

KIC 005942605

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})
005942605-01	OBS	No	1.280137	132.209859	2.3	8.154	9.0	0.7	1.64	11430	0.26	45443.99
005942605-04	OBS	No	65.410188	179.276737	549.3	1.960	11.4	10.1	1.64	11430	3.98	239.68
005942605-05	OBS	No	41.906011	133.312553	281.7	12.000	8.0	-1.0	1.64	11430	2.84	433.96
005942605-06	OBS	No	56.898050	139.344456	60.8	5.557	8.4	2.0	1.64	11430	1.38	288.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005942605-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
005942605-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005942605-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005942605-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

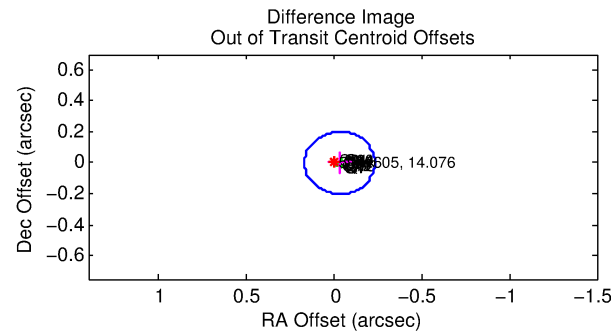
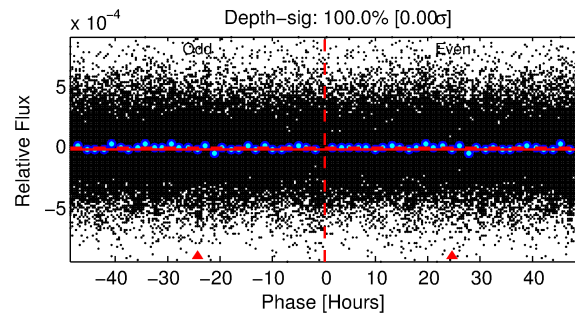
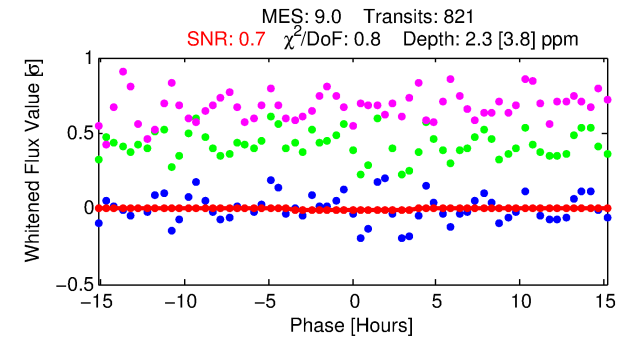
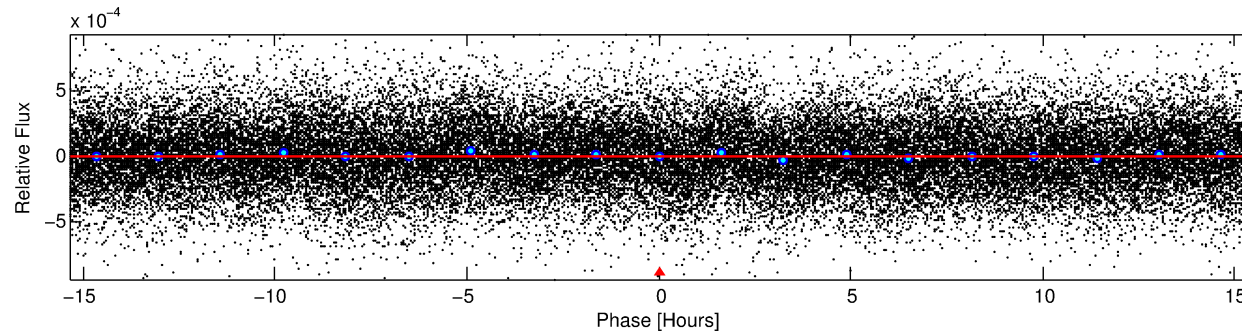
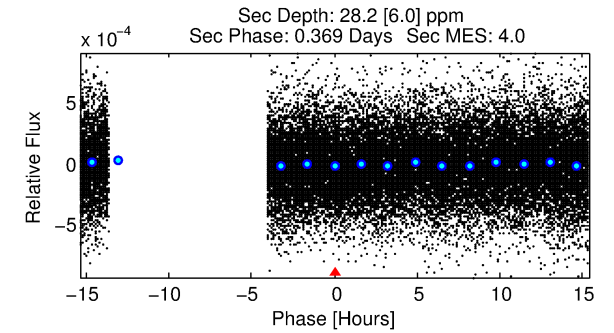
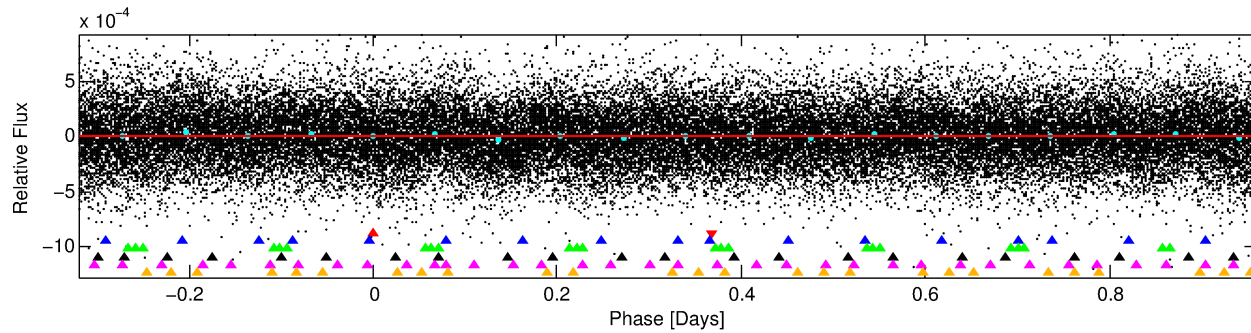
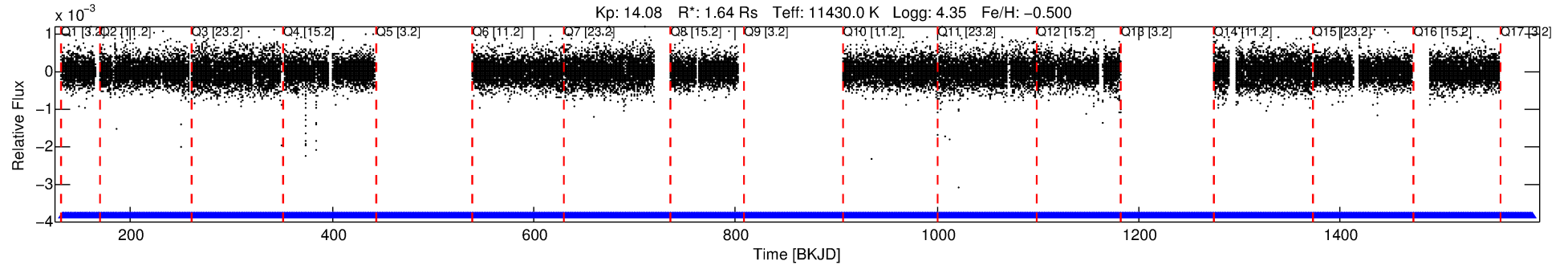
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005942605-01

No Significant Match Found

DV One-Page Summary

KIC: 5942605 Candidate: 1 of 6 Period: 1.280 d



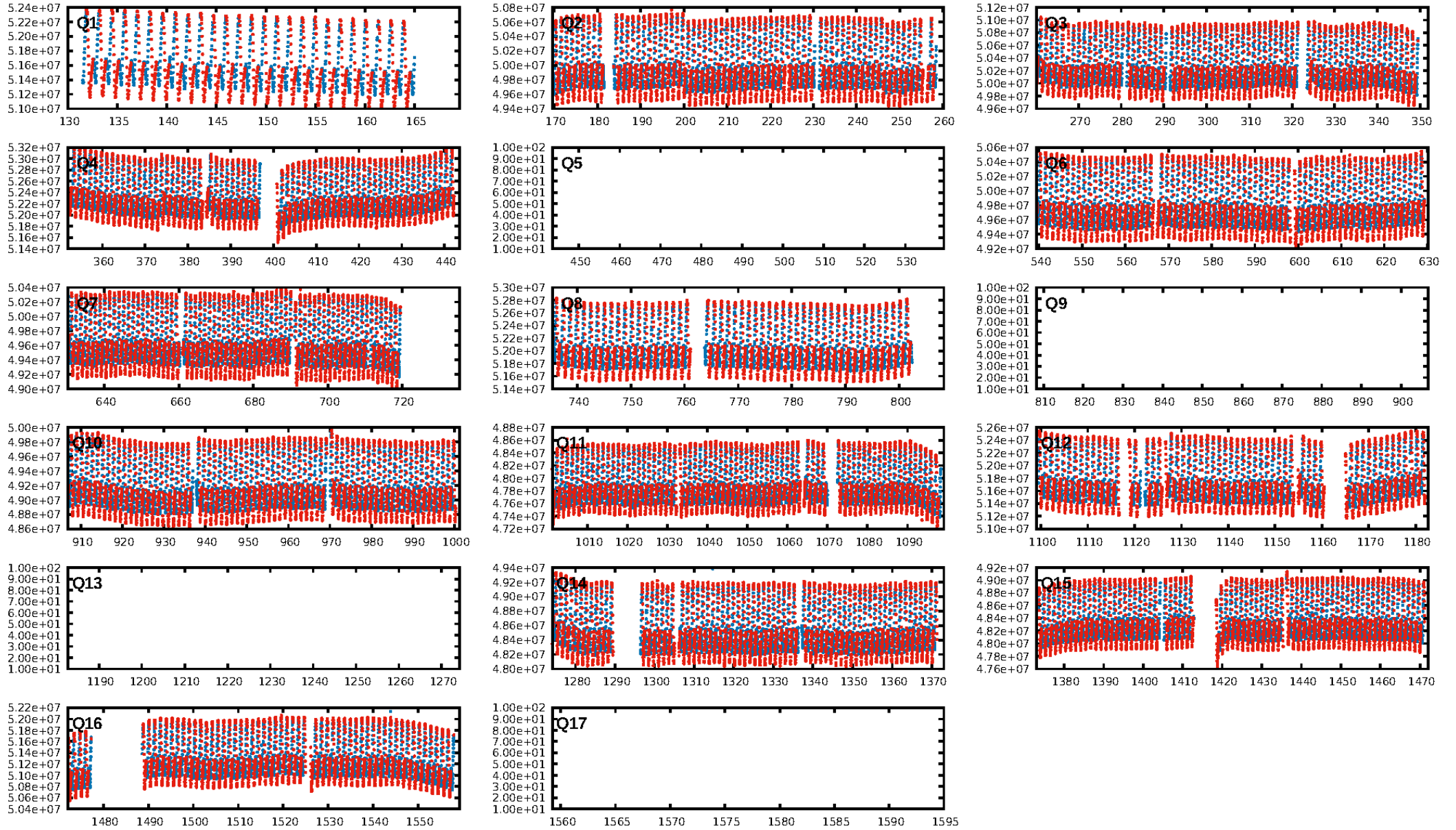
DV Fit Results:

Period = 1.28014 [0.00025] d
Epoch = 132.2099 [0.0658] BKJD
Rp/R* = 0.0014 [0.0116]
a/R* = 1.35 [39.43]
b = 0.10 [646.22]
Seff = 45443.99 [15618.54]
Teff = 3723 [320] K
Rp = 0.26 [2.07] Re
a = 0.0301 [0.0064] AU
Ag = 209.43 [3347.52] [0.06σ]
Teffp = 21897 [87493] K [0.21σ]

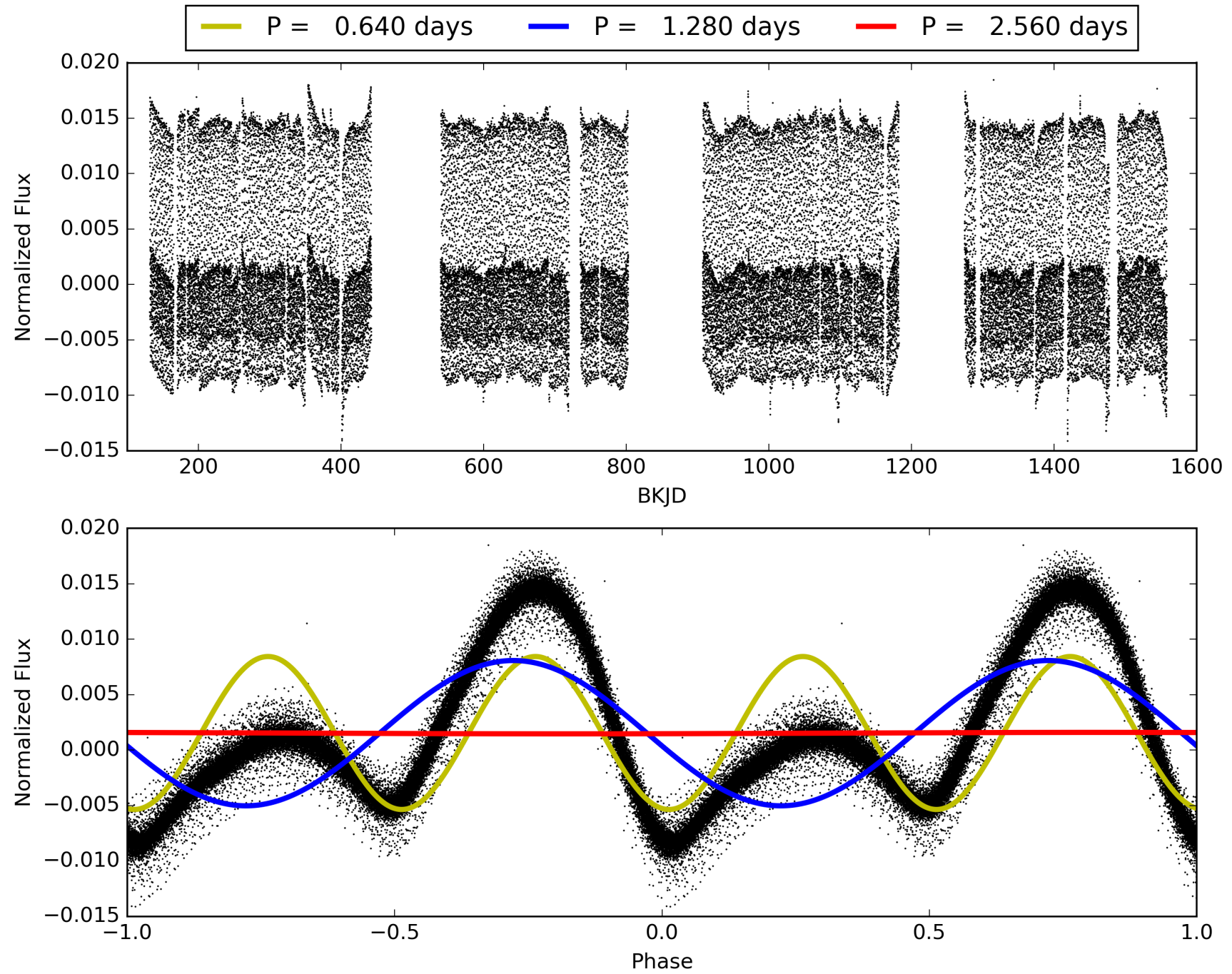
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [67.20σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.92e-12
RollingBand-fgt: 1.00 [795/795]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.033 arcsec [0.50σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-rm: 0.237 arcsec [3.41σ]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 005942605-01, PDC Light Curves

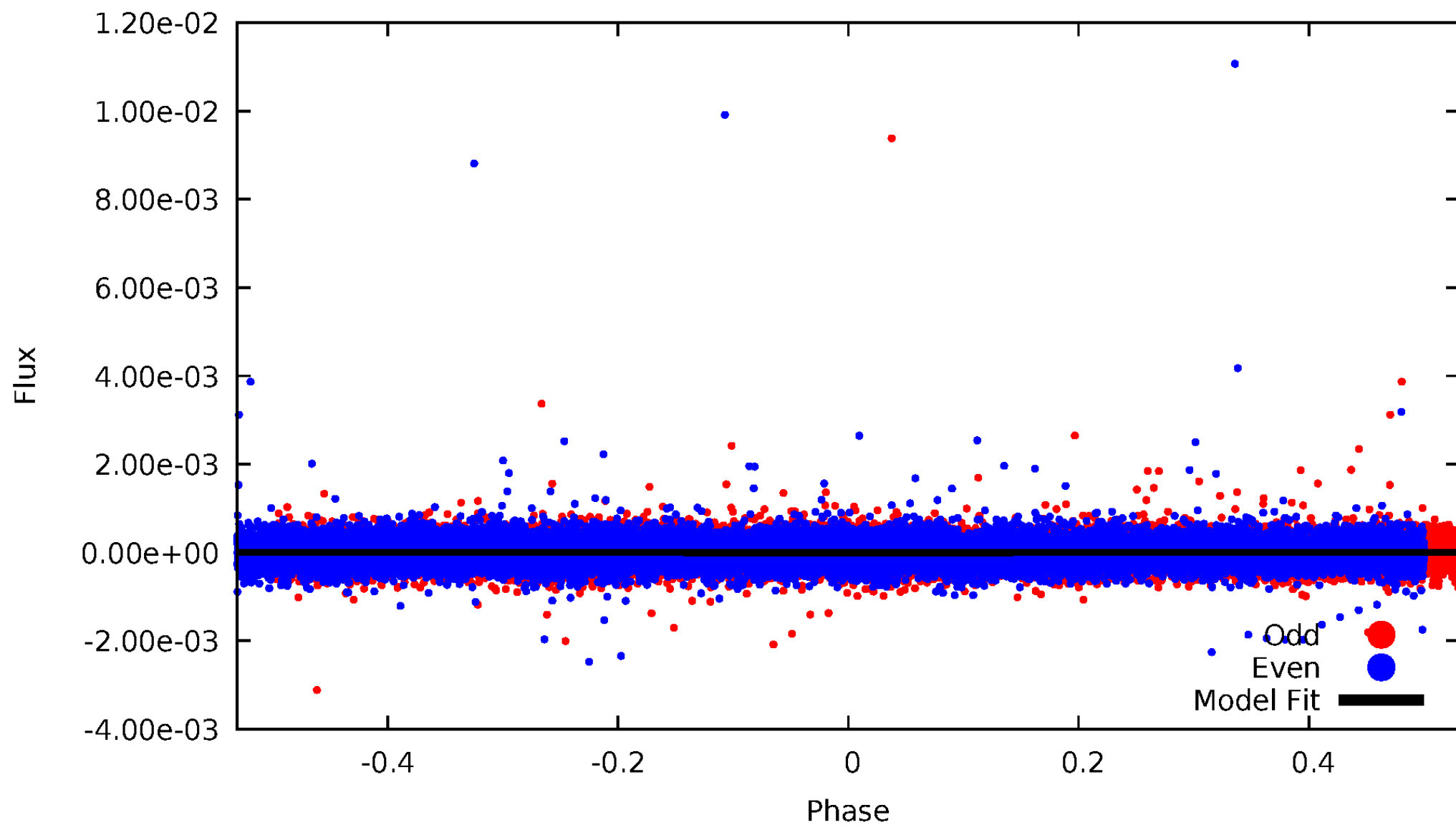


TCE 005942605-01



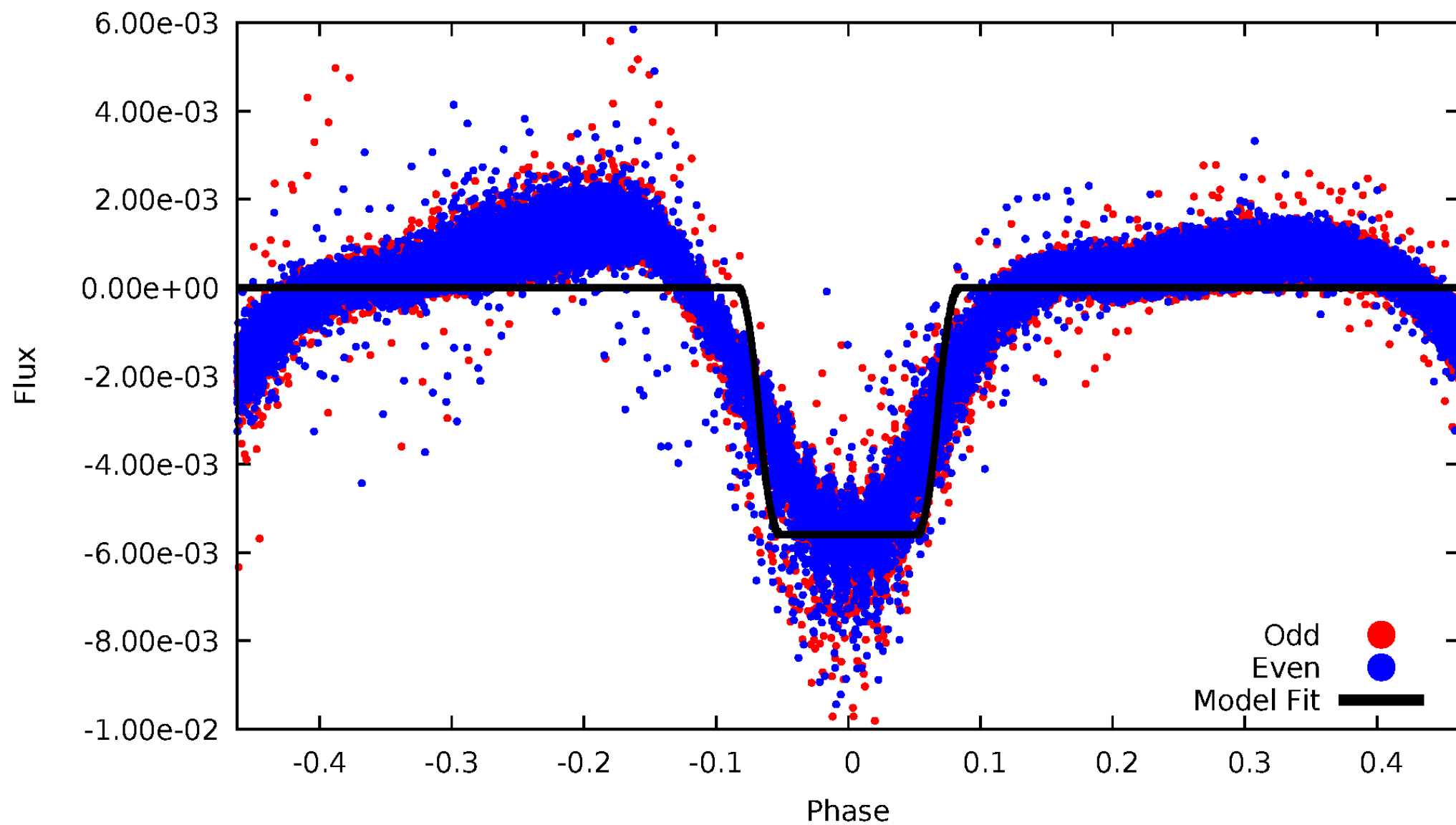
DV Odd/Even

TCE 005942605-01



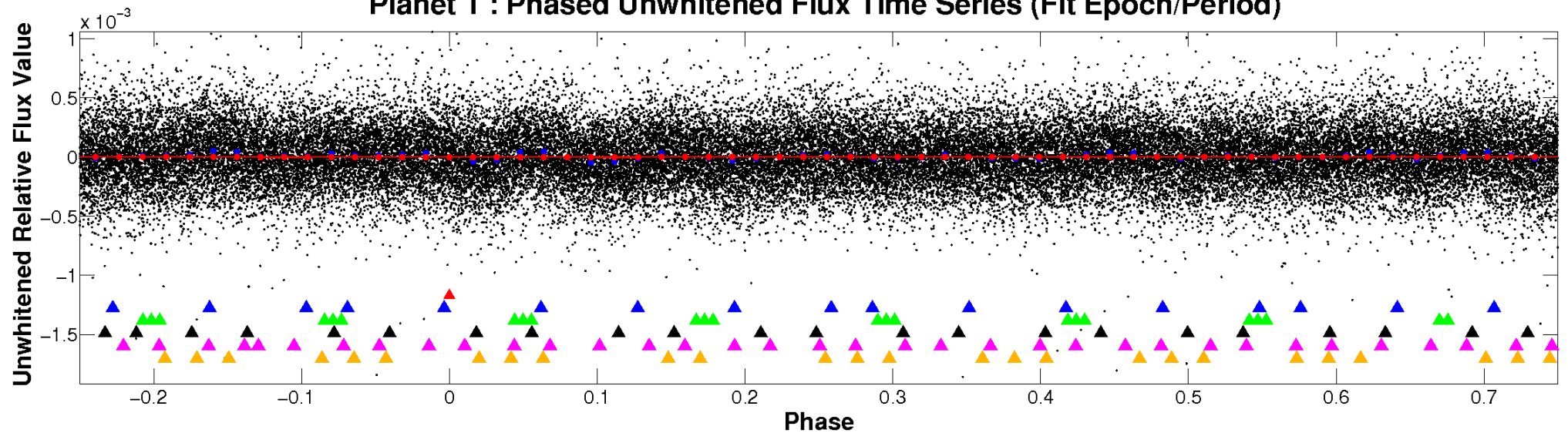
ALT Odd/Even

TCE 005942605-01

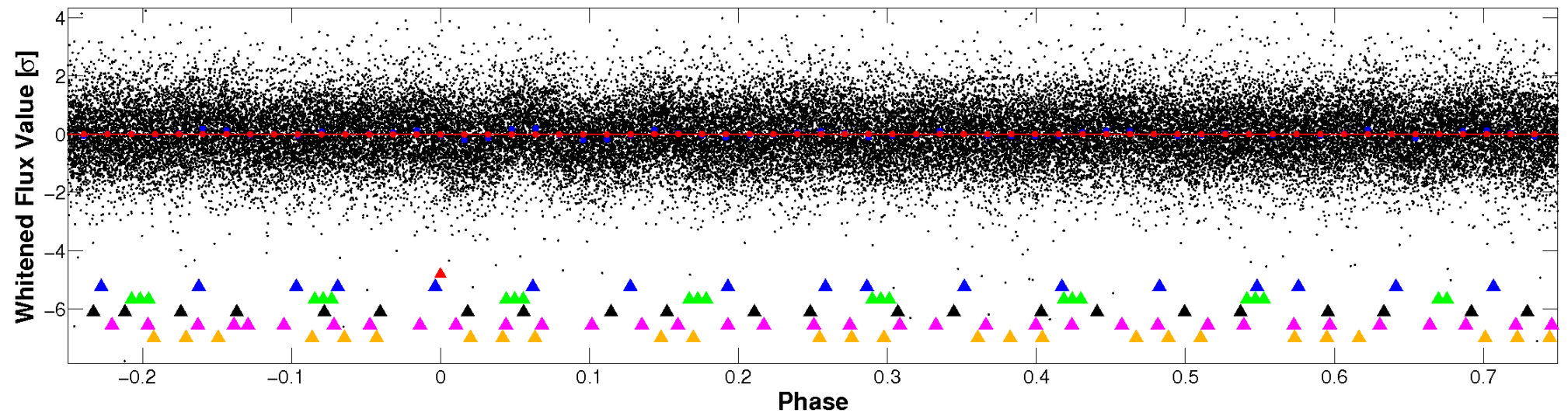


Non-Whitened Vs. Whitened Light Curve

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

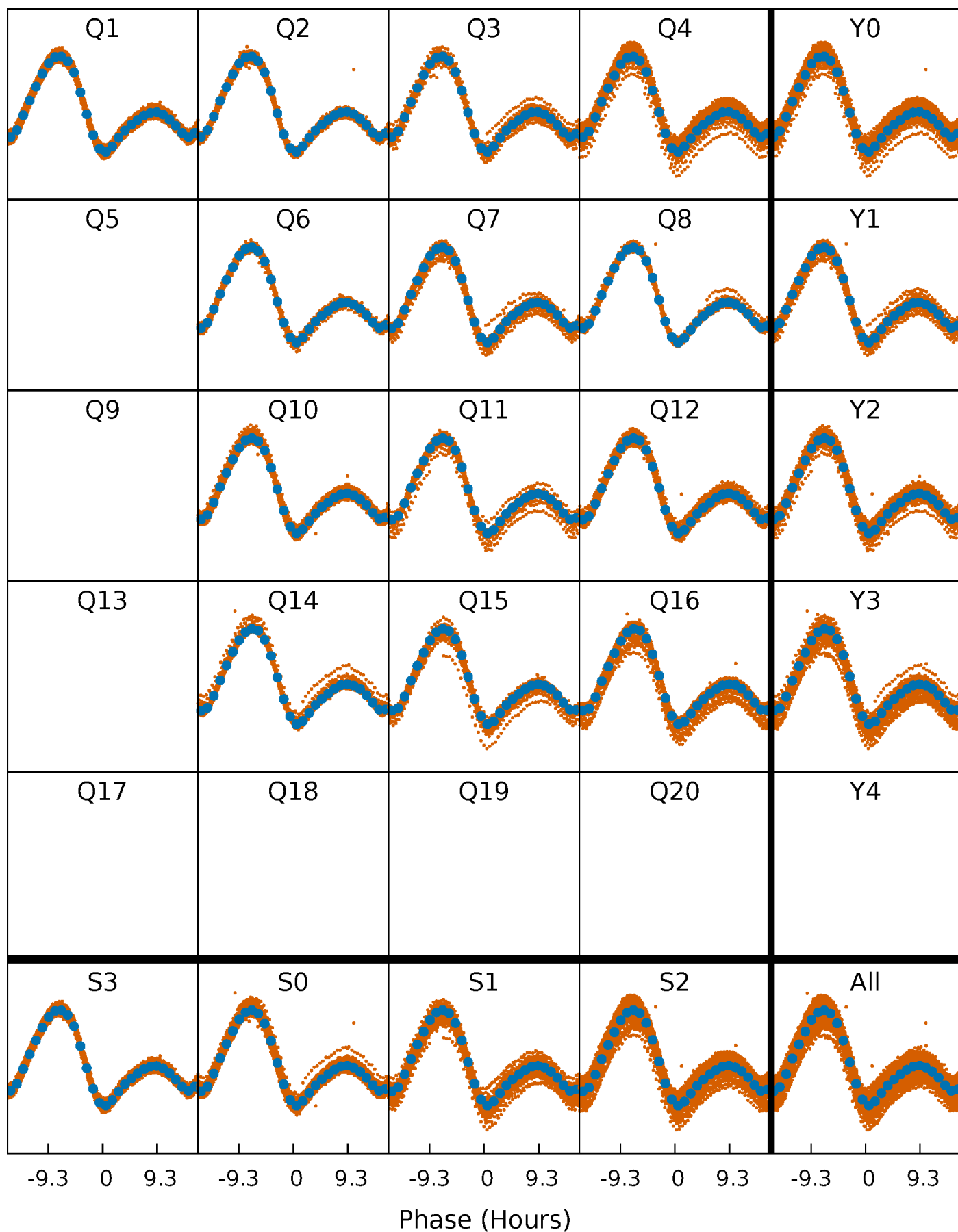


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



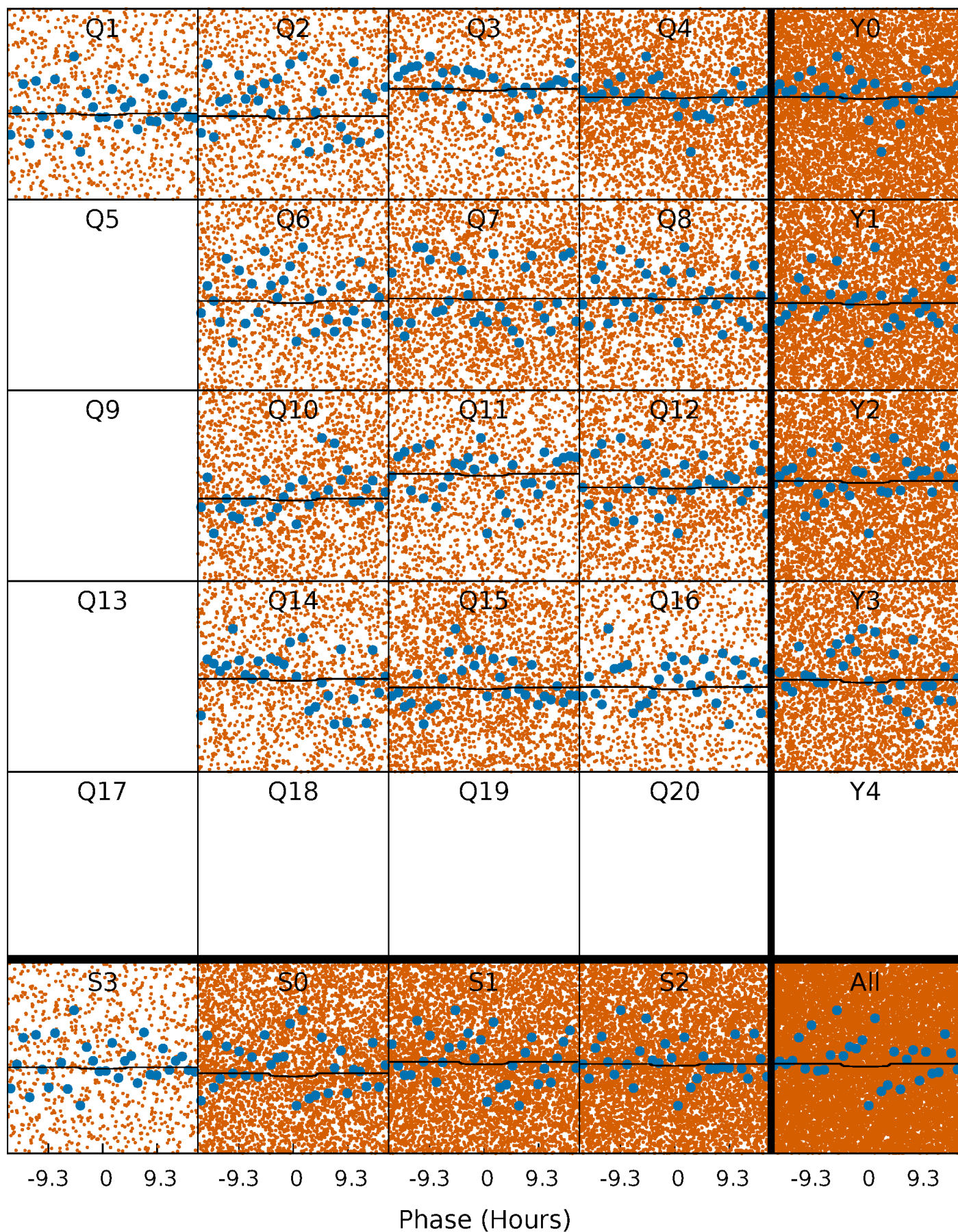
PDC Quarter-Phased Transit Curves

TCE 005942605-01 P= 1.280137 Days $T_0=132.209859$ (BKJD)



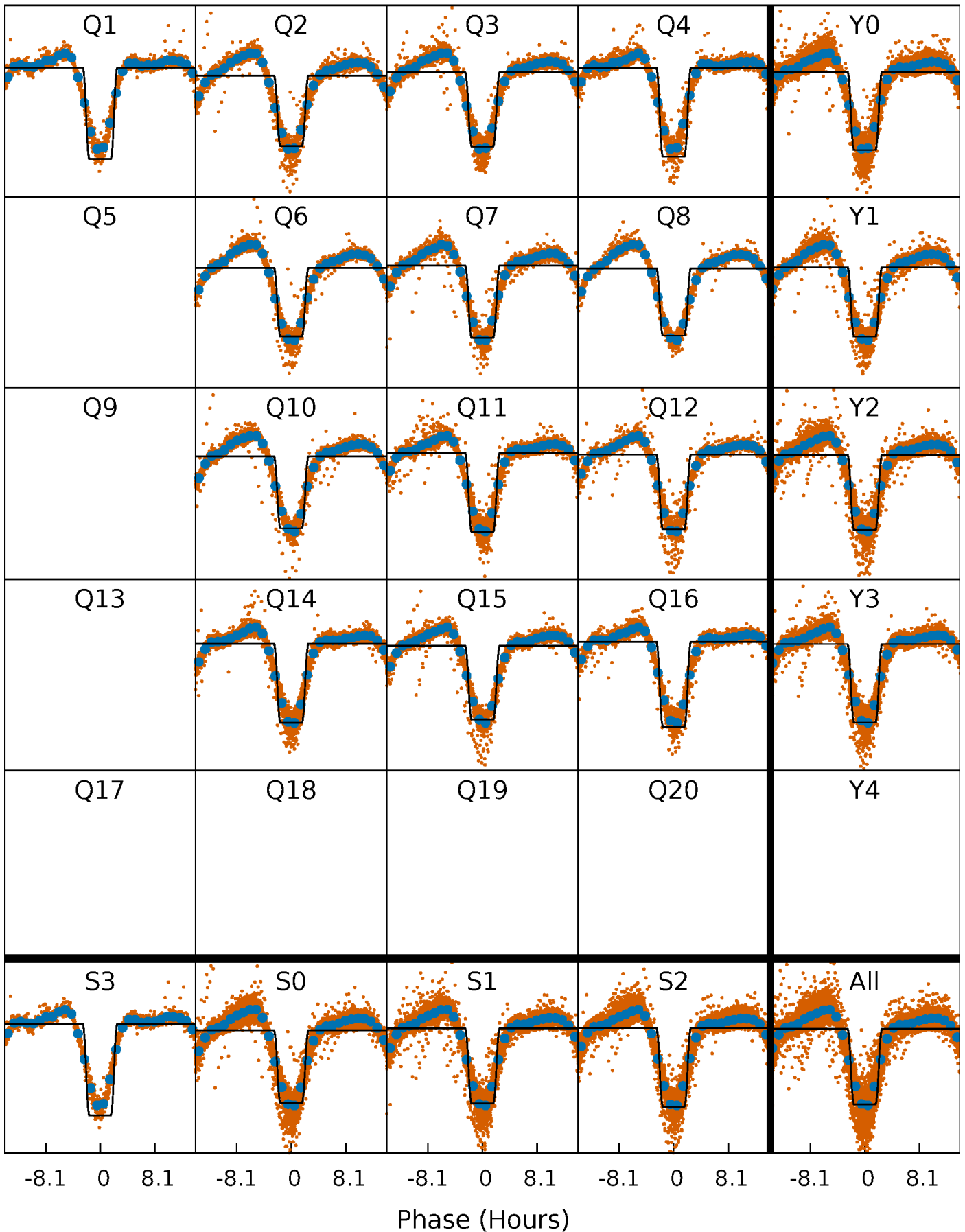
DV Quarter-Phased Transit Curves

TCE 005942605-01 P= 1.280137 Days $T_0=132.209859$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

