

KIC 011971494

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})
011971494-01	OBS	No	3.222819	134.535681	47.4	6.422	11.4	12.5	1.93	7226	2.67	3883.97
011971494-02	OBS	No	3.223168	134.076987	25.5	15.357	10.5	8.7	1.93	7226	1.13	3883.41
011971494-03	OBS	No	400.151158	244.811927	227.4	4.740	8.8	9.3	1.93	7226	3.37	6.27
011971494-04	OBS	No	73.456185	198.529343	177.4	2.231	8.7	9.3	1.93	7226	2.91	60.10
011971494-05	OBS	No	184.667070	312.422646	90.0	25.718	8.5	5.7	1.93	7226	2.12	17.58
011971494-06	OBS	No	132.760221	224.649260	100.6	7.128	8.3	5.2	1.93	7226	2.15	27.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011971494-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011971494-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011971494-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011971494-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011971494-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
011971494-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

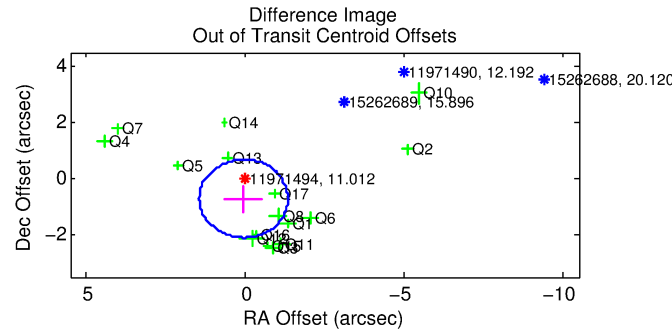
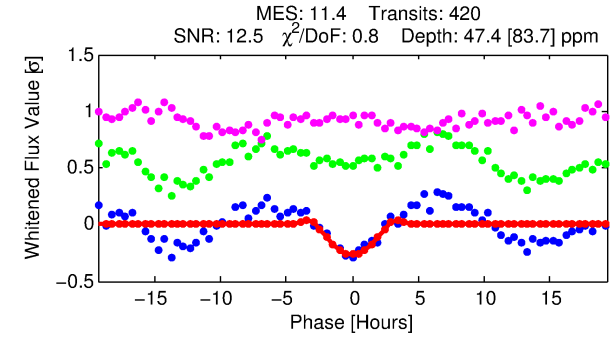
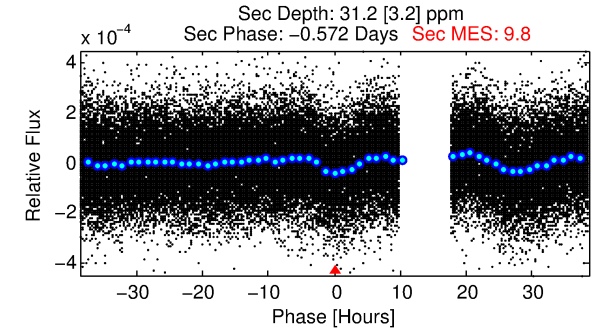
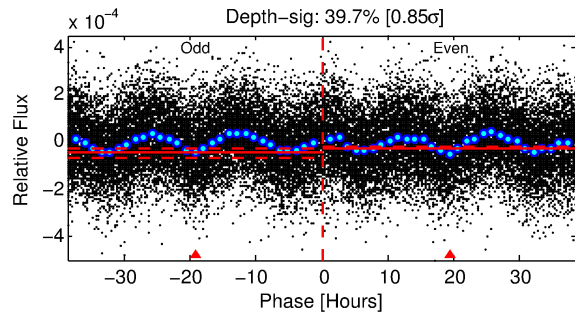
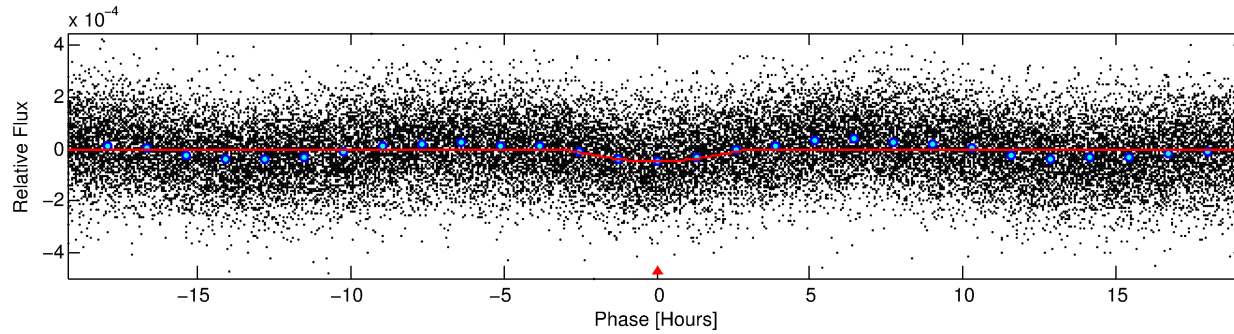
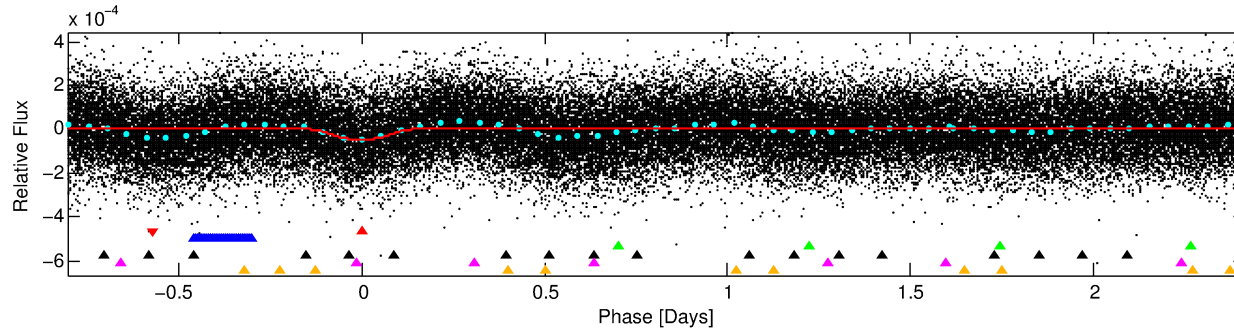
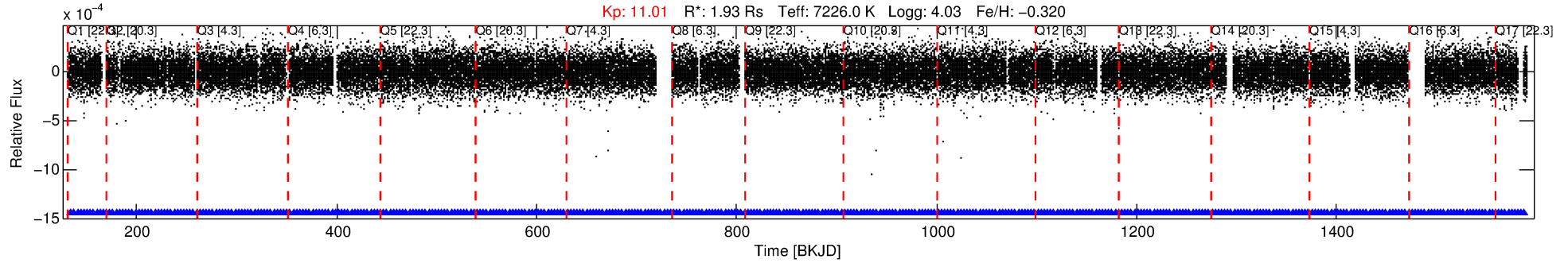
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011971494-01

No Significant Match Found

DV One-Page Summary

KIC: 11971494 Candidate: 1 of 6 Period: 3.223 d



DV Fit Results:

Period = 3.22282 [0.00004] d
Epoch = 134.5357 [0.0095] BKJD
Rp/R* = 0.0127 [0.0231]
a/R* = 1.18 [0.14]
b = 1.00 [0.02]
Seff = 3883.97 [1834.90]
Teq = 2013 [238] K
Rp = 2.67 [4.93] Re
a = 0.0483 [0.0140] AU
Ag = 5.63 [20.69] [0.22 σ]
Teffp = 4795 [4371] K [0.64 σ]

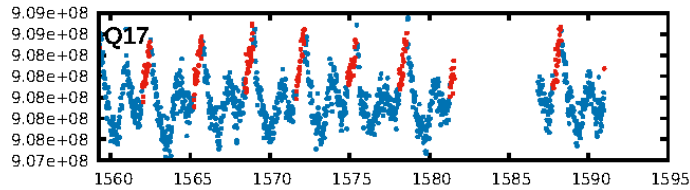
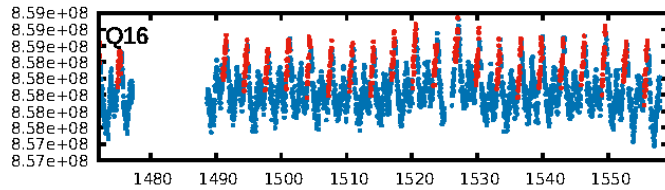
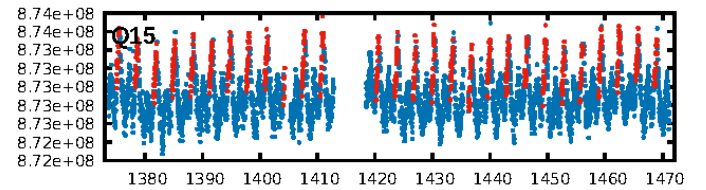
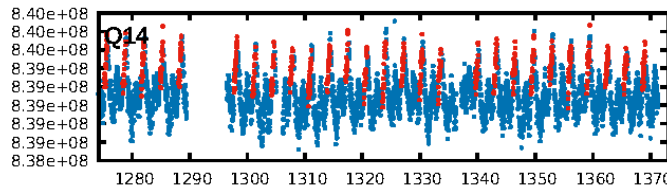
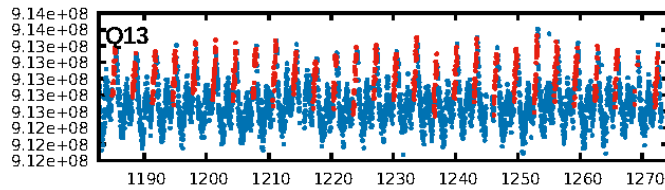
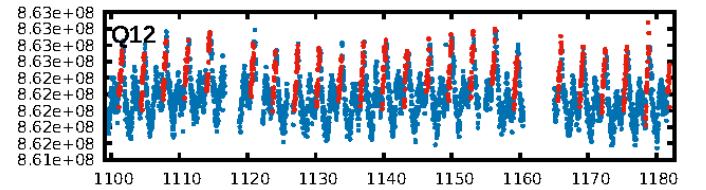
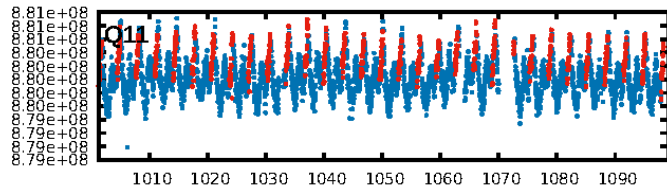
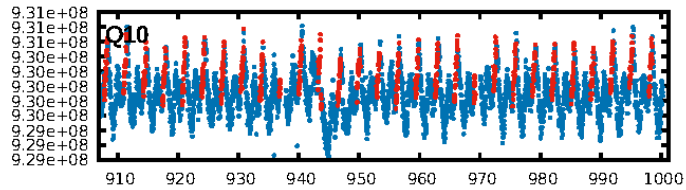
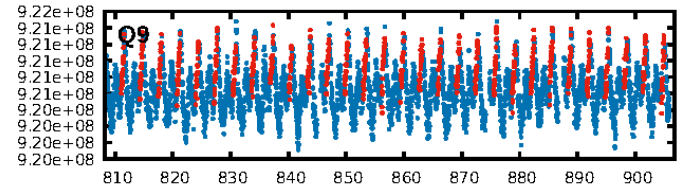
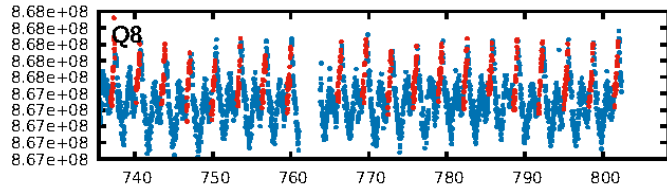
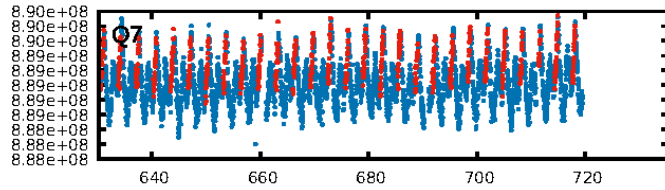
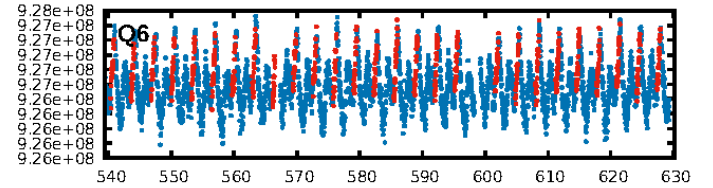
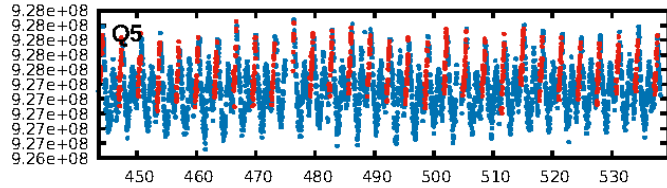
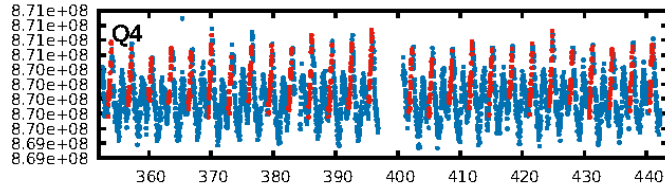
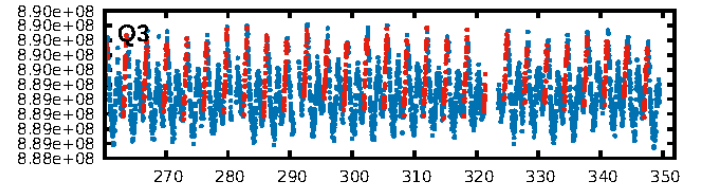
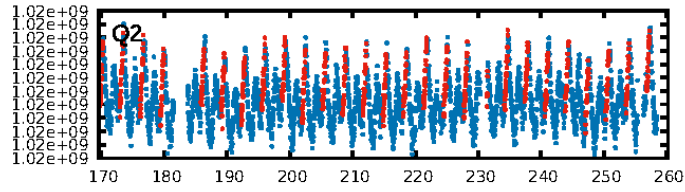
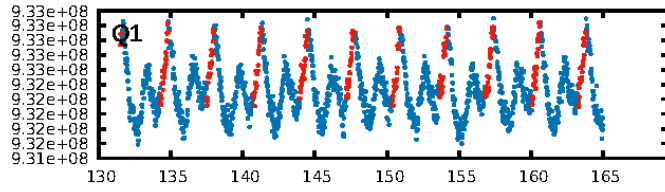
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.54e-15
RollingBand-fgt: 1.00 [402/402]
GhostDiagnostic-chr: -30.71
Centroid-sig: 0.0%
Centroid-so: 1.189 arcsec [2.47 σ]
OotOffset-rm: 0.711 arcsec [1.53 σ]
KicOffset-rm: 0.762 arcsec [1.23 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.38 [6/16]
DiffImageOverlap-fno: 0.00 [0/17]

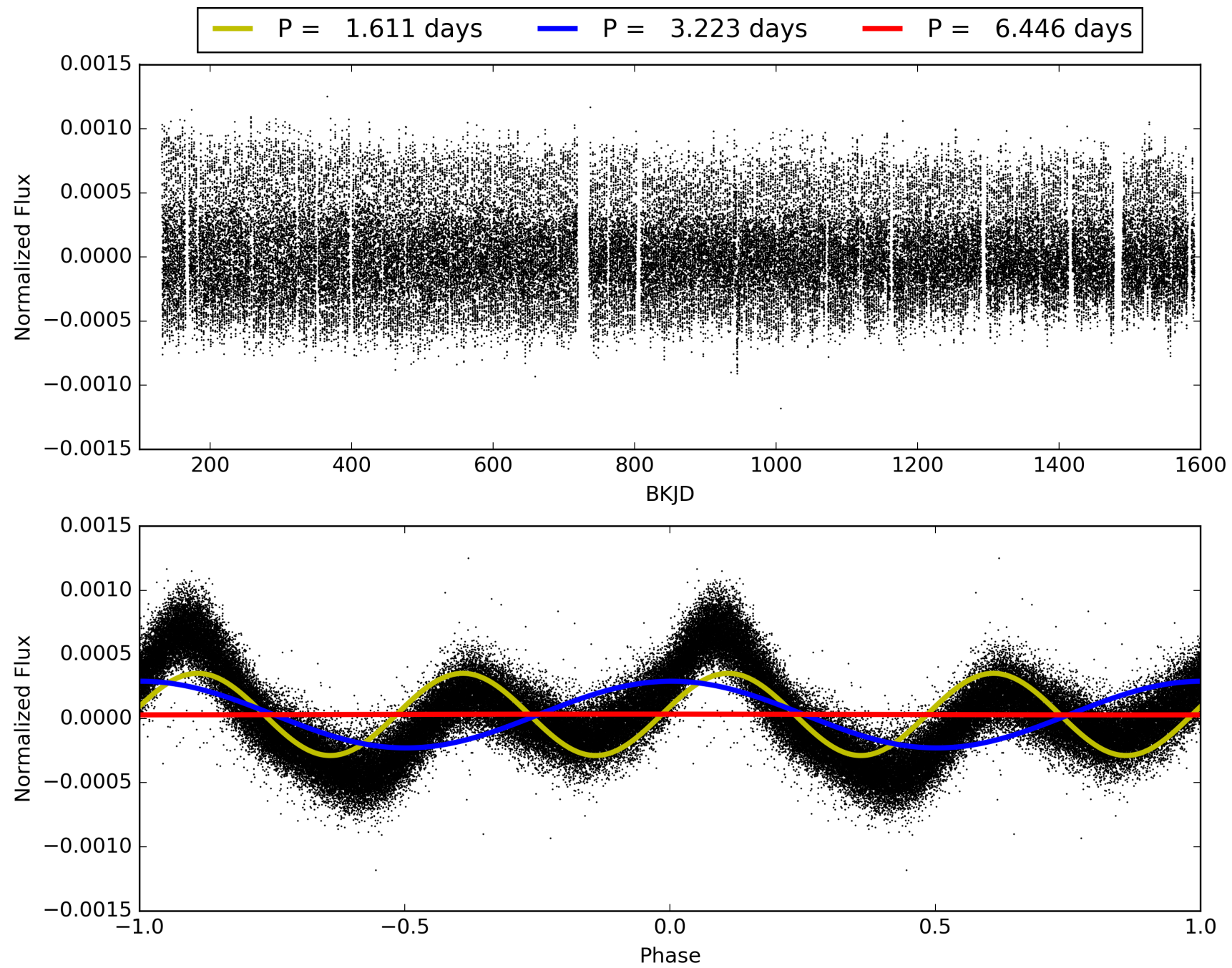
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:11:28 Z

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

TCE 011971494-01, PDC Light Curves

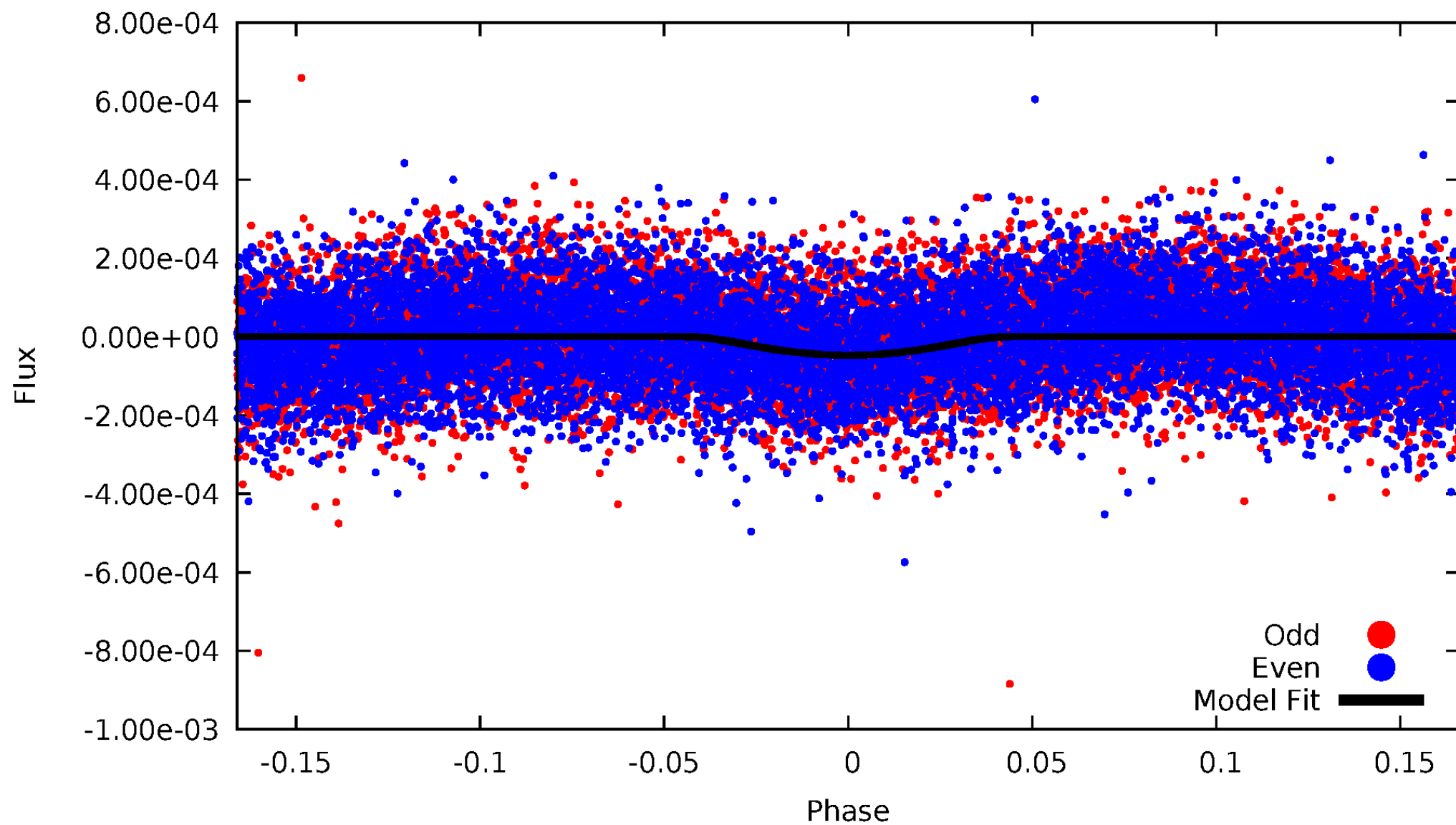


TCE 011971494-01



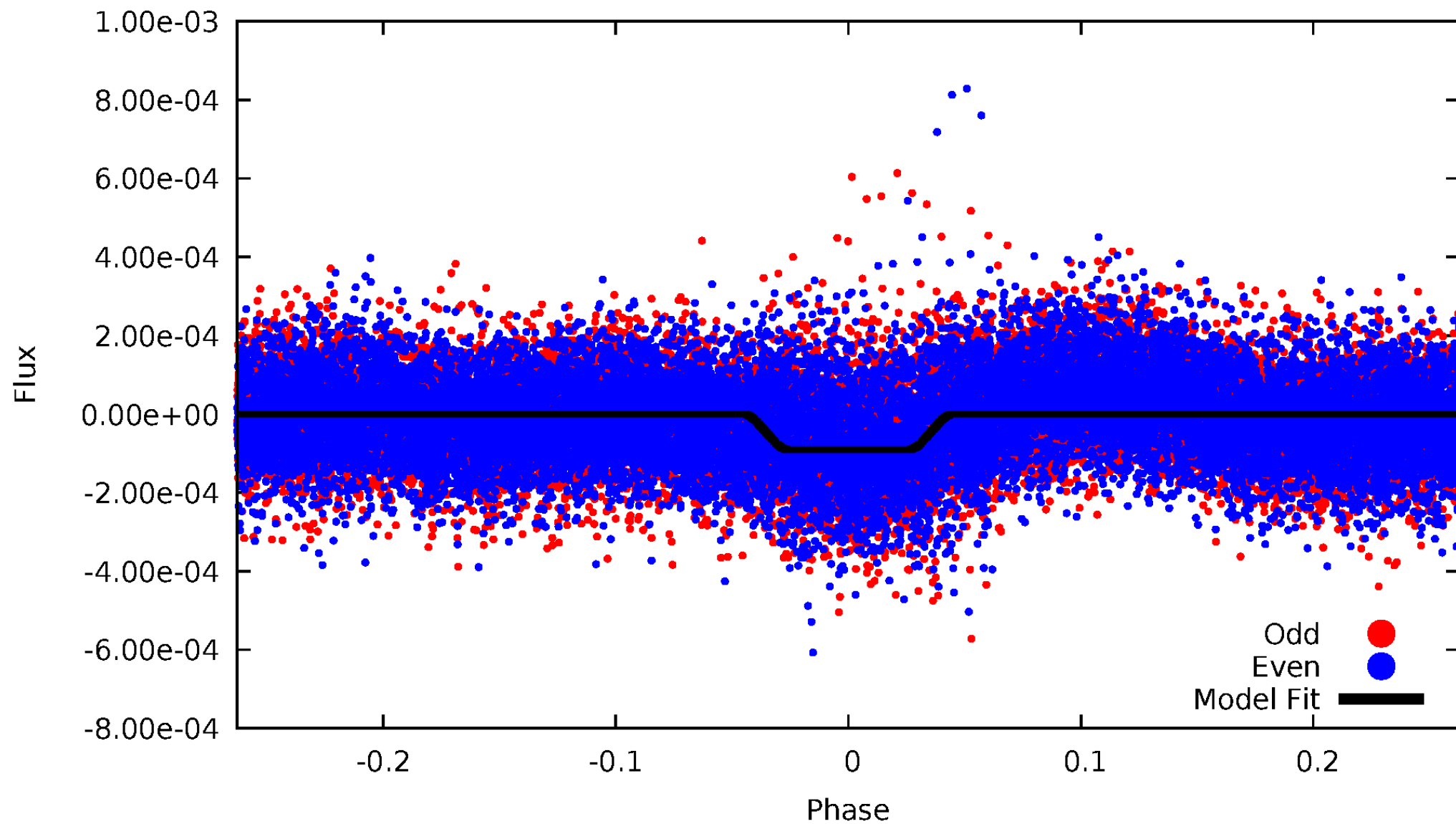
DV Odd/Even

TCE 011971494-01



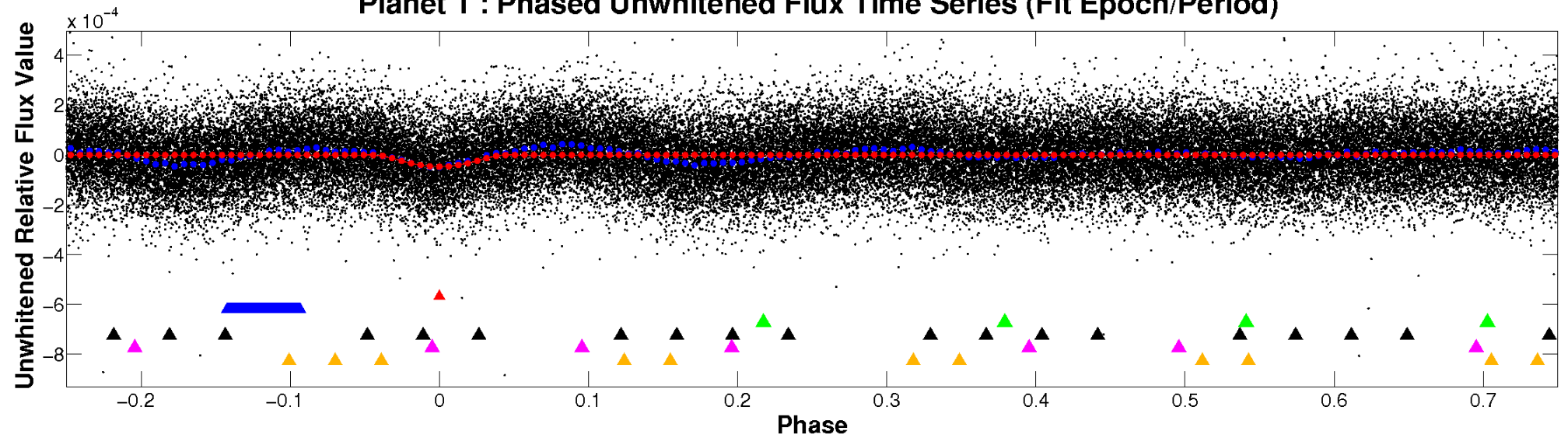
ALT Odd/Even

TCE 011971494-01

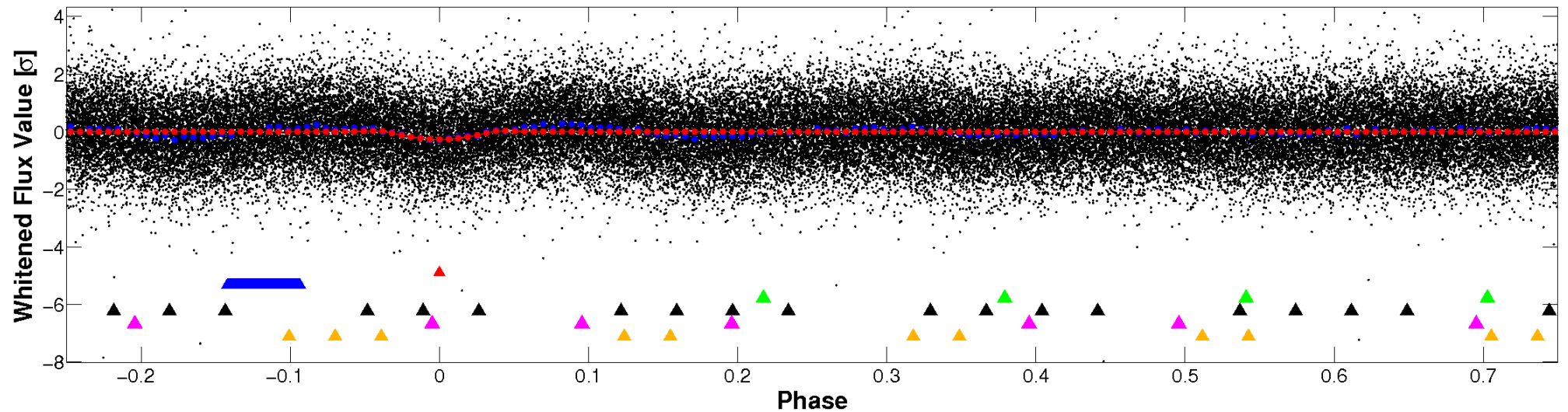


Non-Whitened Vs. Whitened Light Curve

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

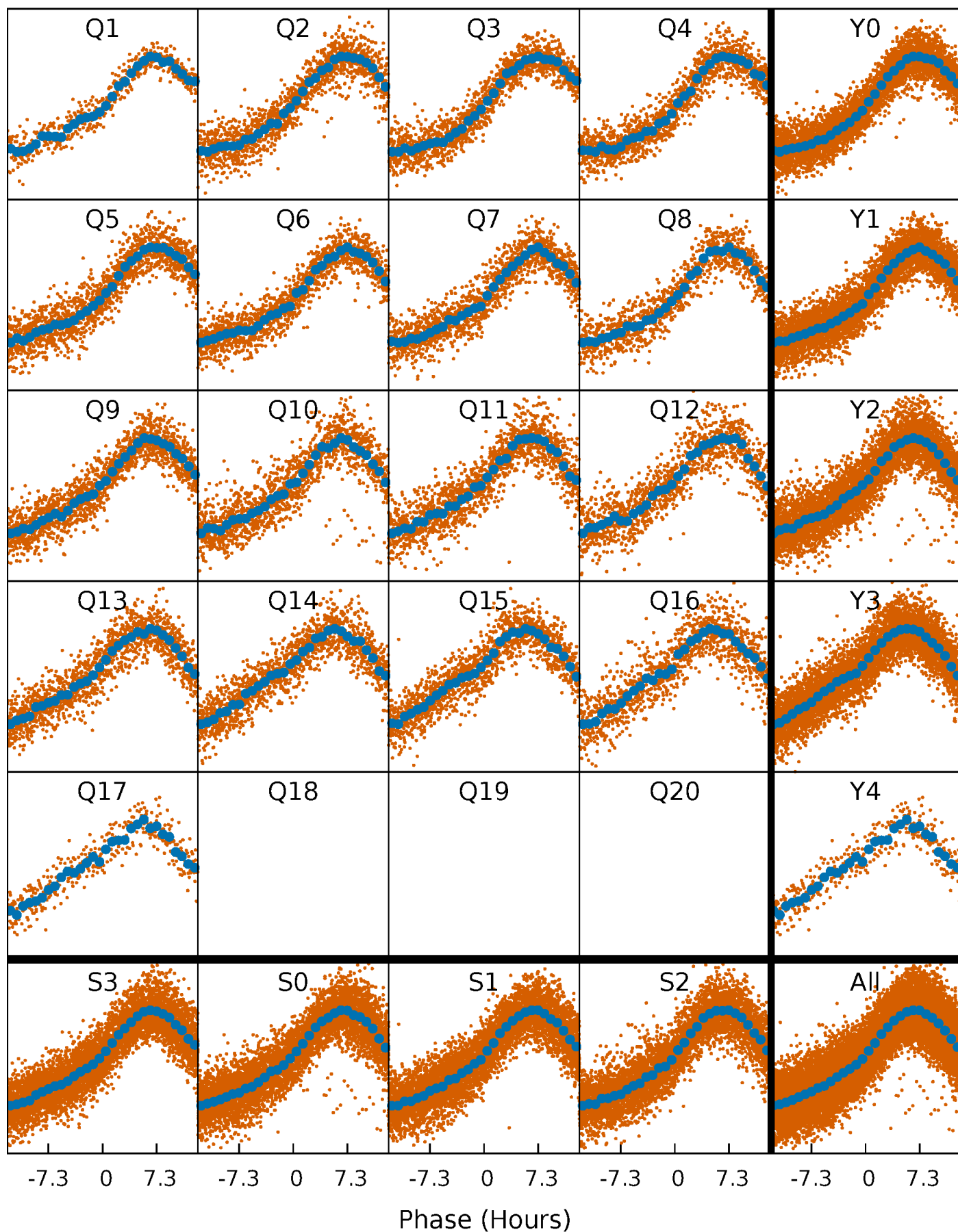


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



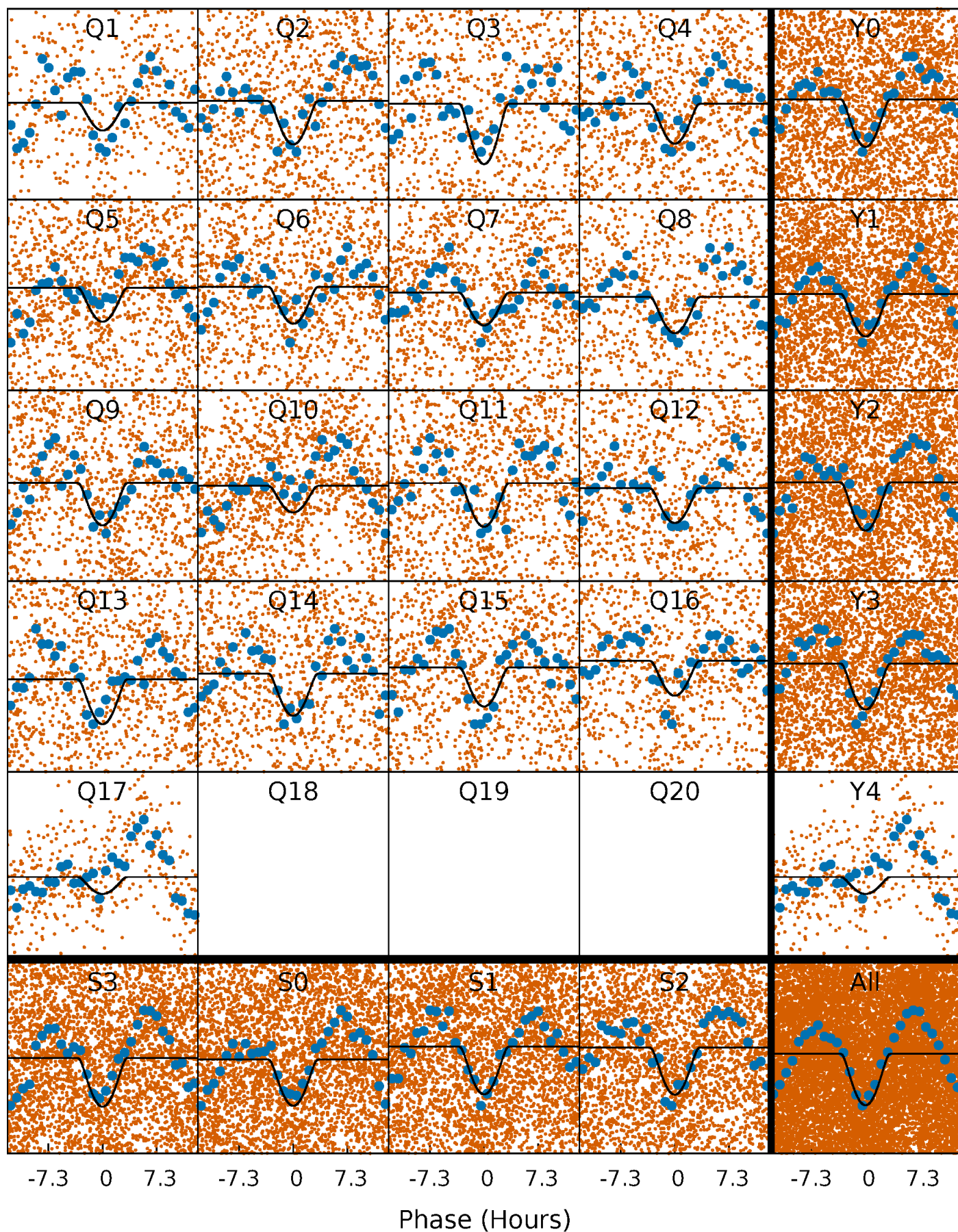
PDC Quarter-Phased Transit Curves

TCE 011971494-01 P= 3.222819 Days $T_0=134.535681$ (BKJD)



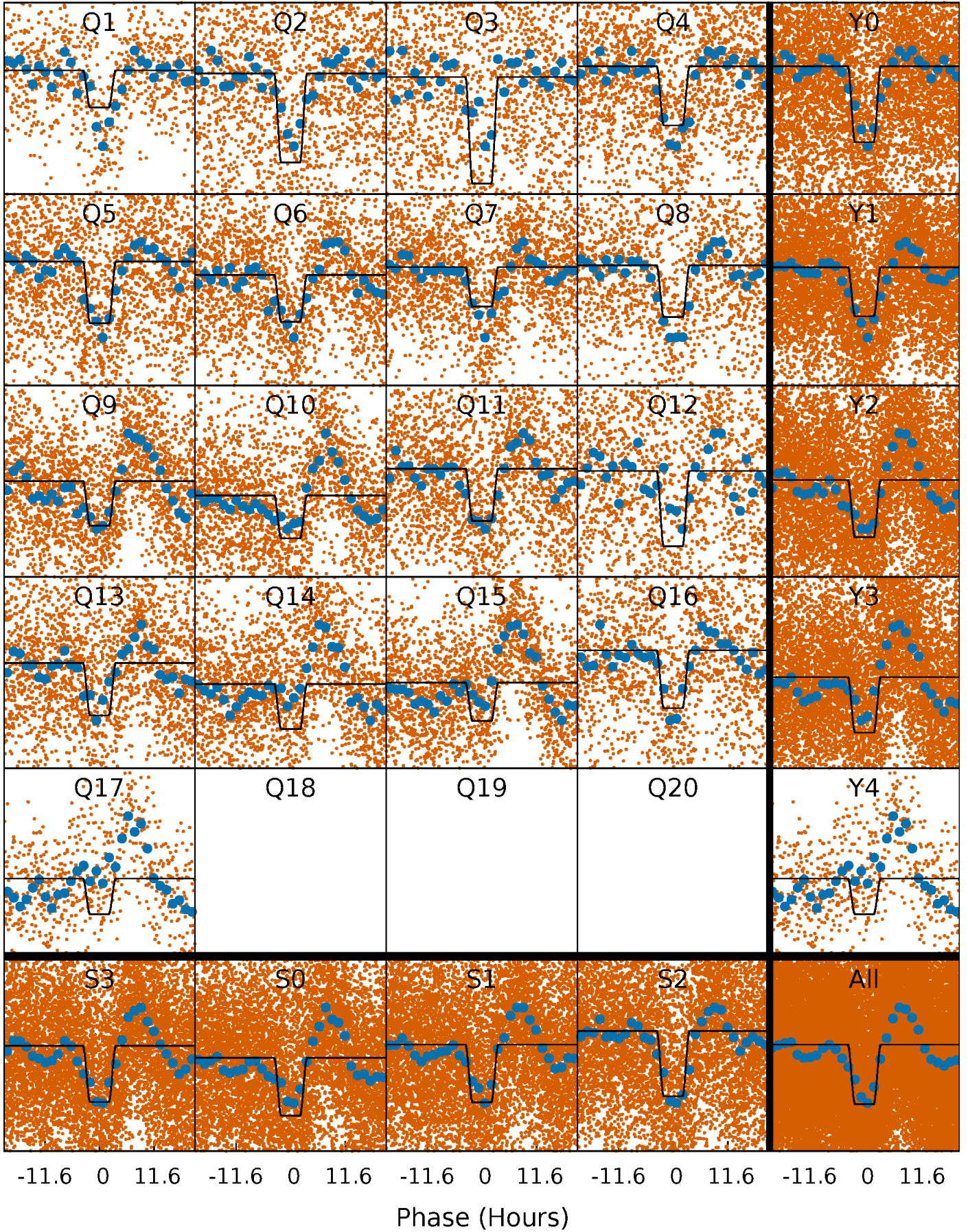
DV Quarter-Phased Transit Curves

TCE 011971494-01 P= 3.222819 Days $T_0=134.535681$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

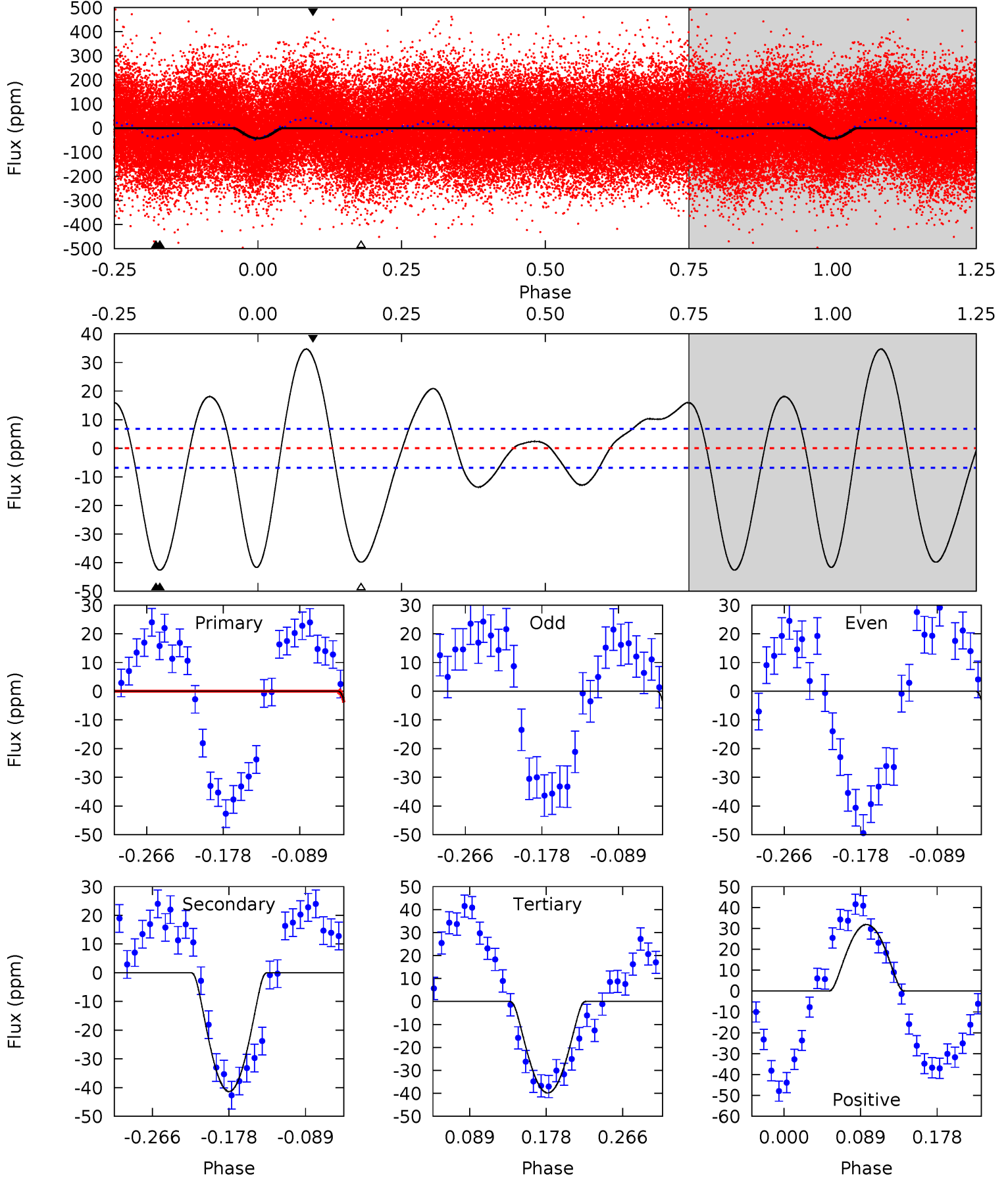
TCE 011971494-01 P= 3.222797 Days $T_0=134.499661$ (BKJD)



DV Model-Shift Uniqueness Test

011971494-01, P = 3.222819 Days, E = 131.312862 Days

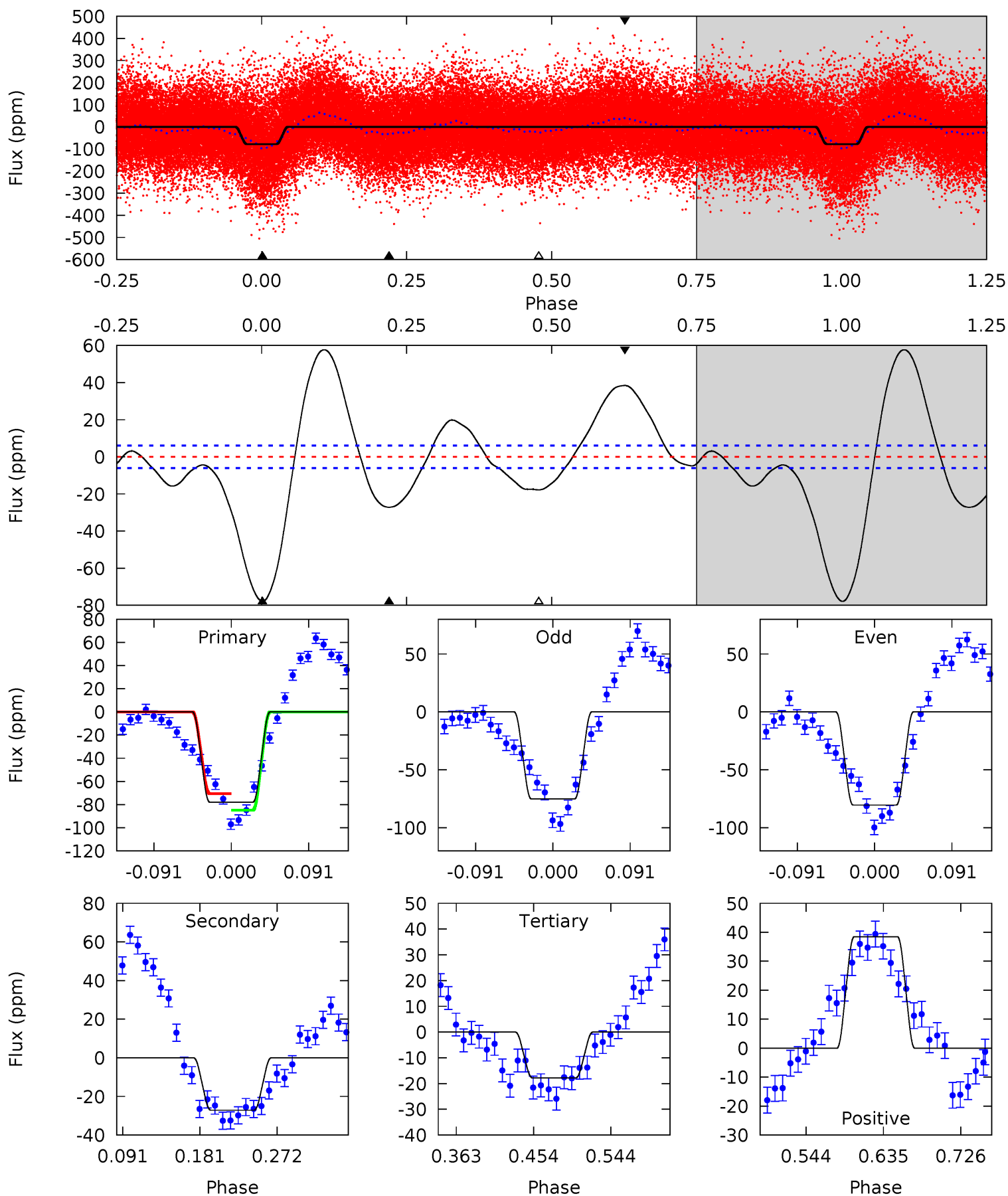
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.7	27.8	26.8	21.4	4.59	1.70	12.0	1.87	7.24	1.03	6.40	1.35	1.02	0.45	3.85



Alt Model-Shift Uniqueness Test

011971494-01, P = 3.222797 Days, E = 131.276864 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.6	20.4	13.4	28.9	4.59	1.69	14.9	45.2	29.6	7.01	-8.51	1.96	0.97	0.43	5.29



Stellar Parameters For KIC 011971494

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7226^{+201}_{-252}	$4.029^{+0.260}_{-0.160}$	$-0.320^{+0.250}_{-0.350}$	$1.926^{+0.553}_{-0.609}$	$1.445^{+0.219}_{-0.267}$	$0.285^{+0.430}_{-0.132}$
	+3%/-3%	+6%/-4%	+78%/-109%	+29%/-32%	+15%/-18%	+151%/-46%
Source	PHO1	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 011971494-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-41 ± 1	$4.20^{+4.39}_{-3.00}$	2781^{+231}_{-222}	4106^{+3224}_{-1023}	$2.962^{+31.862}_{-2.248}$
Alt.	-27 ± 1	$4.26^{+3.74}_{-3.03}$	2788^{+217}_{-240}	3825^{+2646}_{-955}	$1.951^{+20.790}_{-1.402}$

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 $A_{obs} \gg 1.0$

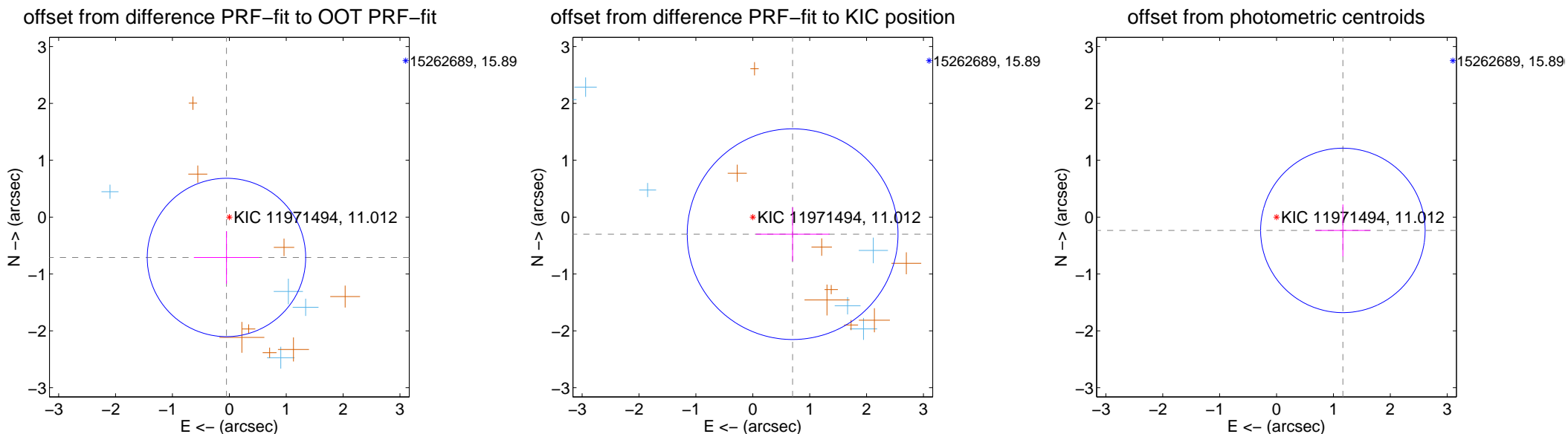
DV Centroid Data

Supplemental centroid analysis for 011971494-01. **Kepler magnitude: 11.01.** Transit SNR 12.46

There are 6 quarters with good PRF difference image offsets

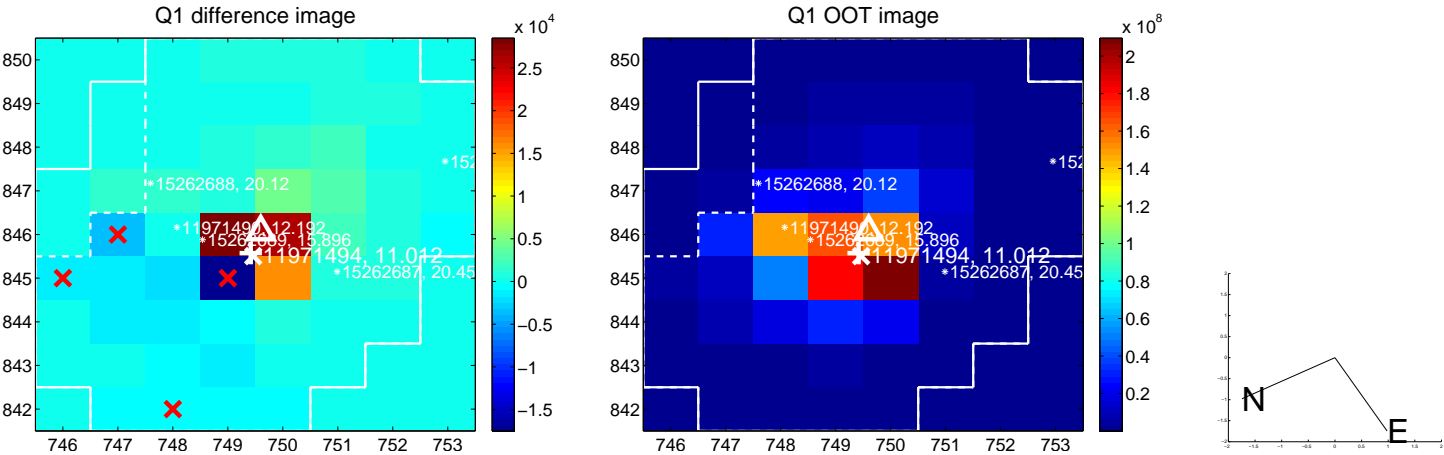
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.711 ± 0.464	1.53	0.050 ± 0.573	-0.709 ± 0.463
PRF-fit source offset from KIC position	0.762 ± 0.617	1.23	-0.700 ± 0.647	-0.300 ± 0.474
photometric centroid source offset	1.19 ± 0.48	2.47	-1.17 ± 0.48	-0.23 ± 0.46

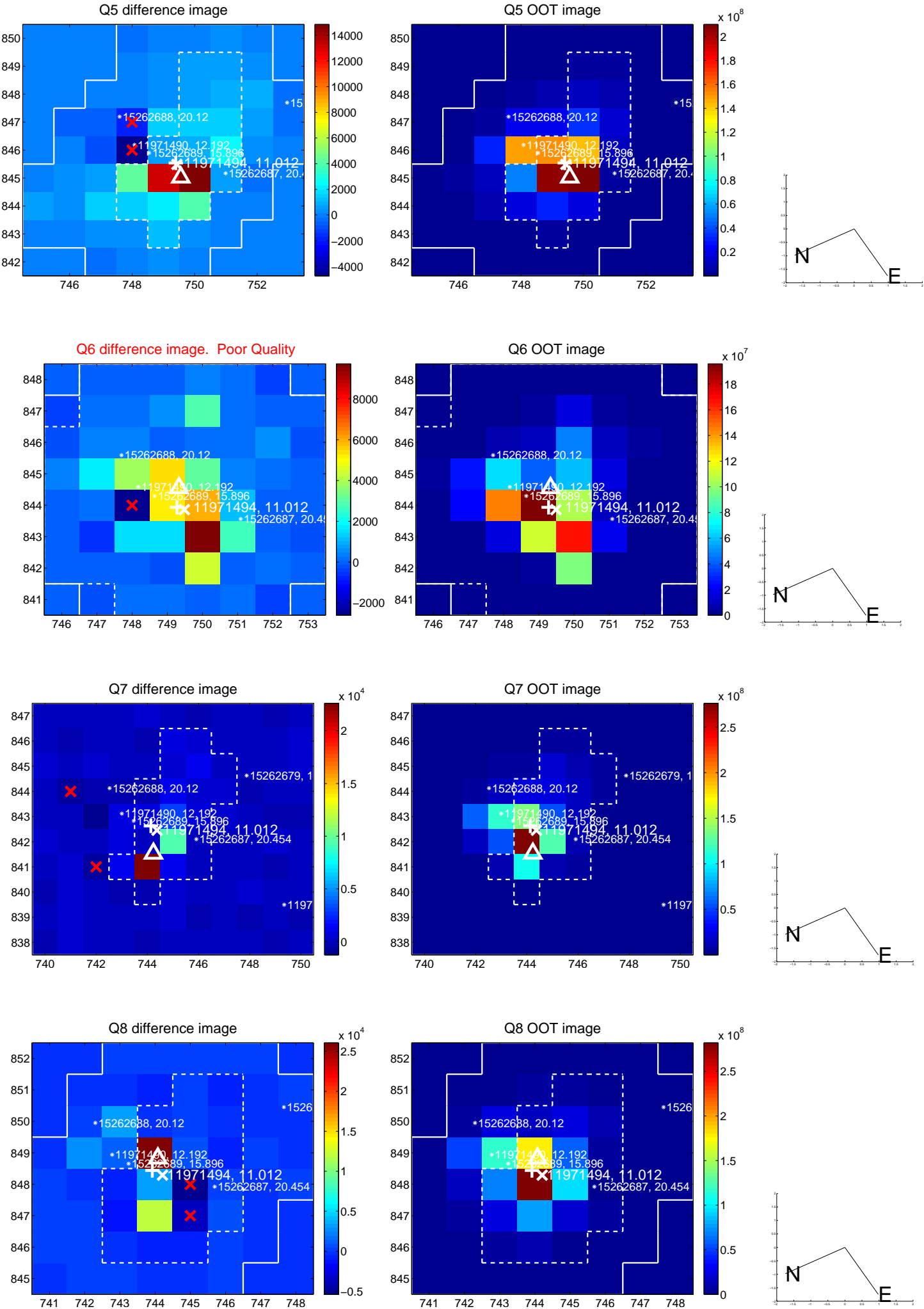


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

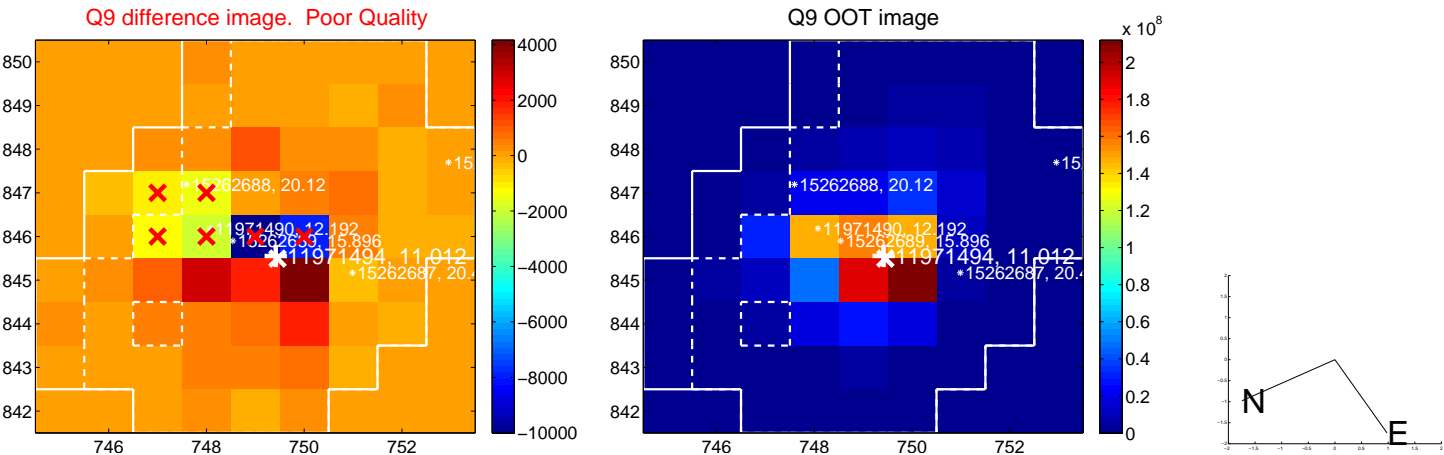
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



