

KIC 003849415

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})
003849415-01	OBS	No	0.638779	131.775097	94.6	4.811	9.5	7.4	0.84	5496	0.88	2840.81
003849415-02	OBS	No	7.788388	136.609447	1976.3	0.871	8.0	11.6	0.84	5496	4.43	101.23
003849415-03	OBS	No	4.424804	131.992443	1537.5	0.558	8.7	7.2	0.84	5496	3.69	215.14
003849415-04	OBS	No	6.523158	134.168545	3523.5	0.599	13.3	21.8	0.84	5496	5.26	128.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003849415-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_MEAS
003849415-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_MEAS
003849415-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
003849415-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET

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

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

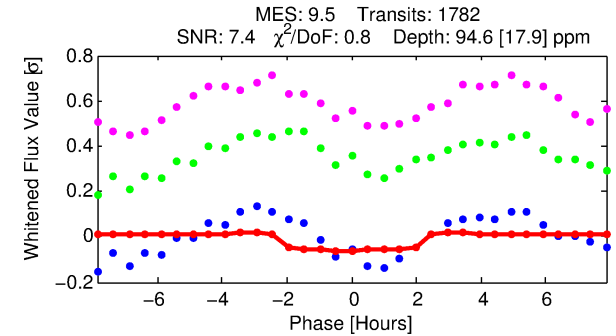
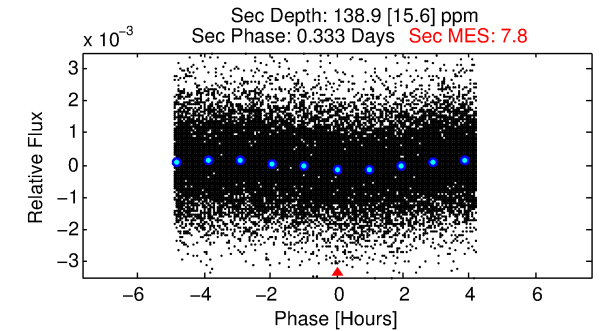
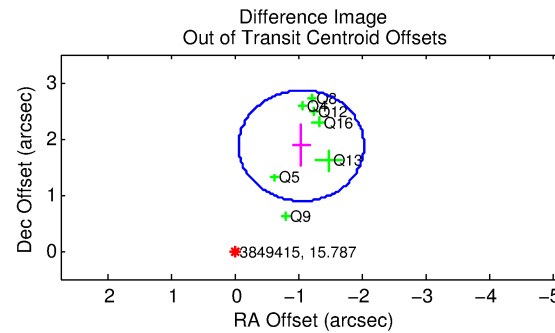
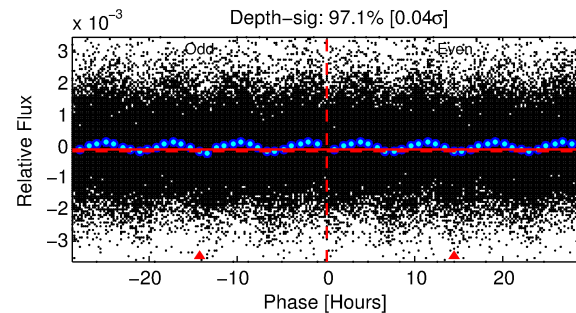
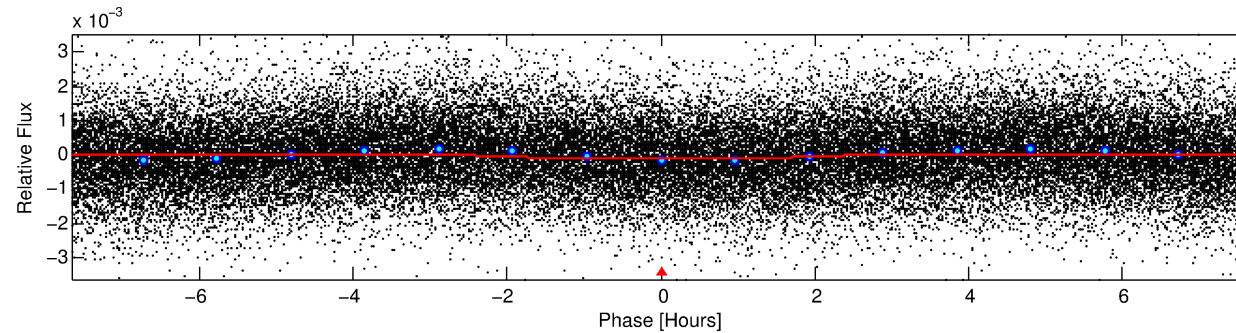
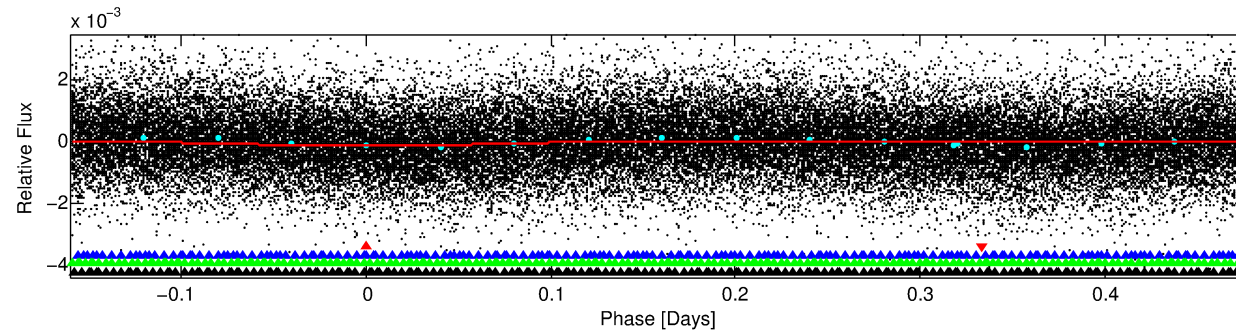
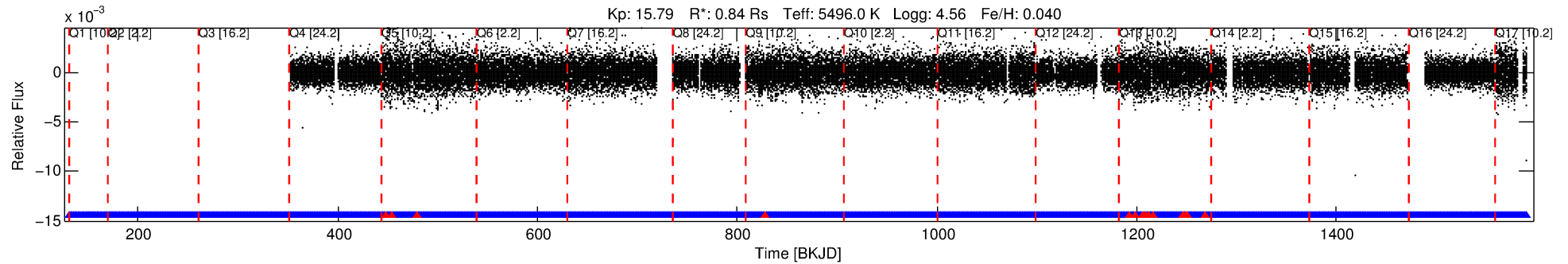
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003849415-01

No Significant Match Found

DV One-Page Summary

KIC: 3849415 Candidate: 1 of 4 Period: 0.639 d



DV Fit Results:

Period = 0.63878 [0.00001] d
Epoch = 131.7751 [0.0049] BKJD
Rp/R* = 0.0096 [0.0083]
a/R* = 1.11 [0.76]
b = 0.72 [2.46]
Seff = 2840.81 [914.19]
Teq = 1862 [150] K
Rp = 0.87 [0.79] Re
a = 0.0142 [0.0029] AU
Ag = 20.19 [35.63] [0.54σ]
Teffp = 6101 [2662] K [1.59σ]

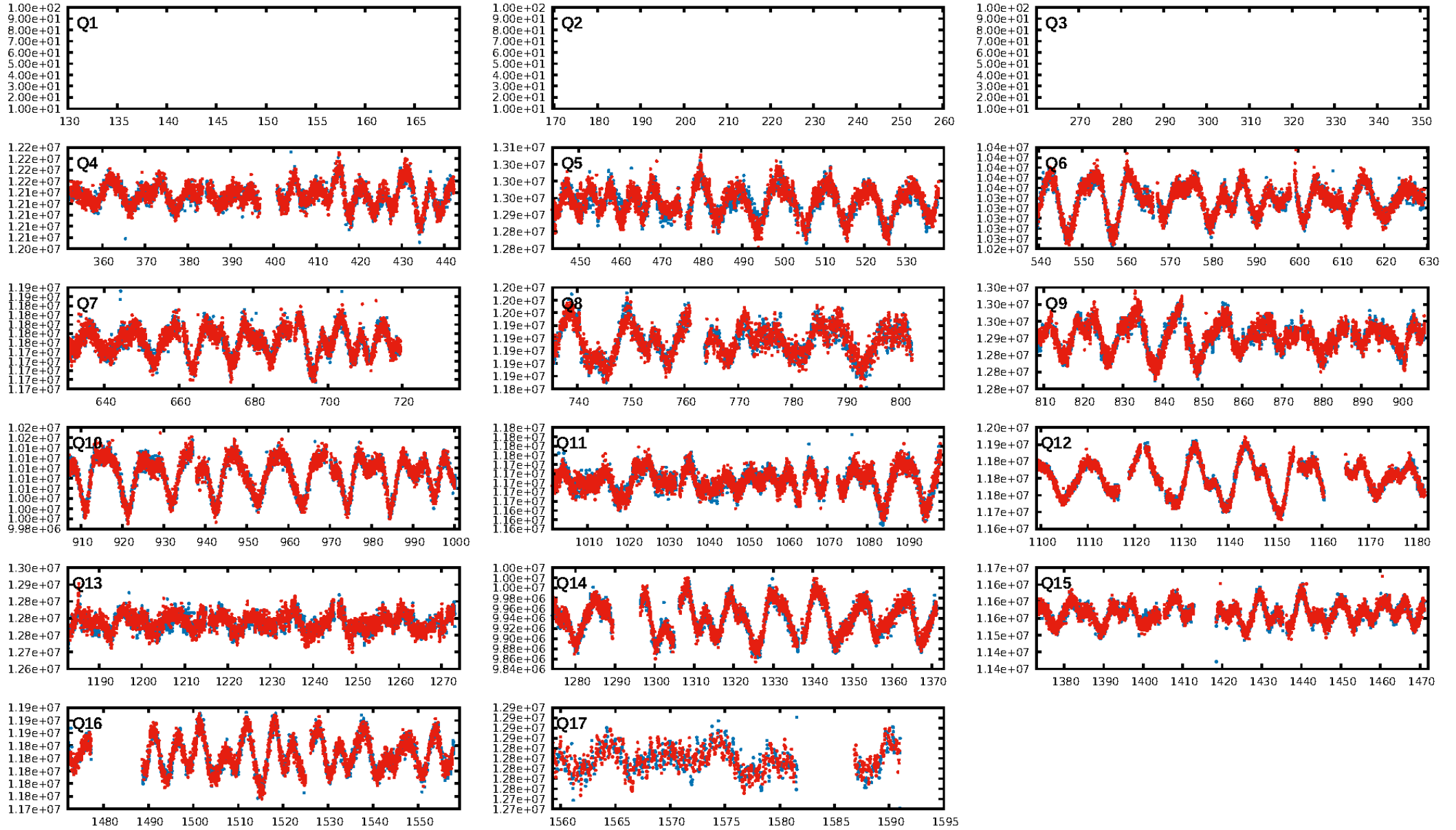
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [18.76σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.90e-07
RollingBand-fgt: 0.99 [1726/1740]
GhostDiagnostic-chr: -1.035
Centroid-sig: 0.0%
Centroid-so: 3.224 arcsec [13.89σ]
OotOffset-rm: 2.141 arcsec [6.52σ]
KicOffset-rm: 4.408 arcsec [13.27σ]
OotOffset-st: 0/0/4/3 [7]
KicOffset-st: 0/0/4/3 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 1.00 [14/14]

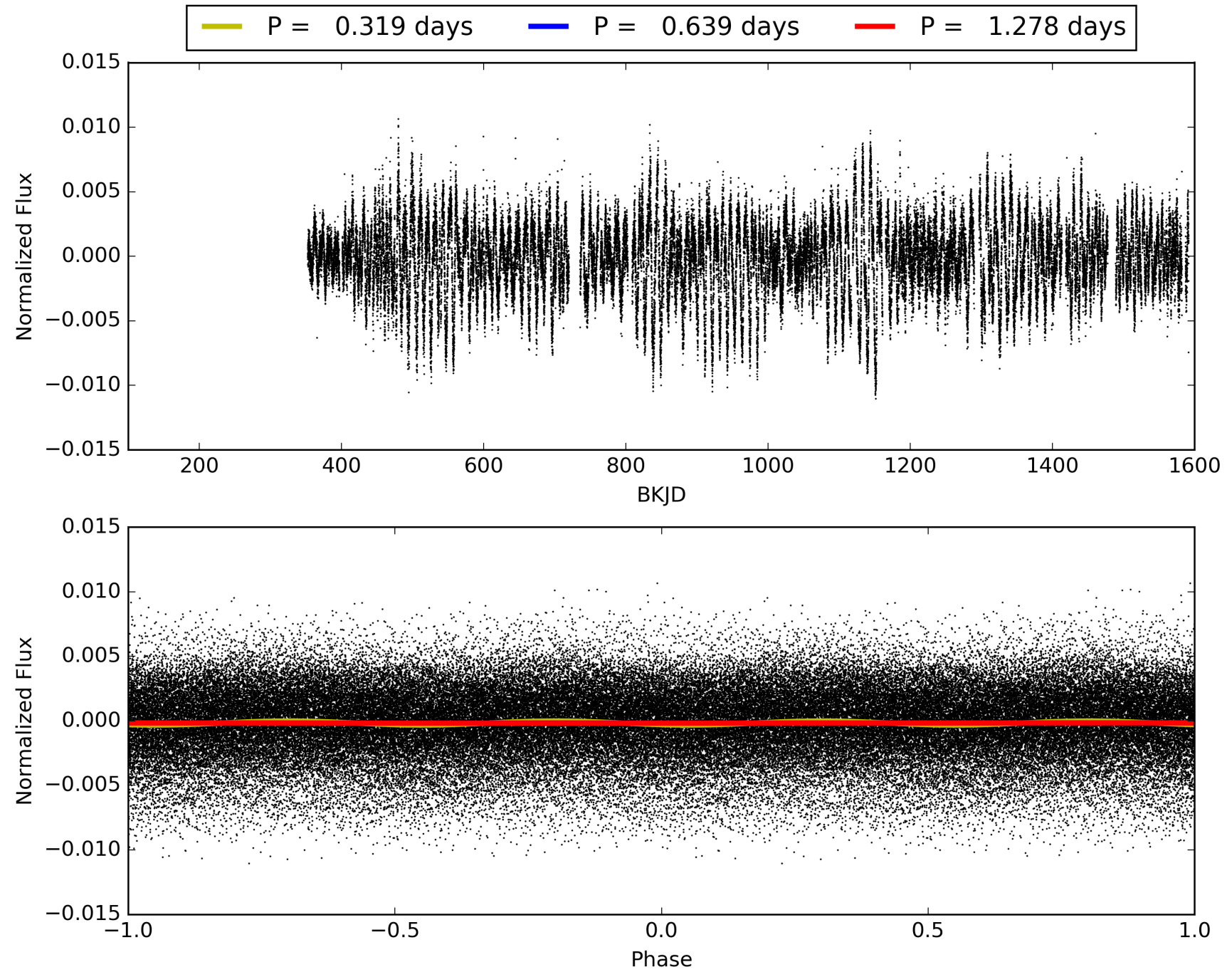
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:34:41 Z

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

TCE 003849415-01, PDC Light Curves

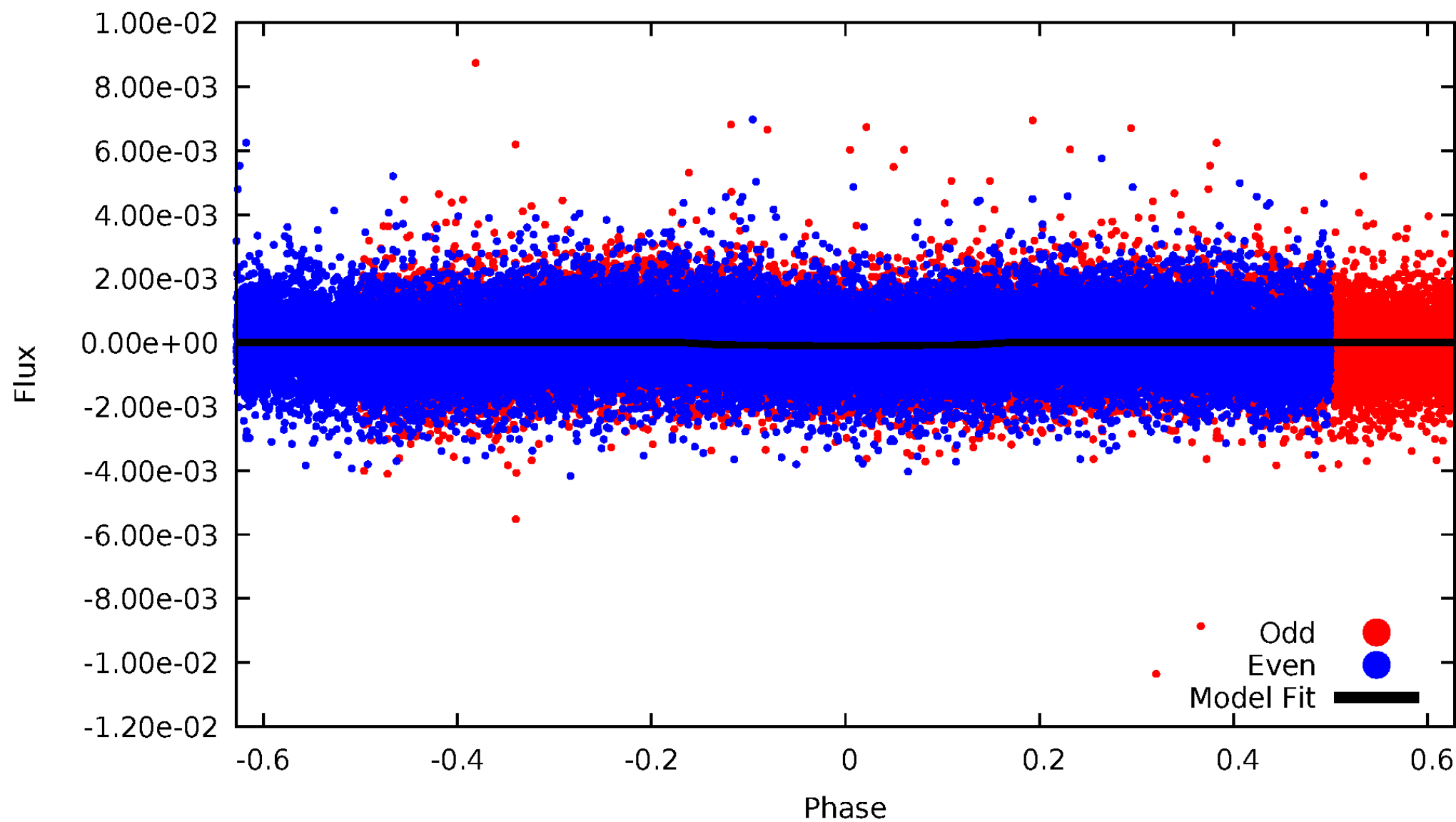


TCE 003849415-01



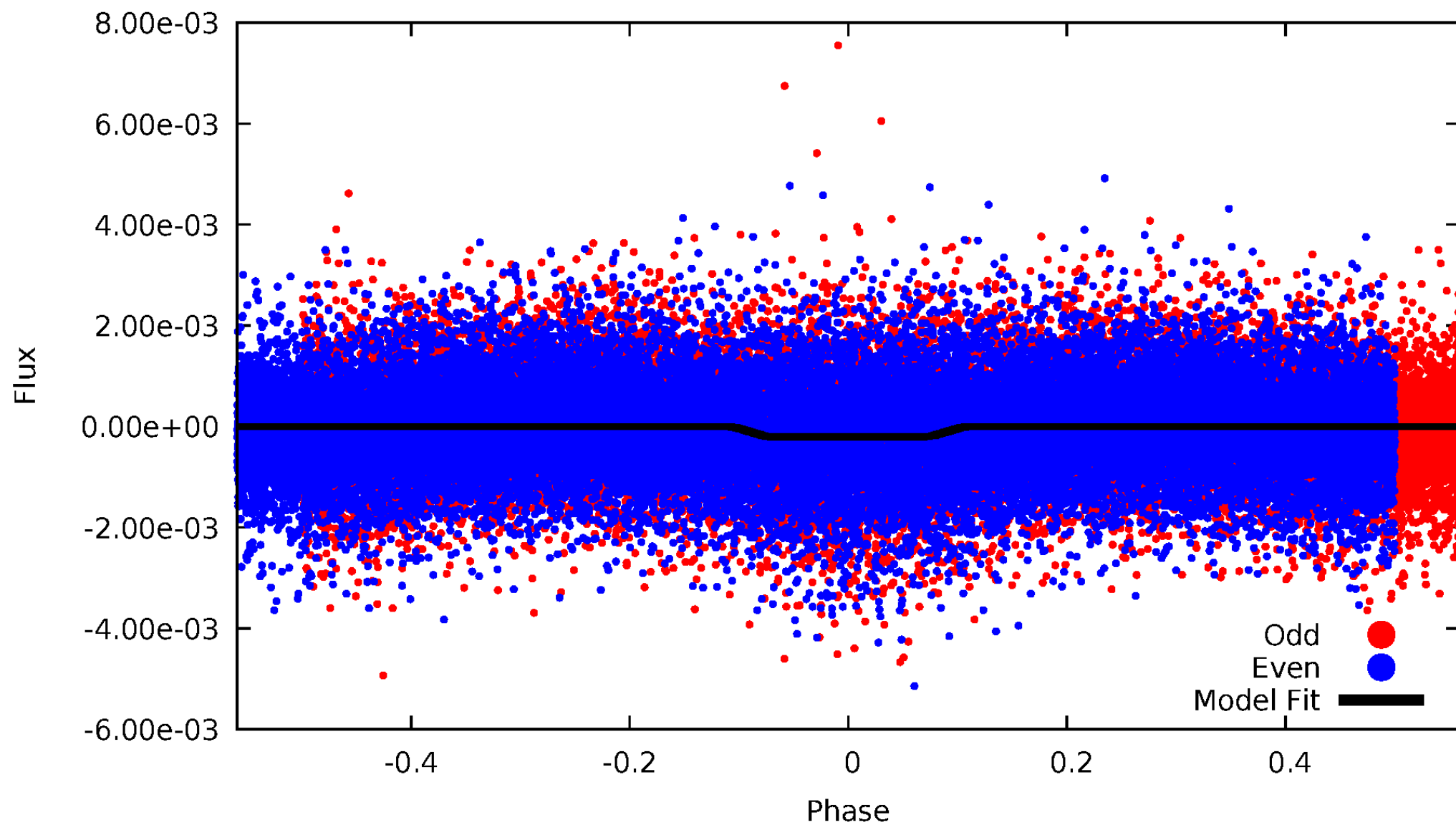
DV Odd/Even

TCE 003849415-01

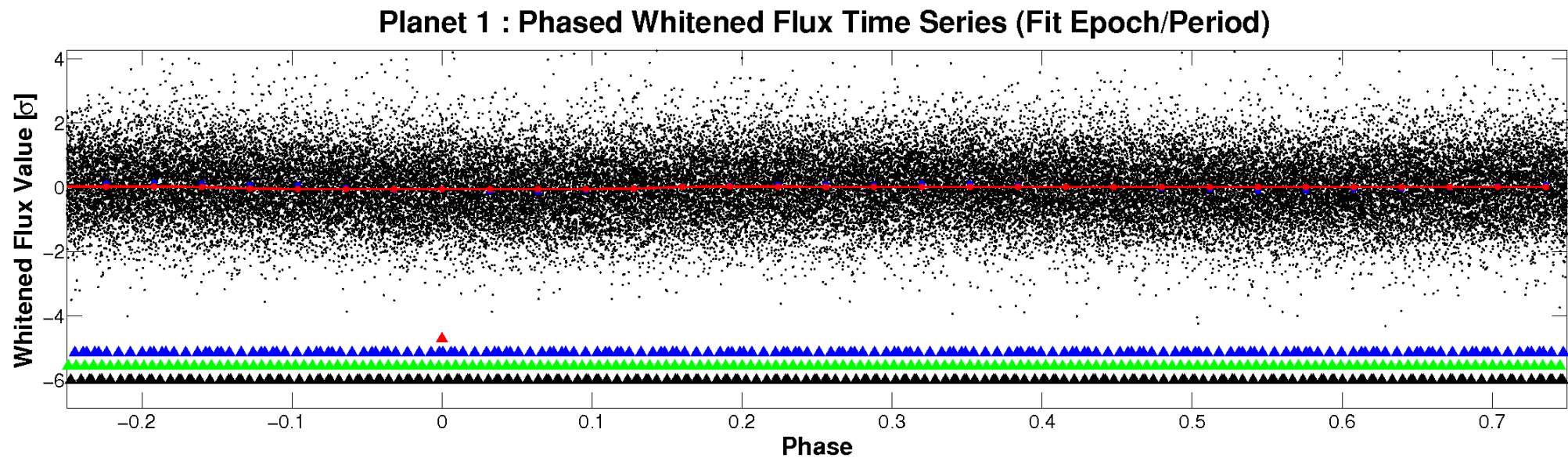
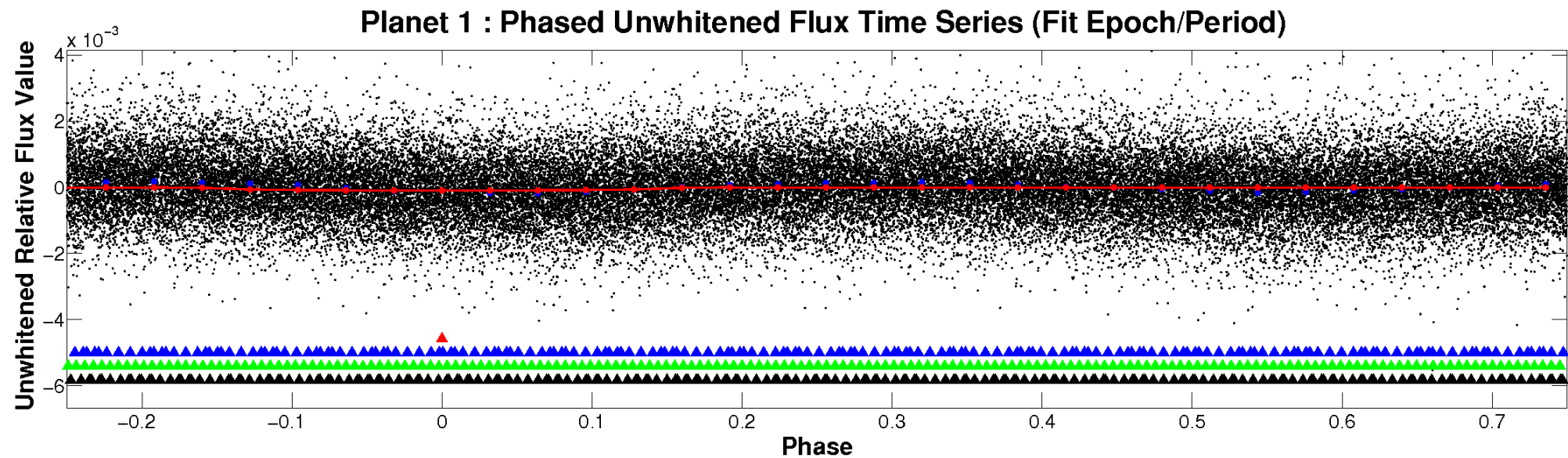


ALT Odd/Even

TCE 003849415-01

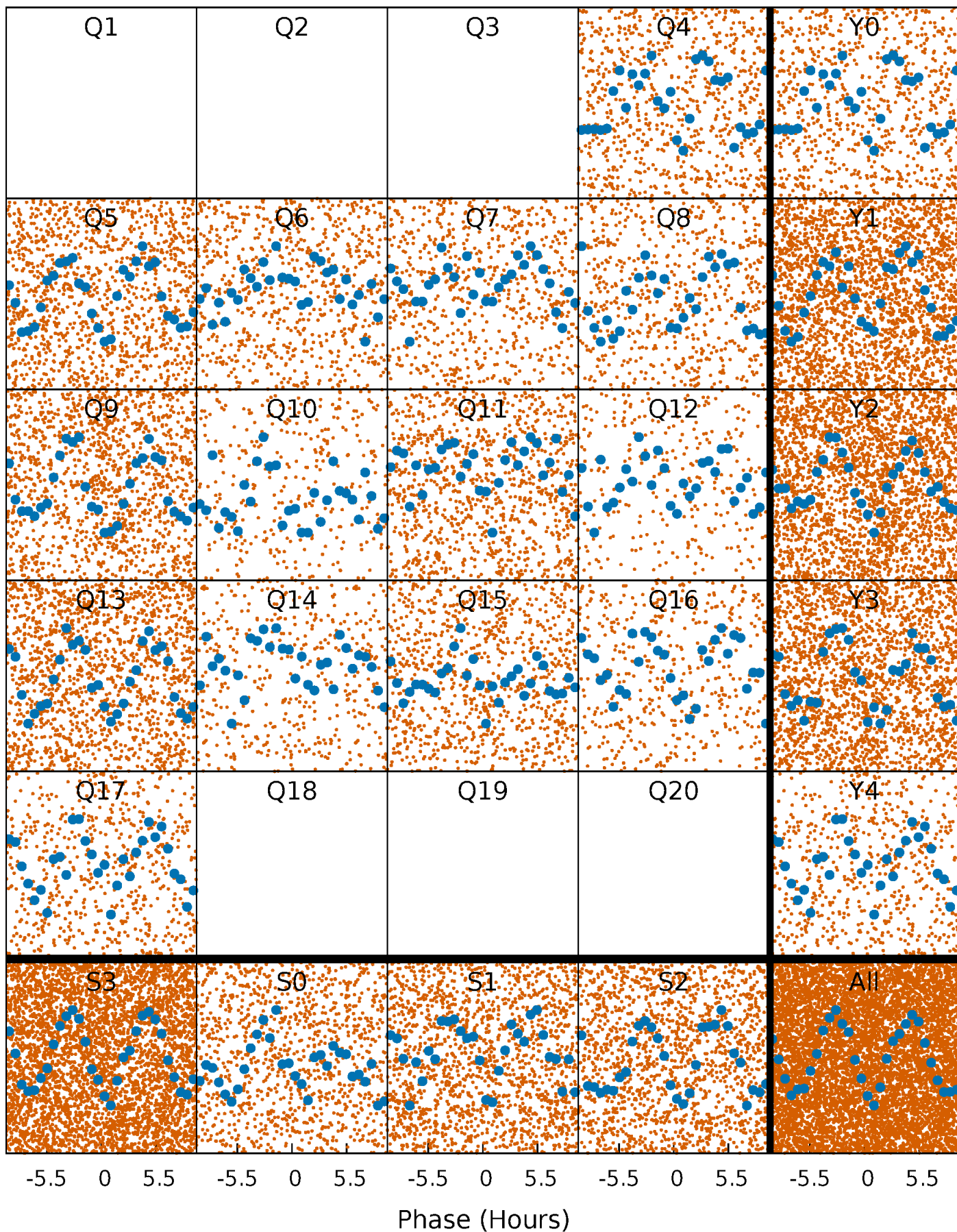


Non-Whitened Vs. Whitened Light Curve



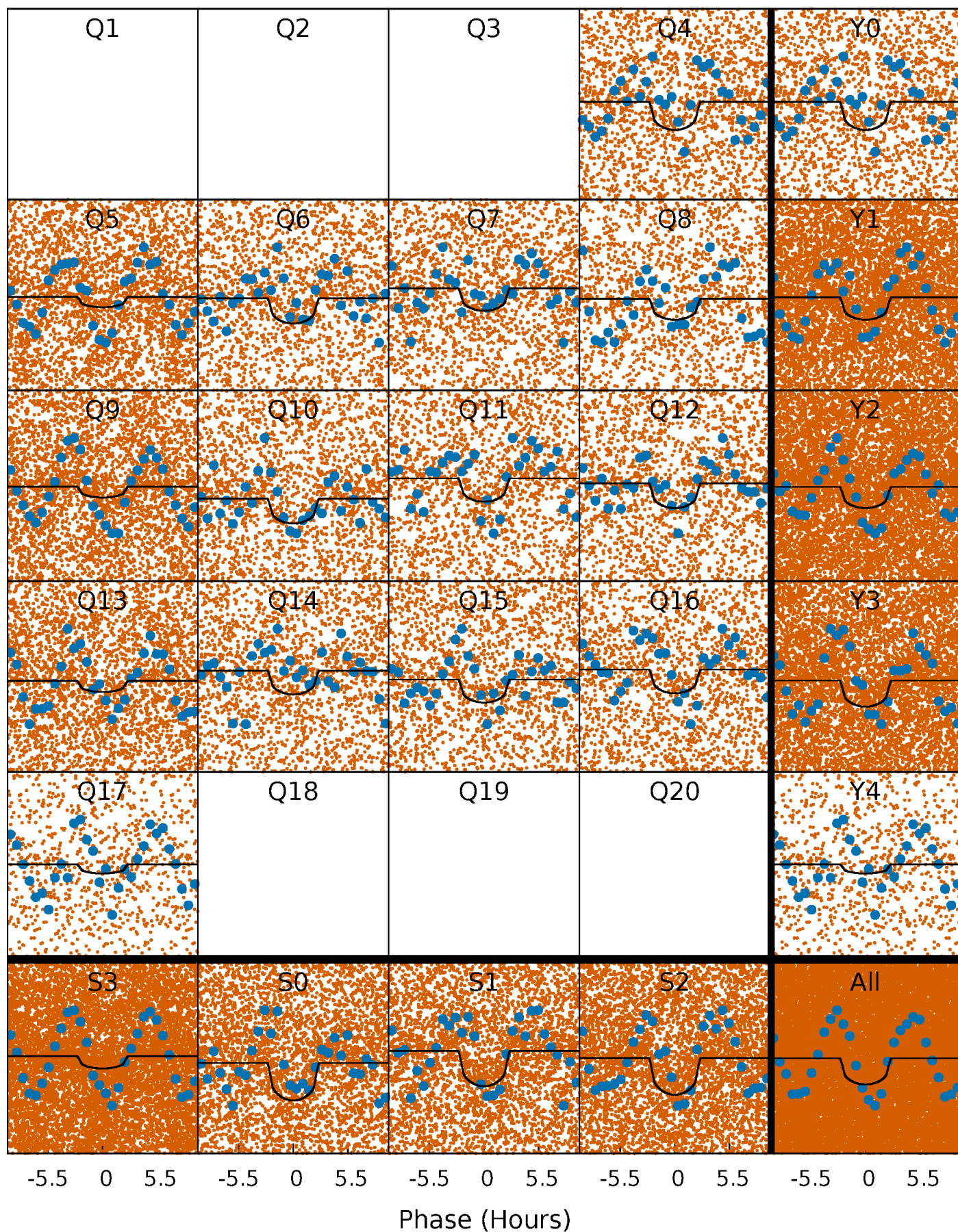
PDC Quarter-Phased Transit Curves

TCE 003849415-01 P= 0.638779 Days $T_0=131.775097$ (BKJD)



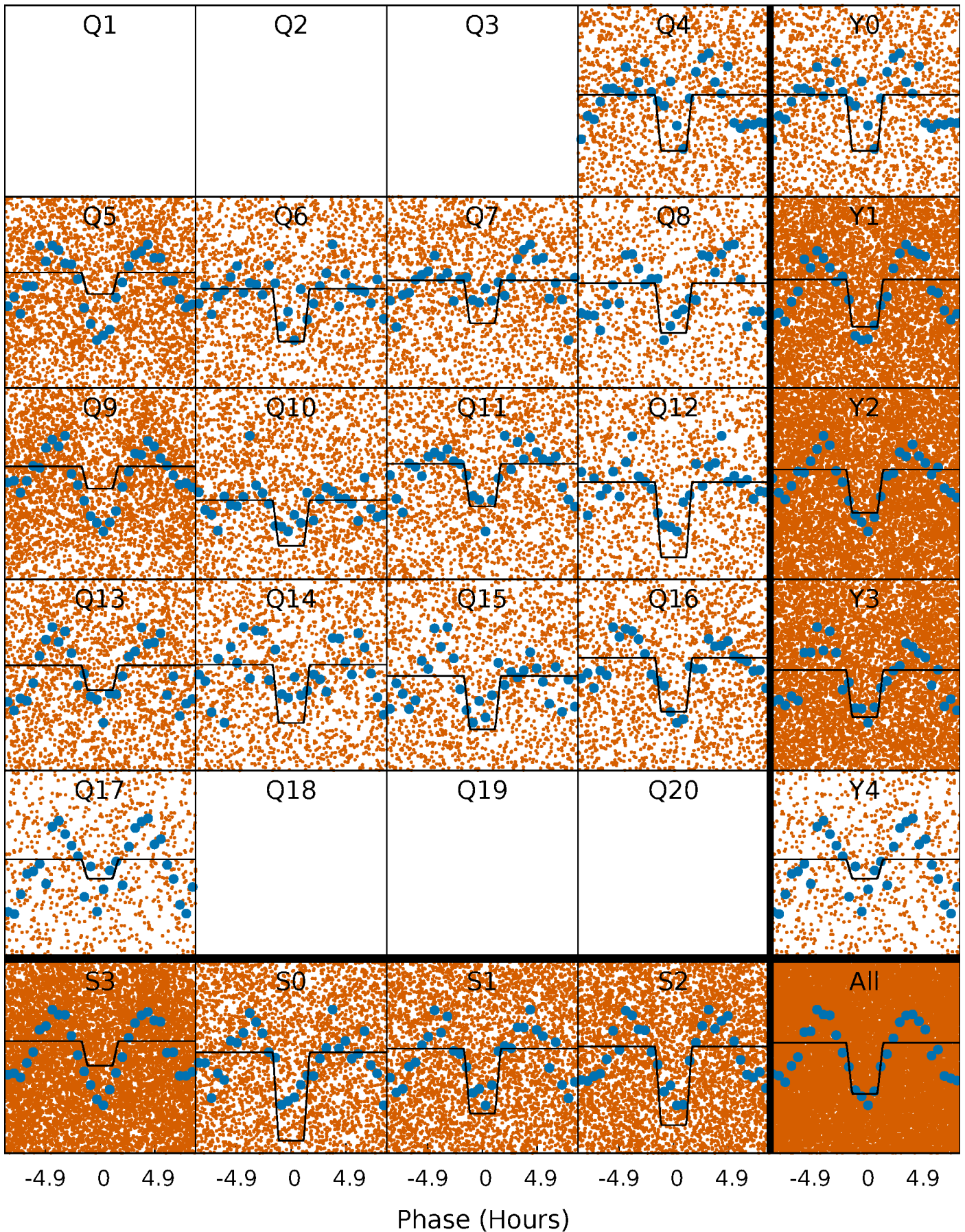
DV Quarter-Phased Transit Curves

TCE 003849415-01 P= 0.638779 Days $T_0=131.775097$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

