

KIC 010549415

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})
010549415-01	OBS	No	1.510881	132.253096	91.1	1.908	7.3	8.1	3.33	5266	3.68	8647.57
010549415-02	OBS	No	1.510864	131.924859	95.5	2.554	9.0	9.4	3.33	5266	3.98	8647.70
010549415-03	OBS	No	0.503616	131.588730	65.4	1.987	10.2	9.5	3.33	5266	3.25	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010549415-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
010549415-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
010549415-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_KIC_POS

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

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

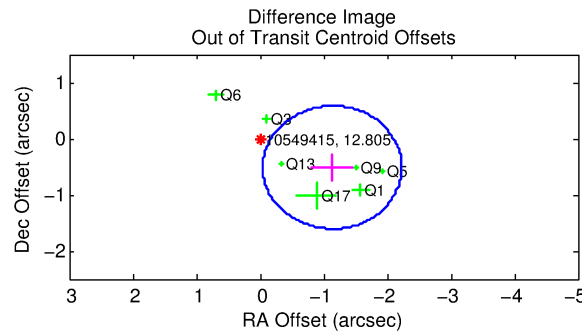
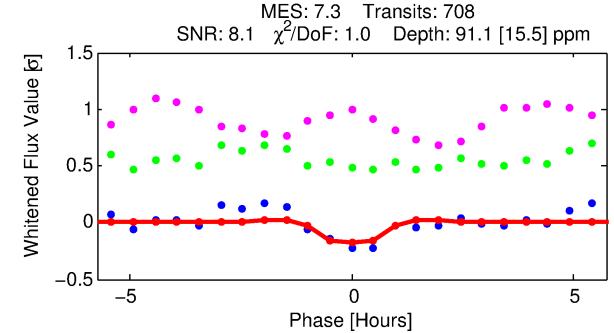
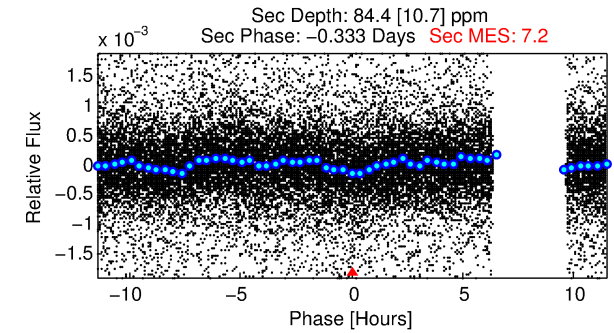
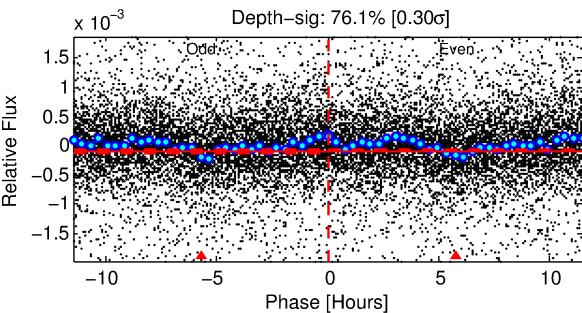
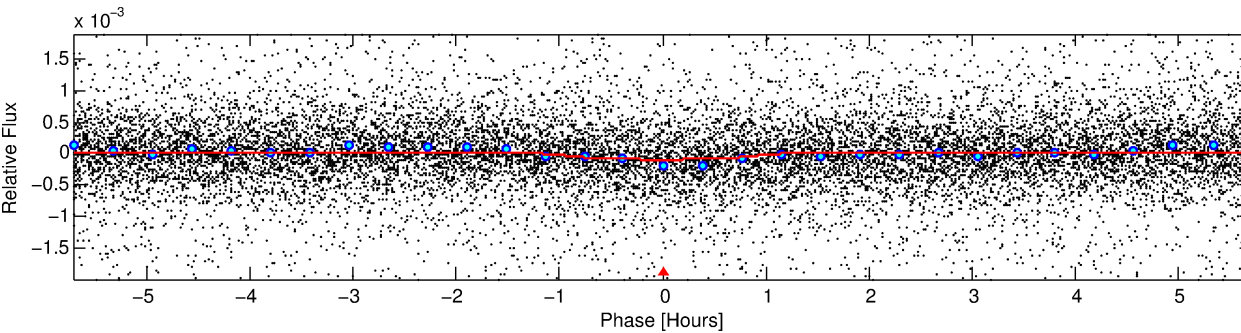
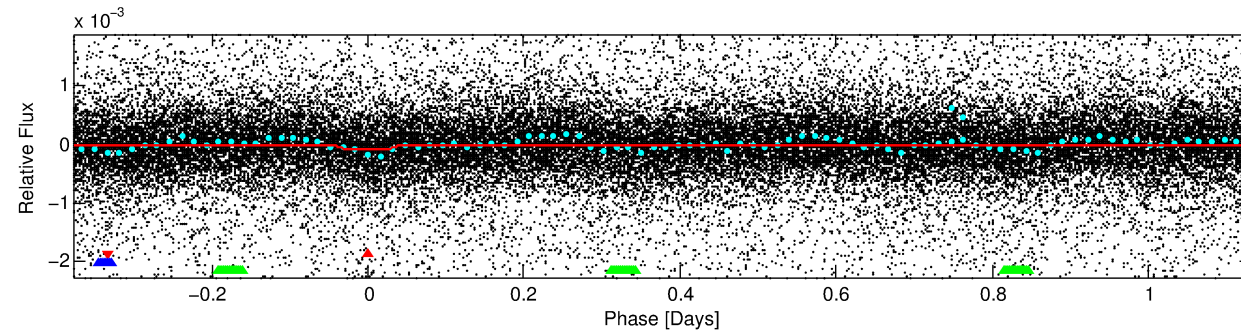
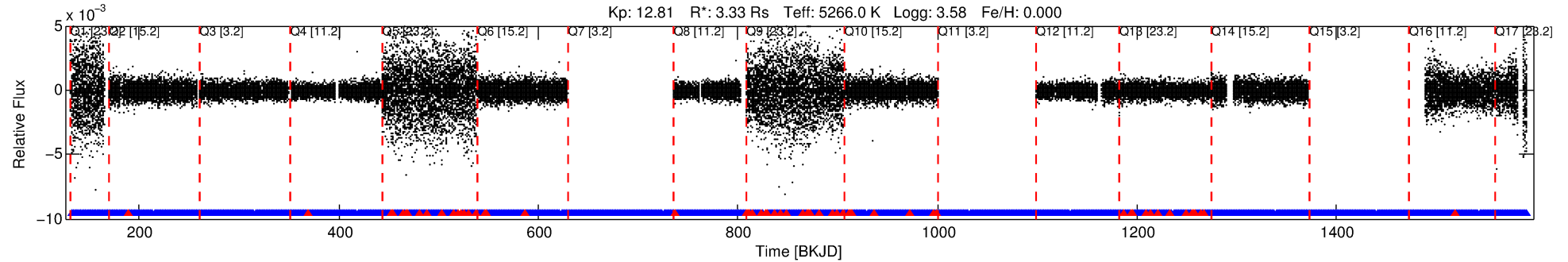
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010549415-01

No Significant Match Found

DV One-Page Summary

KIC: 10549415 Candidate: 1 of 3 Period: 1.511 d



DV Fit Results:

Period = 1.51088 [0.00002] d
Epoch = 132.2531 [0.0034] BKJD
Rp/R* = 0.0101 [0.0107]
a/R* = 3.40 [13.35]
b = 0.85 [1.41]
Seff = 8647.57 [12407.94]
Teq = 2459 [882] K
Rp = 3.68 [4.65] Re
a = 0.0297 [0.0244] AU
Ag = 3.03 [7.74] [0.26 σ]
Teffp = 5017 [2658] K [0.91 σ]

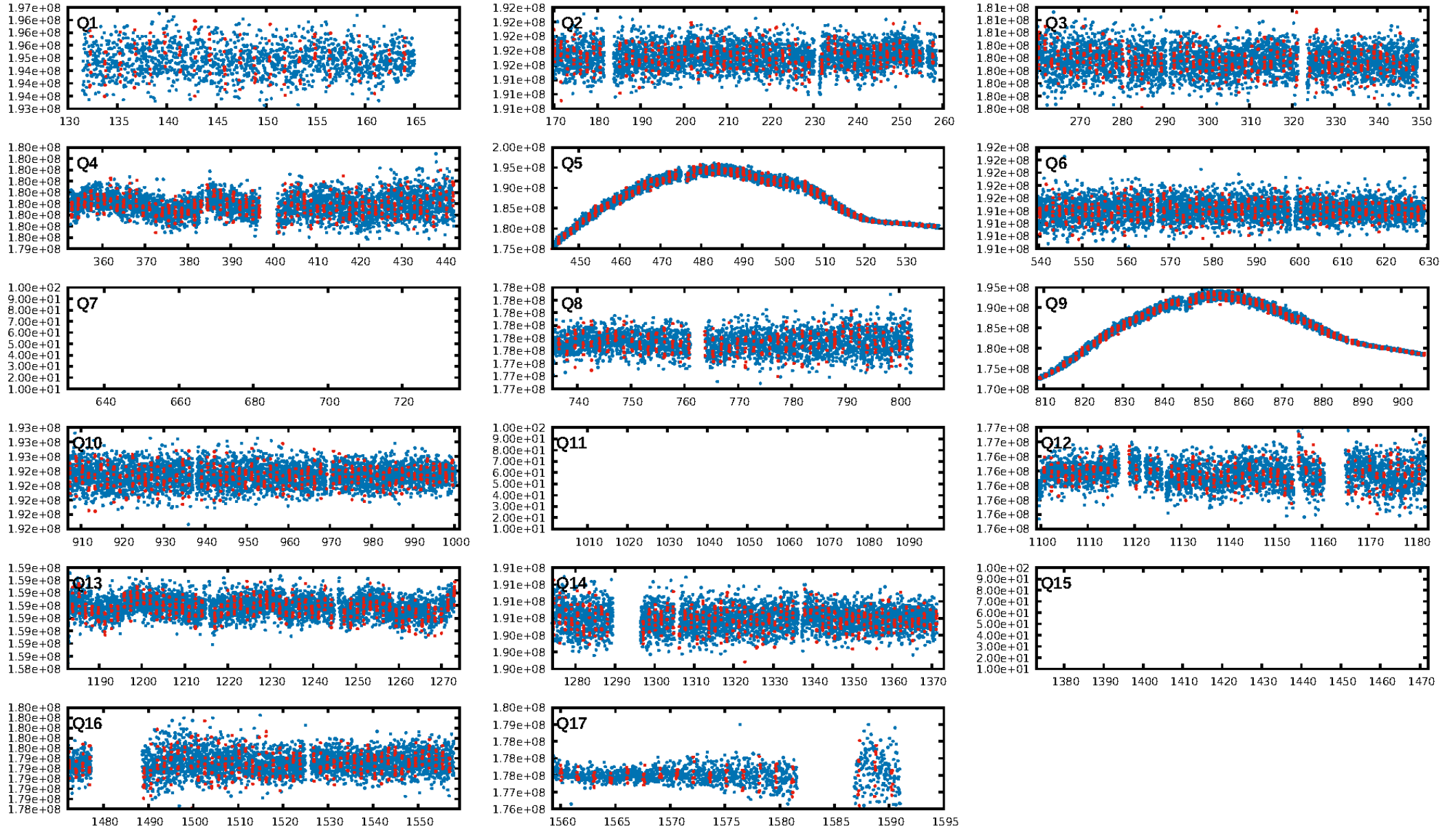
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.38e-10
RollingBand-fgt: 0.91 [609/668]
GhostDiagnostic-chr: -0.6266
Centroid-sig: 1.1%
Centroid-so: 4.452 arcsec [8.82 σ]
OotOffset-rm: 1.246 arcsec [3.42 σ]
KicOffset-rm: 5.056 arcsec [13.80 σ]
OotOffset-st: 1/1/0/5 [7]
KicOffset-st: 1/1/2/5 [9]
DiffImageQuality-fgm: 0.89 [8/9]
DiffImageOverlap-fno: 0.00 [0/14]

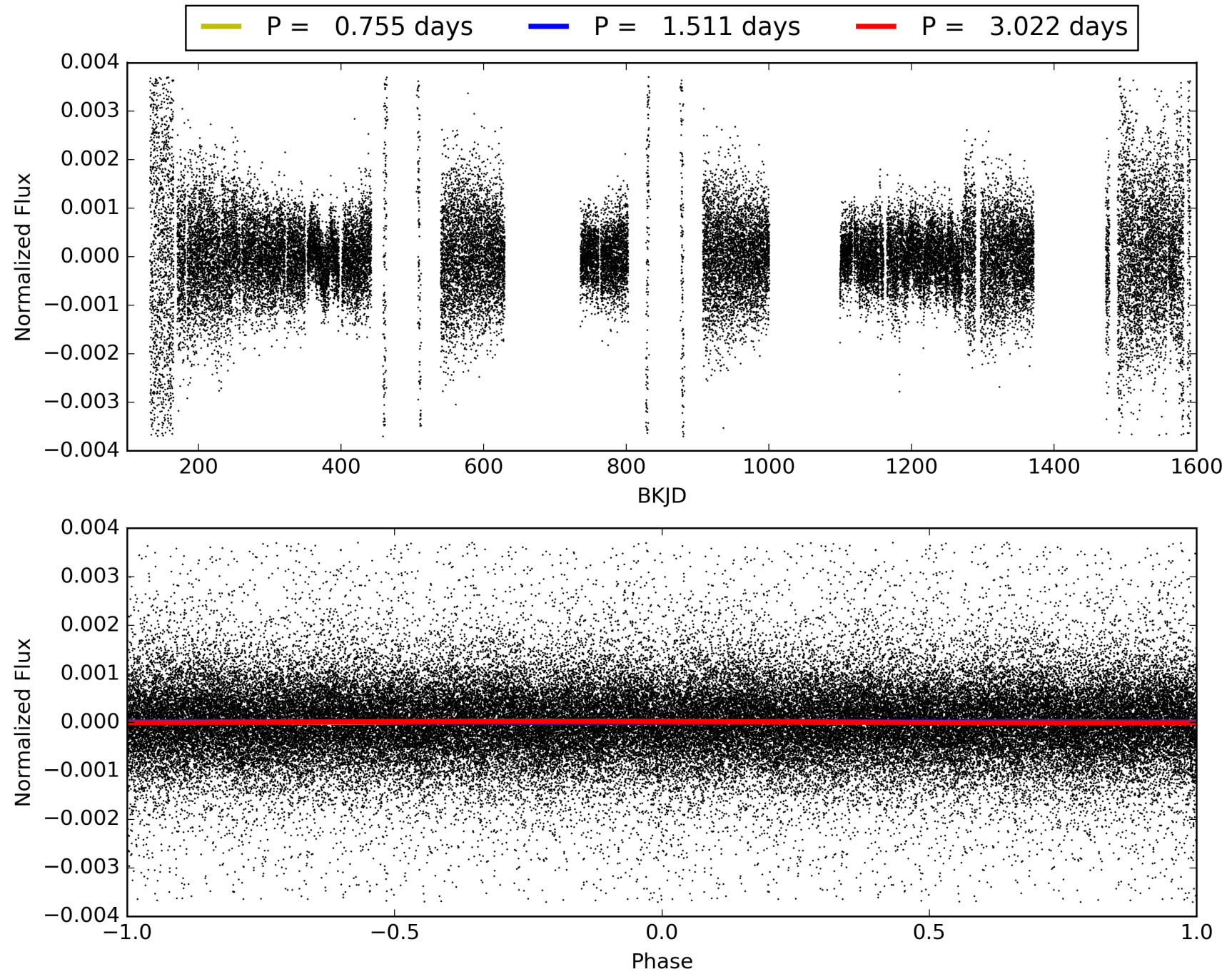
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:03:06 Z

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

TCE 010549415-01, PDC Light Curves

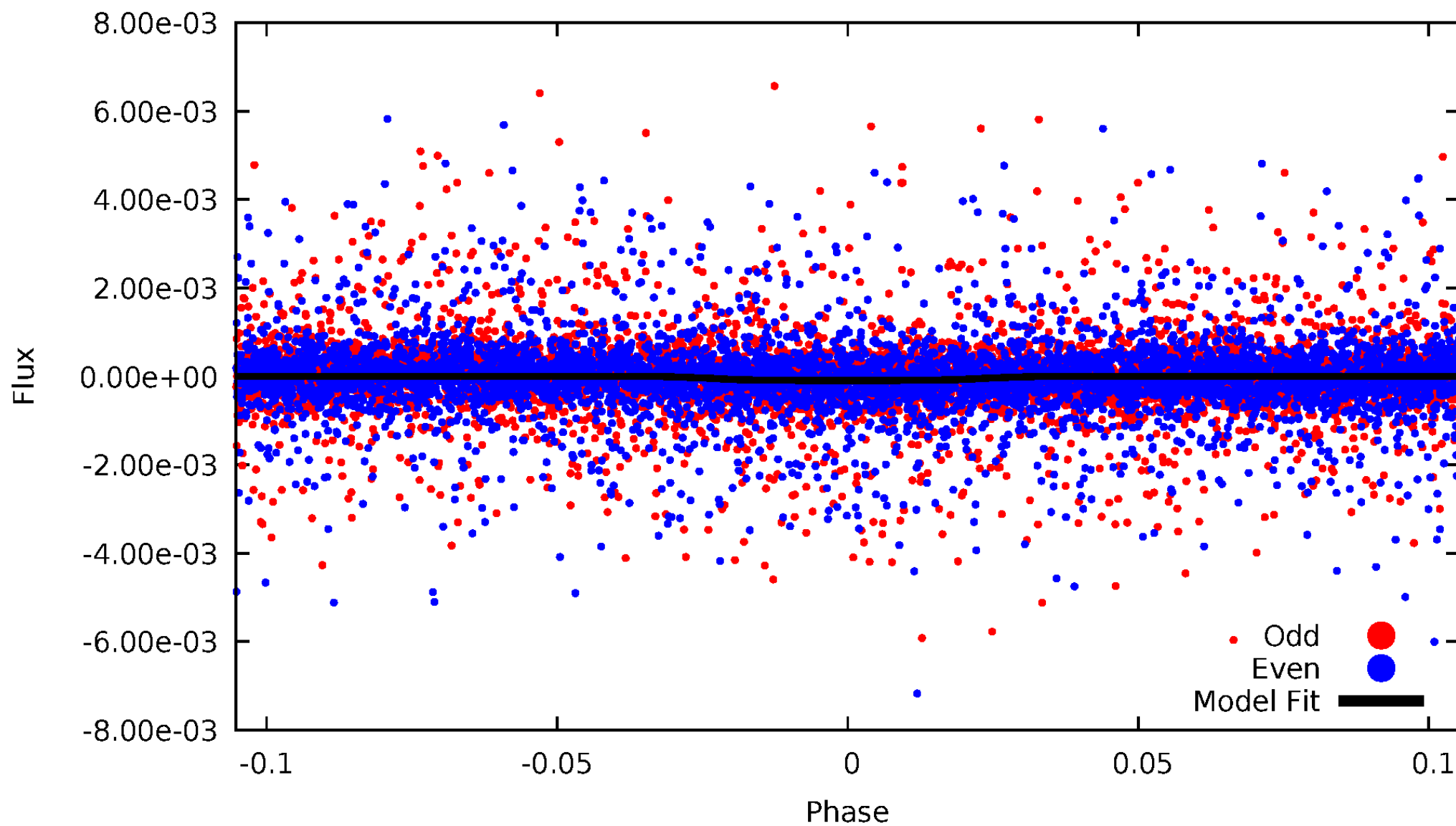


TCE 010549415-01



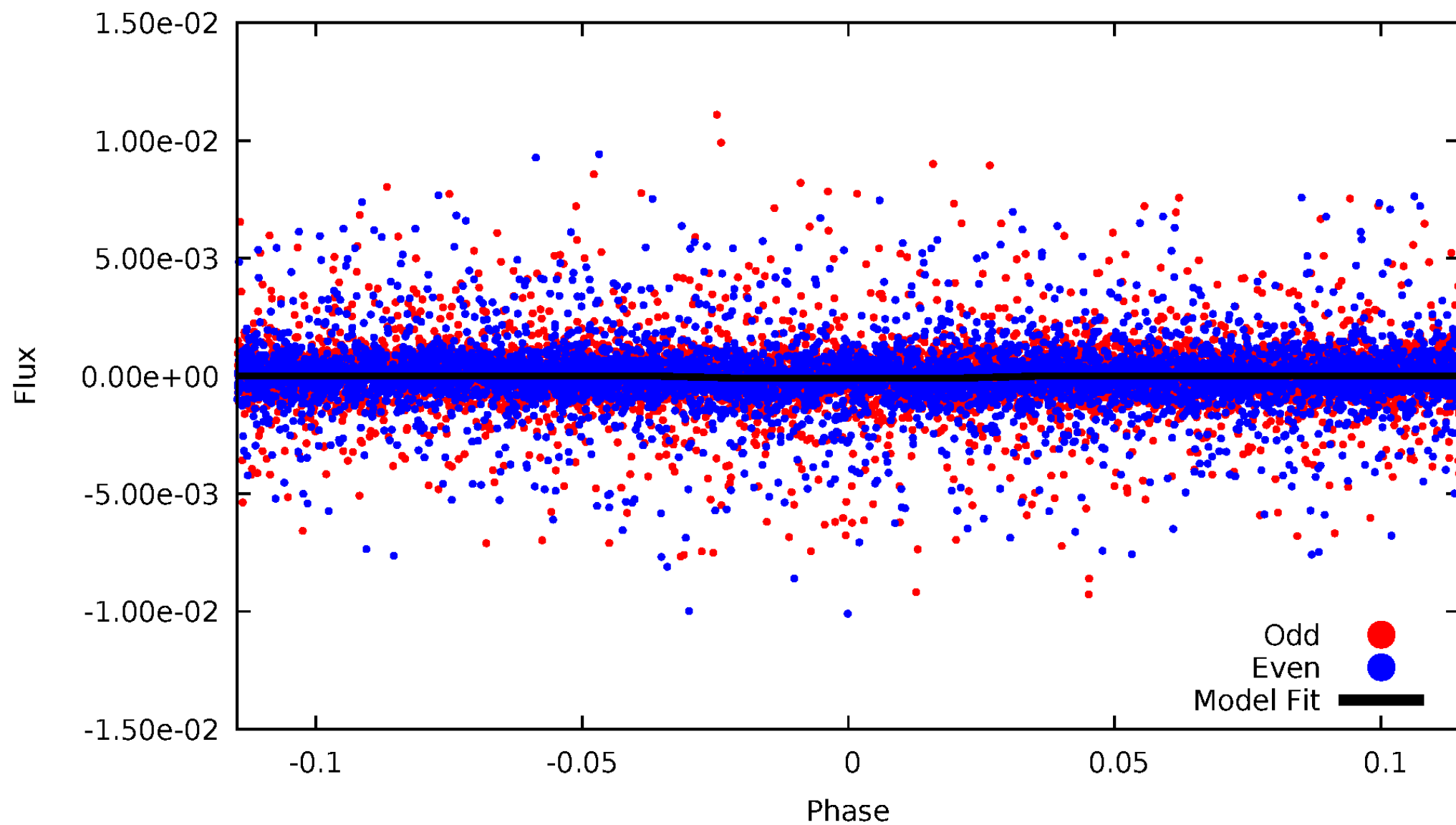
DV Odd/Even

TCE 010549415-01



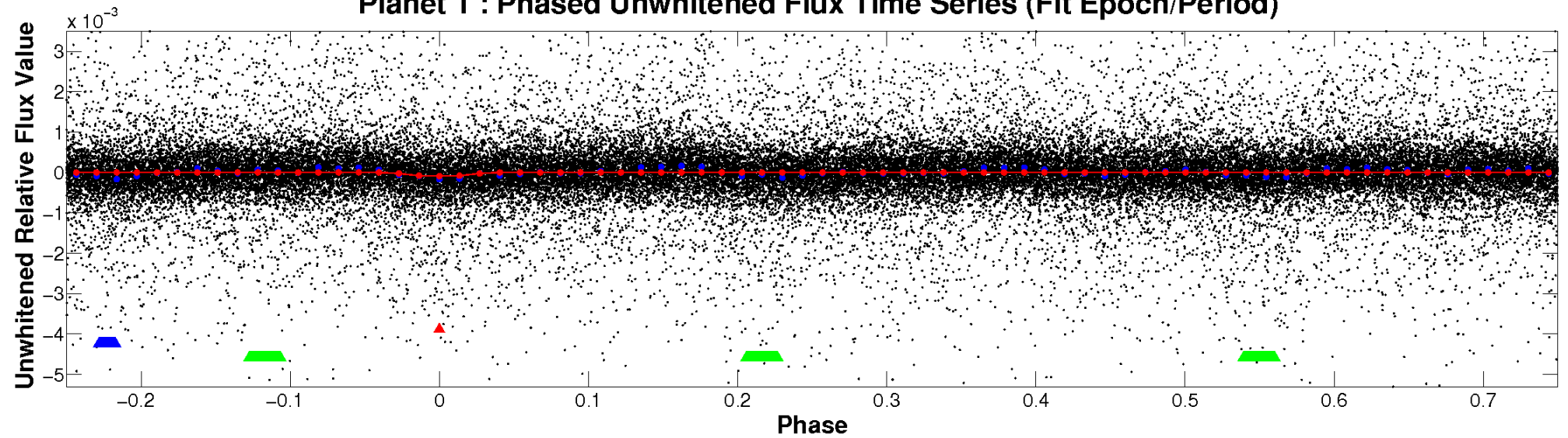
ALT Odd/Even

TCE 010549415-01

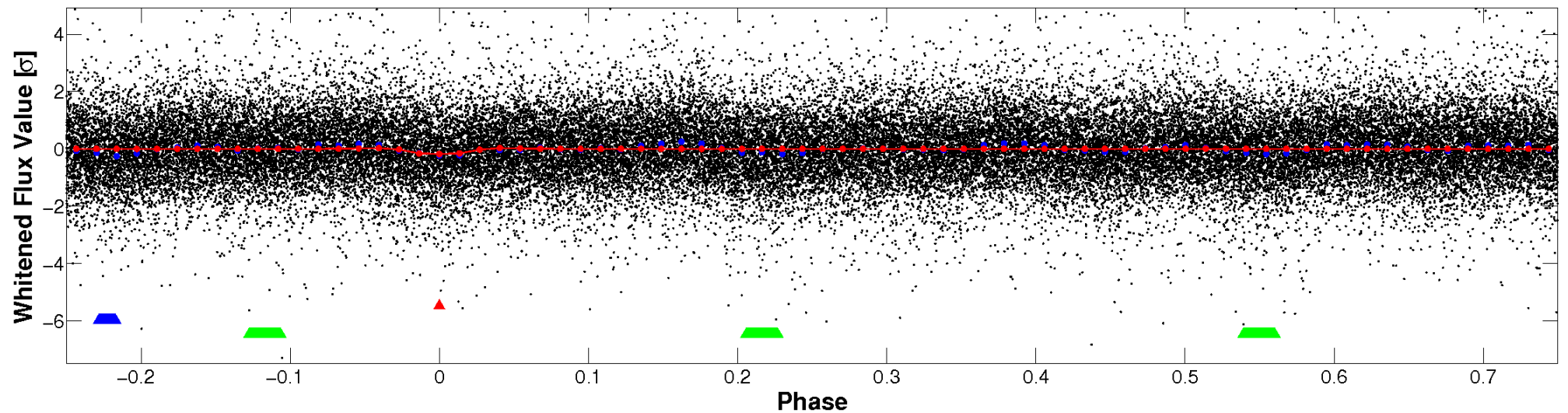


Non-Whitened Vs. Whitened Light Curve

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

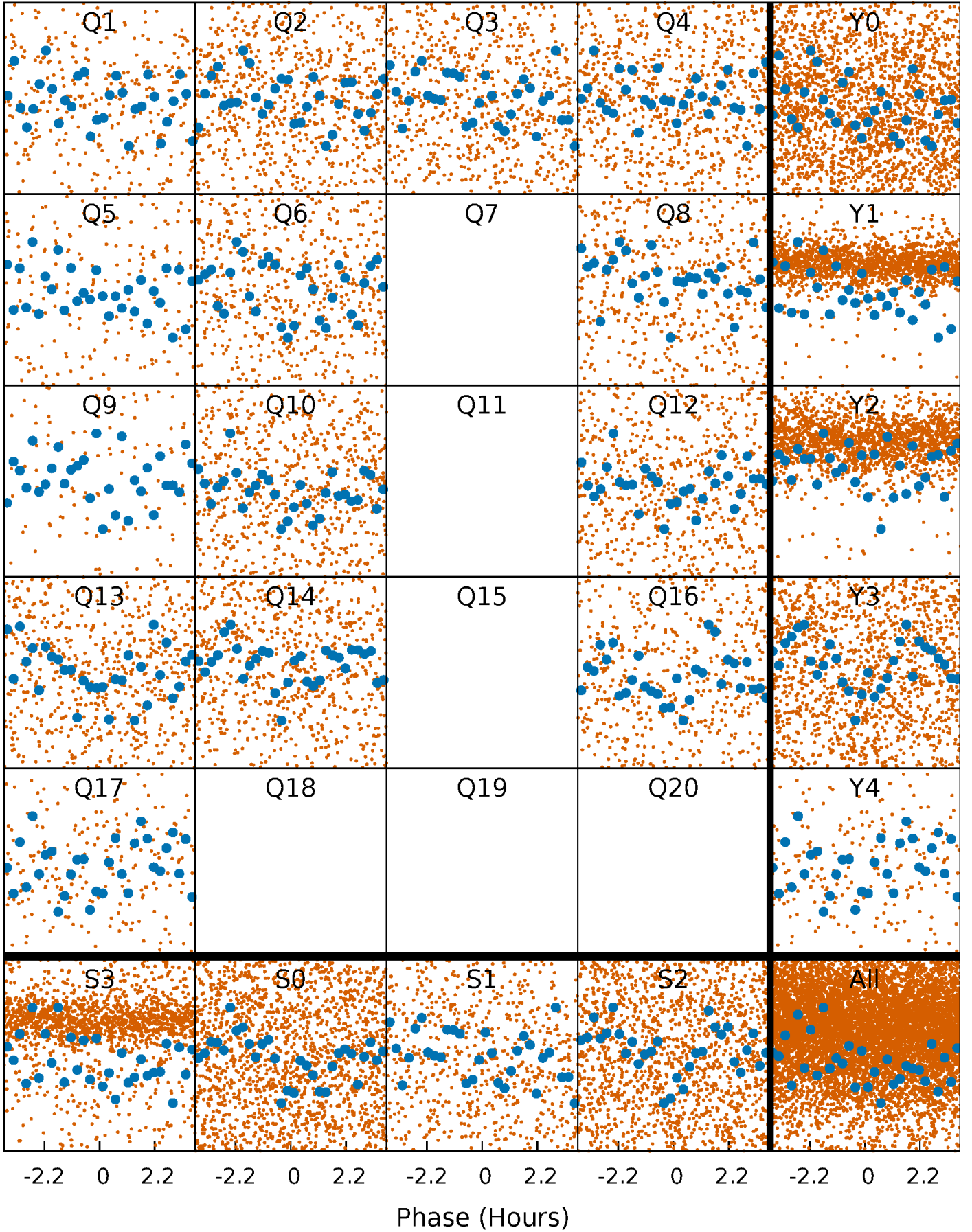


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



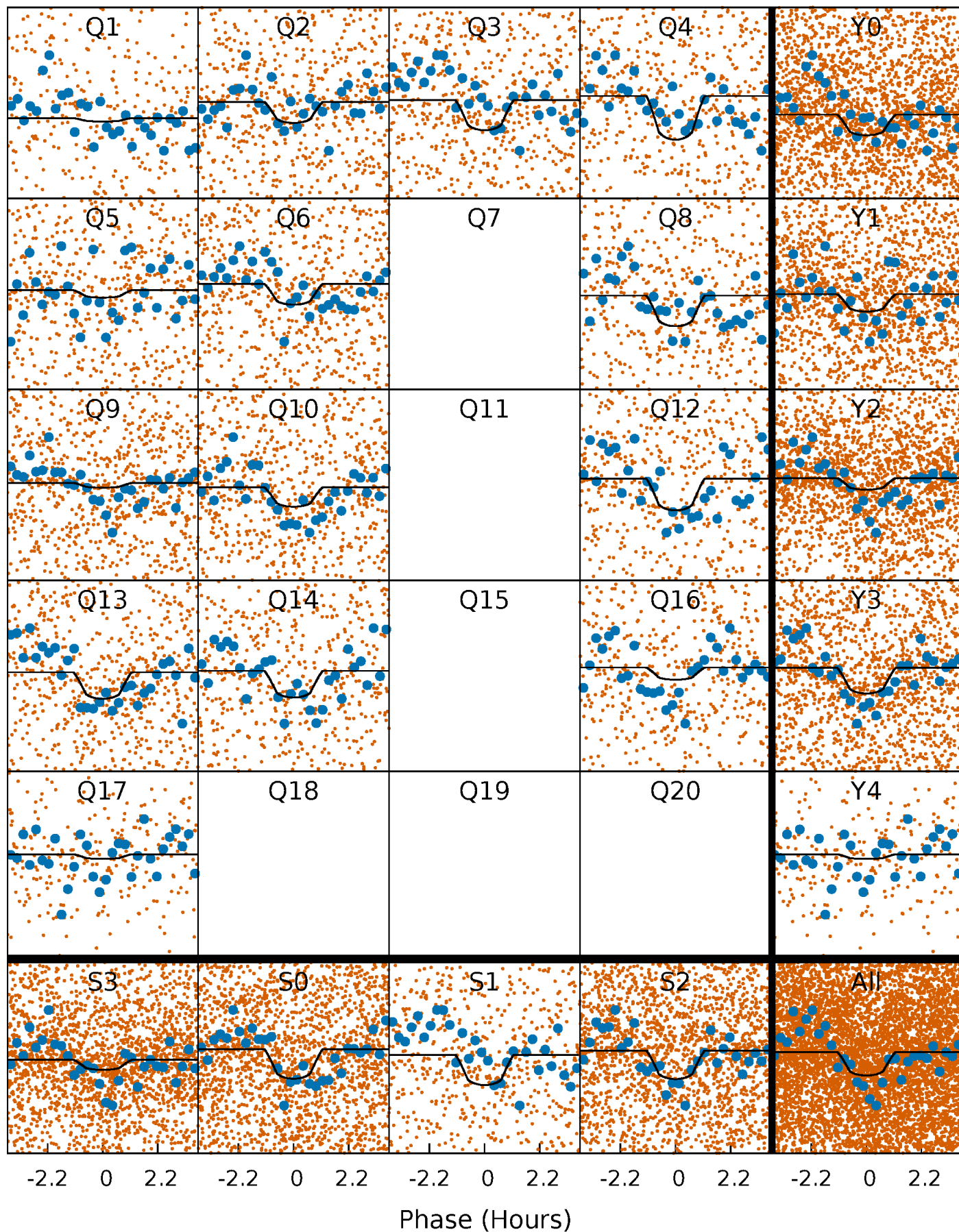
PDC Quarter-Phased Transit Curves

TCE 010549415-01 P= 1.510881 Days $T_0=132.253096$ (BKJD)



