

KIC 011974942

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})
011974942-01	OBS	No	5.202442	132.109065	31.9	17.764	9.9	9.7	3.78	6311	2.54	4258.55
011974942-02	OBS	No	5.203167	134.090662	57.8	12.530	11.7	14.1	3.78	6311	4.45	4257.76
011974942-03	OBS	No	155.481879	180.689306	438.1	3.532	13.1	10.2	3.78	6311	8.49	45.92
011974942-05	OBS	No	5.205100	136.233153	117.3	62.461	7.9	11.9	3.78	6311	7.41	4255.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011974942-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011974942-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
011974942-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS
011974942-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS

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

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

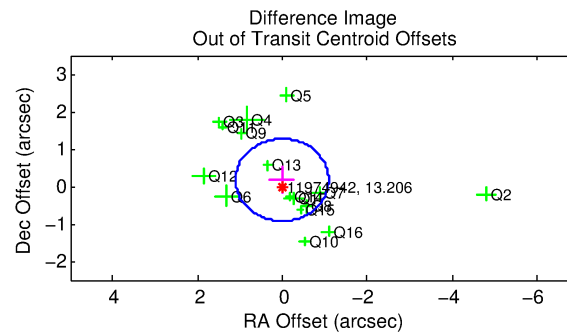
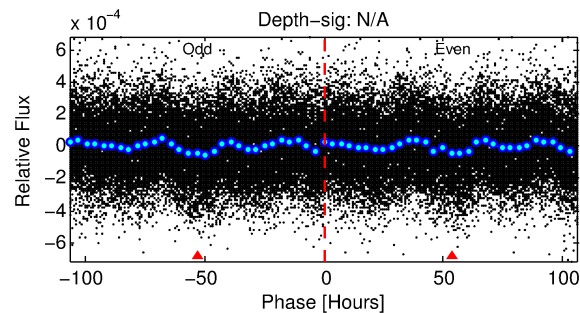
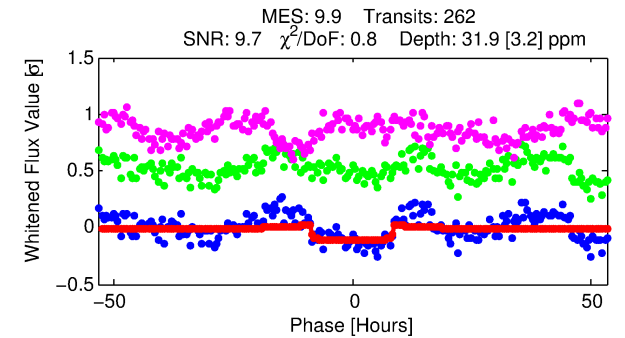
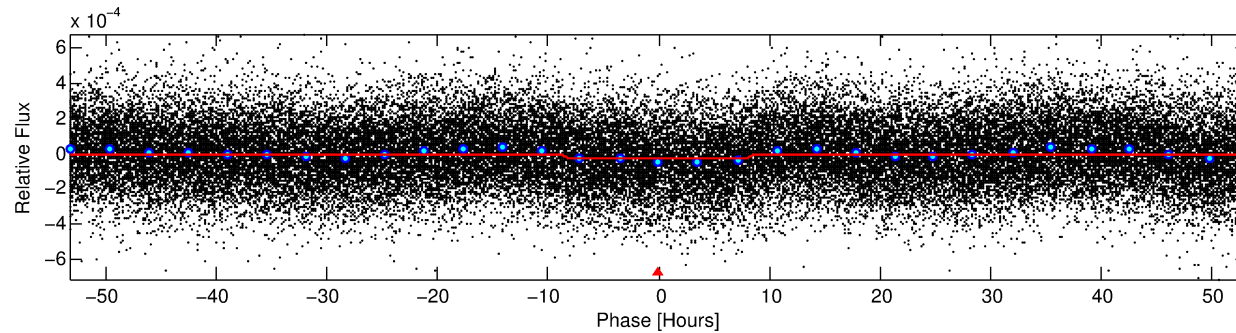
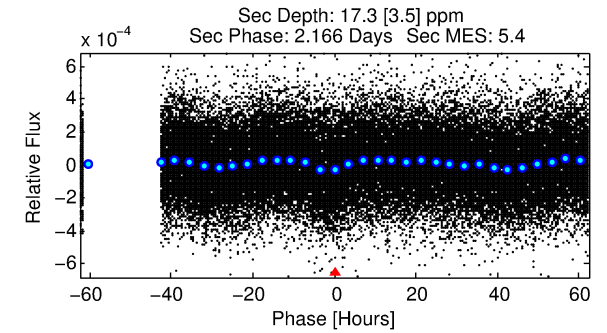
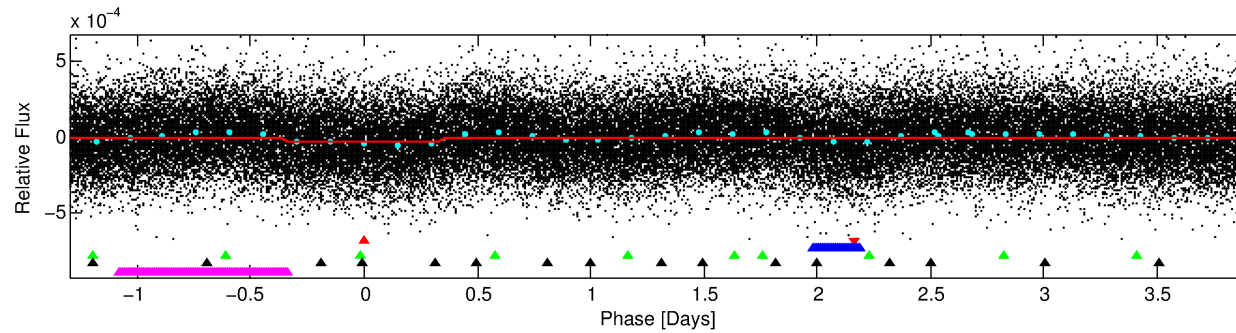
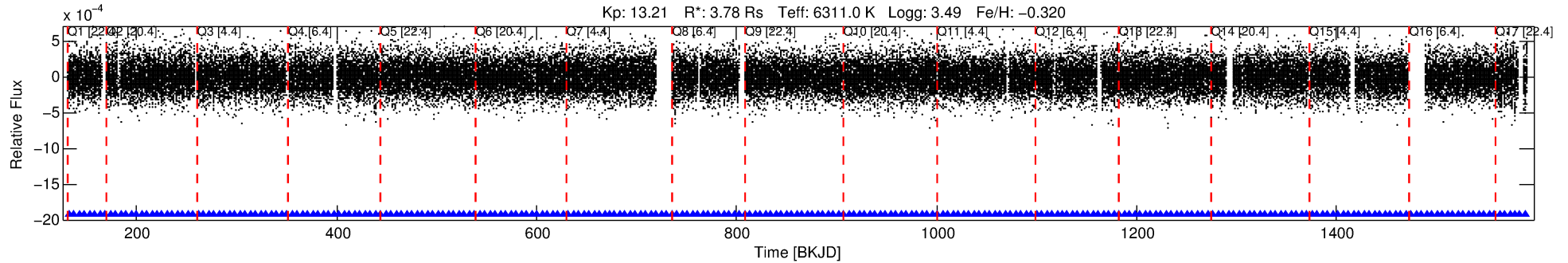
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011974942-01

No Significant Match Found

DV One-Page Summary

KIC: 11974942 Candidate: 1 of 5 Period: 5.202 d



DV Fit Results:

Period = 5.20244 [0.00011] d
Epoch = 132.1091 [0.0152] BKJD
Rp/R* = 0.0062 [0.0007]
a/R* = 1.32 [0.33]
b = 0.92 [0.10]
Seff = 4258.55 [2806.58]
Teq = 2060 [339] K
Rp = 2.54 [1.16] Re
a = 0.0690 [0.0285] AU
Ag = 7.04 [5.04] [1.20σ]
Teffp = 5187 [423] K [5.77σ]

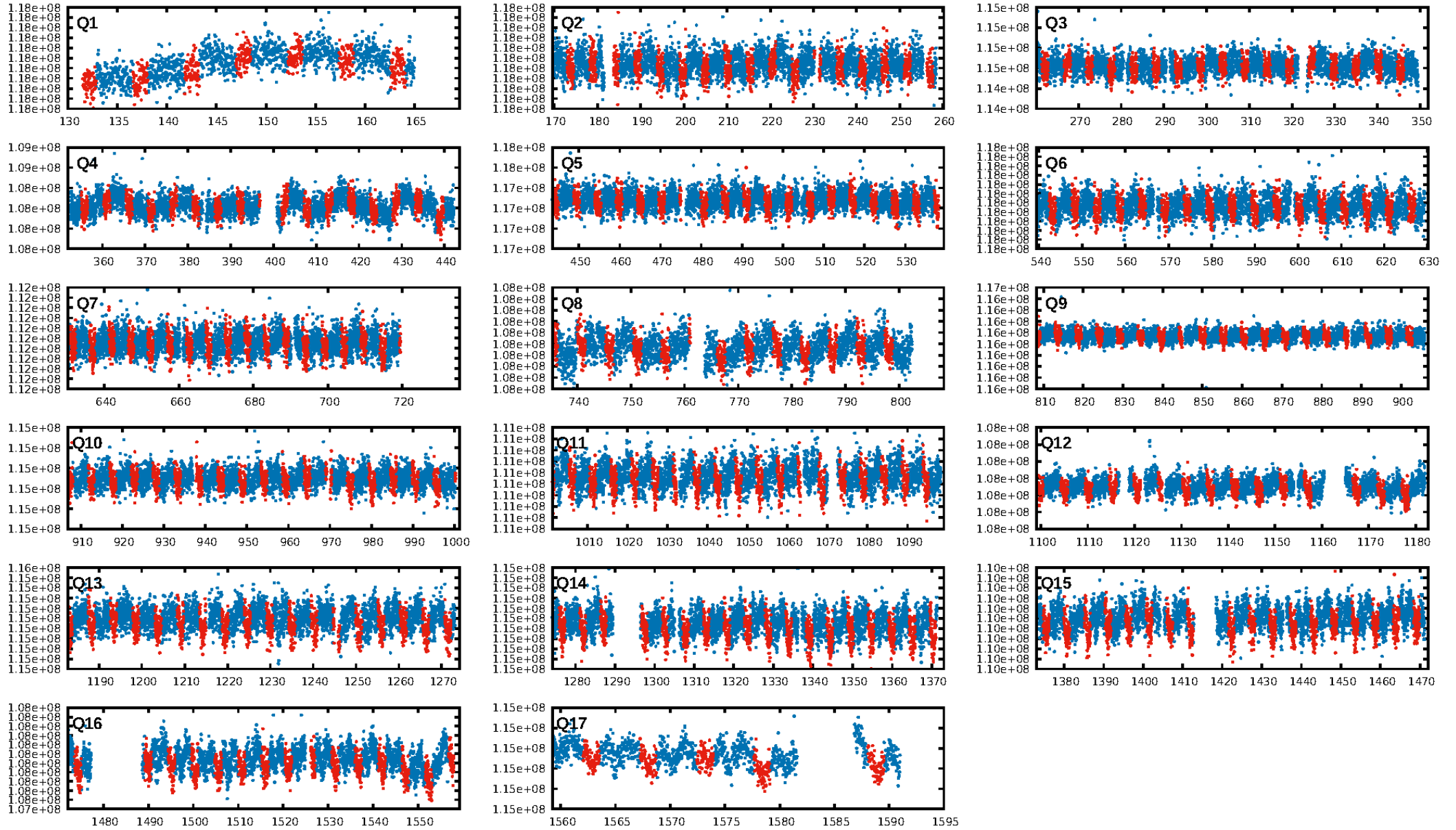
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [250/250]
GhostDiagnostic-chr: 1.948
Centroid-sig: 51.1%
Centroid-so: 0.262 arcsec [0.30σ]
OotOffset-rm: 0.171 arcsec [0.47σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-rm: 0.251 arcsec [0.71σ]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 0.00 [0/17]

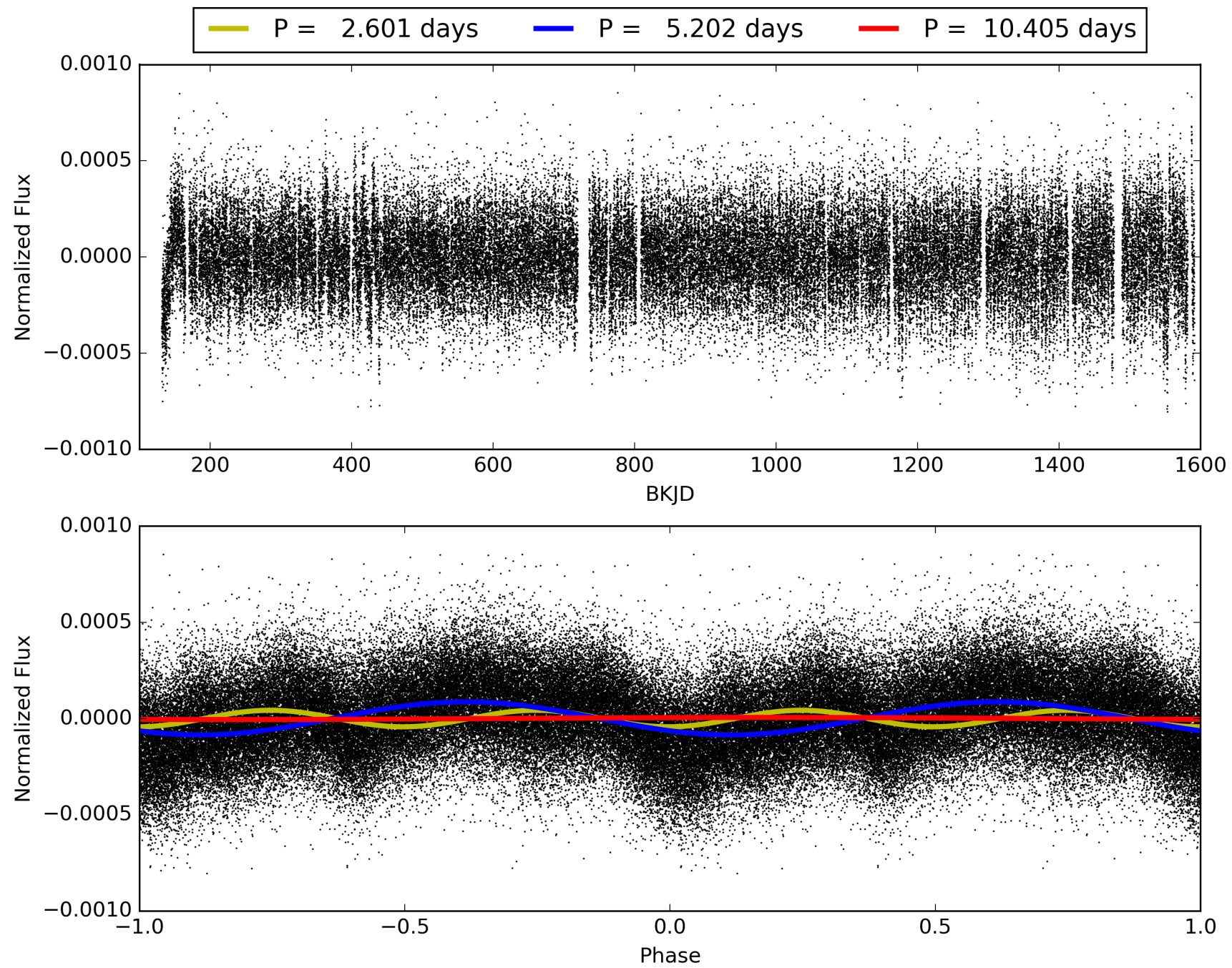
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011974942-01, PDC Light Curves

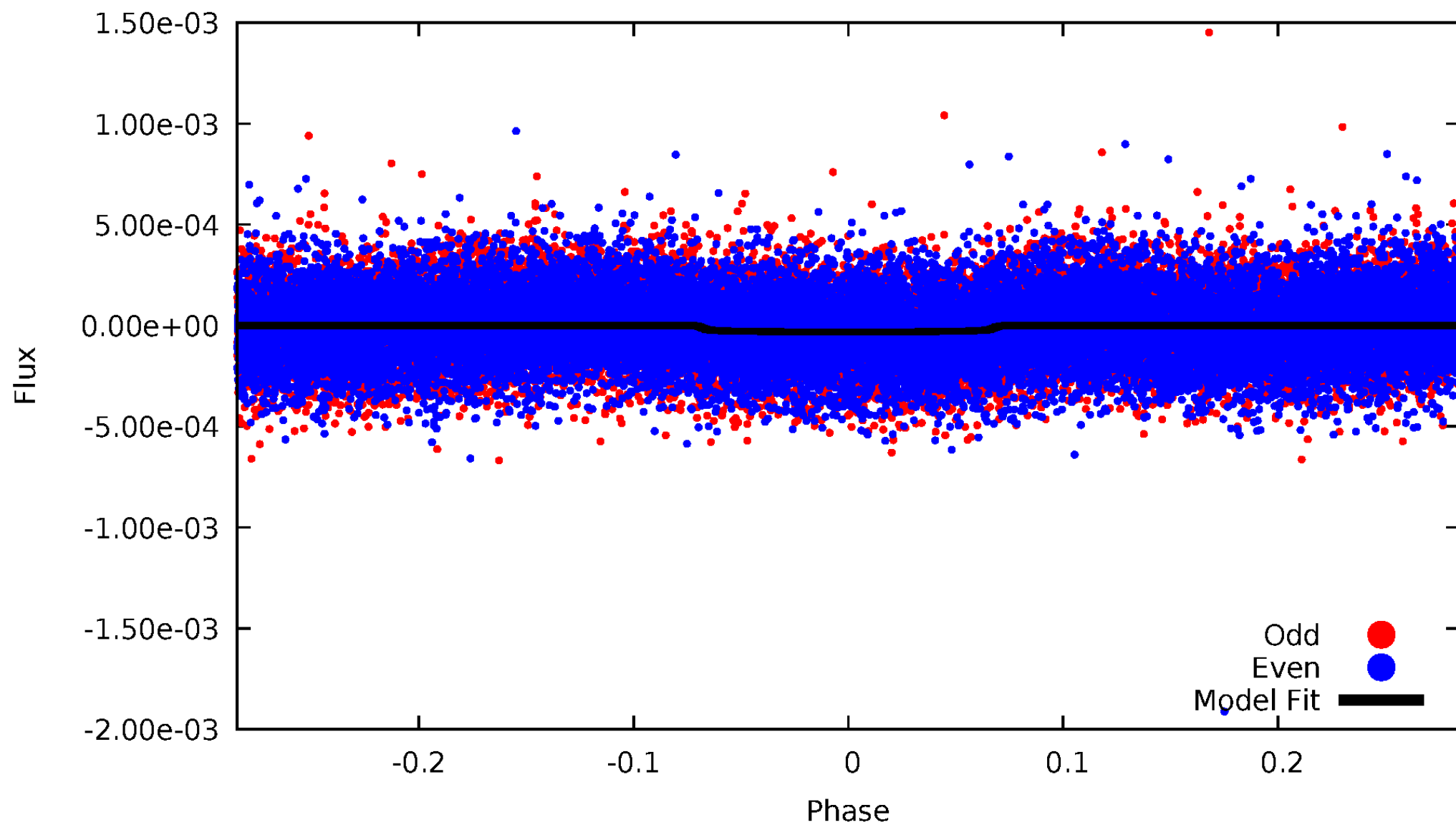


TCE 011974942-01



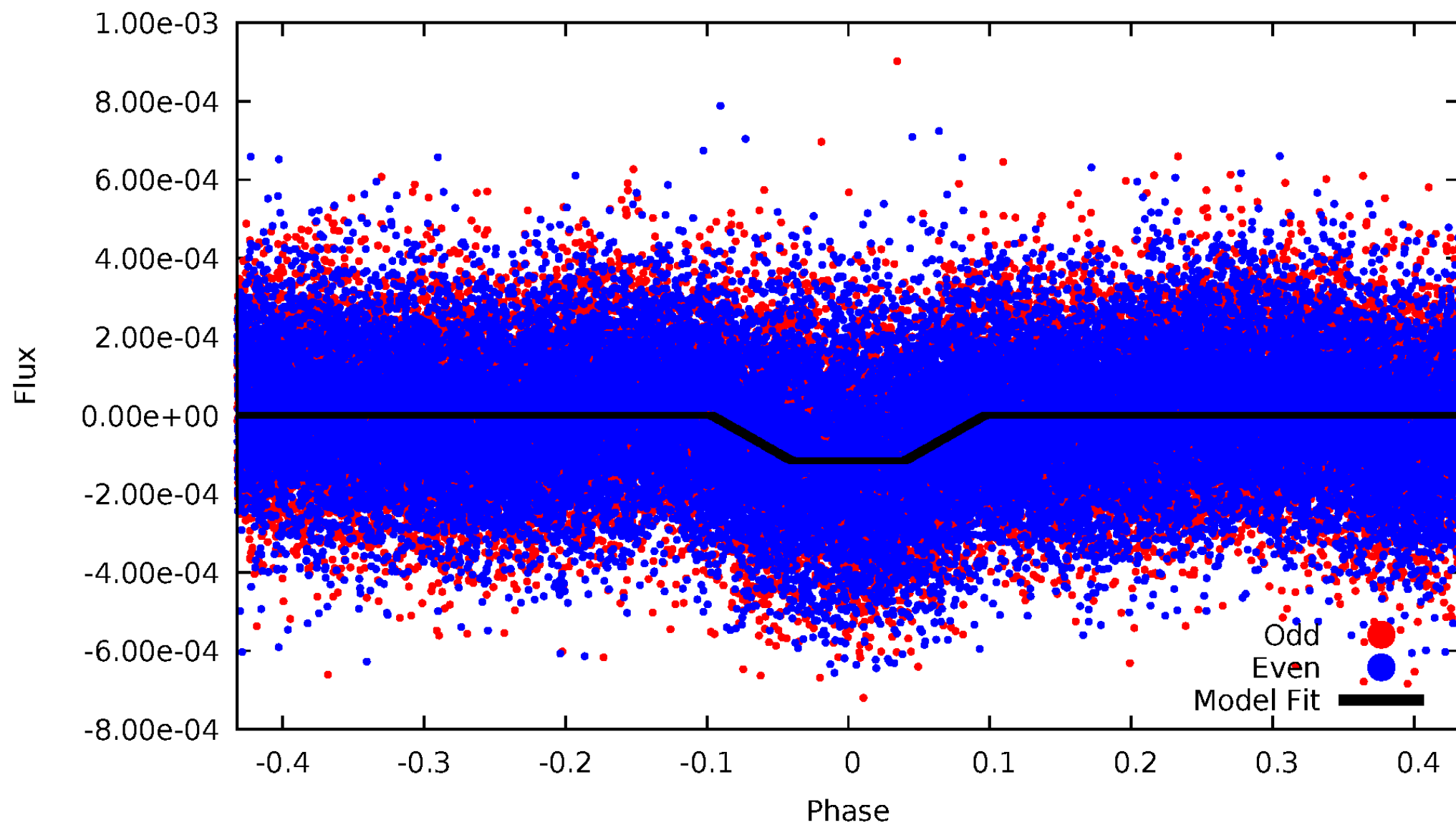
DV Odd/Even

TCE 011974942-01

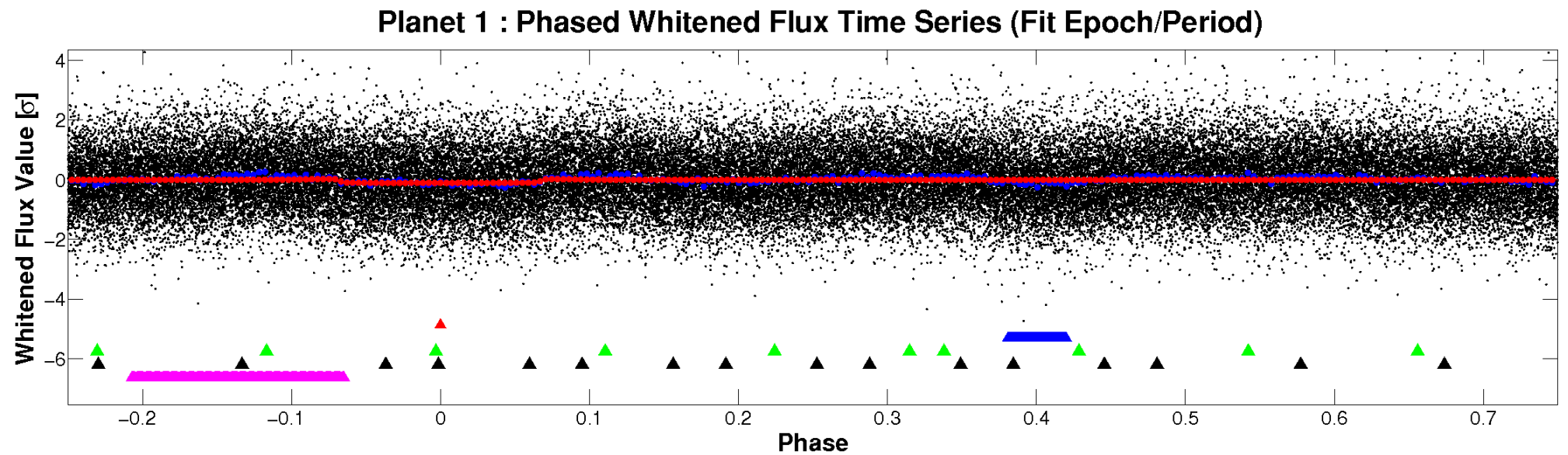
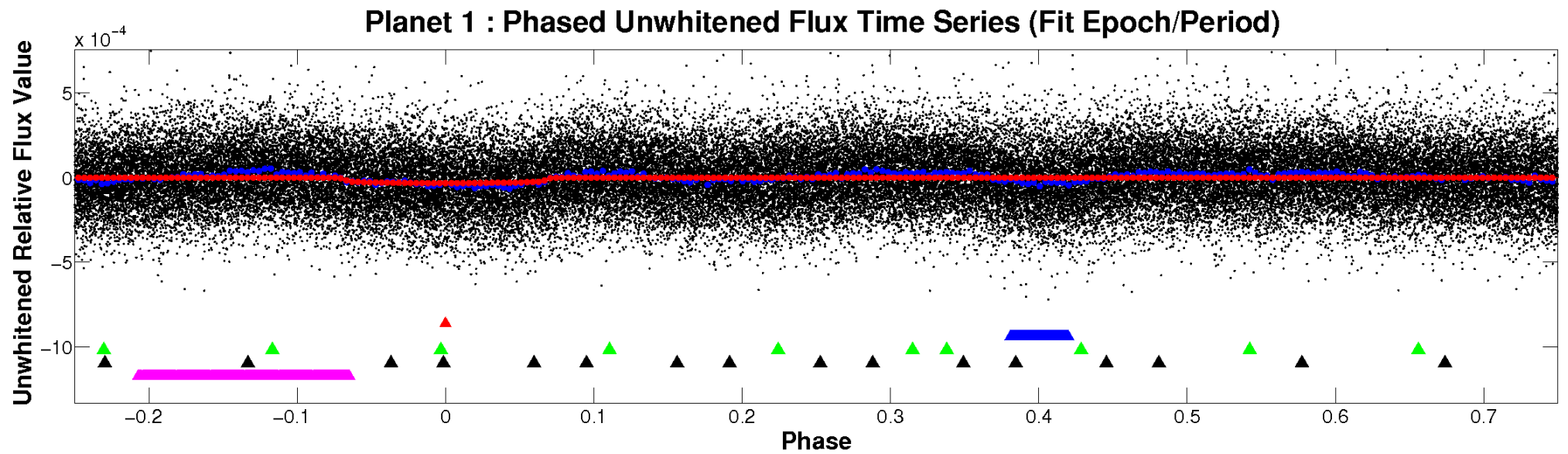


ALT Odd/Even

TCE 011974942-01

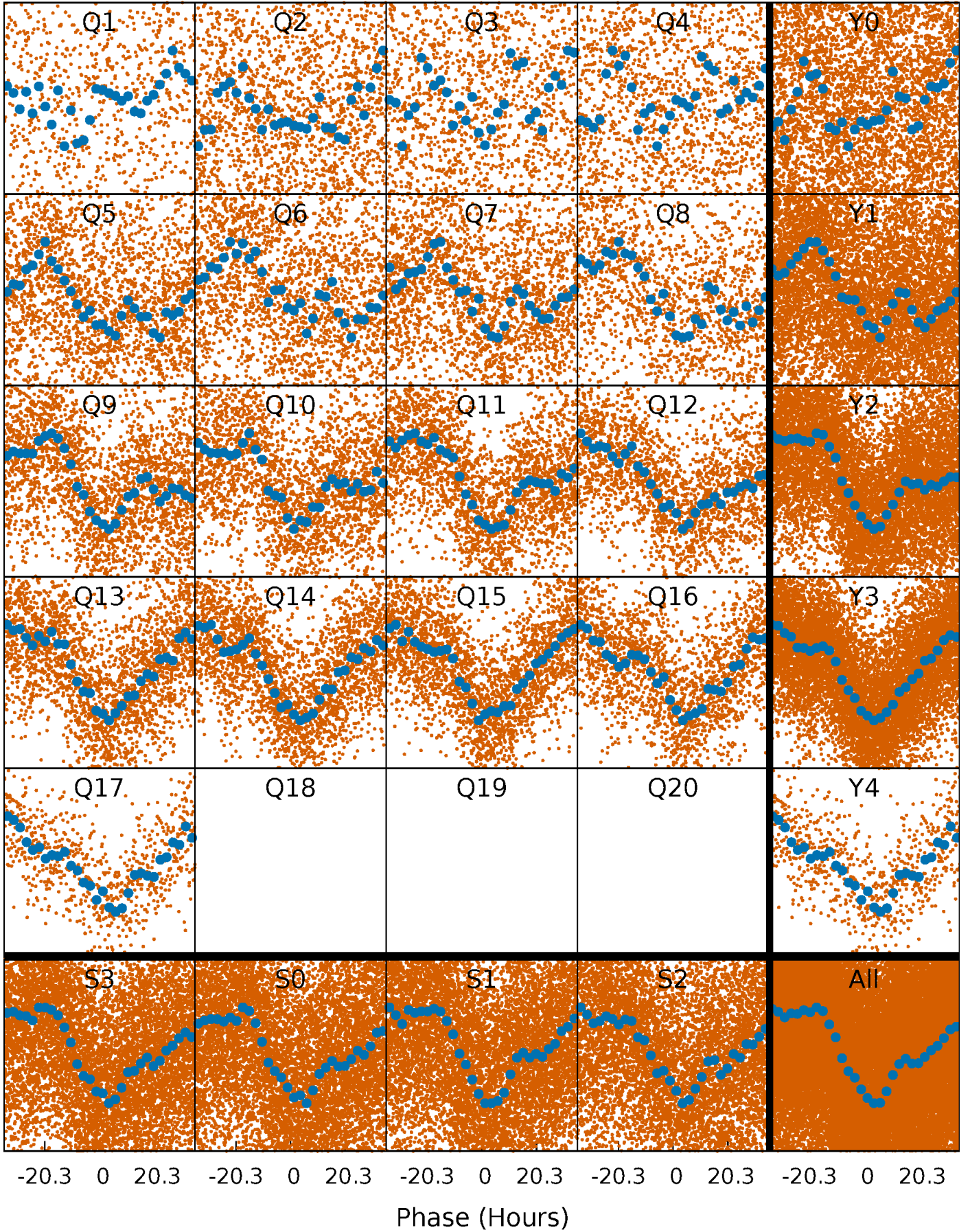


Non-Whitened Vs. Whitened Light Curve



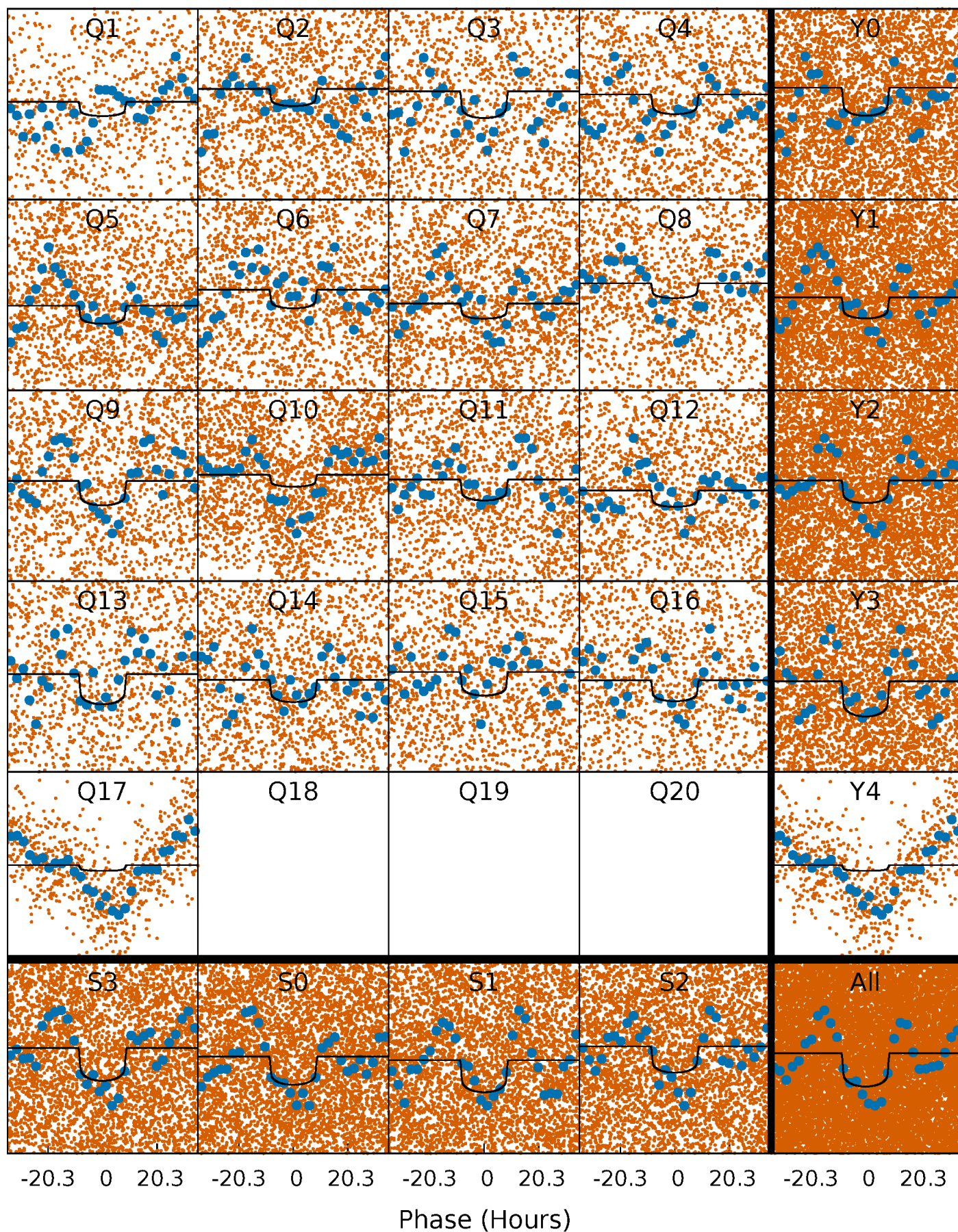
PDC Quarter-Phased Transit Curves

TCE 011974942-01 P= 5.202442 Days $T_0=132.109065$ (BKJD)



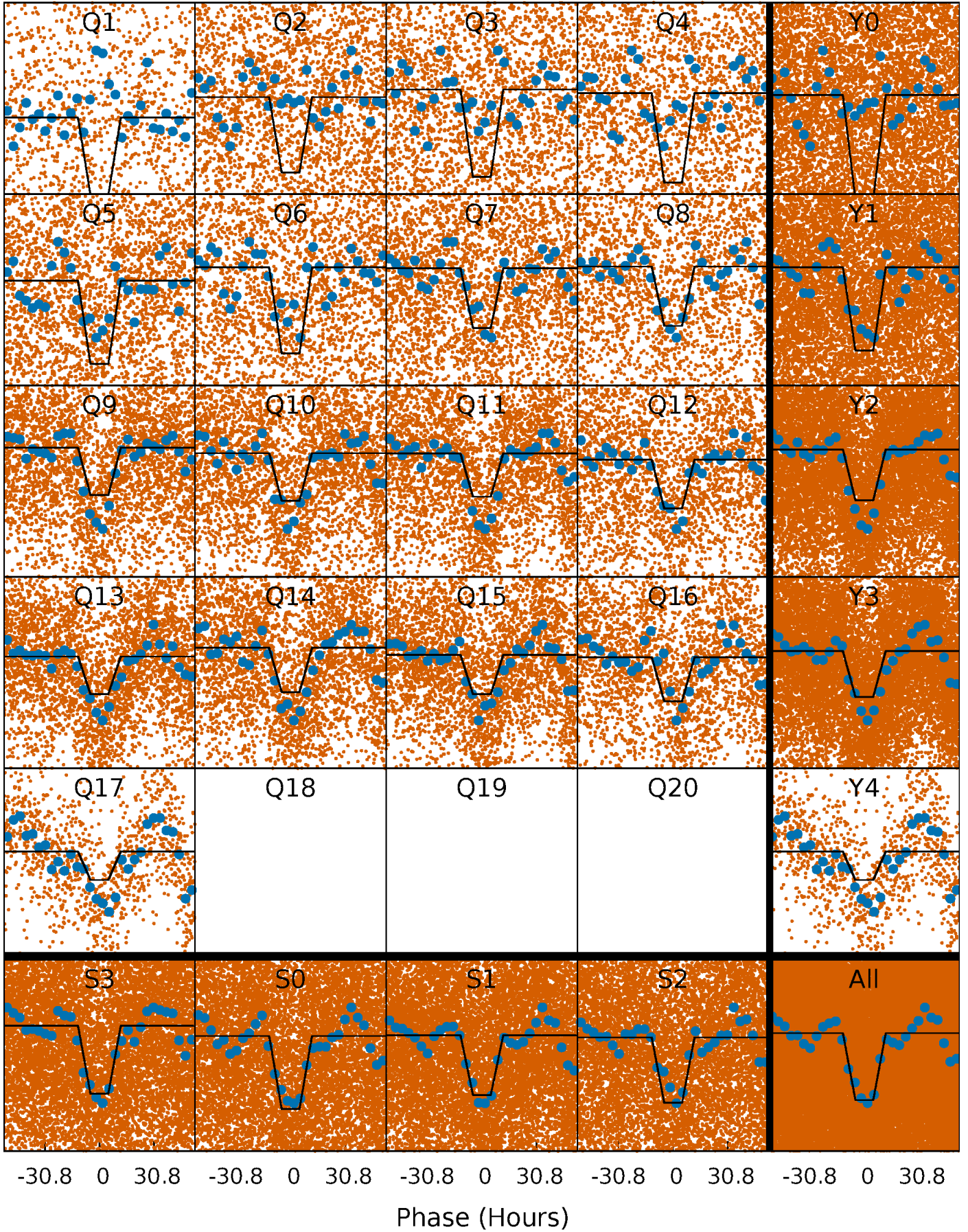
DV Quarter-Phased Transit Curves

TCE 011974942-01 P= 5.202442 Days $T_0=132.109065$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

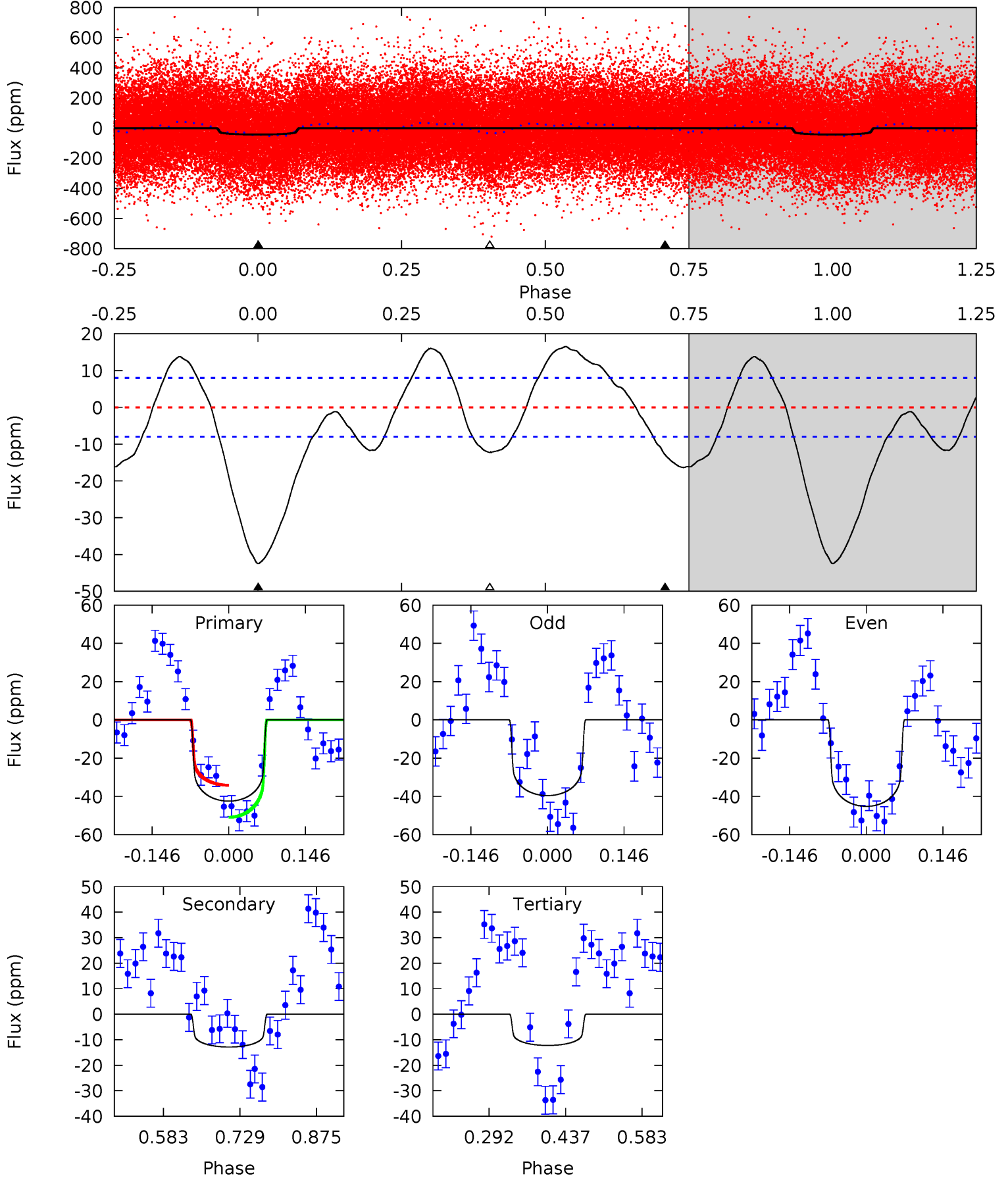
TCE 011974942-01 P= 5.202392 Days $T_0=132.174092$ (BKJD)