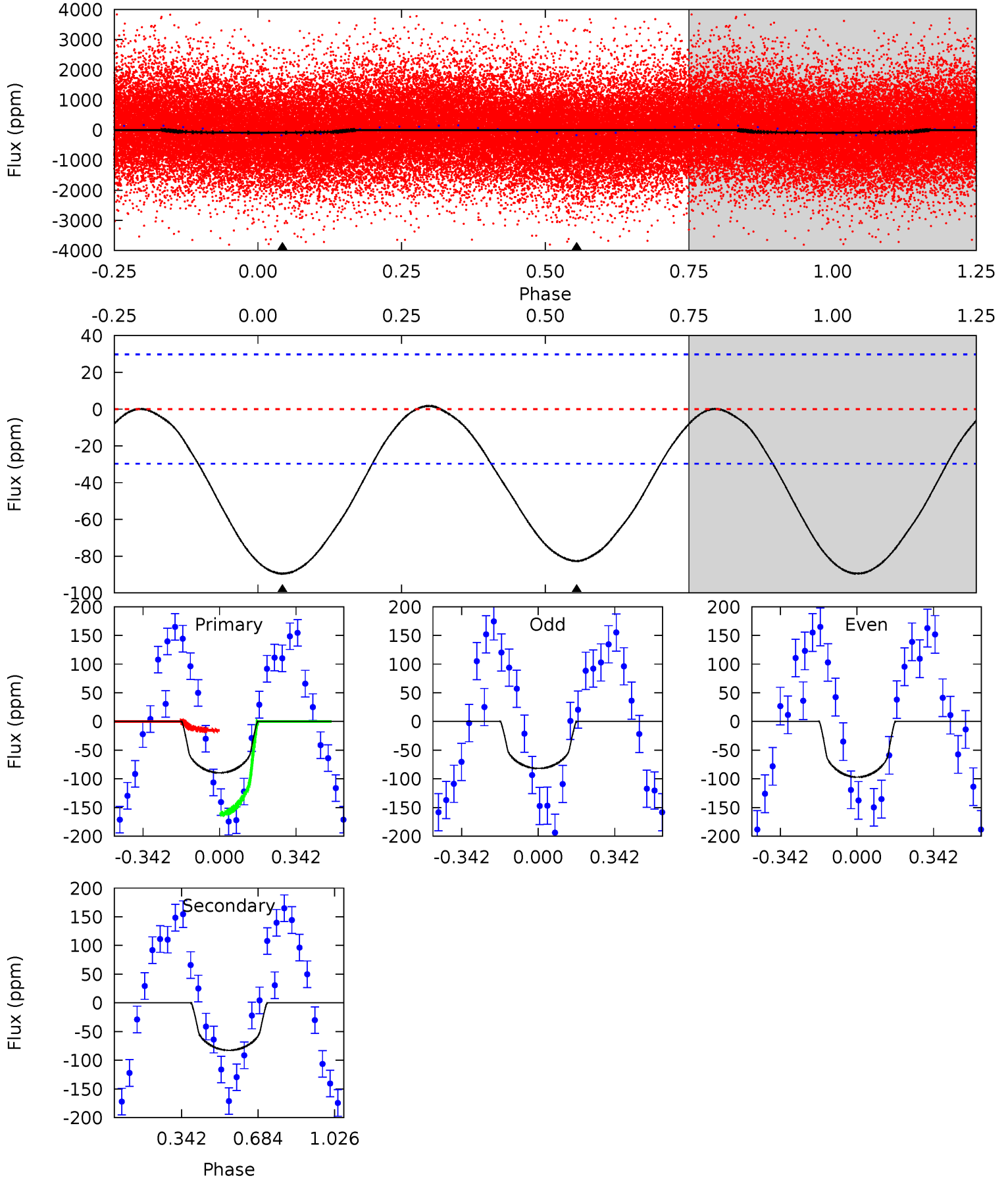
TCE 003849415-01 P= 0.638806 Days $T_0=131.769956$ (BKJD)



DV Model-Shift Uniqueness Test

003849415-01, $P = 0.638779$ Days, $E = 131.775097$ Days

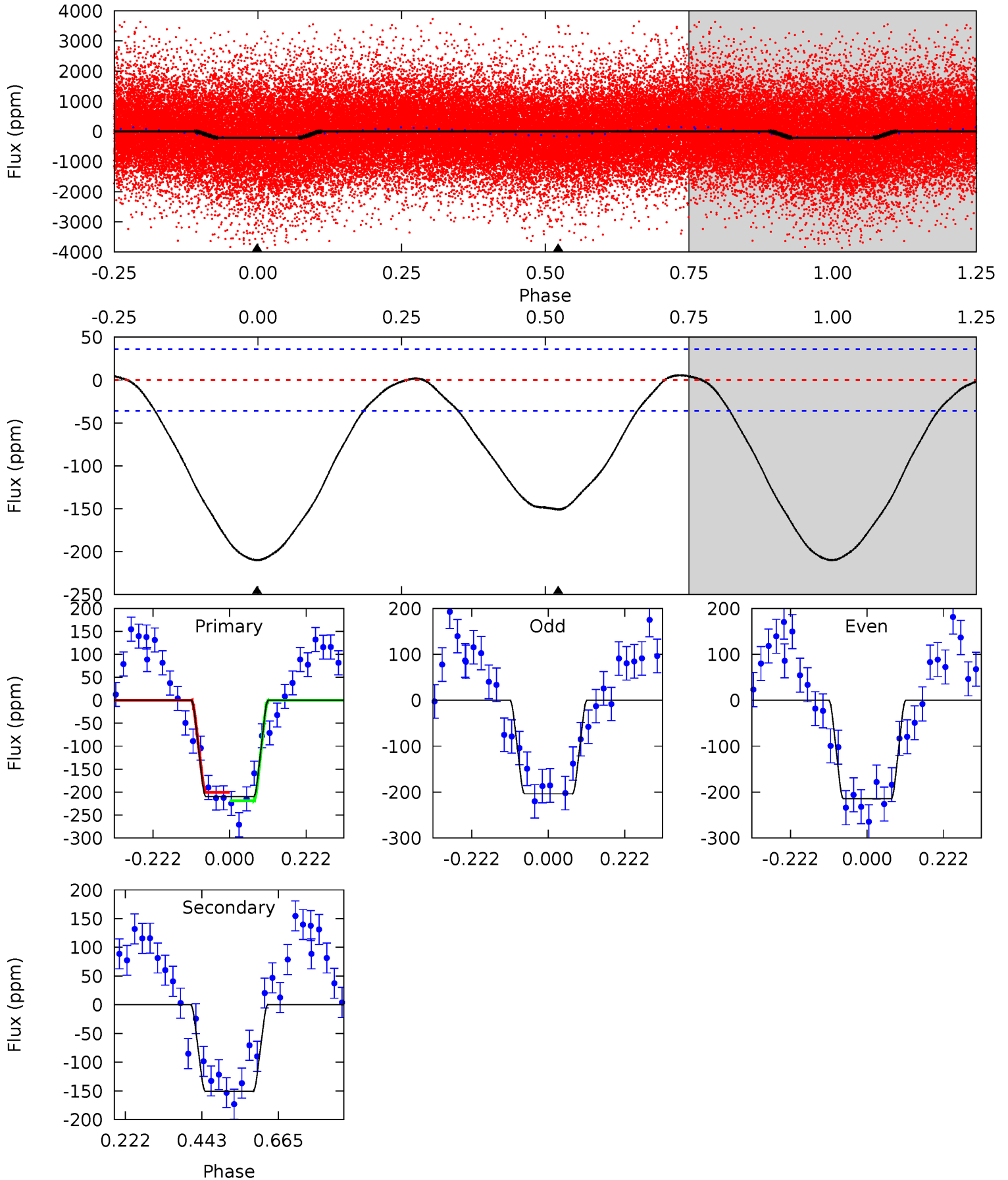
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	12.0	0	0	4.30	0.95	0.15	13.0	13.0	12.0	12.0	1.11	1.11	0.02	10.6



Alt Model-Shift Uniqueness Test

003849415-01, P = 0.638806 Days, E = 131.769956 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.7	18.5	0	0	4.39	1.22	0.48	25.7	25.7	18.5	18.5	0.66	1.20	0.03	1.12



Stellar Parameters For KIC 003849415

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5496^{+180}_{-180}	$4.564^{+0.028}_{-0.161}$	$0.040^{+0.250}_{-0.300}$	$0.838^{+0.200}_{-0.067}$	$0.939^{+0.073}_{-0.110}$	$2.248^{+0.358}_{-1.004}$
	+3%/-3%	+1%/-4%	+625%/-750%	+24%/-8%	+8%/-12%	+16%/-45%
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 003849415-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-83 ± 7	$1.07^{+0.75}_{-0.67}$	2665^{+154}_{-113}	4976^{+3399}_{-950}	$7.865^{+48.370}_{-5.121}$
Alt.	-151 ± 8	$1.47^{+0.75}_{-0.74}$	2656^{+158}_{-118}	4925^{+2013}_{-790}	$7.551^{+22.425}_{-4.244}$

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

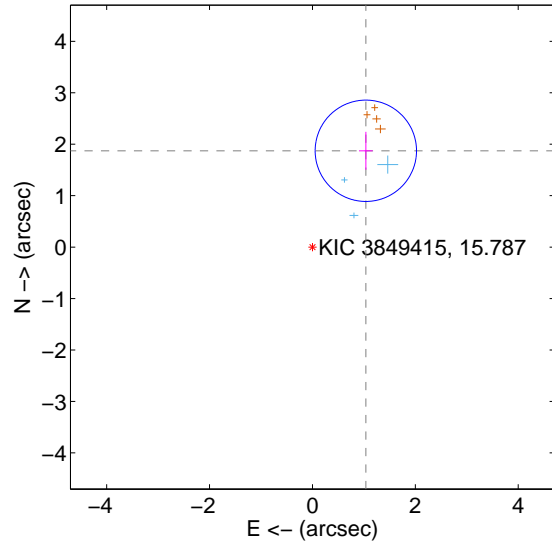
Supplemental centroid analysis for 003849415-01. Kepler magnitude: 15.79. Transit SNR 7.42

There are 3 quarters with good PRF difference image offsets

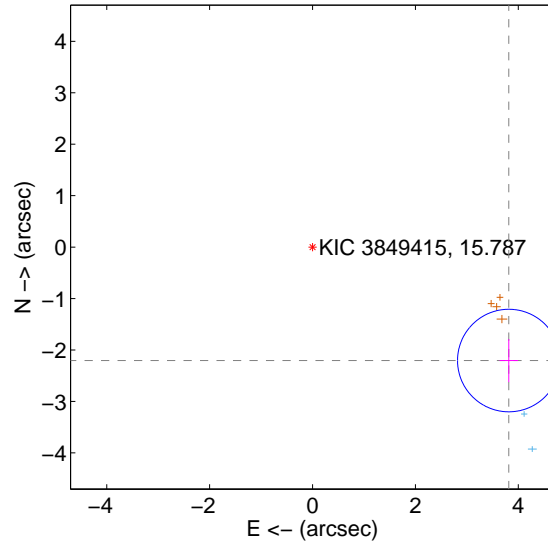
The OOT PRF centroid is offset from the target star catalog position by about 4.39 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.141 ± 0.328	6.52	-1.038 ± 0.133	1.873 ± 0.368
PRF-fit source offset from KIC position	4.408 ± 0.332	13.27	-3.816 ± 0.179	-2.206 ± 0.419
photometric centroid source offset	3.22 ± 0.23	13.89	-2.29 ± 0.20	-2.27 ± 0.26

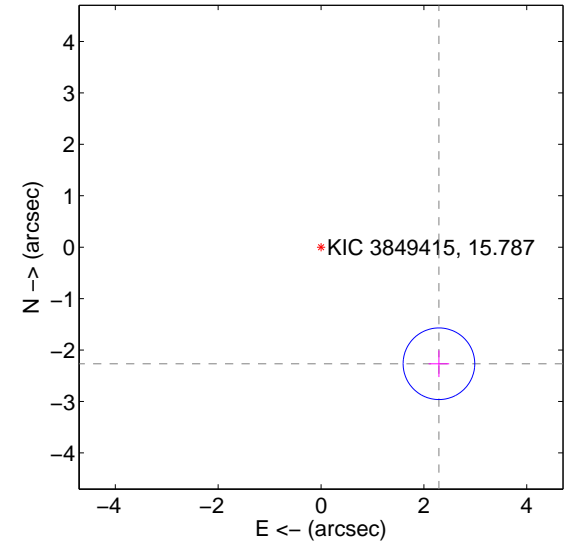
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

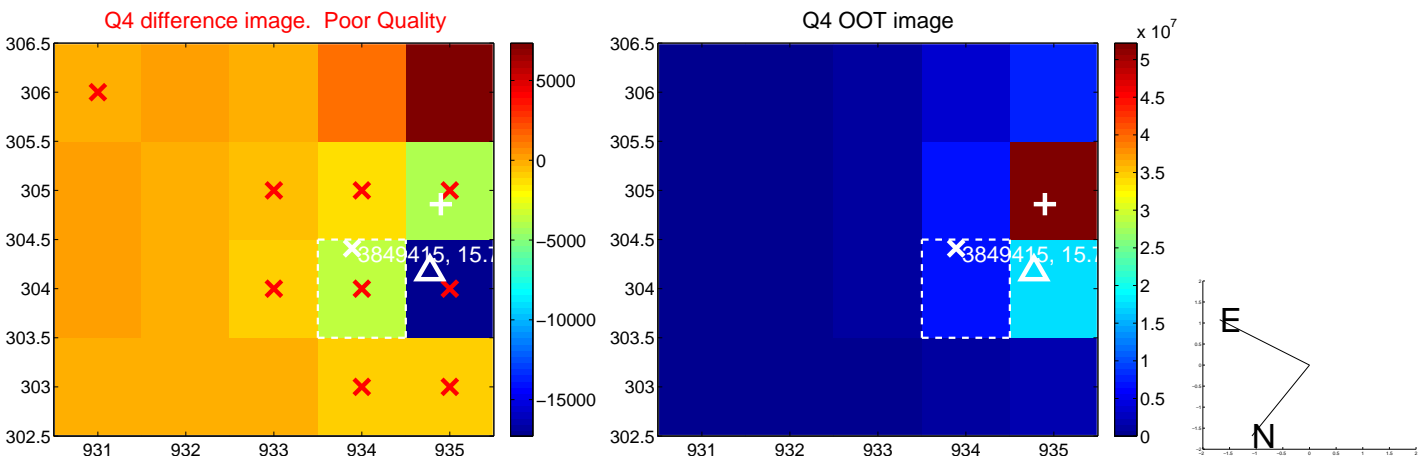
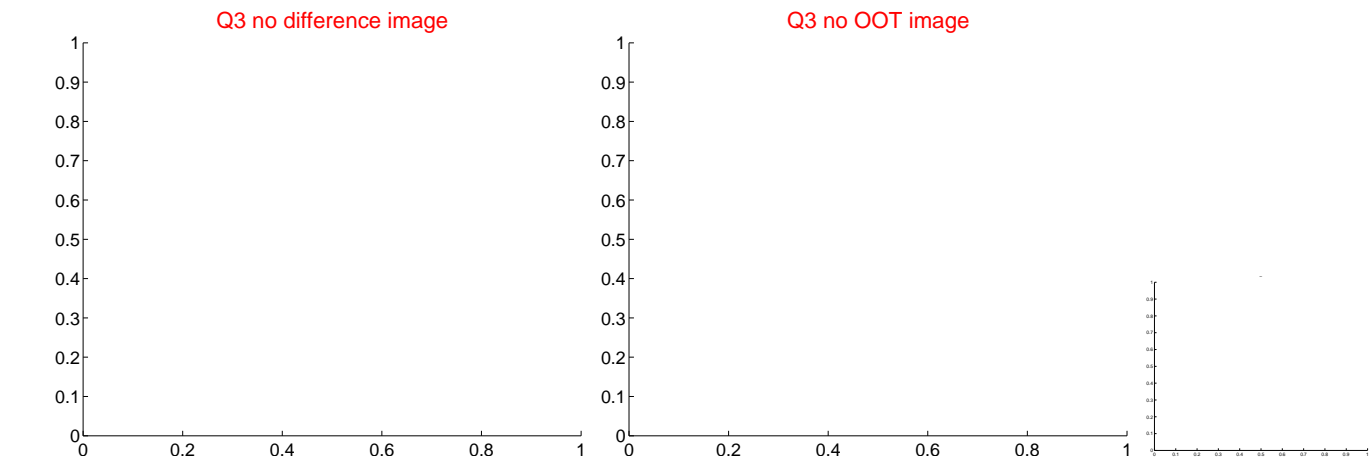
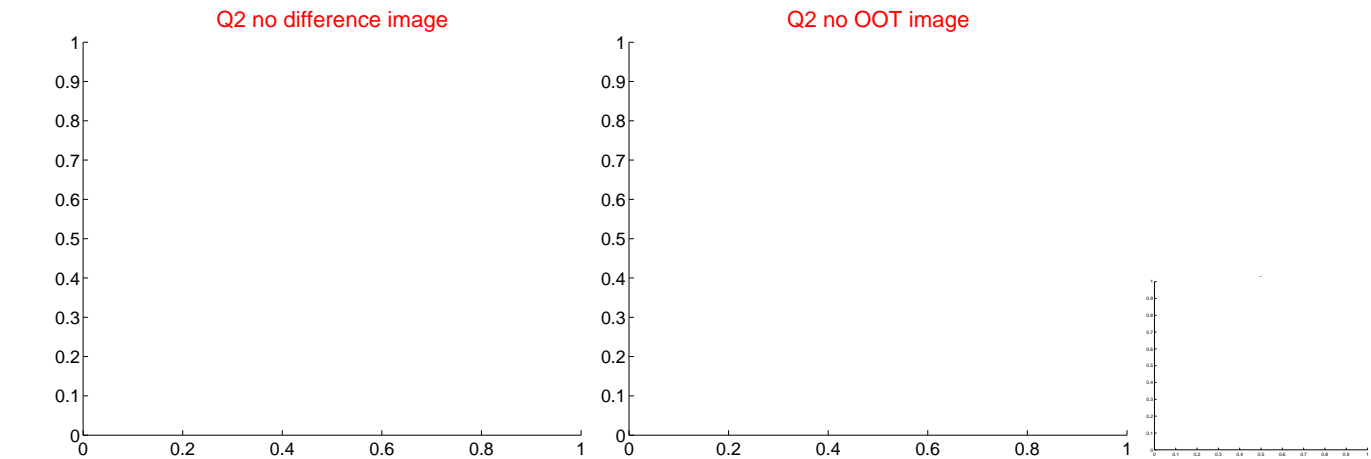
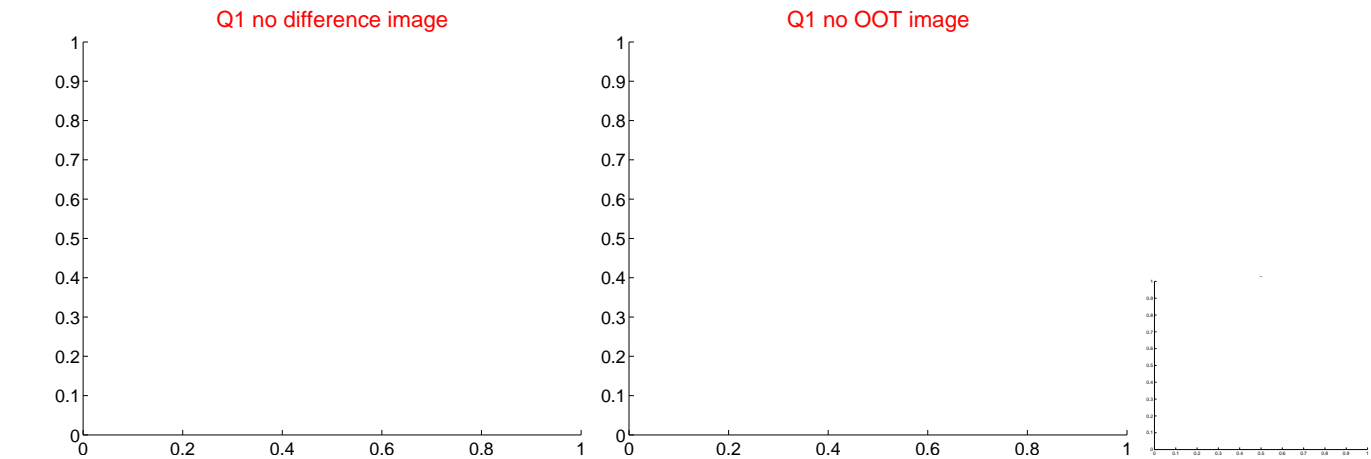


offset from photometric centroids

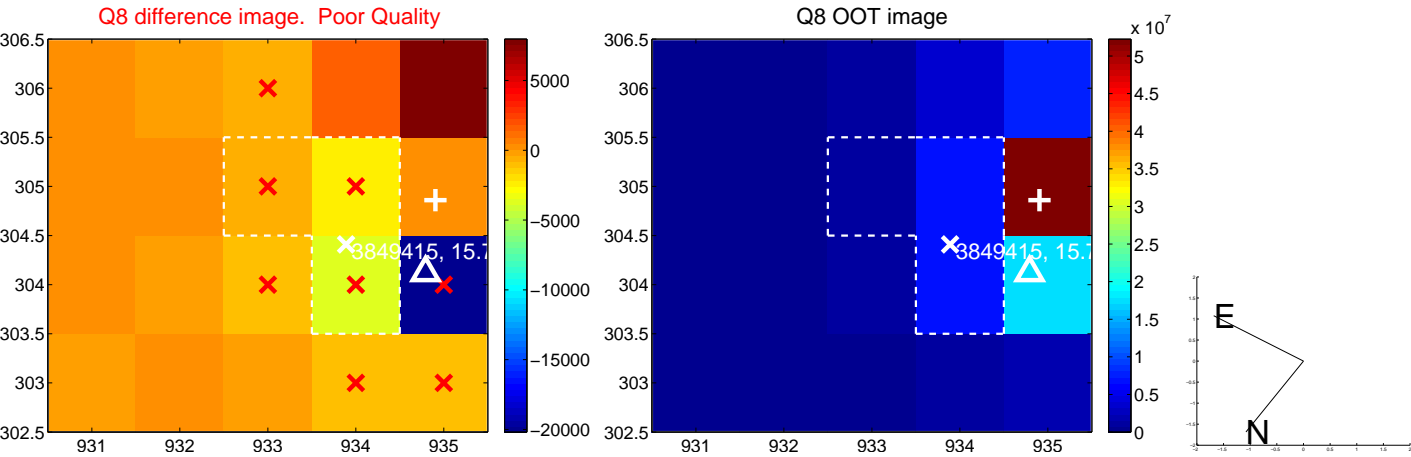
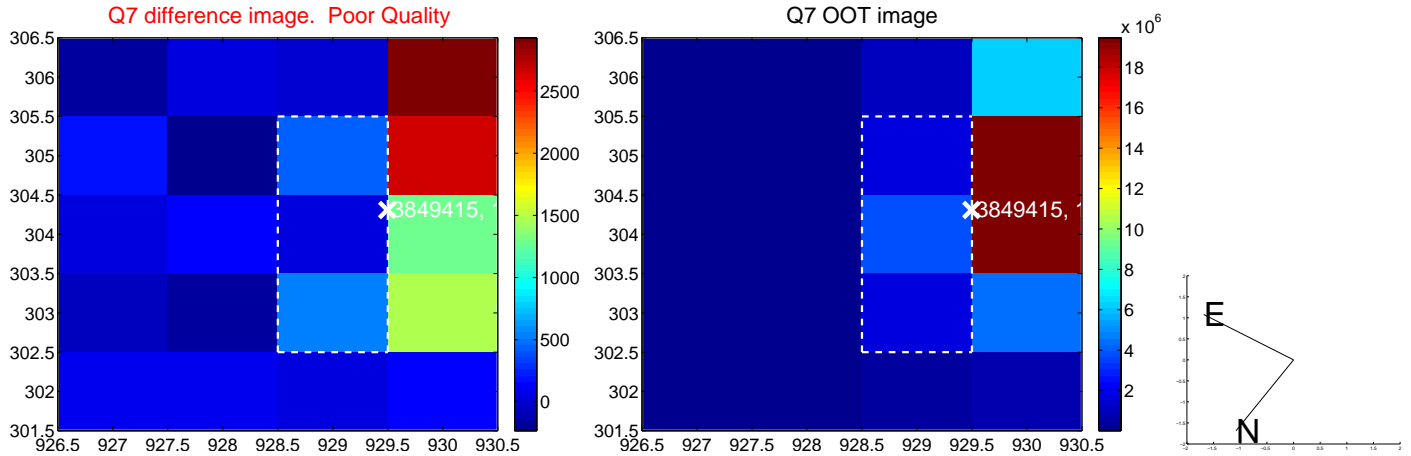
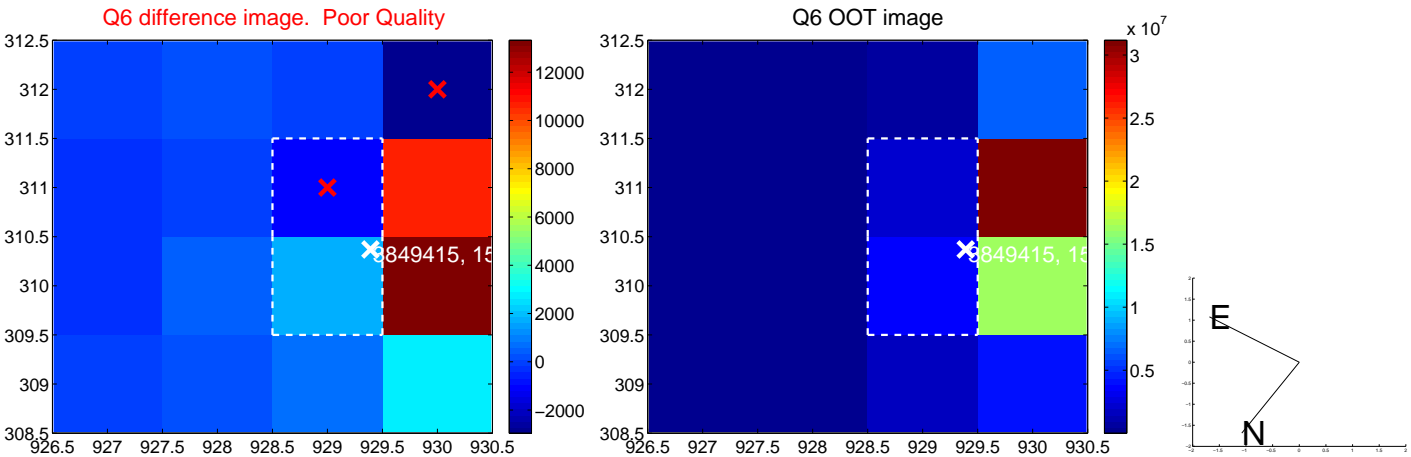
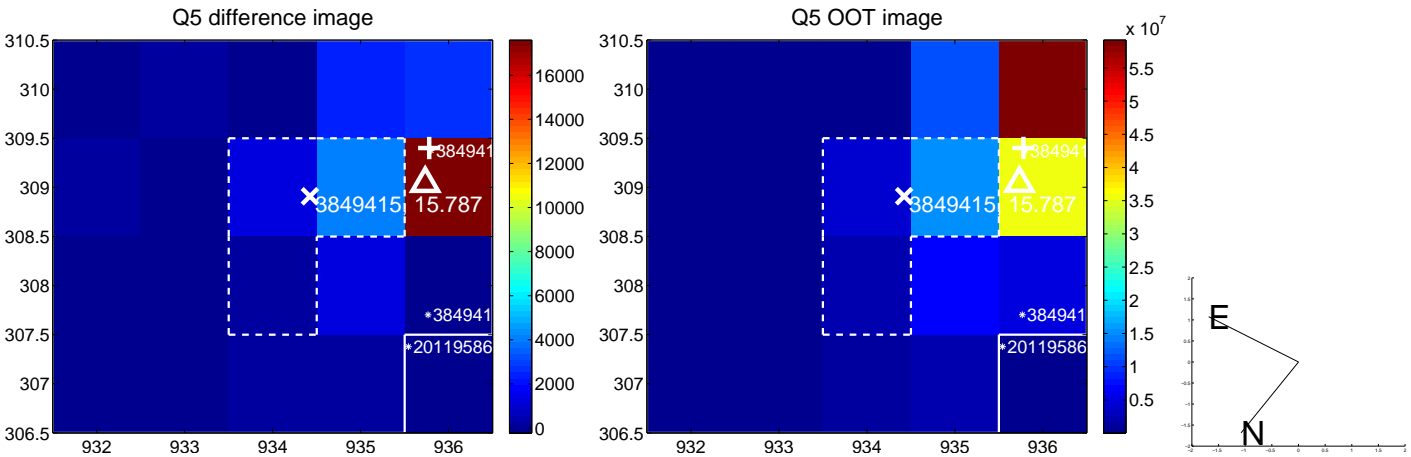


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

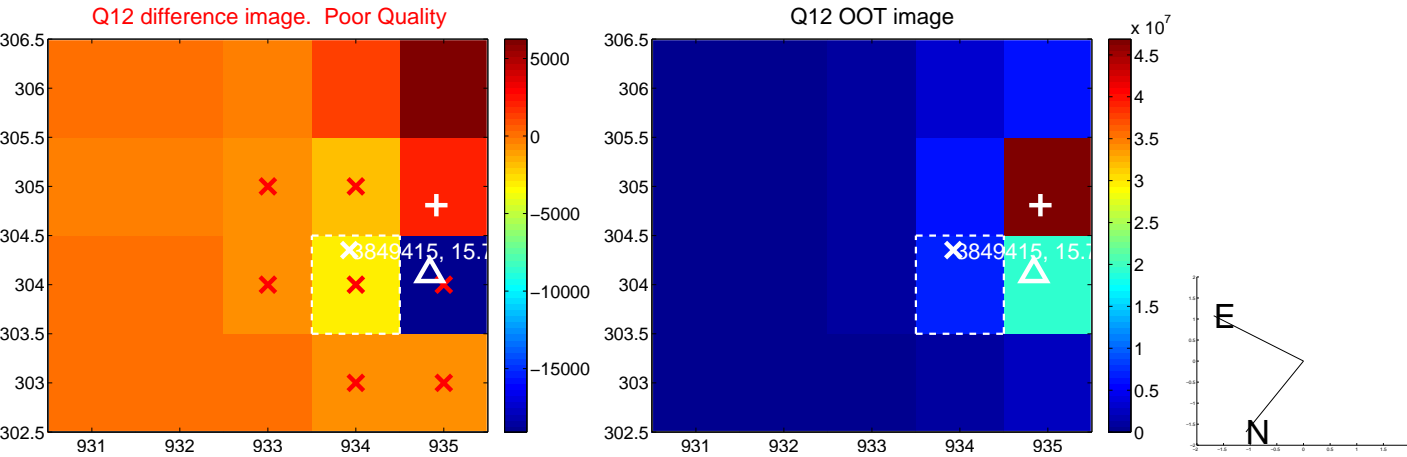
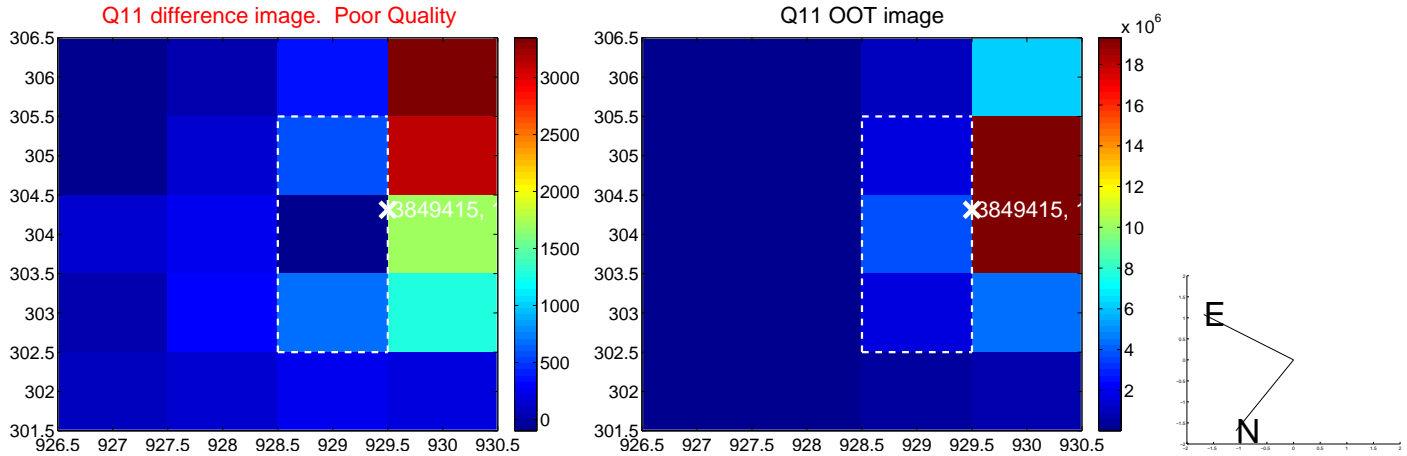
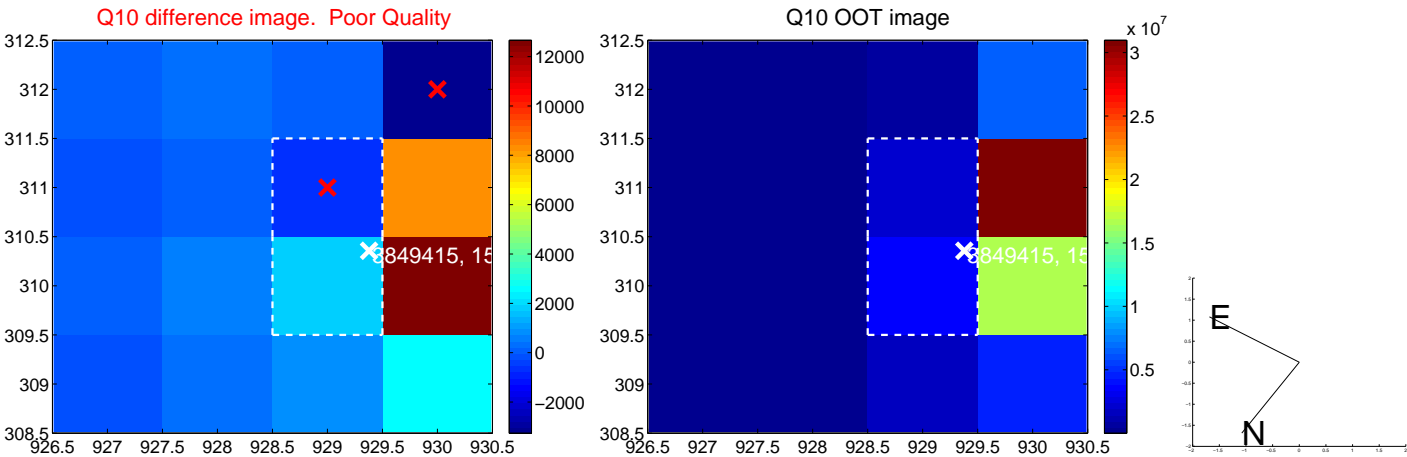
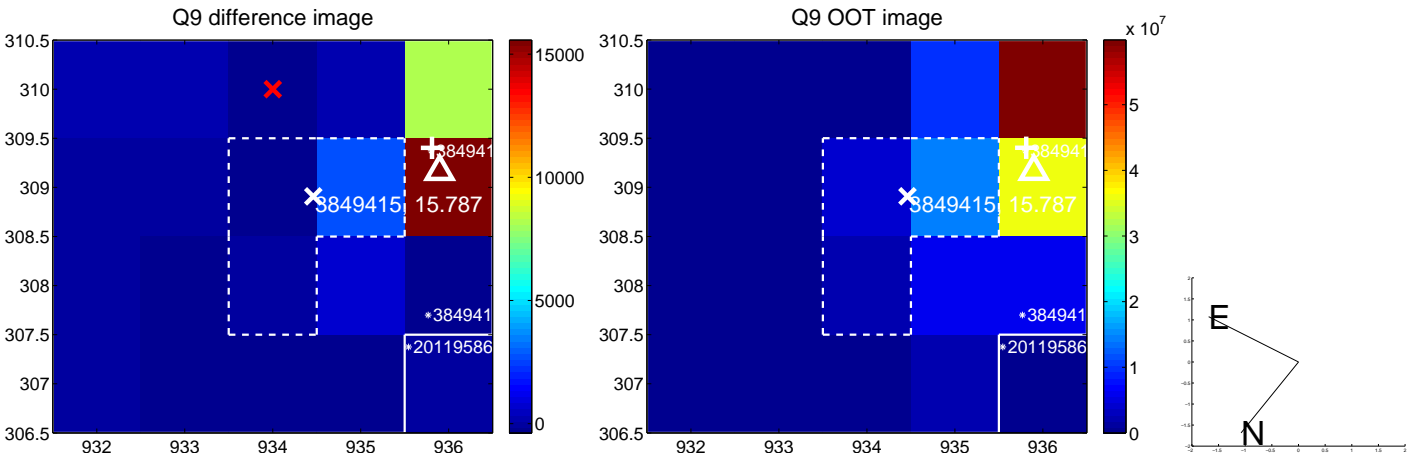
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



