

KIC 011909497

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})
011909497-01	OBS	No	1.030209	132.093933	388.4	1.054	10.9	8.9	3.78	7619	8.67	67507.22
011909497-02	OBS	No	1.030225	132.363354	396.7	1.661	8.7	11.6	3.78	7619	8.84	67505.89
011909497-03	OBS	No	2.382798	132.979518	561.7	28.594	8.1	19.6	3.78	7619	11.39	22069.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011909497-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
011909497-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
011909497-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV

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

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

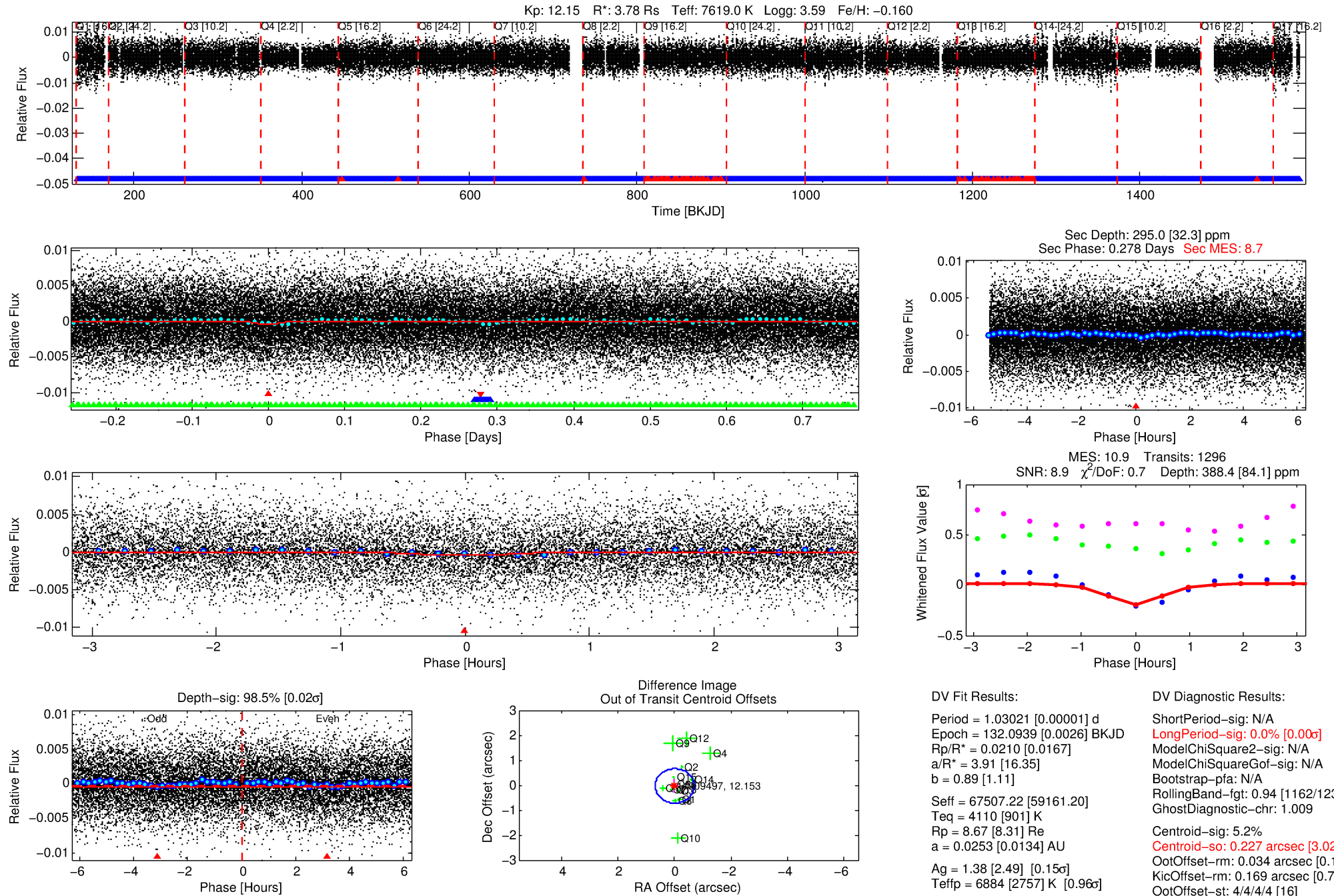
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011909497-01

No Significant Match Found

DV One-Page Summary

KIC: 11909497 Candidate: 1 of 3 Period: 1.030 d



DV Fit Results:

Period = 1.03021 [0.00001] d
Epoch = 132.0939 [0.0026] BKJD
Rp/R* = 0.0210 [0.0167]
a/R* = 3.91 [16.35]
b = 0.89 [1.11]
Seff = 67507.22 [59161.20]
Teq = 4110 [901] K
Rp = 8.67 [8.31] Re
a = 0.0253 [0.0134] AU
Ag = 1.38 [2.49] [0.15σ]
Teffp = 6884 [2757] K [0.96σ]

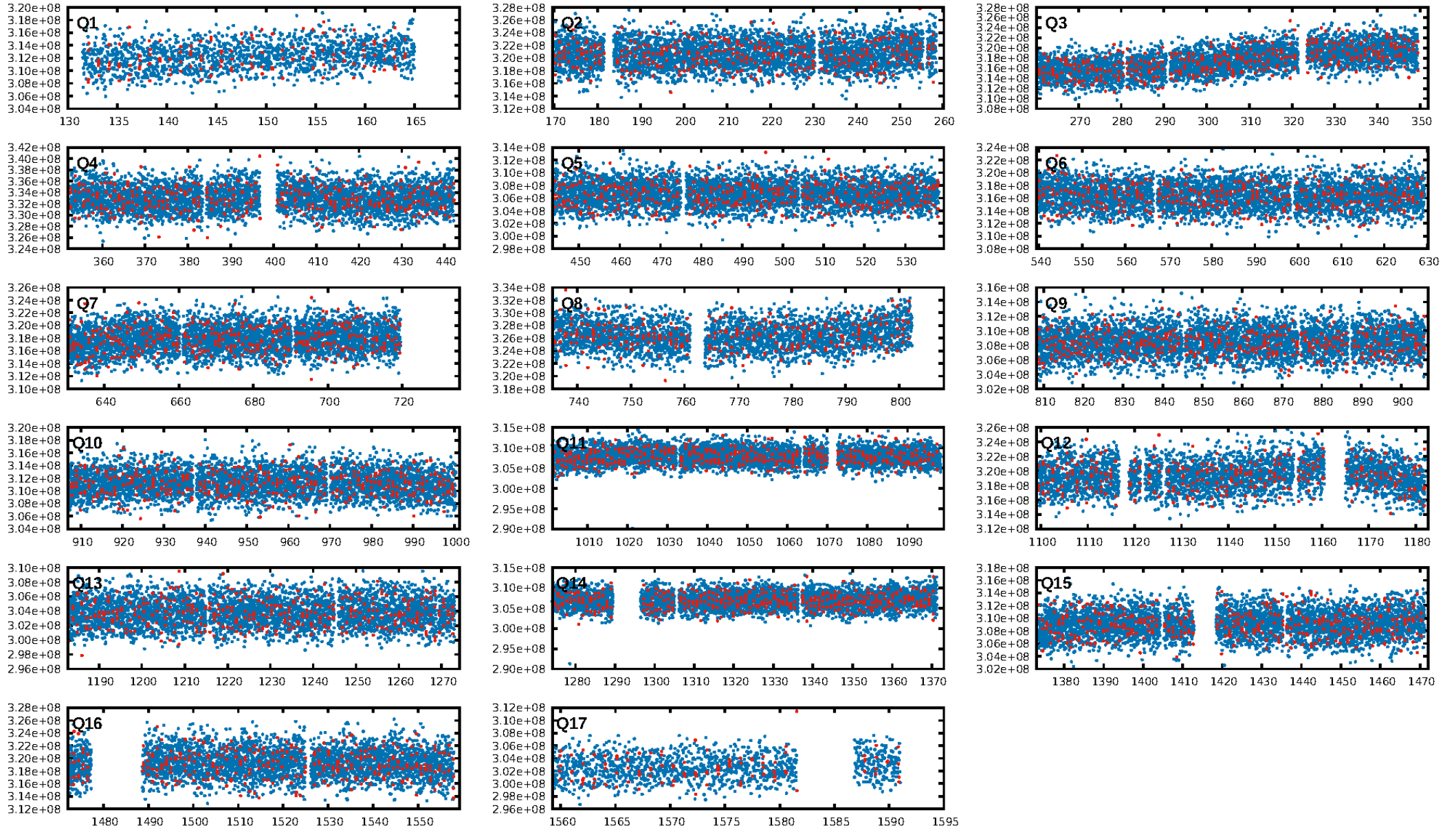
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.94 [1162/1238]
GhostDiagnostic-chr: 1.009
Centroid-sig: 5.2%
Centroid-so: 0.227 arcsec [3.02σ]
OotOffset-rm: 0.034 arcsec [0.15σ]
KicOffset-rm: 0.169 arcsec [0.73σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.69 [11/16]
DiffImageOverlap-fno: 1.00 [17/17]

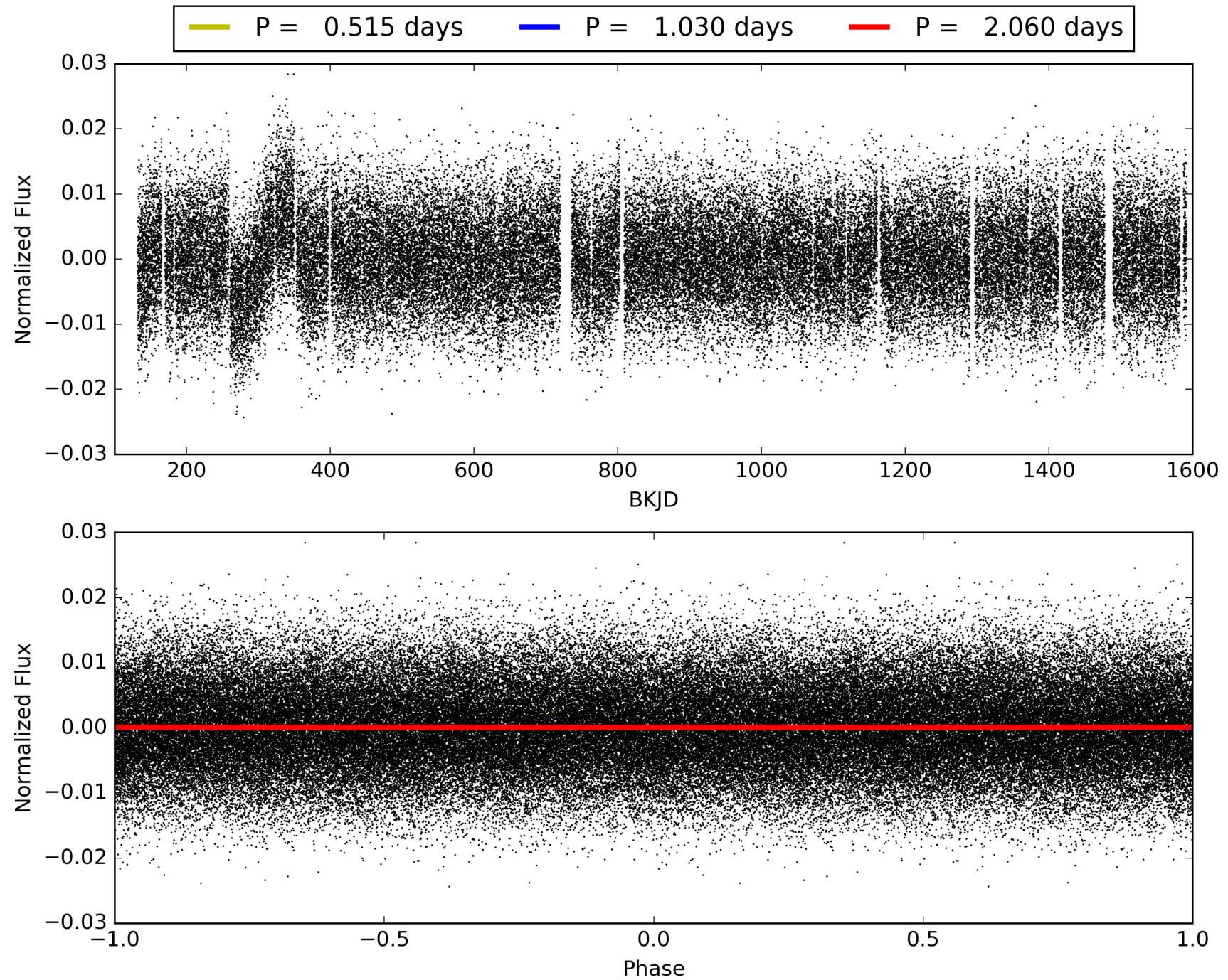
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:52:48 Z

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

TCE 011909497-01, PDC Light Curves

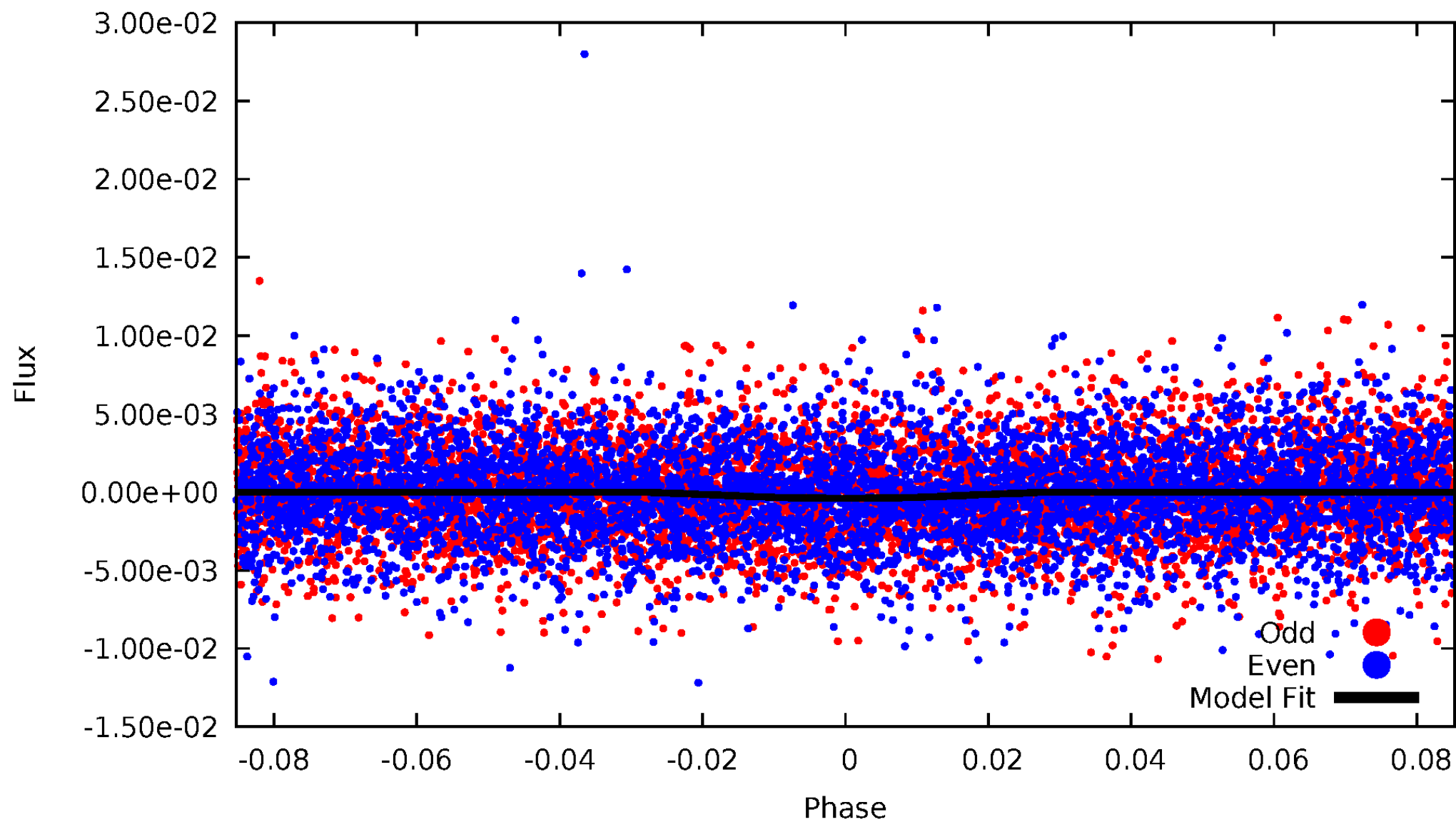


TCE 011909497-01



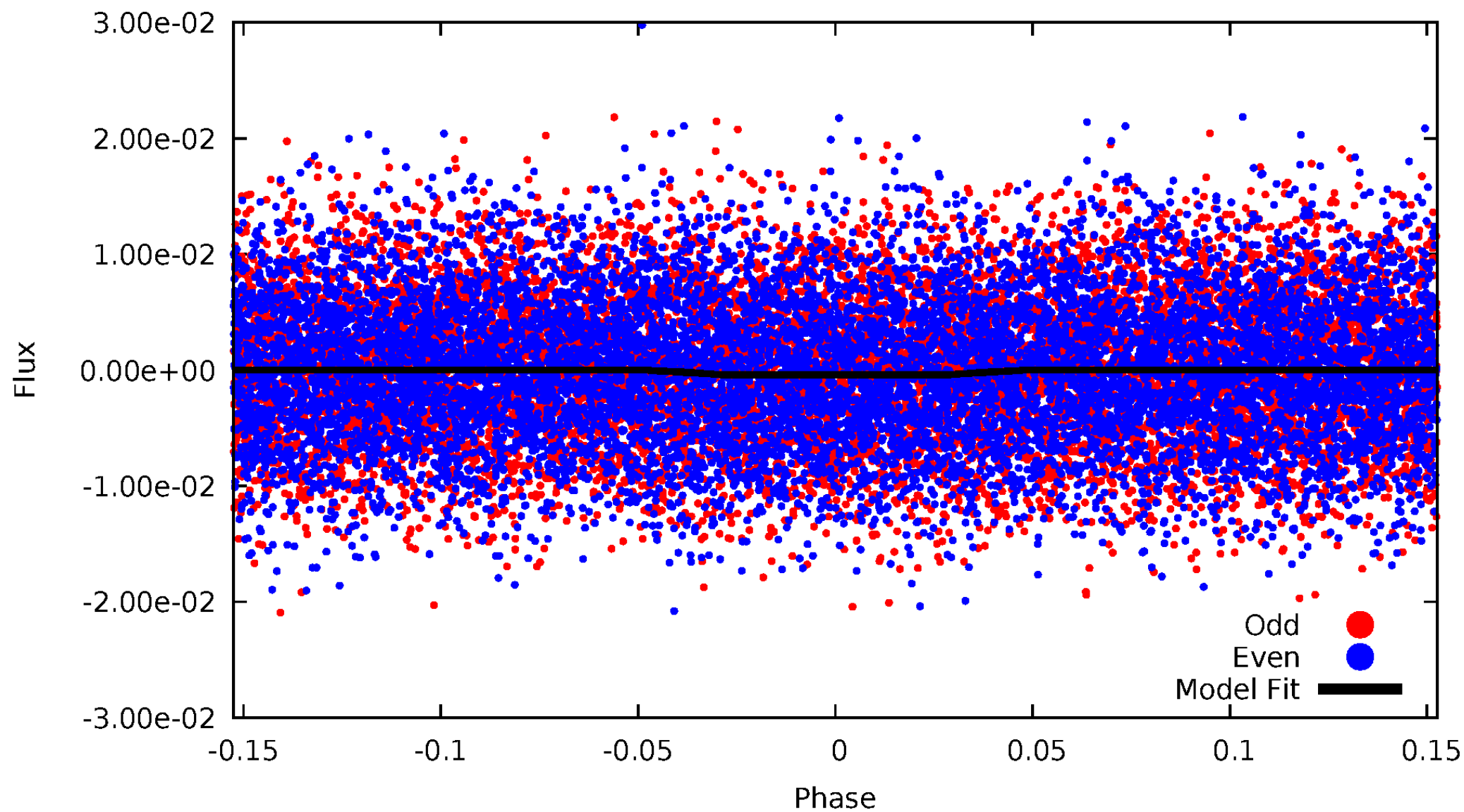
DV Odd/Even

TCE 011909497-01



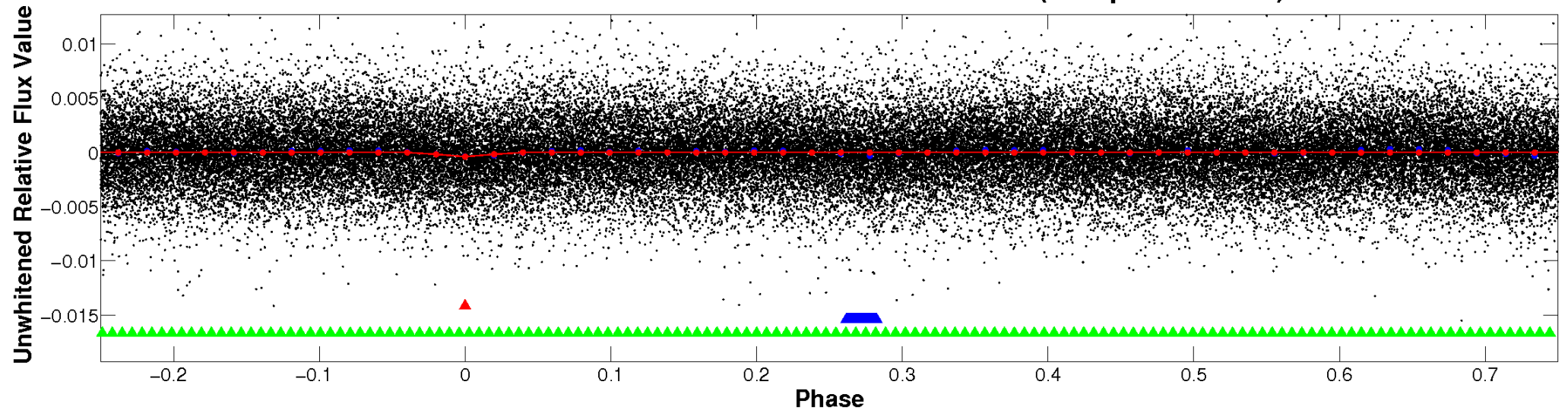
ALT Odd/Even

TCE 011909497-01

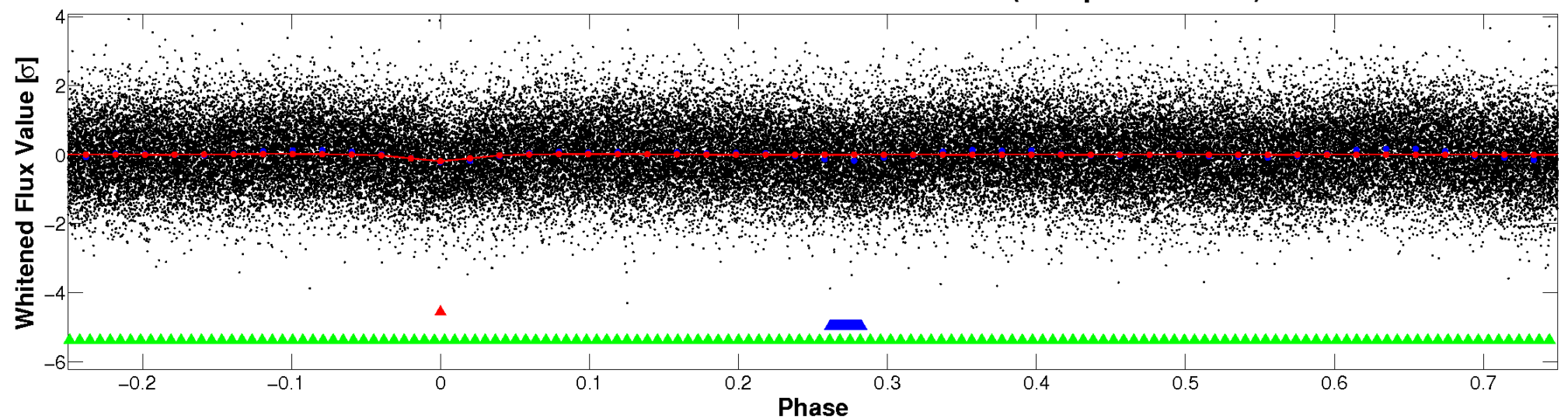


Non-Whitened Vs. Whitened Light Curve

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

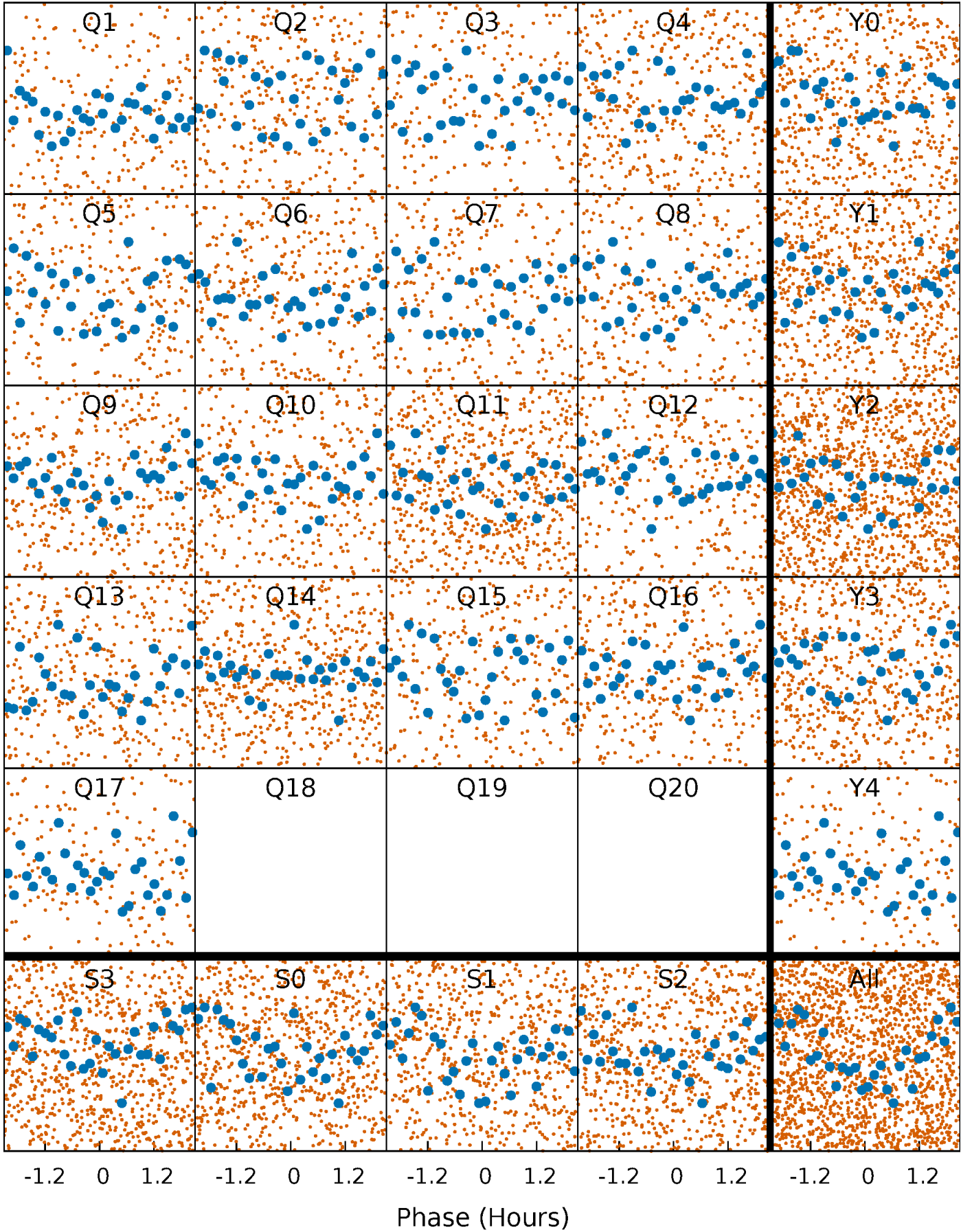


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



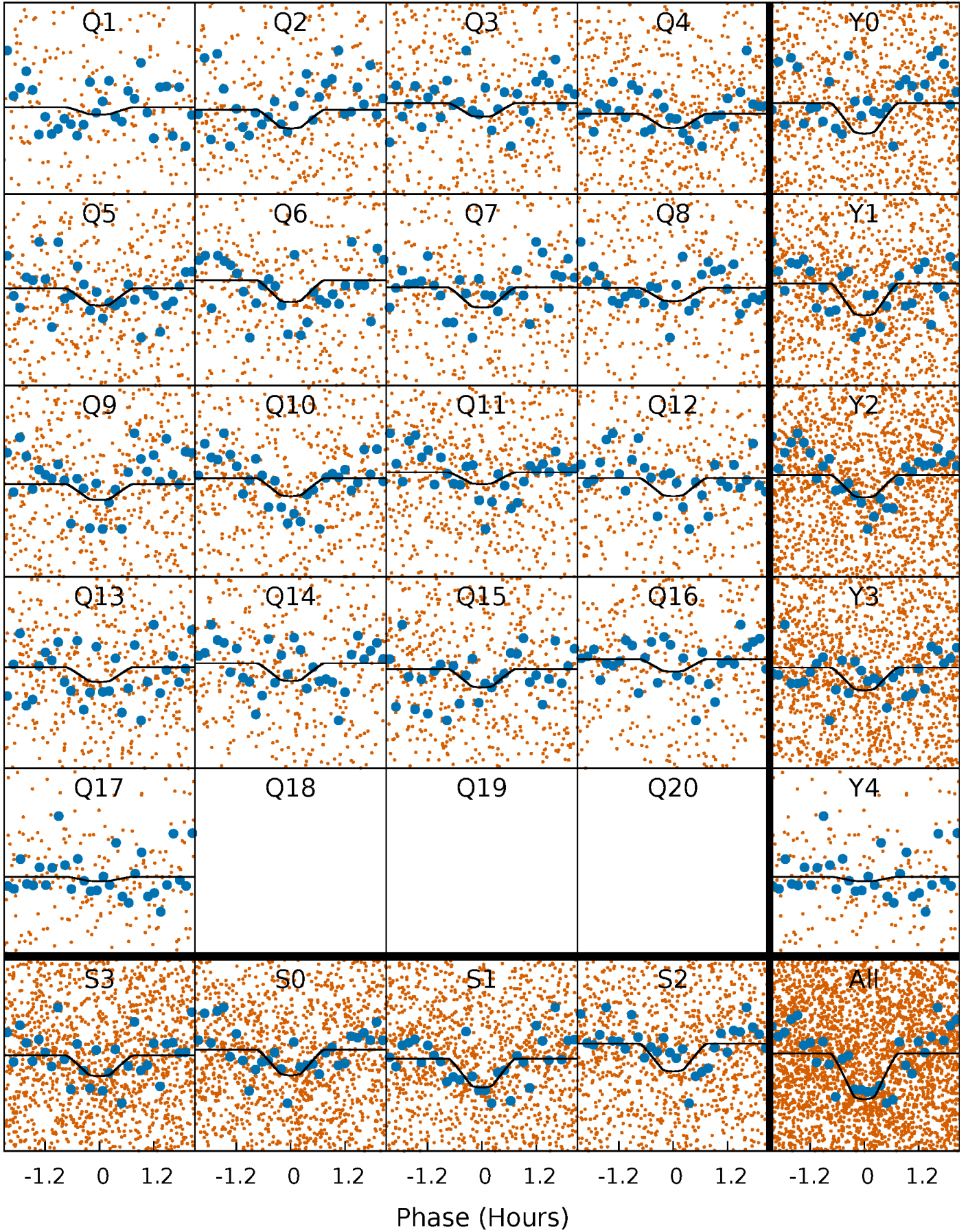
PDC Quarter-Phased Transit Curves

TCE 011909497-01 P= 1.030209 Days $T_0=132.093933$ (BKJD)