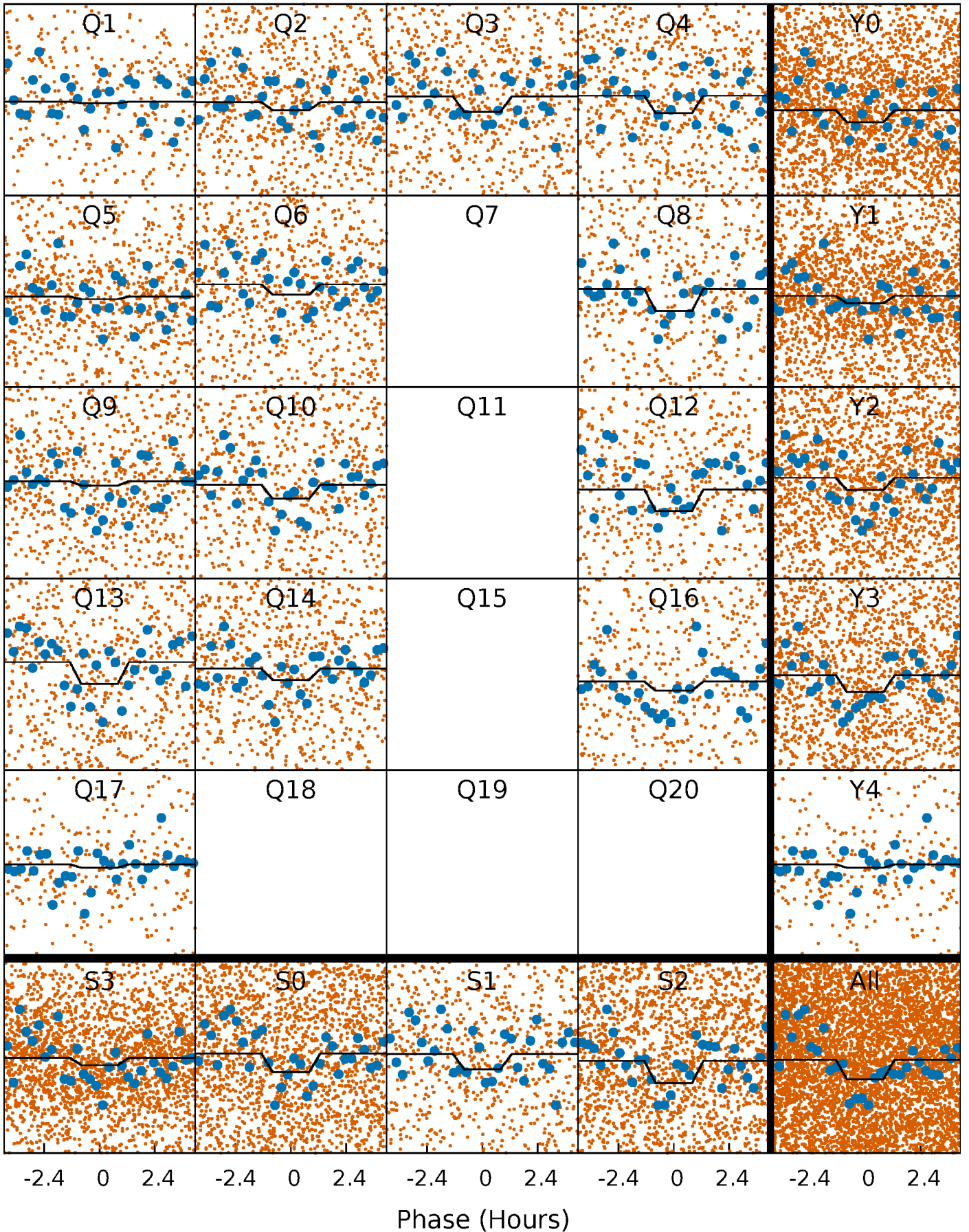
DV Quarter-Phased Transit Curves

TCE 010549415-01 P= 1.510881 Days $T_0=132.253096$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

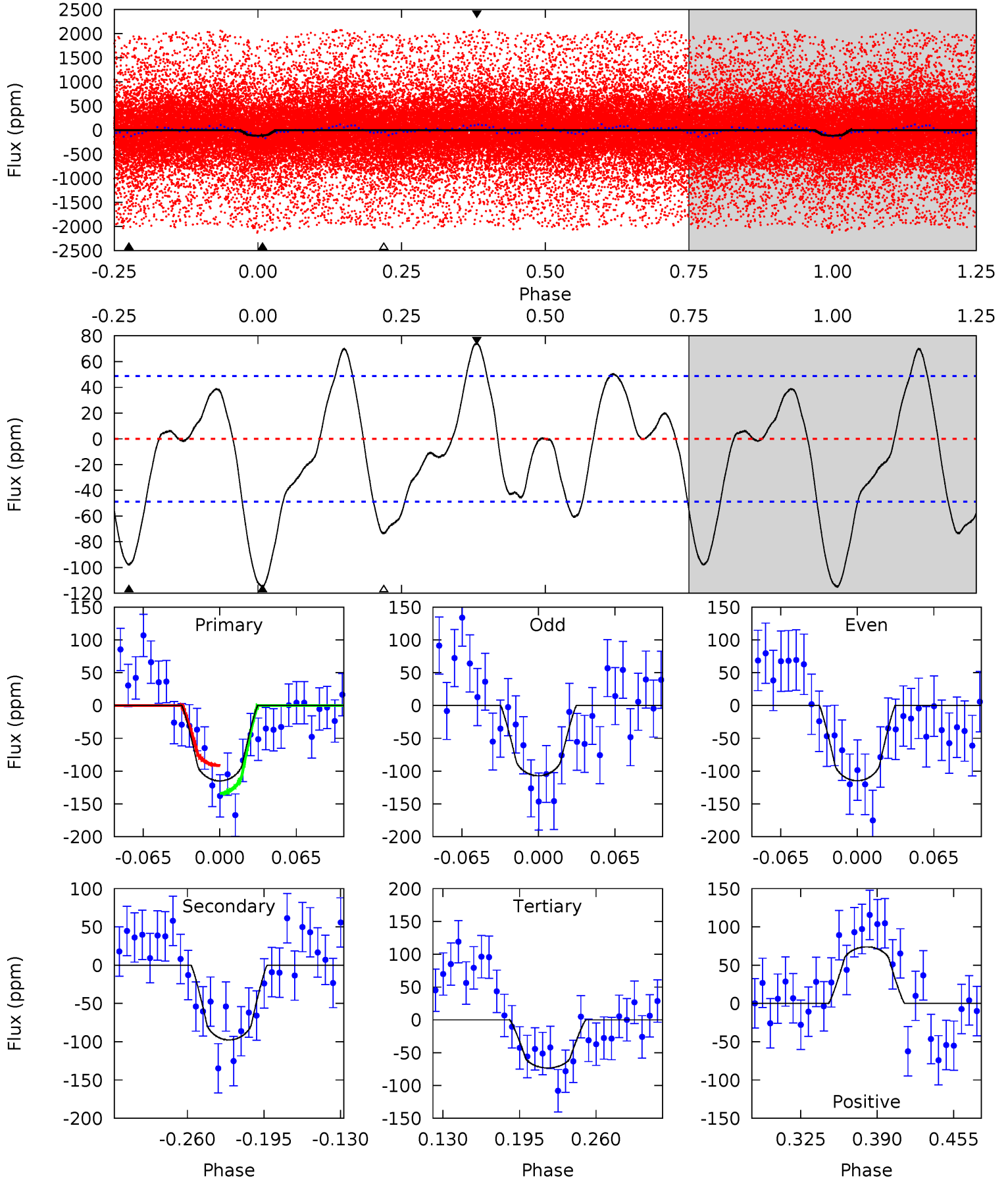
TCE 010549415-01 P= 1.510875 Days $T_0=132.274220$ (BKJD)



DV Model-Shift Uniqueness Test

010549415-01, P = 1.510881 Days, E = 130.742215 Days

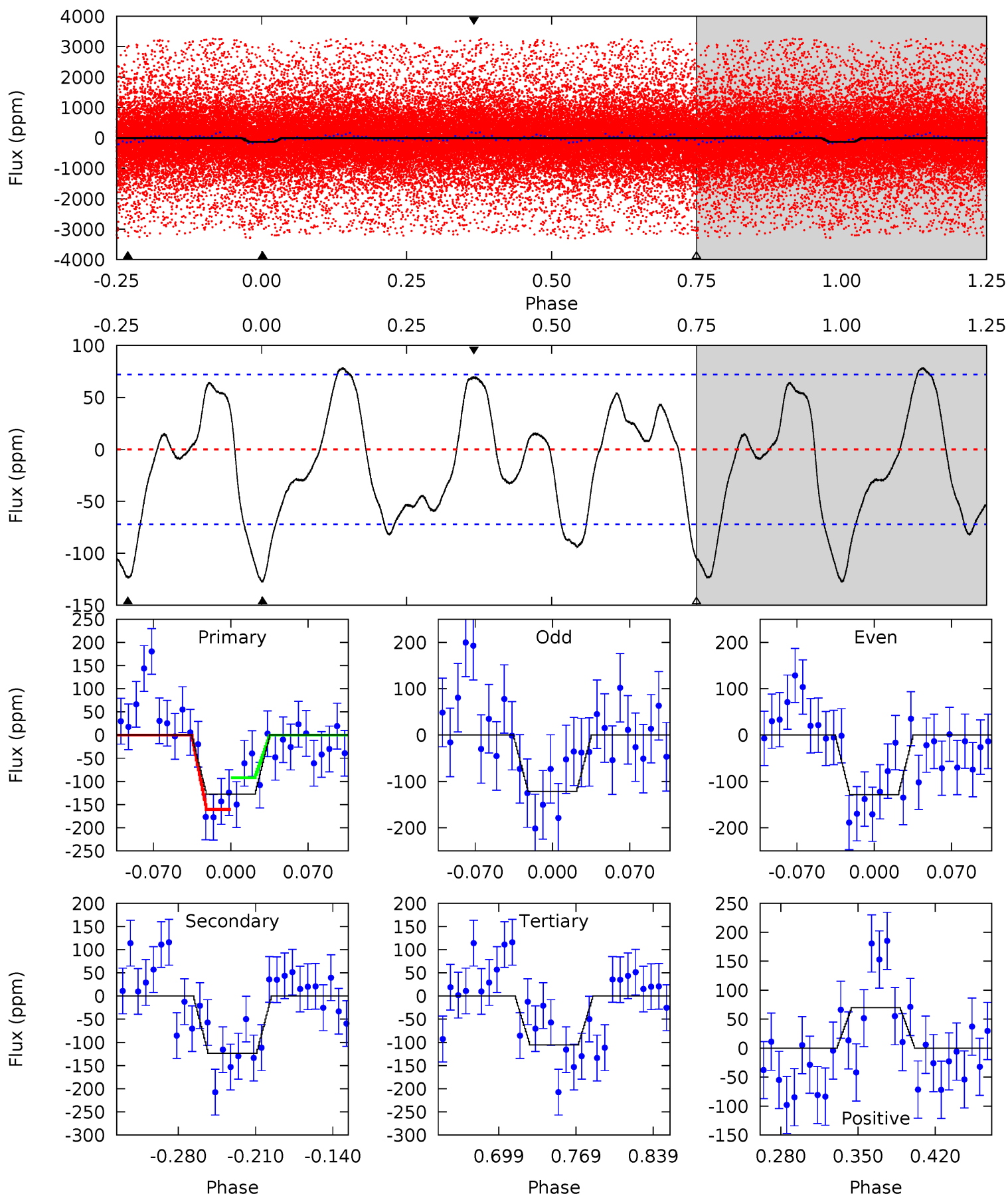
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	9.32	7.00	7.06	4.65	1.85	3.46	3.98	3.92	2.32	2.26	0.37	1.45	0.39	2.07



Alt Model-Shift Uniqueness Test

010549415-01, P = 1.510875 Days, E = 130.763345 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.20	7.95	6.77	4.49	4.64	1.81	3.01	1.43	3.71	1.18	3.46	0.22	1.35	0.38	2.25



Stellar Parameters For KIC 010549415

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5266^{+183}_{-165}	$3.579^{+0.880}_{-0.220}$	$0.000^{+0.300}_{-0.300}$	$3.331^{+0.992}_{-2.315}$	$1.535^{+0.221}_{-0.663}$	$0.058^{+1.429}_{-0.033}$
	+3%/-3%	+25%/-6%	+inf%/-inf%	+30%/-69%	+14%/-43%	+2444%/-56%
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 010549415-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-98 ± 10	$3.94^{+3.86}_{-2.66}$	3380^{+344}_{-632}	4607^{+3181}_{-1111}	$2.981^{+25.051}_{-2.226}$
Alt.	-124 ± 16	$3.61^{+3.53}_{-2.48}$	3354^{+372}_{-571}	5102^{+4545}_{-1228}	$4.492^{+42.298}_{-3.399}$

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 $A_{obs} \gg 1.0$

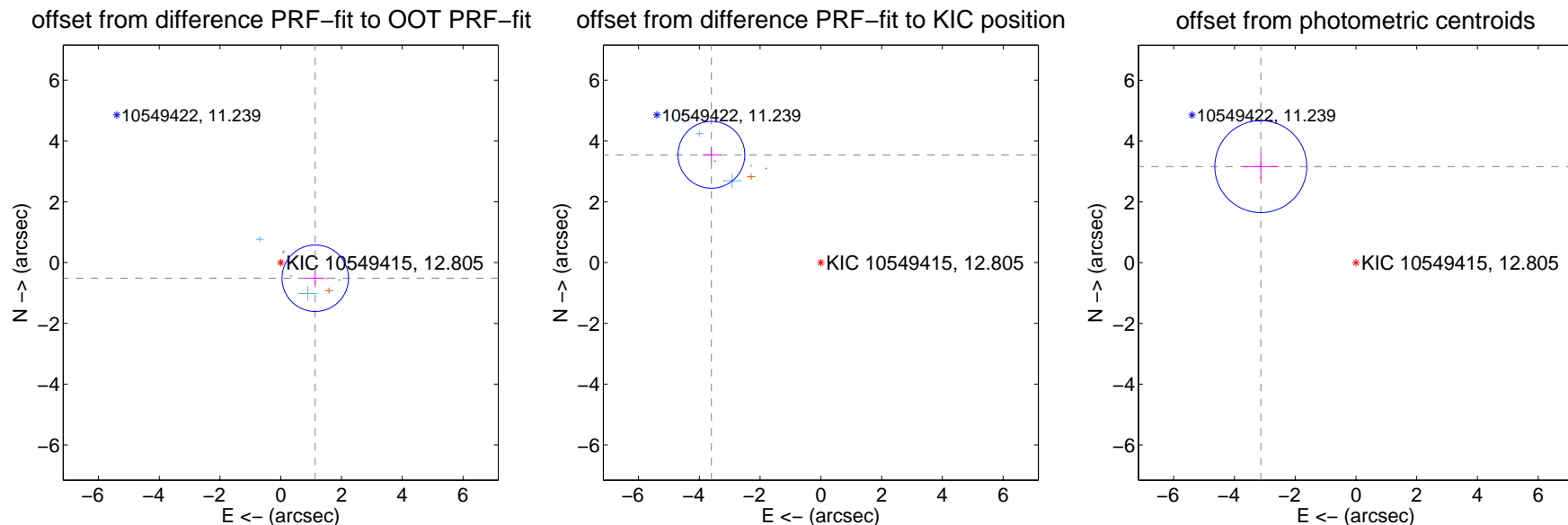
DV Centroid Data

Supplemental centroid analysis for 010549415-01. Kepler magnitude: 12.80. Transit SNR 8.14

There are 8 quarters with good PRF difference image offsets

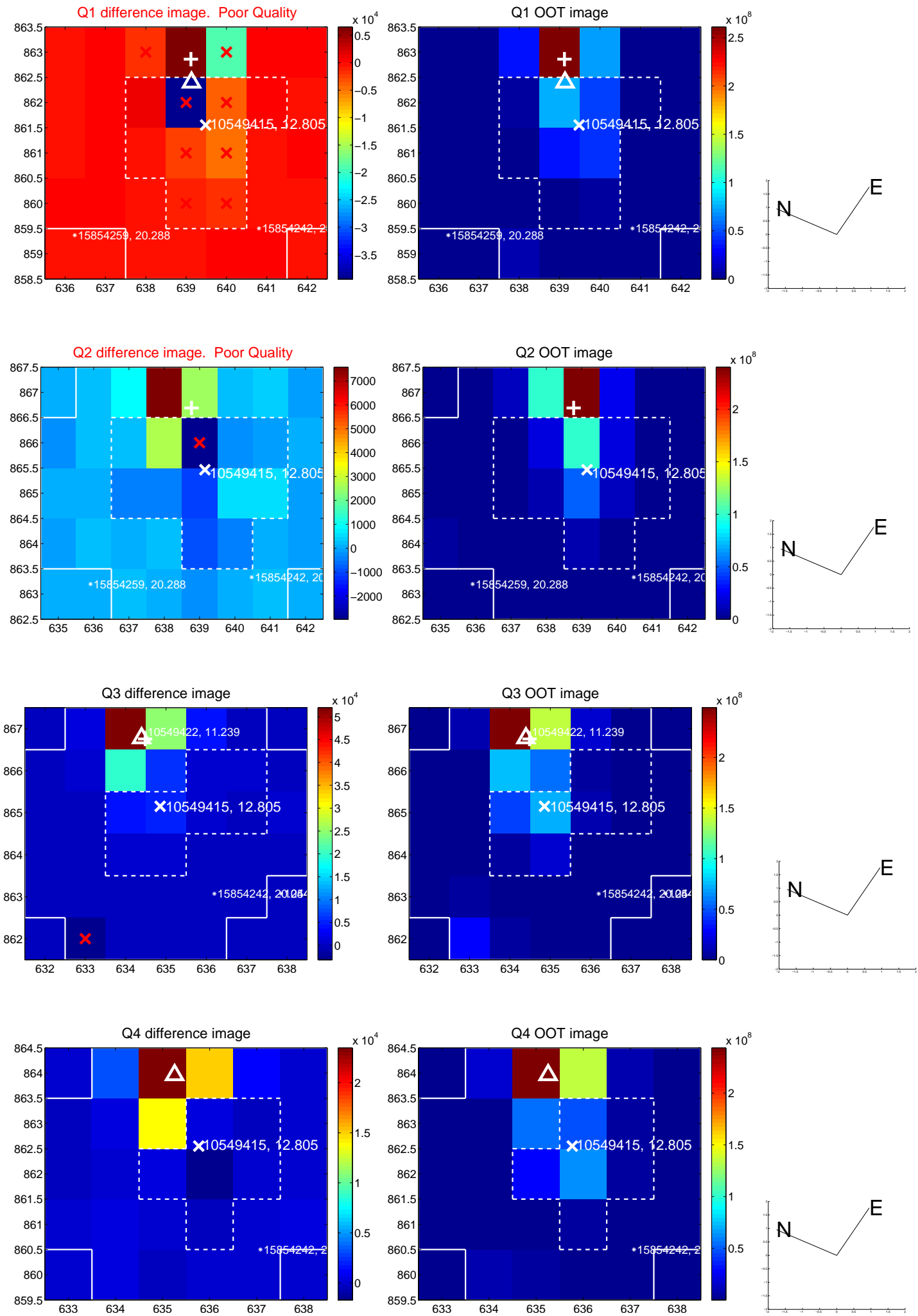
The OOT PRF centroid is offset from the target star catalog position by about 5.32 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.246 ± 0.365	3.42	-1.135 ± 0.318	-0.514 ± 0.227
PRF-fit source offset from KIC position	5.056 ± 0.366	13.80	3.603 ± 0.298	3.547 ± 0.244
photometric centroid source offset	4.45 ± 0.50	8.82	3.13 ± 0.57	3.16 ± 0.43

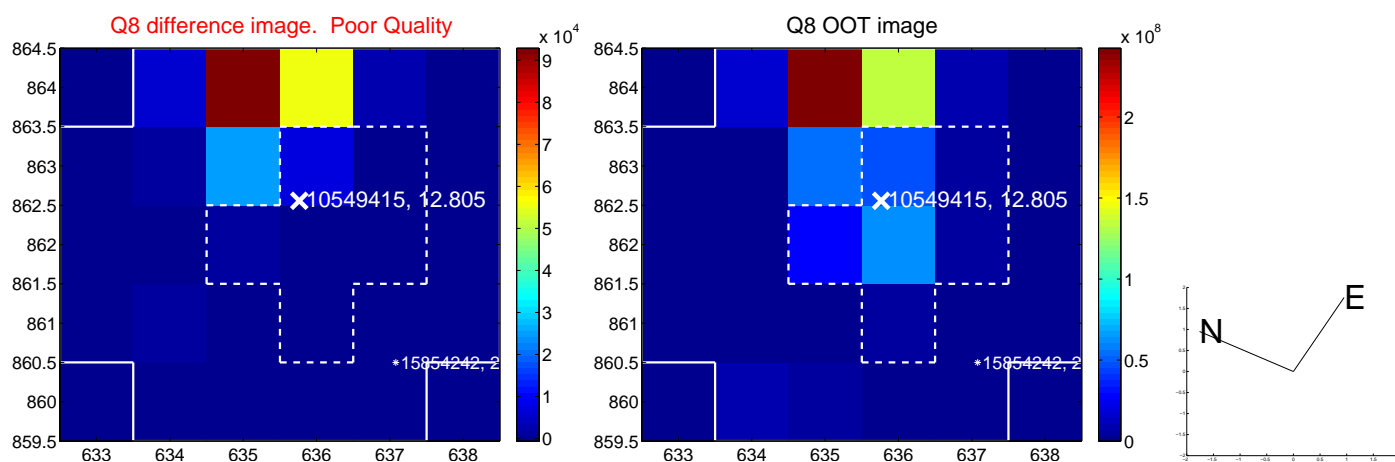
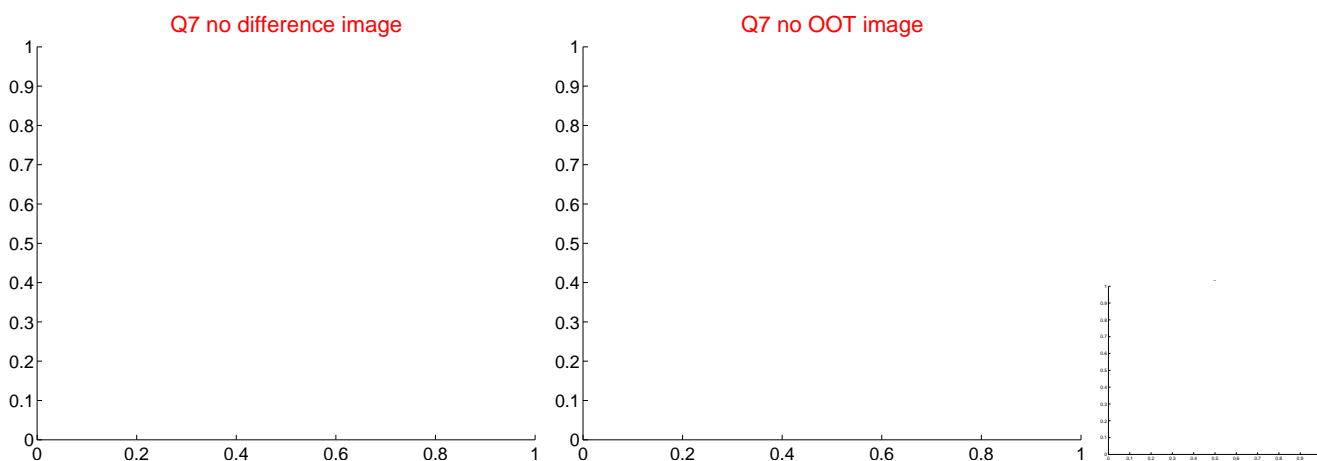
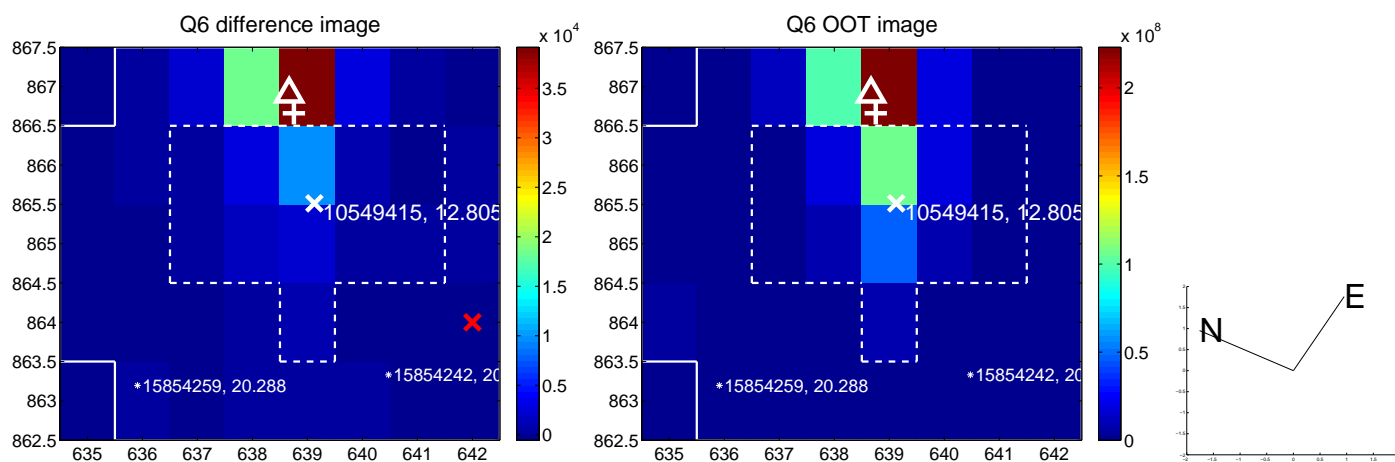
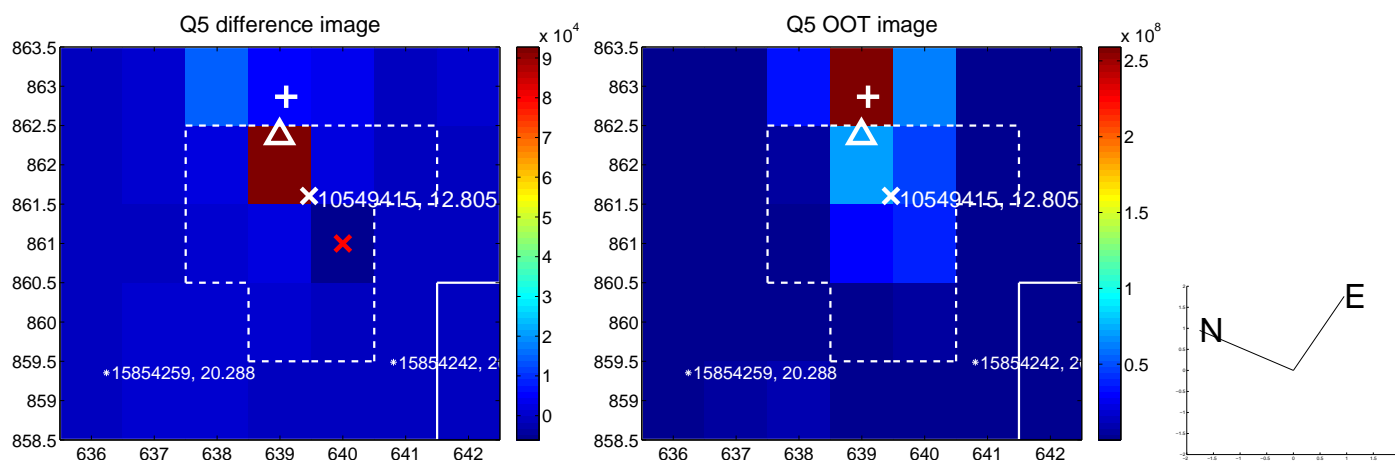


