

KIC 005212962

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})
005212962-01	OBS	No	0.985339	131.659311	9.7	4.441	11.4	10.9	2.70	9189	0.97	69483.44
005212962-02	OBS	No	1.404057	132.233450	17.2	6.280	12.3	11.4	2.70	9189	1.30	43332.68
005212962-03	OBS	No	1.404144	132.855569	18.2	9.639	14.9	13.8	2.70	9189	1.18	43329.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005212962-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005212962-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—CENT_SATURATED
005212962-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

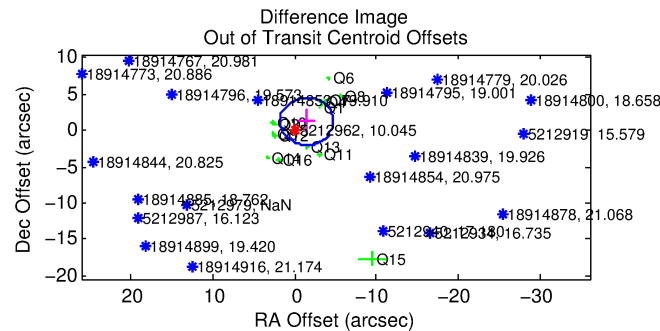
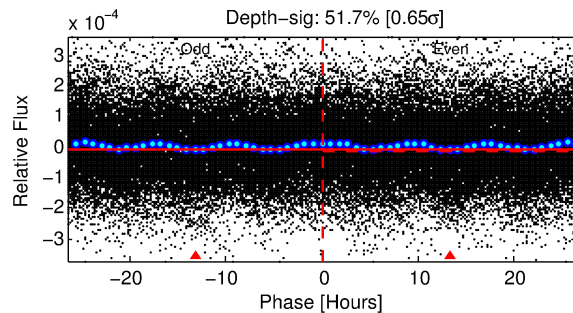
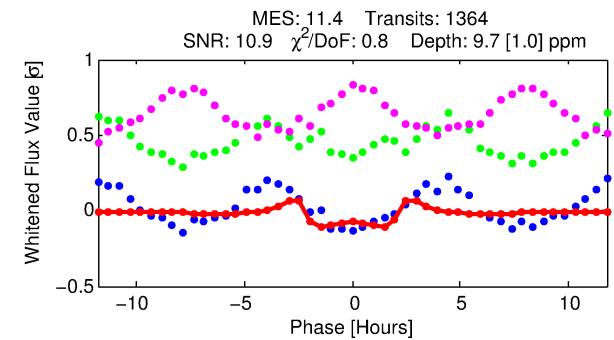
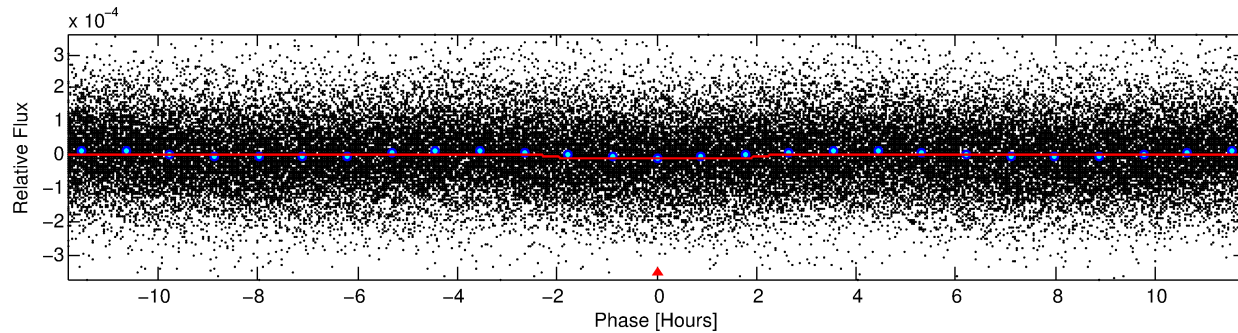
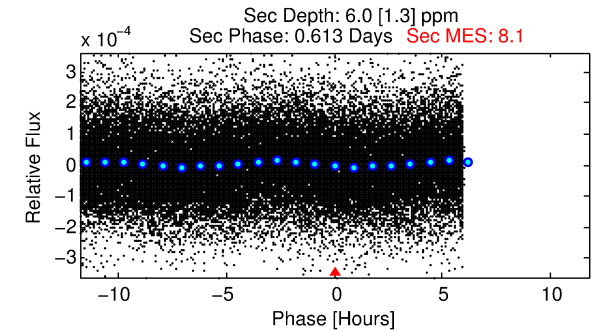
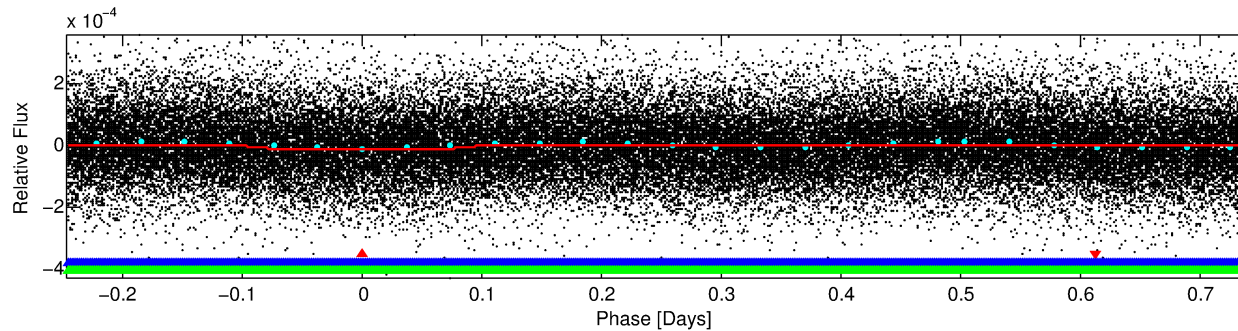
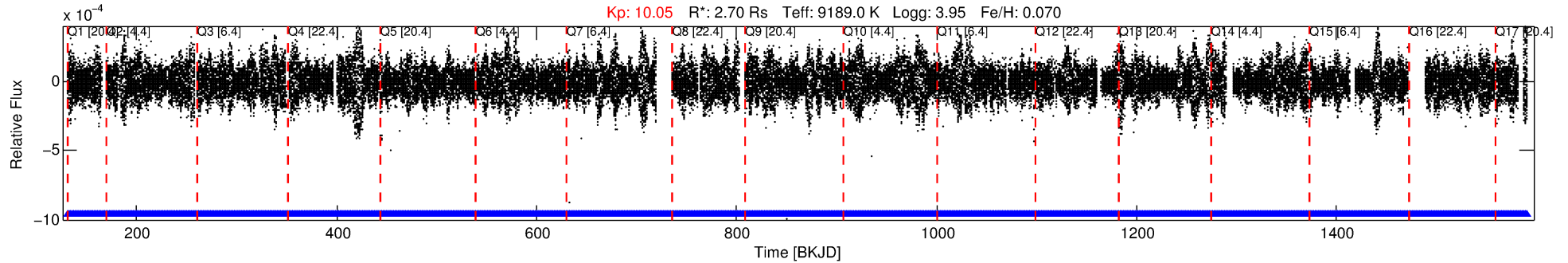
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005212962-01

No Significant Match Found

DV One-Page Summary

KIC: 5212962 Candidate: 1 of 3 Period: 0.985 d



DV Fit Results:

Period = 0.98534 [0.00001] d
Epoch = 131.6593 [0.0022] BKJD
Rp/R* = 0.0033 [0.0003]
a/R* = 1.21 [0.25]
b = 0.90 [0.15]
Seff = 69483.44 [33757.83]
Teq = 4140 [503] K
Rp = 0.97 [0.38] Re
a = 0.0259 [0.0082] AU
Ag = 2.36 [1.28] [1.06σ]
Teffp = 7933 [699] K [4.40σ]

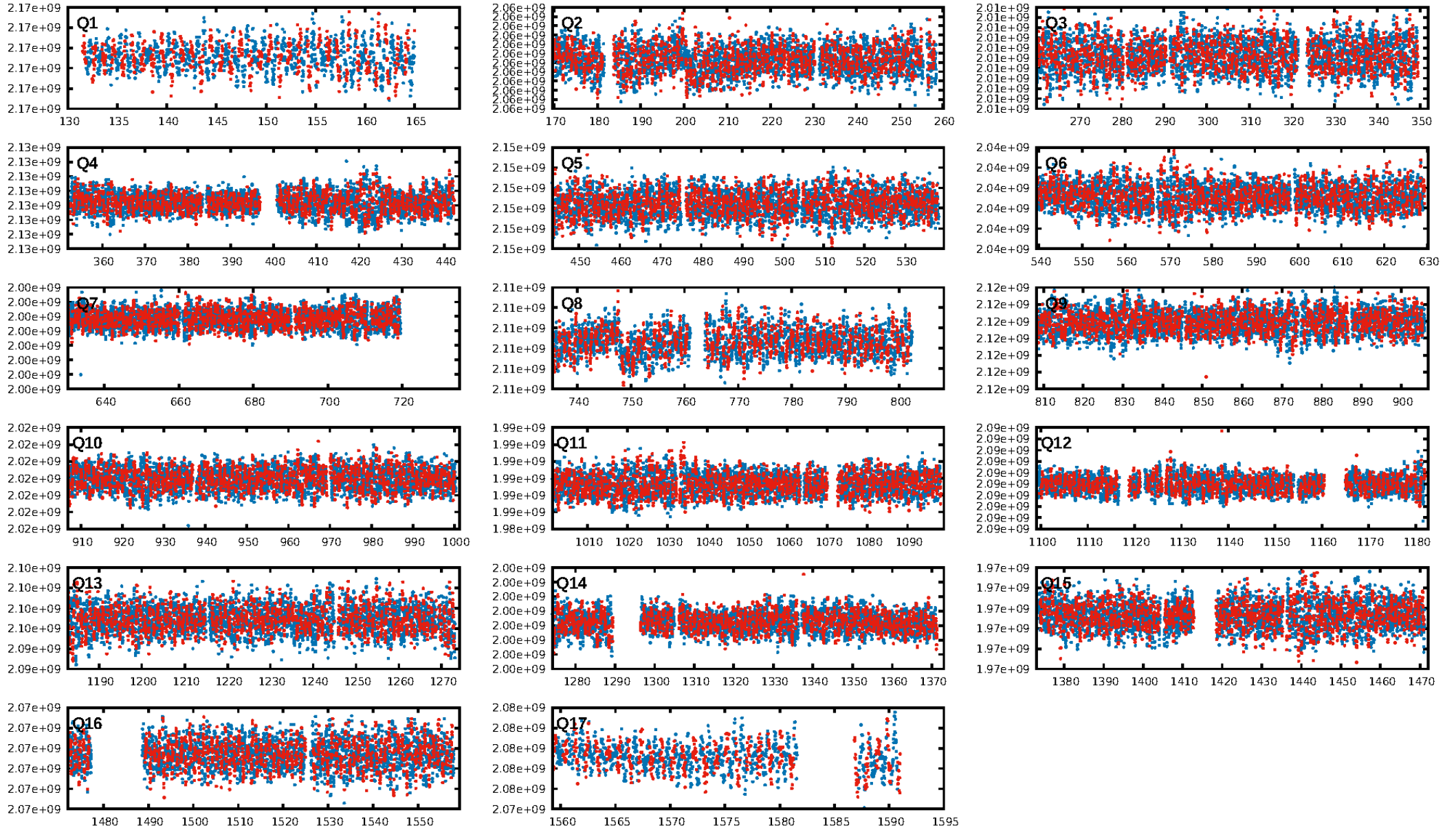
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 80.9% [1.31σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1302/1302]
GhostDiagnostic-chr: N/A
Centroid-sig: 81.4%
Centroid-so: 0.419 arcsec [0.52σ]
OotOffset-rm: 1.910 arcsec [1.77σ]
OotOffset-st: 3/4/4/3 [14]
KicOffset-rm: 1.247 arcsec [1.26σ]
KicOffset-st: 3/4/4/3 [14]
DiffImageQuality-fgm: 0.36 [5/14]
DiffImageOverlap-fno: 0.00 [0/17]

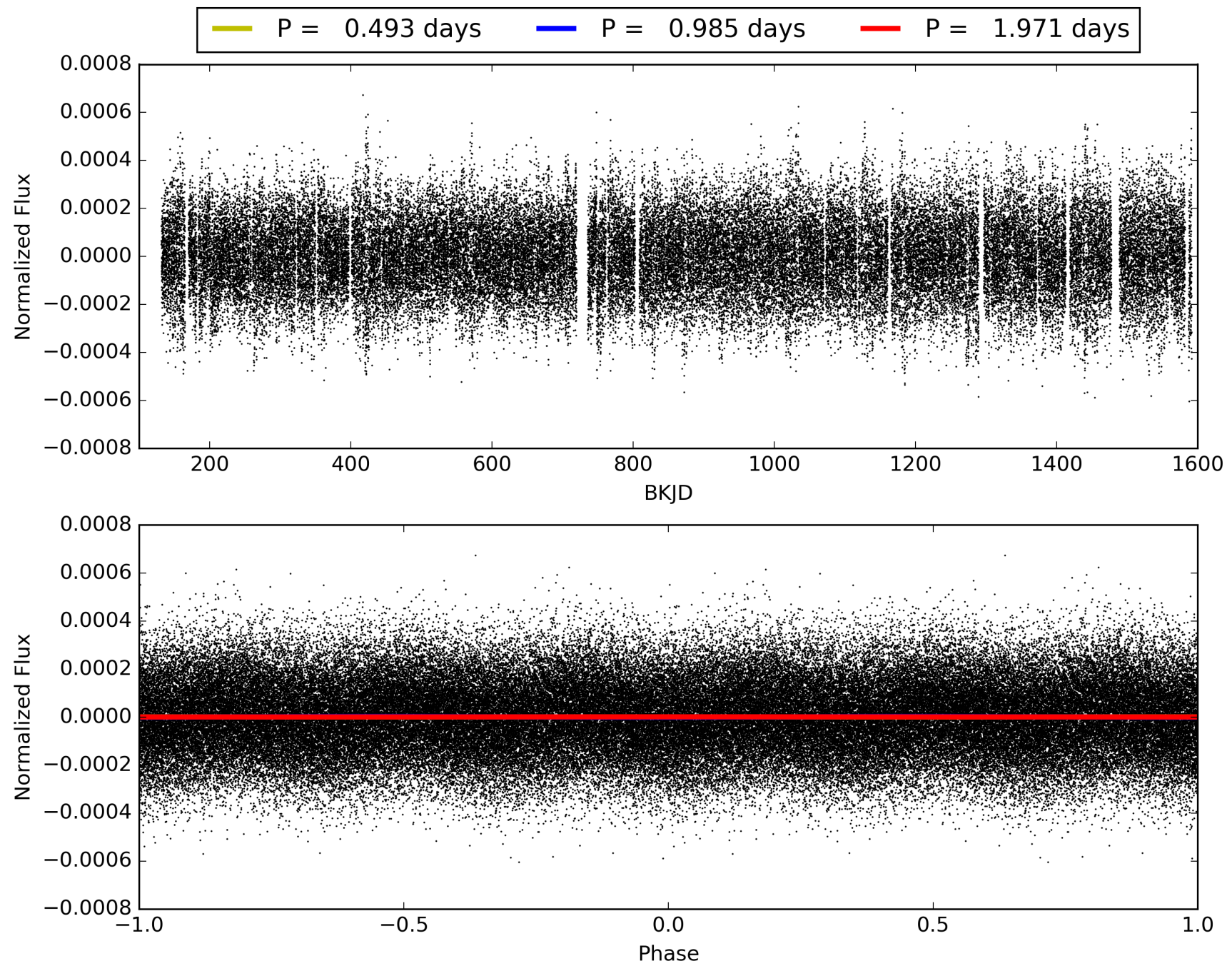
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:51:44 Z

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

TCE 005212962-01, PDC Light Curves

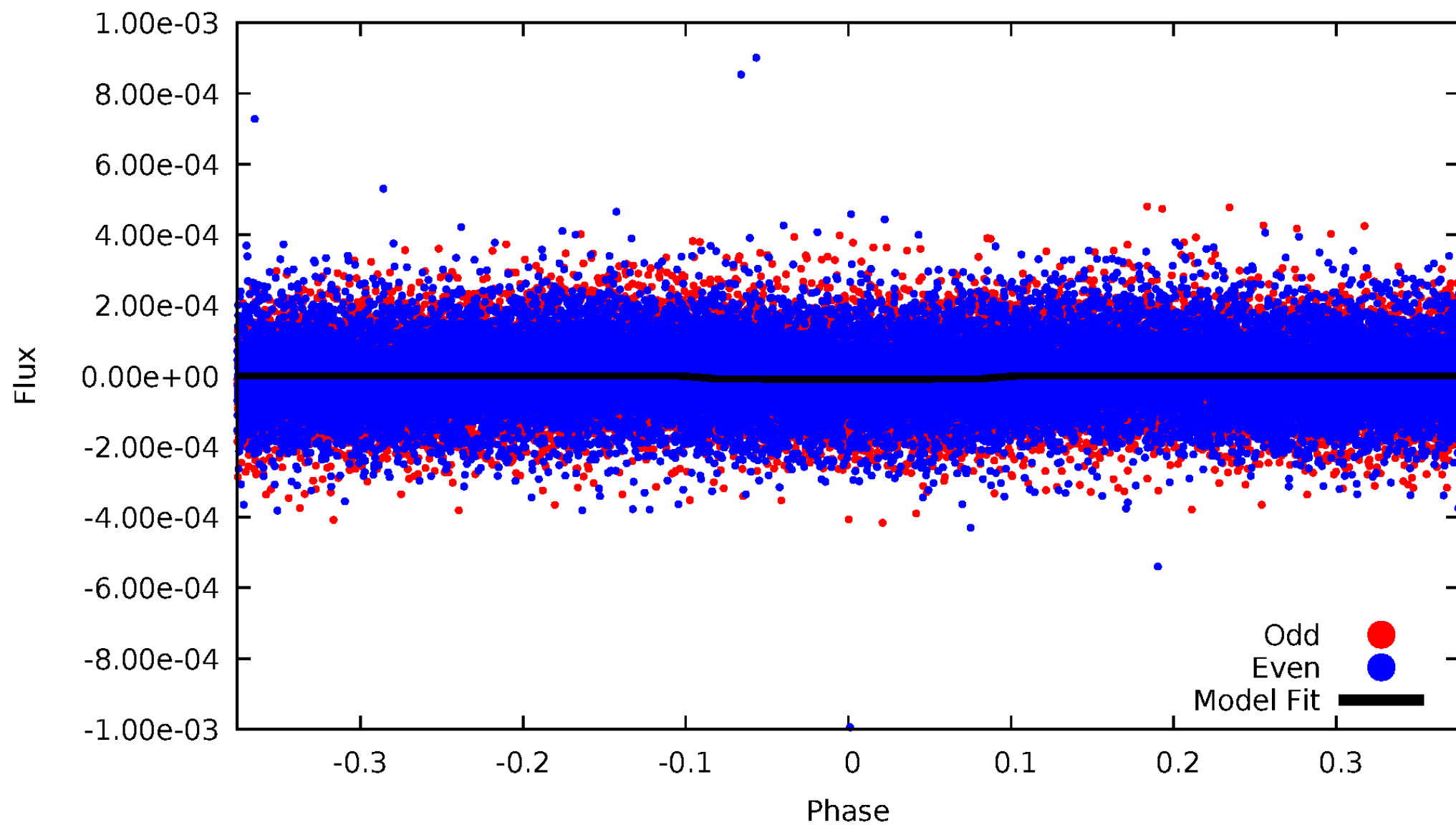


TCE 005212962-01



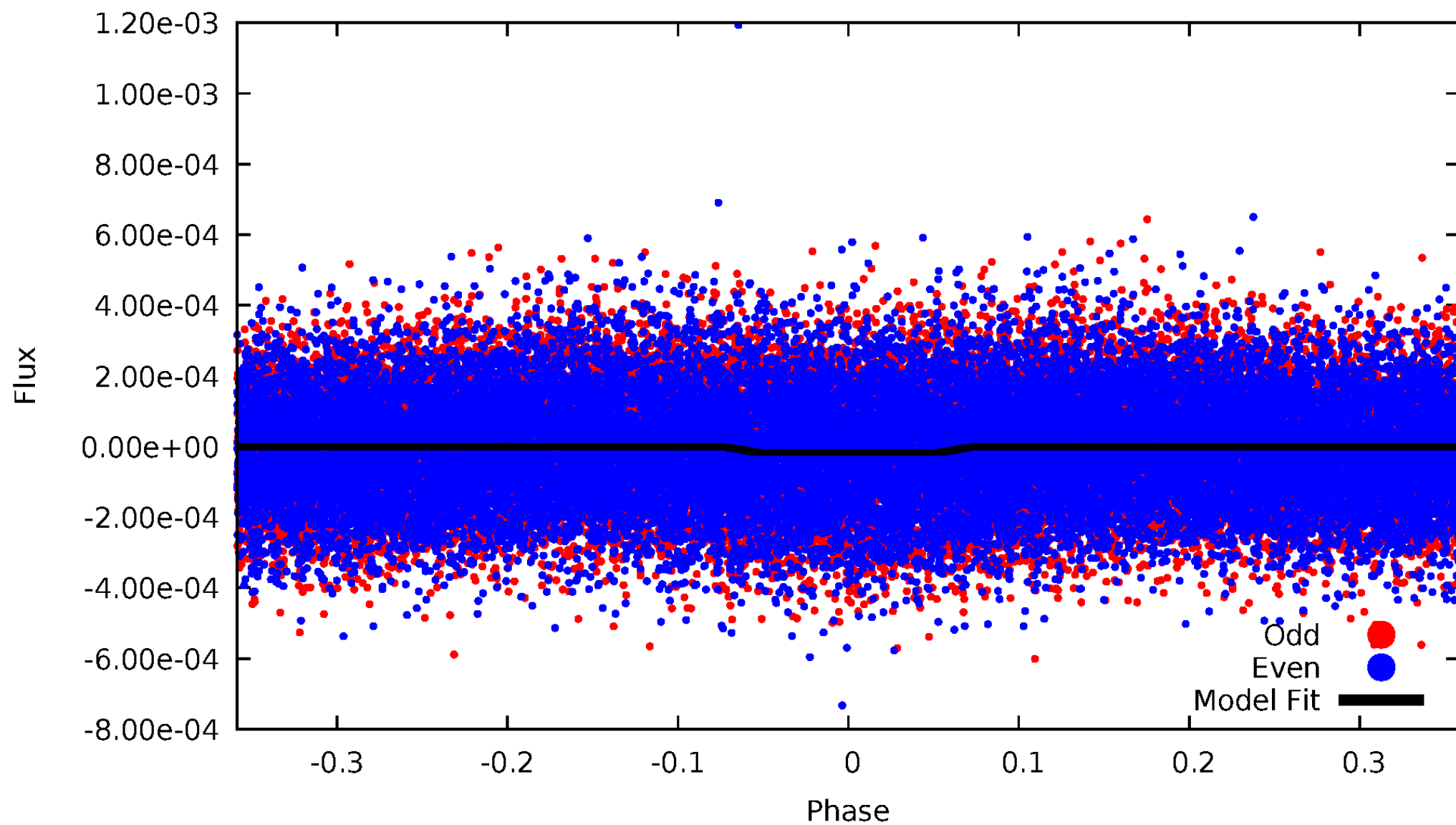
DV Odd/Even

TCE 005212962-01



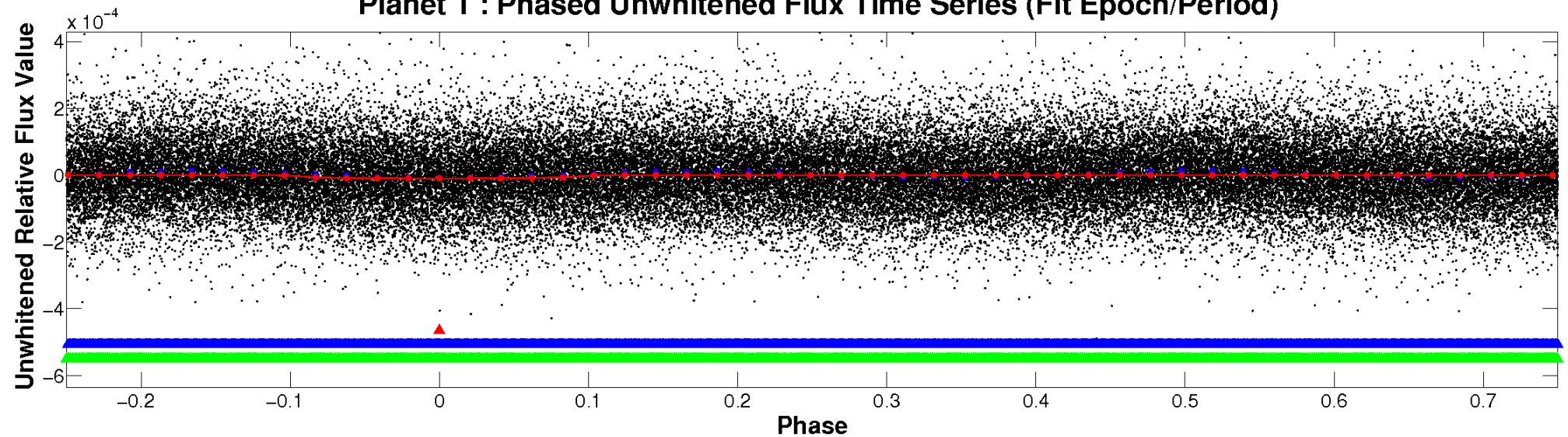
ALT Odd/Even

TCE 005212962-01

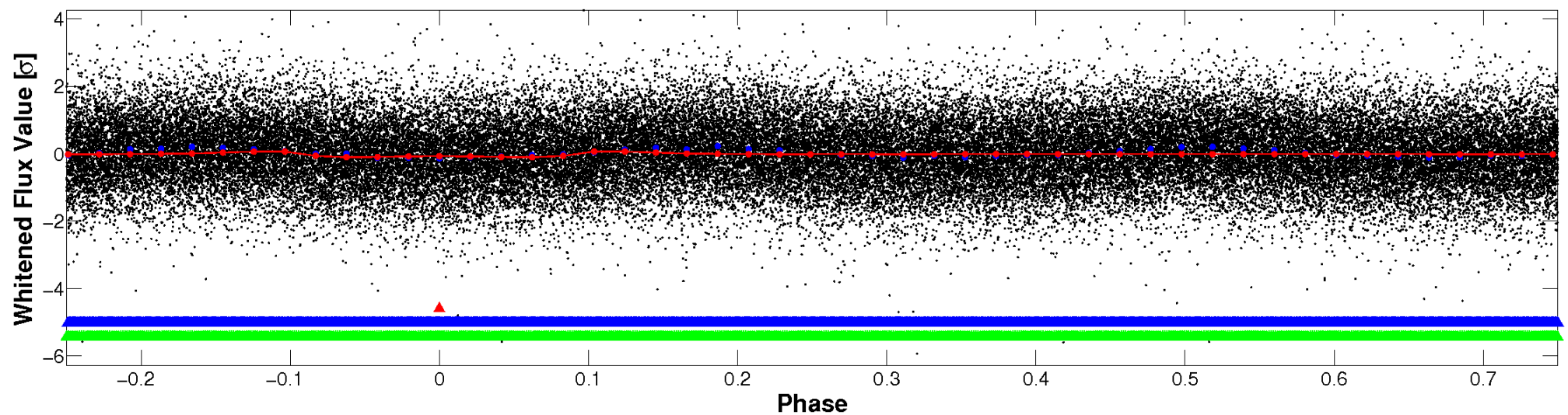


Non-Whitened Vs. Whitened Light Curve

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

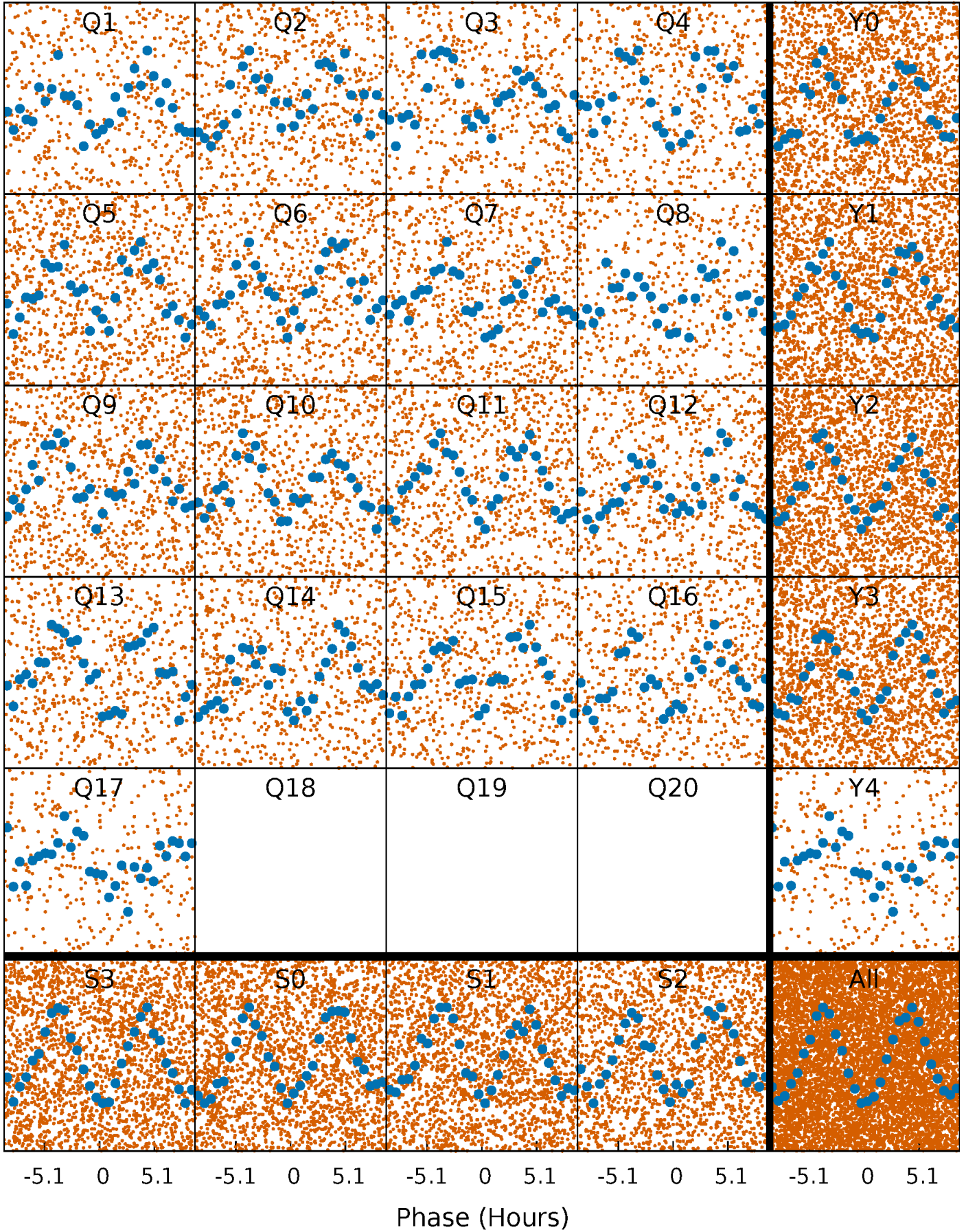


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



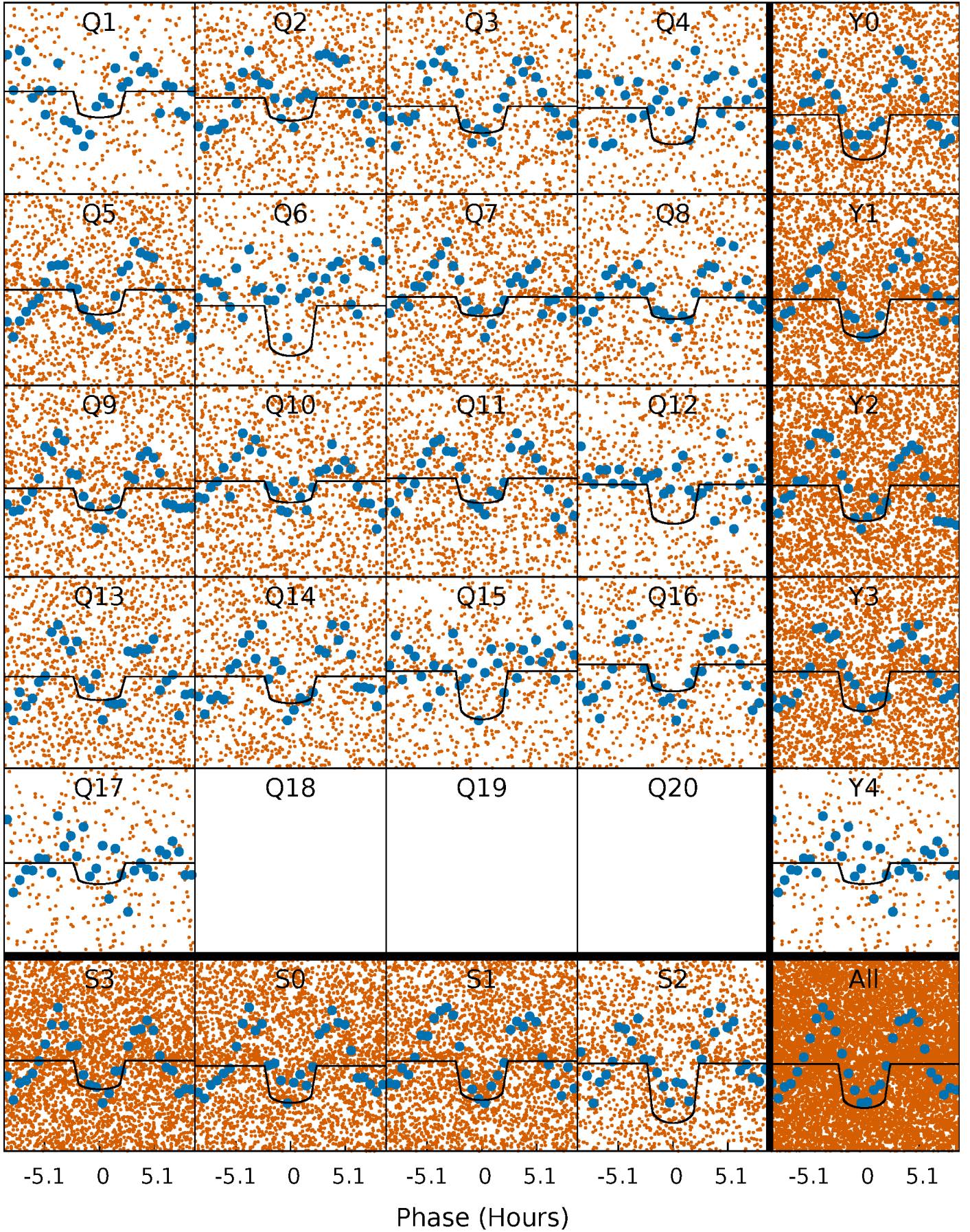
PDC Quarter-Phased Transit Curves

TCE 005212962-01 P= 0.985339 Days $T_0=131.659311$ (BKJD)



