σ]
OotOffset-st: 1/0/2/0 [3]
KicOffset-st: 1/0/2/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 005607052-02, PDC Light Curves

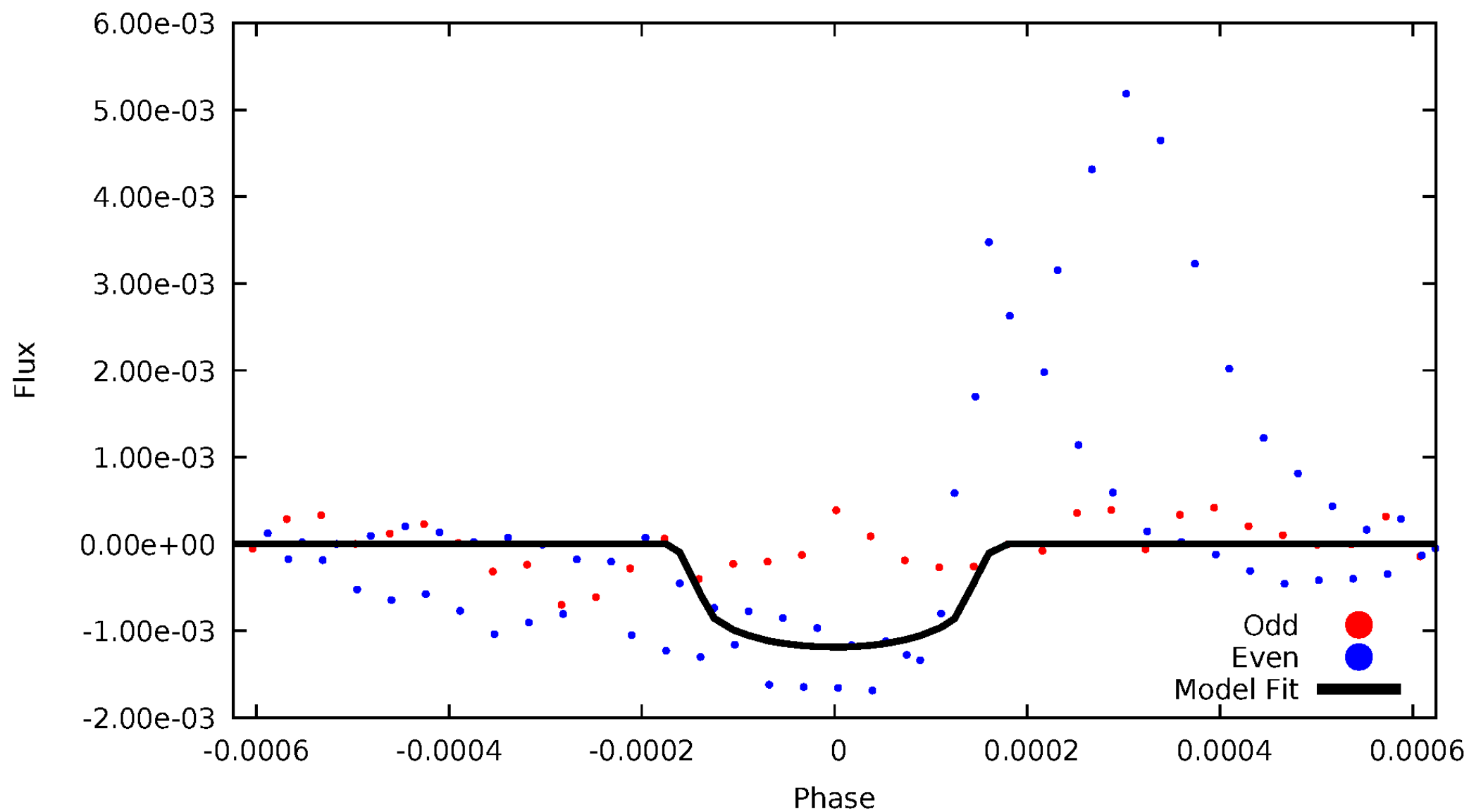


TCE 005607052-02



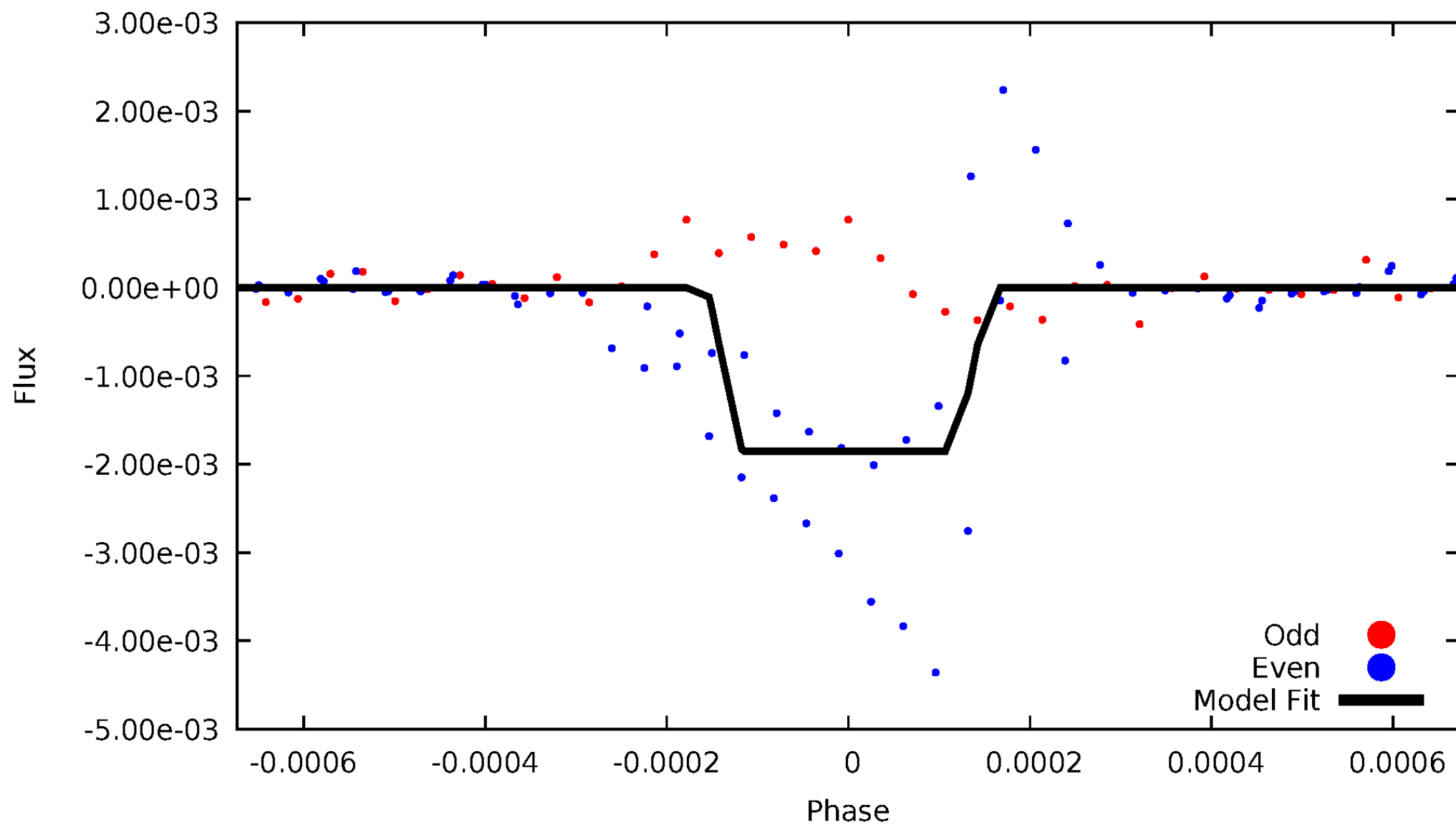
DV Odd/Even

TCE 005607052-02



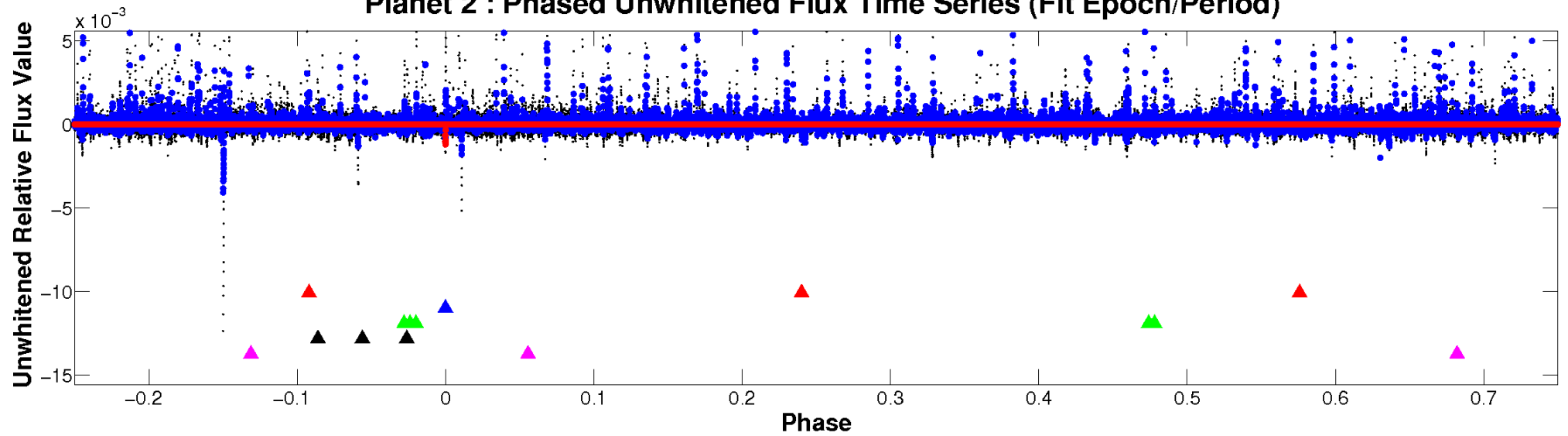
ALT Odd/Even

TCE 005607052-02

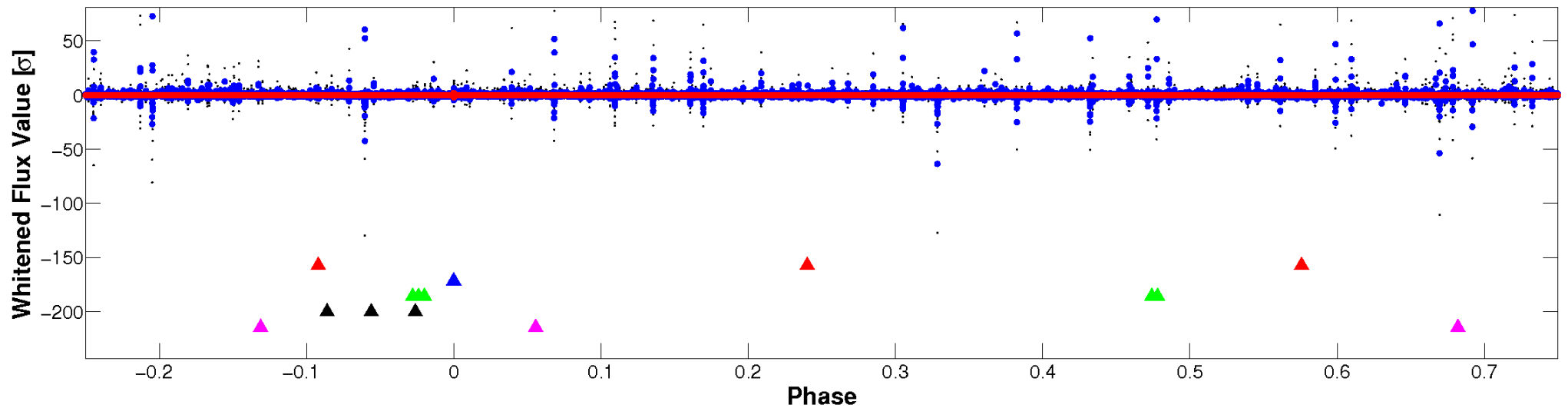


Non-Whitened Vs. Whitened Light Curve

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

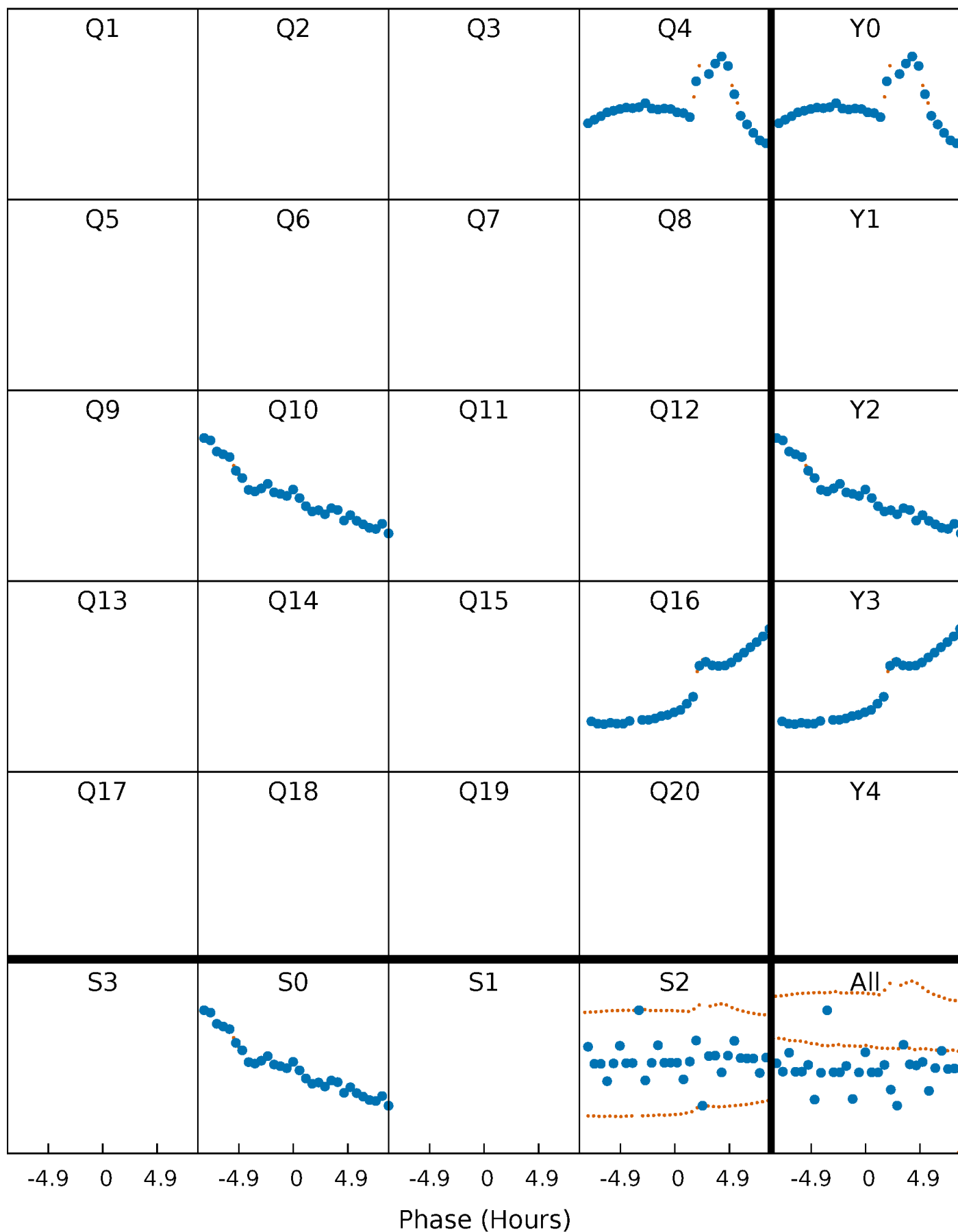


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



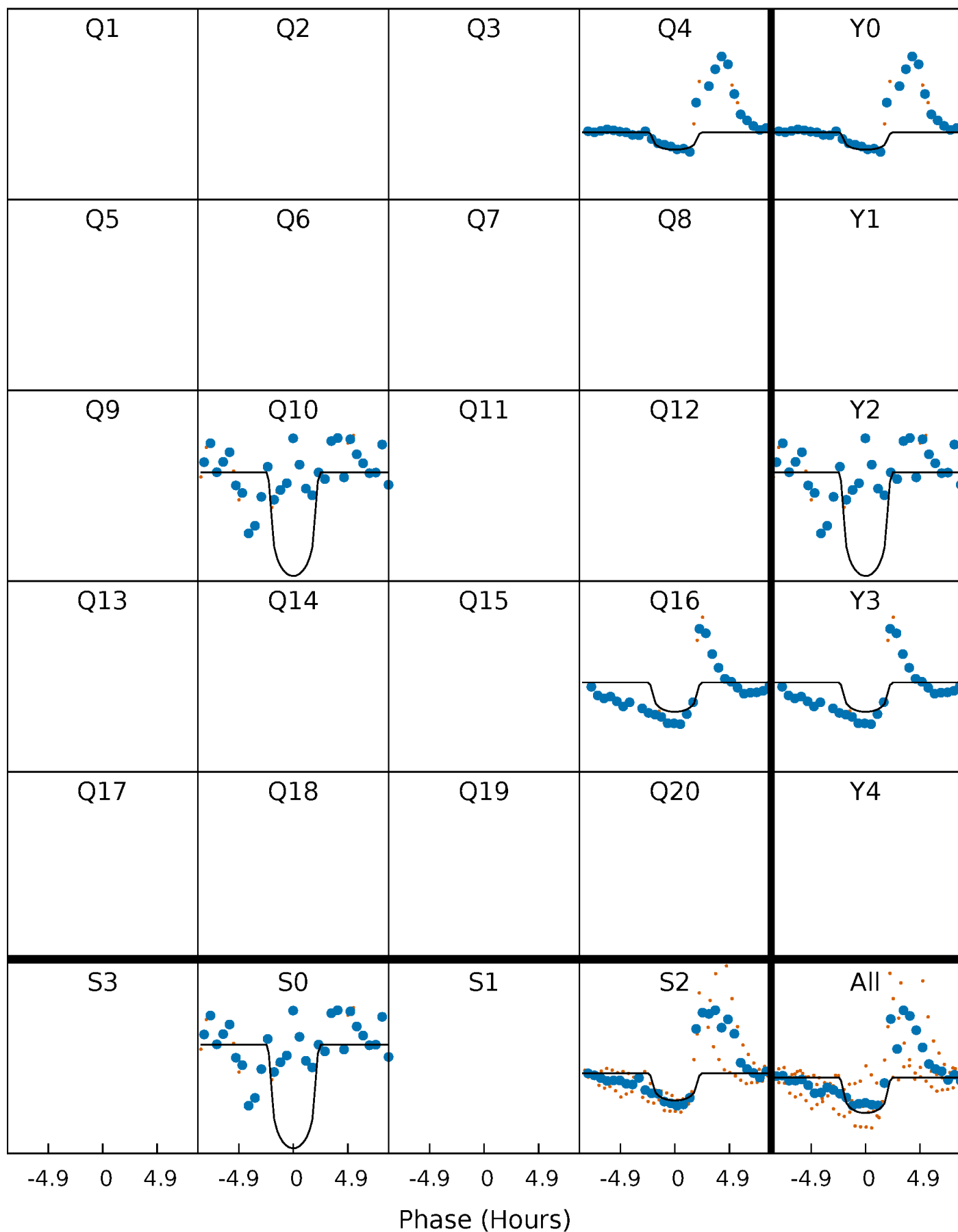
PDC Quarter-Phased Transit Curves

TCE 005607052-02 P=573.278654 Days $T_0=358.271437$ (BKJD)



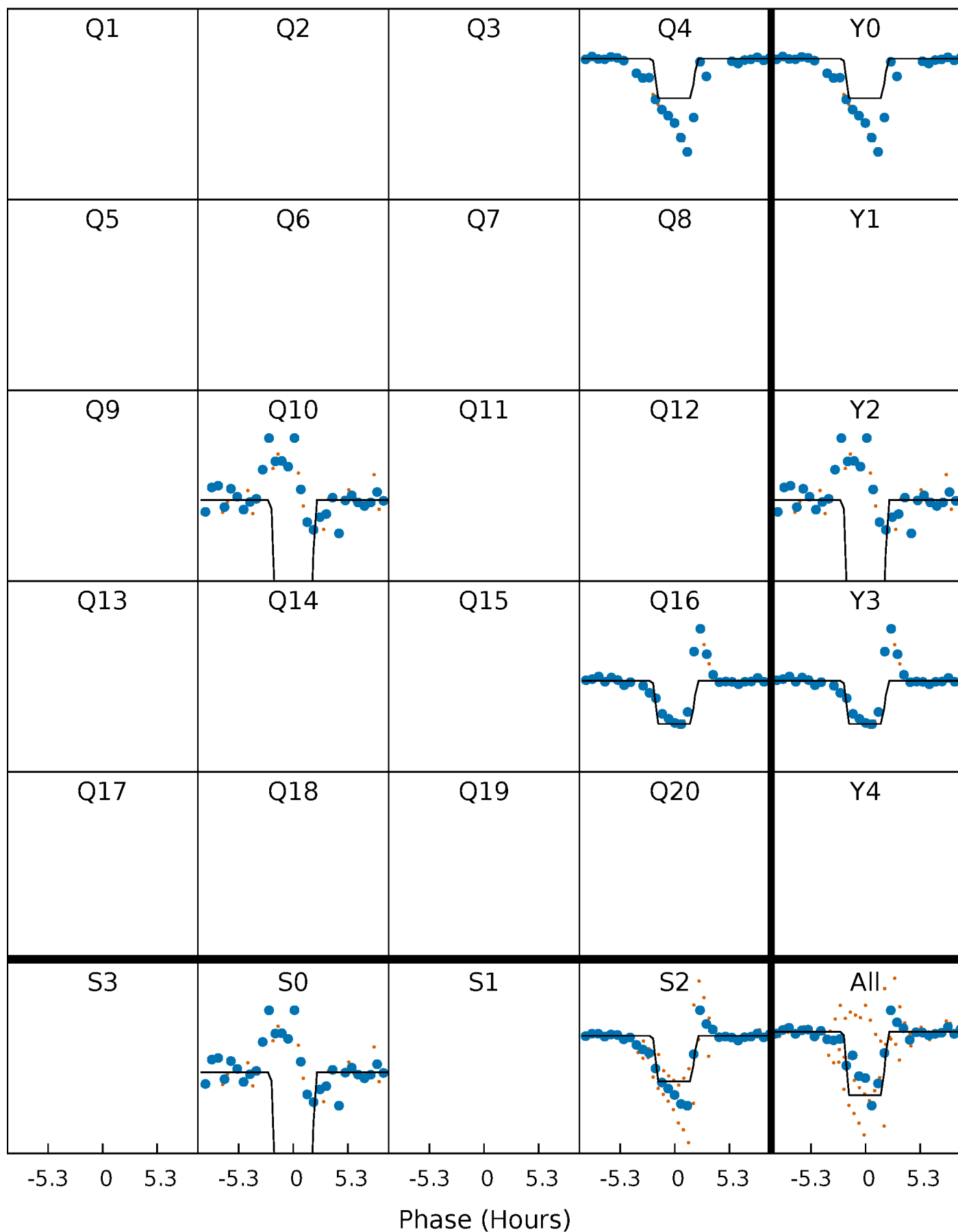
DV Quarter-Phased Transit Curves

TCE 005607052-02 P=573.278654 Days $T_0=358.271437$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

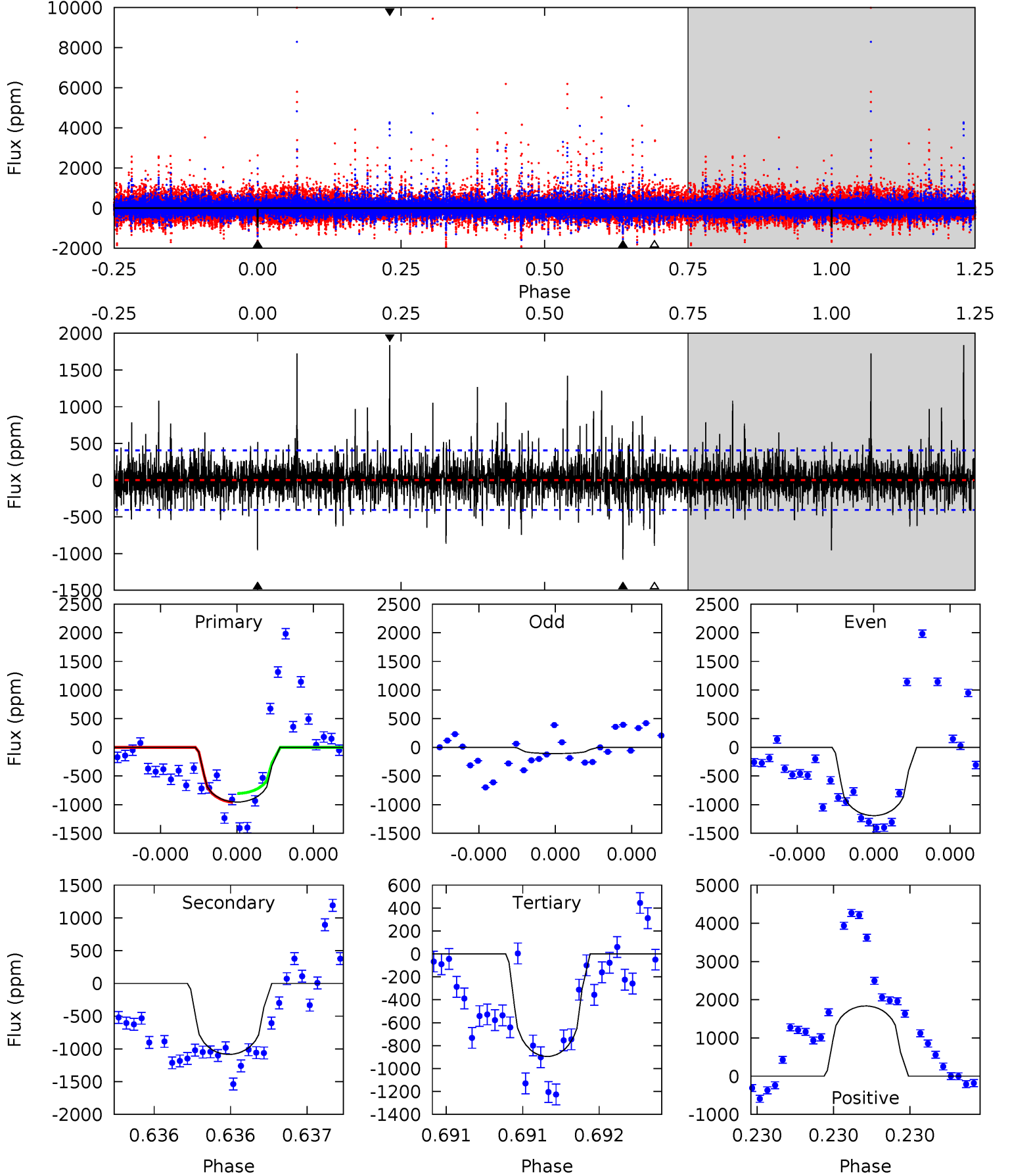
TCE 005607052-02 P=573.283959 Days $T_0=358.267229$ (BKJD)



DV Model-Shift Uniqueness Test

005607052-02, $P = 573.278654$ Days, $E = 358.271437$ Days

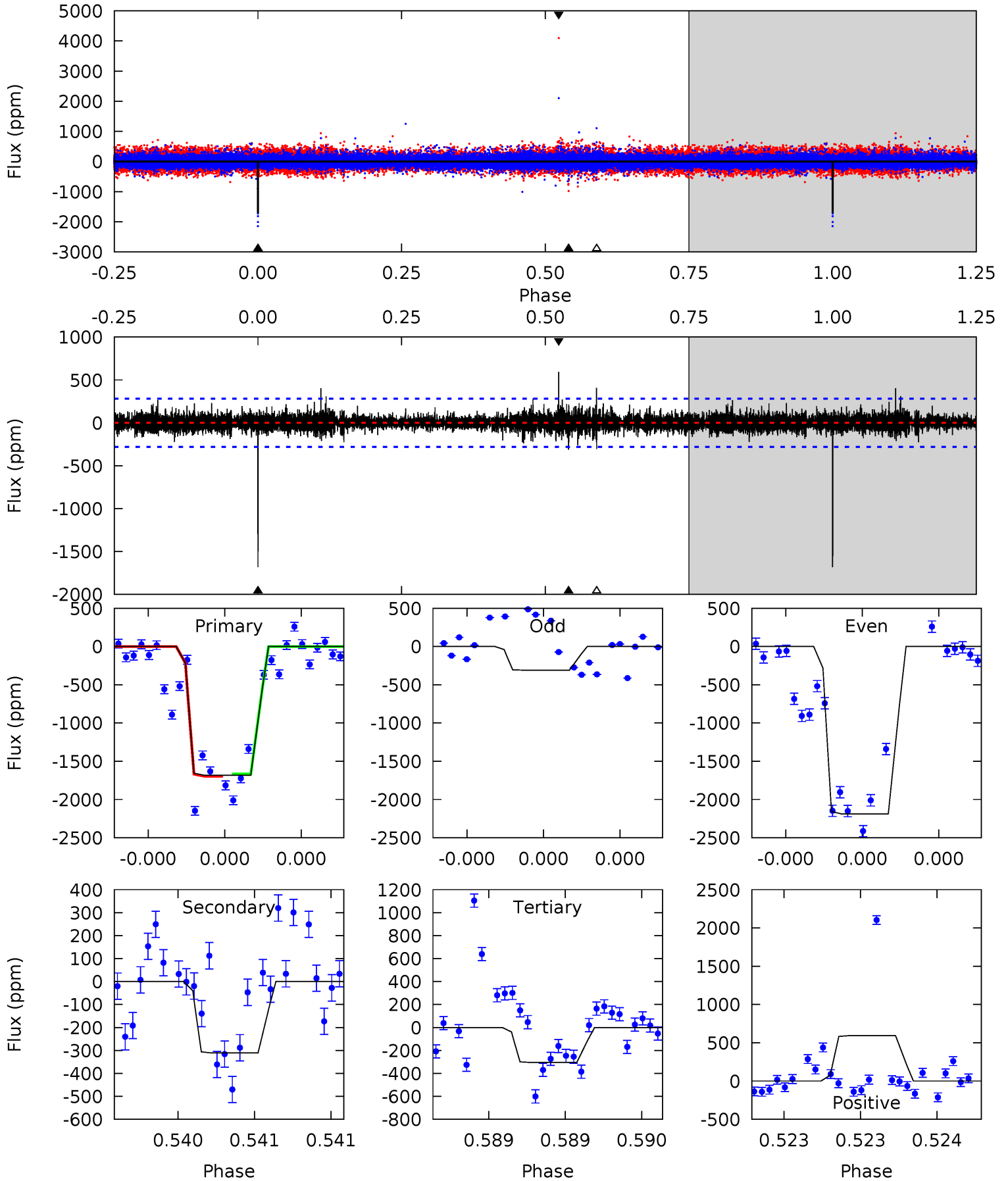
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	15.1	12.4	25.5	5.65	3.60	2.44	0.84	-12.3	2.62	-10.5	2.05	0.92	0.63	1.11



Alt Model-Shift Uniqueness Test

005607052-02, P = 573.283959 Days, E = 358.267229 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.8	6.26	6.13	11.9	5.67	3.62	0.96	27.7	21.9	0.13	-5.66	21.4	1.04	0.26	0



Stellar Parameters For KIC 005607052

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5157^{+179}_{-179}	$4.596^{+0.048}_{-0.066}$	$-0.360^{+0.300}_{-0.300}$	$0.713^{+0.088}_{-0.066}$	$0.732^{+0.088}_{-0.059}$	$2.841^{+0.652}_{-0.633}$
	+3%/-3%	+1%/-1%	+83%/-83%	+12%/-9%	+12%/-8%	+23%/-22%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 005607052-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1084 ± 72	$4.43^{+4.35}_{-2.99}$	244^{+10}_{-10}	4166^{+2641}_{-854}	$46324^{+362370}_{-34692}$
Alt.	-311 ± 50	$5.16^{+4.33}_{-3.57}$	244^{+10}_{-9}	3230^{+1647}_{-518}	9656^{+92973}_{-6934}

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 $A_{obs} \gg 1.0$

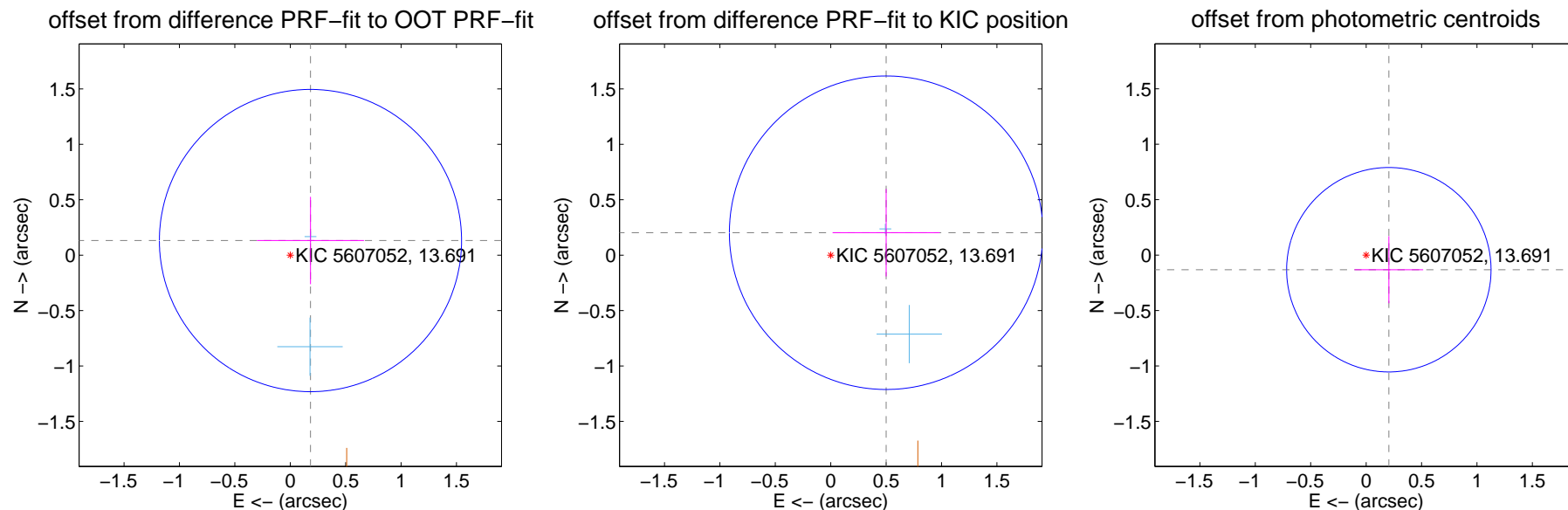
DV Centroid Data

Supplemental centroid analysis for 005607052-02. Kepler magnitude: 13.69. Transit SNR 8.83

There are 2 quarters with good PRF difference image offsets

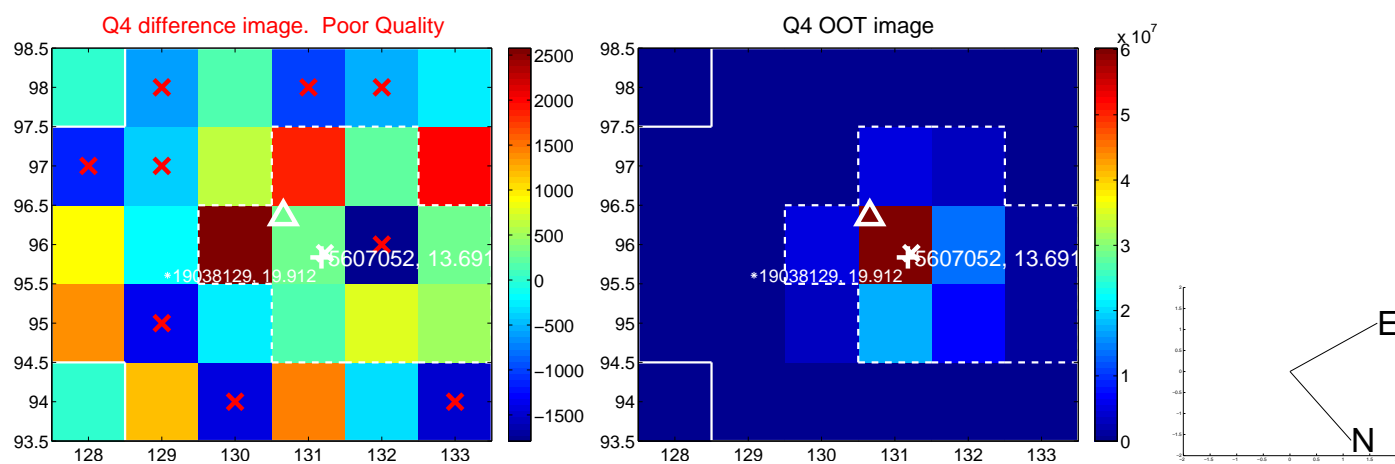
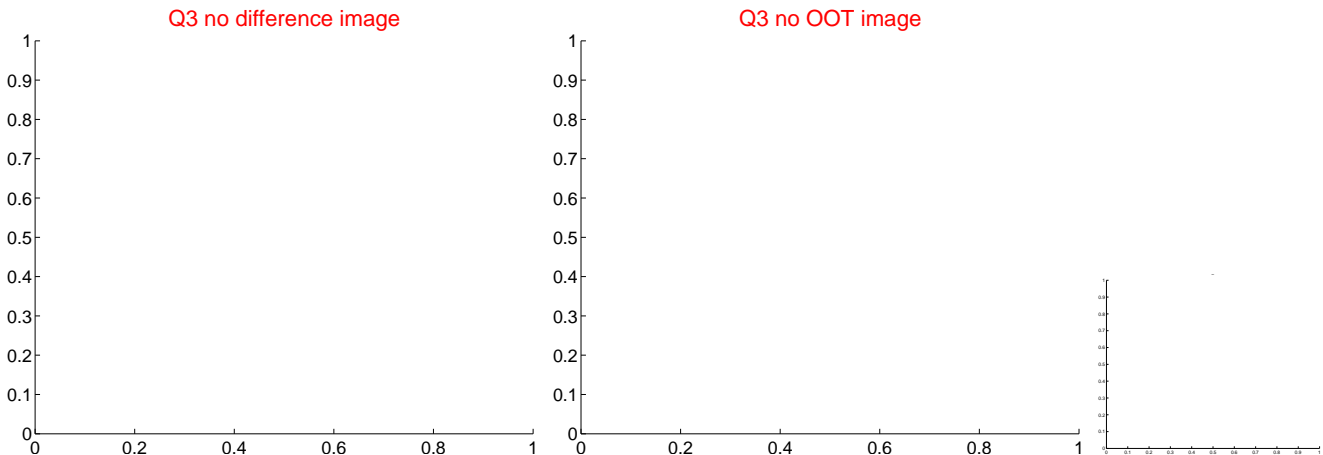
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.225 ± 0.455	0.50	-0.183 ± 0.483	0.132 ± 0.394
PRF-fit source offset from KIC position	0.539 ± 0.472	1.14	-0.500 ± 0.483	0.202 ± 0.394
photometric centroid source offset	0.24 ± 0.31	0.79	-0.20 ± 0.31	-0.13 ± 0.30



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.

