

KIC 003967219

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})
003967219-01	OBS	No	2.080797	132.144804	321.2	4.824	19.6	22.5	1.93	9748	5.00	17152.27
003967219-02	OBS	No	2.081145	133.892952	104.7	11.695	7.9	7.5	1.93	9748	2.08	17148.44
003967219-03	OBS	No	116.751267	213.218814	332.7	3.586	11.7	2.2	1.93	9748	4.06	79.85
003967219-04	OBS	No	116.784607	213.500653	1351.8	12.000	11.9	-1.0	1.93	9748	7.26	79.82
003967219-05	OBS	No	63.410114	180.103749	796.3	2.891	8.2	8.5	1.93	9748	6.09	180.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003967219-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
003967219-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD
003967219-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—HALO_GHOST
003967219-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_NOFITS
003967219-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_POS_ALT—HALO_GHOST

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

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

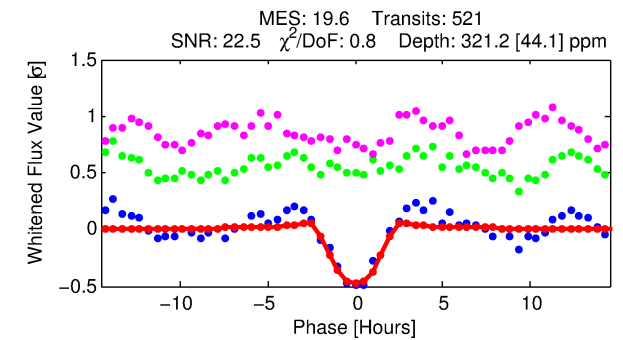
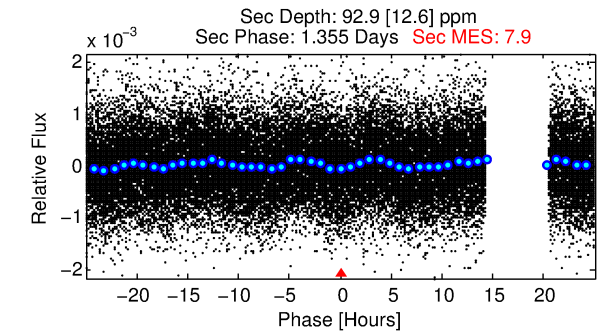
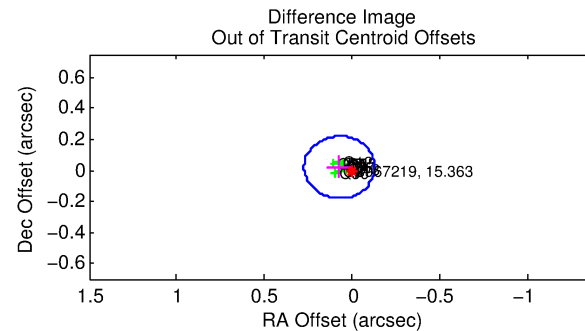
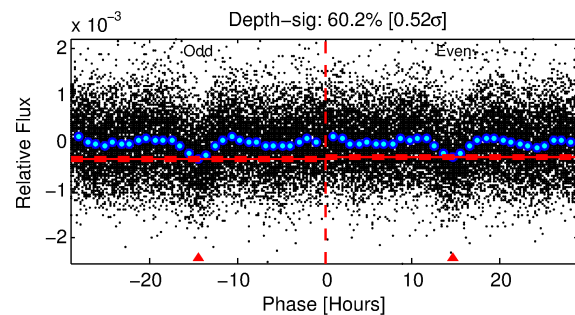
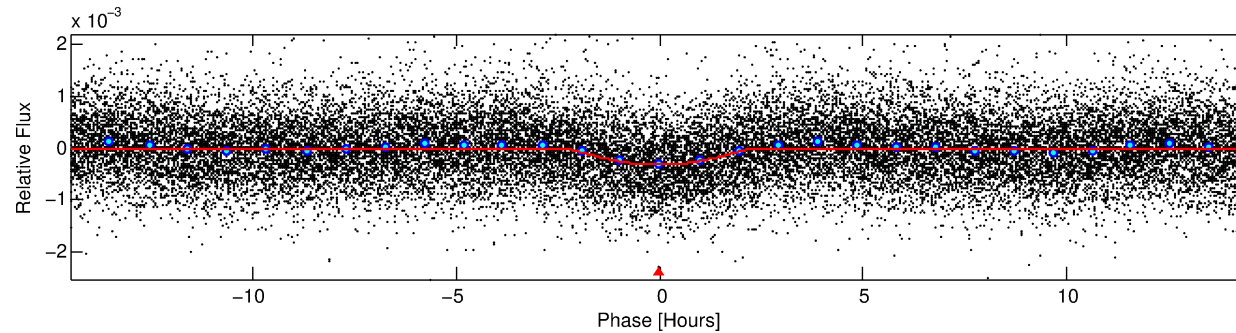
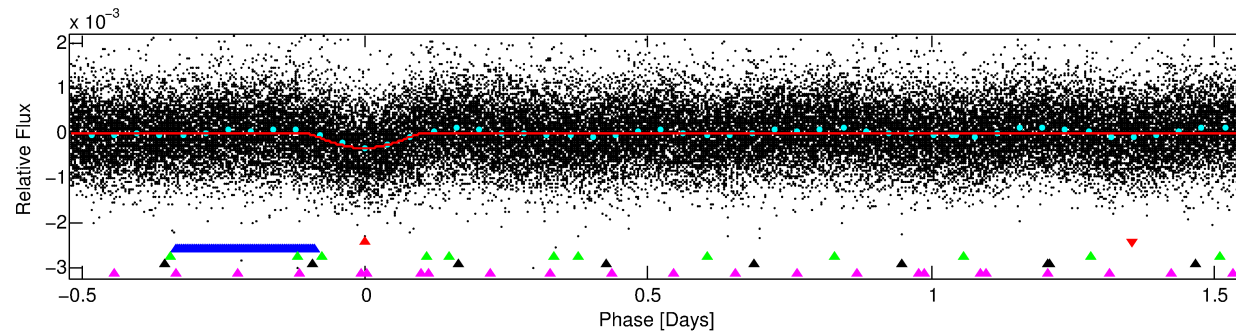
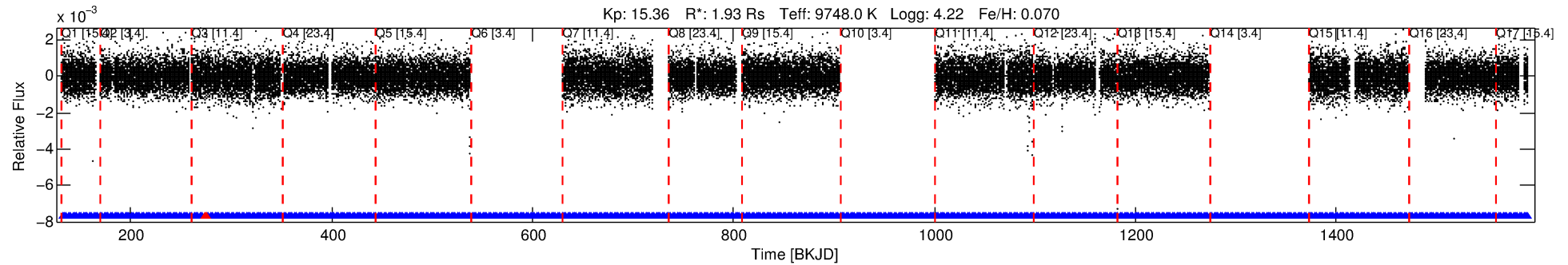
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003967219-01

No Significant Match Found

DV One-Page Summary

KIC: 3967219 Candidate: 1 of 5 Period: 2.081 d



DV Fit Results:

Period = 2.08080 [0.00001] d
Epoch = 132.1448 [0.0035] BKJD
Rp/R* = 0.0237 [0.0105]
a/R* = 1.33 [0.11]
b = 0.99 [0.02]
Seff = 17152.27 [6017.41]
Teq = 2918 [256] K
Rp = 5.00 [2.62] Re
a = 0.0419 [0.0094] AU
Ag = 3.59 [3.42] [0.76 σ]
Teffp = 6212 [1415] K [2.29 σ]

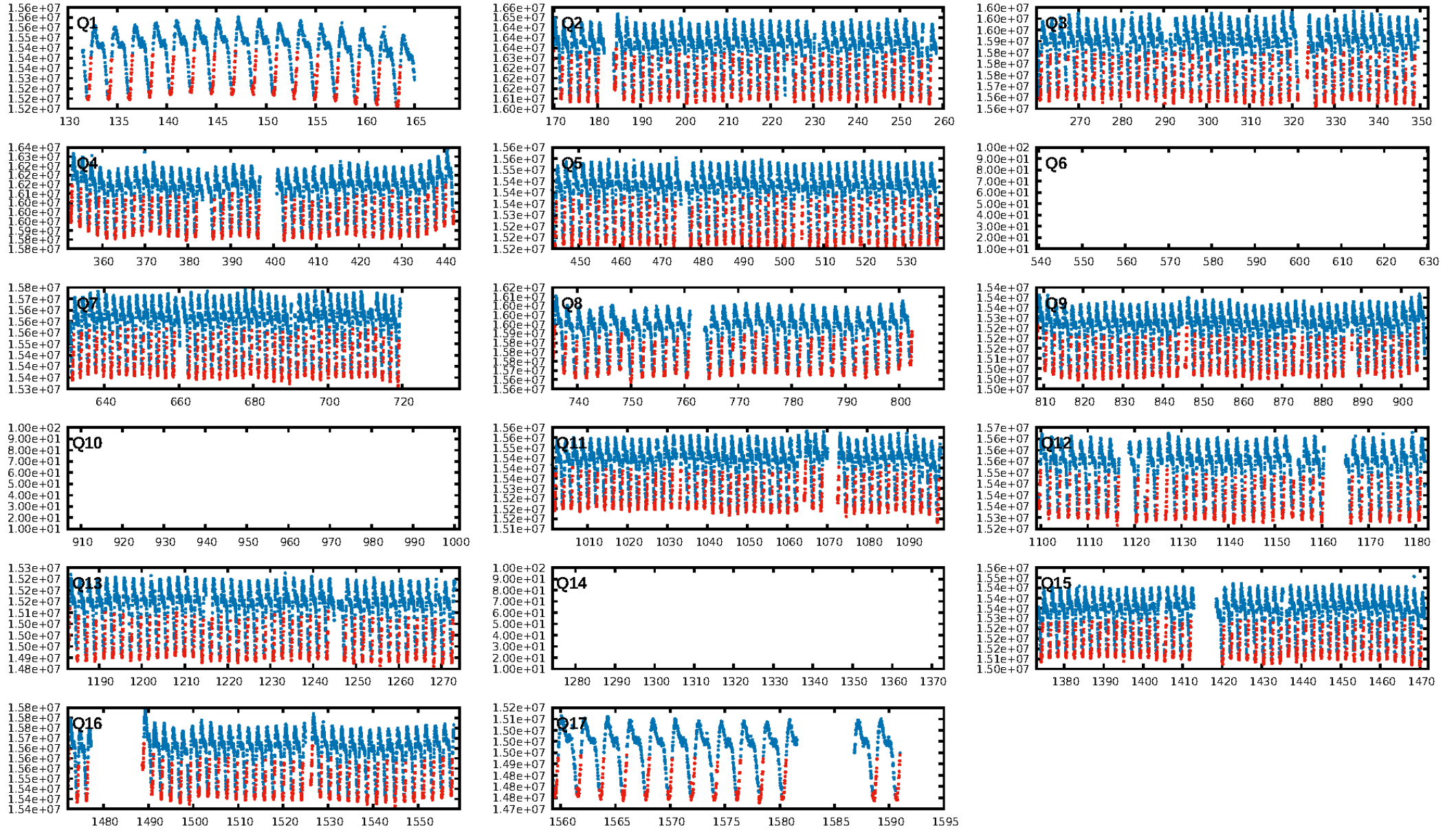
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.08e-52
RollingBand-fgt: 1.00 [490/492]
GhostDiagnostic-chr: 2.662
Centroid-sig: 0.2%
Centroid-so: 1.299 arcsec [2.17 σ]
OotOffset-rm: 0.077 arcsec [1.14 σ]
KicOffset-rm: 0.134 arcsec [1.99 σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 0.00 [0/14]

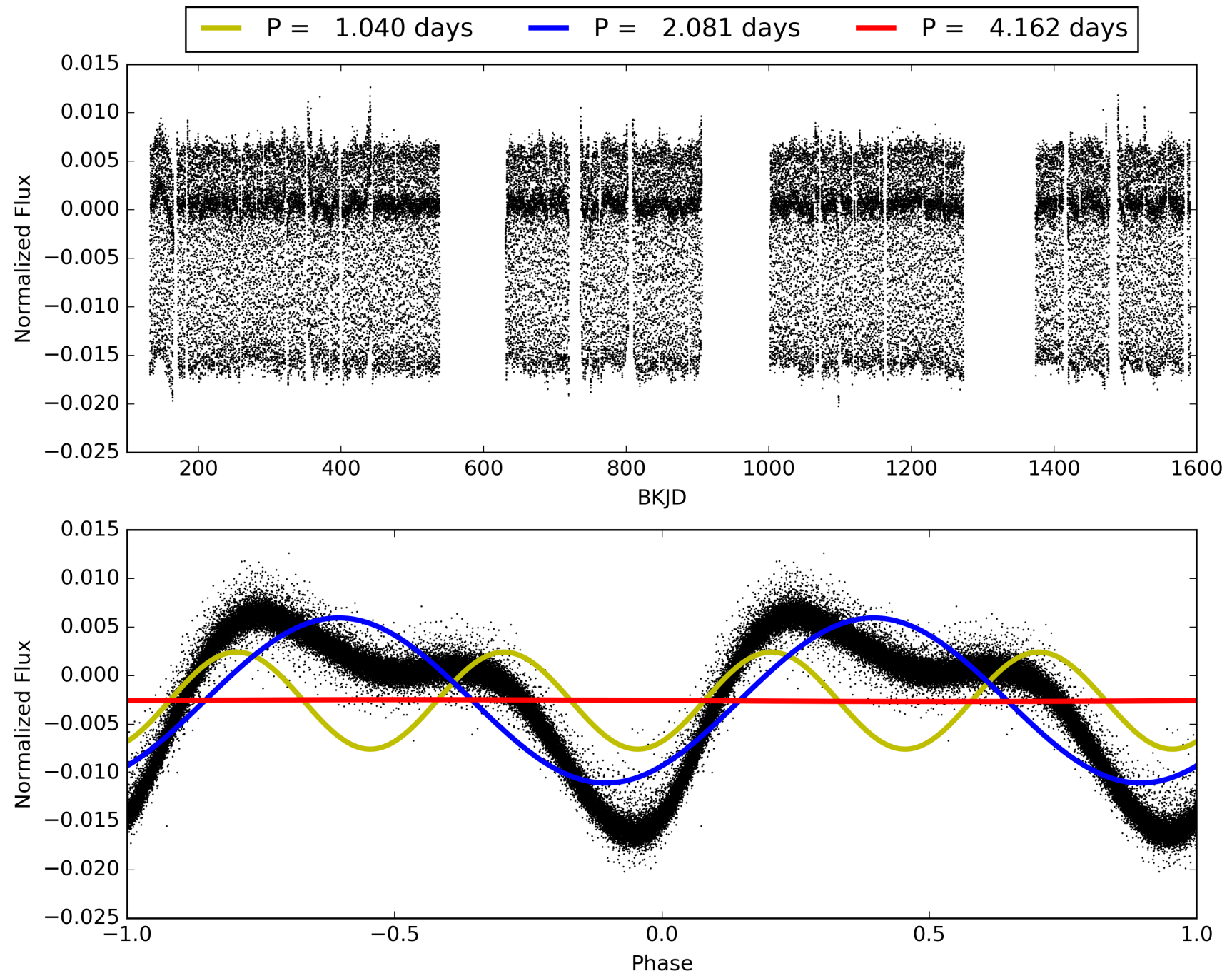
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 12:08:45 Z

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

TCE 003967219-01, PDC Light Curves

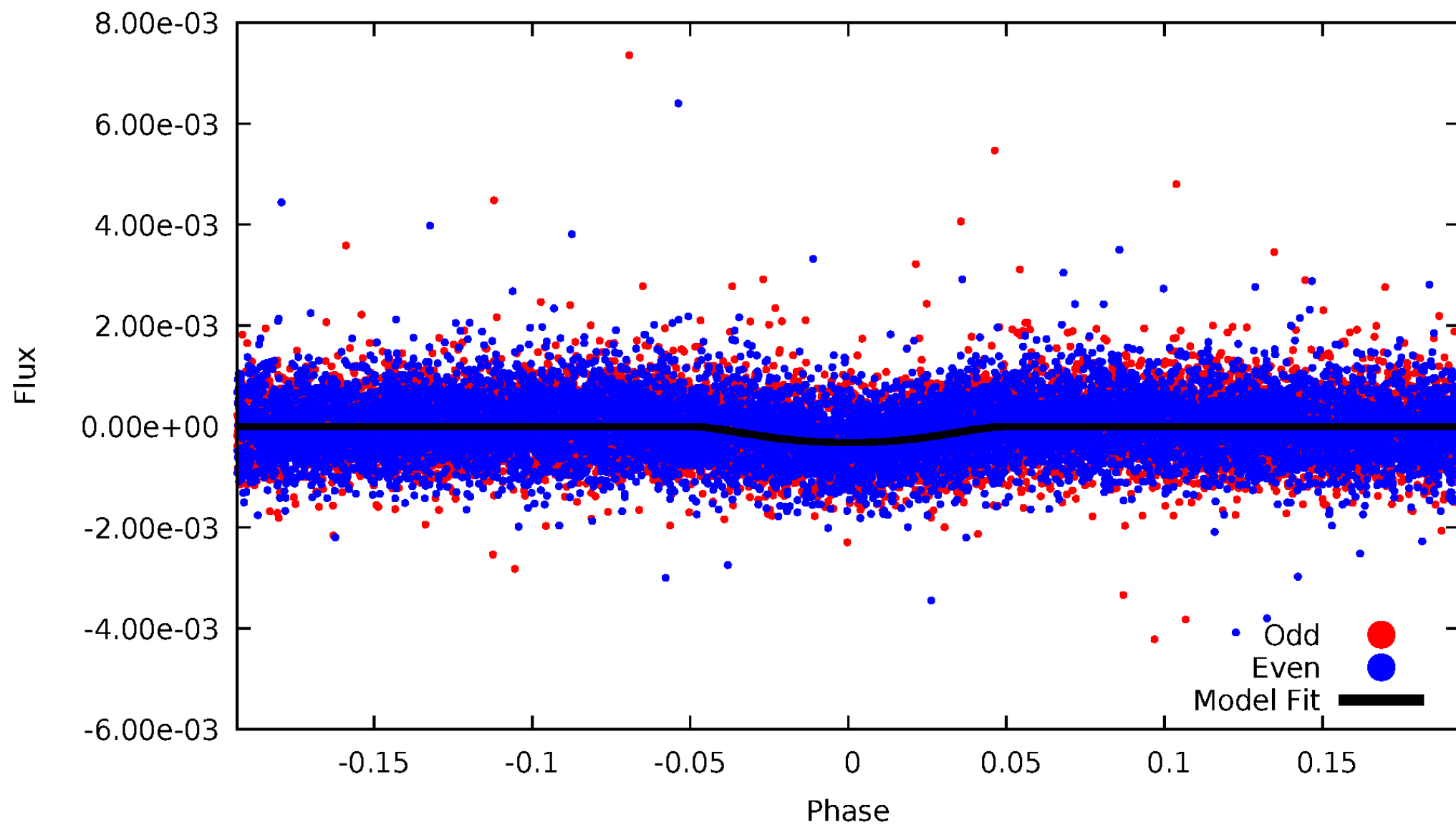


TCE 003967219-01



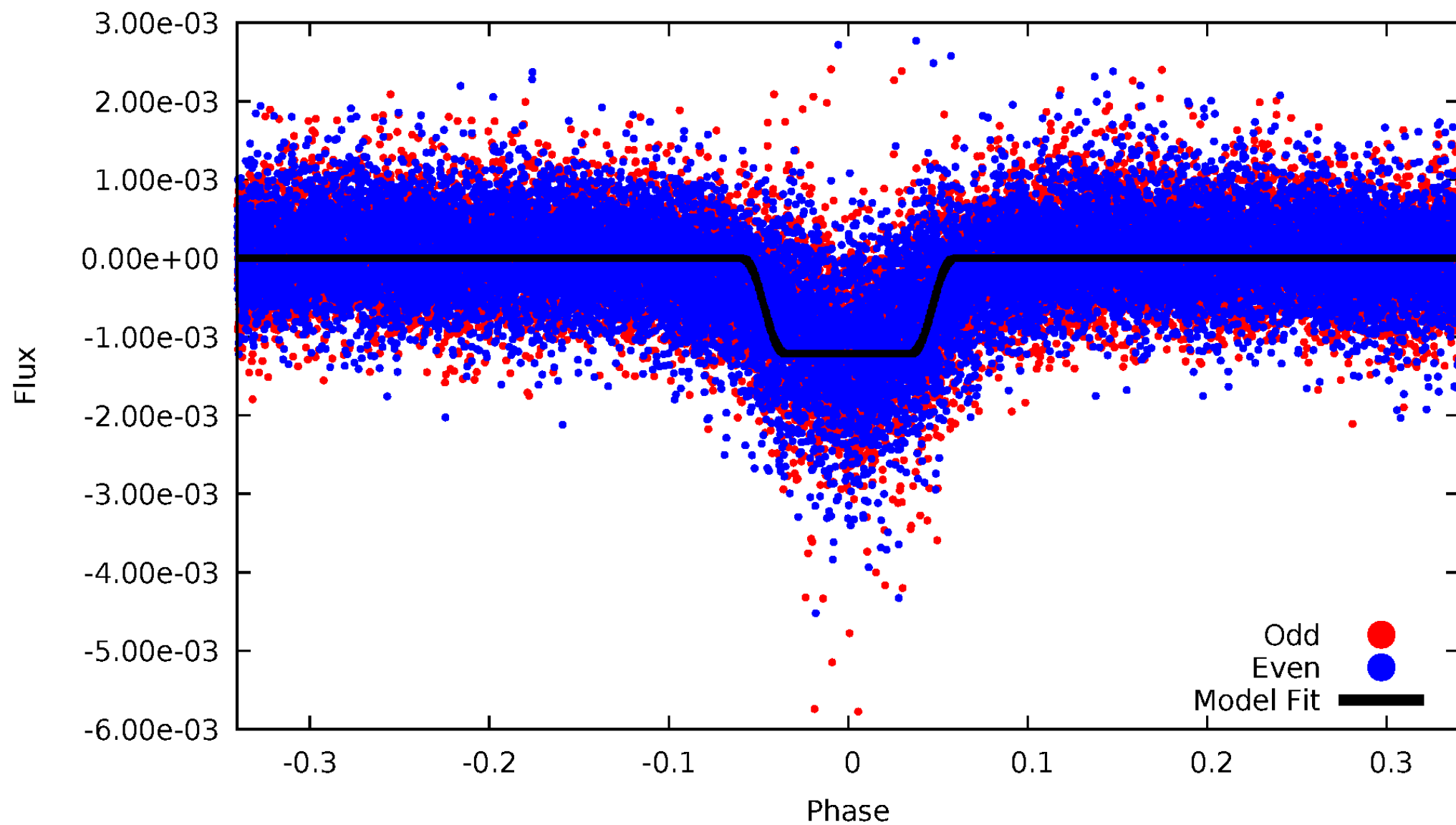
DV Odd/Even

TCE 003967219-01



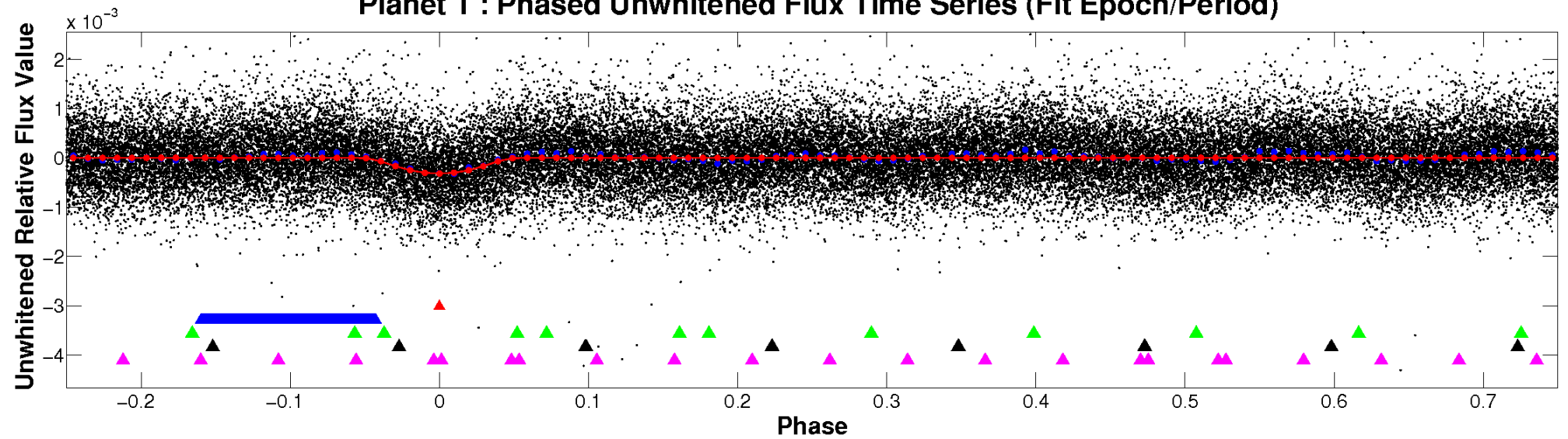
ALT Odd/Even

TCE 003967219-01

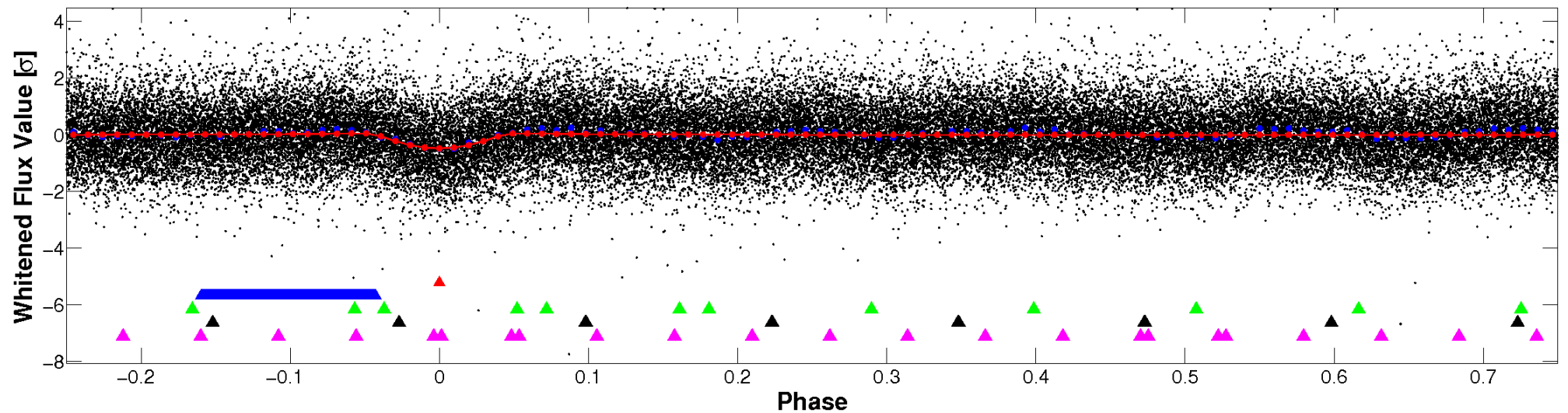


Non-Whitened Vs. Whitened Light Curve

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

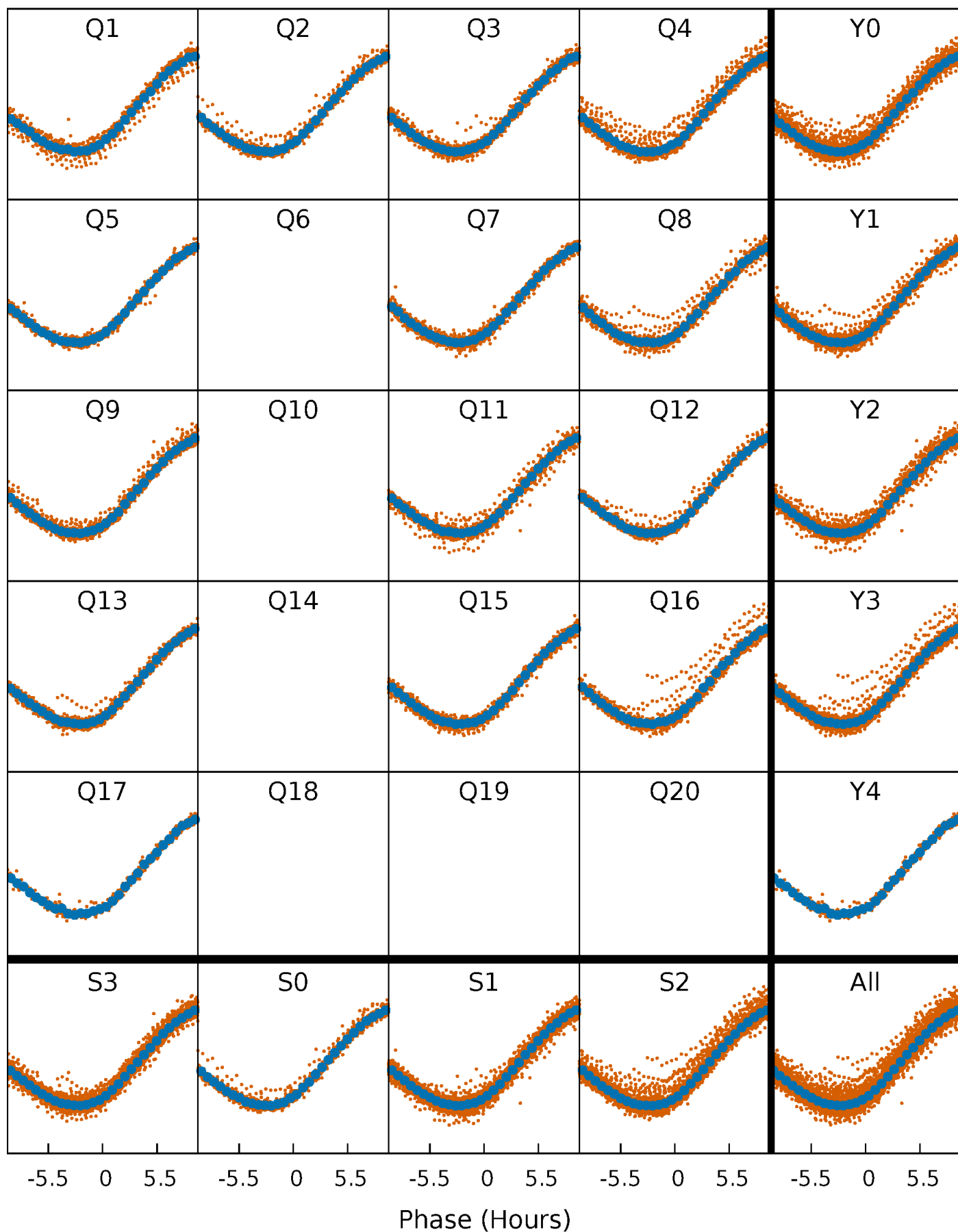


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



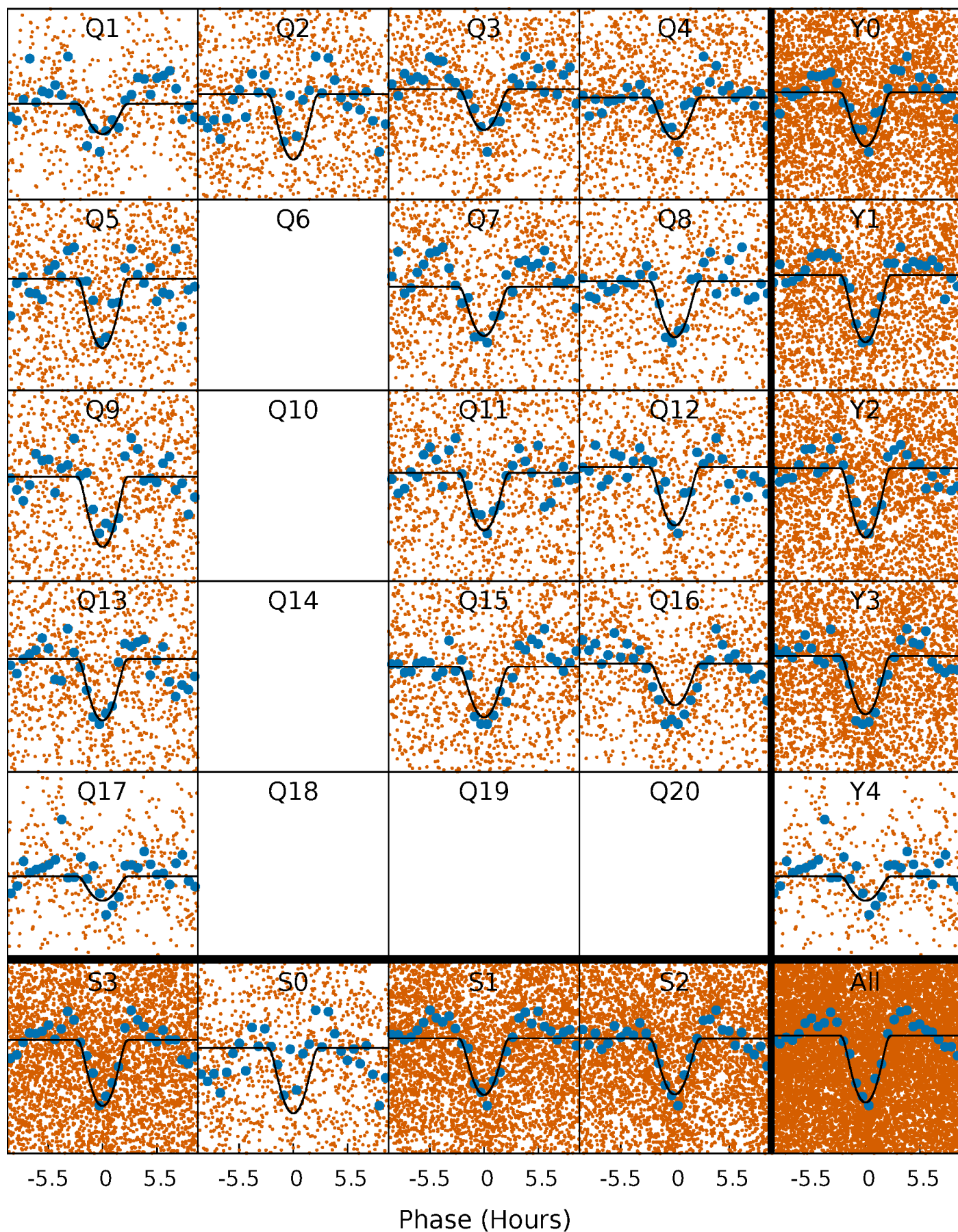
PDC Quarter-Phased Transit Curves

TCE 003967219-01 P= 2.080797 Days $T_0=132.144804$ (BKJD)



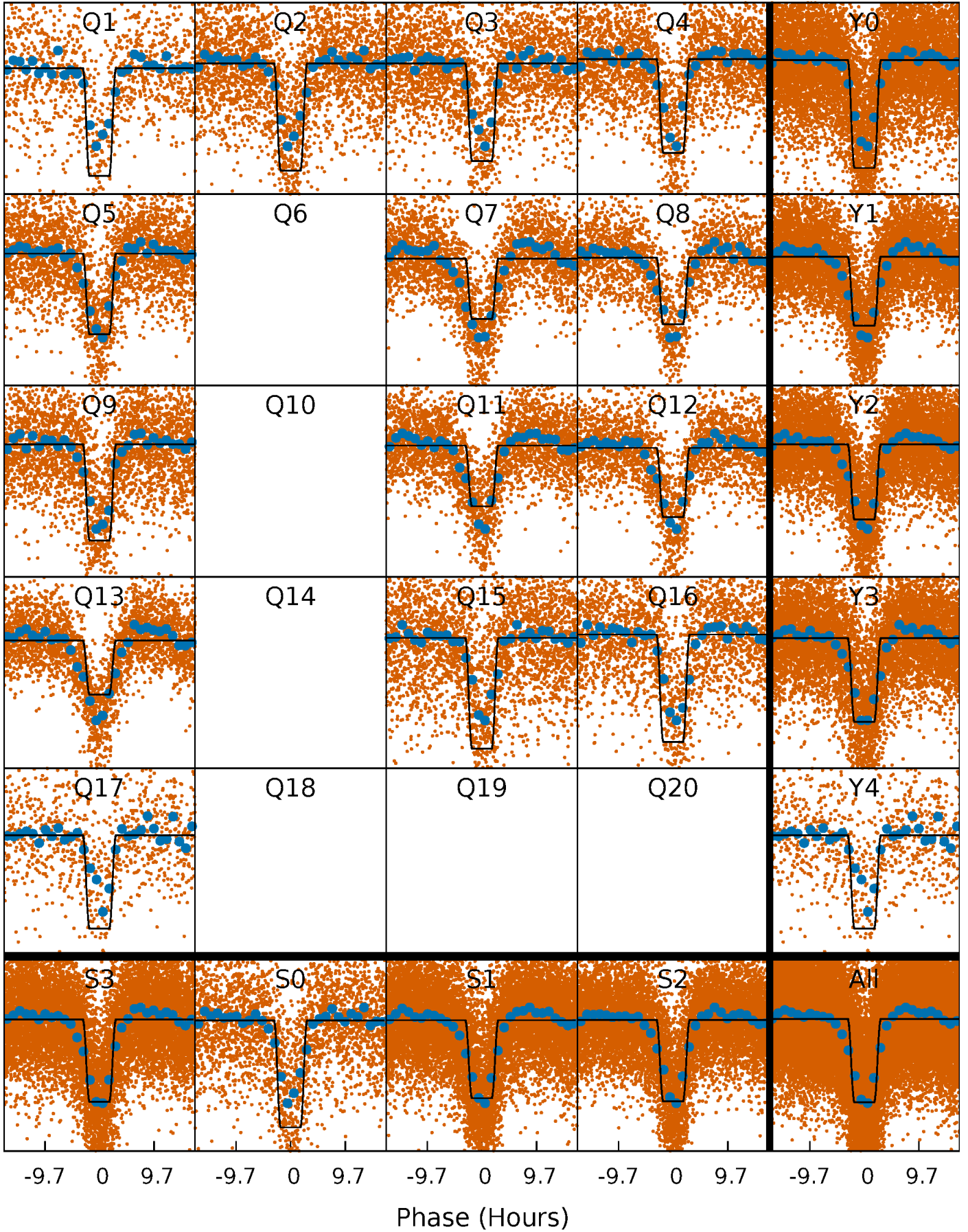
DV Quarter-Phased Transit Curves

TCE 003967219-01 P= 2.080797 Days $T_0=132.144804$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

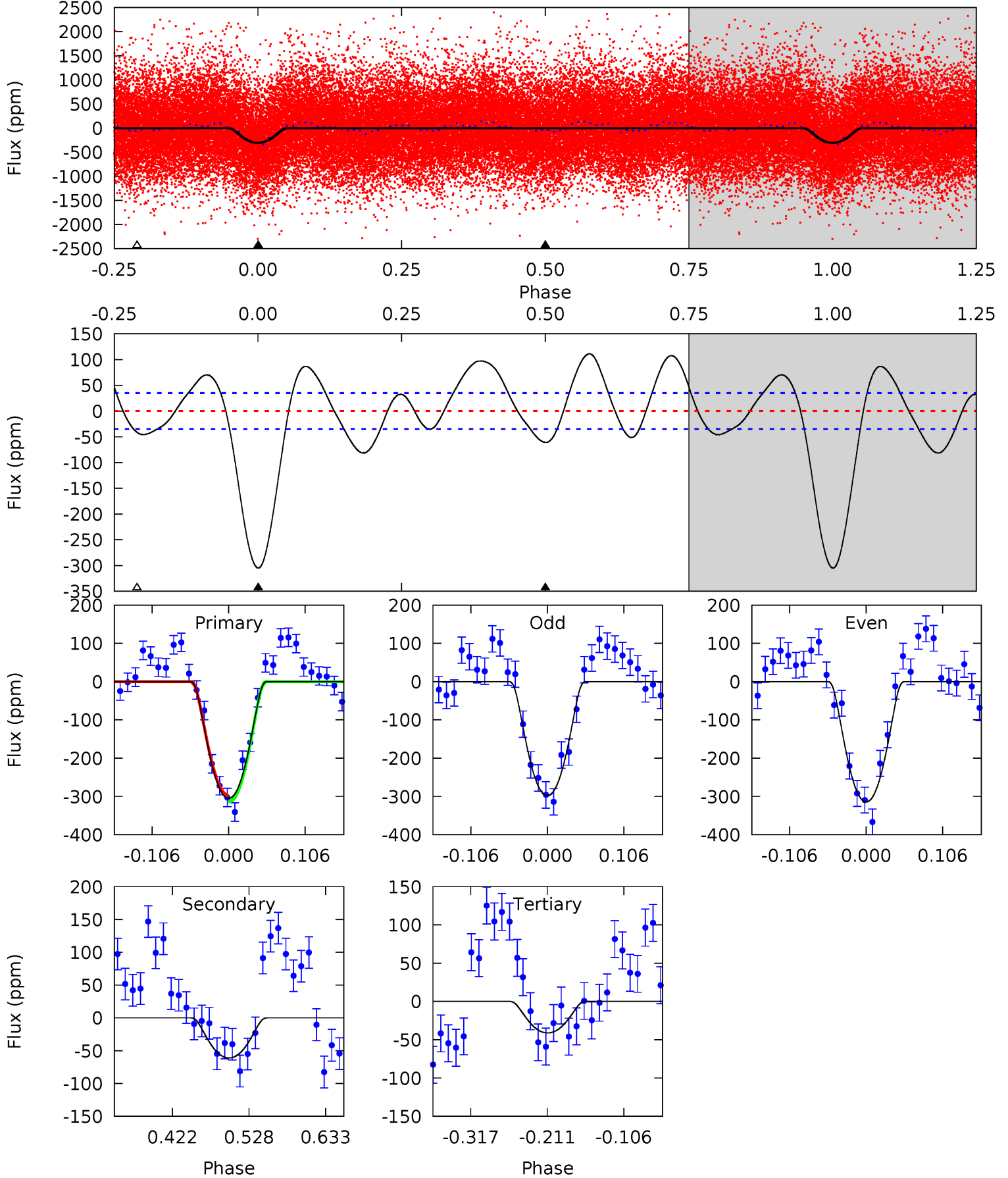
TCE 003967219-01 P= 2.080809 Days $T_0=132.133064$ (BKJD)



DV Model-Shift Uniqueness Test

003967219-01, P = 2.080797 Days, E = 130.064007 Days

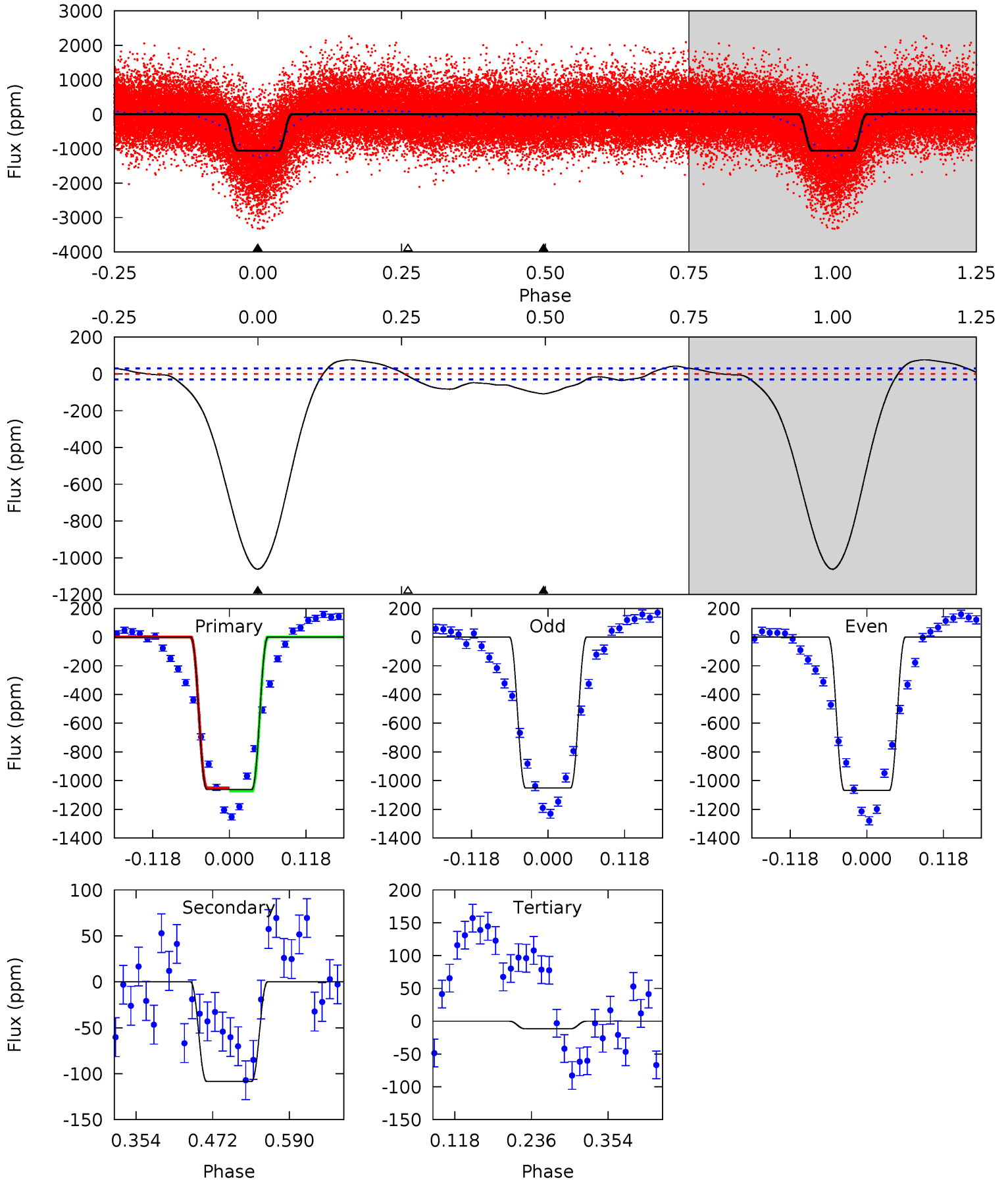
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.9	7.99	5.38	0	4.55	1.62	6.49	34.5	39.9	2.61	7.99	1.07	0.96	0.27	1.01



Alt Model-Shift Uniqueness Test

003967219-01, P = 2.080809 Days, E = 130.052255 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
162.7	16.6	1.79	0	4.53	1.56	7.24	160.9	162.7	14.8	16.6	1.26	1.02	0.07	1.84



Stellar Parameters For KIC 003967219

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9748^{+344}_{-378}	$4.222^{+0.165}_{-0.135}$	$0.070^{+0.150}_{-0.600}$	$1.928^{+0.442}_{-0.540}$	$2.257^{+0.285}_{-0.530}$	$0.444^{+0.421}_{-0.186}$
	+4%/-4%	+4%/-3%	+214%/-857%	+23%/-28%	+13%/-23%	+95%/-42%
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 003967219-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-61 ± 8	$4.85^{+2.32}_{-2.16}$	4087^{+275}_{-304}	5091^{+1799}_{-869}	$2.404^{+5.325}_{-1.293}$
Alt.	-108 ± 7	$7.13^{+2.58}_{-2.11}$	4063^{+283}_{-280}	4858^{+865}_{-613}	$2.040^{+1.913}_{-0.928}$

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 $A_{obs} \gg 1.0$

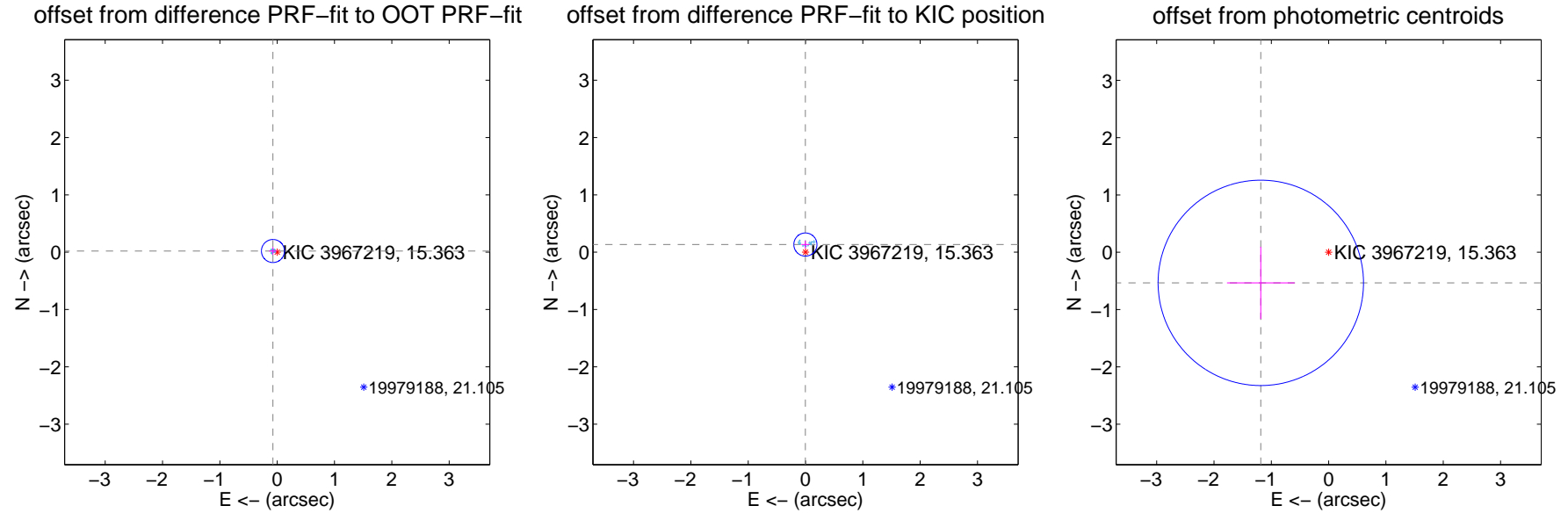
DV Centroid Data

Supplemental centroid analysis for 003967219-01. Kepler magnitude: 15.36. Transit SNR 22.52