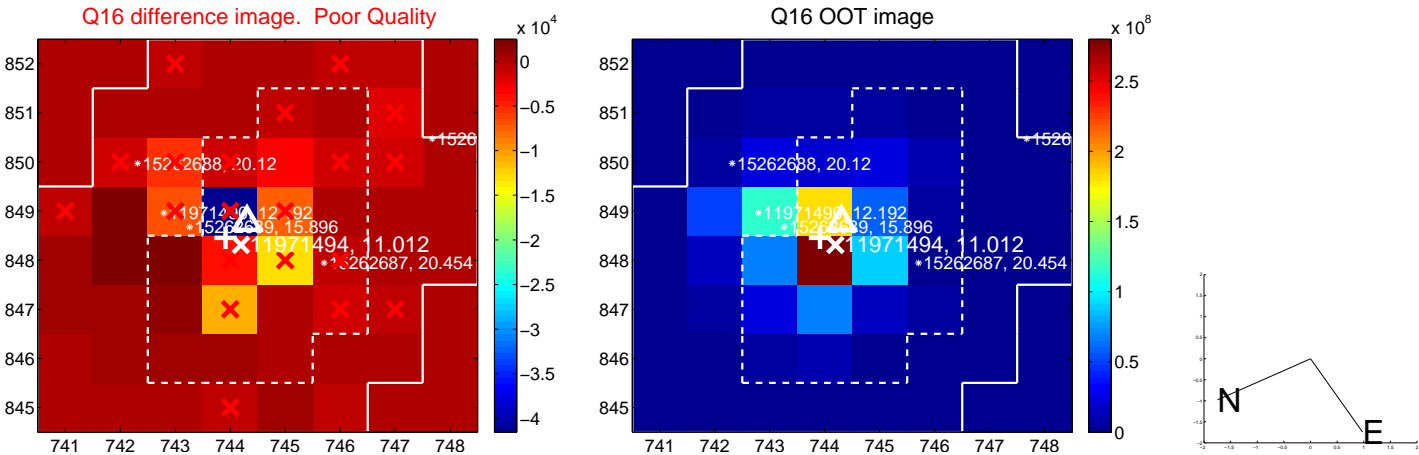
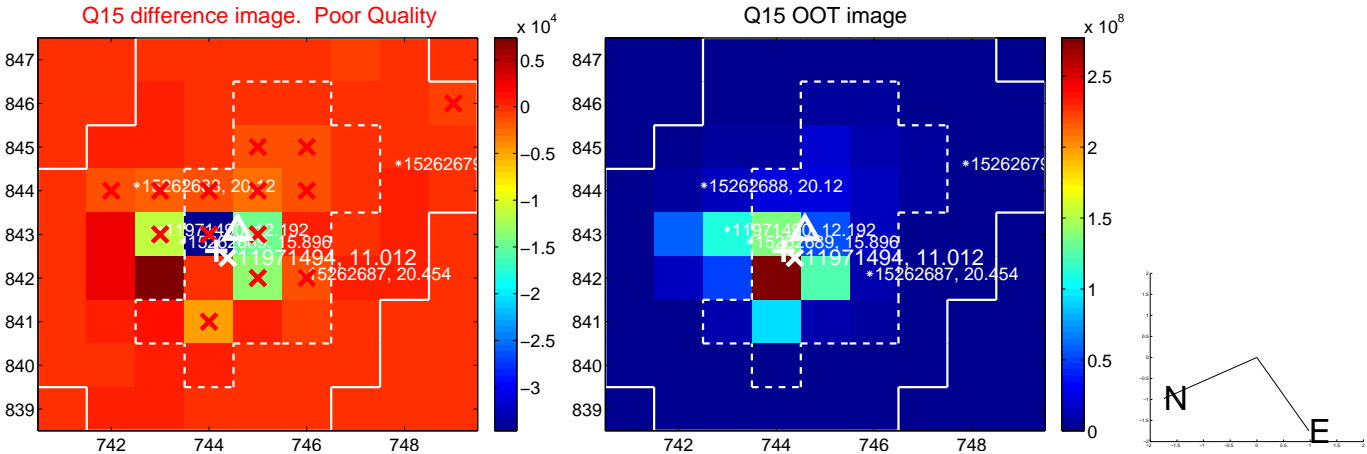
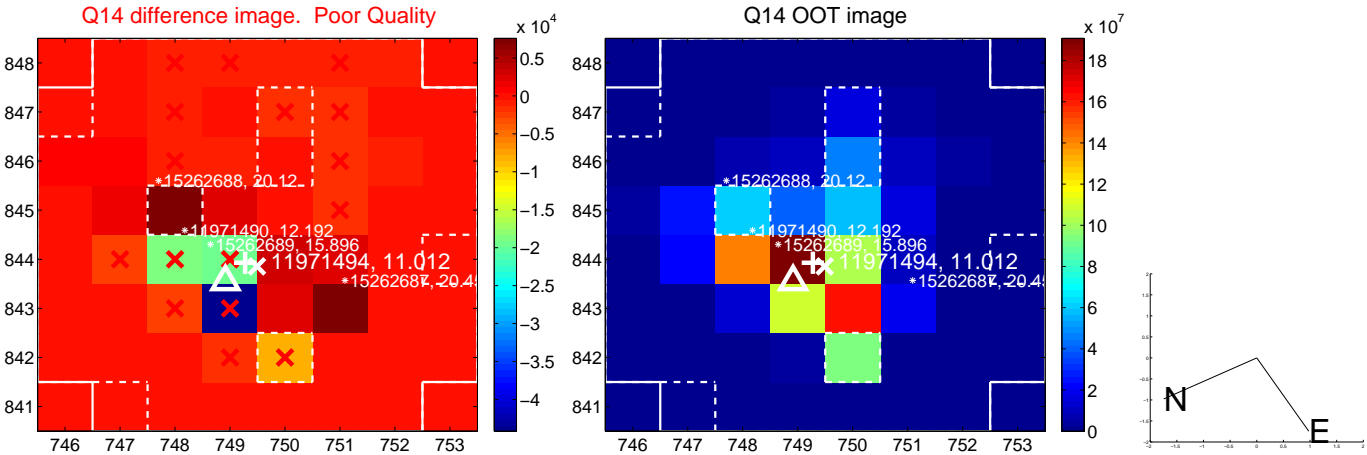
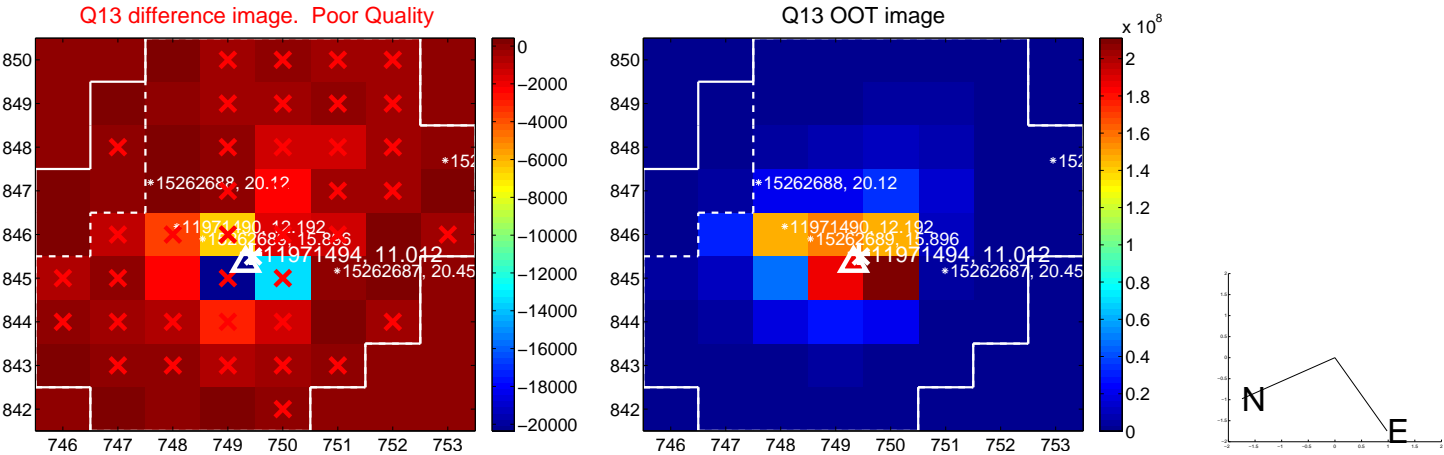
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



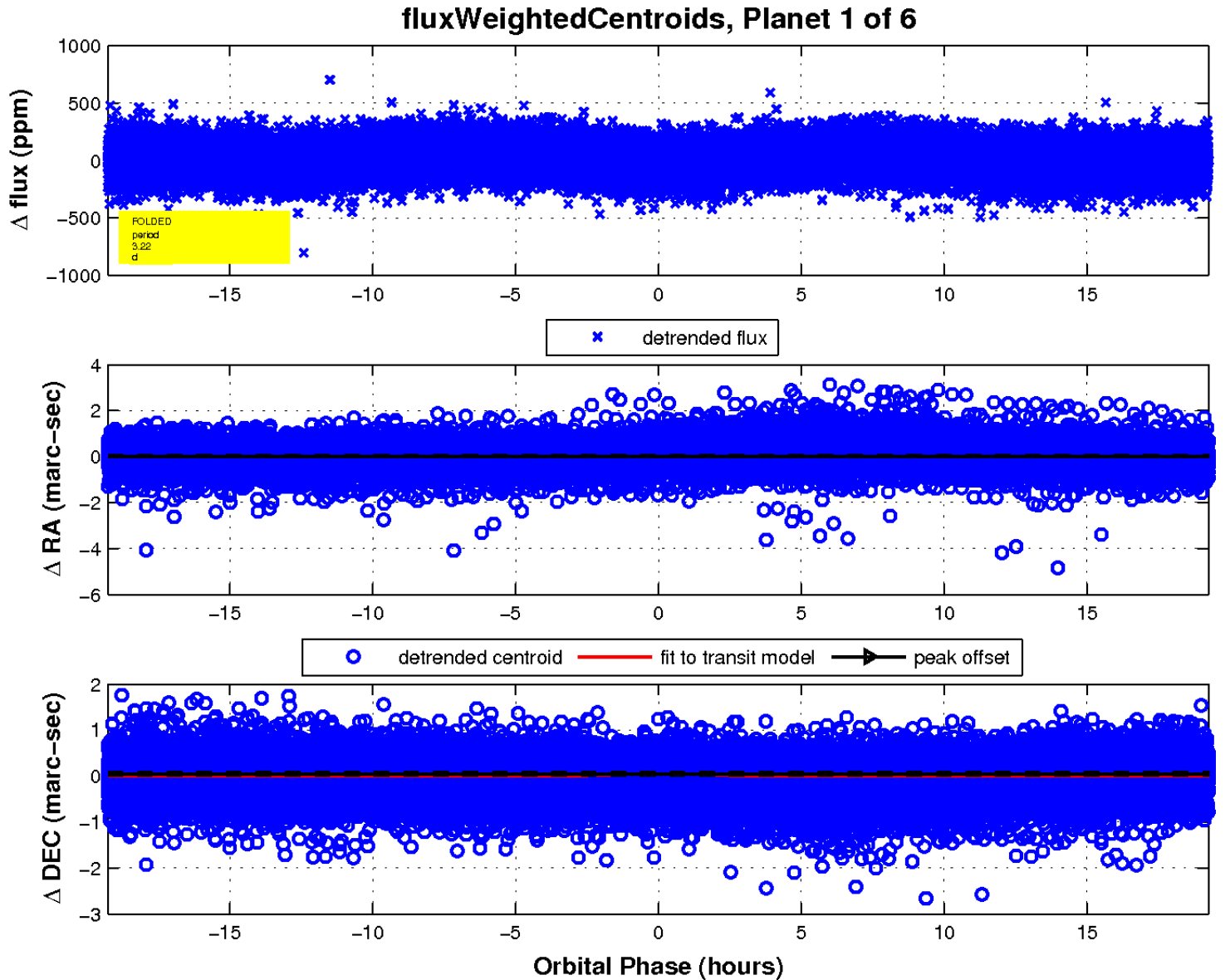
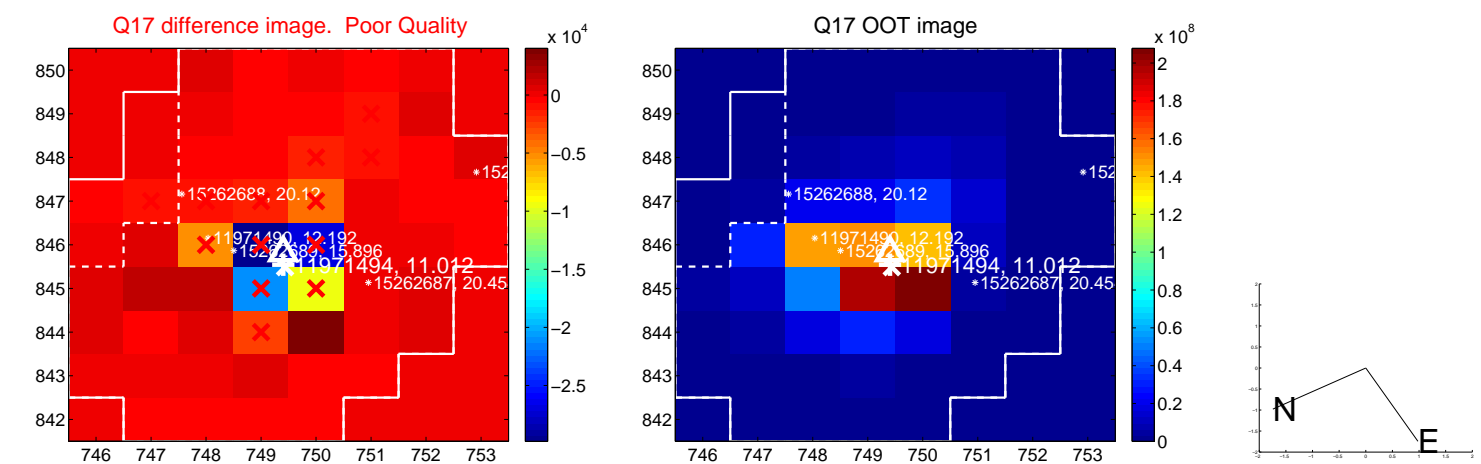
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

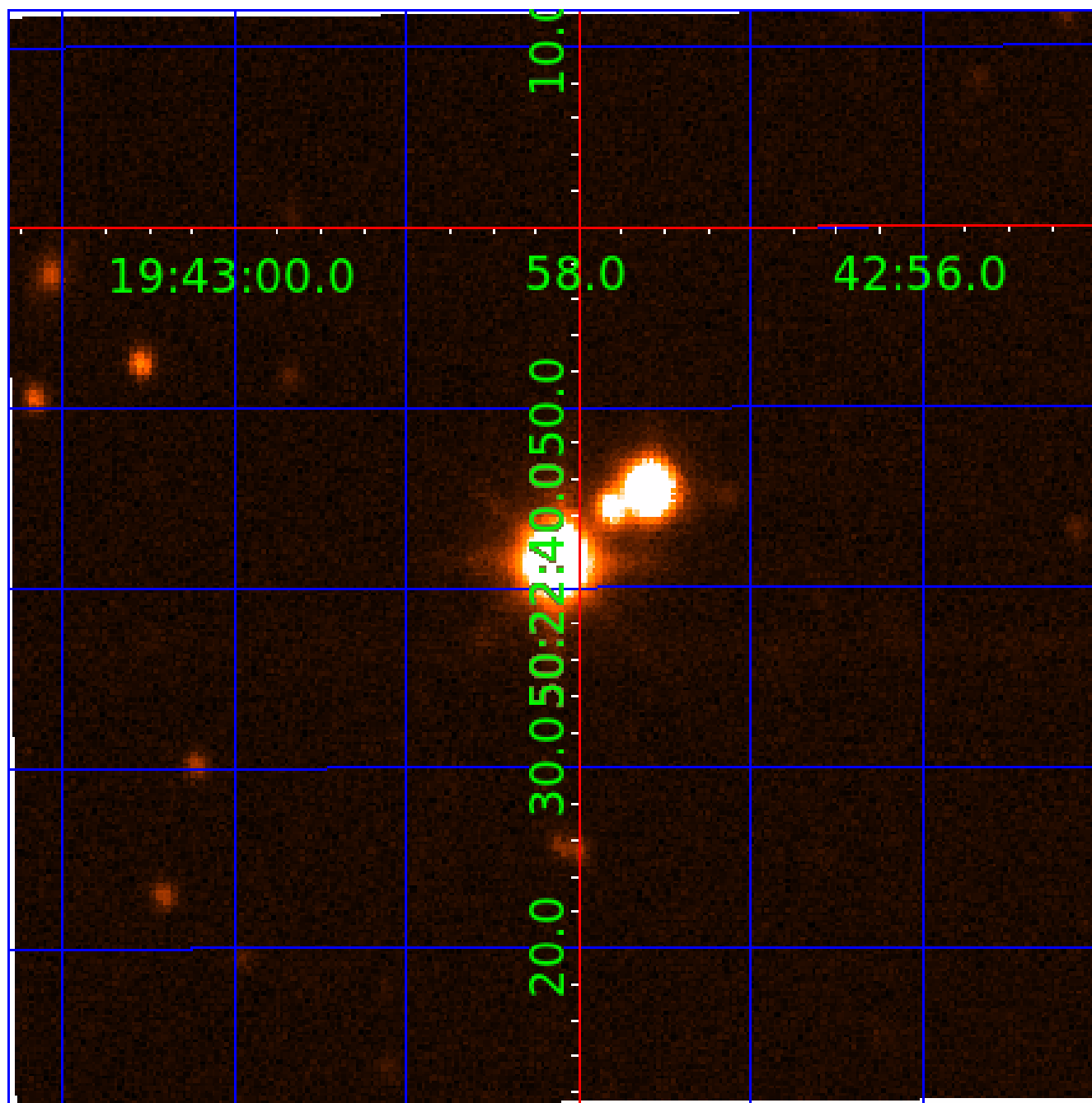


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011971494

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})
011971494-01	OBS	No	3.222819	134.535681	47.4	6.422	11.4	12.5	1.93	7226	2.67	3883.97
011971494-02	OBS	No	3.223168	134.076987	25.5	15.357	10.5	8.7	1.93	7226	1.13	3883.41
011971494-03	OBS	No	400.151158	244.811927	227.4	4.740	8.8	9.3	1.93	7226	3.37	6.27
011971494-04	OBS	No	73.456185	198.529343	177.4	2.231	8.7	9.3	1.93	7226	2.91	60.10
011971494-05	OBS	No	184.667070	312.422646	90.0	25.718	8.5	5.7	1.93	7226	2.12	17.58
011971494-06	OBS	No	132.760221	224.649260	100.6	7.128	8.3	5.2	1.93	7226	2.15	27.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011971494-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011971494-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011971494-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011971494-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011971494-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
011971494-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

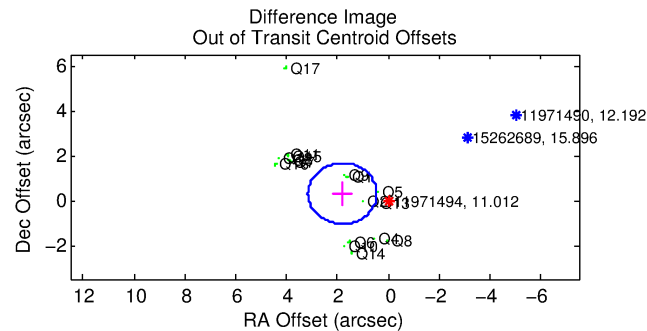
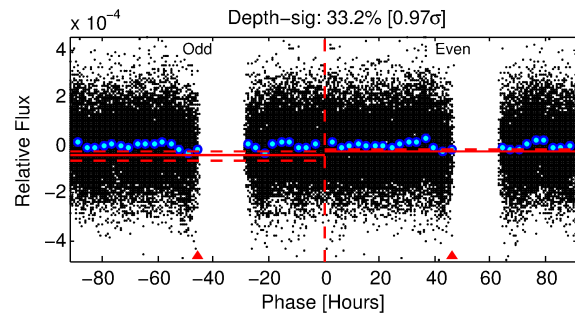
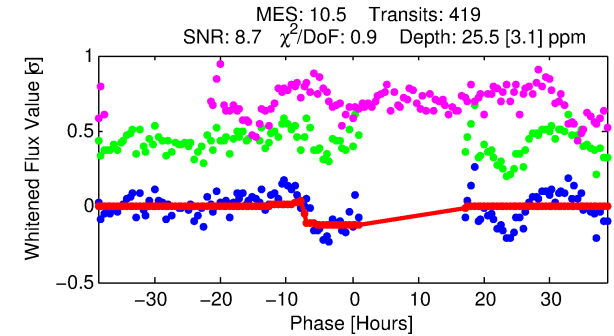
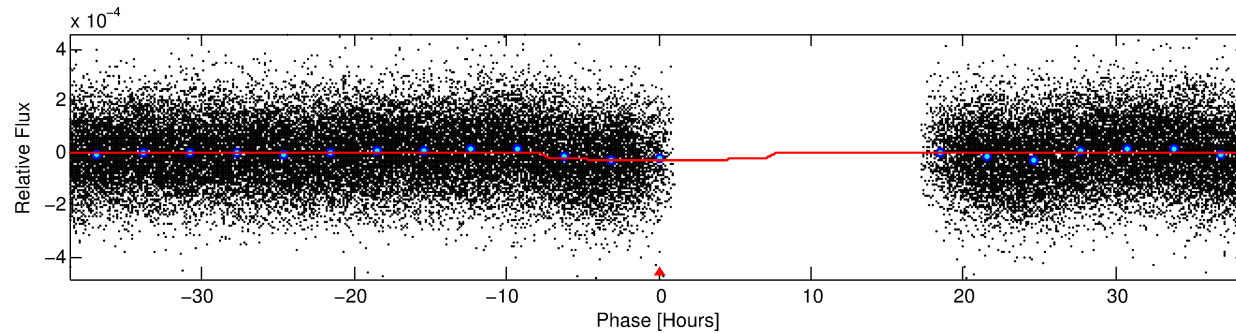
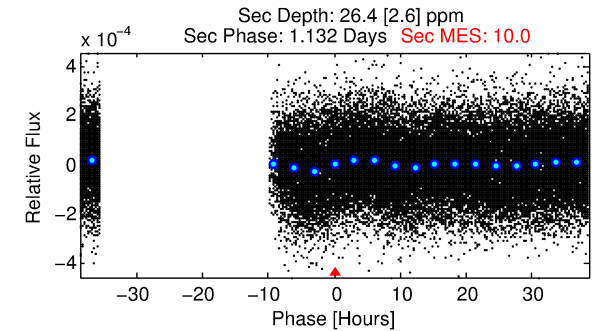
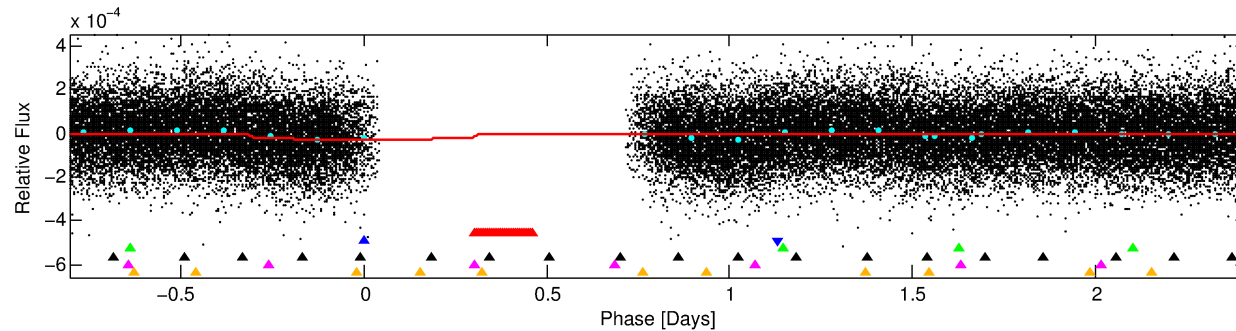
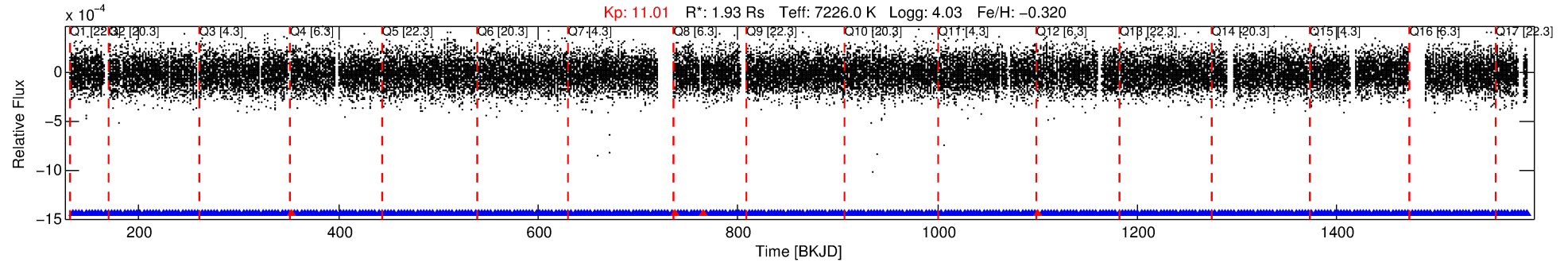
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011971494-02

No Significant Match Found

DV One-Page Summary

KIC: 11971494 Candidate: 2 of 6 Period: 3.223 d



DV Fit Results:

Period = 3.22317 [0.00005] d
Epoch = 134.0770 [0.0946] BKJD
Rp/R* = 0.0054 [0.0013]
a/R* = 1.18 [0.46]
b = 0.90 [0.36]
Seff = 3883.41 [1834.63]
Teq = 2013 [238] K
Rp = 1.13 [0.45] Re
a = 0.0483 [0.0140] AU
Ag = 26.75 [18.15] [1.42σ]
Teffp = 7078 [930] K [5.28σ]

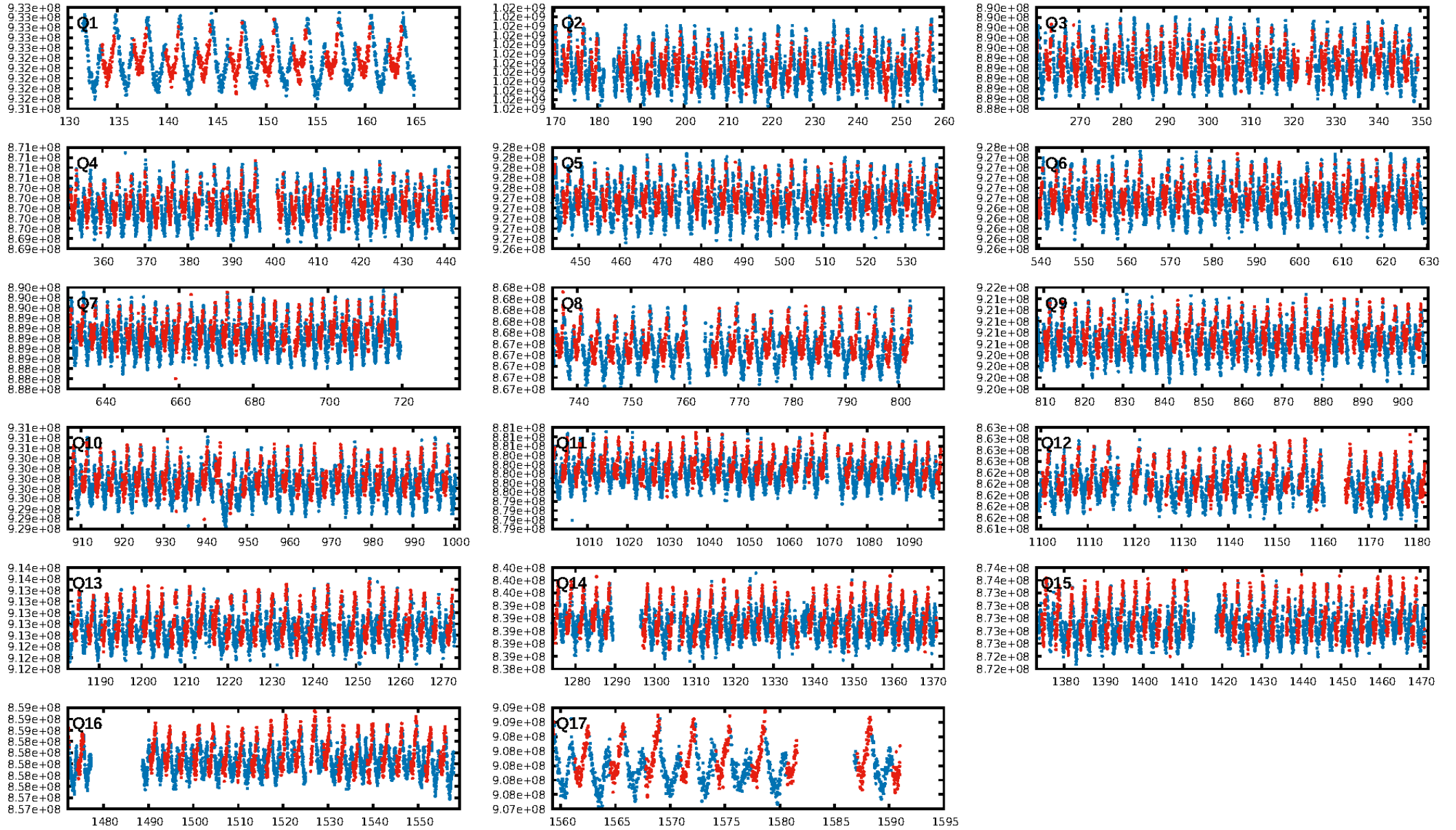
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [108.62σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.01e-13
RollingBand-fgt: 0.99 [396/400]
GhostDiagnostic-chr: -0.4194
Centroid-sig: 0.0%
Centroid-so: 3.232 arcsec [5.58σ]
OotOffset-rm: 1.834 arcsec [4.06σ]
KicOffset-rm: 1.310 arcsec [2.39σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 0.00 [0/17]

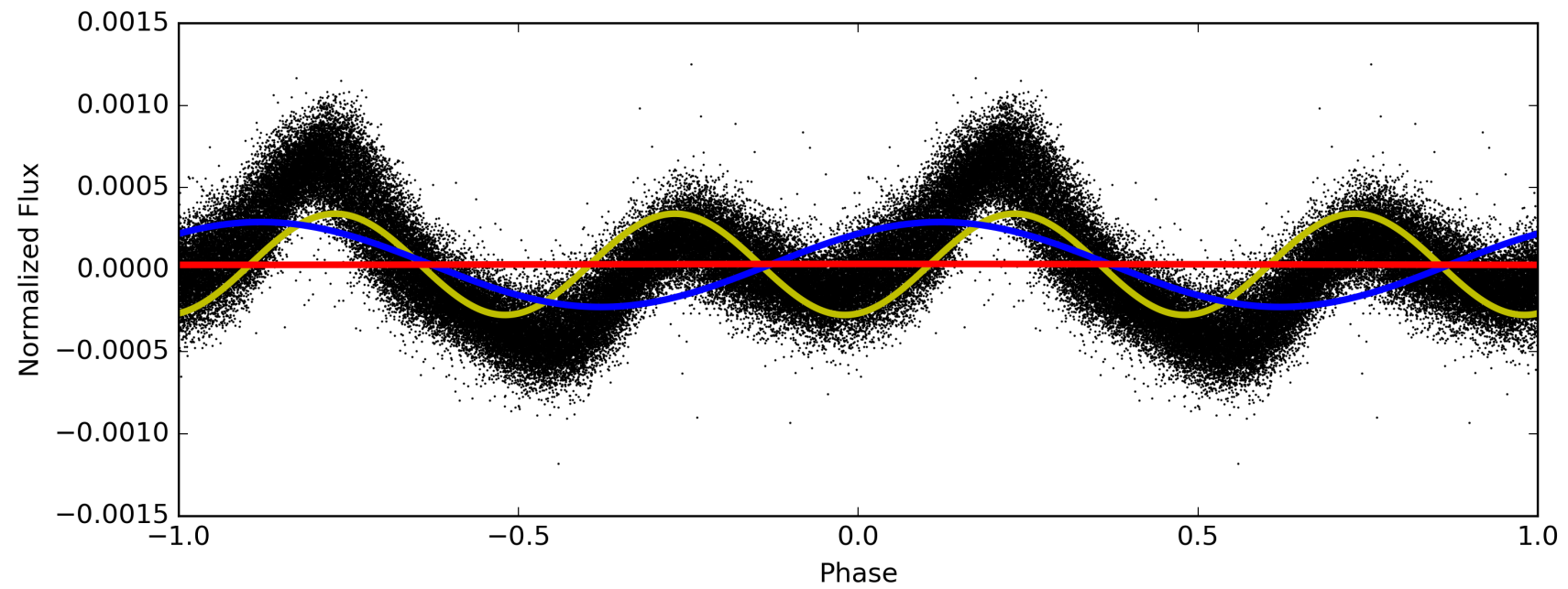
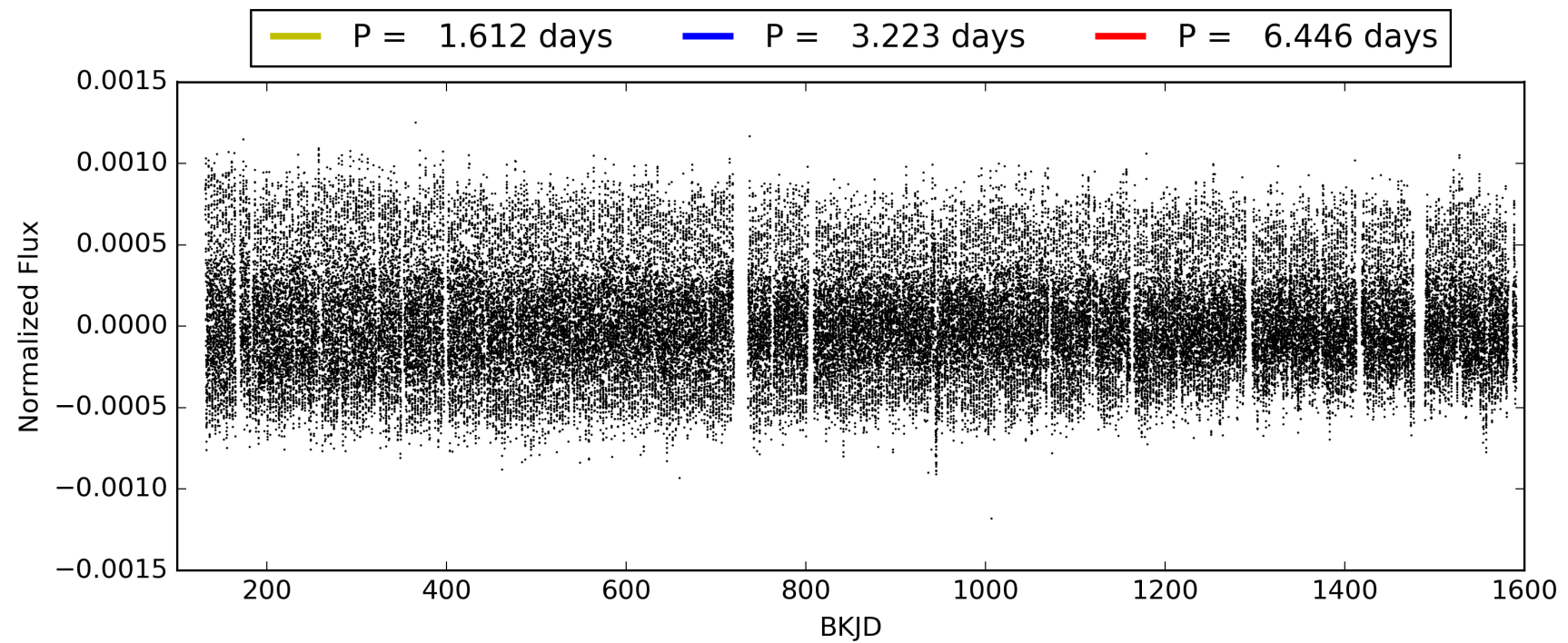
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:11:40 Z

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

TCE 011971494-02, PDC Light Curves

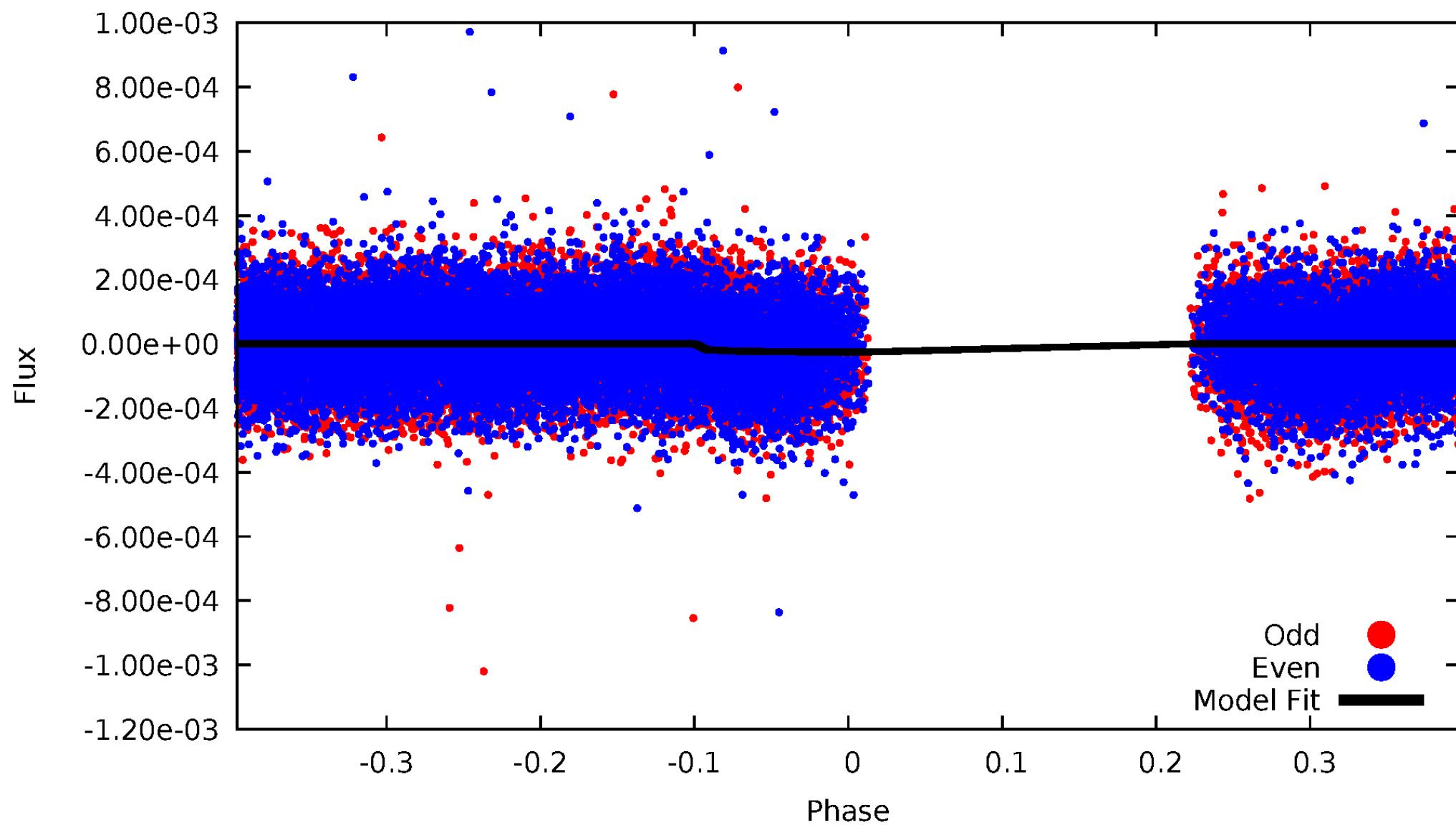


TCE 011971494-02



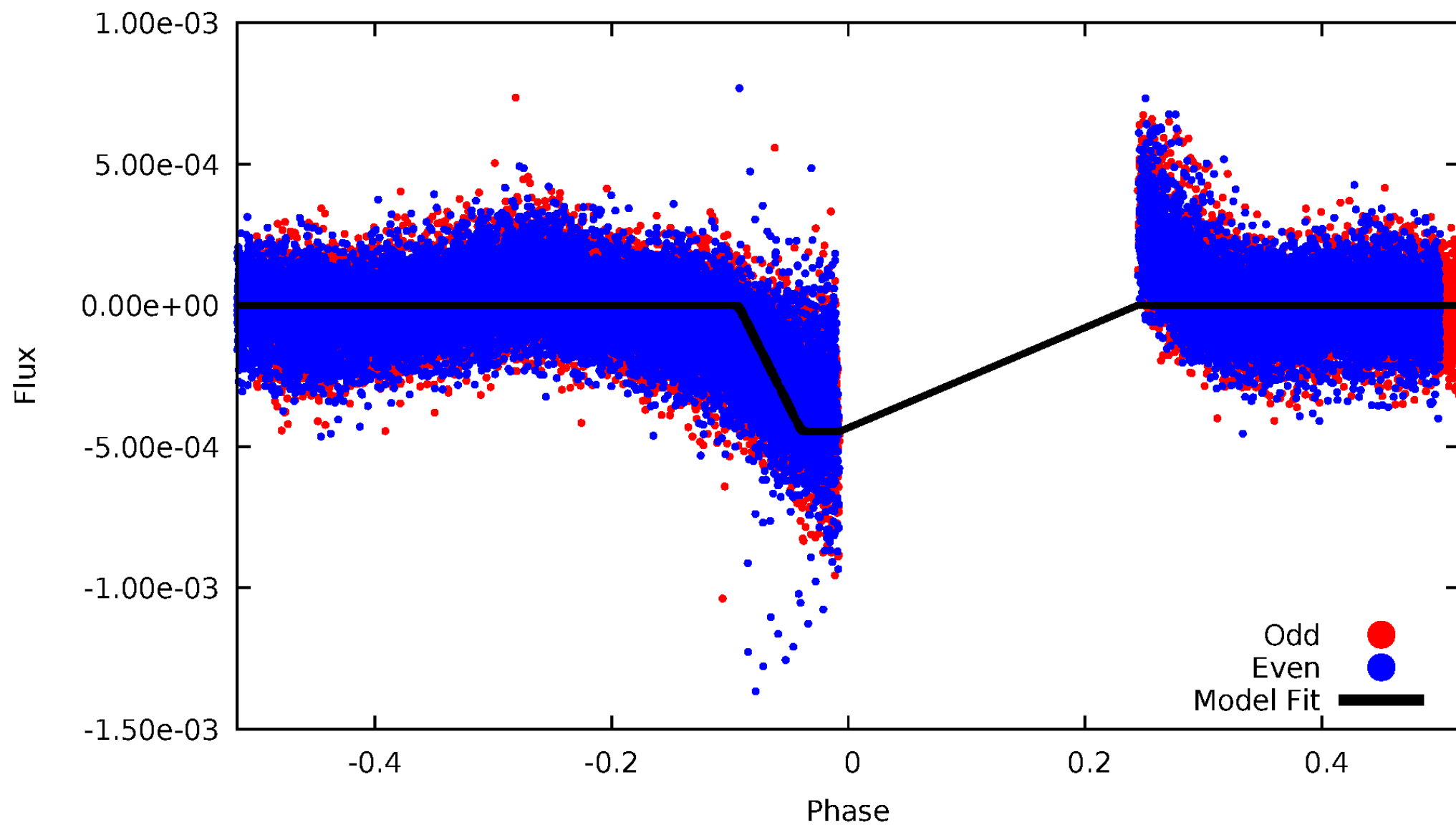
DV Odd/Even

TCE 011971494-02



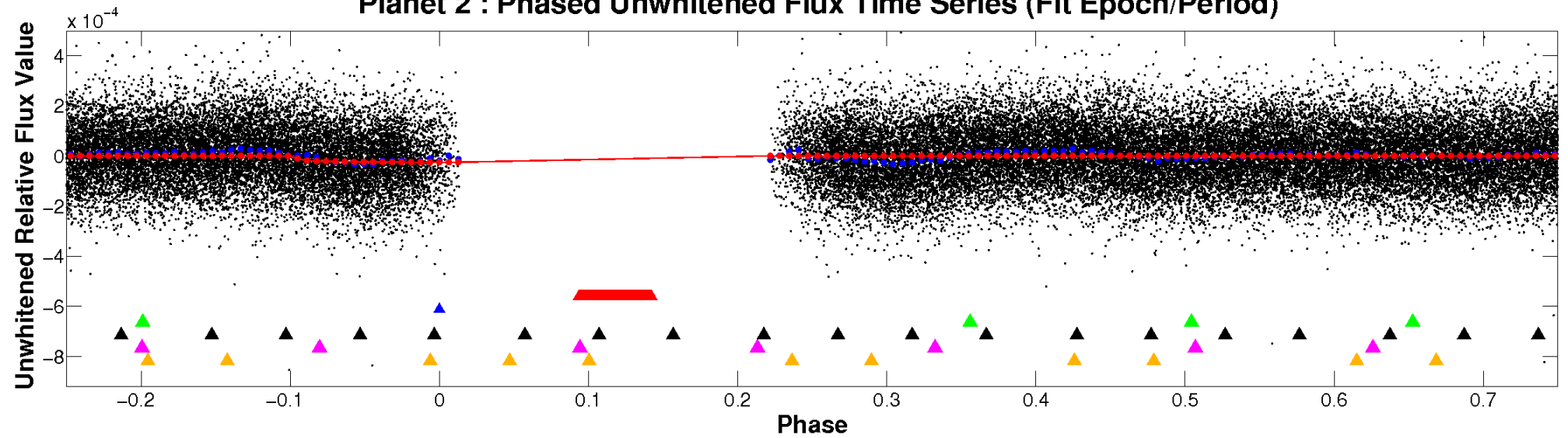
ALT Odd/Even

TCE 011971494-02

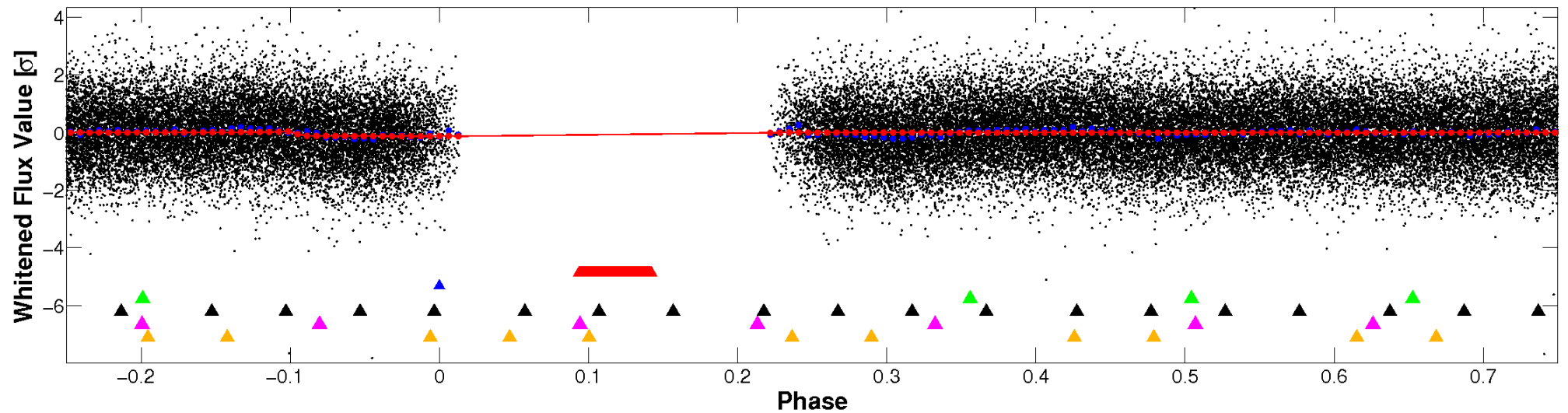


Non-Whitened Vs. Whitened Light Curve

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

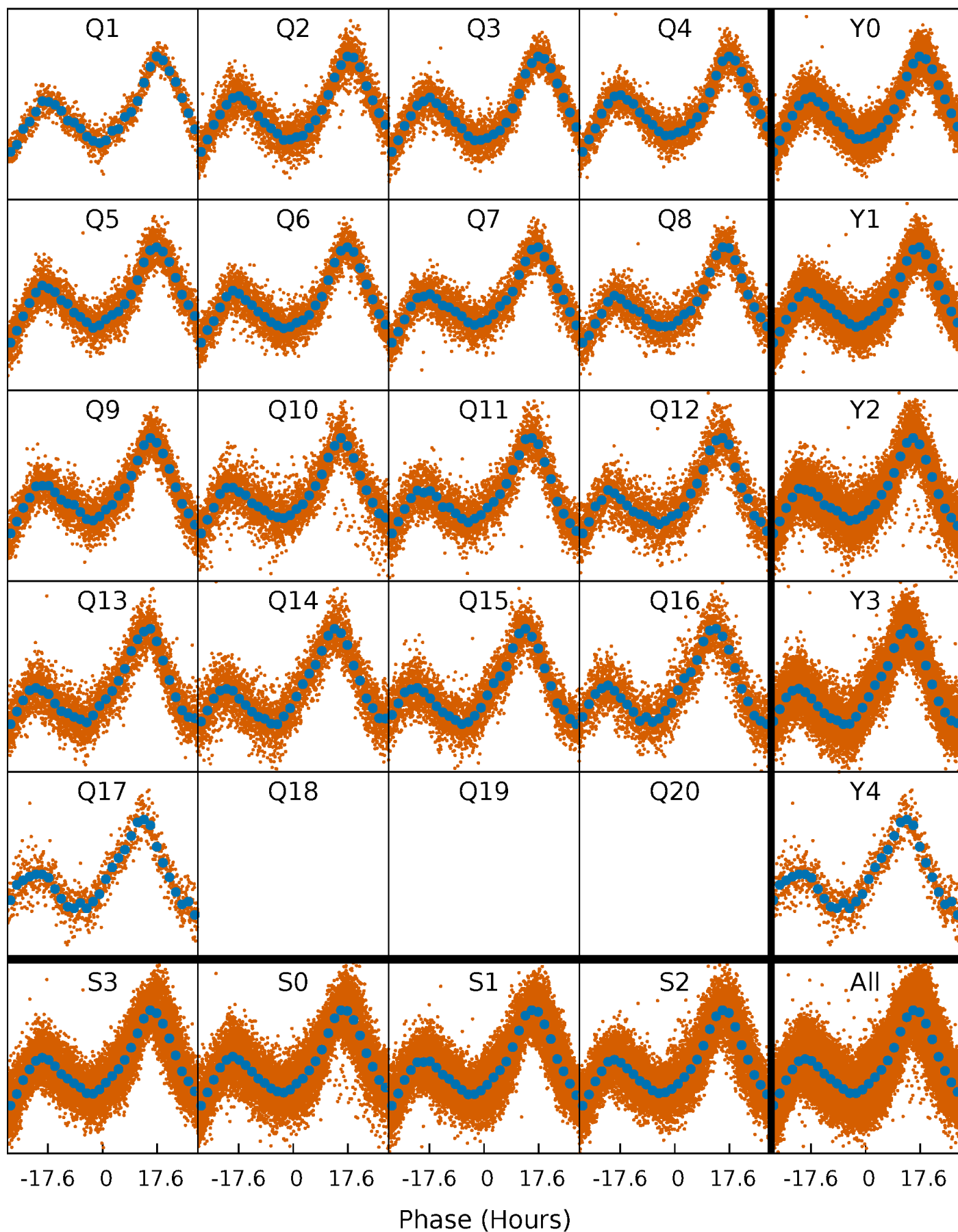


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



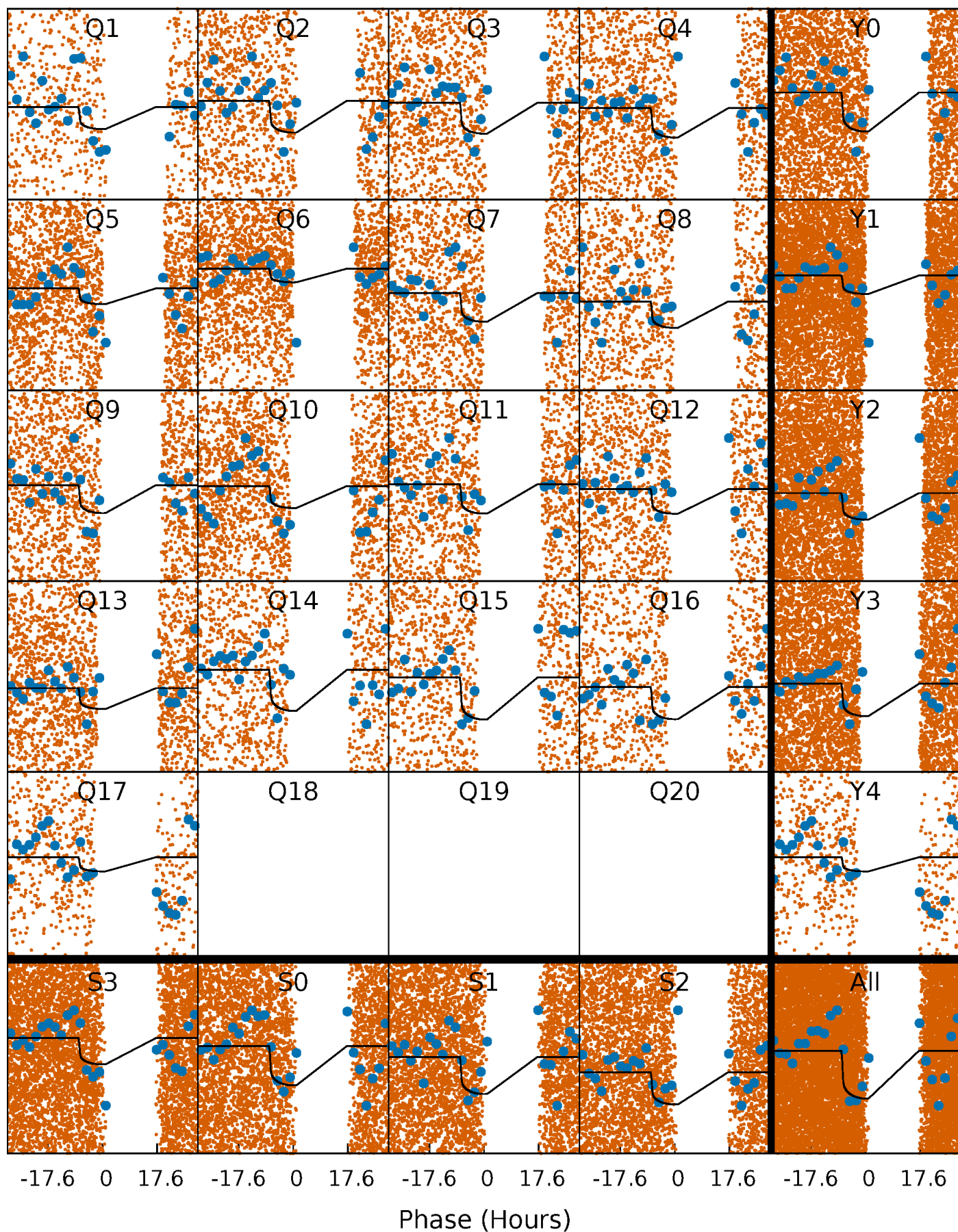
PDC Quarter-Phased Transit Curves

TCE 011971494-02 P= 3.223168 Days $T_0=134.076987$ (BKJD)



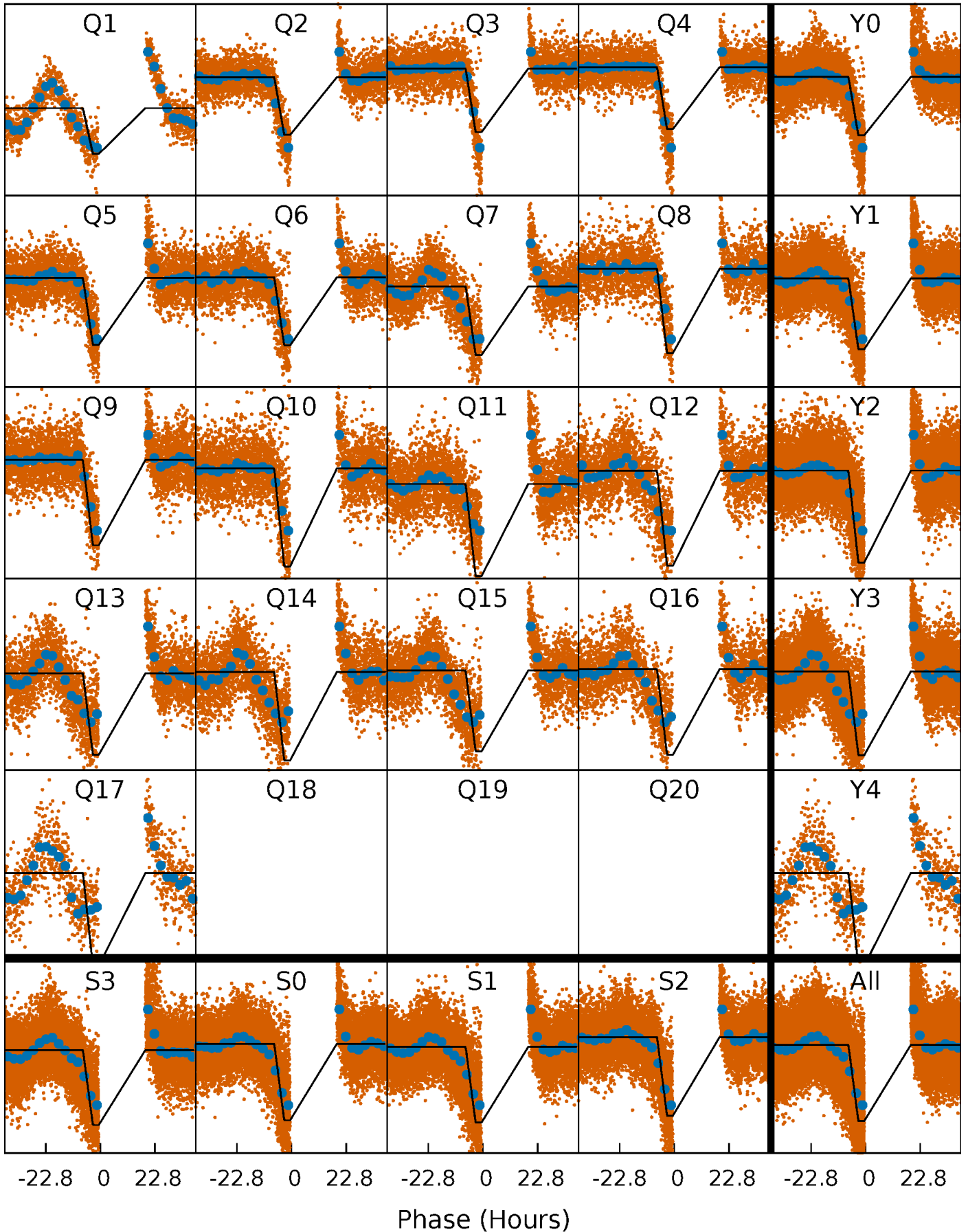
DV Quarter-Phased Transit Curves

TCE 011971494-02 P= 3.223168 Days $T_0=134.076987$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

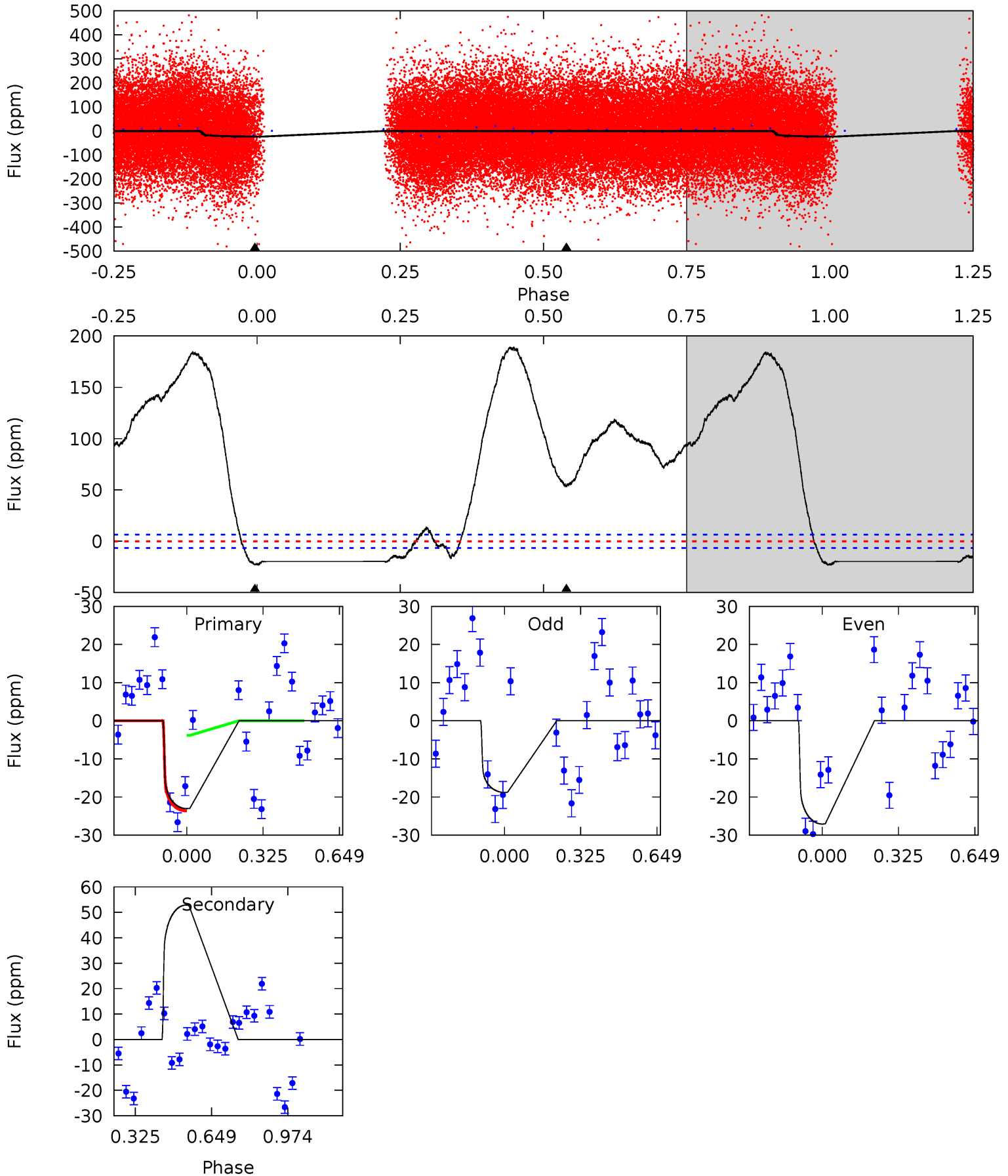
TCE 011971494-02 P= 3.222848 Days $T_0=134.146979$ (BKJD)



