

KIC 005530806

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})
005530806-01	OBS	No	270.375637	264.354260	5168.1	5.361	20.9	11.9	0.92	5681	12.13	1.26
005530806-02	OBS	No	284.416667	253.924418	4695.0	7.941	18.3	10.7	0.92	5681	11.63	1.17
005530806-03	OBS	No	491.622822	406.870467	1656.9	3.550	16.6	5.9	0.92	5681	3.99	0.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005530806-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005530806-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005530806-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—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.

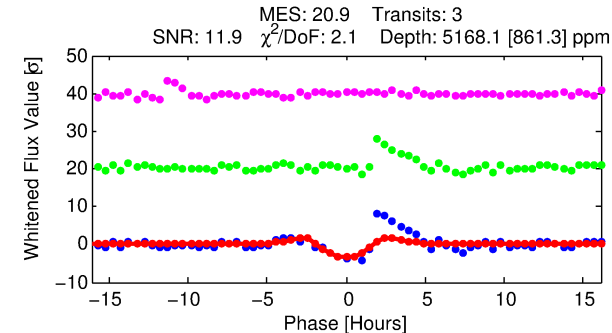
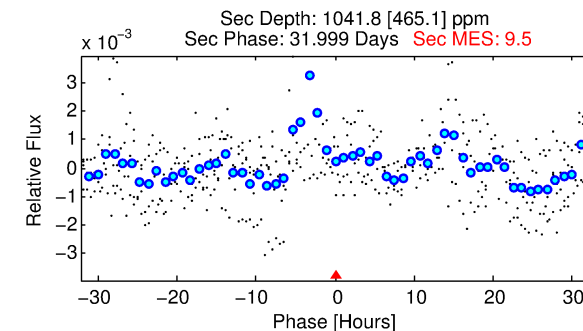
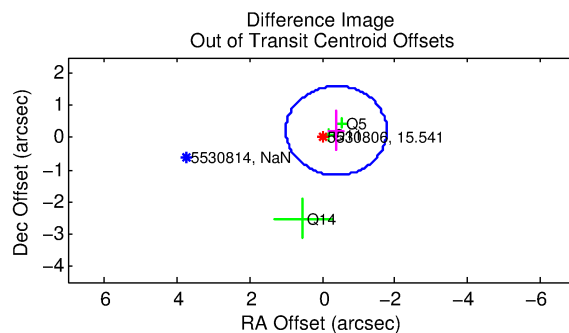
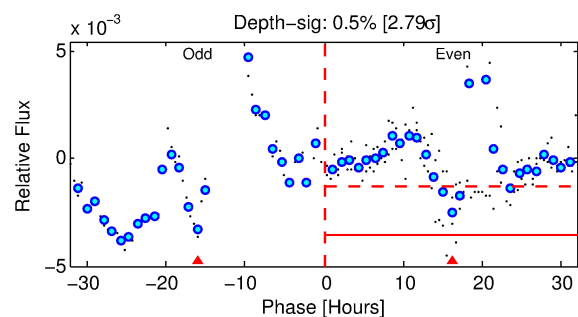
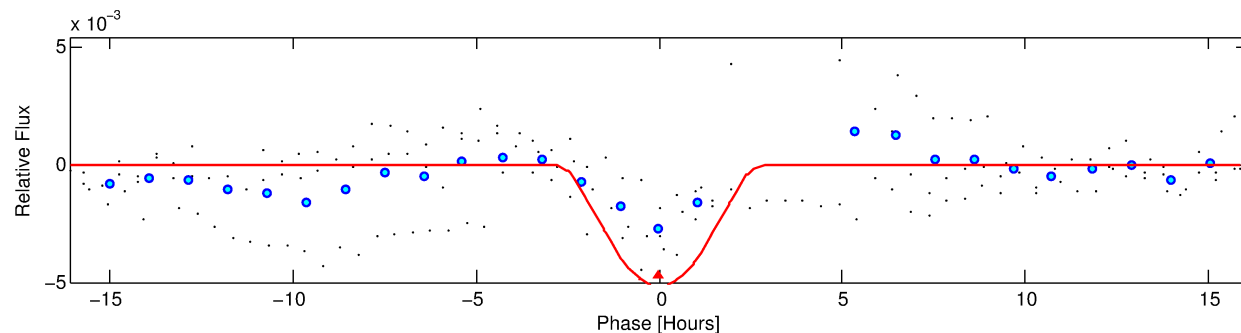
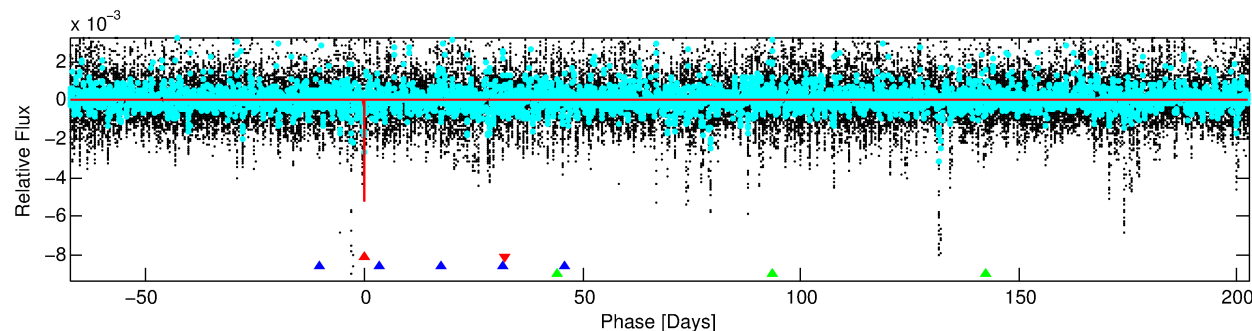
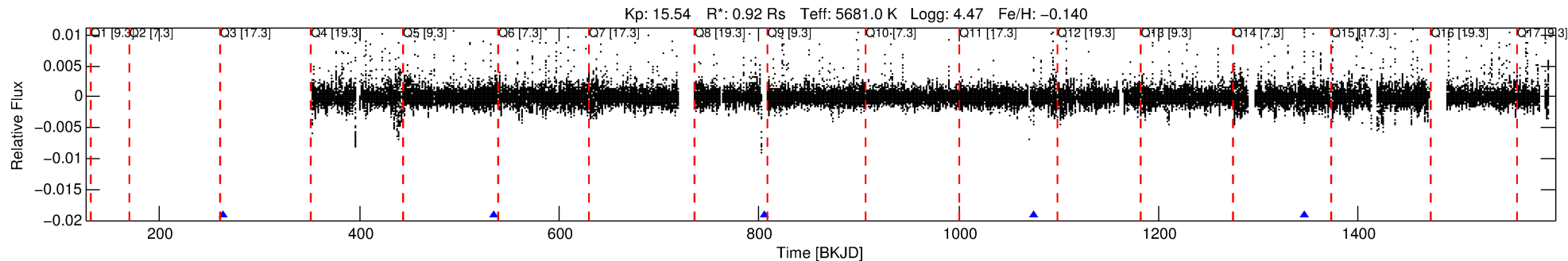
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005530806-01

No Significant Match Found

DV One-Page Summary

KIC: 5530806 Candidate: 1 of 3 Period: 270.376 d



DV Fit Results:

Period = 270.37564 [0.00446] d
Epoch = 264.3543 [0.0138] BKJD
Rp/R* = 0.1215 [0.3564]
a/R* = 196.11 [103.49]
b = 1.00 [0.50]
Seff = 1.26 [0.45]
Teq = 270 [24] K
Rp = 12.13 [35.73] Re
a = 0.7888 [0.1774] AU
Ag = 2422.74 [14277.85] [0.17σ]
Teffp = 2928 [4308] K [0.62σ]

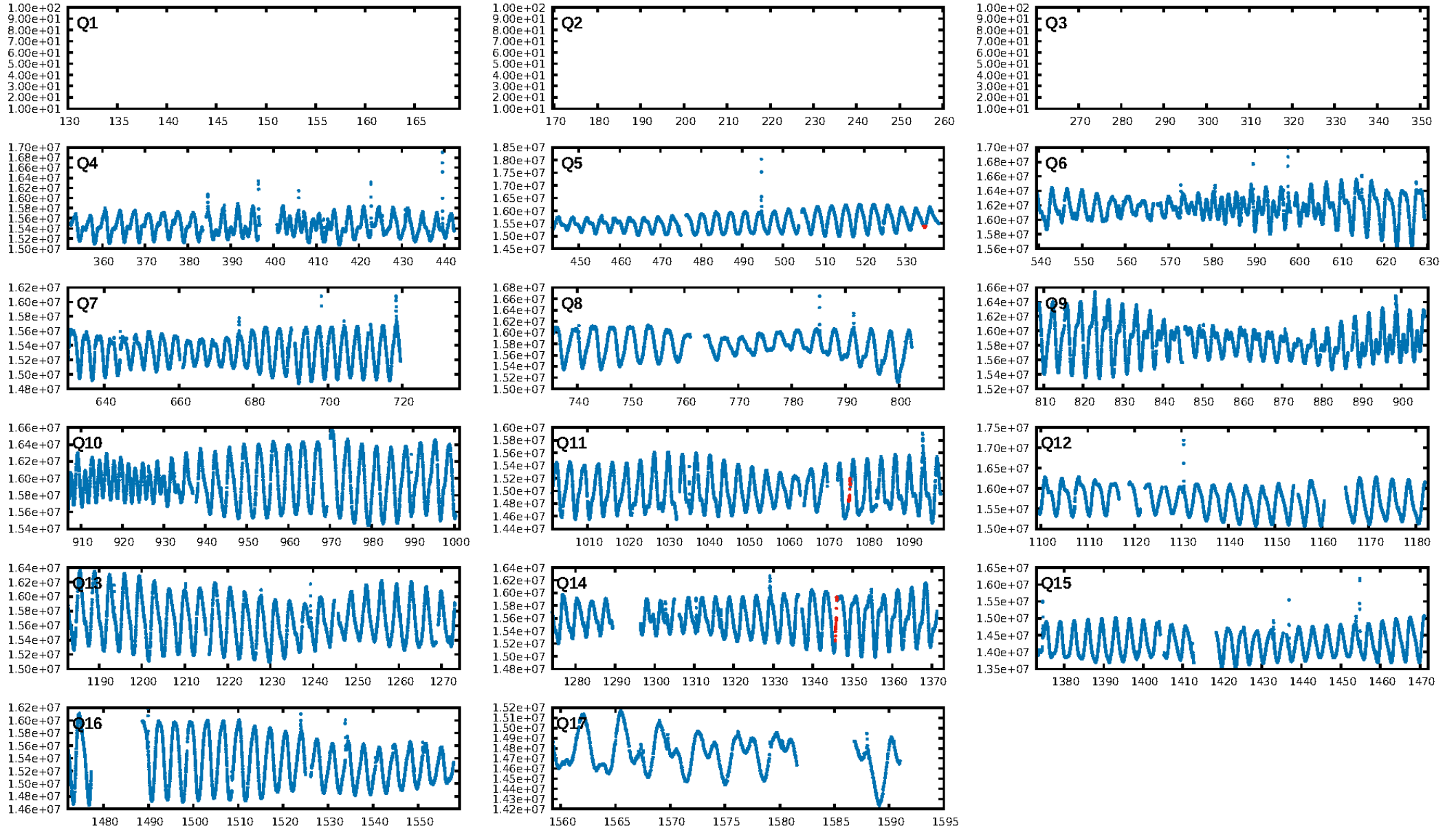
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [35.17σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.848
Centroid-sig: 1.9%
Centroid-so: 0.088 arcsec [0.17σ]
OotOffset-rm: 0.443 arcsec [0.96σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-rm: 0.117 arcsec [0.43σ]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

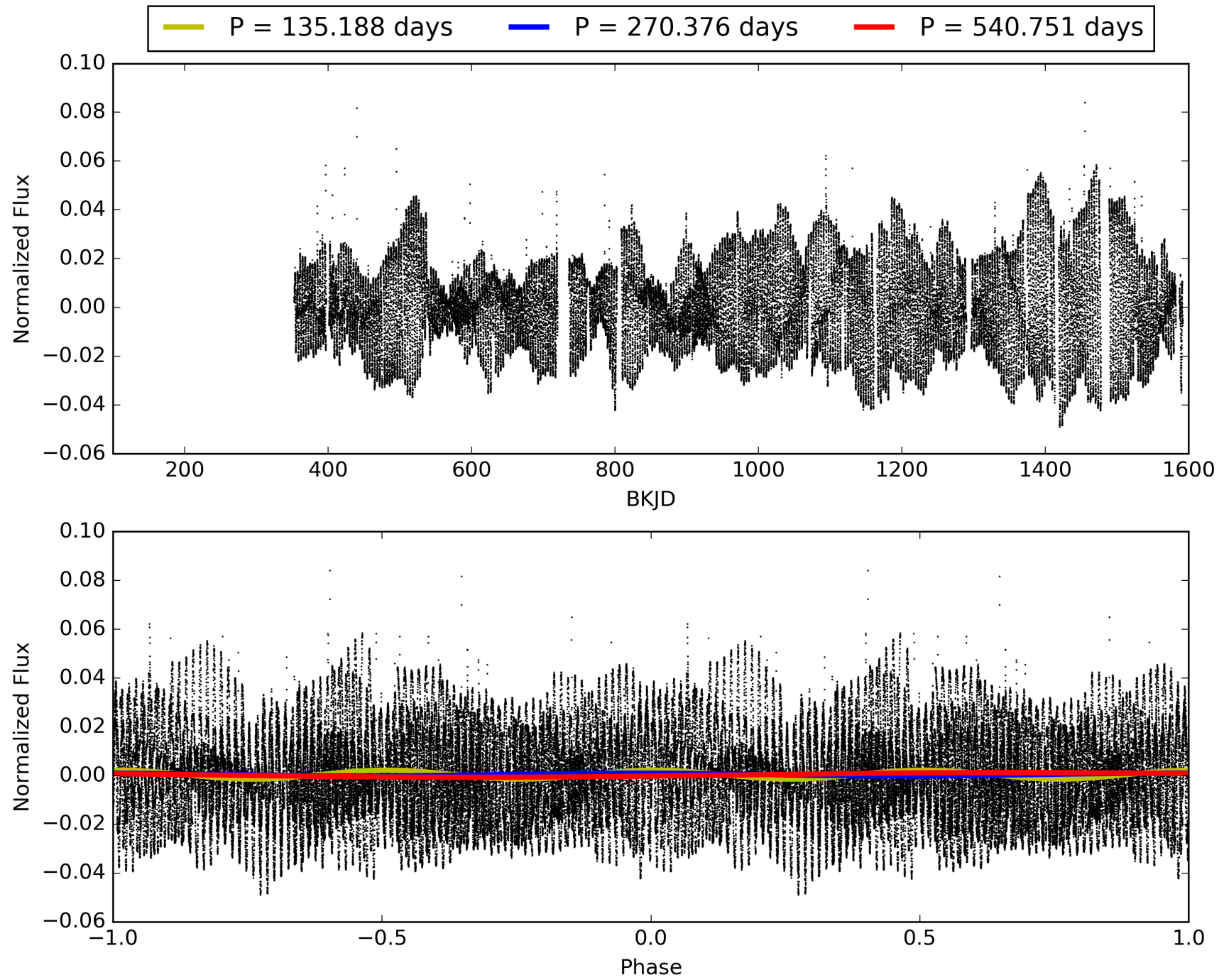
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 12:37:09 Z