There are 14 quarters with good PRF difference image offsets

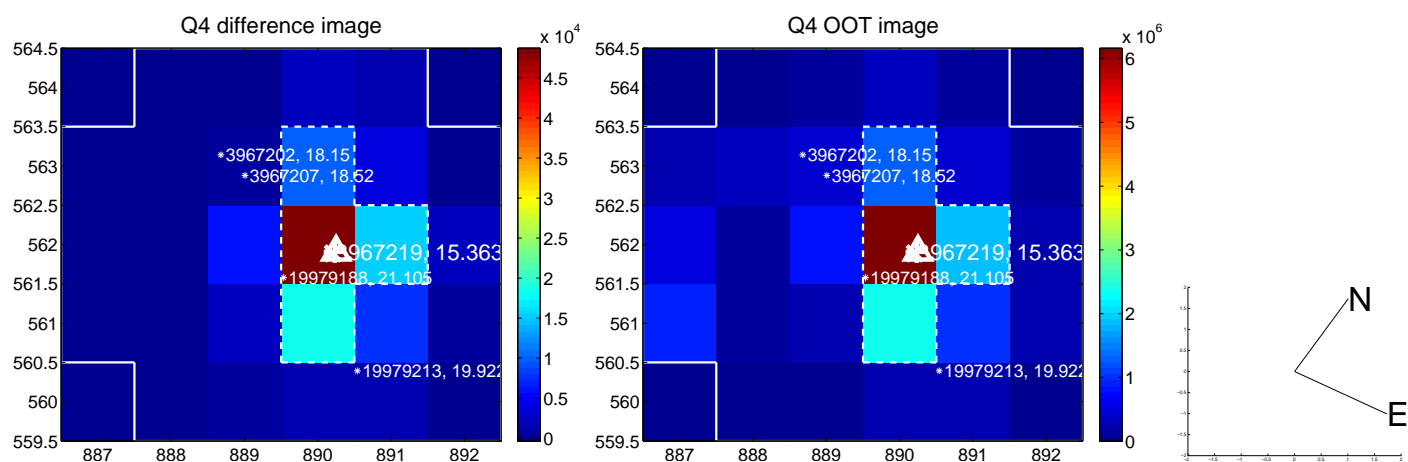
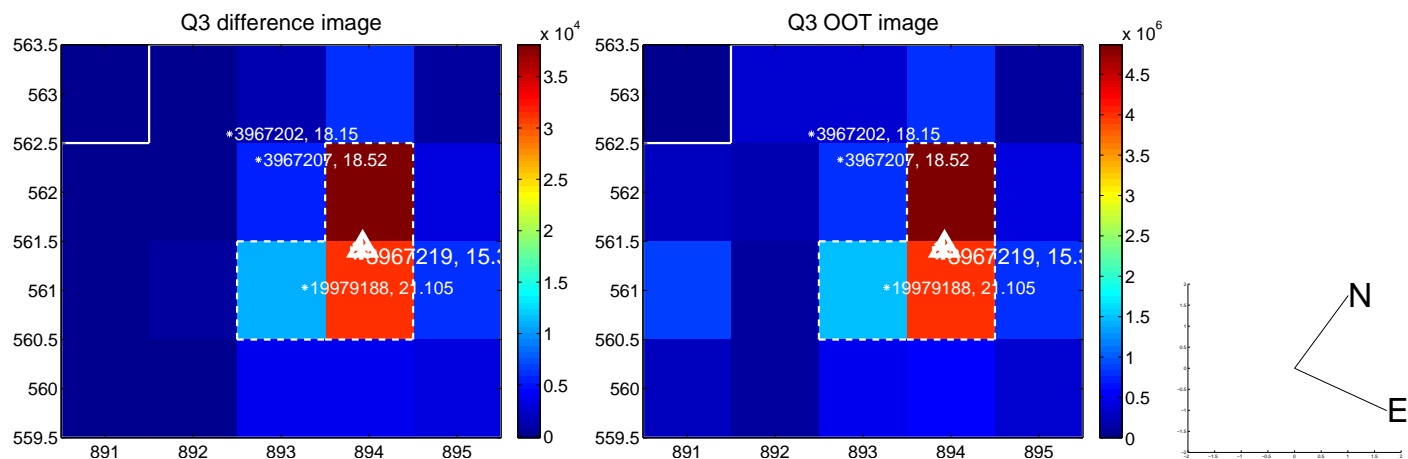
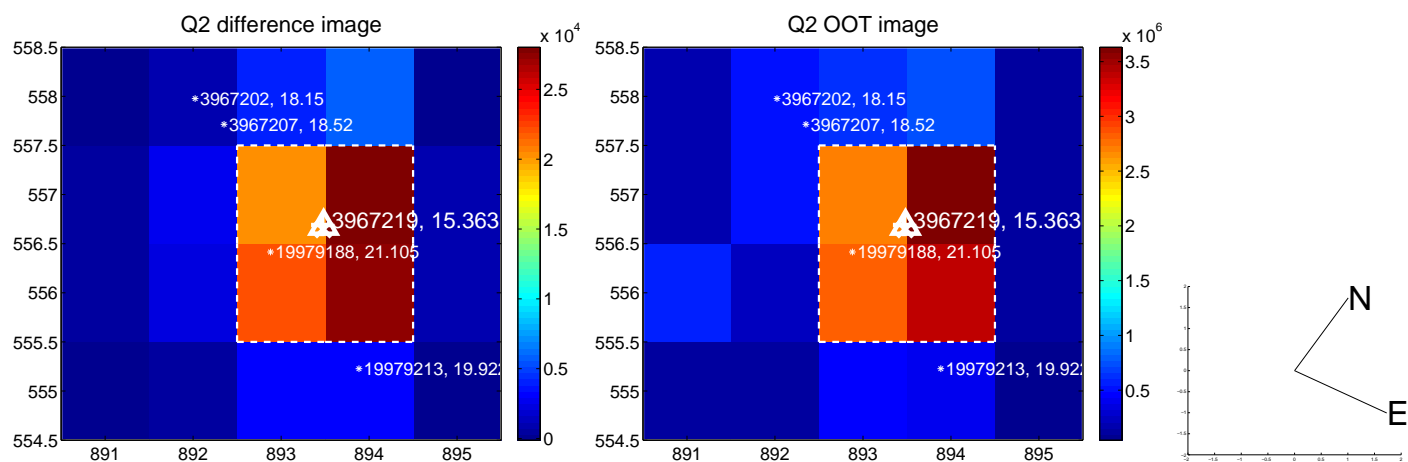
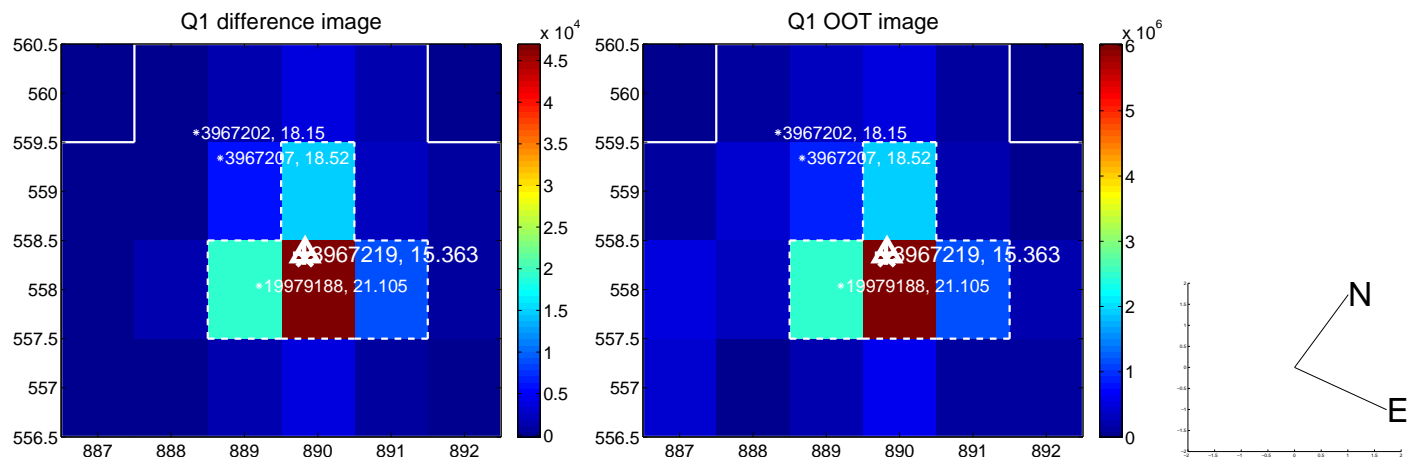
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.077 ± 0.067	1.14	0.074 ± 0.067	0.021 ± 0.067
PRF-fit source offset from KIC position	0.134 ± 0.067	1.99	0.002 ± 0.071	0.134 ± 0.067
photometric centroid source offset	1.30 ± 0.60	2.17	1.18 ± 0.59	-0.53 ± 0.63

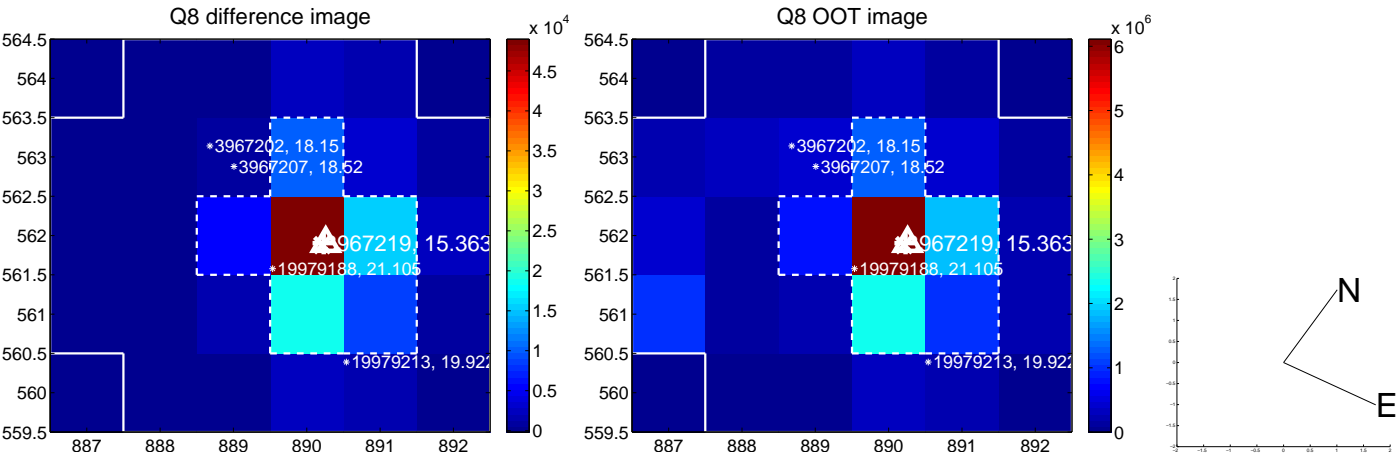
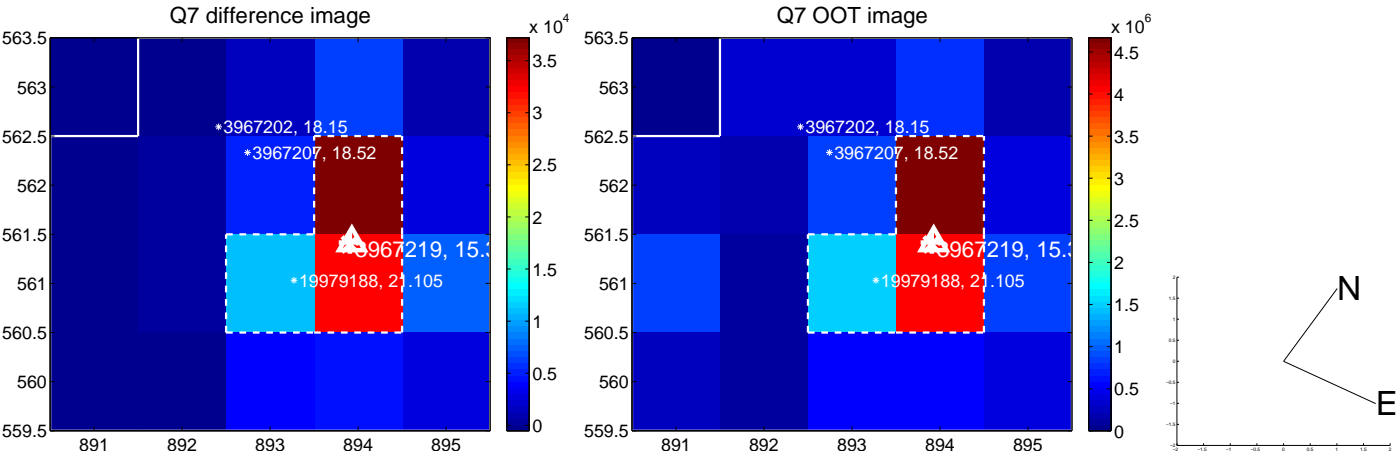
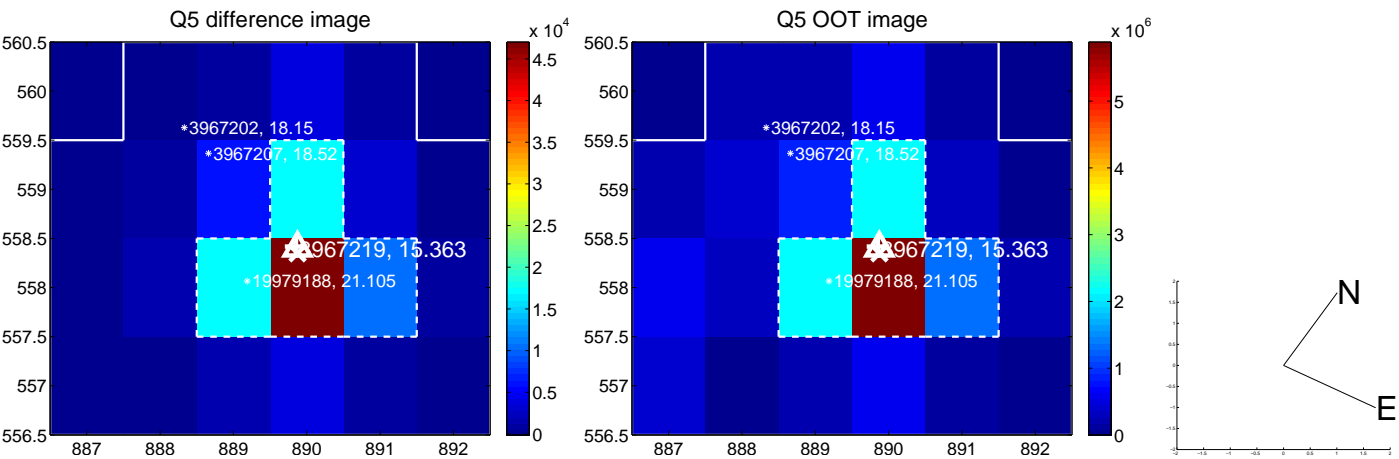


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

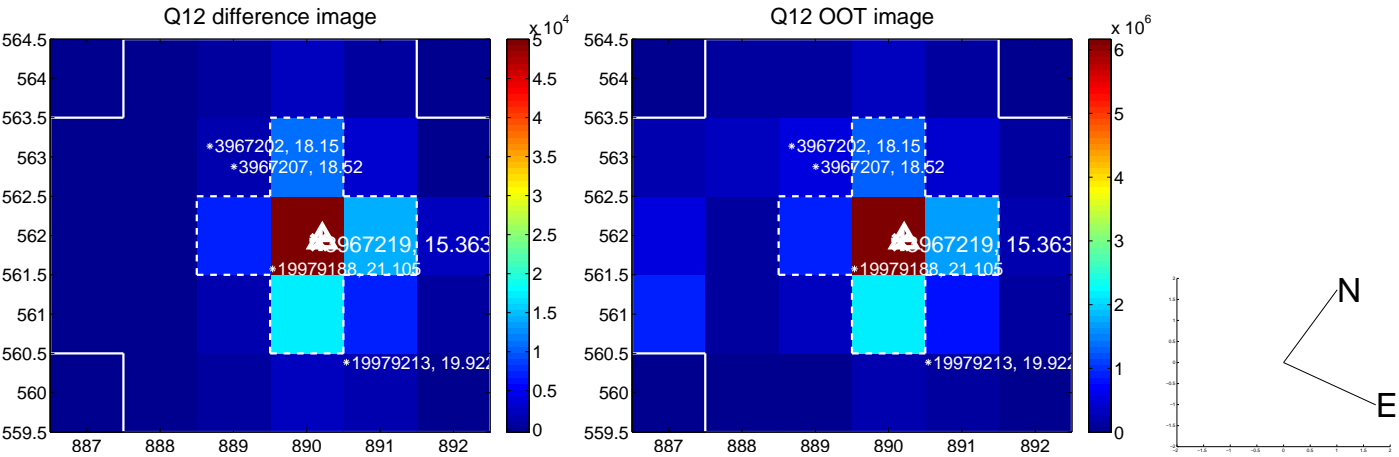
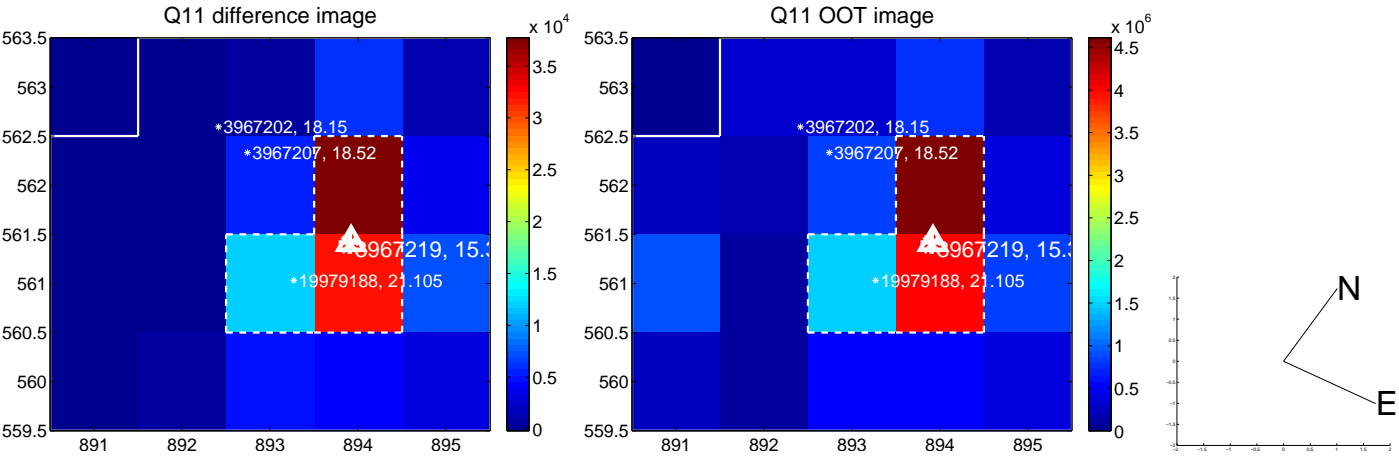
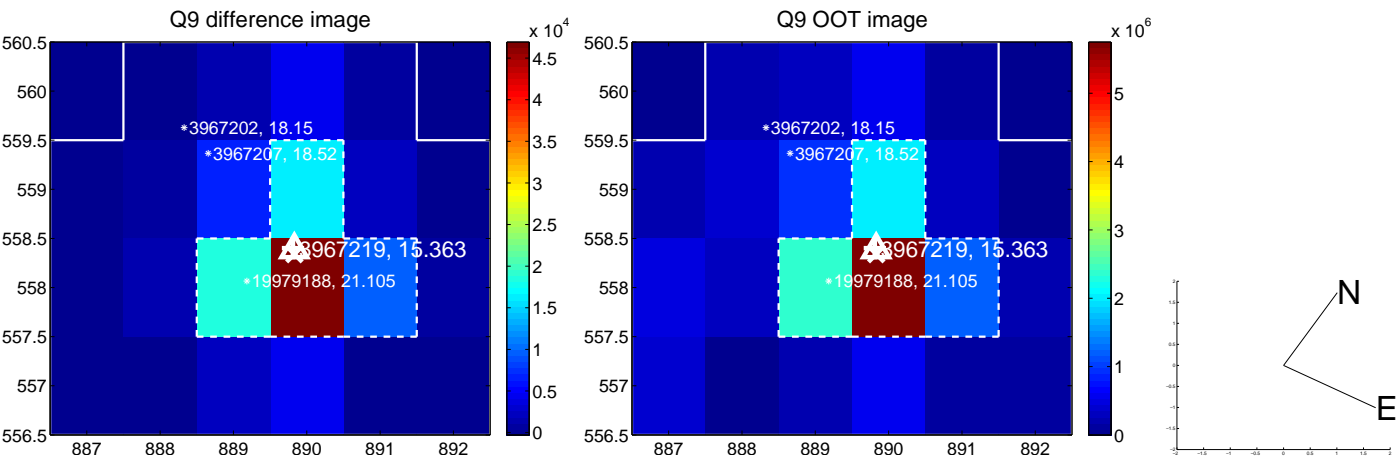
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



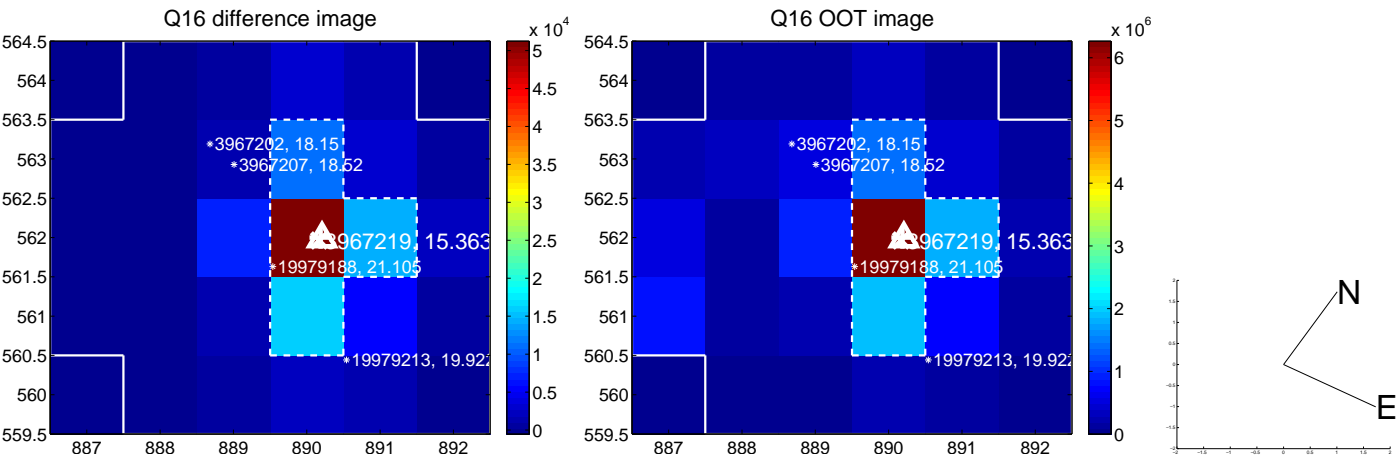
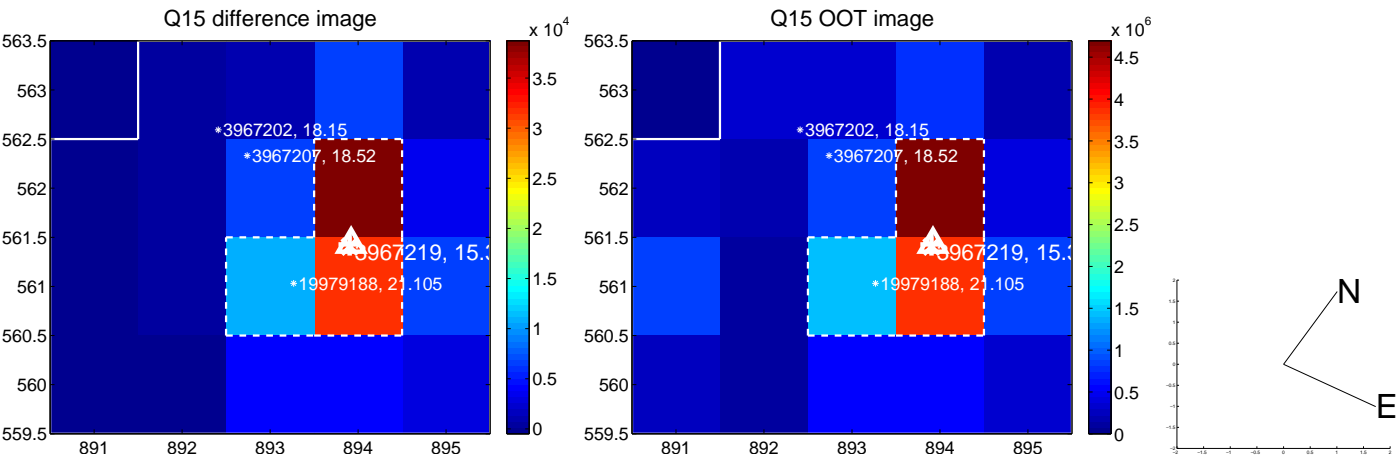
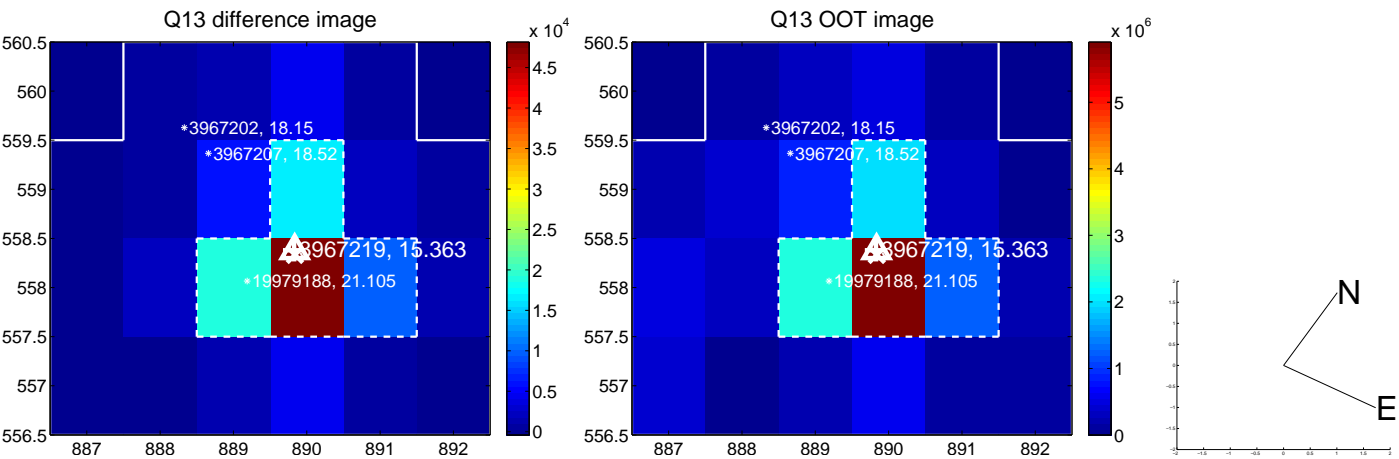
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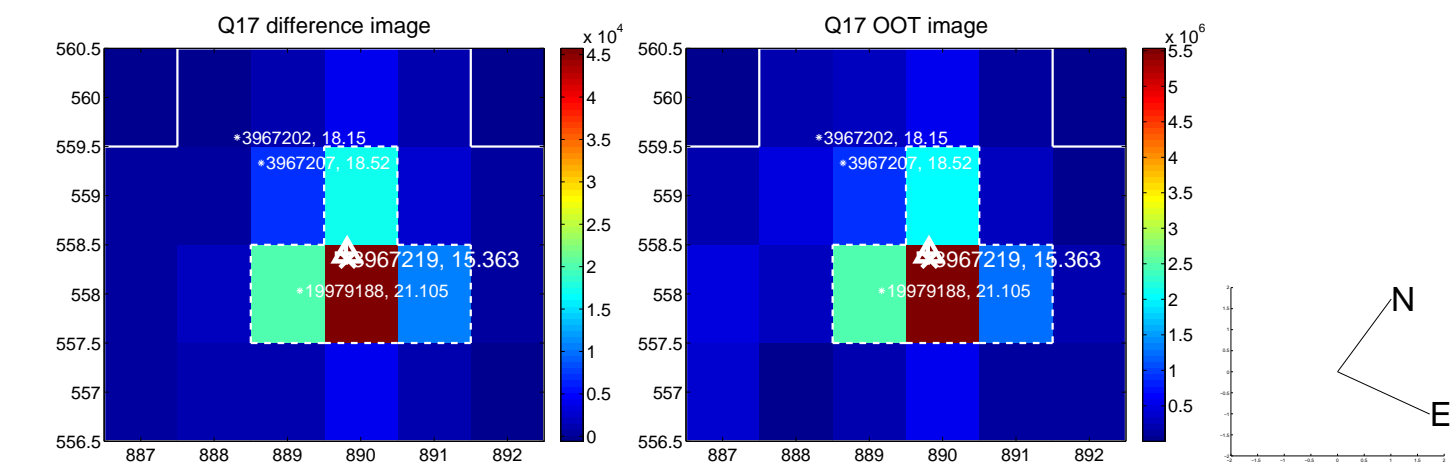
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



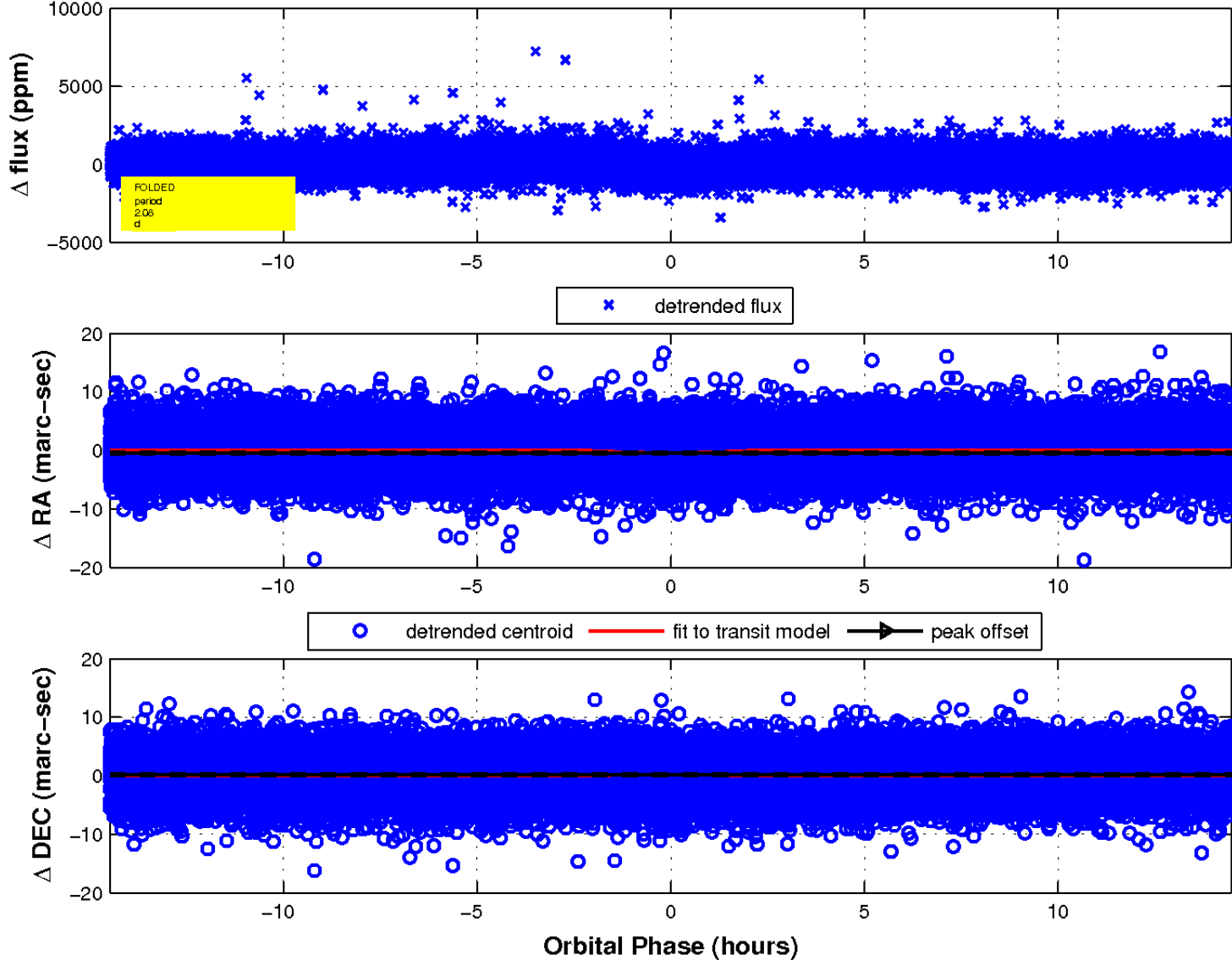
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



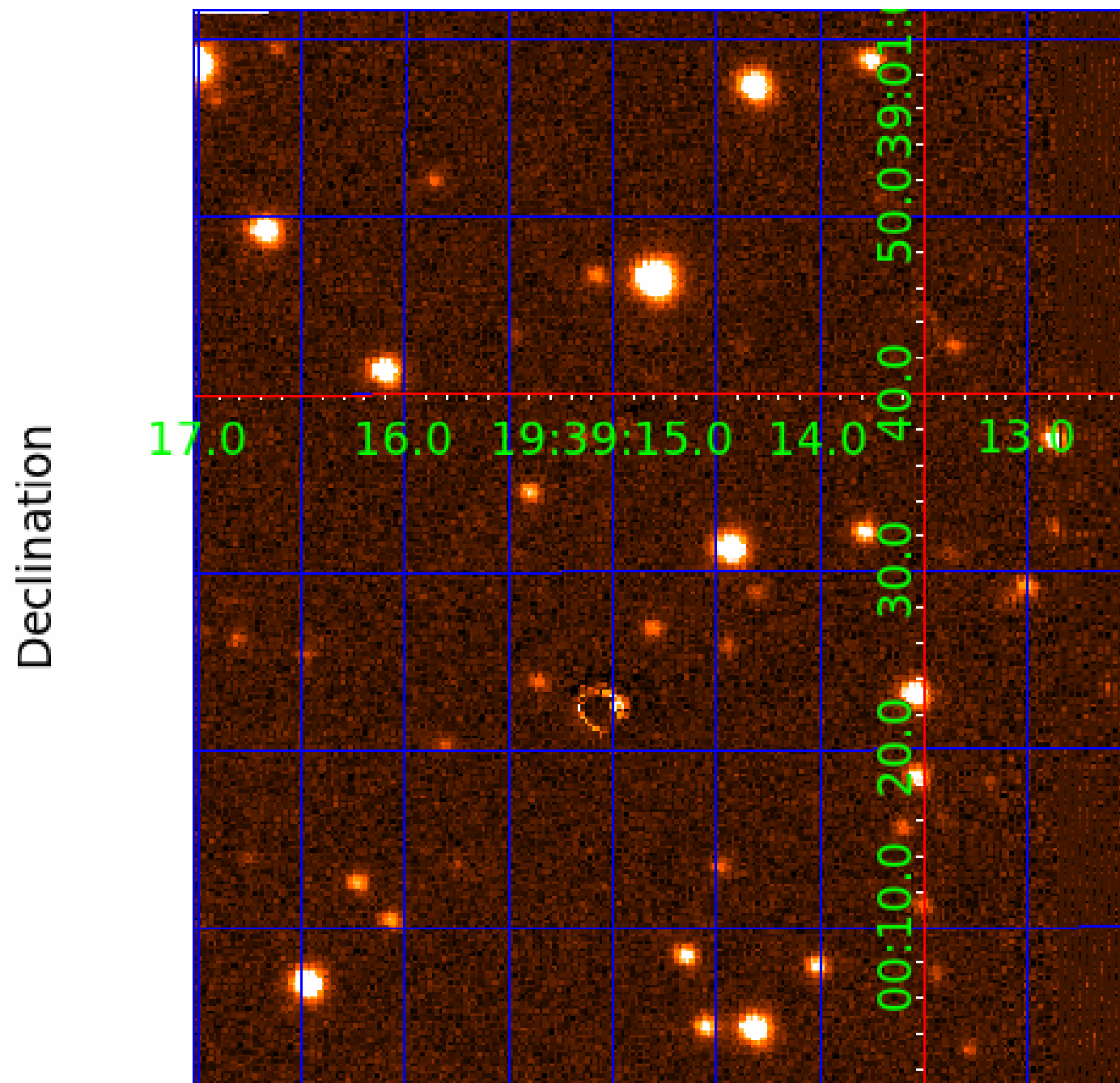
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 5



UKIRT Image



KIC 003967219

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})
003967219-01	OBS	No	2.080797	132.144804	321.2	4.824	19.6	22.5	1.93	9748	5.00	17152.27
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Robovetter Results

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003967219-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD
003967219-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—HALO_GHOST
003967219-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_NOFITS
003967219-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_POS_ALT—HALO_GHOST

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

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

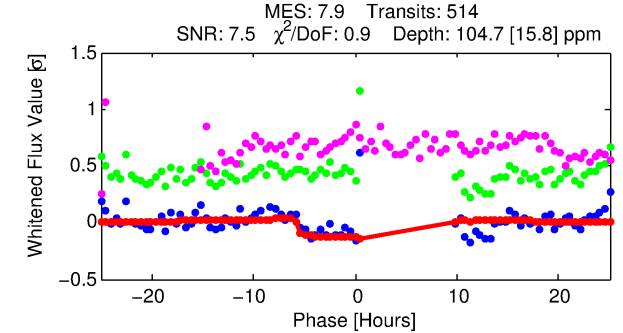
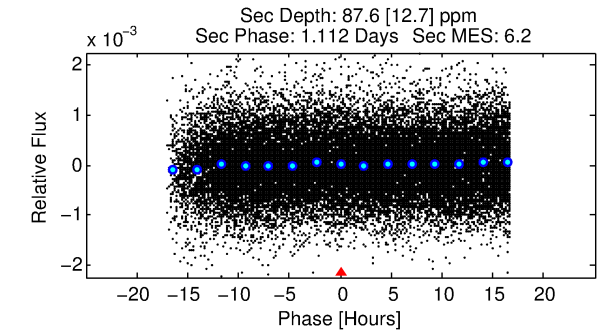
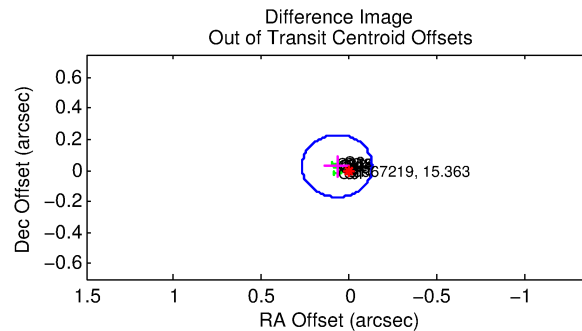
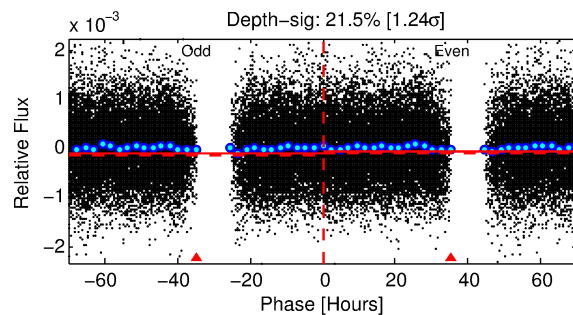
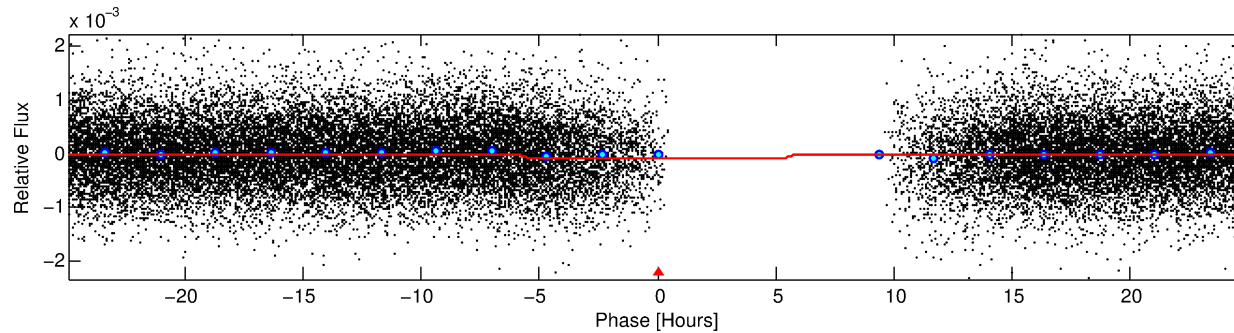
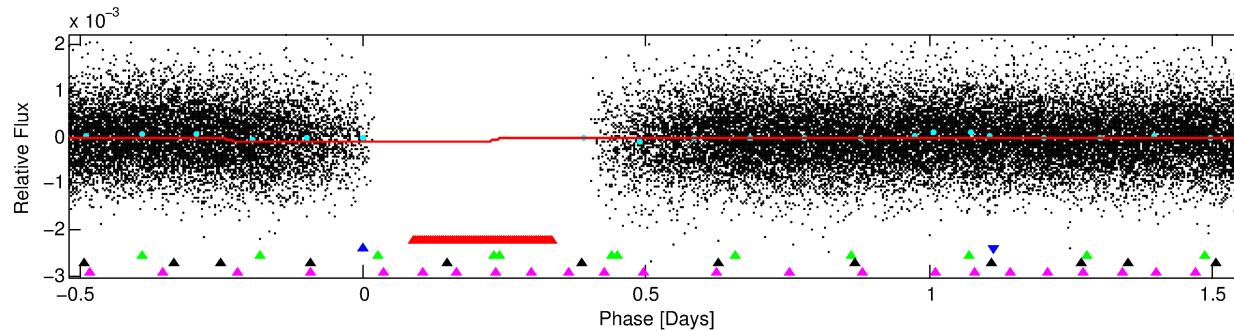
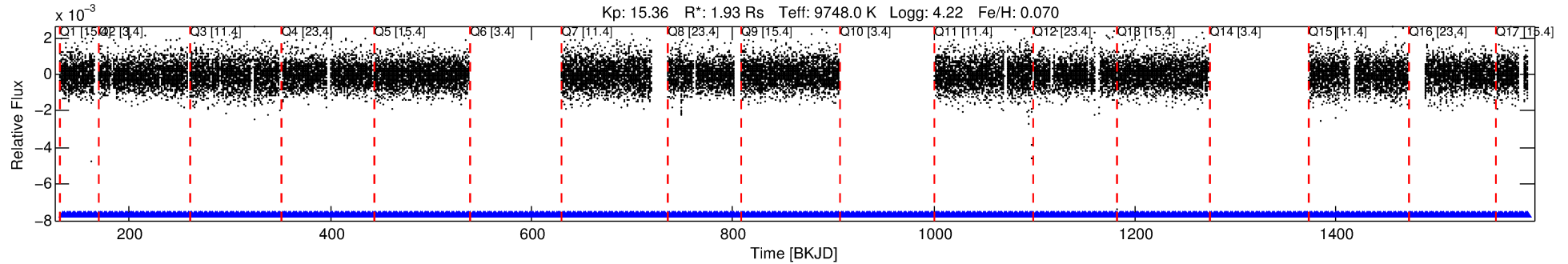
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003967219-02

No Significant Match Found

DV One-Page Summary

KIC: 3967219 Candidate: 2 of 5 Period: 2.081 d



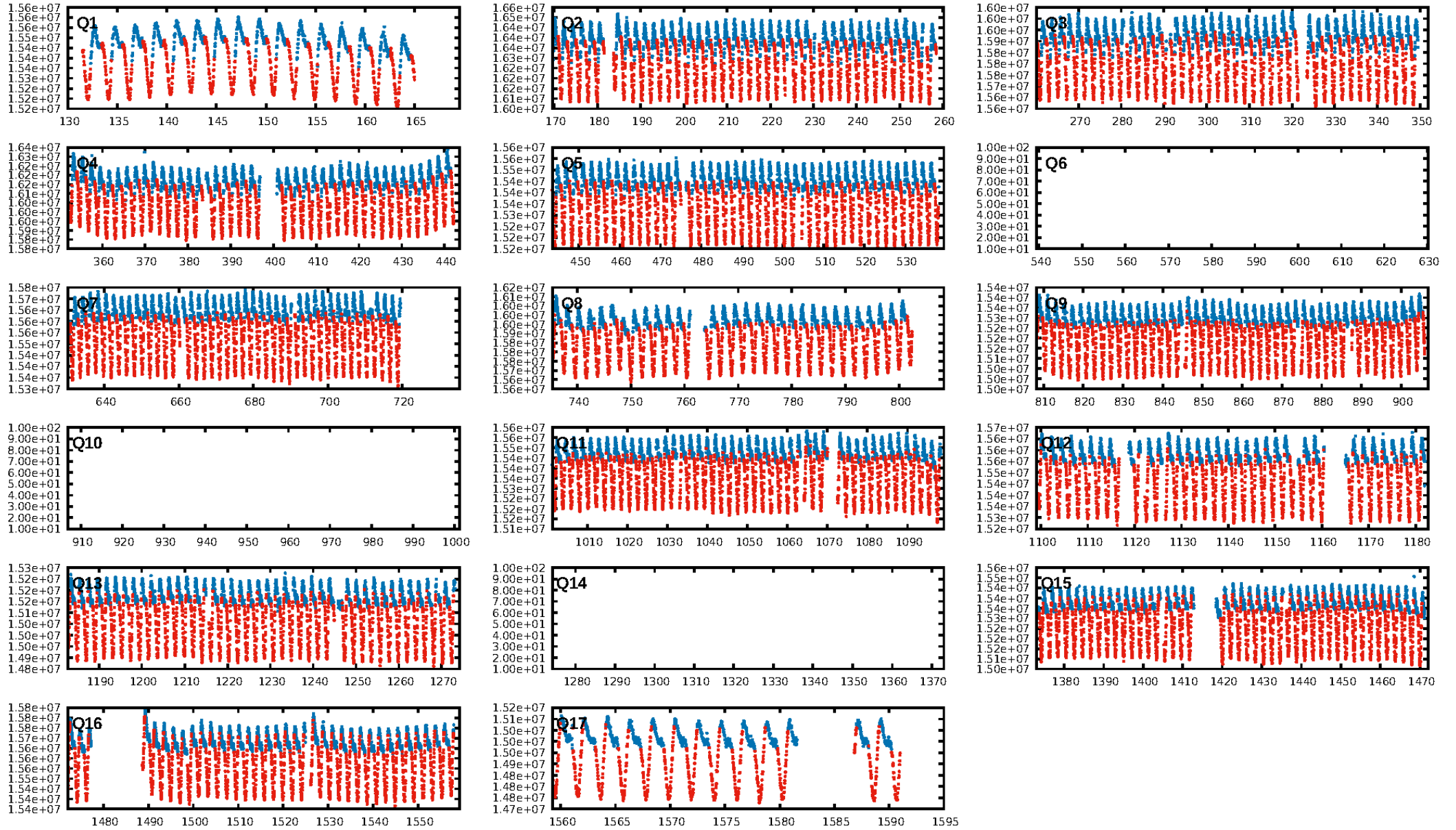
DV Fit Results:

Period = 2.08115 [0.00004] d
Epoch = 133.8930 [0.0391] BKJD
Rp/R* = 0.0099 [0.0067]
a/R* = 1.37 [3.06]
b = 0.57 [5.97]
Seff = 17148.44 [6016.07]
Teq = 2918 [256] K
Rp = 2.08 [1.52] Re
a = 0.0419 [0.0094] AU
Ag = 19.60 [27.44] [0.68σ]
Teffp = 9492 [3259] K [2.01σ]

