

KIC 005603049

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})
005603049-01	OBS	No	0.585599	132.032431	158.5	1.870	19.9	19.8	3.52	8211	5.17	157865.42
005603049-02	OBS	No	0.585597	131.735627	134.9	1.806	16.0	17.0	3.52	8211	4.27	157865.98
005603049-03	OBS	No	0.585600	131.592244	132.6	1.500	9.5	-1.0	3.52	8211	4.12	157864.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005603049-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
005603049-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD—CENT_SATURATED
005603049-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

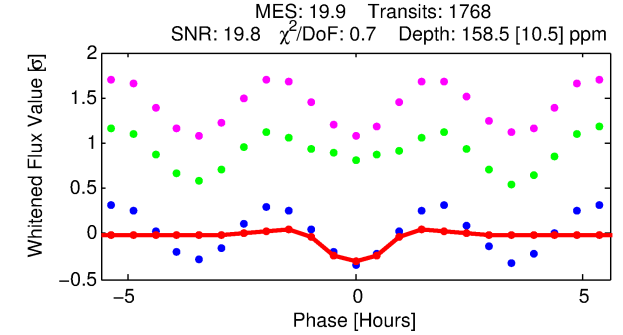
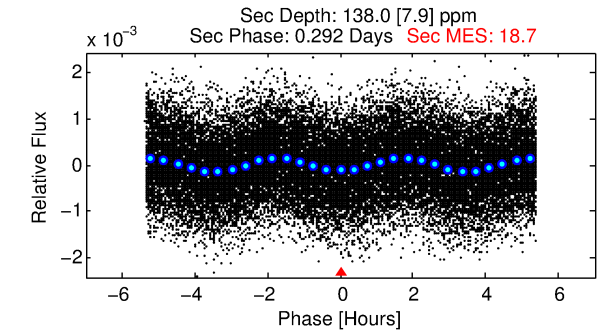
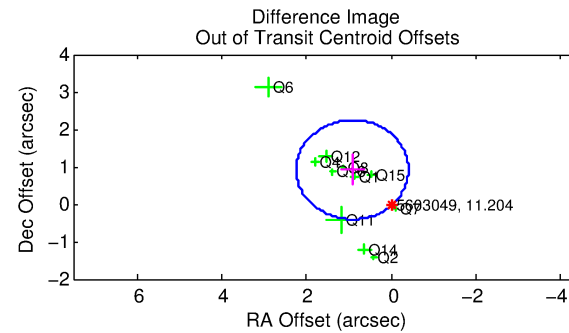
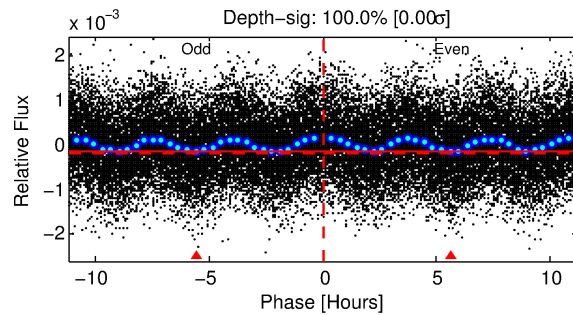
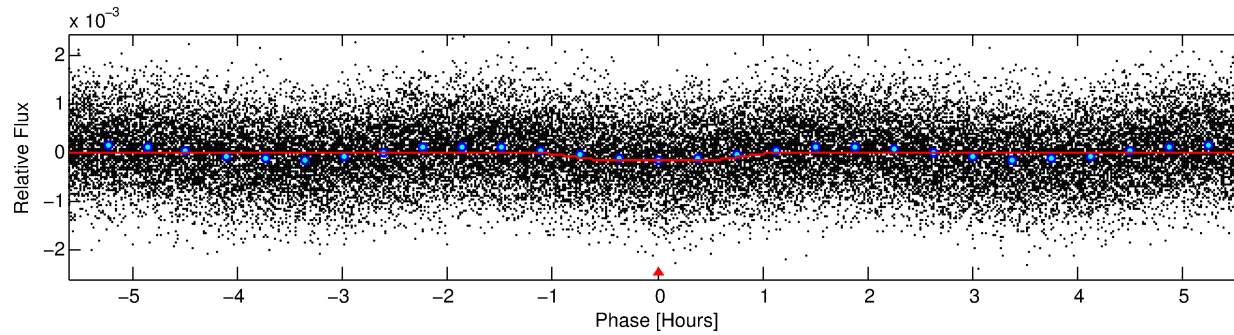
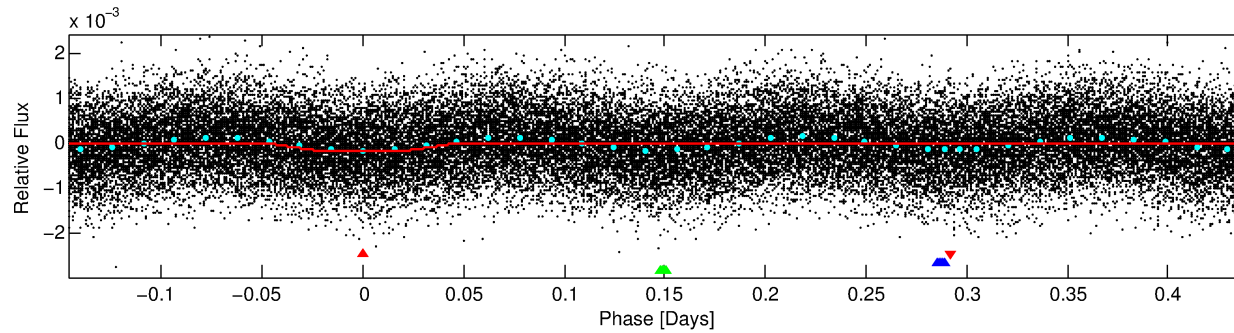
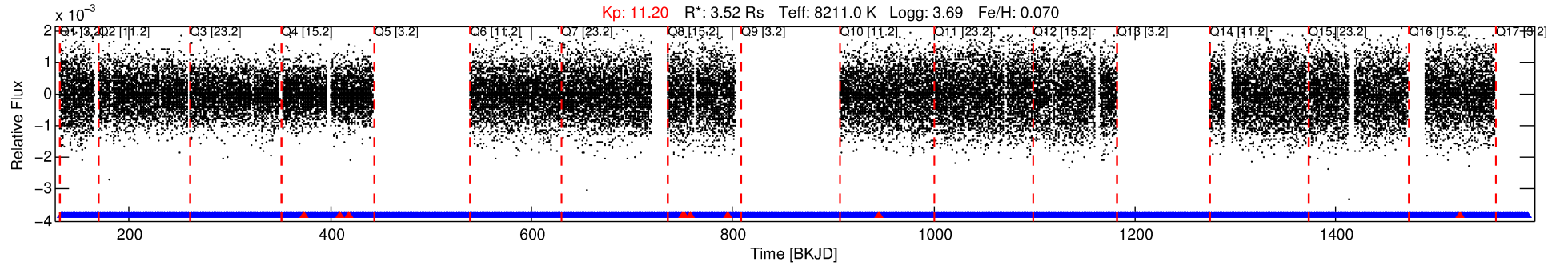
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005603049-01

No Significant Match Found

DV One-Page Summary

KIC: 5603049 Candidate: 1 of 3 Period: 0.586 d



DV Fit Results:

Period = 0.58560 [0.00001] d
Epoch = 132.0324 [0.0012] BKJD
 R_p/R^* = 0.0134 [0.0037]
 a/R^* = 1.46 [1.32]
 b = 0.90 [0.37]
 Seff = 157865.42 [118678.85]
 T_{eq} = 5083 [955] K
 R_p = 5.17 [2.89] R_e
 a = 0.0179 [0.0083] AU
 Ag = 0.91 [0.84] [-0.11 σ]
 T_{eff} = 7676 [1114] K [1.77 σ]

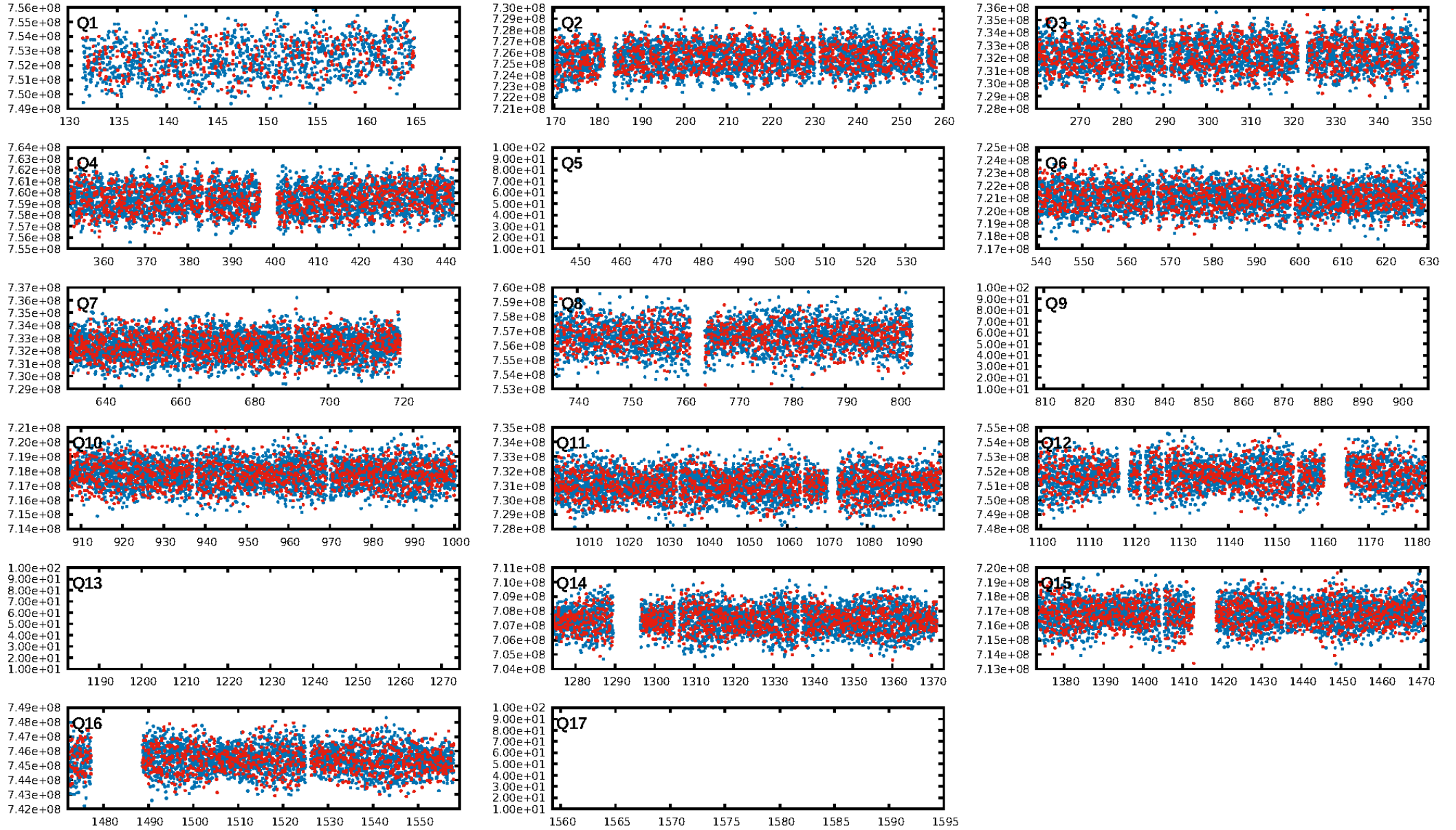
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1702/1711]
GhostDiagnostic-chr: 1.653
Centroid-sig: 1.4%
Centroid-so: 0.128 arcsec [1.58 σ]
OotOffset-rm: 1.297 arcsec [2.94 σ]
KicOffset-rm: 1.452 arcsec [3.83 σ]
OotOffset-st: 3/3/4/1 [11]
KicOffset-st: 3/3/4/1 [11]
DiffImageQuality-fgm: 0.73 [8/11]
DiffImageOverlap-fno: 0.00 [0/13]

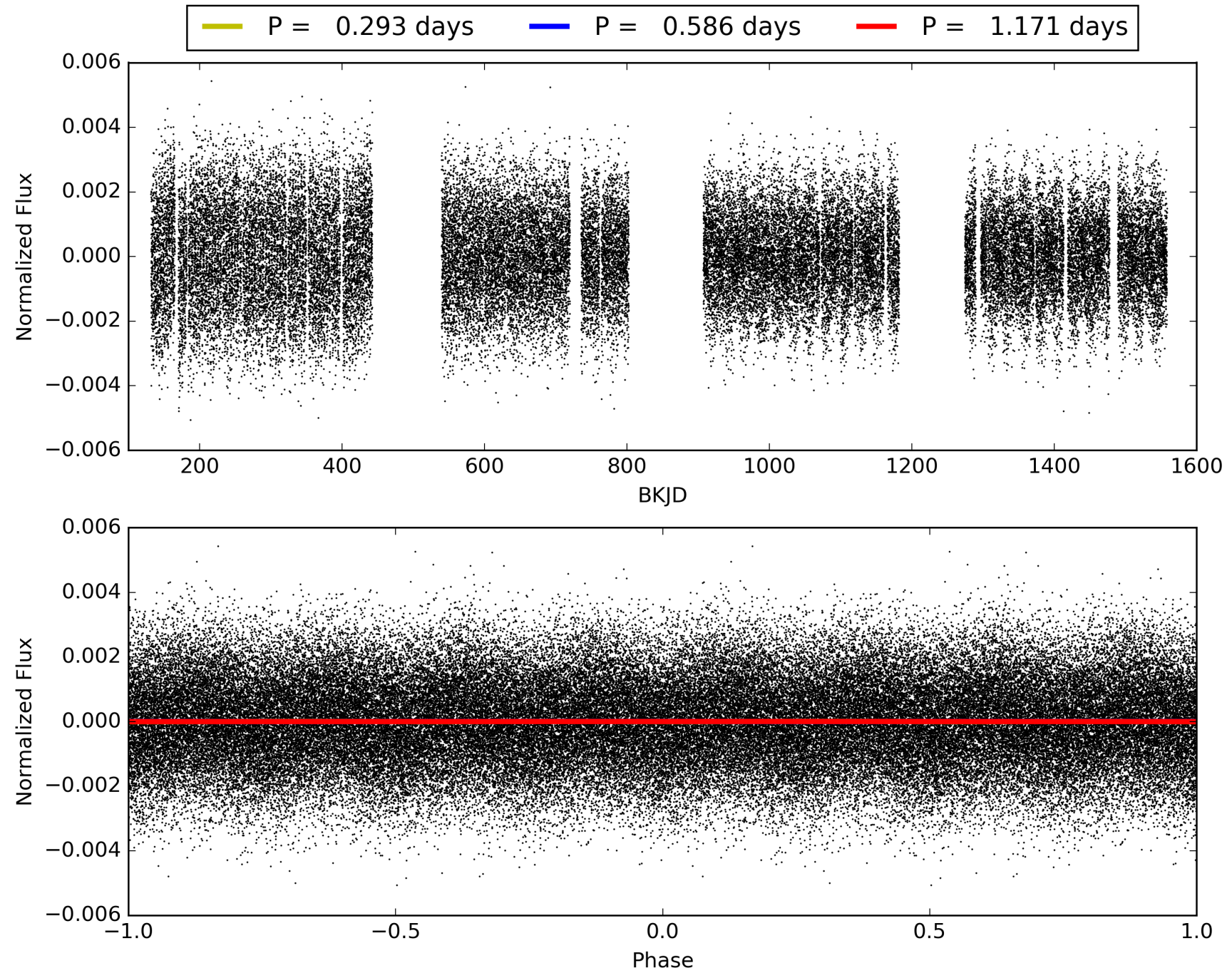
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:22:35 Z

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

TCE 005603049-01, PDC Light Curves

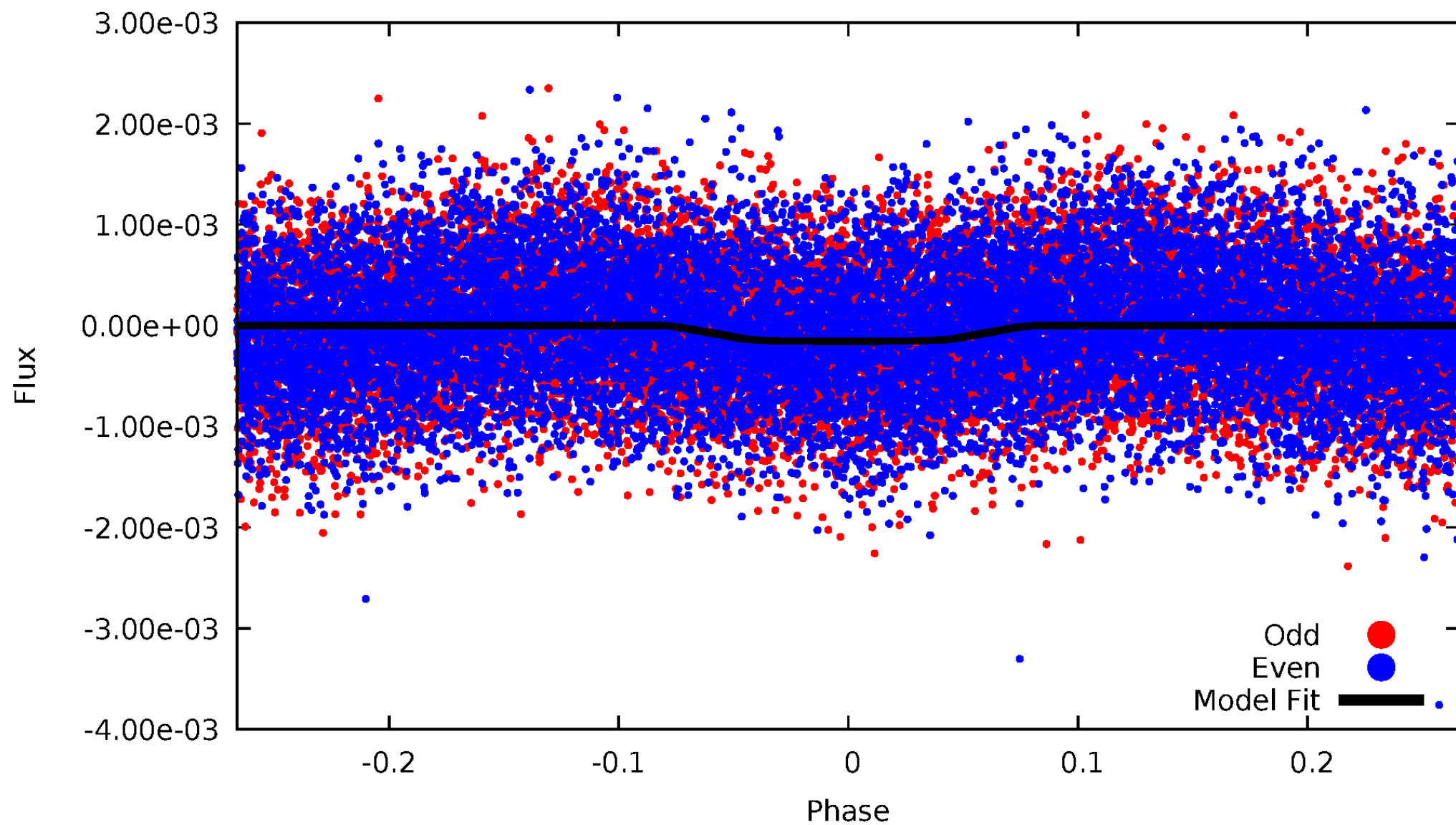


TCE 005603049-01



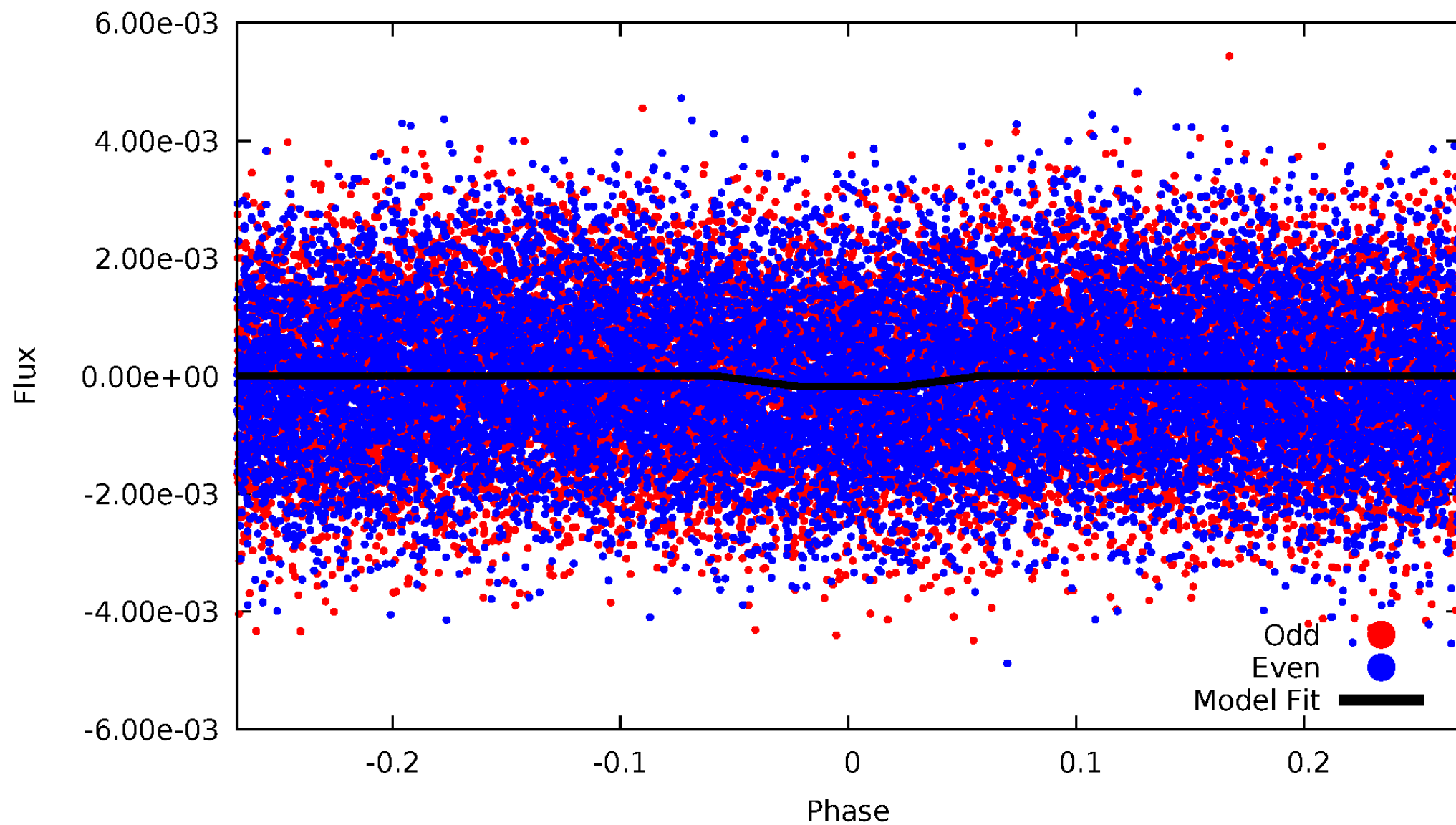
DV Odd/Even

TCE 005603049-01

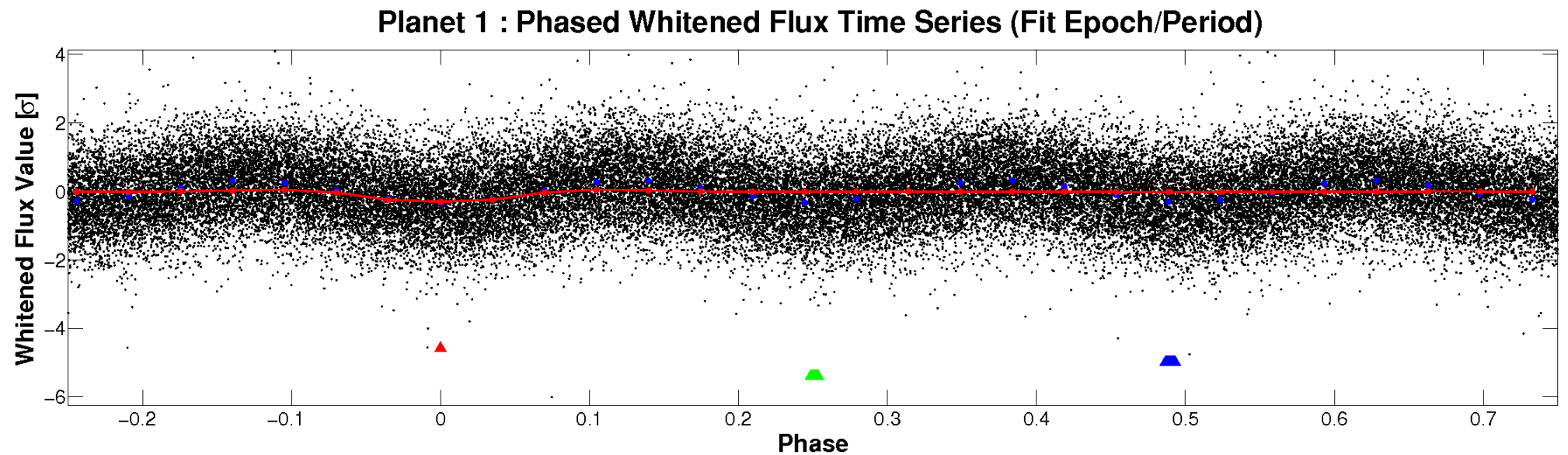
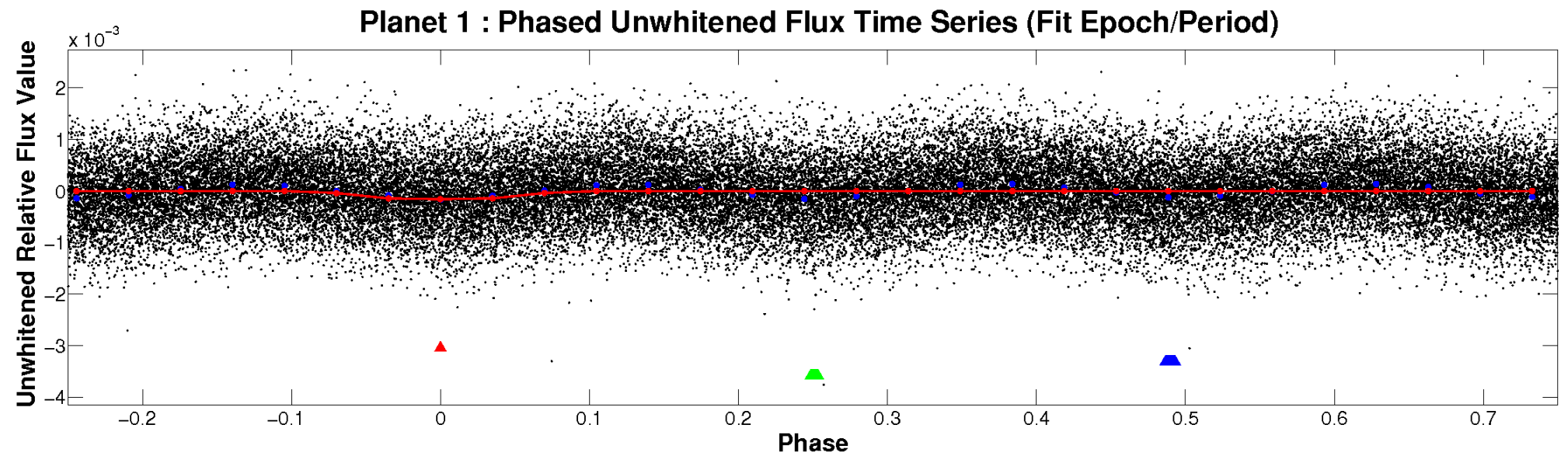