DV Model-Shift Uniqueness Test

011971494-02, P = 3.223168 Days, E = 130.853819 Days

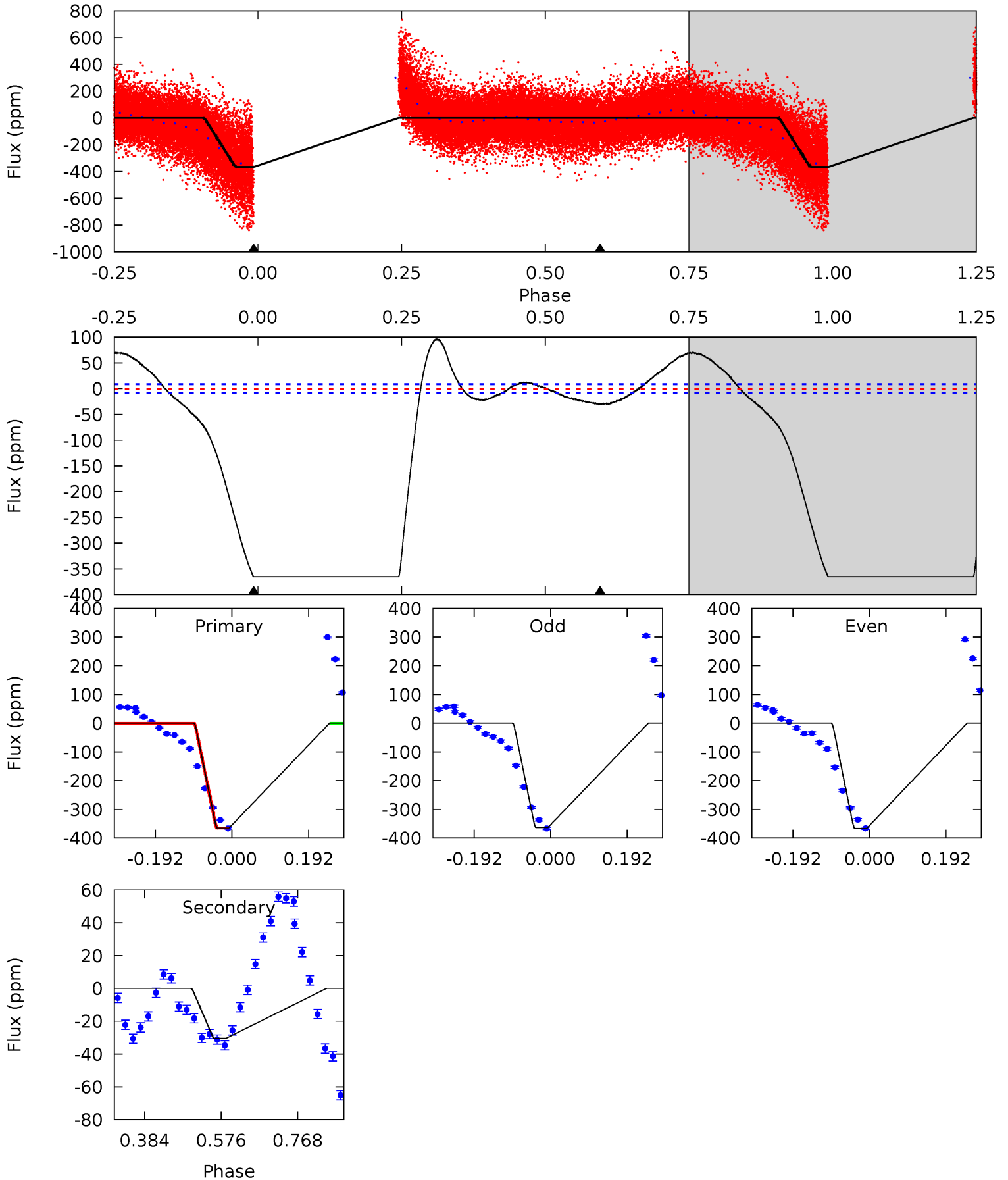
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.4	-35.3	0	0	4.31	0.98	22.1	15.4	15.4	-35.3	-35.3	2.78	1.01	0.89	2.00



Alt Model-Shift Uniqueness Test

011971494-02, P = 3.222848 Days, E = 130.924131 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
186.5	15.5	0	0	4.43	1.30	52.6	186.5	186.5	15.5	15.5	0.77	0	0.21	0



Stellar Parameters For KIC 011971494

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7226^{+201}_{-252}	$4.029^{+0.260}_{-0.160}$	$-0.320^{+0.250}_{-0.350}$	$1.926^{+0.553}_{-0.609}$	$1.445^{+0.219}_{-0.267}$	$0.285^{+0.430}_{-0.132}$
	+3%/-3%	+6%/-4%	+78%/-109%	+29%/-32%	+15%/-18%	+151%/-46%
Source	PHO1	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 011971494-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	53 ± 1	$1.10^{+0.35}_{-0.30}$	2773^{+219}_{-236}	-8605^{+1038}_{-1861}	$-56.939^{+24.656}_{-49.569}$
Alt.	-30 ± 2	$4.41^{+0.78}_{-0.77}$	2794^{+213}_{-243}	3863^{+145}_{-146}	$2.009^{+0.902}_{-0.547}$

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

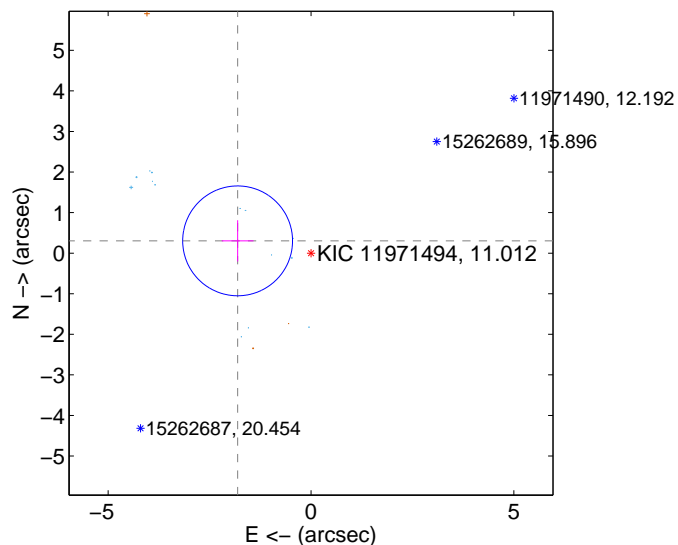
Supplemental centroid analysis for 011971494-02. **Kepler magnitude: 11.01.** Transit SNR 8.72

There are 14 quarters with good PRF difference image offsets

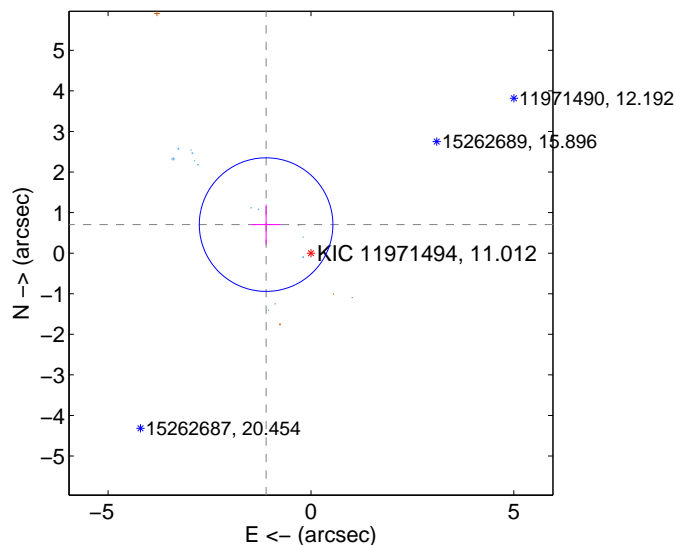
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.834 ± 0.451	4.06	1.809 ± 0.392	0.303 ± 0.509
PRF-fit source offset from KIC position	1.310 ± 0.549	2.39	1.105 ± 0.365	0.704 ± 0.492
photometric centroid source offset	3.23 ± 0.58	5.58	-3.02 ± 0.57	1.16 ± 0.62

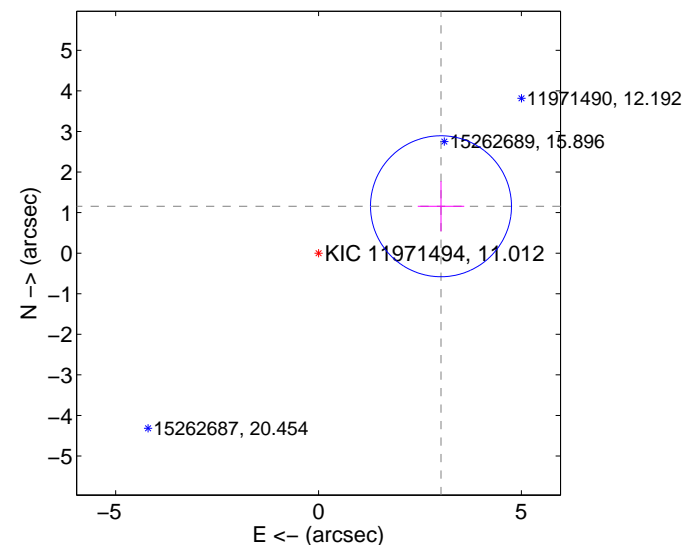
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

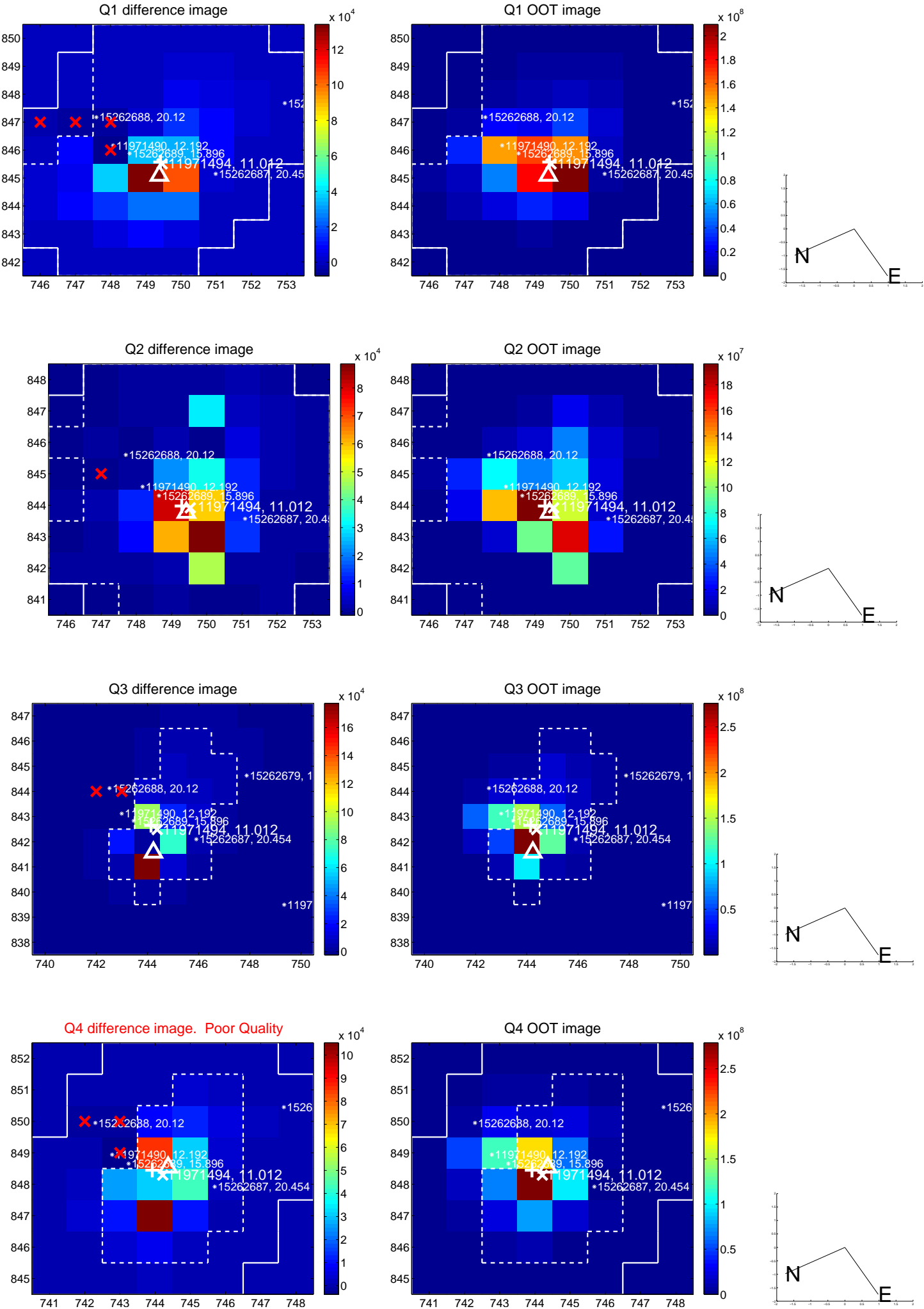


offset from photometric centroids

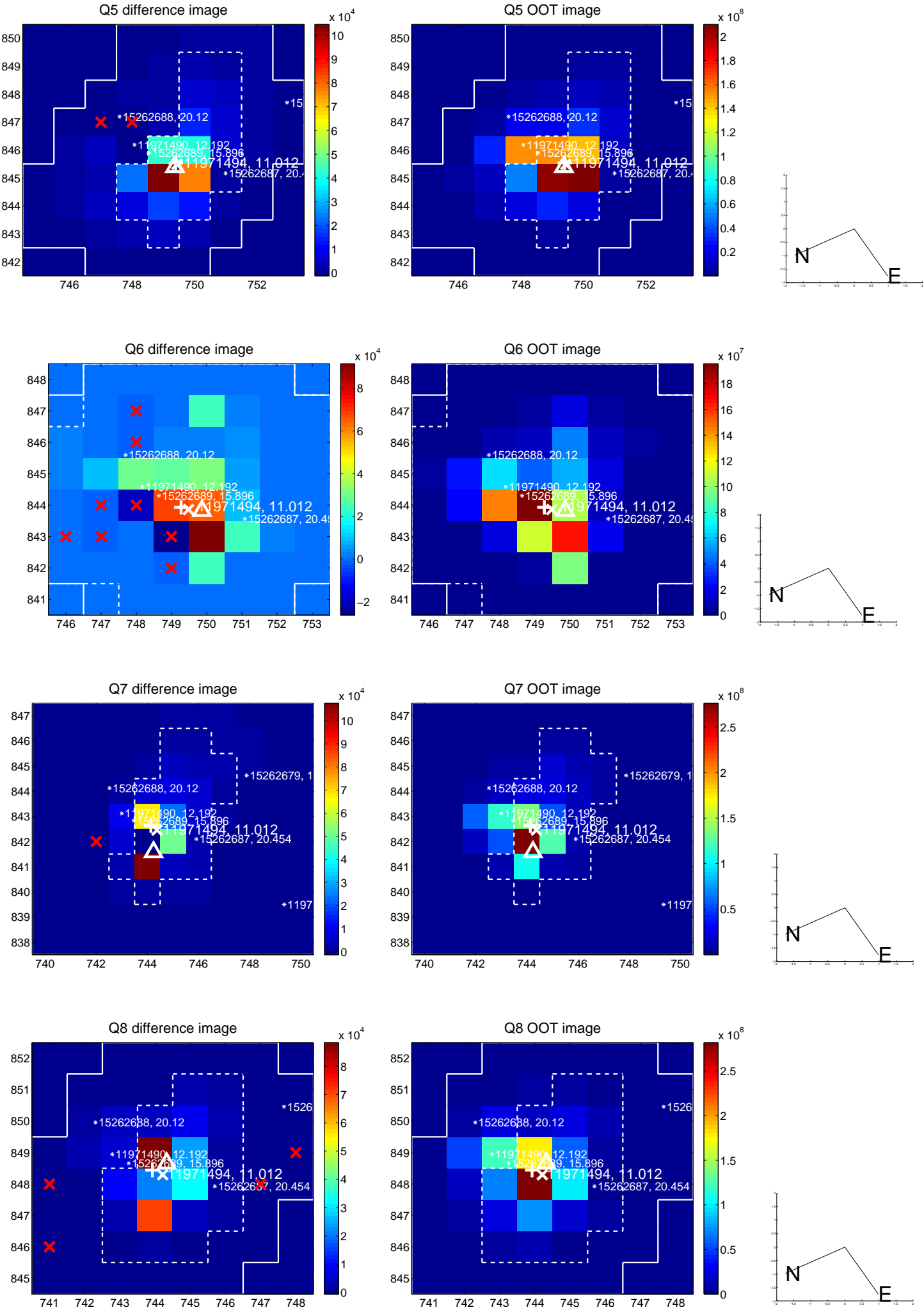


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

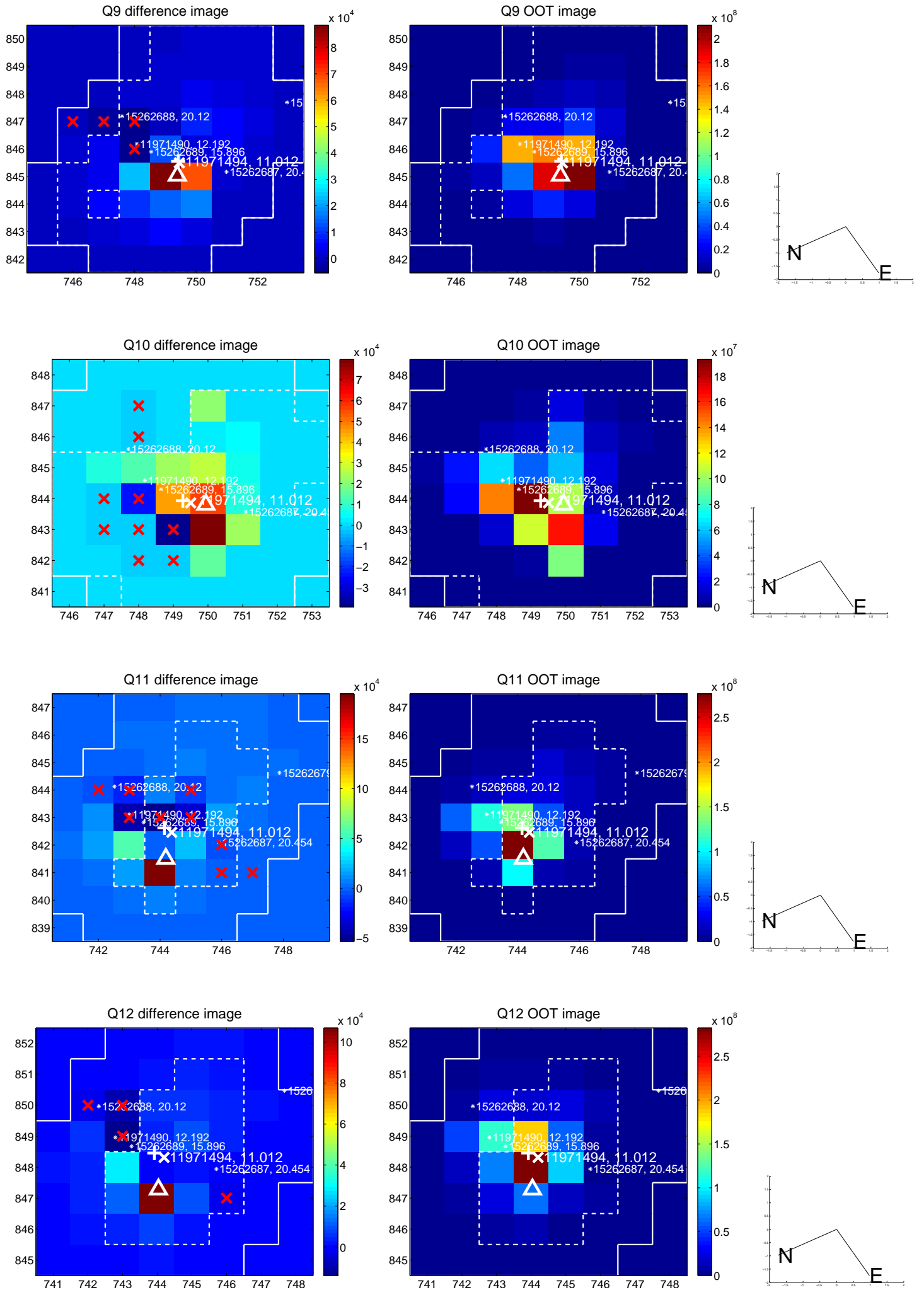
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



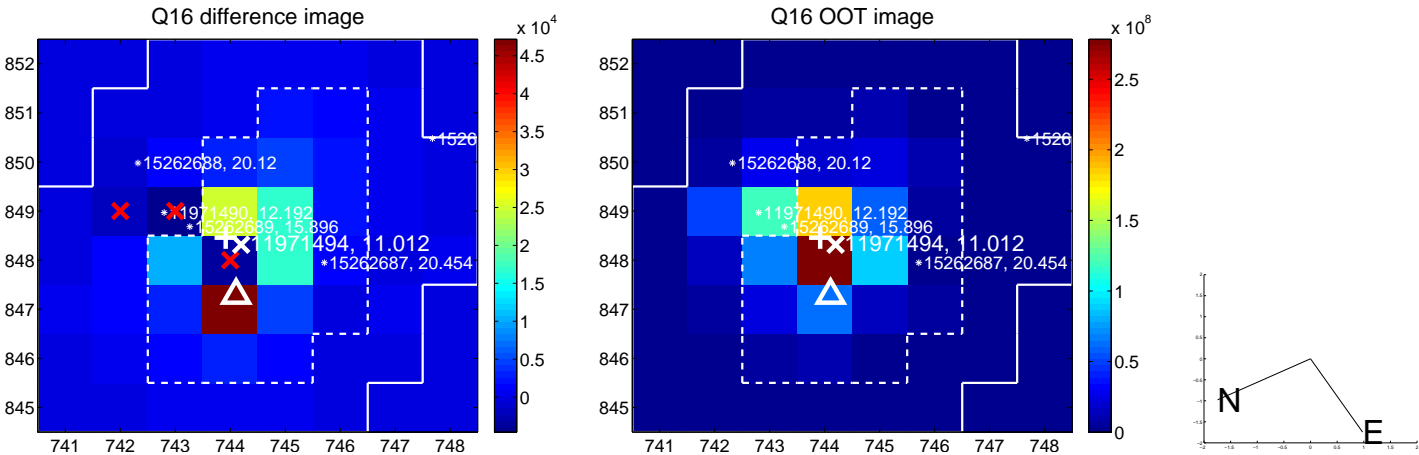
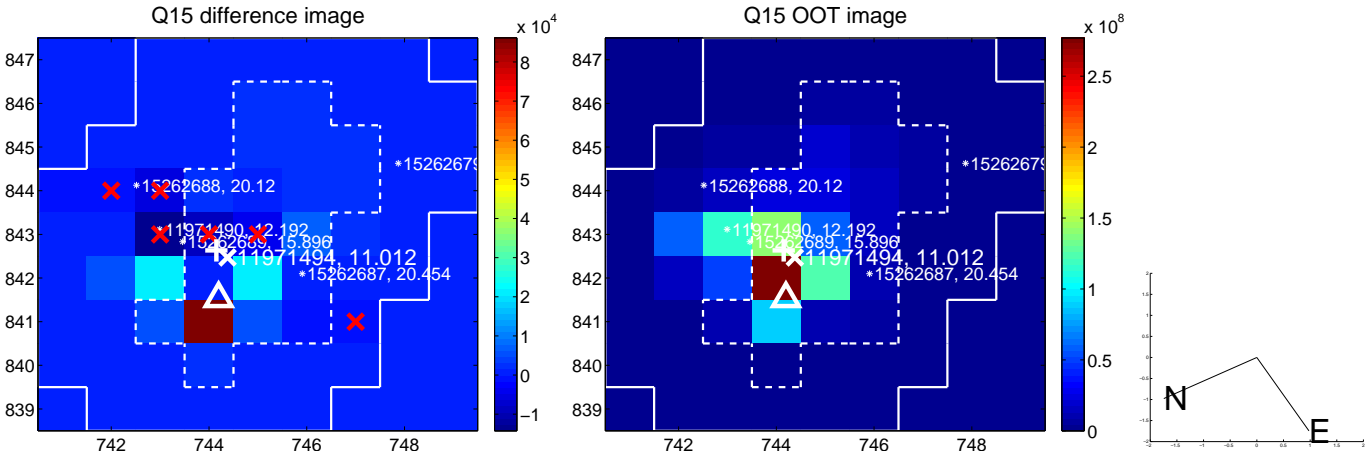
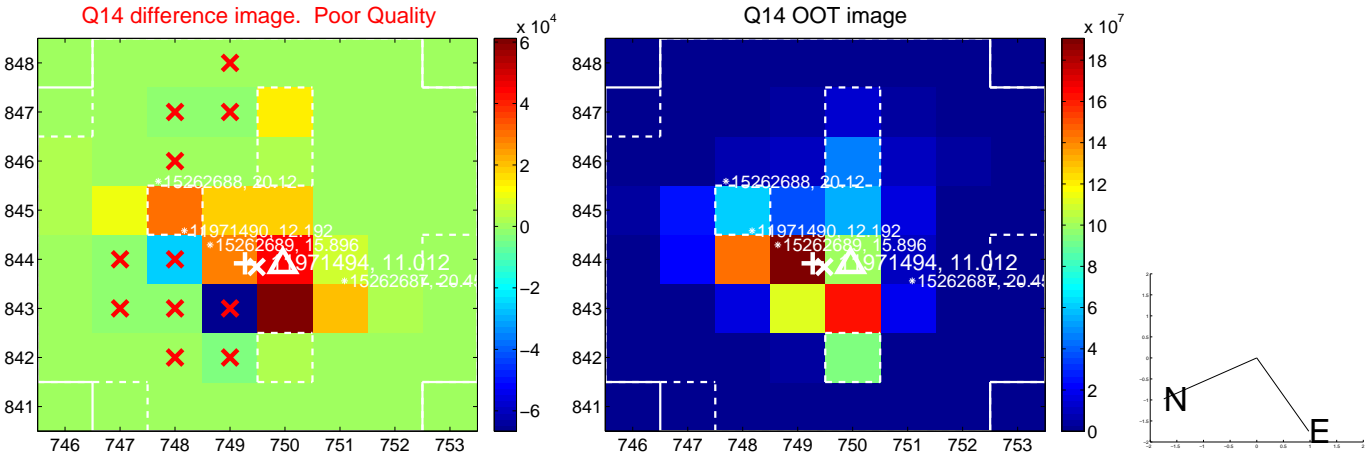
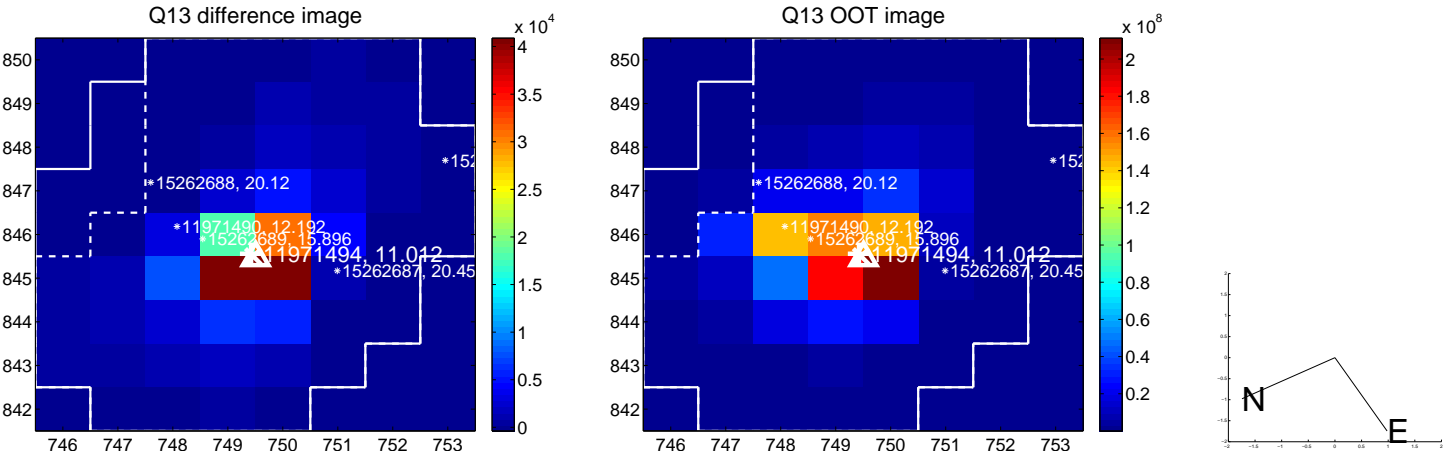
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



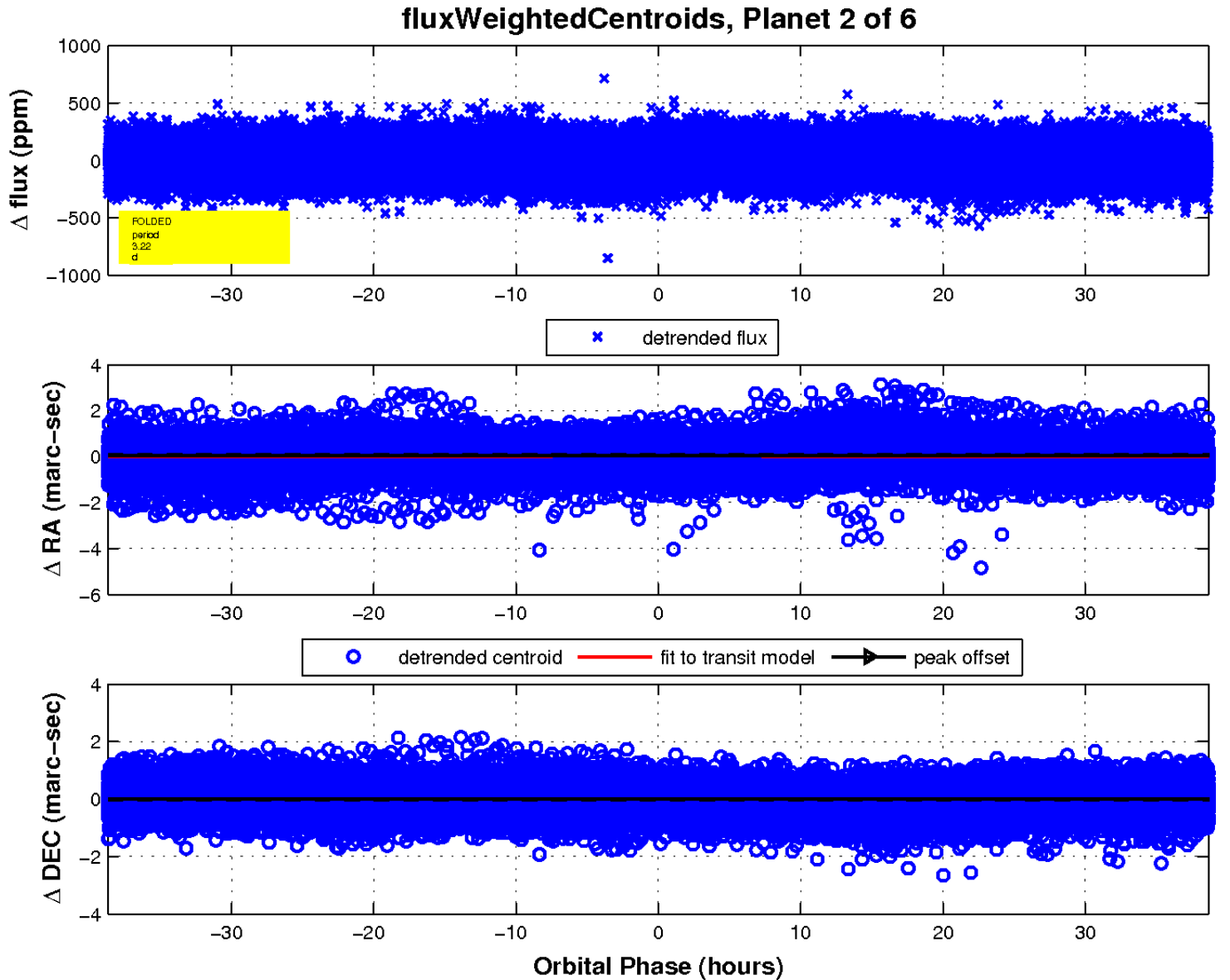
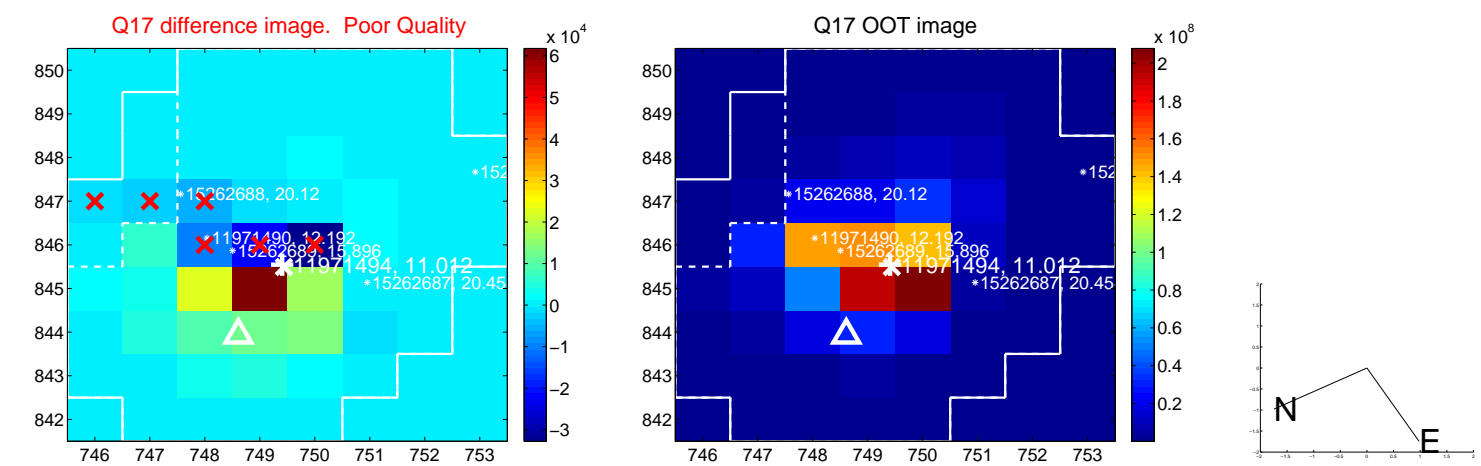
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

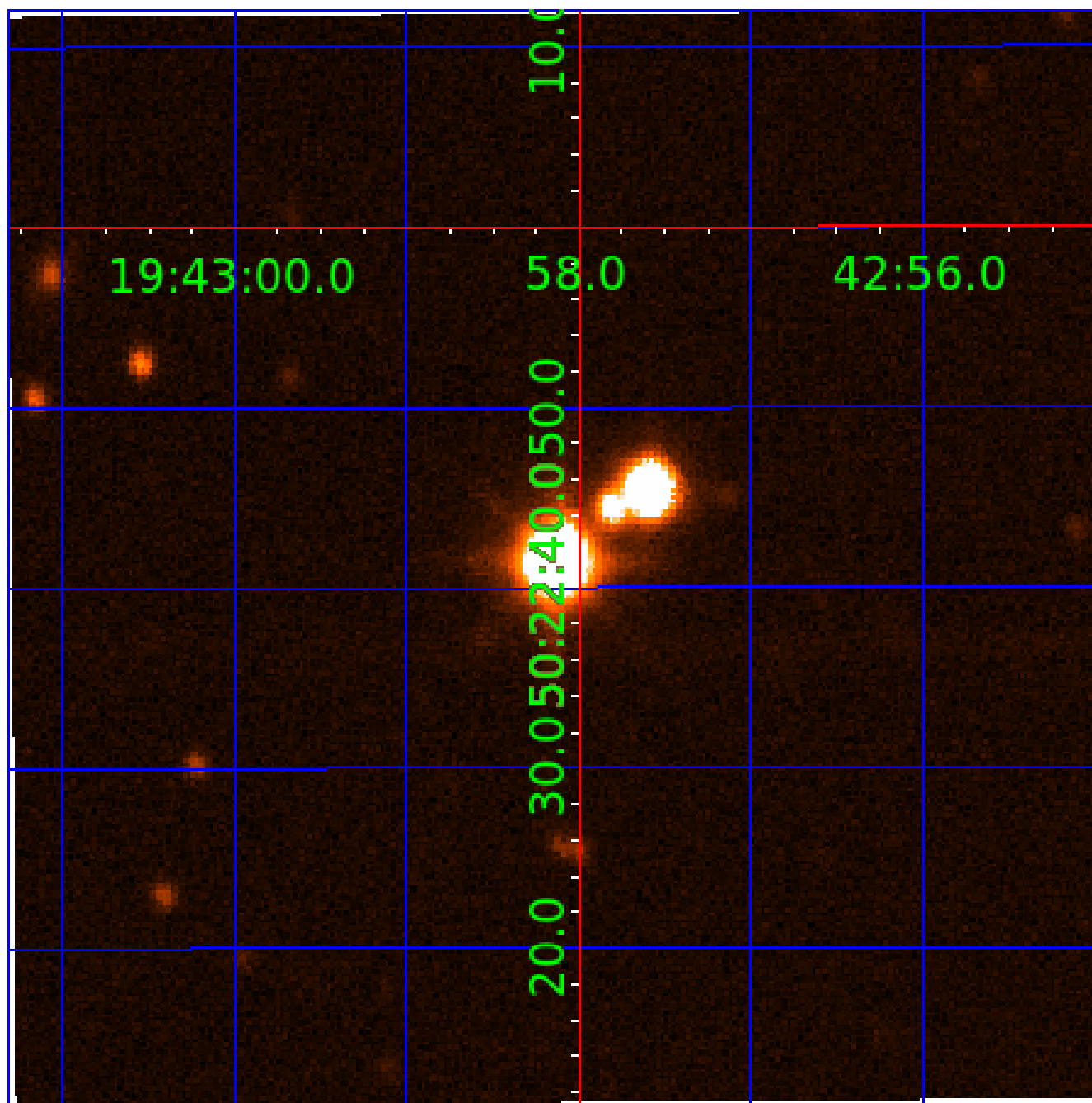


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011971494

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})
011971494-01	OBS	No	3.222819	134.535681	47.4	6.422	11.4	12.5	1.93	7226	2.67	3883.97
011971494-02	OBS	No	3.223168	134.076987	25.5	15.357	10.5	8.7	1.93	7226	1.13	3883.41
011971494-03	OBS	No	400.151158	244.811927	227.4	4.740	8.8	9.3	1.93	7226	3.37	6.27
011971494-04	OBS	No	73.456185	198.529343	177.4	2.231	8.7	9.3	1.93	7226	2.91	60.10
011971494-05	OBS	No	184.667070	312.422646	90.0	25.718	8.5	5.7	1.93	7226	2.12	17.58
011971494-06	OBS	No	132.760221	224.649260	100.6	7.128	8.3	5.2	1.93	7226	2.15	27.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011971494-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011971494-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011971494-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011971494-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011971494-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
011971494-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

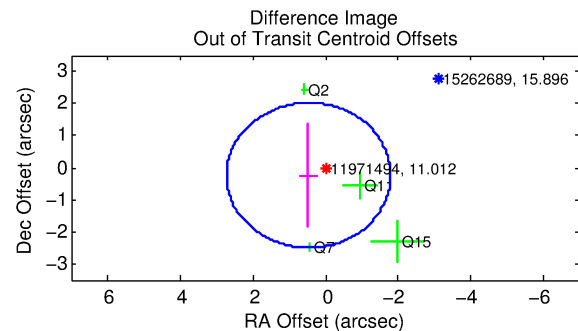
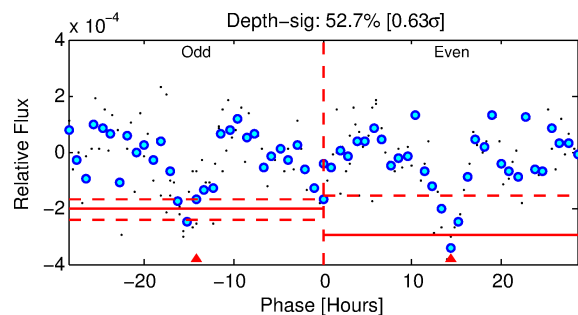
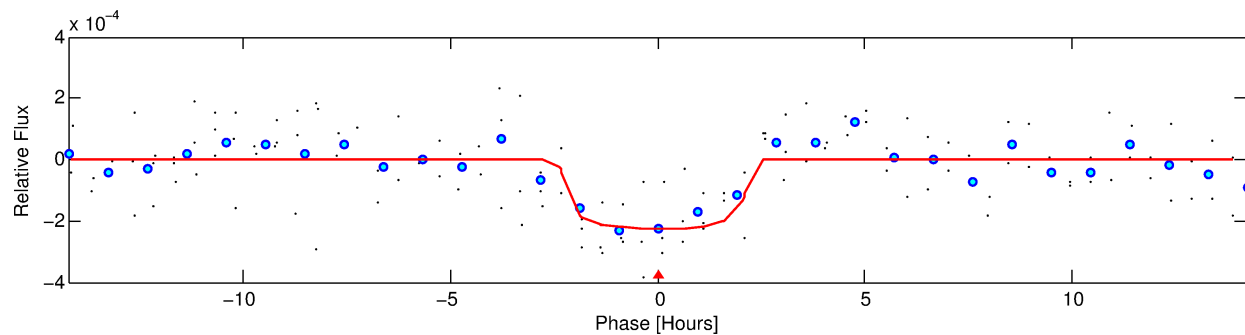
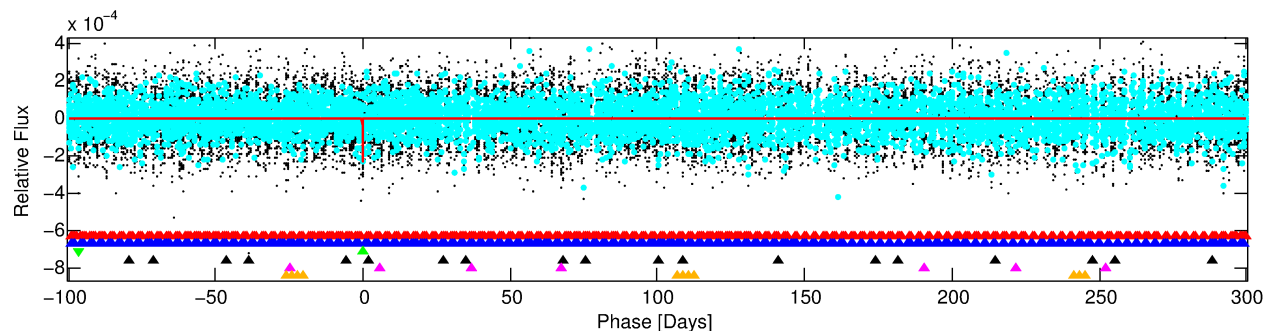
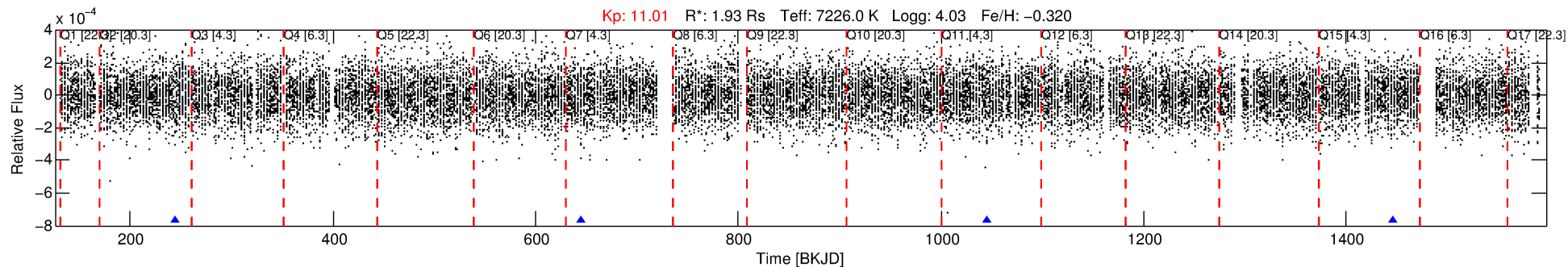
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011971494-03

No Significant Match Found

DV One-Page Summary

KIC: 11971494 Candidate: 3 of 6 Period: 400.151 d



DV Fit Results:

Period = 400.15116 [0.00765] d
Epoch = 244.8119 [0.0105] BKJD
 $R_p/R^* = 0.0160$ [0.0061]
 $a/R^* = 304.13$ [698.83]
 $b = 0.90$ [0.49]
 $S_{\text{eff}} = 6.27$ [2.96]
 $T_{\text{eq}} = 404$ [48] K
 $R_p = 3.37$ [1.66] R_{e}
 $a = 1.2021$ [0.3489] AU
 $A_g = 5916.19$ [5665.44] [1.04 σ]
 $T_{\text{eff}} = 5471$ [1171] K [4.32 σ]

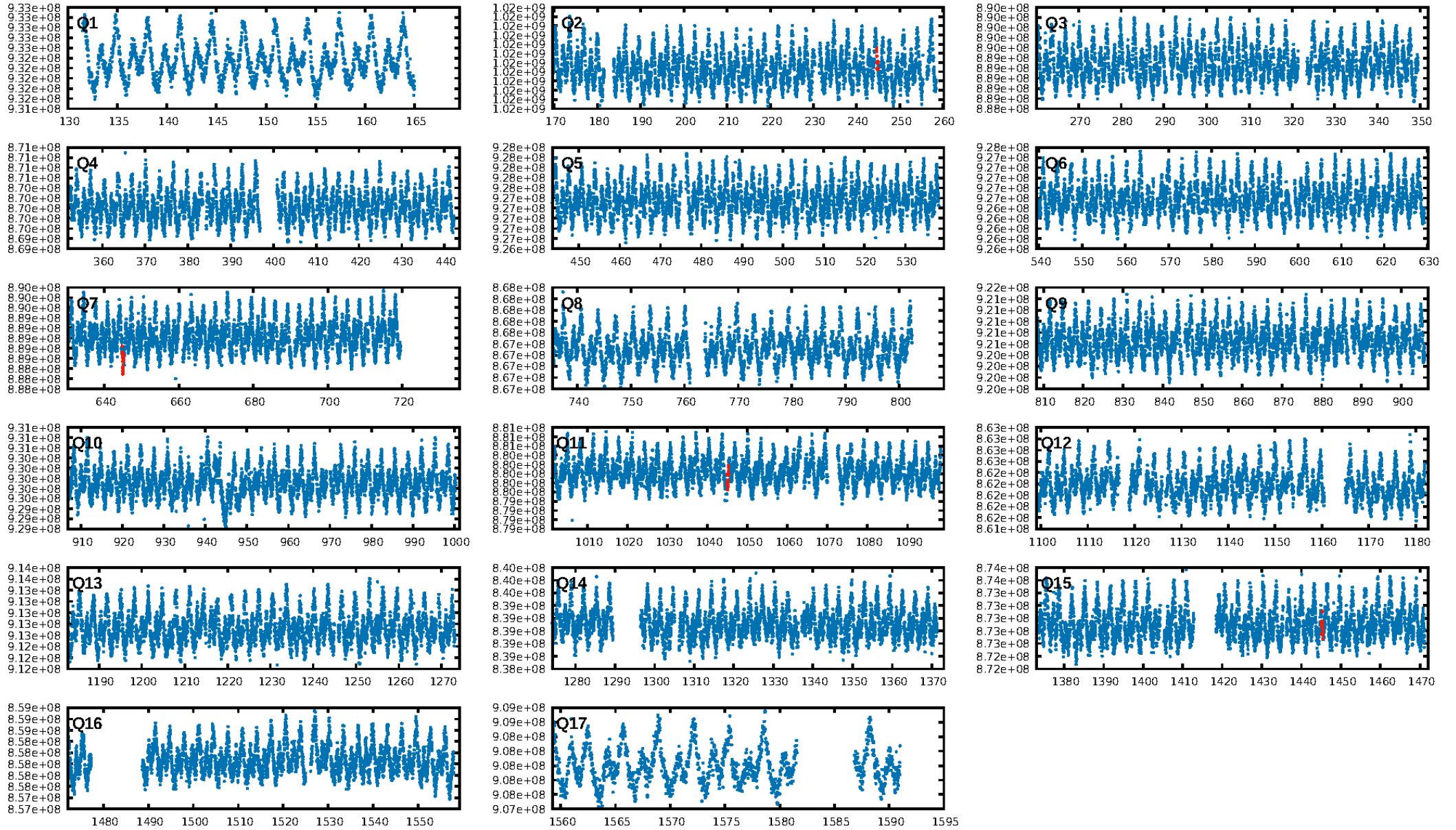
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [197.76 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 17.0%
ModelChiSquareGof-sig: 92.1%
Bootstrap-pfa: 3.36e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.8395
Centroid-sig: 67.3%
Centroid-so: 1.269 arcsec [1.33 σ]
OotOffset-rm: 0.526 arcsec [0.70 σ]
OotOffset-st: 1/3/0/0 [4]
KicOffset-rm: 0.467 arcsec [0.42 σ]
KicOffset-st: 1/3/0/0 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 0.75 [3/4]

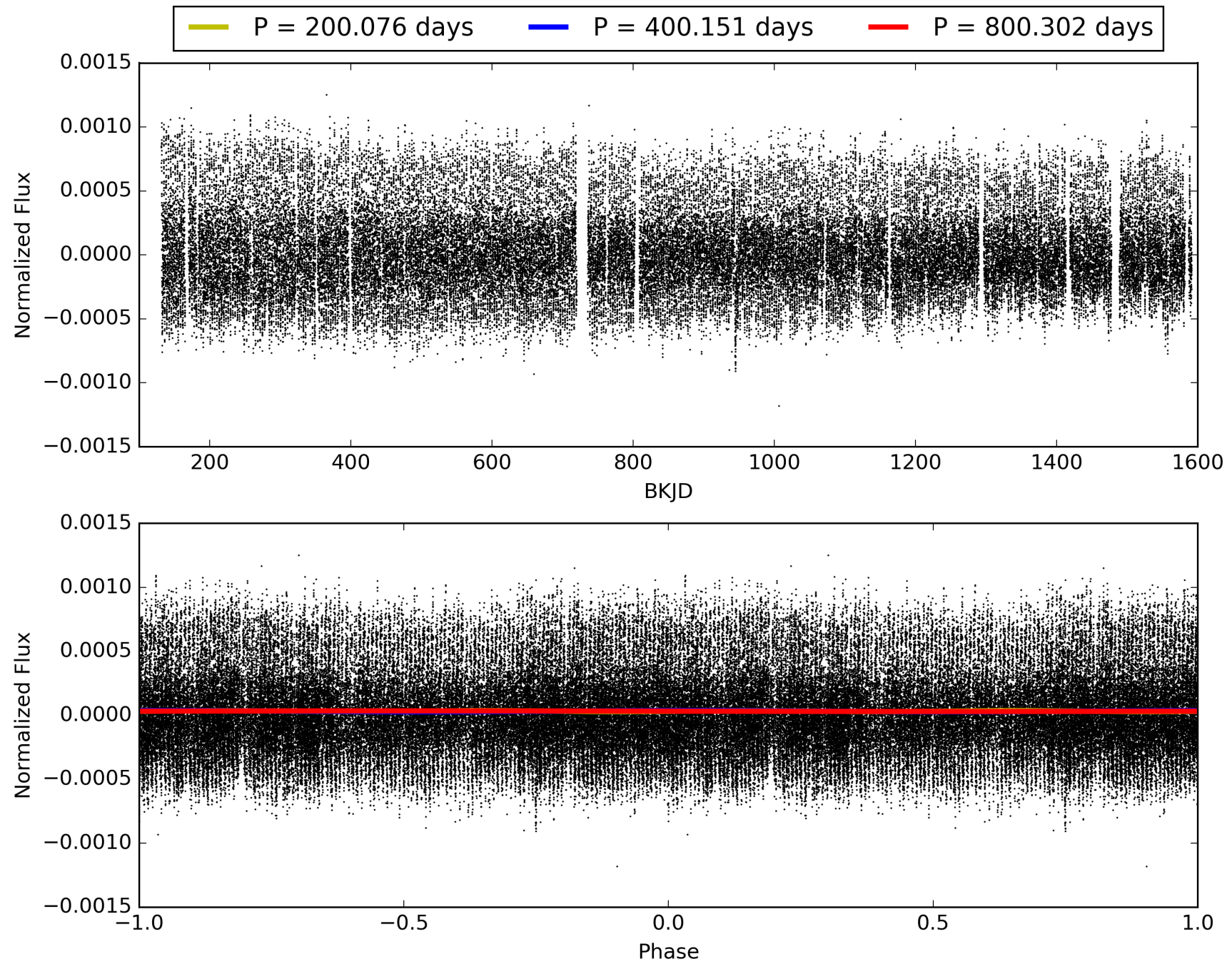
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:11:52 Z

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

TCE 011971494-03, PDC Light Curves

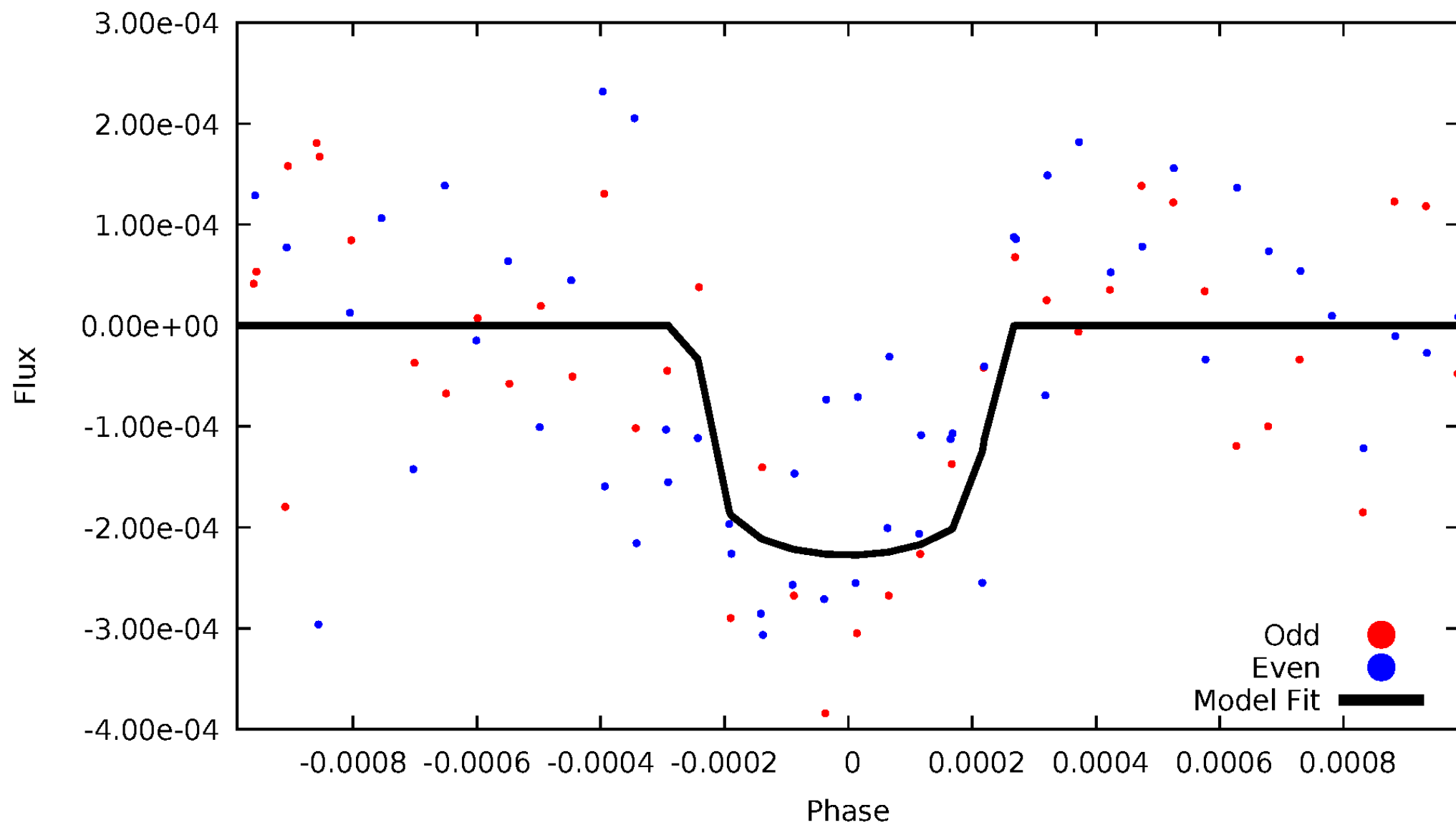


TCE 011971494-03



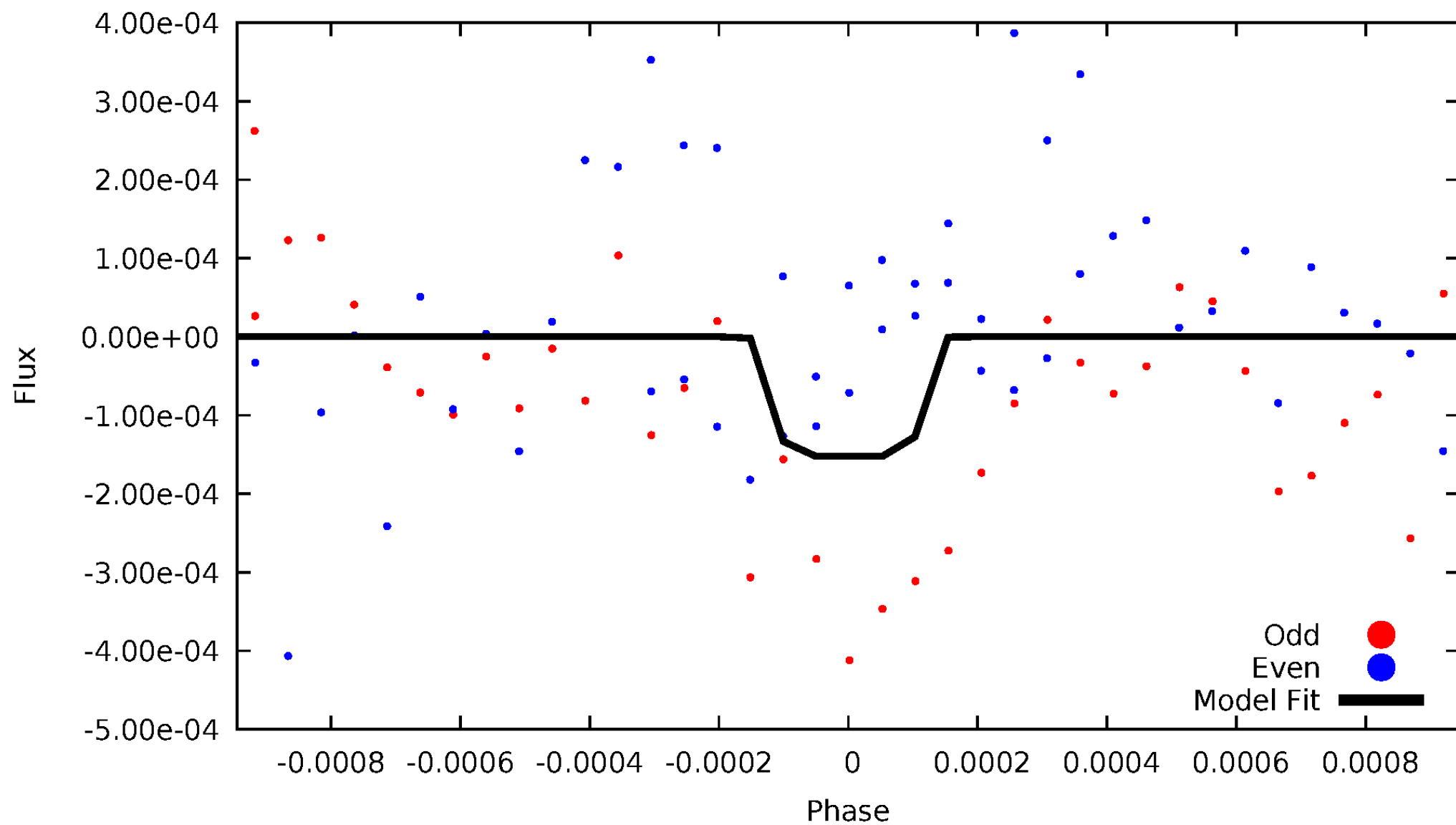
DV Odd/Even

TCE 011971494-03

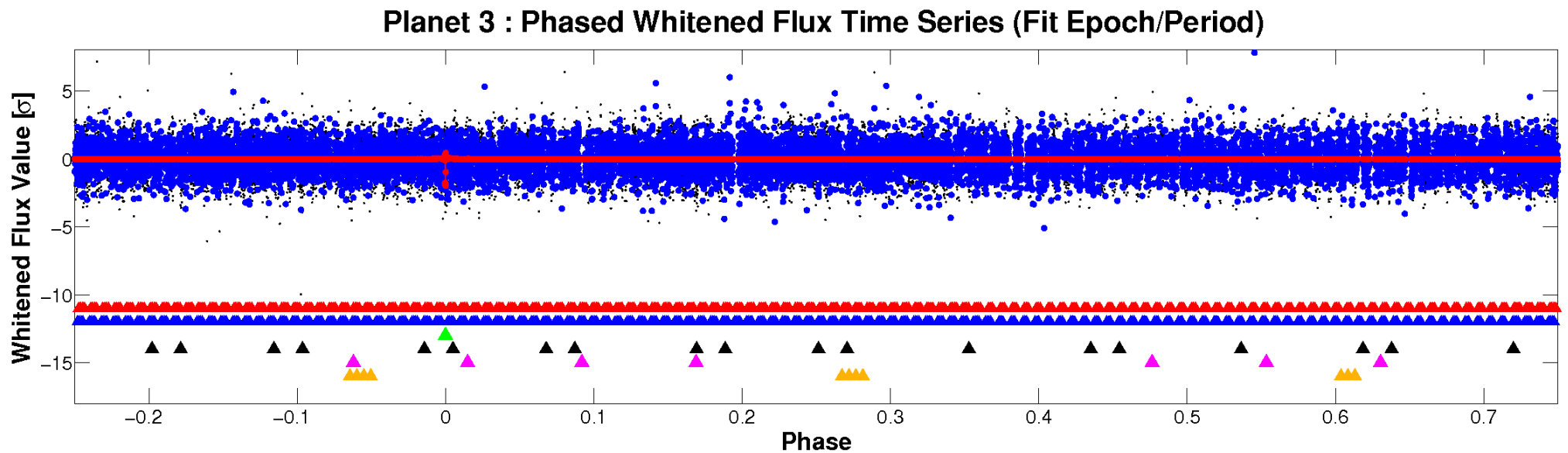
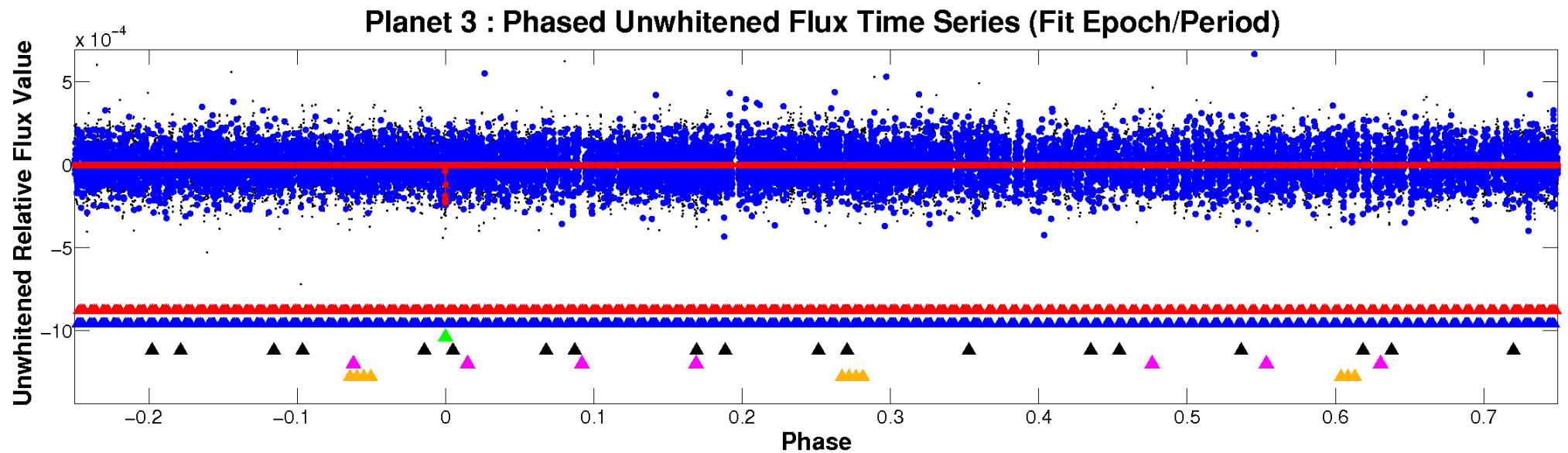