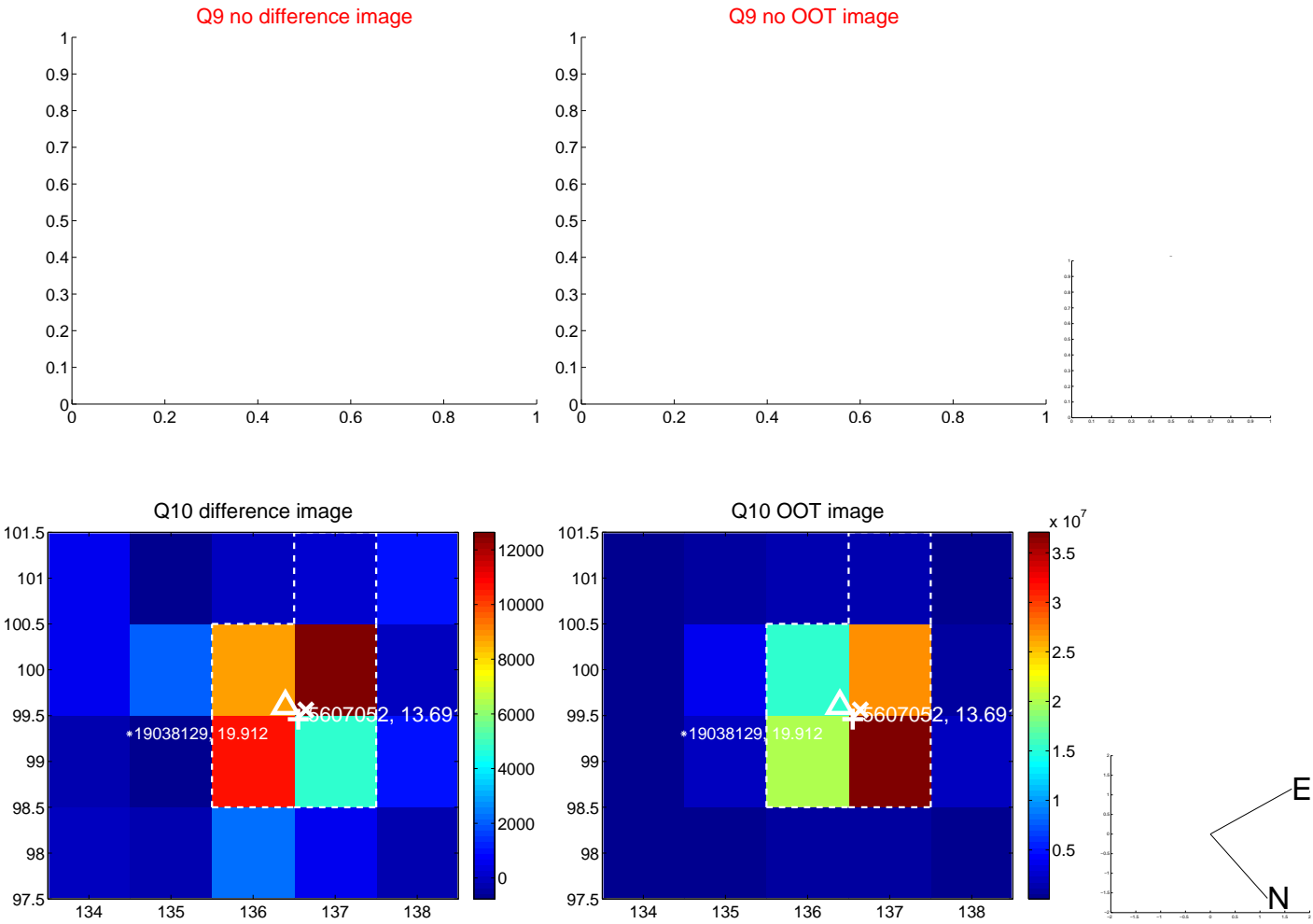
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



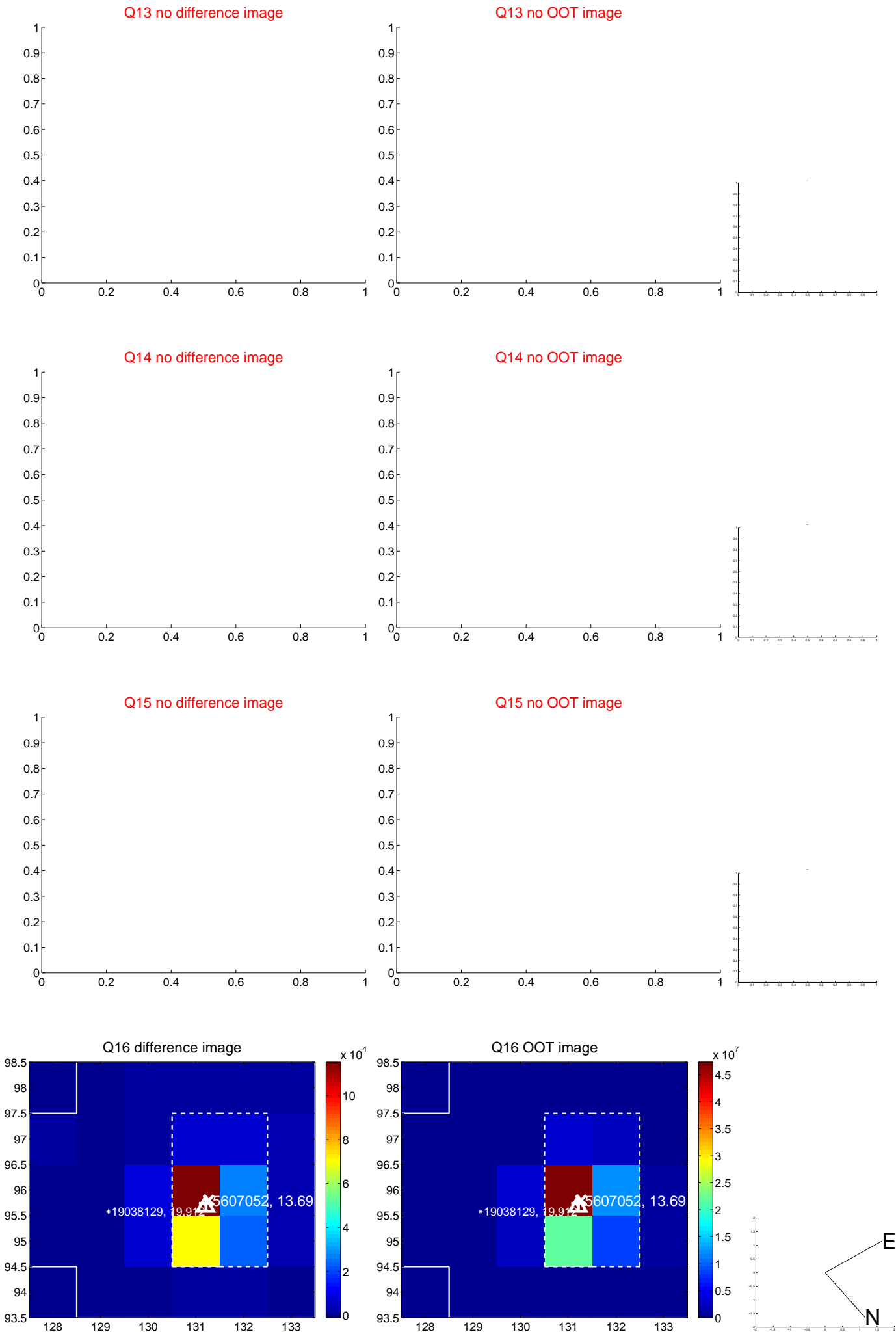
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



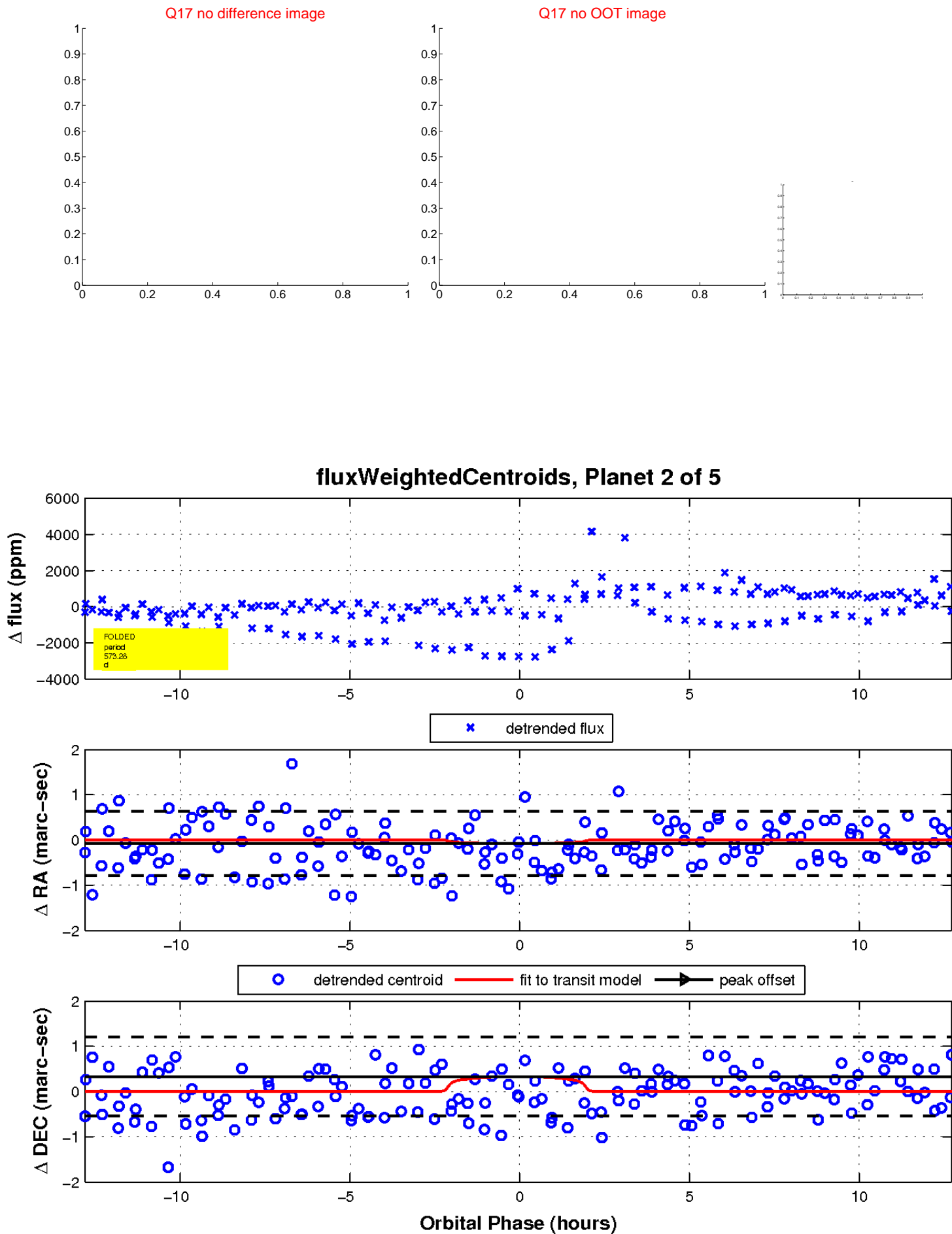
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

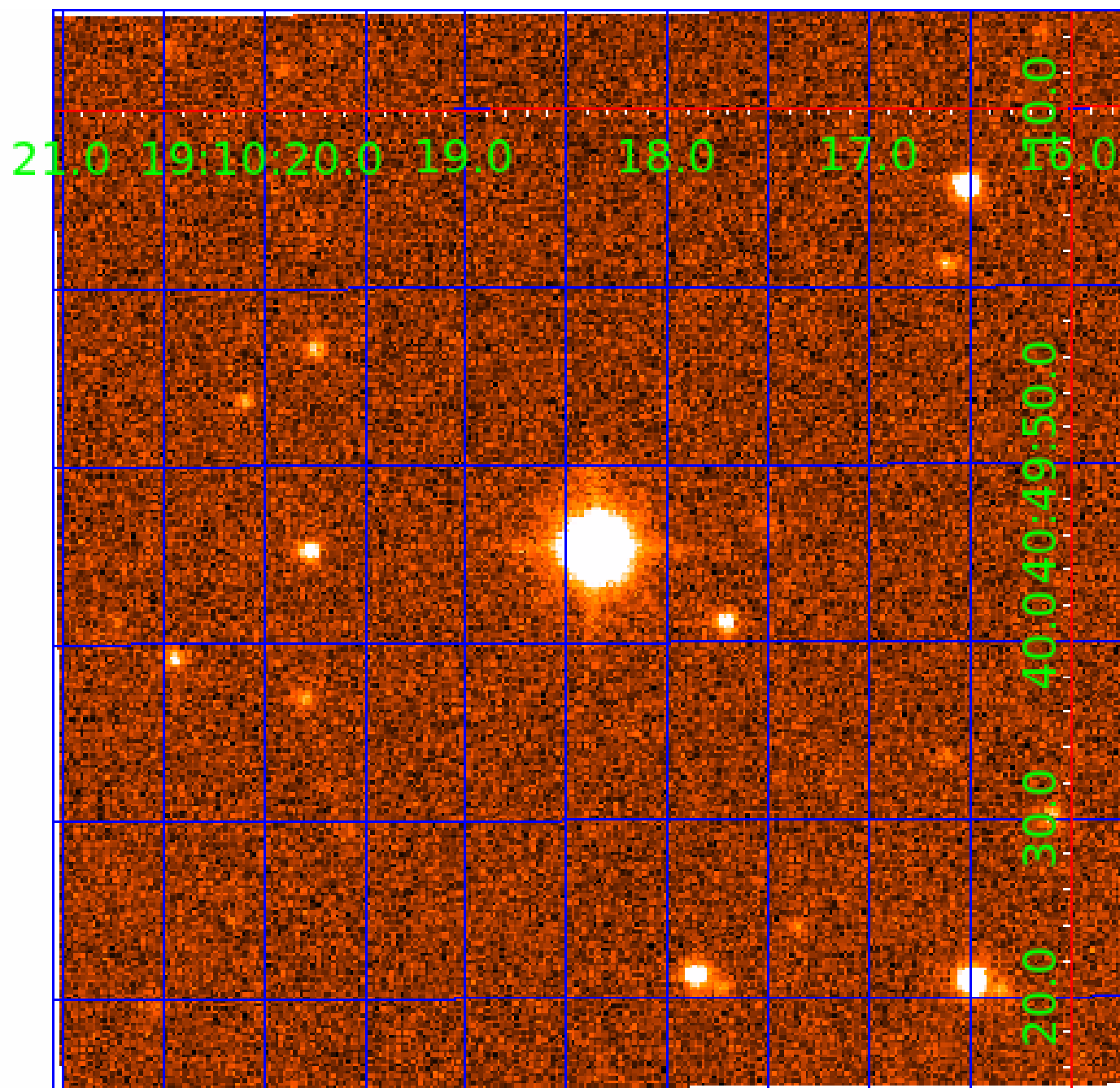


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005607052

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})
005607052-01	OBS	No	382.889253	495.911446	795.4	3.485	17.3	6.1	0.71	5157	1.97	0.37
005607052-02	OBS	No	573.278654	358.271437	1186.2	4.292	17.2	8.8	0.71	5157	2.54	0.22
005607052-03	OBS	No	287.779482	342.287953	1009.9	6.532	16.5	8.0	0.71	5157	2.57	0.55
005607052-04	OBS	No	556.106136	343.318465	1035.2	4.761	13.6	6.9	0.71	5157	2.36	0.23
005607052-05	OBS	No	680.366862	175.998293	1012.9	5.022	11.7	7.5	0.71	5157	2.30	0.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005607052-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
005607052-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005607052-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
005607052-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005607052-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

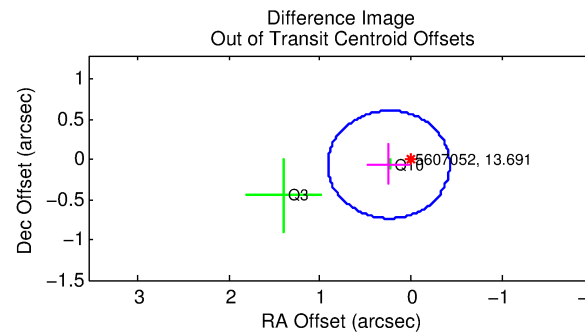
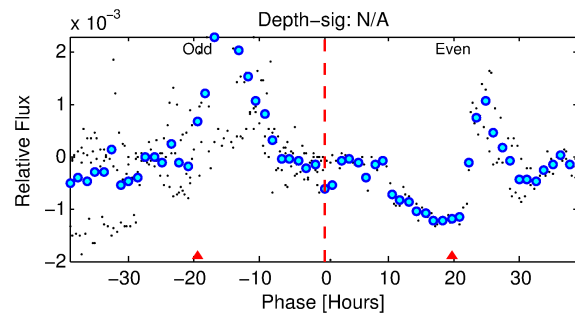
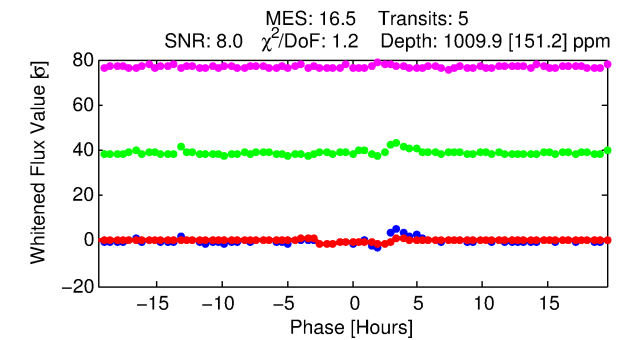
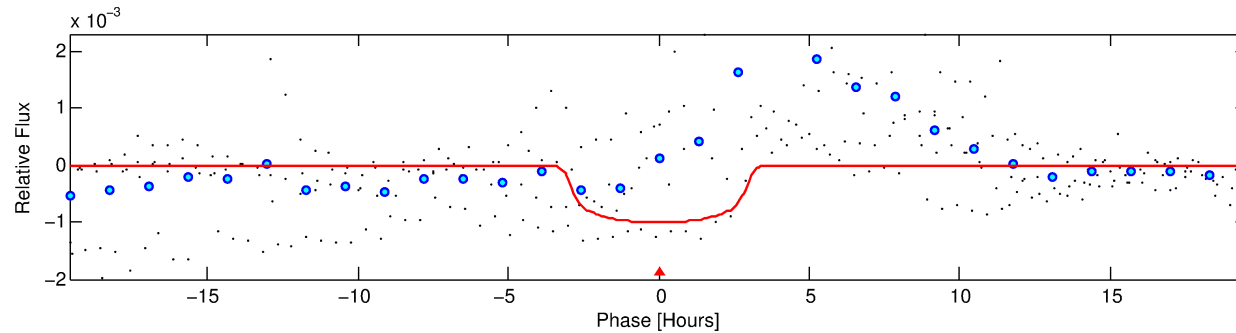
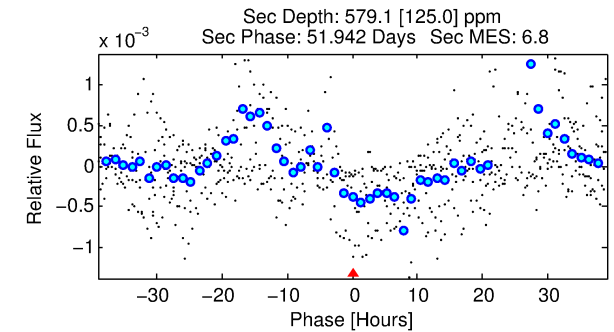
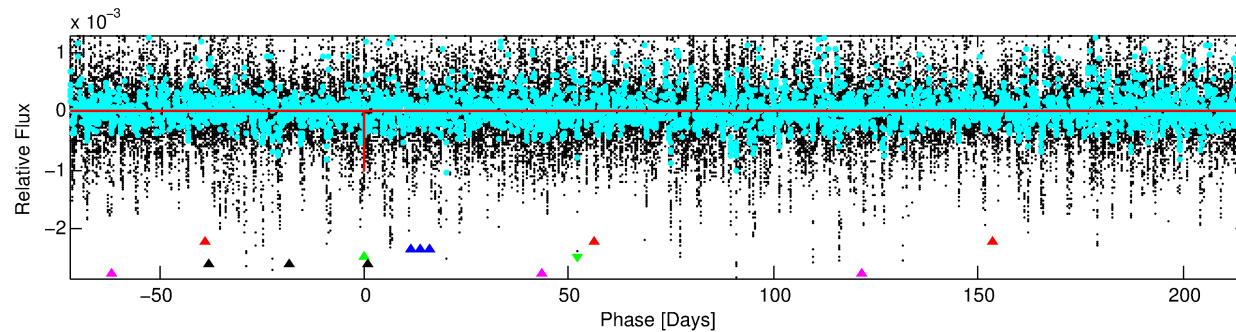
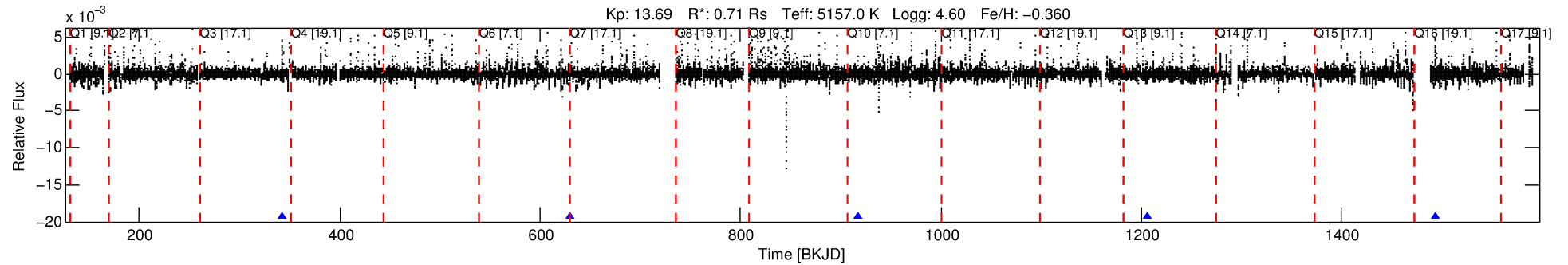
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005607052-03

No Significant Match Found

DV One-Page Summary

KIC: 5607052 Candidate: 3 of 5 Period: 287.779 d



DV Fit Results:

Period = 287.77948 [0.00236] d
Epoch = 342.2880 [0.0063] BKJD
Rp/R* = 0.0330 [0.0046]
a/R* = 209.19 [86.18]
b = 0.83 [0.16]
Seff = 0.55 [0.10]
Teq = 219 [10] K
Rp = 2.57 [0.48] Re
a = 0.7688 [0.0743] AU
Ag = 28591.84 [10792.90] [2.65] σ
Teffp = 4405 [419] K [9.99] σ

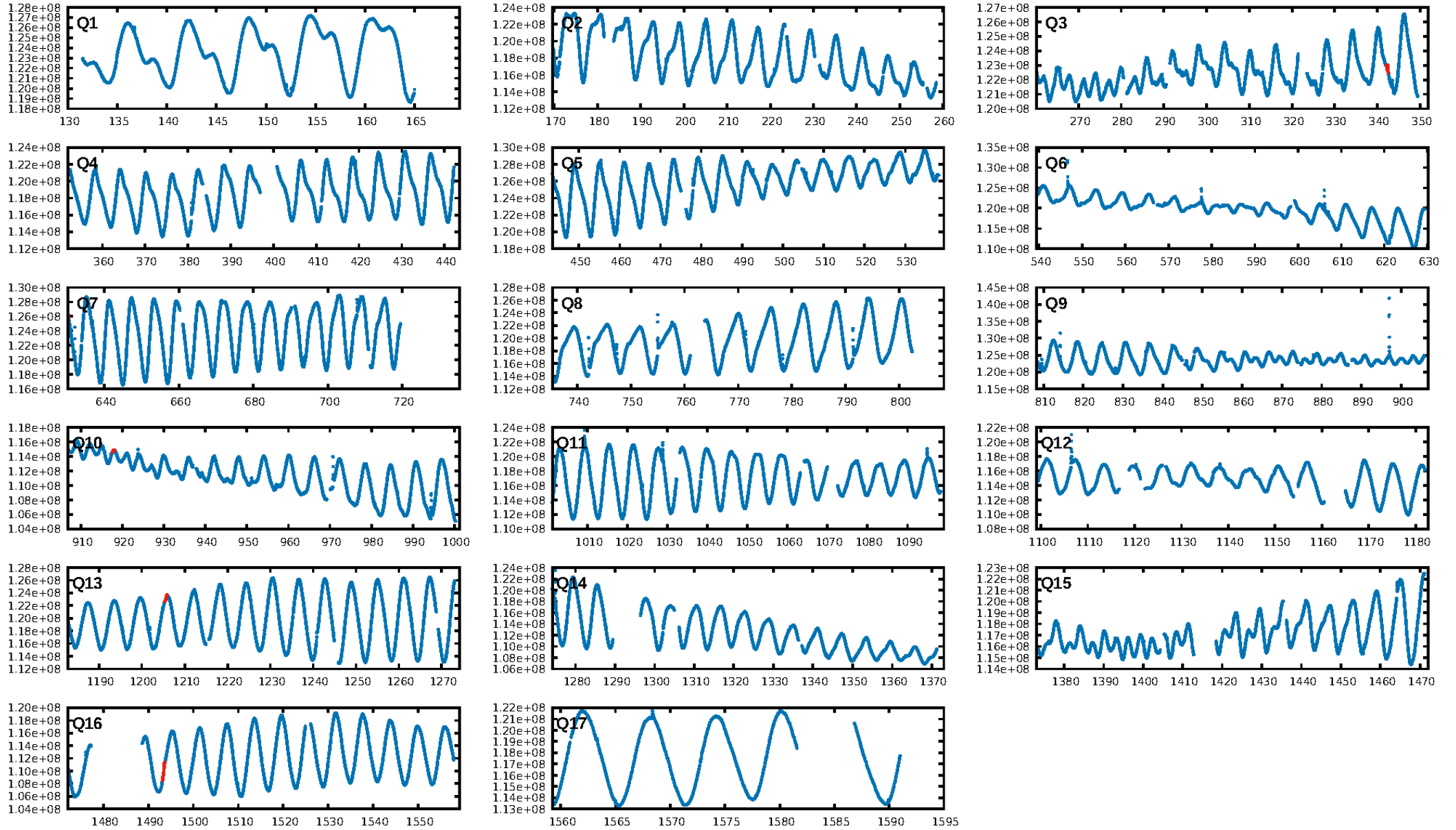
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [308.30] σ
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 76.5%
Bootstrap-pfa: 1.59e-13
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 5.697
Centroid-sig: 21.4%
Centroid-so: 0.410 arcsec [1.40] σ
OotOffset-rm: 0.250 arcsec [1.12] σ
OotOffset-st: 1/1/0/0 [2]
KicOffset-rm: 0.278 arcsec [0.39] σ
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

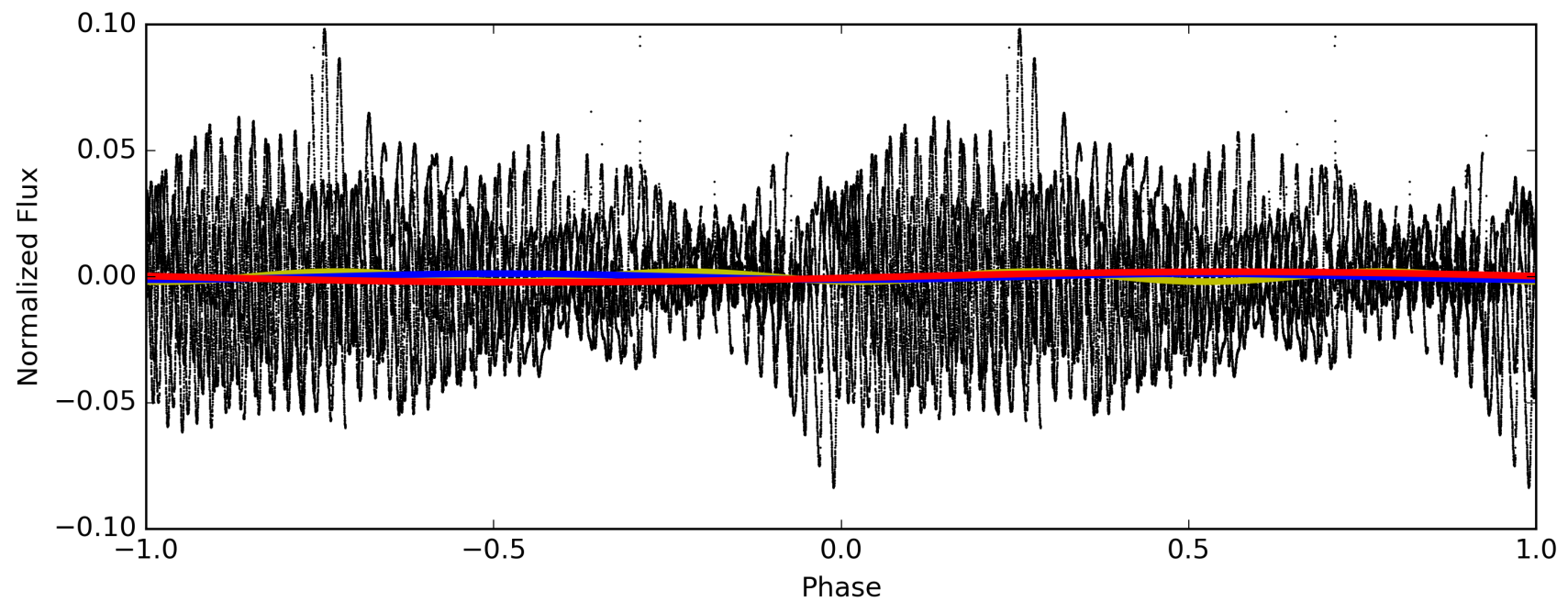
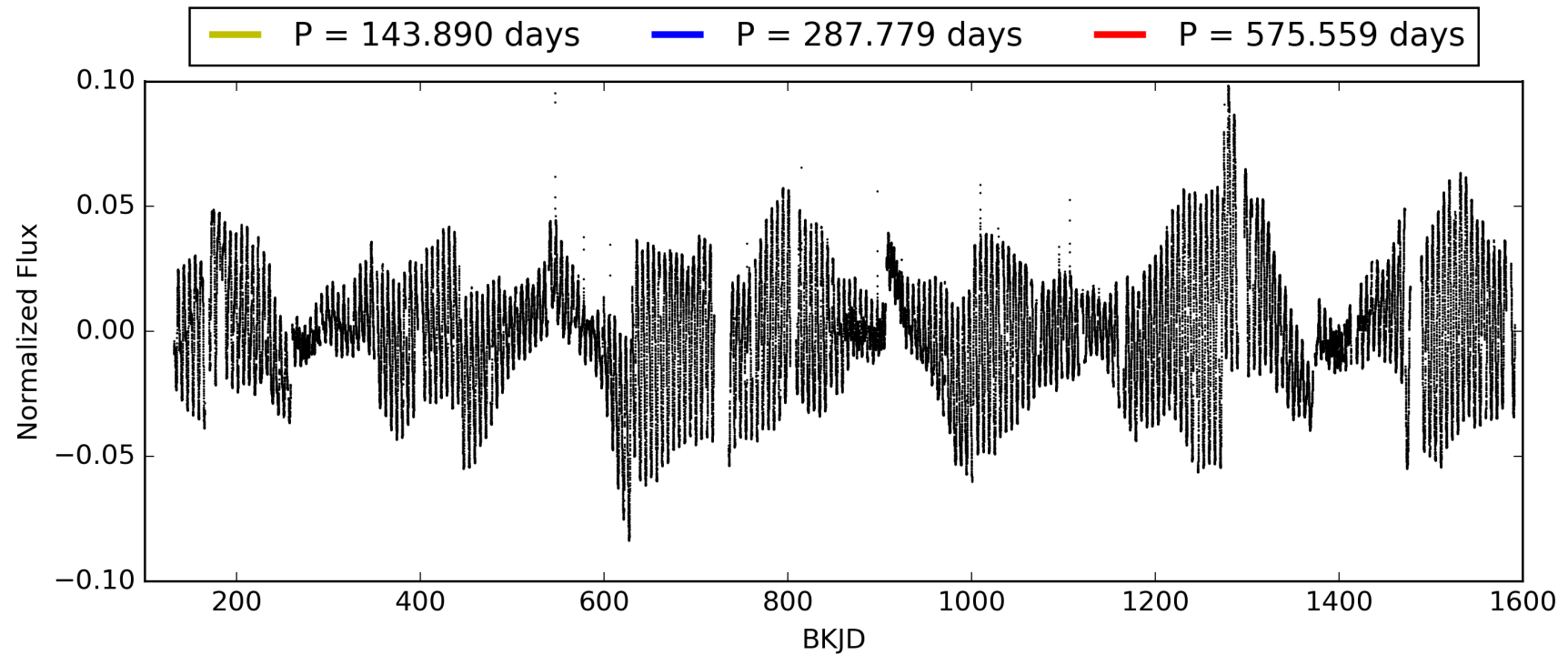
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:49:11 Z