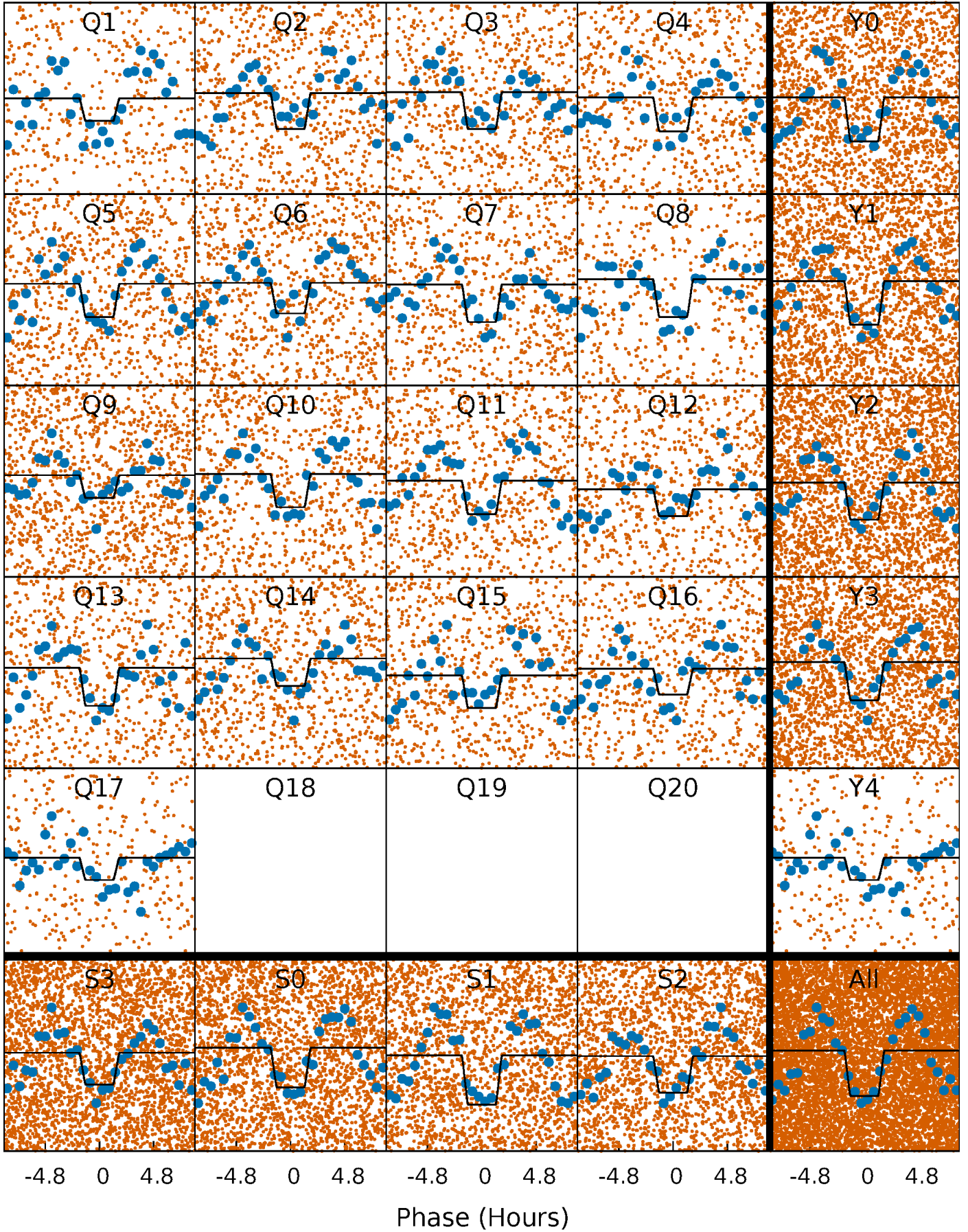
DV Quarter-Phased Transit Curves

TCE 005212962-01 P= 0.985339 Days $T_0=131.659311$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

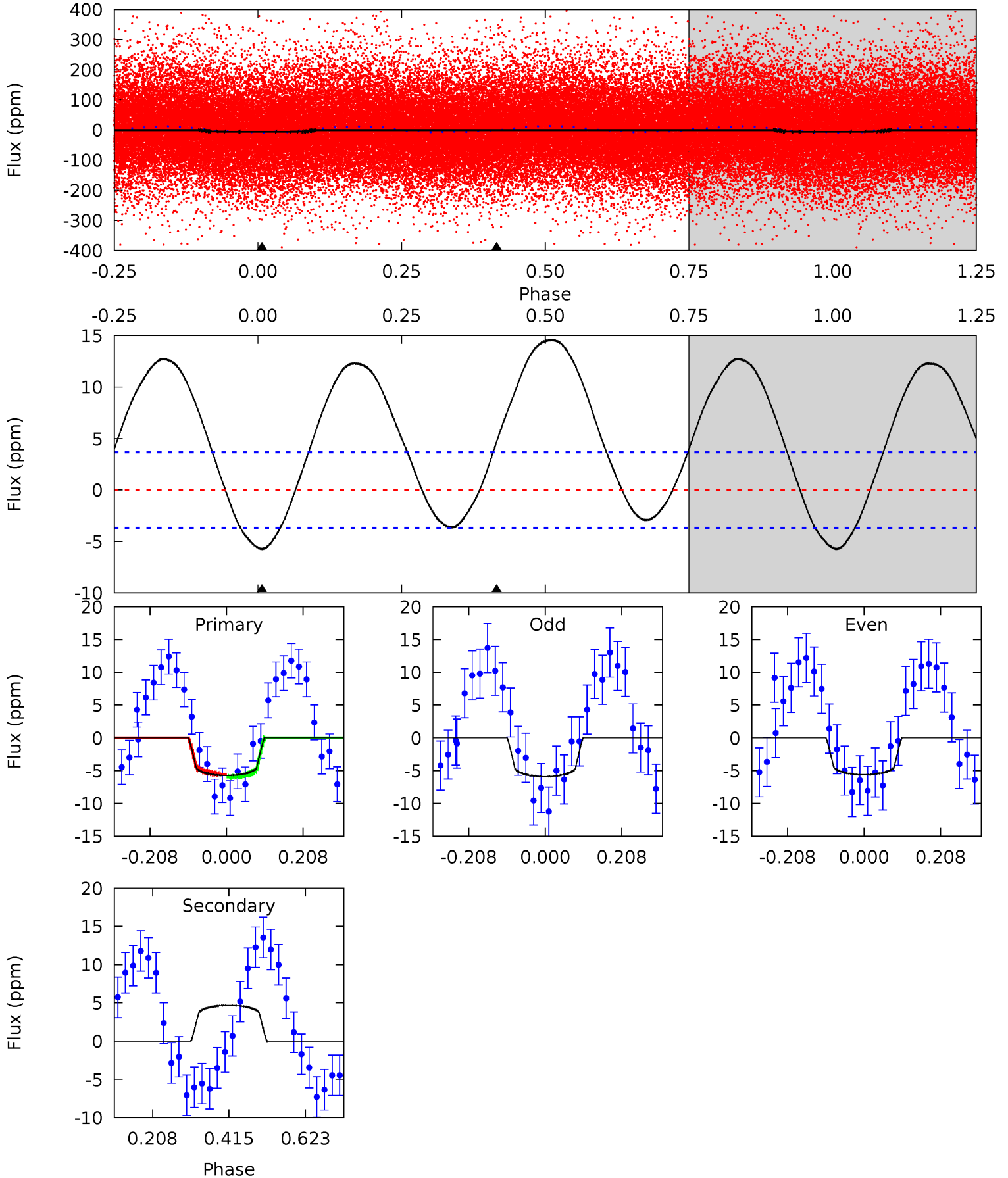
TCE 005212962-01 P= 0.985350 Days $T_0=131.655393$ (BKJD)



DV Model-Shift Uniqueness Test

005212962-01, P = 0.985339 Days, E = 130.673972 Days

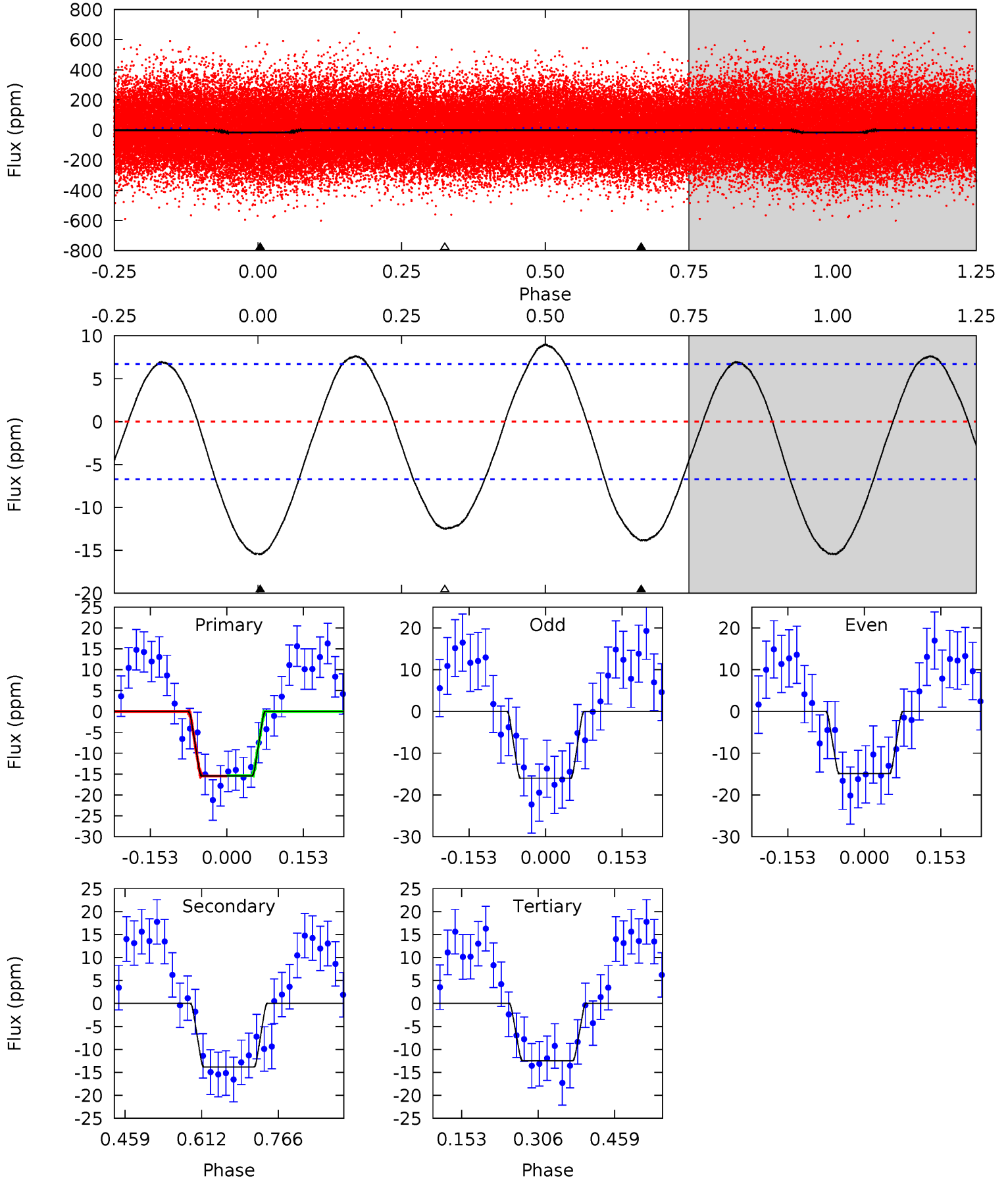
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.88	-5.62	0	0	4.41	1.26	5.11	6.88	6.88	-5.62	-5.62	0.17	1.12	0.72	0.25



Alt Model-Shift Uniqueness Test

005212962-01, P = 0.985350 Days, E = 130.670043 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	9.23	8.33	0	4.47	1.43	5.08	1.97	10.3	0.90	9.23	0.37	0.90	0.37	0.03



Stellar Parameters For KIC 005212962

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9189^{+287}_{-415}	$3.952^{+0.242}_{-0.176}$	$0.070^{+0.150}_{-0.650}$	$2.698^{+0.847}_{-1.035}$	$2.376^{+0.377}_{-0.753}$	$0.170^{+0.309}_{-0.084}$
	+3%/-5%	+6%/-4%	+214%/-929%	+31%/-38%	+16%/-32%	+181%/-49%
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 005212962-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	5 ± 1	$0.95^{+0.21}_{-0.21}$	5733^{+518}_{-524}	-7390^{+512}_{-599}	$-1.889^{+0.671}_{-1.035}$
Alt.	-14 ± 1	$1.18^{+0.24}_{-0.22}$	5746^{+492}_{-530}	8349^{+671}_{-630}	$3.592^{+1.740}_{-1.067}$

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

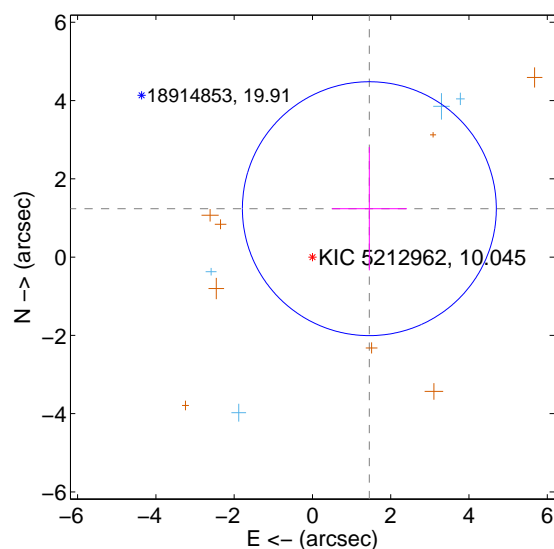
Supplemental centroid analysis for 005212962-01. **Kepler magnitude: 10.04.** Transit SNR 10.91

There are 5 quarters with good PRF difference image offsets

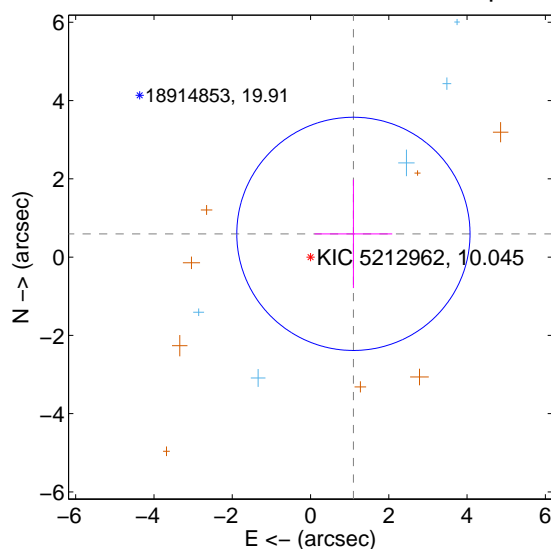
The direct PRF centroid is offset from the target star catalog position by about 1.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.910 ± 1.081	1.77	-1.455 ± 0.958	1.237 ± 1.575
PRF-fit source offset from KIC position	1.247 ± 0.993	1.26	-1.096 ± 0.994	0.594 ± 1.384
photometric centroid source offset	0.42 ± 0.81	0.52	-0.41 ± 0.80	-0.09 ± 0.87

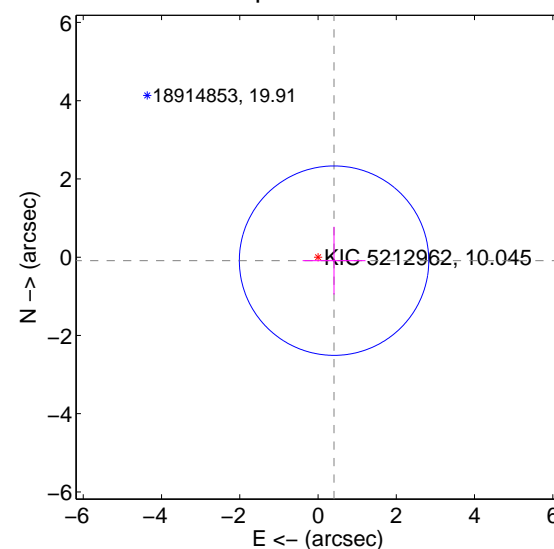
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

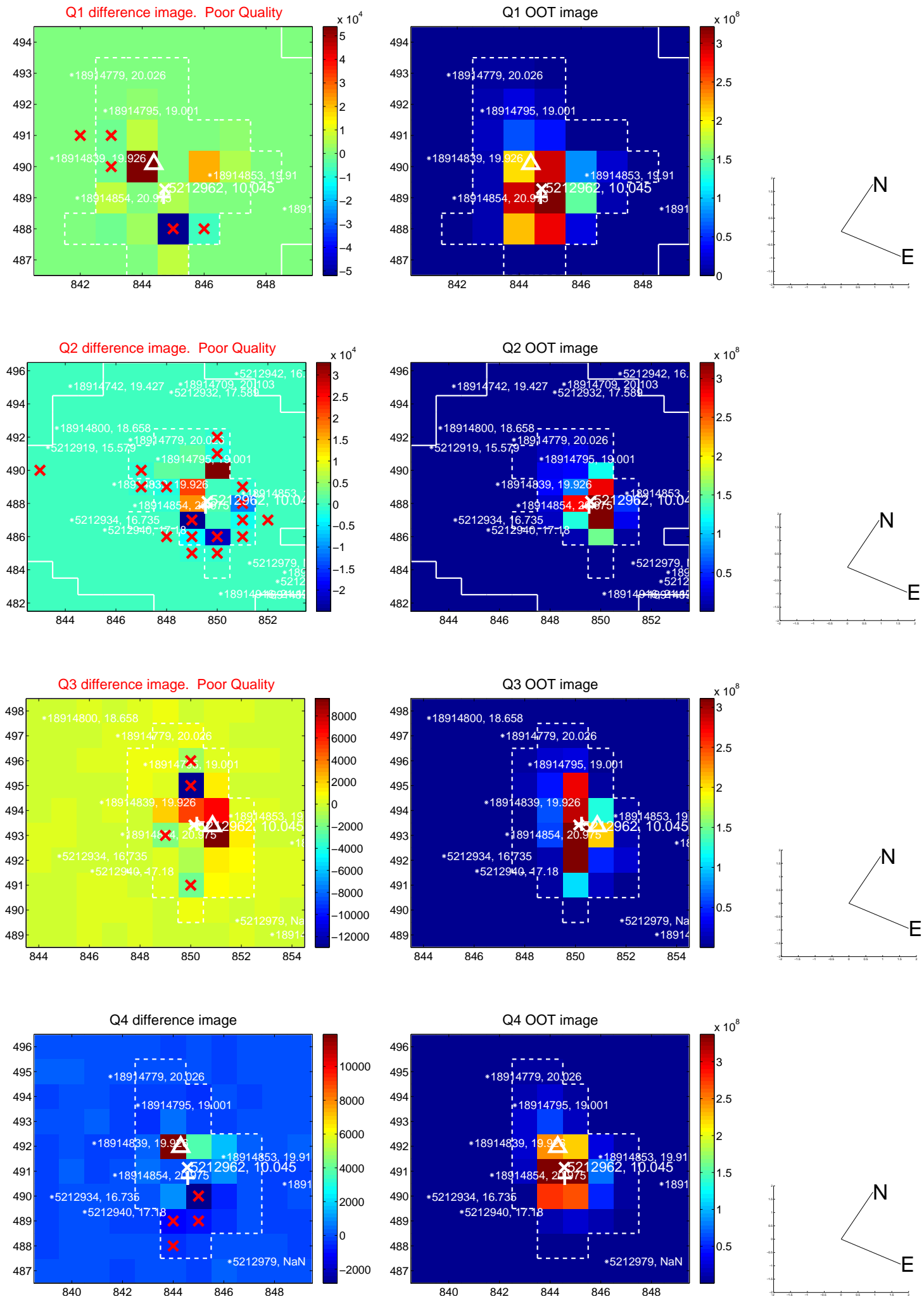


offset from photometric centroids

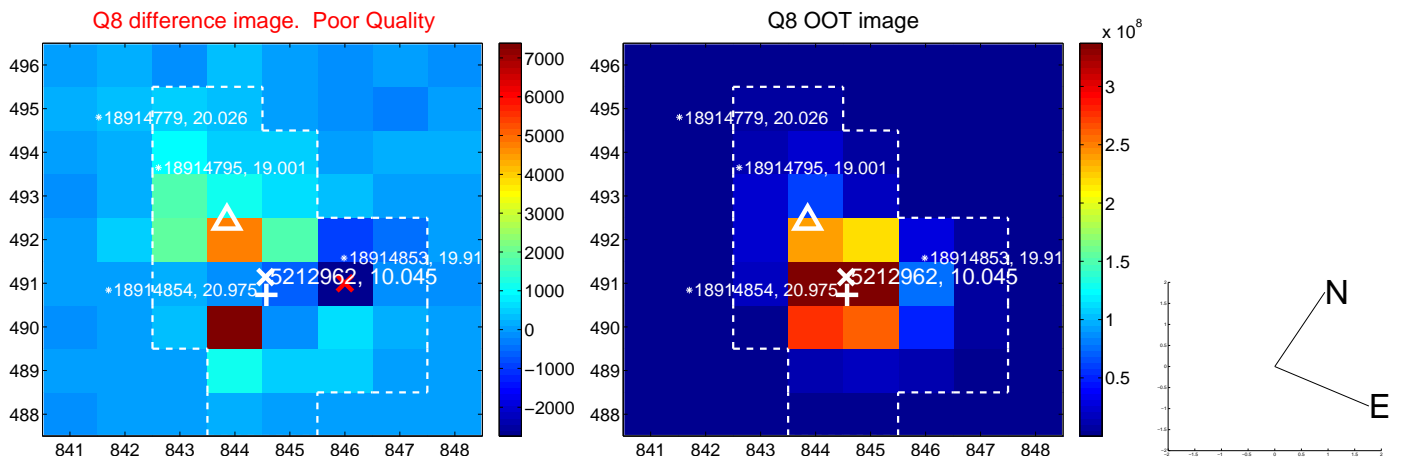
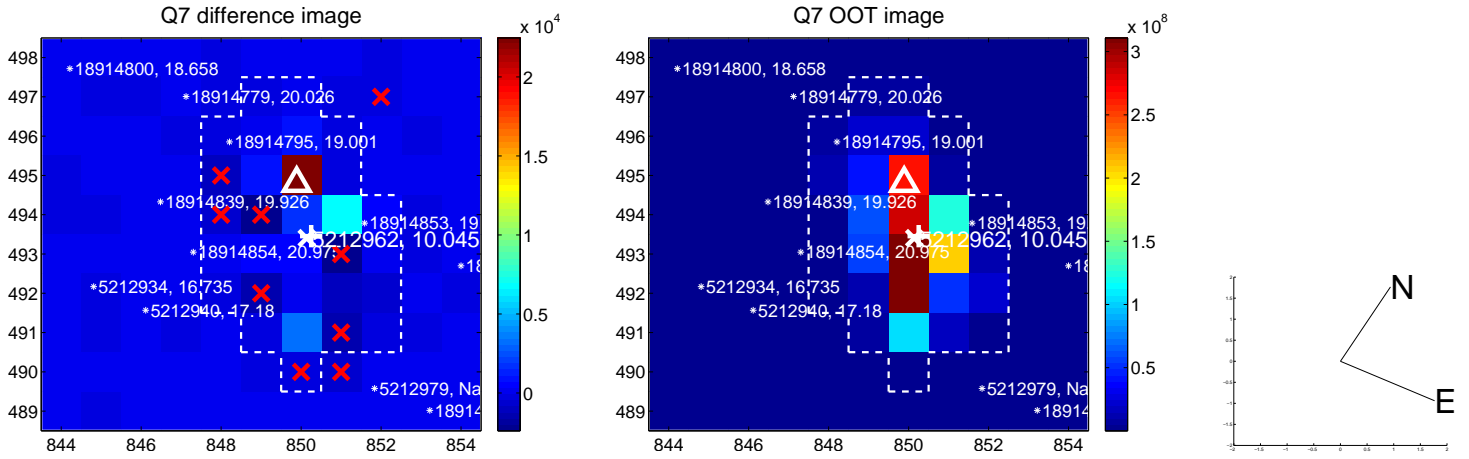
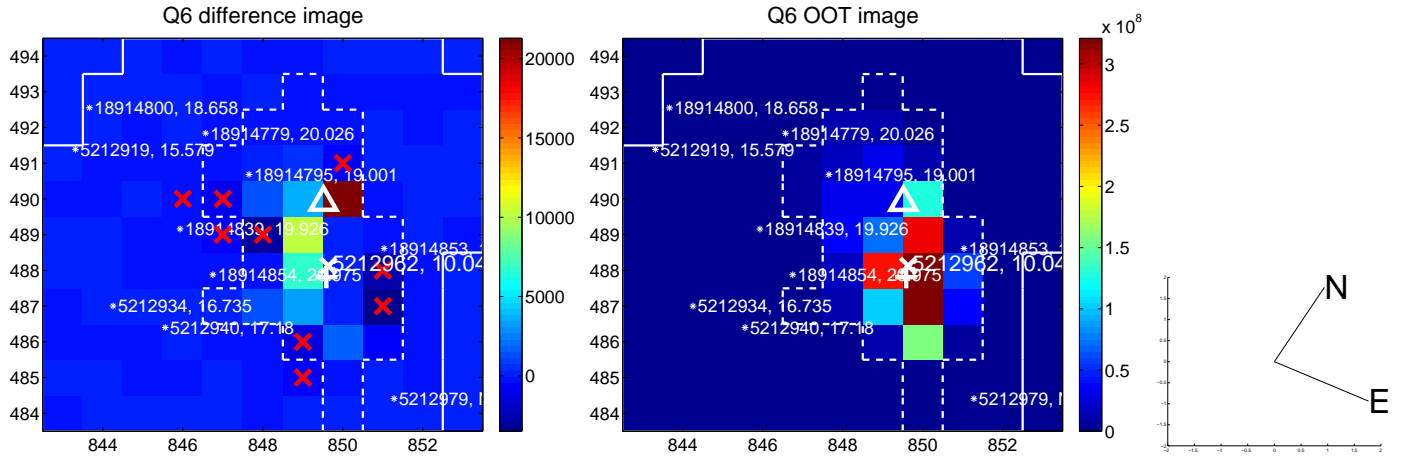
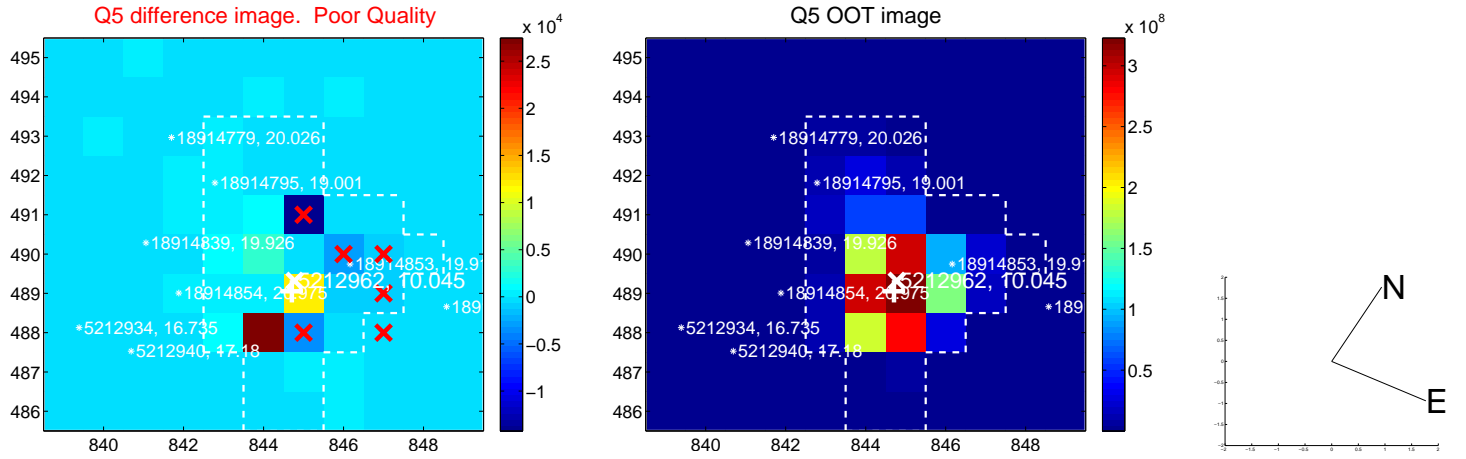