ALT Odd/Even

TCE 011971494-03

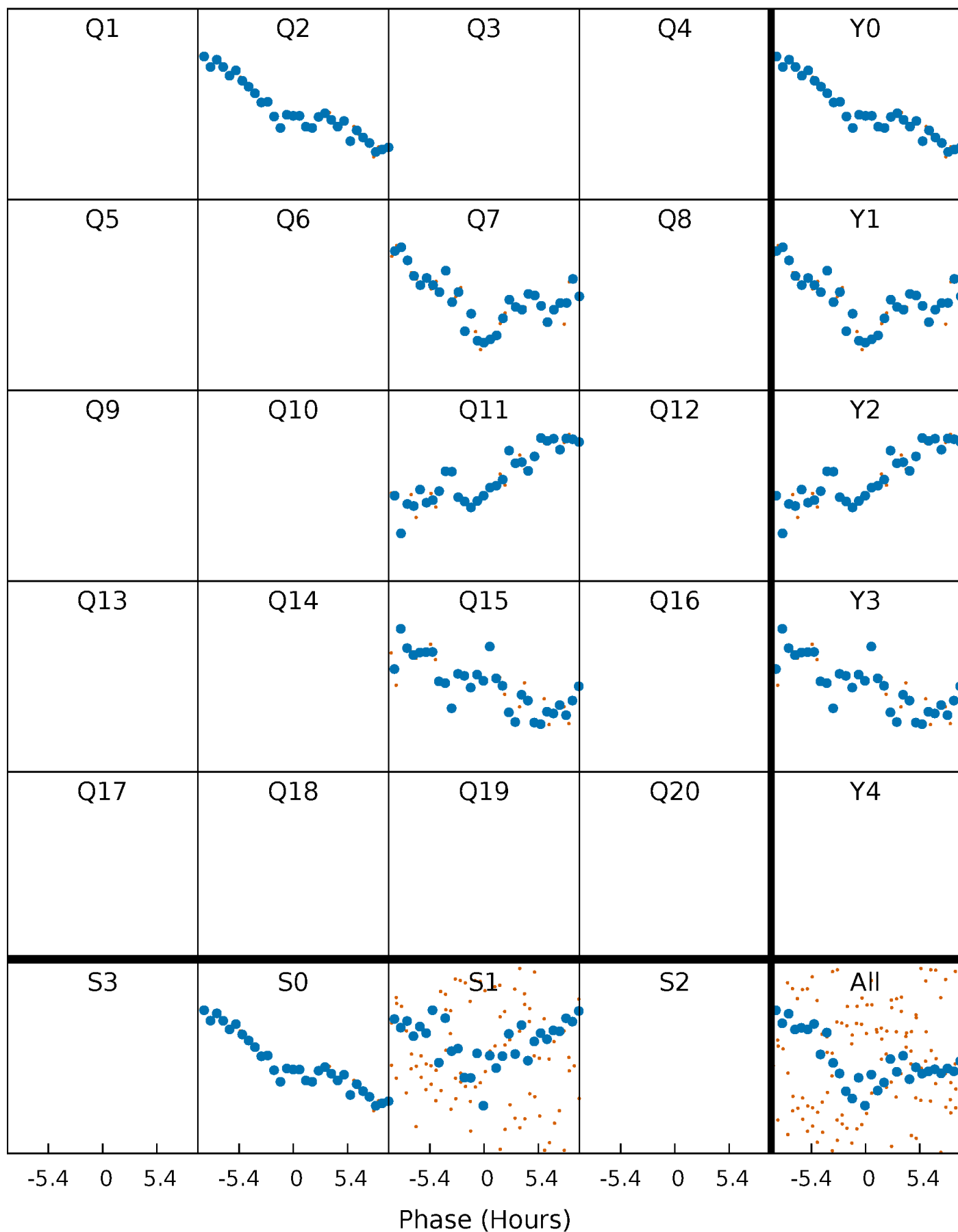


Non-Whitened Vs. Whitened Light Curve



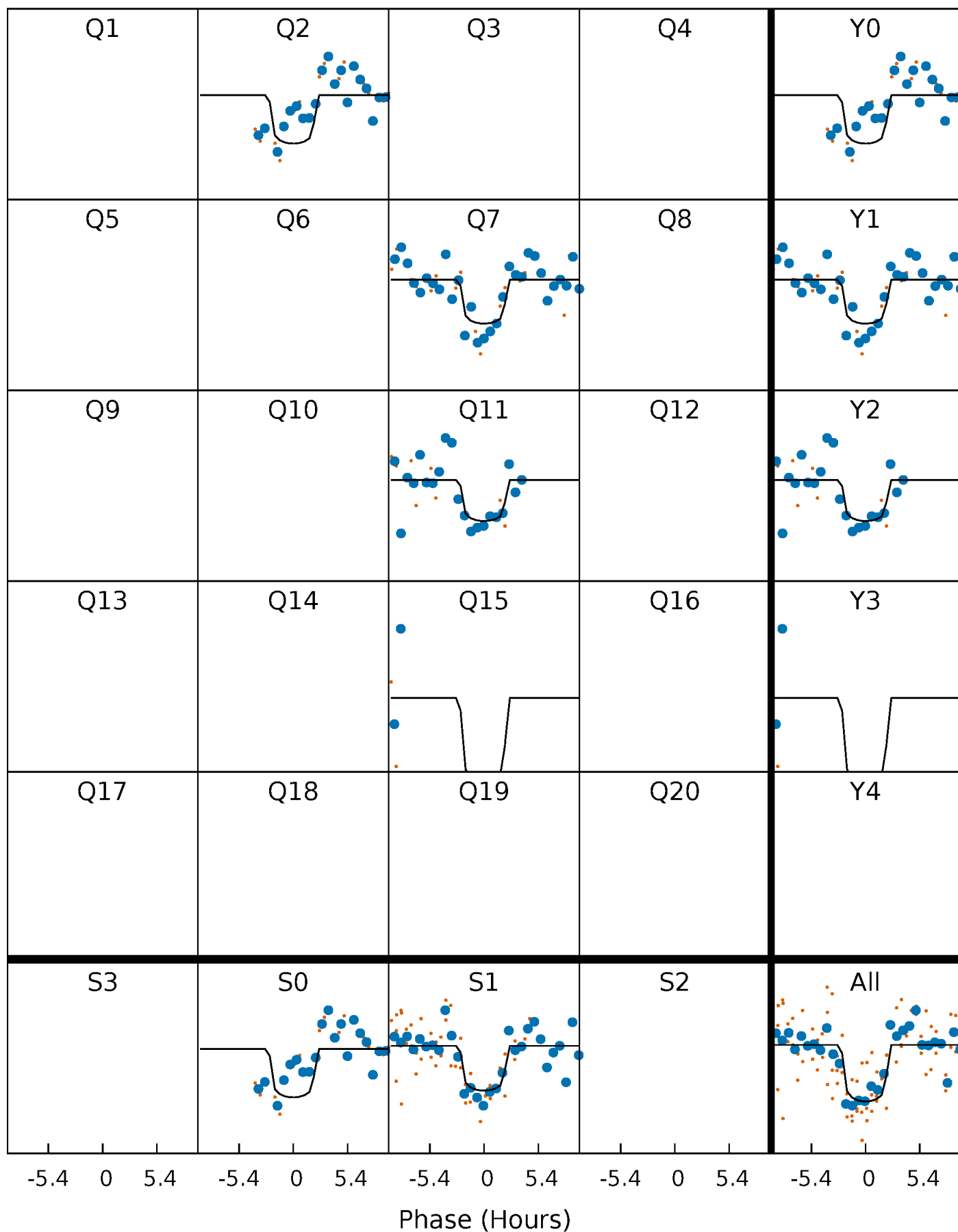
PDC Quarter-Phased Transit Curves

TCE 011971494-03 $P=400.151158$ Days $T_0=244.811927$ (BKJD)



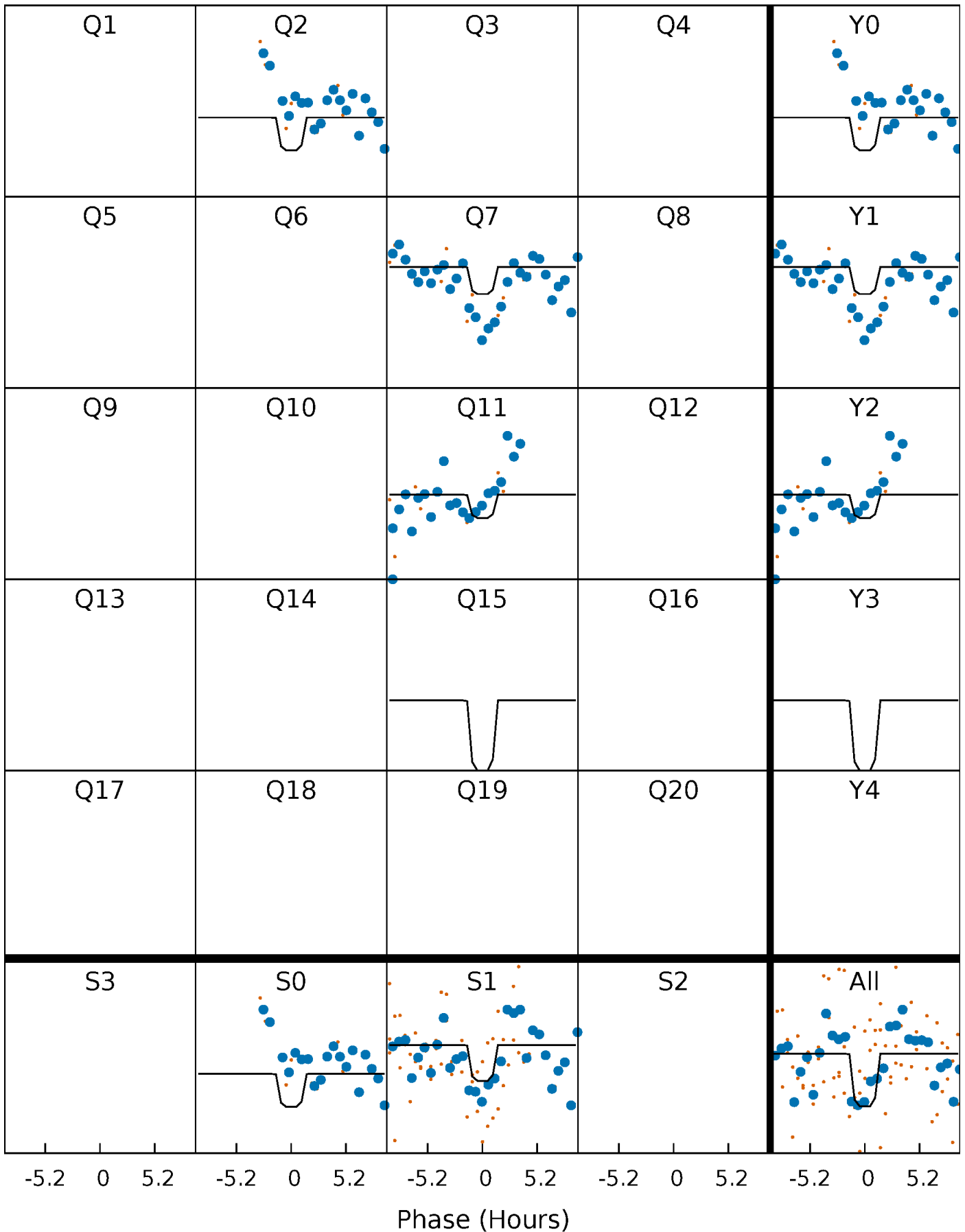
DV Quarter-Phased Transit Curves

TCE 011971494-03 P=400.151158 Days $T_0=244.811927$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

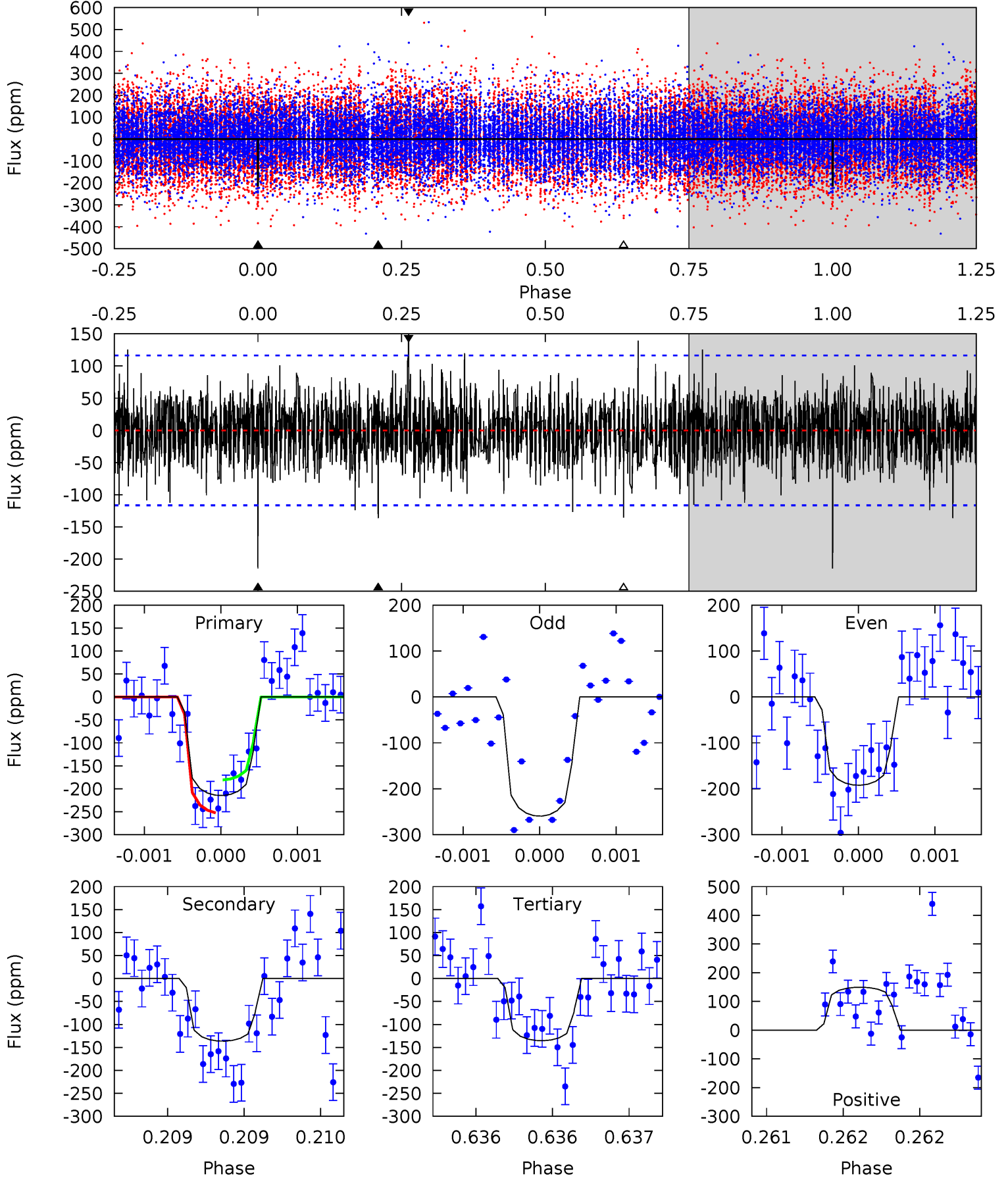
TCE 011971494-03 $P=400.170839$ Days $T_0=244.776806$ (BKJD)



DV Model-Shift Uniqueness Test

011971494-03, P = 400.151158 Days, E = 244.811927 Days

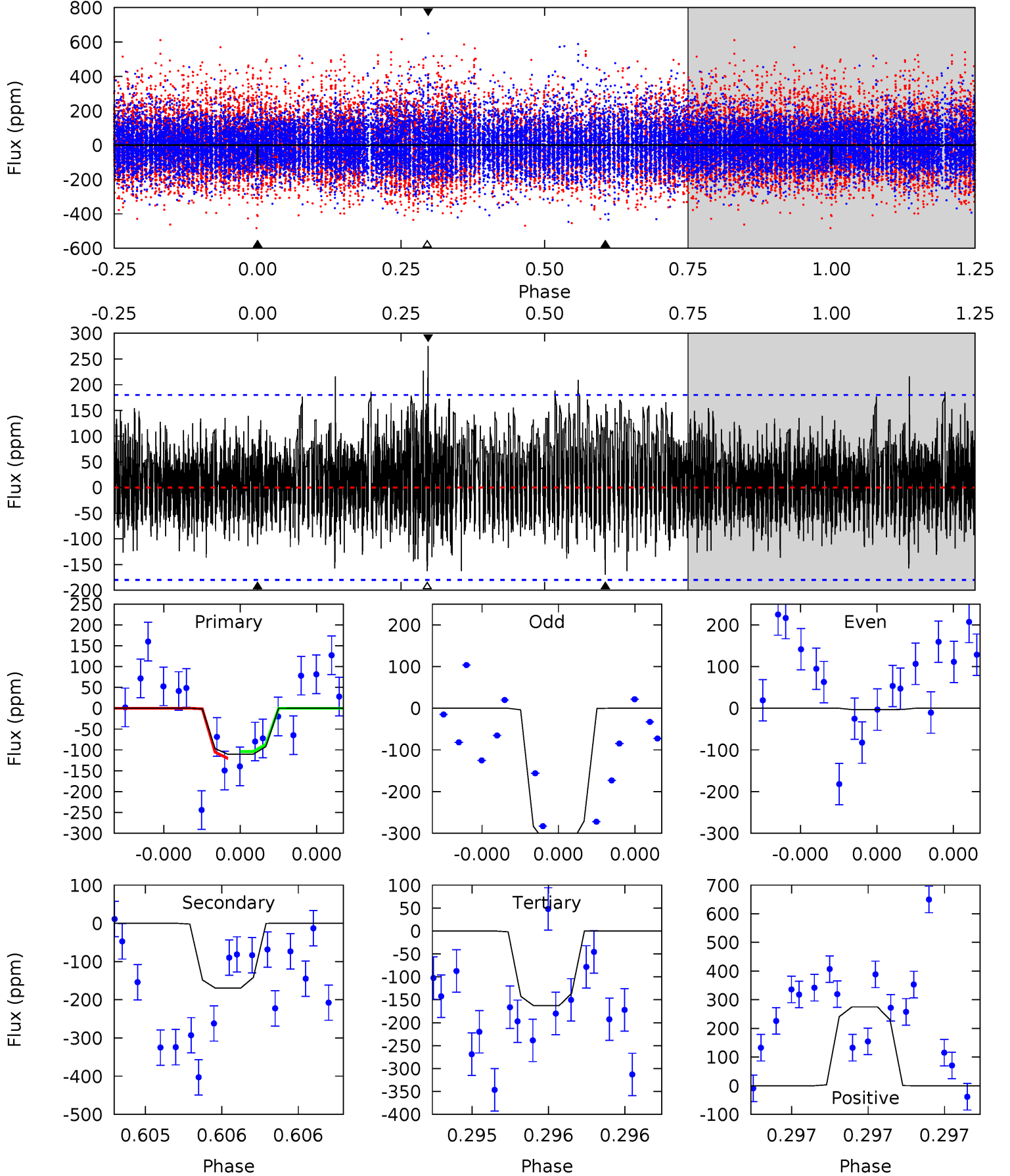
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	6.53	6.48	7.16	5.57	3.48	1.61	3.80	3.12	0.05	-0.63	1.50	0.87	0.41	1.70



Alt Model-Shift Uniqueness Test

011971494-03, P = 400.170839 Days, E = 244.776806 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.46	5.32	5.12	8.65	5.66	3.61	1.62	-1.65	-5.18	0.21	-3.32	4.71	1.84	0.62	0.25



Stellar Parameters For KIC 011971494

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7226^{+201}_{-252}	$4.029^{+0.260}_{-0.160}$	$-0.320^{+0.250}_{-0.350}$	$1.926^{+0.553}_{-0.609}$	$1.445^{+0.219}_{-0.267}$	$0.285^{+0.430}_{-0.132}$
	+3%/-3%	+6%/-4%	+78%/-109%	+29%/-32%	+15%/-18%	+151%/-46%
Source	PHO1	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 011971494-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-136 ± 21	$3.21^{+1.31}_{-1.21}$	556^{+47}_{-49}	6097^{+1690}_{-856}	10046^{+16395}_{-4874}
Alt.	-169 ± 32	$2.55^{+1.34}_{-1.21}$	559^{+44}_{-49}	7394^{+4181}_{-1475}	21207^{+52995}_{-12405}

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 $A_{obs} \gg 1.0$

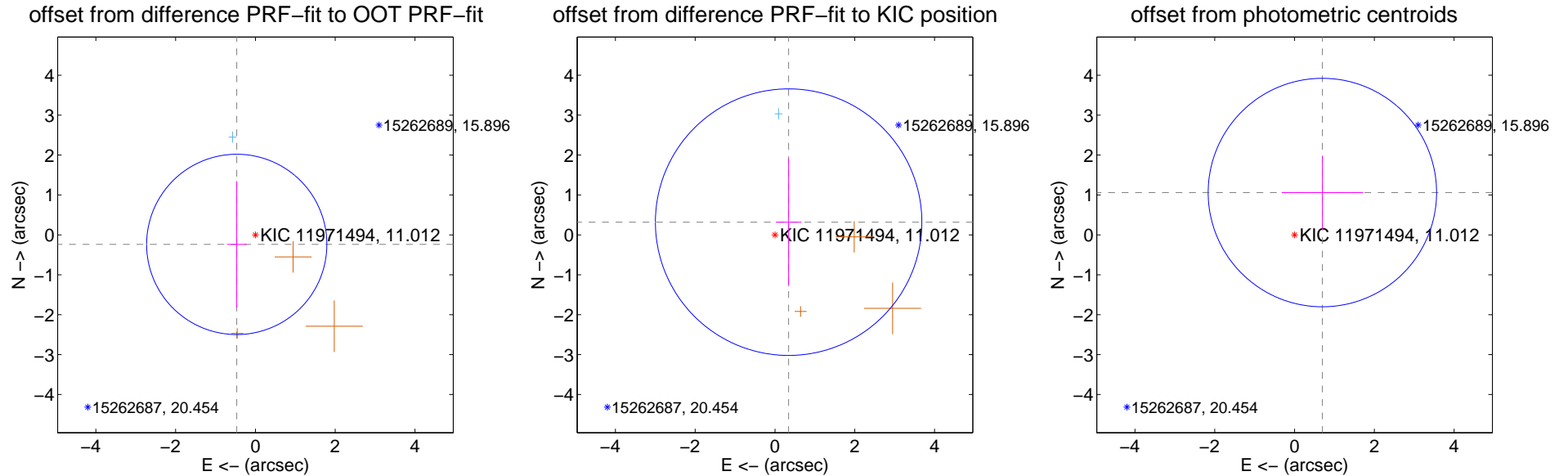
DV Centroid Data

Supplemental centroid analysis for 011971494-03. **Kepler magnitude: 11.01.** Transit SNR 9.33

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.07 arcsec

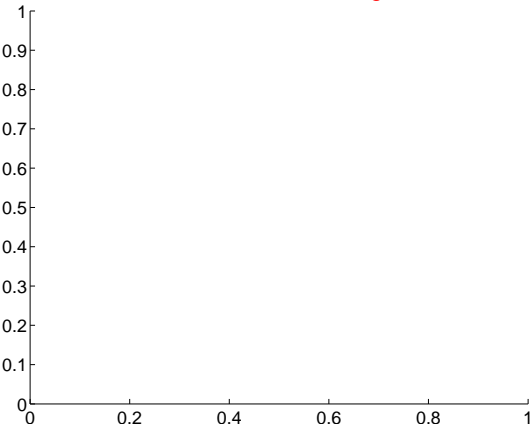
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.526 ± 0.753	0.70	0.468 ± 0.245	-0.239 ± 1.586
PRF-fit source offset from KIC position	0.467 ± 1.113	0.42	-0.342 ± 0.319	0.318 ± 1.598
photometric centroid source offset	1.27 ± 0.95	1.33	-0.70 ± 1.02	1.06 ± 0.92



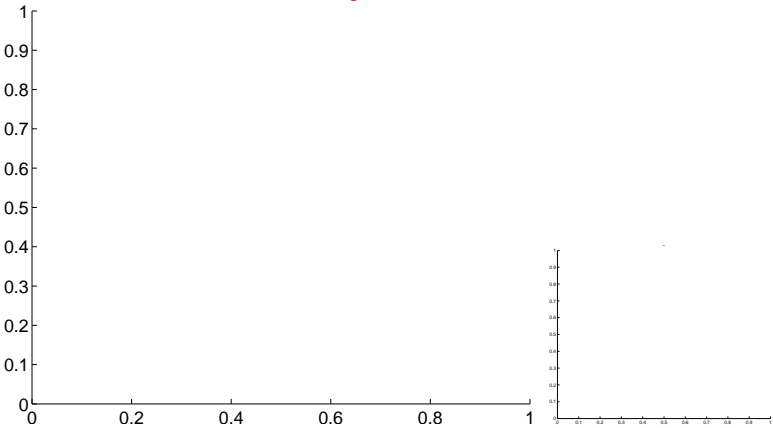
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

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

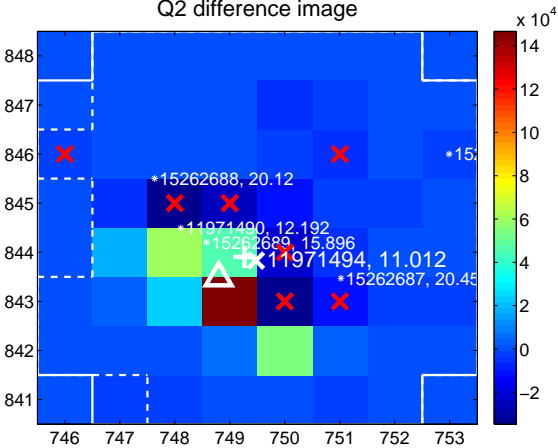
Q1 no difference image



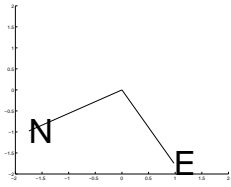
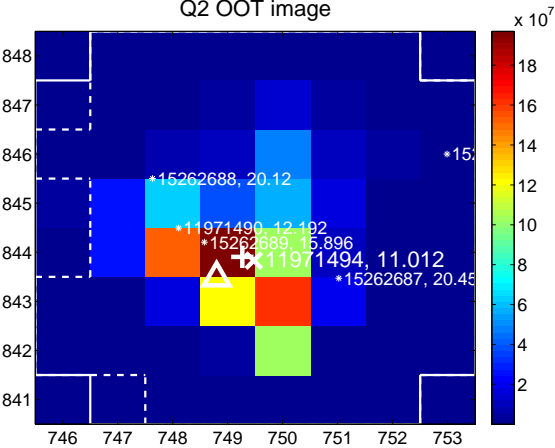
Q1 no OOT image



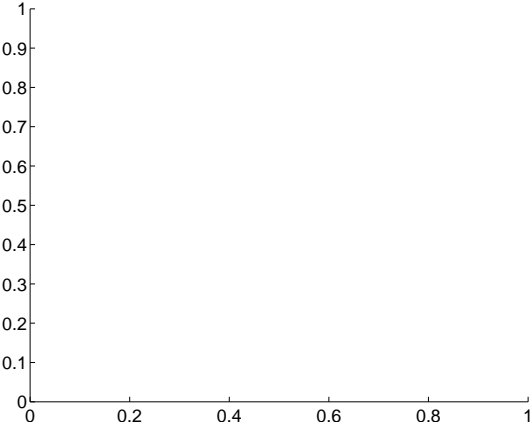
Q2 difference image



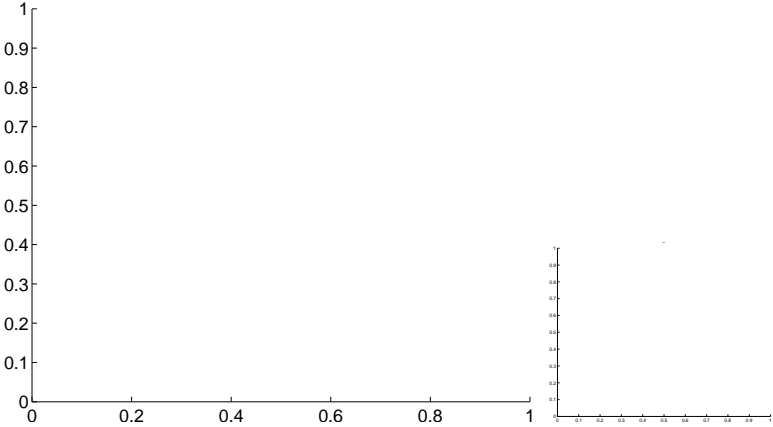
Q2 OOT image



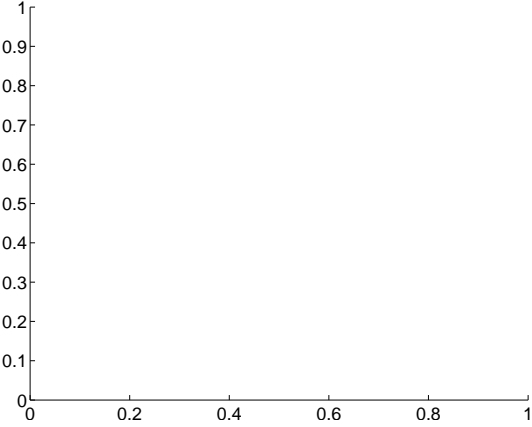
Q3 no difference image



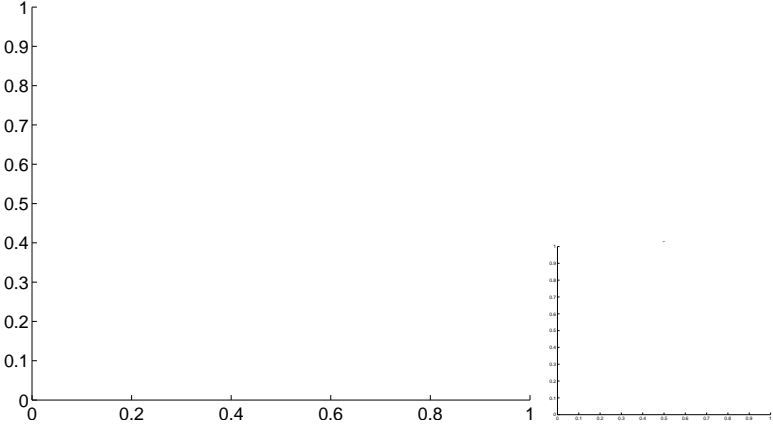
Q3 no OOT image



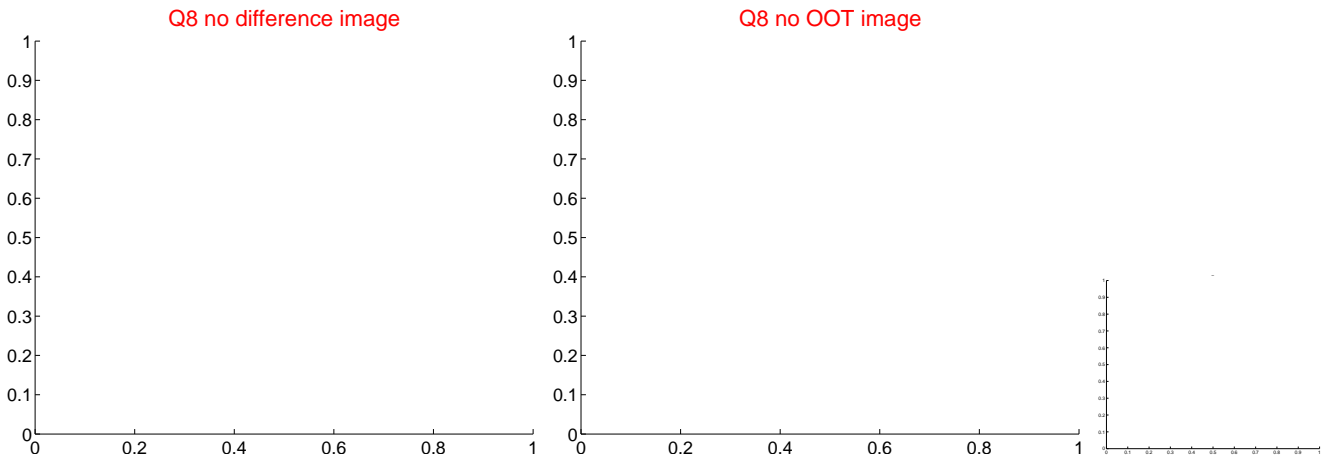
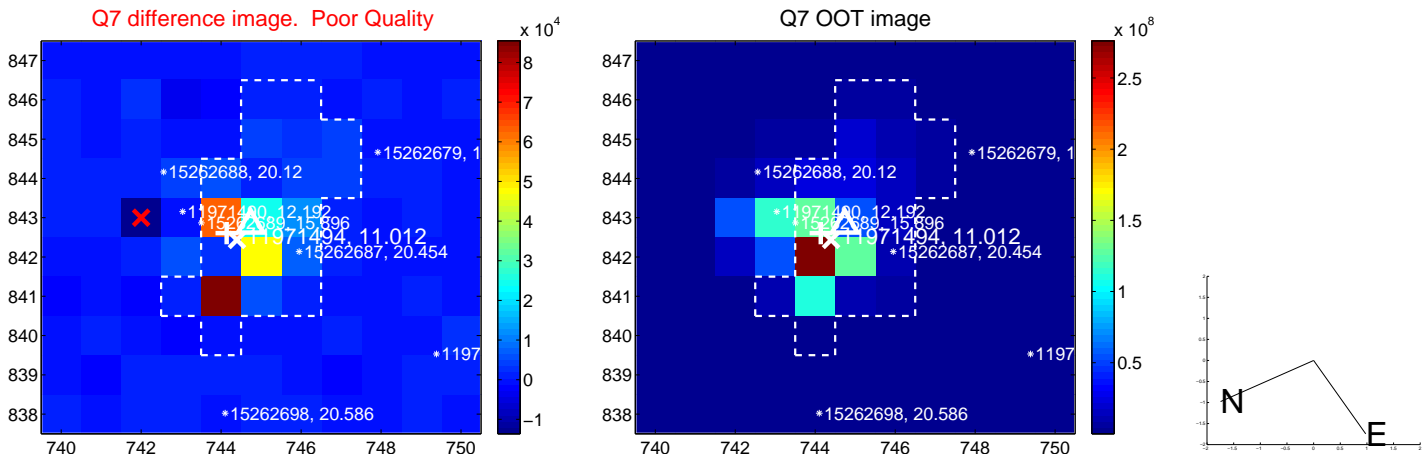
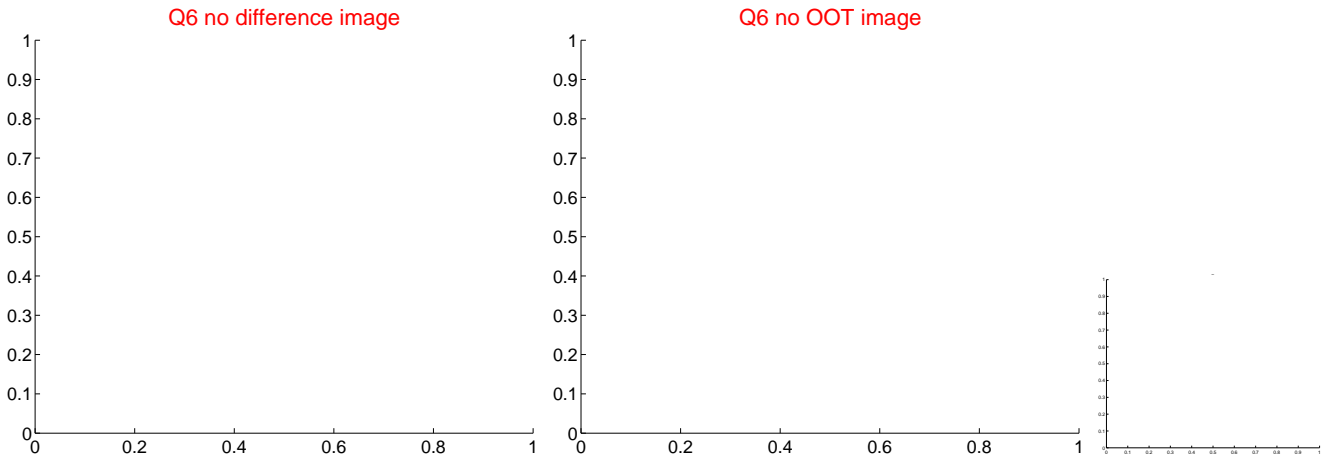
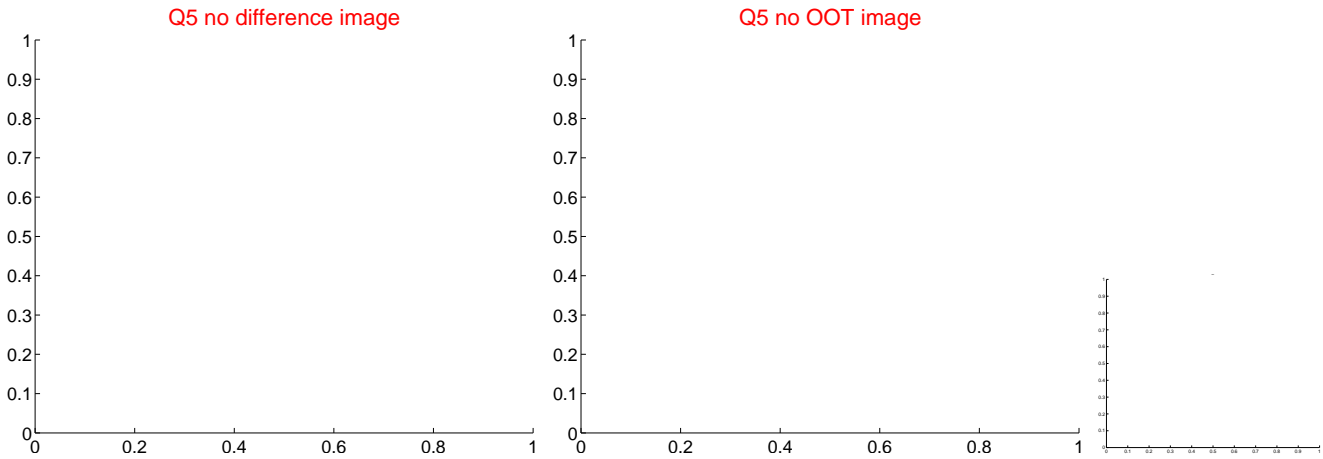
Q4 no difference image



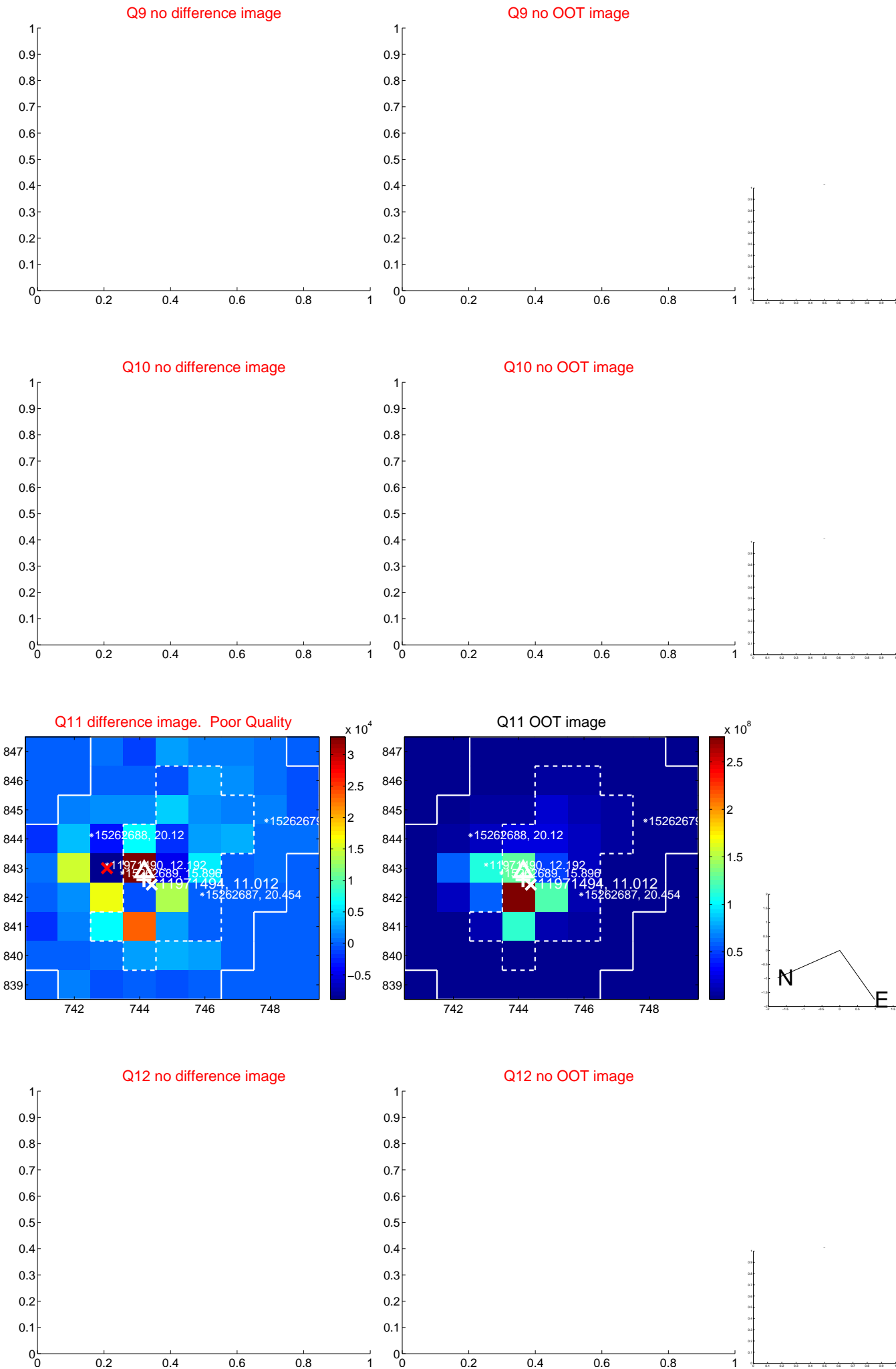
Q4 no OOT image



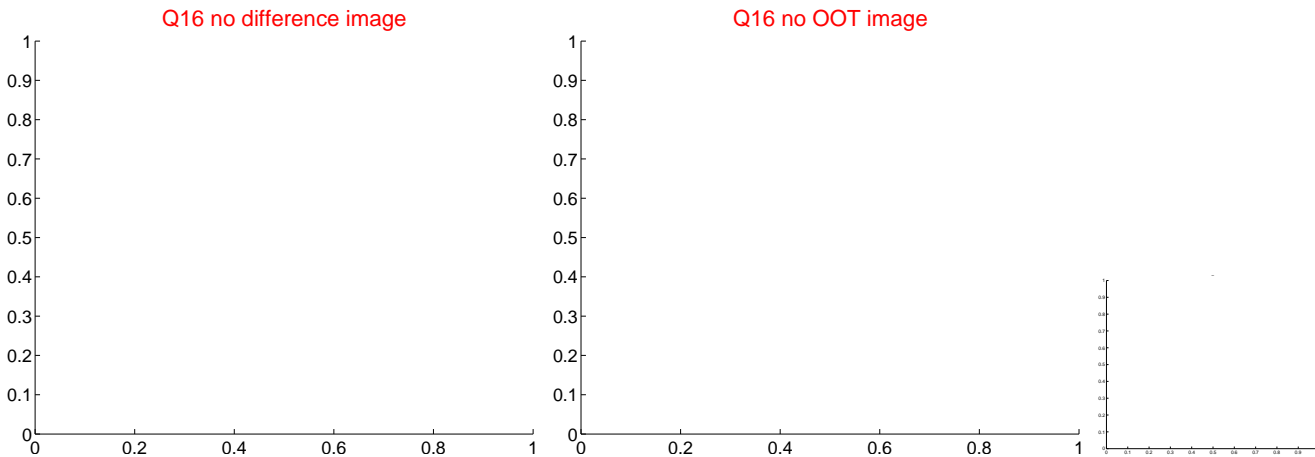
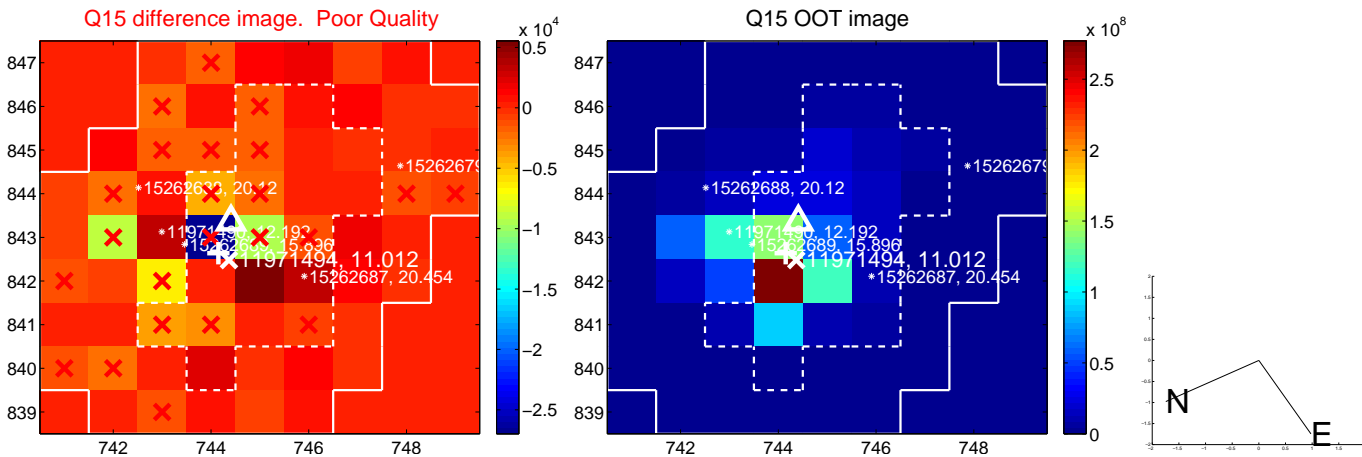
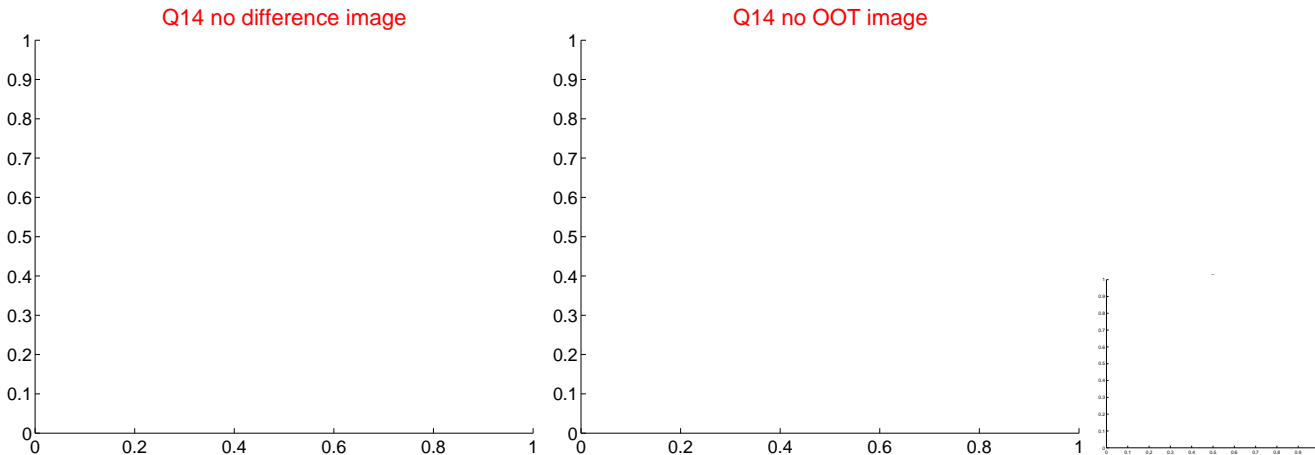
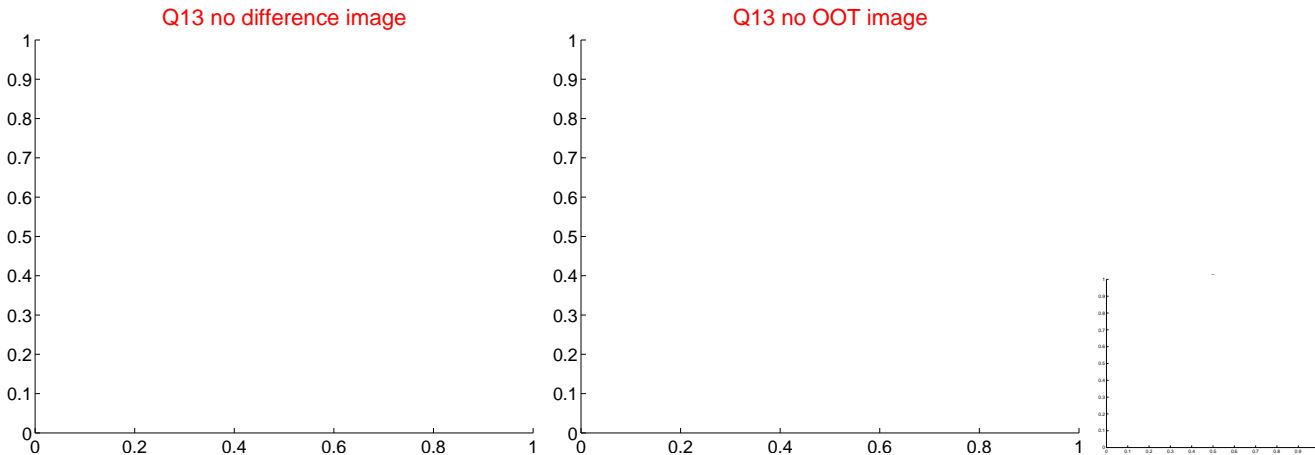
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



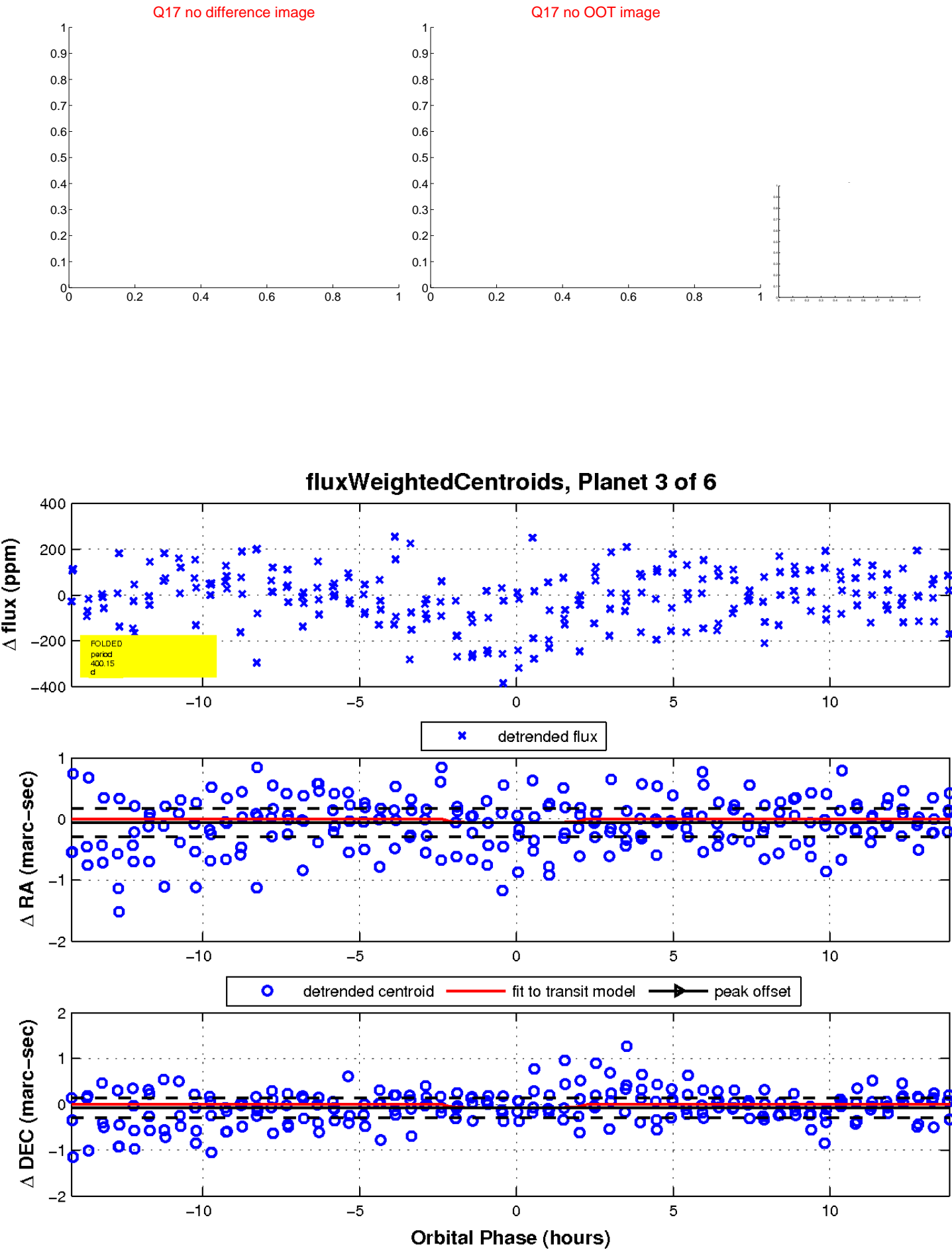
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

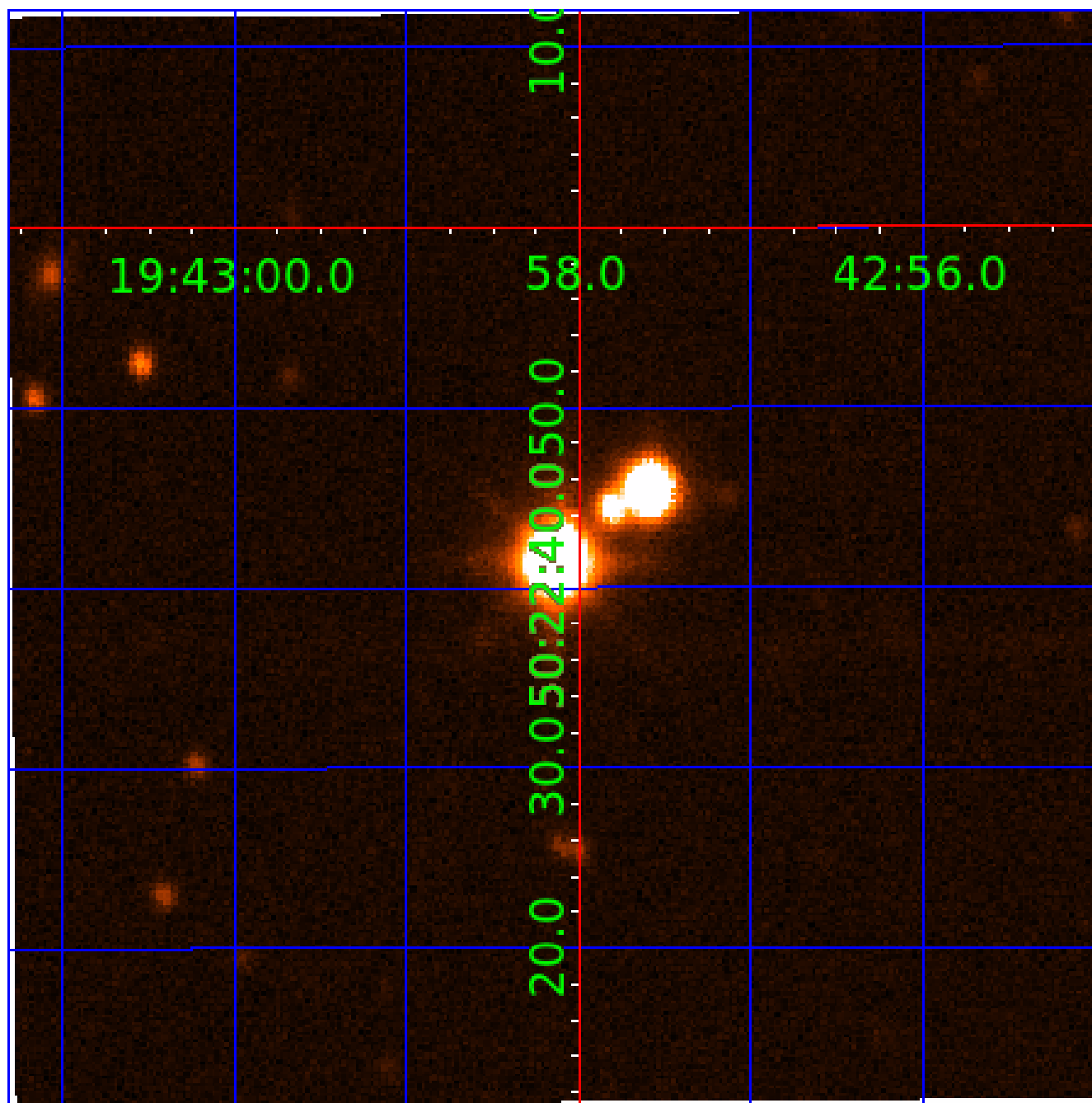


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011971494

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})
011971494-01	OBS	No	3.222819	134.535681	47.4	6.422	11.4	12.5	1.93	7226	2.67	3883.97
011971494-02	OBS	No	3.223168	134.076987	25.5	15.357	10.5	8.7	1.93	7226	1.13	3883.41
011971494-03	OBS	No	400.151158	244.811927	227.4	4.740	8.8	9.3	1.93	7226	3.37	6.27
011971494-04	OBS	No	73.456185	198.529343	177.4	2.231	8.7	9.3	1.93	7226	2.91	60.10
011971494-05	OBS	No	184.667070	312.422646	90.0	25.718	8.5	5.7	1.93	7226	2.12	17.58
011971494-06	OBS	No	132.760221	224.649260	100.6	7.128	8.3	5.2	1.93	7226	2.15	27.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011971494-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011971494-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011971494-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011971494-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011971494-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
011971494-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

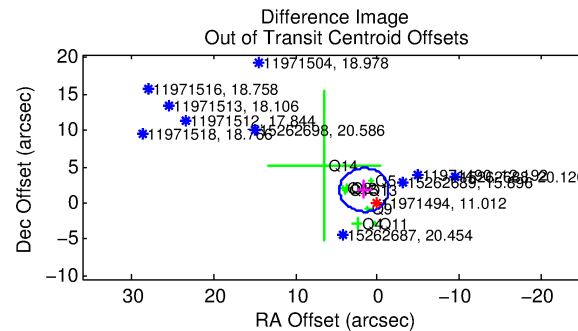
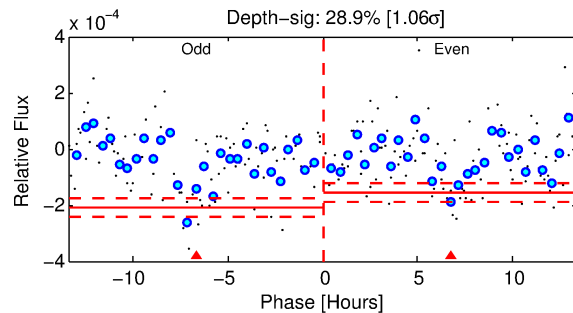
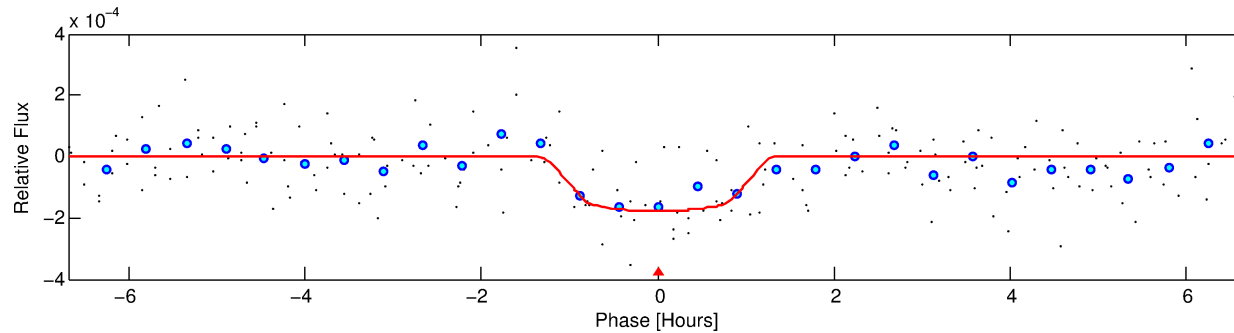
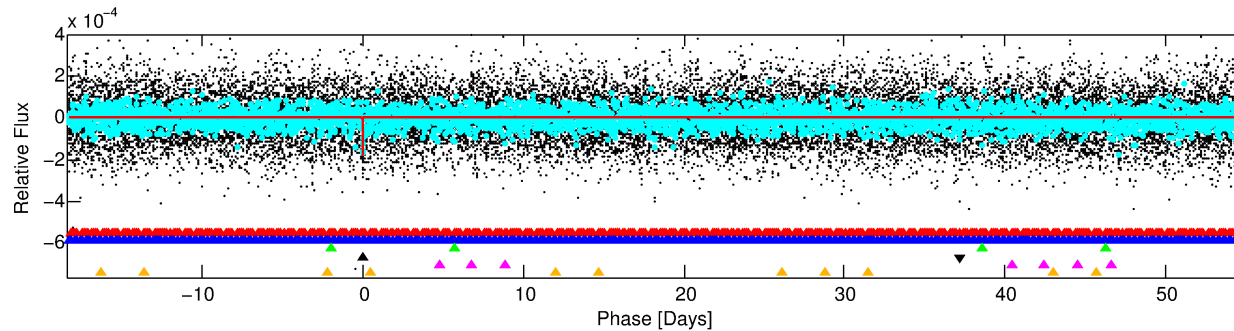
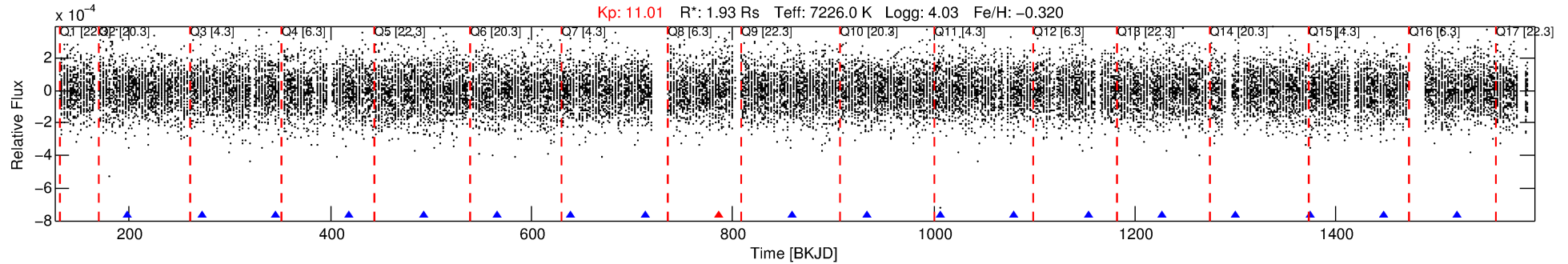
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011971494-04

No Significant Match Found

DV One-Page Summary

KIC: 11971494 Candidate: 4 of 6 Period: 73.456 d



DV Fit Results:

Period = 73.45618 [0.00076] d
Epoch = 198.5293 [0.0081] BKJD
Rp/R* = 0.0139 [0.0109]
a/R* = 132.36 [661.09]
b = 0.87 [1.44]
Seff = 60.10 [28.39]
Teq = 710 [84] K
Rp = 2.91 [2.48] Re
a = 0.3883 [0.1127] AU
Ag = 956.22 [1577.45] [0.61 σ]
Teffp = 6104 [2431] K [2.22 σ]