ALT Odd/Even

TCE 005603049-01

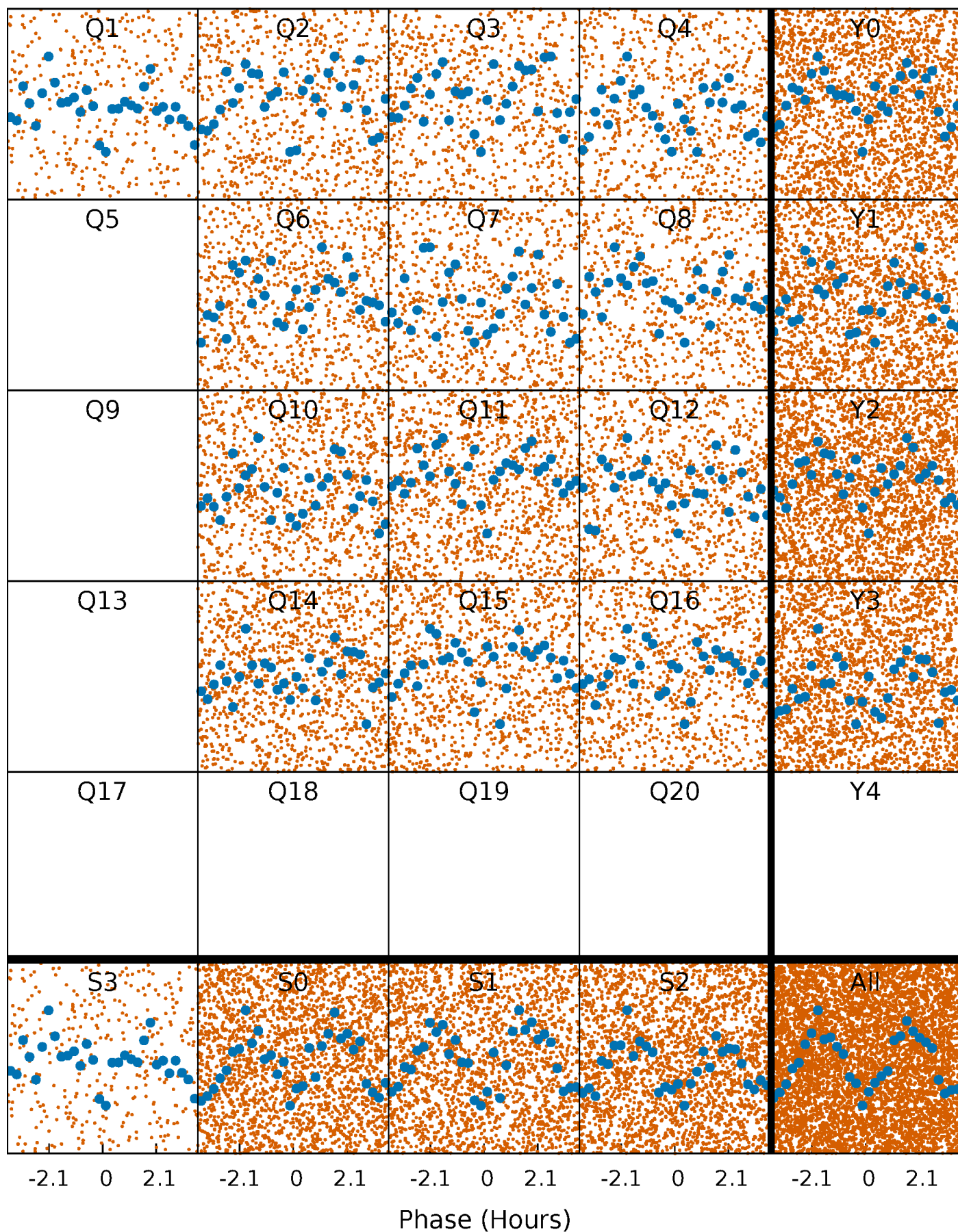


Non-Whitened Vs. Whitened Light Curve



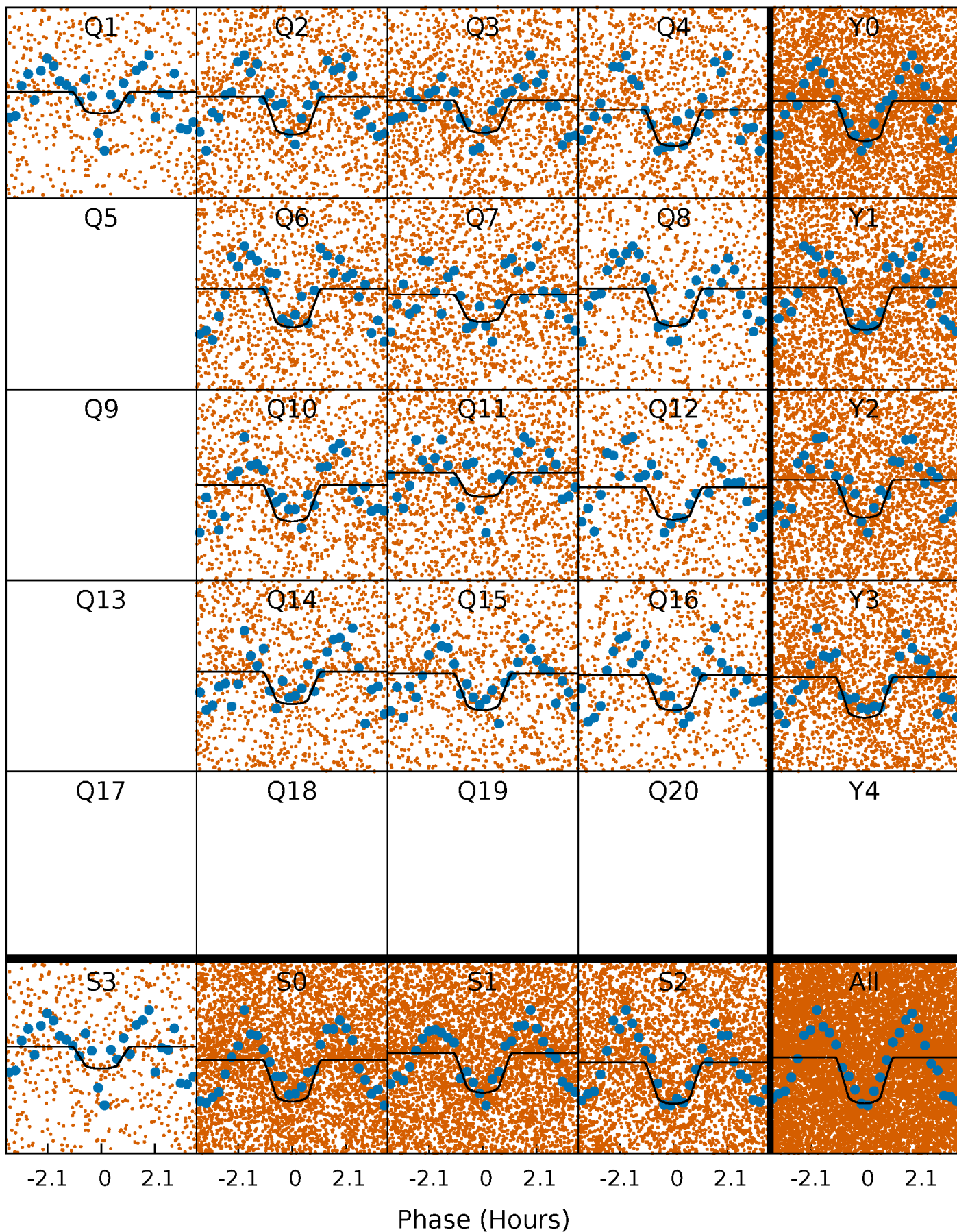
PDC Quarter-Phased Transit Curves

TCE 005603049-01 P= 0.585599 Days $T_0=132.032431$ (BKJD)



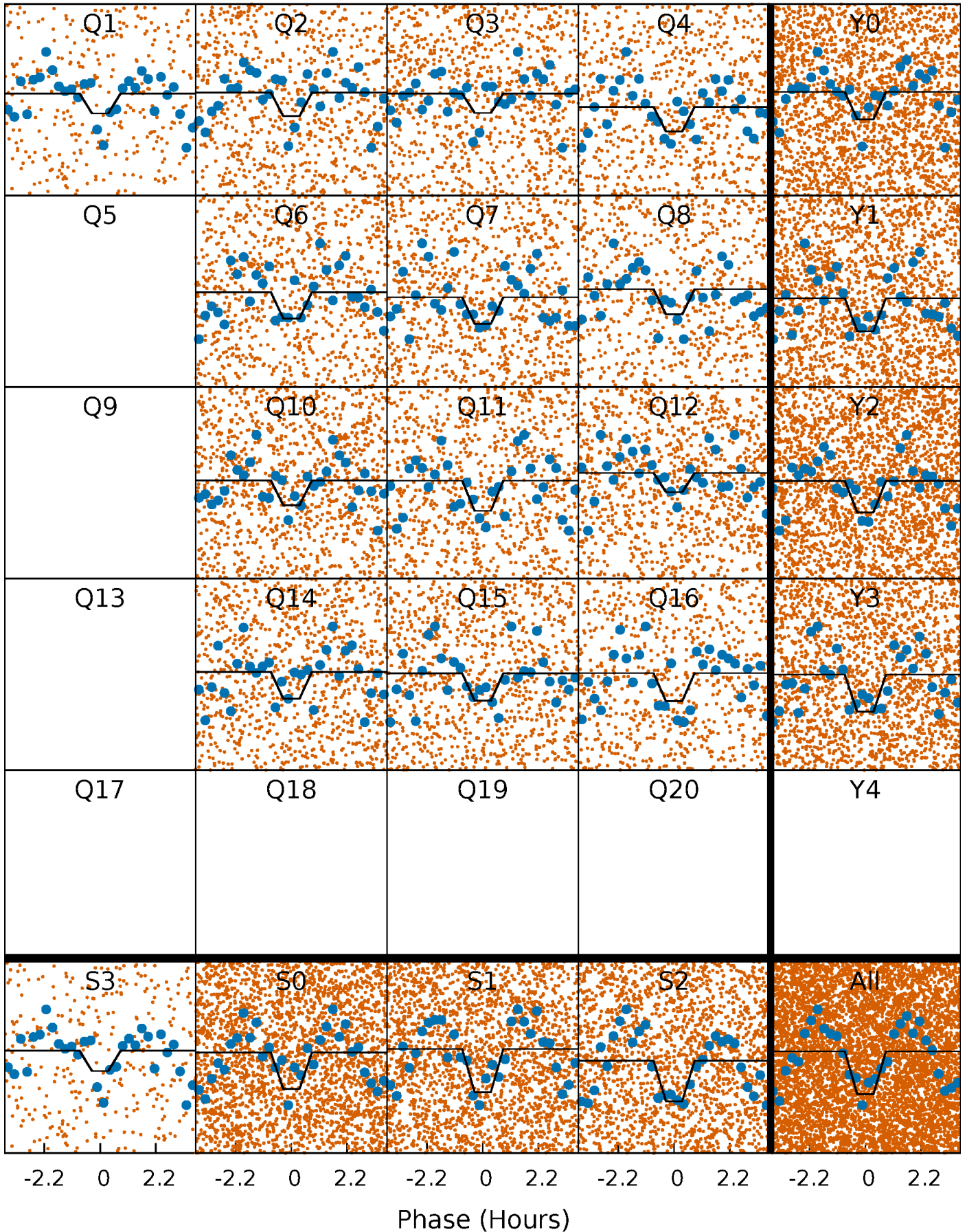
DV Quarter-Phased Transit Curves

TCE 005603049-01 P= 0.585599 Days $T_0=132.032431$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

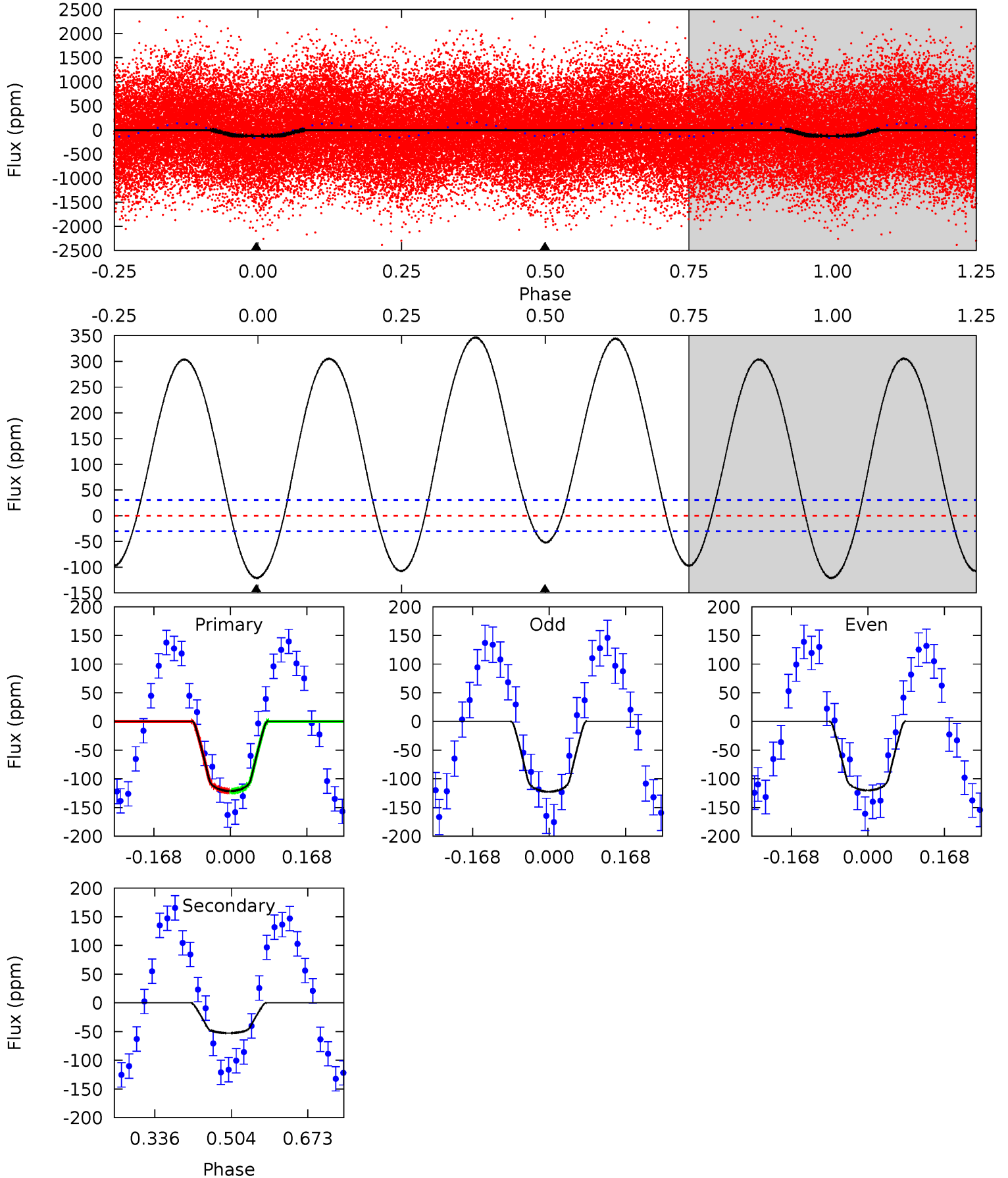
TCE 005603049-01 P= 0.585600 Days $T_0=132.032581$ (BKJD)



DV Model-Shift Uniqueness Test

005603049-01, P = 0.585599 Days, E = 131.446832 Days

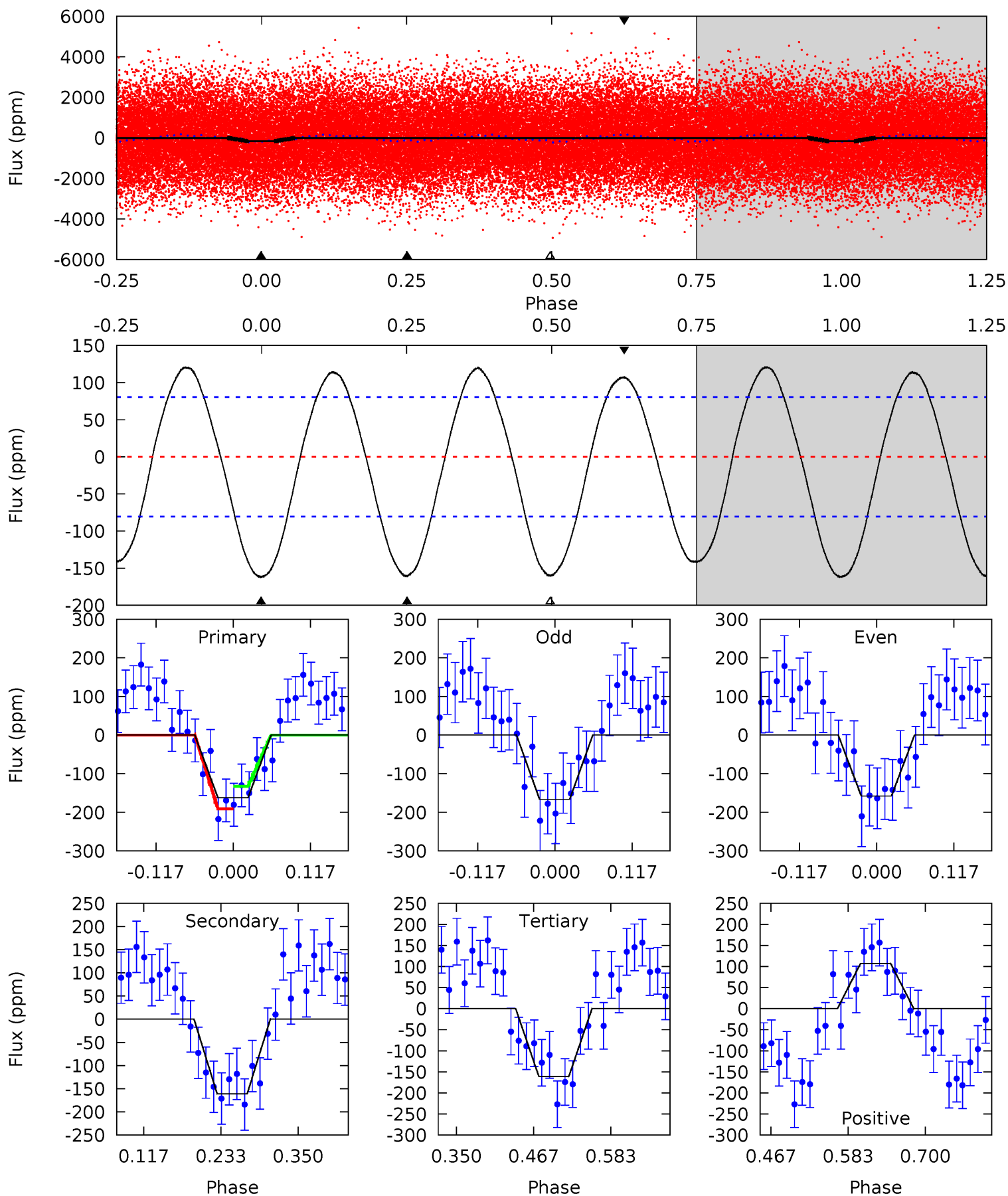
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.9	7.76	0	0	4.45	1.38	14.6	17.9	17.9	7.76	7.76	0.17	0.95	0.74	0.04



Alt Model-Shift Uniqueness Test

005603049-01, P = 0.585600 Days, E = 131.446981 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.14	9.06	9.05	6.04	4.53	1.57	5.45	0.09	3.10	0.02	3.02	0.24	0.99	0.43	1.64



Stellar Parameters For KIC 005603049

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8211^{+226}_{-356}	$3.692^{+0.427}_{-0.142}$	$0.070^{+0.250}_{-0.450}$	$3.523^{+0.924}_{-1.716}$	$2.225^{+0.329}_{-0.611}$	$0.072^{+0.314}_{-0.031}$
	+3%/-4%	+12%/-4%	+357%/-643%	+26%/-49%	+15%/-27%	+439%/-44%
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 005603049-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-53 ± 7	$4.74^{+1.76}_{-1.66}$	6886^{+592}_{-792}	4328^{+1784}_{-8633}	$0.412^{+0.520}_{-0.191}$
Alt.	-161 ± 18	$4.69^{+1.85}_{-1.65}$	6881^{+610}_{-839}	7246^{+2115}_{-1352}	$1.277^{+1.594}_{-0.610}$

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 $A_{obs} \gg 1.0$

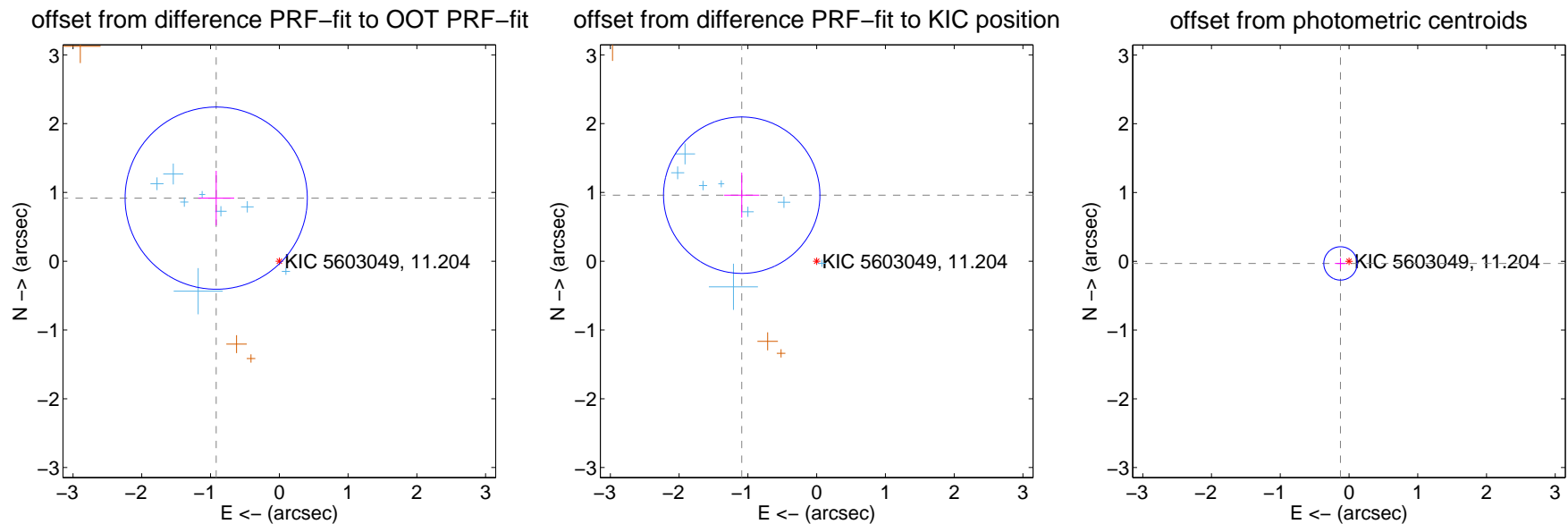
DV Centroid Data

Supplemental centroid analysis for 005603049-01. **Kepler magnitude: 11.20.** Transit SNR 19.81

There are 8 quarters with good PRF difference image offsets

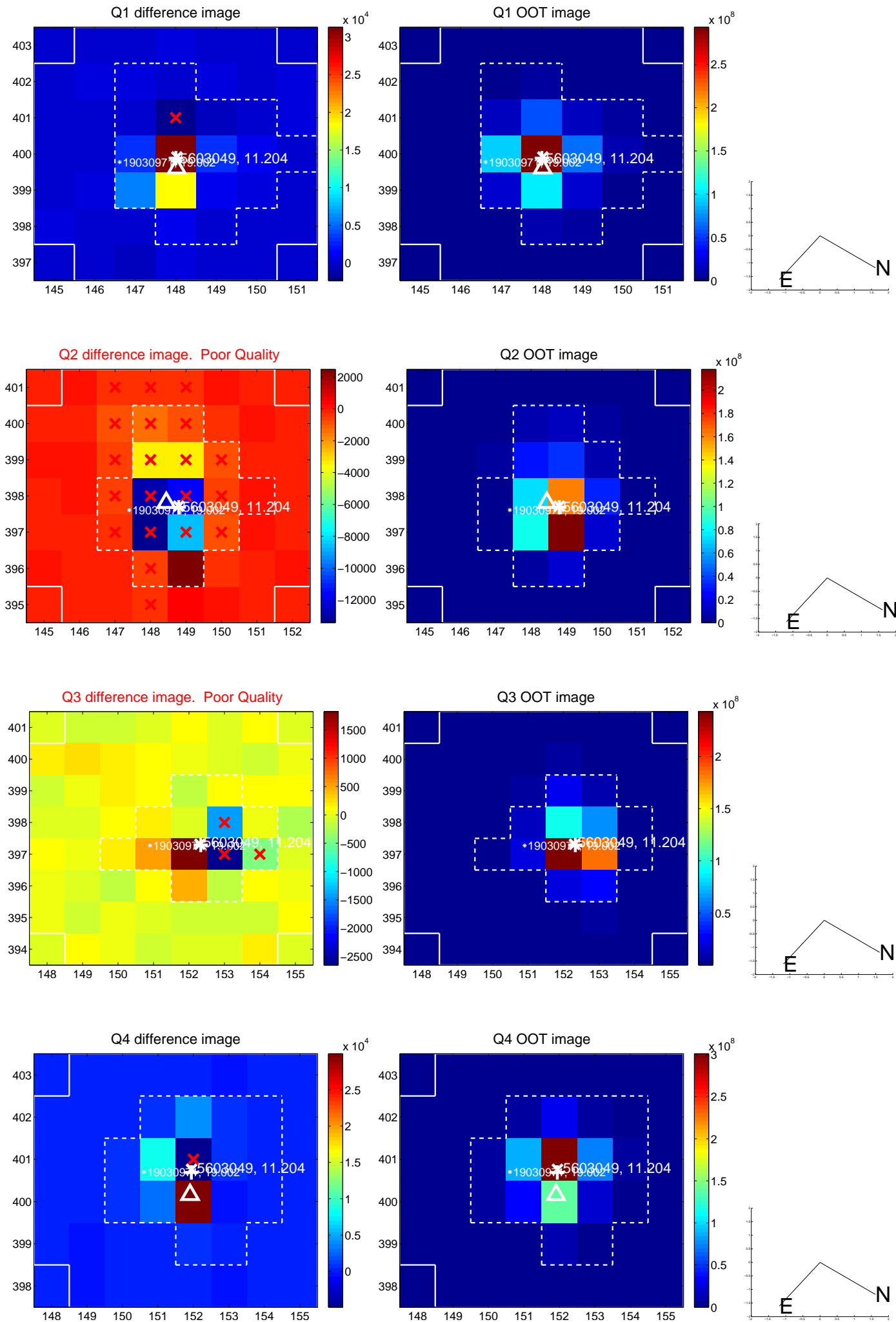
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.297 ± 0.442	2.94	0.918 ± 0.261	0.917 ± 0.397
PRF-fit source offset from KIC position	1.452 ± 0.379	3.83	1.090 ± 0.255	0.960 ± 0.327
photometric centroid source offset	0.13 ± 0.08	1.58	0.12 ± 0.08	-0.03 ± 0.08