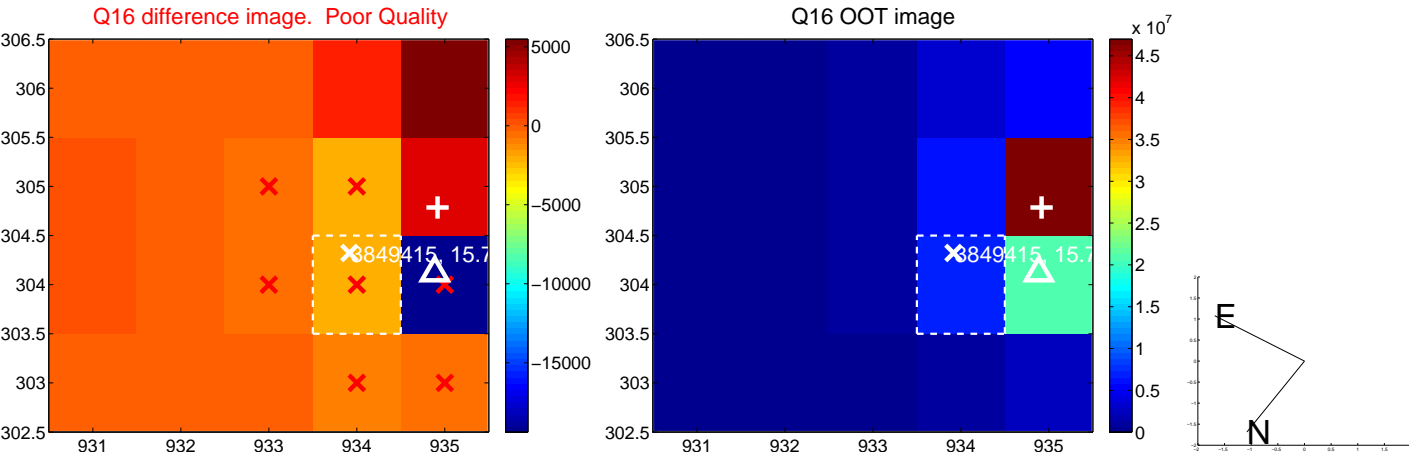
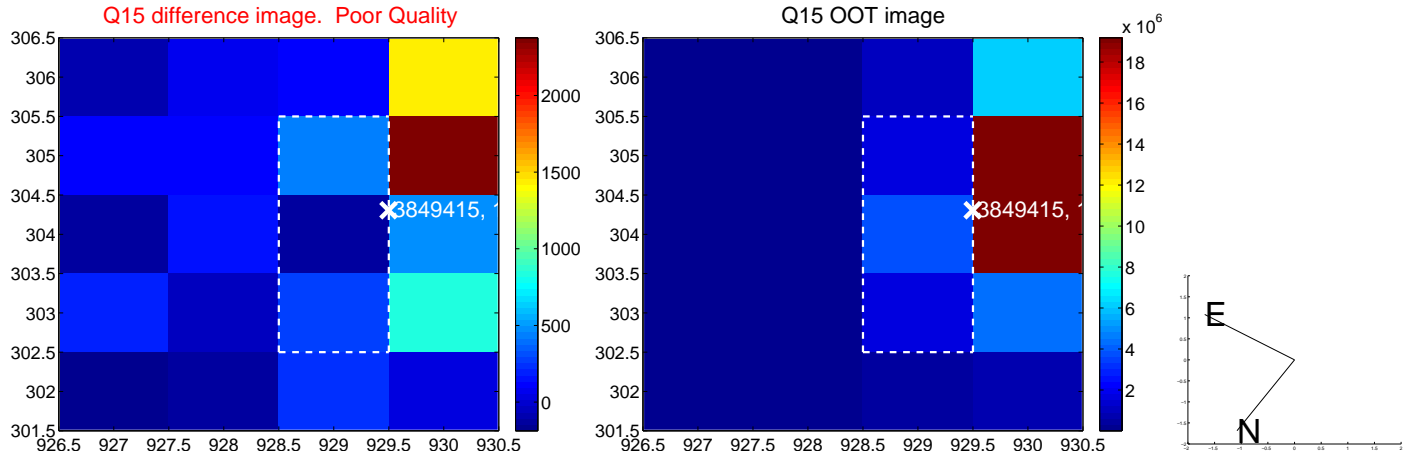
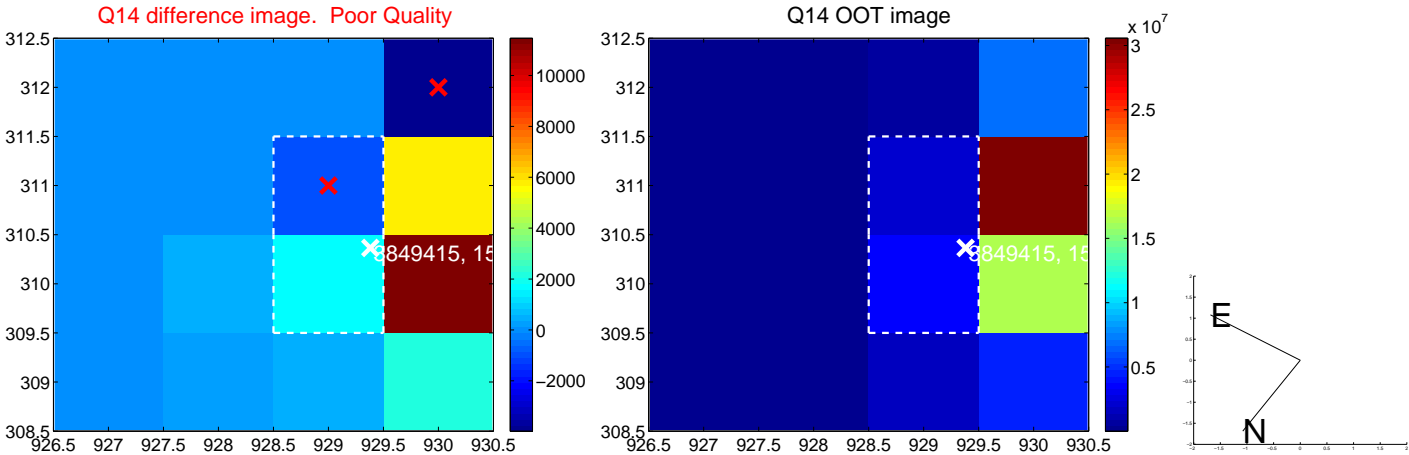
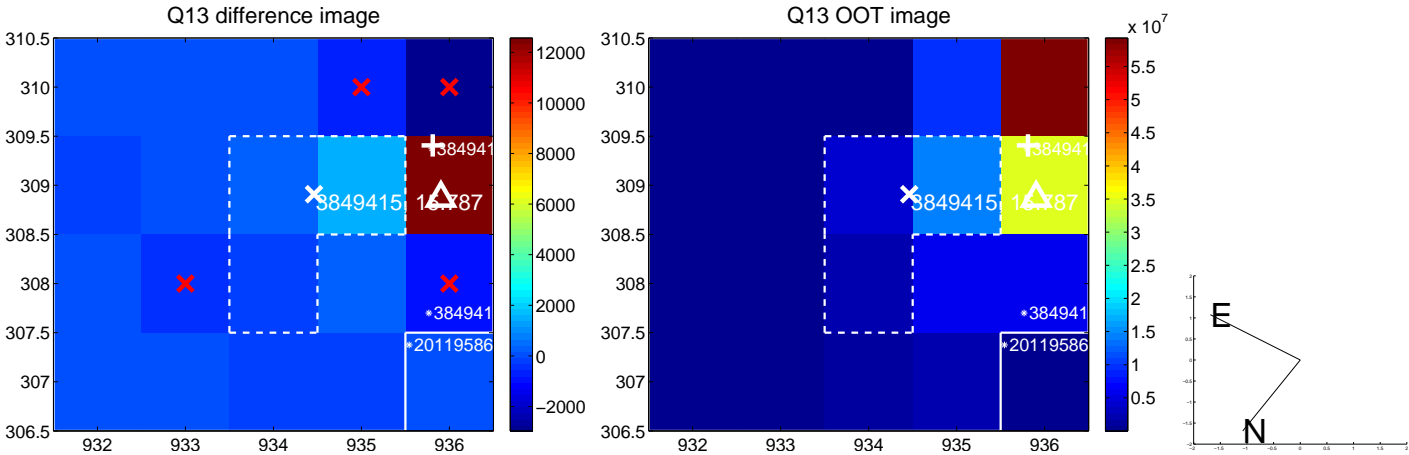
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



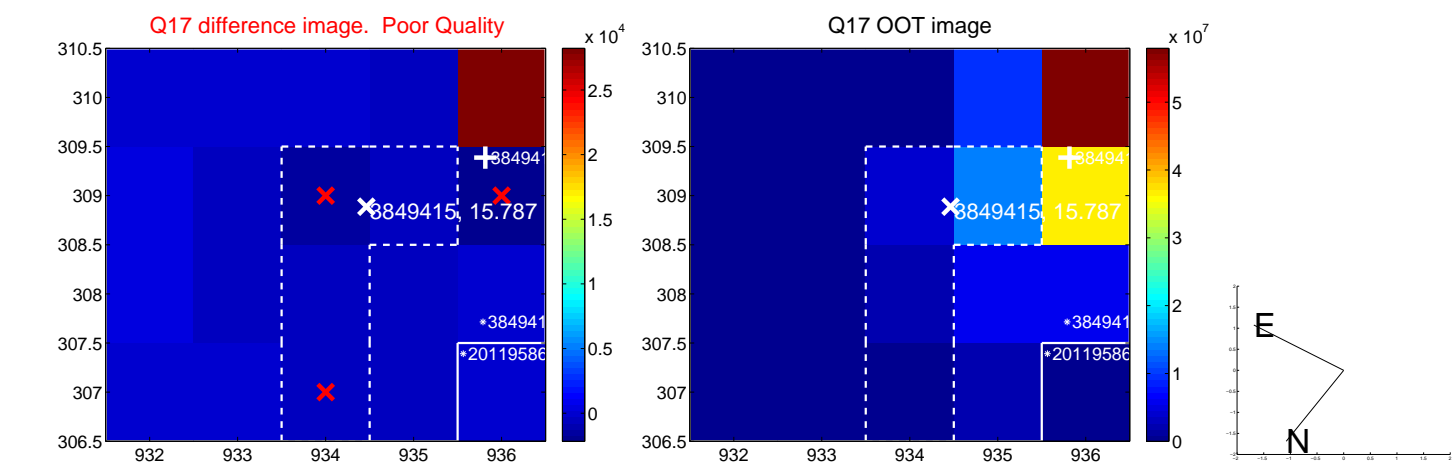
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



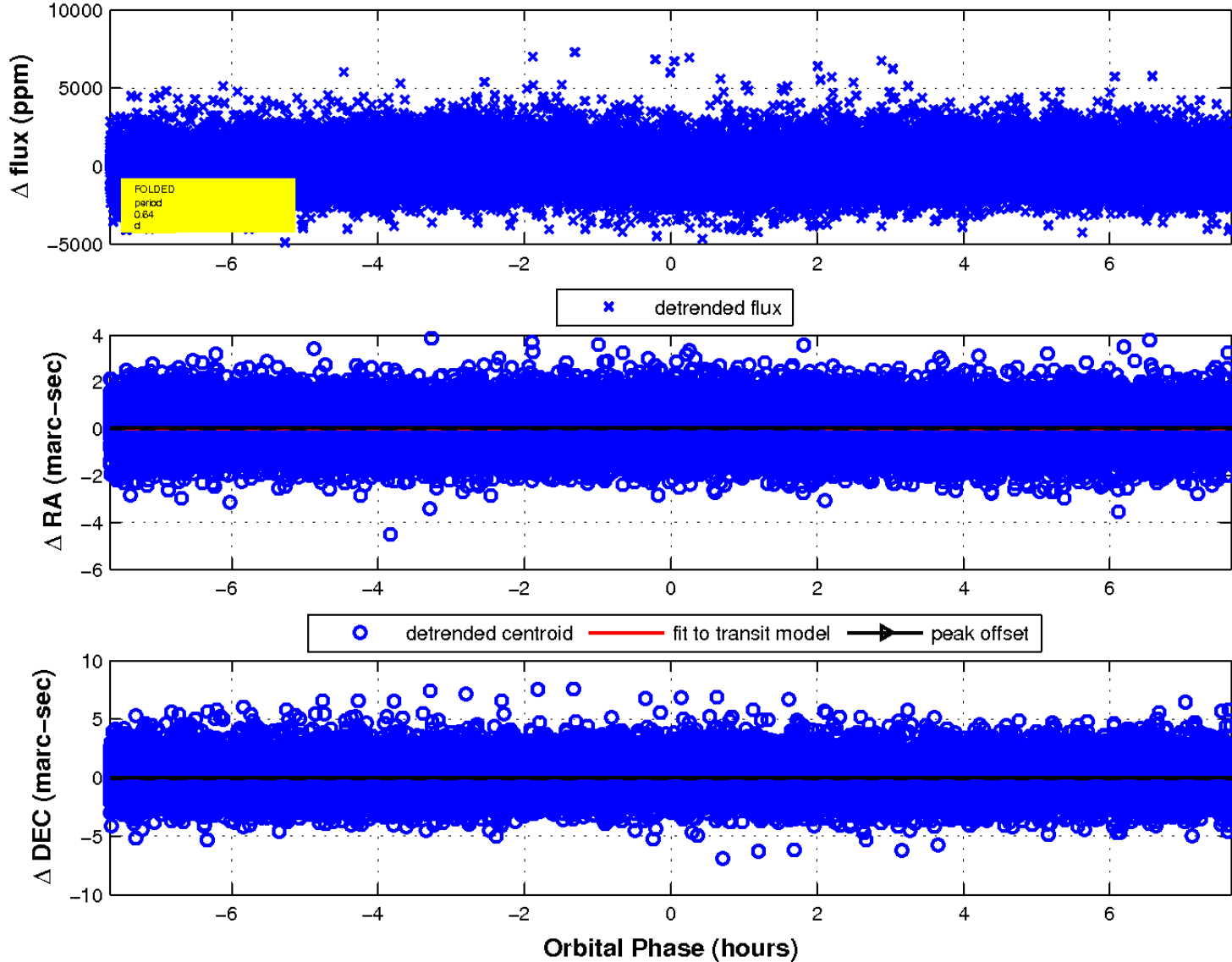
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

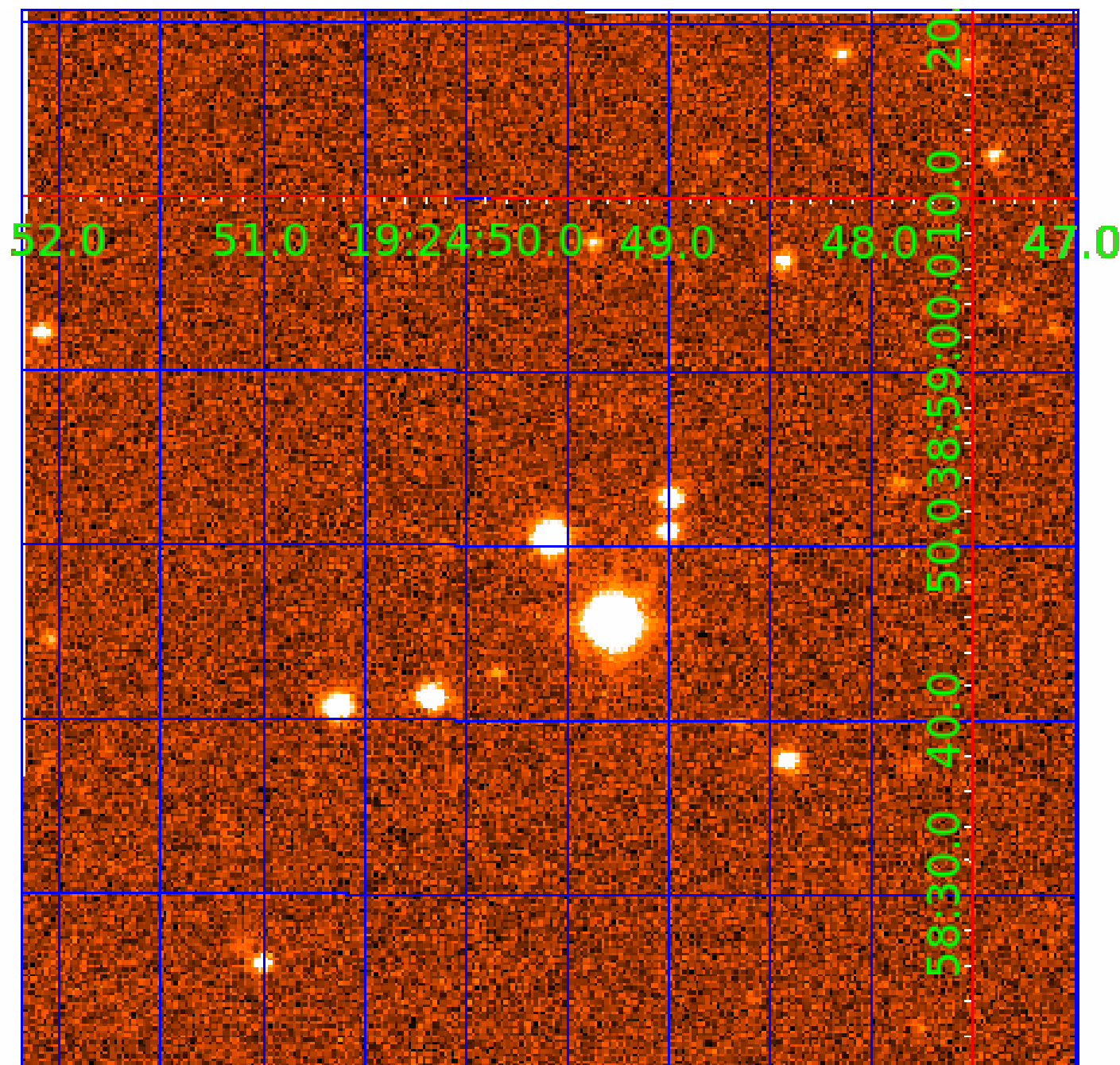


fluxWeightedCentroids, Planet 1 of 4



UKIRT Image

Declination



KIC 003849415

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})
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003849415-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_MEAS
003849415-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
003849415-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET

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

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

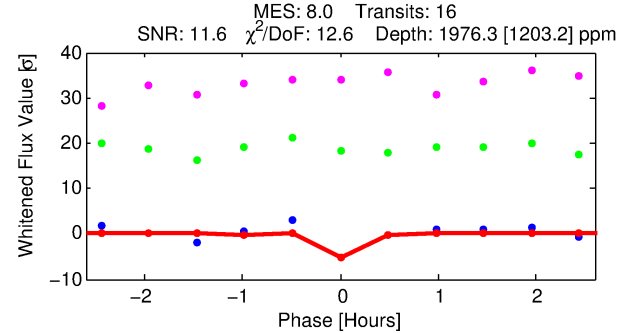
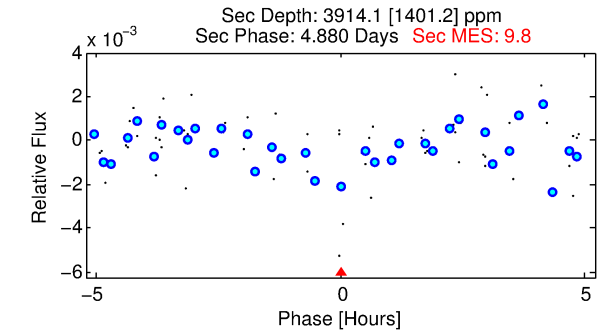
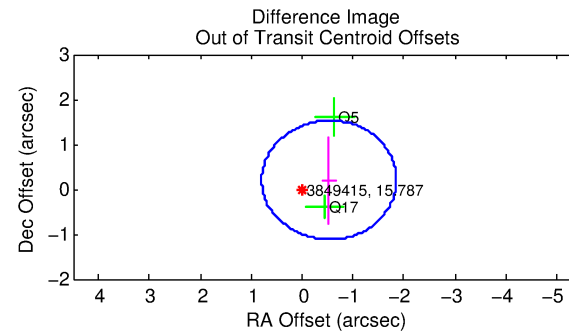
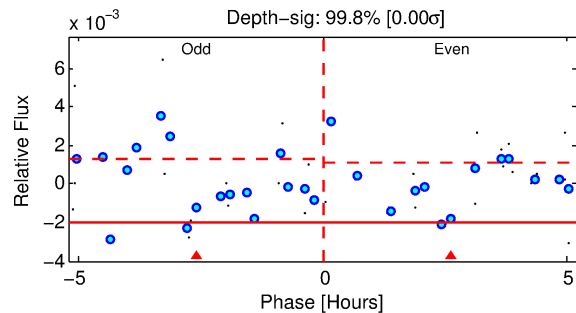
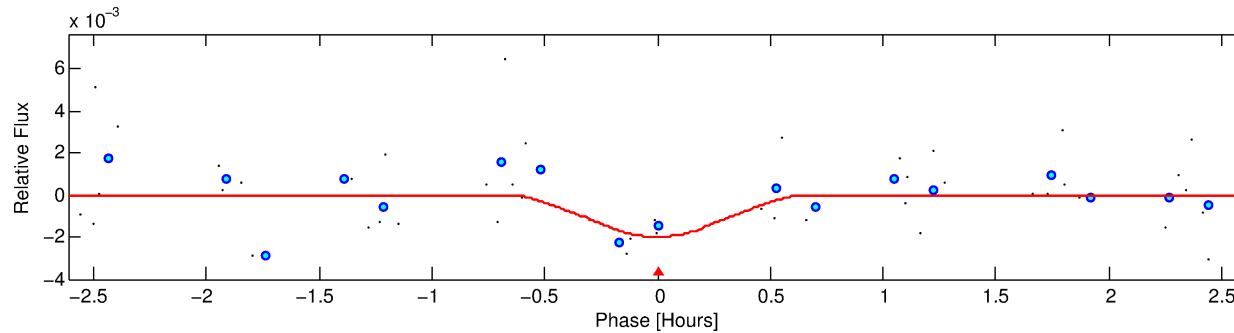
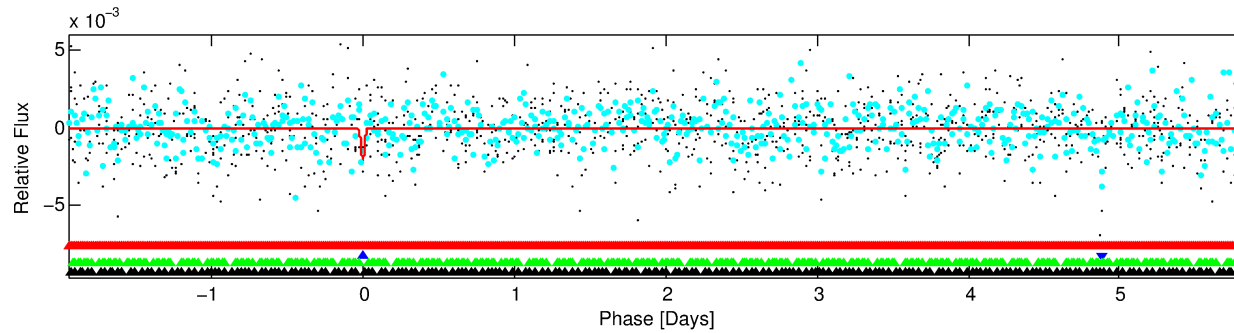
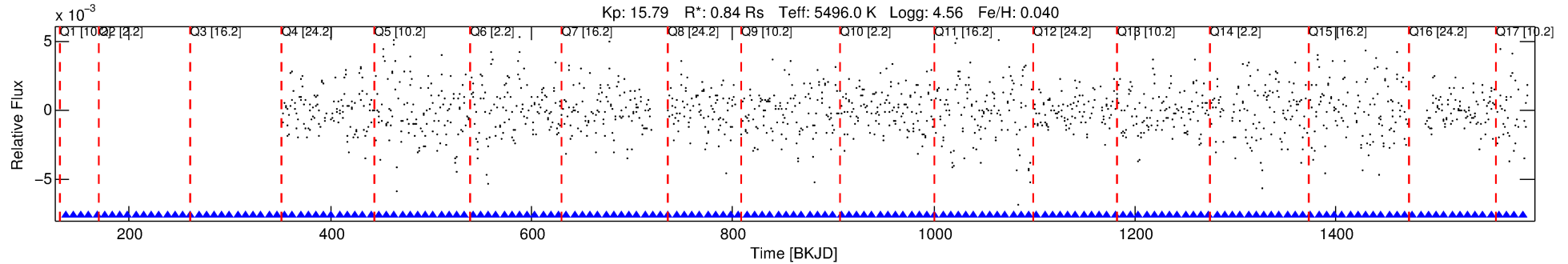
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003849415-02

No Significant Match Found

DV One-Page Summary

KIC: 3849415 Candidate: 2 of 4 Period: 7.788 d



DV Fit Results:

Period = 7.78839 [0.00009] d
Epoch = 136.6094 [0.0136] BKJD
Rp/R* = 0.0484 [0.0959]
a/R* = 40.20 [328.81]
b = 0.87 [2.34]
Seff = 101.23 [32.58]
Teq = 809 [65] K
Rp = 4.43 [8.84] Re
a = 0.0753 [0.0152] AU
Ag = 623.03 [2486.24] [0.25σ]
Teffp = 6248 [6219] K [0.87σ]

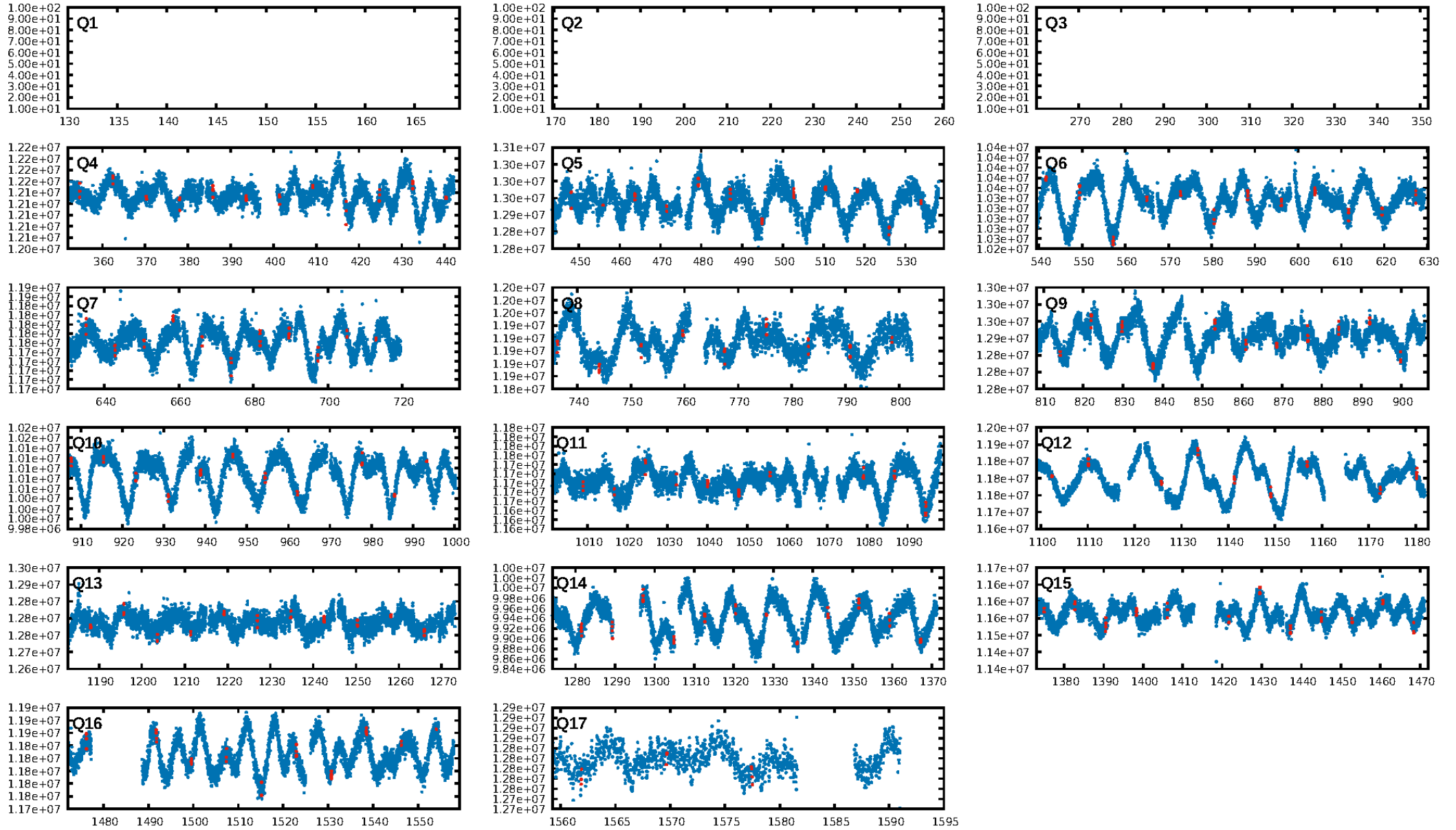
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [28.73σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 6.4%
Bootstrap-pfa: 1.04e-04
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: -0.9763
Centroid-sig: 49.8%
Centroid-so: 3.170 arcsec [41.77σ]
OotOffset-rm: 0.569 arcsec [1.29σ]
KicOffset-rm: 5.920 arcsec [7.37σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.00 [0/14]

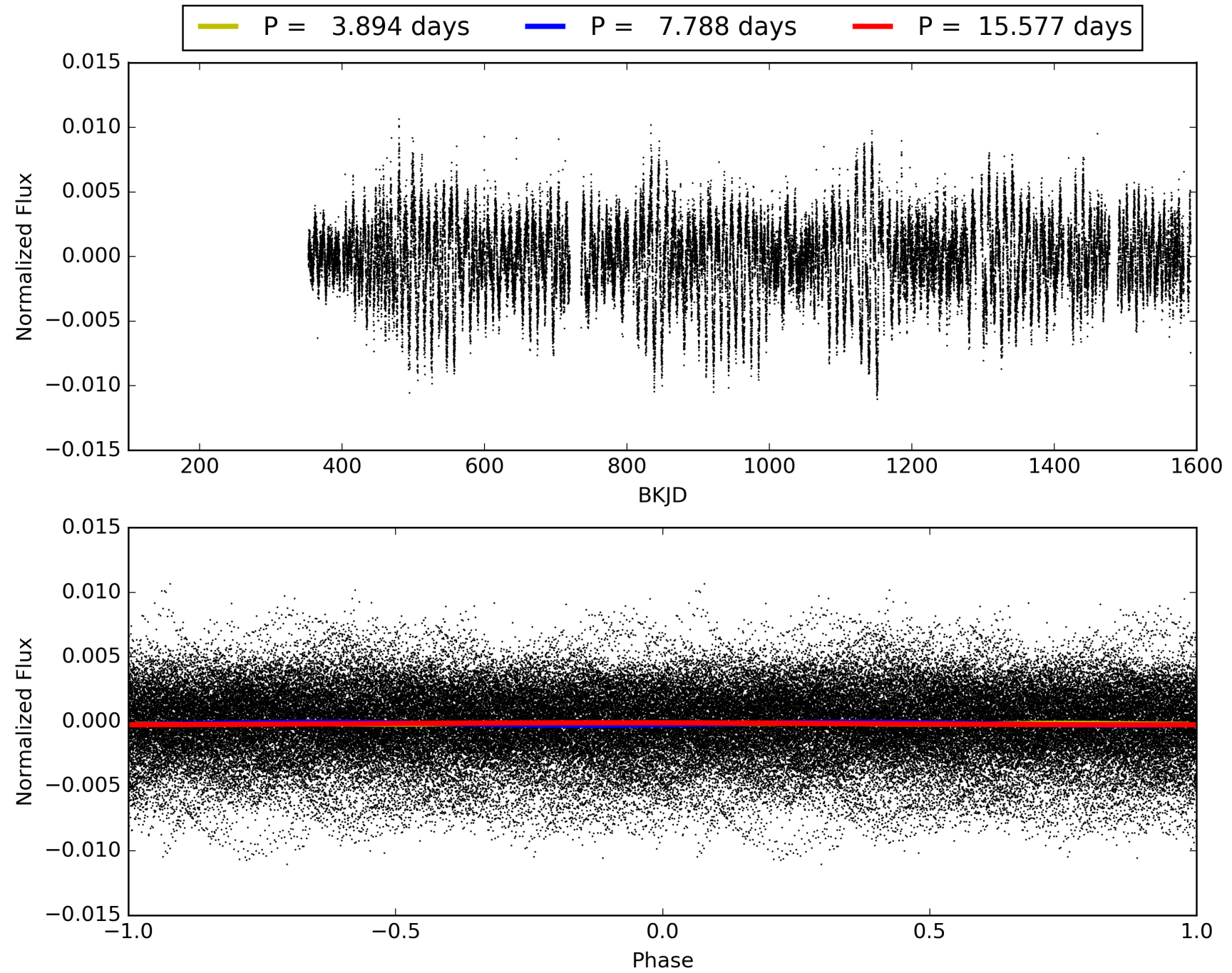
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:34:51 Z

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

TCE 003849415-02, PDC Light Curves

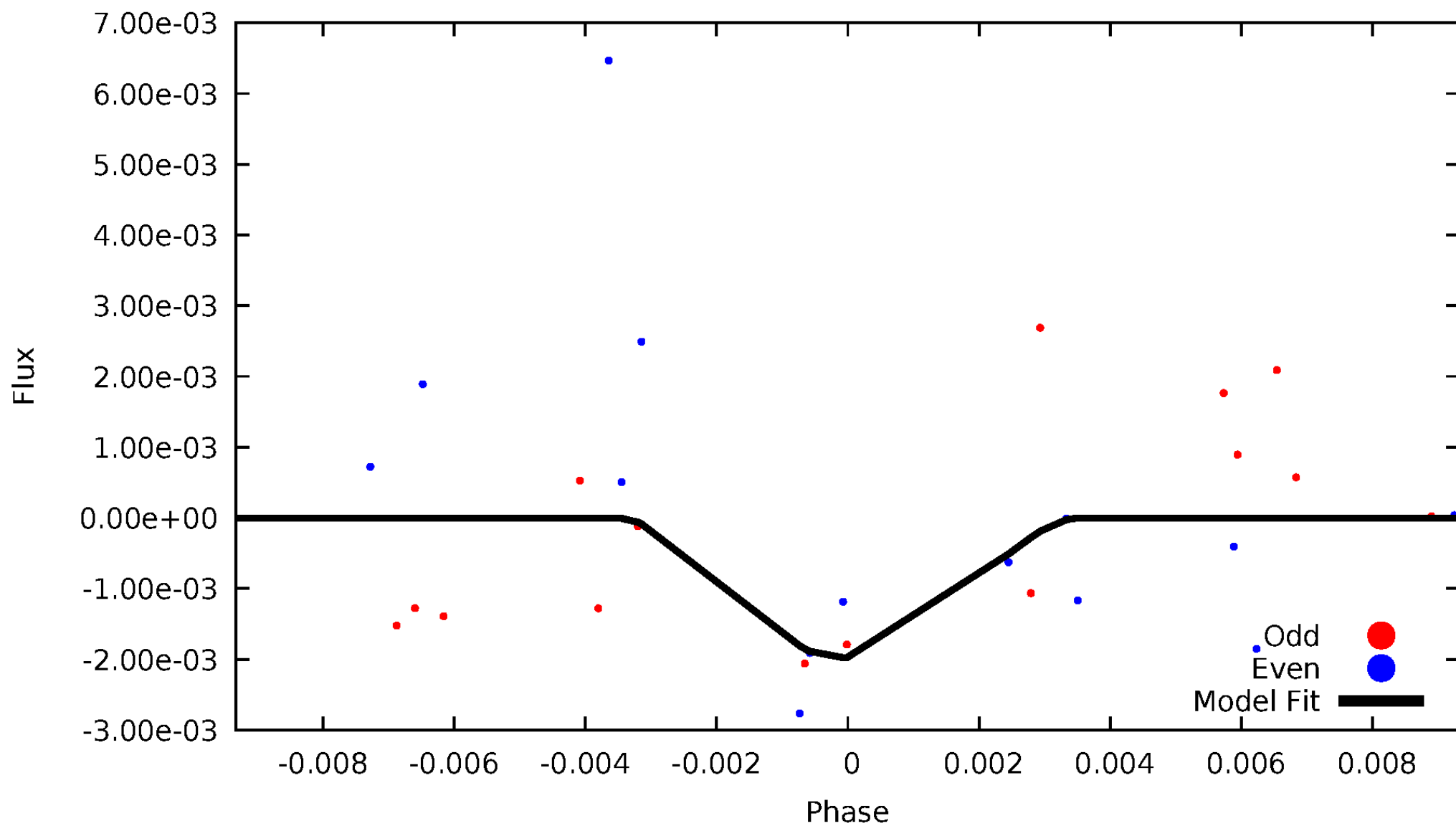


TCE 003849415-02



DV Odd/Even

TCE 003849415-02

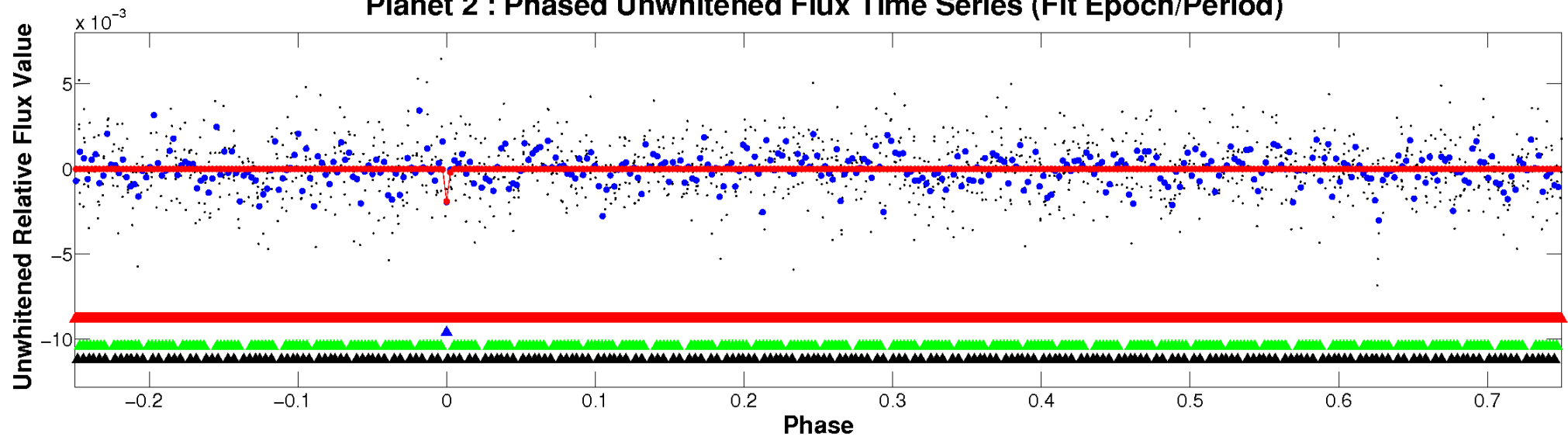


ALT Odd/Even

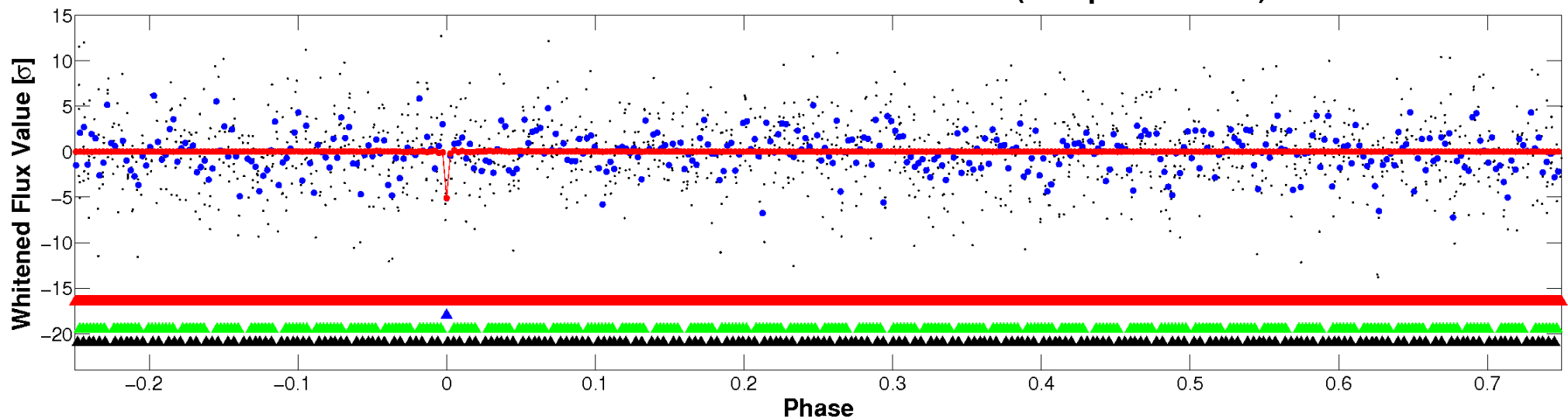
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