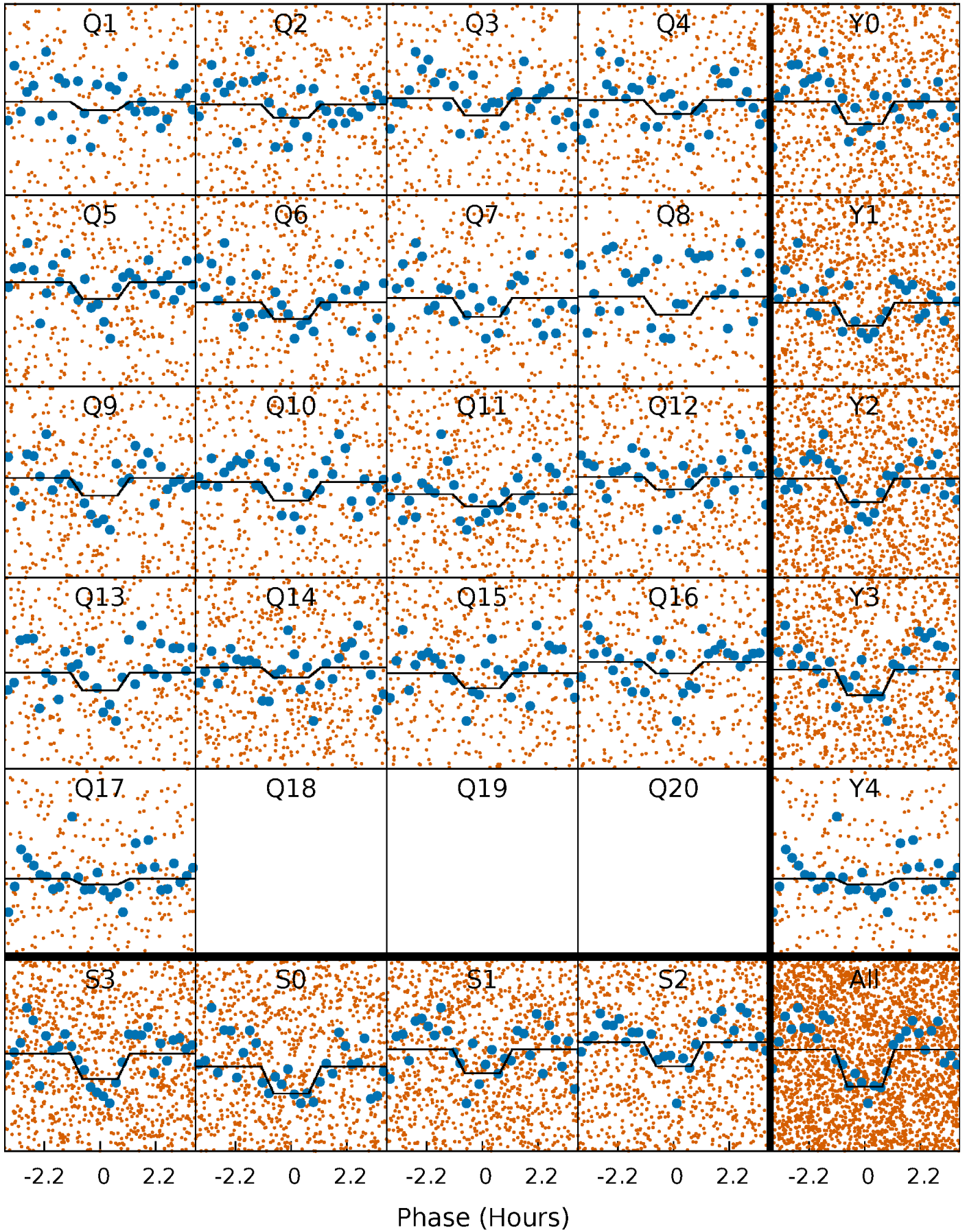
DV Quarter-Phased Transit Curves

TCE 011909497-01 P= 1.030209 Days $T_0=132.093933$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

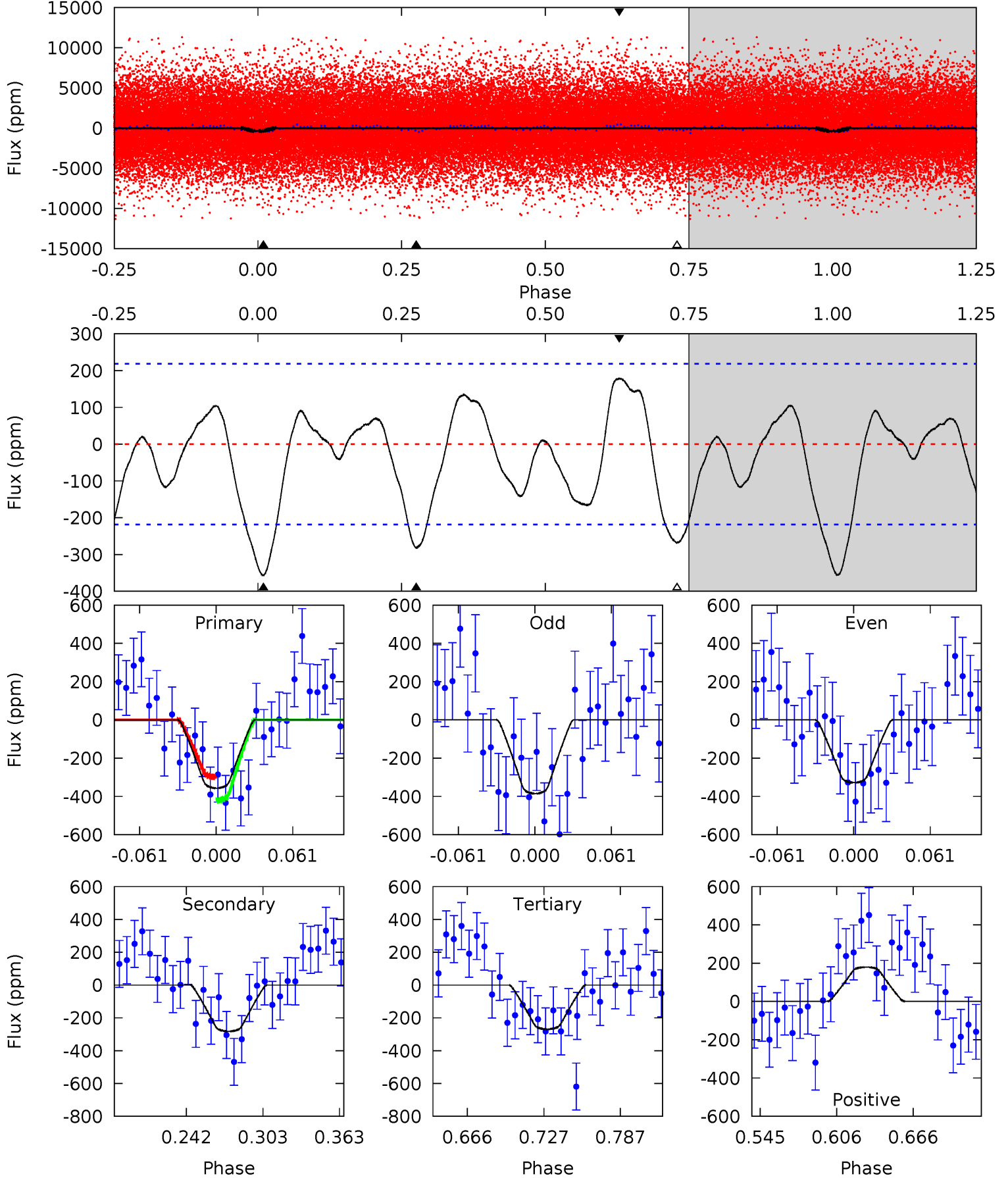
TCE 011909497-01 P= 1.030219 Days $T_0=132.092908$ (BKJD)



DV Model-Shift Uniqueness Test

011909497-01, P = 1.030209 Days, E = 131.063724 Days

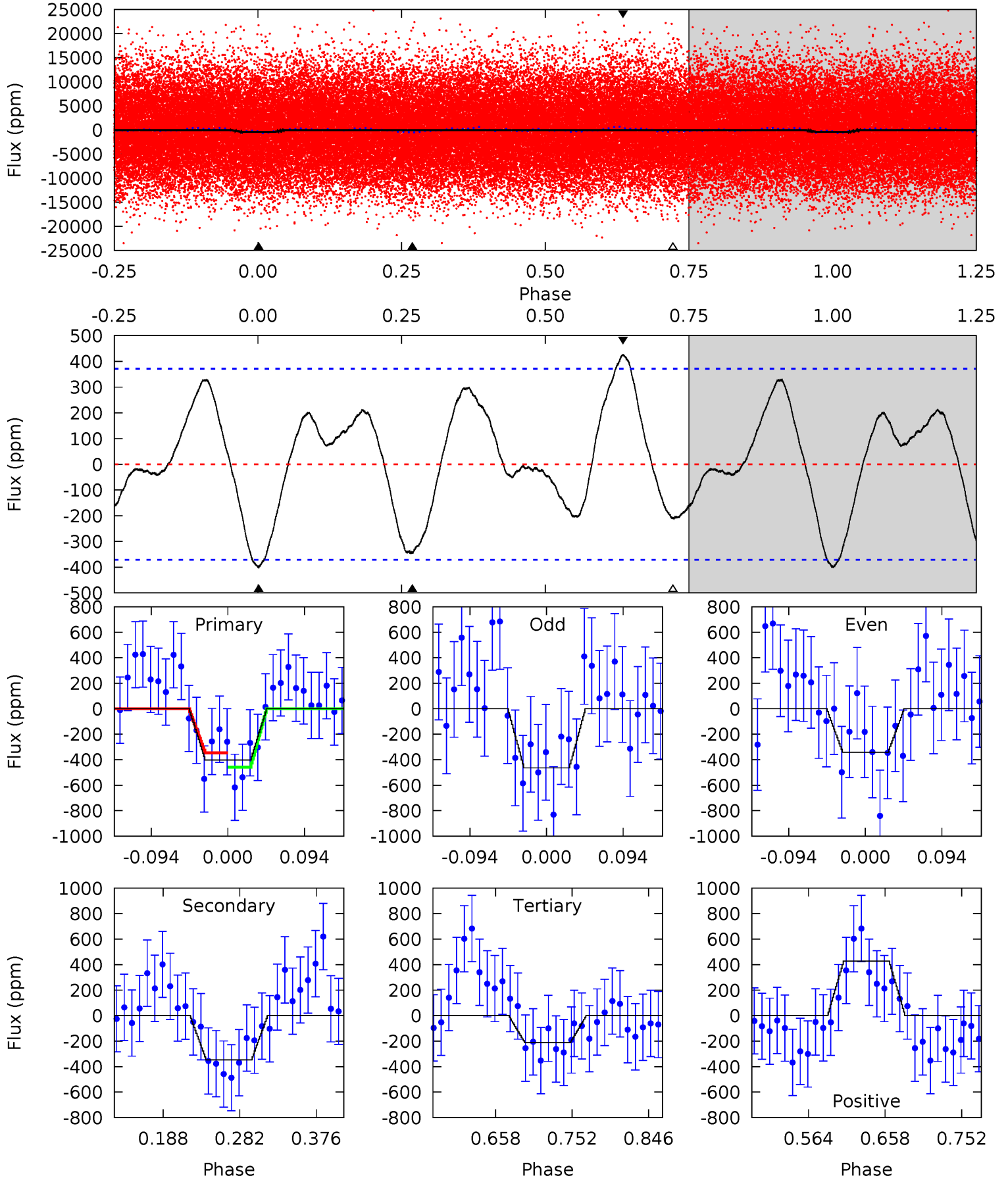
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.62	6.03	5.74	3.83	4.67	1.88	2.30	1.88	3.79	0.29	2.20	0.61	0.86	0.33	1.31



Alt Model-Shift Uniqueness Test

011909497-01, P = 1.030219 Days, E = 131.062689 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.97	4.28	2.62	5.28	4.58	1.67	2.03	2.35	-0.31	1.66	-0.99	0.75	0.92	0.52	0.69



Stellar Parameters For KIC 011909497

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7619^{+212}_{-318}	$3.590^{+0.510}_{-0.060}$	$-0.160^{+0.200}_{-0.300}$	$3.777^{+0.505}_{-2.021}$	$2.025^{+0.255}_{-0.583}$	$0.053^{+0.351}_{-0.011}$
	+3%/-4%	+14%/-2%	+125%/-188%	+13%/-54%	+13%/-29%	+663%/-20%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011909497-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-282 ± 47	$7.82^{+6.43}_{-4.81}$	5501^{+365}_{-686}	6118^{+5661}_{-1952}	$1.554^{+9.343}_{-1.065}$
Alt.	-347 ± 81	$8.06^{+6.98}_{-4.81}$	5499^{+377}_{-754}	6364^{+5293}_{-1966}	$1.856^{+9.144}_{-1.319}$

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 $A_{obs} \gg 1.0$

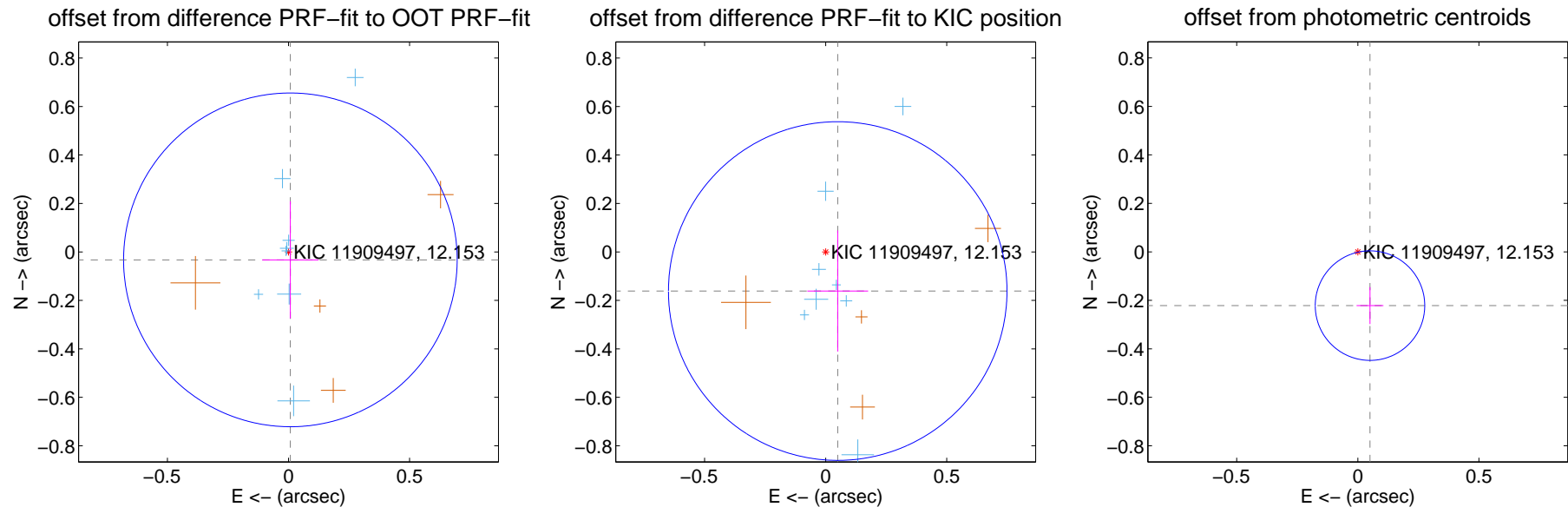
DV Centroid Data

Supplemental centroid analysis for 011909497-01. Kepler magnitude: 12.15. Transit SNR 8.87

There are 11 quarters with good PRF difference image offsets

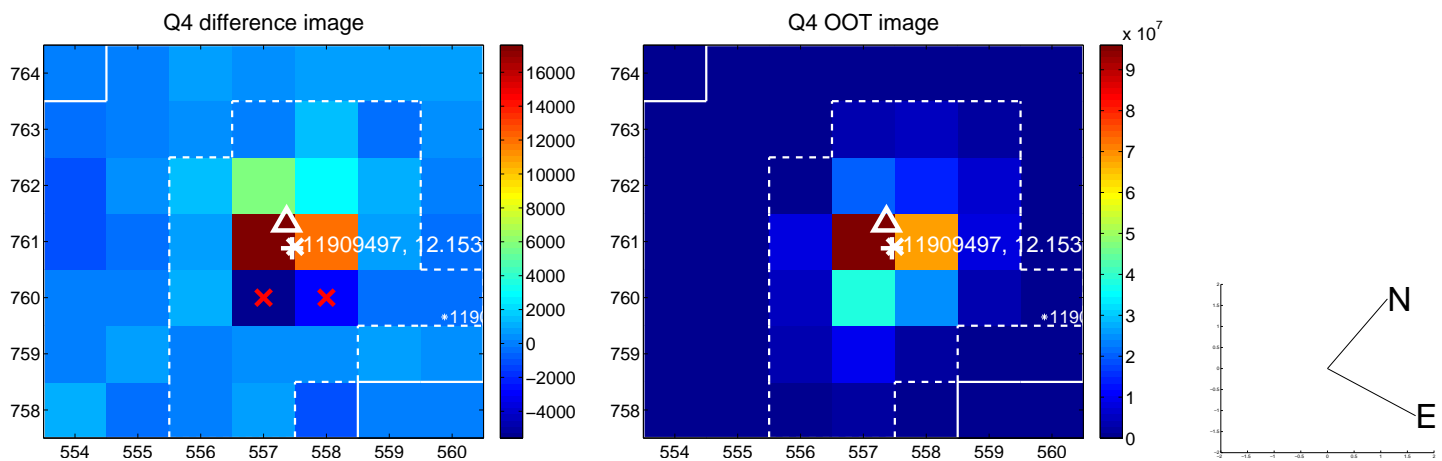
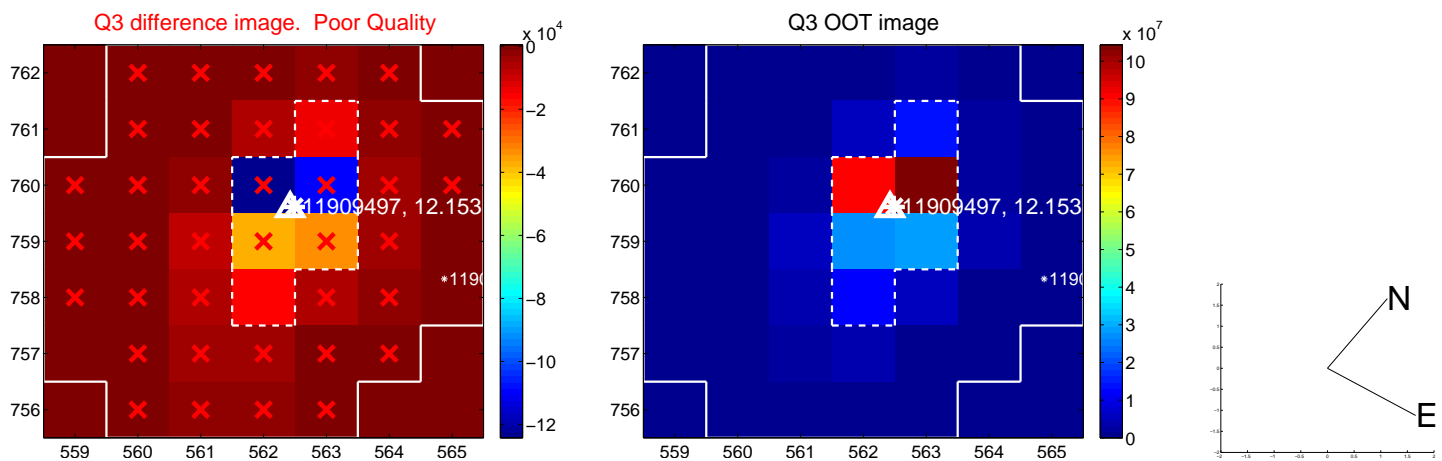
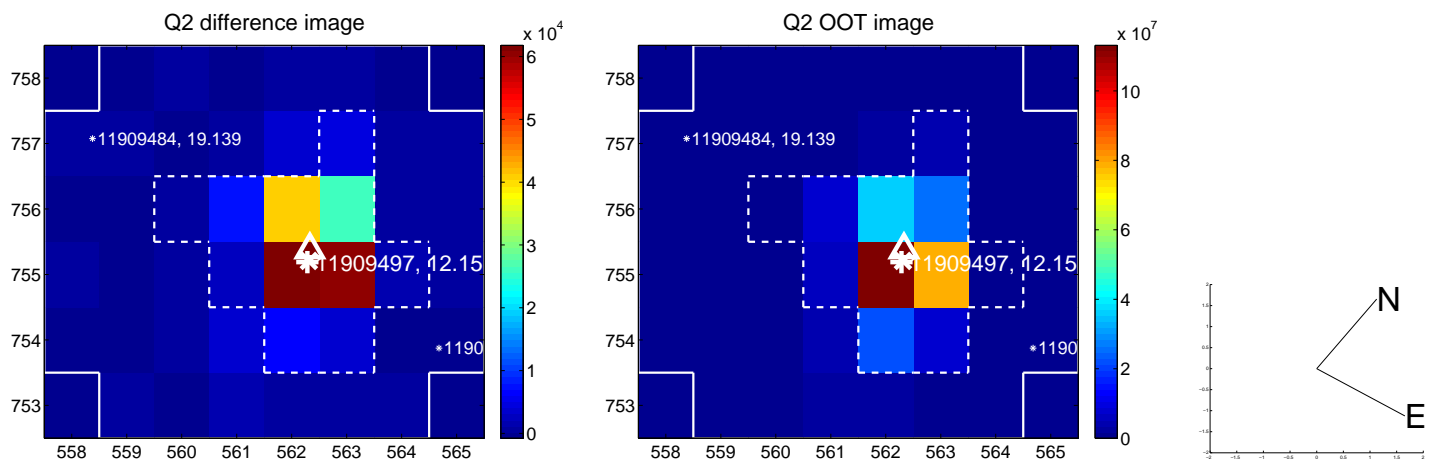
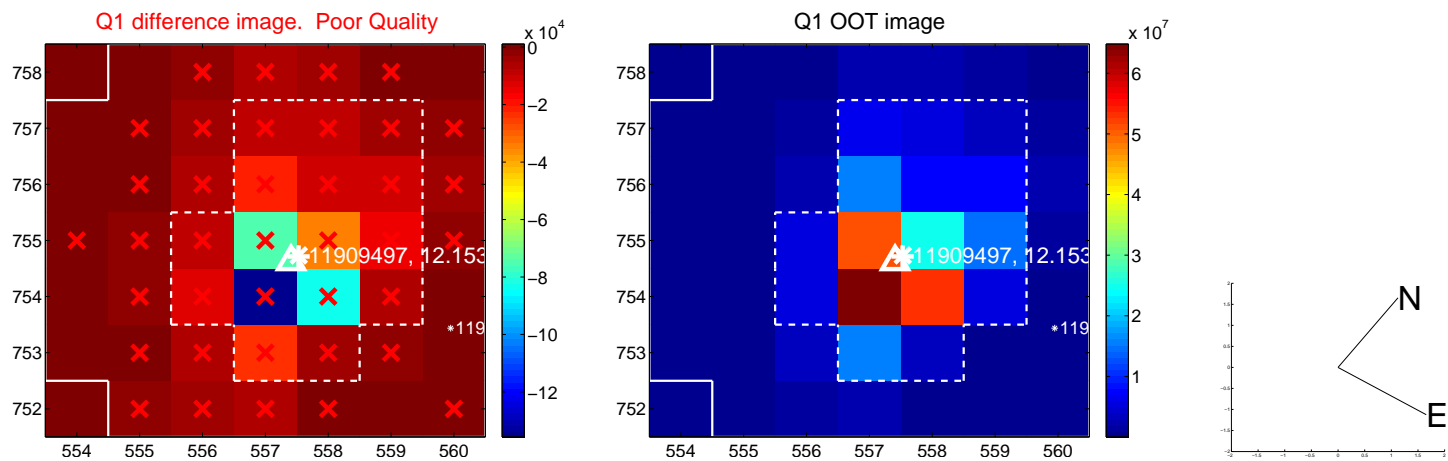
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.034 ± 0.230	0.15	-0.008 ± 0.116	-0.033 ± 0.242
PRF-fit source offset from KIC position	0.169 ± 0.233	0.73	-0.050 ± 0.125	-0.161 ± 0.250
photometric centroid source offset	0.23 ± 0.08	3.02	-0.05 ± 0.06	-0.22 ± 0.08

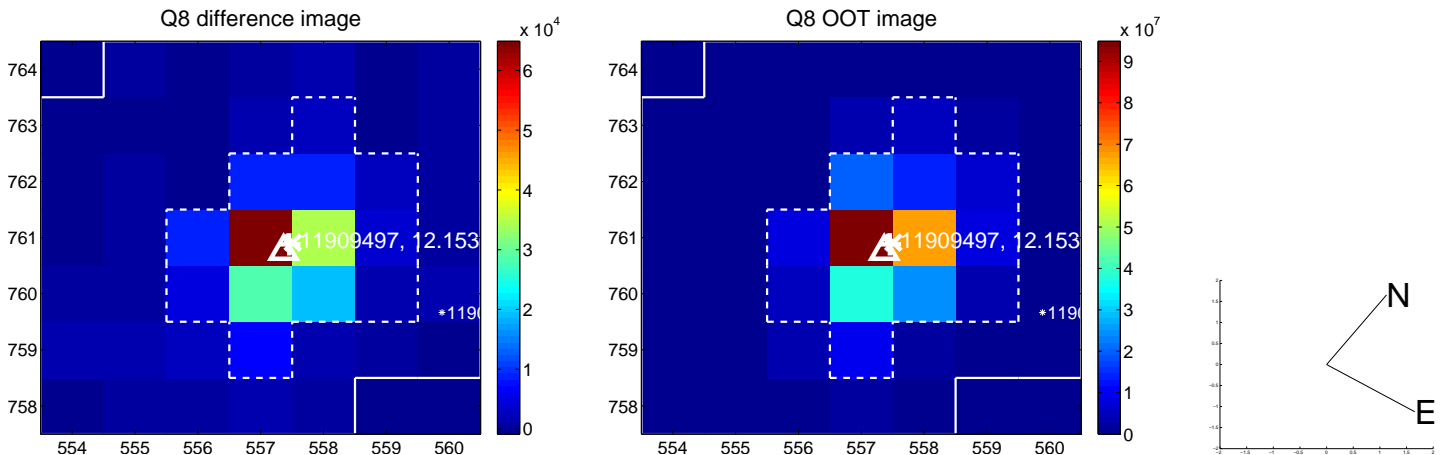
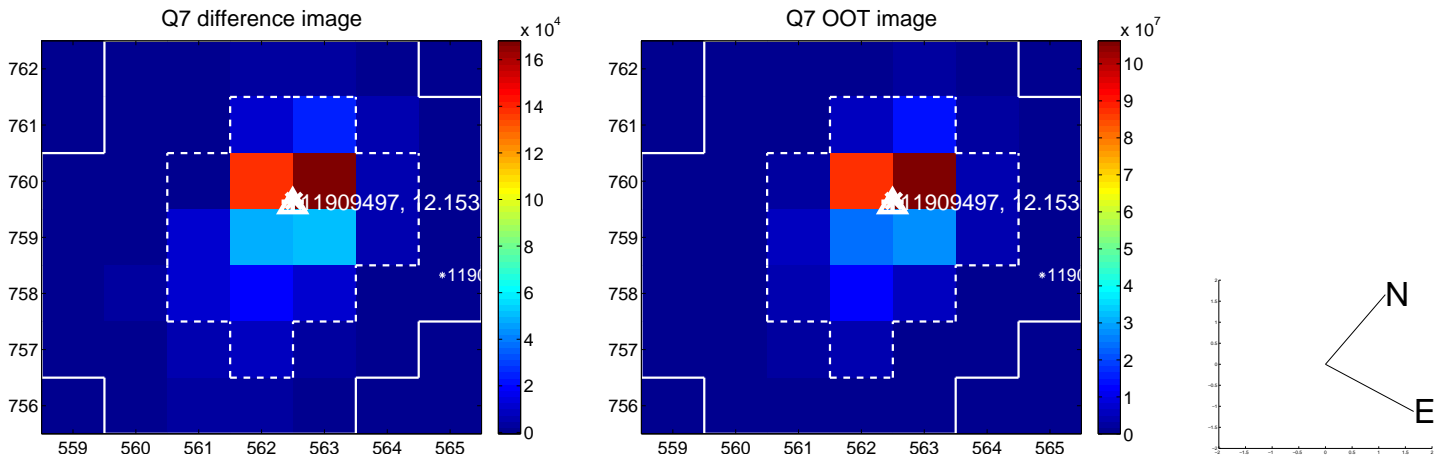
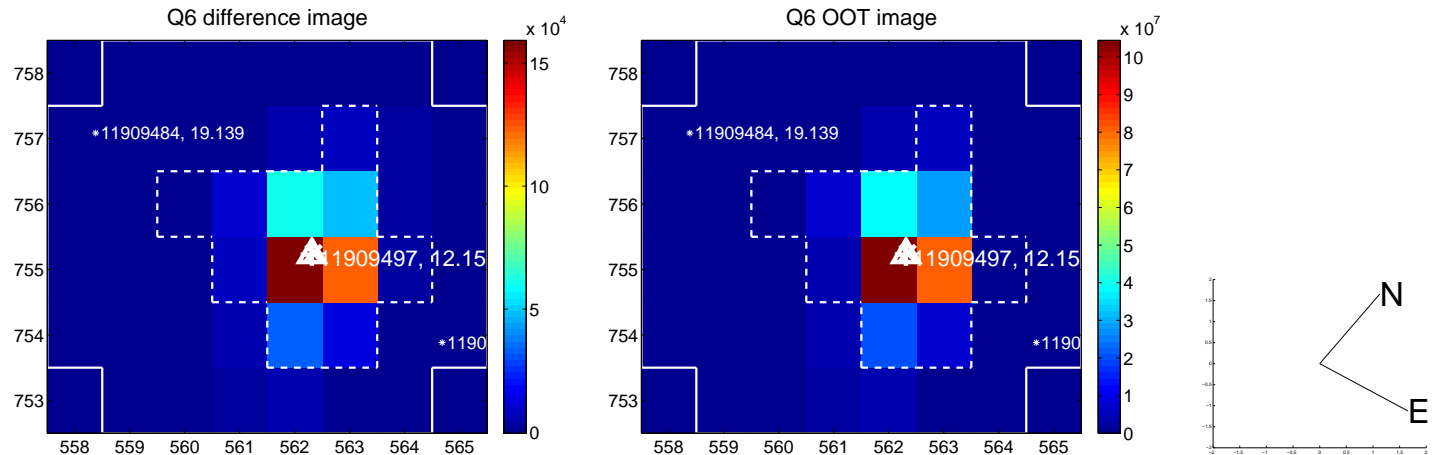
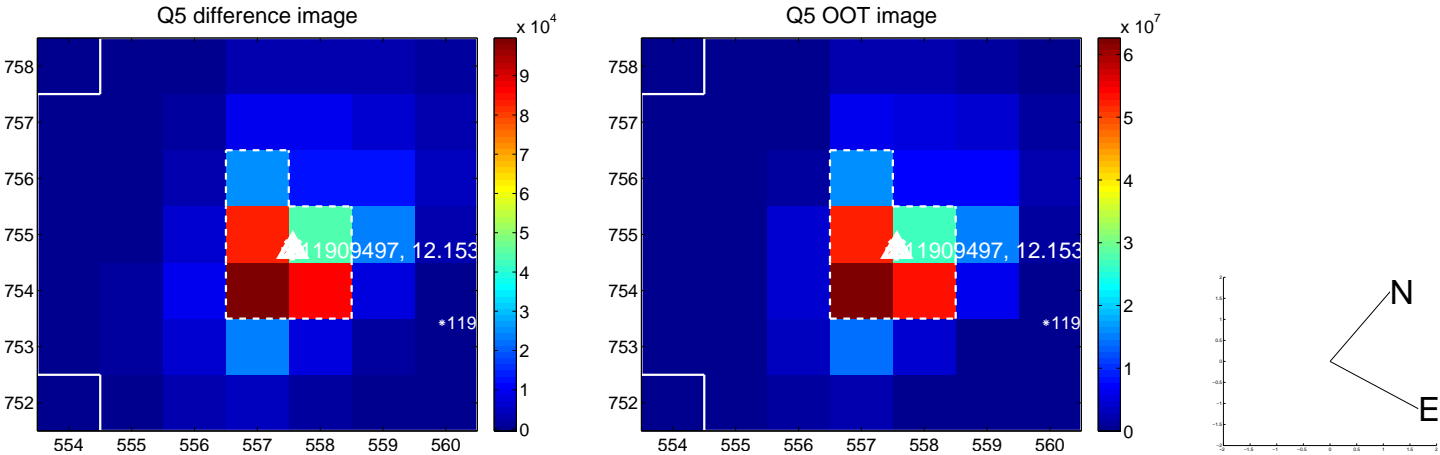