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

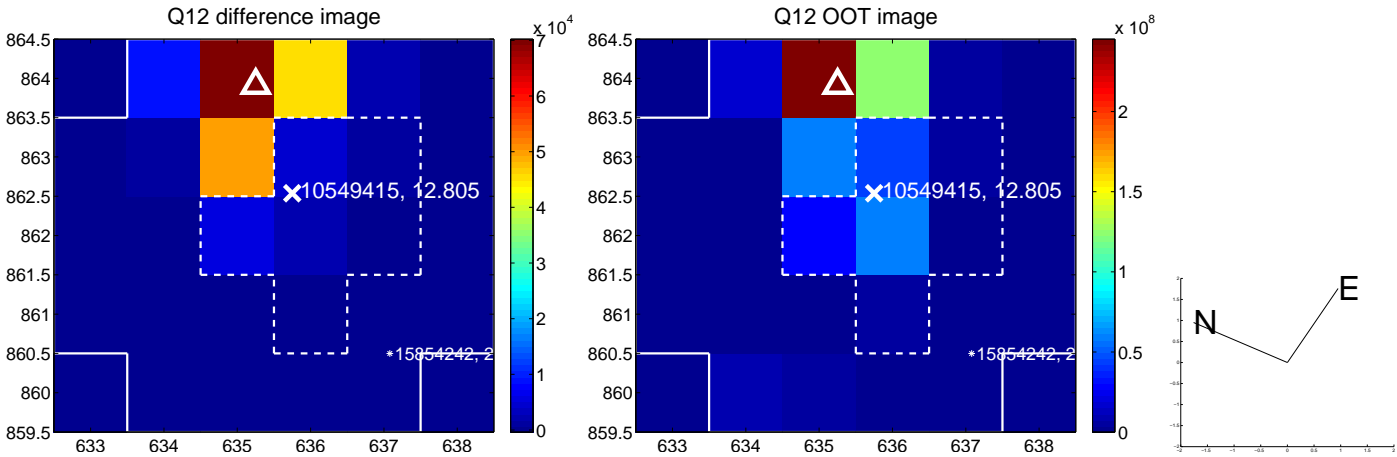
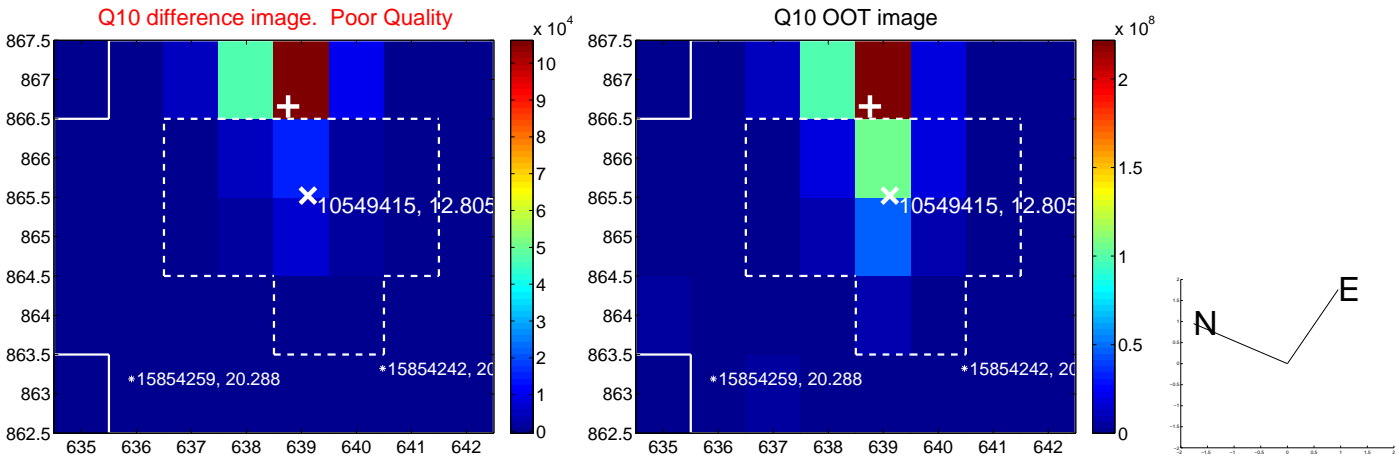
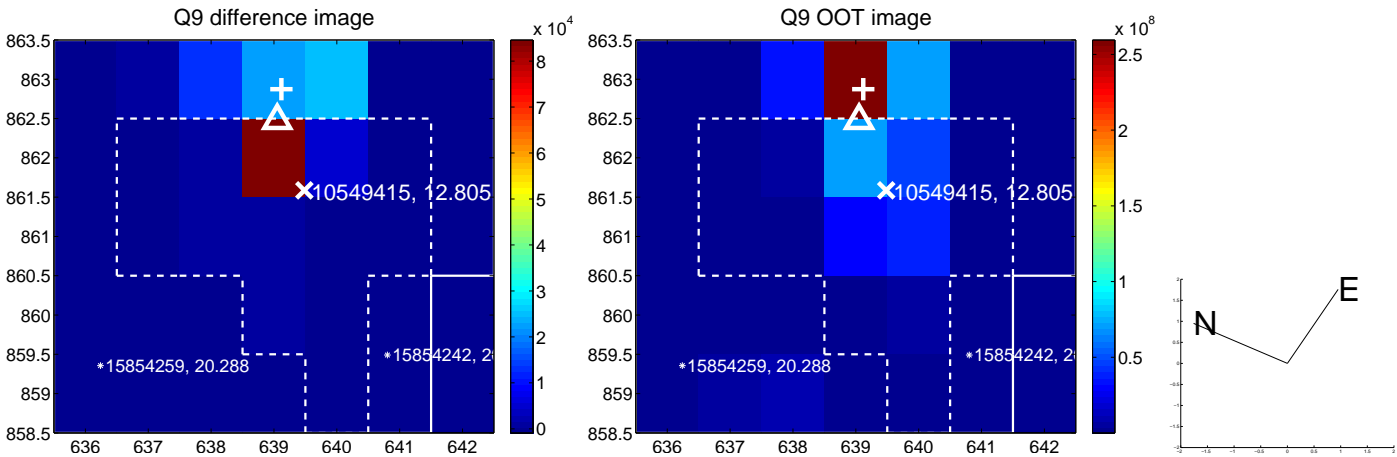
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



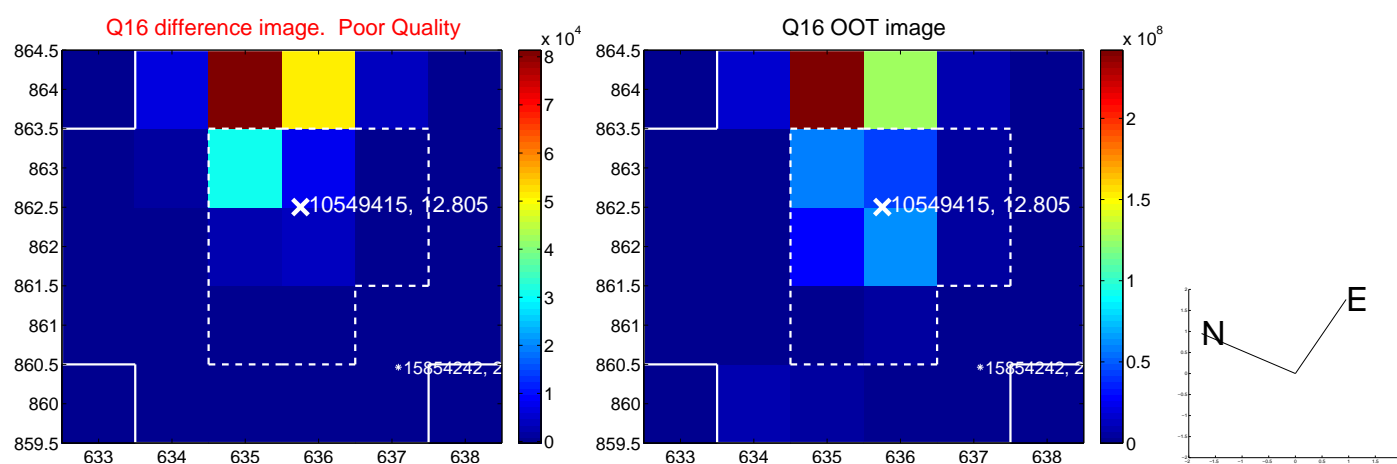
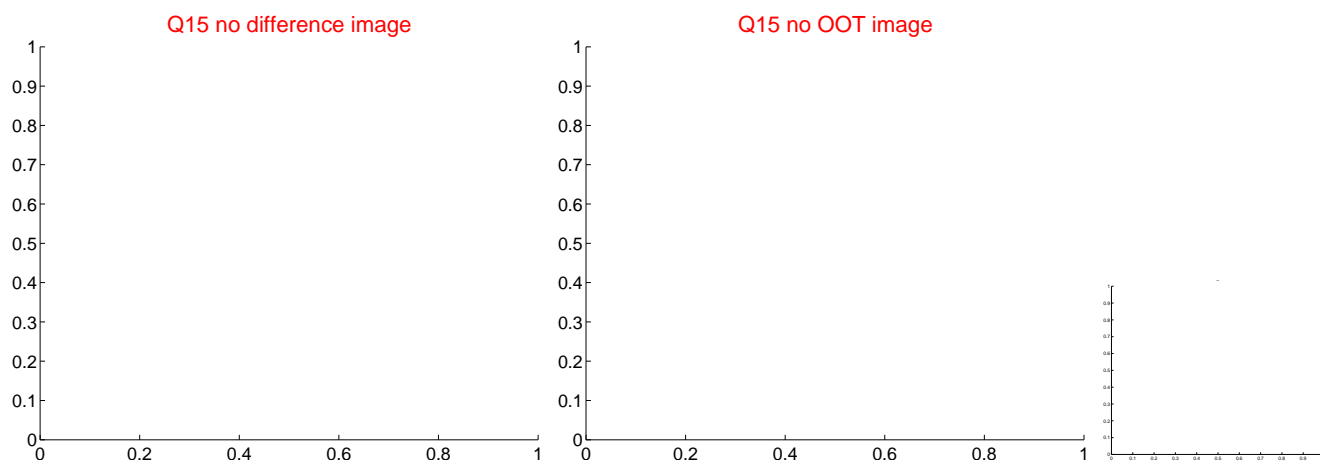
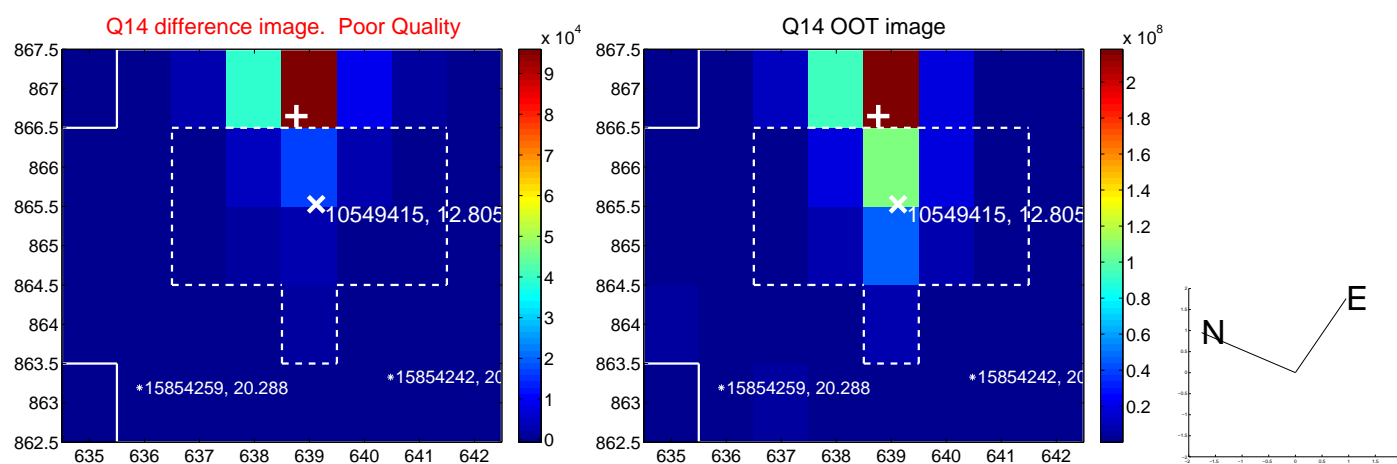
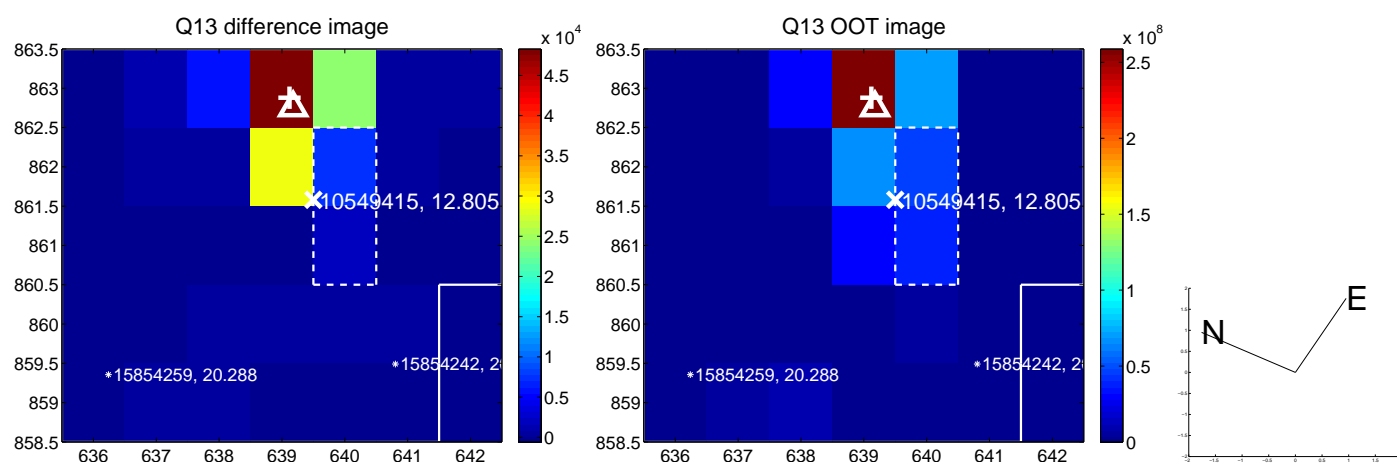
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



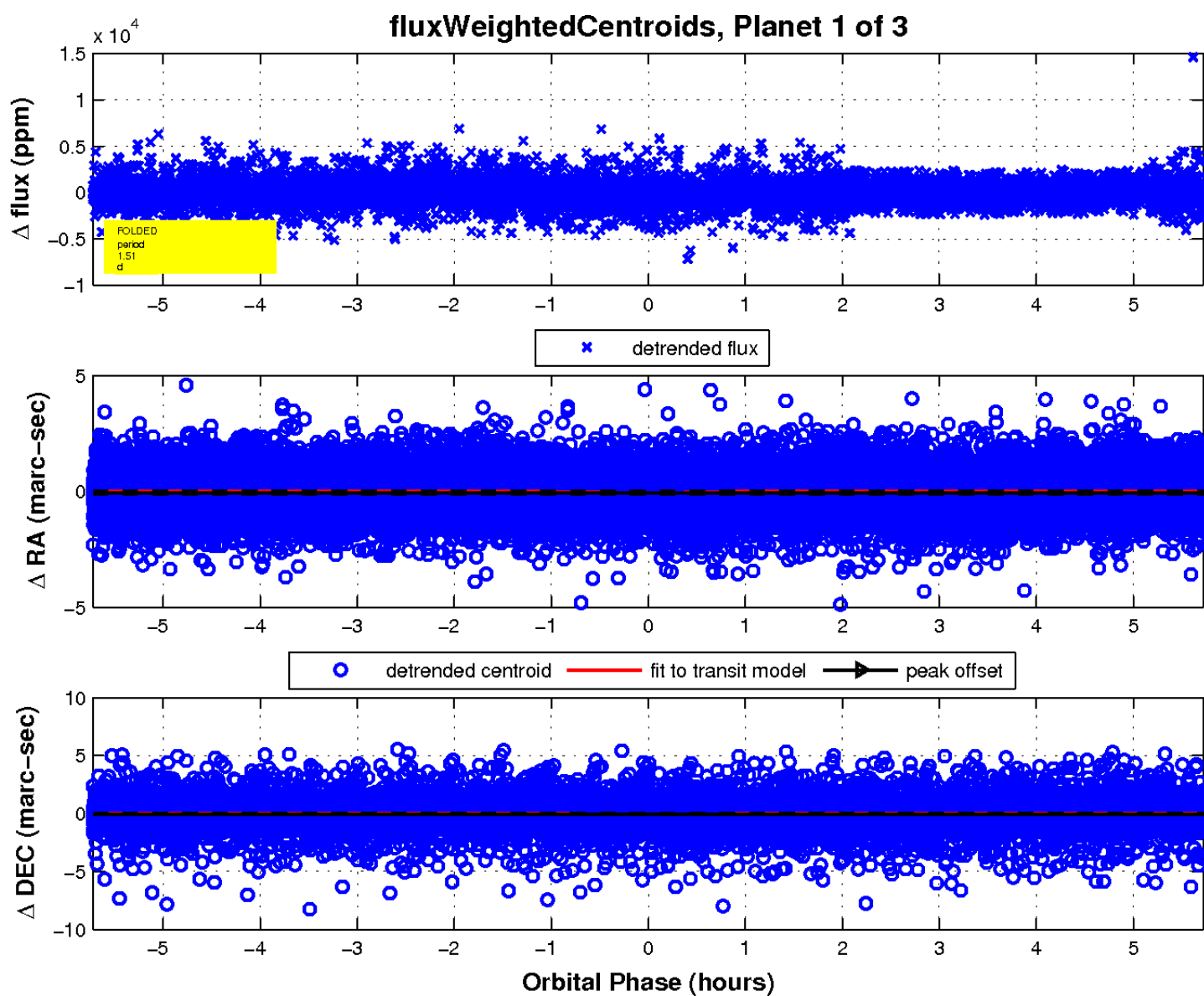
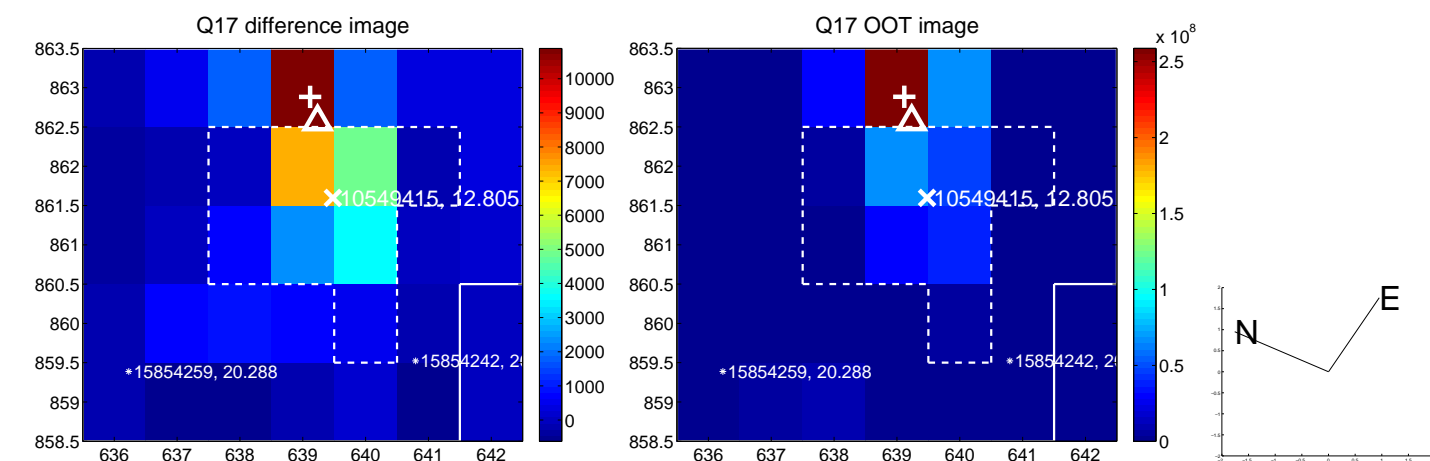
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



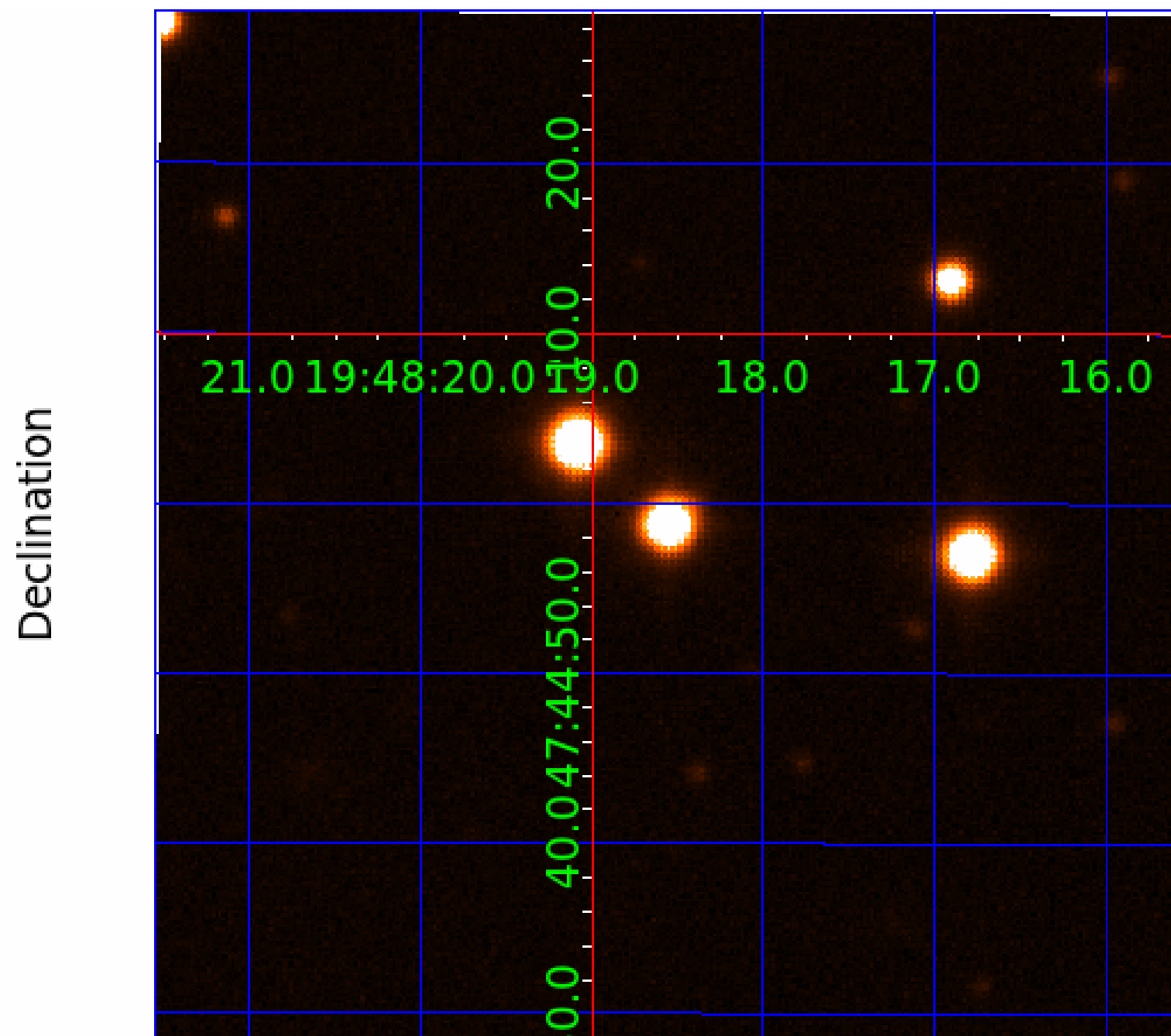
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 010549415

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})
010549415-01	OBS	No	1.510881	132.253096	91.1	1.908	7.3	8.1	3.33	5266	3.68	8647.57
010549415-02	OBS	No	1.510864	131.924859	95.5	2.554	9.0	9.4	3.33	5266	3.98	8647.70
010549415-03	OBS	No	0.503616	131.588730	65.4	1.987	10.2	9.5	3.33	5266	3.25	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010549415-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
010549415-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
010549415-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_KIC_POS

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

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

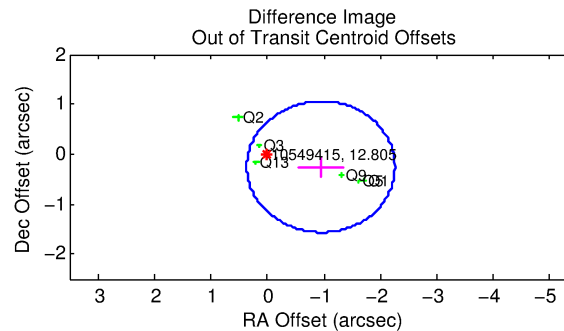
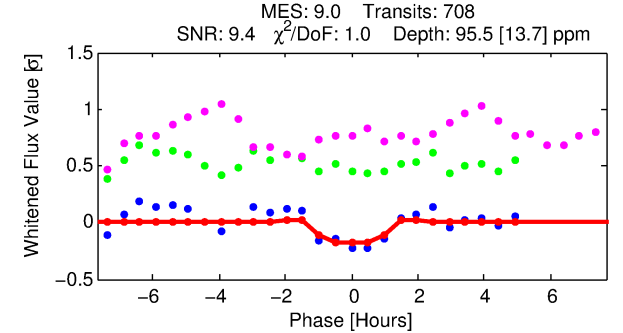
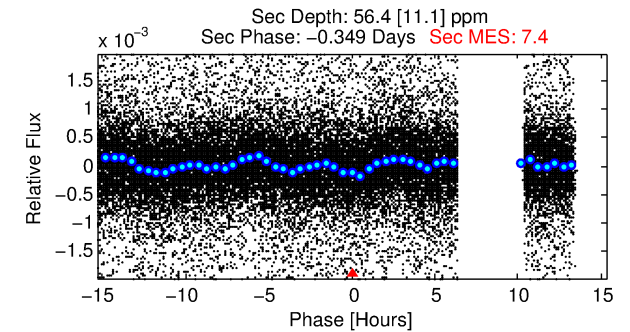
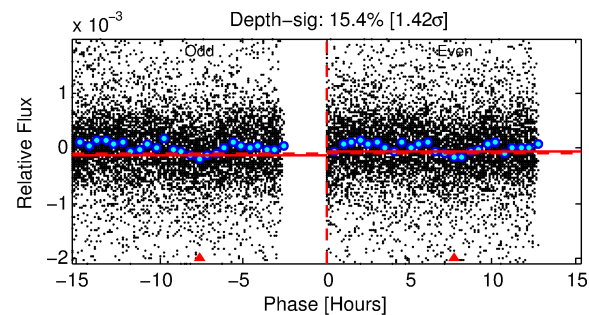
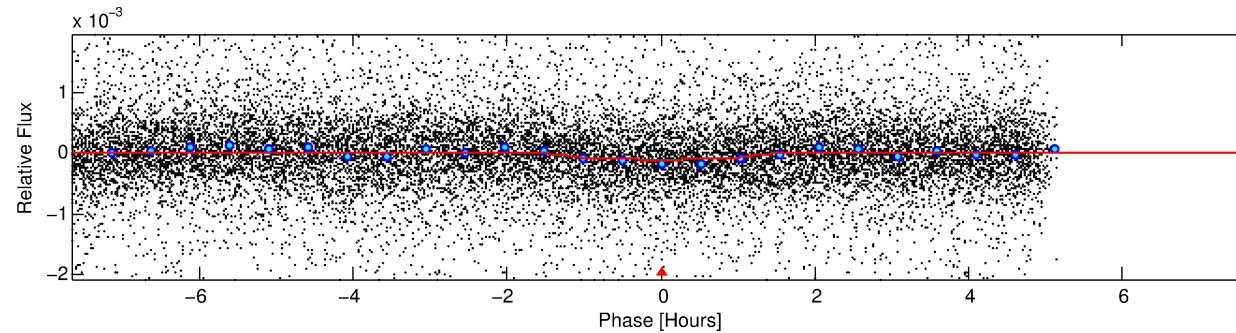
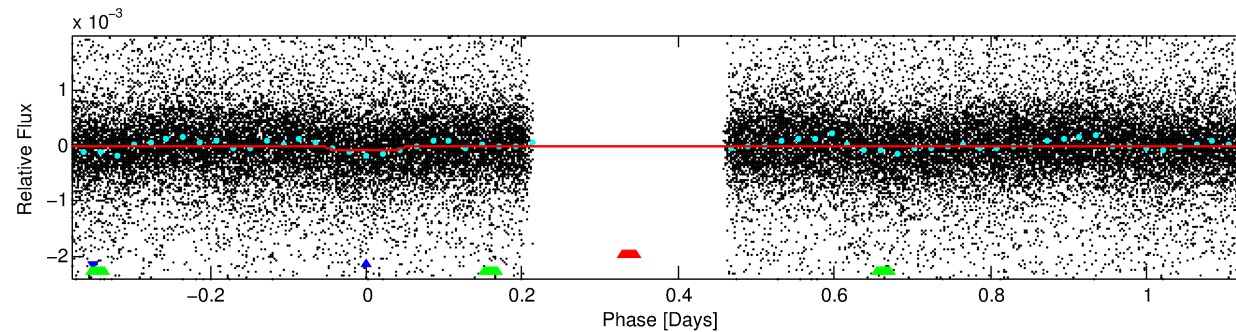
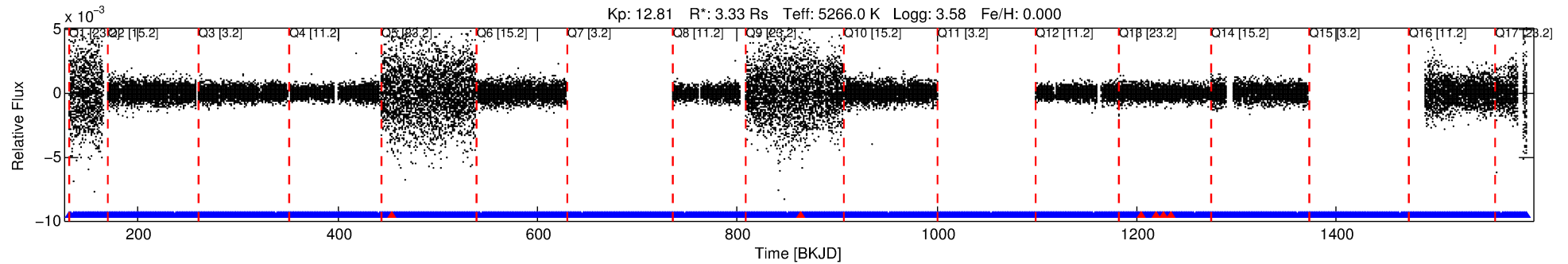
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010549415-02

No Significant Match Found

DV One-Page Summary

KIC: 10549415 Candidate: 2 of 3 Period: 1.511 d



DV Fit Results:

Period = 1.51086 [0.00002] d
Epoch = 131.9249 [0.0038] BKJD
Rp/R* = 0.0110 [0.0088]
a/R* = 2.19 [6.05]
b = 0.91 [0.66]
Seff = 8647.70 [12408.13]
Teq = 2459 [882] K
Rp = 3.98 [4.22] Re
a = 0.0297 [0.0244] AU
Ag = 1.73 [3.72] [0.20σ]
Teffp = 4359 [1759] K [0.97σ]