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

TCE 005607052-03, PDC Light Curves

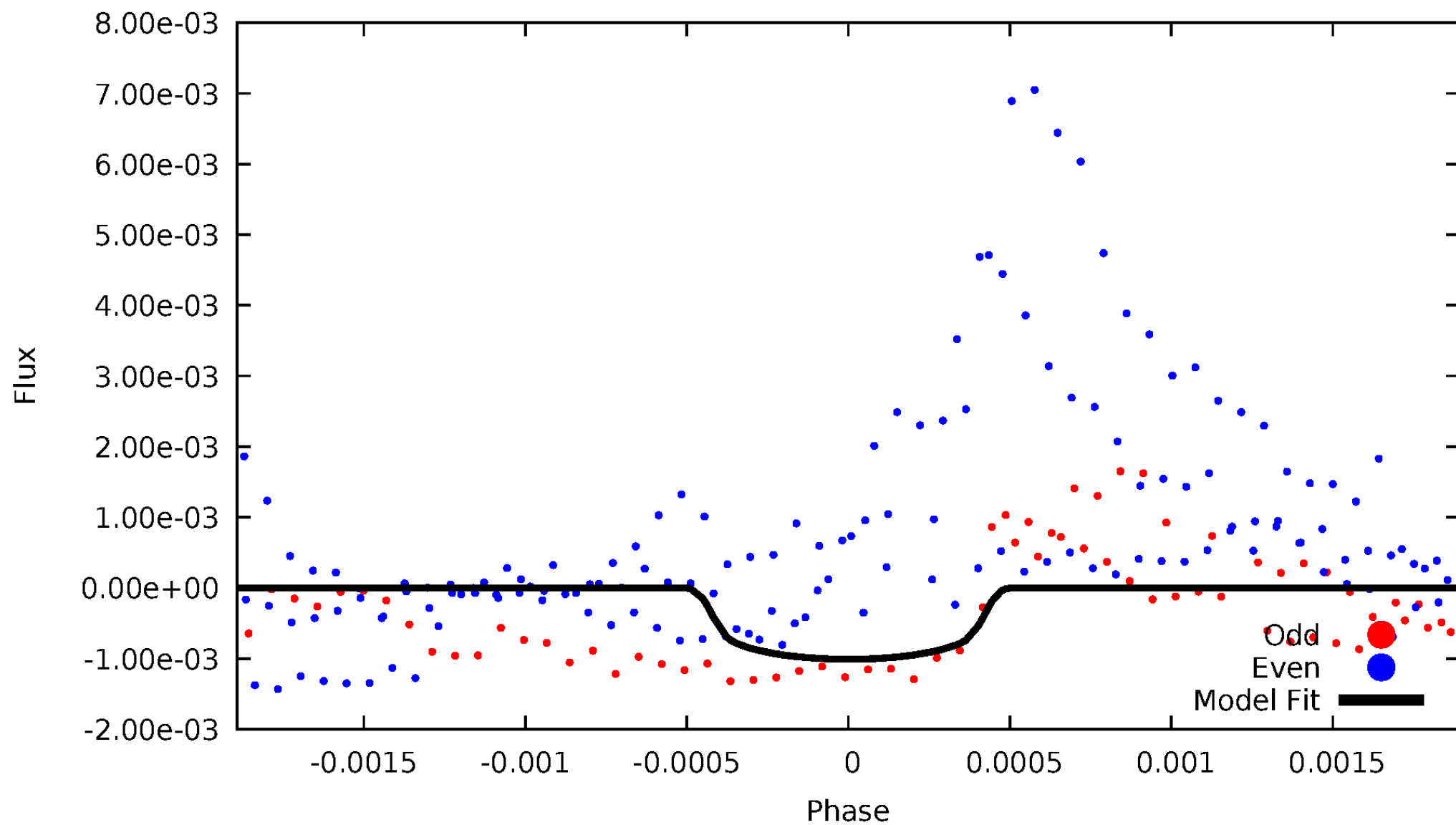


TCE 005607052-03



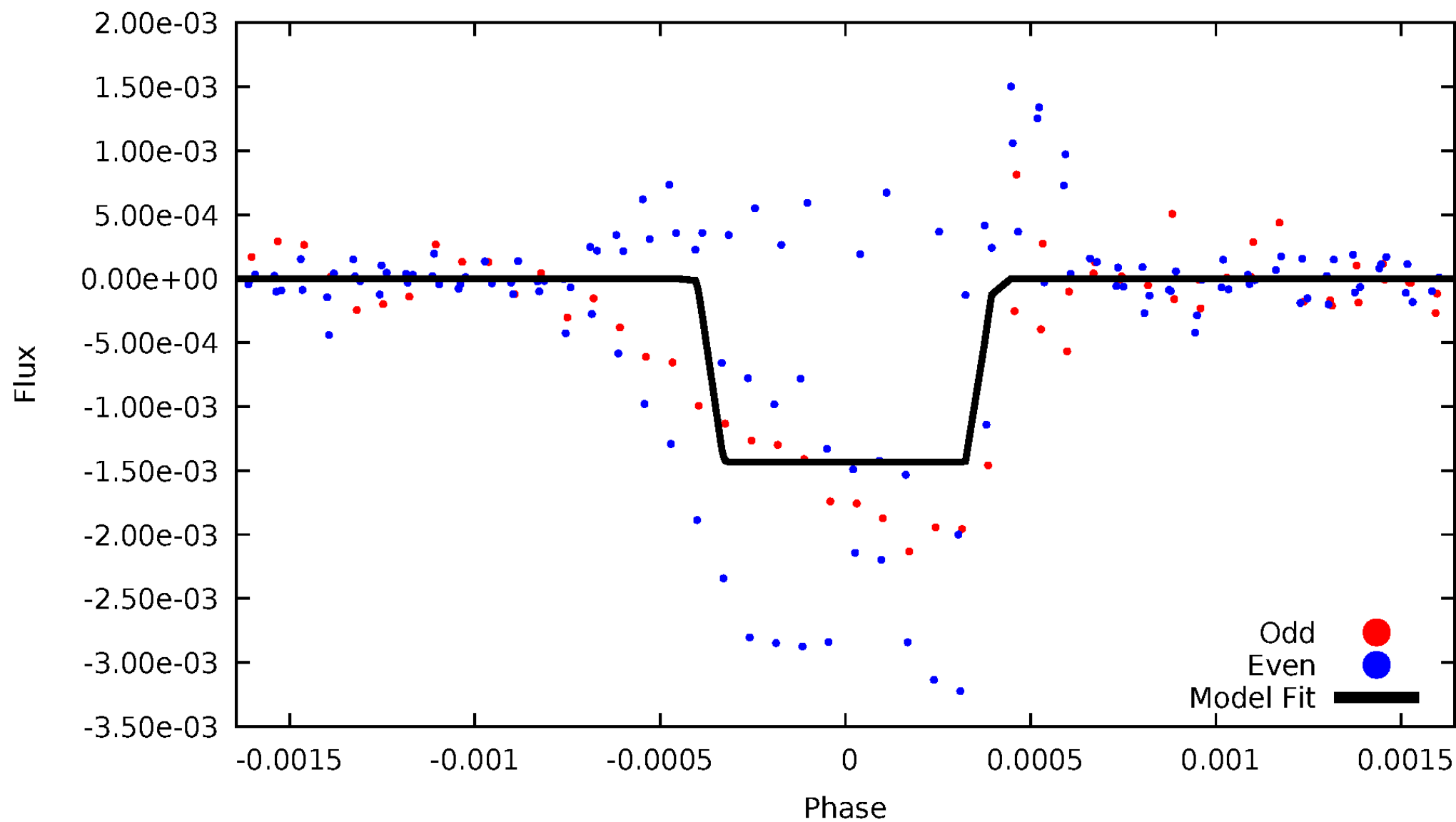
DV Odd/Even

TCE 005607052-03



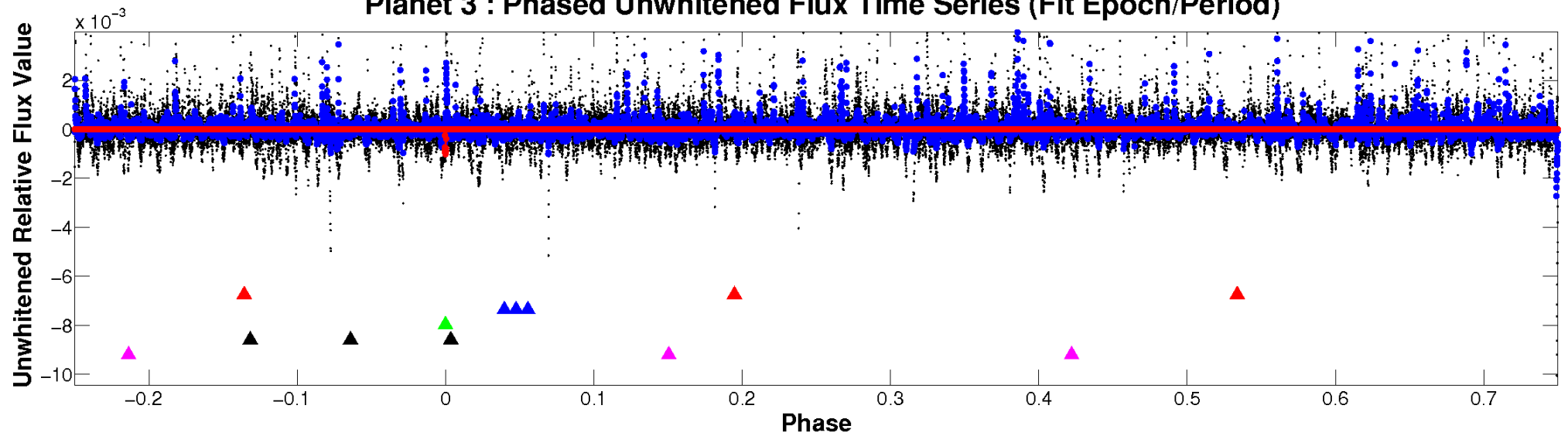
ALT Odd/Even

TCE 005607052-03

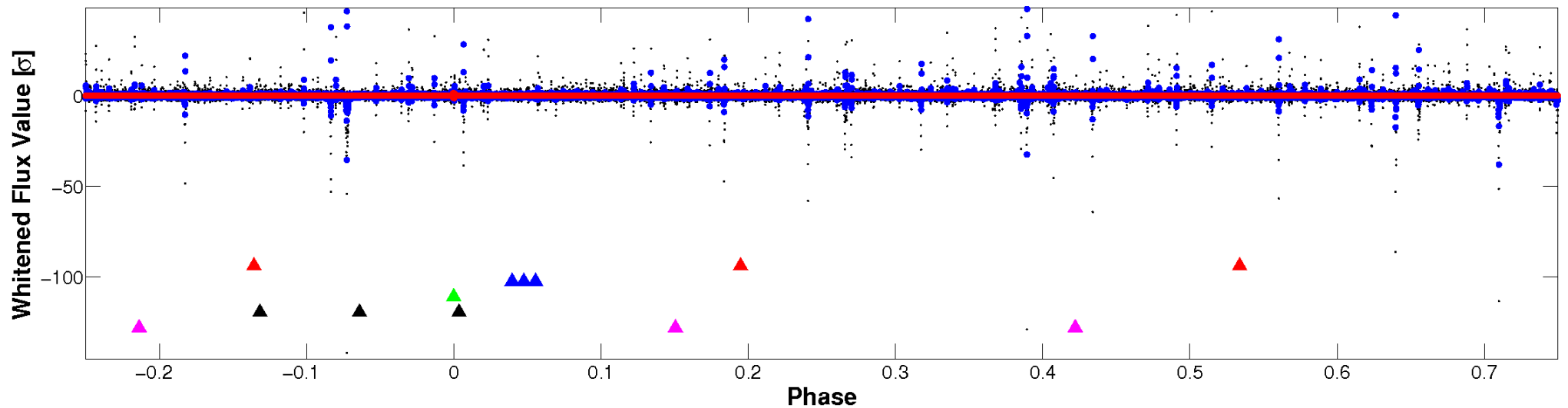


Non-Whitened Vs. Whitened Light Curve

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

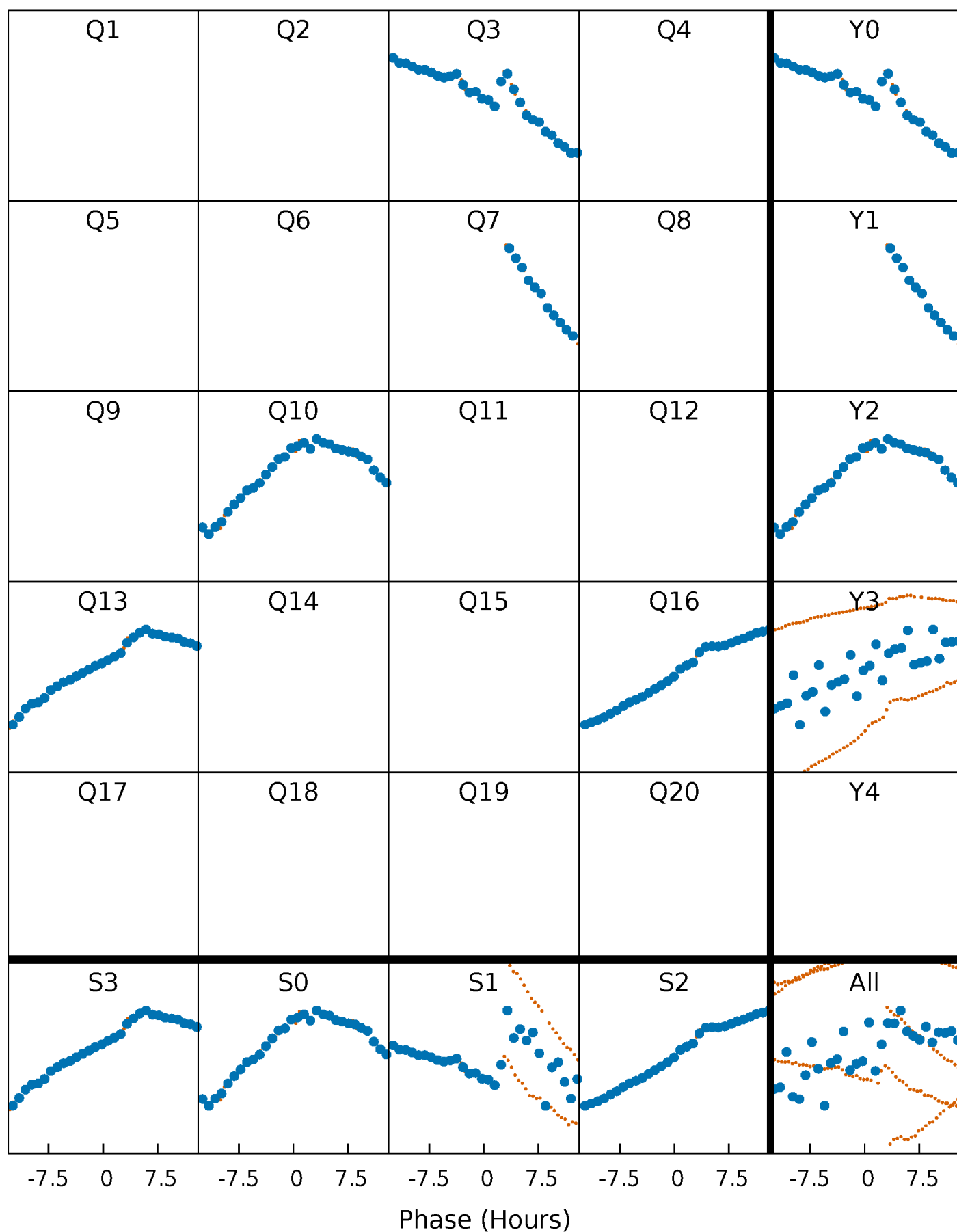


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



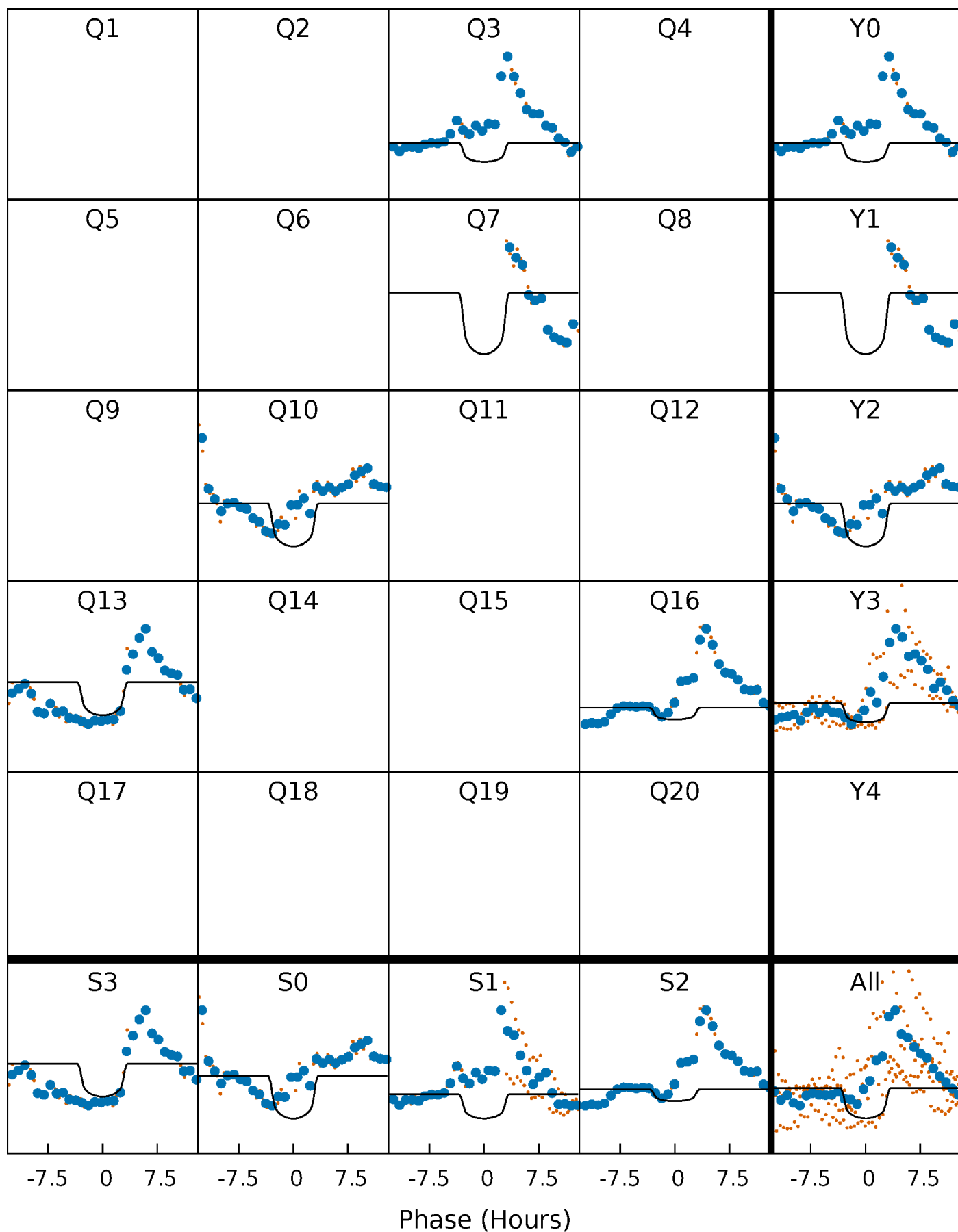
PDC Quarter-Phased Transit Curves

TCE 005607052-03 P=287.779482 Days $T_0=342.287953$ (BKJD)



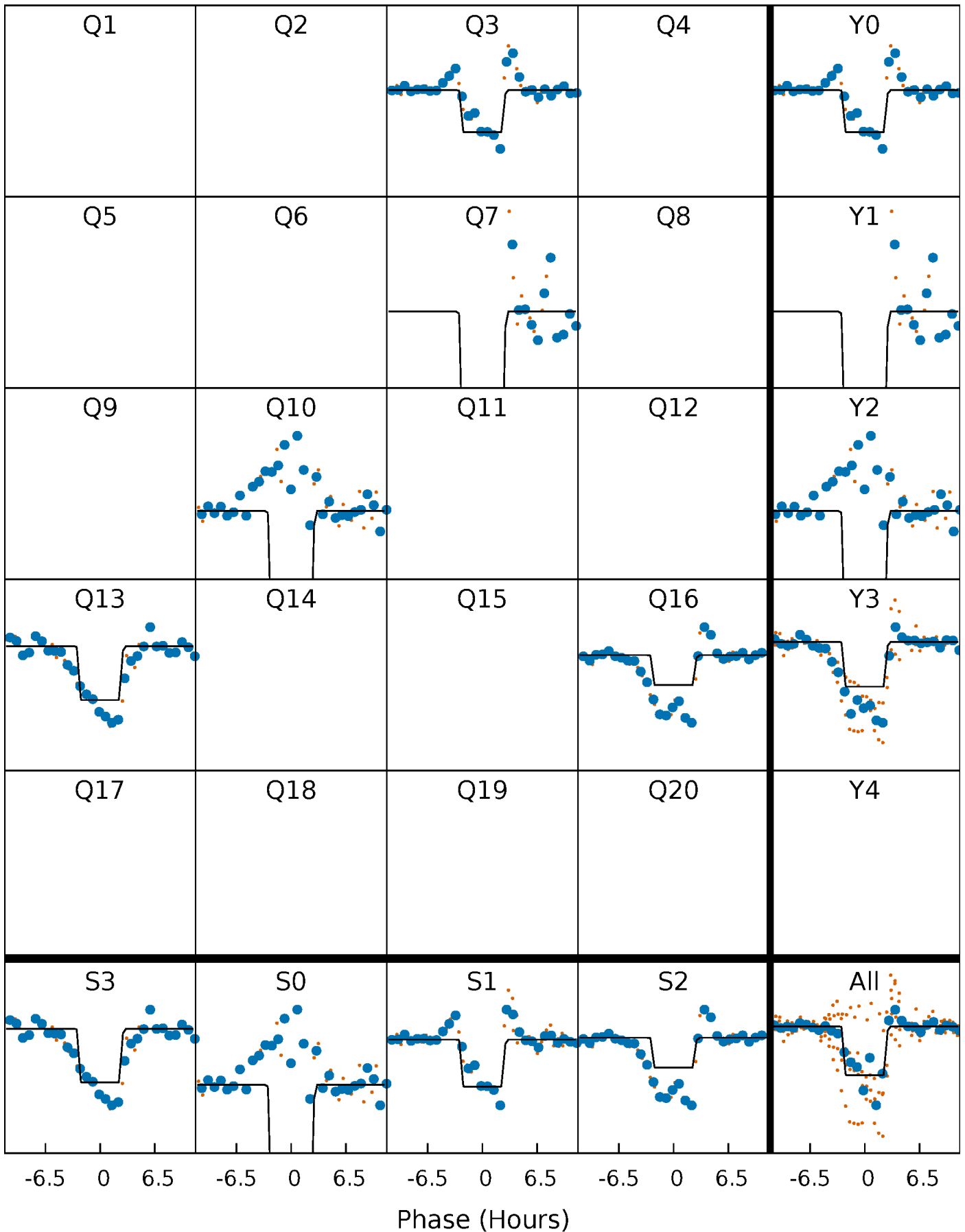
DV Quarter-Phased Transit Curves

TCE 005607052-03 $P=287.779482$ Days $T_0=342.287953$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

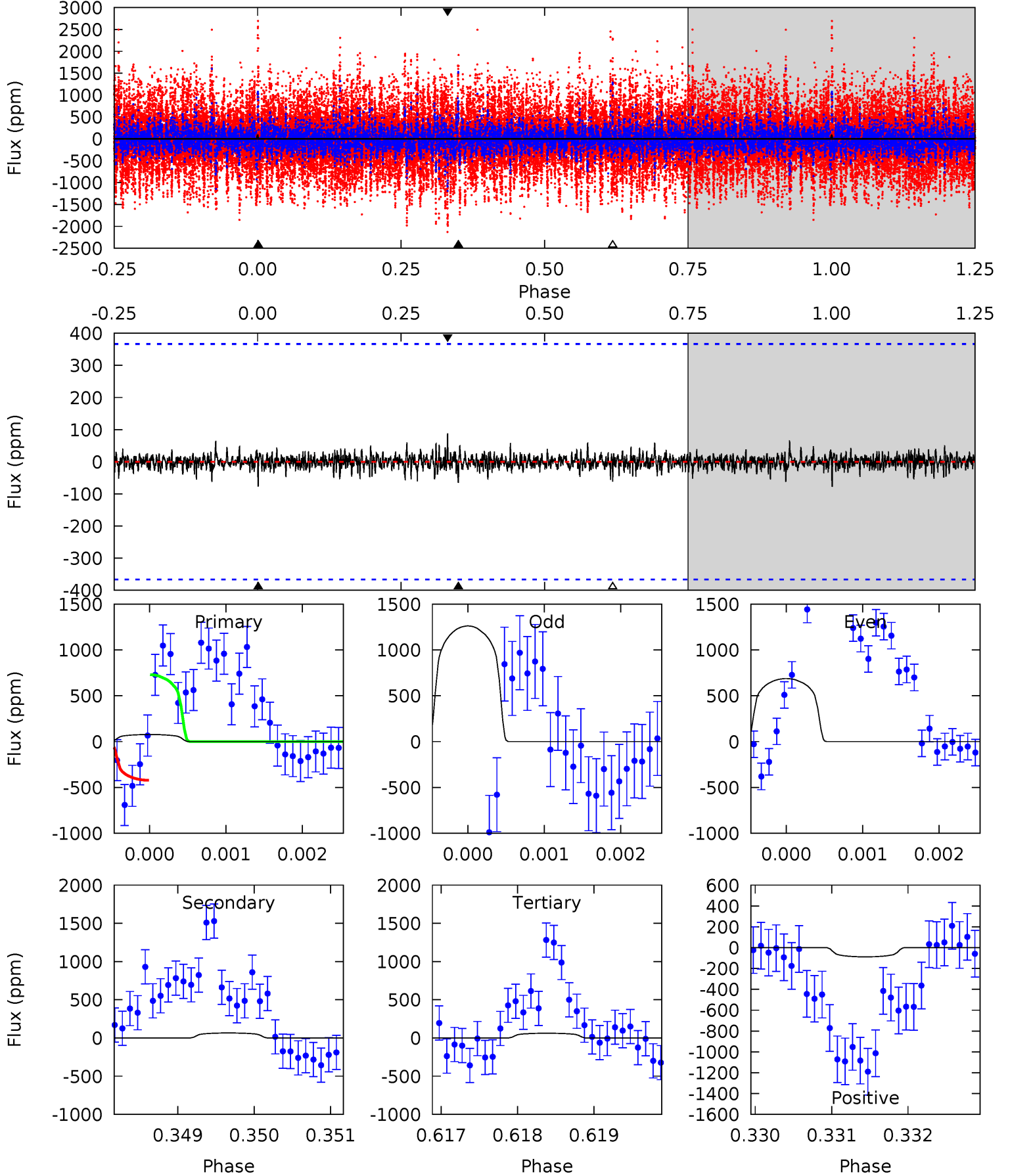
TCE 005607052-03 $P=287.786259$ Days $T_0=342.276413$ (BKJD)



DV Model-Shift Uniqueness Test

005607052-03, P = 287.779482 Days, E = 54.508471 Days

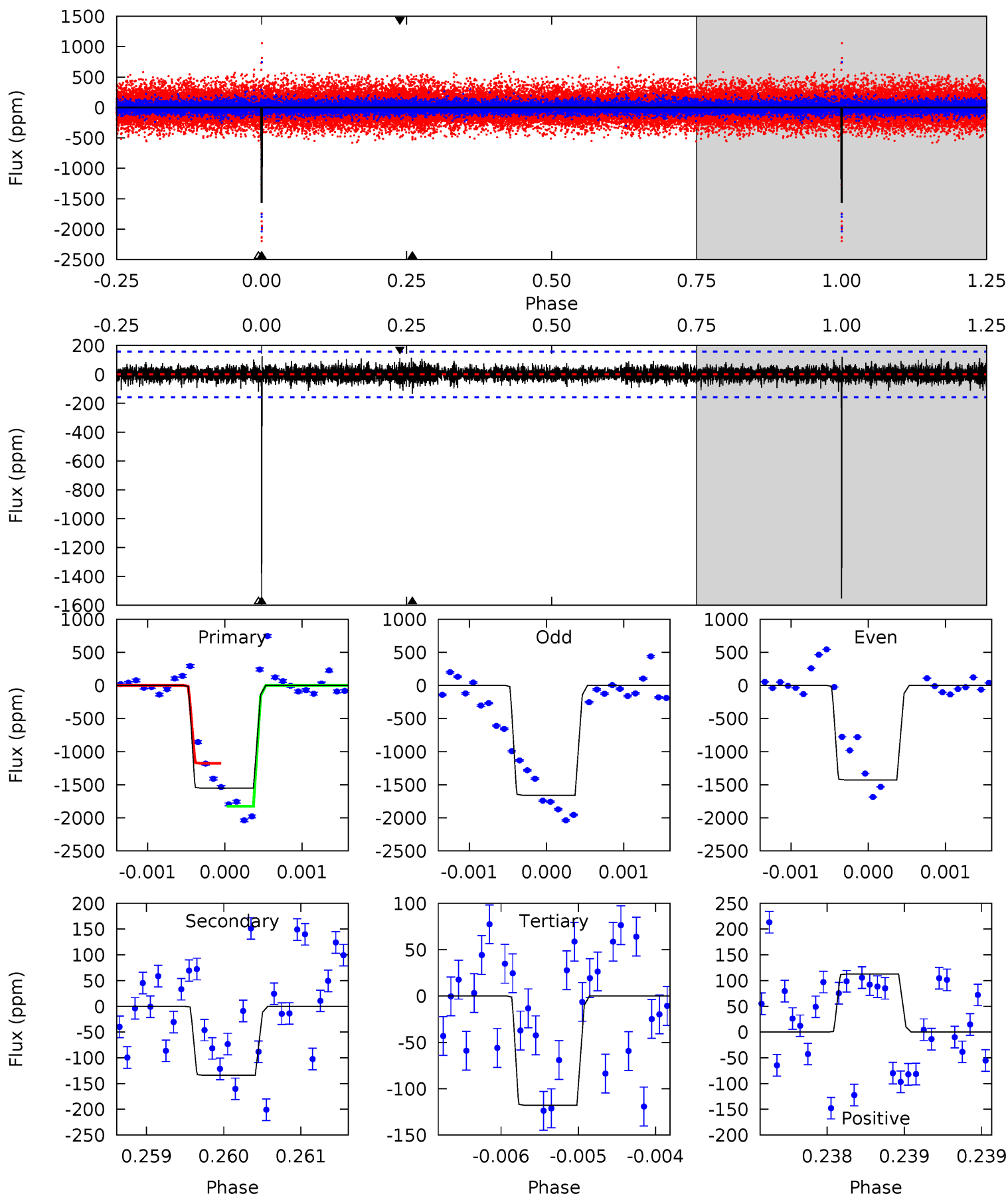
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.15	0.97	0.92	1.31	5.46	3.30	0.24	0.23	-0.16	0.05	-0.34	2.98	0.53	0.53	2.20



Alt Model-Shift Uniqueness Test

005607052-03, P = 287.786259 Days, E = 54.490154 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
53.7	4.63	4.08	3.89	5.48	3.34	0.86	49.7	49.9	0.55	0.74	3.95	0.91	0.07	11.1