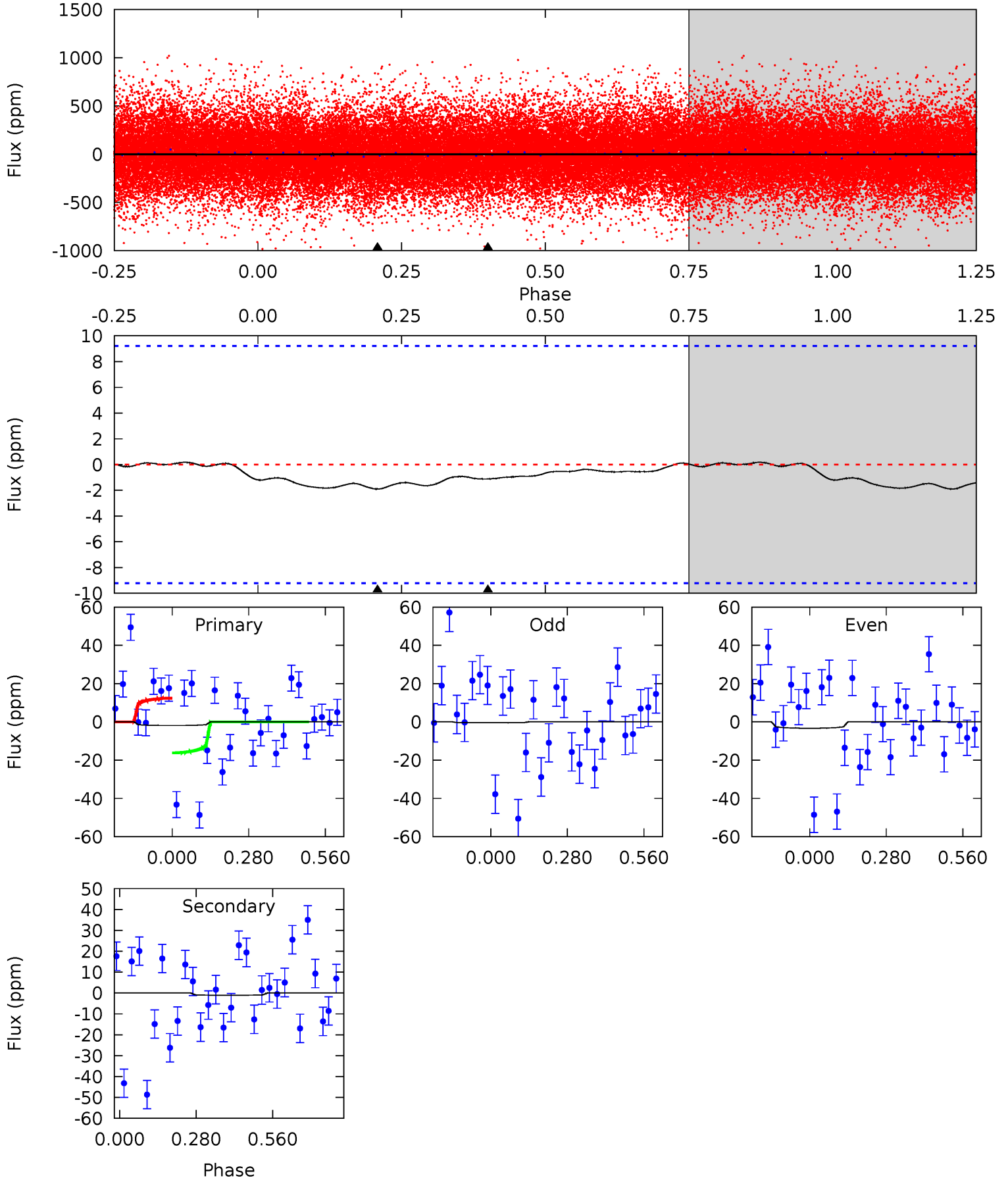
TCE 005942605-01 P= 1.280148 Days $T_0=132.195070$ (BKJD)



DV Model-Shift Uniqueness Test

005942605-01, P = 1.280137 Days, E = 130.929722 Days

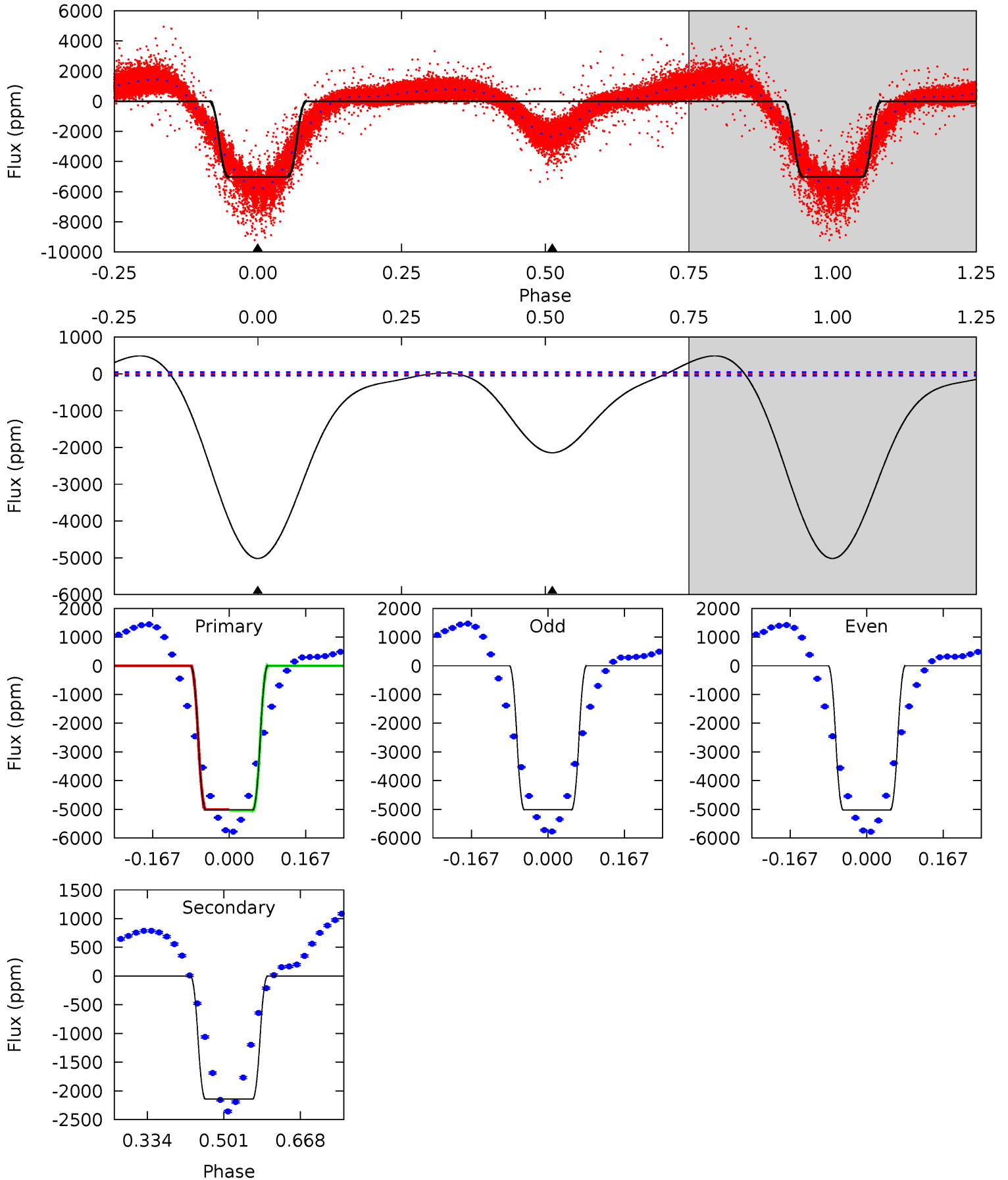
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.90	0.53	0	0	4.34	1.08	0.08	0.90	0.90	0.53	0.53	0.69	-0.84	0.08	0.91



Alt Model-Shift Uniqueness Test

005942605-01, P = 1.280148 Days, E = 130.914922 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
483.3	206.4	0	0	4.46	1.38	26.3	483.3	483.3	206.4	206.4	0.31	1.01	0.09	1.06



Stellar Parameters For KIC 005942605

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	11430^{+323}_{-485}	$4.354^{+0.052}_{-0.157}$	$-0.500^{+0.550}_{-0.250}$	$1.641^{+0.435}_{-0.145}$	$2.218^{+0.250}_{-0.167}$	$0.707^{+0.154}_{-0.317}$
	+3%/-4%	+1%/-4%	+110%/-50%	+27%/-9%	+11%/-8%	+22%/-45%
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 005942605-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1 ± 2	$1.53^{+1.67}_{-1.12}$	5258^{+310}_{-272}	-3624^{+9869}_{-871}	$0.148^{+2.318}_{-0.341}$
Alt.	-2144 ± 10	$13.72^{+2.67}_{-2.29}$	5250^{+292}_{-239}	7963^{+981}_{-721}	$5.673^{+2.449}_{-1.688}$

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 $A_{obs} \gg 1.0$

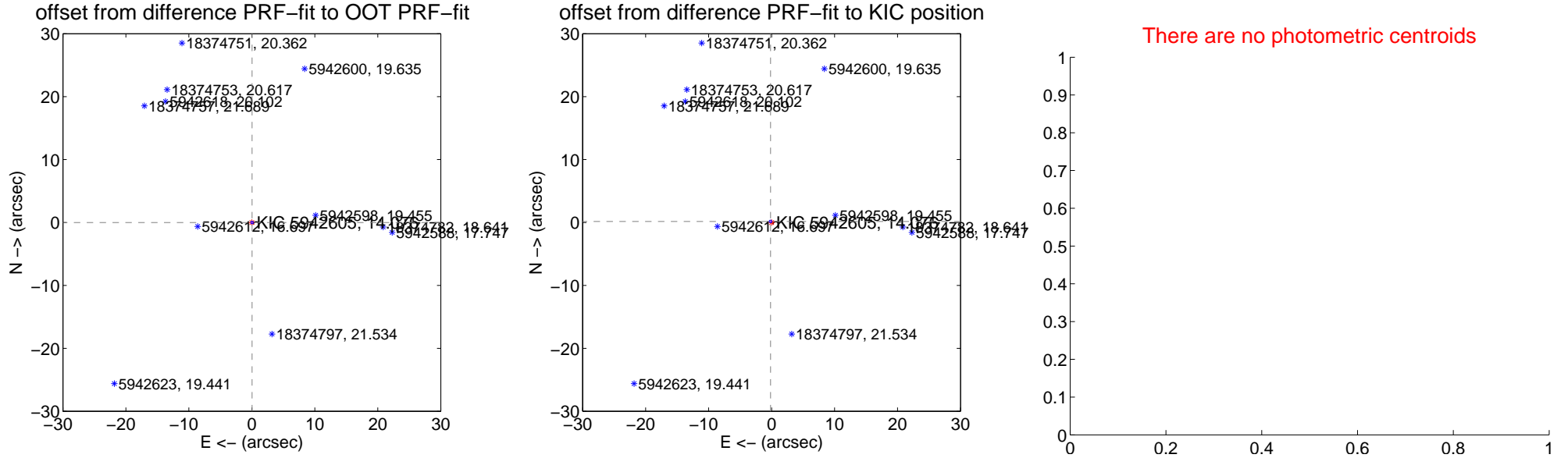
DV Centroid Data

Supplemental centroid analysis for 005942605-01. Kepler magnitude: 14.08. Transit SNR 0.68

There are 13 quarters with good PRF difference image offsets

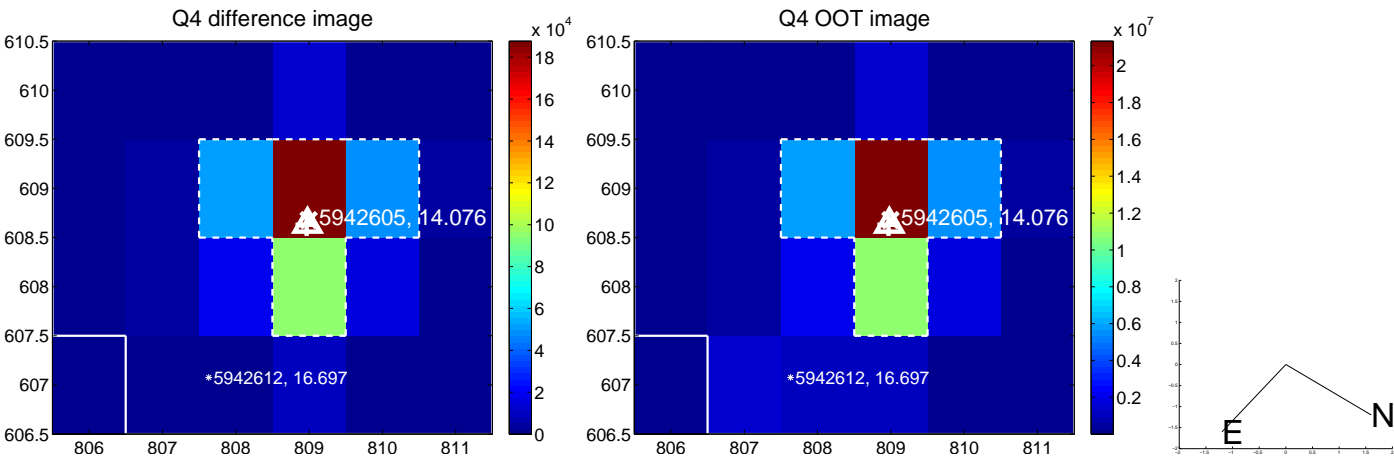
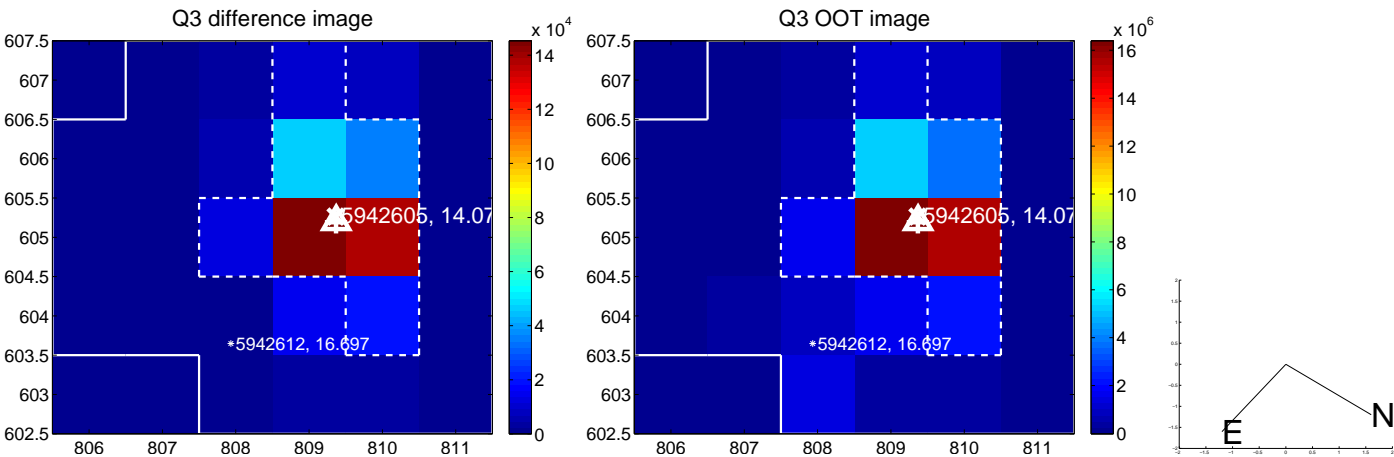
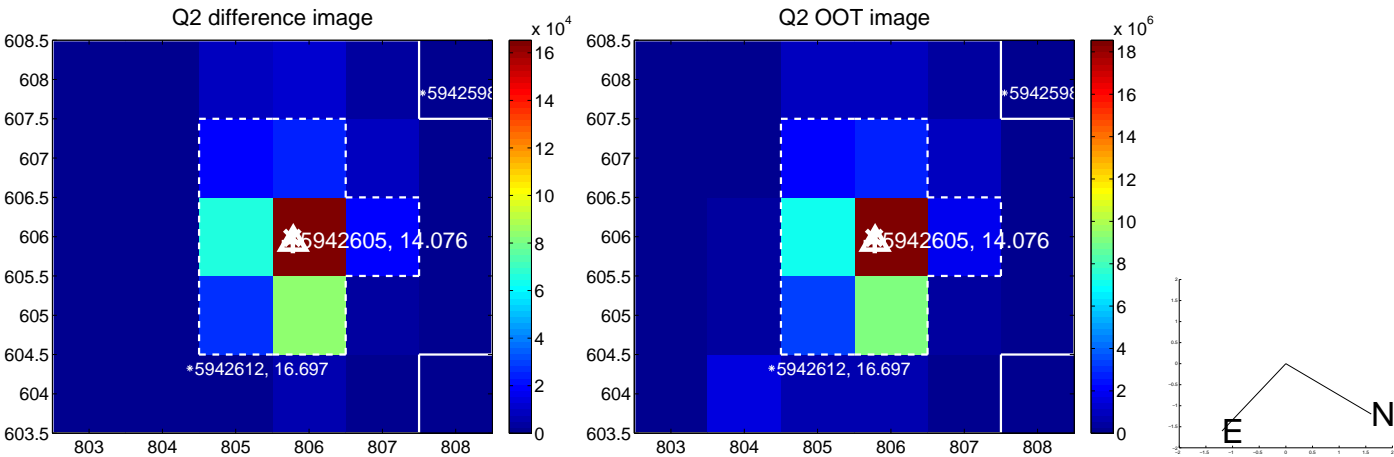
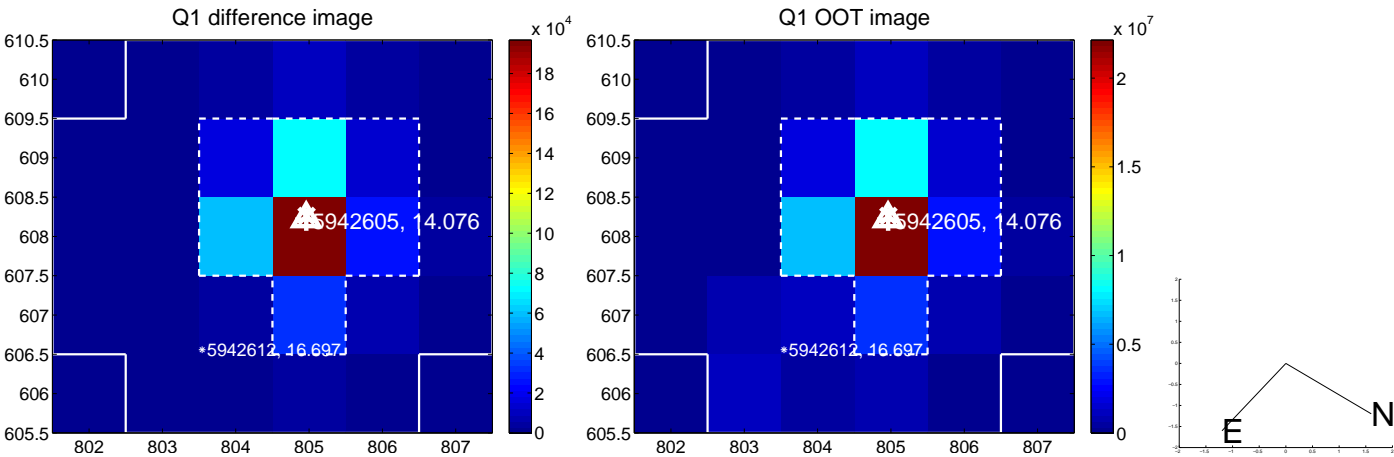
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.033 ± 0.067	0.50	-0.033 ± 0.067	-0.000 ± 0.067
PRF-fit source offset from KIC position	0.237 ± 0.069	3.41	0.167 ± 0.068	0.168 ± 0.069
photometric centroid source offset	—	—	—	—

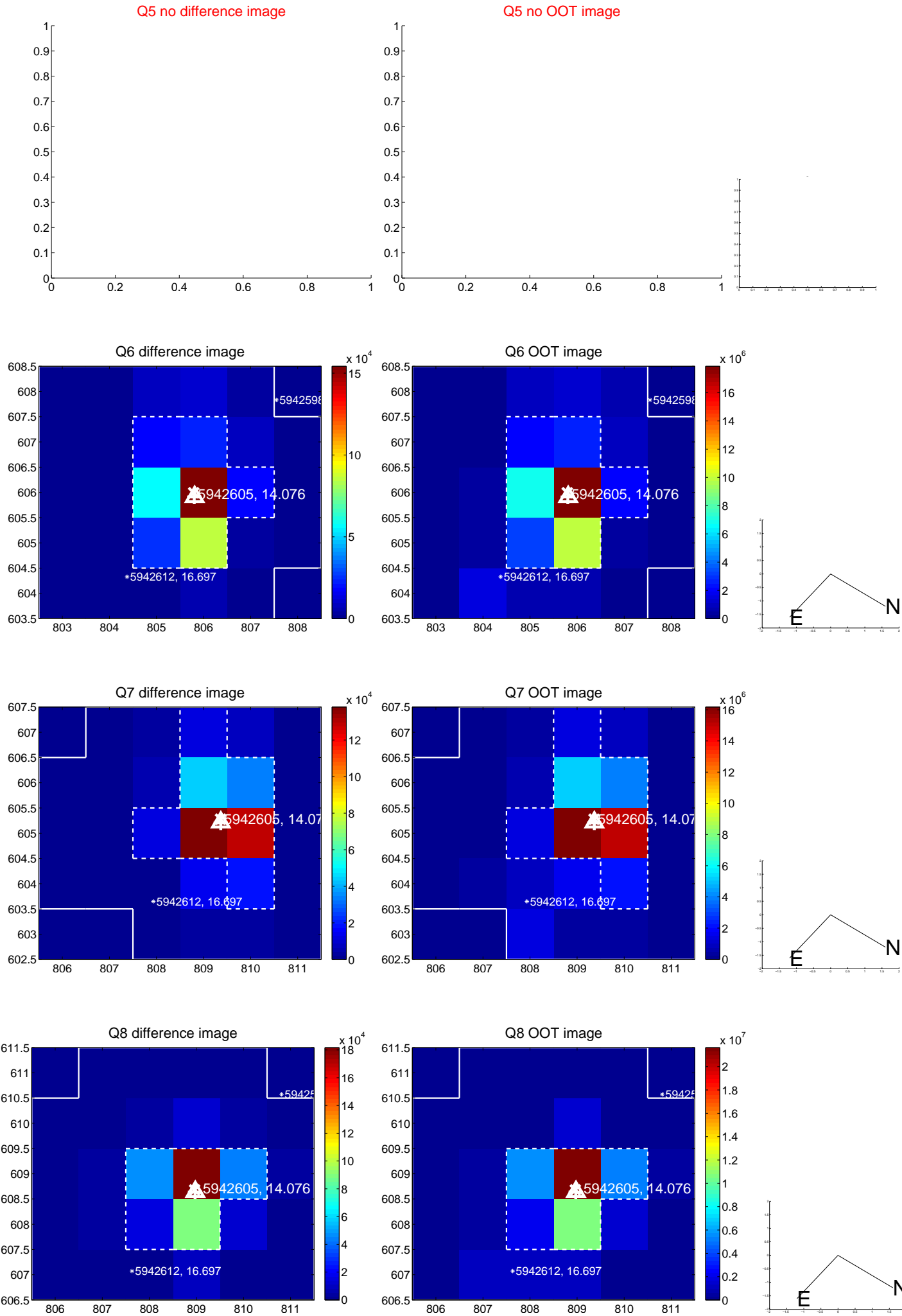


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

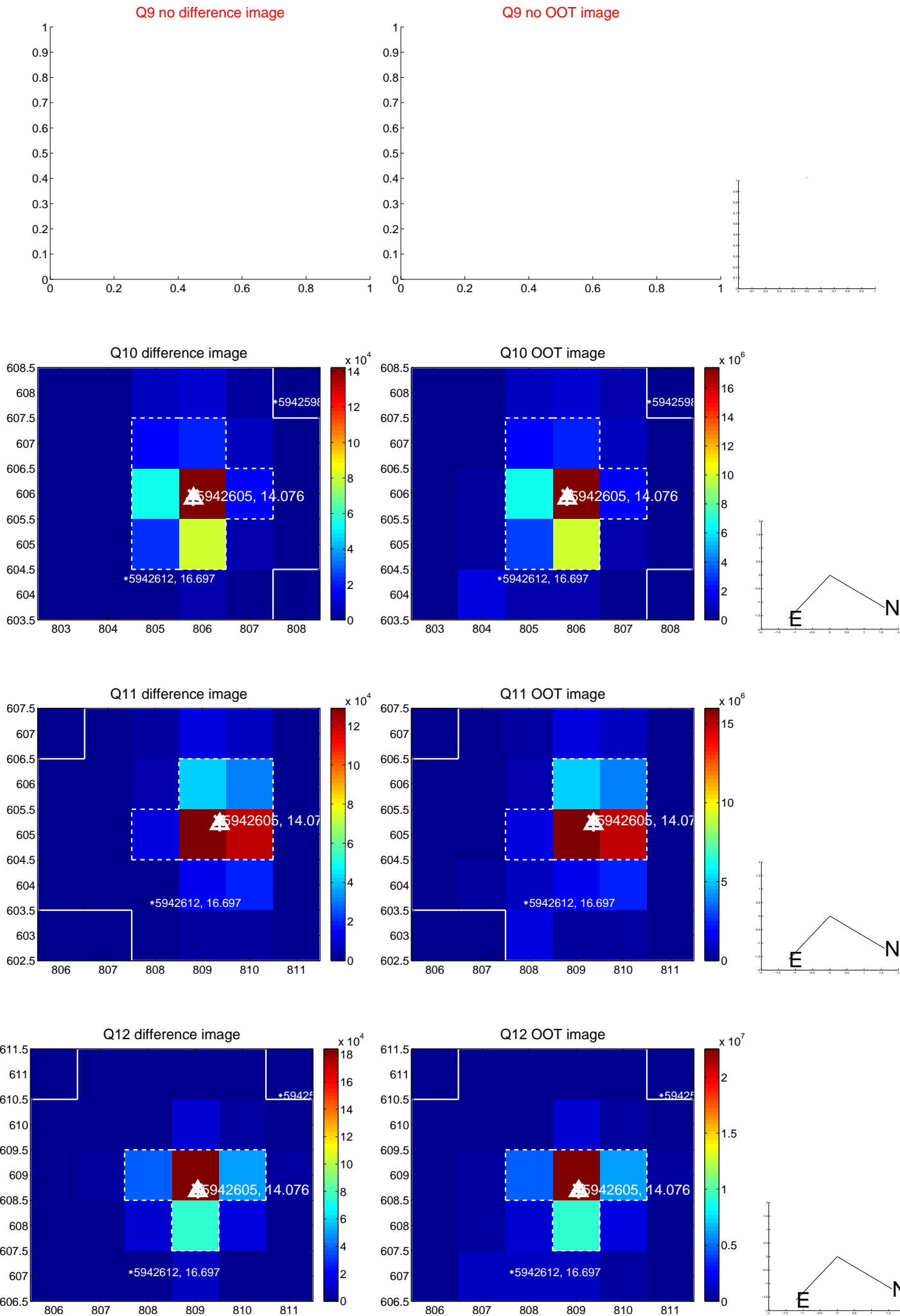
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



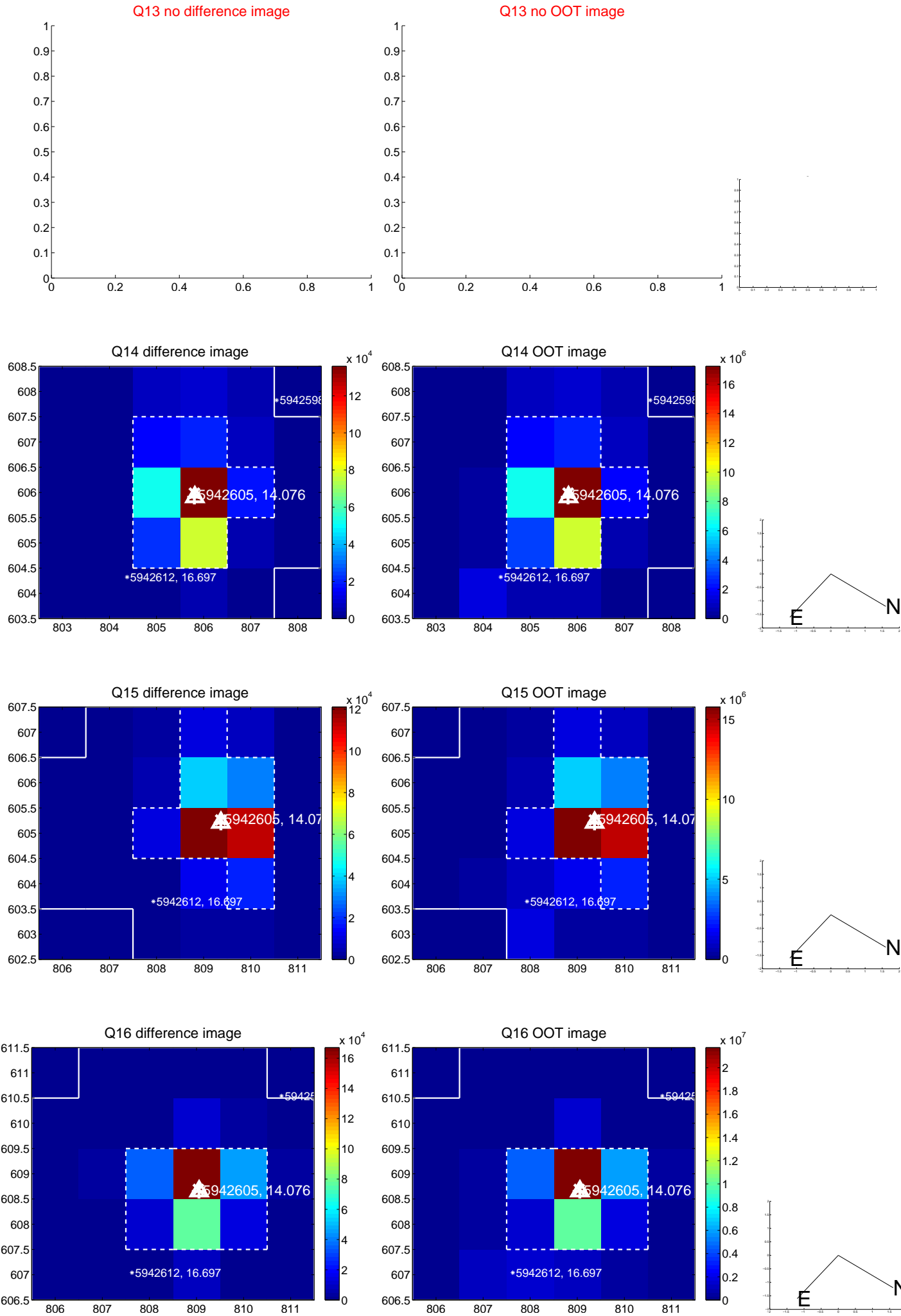
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.

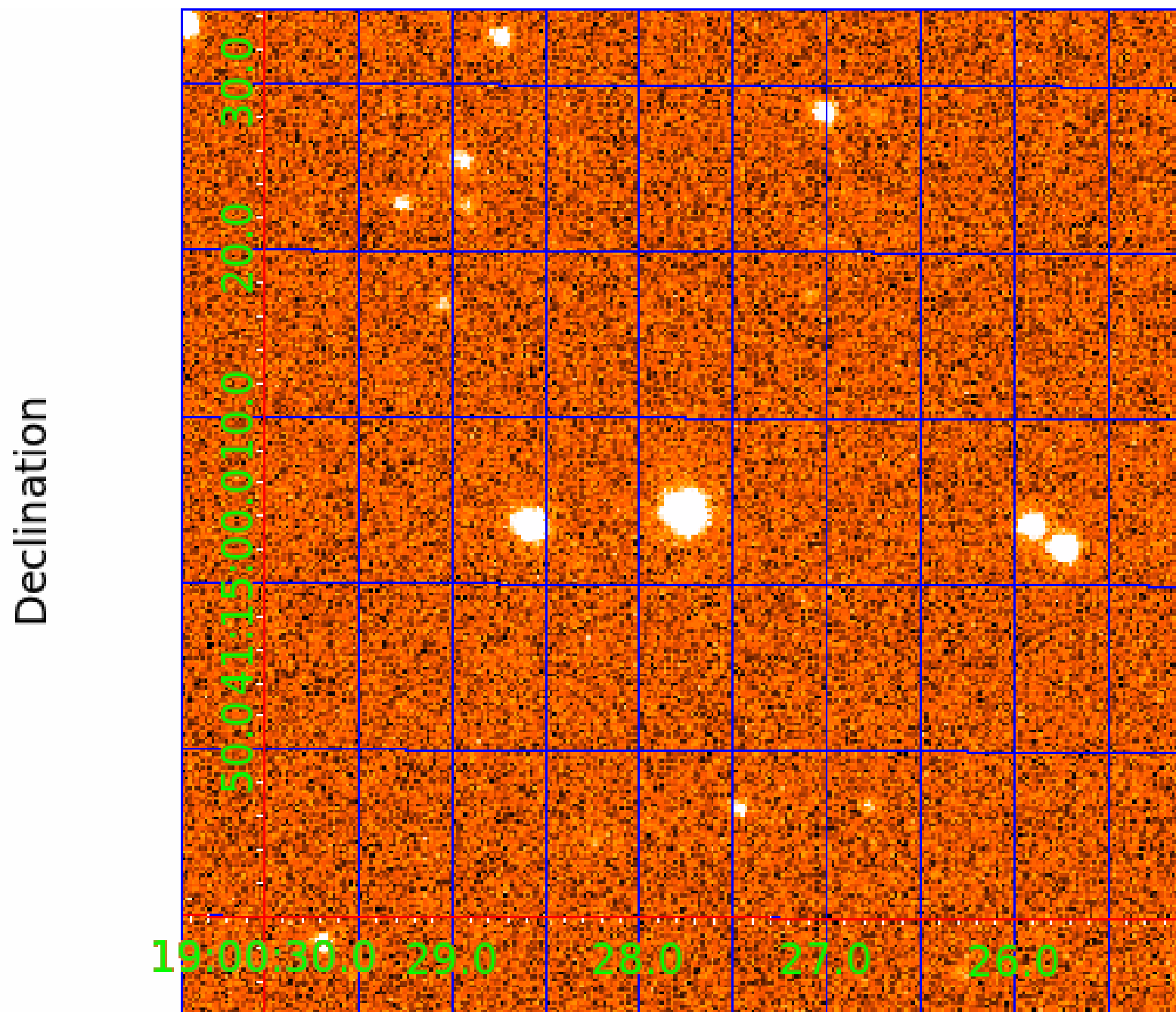


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image



KIC 005942605

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})
005942605-01	OBS	No	1.280137	132.209859	2.3	8.154	9.0	0.7	1.64	11430	0.26	45443.99
005942605-04	OBS	No	65.410188	179.276737	549.3	1.960	11.4	10.1	1.64	11430	3.98	239.68
005942605-05	OBS	No	41.906011	133.312553	281.7	12.000	8.0	-1.0	1.64	11430	2.84	433.96
005942605-06	OBS	No	56.898050	139.344456	60.8	5.557	8.4	2.0	1.64	11430	1.38	288.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005942605-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
005942605-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005942605-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005942605-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