DV Model-Shift Uniqueness Test

011974942-01, P = 5.202442 Days, E = 126.906623 Days

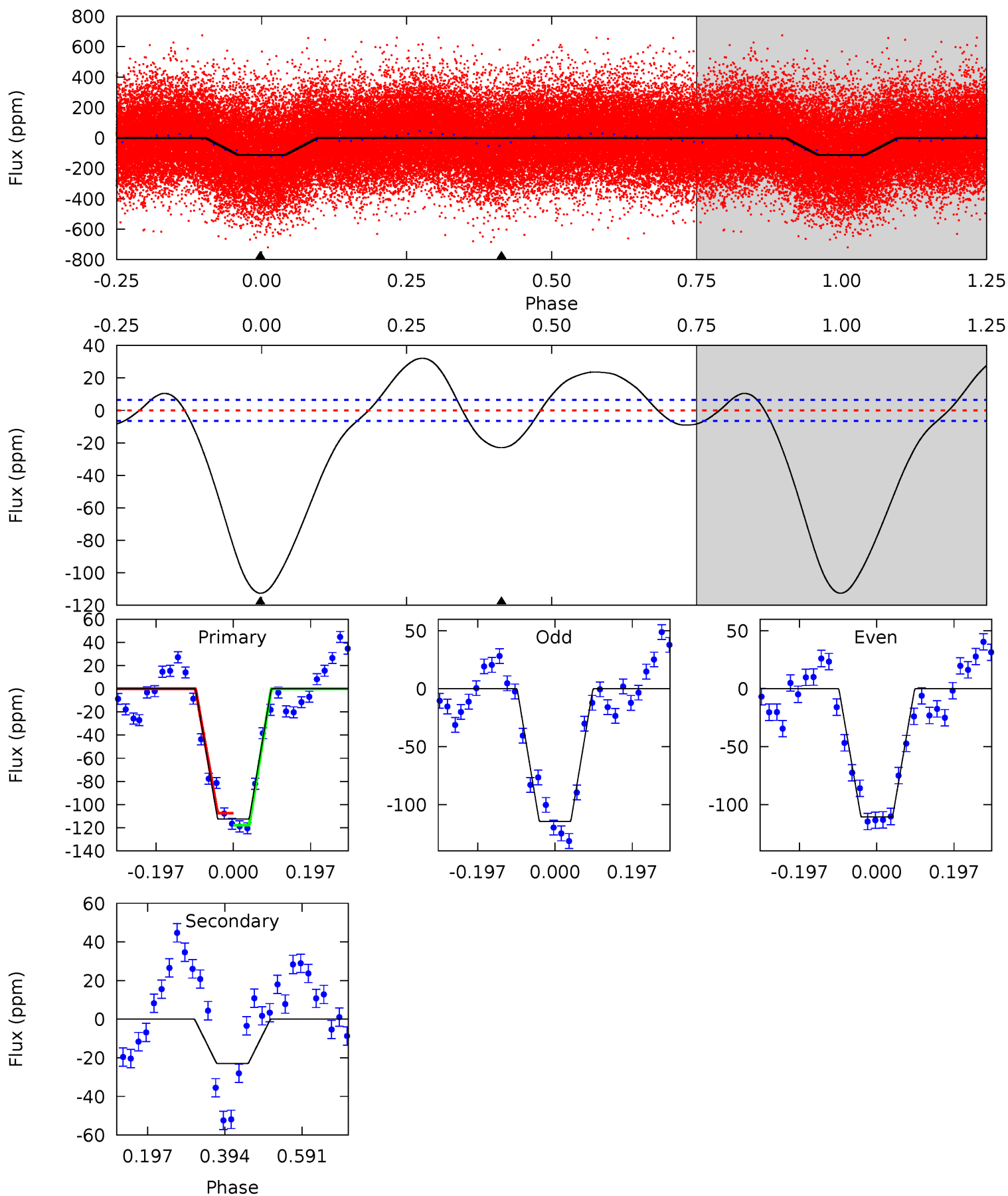
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.8	7.22	6.87	0	4.49	1.45	5.82	17.0	23.8	0.35	7.22	1.59	1.09	0.28	4.74



Alt Model-Shift Uniqueness Test

011974942-01, P = 5.202392 Days, E = 126.971700 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
77.2	15.7	0	0	4.42	1.29	6.64	77.2	77.2	15.7	15.7	1.28	0.89	0.22	3.53



Stellar Parameters For KIC 011974942

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6311^{+169}_{-188}	$3.493^{+0.376}_{-0.094}$	$-0.320^{+0.400}_{-0.300}$	$3.779^{+0.669}_{-1.672}$	$1.622^{+0.186}_{-0.434}$	$0.042^{+0.134}_{-0.015}$
	+3%/-3%	+11%/-3%	+125%/-94%	+18%/-44%	+11%/-27%	+315%/-36%
Source	PHO1	FLK73	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 011974942-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-13 ± 2	$2.38^{+0.46}_{-0.52}$	2807^{+186}_{-288}	4861^{+336}_{-279}	$5.929^{+3.404}_{-1.757}$
Alt.	-23 ± 1	$4.25^{+0.69}_{-1.02}$	2820^{+199}_{-326}	4344^{+164}_{-160}	$3.357^{+1.937}_{-0.860}$

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

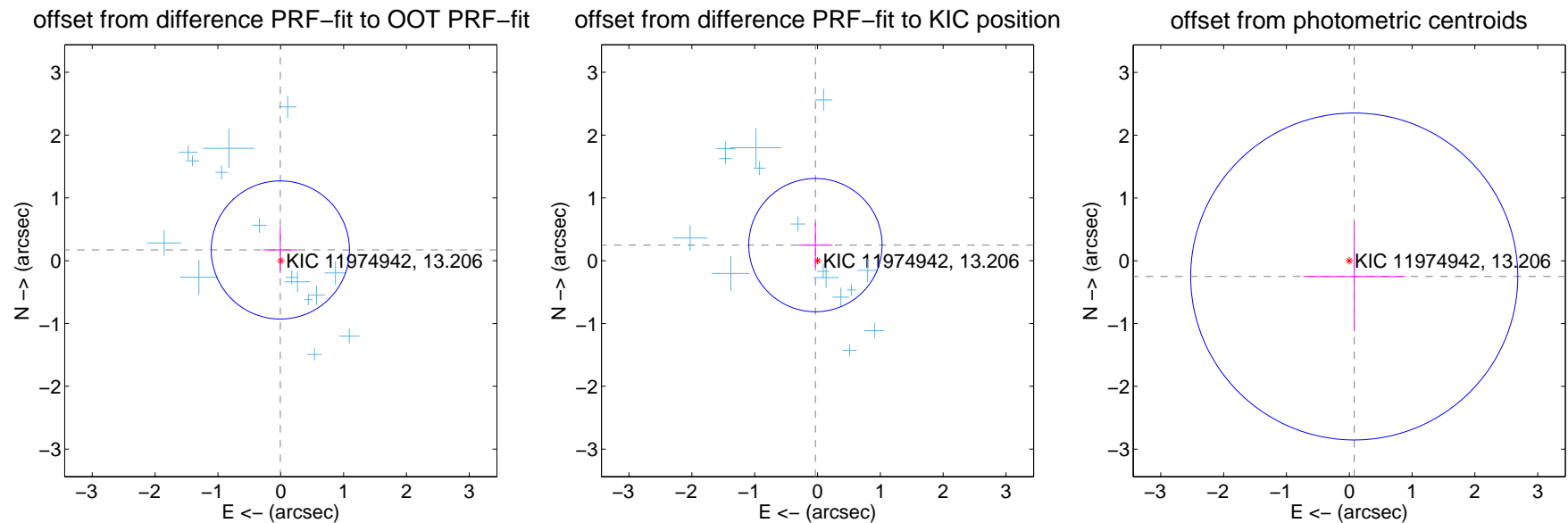
DV Centroid Data

Supplemental centroid analysis for 011974942-01. Kepler magnitude: 13.21. Transit SNR 9.66

There are 15 quarters with good PRF difference image offsets

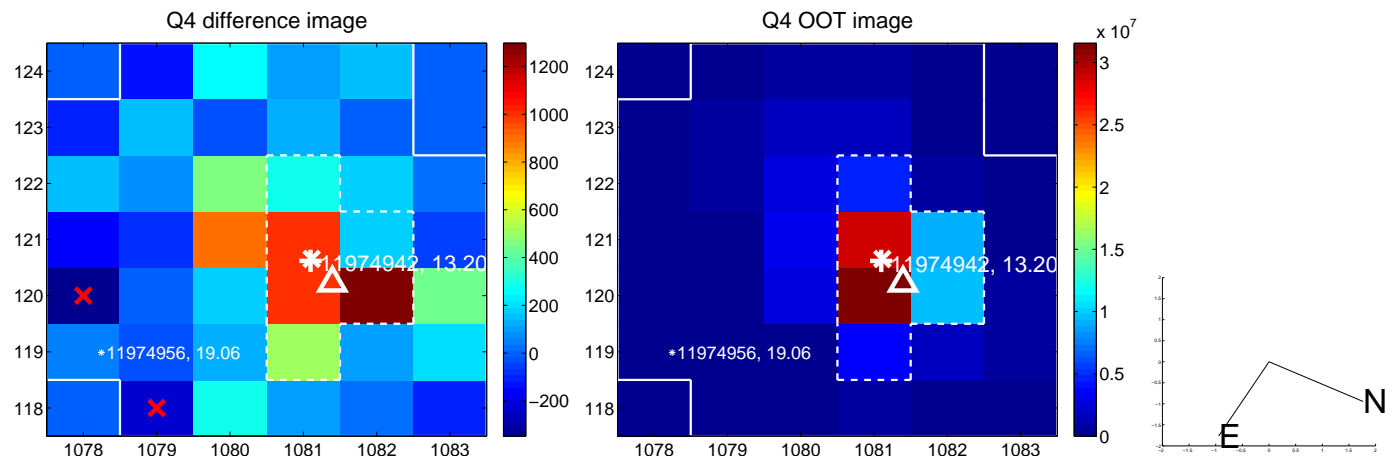
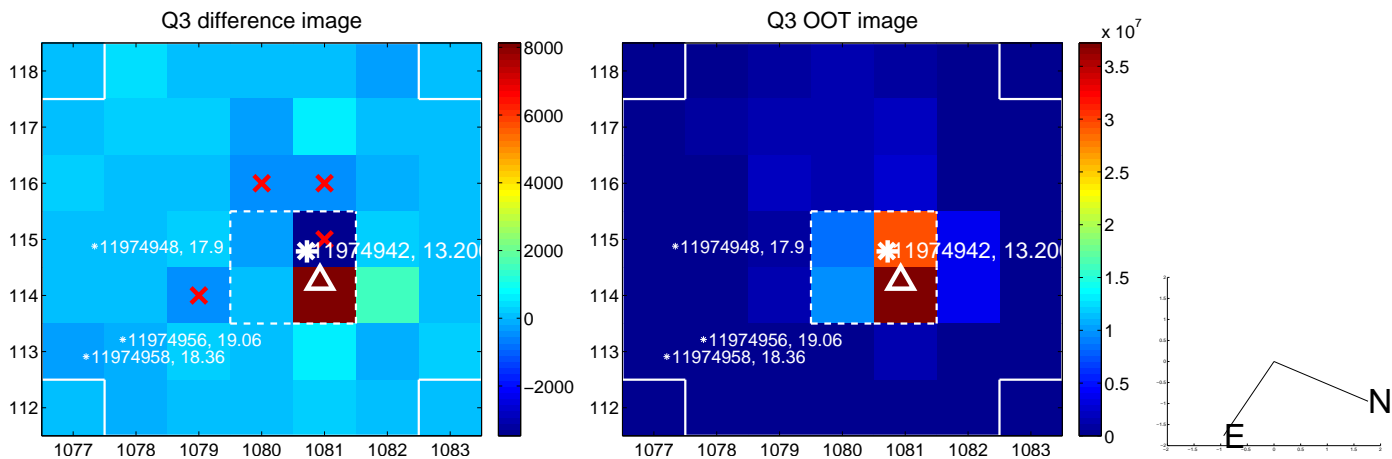
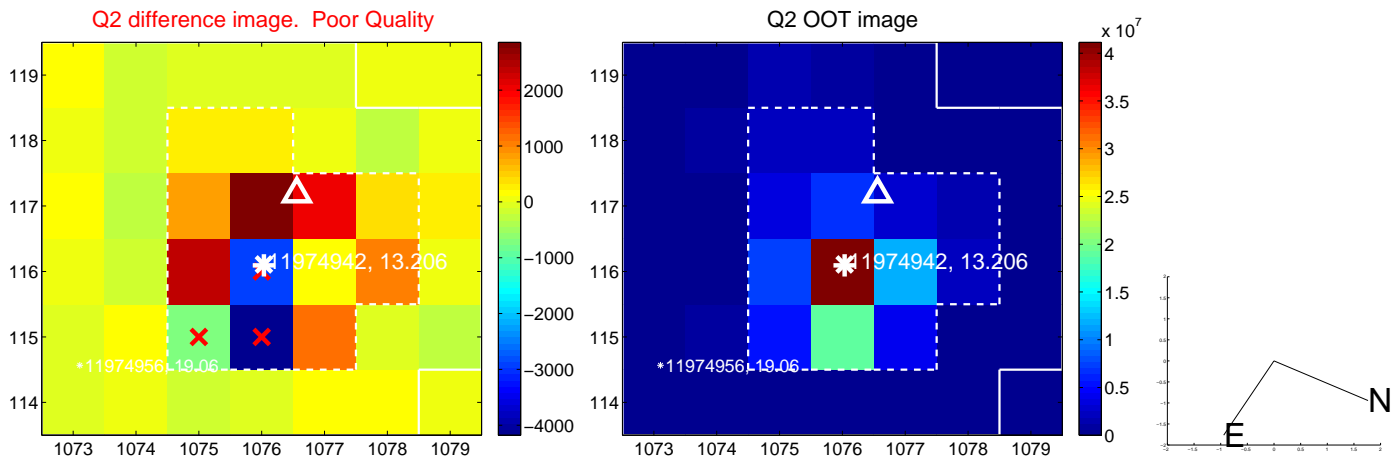
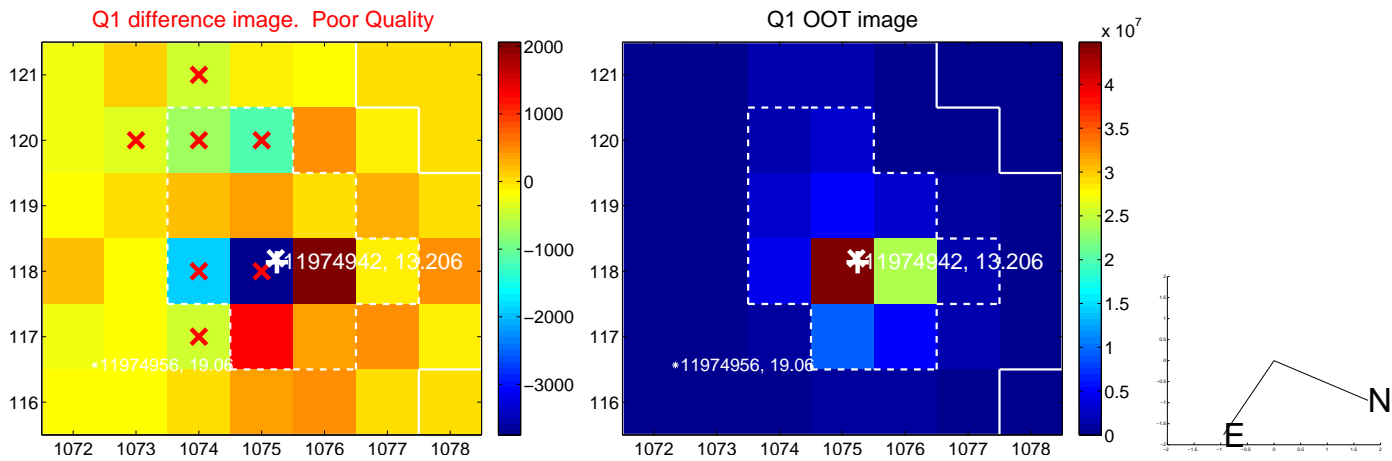
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.171 ± 0.367	0.47	0.007 ± 0.275	0.171 ± 0.367
PRF-fit source offset from KIC position	0.251 ± 0.354	0.71	0.033 ± 0.274	0.248 ± 0.355
photometric centroid source offset	0.26 ± 0.87	0.30	-0.08 ± 0.81	-0.25 ± 0.87

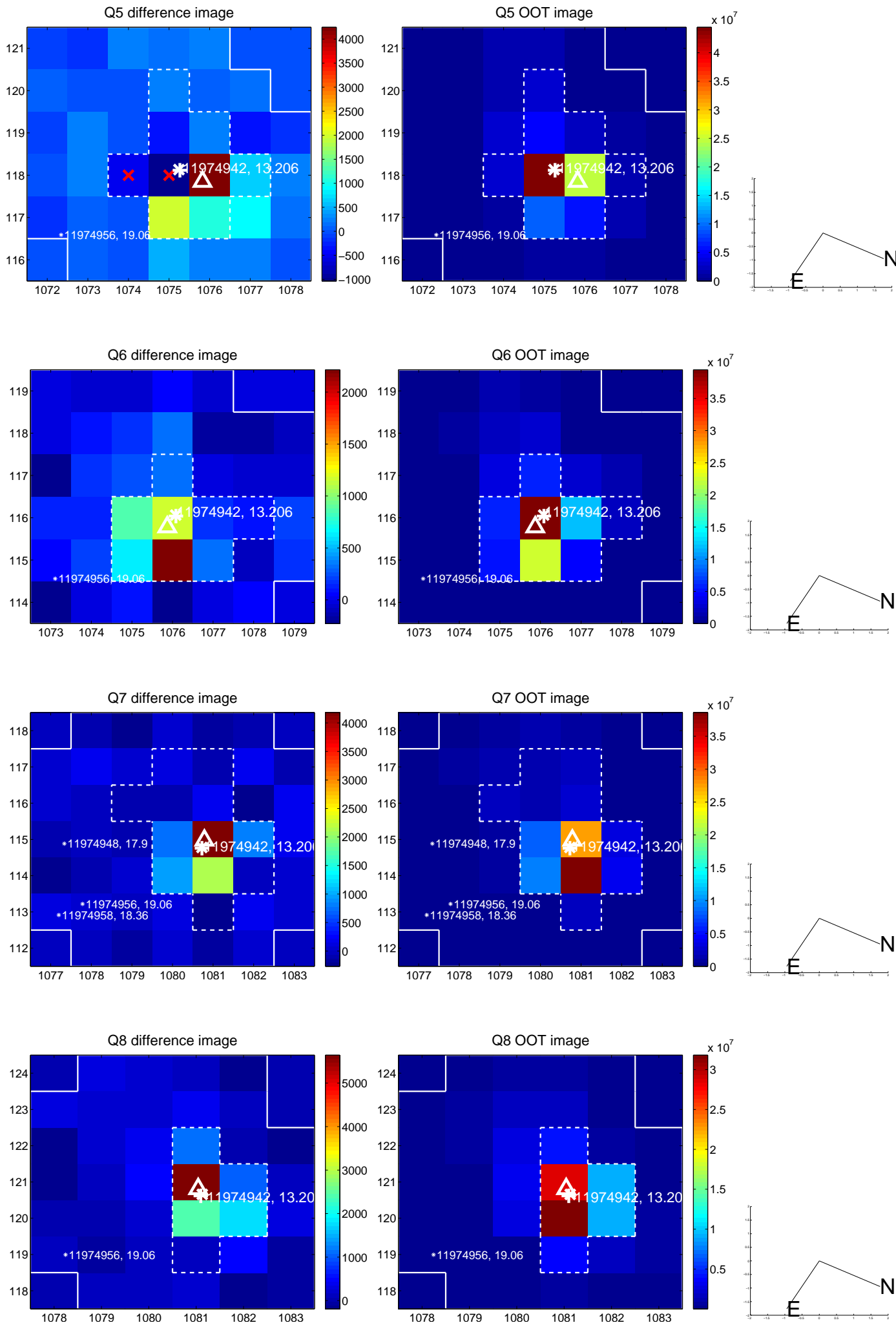


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

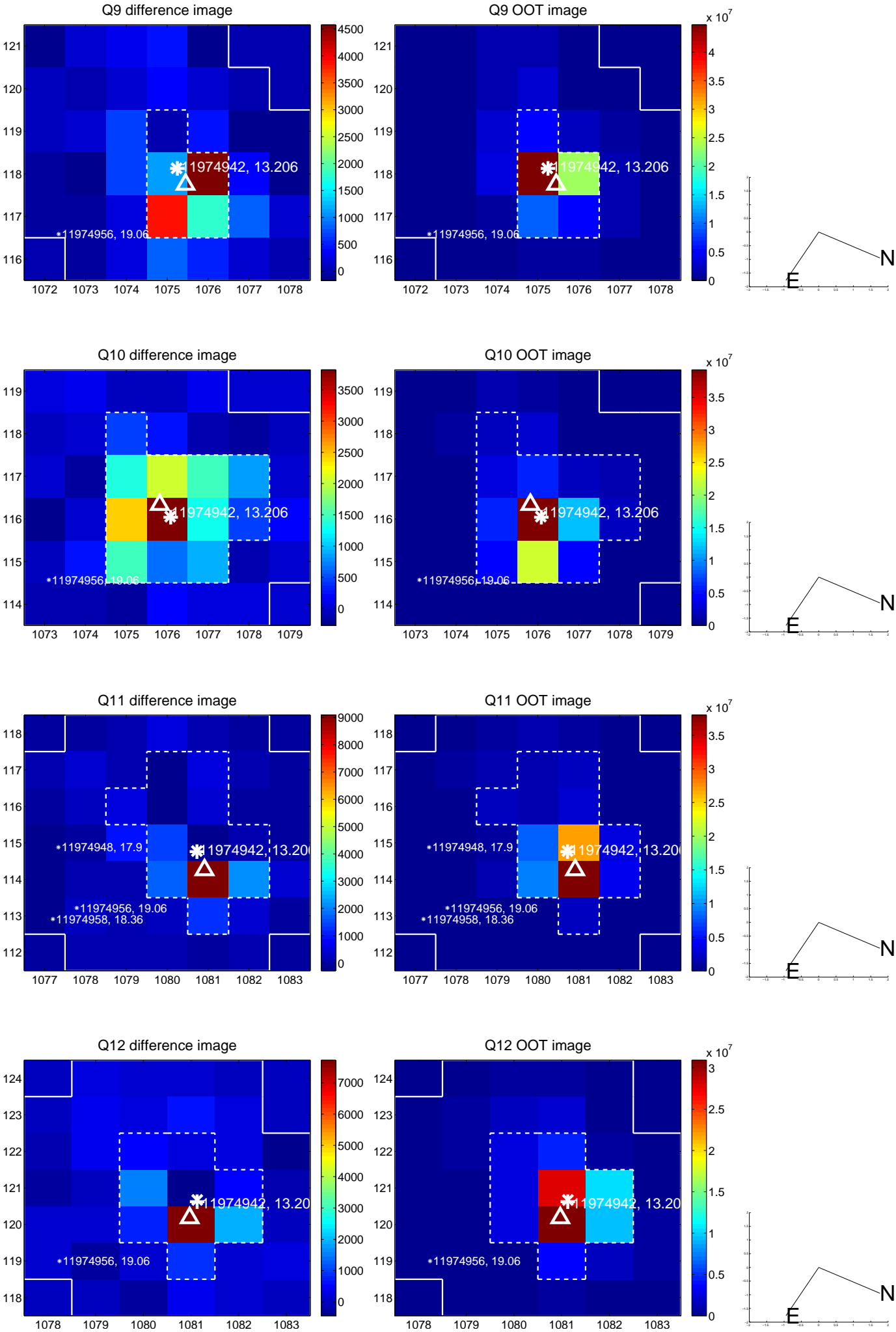
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



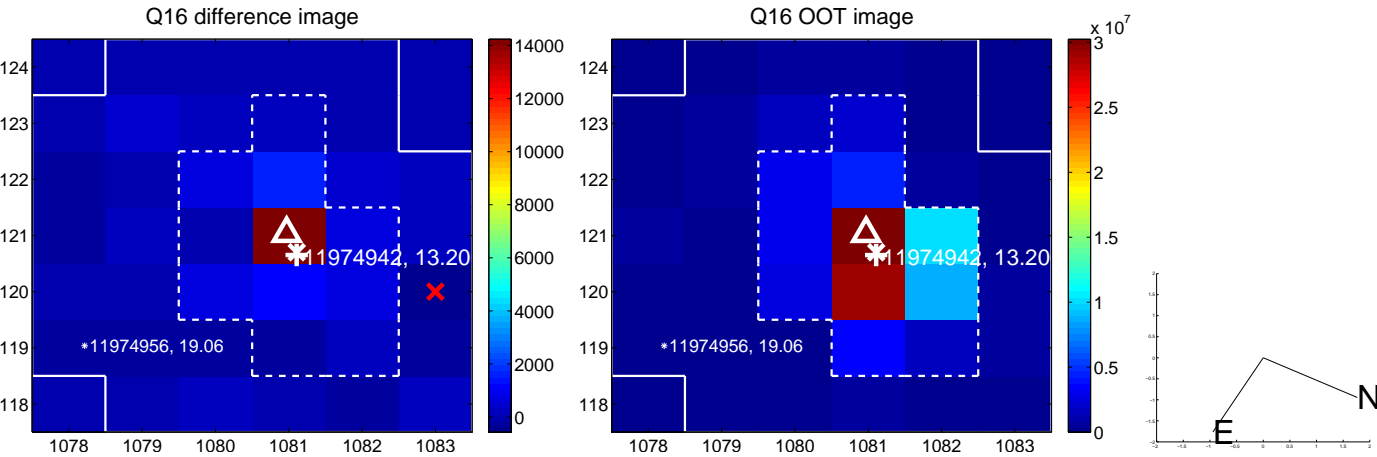
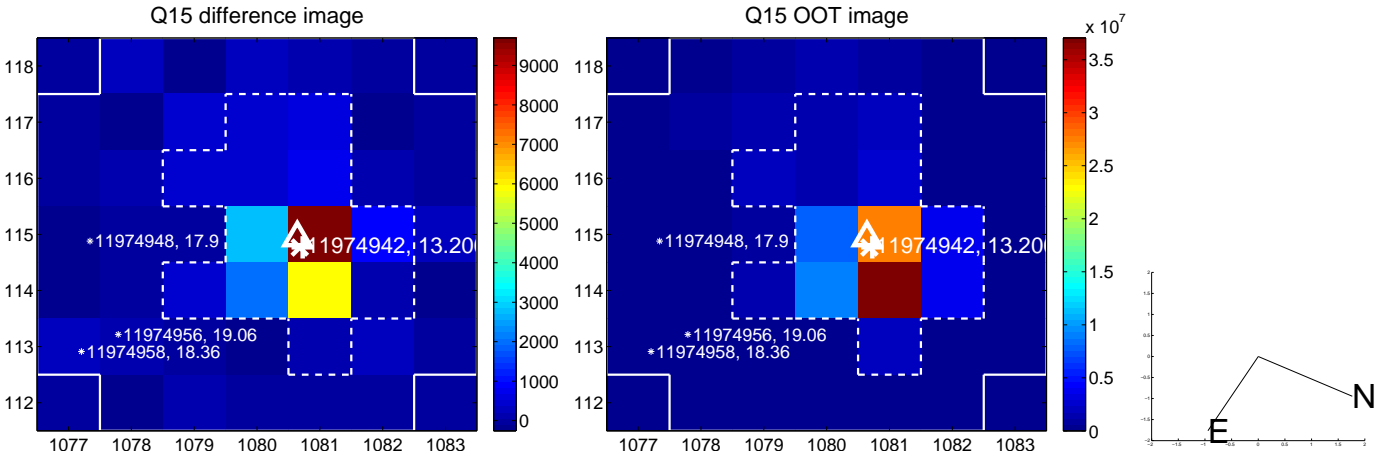
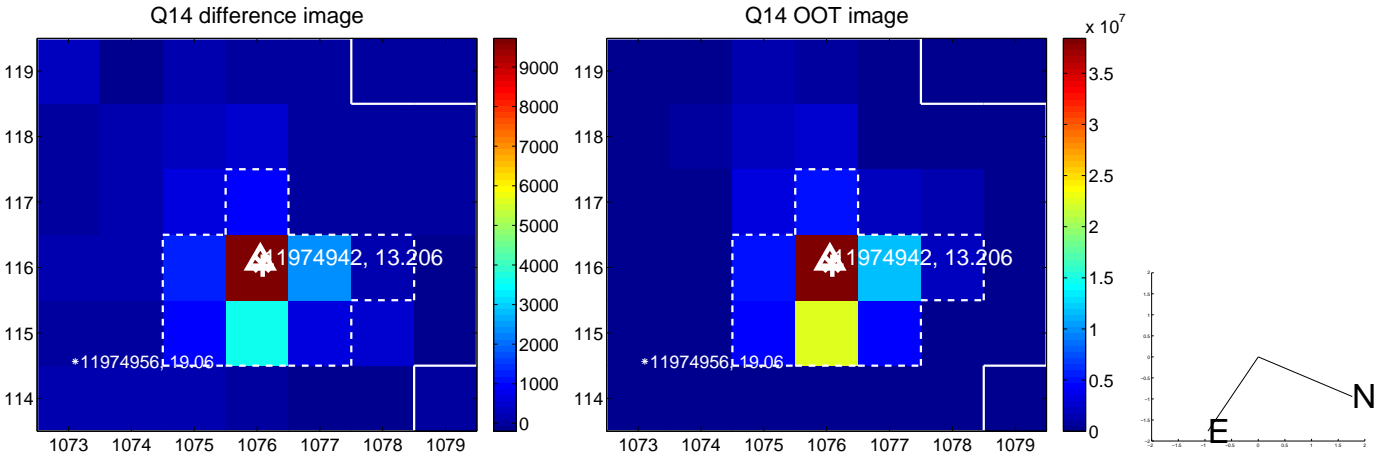
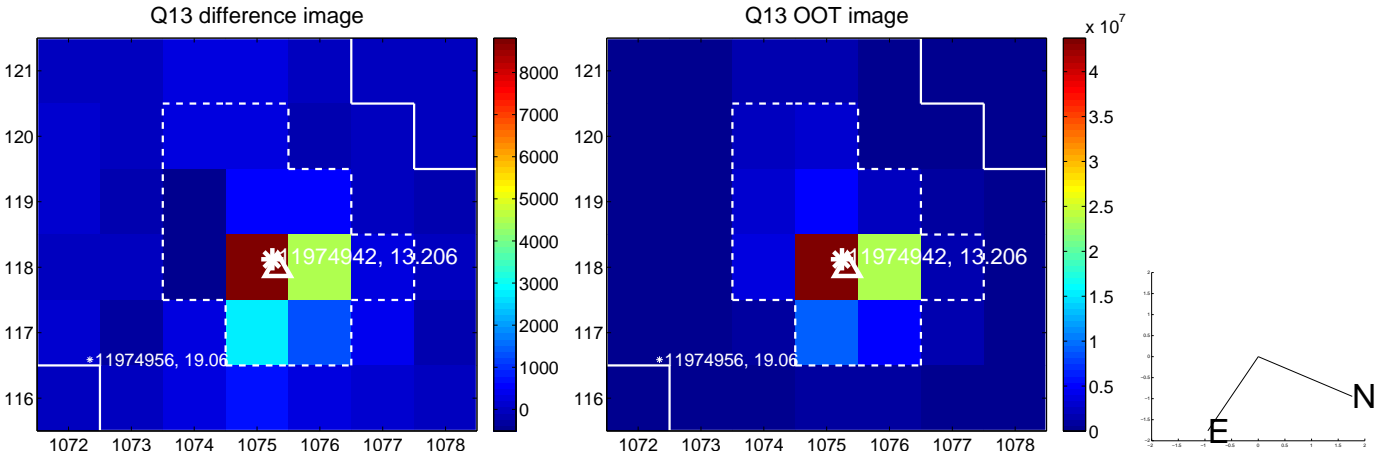
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



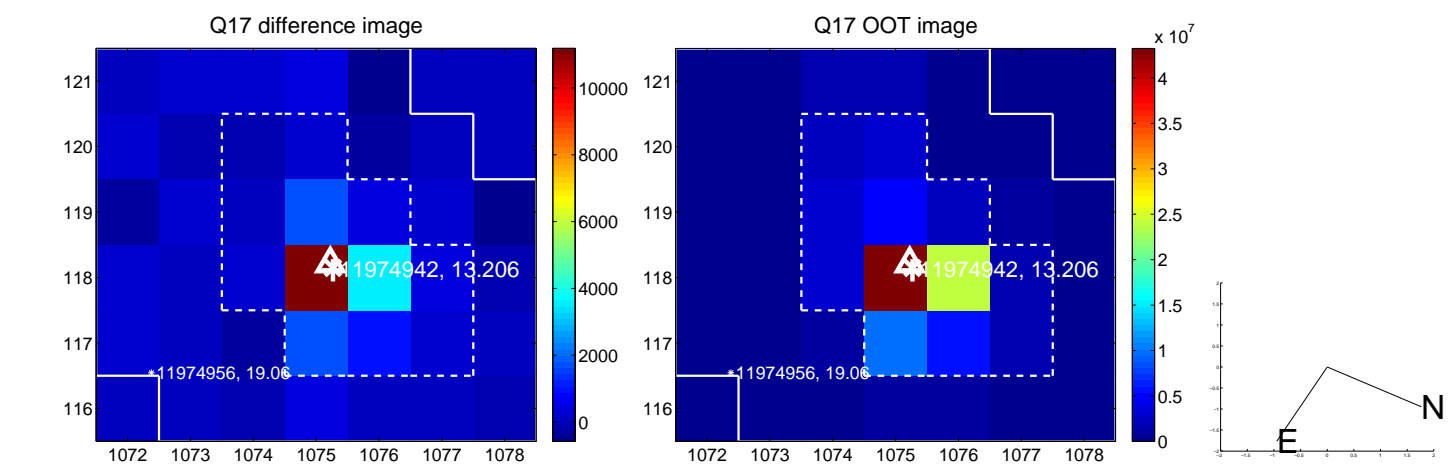
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



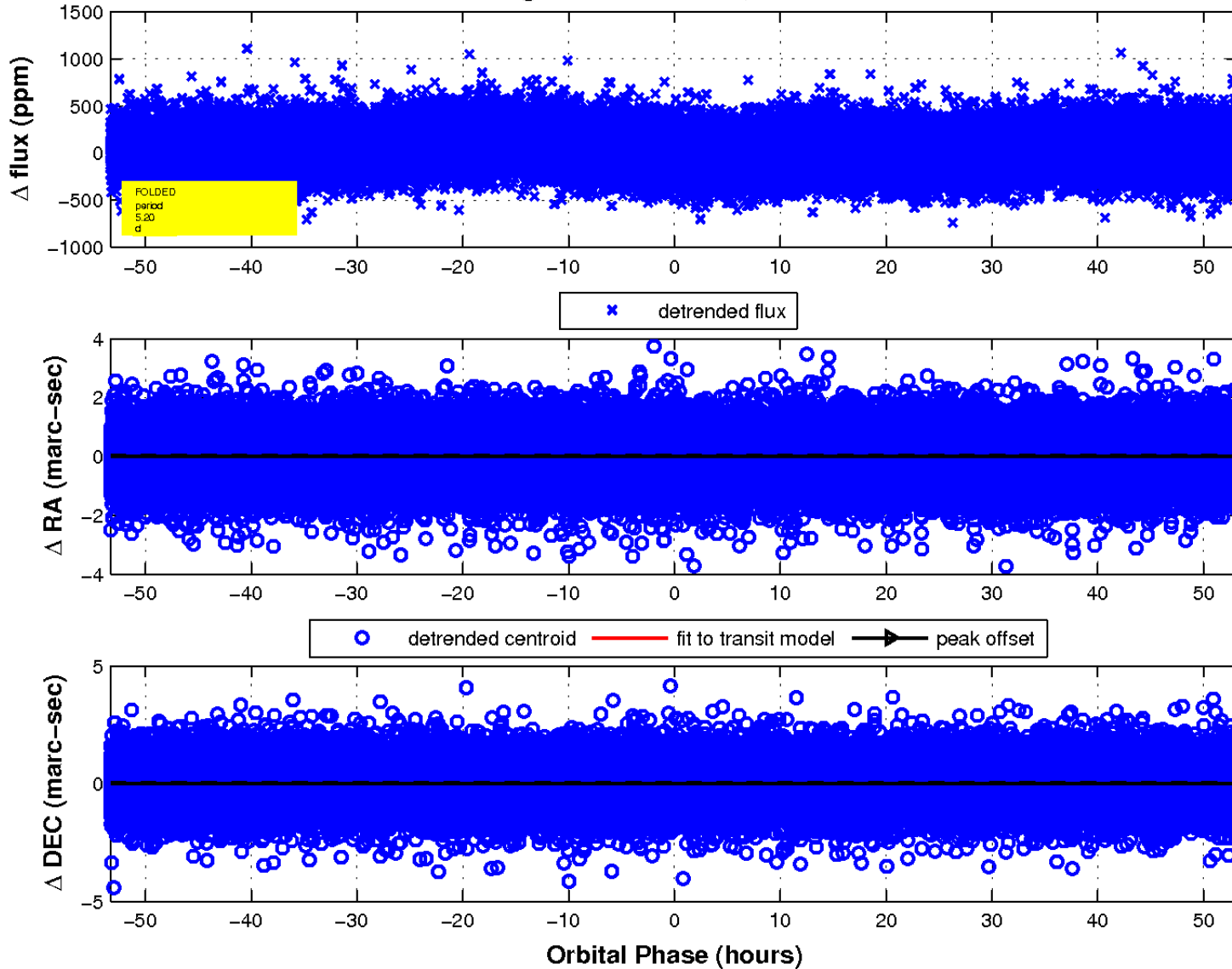
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

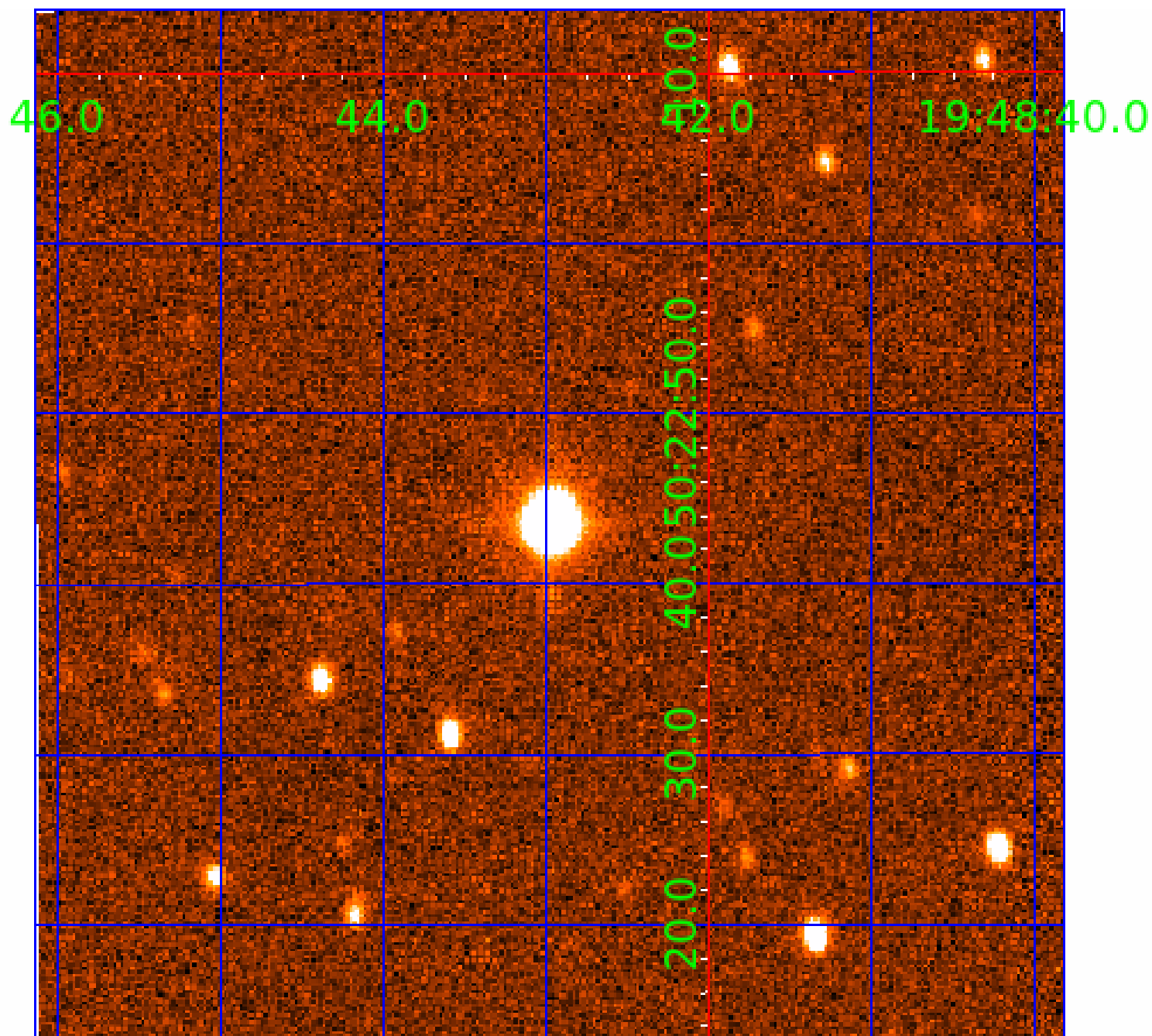


fluxWeightedCentroids, Planet 1 of 5



UKIRT Image

Declination



KIC 011974942

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})
011974942-01	OBS	No	5.202442	132.109065	31.9	17.764	9.9	9.7	3.78	6311	2.54	4258.55
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011974942-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011974942-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
011974942-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS
011974942-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS