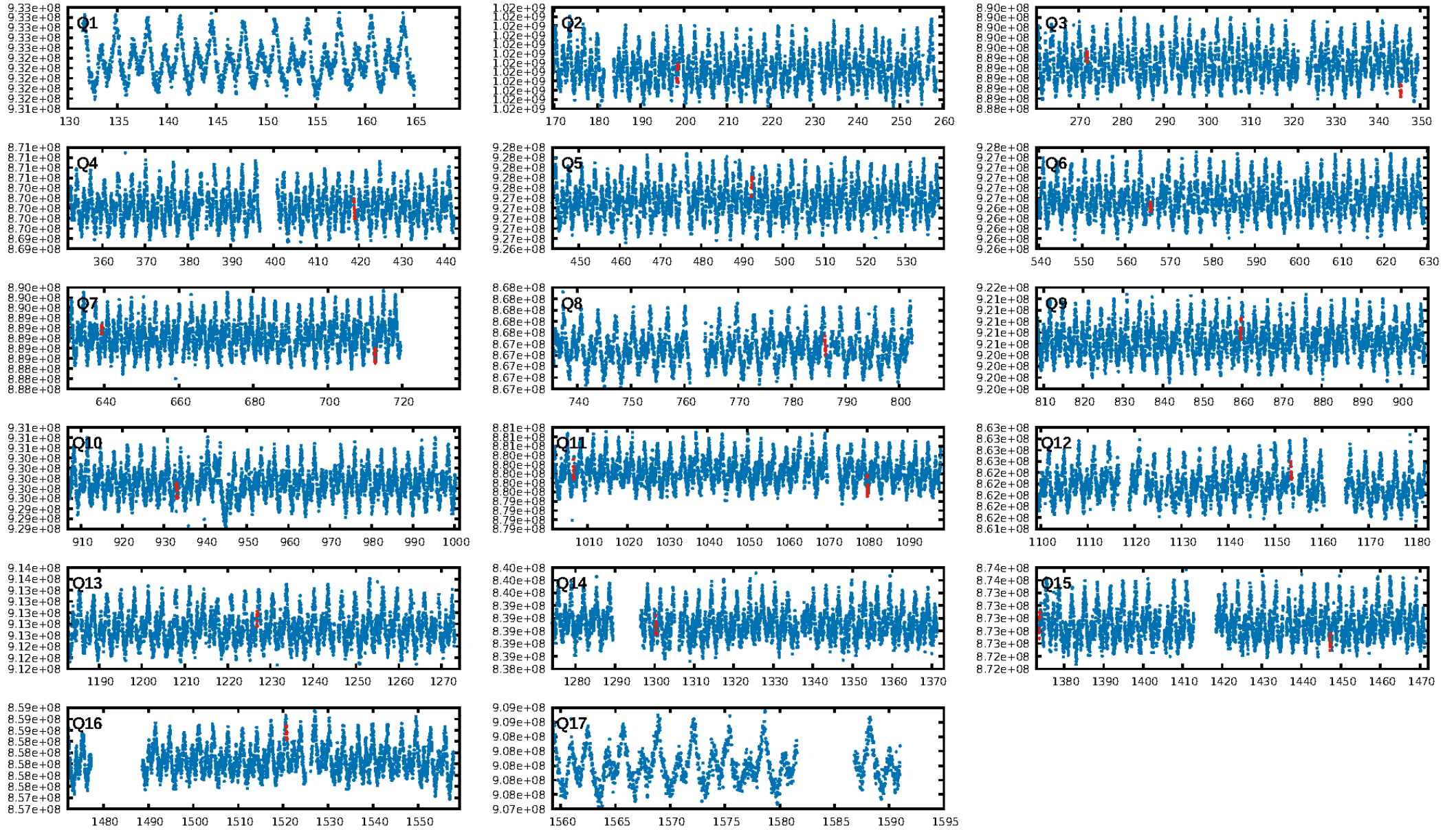
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [108.62 σ]
LongPeriod-sig: 100.0% [190.57 σ]
ModelChiSquare2-sig: 50.5%
ModelChiSquareGof-sig: 84.7%
Bootstrap-pfa: 9.75e-10
RollingBand-fgt: 0.88 [7/8]
GhostDiagnostic-chr: 17.49
Centroid-sig: 4.6%
Centroid-so: 1.609 arcsec [2.65 σ]
OotOffset-rm: 2.427 arcsec [2.43 σ]
OotOffset-st: 1/3/2/3 [9]
KicOffset-rm: 1.609 arcsec [1.65 σ]
KicOffset-st: 1/3/2/3 [9]
DiffImageQuality-fgm: 0.78 [7/9]
DiffImageOverlap-fno: 0.47 [7/15]

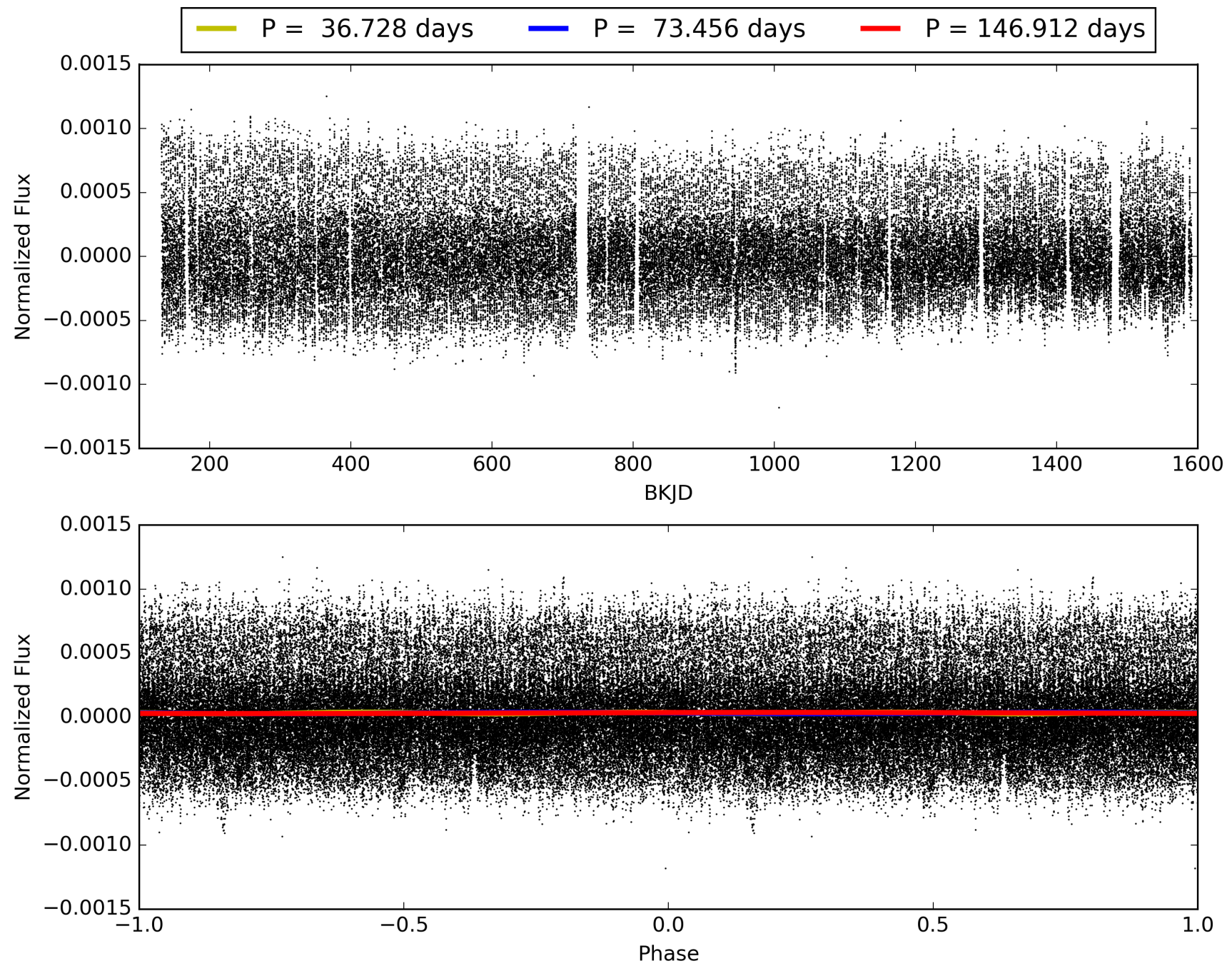
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:11:58 Z

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

TCE 011971494-04, PDC Light Curves

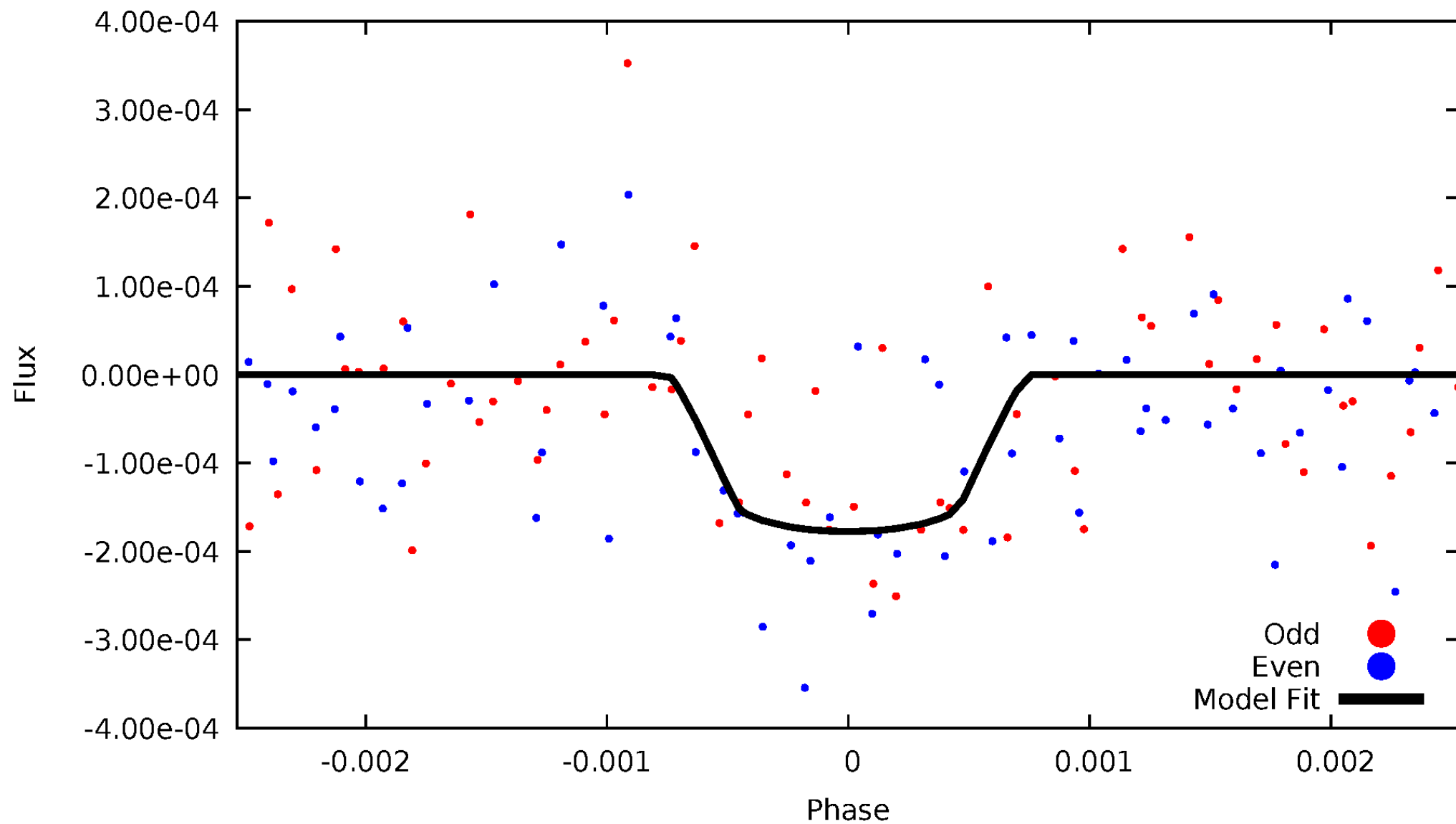


TCE 011971494-04



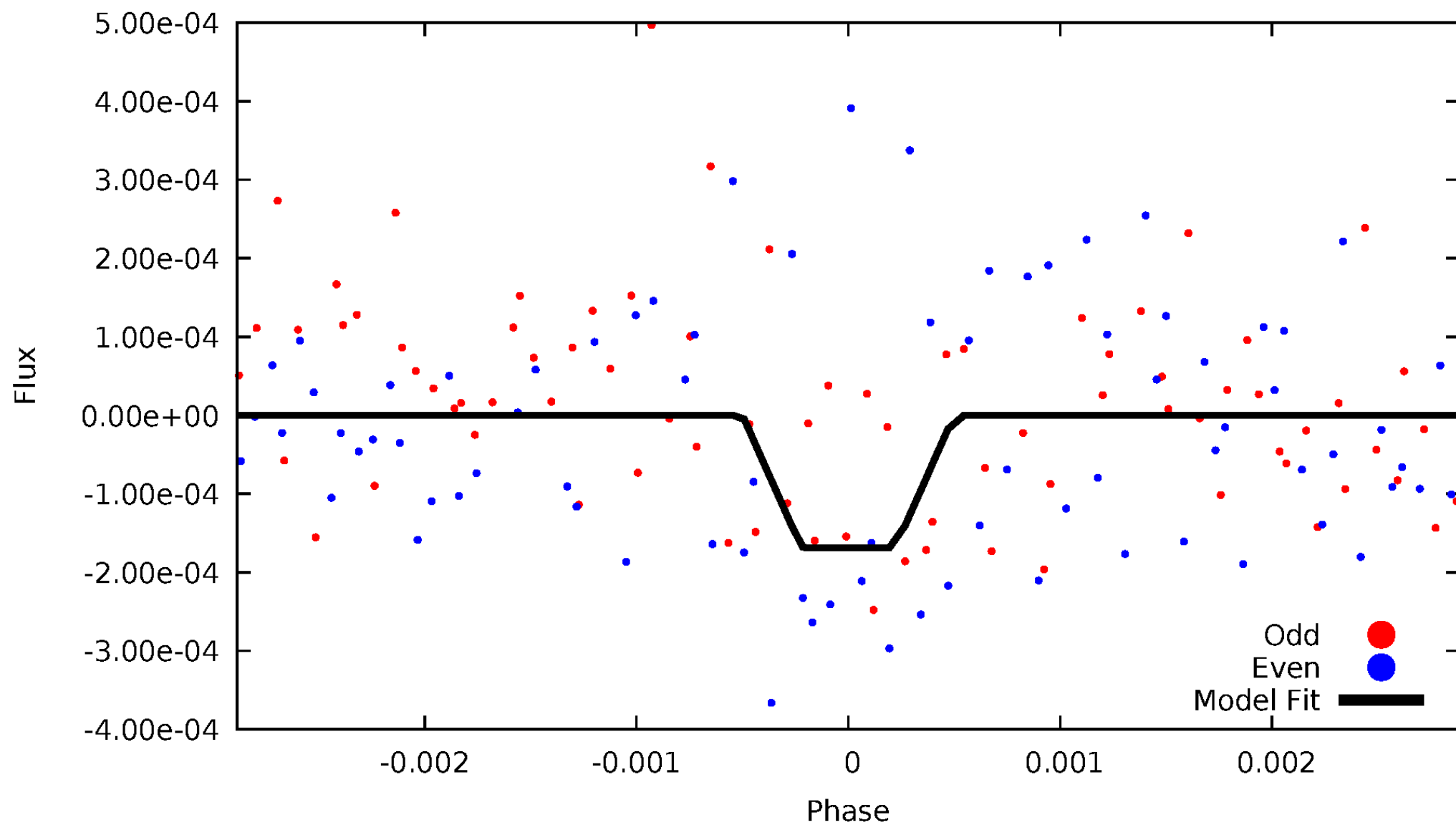
DV Odd/Even

TCE 011971494-04



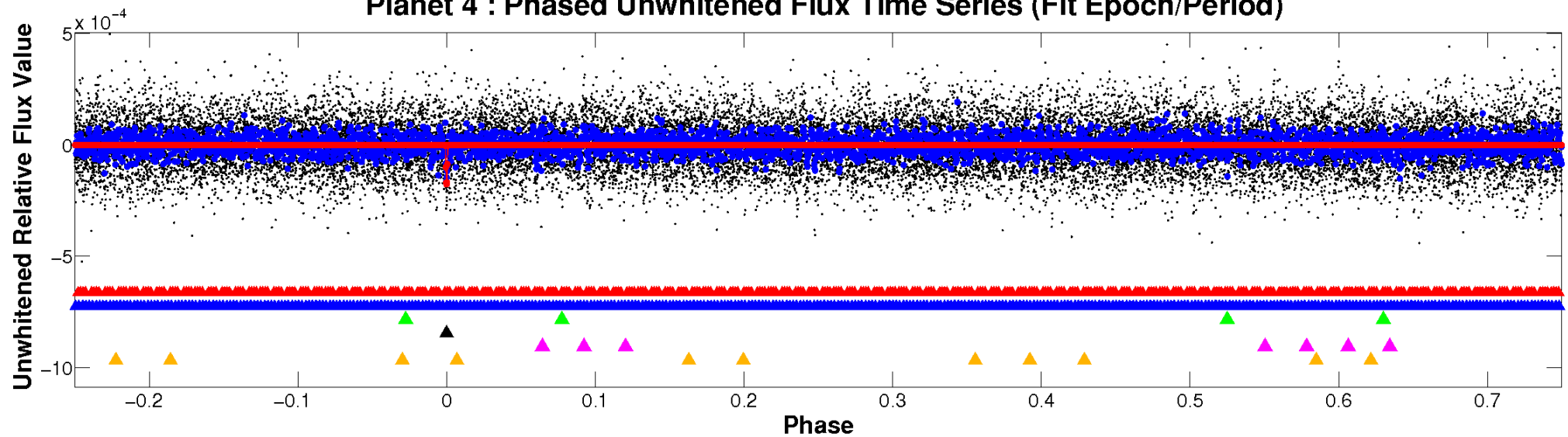
ALT Odd/Even

TCE 011971494-04

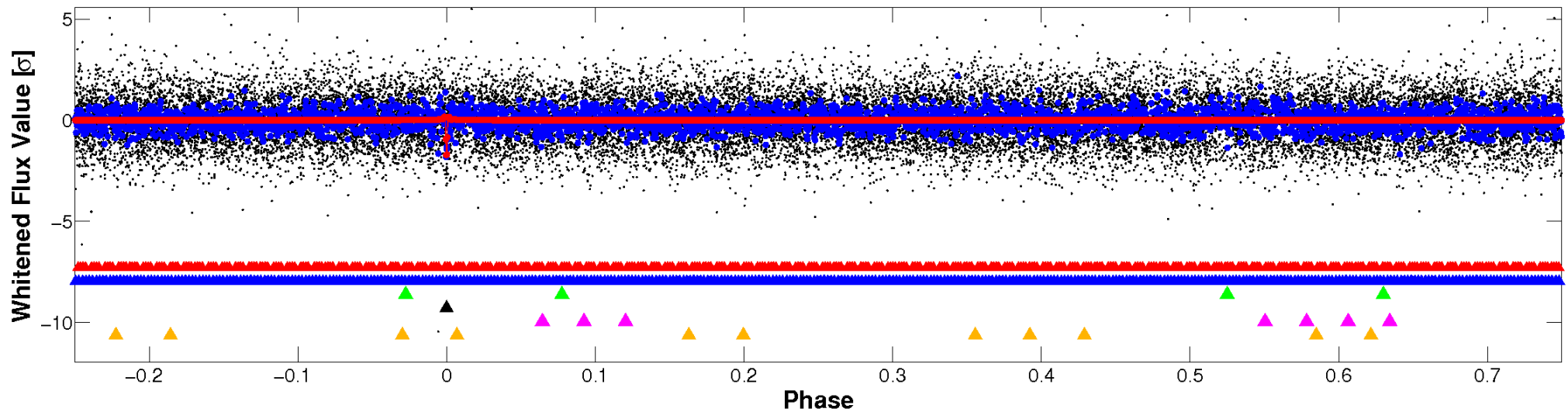


Non-Whitened Vs. Whitened Light Curve

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

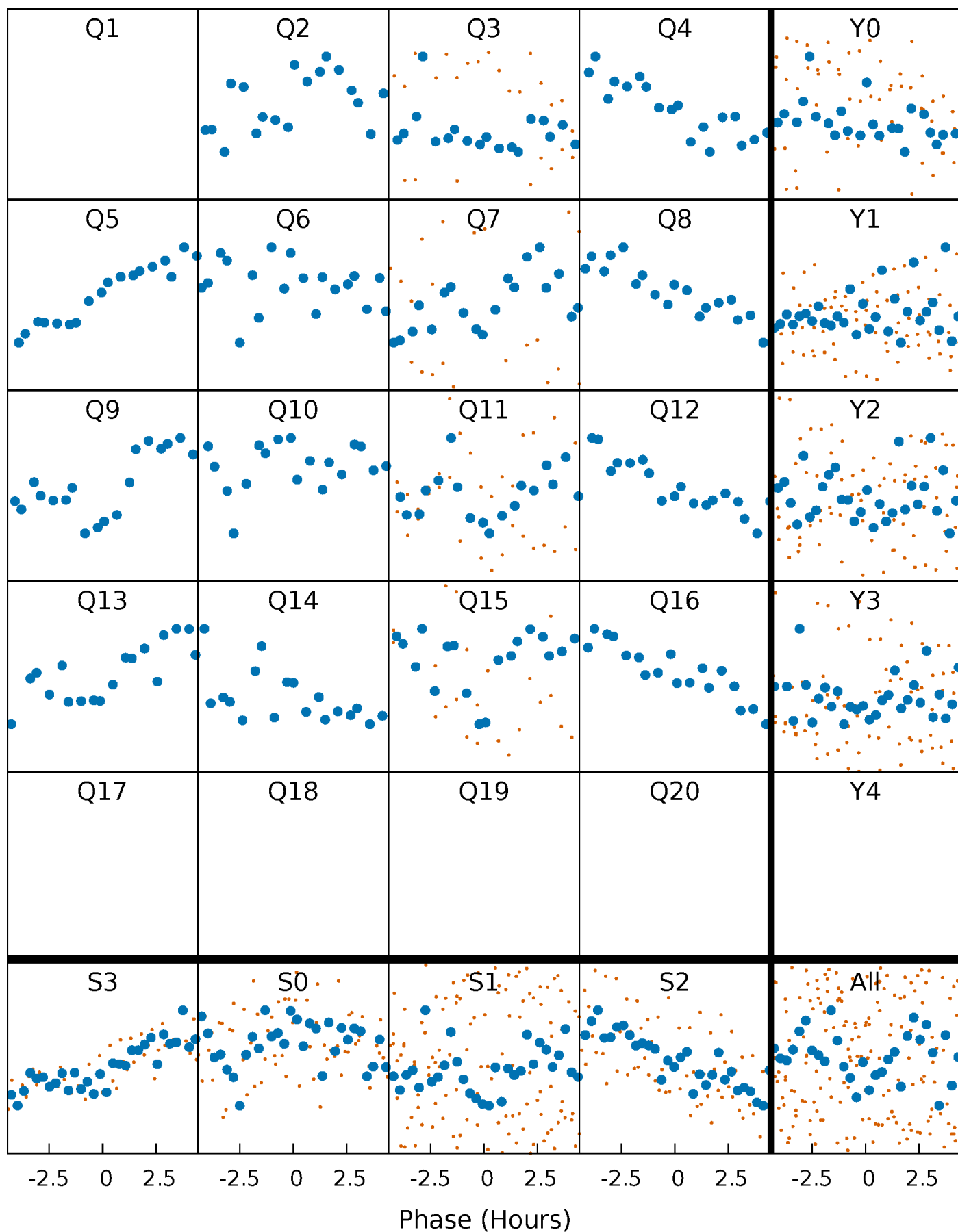


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



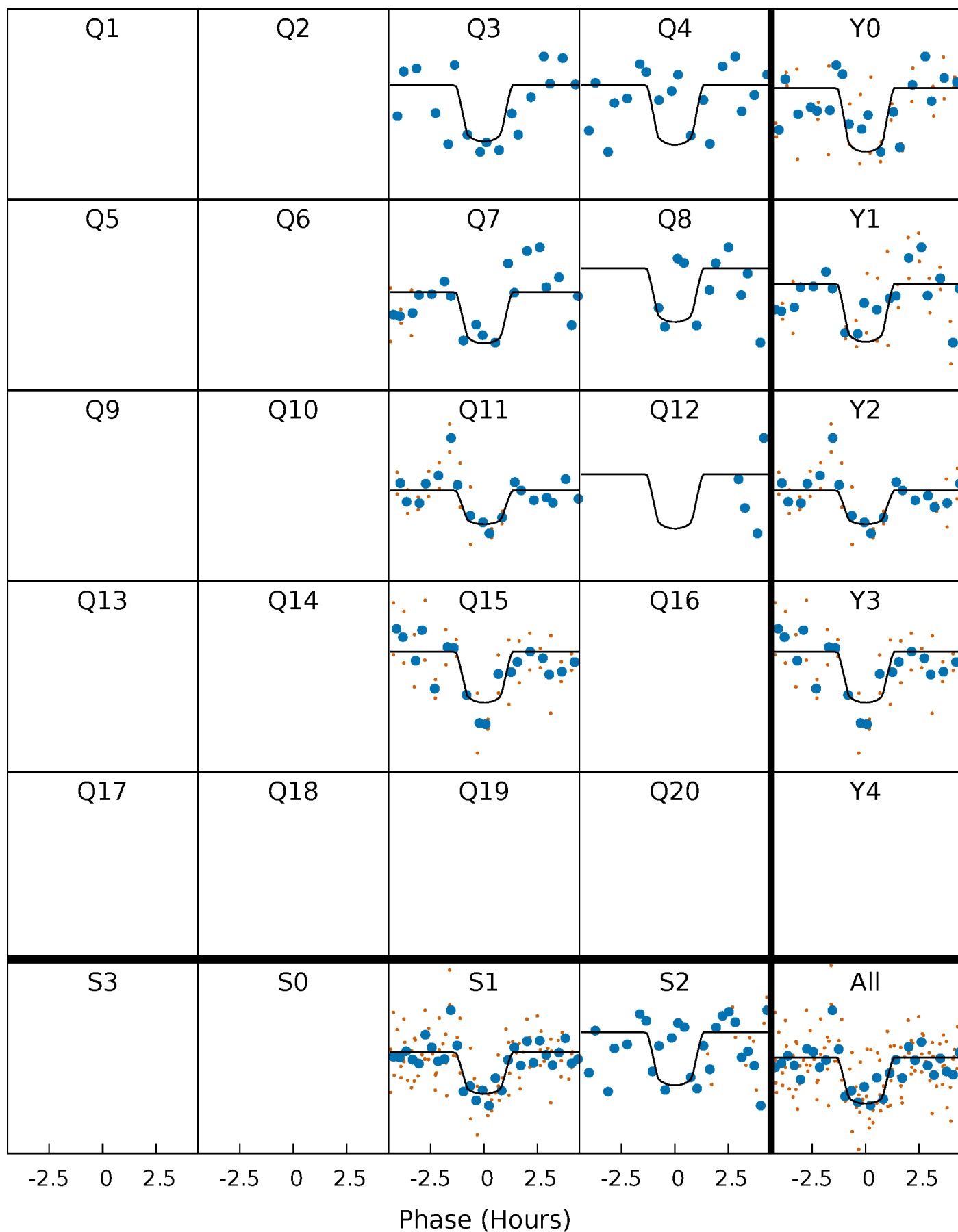
PDC Quarter-Phased Transit Curves

TCE 011971494-04 $P = 73.456185$ Days $T_0 = 198.529343$ (BKJD)



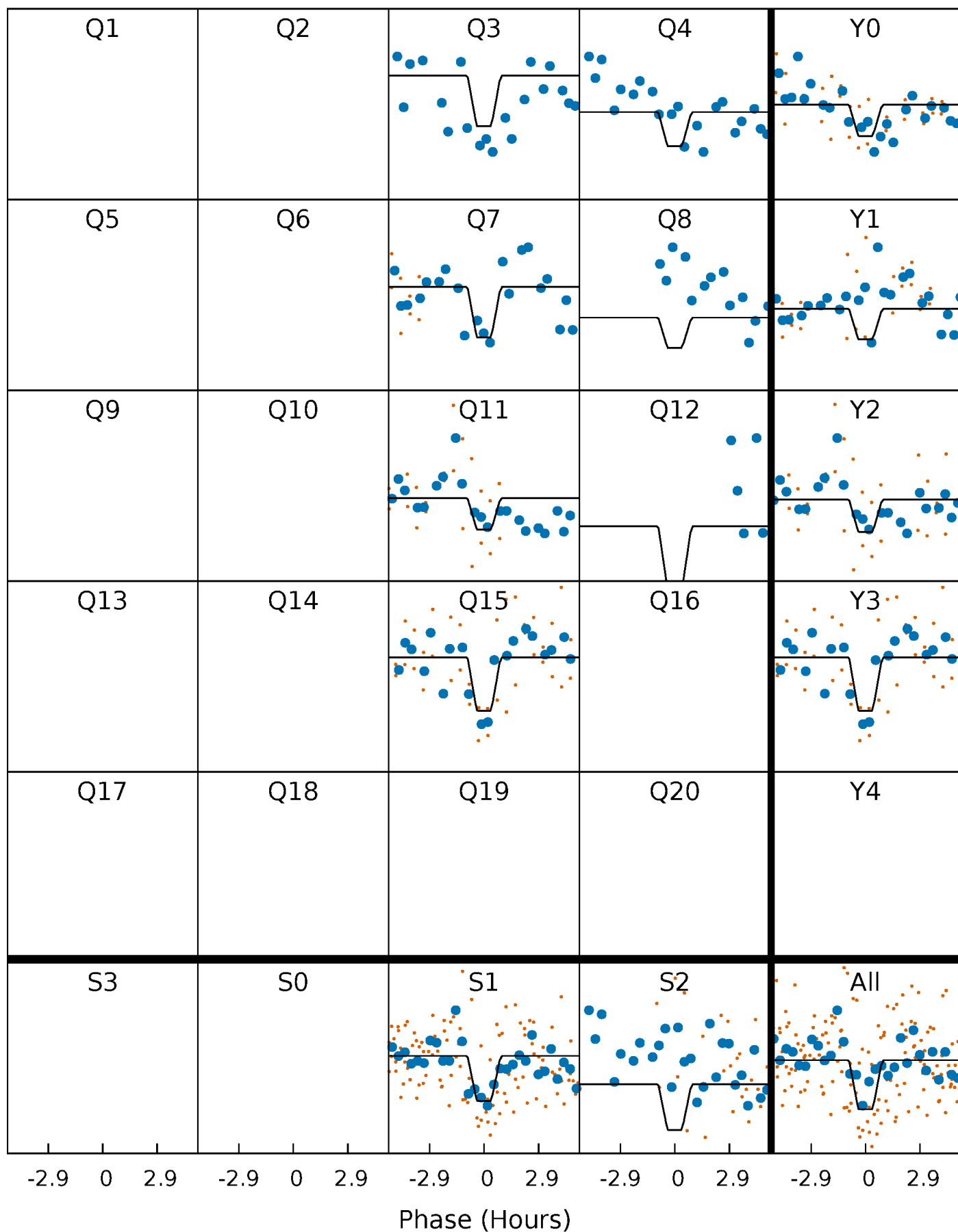
DV Quarter-Phased Transit Curves

TCE 011971494-04 P= 73.456185 Days $T_0=198.529343$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

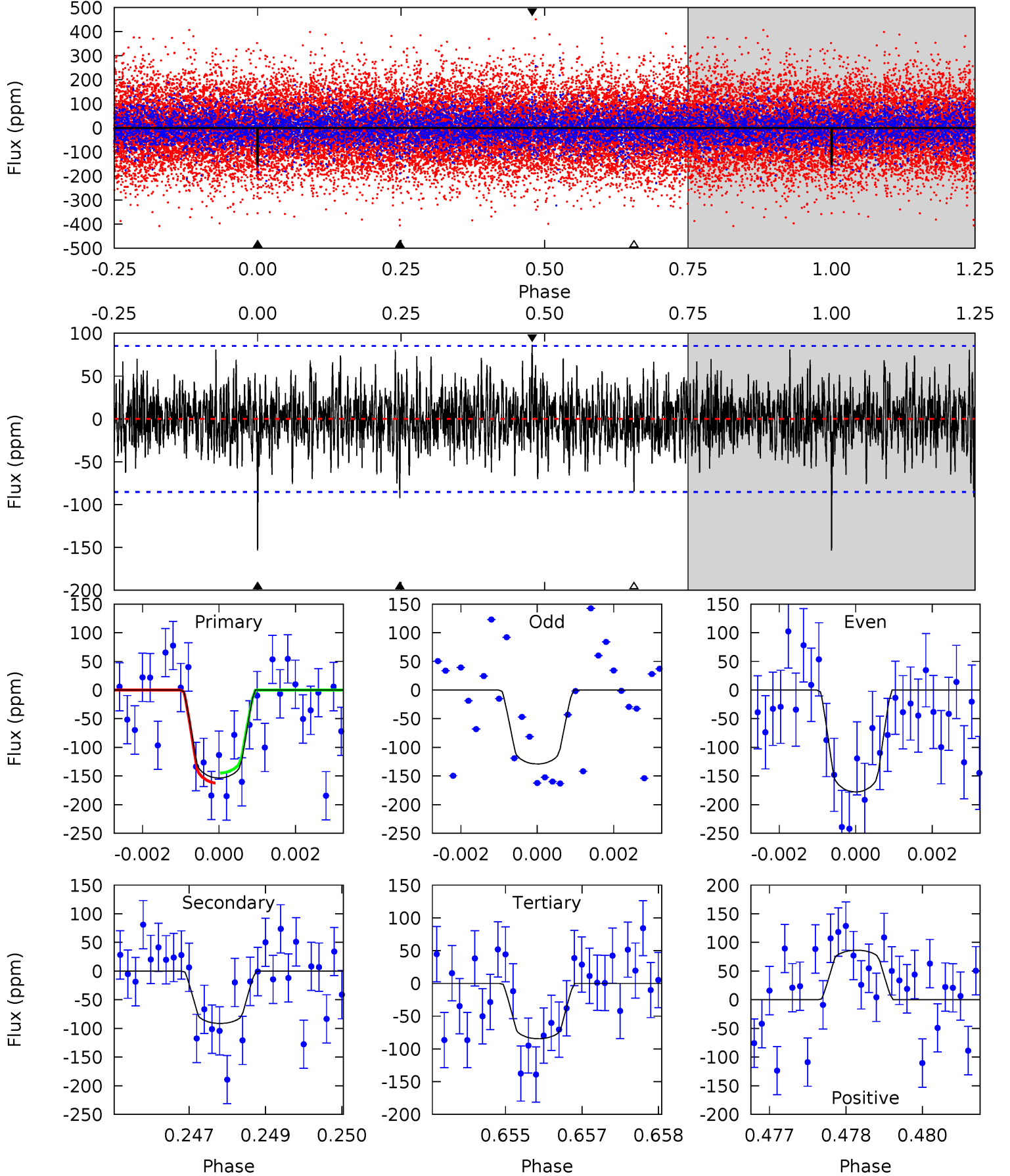
TCE 011971494-04 $P = 73.455825$ Days $T_0 = 198.534292$ (BKJD)



DV Model-Shift Uniqueness Test

011971494-04, P = 73.456185 Days, E = 125.073158 Days

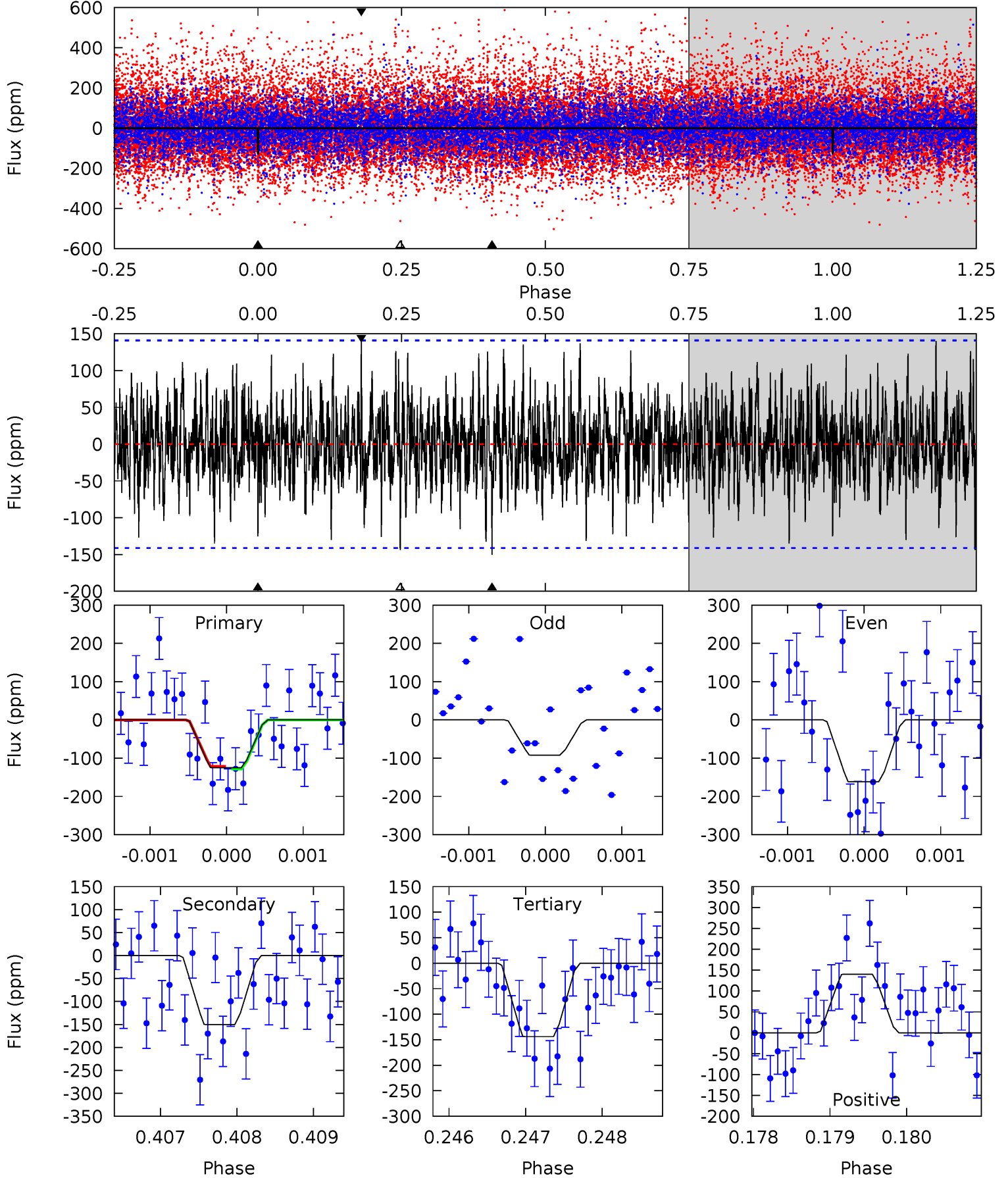
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.67	5.76	5.32	5.45	5.37	3.16	1.57	4.35	4.23	0.43	0.31	1.54	0.93	0.36	0.55



Alt Model-Shift Uniqueness Test

011971494-04, P = 73.455825 Days, E = 125.078467 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.83	5.80	5.55	5.41	5.45	3.29	1.61	-0.72	-0.58	0.25	0.39	1.35	0.55	0.48	0.13



Stellar Parameters For KIC 011971494

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7226^{+201}_{-252}	$4.029^{+0.260}_{-0.160}$	$-0.320^{+0.250}_{-0.350}$	$1.926^{+0.553}_{-0.609}$	$1.445^{+0.219}_{-0.267}$	$0.285^{+0.430}_{-0.132}$
	+3%/-3%	+6%/-4%	+78%/-109%	+29%/-32%	+15%/-18%	+151%/-46%
Source	PHO1	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 011971494-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-91±16	$3.20^{+2.17}_{-1.93}$	978^{+81}_{-78}	5547^{+3747}_{-1081}	730^{+3806}_{-481}
Alt.	-150±26	$2.93^{+2.31}_{-1.78}$	980^{+86}_{-77}	6542^{+5578}_{-1487}	1405^{+8142}_{-950}

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

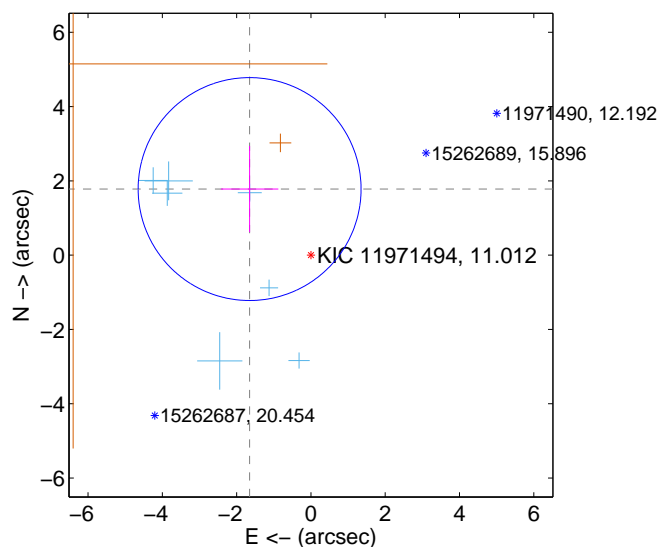
Supplemental centroid analysis for 011971494-04. **Kepler magnitude: 11.01.** Transit SNR 9.30

There are 7 quarters with good PRF difference image offsets

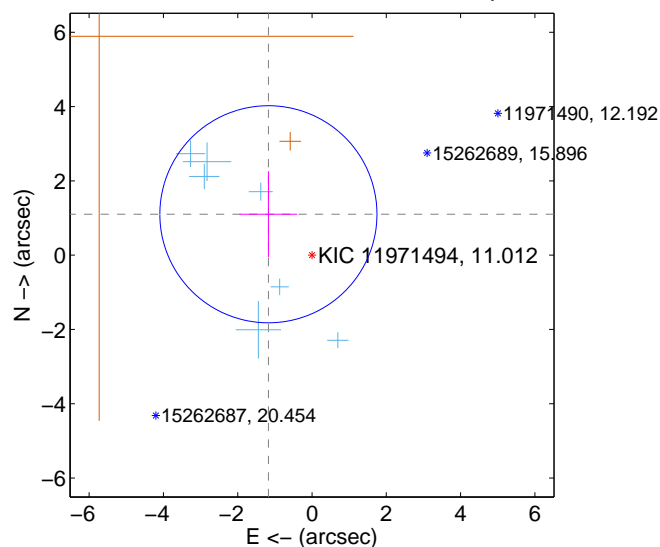
The direct PRF centroid is offset from the target star catalog position by about 1.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.427 ± 1.000	2.43	1.650 ± 0.775	1.779 ± 1.159
PRF-fit source offset from KIC position	1.609 ± 0.974	1.65	1.174 ± 0.775	1.101 ± 1.159
photometric centroid source offset	1.61 ± 0.61	2.65	-0.71 ± 0.66	1.44 ± 0.59

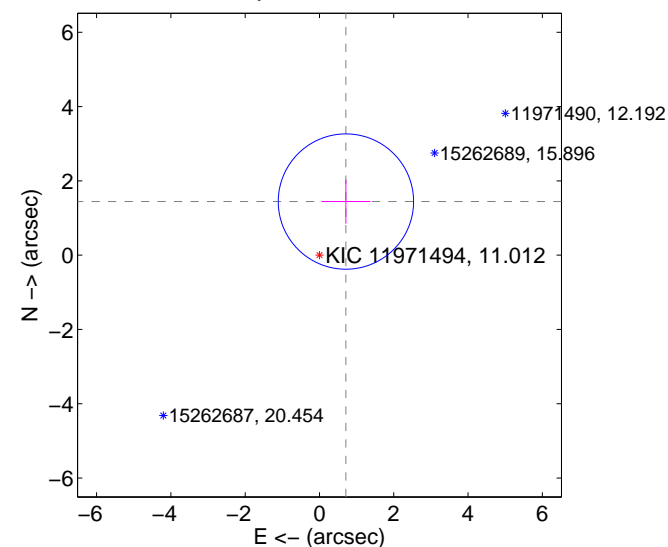
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

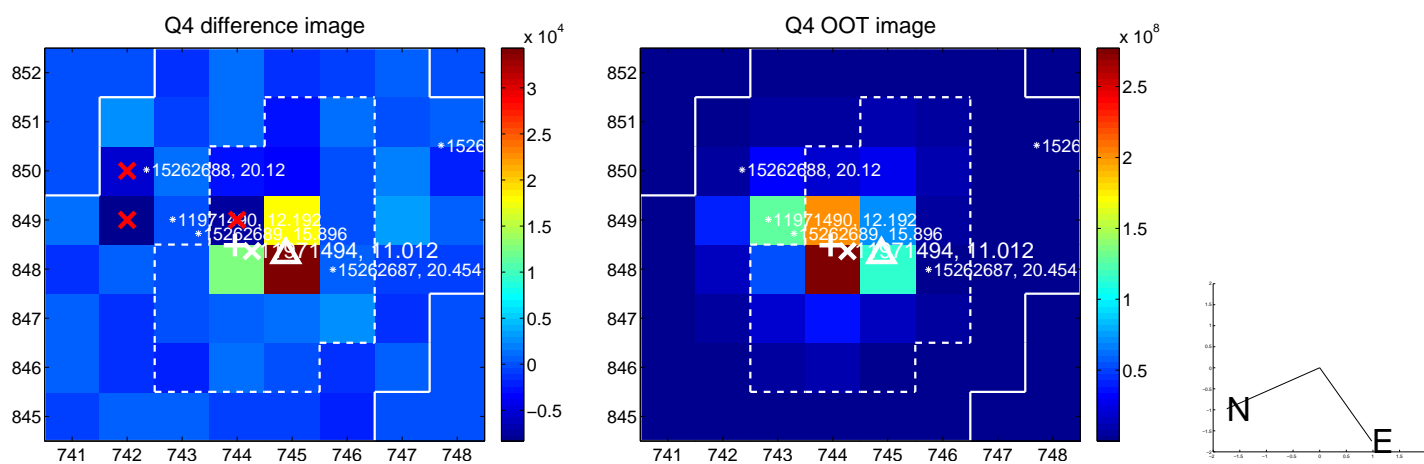
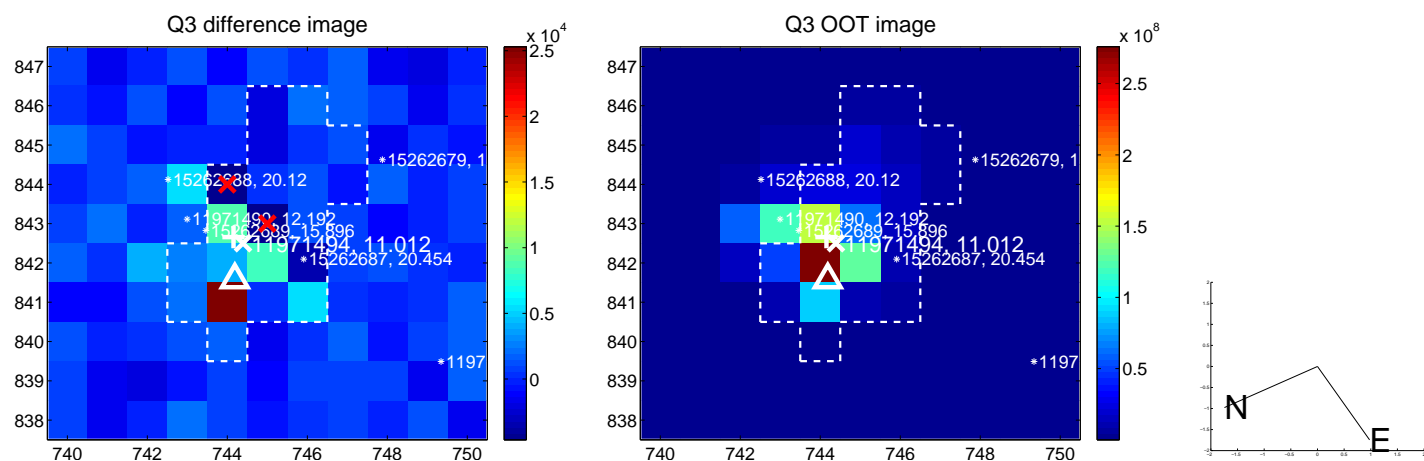
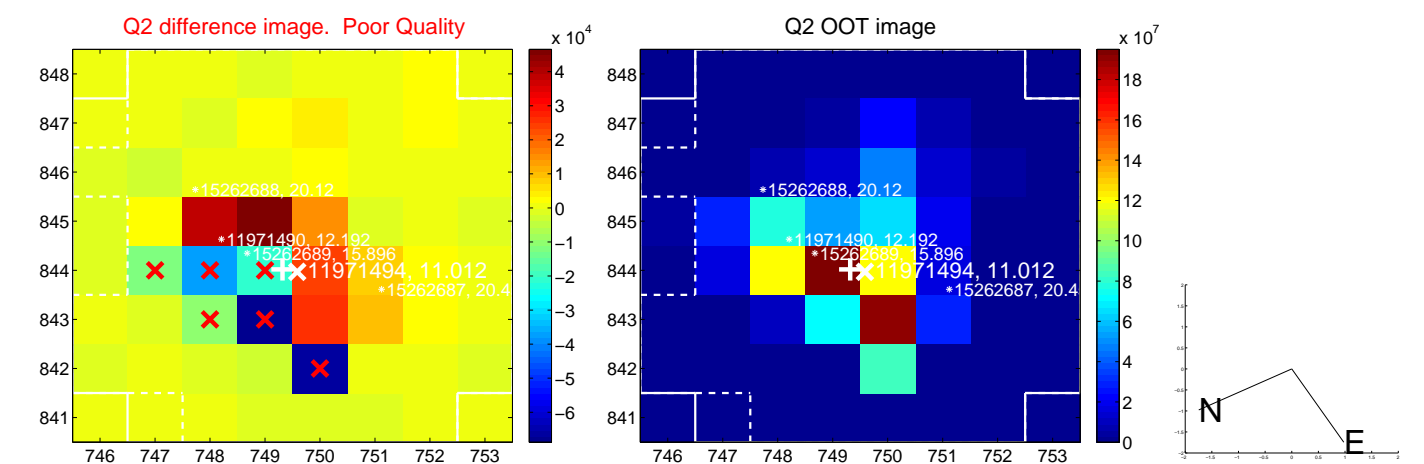
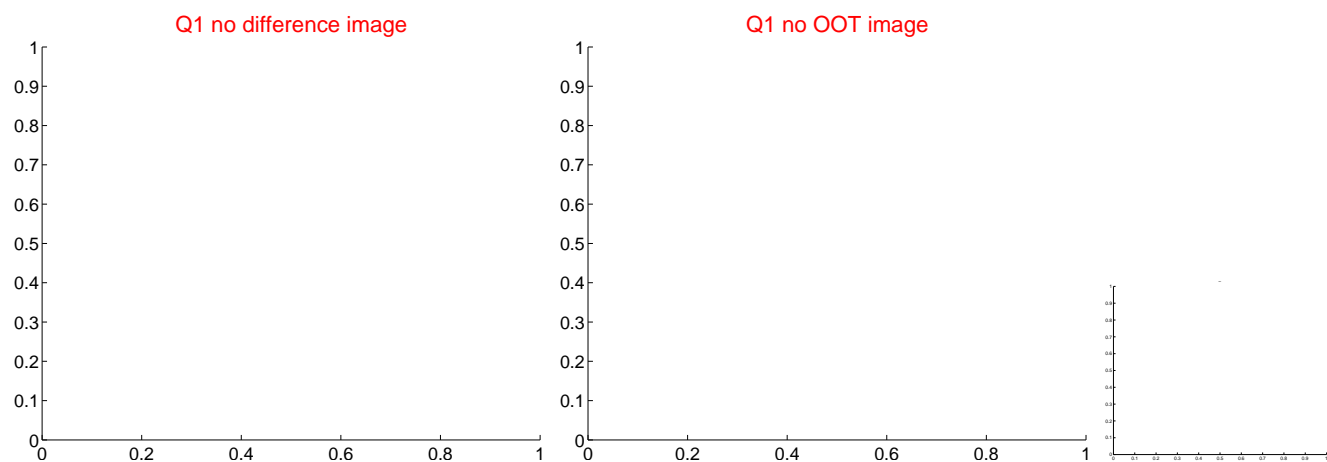


offset from photometric centroids

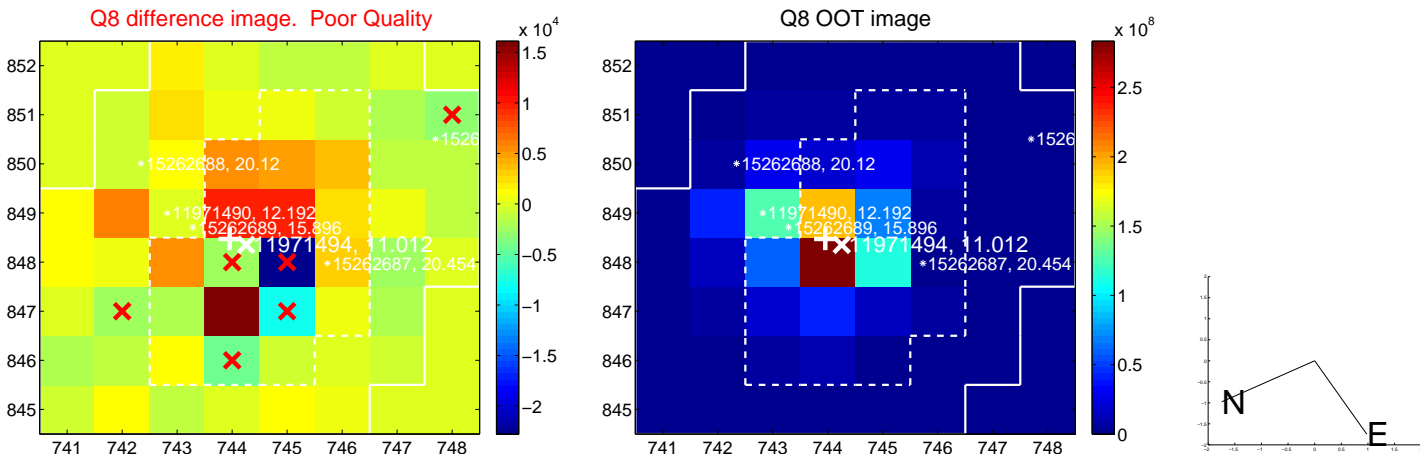
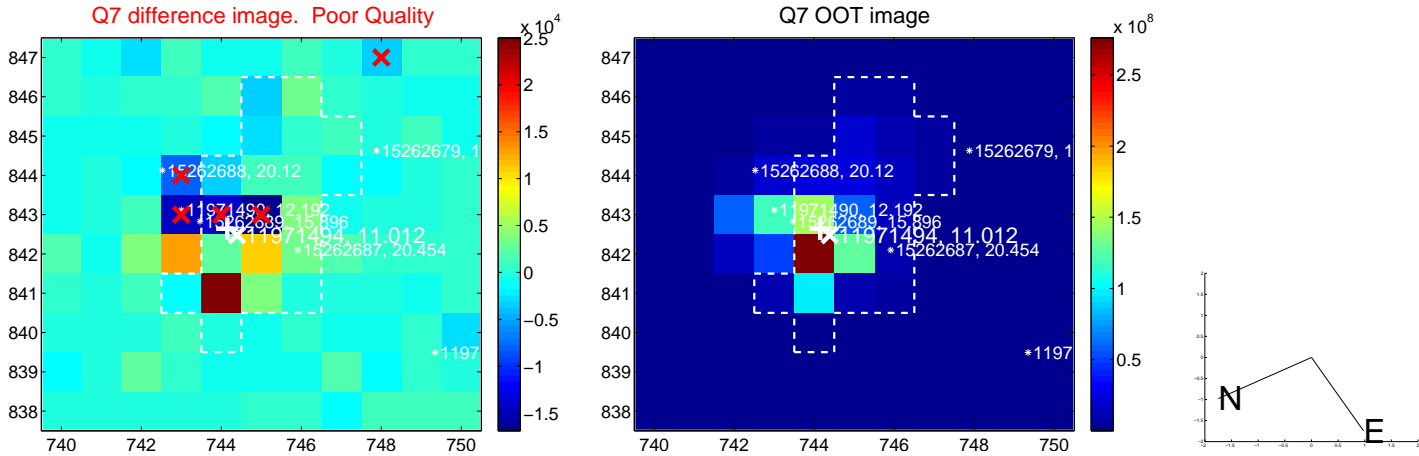
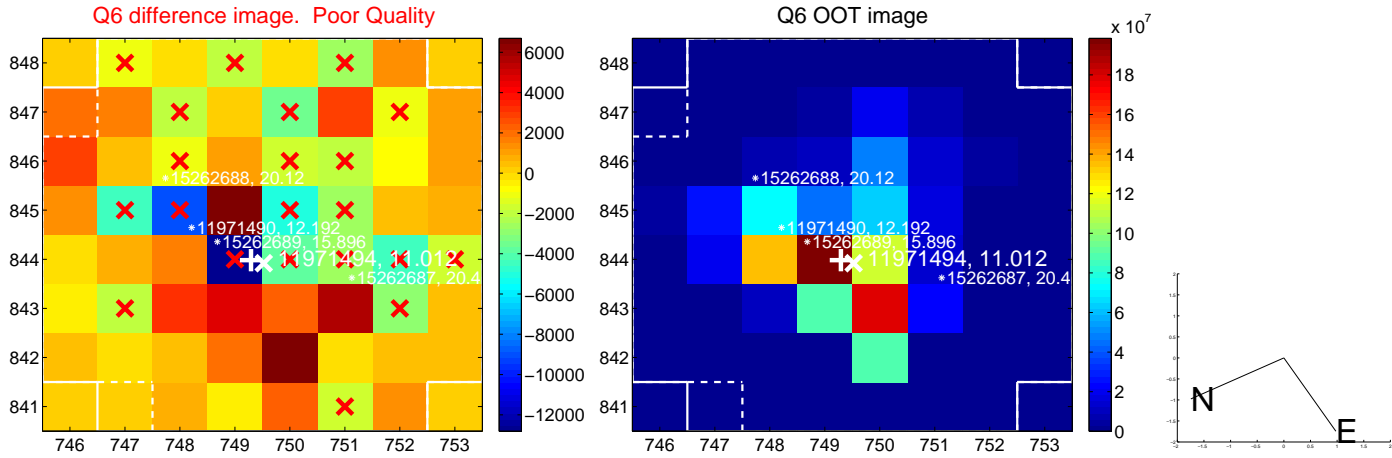
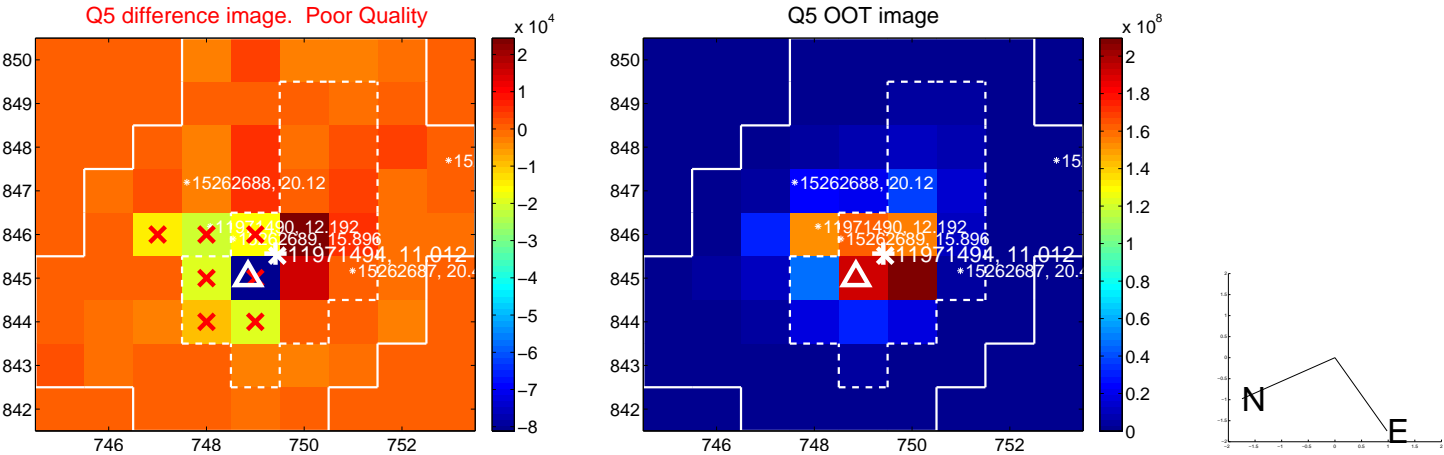


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

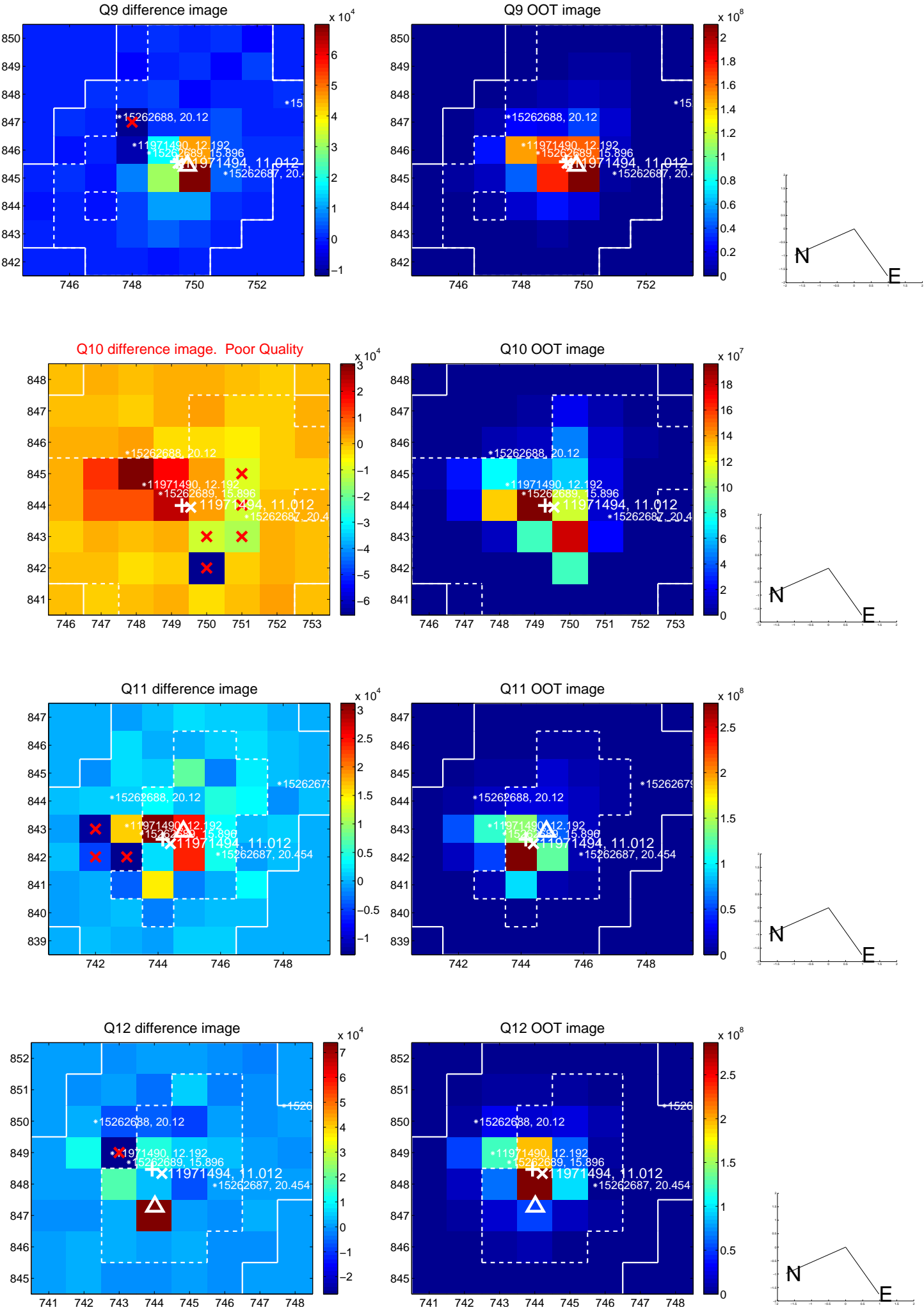
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