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

TCE 005530806-01, PDC Light Curves

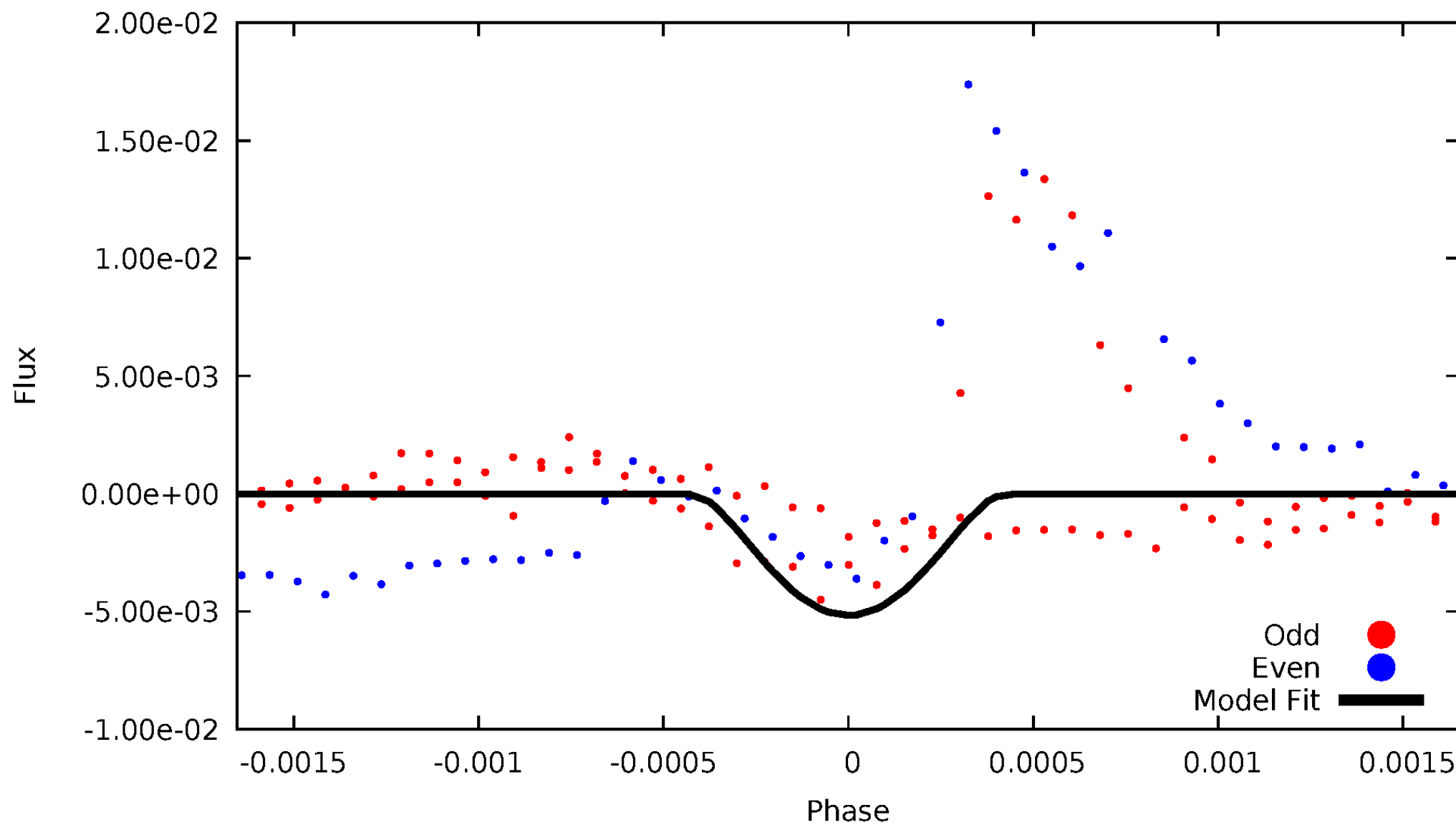


TCE 005530806-01



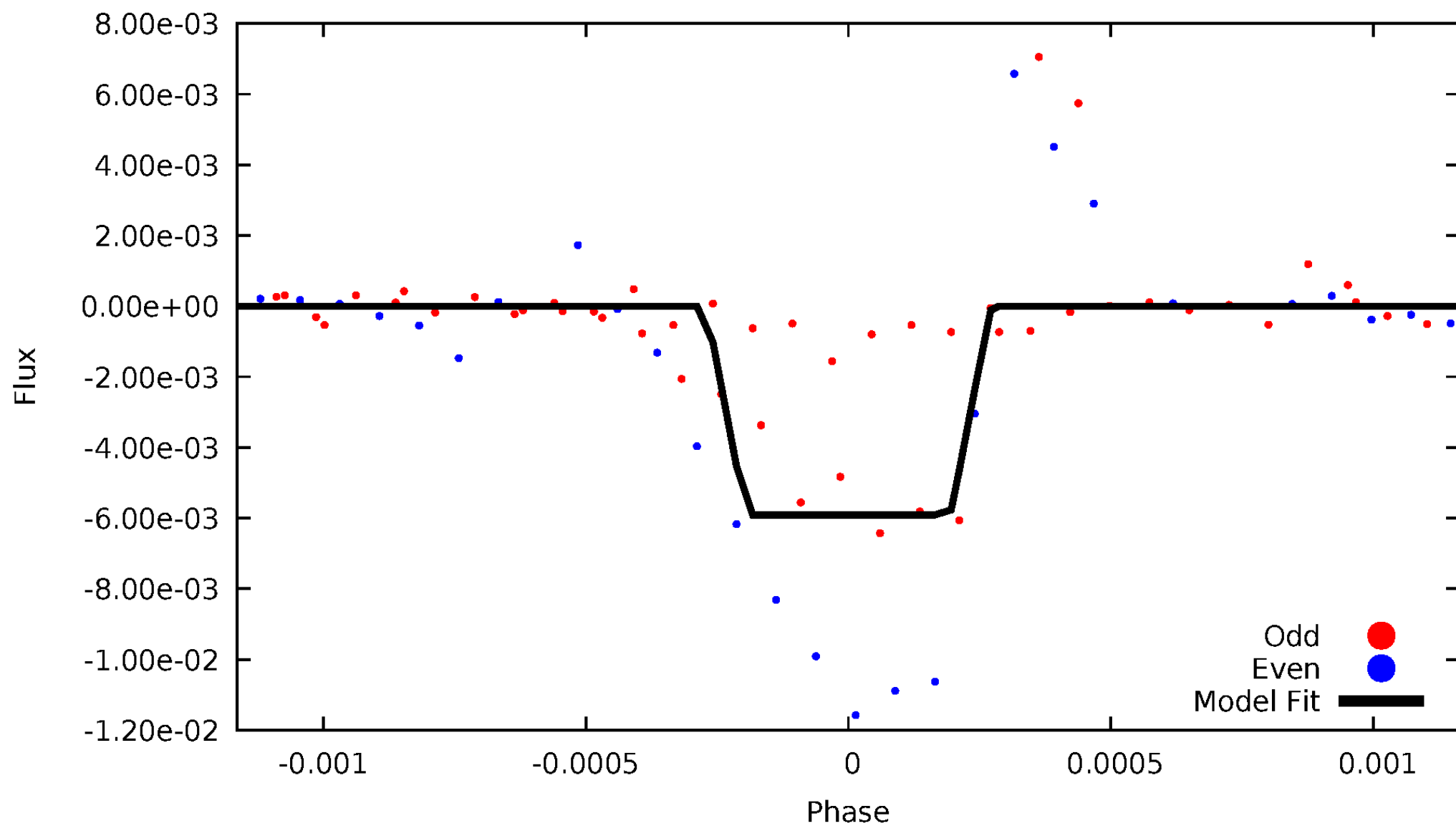
DV Odd/Even

TCE 005530806-01



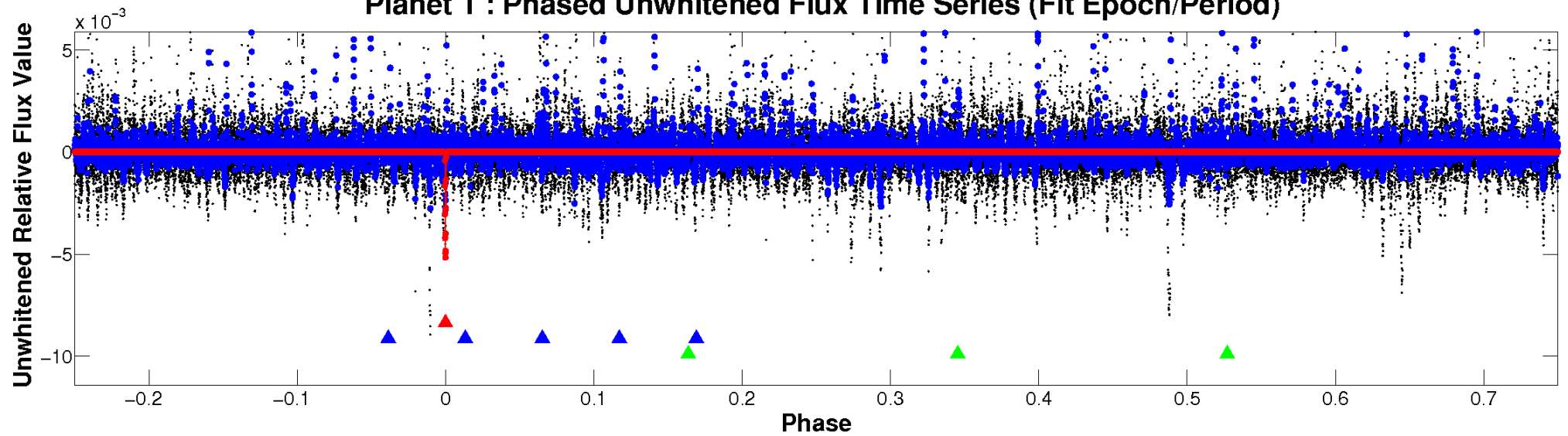
ALT Odd/Even

TCE 005530806-01

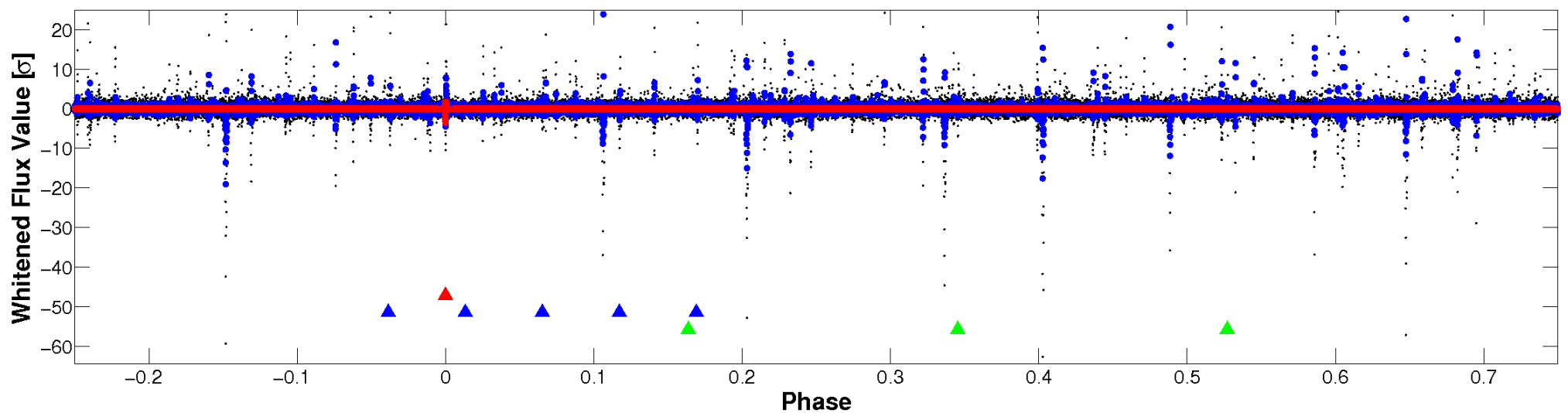


Non-Whitened Vs. Whitened Light Curve

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

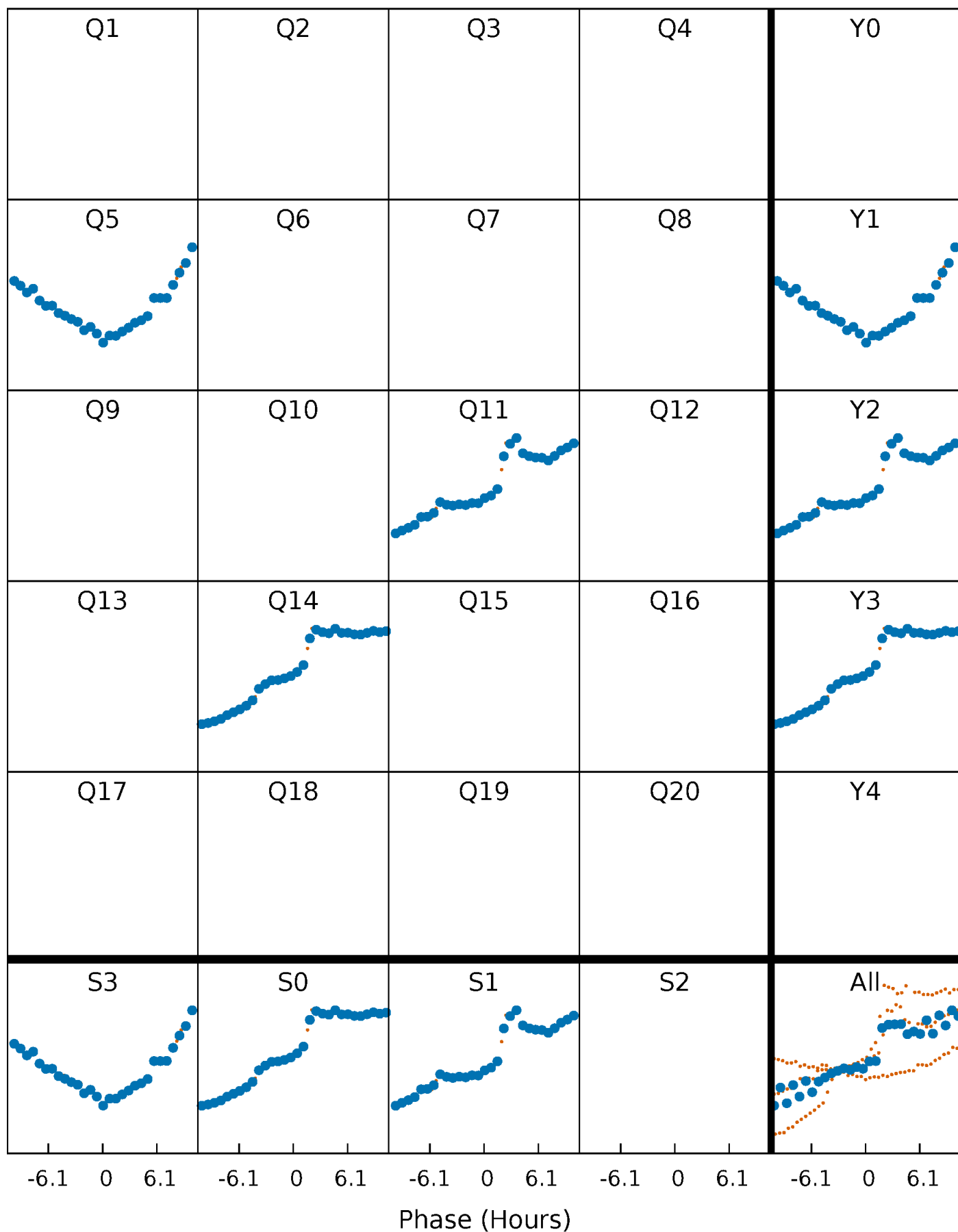


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



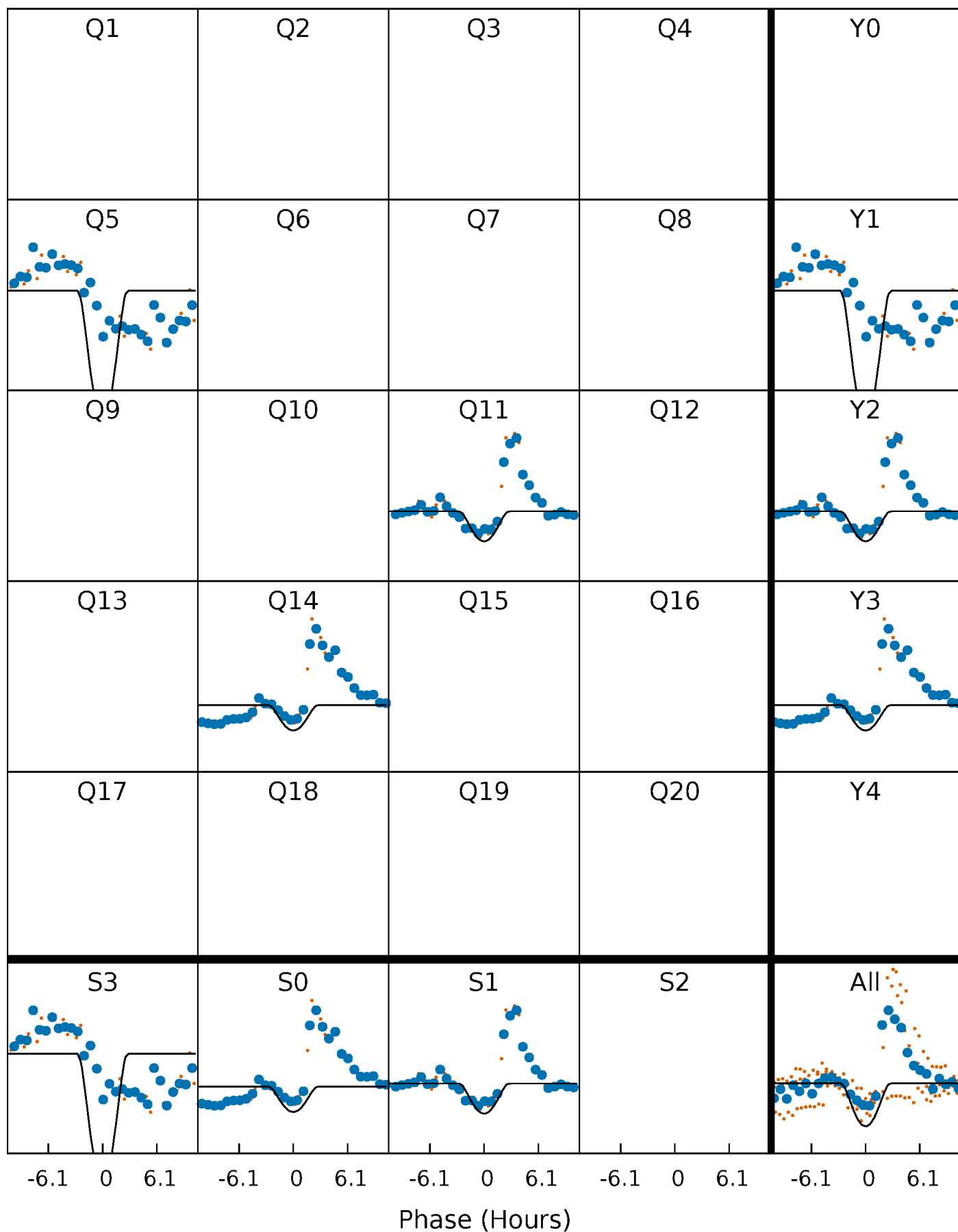
PDC Quarter-Phased Transit Curves

TCE 005530806-01 P=270.375637 Days $T_0=264.354260$ (BKJD)



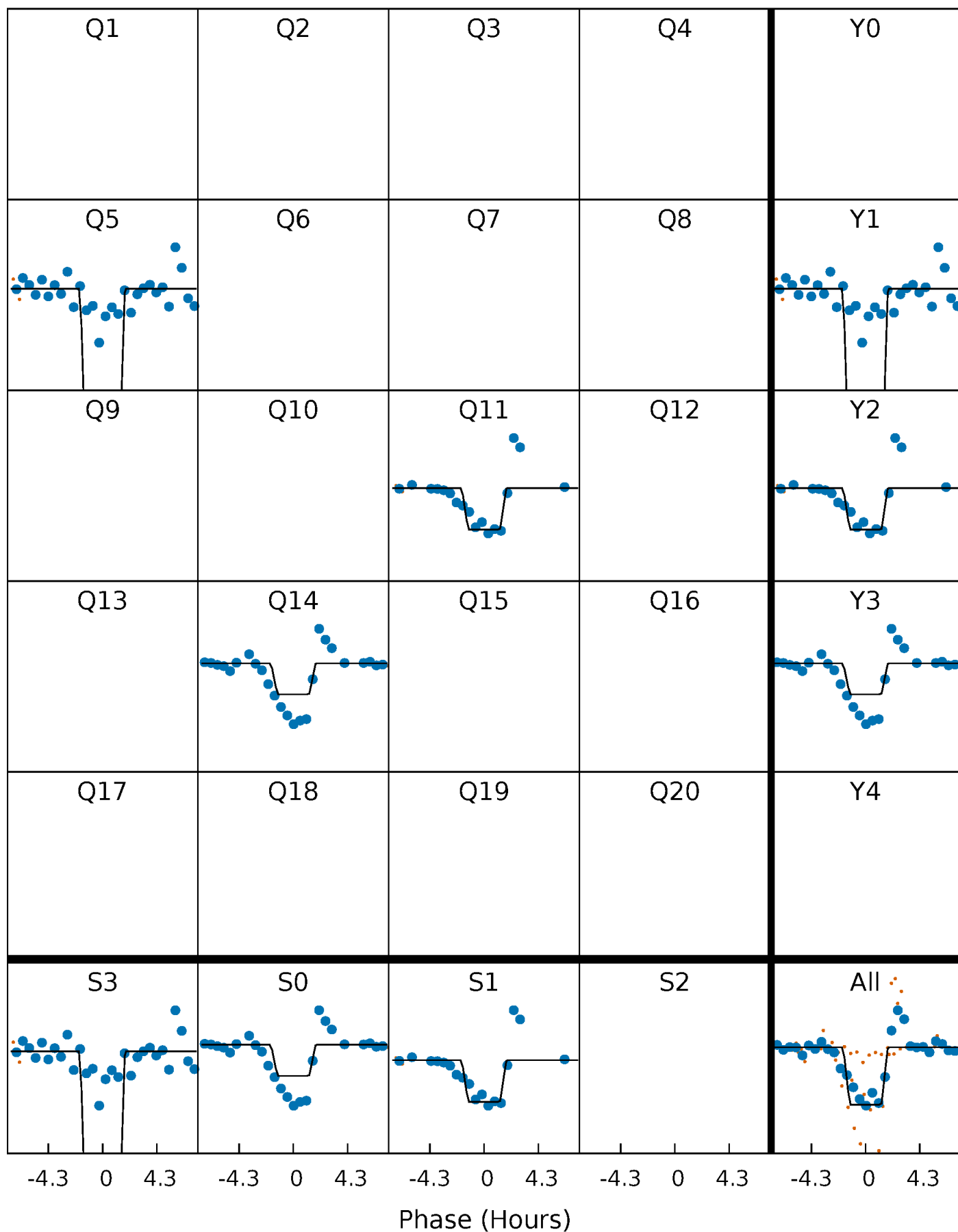
DV Quarter-Phased Transit Curves

TCE 005530806-01 P=270.375637 Days $T_0=264.354260$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

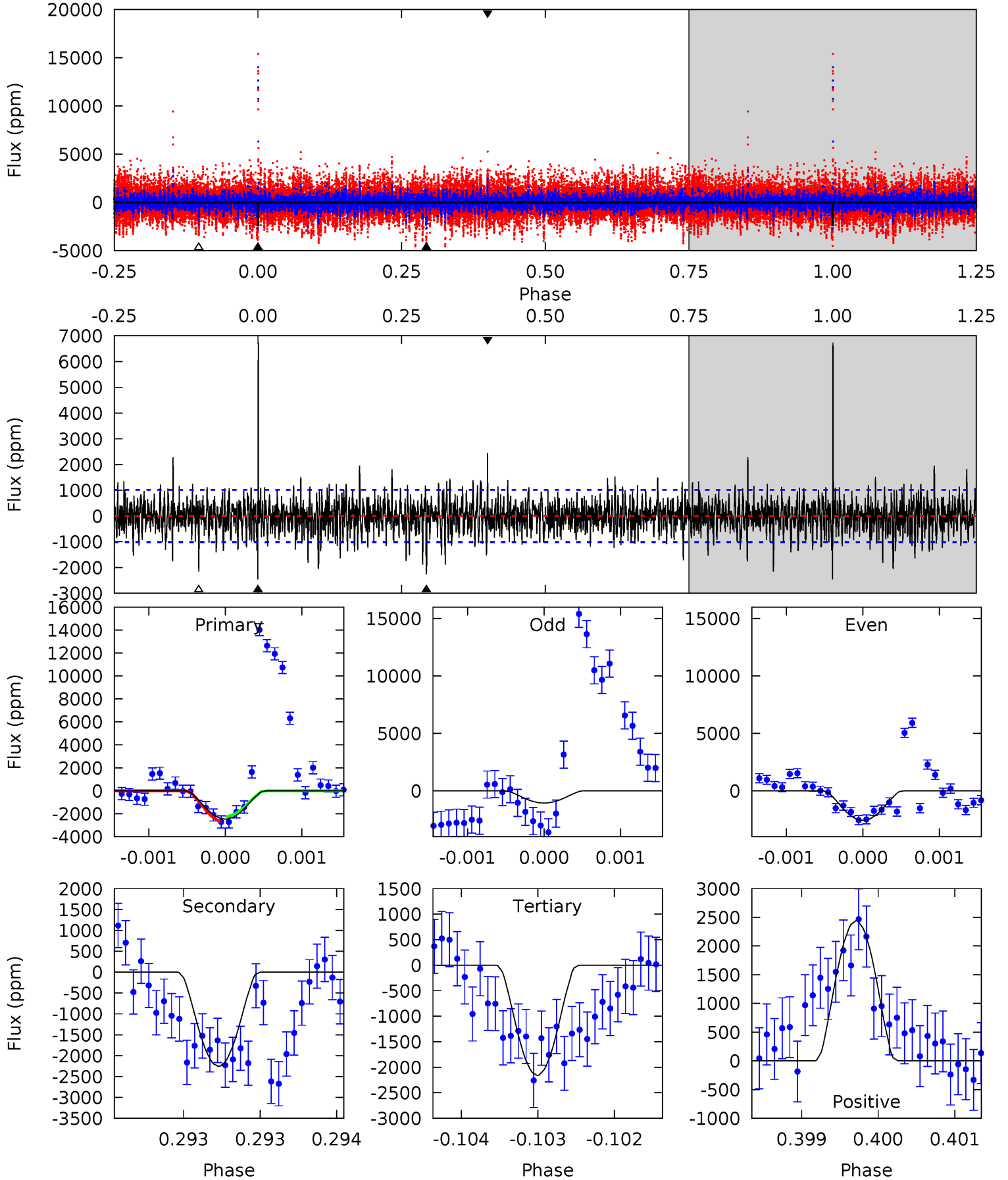
TCE 005530806-01 P=270.373550 Days $T_0=264.364862$ (BKJD)



DV Model-Shift Uniqueness Test

005530806-01, P = 270.375637 Days, E = 264.354260 Days

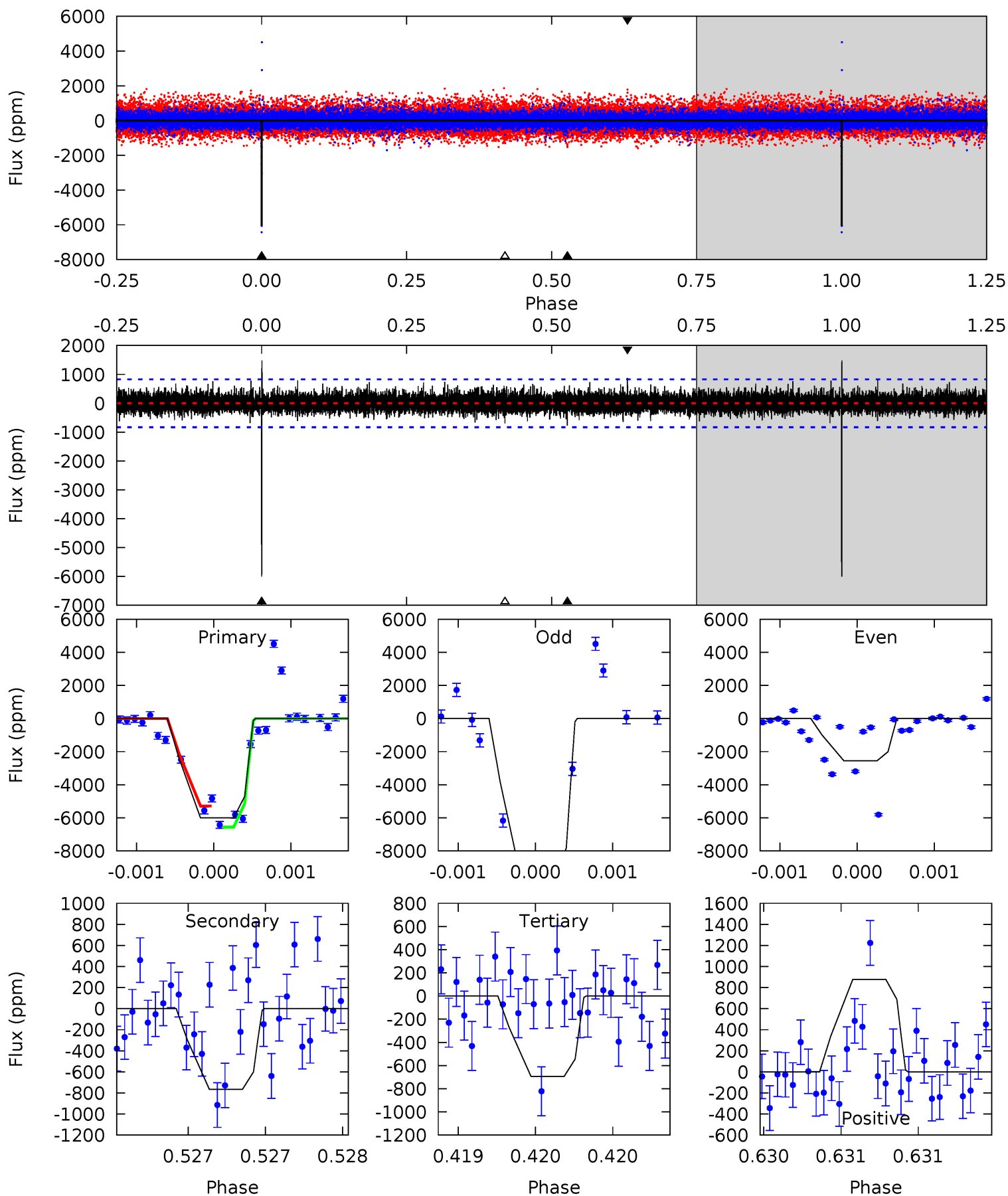
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	12.2	11.7	13.2	5.48	3.34	2.69	1.63	0.11	0.52	-1.00	3.51	1.56	0.73	1.23



Alt Model-Shift Uniqueness Test

005530806-01, P = 270.373550 Days, E = 264.364862 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.3	5.14	4.65	5.88	5.56	3.47	1.15	35.6	34.4	0.48	-0.74	37.7	0.98	0.20	3.90



Stellar Parameters For KIC 005530806

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5681^{+169}_{-186}	$4.467^{+0.078}_{-0.182}$	$-0.140^{+0.300}_{-0.300}$	$0.915^{+0.242}_{-0.104}$	$0.896^{+0.115}_{-0.083}$	$1.647^{+0.668}_{-0.774}$
	+3%/-3%	+2%/-4%	+214%/-214%	+26%/-11%	+13%/-9%	+41%/-47%
Source	KIC0	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 005530806-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2258 ± 185	$28.83^{+33.85}_{-19.94}$	382^{+28}_{-19}	3011^{+1330}_{-520}	910^{+8861}_{-708}
Alt.	-766 ± 149	$27.74^{+27.73}_{-19.36}$	380^{+24}_{-18}	2619^{+1030}_{-409}	337^{+3313}_{-255}

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

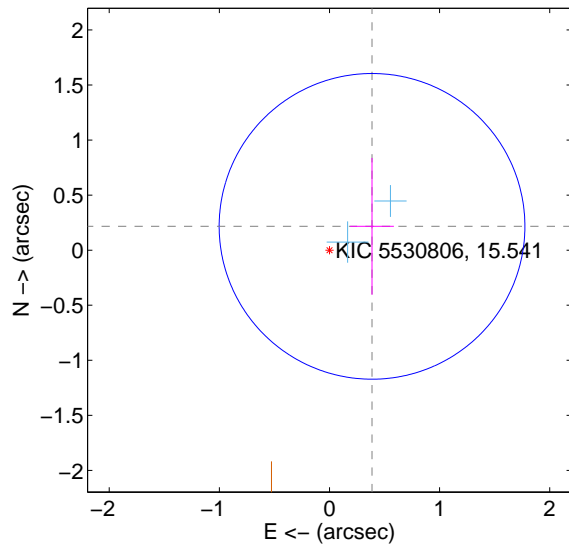
Supplemental centroid analysis for 005530806-01. Kepler magnitude: 15.54. Transit SNR 11.89

There are 2 quarters with good PRF difference image offsets

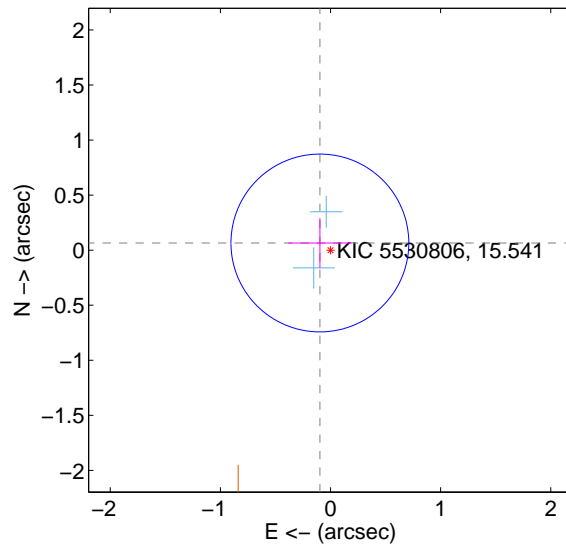
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.443 ± 0.463	0.96	-0.386 ± 0.199	0.216 ± 0.622
PRF-fit source offset from KIC position	0.117 ± 0.269	0.43	0.097 ± 0.287	0.065 ± 0.226
photometric centroid source offset	0.09 ± 0.51	0.17	0.08 ± 0.53	-0.04 ± 0.45

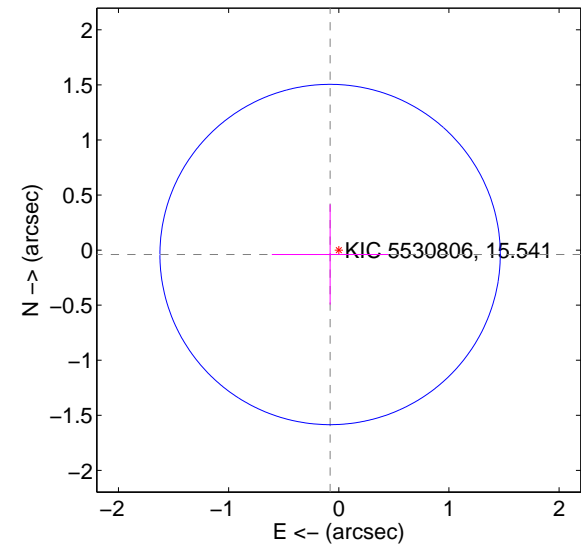
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