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

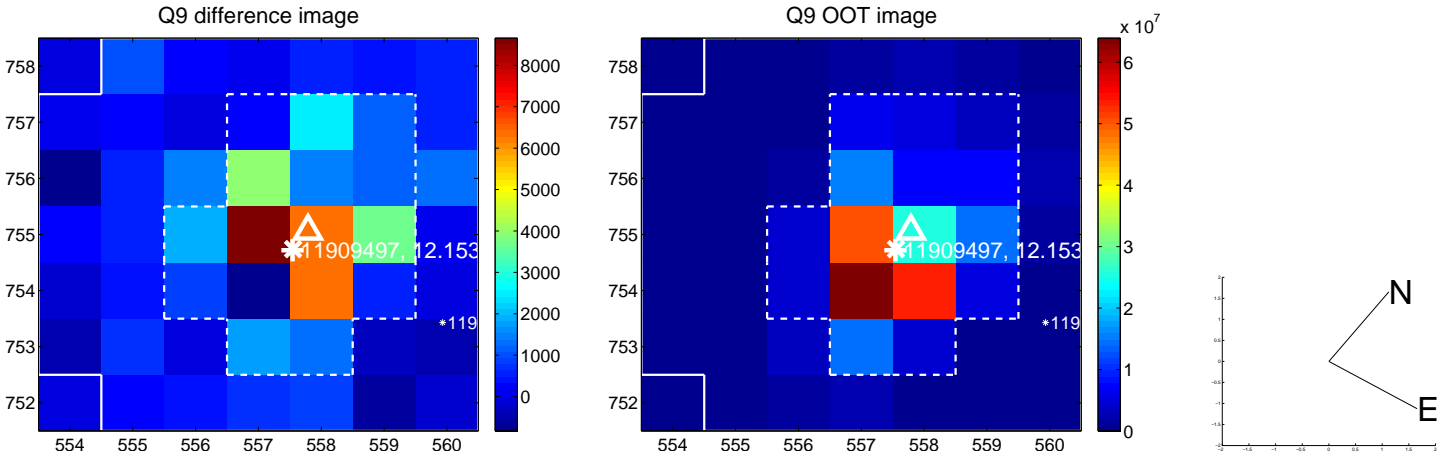
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



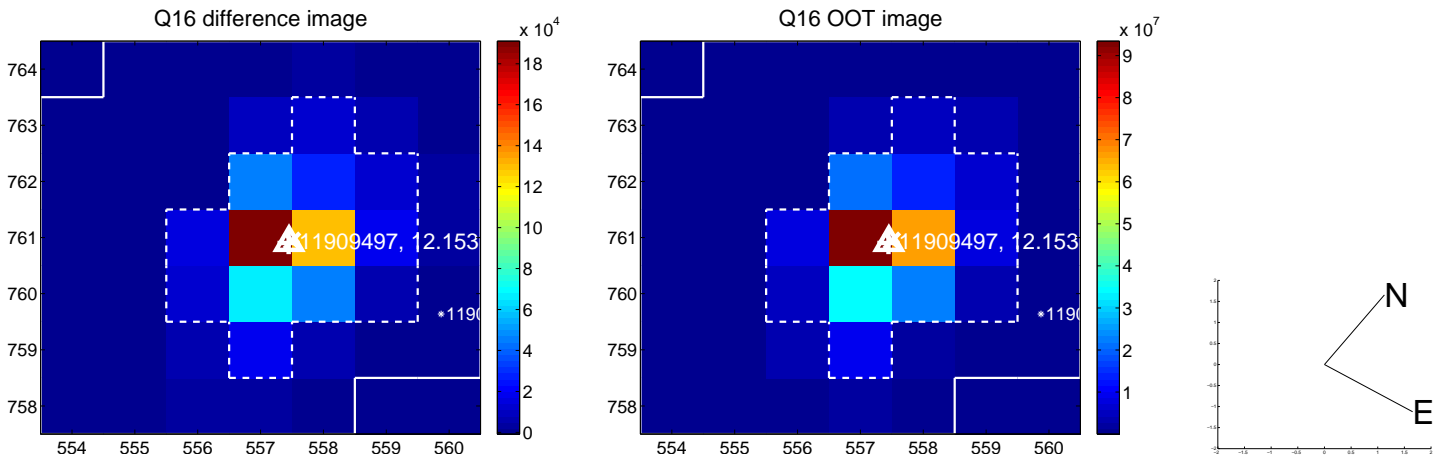
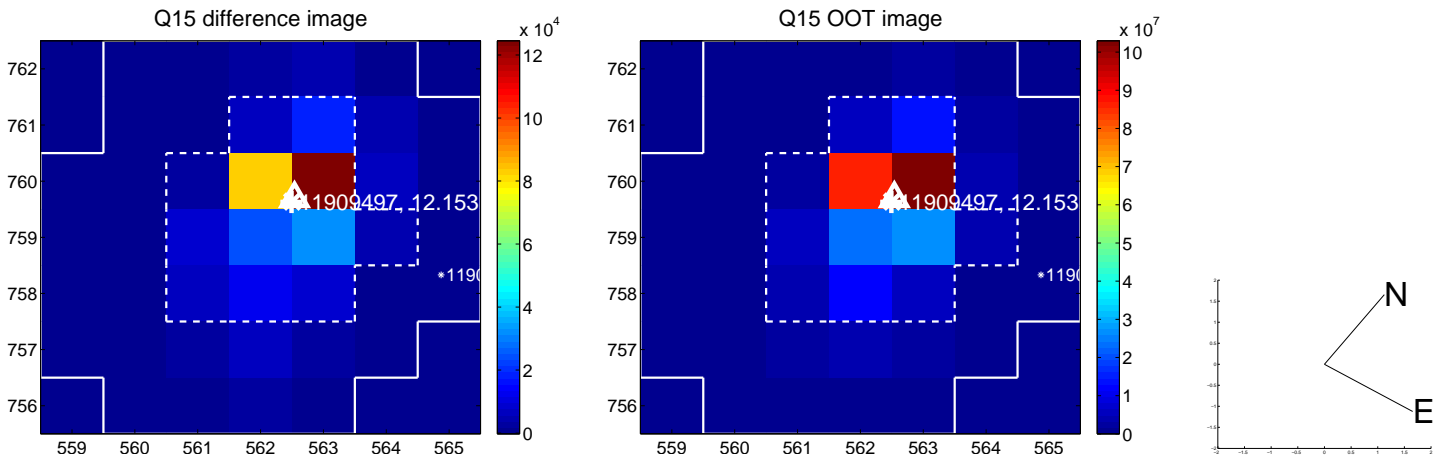
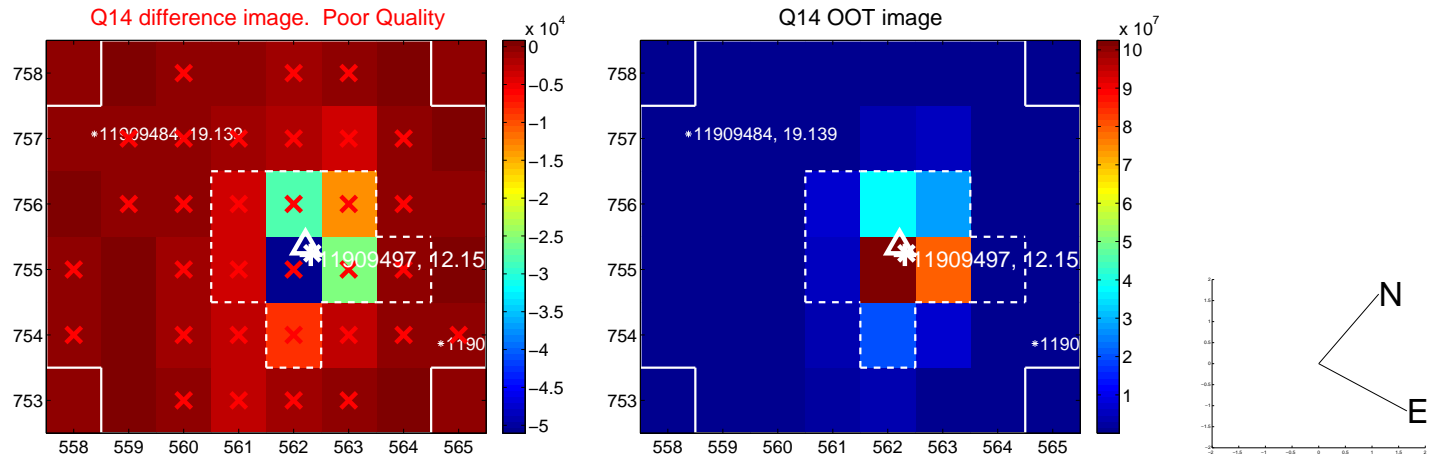
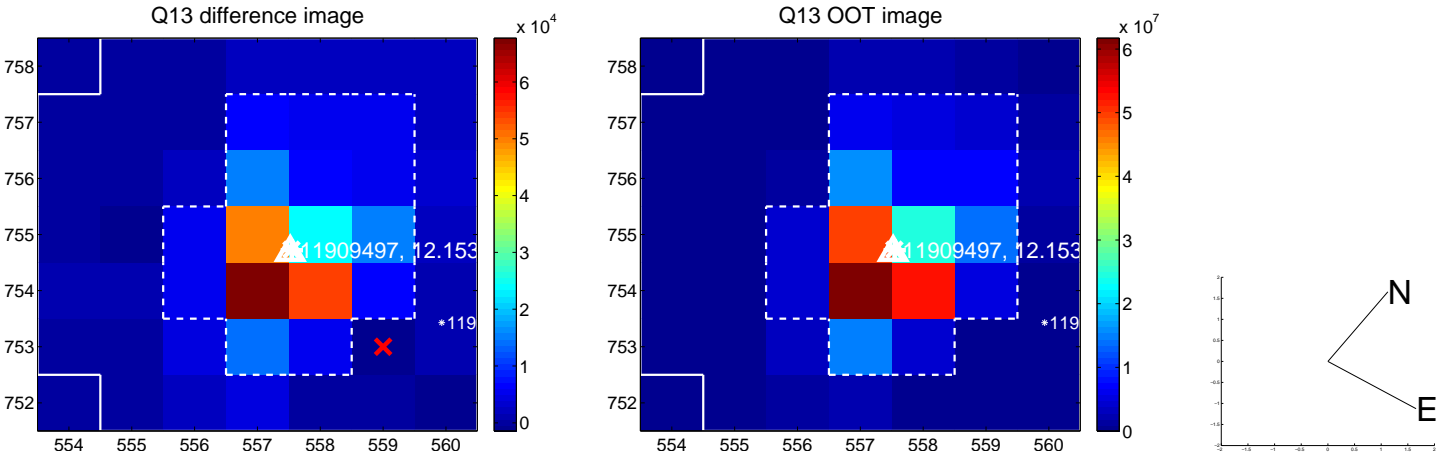
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



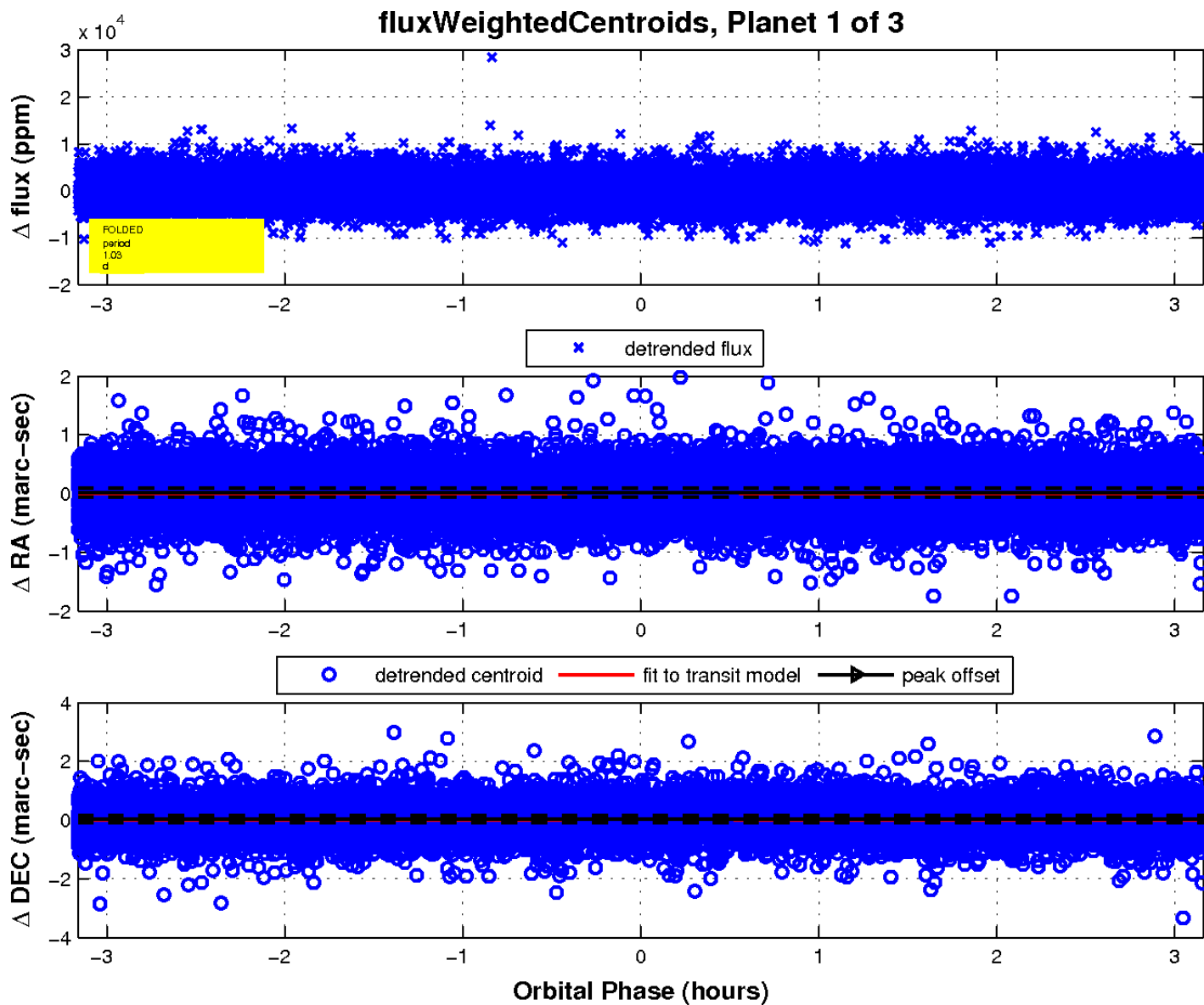
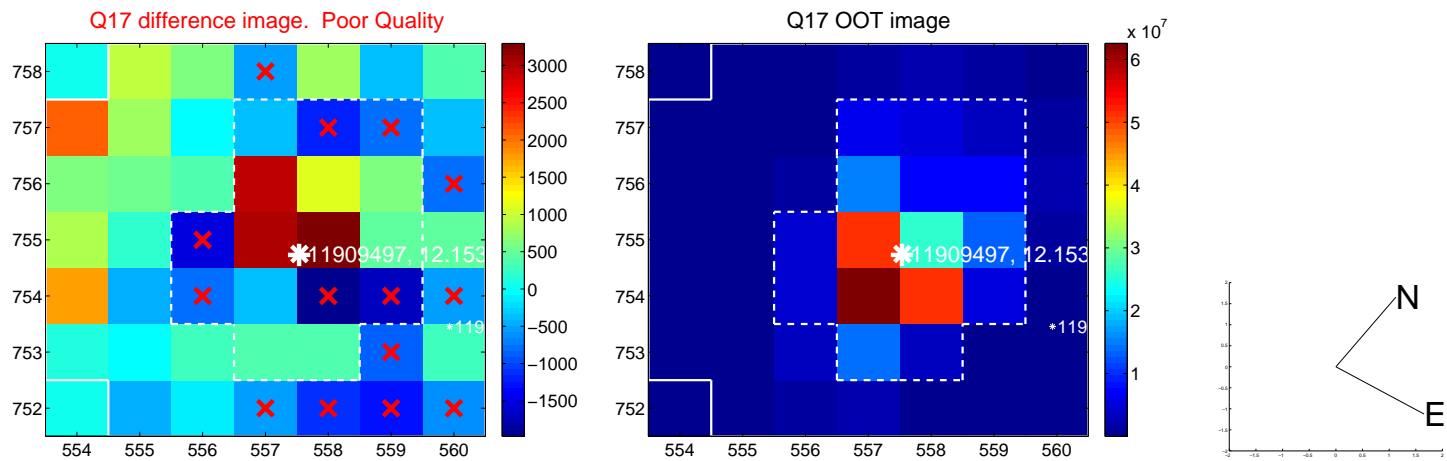
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

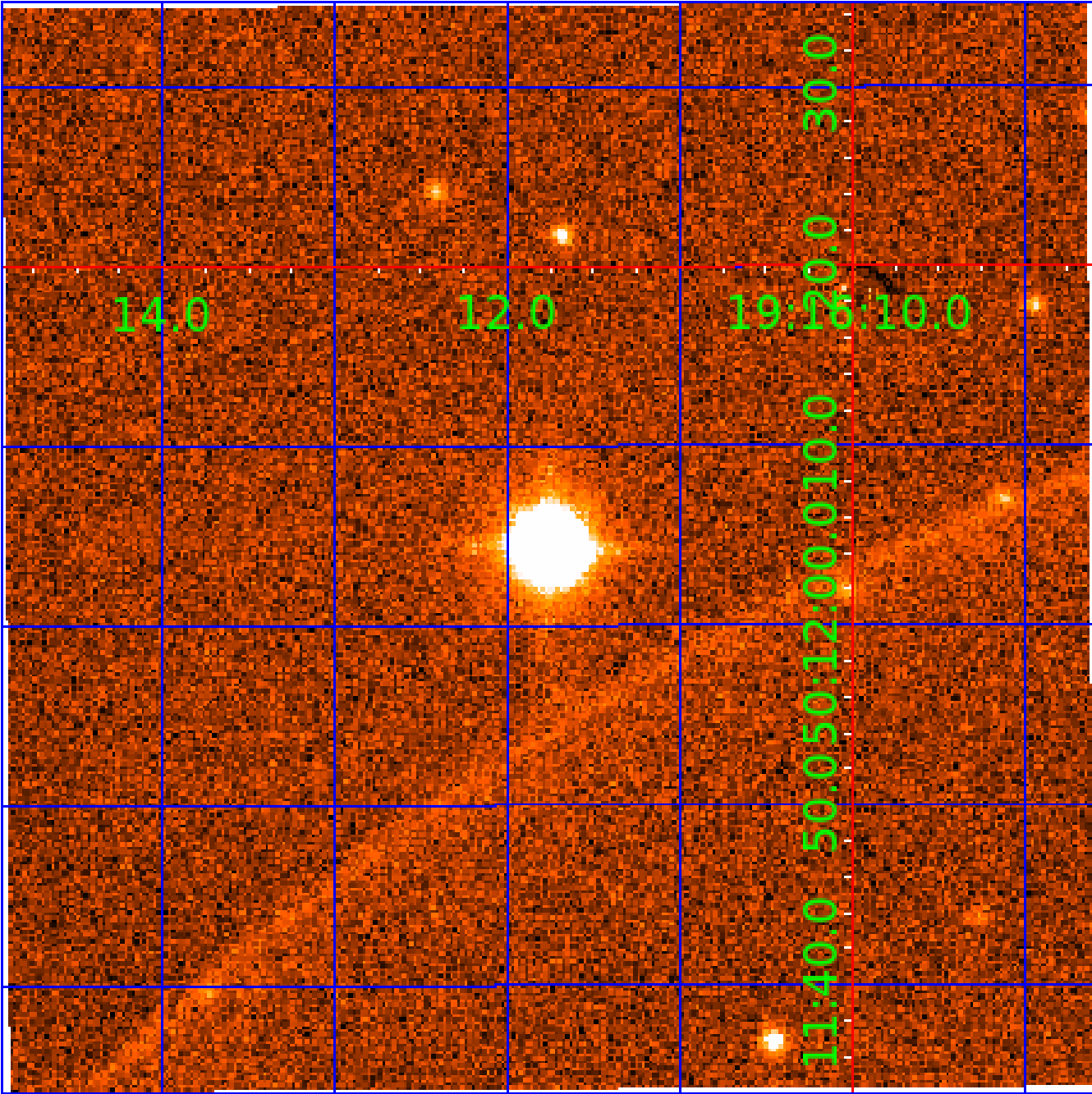


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011909497

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})
011909497-01	OBS	No	1.030209	132.093933	388.4	1.054	10.9	8.9	3.78	7619	8.67	67507.22
011909497-02	OBS	No	1.030225	132.363354	396.7	1.661	8.7	11.6	3.78	7619	8.84	67505.89
011909497-03	OBS	No	2.382798	132.979518	561.7	28.594	8.1	19.6	3.78	7619	11.39	22069.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011909497-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
011909497-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
011909497-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV

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

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

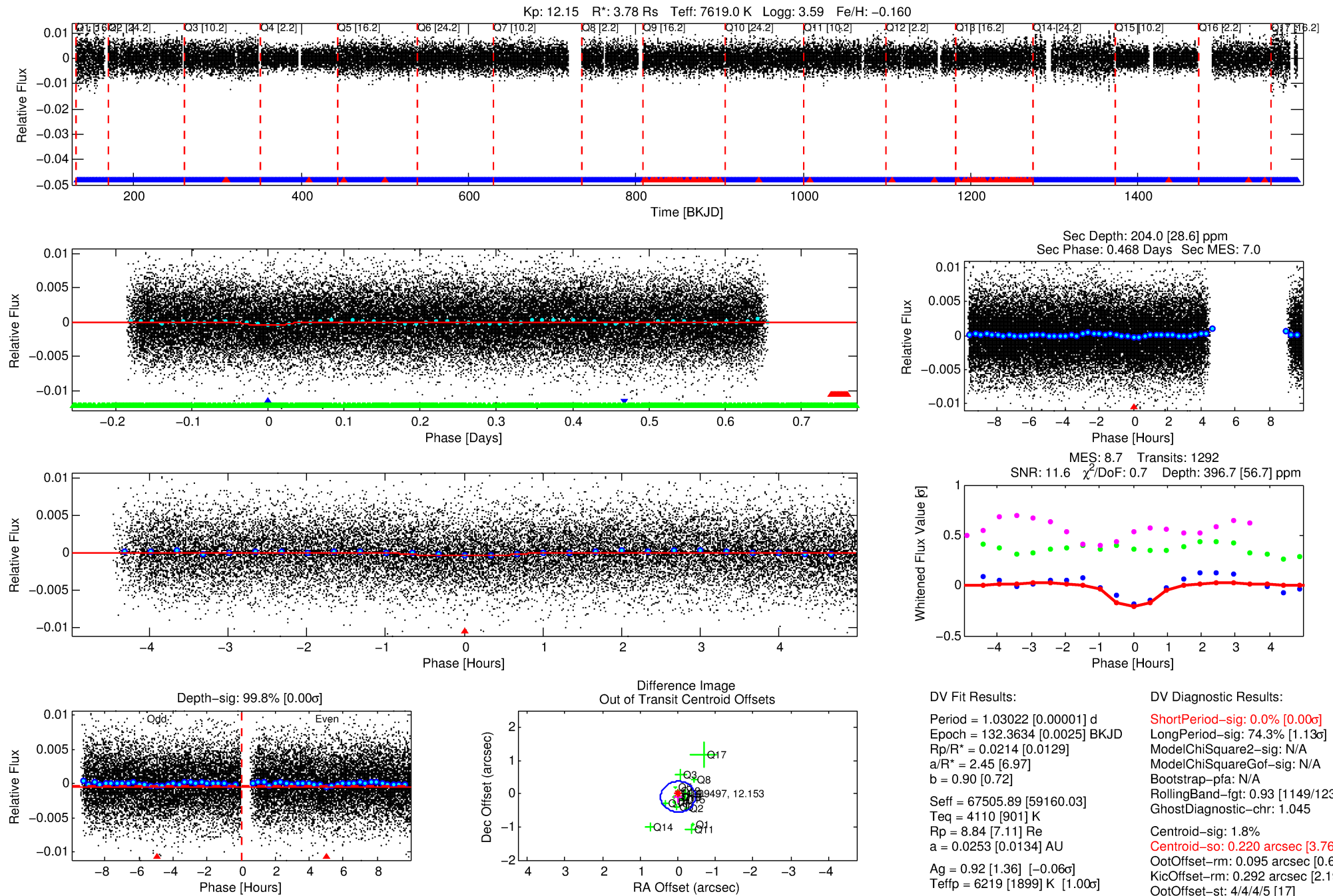
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011909497-02

No Significant Match Found

DV One-Page Summary

KIC: 11909497 Candidate: 2 of 3 Period: 1.030 d



DV Fit Results:

Period = 1.03022 [0.00001] d
Epoch = 132.3634 [0.0025] BKJD
Rp/R* = 0.0214 [0.0129]
a/R* = 2.45 [6.97]
b = 0.90 [0.72]
Seff = 67505.89 [59160.03]
Teq = 4110 [901] K
Rp = 8.84 [7.11] Re
a = 0.0253 [0.0134] AU
Ag = 0.92 [1.36] [-0.06σ]
Teff = 6219 [1899] K [1.00σ]

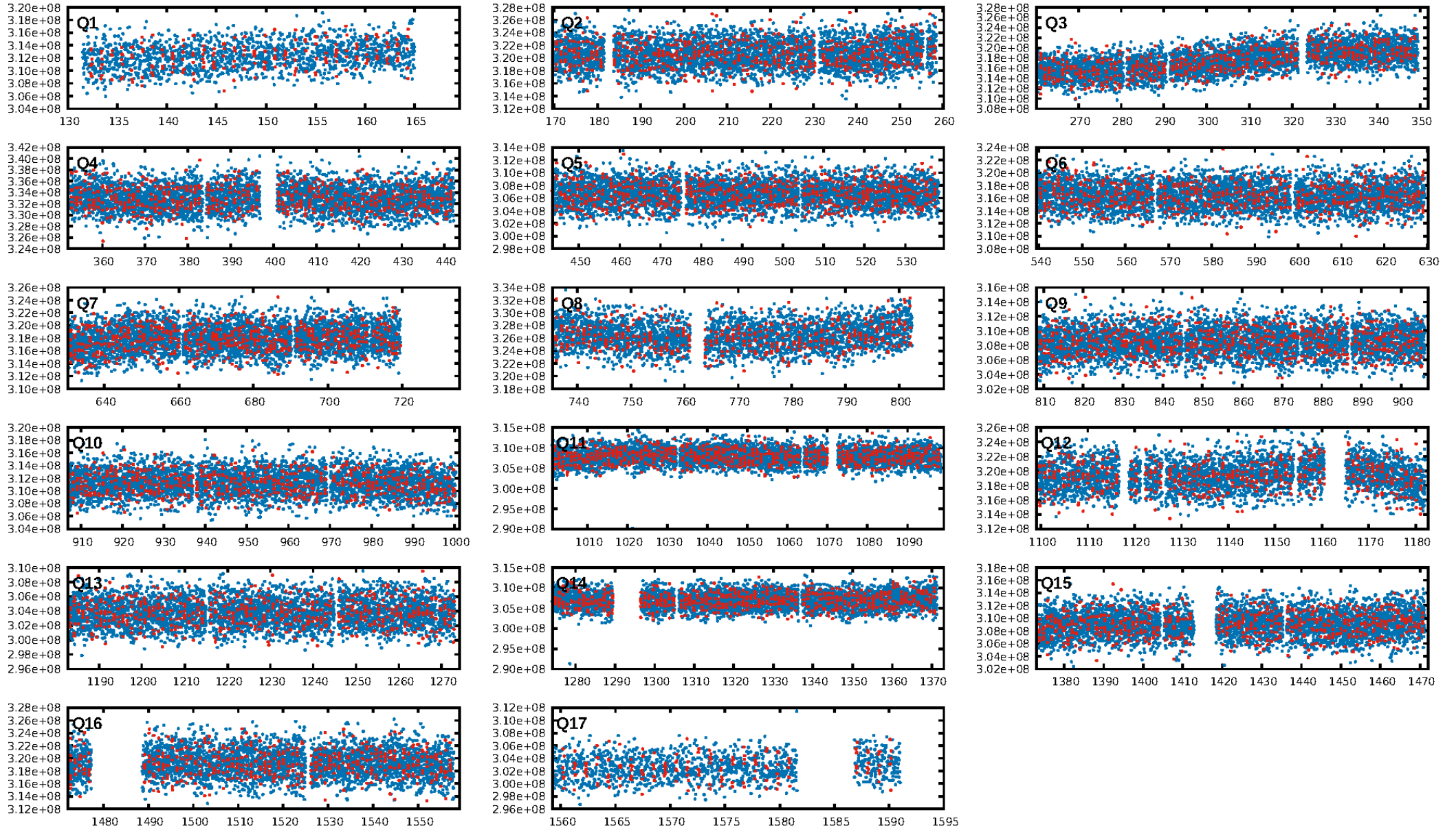
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 74.3% [1.13σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.93 [1149/1234]
GhostDiagnostic-chr: 1.045
Centroid-sig: 1.8%
Centroid-so: 0.220 arcsec [3.76σ]
OotOffset-rm: 0.095 arcsec [0.62σ]
KicOffset-rm: 0.292 arcsec [2.19σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.71 [12/17]
DiffImageOverlap-fno: 1.00 [17/17]

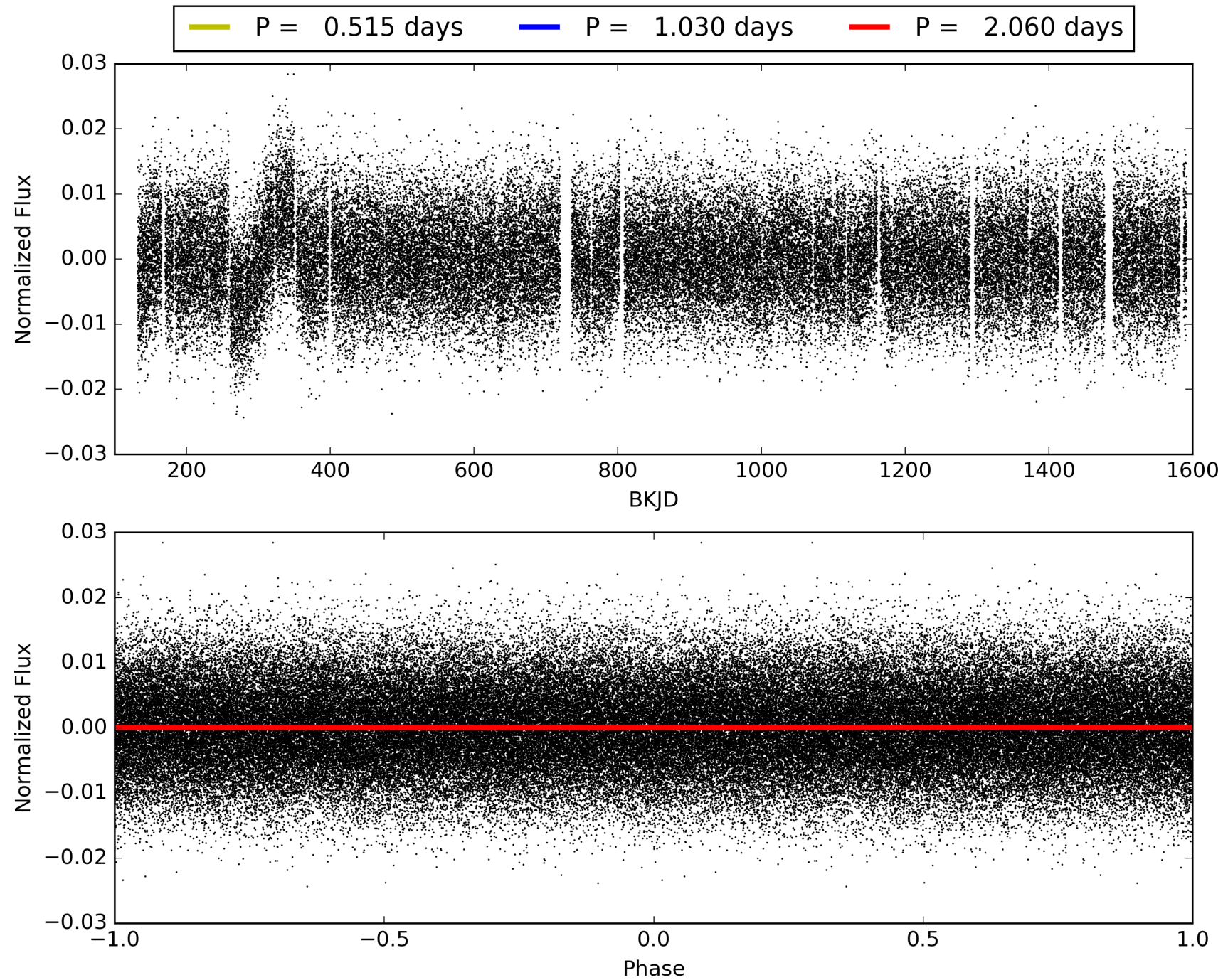
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:52:57 Z