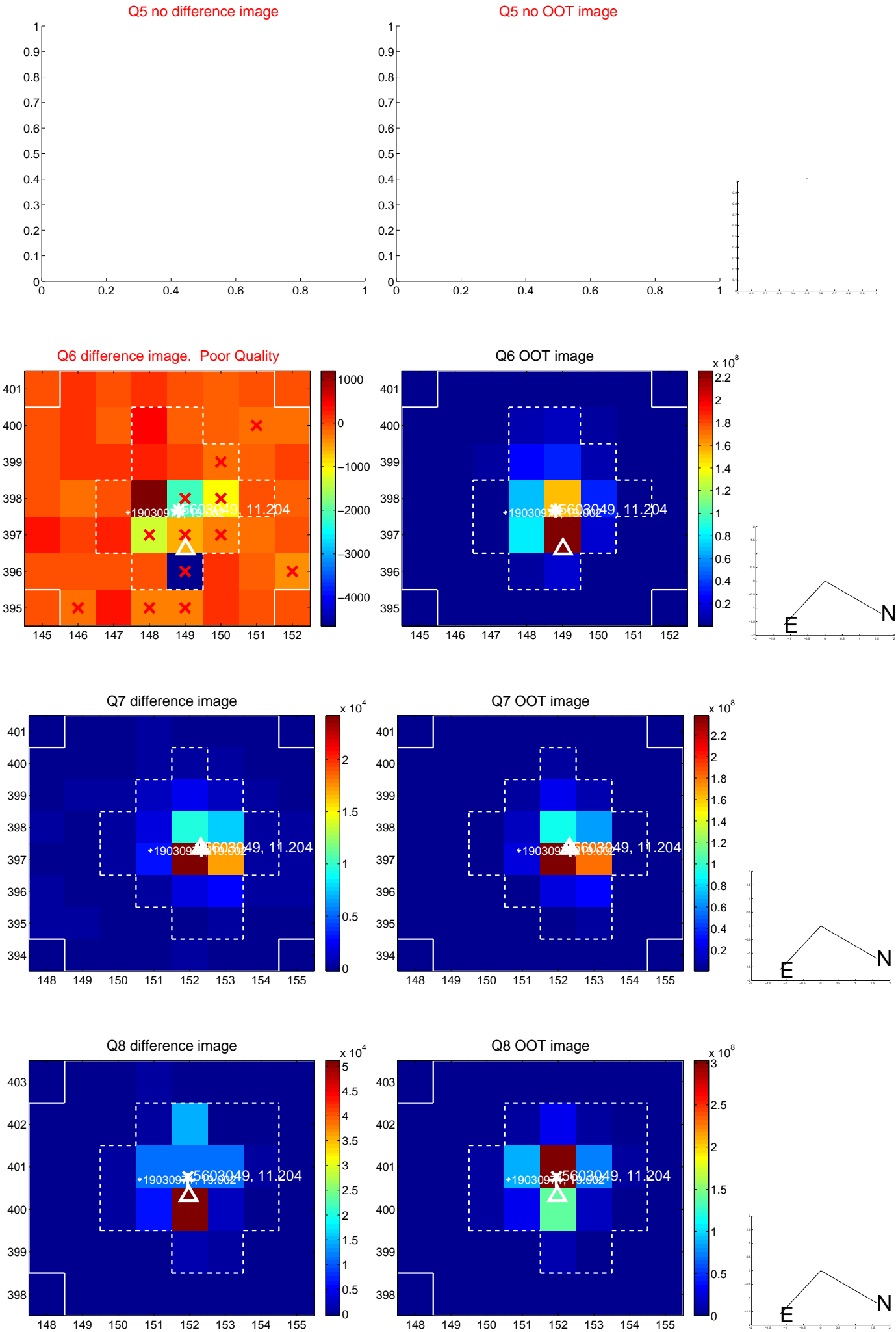


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

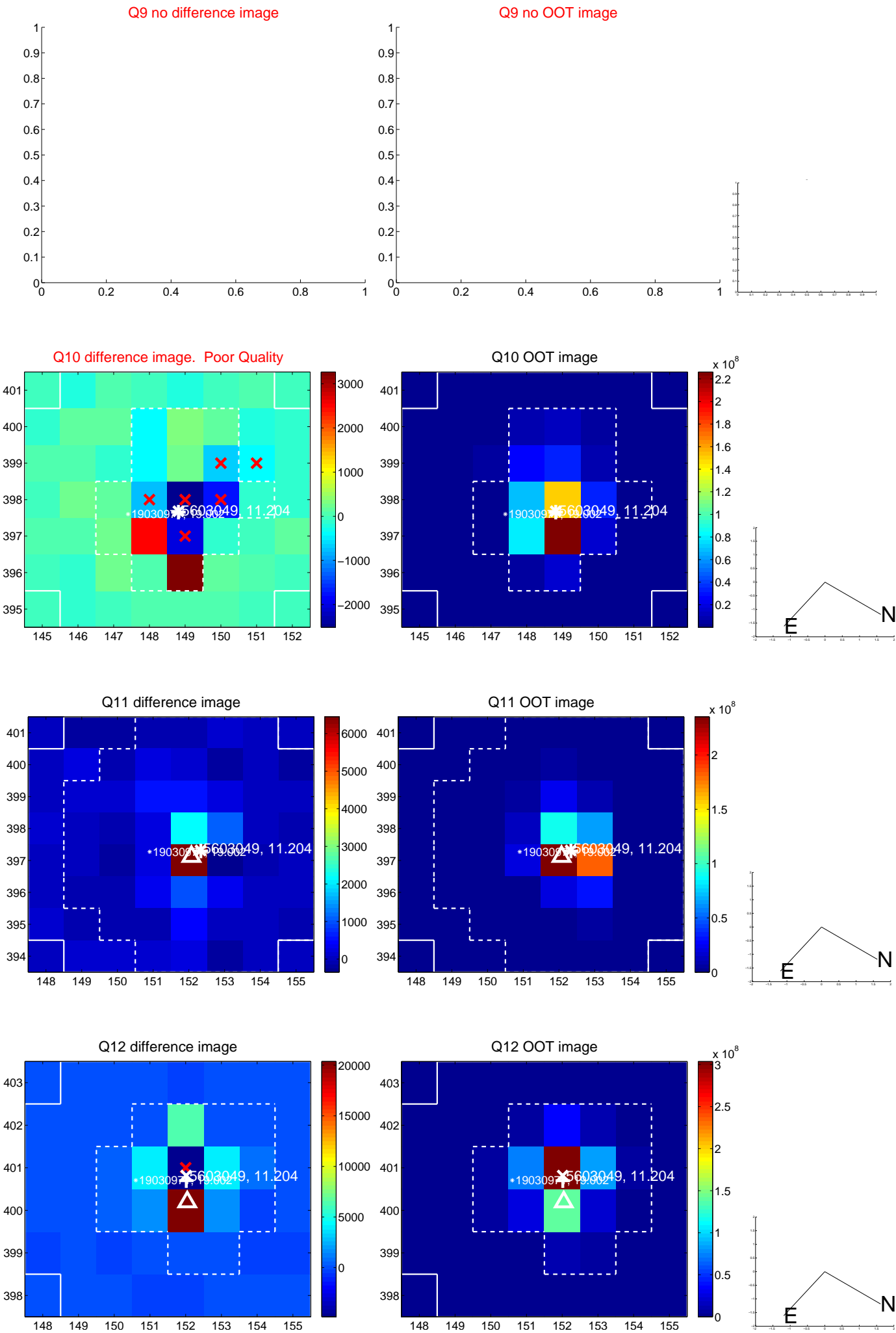
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



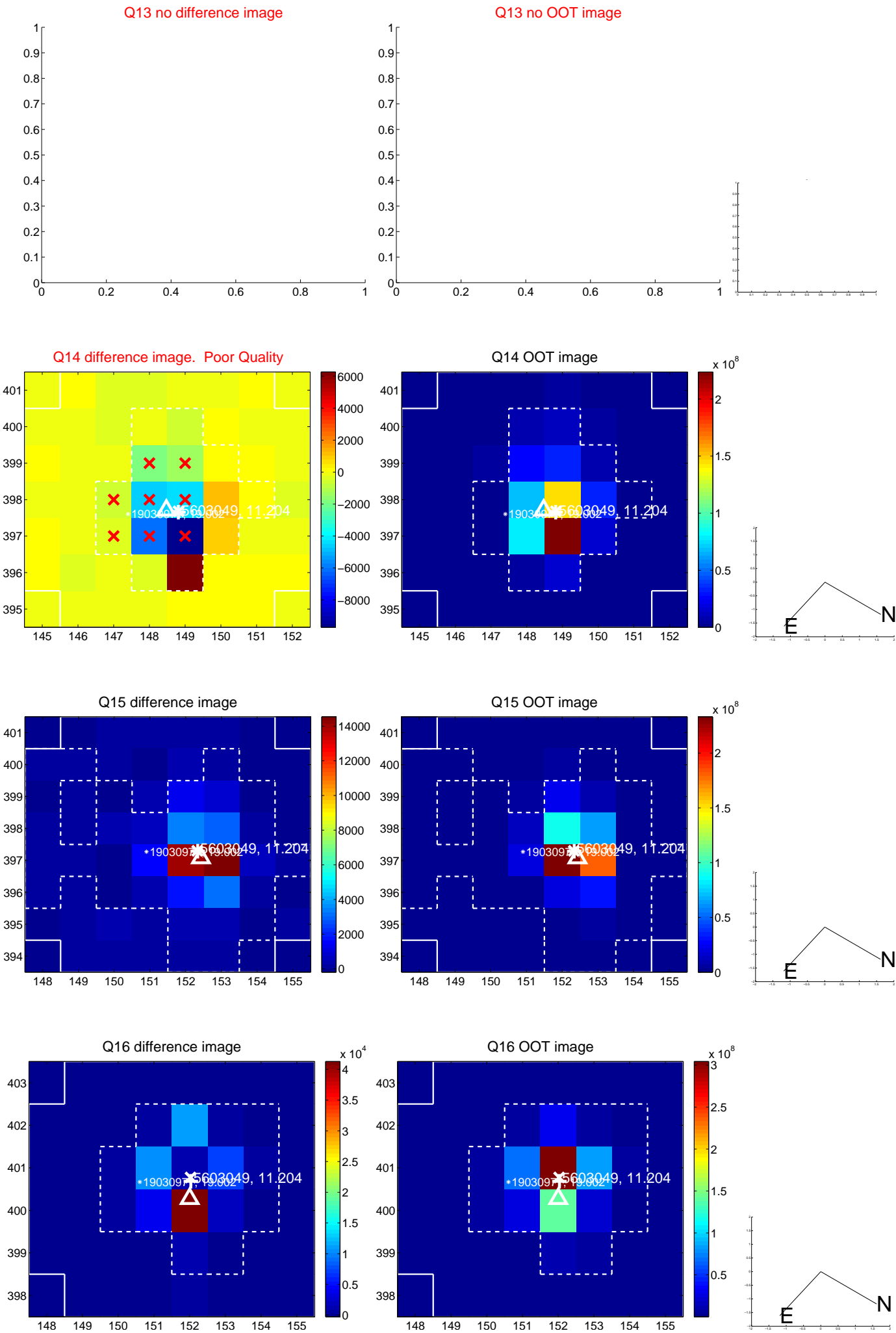
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



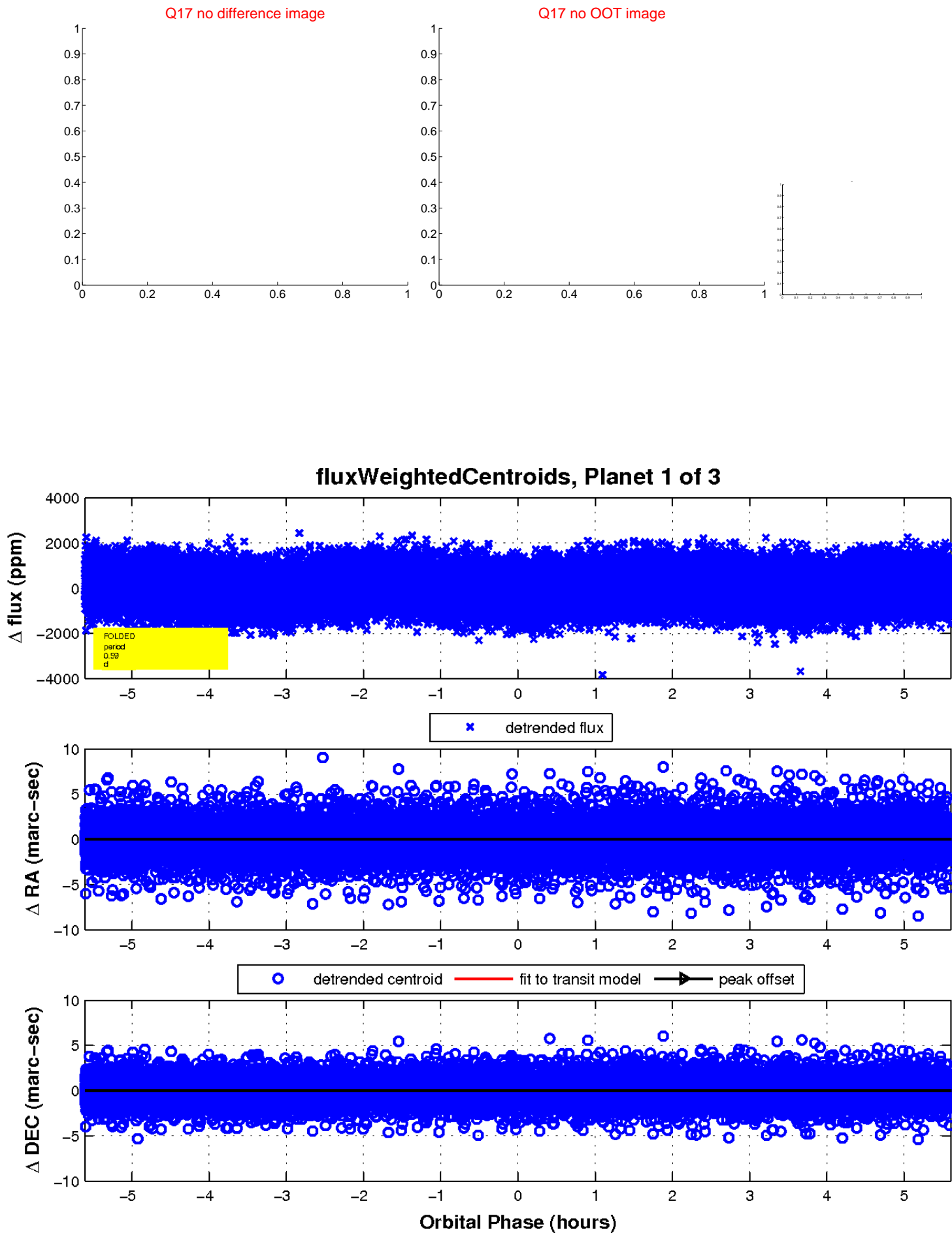
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

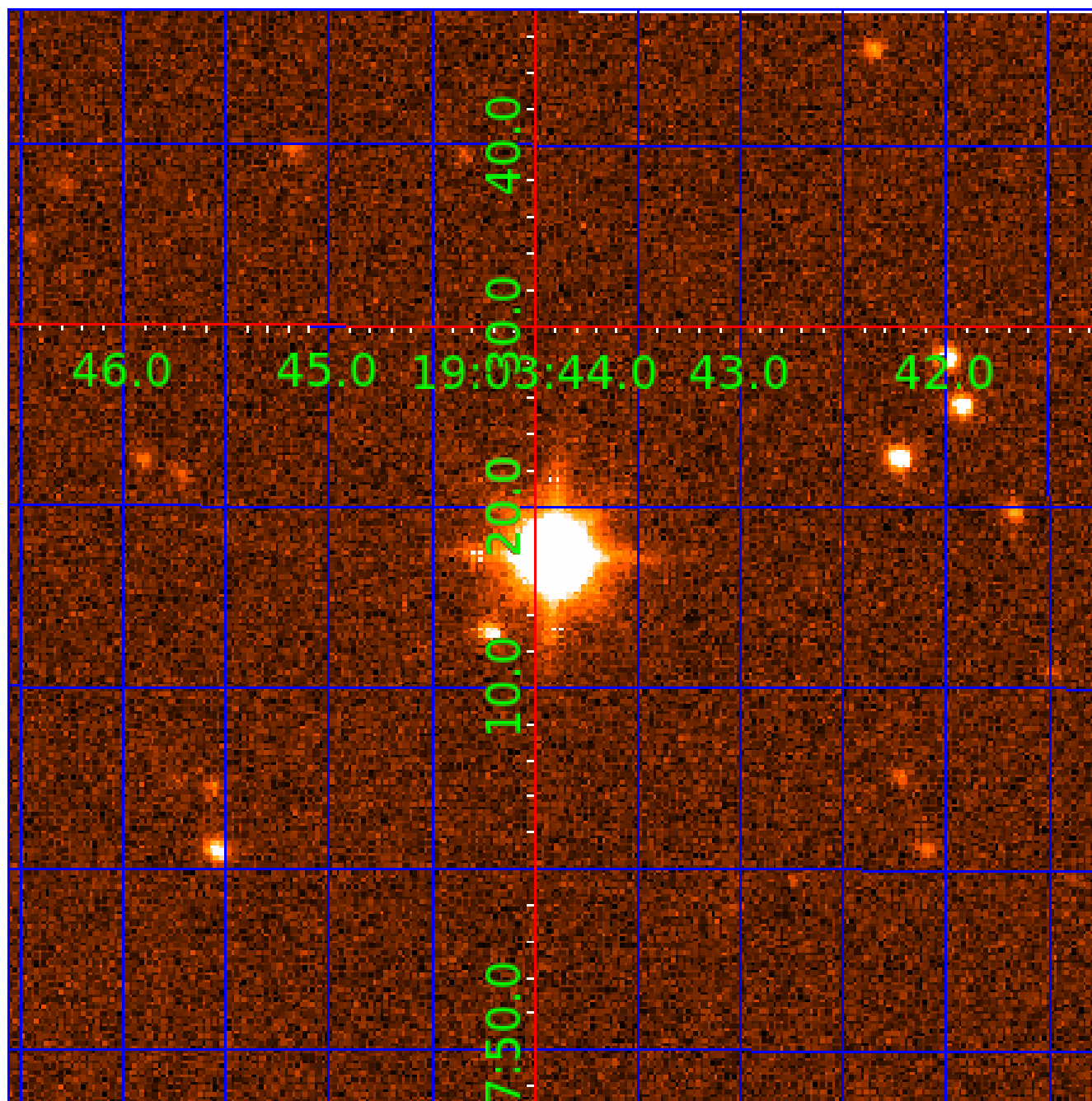


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005603049

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})
005603049-01	OBS	No	0.585599	132.032431	158.5	1.870	19.9	19.8	3.52	8211	5.17	157865.42
005603049-02	OBS	No	0.585597	131.735627	134.9	1.806	16.0	17.0	3.52	8211	4.27	157865.98
005603049-03	OBS	No	0.585600	131.592244	132.6	1.500	9.5	-1.0	3.52	8211	4.12	157864.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005603049-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
005603049-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD—CENT_SATURATED
005603049-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

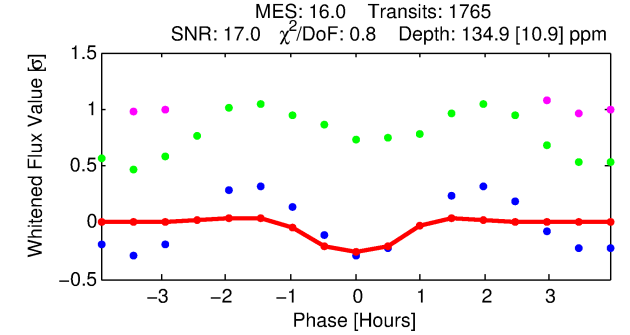
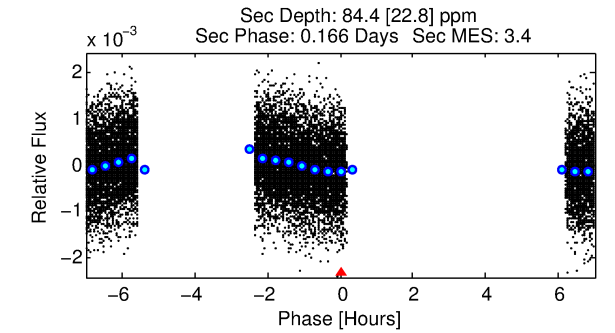
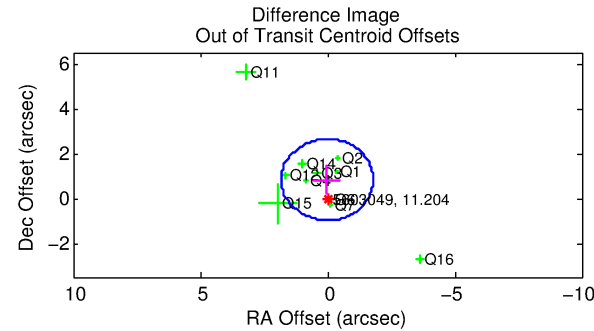
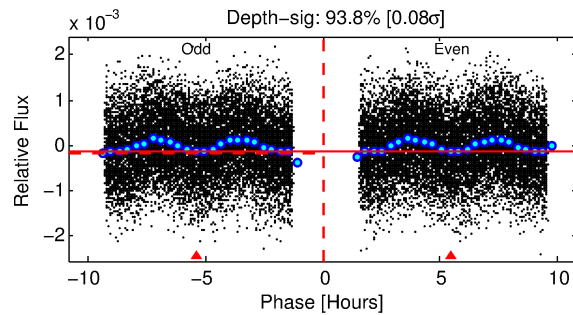
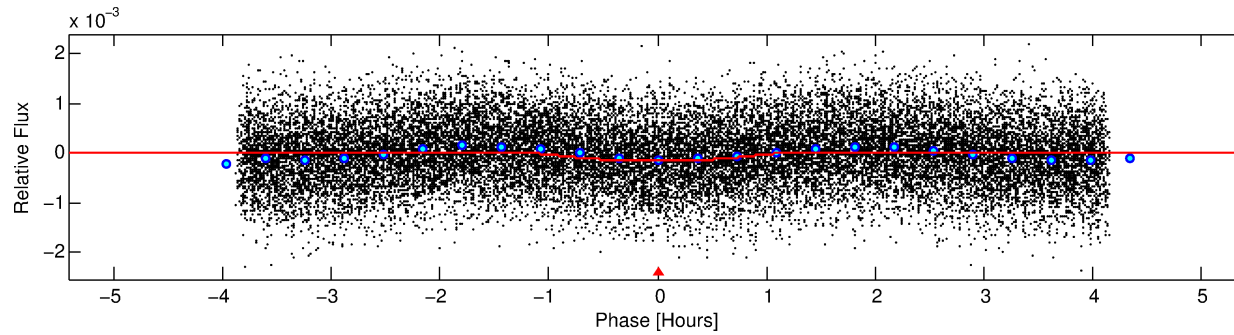
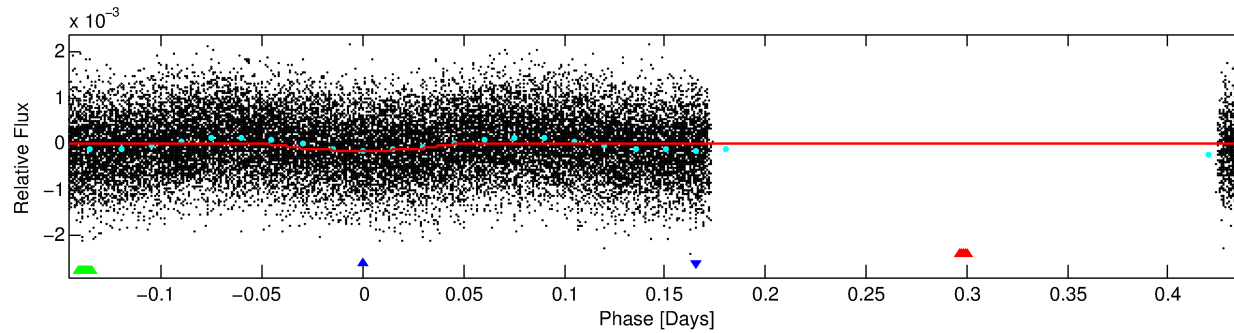
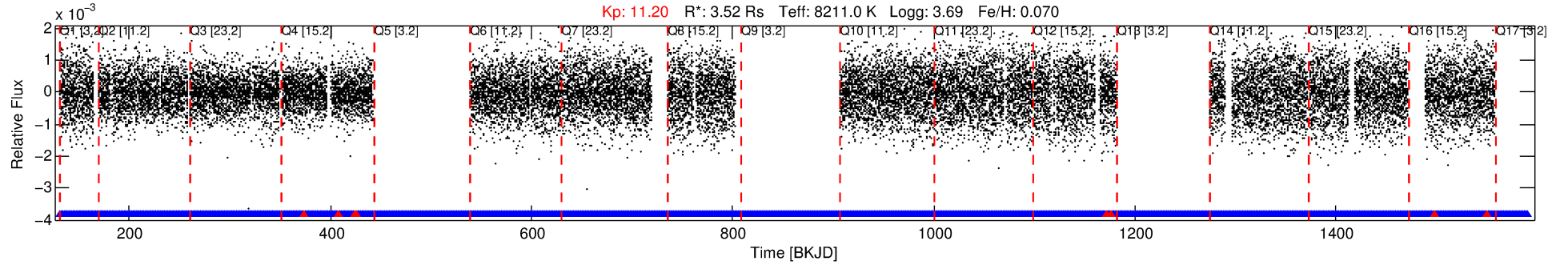
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005603049-02

No Significant Match Found

DV One-Page Summary

KIC: 5603049 Candidate: 2 of 3 Period: 0.586 d



DV Fit Results:

Period = 0.58560 [0.00001] d
Epoch = 131.7356 [0.0014] BKJD
Rp/R* = 0.0111 [0.0035]
a/R* = 2.23 [3.22]
b = 0.55 [2.34]
Seff = 157865.98 [118679.27]
Teq = 5083 [955] K
Rp = 4.27 [2.48] Re
a = 0.0179 [0.0083] AU
Ag = 0.81 [0.82] [-0.23 σ]
Teffp = 7464 [1324] K [1.46 σ]