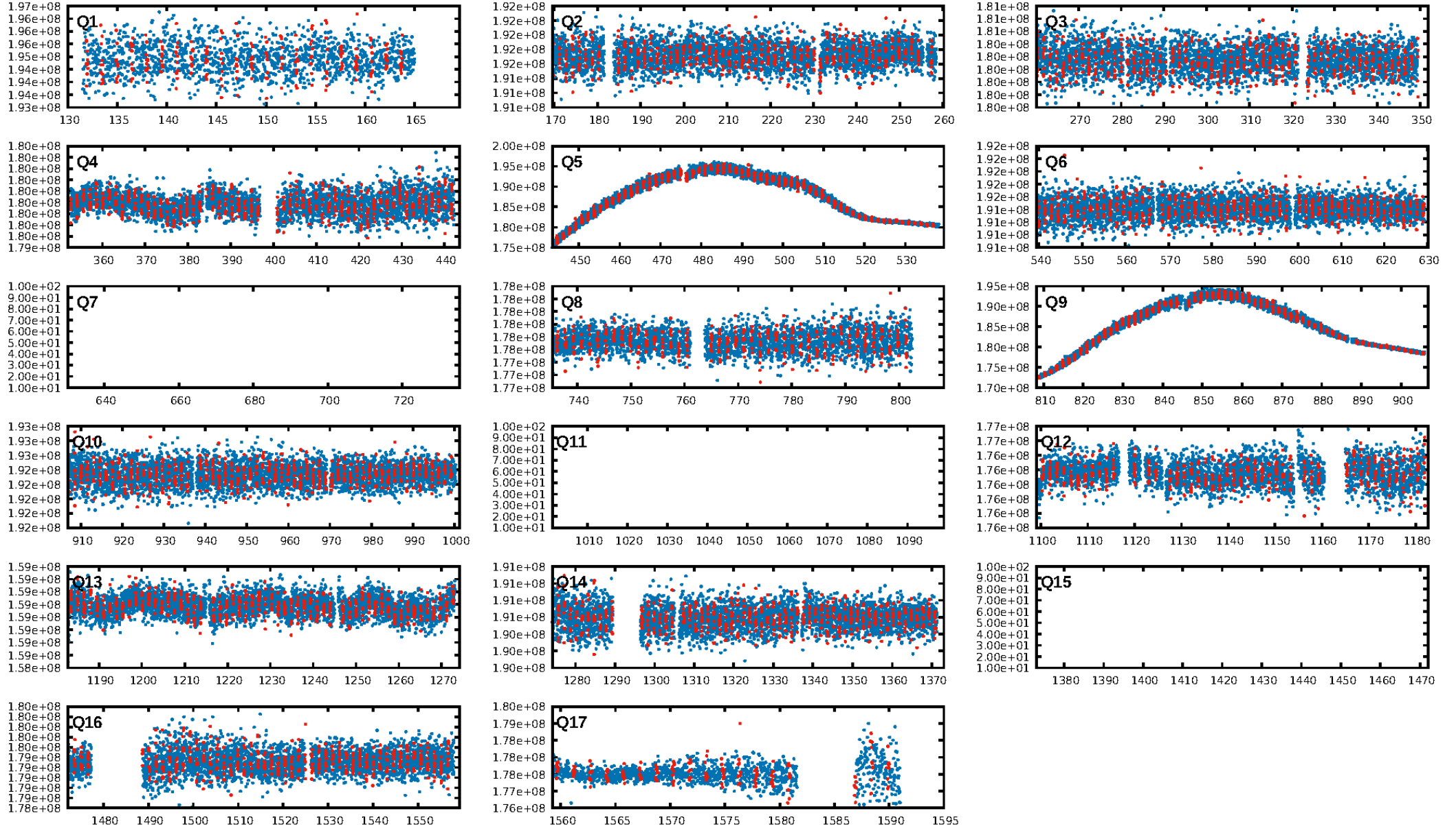
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [7.47σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.75e-13
RollingBand-fgt: 0.99 [662/668]
GhostDiagnostic-chr: -0.48
Centroid-sig: 0.0%
Centroid-so: 4.931 arcsec [11.16σ]
OotOffset-rm: 0.983 arcsec [2.25σ]
KicOffset-rm: 4.932 arcsec [12.73σ]
OotOffset-st: 1/1/0/4 [6]
KicOffset-st: 1/1/2/4 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 0.00 [0/14]

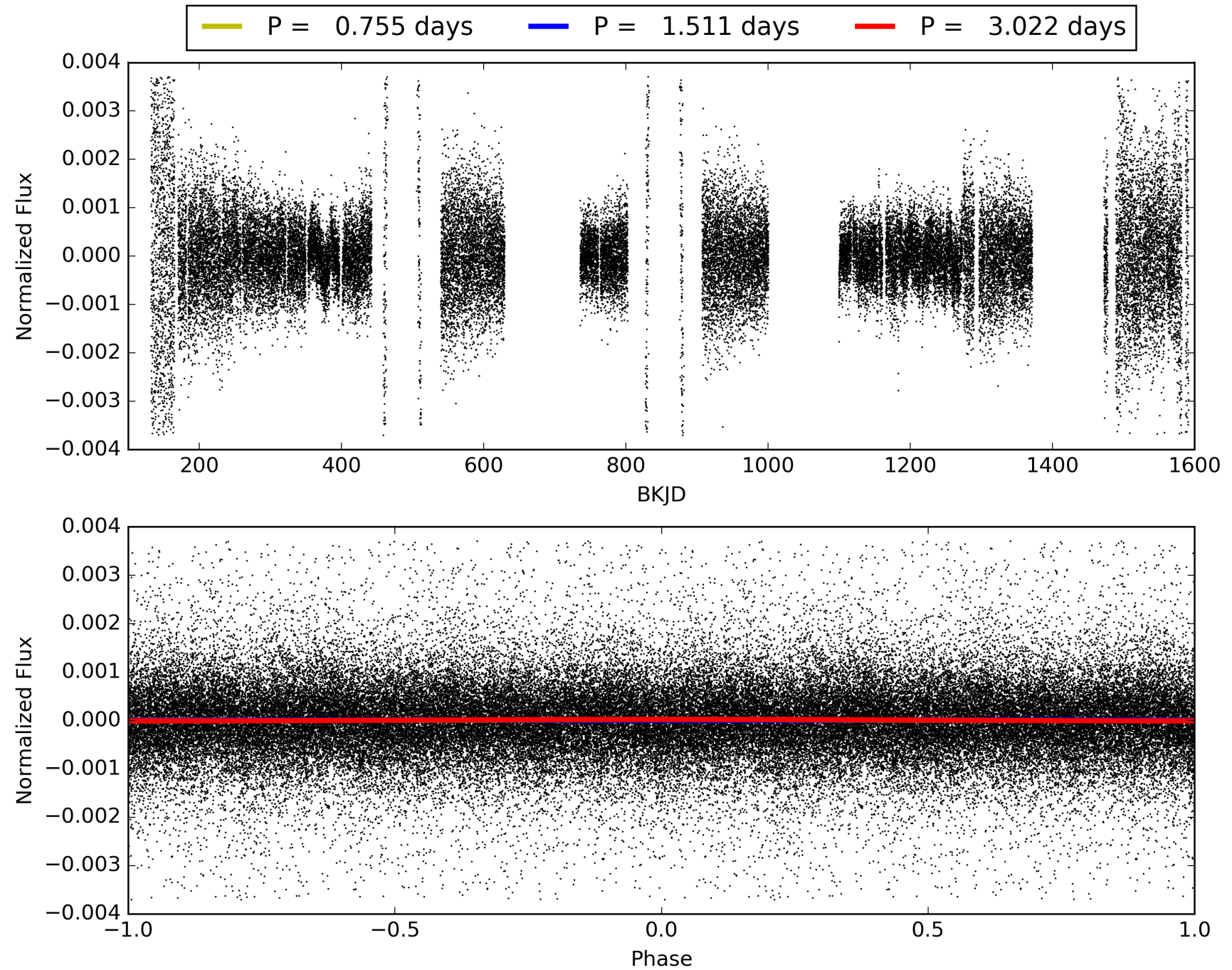
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:03:14 Z

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

TCE 010549415-02, PDC Light Curves

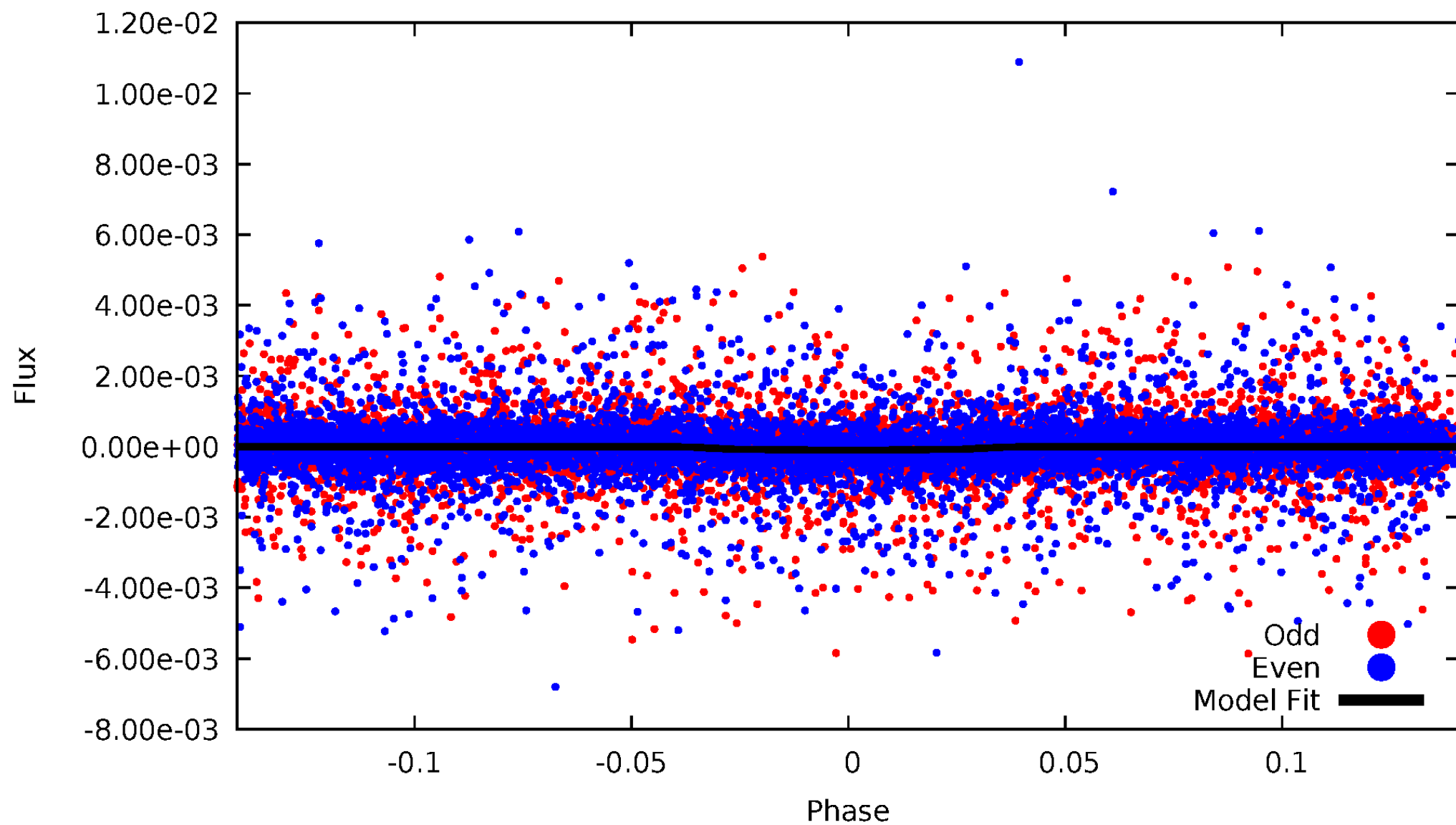


TCE 010549415-02



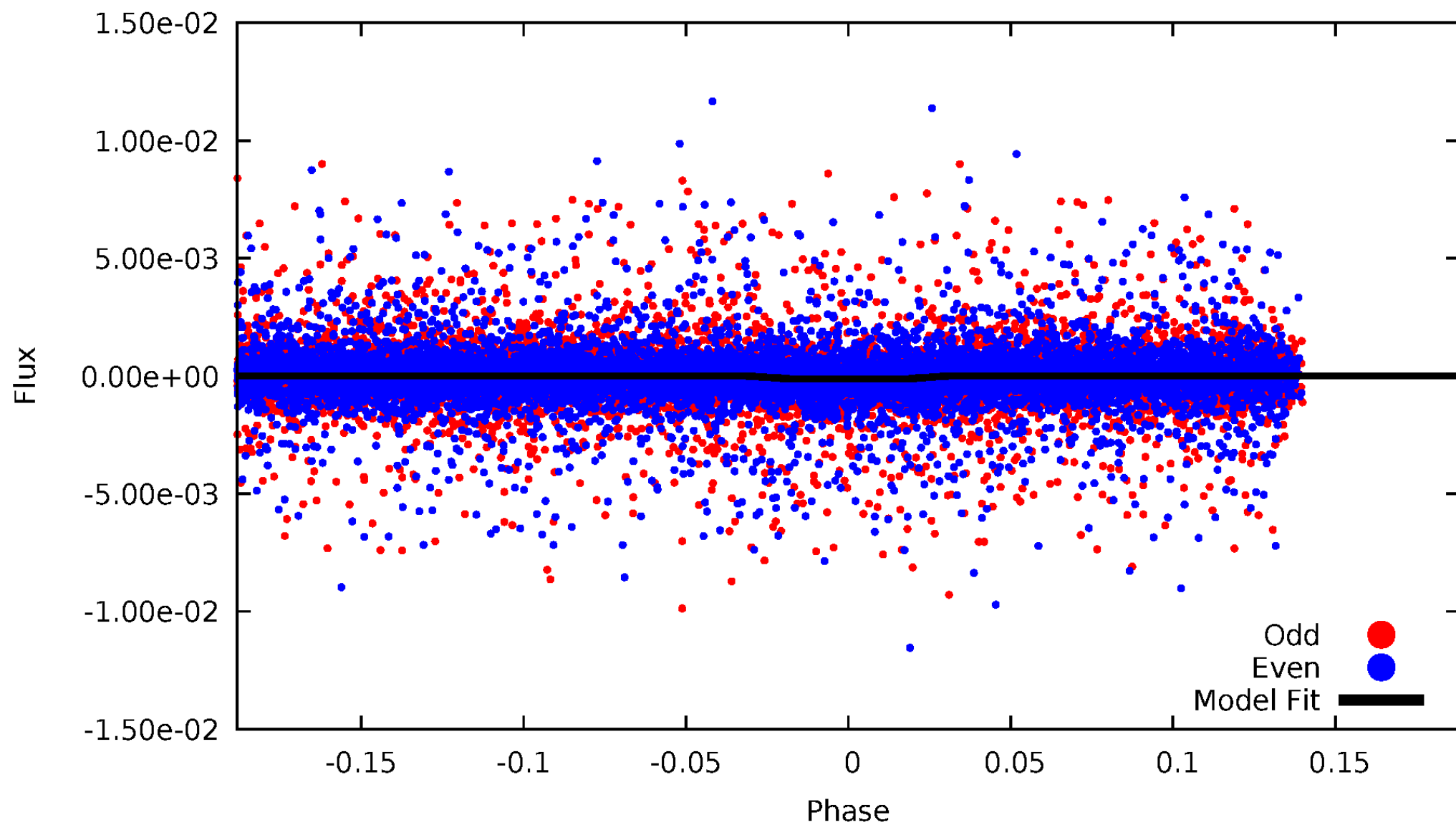
DV Odd/Even

TCE 010549415-02



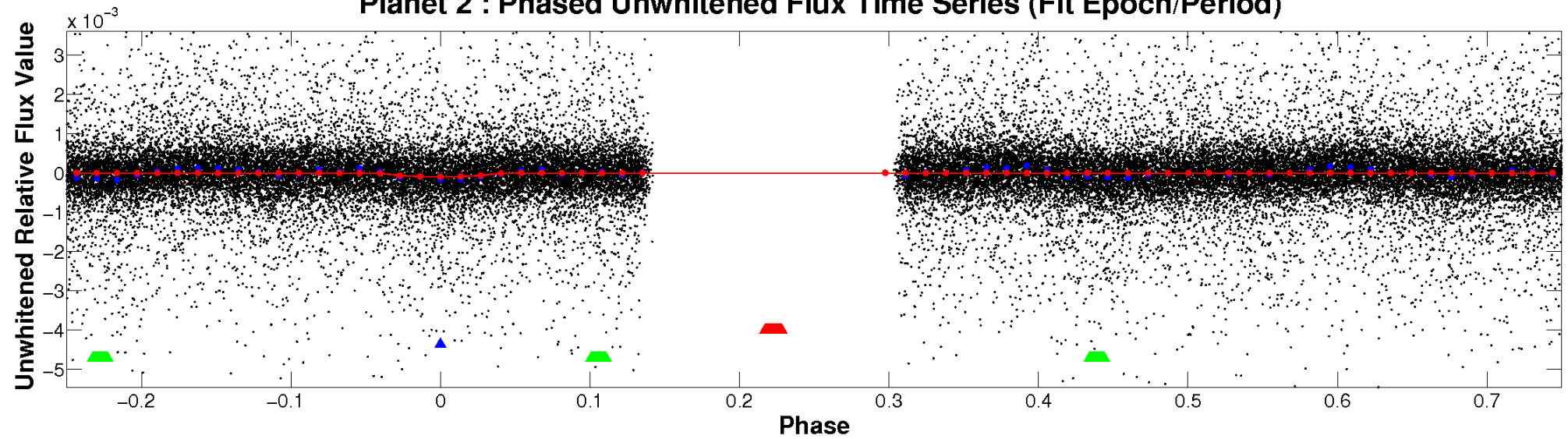
ALT Odd/Even

TCE 010549415-02

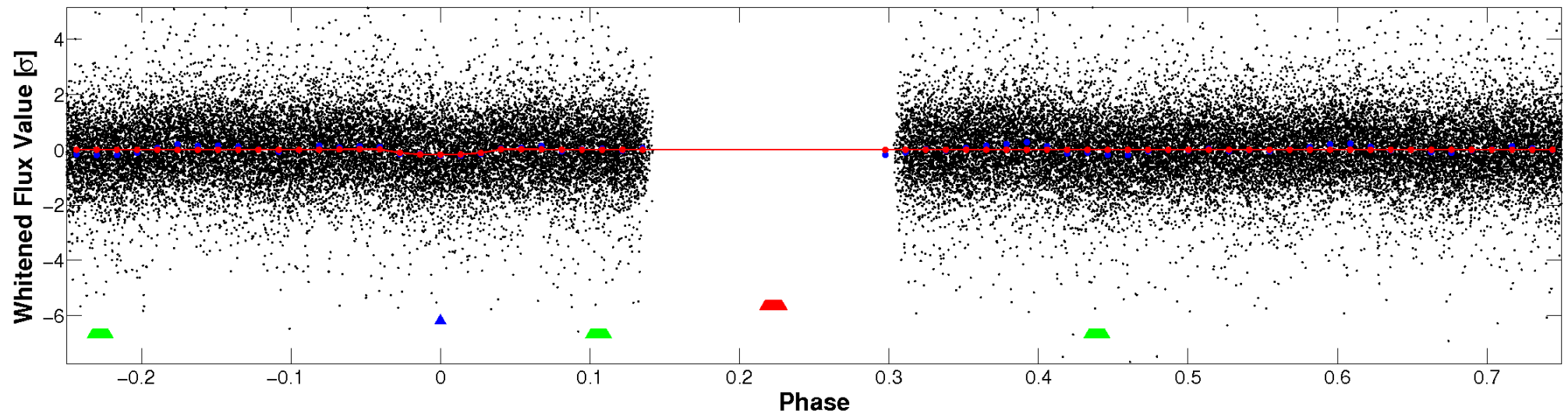


Non-Whitened Vs. Whitened Light Curve

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

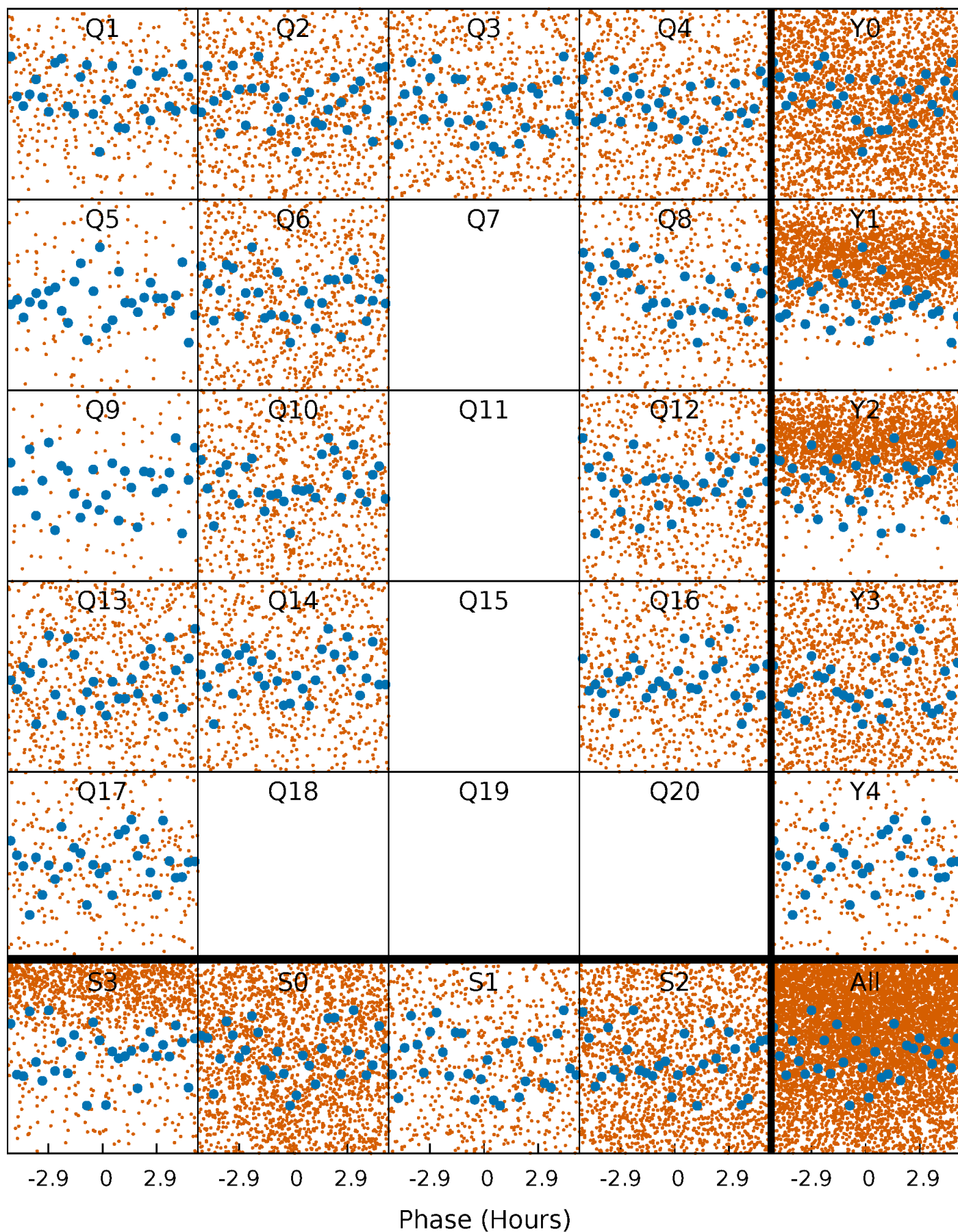


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



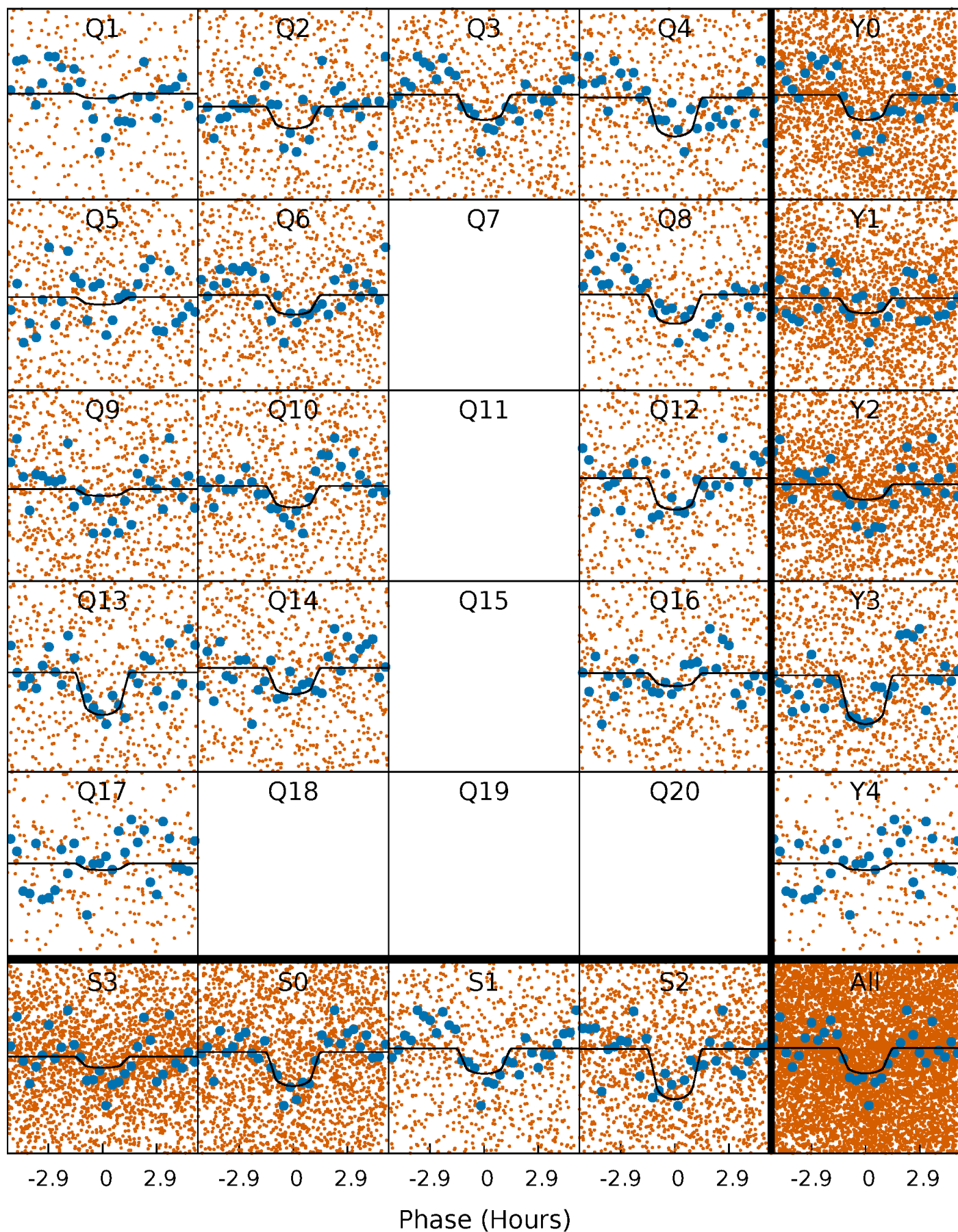
PDC Quarter-Phased Transit Curves

TCE 010549415-02 P= 1.510864 Days $T_0=131.924859$ (BKJD)



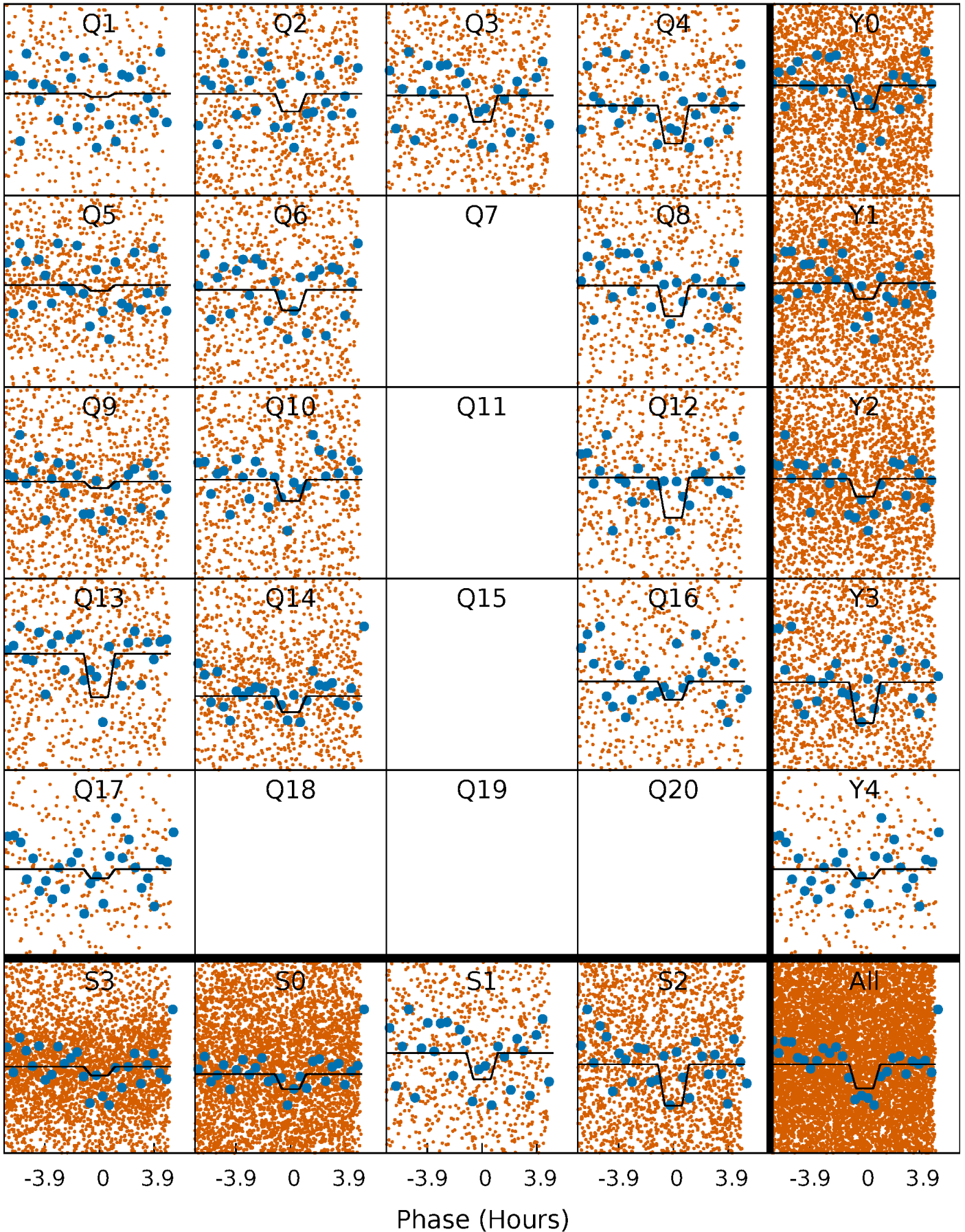
DV Quarter-Phased Transit Curves

TCE 010549415-02 P= 1.510864 Days $T_0=131.924859$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