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

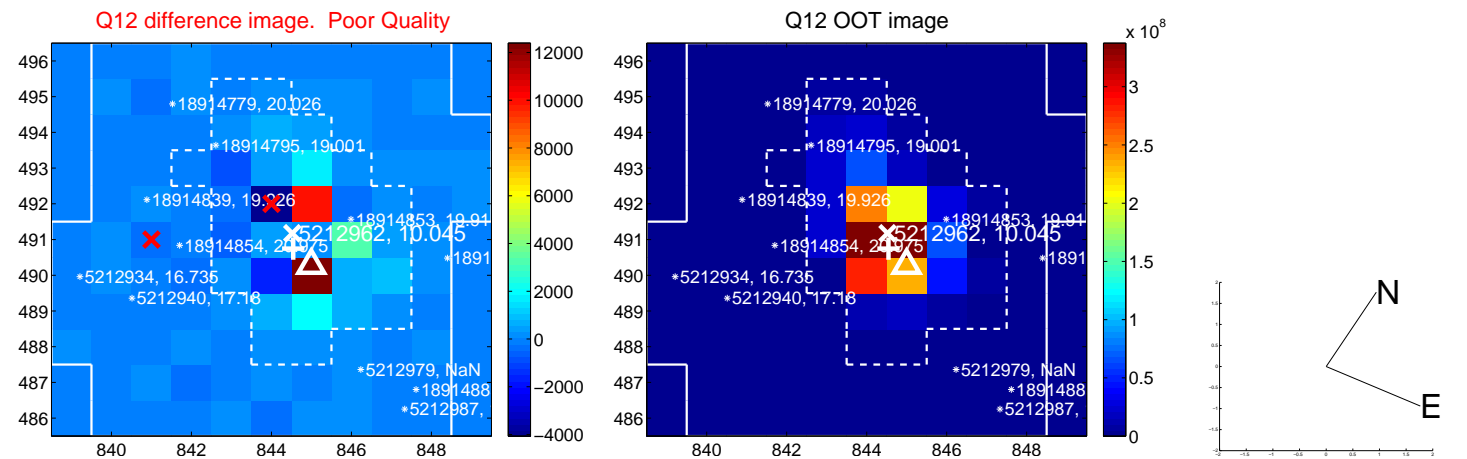
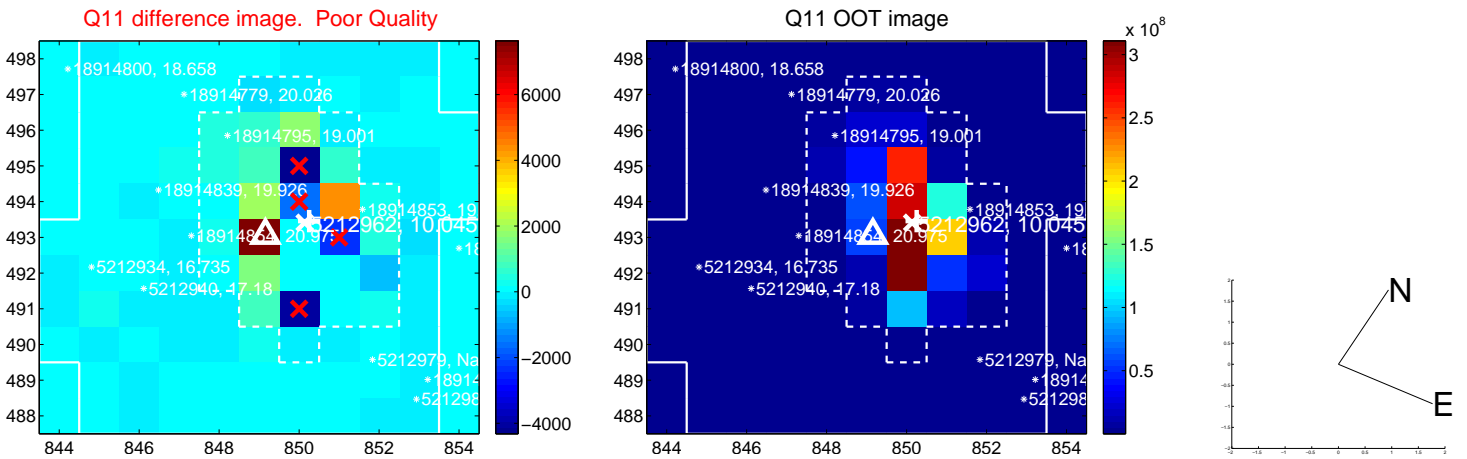
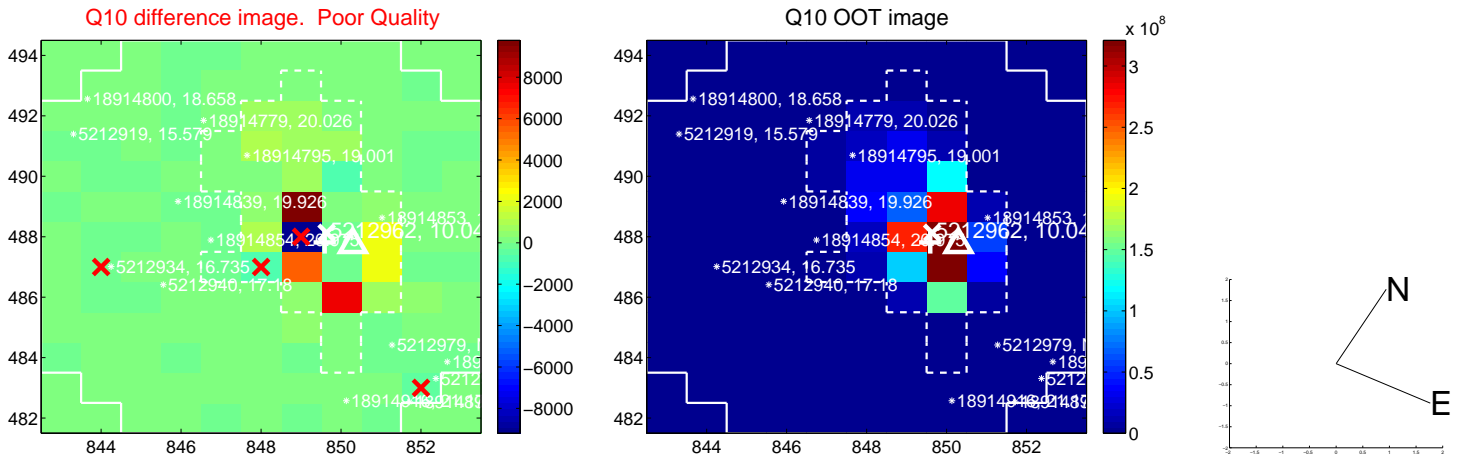
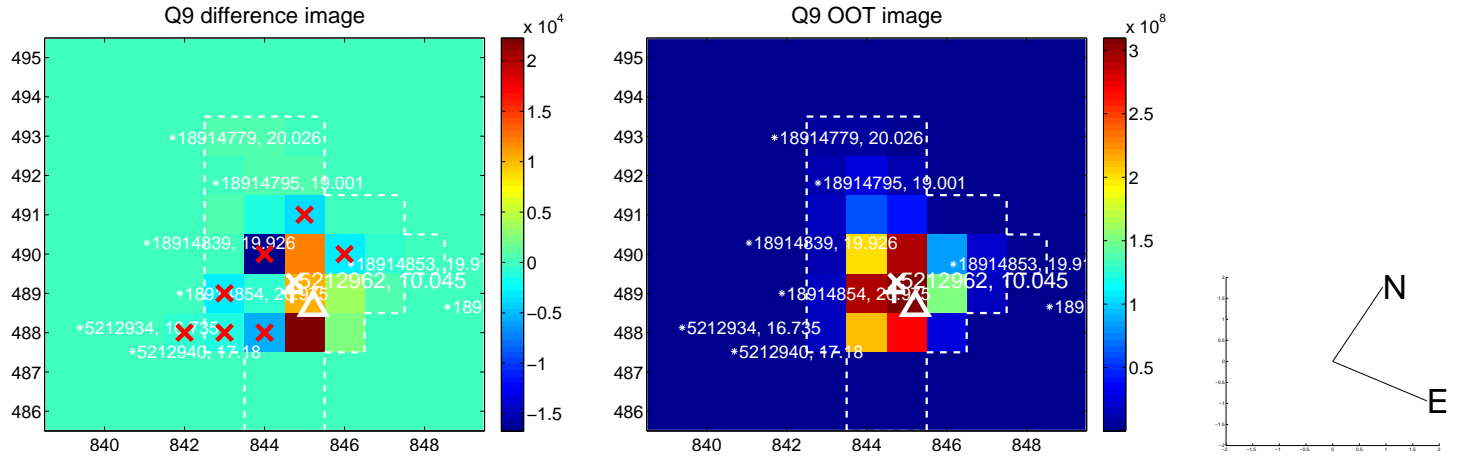
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



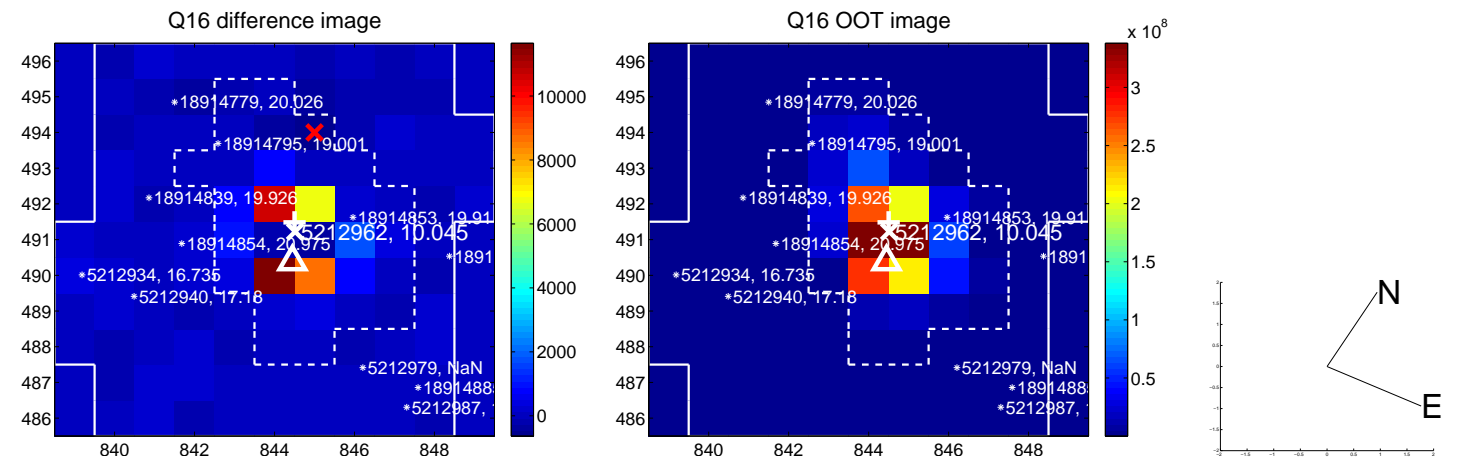
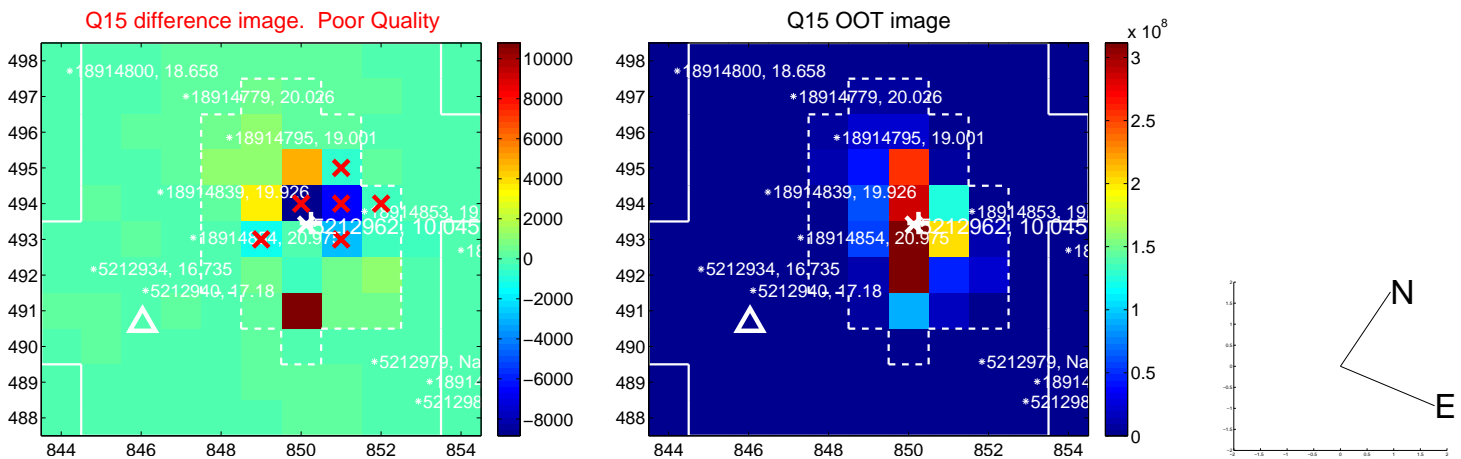
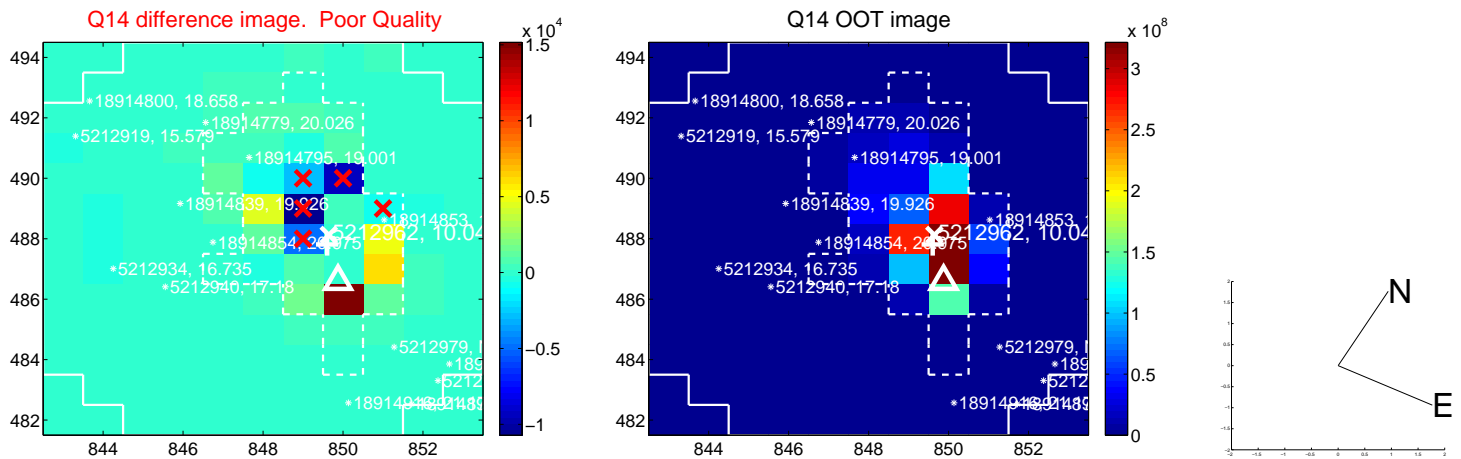
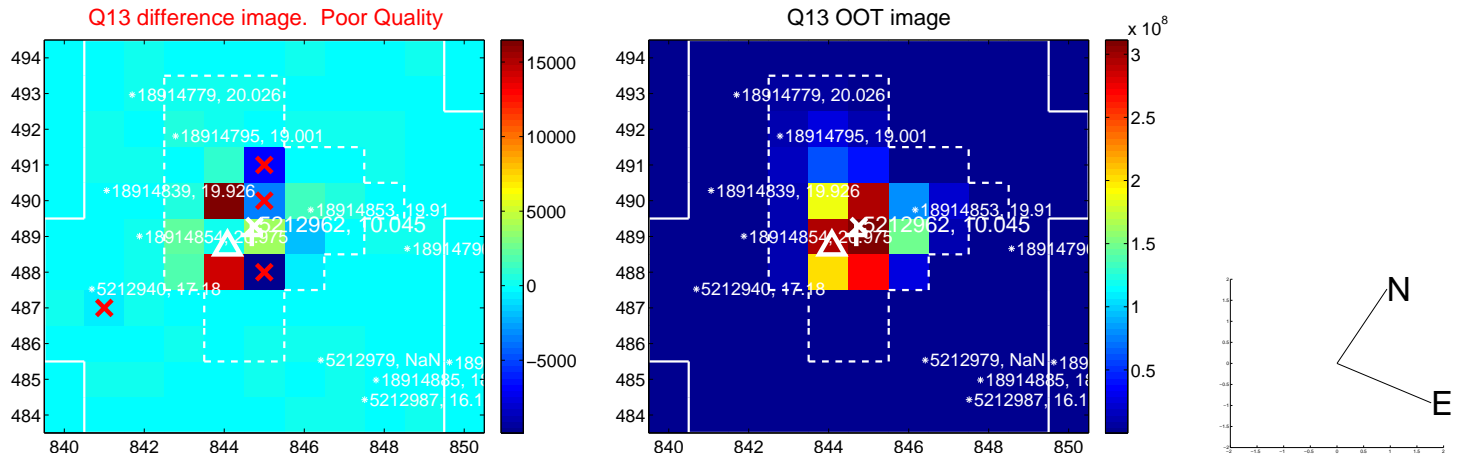
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



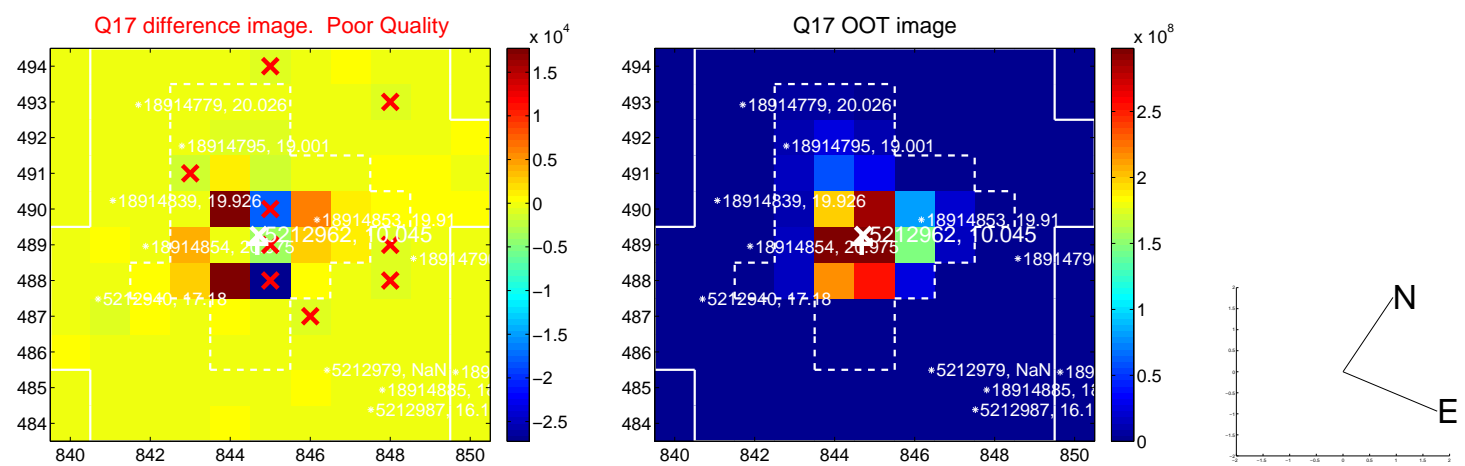
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



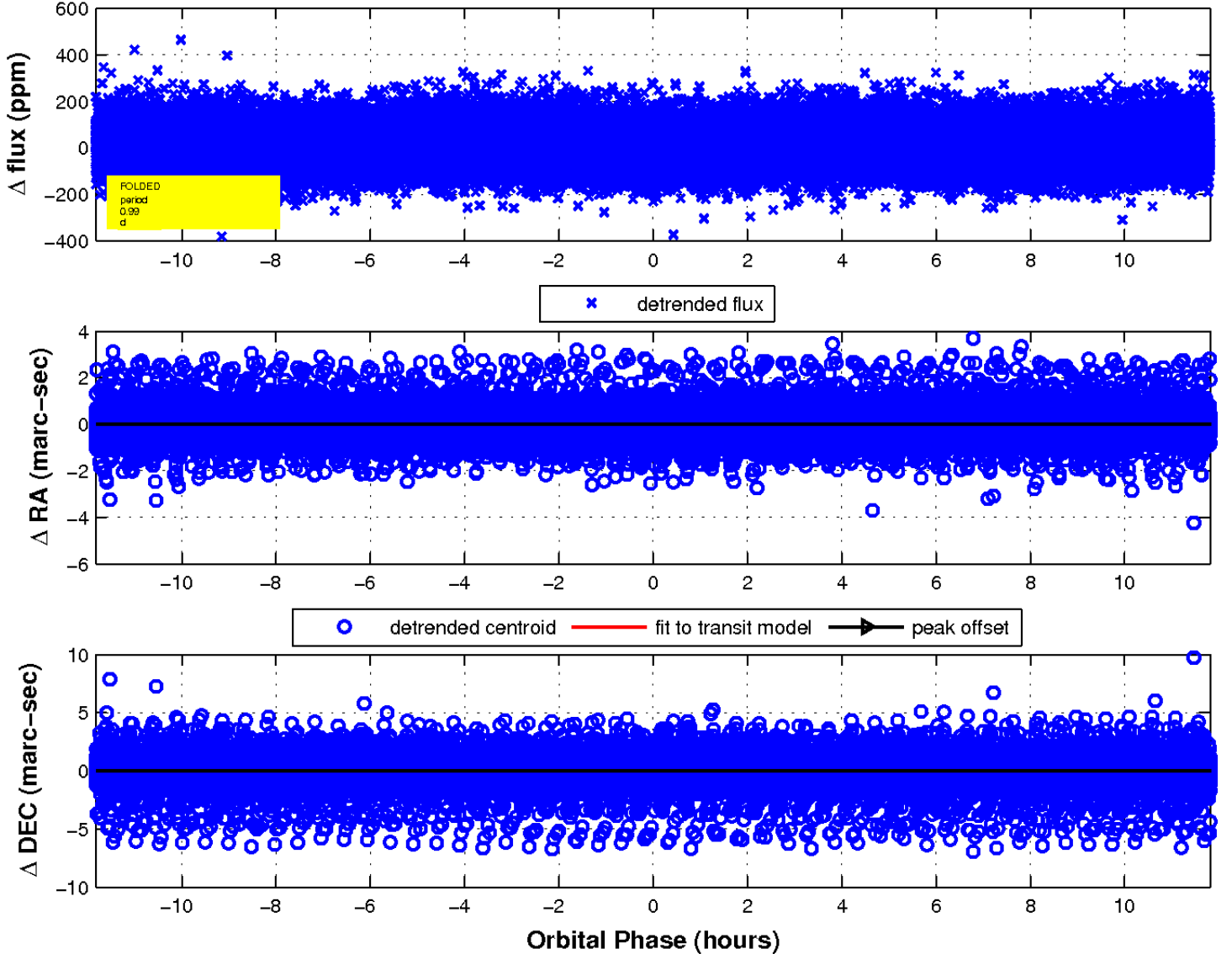
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



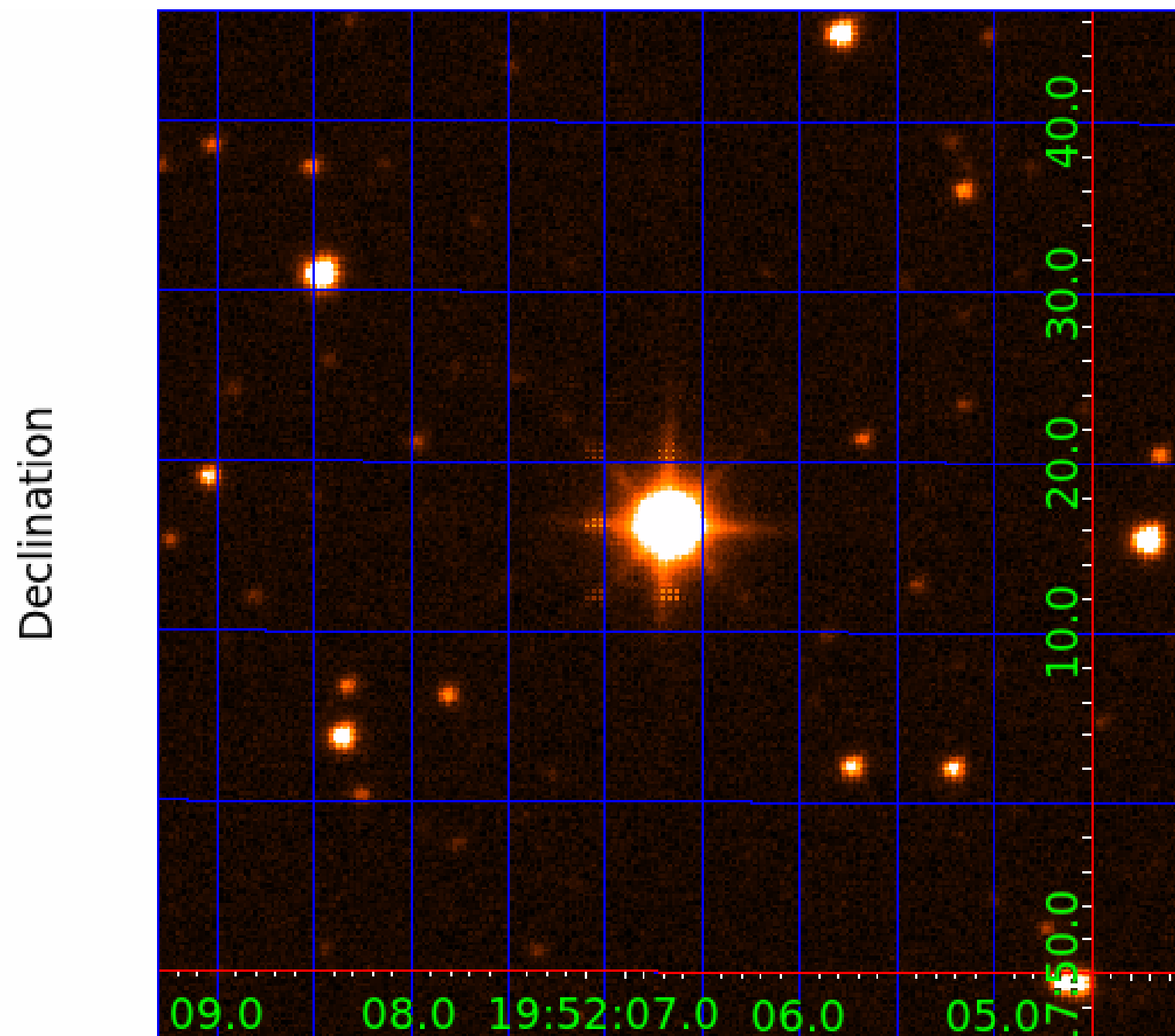
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 3



UKIRT Image



KIC 005212962

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})
005212962-01	OBS	No	0.985339	131.659311	9.7	4.441	11.4	10.9	2.70	9189	0.97	69483.44
005212962-02	OBS	No	1.404057	132.233450	17.2	6.280	12.3	11.4	2.70	9189	1.30	43332.68
005212962-03	OBS	No	1.404144	132.855569	18.2	9.639	14.9	13.8	2.70	9189	1.18	43329.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005212962-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005212962-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—CENT_SATURATED
005212962-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

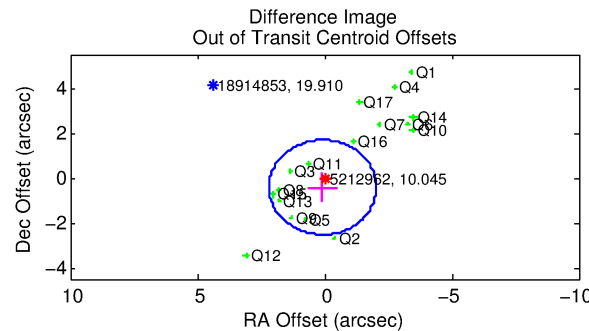
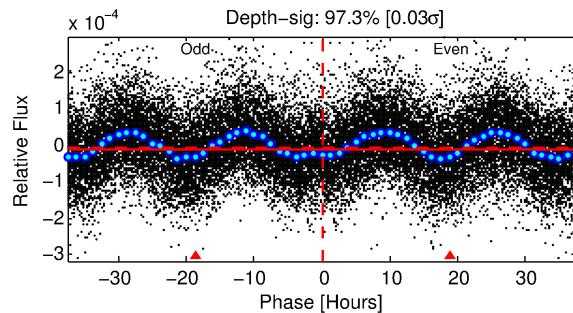
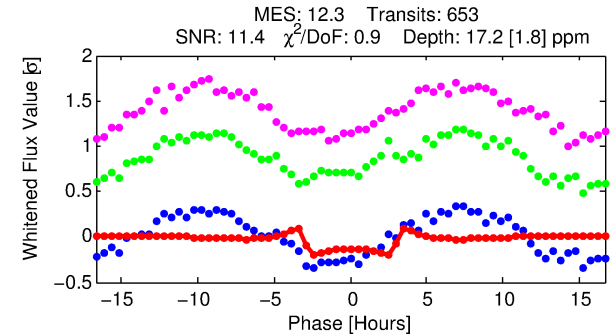
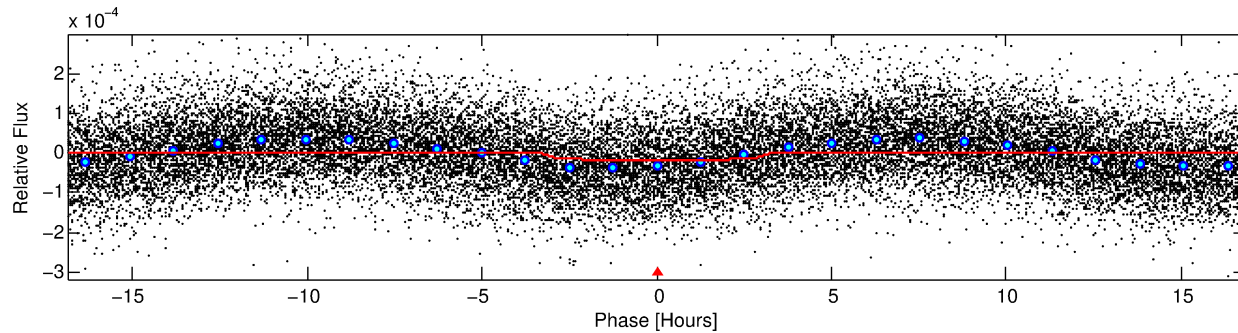
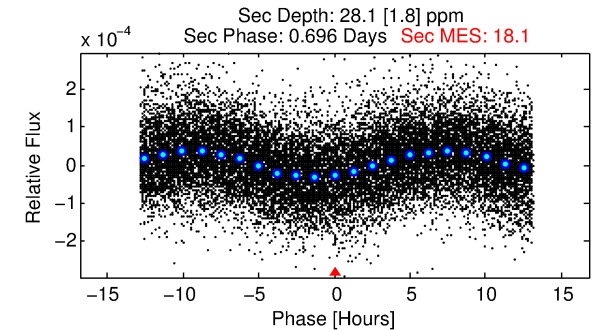
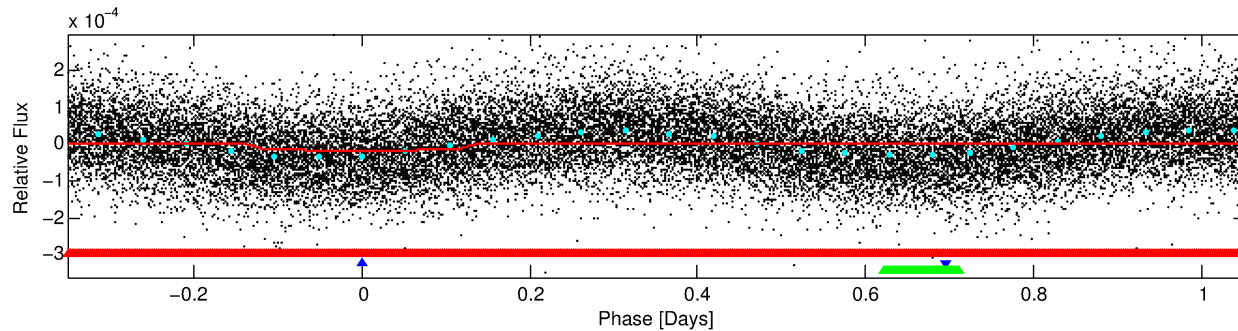
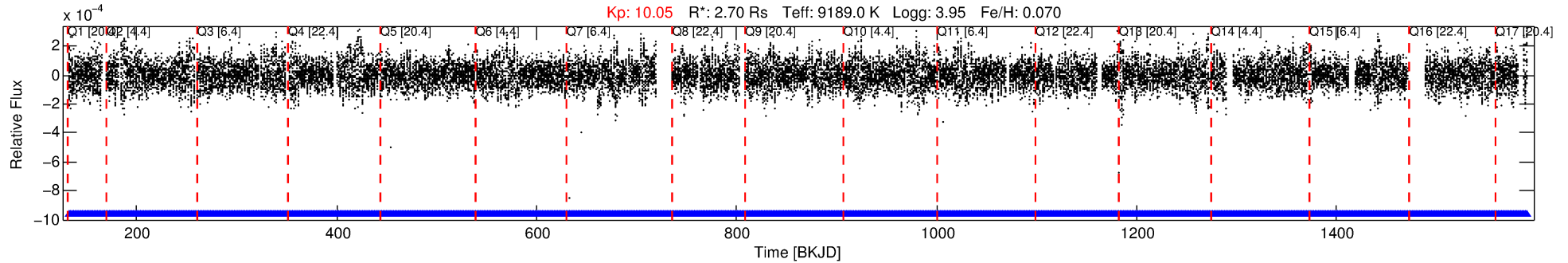
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005212962-02