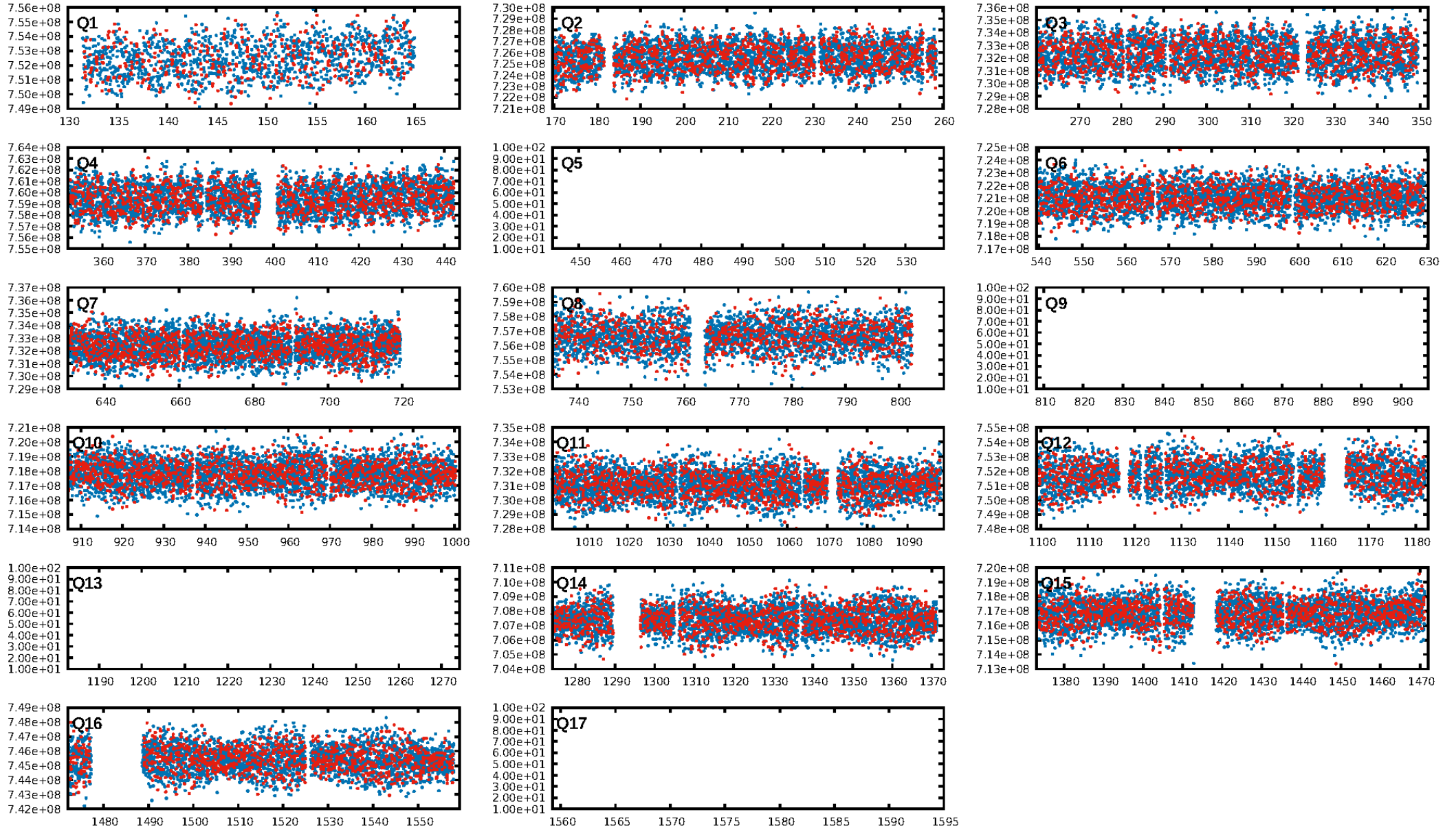
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1700/1708]
GhostDiagnostic-chr: 1.067
Centroid-sig: 12.2%
Centroid-so: 0.082 arcsec [0.87 σ]
OotOffset-rm: 0.830 arcsec [1.38 σ]
OotOffset-st: 3/4/3/1 [11]
KicOffset-rm: 1.248 arcsec [2.08 σ]
KicOffset-st: 3/4/3/1 [11]
DiffImageQuality-fgm: 0.73 [8/11]
DiffImageOverlap-fno: 0.00 [0/13]

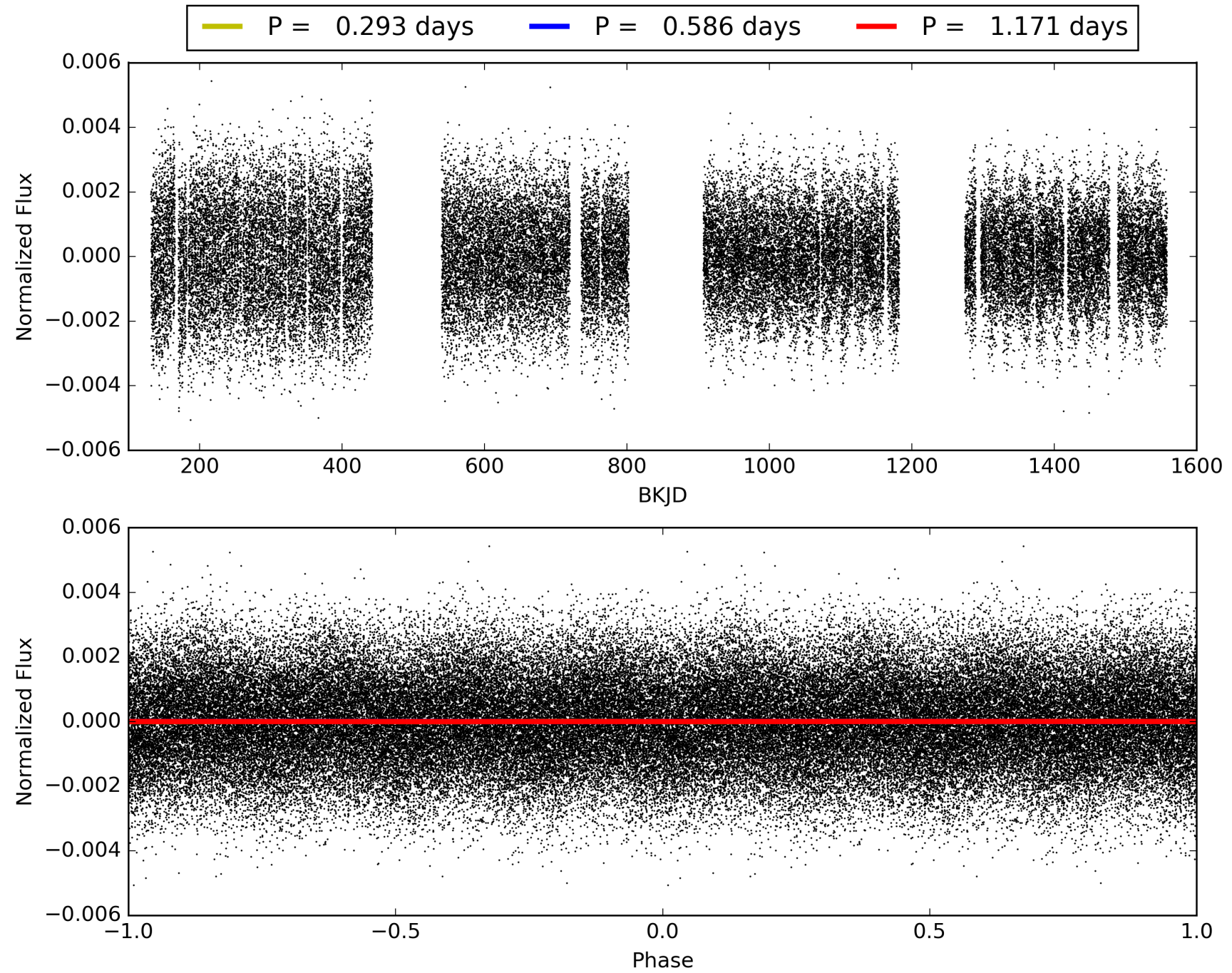
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:22:45 Z

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

TCE 005603049-02, PDC Light Curves

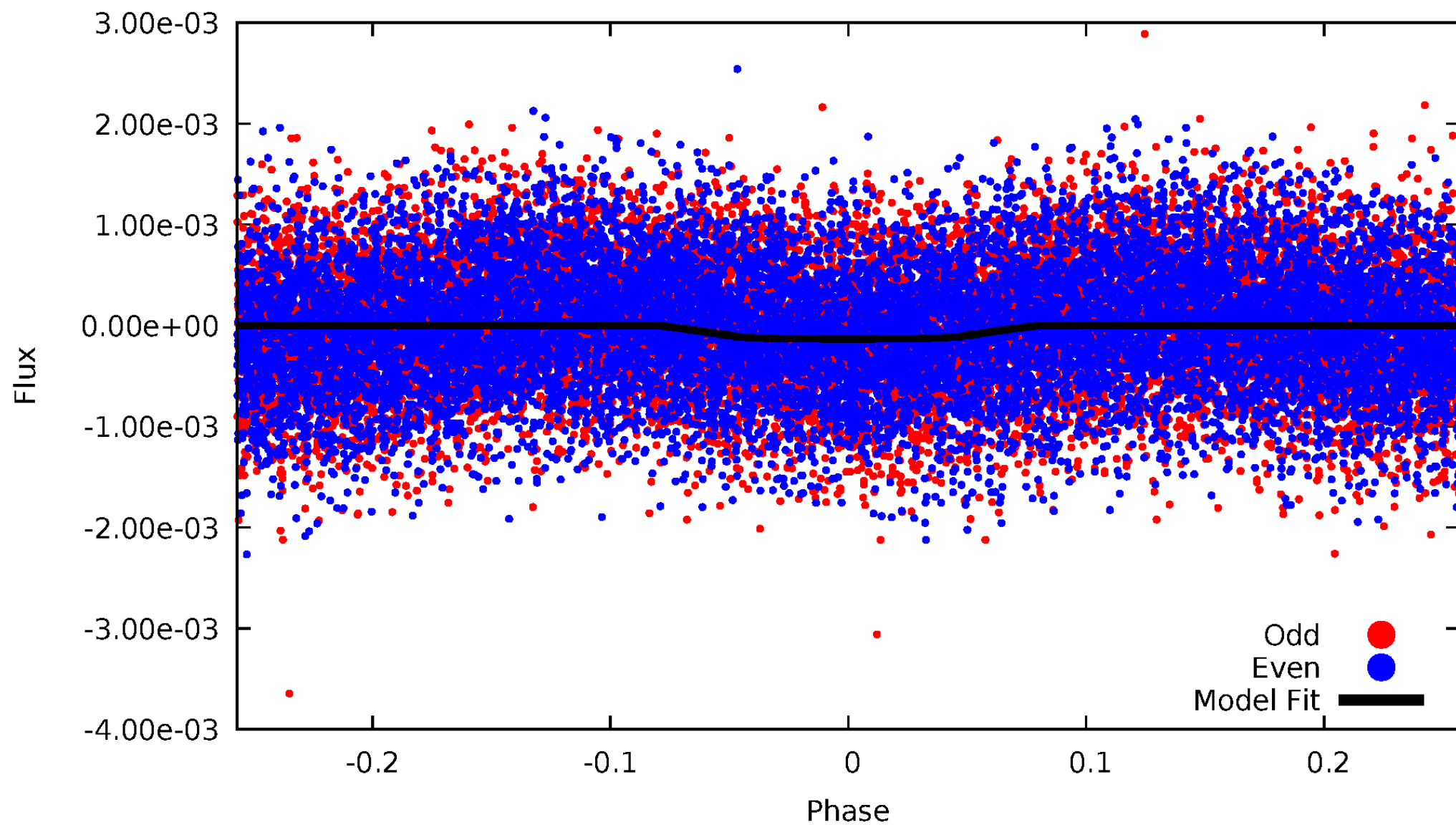


TCE 005603049-02



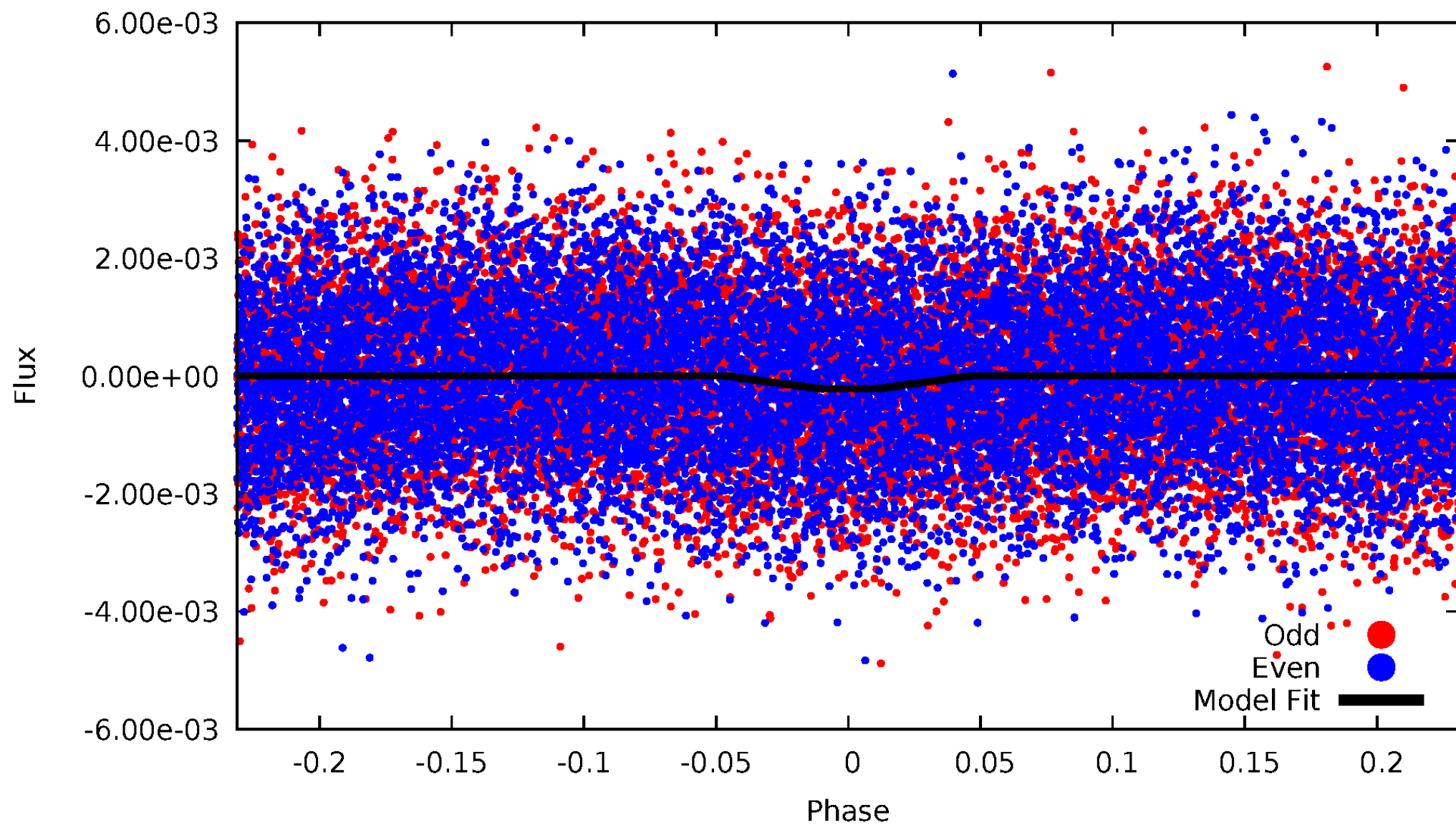
DV Odd/Even

TCE 005603049-02



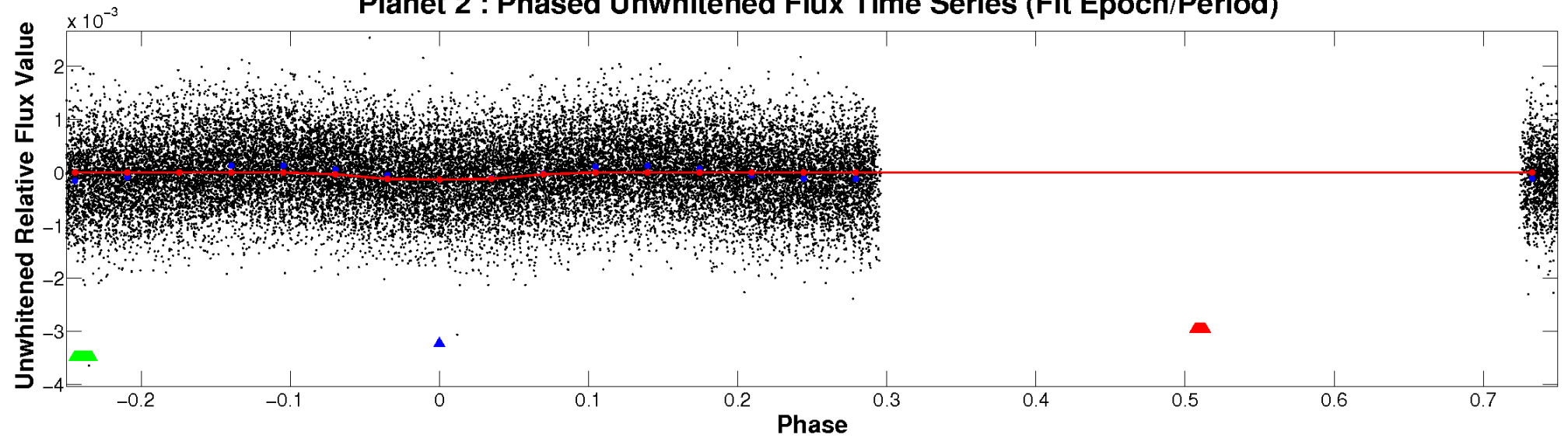
ALT Odd/Even

TCE 005603049-02

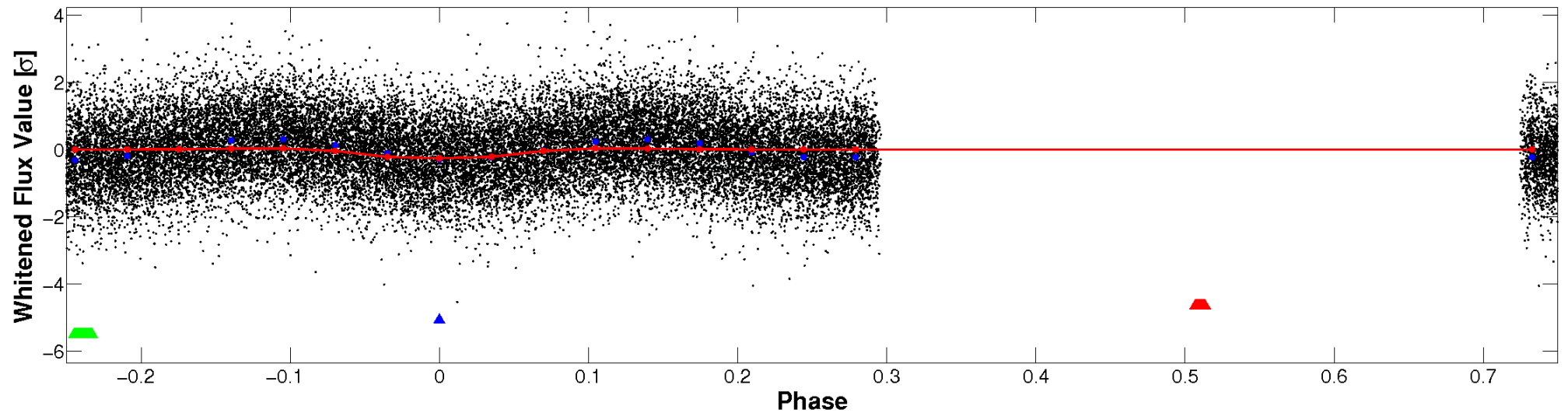


Non-Whitened Vs. Whitened Light Curve

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

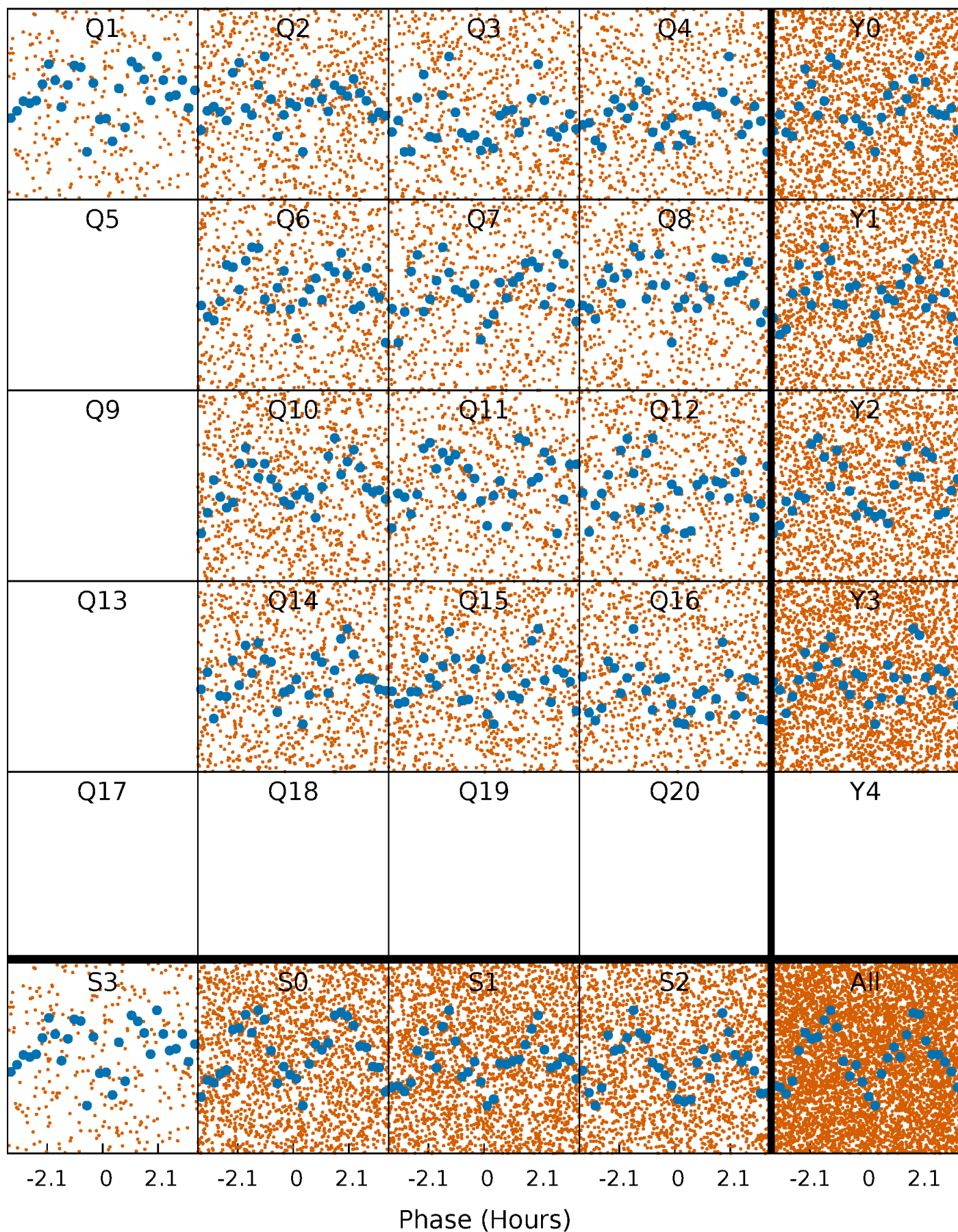


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



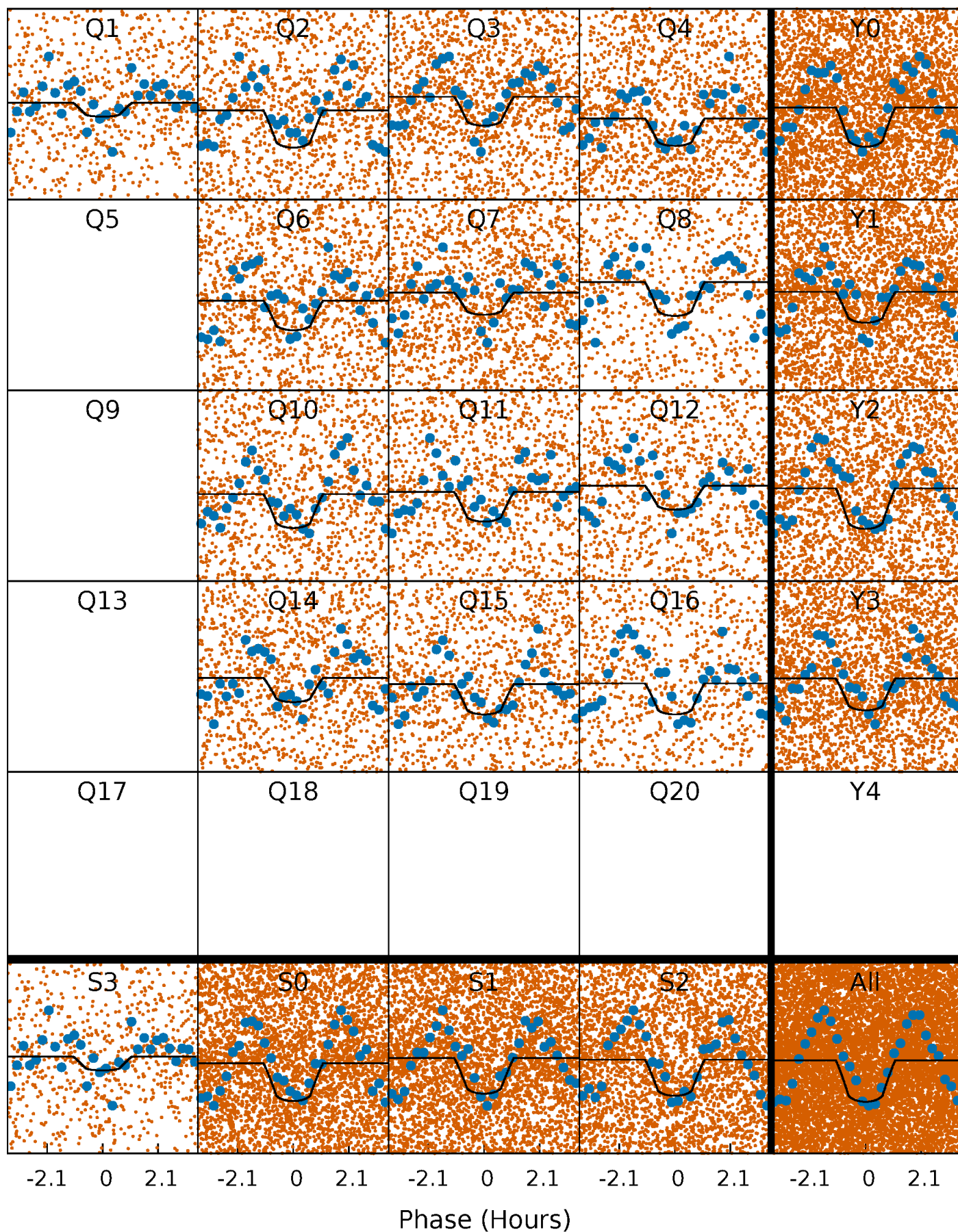
PDC Quarter-Phased Transit Curves

TCE 005603049-02 P= 0.585597 Days $T_0=131.735627$ (BKJD)