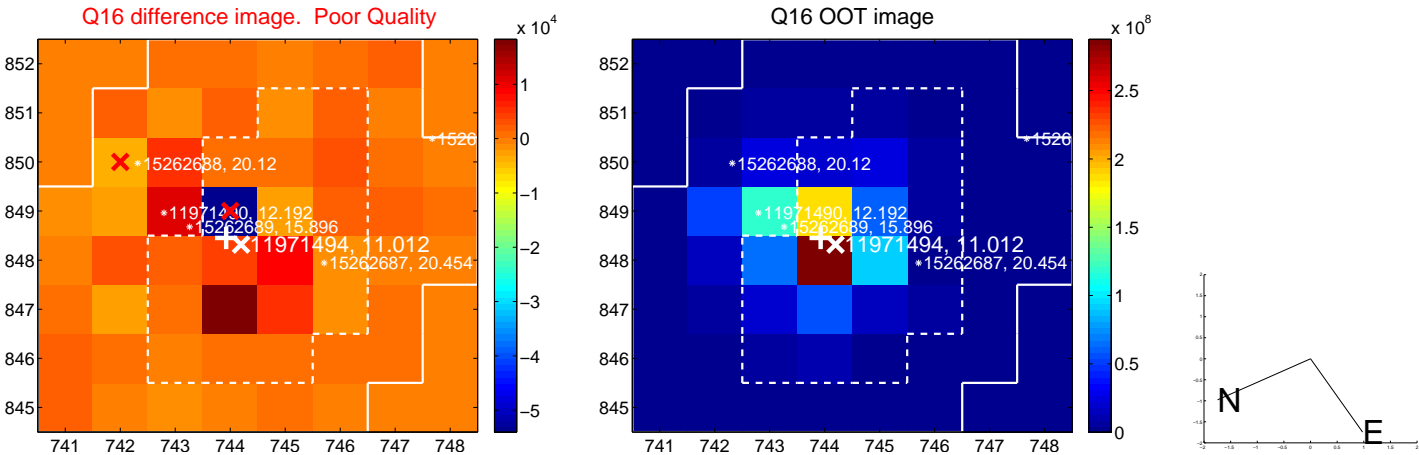
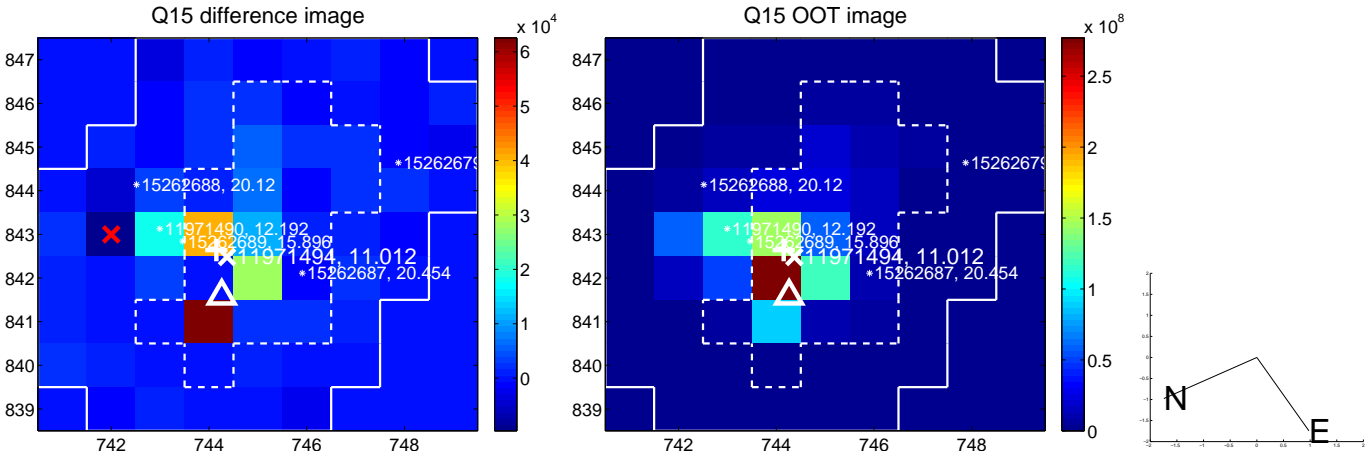
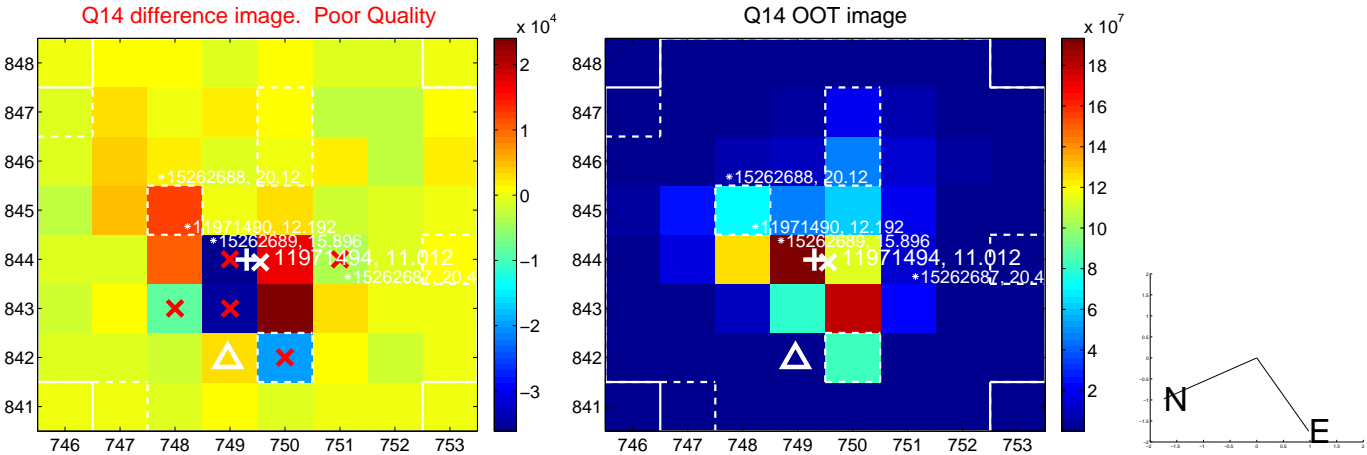
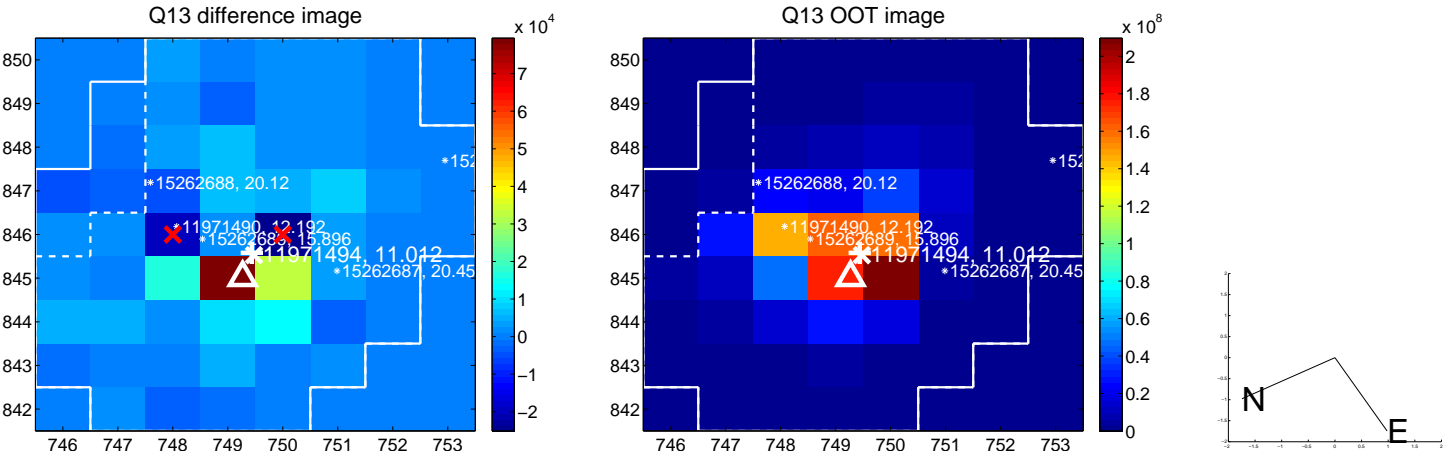
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



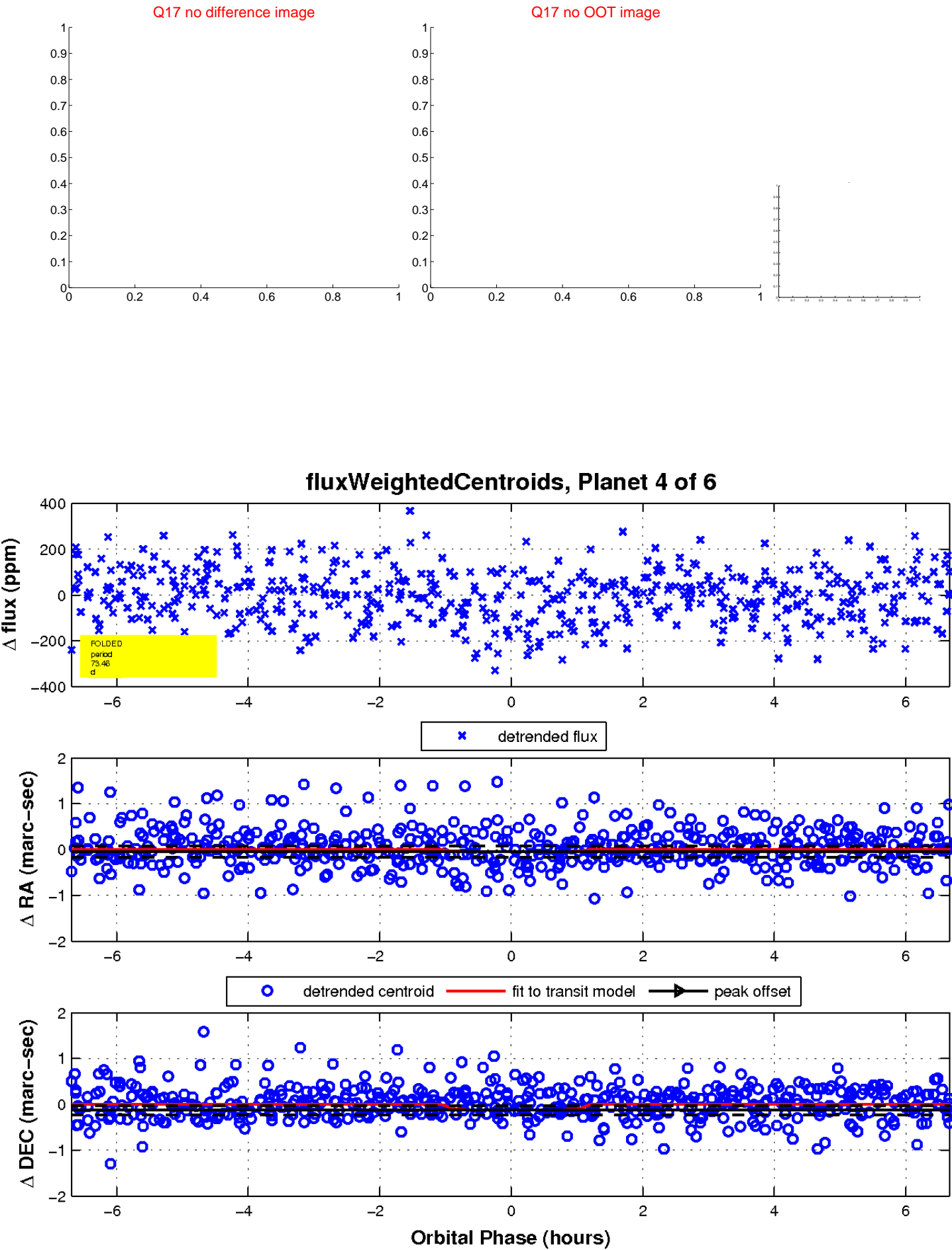
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

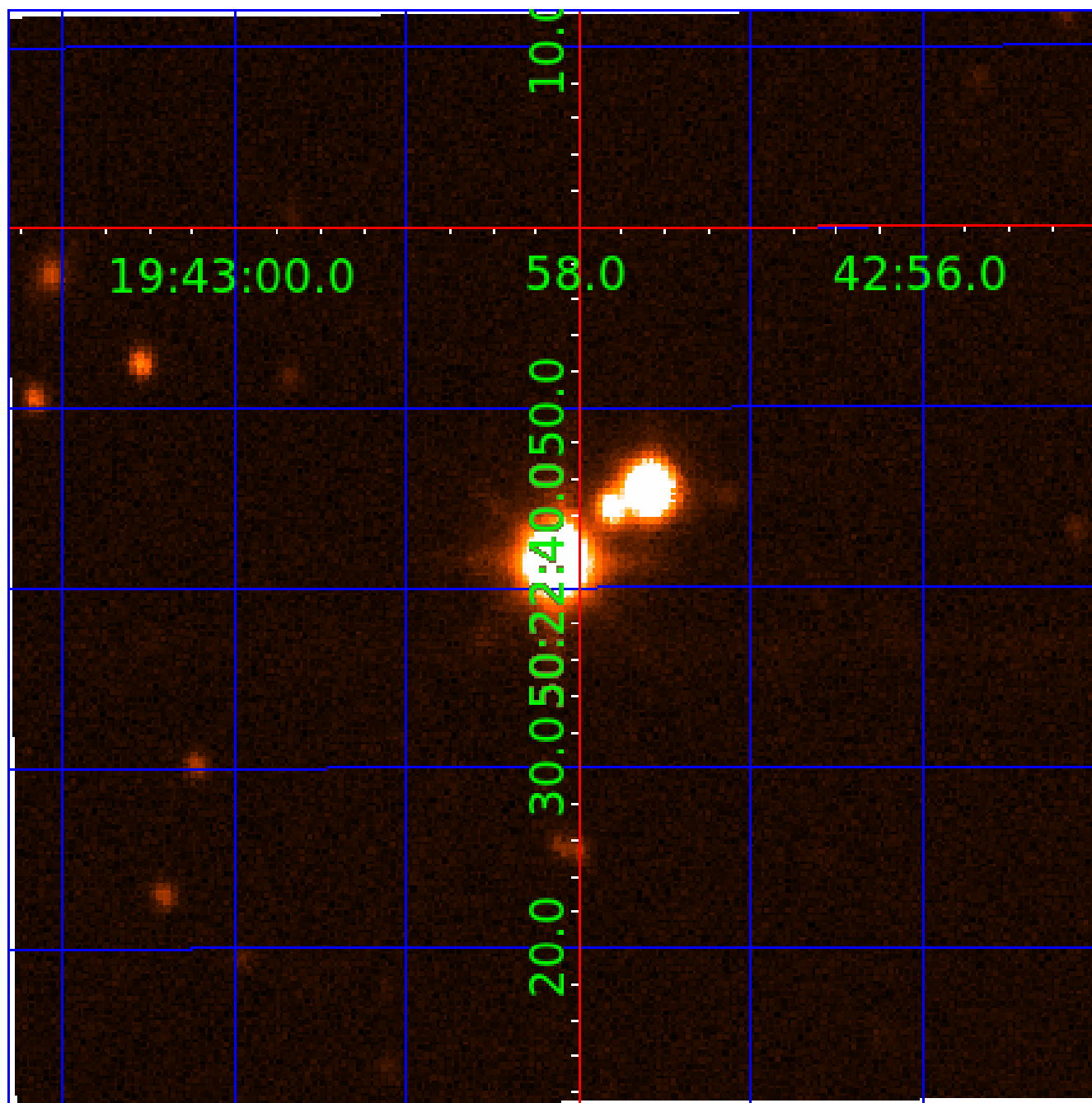


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011971494

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})
011971494-01	OBS	No	3.222819	134.535681	47.4	6.422	11.4	12.5	1.93	7226	2.67	3883.97
011971494-02	OBS	No	3.223168	134.076987	25.5	15.357	10.5	8.7	1.93	7226	1.13	3883.41
011971494-03	OBS	No	400.151158	244.811927	227.4	4.740	8.8	9.3	1.93	7226	3.37	6.27
011971494-04	OBS	No	73.456185	198.529343	177.4	2.231	8.7	9.3	1.93	7226	2.91	60.10
011971494-05	OBS	No	184.667070	312.422646	90.0	25.718	8.5	5.7	1.93	7226	2.12	17.58
011971494-06	OBS	No	132.760221	224.649260	100.6	7.128	8.3	5.2	1.93	7226	2.15	27.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011971494-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011971494-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011971494-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011971494-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011971494-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
011971494-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

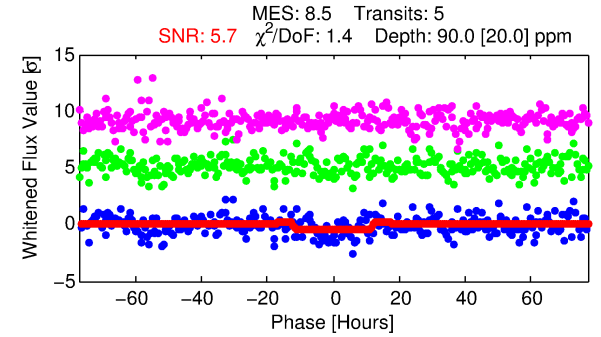
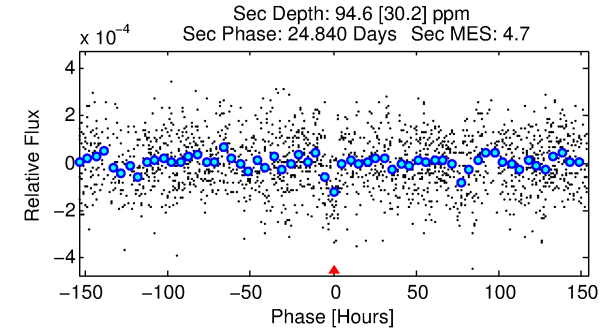
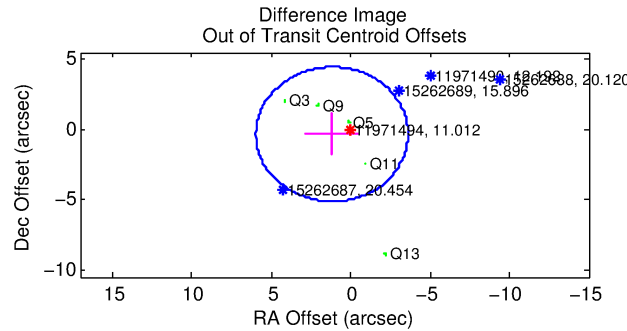
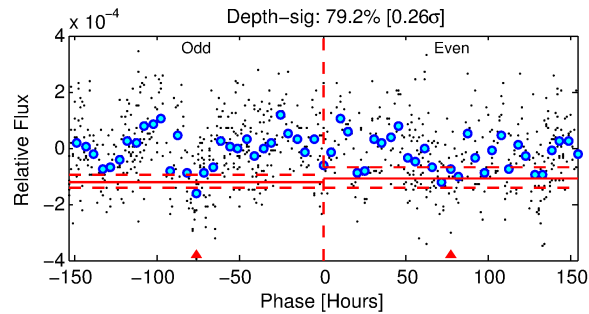
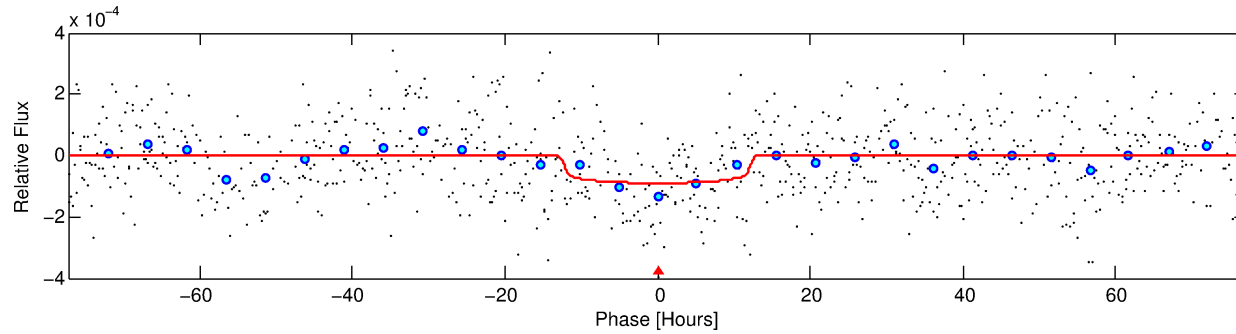
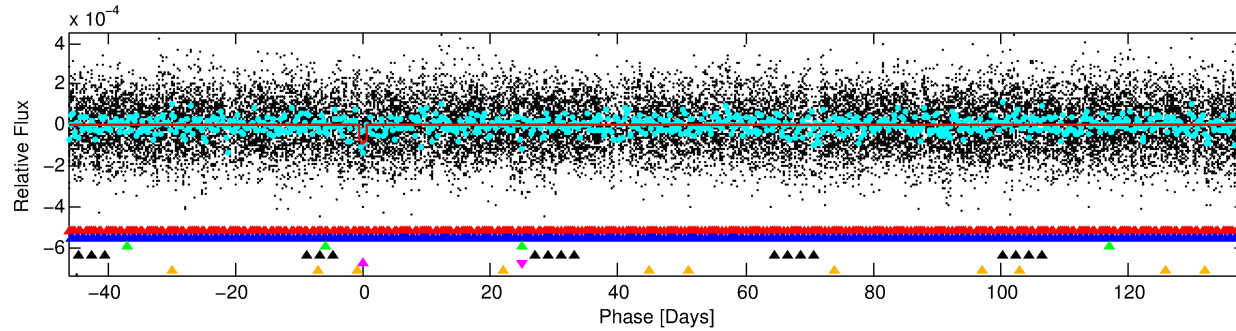
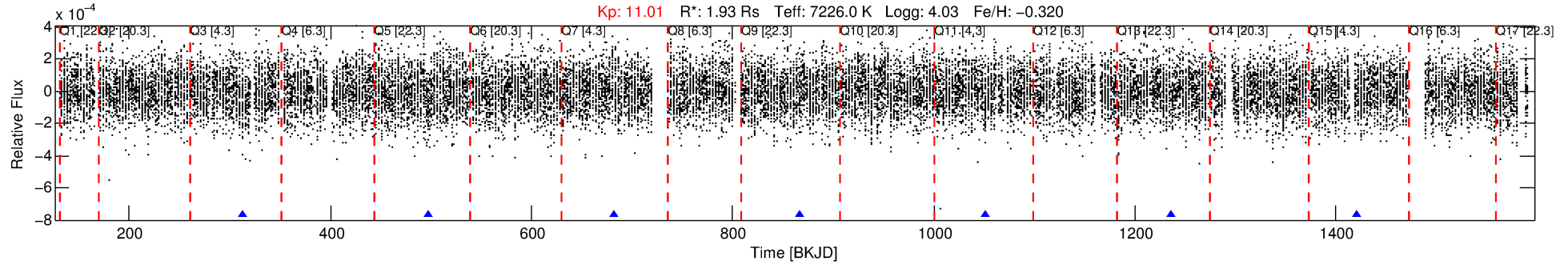
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011971494-05

No Significant Match Found

DV One-Page Summary

KIC: 11971494 Candidate: 5 of 6 Period: 184.667 d



DV Fit Results:

Period = 184.66707 [0.01626] d
Epoch = 312.4226 [0.0550] BKJD
Rp/R* = 0.0101 [0.0017]
a/R* = 25.28 [20.02]
b = 0.90 [0.17]
Seff = 17.58 [8.31]
Teq = 522 [62] K
Rp = 2.12 [0.76] Re
a = 0.7179 [0.2084] AU
Ag = 5992.42 [3902.61] [1.54 σ]
Teffp = 7103 [870] K [7.55 σ]

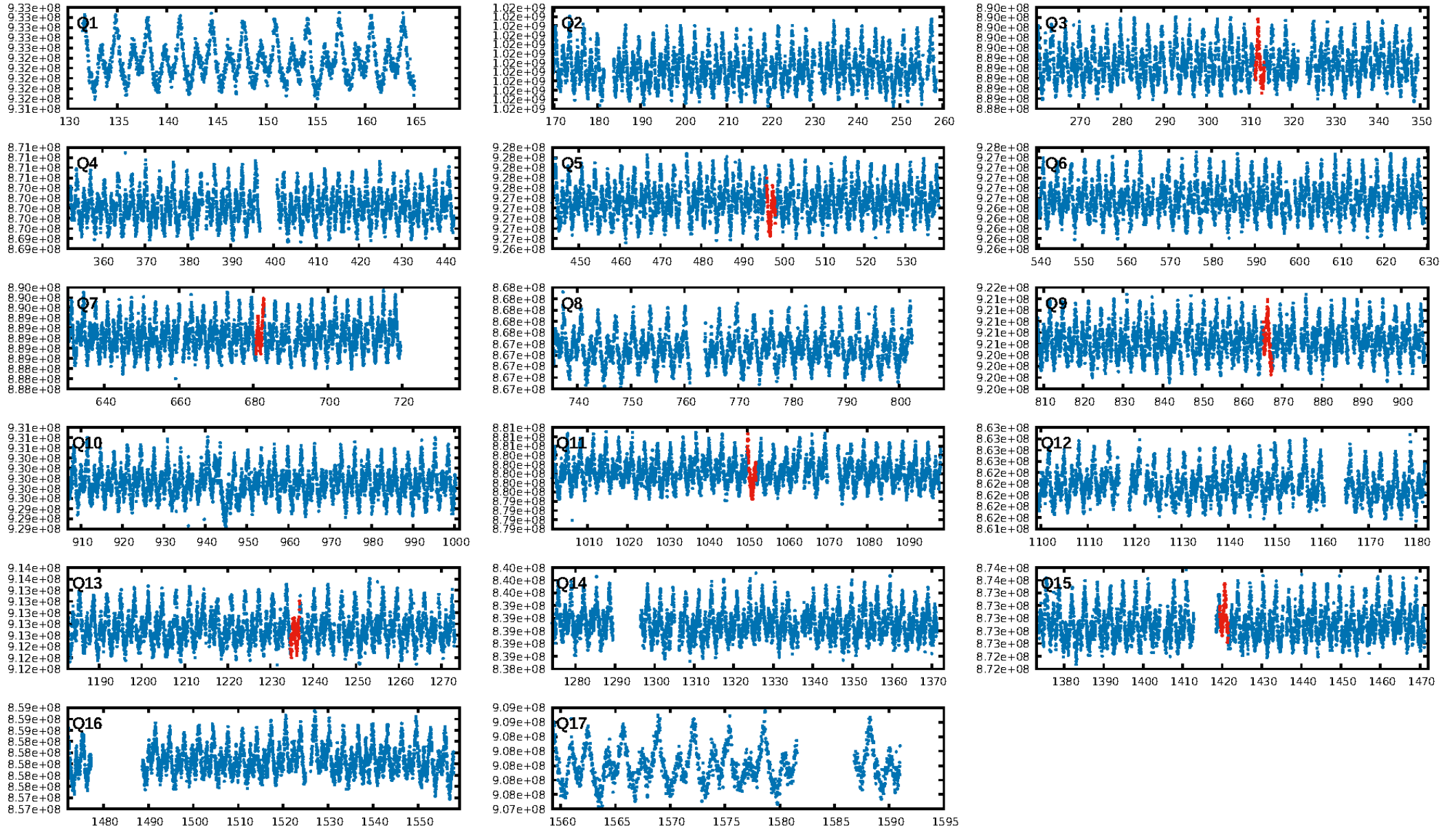
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [46.68 σ]
LongPeriod-sig: 100.0% [197.76 σ]
ModelChiSquare2-sig: 16.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.56e-11
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 2.081
Centroid-sig: 0.0%
Centroid-so: 3.835 arcsec [2.75 σ]
OotOffset-rm: 1.209 arcsec [0.76 σ]
OotOffset-st: 0/2/0/3 [5]
KicOffset-rm: 0.967 arcsec [0.63 σ]
KicOffset-st: 0/2/0/3 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 0.00 [0/6]

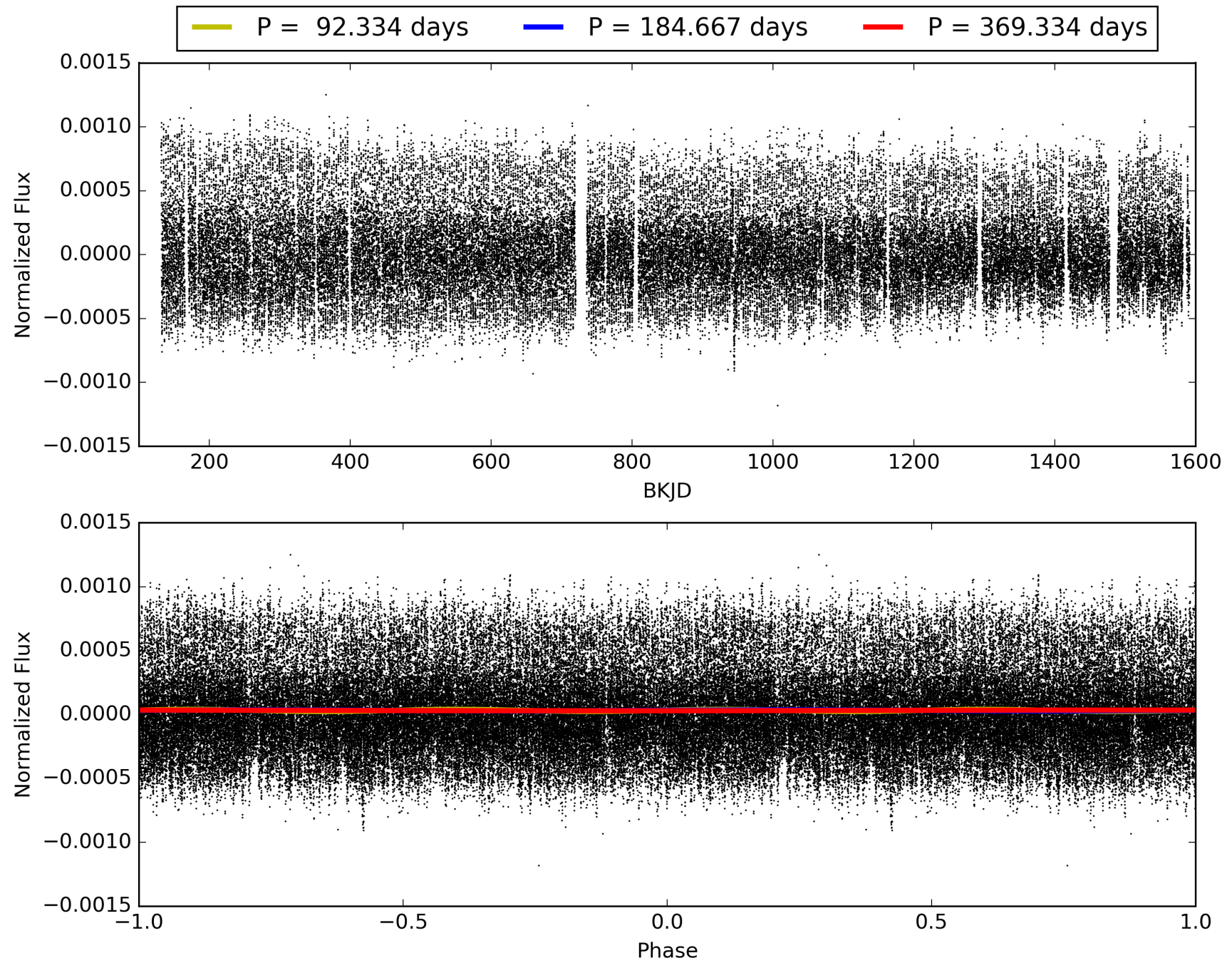
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:12:04 Z

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

TCE 011971494-05, PDC Light Curves

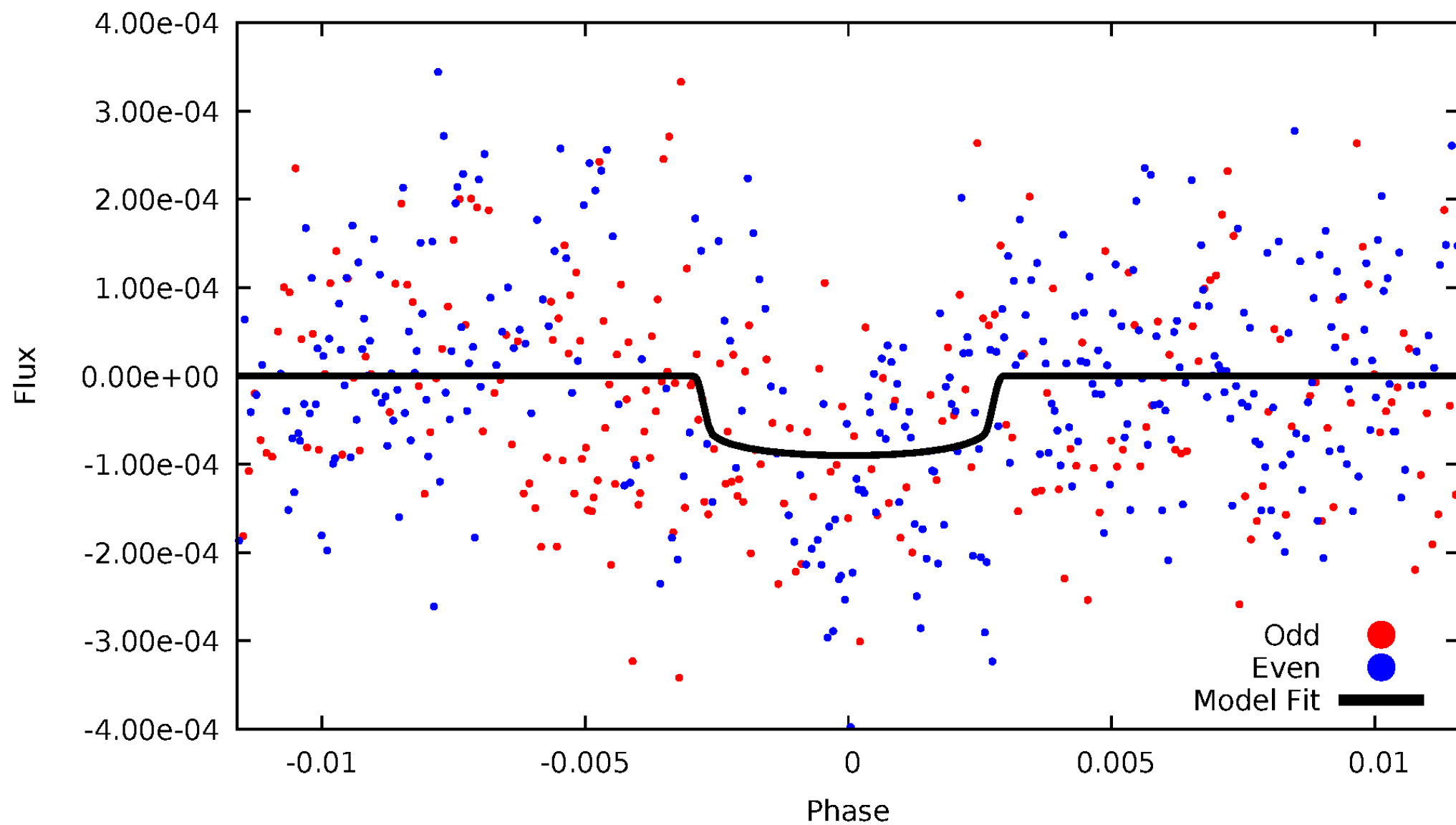


TCE 011971494-05



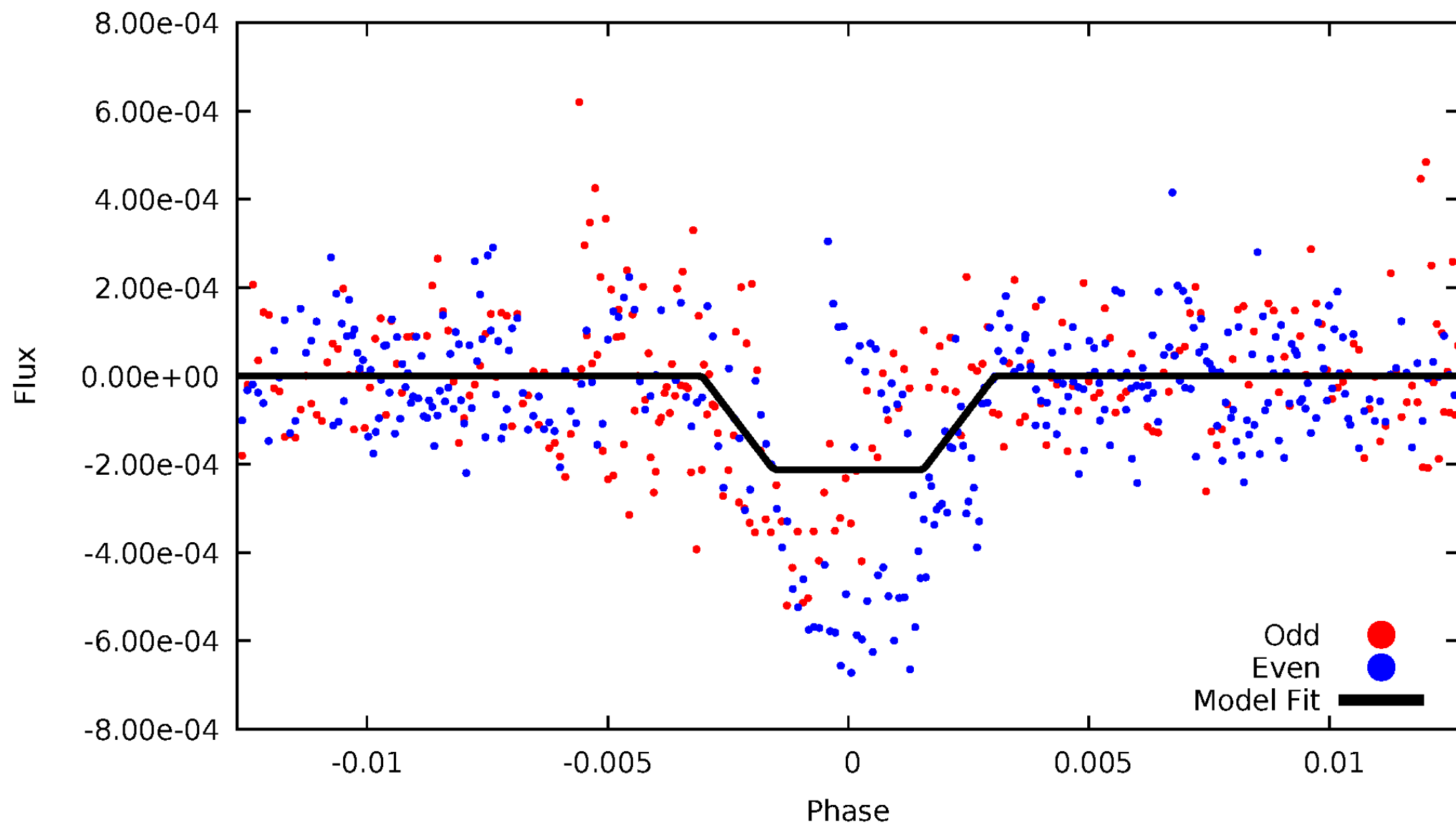
DV Odd/Even

TCE 011971494-05



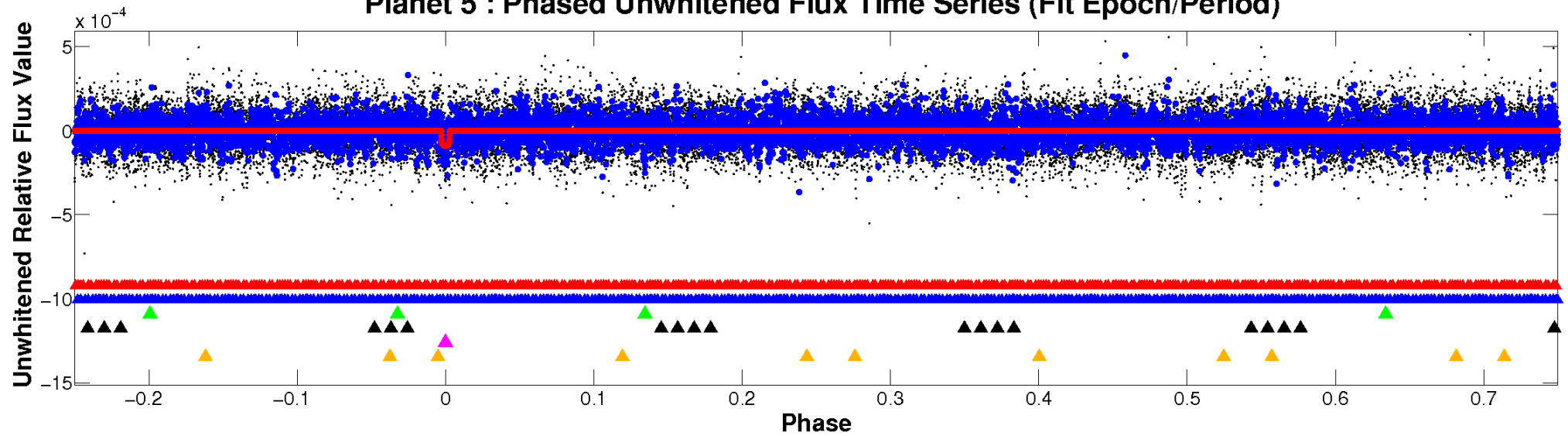
ALT Odd/Even

TCE 011971494-05

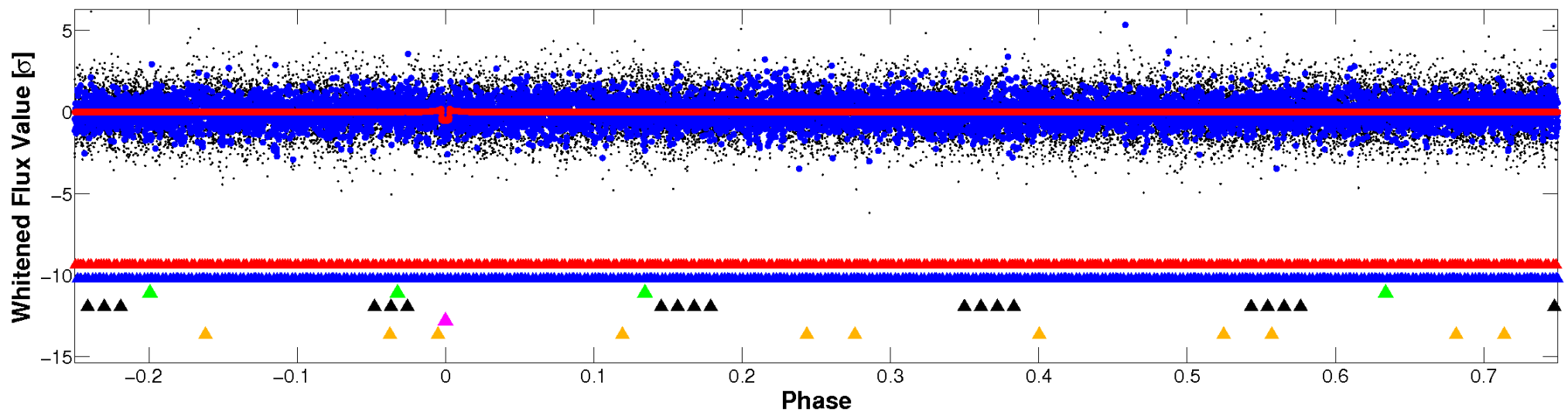


Non-Whitened Vs. Whitened Light Curve

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

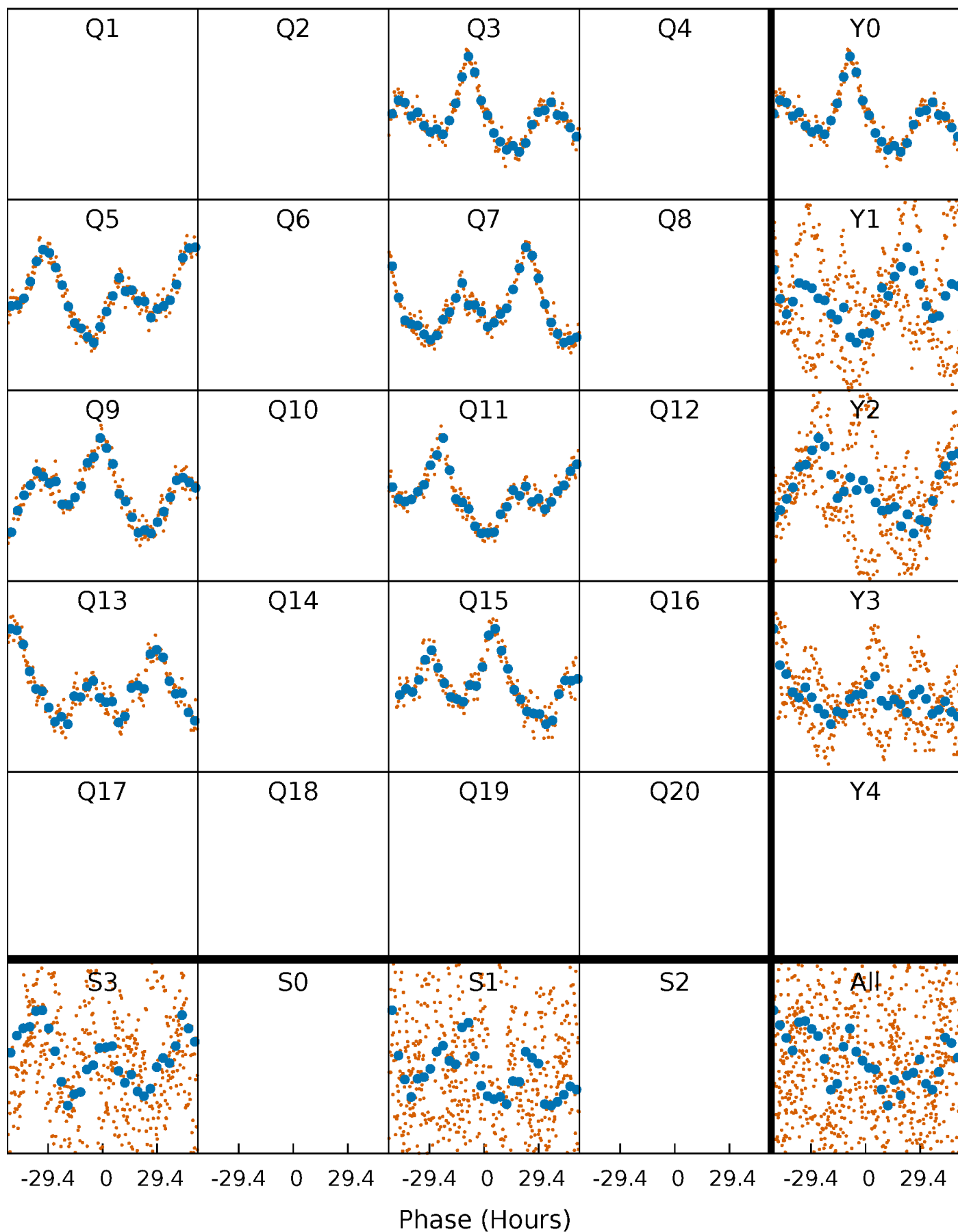


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



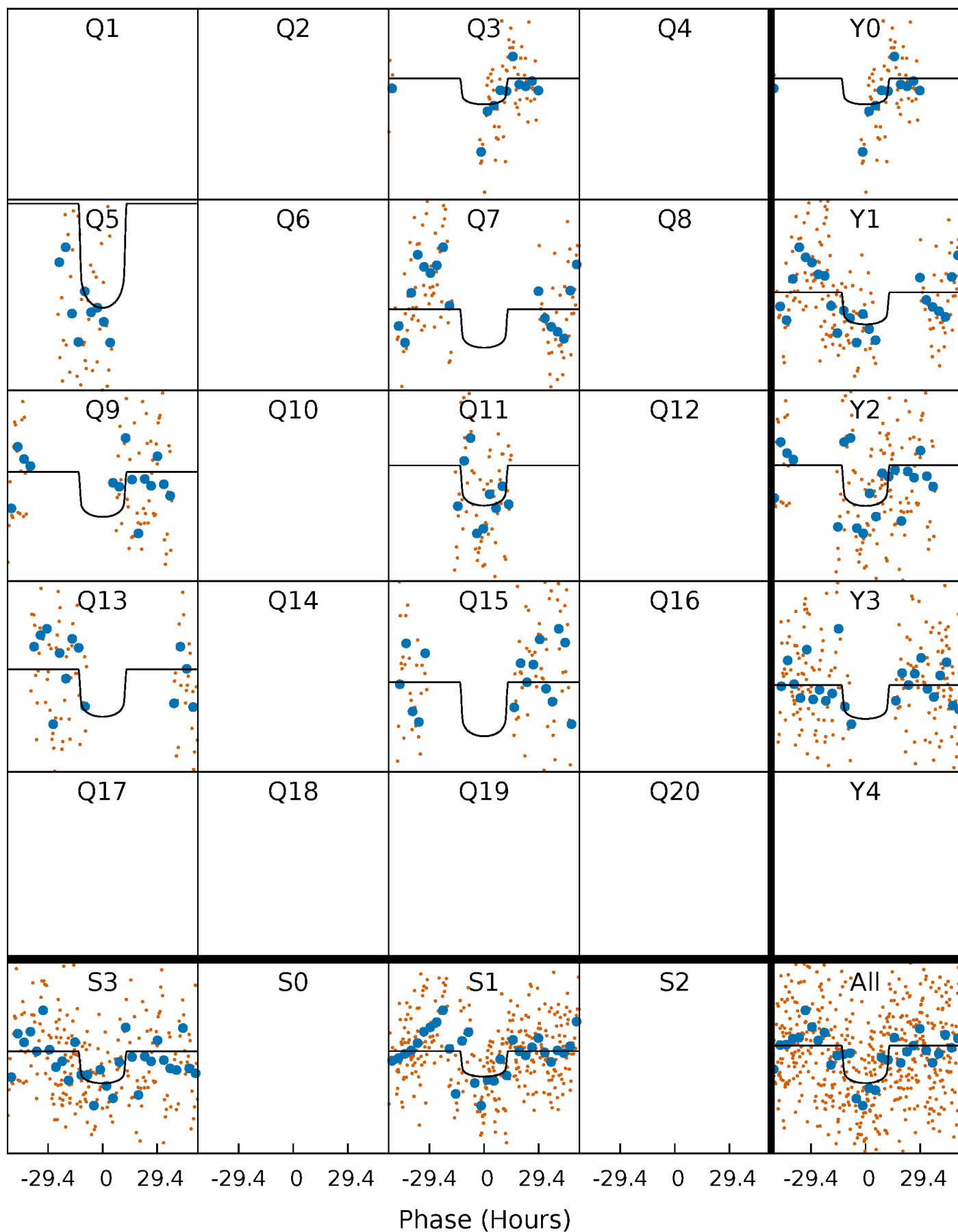
PDC Quarter-Phased Transit Curves

TCE 011971494-05 $P=184.667069$ Days $T_0=312.422646$ (BKJD)



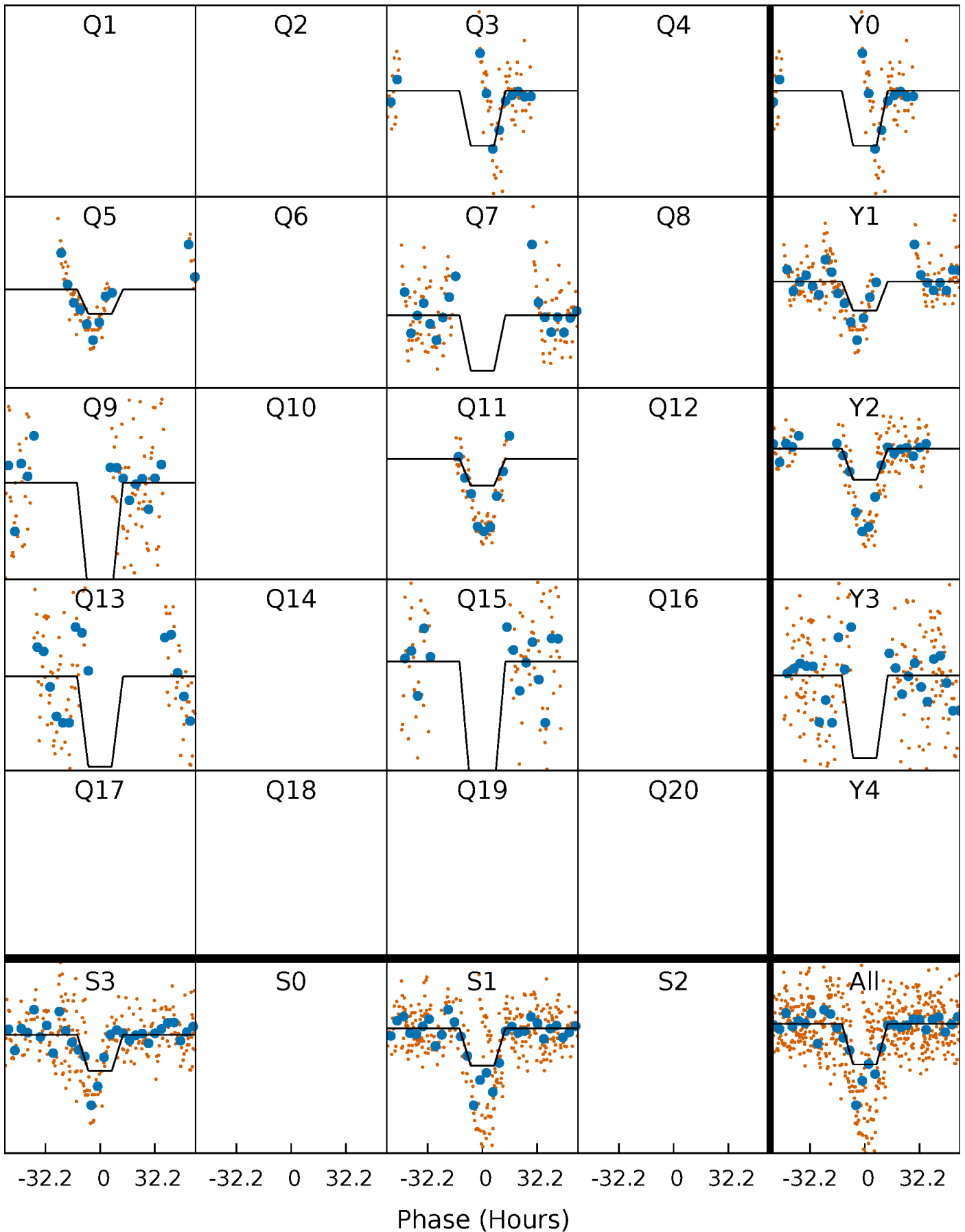
DV Quarter-Phased Transit Curves

TCE 011971494-05 $P=184.667069$ Days $T_0=312.422646$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

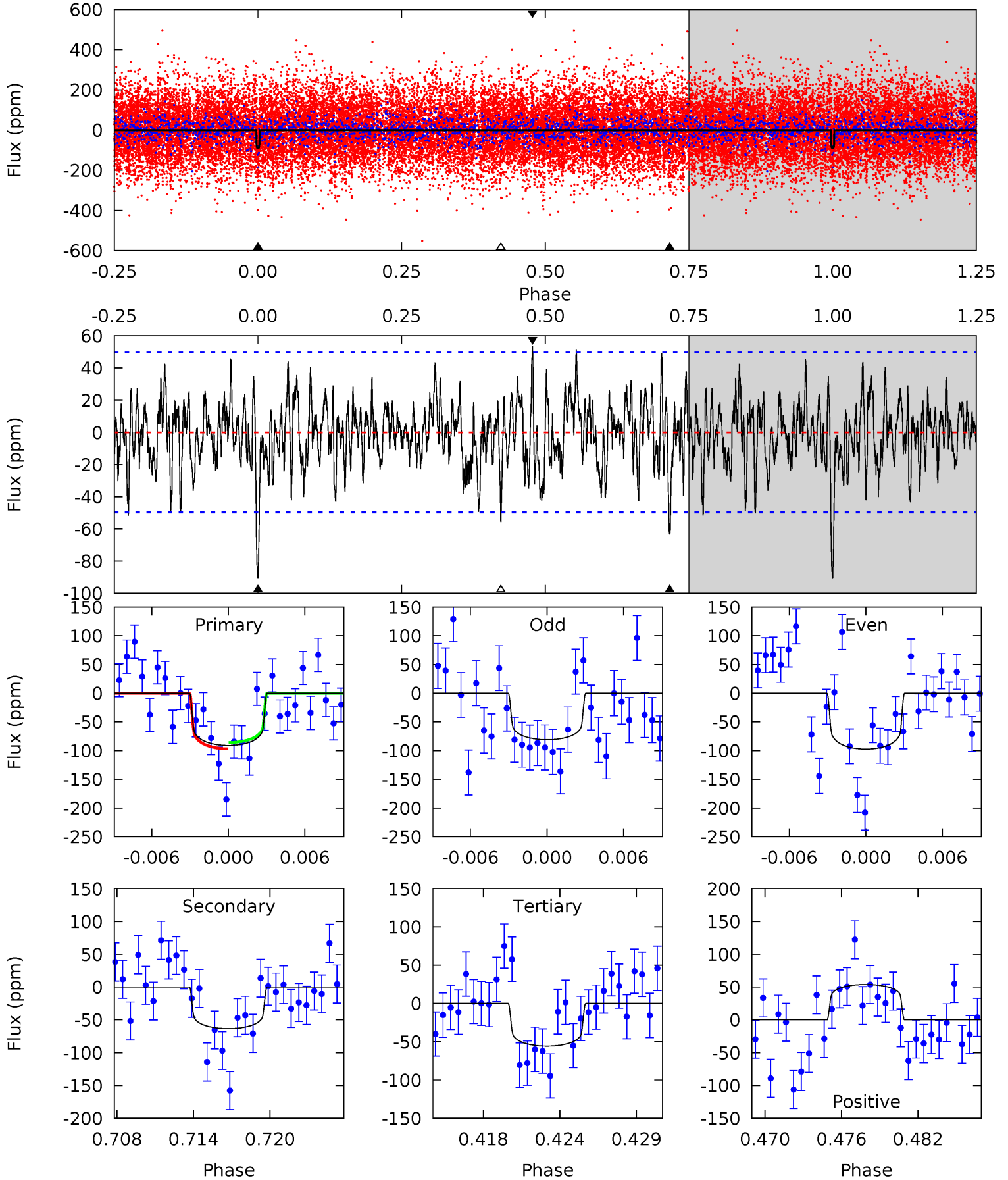
TCE 011971494-05 $P=184.671704$ Days $T_0=312.407597$ (BKJD)



DV Model-Shift Uniqueness Test

011971494-05, $P = 184.667069$ Days, $E = 127.755577$ Days

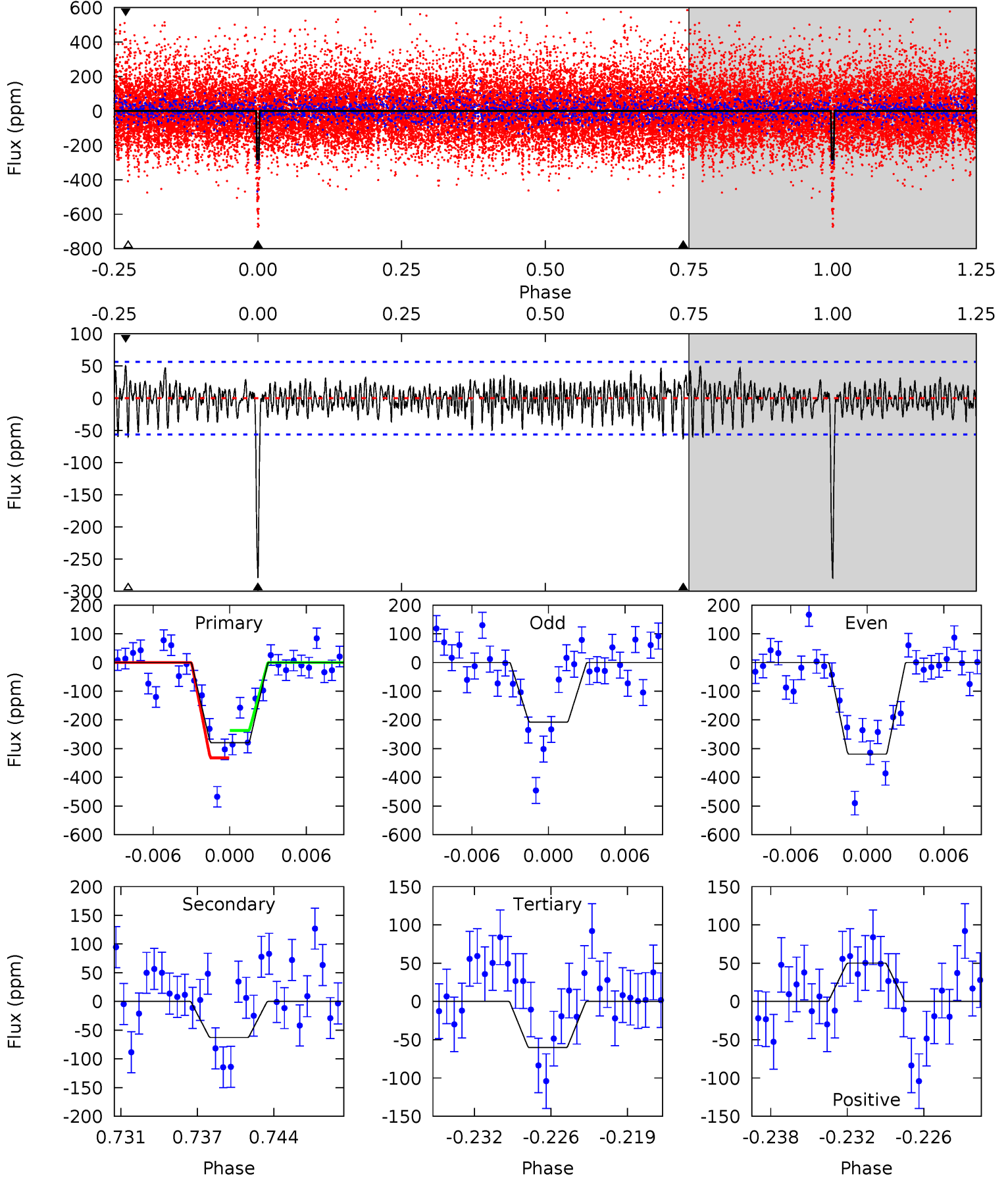
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.39	6.55	5.75	5.55	5.13	2.76	1.81	3.65	3.84	0.80	1.00	0.83	0.84	0.37	0.56



