

KIC 006869313

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})
006869313-01	OBS	No	2.818444	133.794584	101.6	17.976	11.8	12.6	0.80	5325	0.79	366.83
006869313-02	OBS	No	88.317530	210.438634	902.3	2.871	9.0	6.9	0.80	5325	2.63	3.71
006869313-03	OBS	No	76.606449	136.715273	1014.4	3.081	7.8	9.0	0.80	5325	2.73	4.49
006869313-04	OBS	No	68.752966	144.455714	1038.4	2.808	7.6	7.7	0.80	5325	3.23	5.18
006869313-05	OBS	No	25.026820	153.515985	861.8	1.502	8.4	9.0	0.80	5325	2.59	19.95
006869313-06	OBS	No	44.805878	165.228744	752.3	3.694	8.1	7.9	0.80	5325	2.53	9.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006869313-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_CROWDED—HALO_GHOST
006869313-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
006869313-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

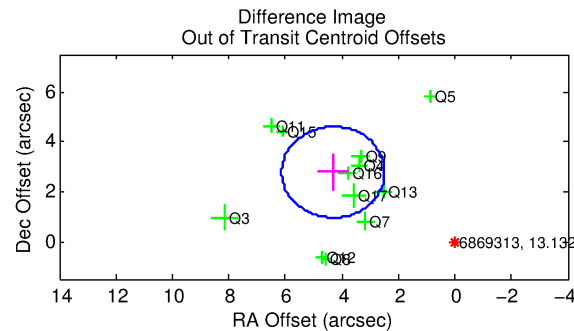
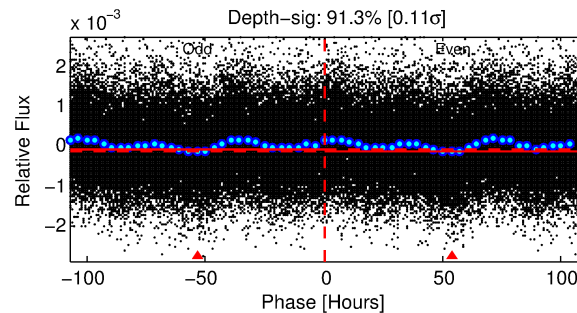
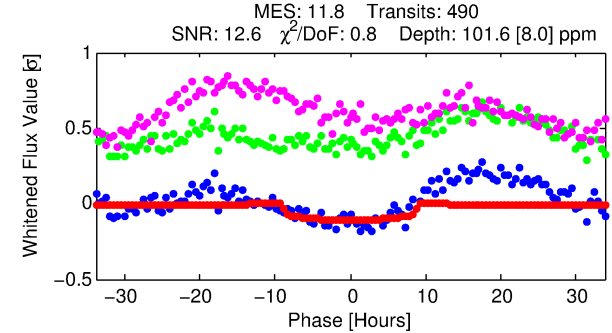
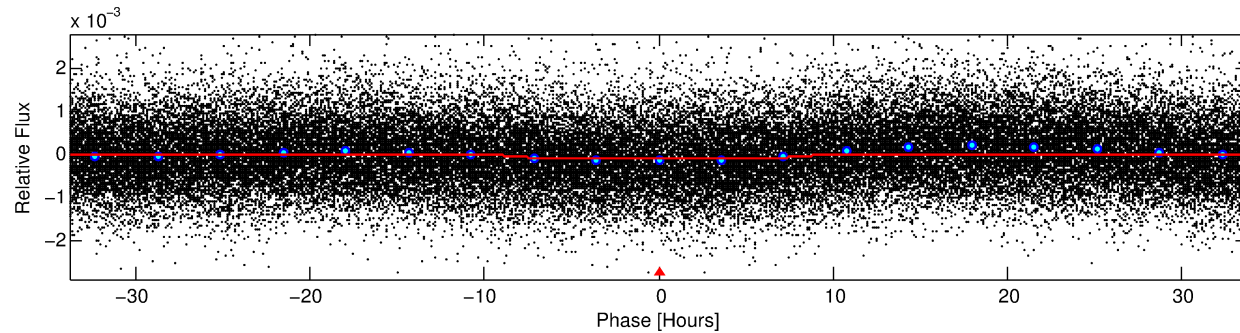
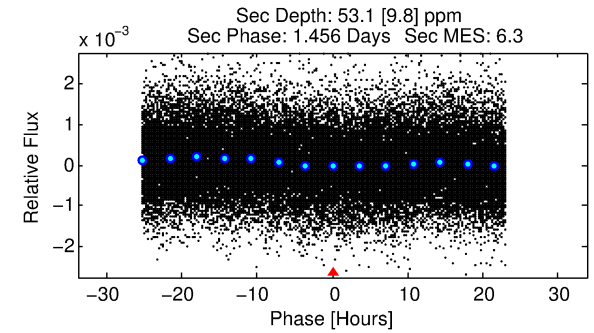
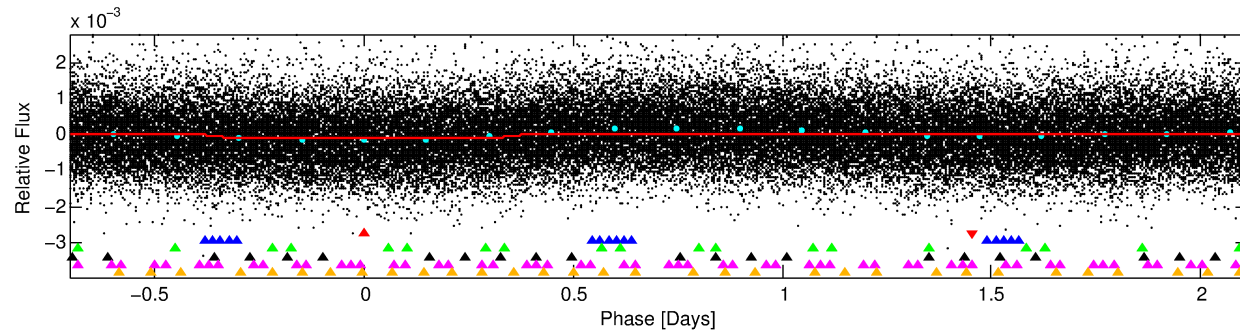
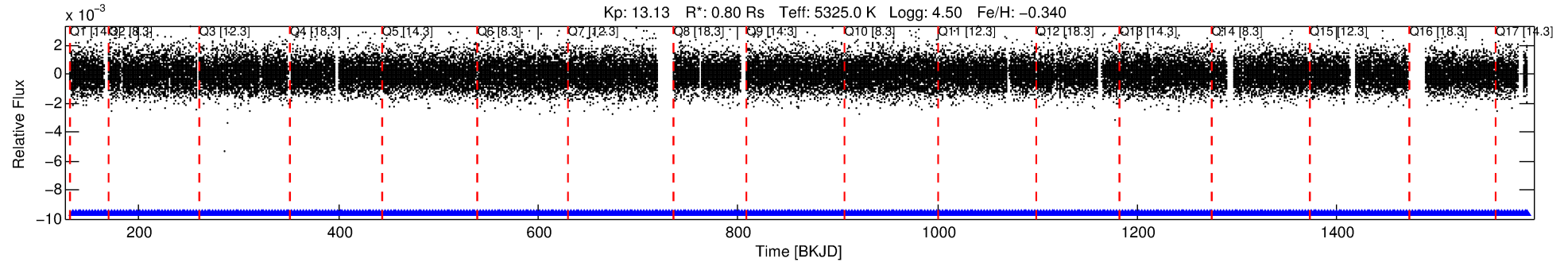
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006869313-01

No Significant Match Found

DV One-Page Summary

KIC: 6869313 Candidate: 1 of 6 Period: 2.818 d



DV Fit Results:

Period = 2.81844 [0.00006] d
Epoch = 133.7946 [0.0124] BKJD
Rp/R* = 0.0091 [0.0099]
a/R* = 1.35 [2.72]
b = 0.15 [28.70]
Seff = 366.83 [87.93]
Teq = 1116 [67] K
Rp = 0.79 [0.87] Re
a = 0.0353 [0.0045] AU
Ag = 58.30 [128.26] [0.45σ]
Teffp = 4768 [2619] K [1.39σ]

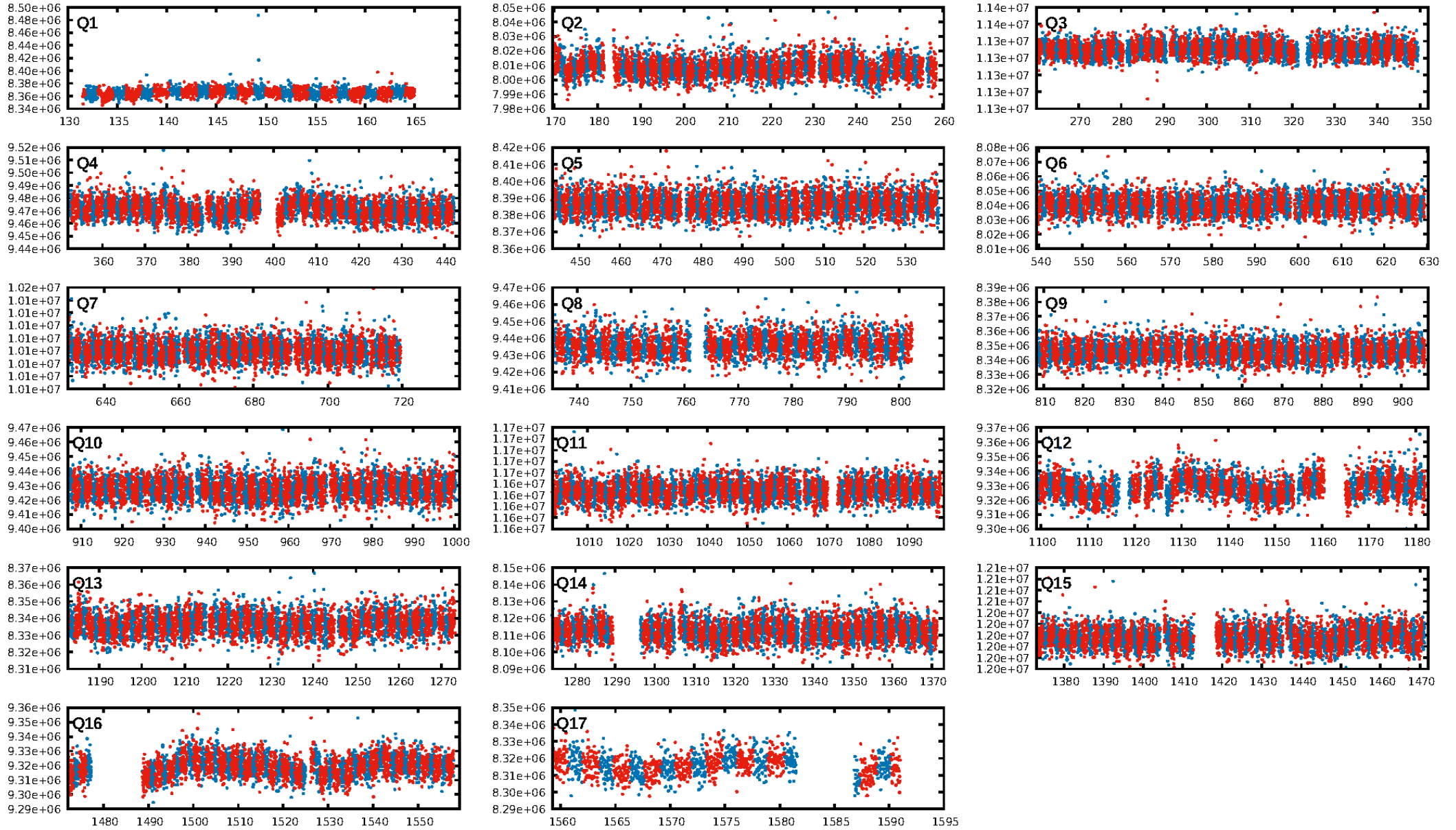
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [29.55σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.98e-22
RollingBand-fgt: 1.00 [468/468]
GhostDiagnostic-chr: -0.1683
Centroid-sig: 0.0%
Centroid-so: 2.128 arcsec [3.46σ]
OotOffset-rm: 5.129 arcsec [8.45σ]
KicOffset-rm: 3.872 arcsec [7.36σ]
OotOffset-st: 0/4/4/4 [12]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.00 [0/16]
DiffImageOverlap-fno: 1.00 [17/17]

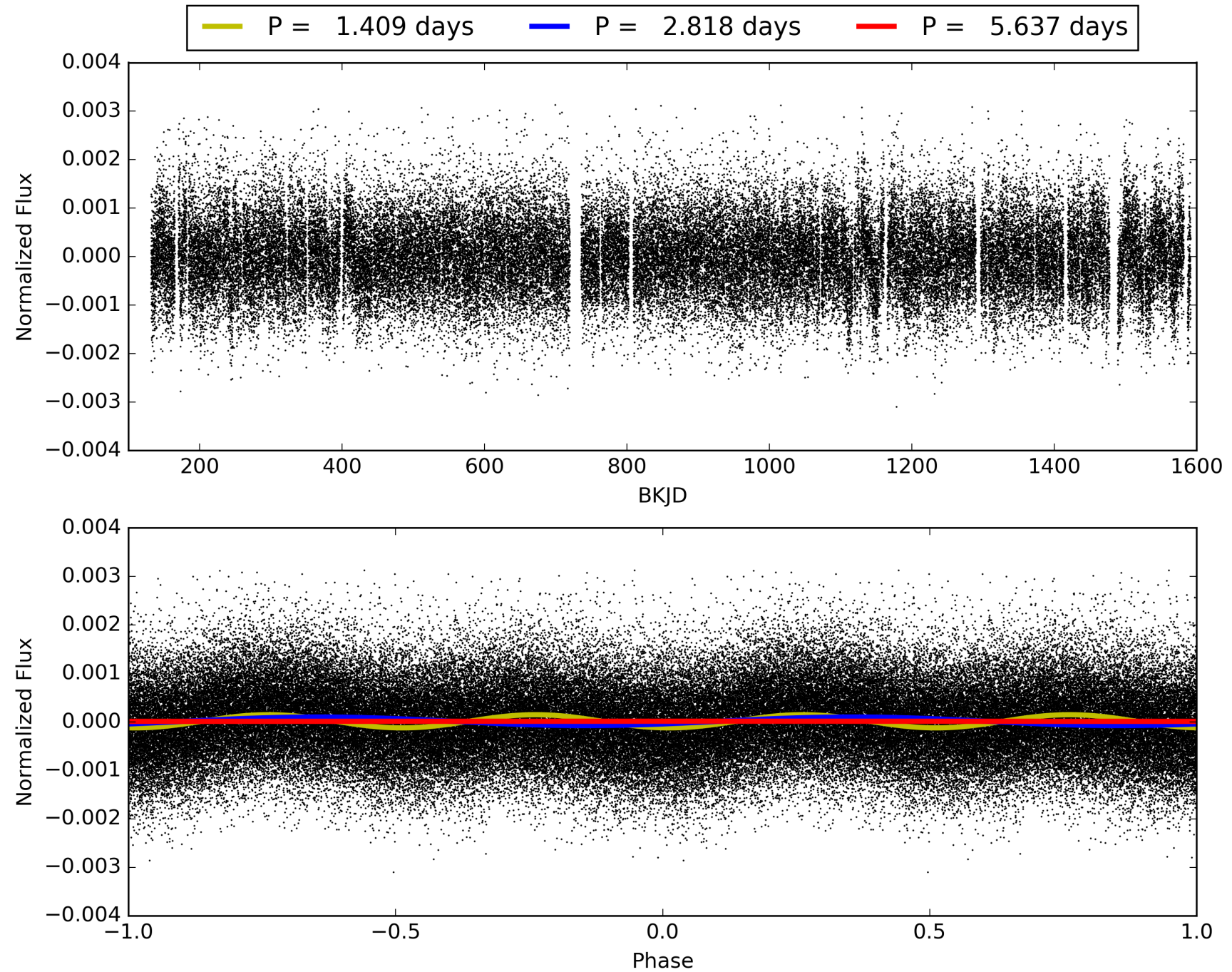
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006869313-01, PDC Light Curves