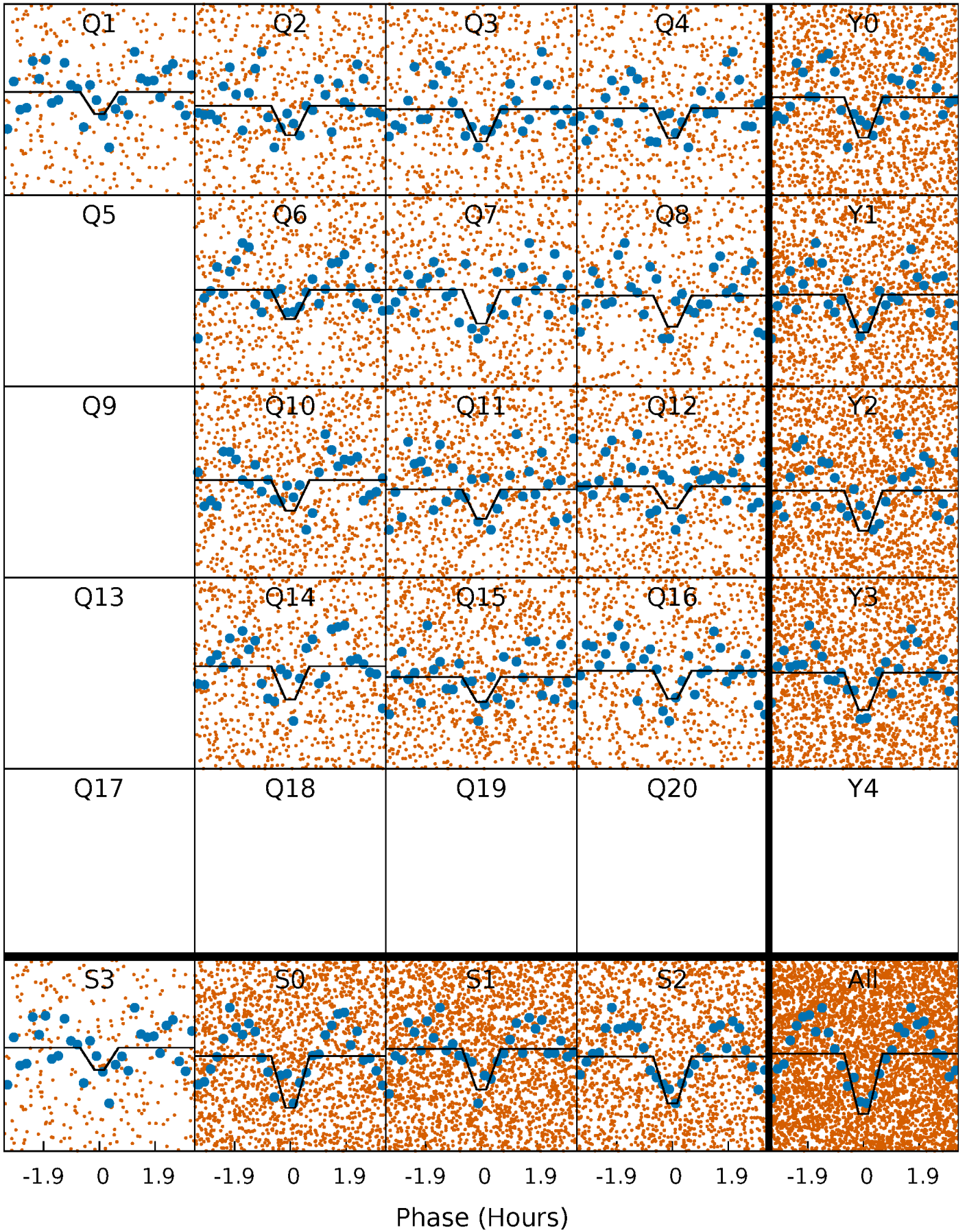
DV Quarter-Phased Transit Curves

TCE 005603049-02 P= 0.585597 Days $T_0=131.735627$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

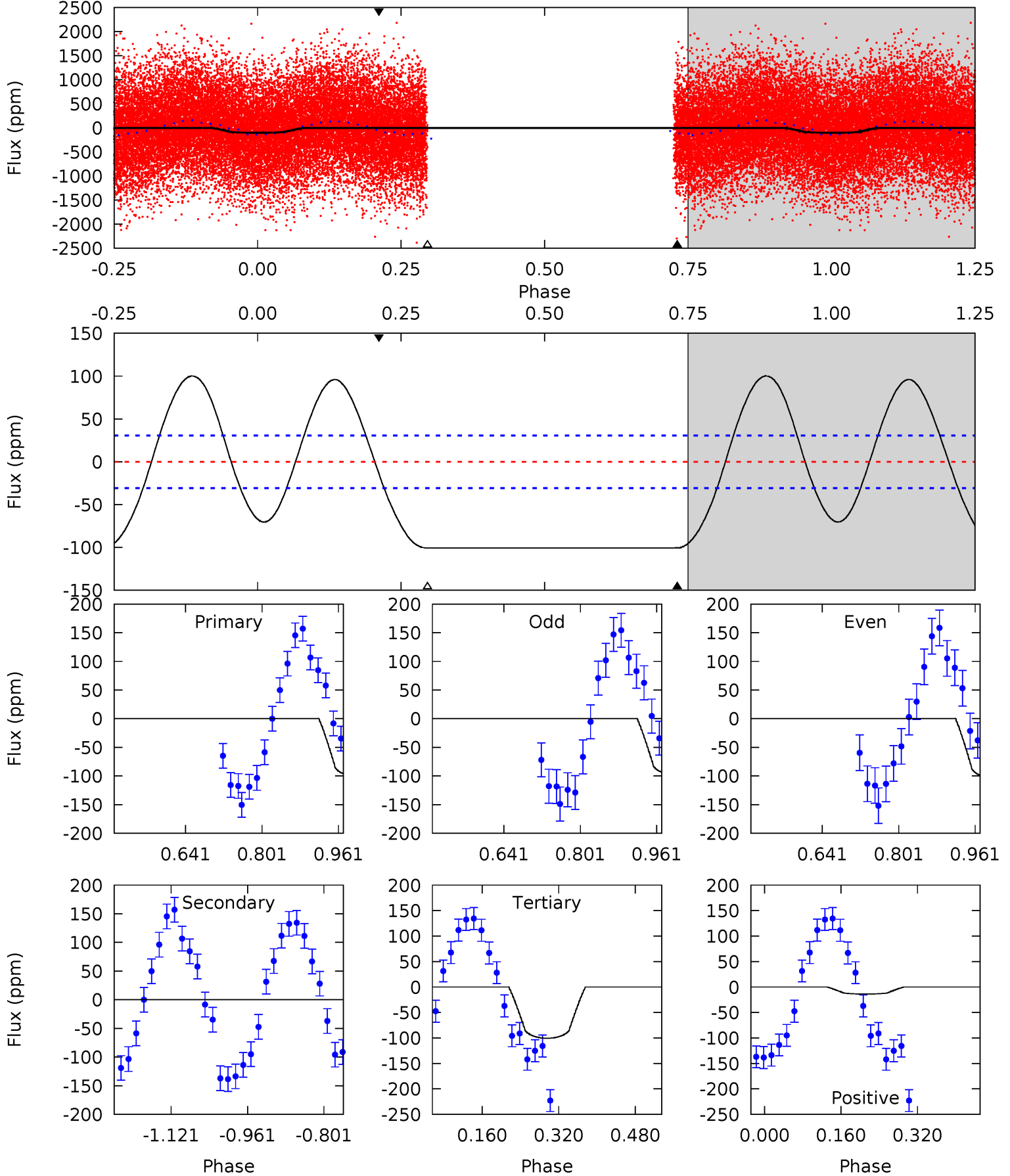
TCE 005603049-02 P= 0.585605 Days $T_0=131.733223$ (BKJD)



DV Model-Shift Uniqueness Test

005603049-02, P = 0.585597 Days, E = 131.150030 Days

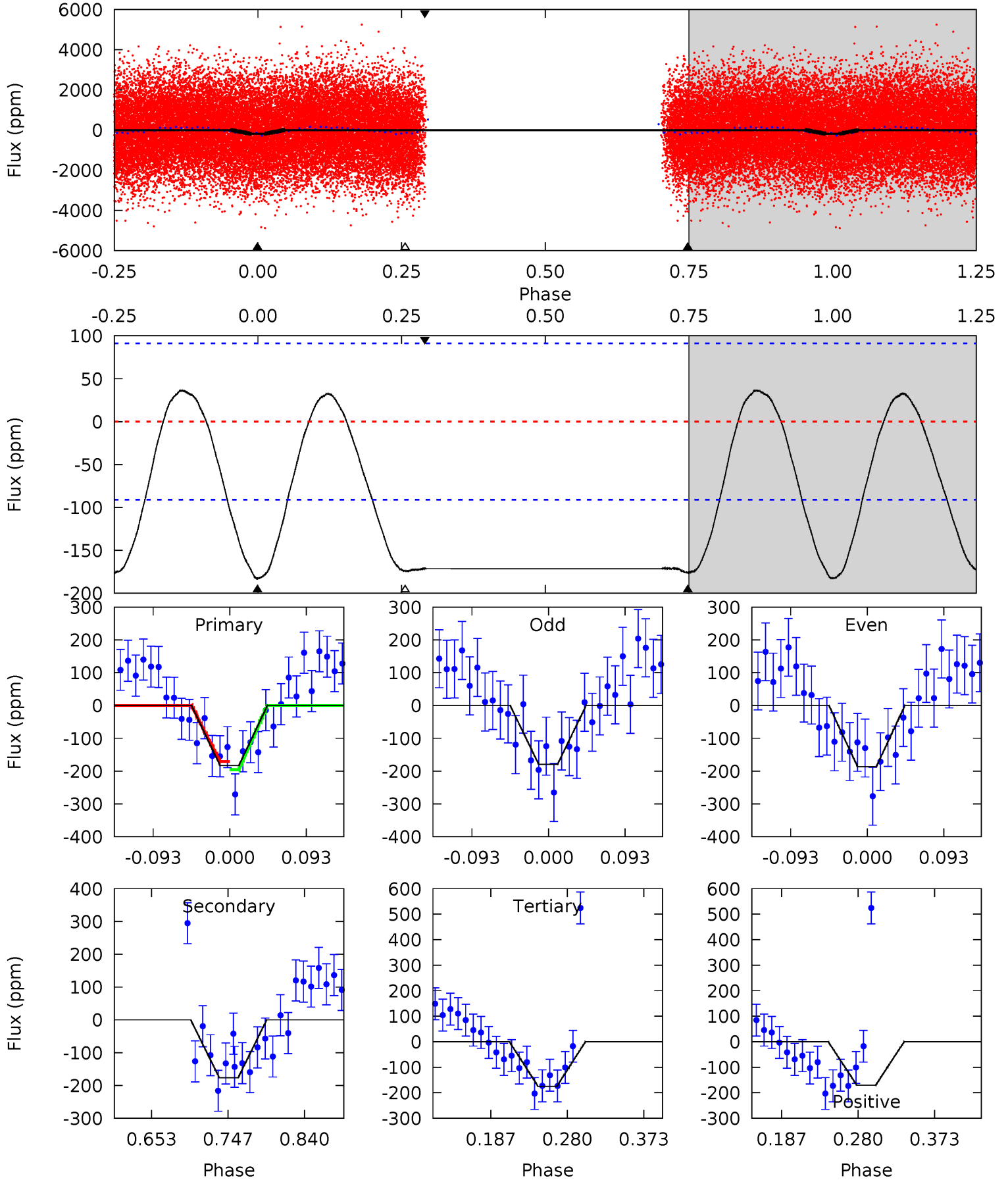
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	0	14.6	-1.99	4.47	1.40	9.27	0.01	16.6	-14.6	1.99	0.41	1.11	0.50	4.47



Alt Model-Shift Uniqueness Test

005603049-02, P = 0.585605 Days, E = 131.147618 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.21	8.89	8.79	-8.59	4.58	1.68	4.07	0.42	17.8	0.09	17.5	0.17	0.92	0.17	0.62



Stellar Parameters For KIC 005603049

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8211^{+226}_{-356}	$3.692^{+0.427}_{-0.142}$	$0.070^{+0.250}_{-0.450}$	$3.523^{+0.924}_{-1.716}$	$2.225^{+0.329}_{-0.611}$	$0.072^{+0.314}_{-0.031}$
	+3%/-4%	+12%/-4%	+357%/-643%	+26%/-49%	+15%/-27%	+439%/-44%
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 005603049-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 7	$3.87^{+1.74}_{-1.47}$	6888^{+608}_{-889}	-5480^{+868}_{-615}	$0.001^{+0.105}_{-0.093}$
Alt.	-177 ± 20	$5.17^{+1.87}_{-1.74}$	6917^{+574}_{-886}	7048^{+1679}_{-1289}	$1.154^{+1.351}_{-0.520}$

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

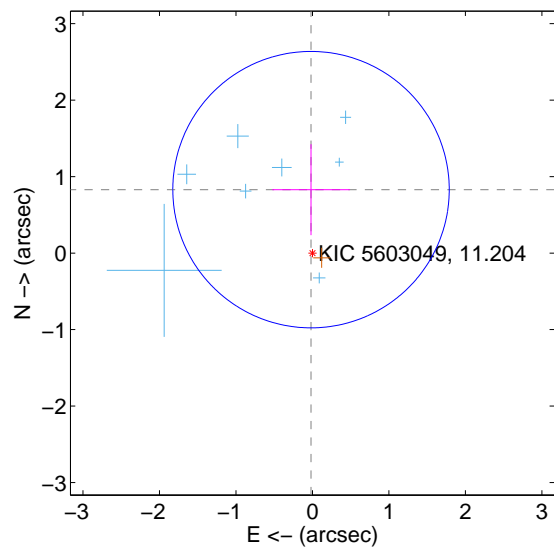
Supplemental centroid analysis for 005603049-02. **Kepler magnitude: 11.20.** Transit SNR 17.00

There are 8 quarters with good PRF difference image offsets

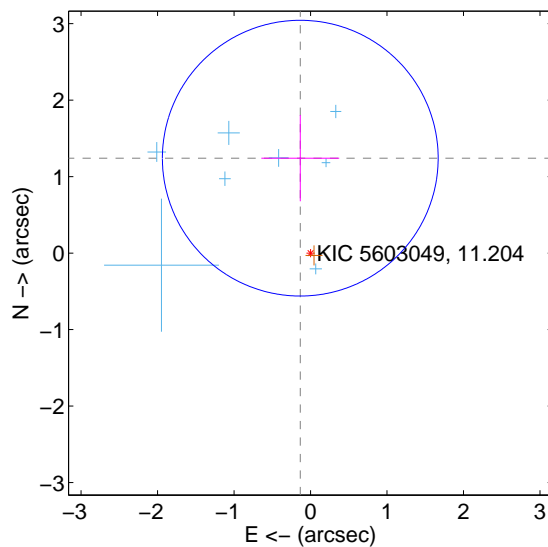
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.830 ± 0.602	1.38	0.018 ± 0.507	0.830 ± 0.594
PRF-fit source offset from KIC position	1.248 ± 0.601	2.08	0.134 ± 0.509	1.241 ± 0.564
photometric centroid source offset	0.08 ± 0.09	0.87	0.07 ± 0.09	-0.04 ± 0.09

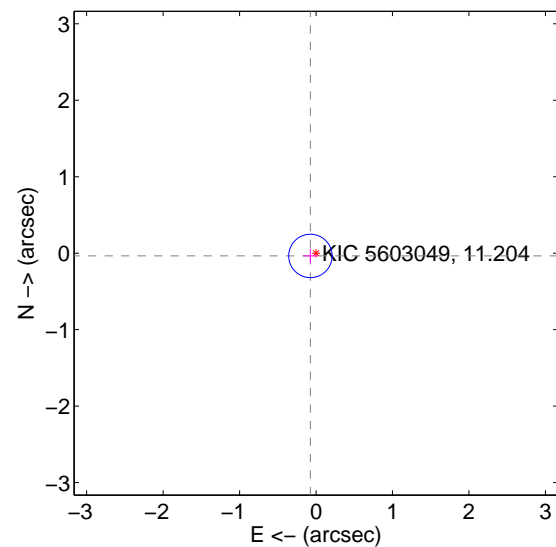
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

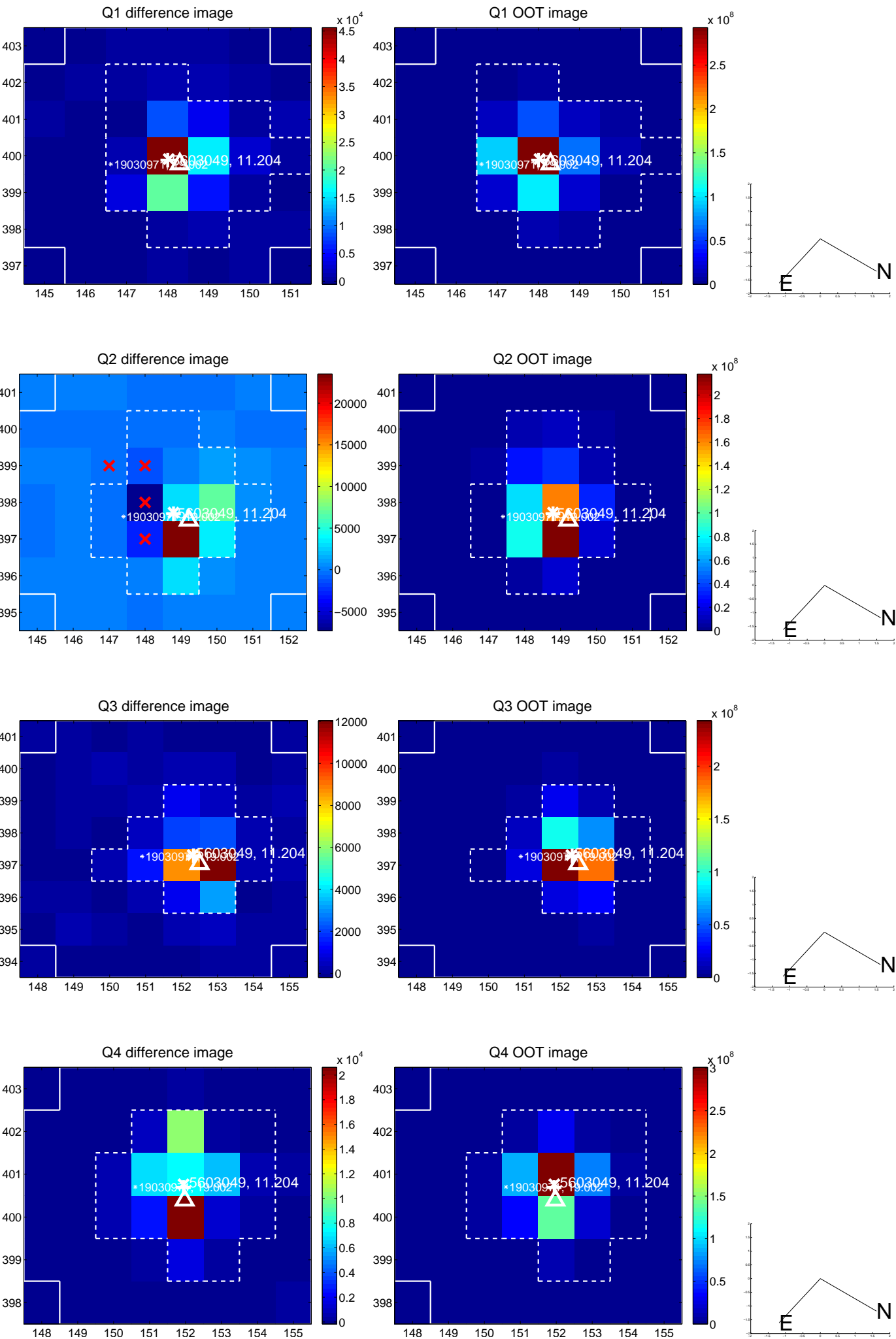


offset from photometric centroids



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.