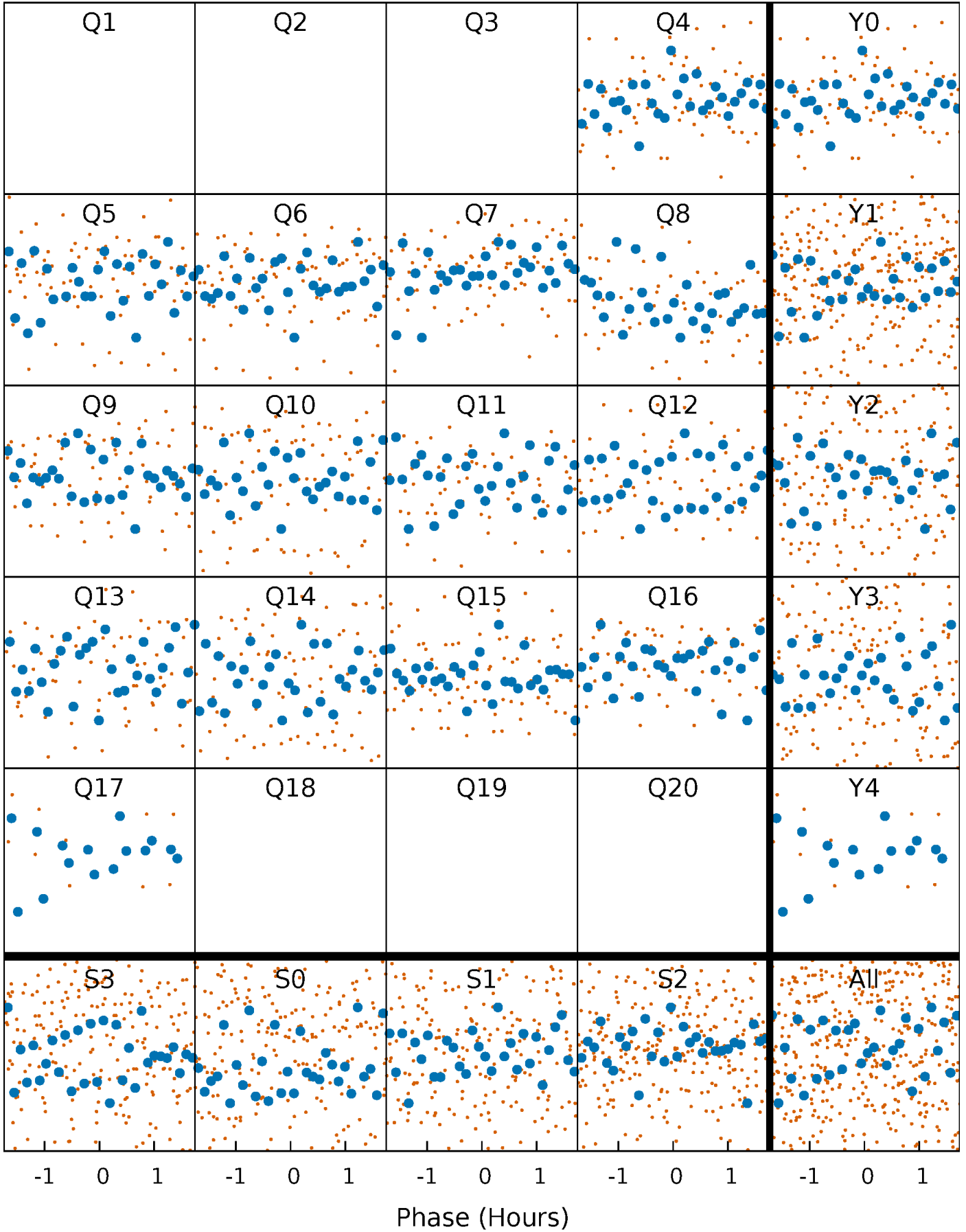


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



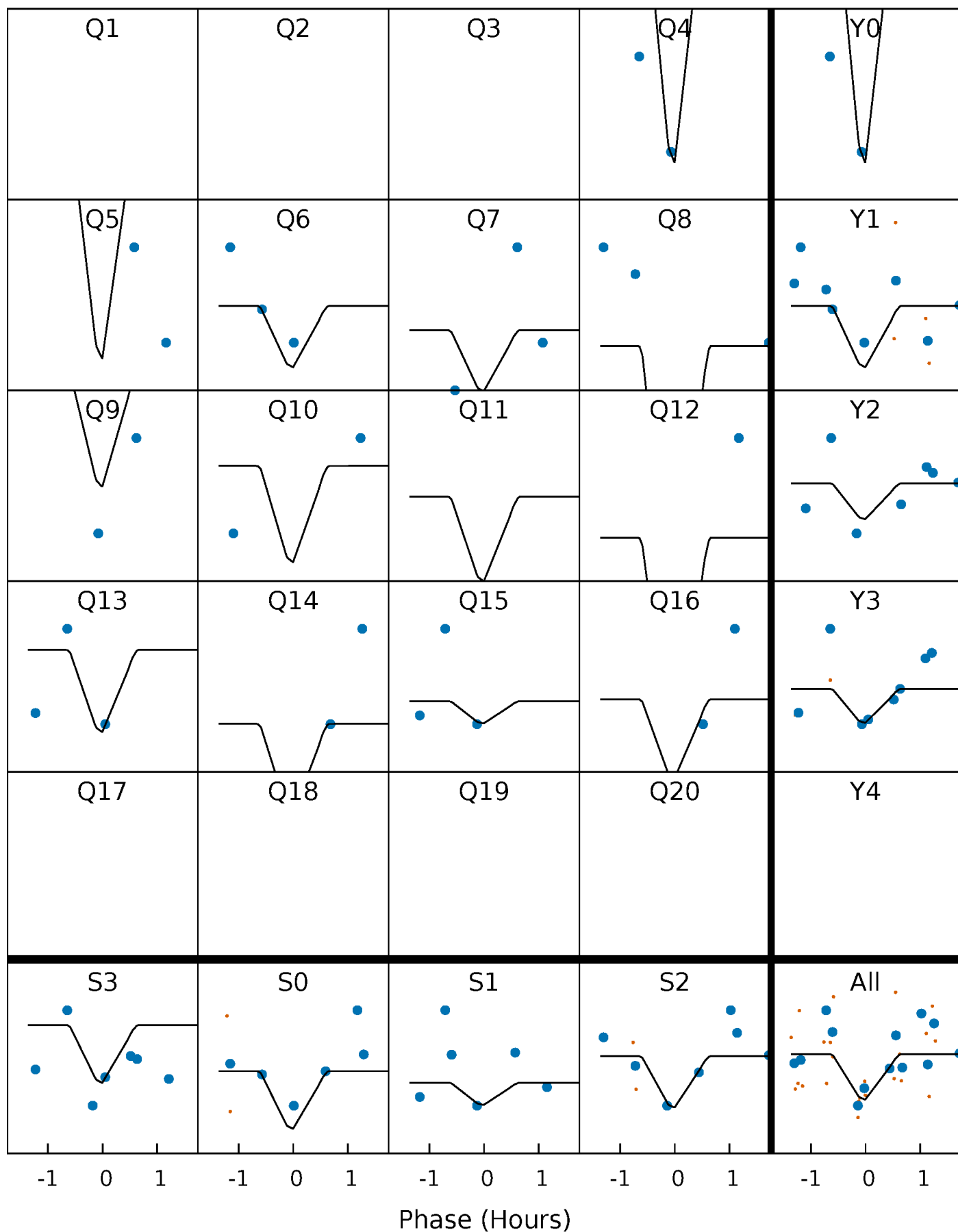
PDC Quarter-Phased Transit Curves

TCE 003849415-02 P= 7.788388 Days $T_0=136.609446$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 003849415-02 P= 7.788388 Days $T_0=136.609446$ (BKJD)

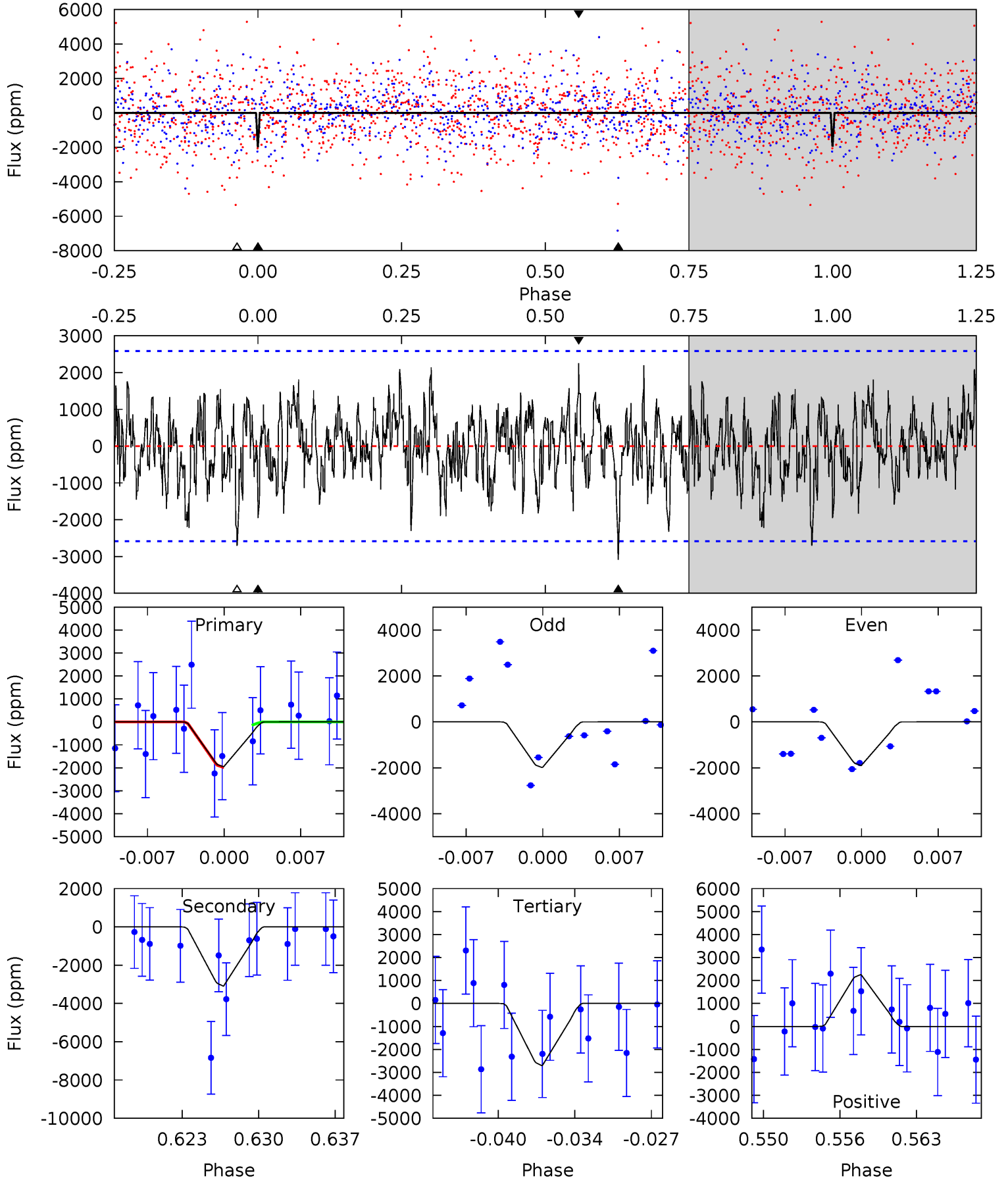


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

003849415-02, P = 7.788388 Days, E = 136.609446 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.85	6.10	5.34	4.45	5.10	2.71	1.57	-1.49	-0.60	0.76	1.65	0.09	0	0.42	1.80



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 003849415

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5496^{+180}_{-180}	$4.564^{+0.028}_{-0.161}$	$0.040^{+0.250}_{-0.300}$	$0.838^{+0.200}_{-0.067}$	$0.939^{+0.073}_{-0.110}$	$2.248^{+0.358}_{-1.004}$
	+3%/-3%	+1%/-4%	+625%/-750%	+24%/-8%	+8%/-12%	+16%/-45%
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 003849415-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3090 ± 507	$8.27^{+8.25}_{-5.73}$	1156^{+70}_{-52}	4542^{+3480}_{-1024}	146^{+1290}_{-111}
Alt.	N/A	N/A	N/A	N/A	N/A

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

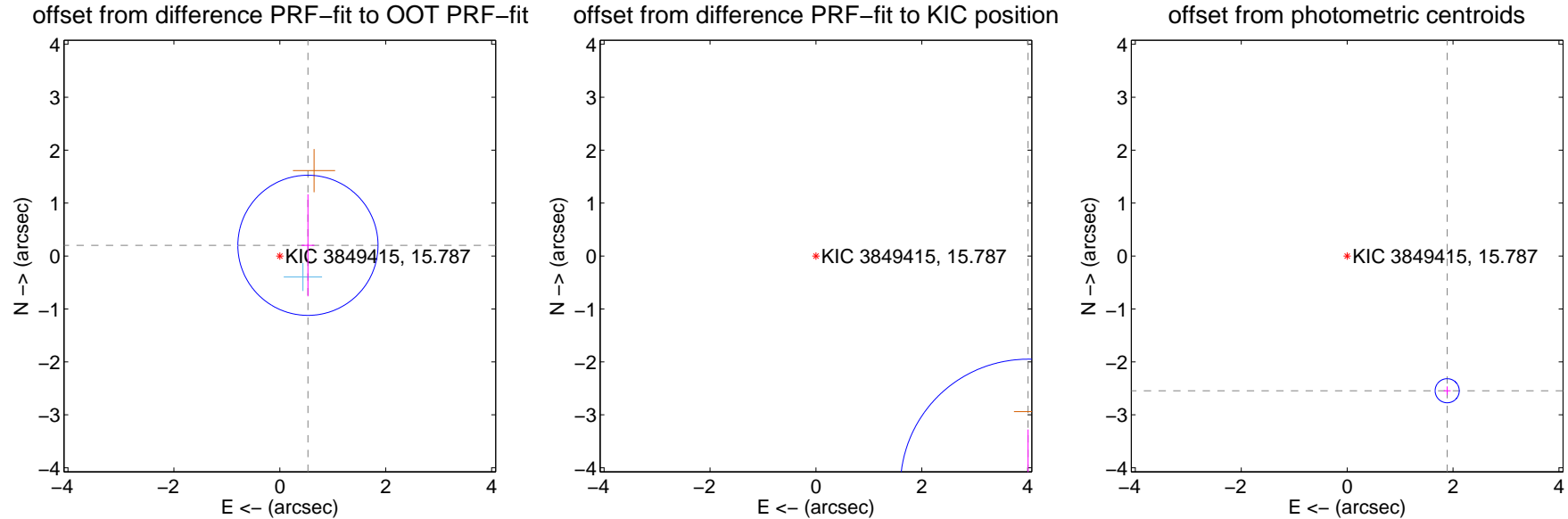
DV Centroid Data

Supplemental centroid analysis for 003849415-02. Kepler magnitude: 15.79. Transit SNR 11.58

There are 1 quarters with good PRF difference image offsets

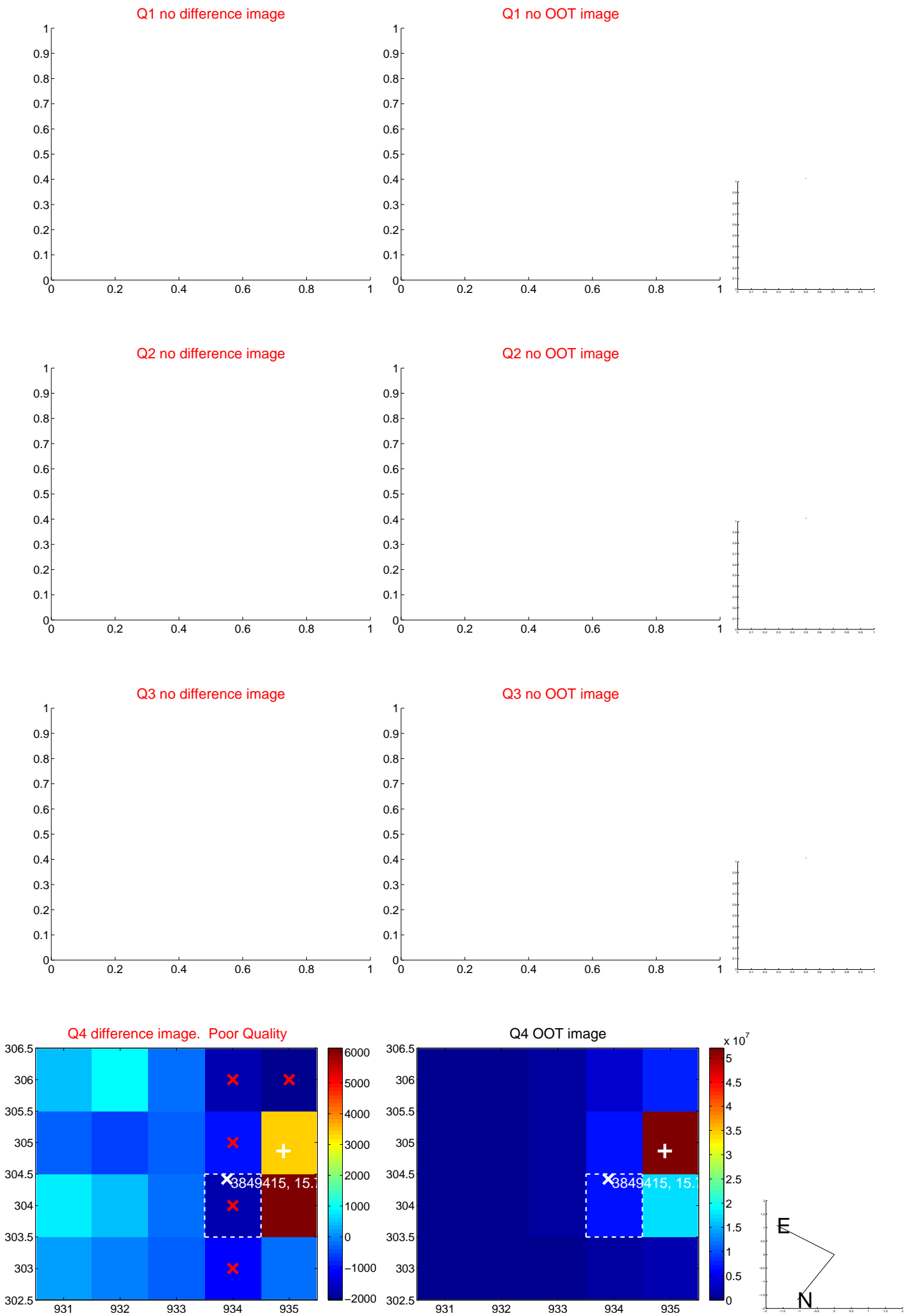
The OOT PRF centroid is offset from the target star catalog position by about 5.73 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.569 ± 0.441	1.29	-0.531 ± 0.121	0.202 ± 0.964
PRF-fit source offset from KIC position	5.920 ± 0.804	7.37	-4.006 ± 0.155	-4.359 ± 1.082
photometric centroid source offset	3.17 ± 0.08	41.77	-1.89 ± 0.07	-2.54 ± 0.08

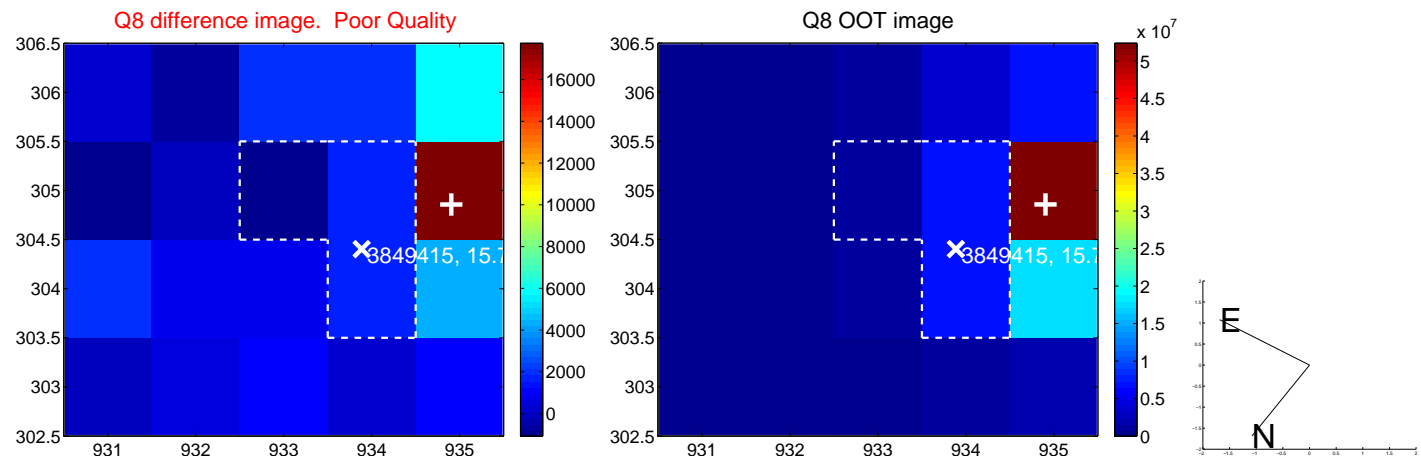
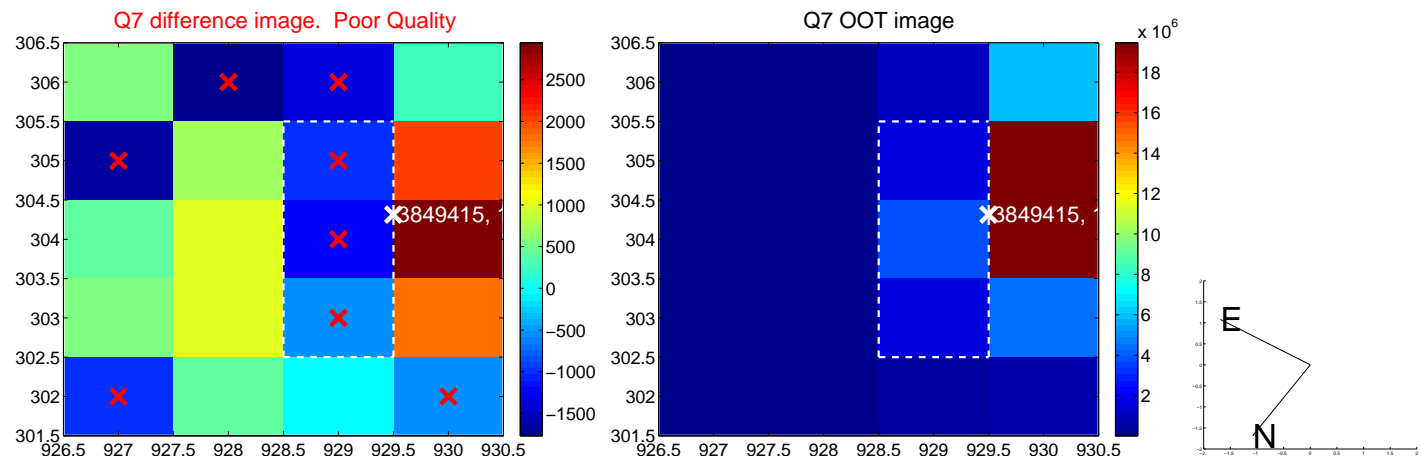
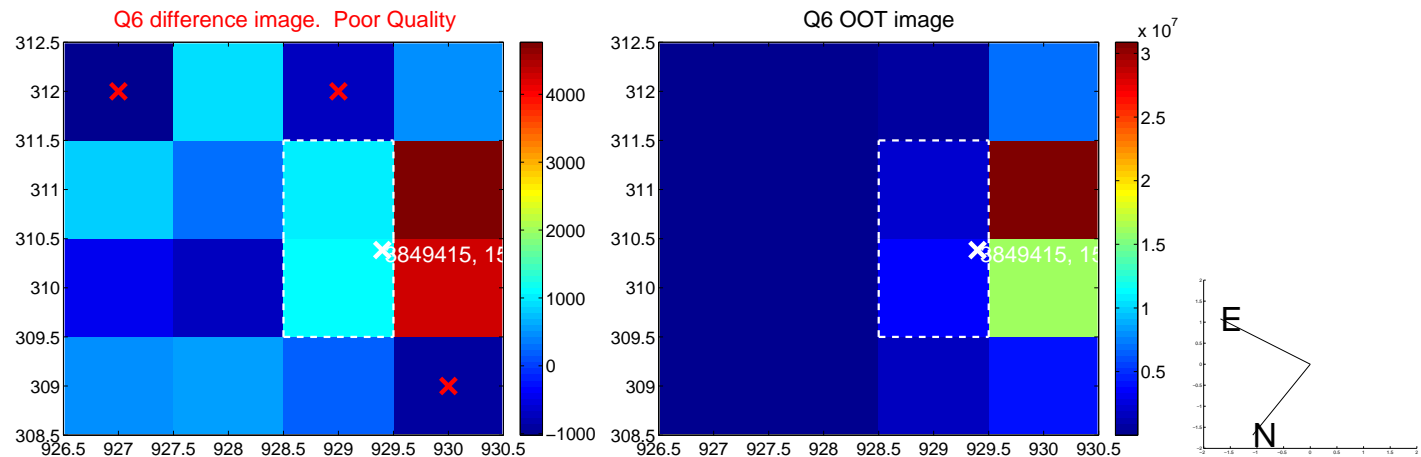
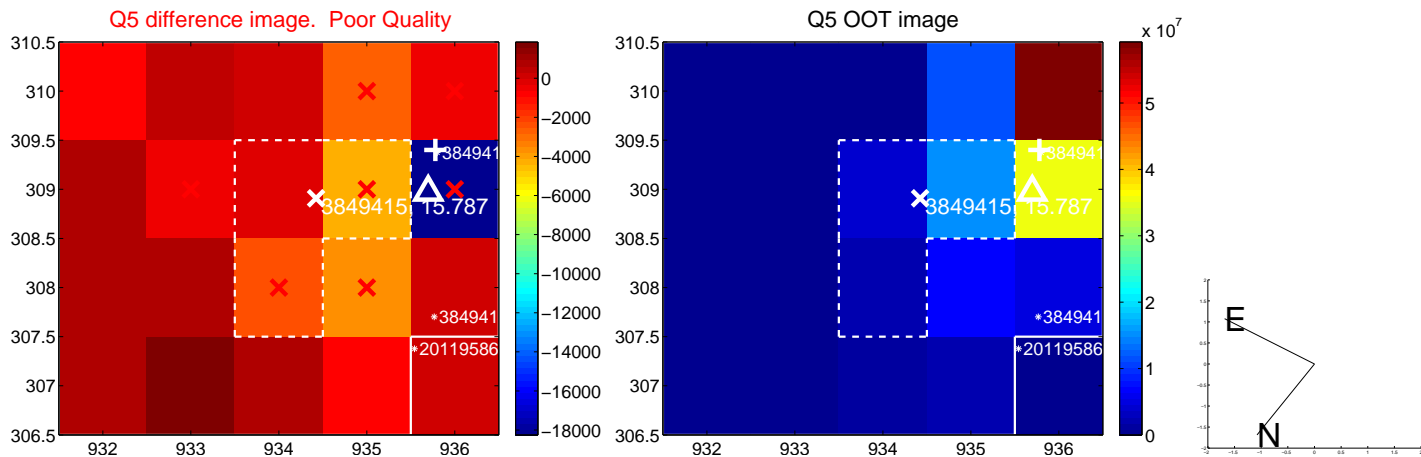


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

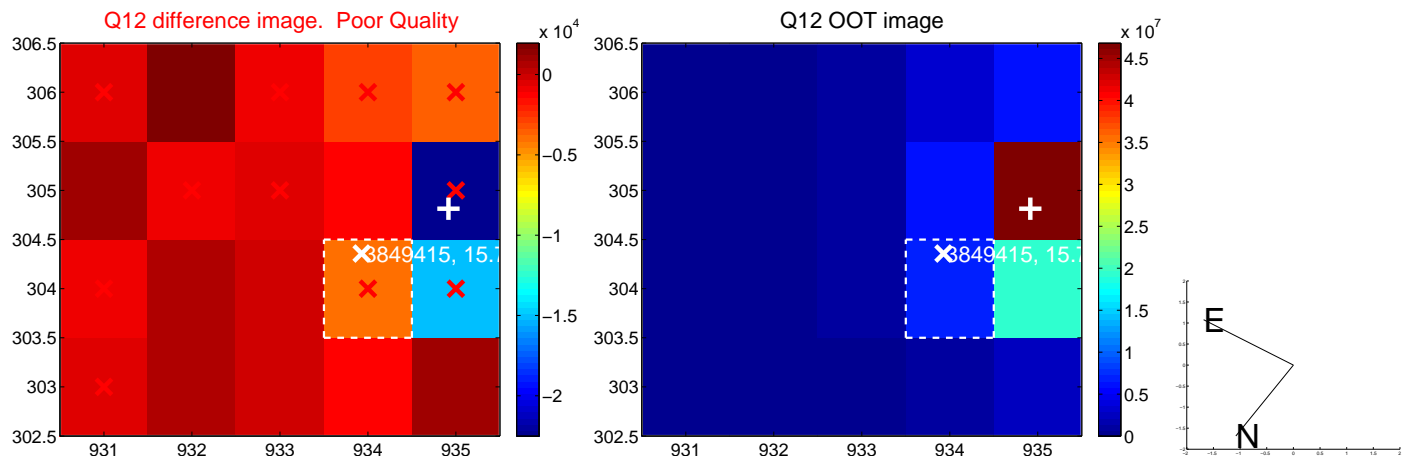
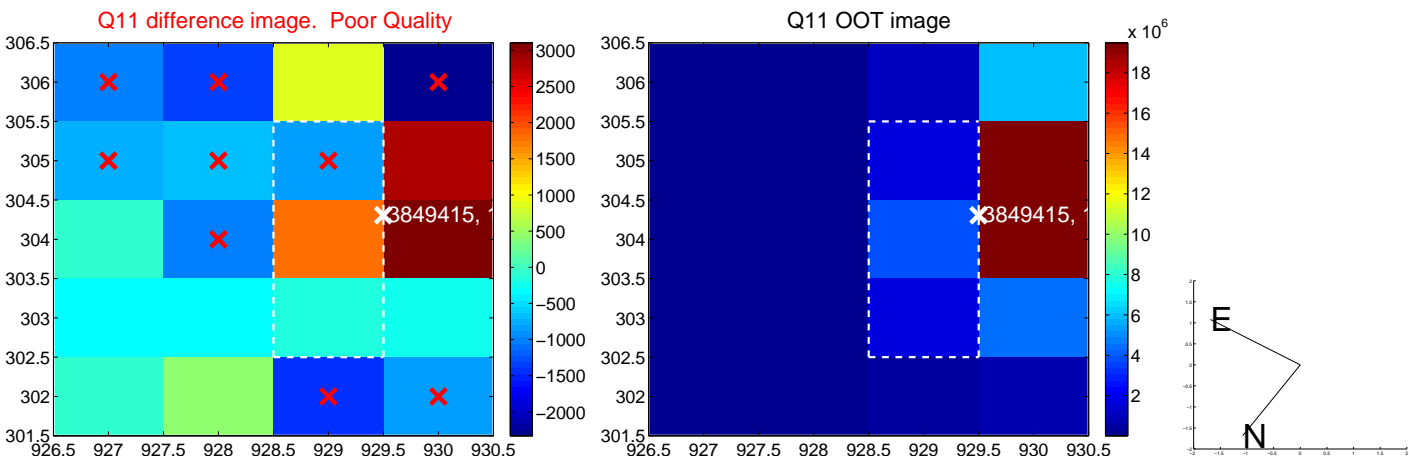
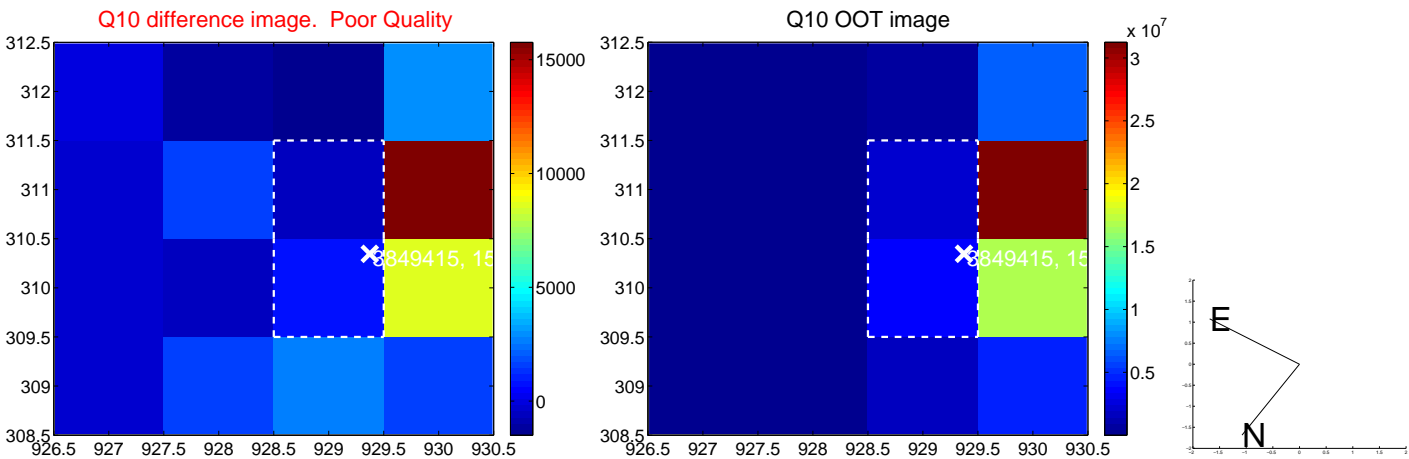
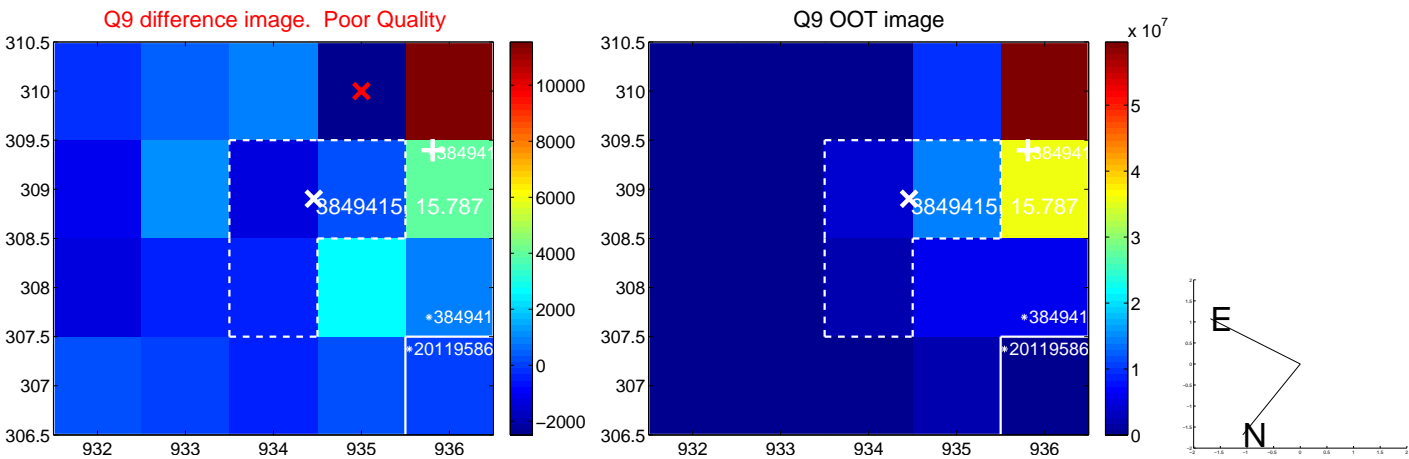
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



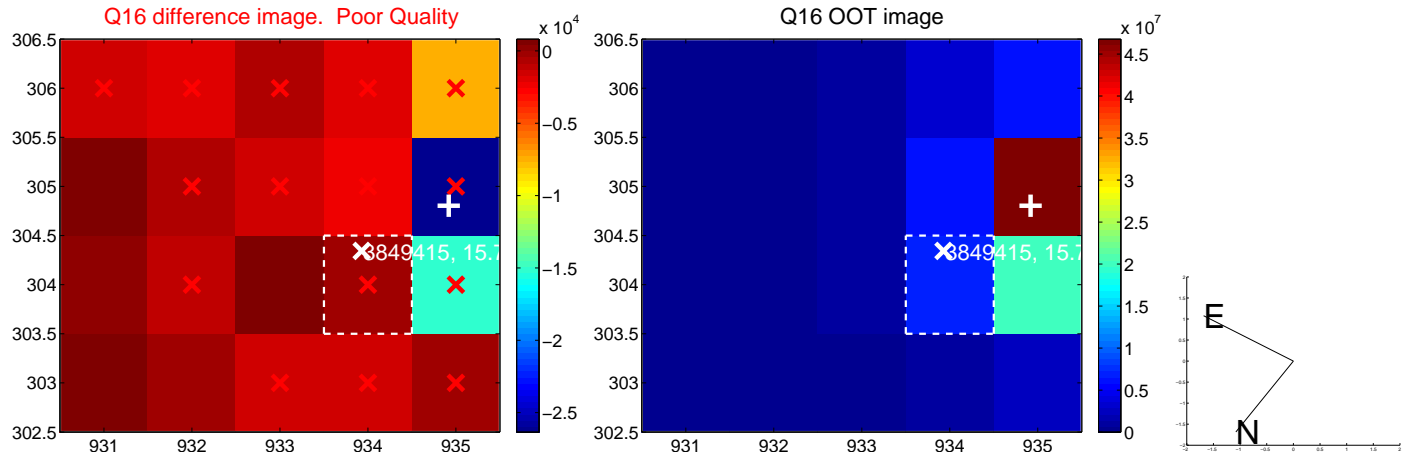
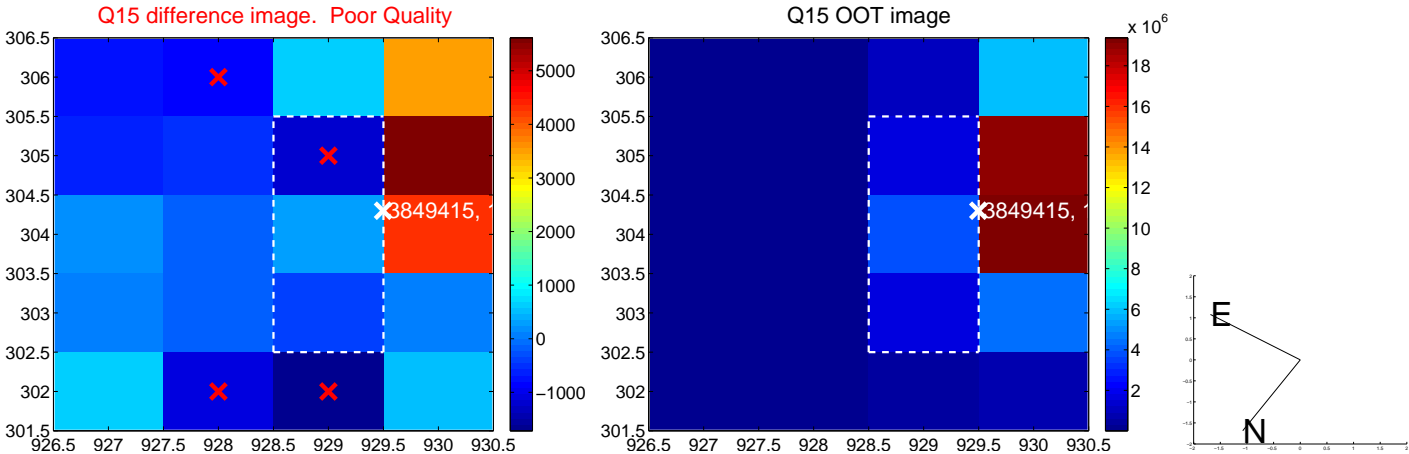
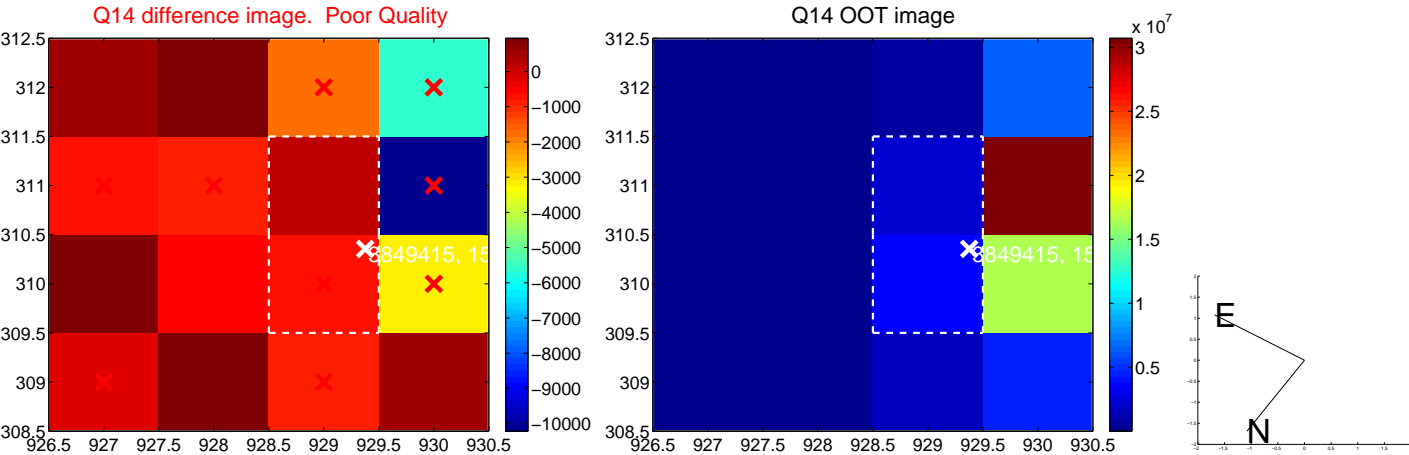
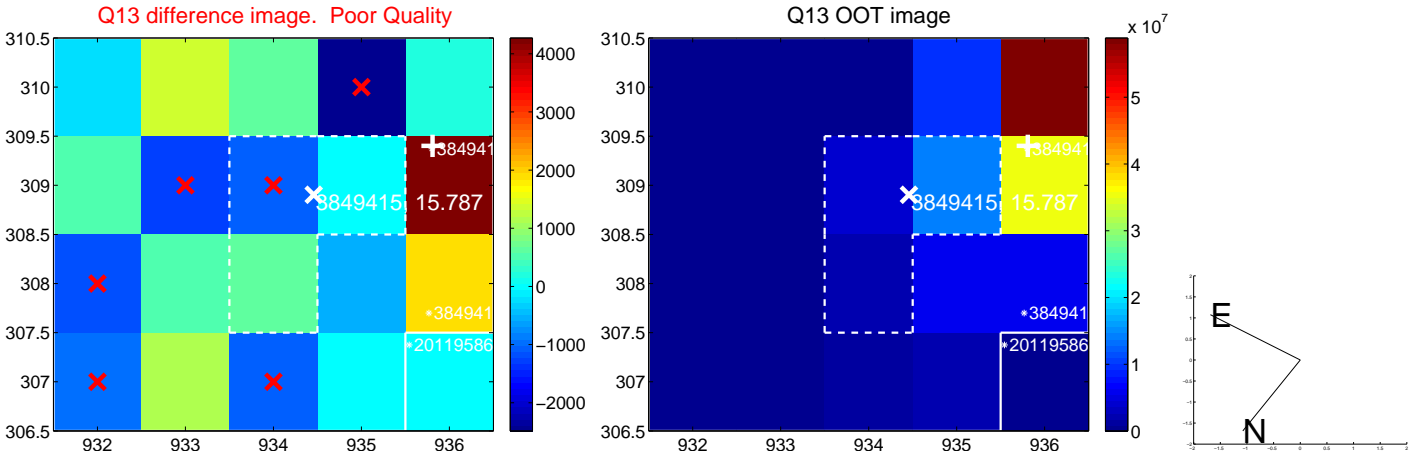
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