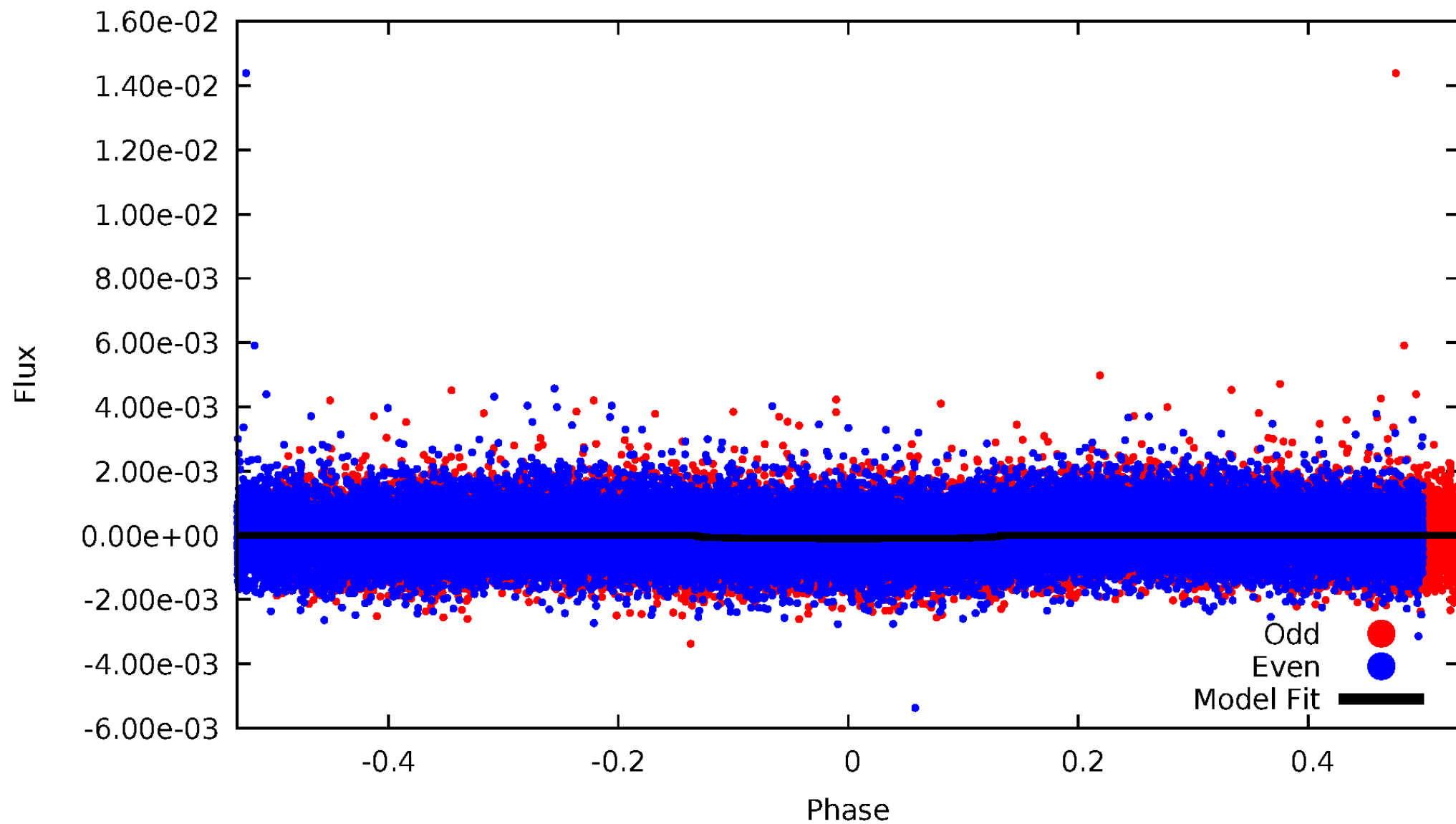


TCE 006869313-01



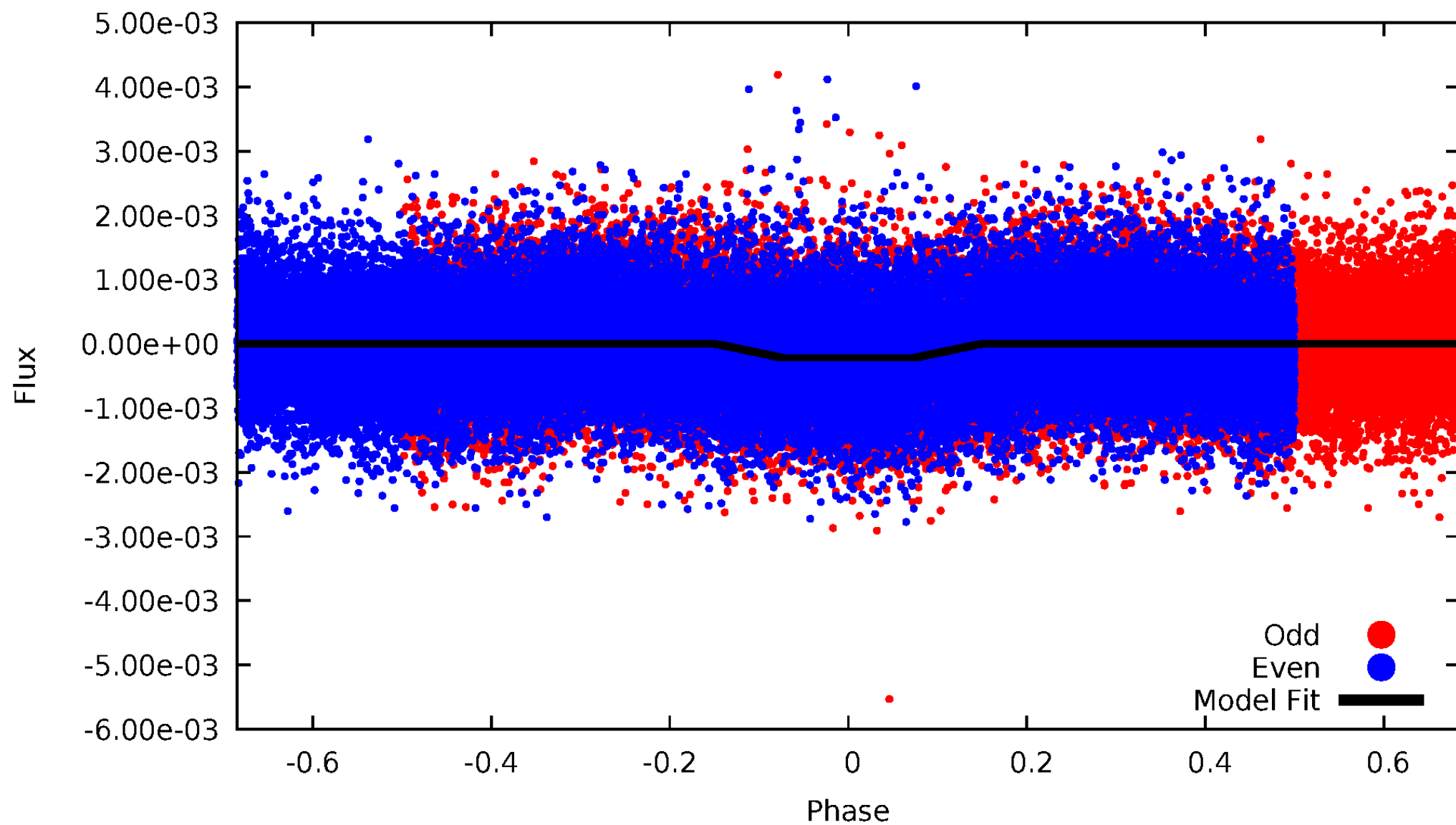
DV Odd/Even

TCE 006869313-01



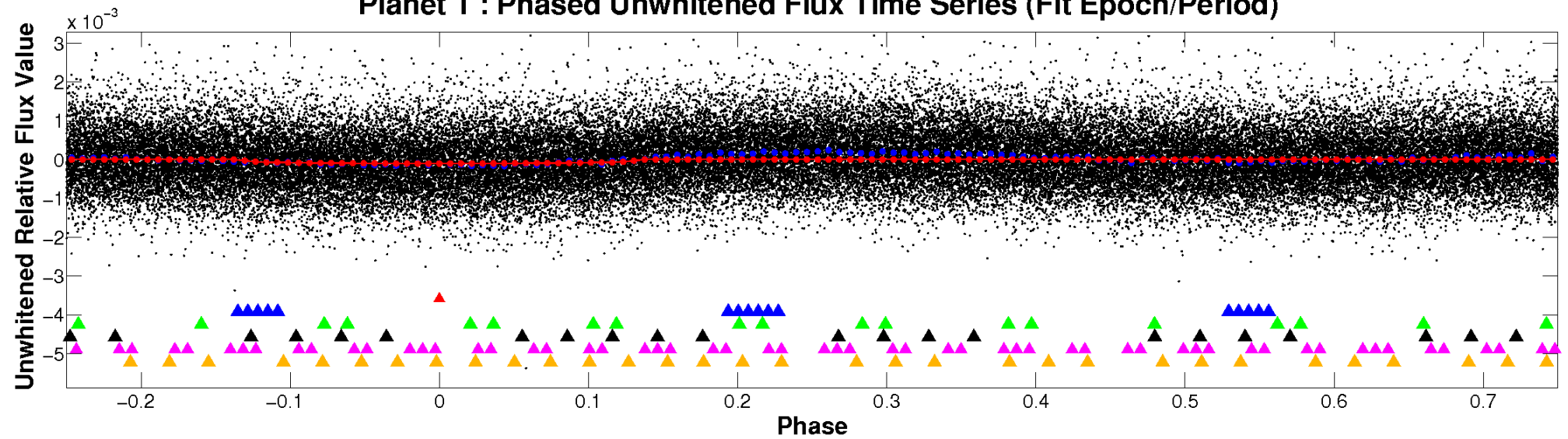
ALT Odd/Even

TCE 006869313-01

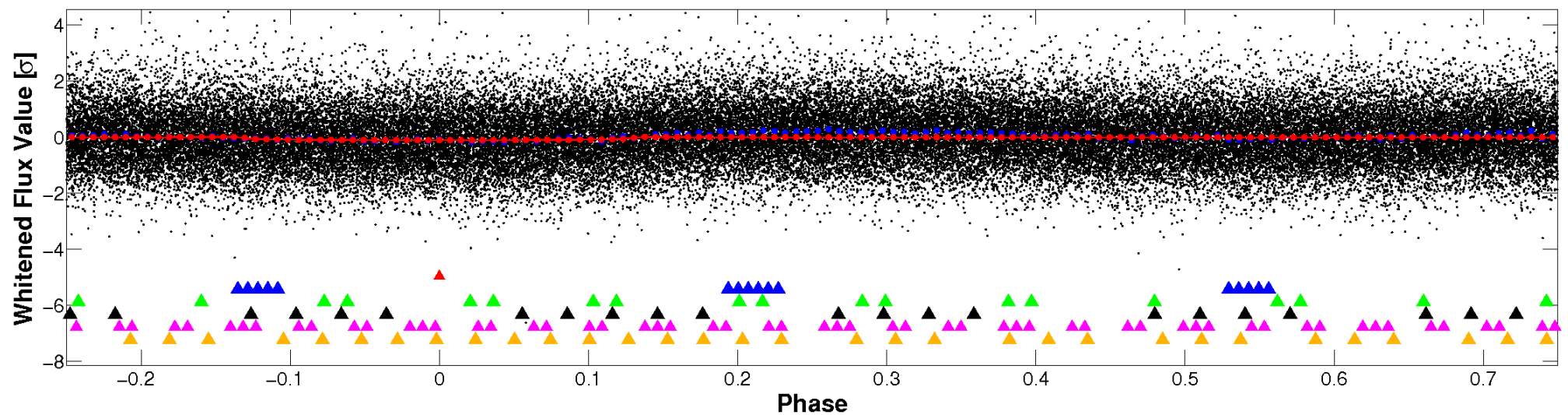


Non-Whitened Vs. Whitened Light Curve

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

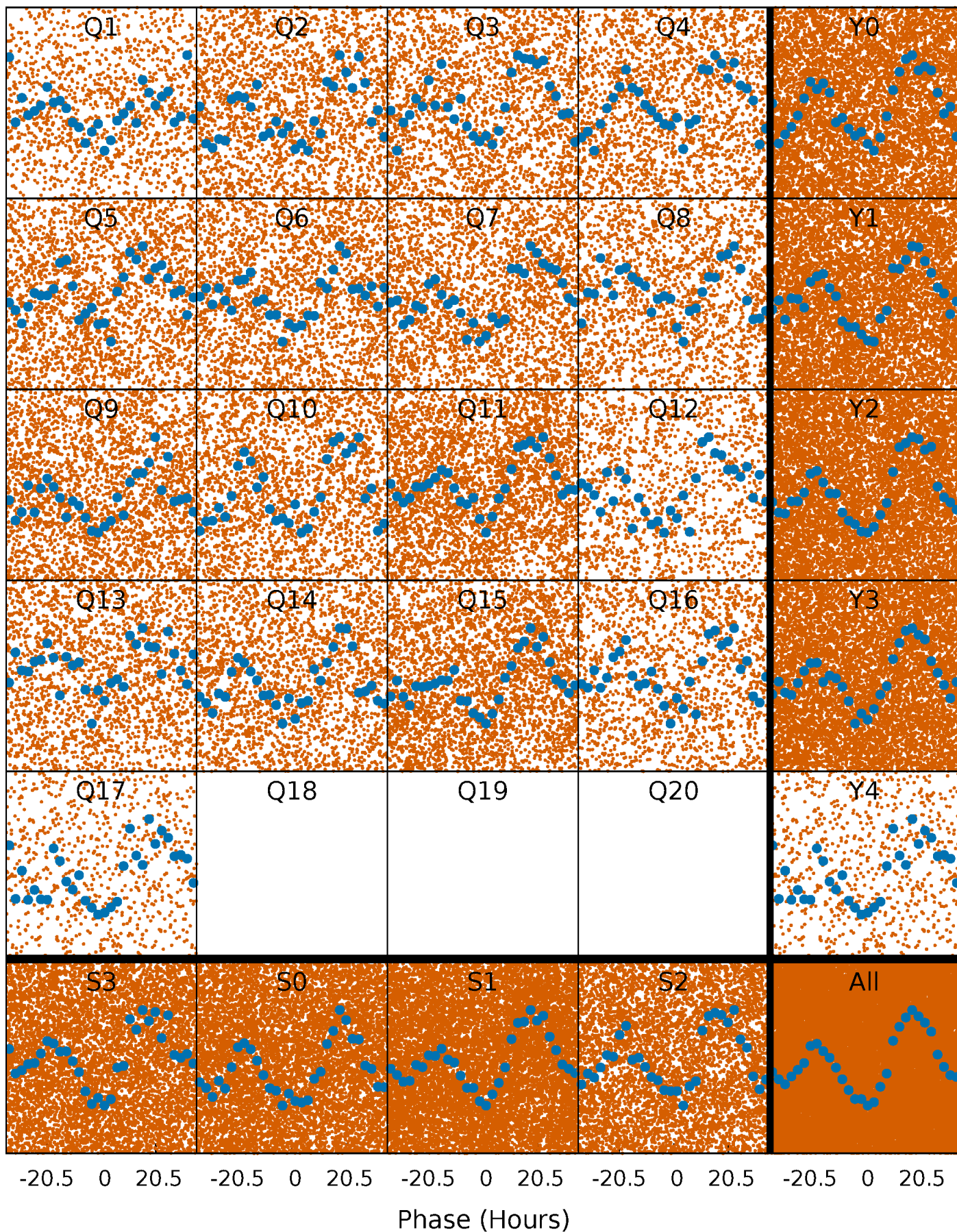


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