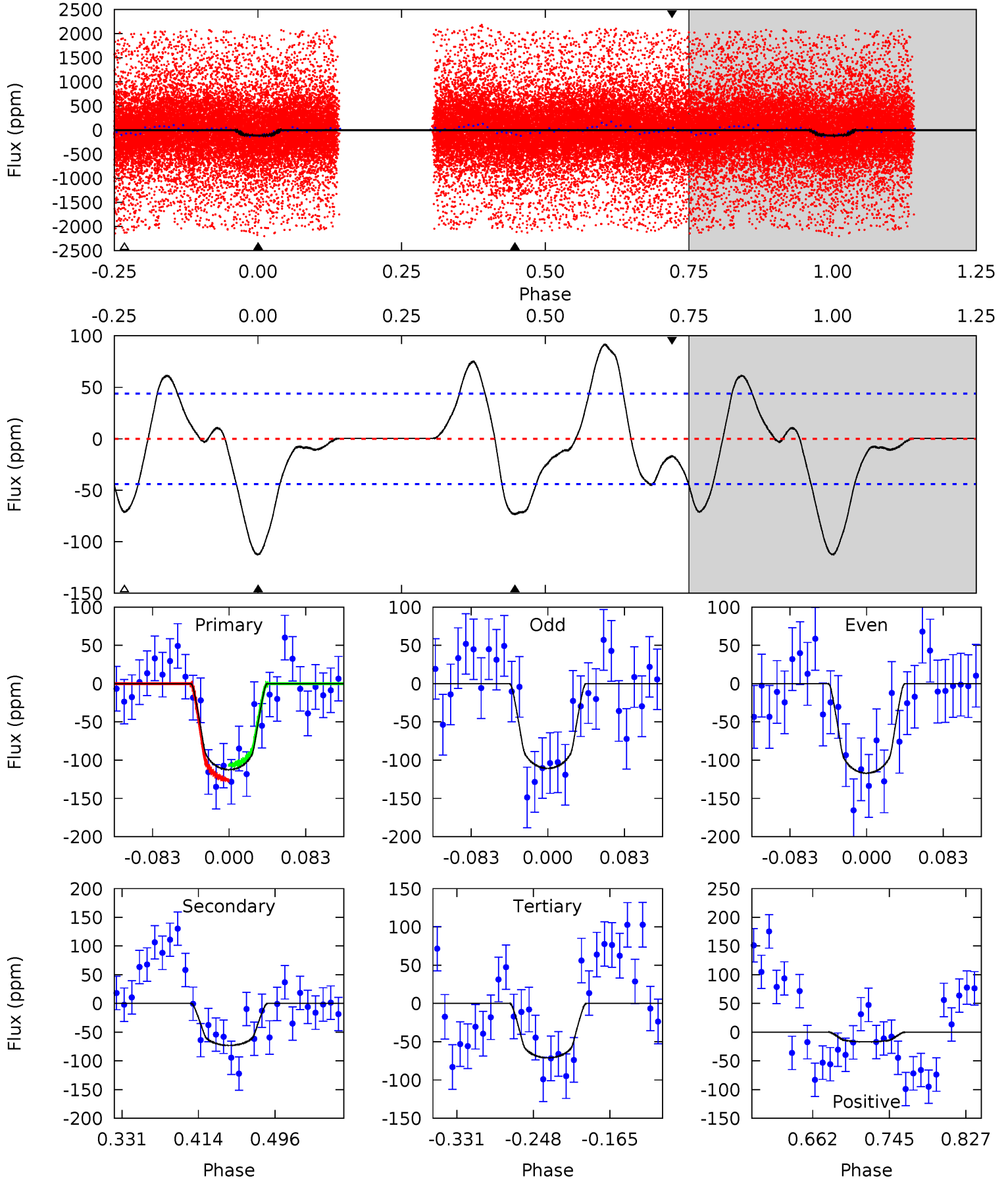
TCE 010549415-02 $P = 1.510865$ Days $T_0 = 131.926534$ (BKJD)



DV Model-Shift Uniqueness Test

010549415-02, P = 1.510864 Days, E = 130.413995 Days

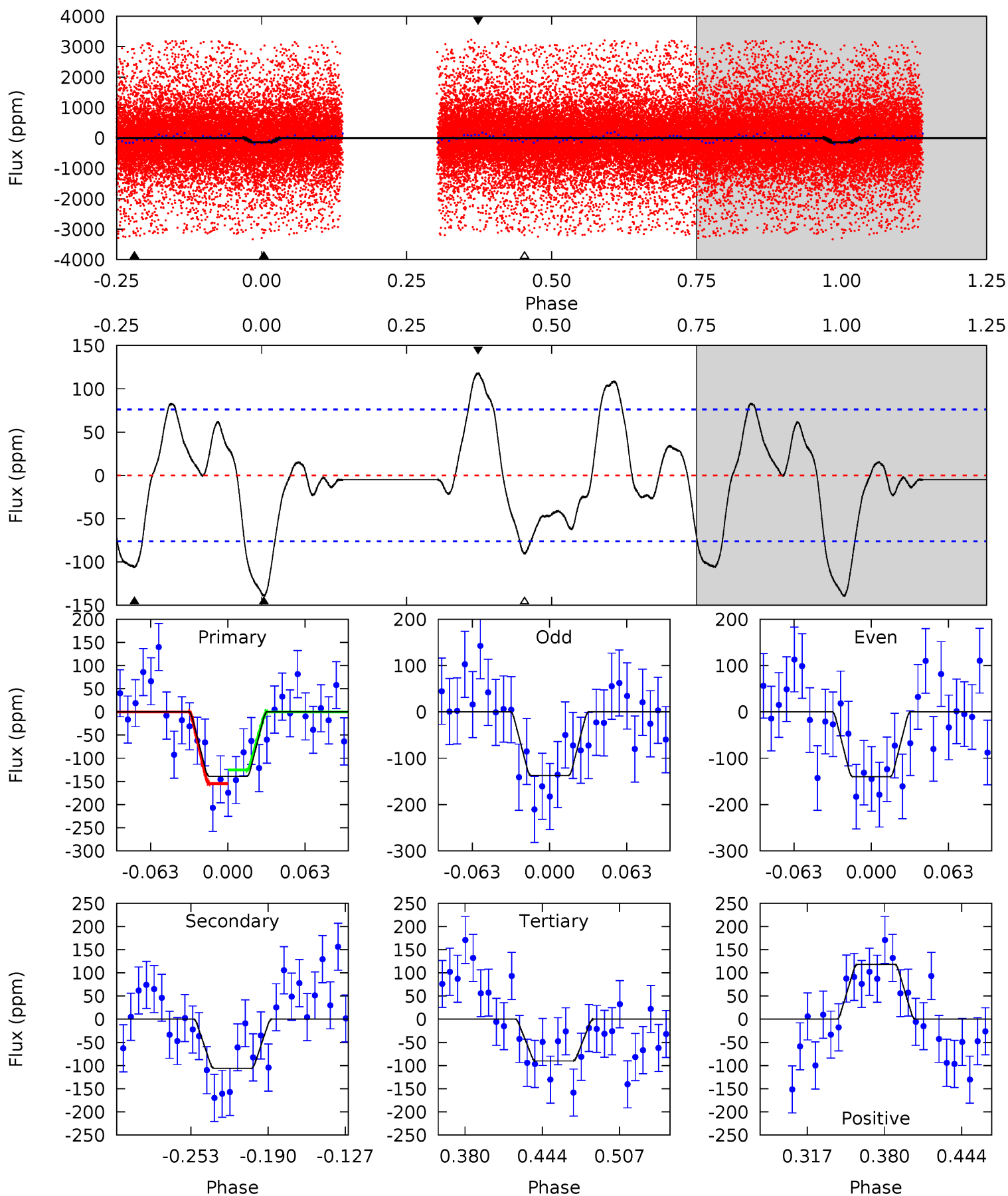
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	7.66	7.44	-1.76	4.60	1.73	4.26	4.34	13.5	0.22	9.42	0.34	1.28	0.45	1.01



Alt Model-Shift Uniqueness Test

010549415-02, P = 1.510865 Days, E = 130.415669 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.53	6.49	5.53	7.25	4.66	1.86	3.17	3.00	1.28	0.95	-0.76	0.08	1.59	0.46	0.91



Stellar Parameters For KIC 010549415

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5266^{+183}_{-165}	$3.579^{+0.880}_{-0.220}$	$0.000^{+0.300}_{-0.300}$	$3.331^{+0.992}_{-2.315}$	$1.535^{+0.221}_{-0.663}$	$0.058^{+1.429}_{-0.033}$
	+3%/-3%	+25%/-6%	+inf%/-inf%	+30%/-69%	+14%/-43%	+2444%/-56%
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 010549415-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-73 ± 10	$3.78^{+3.47}_{-2.35}$	3388^{+349}_{-589}	4409^{+2524}_{-978}	$2.366^{+13.564}_{-1.676}$
Alt.	-106 ± 16	$3.99^{+3.40}_{-2.51}$	3376^{+362}_{-641}	4642^{+2531}_{-957}	$3.043^{+18.065}_{-2.122}$

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 $A_{obs} \gg 1.0$

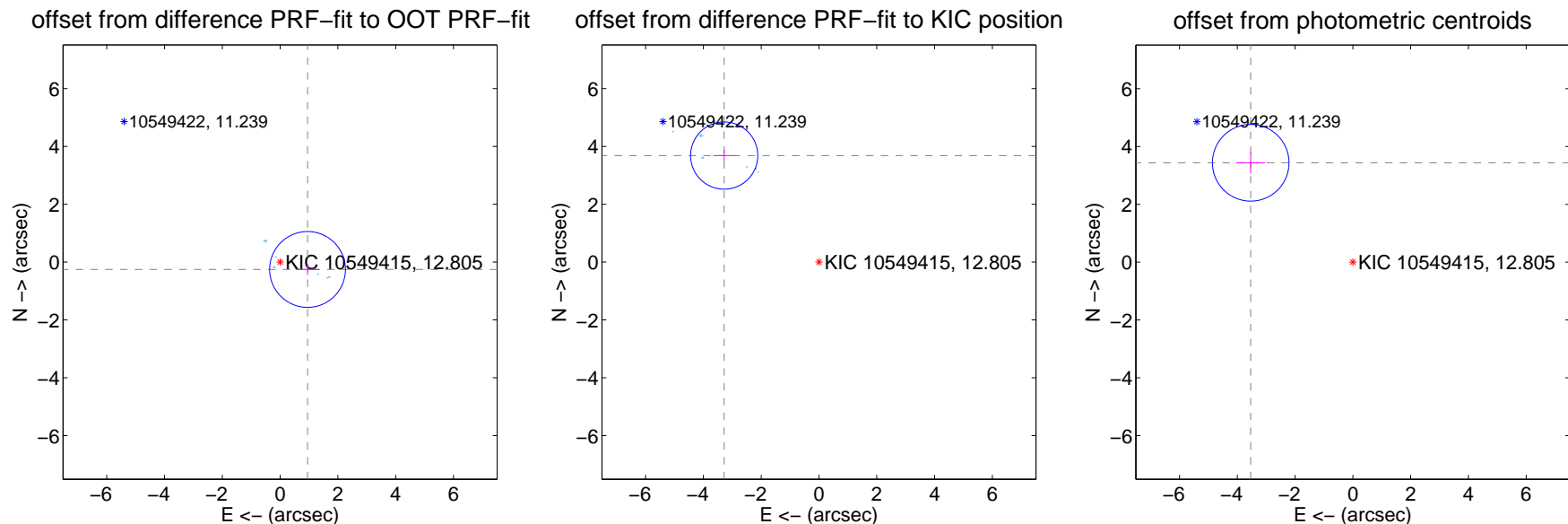
DV Centroid Data

Supplemental centroid analysis for 010549415-02. Kepler magnitude: 12.80. Transit SNR 9.42

There are 8 quarters with good PRF difference image offsets

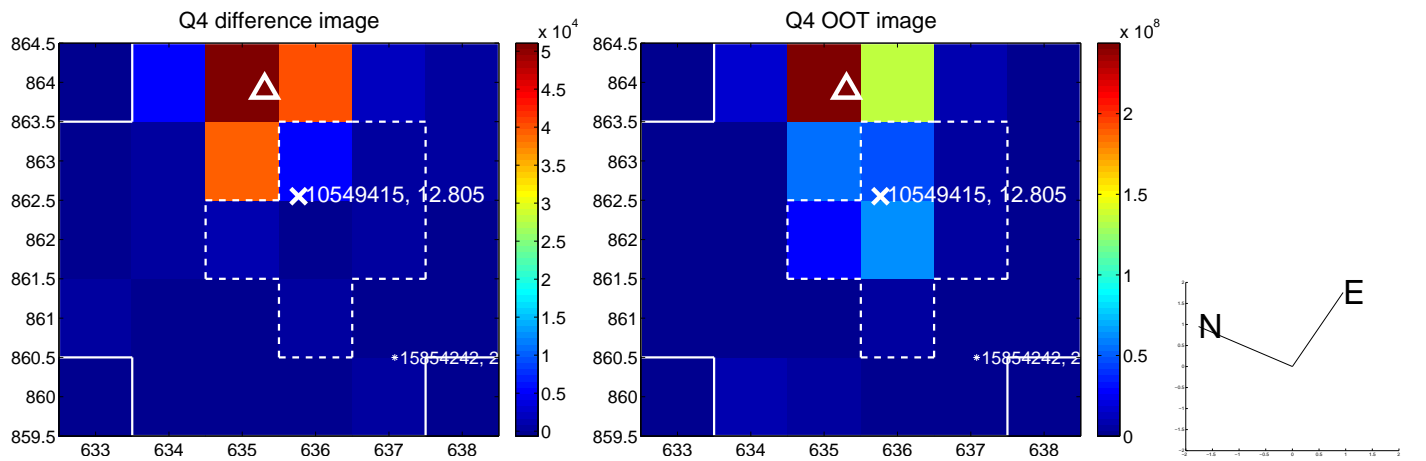
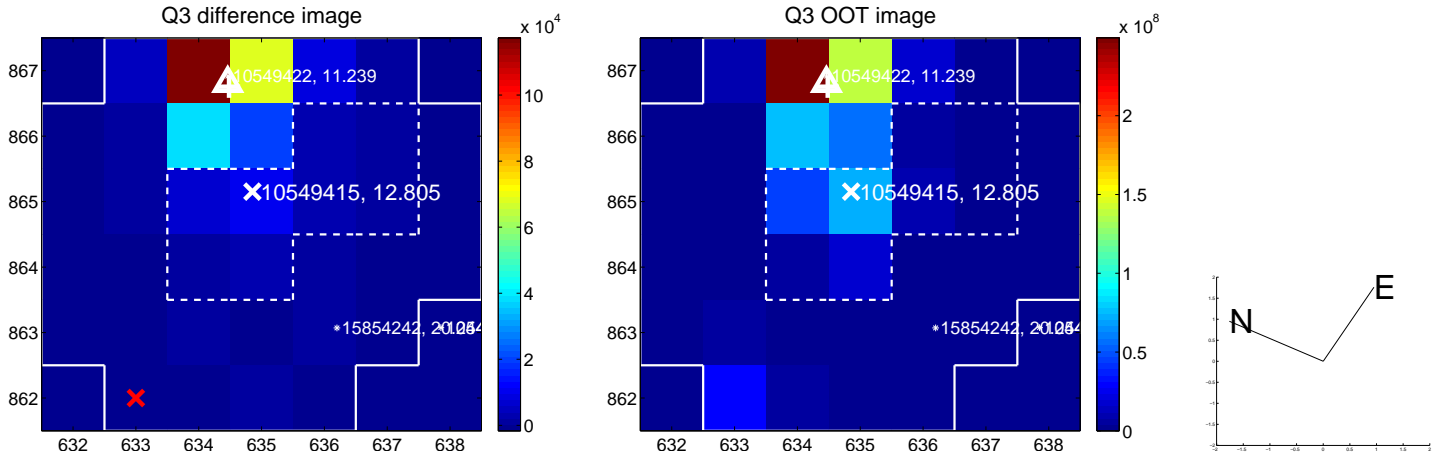
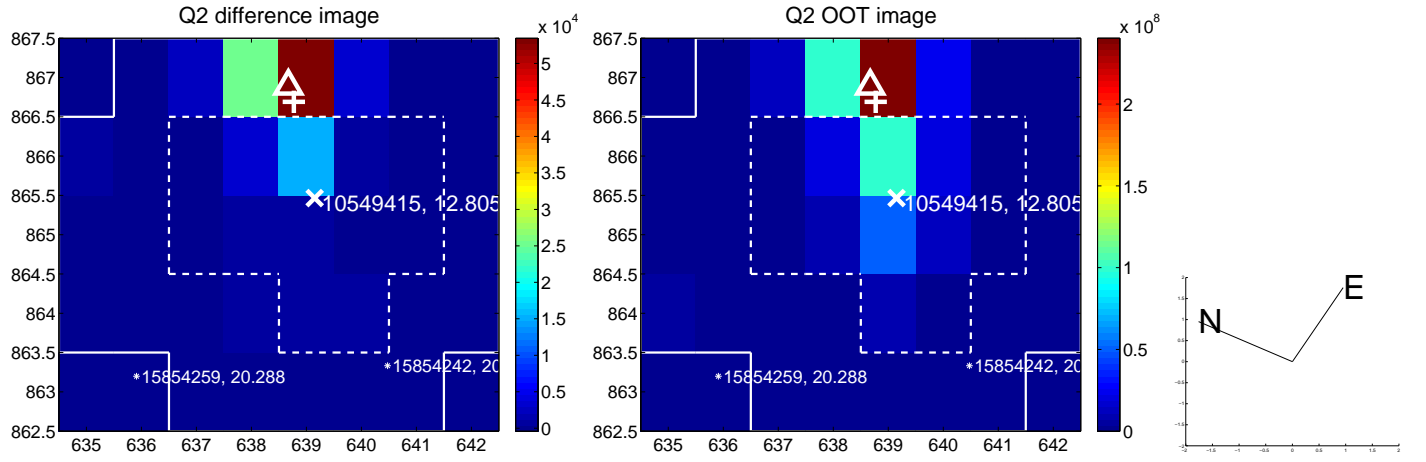
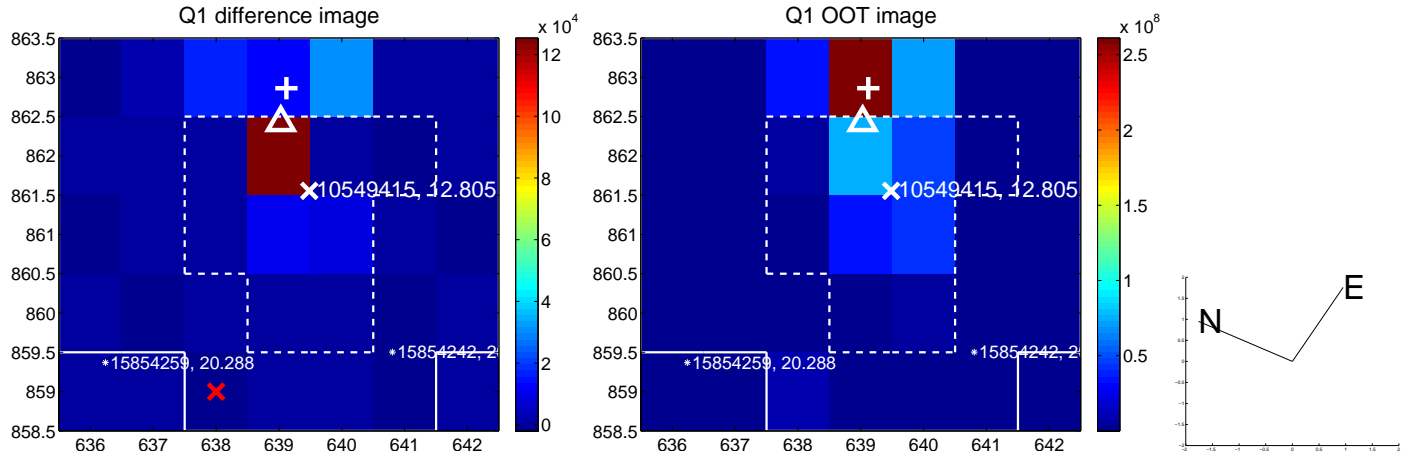
The OOT PRF centroid is offset from the target star catalog position by about 5.38 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.983 ± 0.437	2.25	-0.949 ± 0.410	-0.255 ± 0.191
PRF-fit source offset from KIC position	4.932 ± 0.387	12.73	3.281 ± 0.380	3.683 ± 0.197
photometric centroid source offset	4.93 ± 0.44	11.16	3.54 ± 0.50	3.44 ± 0.37

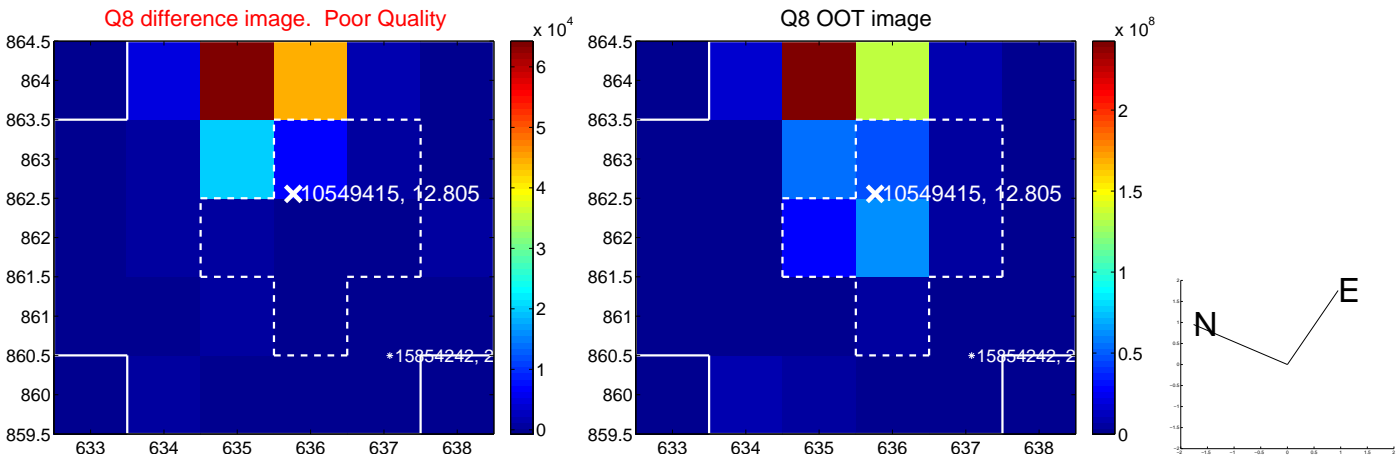
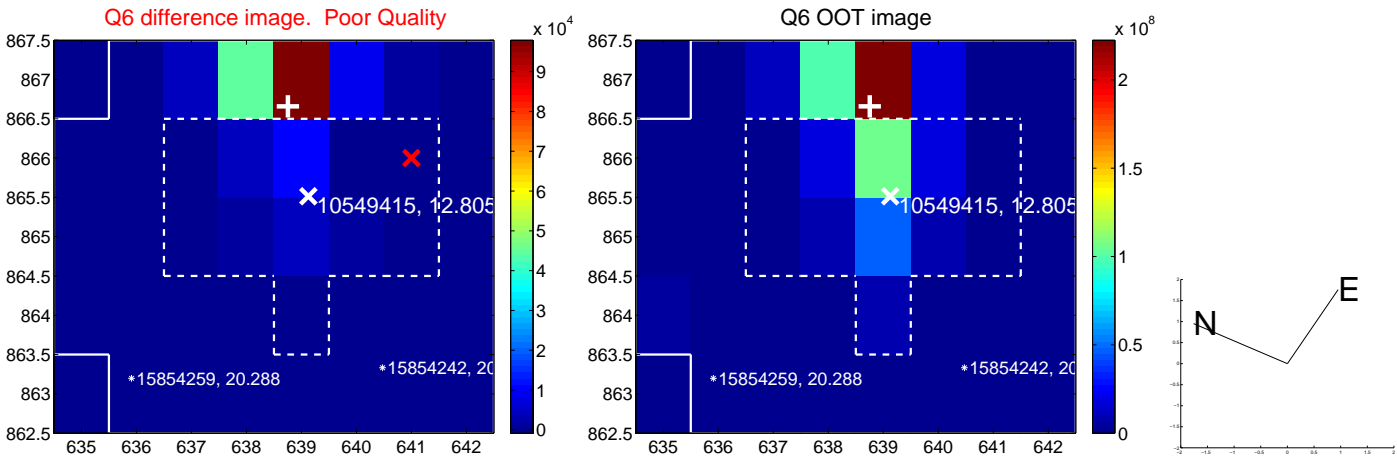
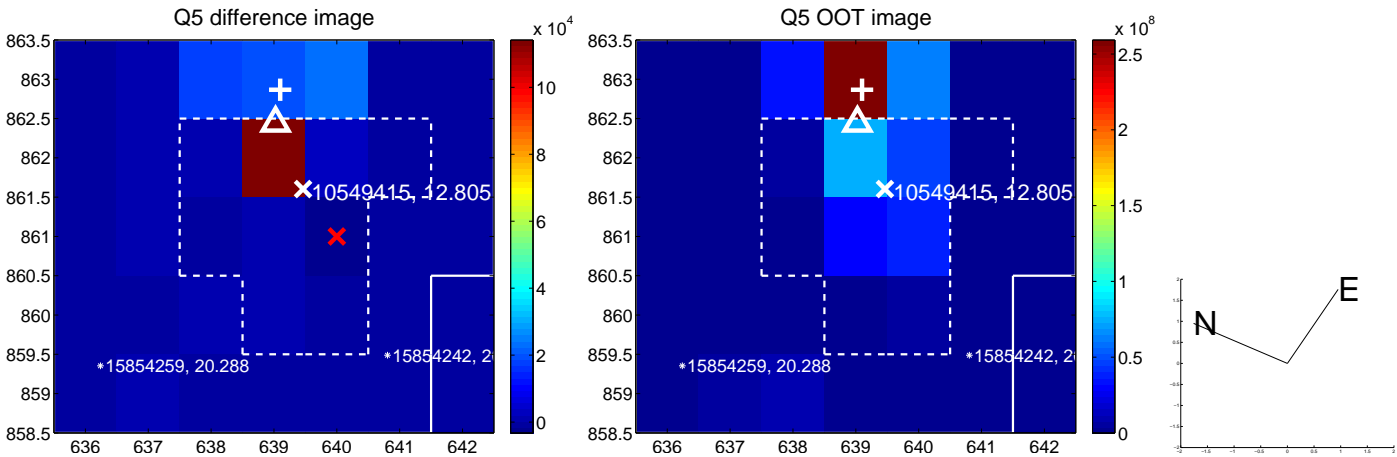


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

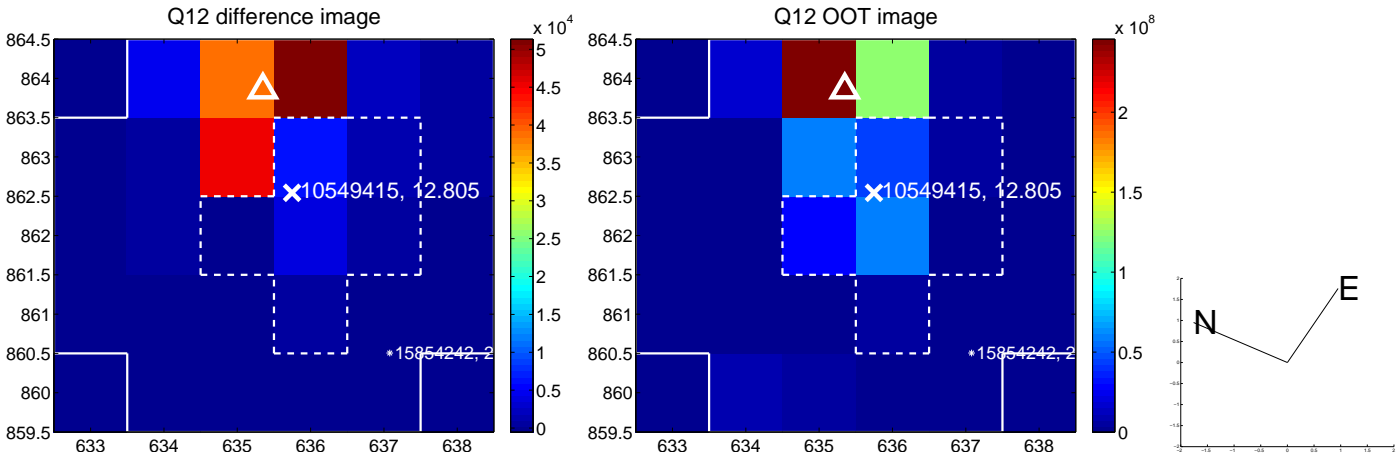
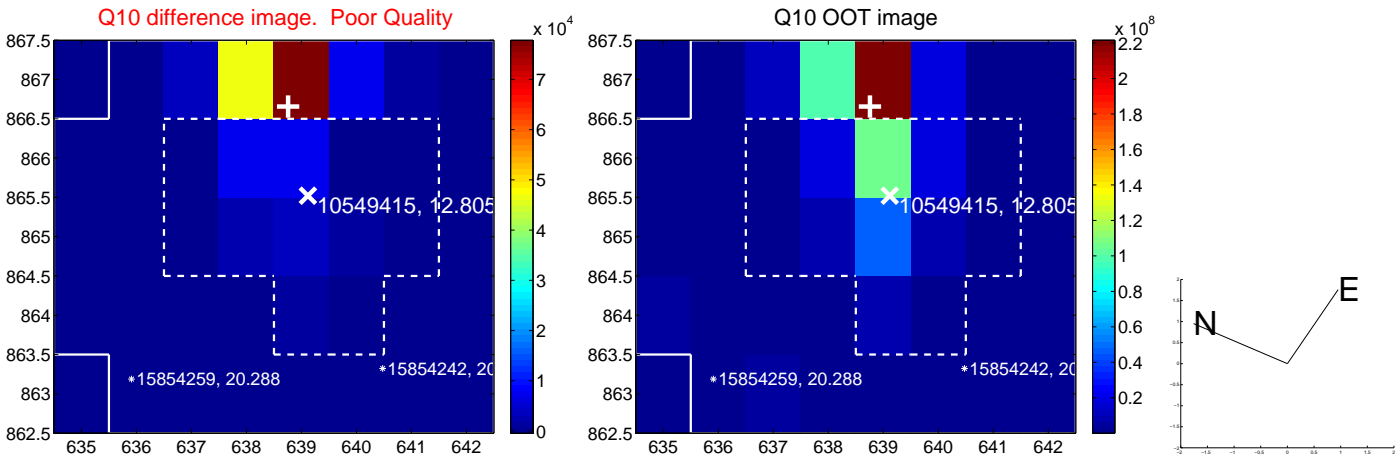
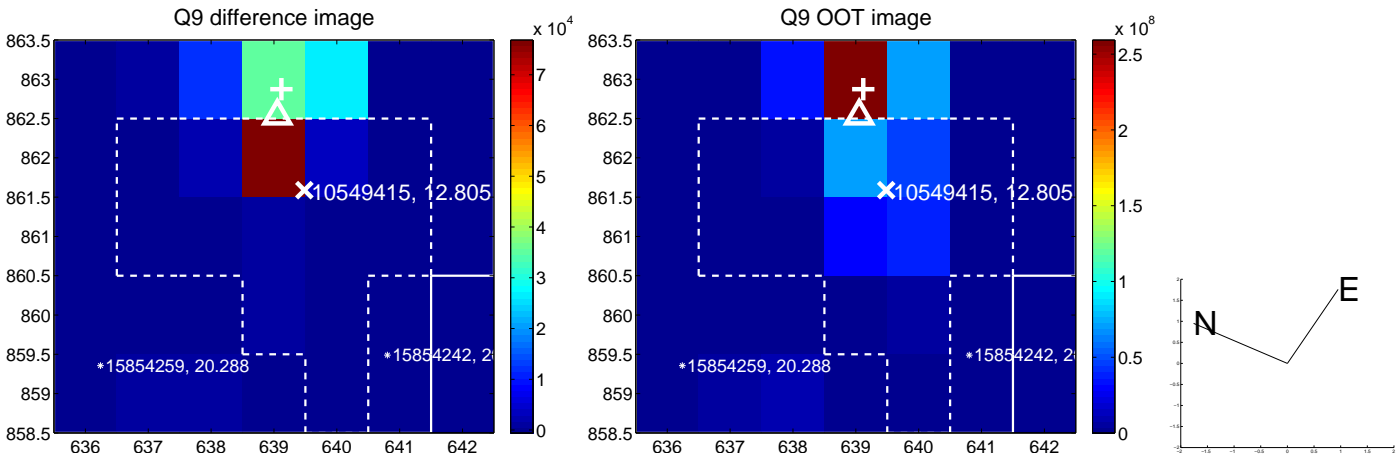
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