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

TCE 011909497-02, PDC Light Curves

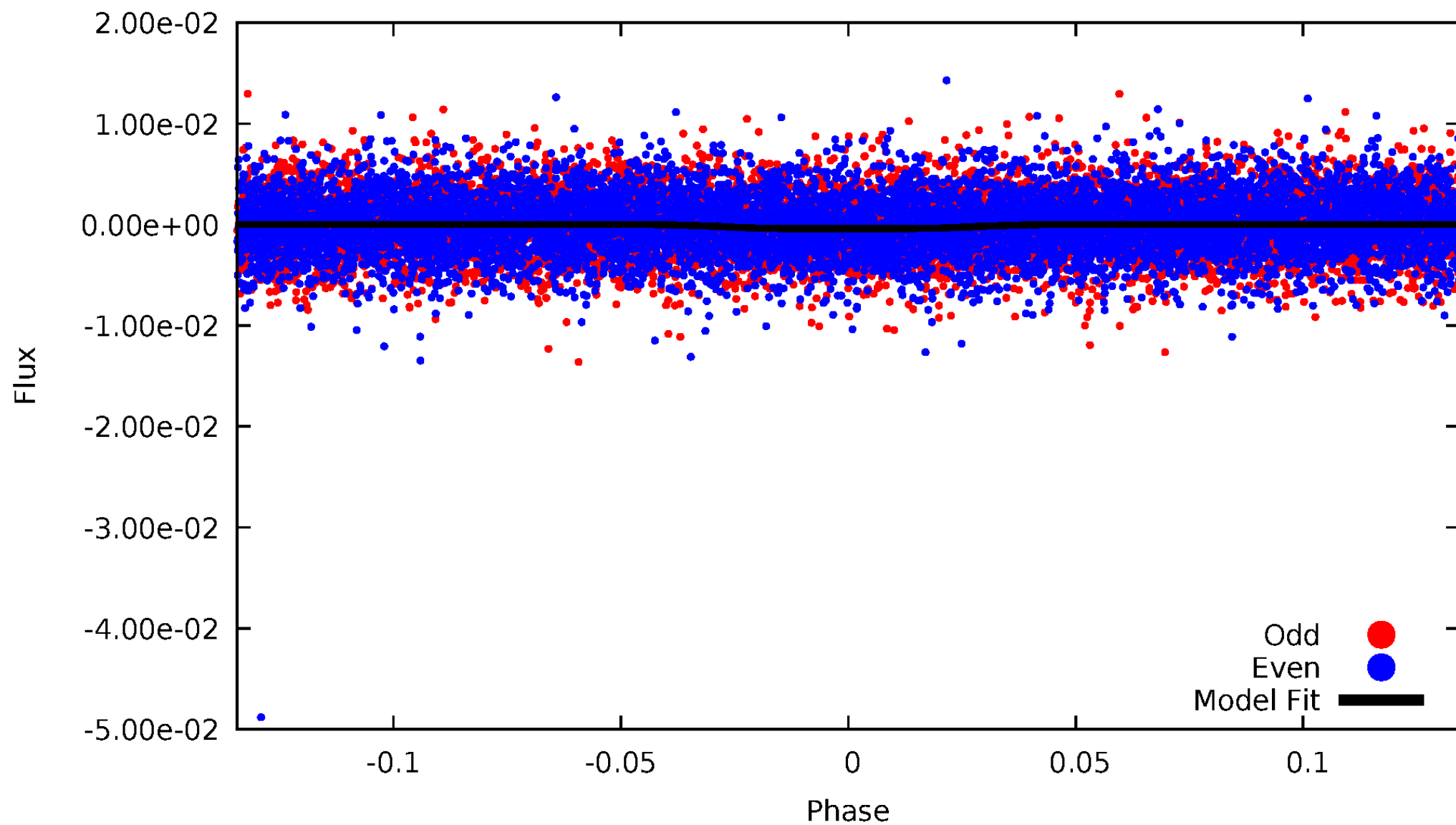


TCE 011909497-02



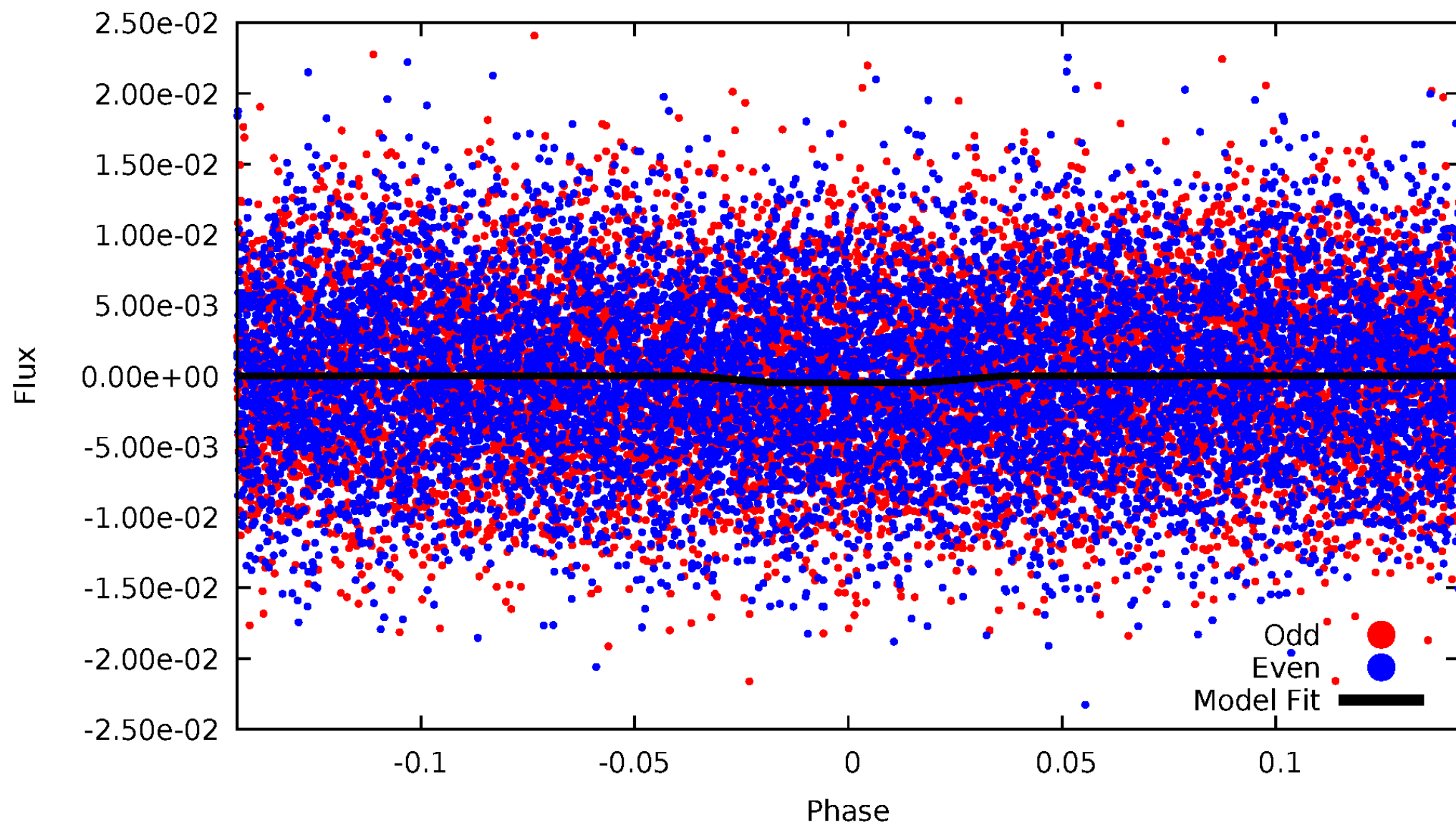
DV Odd/Even

TCE 011909497-02



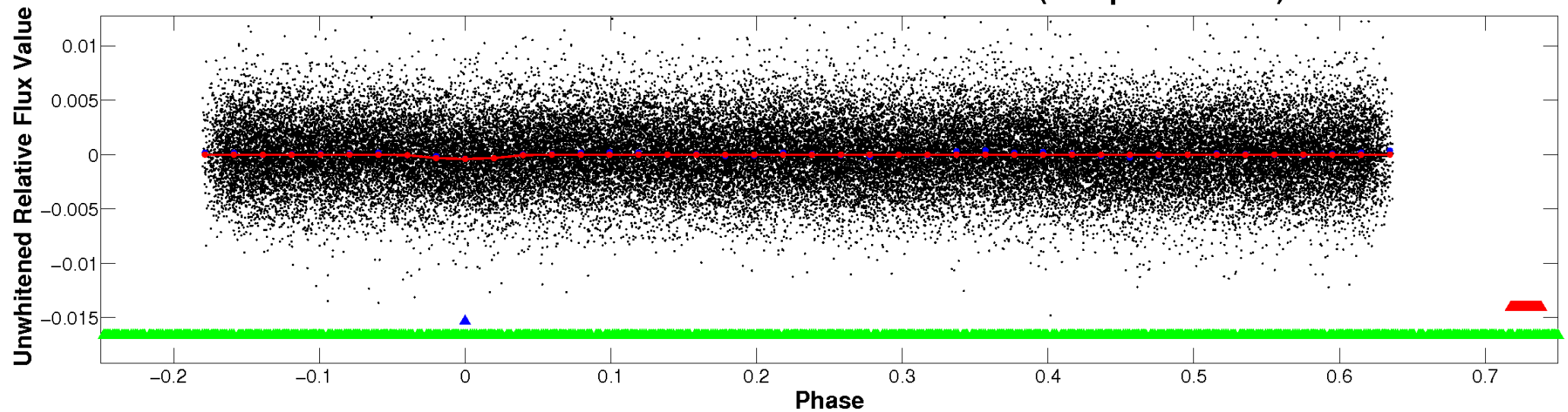
ALT Odd/Even

TCE 011909497-02

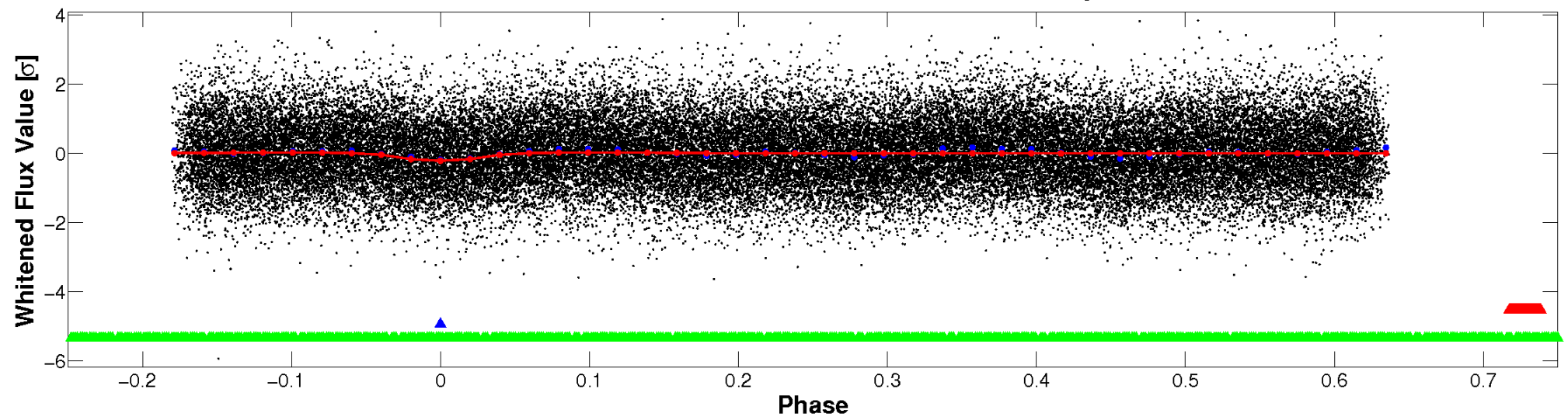


Non-Whitened Vs. Whitened Light Curve

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

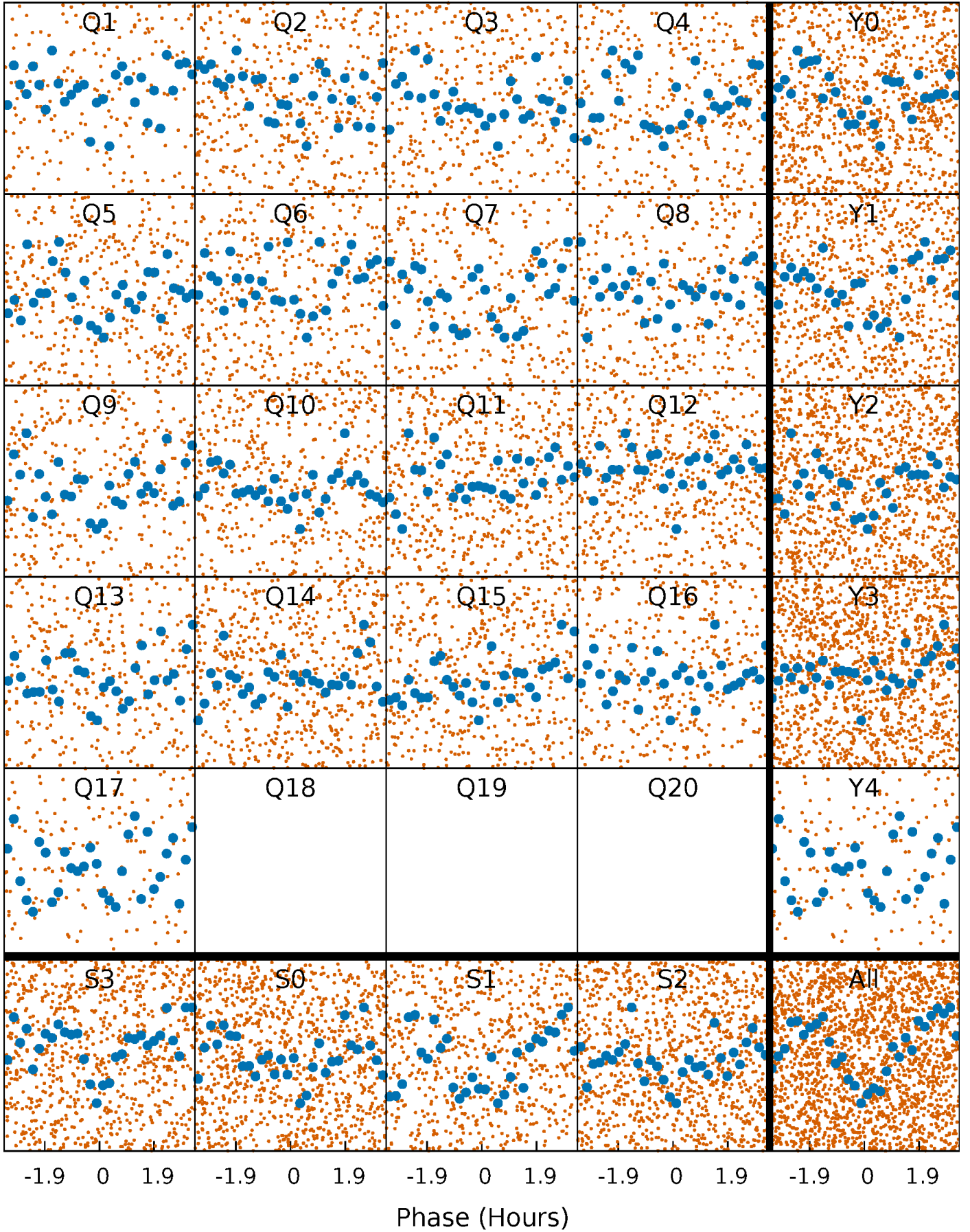


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



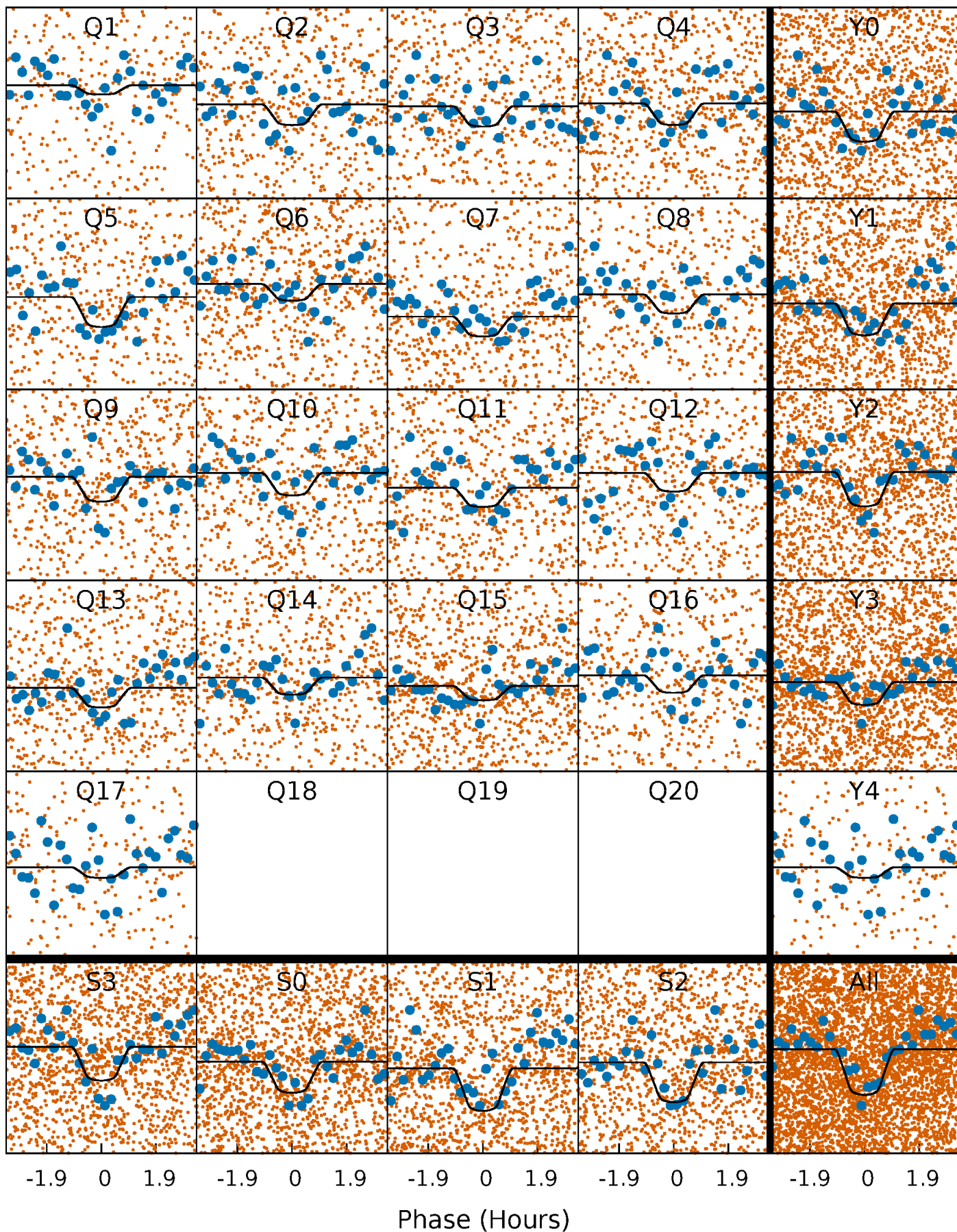
PDC Quarter-Phased Transit Curves

TCE 011909497-02 $P = 1.030225$ Days $T_0 = 132.363354$ (BKJD)



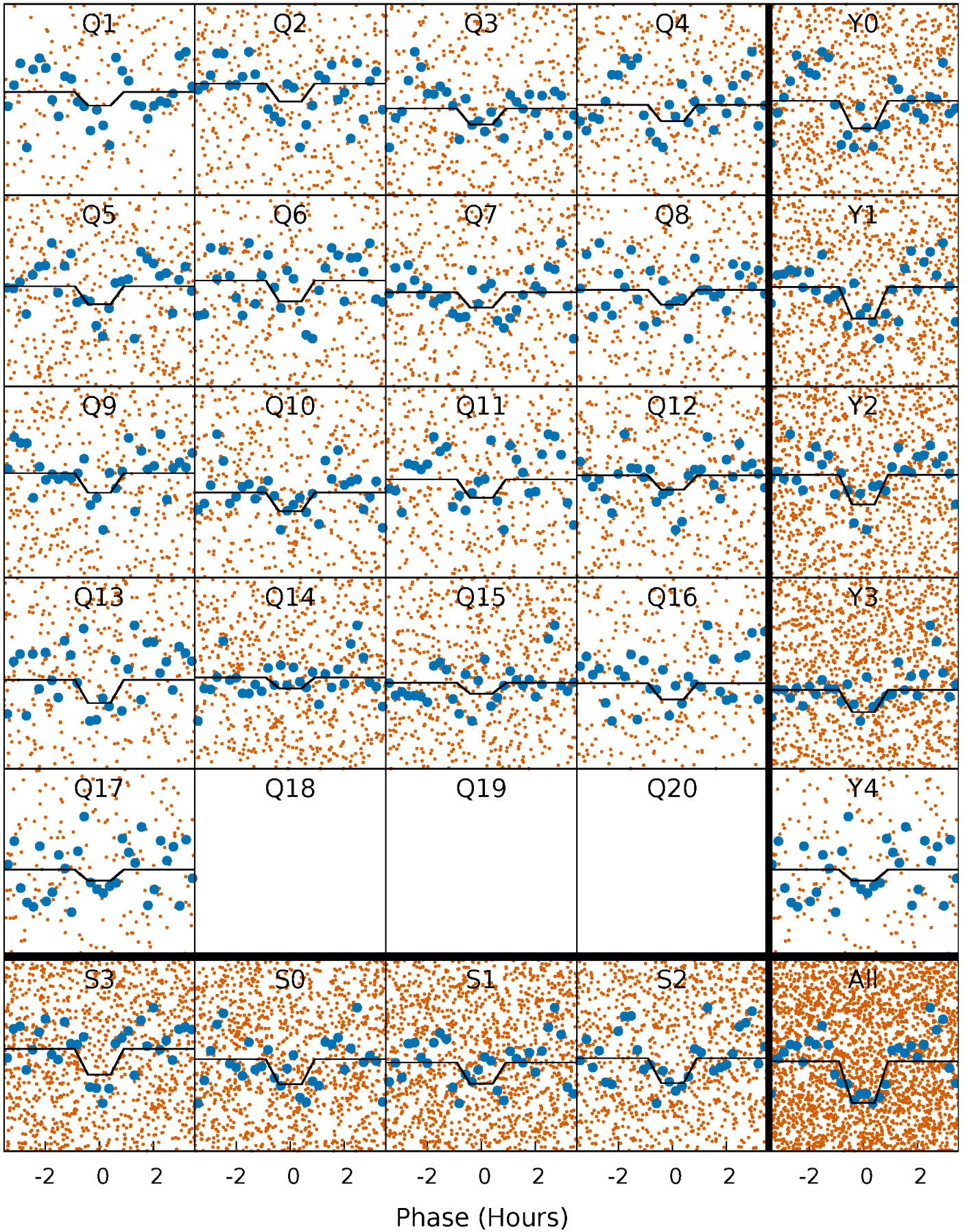
DV Quarter-Phased Transit Curves

TCE 011909497-02 P= 1.030225 Days $T_0=132.363354$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

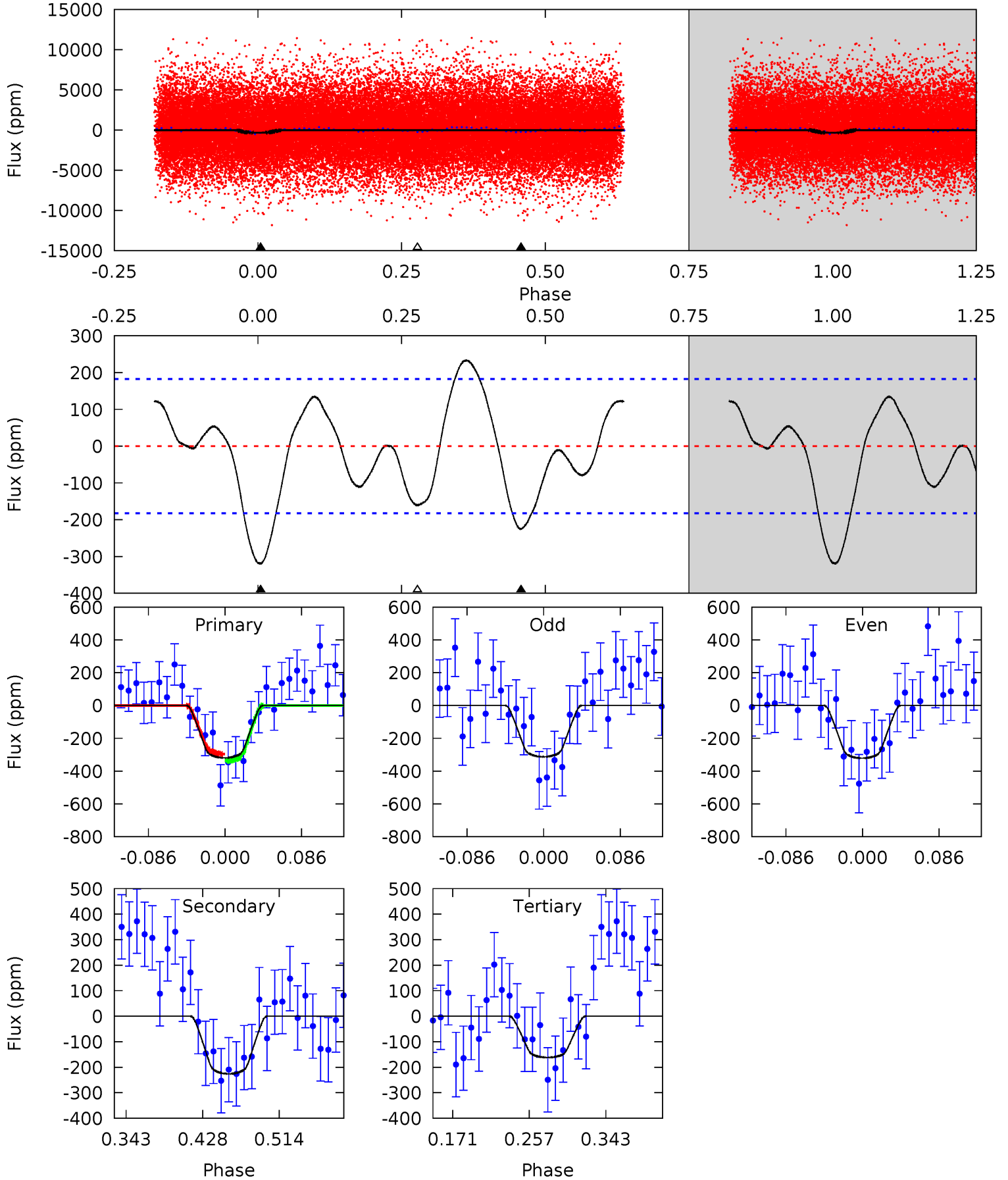
TCE 011909497-02 P= 1.030229 Days $T_0=132.363119$ (BKJD)



DV Model-Shift Uniqueness Test

011909497-02, P = 1.030225 Days, E = 131.333129 Days

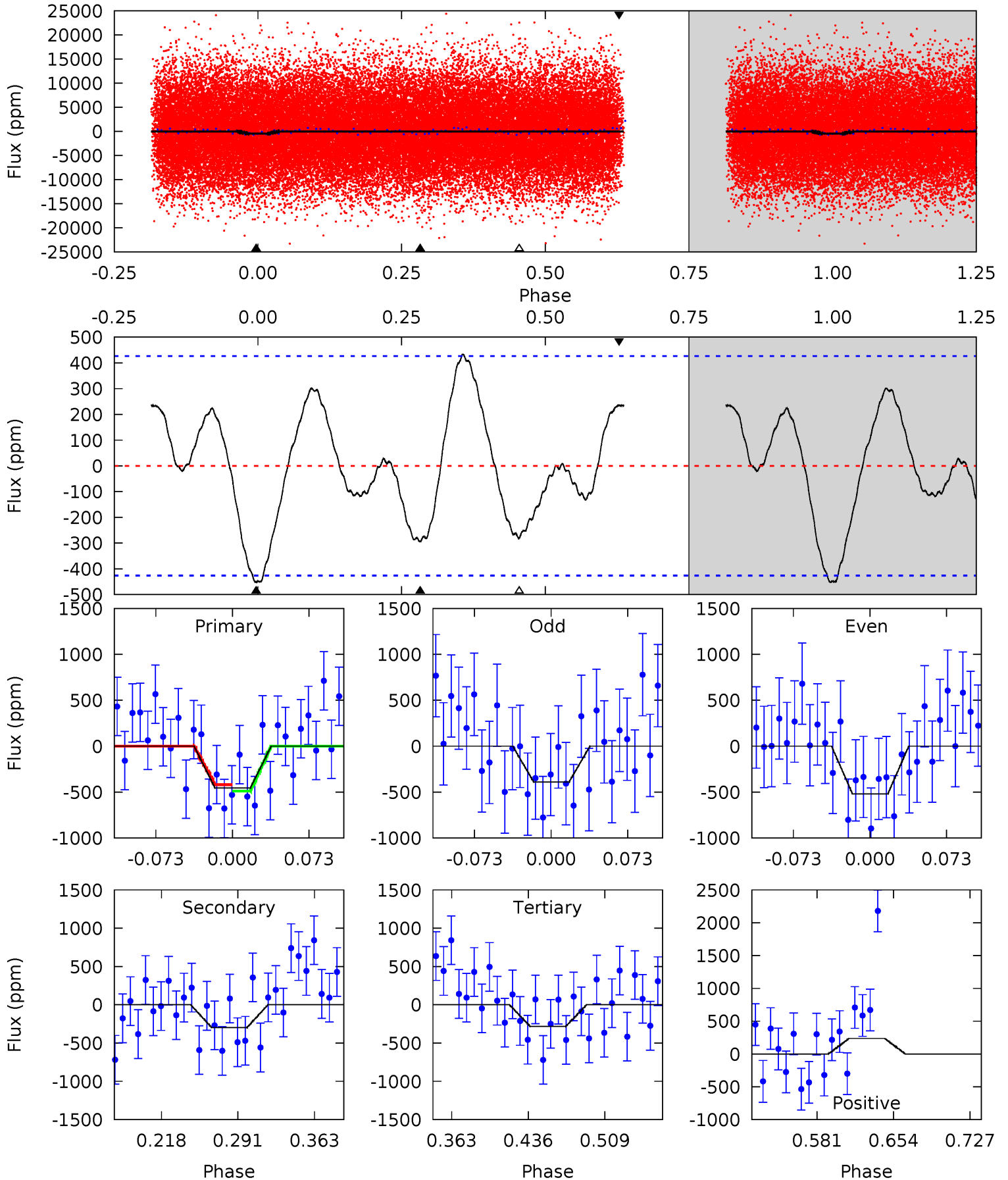
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.05	5.69	4.07	0	4.60	1.72	2.50	3.98	8.05	1.62	5.69	0.11	1.08	0.42	0.52