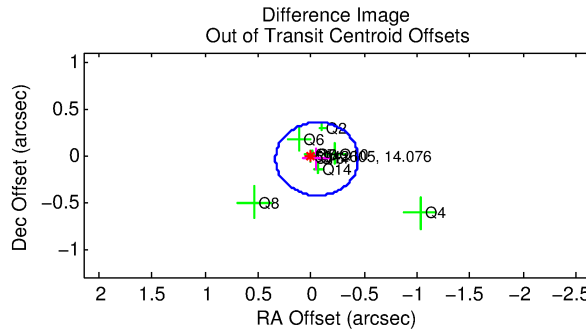
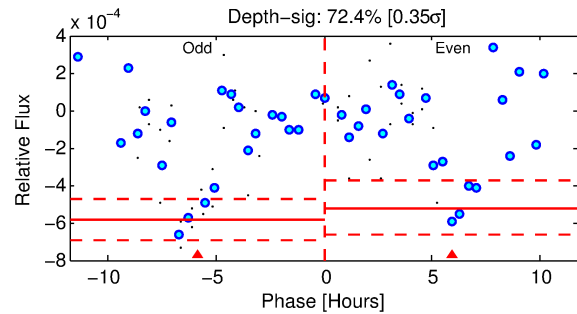
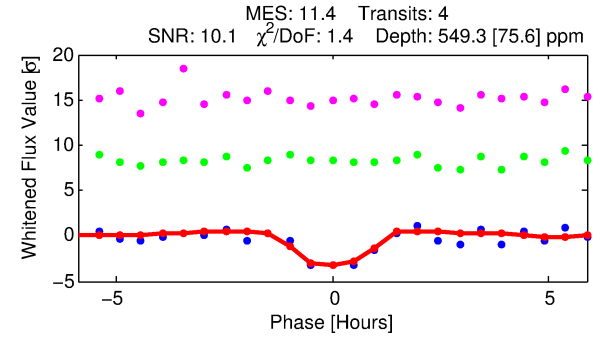
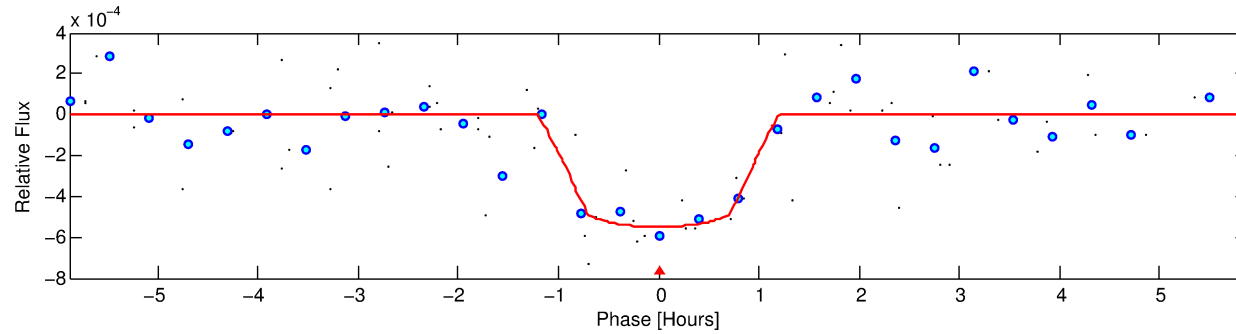
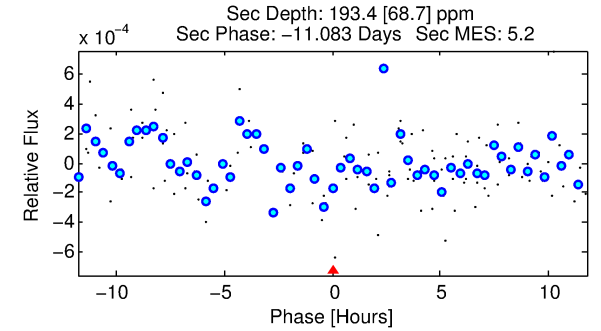
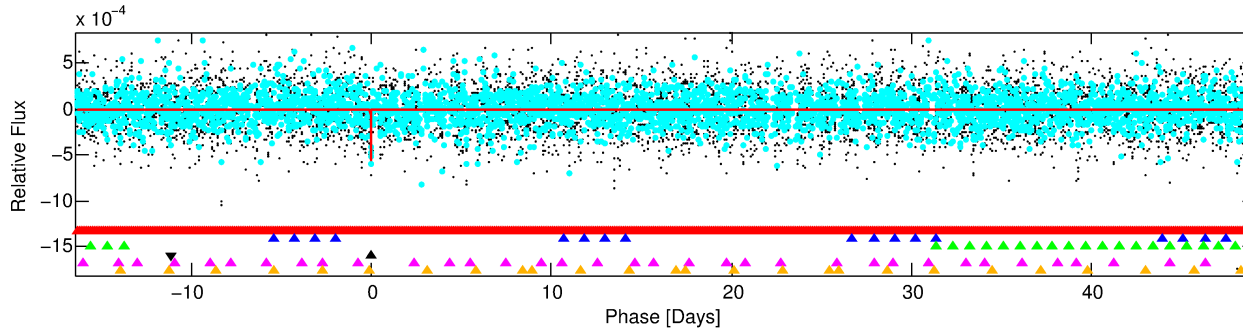
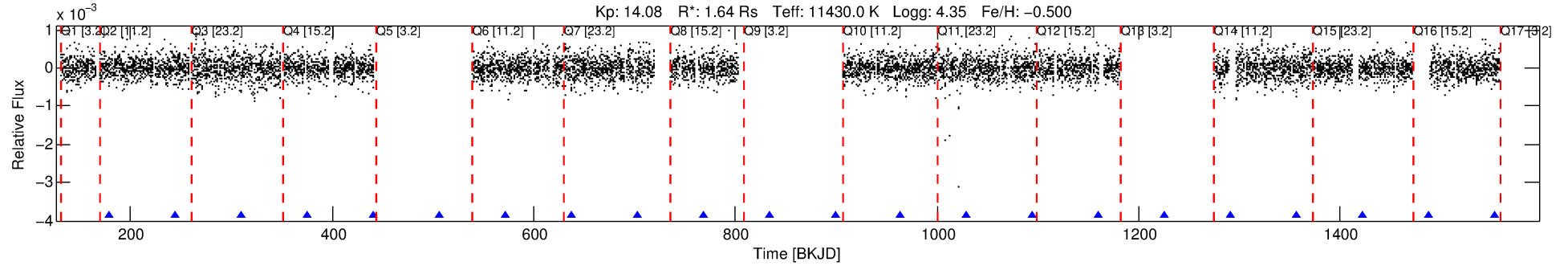
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005942605-04

No Significant Match Found

DV One-Page Summary

KIC: 5942605 Candidate: 4 of 6 Period: 65.410 d



DV Fit Results:

Period = 65.41019 [0.00046] d
Epoch = 179.2767 [0.0075] BKJD
Rp/R* = 0.0222 [0.0190]
a/R* = 260.17 [1731.86]
b = 0.06 [117.82]
Seff = 239.68 [82.37]
Teq = 1003 [86] K
Rp = 3.98 [3.56] Re
a = 0.4145 [0.0887] AU
Ag = 1156.30 [2048.27] [0.56σ]
Teffp = 9046 [3967] K [2.03σ]

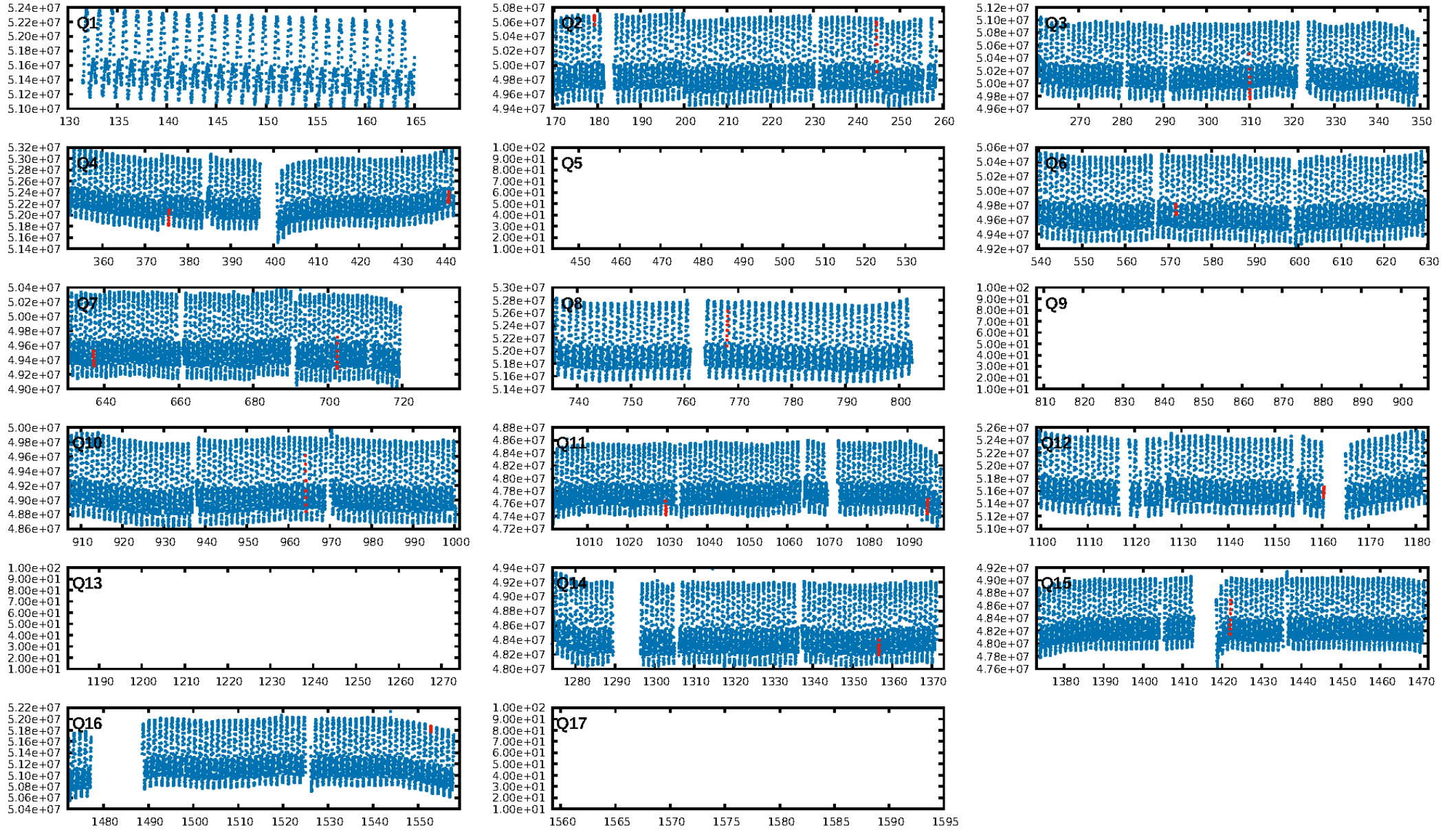
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.39σ]
LongPeriod-sig: 100.0% [41.95σ]
ModelChiSquare2-sig: 24.4%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 5.45e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -4.14
Centroid-sig: 2.3%
Centroid-so: 1.873 arcsec [2.14σ]
OotOffset-rm: 0.067 arcsec [0.51σ]
KicOffset-rm: 0.195 arcsec [1.36σ]
OotOffset-st: 4/3/3/0 [10]
KicOffset-st: 4/3/3/0 [10]
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DiffImageOverlap-fno: 0.45 [5/11]

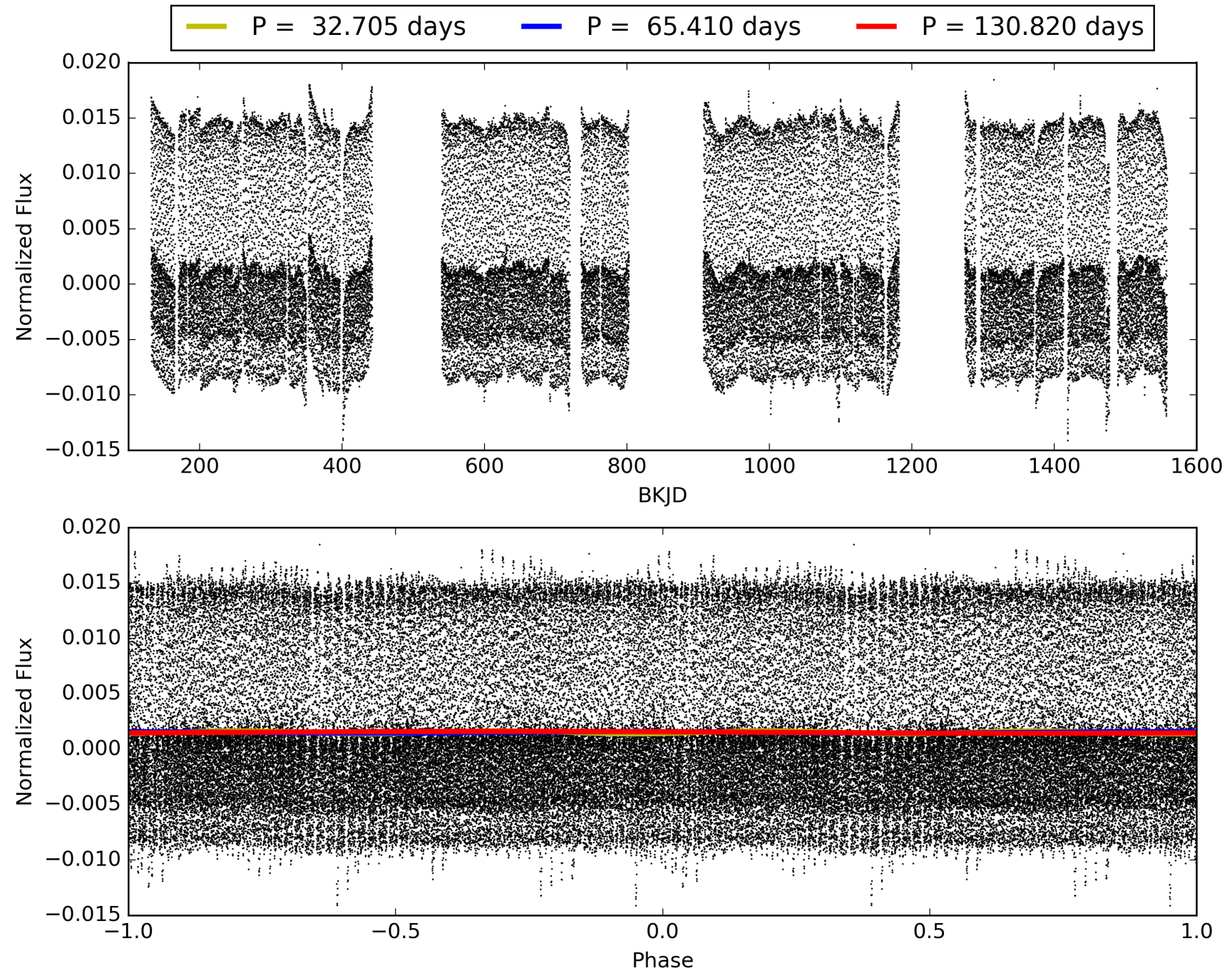
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:07:53 Z

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

TCE 005942605-04, PDC Light Curves

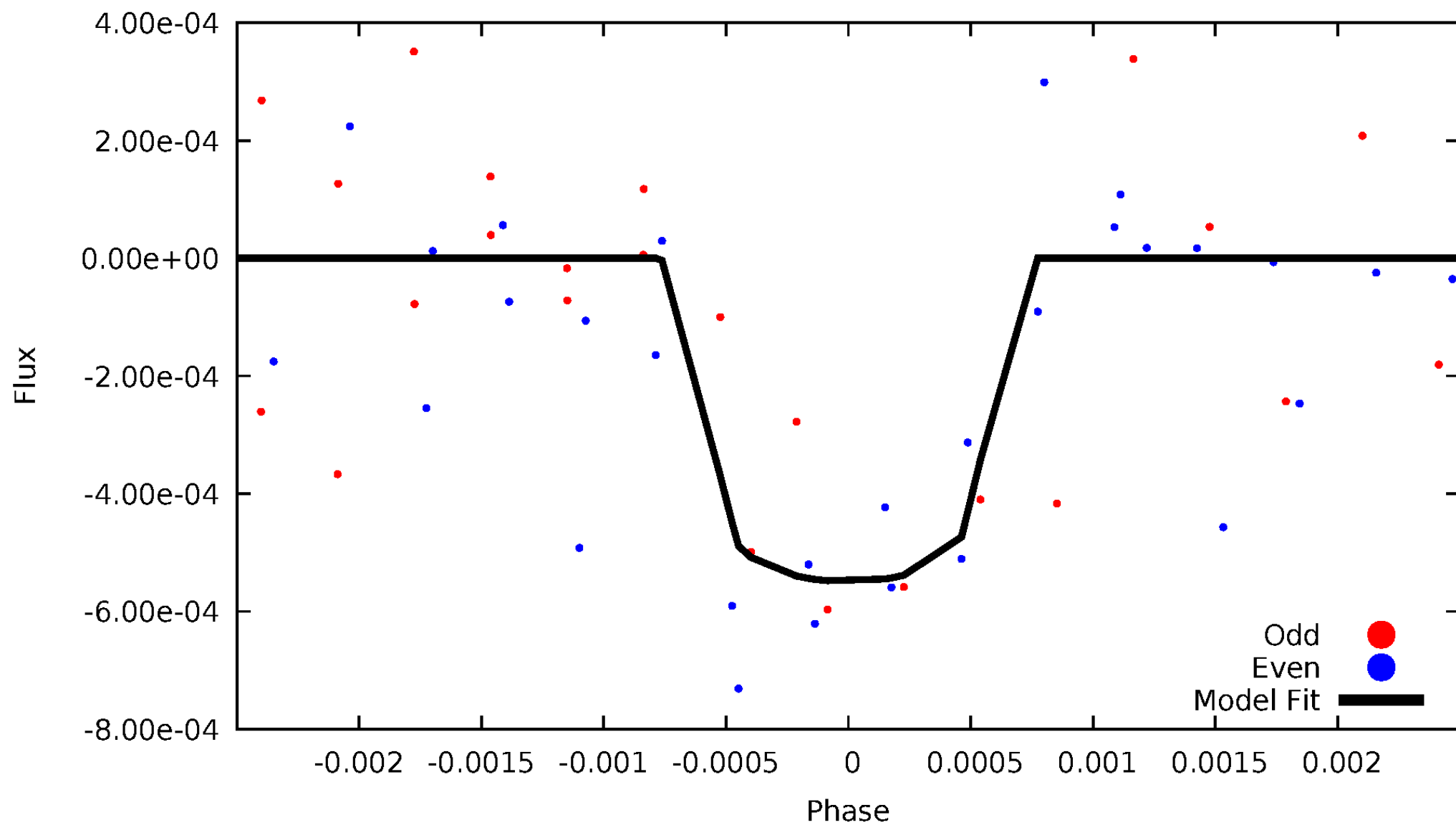


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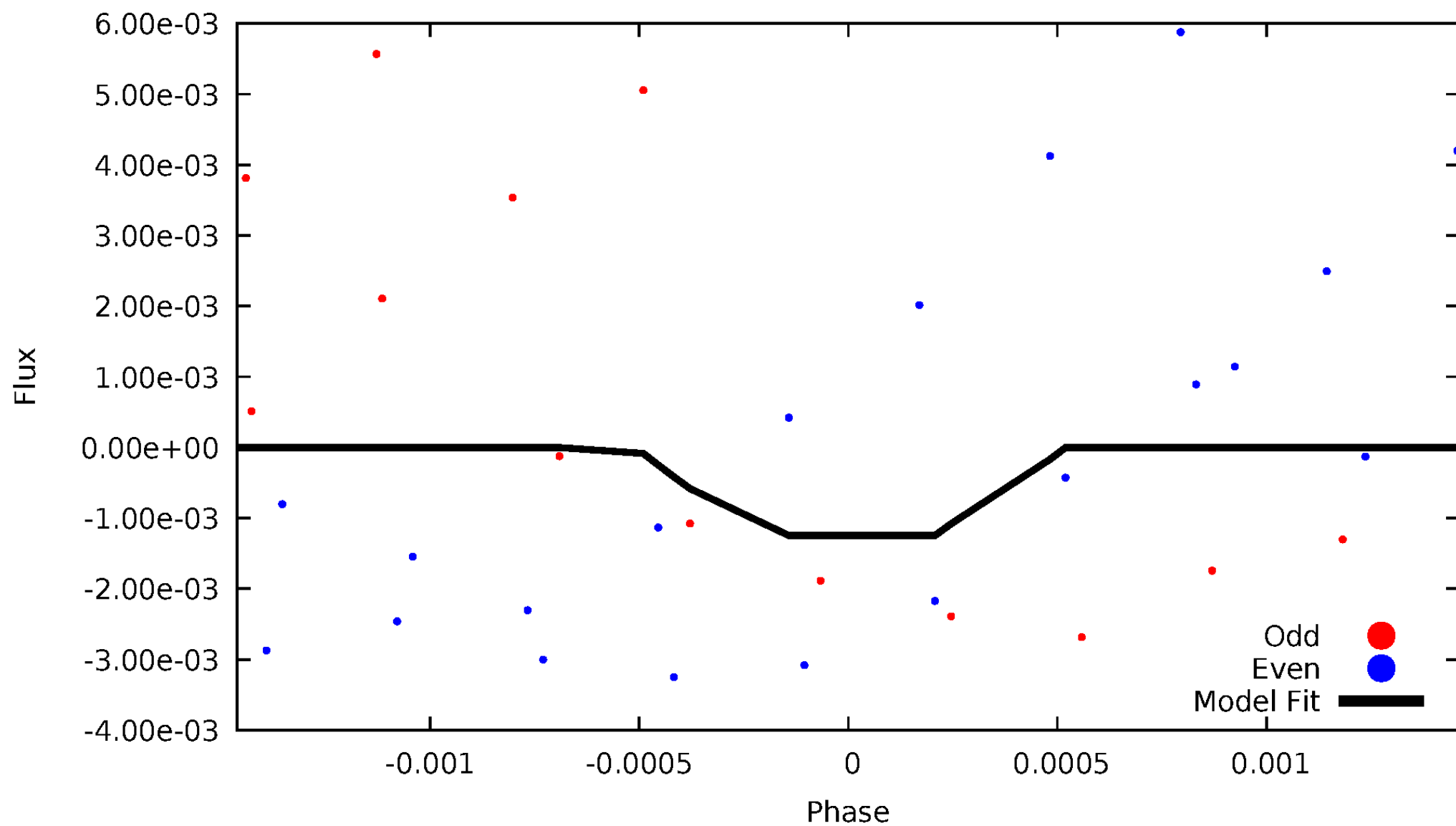
DV Odd/Even

TCE 005942605-04



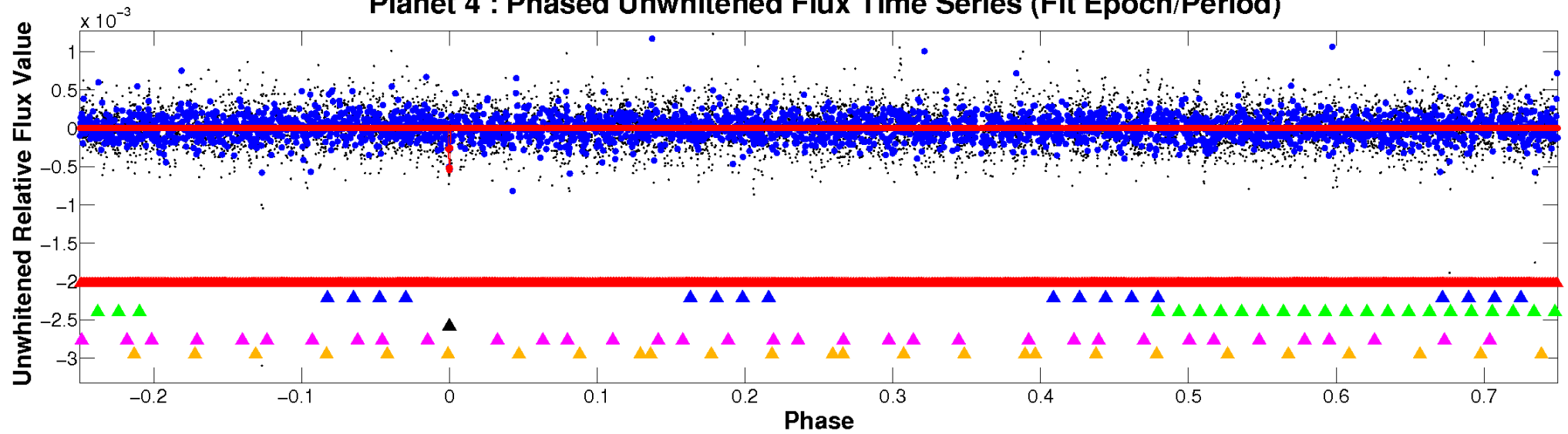
ALT Odd/Even

TCE 005942605-04

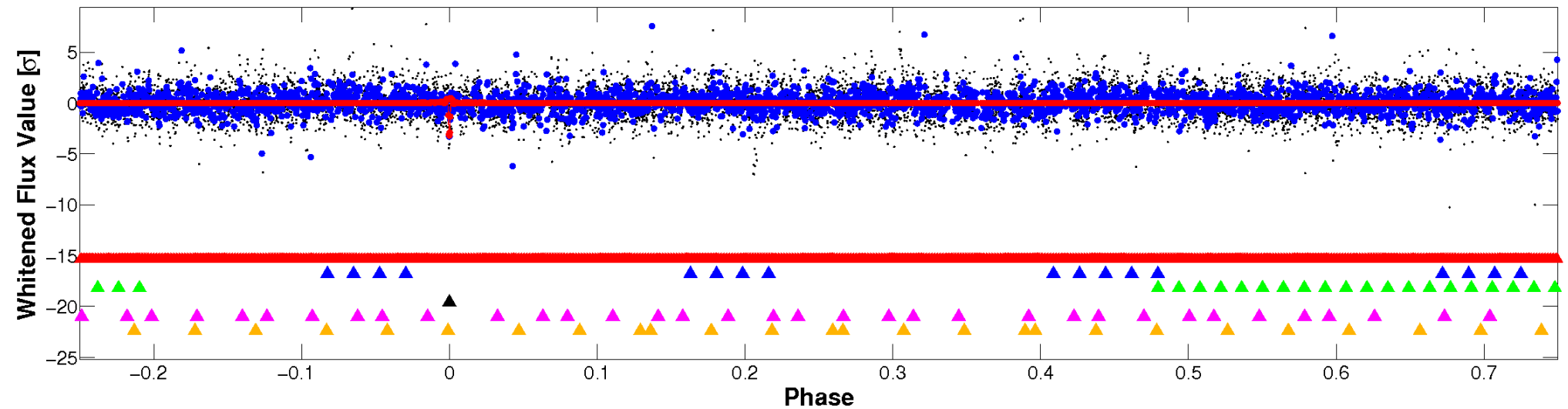


Non-Whitened Vs. Whitened Light Curve

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

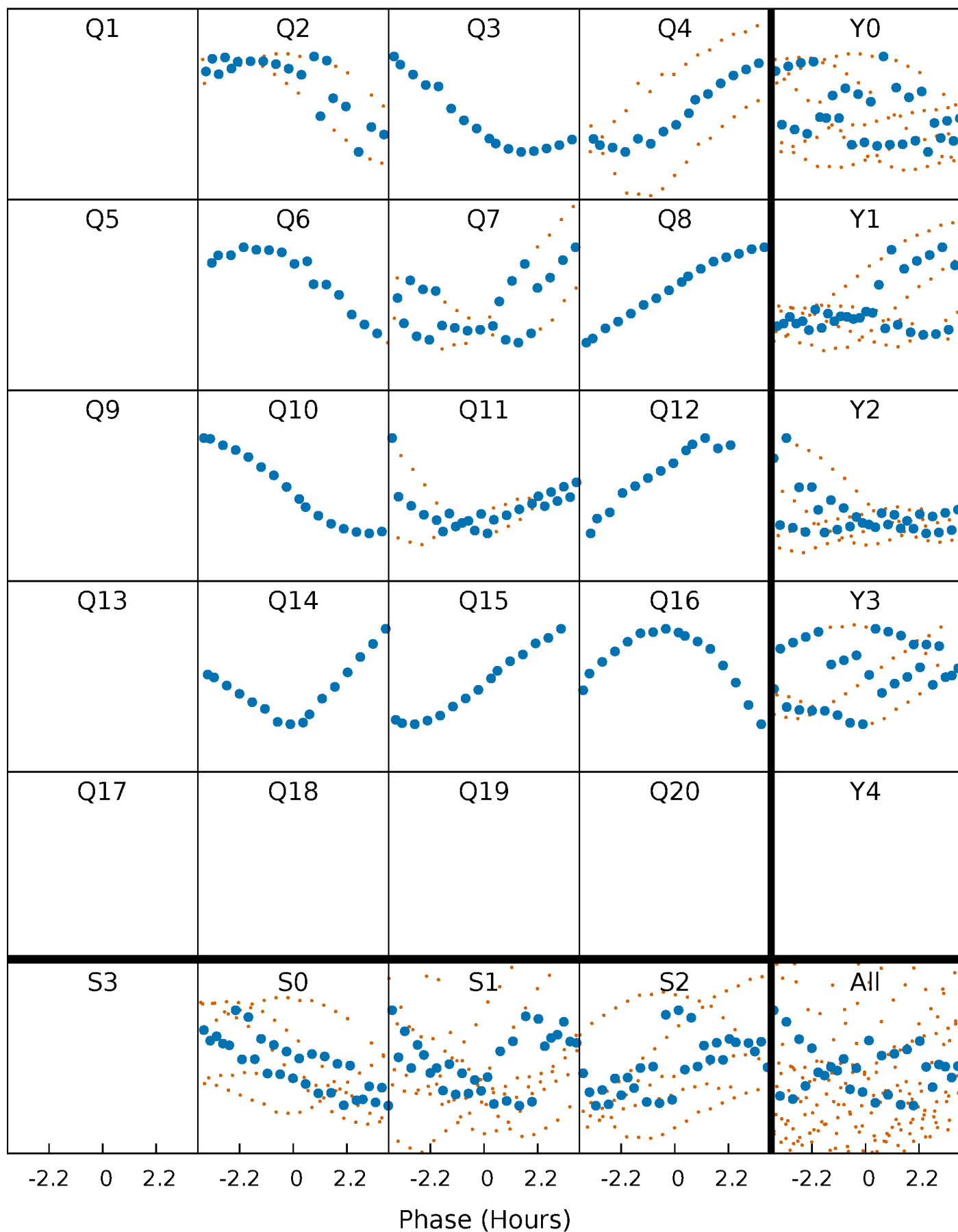


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



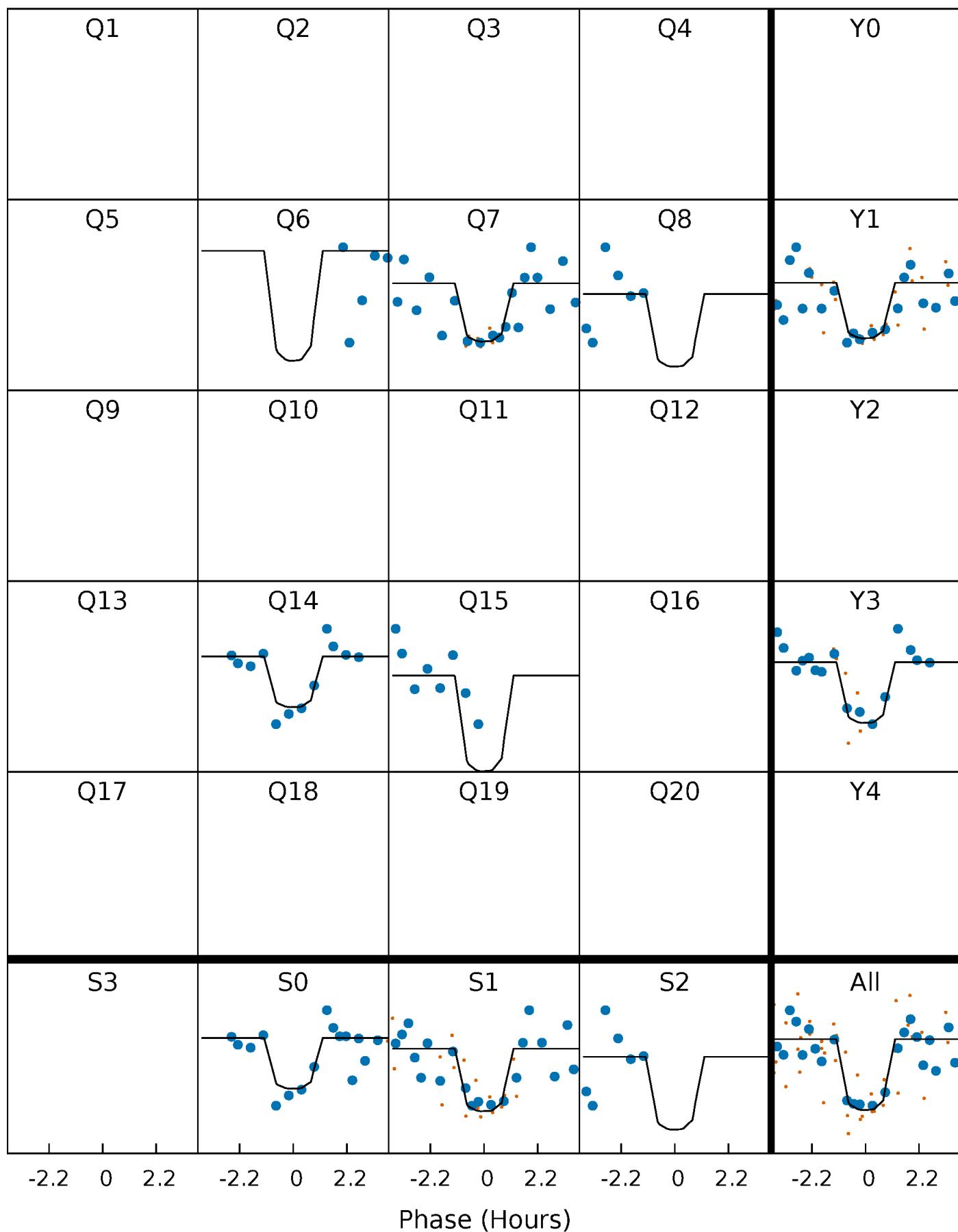
PDC Quarter-Phased Transit Curves

TCE 005942605-04 P= 65.410188 Days $T_0=179.276737$ (BKJD)



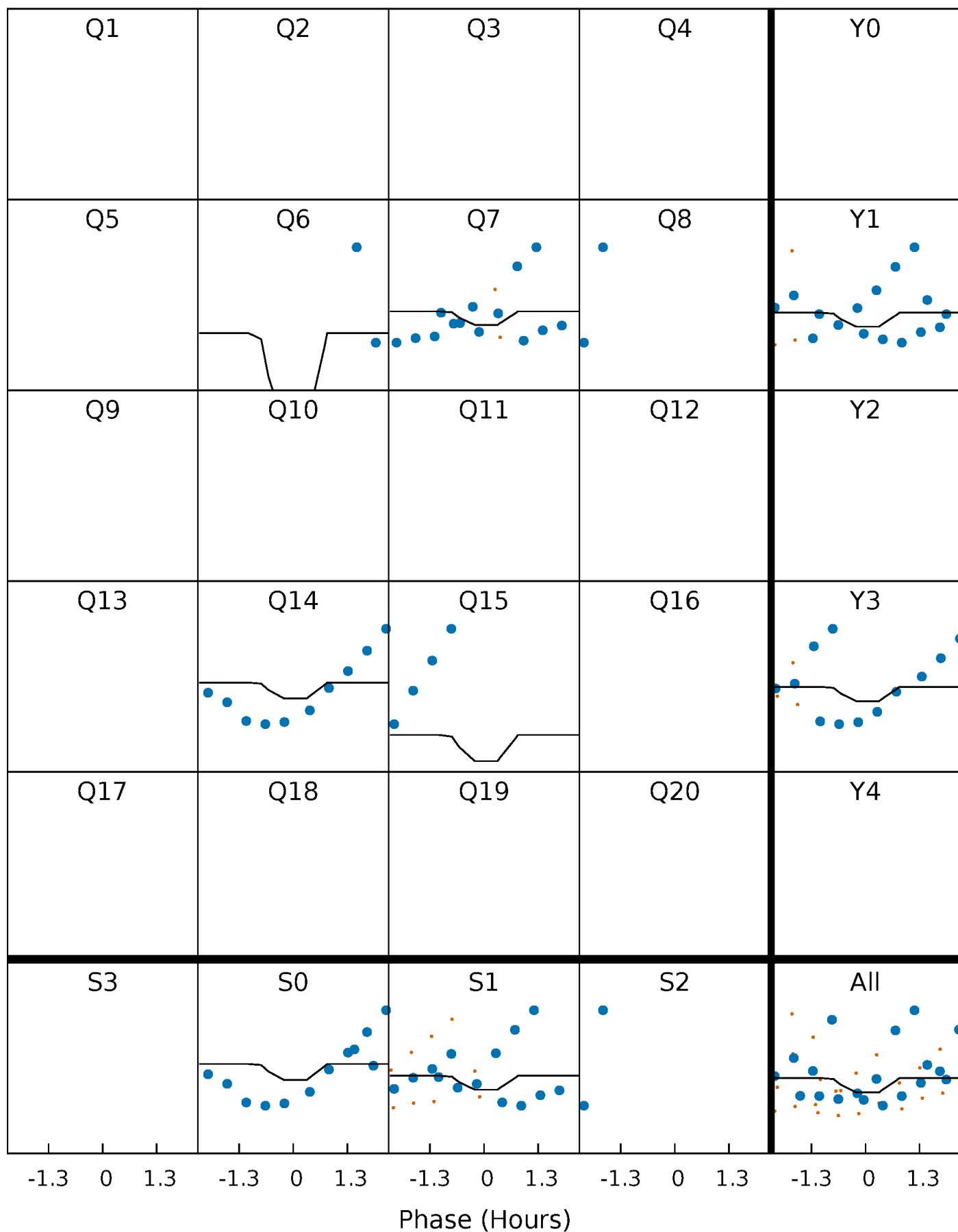
DV Quarter-Phased Transit Curves

TCE 005942605-04 P= 65.410188 Days $T_0=179.276737$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

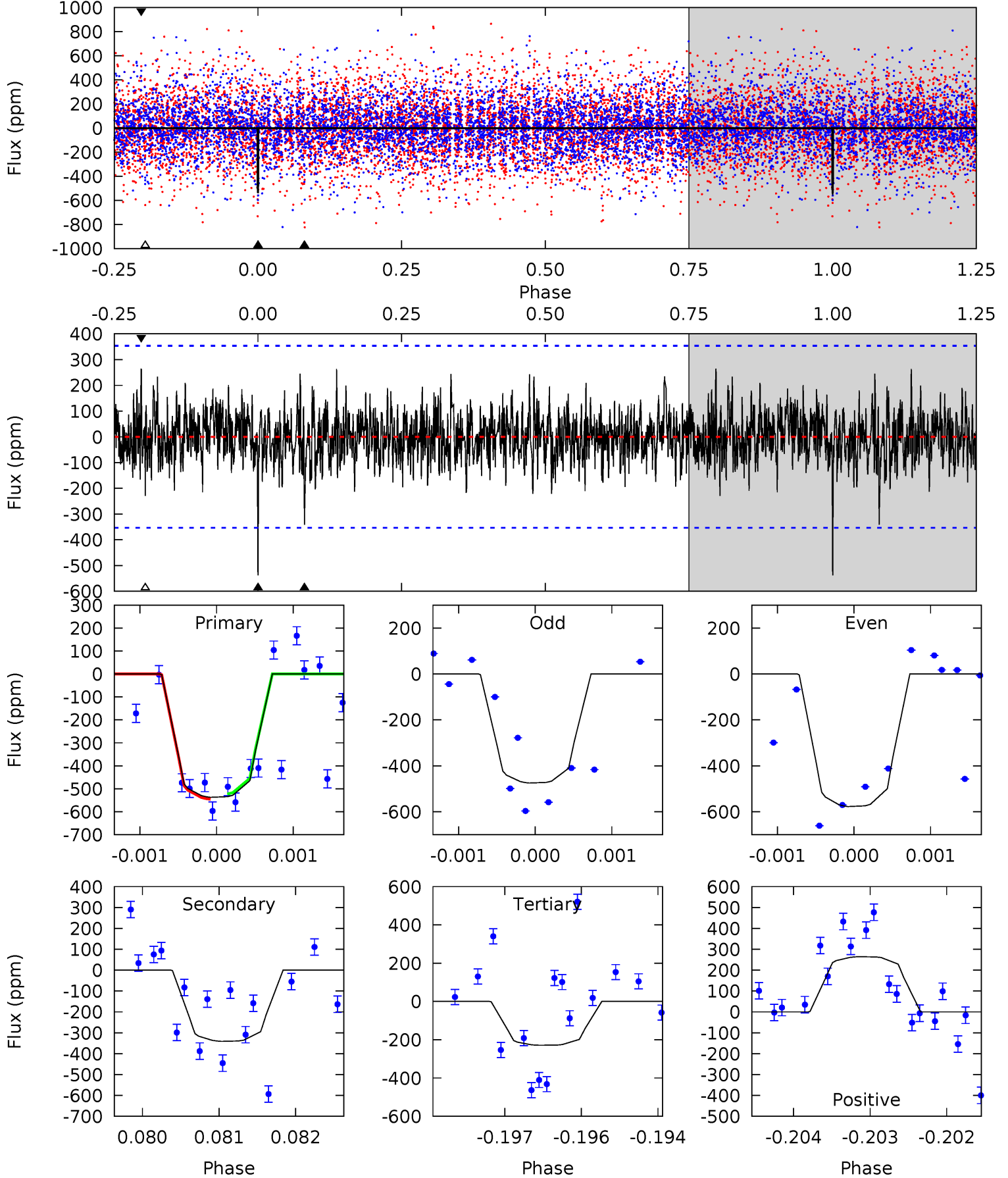
TCE 005942605-04 P= 65.410113 Days $T_0=179.296461$ (BKJD)