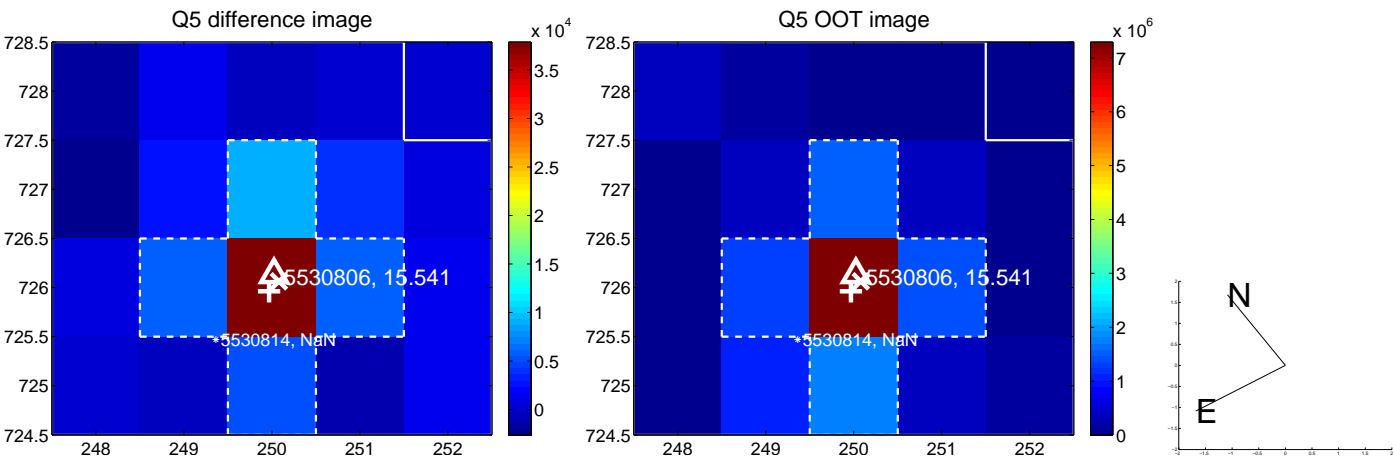


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

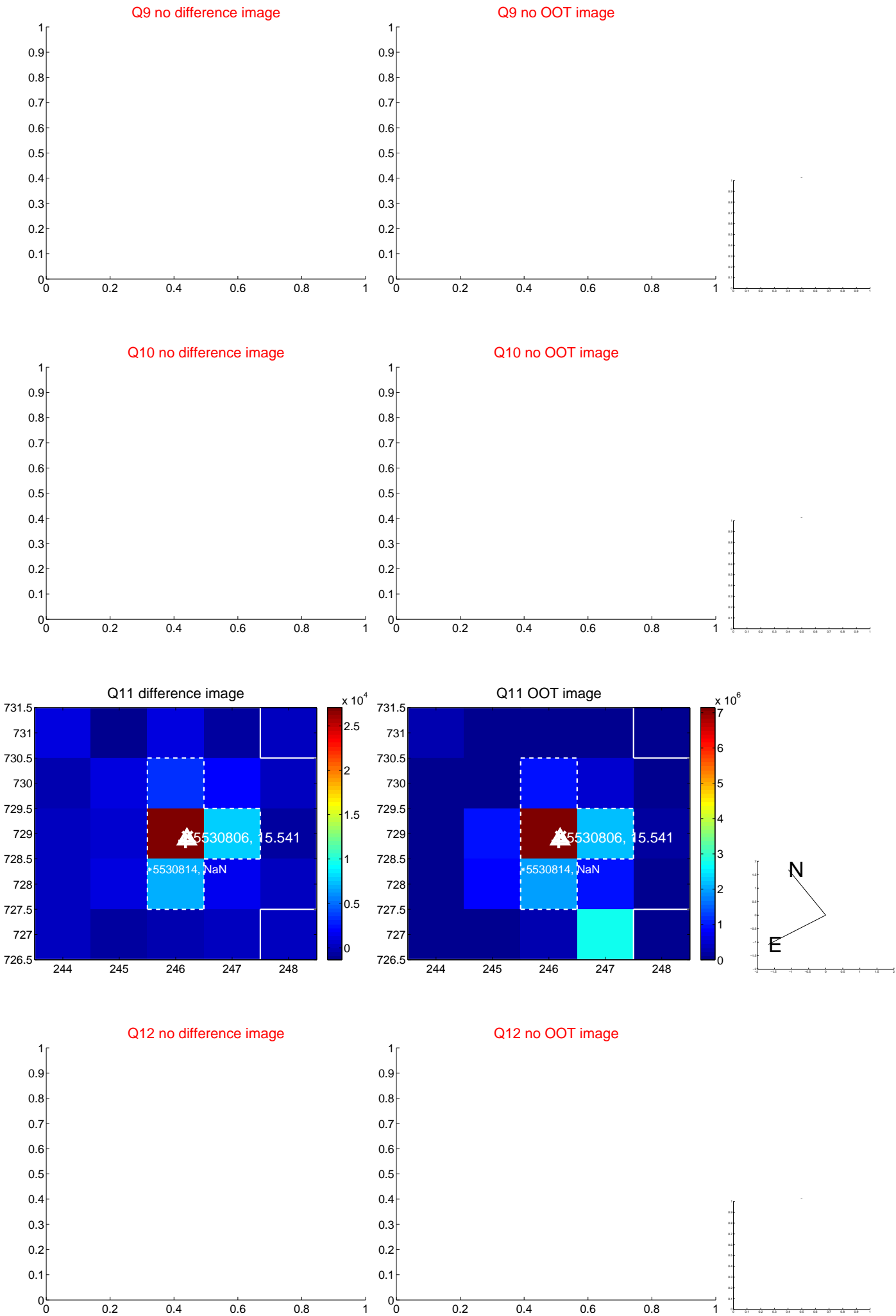
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



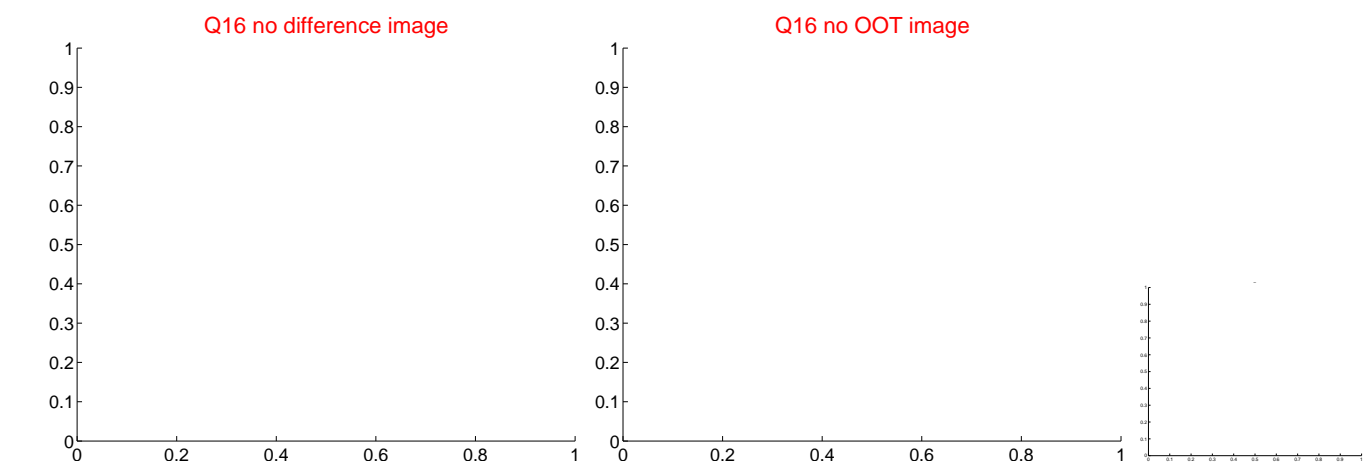
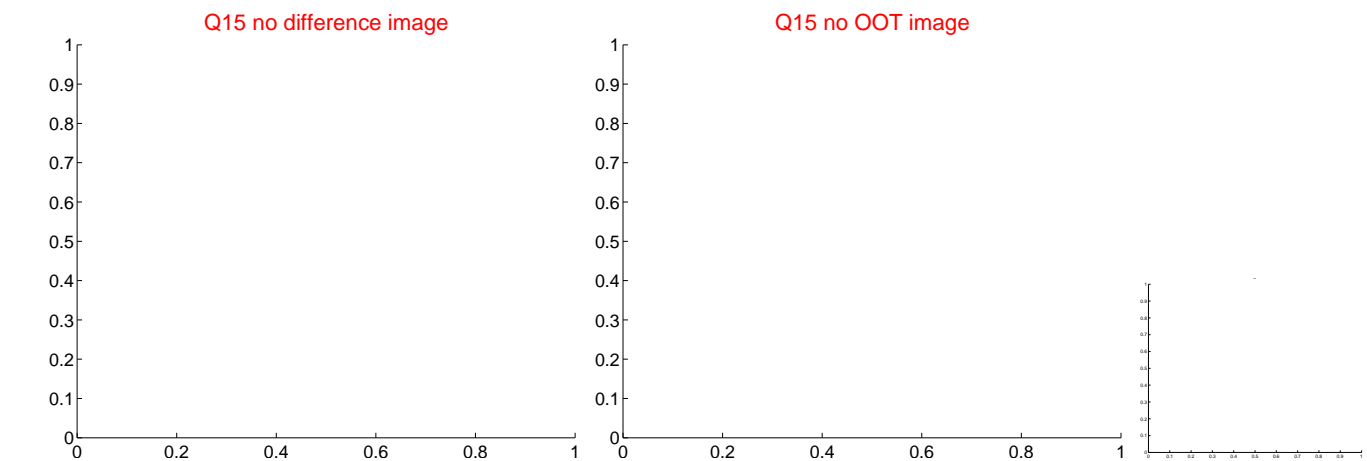
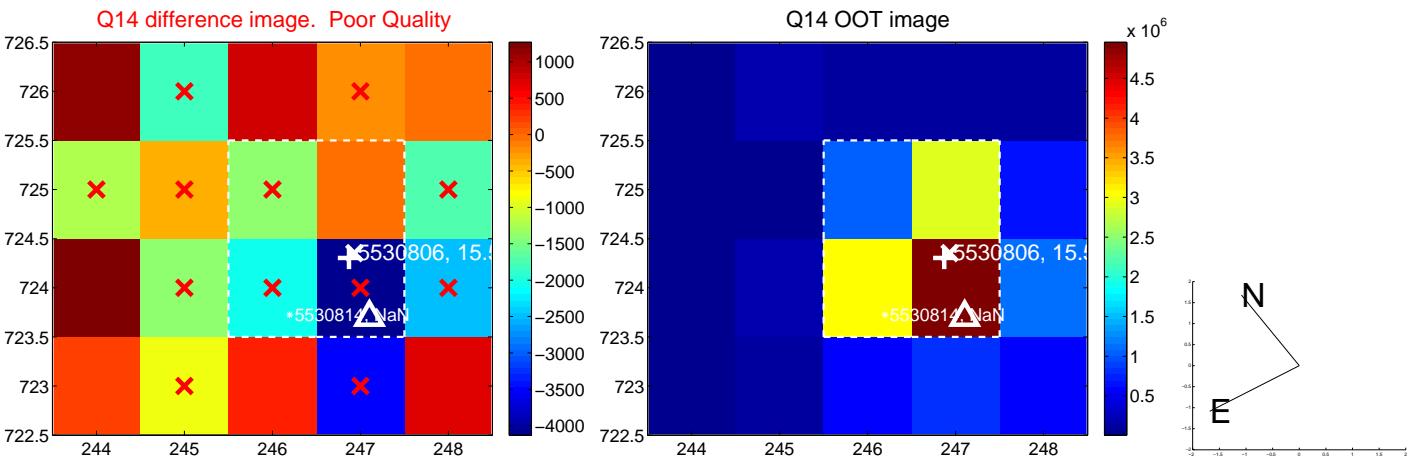
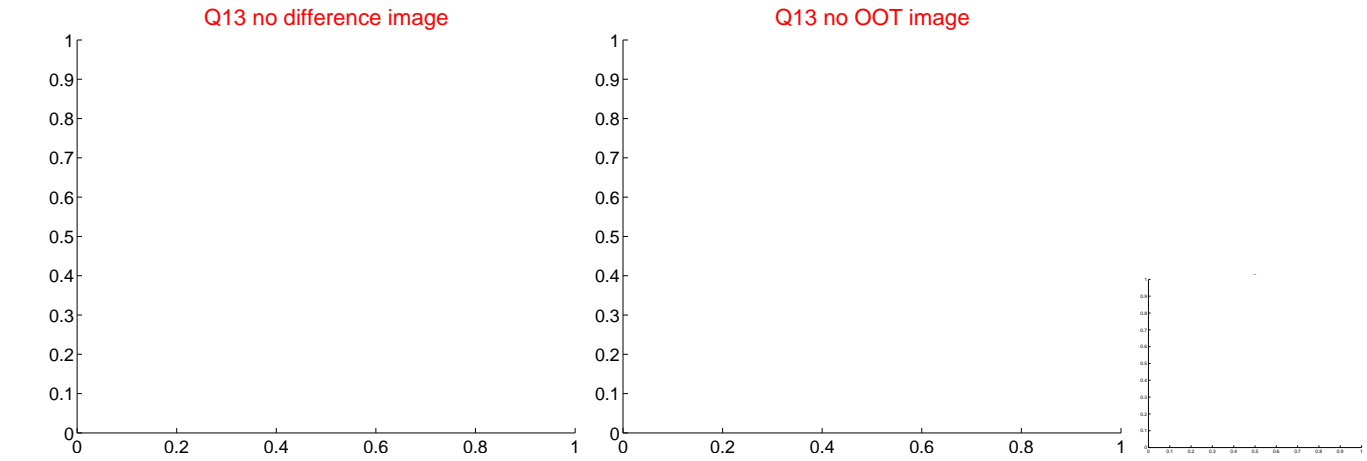
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



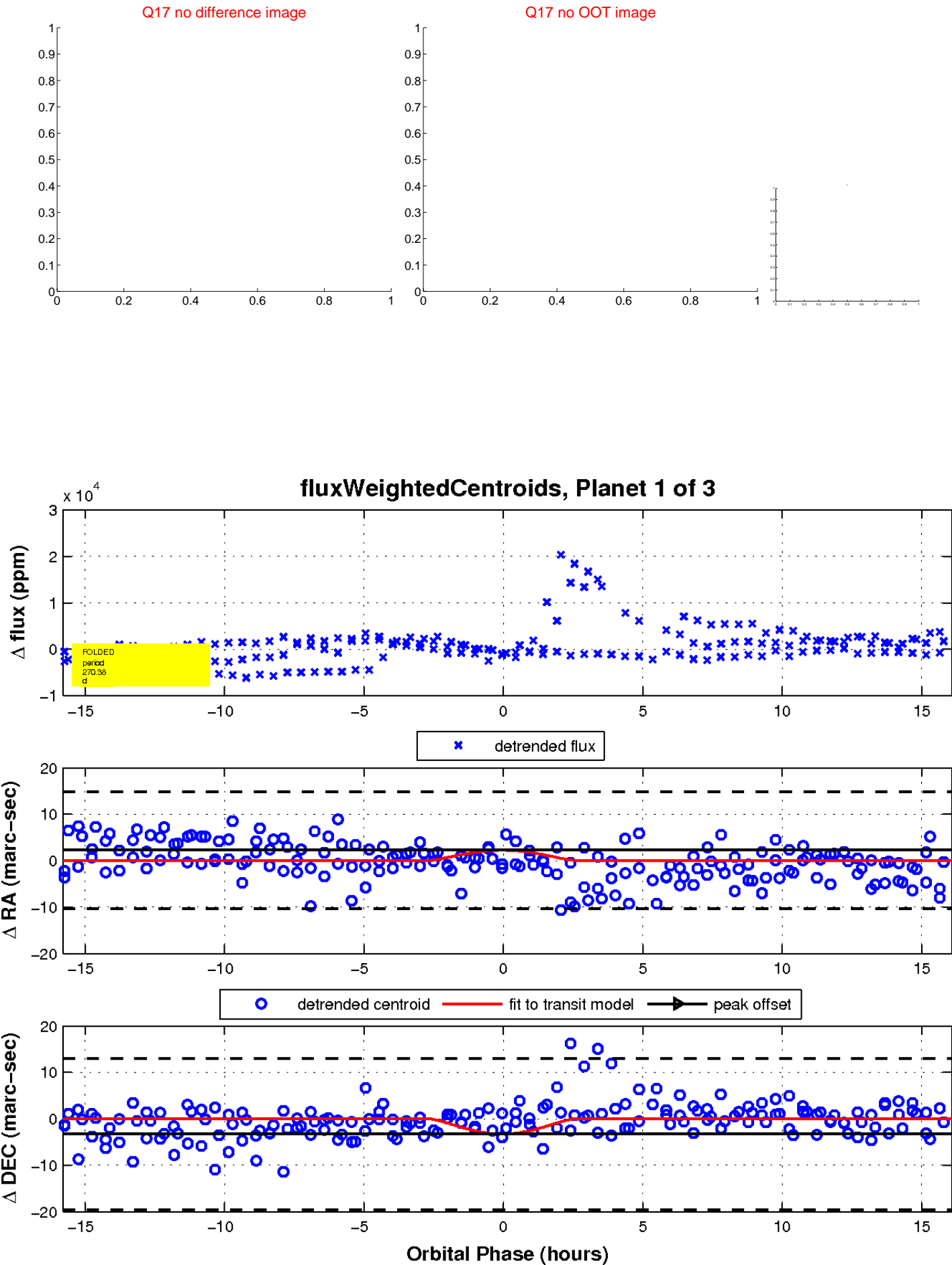
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

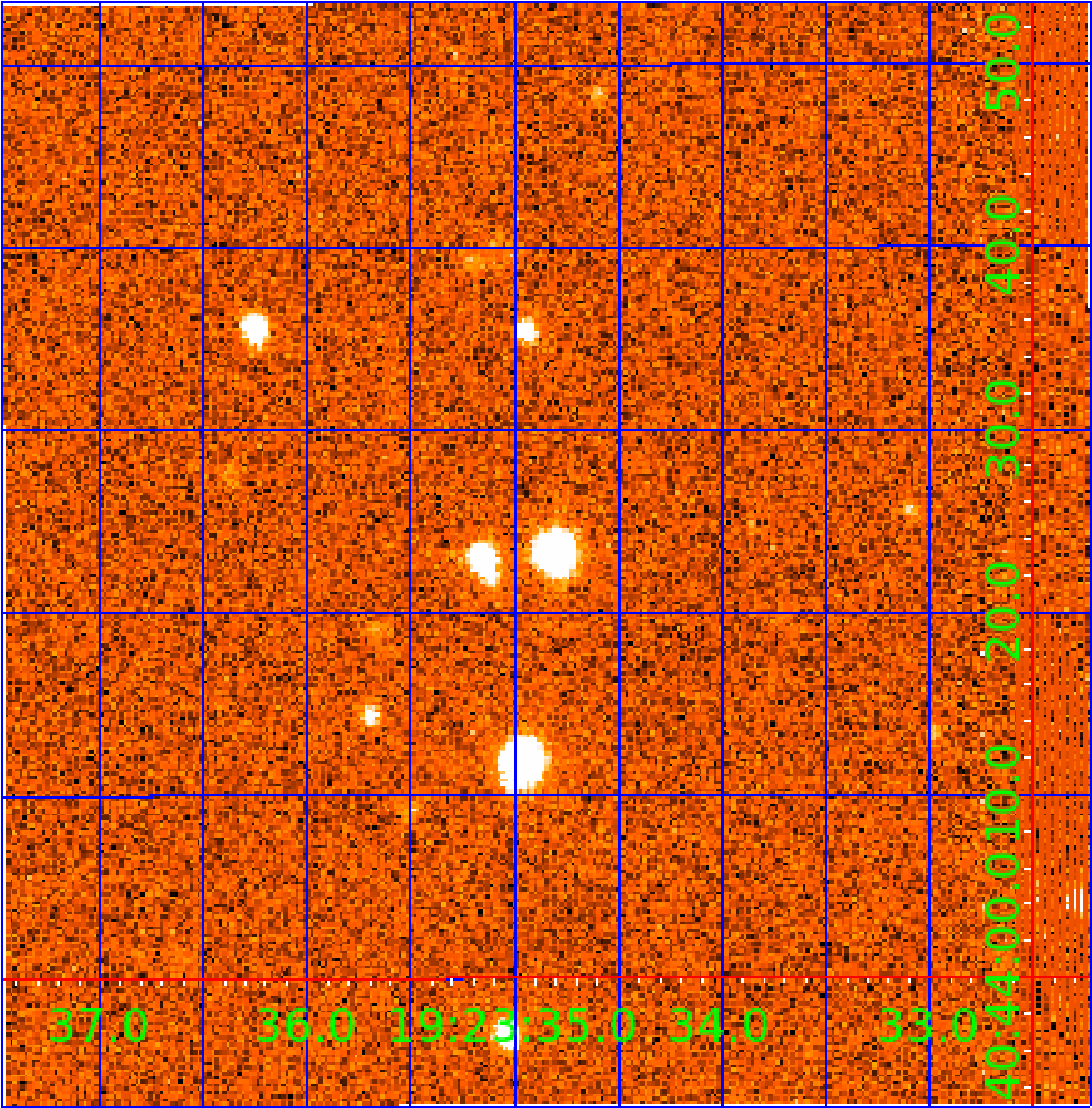


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005530806

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})
005530806-01	OBS	No	270.375637	264.354260	5168.1	5.361	20.9	11.9	0.92	5681	12.13	1.26
005530806-02	OBS	No	284.416667	253.924418	4695.0	7.941	18.3	10.7	0.92	5681	11.63	1.17
005530806-03	OBS	No	491.622822	406.870467	1656.9	3.550	16.6	5.9	0.92	5681	3.99	0.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005530806-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005530806-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005530806-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—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.