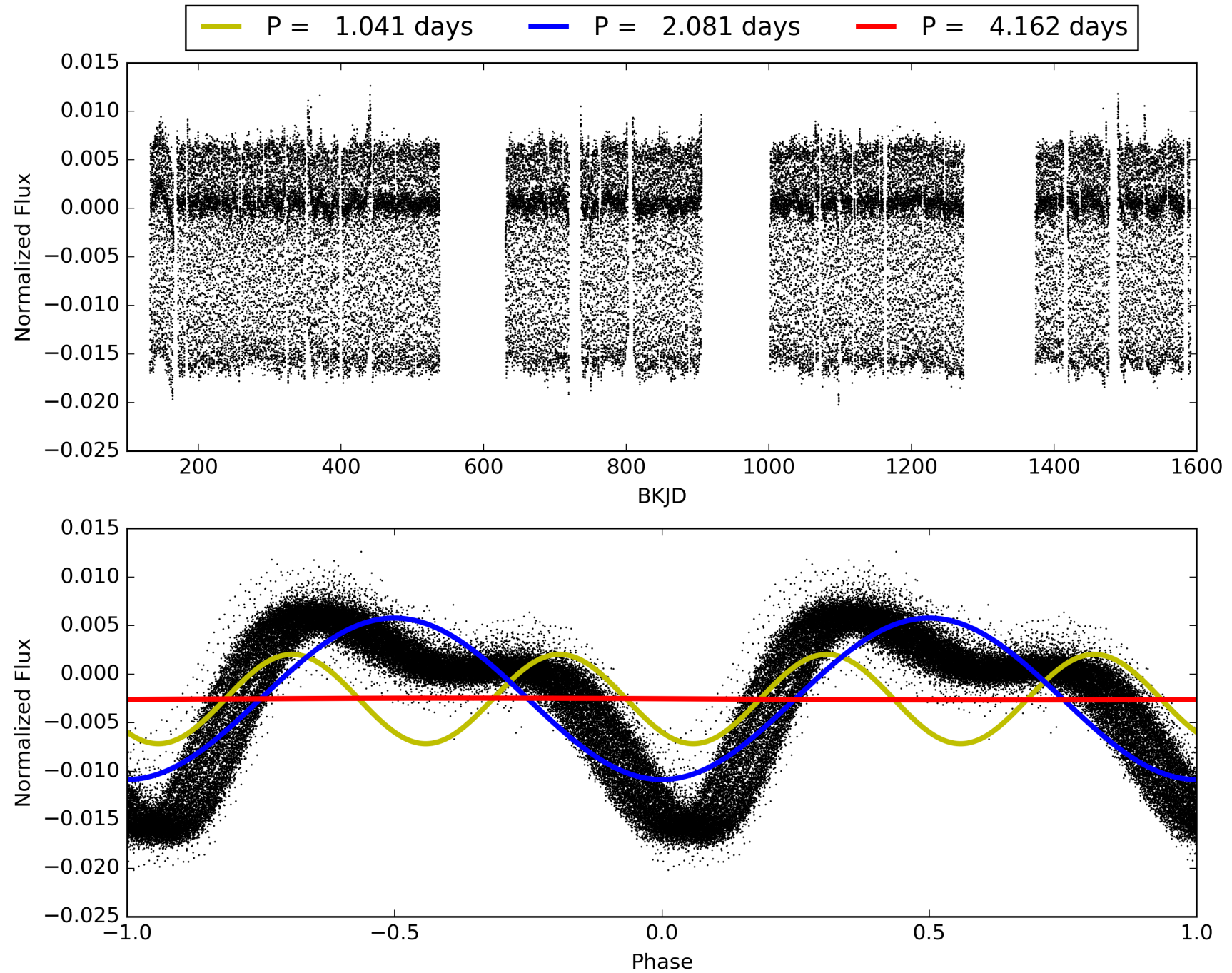
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: 100.0% [122.18σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.80e-11
RollingBand-fgt: 1.00 [484/484]
GhostDiagnostic-chr: 13.73
Centroid-sig: 0.0%
Centroid-so: 2.484 arcsec [2.49σ]
OotOffset-rm: 0.075 arcsec [1.12σ]
KicOffset-rm: 0.141 arcsec [2.09σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 0.00 [0/14]

TCE 003967219-02, PDC Light Curves

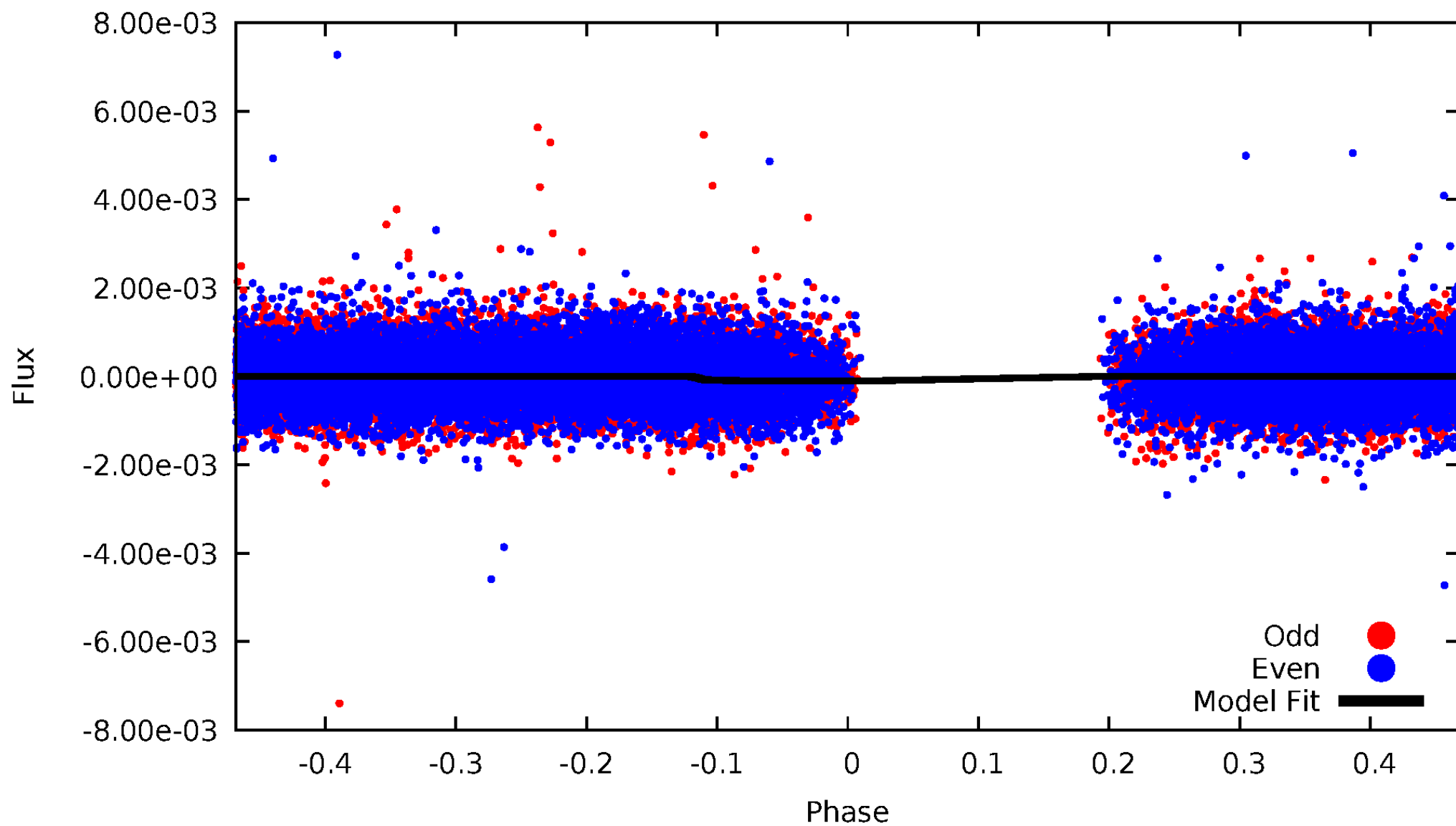


TCE 003967219-02



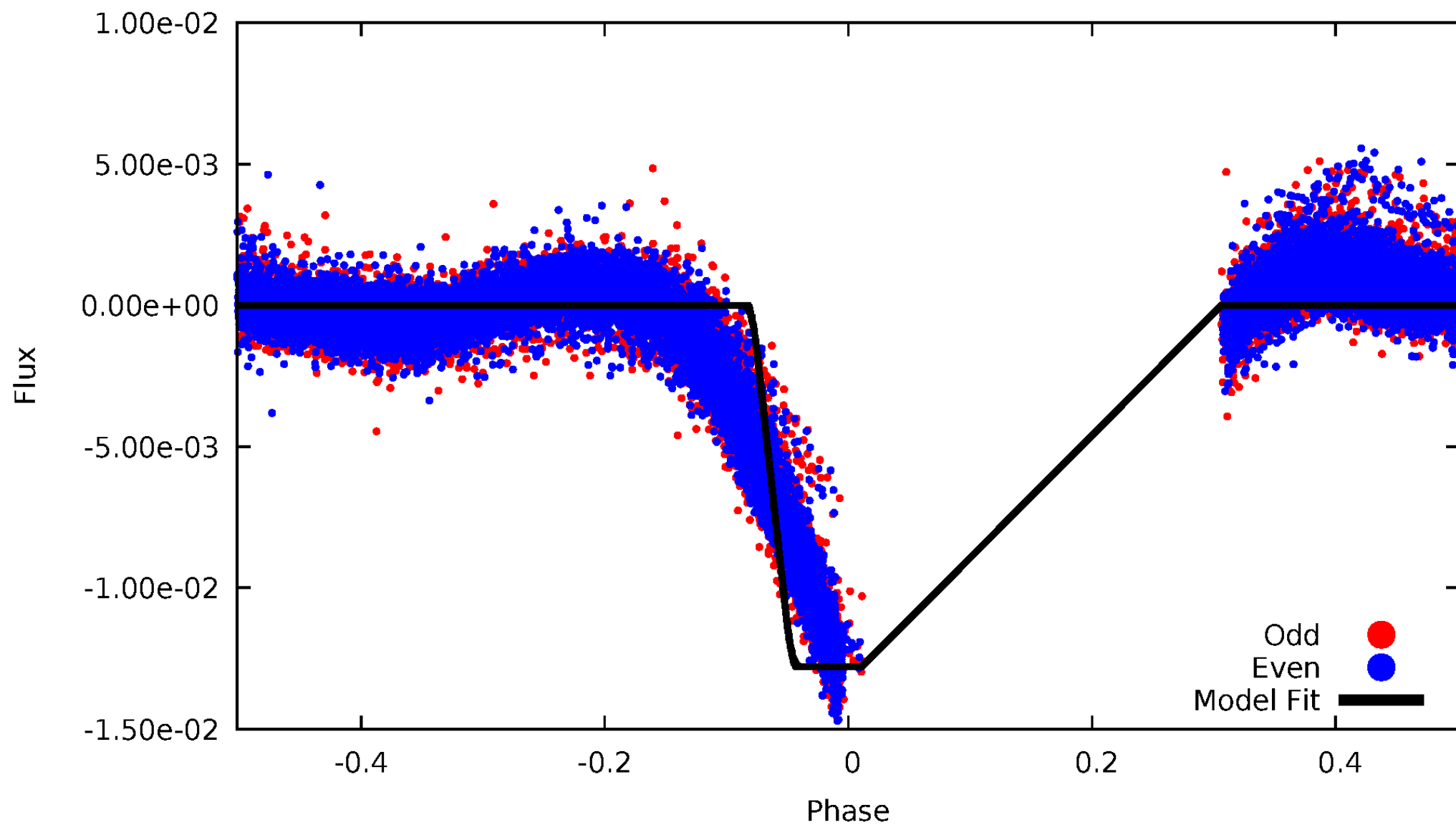
DV Odd/Even

TCE 003967219-02



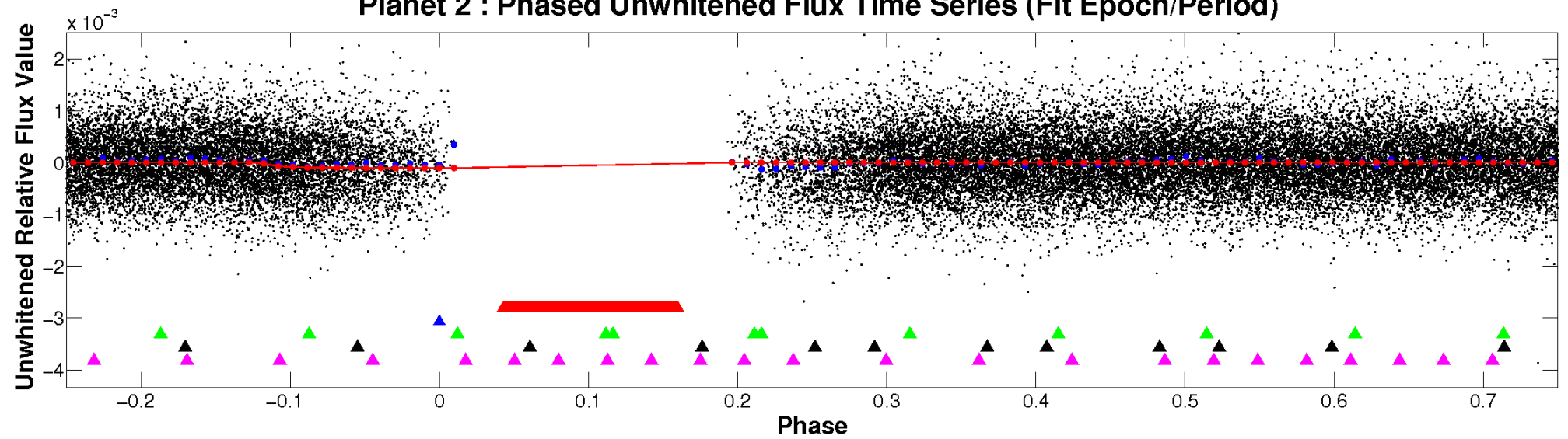
ALT Odd/Even

TCE 003967219-02

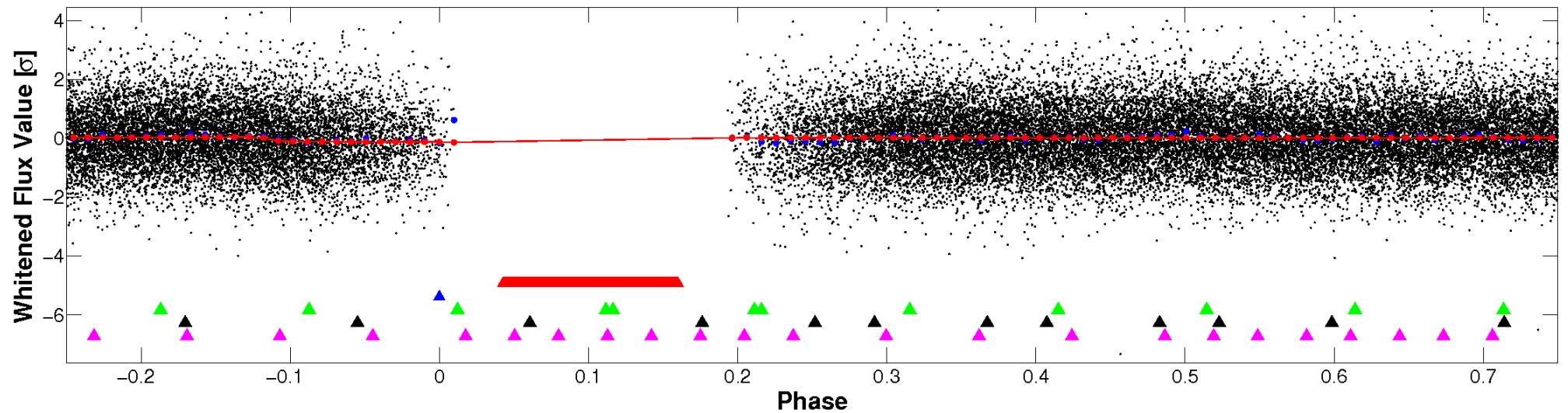


Non-Whitened Vs. Whitened Light Curve

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

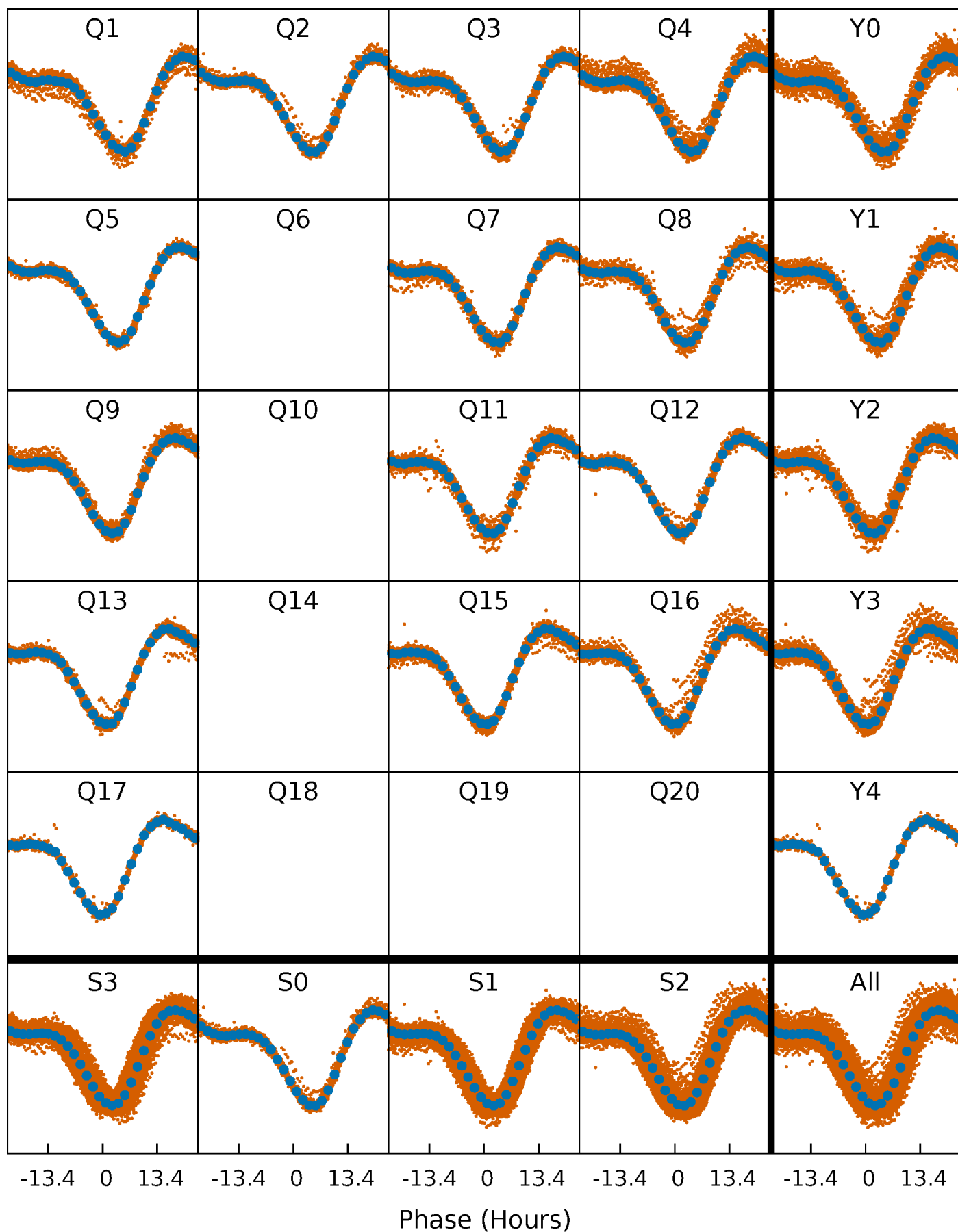


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



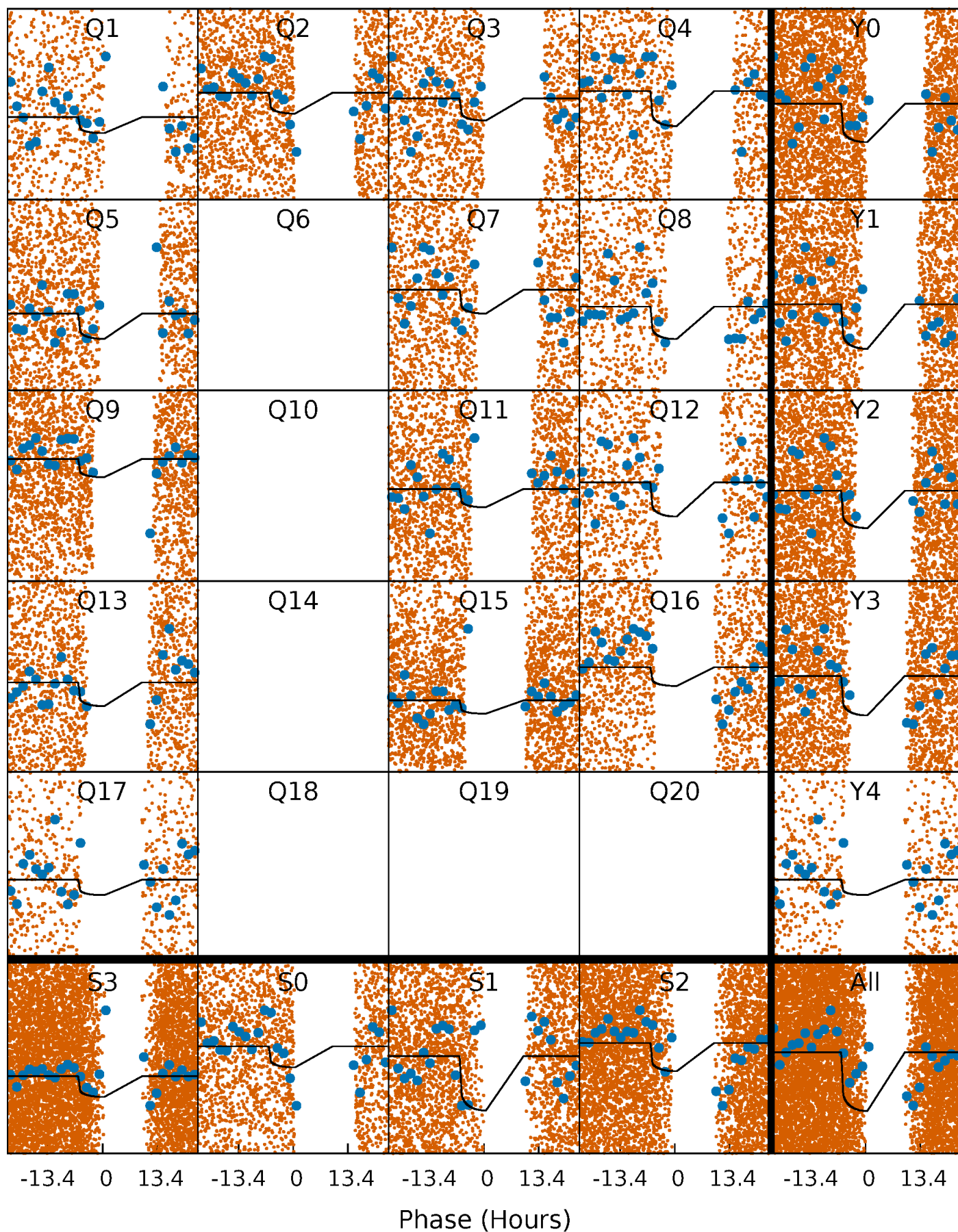
PDC Quarter-Phased Transit Curves

TCE 003967219-02 P= 2.081145 Days $T_0=133.892952$ (BKJD)



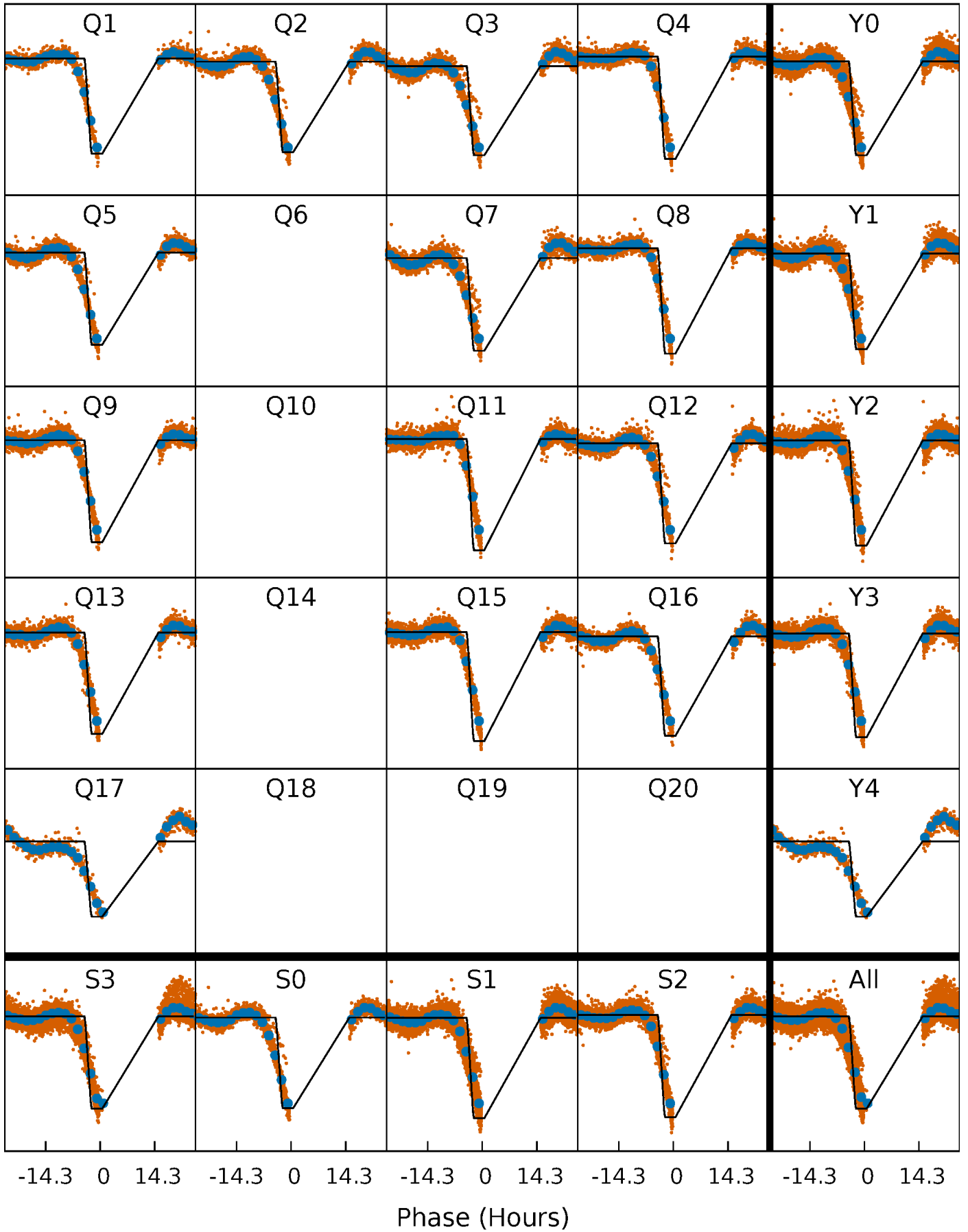
DV Quarter-Phased Transit Curves

TCE 003967219-02 P= 2.081145 Days $T_0=133.892952$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

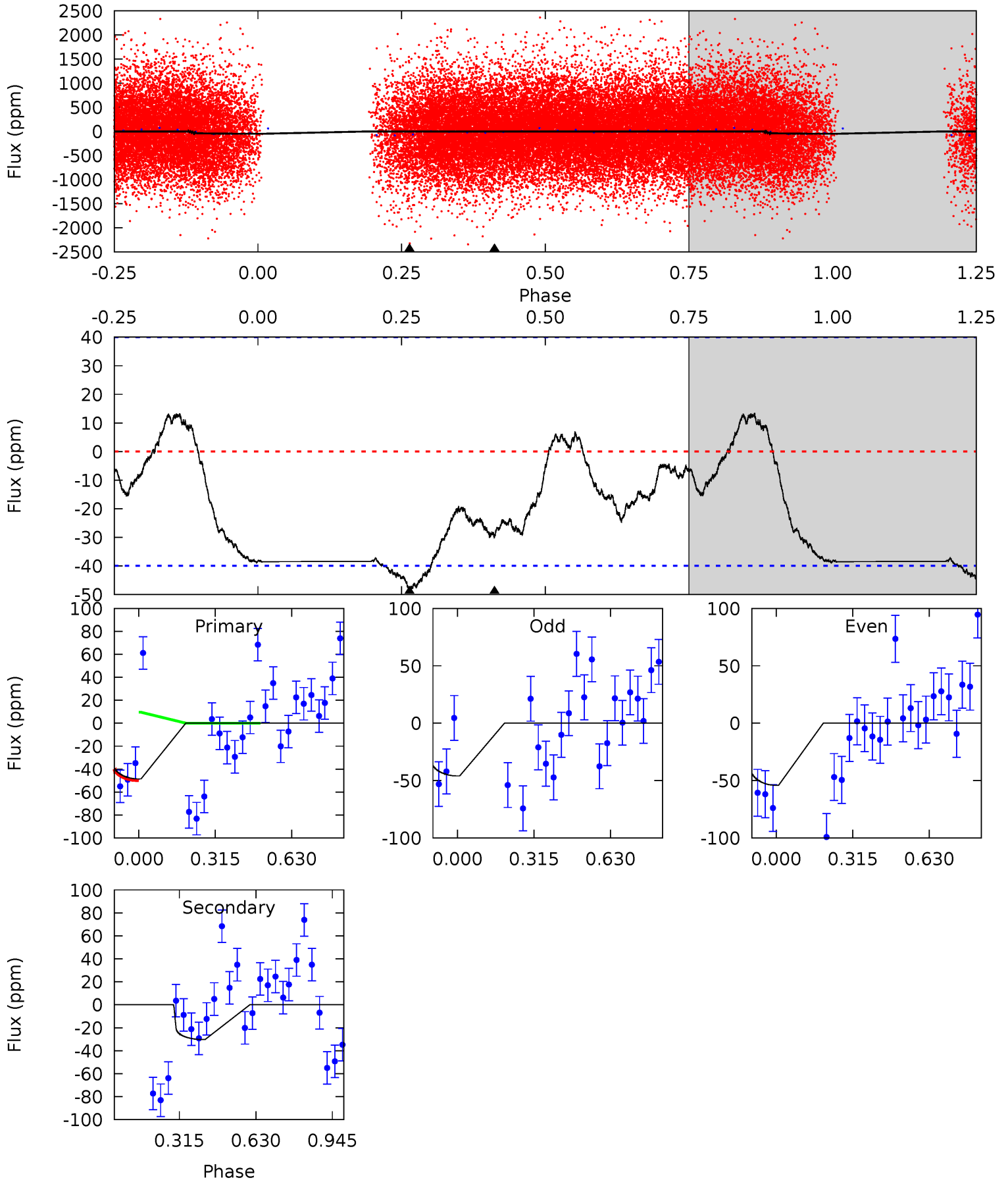
TCE 003967219-02 P= 2.080780 Days $T_0=133.900347$ (BKJD)



DV Model-Shift Uniqueness Test

003967219-02, P = 2.081145 Days, E = 129.730662 Days

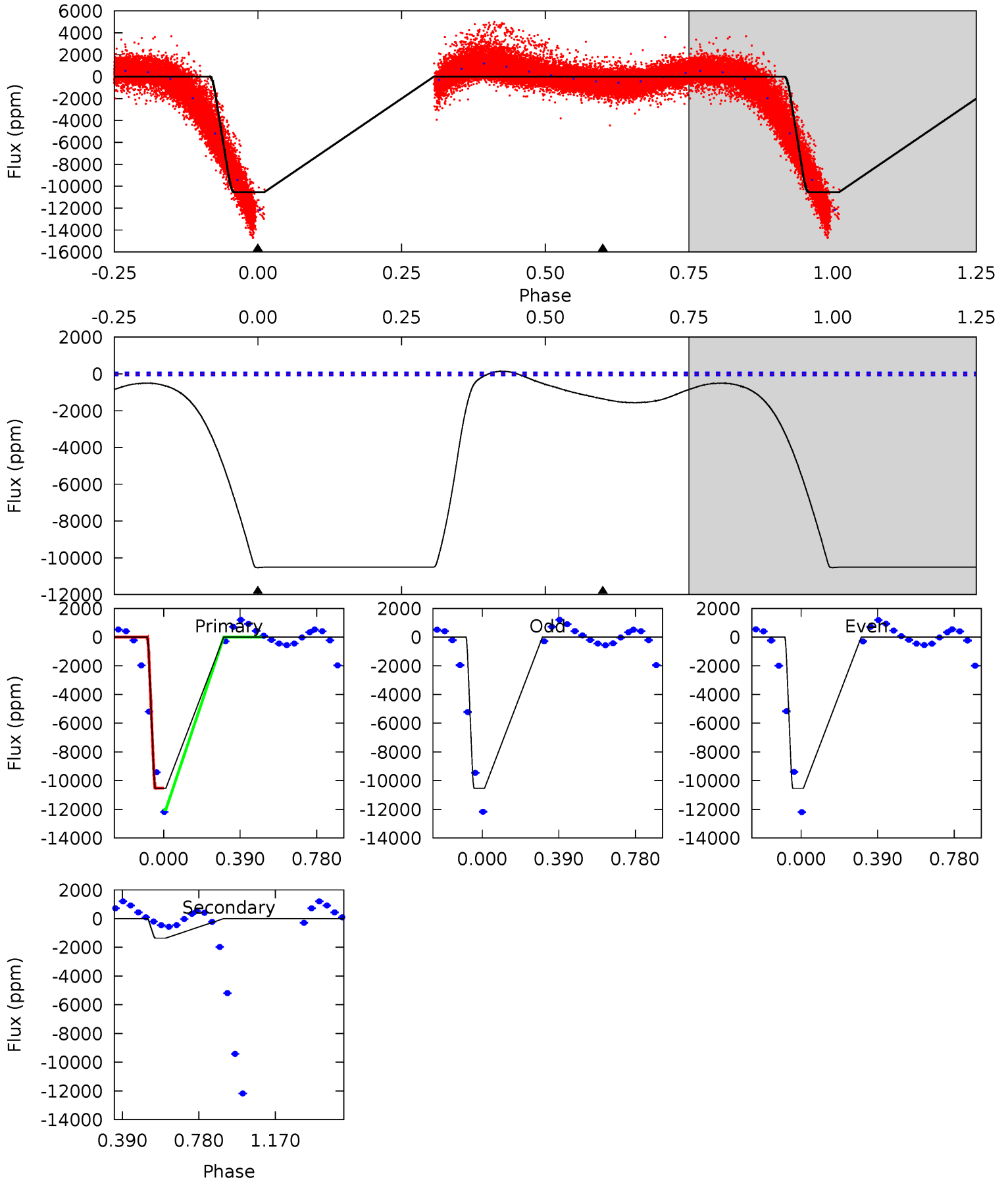
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.25	3.27	0	0	4.32	1.00	1.77	5.25	5.25	3.27	3.27	0.45	0.82	0.22	0.36



Alt Model-Shift Uniqueness Test

003967219-02, P = 2.080780 Days, E = 129.738787 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
607.8	78.2	0	0	4.27	0.86	10.5	607.8	607.8	78.2	78.2	0.49	0.99	0.01	3.97



Stellar Parameters For KIC 003967219

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9748^{+344}_{-378}	$4.222^{+0.165}_{-0.135}$	$0.070^{+0.150}_{-0.600}$	$1.928^{+0.442}_{-0.540}$	$2.257^{+0.285}_{-0.530}$	$0.444^{+0.421}_{-0.186}$
	+4%/-4%	+4%/-3%	+214%/-857%	+23%/-28%	+13%/-23%	+95%/-42%
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 003967219-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-30 ± 9	$2.08^{+1.35}_{-1.18}$	4079^{+274}_{-280}	6612^{+4530}_{-1595}	$6.463^{+27.336}_{-4.356}$
Alt.	-1356 ± 17	$23.95^{+3.30}_{-3.94}$	4080^{+260}_{-260}	5062^{+200}_{-182}	$2.314^{+0.672}_{-0.482}$

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 $A_{obs} \gg 1.0$

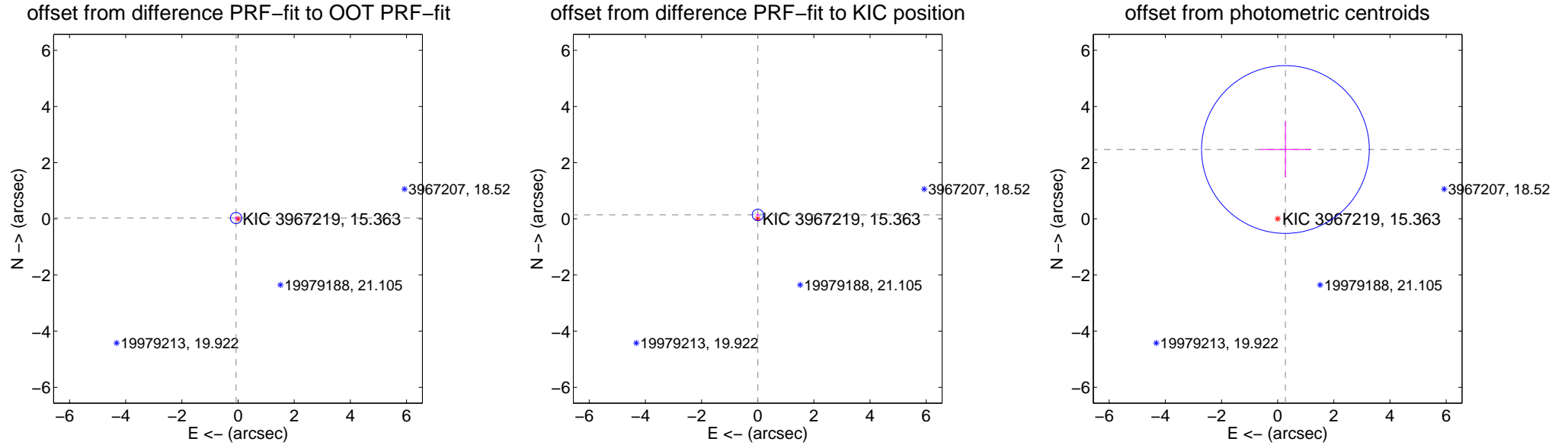
DV Centroid Data

Supplemental centroid analysis for 003967219-02. Kepler magnitude: 15.36. Transit SNR 7.49

There are 14 quarters with good PRF difference image offsets

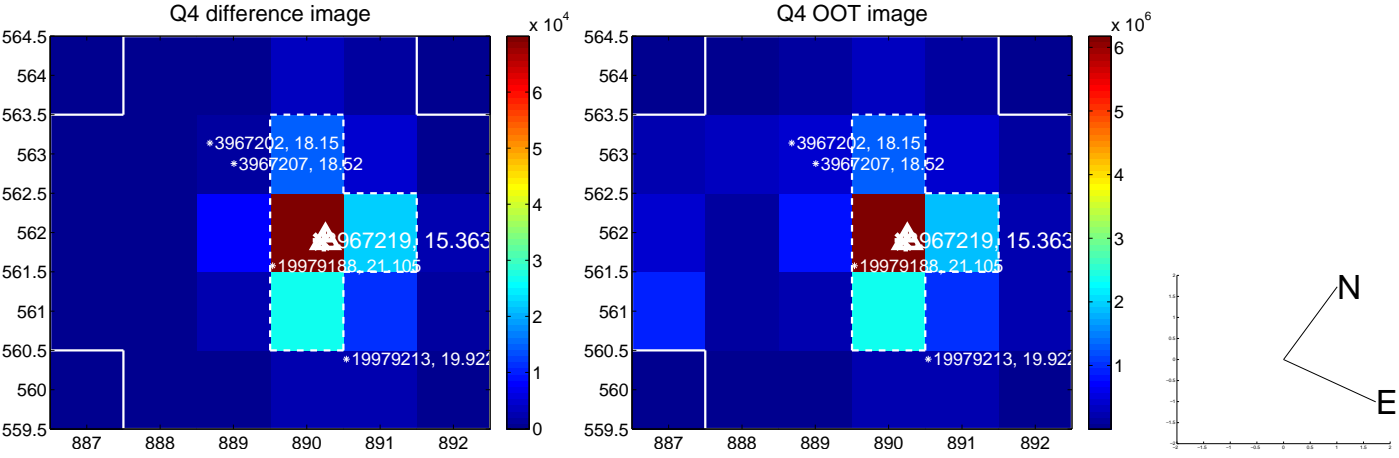
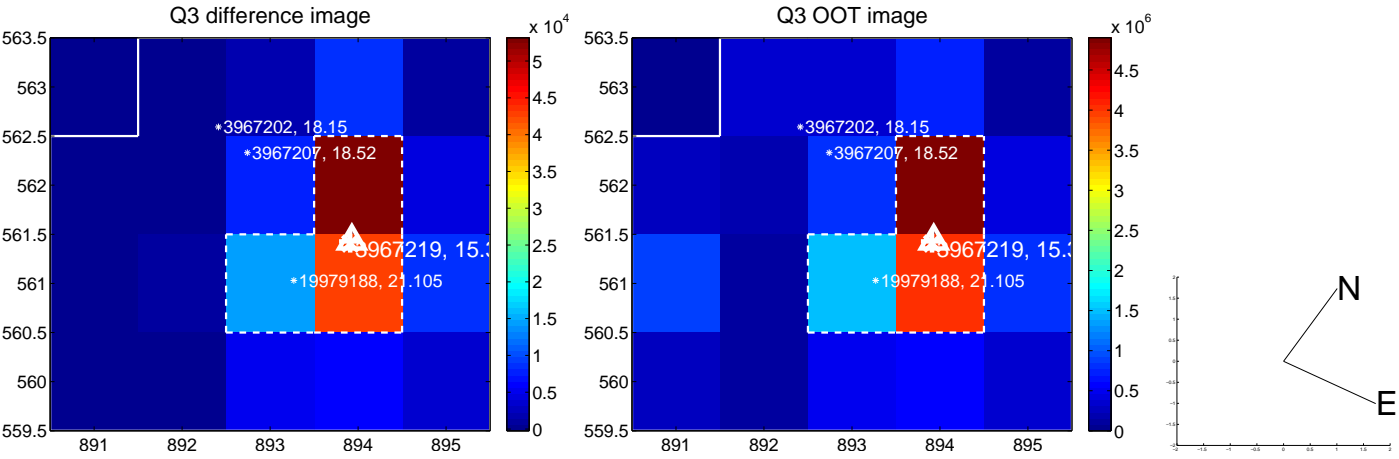
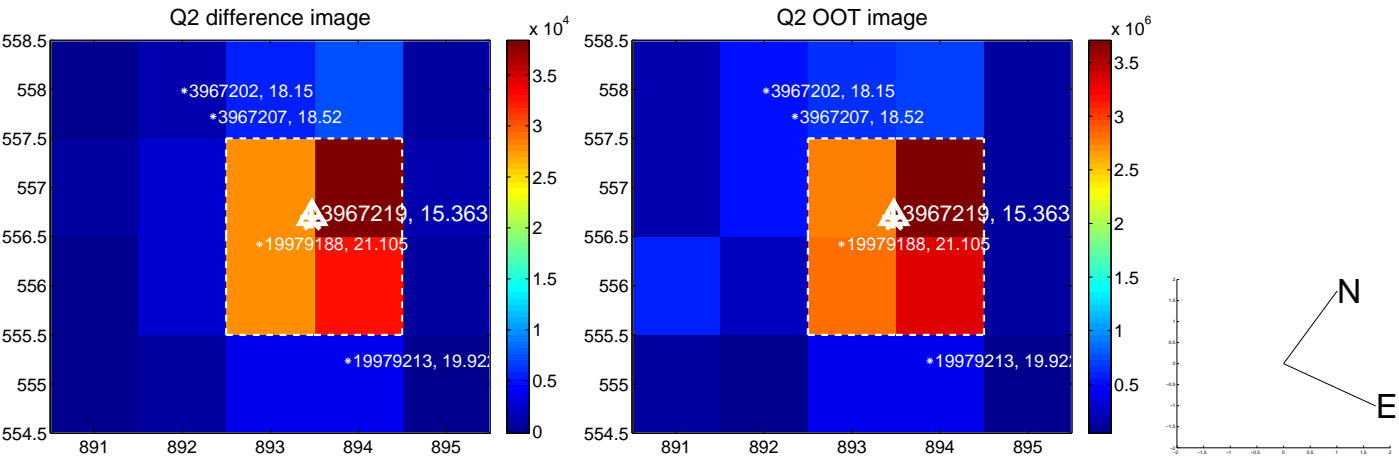
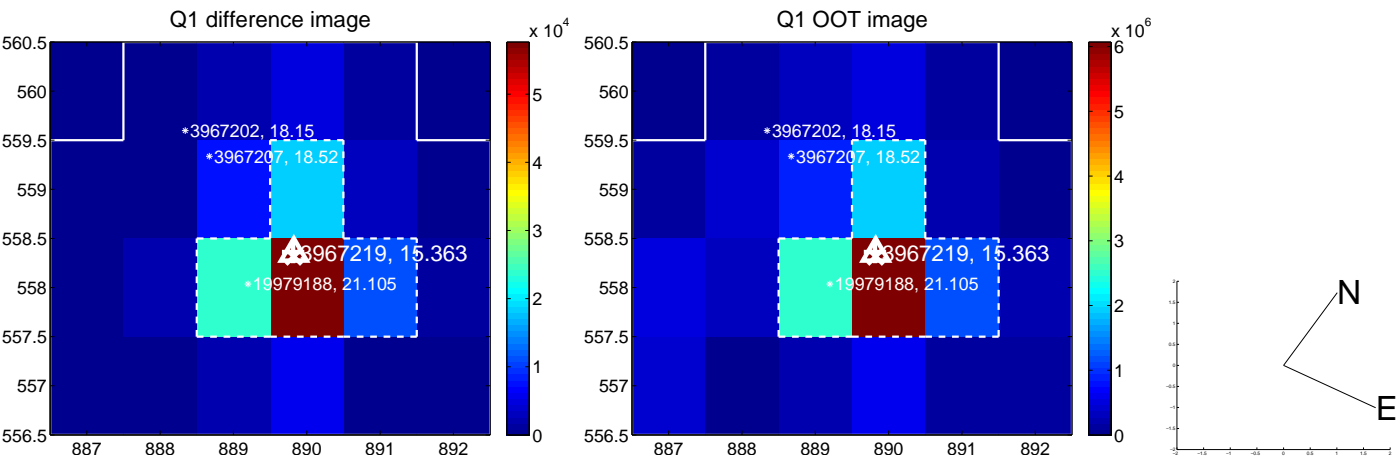
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.075 ± 0.067	1.12	0.069 ± 0.067	0.029 ± 0.067
PRF-fit source offset from KIC position	0.141 ± 0.067	2.09	-0.004 ± 0.072	0.141 ± 0.067
photometric centroid source offset	2.48 ± 1.00	2.49	-0.28 ± 0.91	2.47 ± 1.00

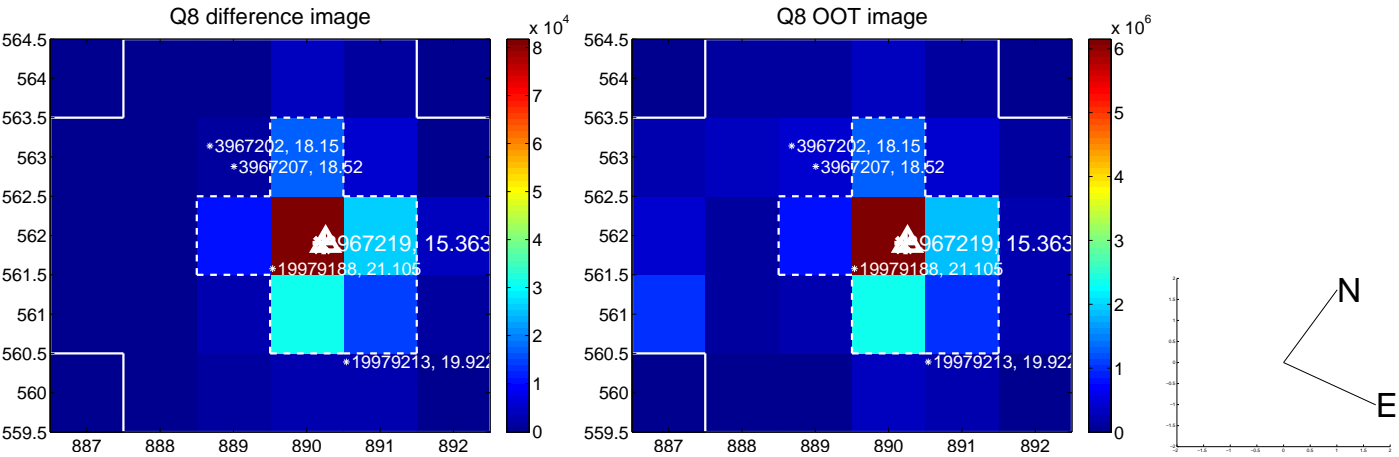
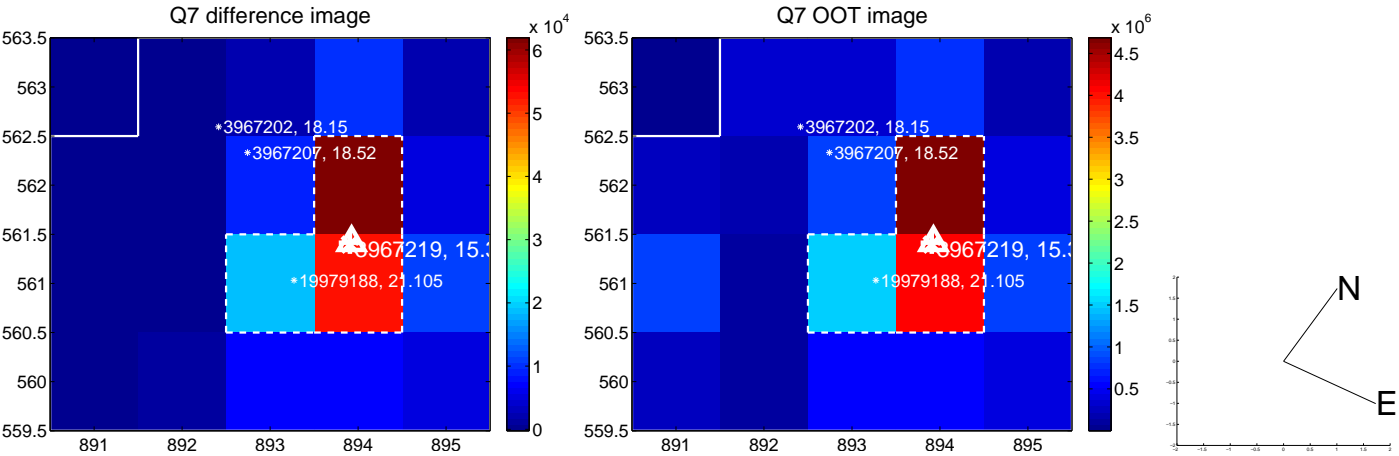
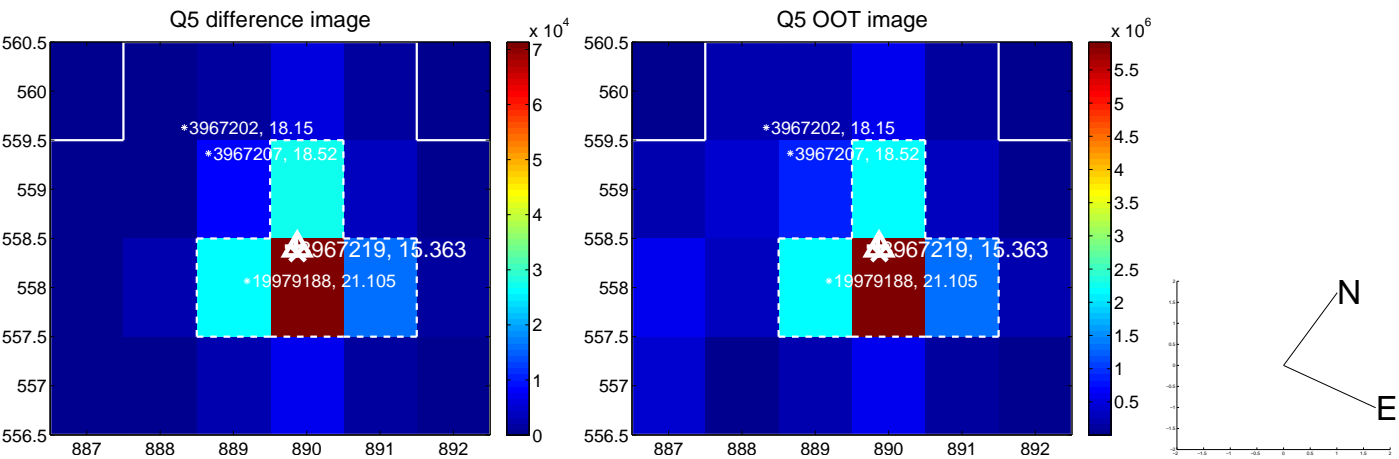