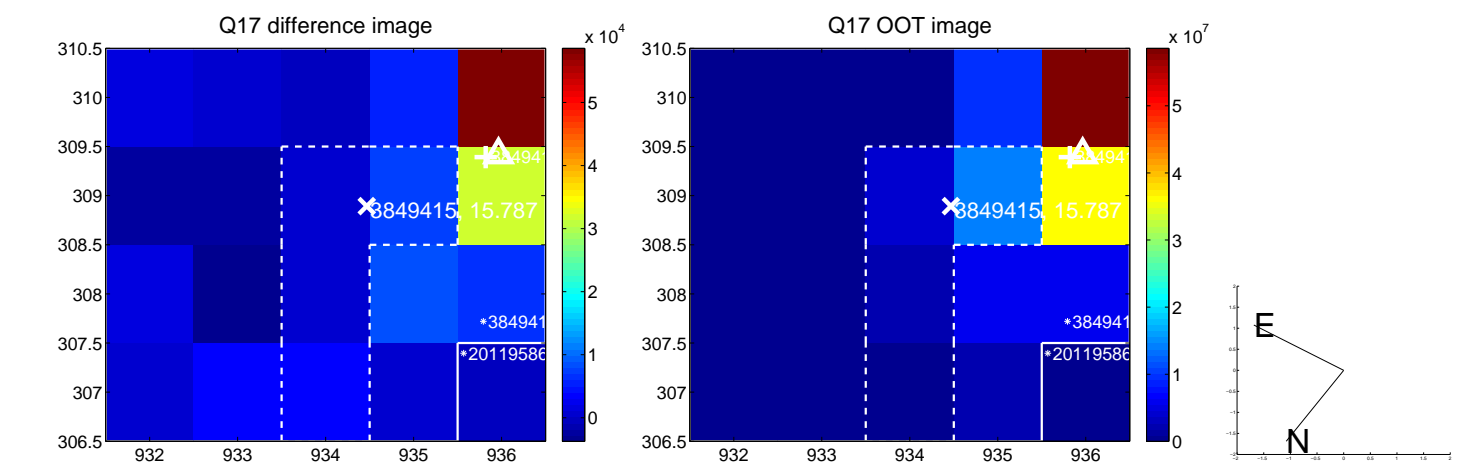
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



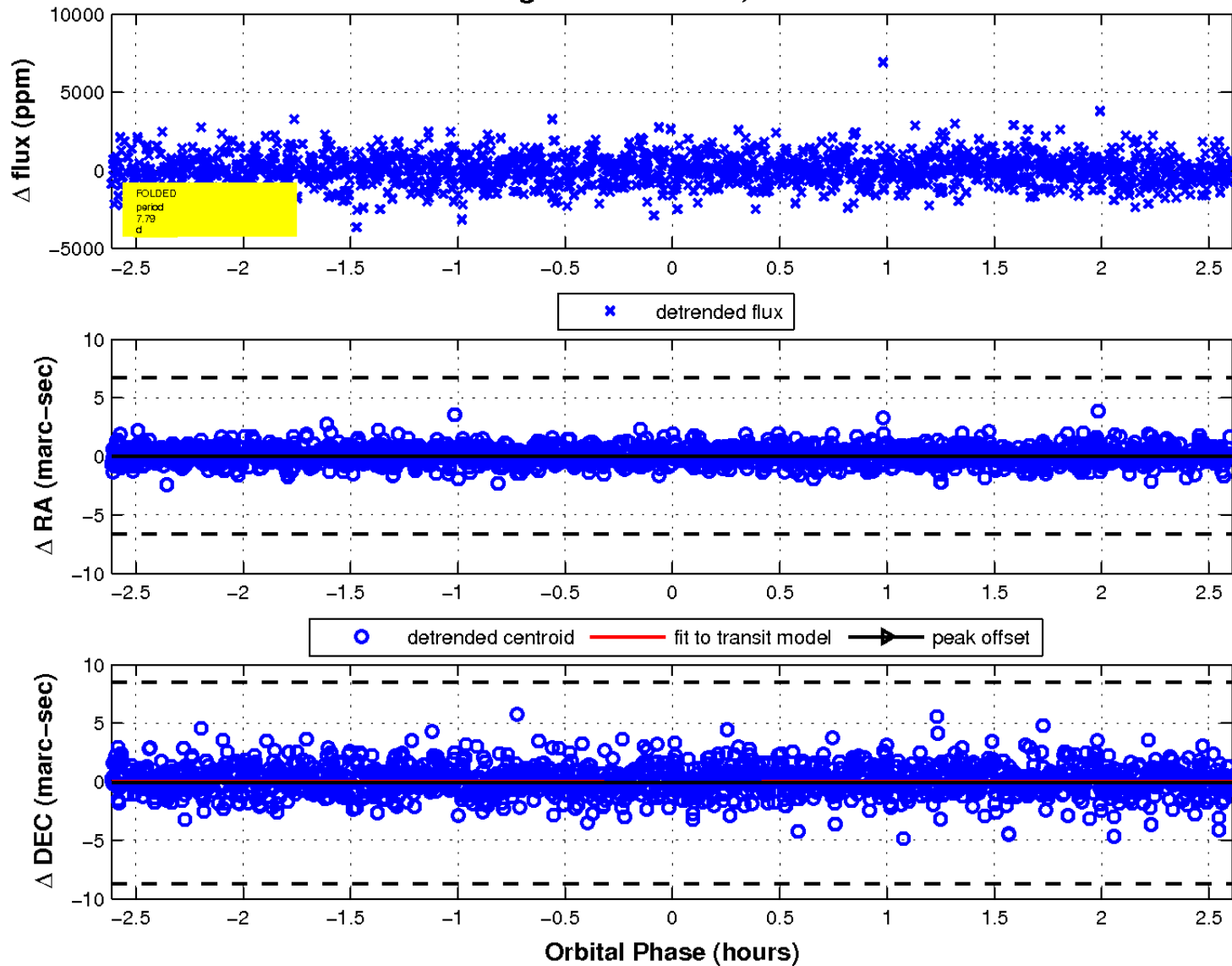
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

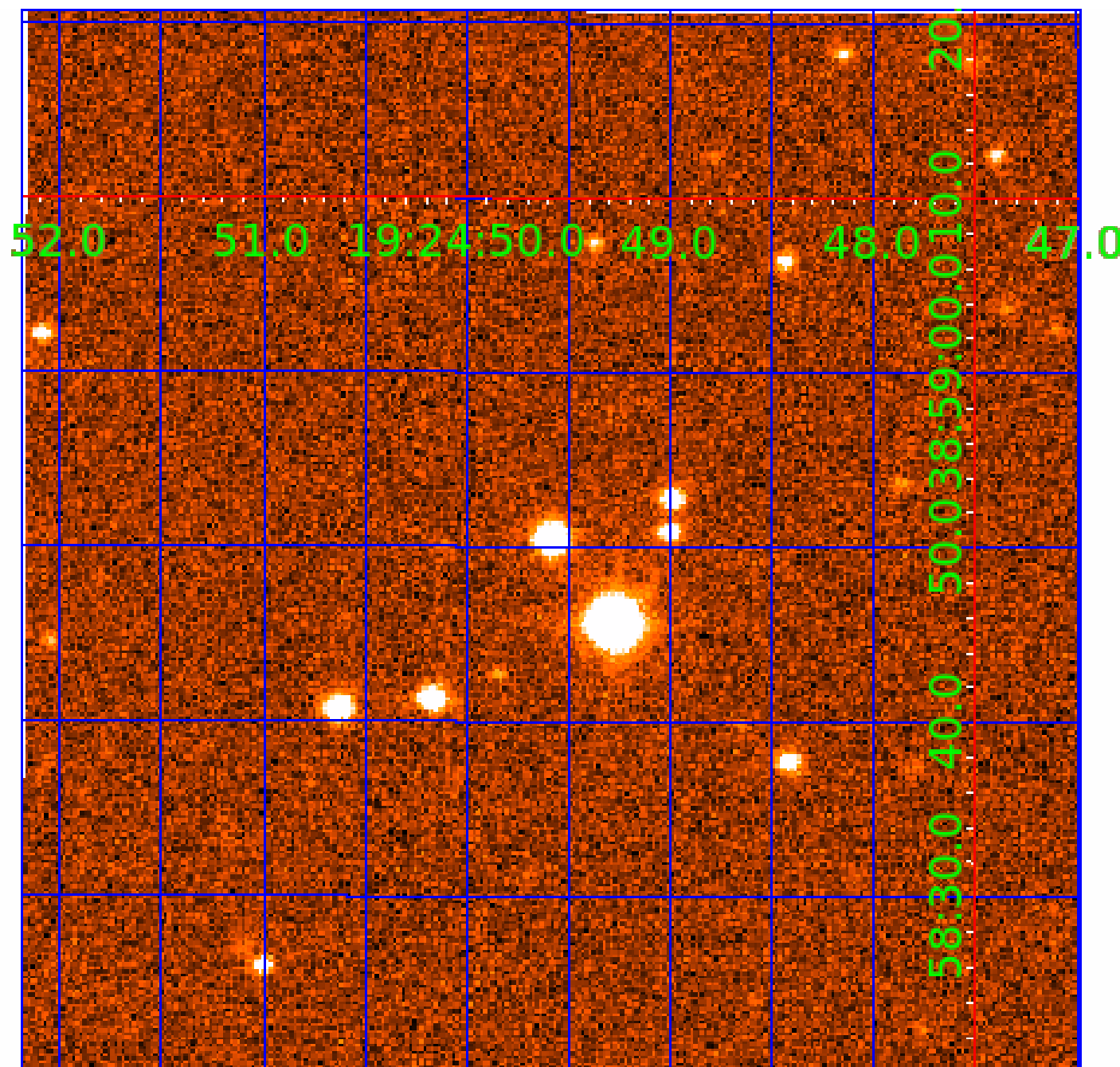


fluxWeightedCentroids, Planet 2 of 4



UKIRT Image

Declination



KIC 003849415

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})
003849415-01	OBS	No	0.638779	131.775097	94.6	4.811	9.5	7.4	0.84	5496	0.88	2840.81
003849415-02	OBS	No	7.788388	136.609447	1976.3	0.871	8.0	11.6	0.84	5496	4.43	101.23
003849415-03	OBS	No	4.424804	131.992443	1537.5	0.558	8.7	7.2	0.84	5496	3.69	215.14
003849415-04	OBS	No	6.523158	134.168545	3523.5	0.599	13.3	21.8	0.84	5496	5.26	128.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003849415-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_MEAS
003849415-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_MEAS
003849415-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
003849415-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET

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

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

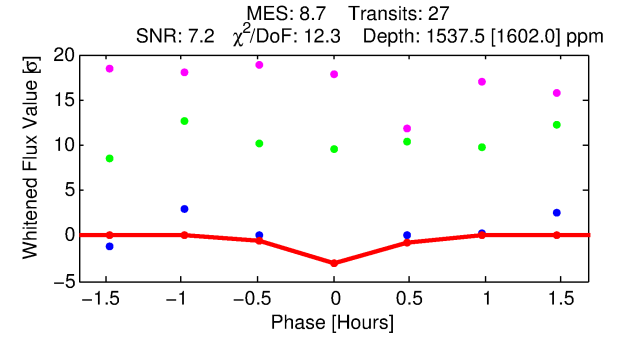
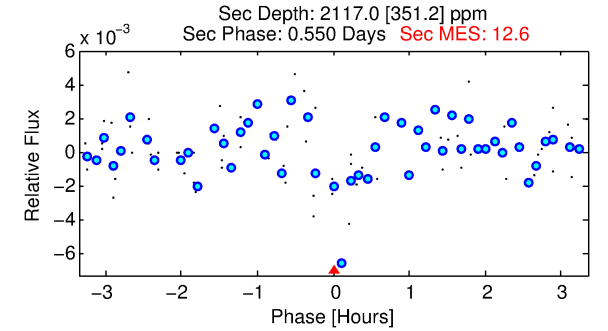
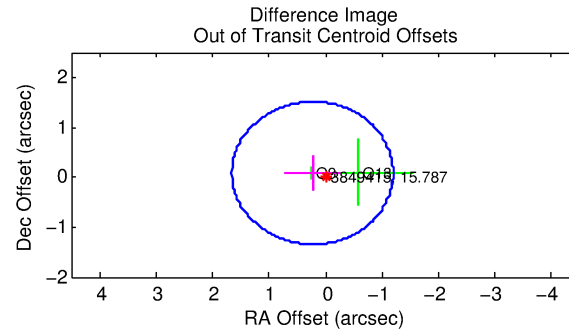
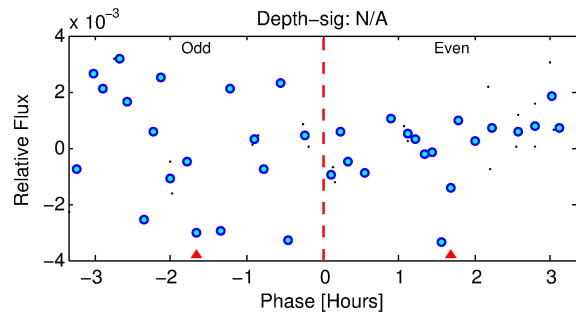
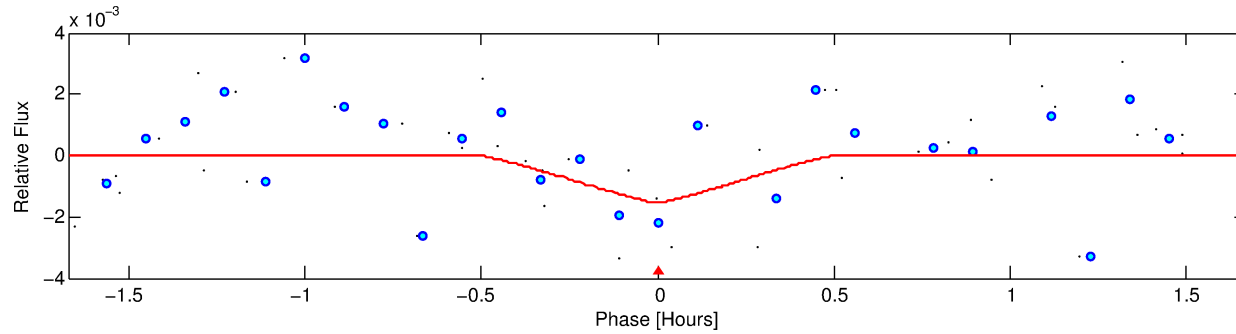
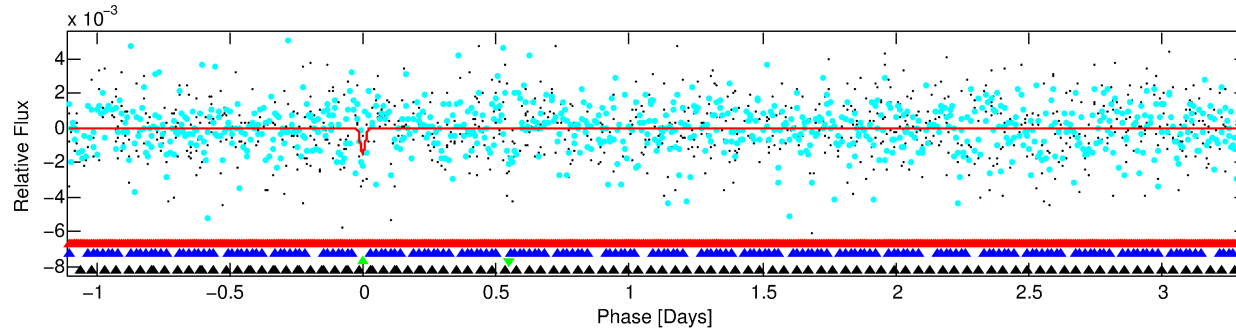
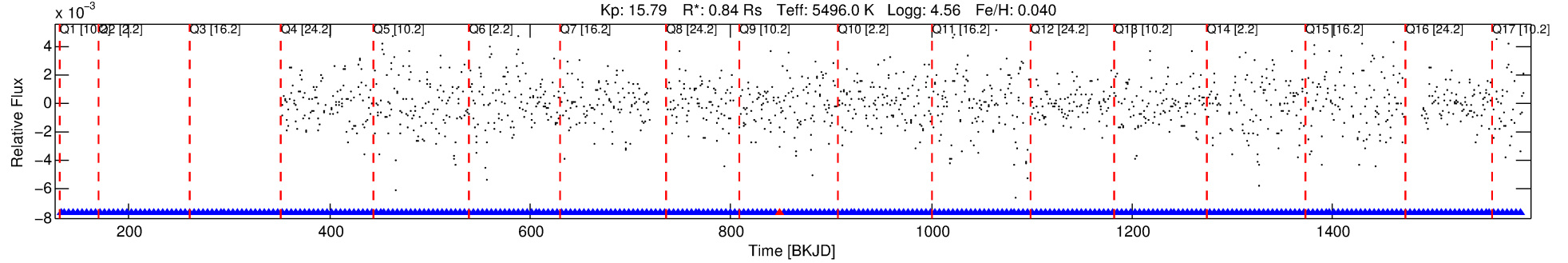
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003849415-03

No Significant Match Found

DV One-Page Summary

KIC: 3849415 Candidate: 3 of 4 Period: 4.425 d



DV Fit Results:

Period = 4.42480 [0.00007] d
Epoch = 131.9924 [0.0082] BKJD
Rp/R* = 0.0403 [0.1155]
a/R* = 46.60 [526.80]
b = 0.70 [8.22]
Seff = 215.14 [69.23]
Teq = 977 [79] K
Rp = 3.69 [10.60] Re
a = 0.0517 [0.0104] AU
Ag = 228.49 [1311.48] [0.17σ]
Teffp = 5870 [8415] K [0.58σ]

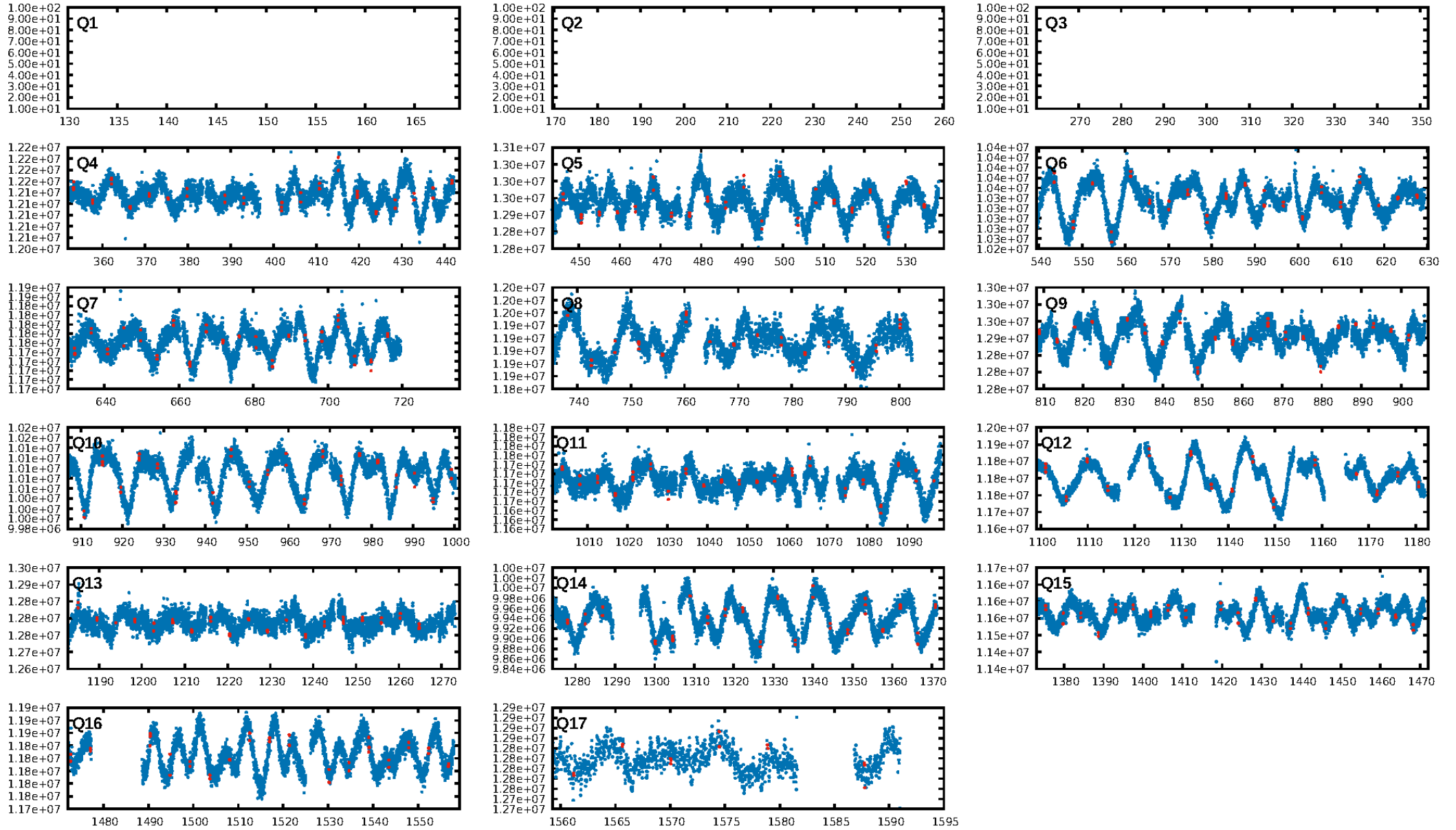
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [18.76σ]
LongPeriod-sig: 100.0% [61.53σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 2.47e-05
RollingBand-fgt: 0.96 [25/26]
GhostDiagnostic-chr: -0.4919
Centroid-sig: 0.7%
Centroid-so: 3.104 arcsec [35.86σ]
OotOffset-rm: 0.244 arcsec [0.51σ]
KicOffset-rm: 5.263 arcsec [2.49σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 1/2/0/2 [5]
DiffImageQuality-fgm: 0.20 [1/5]
DiffImageOverlap-fno: 0.00 [0/14]

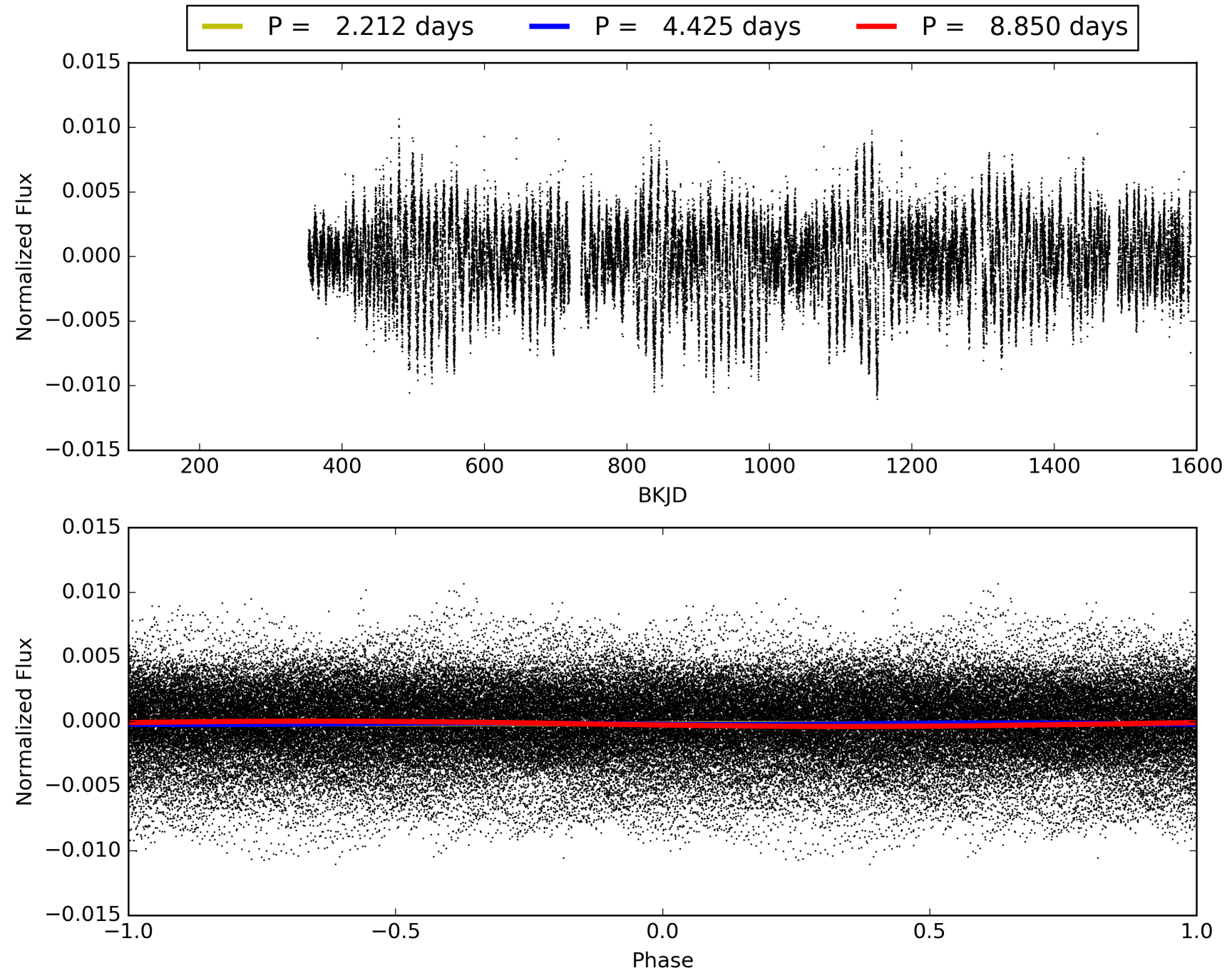
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:34:54 Z

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

TCE 003849415-03, PDC Light Curves

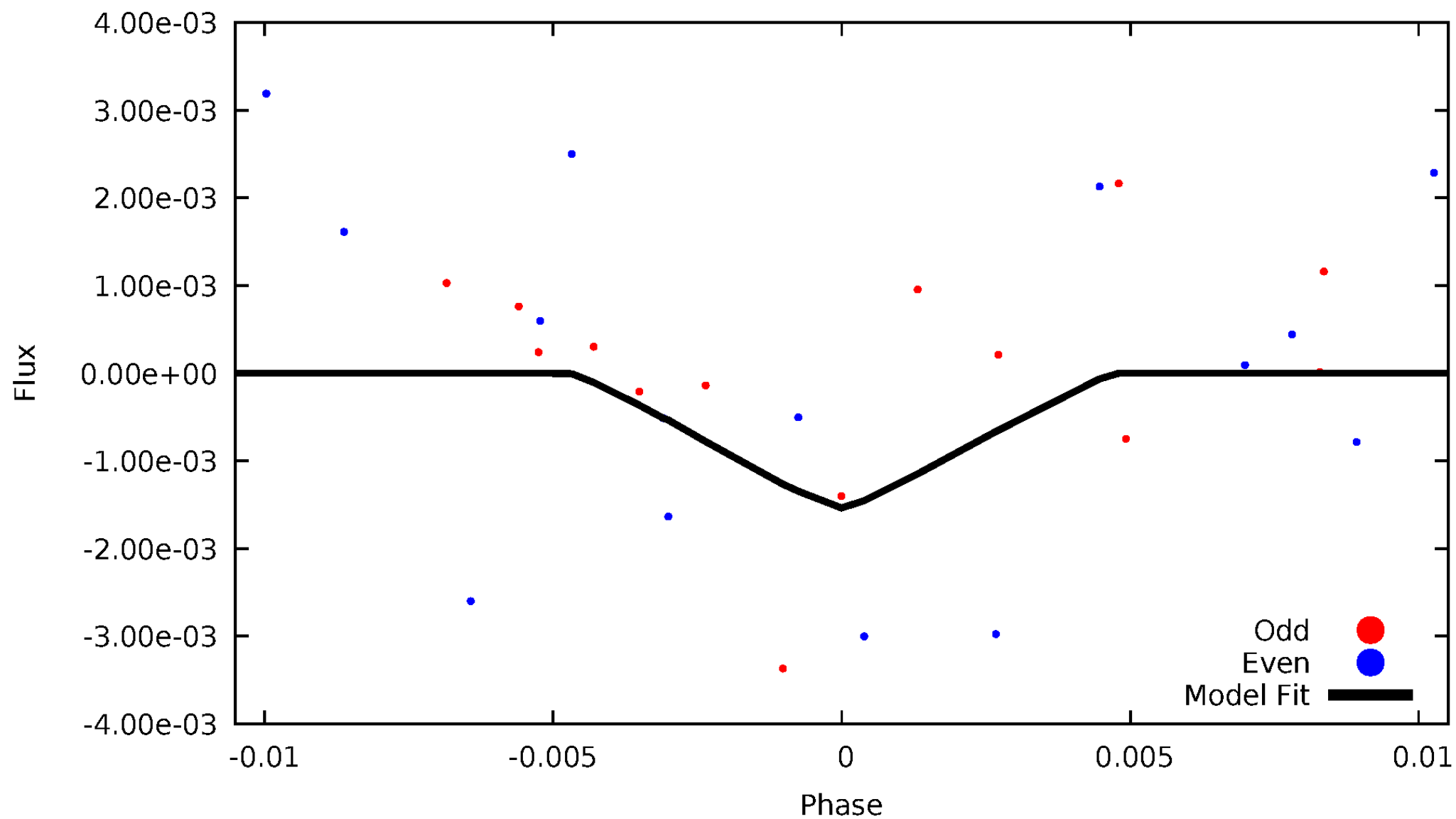


TCE 003849415-03



DV Odd/Even

TCE 003849415-03

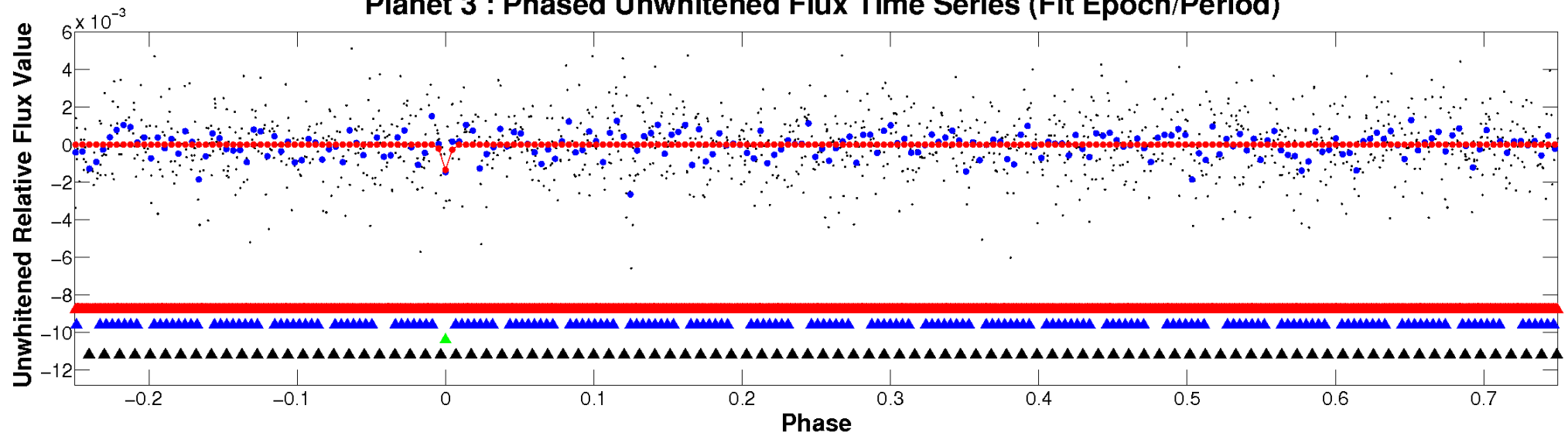


ALT Odd/Even

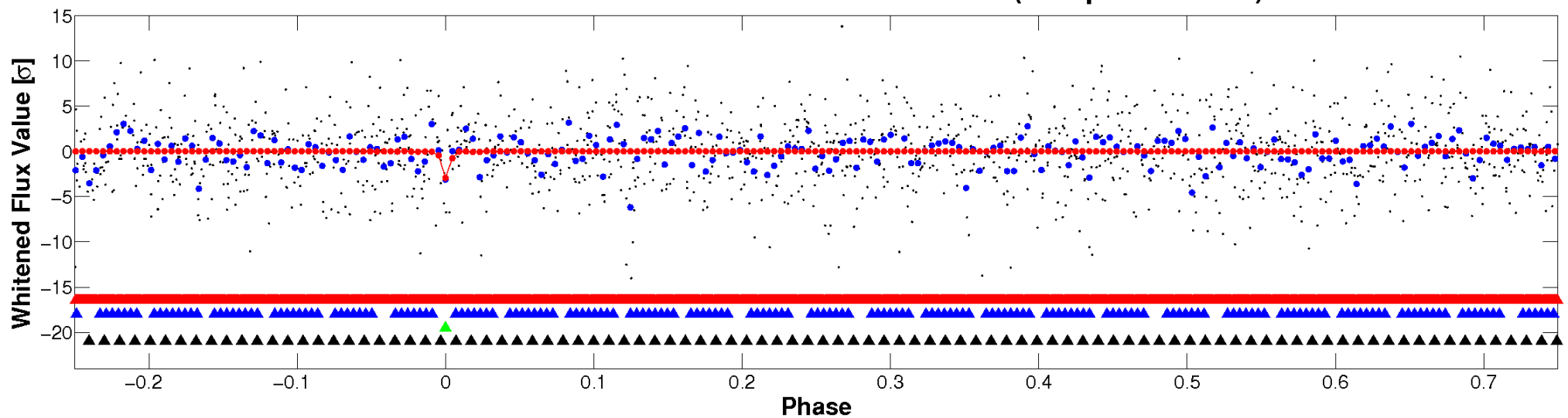
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

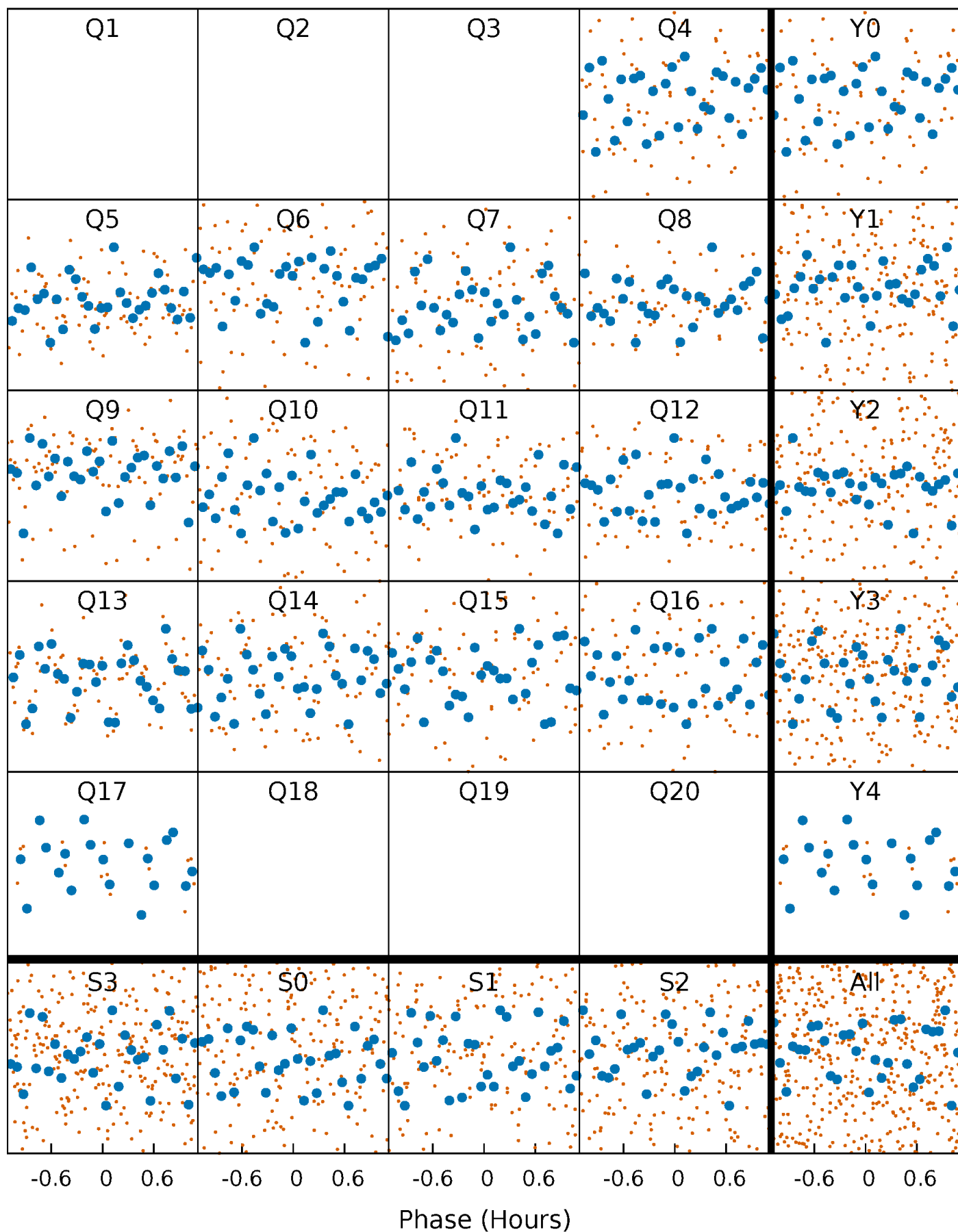


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



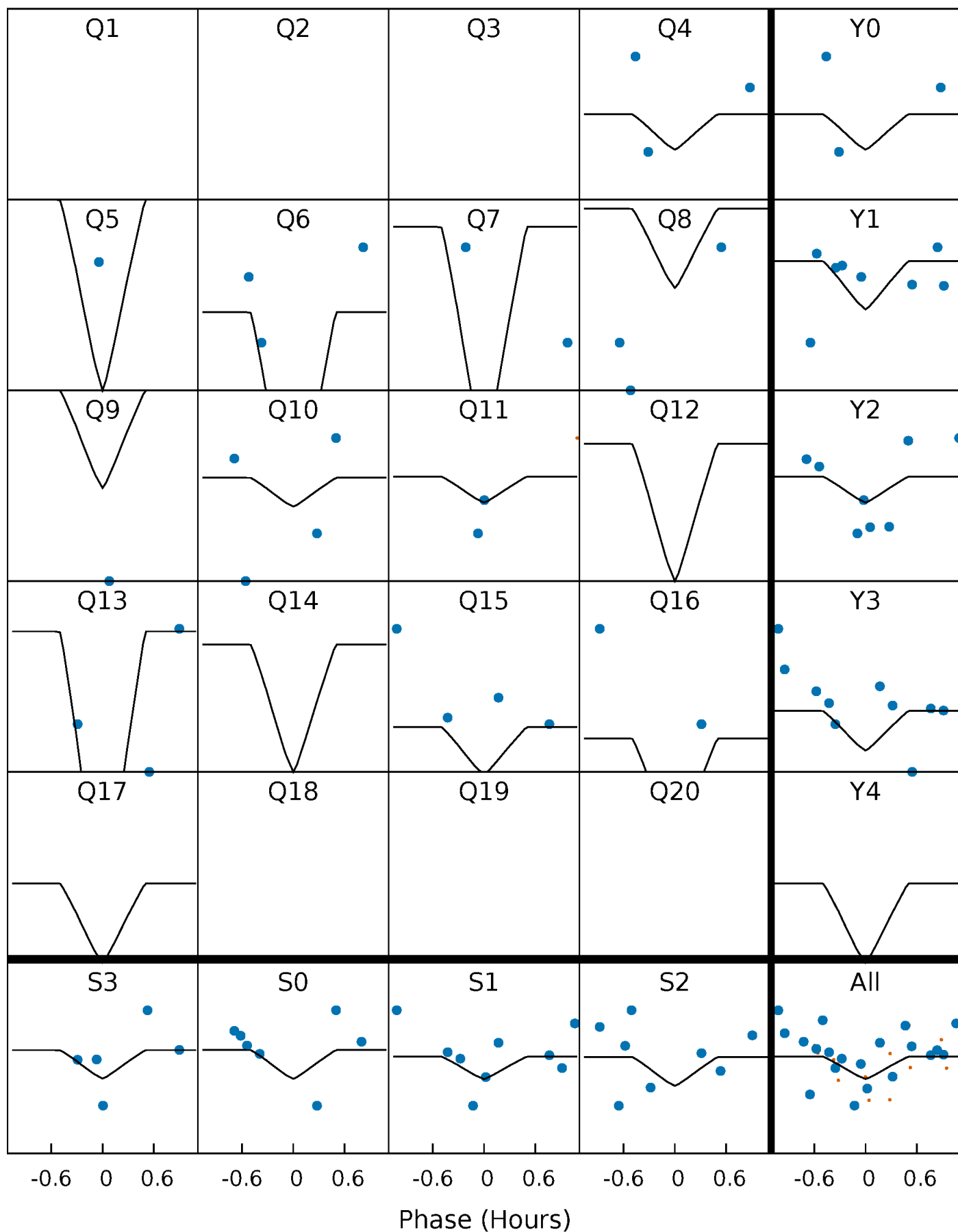
PDC Quarter-Phased Transit Curves

TCE 003849415-03 P= 4.424804 Days $T_0=131.992443$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 003849415-03 P= 4.424804 Days $T_0=131.992443$ (BKJD)