Alt Model-Shift Uniqueness Test

011971494-05, P = 184.671704 Days, E = 127.735893 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.4	5.71	5.47	4.56	5.12	2.74	1.64	19.9	20.8	0.24	1.15	4.99	1.57	0.15	4.32



Stellar Parameters For KIC 011971494

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7226^{+201}_{-252}	$4.029^{+0.260}_{-0.160}$	$-0.320^{+0.250}_{-0.350}$	$1.926^{+0.553}_{-0.609}$	$1.445^{+0.219}_{-0.267}$	$0.285^{+0.430}_{-0.132}$
	+3%/-3%	+6%/-4%	+78%/-109%	+29%/-32%	+15%/-18%	+151%/-46%
Source	PHO1	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 011971494-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-63 ± 10	$2.05^{+0.49}_{-0.45}$	721^{+53}_{-66}	6358^{+704}_{-585}	4290^{+2571}_{-1588}
Alt.	-63 ± 11	$2.97^{+0.59}_{-0.57}$	718^{+57}_{-54}	5282^{+392}_{-316}	1945^{+1117}_{-645}

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 $A_{obs} \gg 1.0$

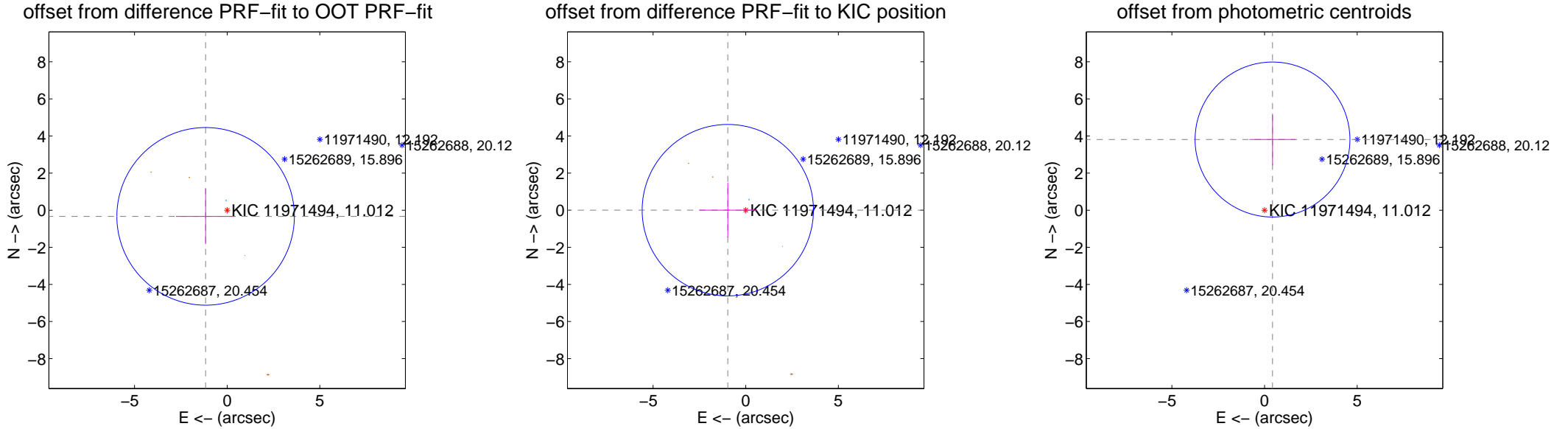
DV Centroid Data

Supplemental centroid analysis for 011971494-05. **Kepler magnitude: 11.01.** Transit SNR 5.75

There are 2 quarters with good PRF difference image offsets

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

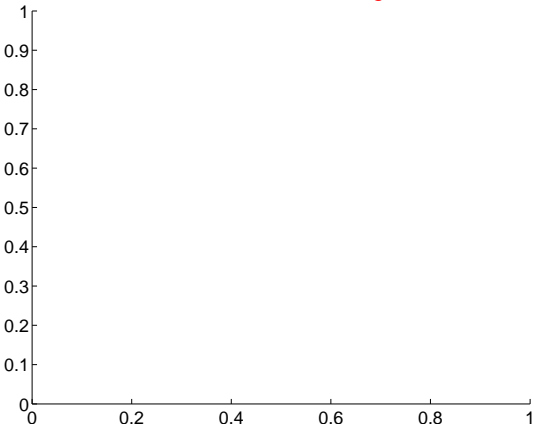
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.209 ± 1.596	0.76	1.163 ± 1.603	-0.332 ± 1.501
PRF-fit source offset from KIC position	0.967 ± 1.540	0.63	0.967 ± 1.540	0.002 ± 1.473
photometric centroid source offset	3.83 ± 1.39	2.75	-0.43 ± 1.24	3.81 ± 1.39



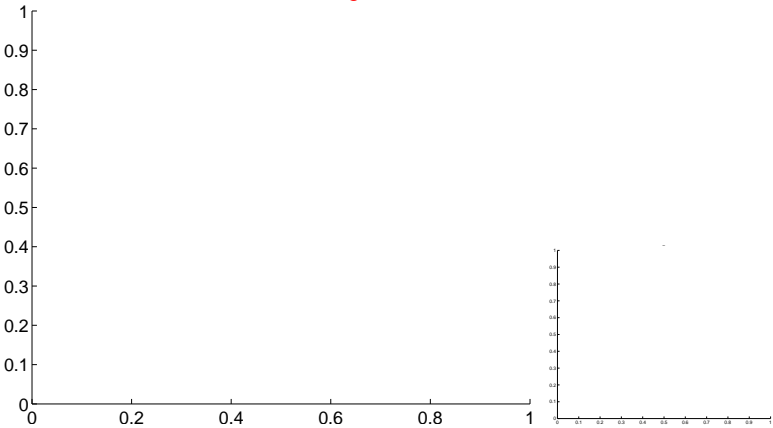
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

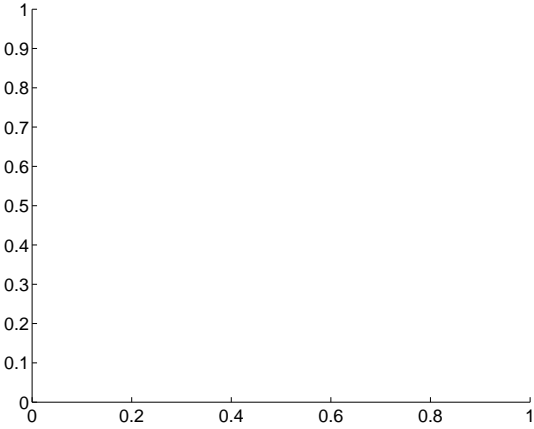
Q1 no difference image



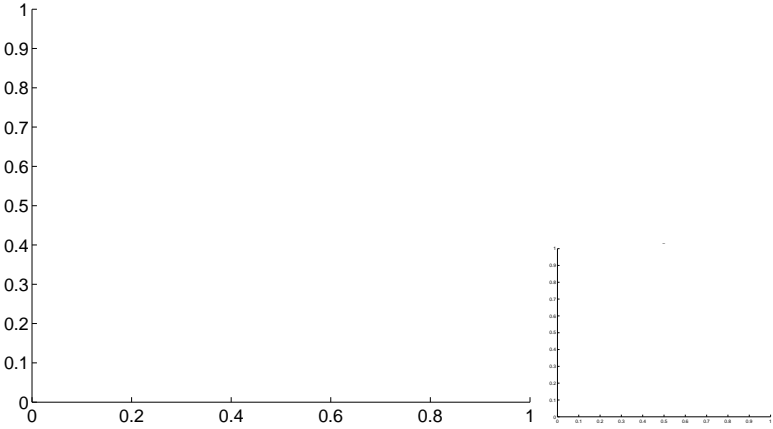
Q1 no OOT image



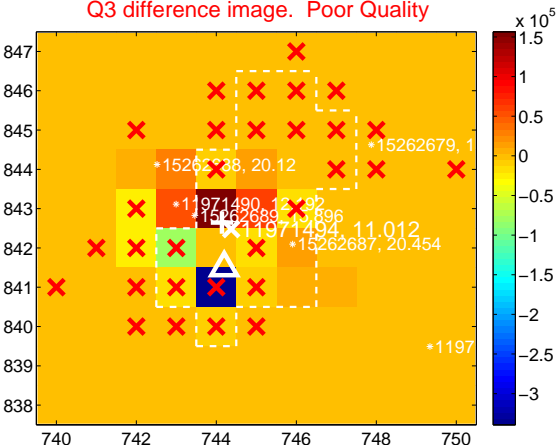
Q2 no difference image



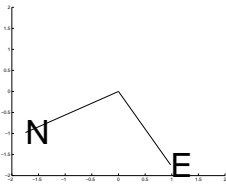
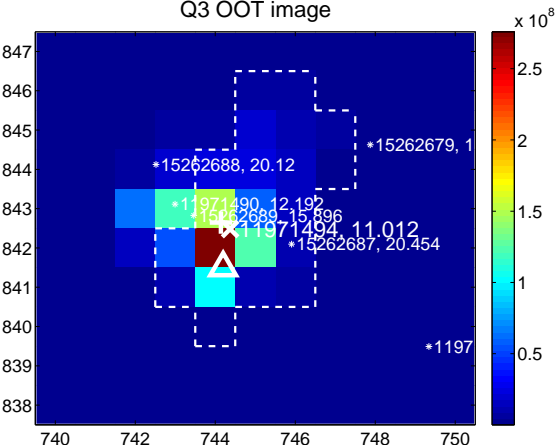
Q2 no OOT image



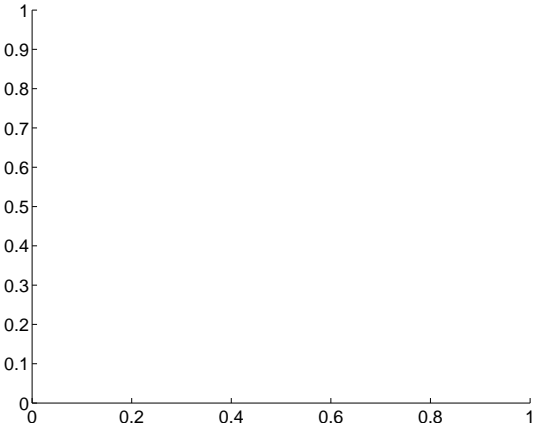
Q3 difference image. Poor Quality



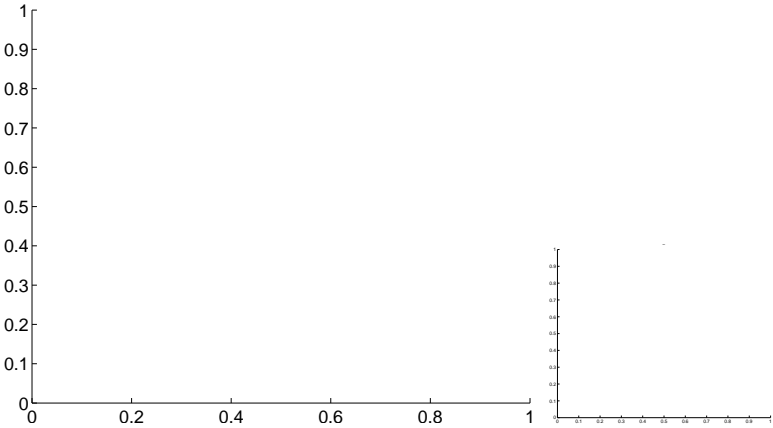
Q3 OOT image



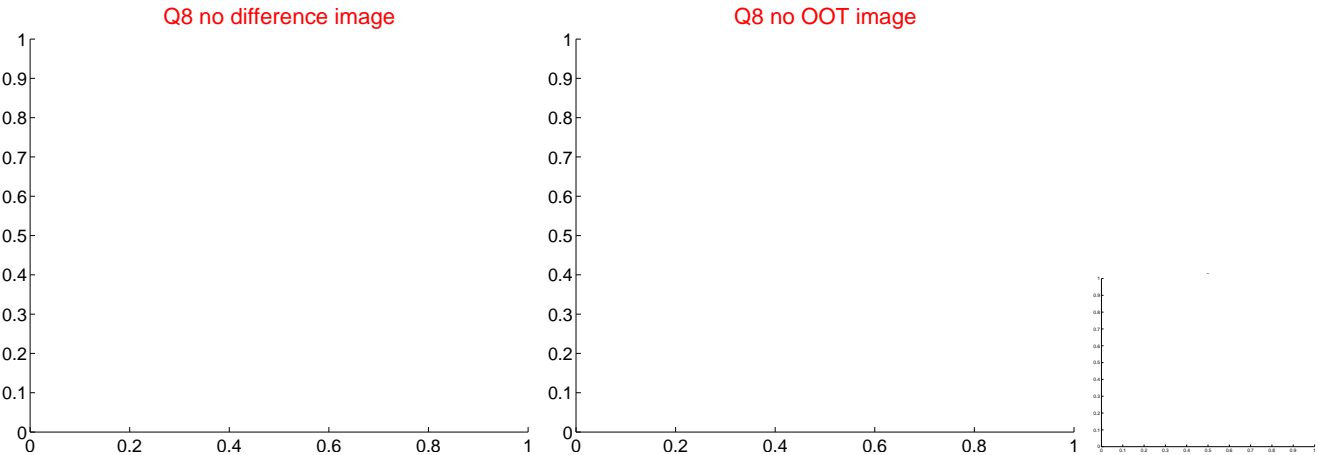
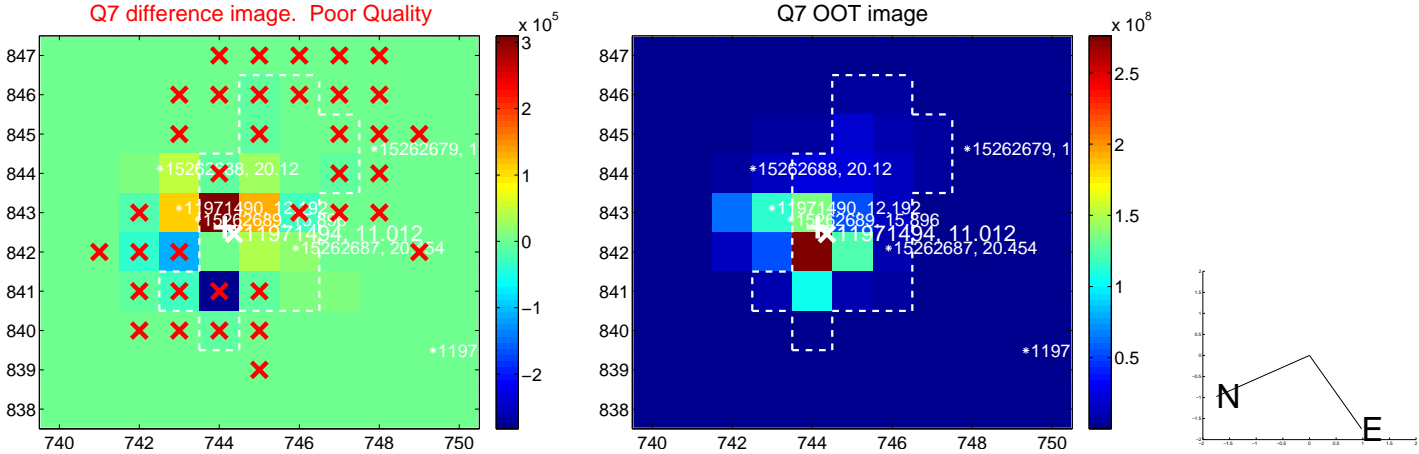
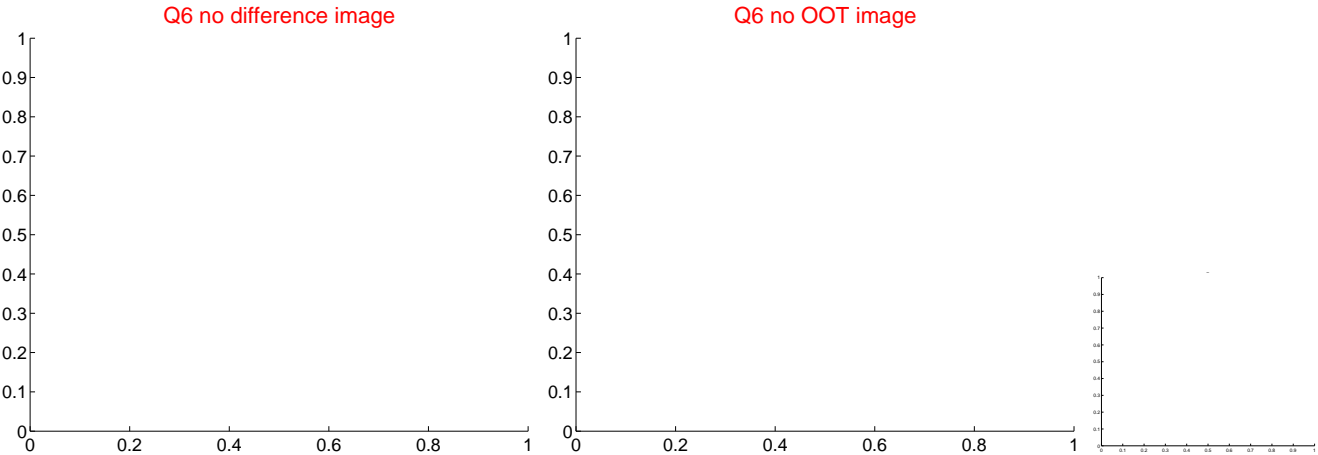
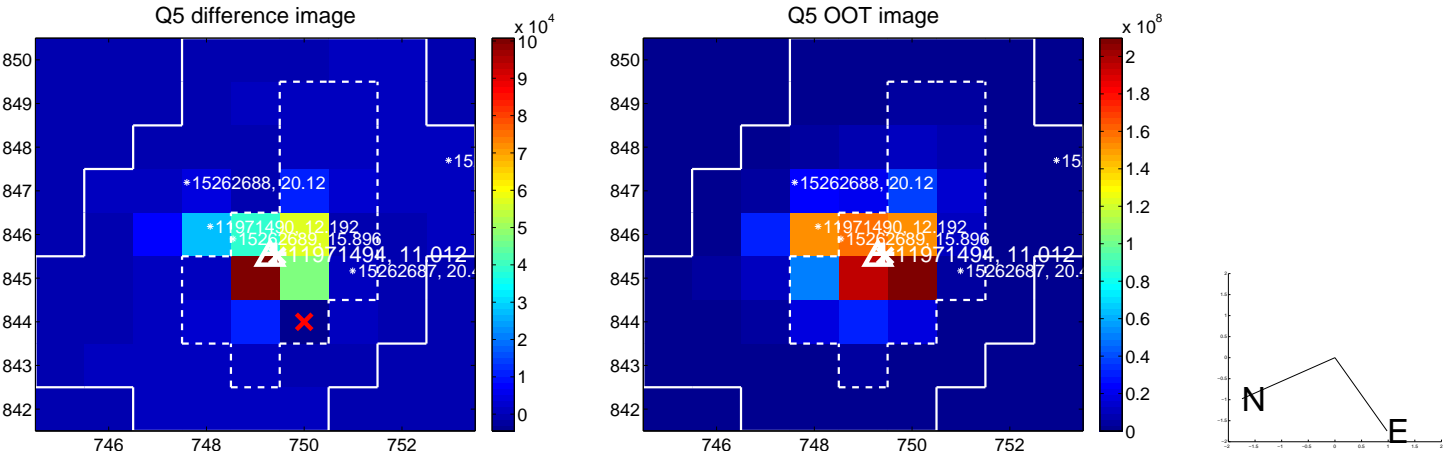
Q4 no difference image



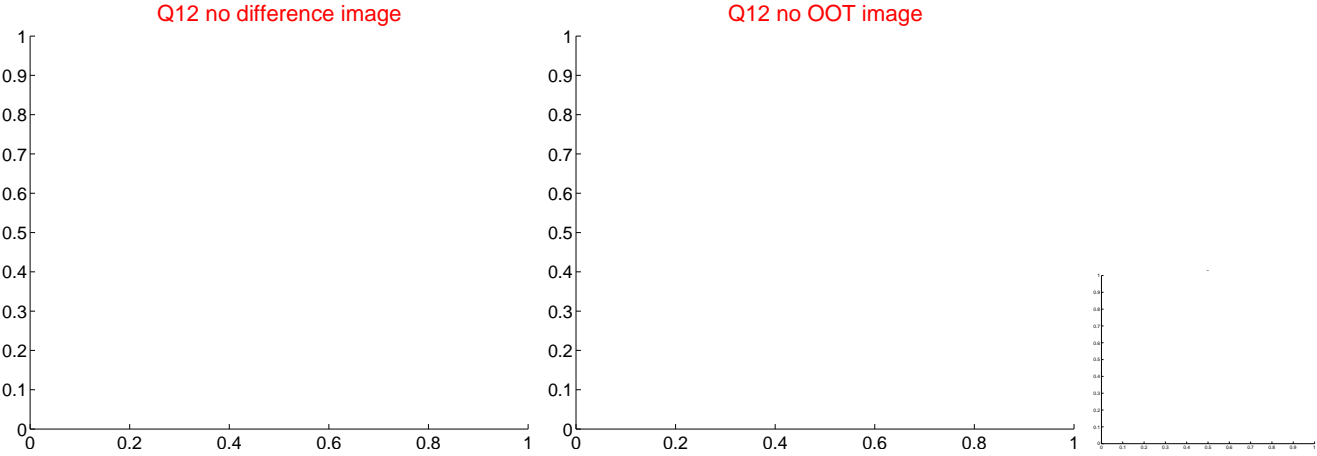
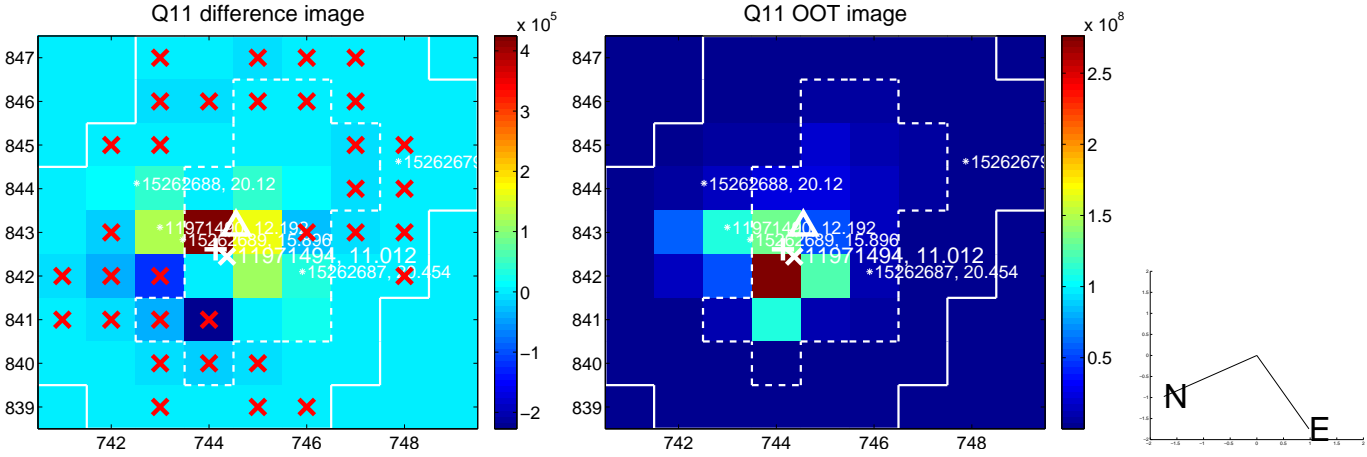
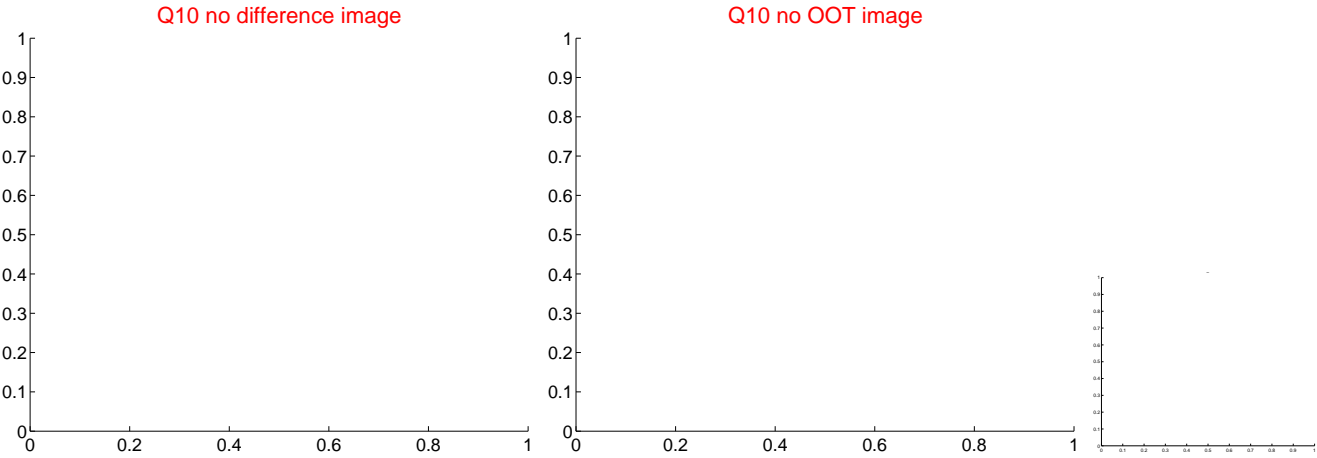
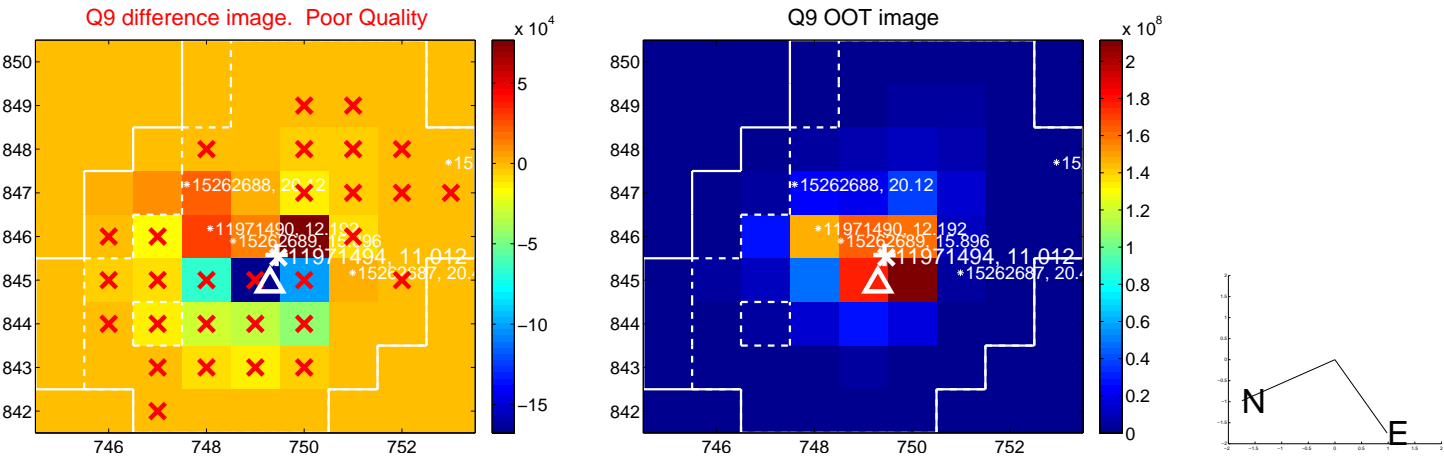
Q4 no OOT image



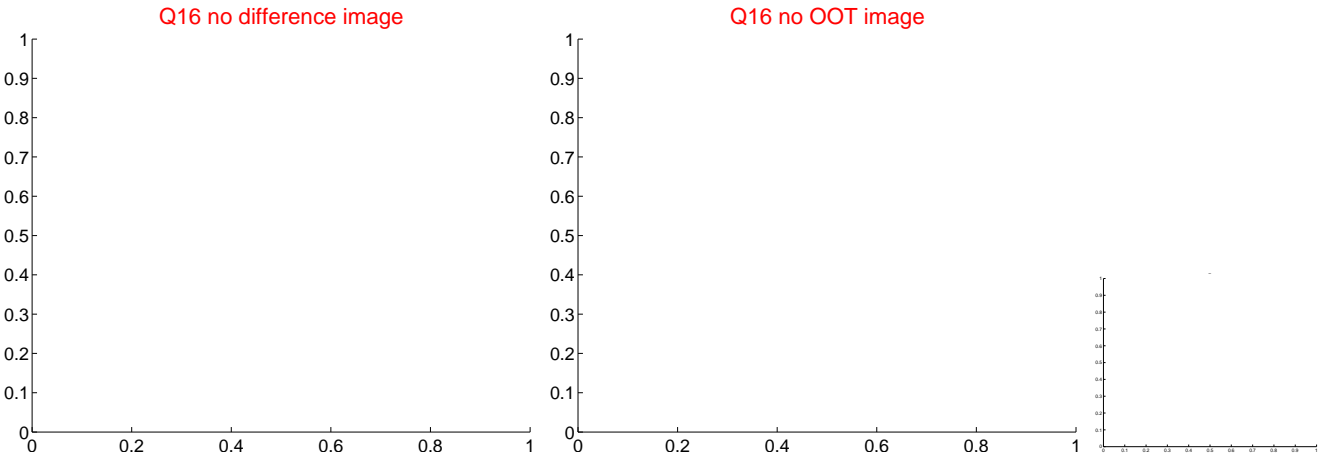
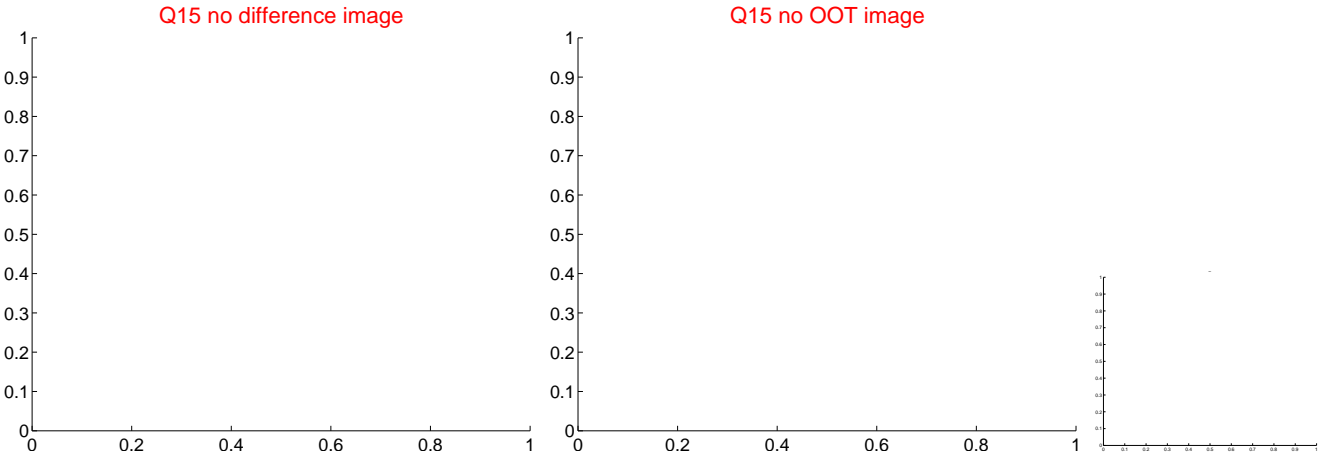
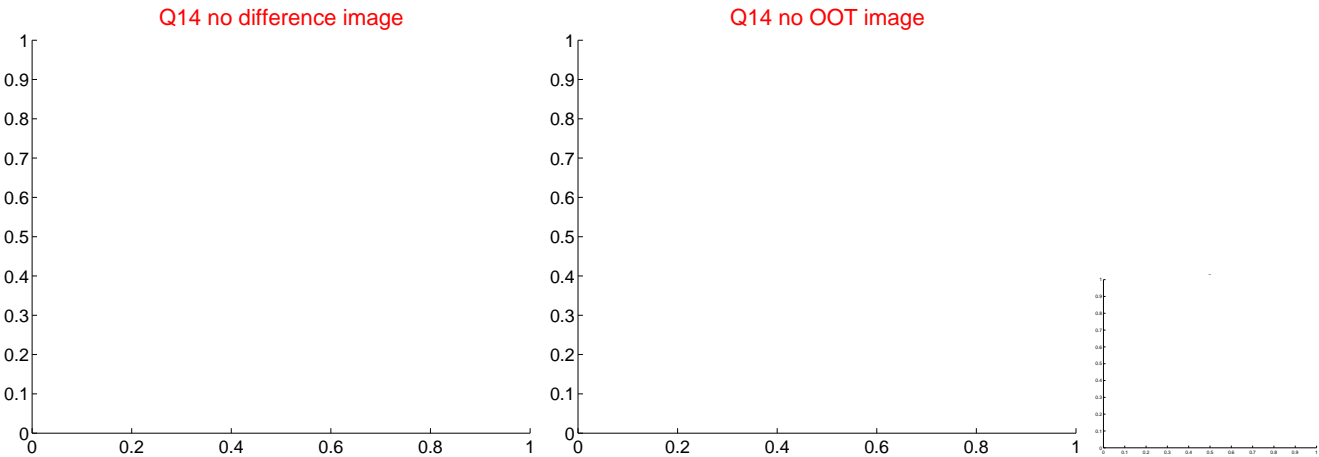
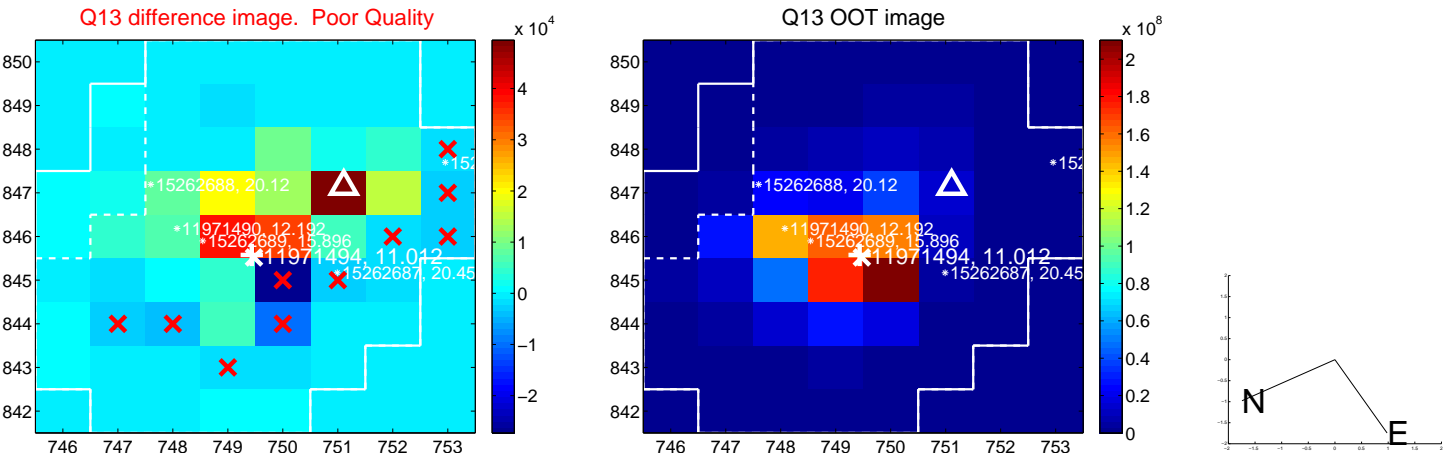
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



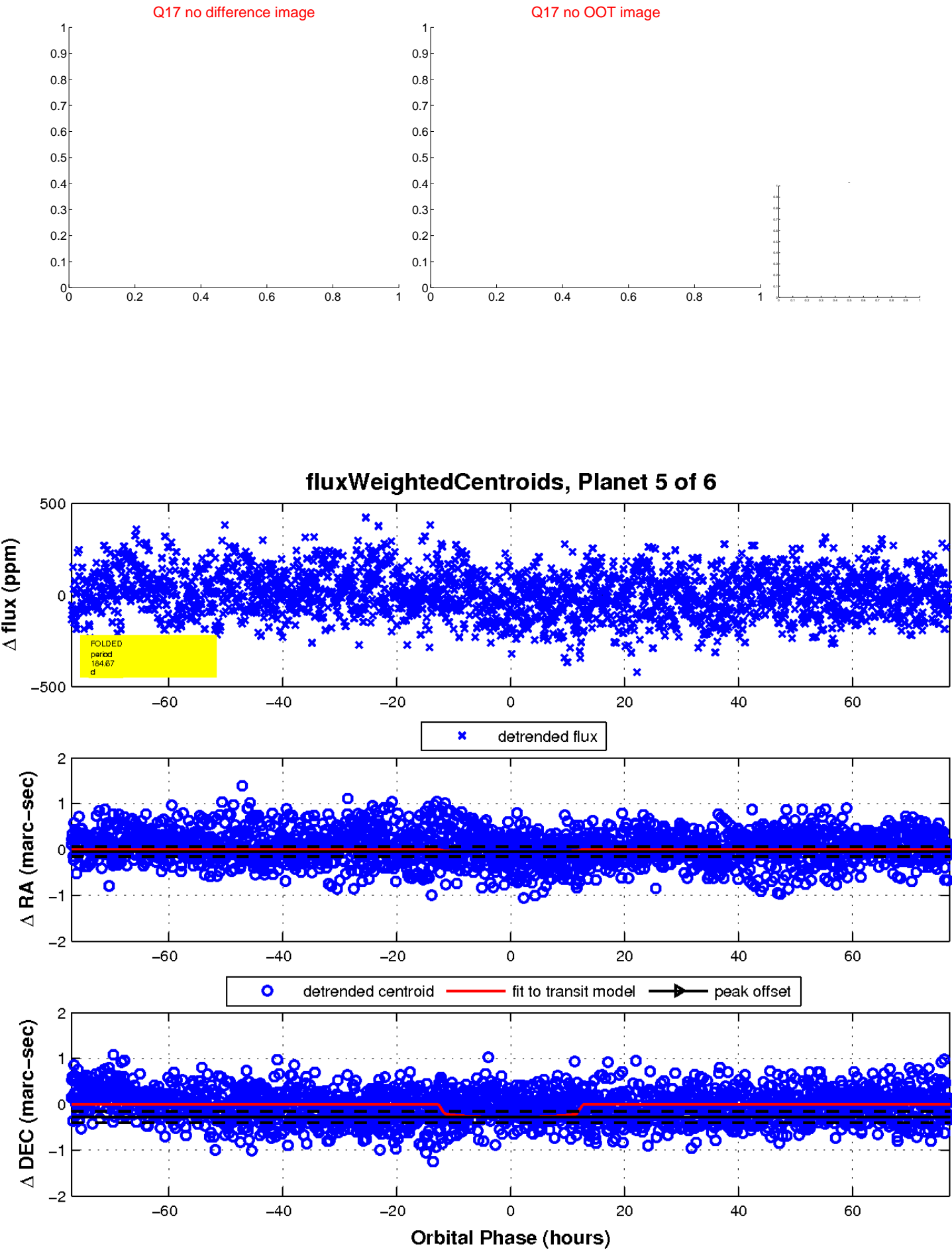
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

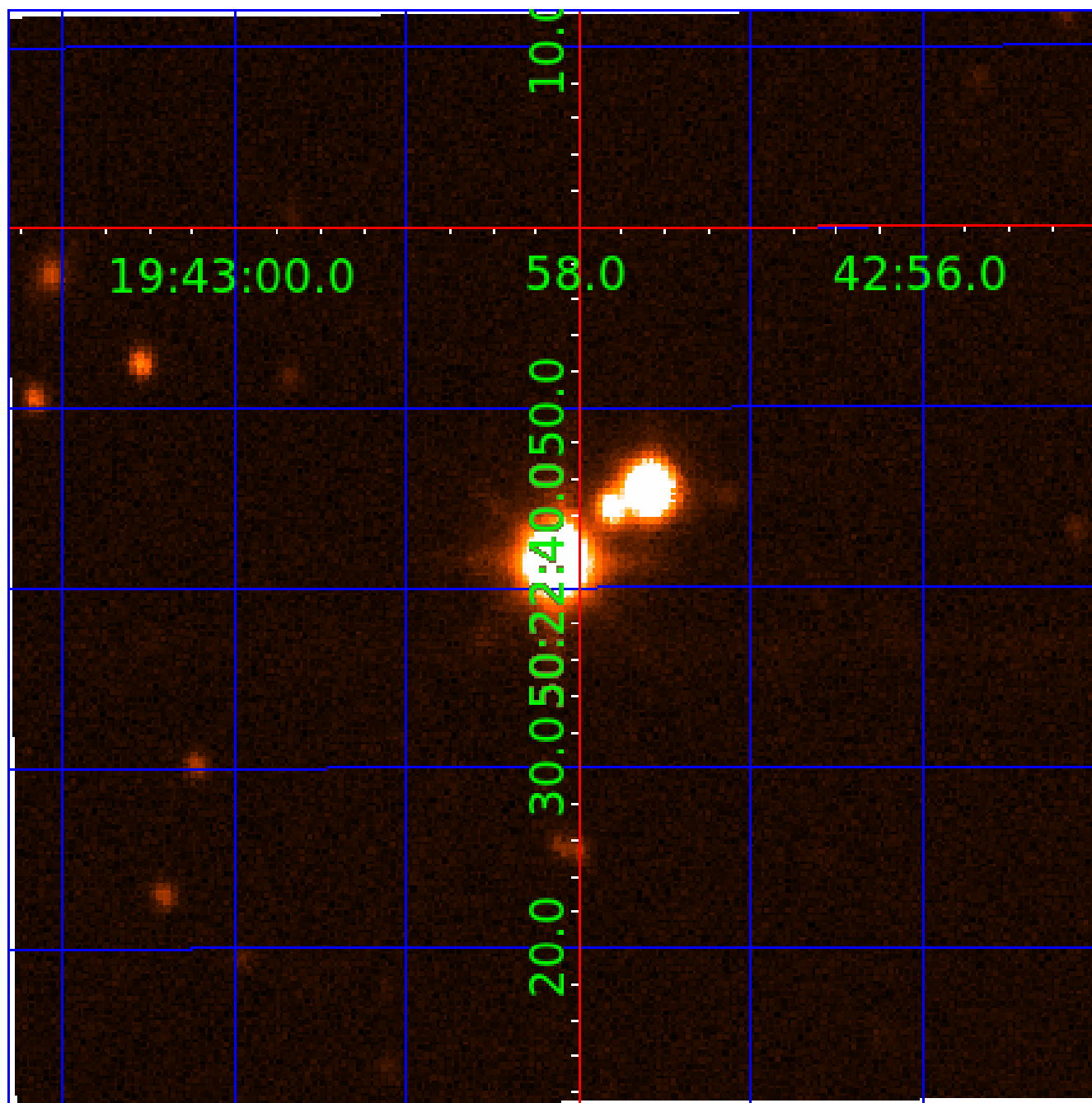


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011971494

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})
011971494-01	OBS	No	3.222819	134.535681	47.4	6.422	11.4	12.5	1.93	7226	2.67	3883.97
011971494-02	OBS	No	3.223168	134.076987	25.5	15.357	10.5	8.7	1.93	7226	1.13	3883.41
011971494-03	OBS	No	400.151158	244.811927	227.4	4.740	8.8	9.3	1.93	7226	3.37	6.27
011971494-04	OBS	No	73.456185	198.529343	177.4	2.231	8.7	9.3	1.93	7226	2.91	60.10
011971494-05	OBS	No	184.667070	312.422646	90.0	25.718	8.5	5.7	1.93	7226	2.12	17.58
011971494-06	OBS	No	132.760221	224.649260	100.6	7.128	8.3	5.2	1.93	7226	2.15	27.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011971494-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011971494-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011971494-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011971494-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011971494-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
011971494-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

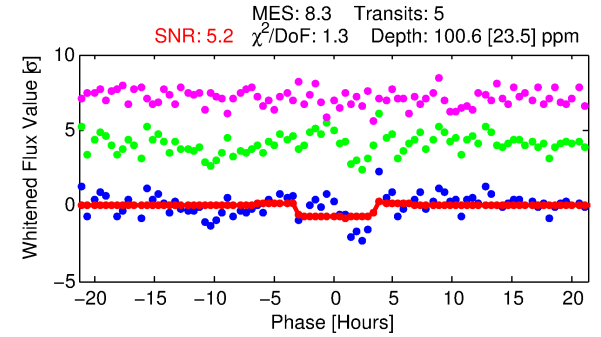
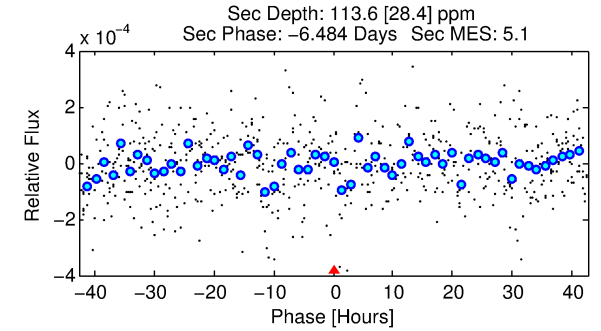
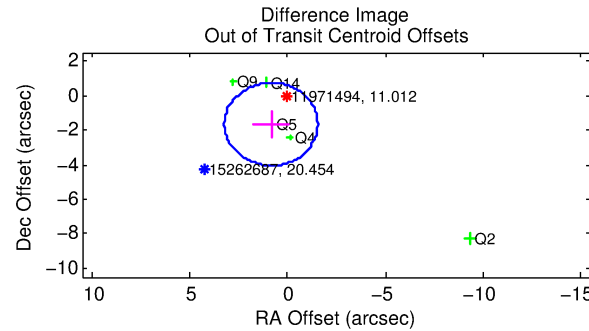
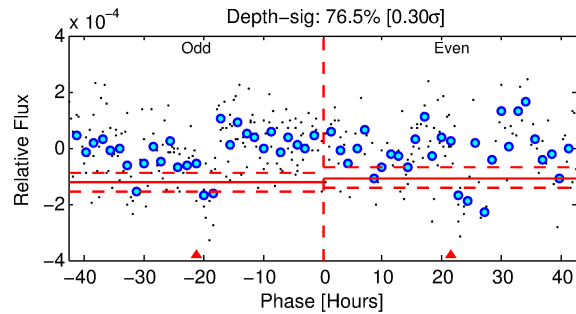
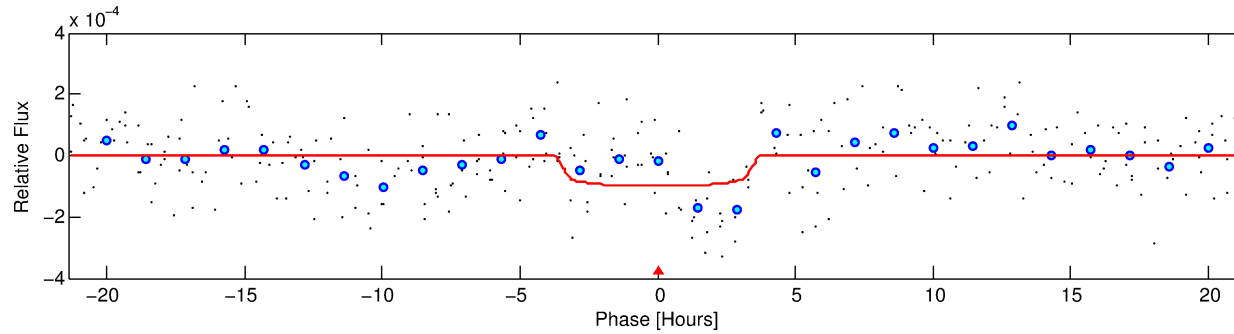
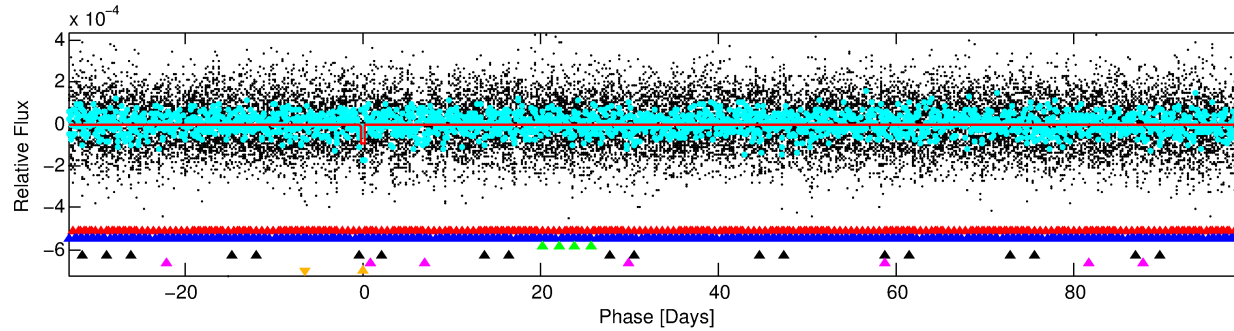
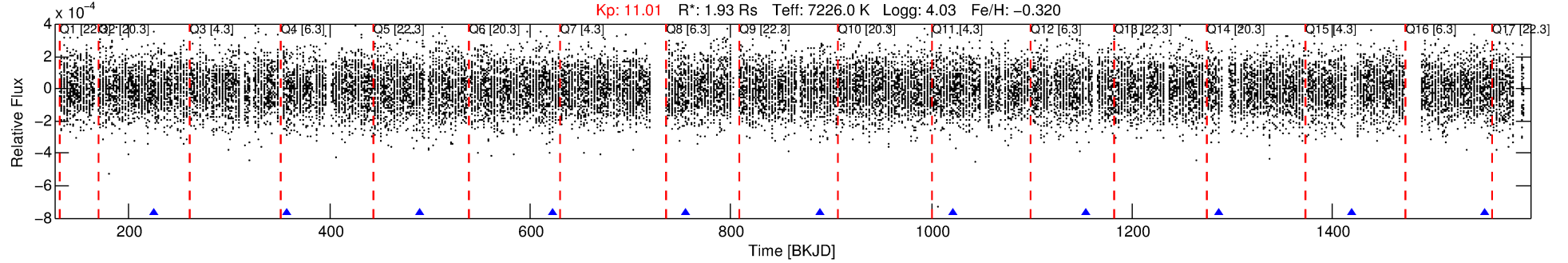
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011971494-06

No Significant Match Found

DV One-Page Summary

KIC: 11971494 Candidate: 6 of 6 Period: 132.760 d



DV Fit Results:

Period = 132.76022 [0.00375] d
Epoch = 224.6493 [0.0237] BKJD
Rp/R* = 0.0102 [0.0065]
a/R* = 83.41 [319.60]
b = 0.82 [1.51]
Seff = 27.30 [12.90]
Teq = 583 [69] K
Rp = 2.15 [1.52] Re
a = 0.5761 [0.1672] AU
Ag = 4501.16 [6155.55] [0.73 σ]
Teffp = 7381 [2396] K [2.84 σ]

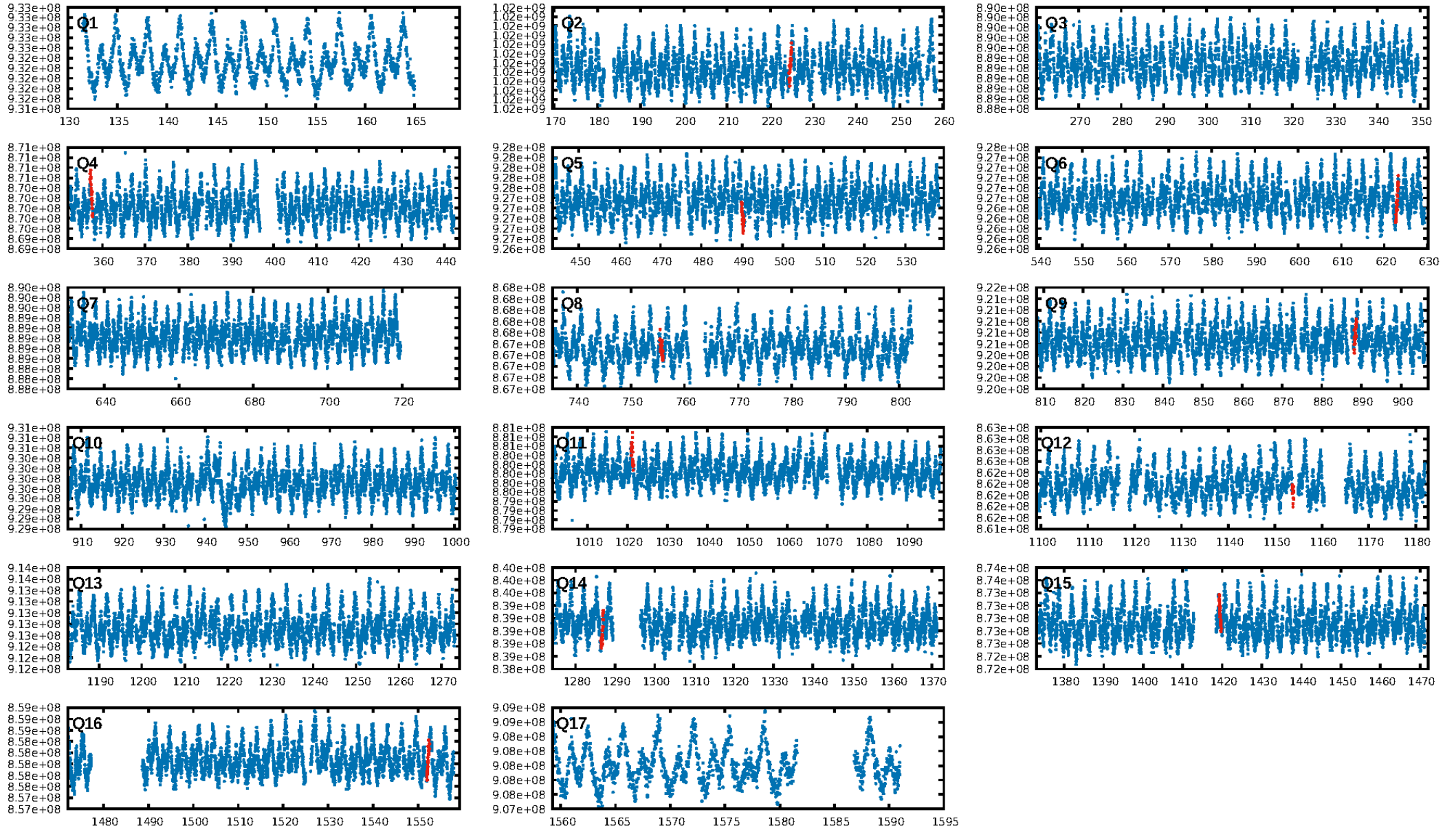
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [190.57 σ]
LongPeriod-sig: 100.0% [46.68 σ]
ModelChiSquare2-sig: 17.9%
ModelChiSquareGof-sig: 70.0%
Bootstrap-pfa: 3.76e-09
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 1.186
Centroid-sig: 81.2%
Centroid-so: 1.736 arcsec [1.49 σ]
OotOffset-rm: 1.861 arcsec [2.33 σ]
KicOffset-rm: 1.521 arcsec [1.49 σ]
OotOffset-st: 2/0/1/2 [5]
KicOffset-st: 2/0/1/2 [5]
DiffImageQuality-fgm: 0.60 [3/5]
DiffImageOverlap-fno: 0.38 [3/8]

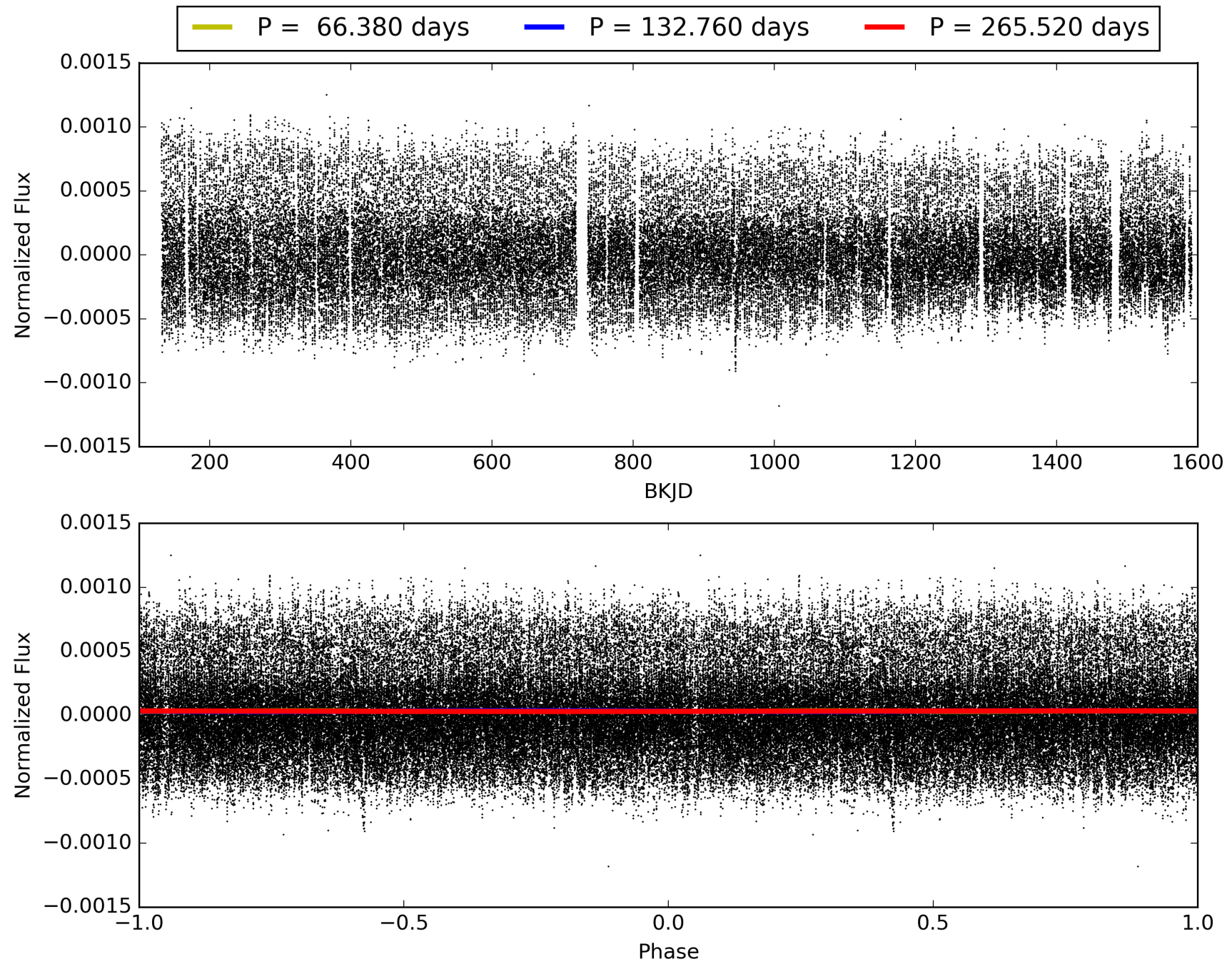
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:12:09 Z