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

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

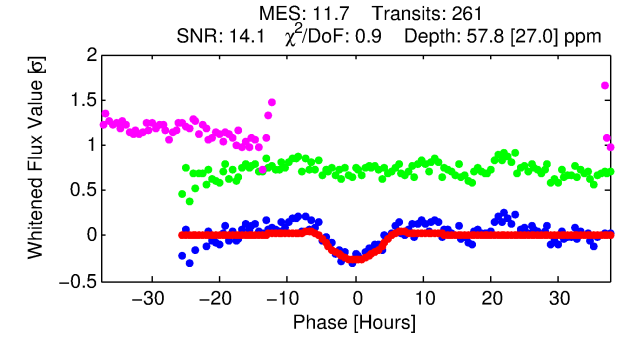
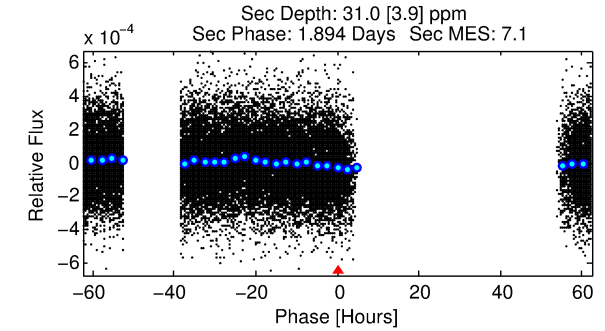
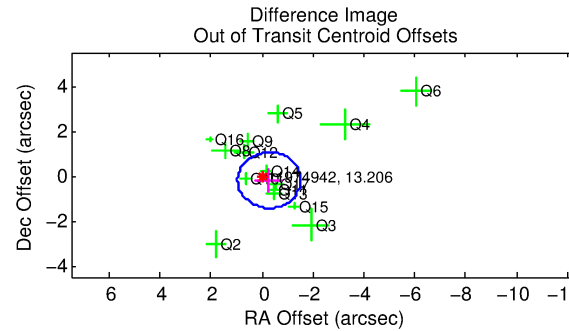
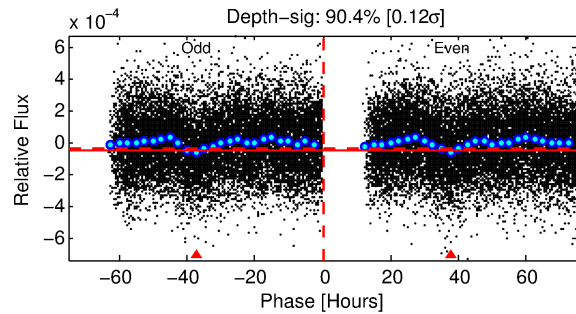
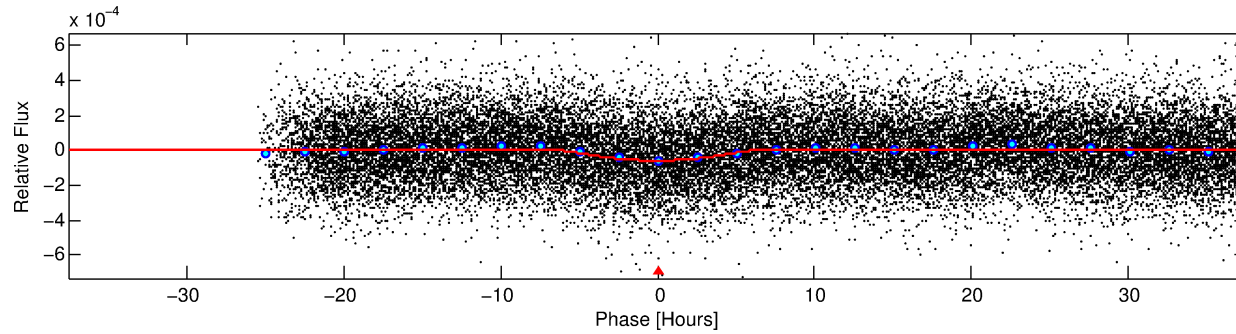
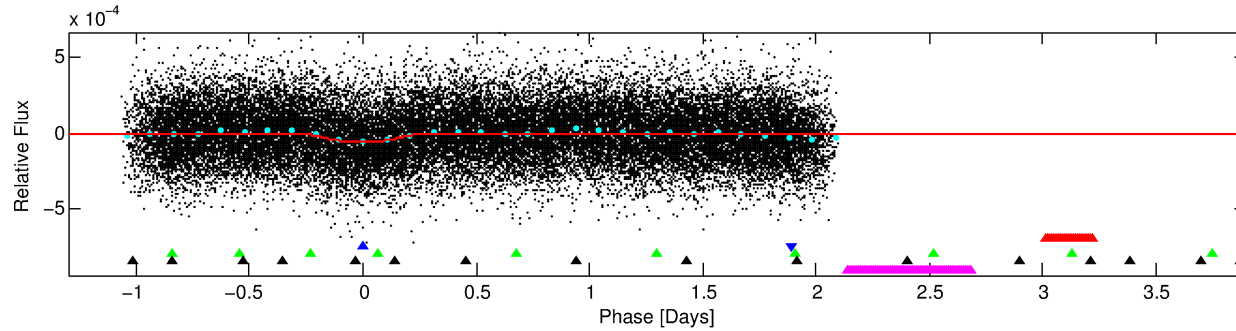
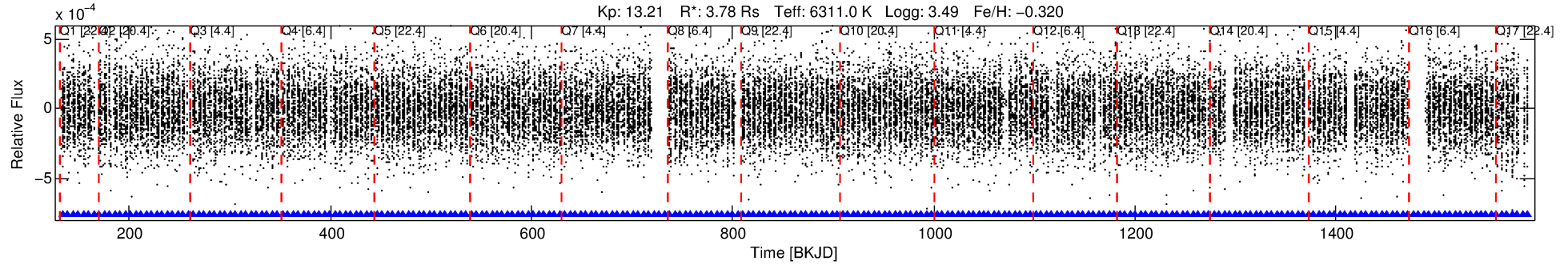
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011974942-02

No Significant Match Found

DV One-Page Summary

KIC: 11974942 Candidate: 2 of 5 Period: 5.203 d



DV Fit Results:

Period = 5.20317 [0.00012] d
Epoch = 134.0907 [0.0199] BKJD
Rp/R* = 0.0108 [0.0054]
a/R* = 1.16 [0.07]
b = 0.99 [0.01]
Seff = 4257.76 [2806.06]
Teq = 2060 [339] K
Rp = 4.45 [2.97] Re
a = 0.0690 [0.0285] AU
Ag = 4.10 [4.92] [0.63 σ]
Teffp = 4533 [1151] K [2.06 σ]

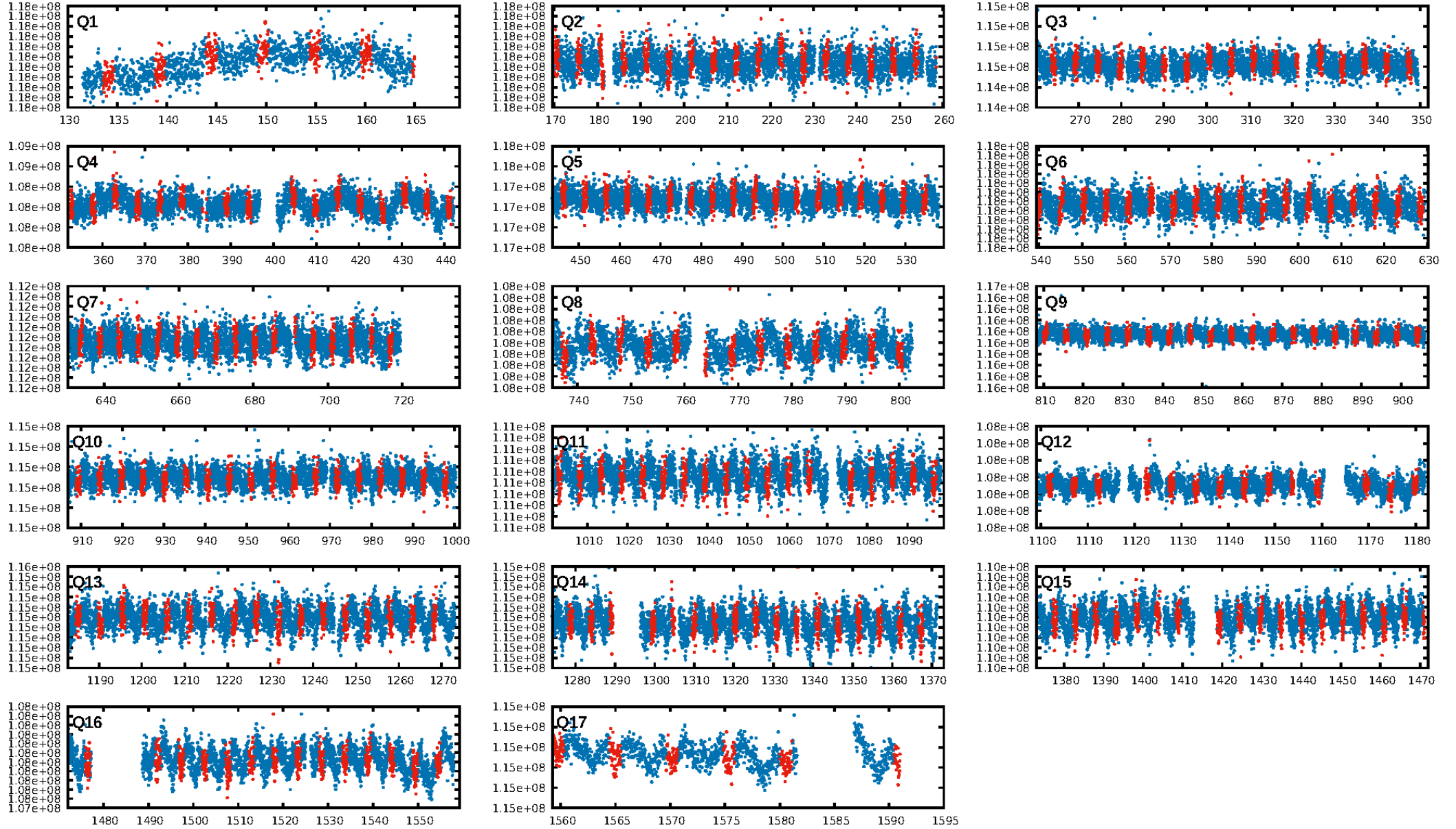
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00 σ]
LongPeriod-sig: 0.1% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [249/249]
GhostDiagnostic-chr: 3.066
Centroid-sig: 40.4%
Centroid-so: 1.038 arcsec [1.64 σ]
OotOffset-rm: 0.342 arcsec [0.83 σ]
KicOffset-rm: 0.282 arcsec [0.64 σ]
OotOffset-st: 4/3/4/4 [15]
KicOffset-st: 4/3/4/4 [15]
DiffImageQuality-fgm: 0.67 [10/15]
DiffImageOverlap-fno: 0.88 [15/17]

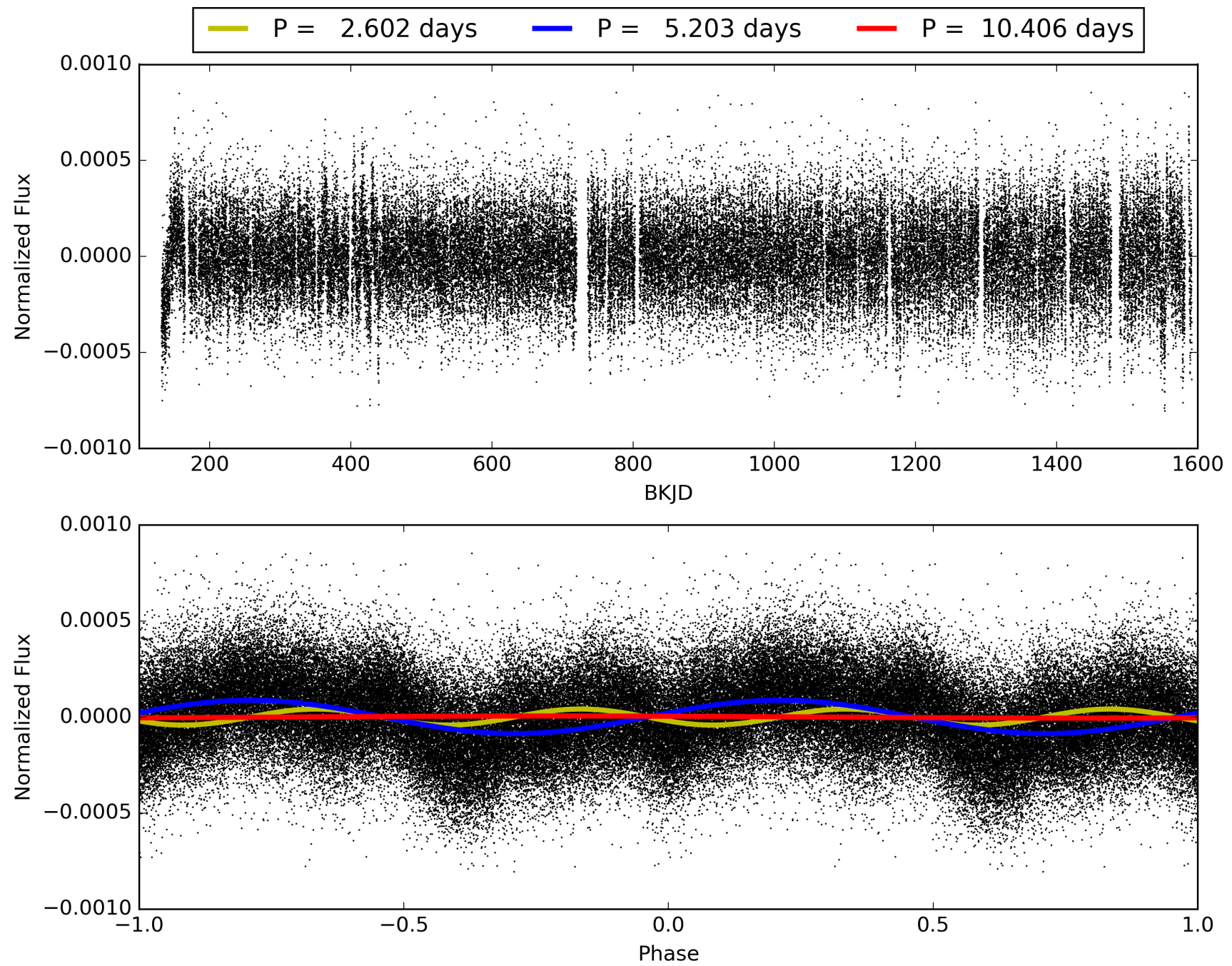
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:02:09 Z

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

TCE 011974942-02, PDC Light Curves

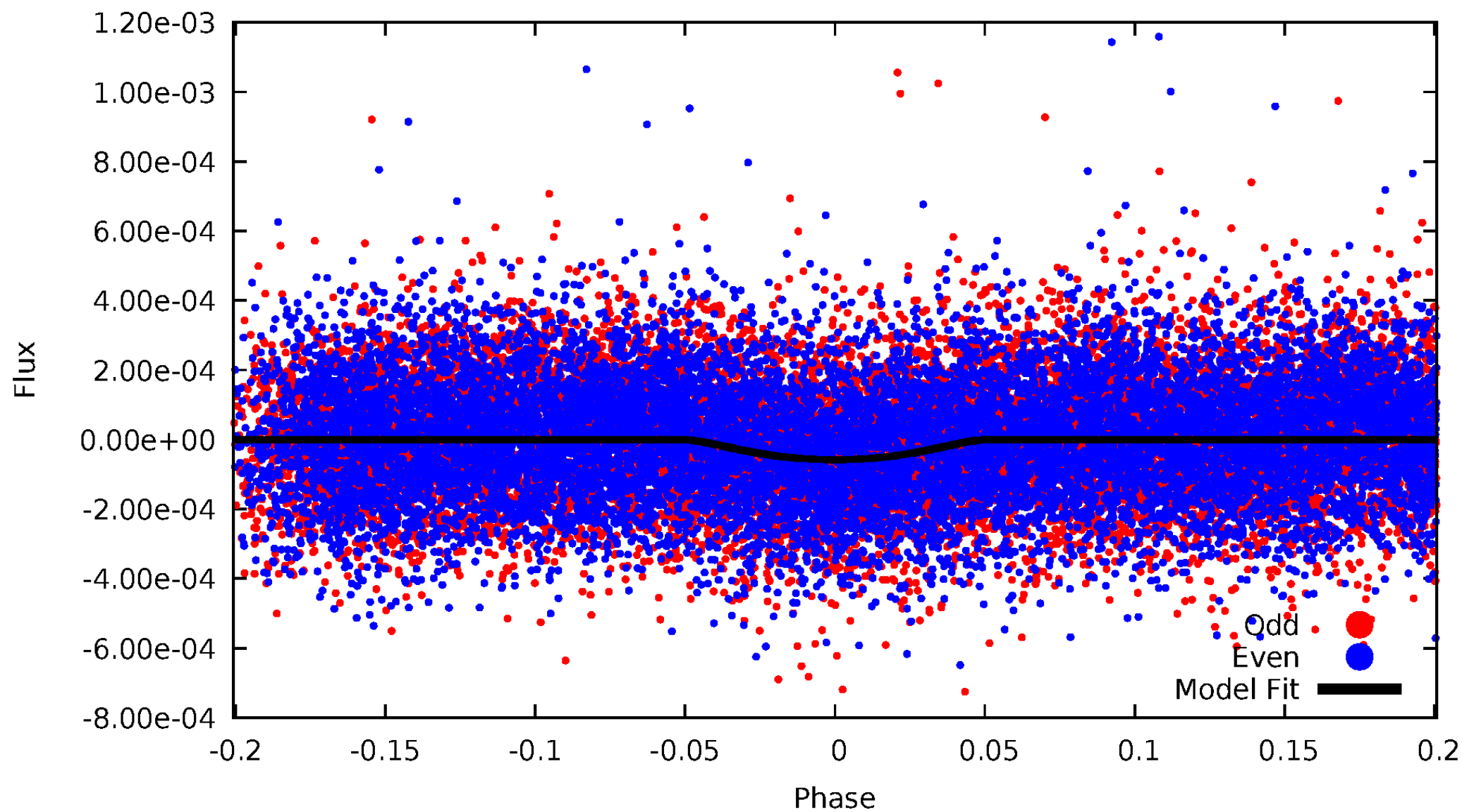


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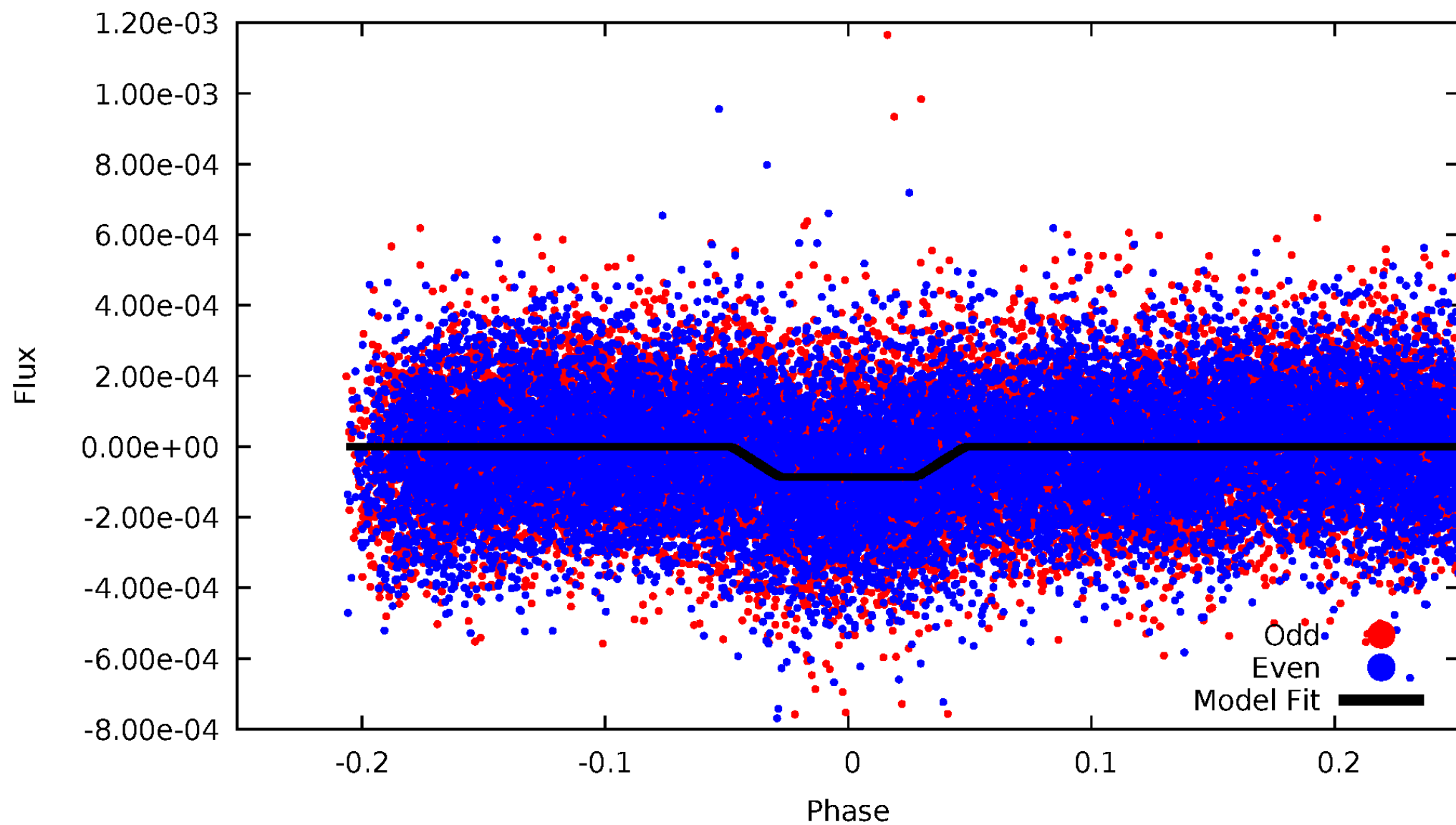
DV Odd/Even

TCE 011974942-02



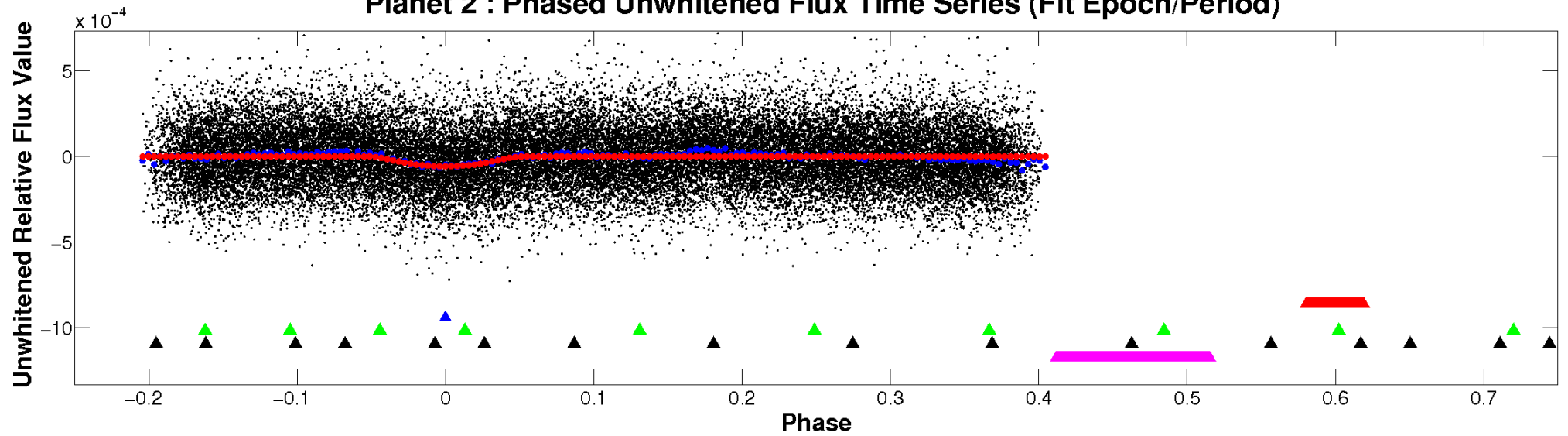
ALT Odd/Even

TCE 011974942-02

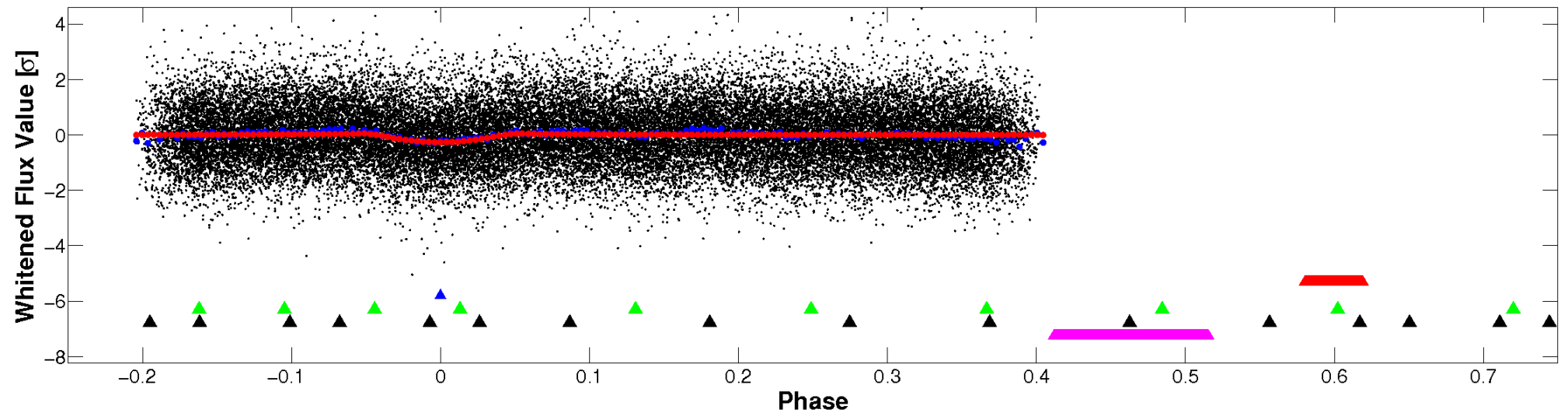


Non-Whitened Vs. Whitened Light Curve

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

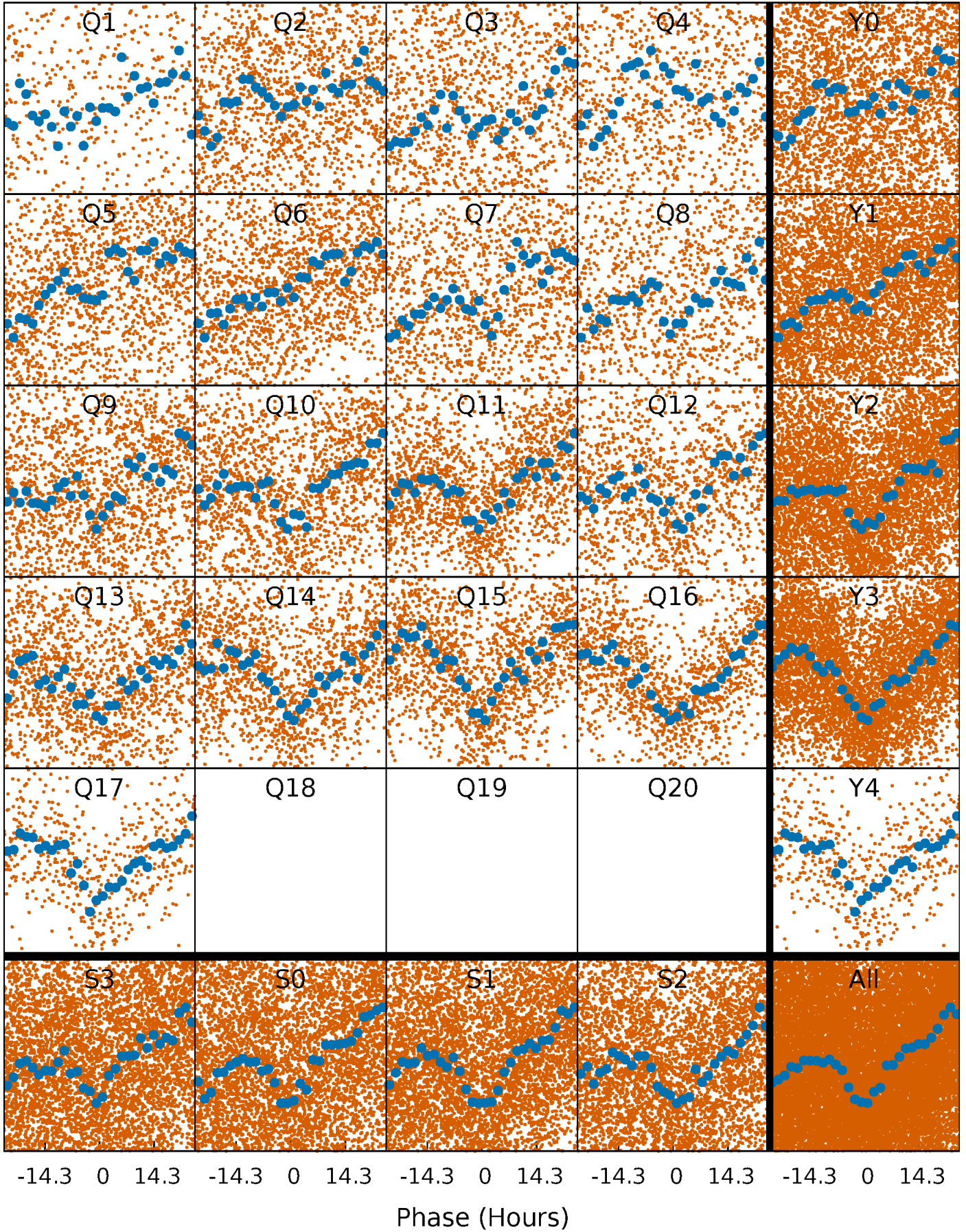


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



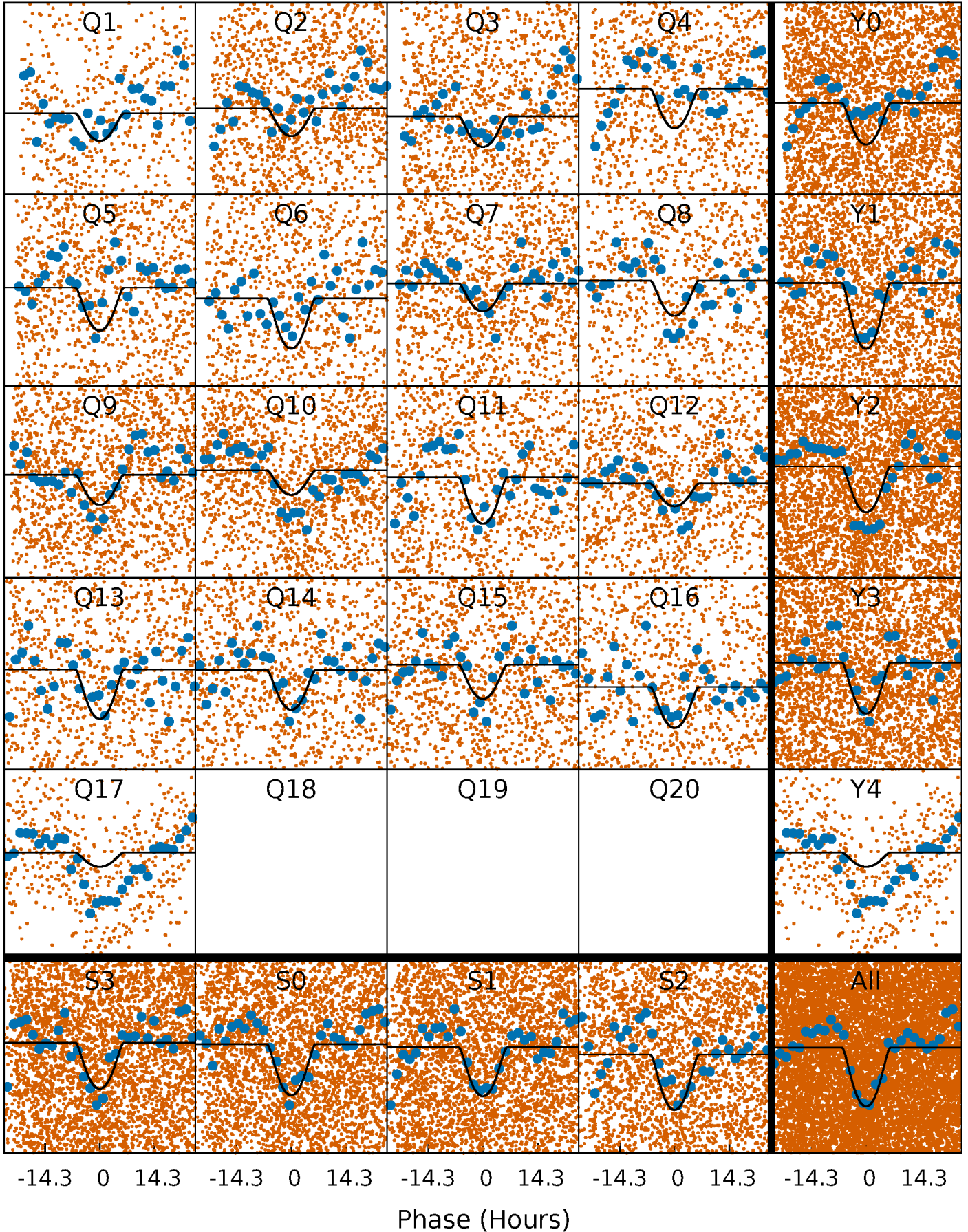
PDC Quarter-Phased Transit Curves

TCE 011974942-02 P= 5.203167 Days $T_0=134.090662$ (BKJD)



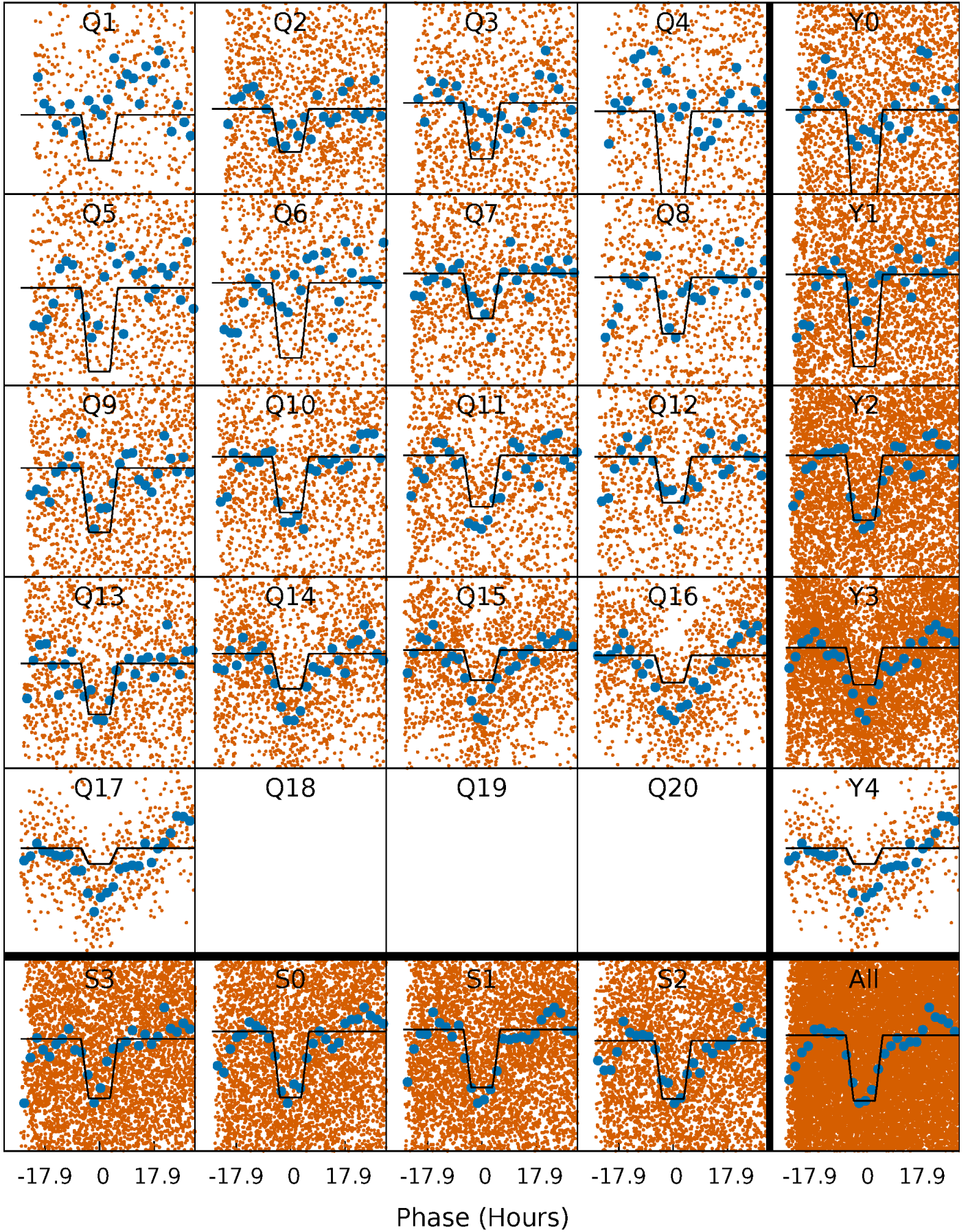
DV Quarter-Phased Transit Curves

TCE 011974942-02 P= 5.203167 Days $T_0=134.090662$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

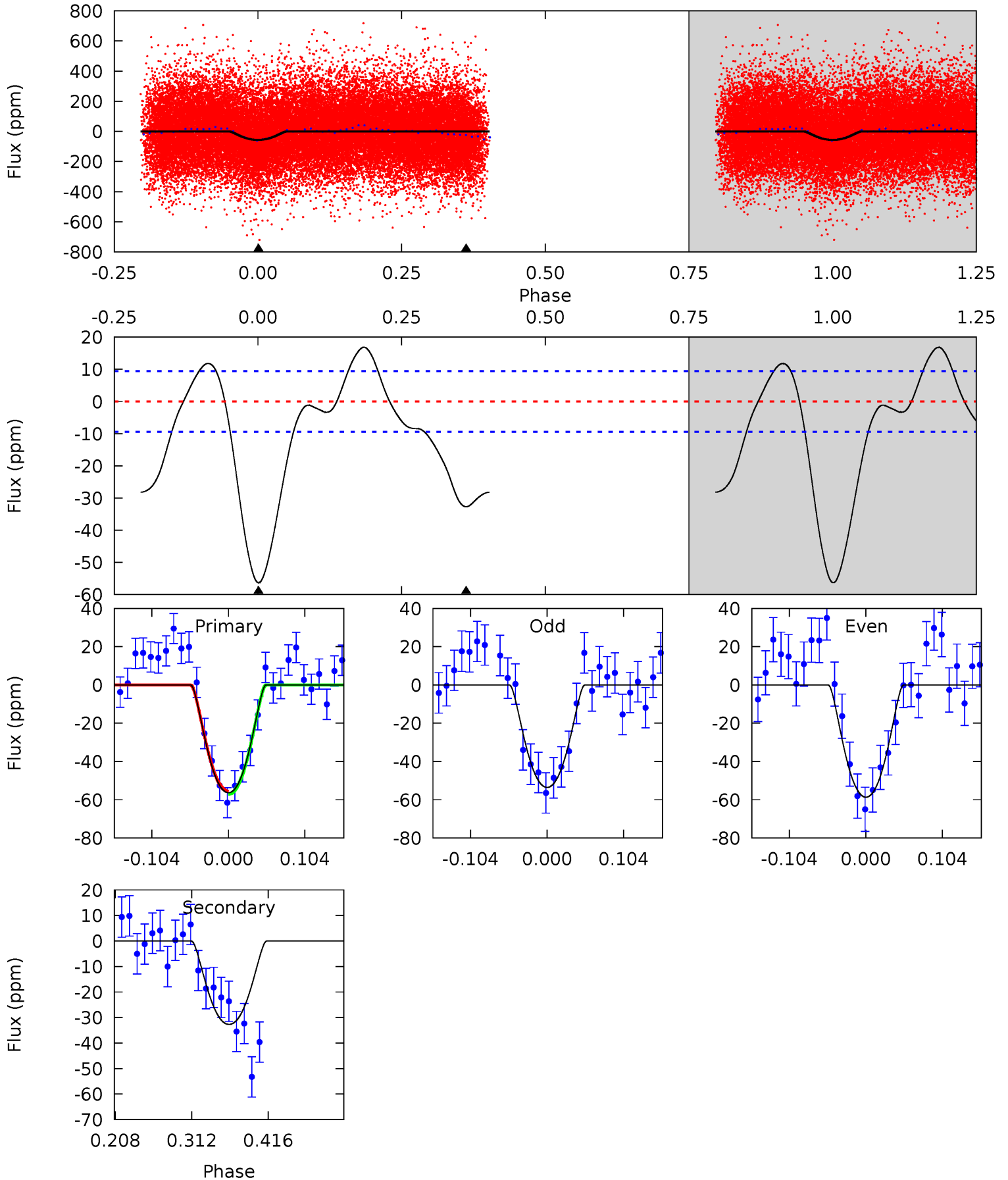
TCE 011974942-02 P= 5.203115 Days $T_0=134.117732$ (BKJD)