Alt Model-Shift Uniqueness Test

011909497-02, P = 1.030229 Days, E = 131.332890 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.93	3.23	3.07	2.58	4.63	1.79	1.86	1.86	2.36	0.16	0.65	0.70	0.98	0.49	0.37



Stellar Parameters For KIC 011909497

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7619^{+212}_{-318}	$3.590^{+0.510}_{-0.060}$	$-0.160^{+0.200}_{-0.300}$	$3.777^{+0.505}_{-2.021}$	$2.025^{+0.255}_{-0.583}$	$0.053^{+0.351}_{-0.011}$
	+3%/-4%	+14%/-2%	+125%/-188%	+13%/-54%	+13%/-29%	+663%/-20%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011909497-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-226 ± 40	$7.74^{+5.69}_{-4.26}$	5520^{+377}_{-797}	5715^{+3635}_{-1815}	$1.267^{+5.282}_{-0.836}$
Alt.	-297 ± 92	$8.09^{+5.36}_{-4.51}$	5520^{+383}_{-758}	6132^{+3833}_{-1767}	$1.534^{+6.366}_{-0.997}$

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 $A_{obs} \gg 1.0$

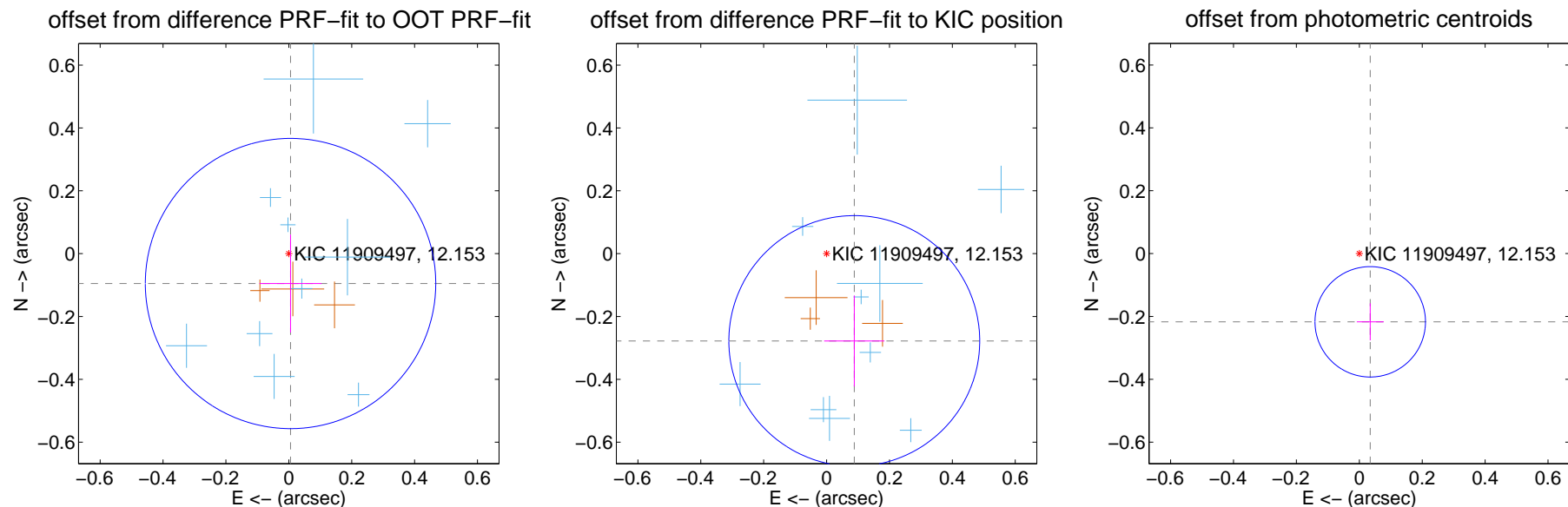
DV Centroid Data

Supplemental centroid analysis for 011909497-02. Kepler magnitude: 12.15. Transit SNR 11.55

There are 12 quarters with good PRF difference image offsets

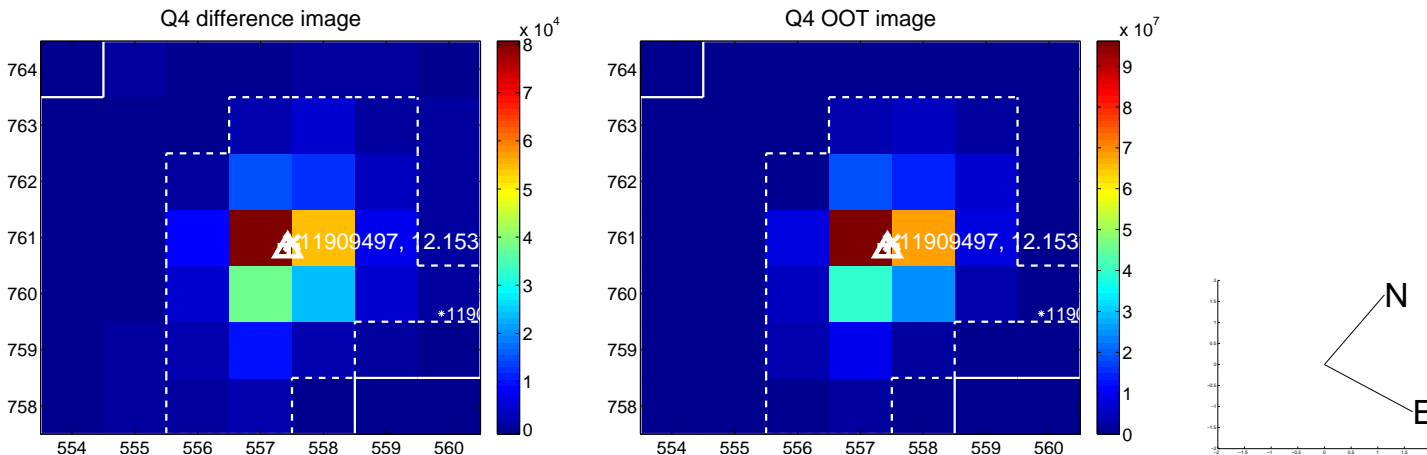
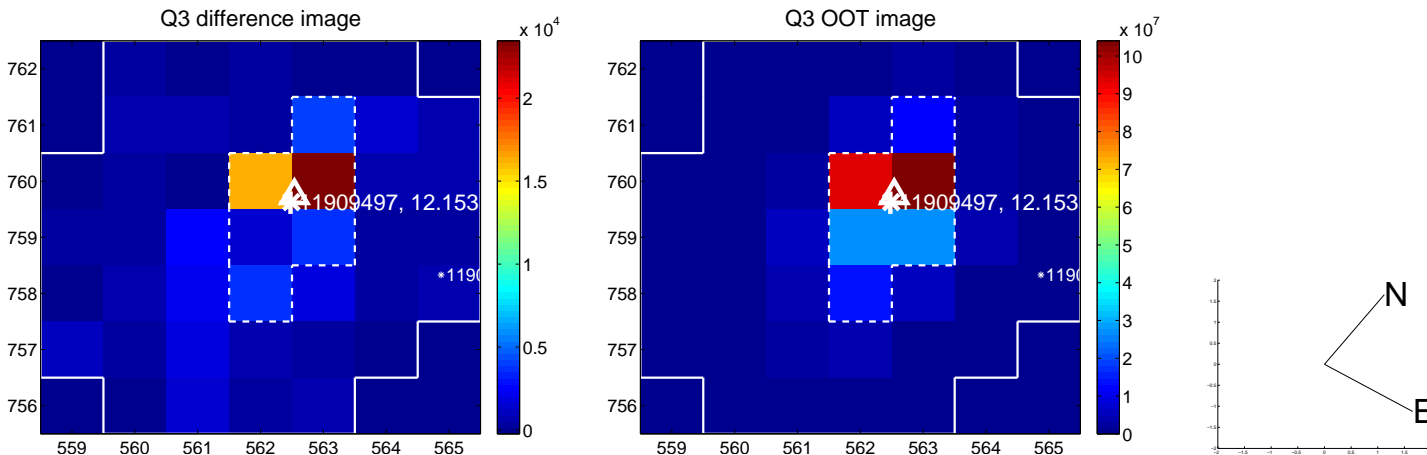
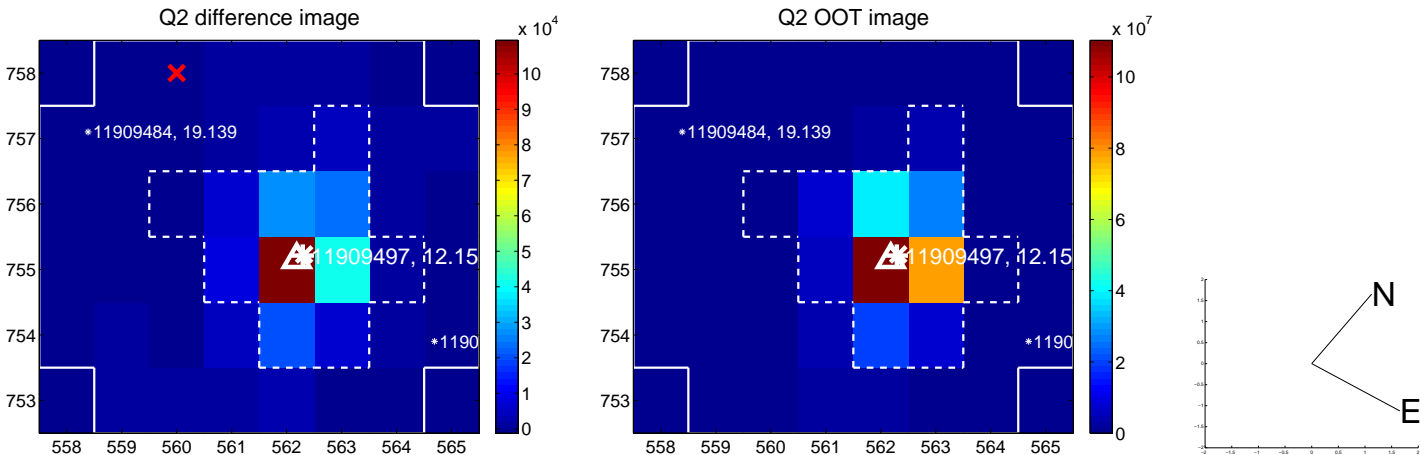
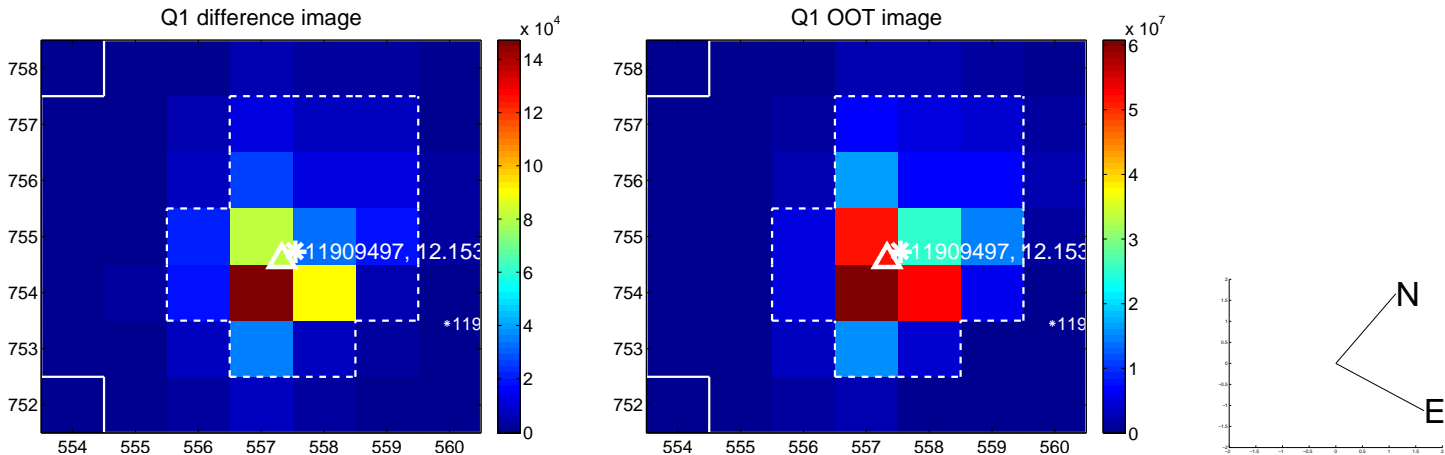
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.095 ± 0.154	0.62	-0.005 ± 0.099	-0.095 ± 0.156
PRF-fit source offset from KIC position	0.292 ± 0.133	2.19	-0.088 ± 0.096	-0.278 ± 0.145
photometric centroid source offset	0.22 ± 0.06	3.76	-0.03 ± 0.04	-0.22 ± 0.06

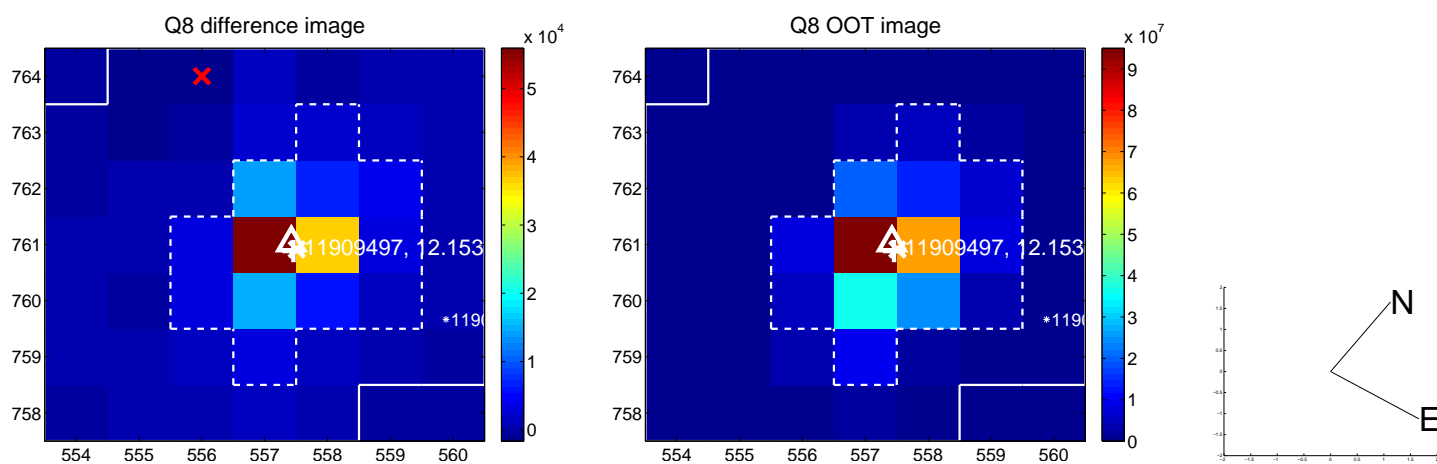
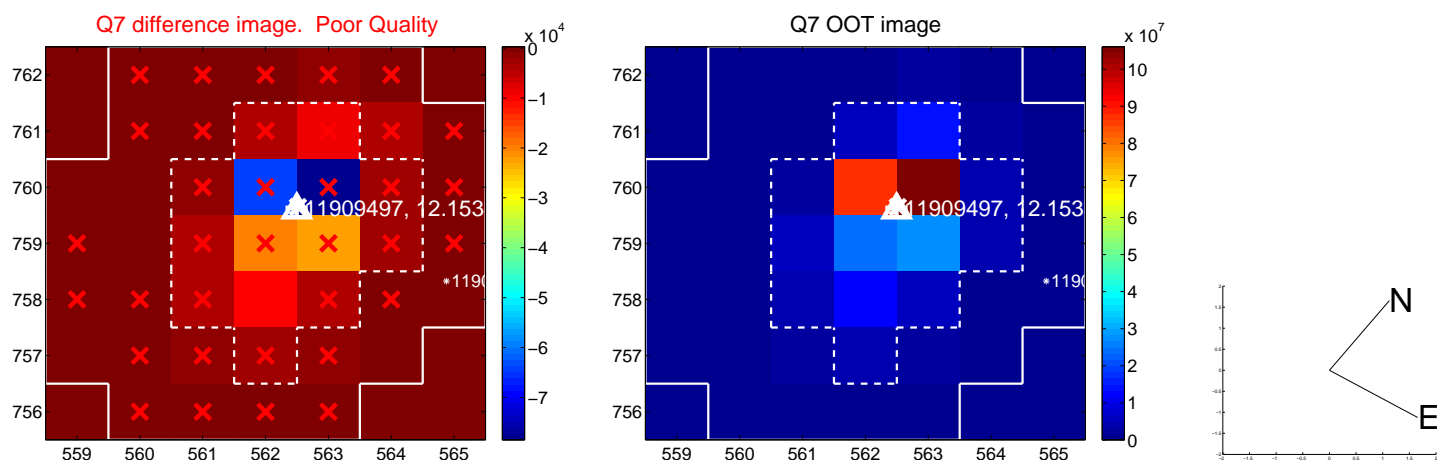
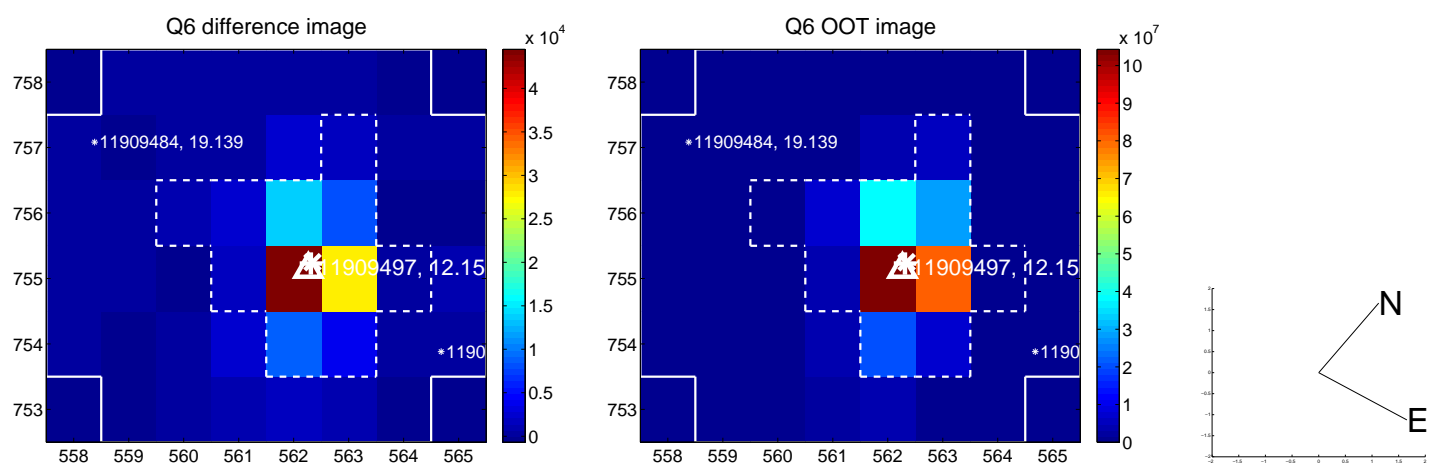
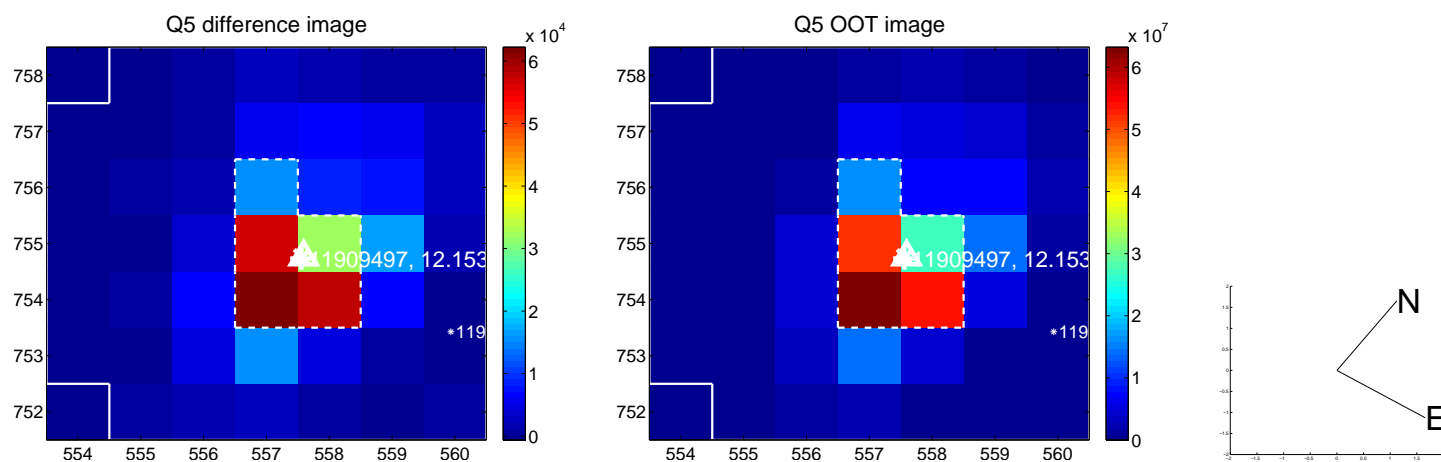


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

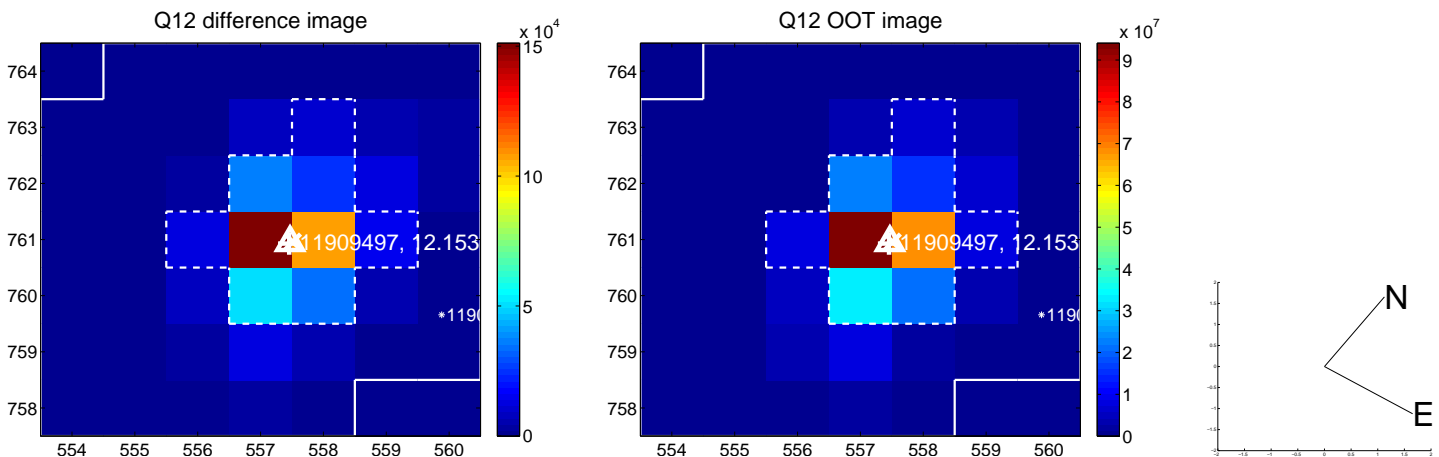
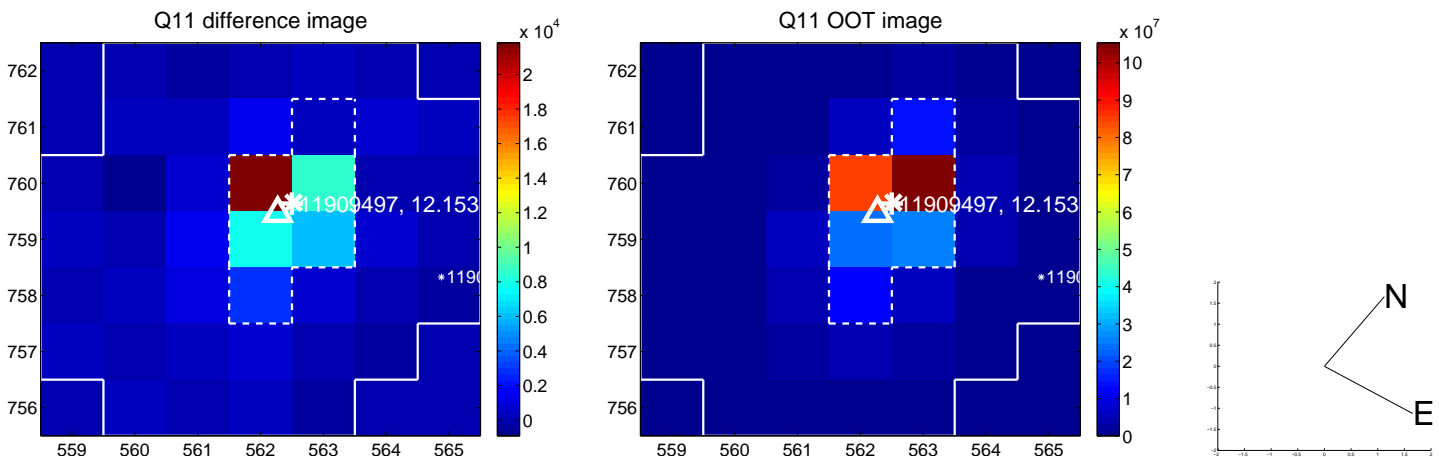
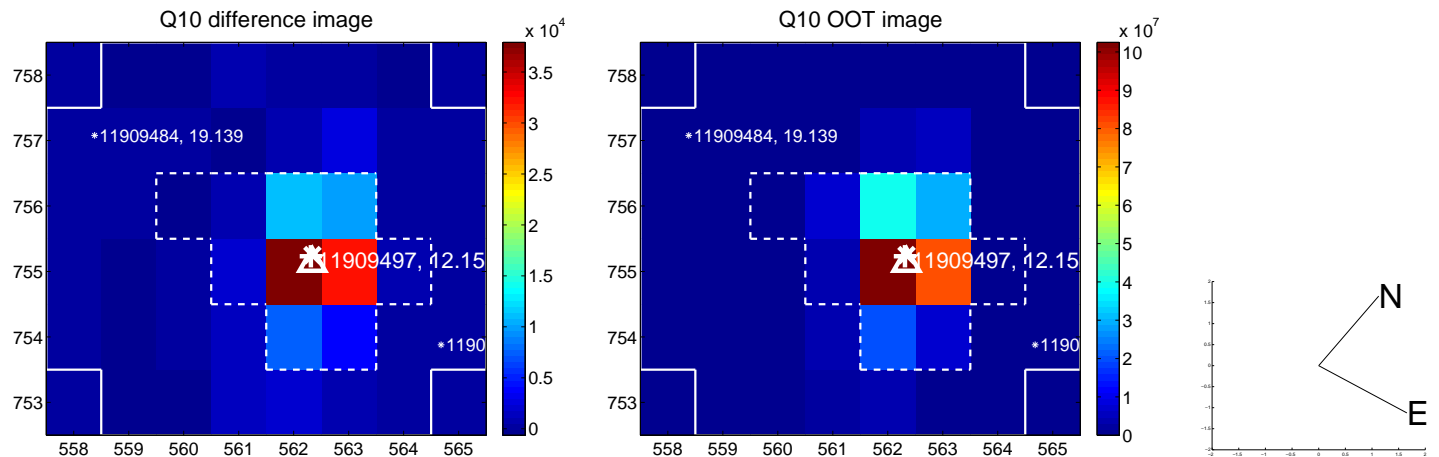
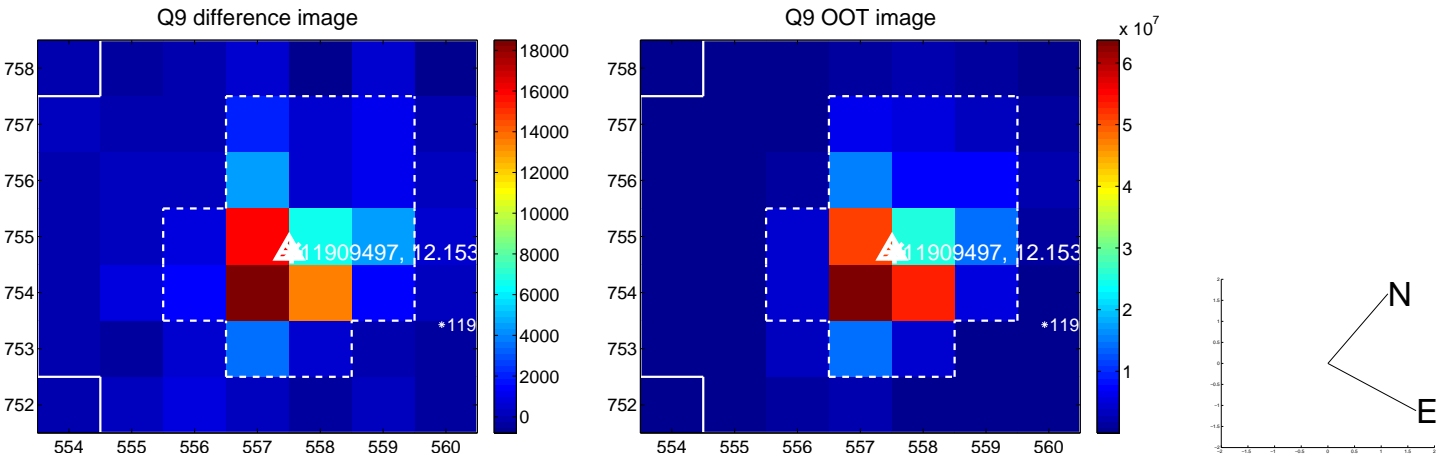
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