No Significant Match Found

DV One-Page Summary

KIC: 5212962 Candidate: 2 of 3 Period: 1.404 d



DV Fit Results:

Period = 1.40406 [0.00001] d
Epoch = 132.2335 [0.0029] BKJD
Rp/R* = 0.0044 [0.0006]
a/R* = 1.19 [0.31]
b = 0.91 [0.17]
Seff = 43332.68 [21052.74]
Teq = 3679 [447] K
Rp = 1.30 [0.53] Re
a = 0.0328 [0.0104] AU
Ag = 9.87 [5.18] [1.71σ]
Teffp = 10083 [815] K [6.89σ]

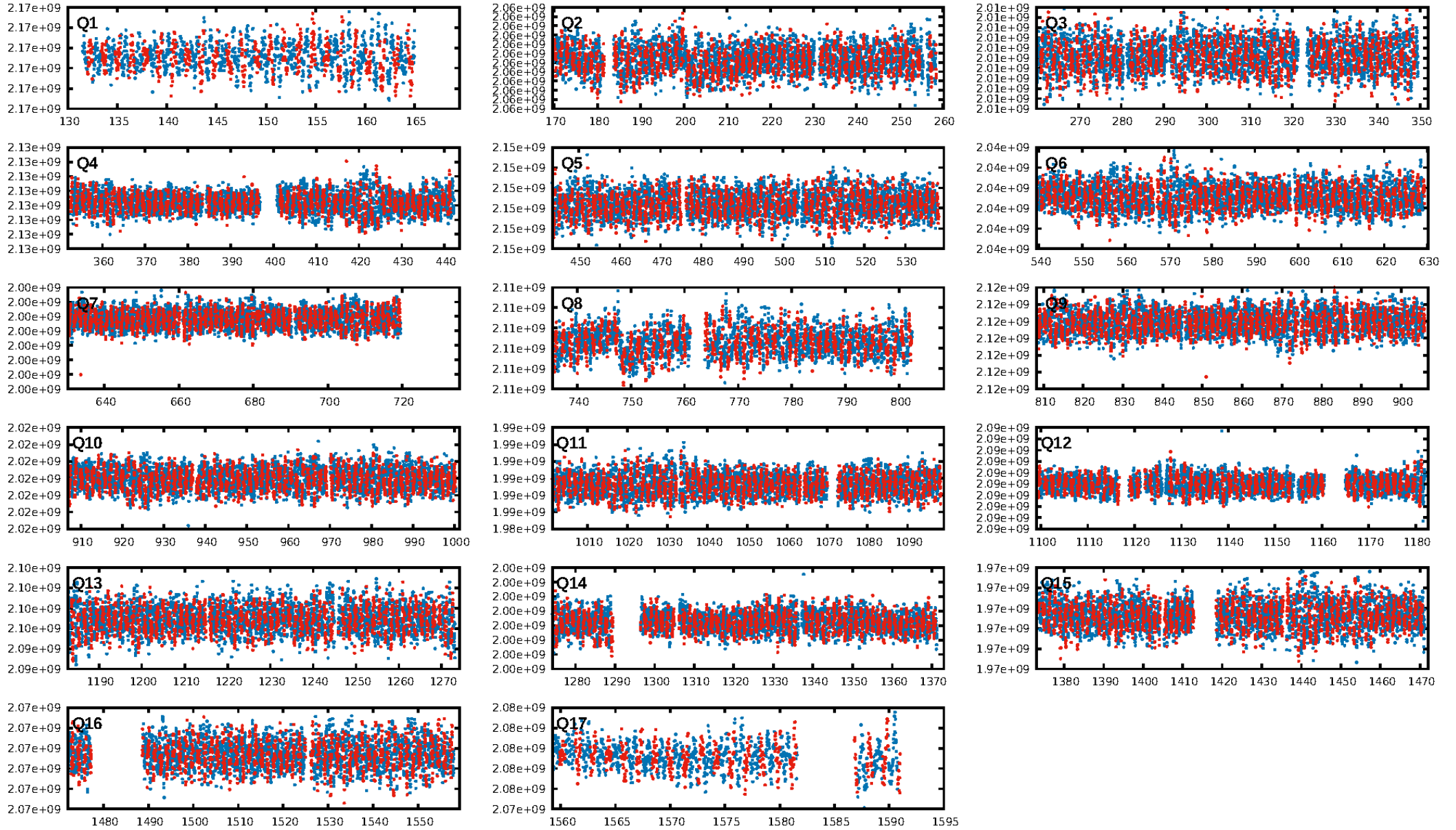
DV Diagnostic Results:

ShortPeriod-sig: 80.9% [1.31σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [624/624]
GhostDiagnostic-chr: N/A
Centroid-sig: 16.2%
Centroid-so: 0.634 arcsec [1.11σ]
OotOffset-rm: 0.429 arcsec [0.61σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 1.243 arcsec [1.92σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.47 [8/17]
DiffImageOverlap-fno: 0.00 [0/17]

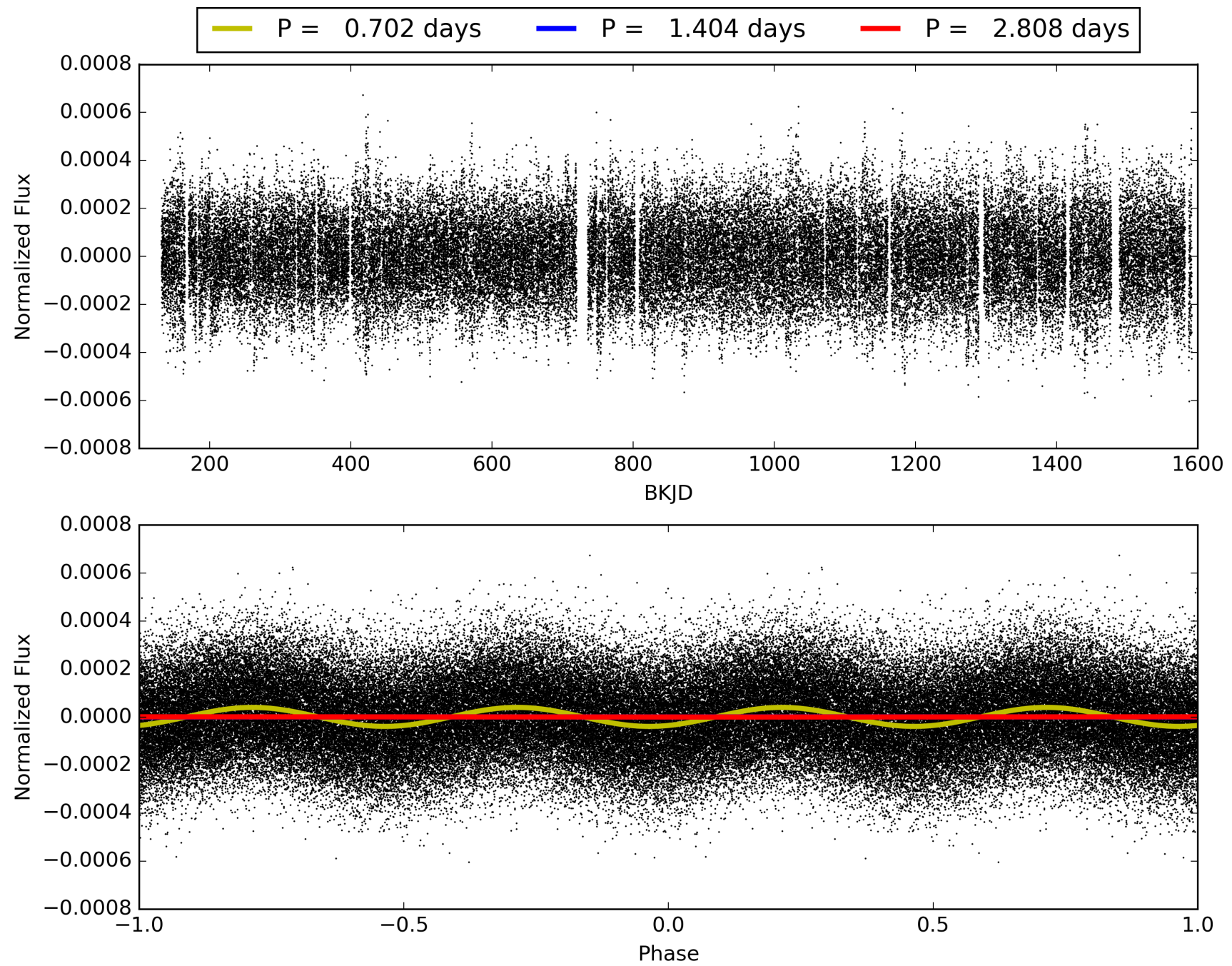
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:52:11 Z

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

TCE 005212962-02, PDC Light Curves

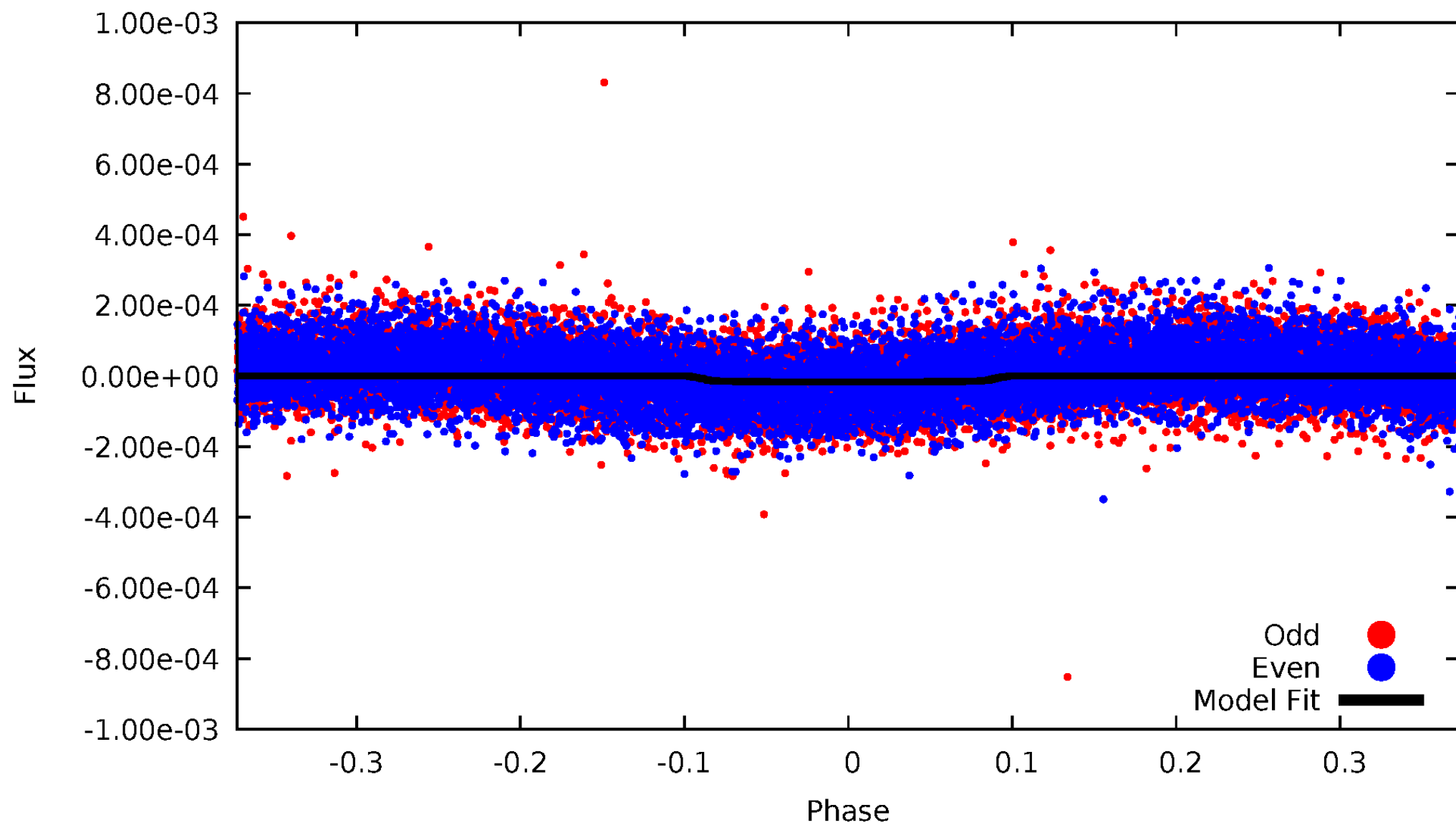


TCE 005212962-02



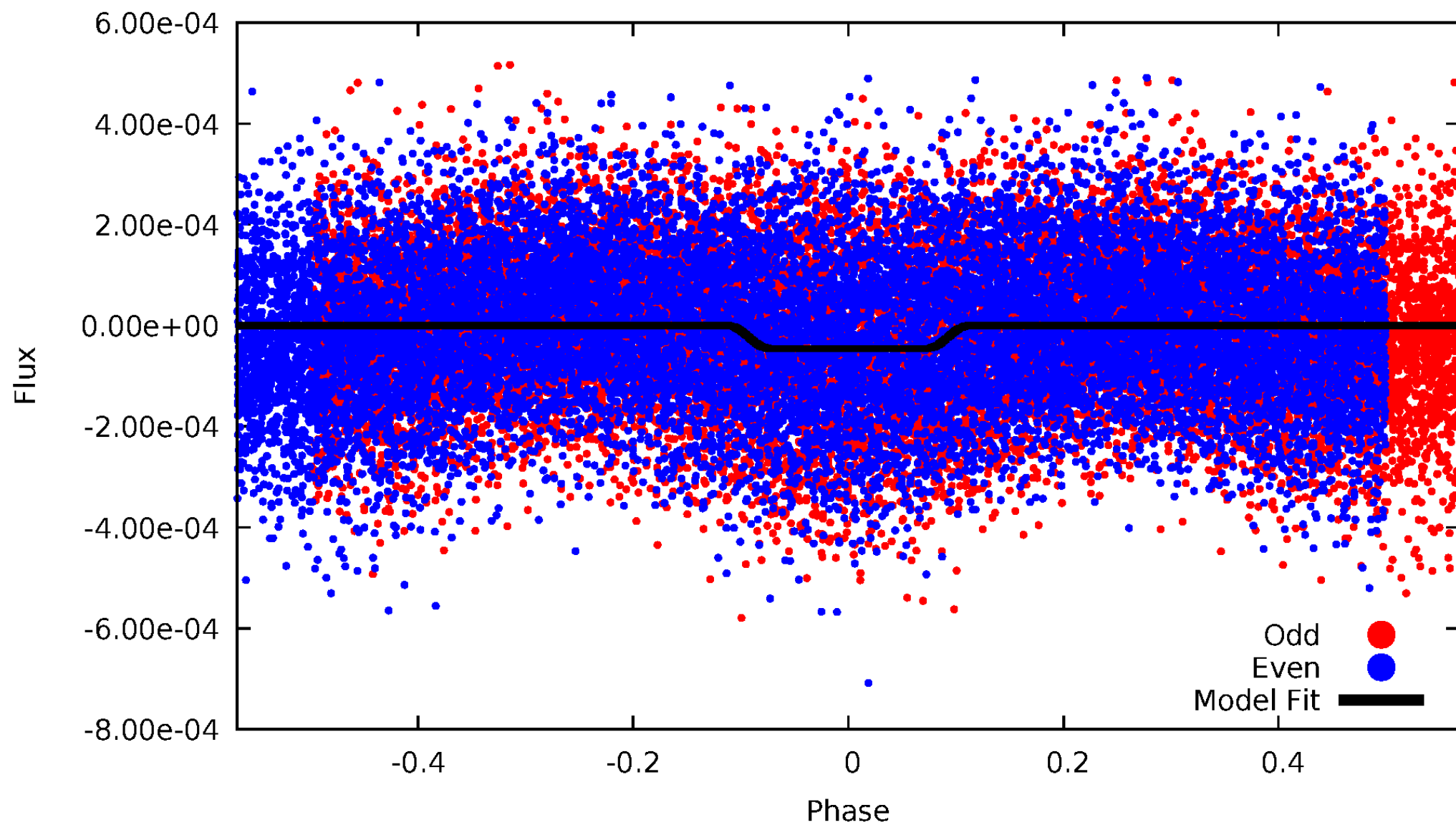
DV Odd/Even

TCE 005212962-02



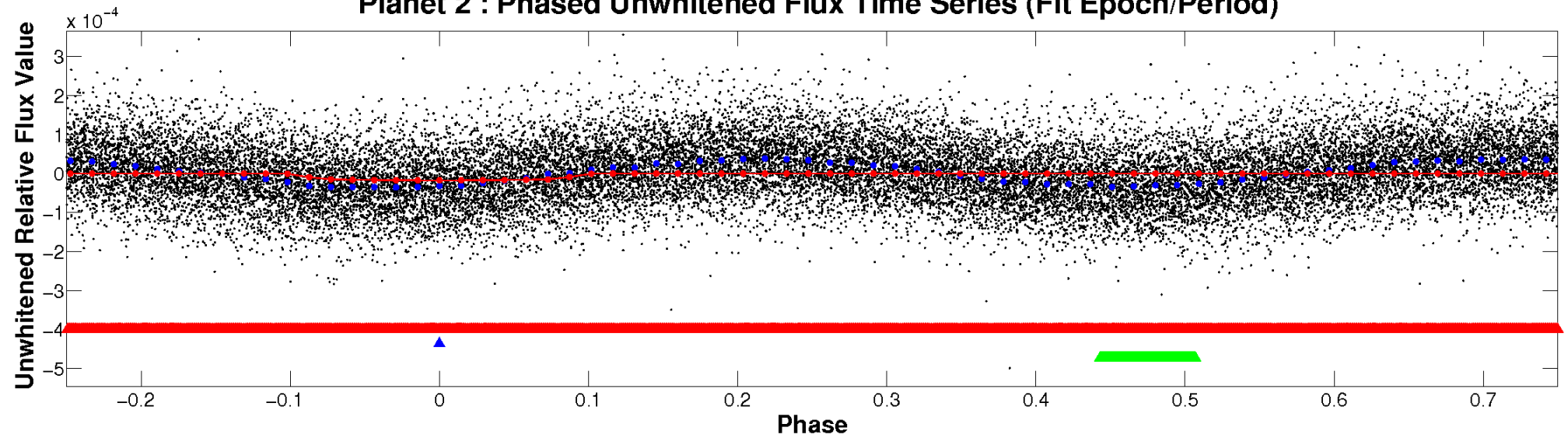
ALT Odd/Even

TCE 005212962-02

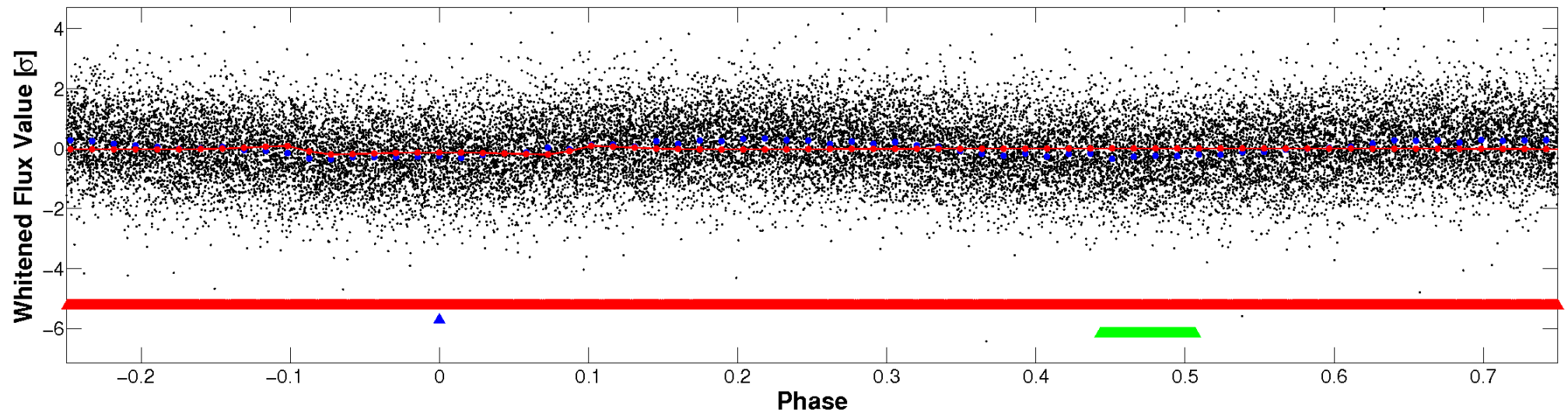


Non-Whitened Vs. Whitened Light Curve

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

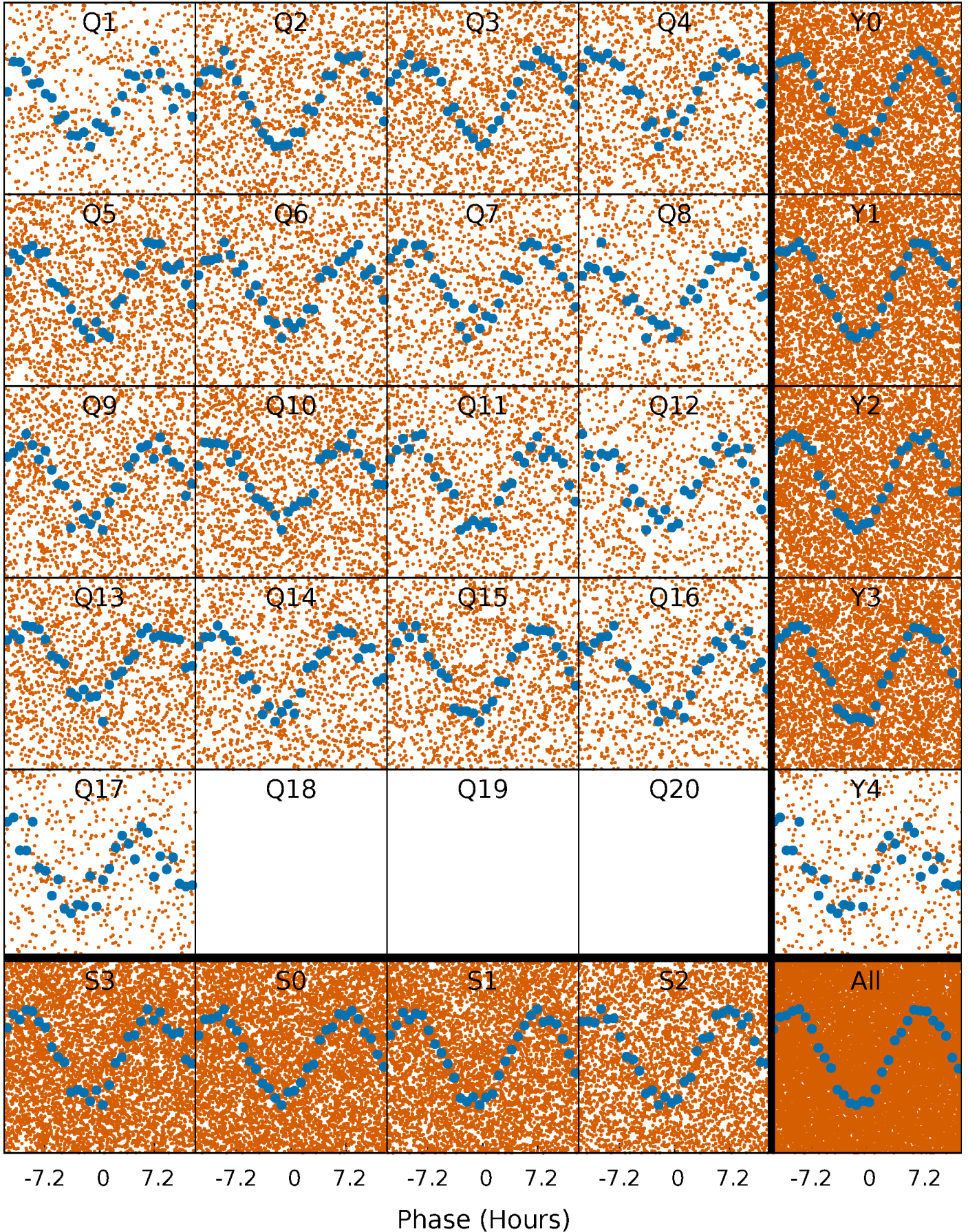


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



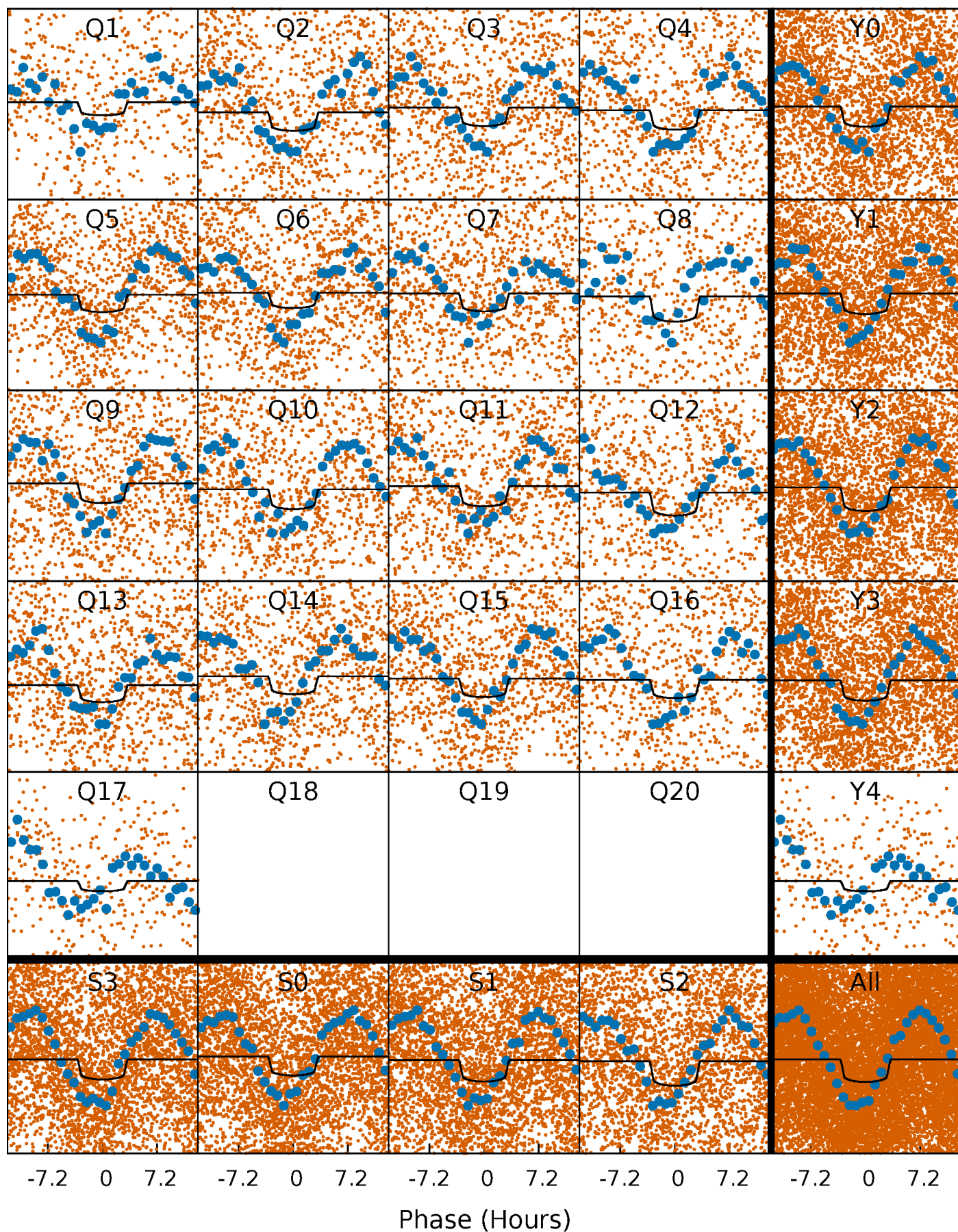
PDC Quarter-Phased Transit Curves

TCE 005212962-02 P= 1.404057 Days $T_0=132.233450$ (BKJD)