DV Model-Shift Uniqueness Test

005942605-04, P = 65.410188 Days, E = 113.866549 Days

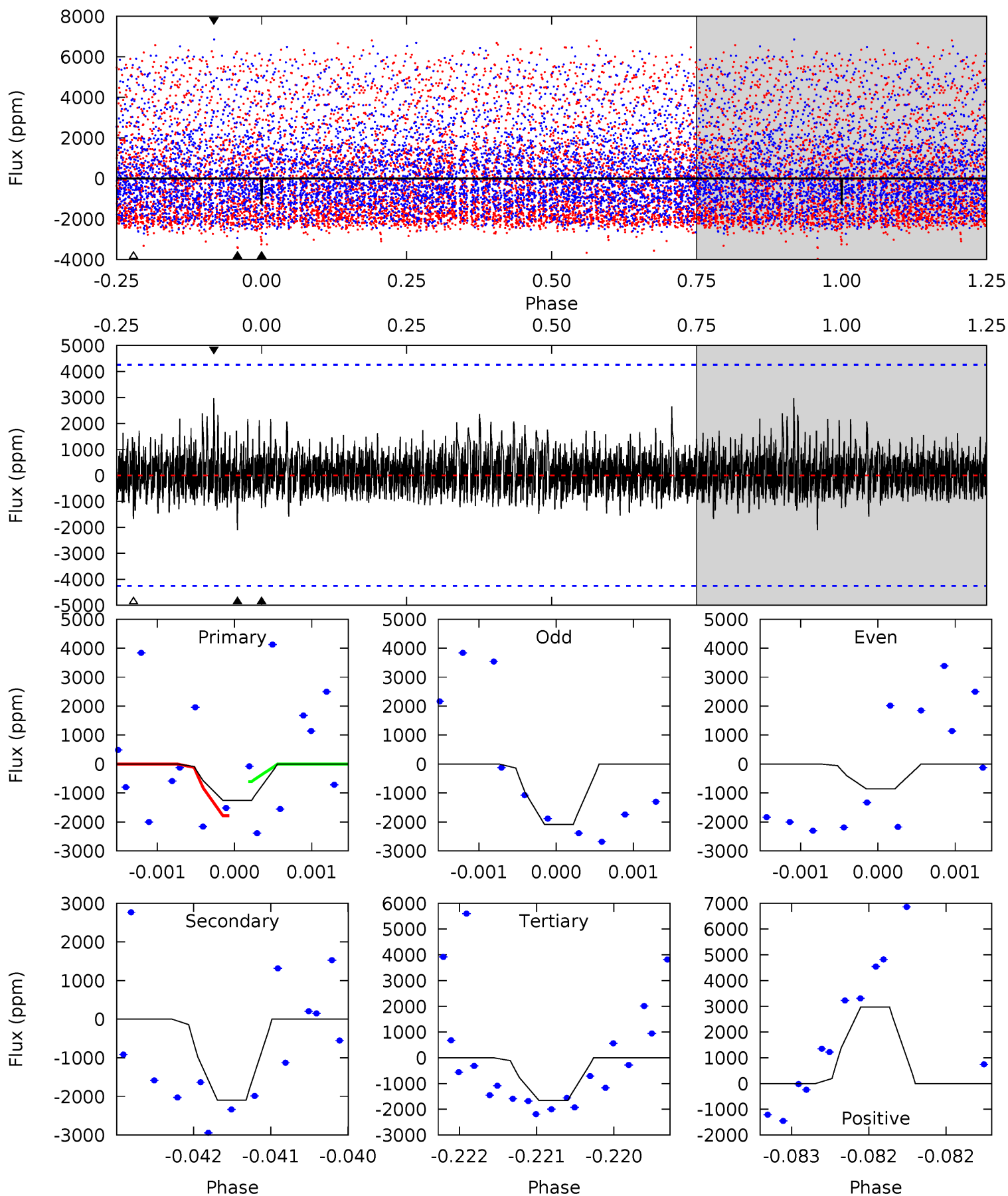
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.27	5.25	3.53	4.07	5.44	3.27	1.17	4.74	4.20	1.72	1.18	0.74	0.88	0.33	0.17



Alt Model-Shift Uniqueness Test

005942605-04, P = 65.410113 Days, E = 113.886348 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.61	2.69	2.13	3.81	5.46	3.31	0.76	-0.52	-2.21	0.56	-1.13	0.77	0.58	0.59	0.73



Stellar Parameters For KIC 005942605

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	11430^{+323}_{-485}	$4.354^{+0.052}_{-0.157}$	$-0.500^{+0.550}_{-0.250}$	$1.641^{+0.435}_{-0.145}$	$2.218^{+0.250}_{-0.167}$	$0.707^{+0.154}_{-0.317}$
	+3%/-4%	+1%/-4%	+110%/-50%	+27%/-9%	+11%/-8%	+22%/-45%
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 005942605-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-341 ± 65	$4.54^{+3.20}_{-2.63}$	1418^{+78}_{-76}	9106^{+10360}_{-2562}	1520^{+7600}_{-1018}
Alt.	-2096 ± 779	$6.90^{+3.45}_{-3.59}$	1416^{+87}_{-67}	13467^{+15727}_{-4175}	4145^{+12759}_{-2530}

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 $A_{obs} \gg 1.0$

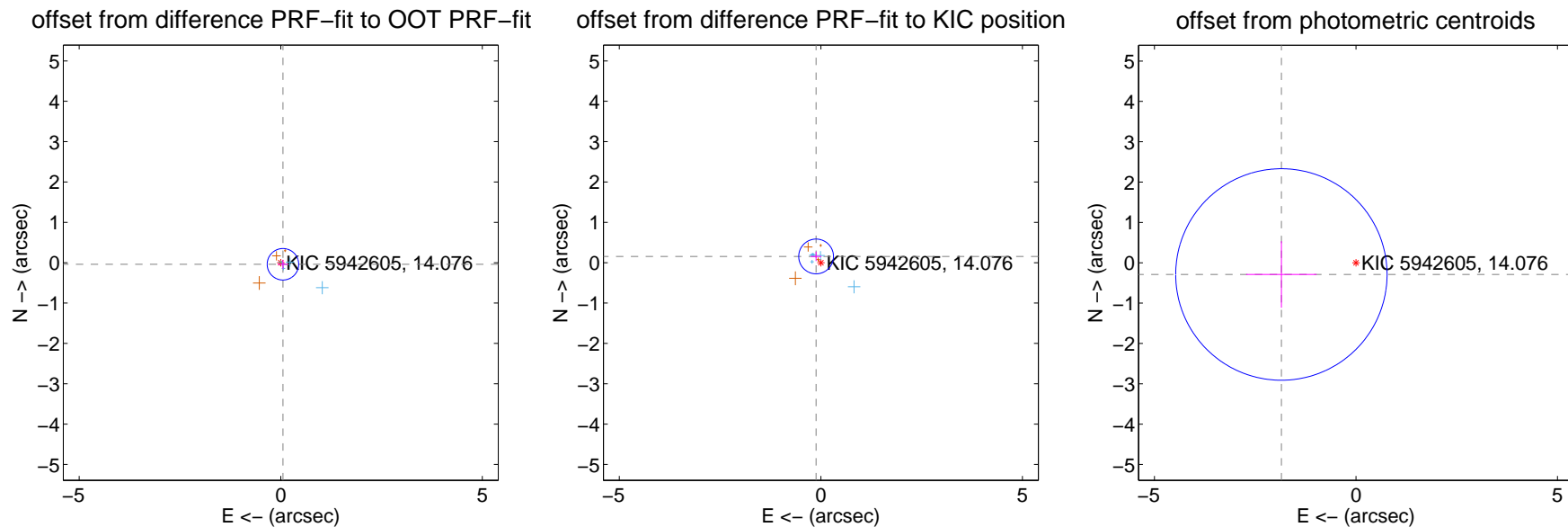
DV Centroid Data

Supplemental centroid analysis for 005942605-04. Kepler magnitude: 14.08. Transit SNR 10.12

There are 6 quarters with good PRF difference image offsets

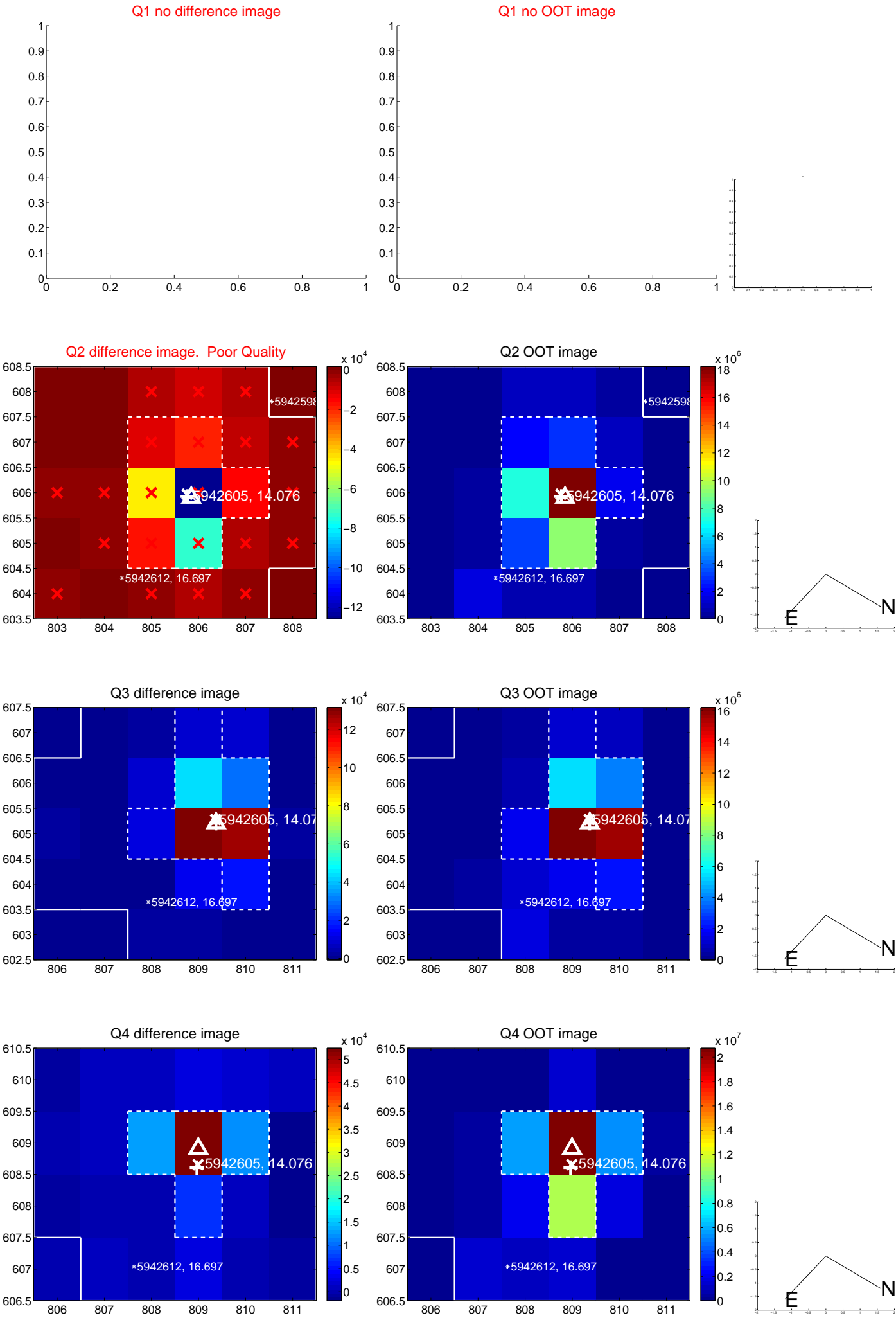
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.067 ± 0.130	0.51	-0.054 ± 0.125	-0.039 ± 0.111
PRF-fit source offset from KIC position	0.195 ± 0.144	1.36	0.118 ± 0.131	0.155 ± 0.116
photometric centroid source offset	1.87 ± 0.87	2.14	1.85 ± 0.88	-0.29 ± 0.82

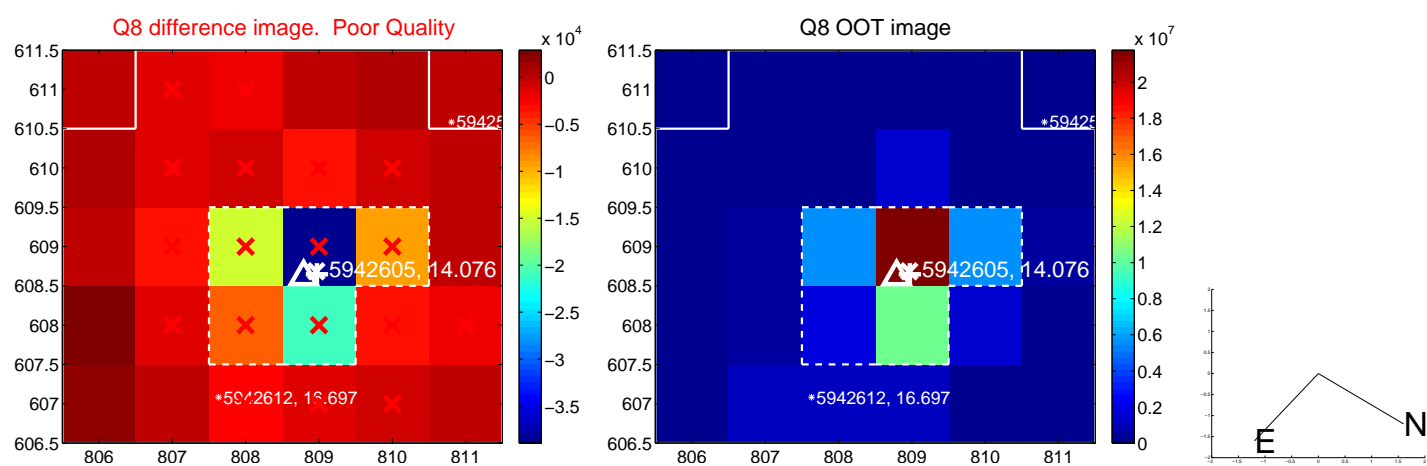
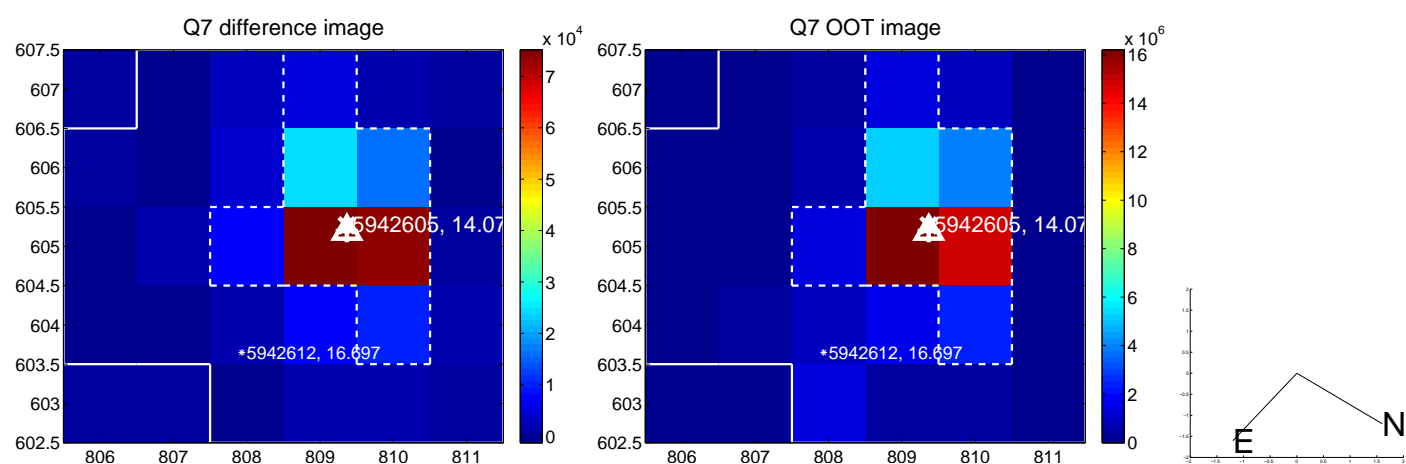
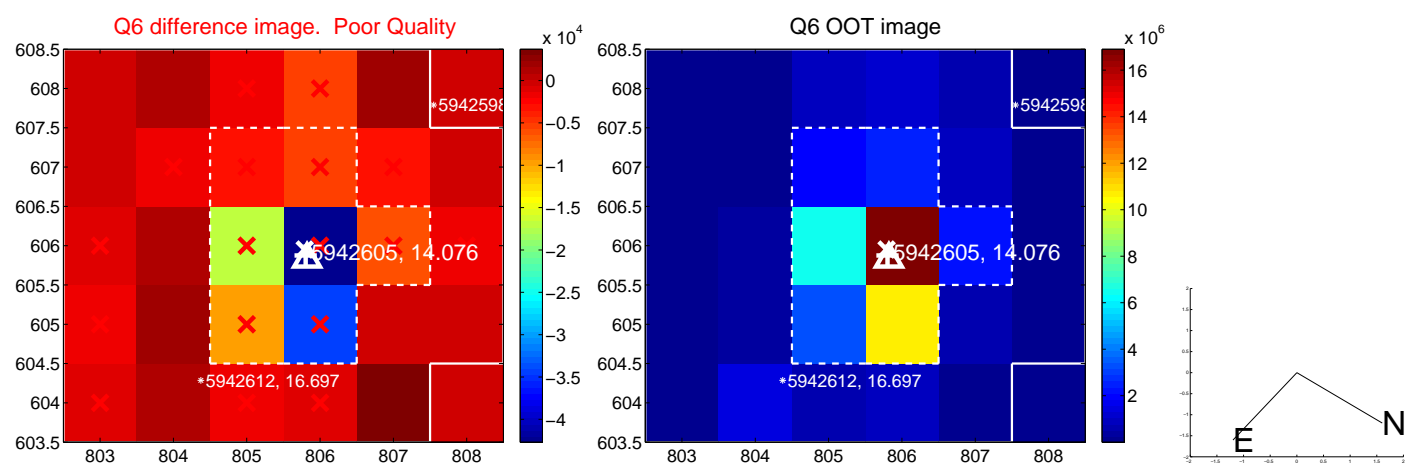
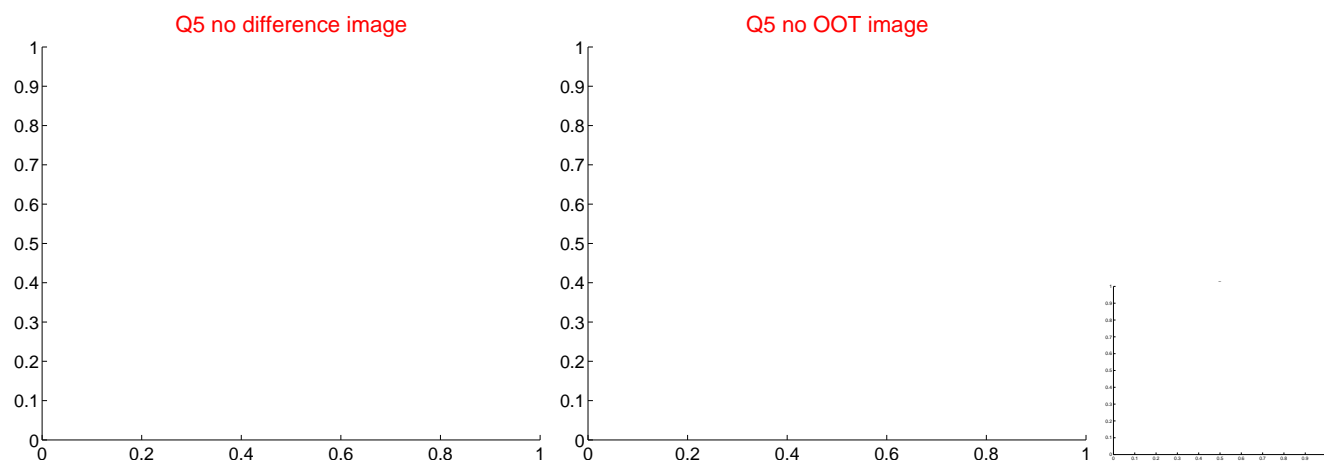


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

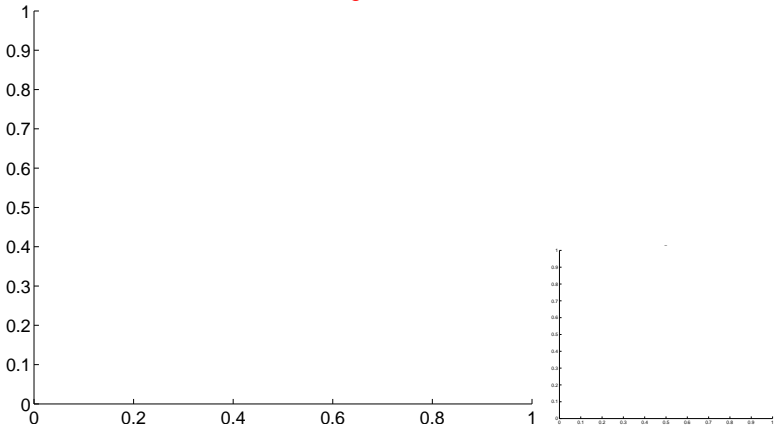


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

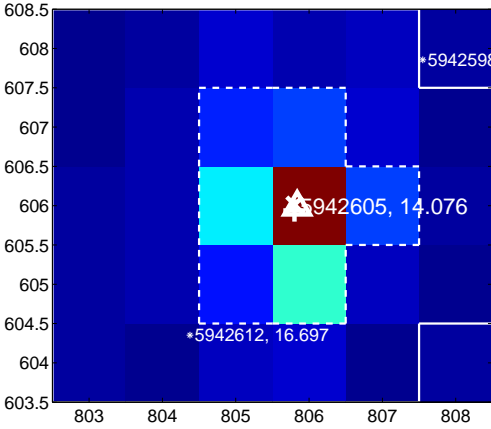
Q9 no difference image



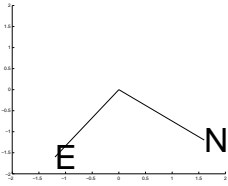
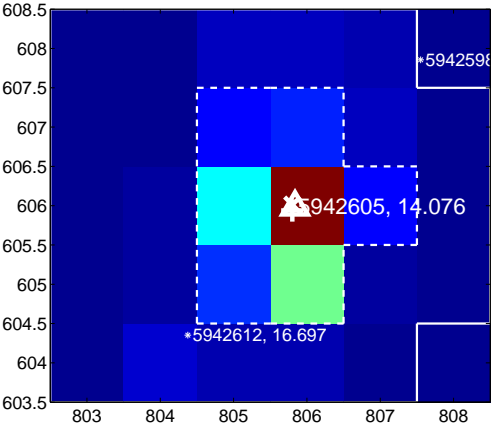
Q9 no OOT image



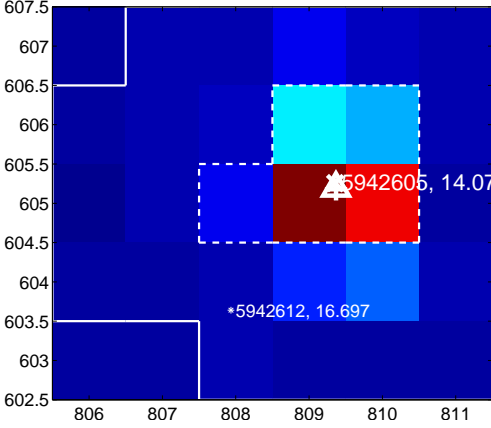
Q10 difference image



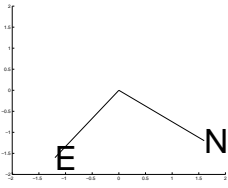
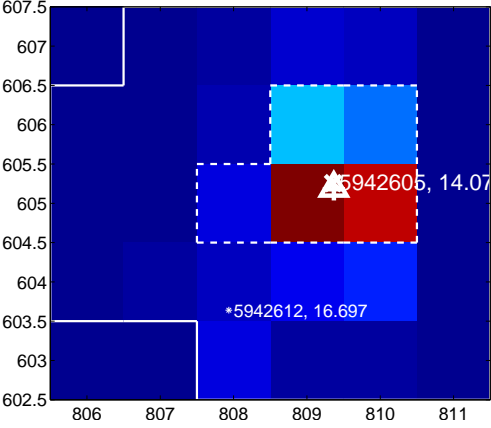
Q10 OOT image



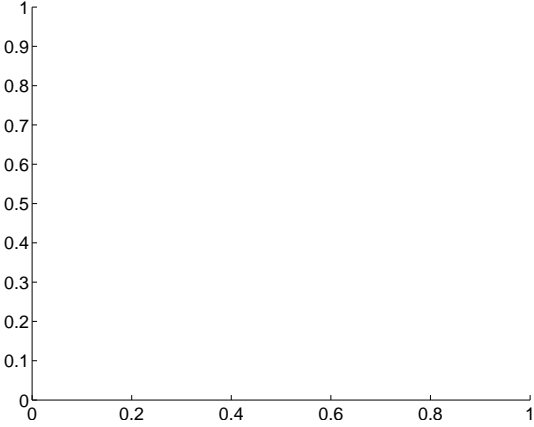
Q11 difference image



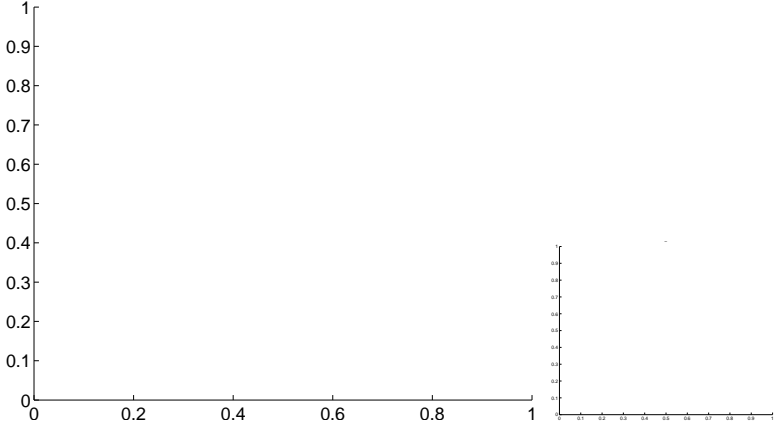
Q11 OOT image



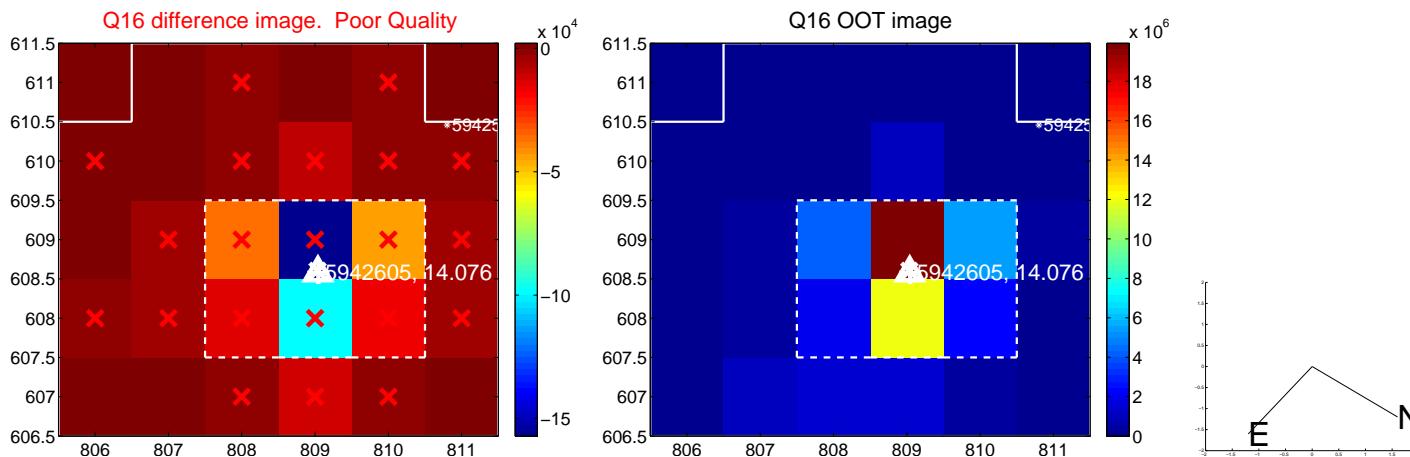
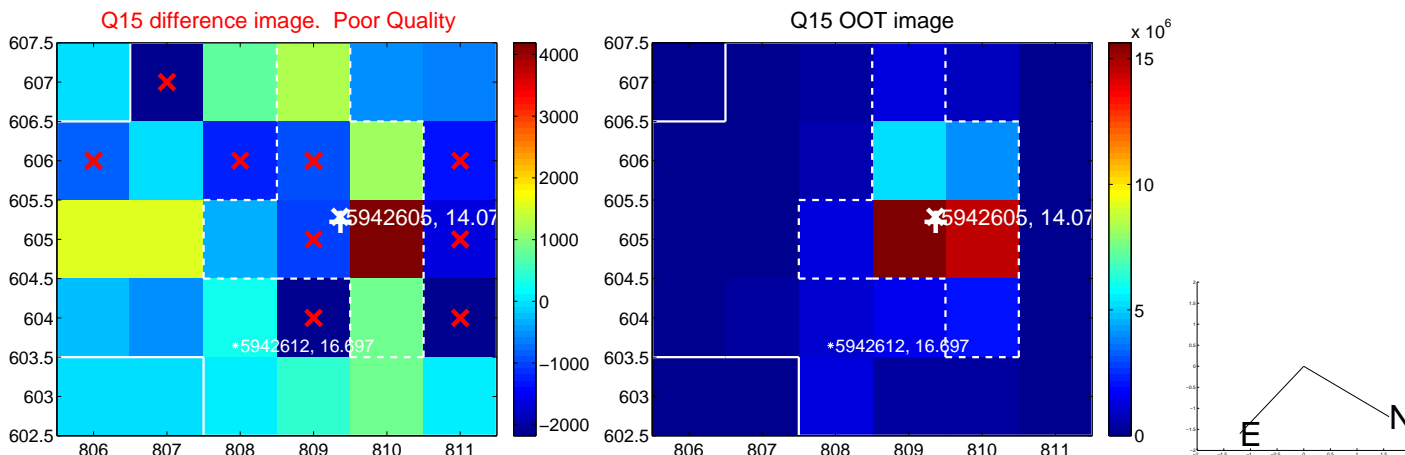
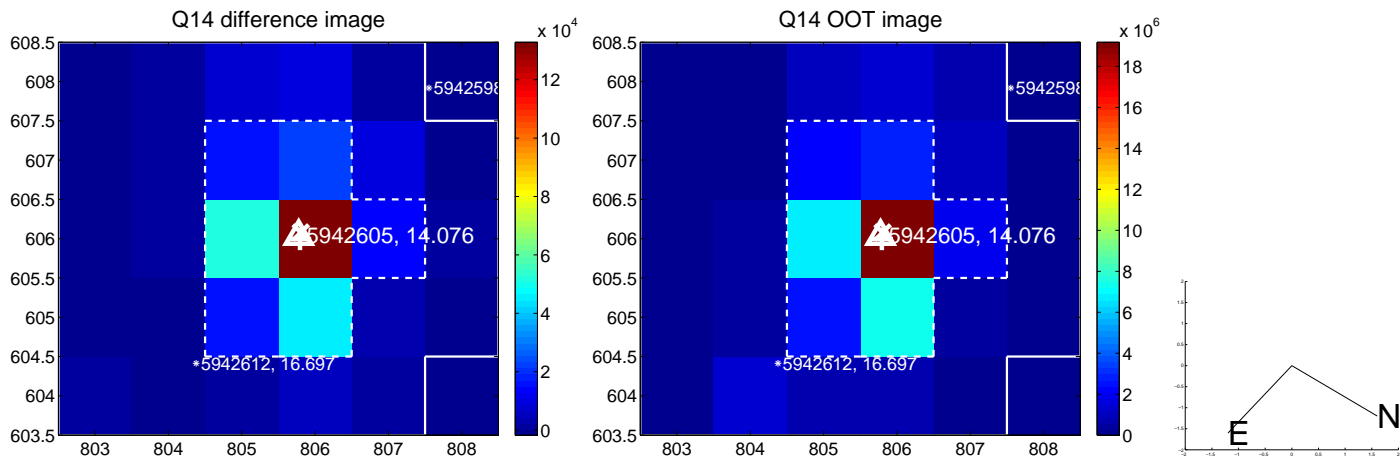
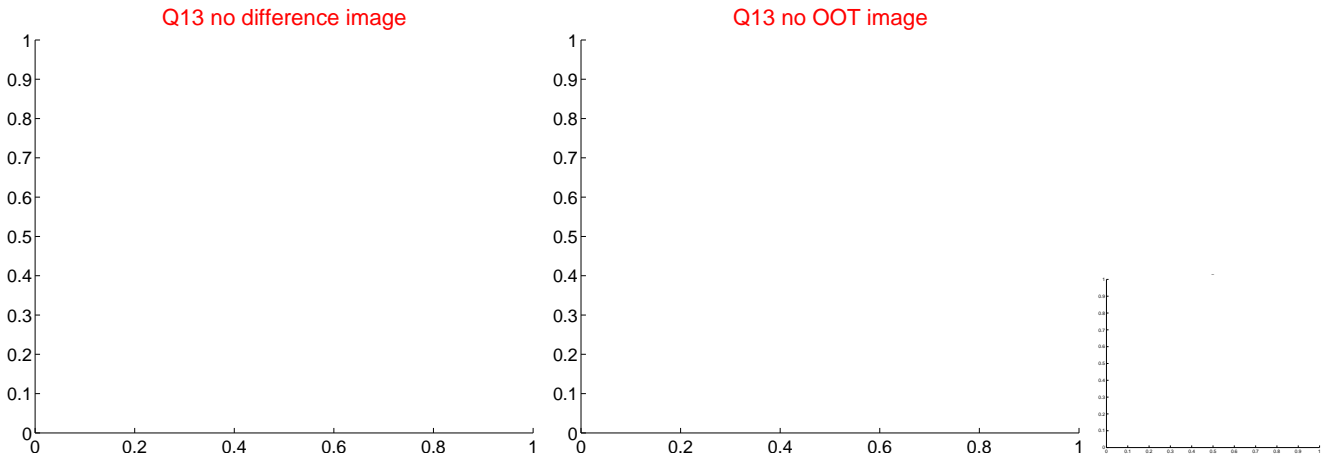
Q12 no difference image