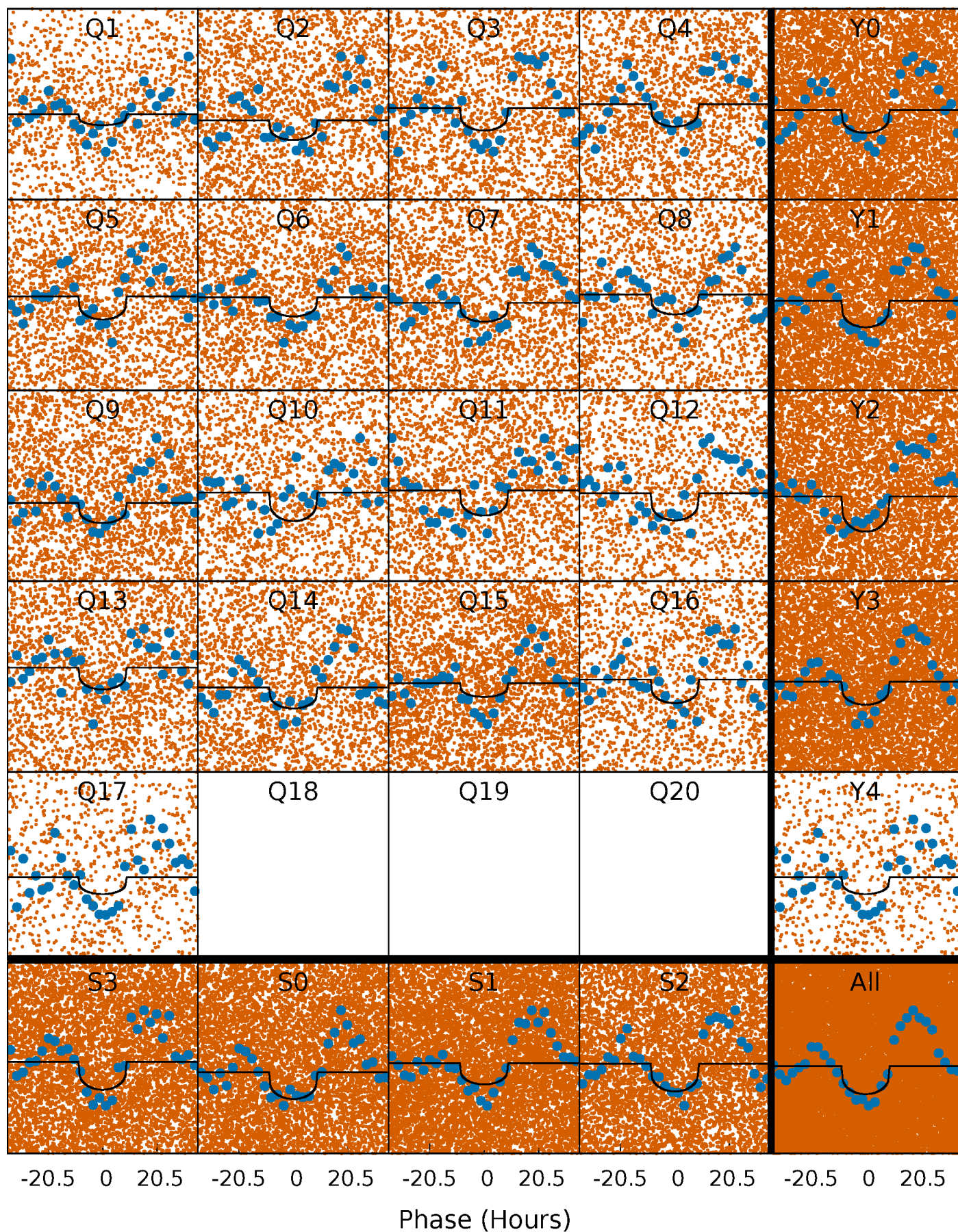
PDC Quarter-Phased Transit Curves

TCE 006869313-01 P= 2.818444 Days $T_0=133.794584$ (BKJD)



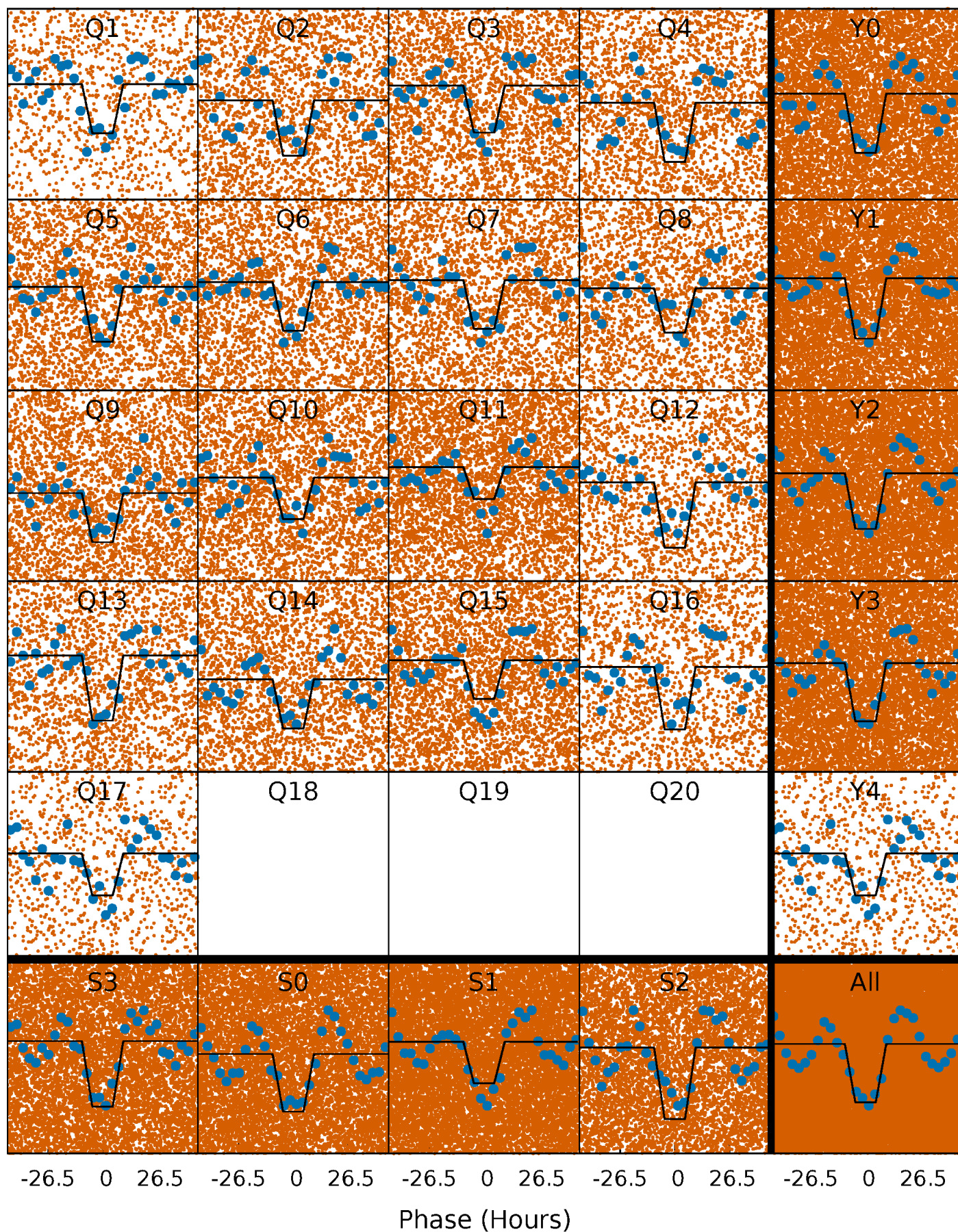
DV Quarter-Phased Transit Curves

TCE 006869313-01 P= 2.818444 Days $T_0=133.794584$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

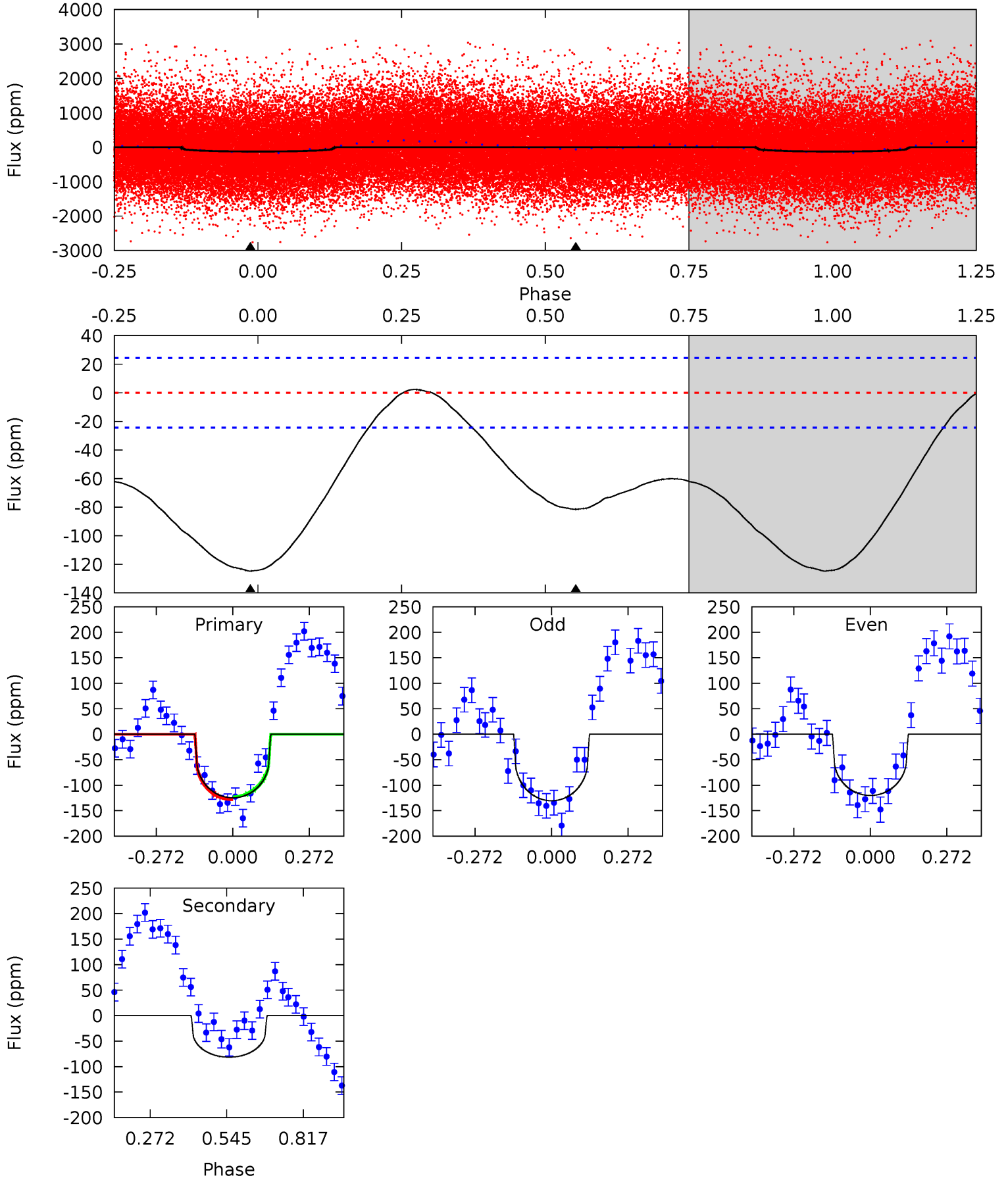
TCE 006869313-01 P= 2.818341 Days $T_0=133.834202$ (BKJD)