DV Model-Shift Uniqueness Test

011974942-02, P = 5.203167 Days, E = 128.887495 Days

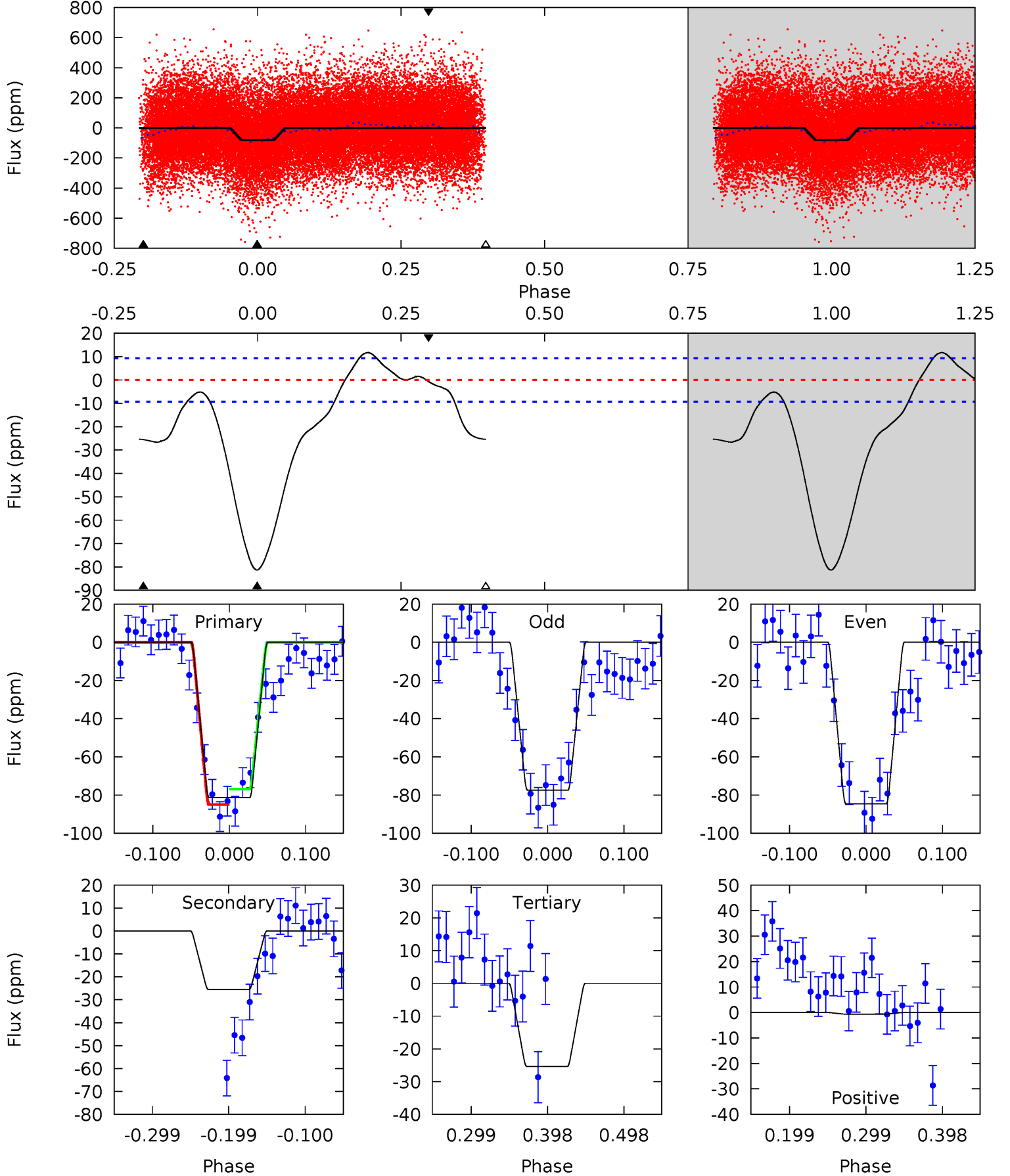
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.2	15.8	0	0	4.56	1.63	5.33	27.2	27.2	15.8	15.8	1.23	1.10	0.23	0.37



Alt Model-Shift Uniqueness Test

011974942-02, P = 5.203115 Days, E = 128.914617 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	12.5	12.5	-0.31	4.57	1.65	4.89	27.5	40.2	0.07	12.8	1.75	1.12	0.13	1.91



Stellar Parameters For KIC 011974942

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6311^{+169}_{-188}	$3.493^{+0.376}_{-0.094}$	$-0.320^{+0.400}_{-0.300}$	$3.779^{+0.669}_{-1.672}$	$1.622^{+0.186}_{-0.434}$	$0.042^{+0.134}_{-0.015}$
	+3%/-3%	+11%/-3%	+125%/-94%	+18%/-44%	+11%/-27%	+315%/-36%
Source	PHO1	FLK73	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 011974942-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-33 ± 2	$4.12^{+2.22}_{-1.91}$	2806^{+200}_{-313}	4583^{+1625}_{-638}	$4.997^{+11.963}_{-2.857}$
Alt.	-26 ± 2	$3.51^{+2.22}_{-1.96}$	2806^{+184}_{-287}	4666^{+2145}_{-758}	$5.475^{+22.438}_{-3.413}$

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

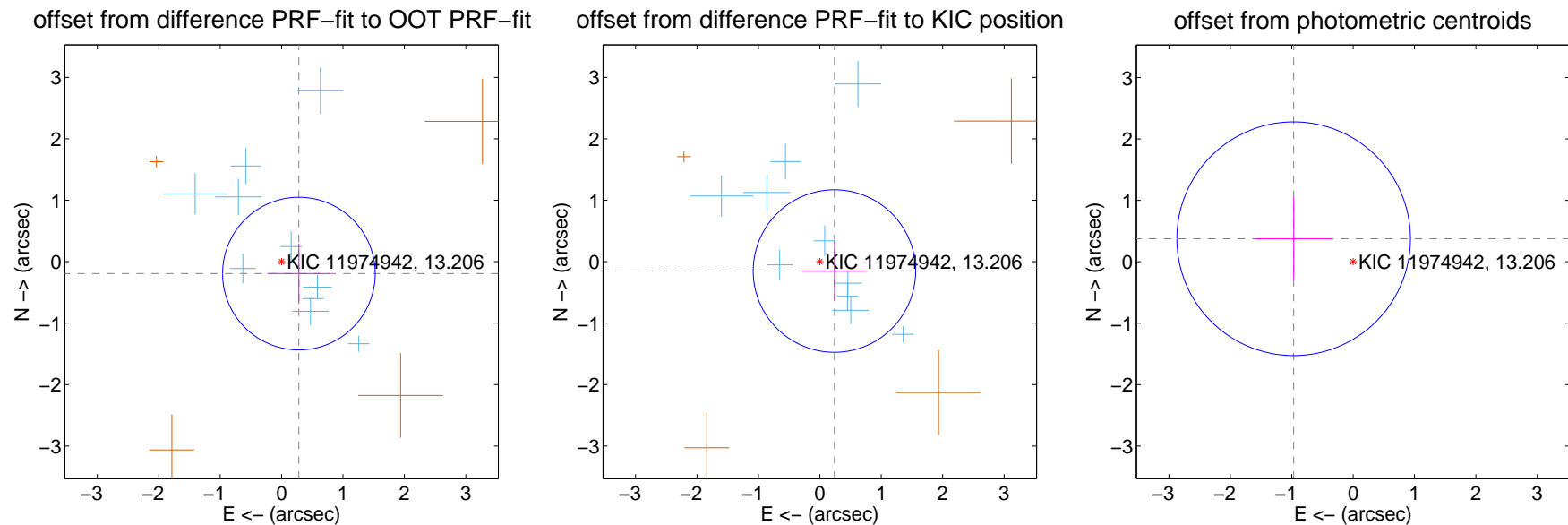
DV Centroid Data

Supplemental centroid analysis for 011974942-02. Kepler magnitude: 13.21. Transit SNR 14.13

There are 10 quarters with good PRF difference image offsets

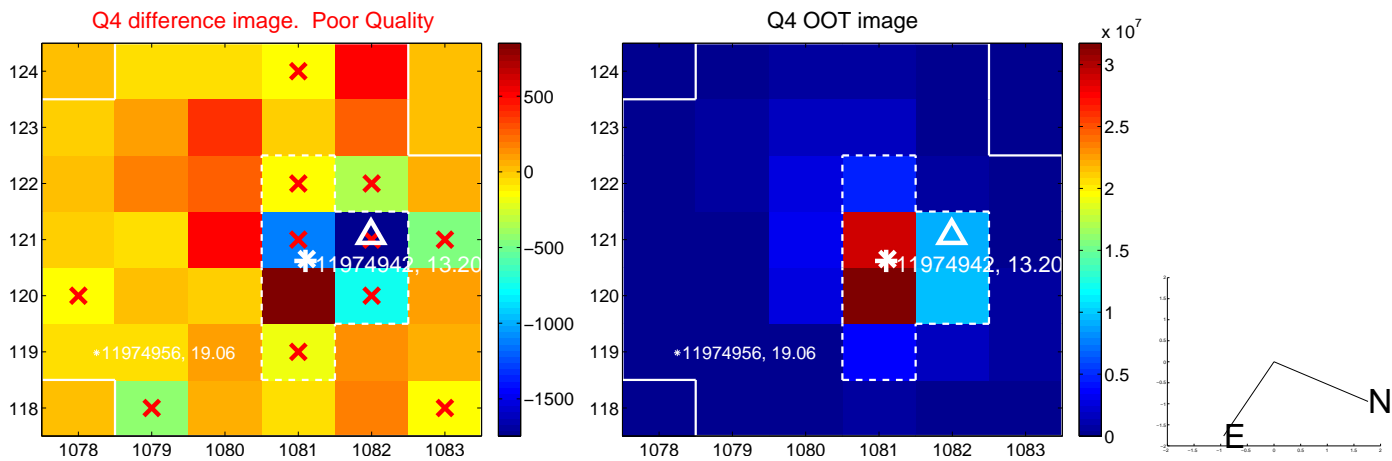
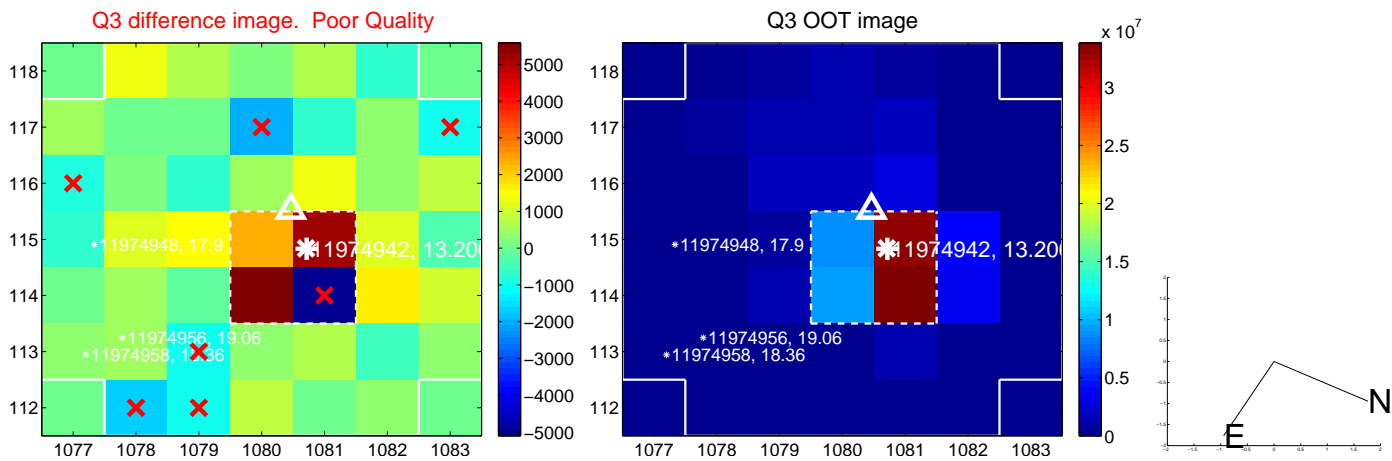
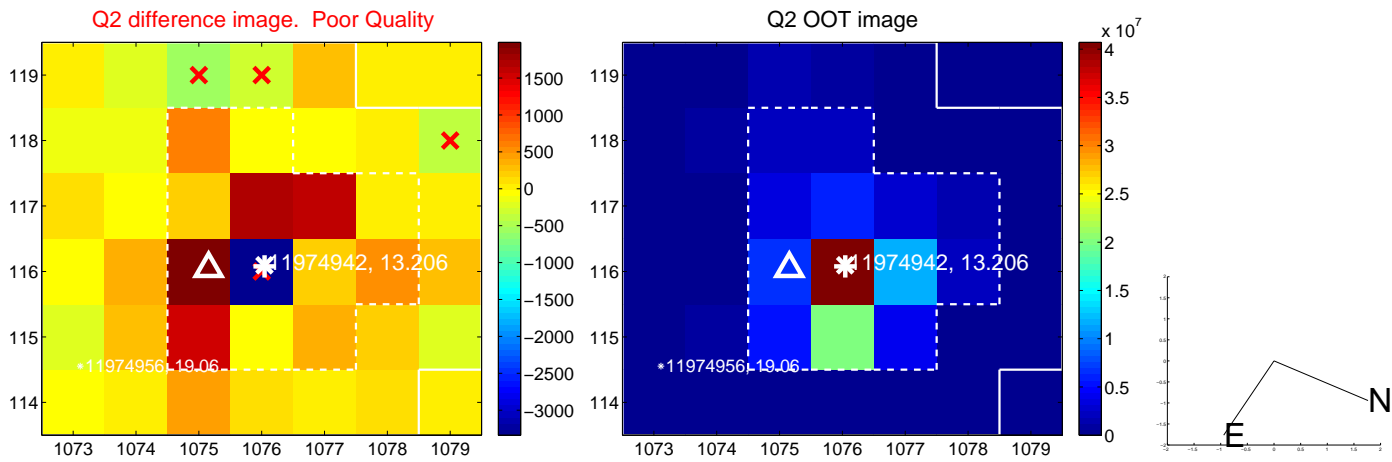
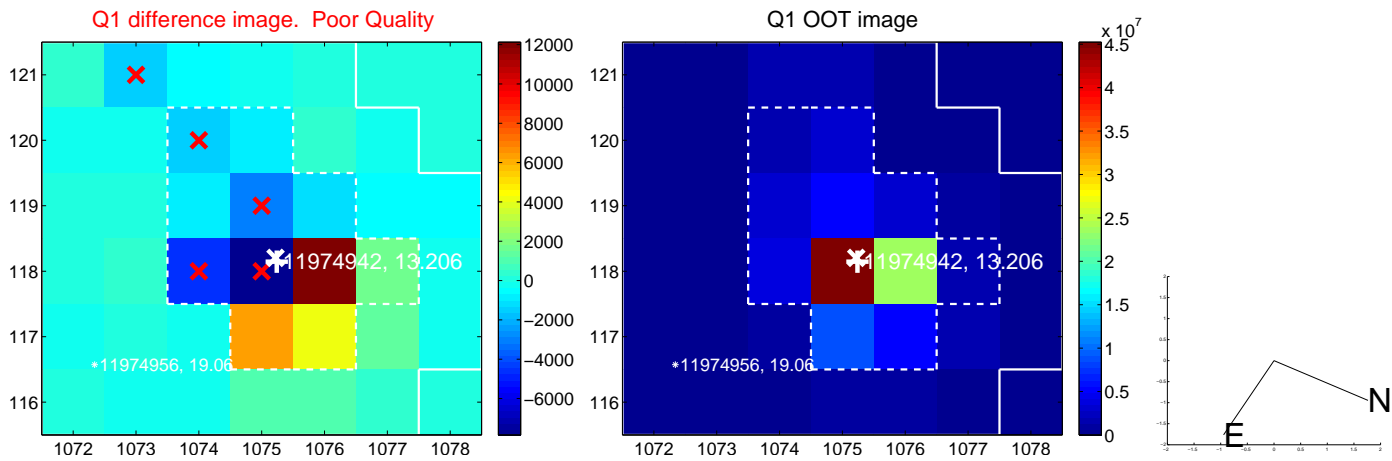
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.342 ± 0.414	0.83	-0.282 ± 0.514	-0.193 ± 0.489
PRF-fit source offset from KIC position	0.282 ± 0.441	0.64	-0.237 ± 0.526	-0.152 ± 0.484
photometric centroid source offset	1.04 ± 0.63	1.64	0.97 ± 0.63	0.38 ± 0.67

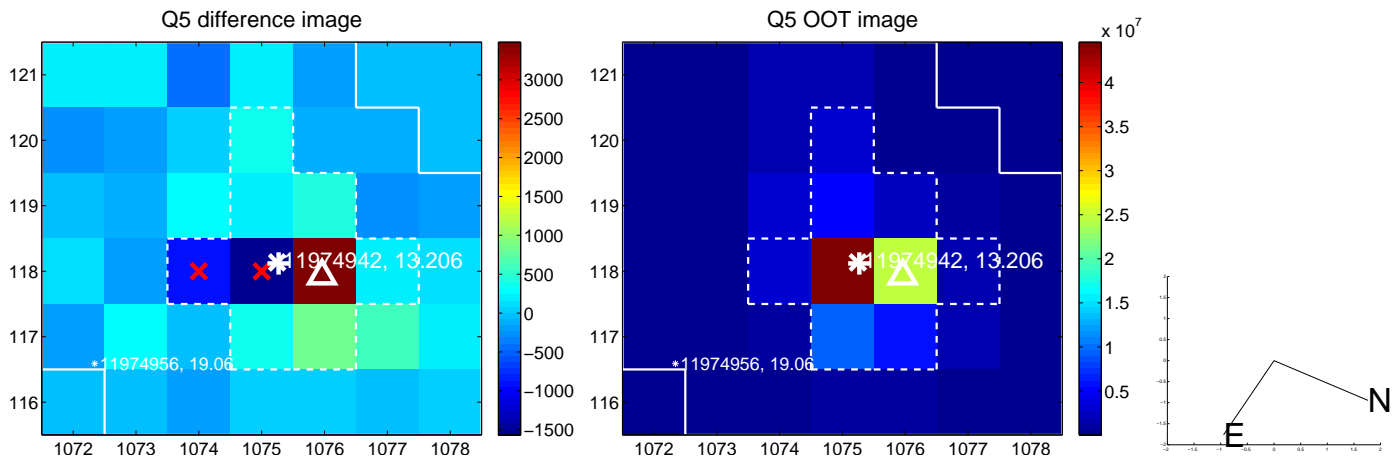


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

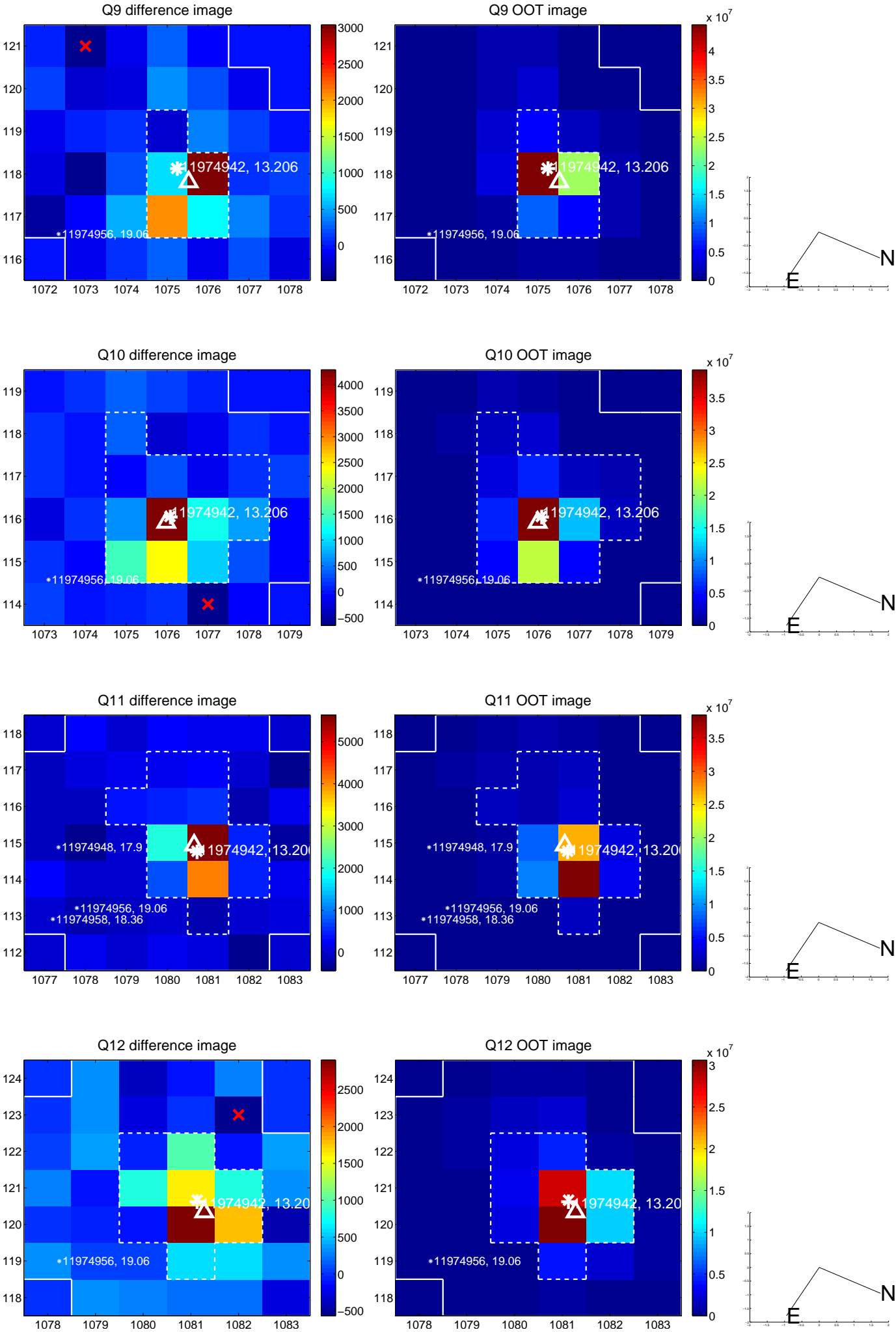
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



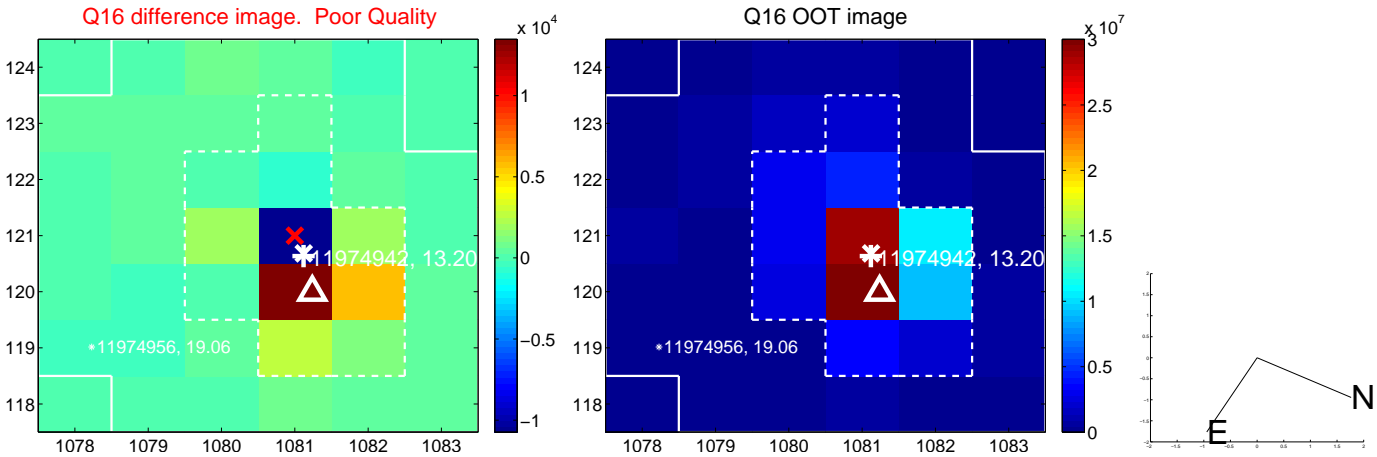
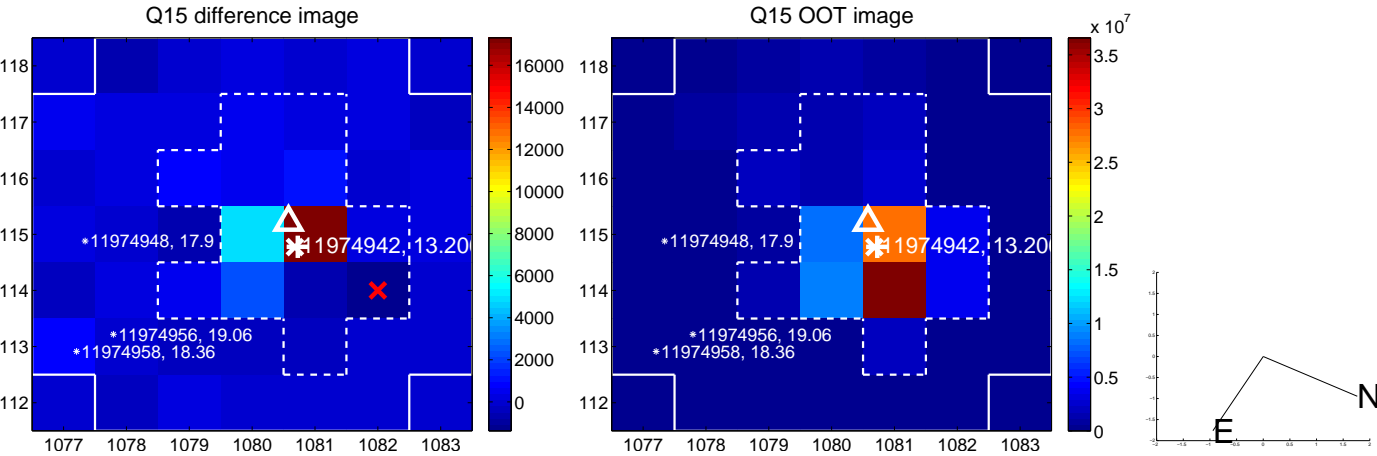
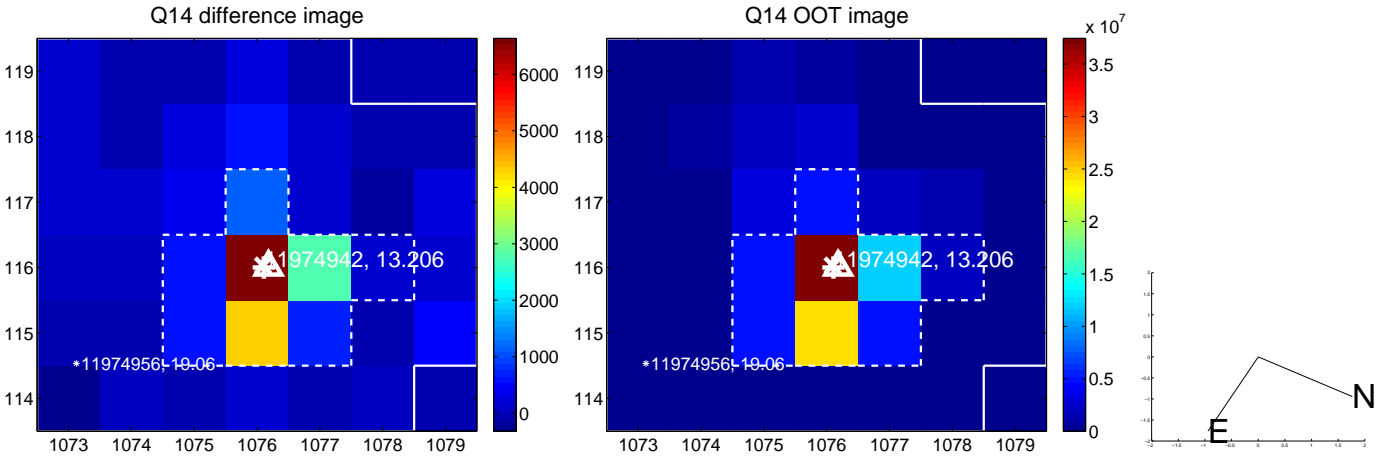
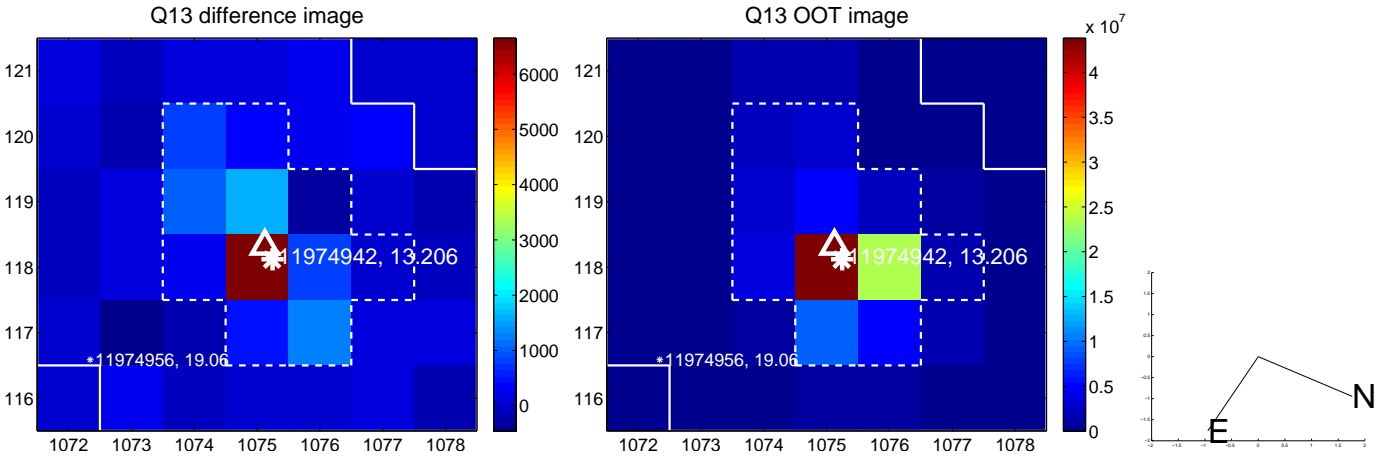
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



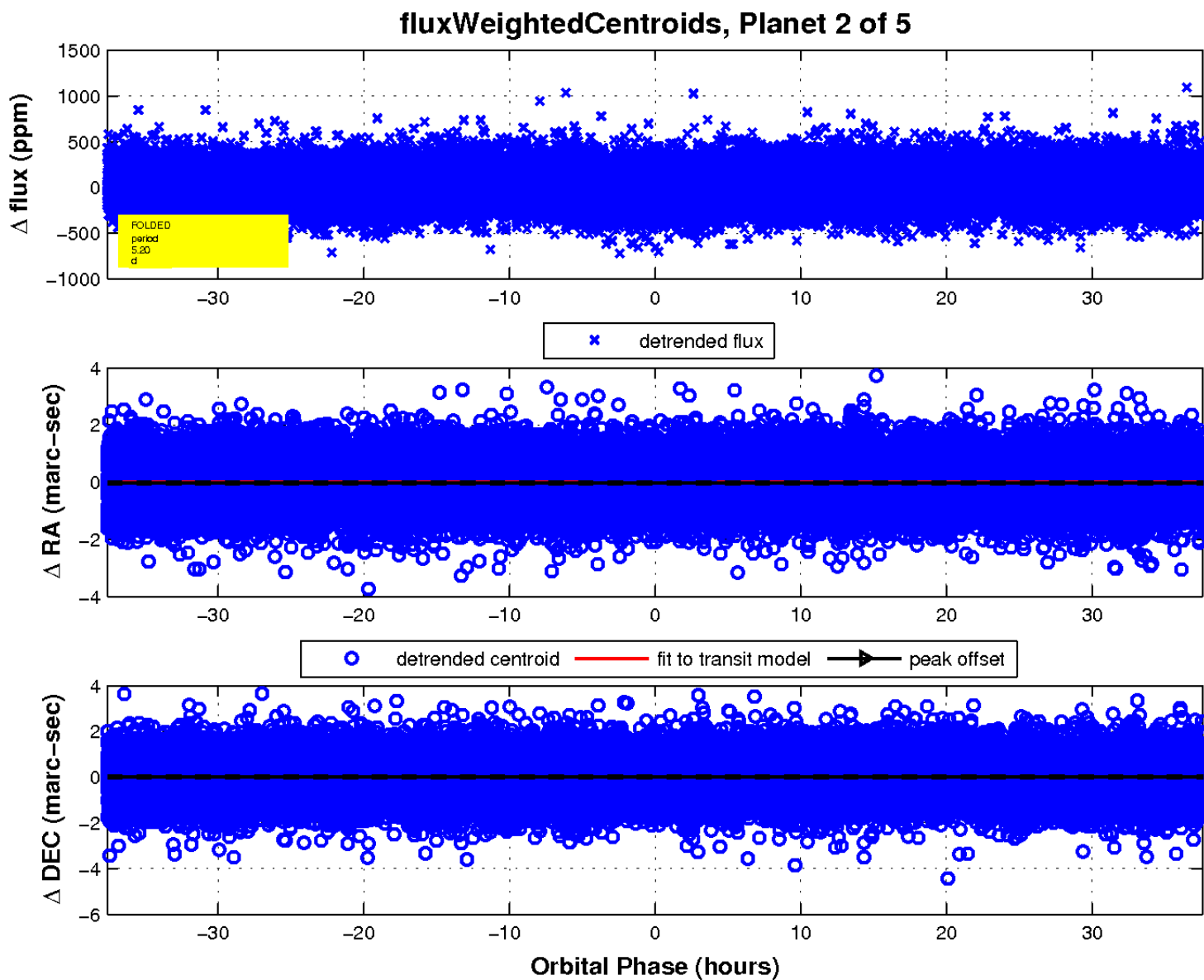
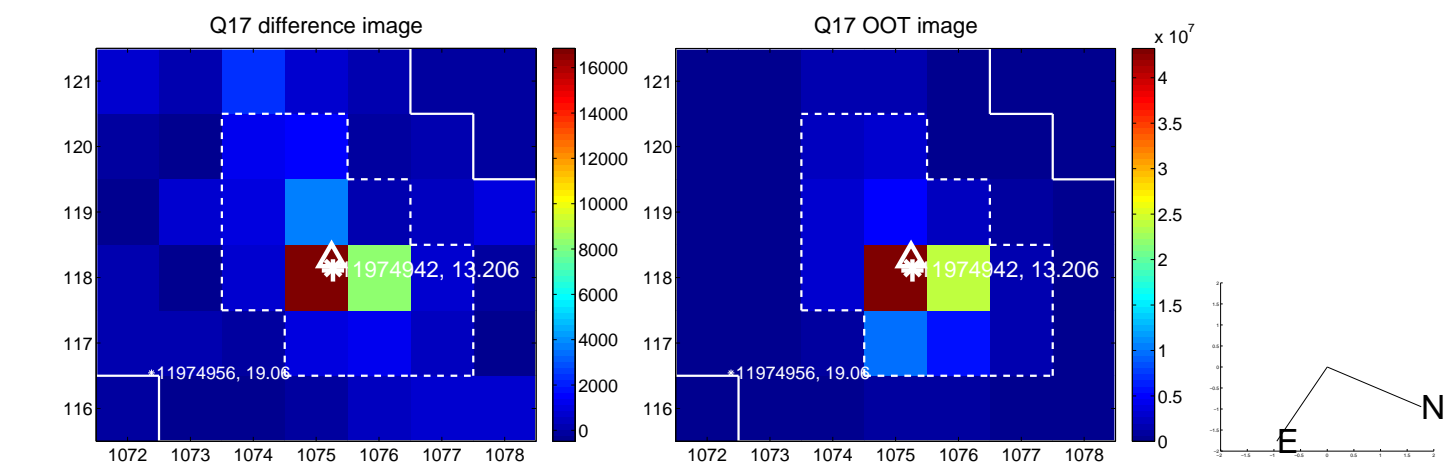
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

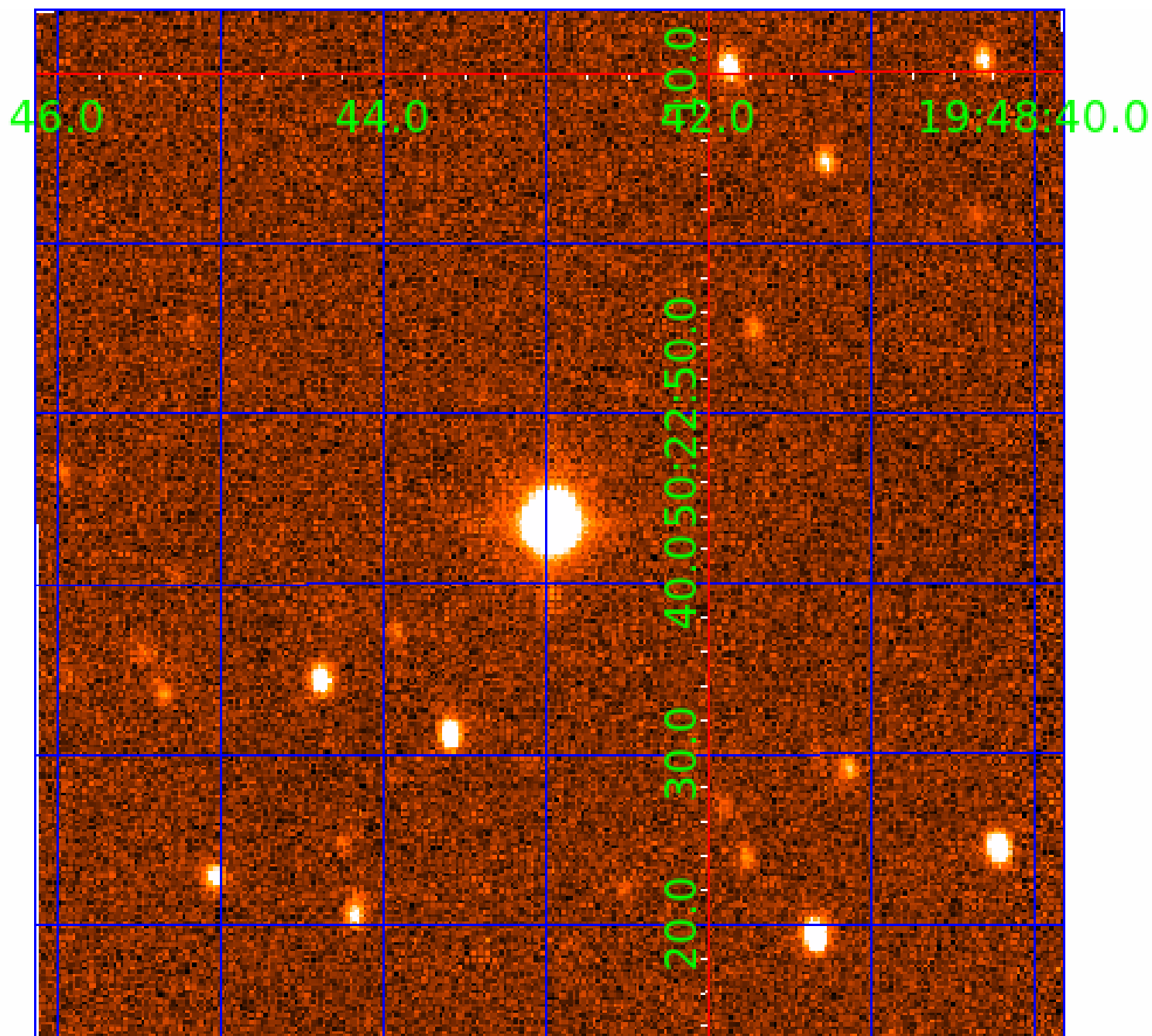


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011974942

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})
011974942-01	OBS	No	5.202442	132.109065	31.9	17.764	9.9	9.7	3.78	6311	2.54	4258.55
011974942-02	OBS	No	5.203167	134.090662	57.8	12.530	11.7	14.1	3.78	6311	4.45	4257.76
011974942-03	OBS	No	155.481879	180.689306	438.1	3.532	13.1	10.2	3.78	6311	8.49	45.92
011974942-05	OBS	No	5.205100	136.233153	117.3	62.461	7.9	11.9	3.78	6311	7.41	4255.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011974942-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011974942-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
011974942-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS
011974942-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS

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

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

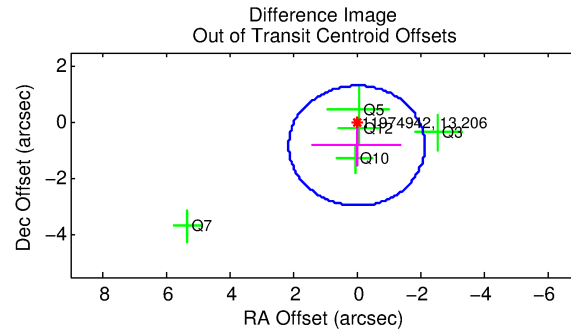
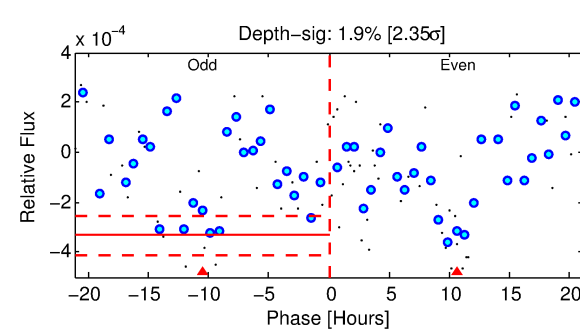
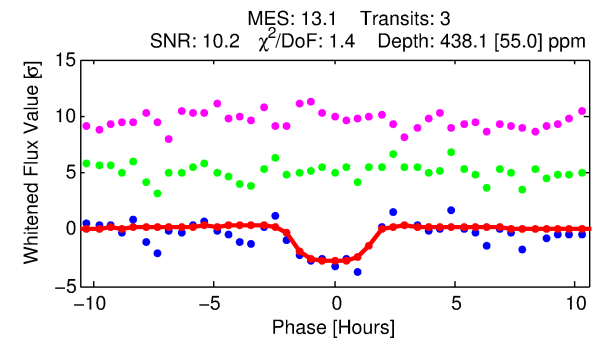
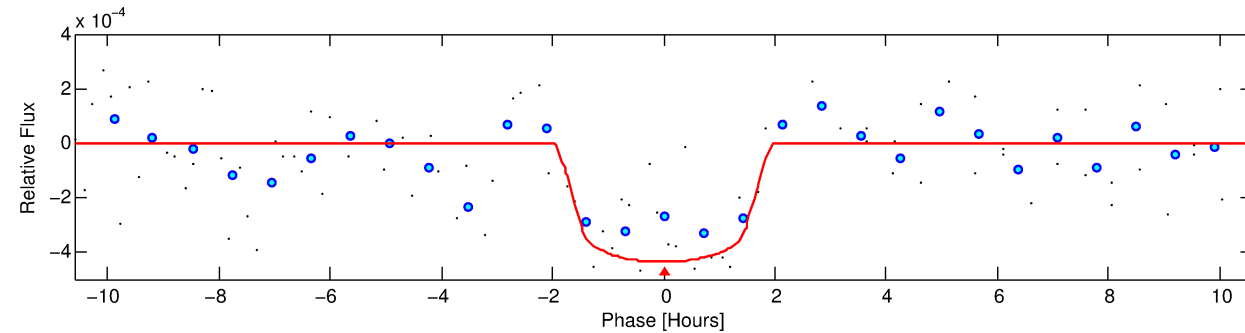
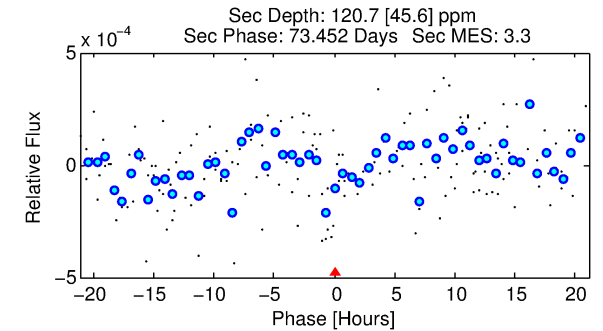
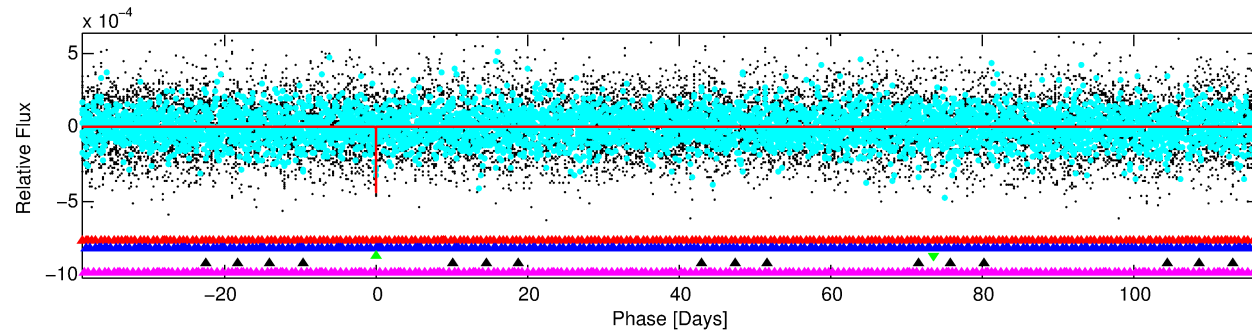
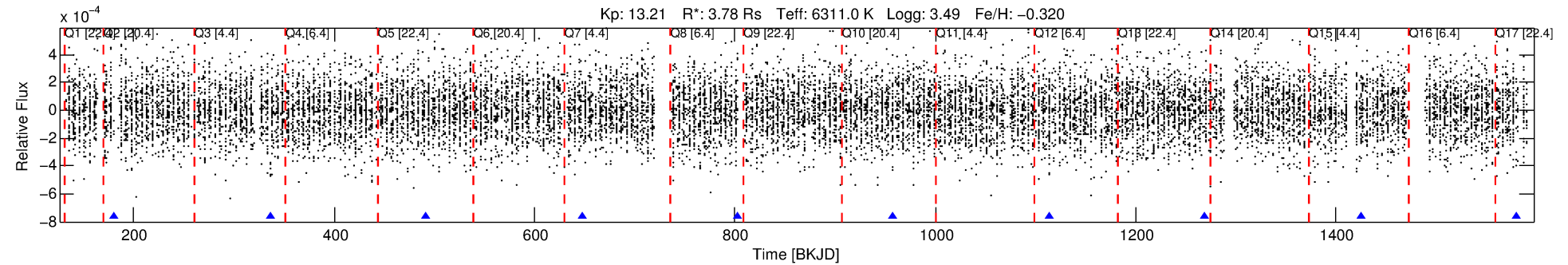
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011974942-03