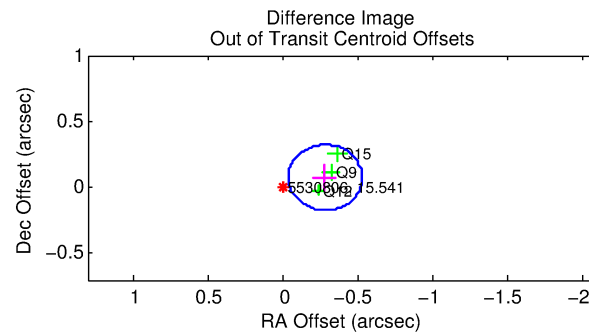
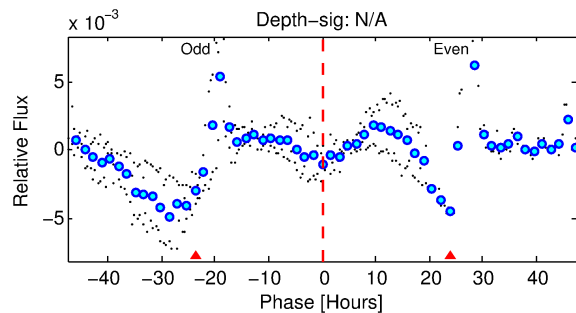
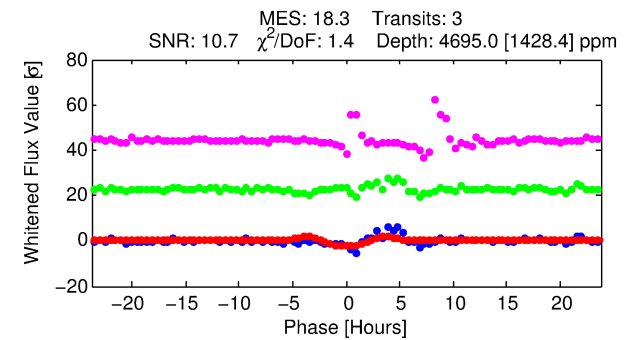
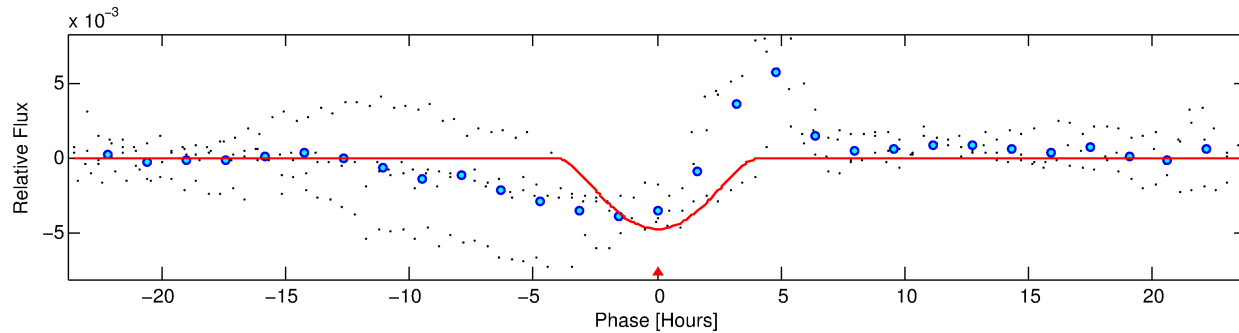
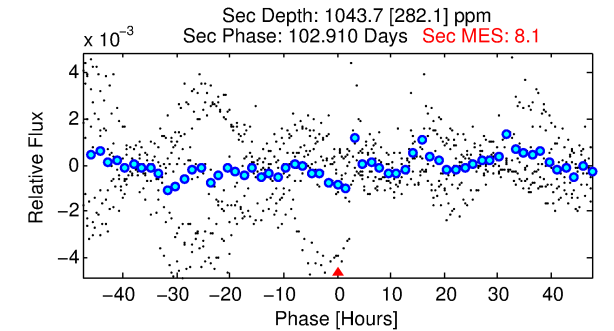
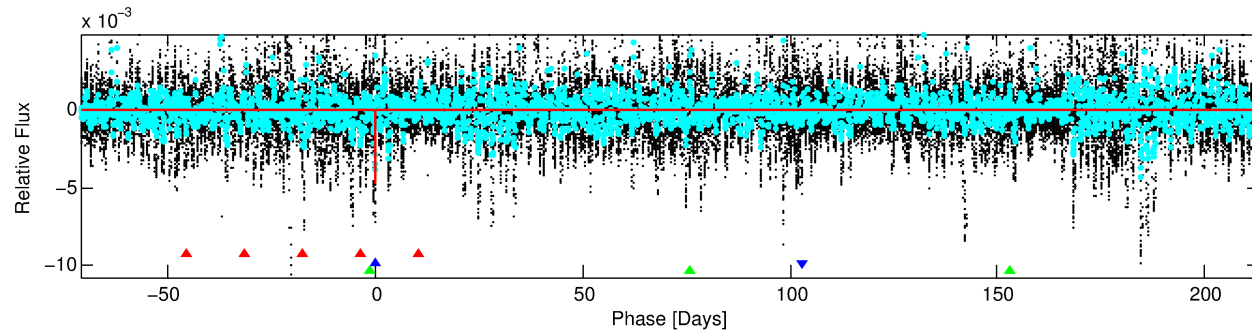
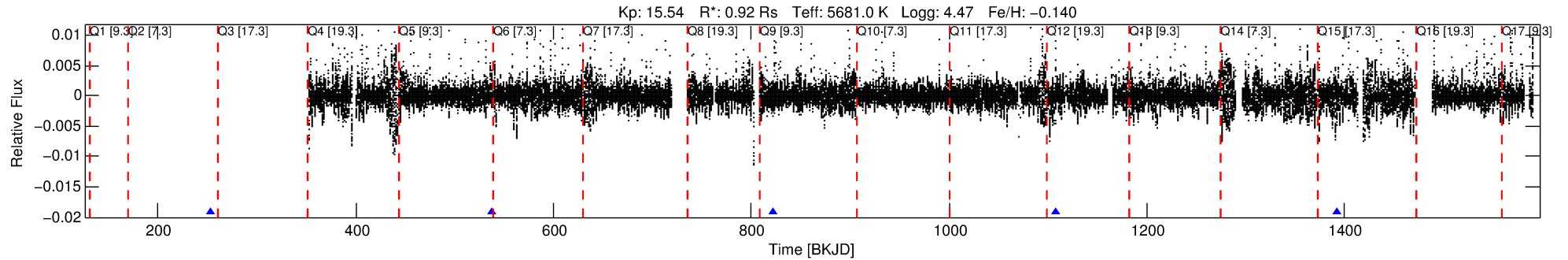
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005530806-02

No Significant Match Found

DV One-Page Summary

KIC: 5530806 Candidate: 2 of 3 Period: 284.417 d



DV Fit Results:

Period = 284.41667 [0.00774] d
Epoch = 253.9244 [0.0220] BKJD
Rp/R* = 0.1165 [0.2240]
a/R* = 135.86 [48.51]
b = 1.00 [0.29]
Seff = 1.17 [0.42]
Teq = 265 [24] K
Rp = 11.63 [22.58] Re
a = 0.8159 [0.1835] AU
Ag = 2826.87 [10943.38] [0.26σ]
Teffp = 2992 [2887] K [0.94σ]

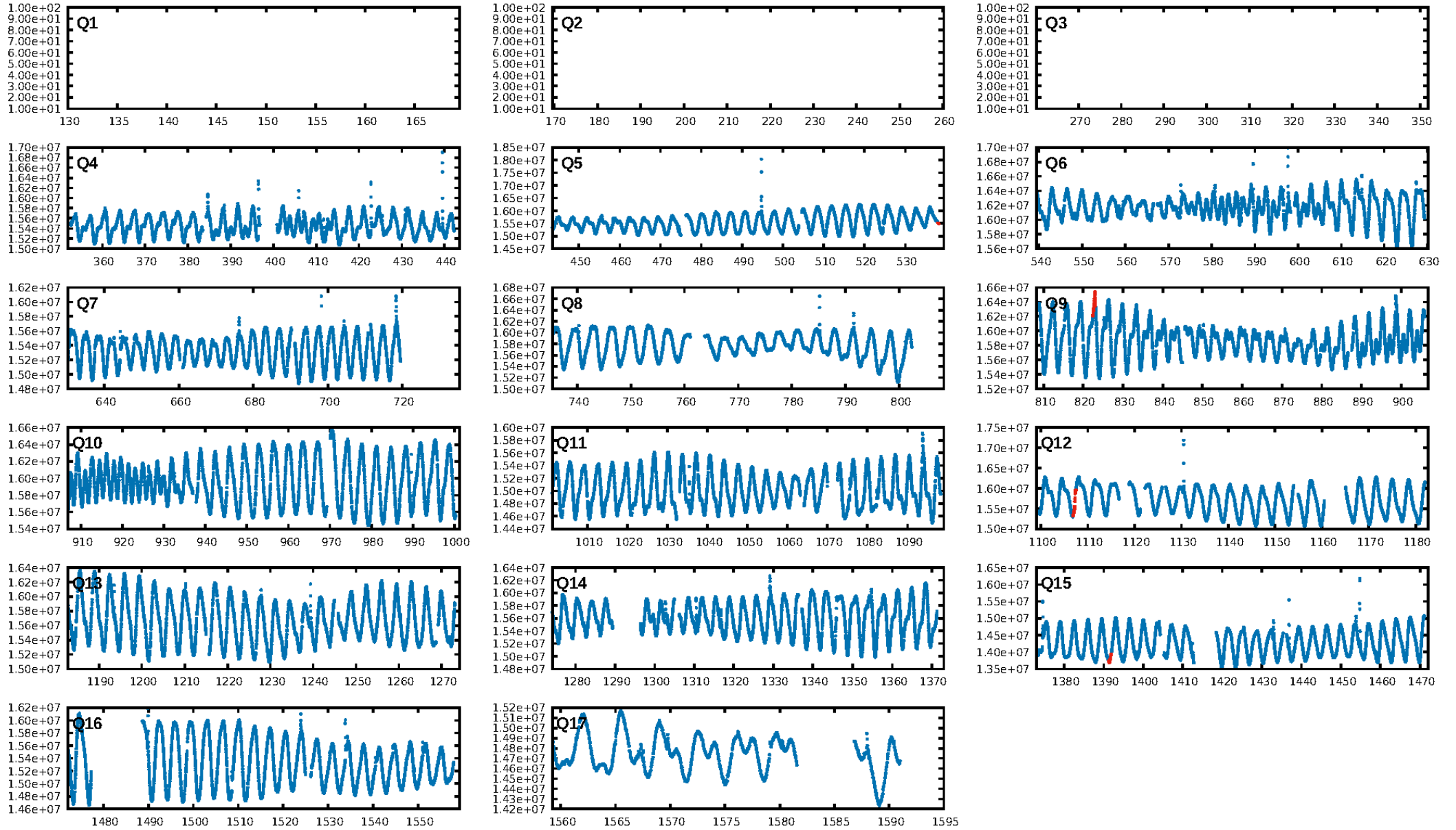
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [35.17σ]
LongPeriod-sig: 100.0% [571.70σ]
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 8.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.91
Centroid-sig: 53.1%
Centroid-so: 1.249 arcsec [2.00σ]
OotOffset-rm: 0.296 arcsec [3.58σ]
KicOffset-rm: 0.151 arcsec [1.53σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

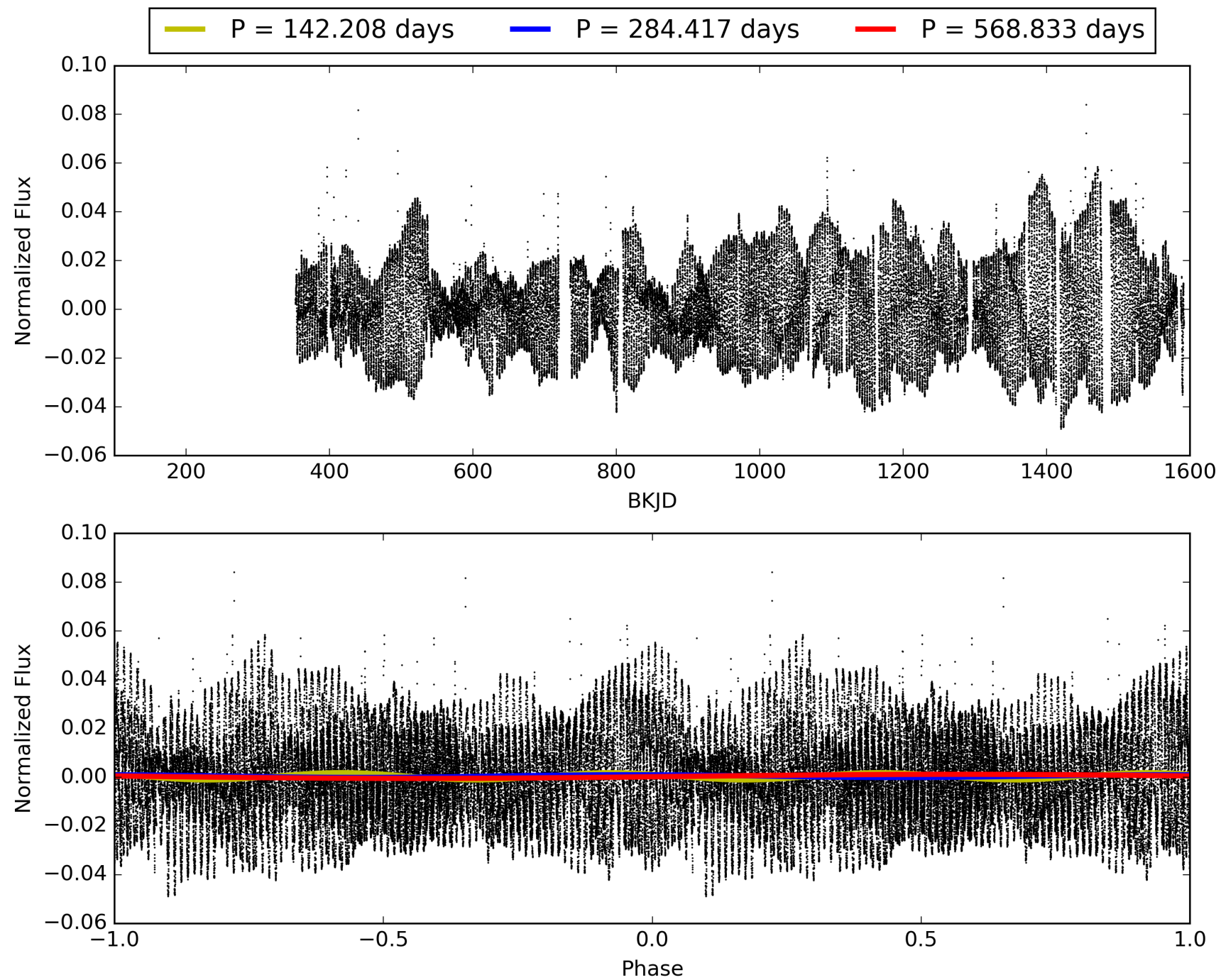
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 12:37:17 Z