Stellar Parameters For KIC 005607052

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5157^{+179}_{-179}	$4.596^{+0.048}_{-0.066}$	$-0.360^{+0.300}_{-0.300}$	$0.713^{+0.088}_{-0.066}$	$0.732^{+0.088}_{-0.059}$	$2.841^{+0.652}_{-0.633}$
	+3%/-3%	+1%/-1%	+83%/-83%	+12%/-9%	+12%/-8%	+23%/-22%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 005607052-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-65 ± 67	$2.59^{+0.41}_{-0.38}$	308^{+14}_{-12}	3144^{+420}_{-1209}	3215^{+3779}_{-3151}
Alt.	-134 ± 29	$2.96^{+0.45}_{-0.41}$	307^{+13}_{-13}	3339^{+229}_{-175}	4847^{+2164}_{-1359}

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 $A_{obs} \gg 1.0$

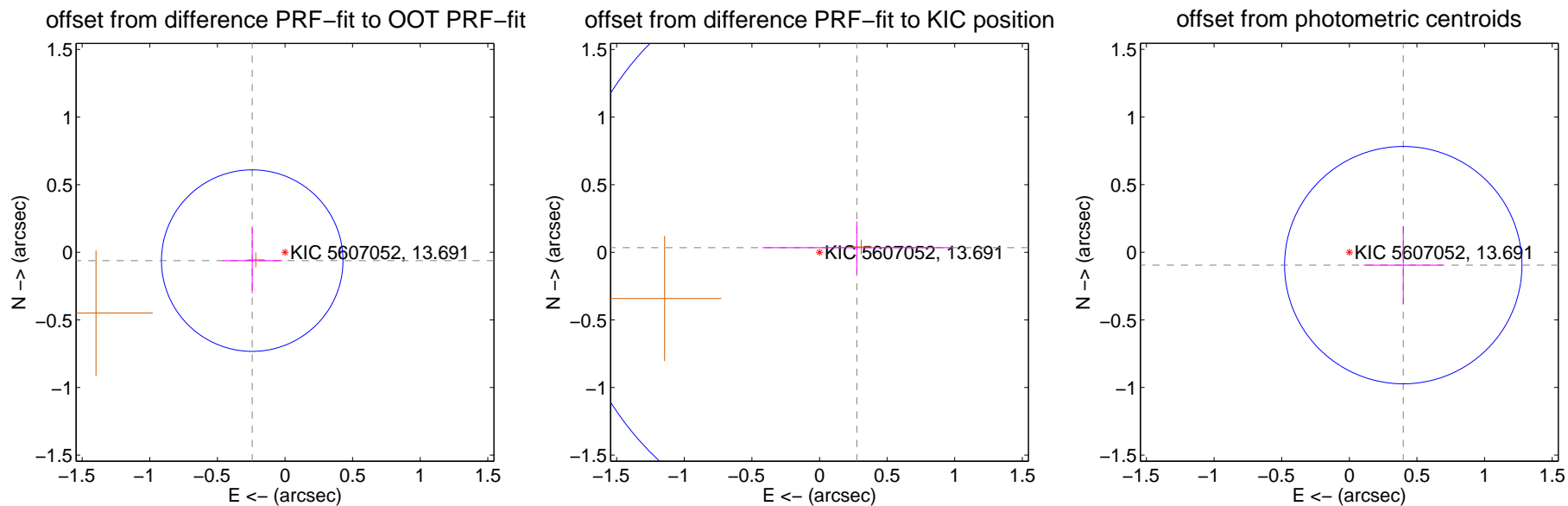
DV Centroid Data

Supplemental centroid analysis for 005607052-03. Kepler magnitude: 13.69. Transit SNR 7.99

There are 0 quarters with good PRF difference image offsets

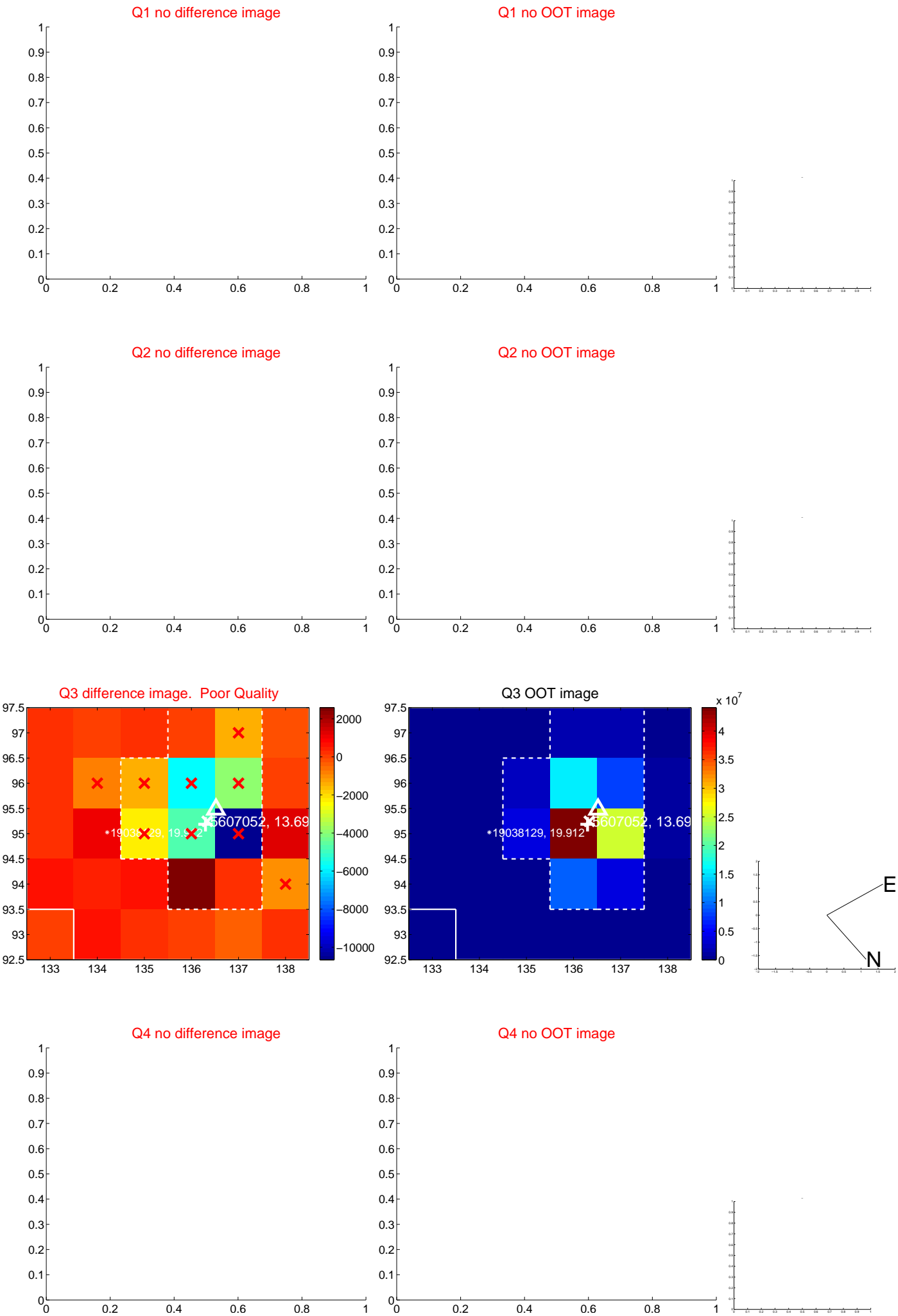
The direct PRF centroid is offset from the target star catalog position by about 0.53 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.250 ± 0.224	1.12	0.242 ± 0.222	-0.062 ± 0.242
PRF-fit source offset from KIC position	0.278 ± 0.716	0.39	-0.276 ± 0.699	0.034 ± 0.194
photometric centroid source offset	0.41 ± 0.29	1.40	-0.40 ± 0.29	-0.10 ± 0.29



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.

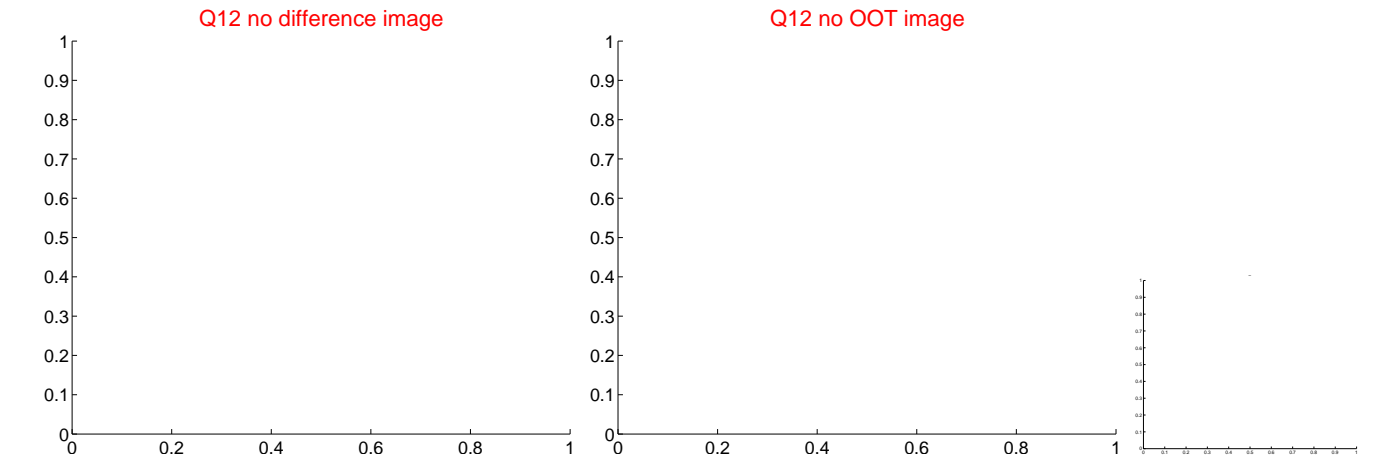
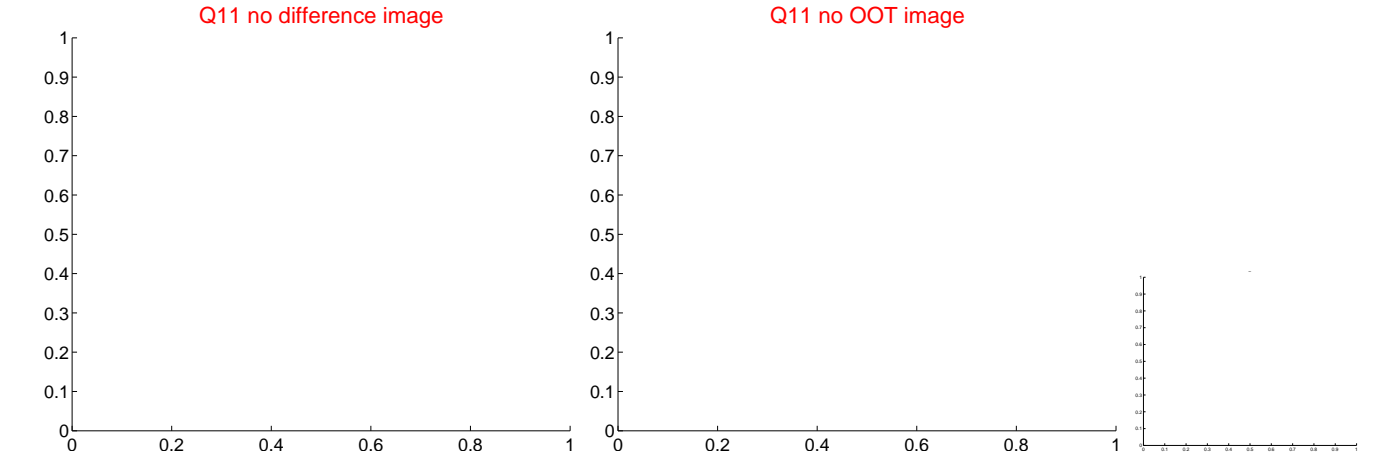
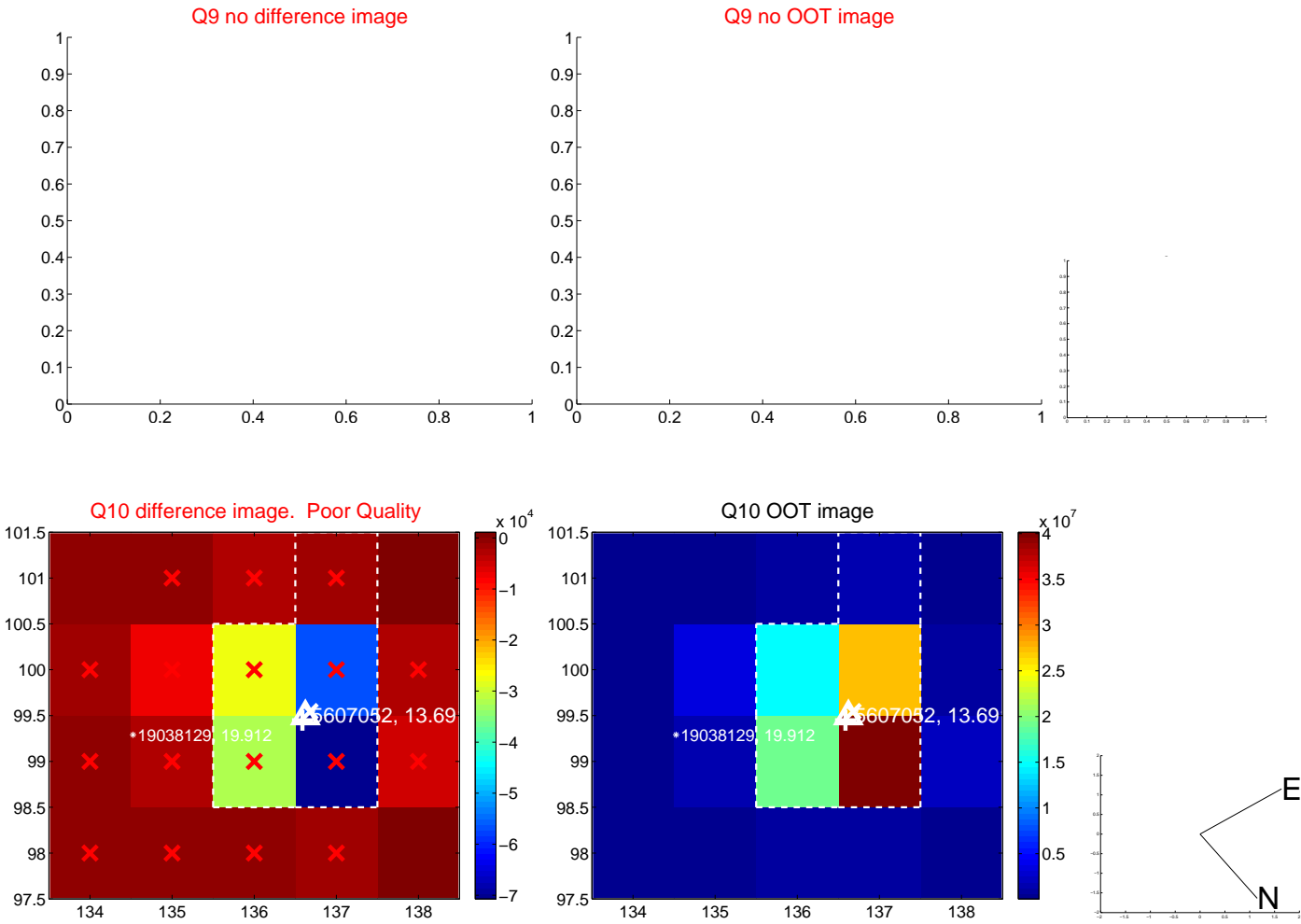
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



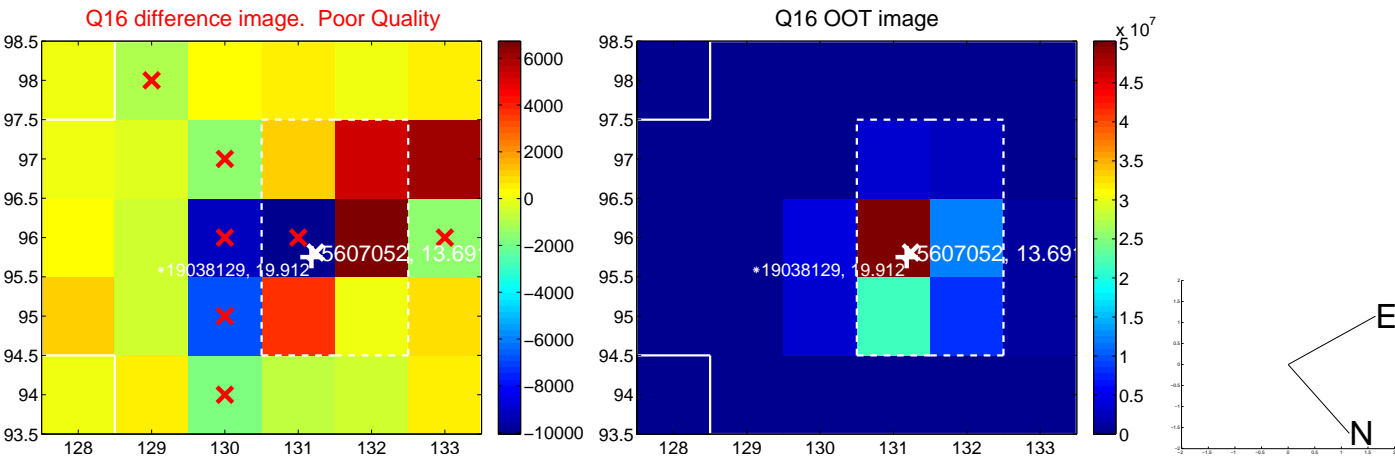
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



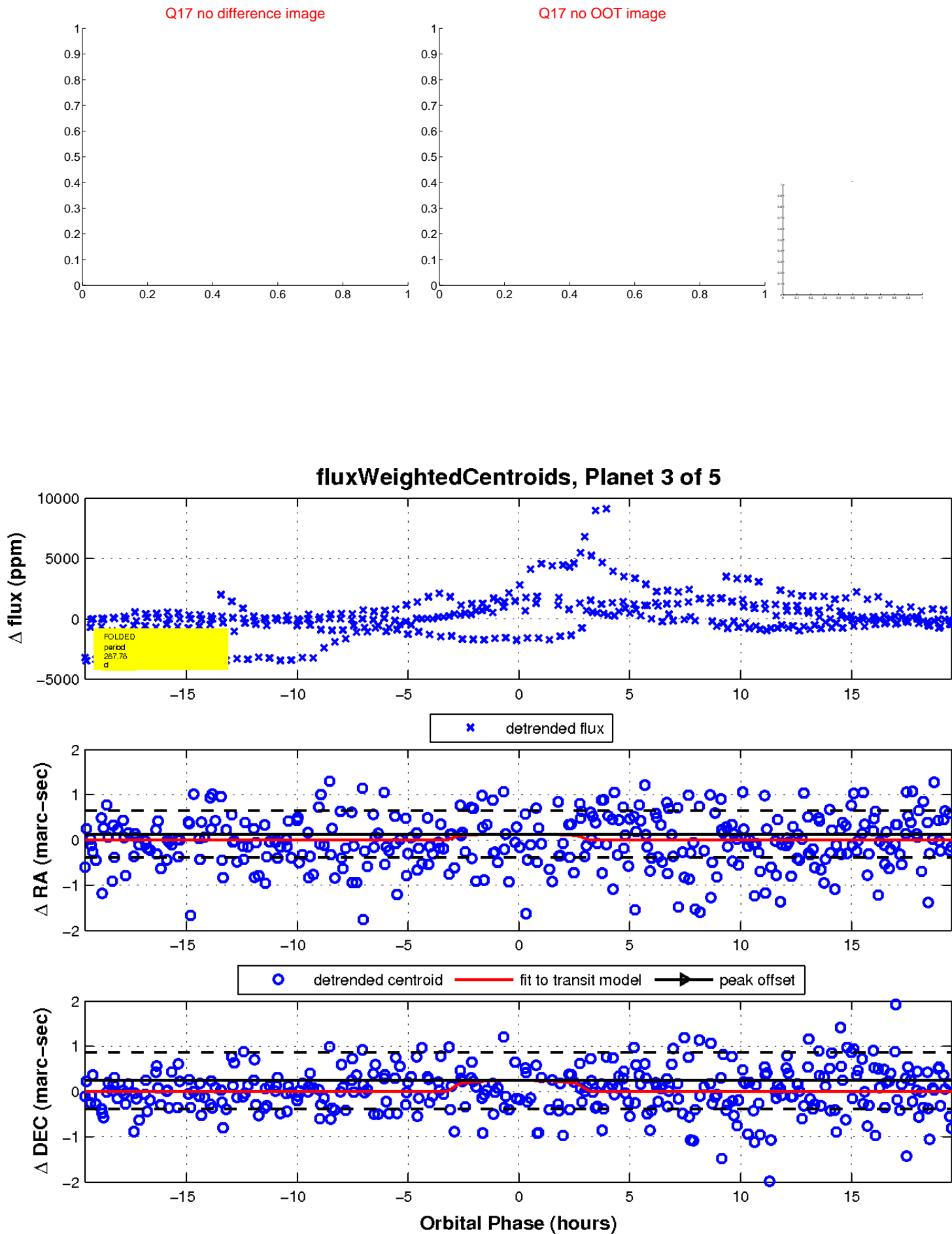
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



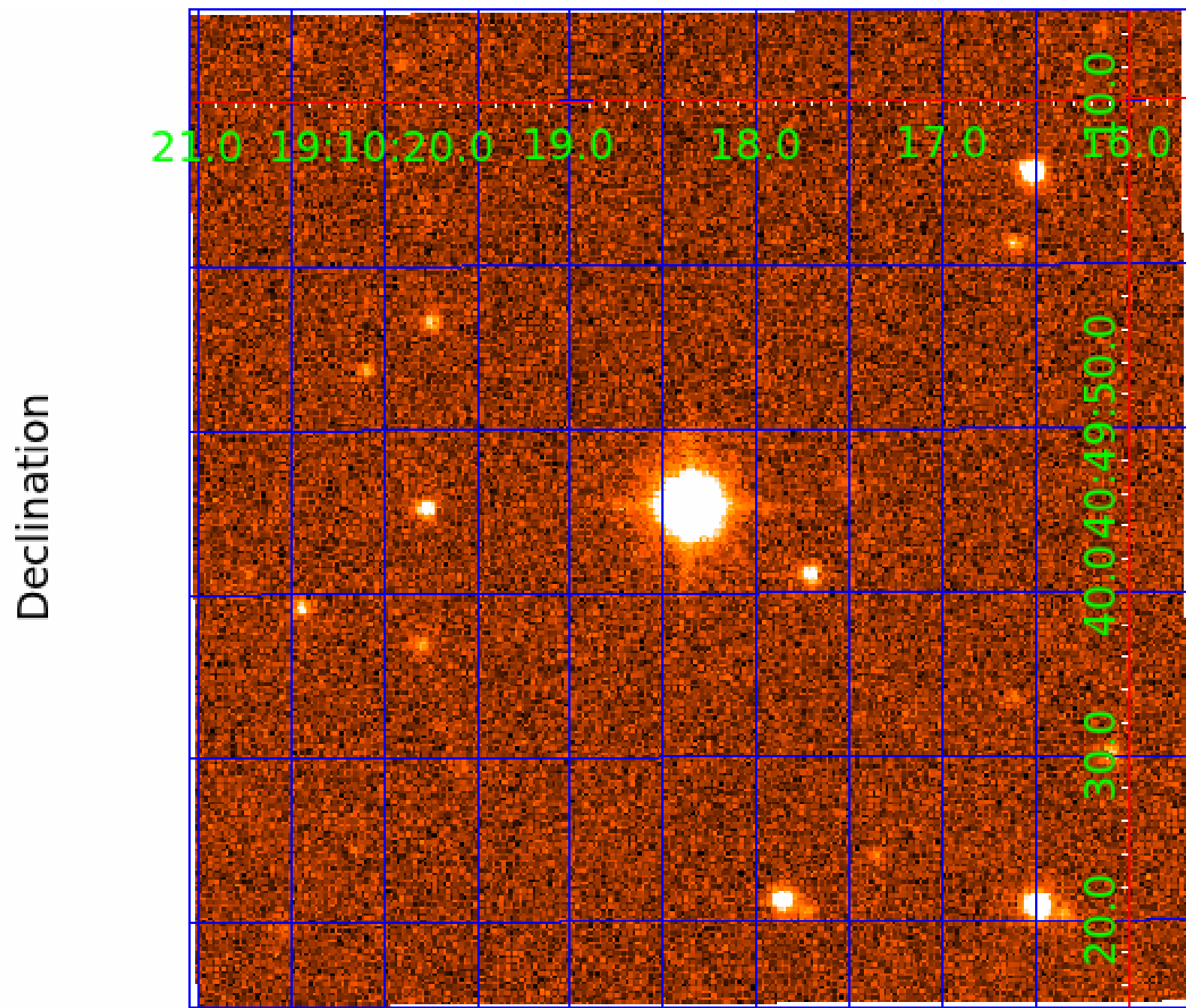
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image



KIC 005607052

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})
005607052-01	OBS	No	382.889253	495.911446	795.4	3.485	17.3	6.1	0.71	5157	1.97	0.37
005607052-02	OBS	No	573.278654	358.271437	1186.2	4.292	17.2	8.8	0.71	5157	2.54	0.22
005607052-03	OBS	No	287.779482	342.287953	1009.9	6.532	16.5	8.0	0.71	5157	2.57	0.55
005607052-04	OBS	No	556.106136	343.318465	1035.2	4.761	13.6	6.9	0.71	5157	2.36	0.23
005607052-05	OBS	No	680.366862	175.998293	1012.9	5.022	11.7	7.5	0.71	5157	2.30	0.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005607052-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
005607052-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005607052-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
005607052-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005607052-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

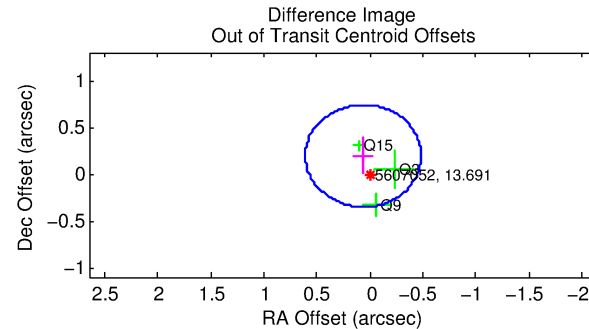
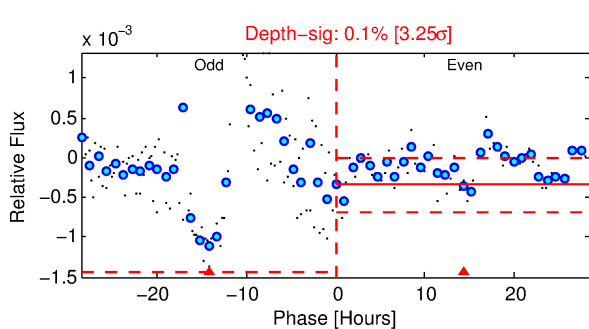
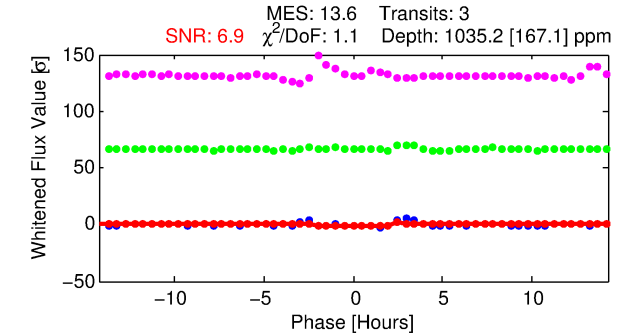
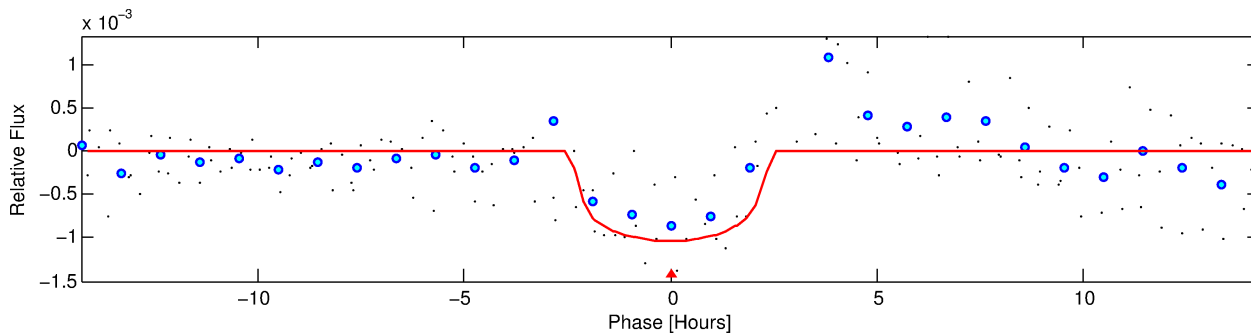
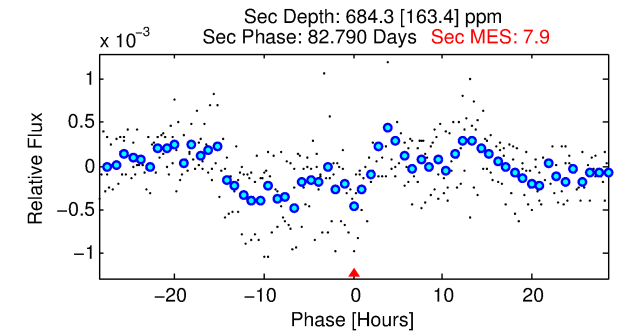
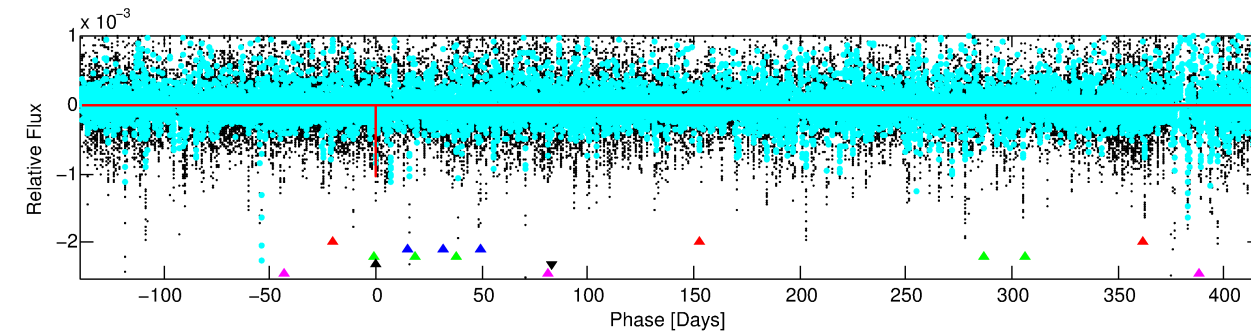
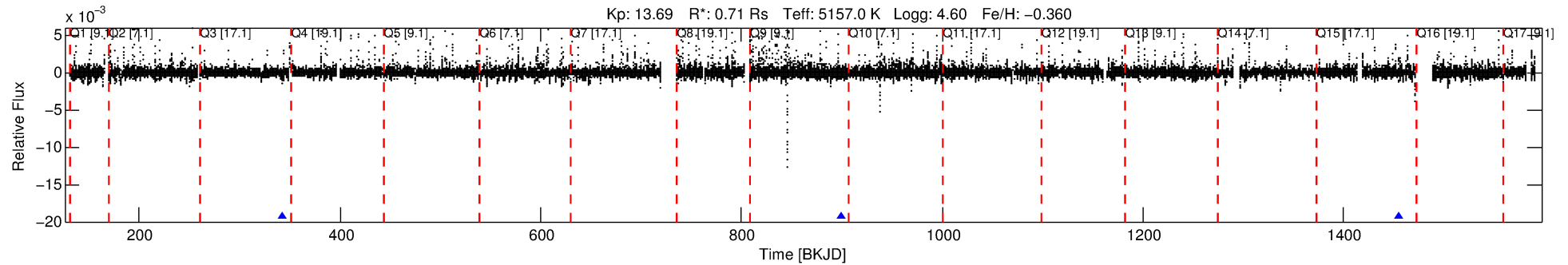
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005607052-04

No Significant Match Found

DV One-Page Summary

KIC: 5607052 Candidate: 4 of 5 Period: 556.106 d



DV Fit Results:

Period = 556.10614 [0.00466] d
Epoch = 343.3185 [0.0063] BKJD
Rp/R* = 0.0303 [0.0269]
a/R* = 766.54 [2516.24]
b = 0.57 [3.94]
Seff = 0.23 [0.04]
Teq = 176 [8] K
Rp = 2.36 [2.11] Re
a = 1.1927 [0.1152] AU
Ag = 96277.01 [172667.65] [0.56σ]
Teffp = 4791 [2149] K [2.15σ]