No Significant Match Found

DV One-Page Summary

KIC: 11974942 Candidate: 3 of 5 Period: 155.482 d



DV Fit Results:

Period = 155.48188 [0.00815] d
Epoch = 180.6893 [0.0469] BKJD
Rp/R* = 0.0206 [0.0609]
a/R* = 246.67 [3935.23]
b = 0.71 [11.25]
Seff = 45.92 [30.26]
Teq = 664 [109] K
Rp = 8.49 [25.40] Re
a = 0.6649 [0.2744] AU
Ag = 407.16 [2428.64] [0.17σ]
Teffp = 4610 [6835] K [0.58σ]

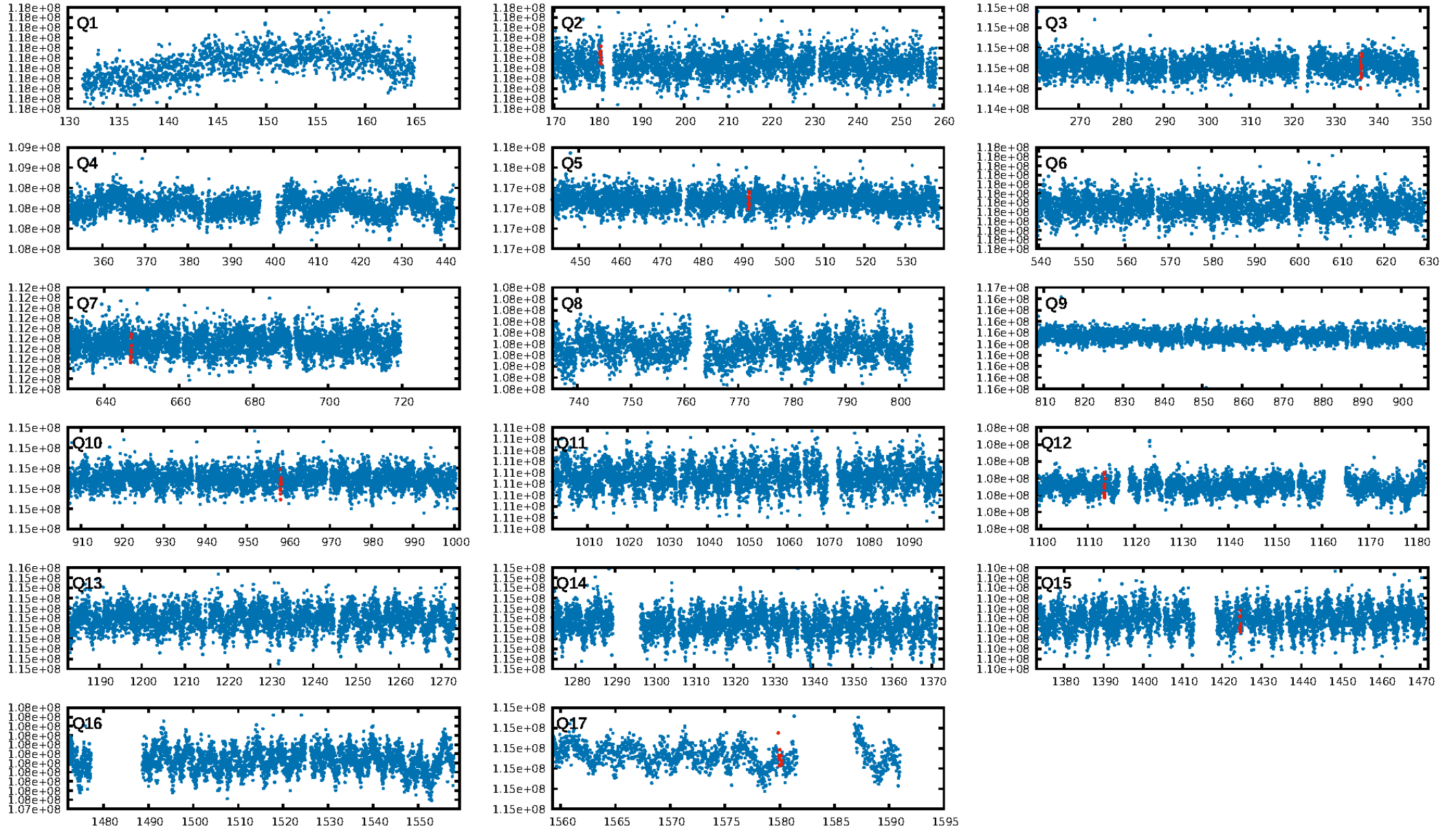
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [112.45σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 62.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.8106
Centroid-sig: 42.0%
Centroid-so: 0.990 arcsec [1.46σ]
OotOffset-rm: 0.826 arcsec [1.16σ]
KicOffset-rm: 0.982 arcsec [1.24σ]
OotOffset-st: 1/2/1/1 [5]
KicOffset-st: 1/2/1/1 [5]
DiffImageQuality-fgm: 0.60 [3/5]
DiffImageOverlap-fno: 0.12 [1/8]

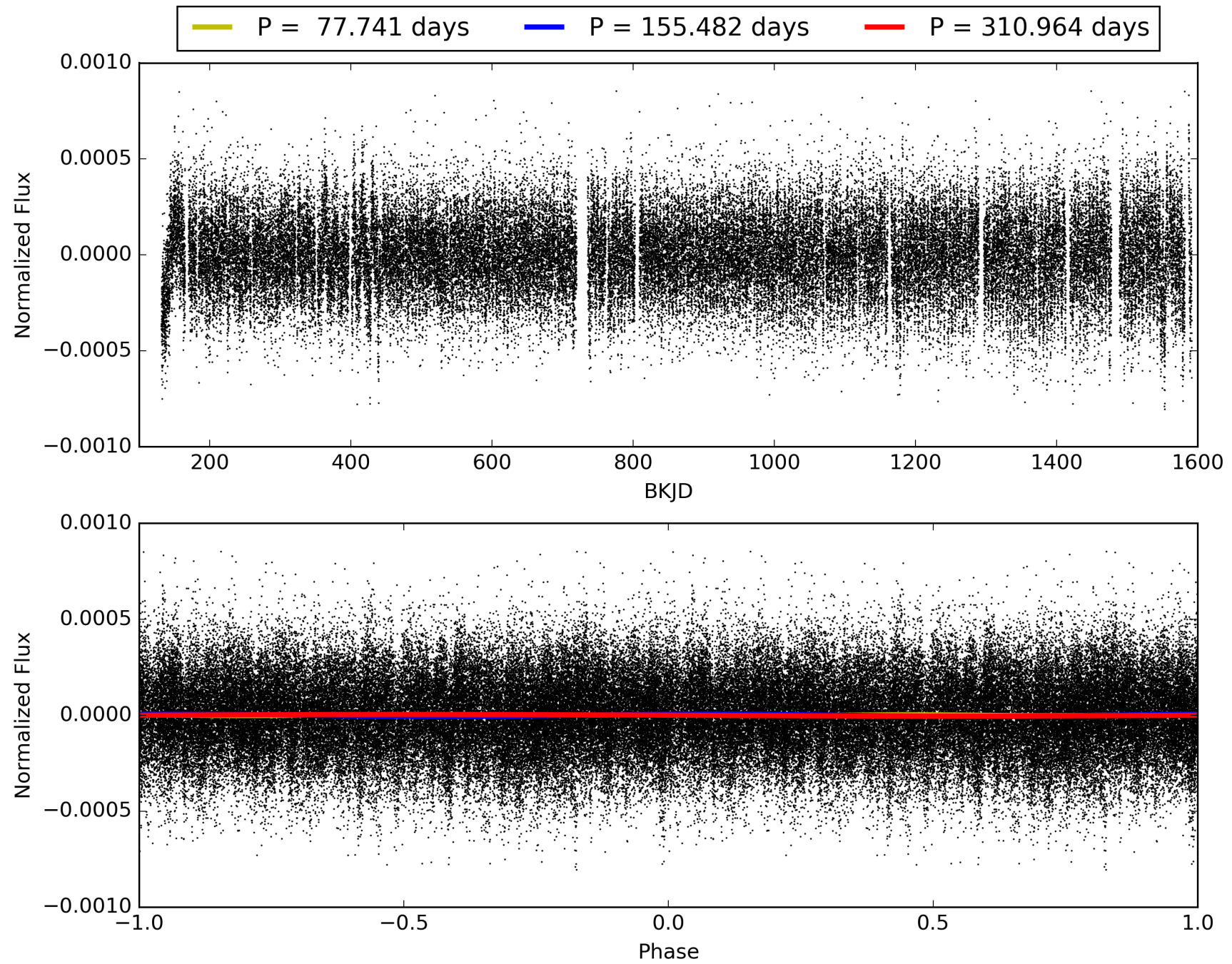
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:02:17 Z

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

TCE 011974942-03, PDC Light Curves

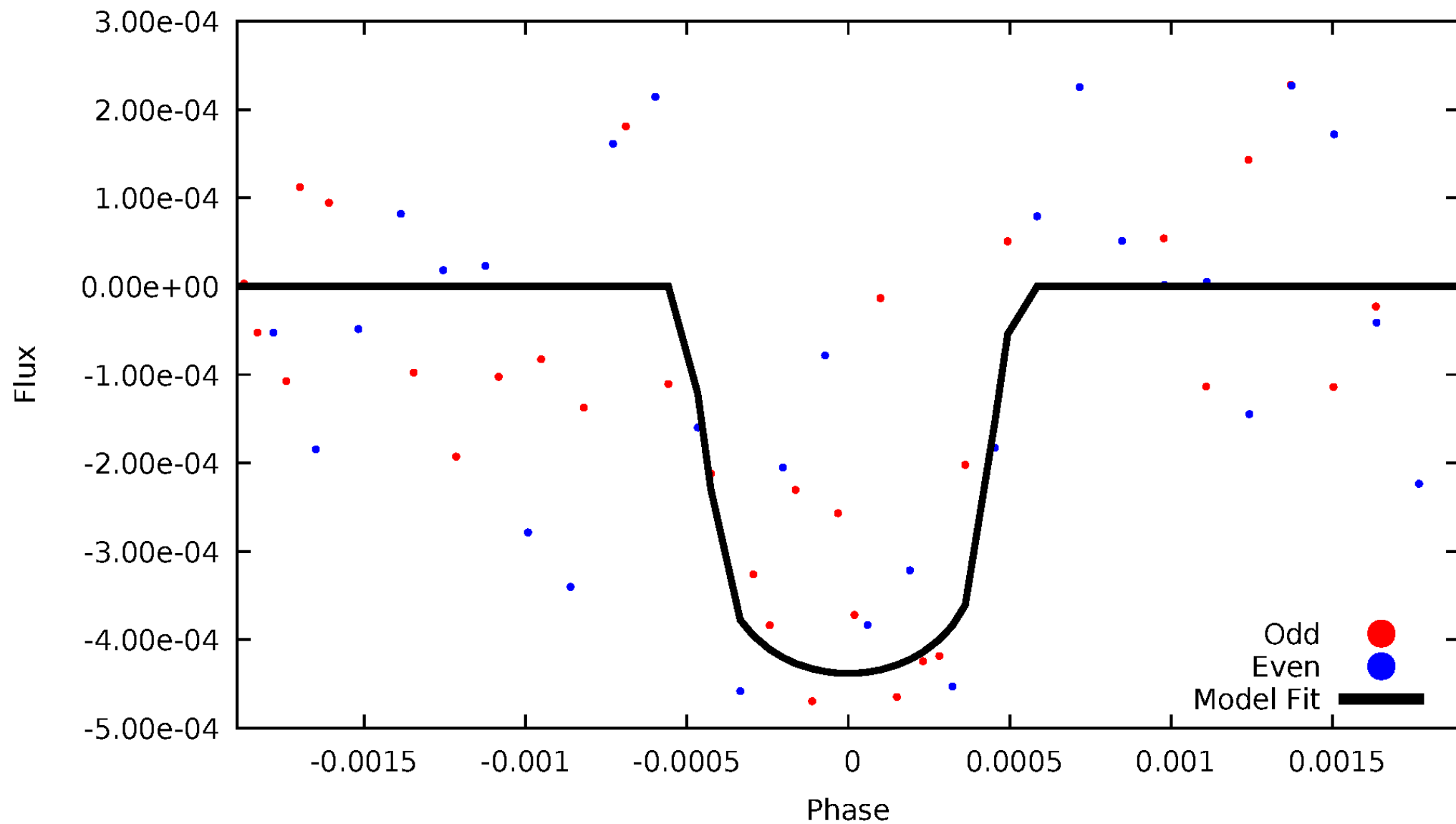


TCE 011974942-03



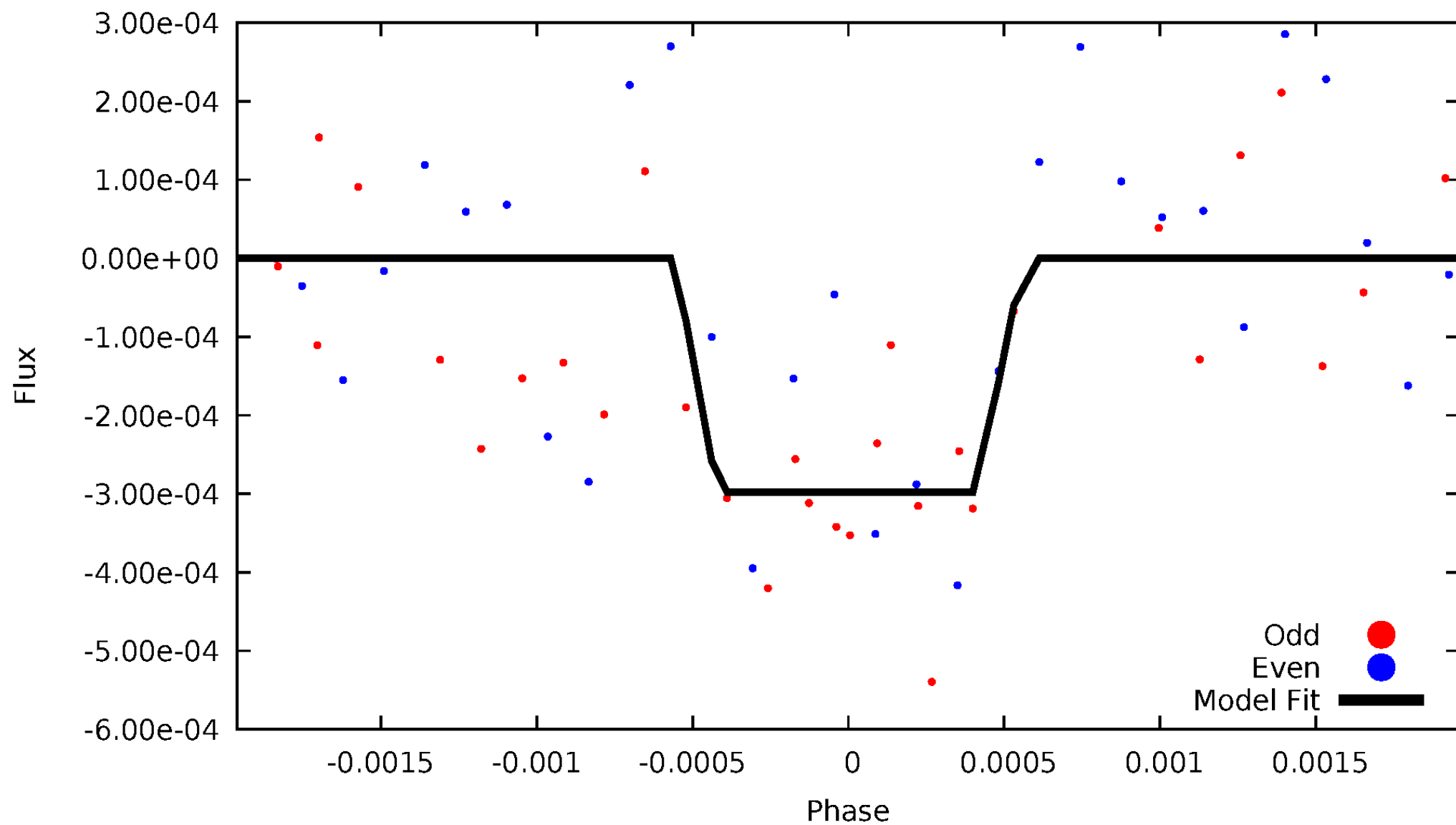
DV Odd/Even

TCE 011974942-03



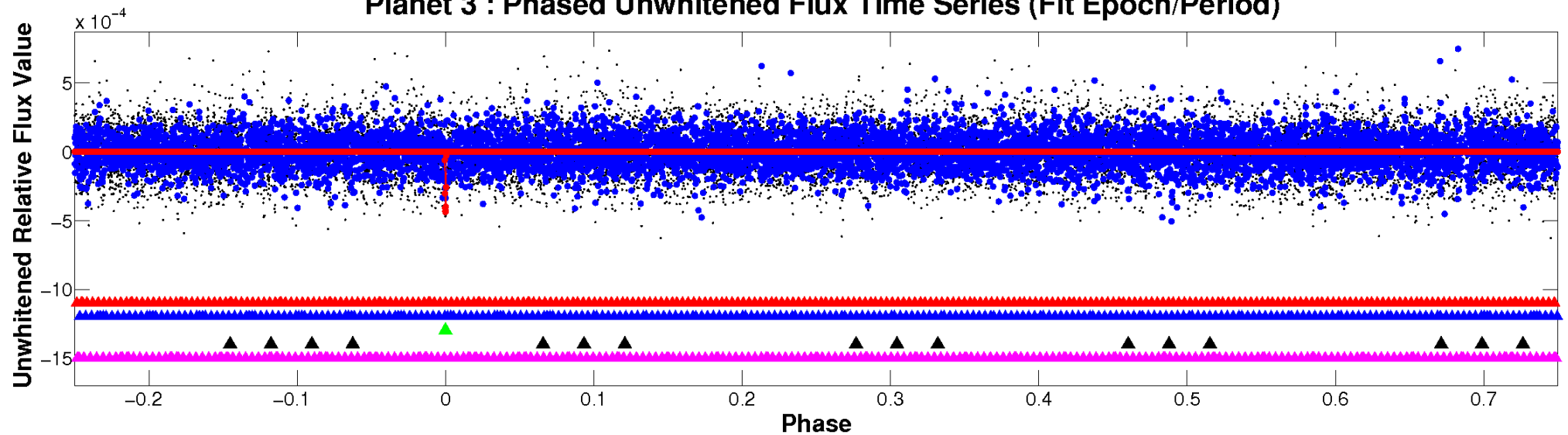
ALT Odd/Even

TCE 011974942-03

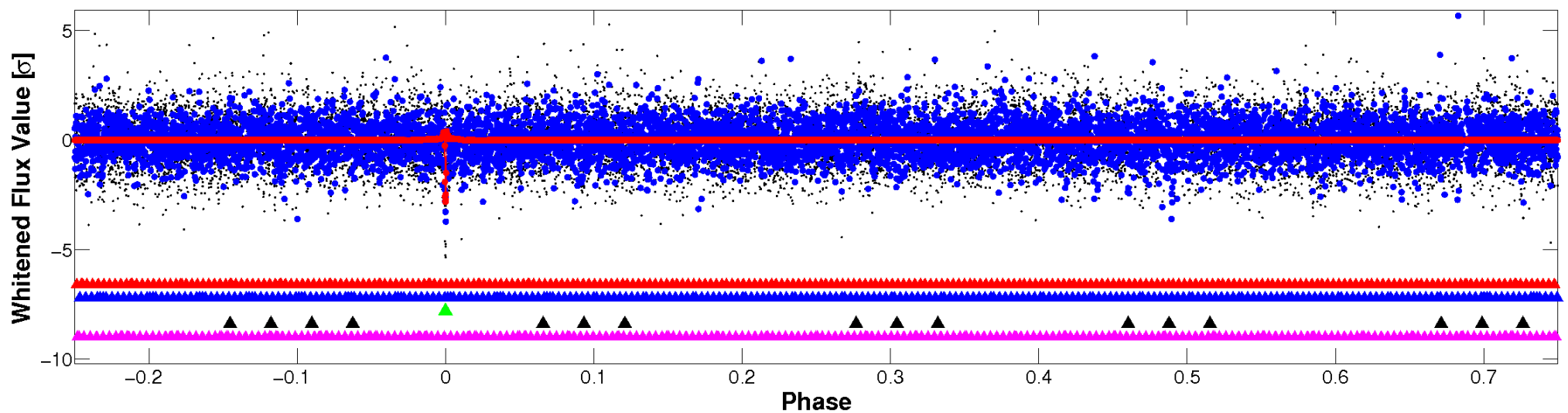


Non-Whitened Vs. Whitened Light Curve

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

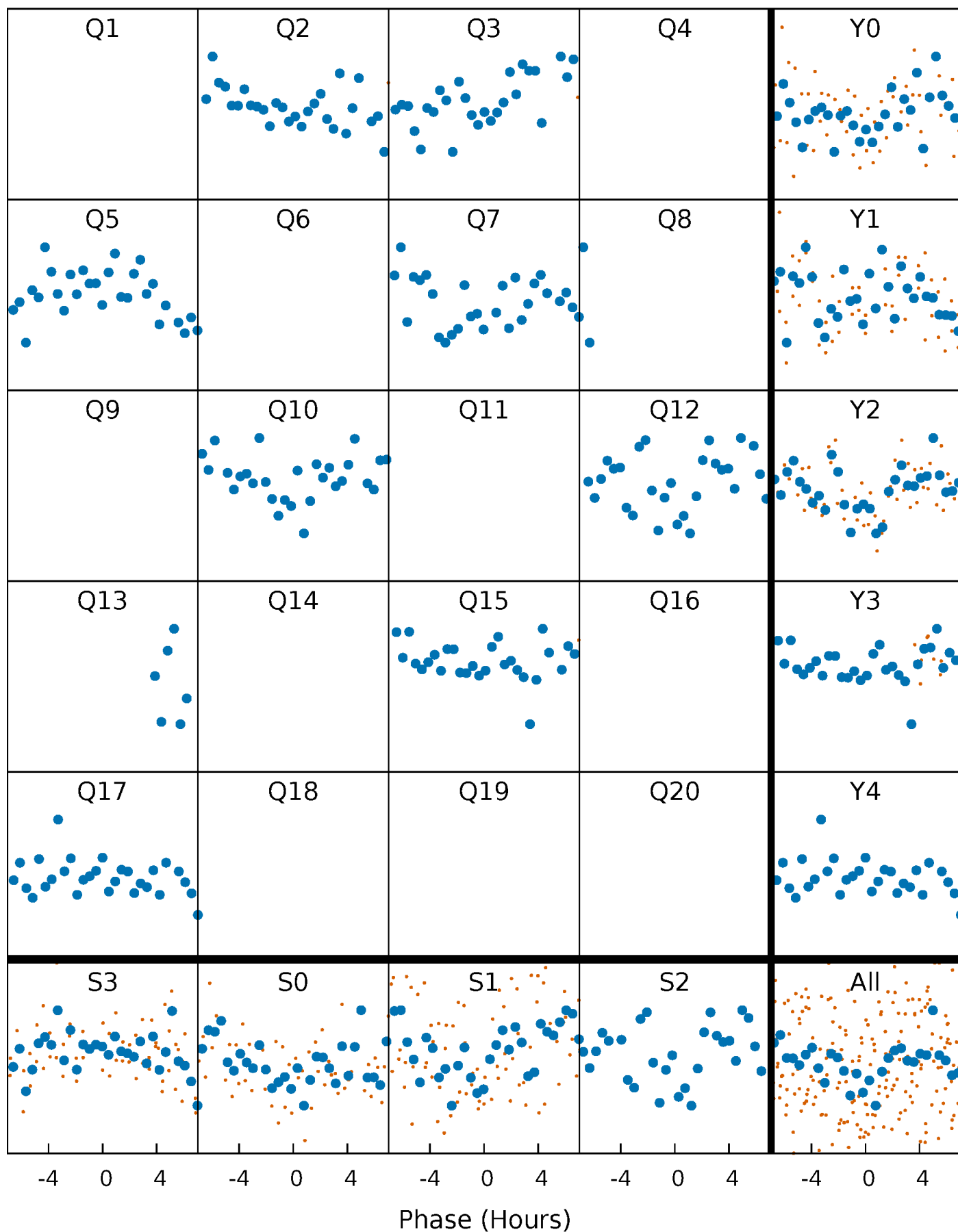


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



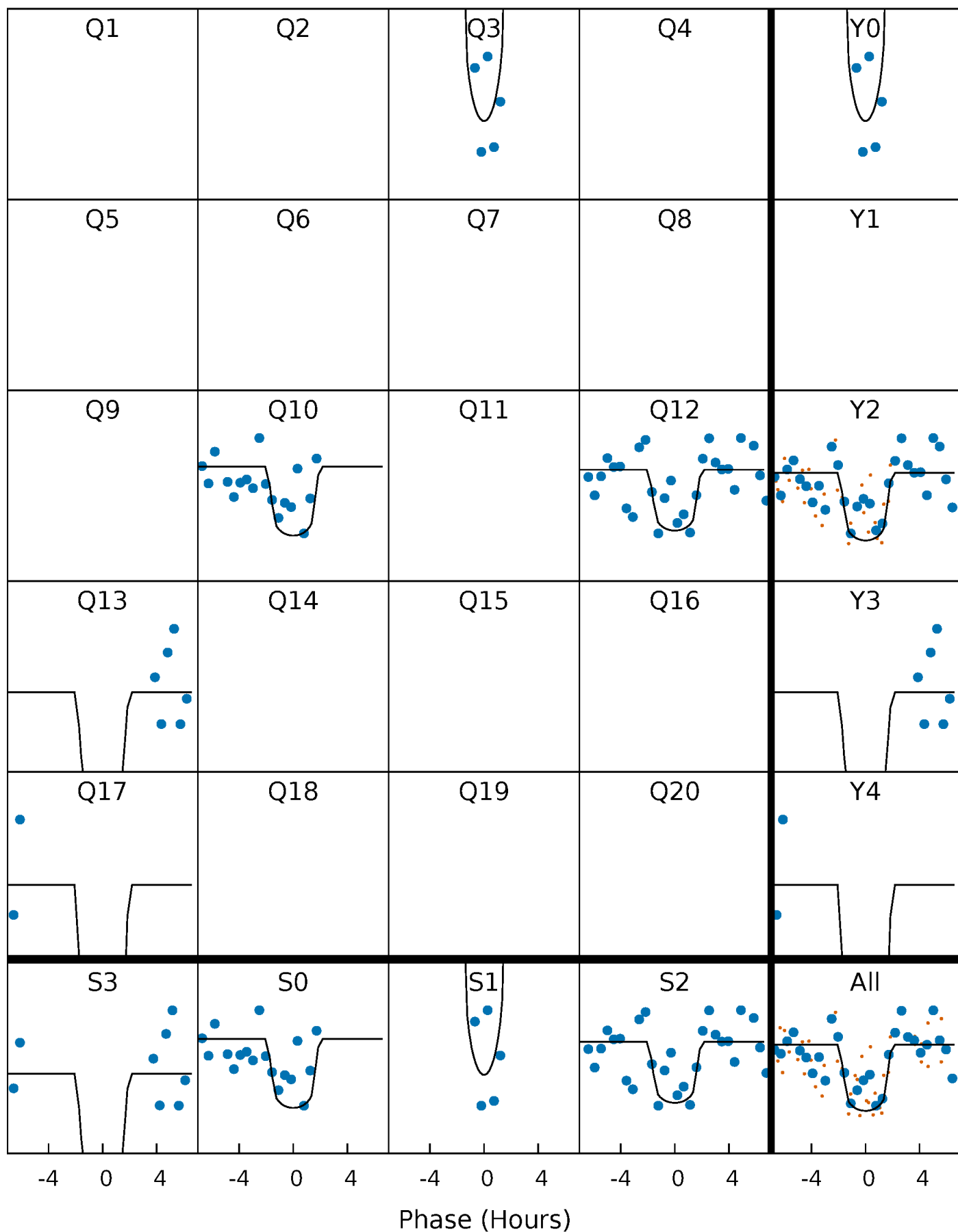
PDC Quarter-Phased Transit Curves

TCE 011974942-03 P=155.481879 Days $T_0=180.689306$ (BKJD)



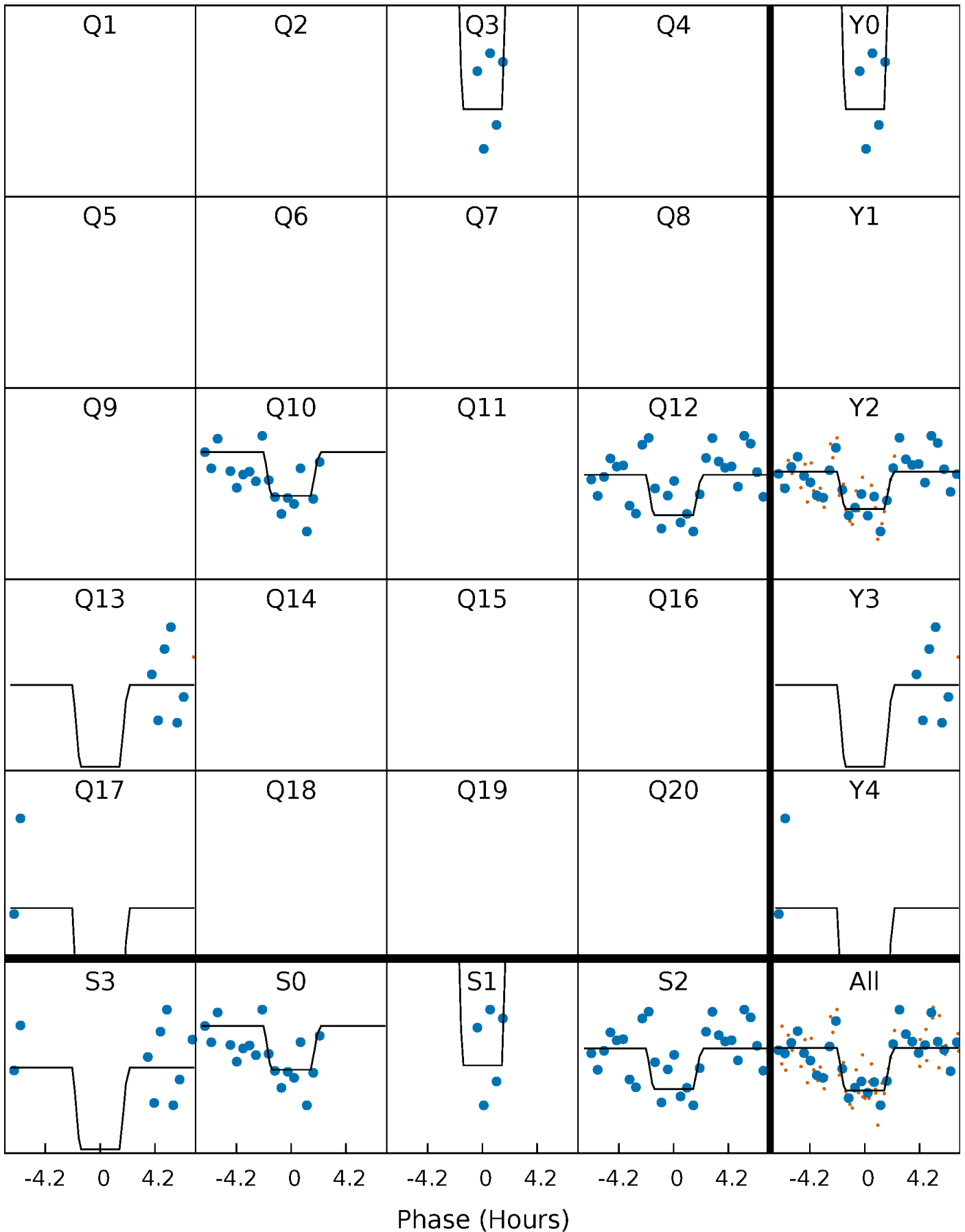
DV Quarter-Phased Transit Curves

TCE 011974942-03 P=155.481879 Days $T_0=180.689306$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

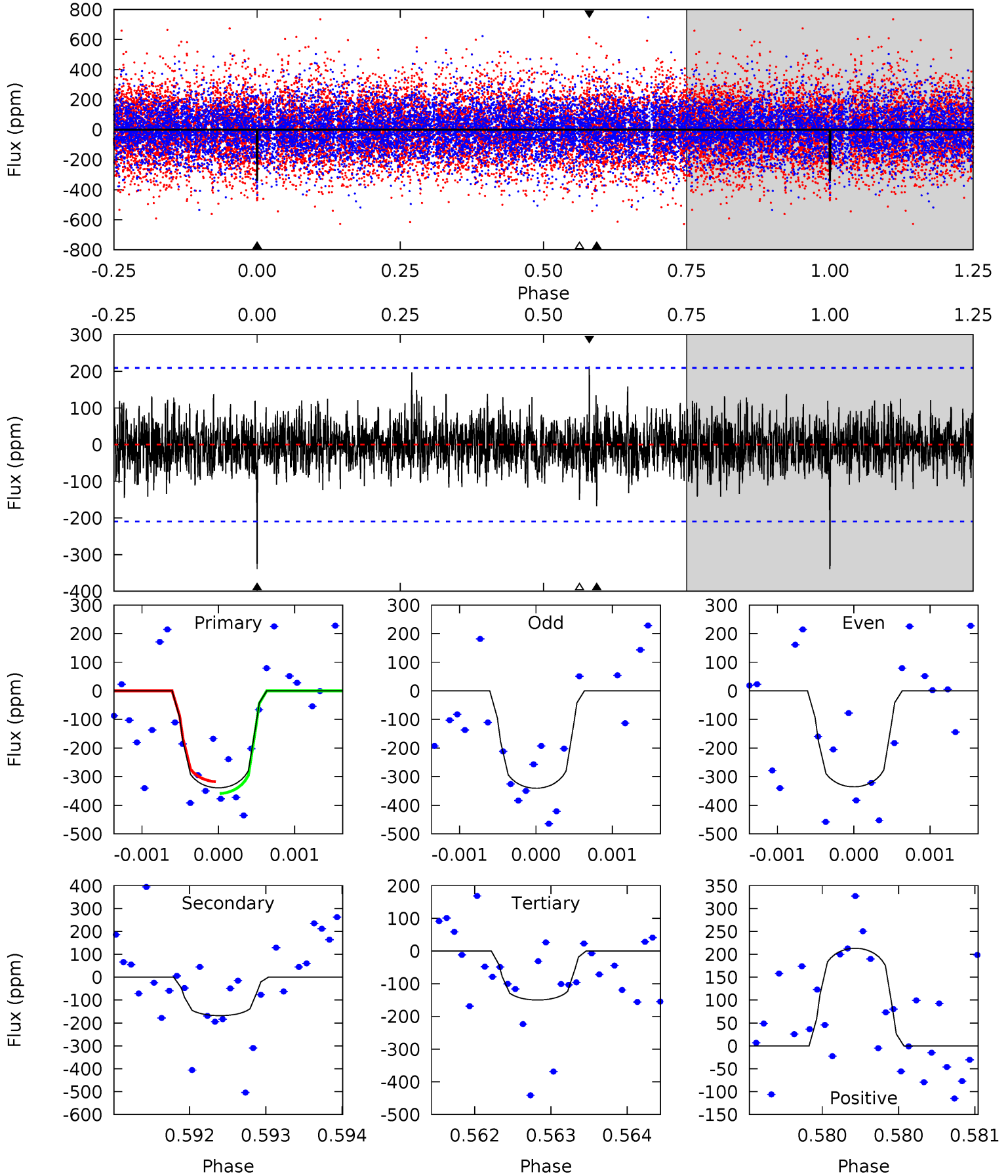
TCE 011974942-03 P=155.483301 Days $T_0=180.676457$ (BKJD)



DV Model-Shift Uniqueness Test

011974942-03, P = 155.481879 Days, E = 25.207427 Days

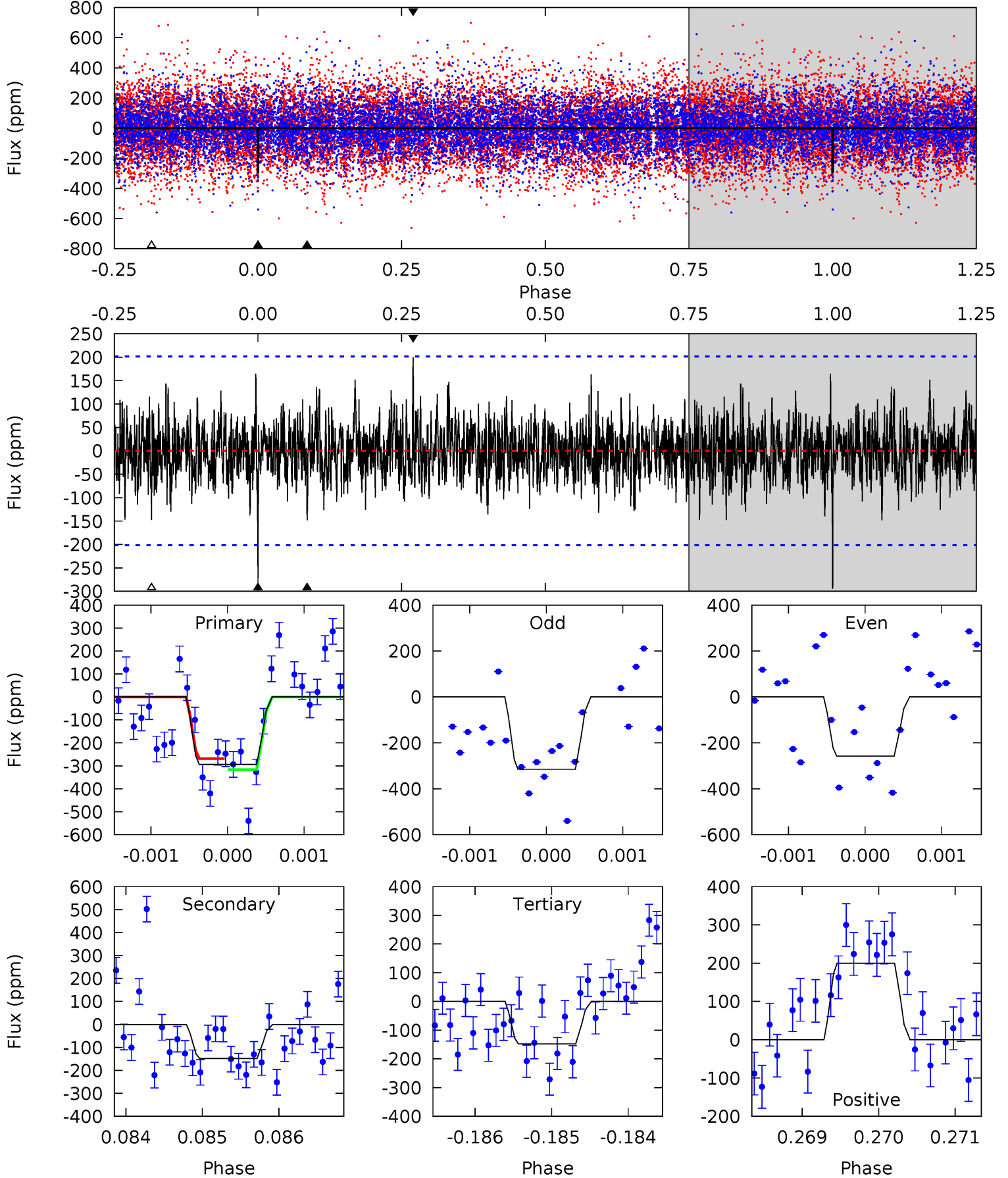
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.85	4.39	3.92	5.56	5.47	3.31	1.20	4.94	3.29	0.47	-1.18	0.06	1.02	0.39	0.54