DV Model-Shift Uniqueness Test

006869313-01, P = 2.818444 Days, E = 130.976140 Days

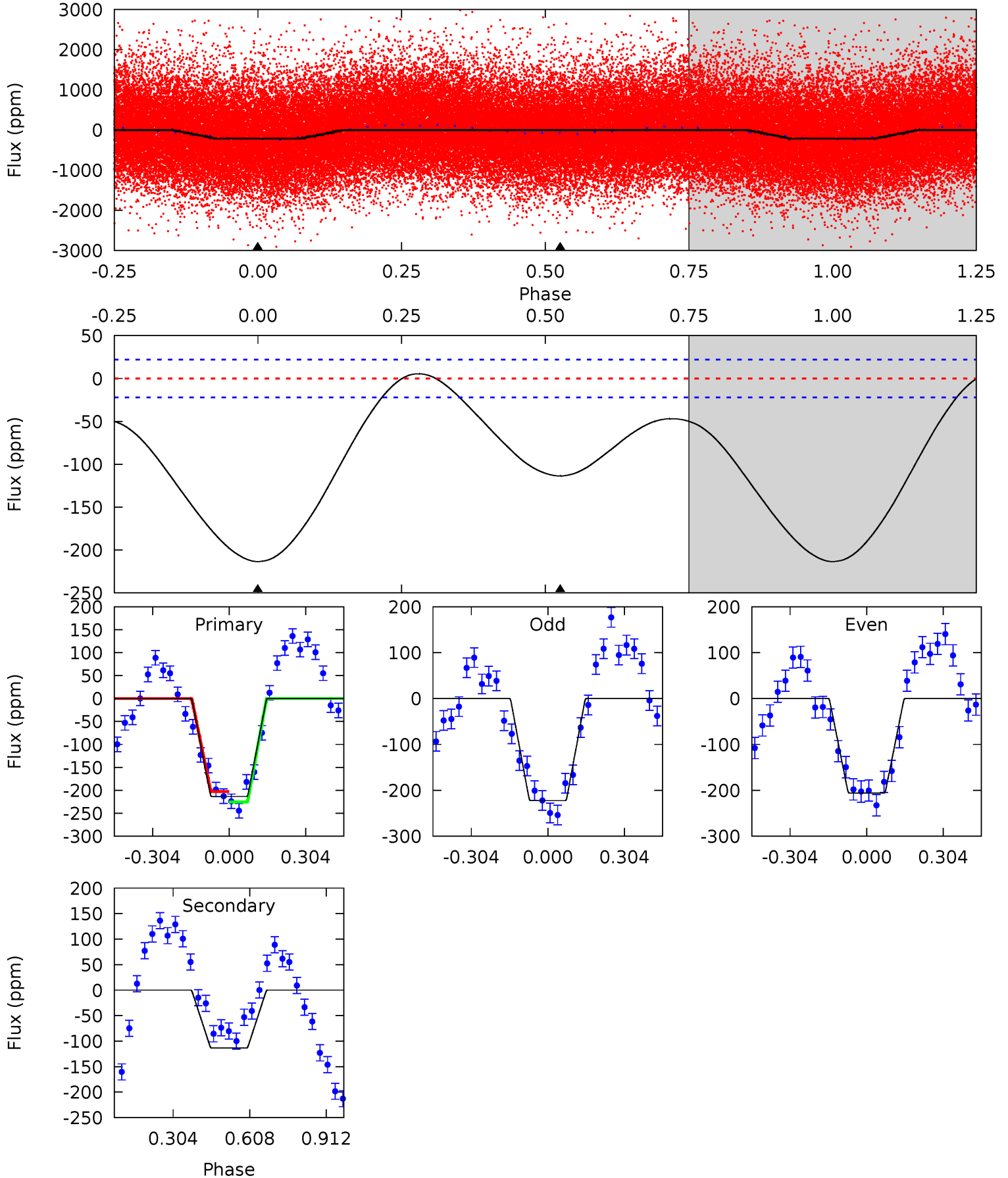
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.3	14.6	0	0	4.35	1.10	0.65	22.3	22.3	14.6	14.6	0.92	1.07	0.02	0.49



Alt Model-Shift Uniqueness Test

006869313-01, P = 2.818341 Days, E = 131.015861 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.1	22.4	0	0	4.33	1.03	4.64	42.1	42.1	22.4	22.4	1.61	0.87	0.03	2.20



Stellar Parameters For KIC 006869313

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5325^{+204}_{-185}	$4.504^{+0.100}_{-0.100}$	$-0.340^{+0.350}_{-0.300}$	$0.797^{+0.122}_{-0.102}$	$0.740^{+0.113}_{-0.052}$	$2.058^{+0.874}_{-0.612}$
	+4%/-3%	+2%/-2%	+103%/-88%	+15%/-13%	+15%/-7%	+42%/-30%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006869313-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-81 ± 6	$1.01^{+0.72}_{-0.66}$	1557^{+80}_{-82}	4776^{+3240}_{-907}	56^{+393}_{-38}
Alt.	-114 ± 5	$1.37^{+0.84}_{-0.71}$	1558^{+85}_{-76}	4524^{+1733}_{-728}	43^{+138}_{-27}

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

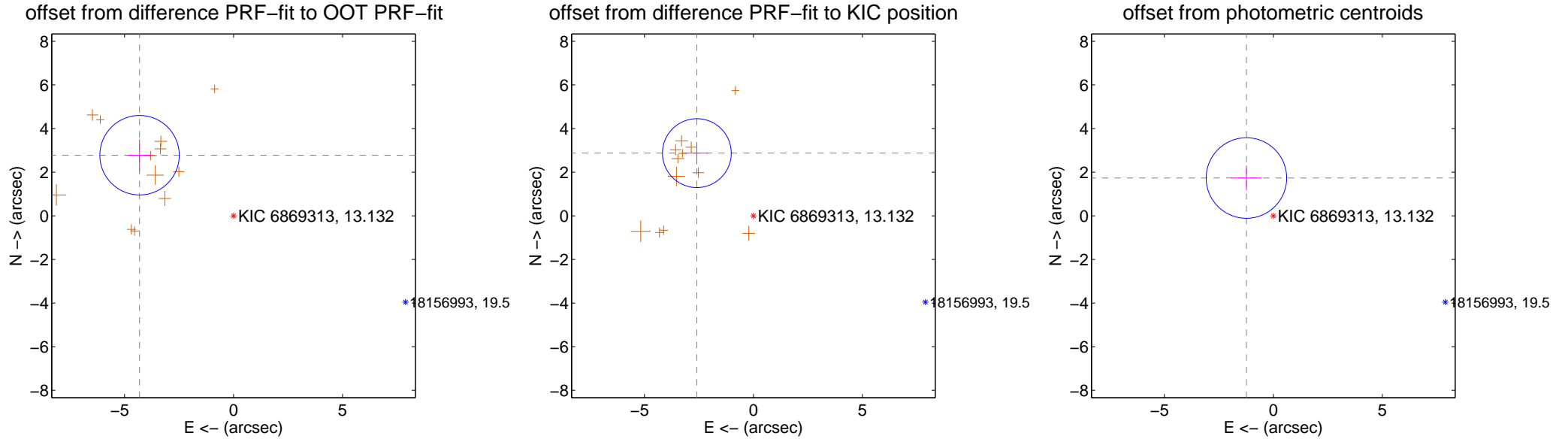
DV Centroid Data

Supplemental centroid analysis for 006869313-01. Kepler magnitude: 13.13. Transit SNR 12.56

There are 0 quarters with good PRF difference image offsets

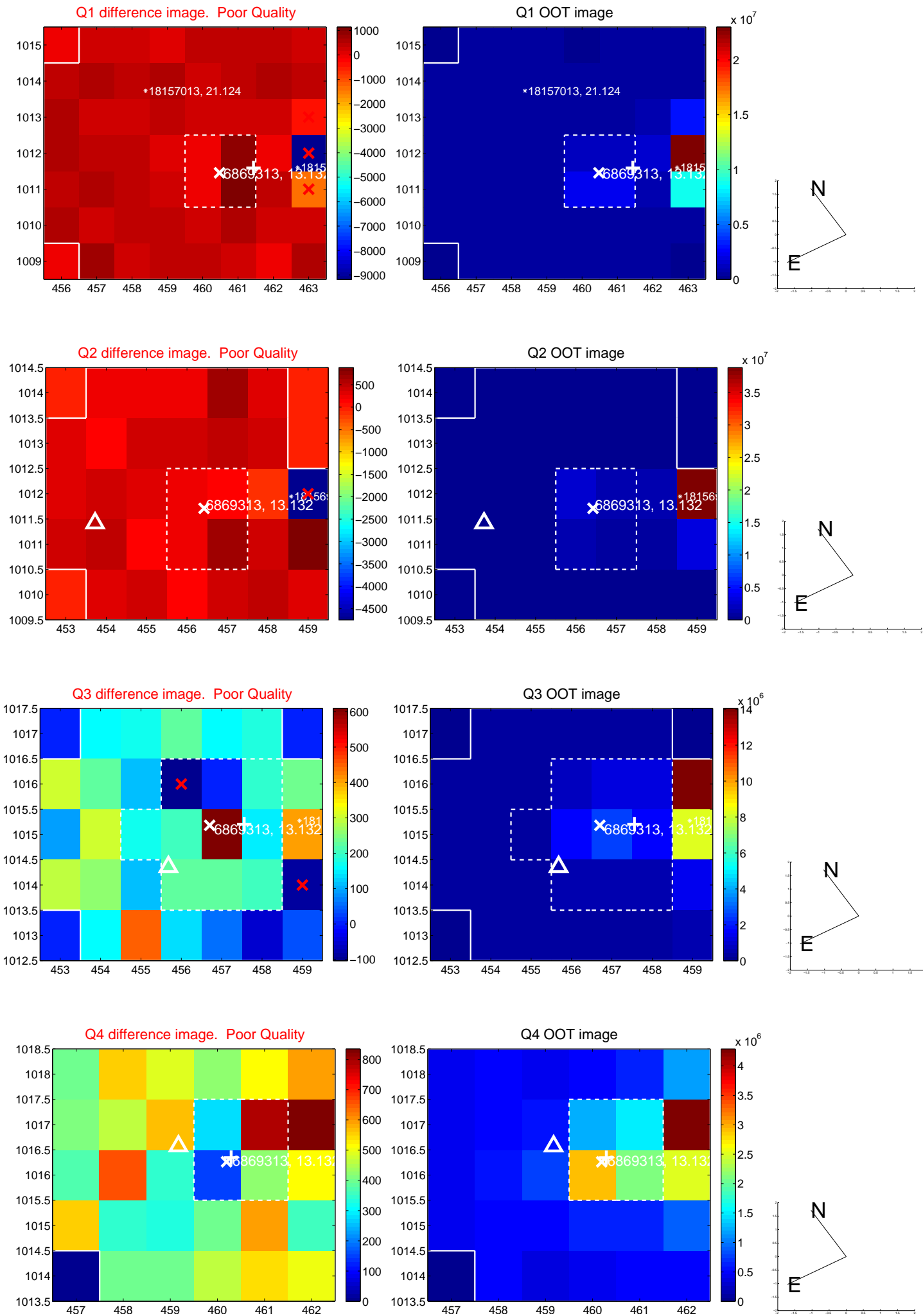
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.129 ± 0.607	8.45	4.311 ± 0.554	2.779 ± 0.720
PRF-fit source offset from KIC position	3.872 ± 0.526	7.36	2.595 ± 0.545	2.874 ± 0.510
photometric centroid source offset	2.13 ± 0.62	3.46	1.23 ± 0.70	1.73 ± 0.57