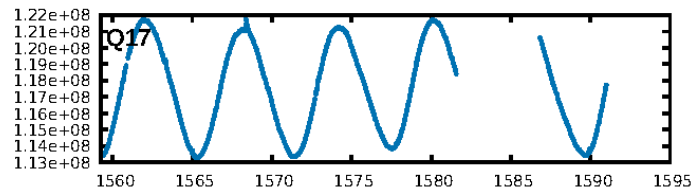
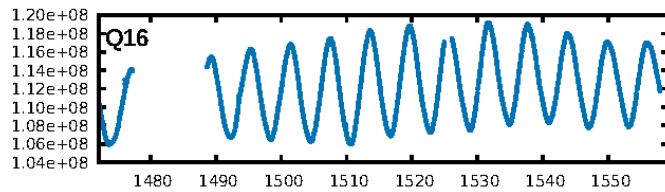
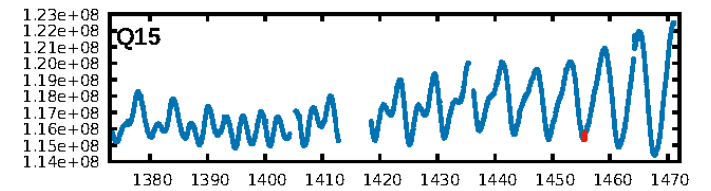
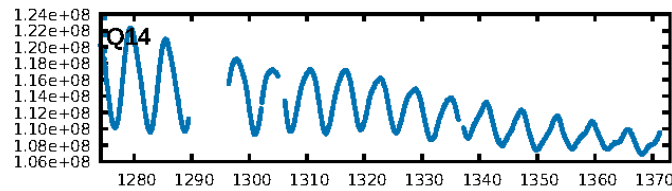
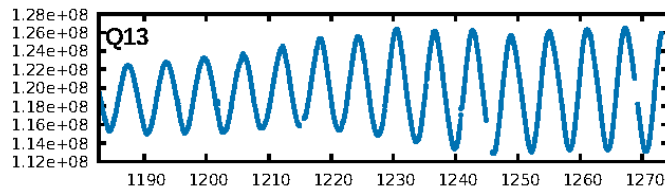
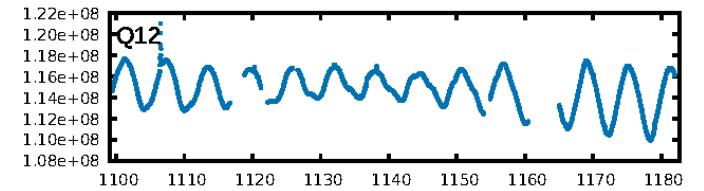
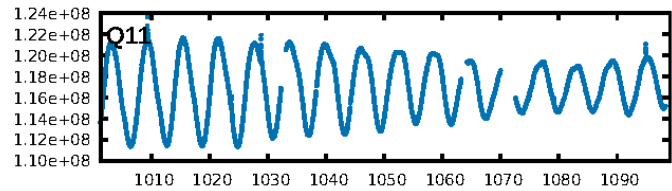
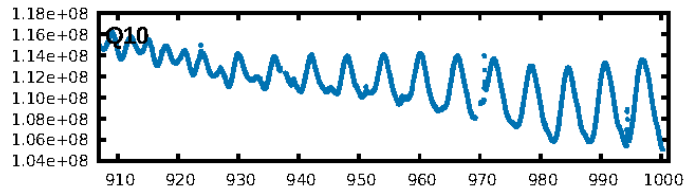
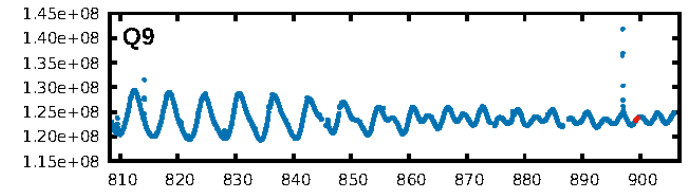
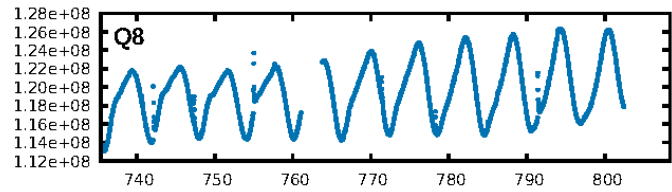
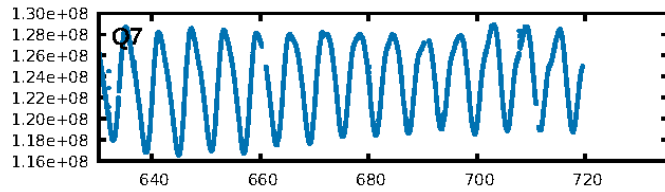
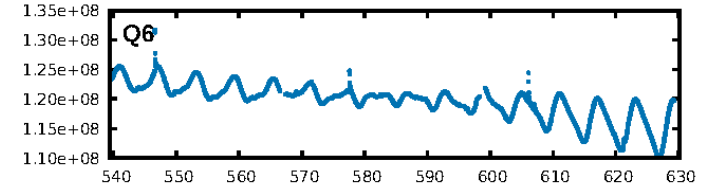
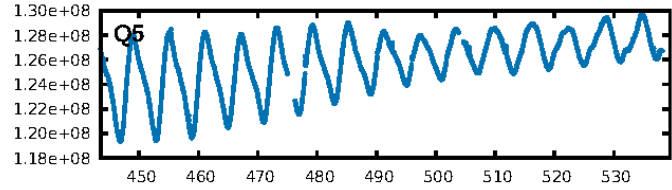
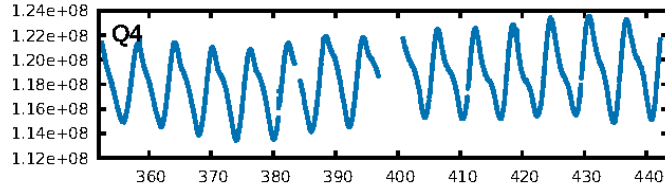
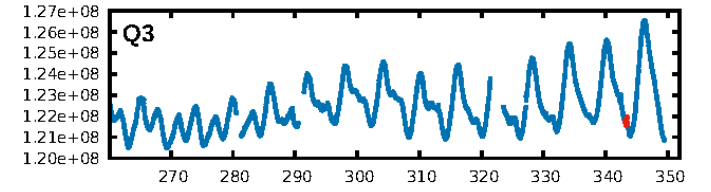
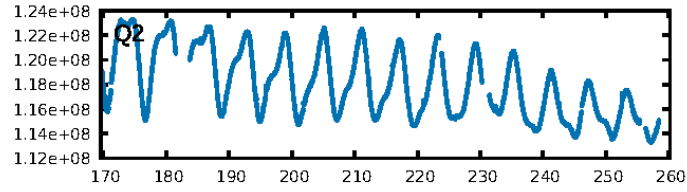
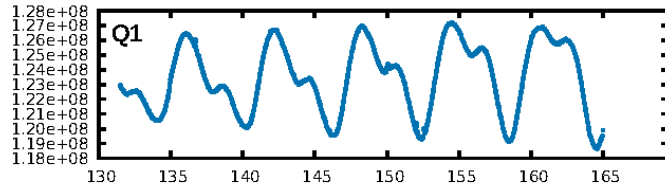
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [704.54σ]
LongPeriod-sig: 100.0% [64.30σ]
ModelChiSquare2-sig: 0.8%
ModelChiSquareGof-sig: 85.6%
Bootstrap-pfa: 3.20e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.221
Centroid-sig: 0.5%
Centroid-so: 0.748 arcsec [2.01σ]
OotOffset-rm: 0.203 arcsec [1.12σ]
OotOffset-st: 0/2/0/1 [3]
KicOffset-rm: 0.355 arcsec [1.97σ]
KicOffset-st: 0/2/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

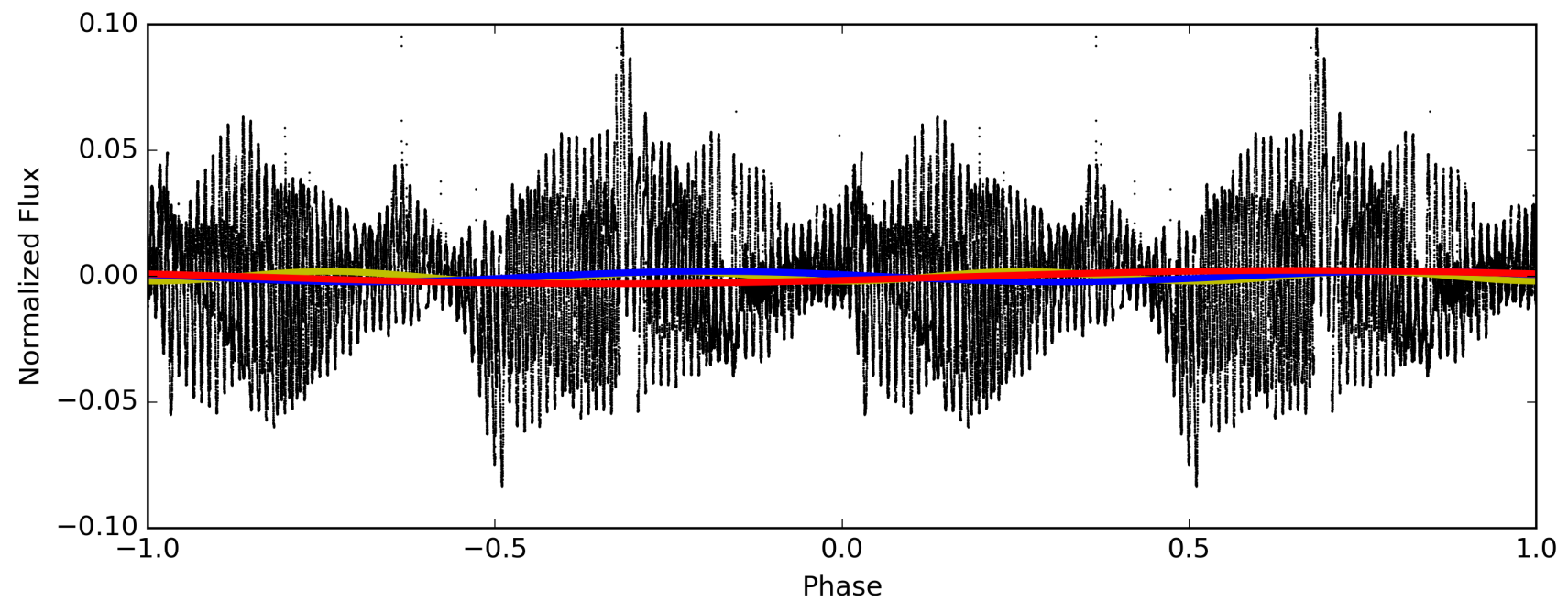
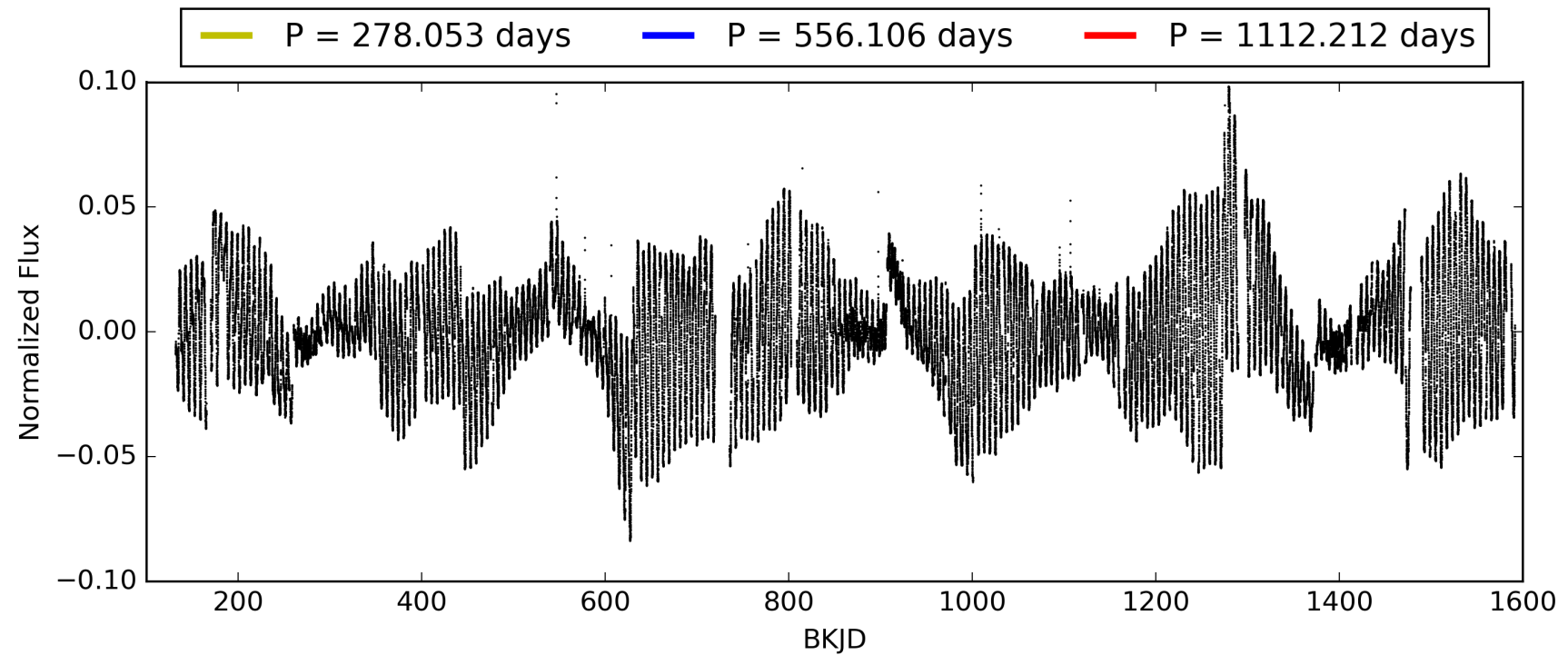
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:49:28 Z

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

TCE 005607052-04, PDC Light Curves

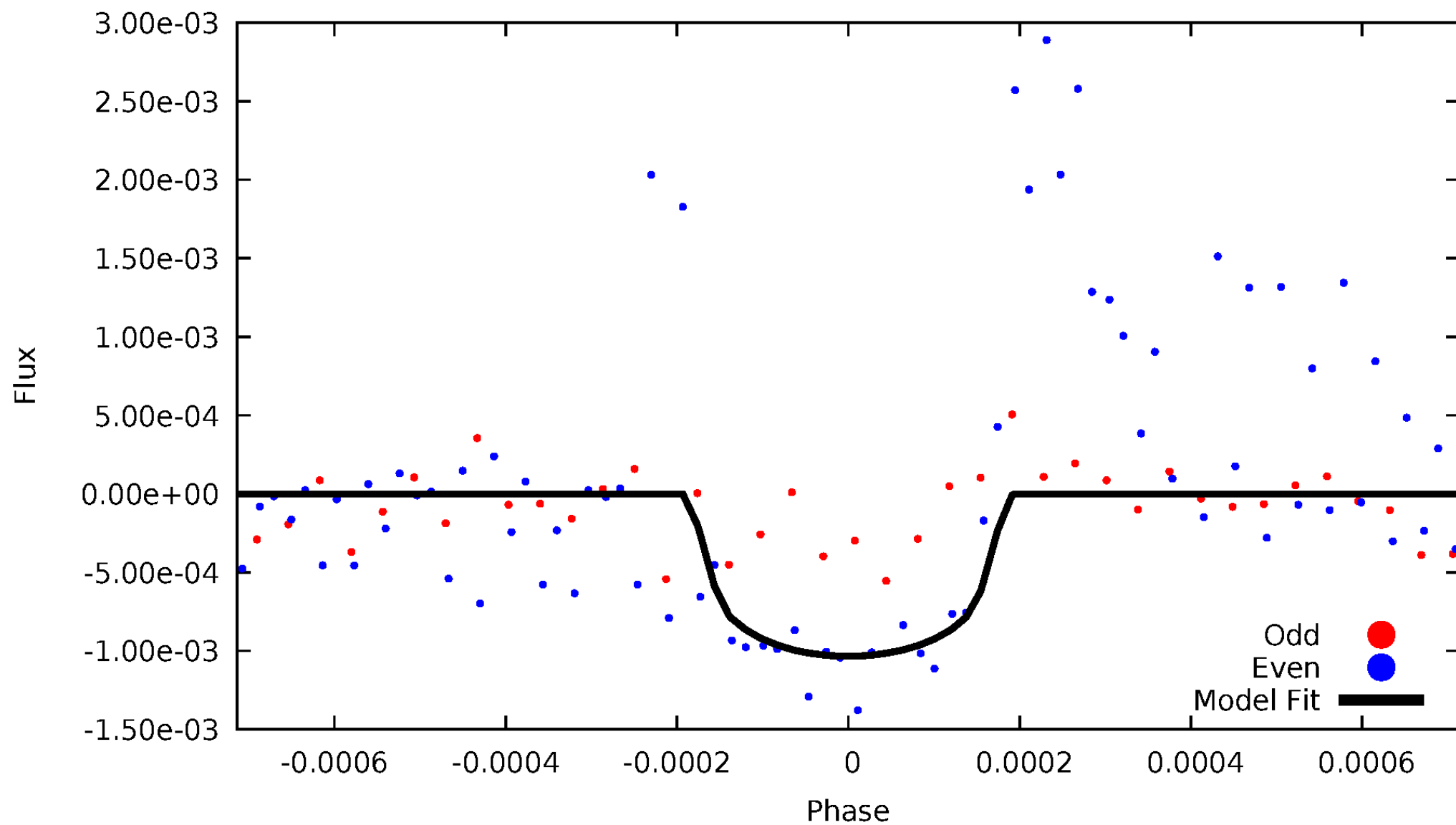


TCE 005607052-04



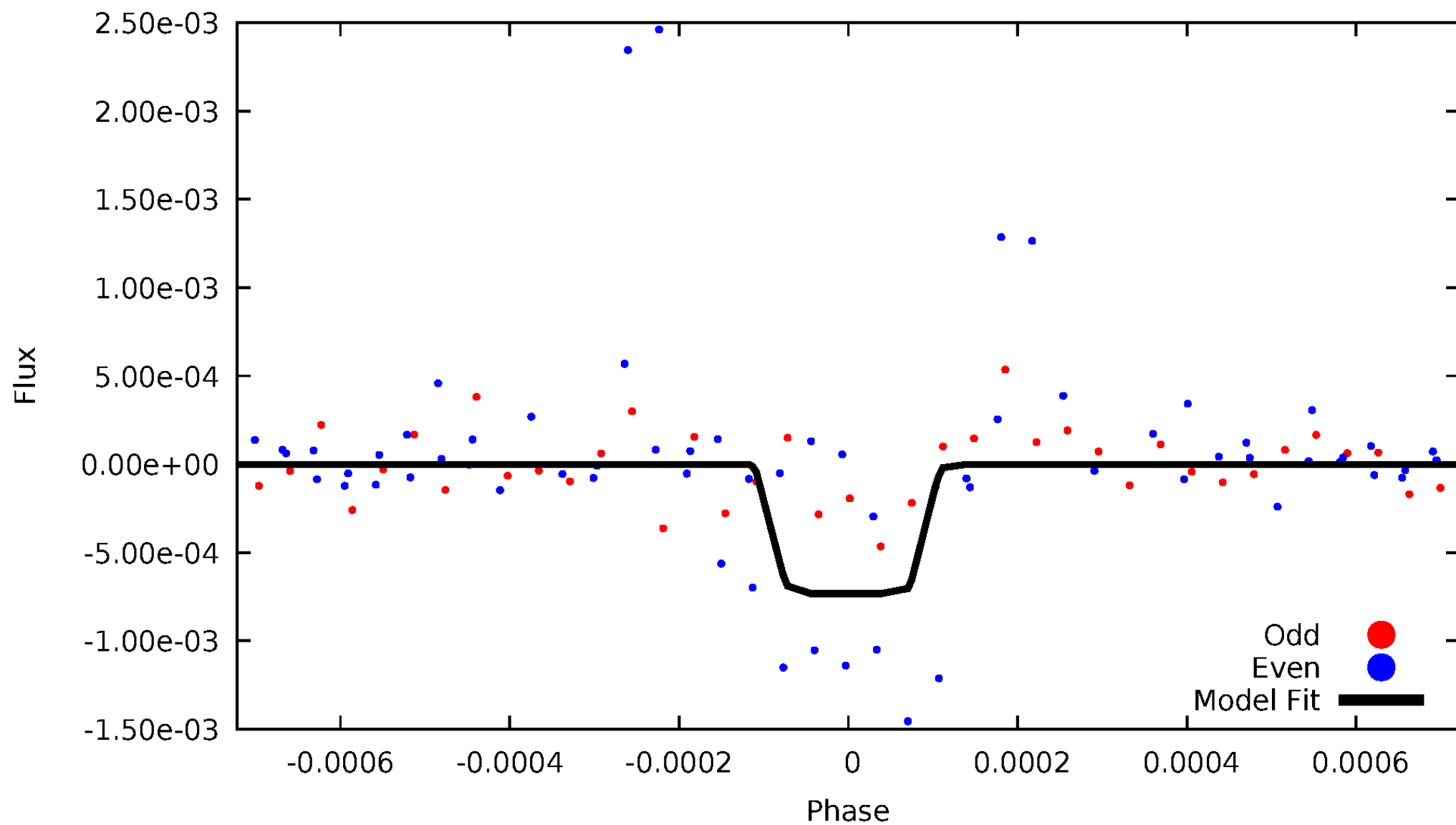
DV Odd/Even

TCE 005607052-04



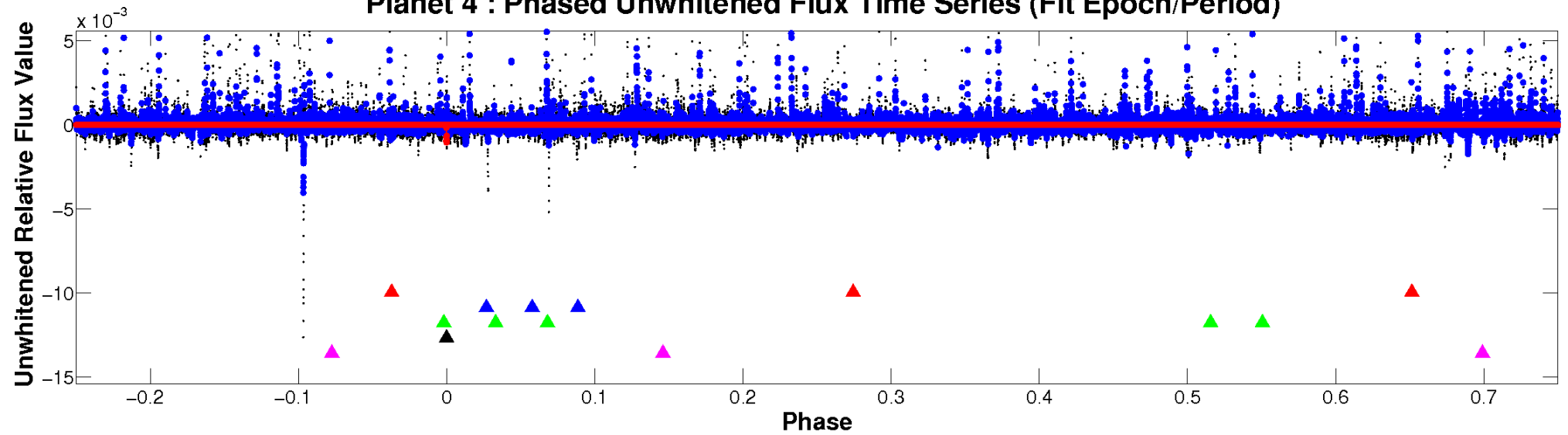
ALT Odd/Even

TCE 005607052-04

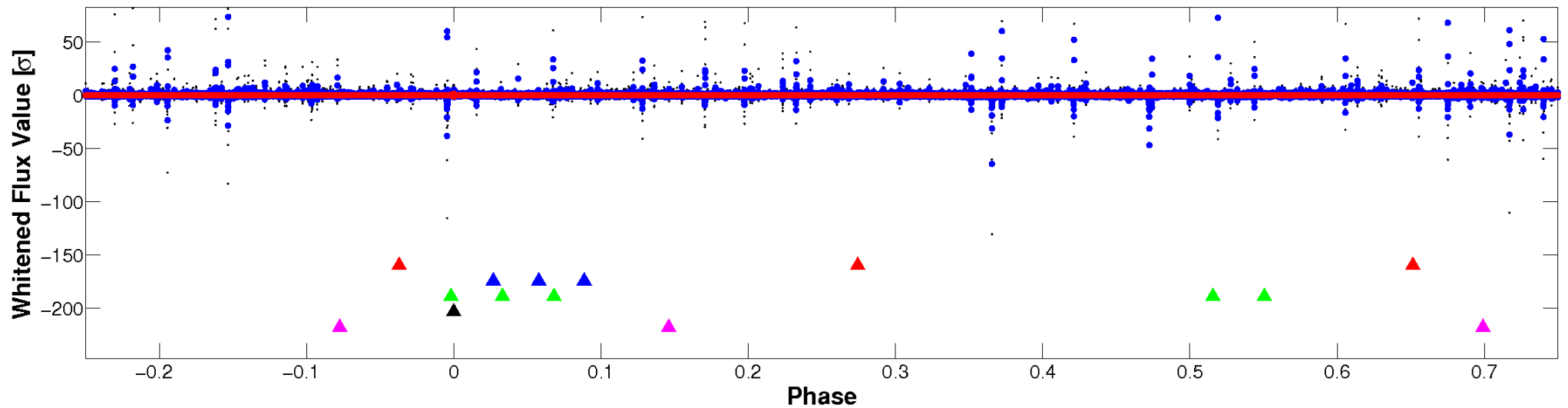


Non-Whitened Vs. Whitened Light Curve

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

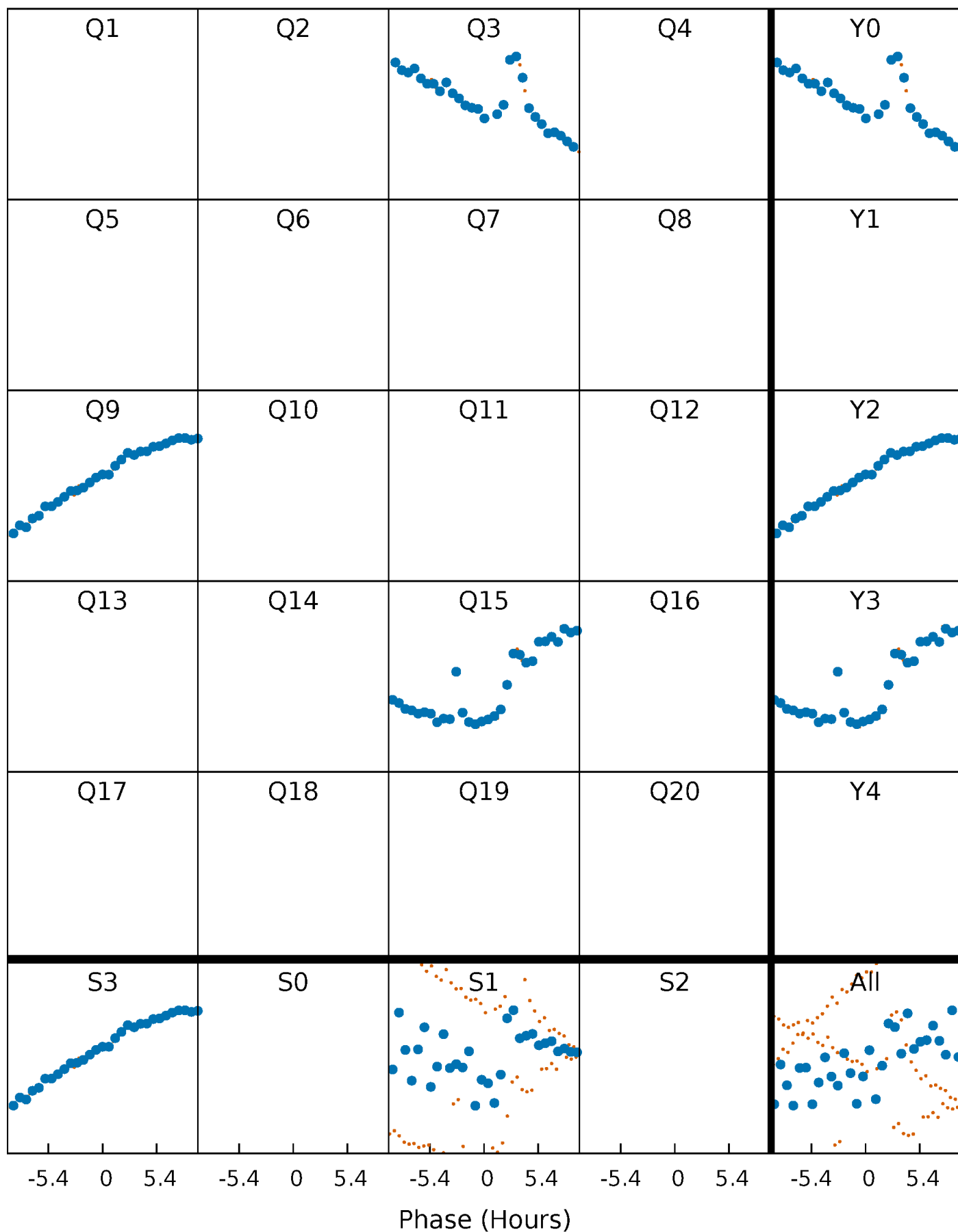


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



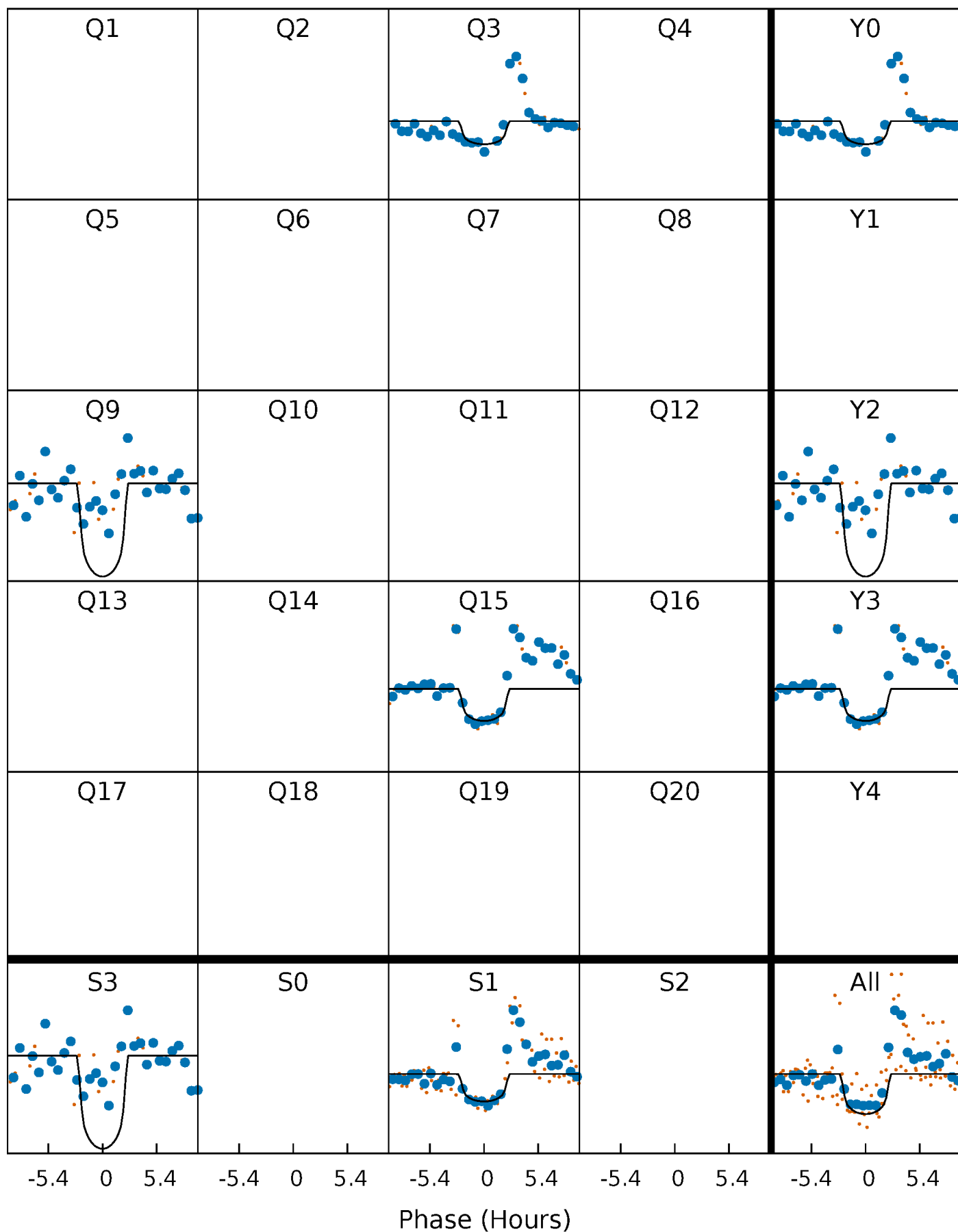
PDC Quarter-Phased Transit Curves

TCE 005607052-04 P=556.106137 Days $T_0=343.318465$ (BKJD)



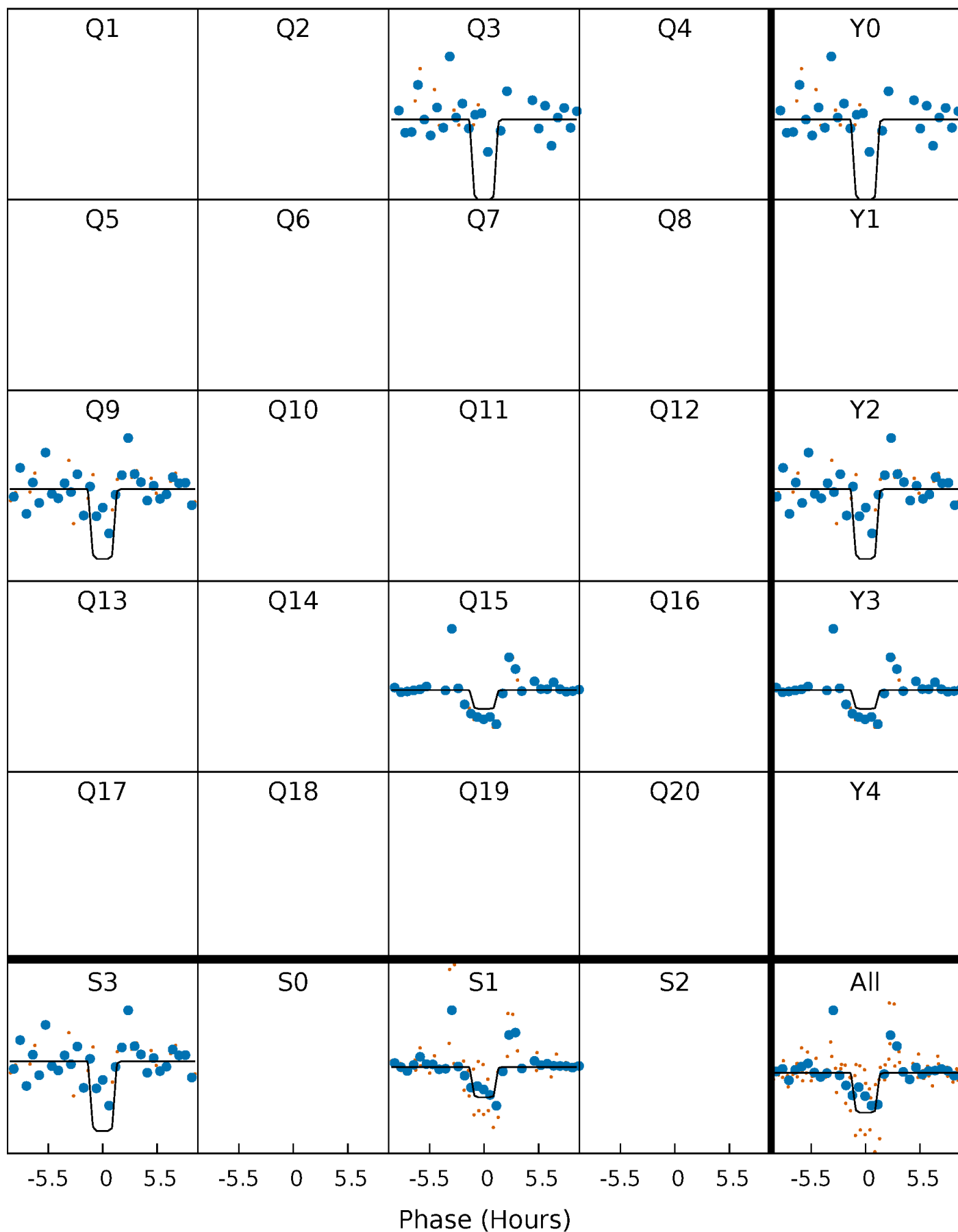
DV Quarter-Phased Transit Curves

TCE 005607052-04 P=556.106137 Days $T_0=343.318465$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