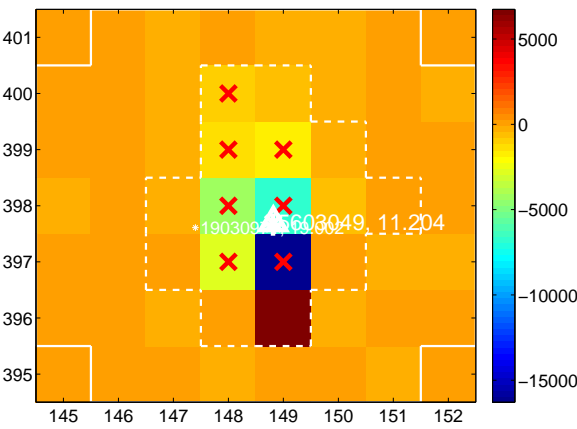
Q5 no difference image



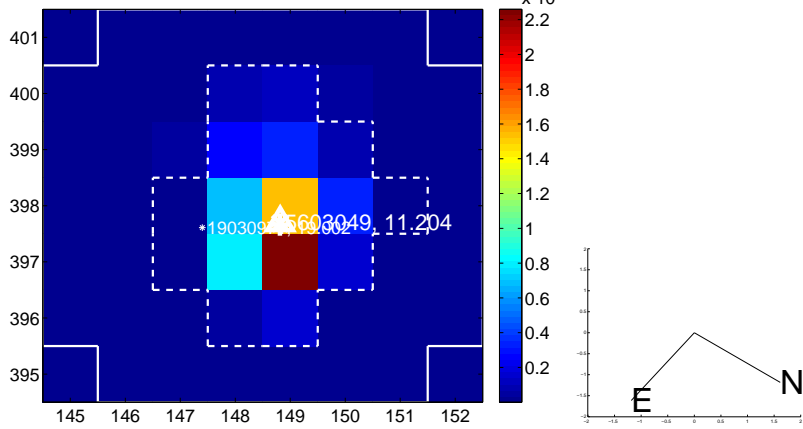
Q5 no OOT image



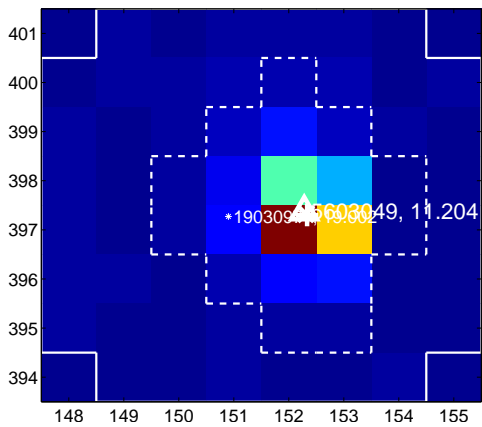
Q6 difference image. Poor Quality



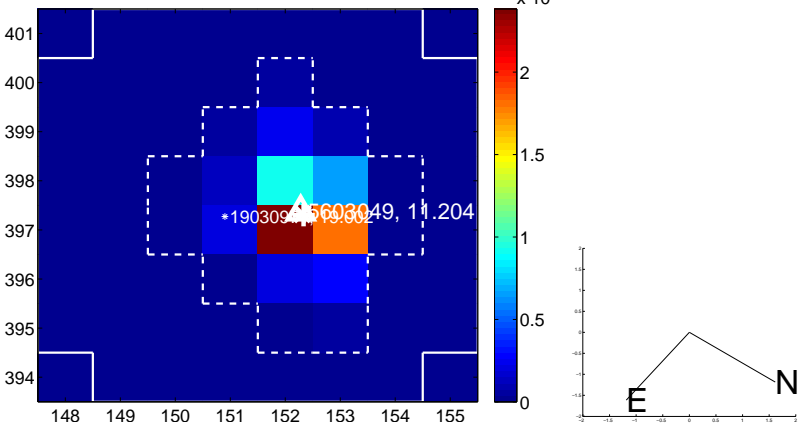
Q6 OOT image



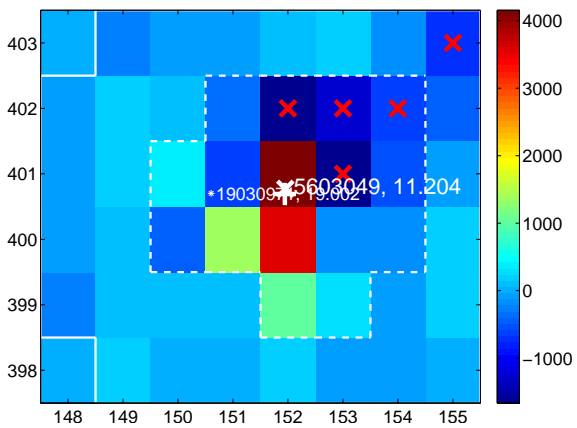
Q7 difference image



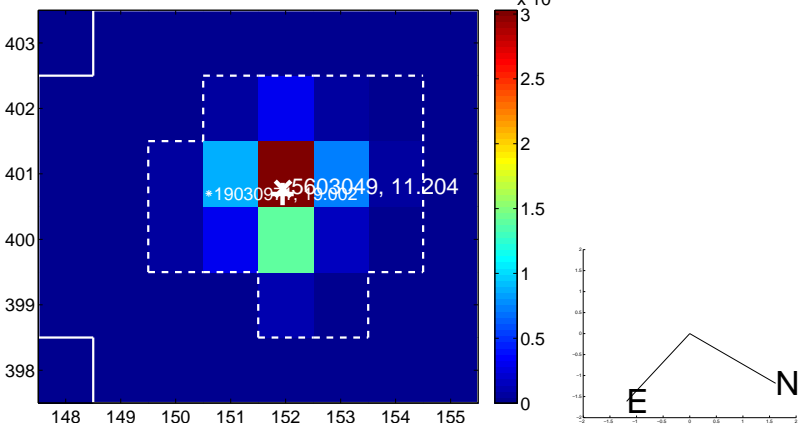
Q7 OOT image



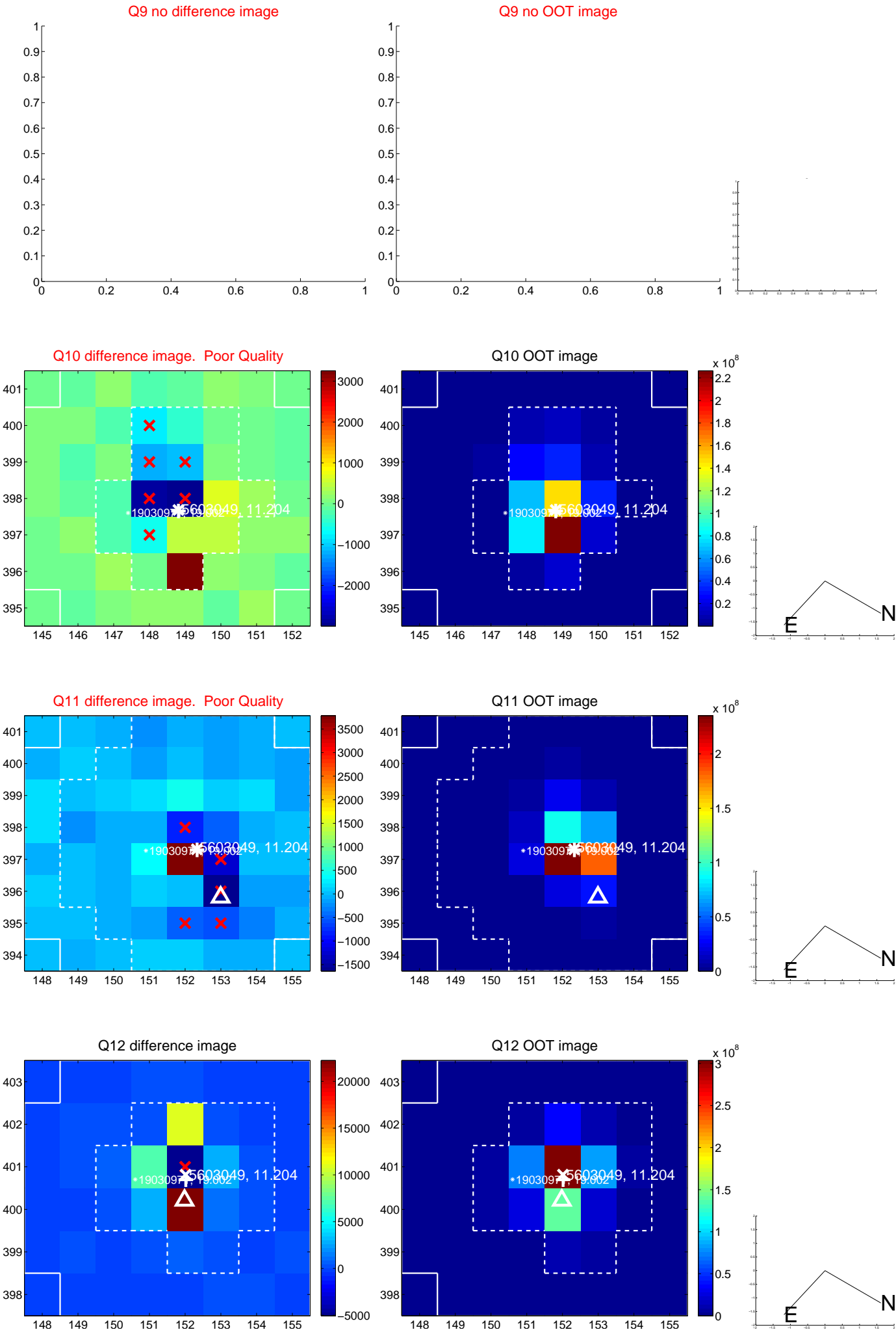
Q8 difference image. Poor Quality



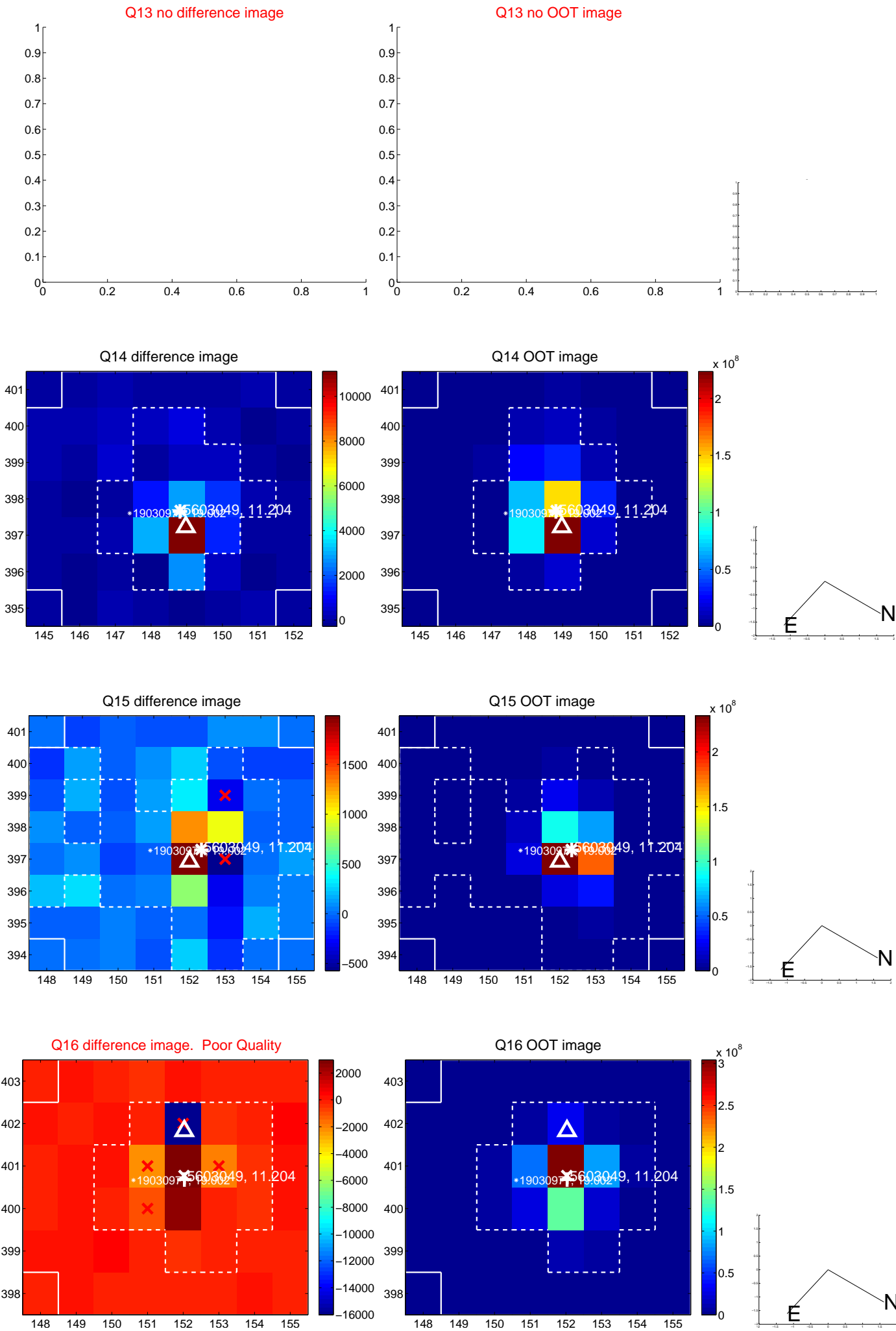
Q8 OOT image



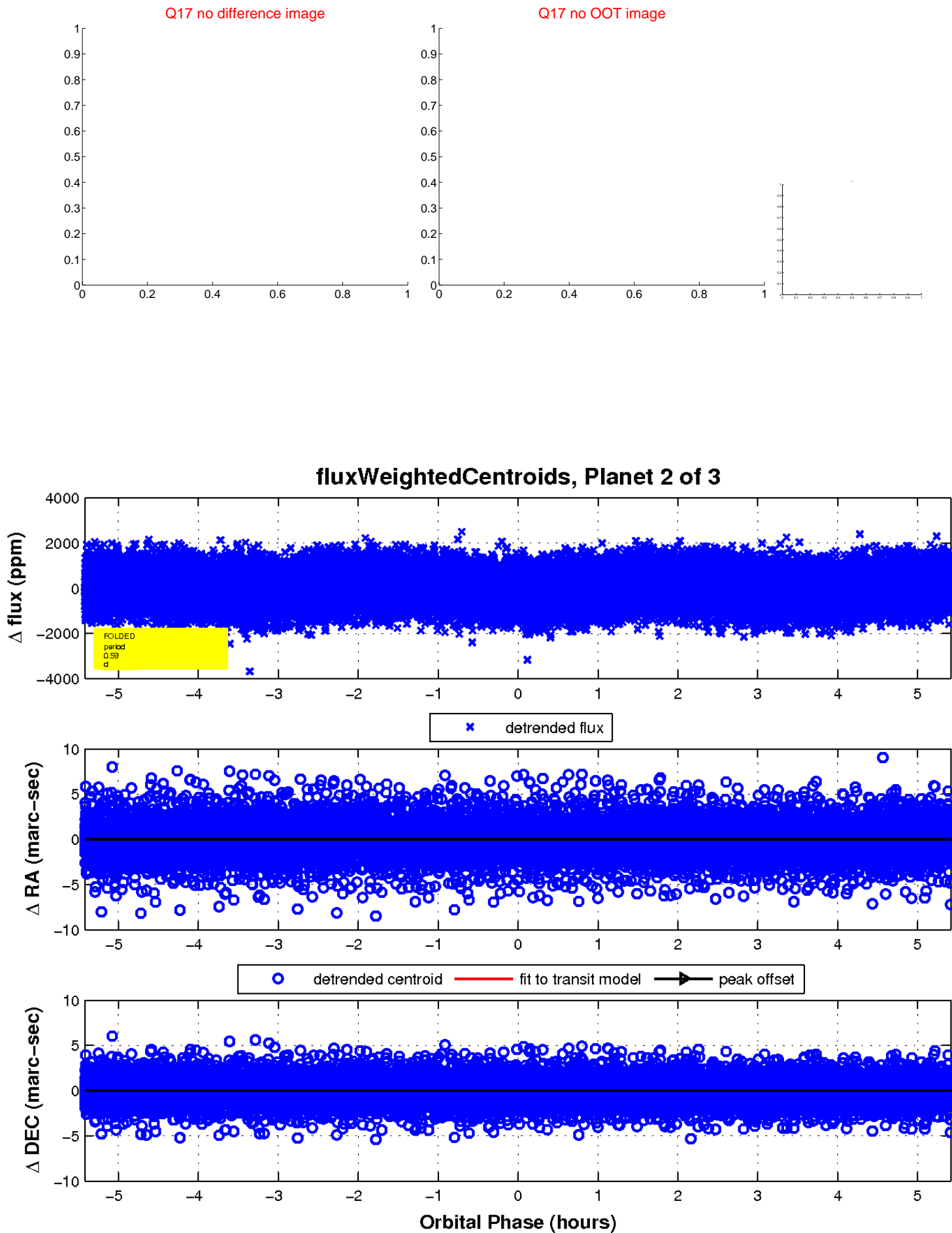
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

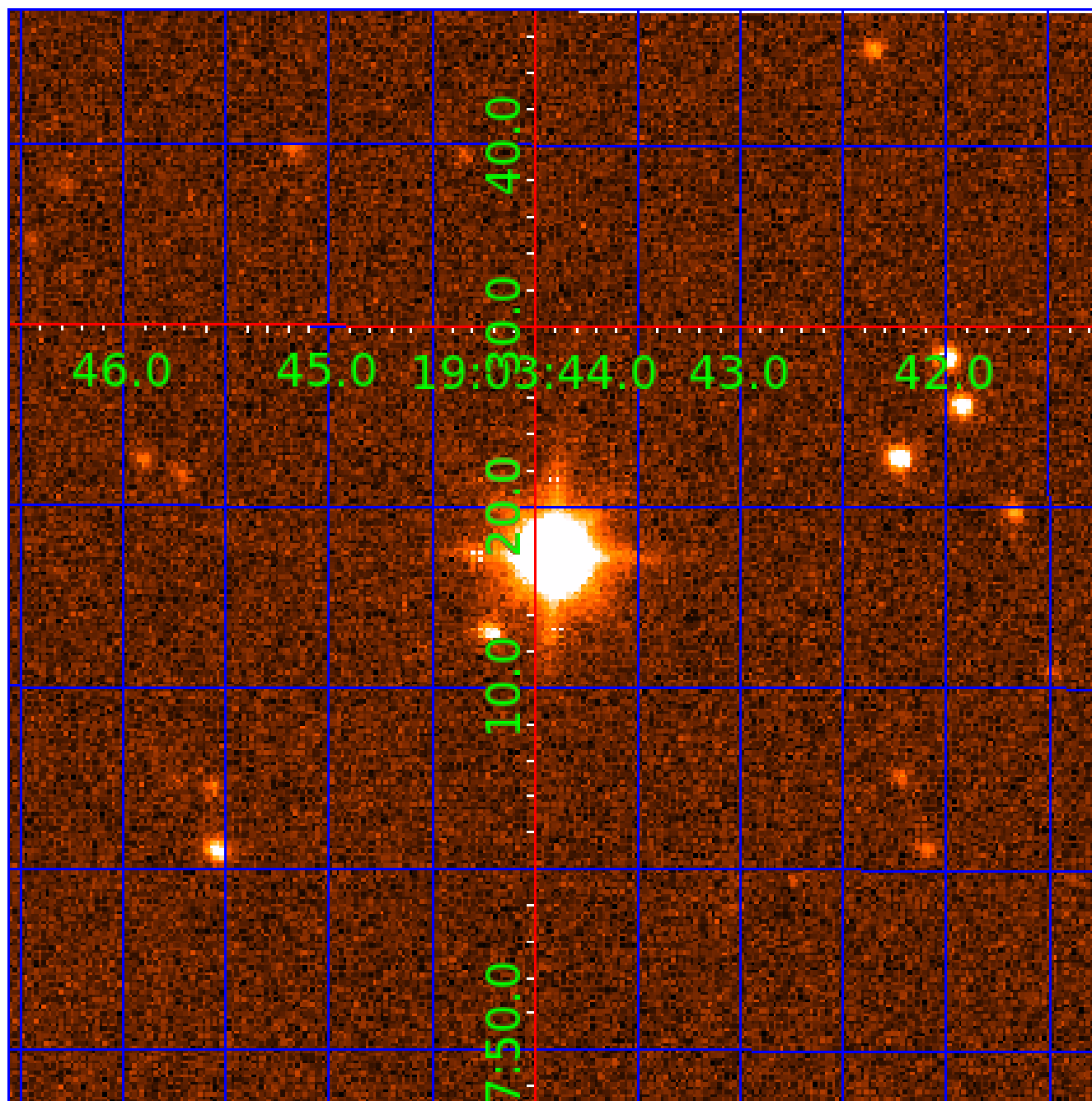


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005603049

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})
005603049-01	OBS	No	0.585599	132.032431	158.5	1.870	19.9	19.8	3.52	8211	5.17	157865.42
005603049-02	OBS	No	0.585597	131.735627	134.9	1.806	16.0	17.0	3.52	8211	4.27	157865.98
005603049-03	OBS	No	0.585600	131.592244	132.6	1.500	9.5	-1.0	3.52	8211	4.12	157864.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005603049-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
005603049-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD—CENT_SATURATED
005603049-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

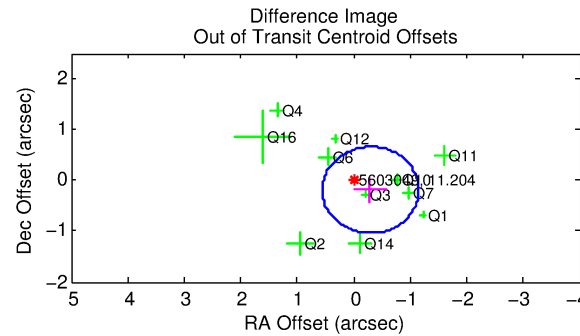
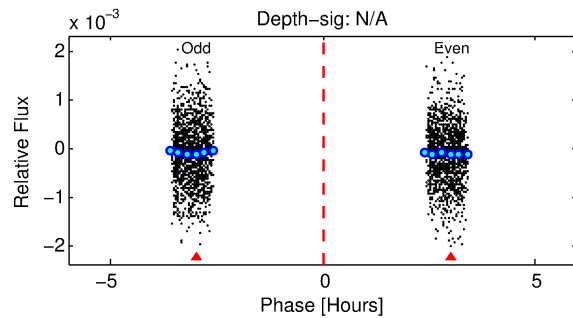
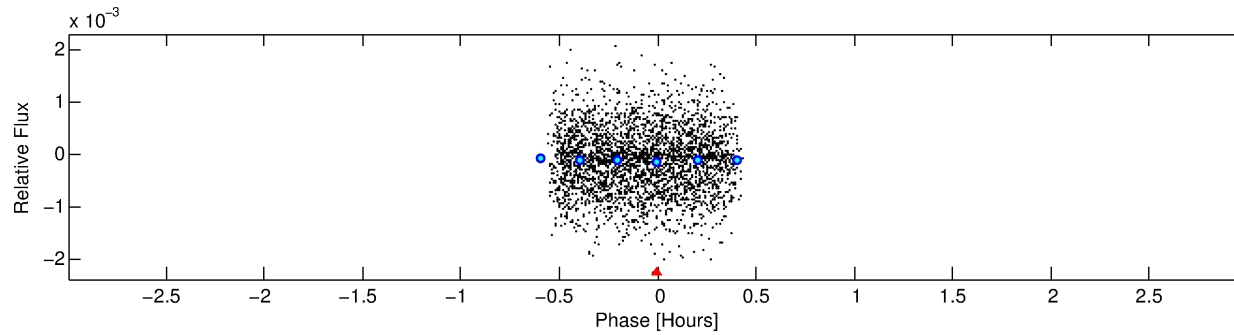
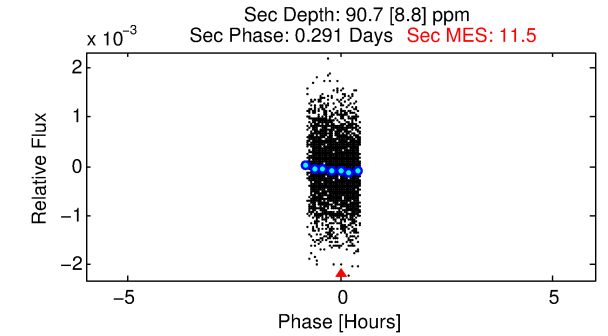
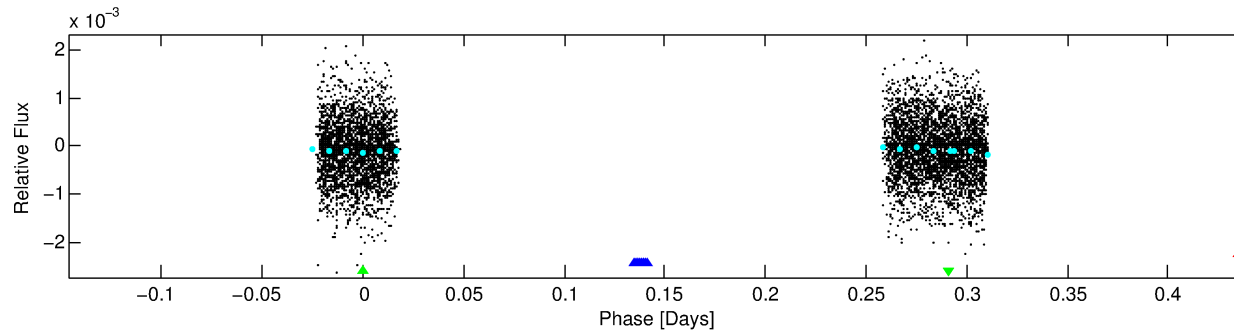
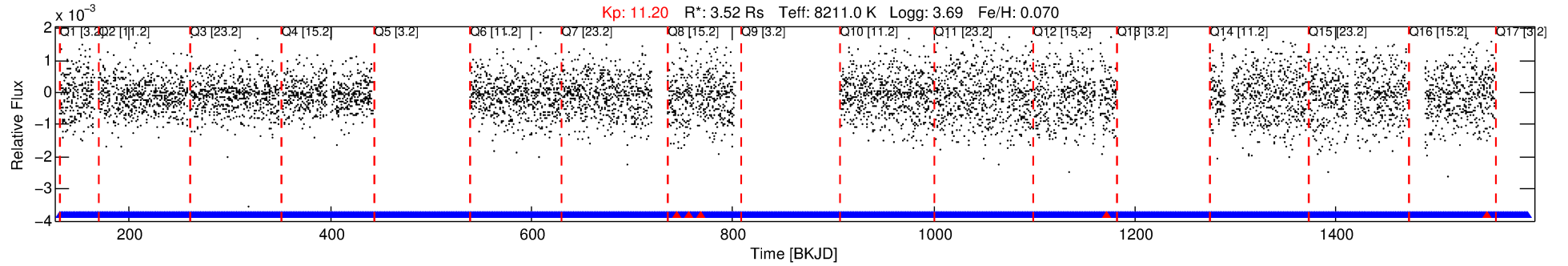
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005603049-03

No Significant Match Found

DV One-Page Summary

KIC: 5603049 Candidate: 3 of 3 Period: 0.586 d



TPS TCE Results:

Period = 0.58560 d
Epoch = 131.5922 BKJD

DV fit results are unavailable

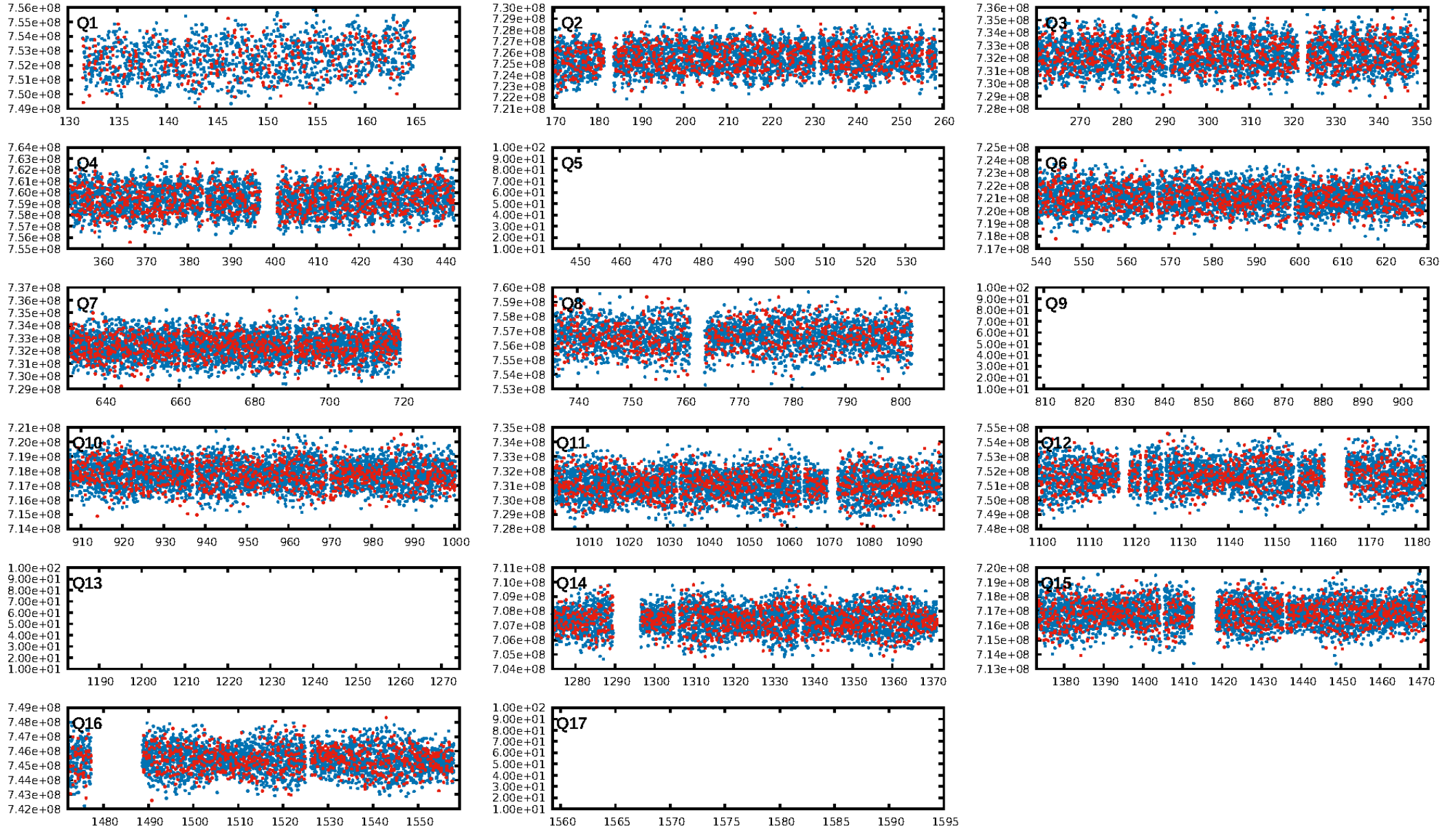
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1692/1697]
GhostDiagnostic-chr: -13.03
Centroid-sig: 0.4%
Centroid-so: 1.040 arcsec [2.03 σ]
OotOffset-rm: 0.349 arcsec [1.23 σ]
KicOffset-rm: 0.243 arcsec [0.66 σ]
OotOffset-st: 4/3/3/1 [11]
KicOffset-st: 4/3/3/1 [11]
DiffImageQuality-fgm: 0.82 [9/11]
DiffImageOverlap-fno: 0.00 [0/13]

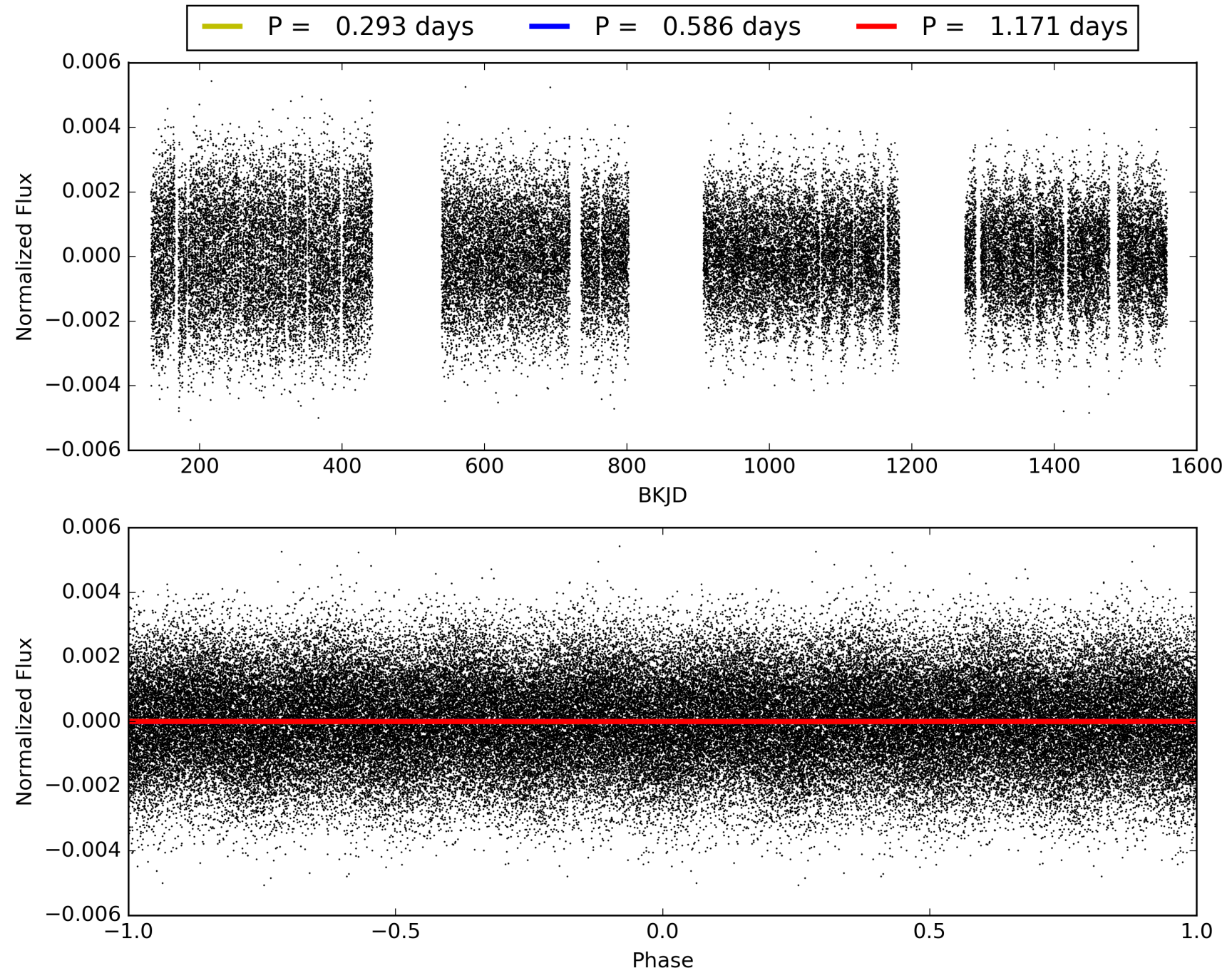
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:22:52 Z