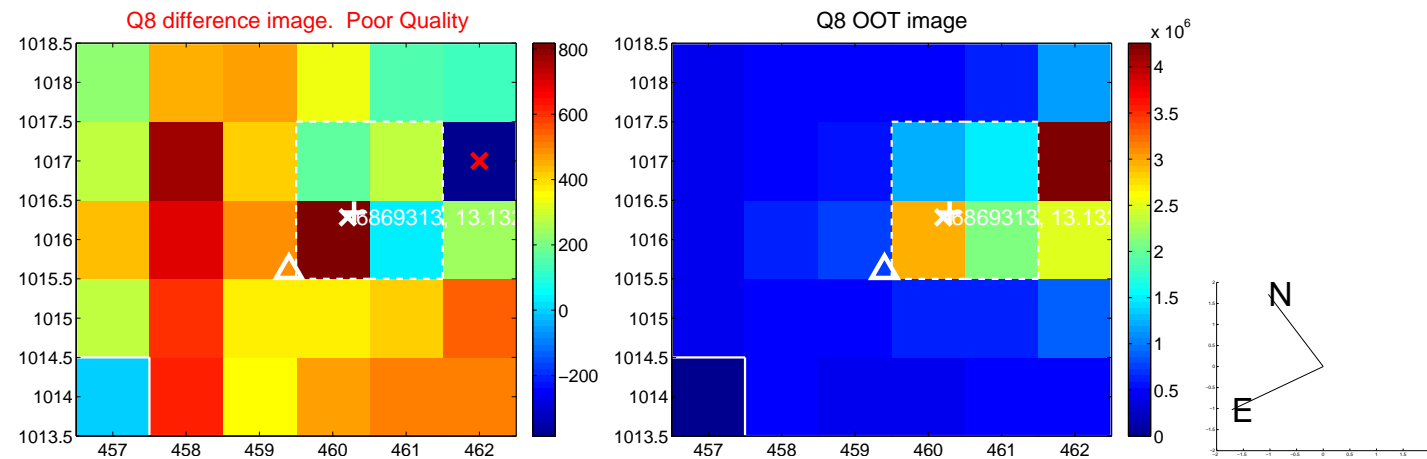
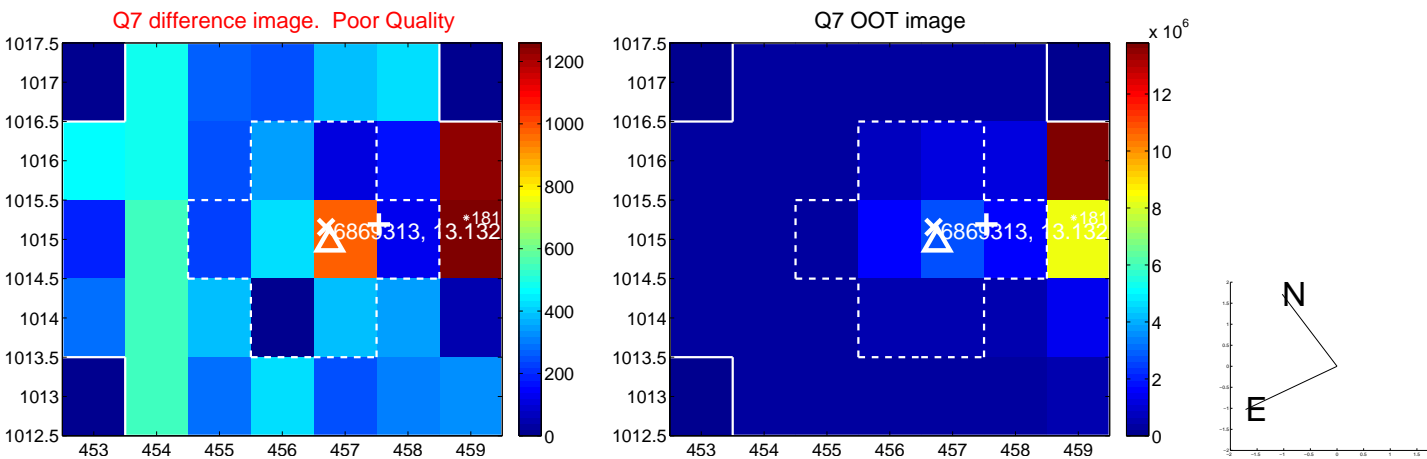
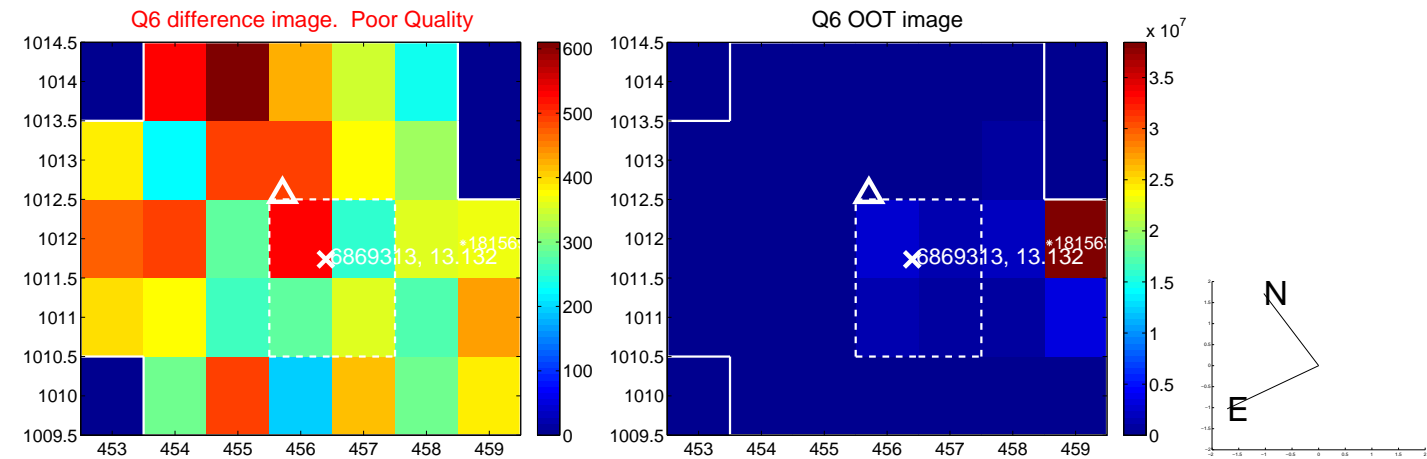
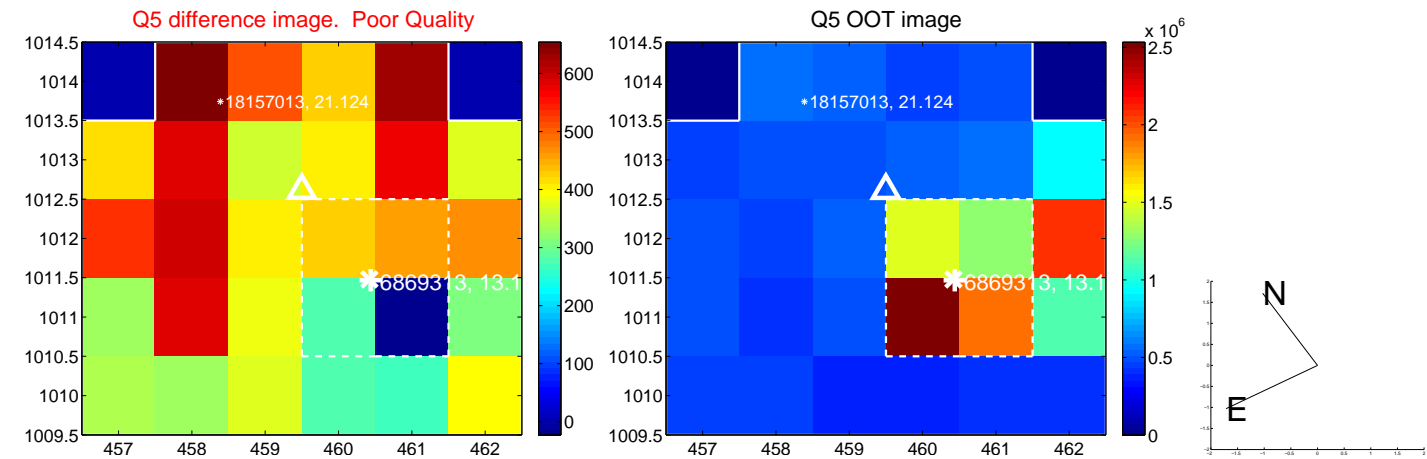


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

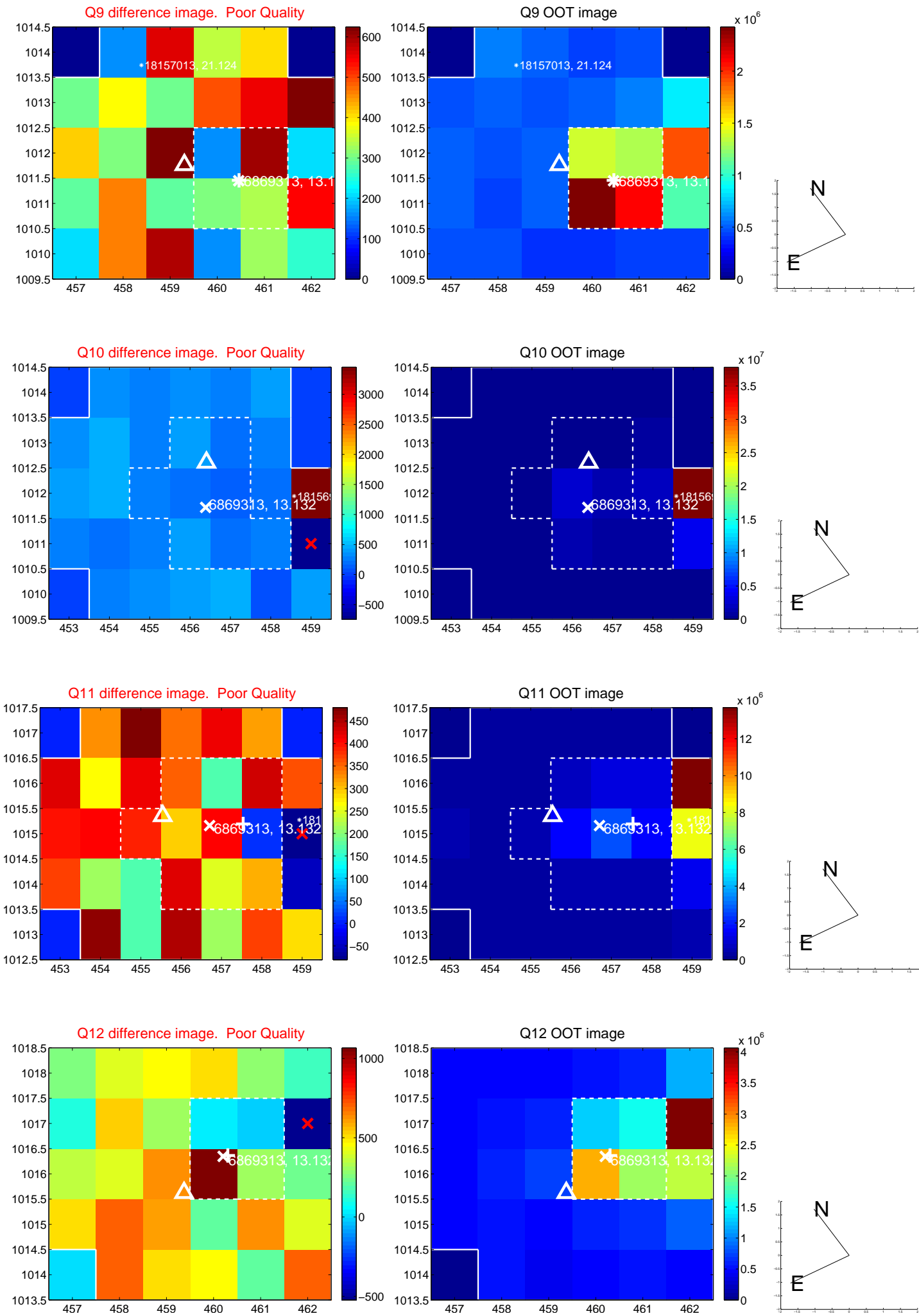
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



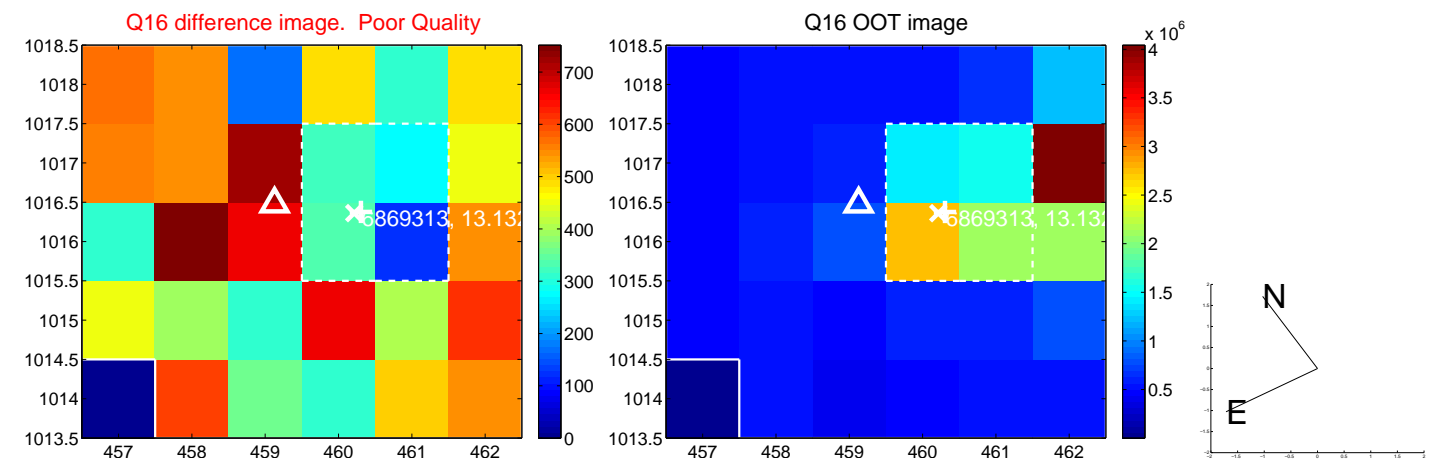
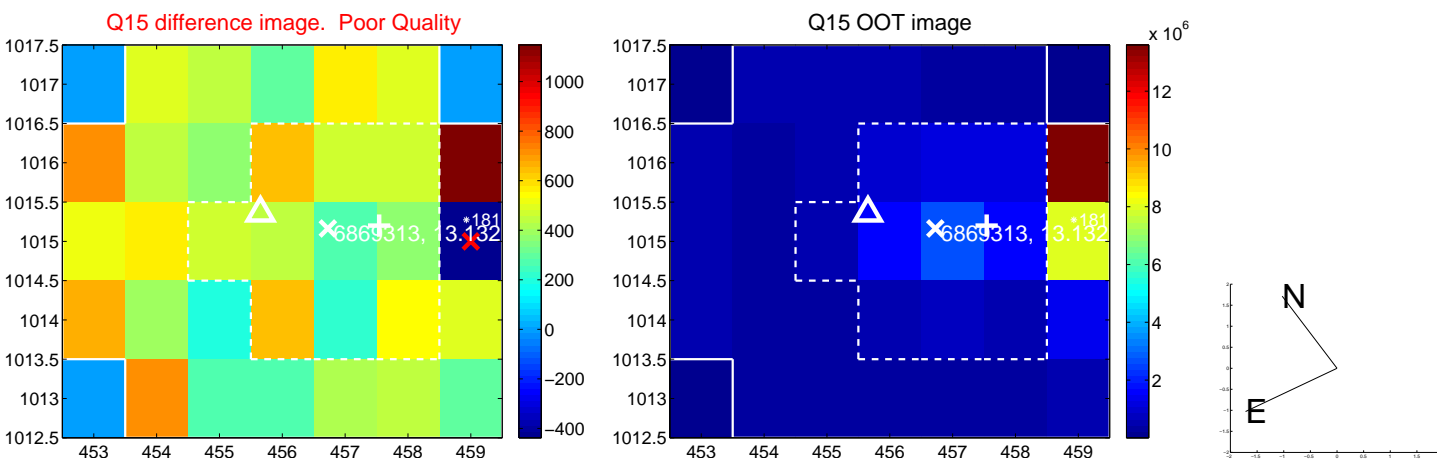
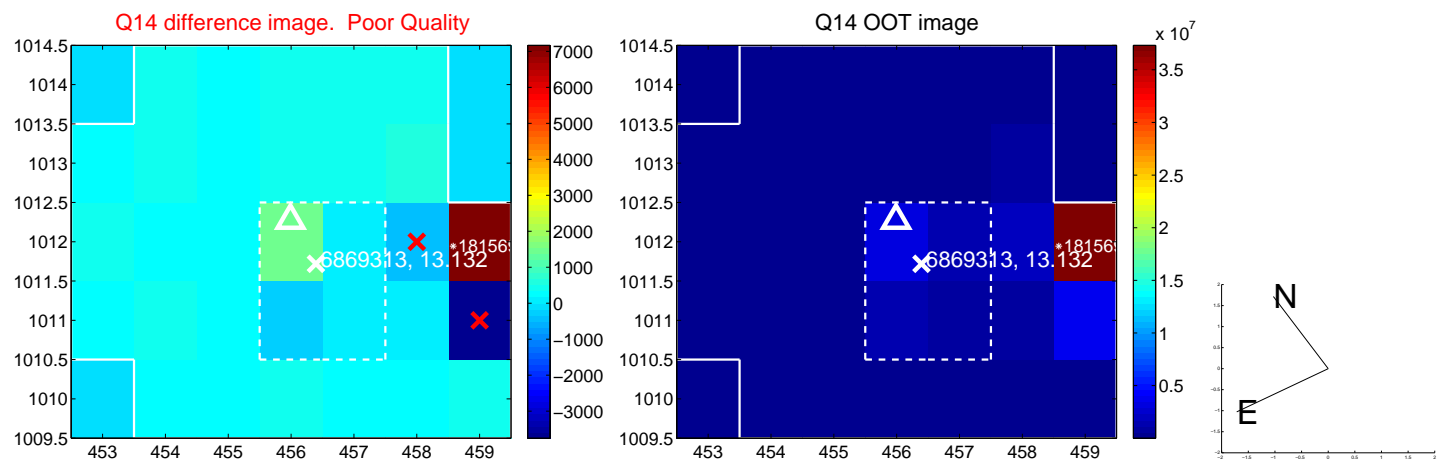
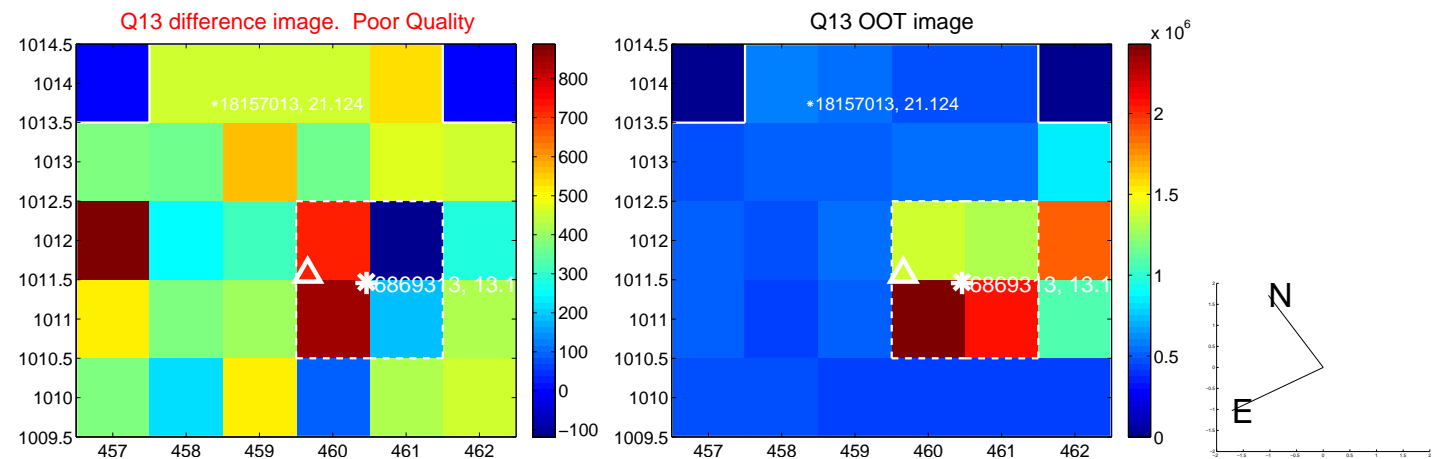
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