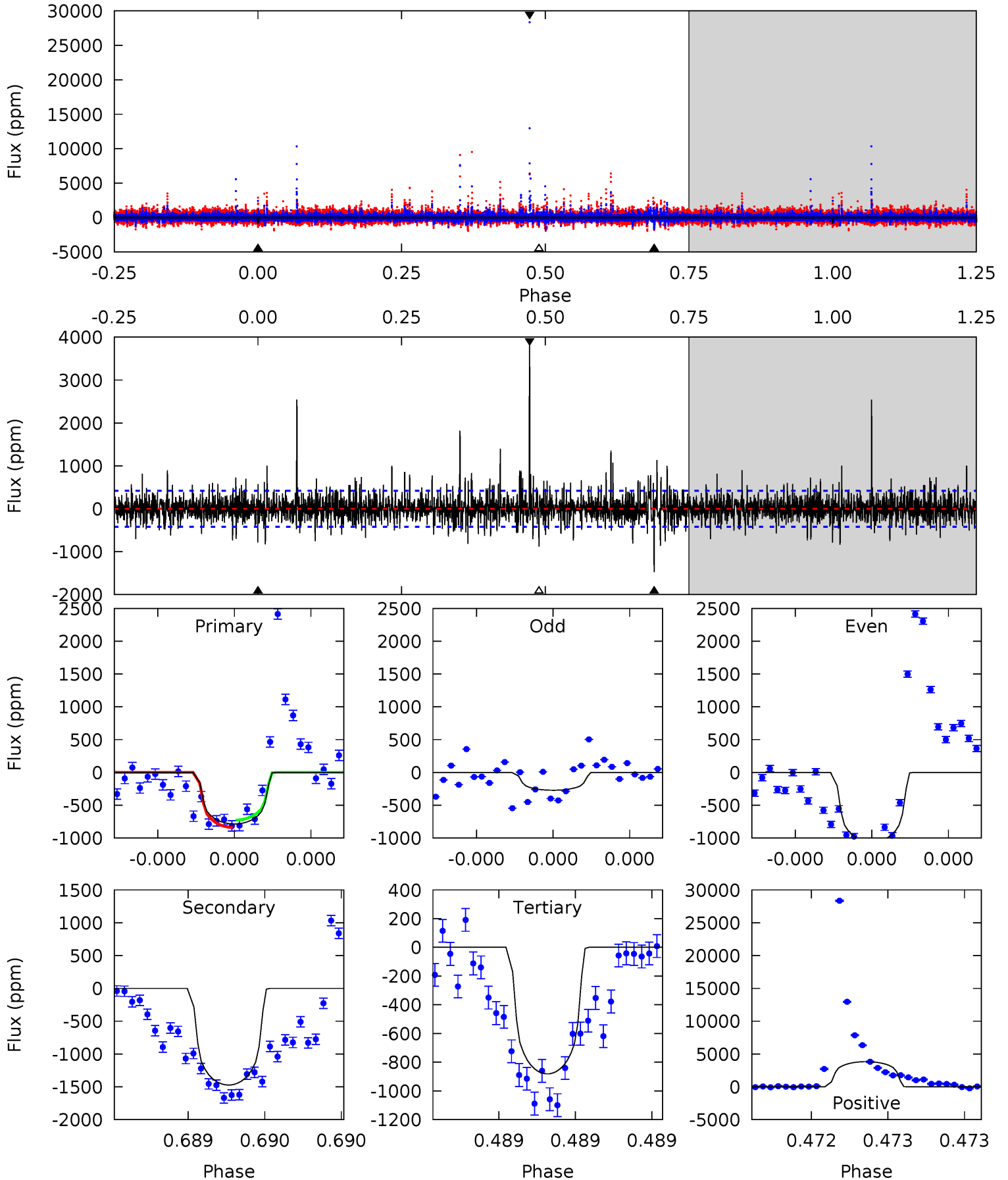
TCE 005607052-04 P=556.119769 Days $T_0=343.308133$ (BKJD)



DV Model-Shift Uniqueness Test

005607052-04, P = 556.106137 Days, E = 343.318465 Days

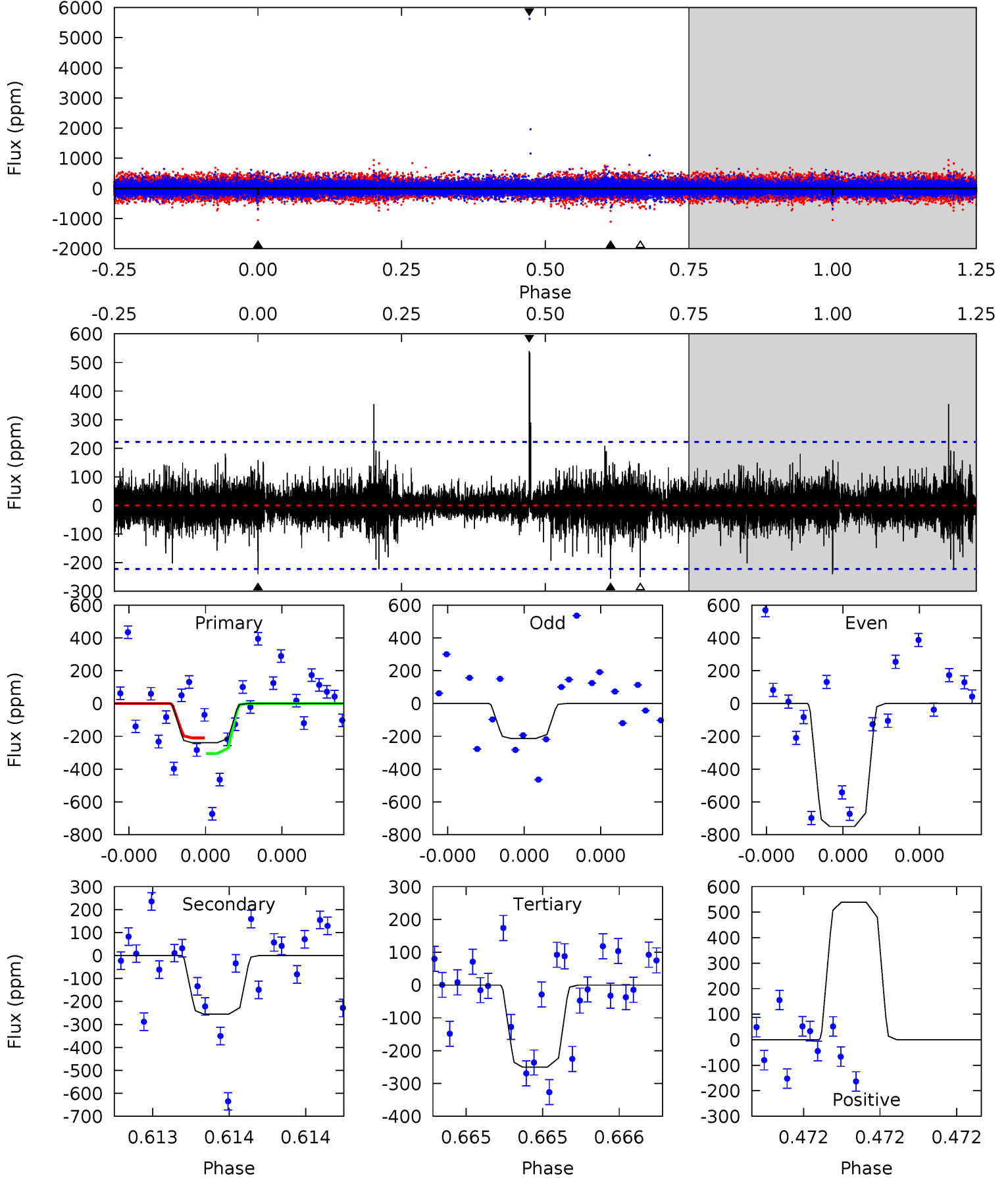
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	19.7	11.8	51.3	5.62	3.55	2.97	-1.28	-40.8	7.91	-31.6	1.61	0.76	0.72	0.77



Alt Model-Shift Uniqueness Test

005607052-04, P = 556.119769 Days, E = 343.308133 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.14	6.54	6.40	13.8	5.69	3.66	0.92	-0.27	-7.67	0.14	-7.26	7.31	2.33	0.68	1.23



Stellar Parameters For KIC 005607052

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5157^{+179}_{-179}	$4.596^{+0.048}_{-0.066}$	$-0.360^{+0.300}_{-0.300}$	$0.713^{+0.088}_{-0.066}$	$0.732^{+0.088}_{-0.059}$	$2.841^{+0.652}_{-0.633}$
	+3%/-3%	+1%/-1%	+83%/-83%	+12%/-9%	+12%/-8%	+23%/-22%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 005607052-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1472 ± 75	$2.58^{+2.21}_{-1.58}$	248^{+10}_{-11}	5528^{+4015}_{-1256}	$173514^{+1073602}_{-124494}$
Alt.	-255 ± 39	$2.45^{+2.01}_{-1.53}$	246^{+10}_{-10}	3970^{+2062}_{-686}	$33715^{+219395}_{-23725}$

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

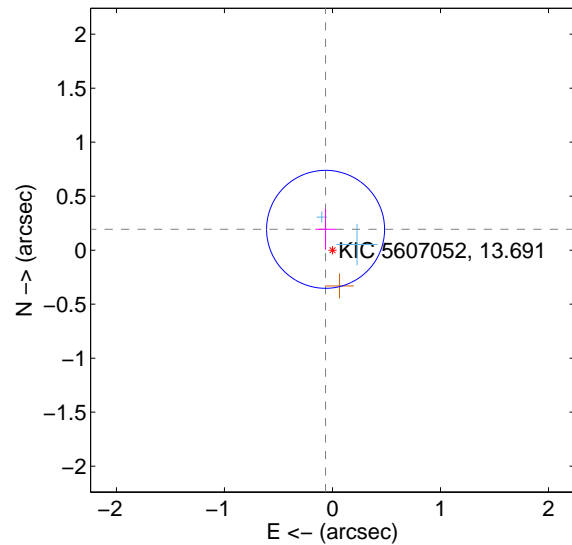
Supplemental centroid analysis for 005607052-04. Kepler magnitude: 13.69. Transit SNR 6.93

There are 2 quarters with good PRF difference image offsets

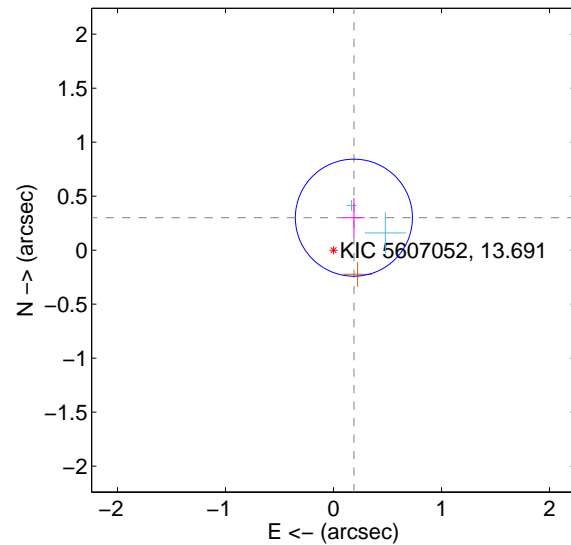
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.203 ± 0.182	1.12	0.064 ± 0.095	0.193 ± 0.189
PRF-fit source offset from KIC position	0.355 ± 0.181	1.97	-0.189 ± 0.100	0.301 ± 0.182
photometric centroid source offset	0.75 ± 0.37	2.01	0.15 ± 0.34	0.73 ± 0.37

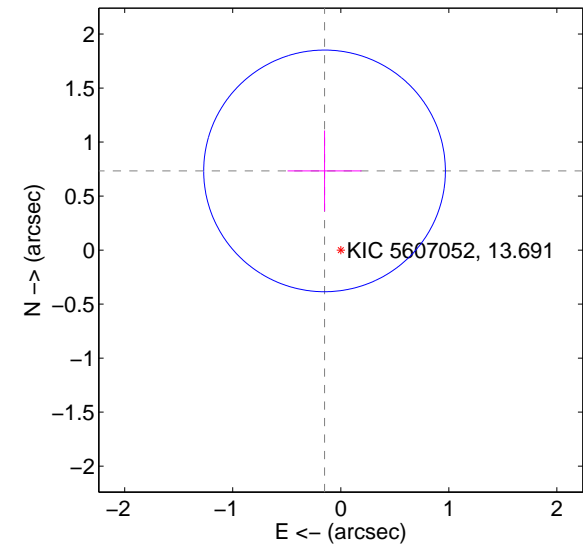
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



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

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

Q1 no difference image



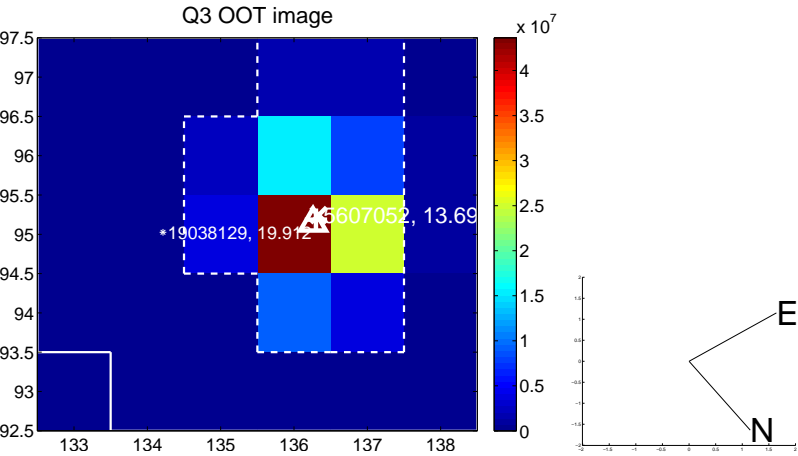
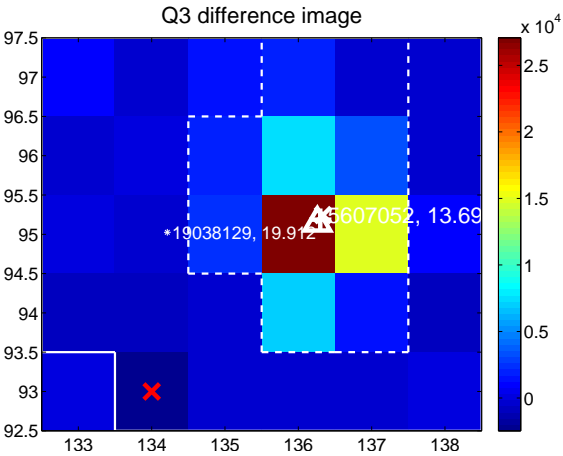
Q1 no OOT image



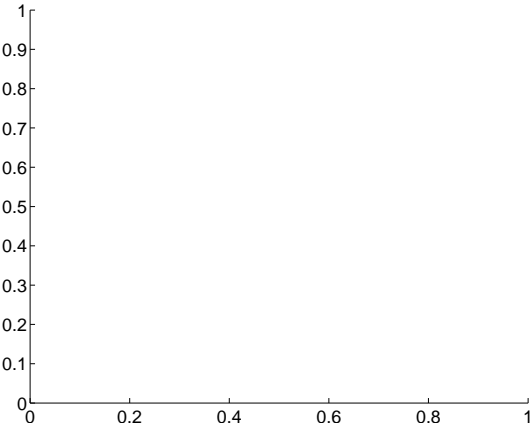
Q2 no difference image



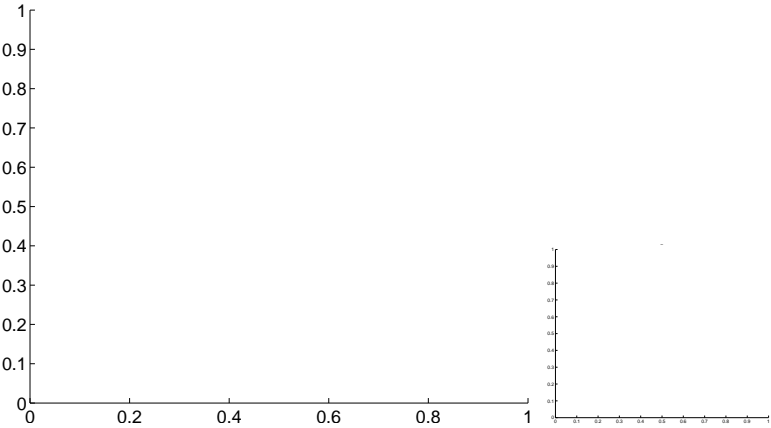
Q2 no OOT image



Q4 no difference image



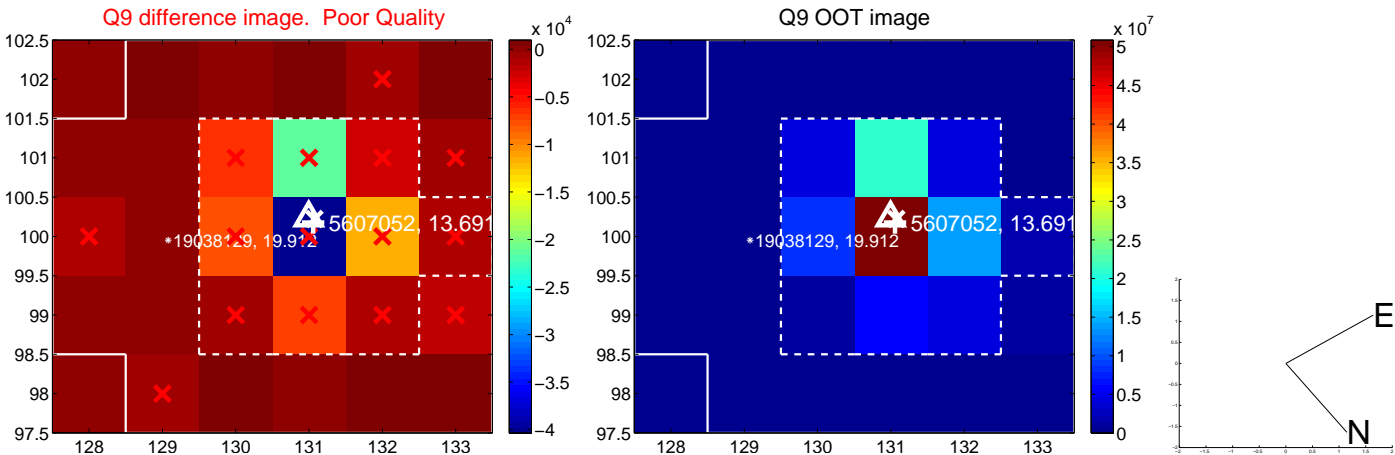
Q4 no OOT image



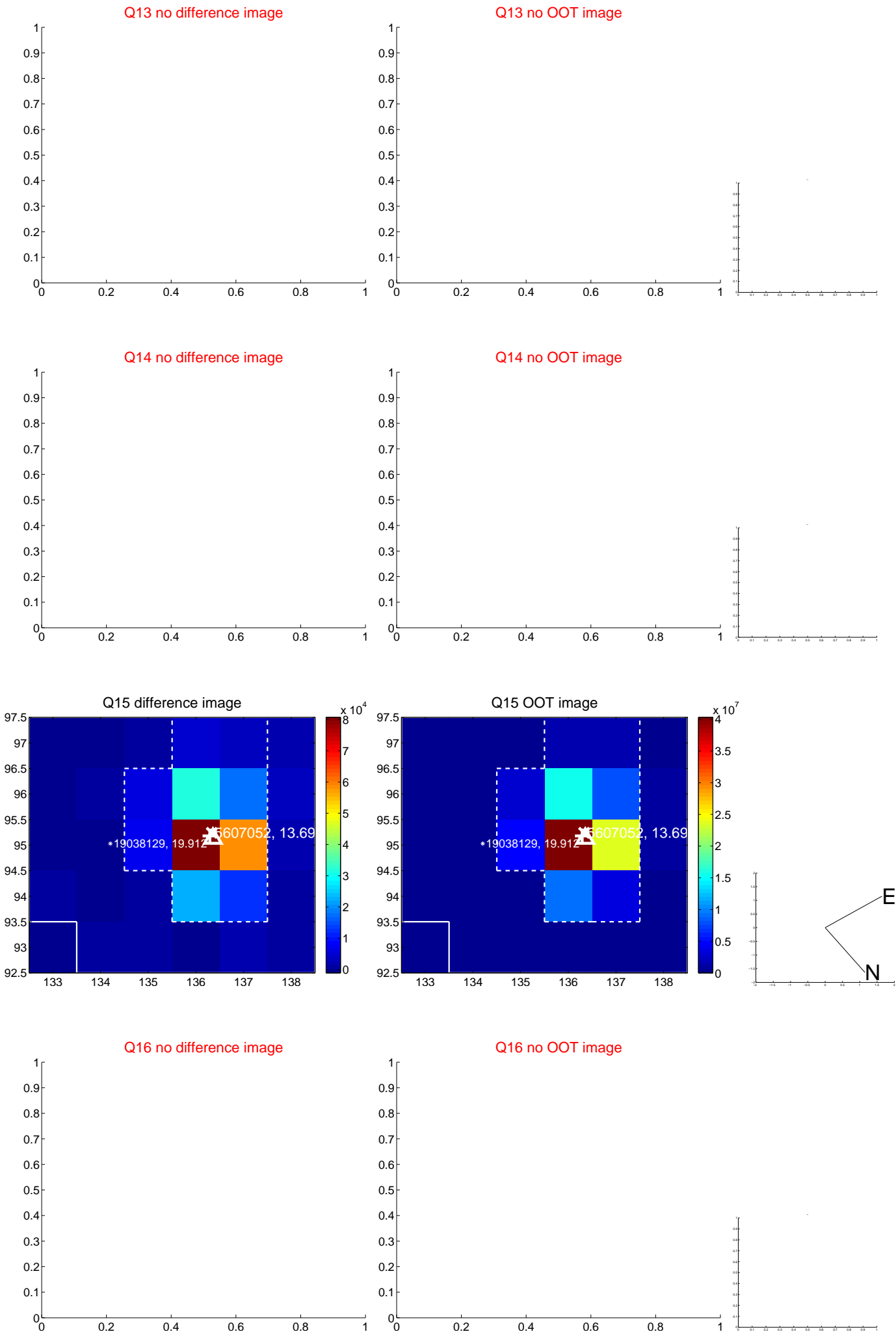
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



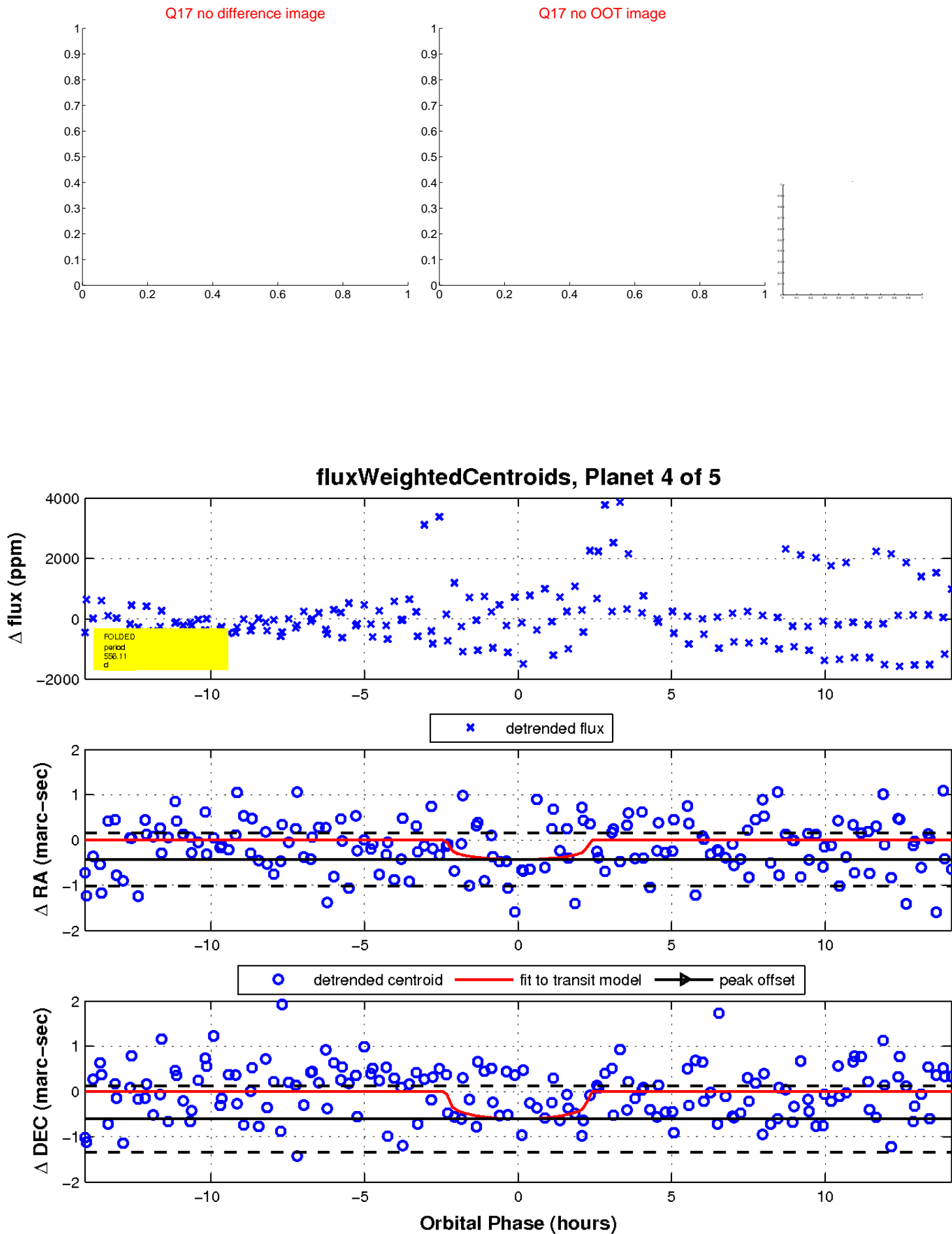
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



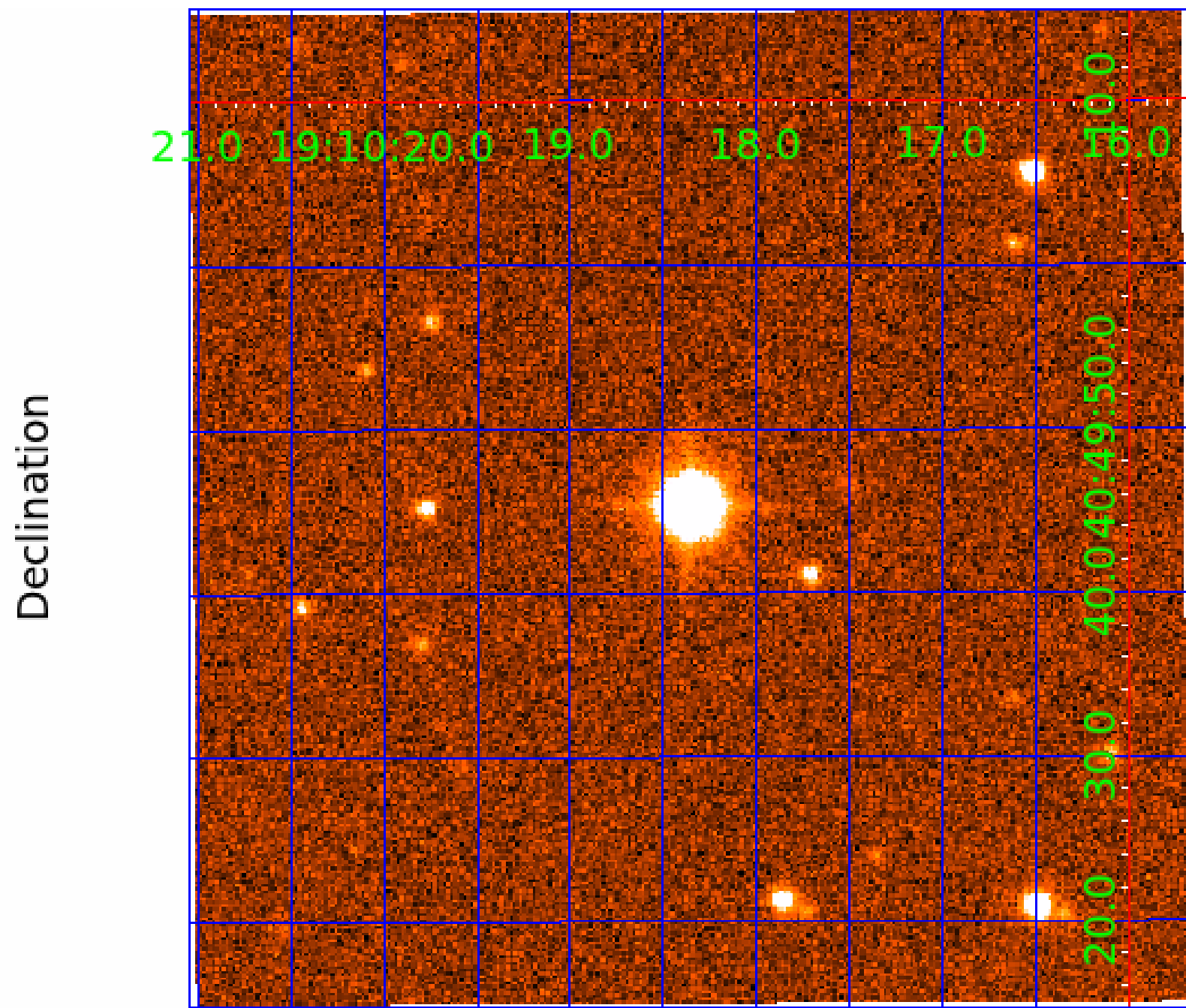
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005607052

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})
005607052-01	OBS	No	382.889253	495.911446	795.4	3.485	17.3	6.1	0.71	5157	1.97	0.37
005607052-02	OBS	No	573.278654	358.271437	1186.2	4.292	17.2	8.8	0.71	5157	2.54	0.22
005607052-03	OBS	No	287.779482	342.287953	1009.9	6.532	16.5	8.0	0.71	5157	2.57	0.55
005607052-04	OBS	No	556.106136	343.318465	1035.2	4.761	13.6	6.9	0.71	5157	2.36	0.23
005607052-05	OBS	No	680.366862	175.998293	1012.9	5.022	11.7	7.5	0.71	5157	2.30	0.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005607052-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
005607052-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005607052-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
005607052-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005607052-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

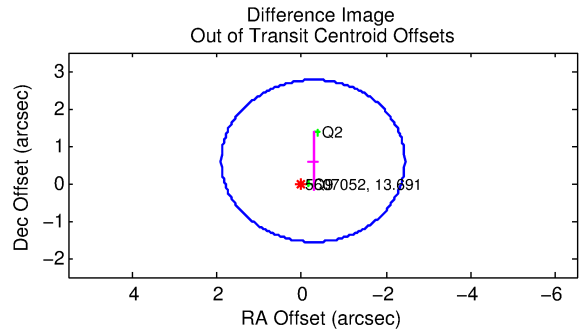
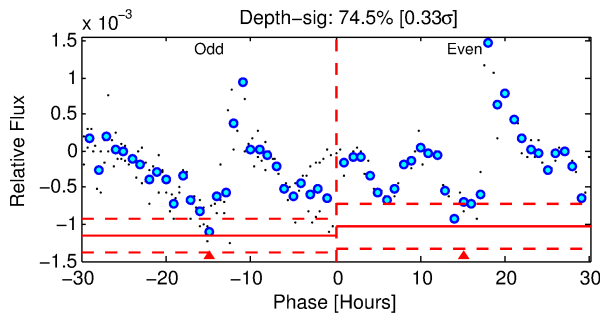
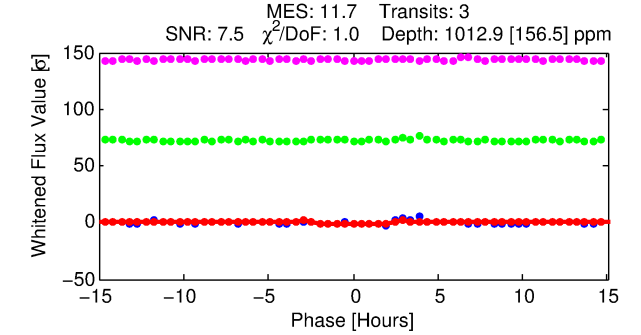
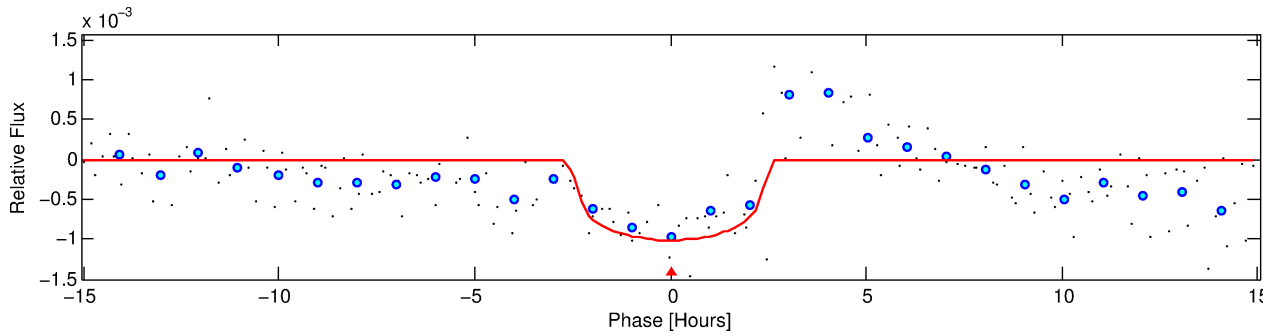
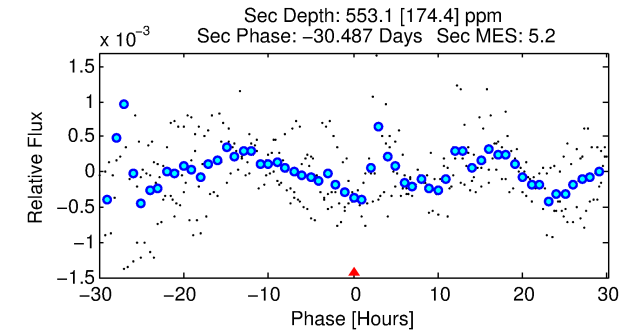
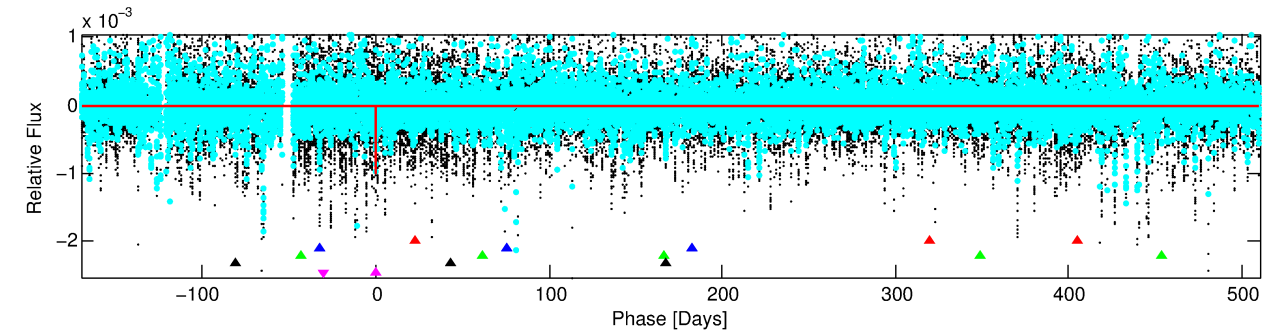
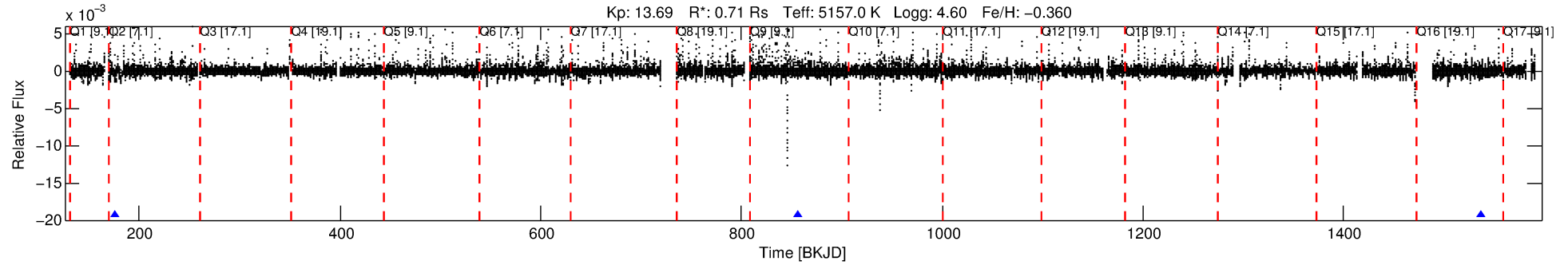
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005607052-05