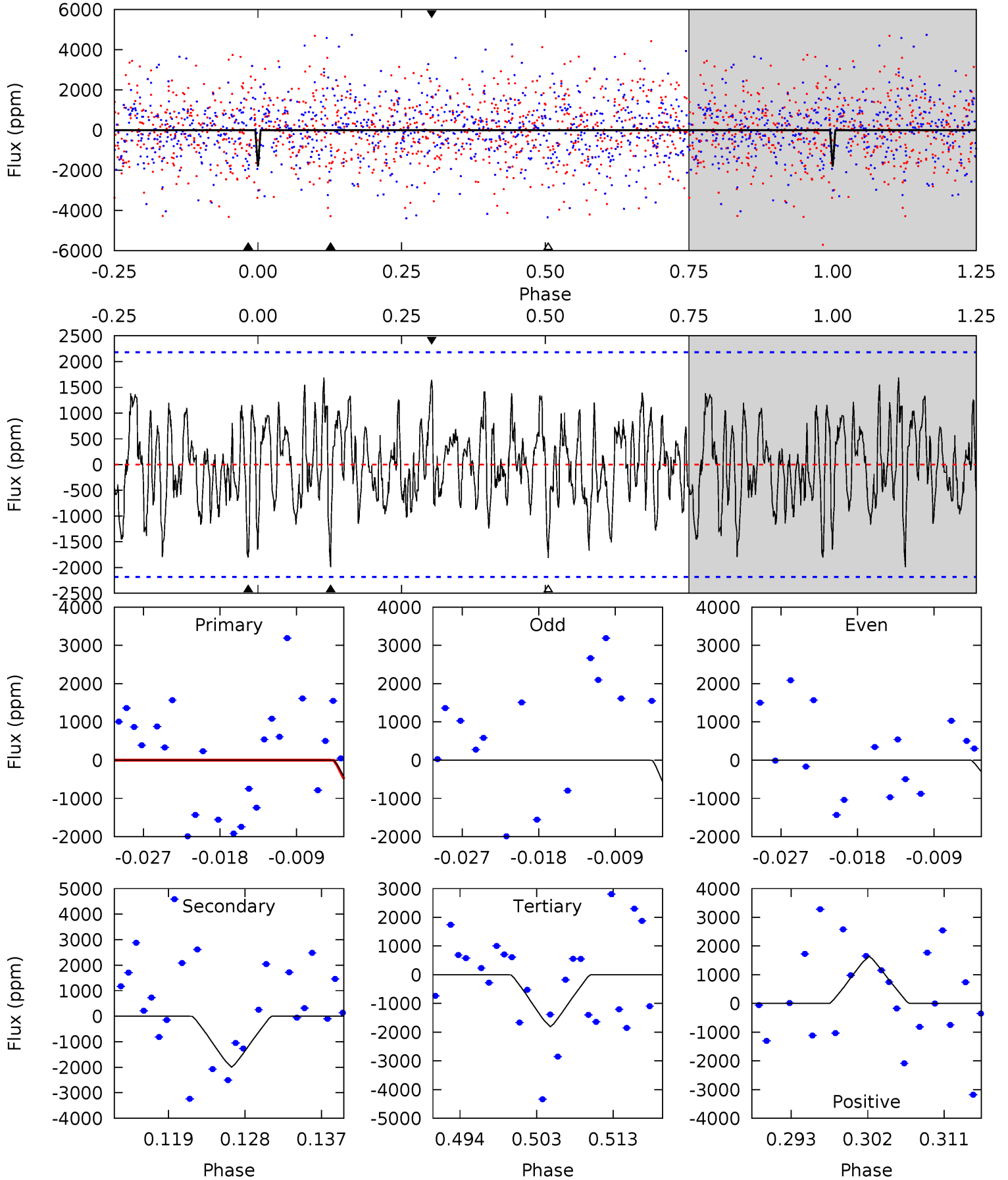


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

003849415-03, P = 4.424804 Days, E = 131.992443 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.17	4.61	4.19	3.79	5.04	2.61	1.51	-0.02	0.38	0.42	0.82	1.27	0	0.46	0.15



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 003849415

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5496^{+180}_{-180}	$4.564^{+0.028}_{-0.161}$	$0.040^{+0.250}_{-0.300}$	$0.838^{+0.200}_{-0.067}$	$0.939^{+0.073}_{-0.110}$	$2.248^{+0.358}_{-1.004}$
	+3%/-3%	+1%/-4%	+625%/-750%	+24%/-8%	+8%/-12%	+16%/-45%
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 003849415-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1994 ± 433	$9.05^{+8.13}_{-6.11}$	1396^{+81}_{-63}	4040^{+2589}_{-819}	36^{+296}_{-26}
Alt.	N/A	N/A	N/A	N/A	N/A

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

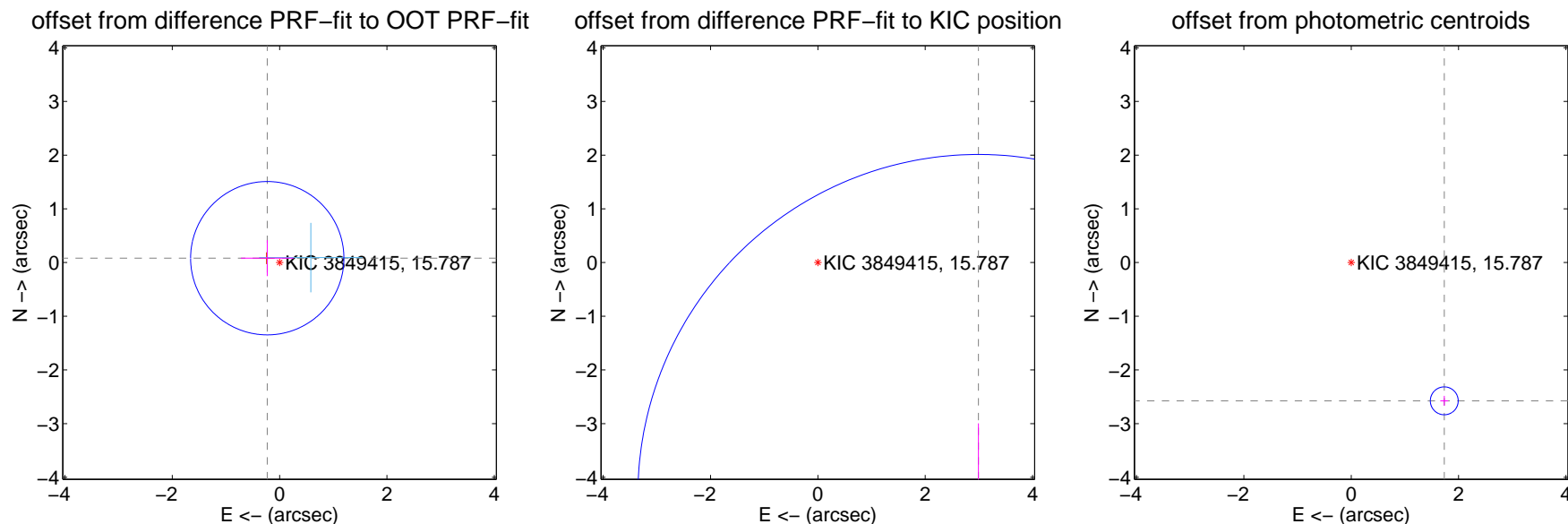
DV Centroid Data

Supplemental centroid analysis for 003849415-03. Kepler magnitude: 15.79. Transit SNR 7.24

There are 1 quarters with good PRF difference image offsets

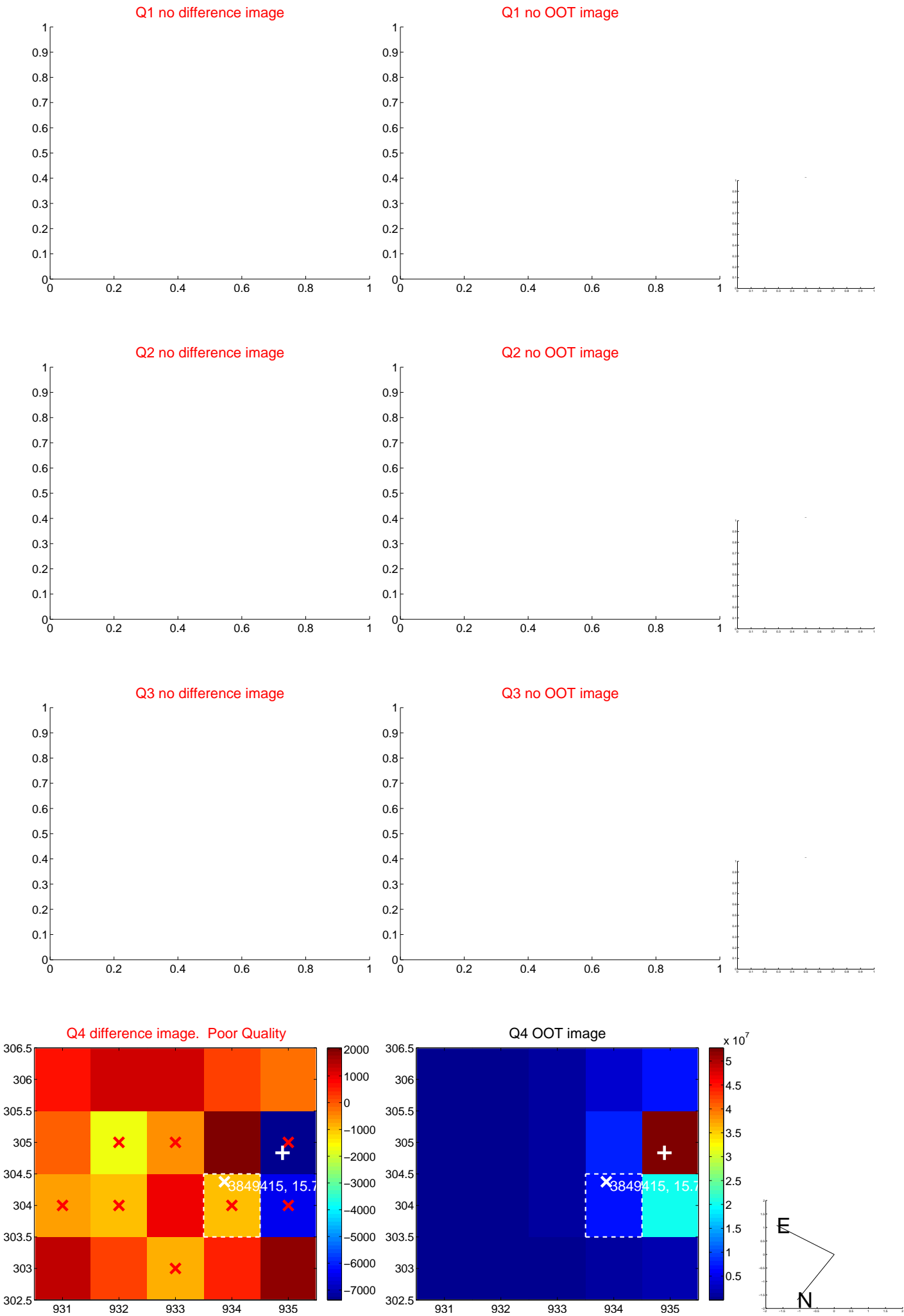
The OOT PRF centroid is offset from the target star catalog position by about 5.73 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.244 ± 0.476	0.51	0.230 ± 0.490	0.081 ± 0.335
PRF-fit source offset from KIC position	5.263 ± 2.114	2.49	-2.991 ± 1.885	-4.331 ± 1.336
photometric centroid source offset	3.10 ± 0.09	35.86	-1.73 ± 0.07	-2.58 ± 0.09

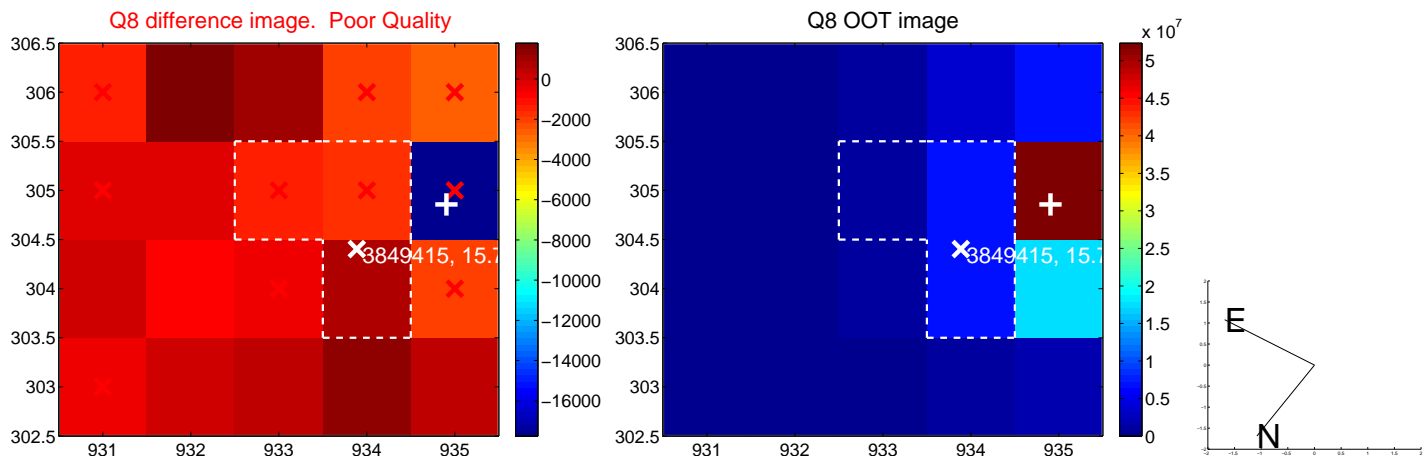
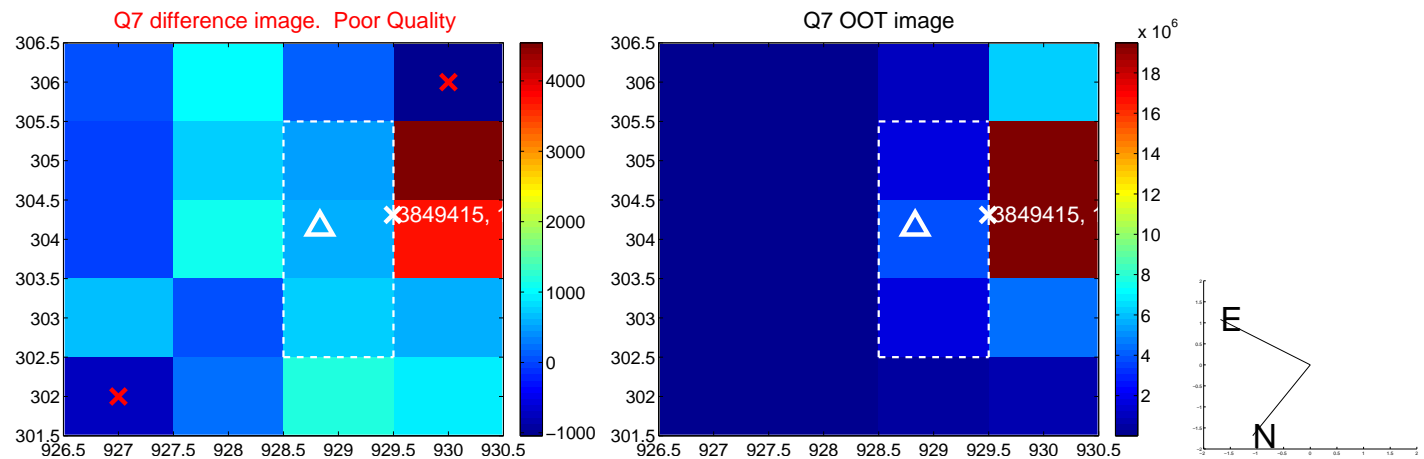
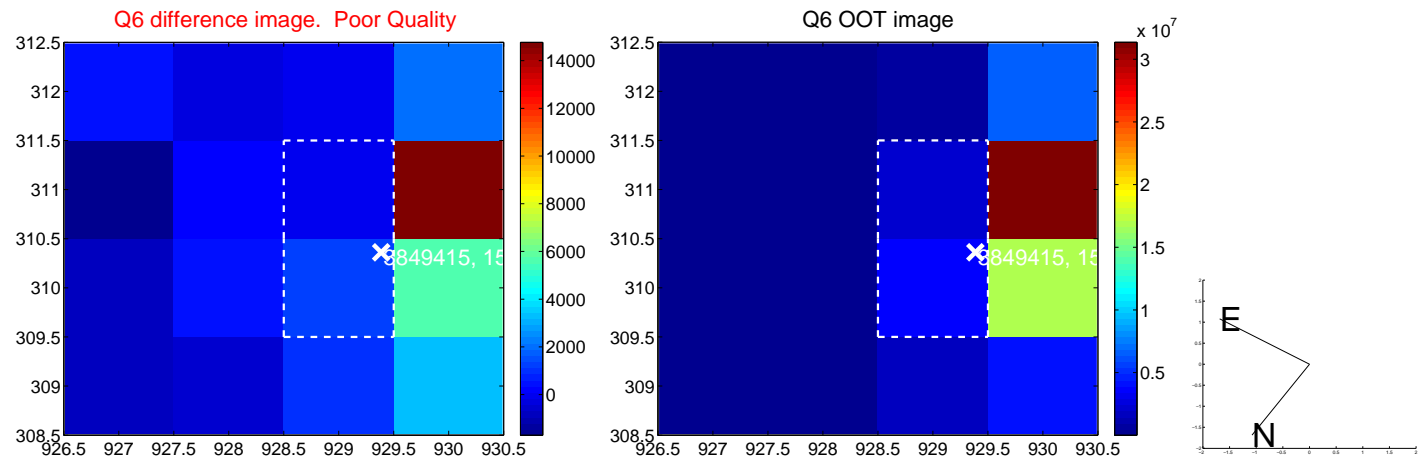
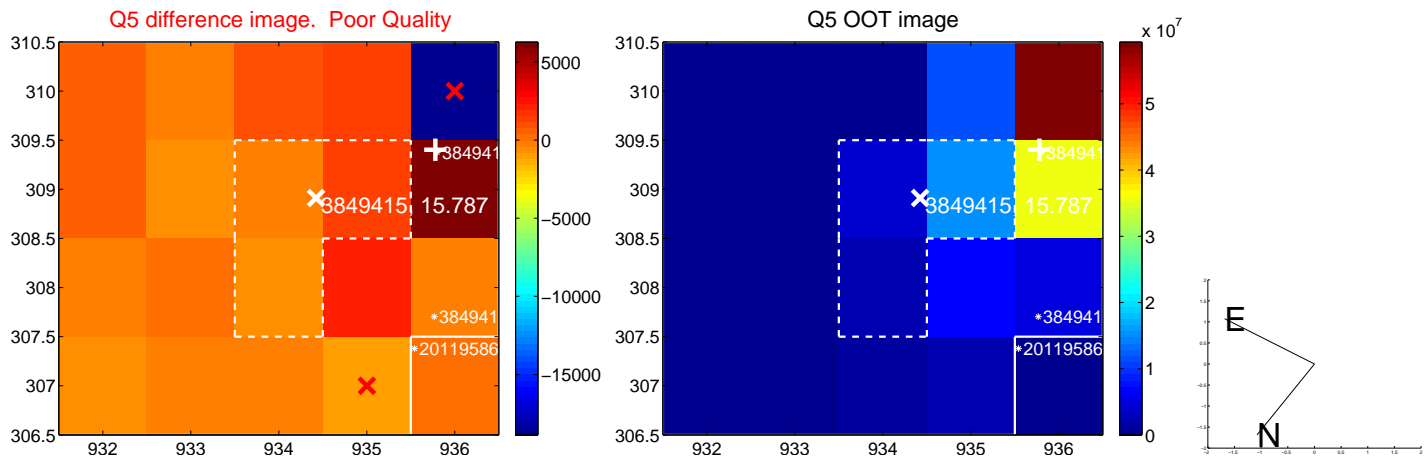


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

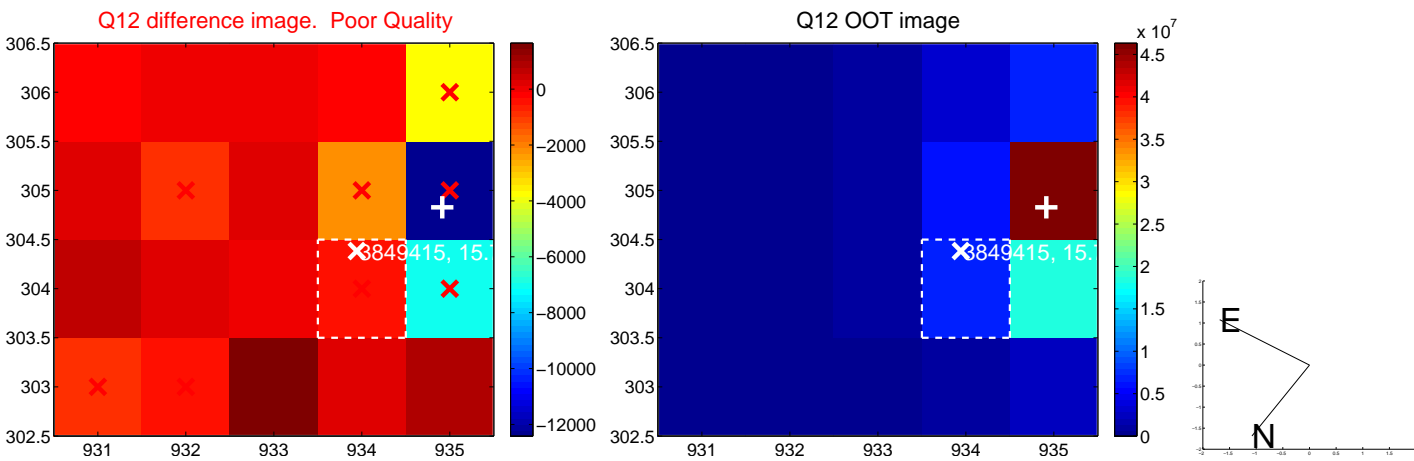
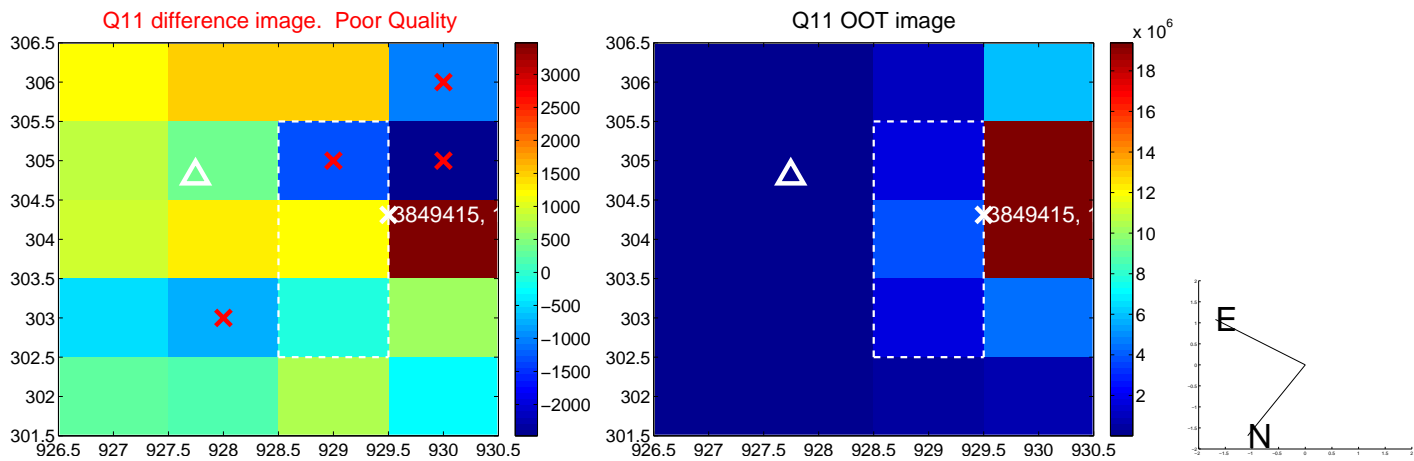
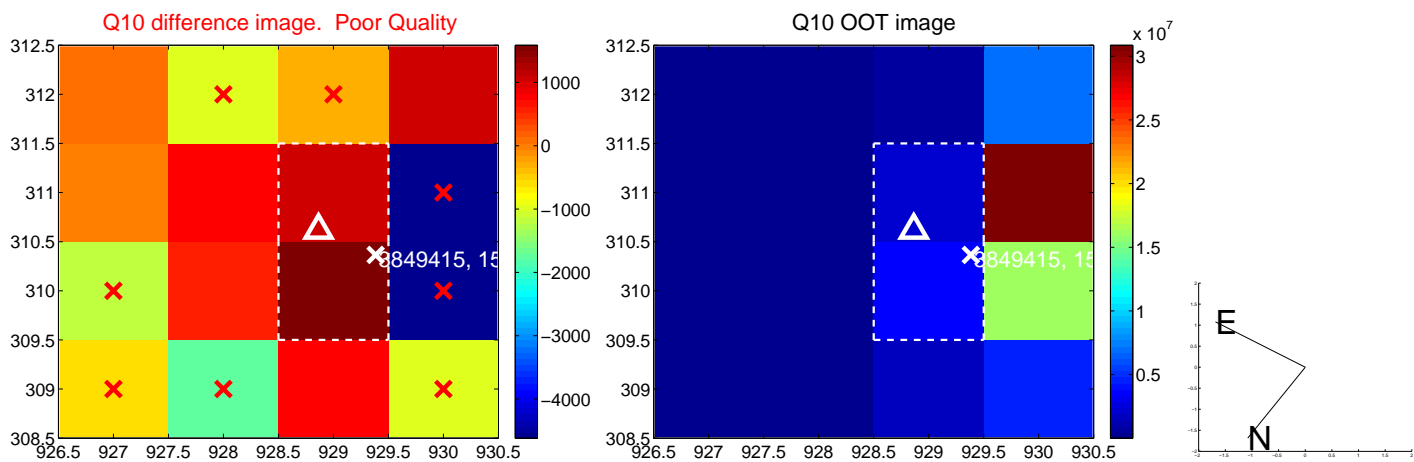
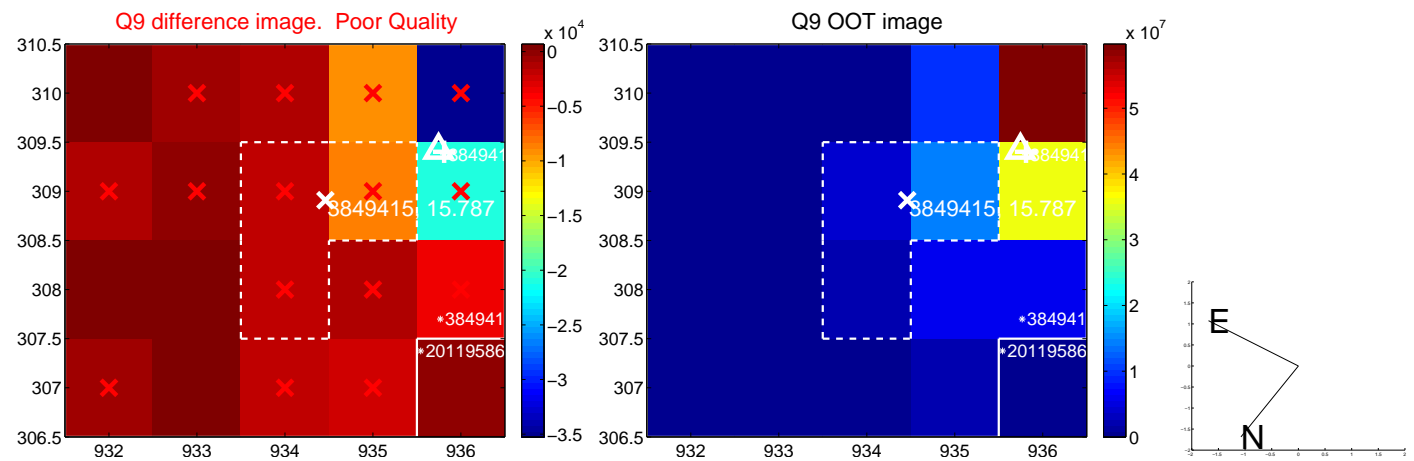
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



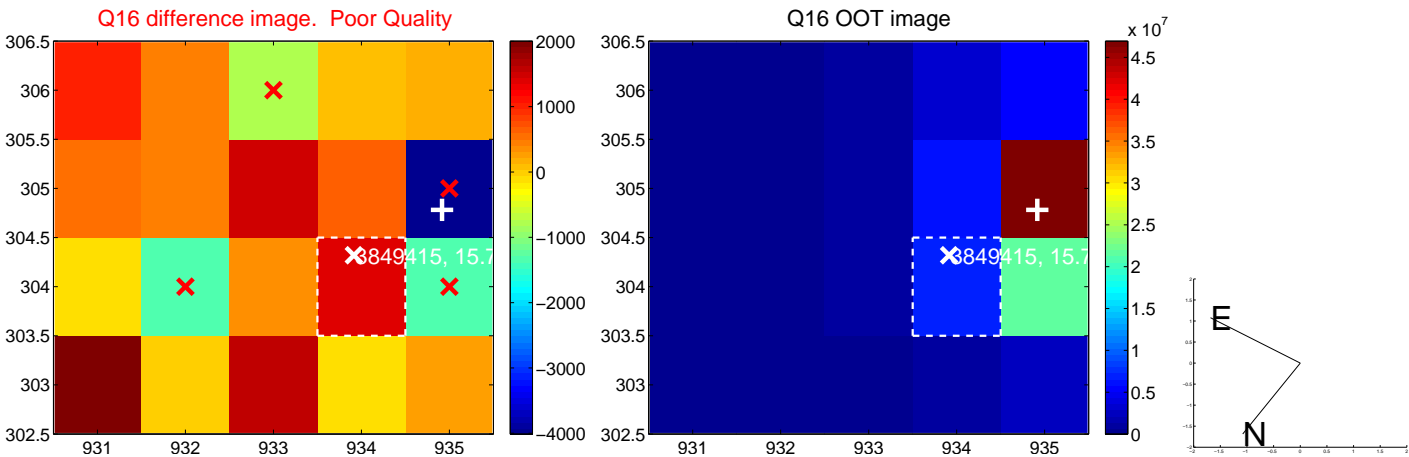
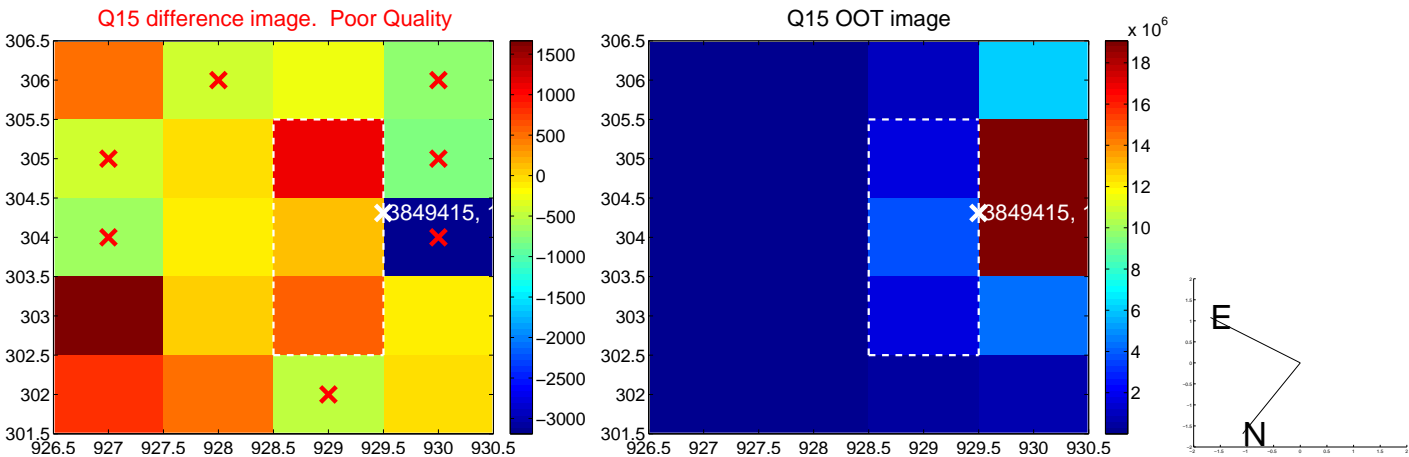
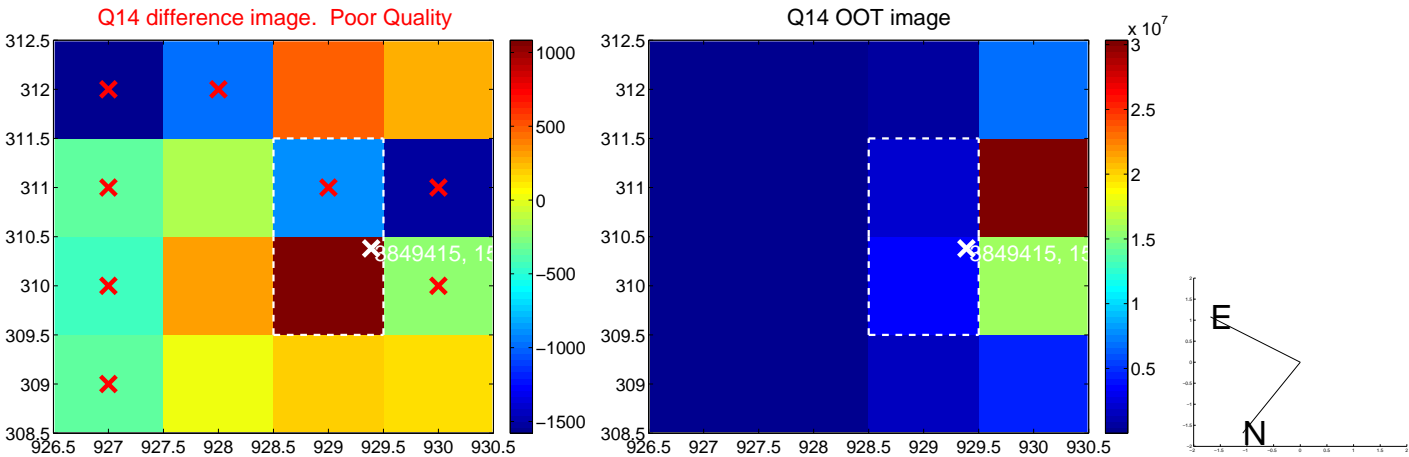
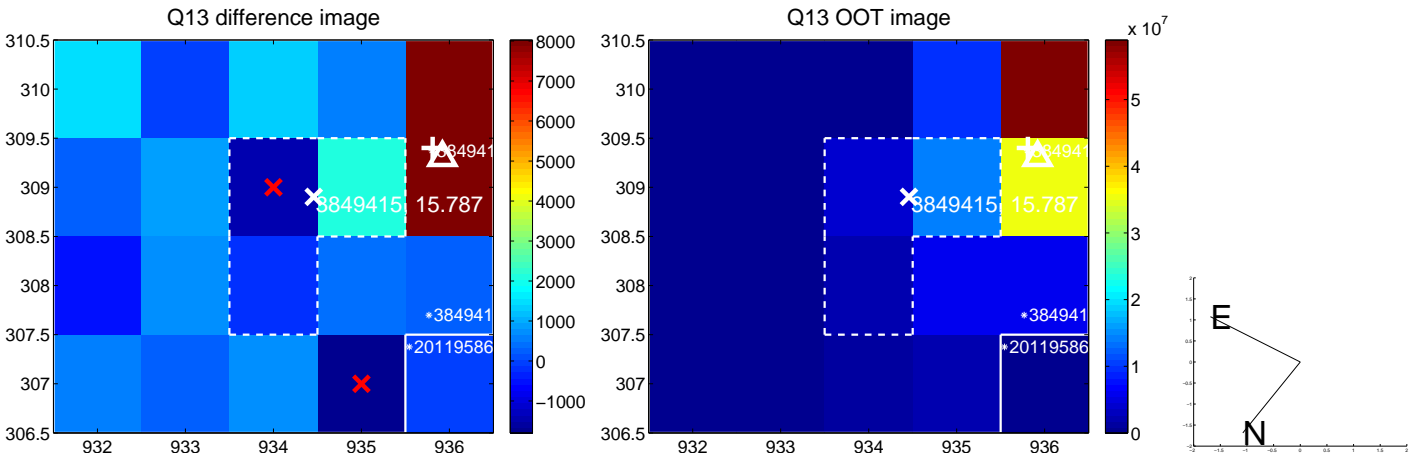
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