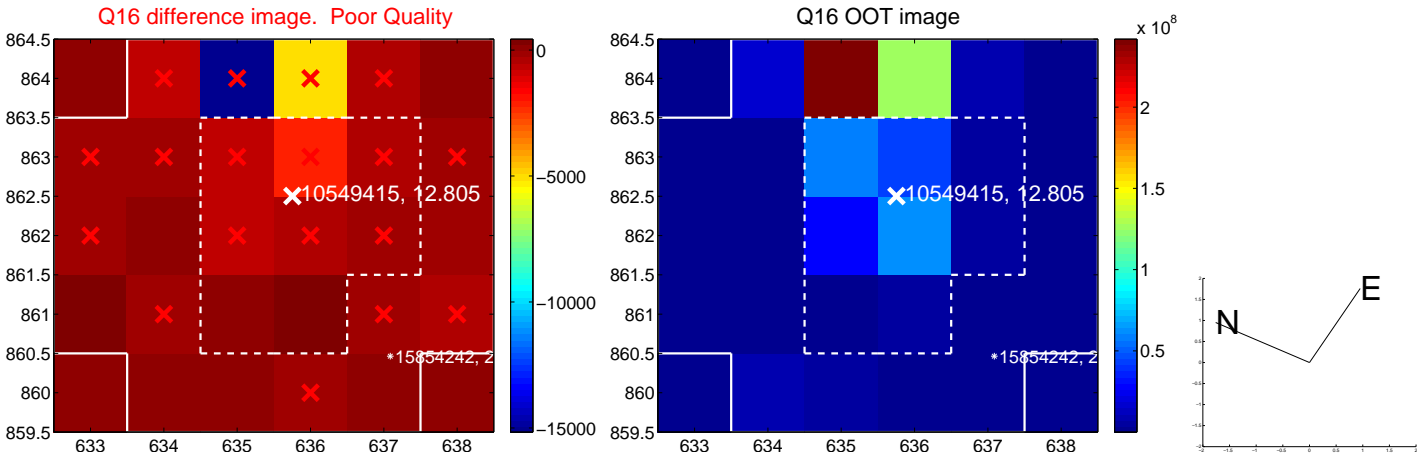
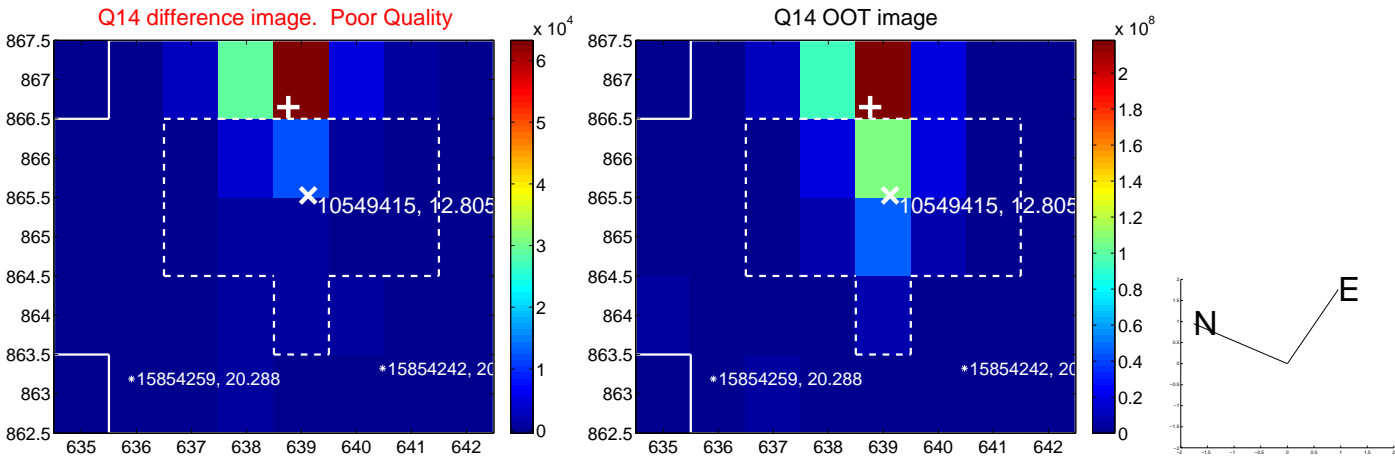
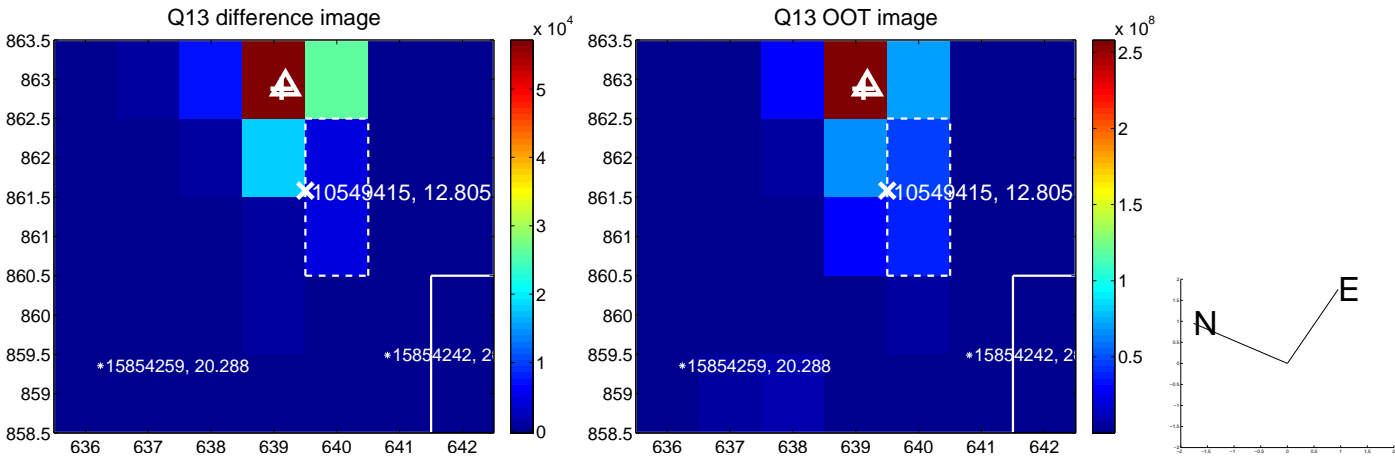
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



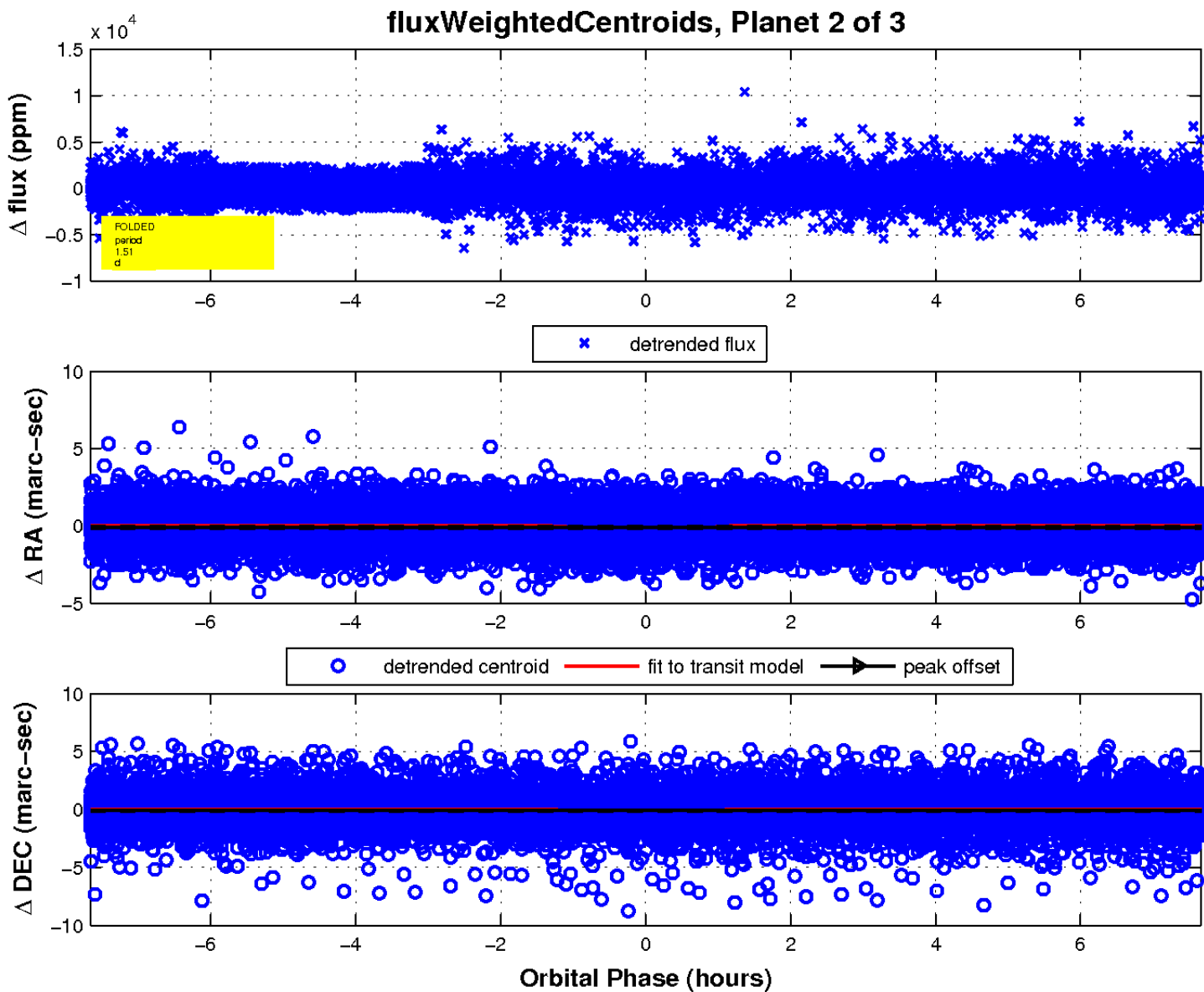
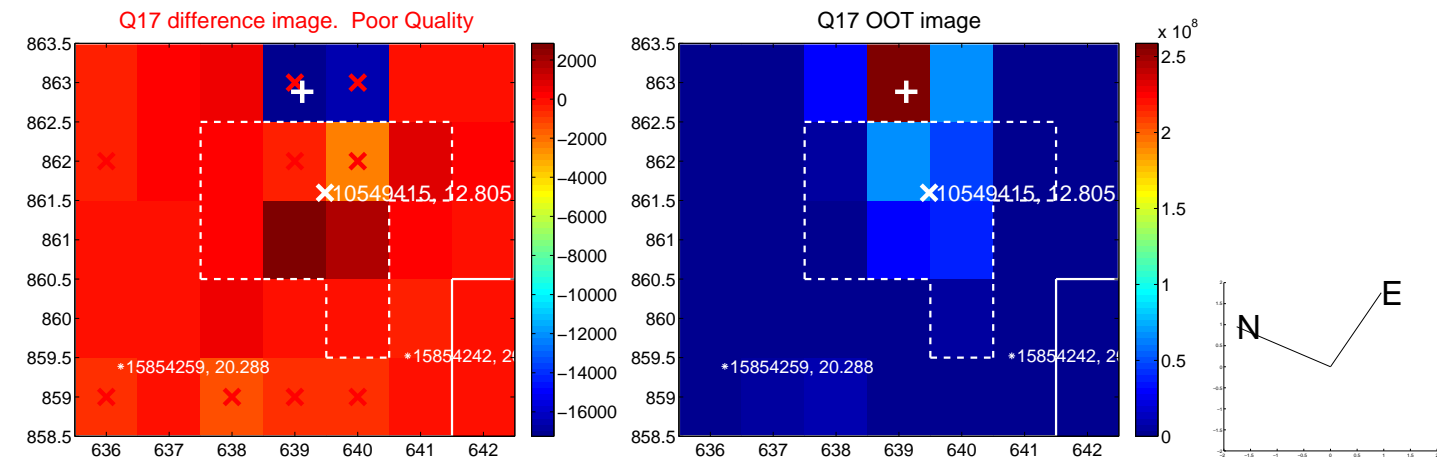
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



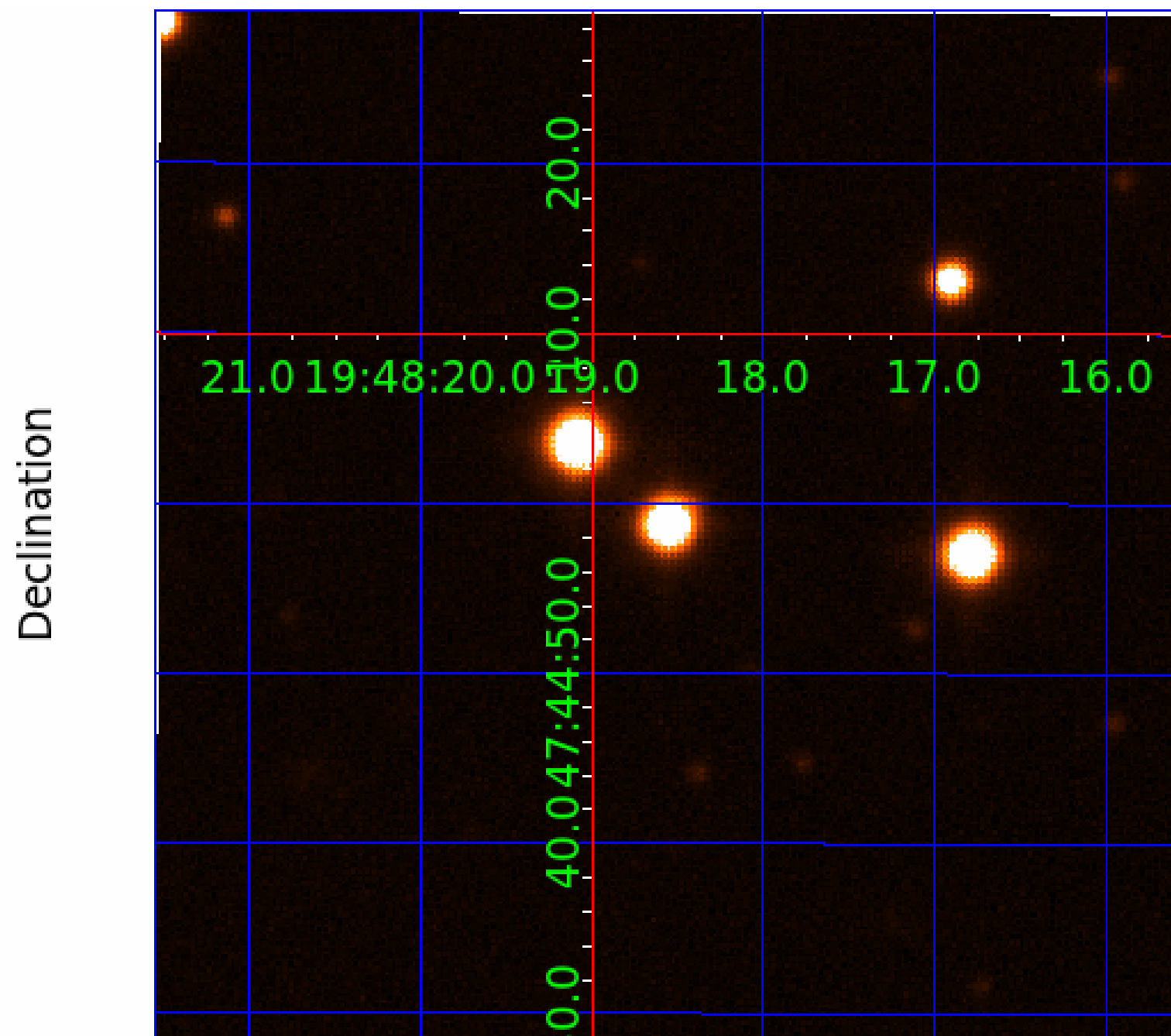
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 010549415

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})
010549415-01	OBS	No	1.510881	132.253096	91.1	1.908	7.3	8.1	3.33	5266	3.68	8647.57
010549415-02	OBS	No	1.510864	131.924859	95.5	2.554	9.0	9.4	3.33	5266	3.98	8647.70
010549415-03	OBS	No	0.503616	131.588730	65.4	1.987	10.2	9.5	3.33	5266	3.25	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010549415-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
010549415-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
010549415-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_KIC_POS

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

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

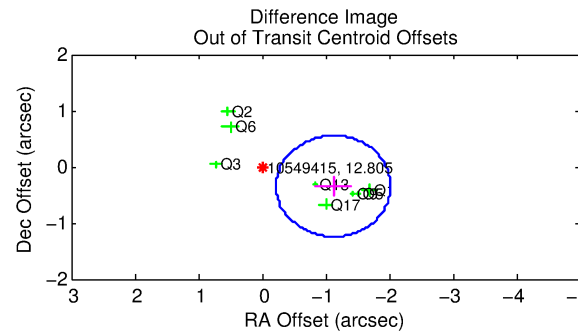
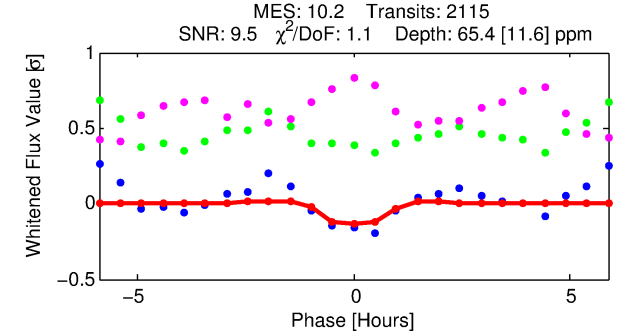
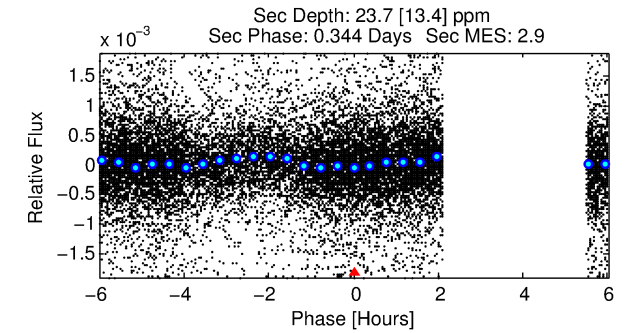
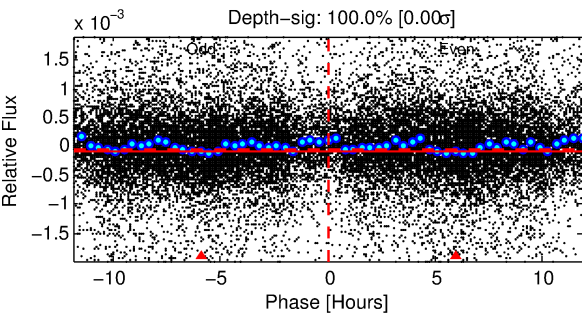
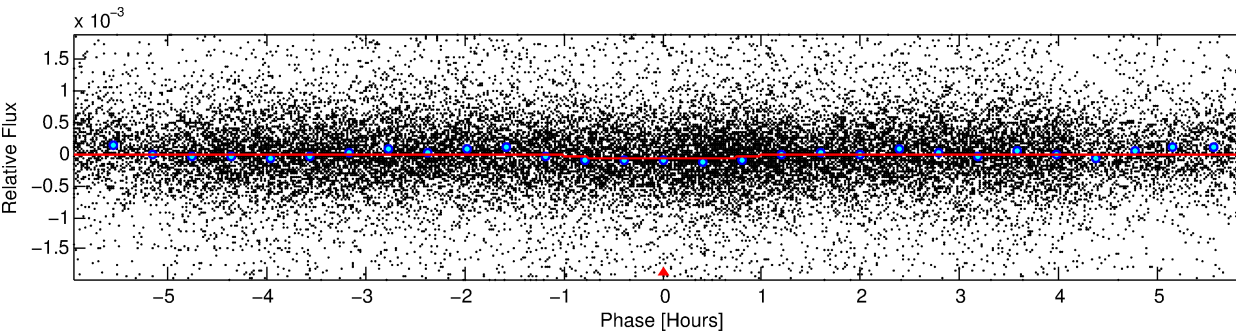
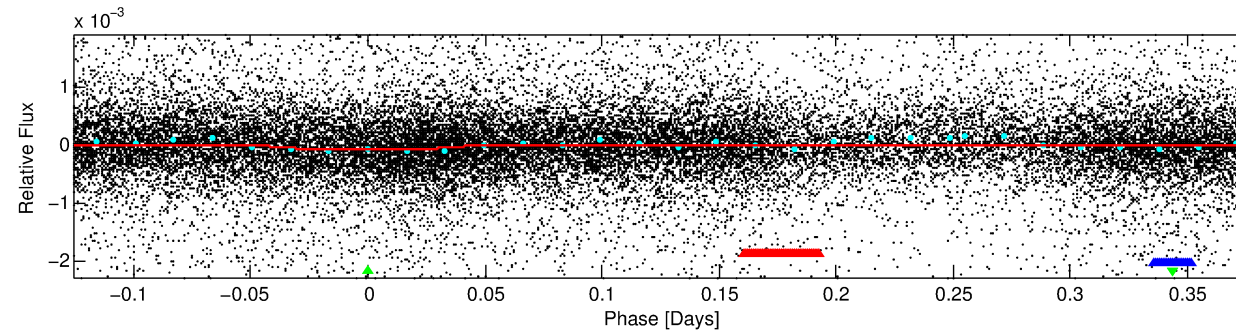
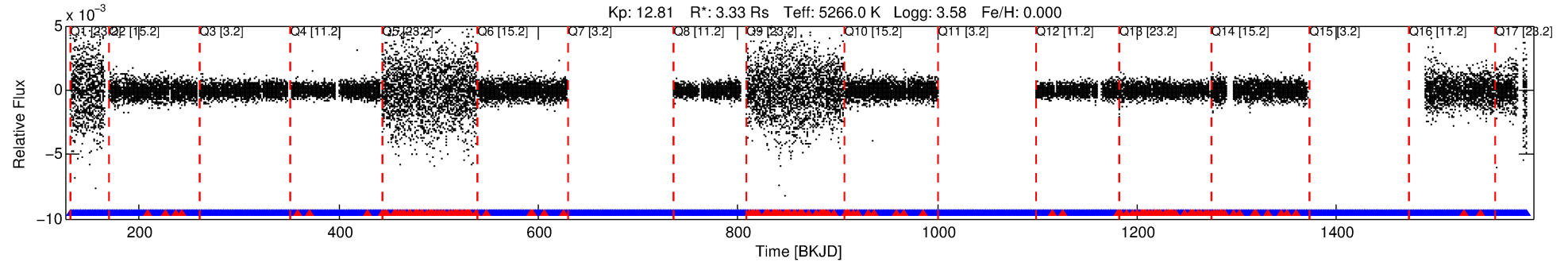
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010549415-03

No Significant Match Found

DV One-Page Summary

KIC: 10549415 Candidate: 3 of 3 Period: 0.504 d



DV Fit Results:

Period = 0.50362 [0.00001] d
Epoch = 131.5887 [0.0031] BKJD
Rp/R* = 0.0089 [0.0085]
a/R* = 1.29 [2.11]
b = 0.90 [0.90]
Seff = N/A
Teq = N/A
Rp = 3.25 [3.83] Re
a = N/A
Ag = N/A
Teffp = N/A

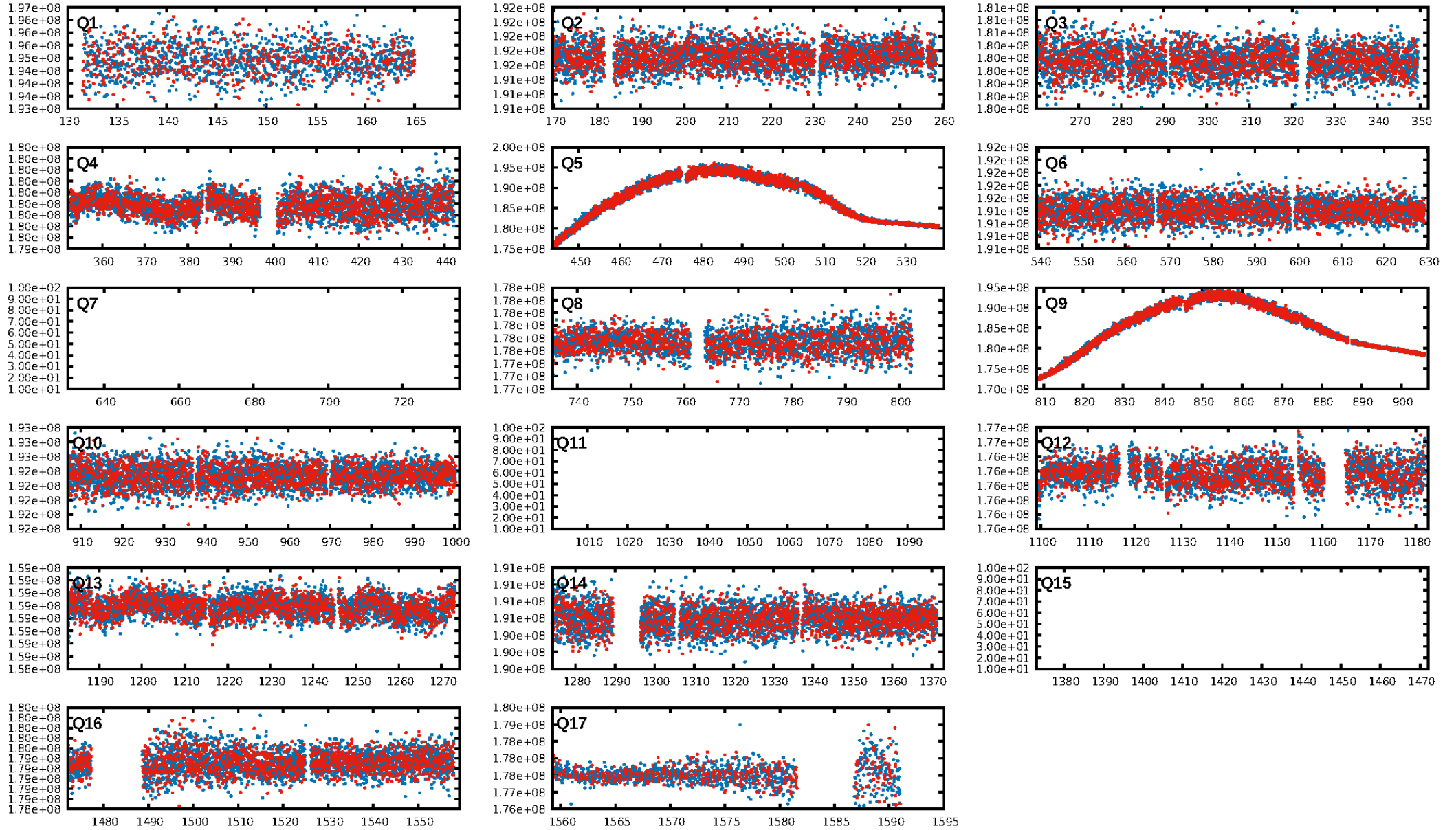
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [7.47σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.25e-18
RollingBand-fgt: 0.93 [1846/1995]
GhostDiagnostic-chr: -0.5373
Centroid-sig: 0.1%
Centroid-so: 4.469 arcsec [11.19σ]
OotOffset-rm: 1.173 arcsec [3.91σ]
KicOffset-rm: 4.489 arcsec [12.34σ]
OotOffset-st: 2/1/0/5 [8]
KicOffset-st: 2/1/1/5 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [14/14]

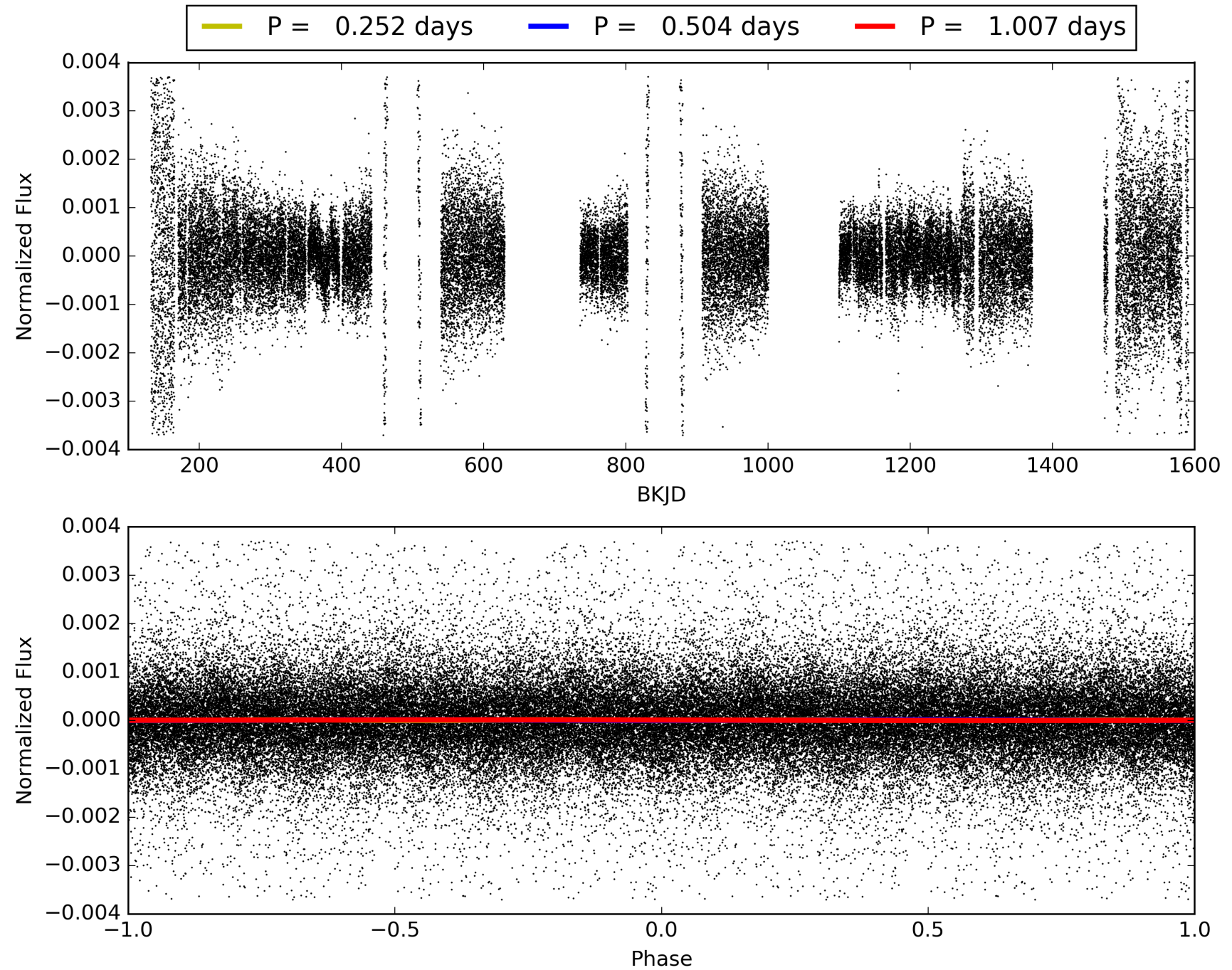
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:03:23 Z