No Significant Match Found

DV One-Page Summary

KIC: 5607052 Candidate: 5 of 5 Period: 680.367 d



DV Fit Results:

Period = 680.36686 [0.00300] d
Epoch = 175.9983 [0.0047] BKJD
Rp/R* = 0.0296 [0.0266]
a/R* = 927.89 [3158.63]
b = 0.51 [5.06]
Seff = 0.17 [0.03]
Teq = 164 [8] K
Rp = 2.30 [2.09] Re
a = 1.3643 [0.1318] AU
Ag = 106759.82 [195394.51] [0.55σ]
Teffp = 4596 [2104] K [2.11σ]

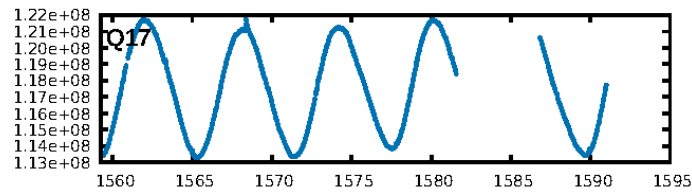
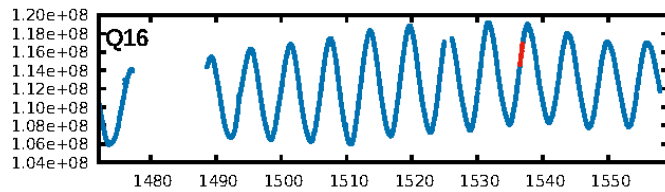
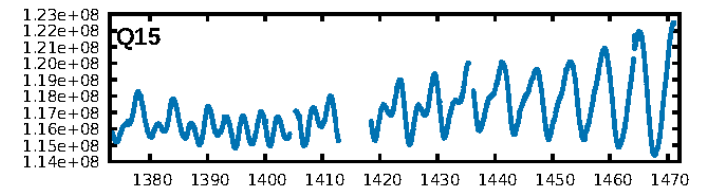
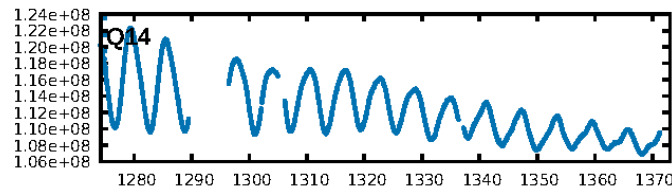
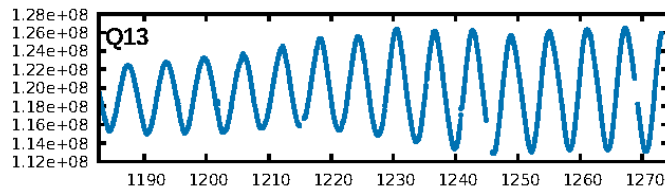
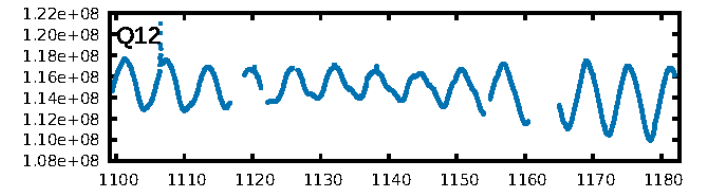
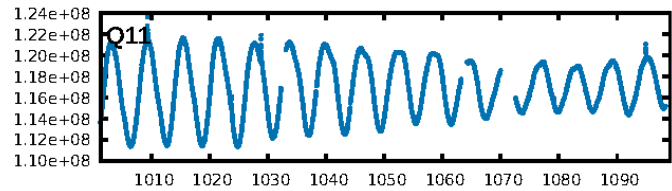
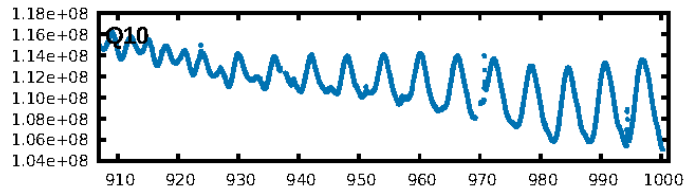
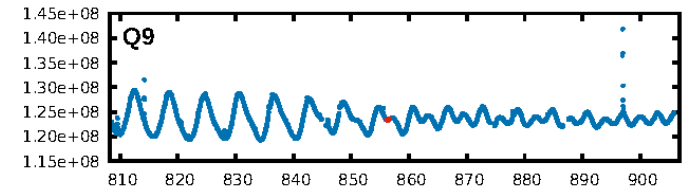
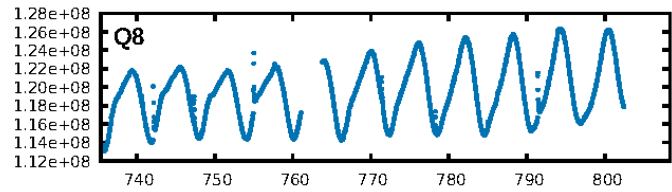
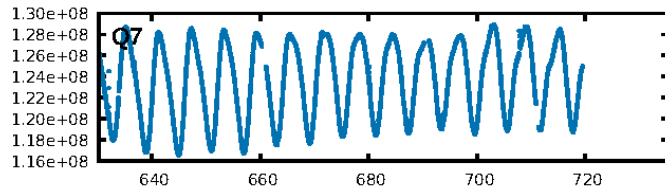
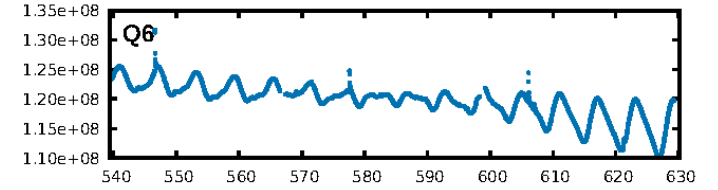
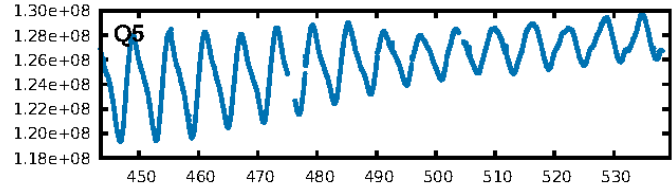
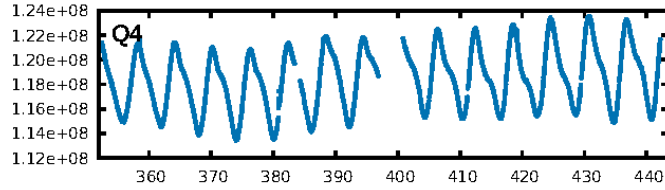
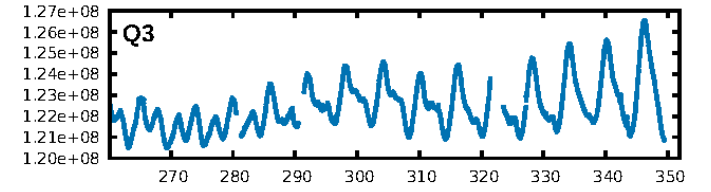
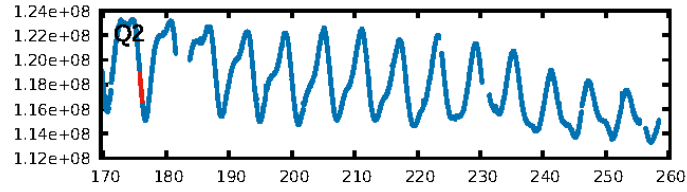
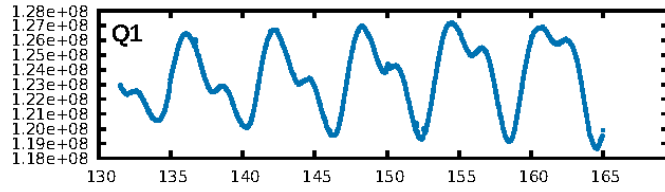
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [389.06σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 83.0%
ModelChiSquareGof-sig: 91.9%
Bootstrap-pfa: 8.04e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.332
Centroid-sig: 9.3%
Centroid-so: 0.854 arcsec [2.44σ]
OotOffset-rm: 0.661 arcsec [0.92σ]
KicOffset-rm: 0.911 arcsec [1.66σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

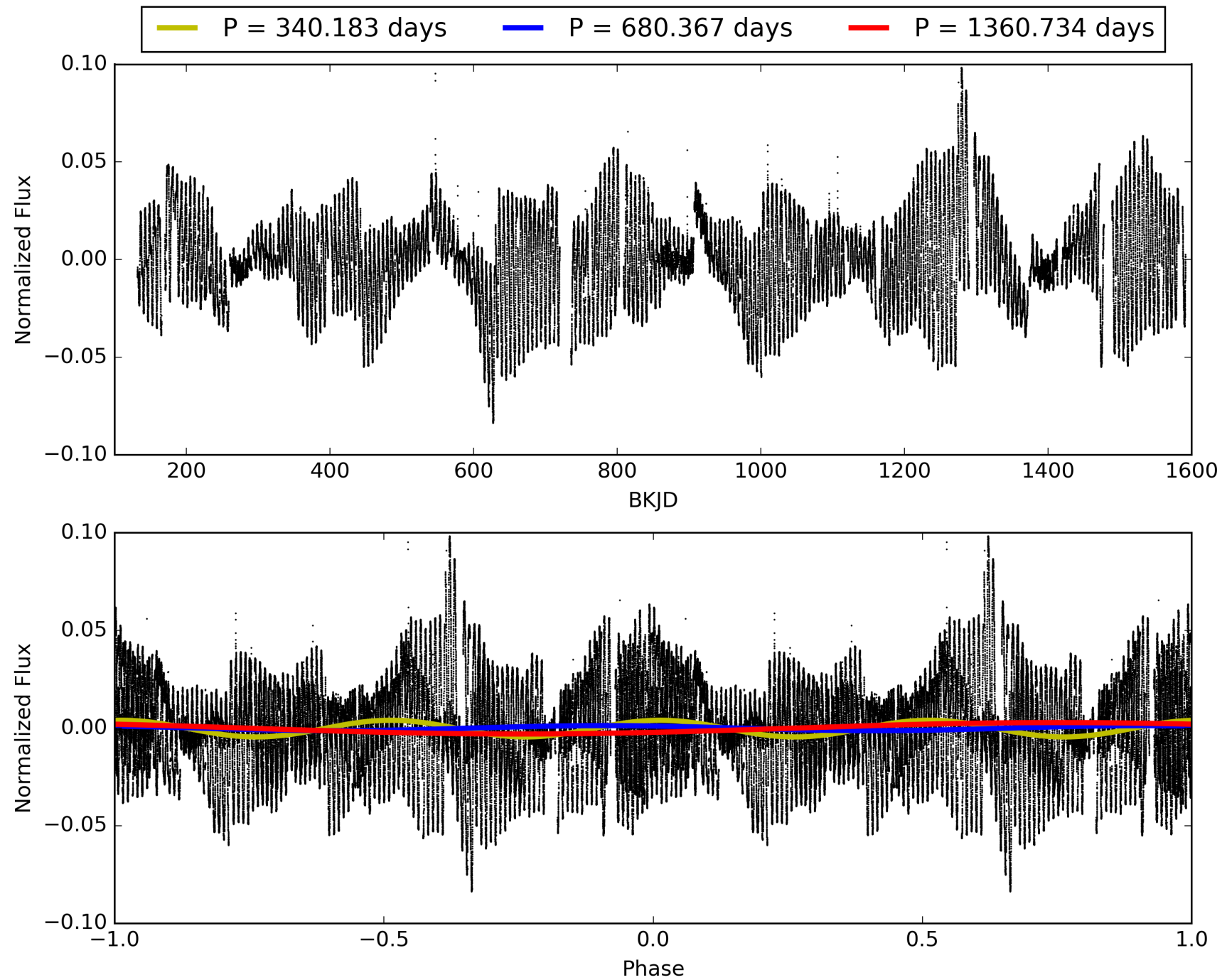
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:49:47 Z

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

TCE 005607052-05, PDC Light Curves

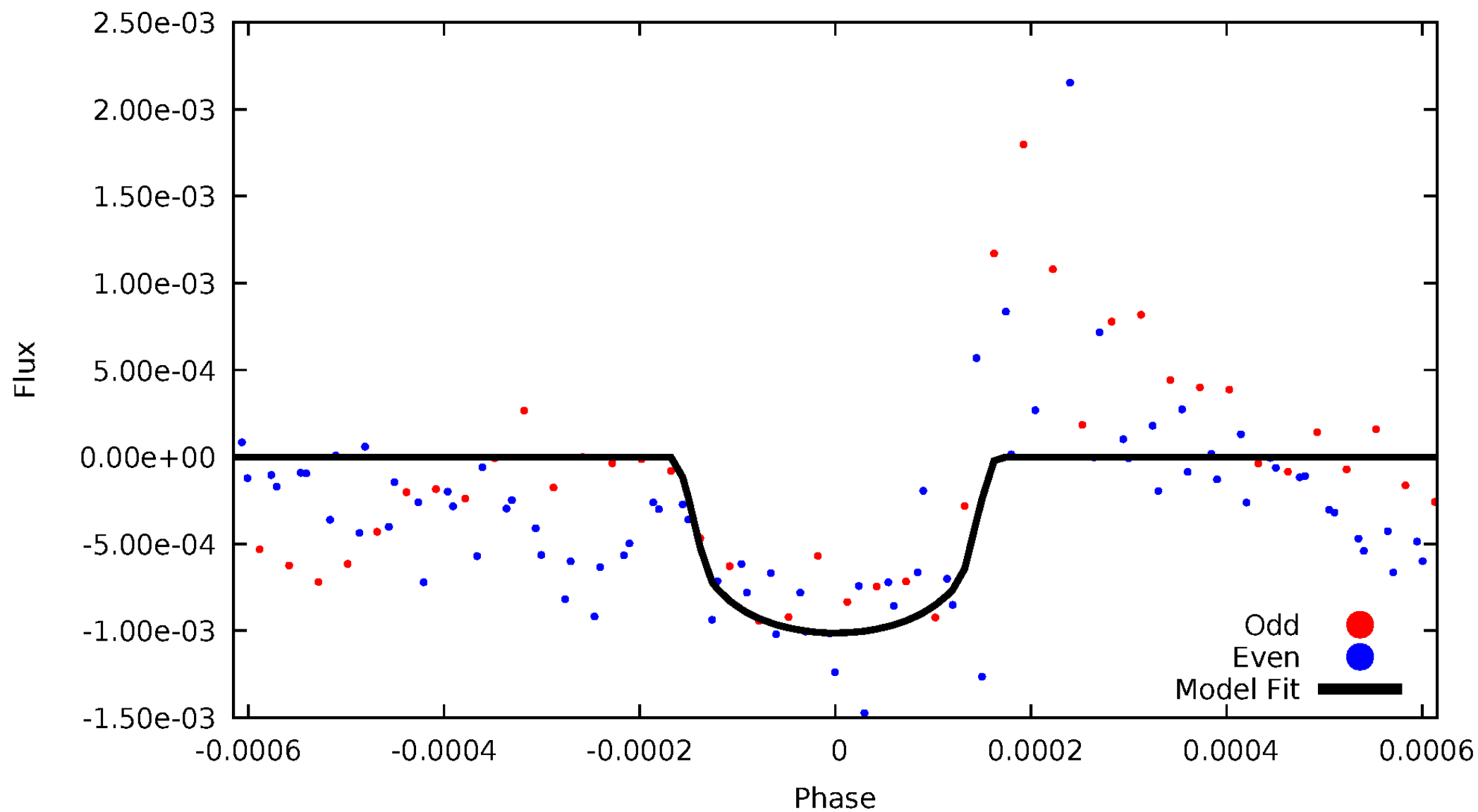


TCE 005607052-05



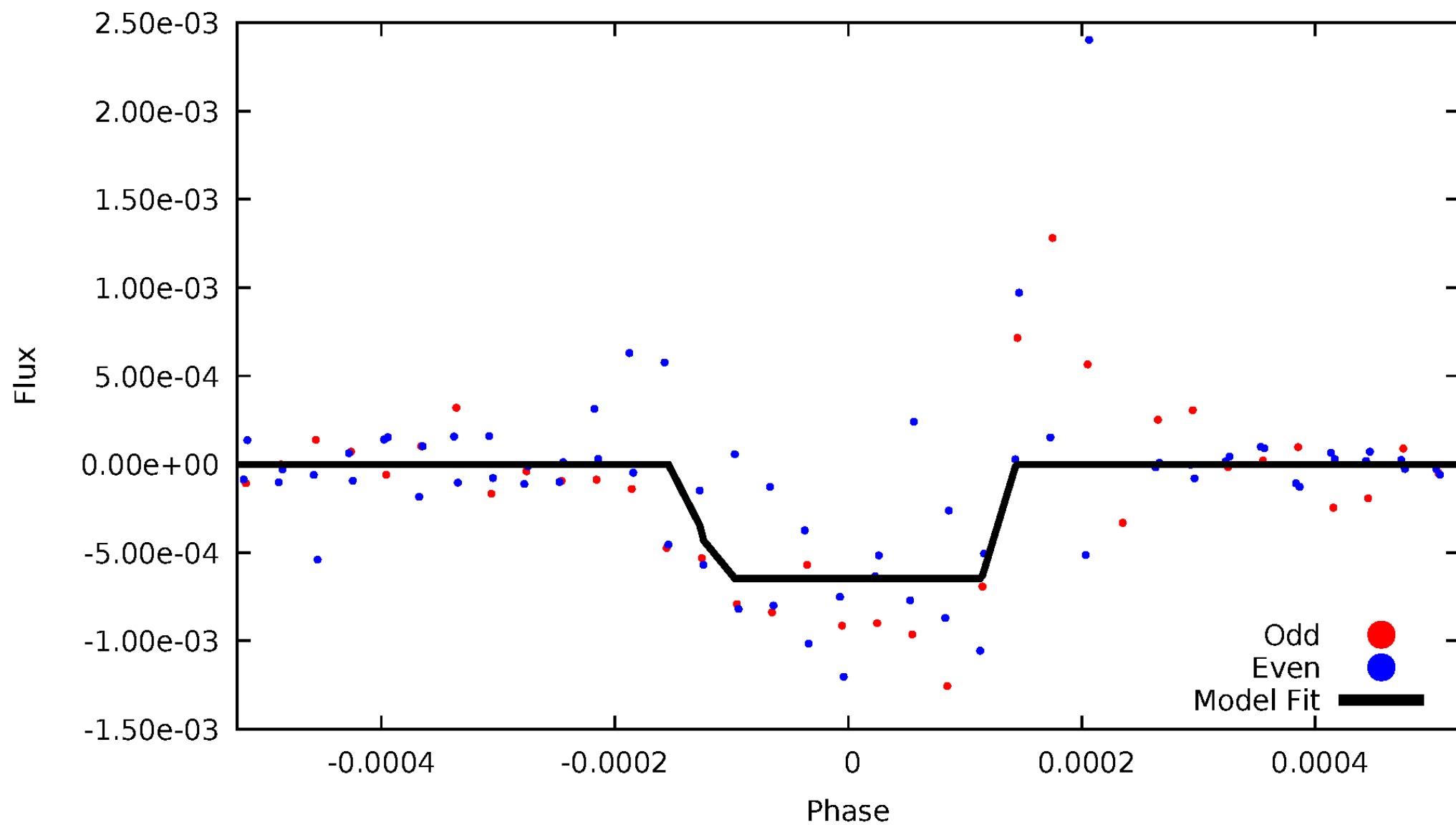
DV Odd/Even

TCE 005607052-05



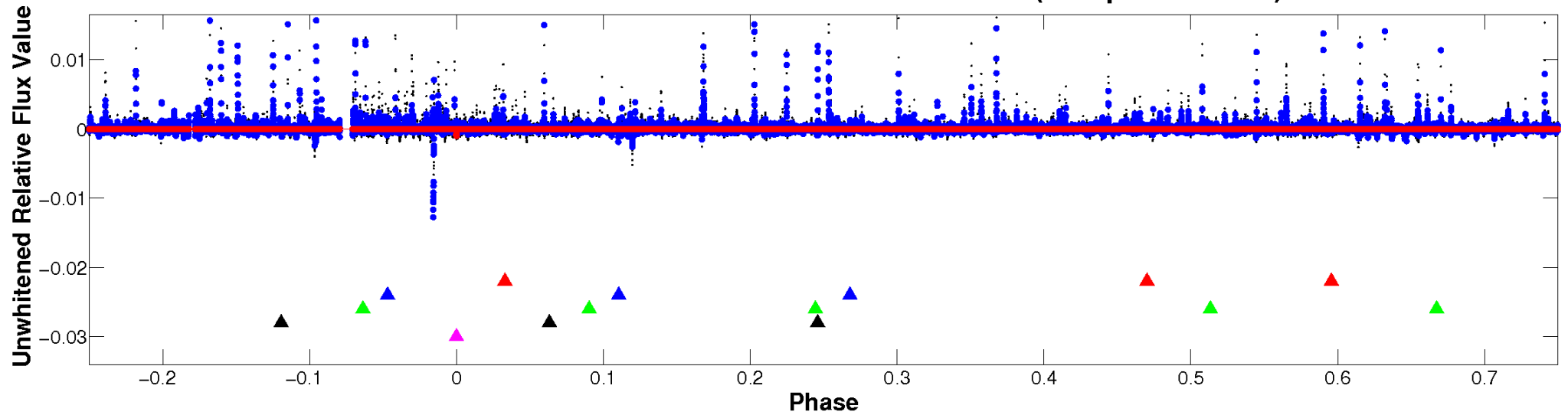
ALT Odd/Even

TCE 005607052-05

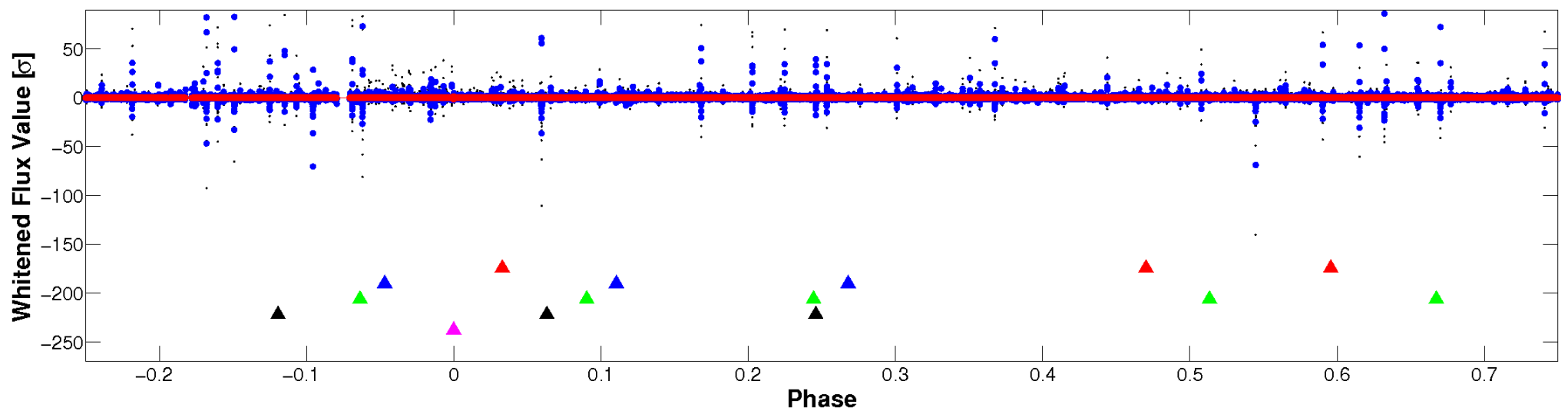


Non-Whitened Vs. Whitened Light Curve

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

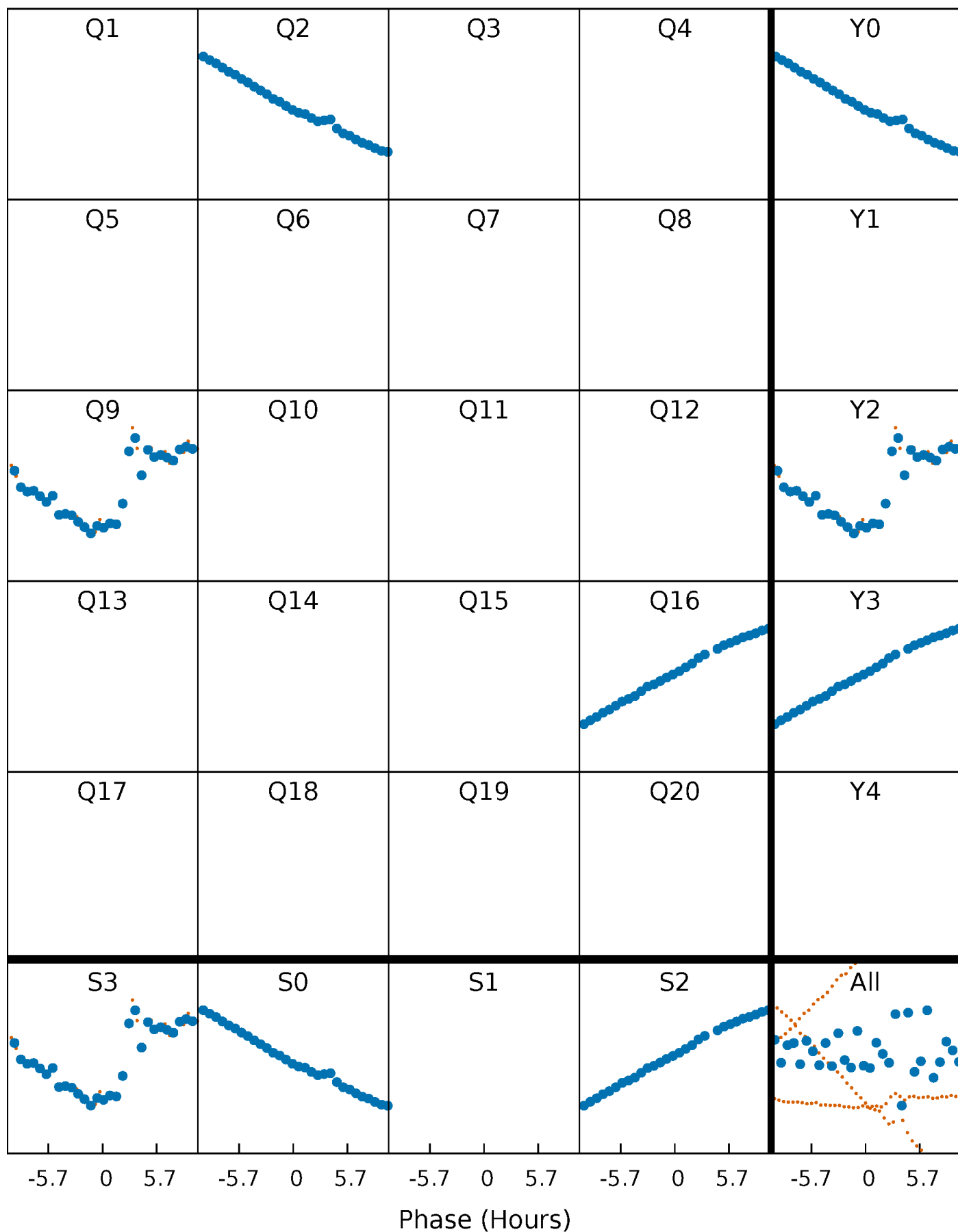


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



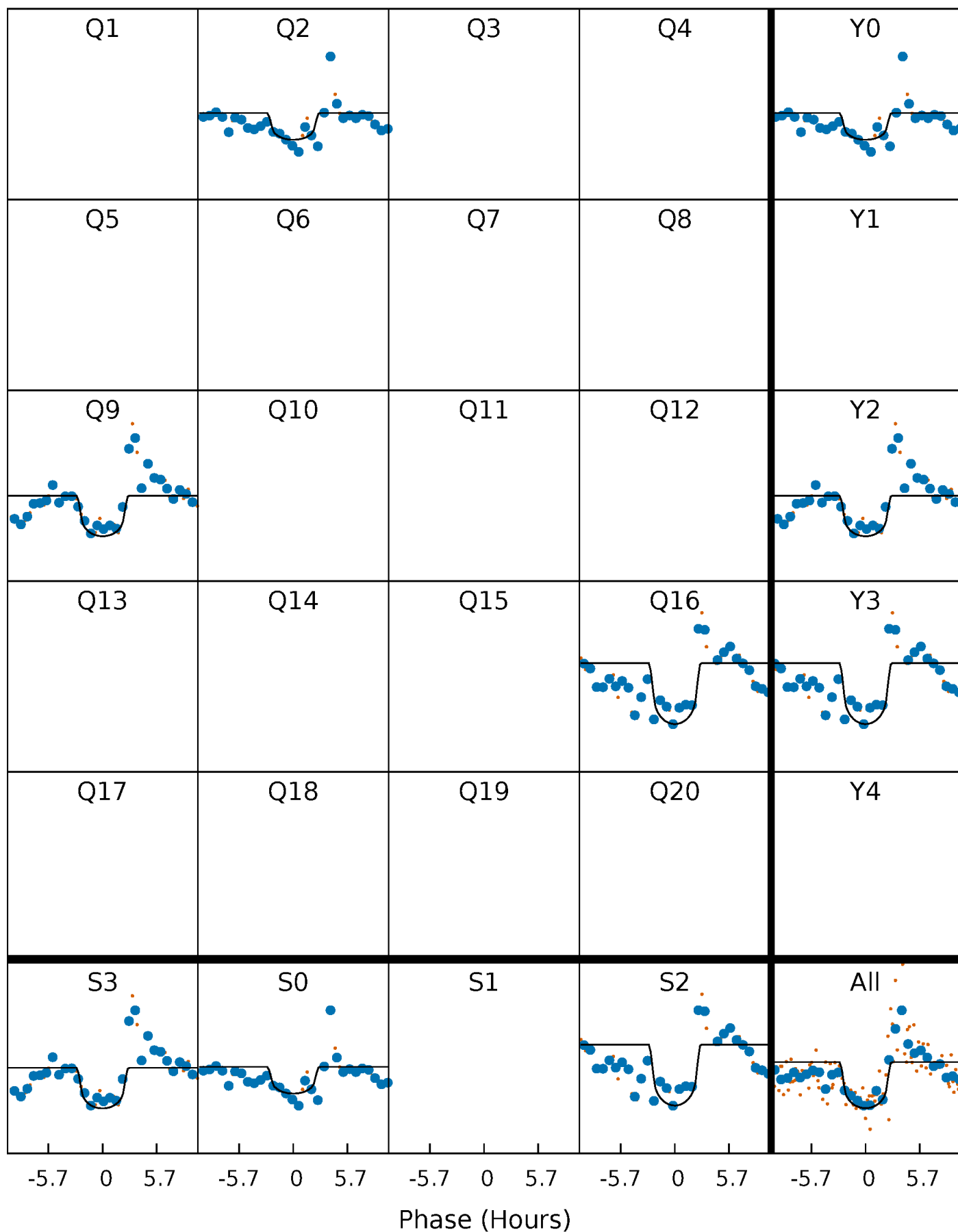
PDC Quarter-Phased Transit Curves

TCE 005607052-05 $P=680.366862$ Days $T_0=175.998293$ (BKJD)