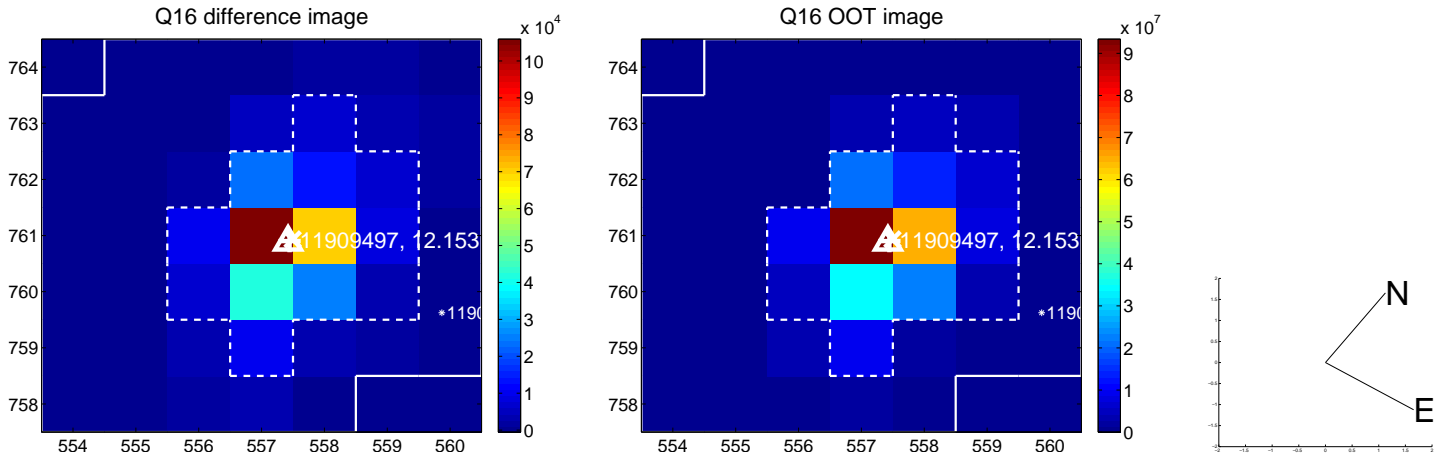
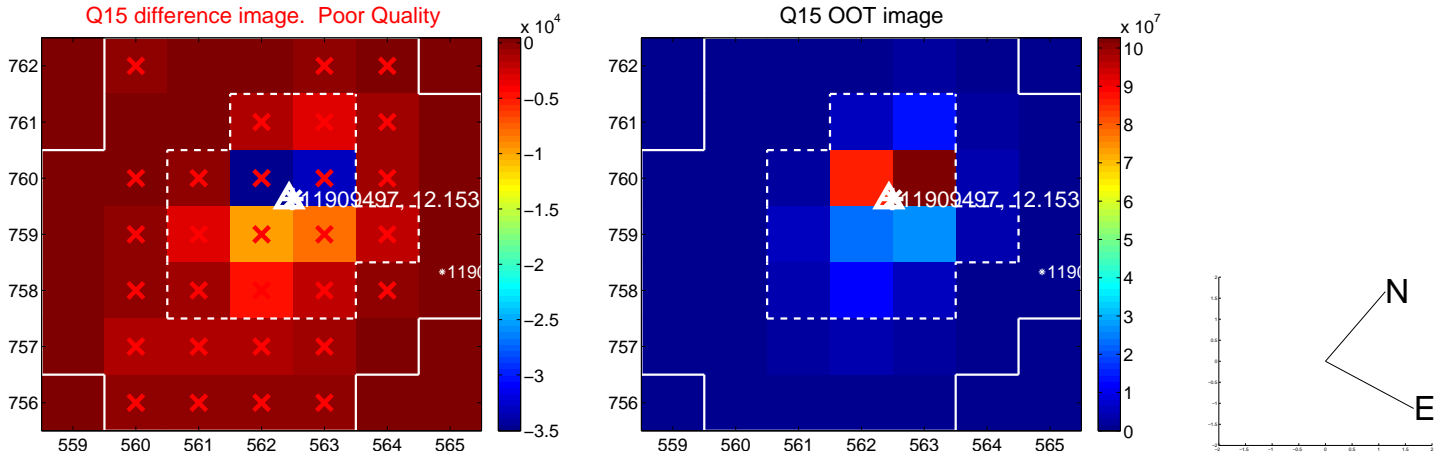
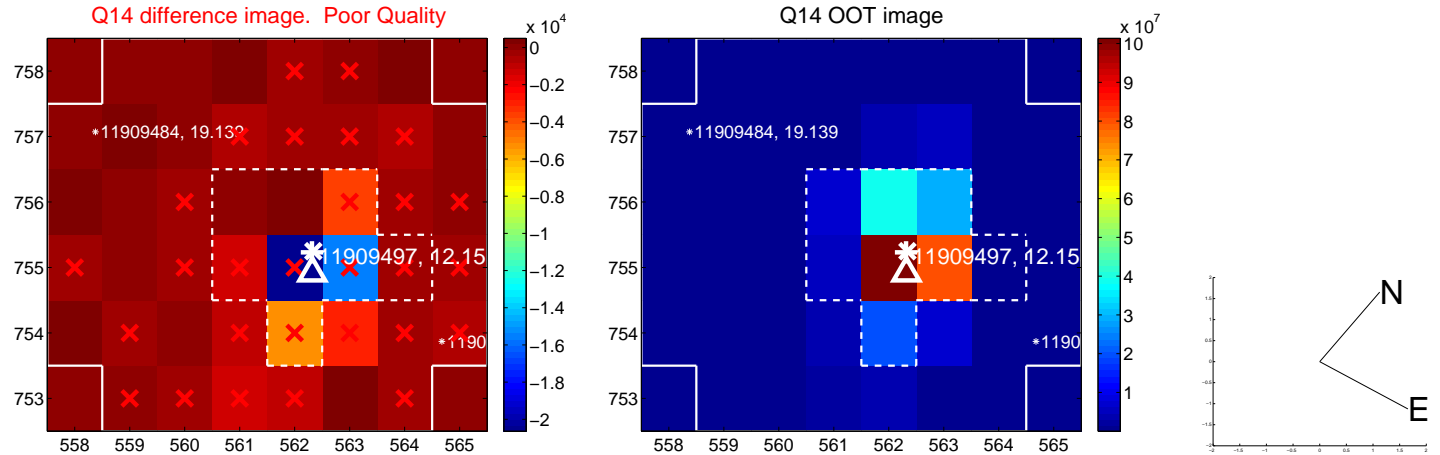
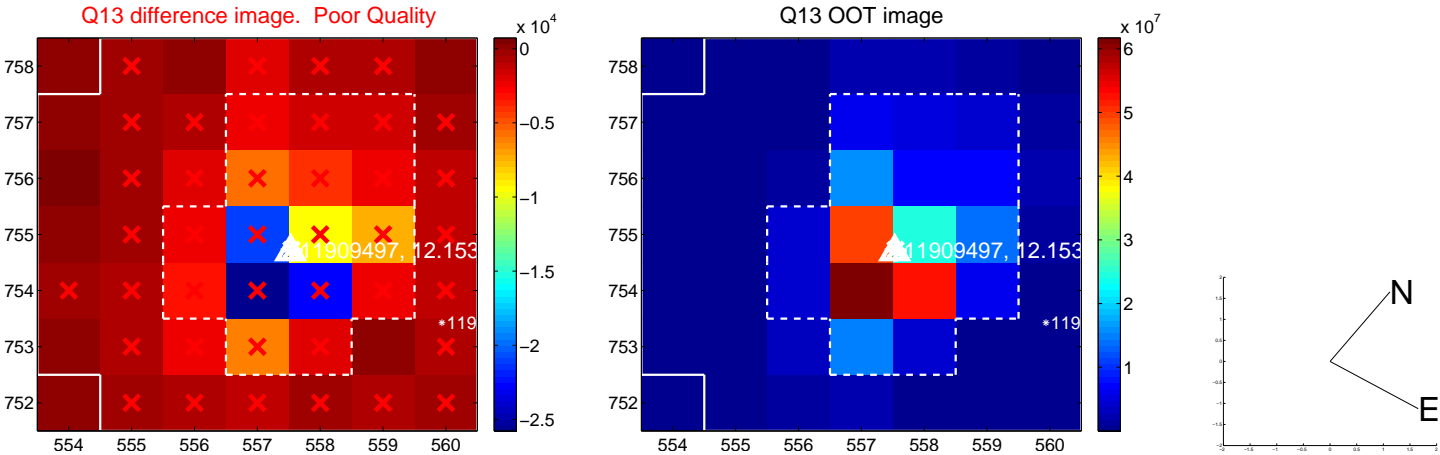
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



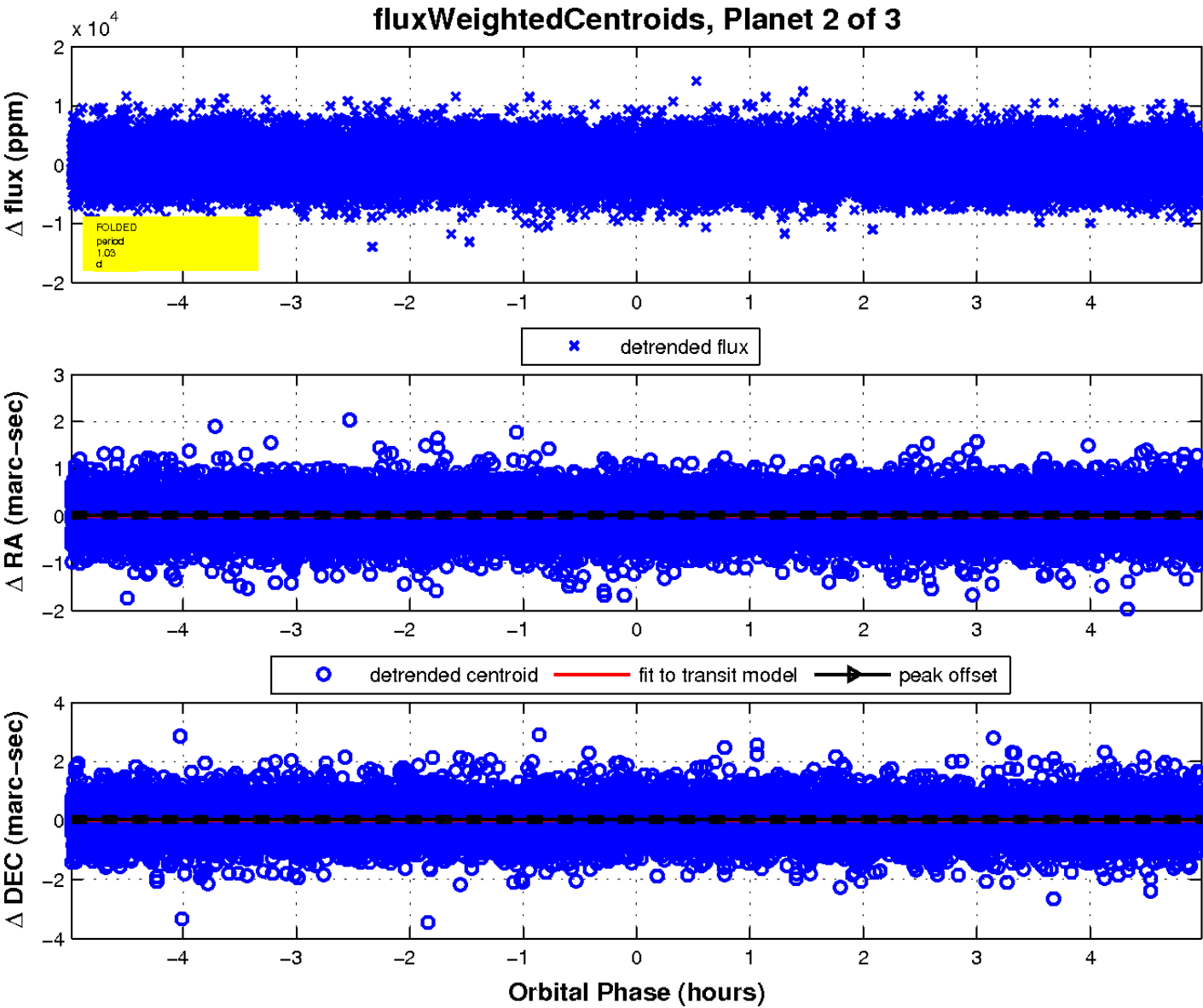
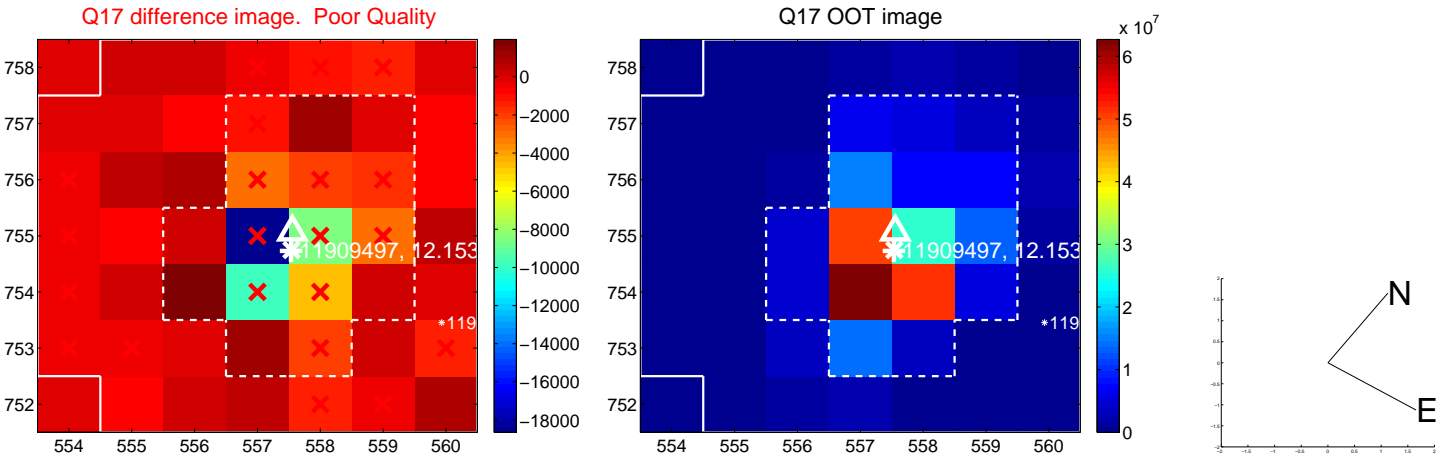
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

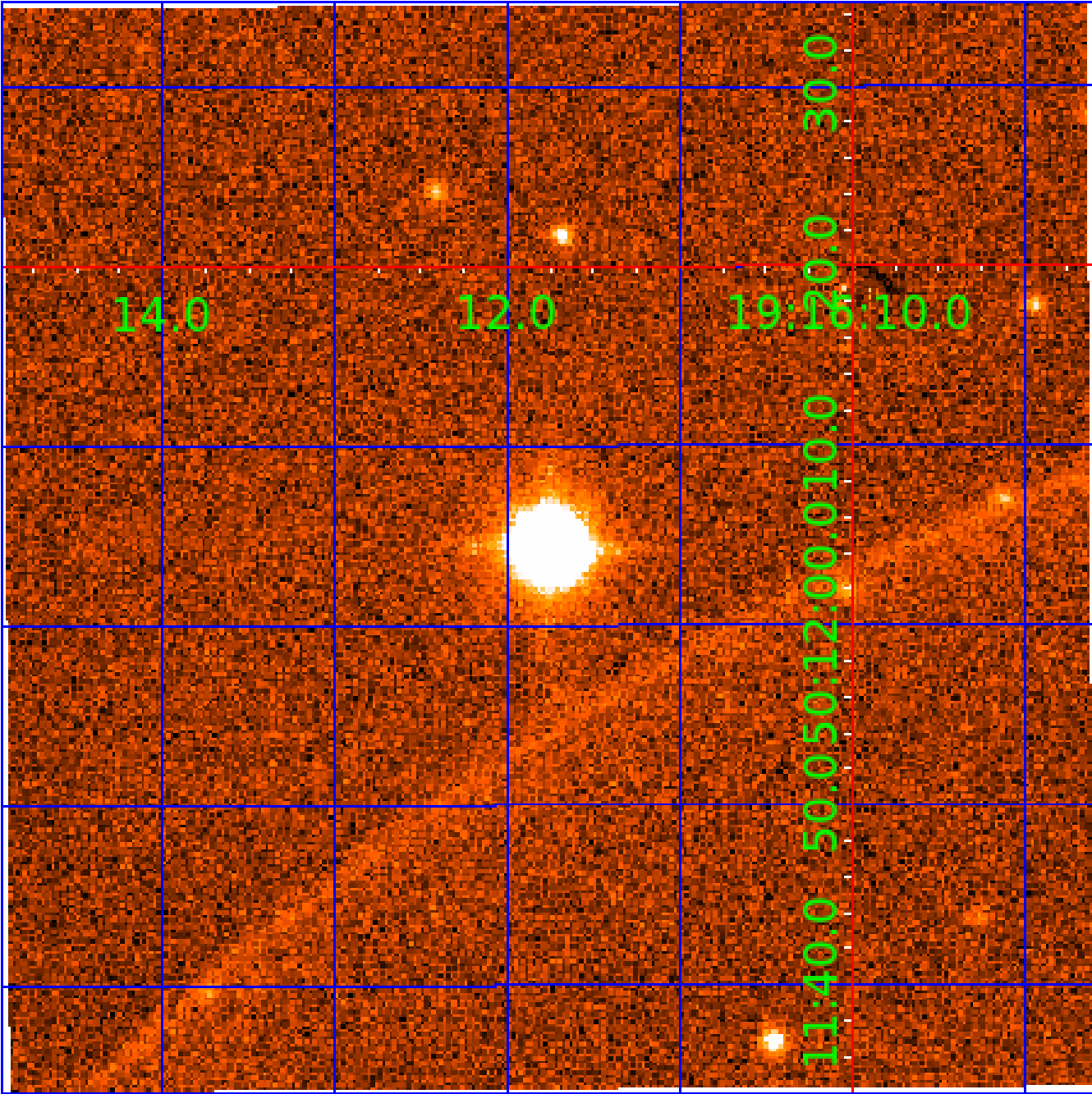


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011909497

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})
011909497-01	OBS	No	1.030209	132.093933	388.4	1.054	10.9	8.9	3.78	7619	8.67	67507.22
011909497-02	OBS	No	1.030225	132.363354	396.7	1.661	8.7	11.6	3.78	7619	8.84	67505.89
011909497-03	OBS	No	2.382798	132.979518	561.7	28.594	8.1	19.6	3.78	7619	11.39	22069.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011909497-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
011909497-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
011909497-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV

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

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

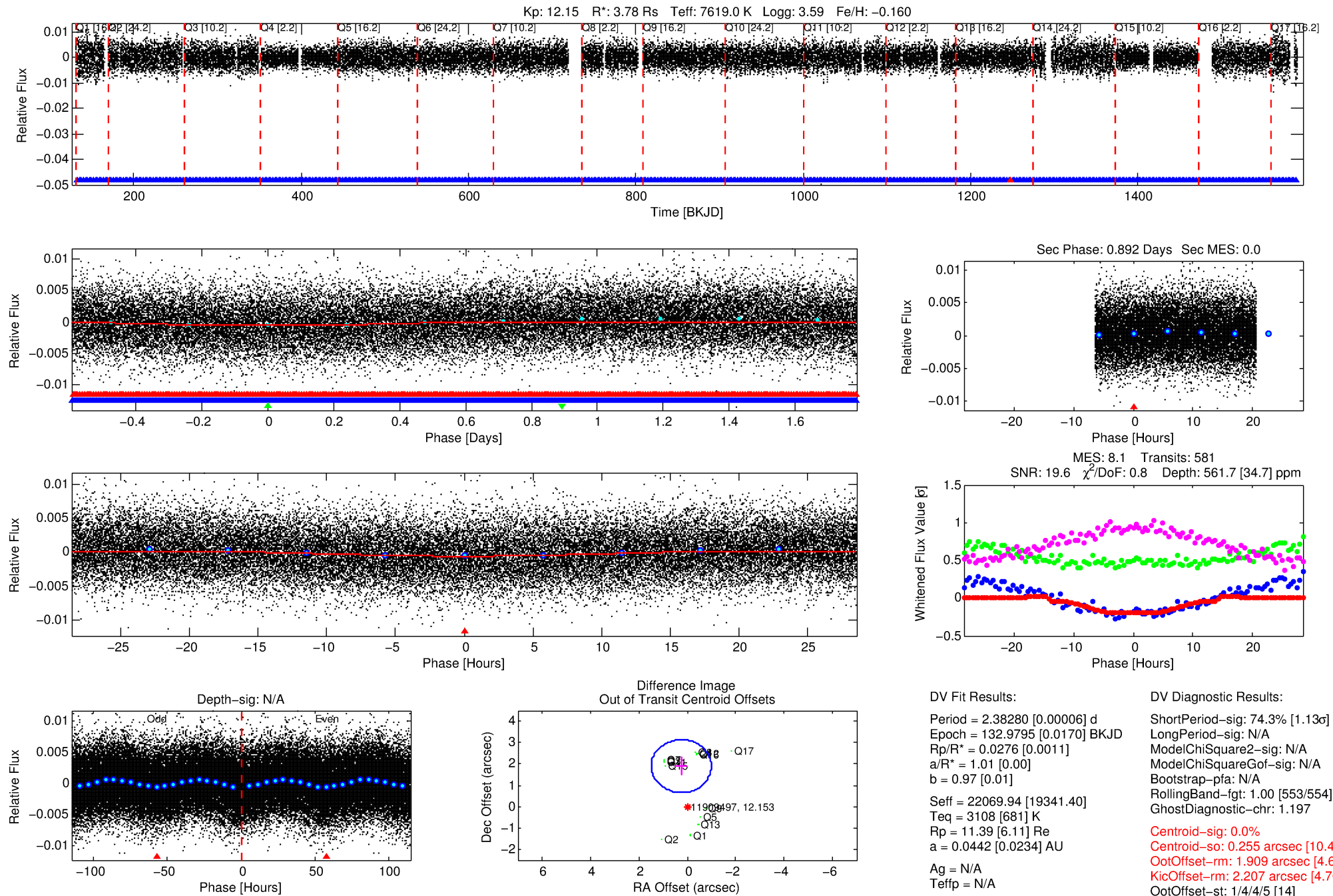
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011909497-03

No Significant Match Found

DV One-Page Summary

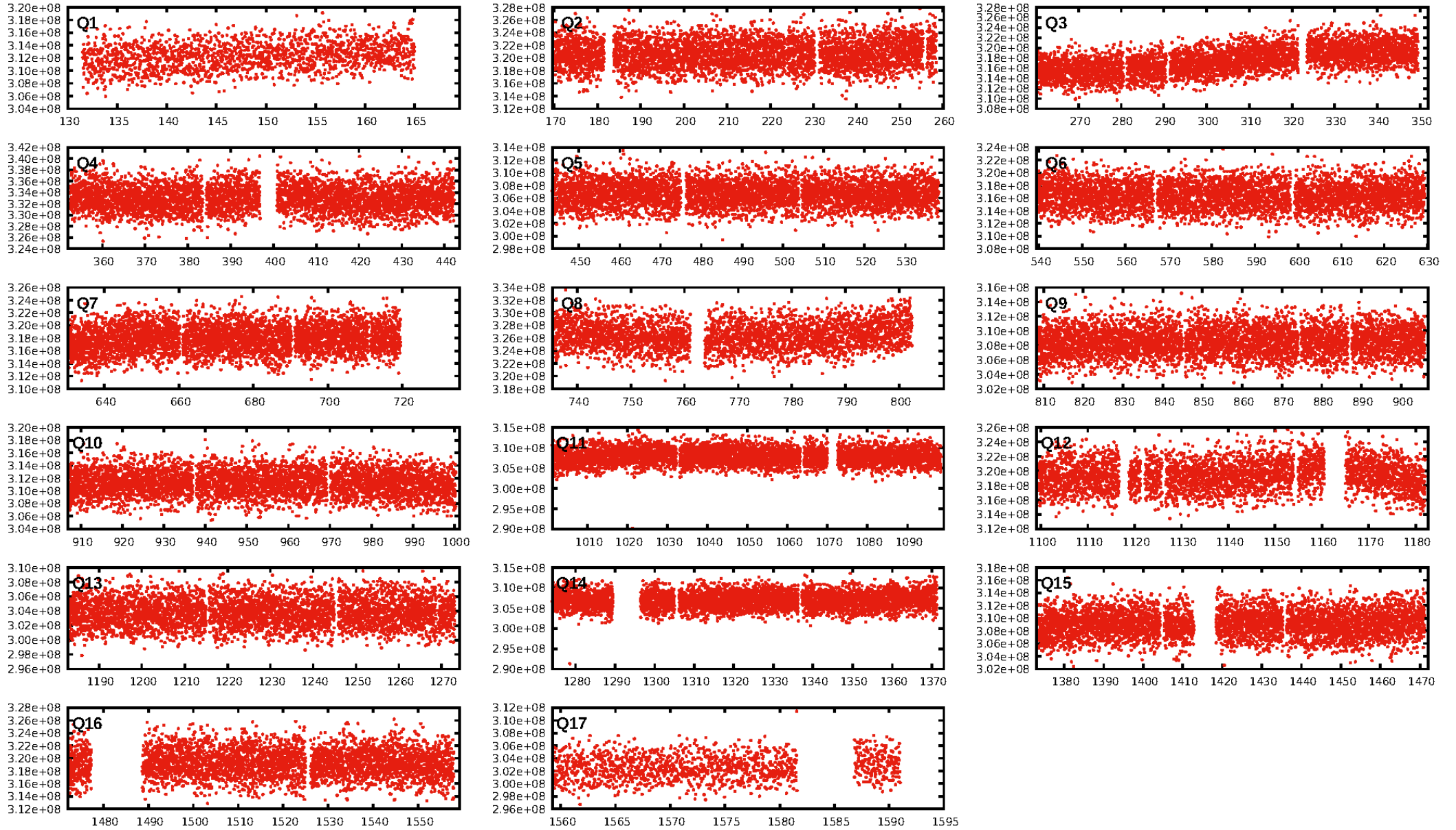
KIC: 11909497 Candidate: 3 of 3 Period: 2.383 d



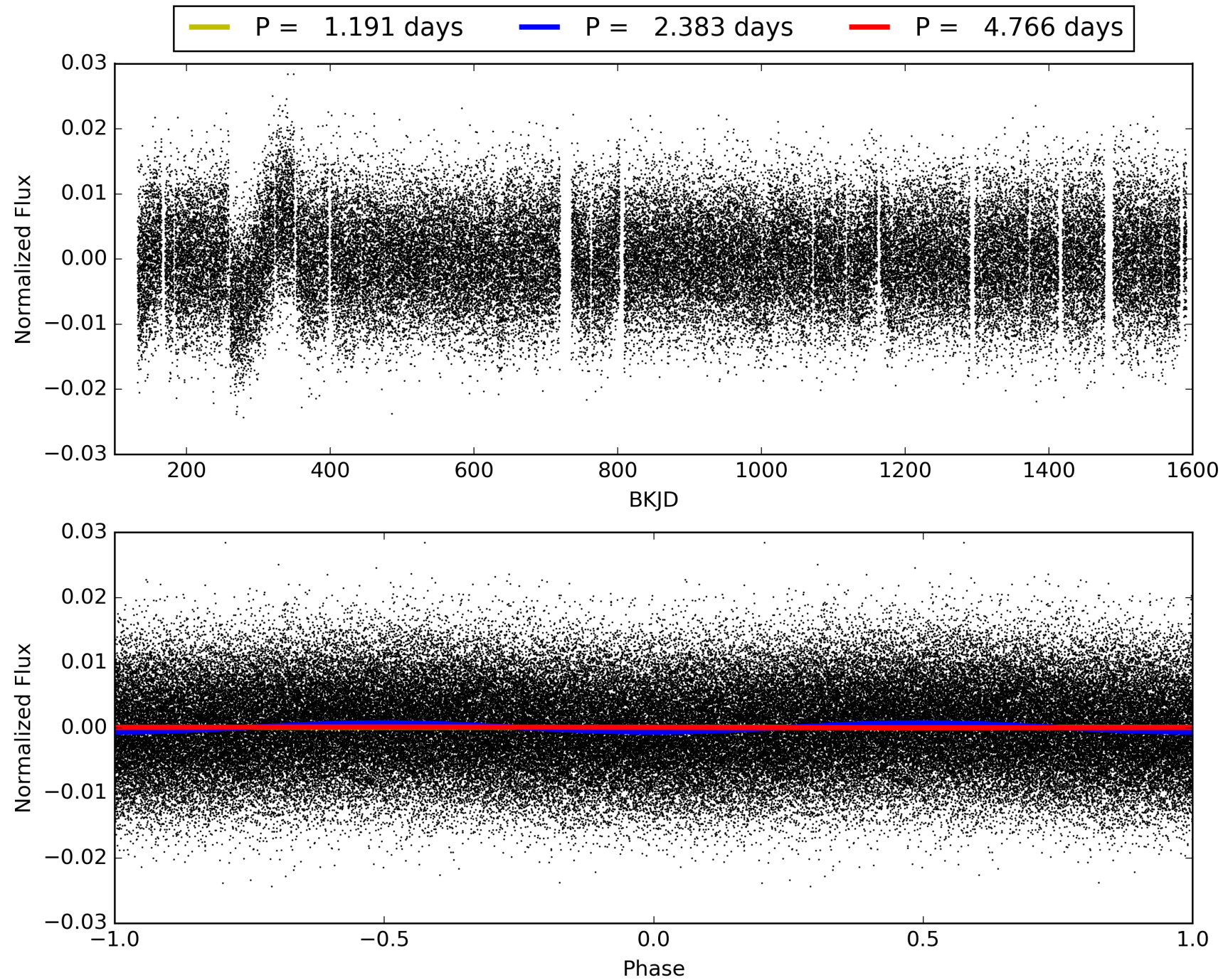
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:53:12 Z