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

TCE 010549415-03, PDC Light Curves

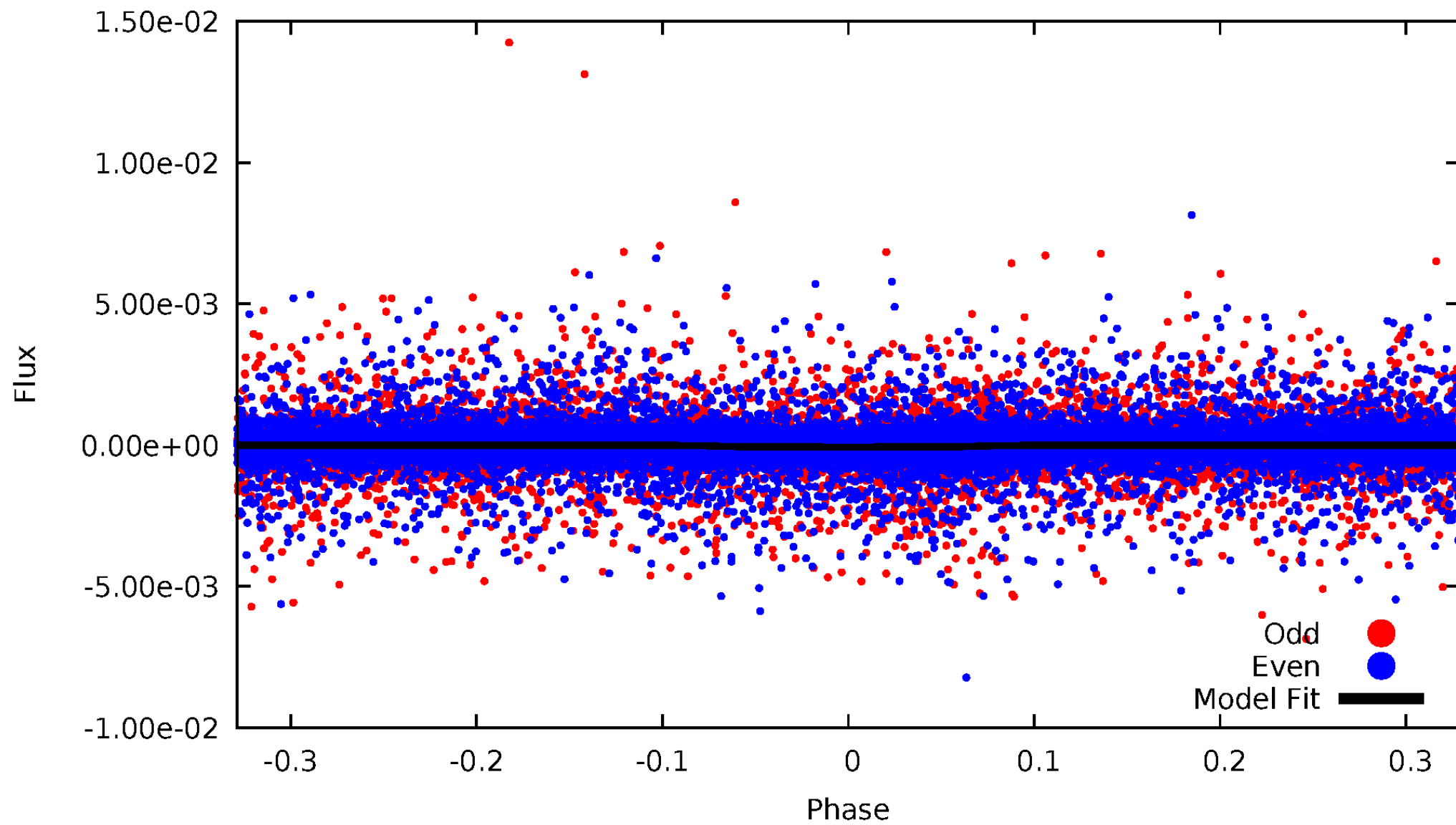


TCE 010549415-03



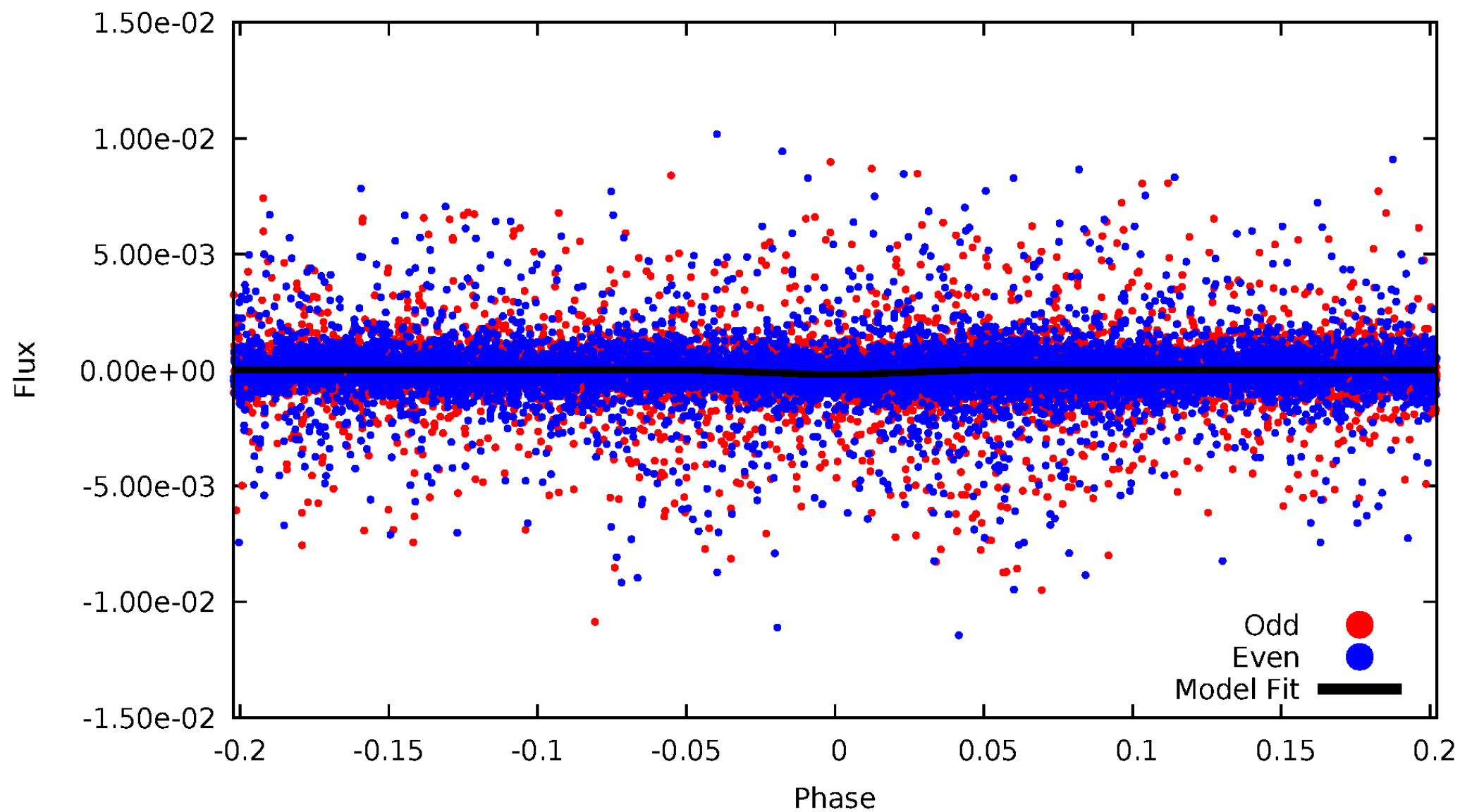
DV Odd/Even

TCE 010549415-03



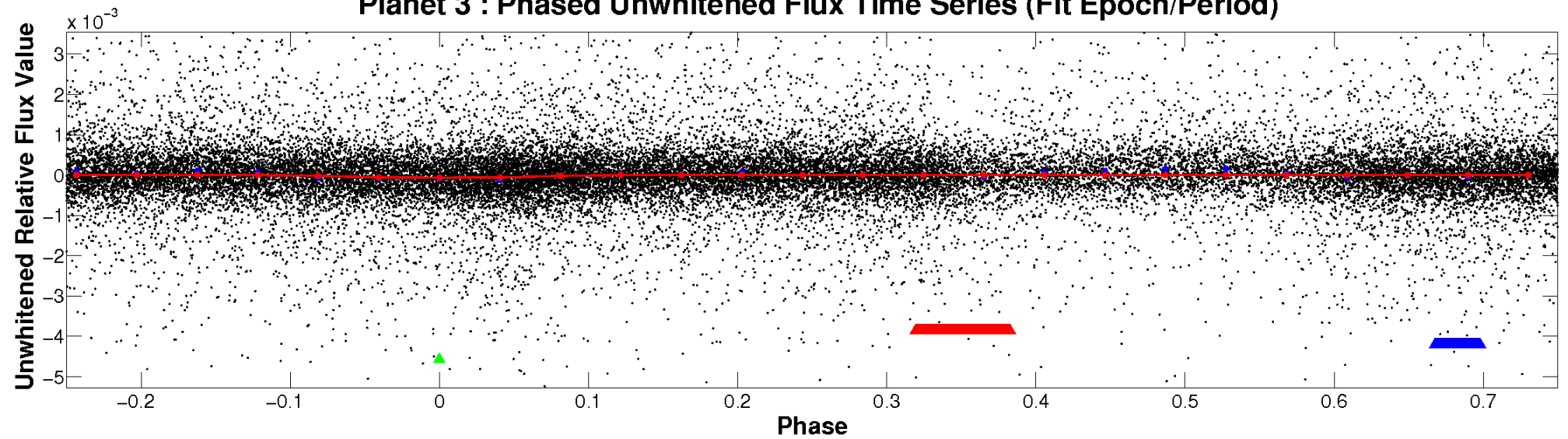
ALT Odd/Even

TCE 010549415-03

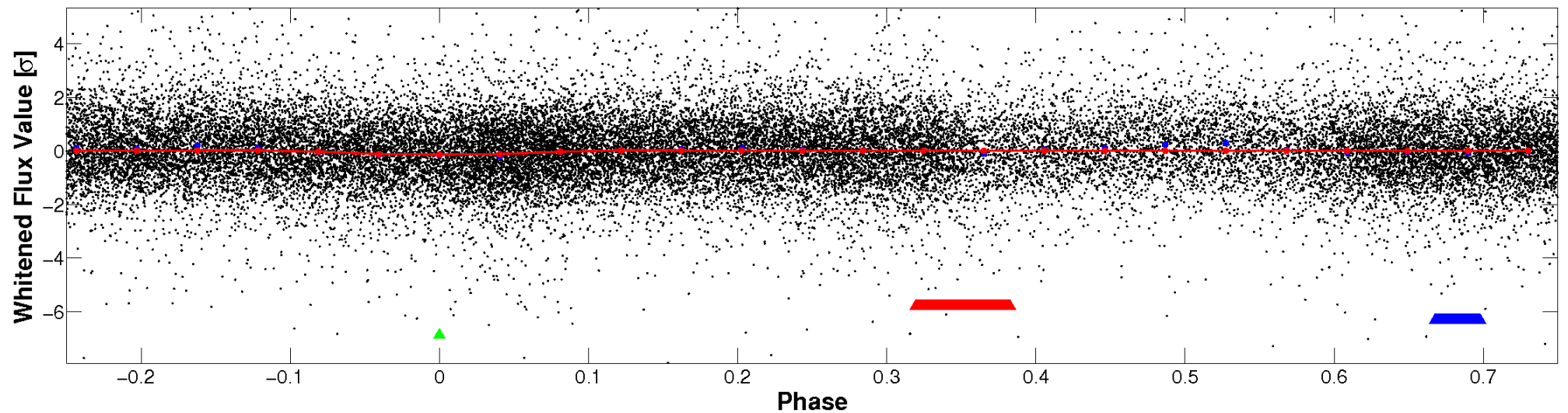


Non-Whitened Vs. Whitened Light Curve

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

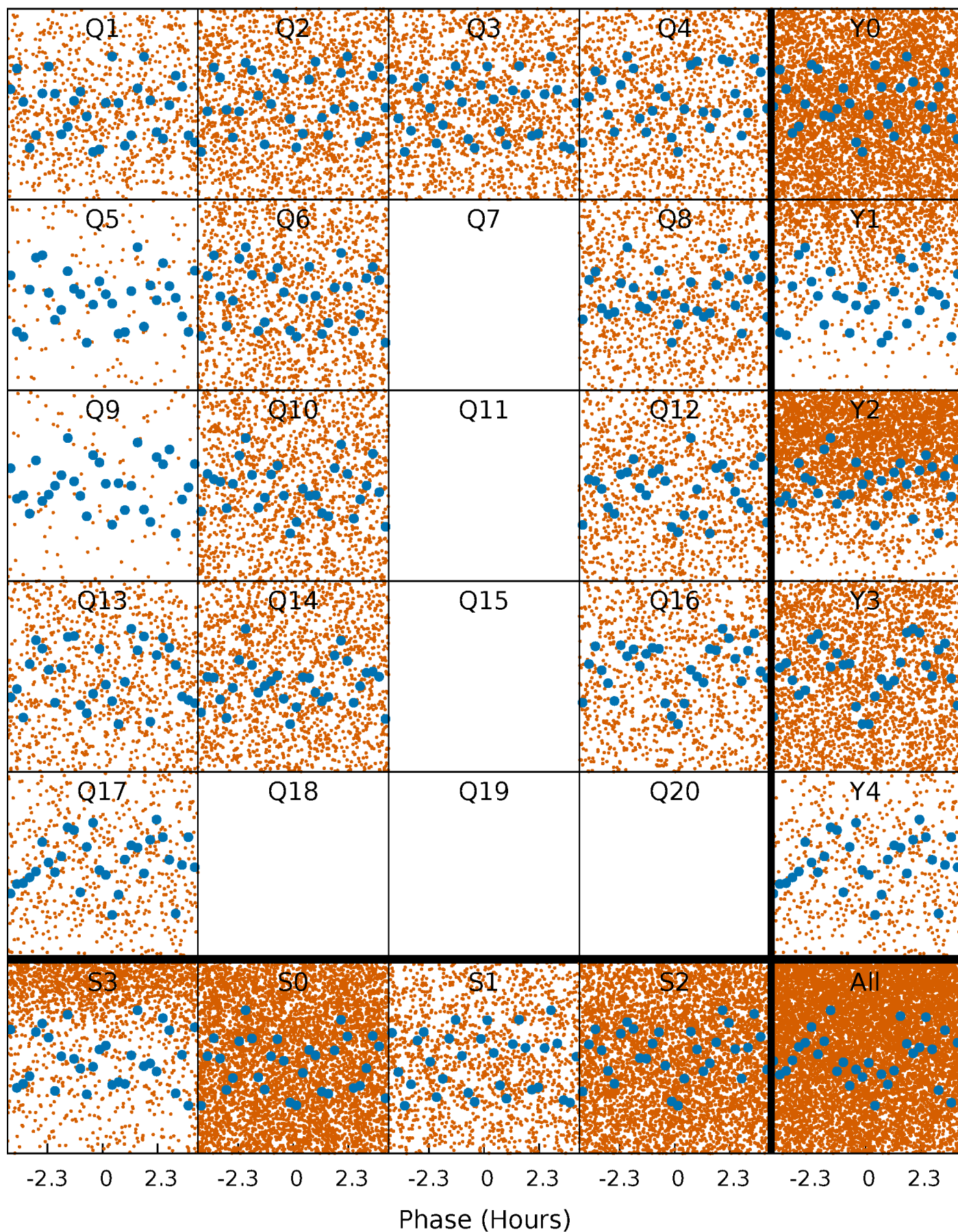


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



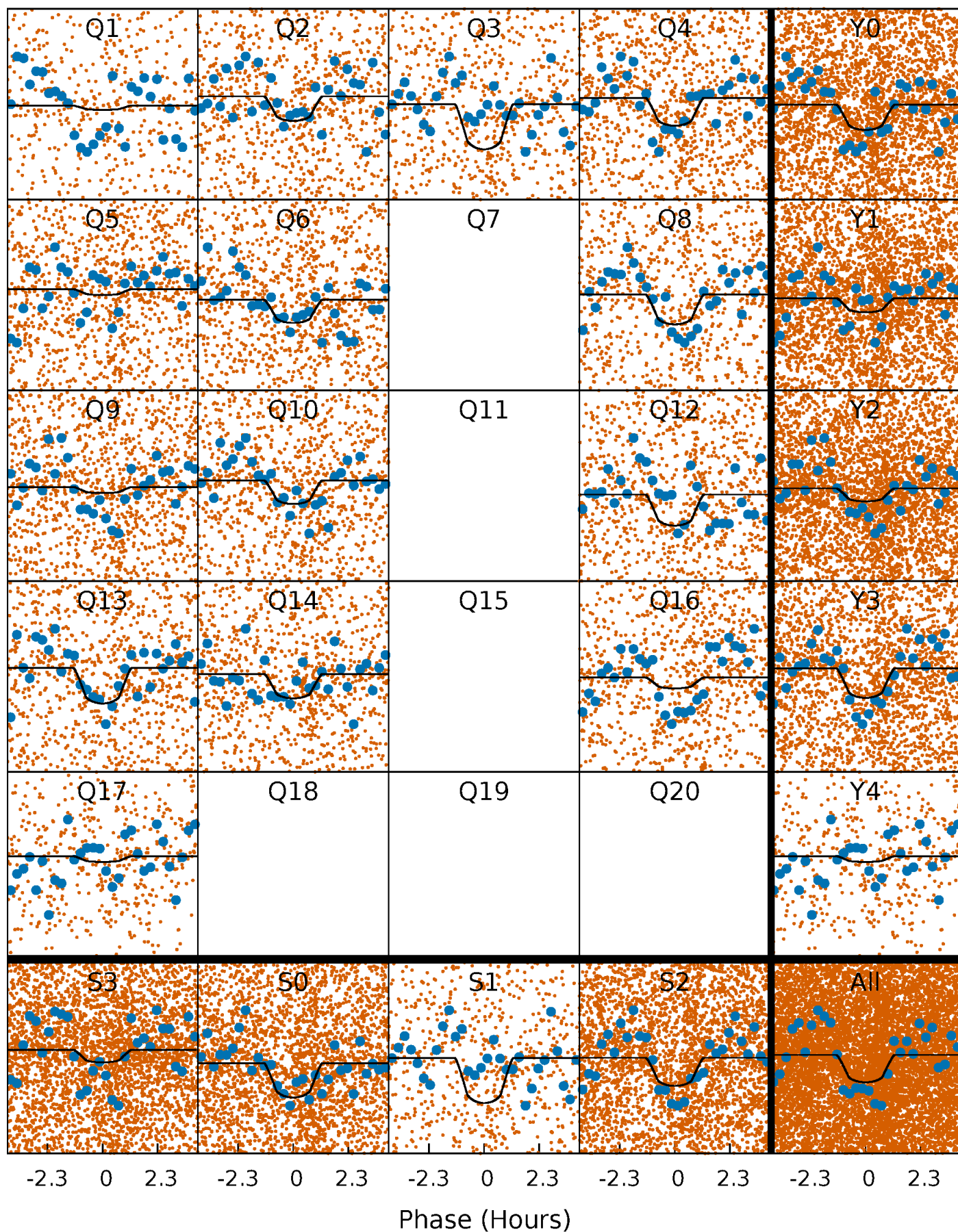
PDC Quarter-Phased Transit Curves

TCE 010549415-03 P= 0.503616 Days $T_0=131.588730$ (BKJD)



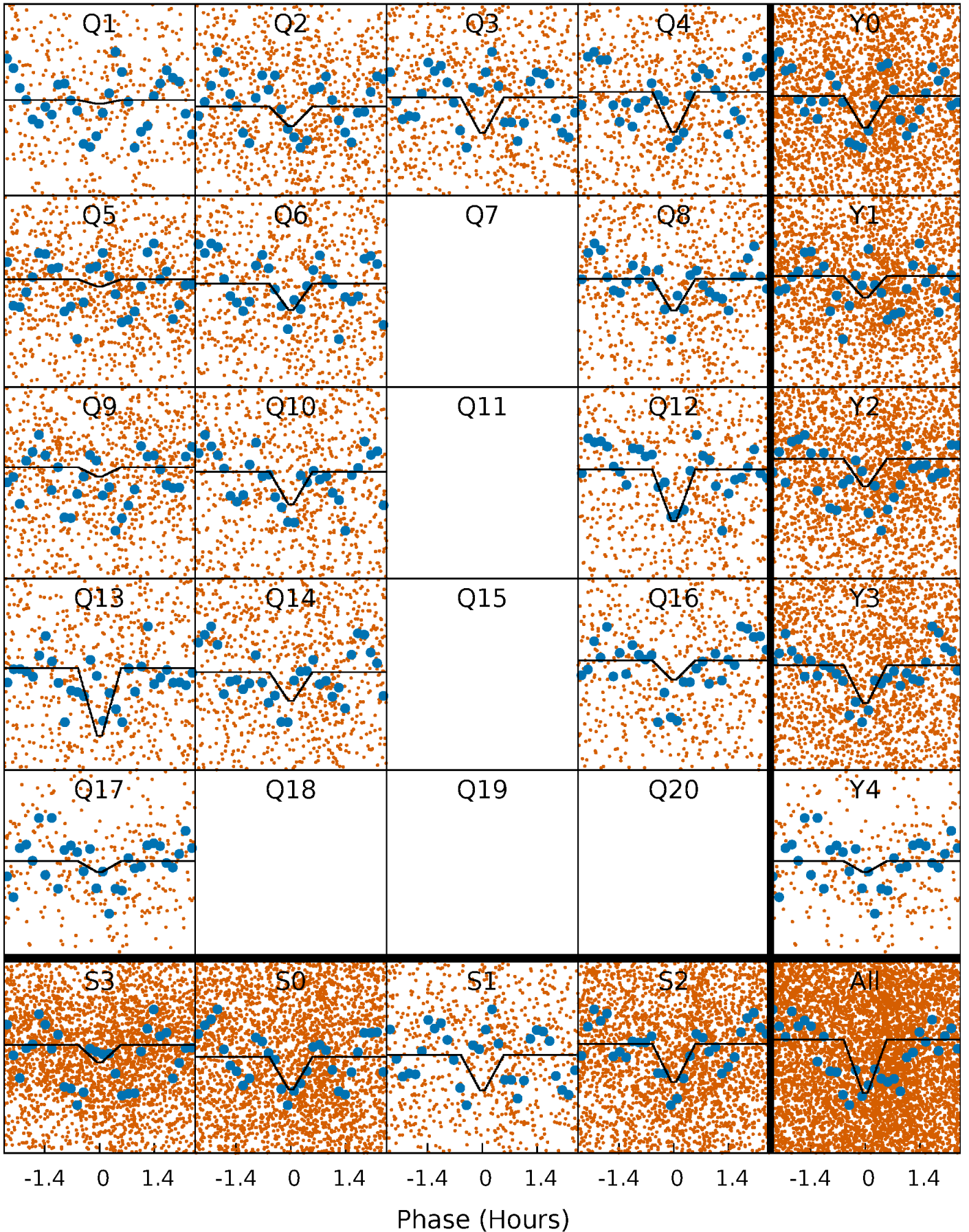
DV Quarter-Phased Transit Curves

TCE 010549415-03 P= 0.503616 Days $T_0=131.588730$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

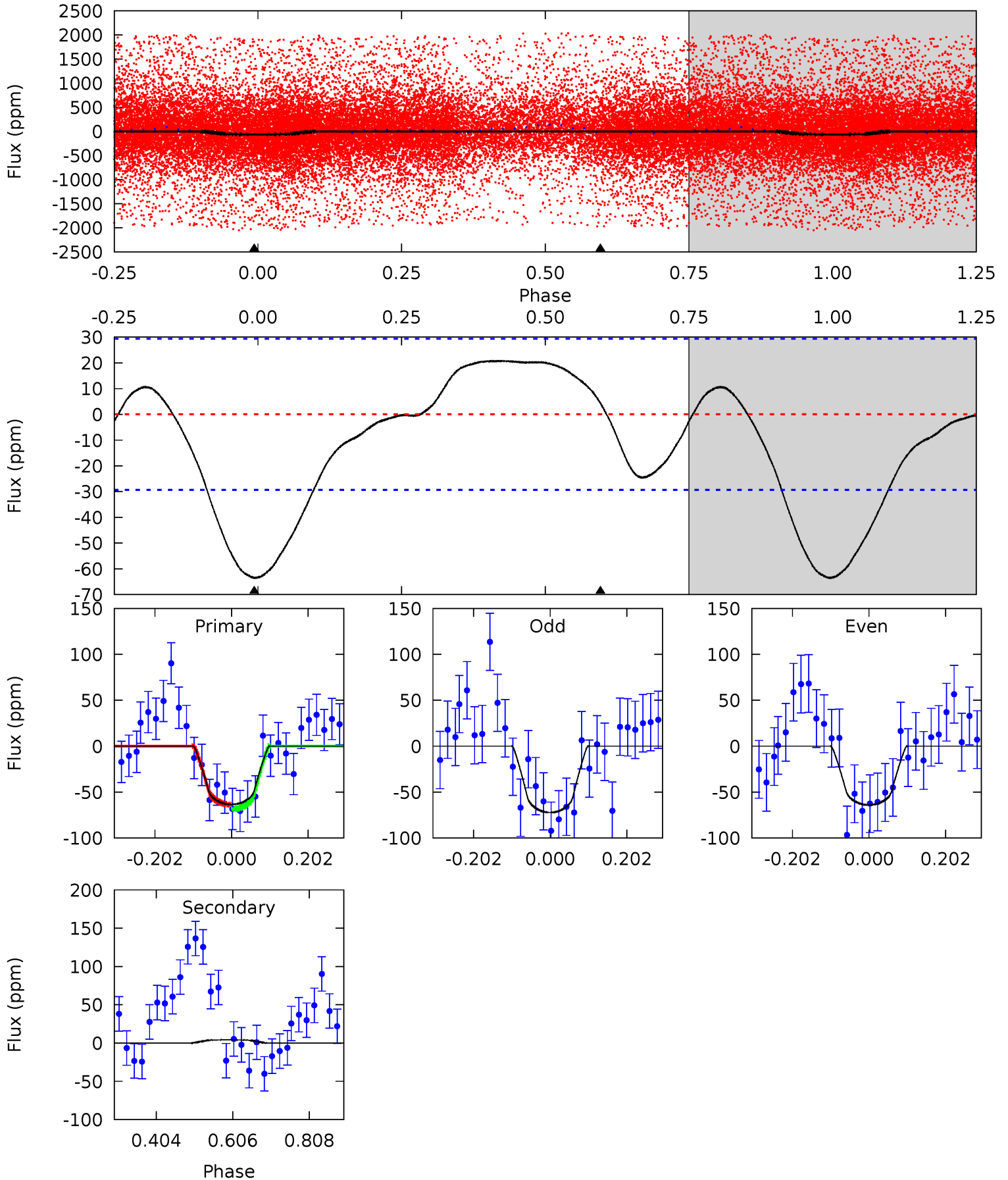
TCE 010549415-03 P= 0.503618 Days $T_0=131.587338$ (BKJD)



DV Model-Shift Uniqueness Test

010549415-03, P = 0.503616 Days, E = 131.085114 Days

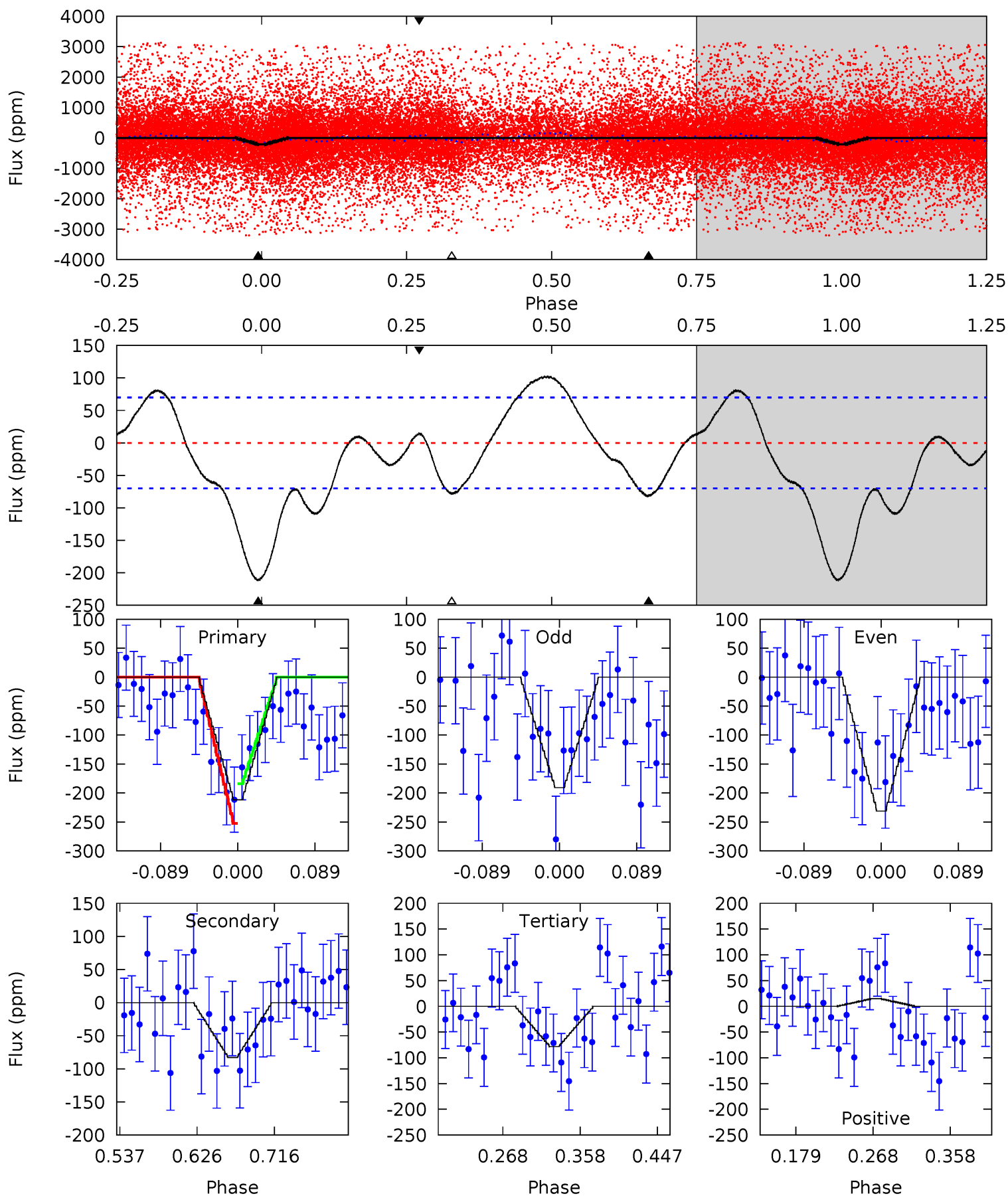
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.55	-0.64	0	0	4.42	1.28	1.19	9.55	9.55	-0.64	-0.64	0.63	1.46	0.25	0.38



Alt Model-Shift Uniqueness Test

010549415-03, P = 0.503618 Days, E = 131.083720 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	5.44	5.13	0.97	4.59	1.70	3.60	8.77	12.9	0.30	4.47	1.37	1.07	0.33	2.26



Stellar Parameters For KIC 010549415

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5266^{+183}_{-165}	$3.579^{+0.880}_{-0.220}$	$0.000^{+0.300}_{-0.300}$	$3.331^{+0.992}_{-2.315}$	$1.535^{+0.221}_{-0.663}$	$0.058^{+1.429}_{-0.033}$
	+3%/-3%	+25%/-6%	+inf%/-inf%	+30%/-69%	+14%/-43%	+2444%/-56%
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 010549415-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	4 ± 7	$3.25^{+3.18}_{-2.08}$	4914^{+458}_{-960}	-4371^{+644}_{-549}	$-0.030^{+0.046}_{-0.266}$
Alt.	-83 ± 15	$4.30^{+3.85}_{-2.59}$	4866^{+565}_{-919}	3581^{+2594}_{-7532}	$0.474^{+2.522}_{-0.345}$