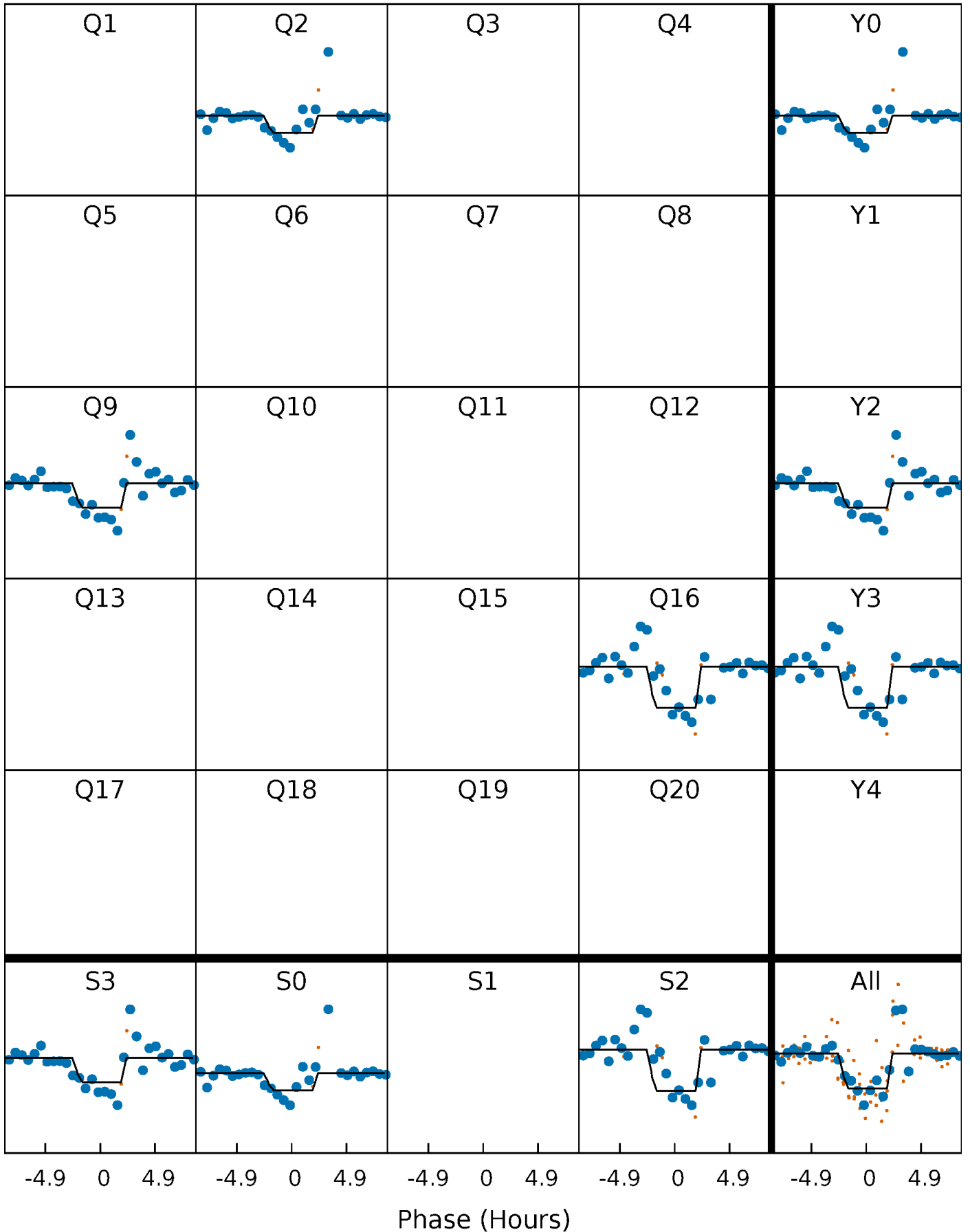
DV Quarter-Phased Transit Curves

TCE 005607052-05 $P=680.366862$ Days $T_0=175.998293$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

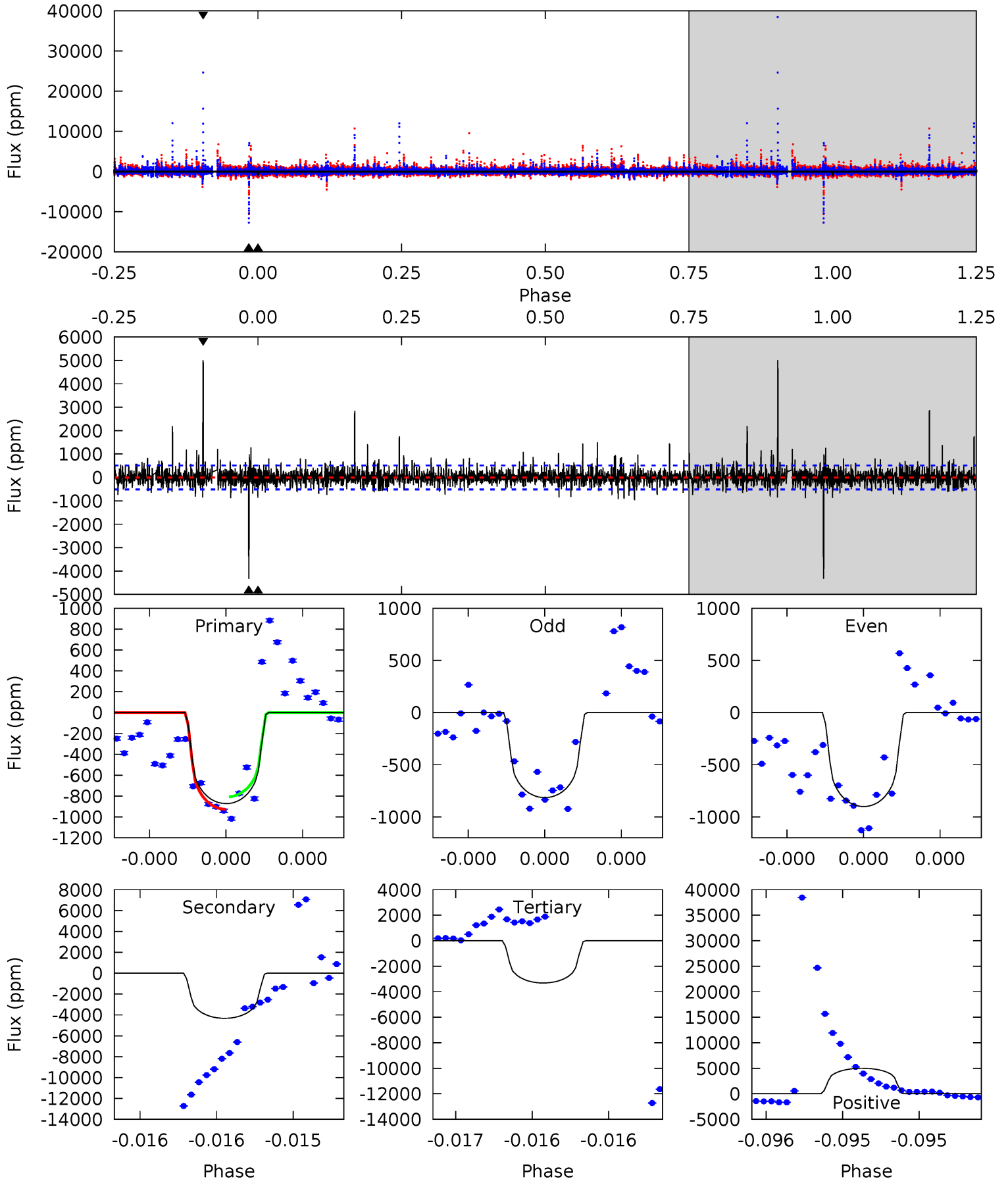
TCE 005607052-05 $P=680.355814$ Days $T_0=176.021297$ (BKJD)



DV Model-Shift Uniqueness Test

005607052-05, P = 680.366862 Days, E = 175.998293 Days

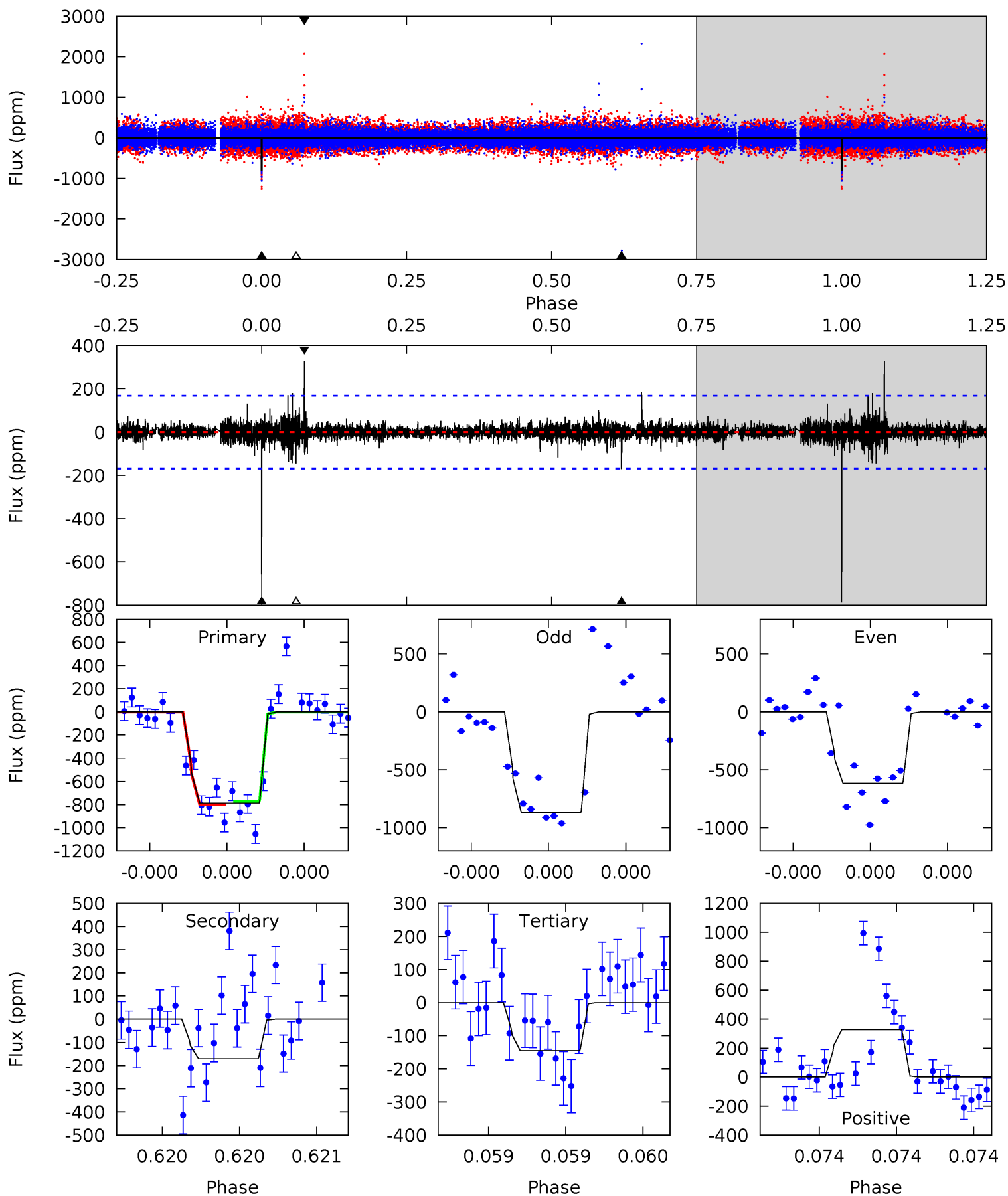
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.63	47.8	36.6	55.3	5.65	3.60	2.81	-27.0	-45.6	11.2	-7.51	0.18	1.08	0.54	0.66



Alt Model-Shift Uniqueness Test

005607052-05, P = 680.355814 Days, E = 176.021297 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.7	5.77	4.91	11.2	5.68	3.64	0.70	21.8	15.5	0.86	-5.39	3.57	1.09	0.29	0.42



Stellar Parameters For KIC 005607052

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5157^{+179}_{-179}	$4.596^{+0.048}_{-0.066}$	$-0.360^{+0.300}_{-0.300}$	$0.713^{+0.088}_{-0.066}$	$0.732^{+0.088}_{-0.059}$	$2.841^{+0.652}_{-0.633}$
	+3%/-3%	+1%/-1%	+83%/-83%	+12%/-9%	+12%/-8%	+23%/-22%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 005607052-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4326 ± 91	$2.68^{+2.06}_{-1.68}$	231^{+9}_{-9}	7158^{+7594}_{-1784}	$631609^{+3721524}_{-428927}$
Alt.	-170 ± 29	$2.48^{+1.87}_{-1.62}$	230^{+10}_{-9}	3691^{+1846}_{-598}	$27710^{+206300}_{-18433}$

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 $A_{obs} \gg 1.0$

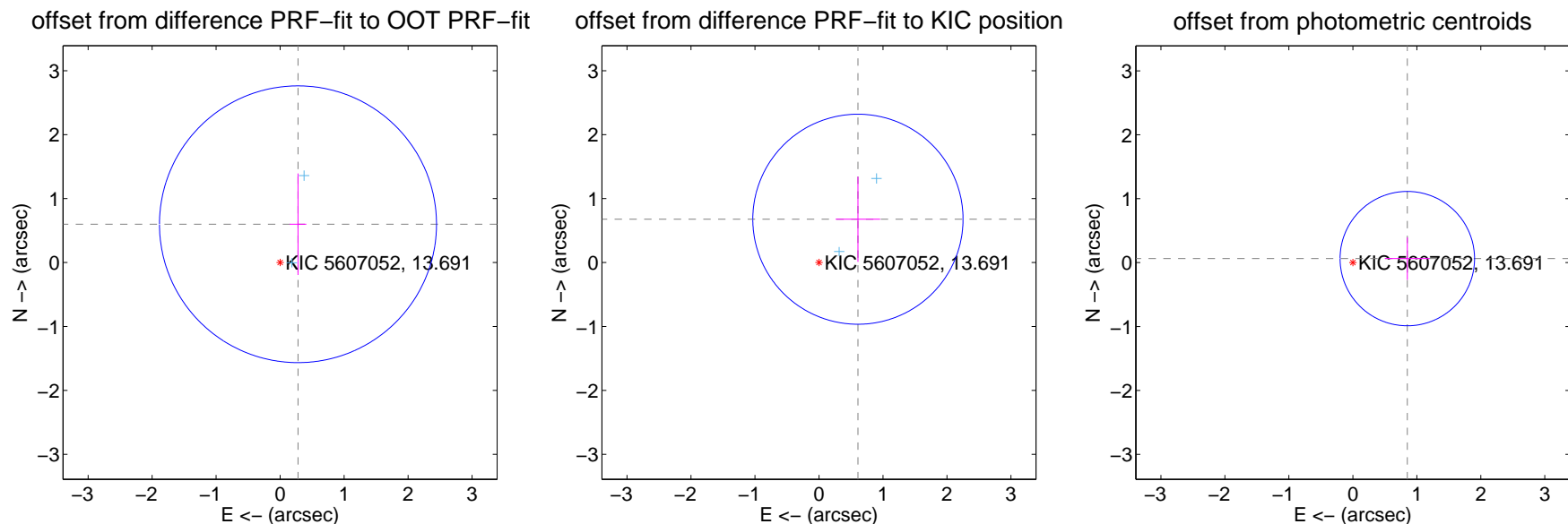
DV Centroid Data

Supplemental centroid analysis for 005607052-05. Kepler magnitude: 13.69. Transit SNR 7.45

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.661 ± 0.722	0.92	-0.280 ± 0.130	0.599 ± 0.794
PRF-fit source offset from KIC position	0.911 ± 0.548	1.66	-0.609 ± 0.347	0.678 ± 0.667
photometric centroid source offset	0.85 ± 0.35	2.44	-0.85 ± 0.35	0.06 ± 0.33



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.

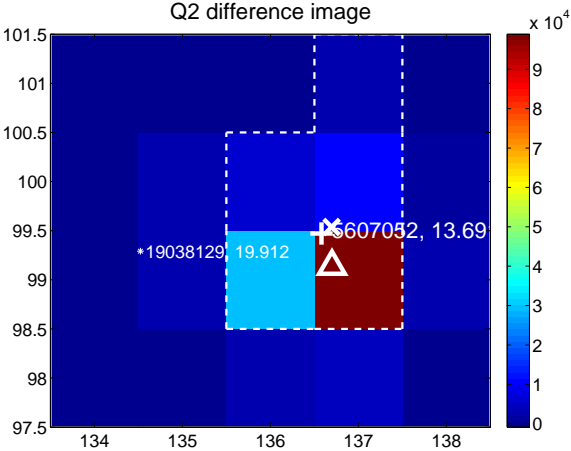
Q1 no difference image



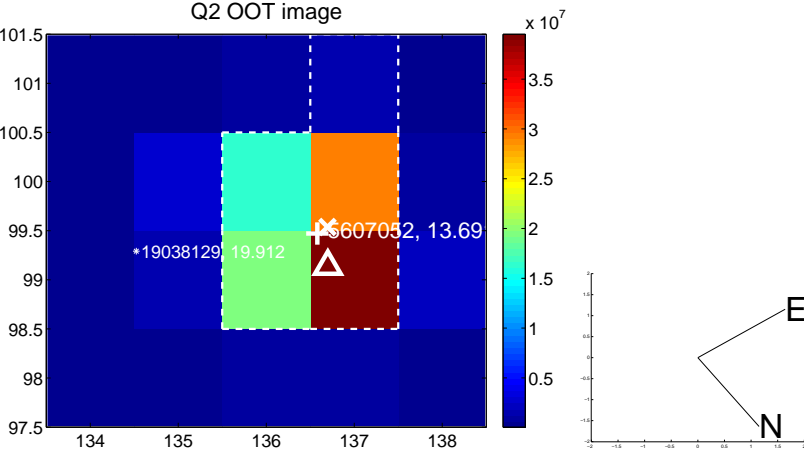
Q1 no OOT image



Q2 difference image



Q2 OOT image



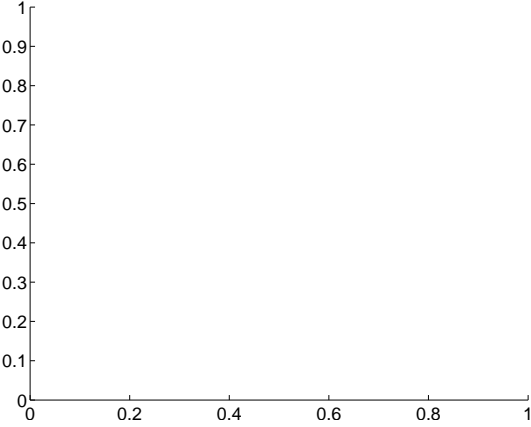
Q3 no difference image



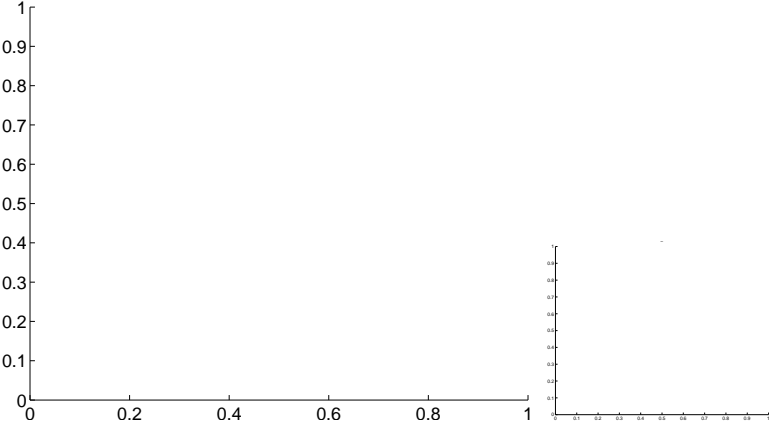
Q3 no OOT image



Q4 no difference image



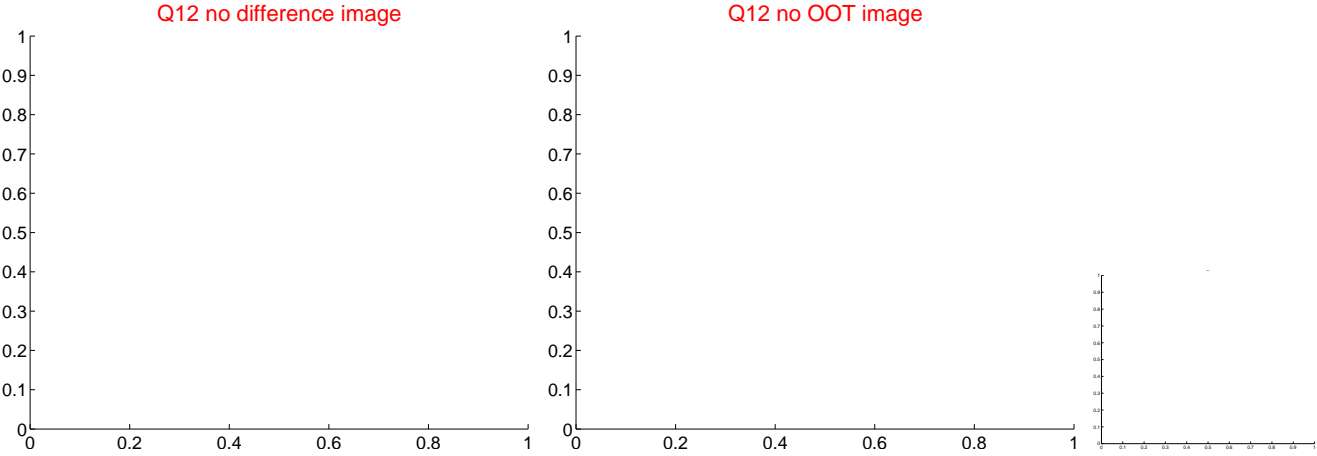
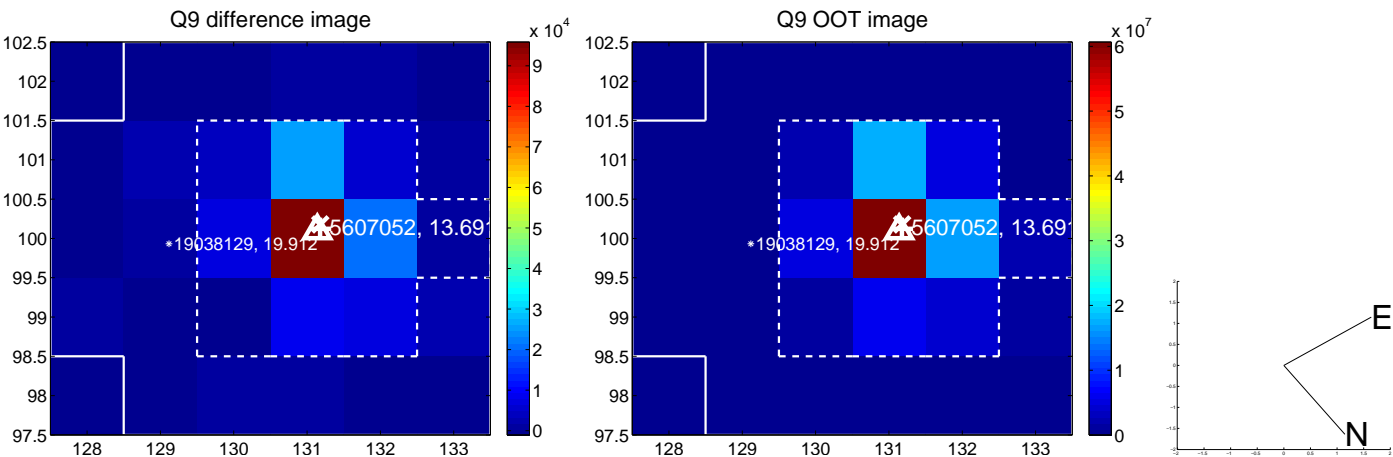
Q4 no OOT image



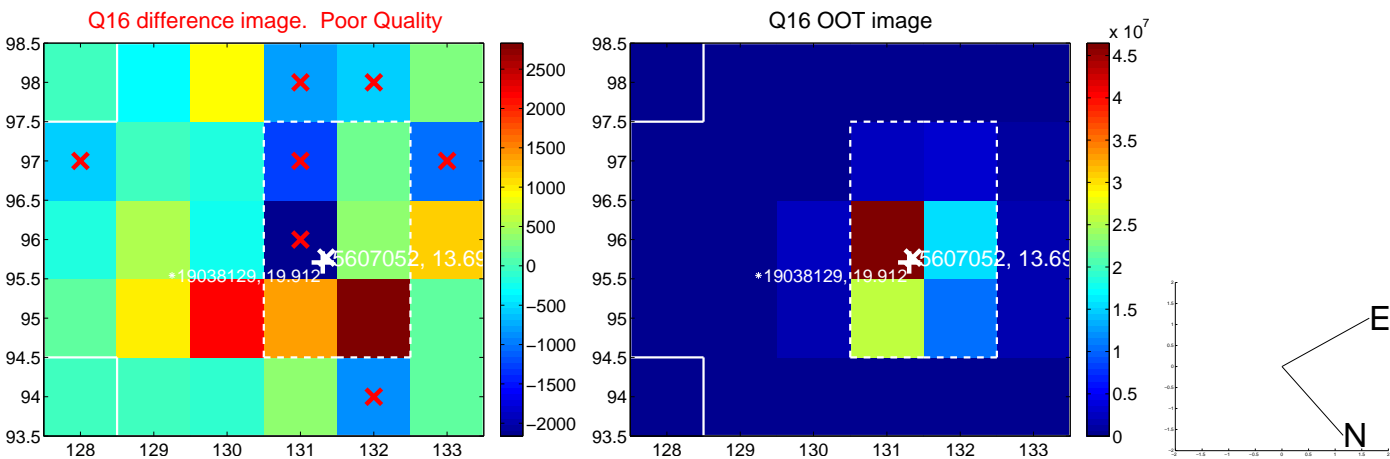
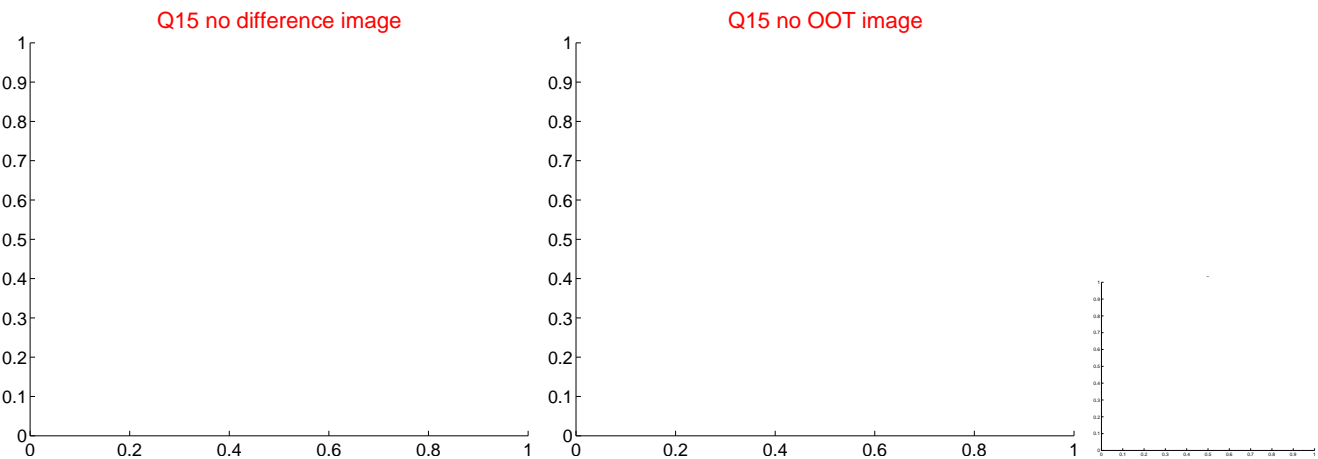
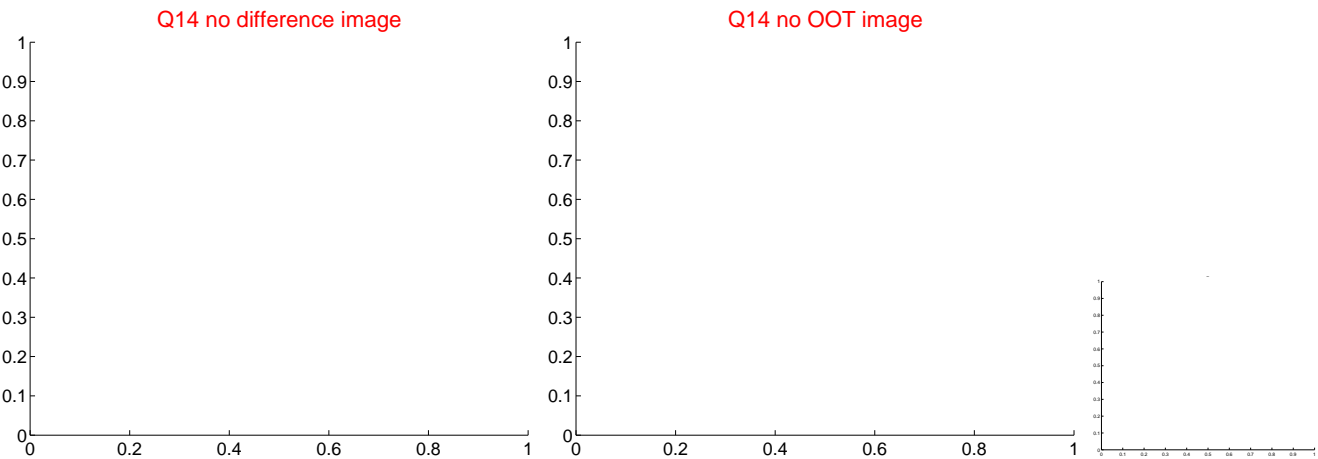
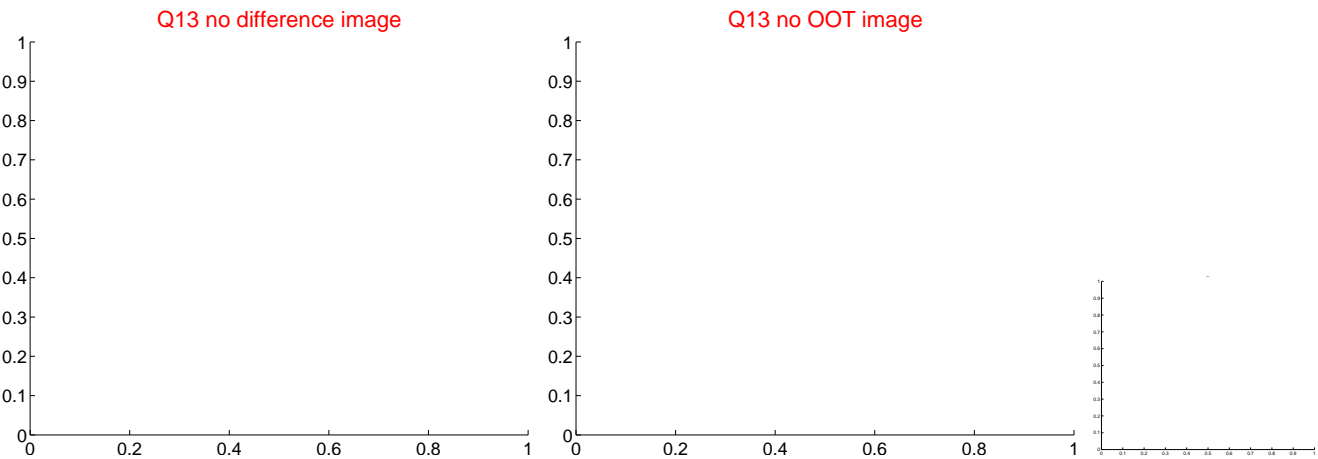
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



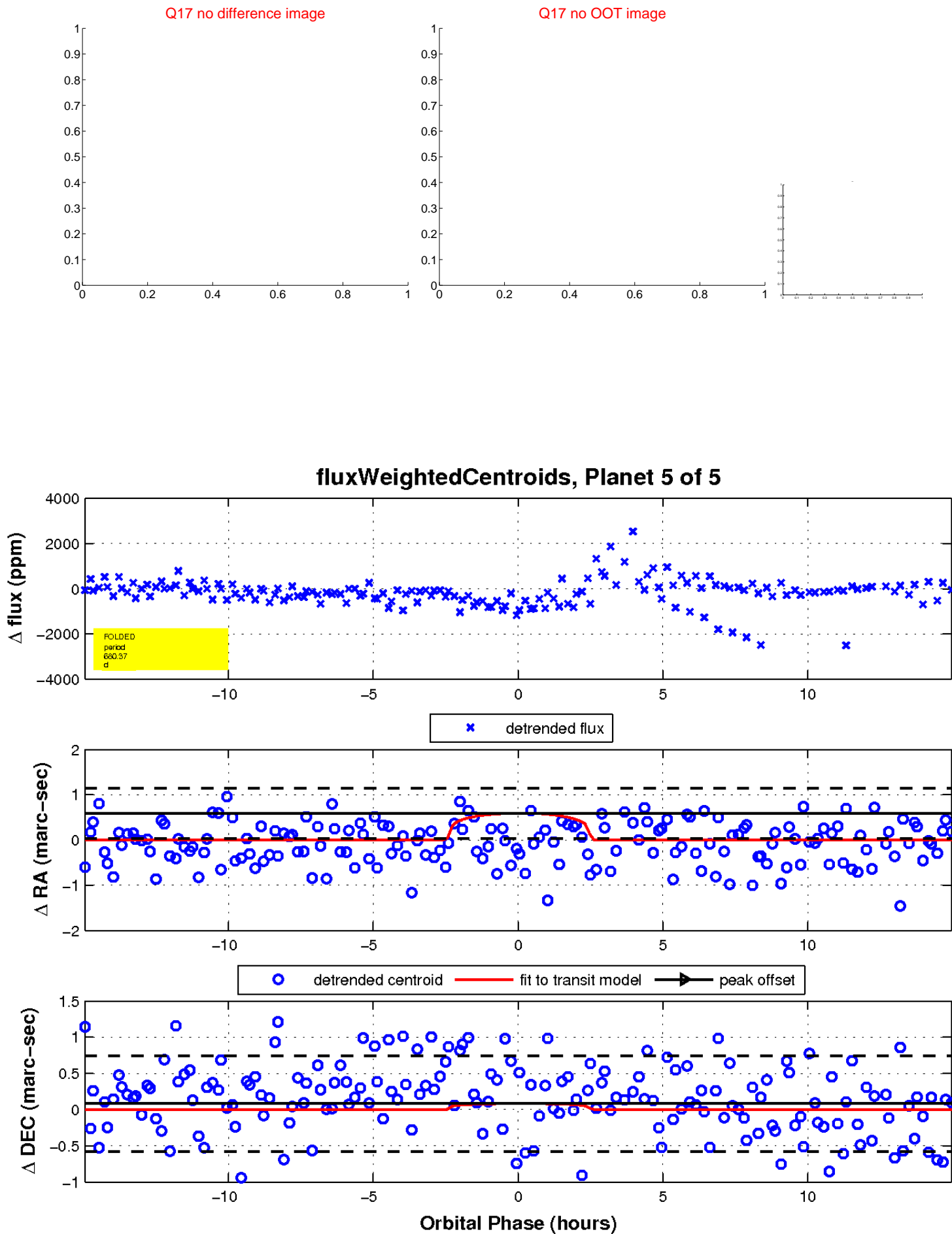
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