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

TCE 011909497-03, PDC Light Curves

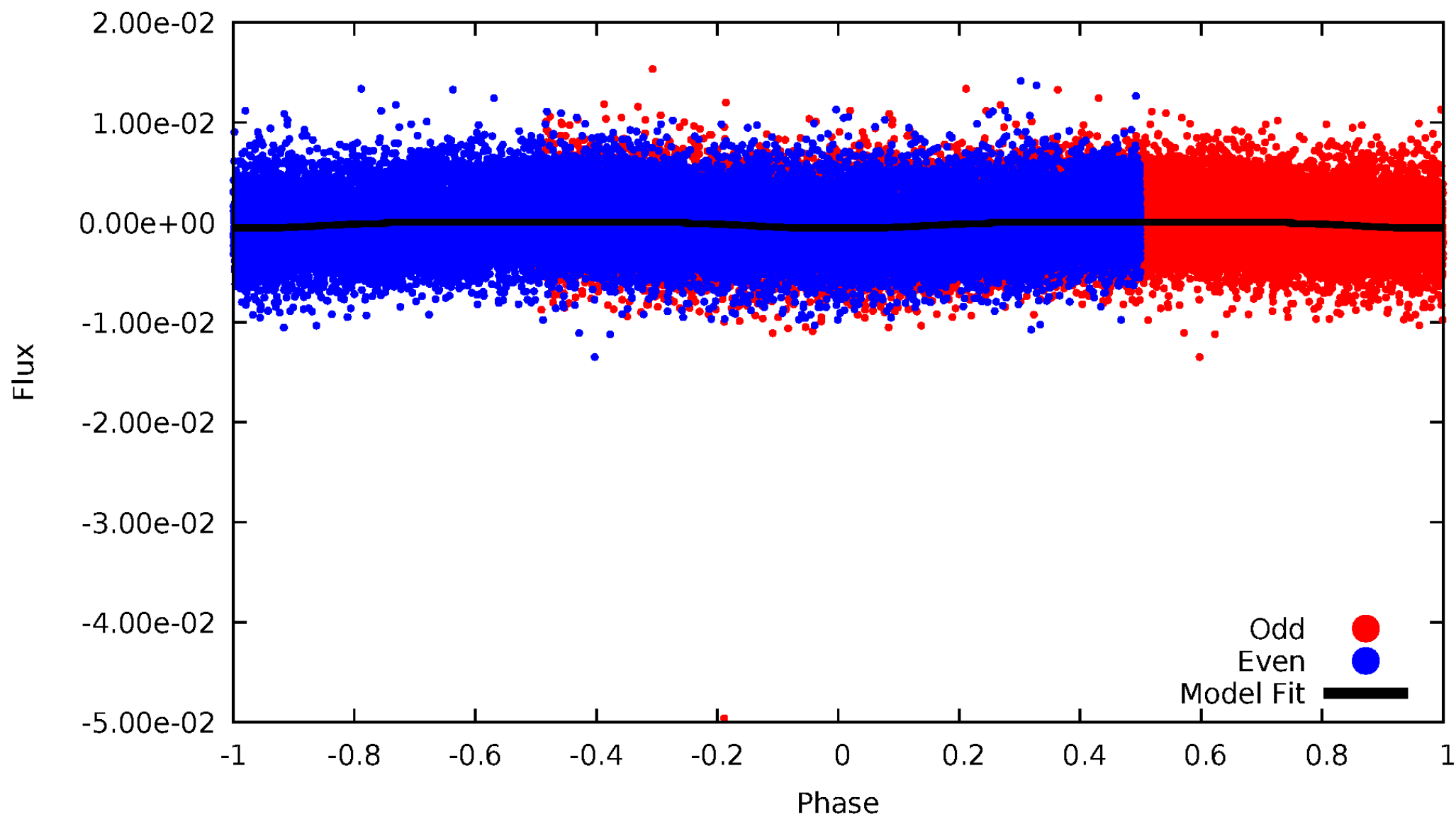


TCE 011909497-03



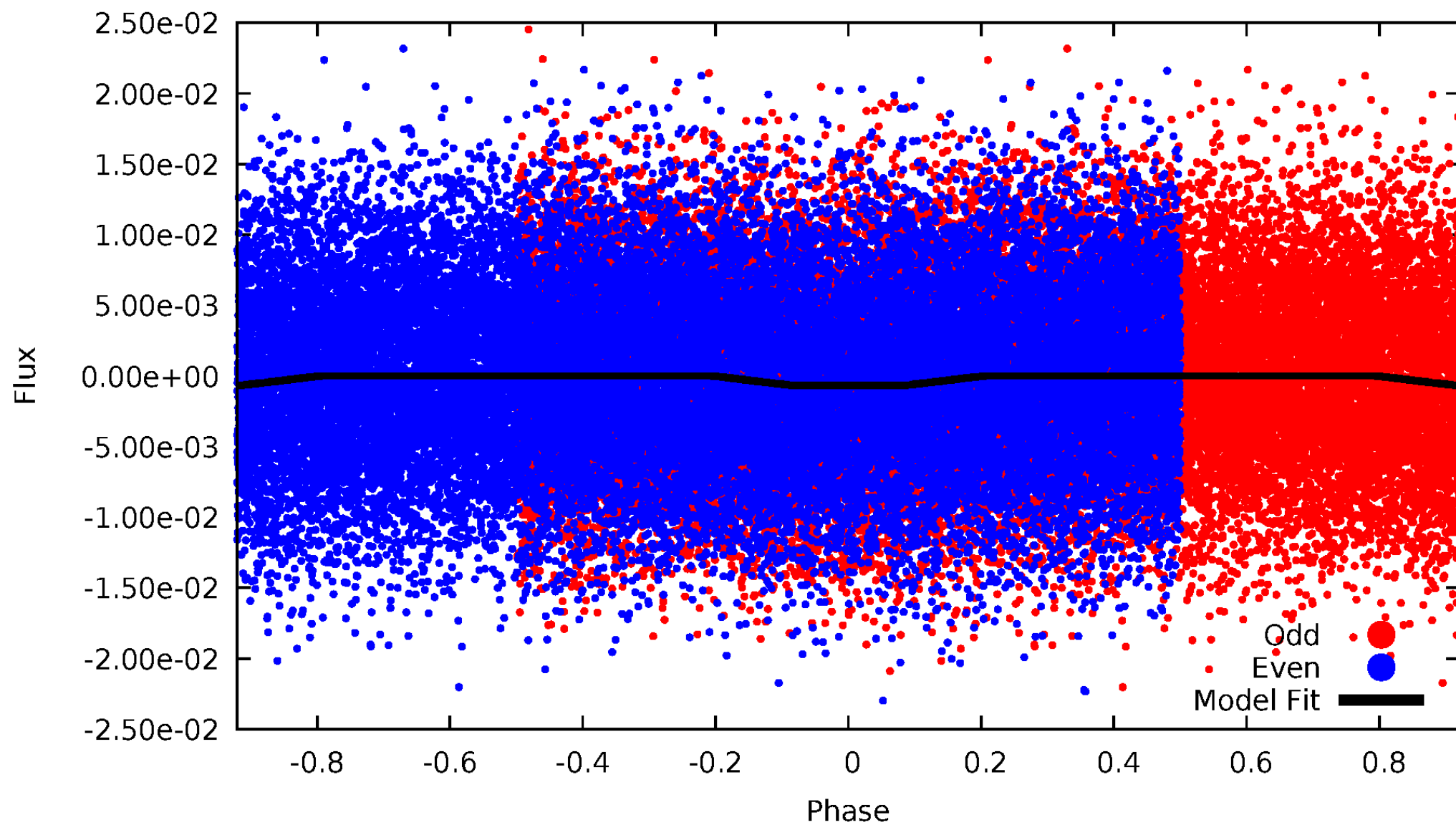
DV Odd/Even

TCE 011909497-03



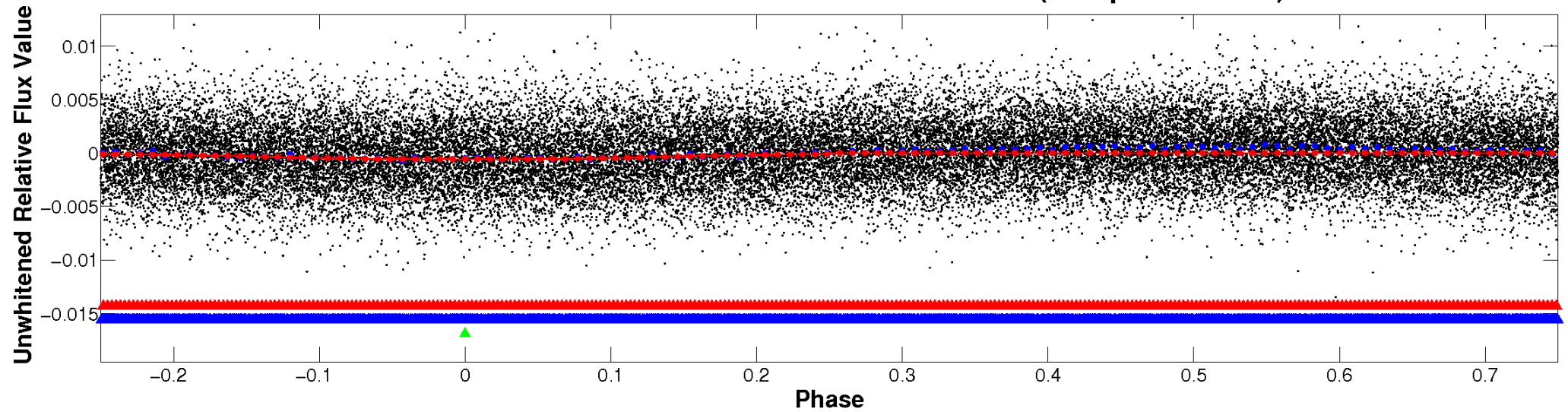
ALT Odd/Even

TCE 011909497-03

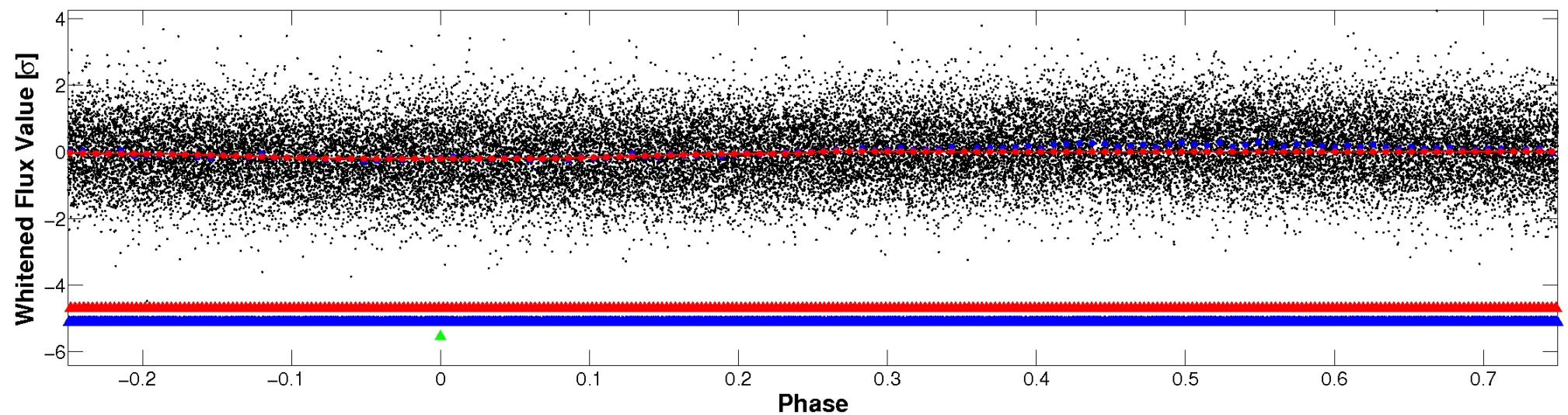


Non-Whitened Vs. Whitened Light Curve

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

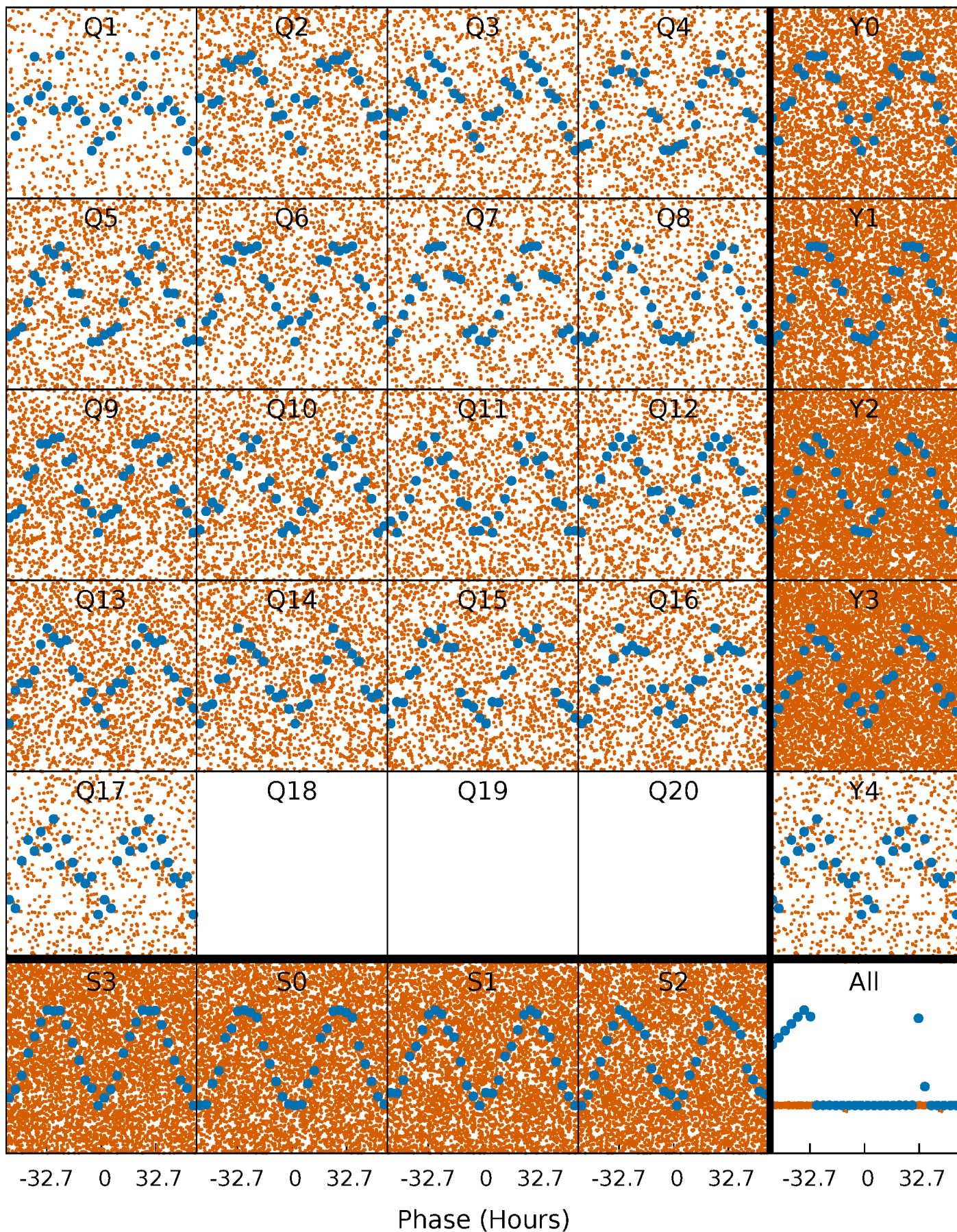


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



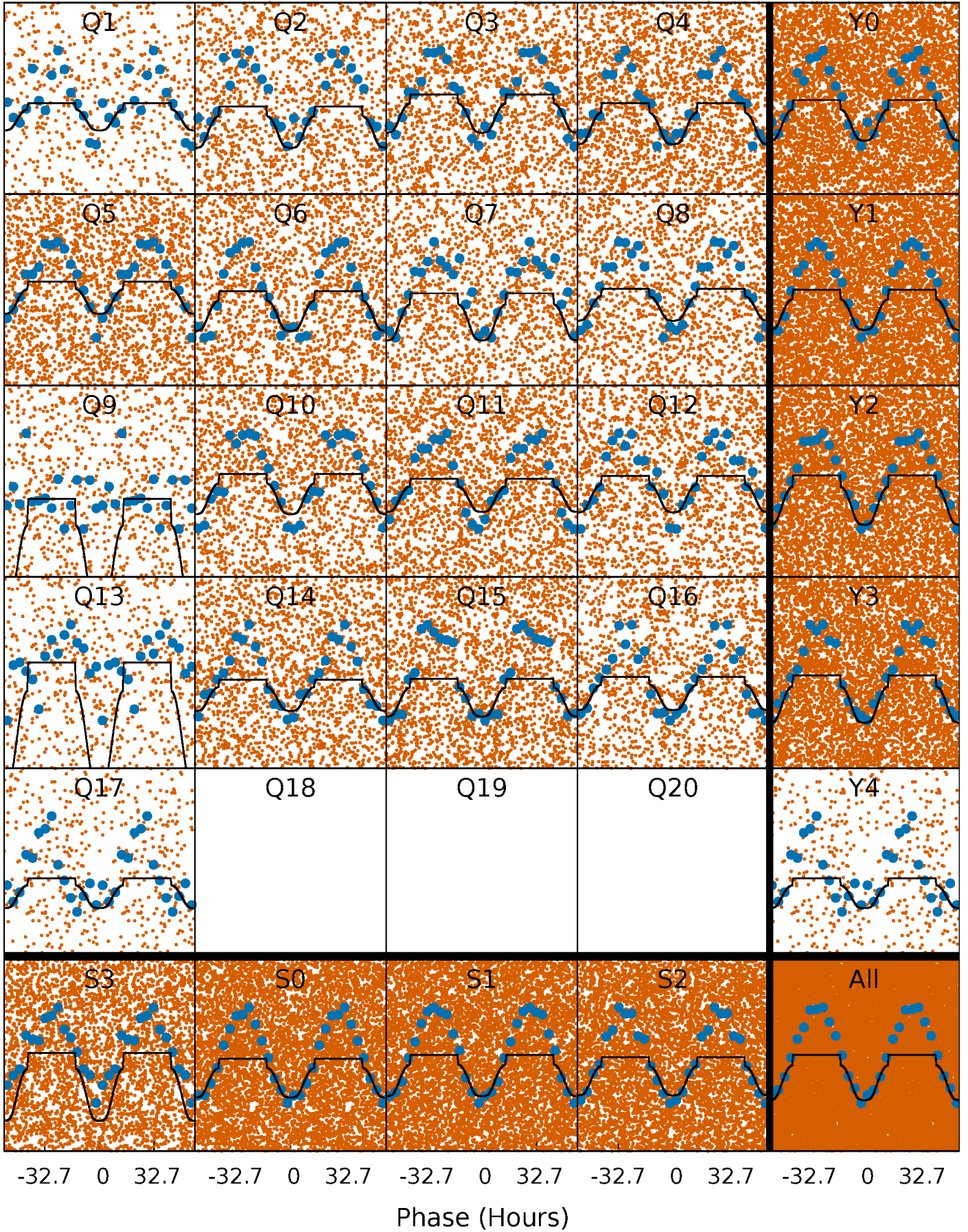
PDC Quarter-Phased Transit Curves

TCE 011909497-03 P= 2.382798 Days $T_0=132.979518$ (BKJD)



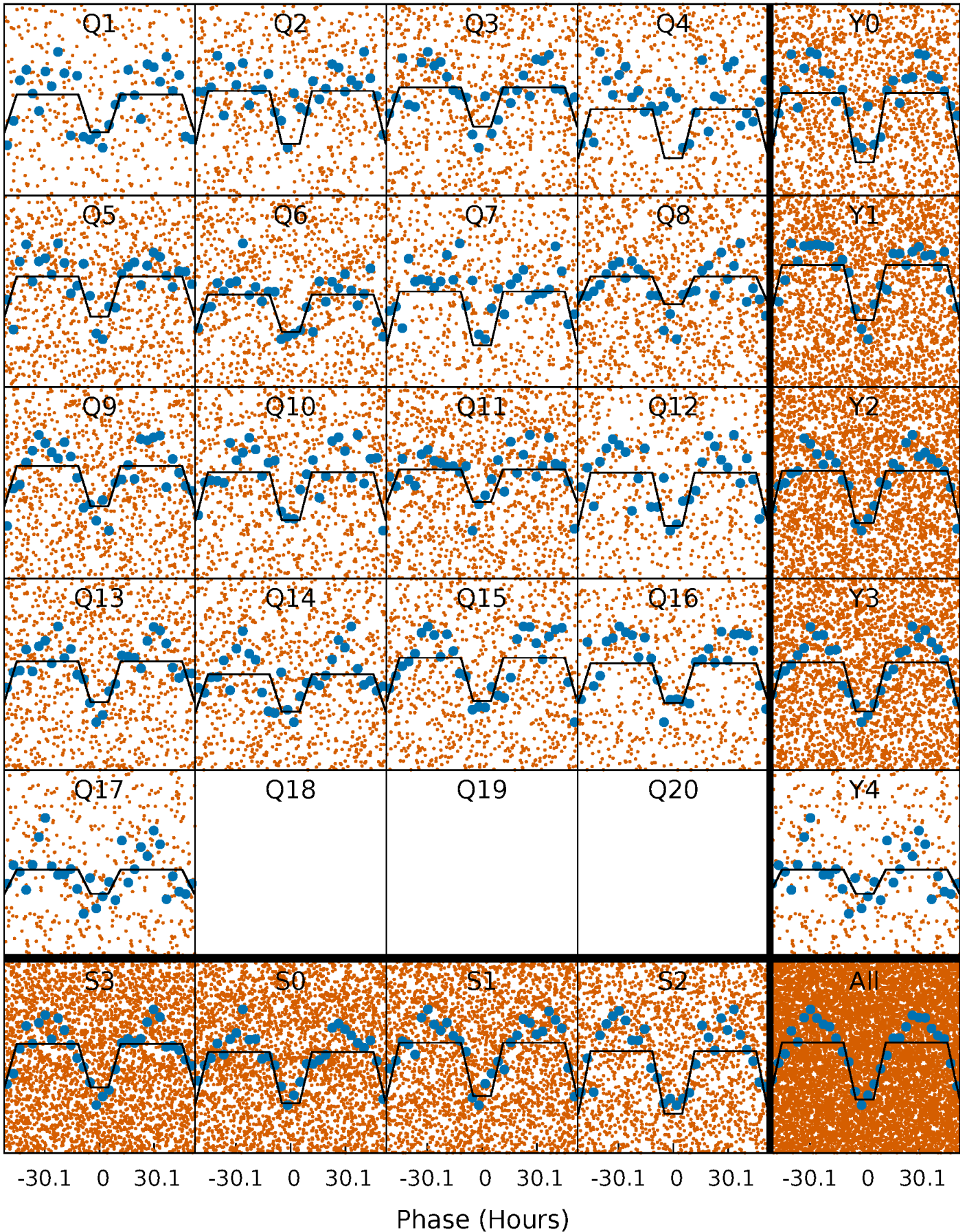
DV Quarter-Phased Transit Curves

TCE 011909497-03 P= 2.382798 Days $T_0=132.979518$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

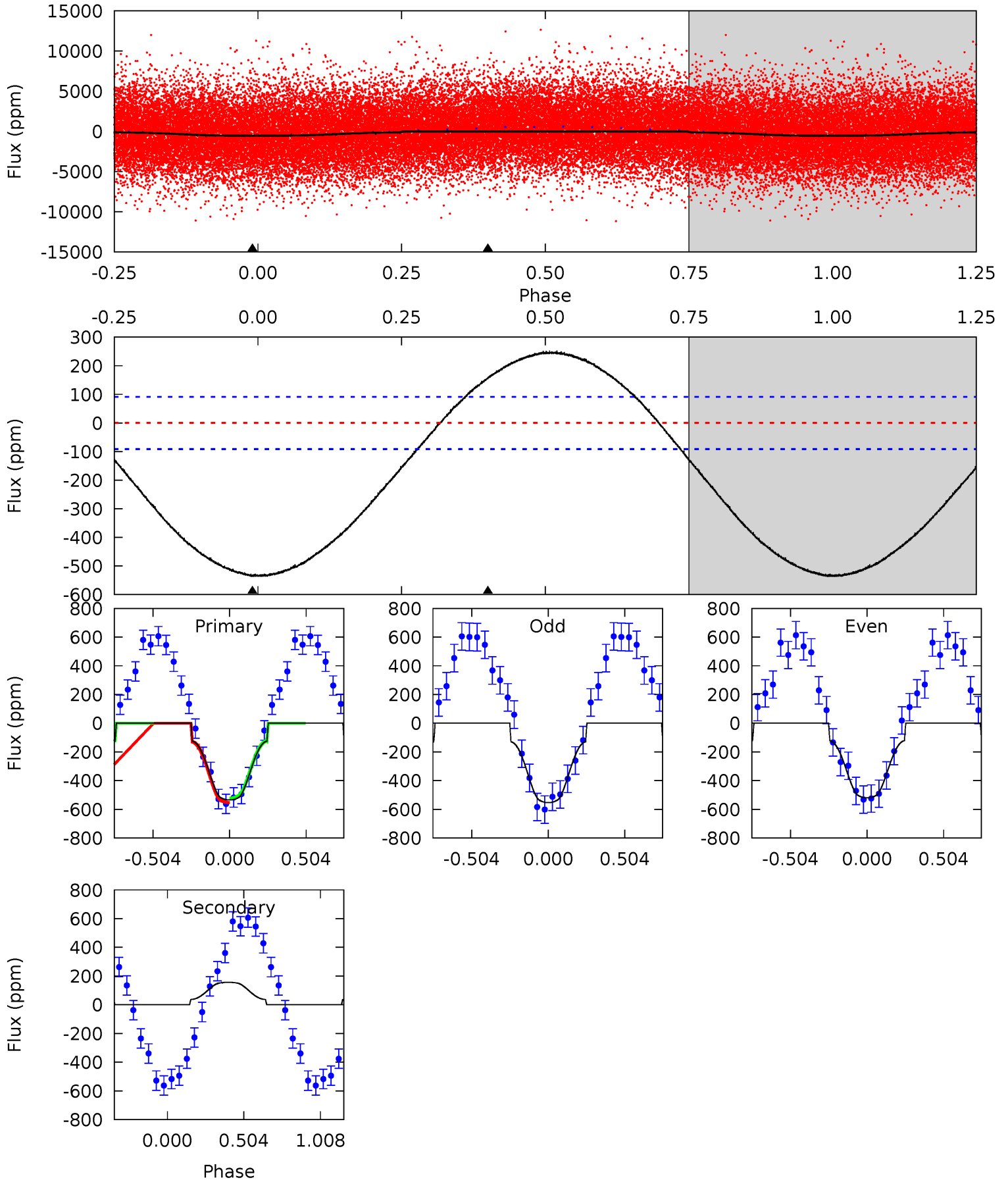
TCE 011909497-03 P= 2.382699 Days $T_0=132.975226$ (BKJD)



DV Model-Shift Uniqueness Test

011909497-03, P = 2.382798 Days, E = 130.596720 Days

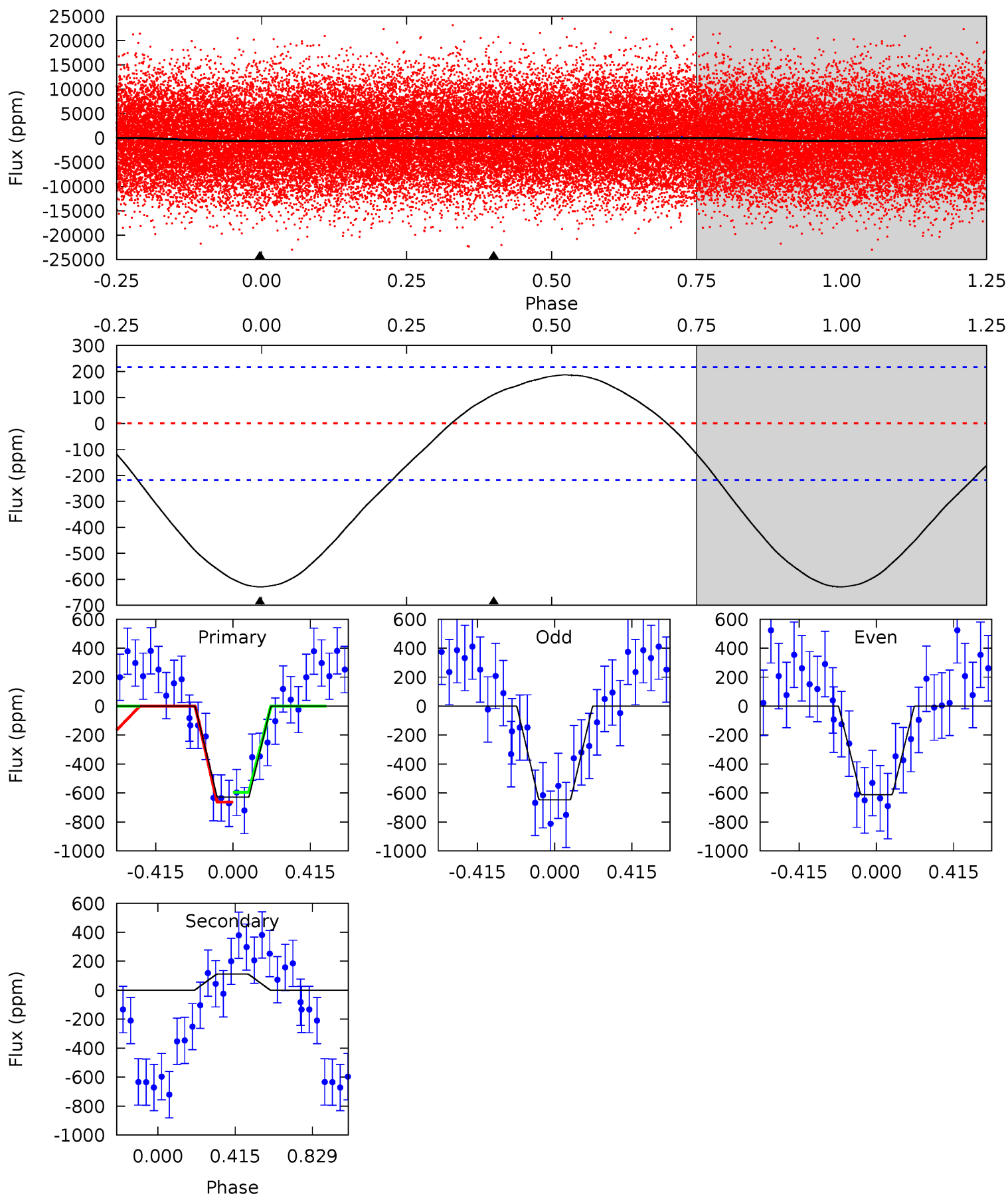
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.6	-7.20	0	0	4.21	0.67	3.14	24.6	24.6	-7.20	-7.20	0.78	0.96	0.32	0.72



Alt Model-Shift Uniqueness Test

011909497-03, P = 2.382699 Days, E = 130.592527 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	-2.18	0	0	4.26	0.82	1.12	12.3	12.3	-2.18	-2.18	0.36	1.01	0.23	0.66



Stellar Parameters For KIC 011909497

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7619^{+212}_{-318}	$3.590^{+0.510}_{-0.060}$	$-0.160^{+0.200}_{-0.300}$	$3.777^{+0.505}_{-2.021}$	$2.025^{+0.255}_{-0.583}$	$0.053^{+0.351}_{-0.011}$
	+3%/-4%	+14%/-2%	+125%/-188%	+13%/-54%	+13%/-29%	+663%/-20%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011909497-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	156 ± 22	$10.95^{+1.32}_{-3.05}$	4162^{+312}_{-538}	-5298^{+227}_{-202}	$-1.495^{+0.379}_{-1.039}$
Alt.	111 ± 51	$10.01^{+1.50}_{-2.84}$	4168^{+298}_{-573}	-5079^{+486}_{-405}	$-1.245^{+0.588}_{-1.062}$

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

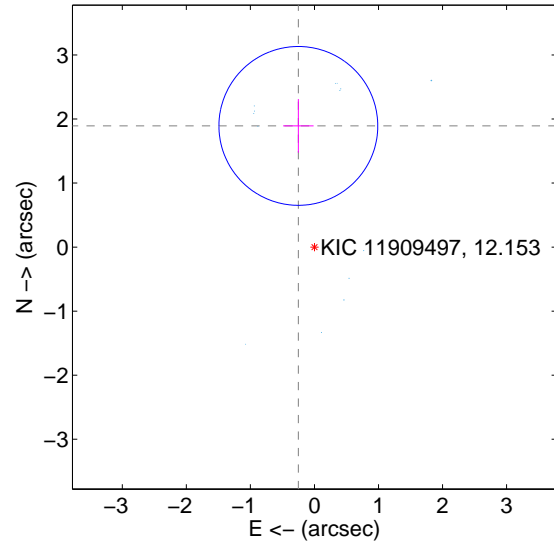
Supplemental centroid analysis for 011909497-03. Kepler magnitude: 12.15. Transit SNR 19.56

There are 14 quarters with good PRF difference image offsets

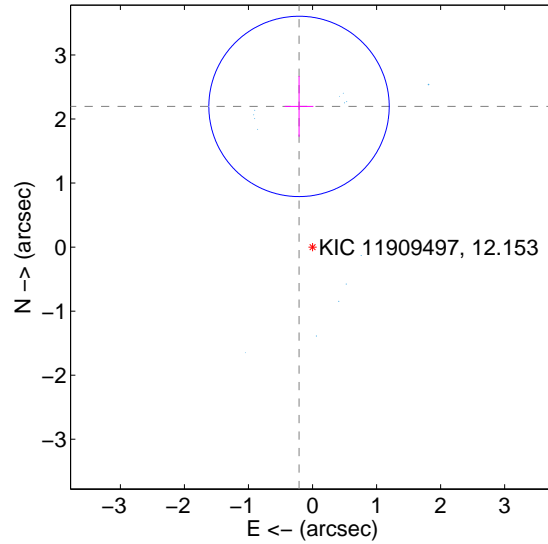
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.909 ± 0.413	4.62	0.251 ± 0.239	1.893 ± 0.419
PRF-fit source offset from KIC position	2.207 ± 0.469	4.70	0.211 ± 0.225	2.197 ± 0.475
photometric centroid source offset	0.25 ± 0.02	10.42	0.01 ± 0.02	-0.25 ± 0.02

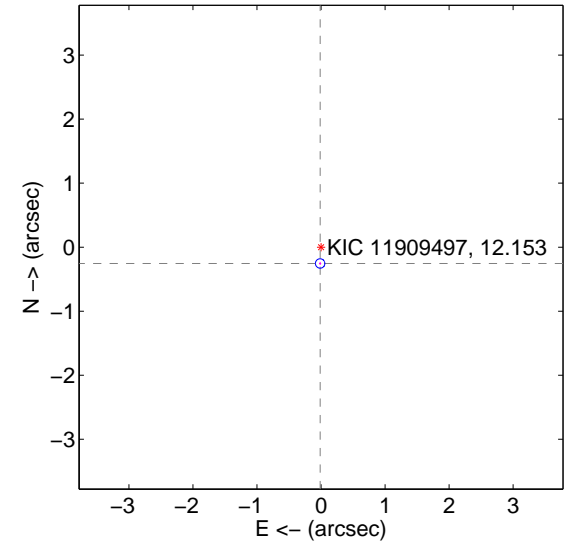
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