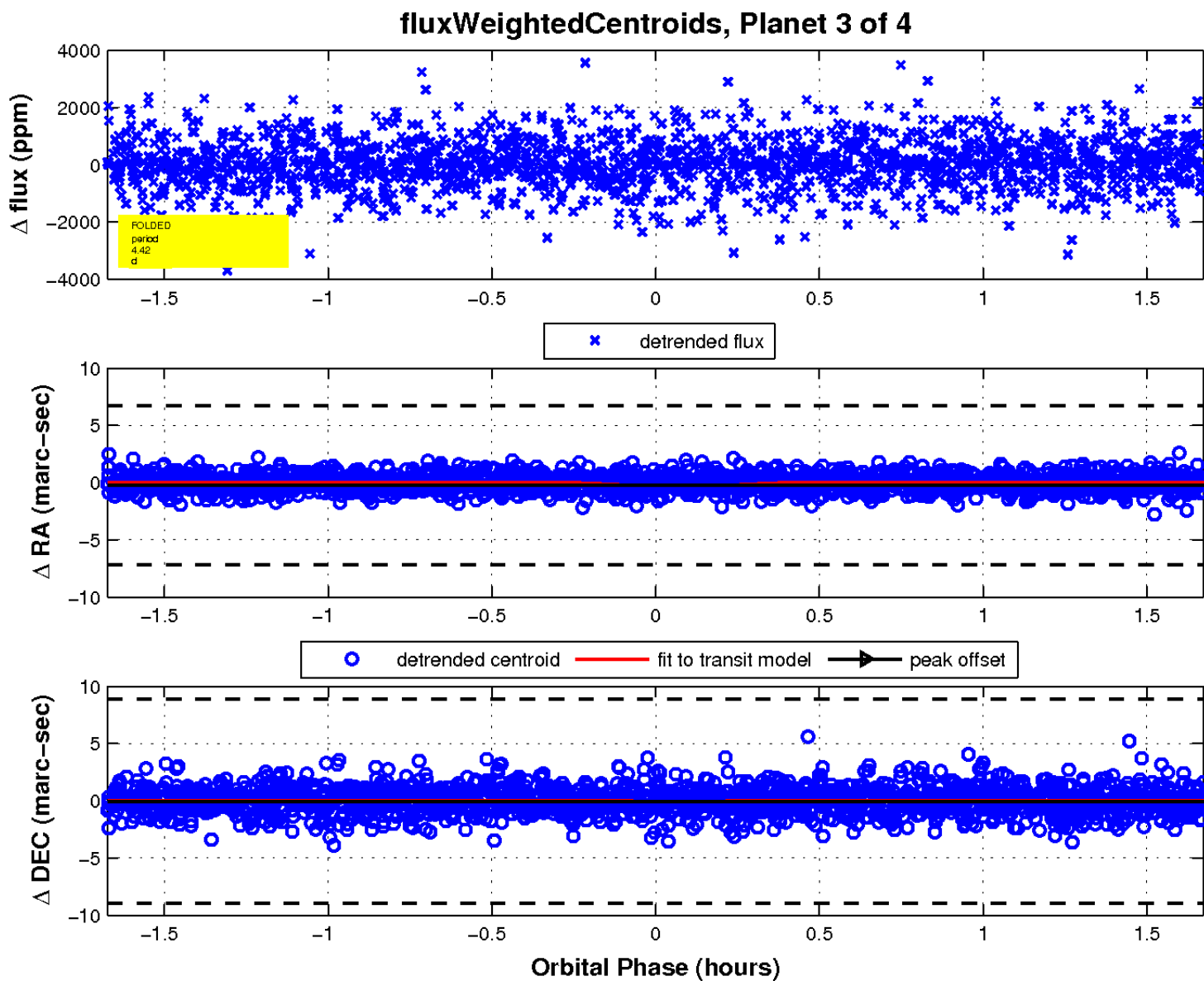
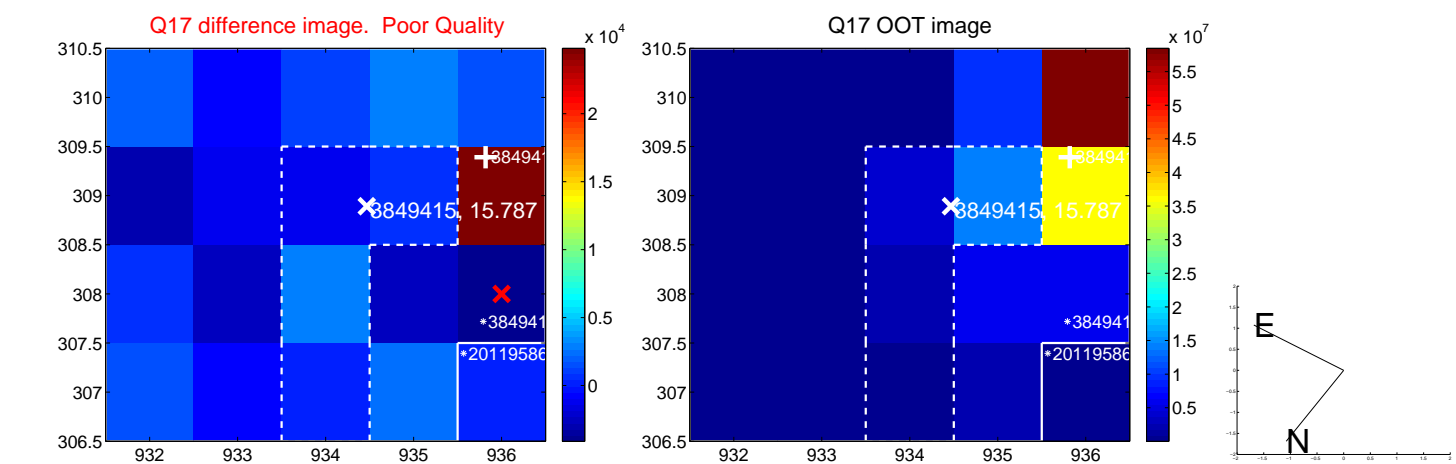
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

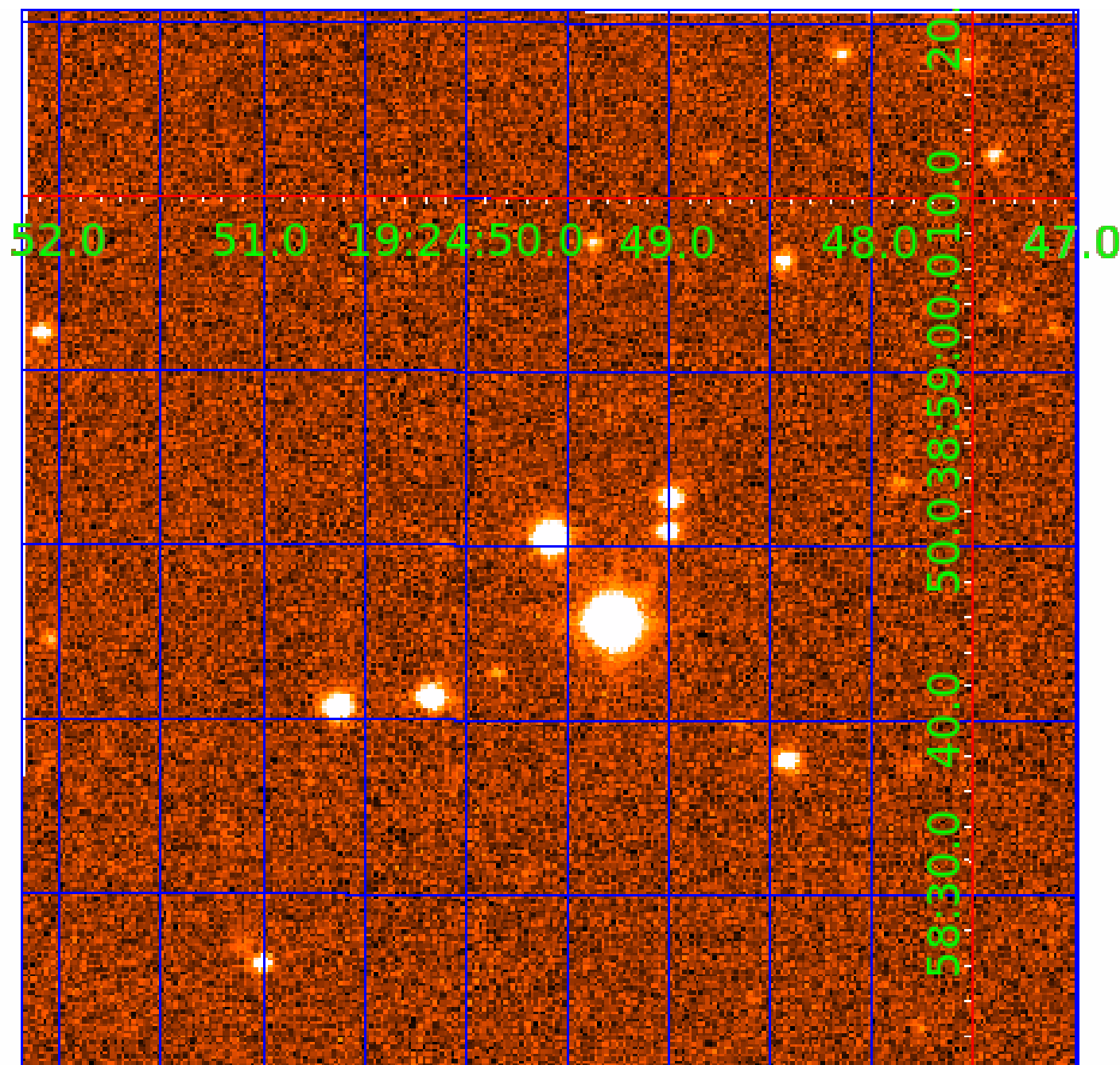


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003849415

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})
003849415-01	OBS	No	0.638779	131.775097	94.6	4.811	9.5	7.4	0.84	5496	0.88	2840.81
003849415-02	OBS	No	7.788388	136.609447	1976.3	0.871	8.0	11.6	0.84	5496	4.43	101.23
003849415-03	OBS	No	4.424804	131.992443	1537.5	0.558	8.7	7.2	0.84	5496	3.69	215.14
003849415-04	OBS	No	6.523158	134.168545	3523.5	0.599	13.3	21.8	0.84	5496	5.26	128.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003849415-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_MEAS
003849415-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_MEAS
003849415-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
003849415-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET

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

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

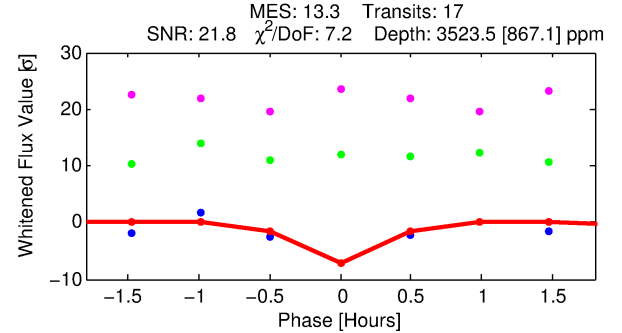
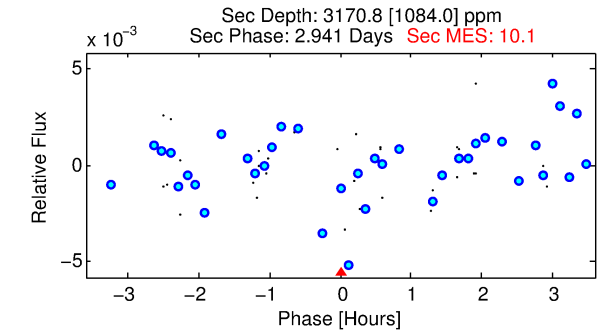
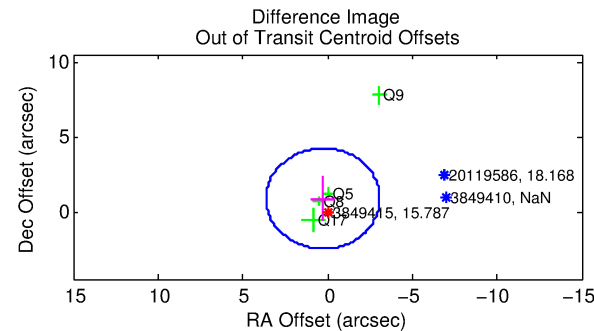
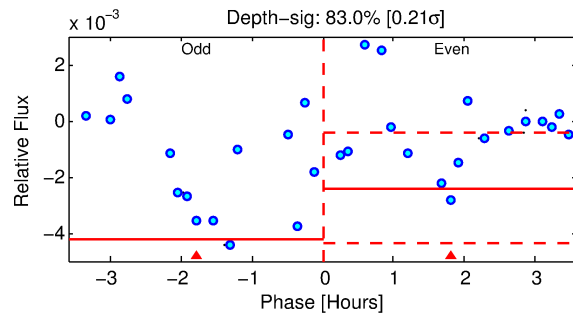
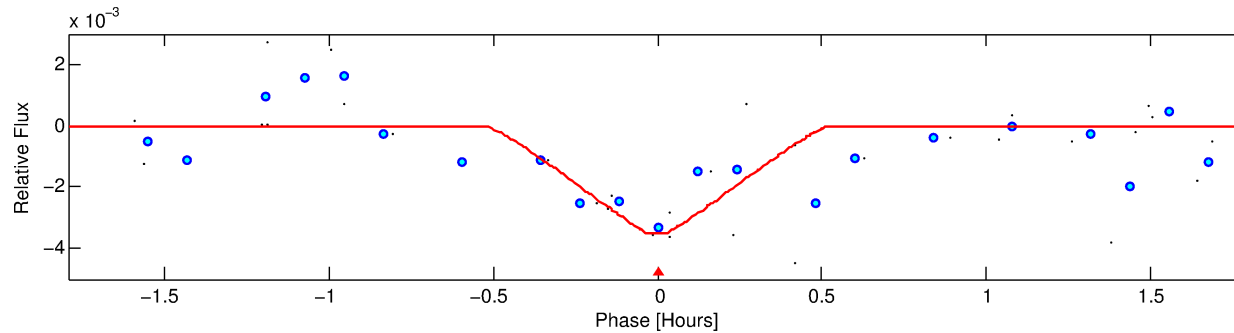
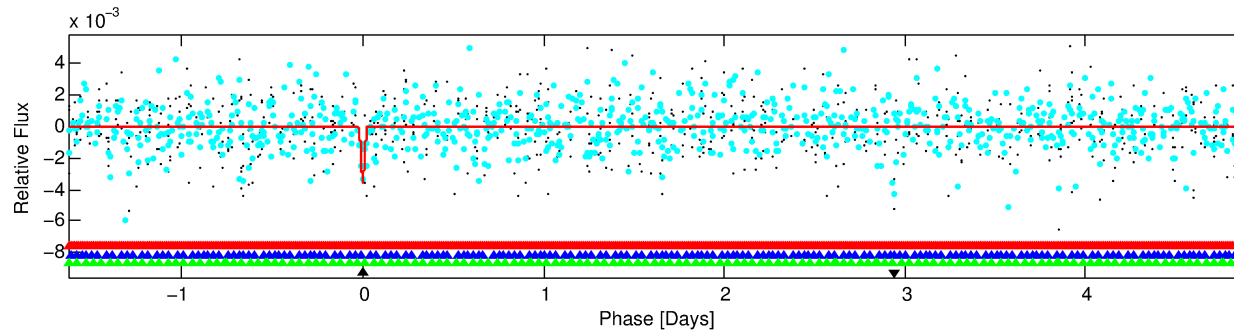
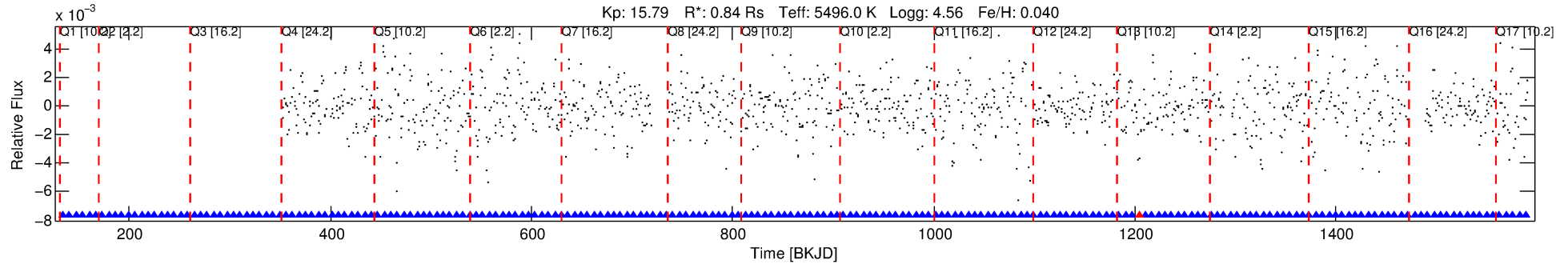
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003849415-04

No Significant Match Found

DV One-Page Summary

KIC: 3849415 Candidate: 4 of 4 Period: 6.523 d



DV Fit Results:

Period = 6.52316 [0.00004] d
Epoch = 134.1685 [0.0047] BKJD
Rp/R* = 0.0576 [0.0981]
a/R* = 78.11 [487.89]
b = 0.49 [10.20]
Seff = 128.22 [41.26]
Teq = 858 [69] K
Rp = 5.26 [9.06] Re
a = 0.0669 [0.0135] AU
Ag = 281.74 [968.38] [0.29 σ]
Teffp = 5435 [4657] K [0.98 σ]

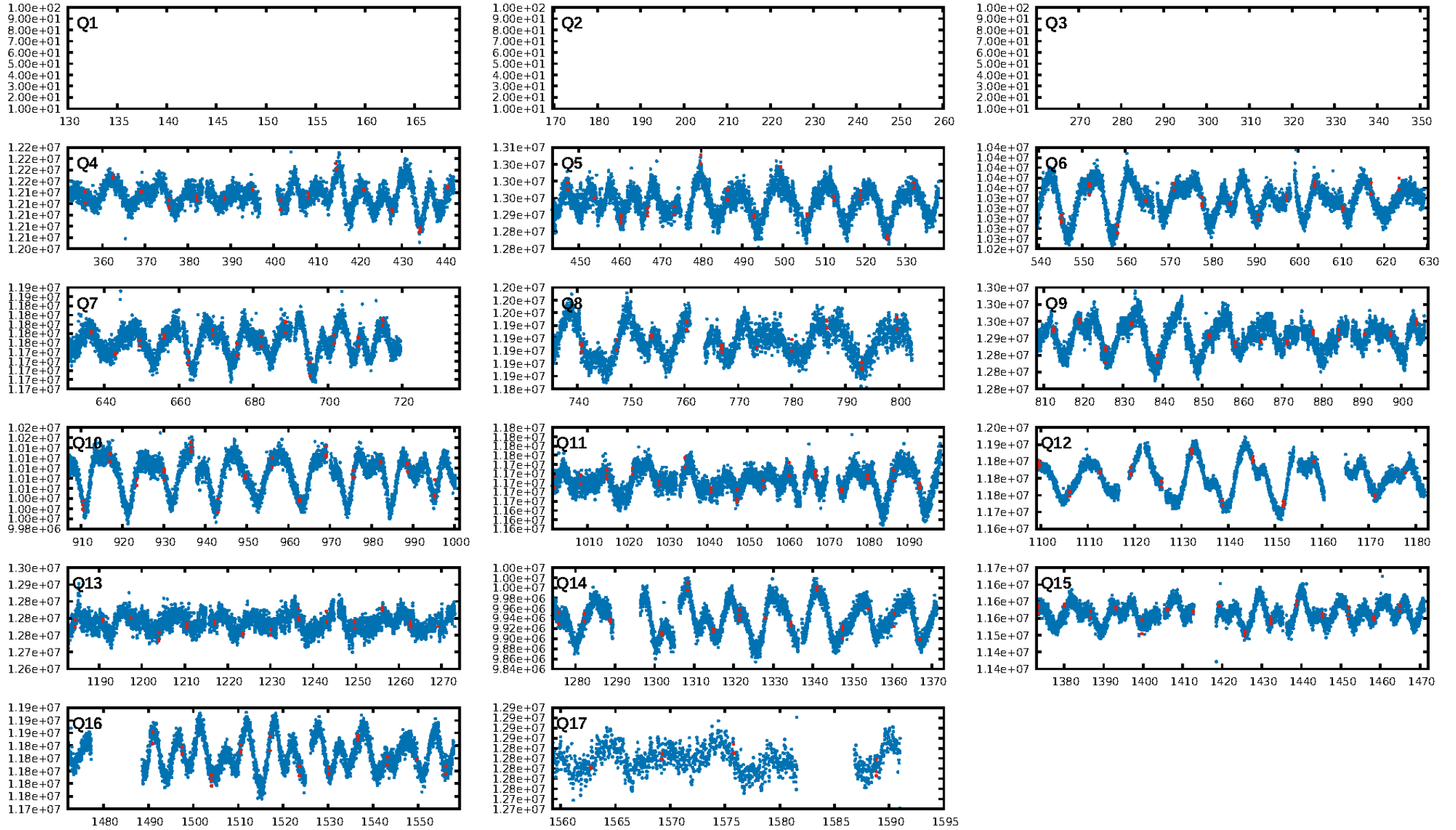
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [61.53 σ]
LongPeriod-sig: 100.0% [28.73 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 1.0%
Bootstrap-pfa: 1.68e-07
RollingBand-fgt: 0.94 [16/17]
GhostDiagnostic-chr: -0.5293
Centroid-sig: 2.3%
Centroid-so: 3.151 arcsec [71.79 σ]
OotOffset-rm: 0.913 arcsec [0.82 σ]
KicOffset-rm: 4.434 arcsec [3.72 σ]
OotOffset-st: 0/0/1/3 [4]
KicOffset-st: 0/1/1/3 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 0.00 [0/14]

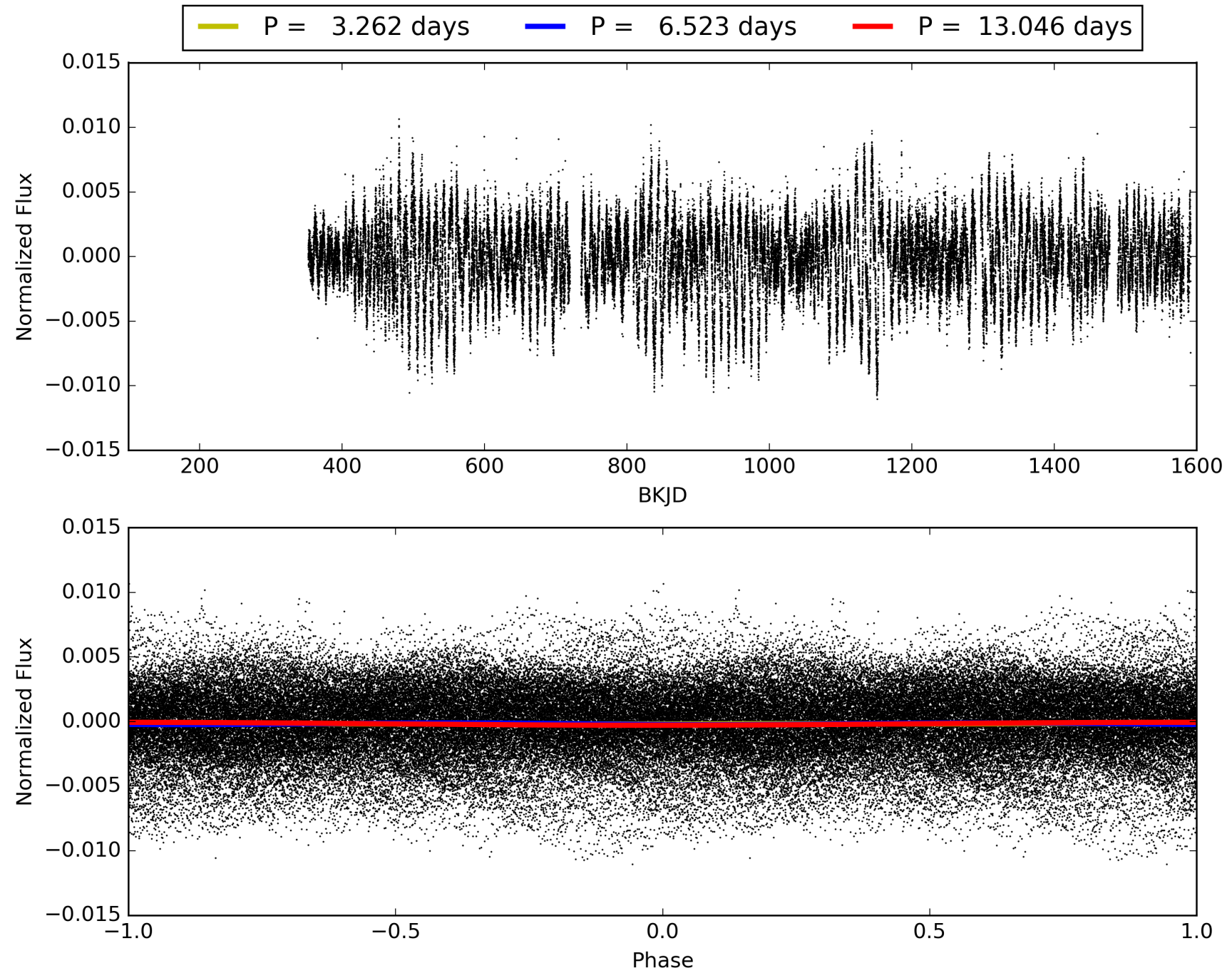
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:34:57 Z

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

TCE 003849415-04, PDC Light Curves

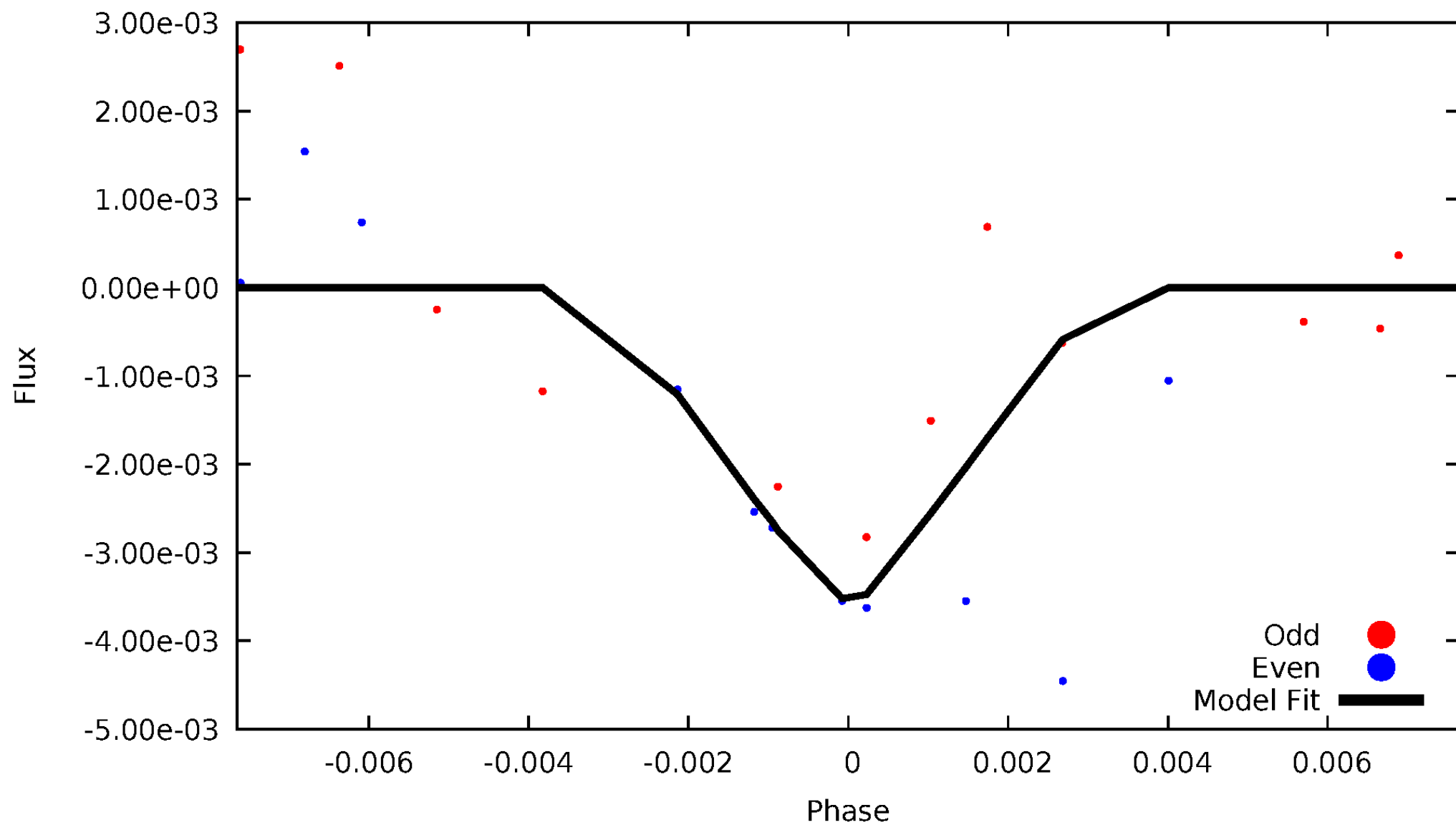


TCE 003849415-04



DV Odd/Even

TCE 003849415-04

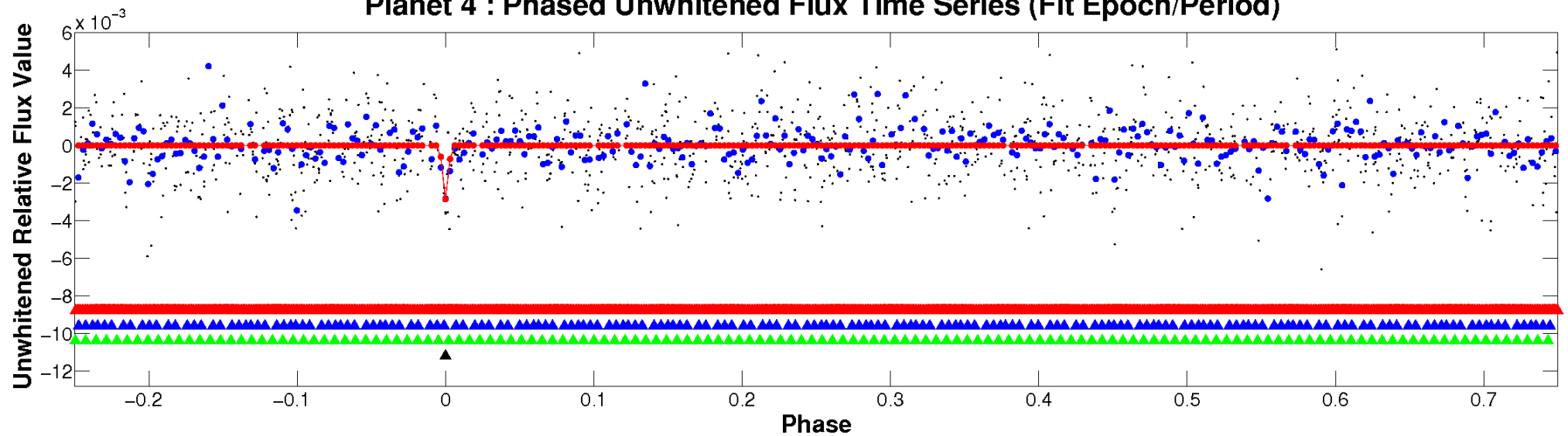


ALT Odd/Even

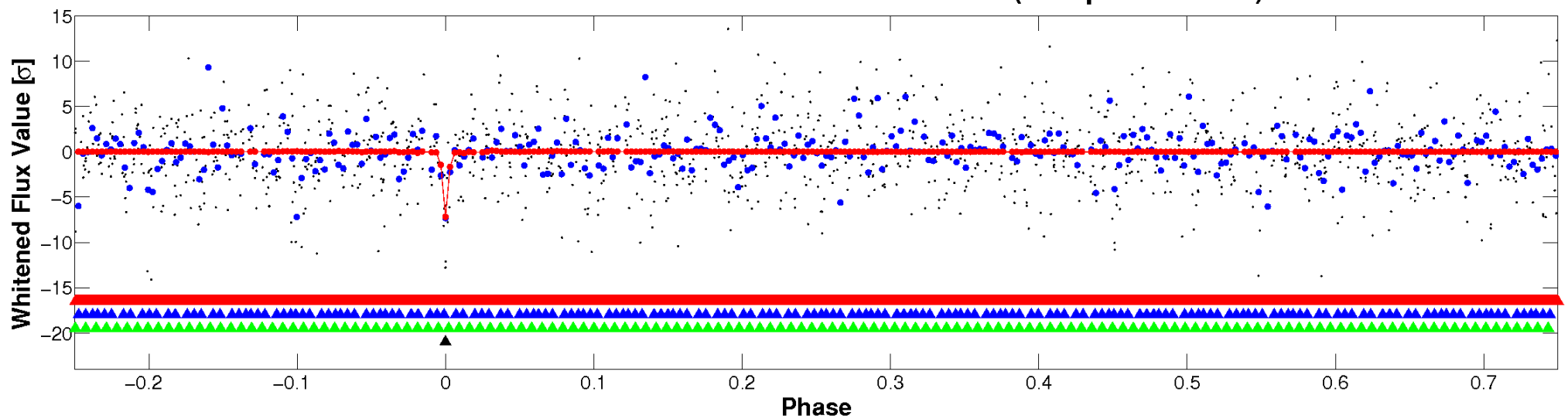
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

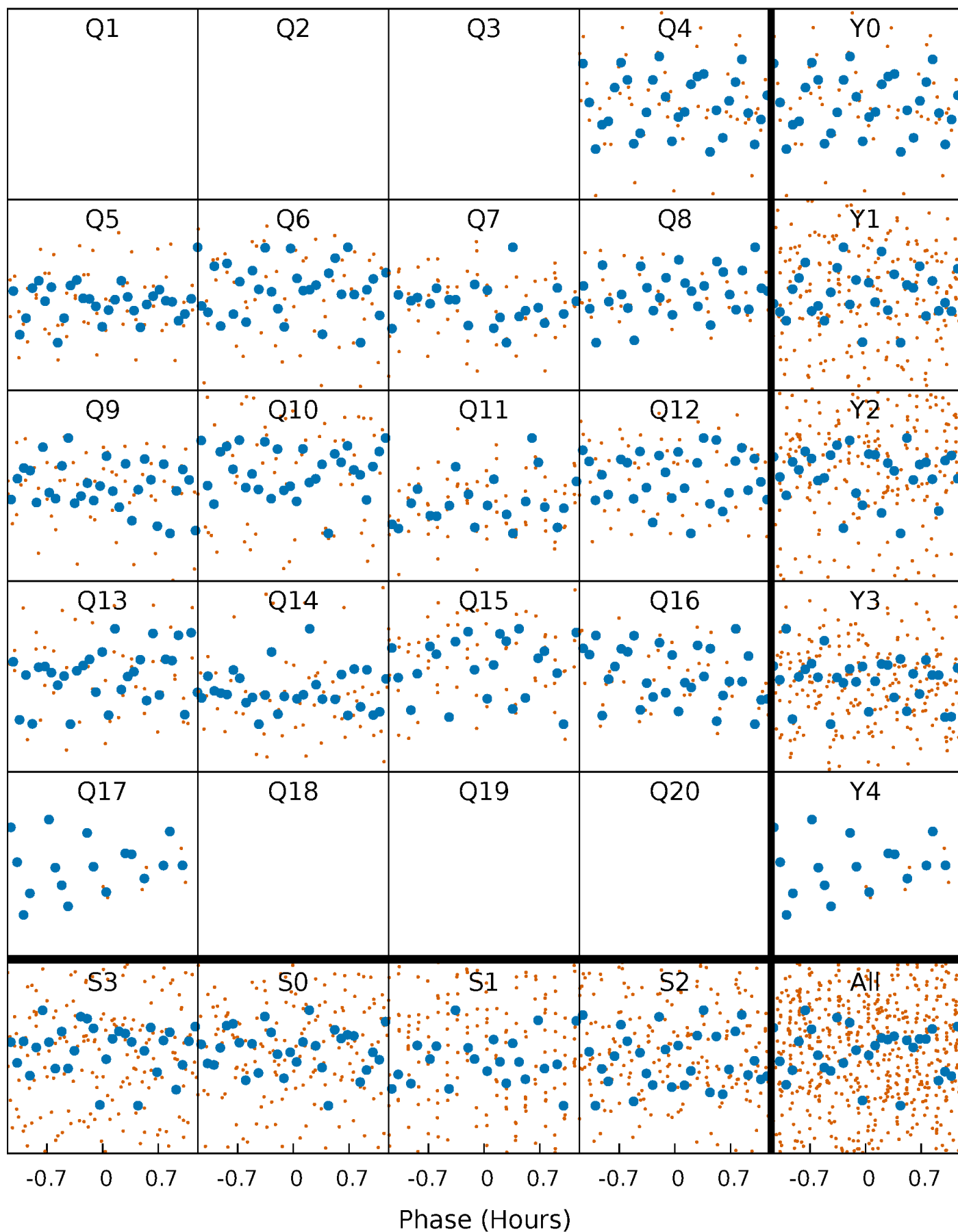


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



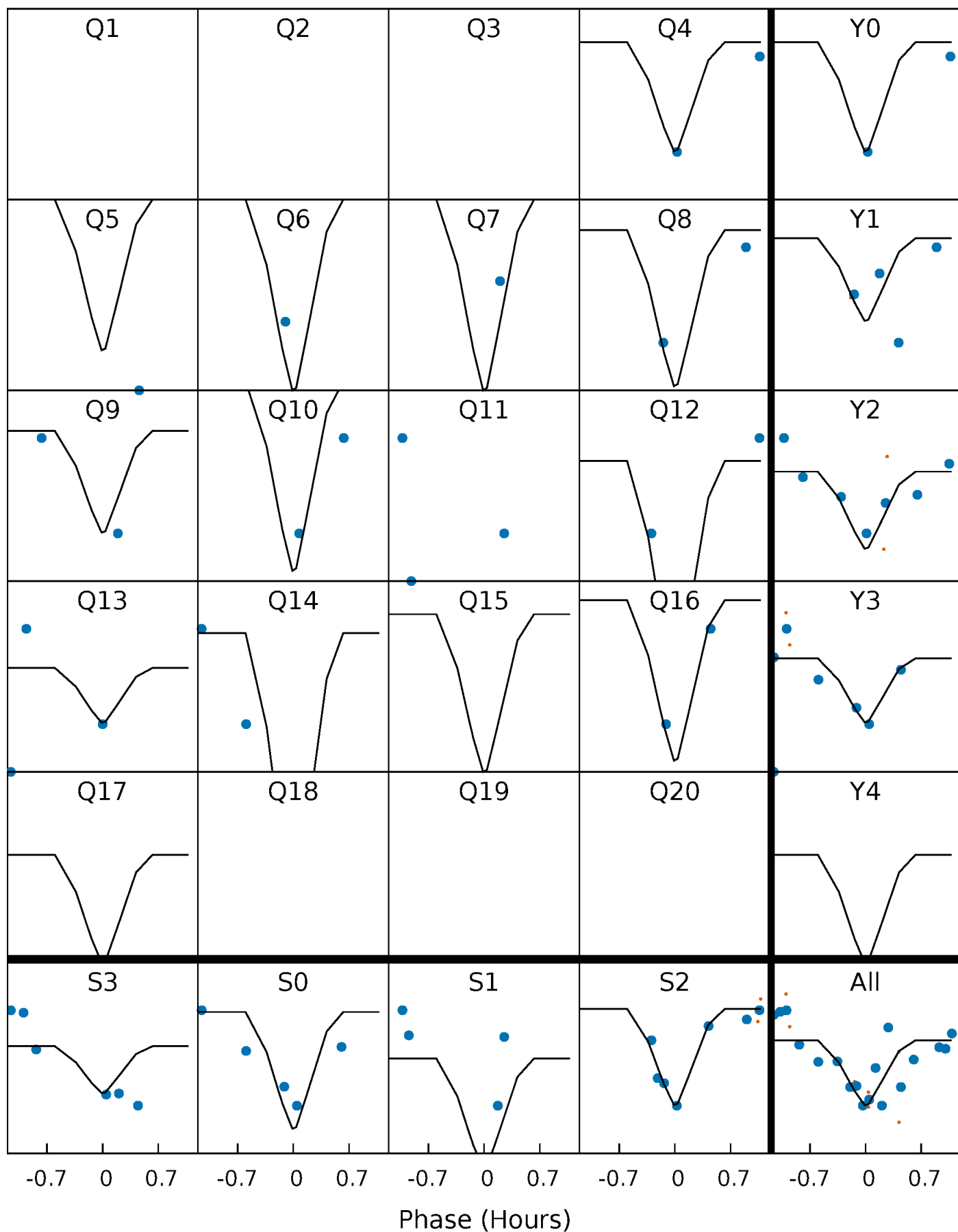
PDC Quarter-Phased Transit Curves

TCE 003849415-04 P= 6.523158 Days $T_0=134.168545$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 003849415-04 P= 6.523158 Days $T_0=134.168545$ (BKJD)