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

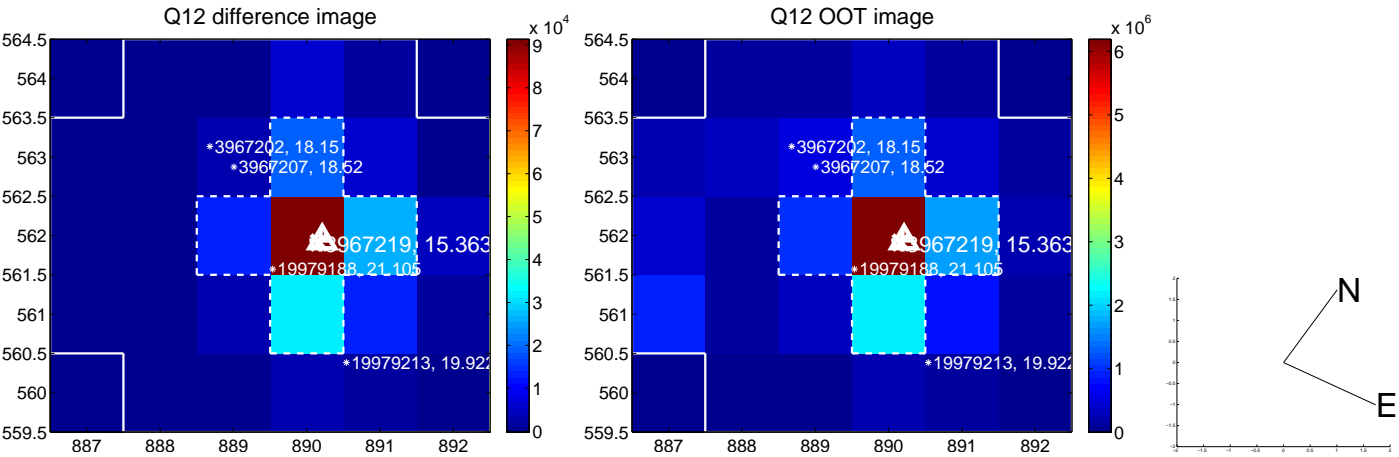
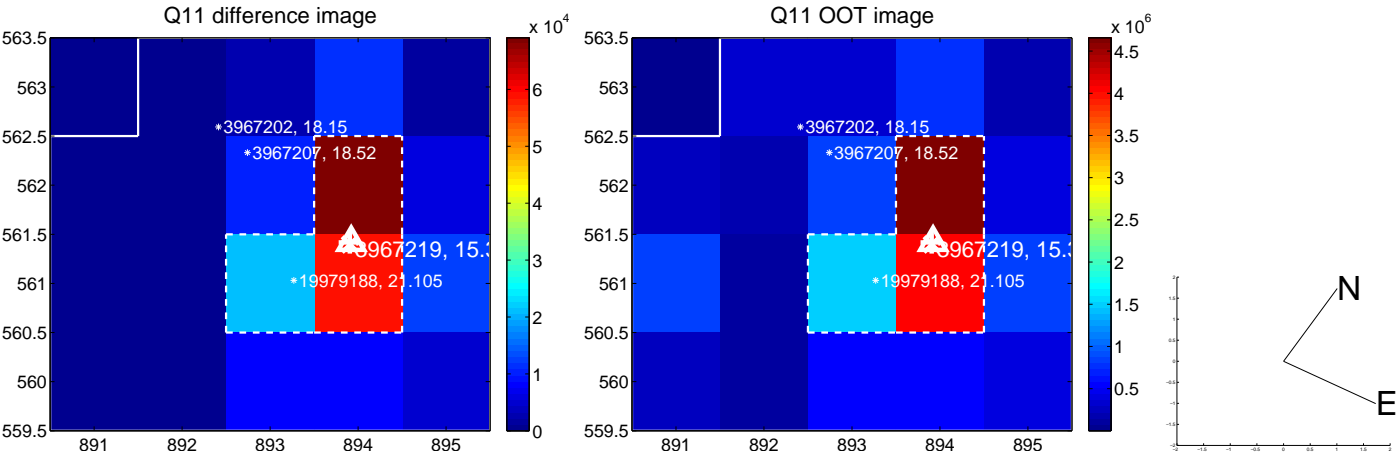
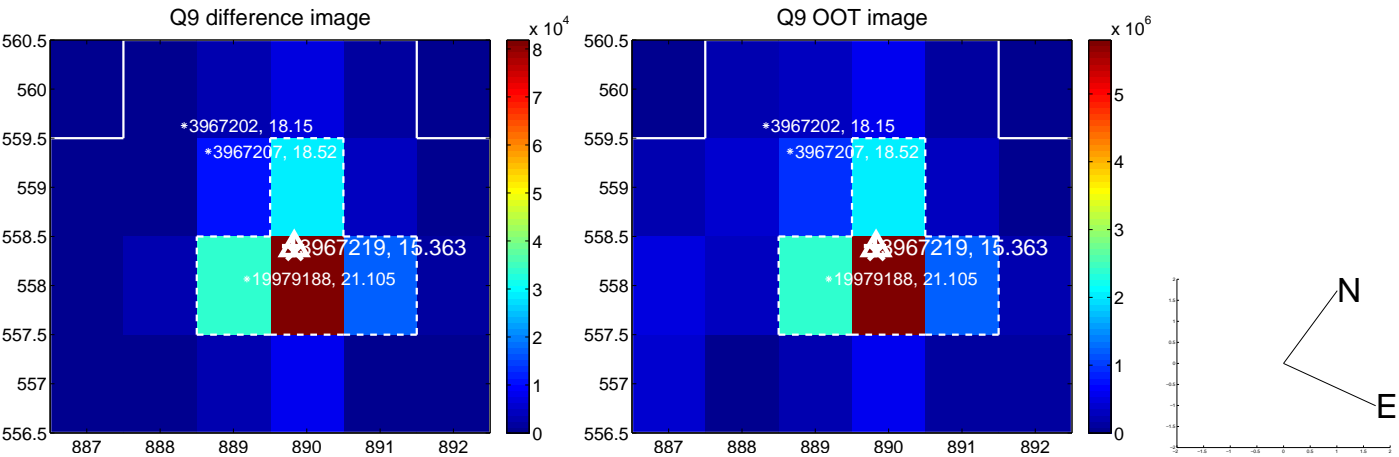
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



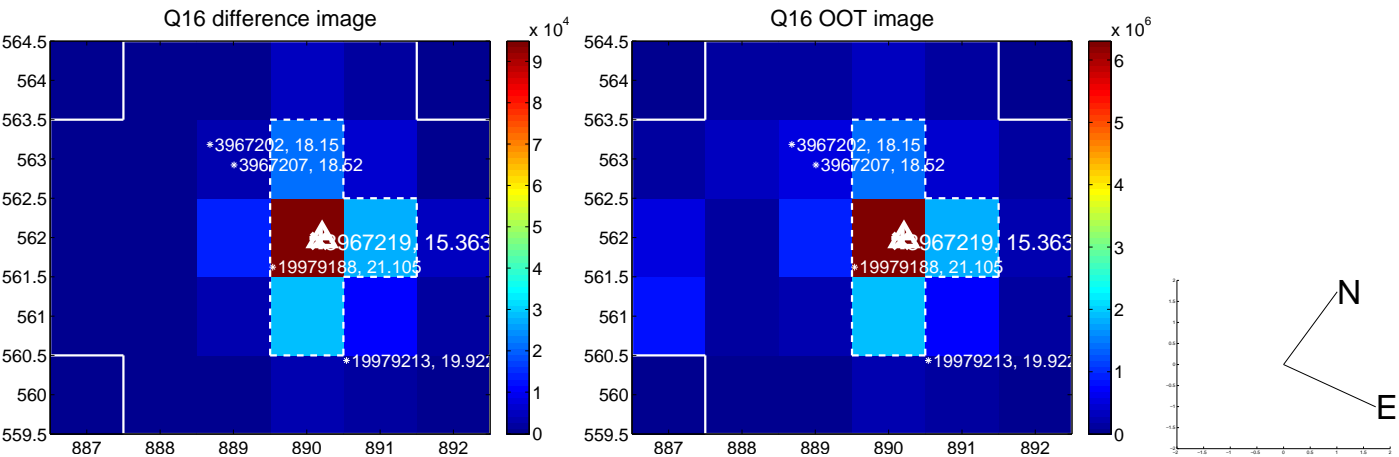
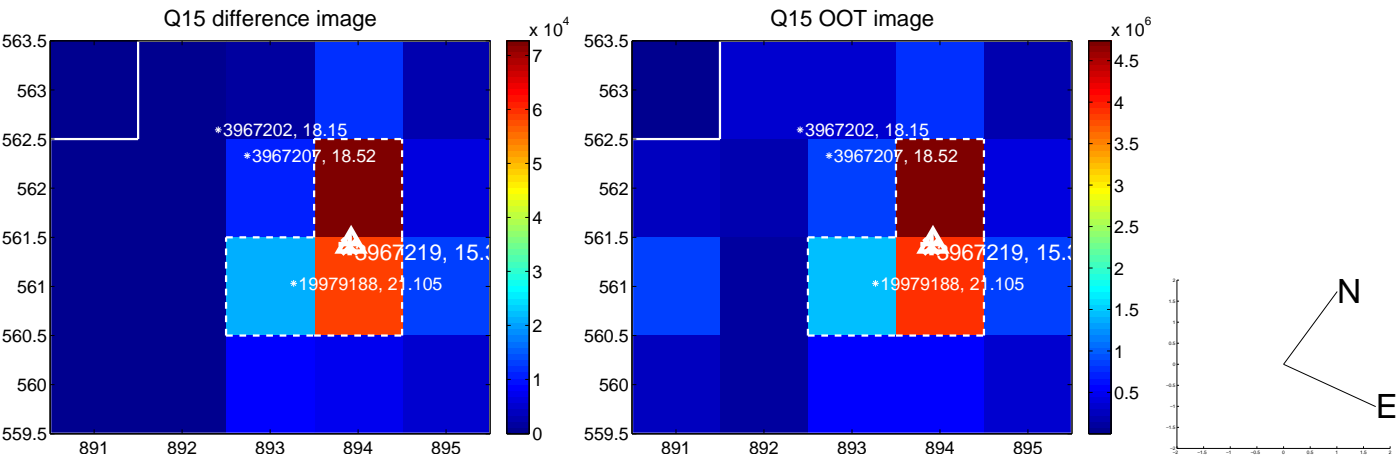
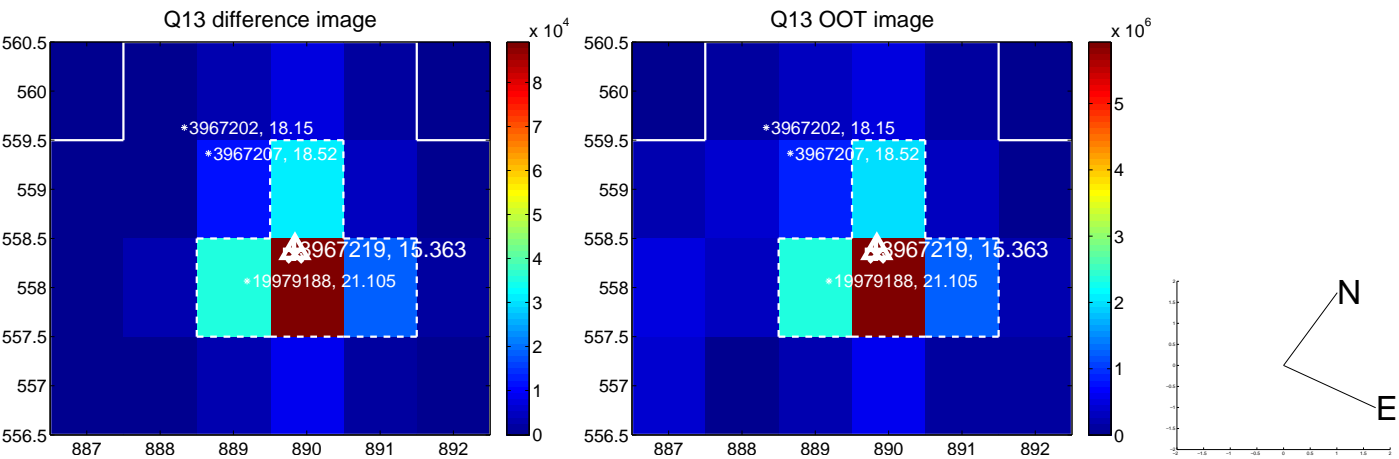
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



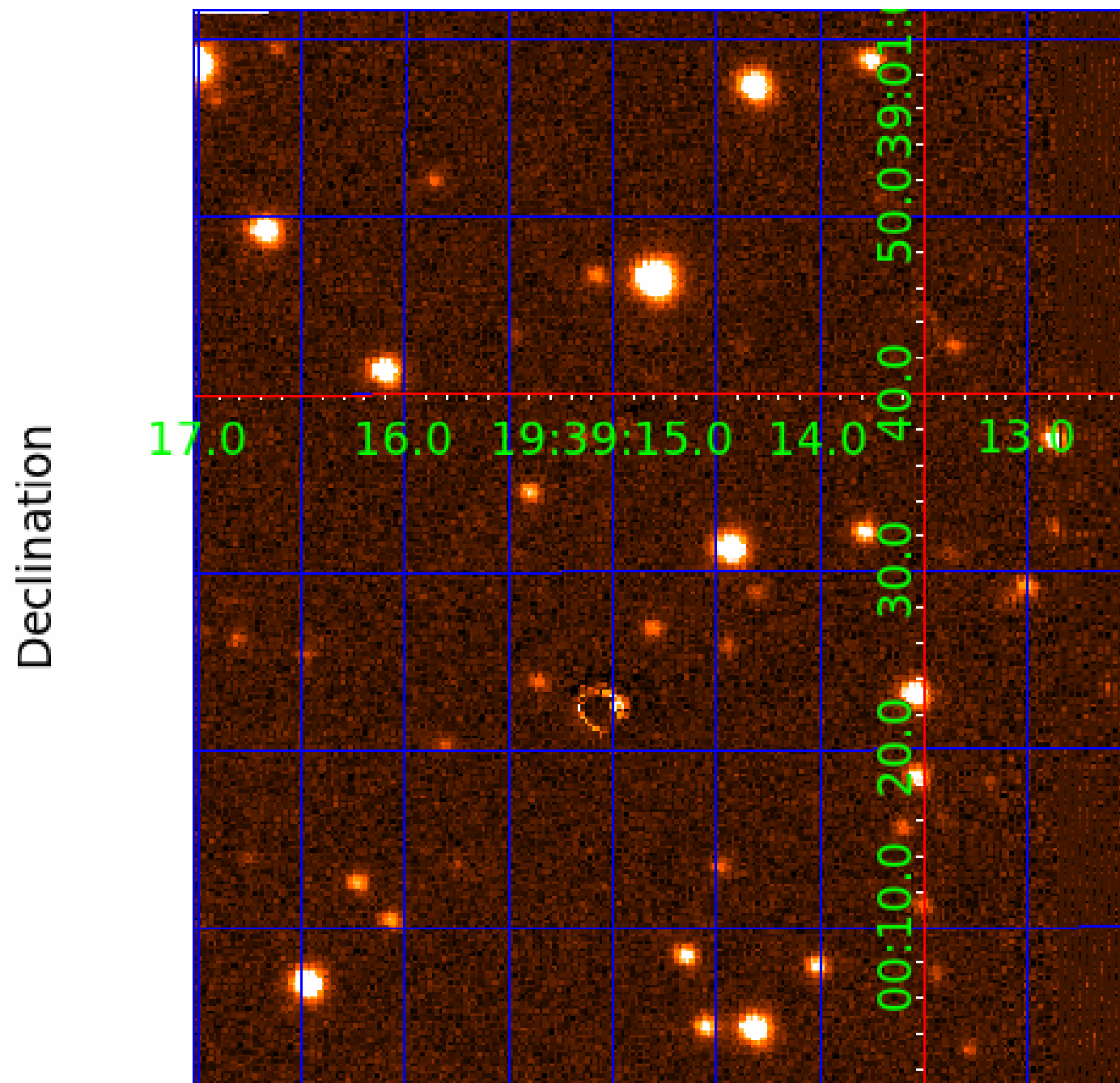
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 003967219

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})
003967219-01	OBS	No	2.080797	132.144804	321.2	4.824	19.6	22.5	1.93	9748	5.00	17152.27
003967219-02	OBS	No	2.081145	133.892952	104.7	11.695	7.9	7.5	1.93	9748	2.08	17148.44
003967219-03	OBS	No	116.751267	213.218814	332.7	3.586	11.7	2.2	1.93	9748	4.06	79.85
003967219-04	OBS	No	116.784607	213.500653	1351.8	12.000	11.9	-1.0	1.93	9748	7.26	79.82
003967219-05	OBS	No	63.410114	180.103749	796.3	2.891	8.2	8.5	1.93	9748	6.09	180.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003967219-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
003967219-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD
003967219-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—HALO_GHOST
003967219-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_NOFITS
003967219-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_POS_ALT—HALO_GHOST

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

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

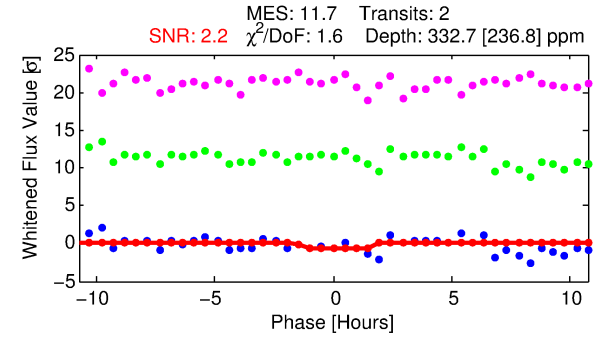
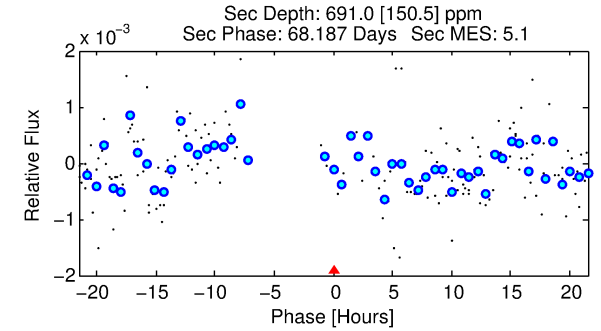
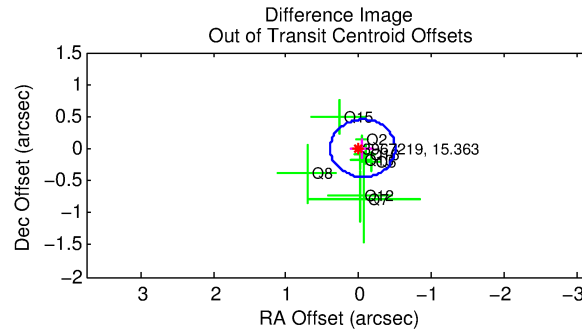
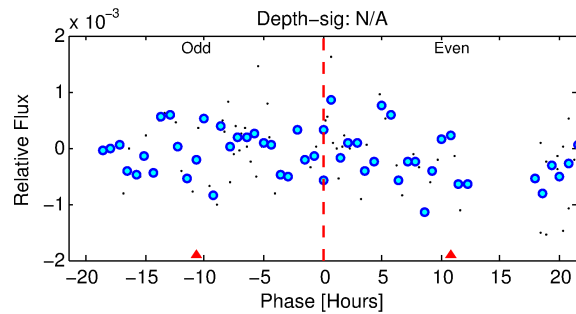
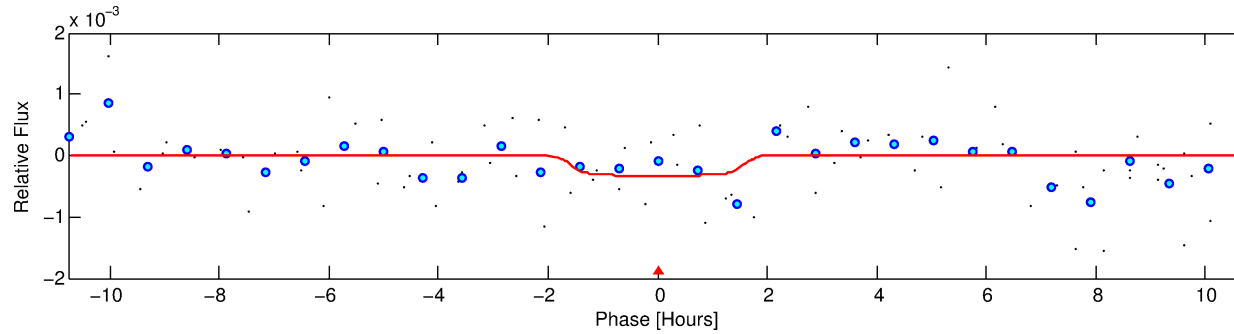
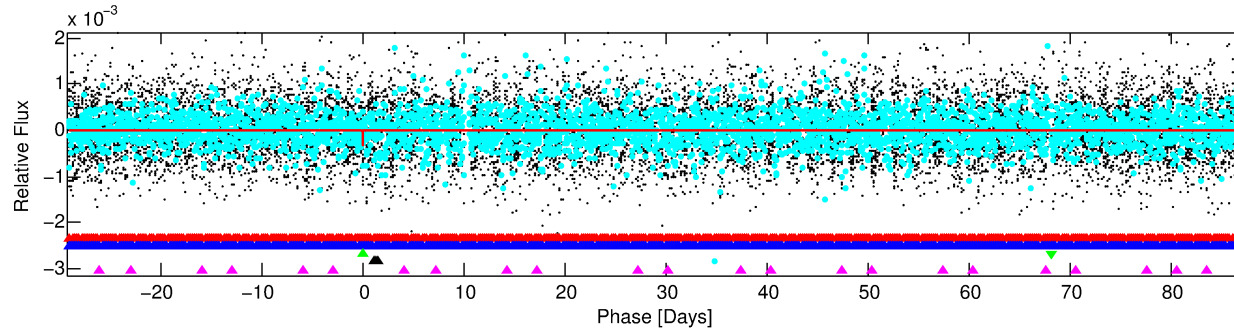
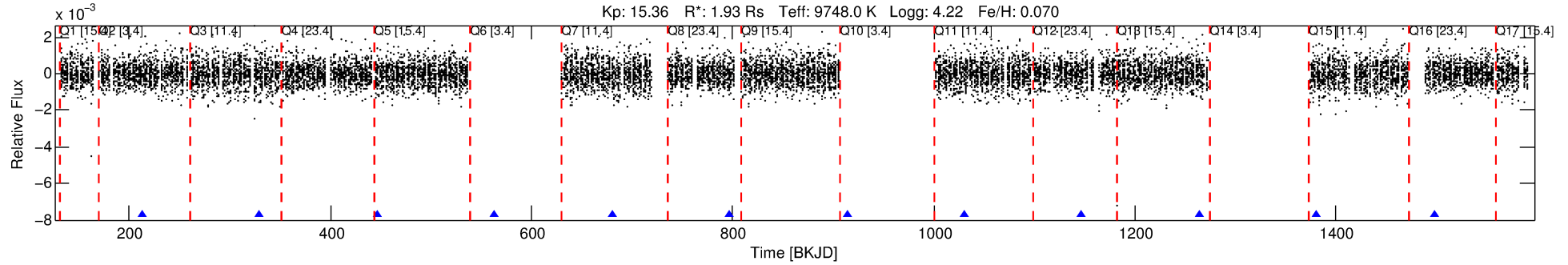
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003967219-03

No Significant Match Found

DV One-Page Summary

KIC: 3967219 Candidate: 3 of 5 Period: 116.751 d



DV Fit Results:

Period = 116.75127 [0.06547] d
Epoch = 213.2188 [0.2889] BKJD
Rp/R* = 0.0193 [0.0510]
a/R* = 114.12 [2422.66]
b = 0.91 [3.97]
Seff = 79.85 [28.01]
Teq = 762 [67] K
Rp = 4.06 [10.79] Re
a = 0.6137 [0.1385] AU
Ag = 8666.48 [45864.32] [0.19σ]
Teffp = 11371 [15026] K [0.71σ]

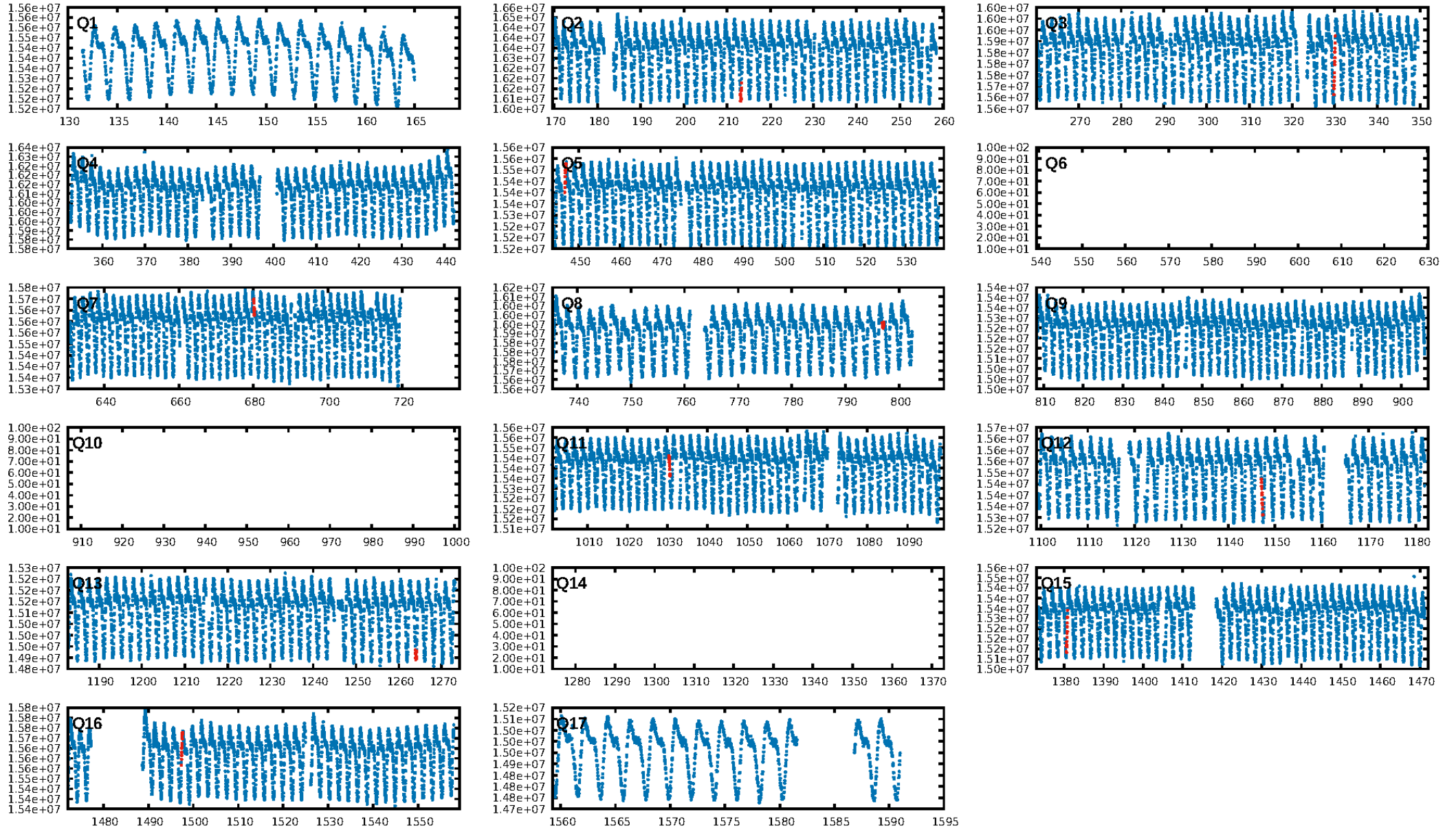
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [277.93σ]
LongPeriod-sig: 5.1% [0.06σ]
ModelChiSquare2-sig: 83.4%
ModelChiSquareGof-sig: 56.8%
Bootstrap-pfa: 3.06e-16
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.01766
Centroid-sig: 1.3%
Centroid-so: 7.263 arcsec [2.01σ]
OotOffset-rm: 0.054 arcsec [0.36σ]
KicOffset-rm: 0.193 arcsec [1.34σ]
OotOffset-st: 1/2/3/2 [8]
KicOffset-st: 1/2/3/2 [8]
DiffImageQuality-fgm: 0.62 [5/8]
DiffImageOverlap-fno: 0.22 [2/9]

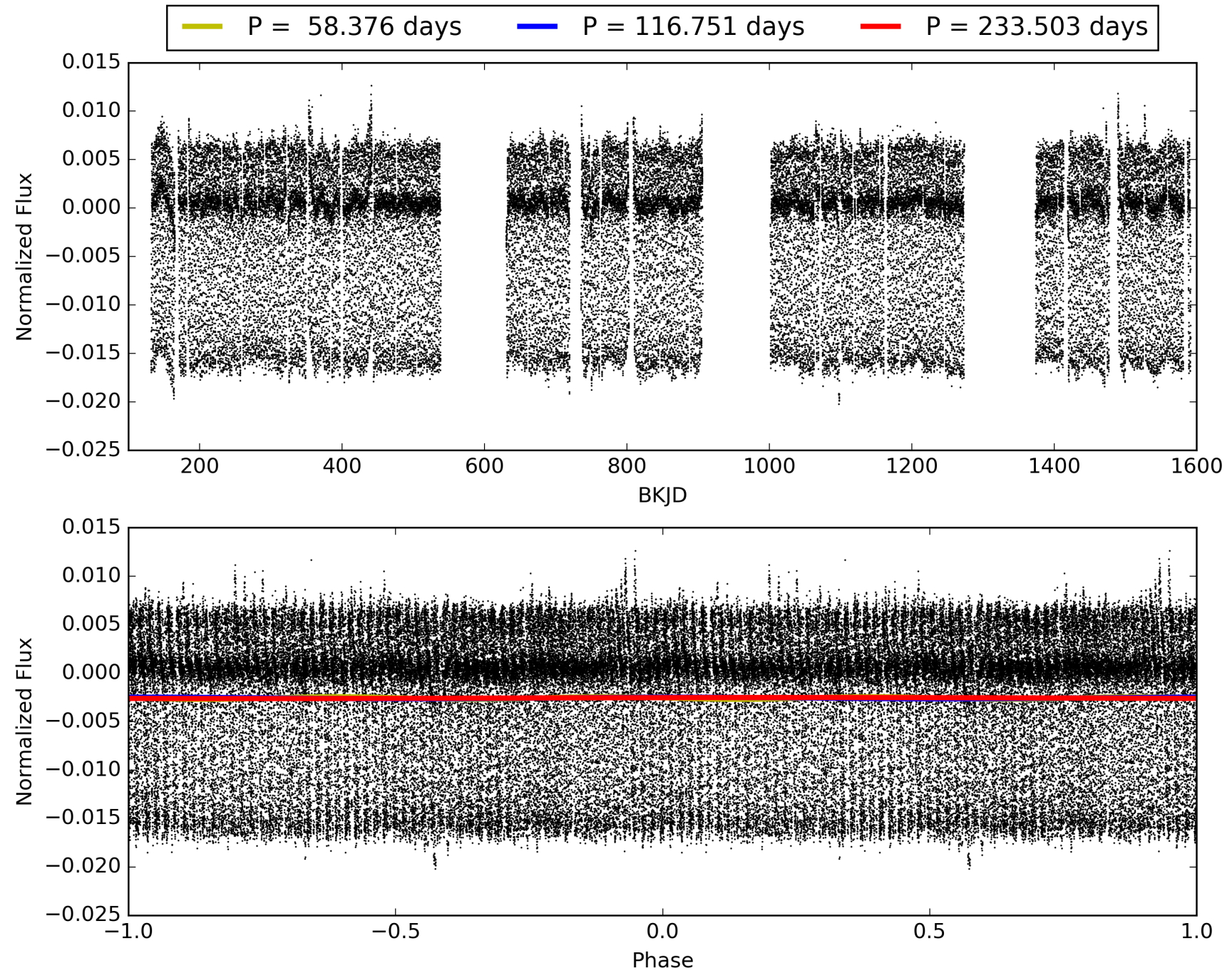
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 12:09:05 Z

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

TCE 003967219-03, PDC Light Curves

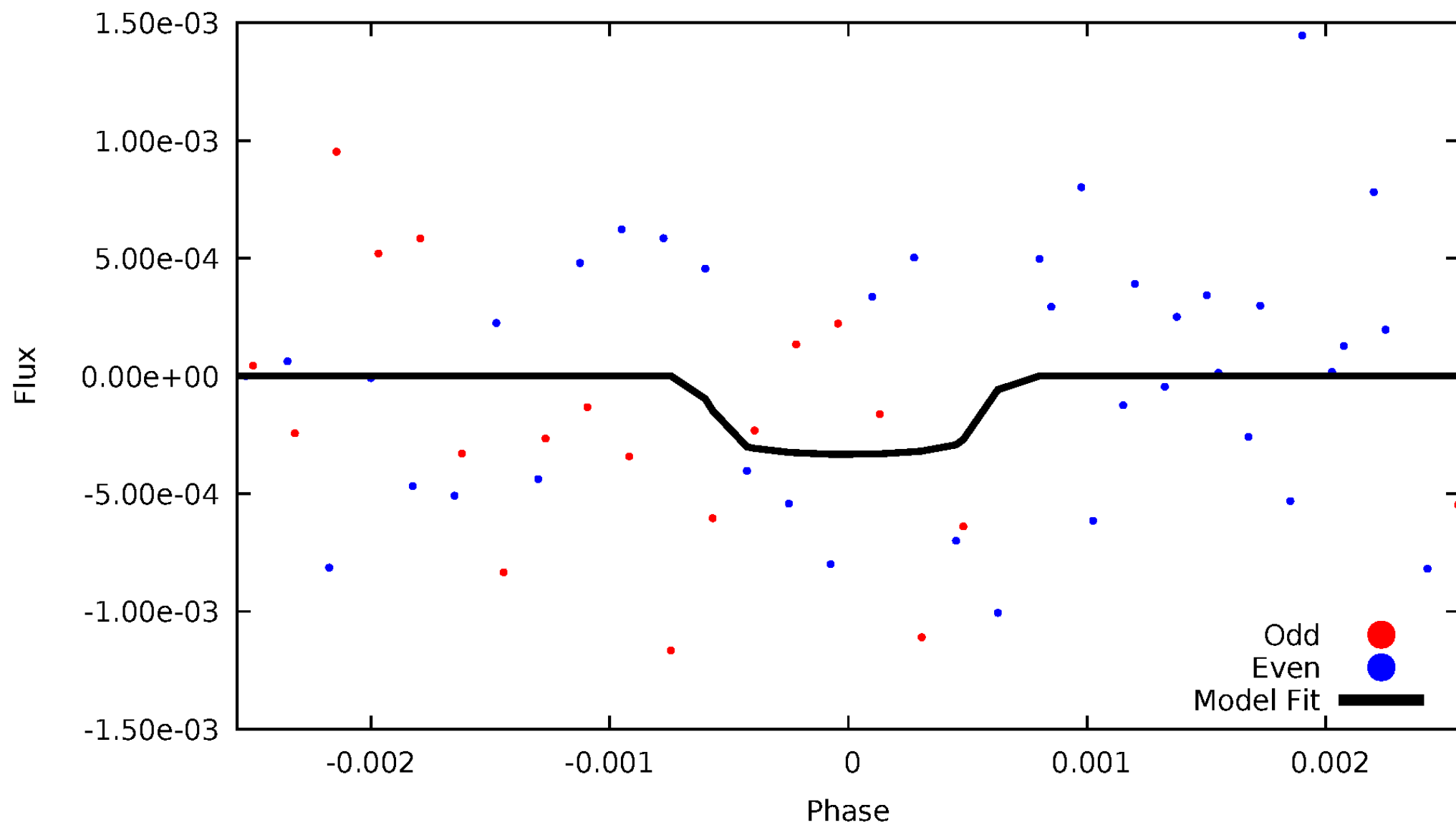


TCE 003967219-03



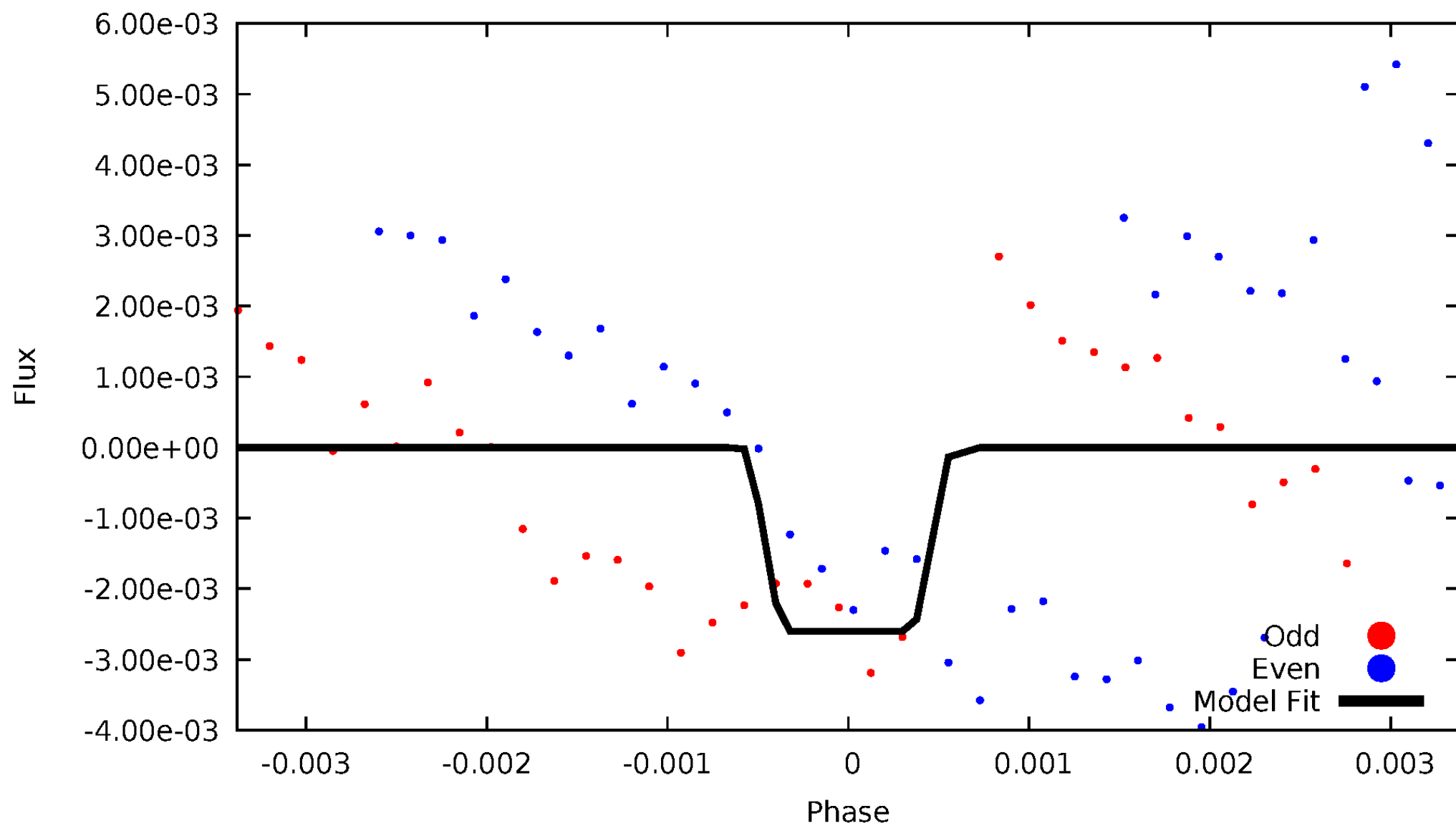
DV Odd/Even

TCE 003967219-03

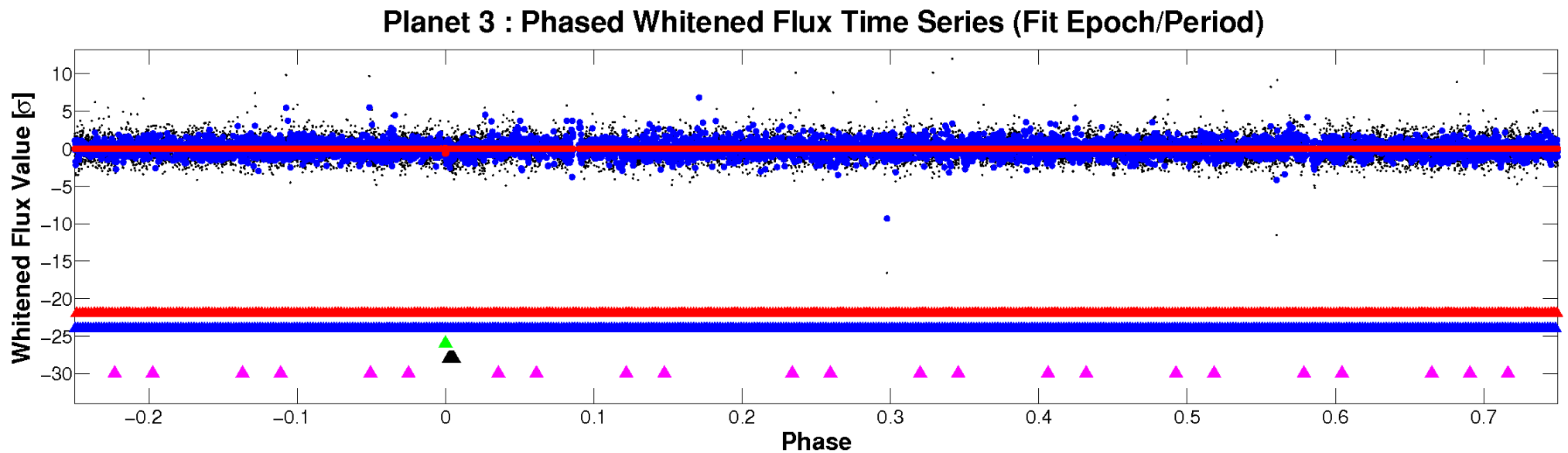
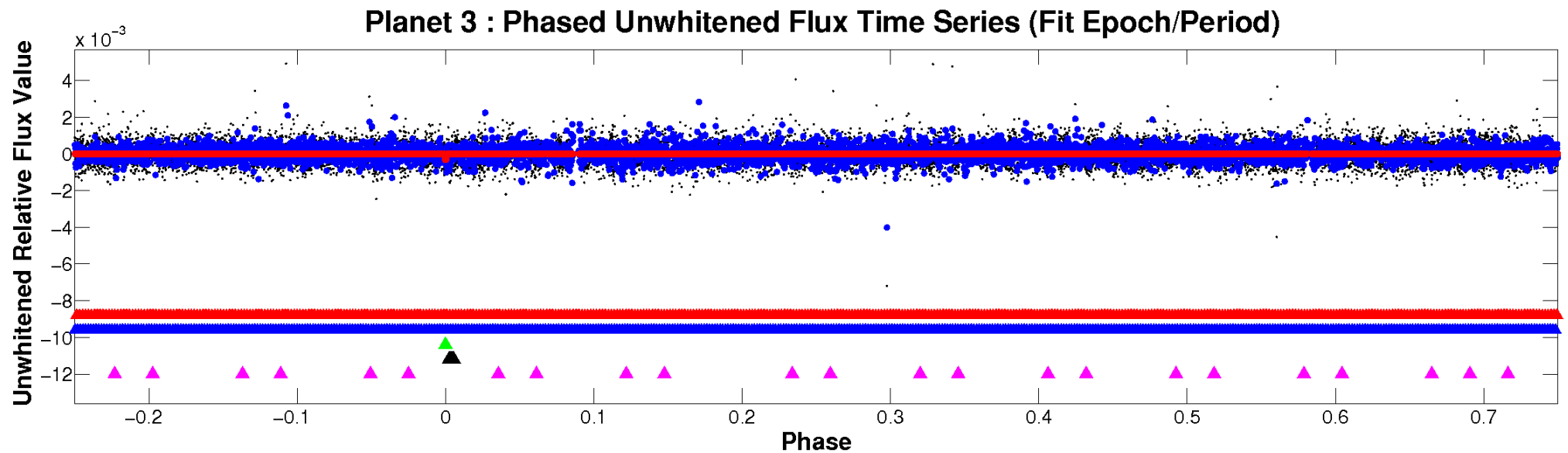


ALT Odd/Even

TCE 003967219-03

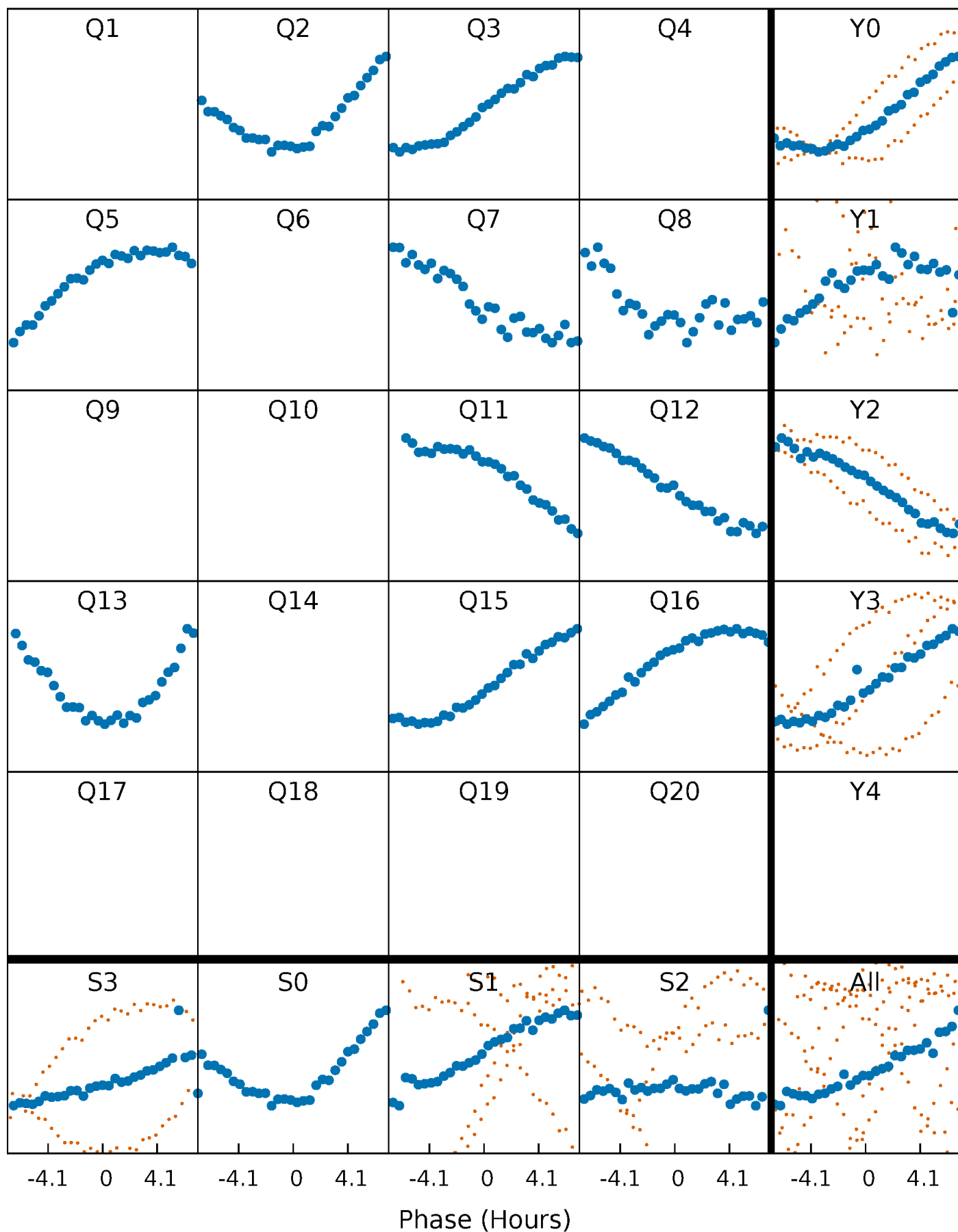


Non-Whitened Vs. Whitened Light Curve



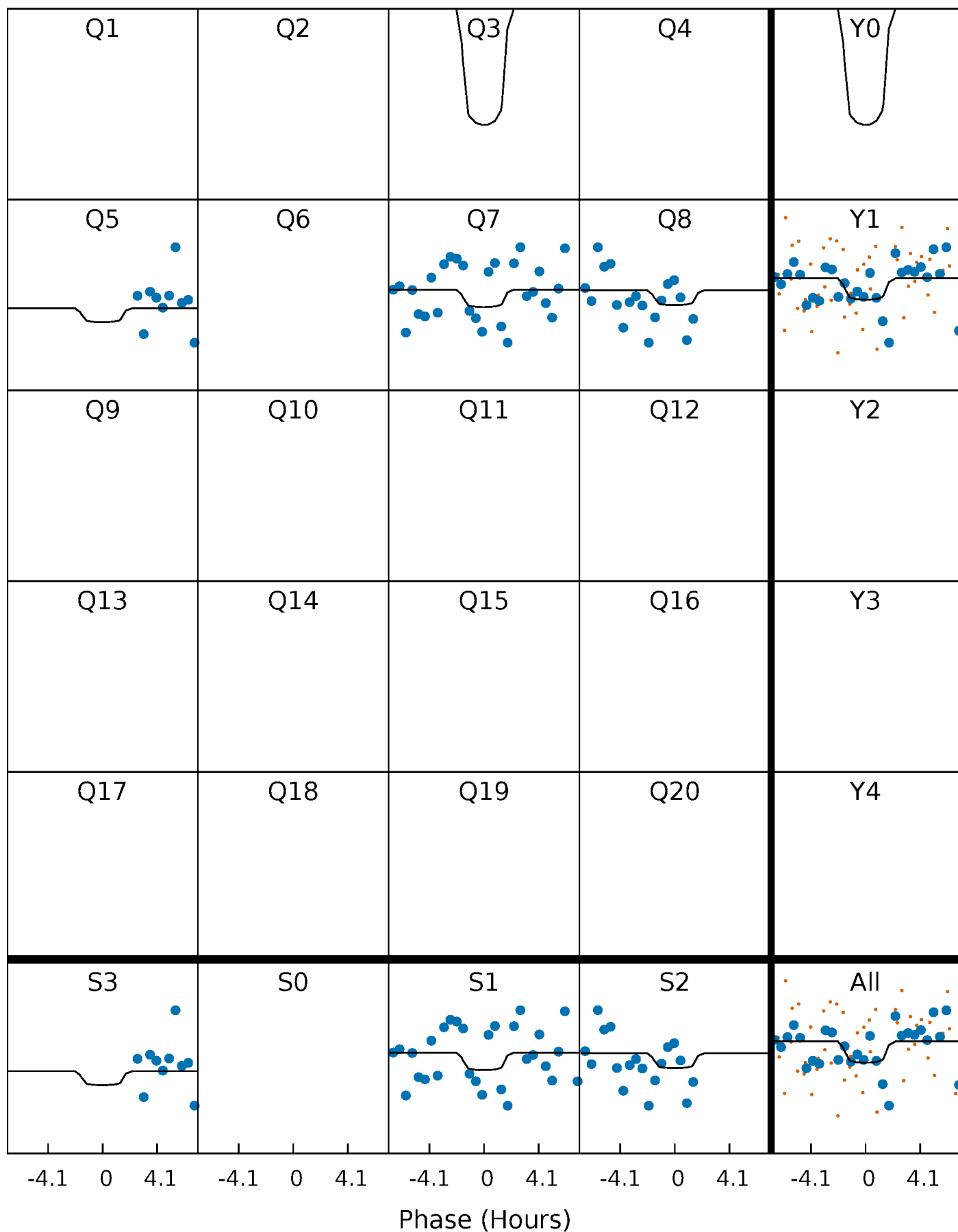
PDC Quarter-Phased Transit Curves

TCE 003967219-03 P=116.751267 Days $T_0=213.218814$ (BKJD)