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

TCE 011971494-06, PDC Light Curves

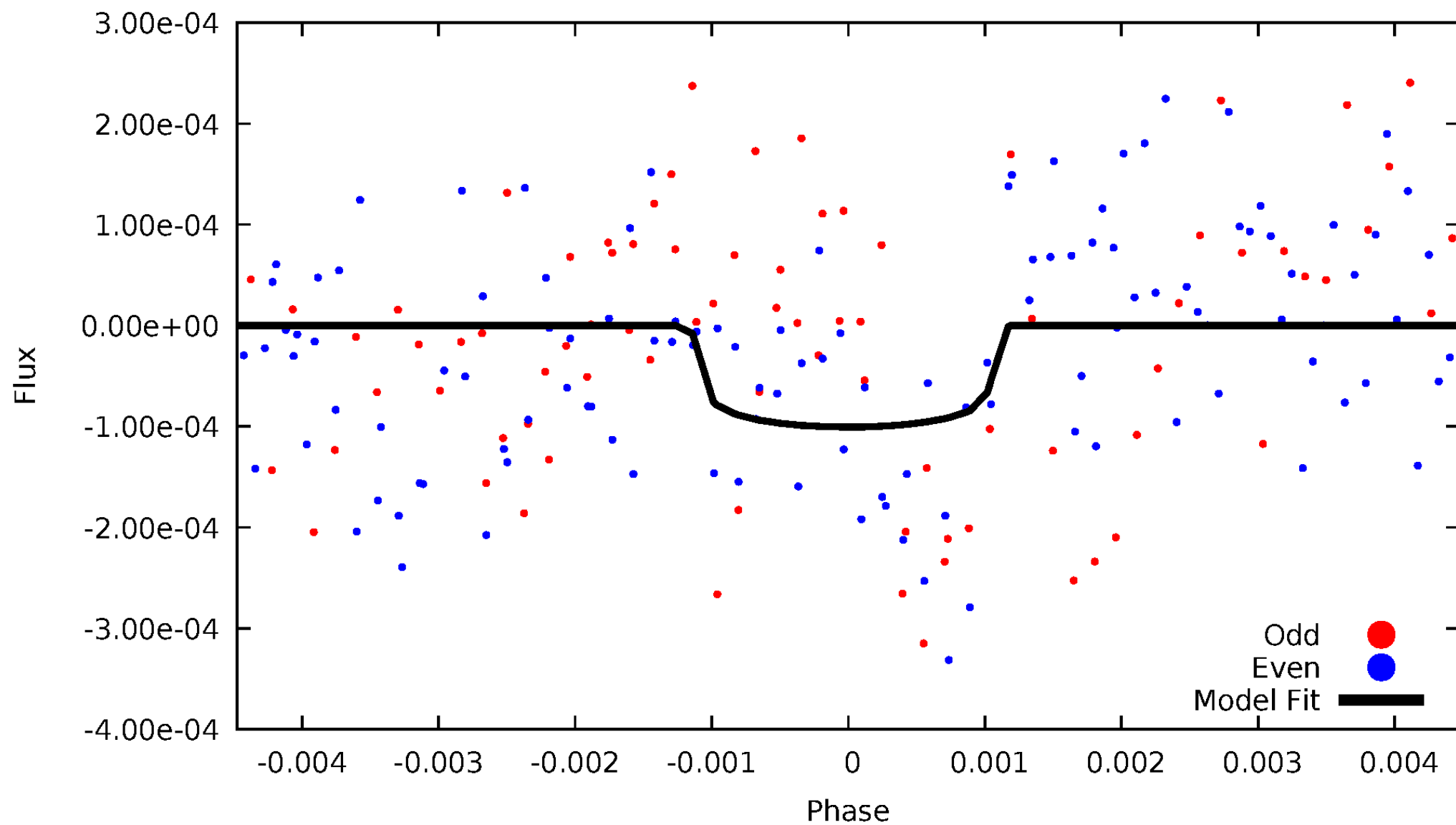


TCE 011971494-06



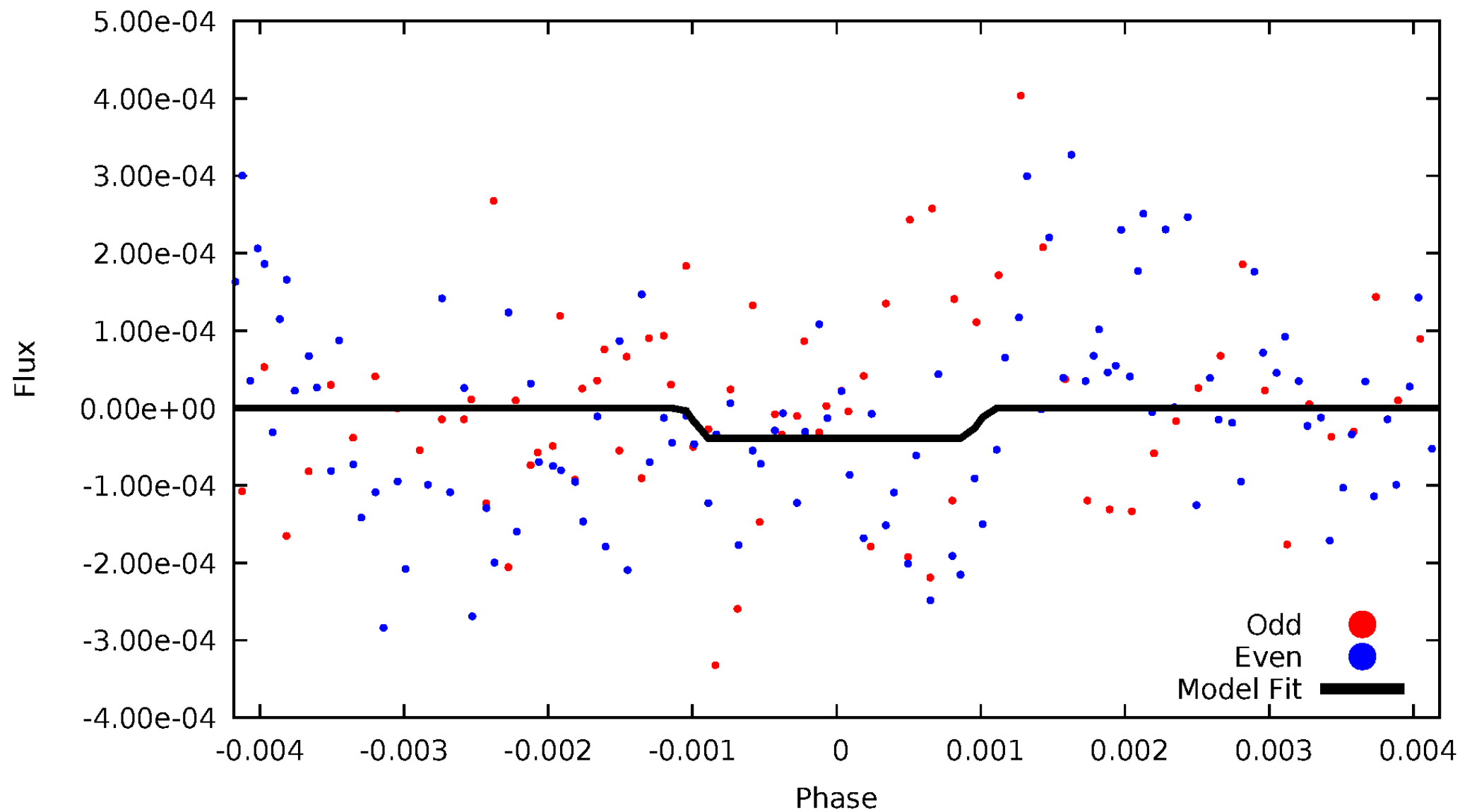
DV Odd/Even

TCE 011971494-06



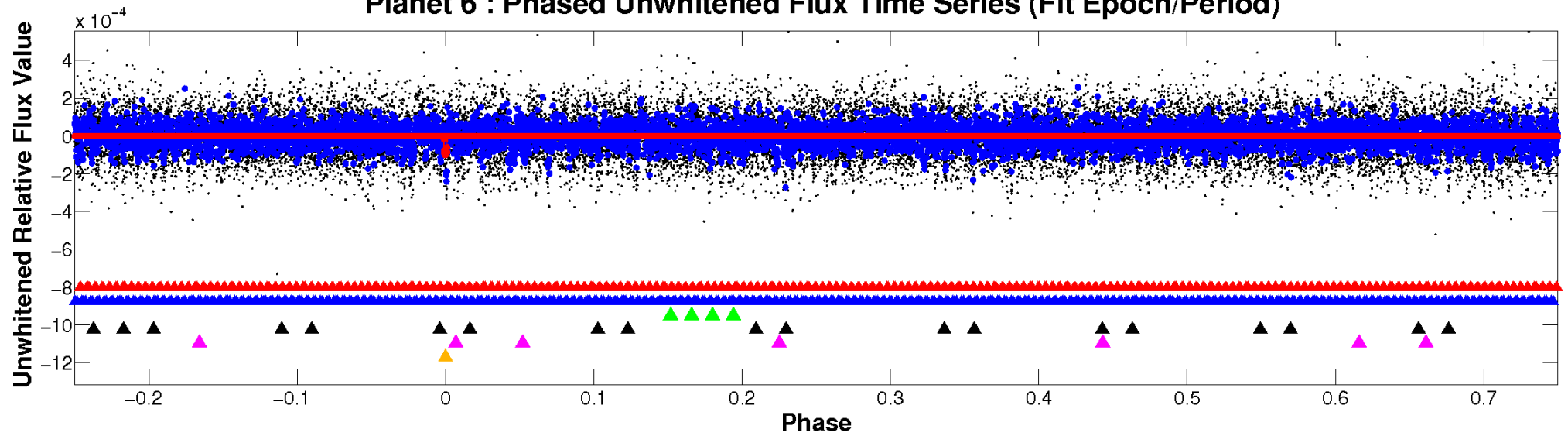
ALT Odd/Even

TCE 011971494-06

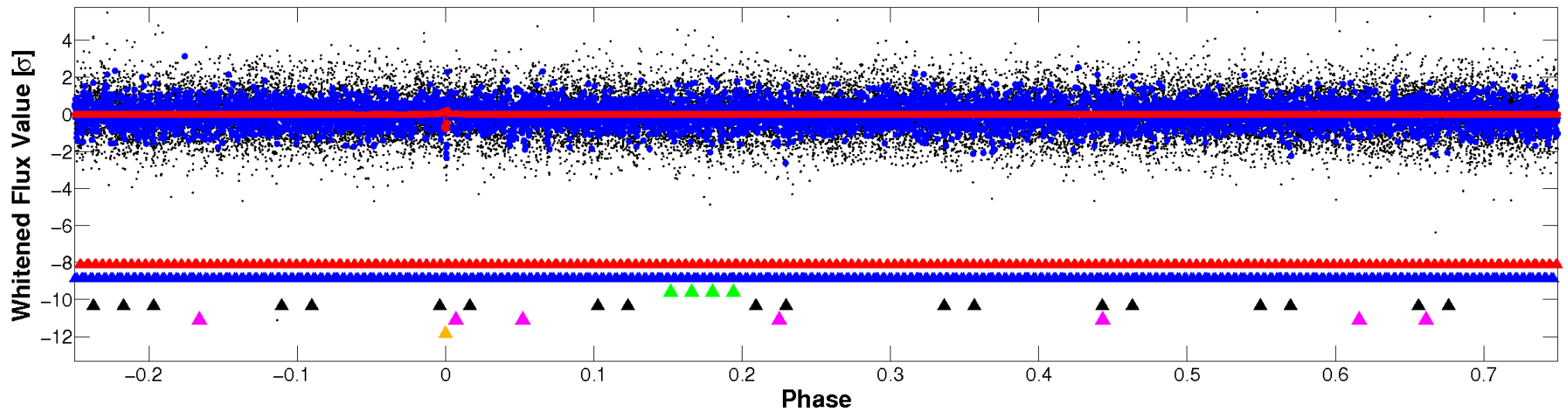


Non-Whitened Vs. Whitened Light Curve

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

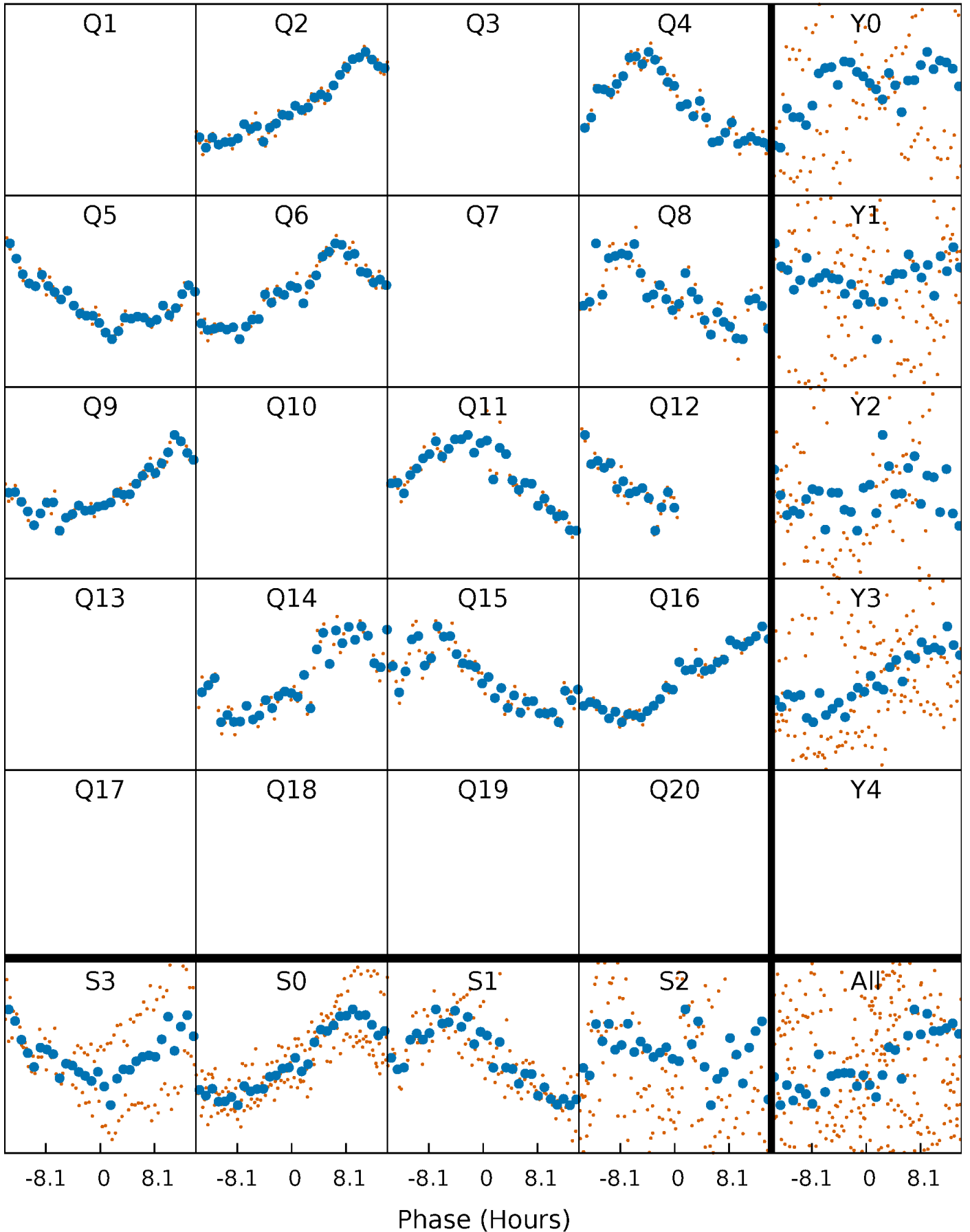


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



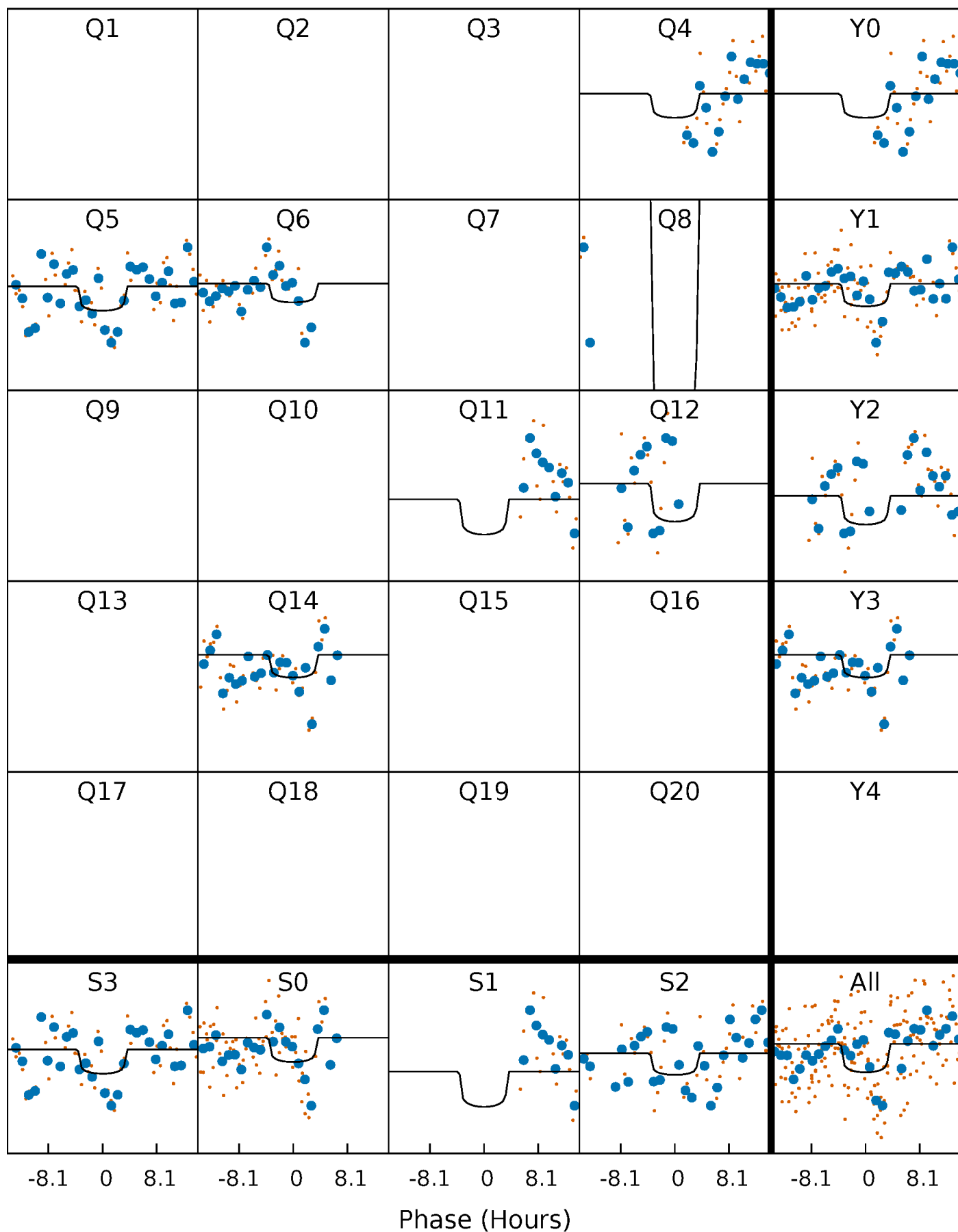
PDC Quarter-Phased Transit Curves

TCE 011971494-06 P=132.760221 Days $T_0=224.649260$ (BKJD)



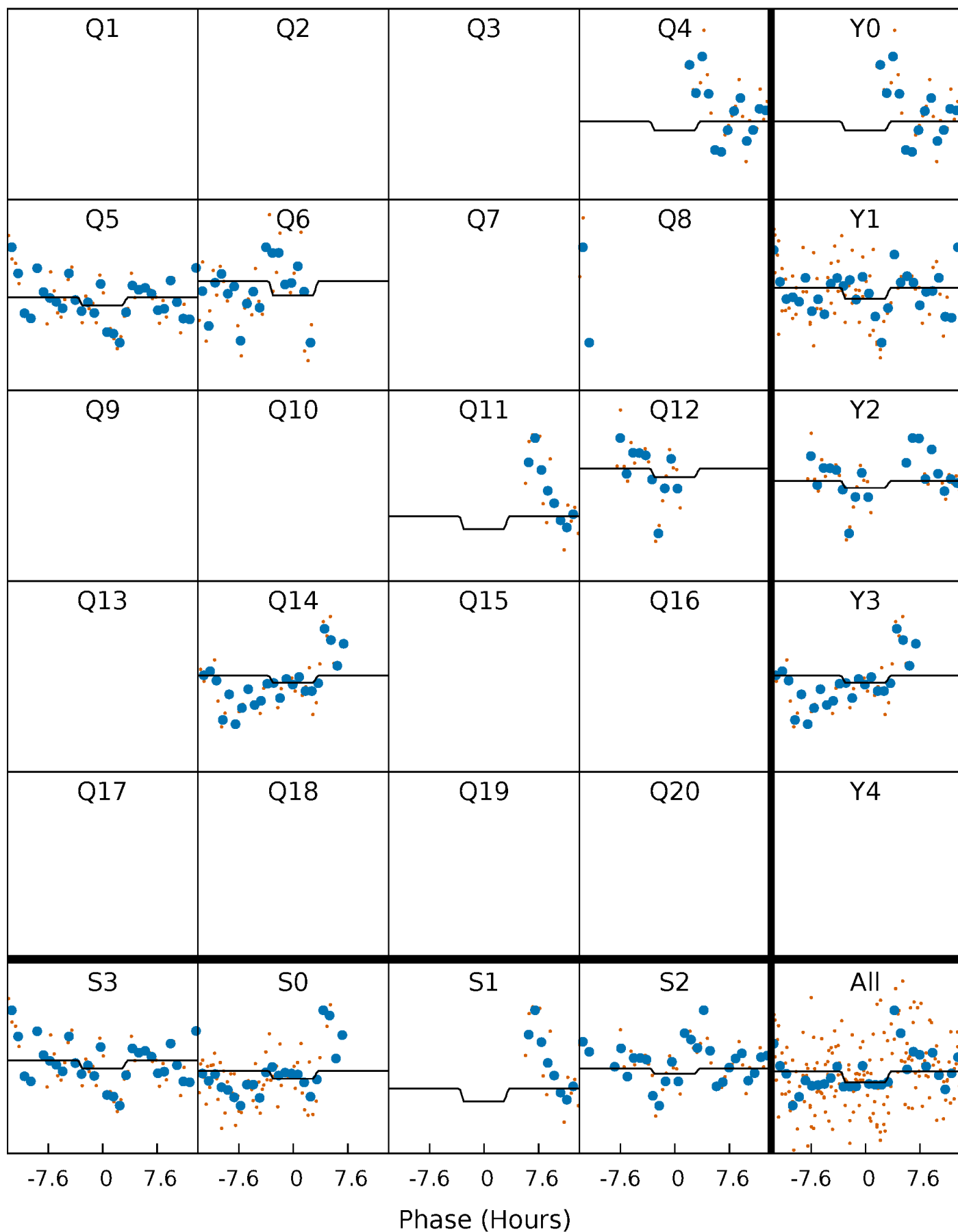
DV Quarter-Phased Transit Curves

TCE 011971494-06 P=132.760221 Days $T_0=224.649260$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

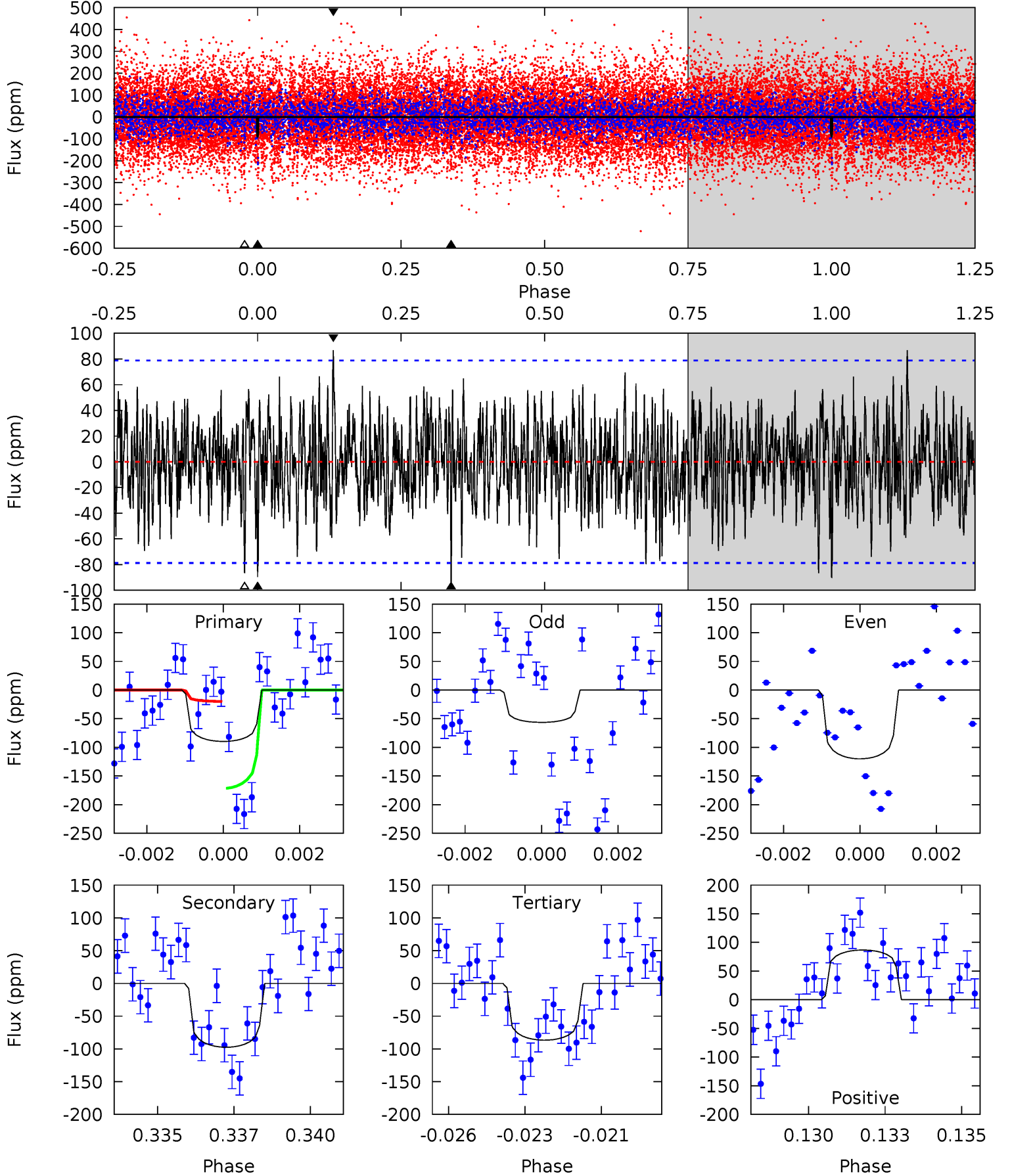
TCE 011971494-06 P=132.759542 Days $T_0=224.638357$ (BKJD)



DV Model-Shift Uniqueness Test

011971494-06, $P = 132.760221$ Days, $E = 91.889039$ Days

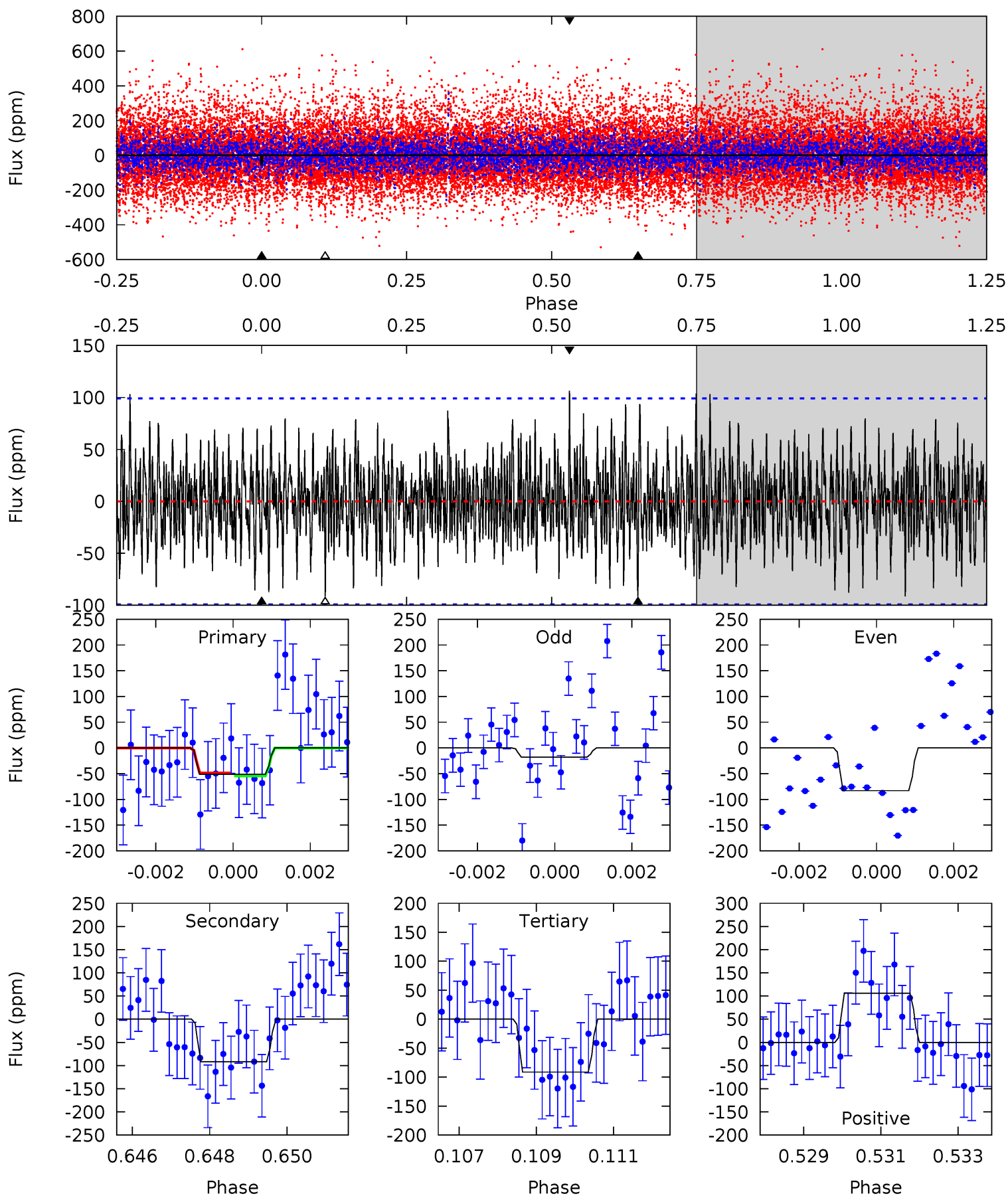
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.03	6.55	5.83	5.83	5.30	3.05	1.74	0.21	0.20	0.73	0.72	2.14	0.82	0.47	5.08



Alt Model-Shift Uniqueness Test

011971494-06, $P = 132.759542$ Days, $E = 91.878815$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.75	4.92	4.90	5.71	5.32	3.08	1.65	-2.15	-2.95	0.01	-0.79	1.75	0.24	0.54	0.15



Stellar Parameters For KIC 011971494

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7226^{+201}_{-252}	$4.029^{+0.260}_{-0.160}$	$-0.320^{+0.250}_{-0.350}$	$1.926^{+0.553}_{-0.609}$	$1.445^{+0.219}_{-0.267}$	$0.285^{+0.430}_{-0.132}$
	+3%/-3%	+6%/-4%	+78%/-109%	+29%/-32%	+15%/-18%	+151%/-46%
Source	PHO1	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 011971494-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-97 ± 15	$2.10^{+1.41}_{-1.14}$	803^{+70}_{-66}	6827^{+4535}_{-1319}	4050^{+15192}_{-2592}
Alt.	-92 ± 19	$1.49^{+1.28}_{-0.96}$	810^{+60}_{-73}	8291^{+13197}_{-2306}	7416^{+51140}_{-5271}

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

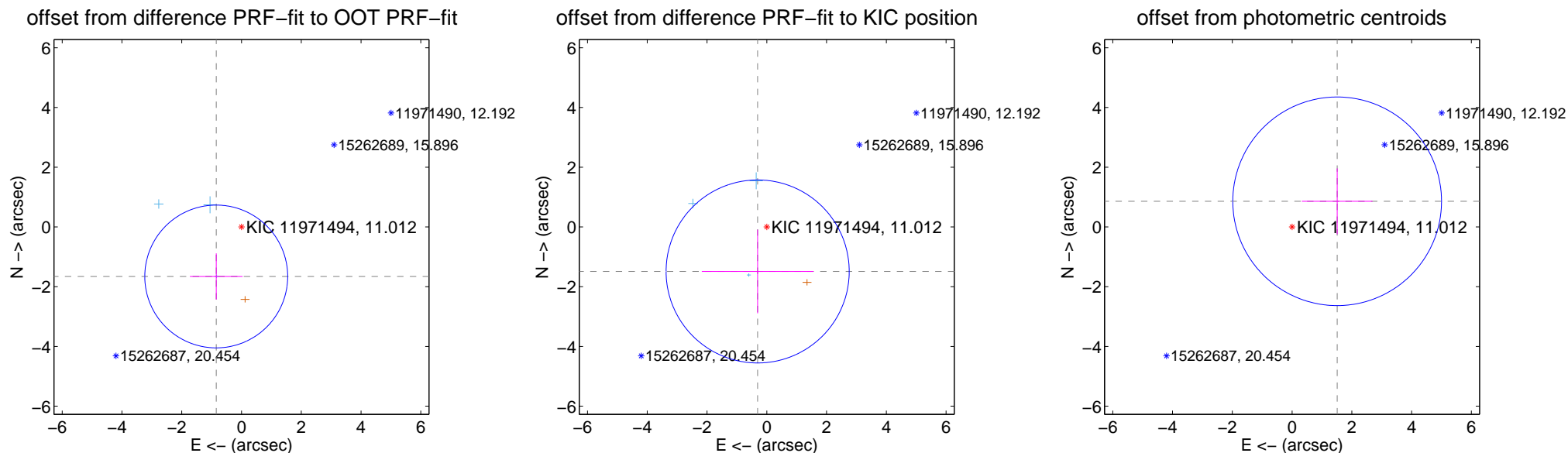
DV Centroid Data

Supplemental centroid analysis for 011971494-06. **Kepler magnitude: 11.01.** Transit SNR 5.17

There are 3 quarters with good PRF difference image offsets

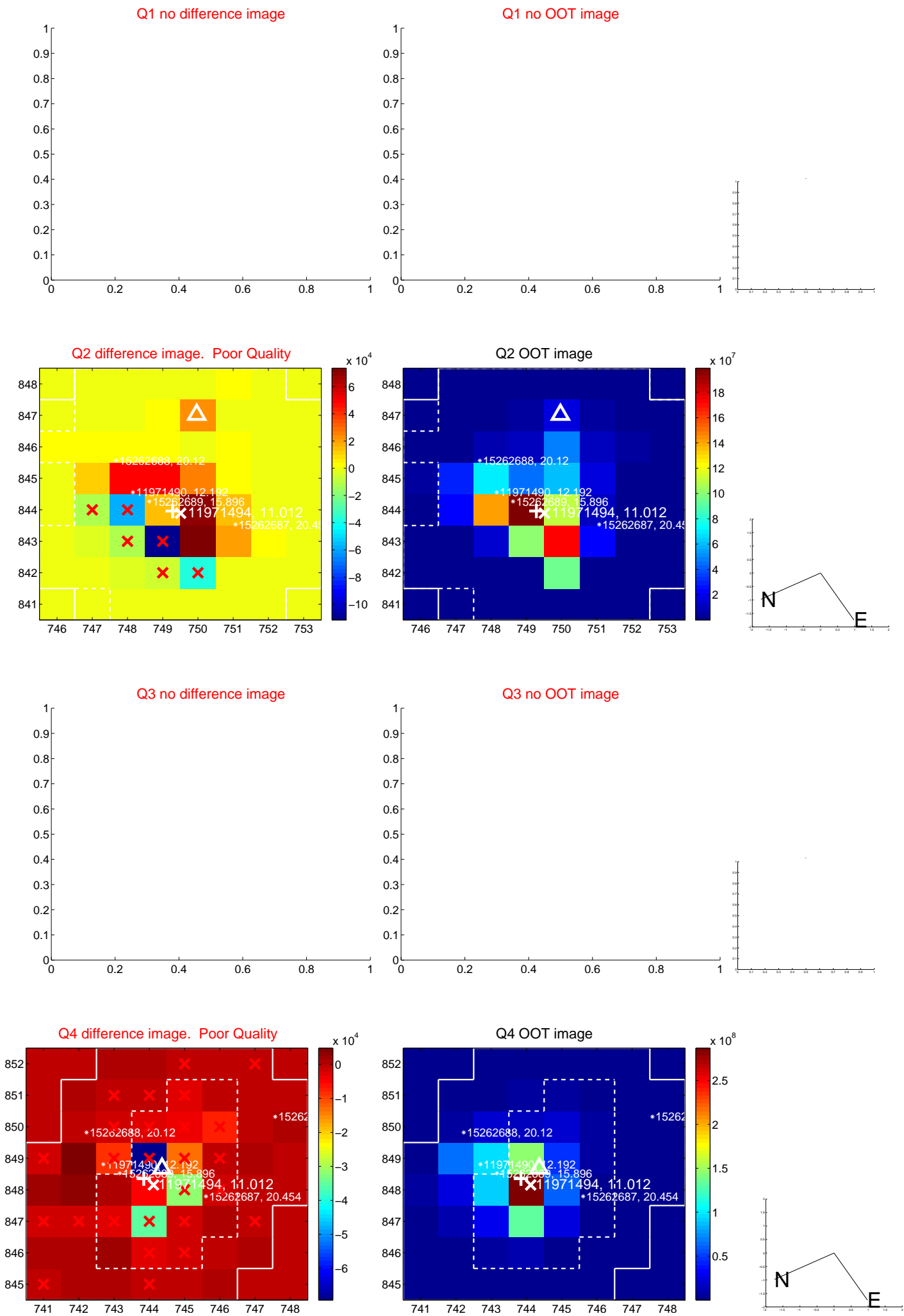
The direct PRF centroid is offset from the target star catalog position by about 1.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.861 ± 0.797	2.33	0.846 ± 0.881	-1.658 ± 0.774
PRF-fit source offset from KIC position	1.521 ± 1.021	1.49	0.306 ± 1.871	-1.490 ± 1.400
photometric centroid source offset	1.74 ± 1.16	1.49	-1.51 ± 1.18	0.86 ± 1.10

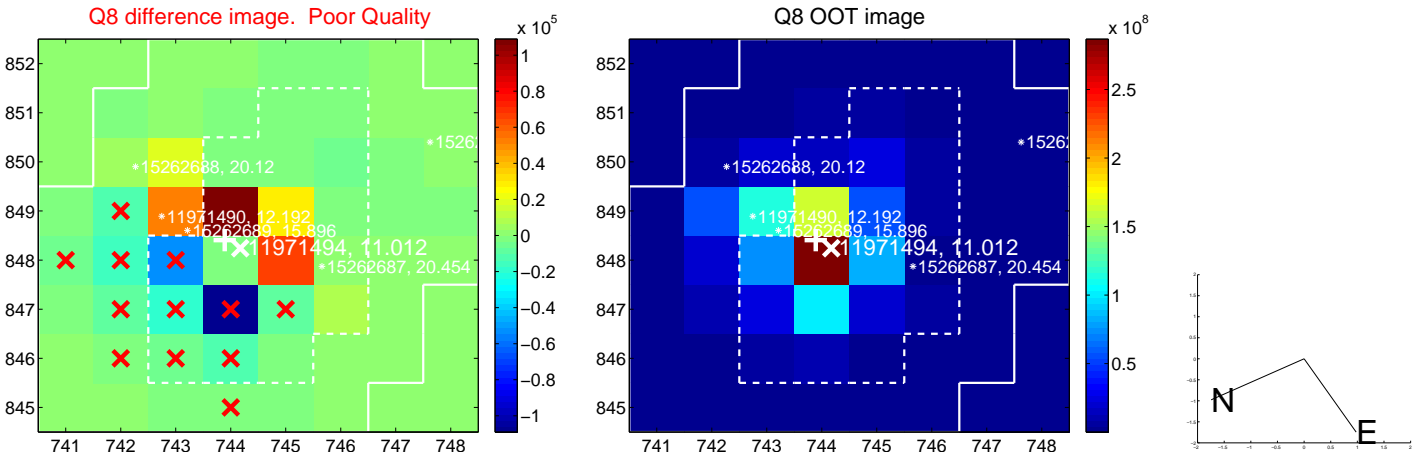
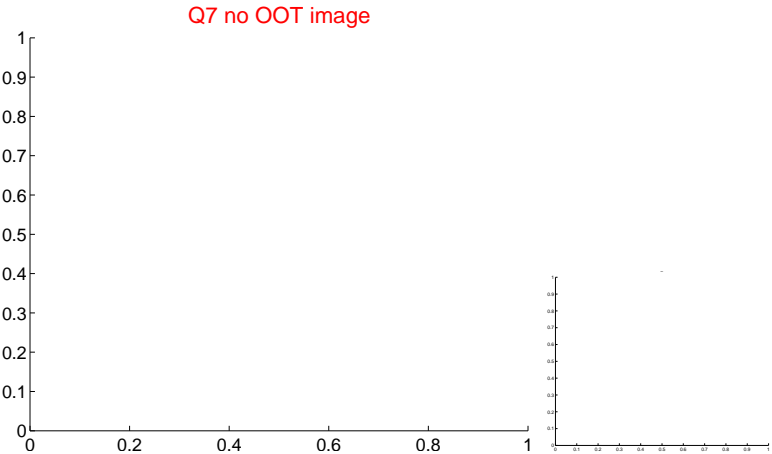
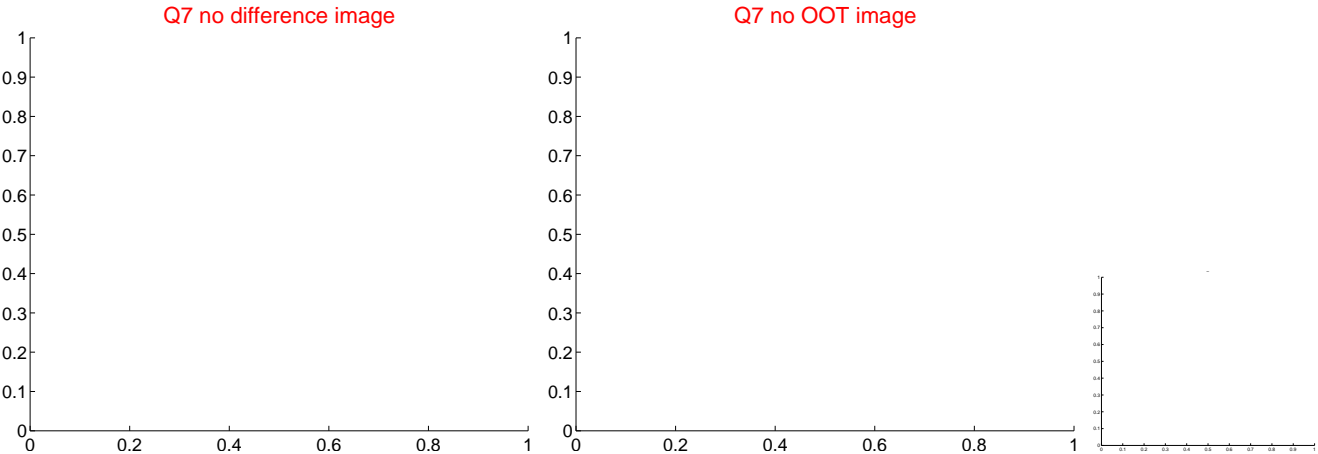
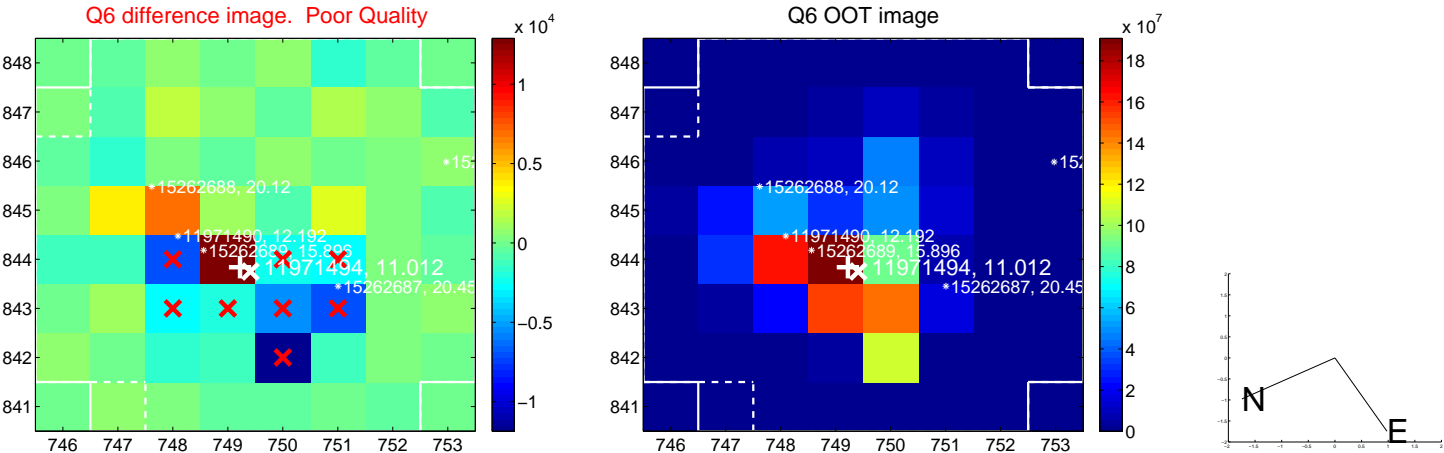
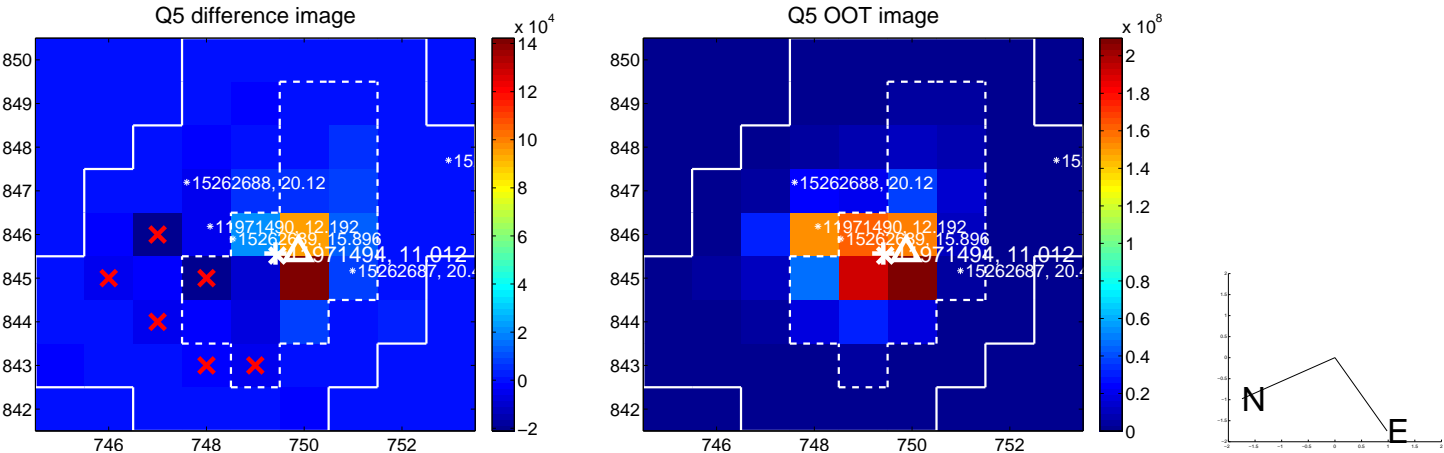


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

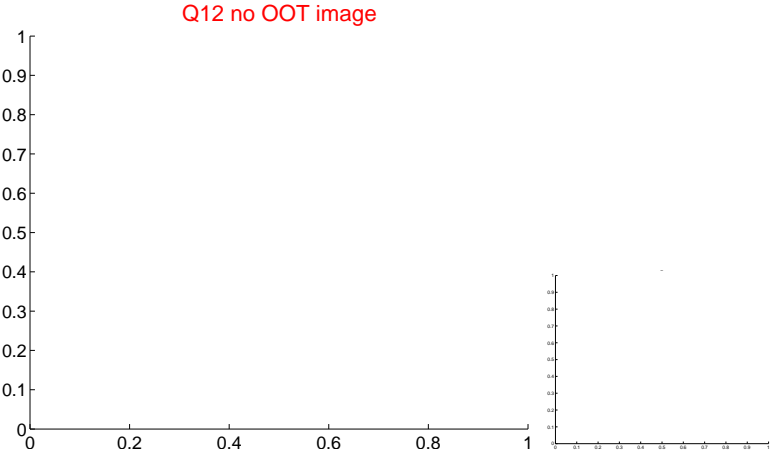
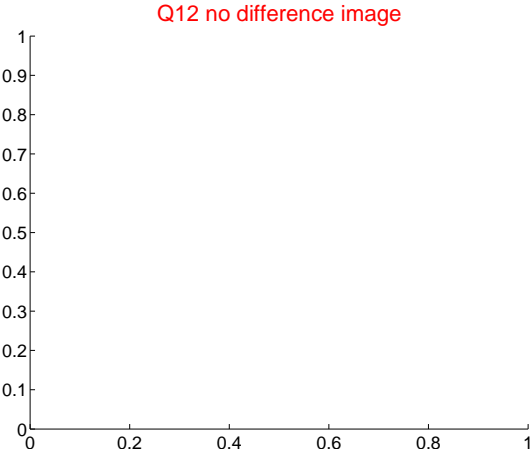
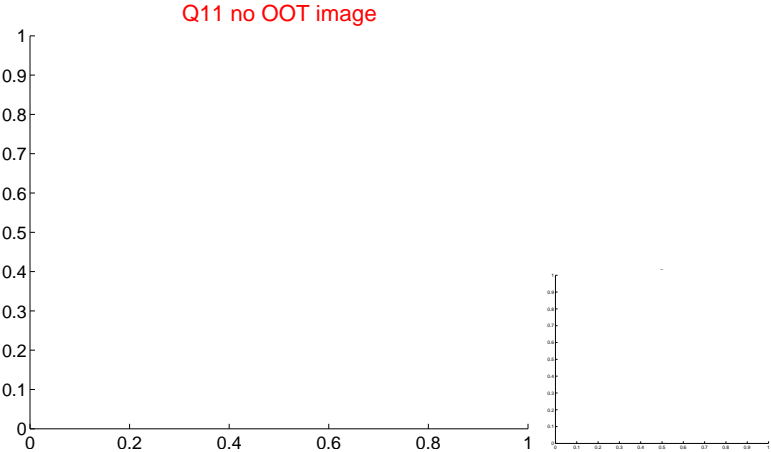
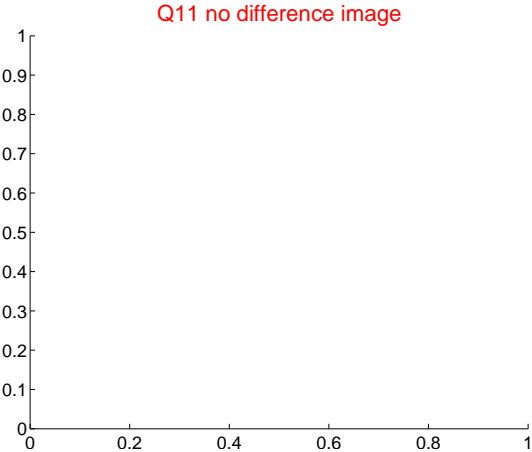
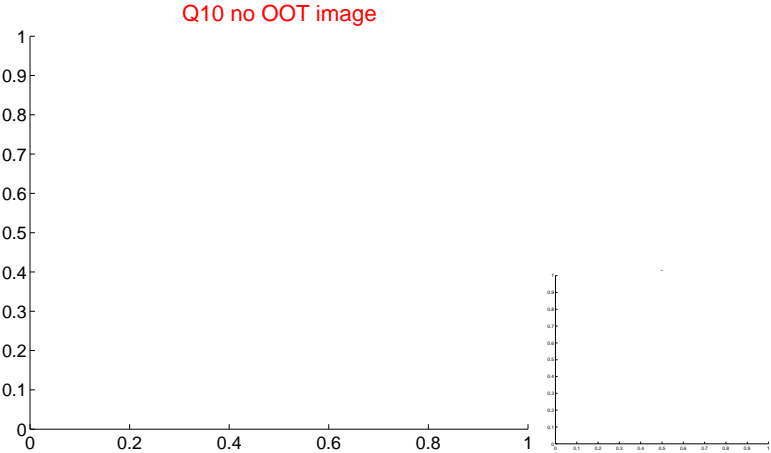
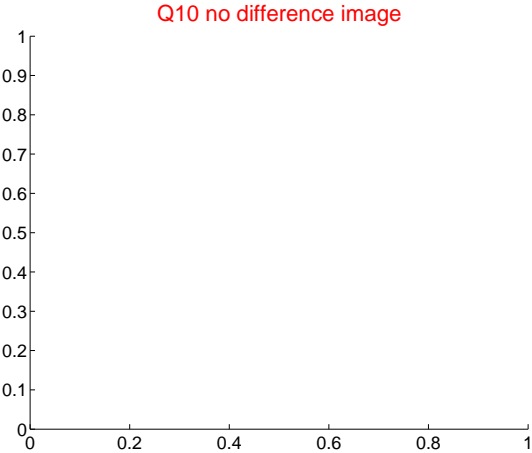
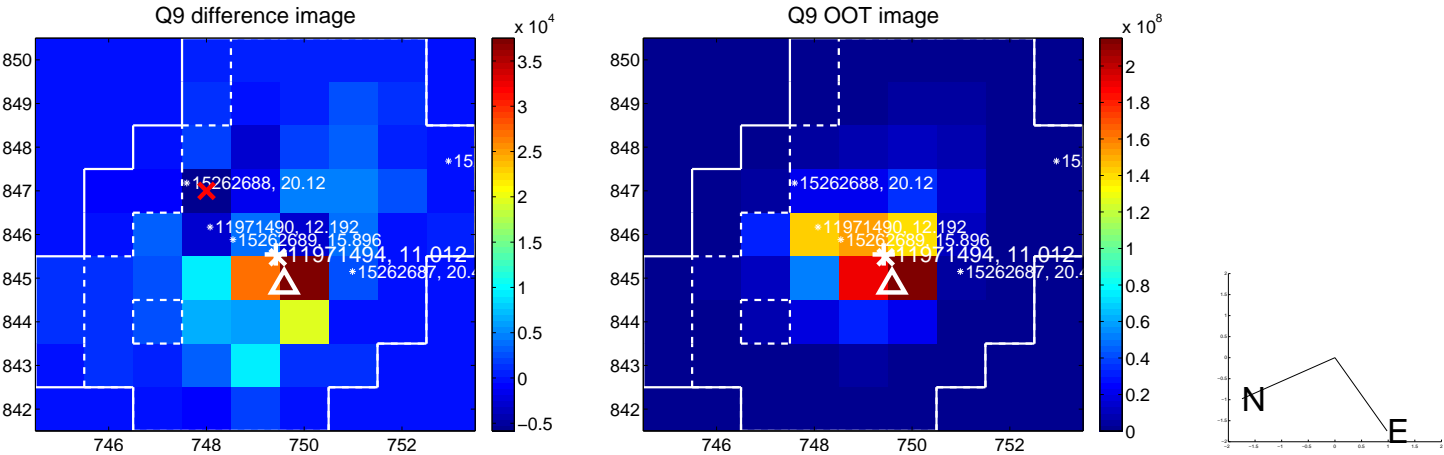
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



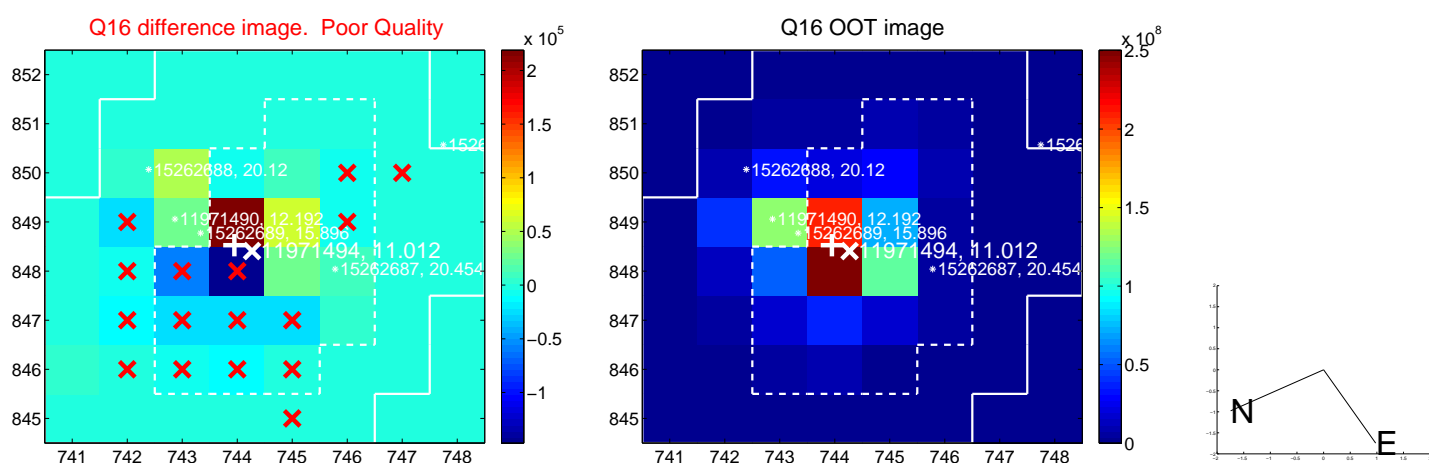
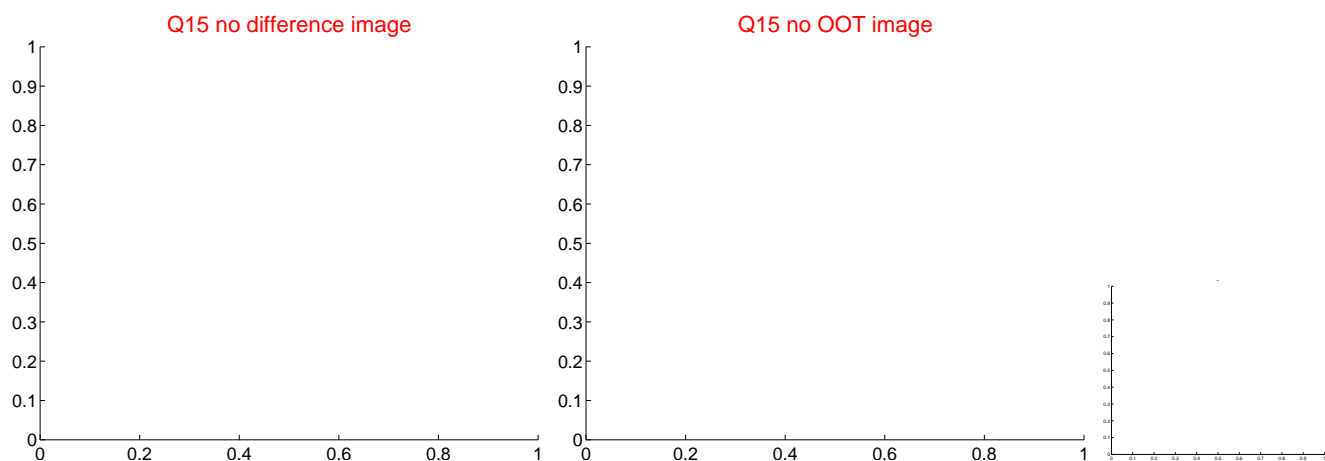
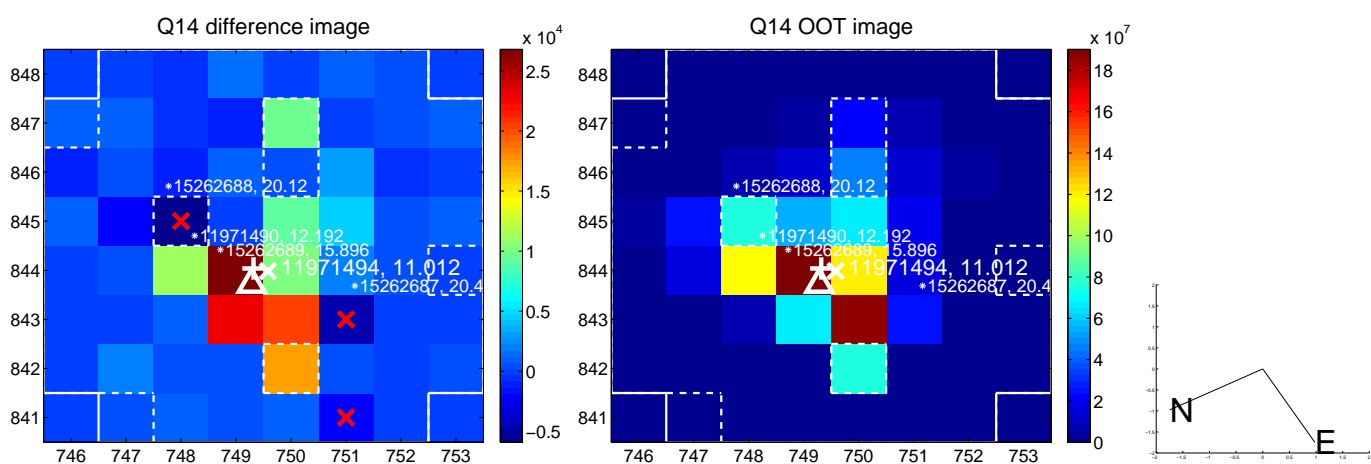
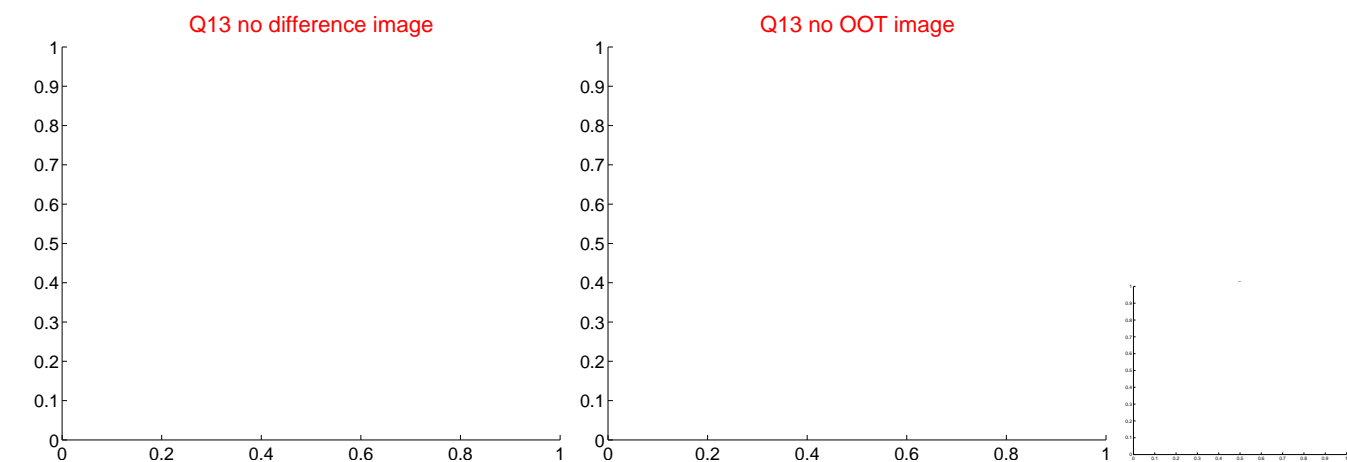
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



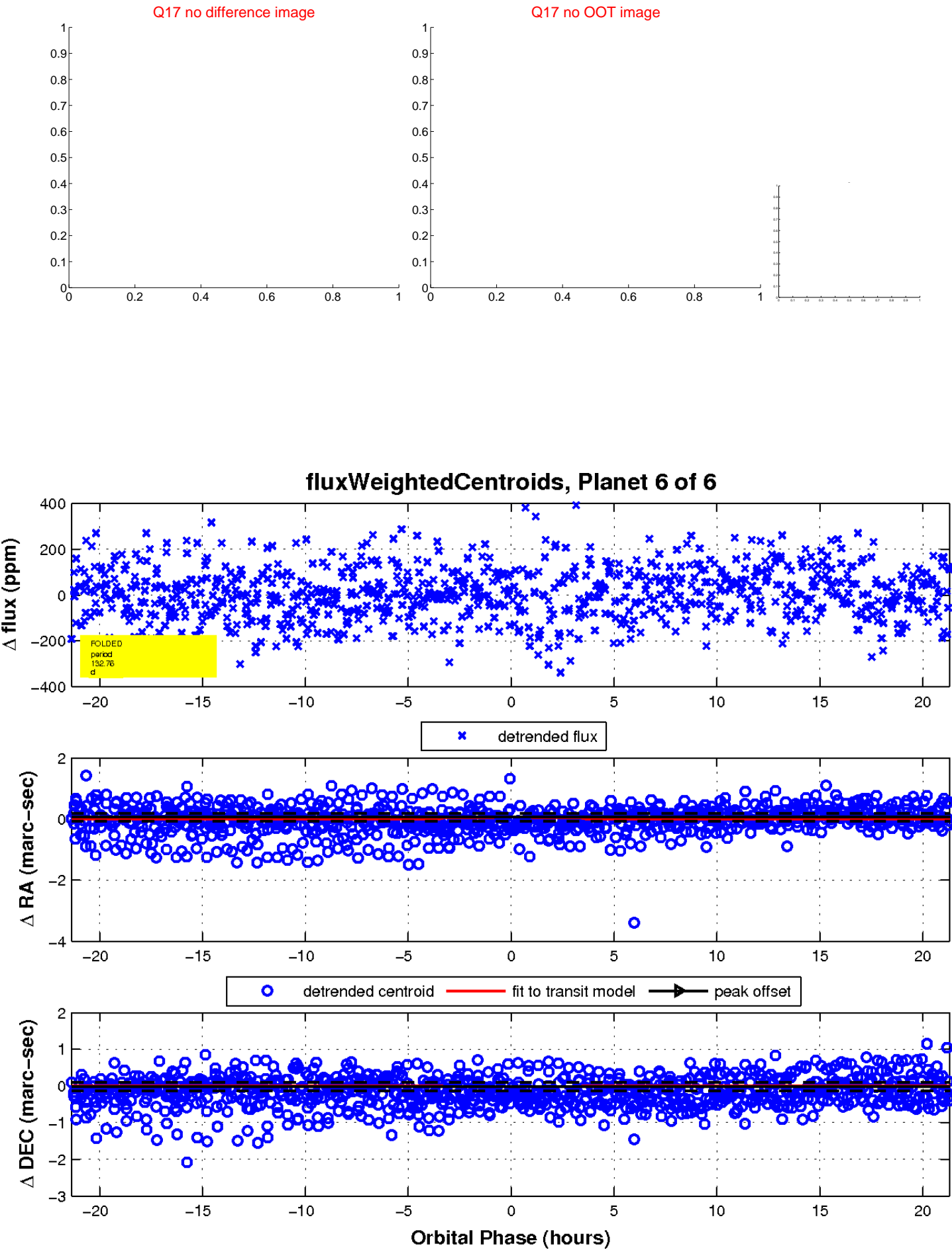
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