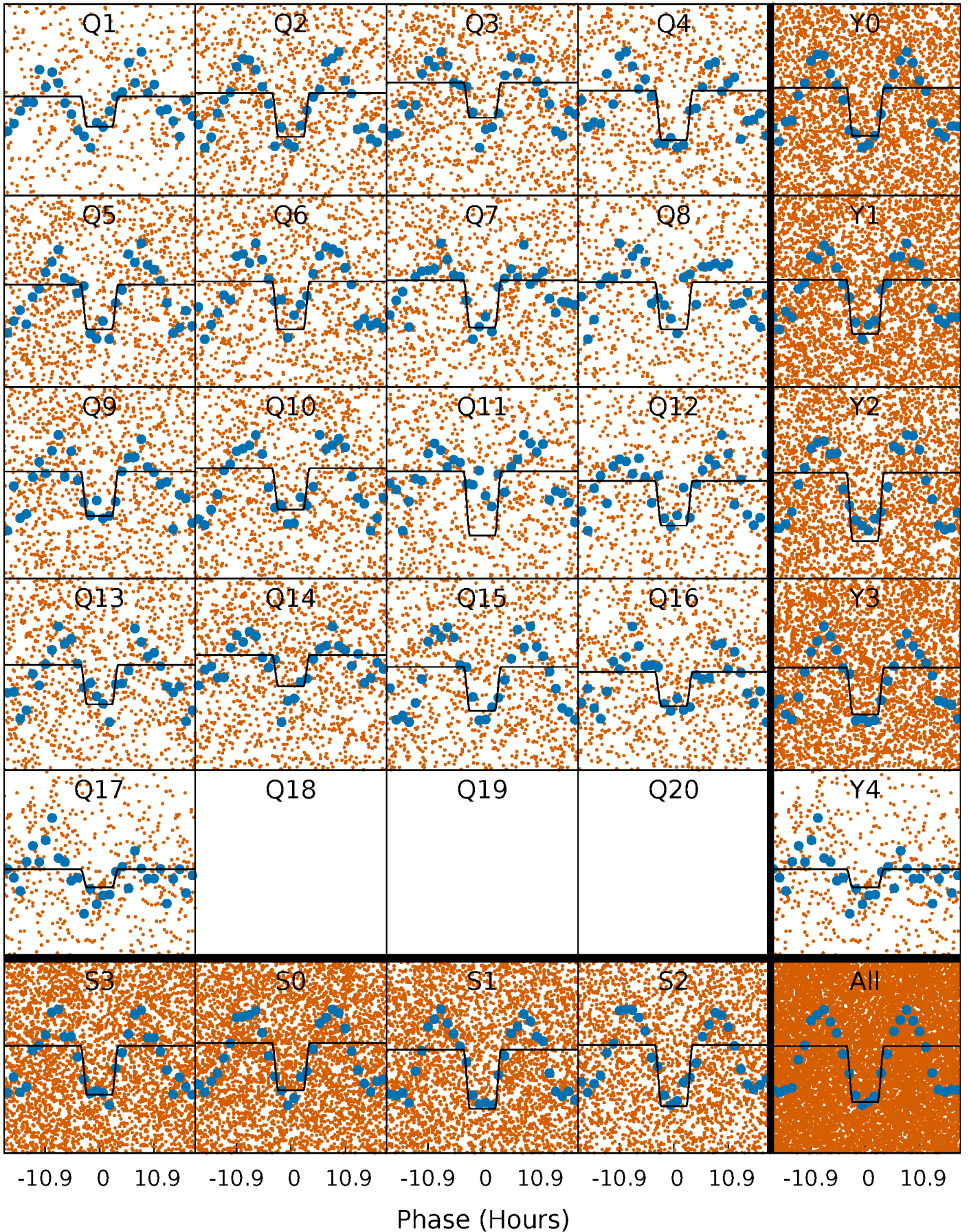
DV Quarter-Phased Transit Curves

TCE 005212962-02 P= 1.404057 Days $T_0=132.233450$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

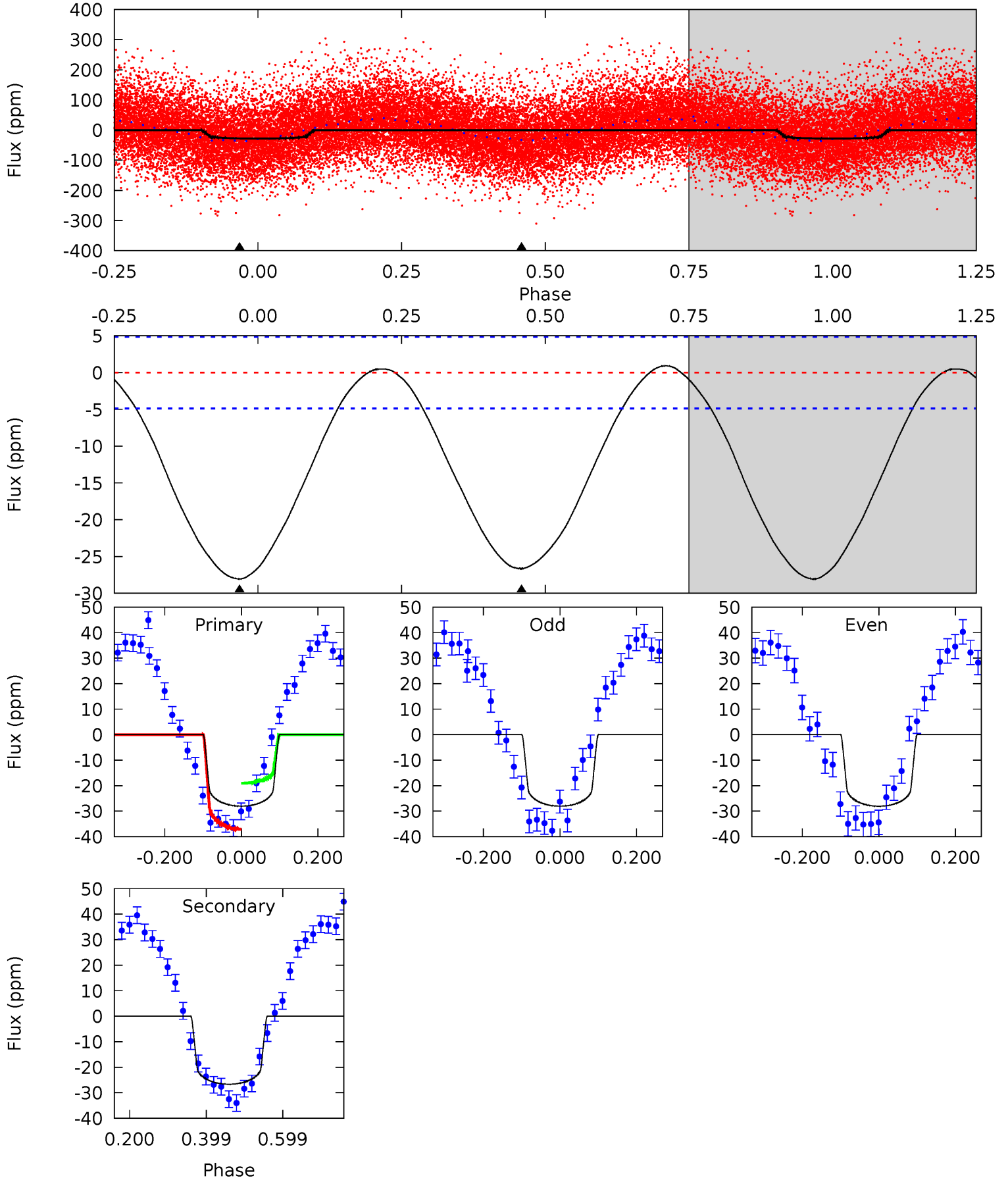
TCE 005212962-02 P= 1.404001 Days $T_0=132.215495$ (BKJD)



DV Model-Shift Uniqueness Test

005212962-02, P = 1.404057 Days, E = 130.829393 Days

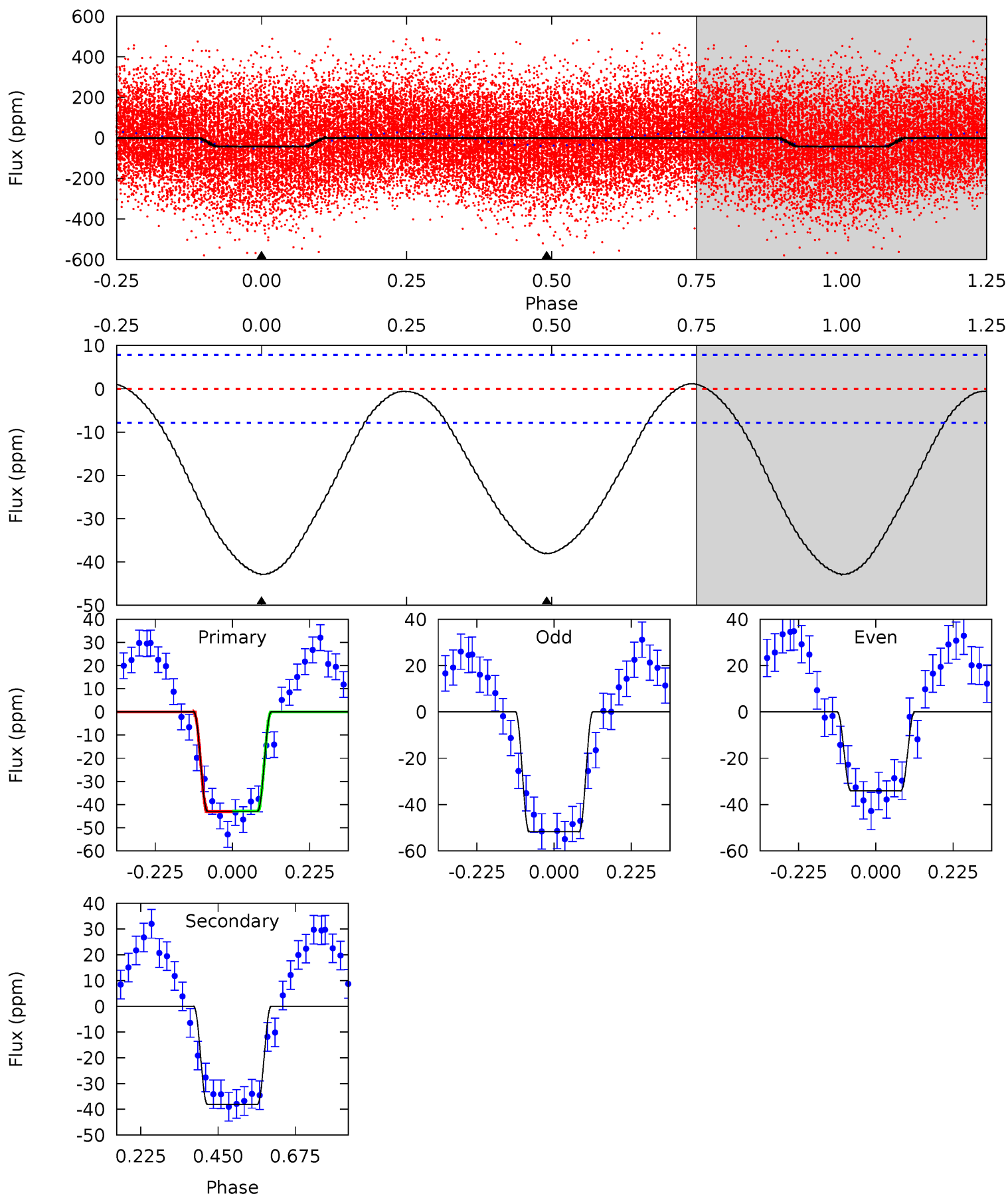
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.4	24.1	0	0	4.42	1.28	0.78	25.4	25.4	24.1	24.1	0.01	1.02	0.03	8.51



Alt Model-Shift Uniqueness Test

005212962-02, P = 1.404001 Days, E = 130.811494 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.0	21.3	0	0	4.39	1.21	0.45	24.0	24.0	21.3	21.3	4.93	0.93	0.03	0.04



Stellar Parameters For KIC 005212962

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9189^{+287}_{-415}	$3.952^{+0.242}_{-0.176}$	$0.070^{+0.150}_{-0.650}$	$2.698^{+0.847}_{-1.035}$	$2.376^{+0.377}_{-0.753}$	$0.170^{+0.309}_{-0.084}$
	+3%/-5%	+6%/-4%	+214%/-929%	+31%/-38%	+16%/-32%	+181%/-49%
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 005212962-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-27 ± 1	$1.28^{+0.32}_{-0.28}$	5122^{+432}_{-481}	10073^{+1202}_{-944}	$9.479^{+4.981}_{-3.160}$
Alt.	-38 ± 2	$1.96^{+0.41}_{-0.38}$	5118^{+434}_{-487}	8428^{+682}_{-519}	$5.798^{+2.431}_{-1.733}$

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

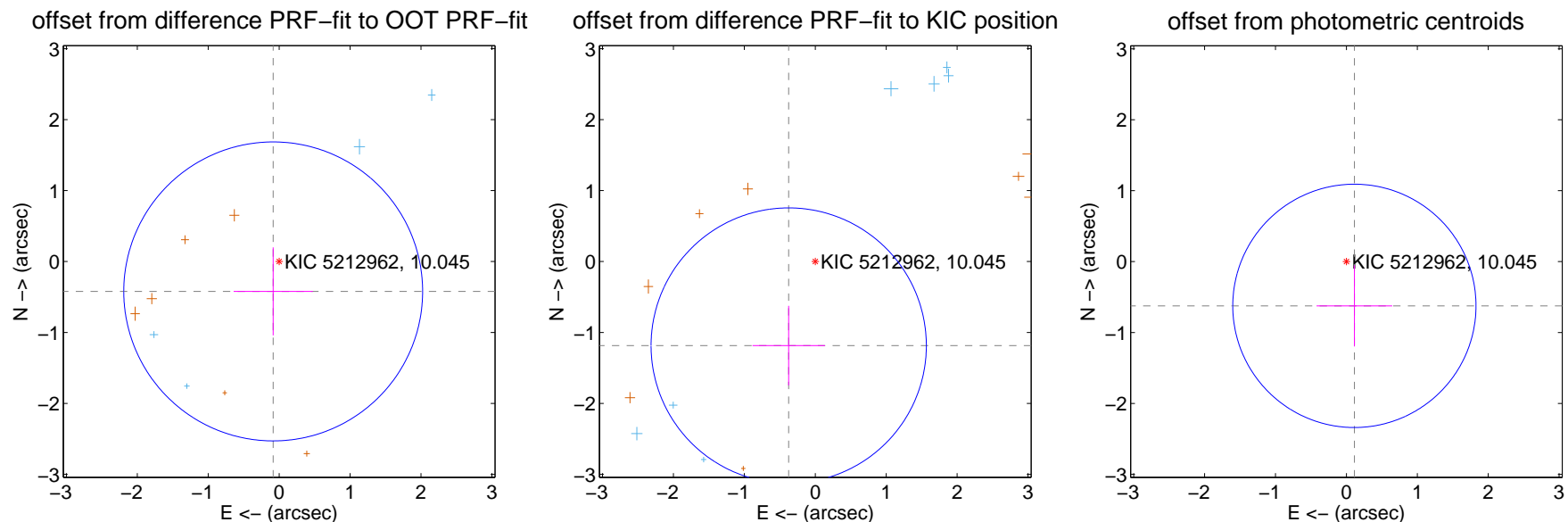
DV Centroid Data

Supplemental centroid analysis for 005212962-02. **Kepler magnitude: 10.04.** Transit SNR 11.41

There are 8 quarters with good PRF difference image offsets

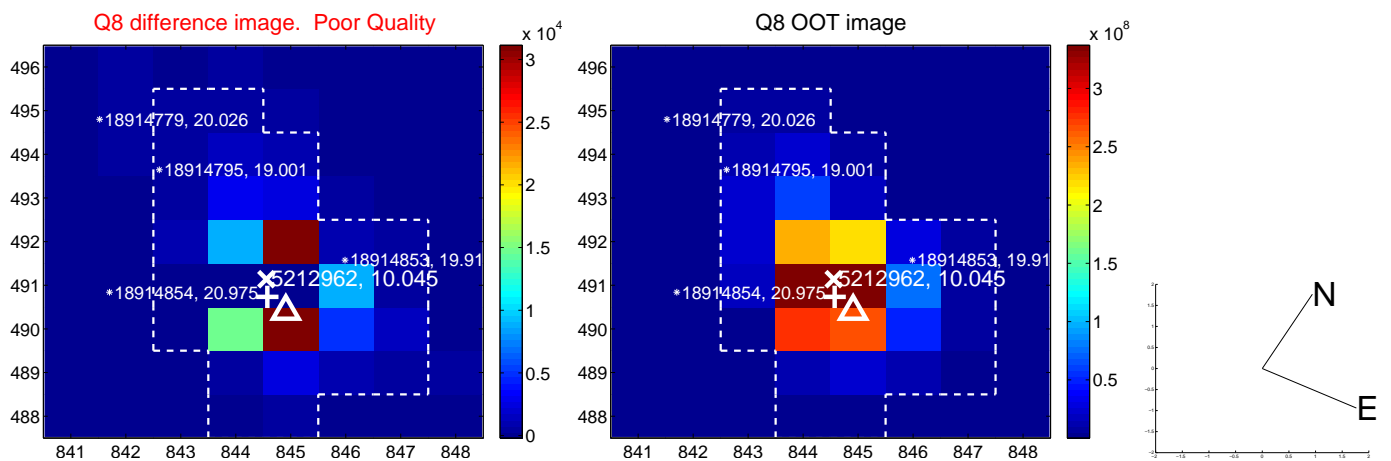
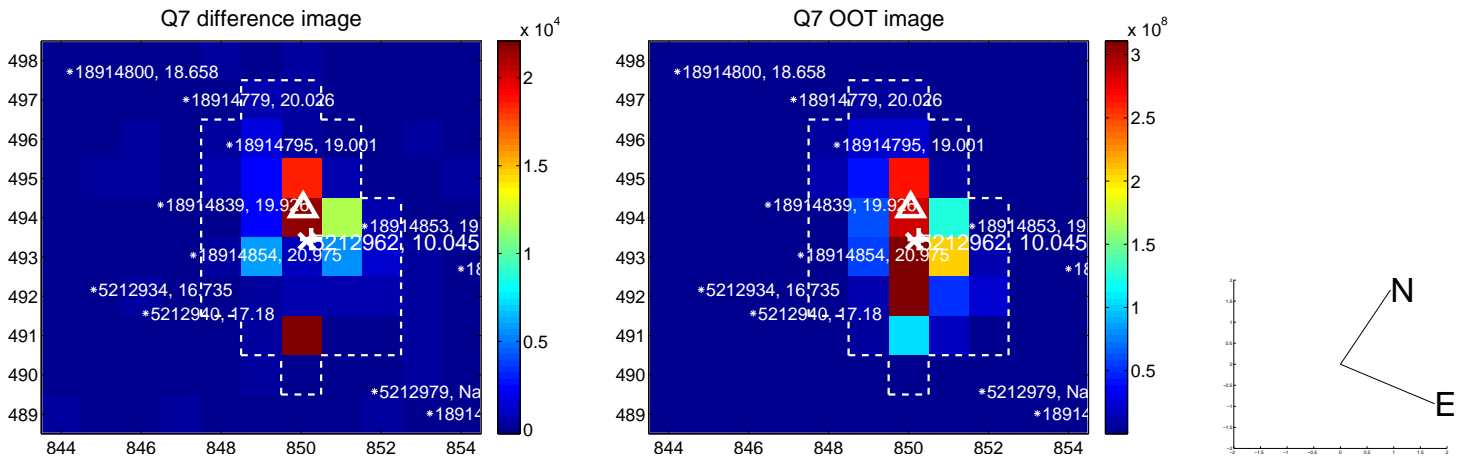
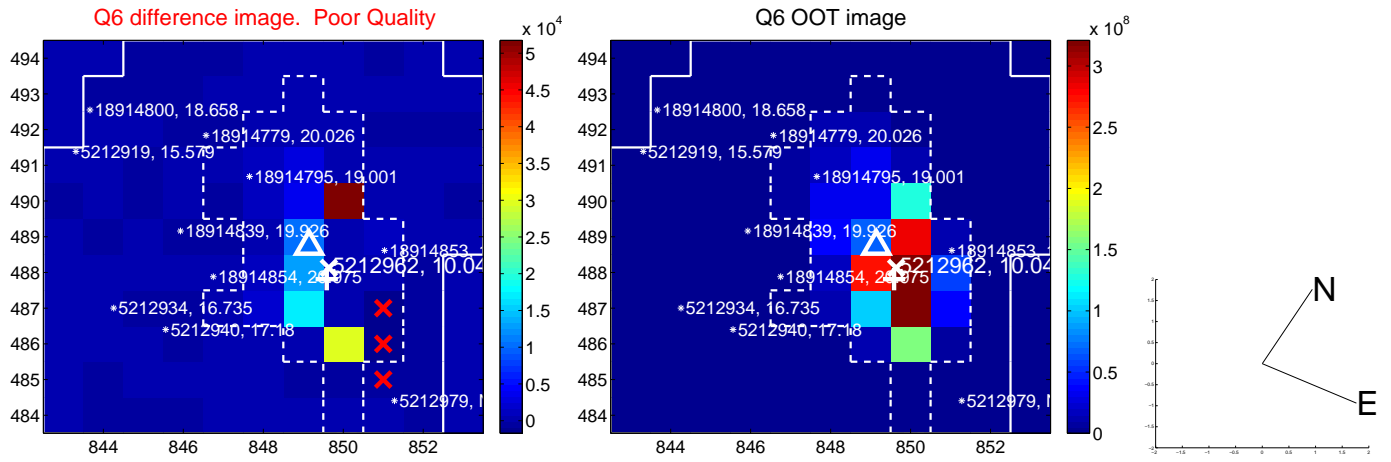
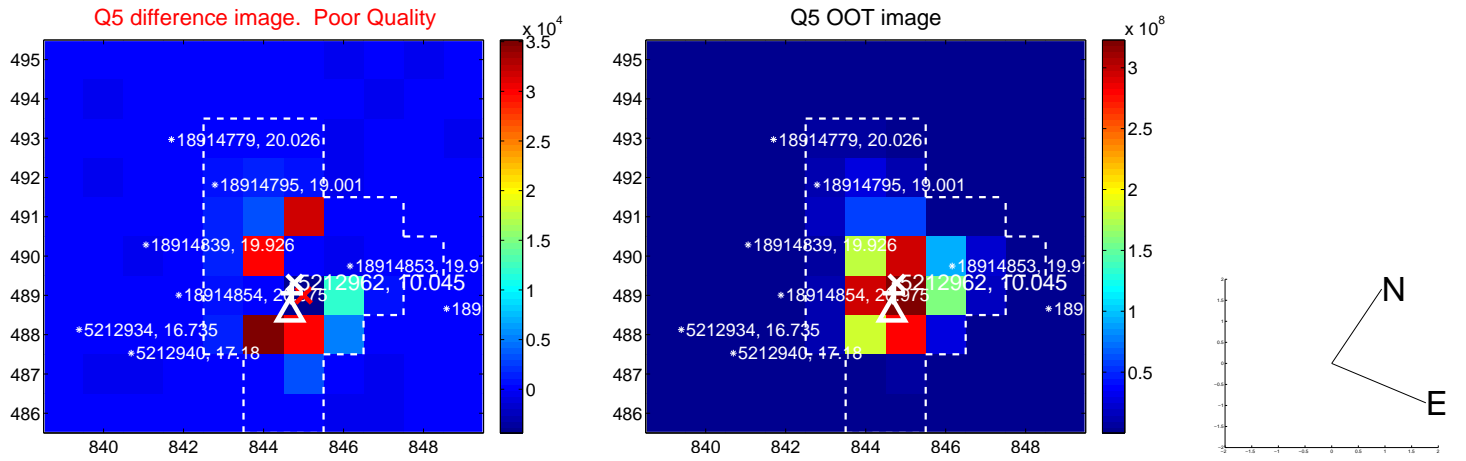
The direct PRF centroid is offset from the target star catalog position by about 0.99 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.429 ± 0.702	0.61	0.084 ± 0.558	-0.421 ± 0.620
PRF-fit source offset from KIC position	1.243 ± 0.647	1.92	0.375 ± 0.510	-1.185 ± 0.561
photometric centroid source offset	0.63 ± 0.57	1.11	-0.11 ± 0.53	-0.62 ± 0.57

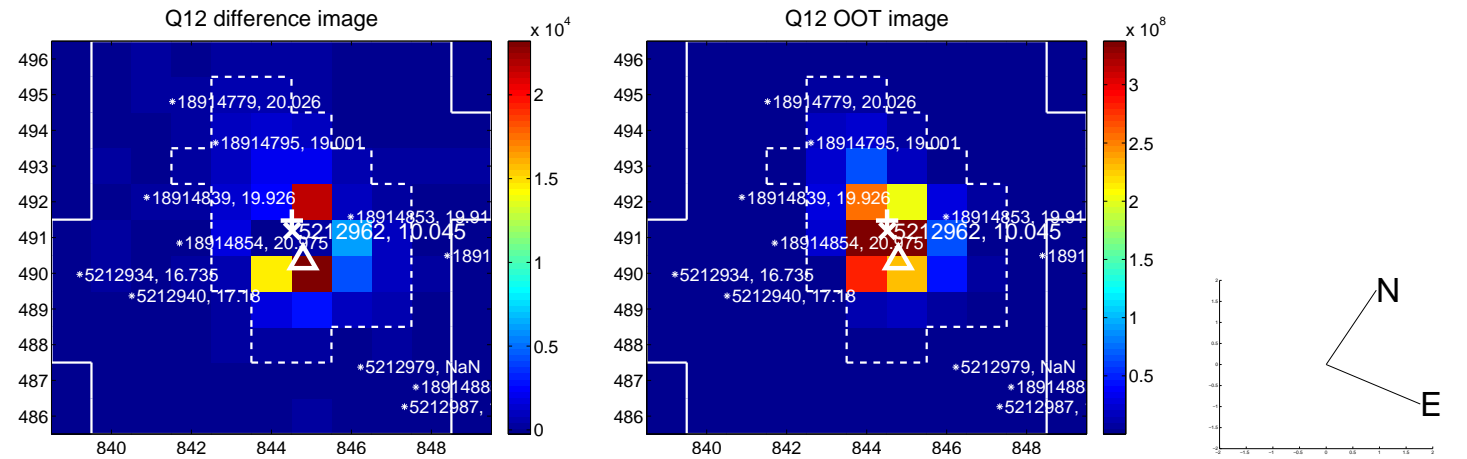
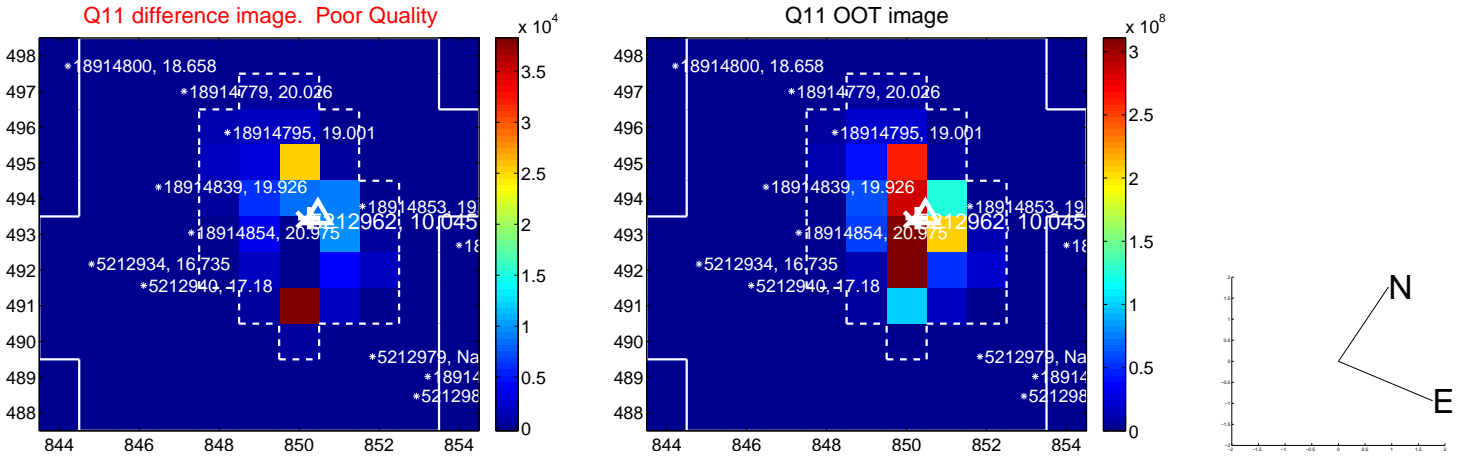
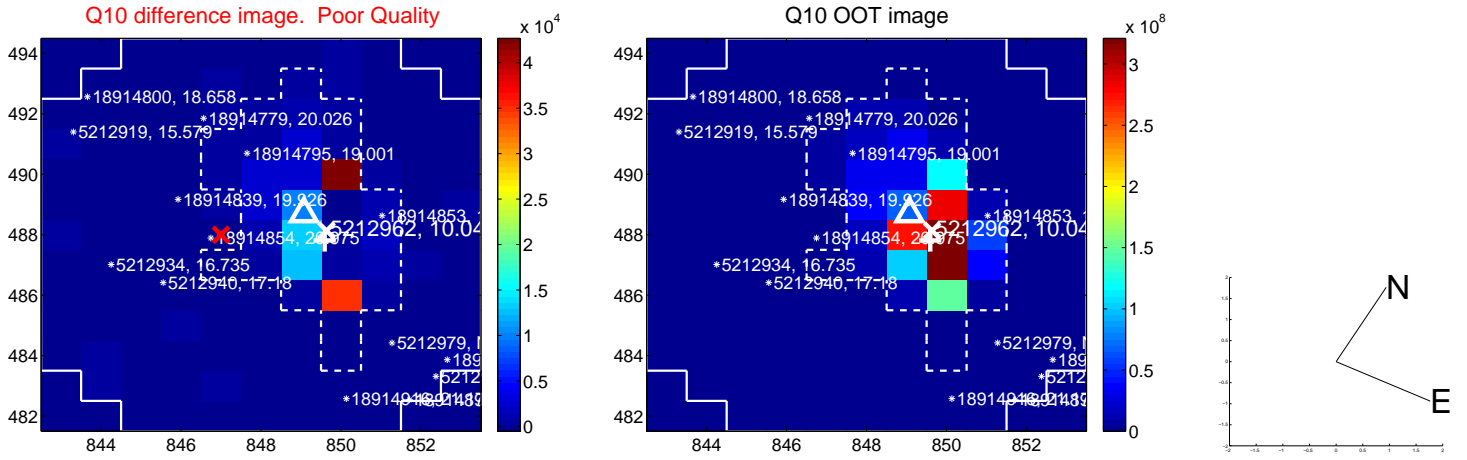
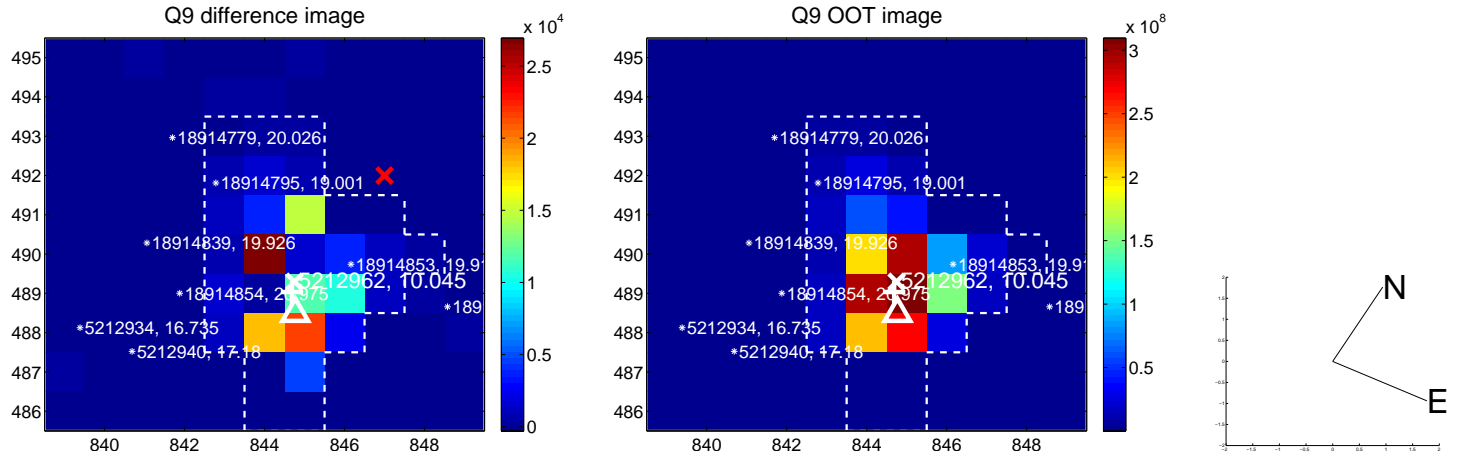