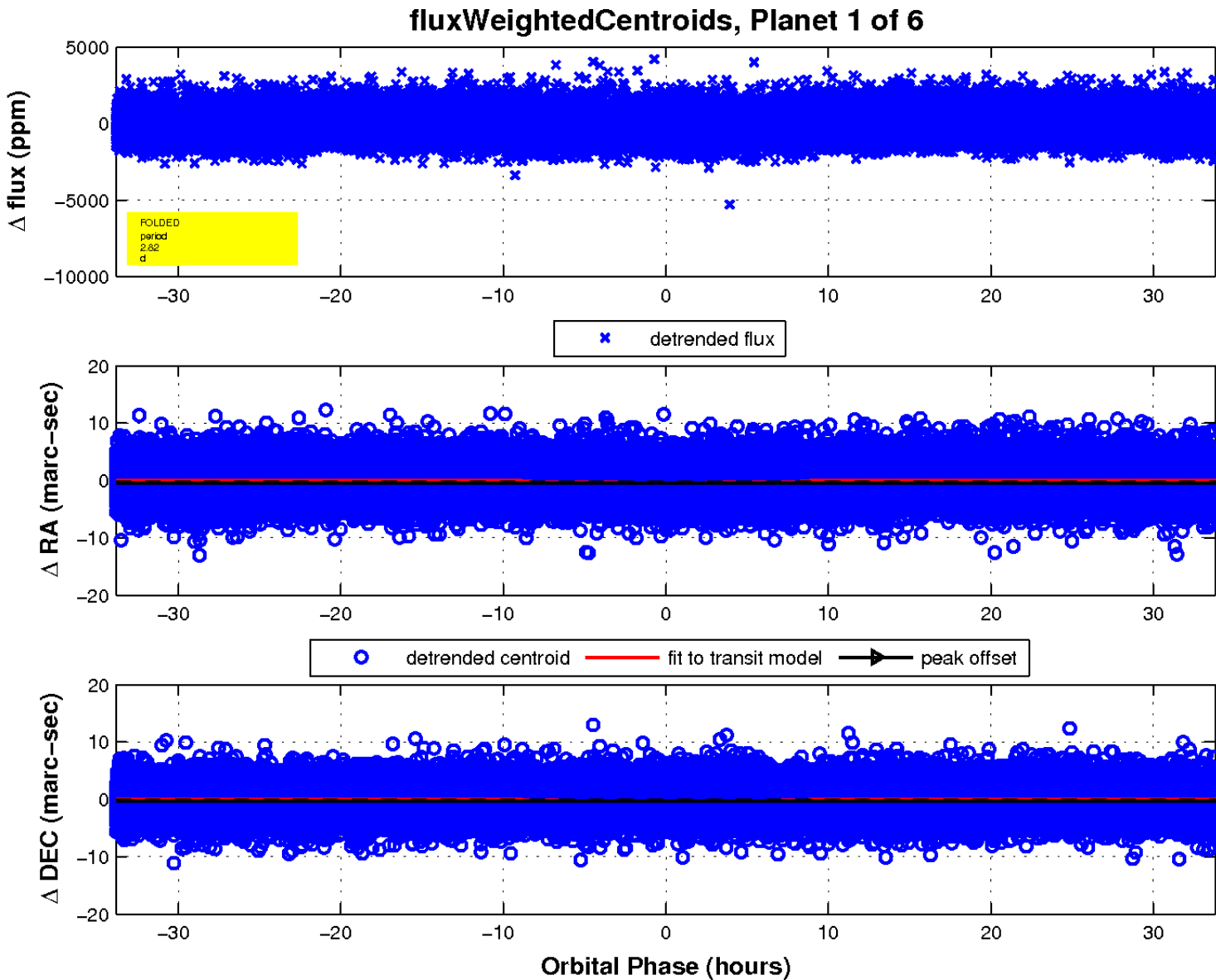
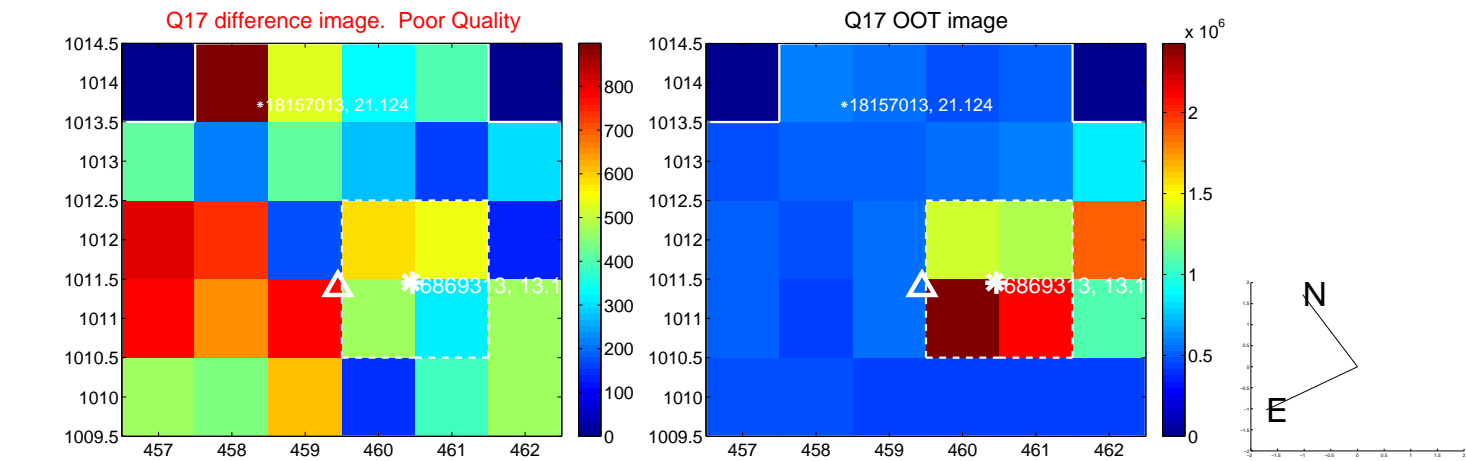
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white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

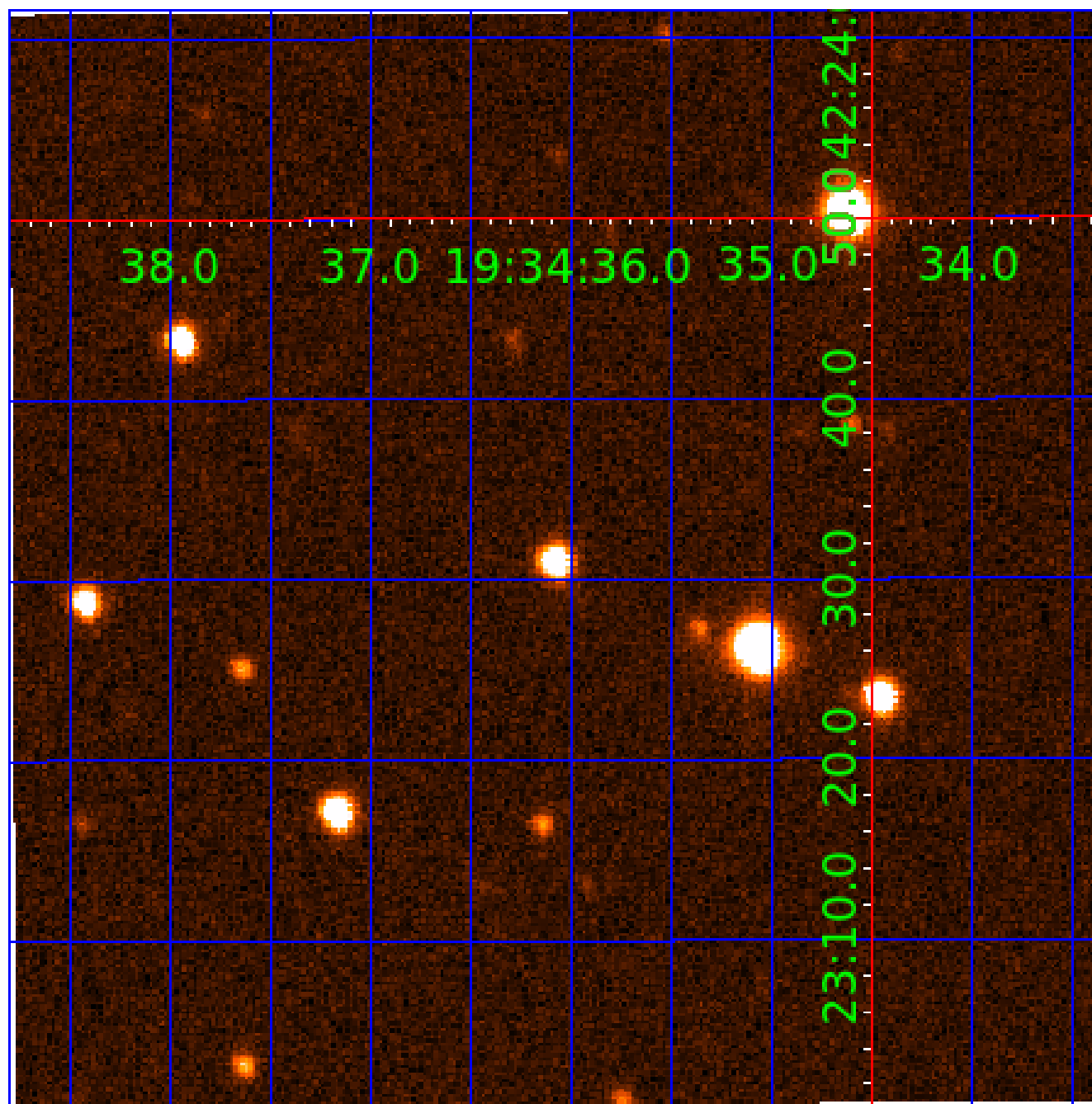


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006869313

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})
006869313-01	OBS	No	2.818444	133.794584	101.6	17.976	11.8	12.6	0.80	5325	0.79	366.83
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006869313-03	OBS	No	76.606449	136.715273	1014.4	3.081	7.8	9.0	0.80	5325	2.73	4.49
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006869313-06	OBS	No	44.805878	165.228744	752.3	3.694	8.1	7.9	0.80	5325	2.53	9.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006869313-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_CROWDED—HALO_GHOST
006869313-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
006869313-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