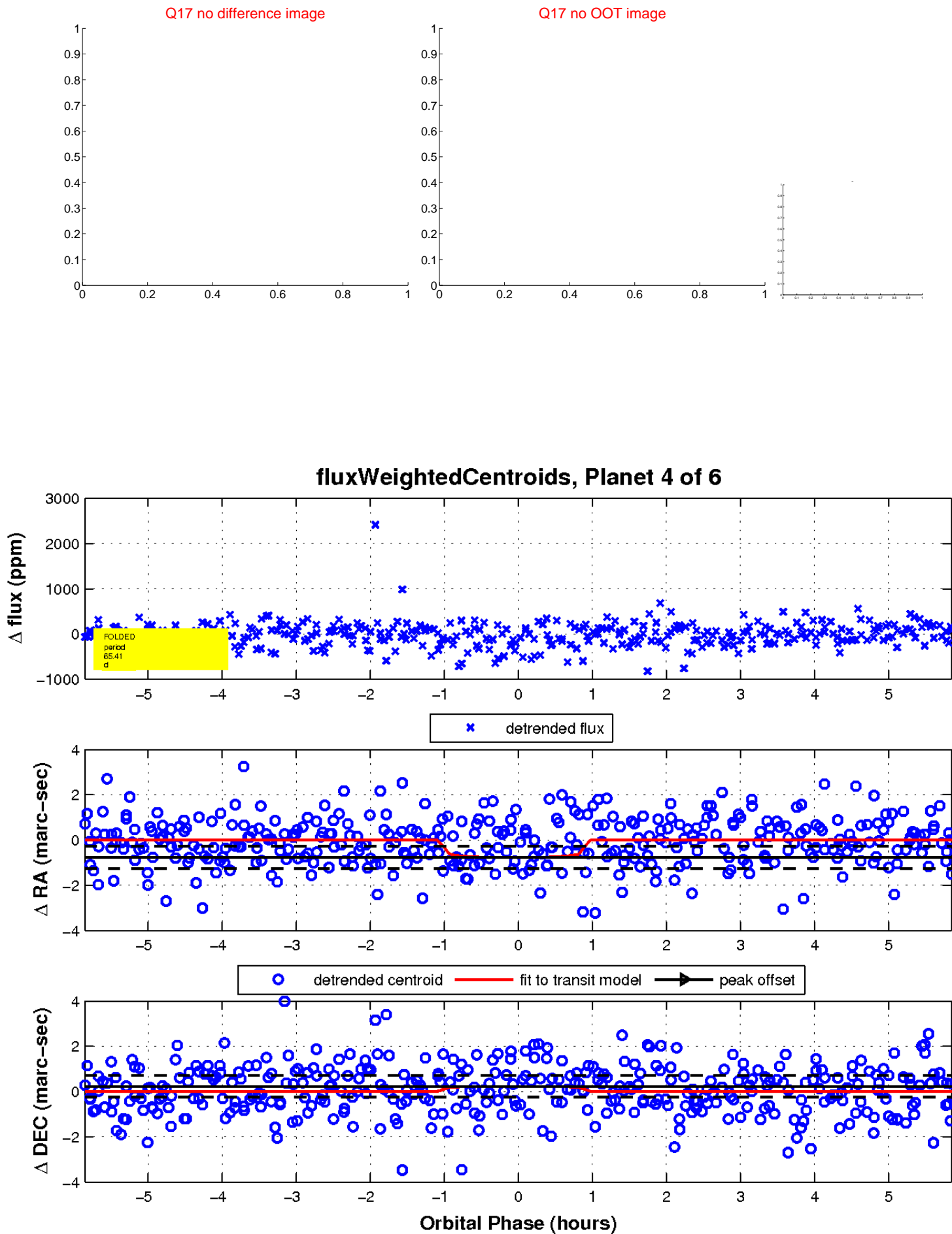
Q12 no OOT image



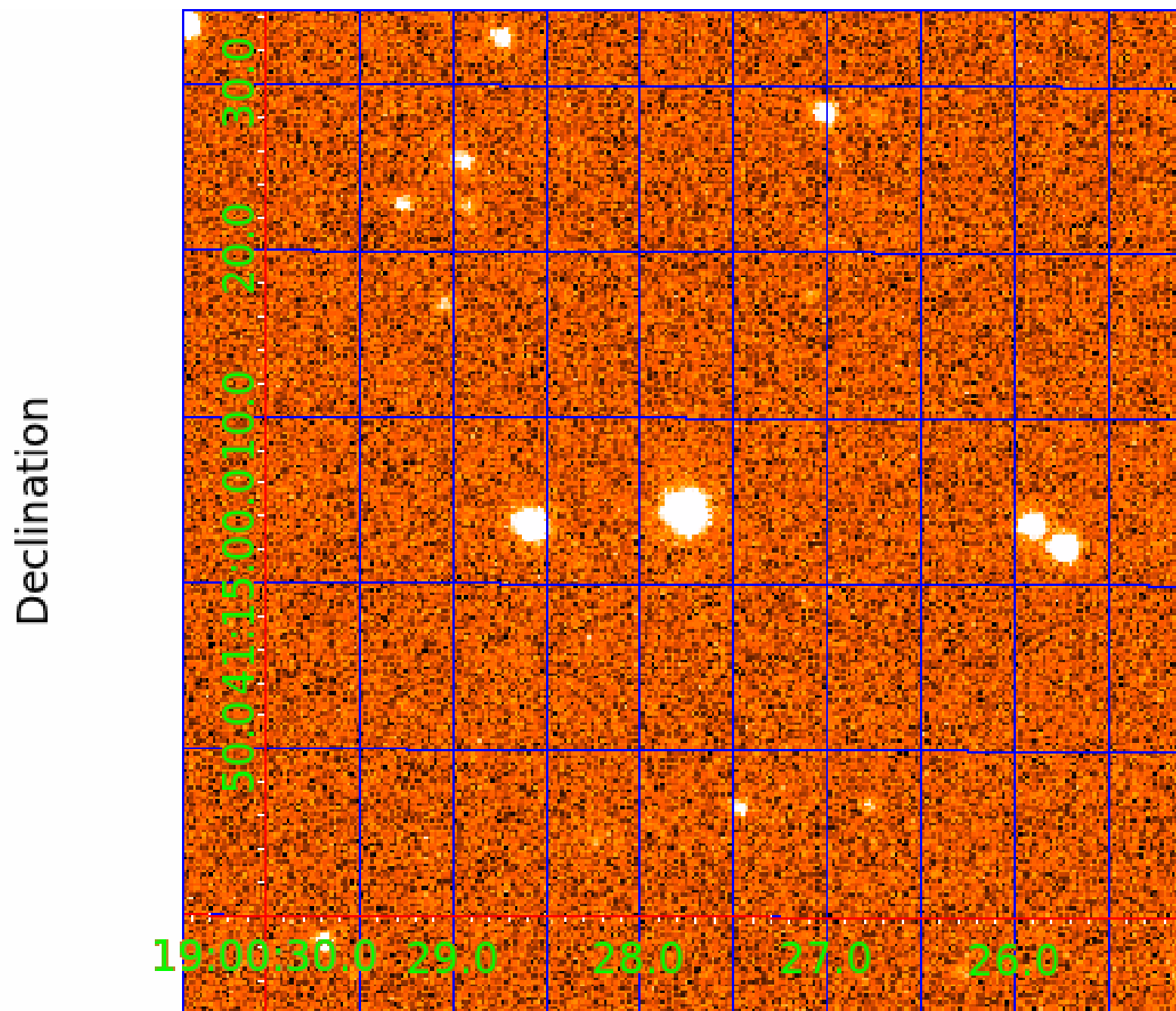
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005942605

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})
005942605-01	OBS	No	1.280137	132.209859	2.3	8.154	9.0	0.7	1.64	11430	0.26	45443.99
005942605-04	OBS	No	65.410188	179.276737	549.3	1.960	11.4	10.1	1.64	11430	3.98	239.68
005942605-05	OBS	No	41.906011	133.312553	281.7	12.000	8.0	-1.0	1.64	11430	2.84	433.96
005942605-06	OBS	No	56.898050	139.344456	60.8	5.557	8.4	2.0	1.64	11430	1.38	288.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005942605-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
005942605-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005942605-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005942605-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

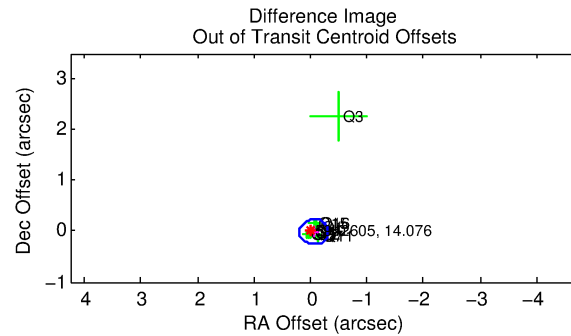
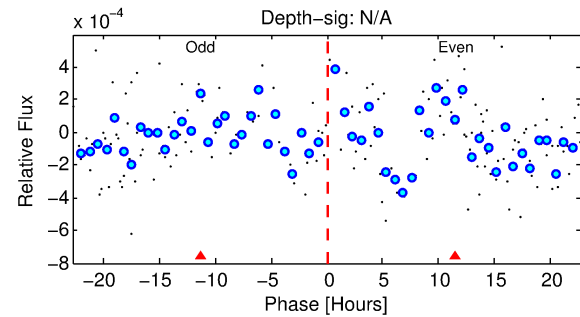
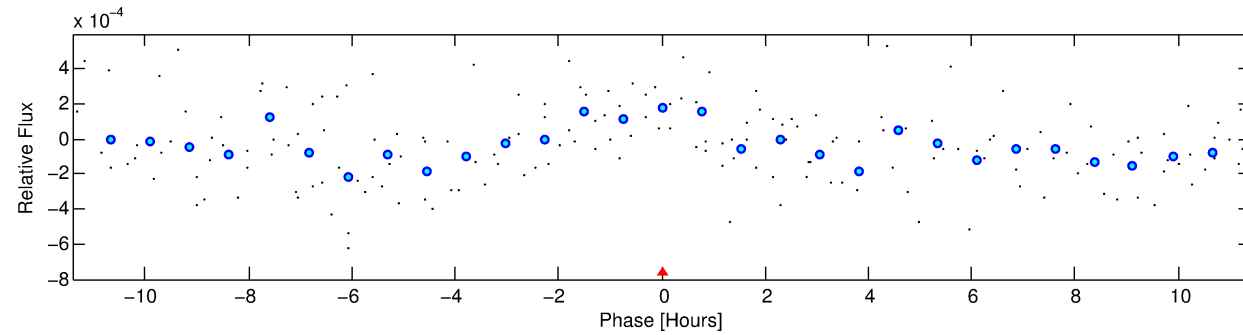
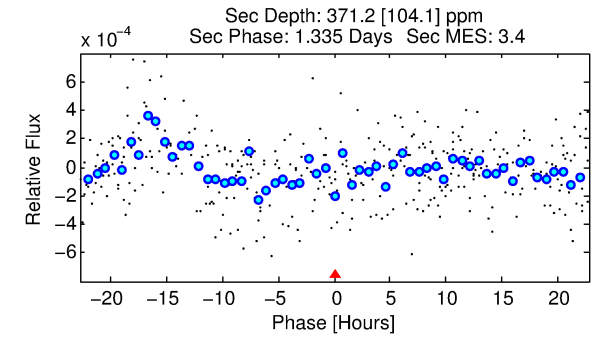
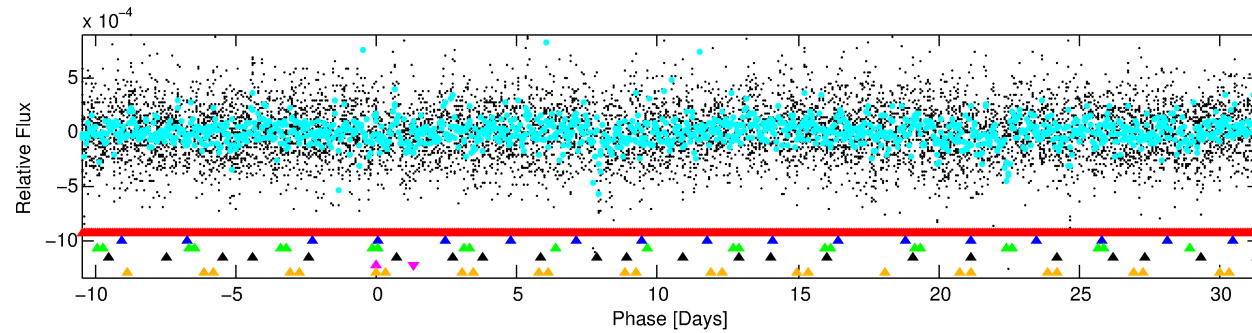
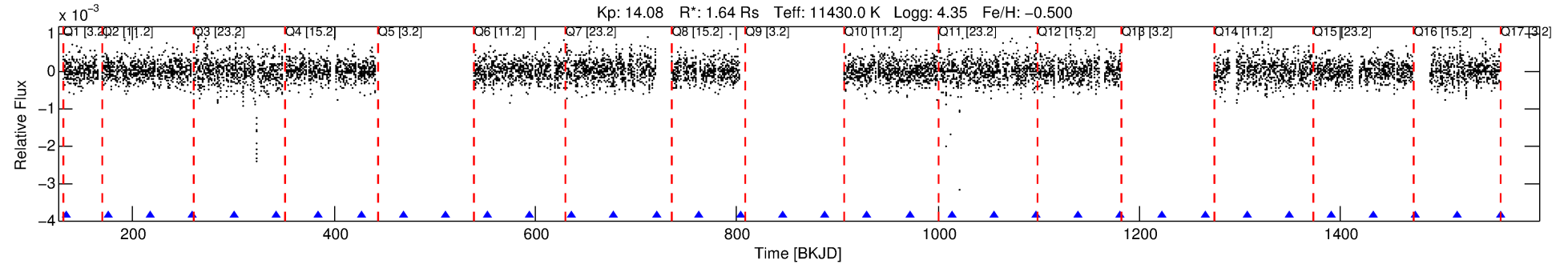
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005942605-05

No Significant Match Found

DV One-Page Summary

KIC: 5942605 Candidate: 5 of 6 Period: 41.906 d



TPS TCE Results:

Period = 41.90601 d
Epoch = 133.3126 BKJD

DV fit results are unavailable

DV Diagnostic Results:

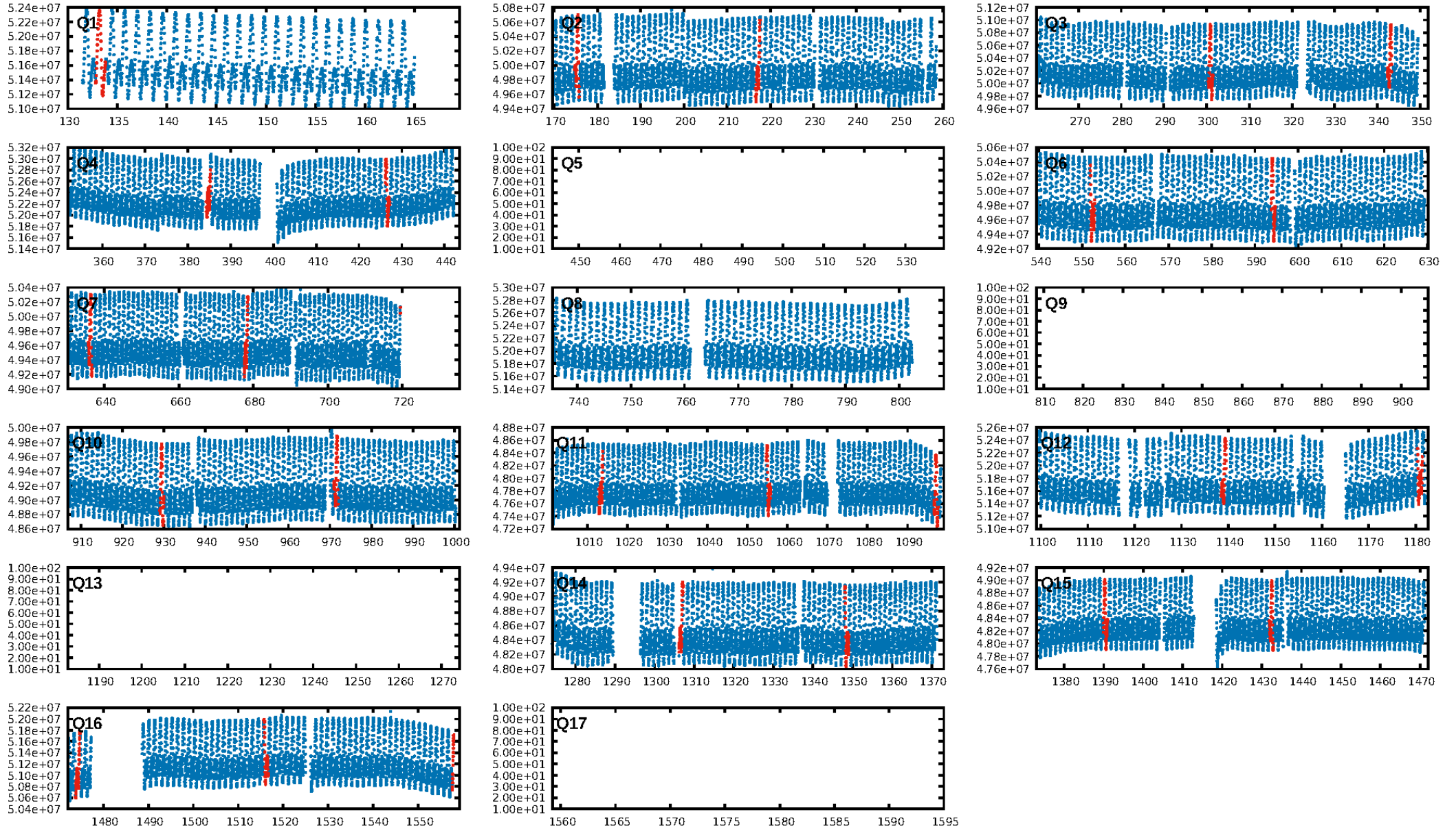
ShortPeriod-sig: 100.0% [67.20 σ]
LongPeriod-sig: 100.0% [27.21 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.66e-25
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -1.771

Centroid-sig: 10.6%
Centroid-so: 5.757 arcsec [1.15 σ]
OotOffset-rm: 0.058 arcsec [0.70 σ]
KicOffset-rm: 0.152 arcsec [0.81 σ]
OotOffset-st: 3/4/3/1 [11]
KicOffset-st: 3/4/3/1 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 0.25 [3/12]

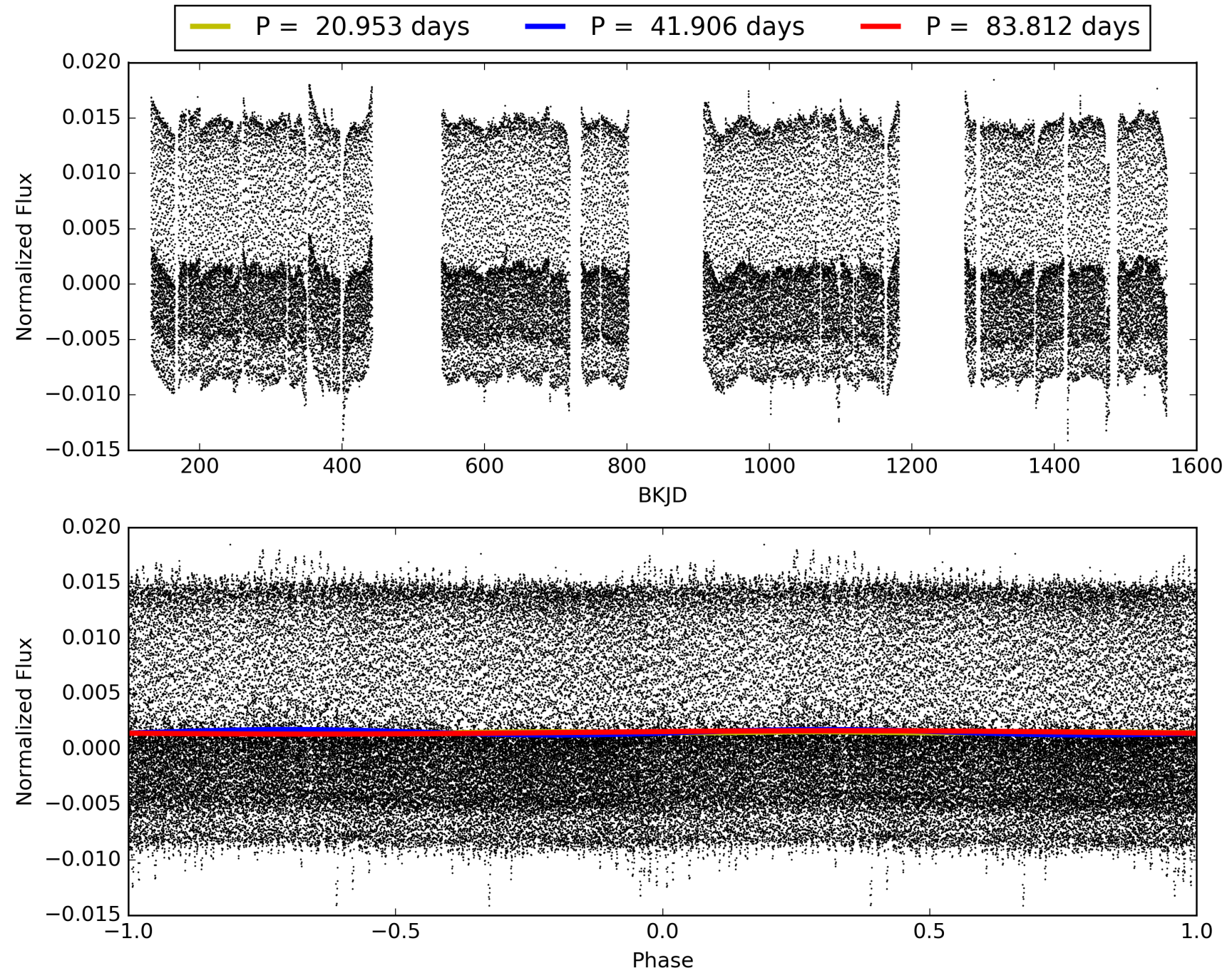
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:07:56 Z

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

TCE 005942605-05, PDC Light Curves

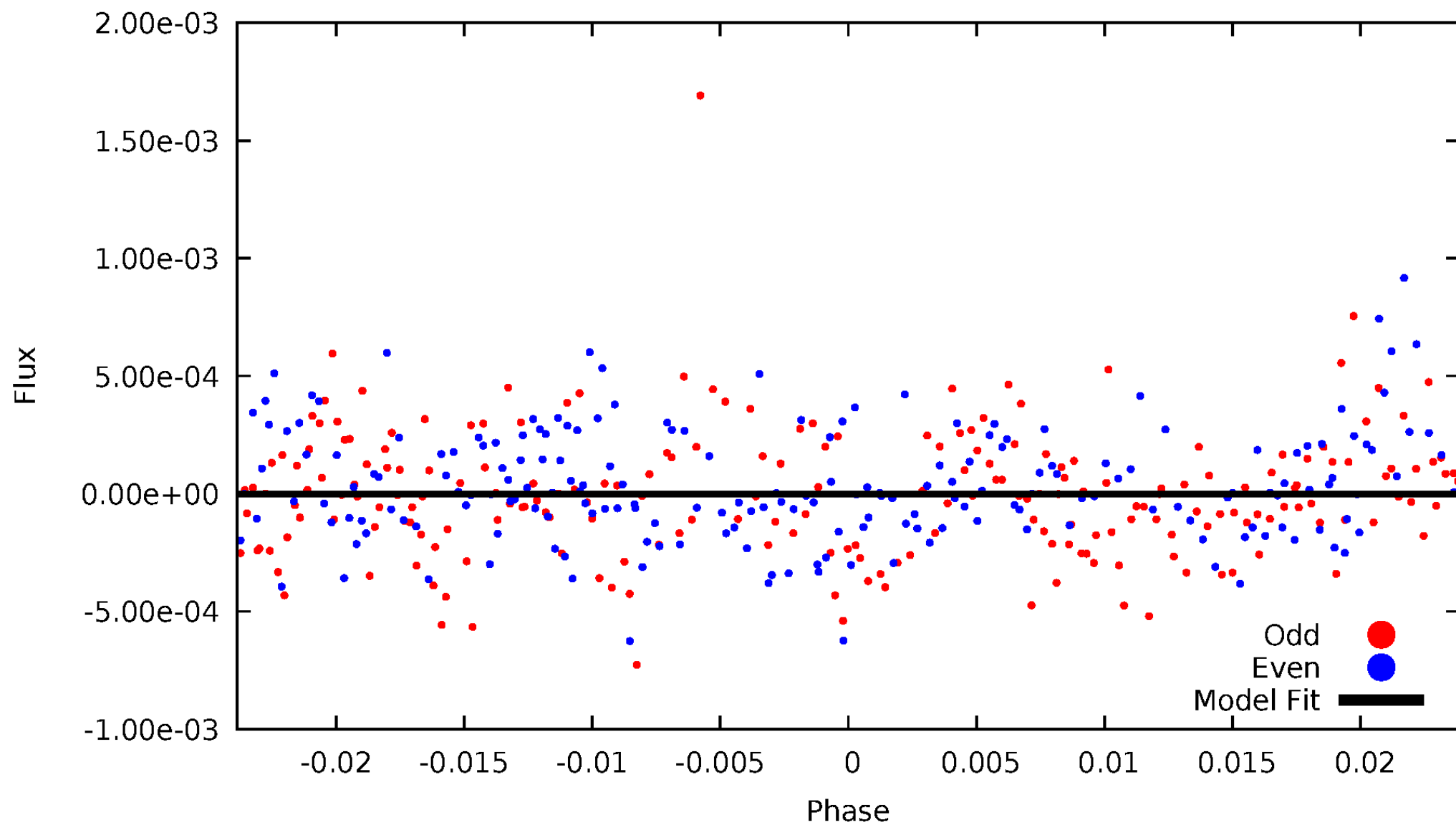


TCE 005942605-05



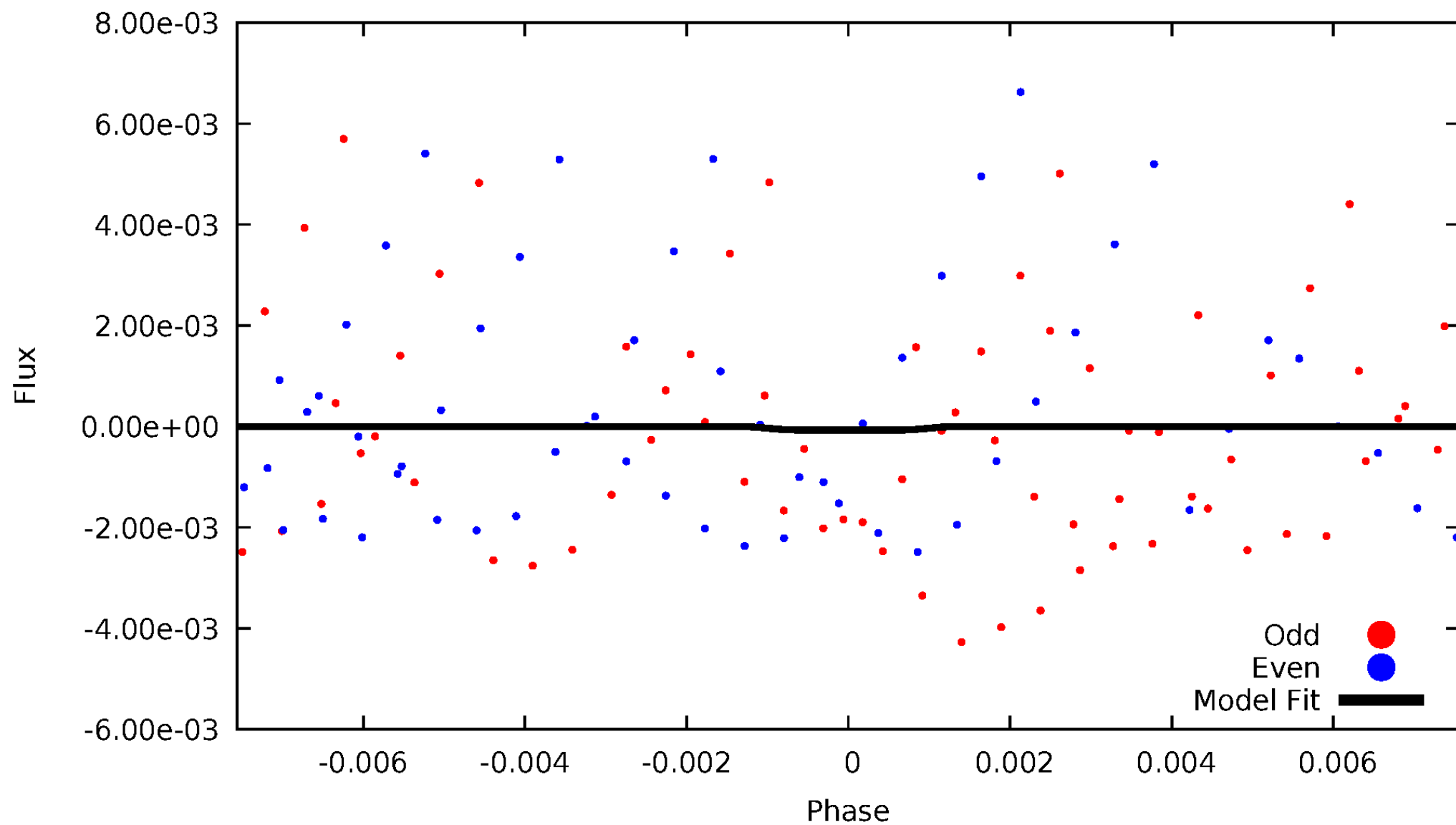
DV Odd/Even

TCE 005942605-05

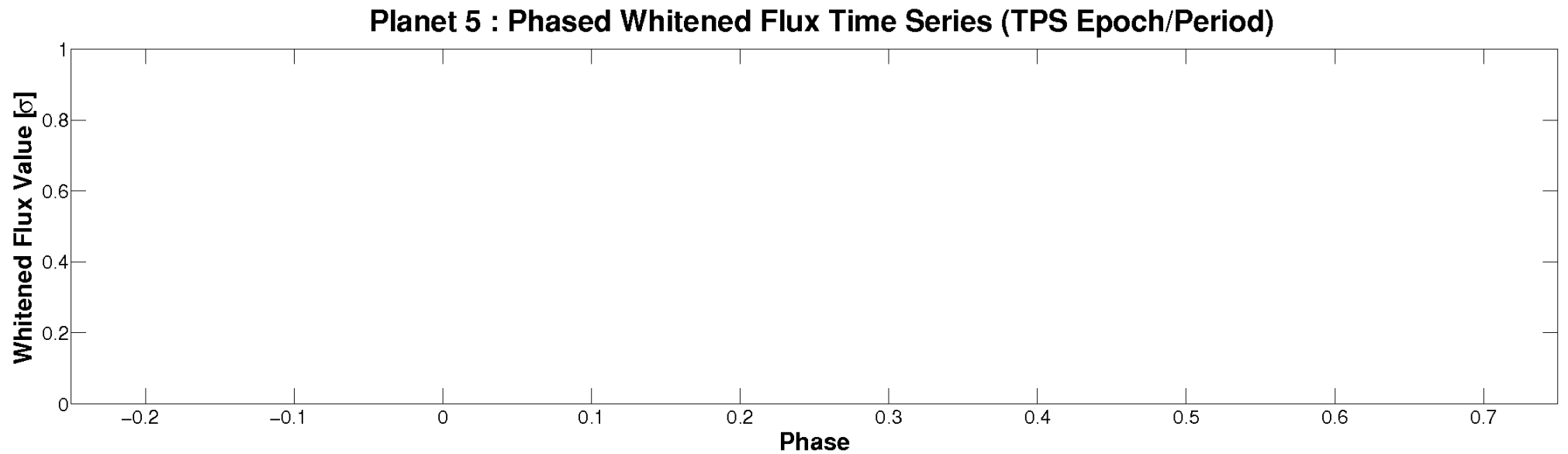
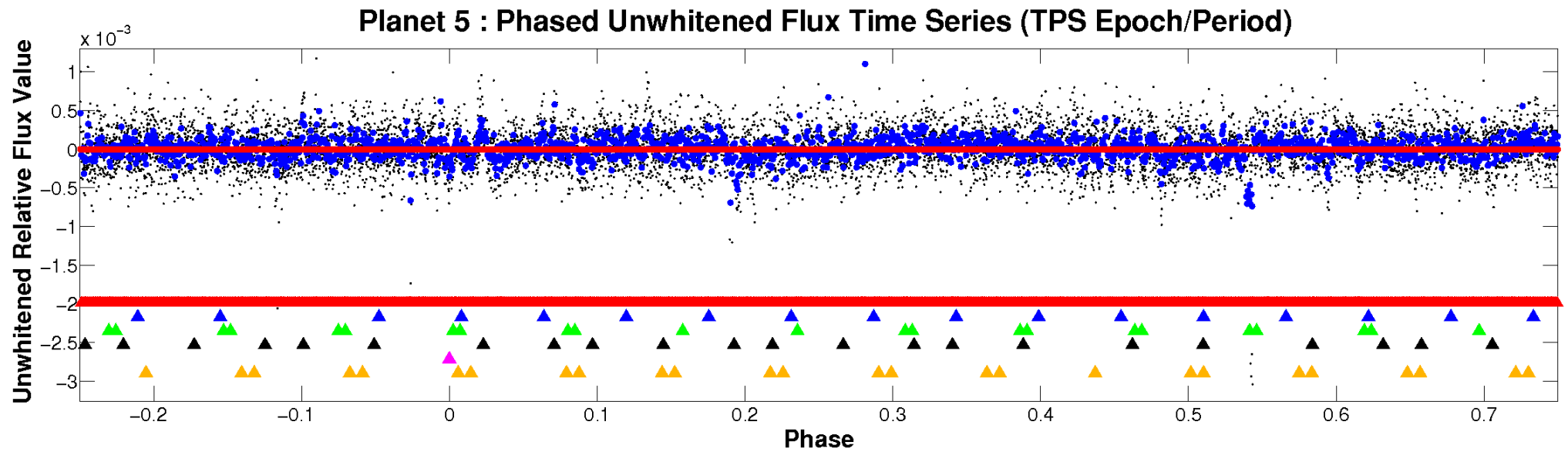


ALT Odd/Even

TCE 005942605-05

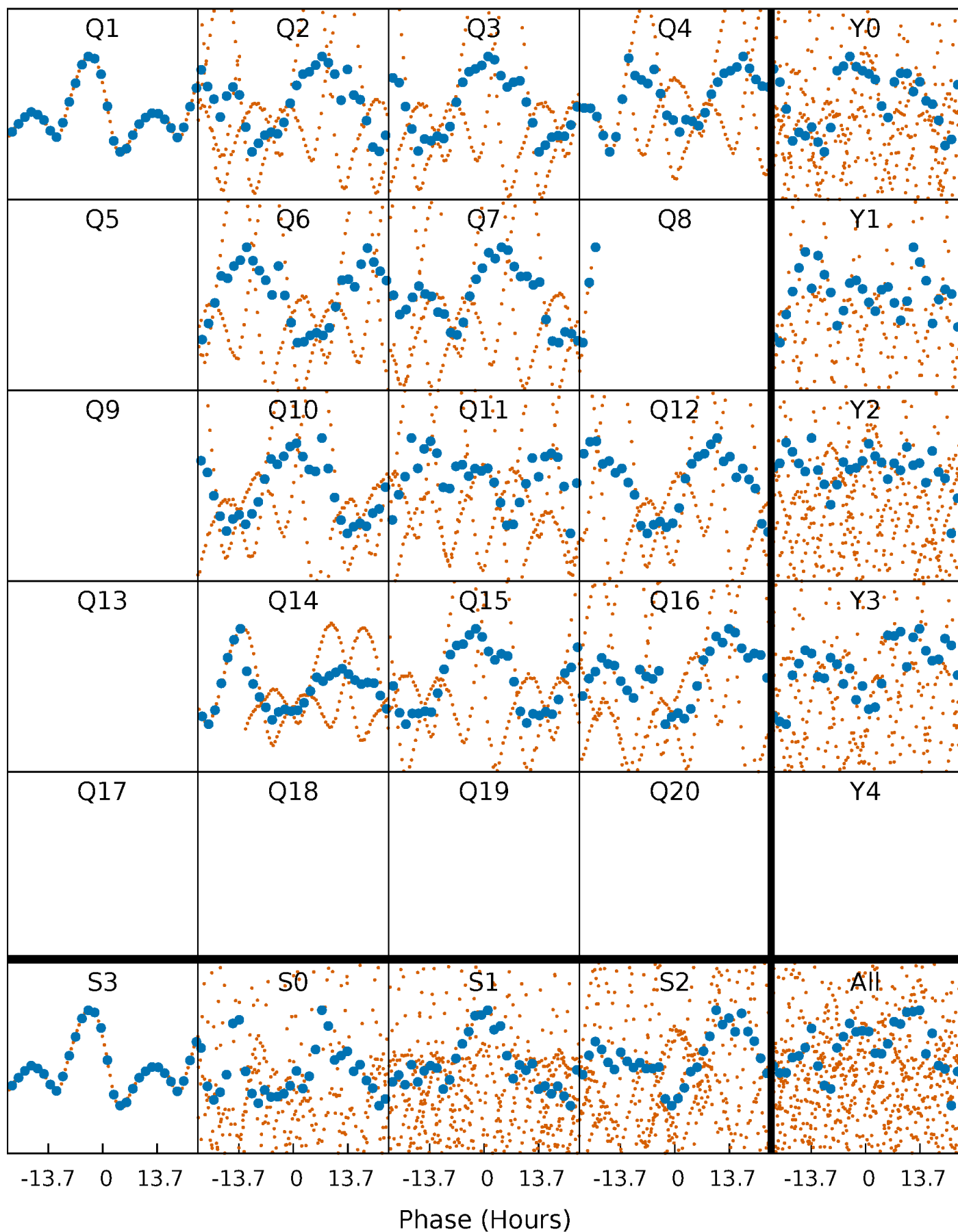


Non-Whitened Vs. Whitened Light Curve



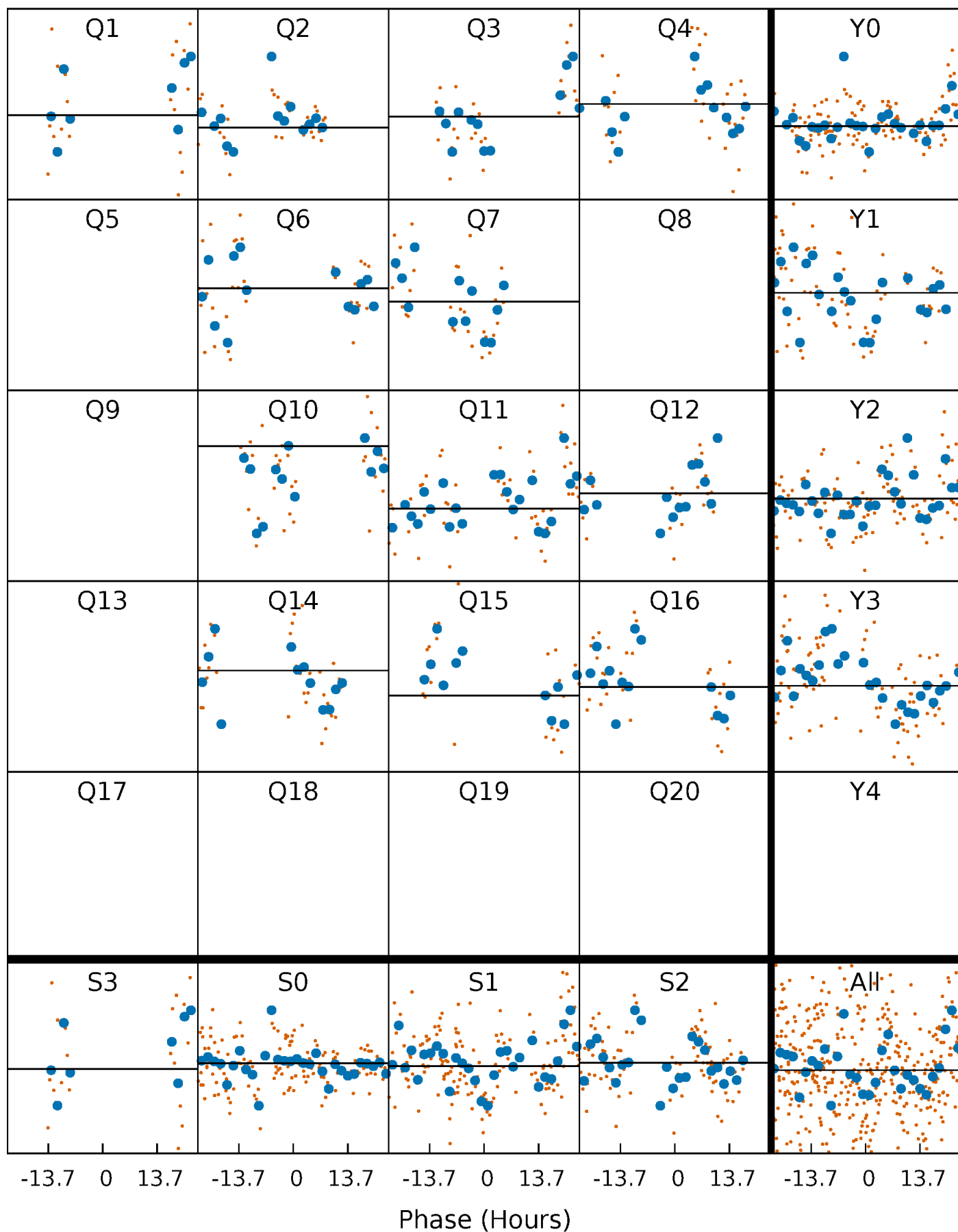
PDC Quarter-Phased Transit Curves

TCE 005942605-05 $P = 41.906011$ Days $T_0 = 133.312553$ (BKJD)