Alt Model-Shift Uniqueness Test

011974942-03, P = 155.483301 Days, E = 25.193156 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.94	4.00	3.99	5.40	5.44	3.28	1.22	3.96	2.55	0.01	-1.40	0.76	1.05	0.40	0.64



Stellar Parameters For KIC 011974942

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6311^{+169}_{-188}	$3.493^{+0.376}_{-0.094}$	$-0.320^{+0.400}_{-0.300}$	$3.779^{+0.669}_{-1.672}$	$1.622^{+0.186}_{-0.434}$	$0.042^{+0.134}_{-0.015}$
	+3%/-3%	+11%/-3%	+125%/-94%	+18%/-44%	+11%/-27%	+315%/-36%
Source	PHO1	FLK73	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 011974942-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-168 ± 38	$17.81^{+21.13}_{-13.14}$	908^{+59}_{-94}	3683^{+2697}_{-723}	129^{+1605}_{-101}
Alt.	-148 ± 37	$17.53^{+19.50}_{-12.01}$	903^{+59}_{-97}	3610^{+2275}_{-720}	116^{+1115}_{-91}

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

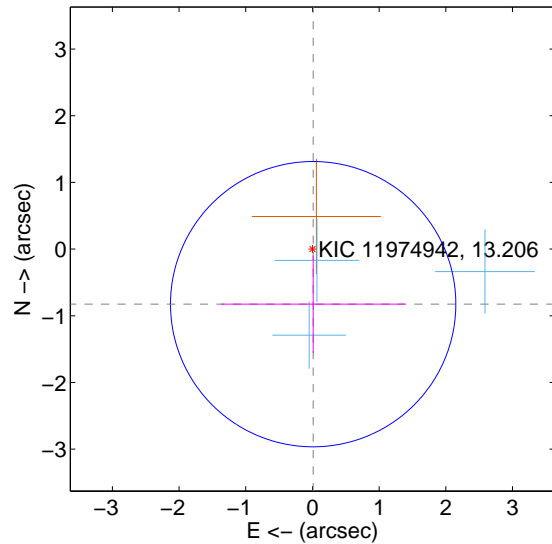
Supplemental centroid analysis for 011974942-03. Kepler magnitude: 13.21. Transit SNR 10.22

There are 3 quarters with good PRF difference image offsets

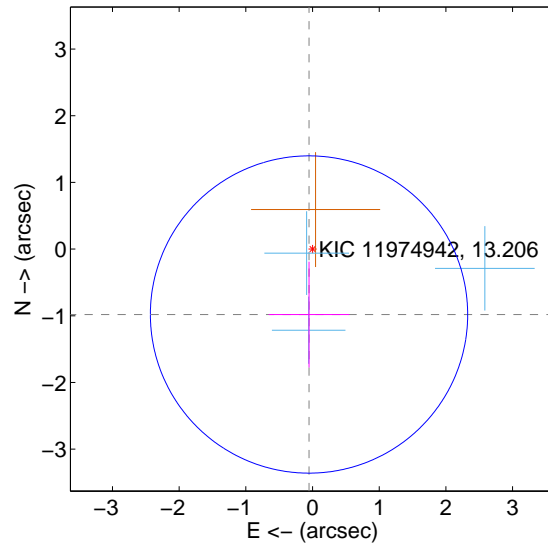
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.826 ± 0.713	1.16	-0.011 ± 1.378	-0.826 ± 0.729
PRF-fit source offset from KIC position	0.982 ± 0.793	1.24	0.052 ± 0.605	-0.981 ± 0.794
photometric centroid source offset	0.99 ± 0.68	1.46	0.98 ± 0.68	0.13 ± 0.74

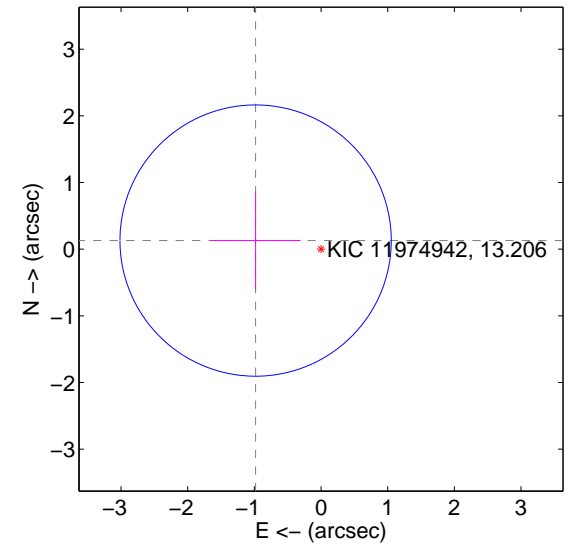
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



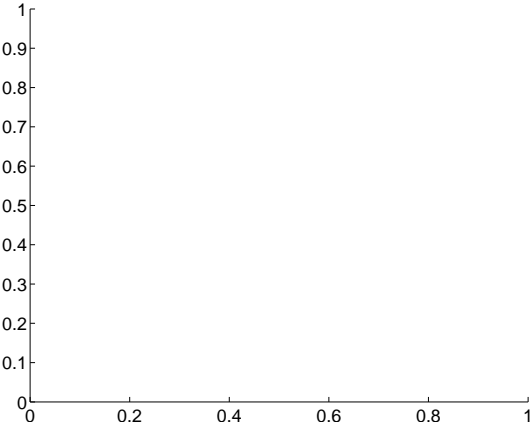
offset from photometric centroids



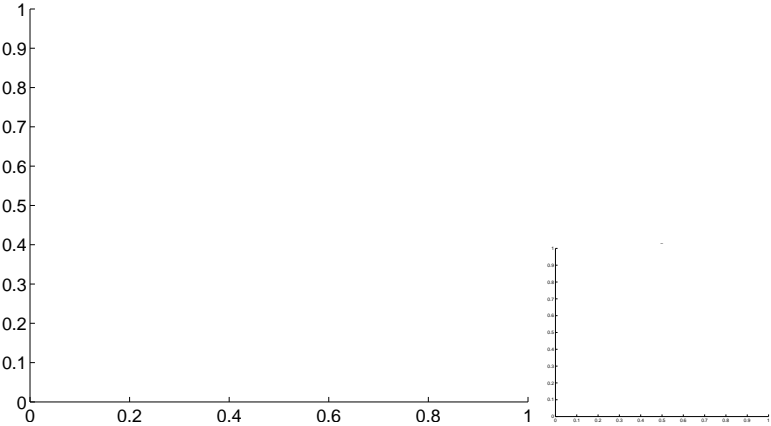
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

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

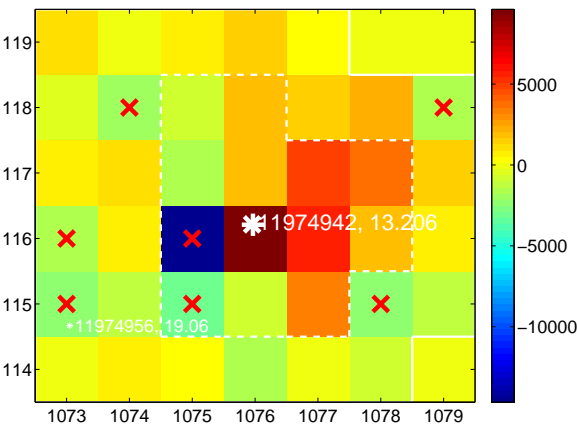
Q1 no difference image



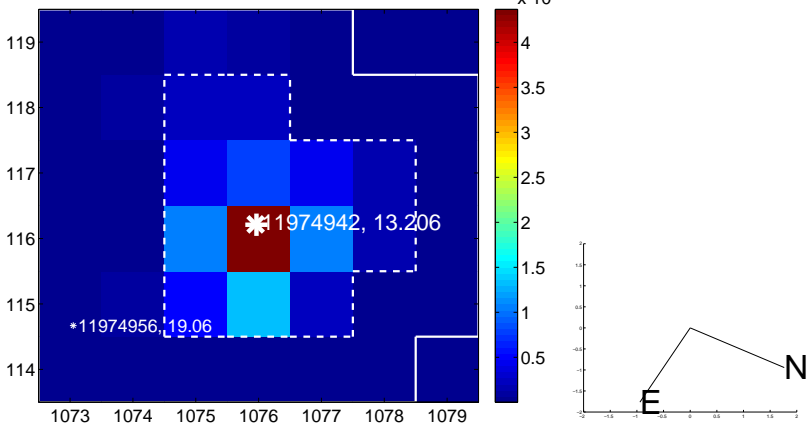
Q1 no OOT image



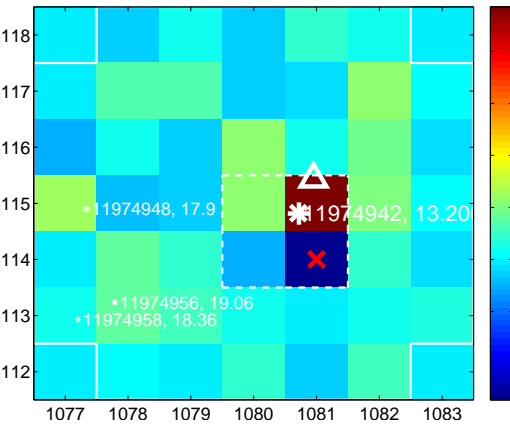
Q2 difference image. Poor Quality



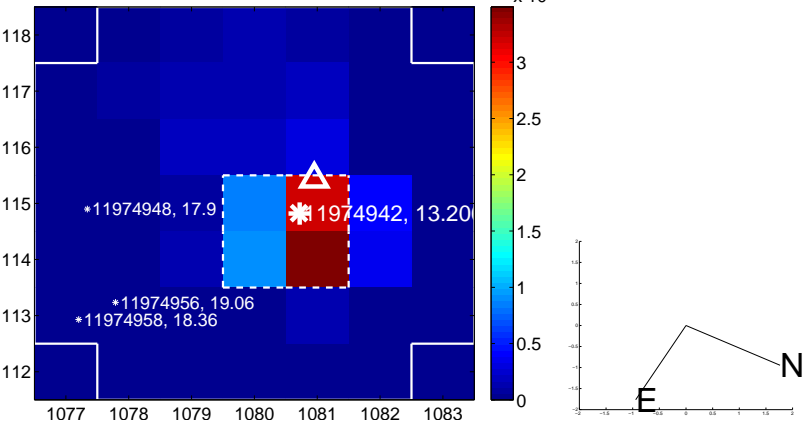
Q2 OOT image



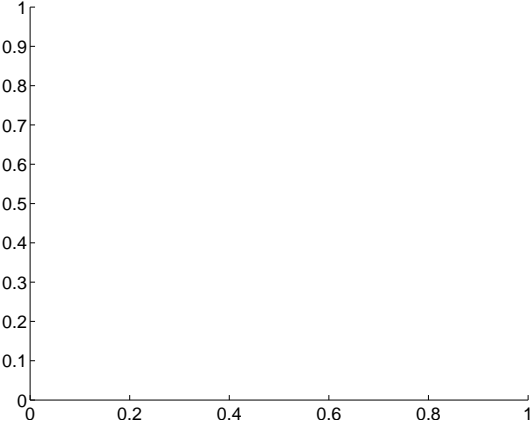
Q3 difference image



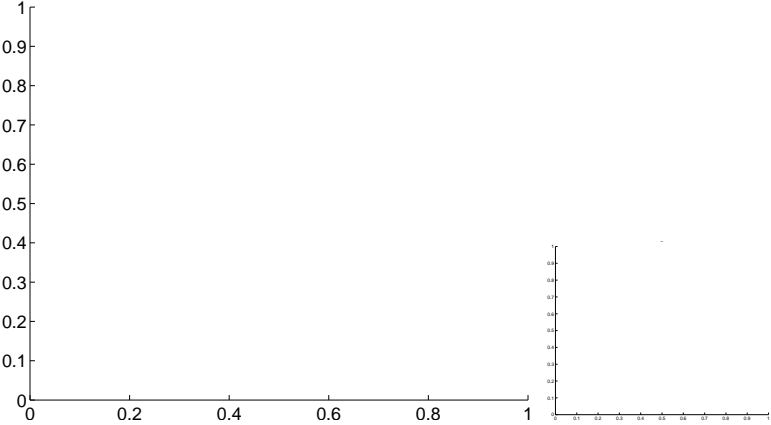
Q3 OOT image



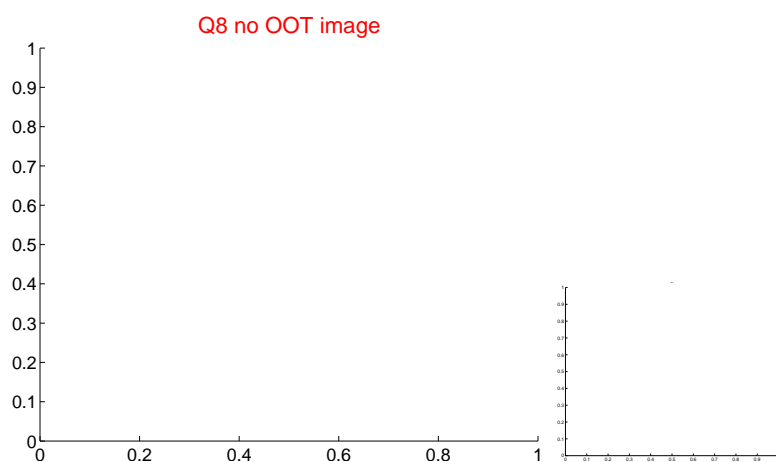
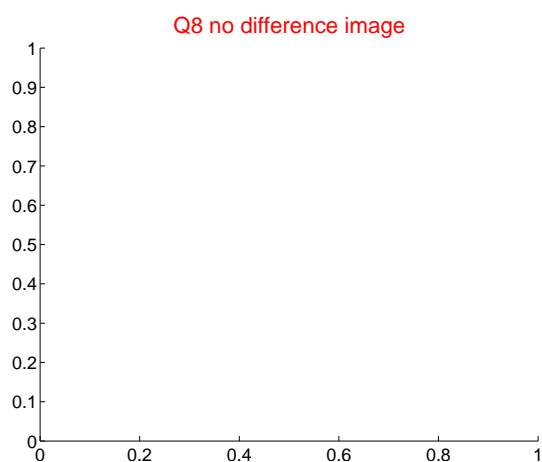
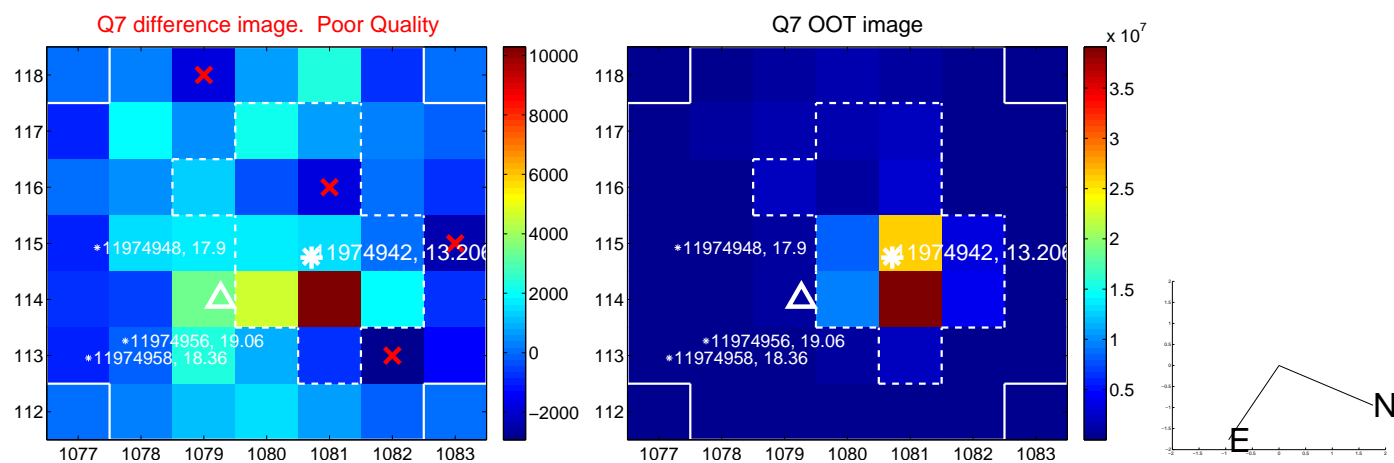
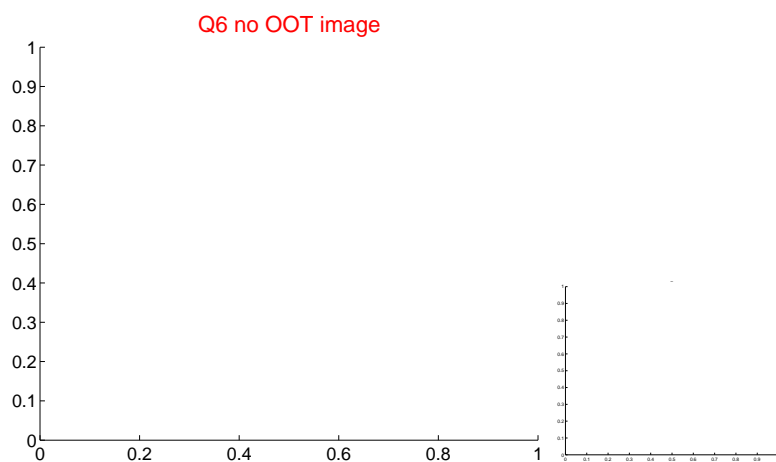
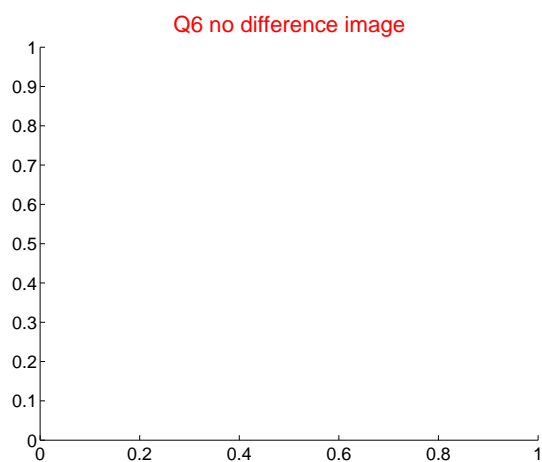
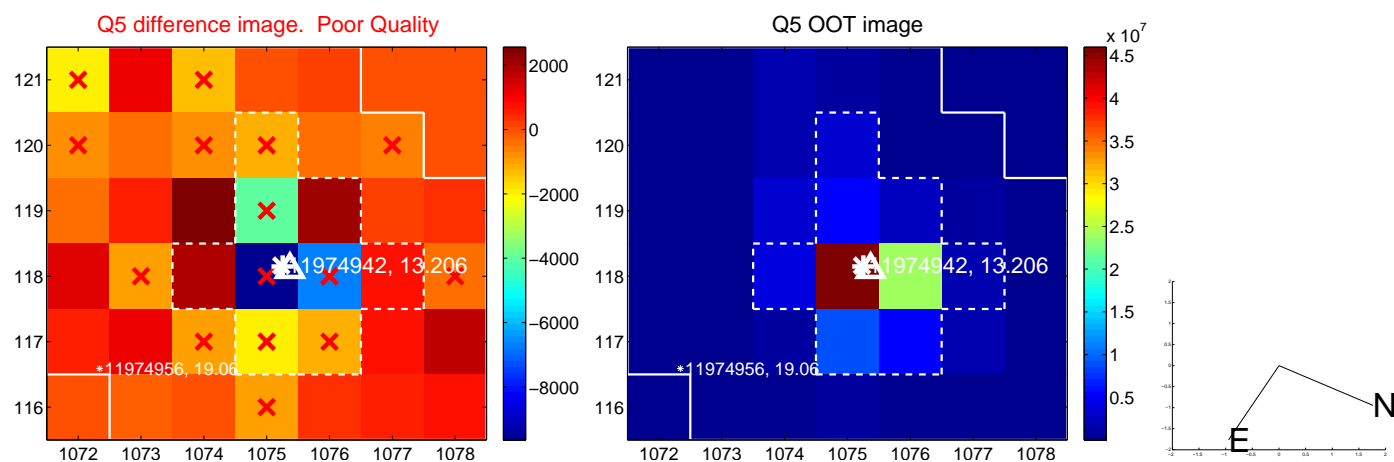
Q4 no difference image



Q4 no OOT image

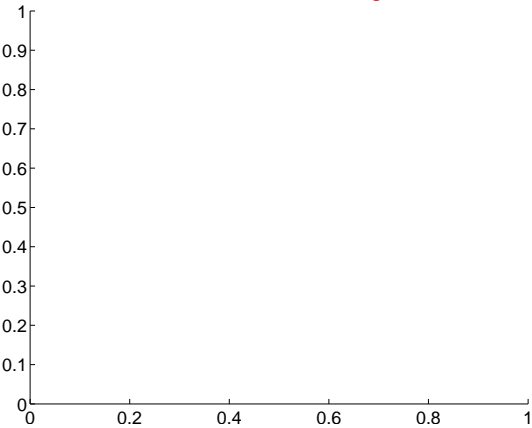


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value

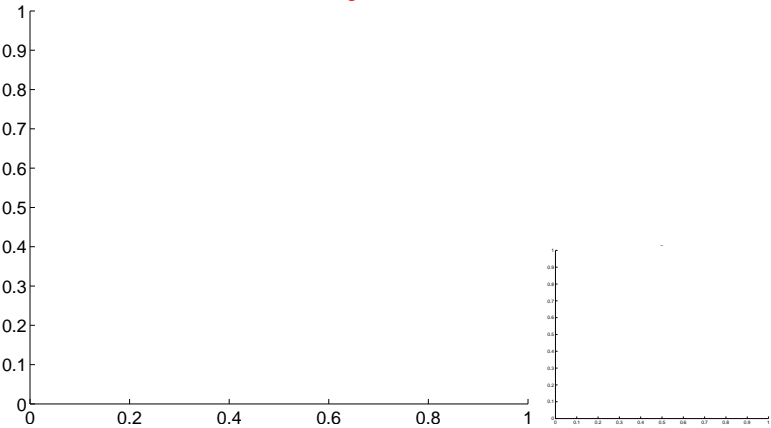


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

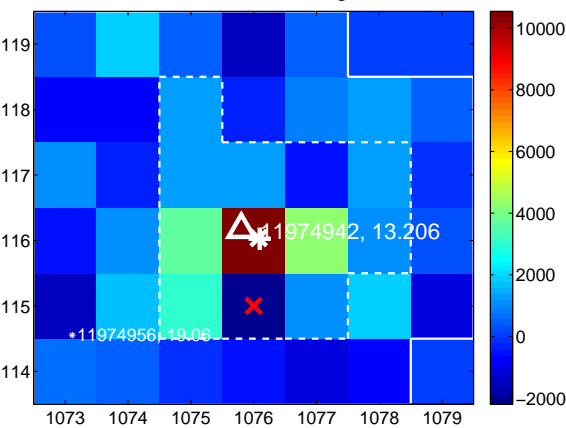
Q9 no difference image



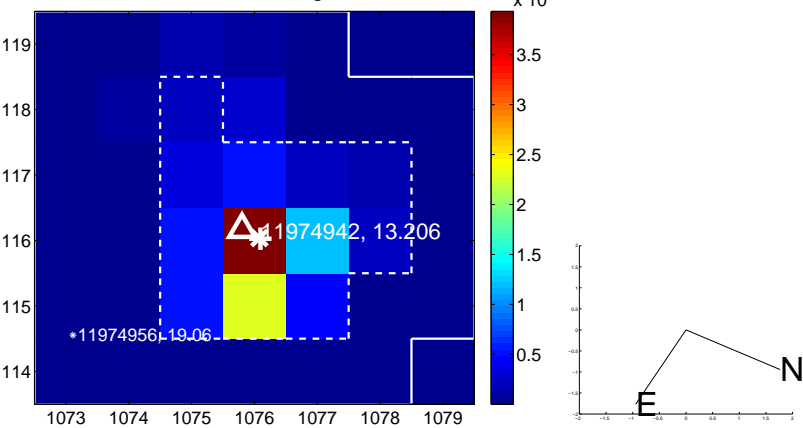
Q9 no OOT image



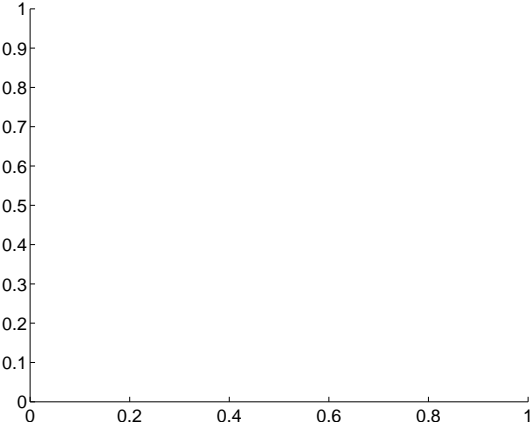
Q10 difference image



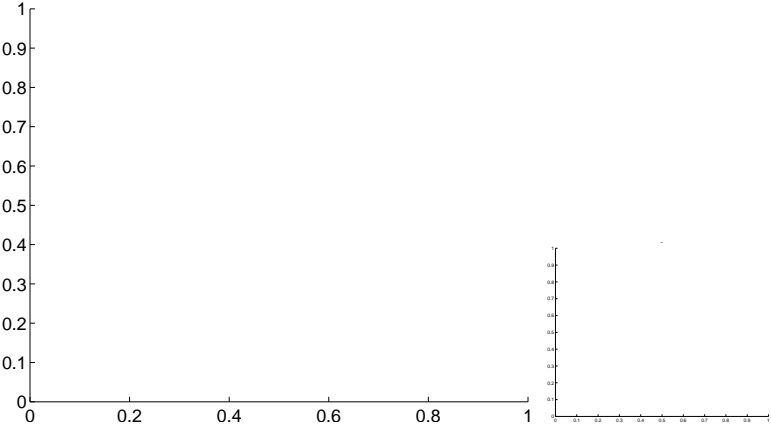
Q10 OOT image



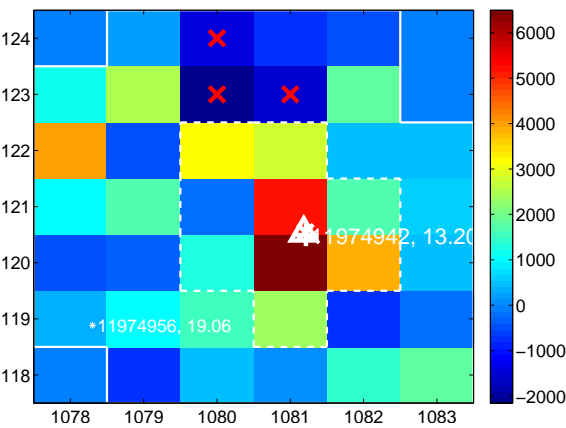
Q11 no difference image



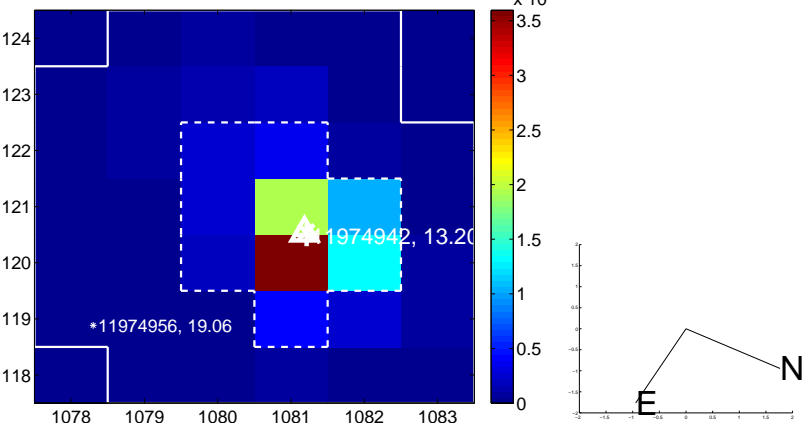
Q11 no OOT image



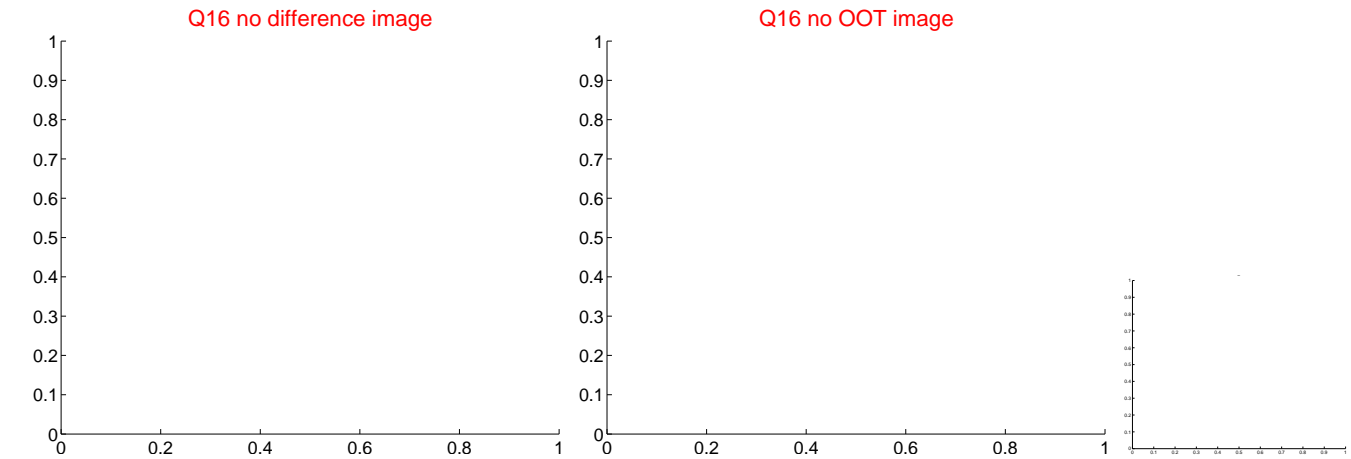
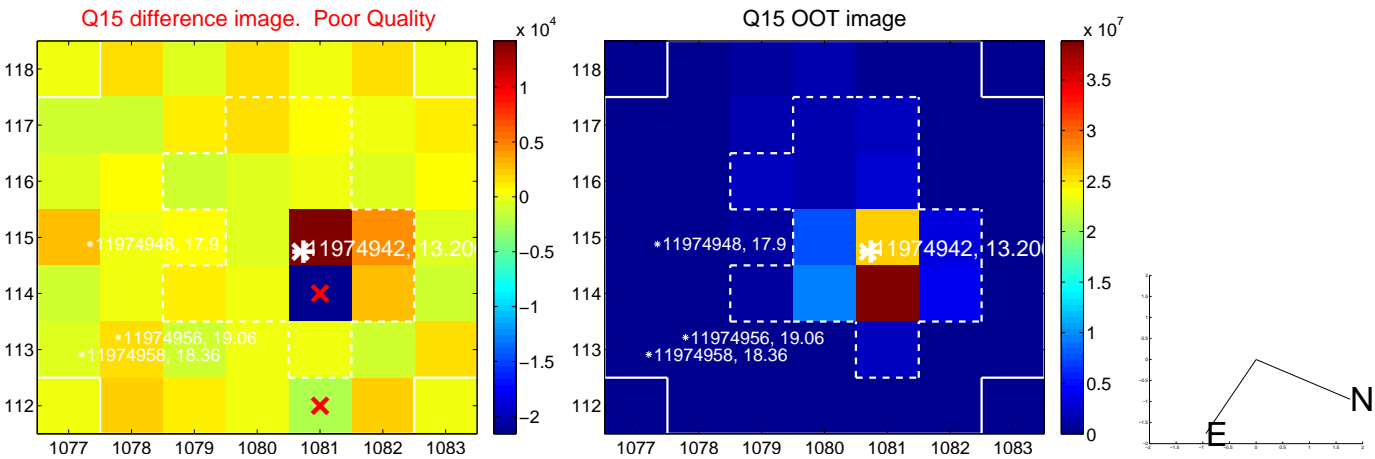
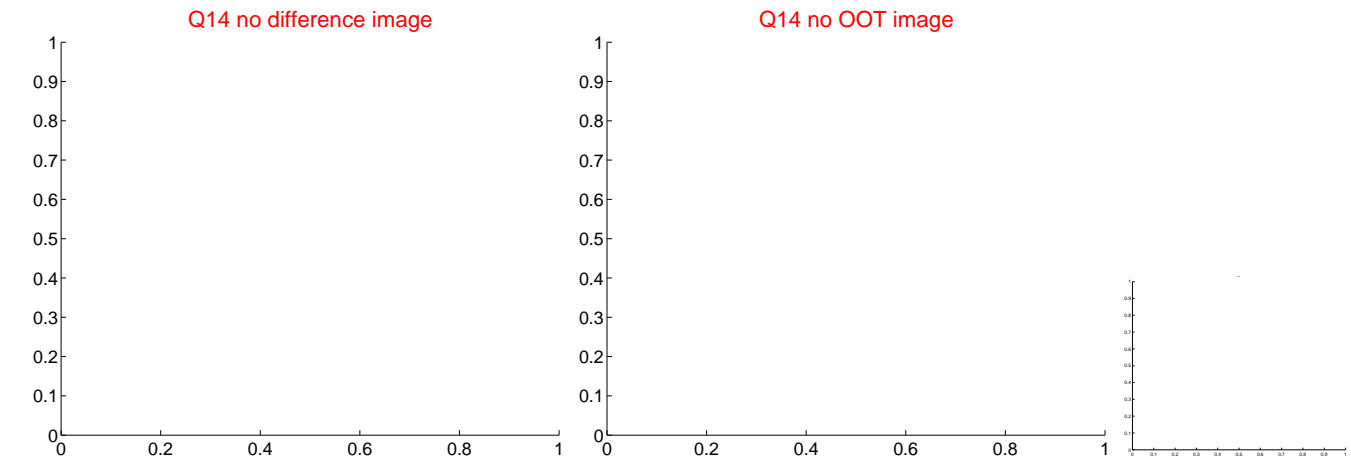
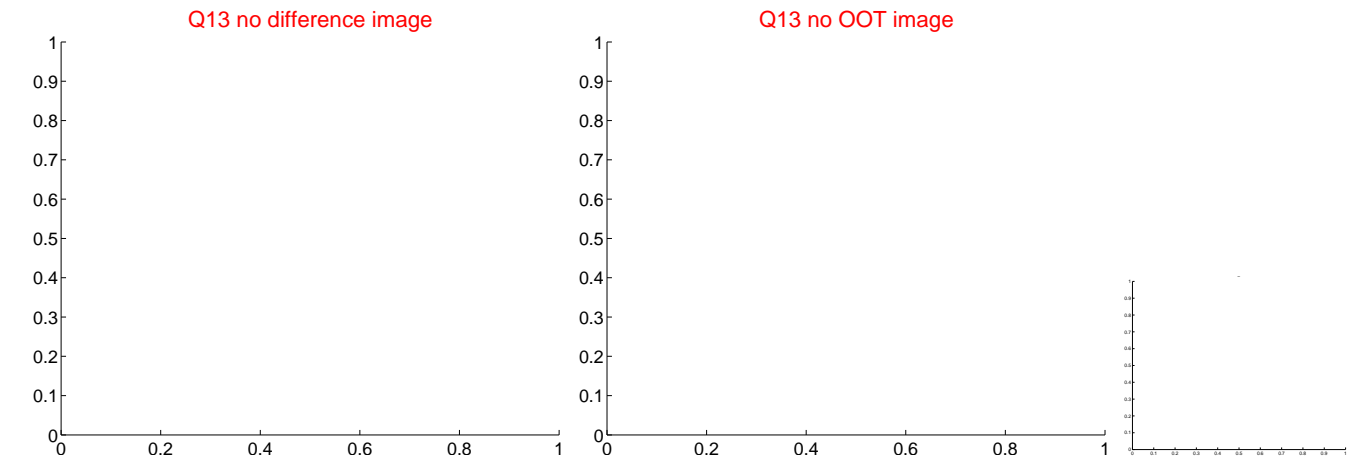
Q12 difference image



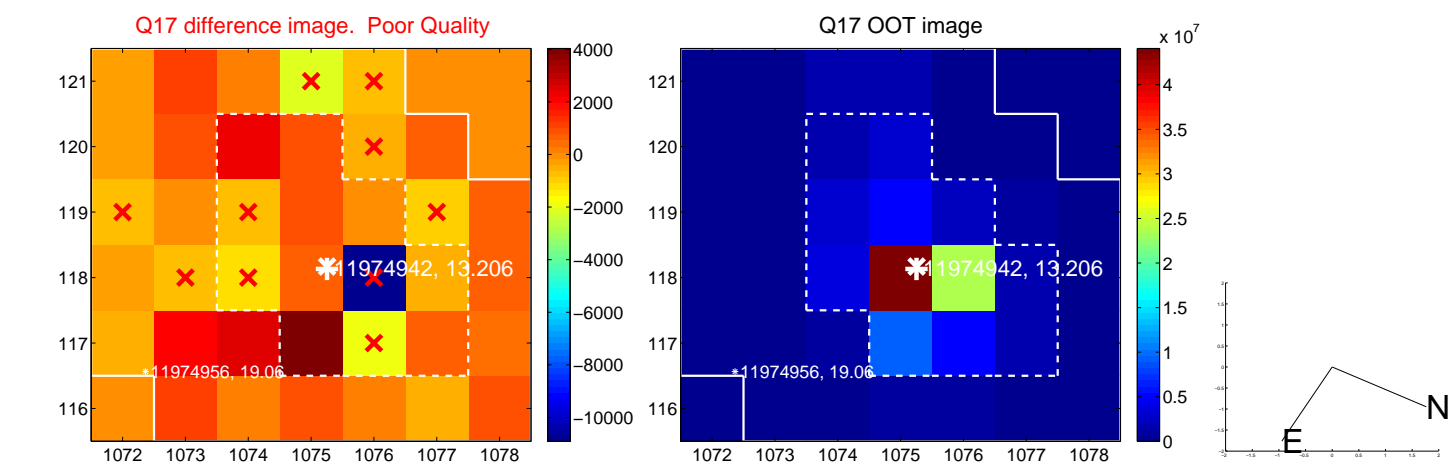
Q12 OOT image



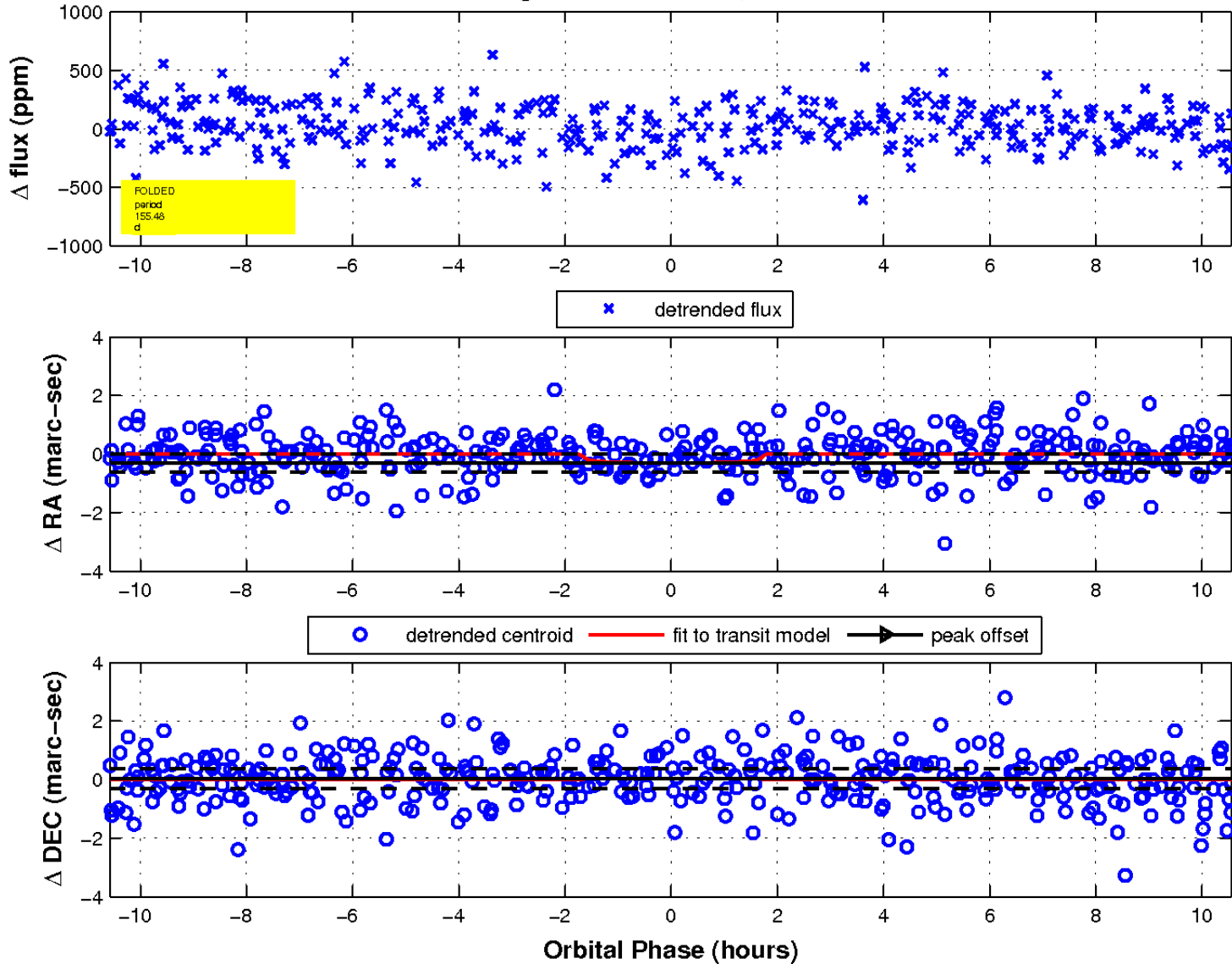
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