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

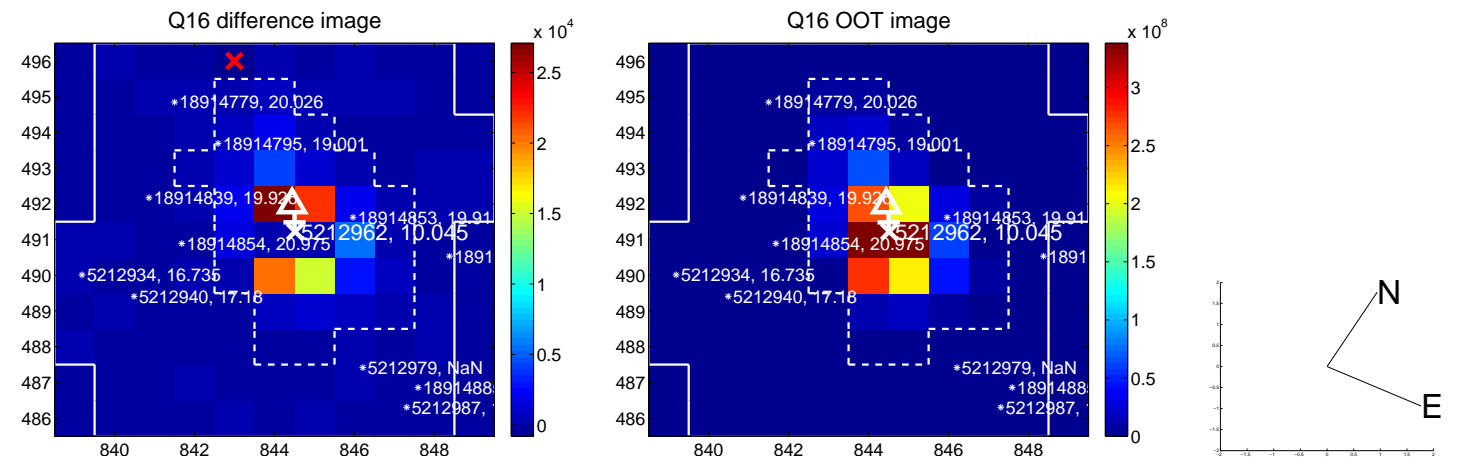
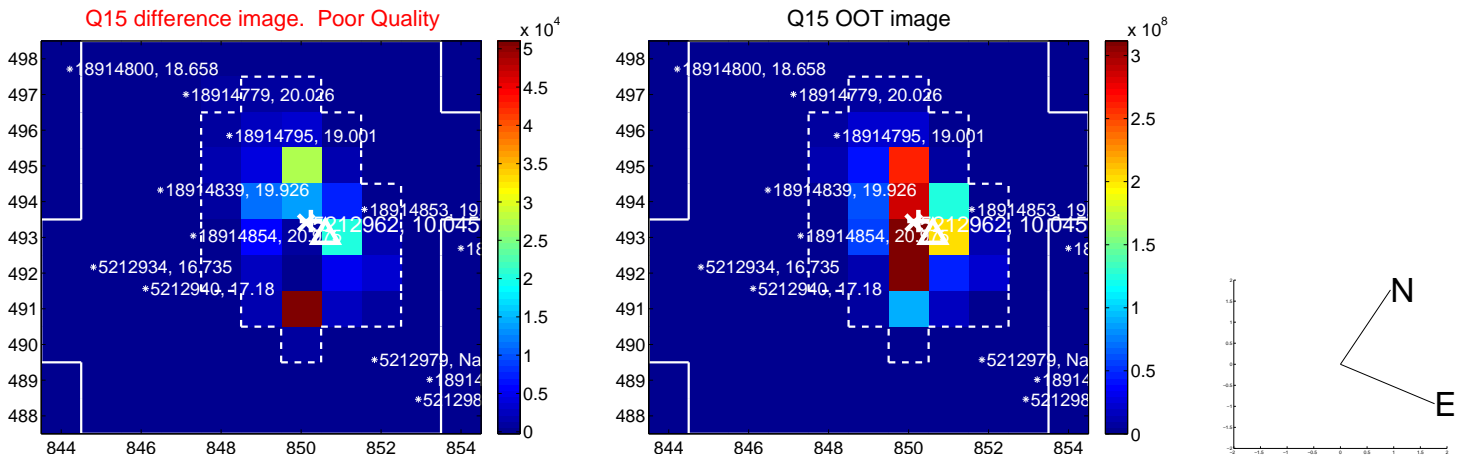
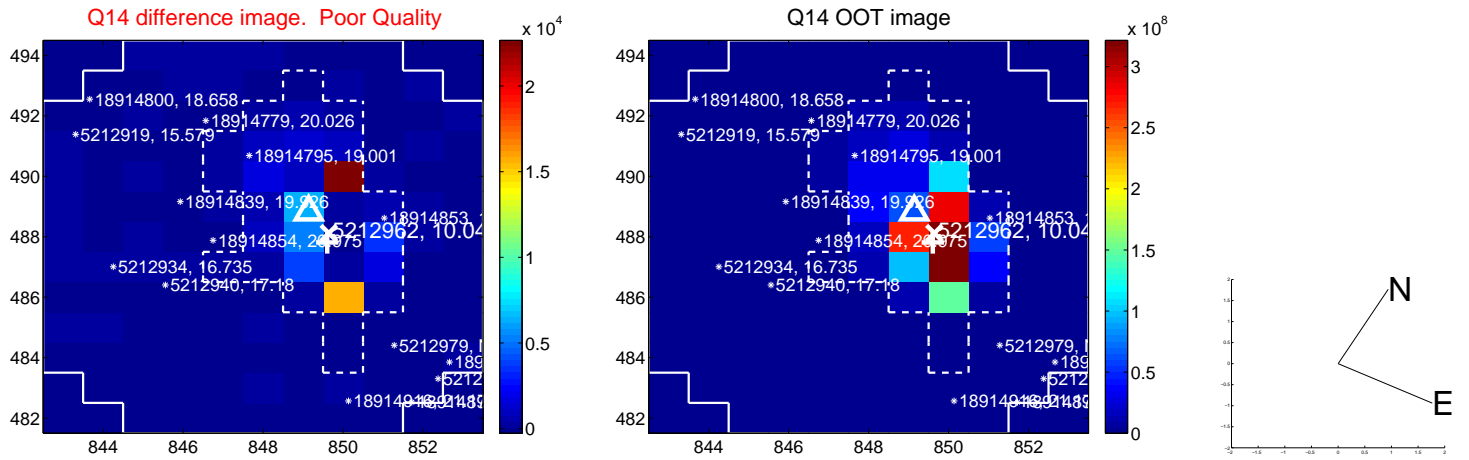
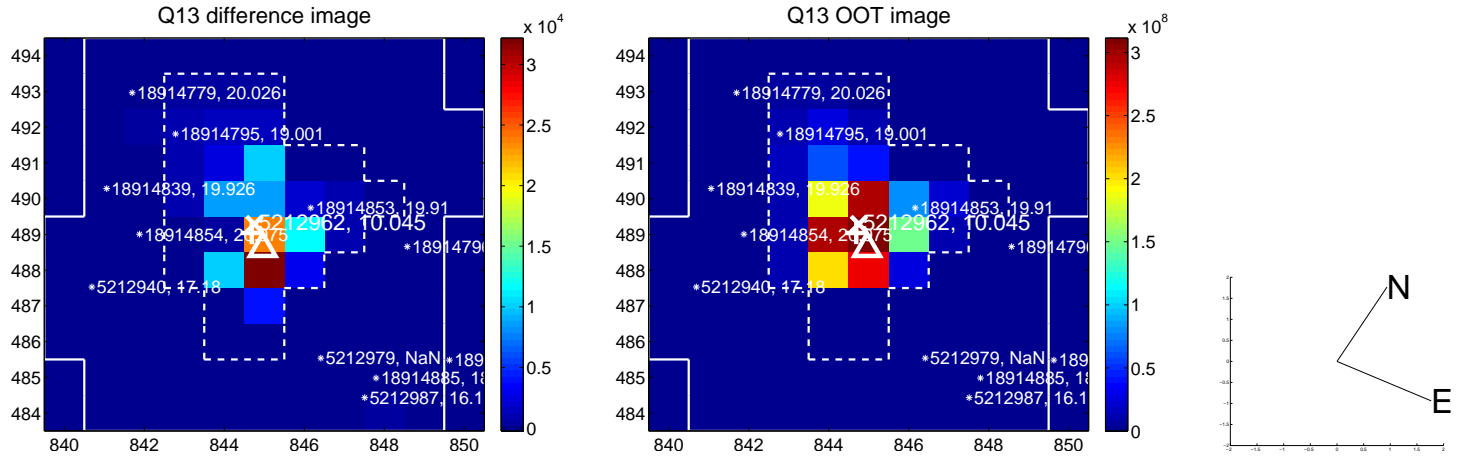
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



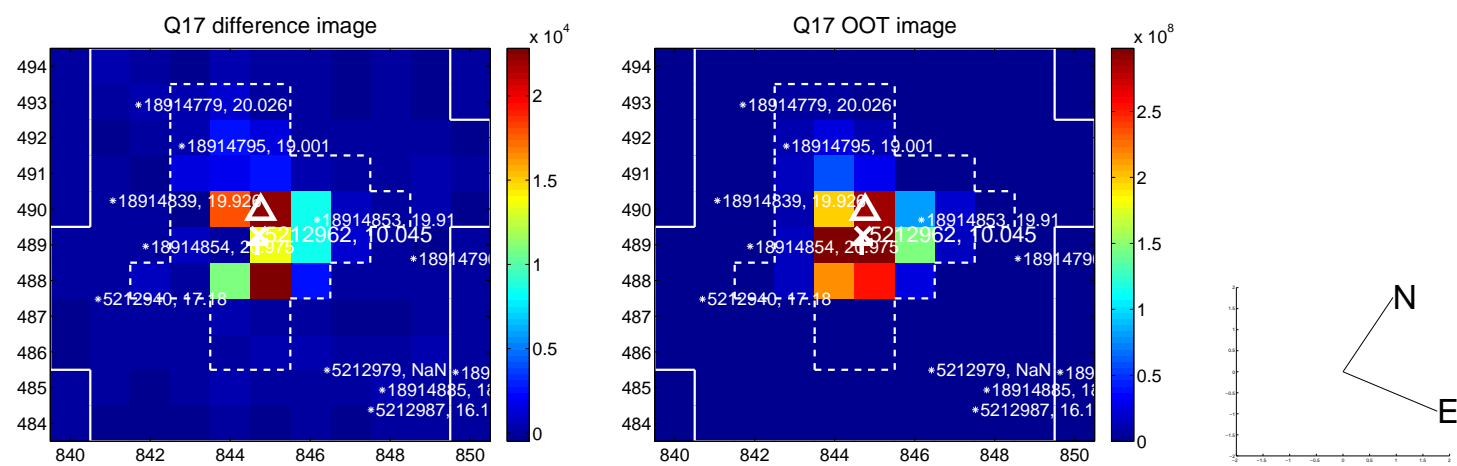
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



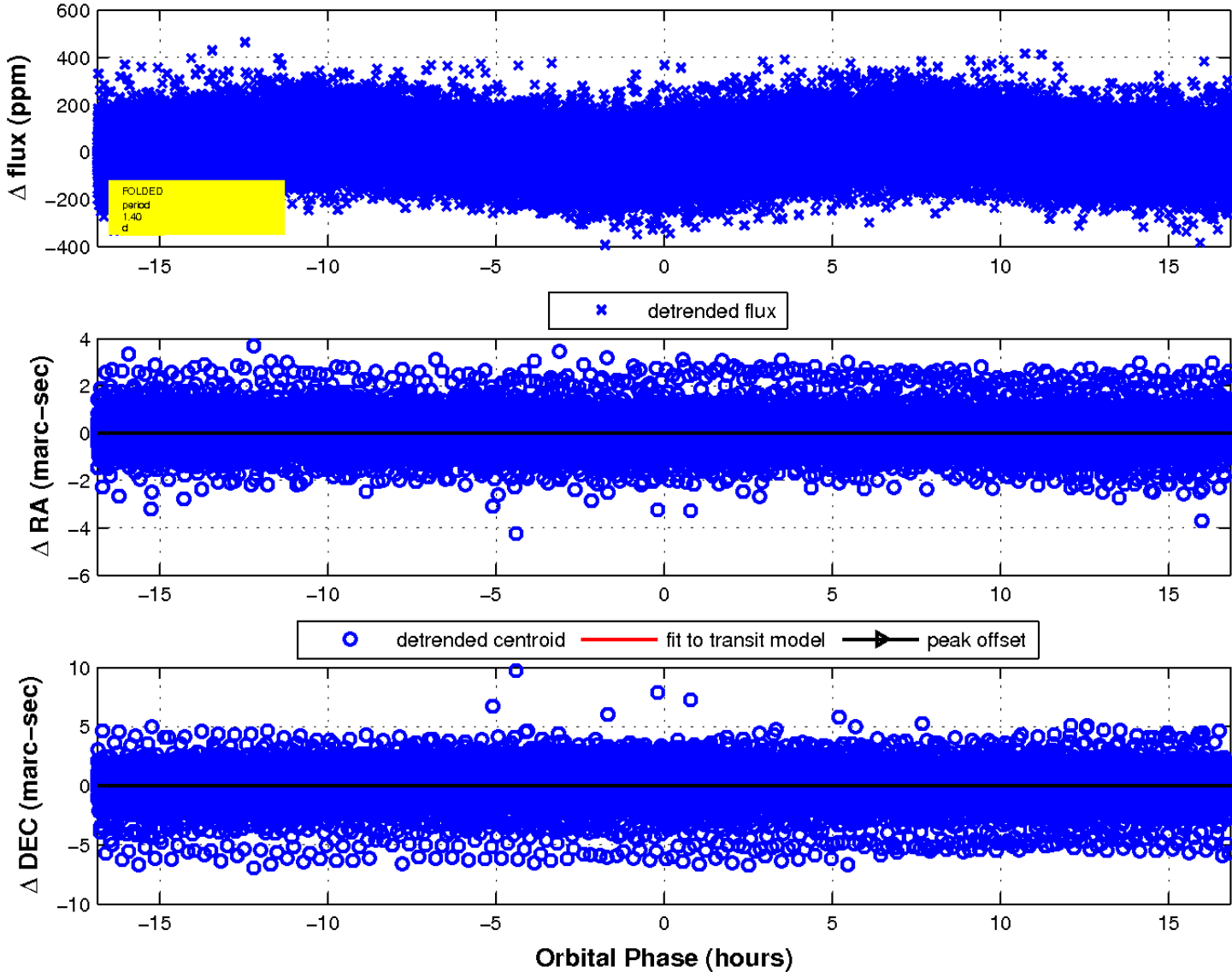
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



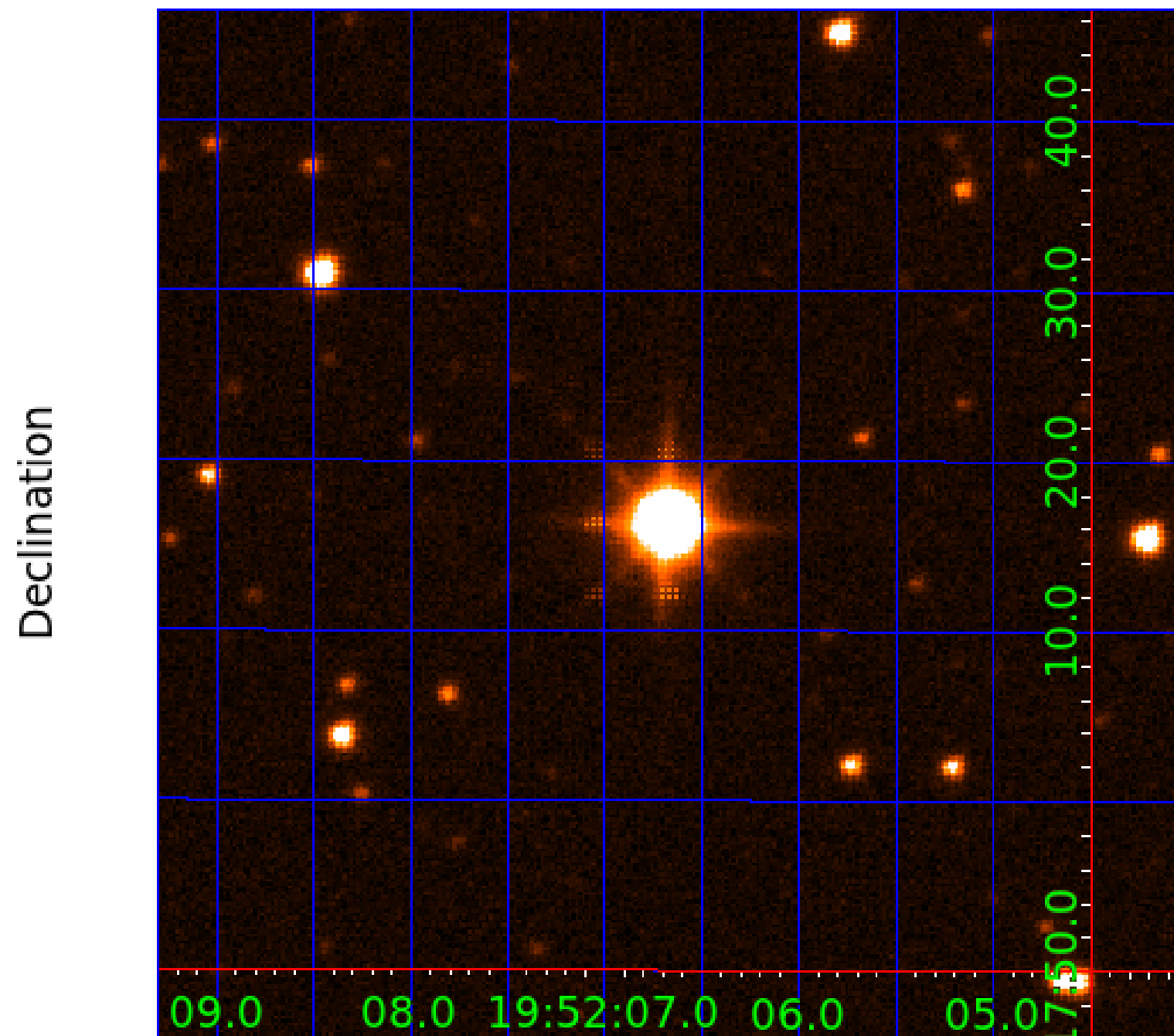
white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 2 of 3



UKIRT Image



KIC 005212962

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})
005212962-01	OBS	No	0.985339	131.659311	9.7	4.441	11.4	10.9	2.70	9189	0.97	69483.44
005212962-02	OBS	No	1.404057	132.233450	17.2	6.280	12.3	11.4	2.70	9189	1.30	43332.68
005212962-03	OBS	No	1.404144	132.855569	18.2	9.639	14.9	13.8	2.70	9189	1.18	43329.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005212962-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005212962-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—CENT_SATURATED
005212962-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

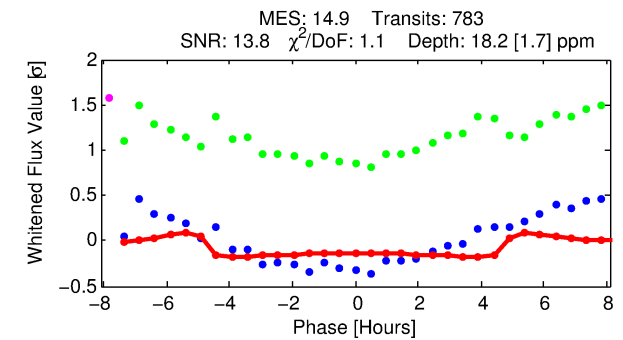
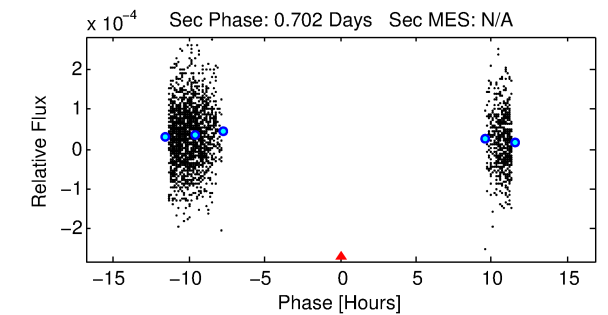
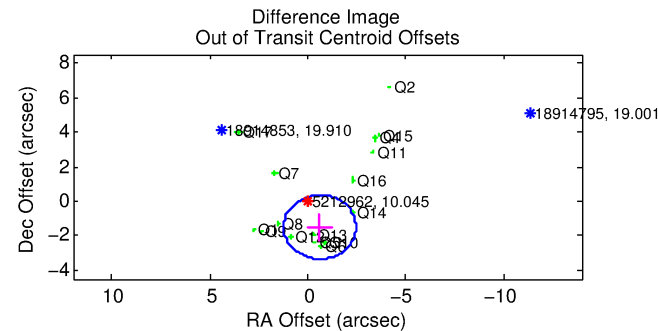
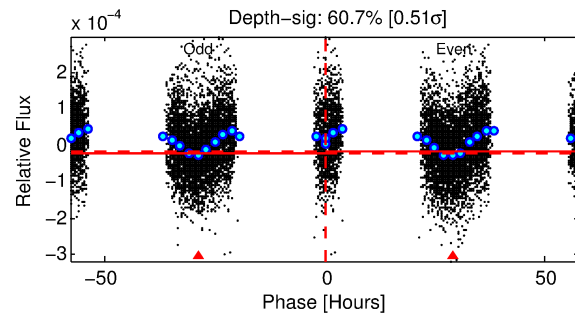
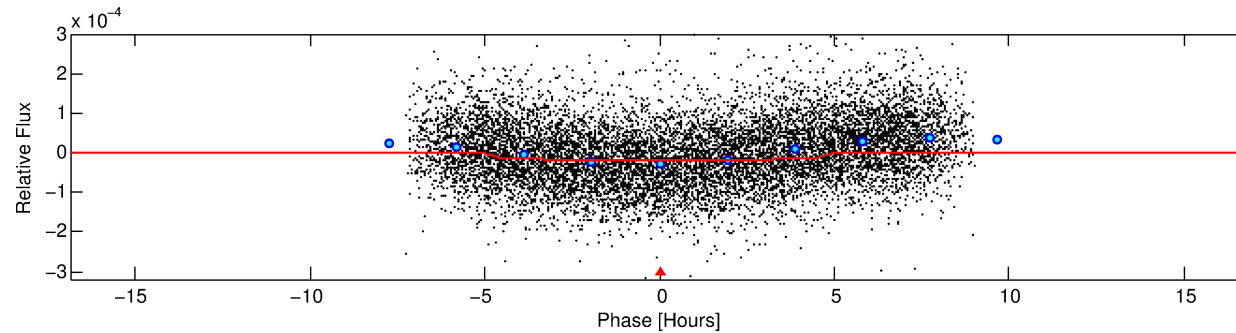
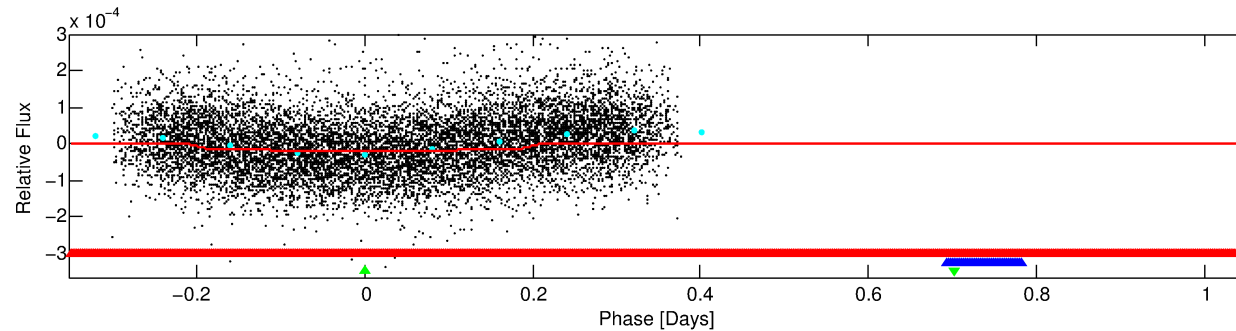
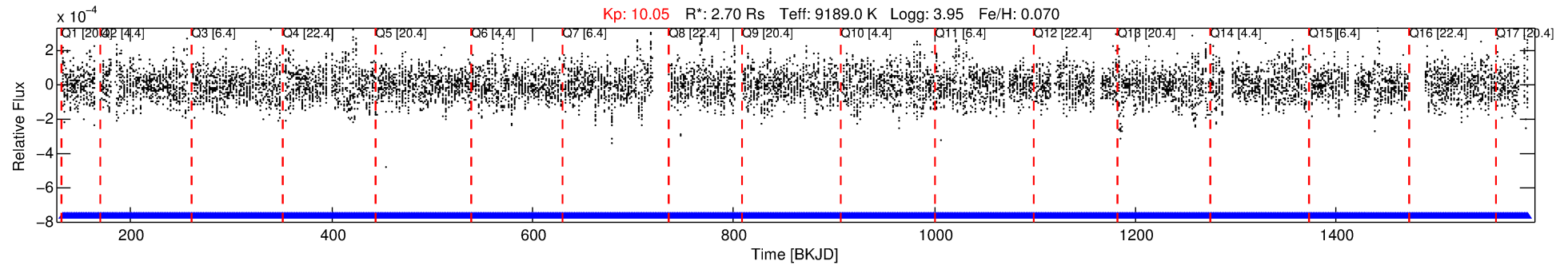
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005212962-03

No Significant Match Found

DV One-Page Summary

KIC: 5212962 Candidate: 3 of 3 Period: 1.404 d



DV Fit Results:

Period = 1.40414 [0.00001] d
Epoch = 132.8556 [0.0033] BKJD
Rp/R* = 0.0040 [0.0016]
a/R* = 1.26 [1.23]
b = 0.31 [7.71]
Seff = 43329.13 [21051.02]
Teq = 3679 [447] K
Rp = 1.18 [0.65] Re
a = 0.0328 [0.0104] AU

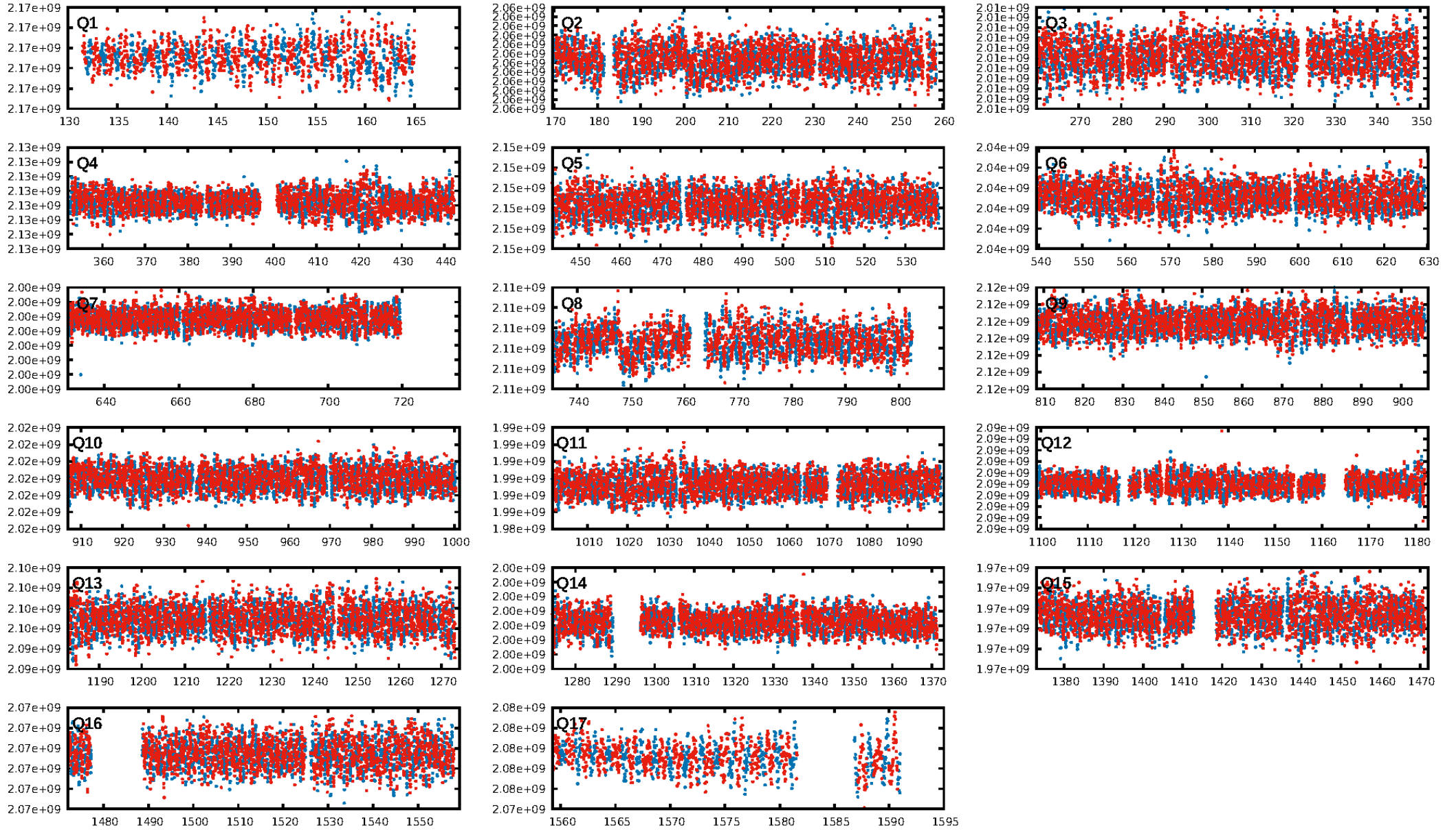
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [749/749]
GhostDiagnostic-chr: N/A
Centroid-sig: 16.0%
Centroid-so: 0.578 arcsec [1.17 σ]
OotOffset-rm: 1.616 arcsec [2.62 σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-rm: 2.325 arcsec [3.30 σ]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.56 [9/16]
DiffImageOverlap-fno: 0.00 [0/17]

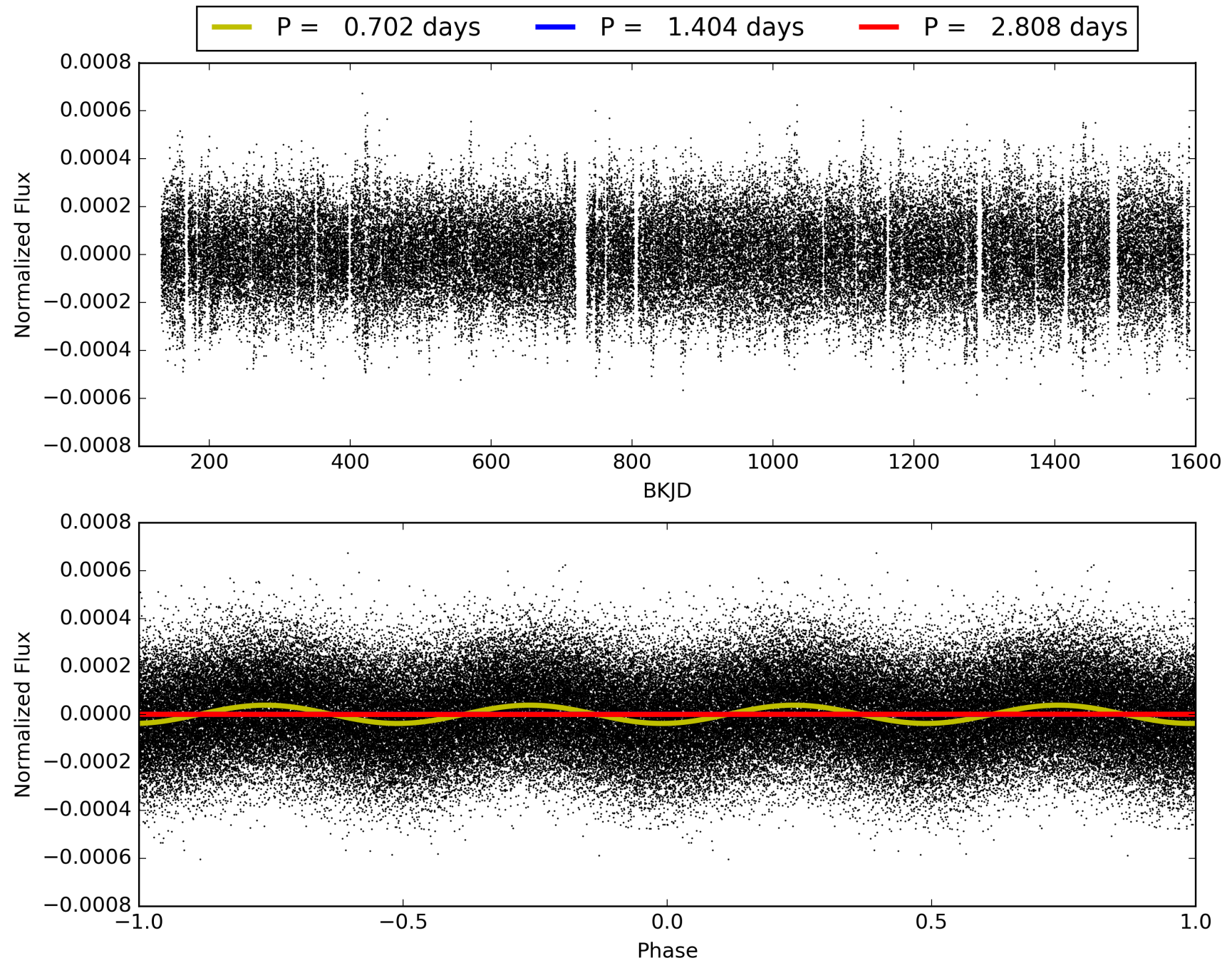
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:52:22 Z