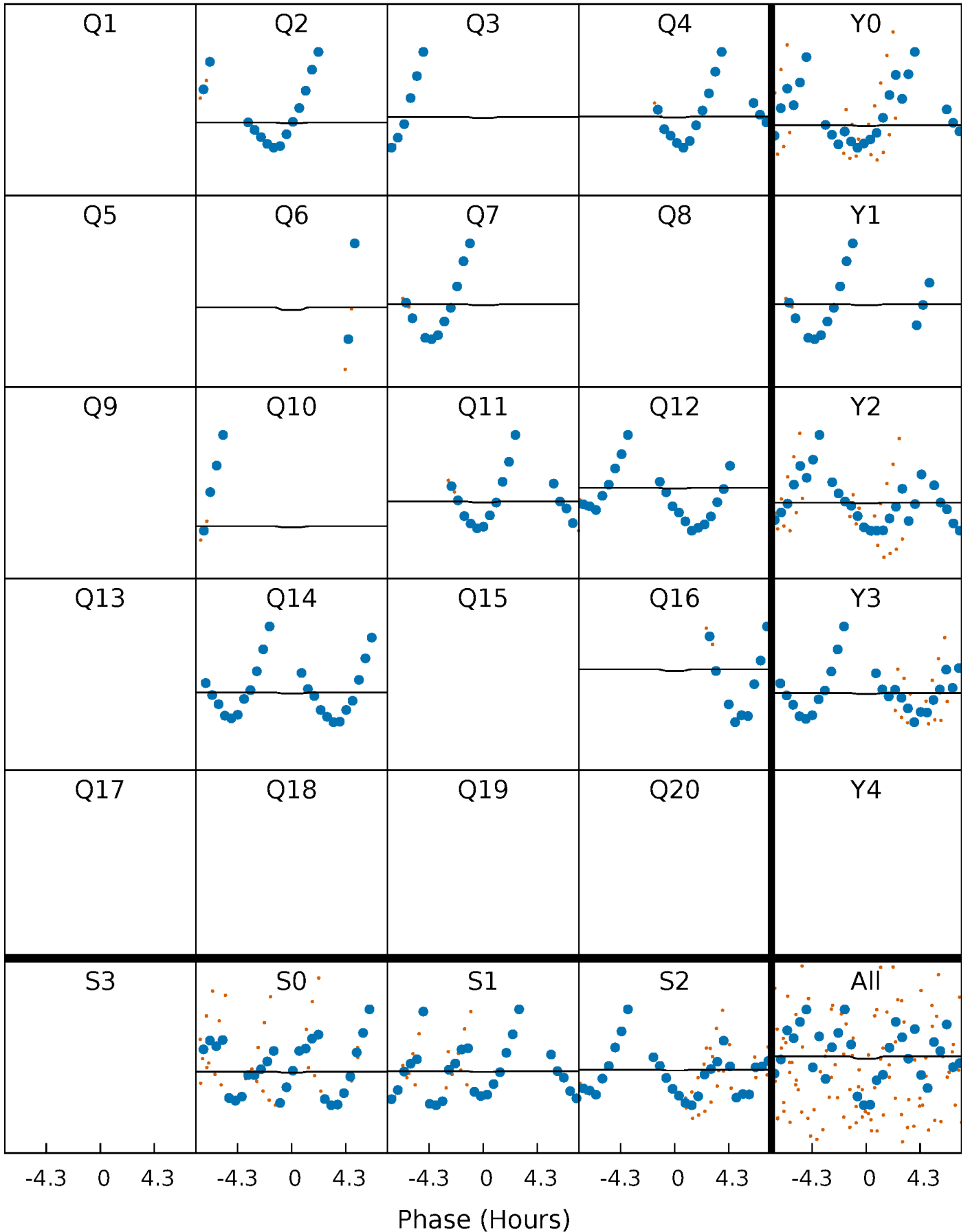
DV Quarter-Phased Transit Curves

TCE 005942605-05 $P = 41.906011$ Days $T_0 = 133.312553$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

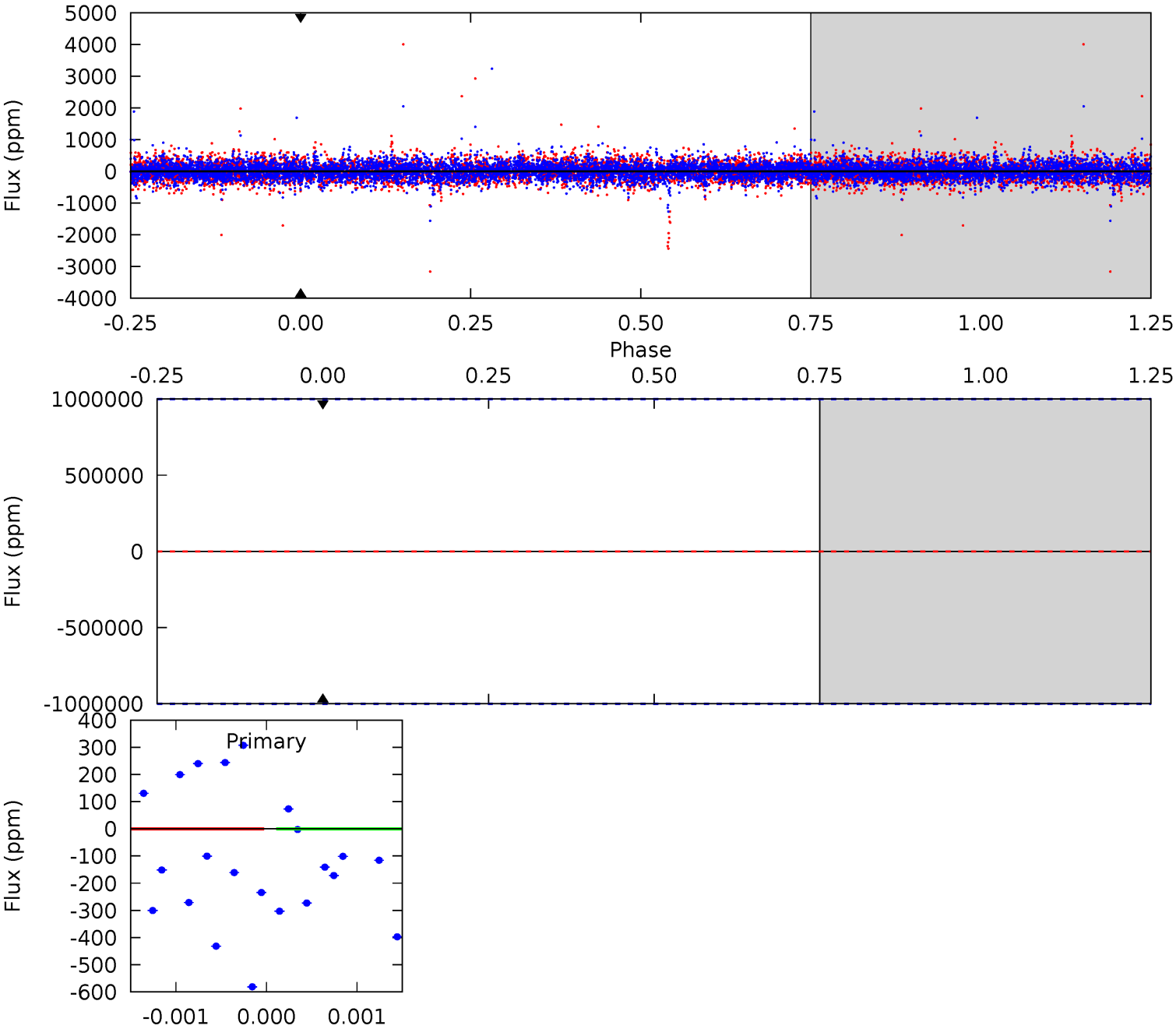
TCE 005942605-05 $P = 41.906011$ Days $T_0 = 133.556793$ (BKJD)



DV Model-Shift Uniqueness Test

005942605-05, P = 41.906011 Days, E = 91.406542 Days

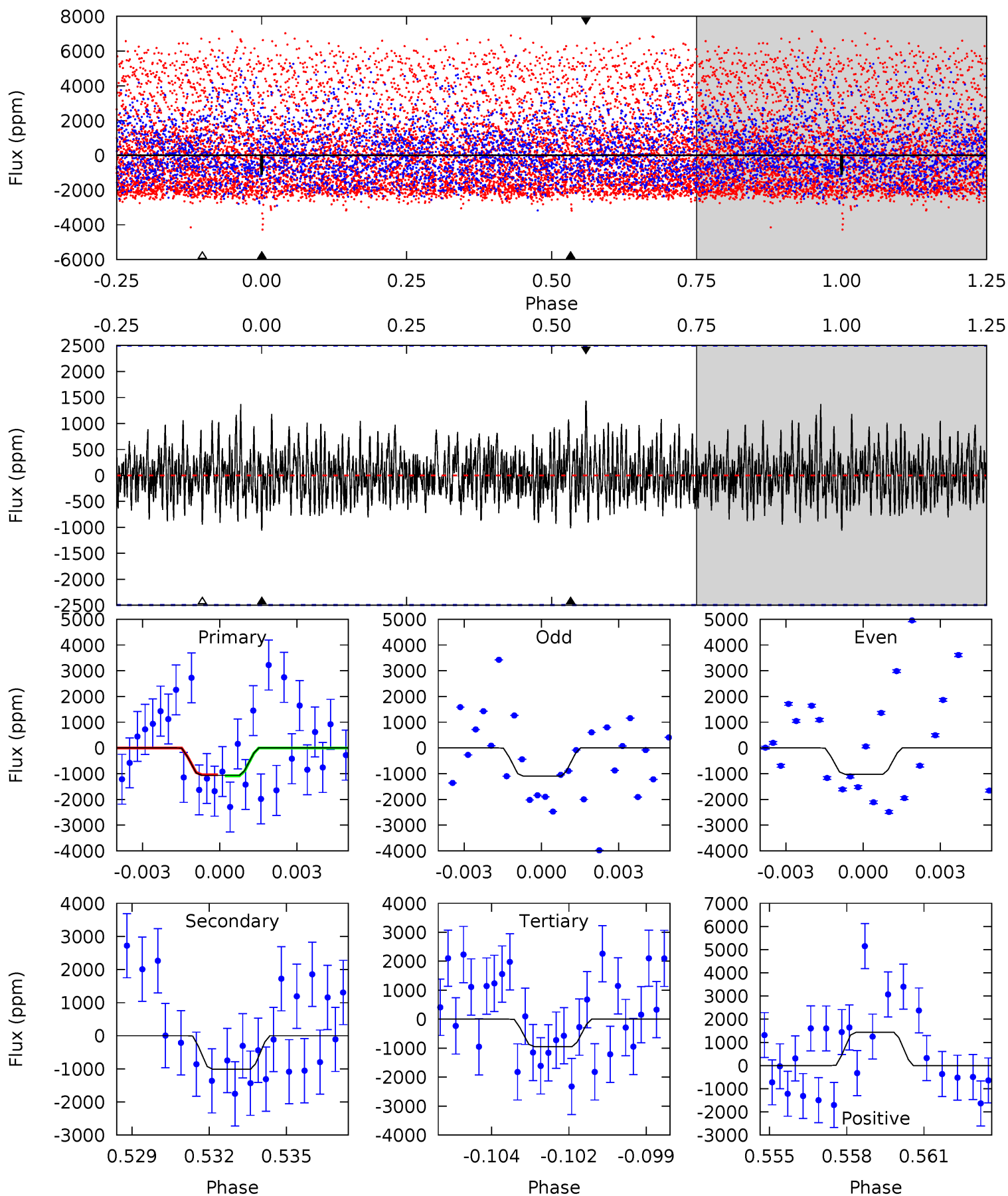
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005942605-05, P = 41.906011 Days, E = 91.650782 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.25	2.14	2.01	3.04	5.28	3.01	0.79	0.24	-0.79	0.14	-0.90	0.08	0.81	0.58	0.04



Stellar Parameters For KIC 005942605

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	11430^{+323}_{-485}	$4.354^{+0.052}_{-0.157}$	$-0.500^{+0.550}_{-0.250}$	$1.641^{+0.435}_{-0.145}$	$2.218^{+0.250}_{-0.167}$	$0.707^{+0.154}_{-0.317}$
	+3%/-4%	+1%/-4%	+110%/-50%	+27%/-9%	+11%/-8%	+22%/-45%
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 005942605-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$13.36^{+14.33}_{-9.03}$	1640^{+98}_{-78}	$5433^{+117455}_{-93691}$	144^{+56668}_{-41708}
Alt.	-1013 ± 473	$13.15^{+13.57}_{-8.72}$	1647^{+91}_{-76}	6488^{+8034}_{-1960}	266^{+2474}_{-210}

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 $A_{\text{obs}} \gg 1.0$

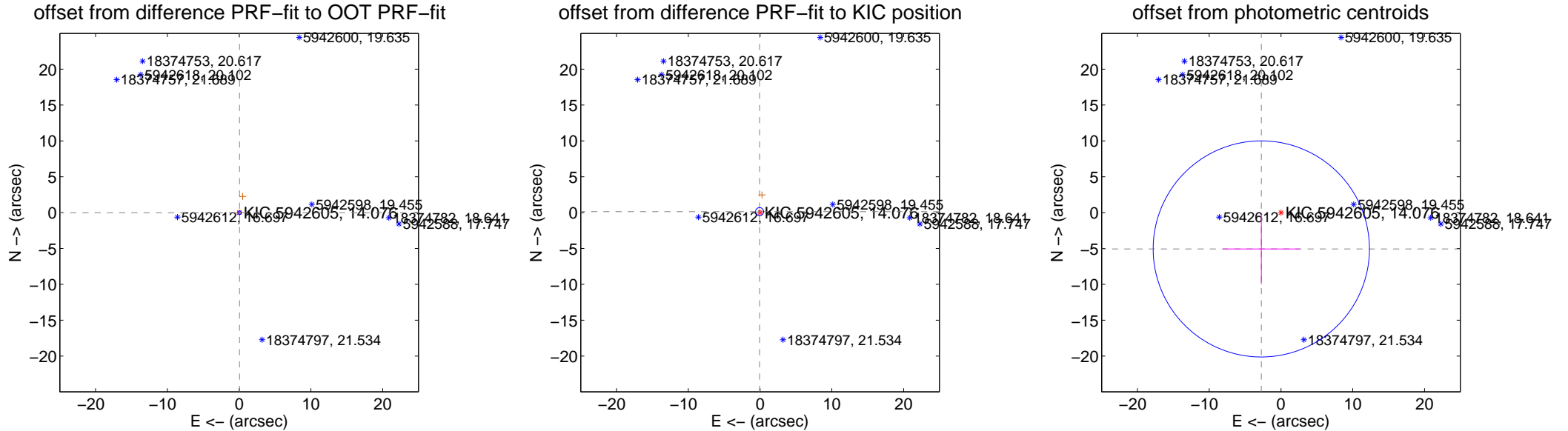
DV Centroid Data

Supplemental centroid analysis for 005942605-05. Kepler magnitude: 14.08. Transit SNR -1.00

There are 5 quarters with good PRF difference image offsets

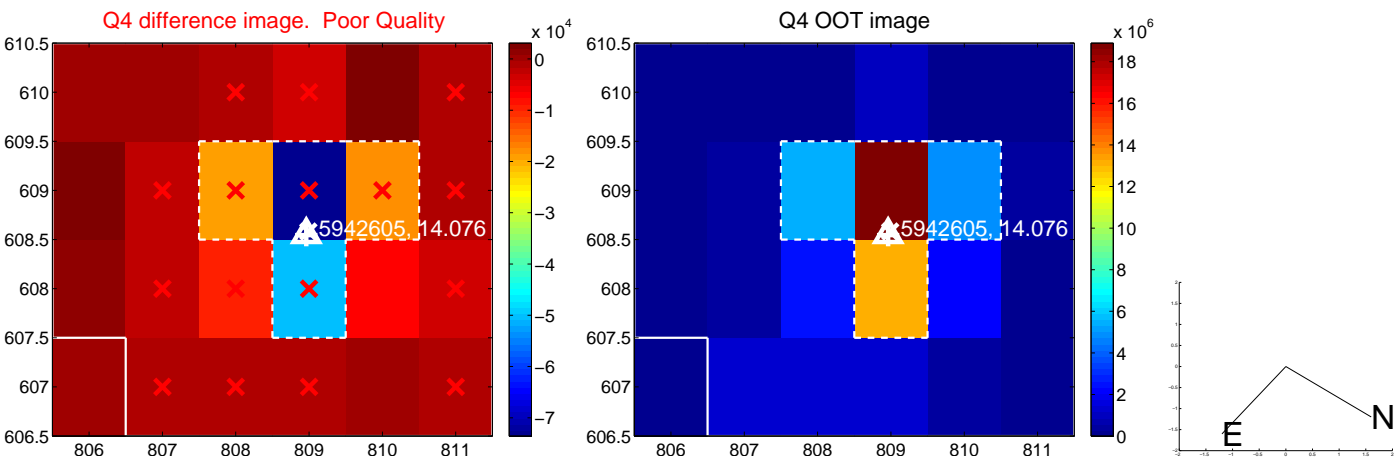
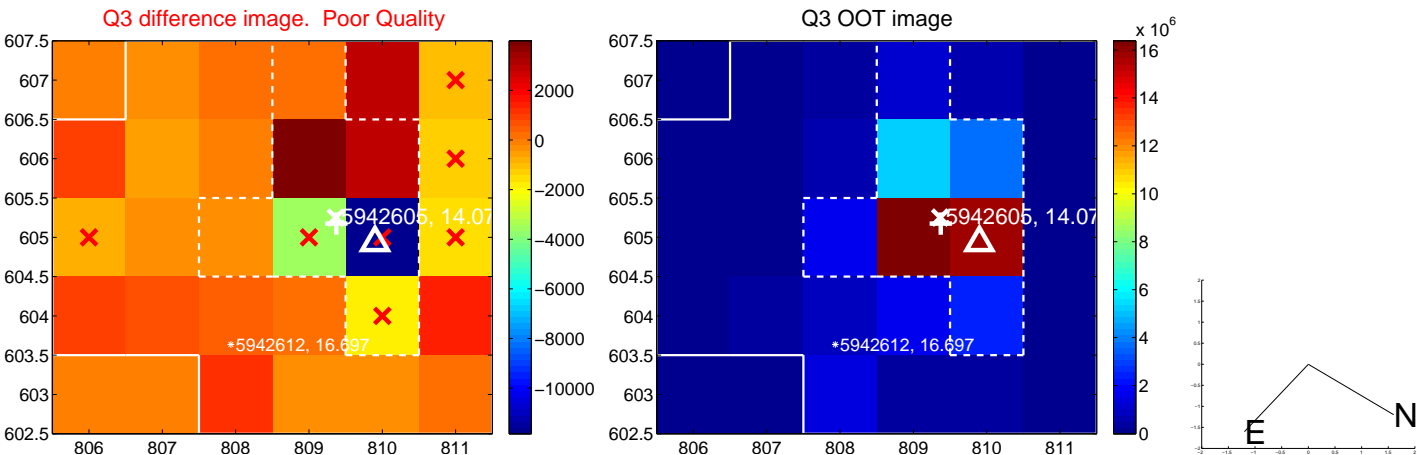
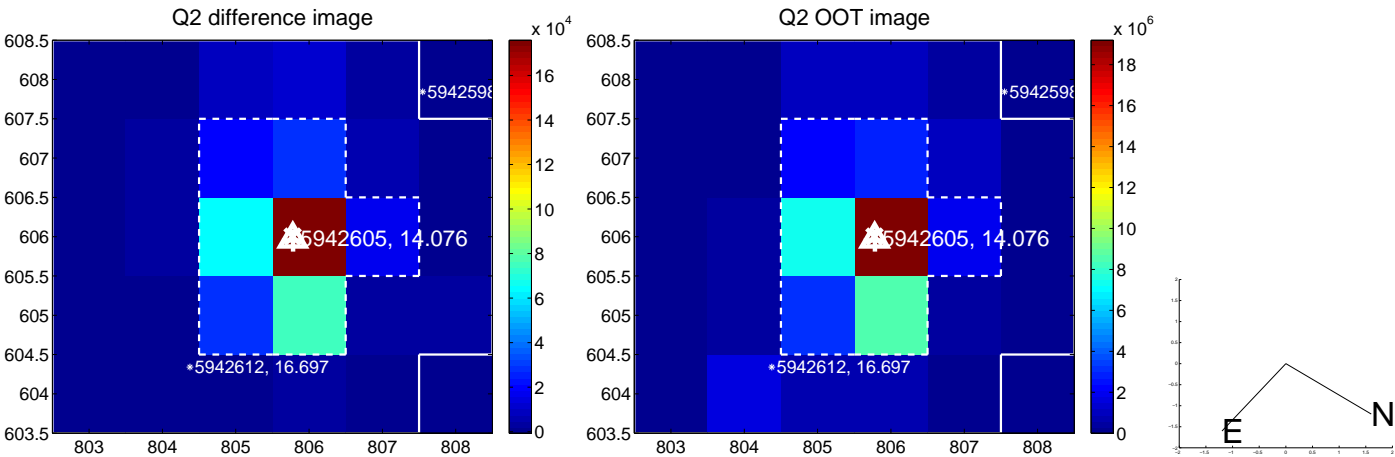
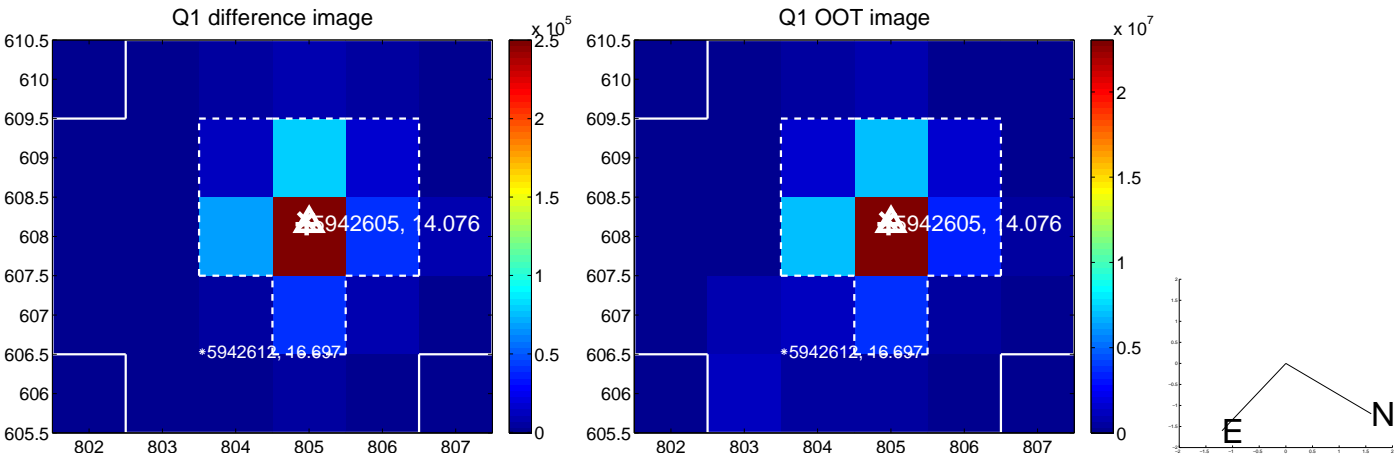
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.058 ± 0.083	0.70	-0.057 ± 0.083	-0.012 ± 0.082
PRF-fit source offset from KIC position	0.152 ± 0.187	0.81	0.063 ± 0.077	0.139 ± 0.217
photometric centroid source offset	5.76 ± 5.02	1.15	2.74 ± 5.36	-5.06 ± 4.92

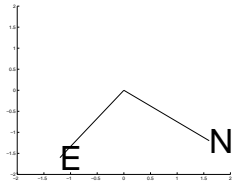
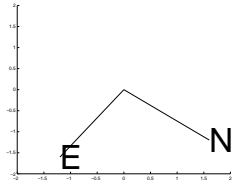
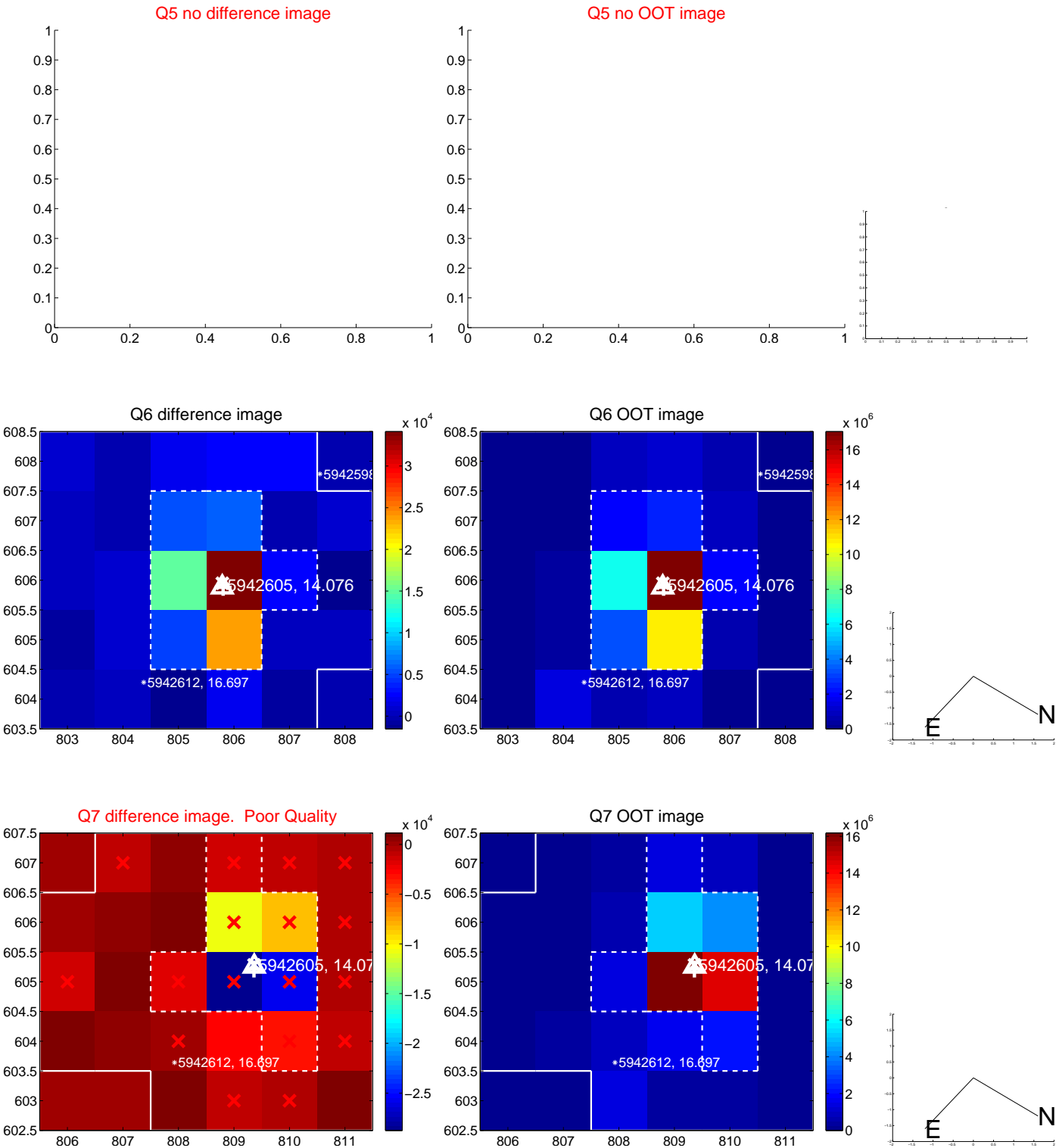


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

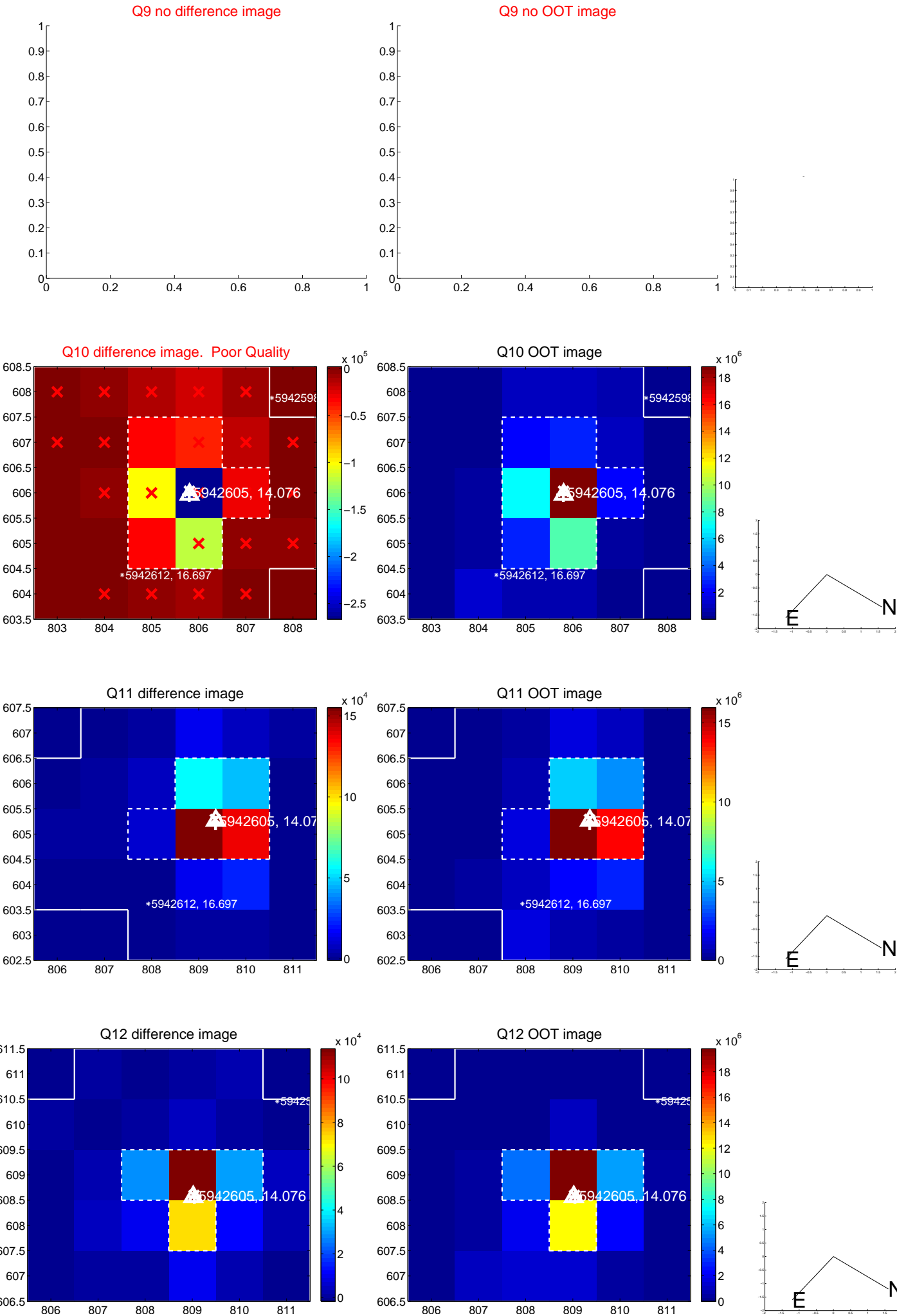
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



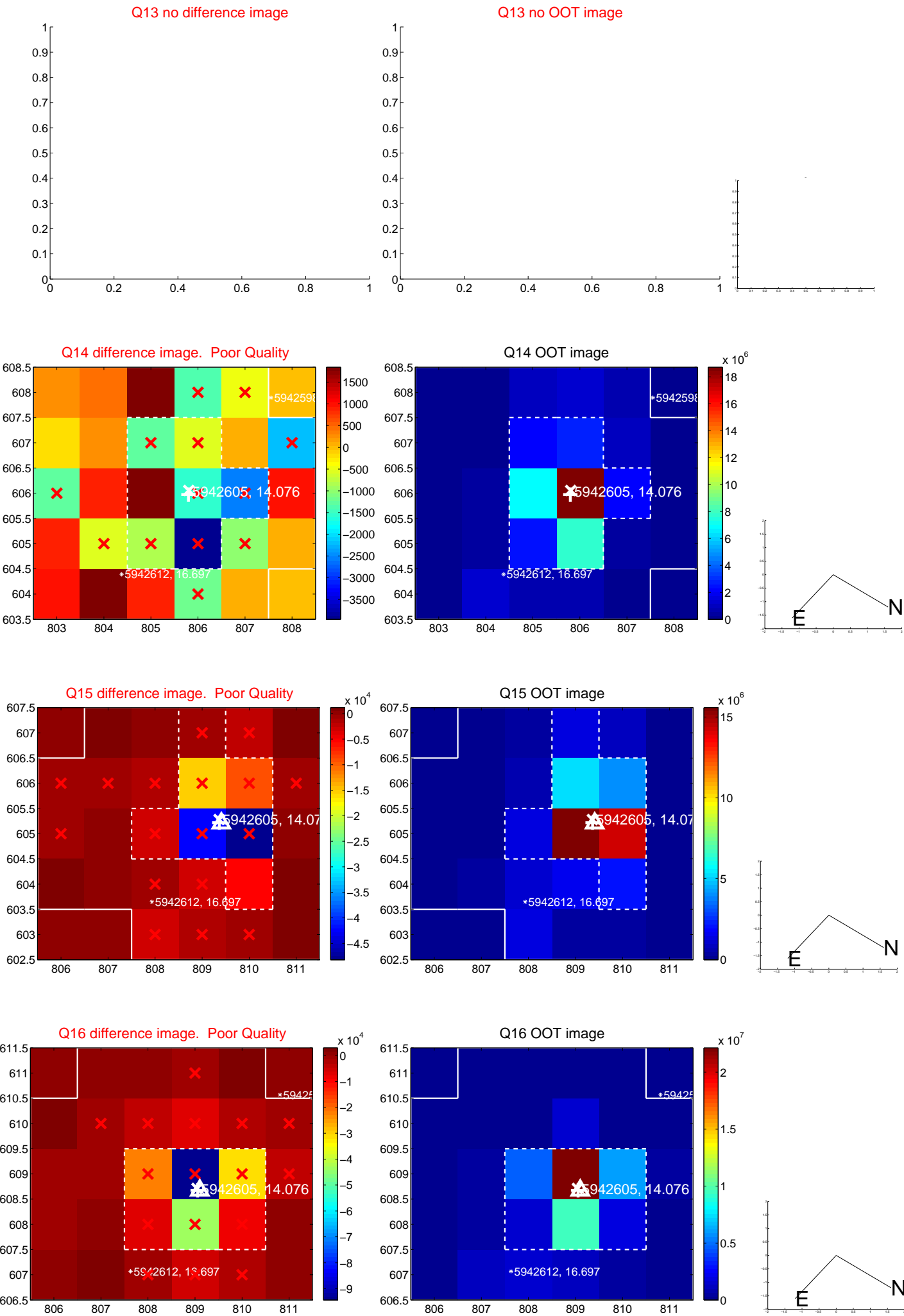
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



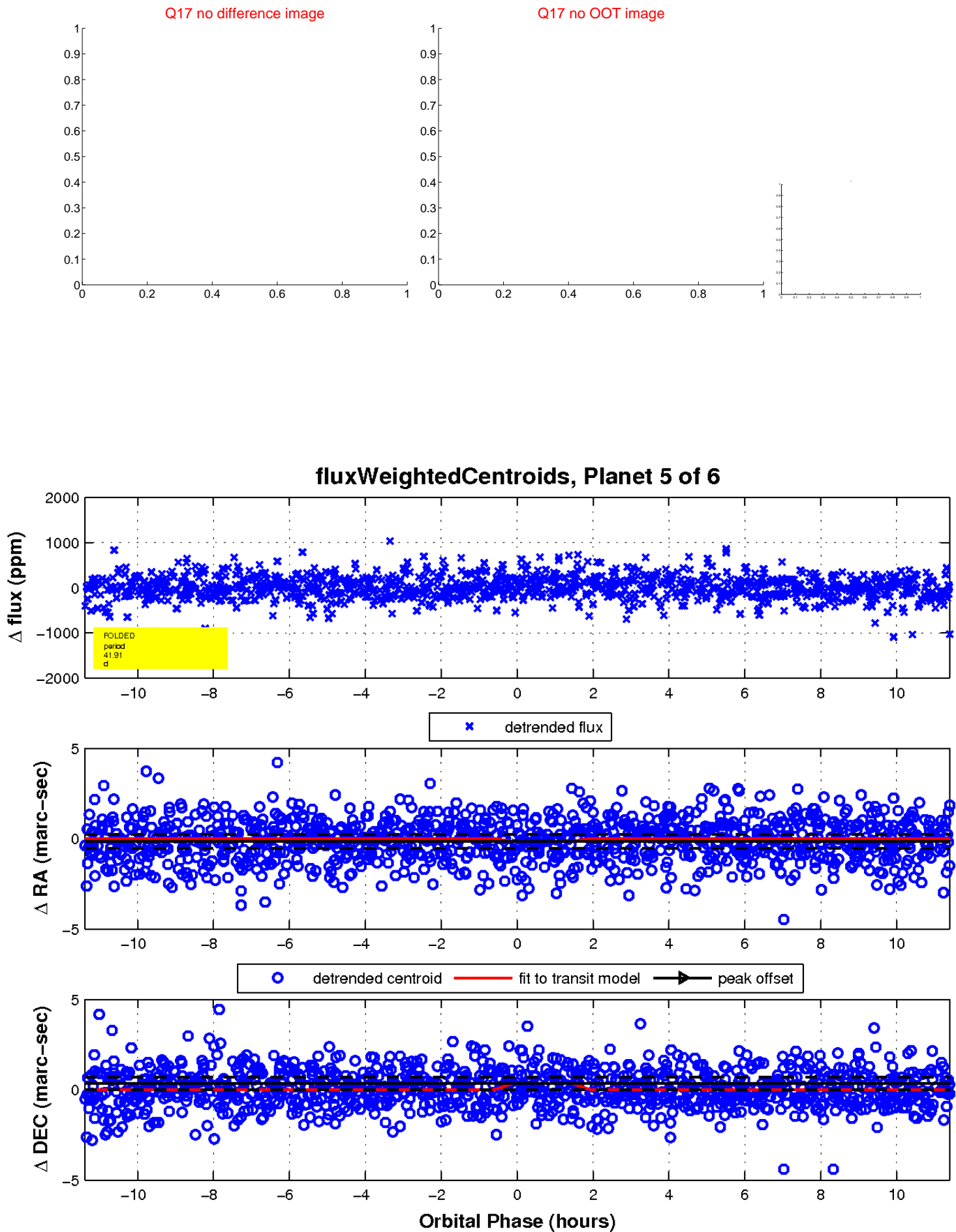
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