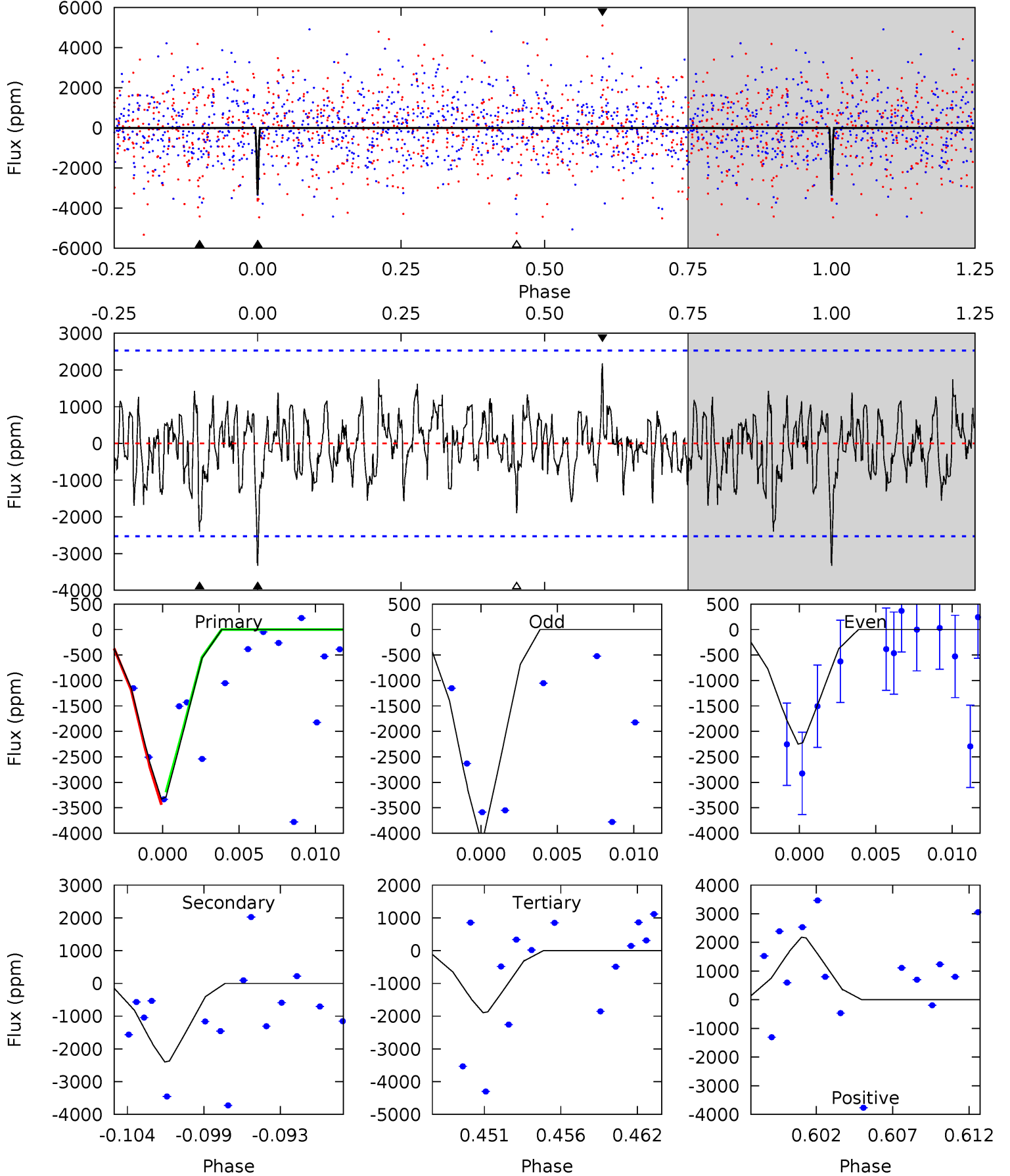


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

003849415-04, P = 6.523158 Days, E = 134.168545 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.78	4.89	3.86	4.44	5.15	2.80	1.34	2.92	2.33	1.03	0.44	1.84	0	0.40	0.23



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 003849415

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5496^{+180}_{-180}	$4.564^{+0.028}_{-0.161}$	$0.040^{+0.250}_{-0.300}$	$0.838^{+0.200}_{-0.067}$	$0.939^{+0.073}_{-0.110}$	$2.248^{+0.358}_{-1.004}$
	+3%/-3%	+1%/-4%	+625%/-750%	+24%/-8%	+8%/-12%	+16%/-45%
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 003849415-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2400 ± 491	$9.19^{+7.49}_{-6.19}$	1226^{+67}_{-55}	4183^{+2637}_{-805}	68^{+580}_{-48}
Alt.	N/A	N/A	N/A	N/A	N/A

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

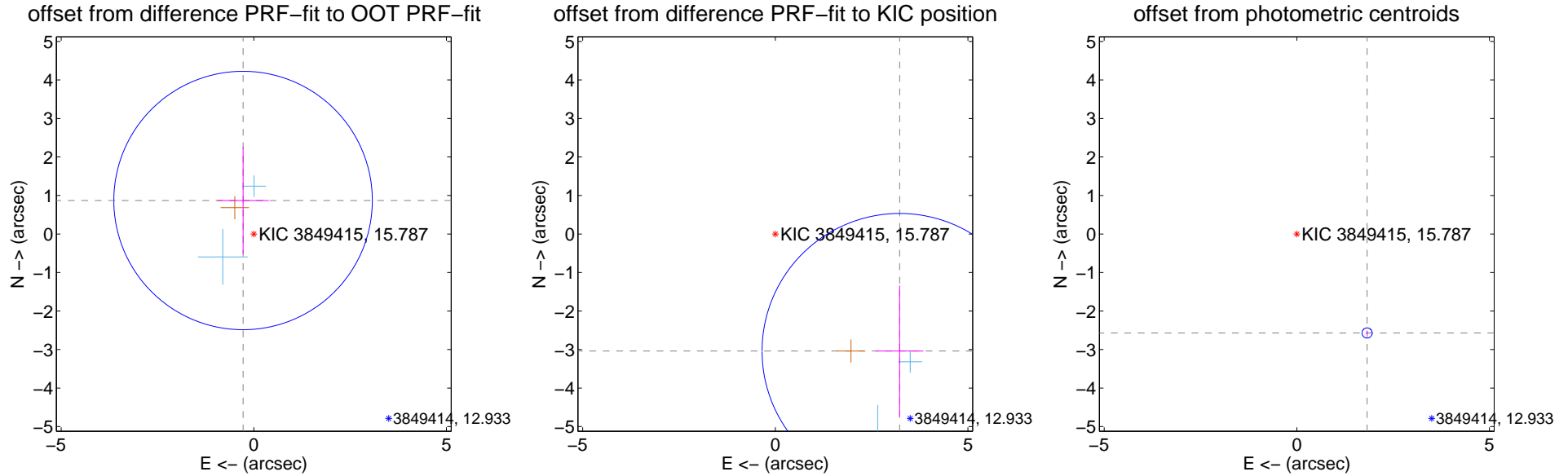
DV Centroid Data

Supplemental centroid analysis for 003849415-04. Kepler magnitude: 15.79. Transit SNR 21.78

There are 2 quarters with good PRF difference image offsets

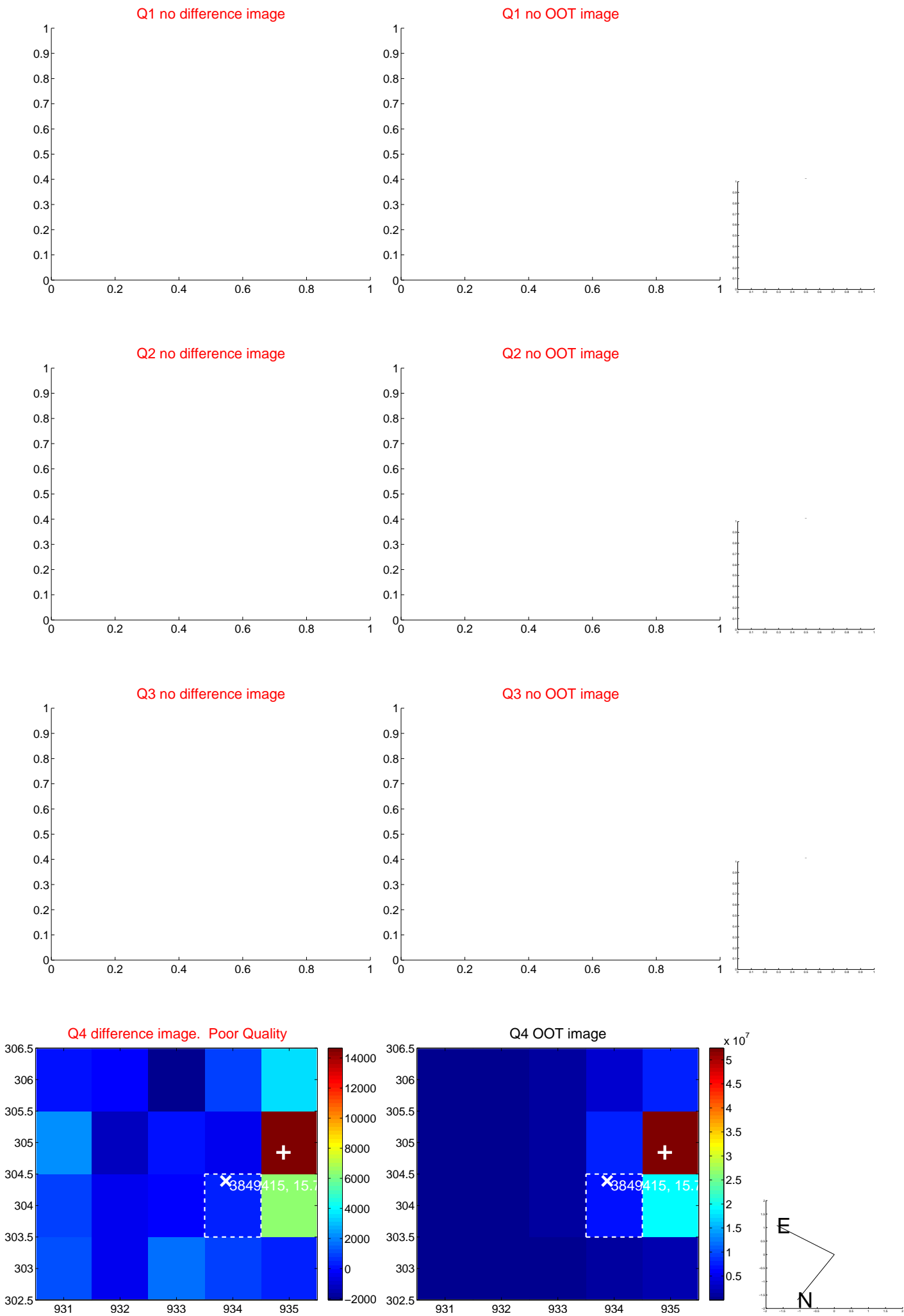
The OOT PRF centroid is offset from the target star catalog position by about 5.73 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.913 ± 1.118	0.82	0.279 ± 0.667	0.870 ± 1.385
PRF-fit source offset from KIC position	4.434 ± 1.191	3.72	-3.229 ± 0.617	-3.039 ± 1.700
photometric centroid source offset	3.15 ± 0.04	71.79	-1.82 ± 0.04	-2.57 ± 0.05

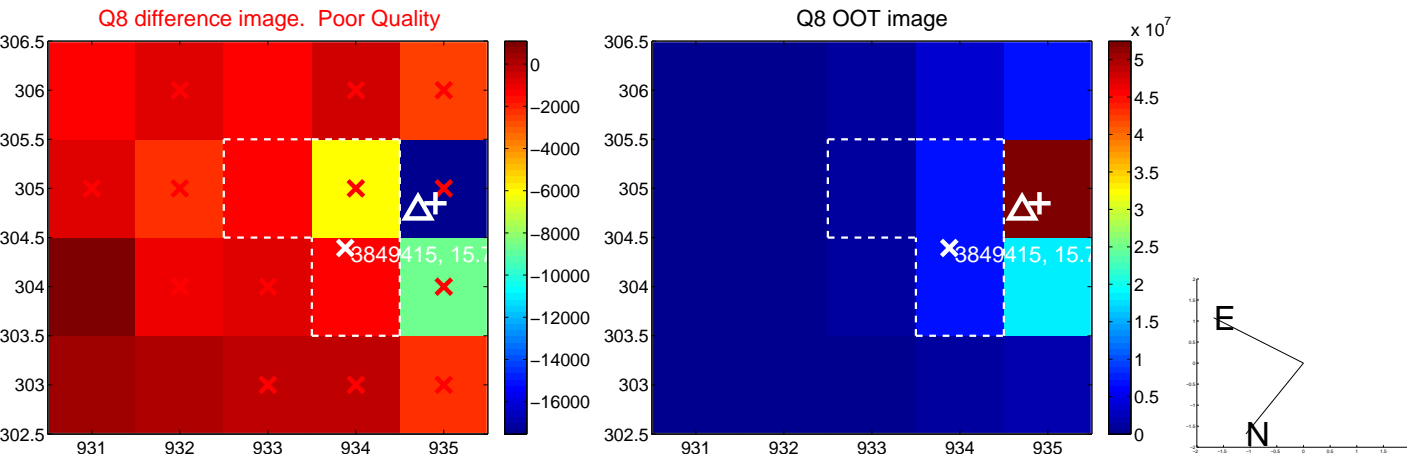
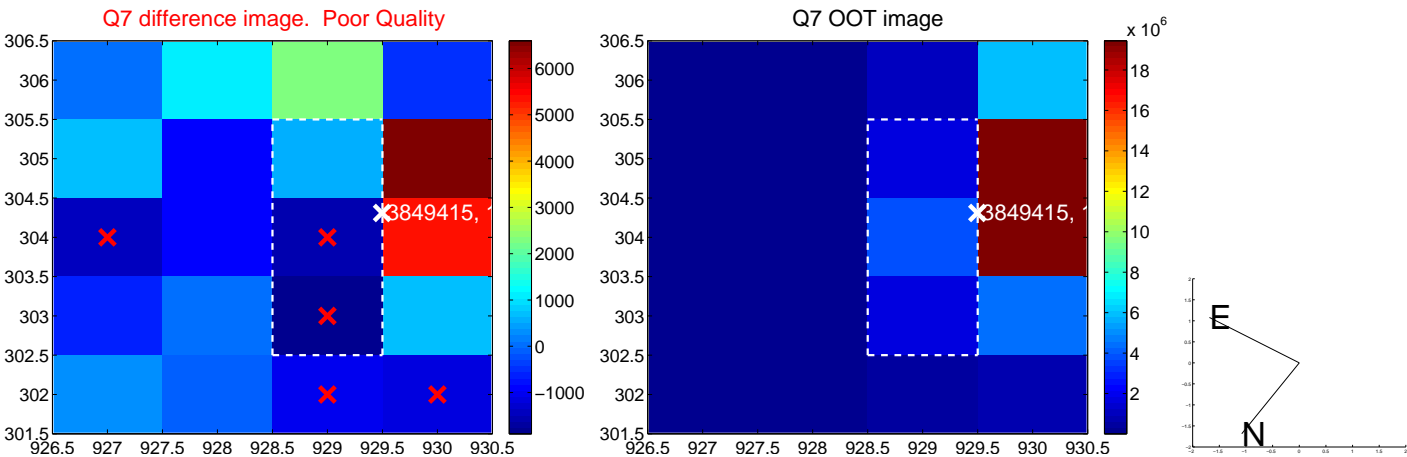
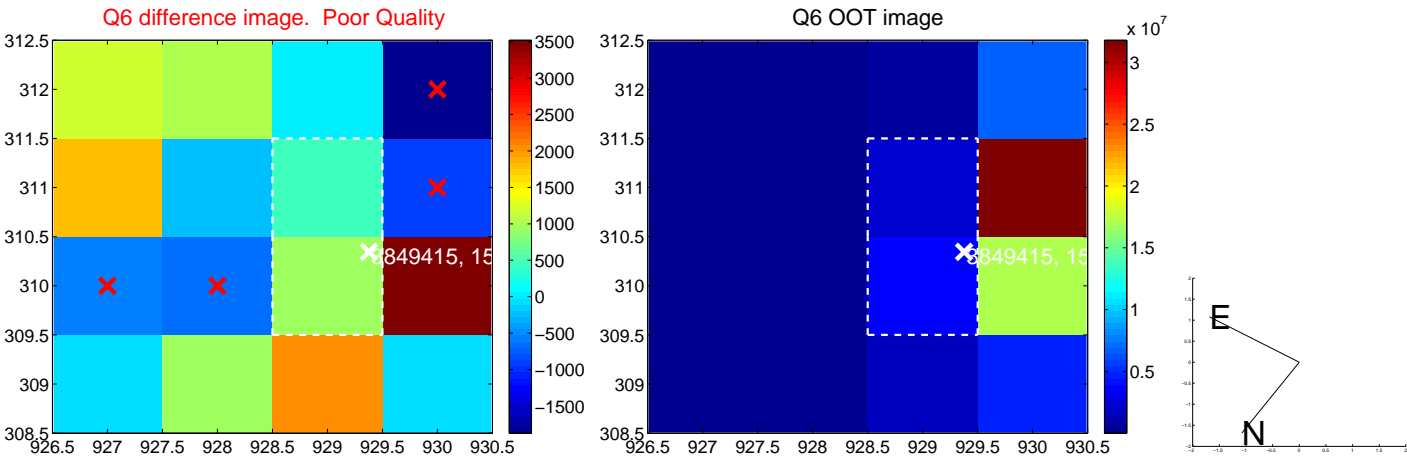
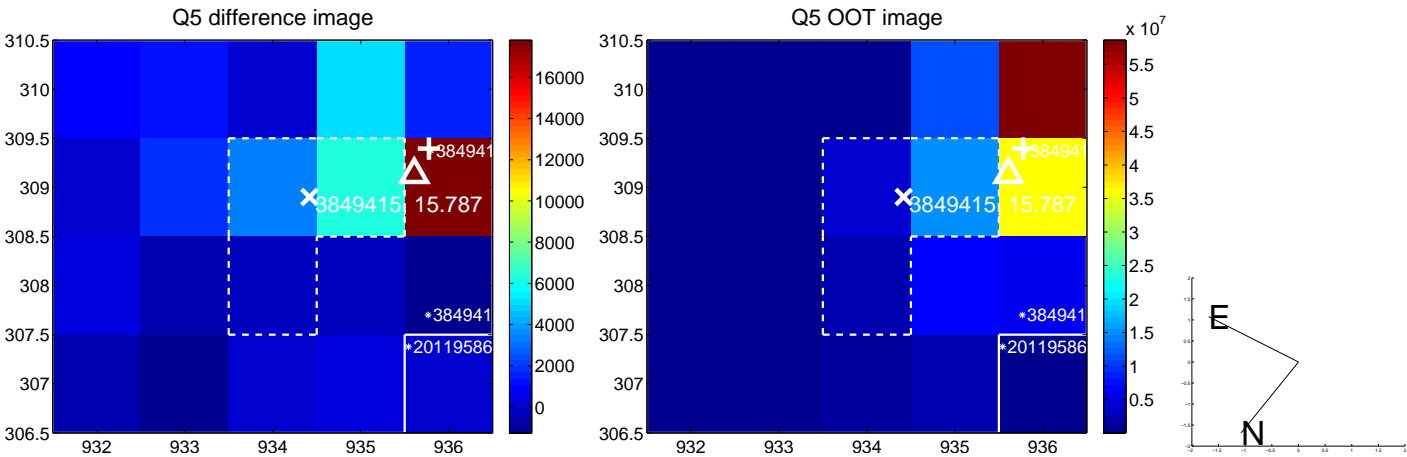


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

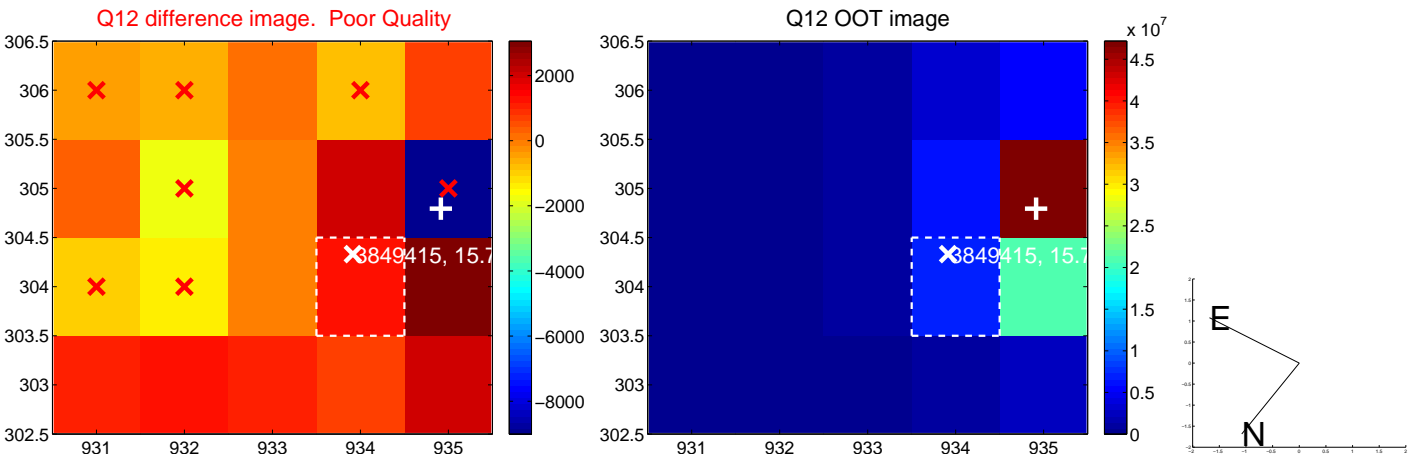
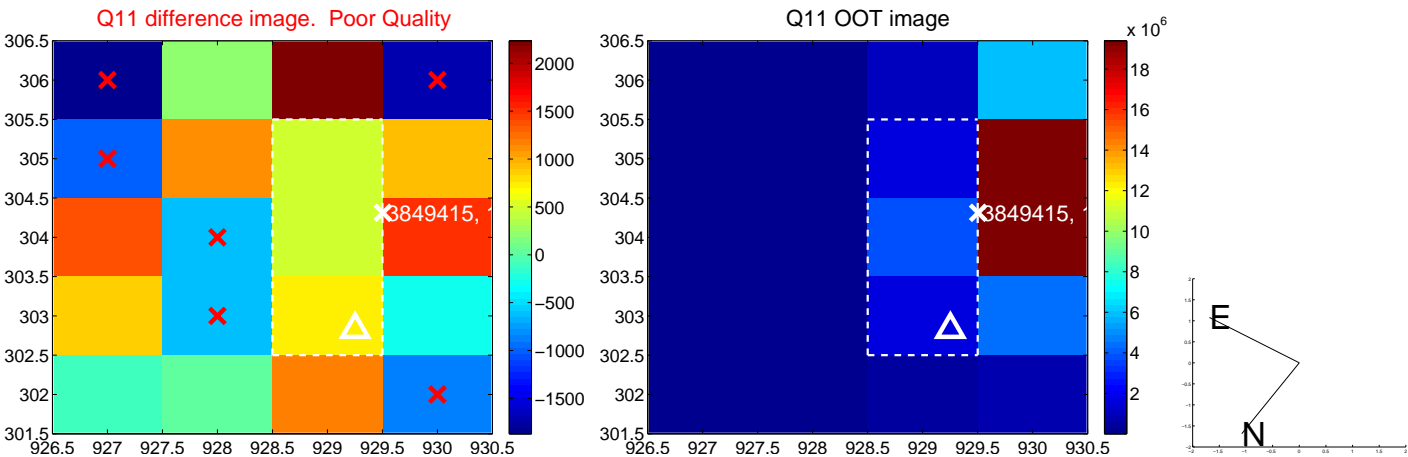
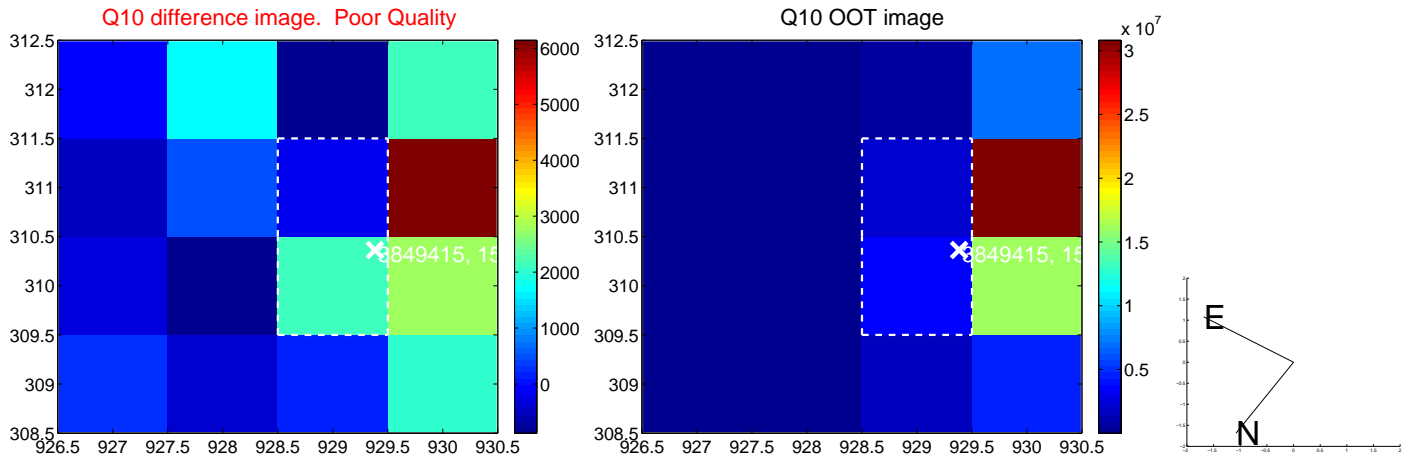
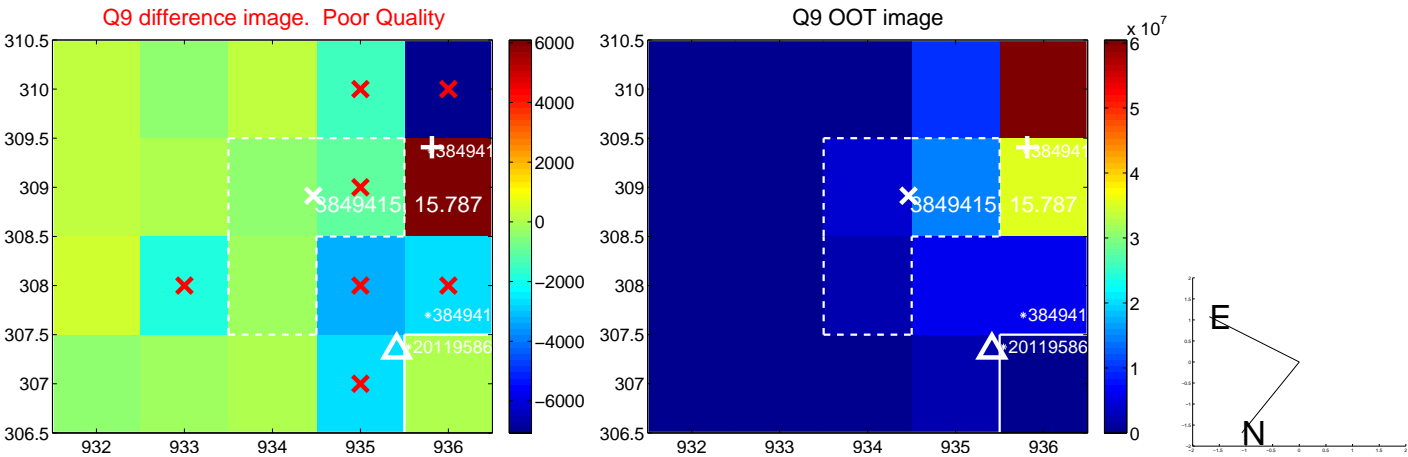
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



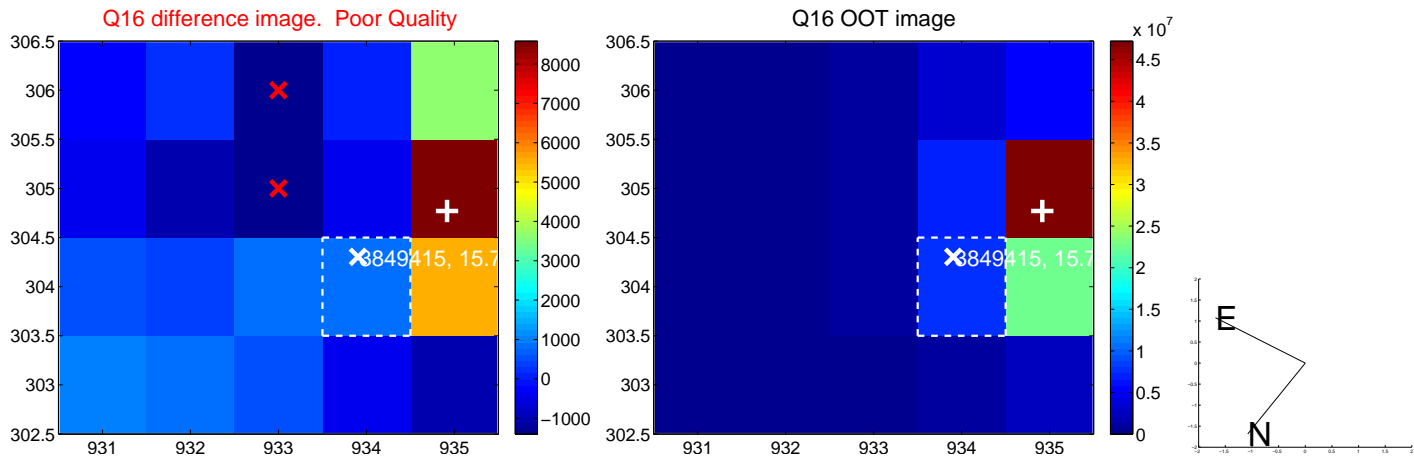
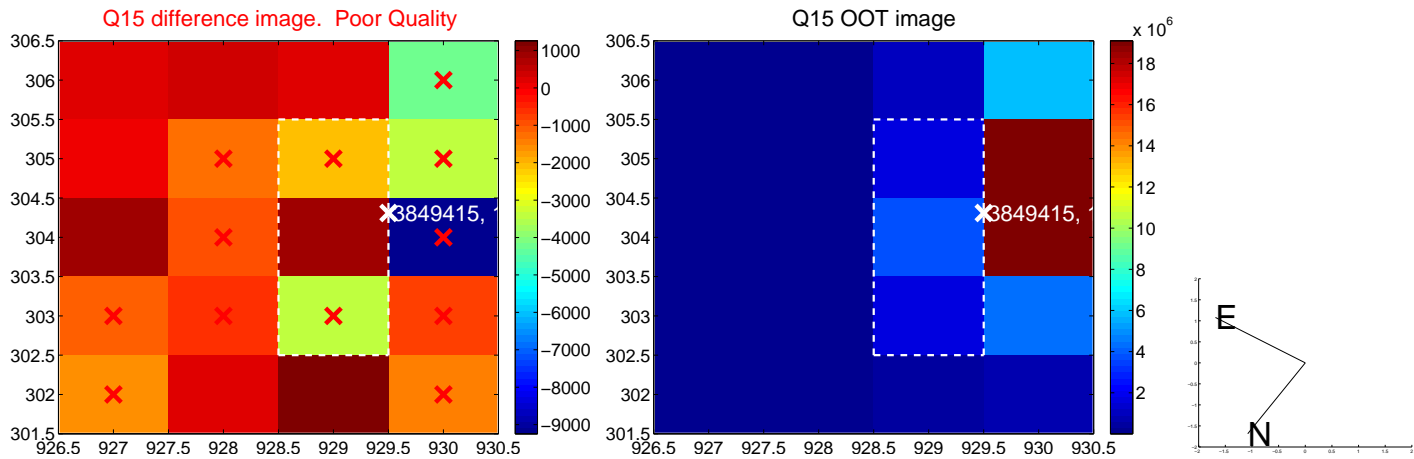
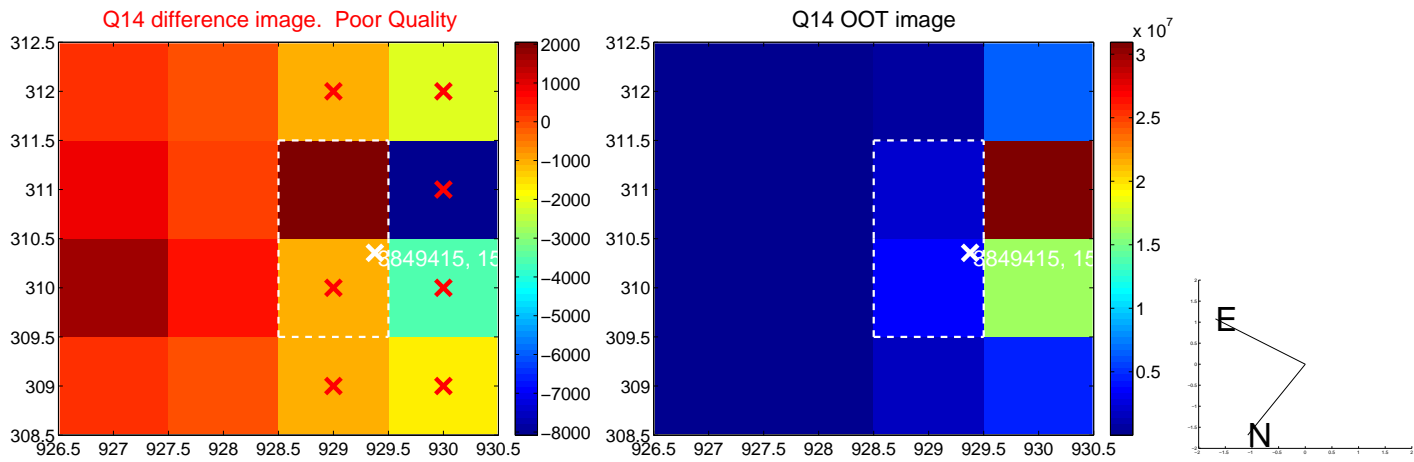
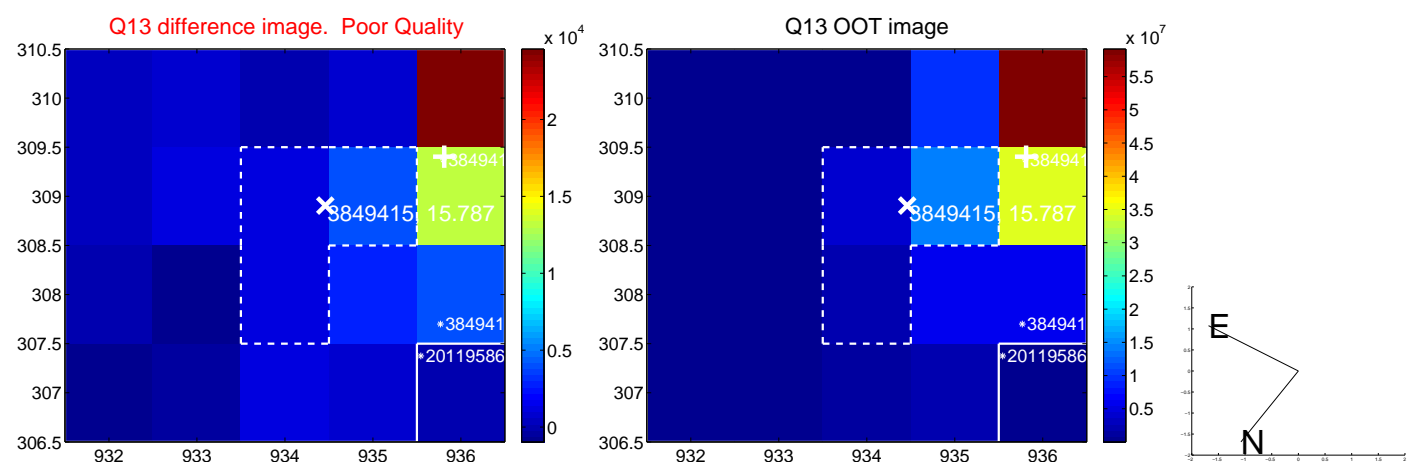
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



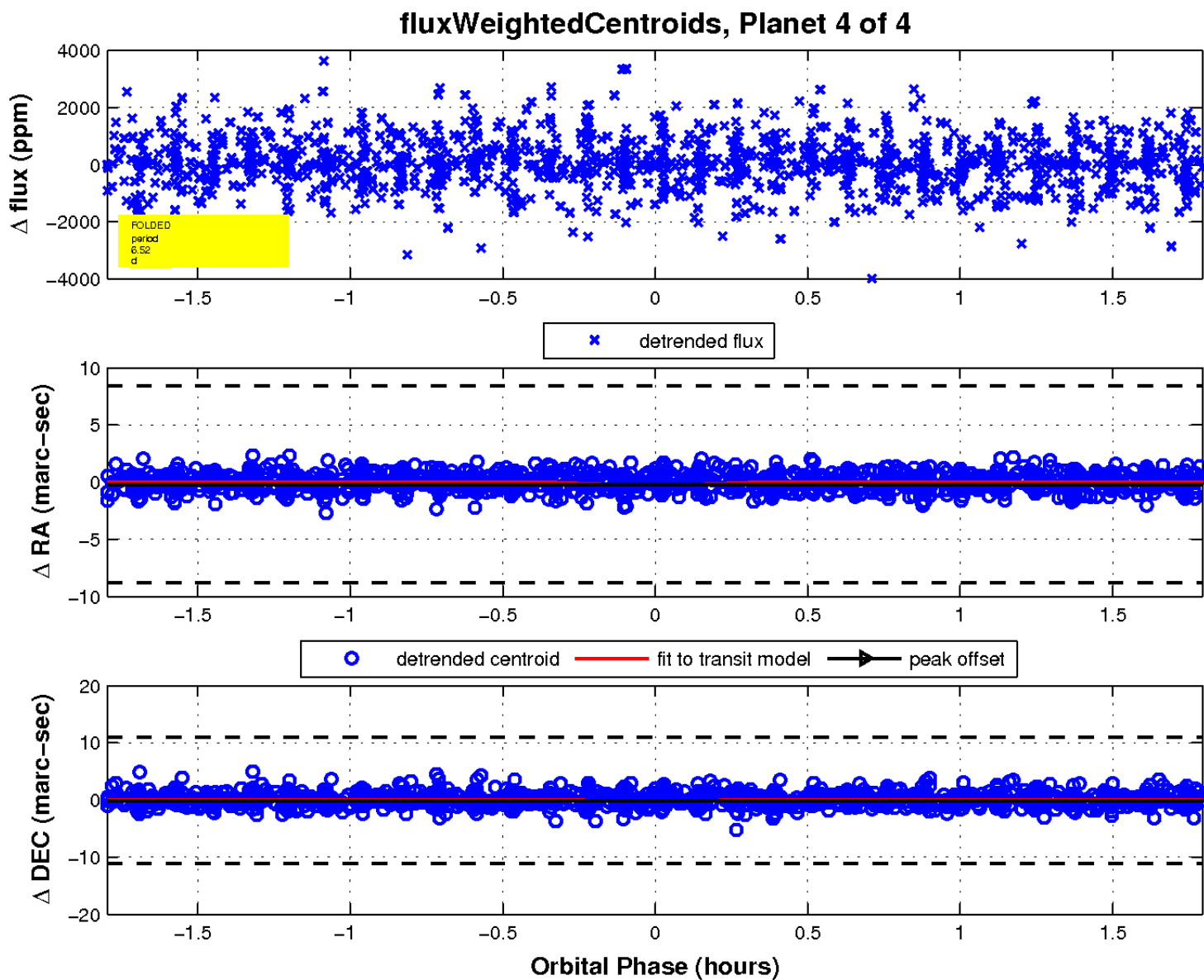
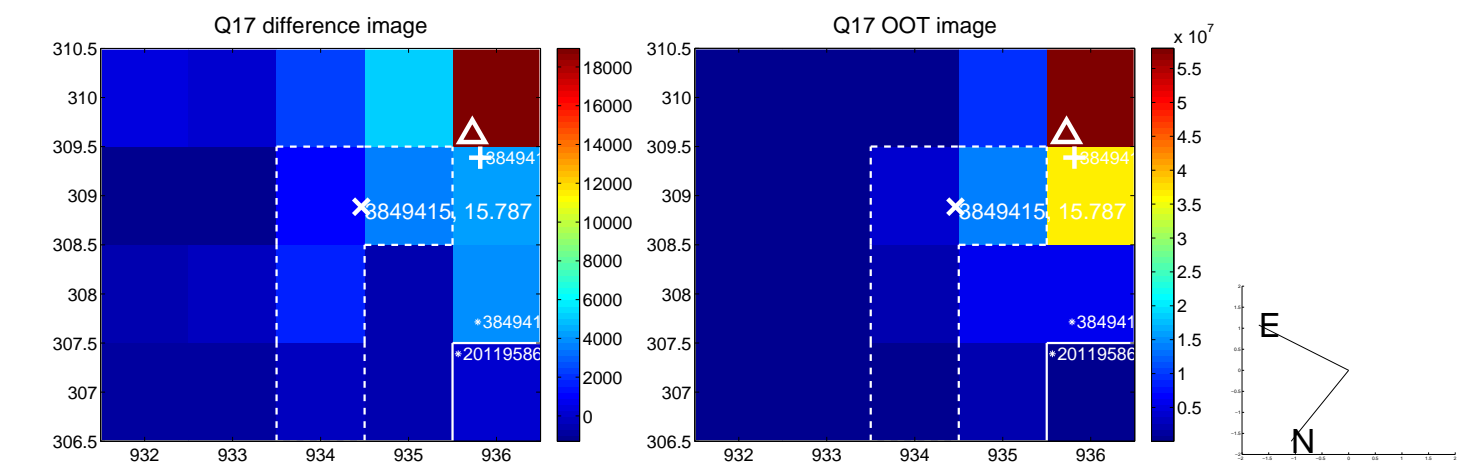
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