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

TCE 005212962-03, PDC Light Curves

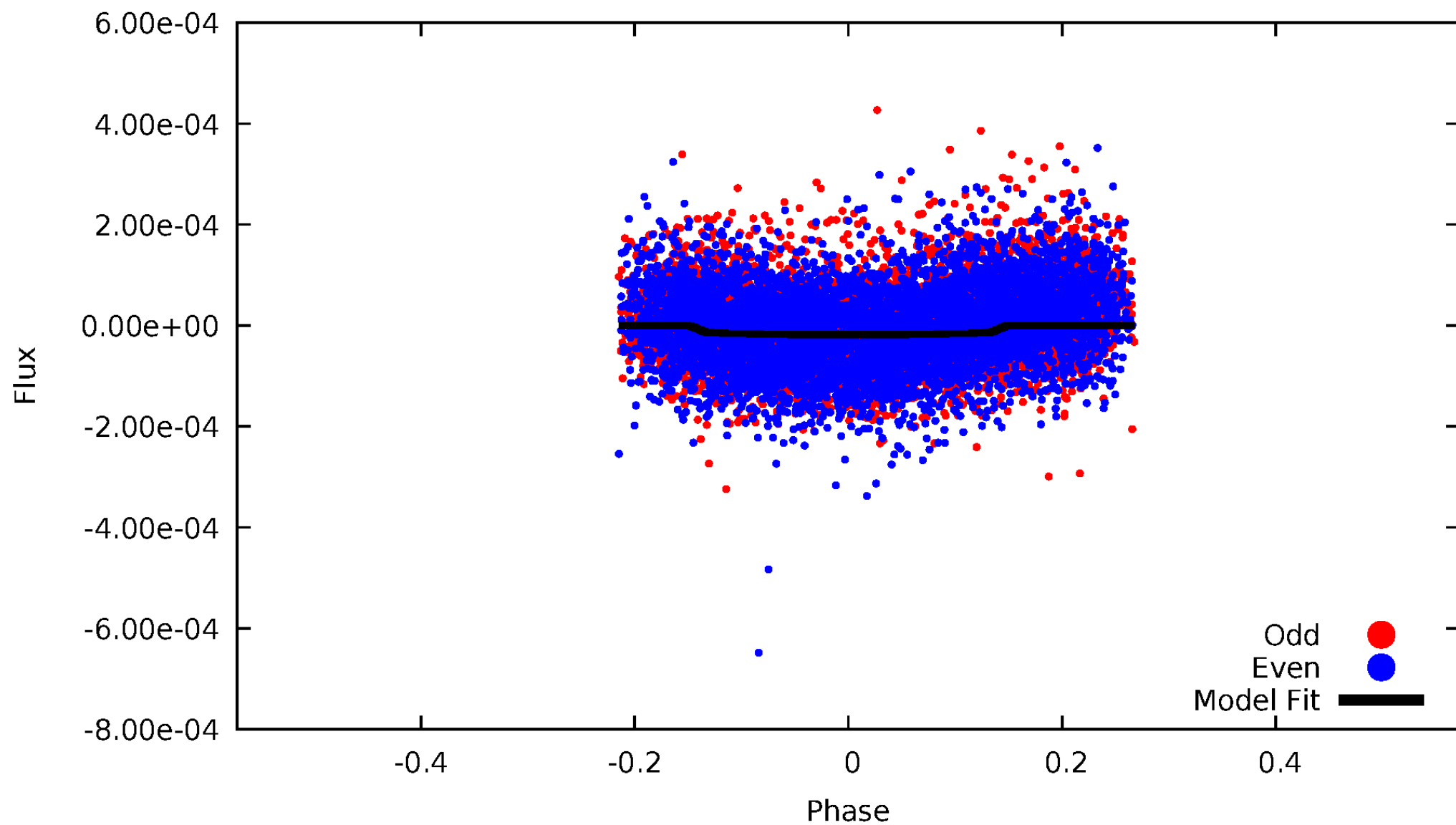


TCE 005212962-03



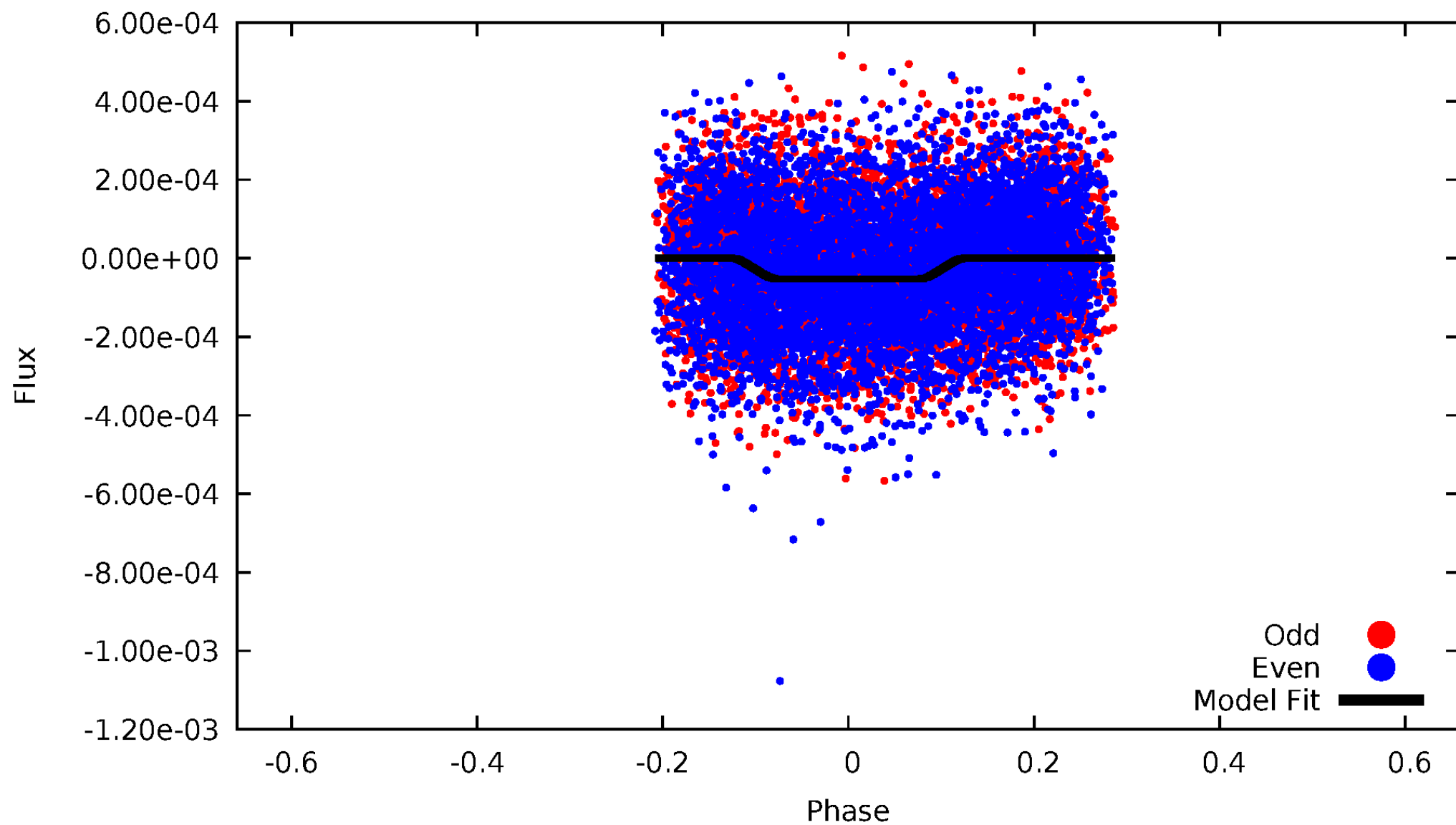
DV Odd/Even

TCE 005212962-03



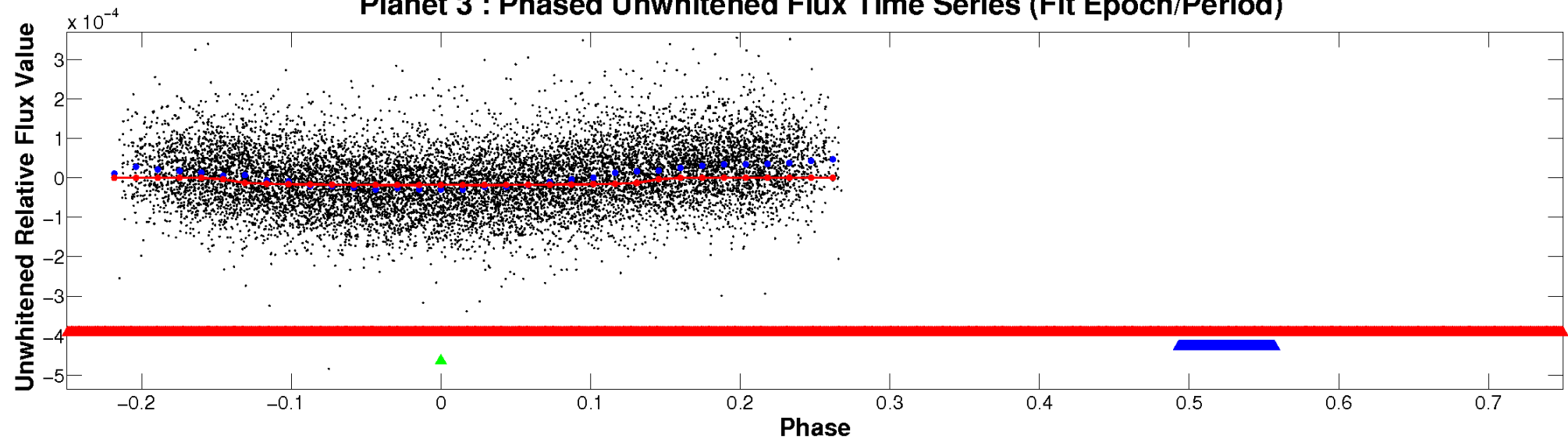
ALT Odd/Even

TCE 005212962-03

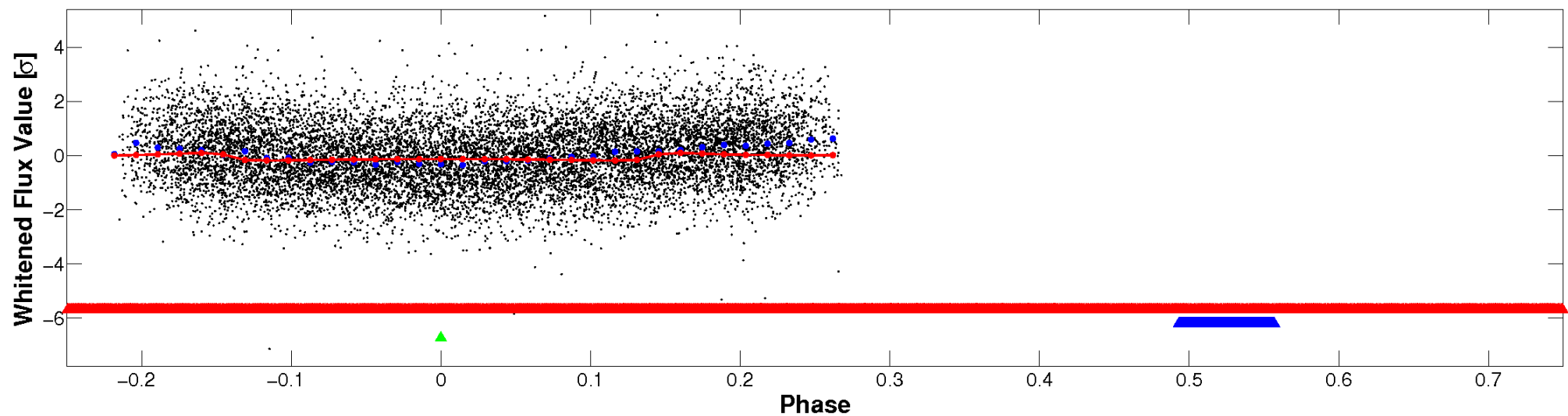


Non-Whitened Vs. Whitened Light Curve

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

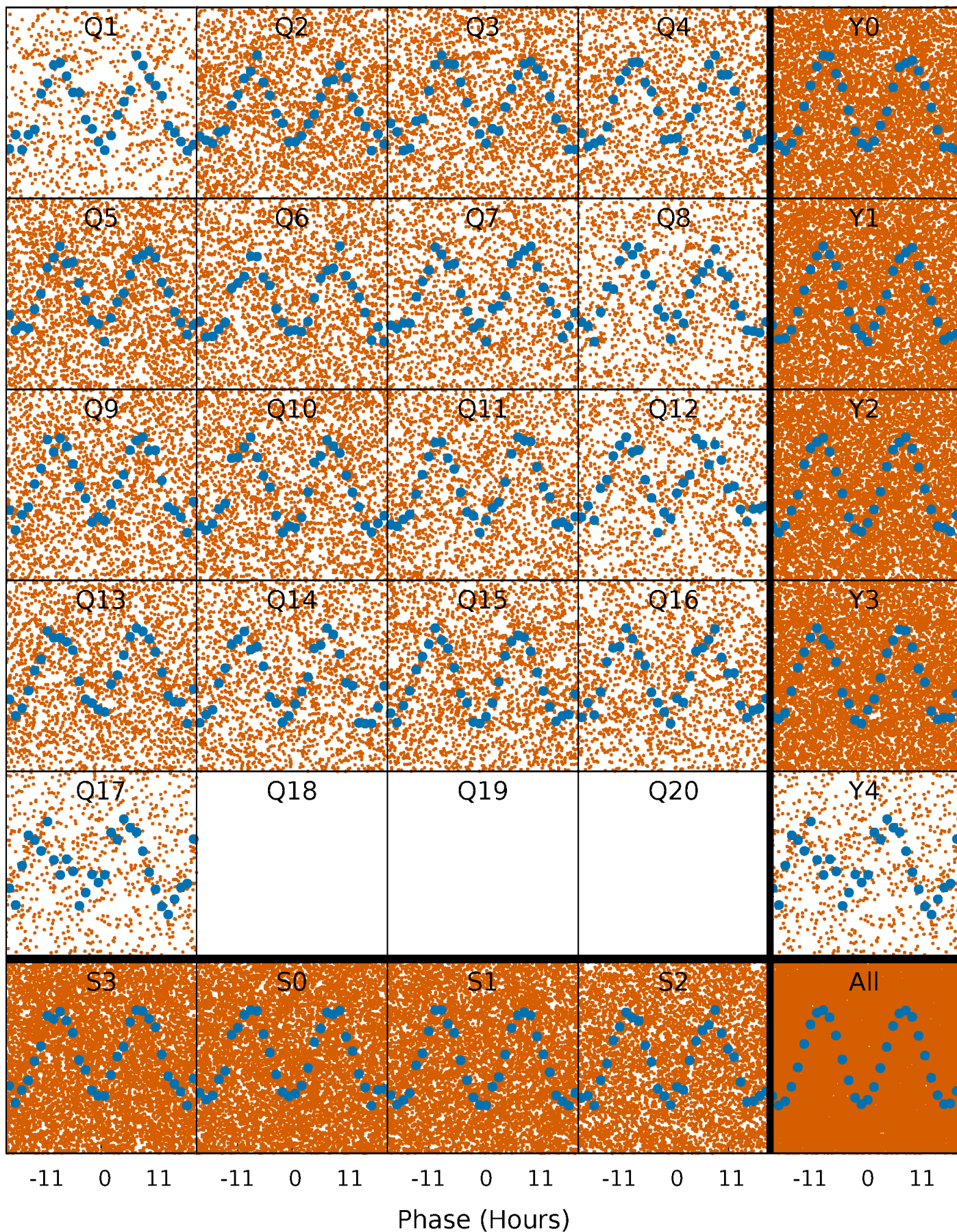


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



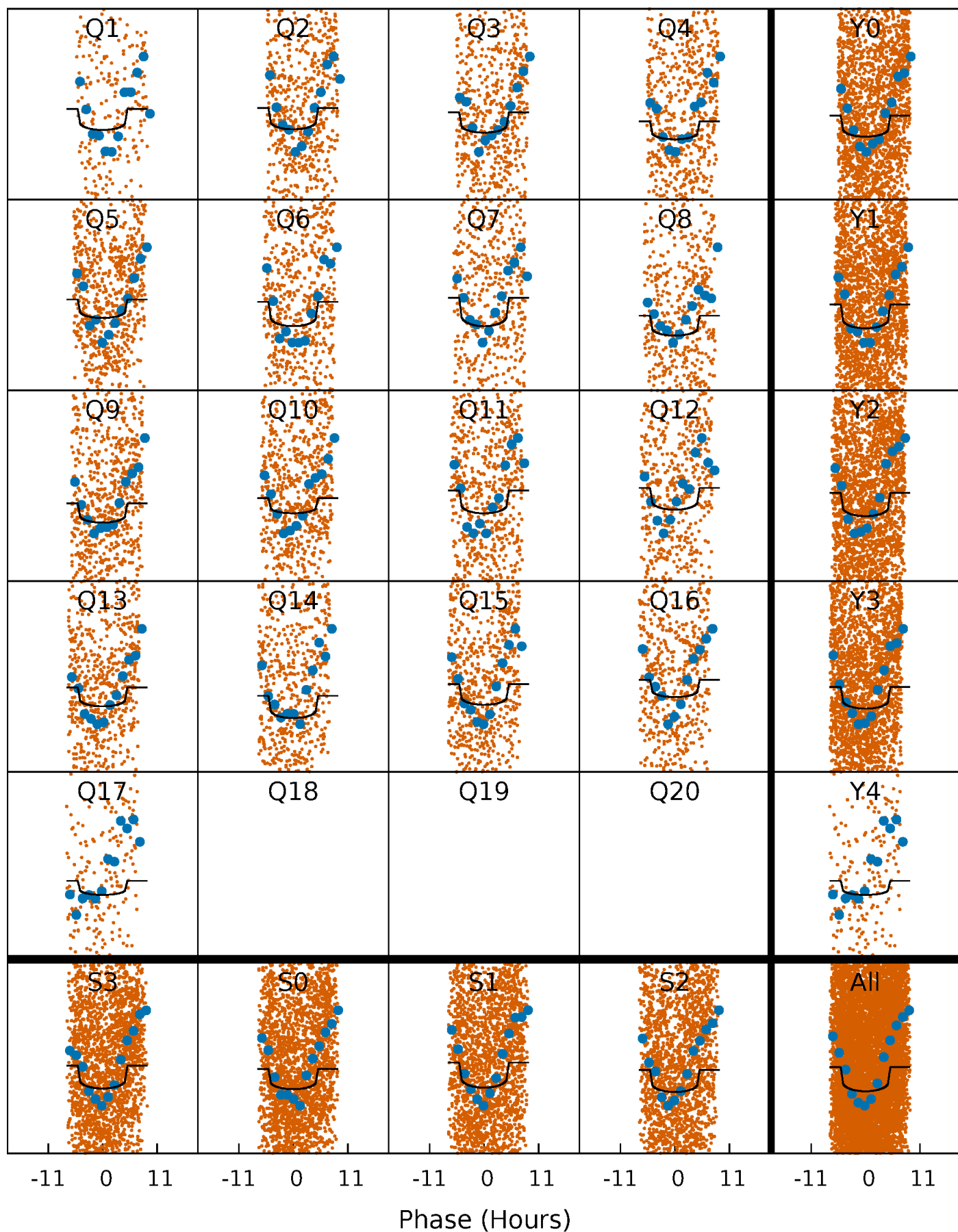
PDC Quarter-Phased Transit Curves

TCE 005212962-03 P= 1.404144 Days $T_0=132.855569$ (BKJD)



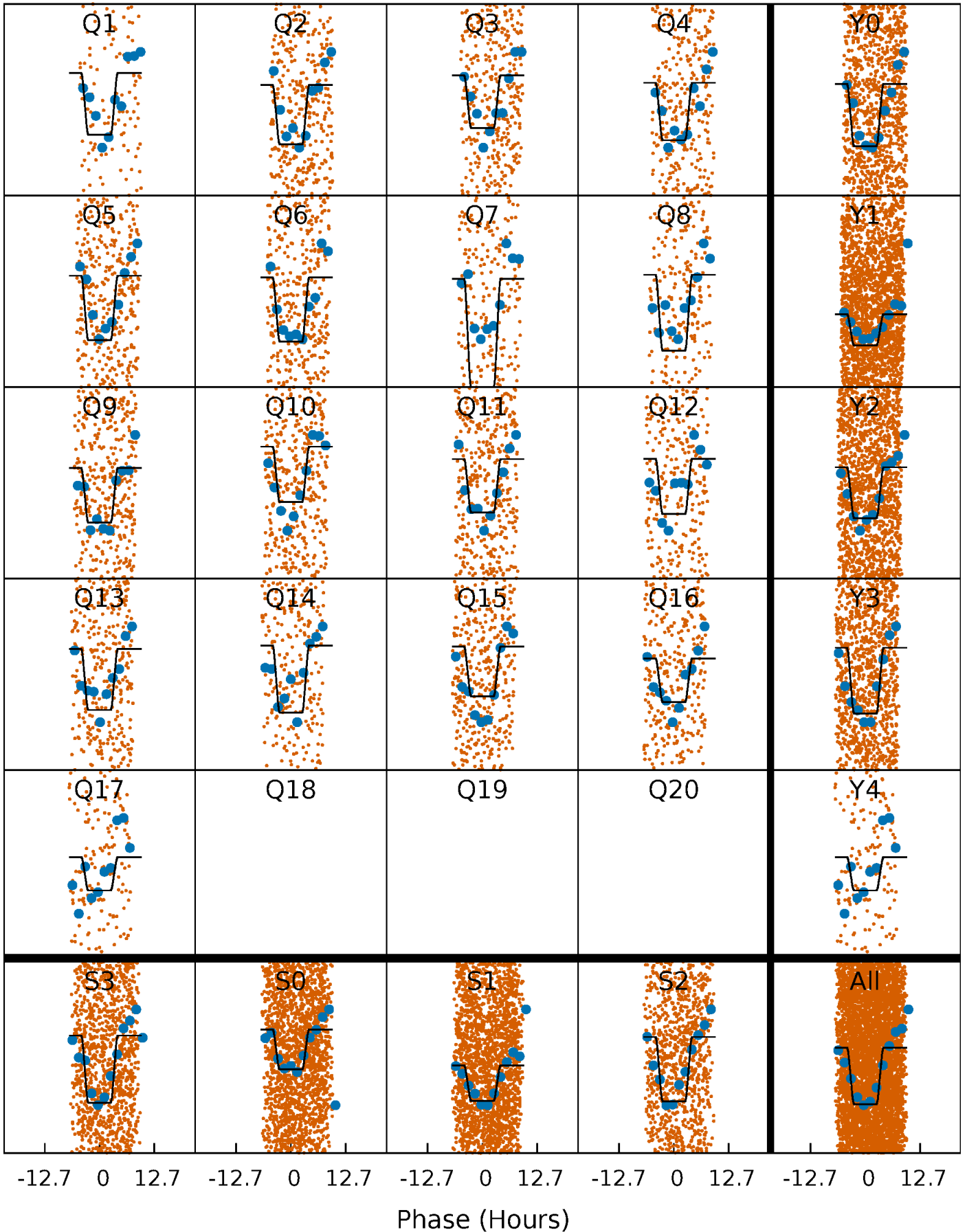
DV Quarter-Phased Transit Curves

TCE 005212962-03 P= 1.404144 Days $T_0=132.855569$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

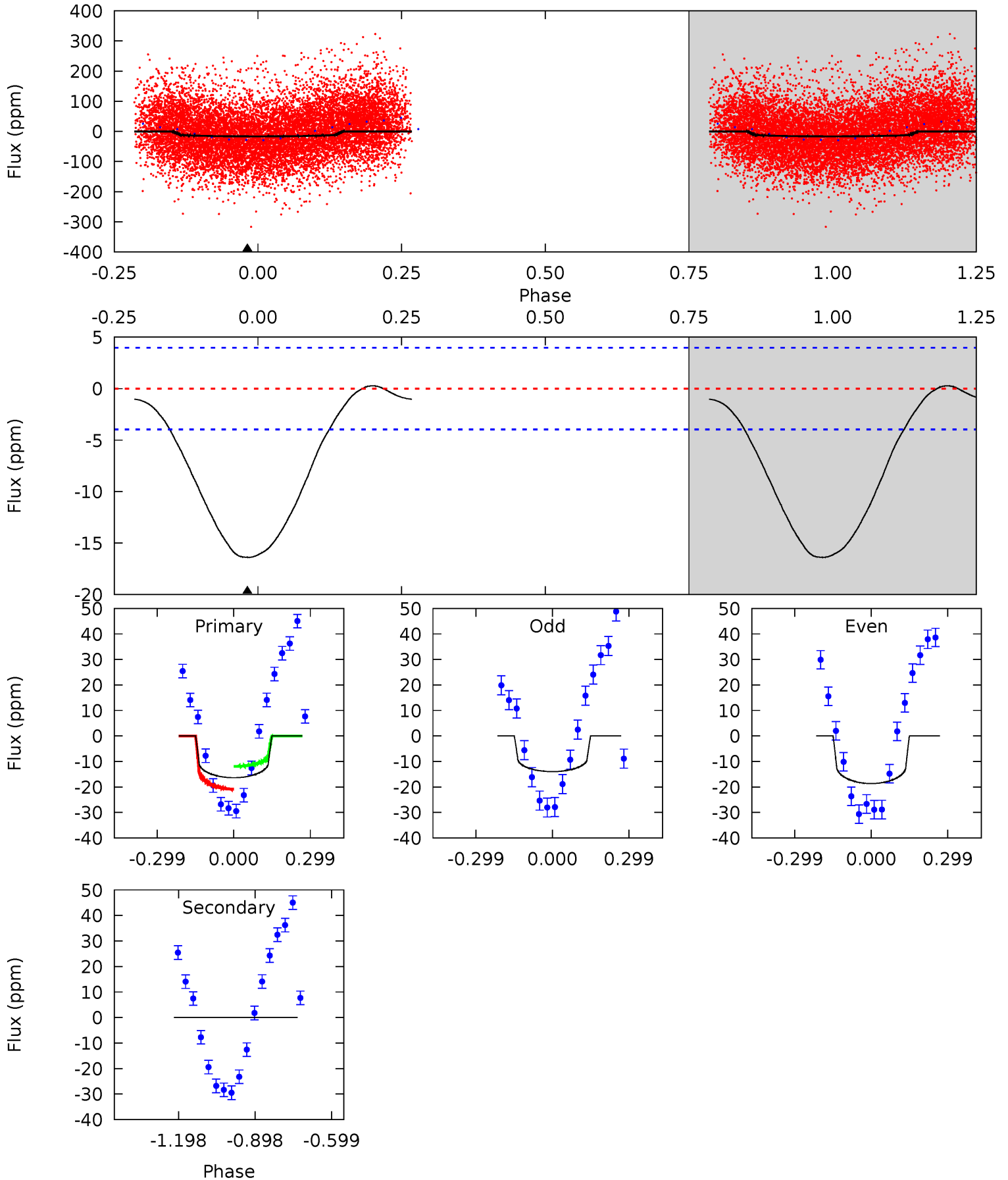
TCE 005212962-03 P= 1.404161 Days $T_0=132.827627$ (BKJD)



DV Model-Shift Uniqueness Test

005212962-03, P = 1.404144 Days, E = 132.855569 Days

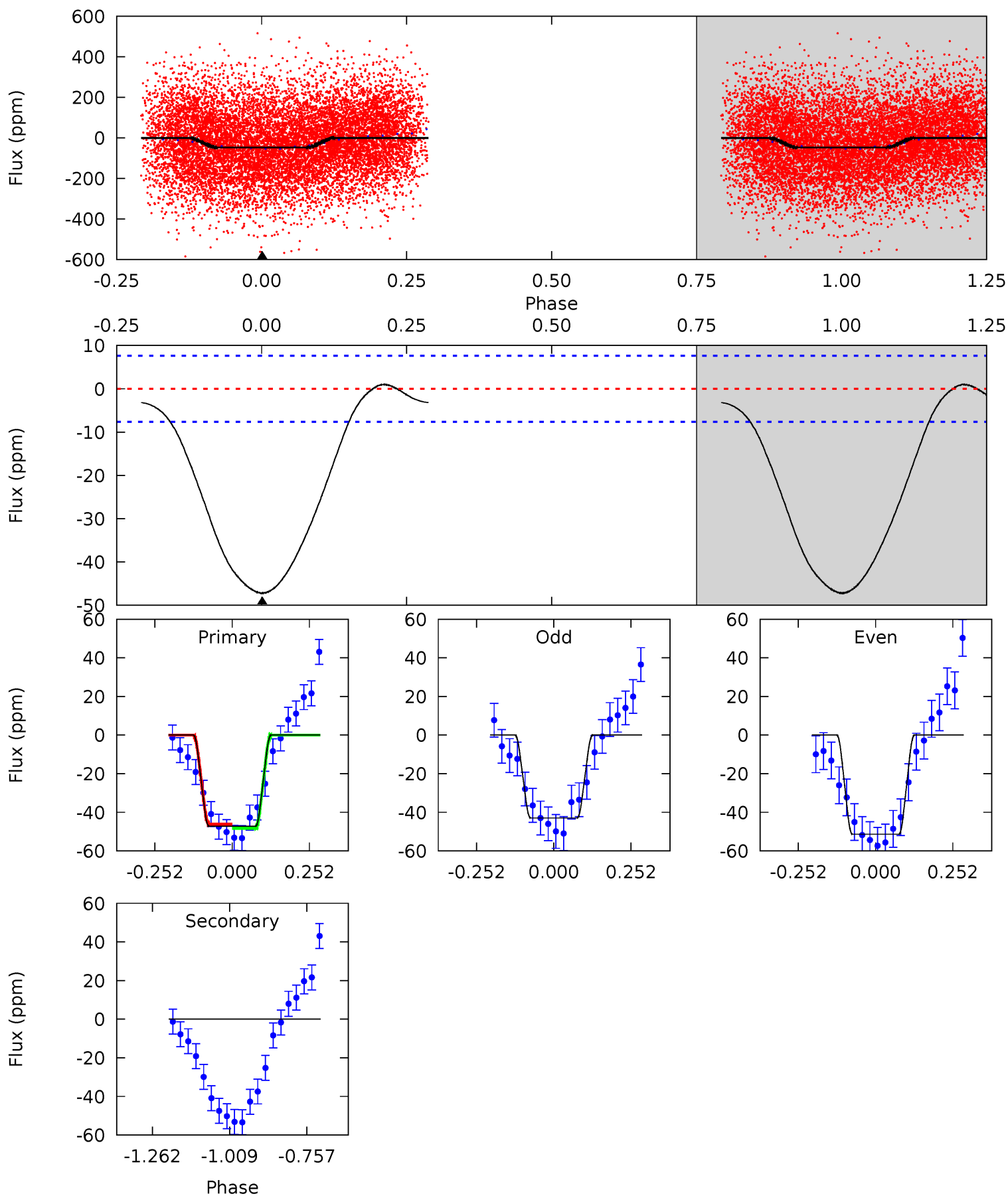
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.9	0	0	0	4.33	1.04	0.43	17.9	17.9	0	0	2.56	1.00	0.02	5.34