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

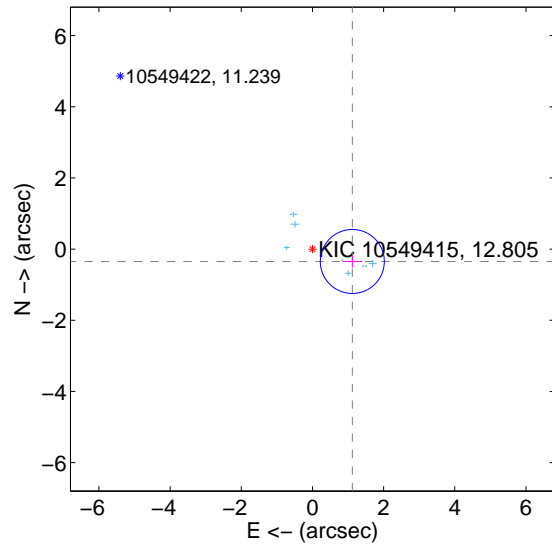
Supplemental centroid analysis for 010549415-03. Kepler magnitude: 12.80. Transit SNR 9.47

There are 9 quarters with good PRF difference image offsets

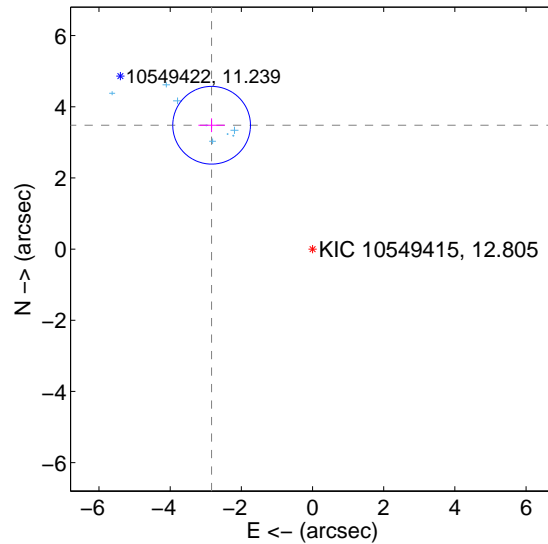
The OOT PRF centroid is offset from the target star catalog position by about 5.32 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.173 ± 0.300	3.91	-1.120 ± 0.275	-0.348 ± 0.172
PRF-fit source offset from KIC position	4.489 ± 0.364	12.34	2.835 ± 0.372	3.480 ± 0.192
photometric centroid source offset	4.47 ± 0.40	11.19	3.23 ± 0.45	3.09 ± 0.34

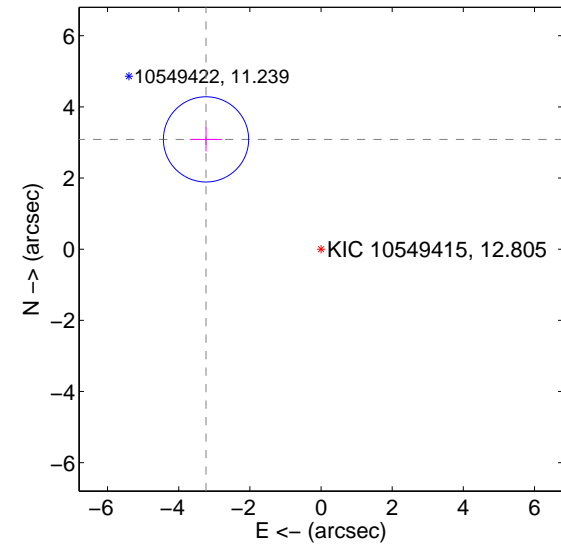
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

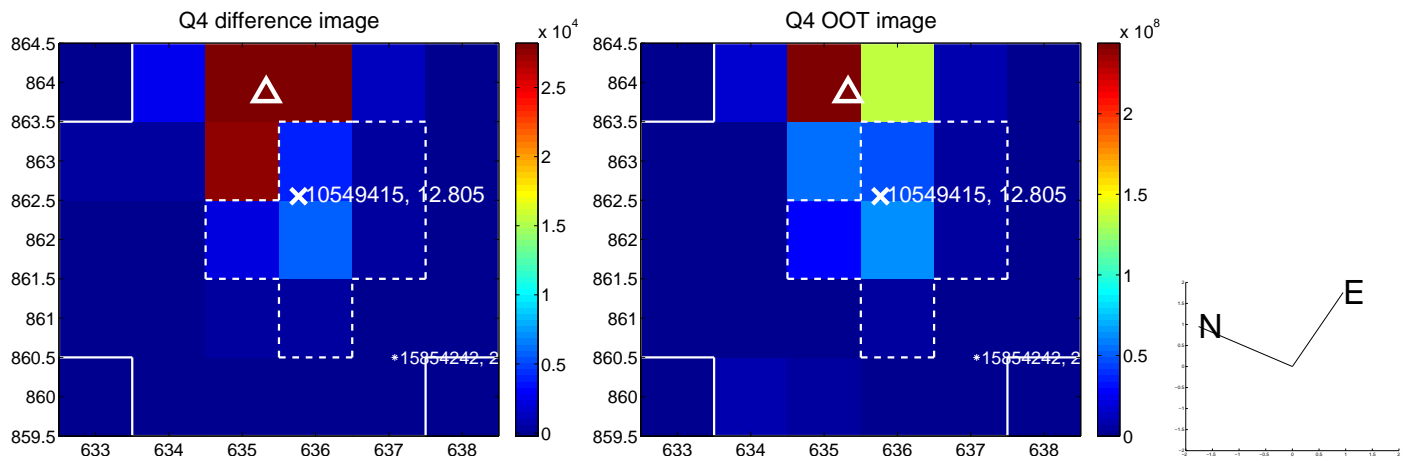
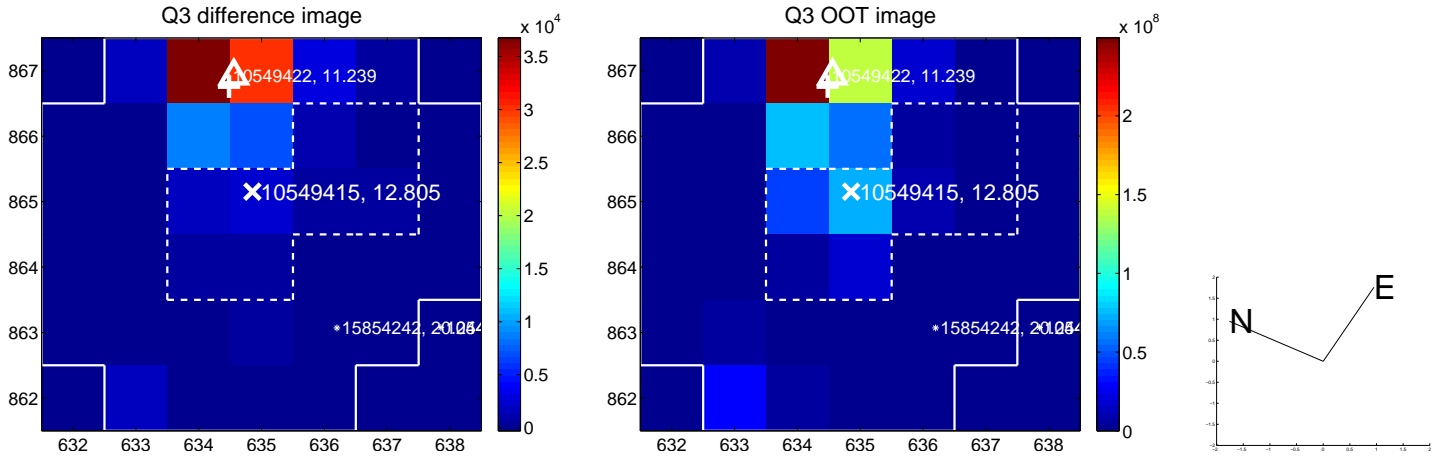
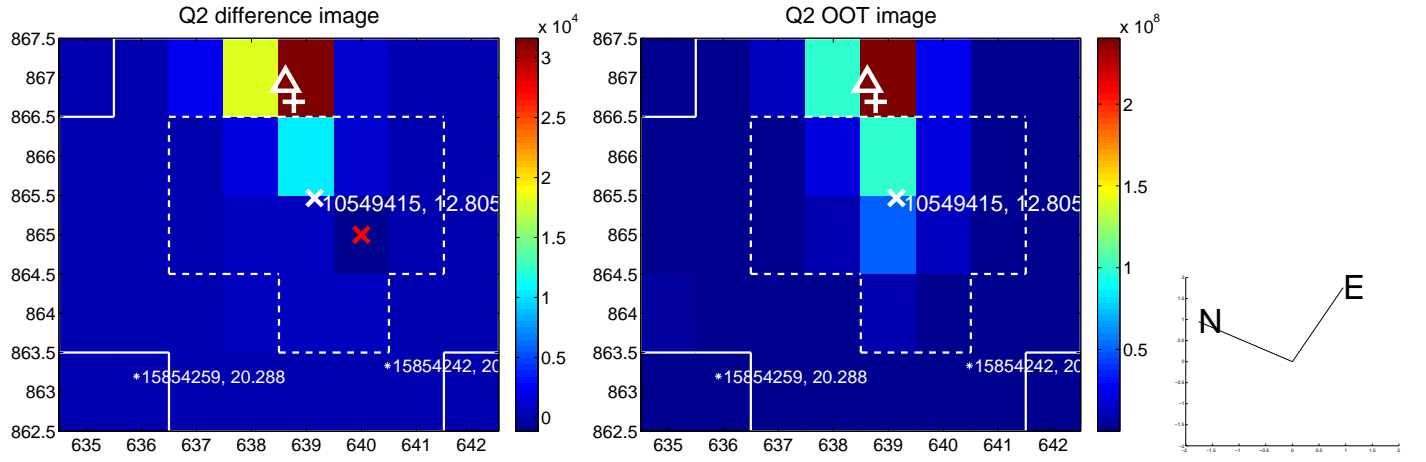
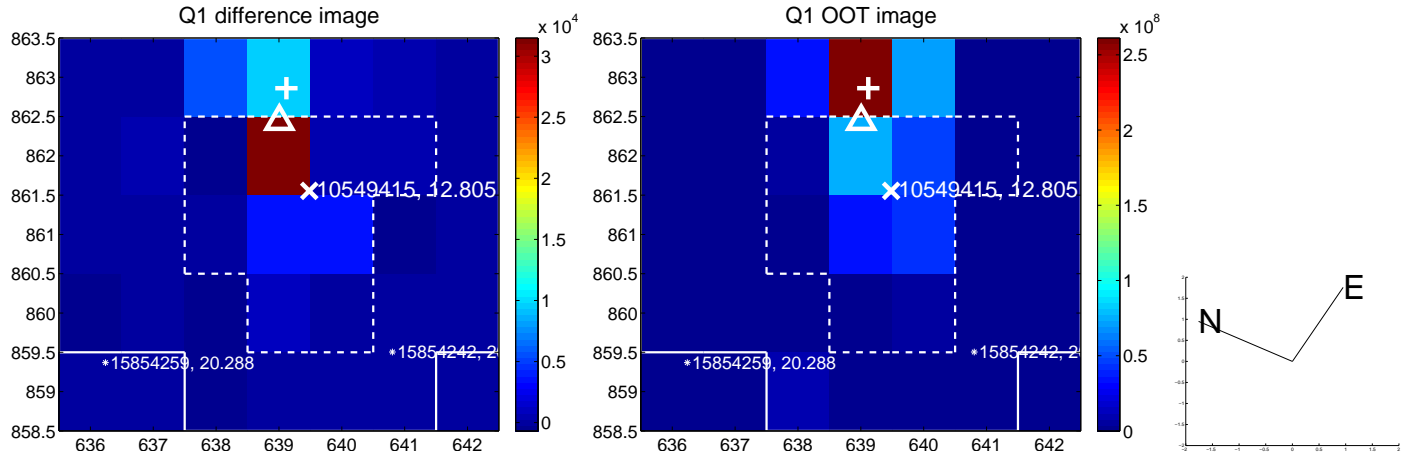


offset from photometric centroids

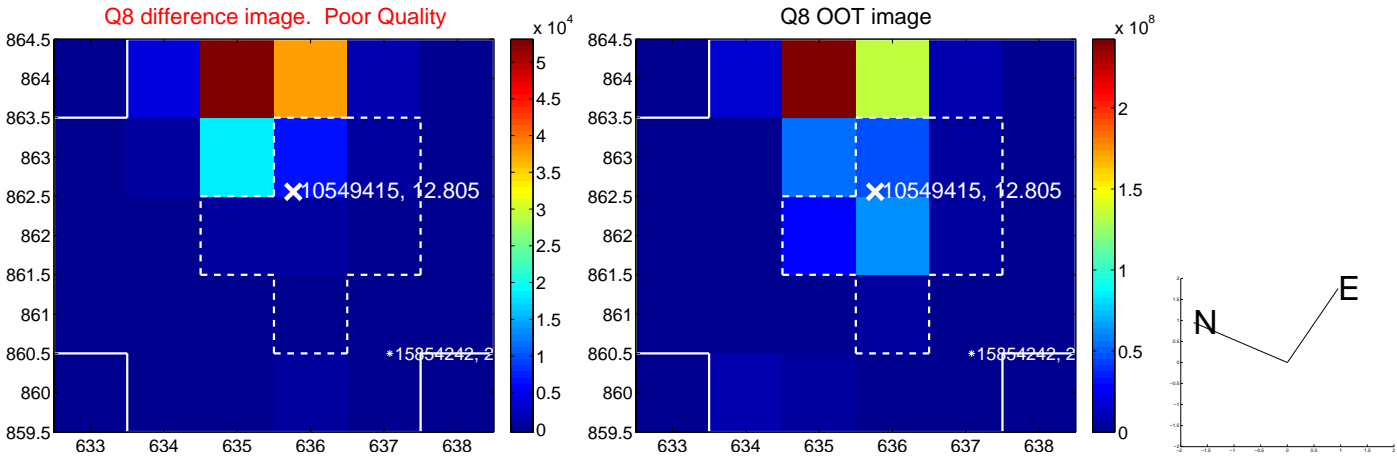
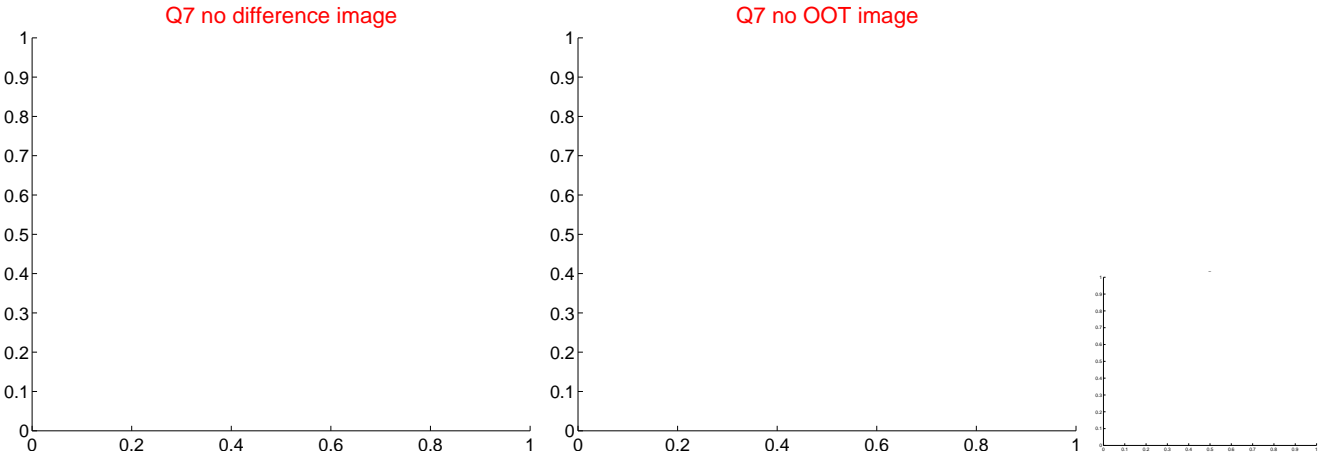
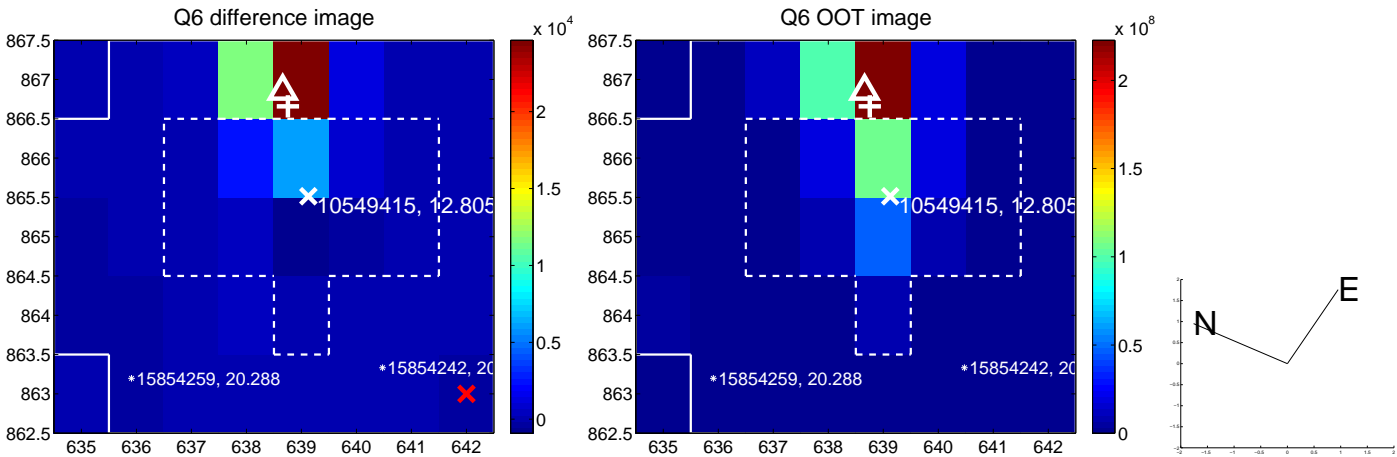
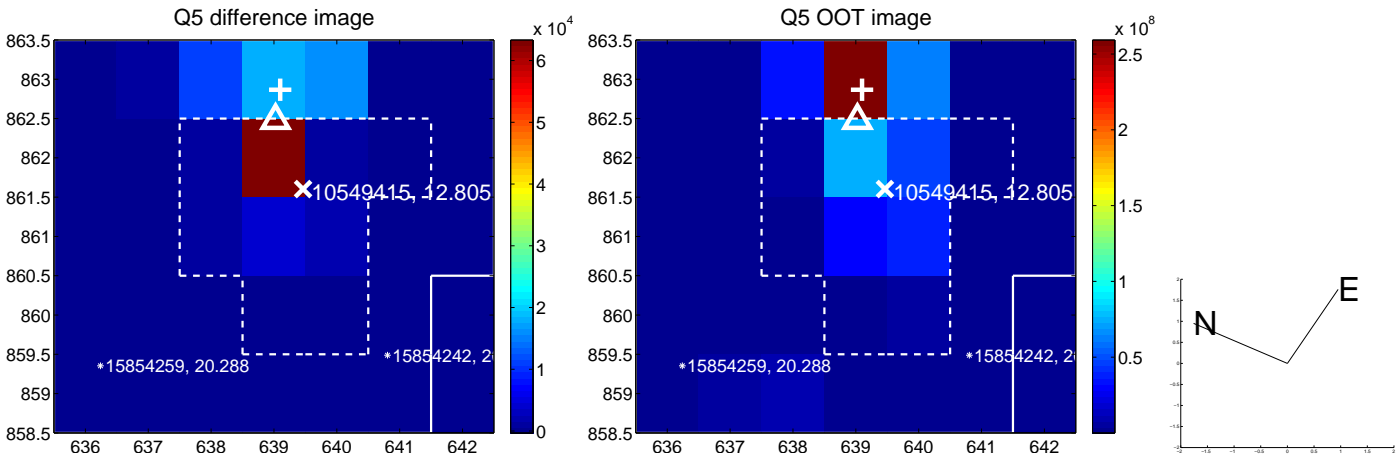


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

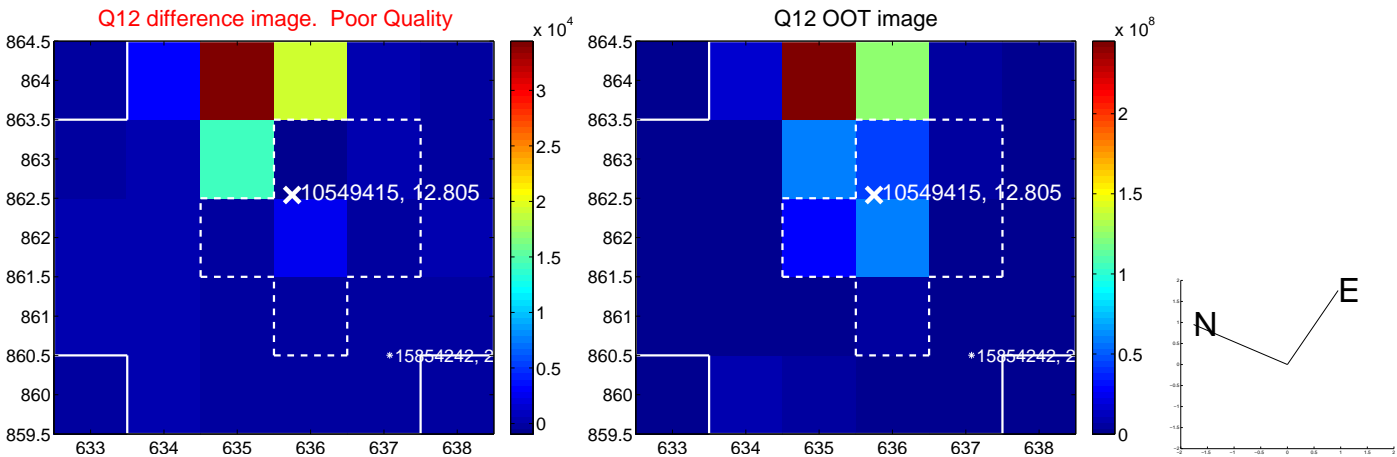
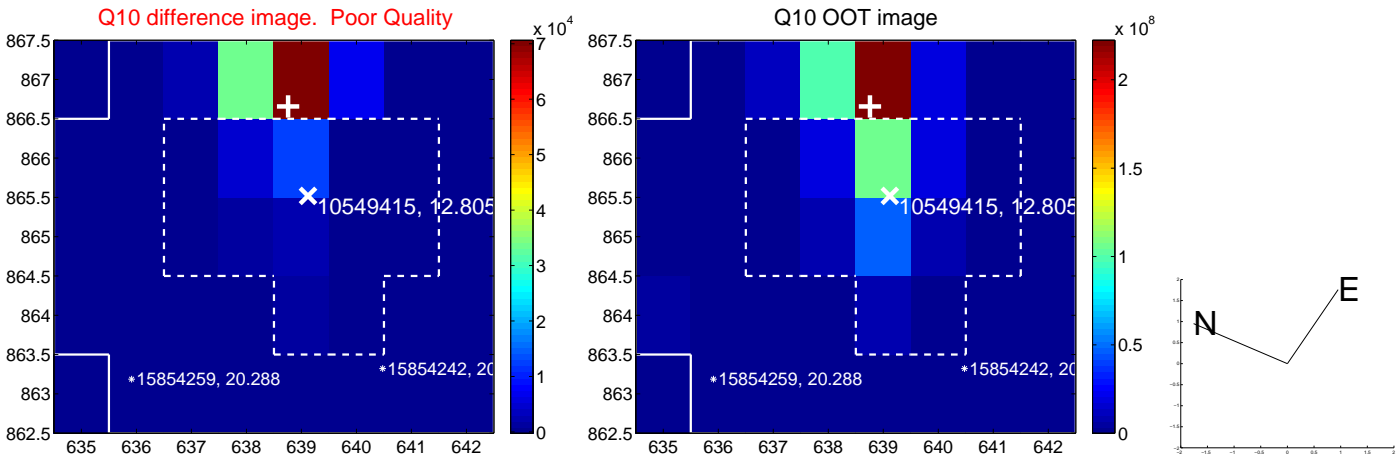
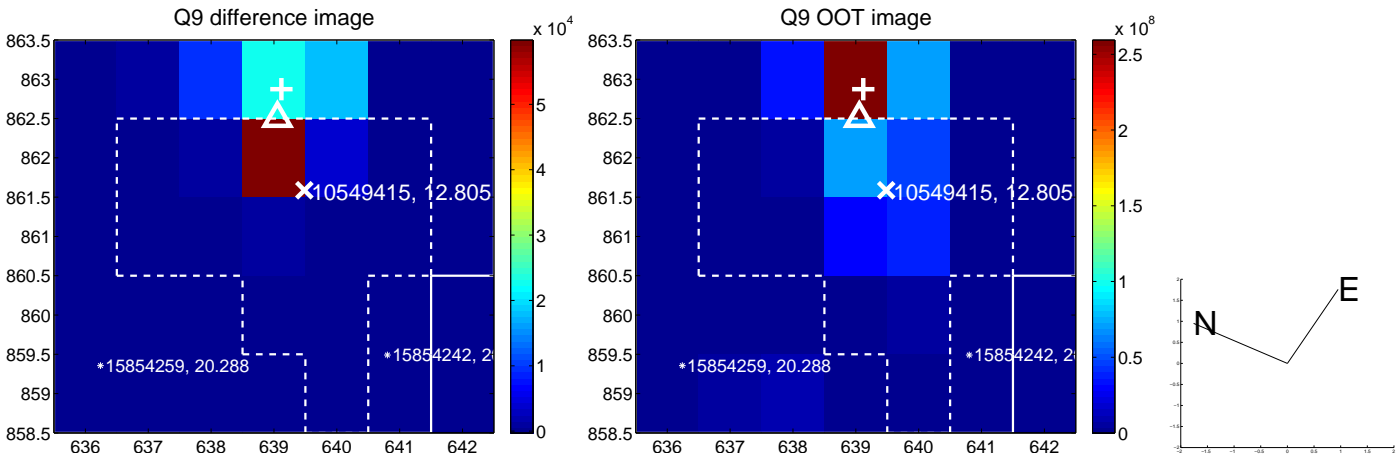
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



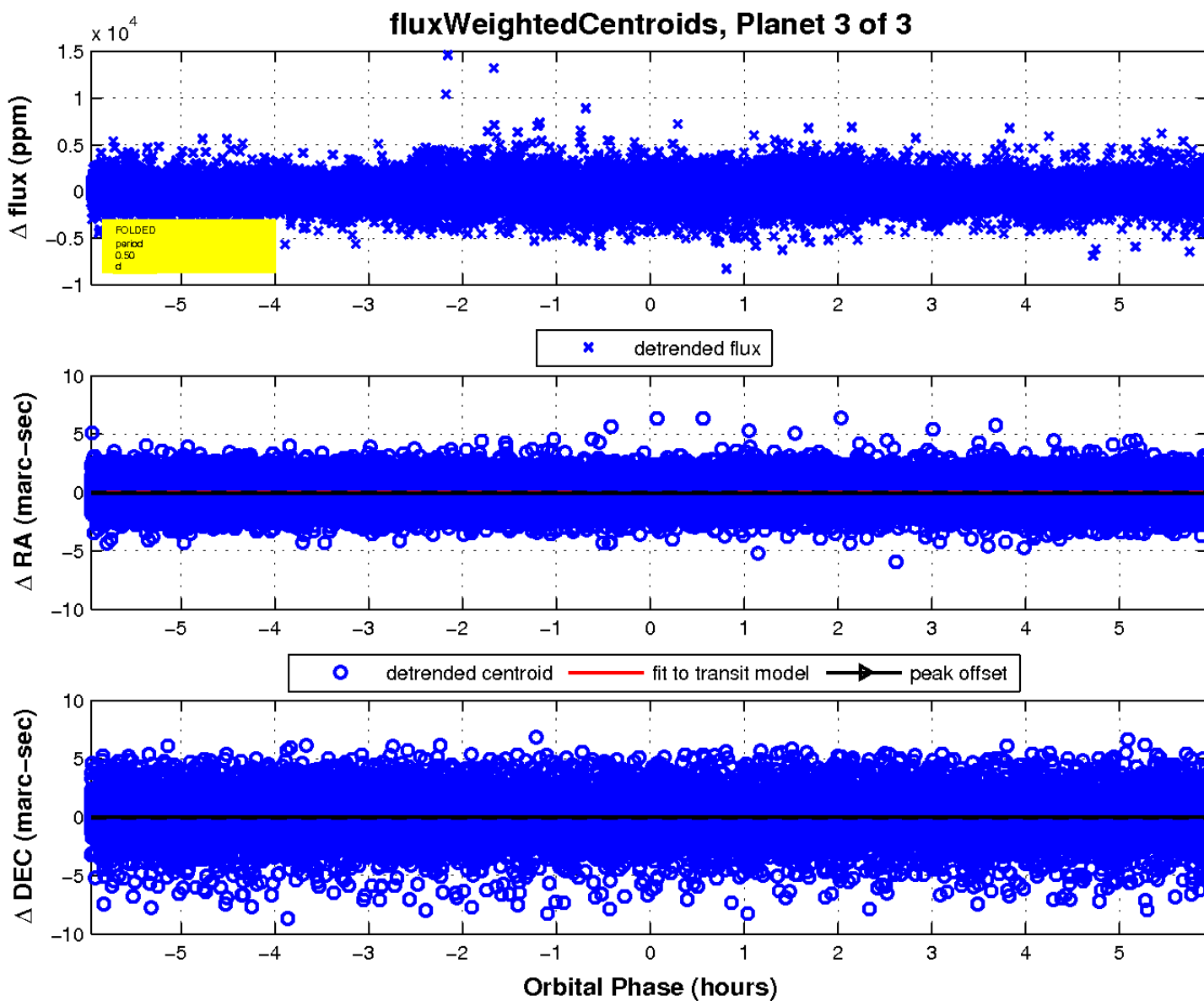
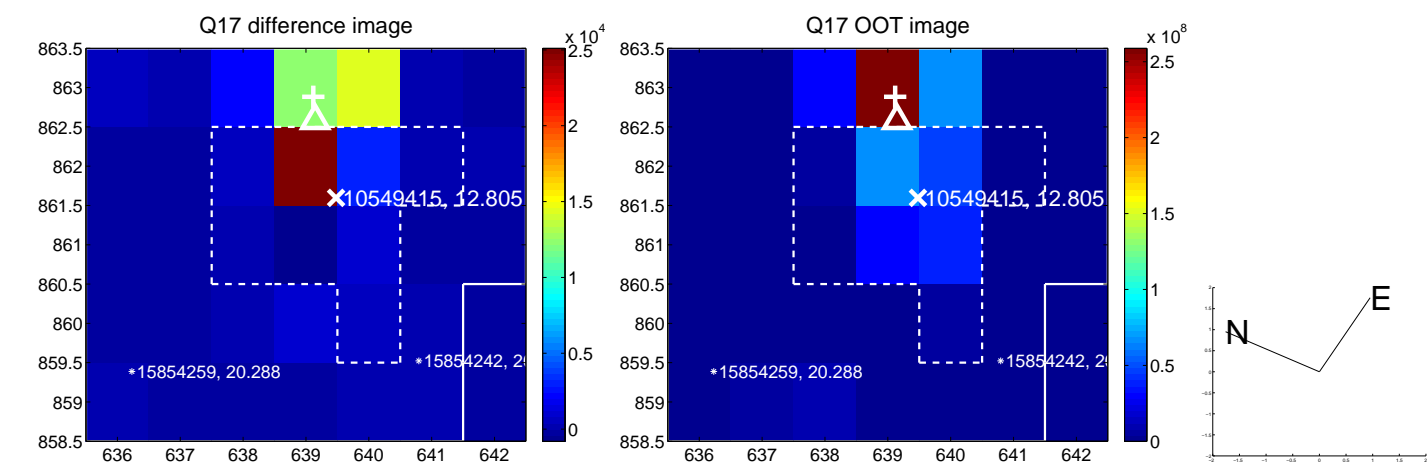
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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