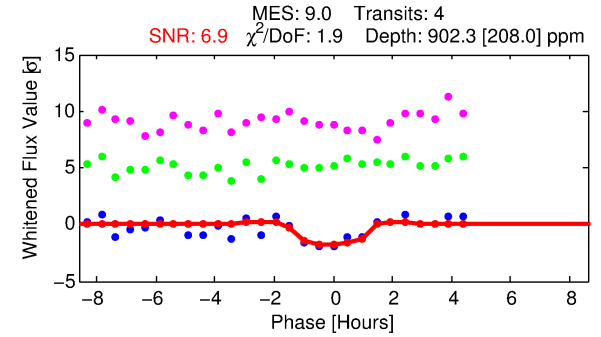
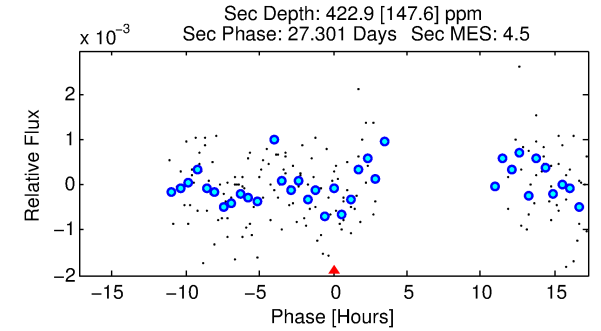
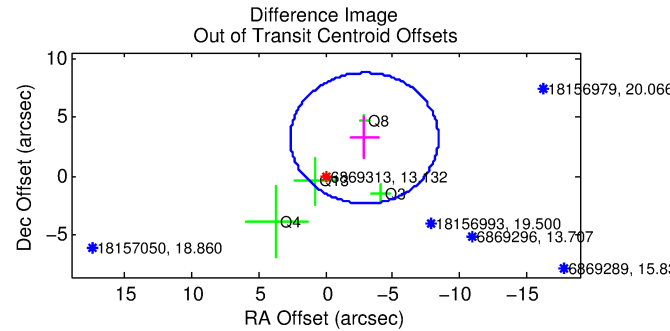
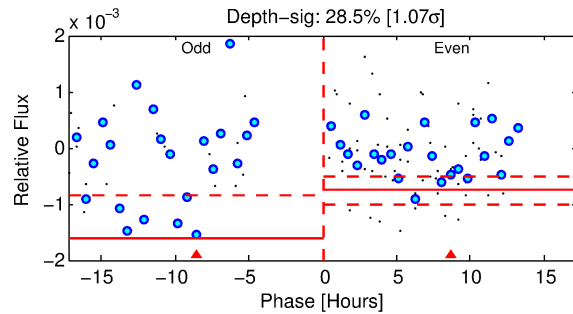
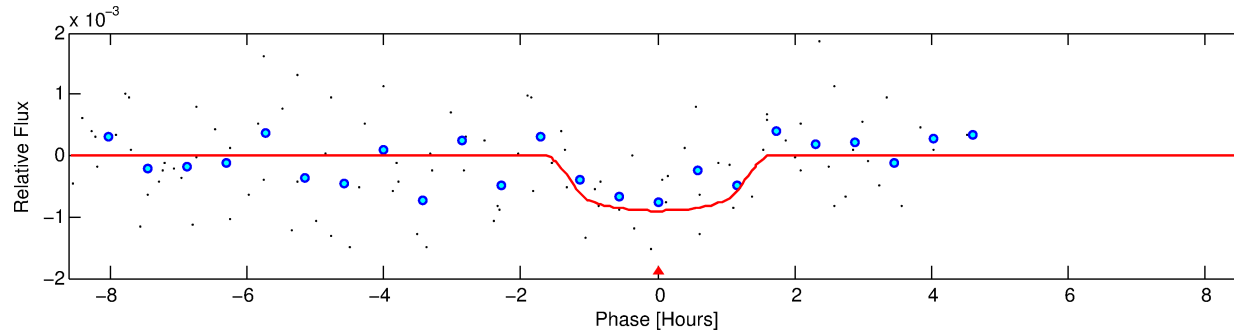
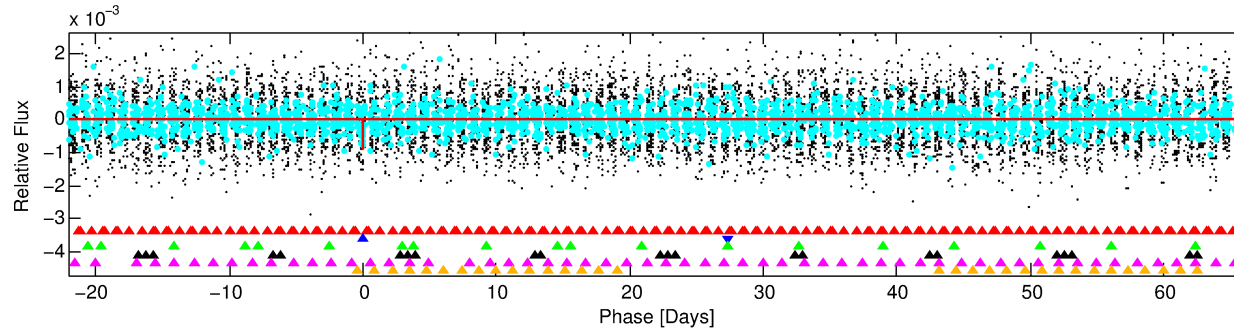
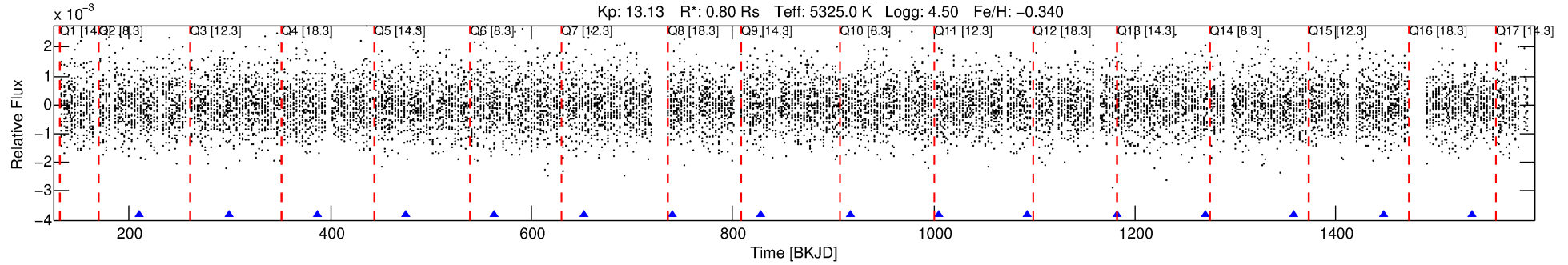
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006869313-02

No Significant Match Found

DV One-Page Summary

KIC: 6869313 Candidate: 2 of 6 Period: 88.318 d



DV Fit Results:

Period = 88.31753 [0.00181] d
Epoch = 210.4386 [0.0134] BKJD
Rp/R* = 0.0302 [0.0511]
a/R* = 160.96 [1087.06]
b = 0.77 [3.64]
Seff = 3.71 [0.89]
Teq = 354 [21] K
Rp = 2.63 [4.46] Re
a = 0.3510 [0.0448] AU
Ag = 4151.08 [14122.81] [0.29 σ]
Teffp = 4393 [3735] K [1.08 σ]

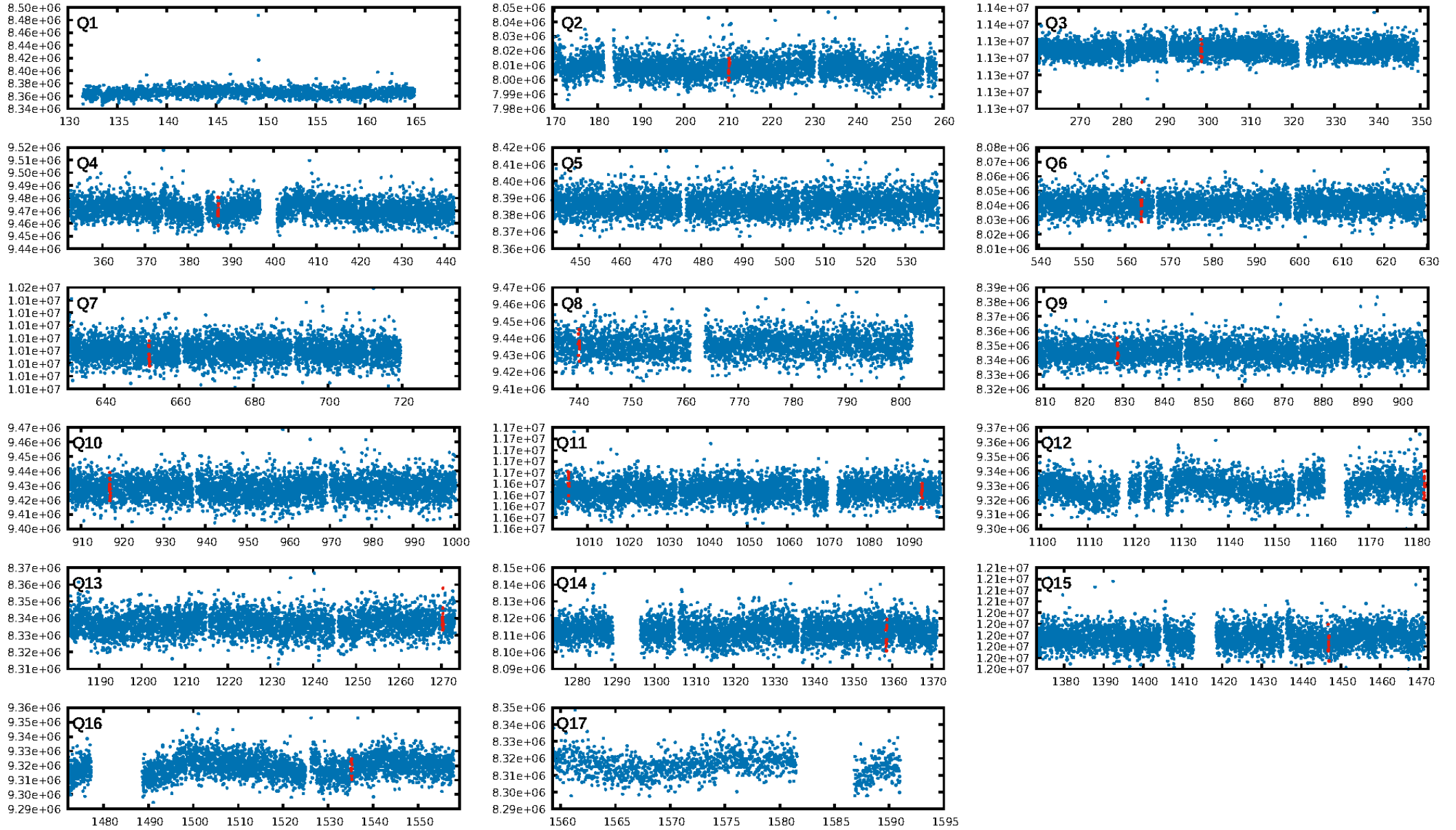
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [66.75 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.8%
ModelChiSquareGof-sig: 49.0%
Bootstrap-pfa: 6.24e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 98.98
Centroid-sig: 56.9%
Centroid-so: 3.596 arcsec [3.45 σ]
OotOffset-rm: 4.349 arcsec [2.36 σ]
KicOffset-rm: 4.089 arcsec [2.43 σ]
OotOffset-st: 0/1/2/1 [4]
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DiffImageOverlap-fno: 0.31 [4/13]

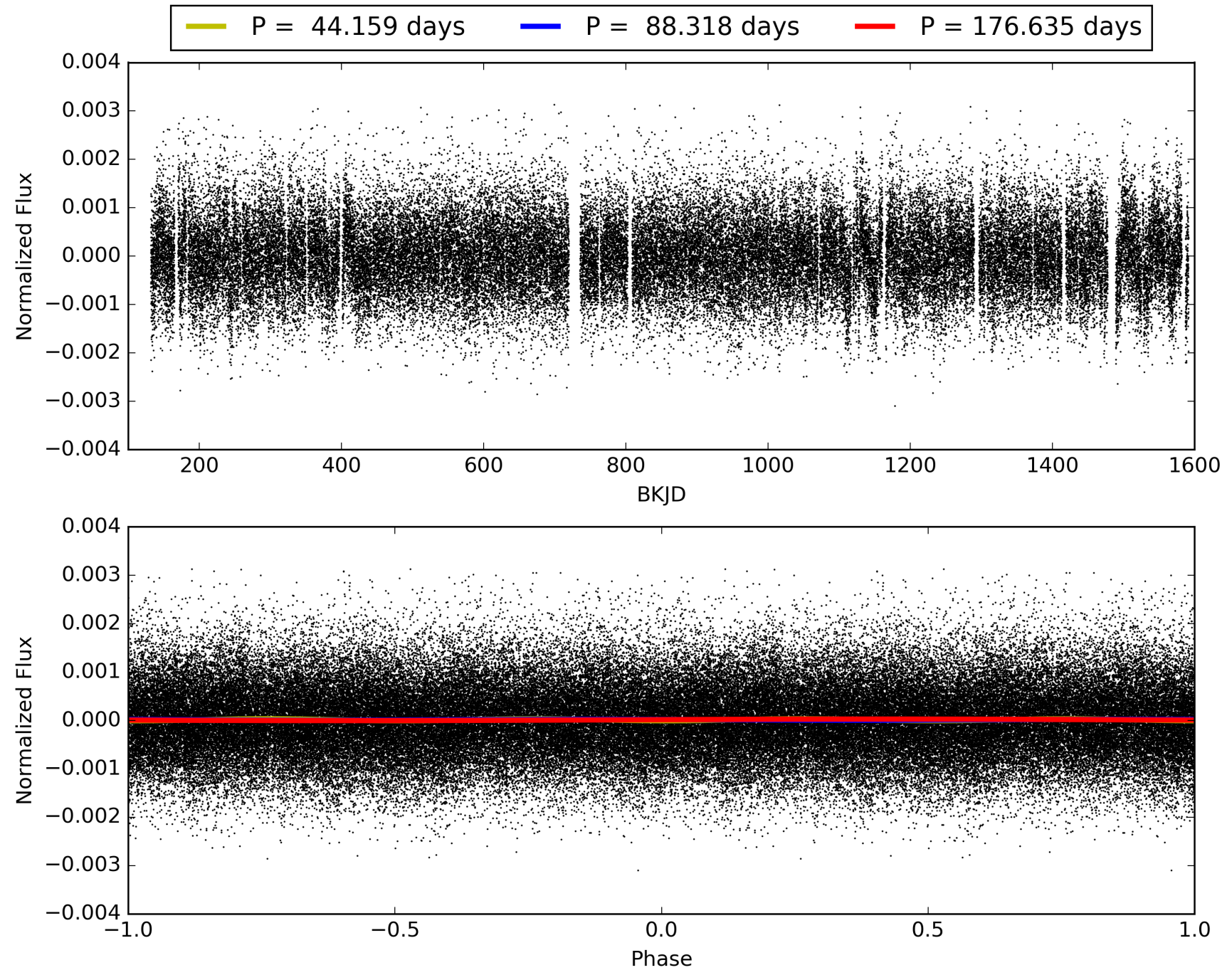
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006869313-02, PDC Light Curves