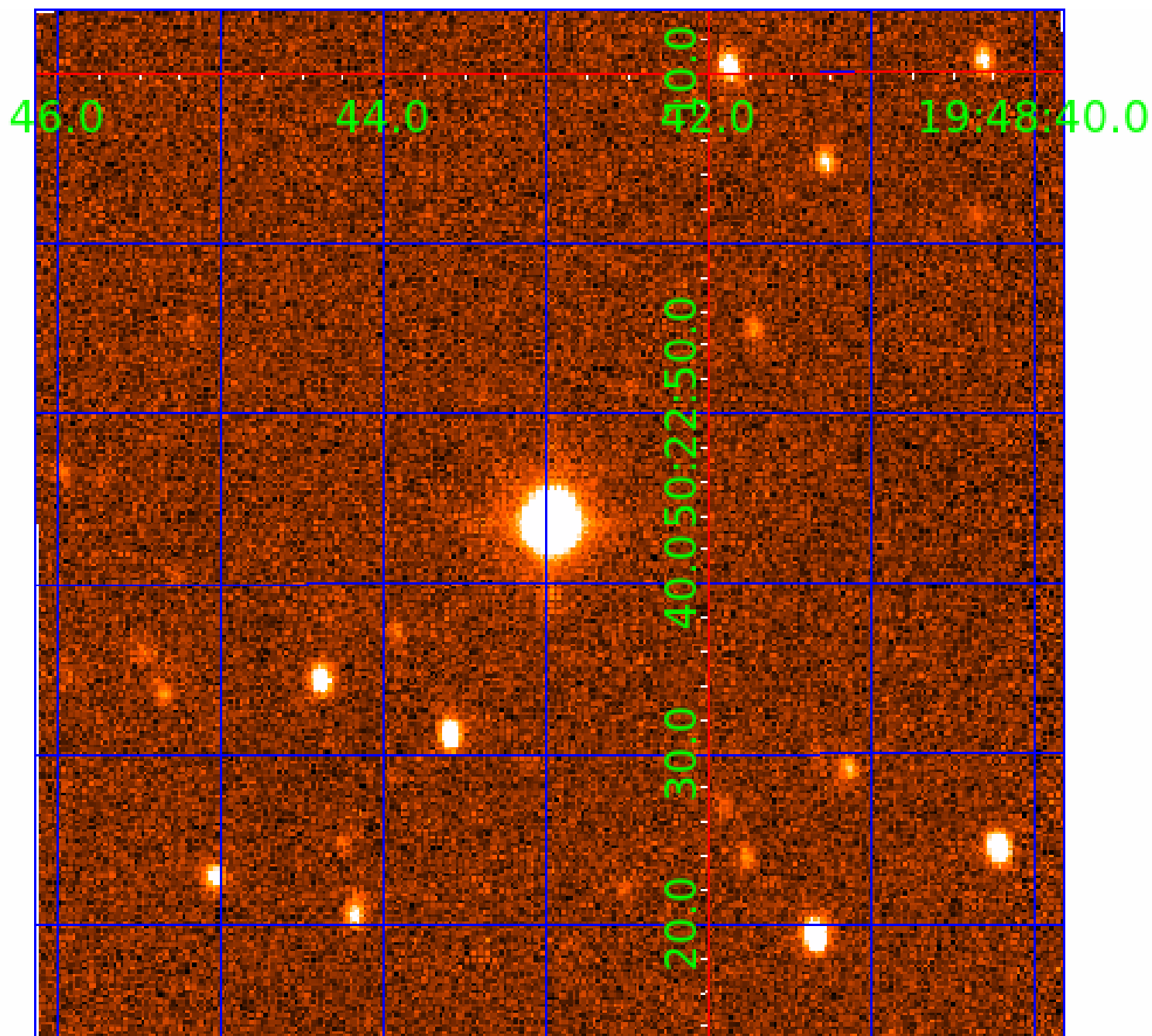


fluxWeightedCentroids, Planet 3 of 5



UKIRT Image

Declination



KIC 011974942

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})
011974942-01	OBS	No	5.202442	132.109065	31.9	17.764	9.9	9.7	3.78	6311	2.54	4258.55
011974942-02	OBS	No	5.203167	134.090662	57.8	12.530	11.7	14.1	3.78	6311	4.45	4257.76
011974942-03	OBS	No	155.481879	180.689306	438.1	3.532	13.1	10.2	3.78	6311	8.49	45.92
011974942-05	OBS	No	5.205100	136.233153	117.3	62.461	7.9	11.9	3.78	6311	7.41	4255.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011974942-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011974942-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
011974942-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS
011974942-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS

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

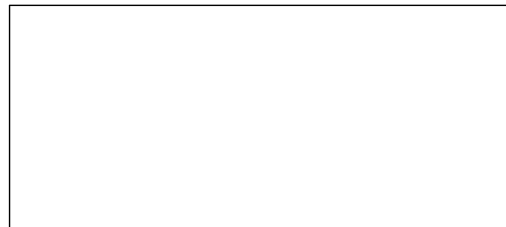
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 011974942-05

No Significant Match Found

KIC: 11974942 Candidate: 5 of 5 Period: 5.205 d

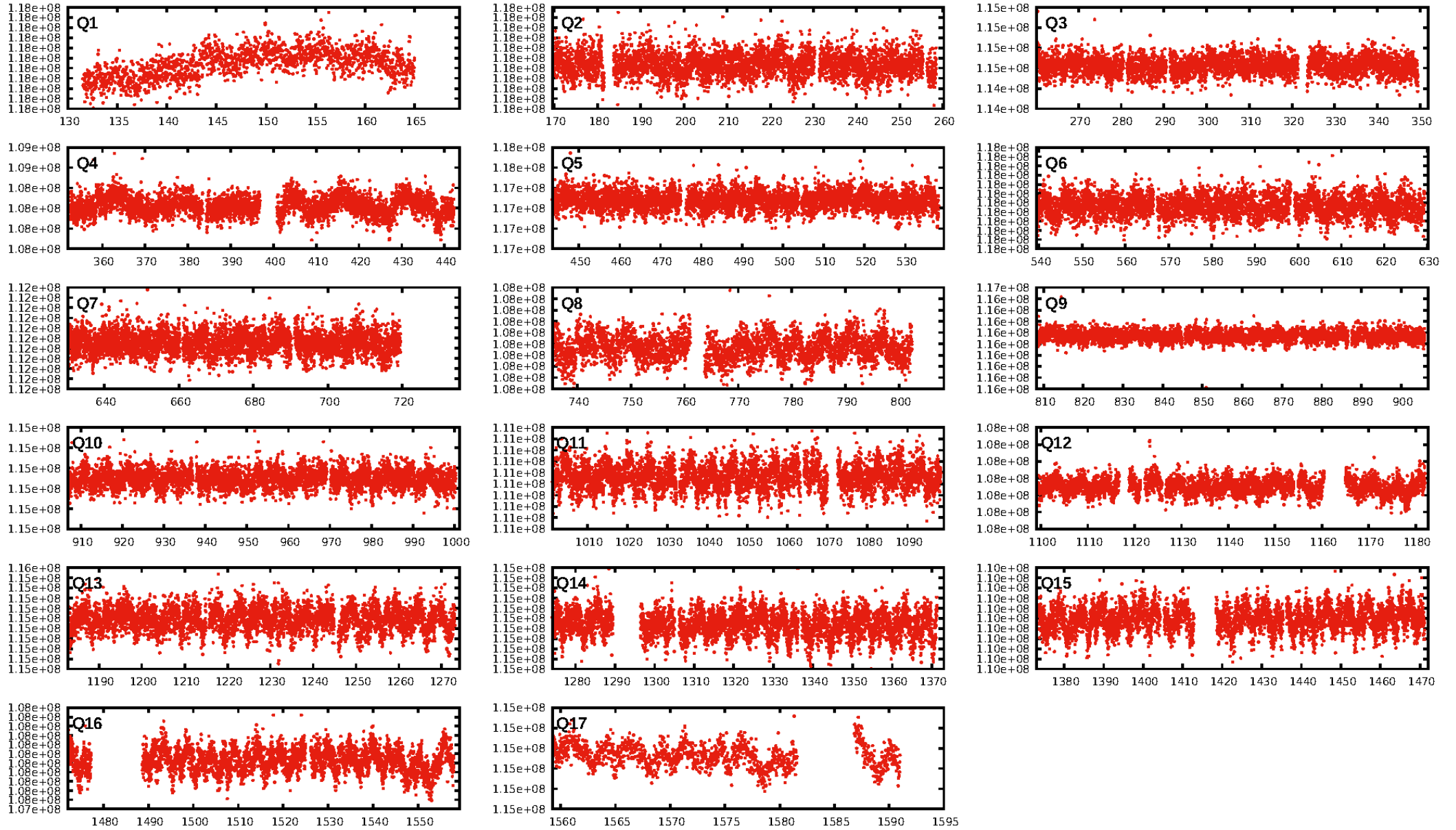


ShortPeriod-sig: 0.1% [0.00e]
LongPeriod-sig: 100.0% [33.50e]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [254/254]
GhostDiagnostic- χ : -6.26

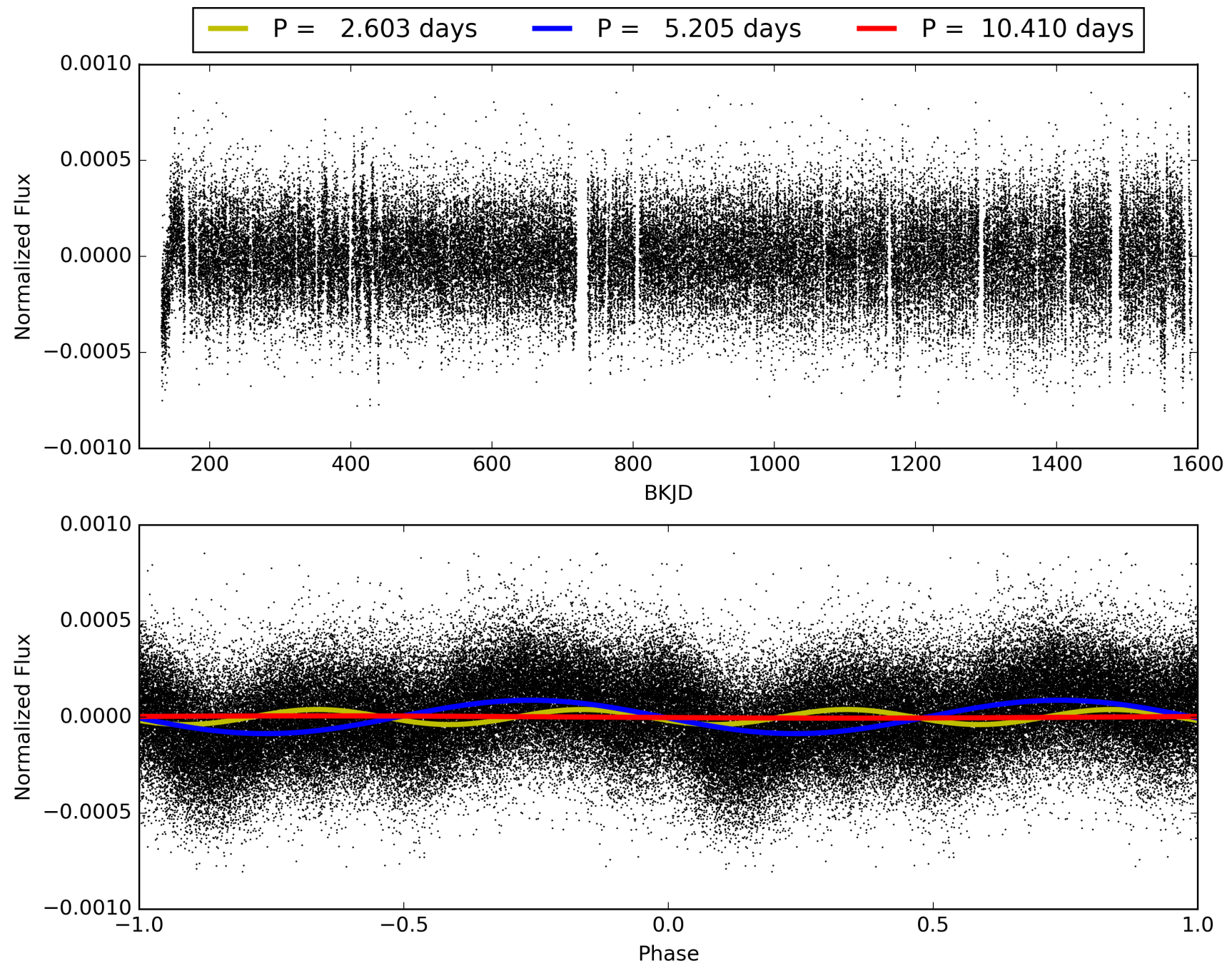
Centroid-sig: 23.5%
Centroid-so: 0.543 arcsec [2.87e]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 0.00 [0/17]

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

TCE 011974942-05, PDC Light Curves

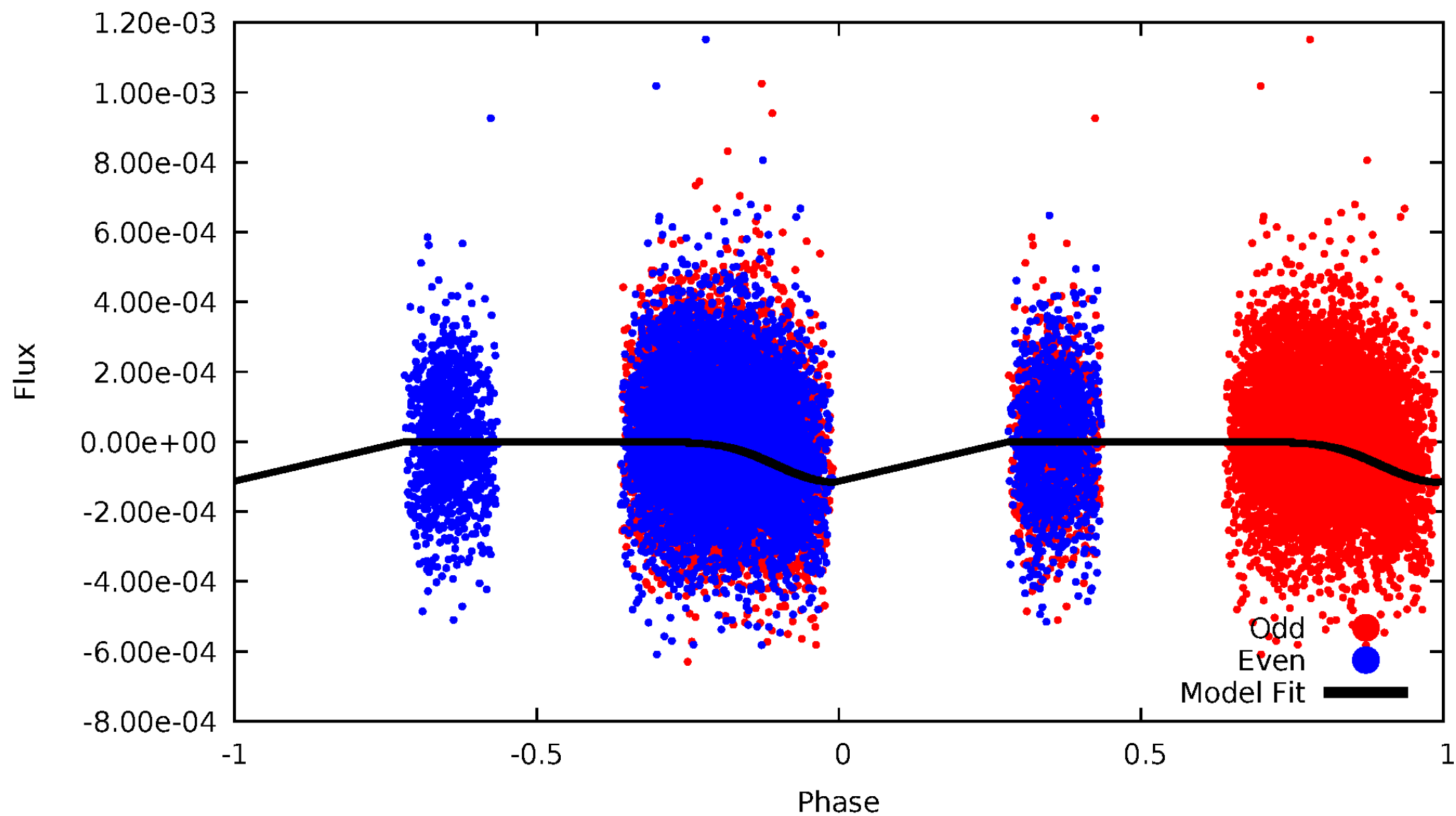


TCE 011974942-05



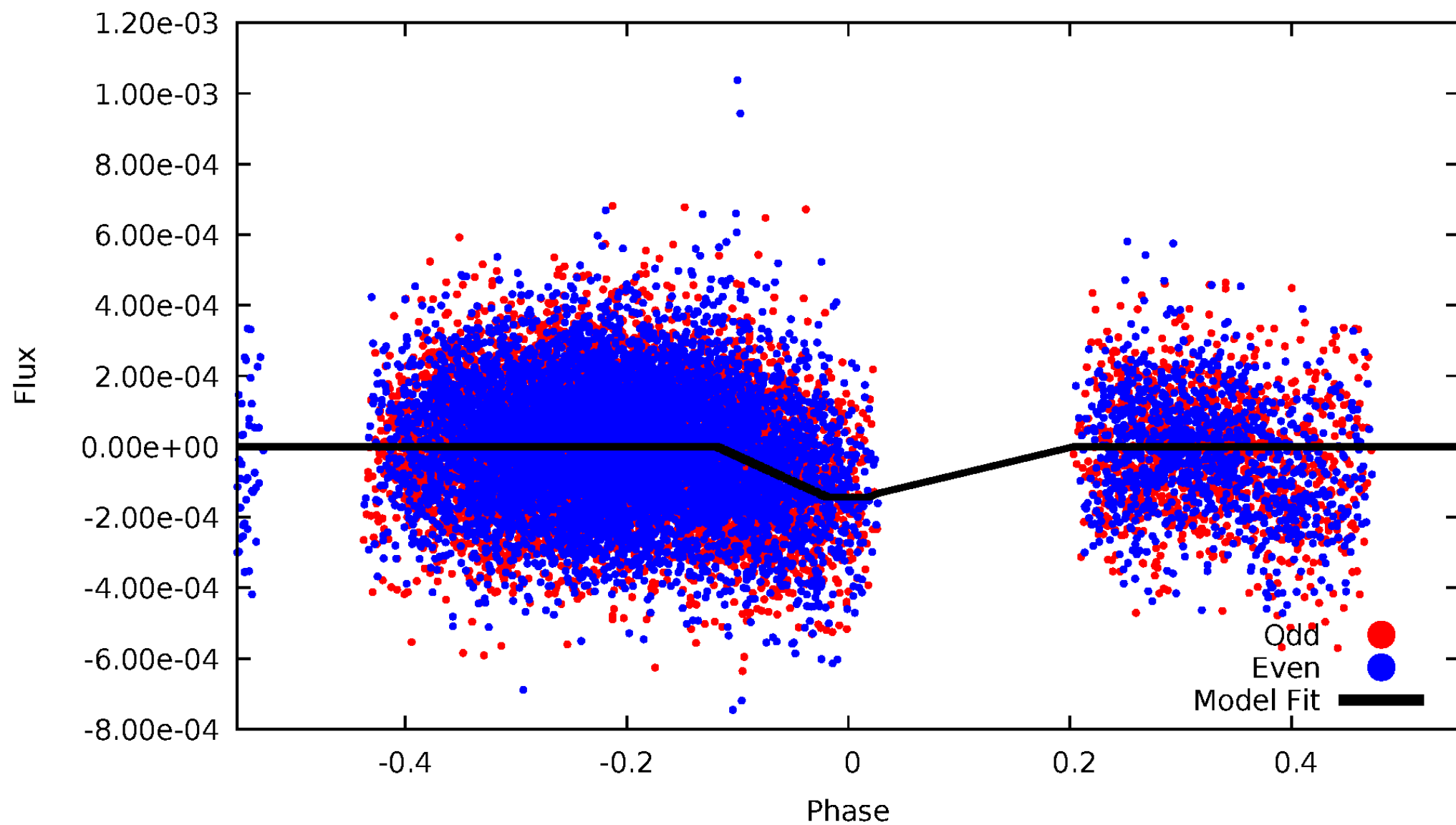
DV Odd/Even

TCE 011974942-05



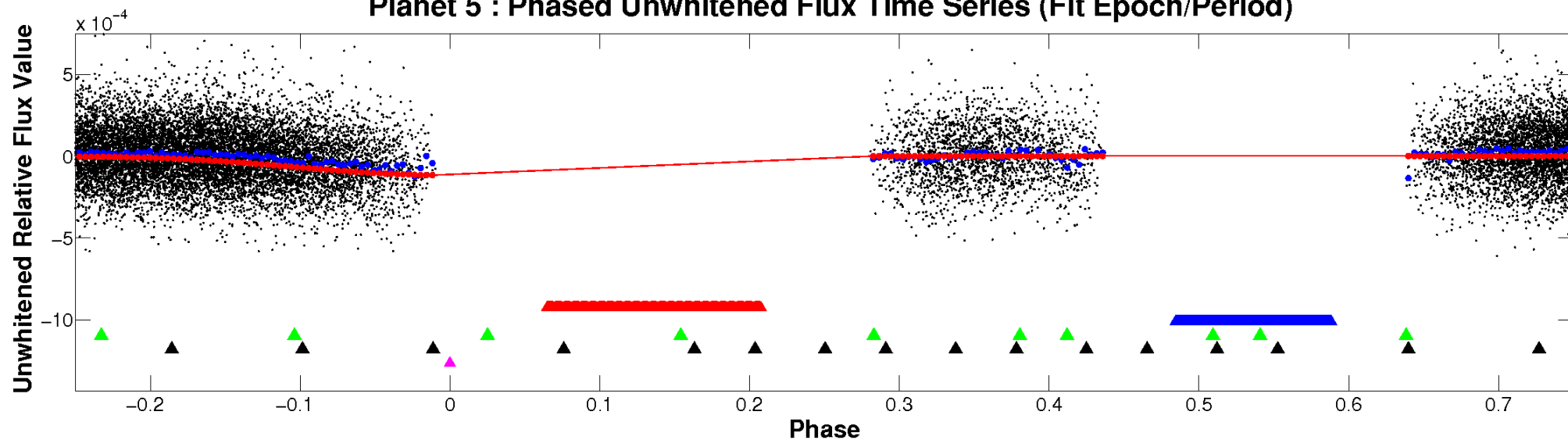
ALT Odd/Even

TCE 011974942-05

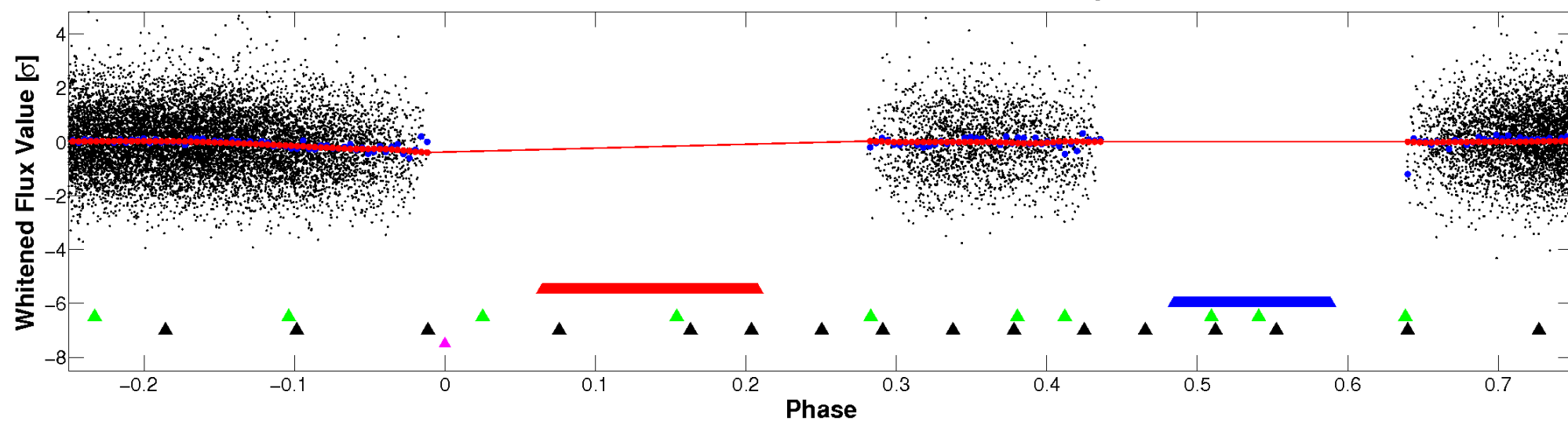


Non-Whitened Vs. Whitened Light Curve

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

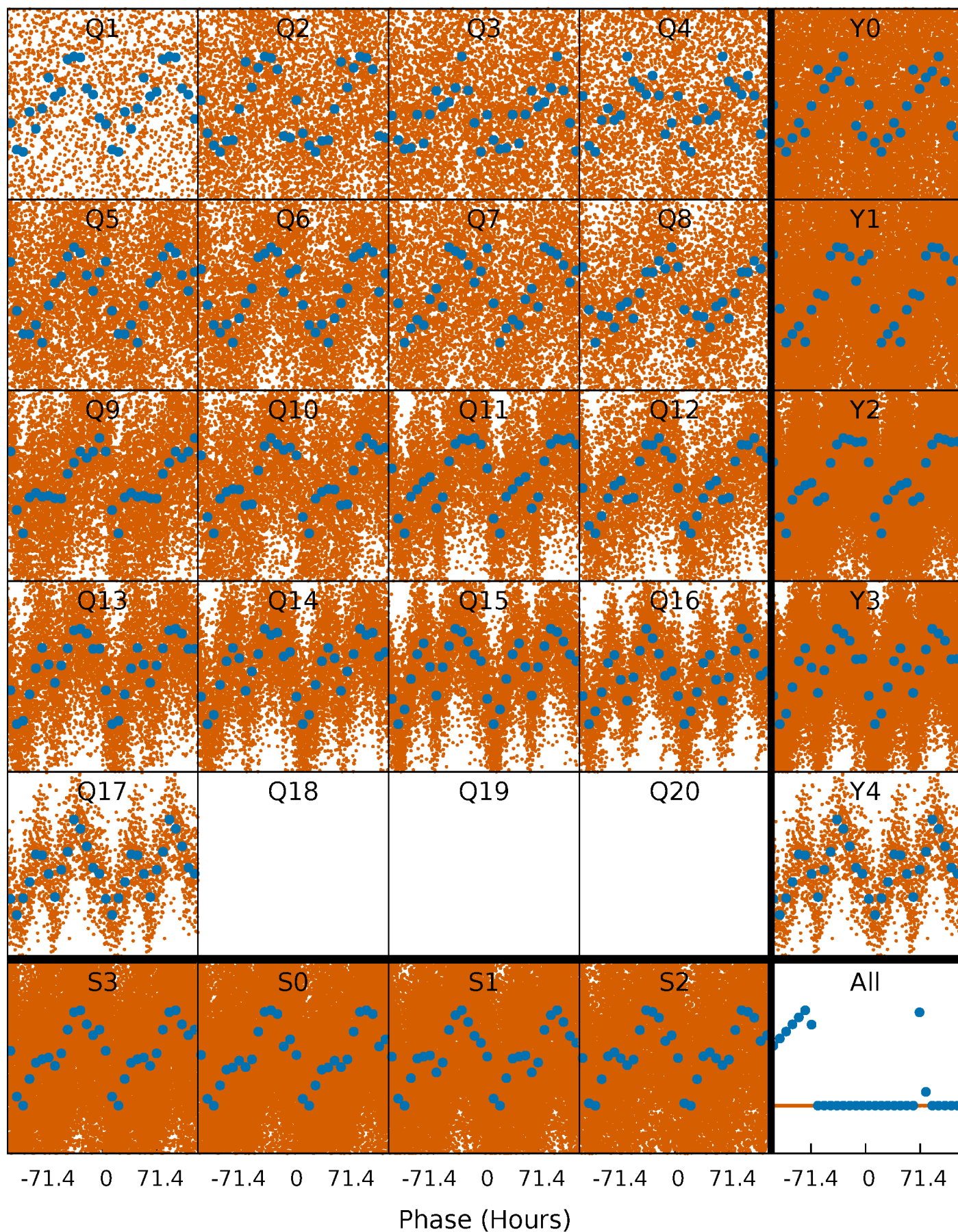


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



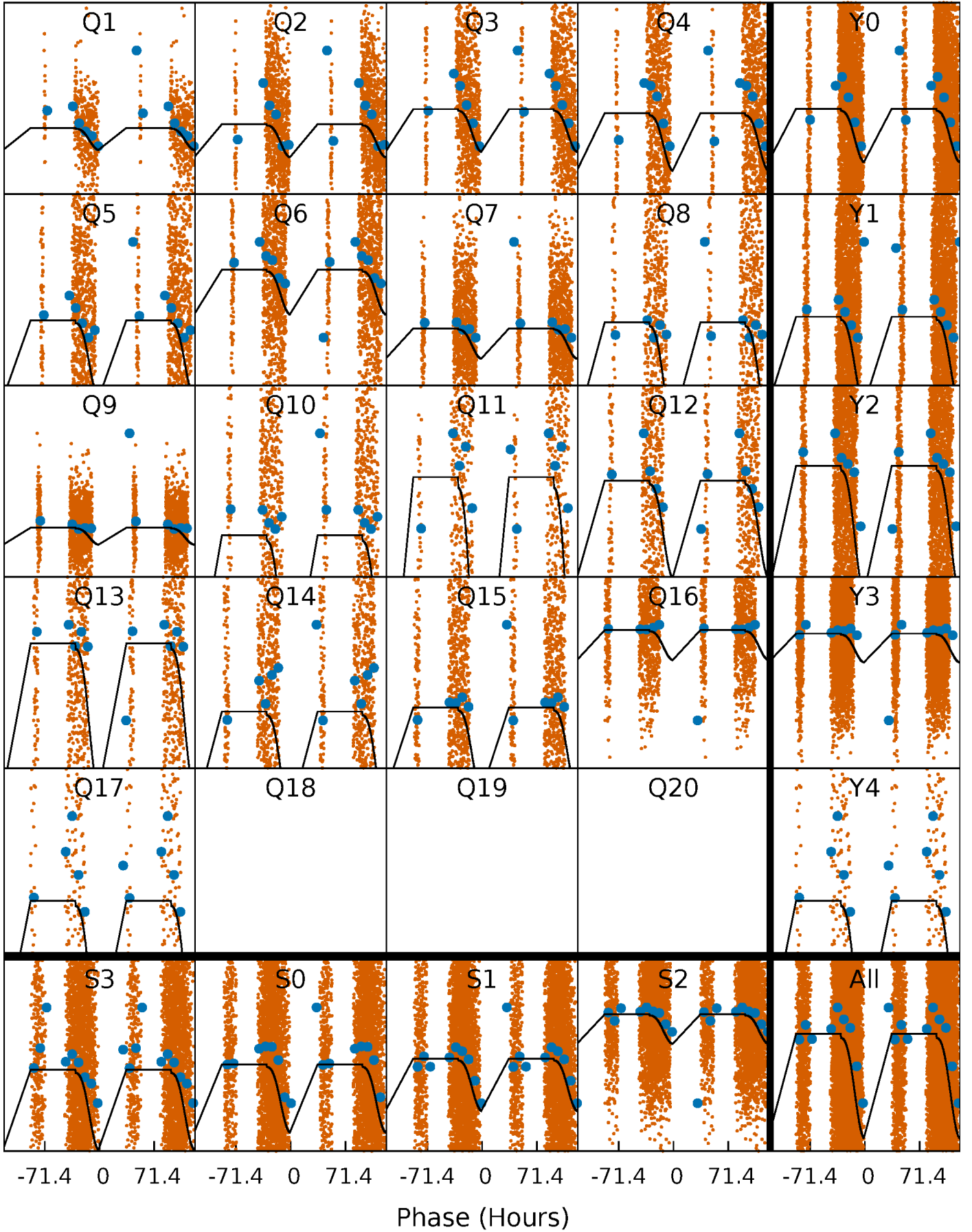
PDC Quarter-Phased Transit Curves

TCE 011974942-05 P= 5.205100 Days $T_0=136.233153$ (BKJD)



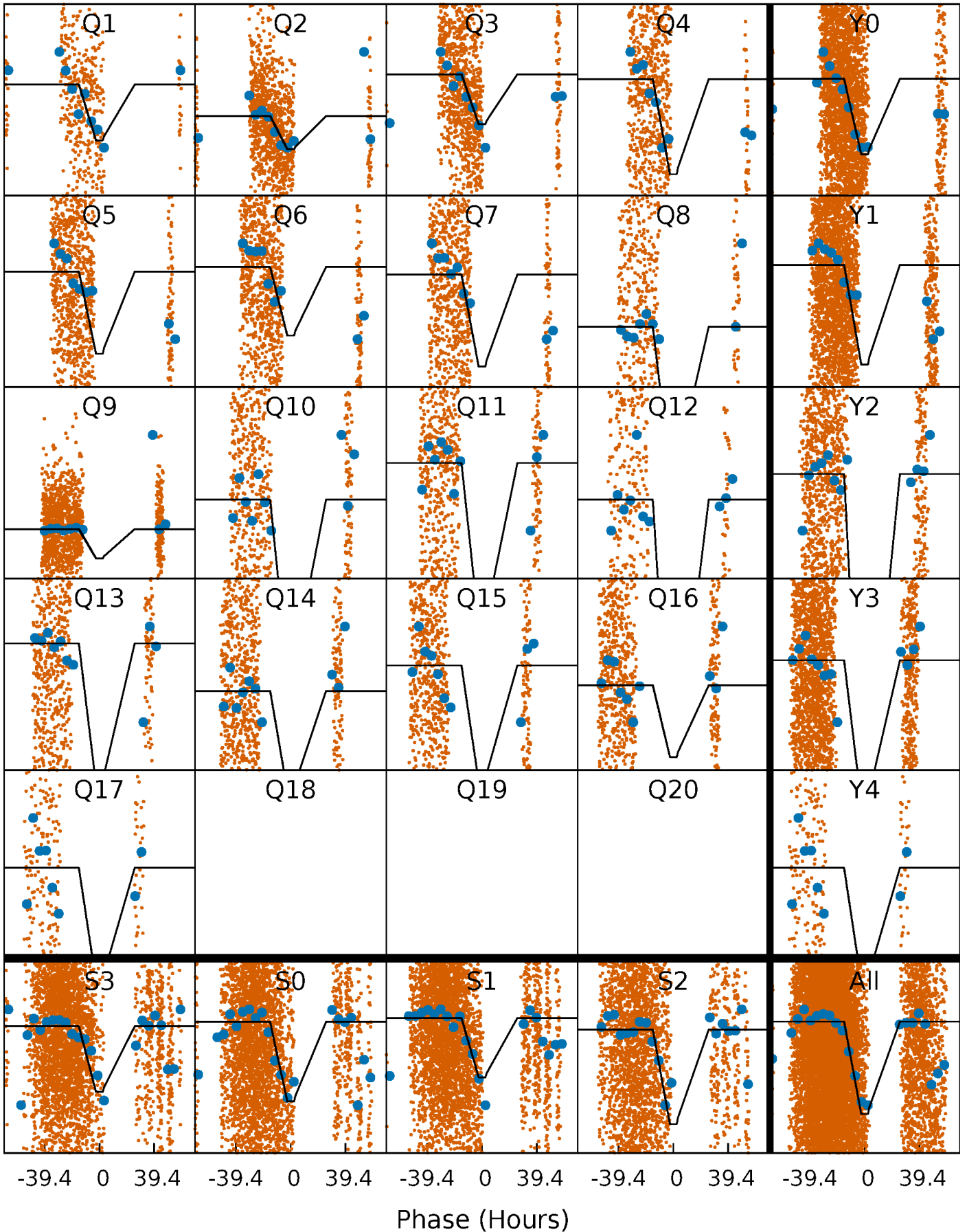
DV Quarter-Phased Transit Curves

TCE 011974942-05 P= 5.205100 Days $T_0=136.233153$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

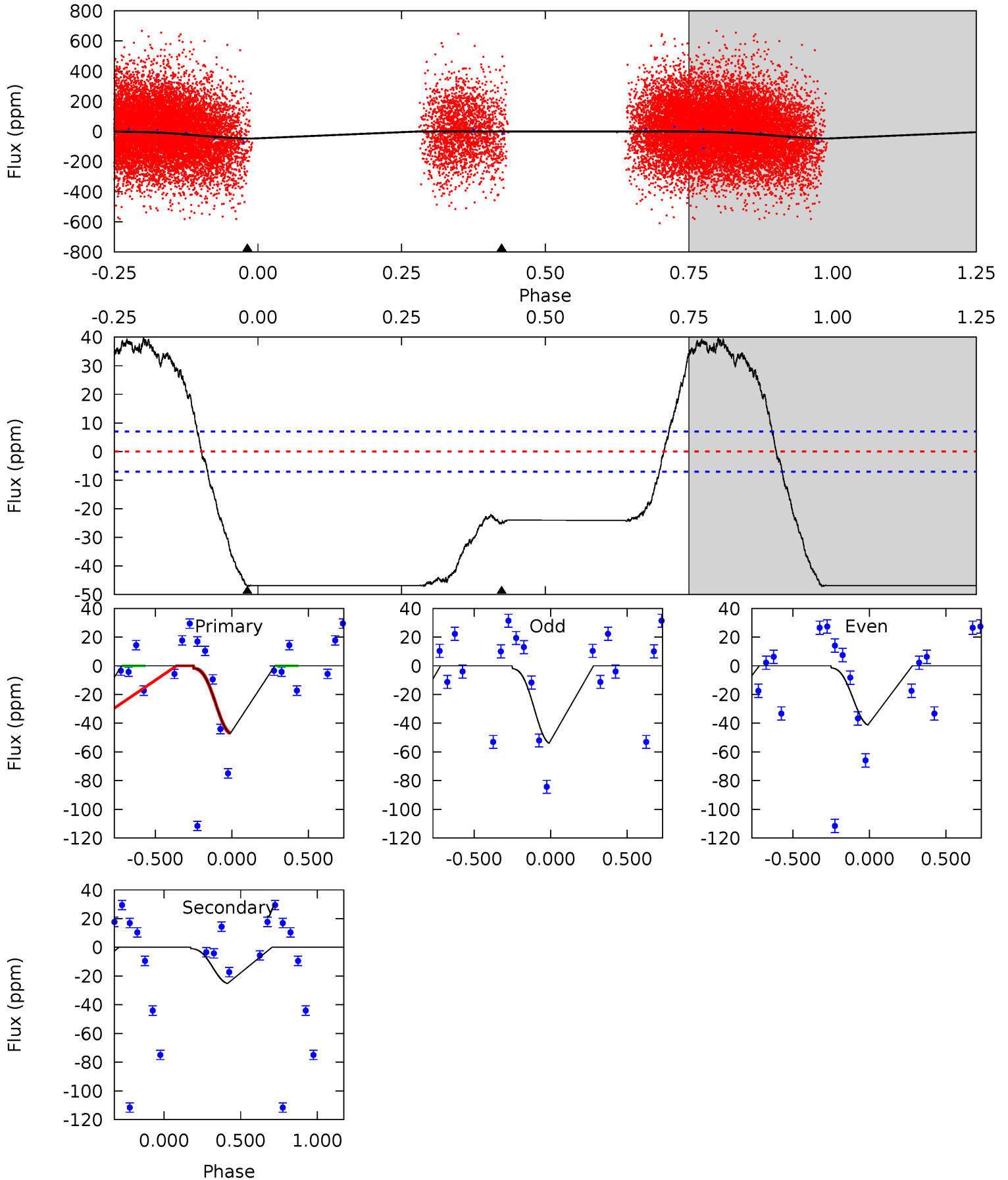
TCE 011974942-05 P= 5.207237 Days $T_0=136.039013$ (BKJD)



DV Model-Shift Uniqueness Test

011974942-05, P = 5.205100 Days, E = 131.028053 Days

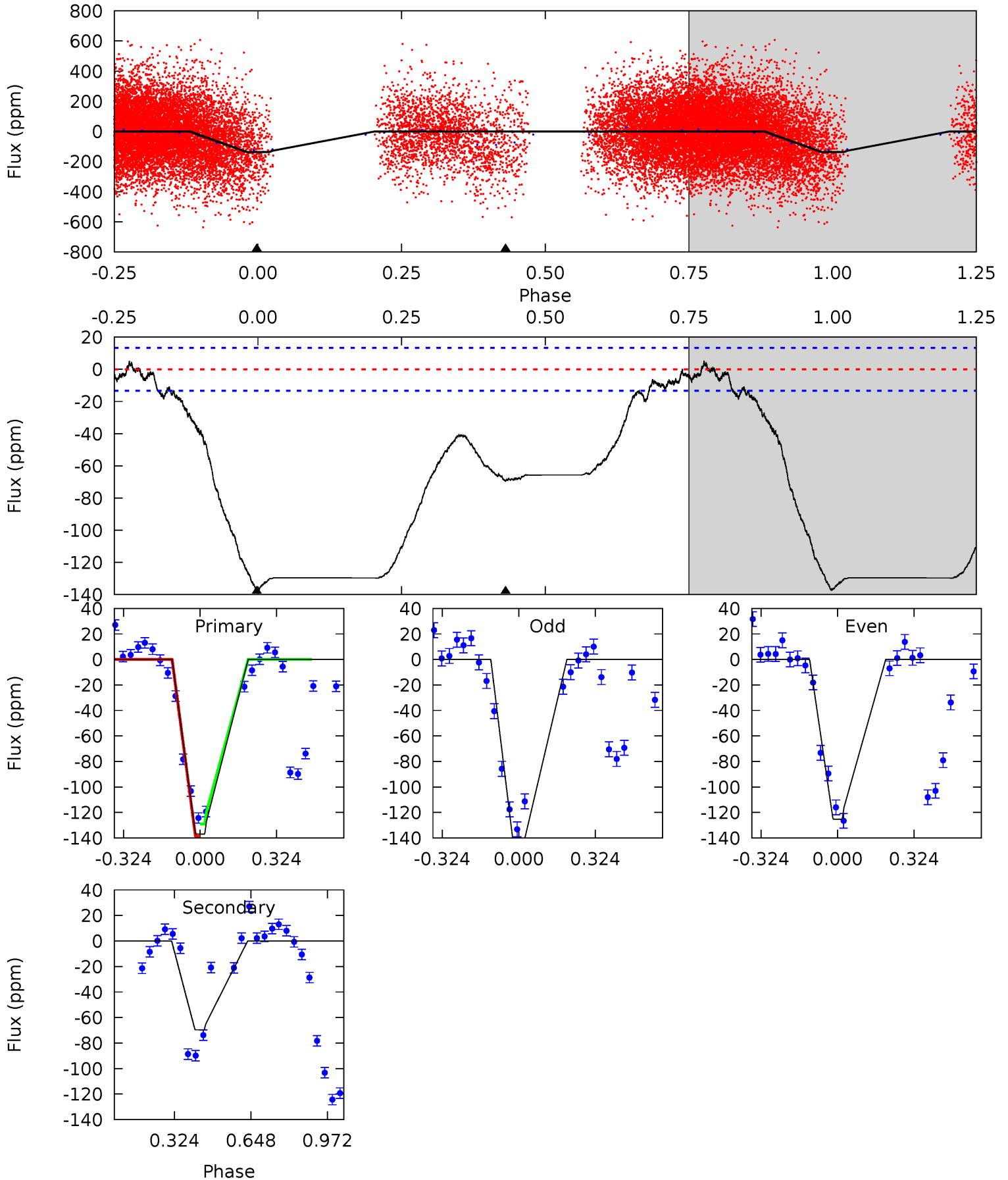
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.3	15.1	0	0	4.21	0.67	5.72	28.3	28.3	15.1	15.1	3.82	0	0.46	0