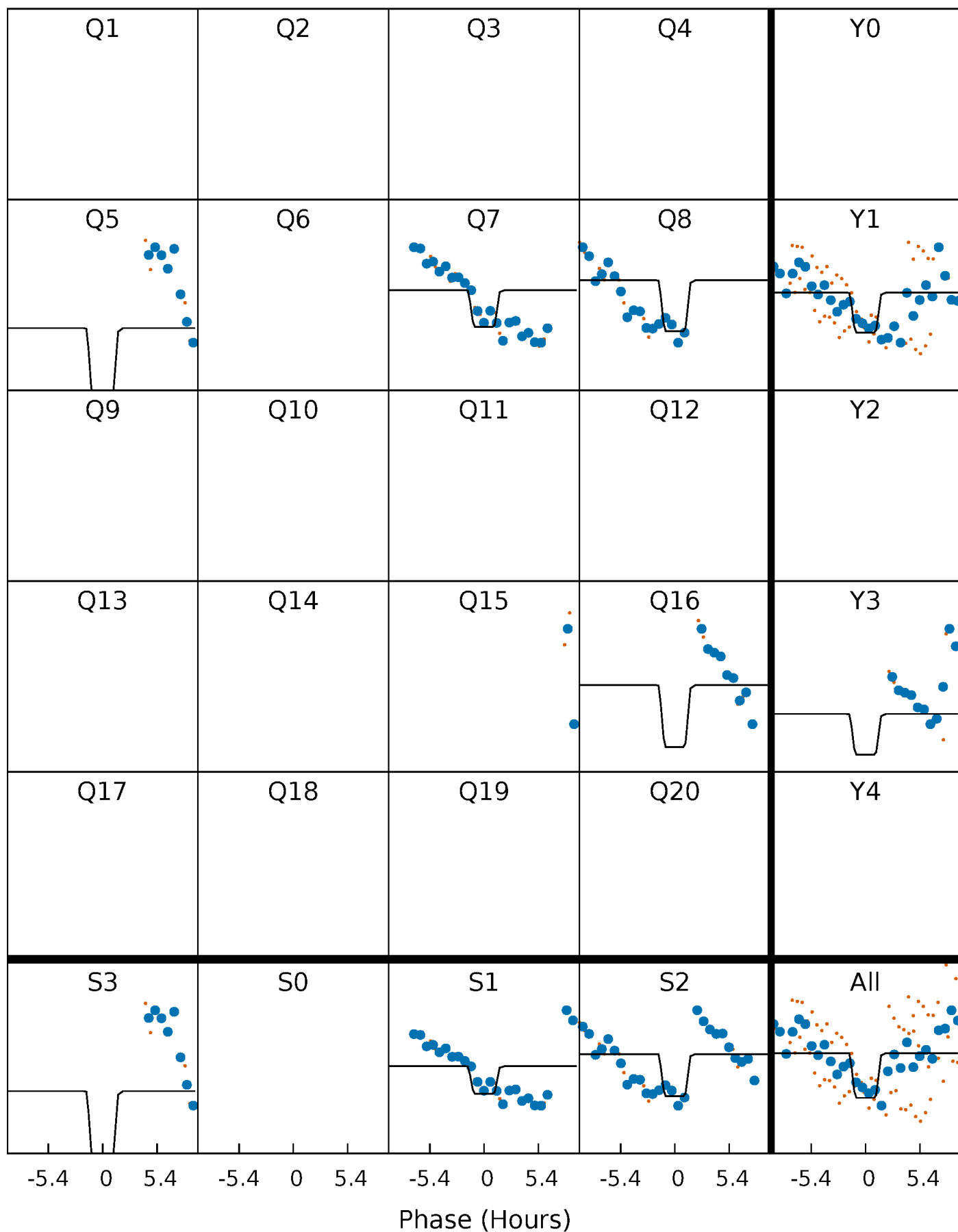
DV Quarter-Phased Transit Curves

TCE 003967219-03 P=116.751267 Days $T_0=213.218814$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

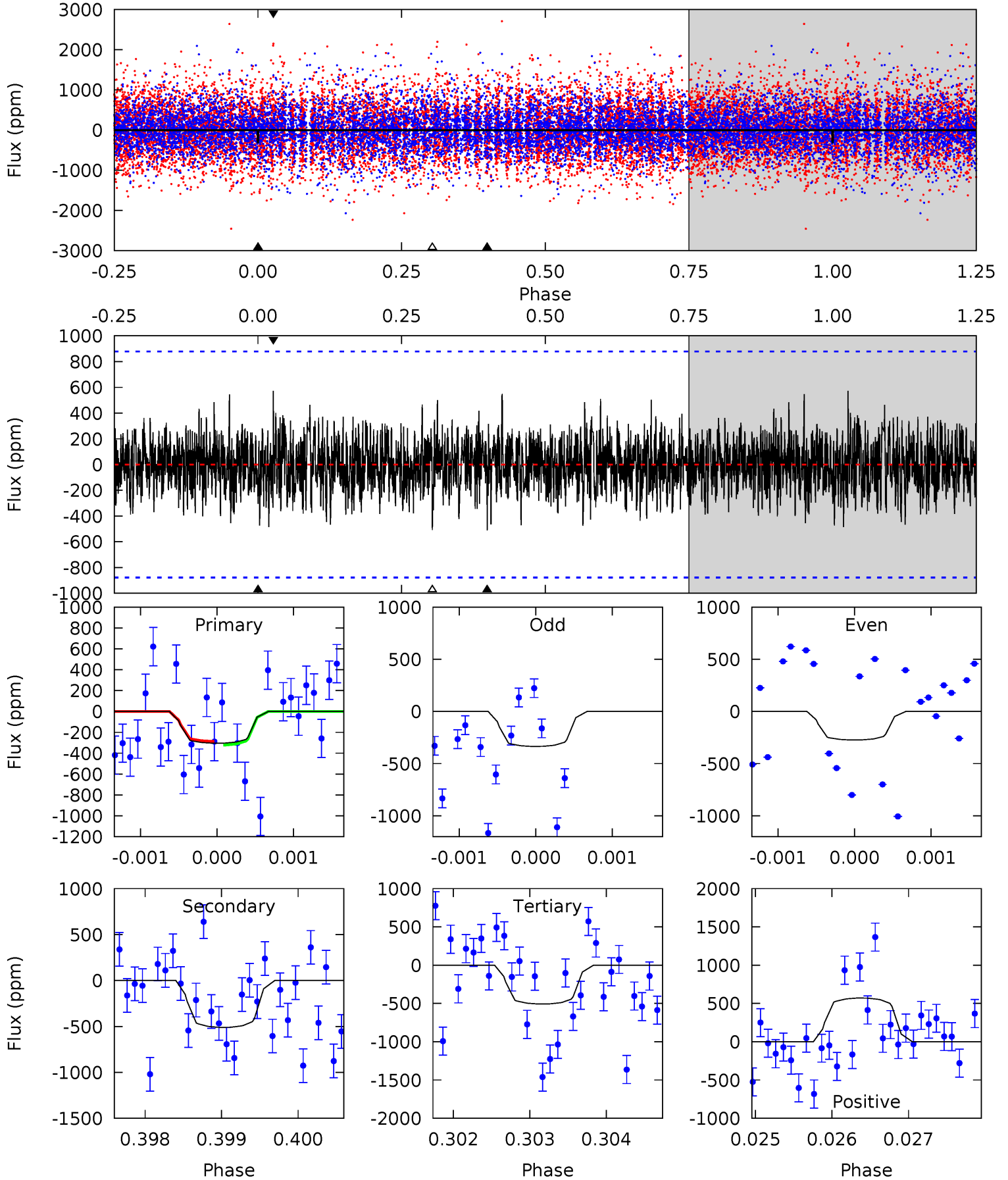
TCE 003967219-03 P=116.784607 Days $T_0=213.073489$ (BKJD)



DV Model-Shift Uniqueness Test

003967219-03, P = 116.751267 Days, E = 96.467547 Days

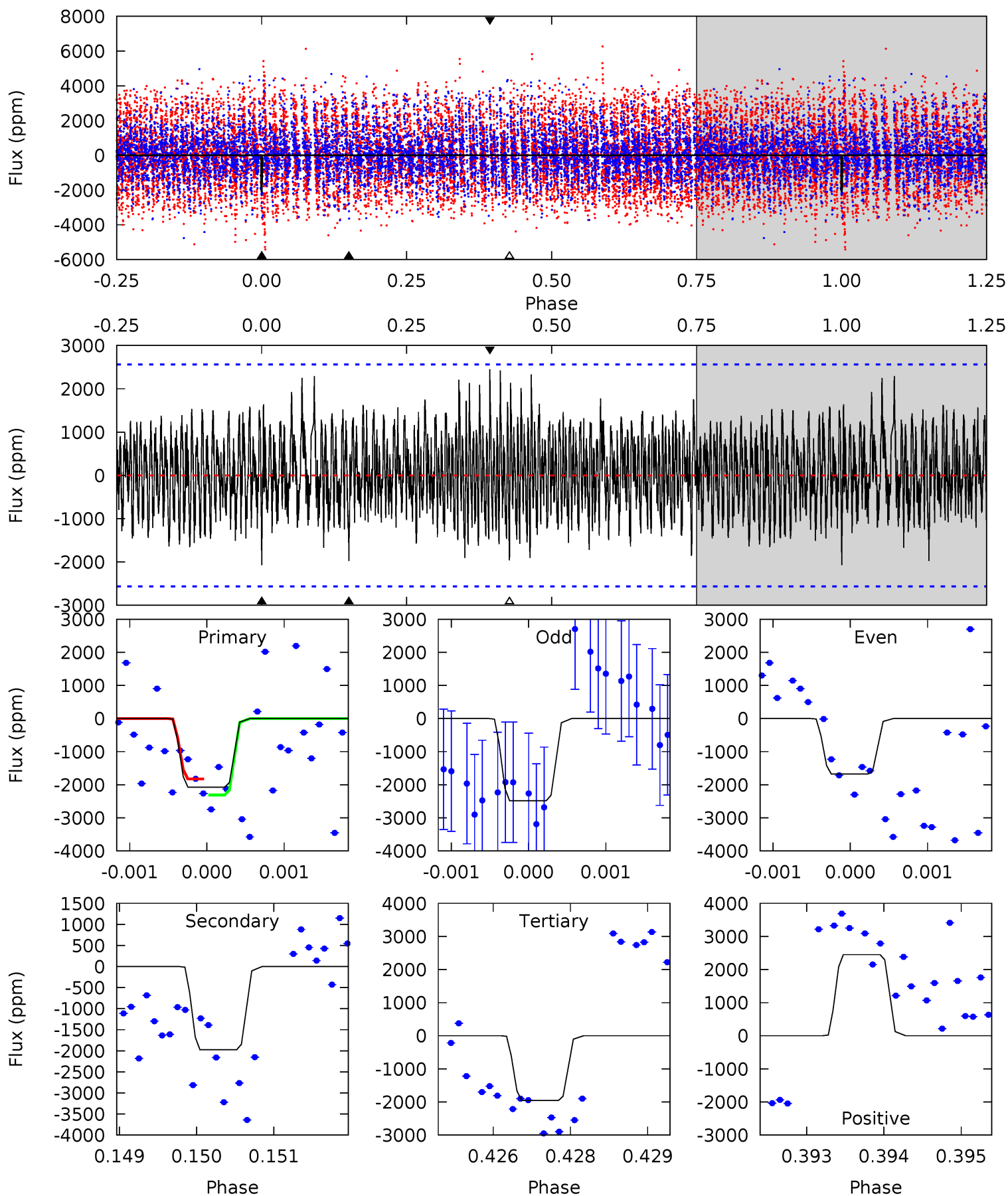
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.88	3.15	3.13	3.52	5.42	3.24	0.94	-1.25	-1.64	0.02	-0.37	0.19	1.00	0.53	0.11



Alt Model-Shift Uniqueness Test

003967219-03, P = 116.784607 Days, E = 96.288882 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.37	4.17	4.13	5.17	5.40	3.22	1.46	0.24	-0.80	0.04	-1.00	0.84	1.00	0.54	0.51



Stellar Parameters For KIC 003967219

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9748^{+344}_{-378}	$4.222^{+0.165}_{-0.135}$	$0.070^{+0.150}_{-0.600}$	$1.928^{+0.442}_{-0.540}$	$2.257^{+0.285}_{-0.530}$	$0.444^{+0.421}_{-0.186}$
	+4%/-4%	+4%/-3%	+214%/-857%	+23%/-28%	+13%/-23%	+95%/-42%
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 003967219-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-511±162	$8.94^{+8.73}_{-5.74}$	1059^{+75}_{-68}	6350^{+6853}_{-1630}	1206^{+8747}_{-902}
Alt.	-1975±474	$12.17^{+9.98}_{-7.54}$	1063^{+76}_{-71}	8013^{+9031}_{-2156}	2599^{+15570}_{-1793}

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

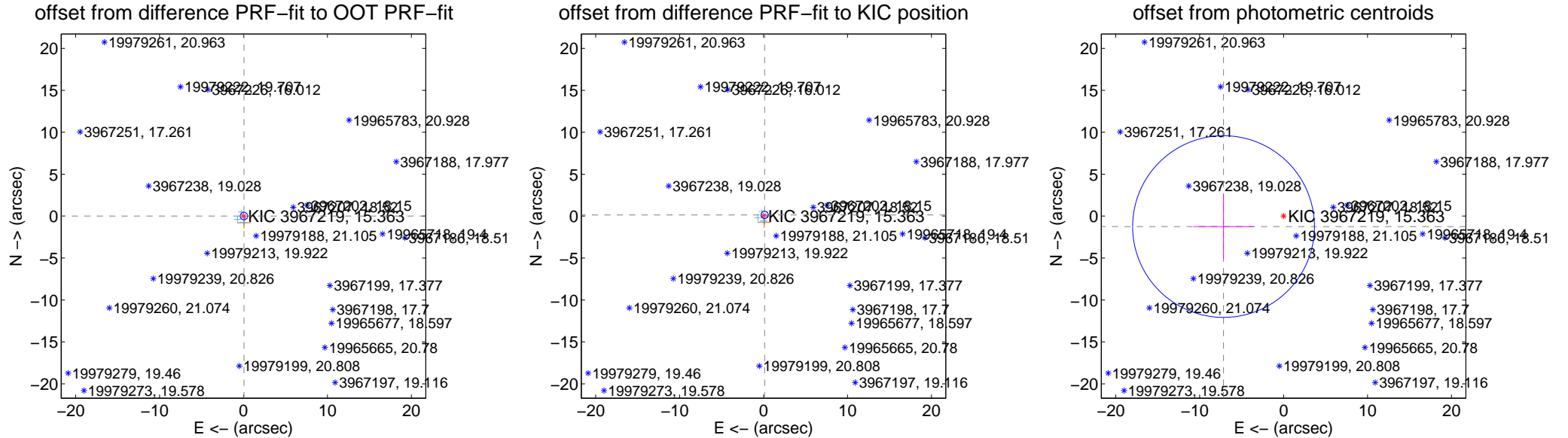
DV Centroid Data

Supplemental centroid analysis for 003967219-03. Kepler magnitude: 15.36. Transit SNR 2.17

There are 5 quarters with good PRF difference image offsets

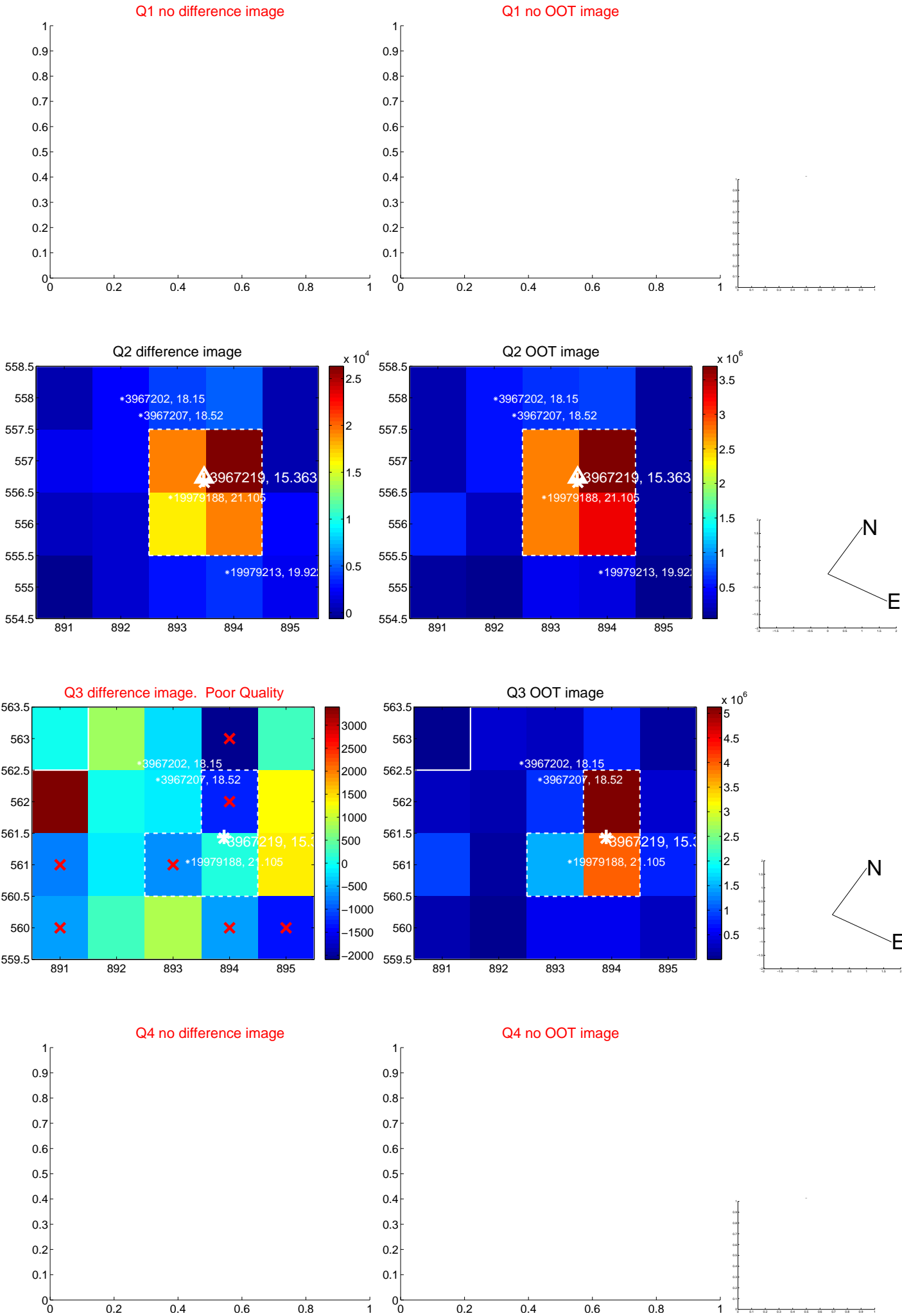
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.054 ± 0.149	0.36	-0.053 ± 0.149	0.005 ± 0.139
PRF-fit source offset from KIC position	0.193 ± 0.144	1.34	-0.130 ± 0.149	0.143 ± 0.139
photometric centroid source offset	7.26 ± 3.61	2.01	7.16 ± 3.60	-1.25 ± 3.86

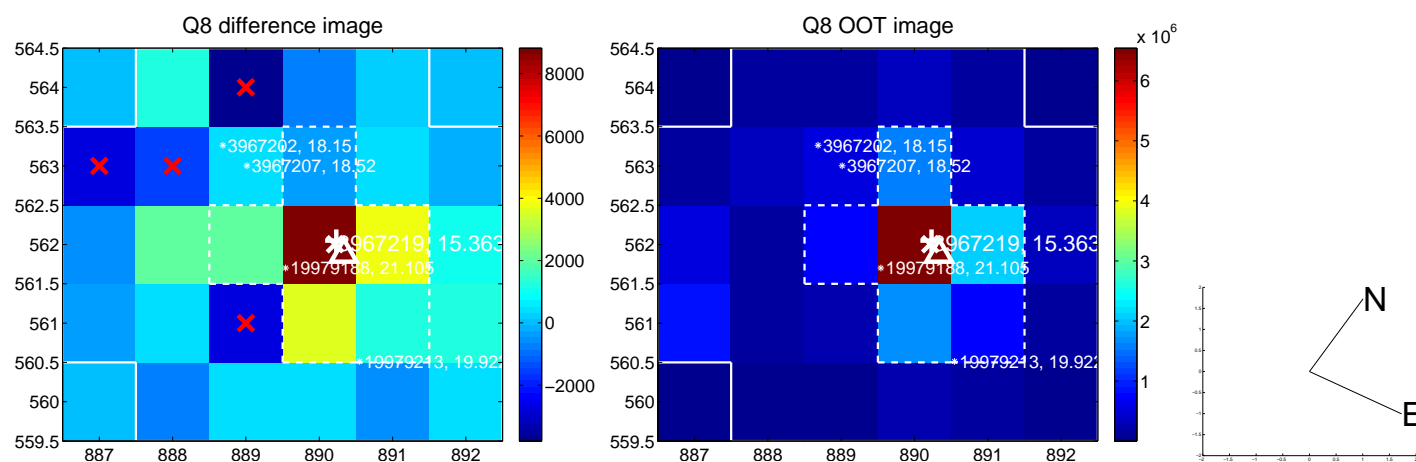
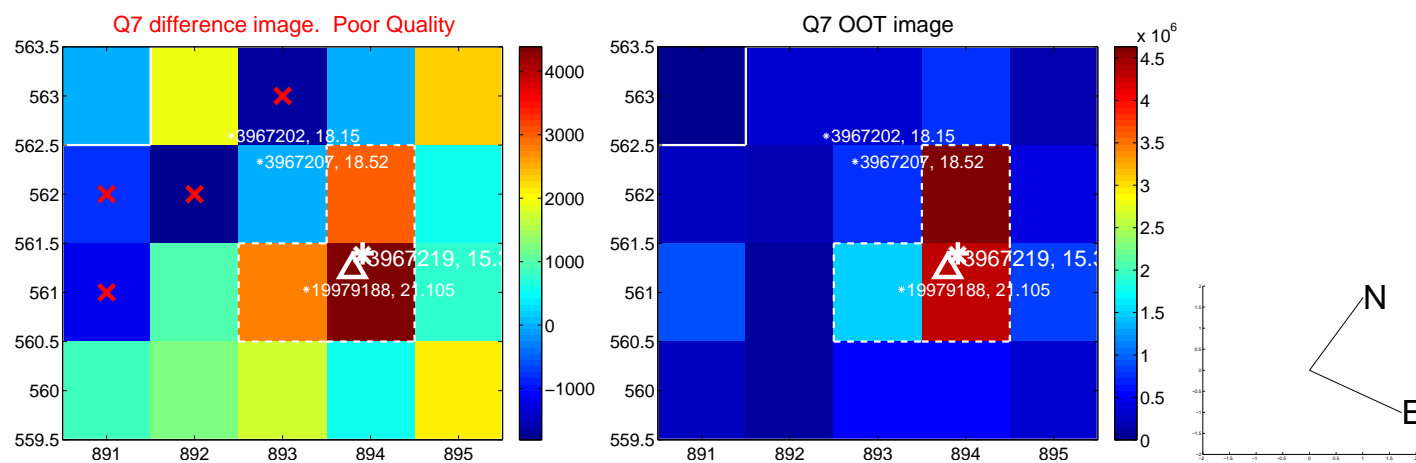
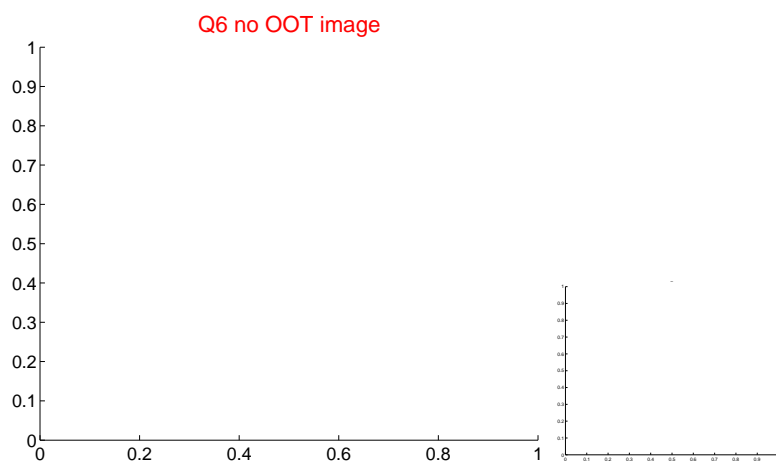
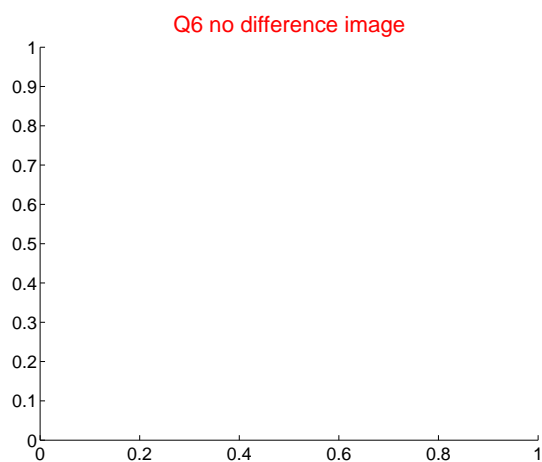
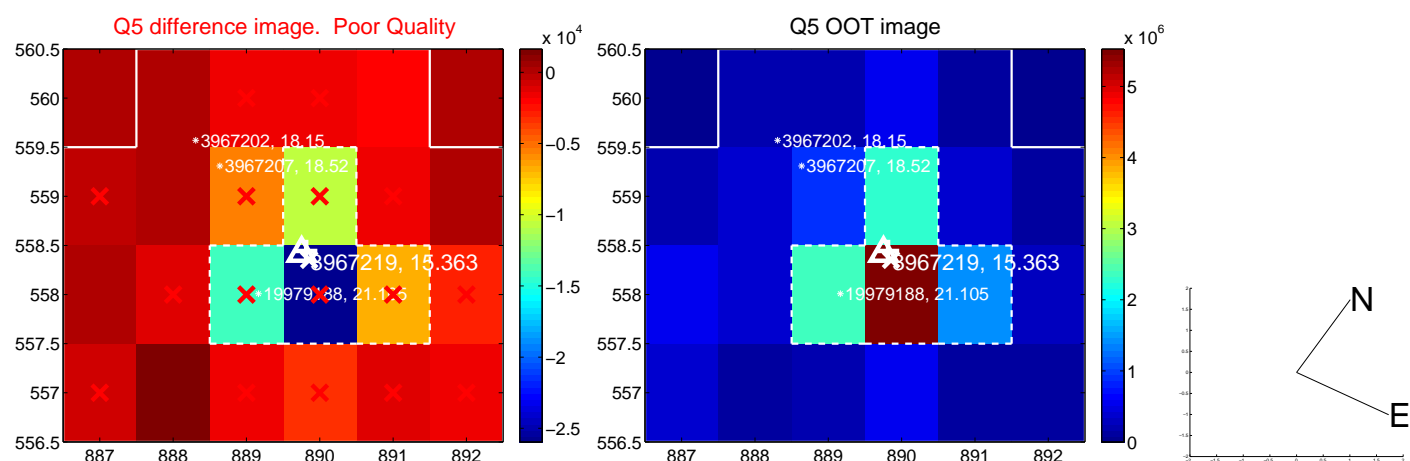


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

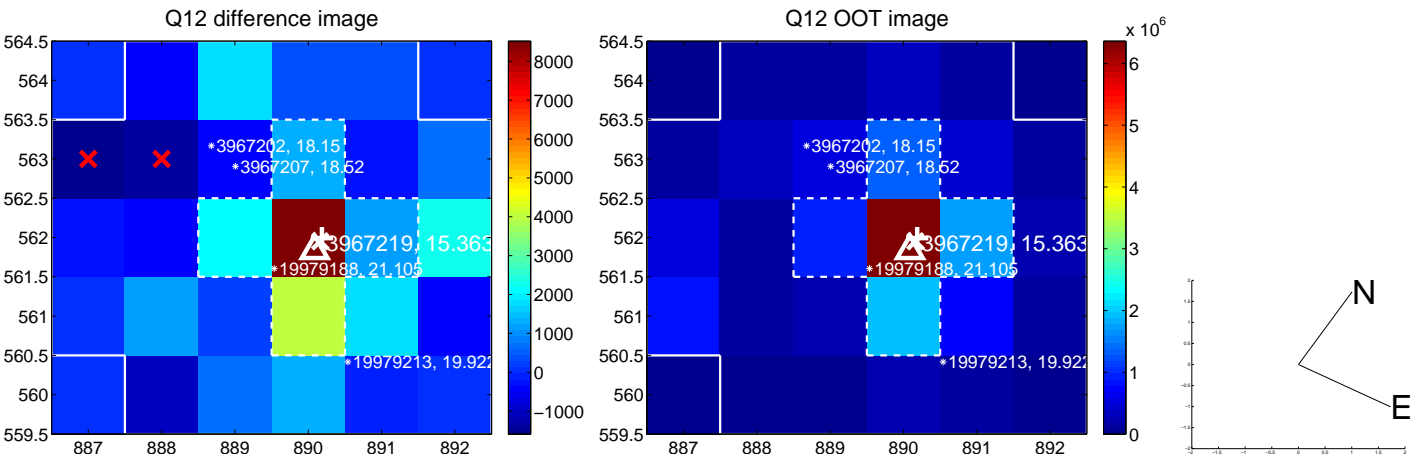
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



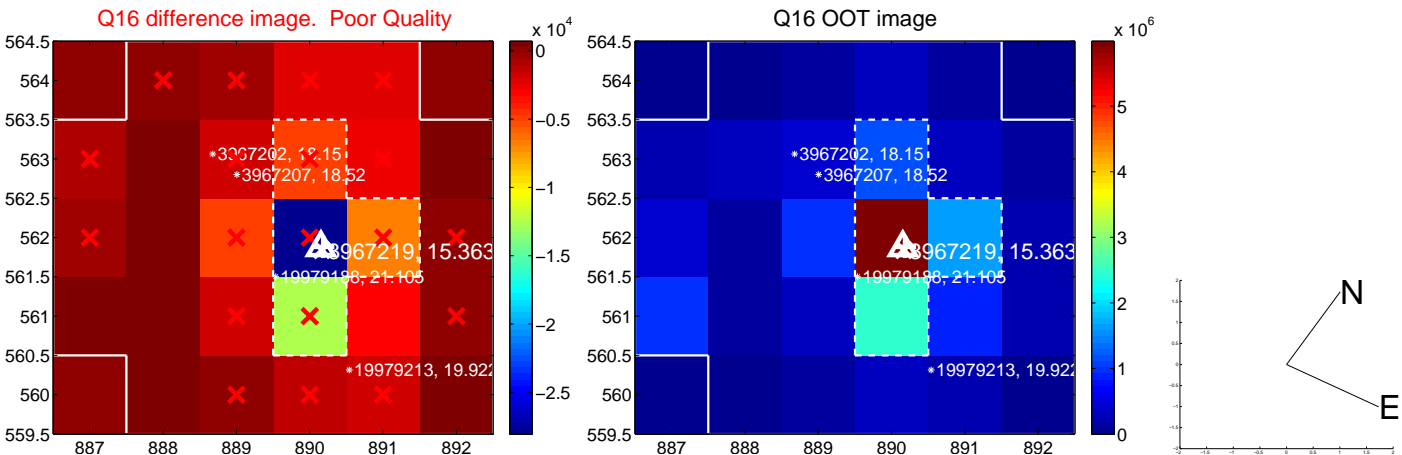
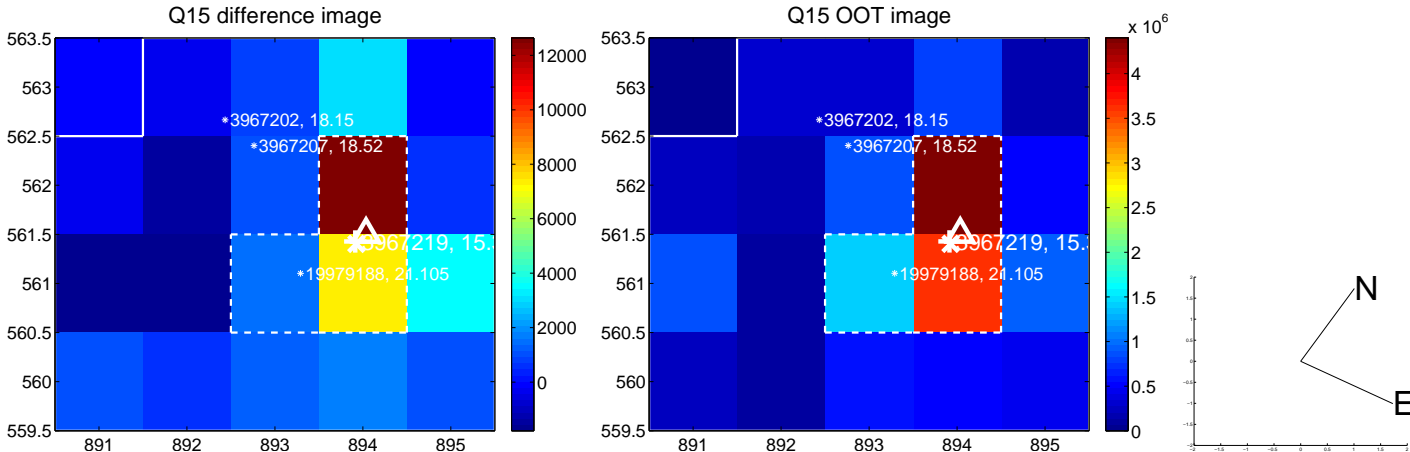
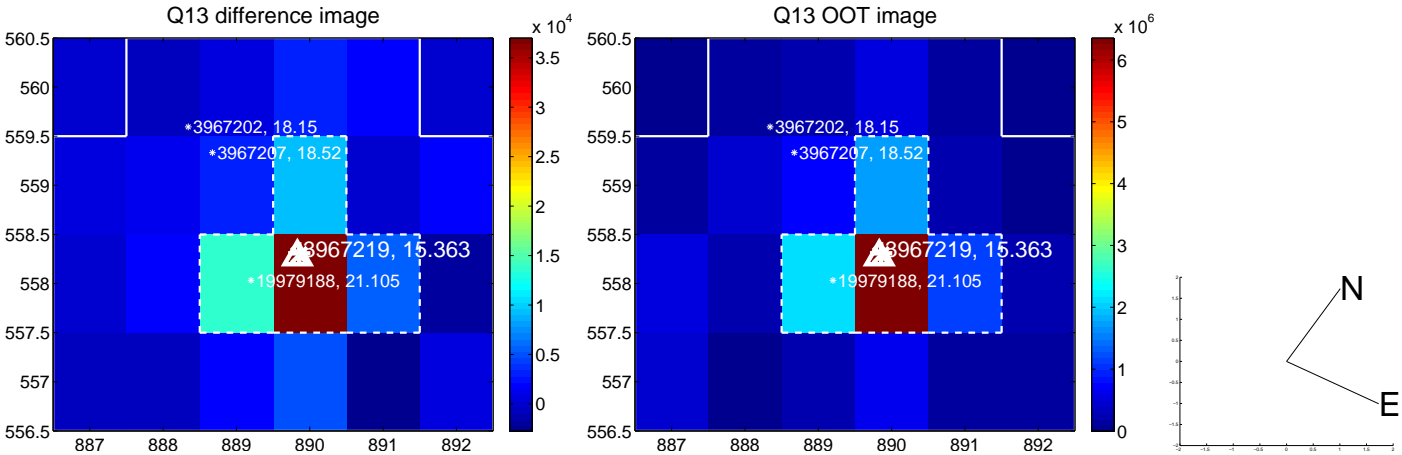
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



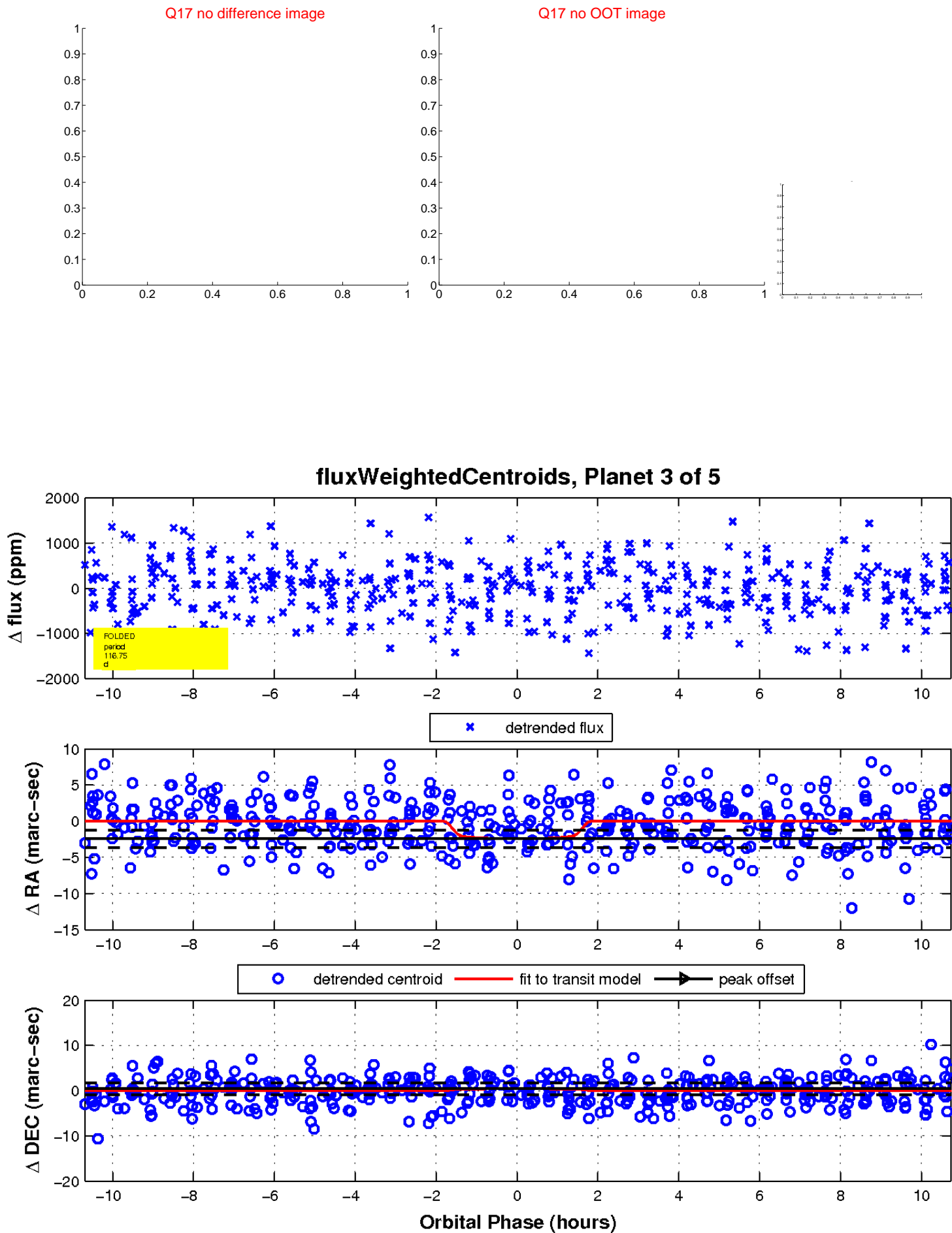
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



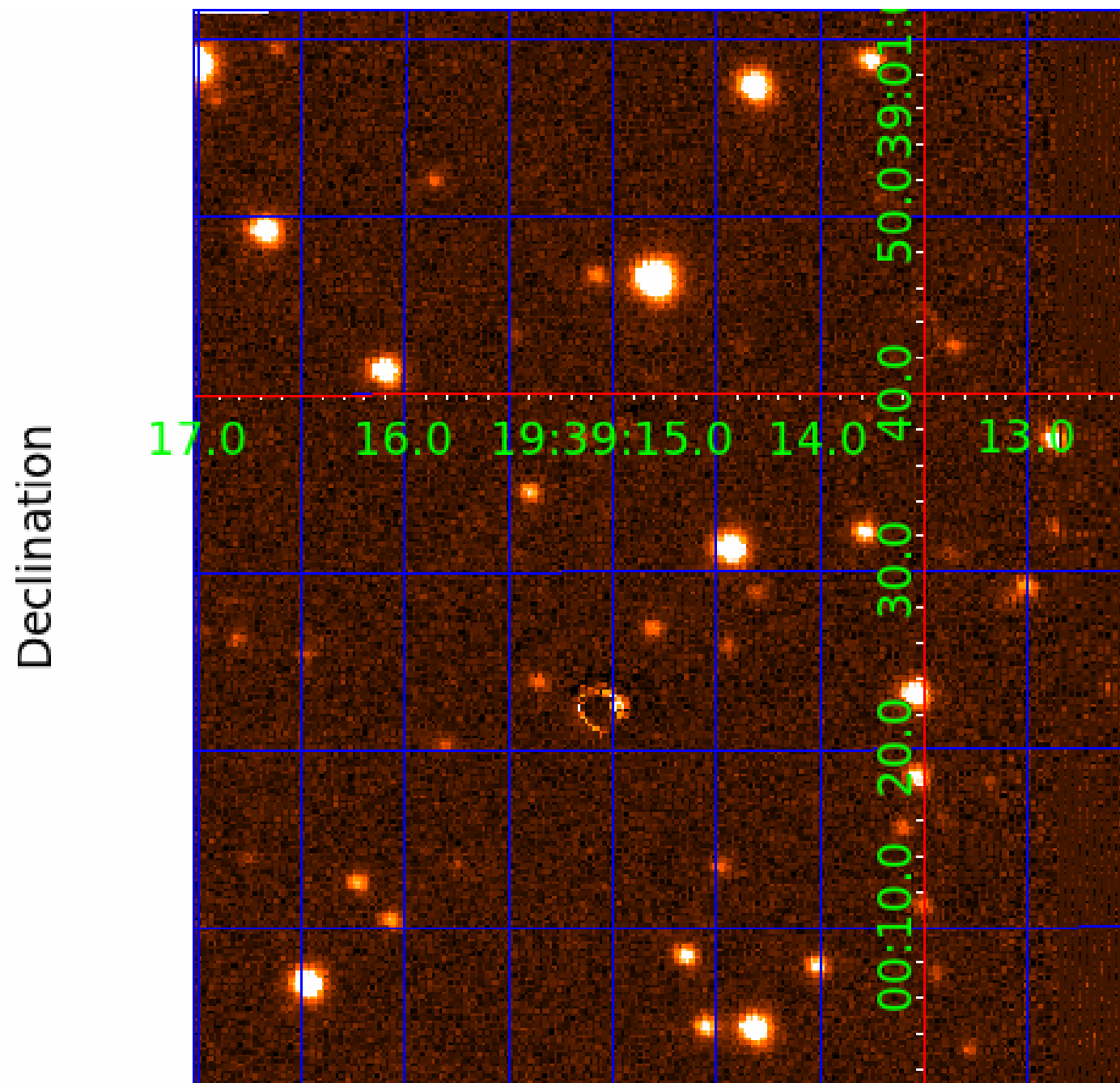
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



UKIRT Image



KIC 003967219

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})
003967219-01	OBS	No	2.080797	132.144804	321.2	4.824	19.6	22.5	1.93	9748	5.00	17152.27
003967219-02	OBS	No	2.081145	133.892952	104.7	11.695	7.9	7.5	1.93	9748	2.08	17148.44
003967219-03	OBS	No	116.751267	213.218814	332.7	3.586	11.7	2.2	1.93	9748	4.06	79.85
003967219-04	OBS	No	116.784607	213.500653	1351.8	12.000	11.9	-1.0	1.93	9748	7.26	79.82
003967219-05	OBS	No	63.410114	180.103749	796.3	2.891	8.2	8.5	1.93	9748	6.09	180.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003967219-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
003967219-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD
003967219-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—HALO_GHOST
003967219-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_NOFITS
003967219-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_POS_ALT—HALO_GHOST

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

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

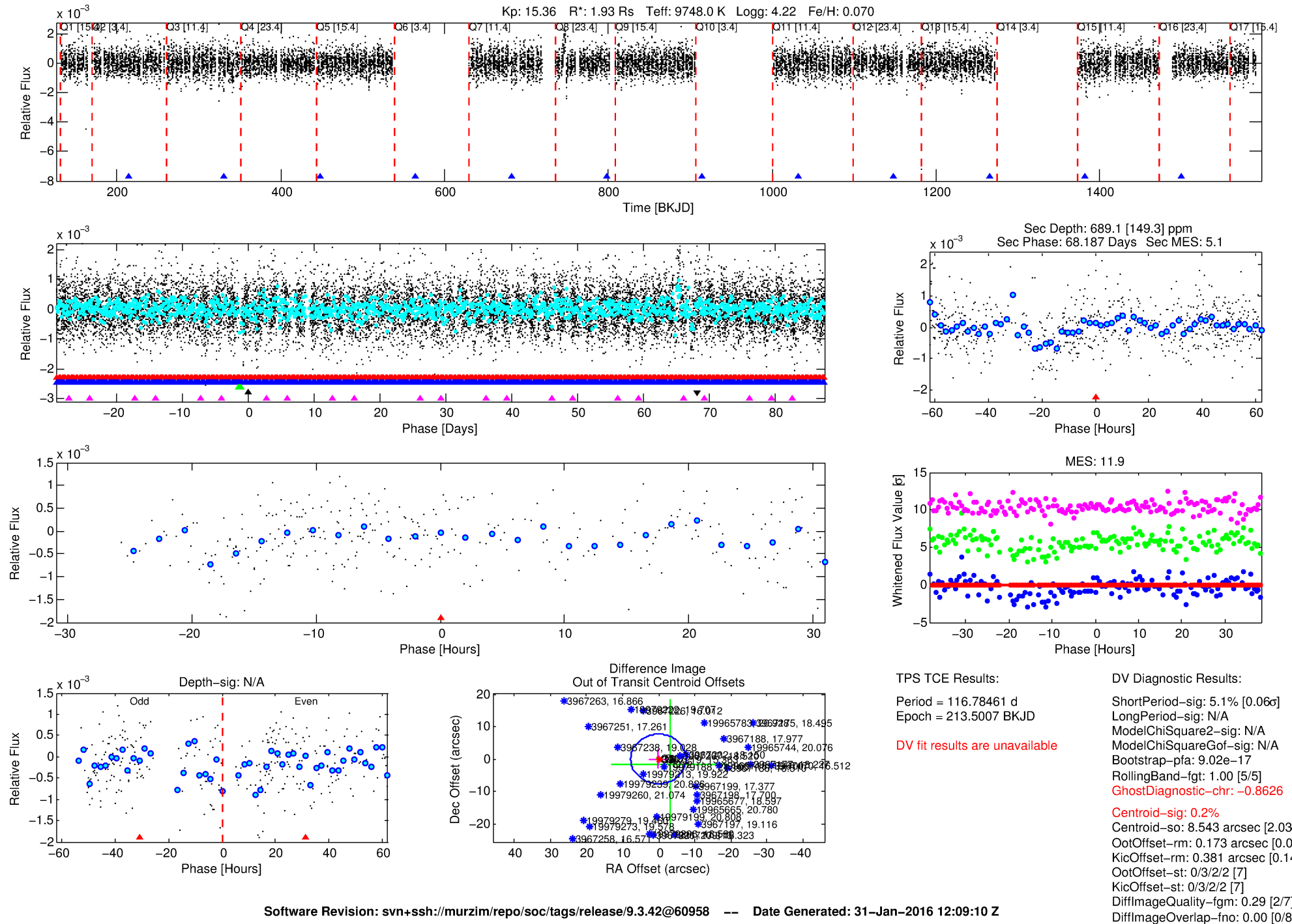
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003967219-04