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

TCE 005530806-02, PDC Light Curves

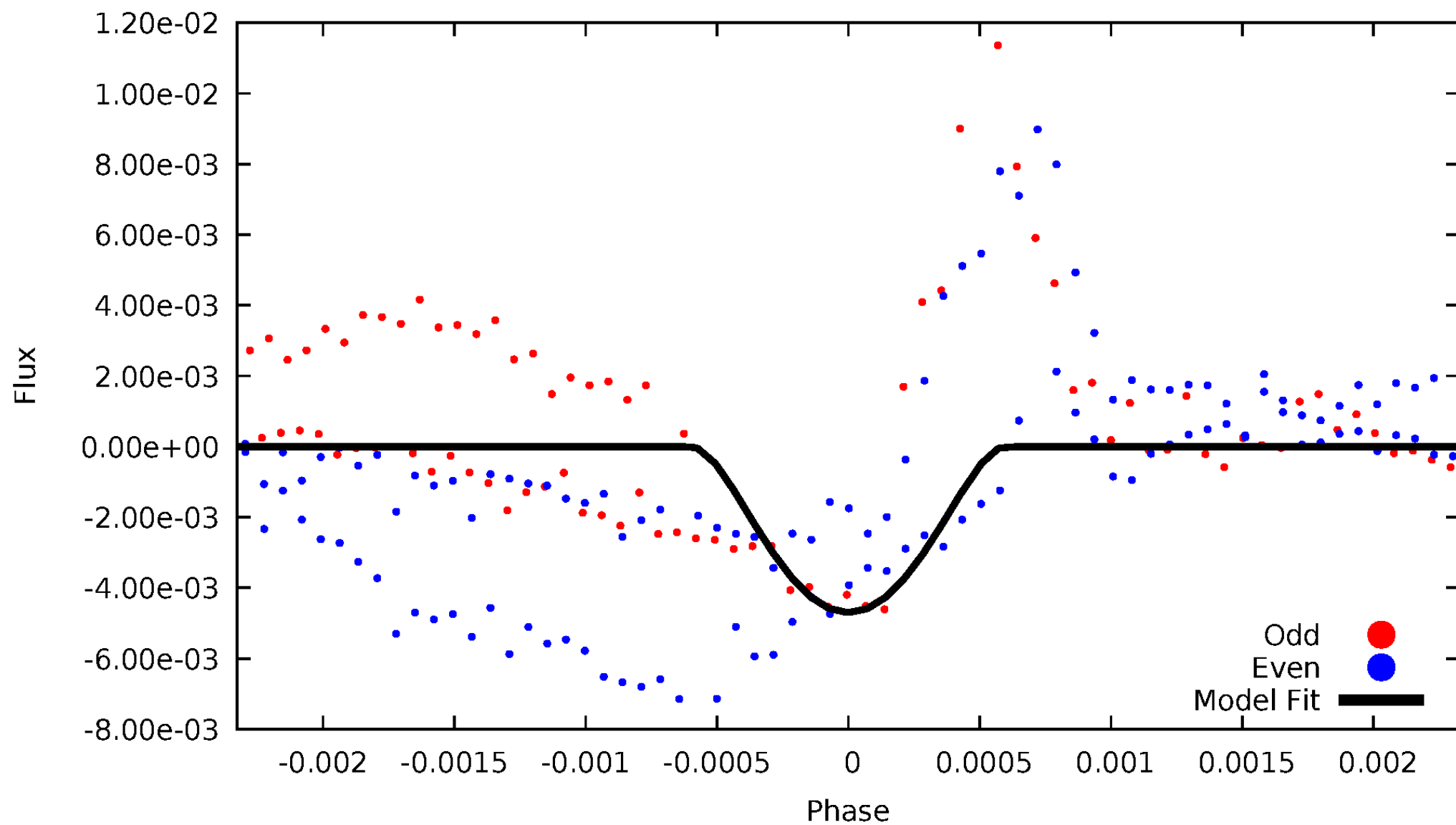


TCE 005530806-02



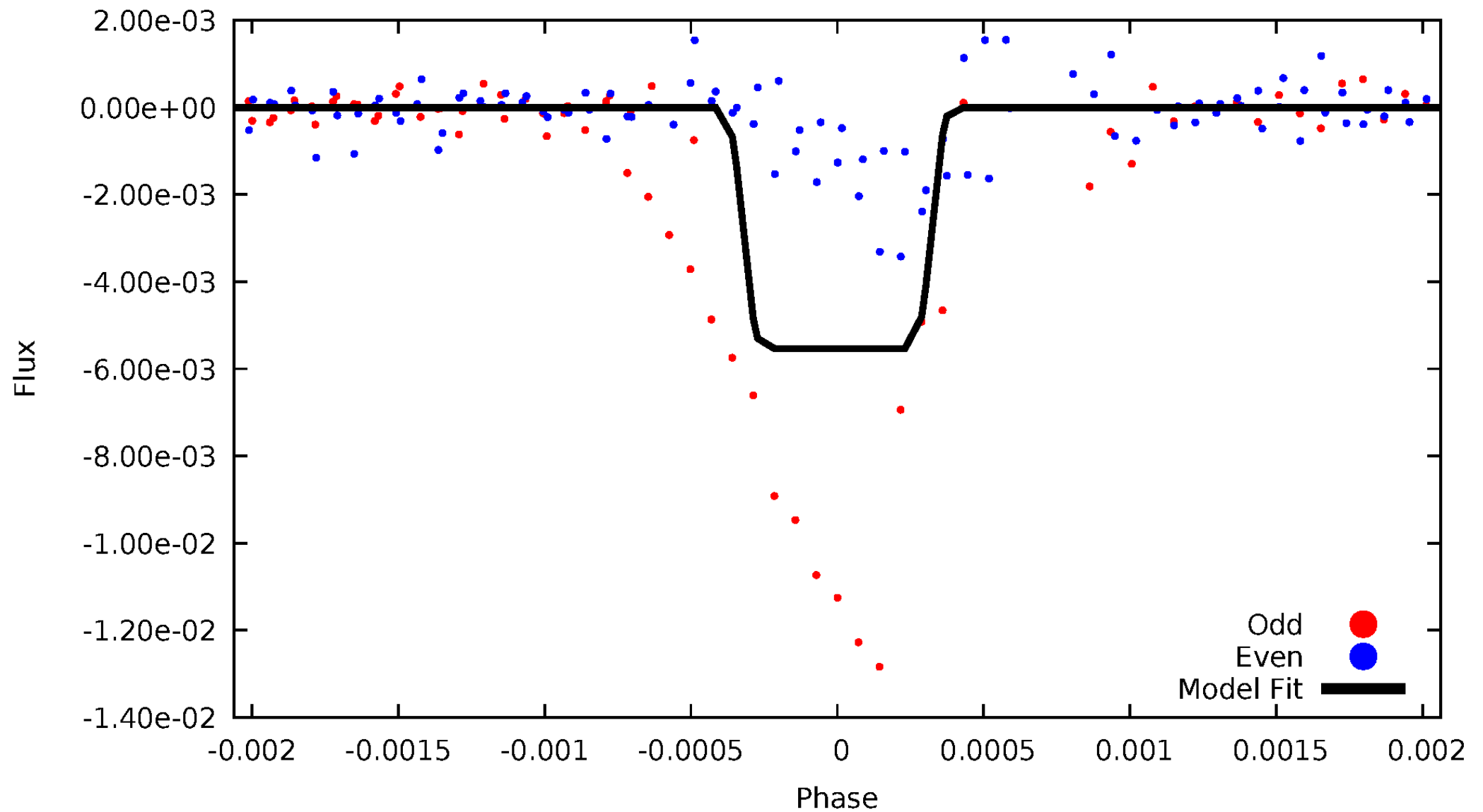
DV Odd/Even

TCE 005530806-02



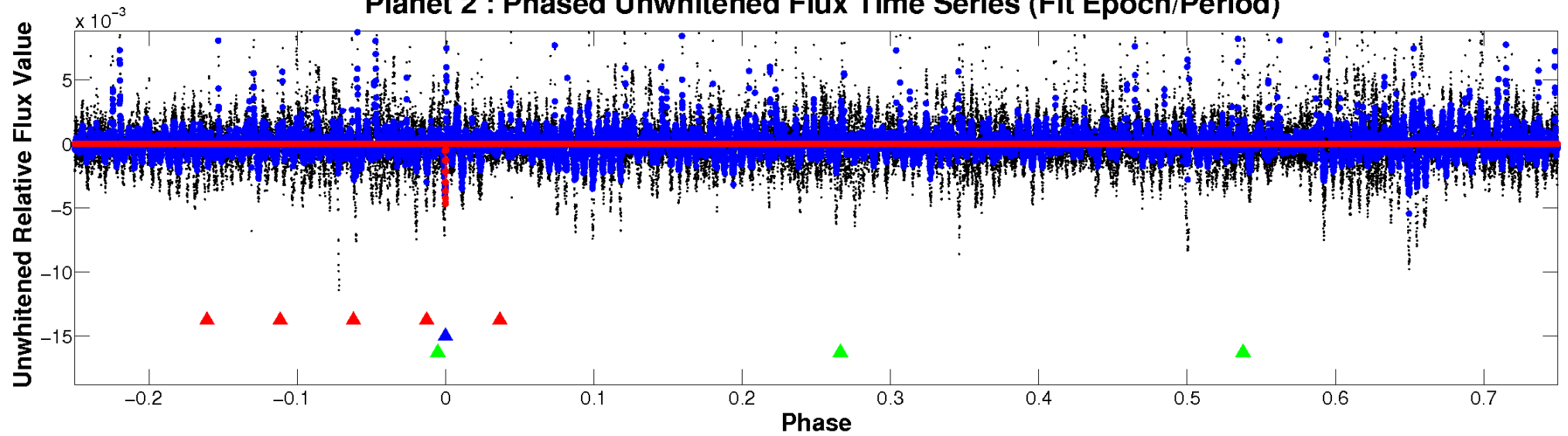
ALT Odd/Even

TCE 005530806-02

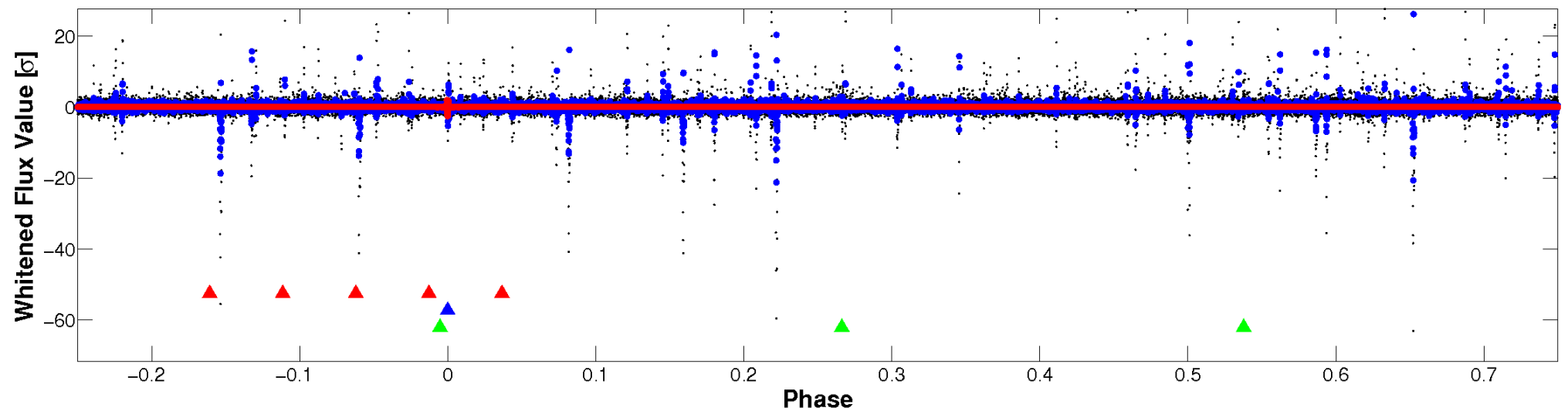


Non-Whitened Vs. Whitened Light Curve

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

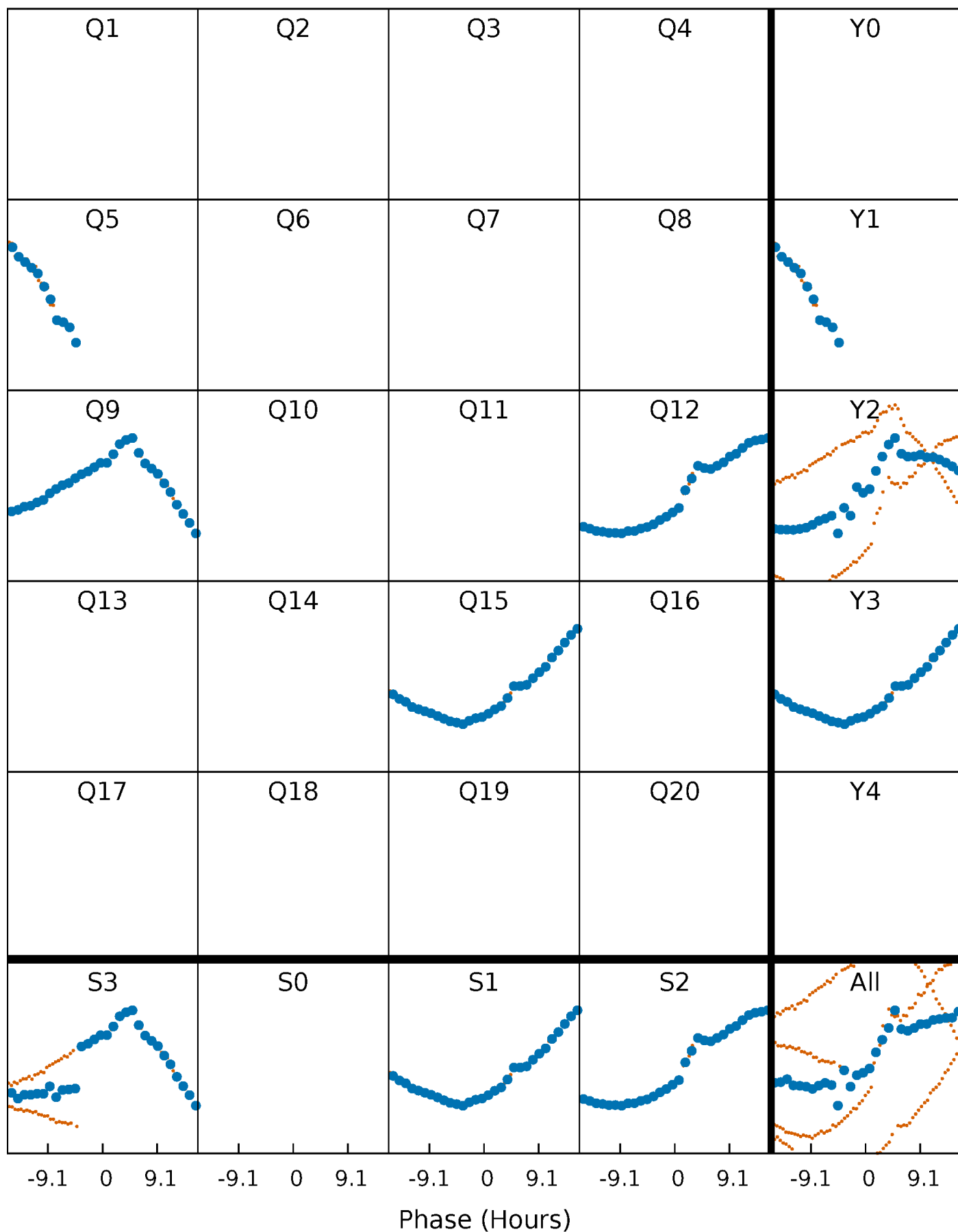


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



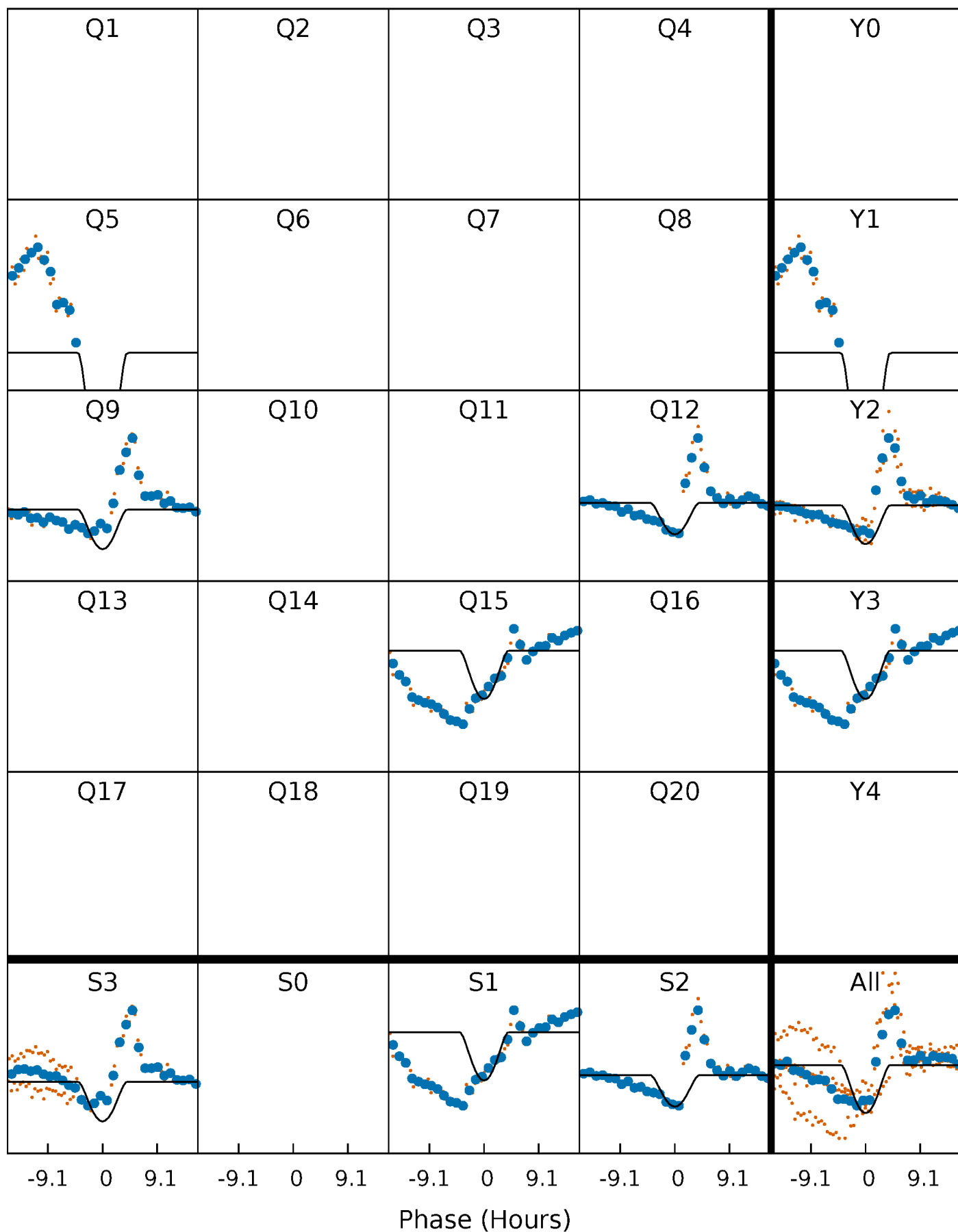
PDC Quarter-Phased Transit Curves

TCE 005530806-02 P=284.416667 Days $T_0=253.924418$ (BKJD)



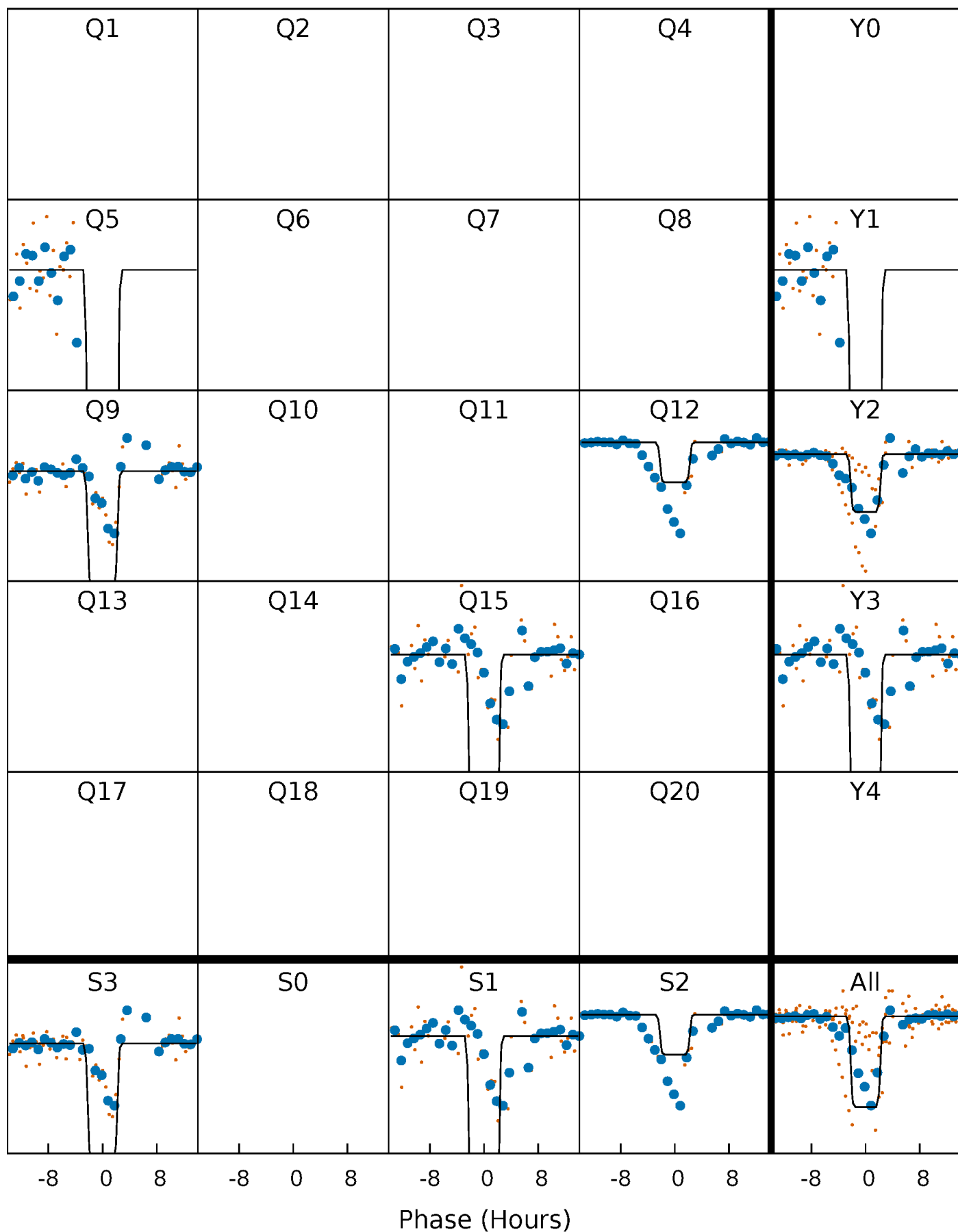
DV Quarter-Phased Transit Curves

TCE 005530806-02 P=284.416667 Days $T_0=253.924418$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

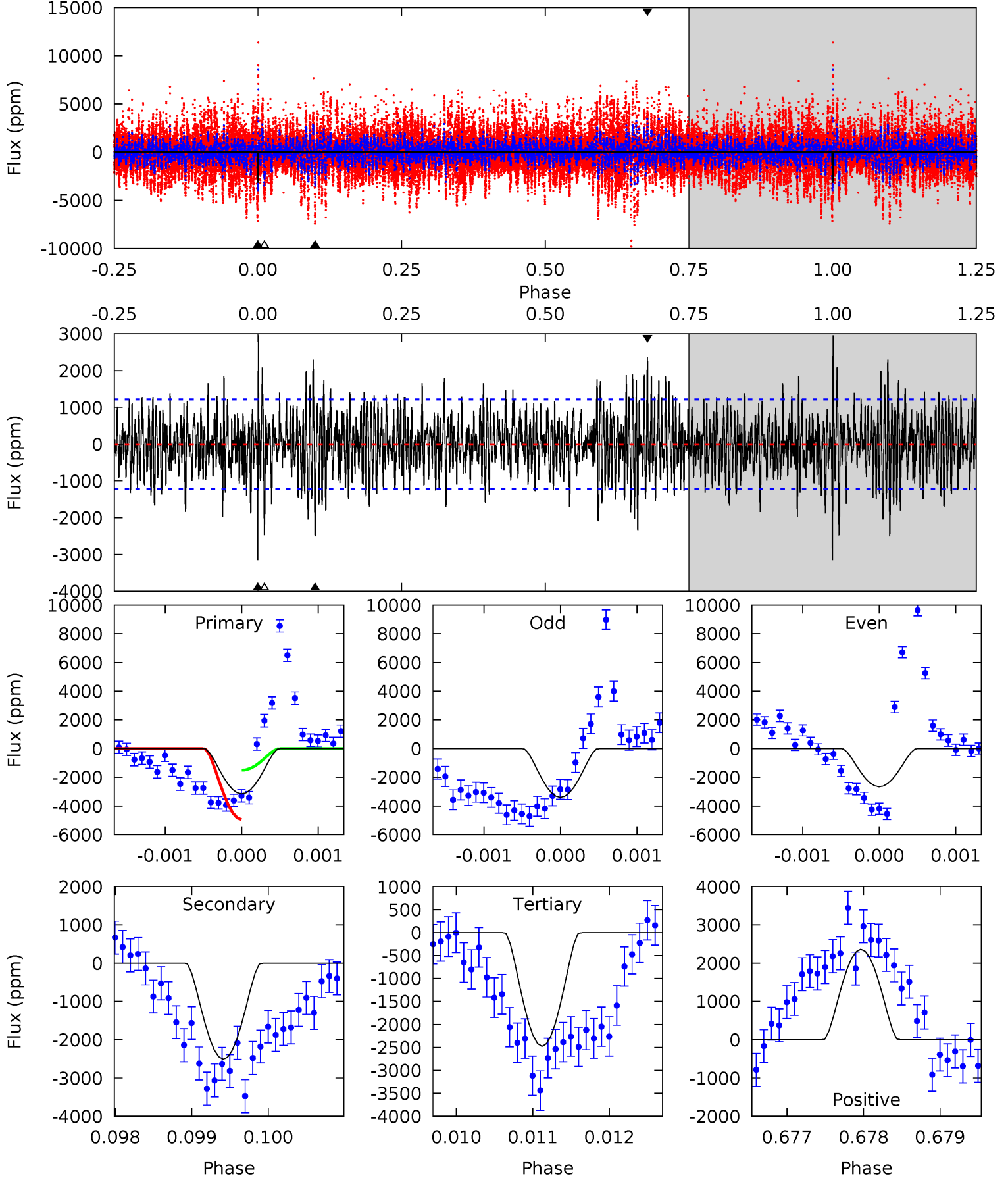
TCE 005530806-02 $P=284.435155$ Days $T_0=253.867240$ (BKJD)



DV Model-Shift Uniqueness Test

005530806-02, P = 284.416667 Days, E = 253.924418 Days

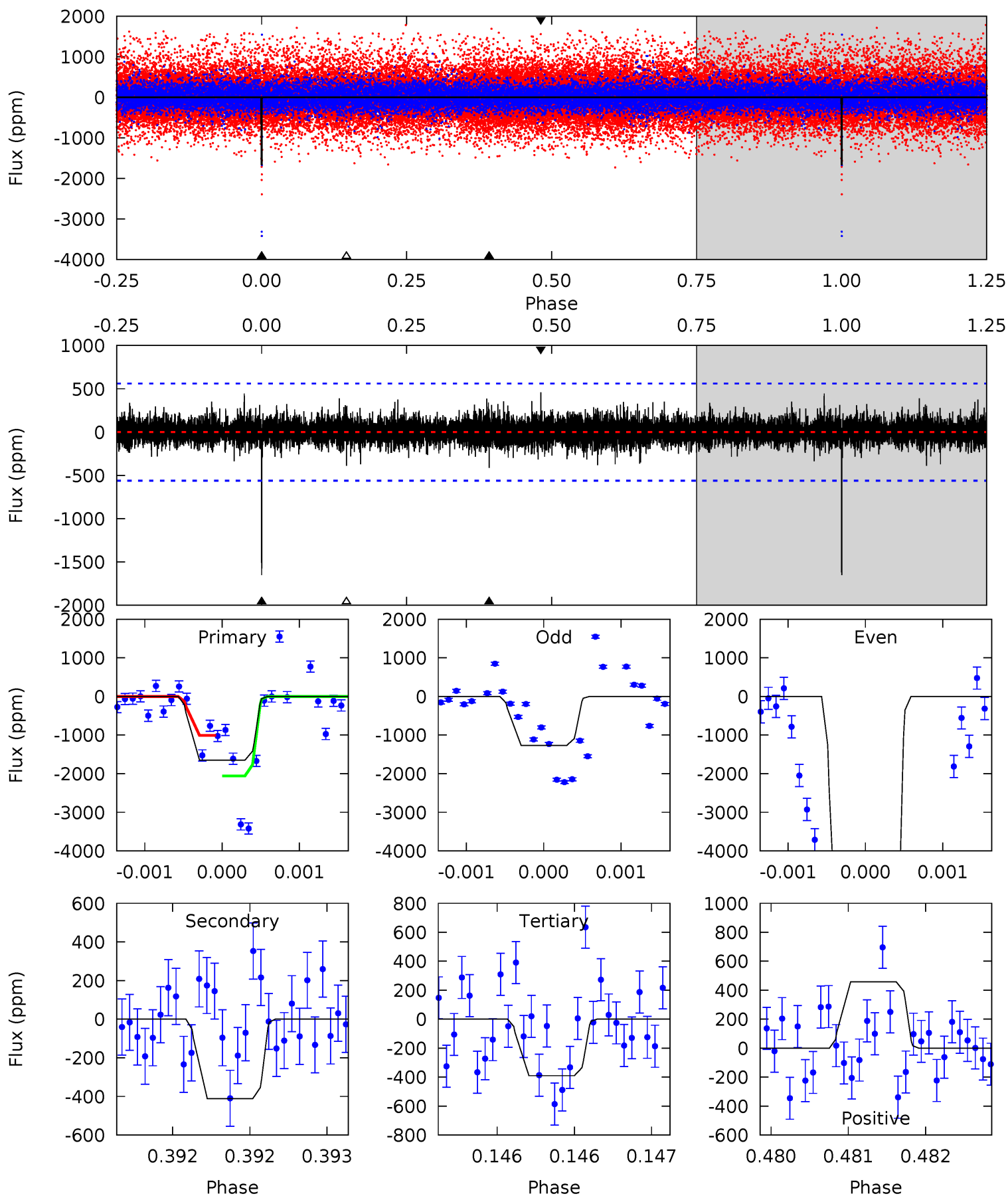
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	11.1	11.0	10.5	5.42	3.23	2.97	3.00	3.51	0.14	0.65	1.42	1.19	0.48	7.66



Alt Model-Shift Uniqueness Test

005530806-02, P = 284.435155 Days, E = 253.867240 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	4.05	3.83	4.51	5.51	3.38	0.86	12.4	11.7	0.22	-0.46	53.6	2.10	0.22	4.95



Stellar Parameters For KIC 005530806

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5681^{+169}_{-186}	$4.467^{+0.078}_{-0.182}$	$-0.140^{+0.300}_{-0.300}$	$0.915^{+0.242}_{-0.104}$	$0.896^{+0.115}_{-0.083}$	$1.647^{+0.668}_{-0.774}$
	+3%/-3%	+2%/-4%	+214%/-214%	+26%/-11%	+13%/-9%	+41%/-47%
Source	KIC0	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 005530806-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2506 ± 225	$20.51^{+18.84}_{-14.11}$	375^{+25}_{-20}	3391^{+1728}_{-572}	2191^{+19935}_{-1594}
Alt.	-412 ± 102	$18.79^{+19.44}_{-12.34}$	376^{+25}_{-18}	2663^{+1010}_{-401}	405^{+2916}_{-304}

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

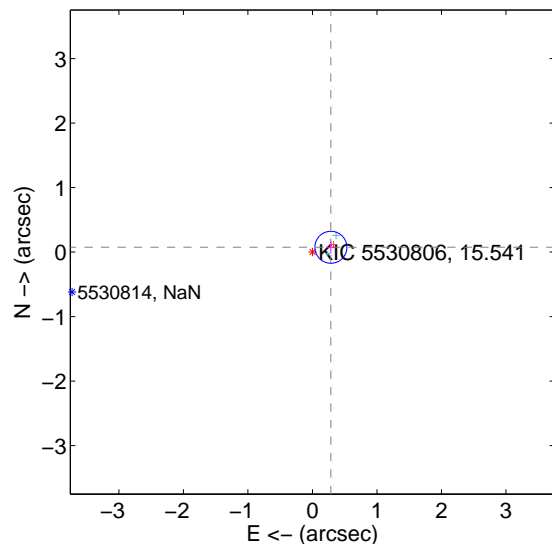
Supplemental centroid analysis for 005530806-02. Kepler magnitude: 15.54. Transit SNR 10.68

There are 2 quarters with good PRF difference image offsets

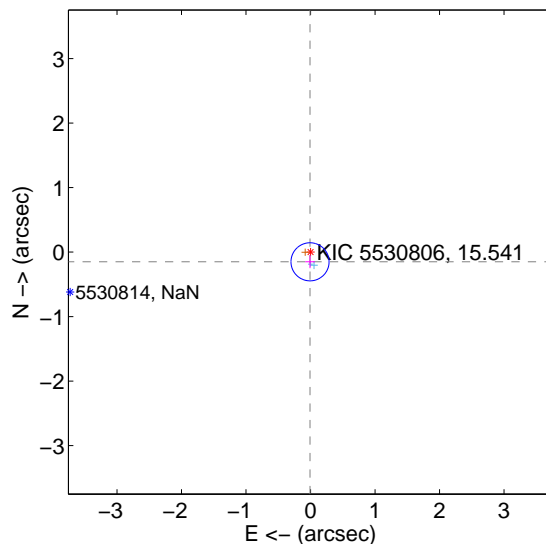
The direct PRF centroid is offset from the target star catalog position by about 0.56 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.296 ± 0.083	3.58	-0.286 ± 0.074	0.075 ± 0.095
PRF-fit source offset from KIC position	0.151 ± 0.098	1.53	0.008 ± 0.075	-0.151 ± 0.099
photometric centroid source offset	1.25 ± 0.63	2.00	1.07 ± 0.64	-0.65 ± 0.59

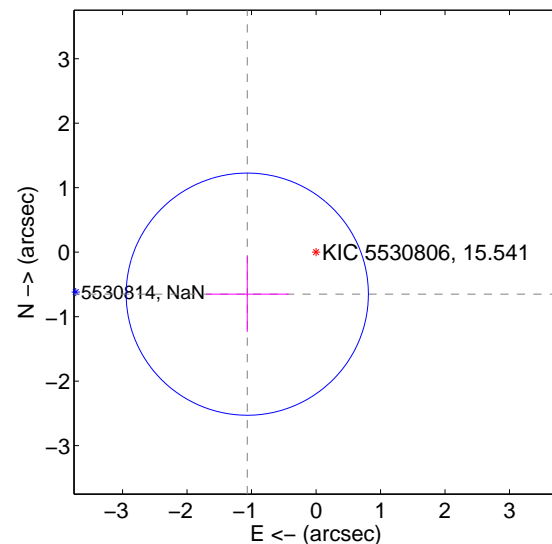
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



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

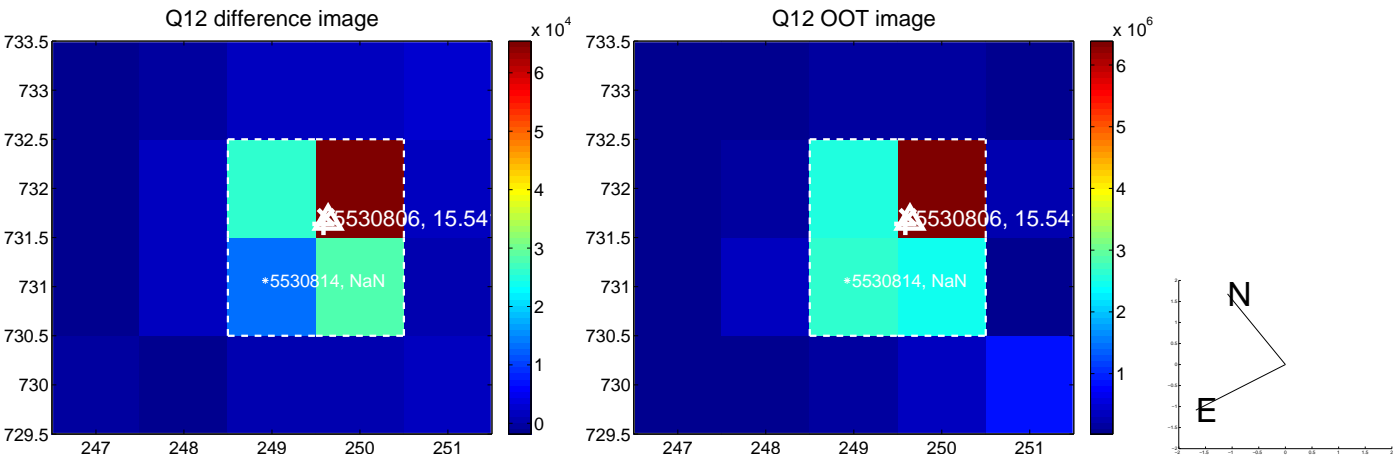
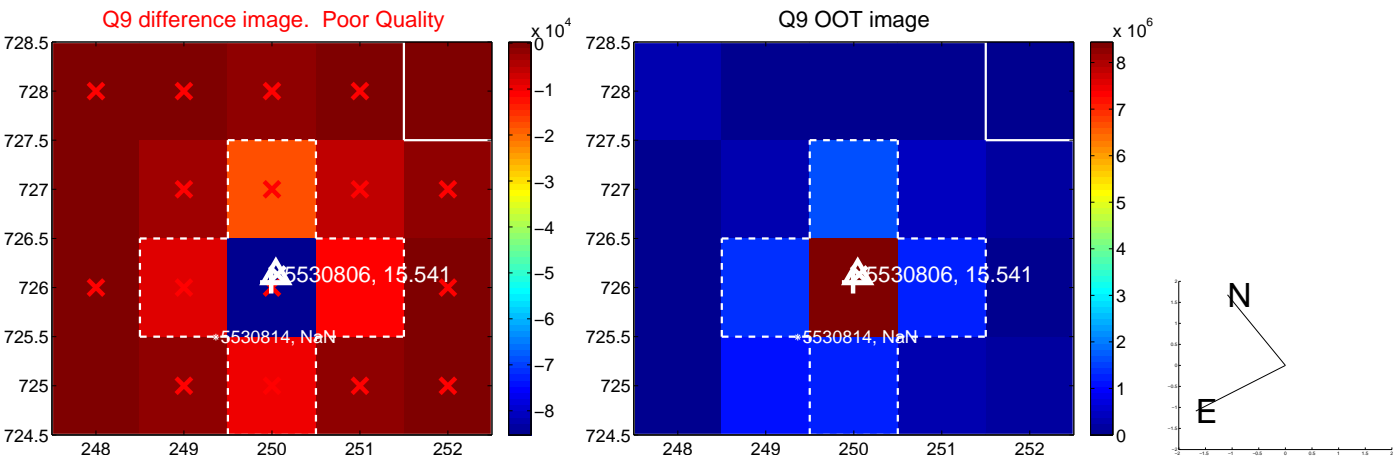
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