Alt Model-Shift Uniqueness Test

011974942-05, P = 5.207237 Days, E = 130.831776 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.3	22.5	0	0	4.31	0.99	0.70	44.3	44.3	22.5	22.5	4.04	0.82	0.04	0.59



Stellar Parameters For KIC 011974942

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6311^{+169}_{-188}	$3.493^{+0.376}_{-0.094}$	$-0.320^{+0.400}_{-0.300}$	$3.779^{+0.669}_{-1.672}$	$1.622^{+0.186}_{-0.434}$	$0.042^{+0.134}_{-0.015}$
	+3%/-3%	+11%/-3%	+125%/-94%	+18%/-44%	+11%/-27%	+315%/-36%
Source	PHO1	FLK73	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 011974942-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-25 ± 2	$8.06^{+6.75}_{-4.86}$	2806^{+188}_{-277}	3327^{+1483}_{-1710}	$1.009^{+5.049}_{-0.708}$
Alt.	-70 ± 3	$6.59^{+5.65}_{-4.34}$	2806^{+186}_{-299}	4441^{+2969}_{-939}	$4.110^{+32.777}_{-2.911}$

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

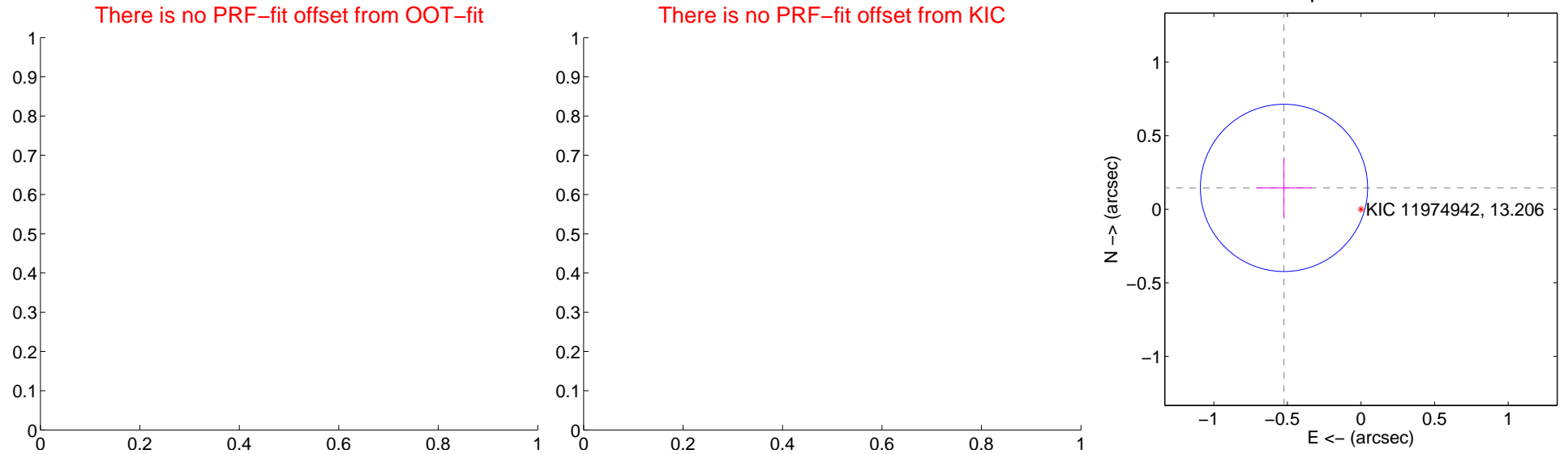
DV Centroid Data

Supplemental centroid analysis for 011974942-05. Kepler magnitude: 13.21. Transit SNR 11.85

There are 0 quarters with good PRF difference image offsets

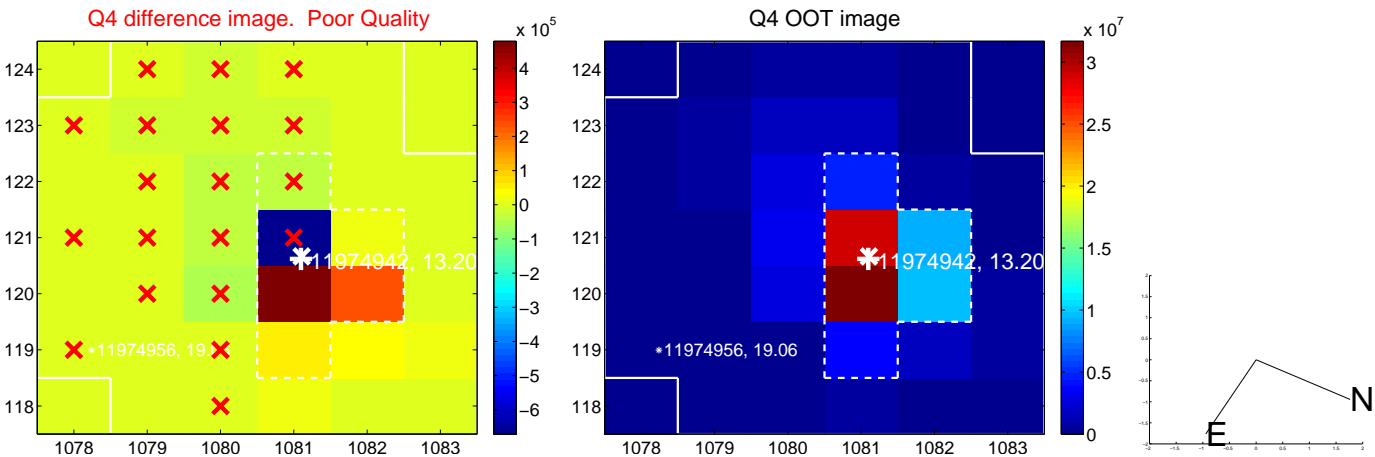
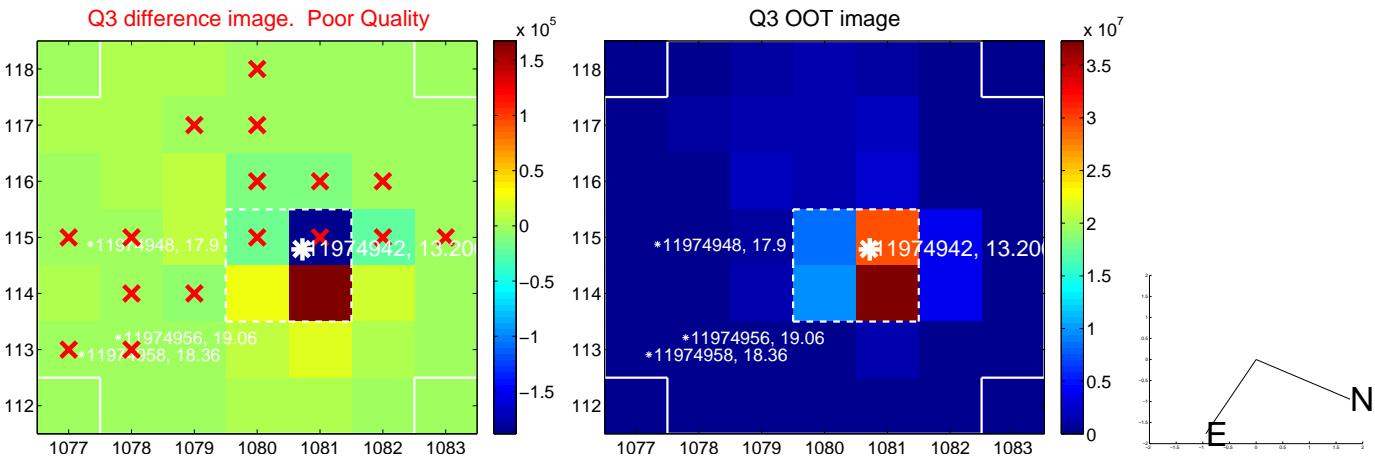
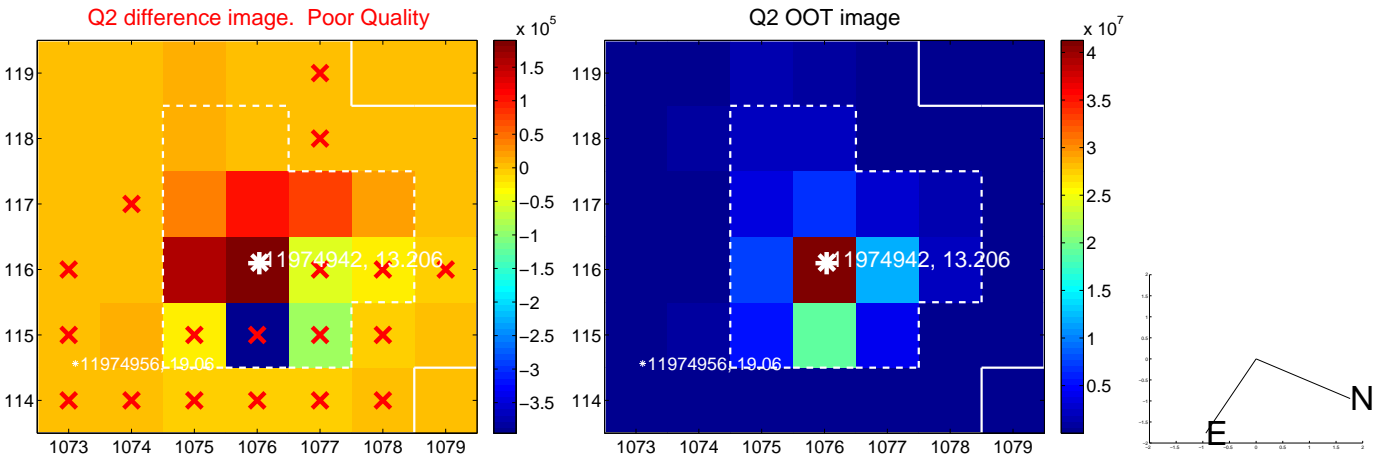
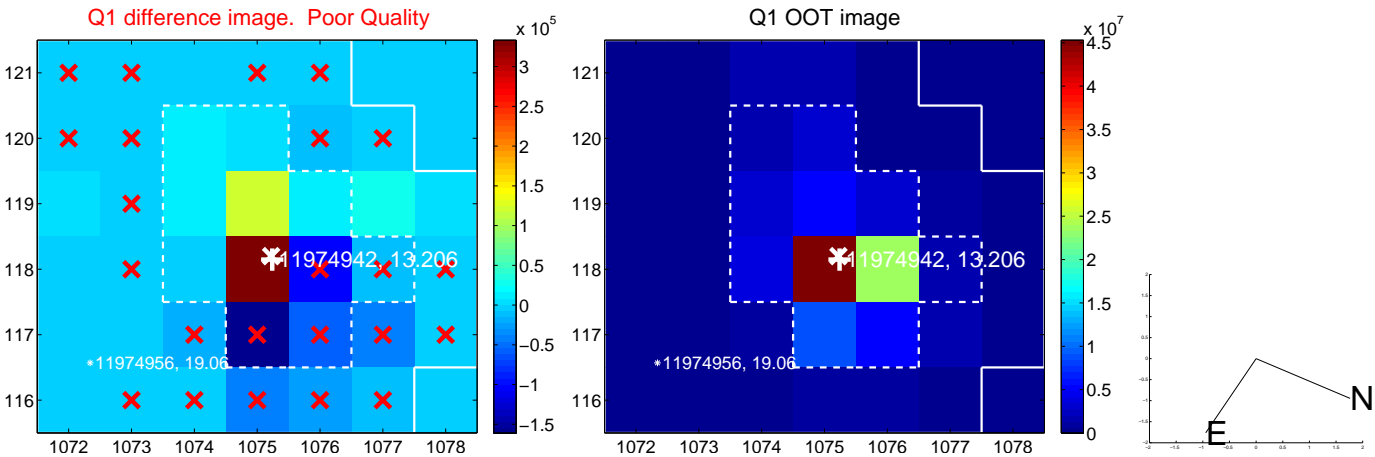
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	0.54 ± 0.19	2.87	0.52 ± 0.19	0.15 ± 0.21

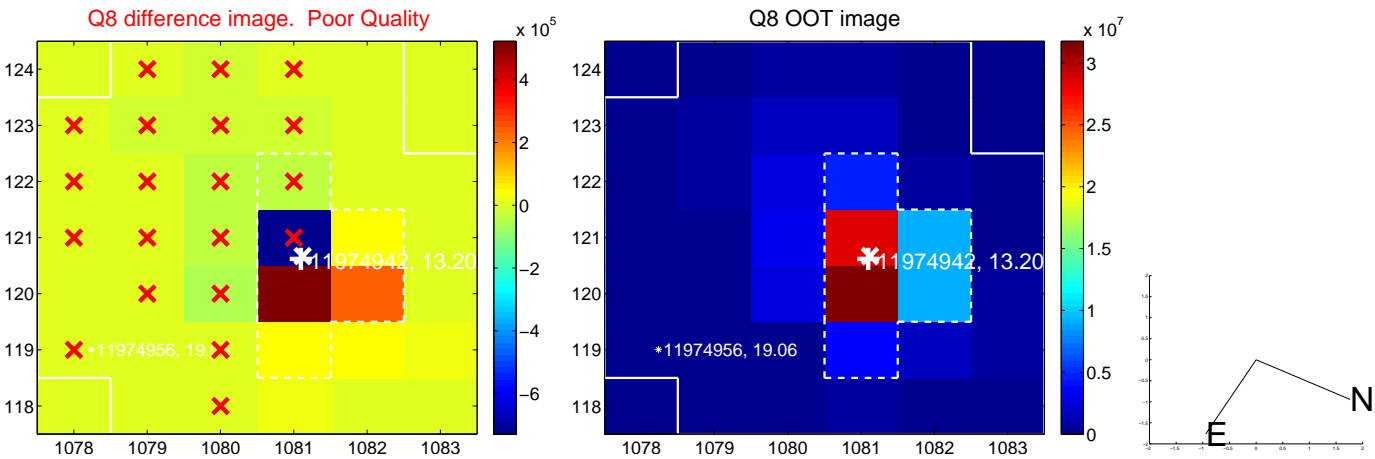
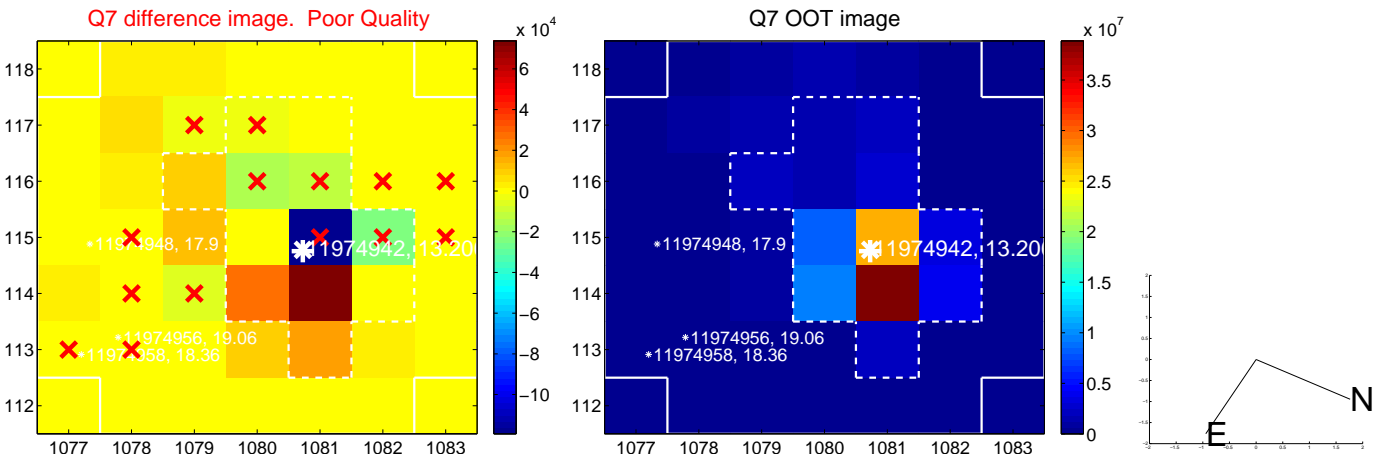
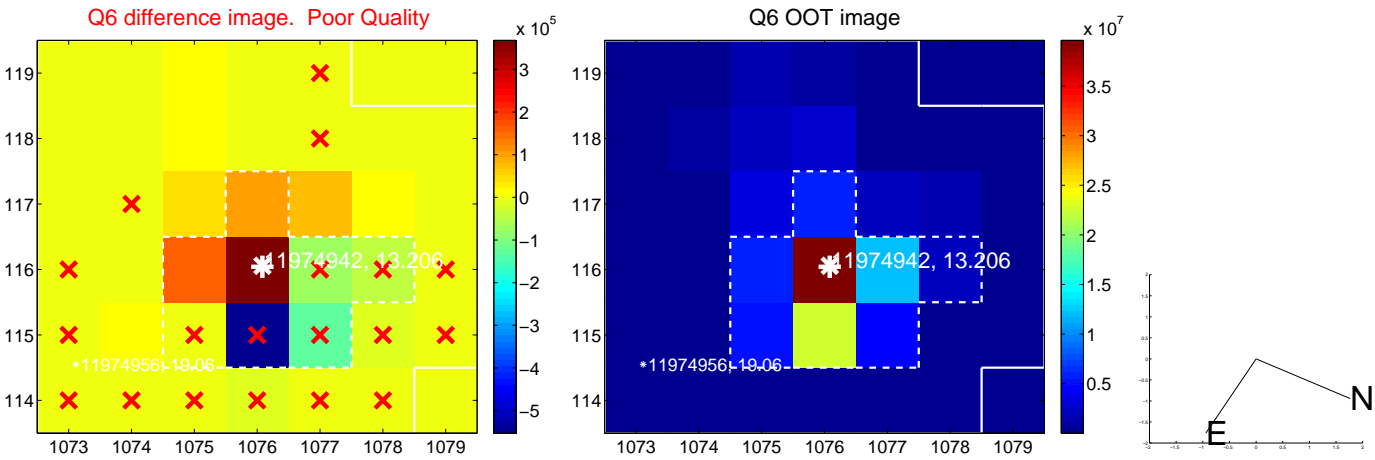
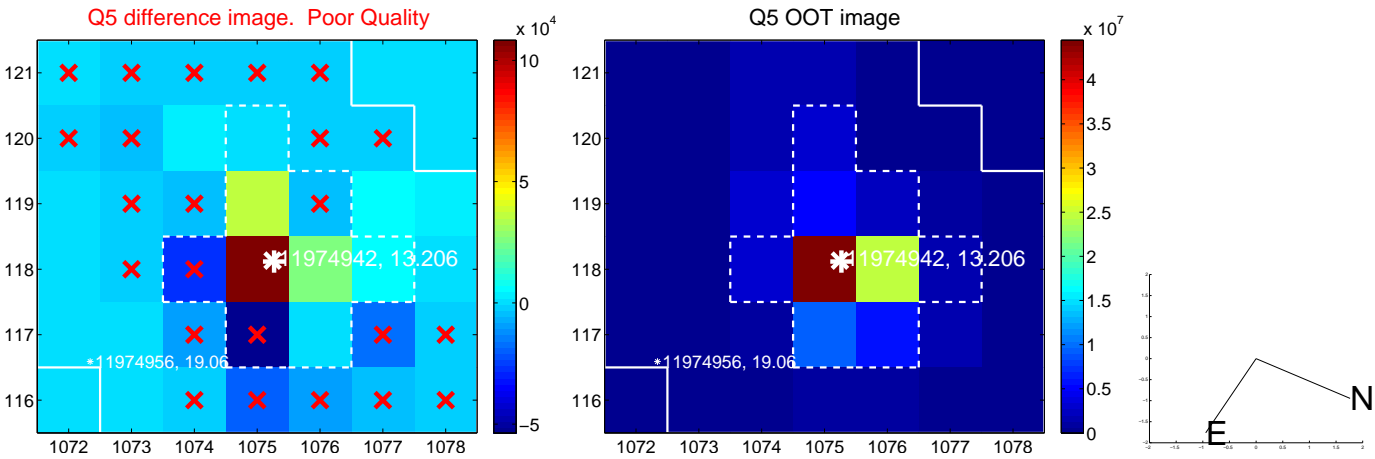


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

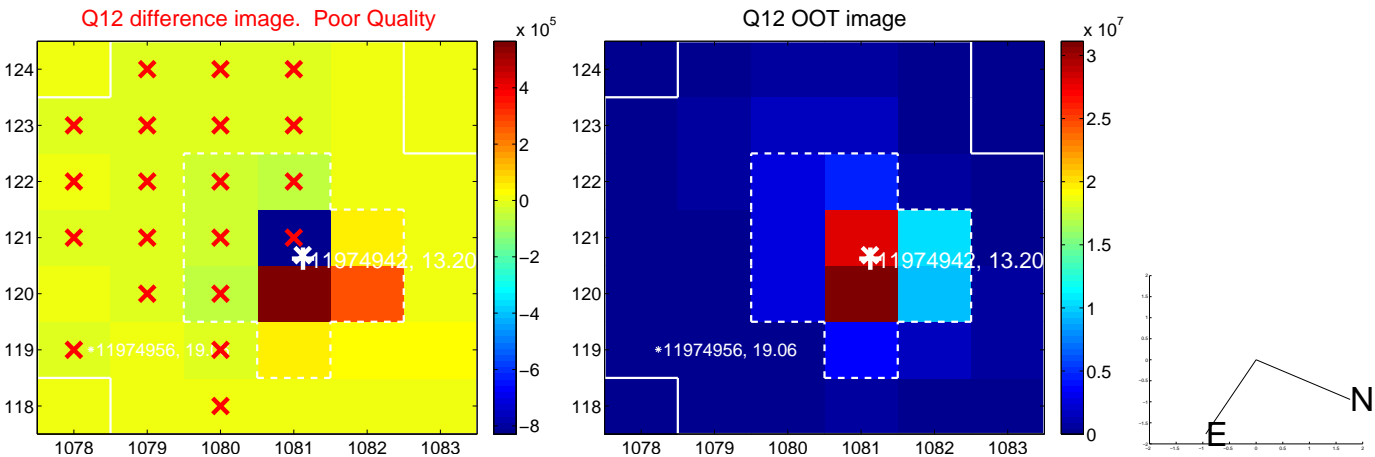
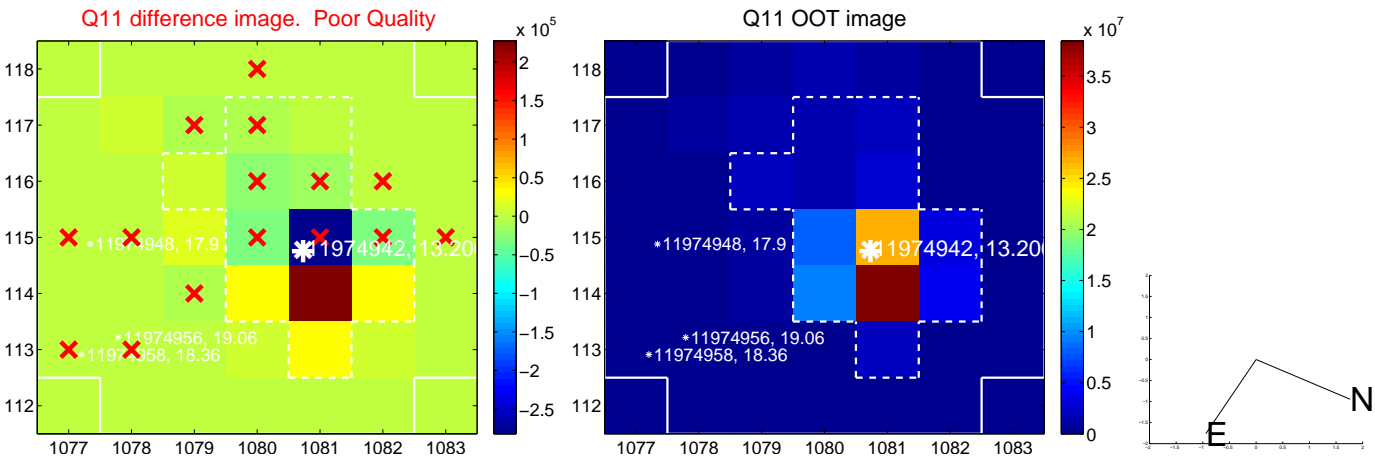
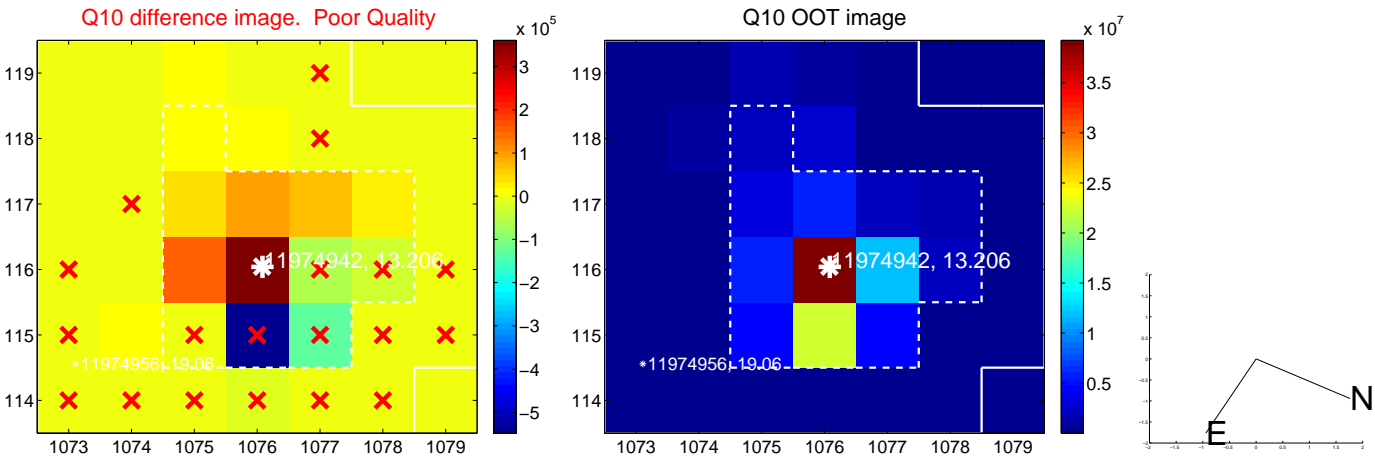
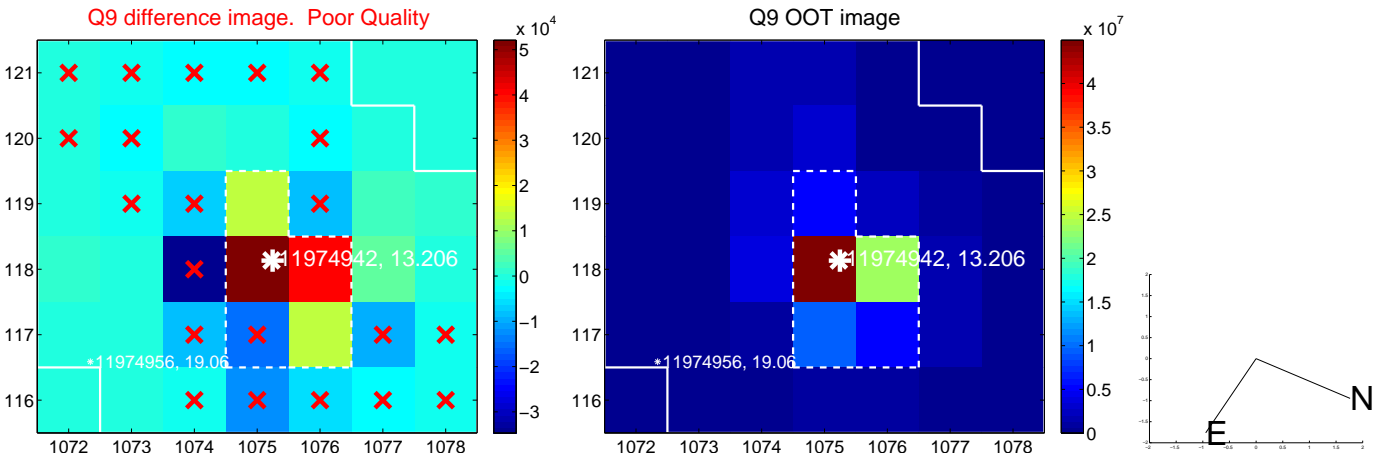
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



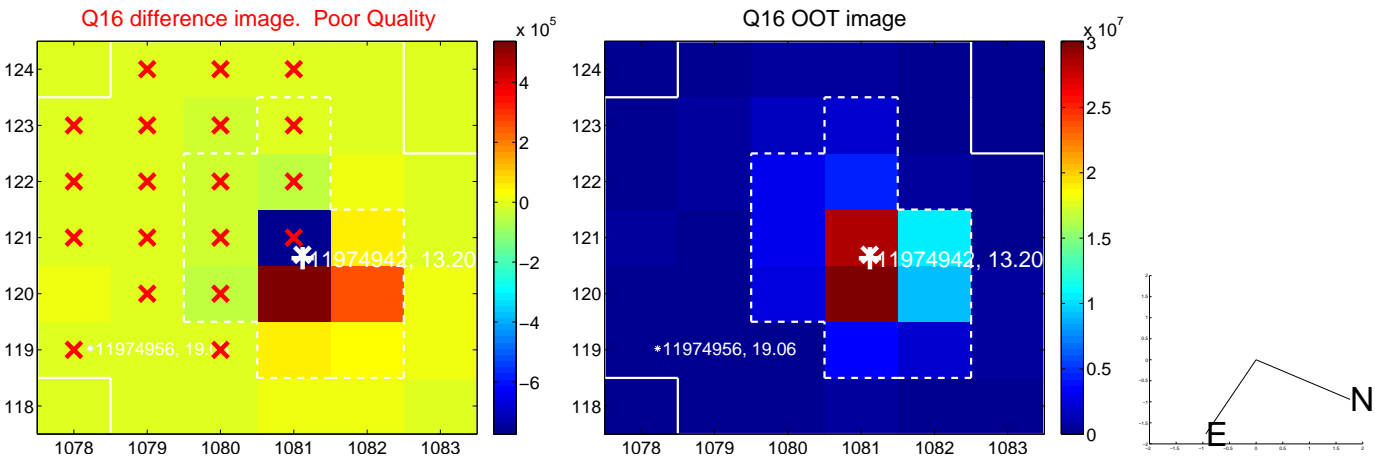
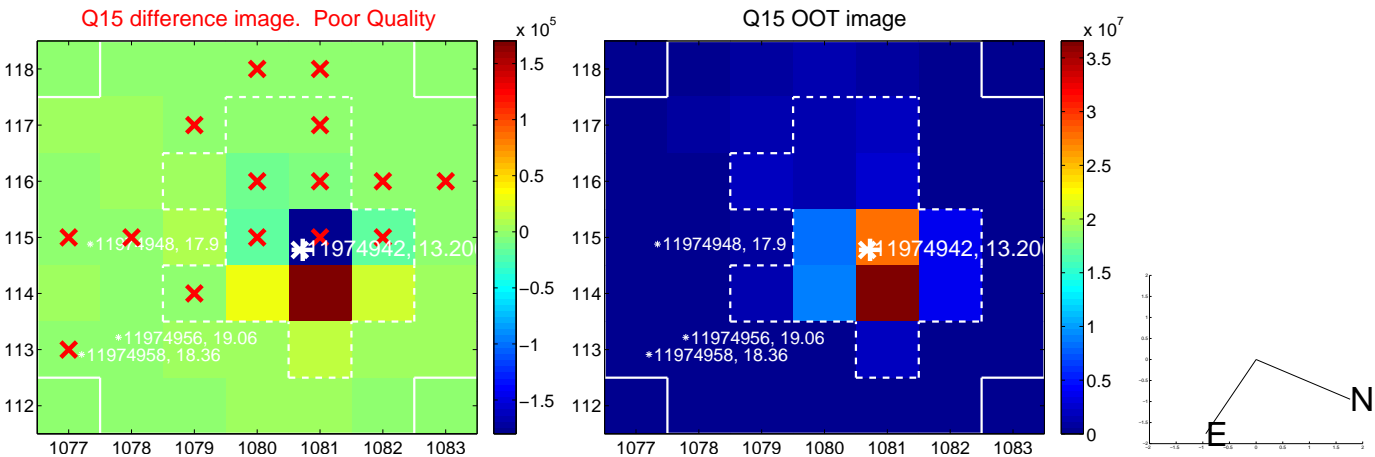
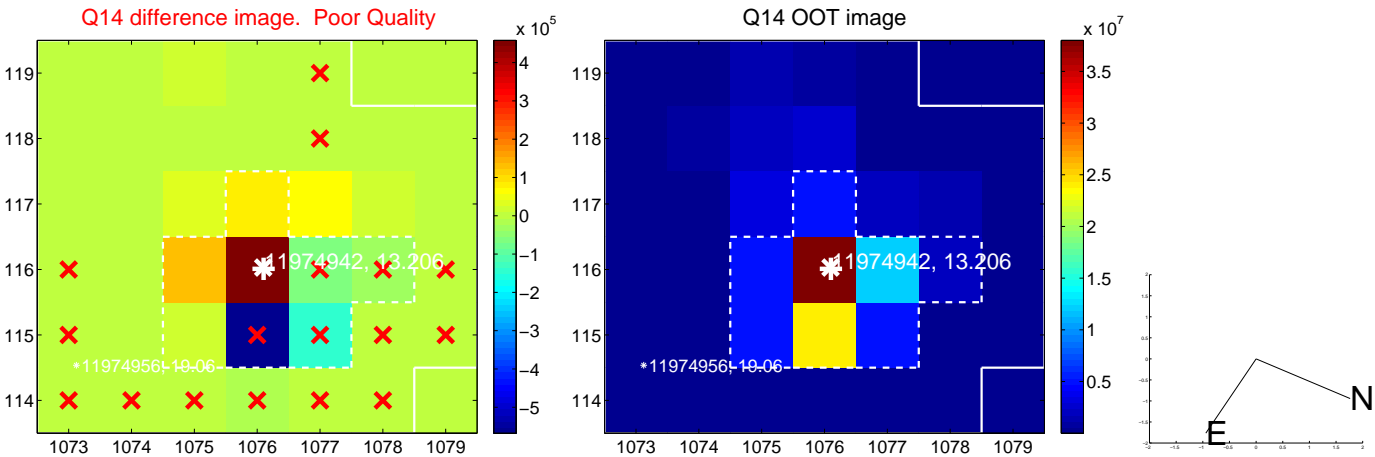
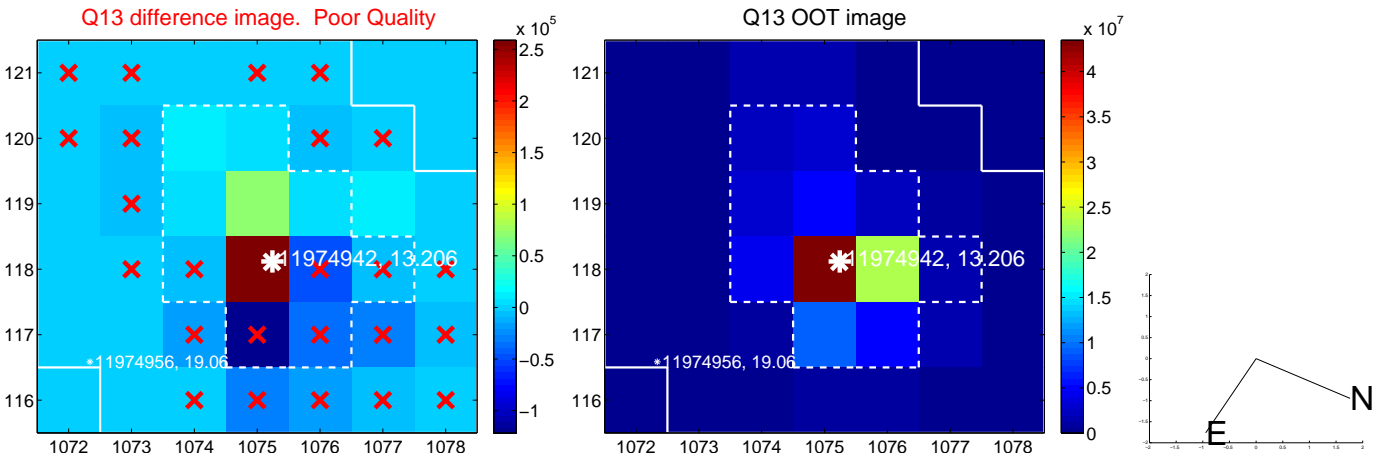
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



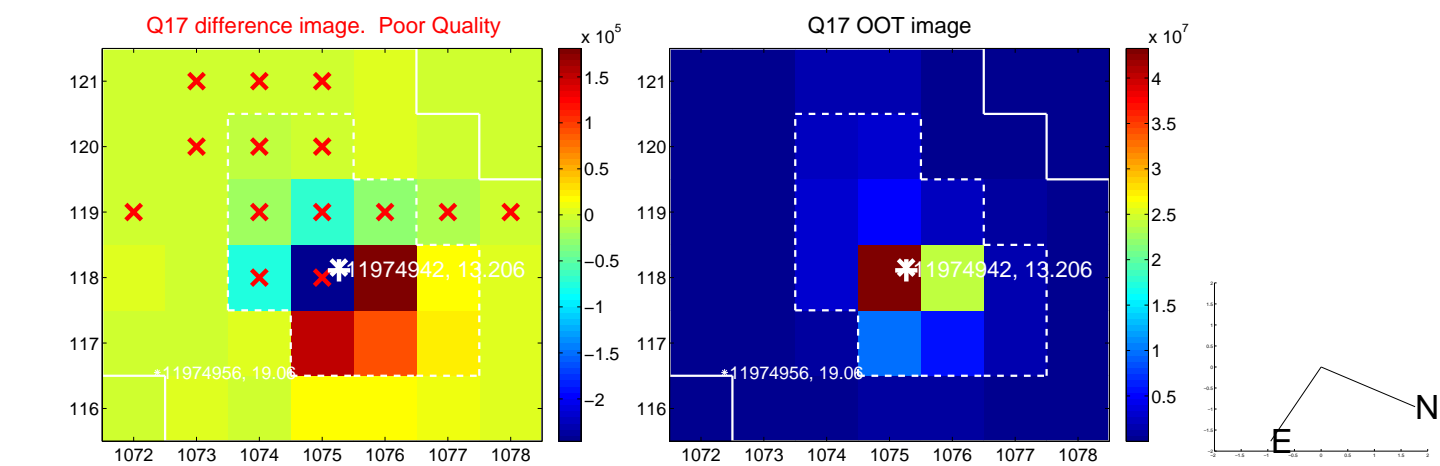
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



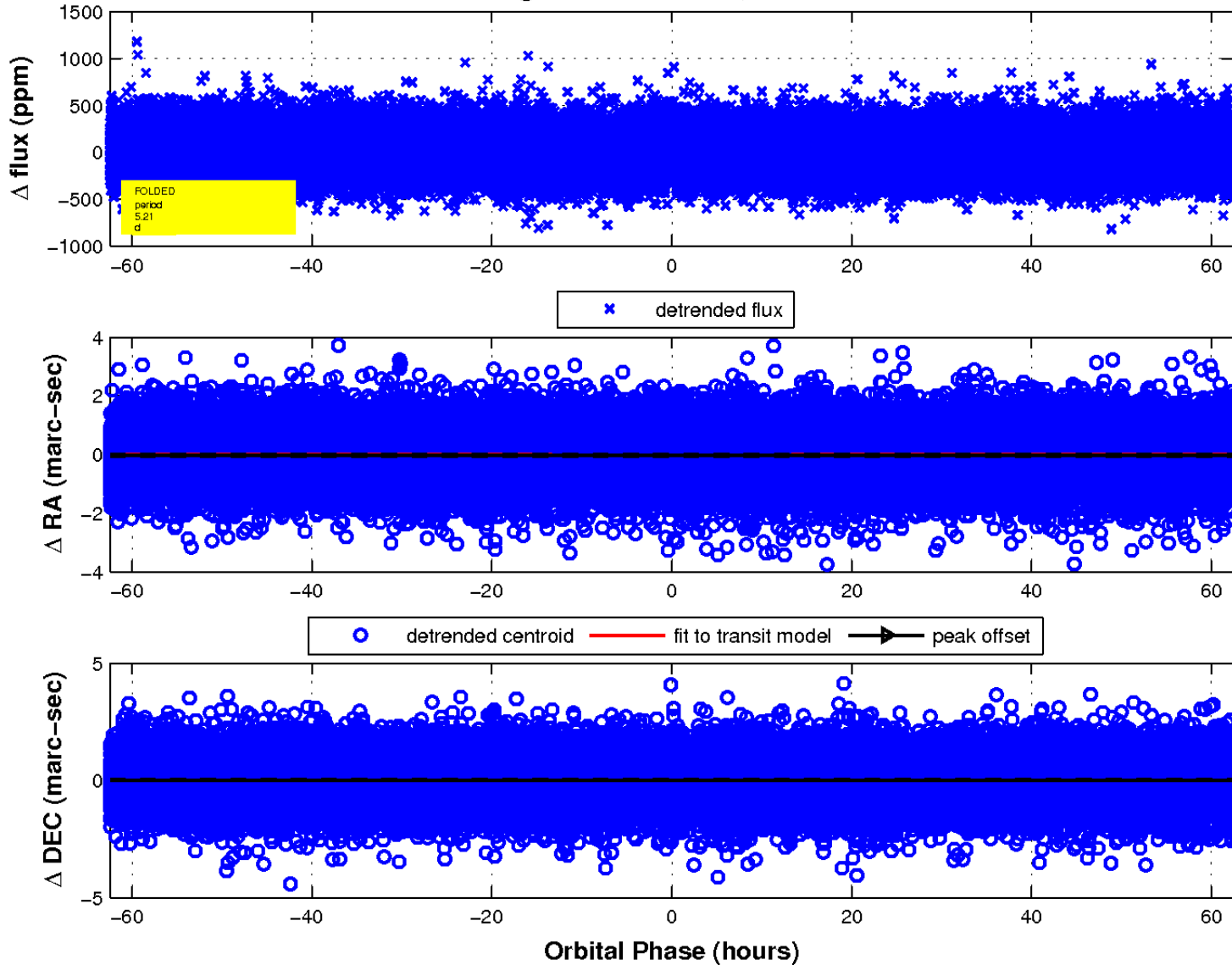
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 5 of 5



UKIRT Image

Declination