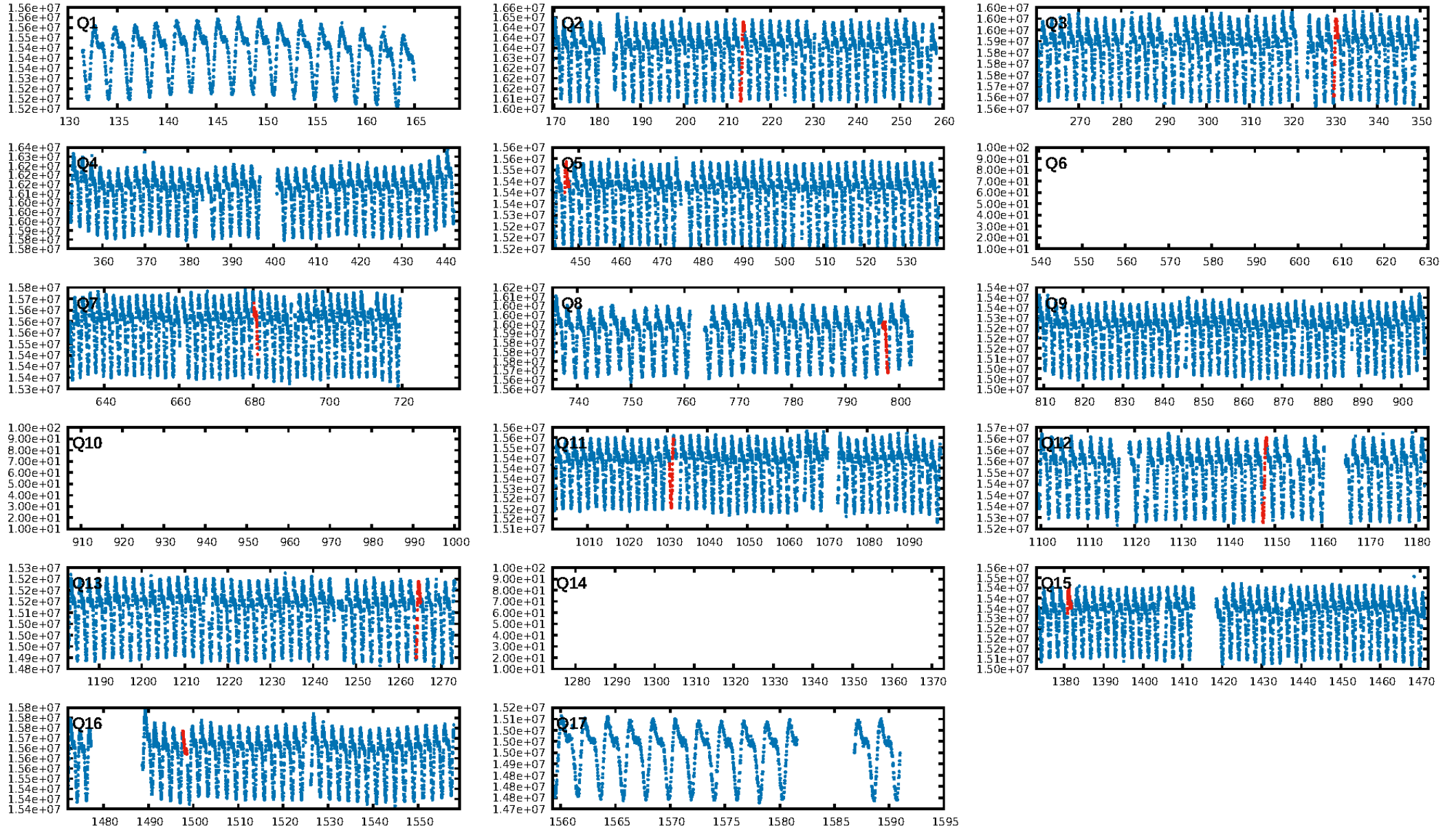
No Significant Match Found

DV One-Page Summary

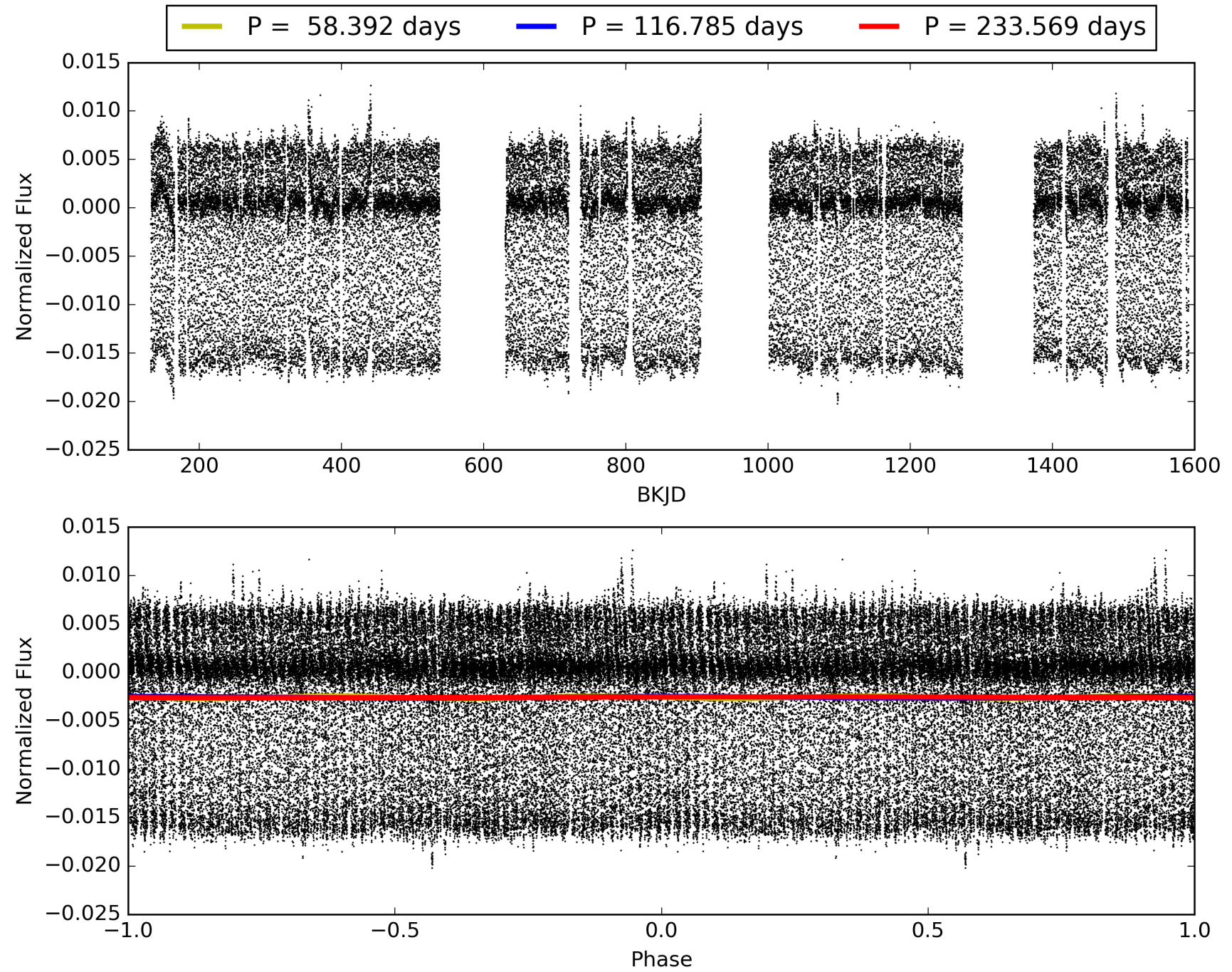
KIC: 3967219 Candidate: 4 of 5 Period: 116.785 d



TCE 003967219-04, PDC Light Curves

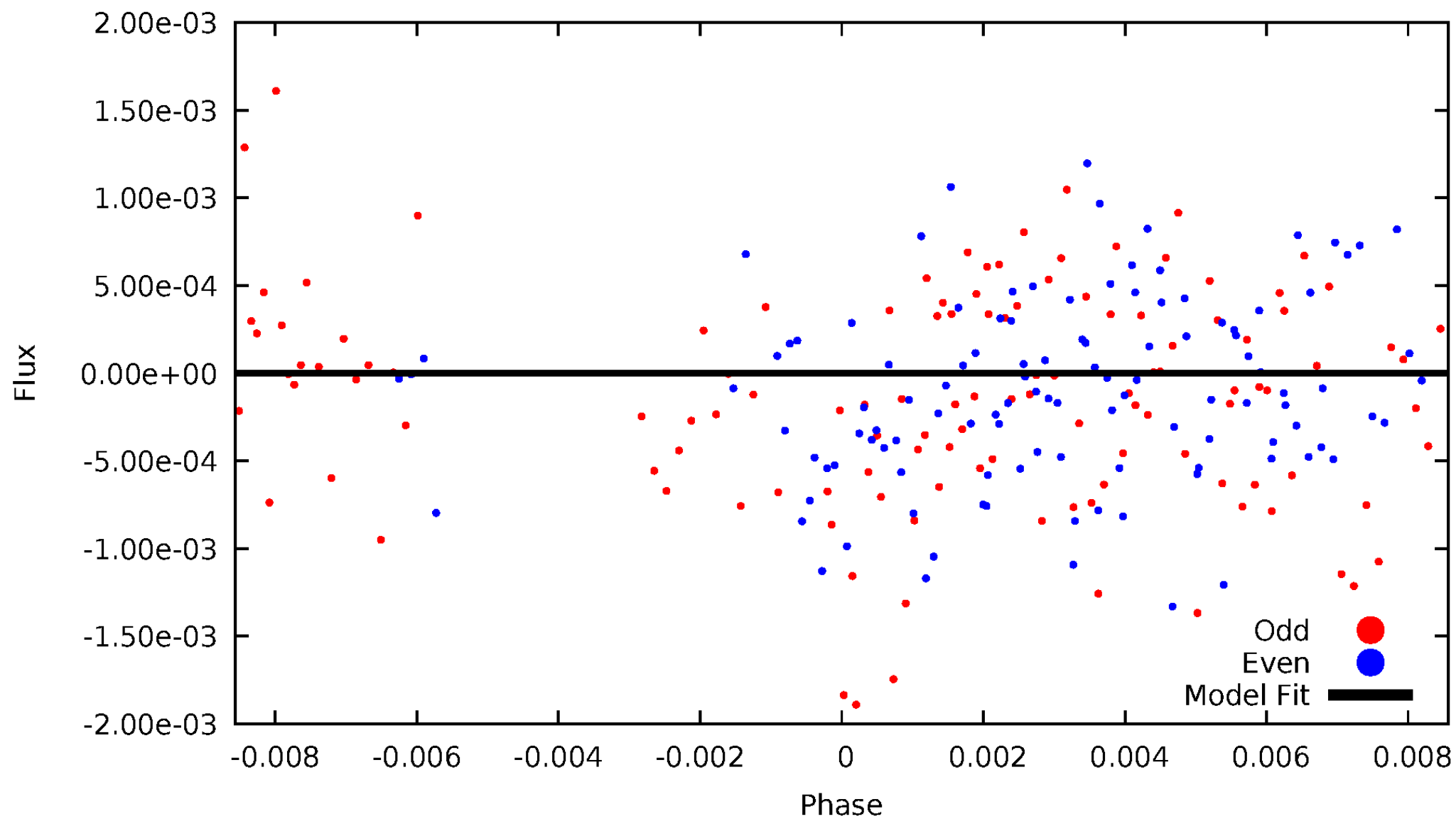


TCE 003967219-04



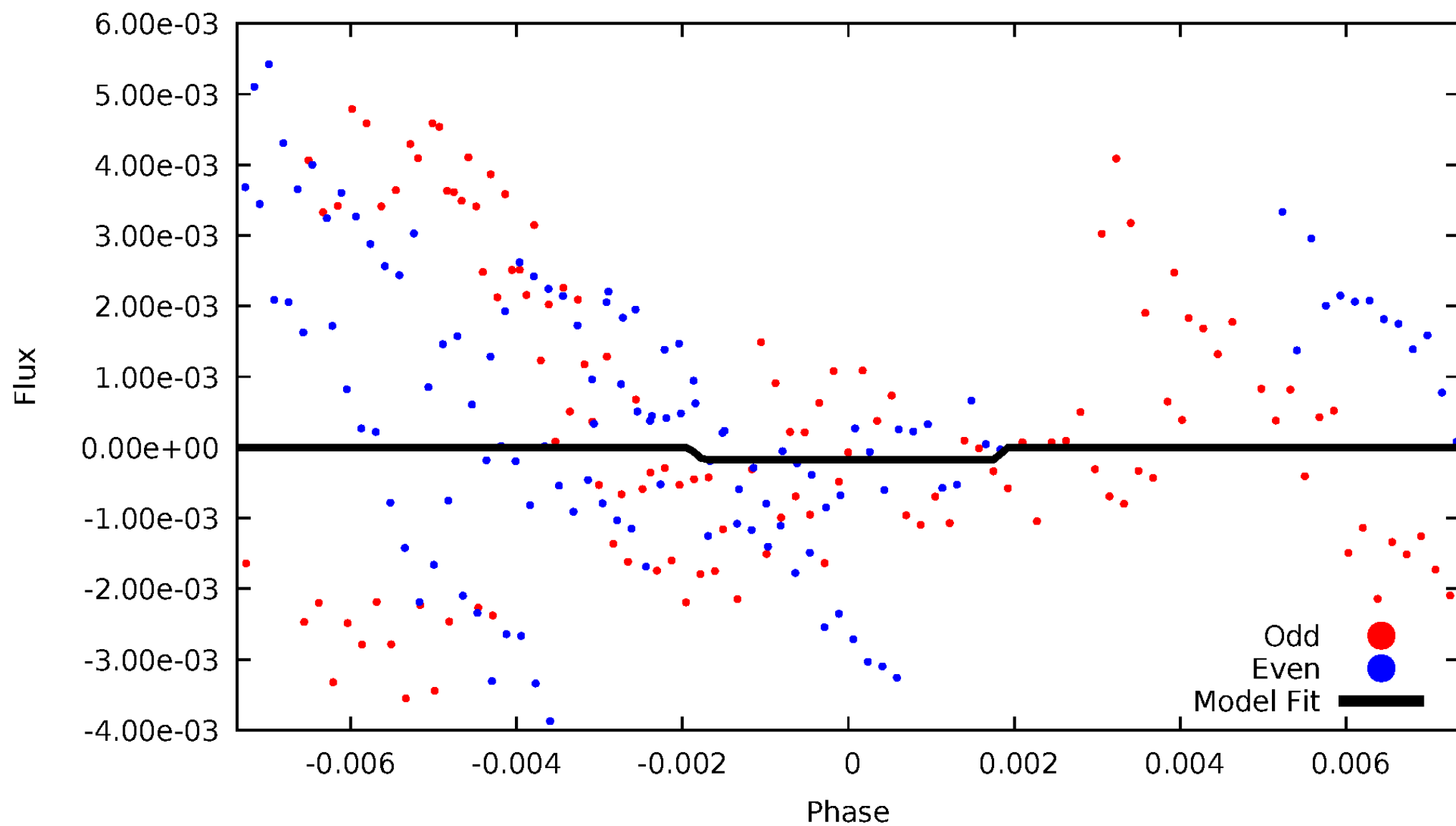
DV Odd/Even

TCE 003967219-04



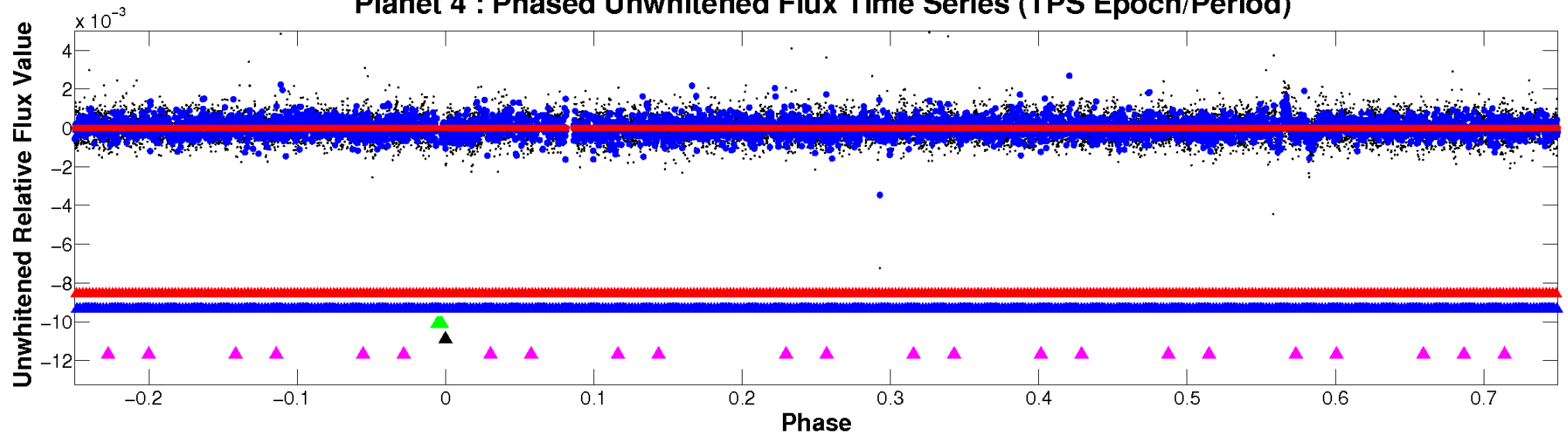
ALT Odd/Even

TCE 003967219-04

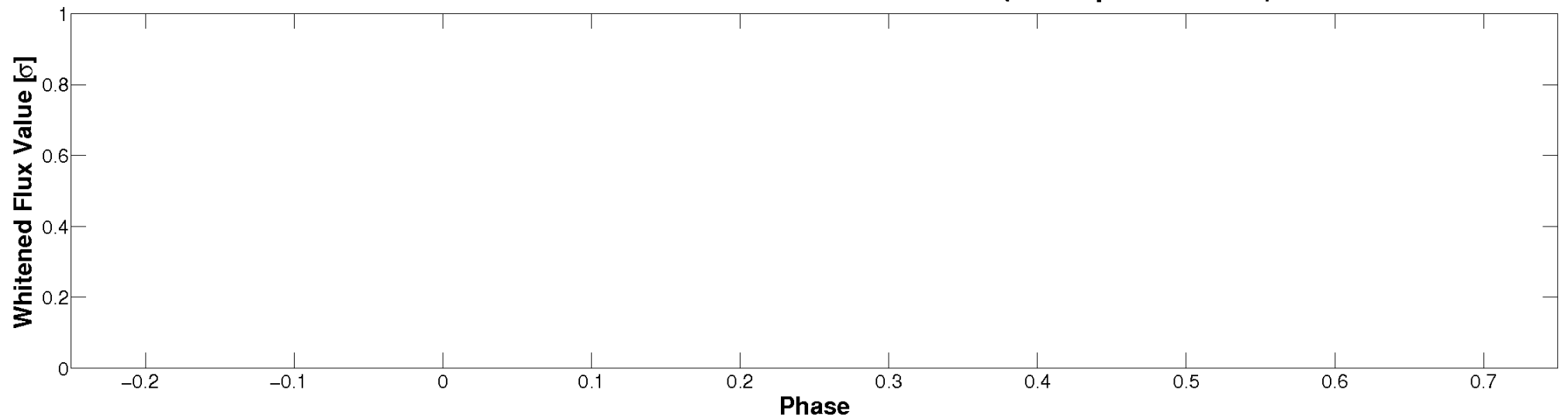


Non-Whitened Vs. Whitened Light Curve

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

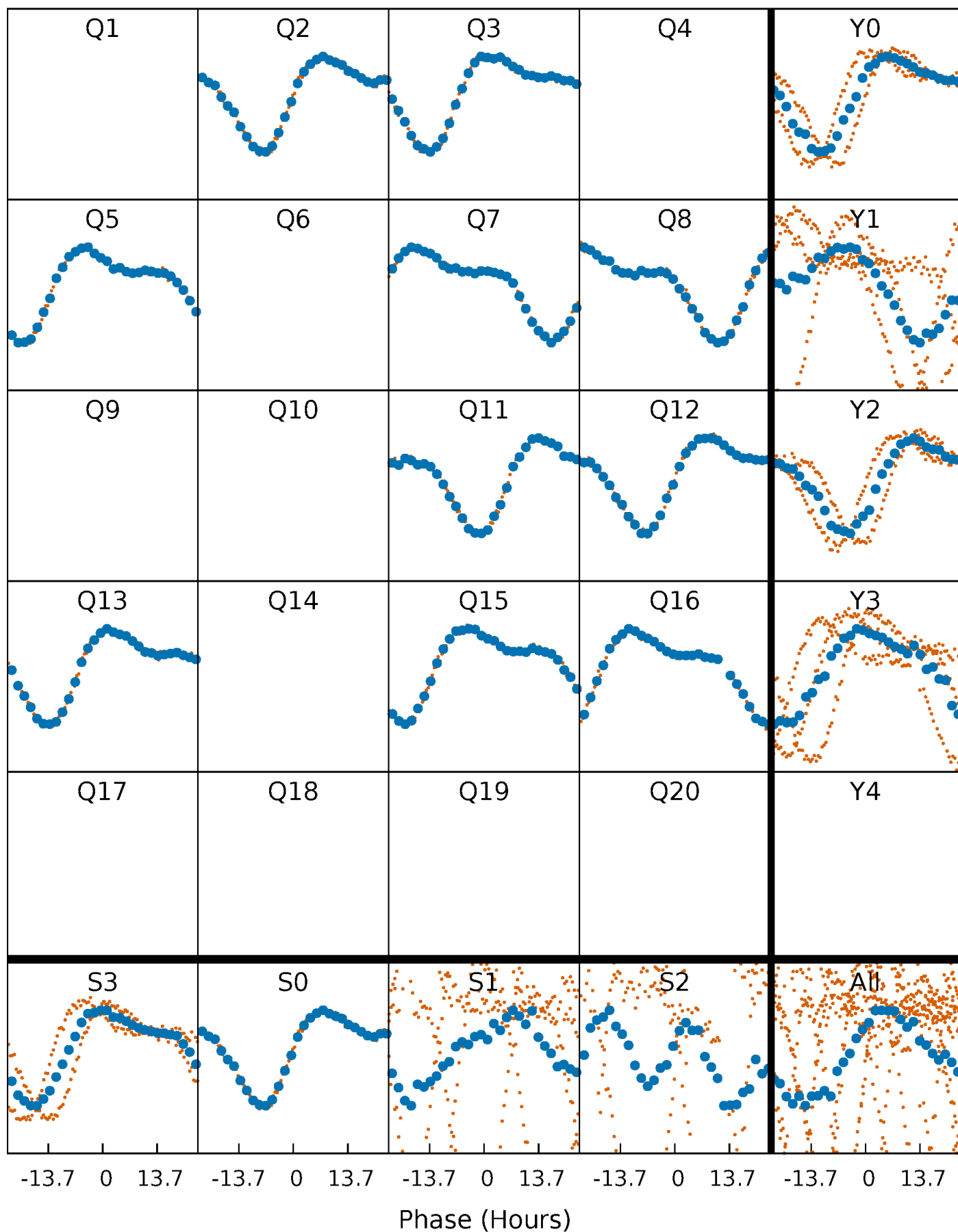


Planet 4 : Phased Whitened Flux Time Series (TPS Epoch/Period)



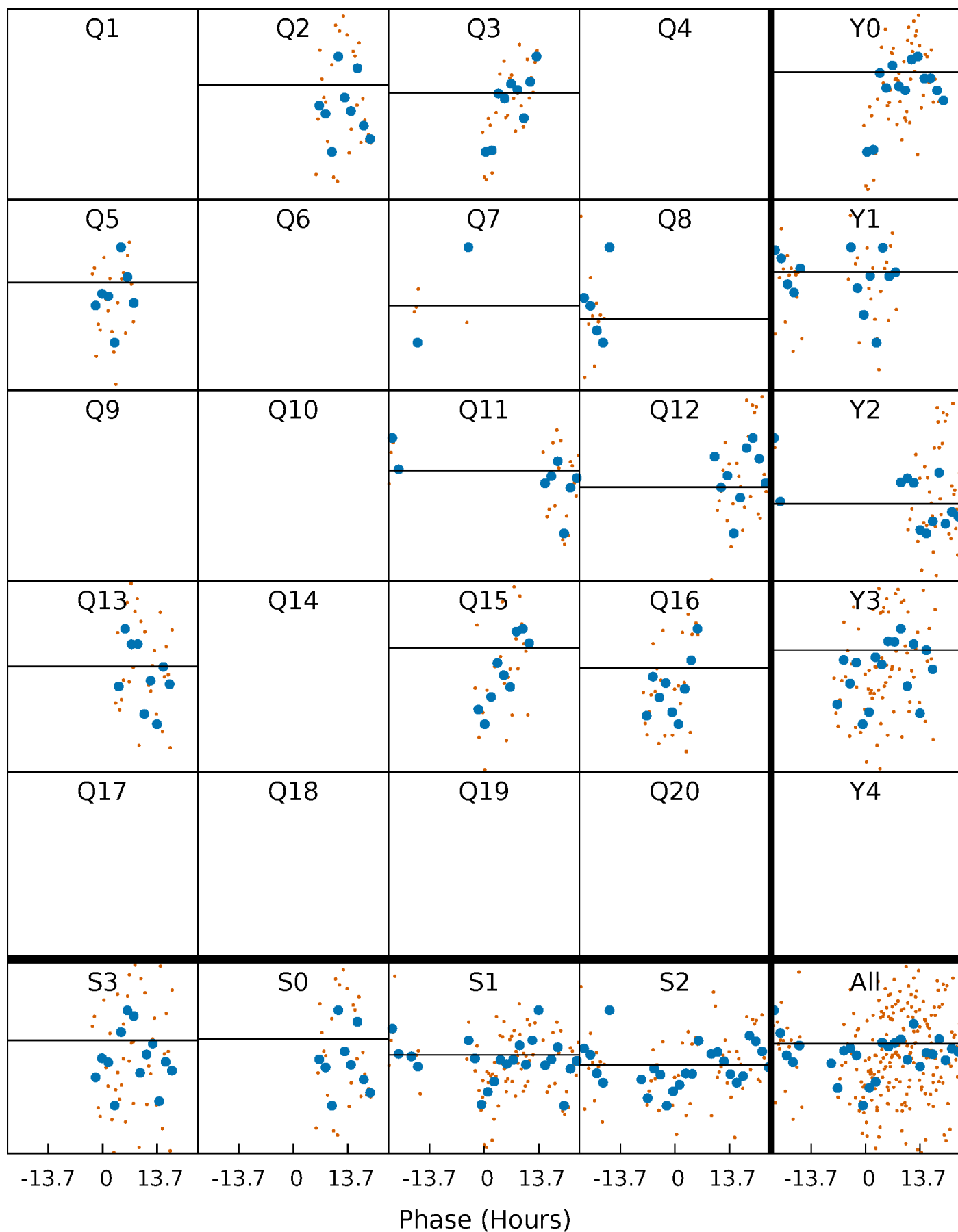
PDC Quarter-Phased Transit Curves

TCE 003967219-04 P=116.784607 Days $T_0=213.500653$ (BKJD)



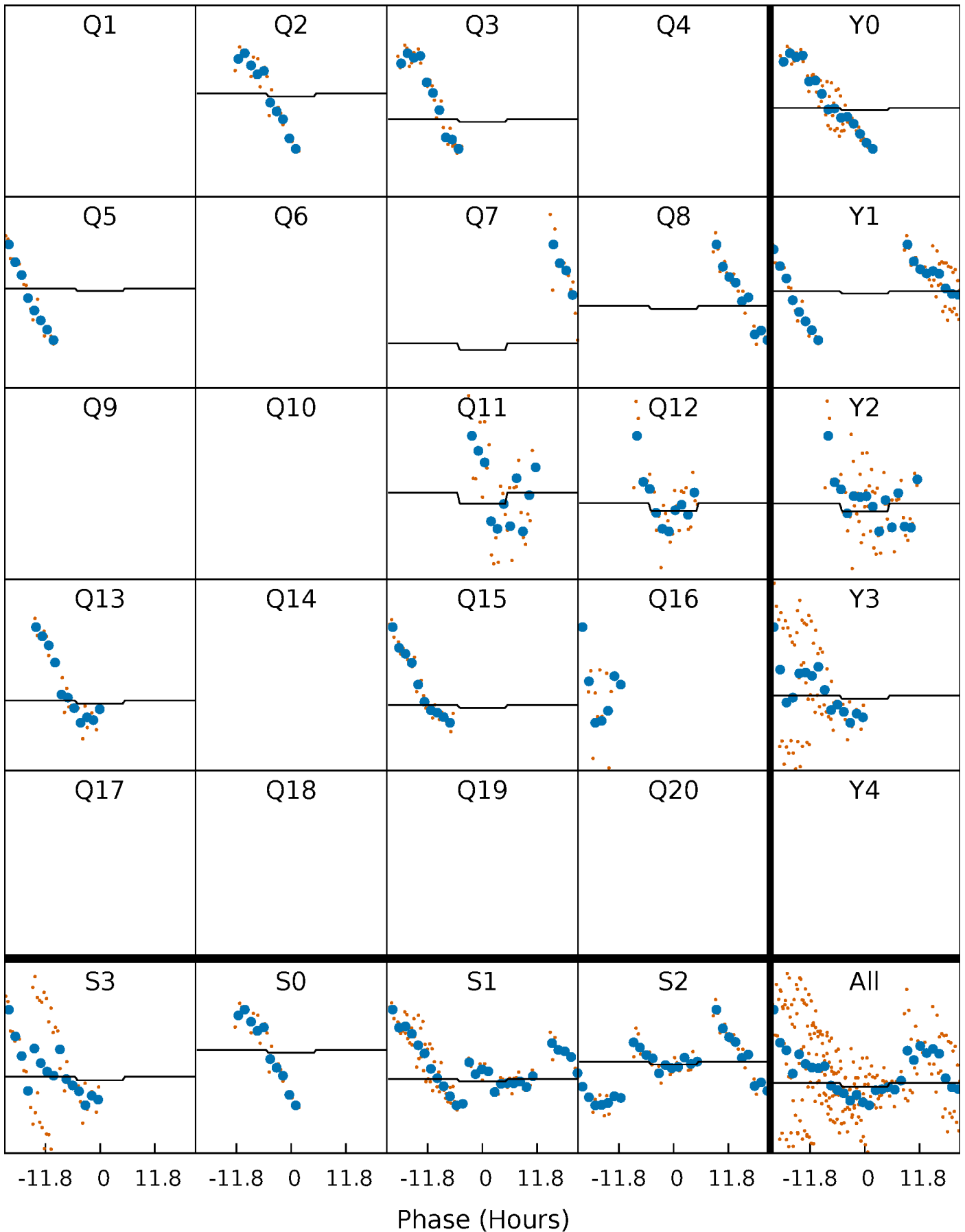
DV Quarter-Phased Transit Curves

TCE 003967219-04 P=116.784607 Days $T_0=213.500653$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

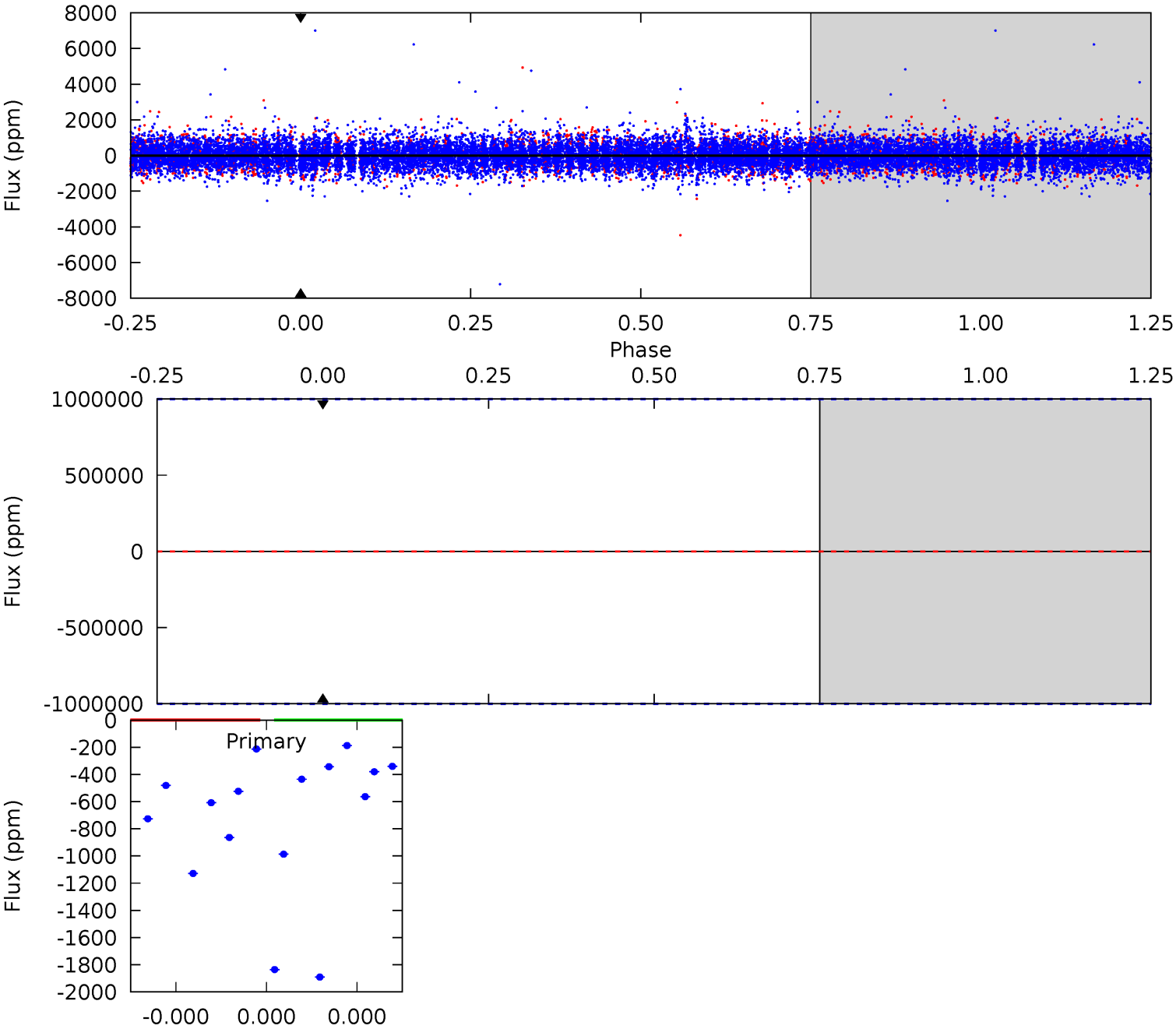
TCE 003967219-04 P=116.784607 Days $T_0=214.243425$ (BKJD)



DV Model-Shift Uniqueness Test

003967219-04, P = 116.784607 Days, E = 96.716046 Days

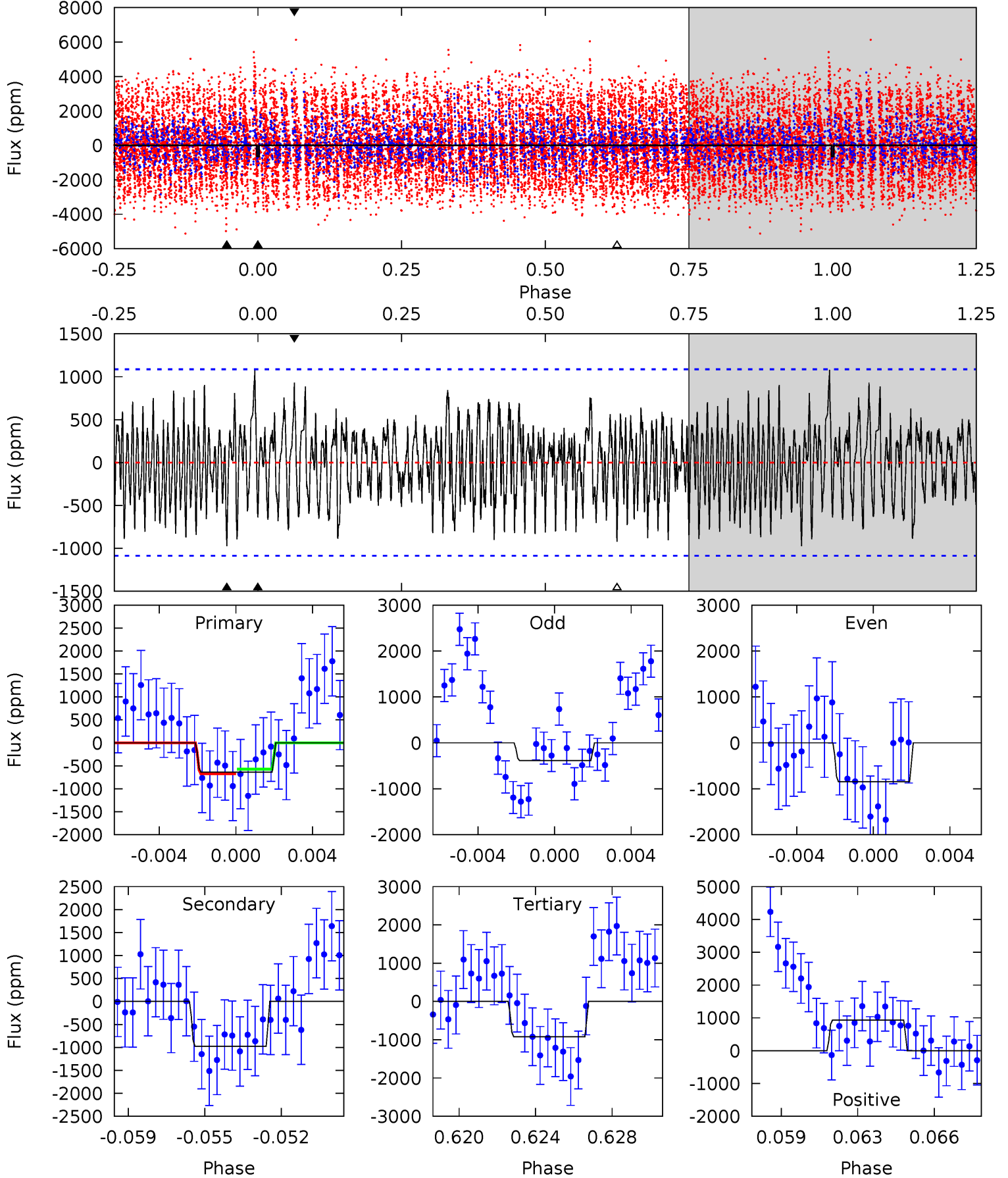
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003967219-04, P = 116.784607 Days, E = 97.458818 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.06	4.68	4.42	4.47	5.21	2.90	1.77	-1.37	-1.42	0.26	0.21	1.10	0.92	0.53	0.23



Stellar Parameters For KIC 003967219

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9748^{+344}_{-378}	$4.222^{+0.165}_{-0.135}$	$0.070^{+0.150}_{-0.600}$	$1.928^{+0.442}_{-0.540}$	$2.257^{+0.285}_{-0.530}$	$0.444^{+0.421}_{-0.186}$
	+4%/-4%	+4%/-3%	+214%/-857%	+23%/-28%	+13%/-23%	+95%/-42%
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 003967219-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$17.04^{+16.99}_{-11.41}$	1062^{+66}_{-74}	-4320^{+64289}_{-59102}	$-117.881^{+116538.713}_{-111975.546}$
Alt.	-975 ± 208	$15.70^{+16.64}_{-10.79}$	1067^{+68}_{-75}	5712^{+6302}_{-1398}	750^{+7508}_{-552}

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

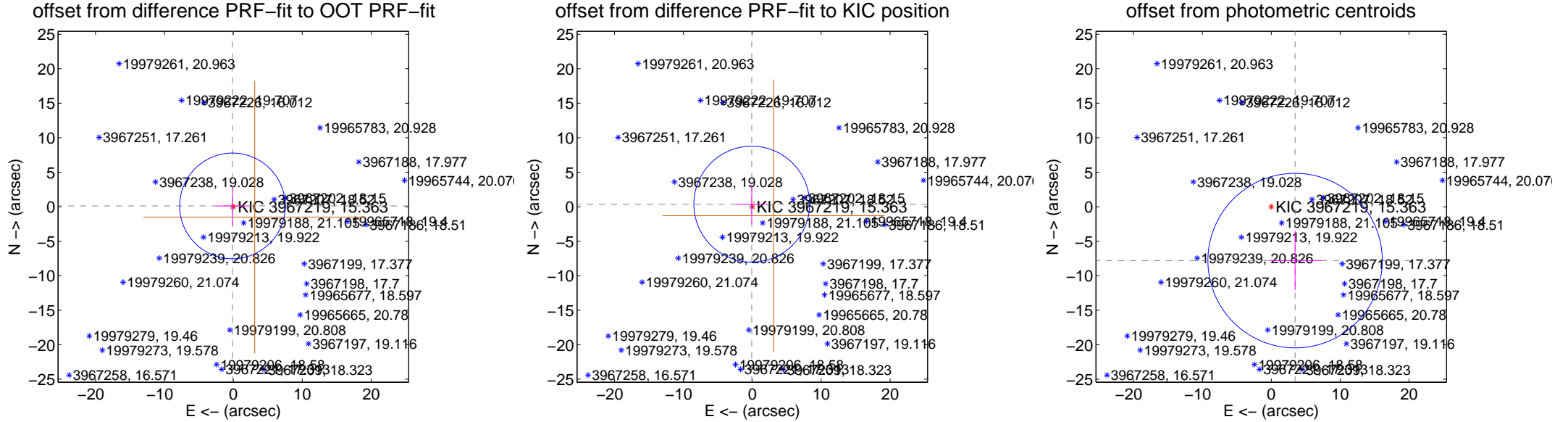
DV Centroid Data

Supplemental centroid analysis for 003967219-04. Kepler magnitude: 15.36. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.173 ± 2.554	0.07	0.128 ± 2.306	0.117 ± 2.822
PRF-fit source offset from KIC position	0.381 ± 2.800	0.14	0.083 ± 2.306	0.372 ± 2.822
photometric centroid source offset	8.54 ± 4.22	2.03	-3.46 ± 3.85	-7.81 ± 4.29