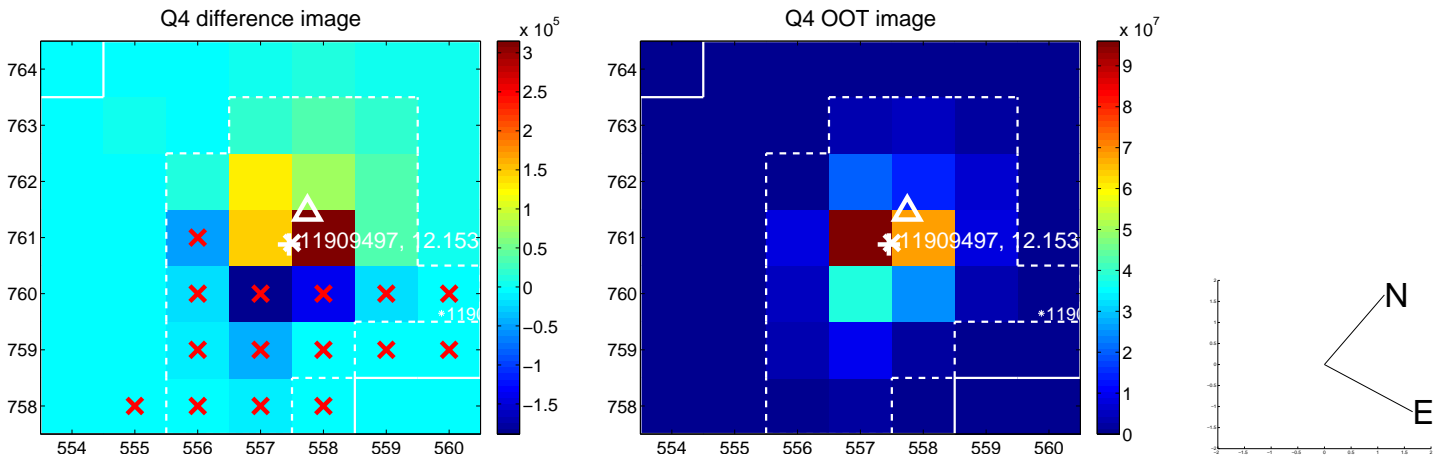
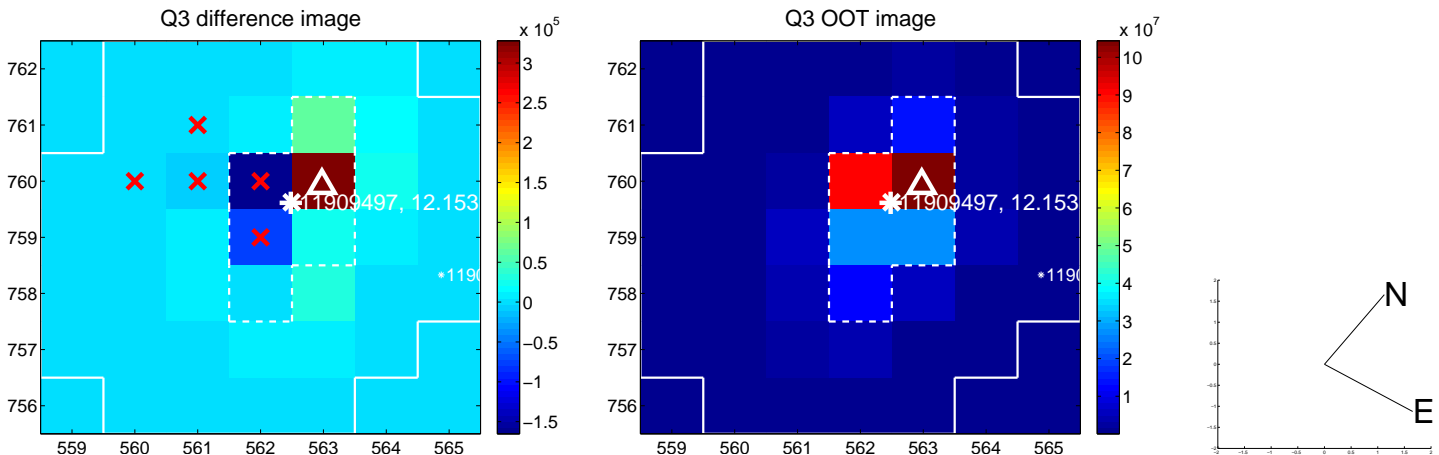
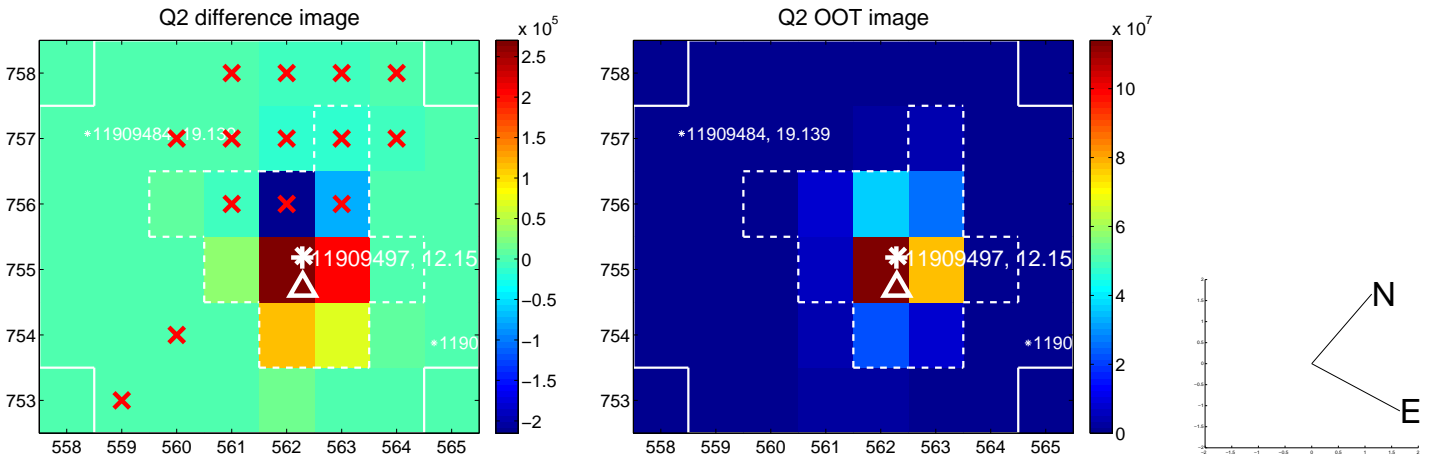
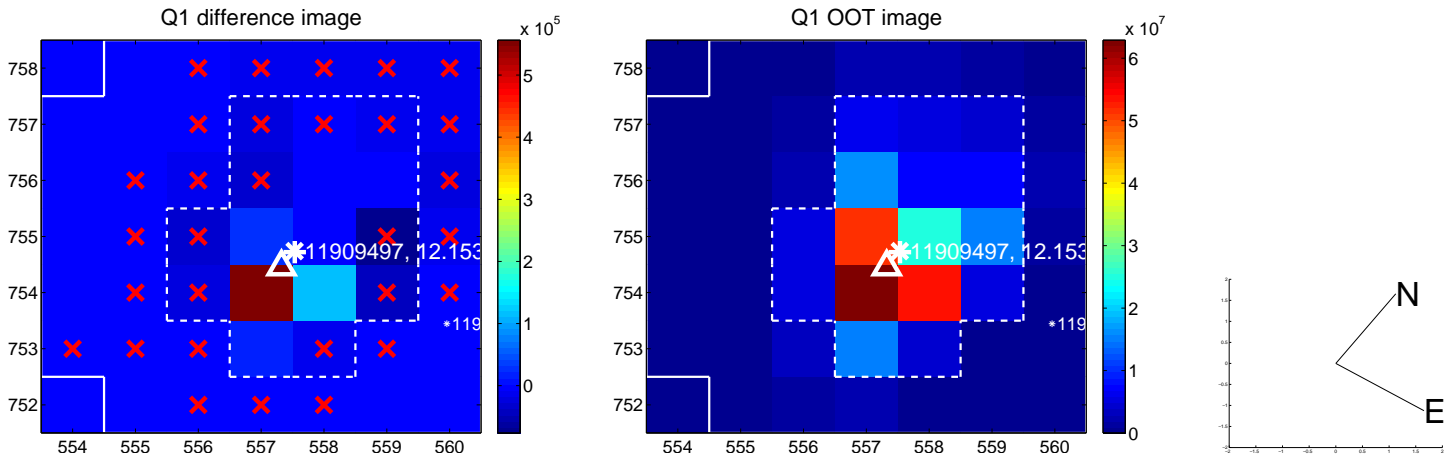


offset from photometric centroids

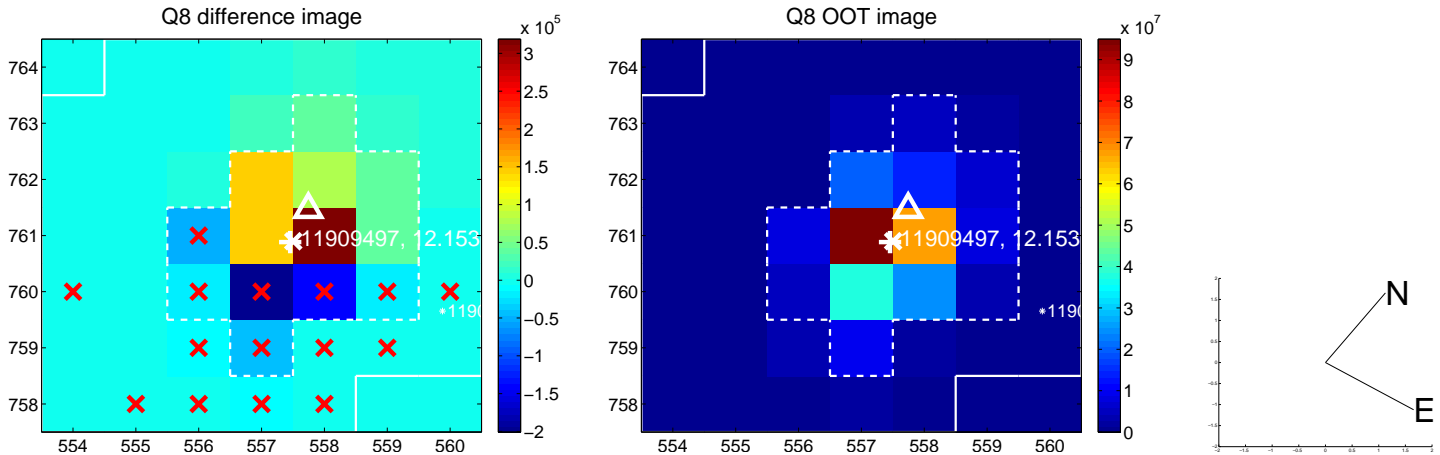
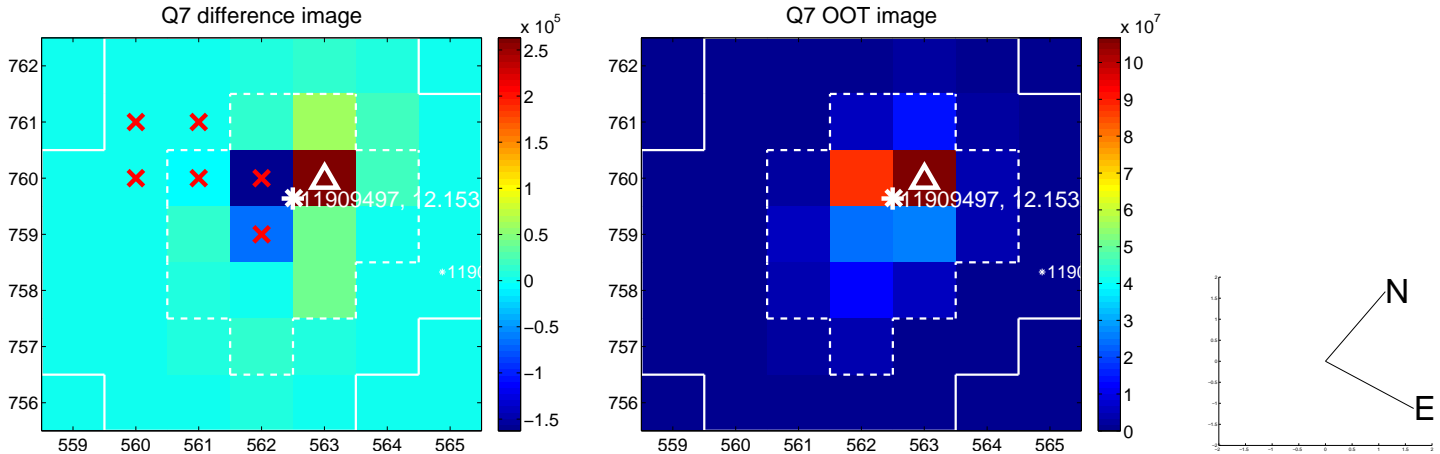
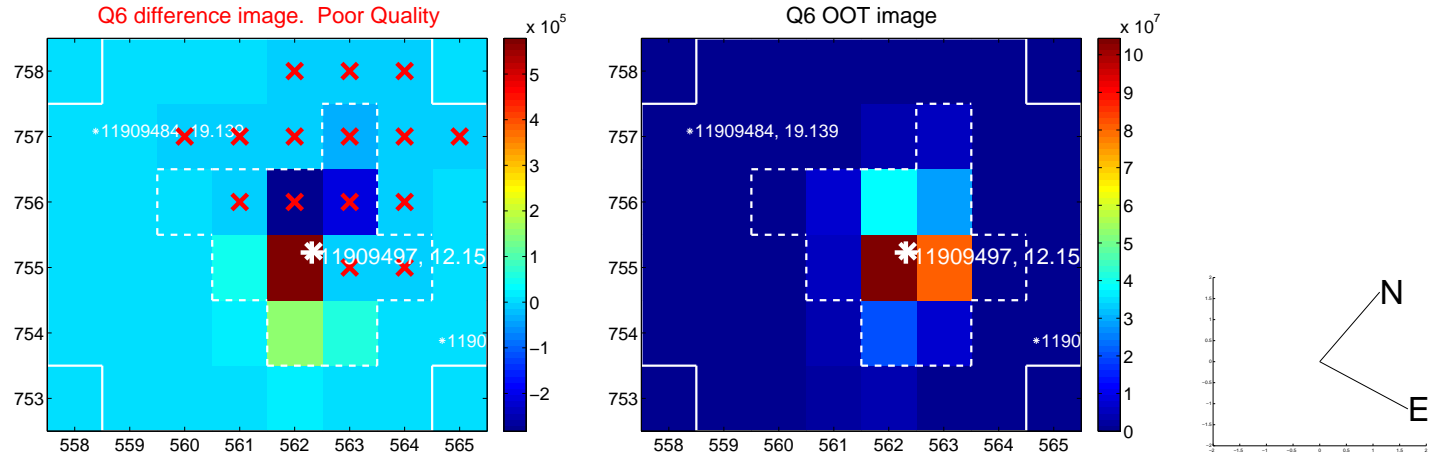
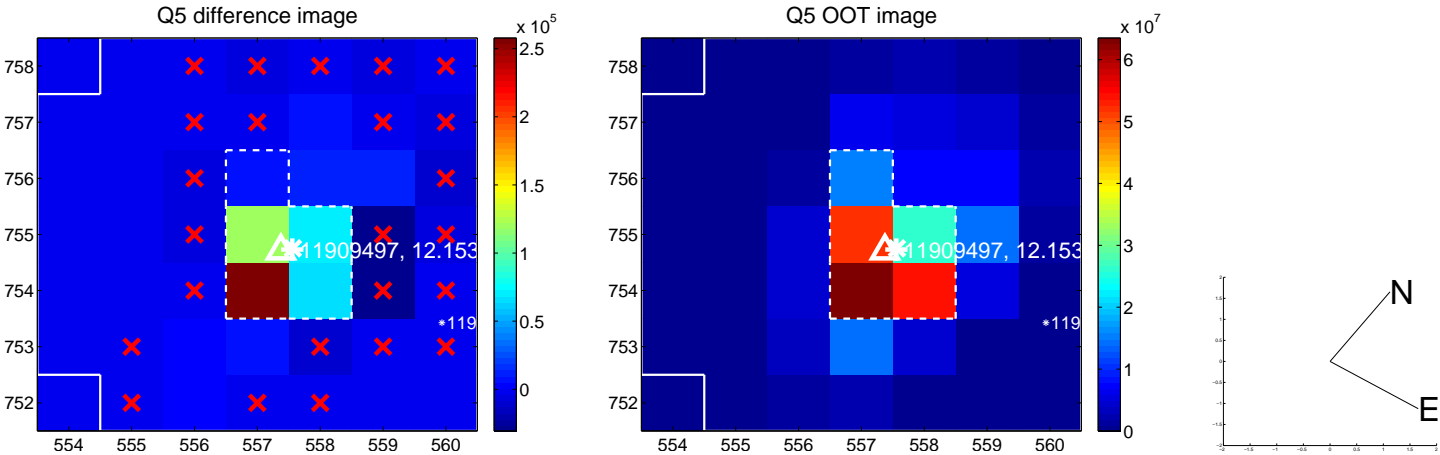


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

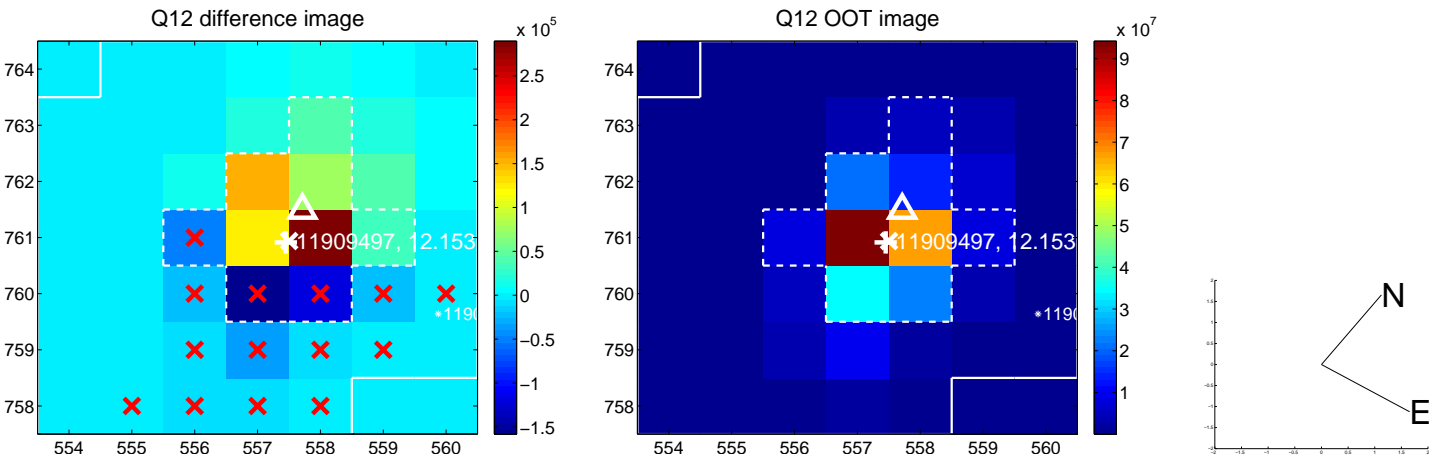
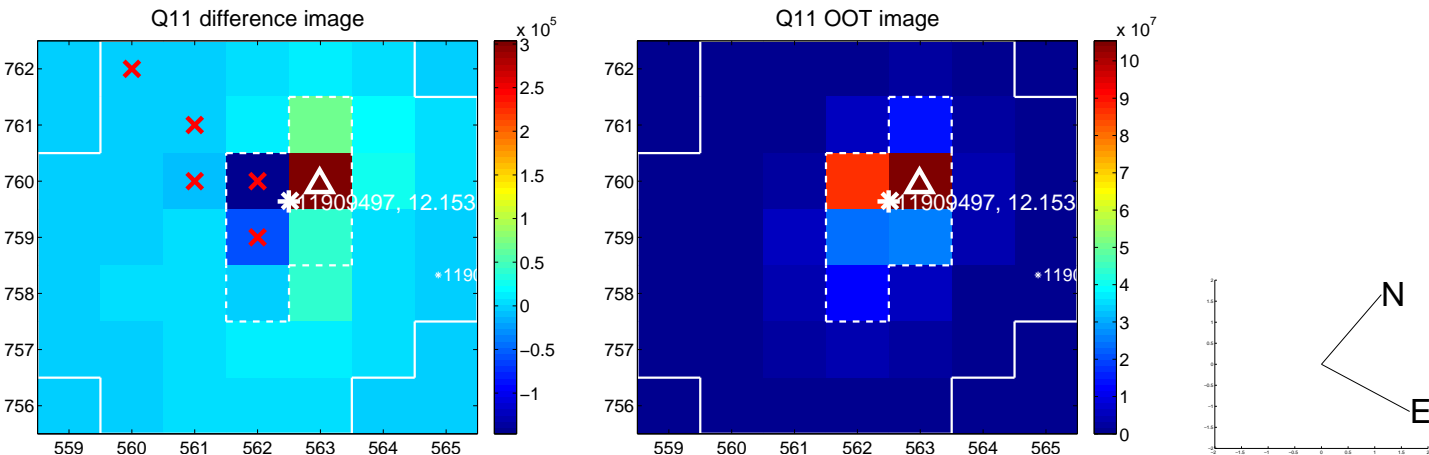
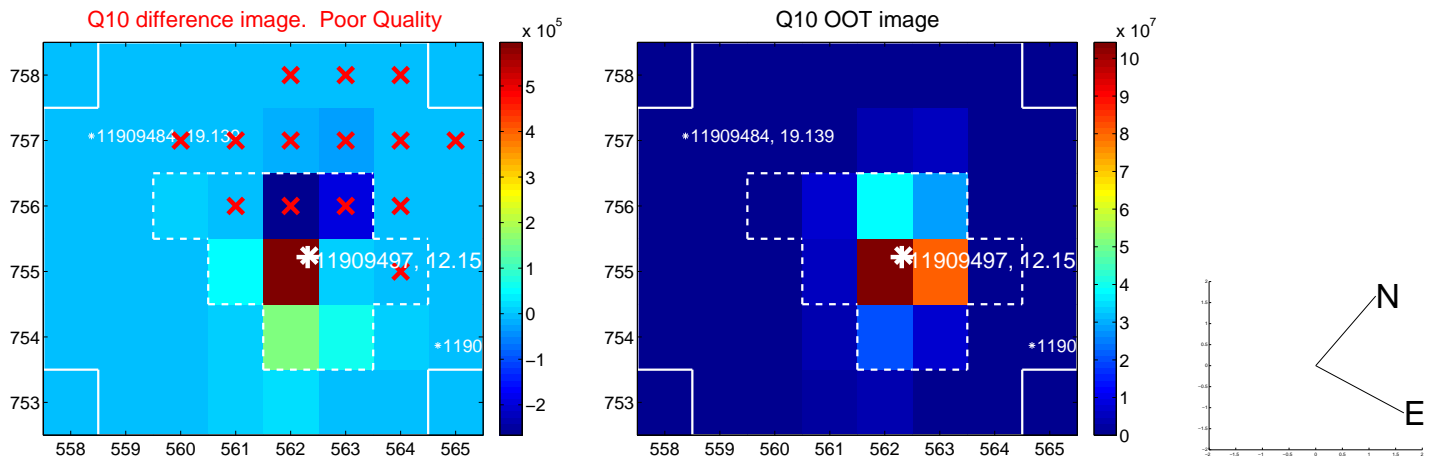
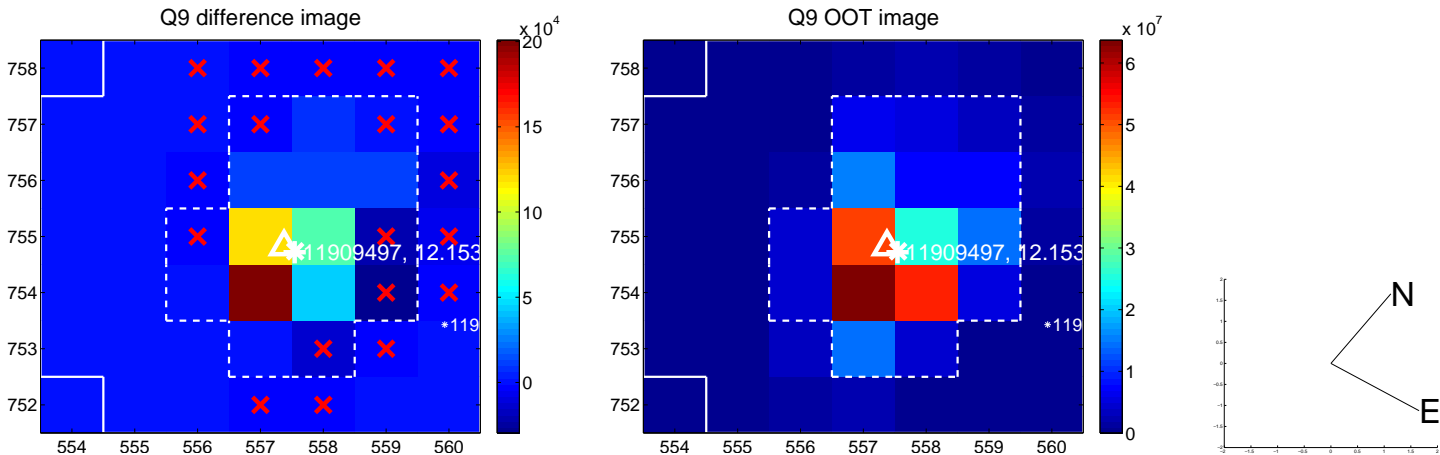
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



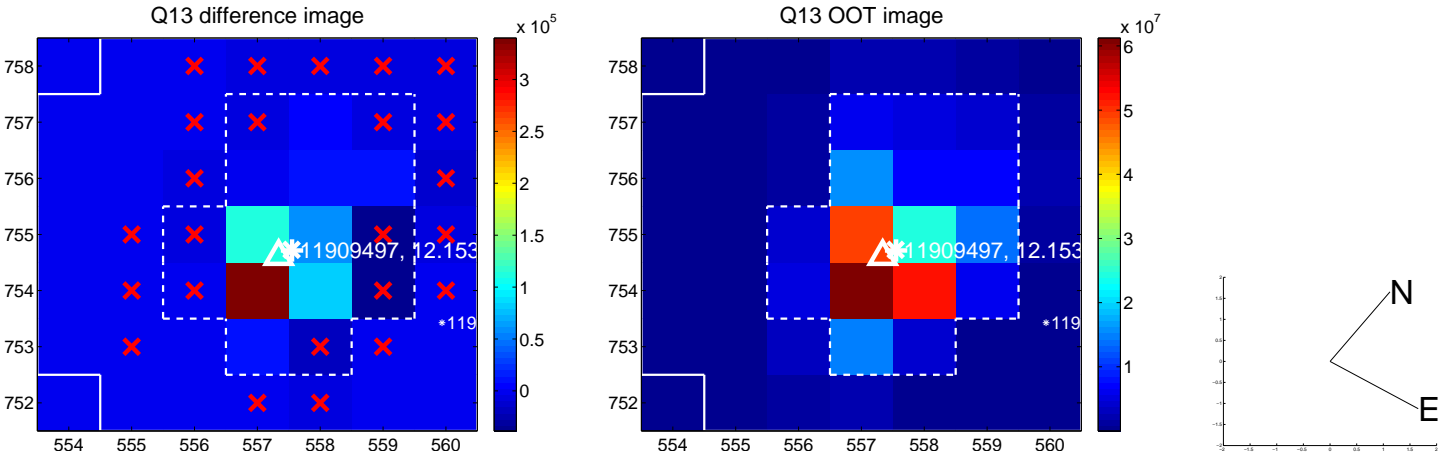
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



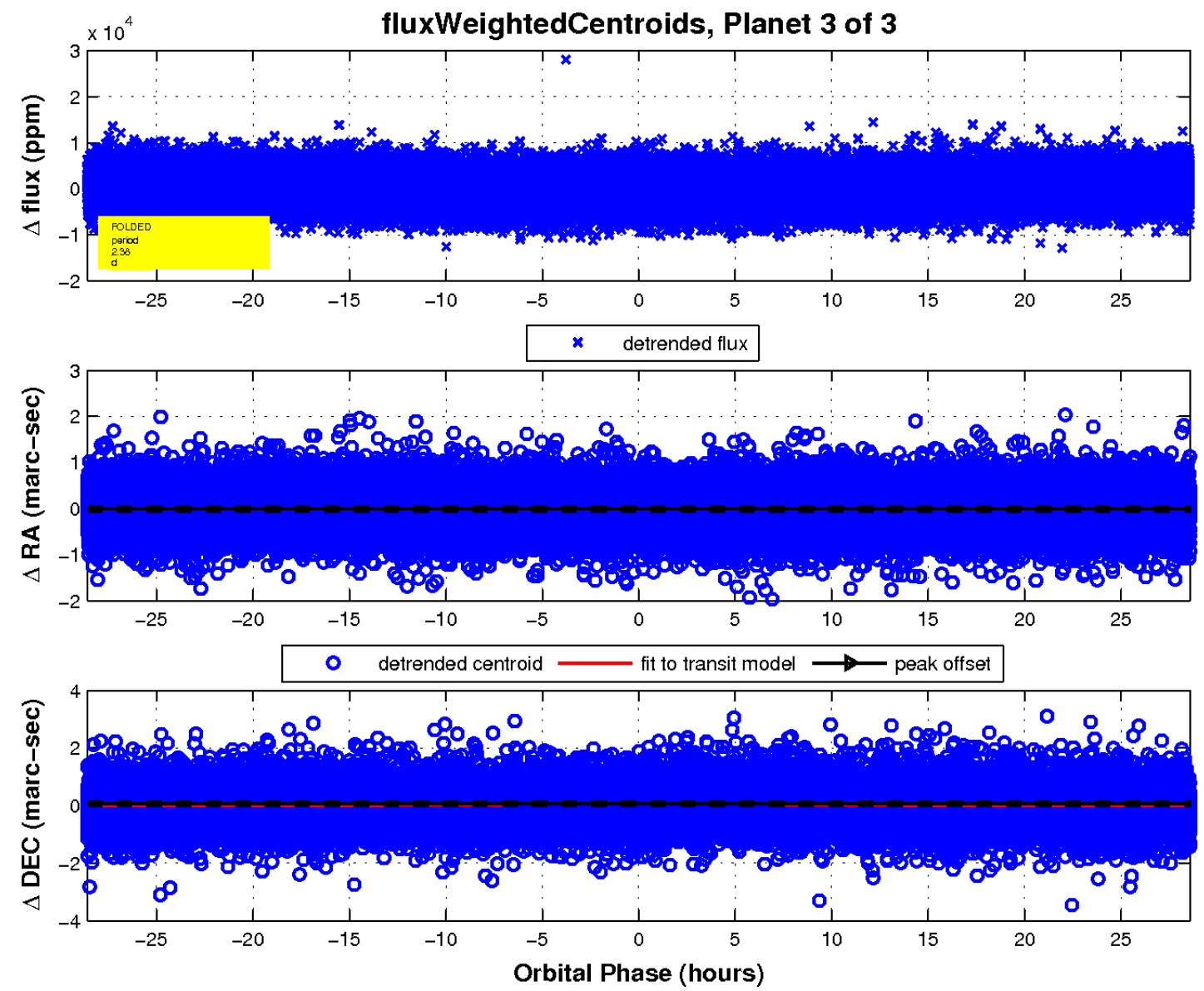
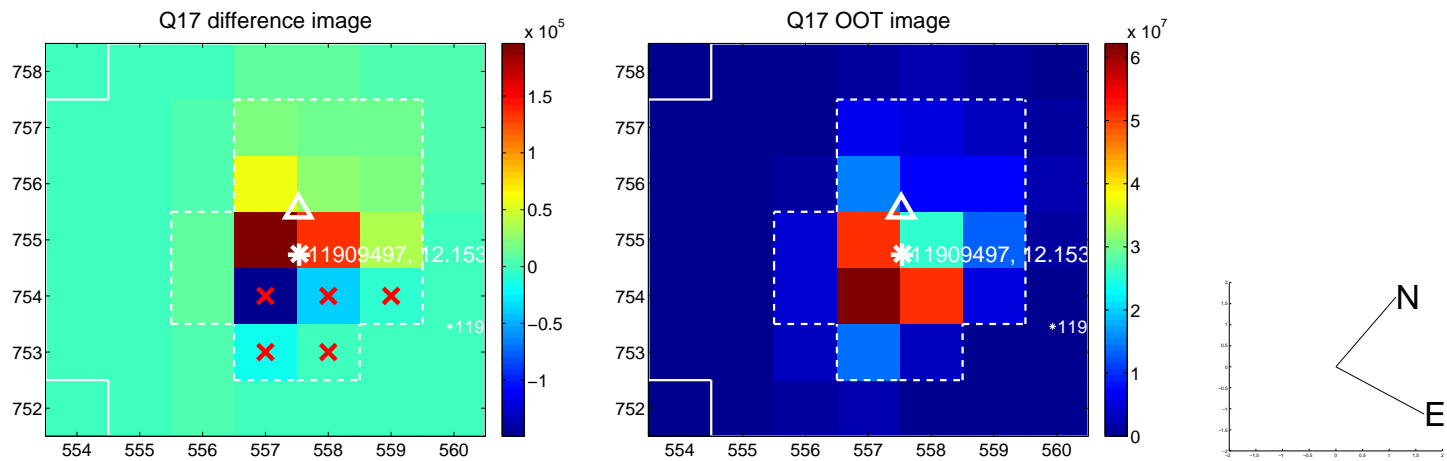
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