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

TCE 005603049-03, PDC Light Curves

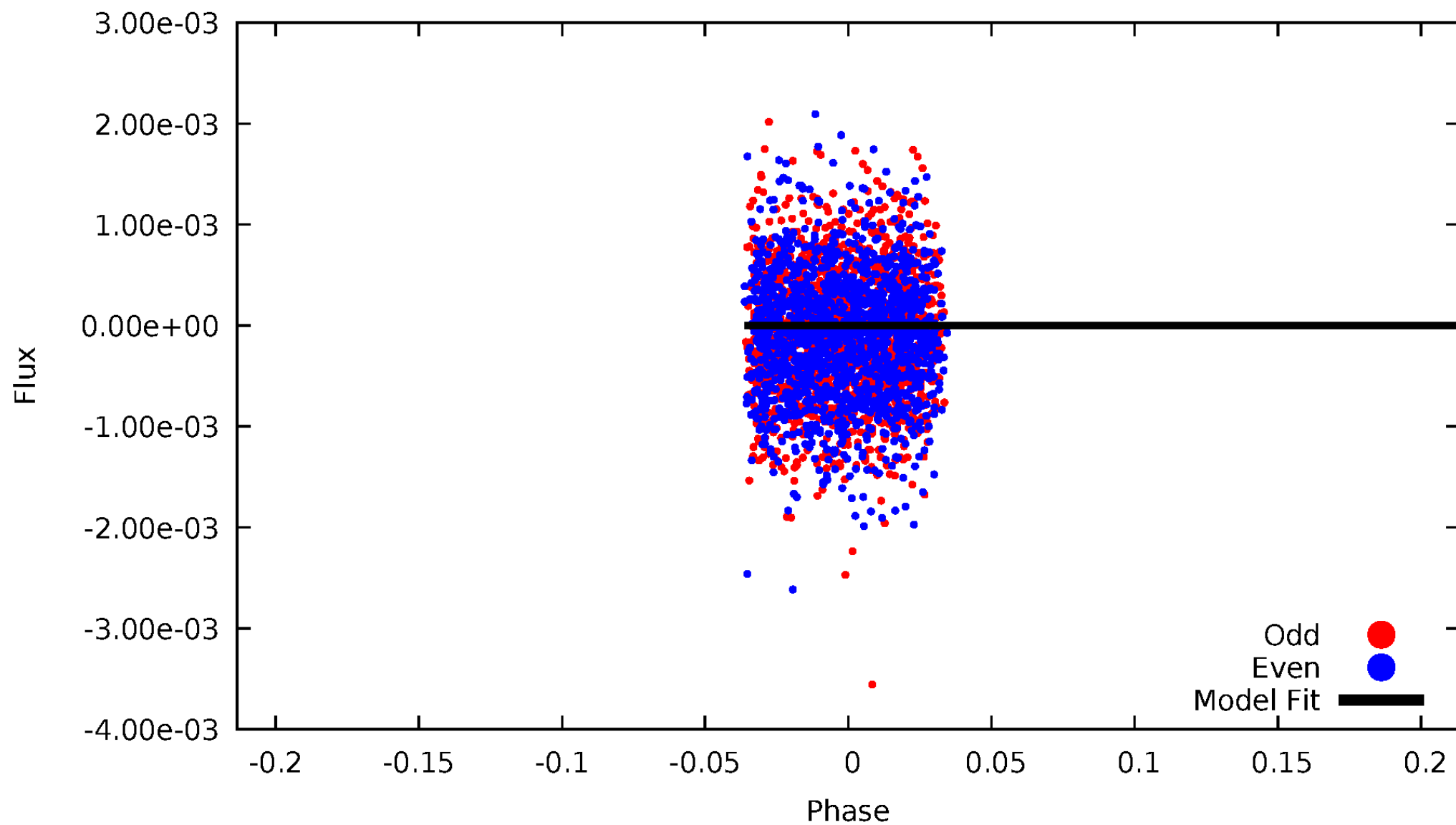


TCE 005603049-03



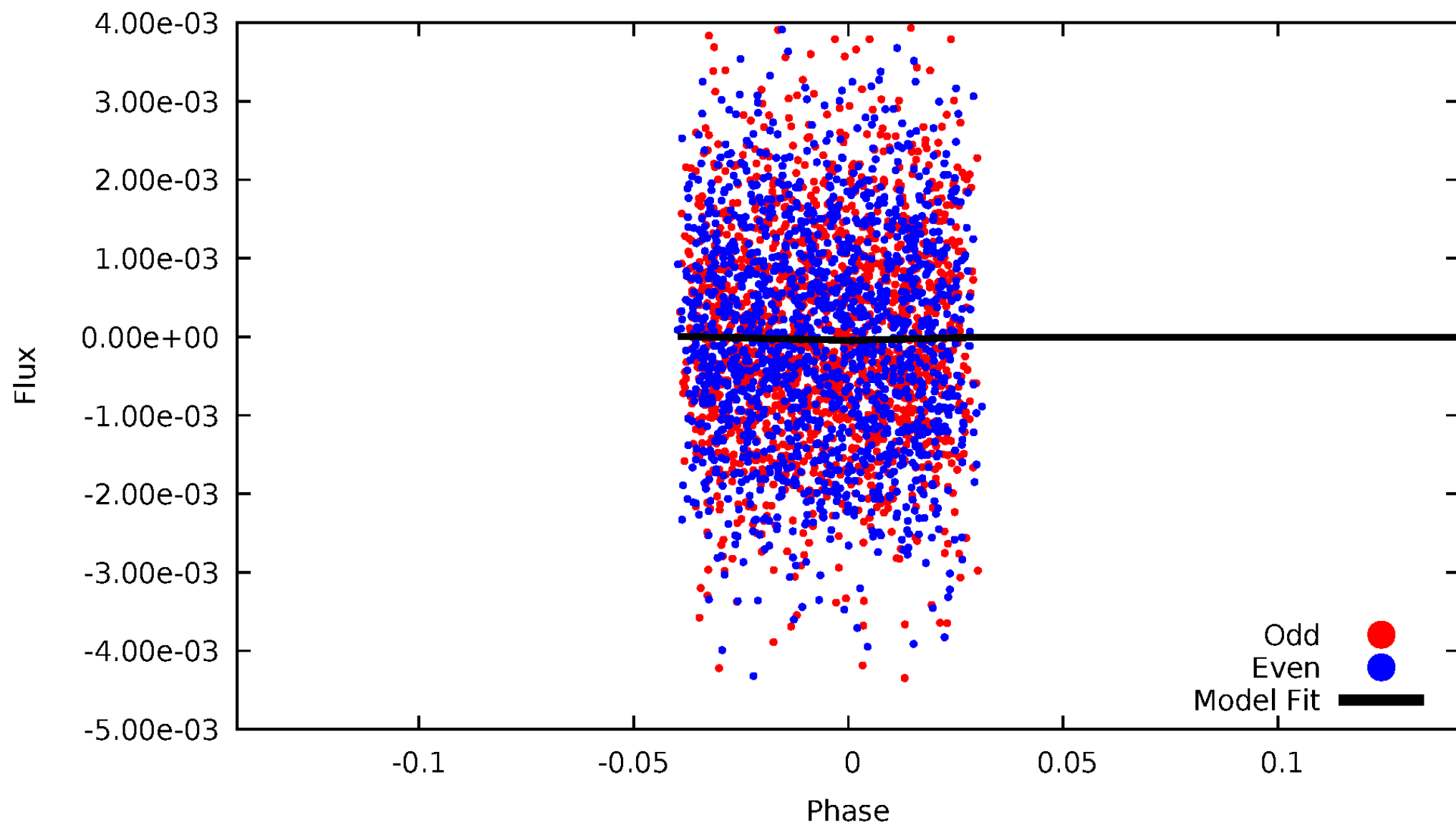
DV Odd/Even

TCE 005603049-03



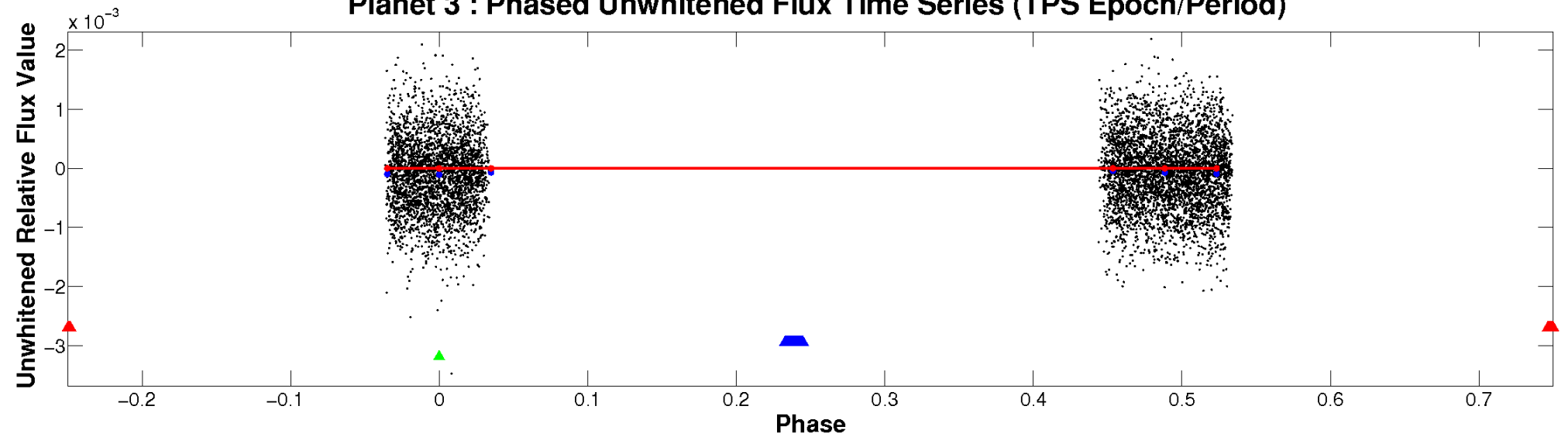
ALT Odd/Even

TCE 005603049-03

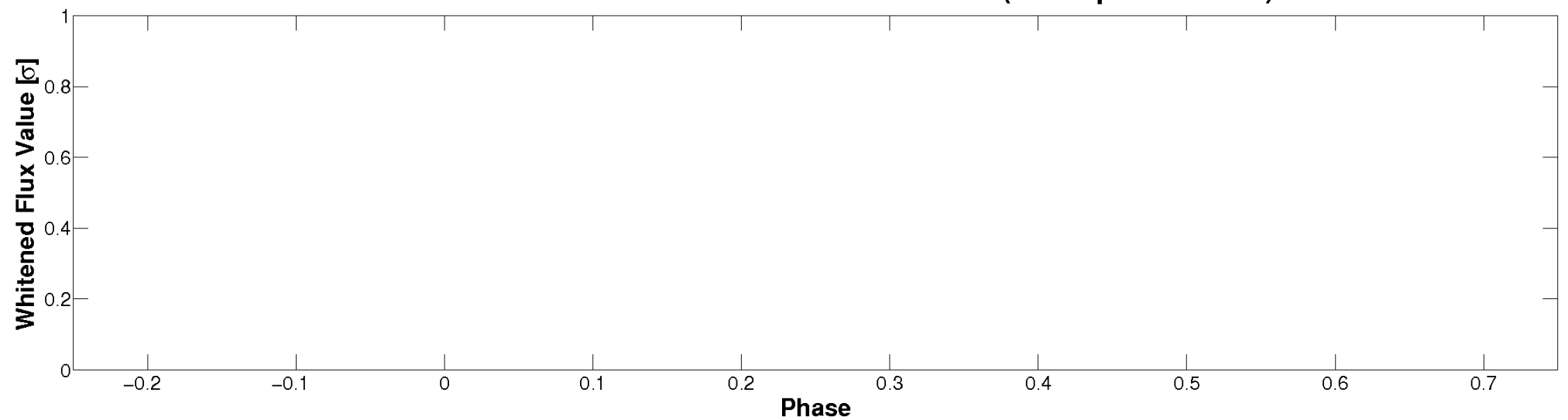


Non-Whitened Vs. Whitened Light Curve

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

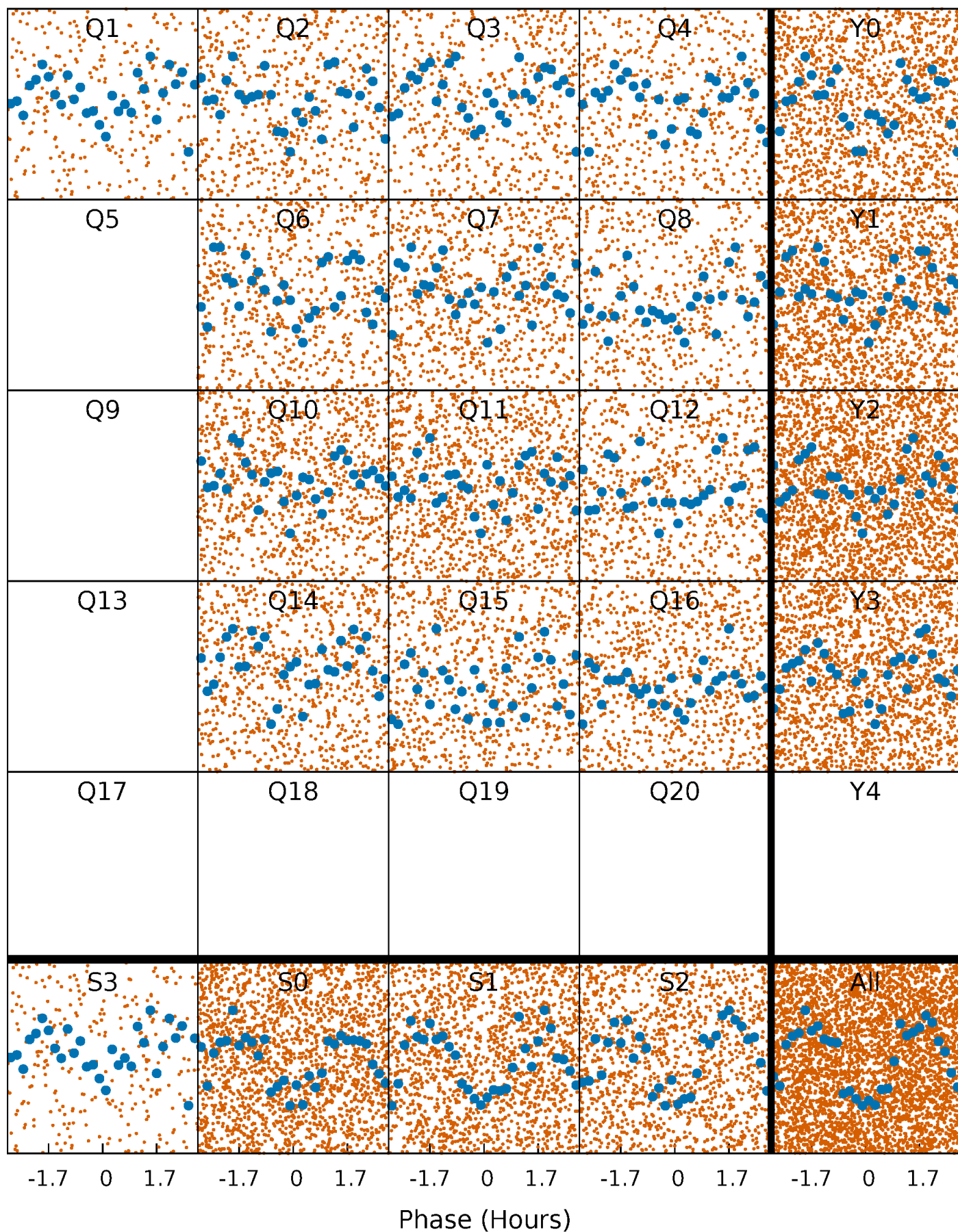


Planet 3 : Phased Whitened Flux Time Series (TPS Epoch/Period)



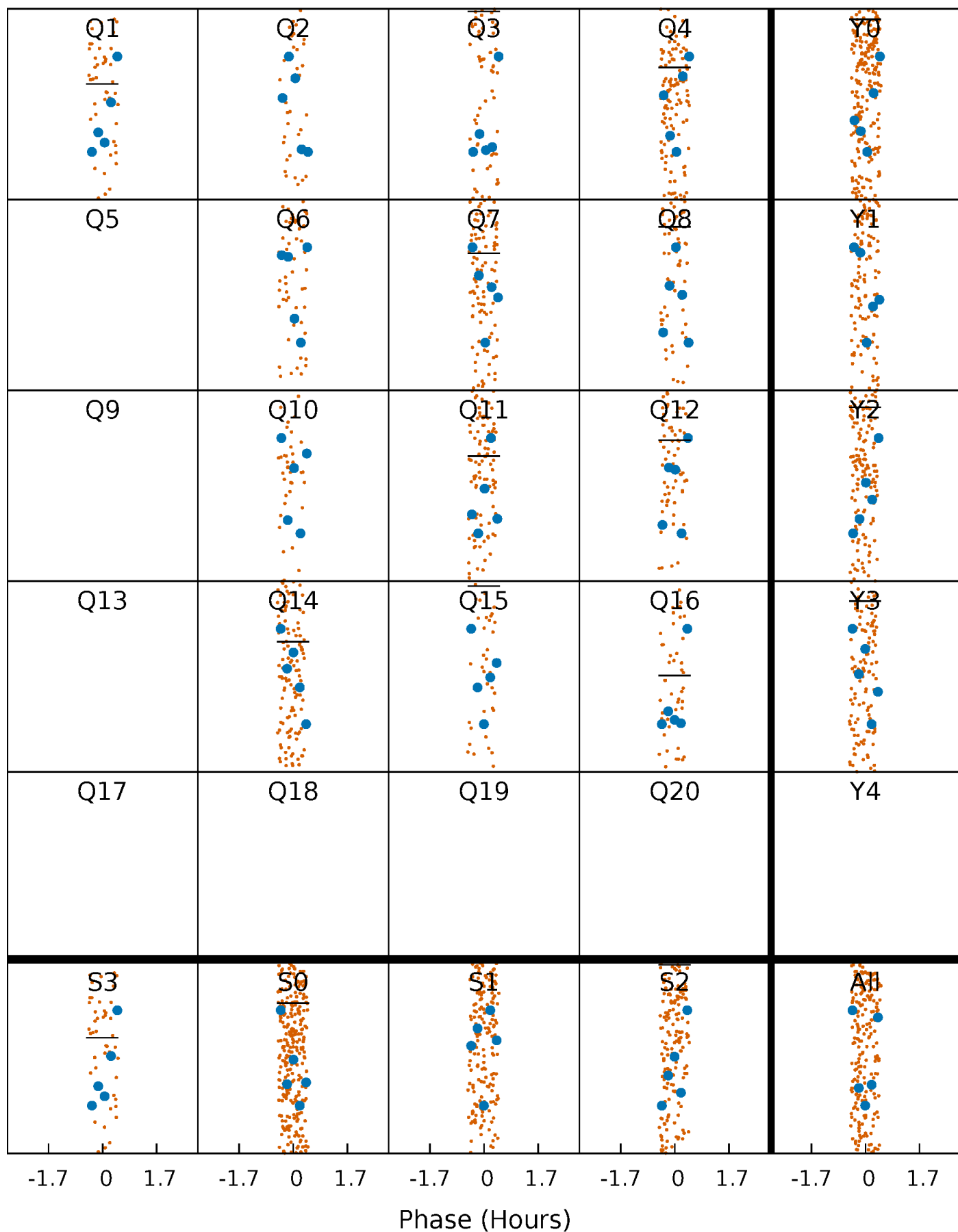
PDC Quarter-Phased Transit Curves

TCE 005603049-03 P= 0.585600 Days $T_0=131.592244$ (BKJD)



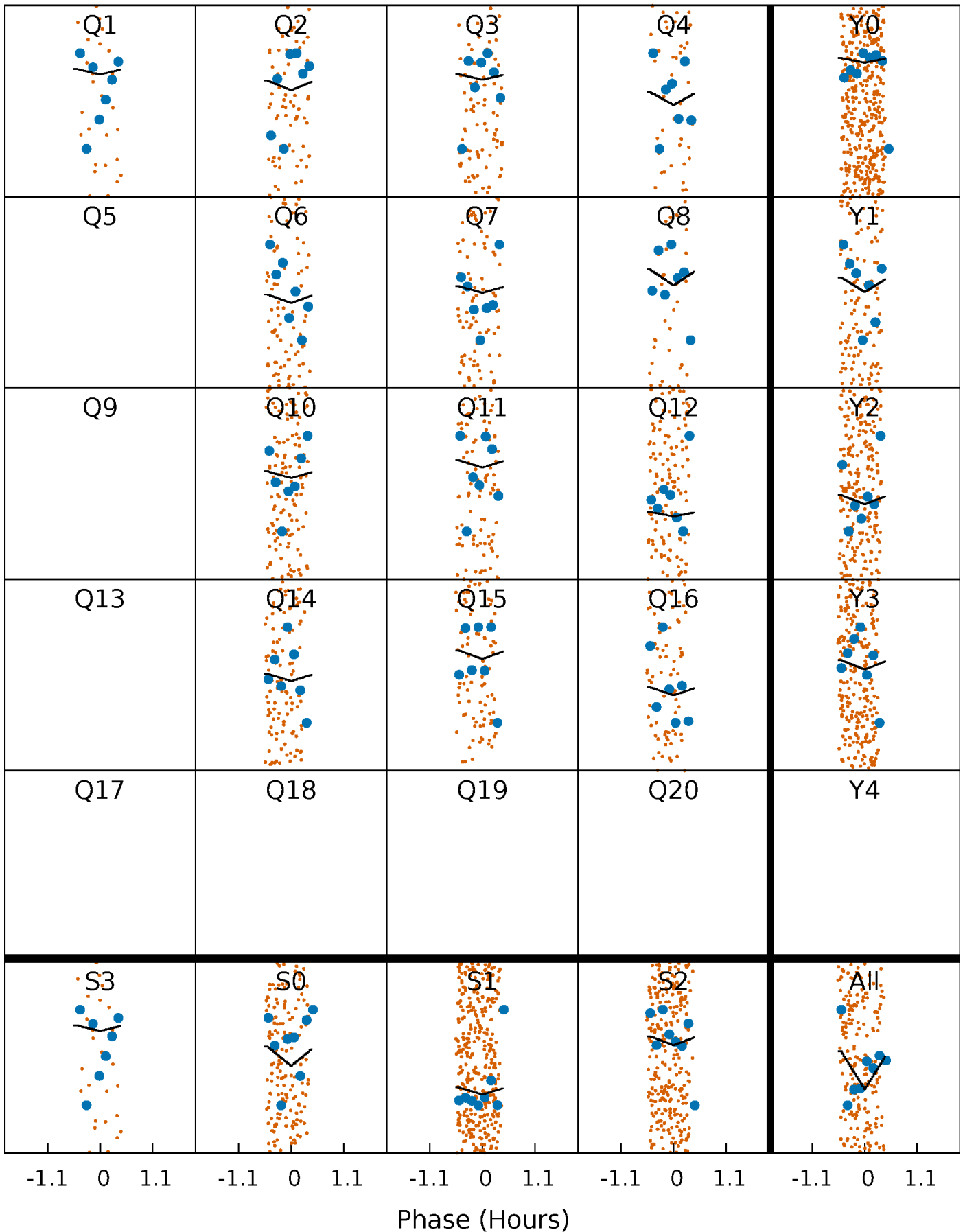
DV Quarter-Phased Transit Curves

TCE 005603049-03 P= 0.585600 Days $T_0=131.592244$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

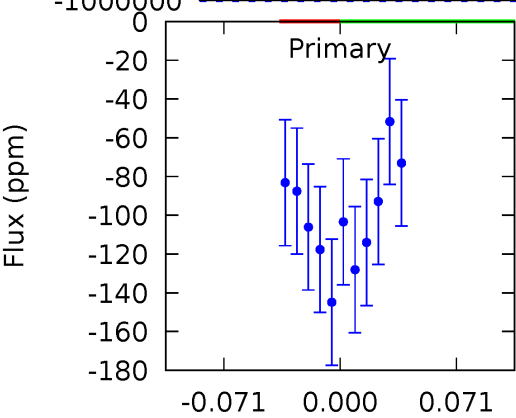
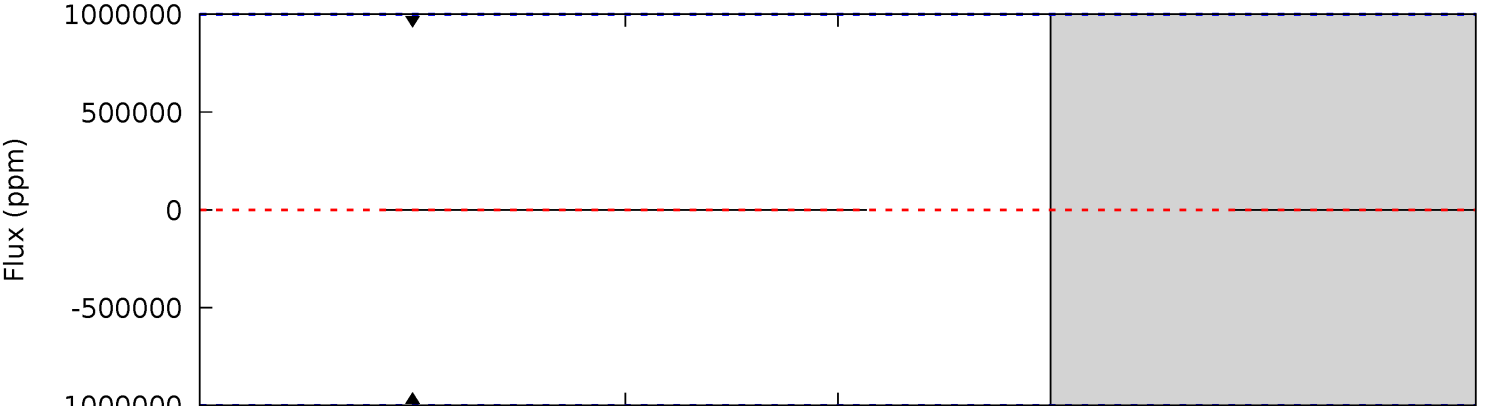
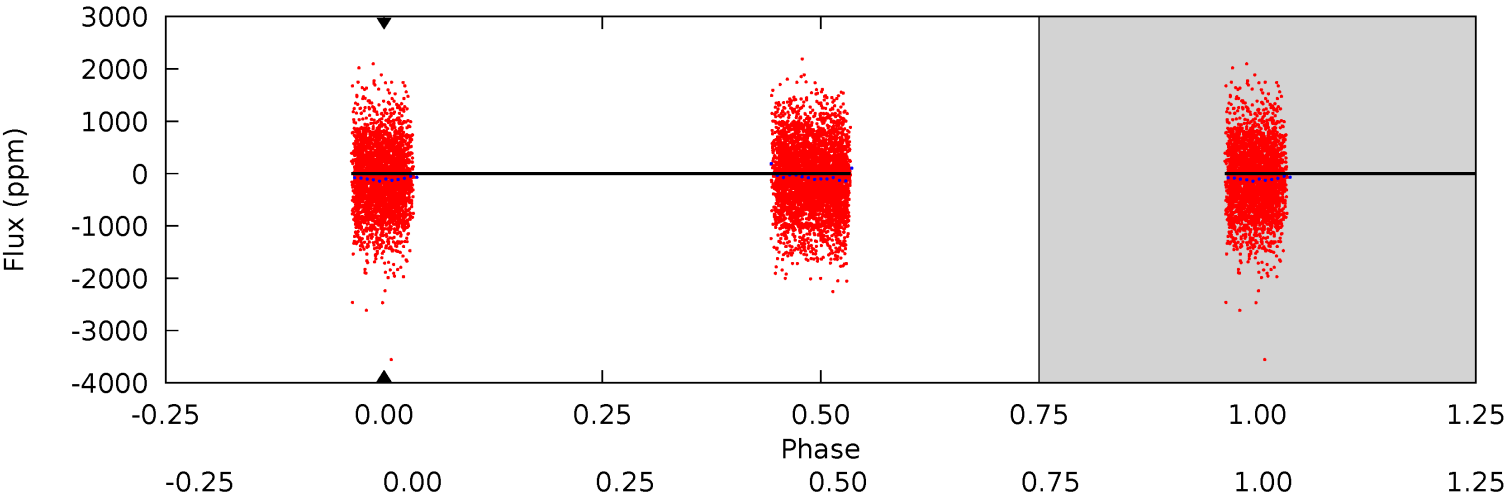
TCE 005603049-03 P= 0.585600 Days $T_0=131.594268$ (BKJD)