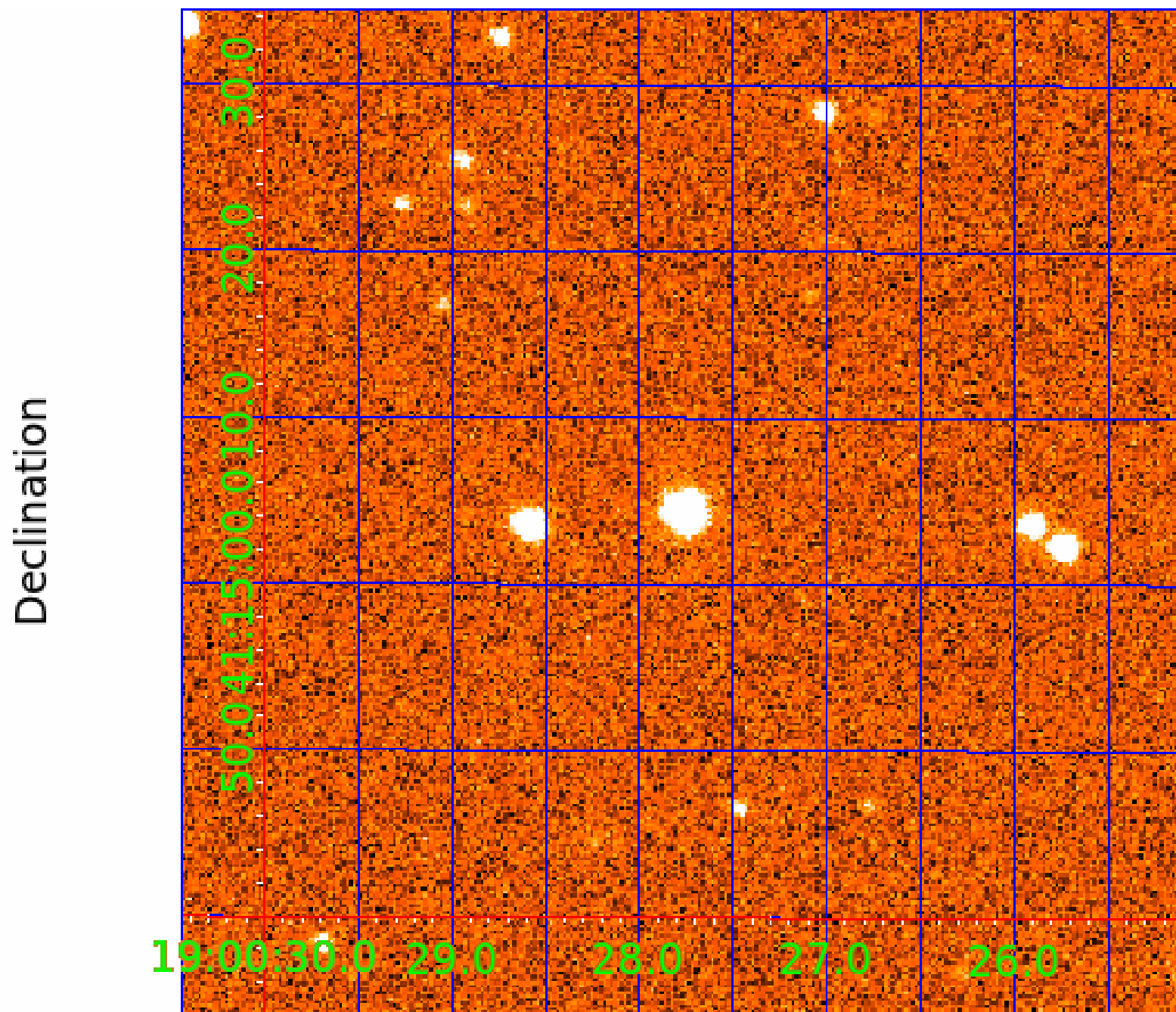
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005942605

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})
005942605-01	OBS	No	1.280137	132.209859	2.3	8.154	9.0	0.7	1.64	11430	0.26	45443.99
005942605-04	OBS	No	65.410188	179.276737	549.3	1.960	11.4	10.1	1.64	11430	3.98	239.68
005942605-05	OBS	No	41.906011	133.312553	281.7	12.000	8.0	-1.0	1.64	11430	2.84	433.96
005942605-06	OBS	No	56.898050	139.344456	60.8	5.557	8.4	2.0	1.64	11430	1.38	288.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005942605-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
005942605-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005942605-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005942605-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

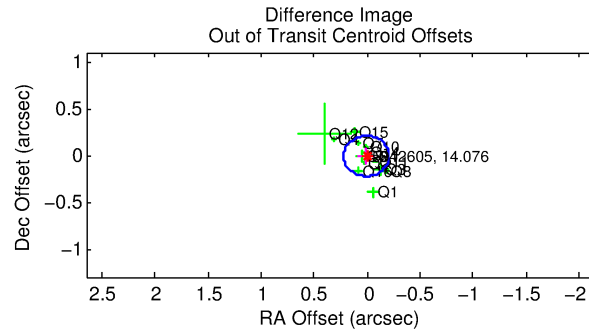
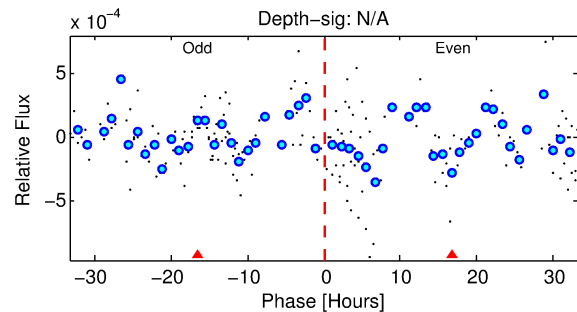
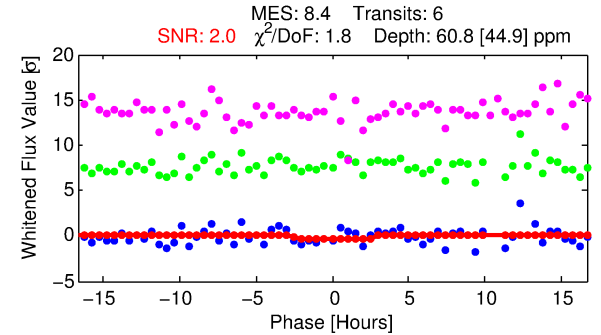
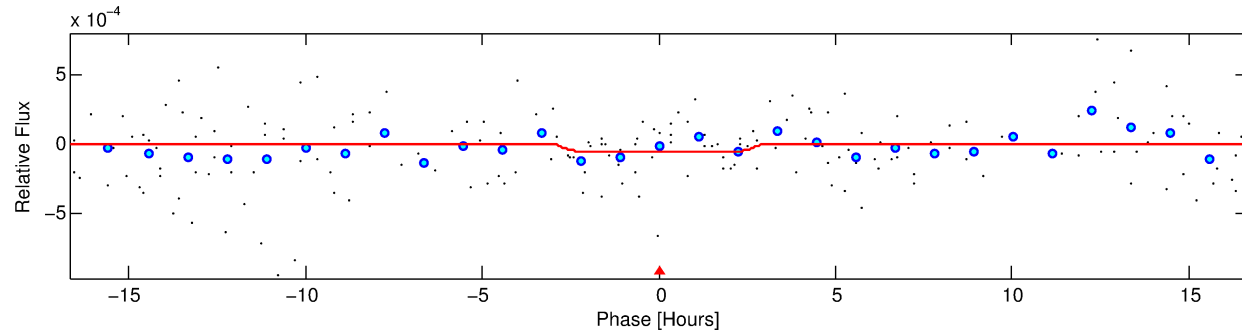
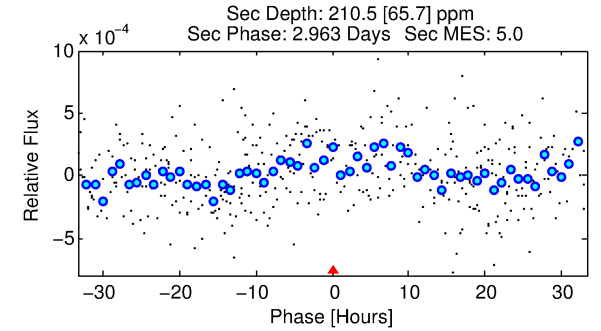
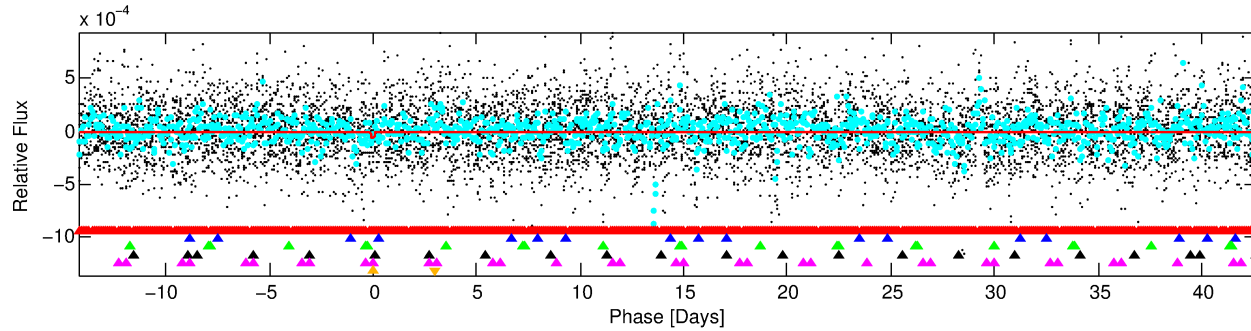
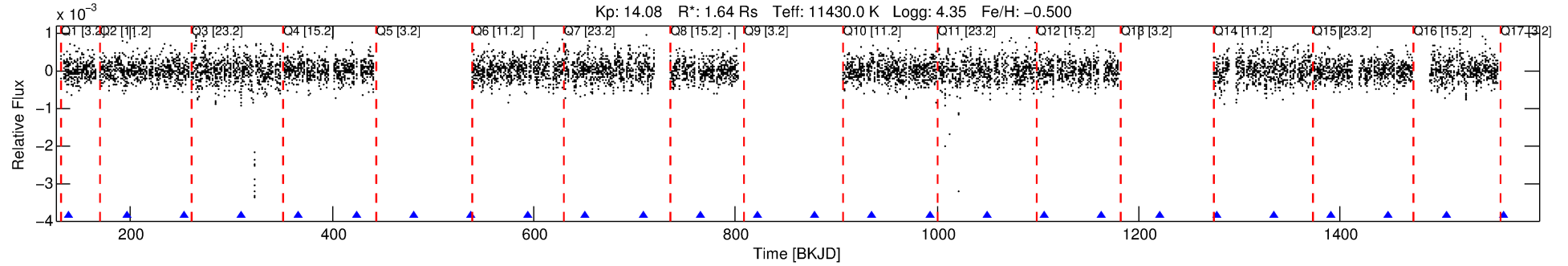
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005942605-06

No Significant Match Found

DV One-Page Summary

KIC: 5942605 Candidate: 6 of 6 Period: 56.898 d



DV Fit Results:

Period = 56.89805 [0.00488] d
Epoch = 139.3445 [0.0483] BKJD
Rp/R* = 0.0077 [0.0239]
a/R* = 56.16 [1470.35]
b = 0.71 [18.44]
Seff = 288.64 [99.20]
Teff = 1051 [90] K
Rp = 1.38 [4.30] Re
a = 0.3777 [0.0808] AU
Ag = 8685.91 [54137.63] [0.16σ]
Teffp = 15688 [24426] K [0.60σ]

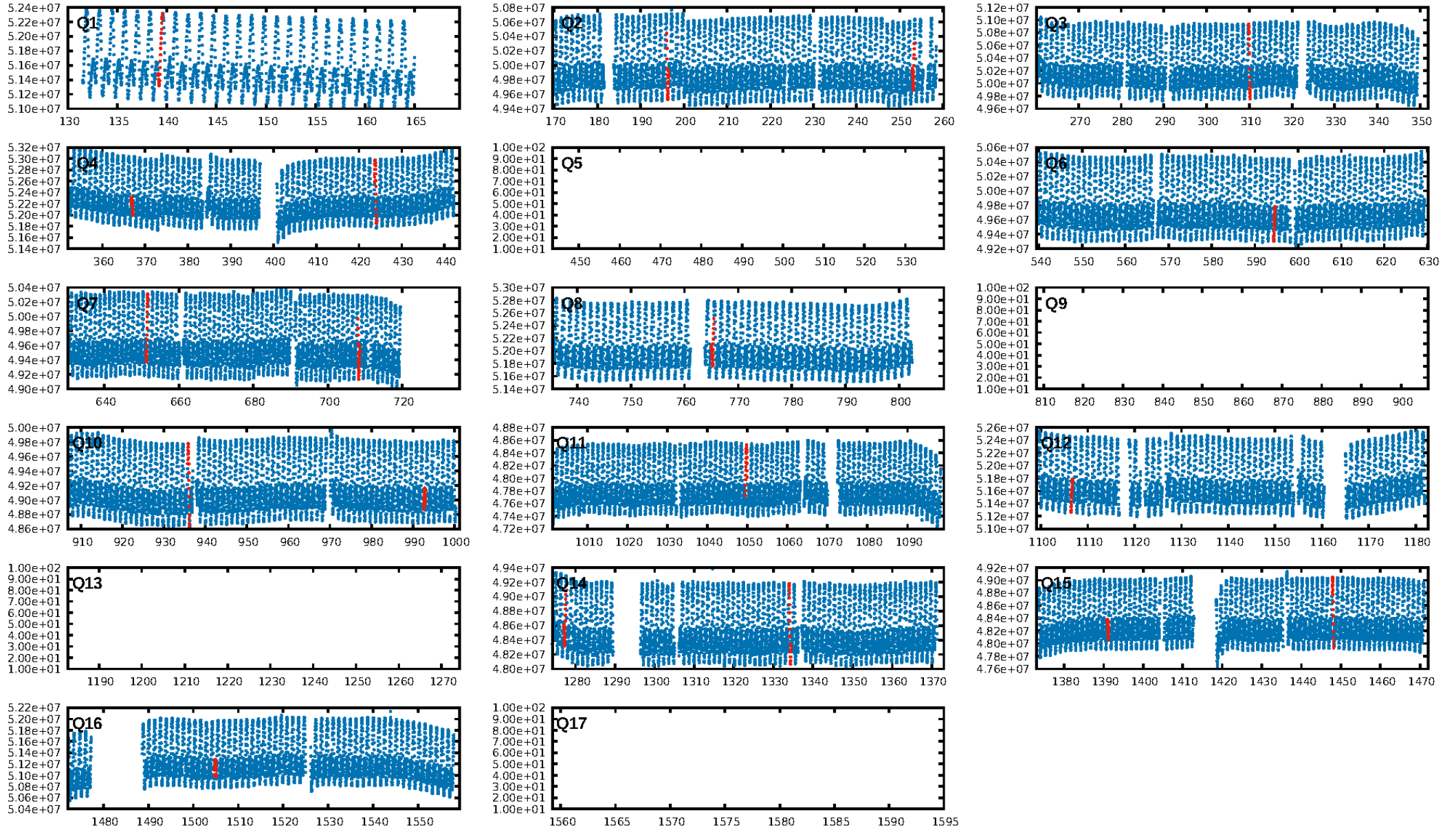
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [27.21σ]
LongPeriod-sig: 100.0% [25.12σ]
ModelChiSquare2-sig: 43.4%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 5.91e-08
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.3223
Centroid-sig: 19.7%
Centroid-so: 3.912 arcsec [0.94σ]
OotOffset-rm: 0.014 arcsec [0.19σ]
KicOffset-rm: 0.268 arcsec [2.86σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 0.00 [0/13]

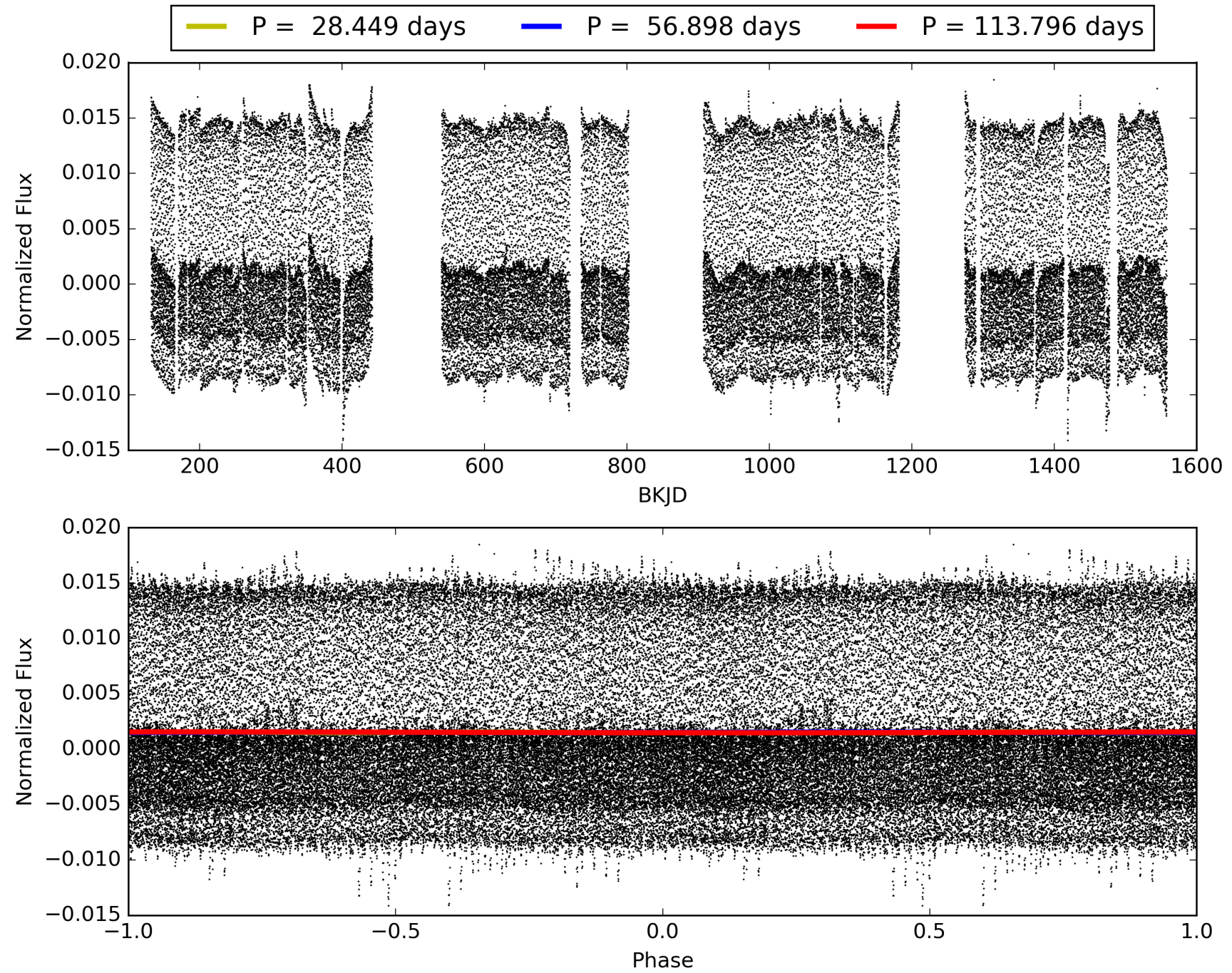
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:07:59 Z

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

TCE 005942605-06, PDC Light Curves

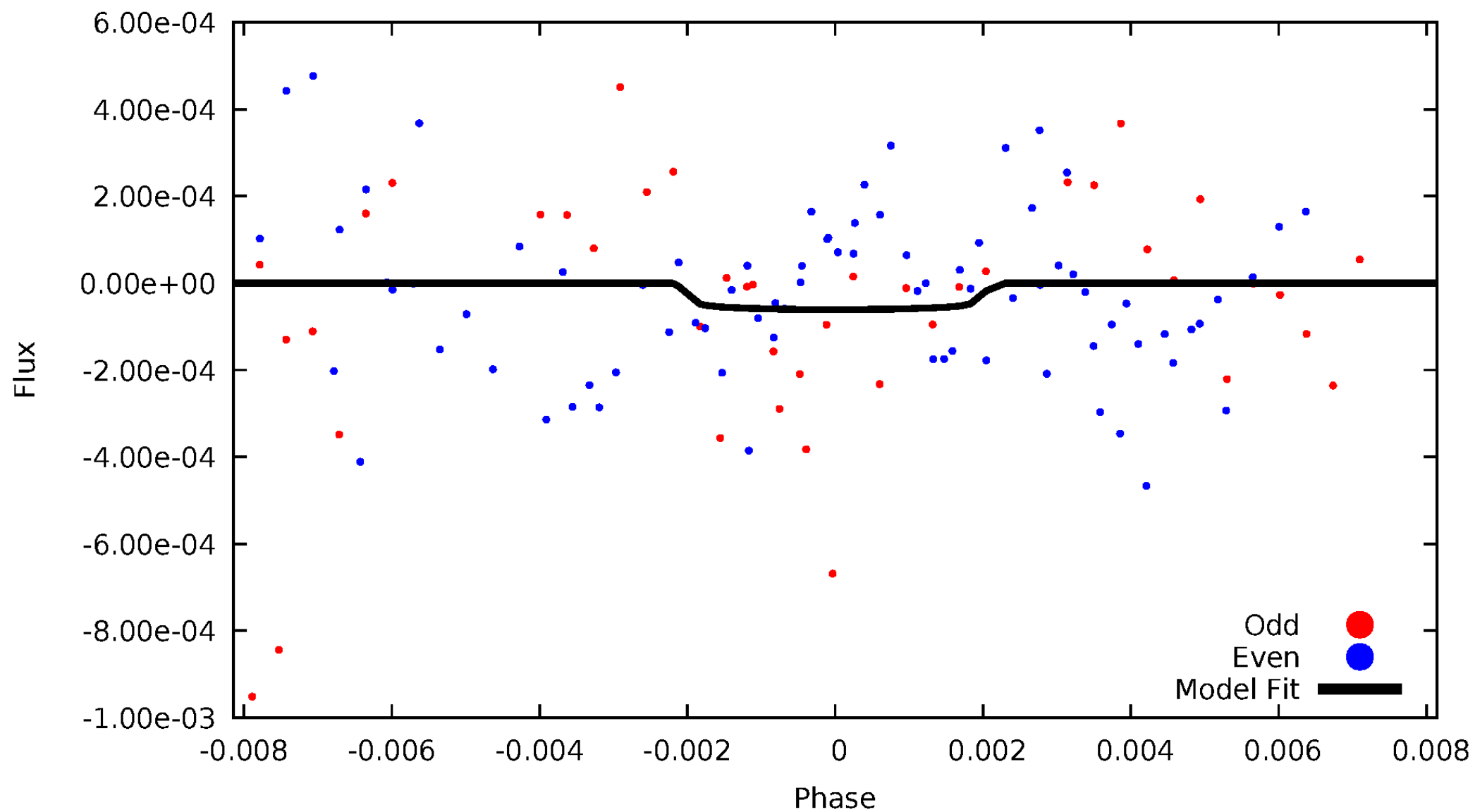


TCE 005942605-06



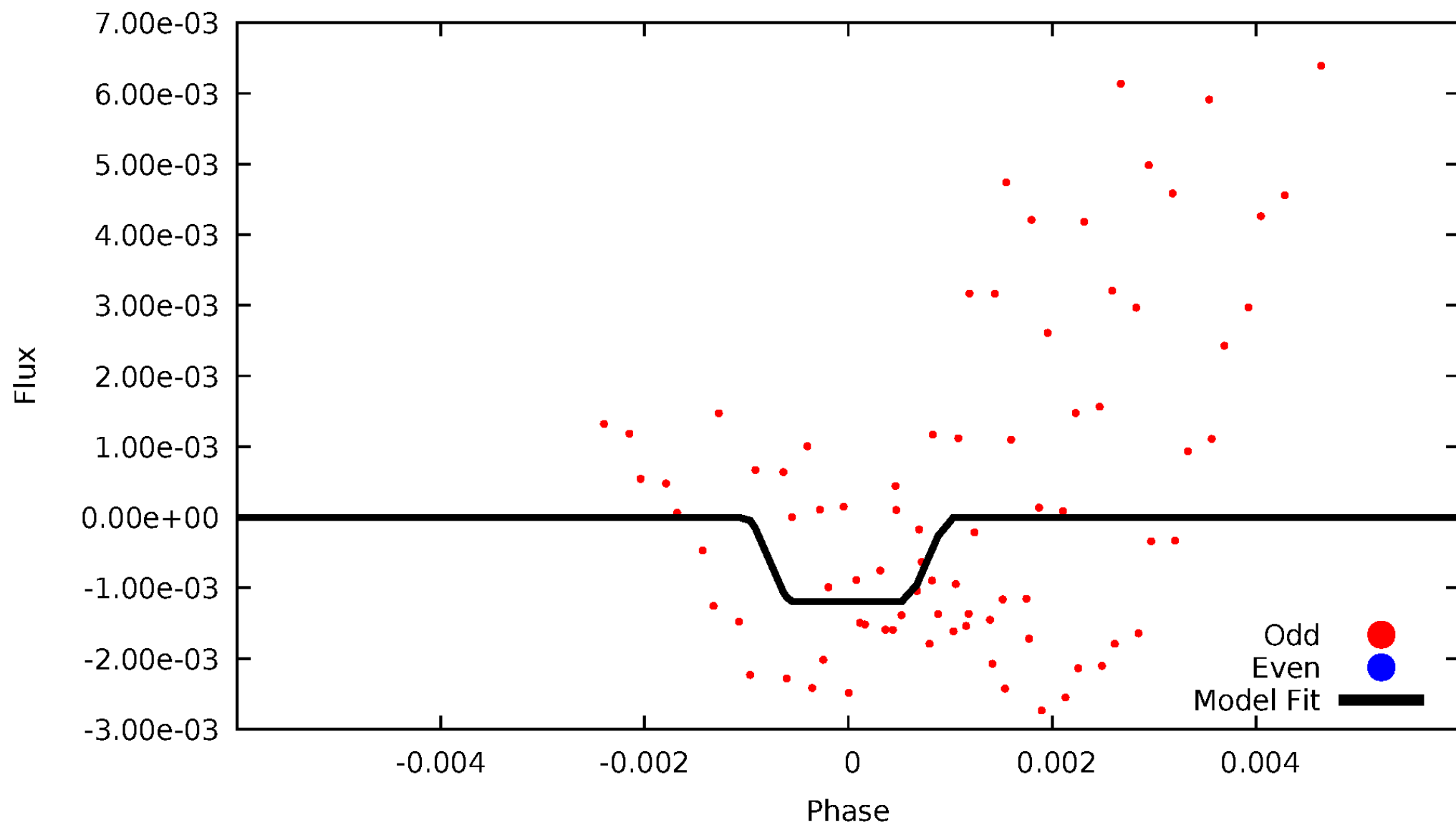
DV Odd/Even

TCE 005942605-06



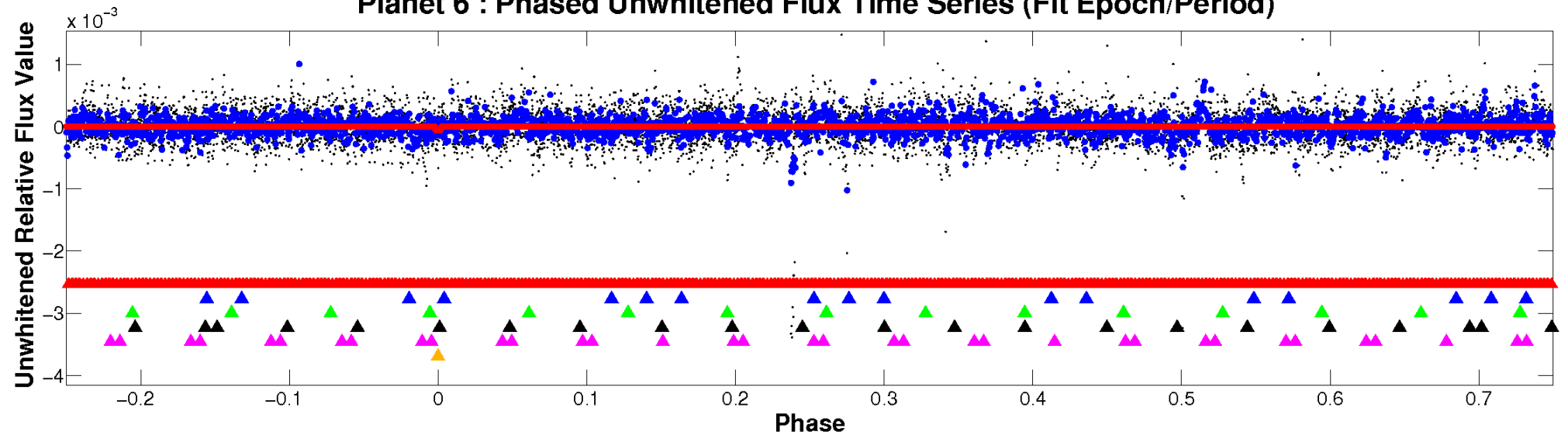
ALT Odd/Even

TCE 005942605-06

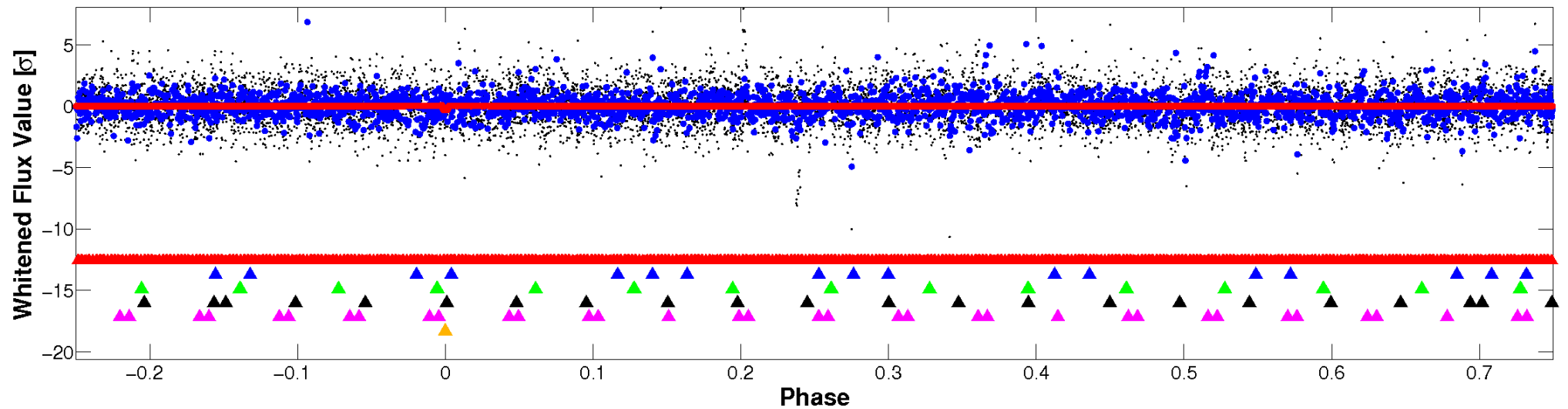


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

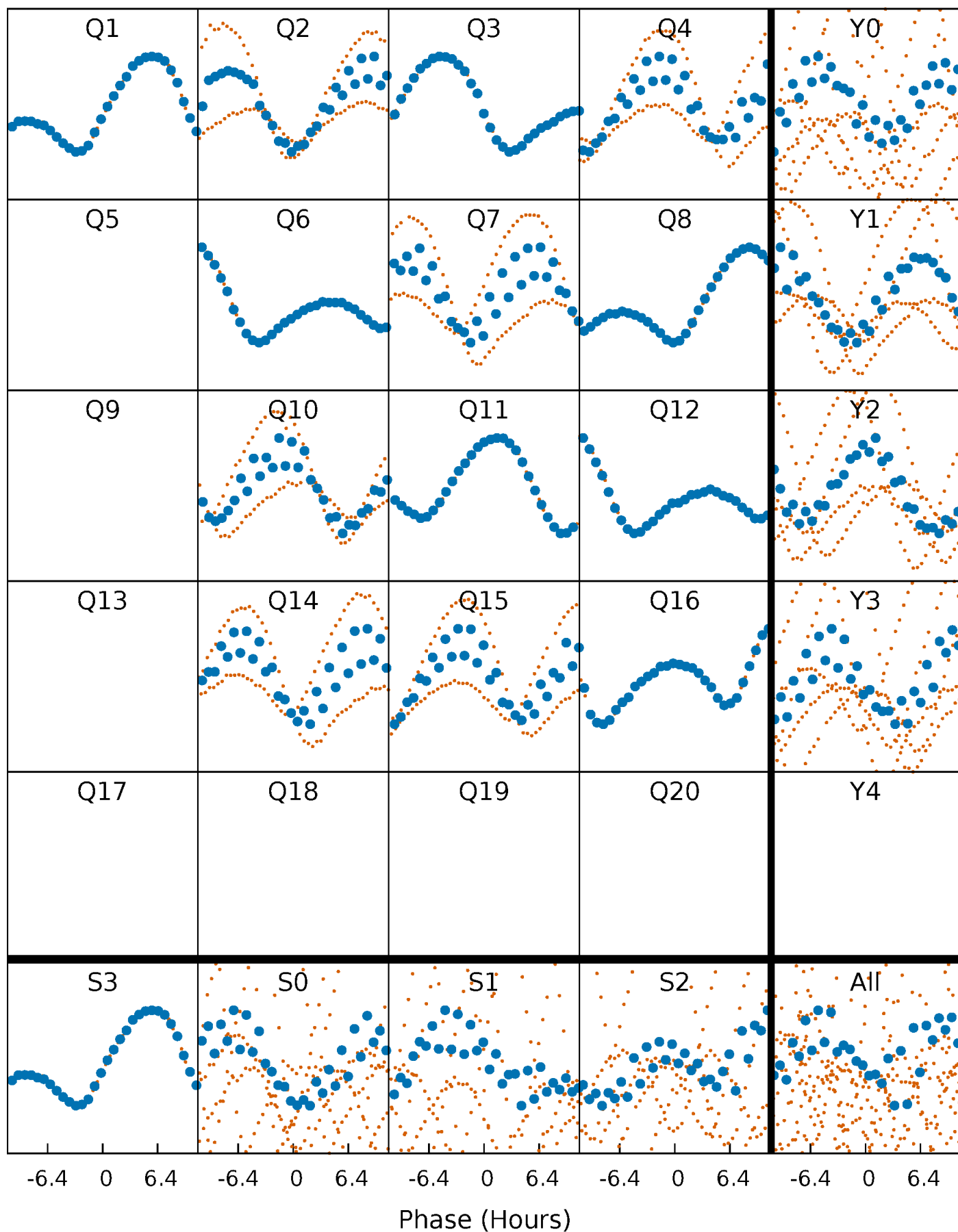


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



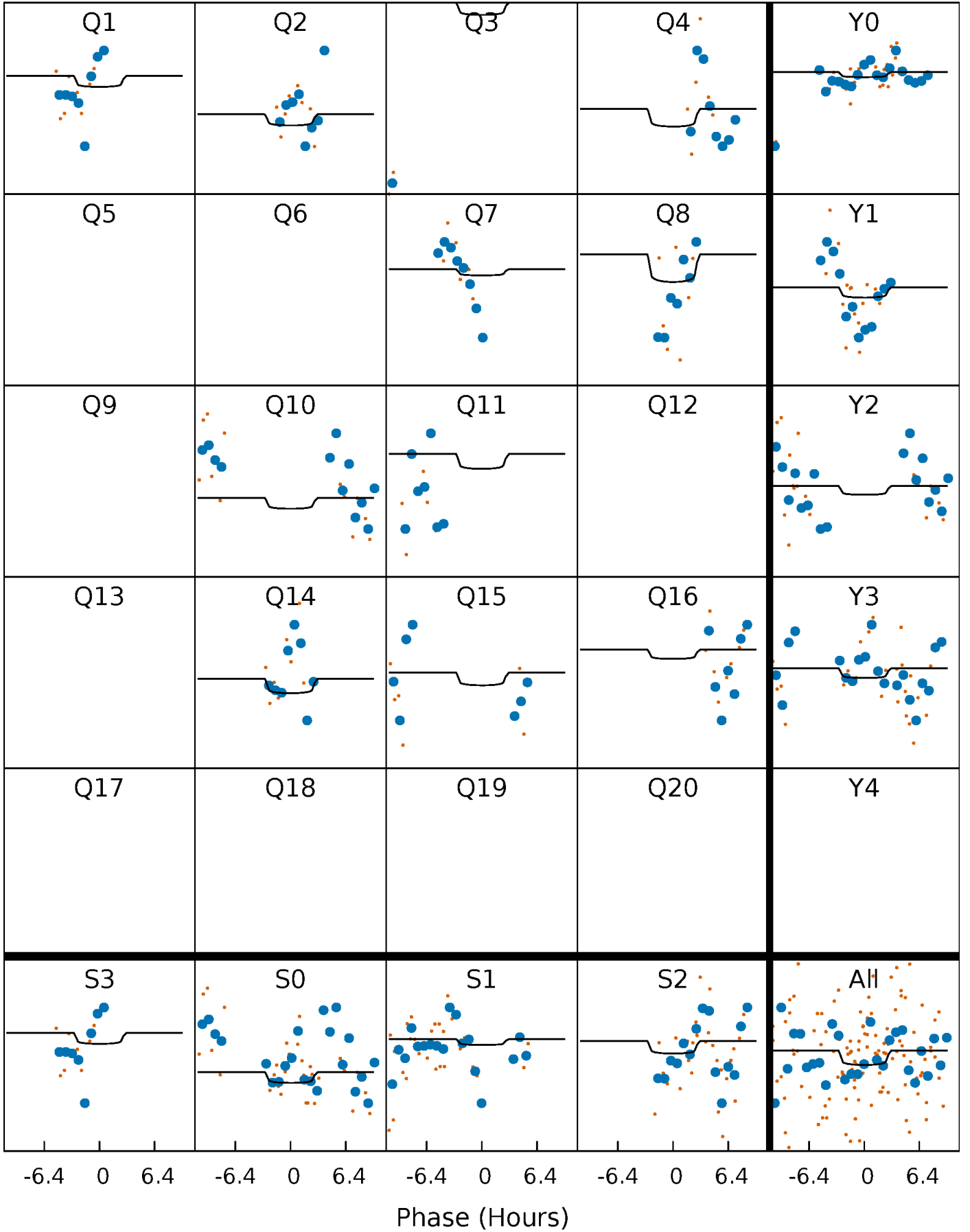
PDC Quarter-Phased Transit Curves

TCE 005942605-06 P= 56.898050 Days $T_0=139.344456$ (BKJD)