Alt Model-Shift Uniqueness Test

005212962-03, P = 1.404161 Days, E = 132.827627 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.0	0	0	0	4.37	1.14	0.72	27.0	27.0	0	0	2.42	0.93	0.02	0.59



Stellar Parameters For KIC 005212962

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9189^{+287}_{-415}	$3.952^{+0.242}_{-0.176}$	$0.070^{+0.150}_{-0.650}$	$2.698^{+0.847}_{-1.035}$	$2.376^{+0.377}_{-0.753}$	$0.170^{+0.309}_{-0.084}$
	+3%/-5%	+6%/-4%	+214%/-929%	+31%/-38%	+16%/-32%	+181%/-49%
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 005212962-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1	$1.14^{+0.51}_{-0.48}$	5106^{+450}_{-479}	-4220^{+8129}_{-895}	$-0.008^{+0.506}_{-0.467}$
Alt.	0 ± 2	$2.11^{+0.63}_{-0.60}$	5084^{+499}_{-481}	-4214^{+1020}_{-575}	$0.004^{+0.225}_{-0.247}$

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

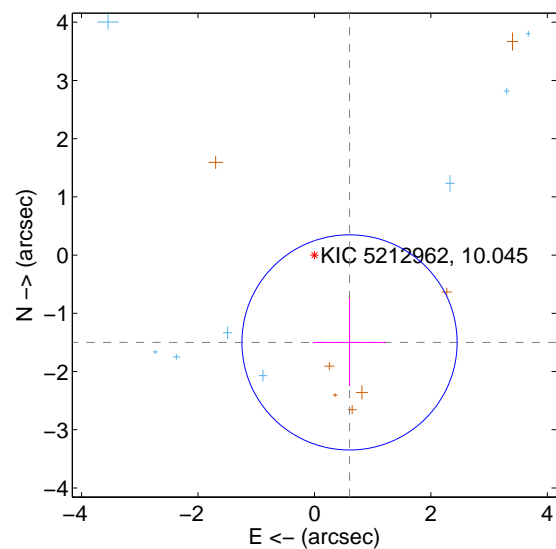
Supplemental centroid analysis for 005212962-03. **Kepler magnitude: 10.04**. Transit SNR 13.84

There are 9 quarters with good PRF difference image offsets

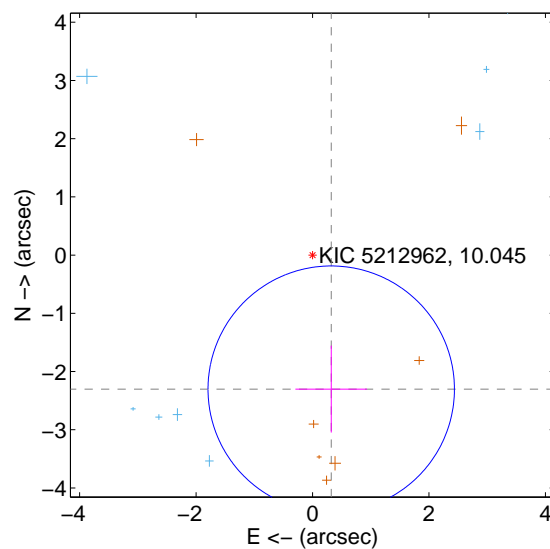
The direct PRF centroid is offset from the target star catalog position by about 0.99 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.616 ± 0.616	2.62	-0.603 ± 0.628	-1.500 ± 0.751
PRF-fit source offset from KIC position	2.325 ± 0.705	3.30	-0.321 ± 0.615	-2.303 ± 0.747
photometric centroid source offset	0.58 ± 0.50	1.17	-0.47 ± 0.49	0.34 ± 0.51

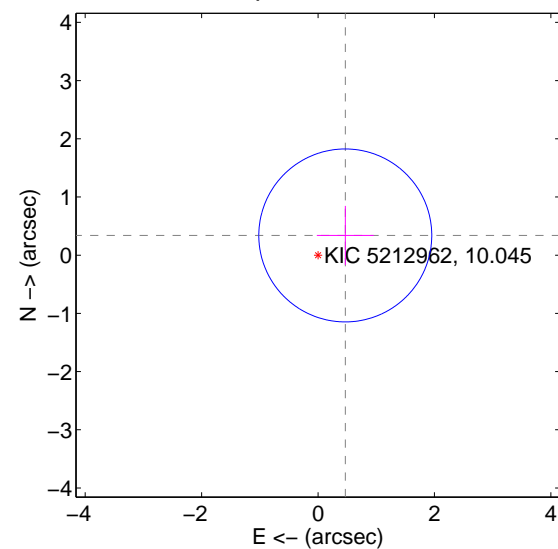
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

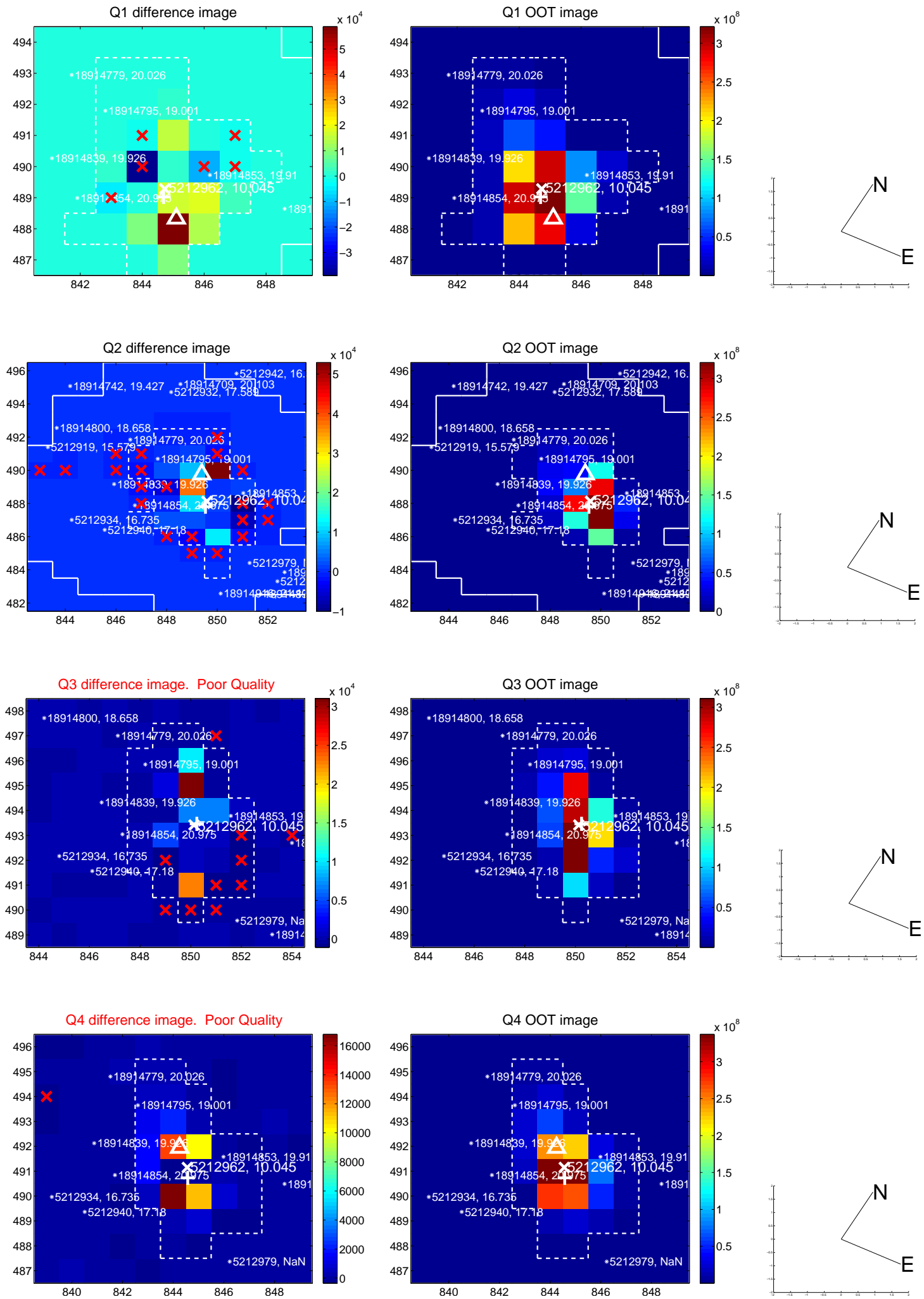


offset from photometric centroids

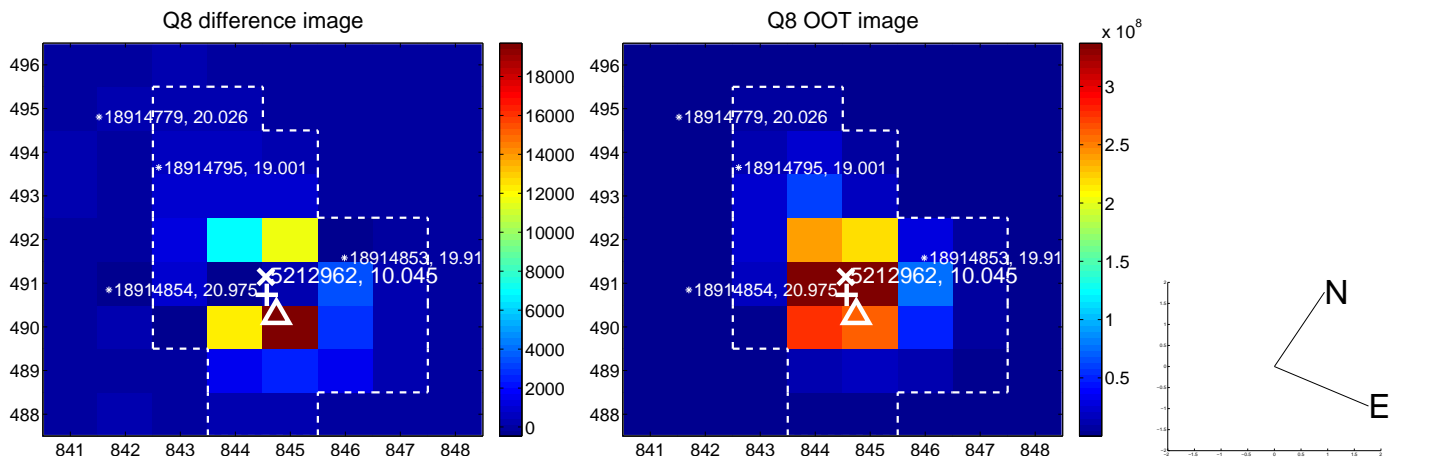
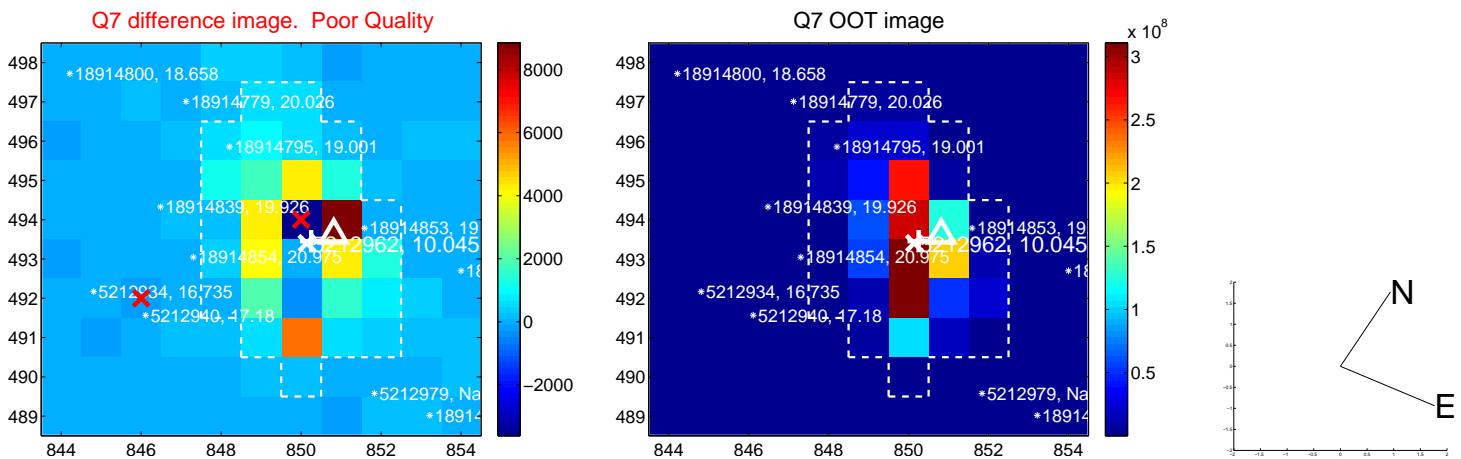
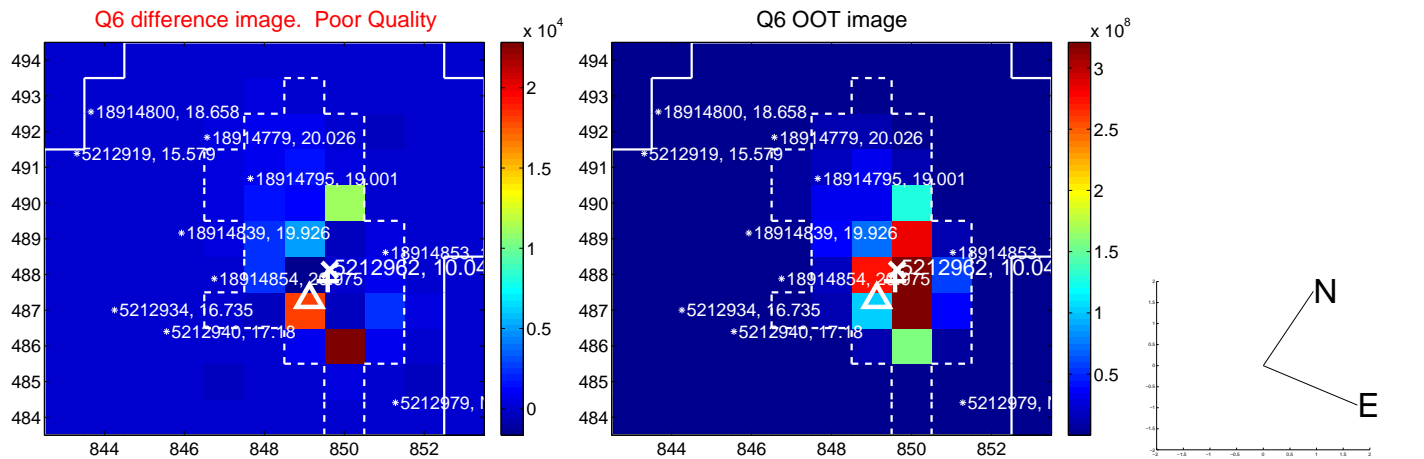
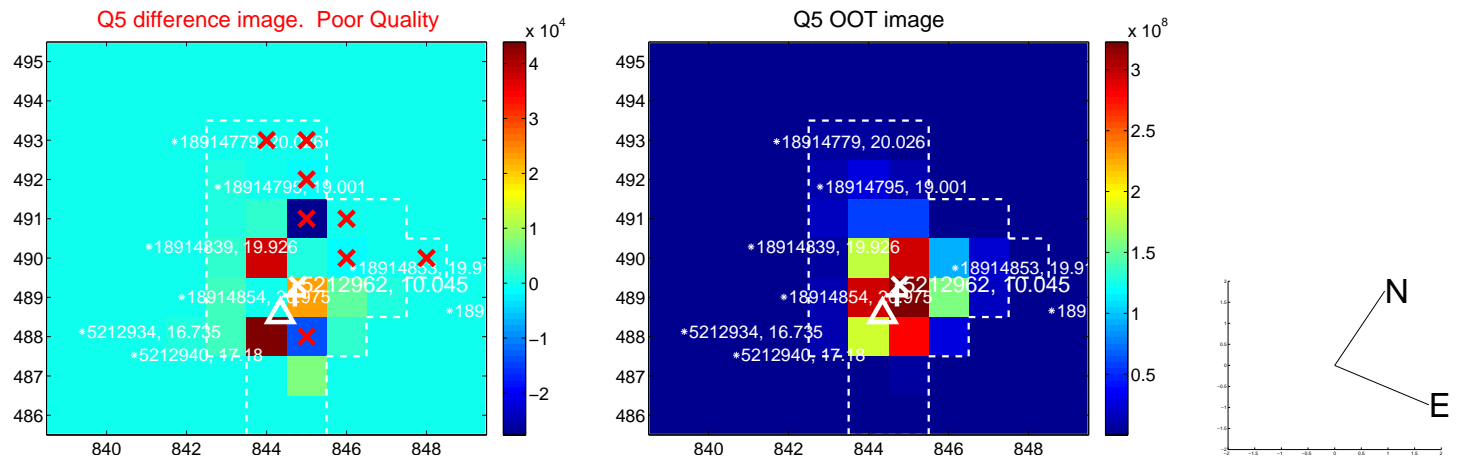


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

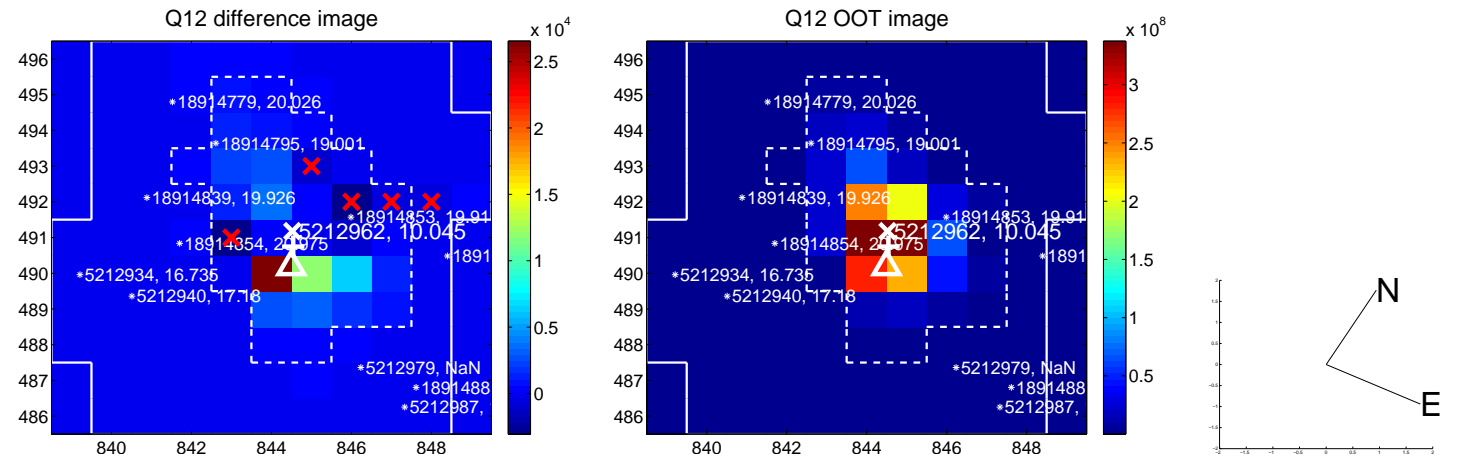
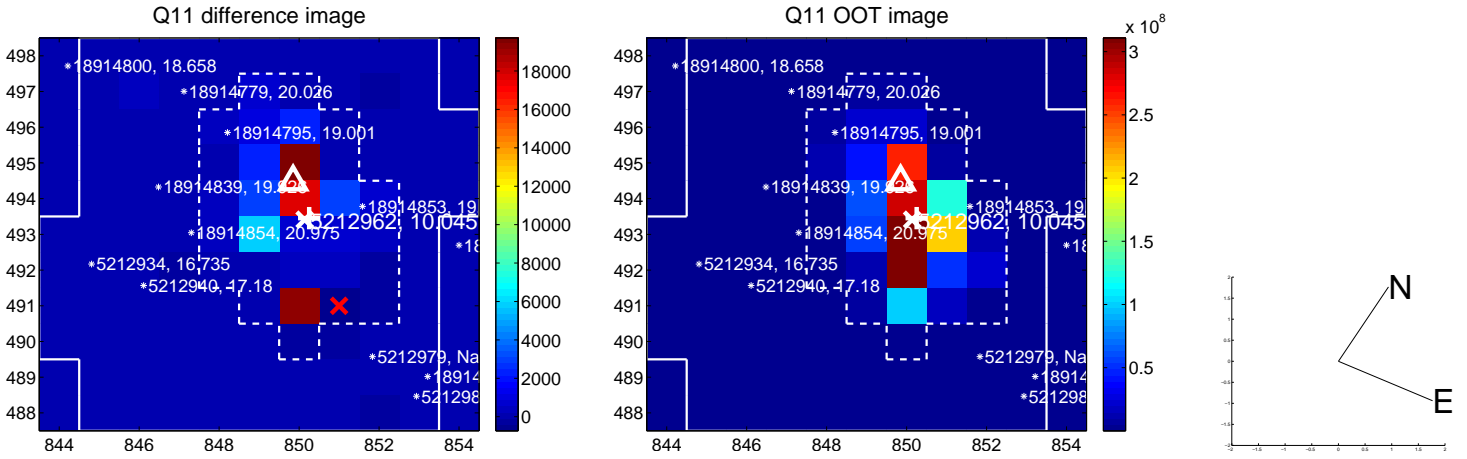
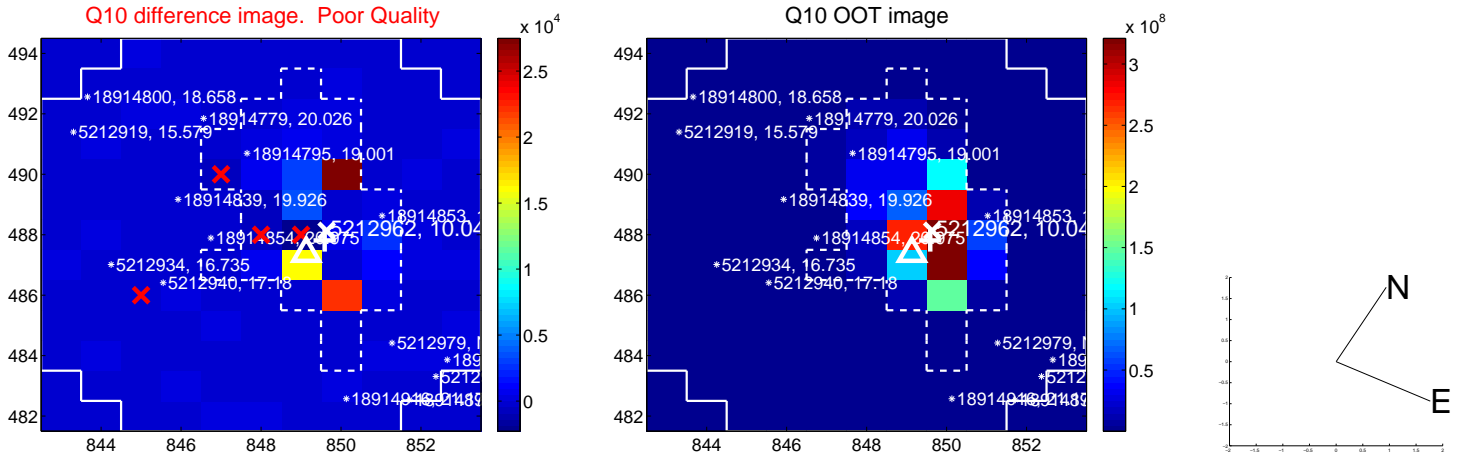
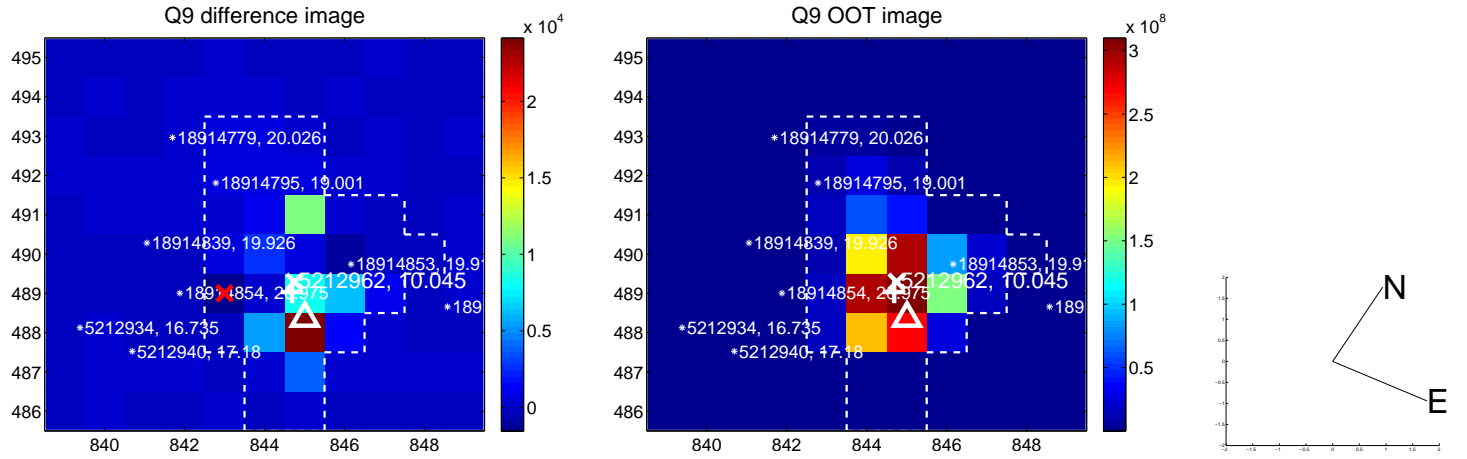
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



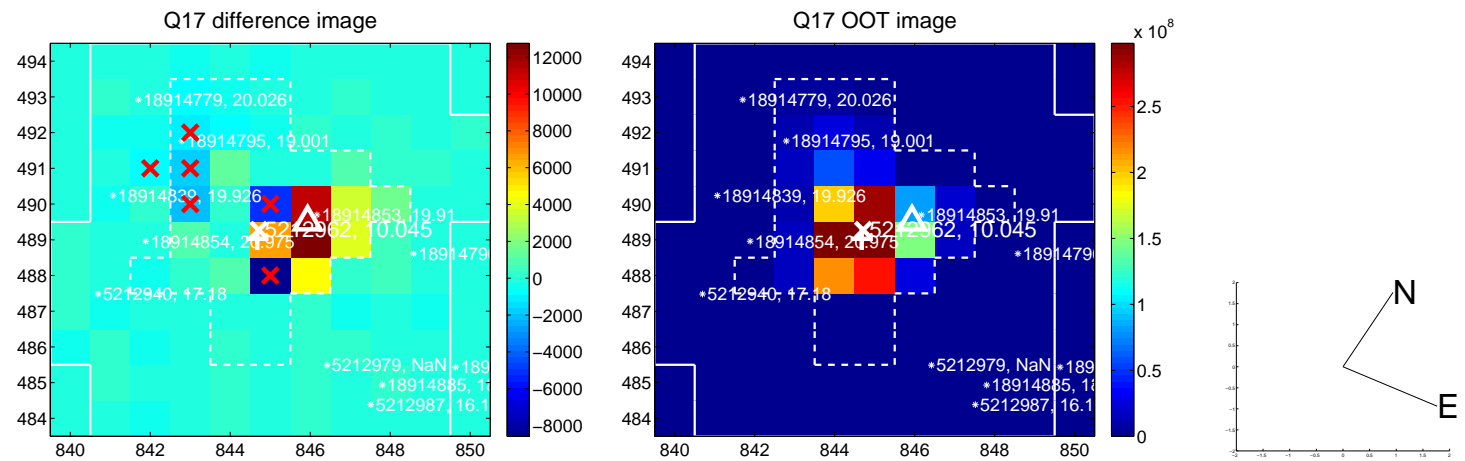
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



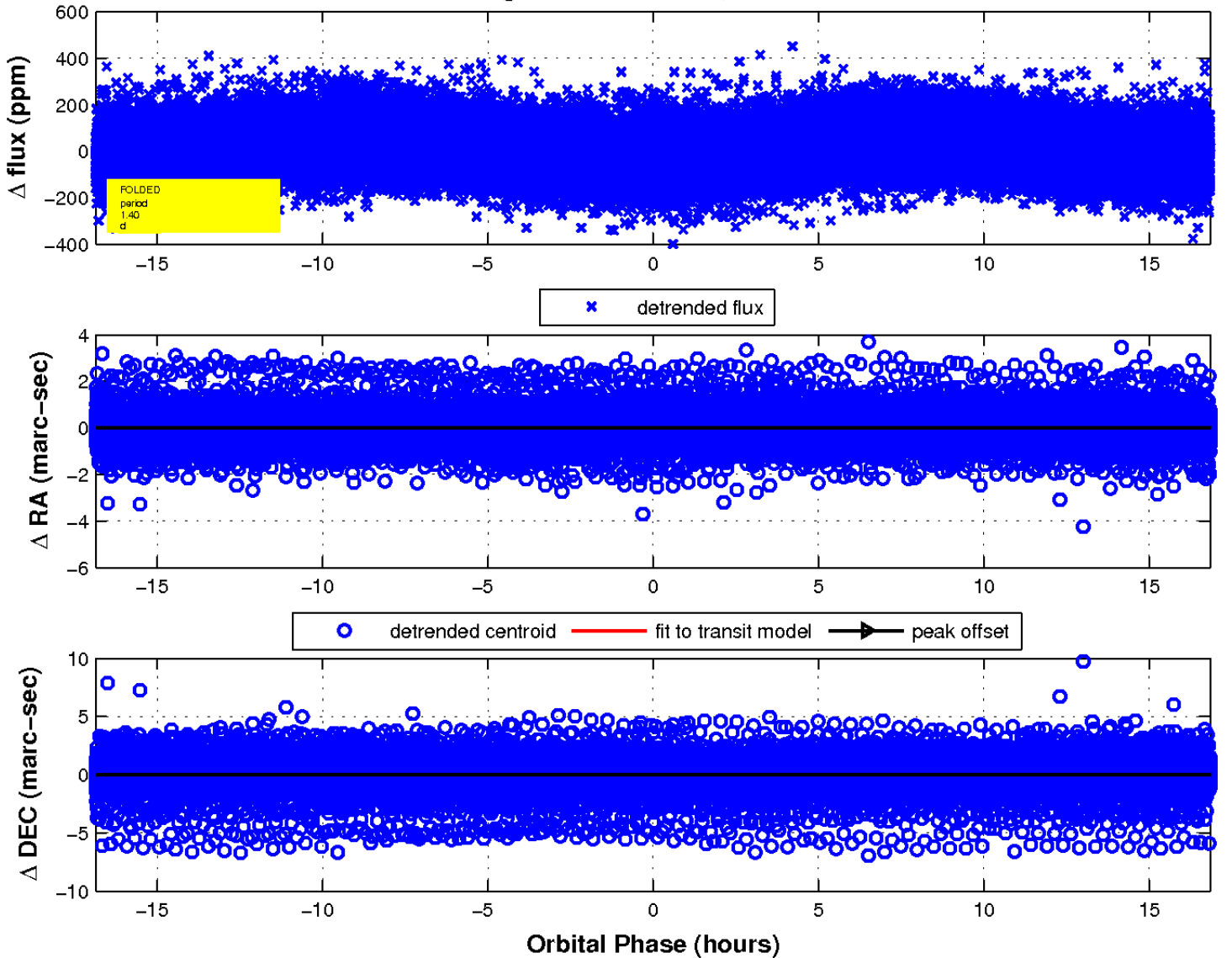
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