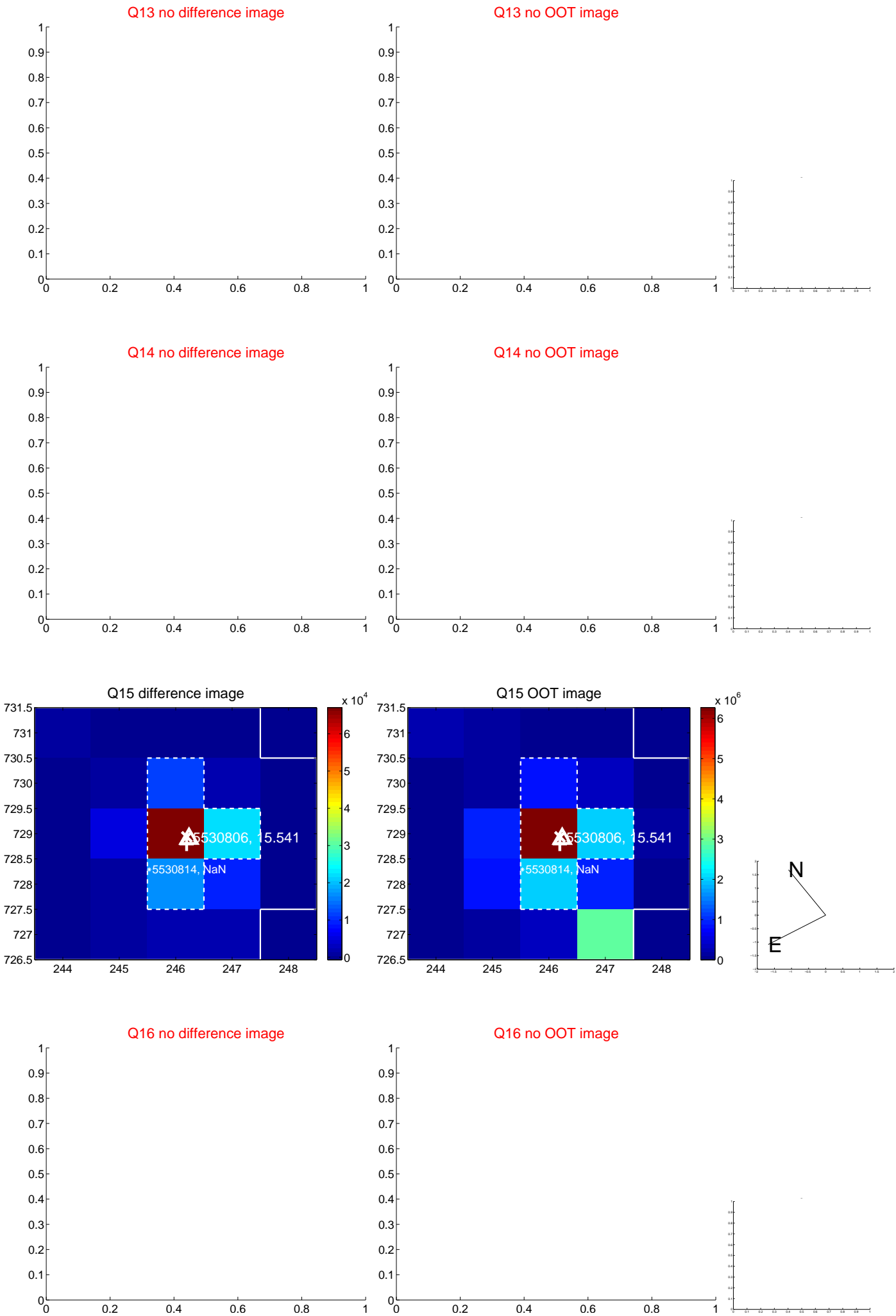
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



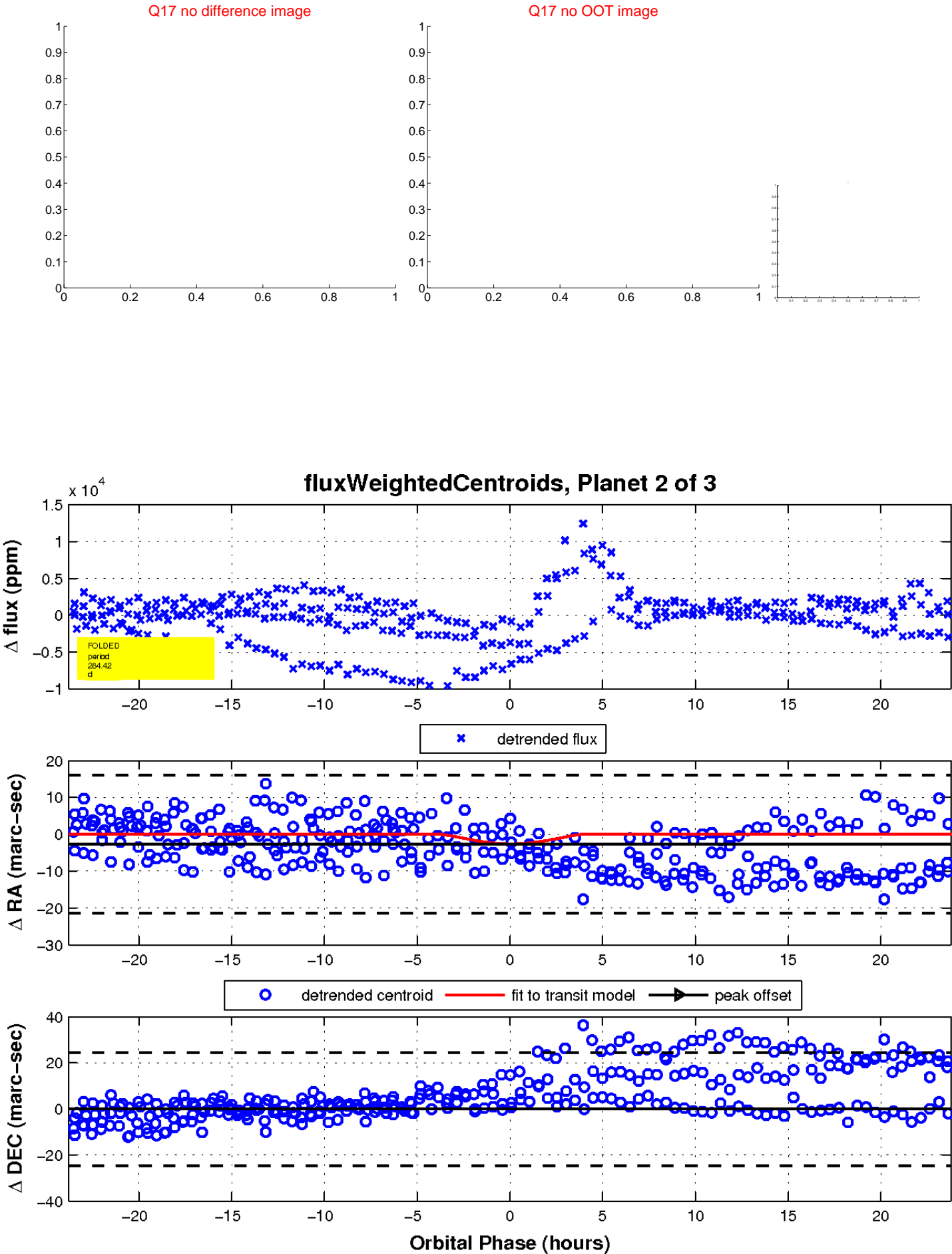
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

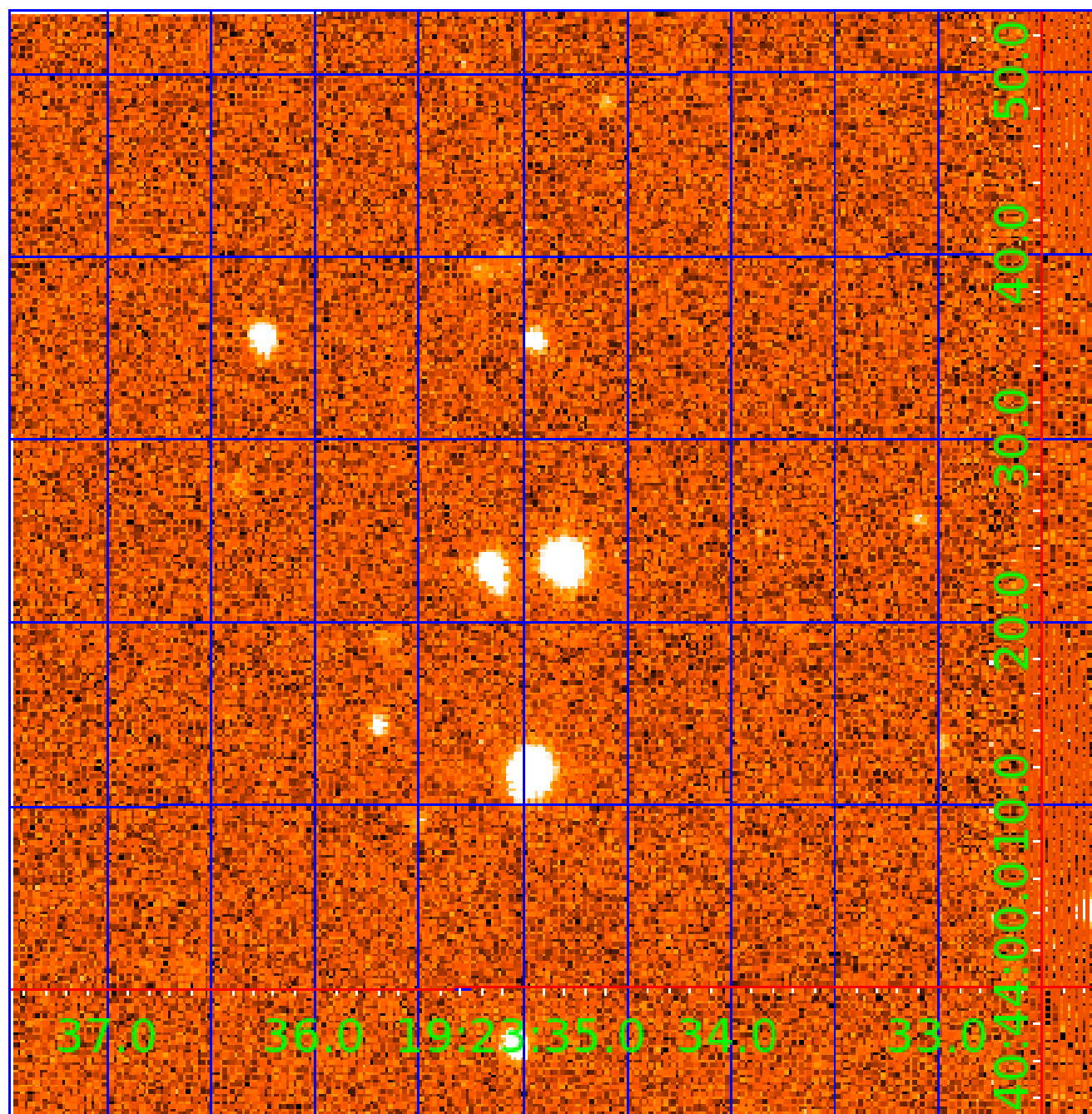


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005530806

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})
005530806-01	OBS	No	270.375637	264.354260	5168.1	5.361	20.9	11.9	0.92	5681	12.13	1.26
005530806-02	OBS	No	284.416667	253.924418	4695.0	7.941	18.3	10.7	0.92	5681	11.63	1.17
005530806-03	OBS	No	491.622822	406.870467	1656.9	3.550	16.6	5.9	0.92	5681	3.99	0.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005530806-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005530806-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005530806-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—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.

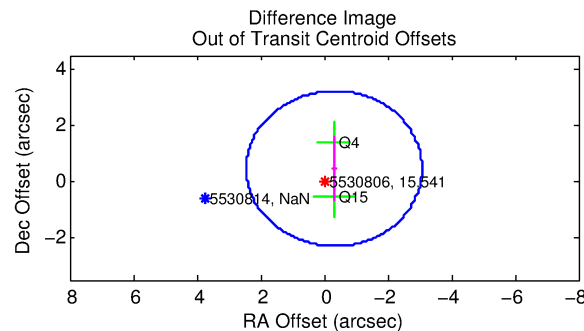
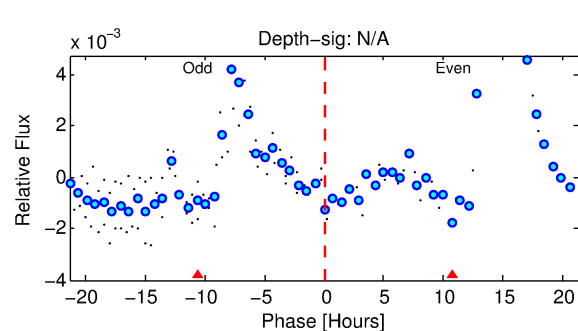
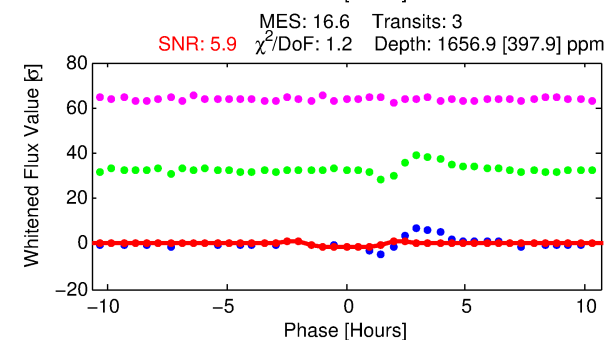
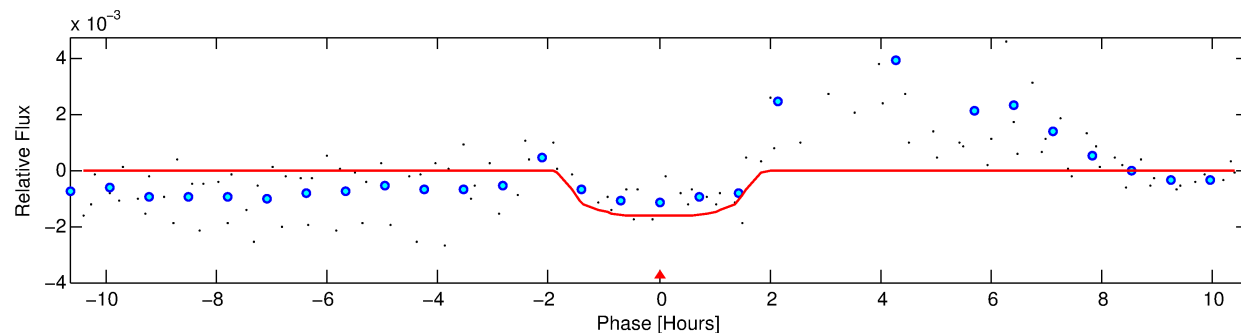
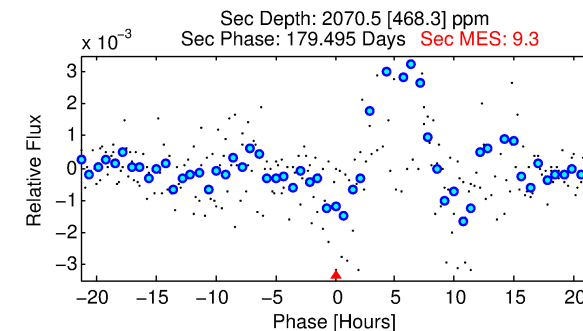
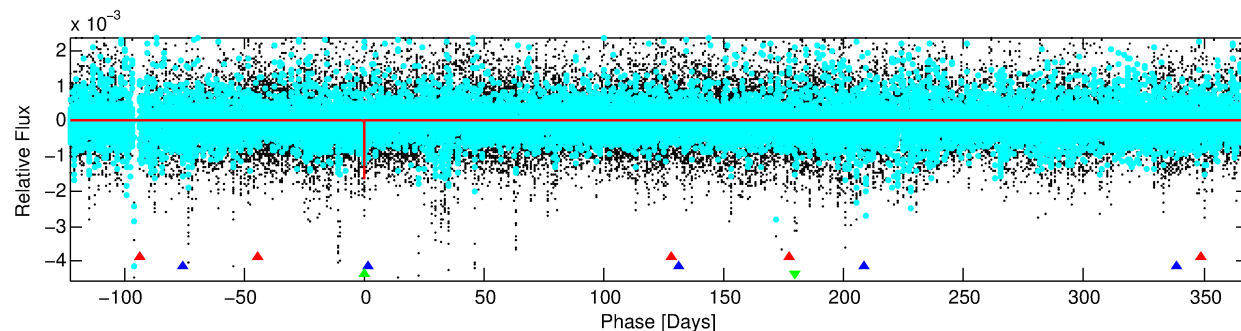
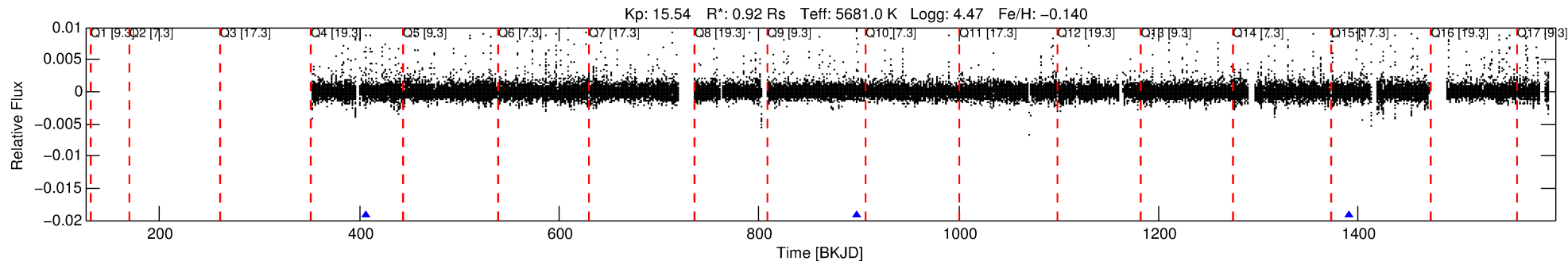
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005530806-03

No Significant Match Found

DV One-Page Summary

KIC: 5530806 Candidate: 3 of 3 Period: 491.623 d



DV Fit Results:

Period = 491.62282 [0.00673] d
Epoch = 406.8705 [0.0085] BKJD
Rp/R* = 0.0400 [0.0281]
a/R* = 805.32 [2308.01]
b = 0.71 [2.04]
Seff = 0.57 [0.20]
Teq = 221 [20] K
Rp = 3.99 [3.00] Re
a = 1.1751 [0.2643] AU
Ag = 98778.83 [144499.36] [0.68σ]
Teff = 6062 [2169] K [2.69σ]

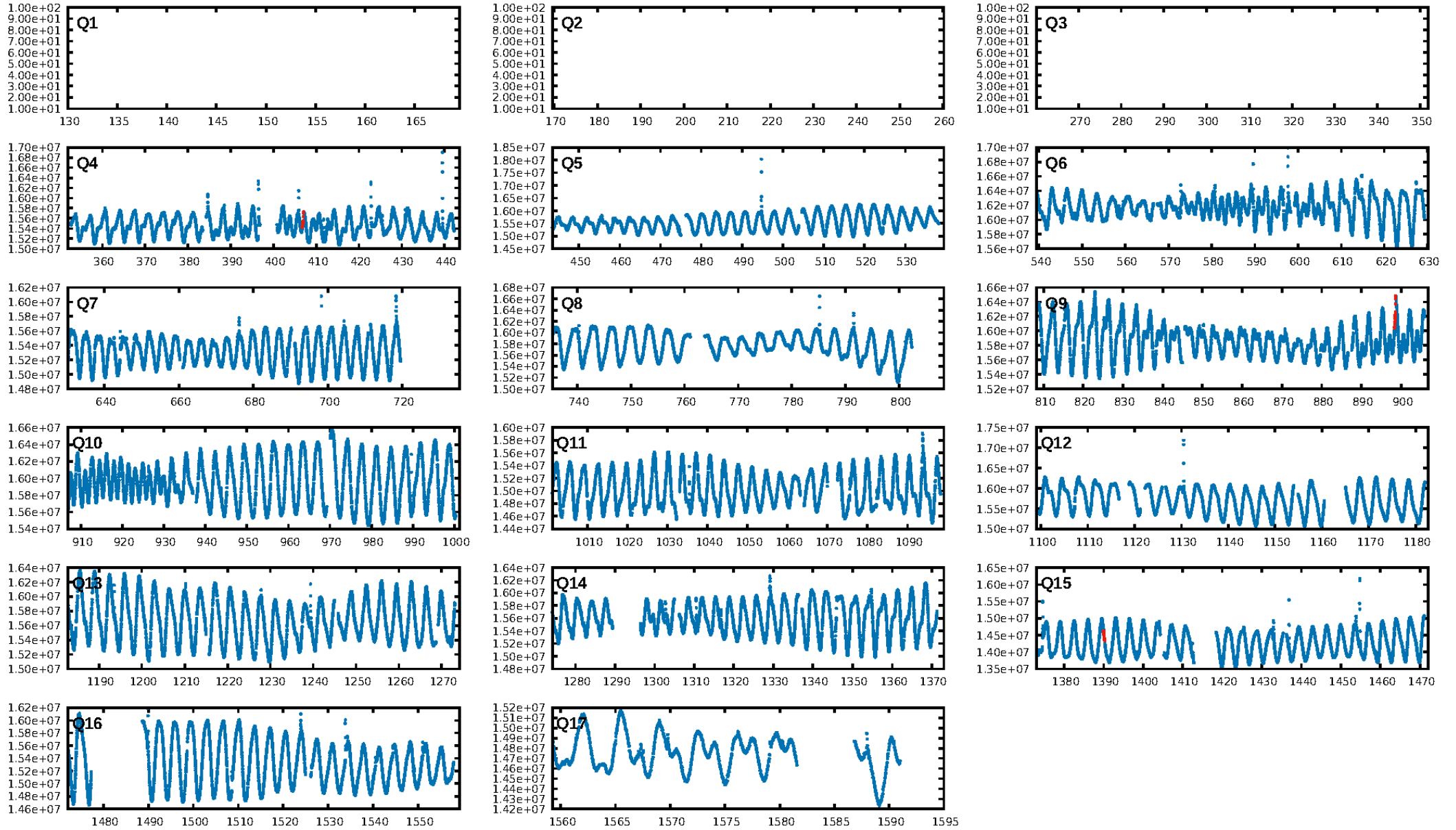
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [571.70σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 23.0%
ModelChiSquareGof-sig: 98.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.9145
Centroid-sig: 63.1%
Centroid-so: 0.774 arcsec [0.45σ]
OotOffset-rm: 0.564 arcsec [0.61σ]
KicOffset-rm: 0.165 arcsec [0.16σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