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

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

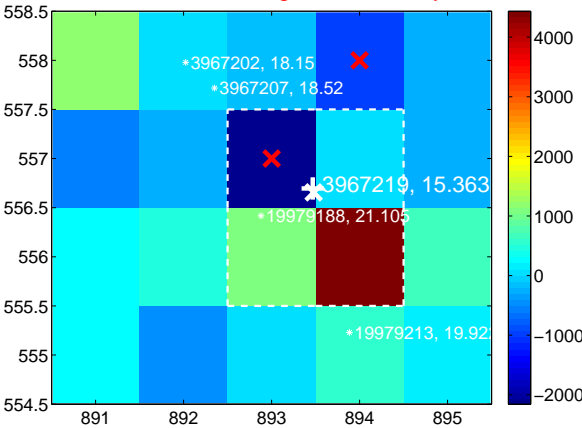
Q1 no difference image



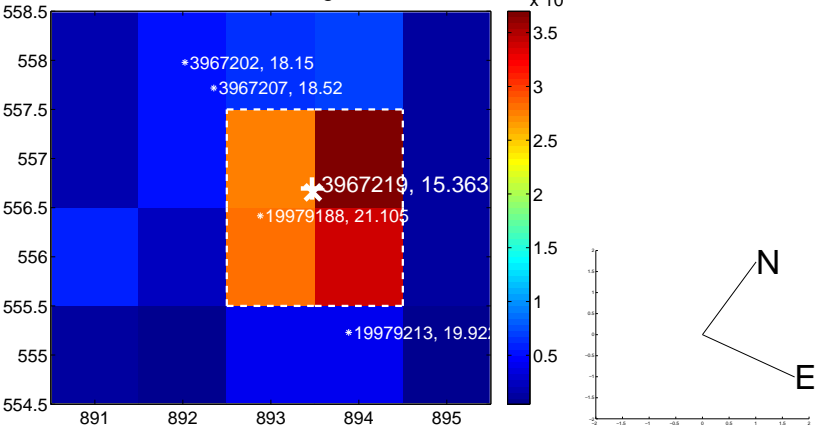
Q1 no OOT image



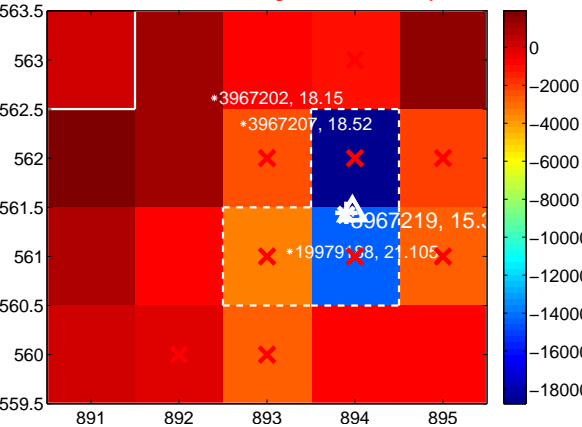
Q2 difference image. Poor Quality



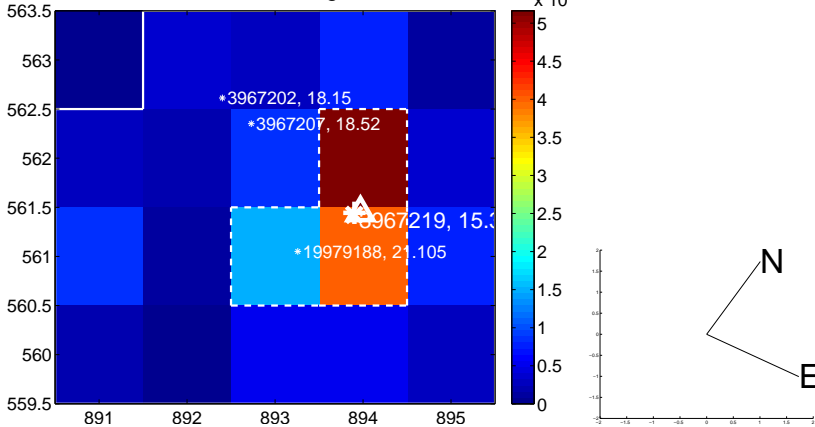
Q2 OOT image



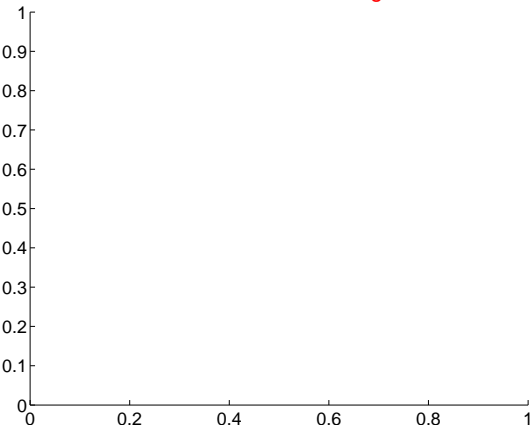
Q3 difference image. Poor Quality



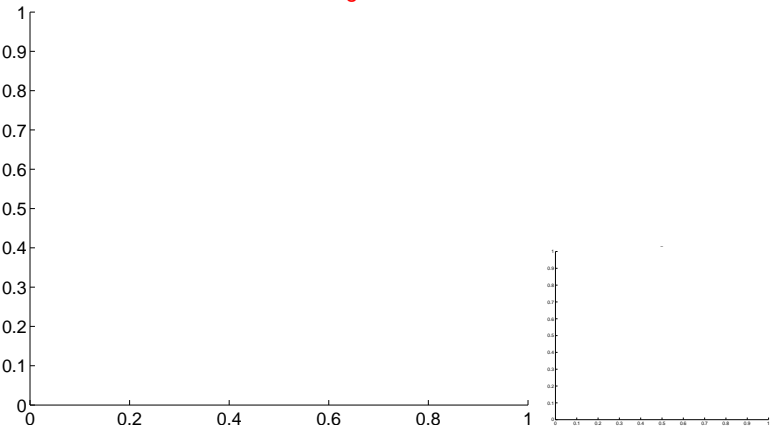
Q3 OOT image



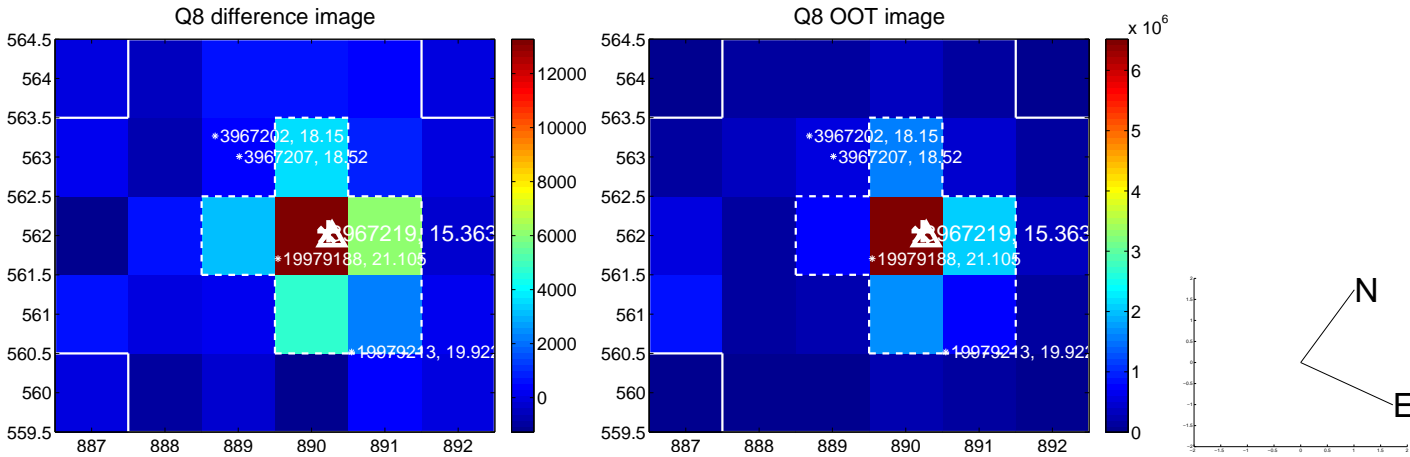
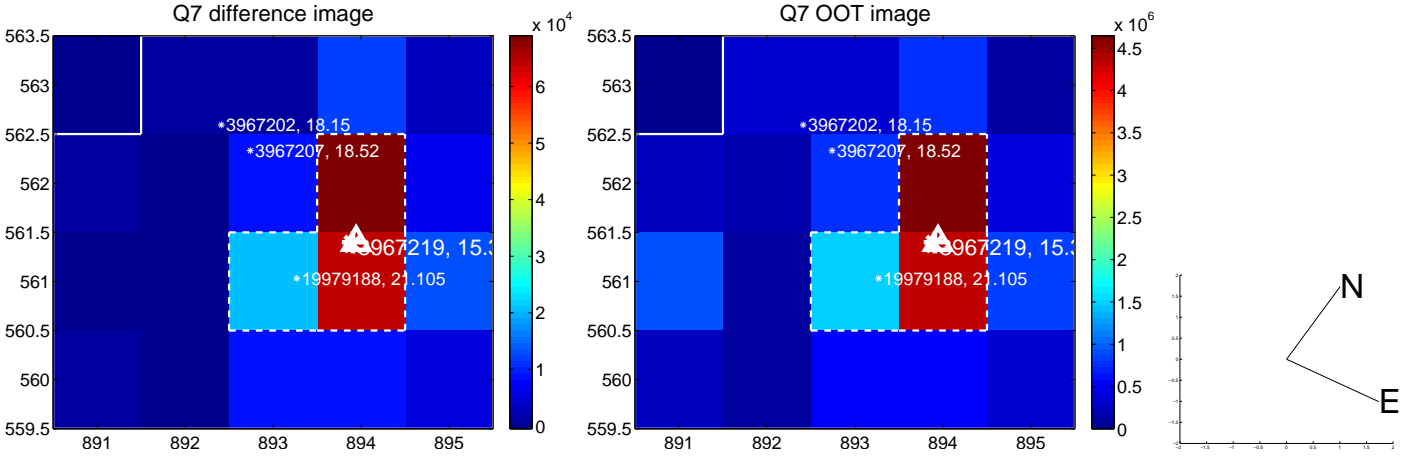
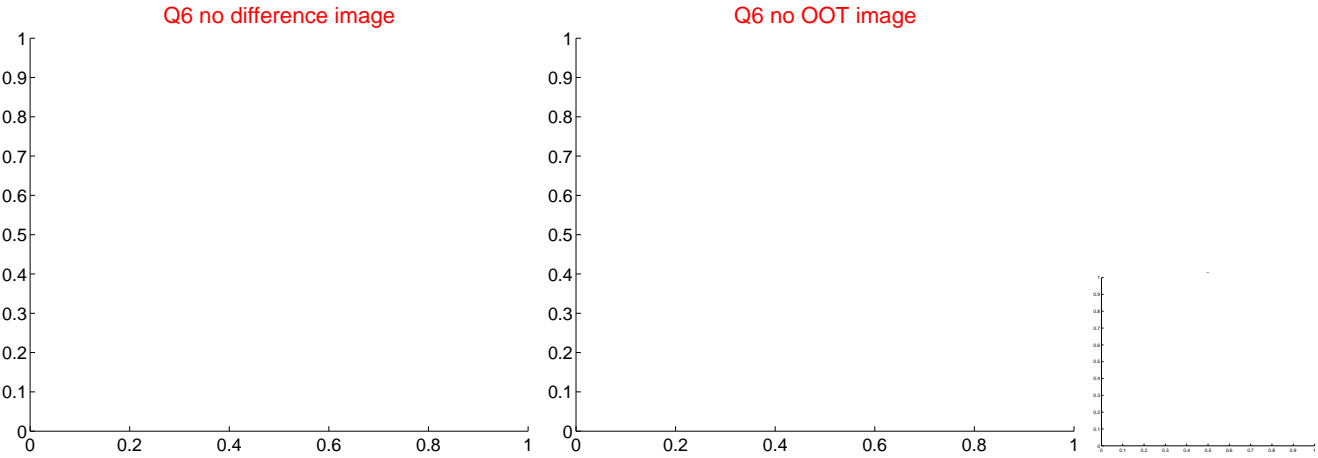
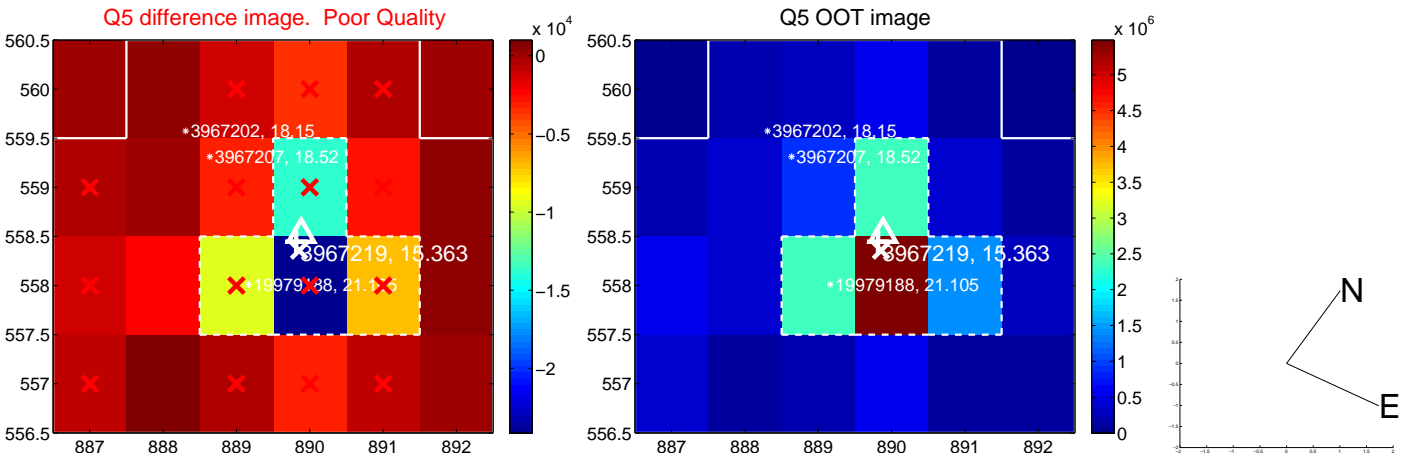
Q4 no difference image



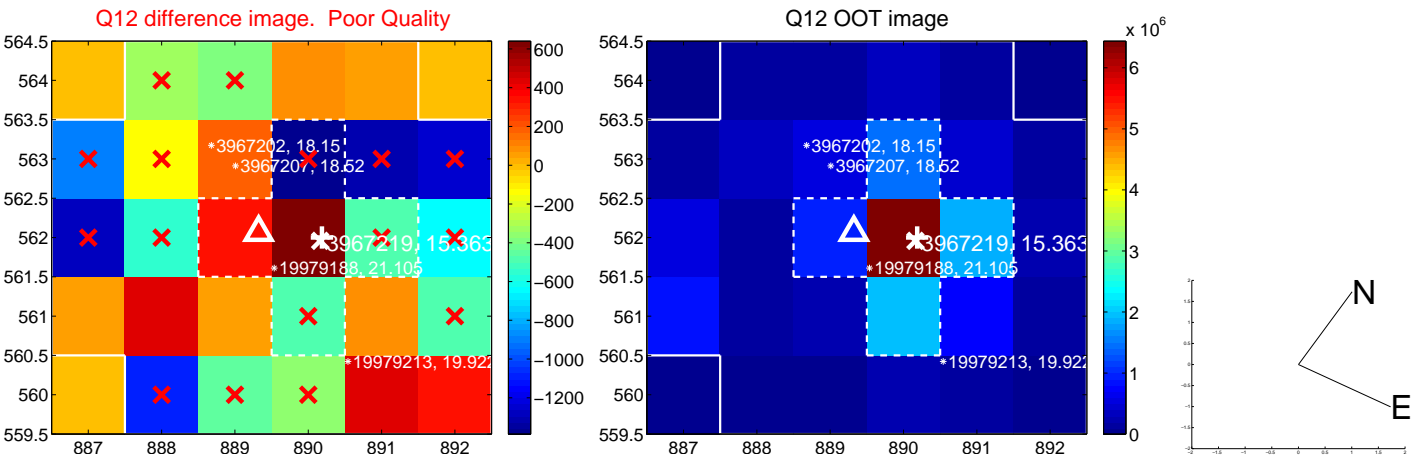
Q4 no OOT image



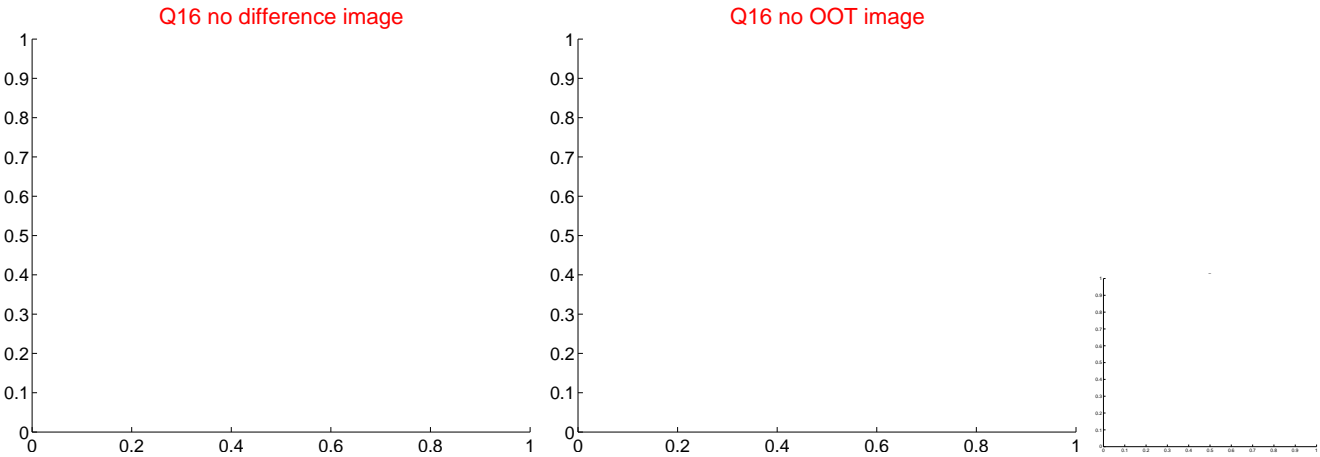
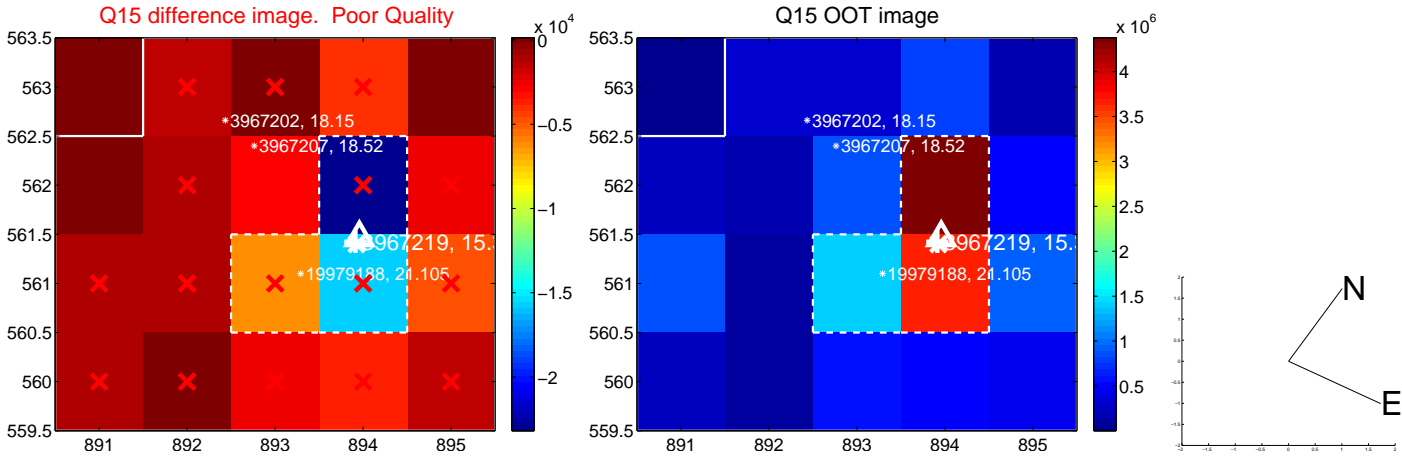
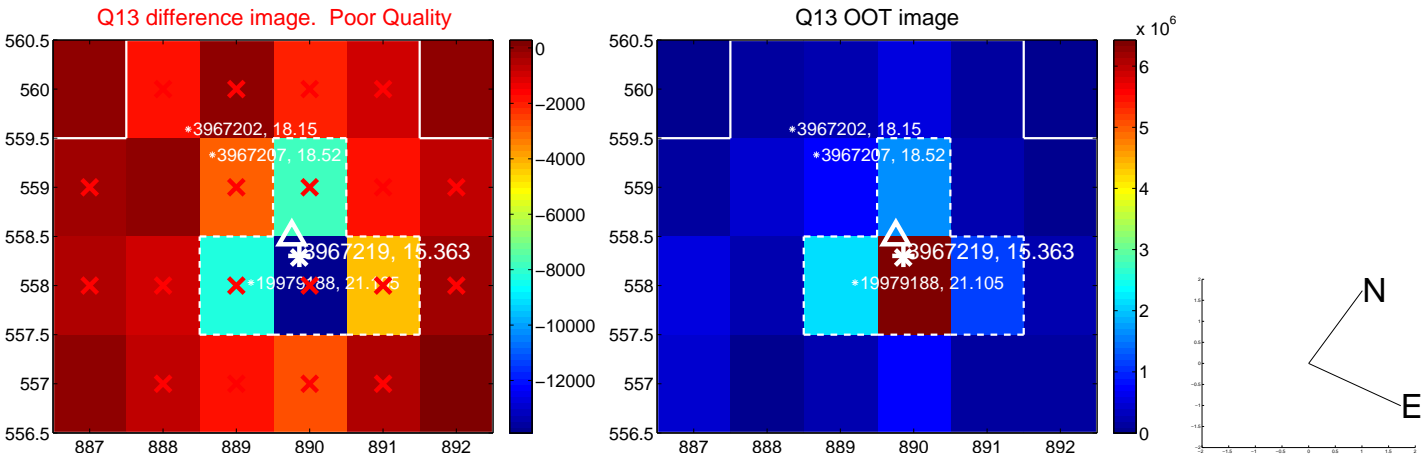
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



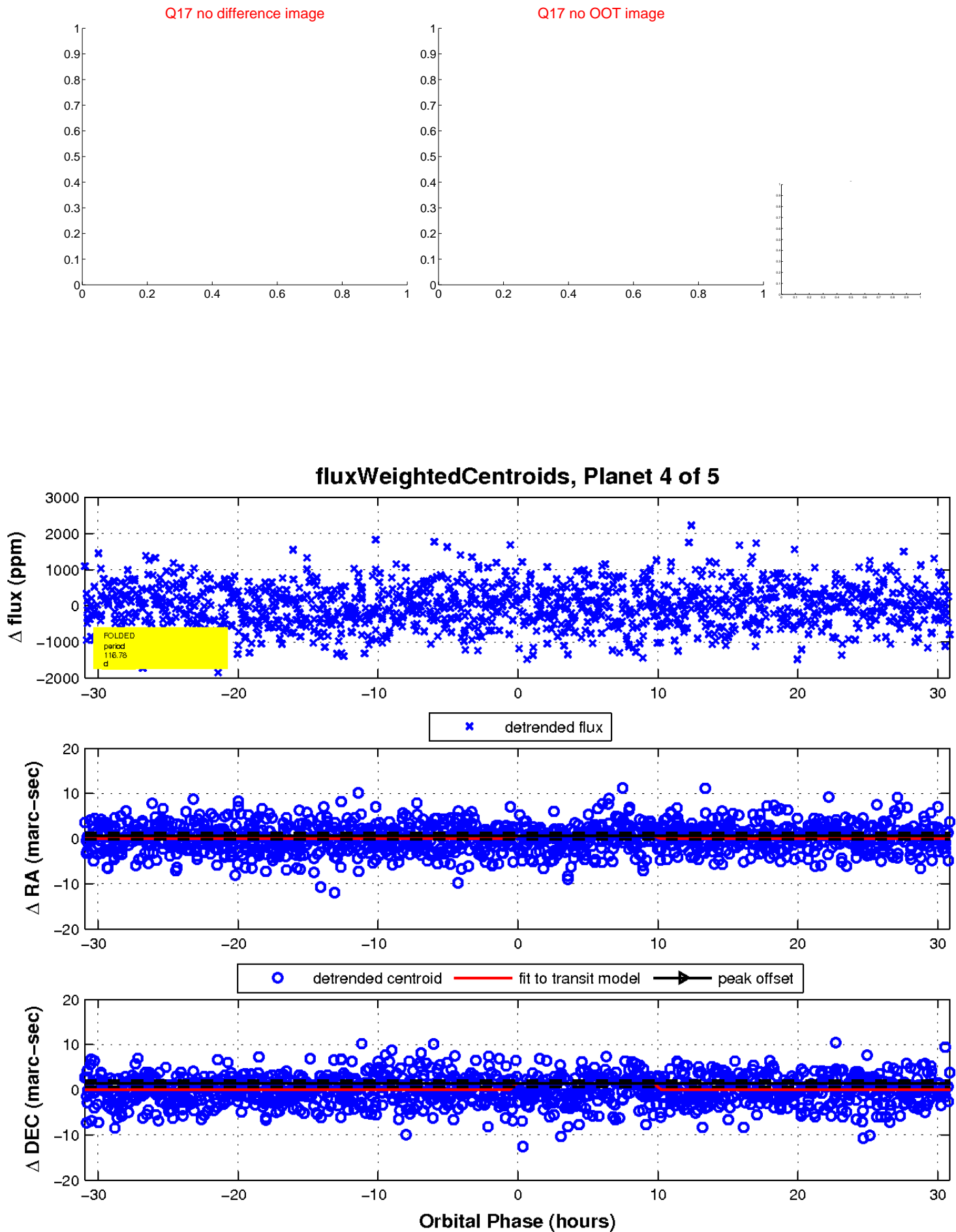
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



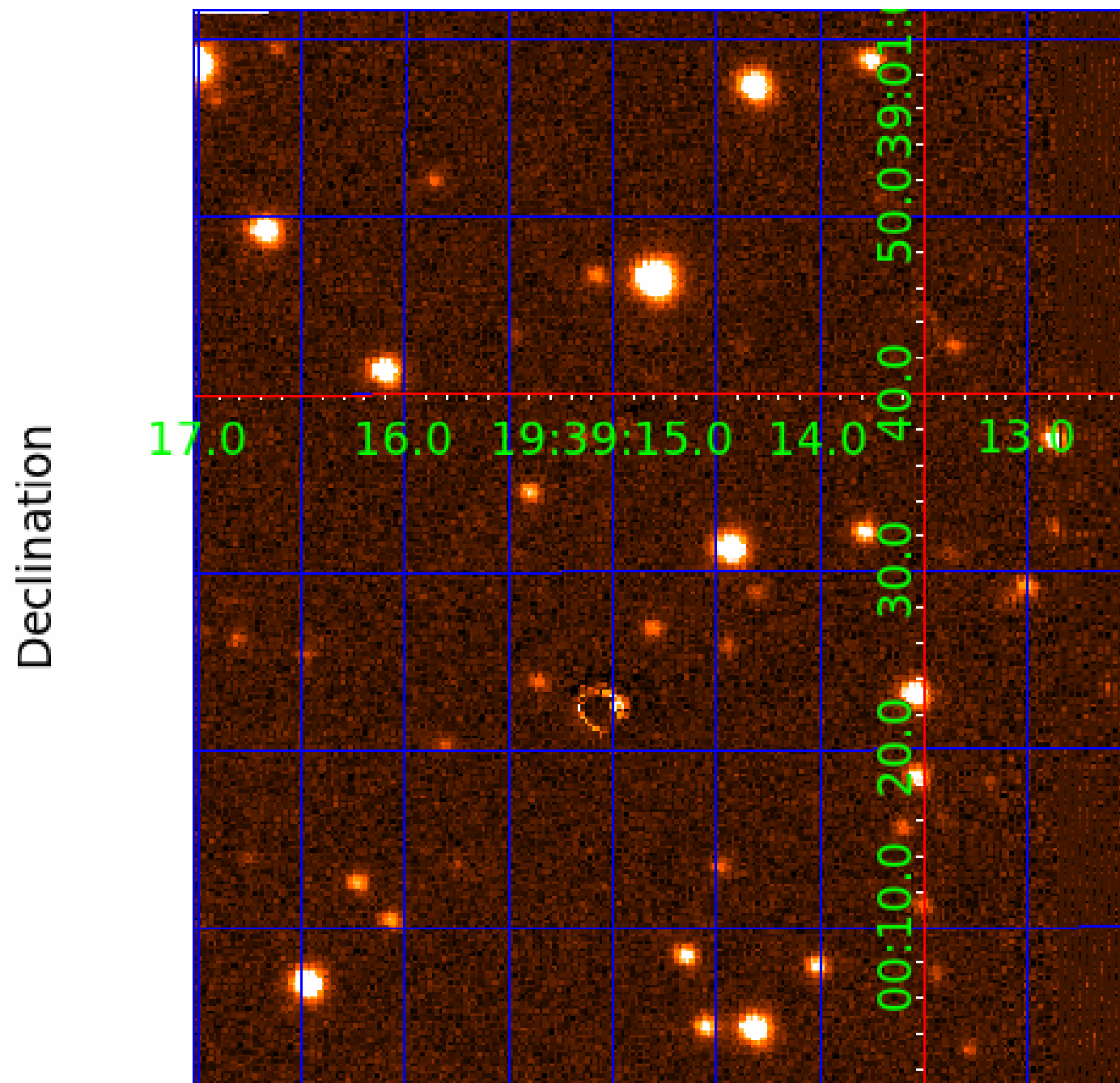
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 003967219

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})
003967219-01	OBS	No	2.080797	132.144804	321.2	4.824	19.6	22.5	1.93	9748	5.00	17152.27
003967219-02	OBS	No	2.081145	133.892952	104.7	11.695	7.9	7.5	1.93	9748	2.08	17148.44
003967219-03	OBS	No	116.751267	213.218814	332.7	3.586	11.7	2.2	1.93	9748	4.06	79.85
003967219-04	OBS	No	116.784607	213.500653	1351.8	12.000	11.9	-1.0	1.93	9748	7.26	79.82
003967219-05	OBS	No	63.410114	180.103749	796.3	2.891	8.2	8.5	1.93	9748	6.09	180.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003967219-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
003967219-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD
003967219-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—HALO_GHOST
003967219-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_NOFITS
003967219-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_POS_ALT—HALO_GHOST

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

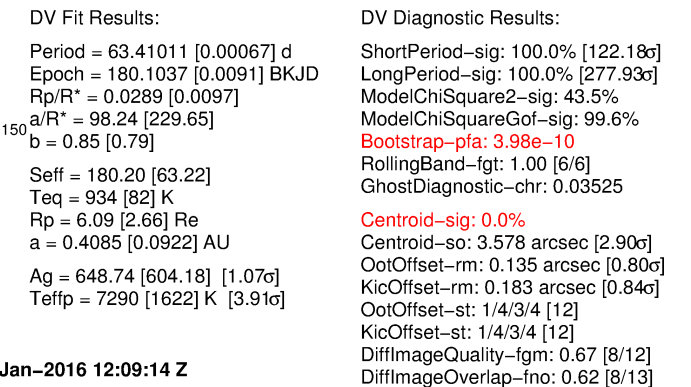
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

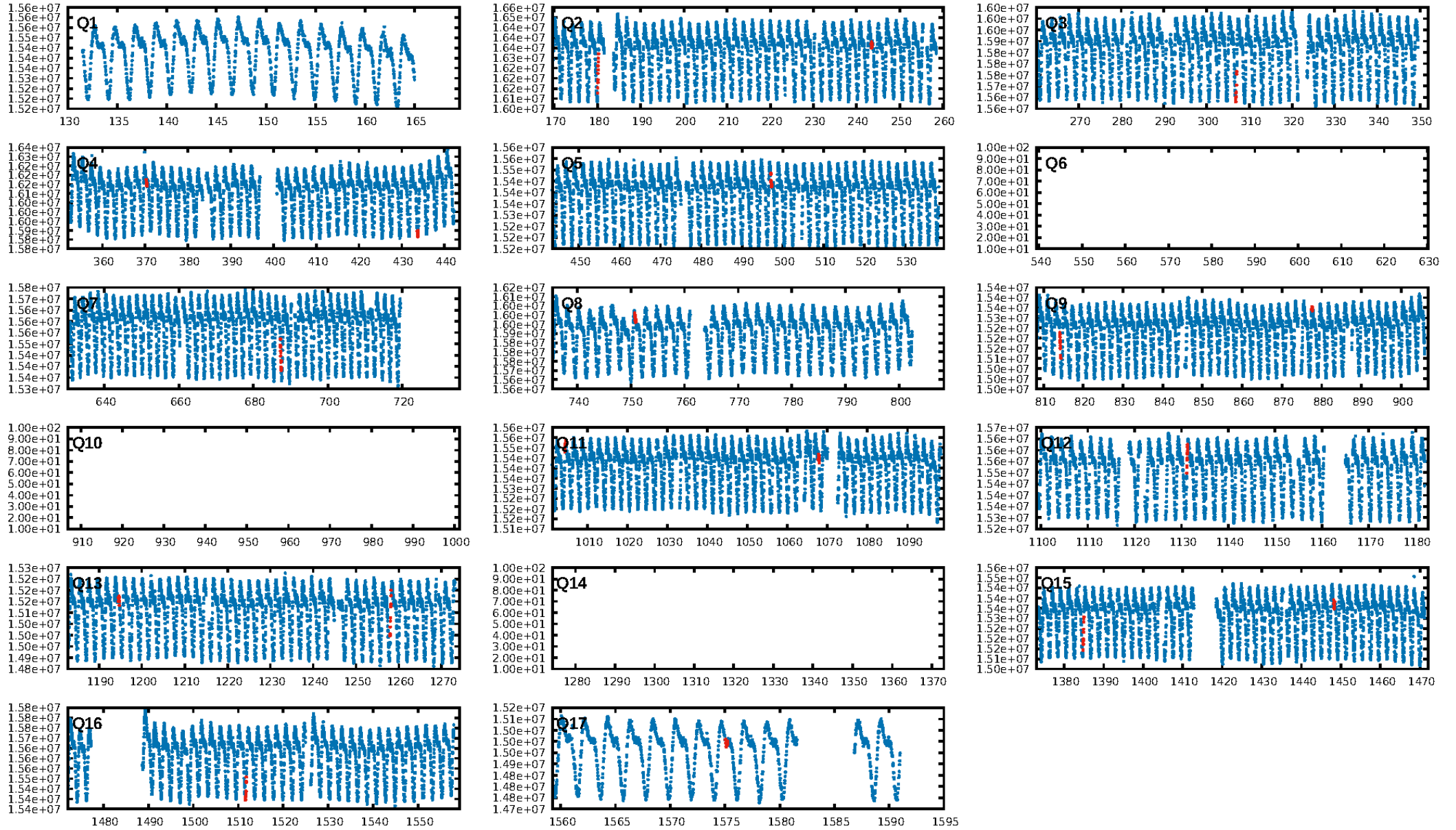
Ephemeris Match Information For 003967219-05

No Significant Match Found

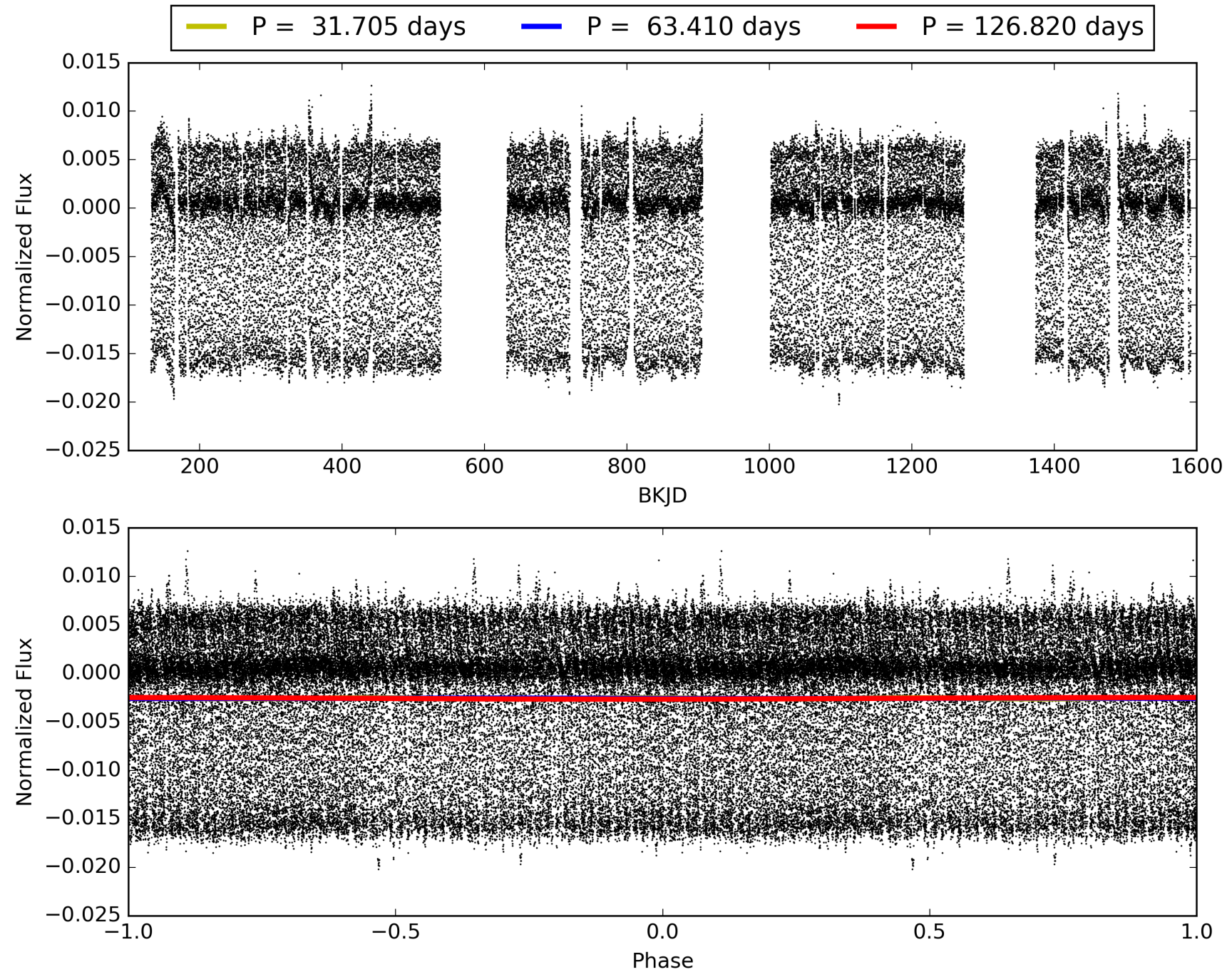
KIC: 3967219 Candidate: 5 of 5 Period: 63.410 d



TCE 003967219-05, PDC Light Curves

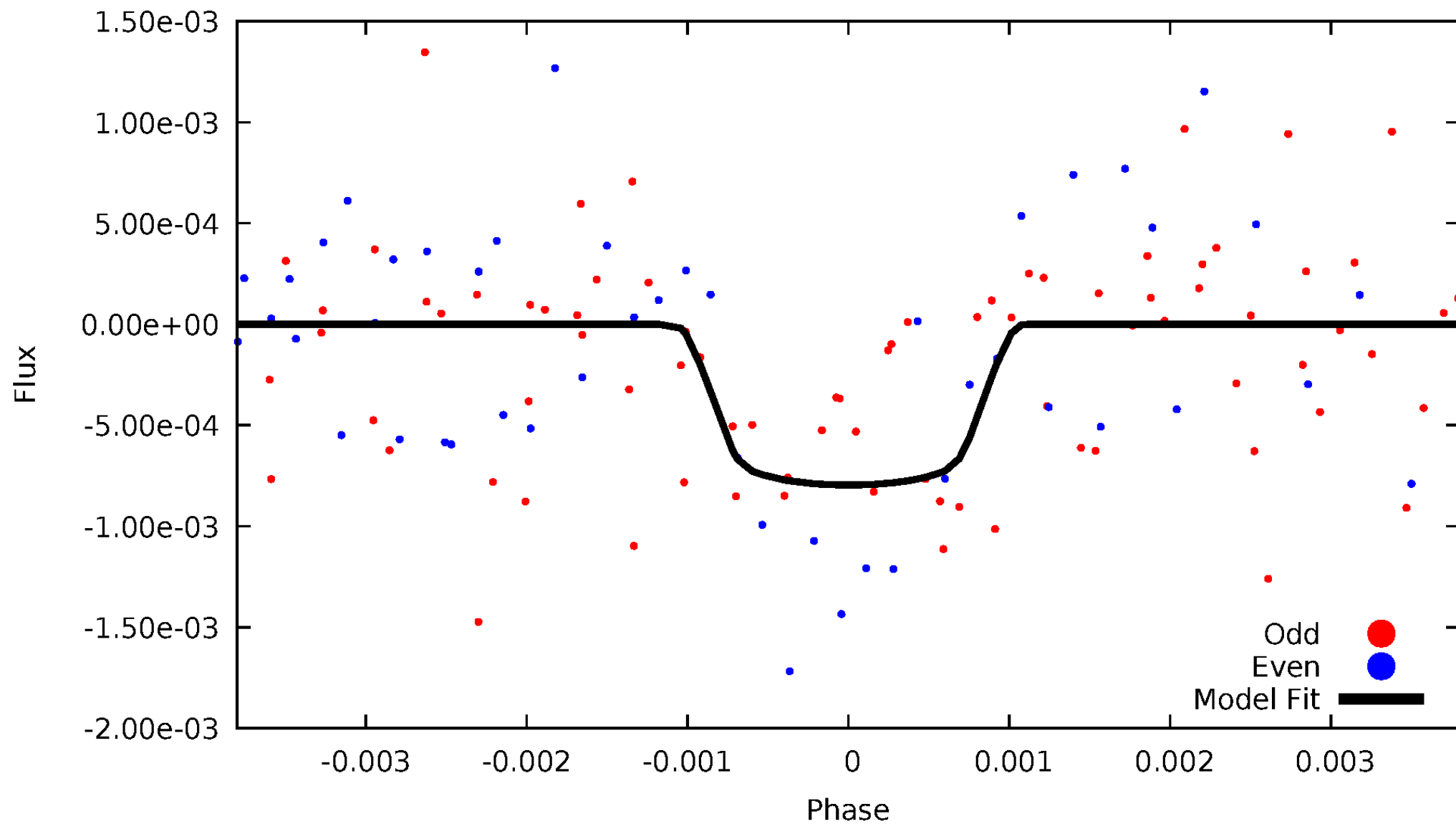


TCE 003967219-05



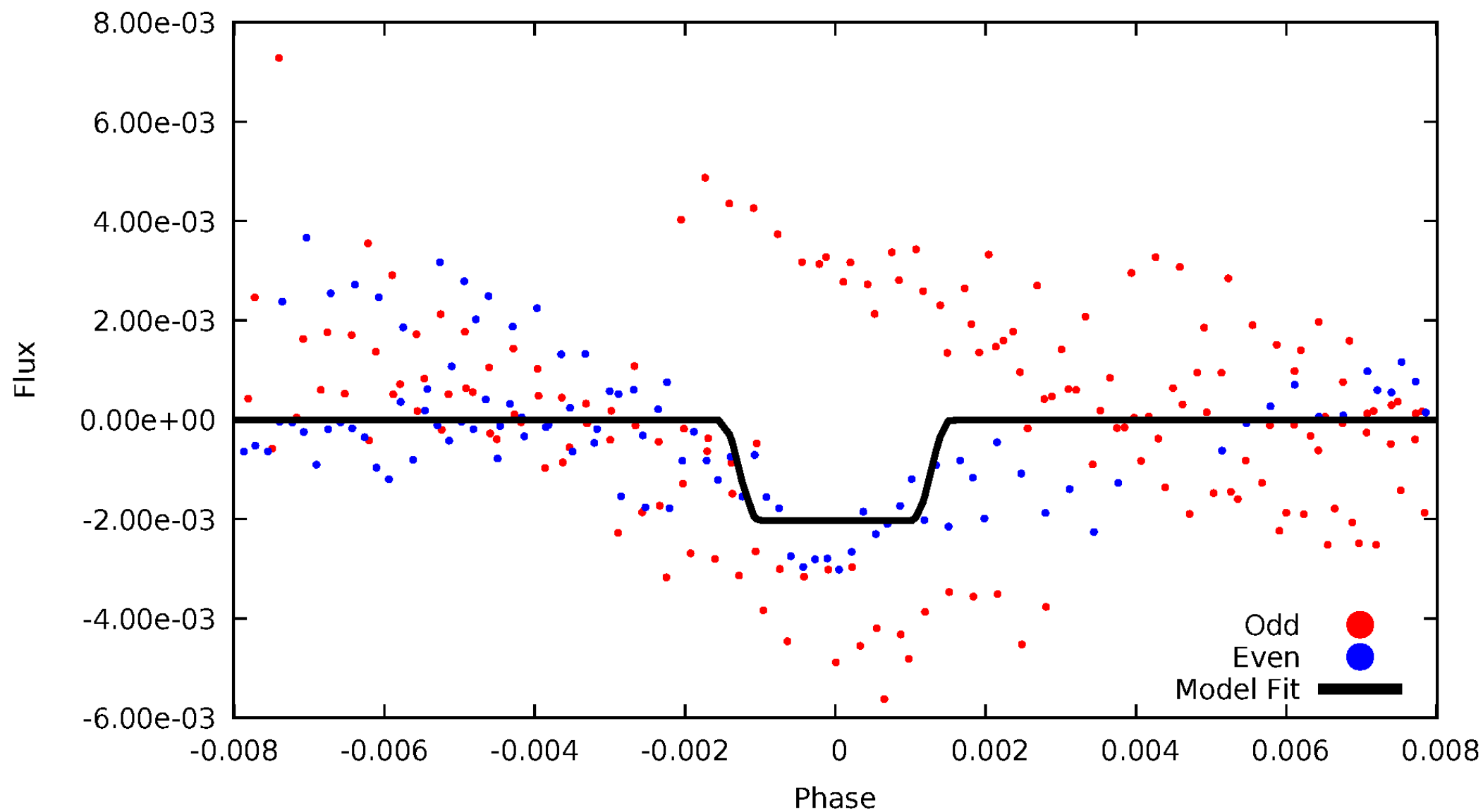
DV Odd/Even

TCE 003967219-05



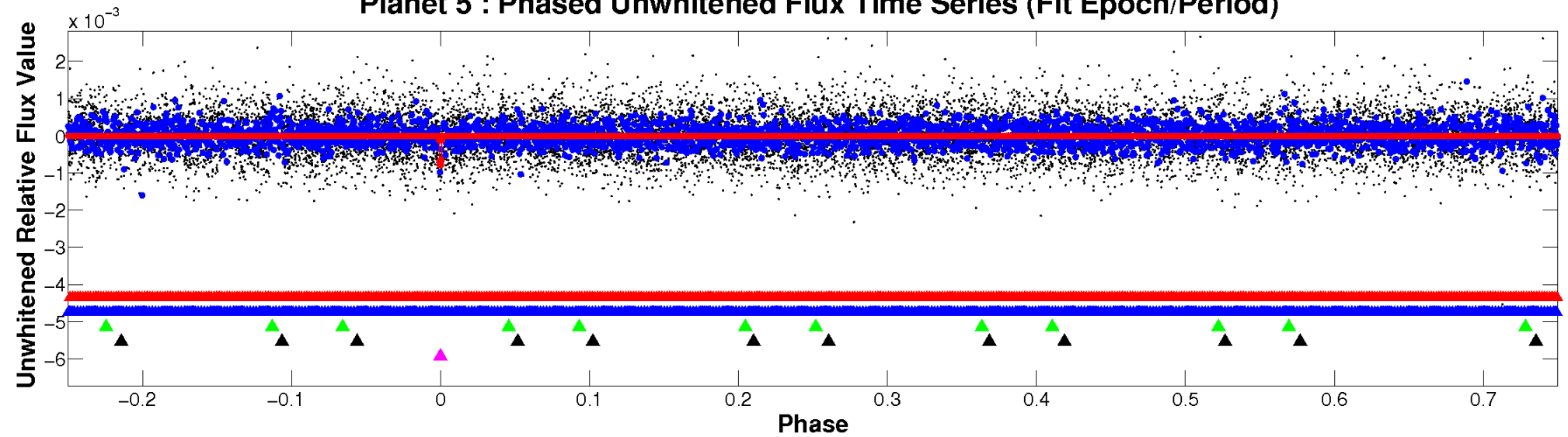
ALT Odd/Even

TCE 003967219-05

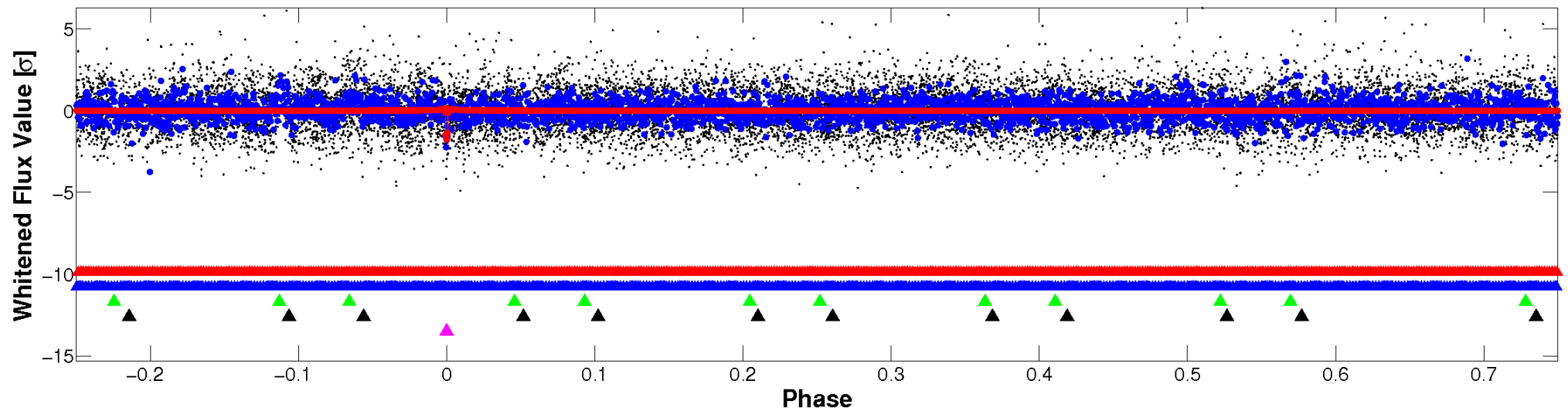


Non-Whitened Vs. Whitened Light Curve

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

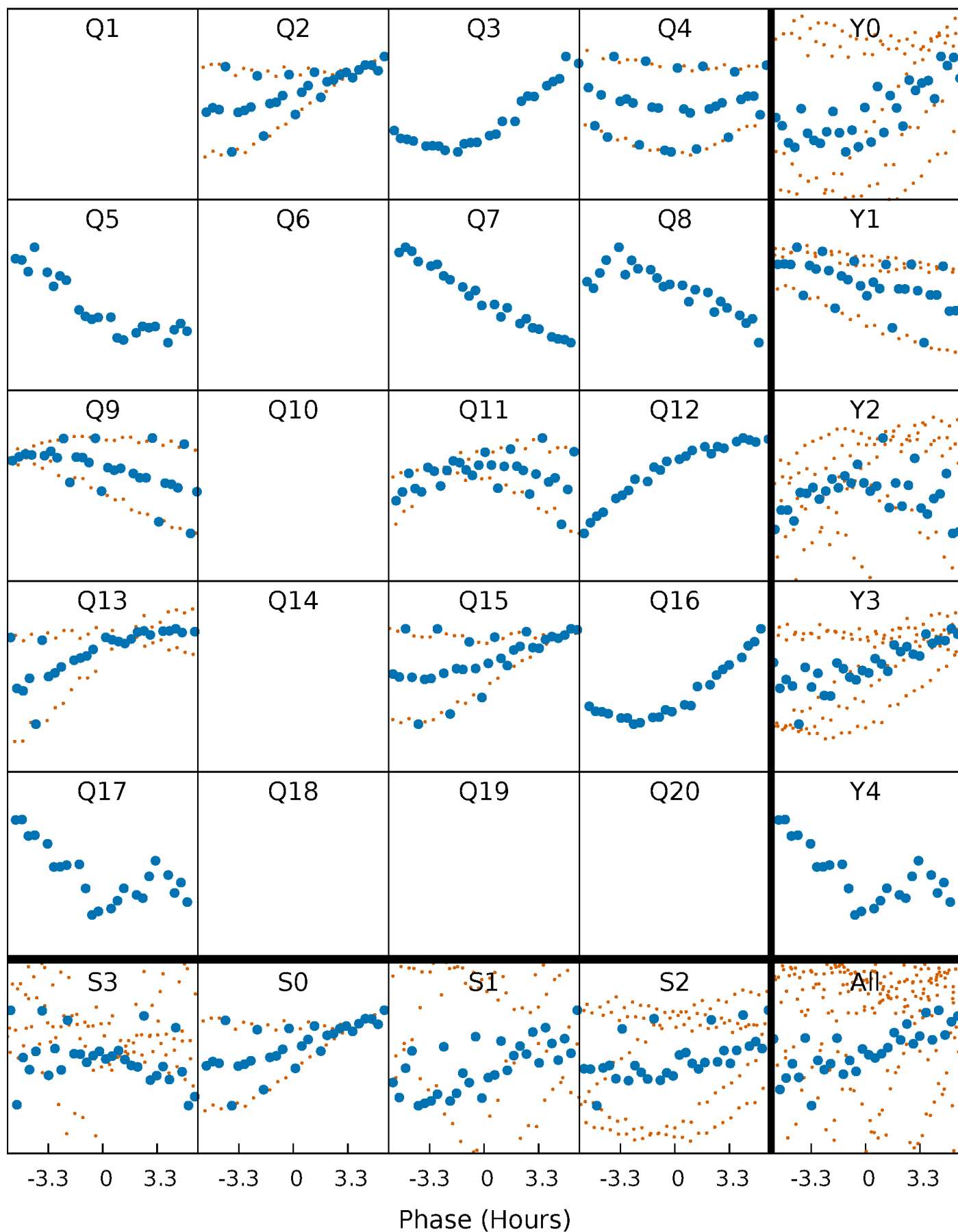


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



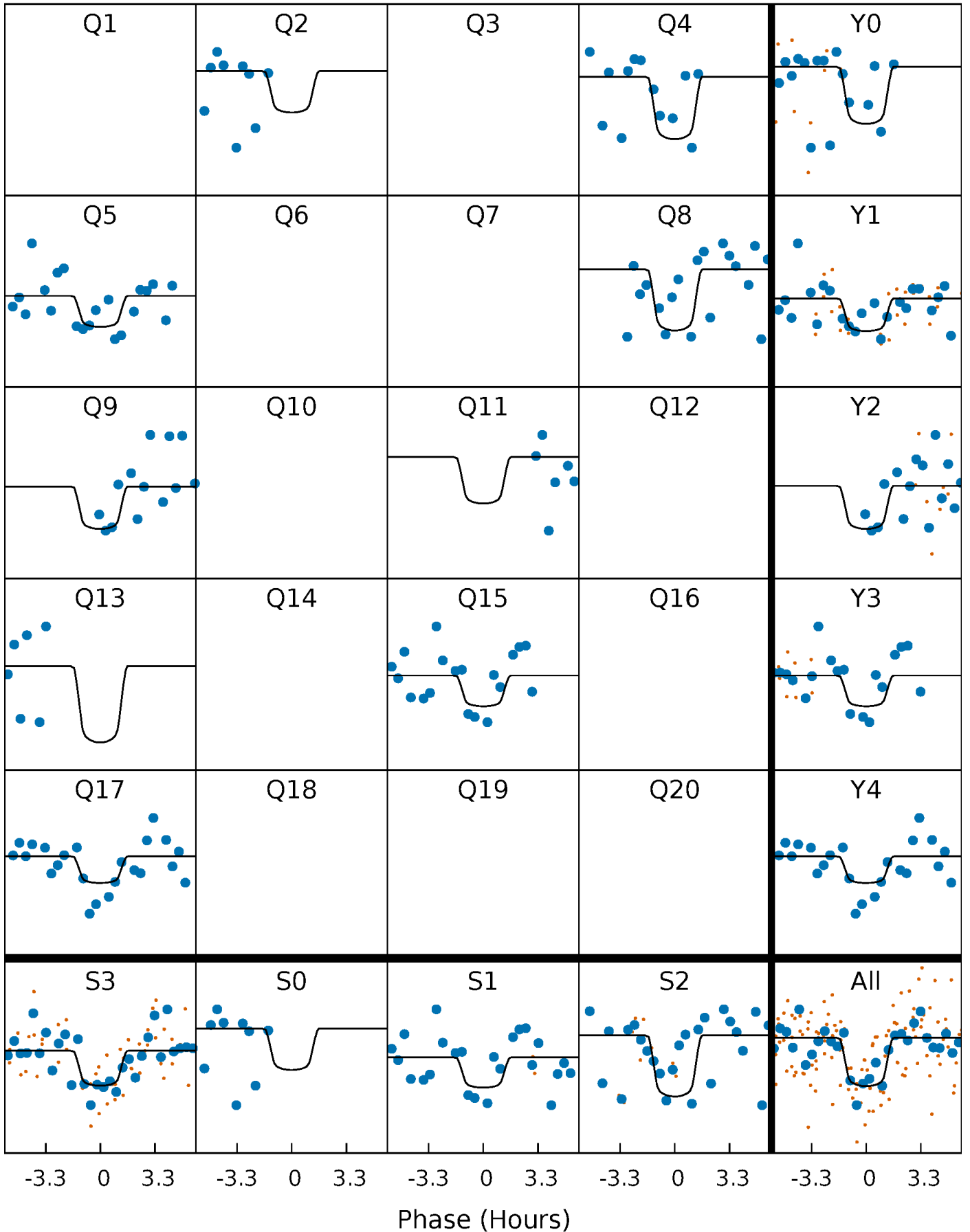
PDC Quarter-Phased Transit Curves

TCE 003967219-05 P= 63.410114 Days $T_0=180.103749$ (BKJD)