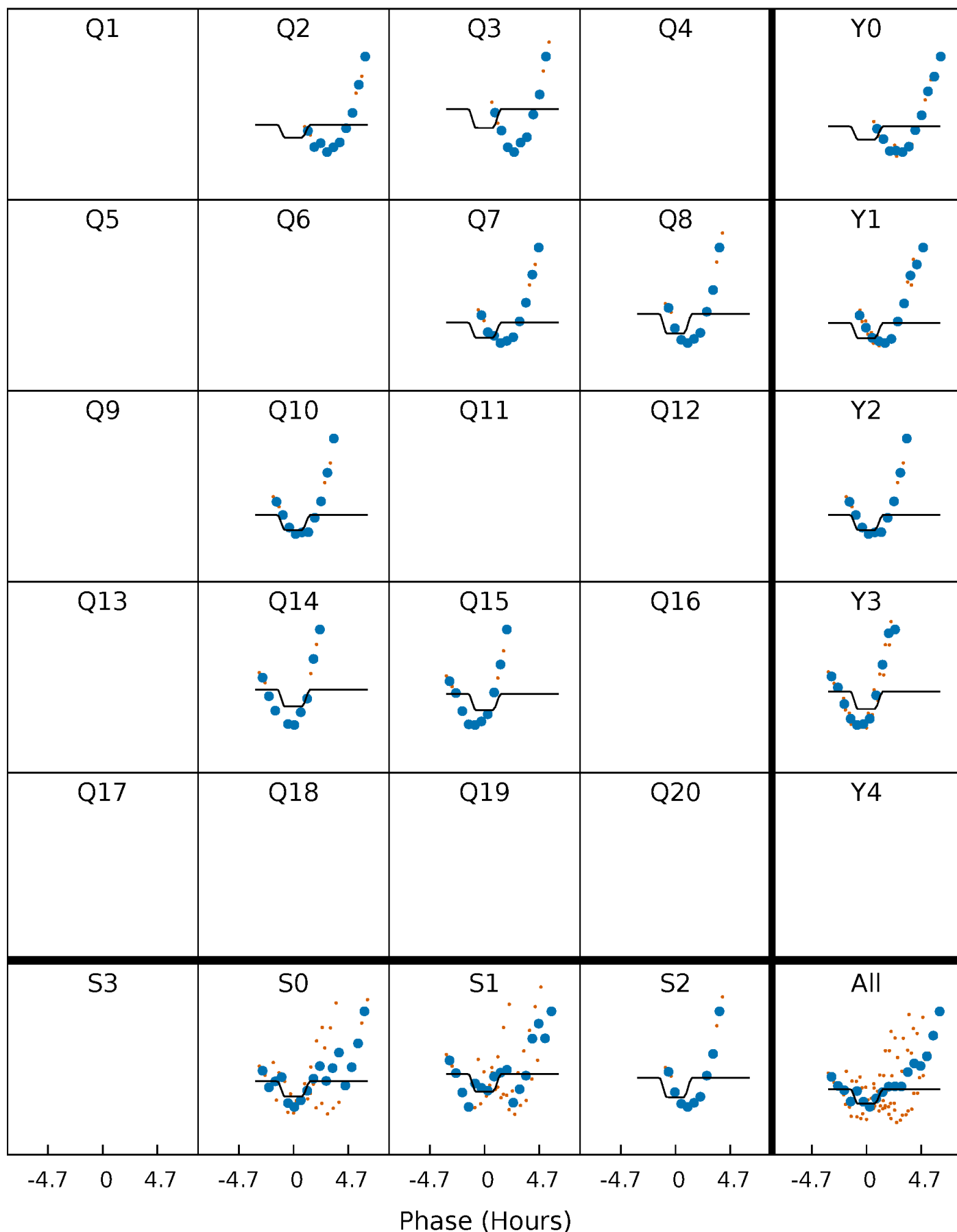
DV Quarter-Phased Transit Curves

TCE 005942605-06 P= 56.898050 Days $T_0=139.344456$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

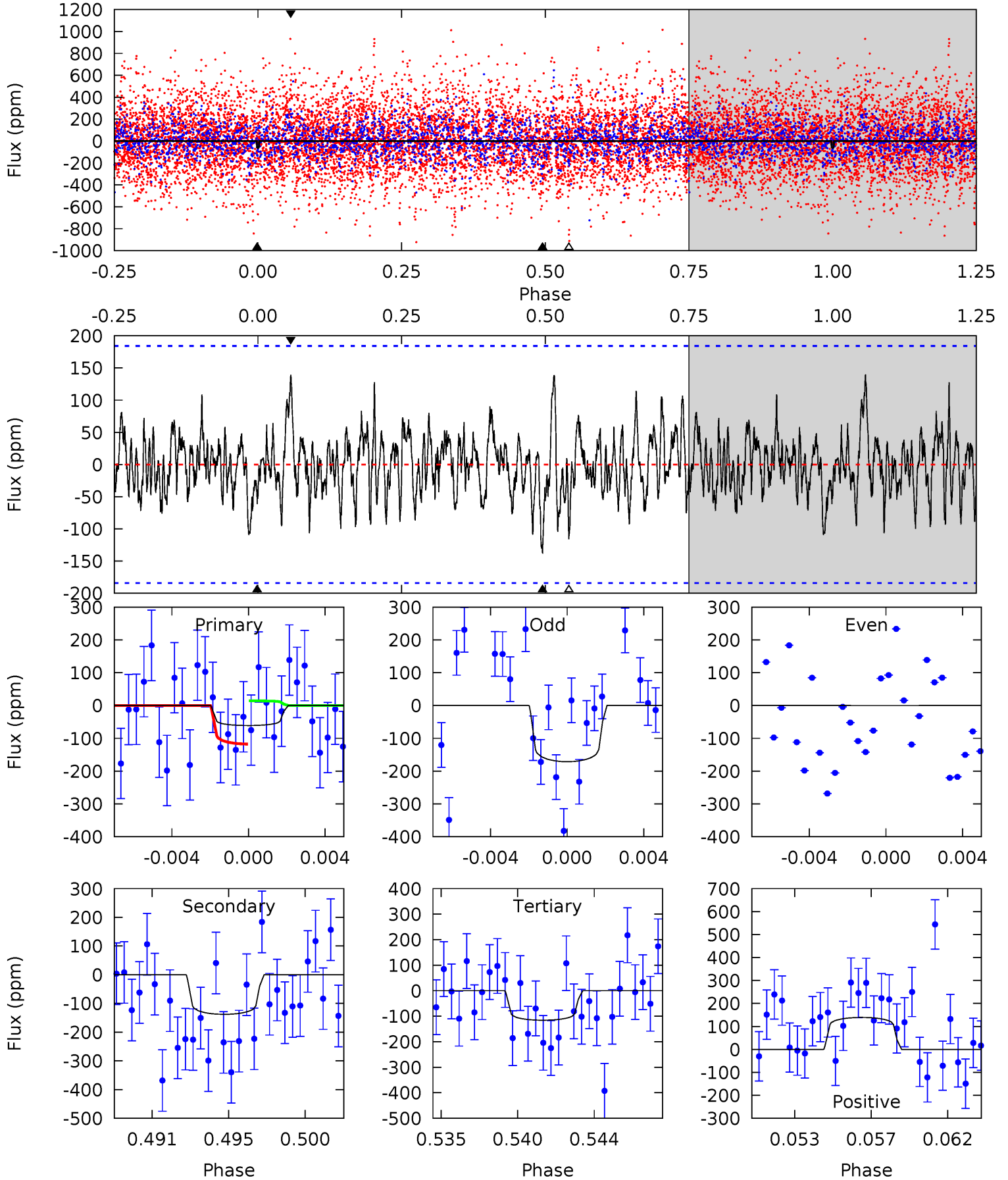
TCE 005942605-06 P= 56.973907 Days $T_0=138.458010$ (BKJD)



DV Model-Shift Uniqueness Test

005942605-06, P = 56.898050 Days, E = 82.446406 Days

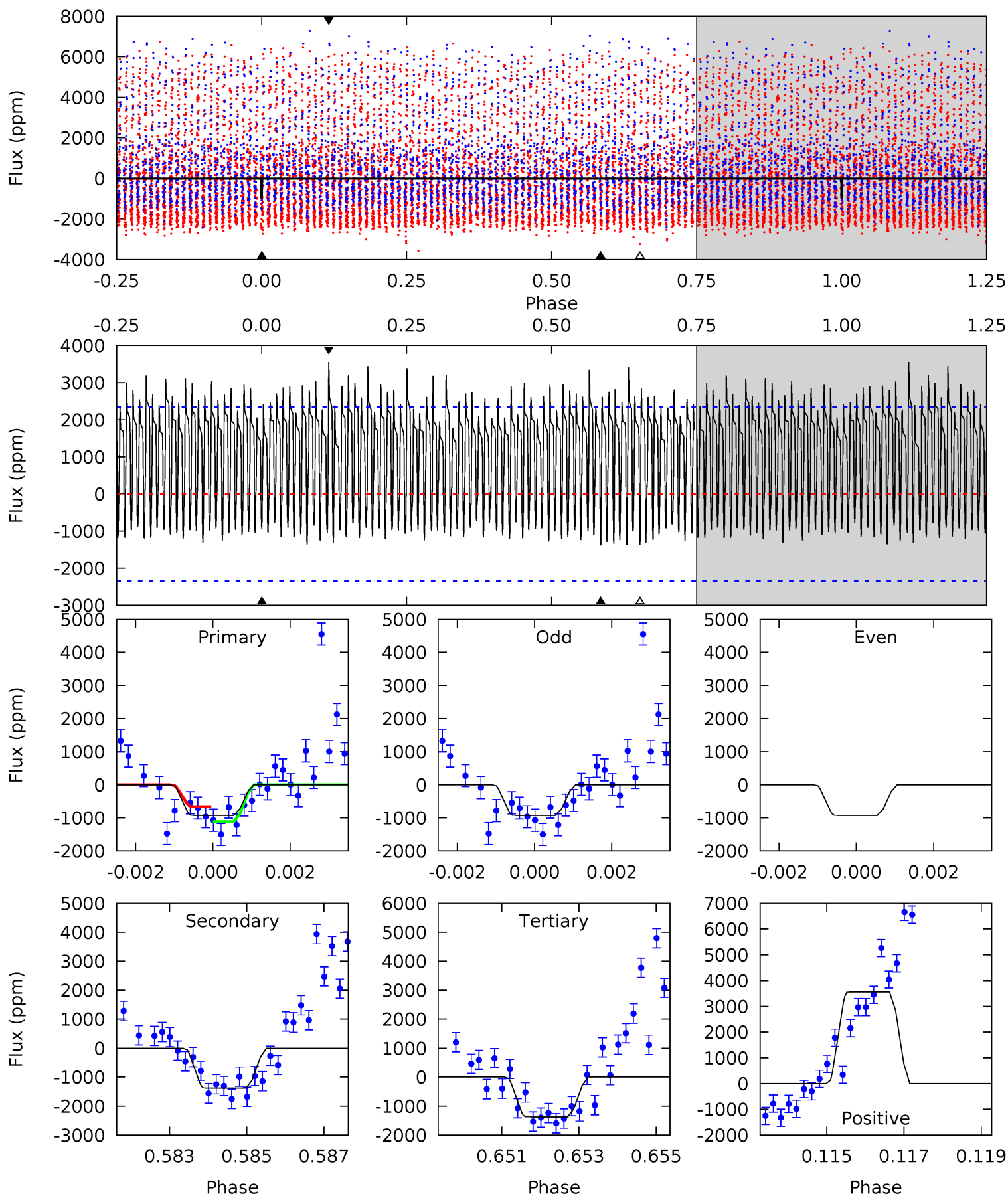
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.72	3.88	3.25	3.91	5.18	2.85	1.18	-1.54	-2.19	0.62	-0.04	2.31	1.35	0.50	1.46



Alt Model-Shift Uniqueness Test

005942605-06, P = 56.973907 Days, E = 81.484103 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.11	3.14	3.12	8.08	5.33	3.10	2.77	-1.01	-5.98	0.02	-4.95	0	1.00	0.72	0.49



Stellar Parameters For KIC 005942605

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	11430^{+323}_{-485}	$4.354^{+0.052}_{-0.157}$	$-0.500^{+0.550}_{-0.250}$	$1.641^{+0.435}_{-0.145}$	$2.218^{+0.250}_{-0.167}$	$0.707^{+0.154}_{-0.317}$
	+3%/-4%	+1%/-4%	+110%/-50%	+27%/-9%	+11%/-8%	+22%/-45%
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 005942605-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-138 ± 36	$3.49^{+3.58}_{-2.30}$	1484^{+96}_{-79}	8027^{+11454}_{-2512}	870^{+6249}_{-670}
Alt.	-1380 ± 440	$6.83^{+4.05}_{-3.77}$	1480^{+90}_{-69}	11448^{+13394}_{-3444}	2358^{+8911}_{-1528}

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 $A_{\text{obs}} \gg 1.0$

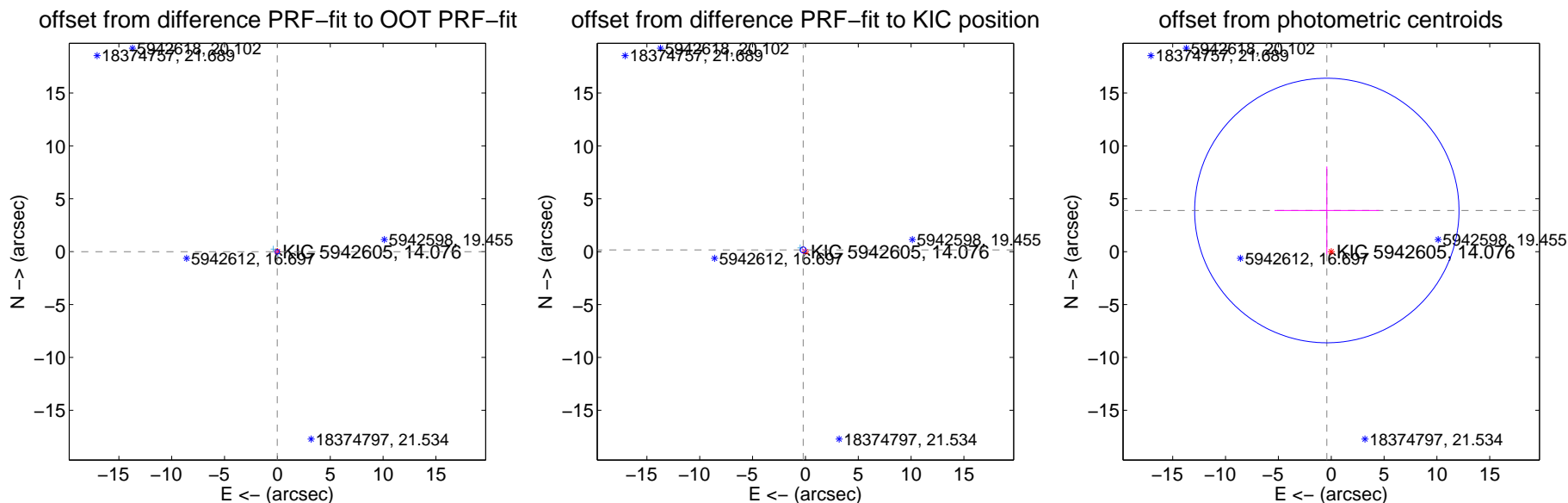
DV Centroid Data

Supplemental centroid analysis for 005942605-06. Kepler magnitude: 14.08. Transit SNR 2.01

There are 8 quarters with good PRF difference image offsets

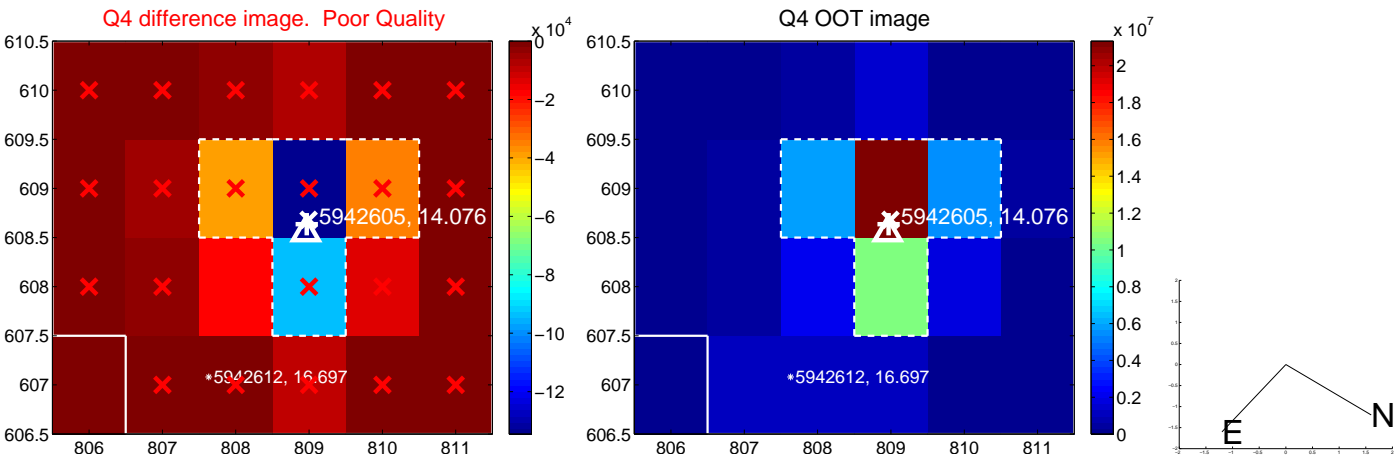
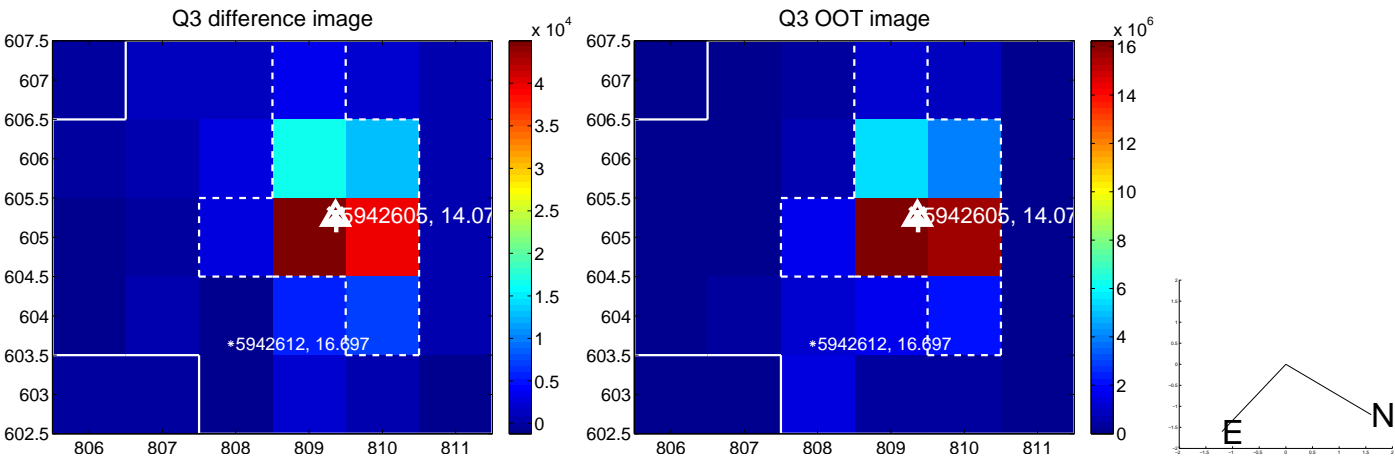
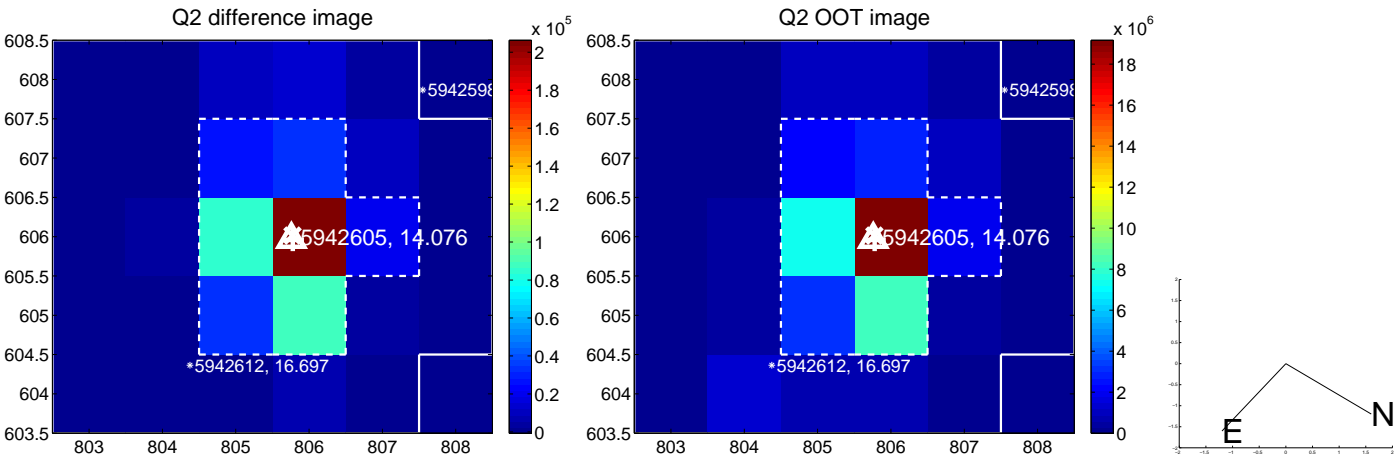
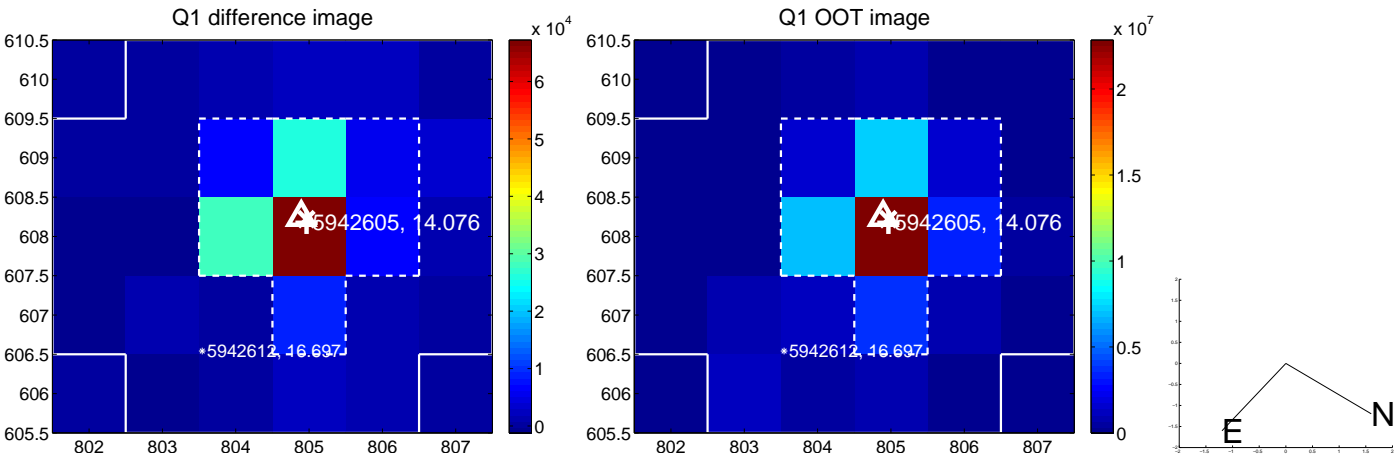
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.014 ± 0.072	0.19	0.010 ± 0.069	-0.009 ± 0.074
PRF-fit source offset from KIC position	0.268 ± 0.094	2.86	0.210 ± 0.081	0.166 ± 0.087
photometric centroid source offset	3.91 ± 4.17	0.94	0.42 ± 4.95	3.89 ± 4.16

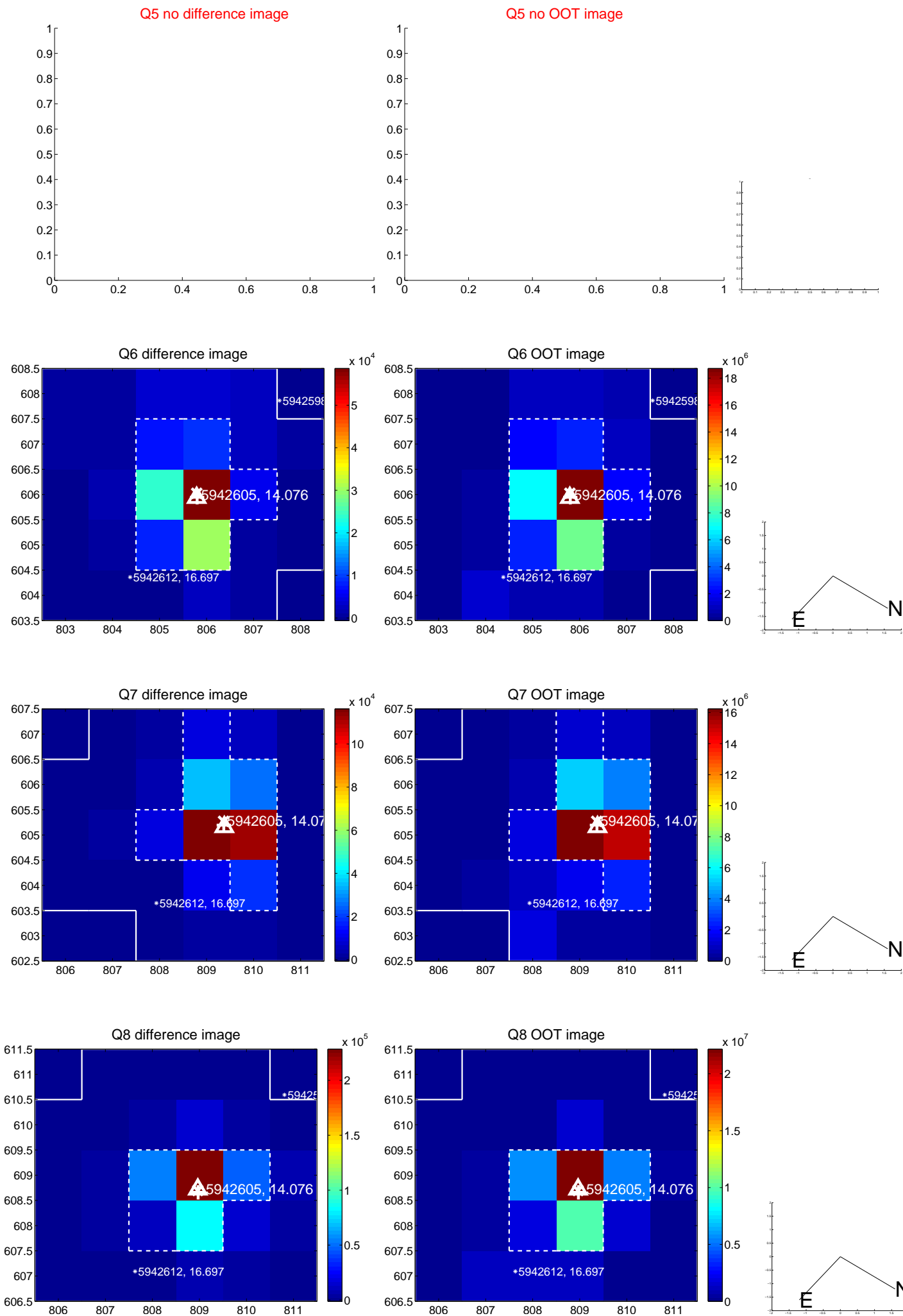


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

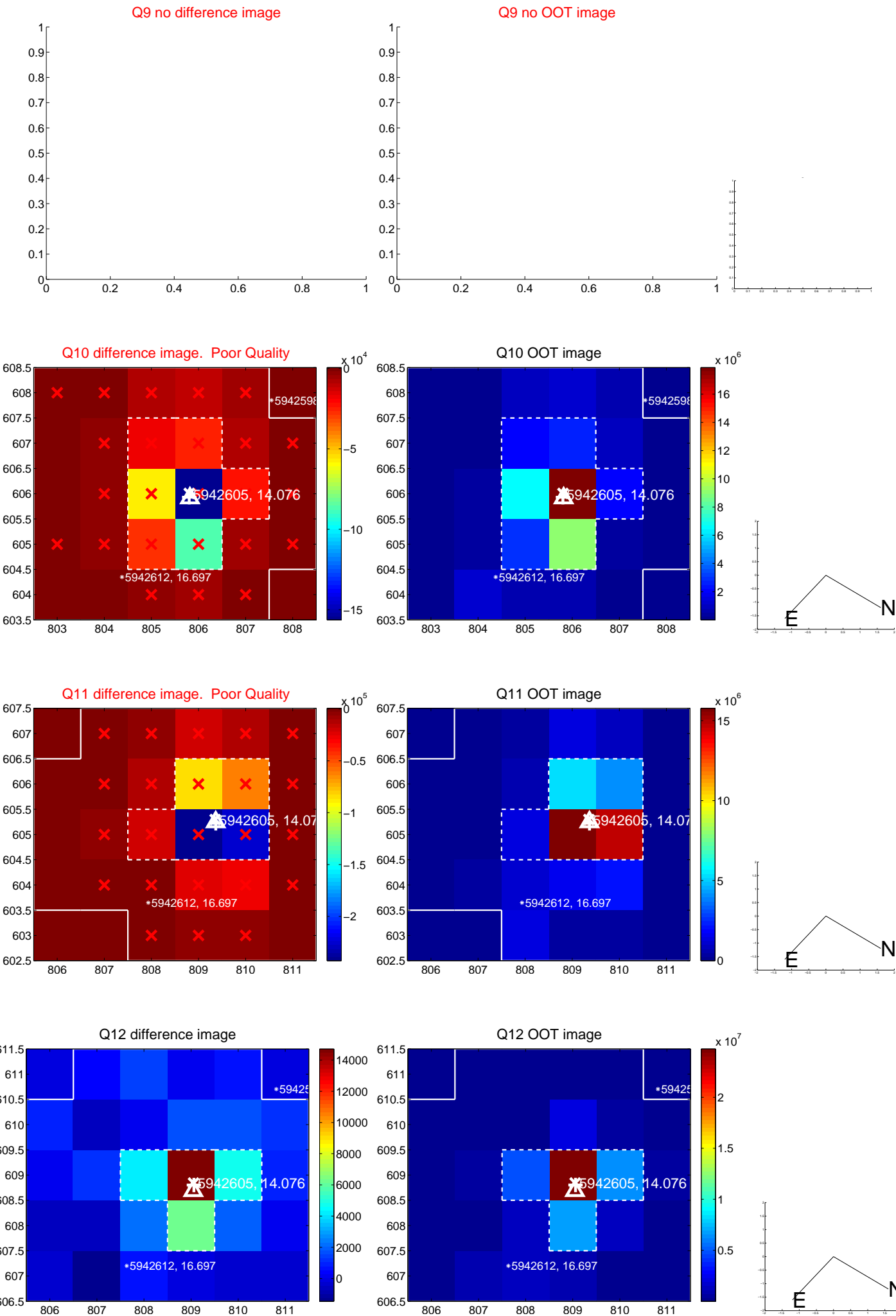
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



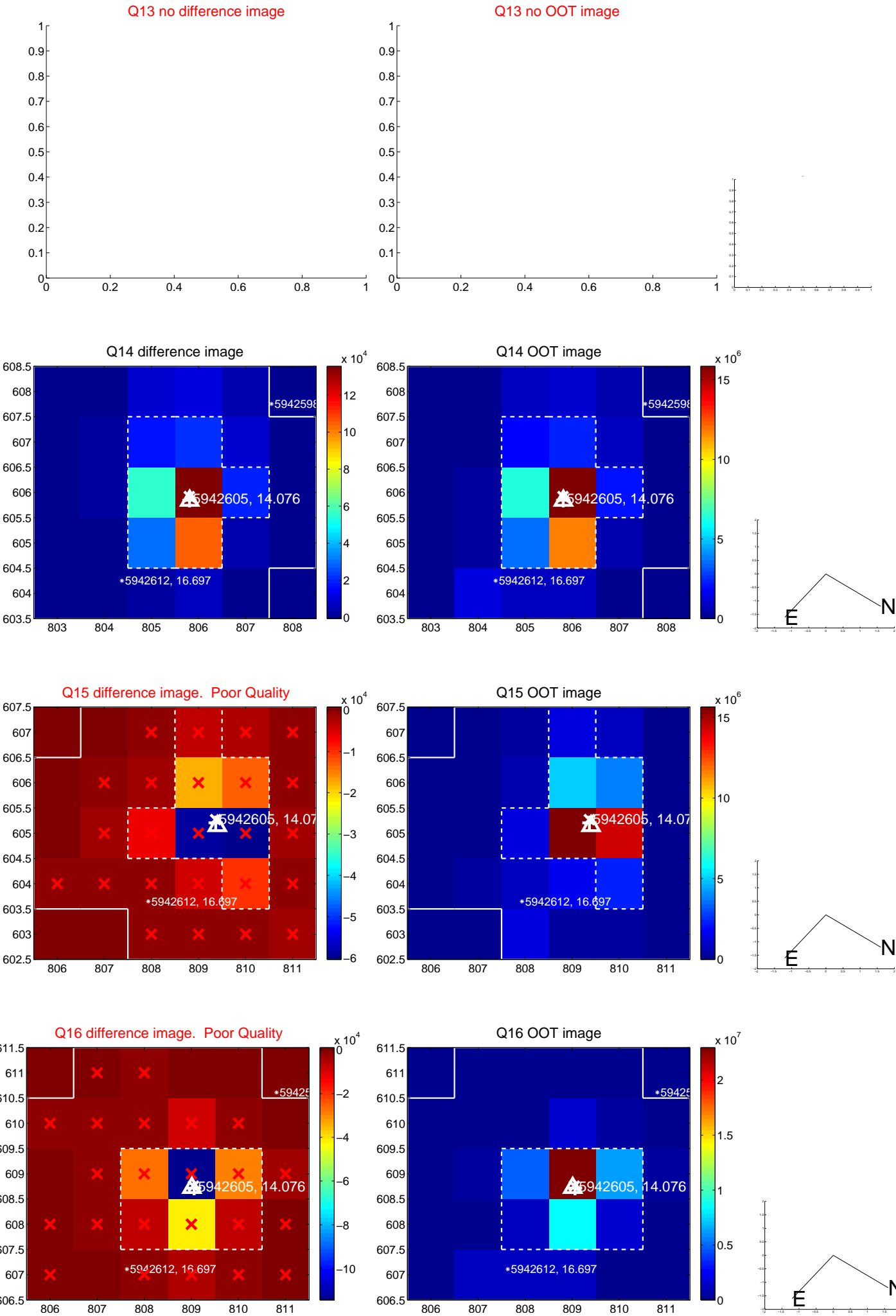
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



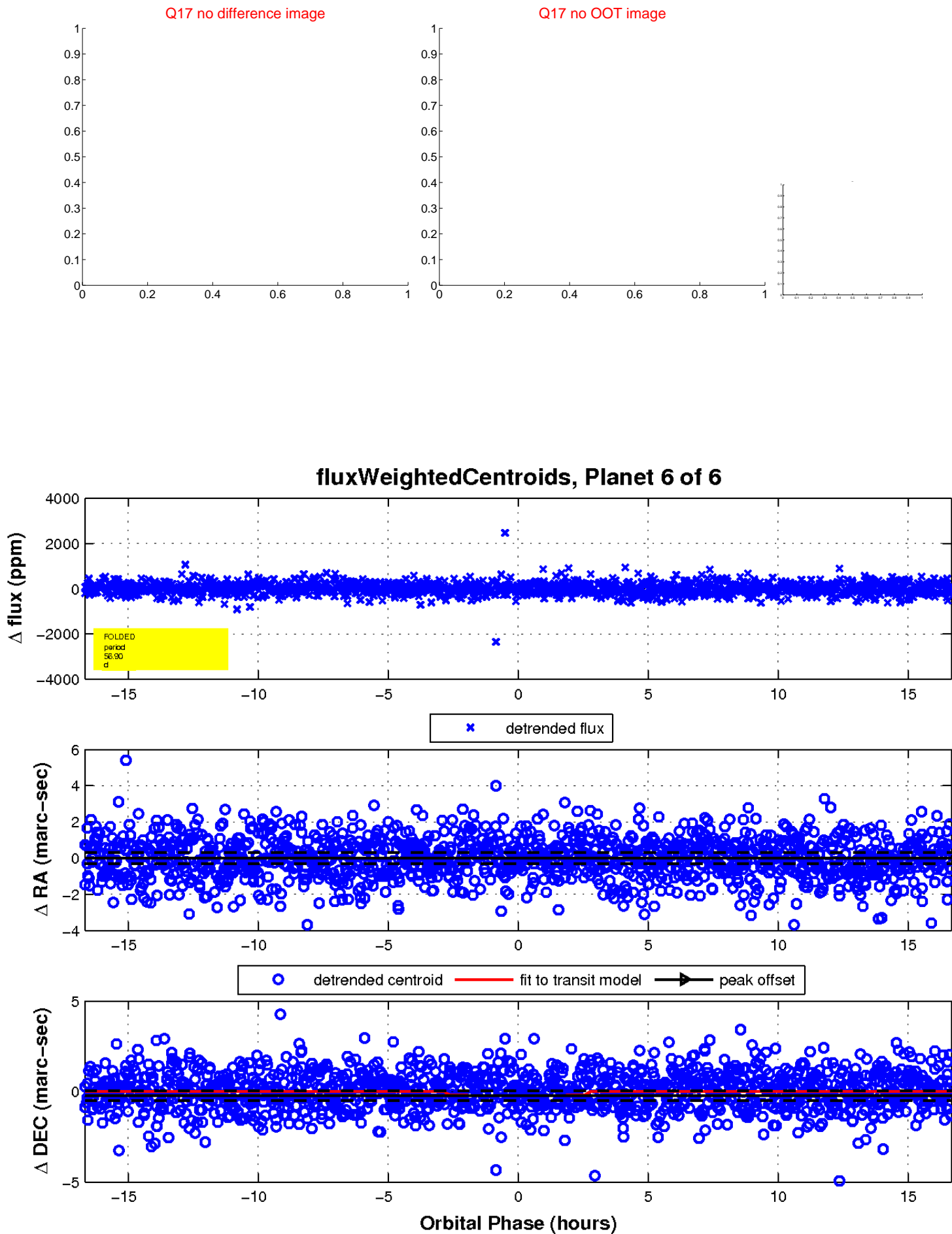
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