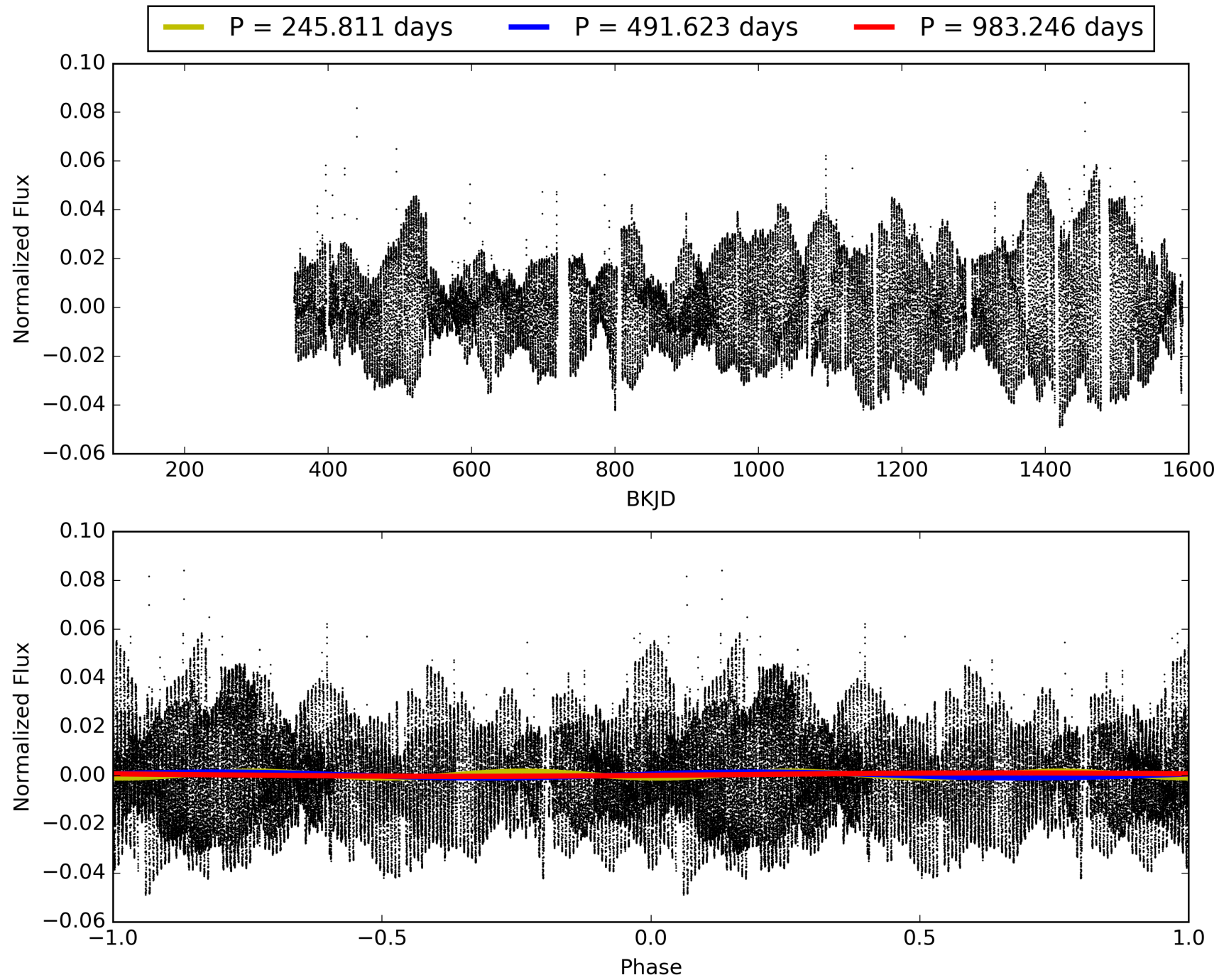
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 12:37:35 Z

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

TCE 005530806-03, PDC Light Curves

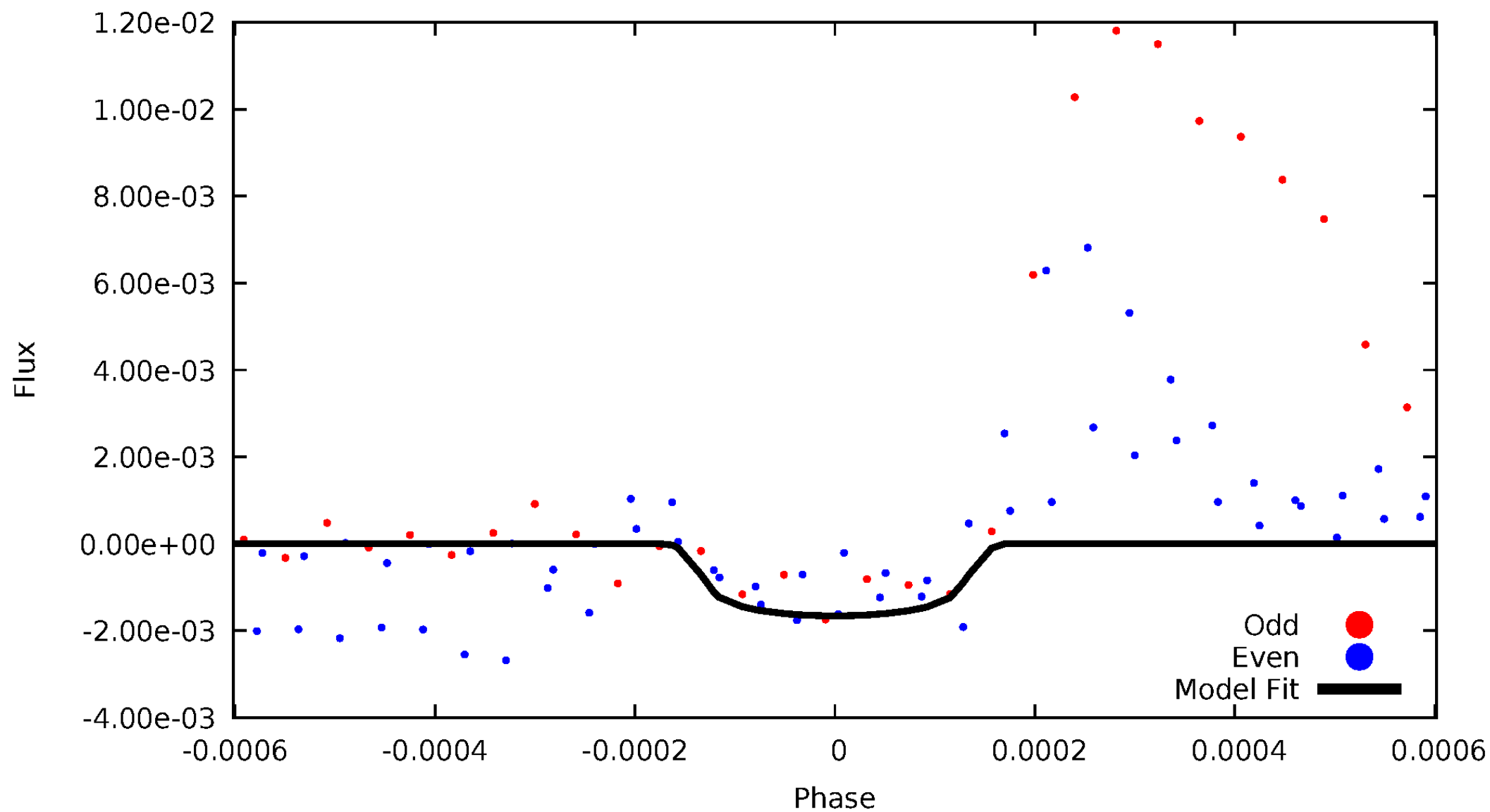


TCE 005530806-03



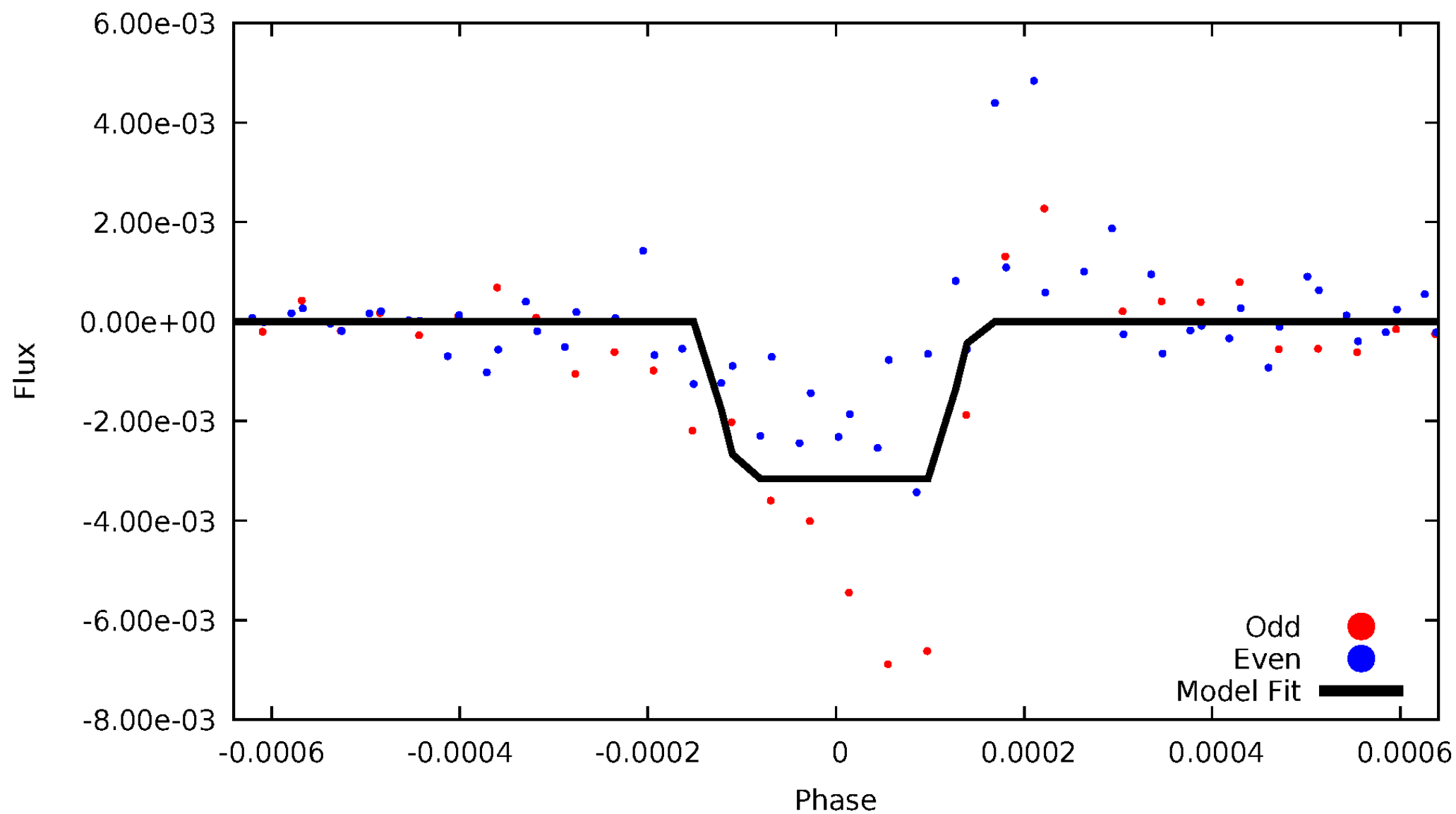
DV Odd/Even

TCE 005530806-03



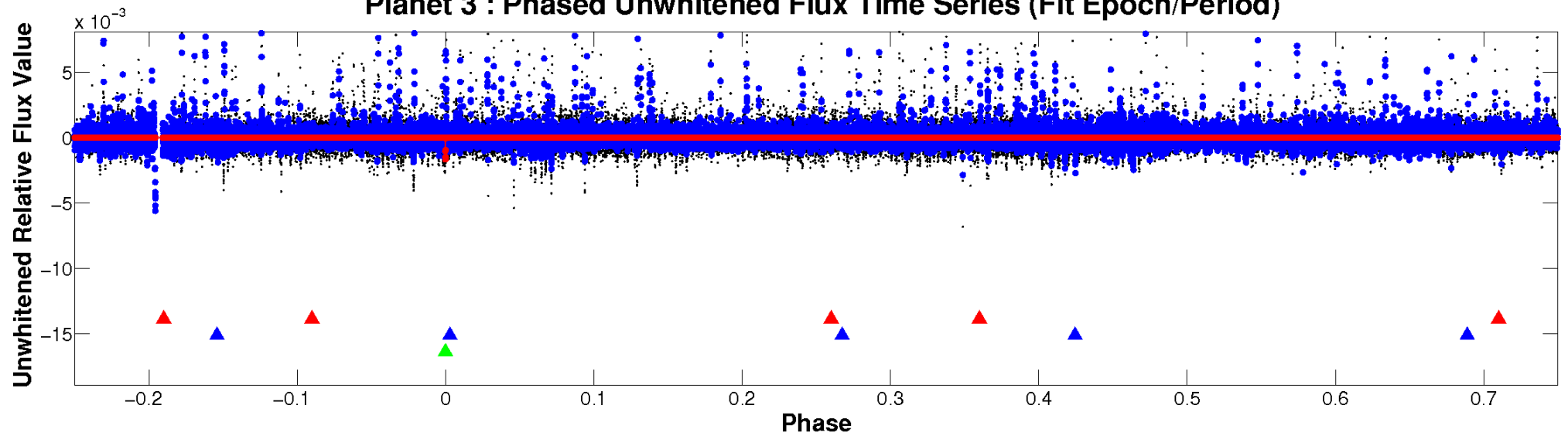
ALT Odd/Even

TCE 005530806-03

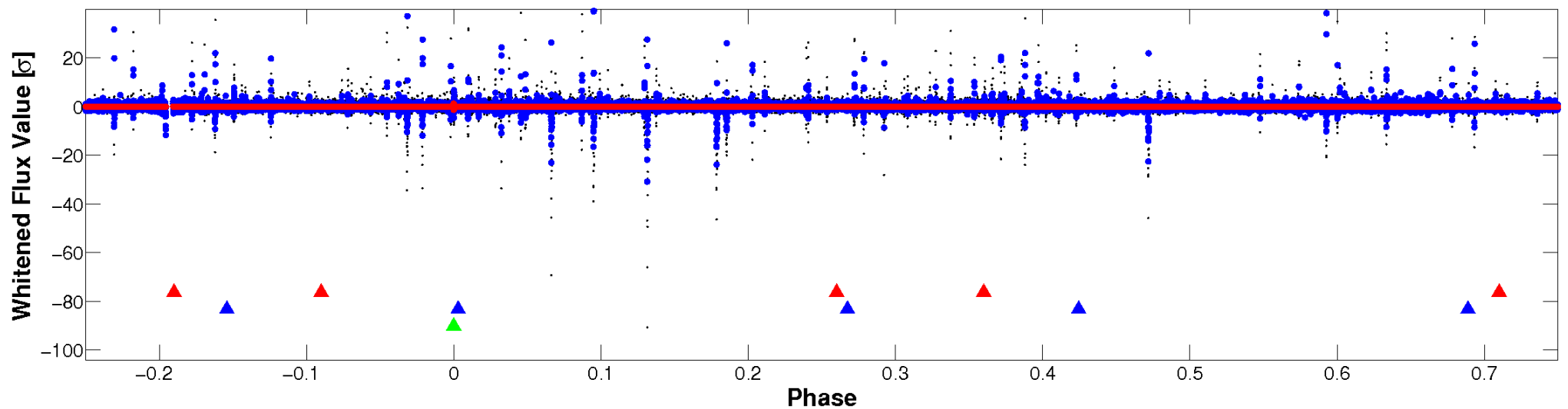


Non-Whitened Vs. Whitened Light Curve

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

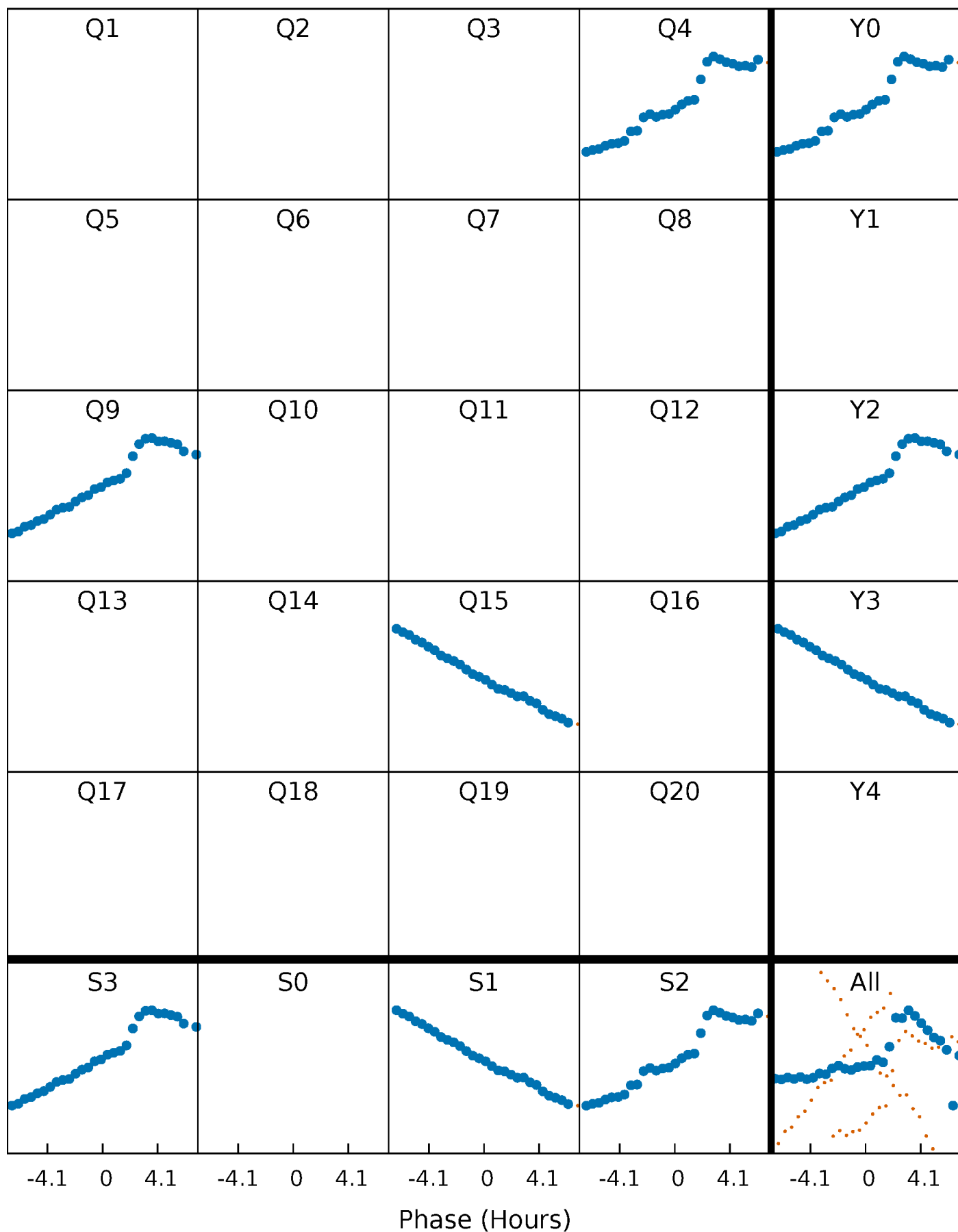


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



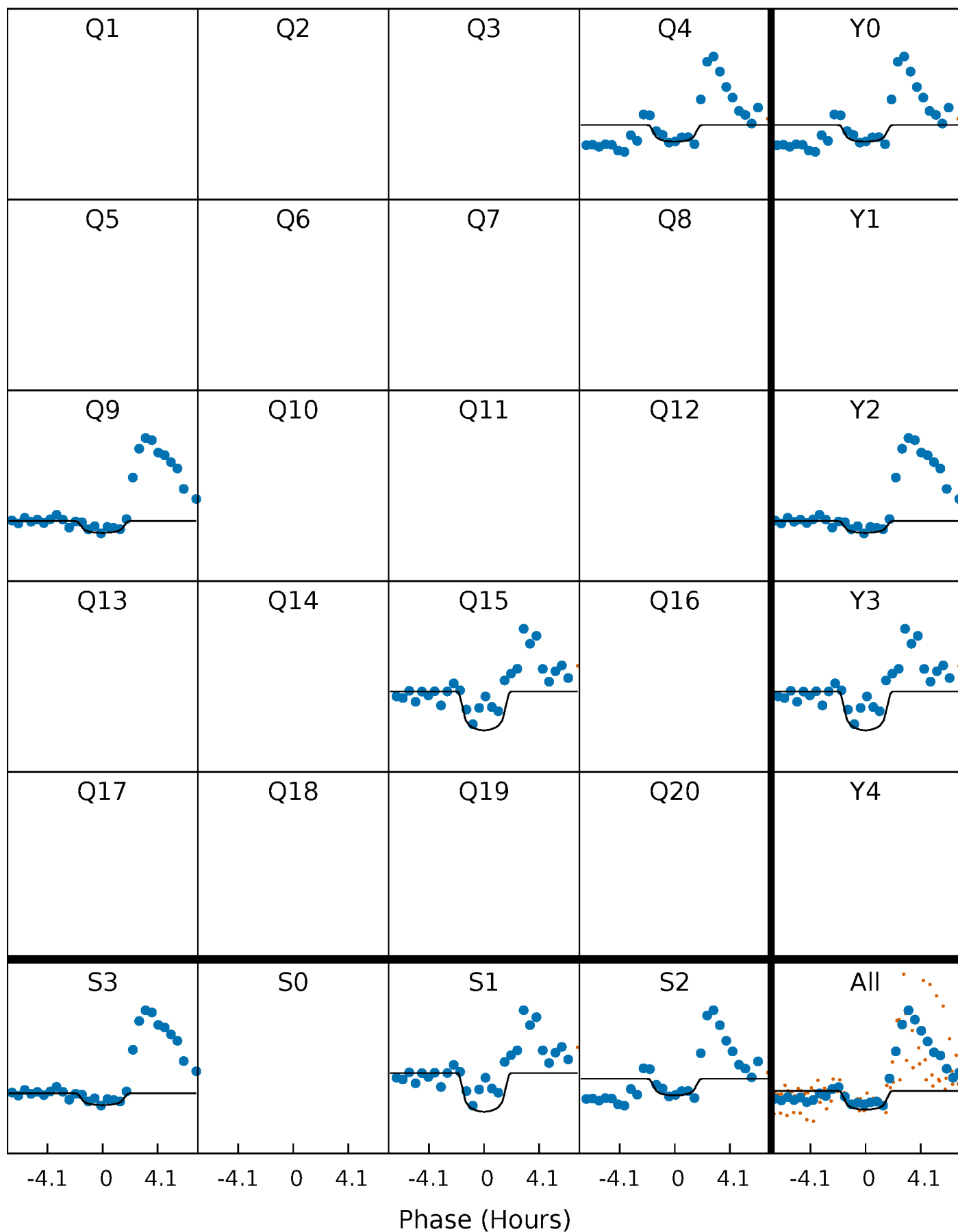
PDC Quarter-Phased Transit Curves

TCE 005530806-03 P=491.622822 Days $T_0=406.870467$ (BKJD)



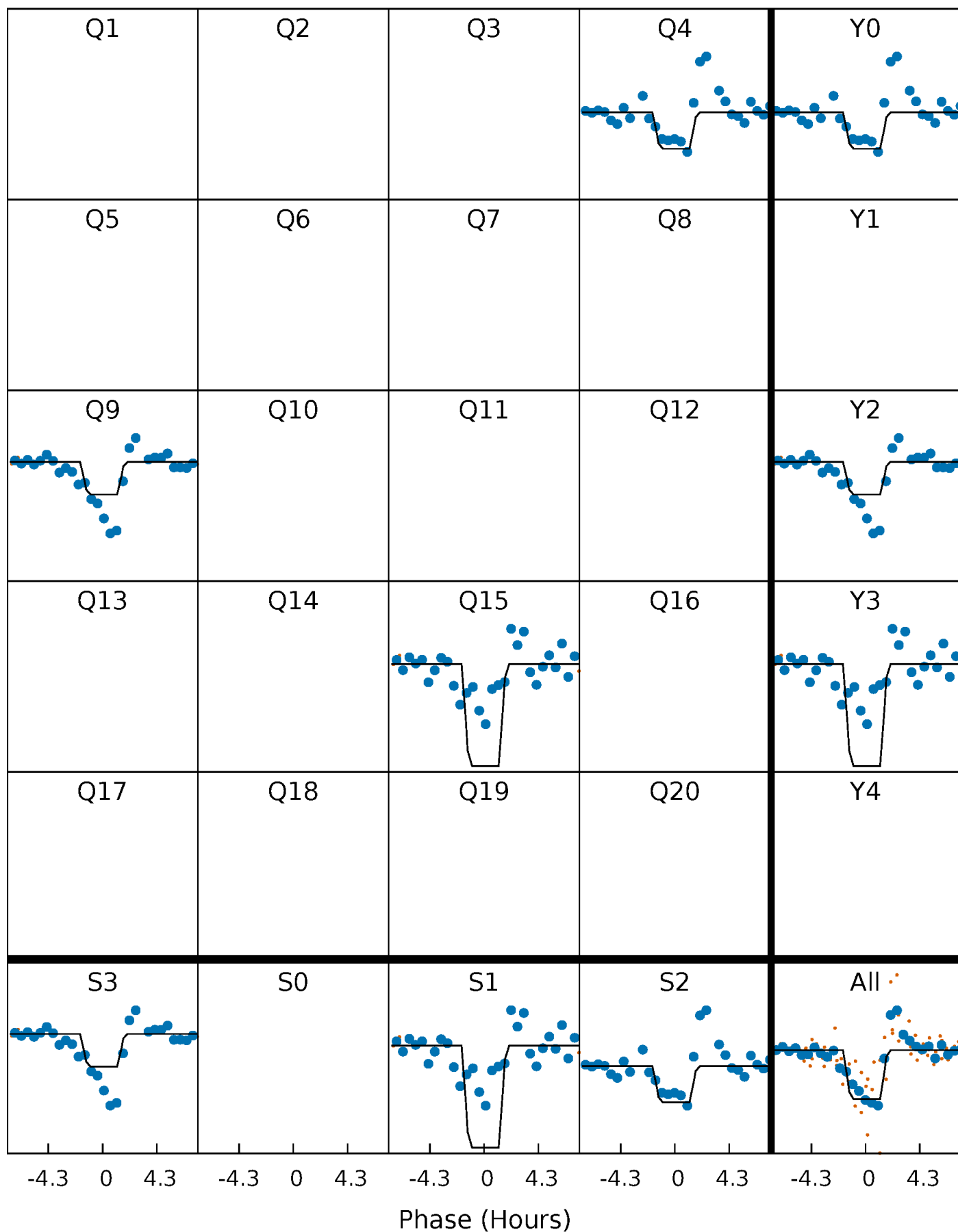
DV Quarter-Phased Transit Curves

TCE 005530806-03 $P=491.622822$ Days $T_0=406.870467$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