DV Model-Shift Uniqueness Test

005603049-03, P = 0.585600 Days, E = 131.006644 Days

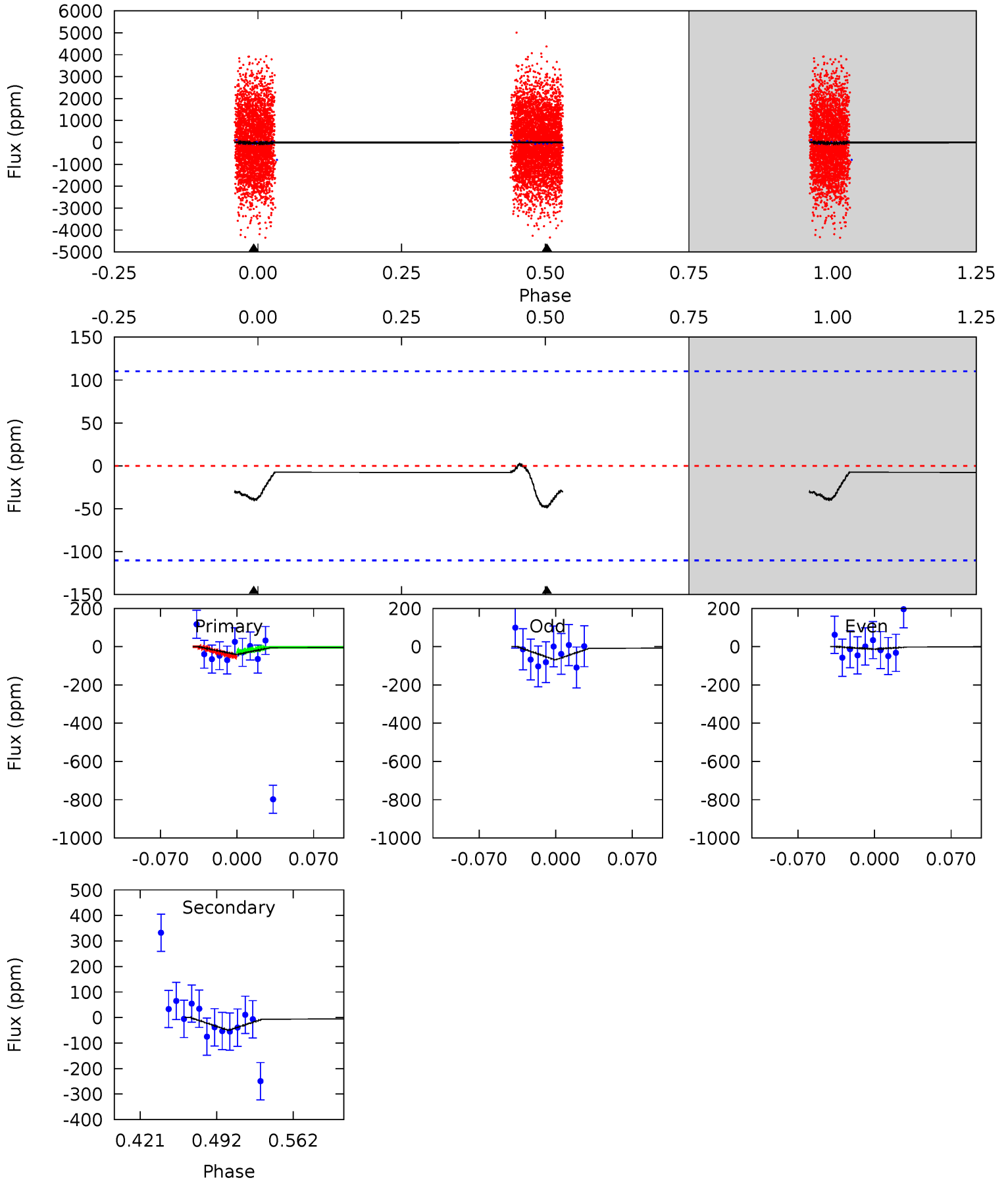
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005603049-03, P = 0.585600 Days, E = 131.008668 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.70	2.09	0	0	4.64	1.81	0.12	1.70	1.70	2.09	2.09	1.15	0.74	0.06	0.49



Stellar Parameters For KIC 005603049

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8211^{+226}_{-356}	$3.692^{+0.427}_{-0.142}$	$0.070^{+0.250}_{-0.450}$	$3.523^{+0.924}_{-1.716}$	$2.225^{+0.329}_{-0.611}$	$0.072^{+0.314}_{-0.031}$
	+3%/-4%	+12%/-4%	+357%/-643%	+26%/-49%	+15%/-27%	+439%/-44%
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 005603049-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$25.85^{+30.27}_{-18.70}$	6913^{+575}_{-810}	5379^{+54376}_{-50210}	$0.499^{+71.428}_{-39.325}$
Alt.	-50 ± 24	$25.48^{+28.64}_{-18.41}$	6965^{+533}_{-762}	-5356^{+1171}_{-470}	$0.012^{+0.158}_{-0.010}$

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

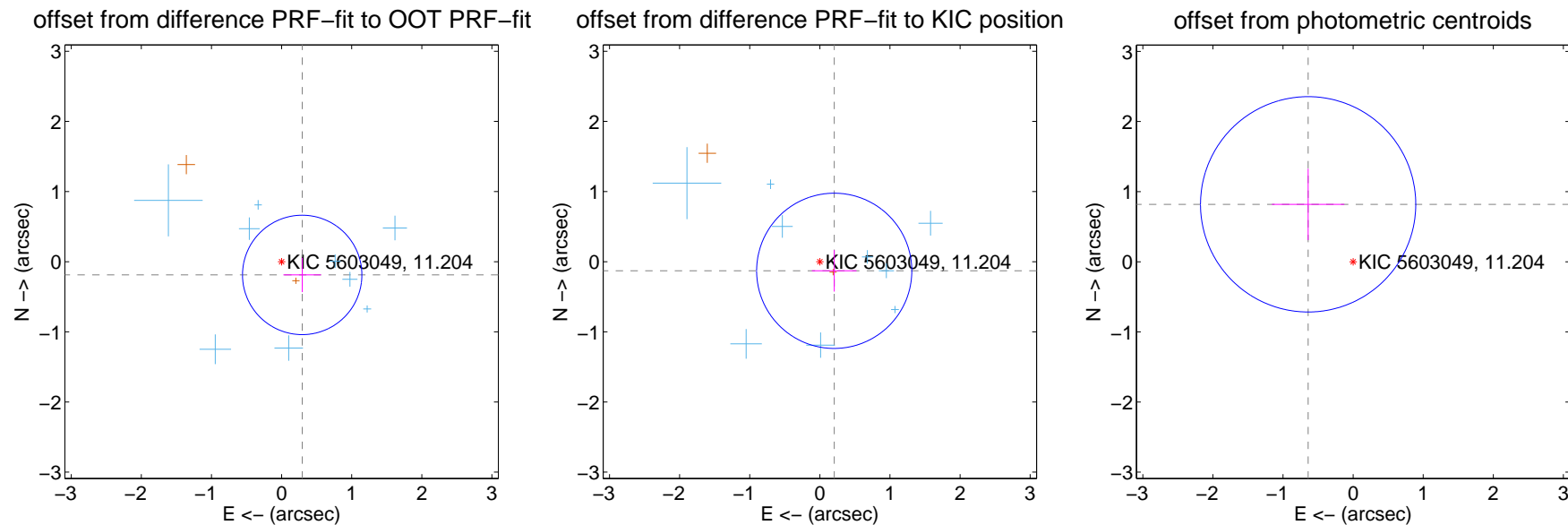
DV Centroid Data

Supplemental centroid analysis for 005603049-03. **Kepler magnitude: 11.20.** Transit SNR -1.00

There are 9 quarters with good PRF difference image offsets

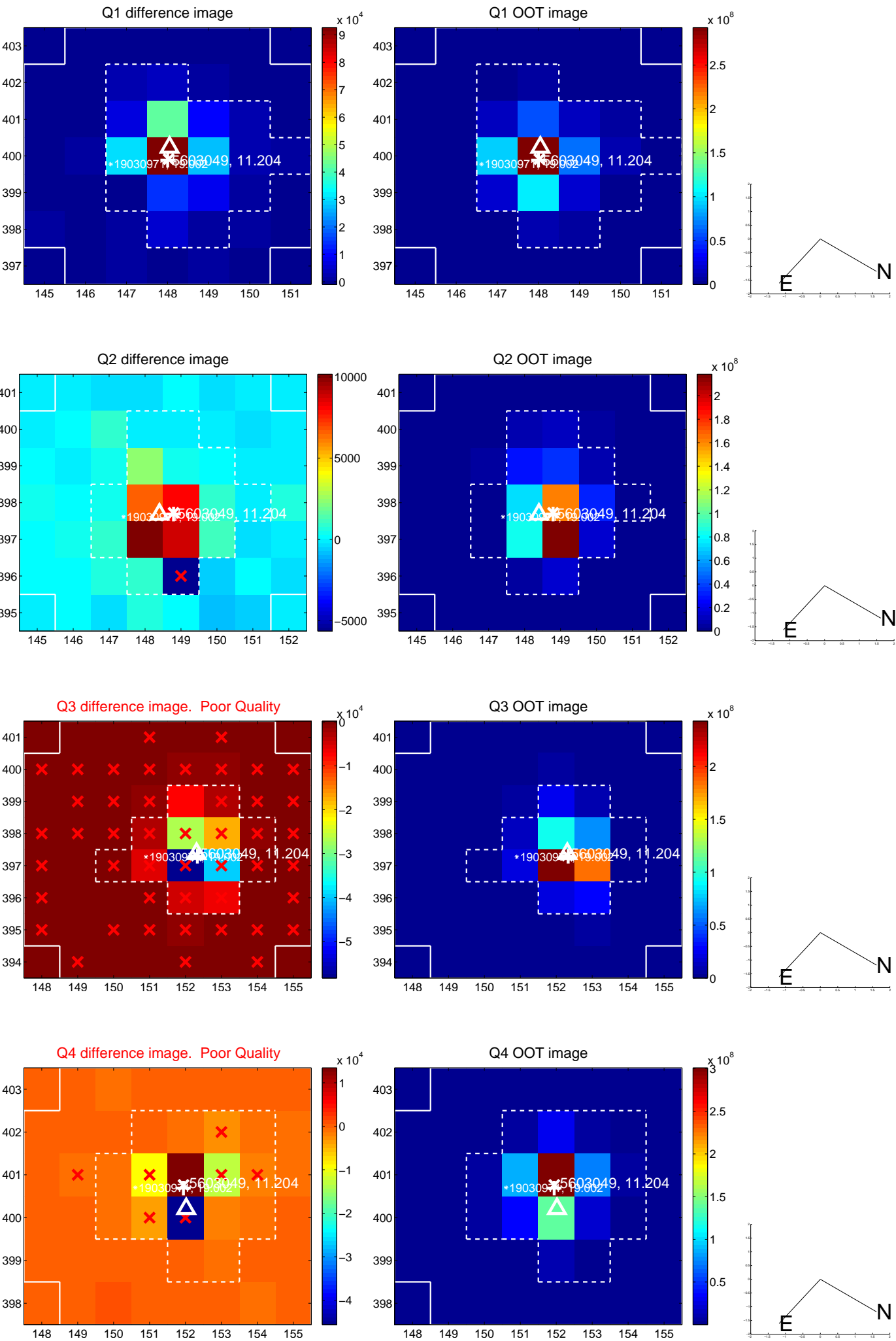
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.349 ± 0.284	1.23	-0.294 ± 0.269	-0.188 ± 0.245
PRF-fit source offset from KIC position	0.243 ± 0.369	0.66	-0.205 ± 0.318	-0.130 ± 0.296
photometric centroid source offset	1.04 ± 0.51	2.03	0.64 ± 0.52	0.82 ± 0.51

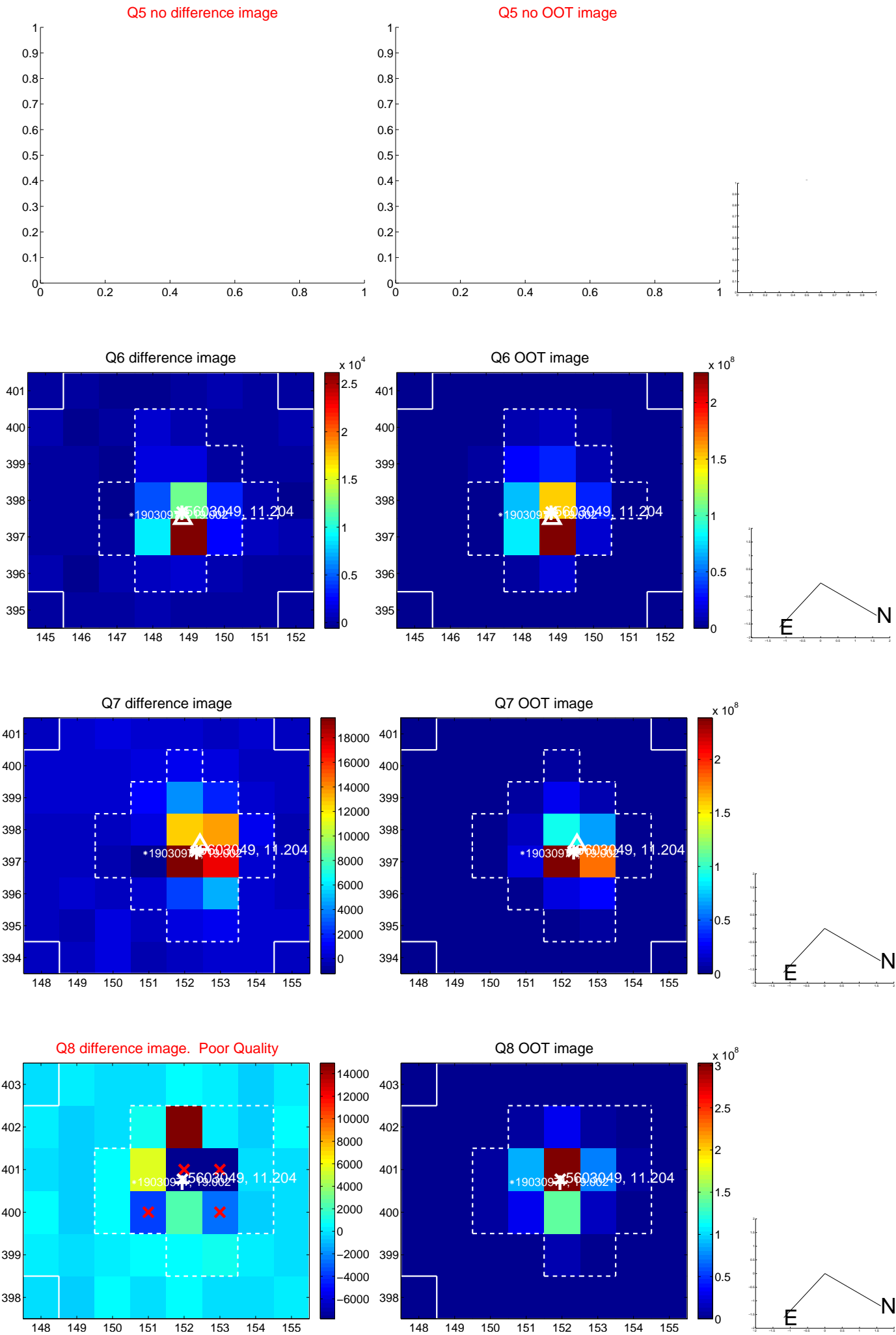


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

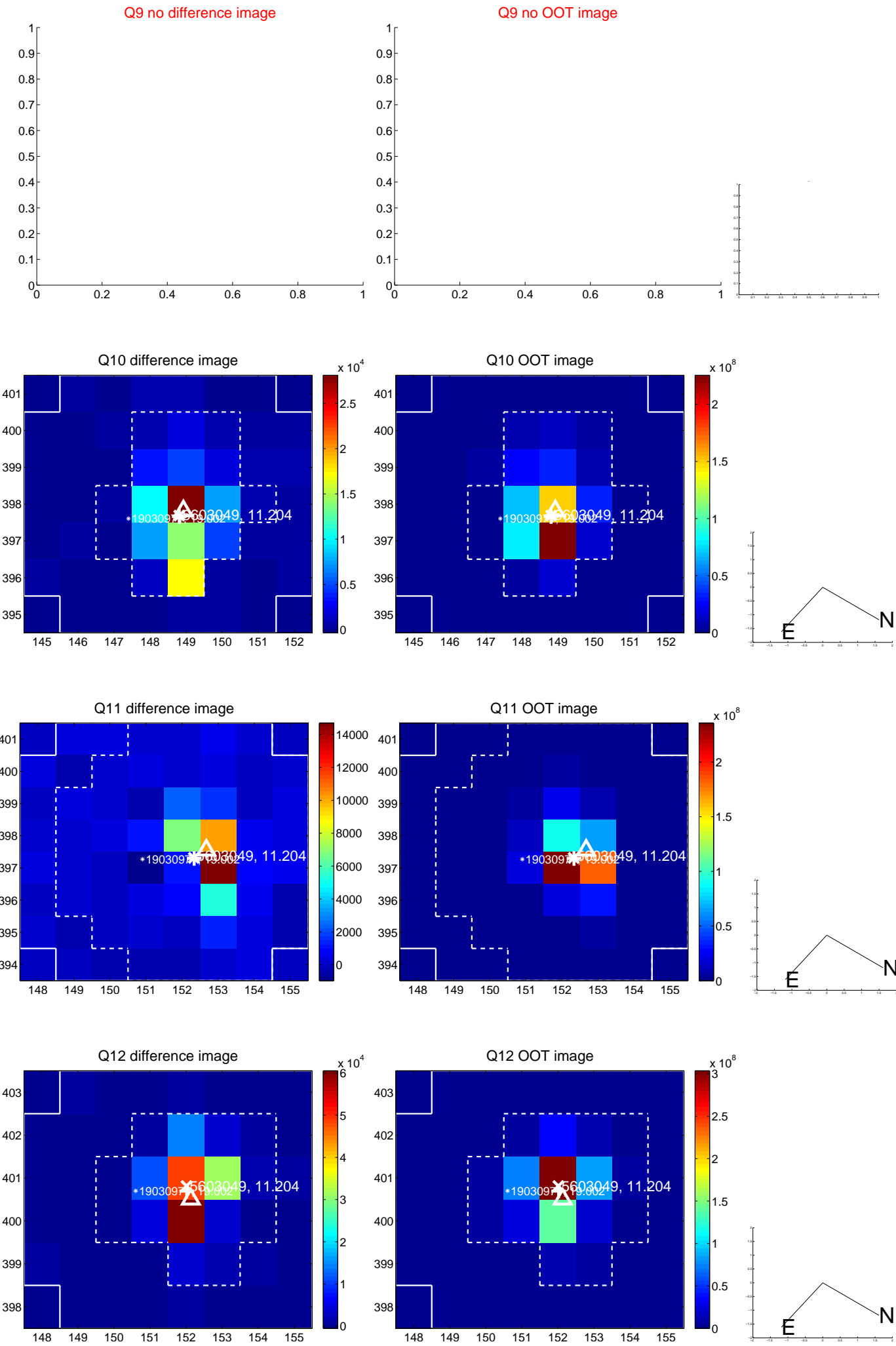
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



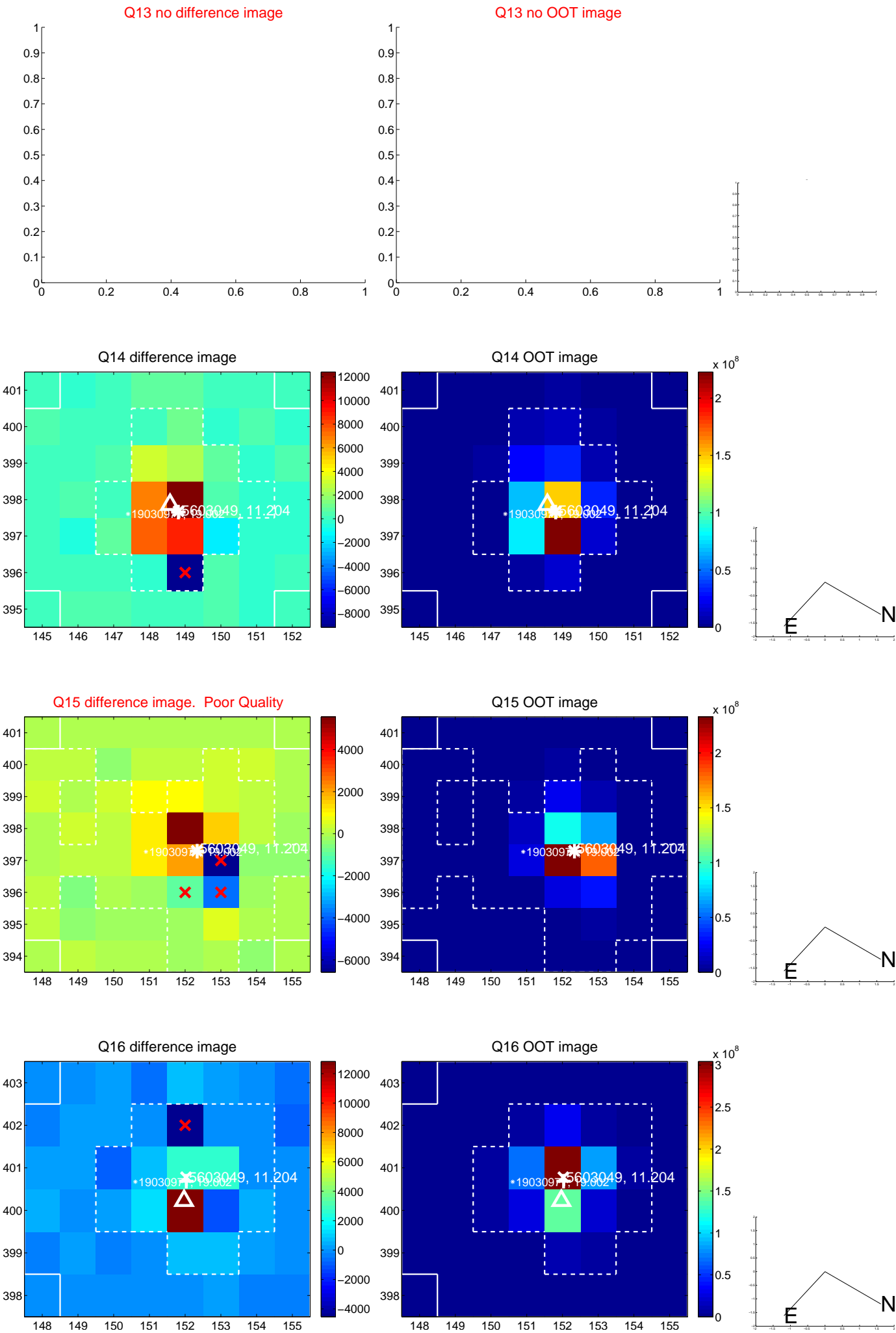
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



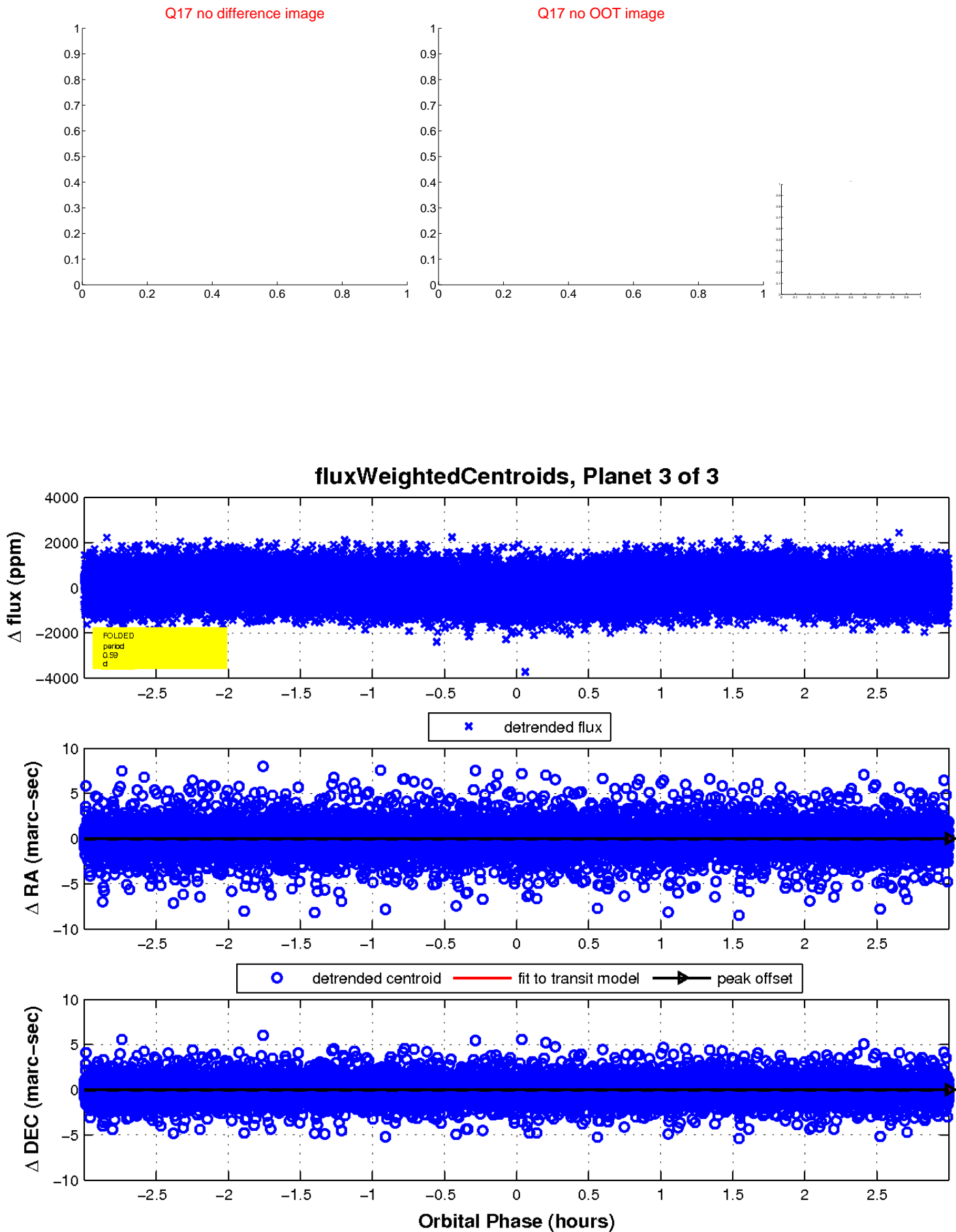
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