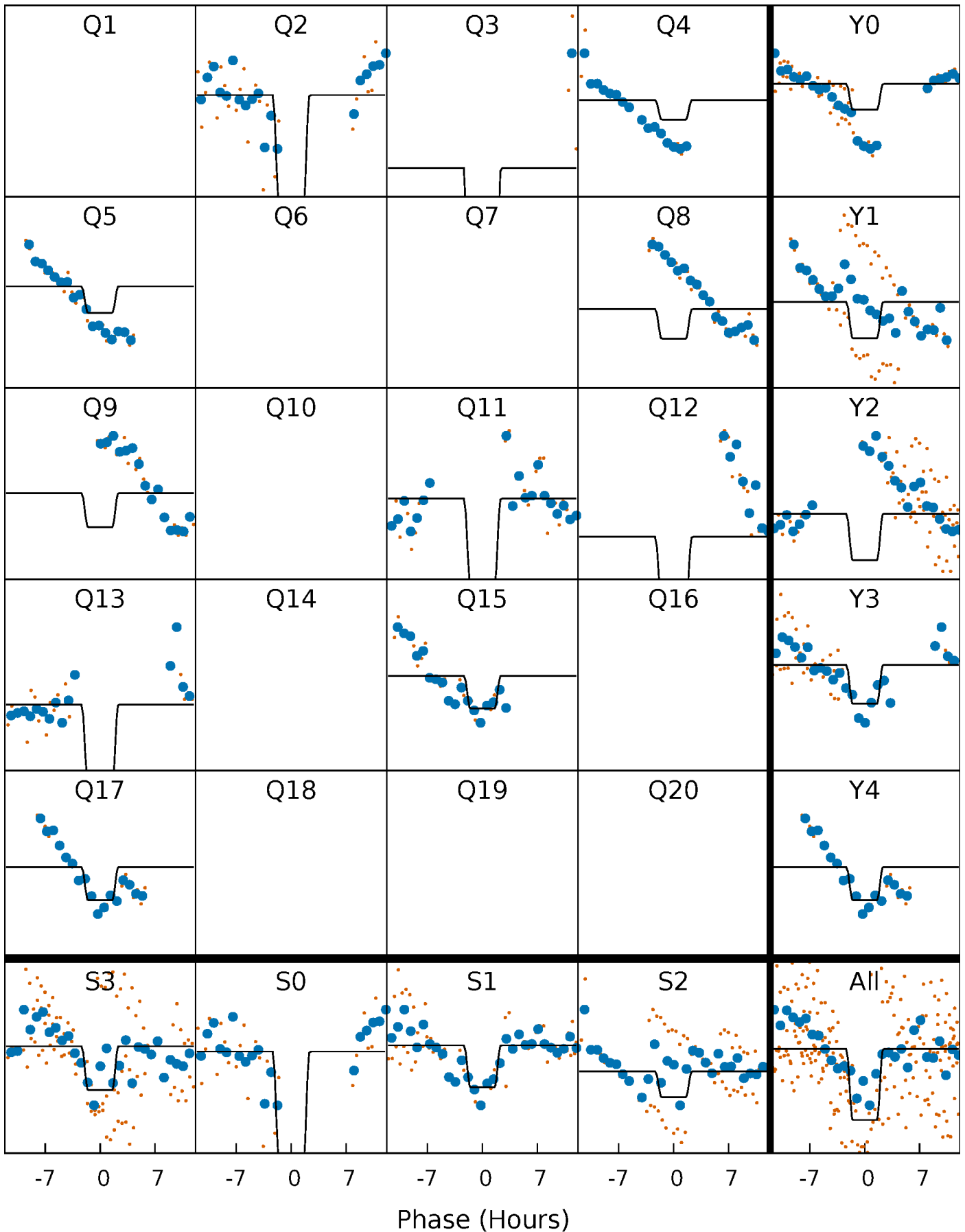
DV Quarter-Phased Transit Curves

TCE 003967219-05 P= 63.410114 Days $T_0=180.103749$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

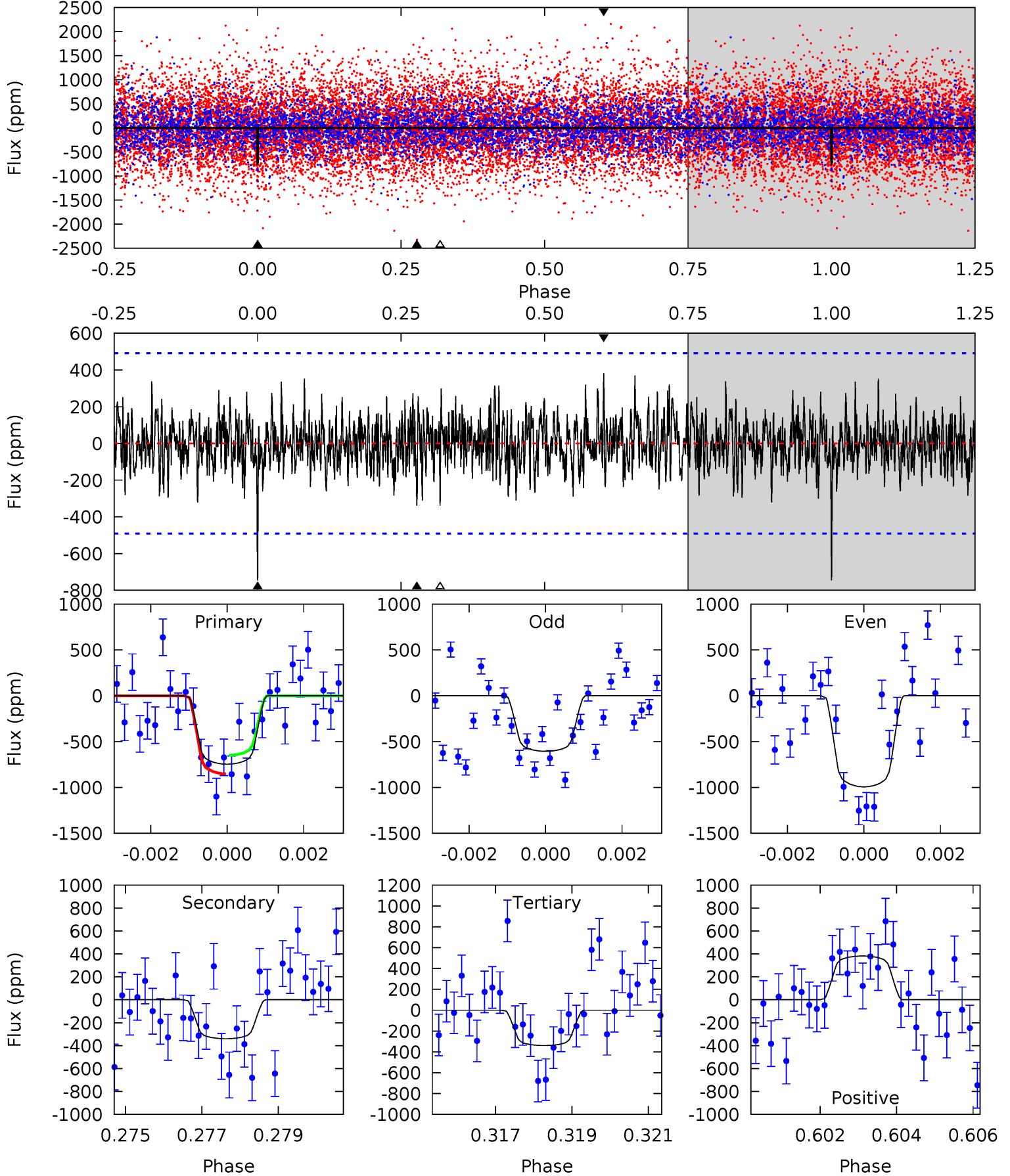
TCE 003967219-05 $P = 63.410188$ Days $T_0 = 180.105989$ (BKJD)



DV Model-Shift Uniqueness Test

003967219-05, $P = 63.410114$ Days, $E = 116.693635$ Days

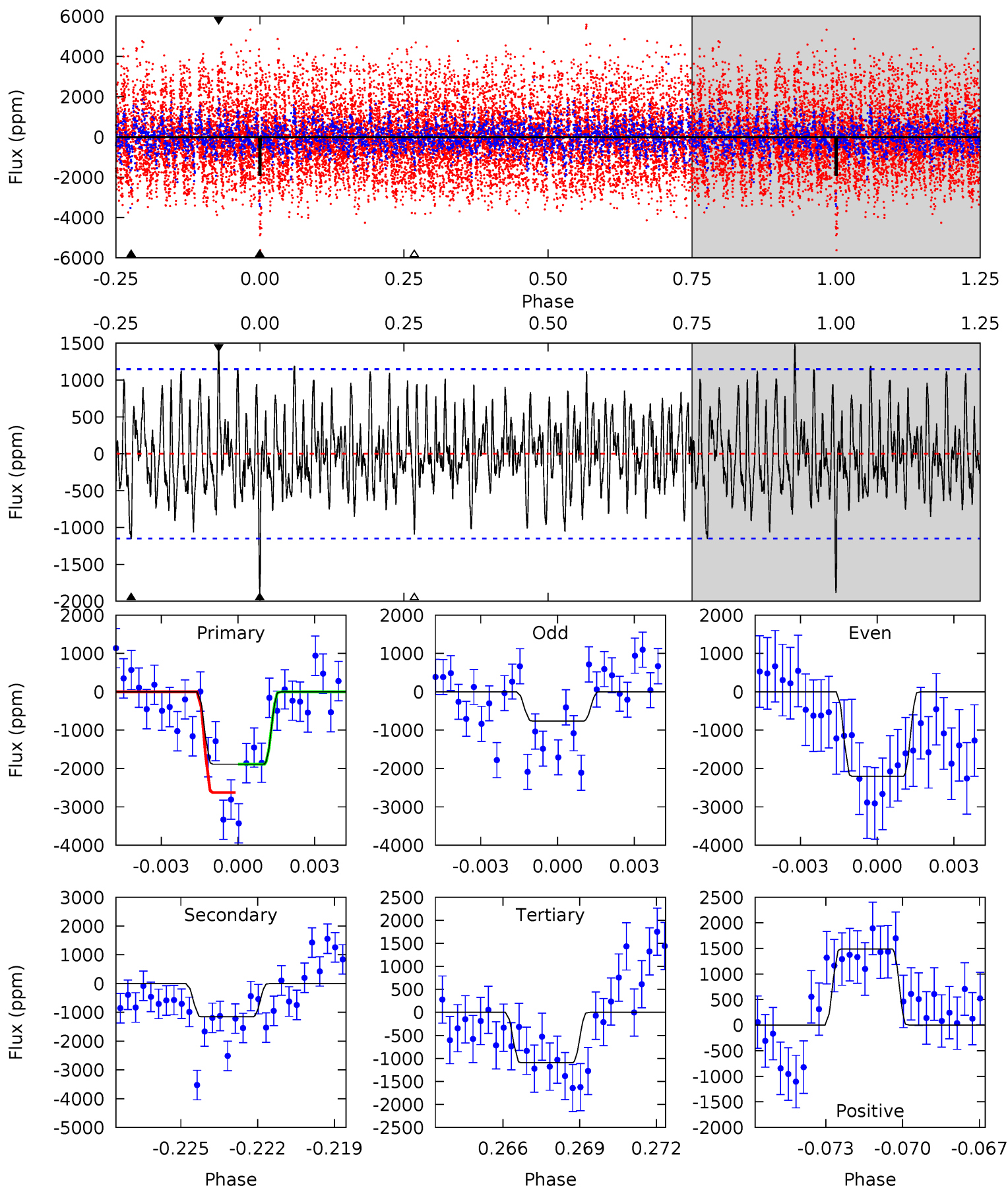
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.08	3.68	3.68	4.13	5.32	3.08	1.20	4.40	3.95	0.00	-0.45	2.01	1.08	0.34	1.10



Alt Model-Shift Uniqueness Test

003967219-05, P = 63.410188 Days, E = 116.695801 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.64	5.29	5.01	6.82	5.26	2.98	1.95	3.63	1.82	0.27	-1.53	3.39	0.45	0.44	1.63



Stellar Parameters For KIC 003967219

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9748^{+344}_{-378}	$4.222^{+0.165}_{-0.135}$	$0.070^{+0.150}_{-0.600}$	$1.928^{+0.442}_{-0.540}$	$2.257^{+0.285}_{-0.530}$	$0.444^{+0.421}_{-0.186}$
	+4%/-4%	+4%/-3%	+214%/-857%	+23%/-28%	+13%/-23%	+95%/-42%
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 003967219-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-340 ± 92	$6.03^{+2.21}_{-2.19}$	1303^{+92}_{-91}	7258^{+2294}_{-1198}	840^{+1220}_{-422}
Alt.	-1154 ± 218	$9.22^{+2.46}_{-2.21}$	1300^{+88}_{-90}	8054^{+1477}_{-984}	1198^{+908}_{-456}

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 $A_{obs} \gg 1.0$

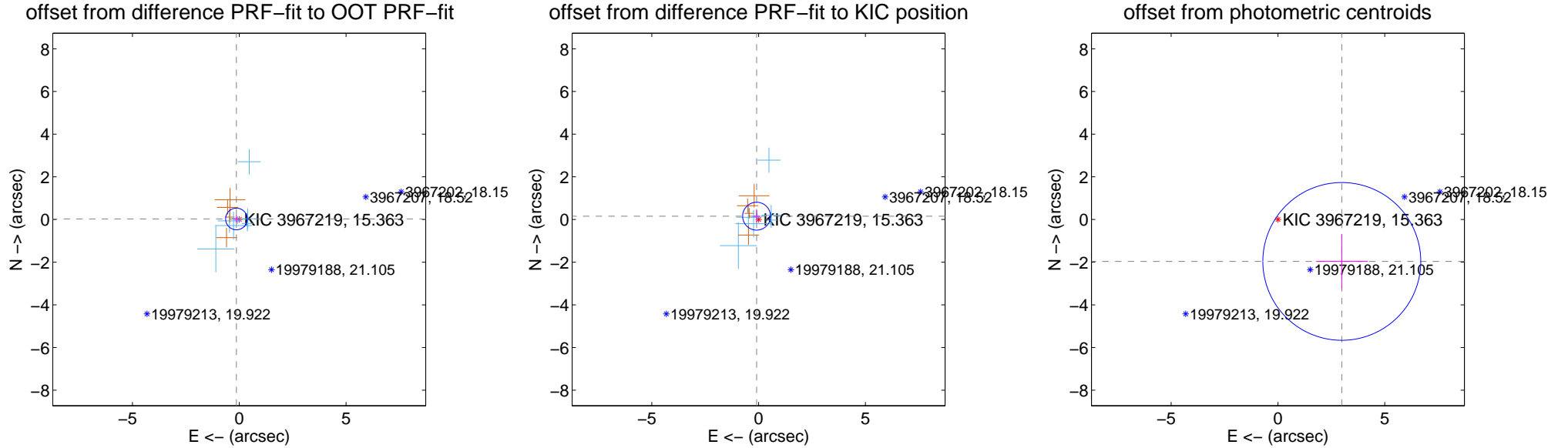
DV Centroid Data

Supplemental centroid analysis for 003967219-05. Kepler magnitude: 15.36. Transit SNR 8.46

There are 8 quarters with good PRF difference image offsets

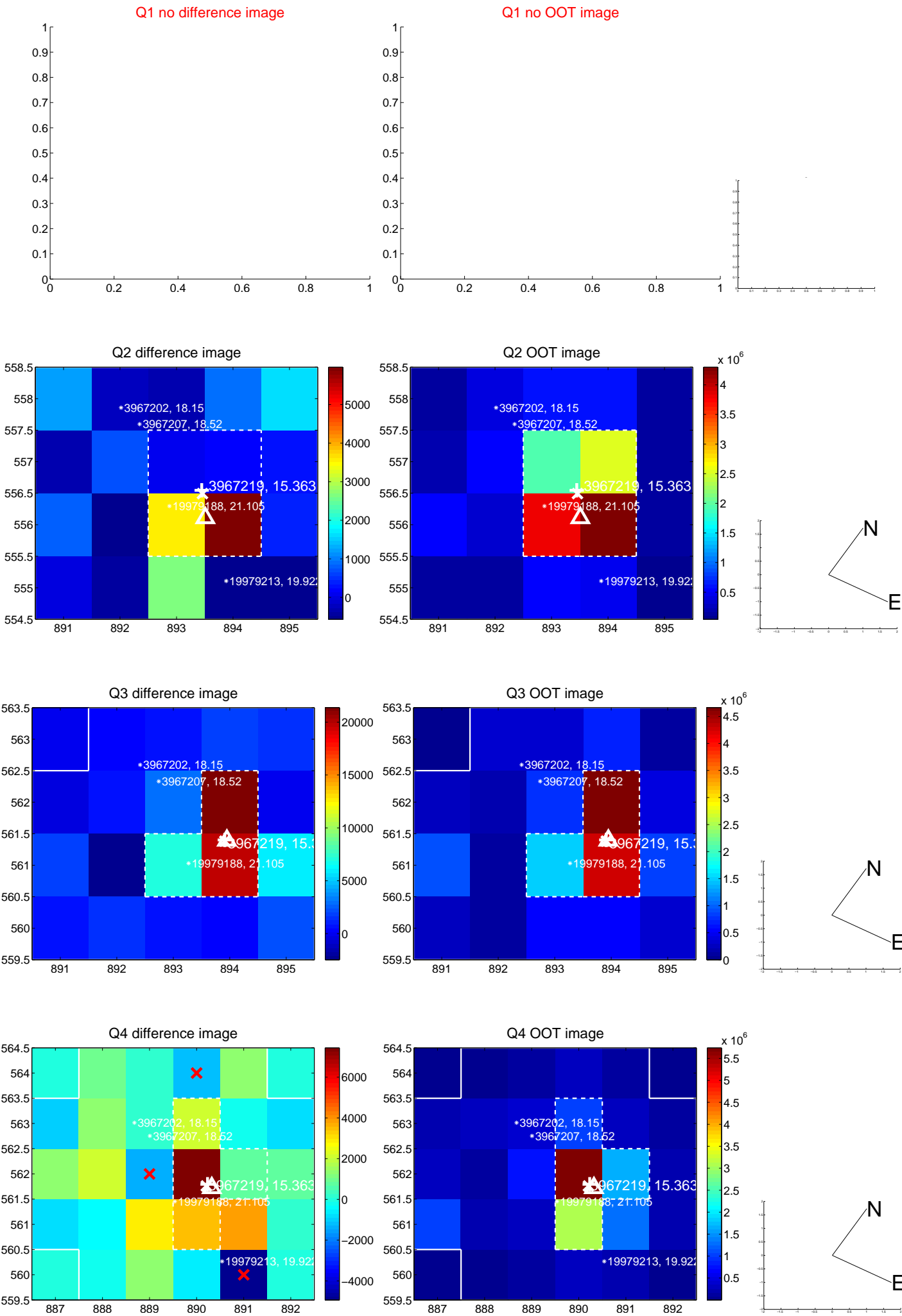
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.135 ± 0.169	0.80	0.133 ± 0.169	0.026 ± 0.167
PRF-fit source offset from KIC position	0.183 ± 0.218	0.84	0.095 ± 0.147	0.156 ± 0.289
photometric centroid source offset	3.58 ± 1.23	2.90	-2.99 ± 1.21	-1.96 ± 1.28

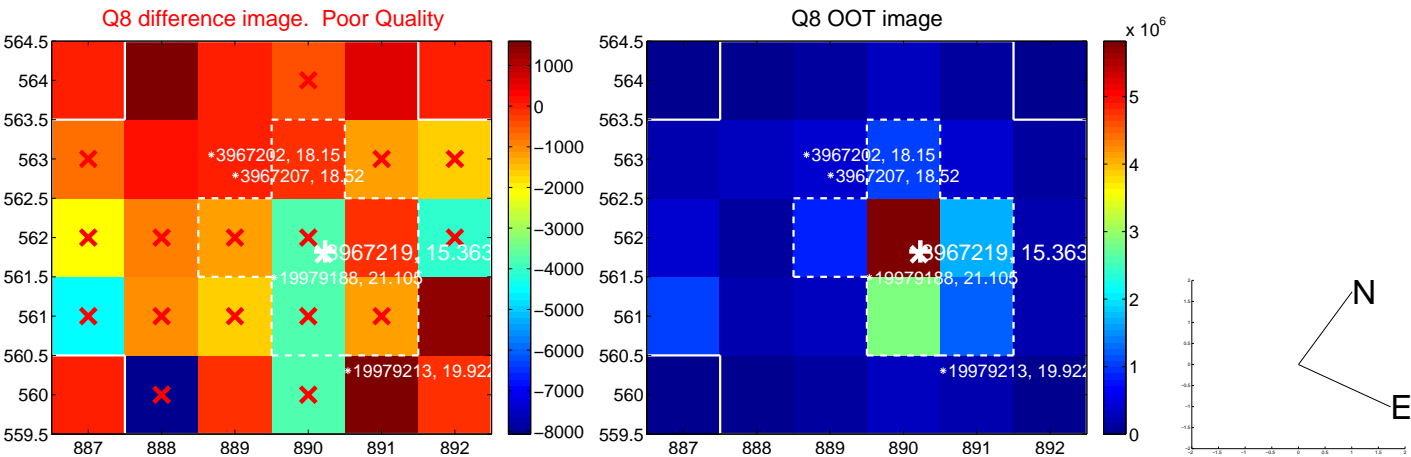
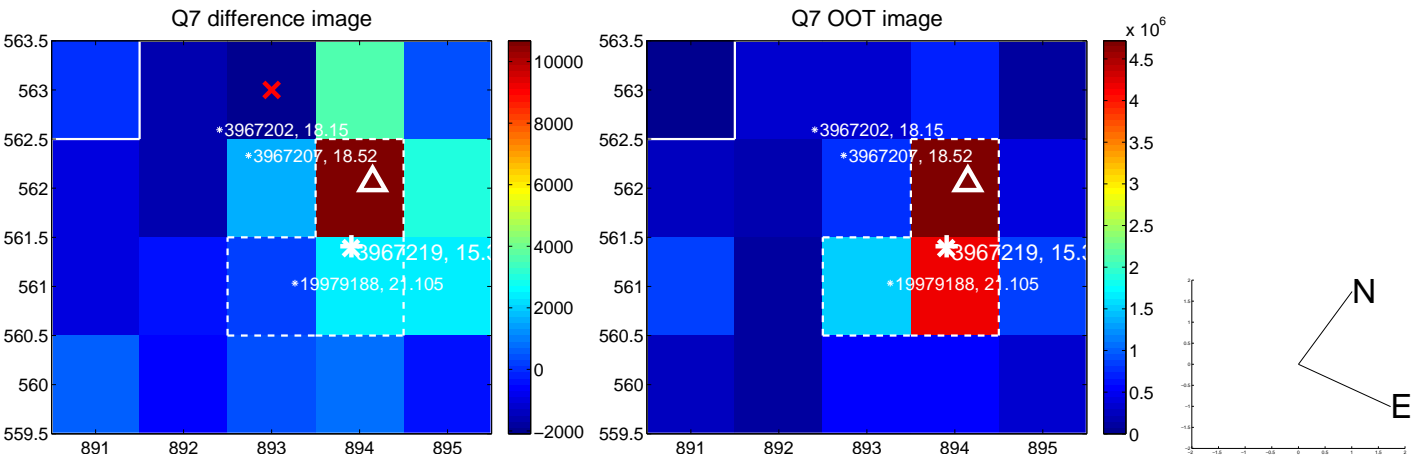
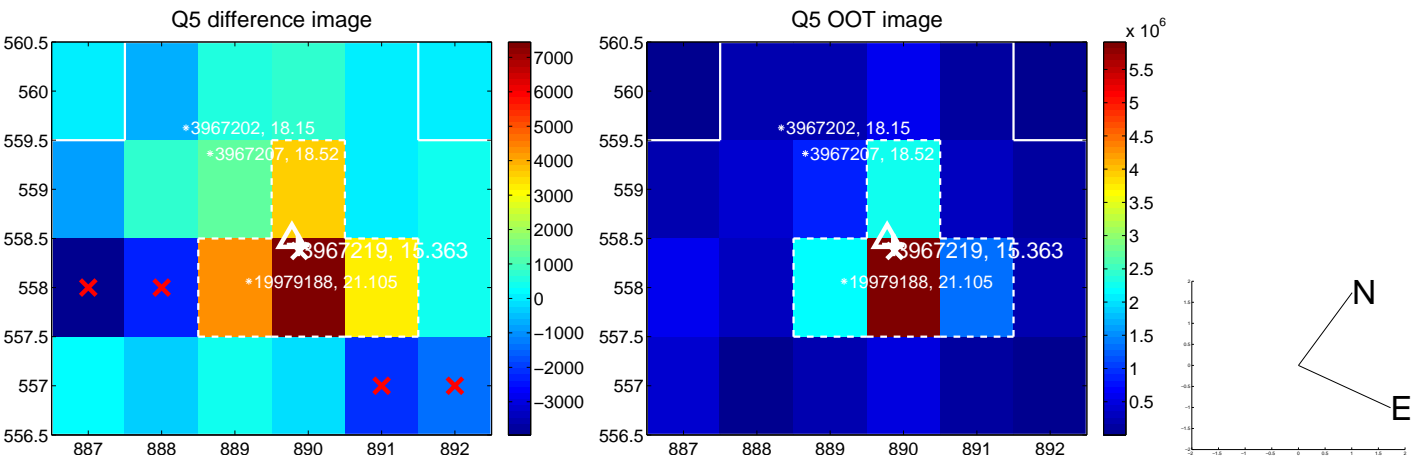


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

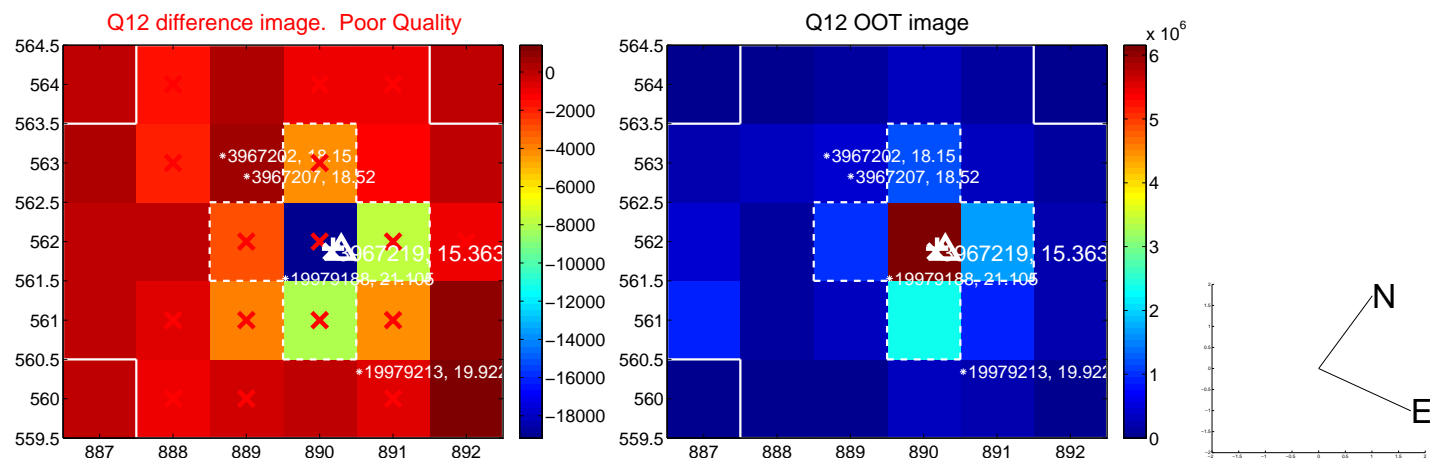
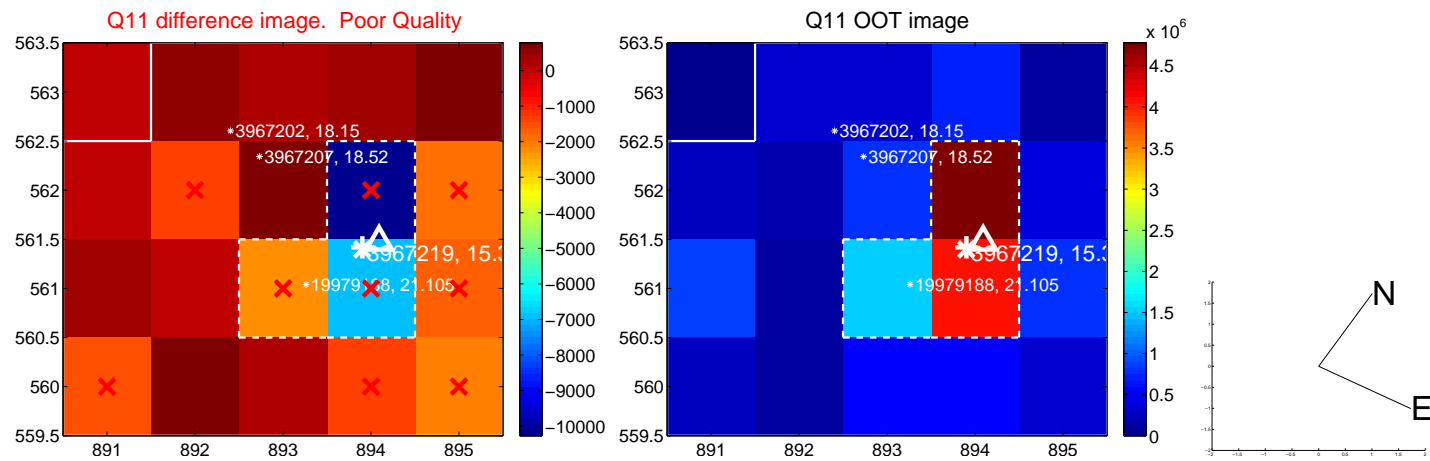
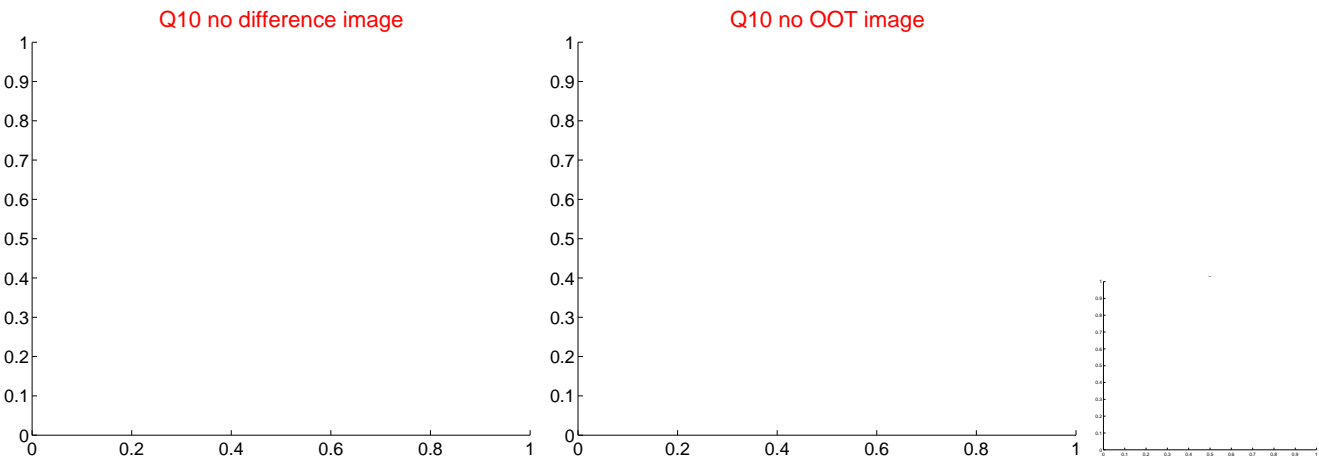
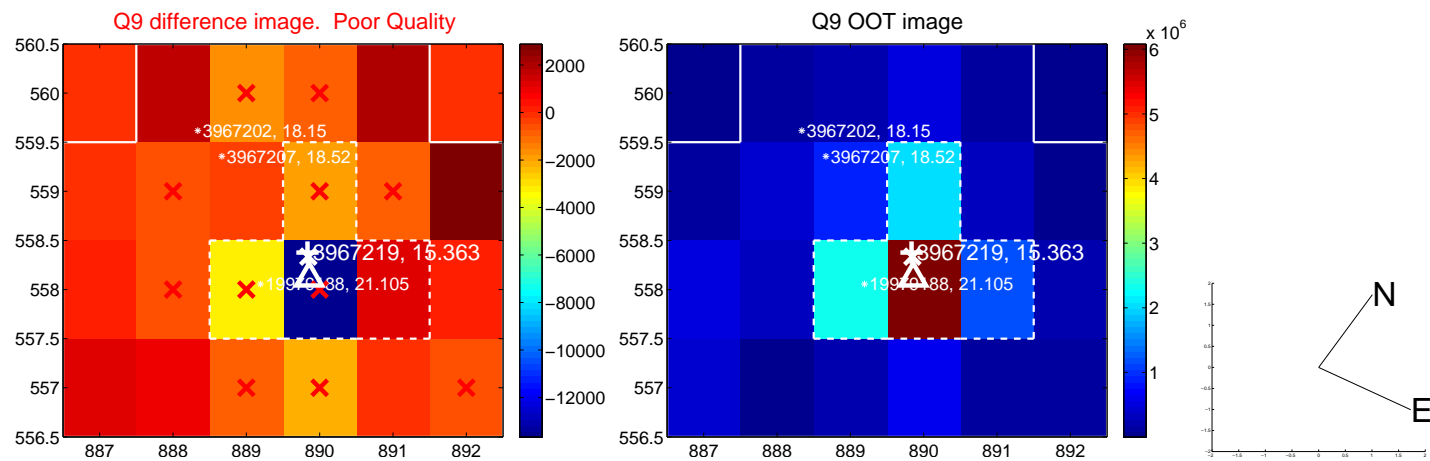
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



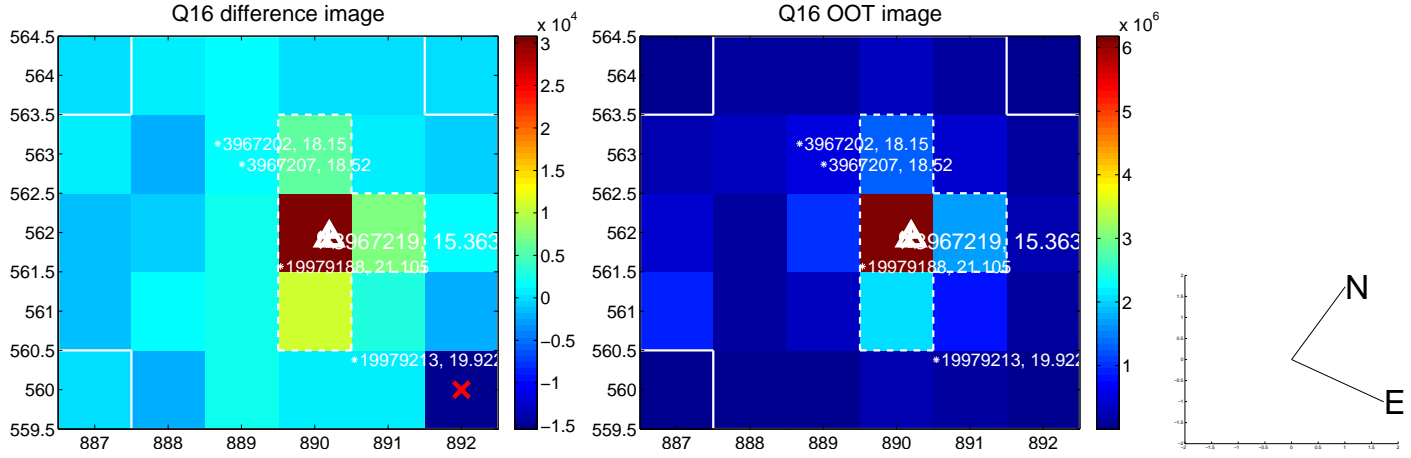
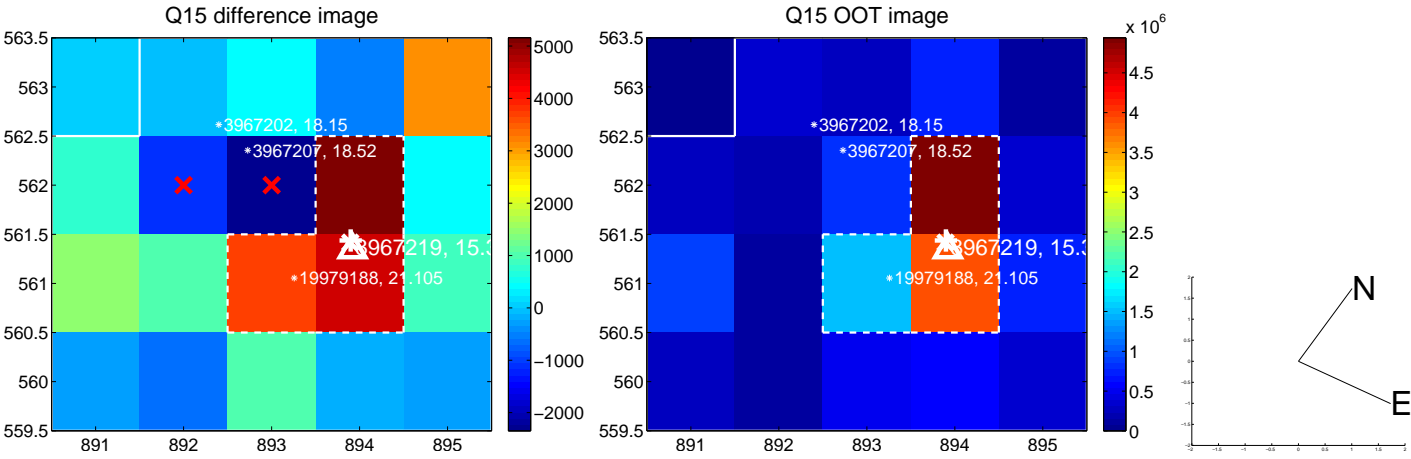
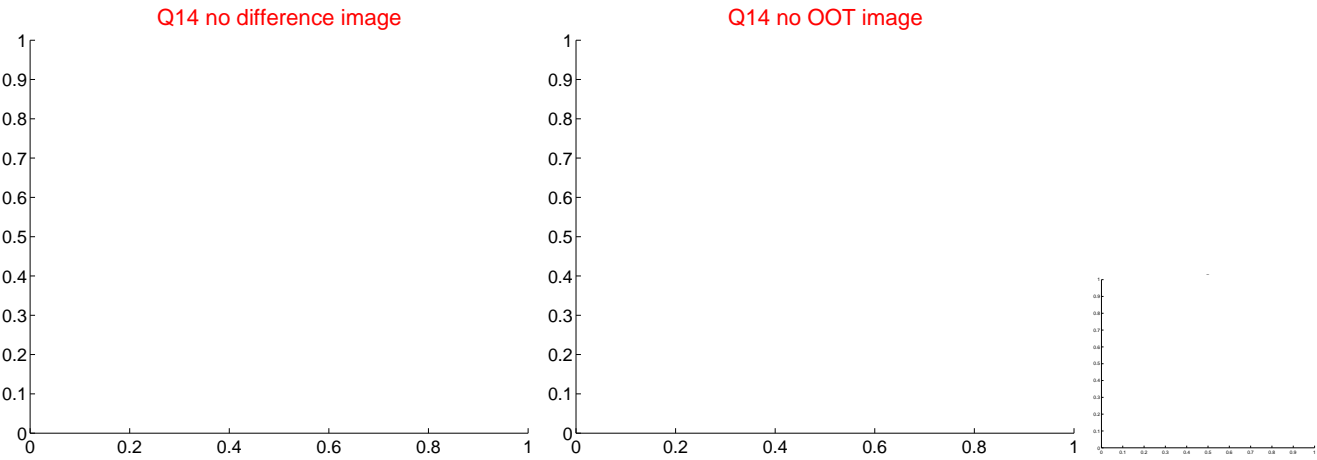
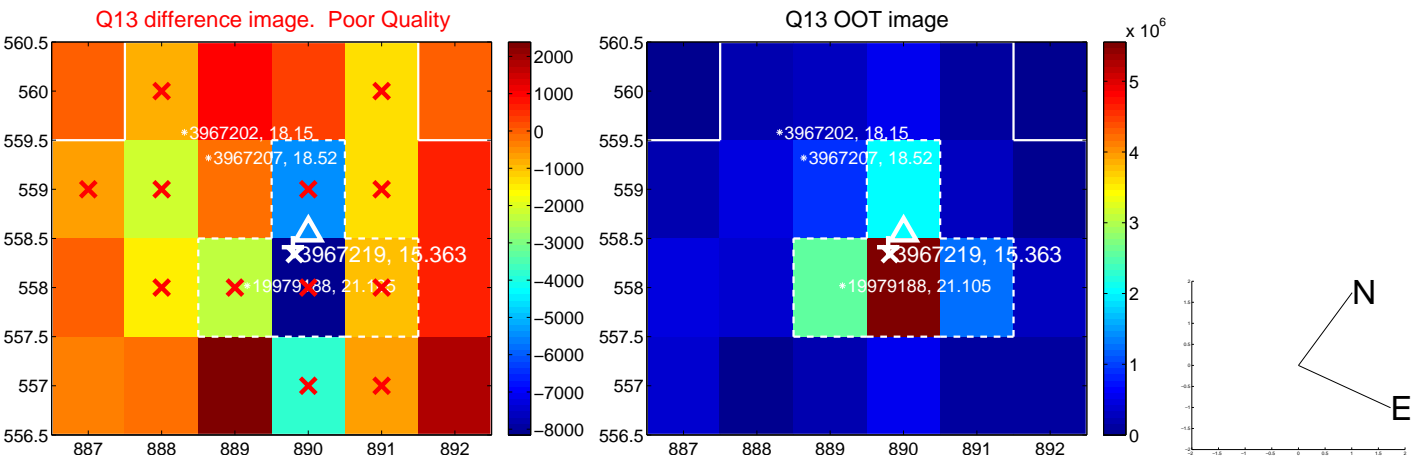
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



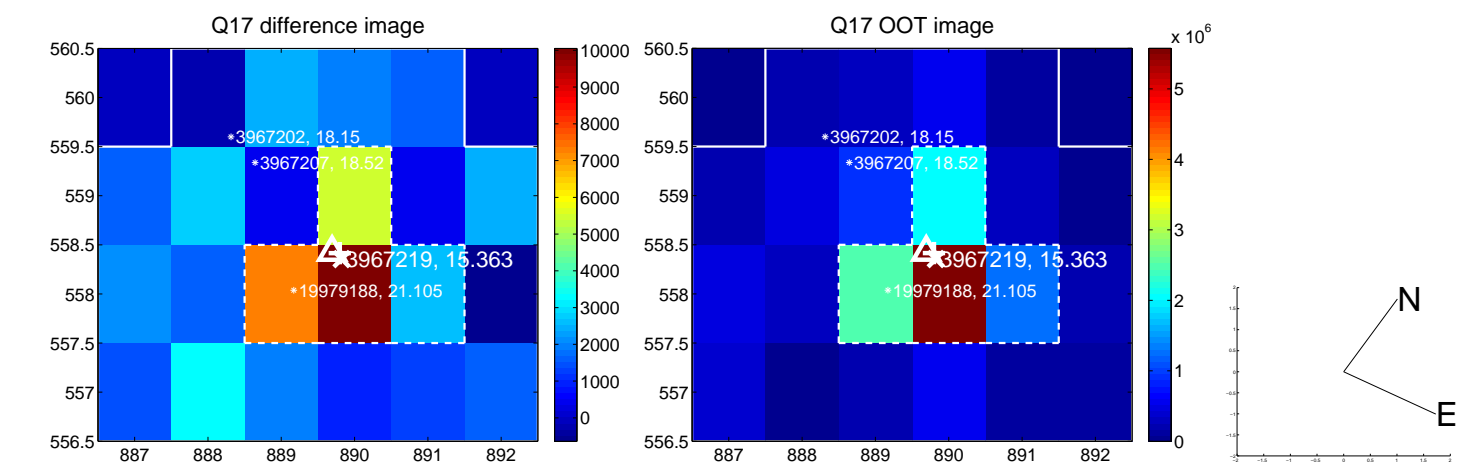
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



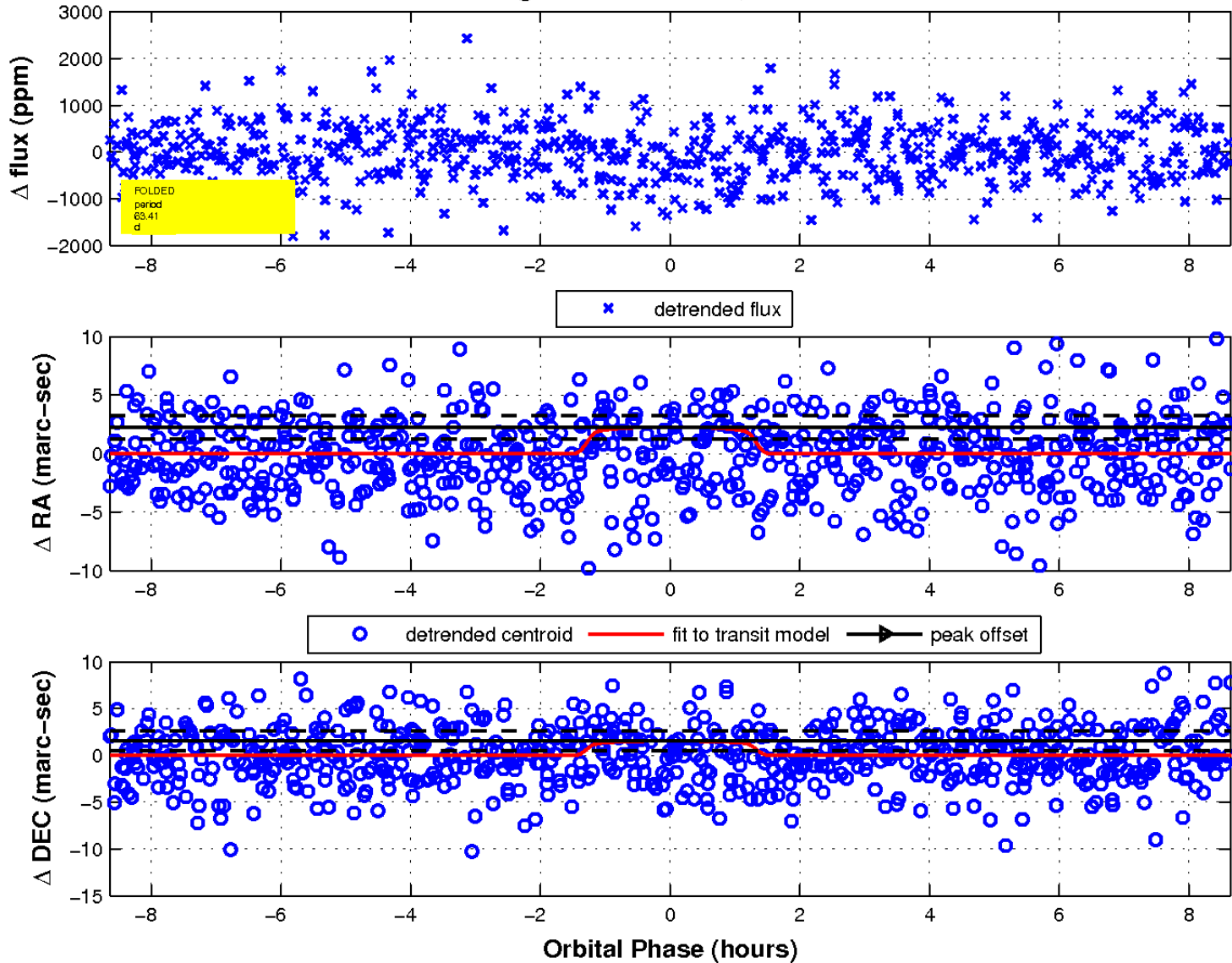
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 5 of 5



UKIRT Image