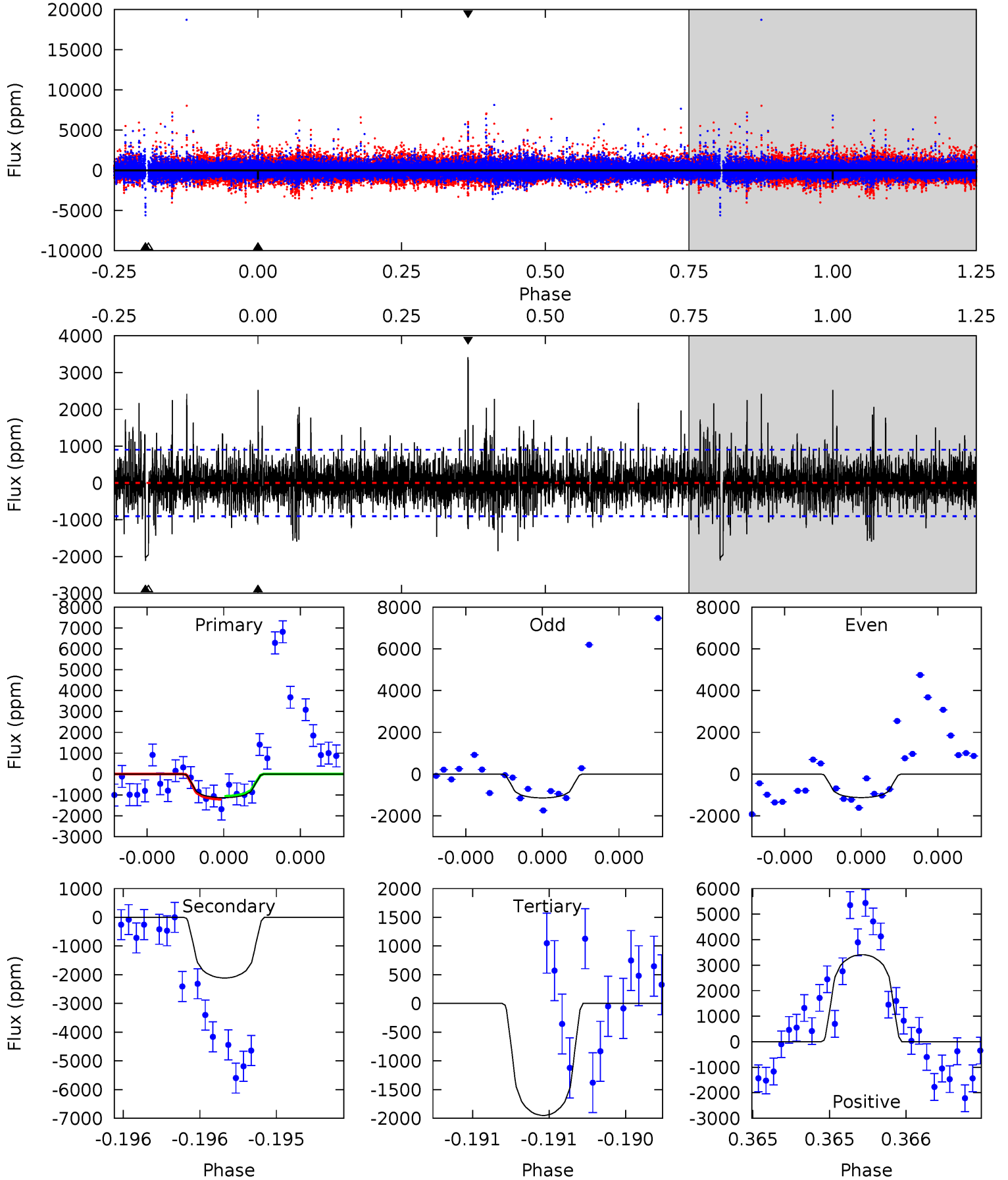
TCE 005530806-03 P=491.631454 Days $T_0=406.891351$ (BKJD)



DV Model-Shift Uniqueness Test

005530806-03, P = 491.622822 Days, E = 406.870467 Days

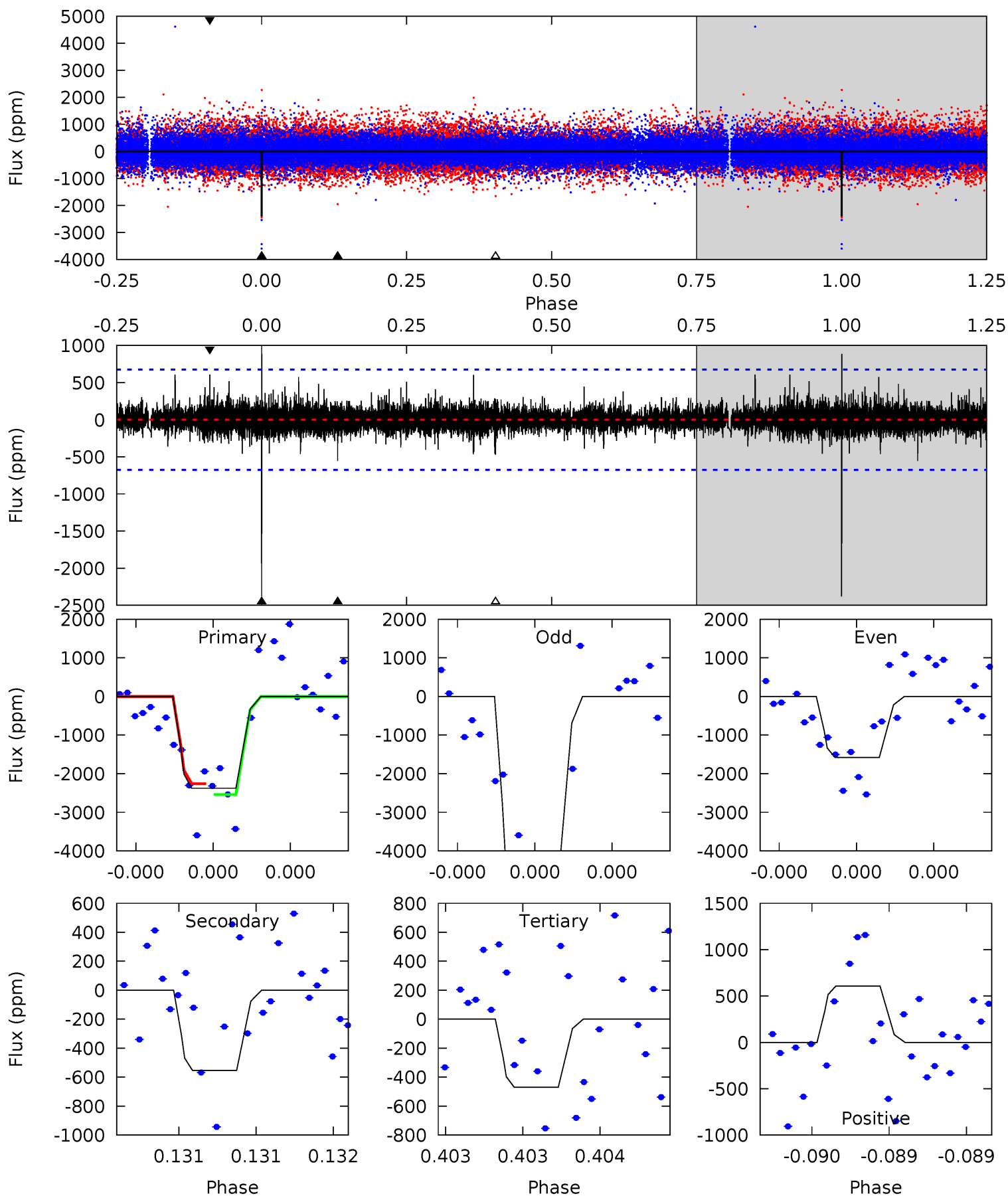
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.06	13.2	12.2	21.3	5.65	3.59	2.52	-5.11	-14.2	1.02	-8.10	0.03	0.99	0.62	0.45



Alt Model-Shift Uniqueness Test

005530806-03, P = 491.631454 Days, E = 406.891351 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	4.65	3.94	5.10	5.67	3.62	0.77	16.0	14.8	0.71	-0.46	17.7	1.17	0.27	1.18



Stellar Parameters For KIC 005530806

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5681^{+169}_{-186}	$4.467^{+0.078}_{-0.182}$	$-0.140^{+0.300}_{-0.300}$	$0.915^{+0.242}_{-0.104}$	$0.896^{+0.115}_{-0.083}$	$1.647^{+0.668}_{-0.774}$
	+3%/-3%	+2%/-4%	+214%/-214%	+26%/-11%	+13%/-9%	+41%/-47%
Source	KIC0	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 005530806-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2115 ± 160	$4.55^{+2.81}_{-2.64}$	313^{+21}_{-16}	5797^{+3427}_{-1116}	$78103^{+346308}_{-48382}$
Alt.	-554 ± 119	$5.74^{+2.95}_{-2.65}$	314^{+20}_{-17}	3997^{+1160}_{-533}	12948^{+31435}_{-7644}

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 $A_{obs} \gg 1.0$

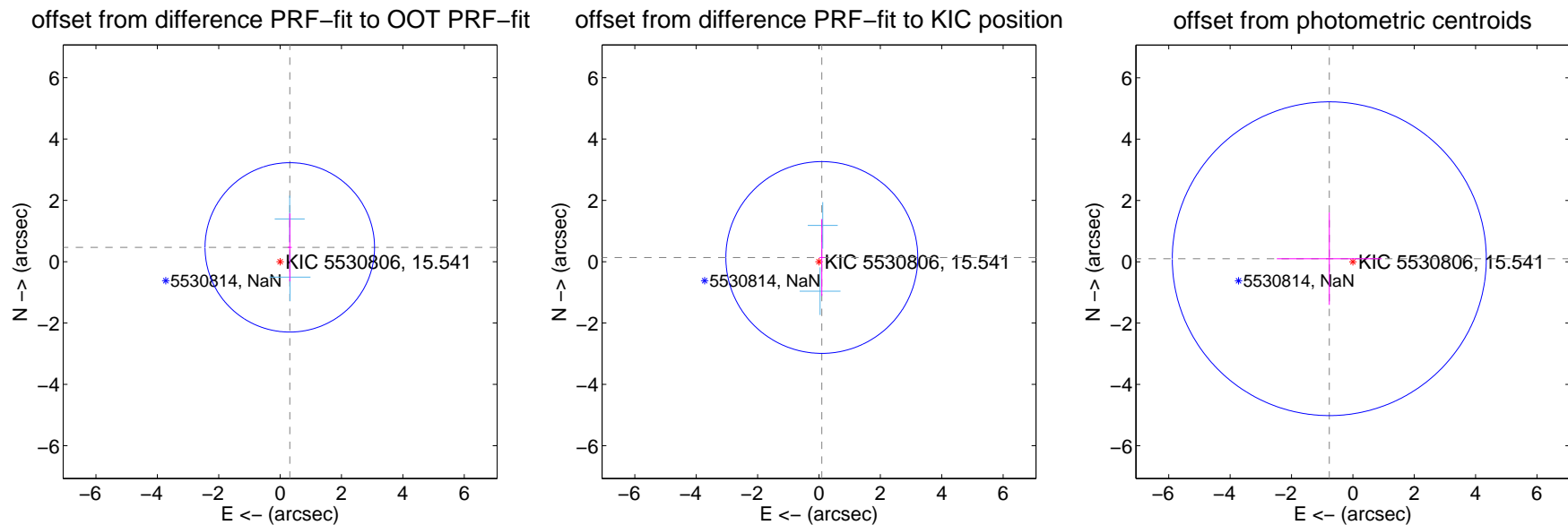
DV Centroid Data

Supplemental centroid analysis for 005530806-03. Kepler magnitude: 15.54. Transit SNR 5.86

There are 2 quarters with good PRF difference image offsets

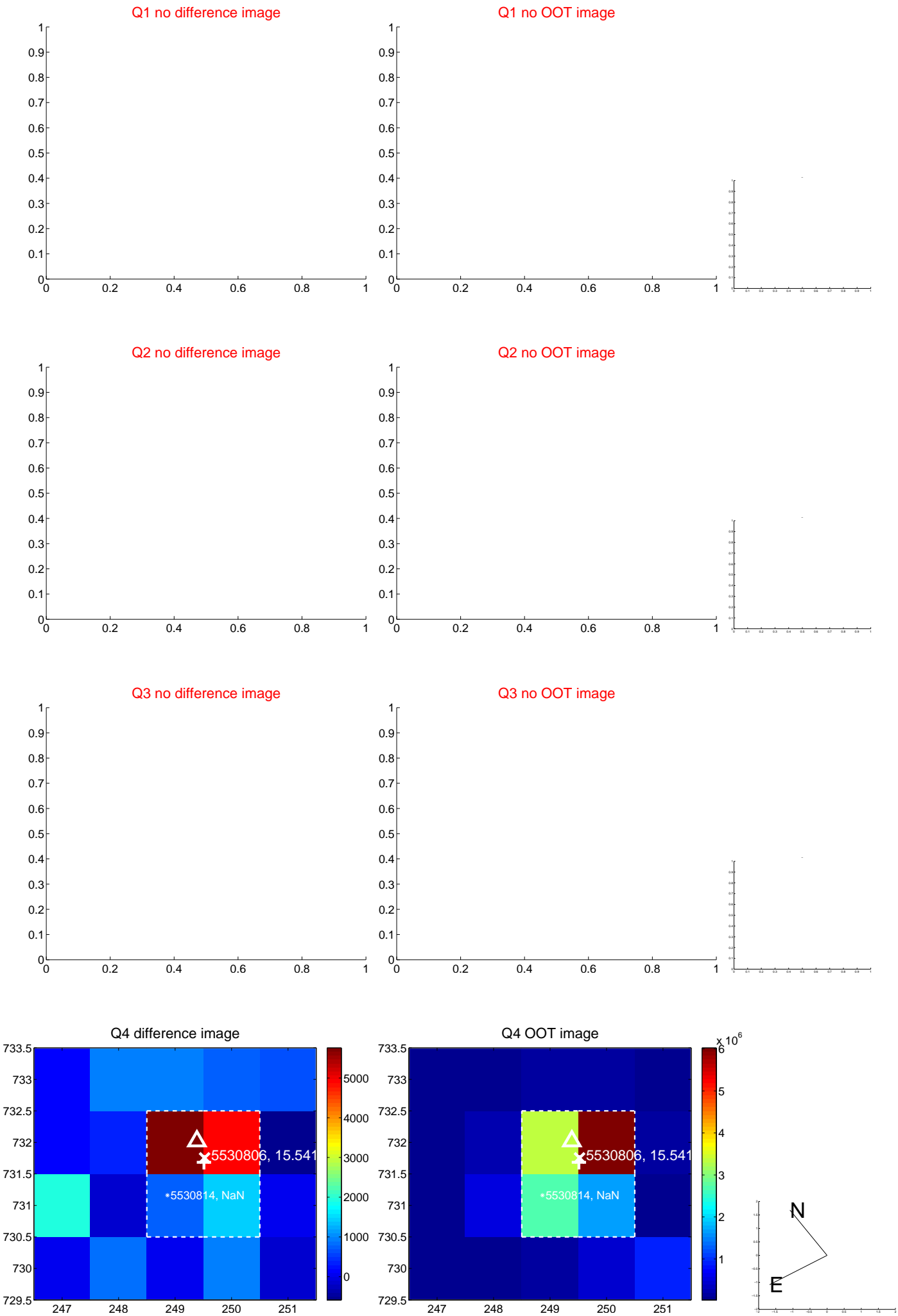
The direct PRF centroid is offset from the target star catalog position by about 0.54 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.564 ± 0.921	0.61	-0.315 ± 0.067	0.467 ± 1.110
PRF-fit source offset from KIC position	0.165 ± 1.042	0.16	-0.092 ± 0.082	0.137 ± 1.254
photometric centroid source offset	0.77 ± 1.71	0.45	0.77 ± 1.71	0.10 ± 1.51



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

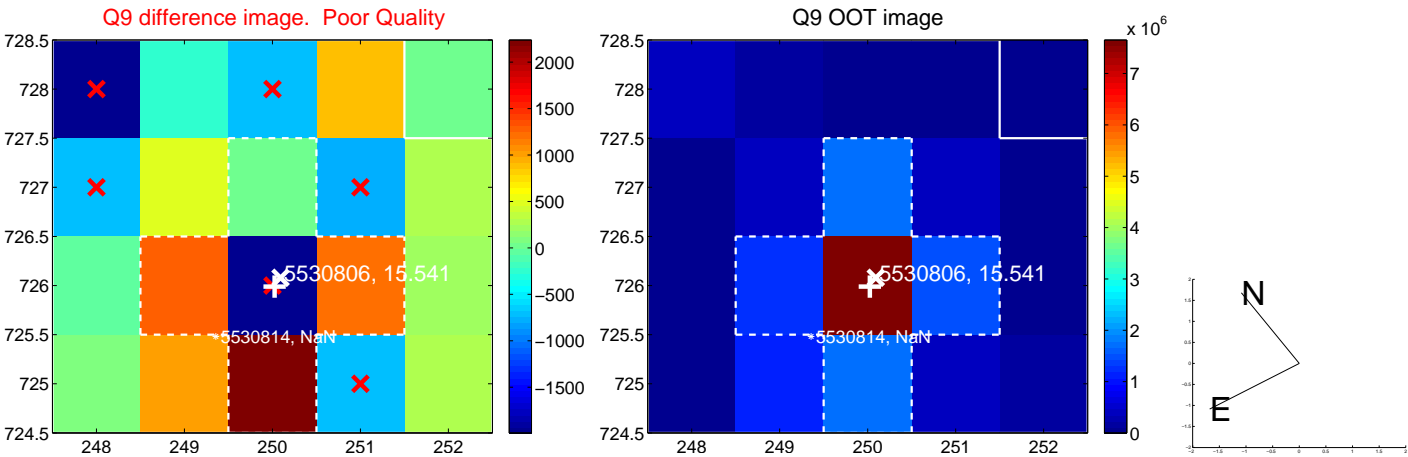
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



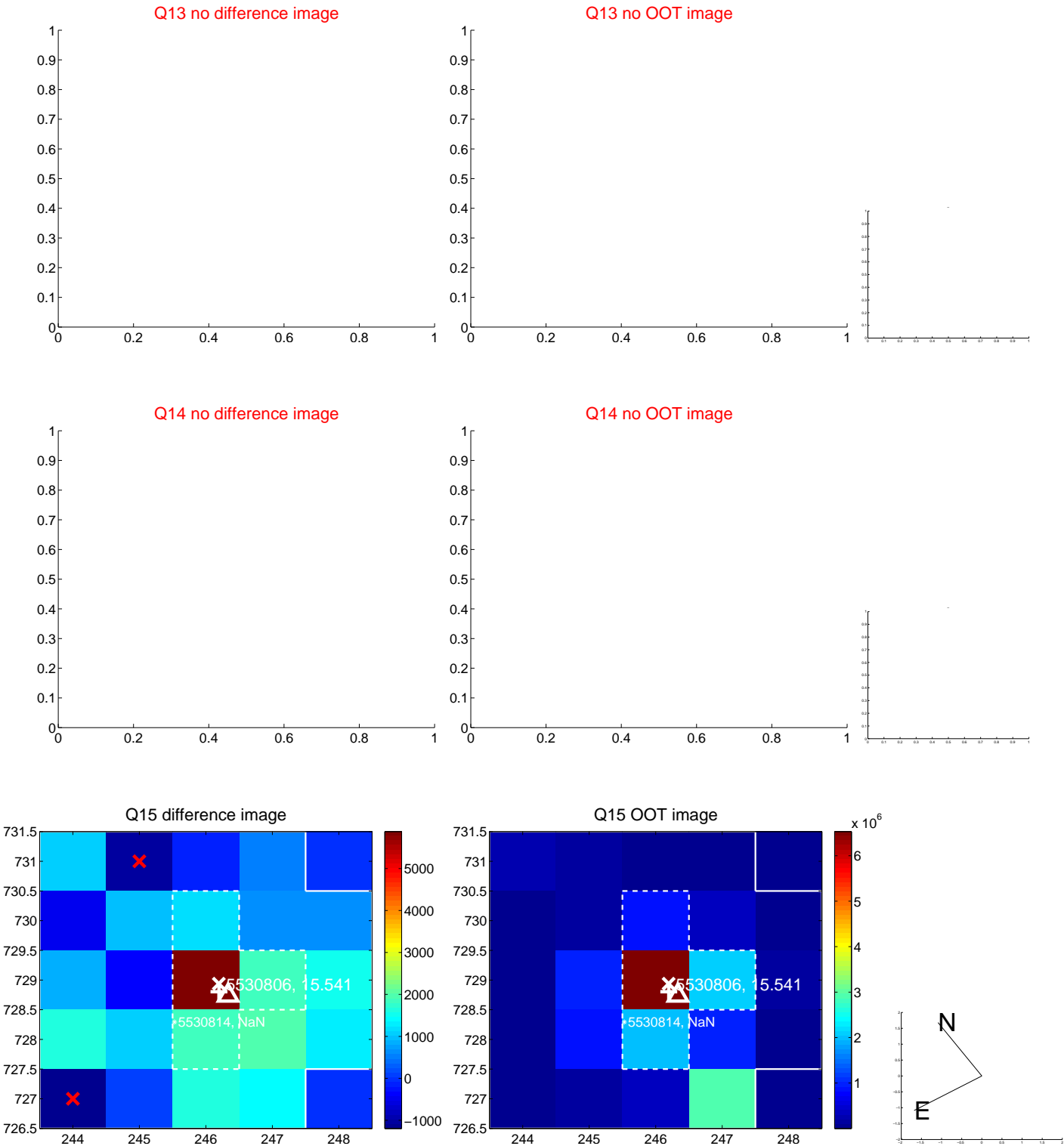
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



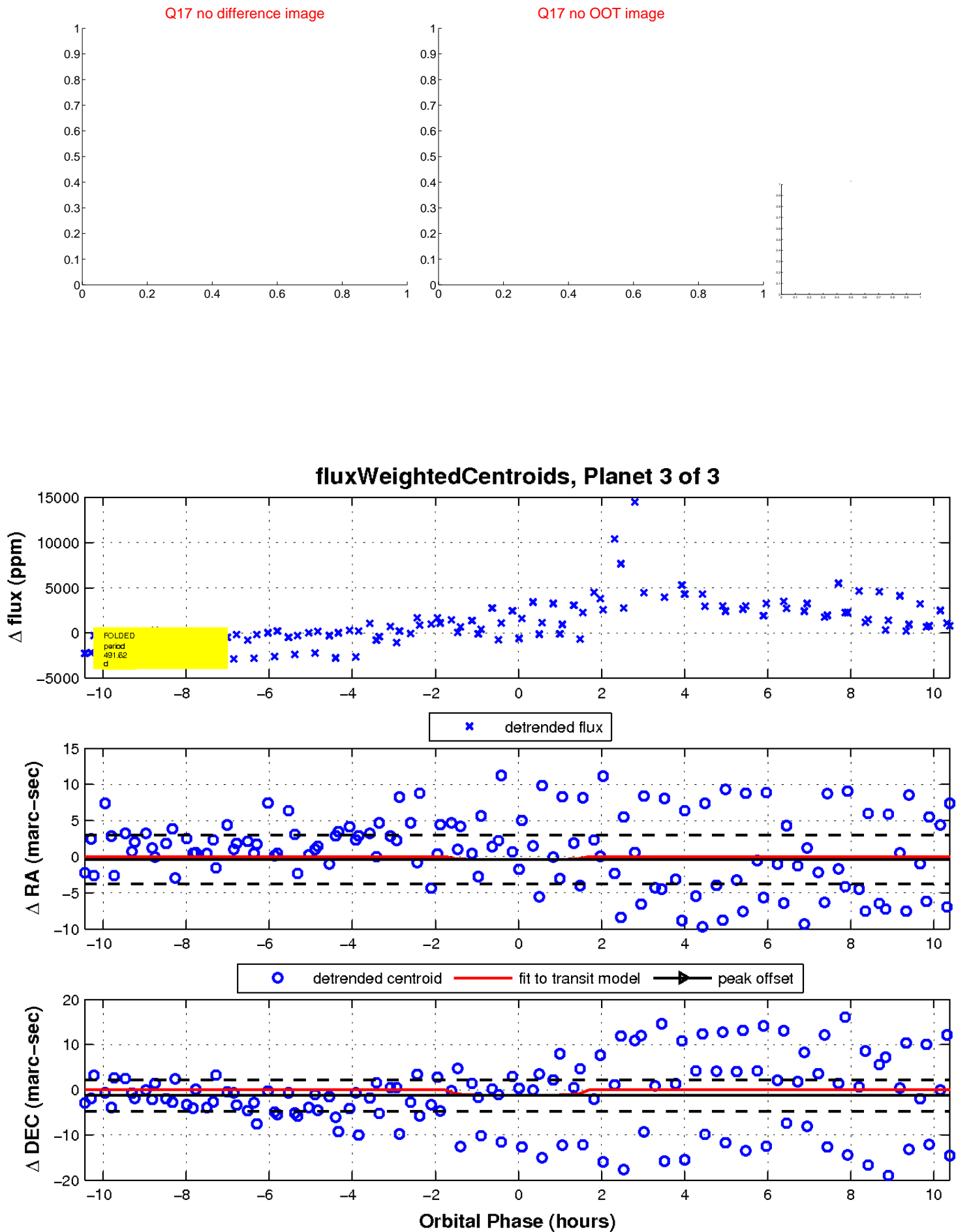
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