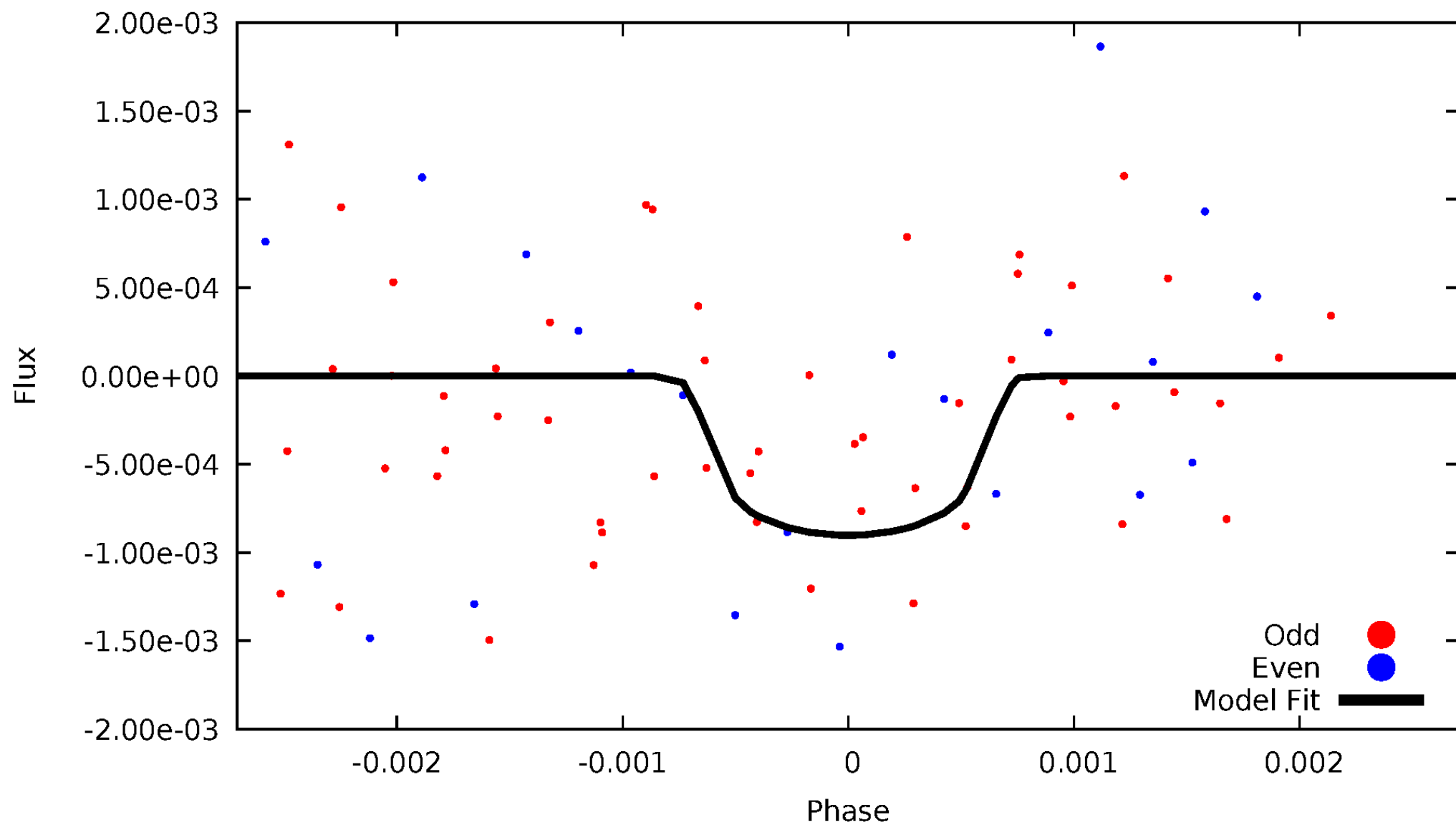


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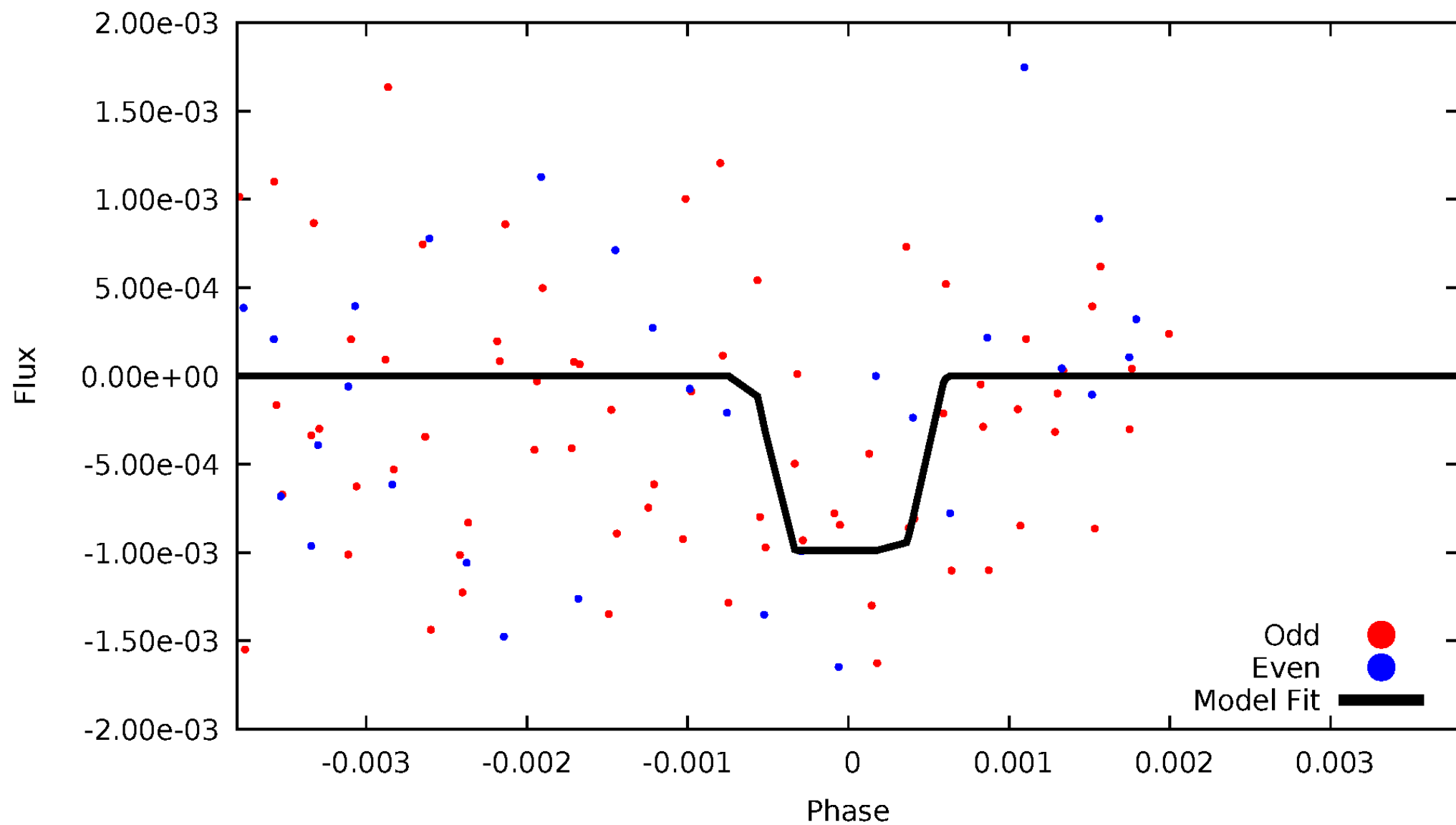
DV Odd/Even

TCE 006869313-02



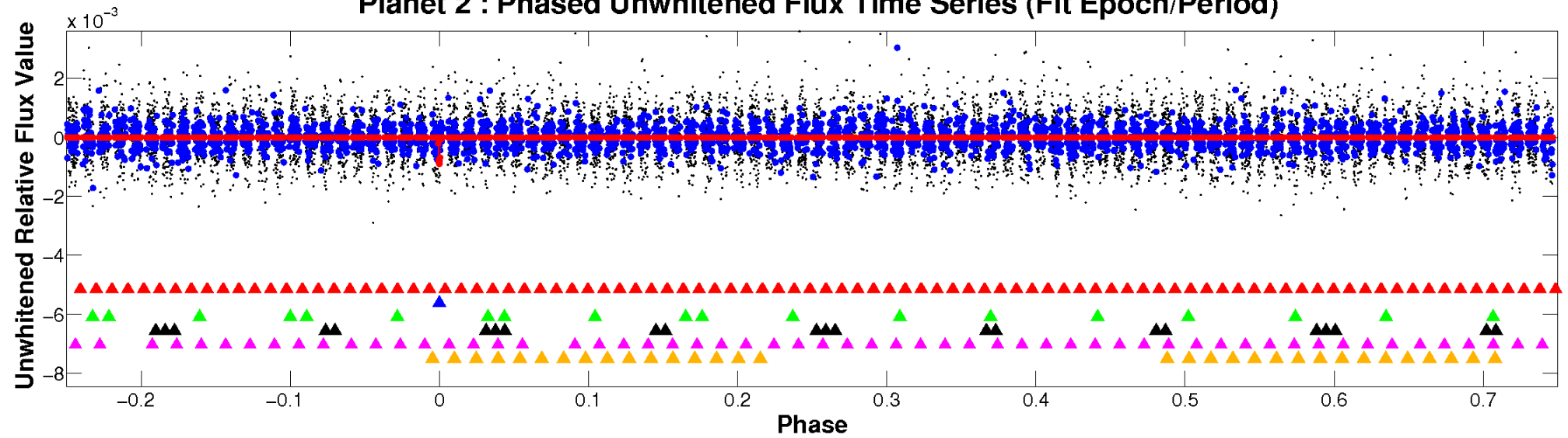
ALT Odd/Even

TCE 006869313-02

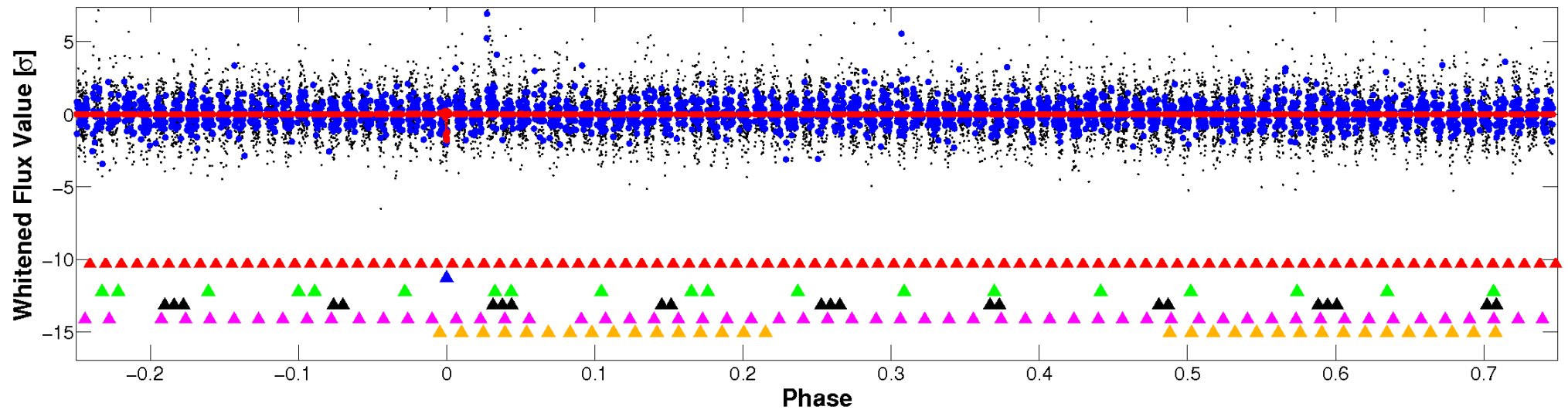


Non-Whitened Vs. Whitened Light Curve

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

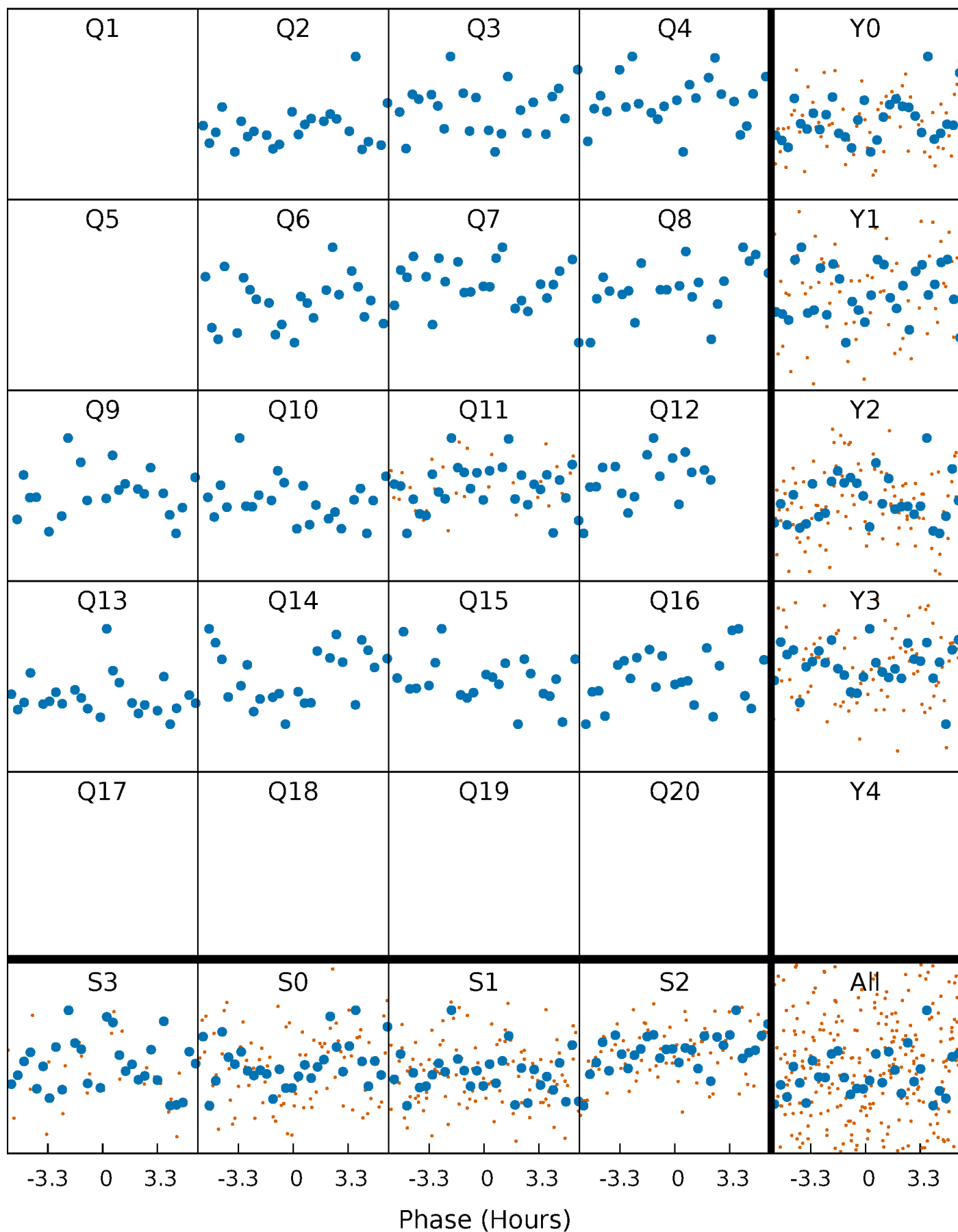


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



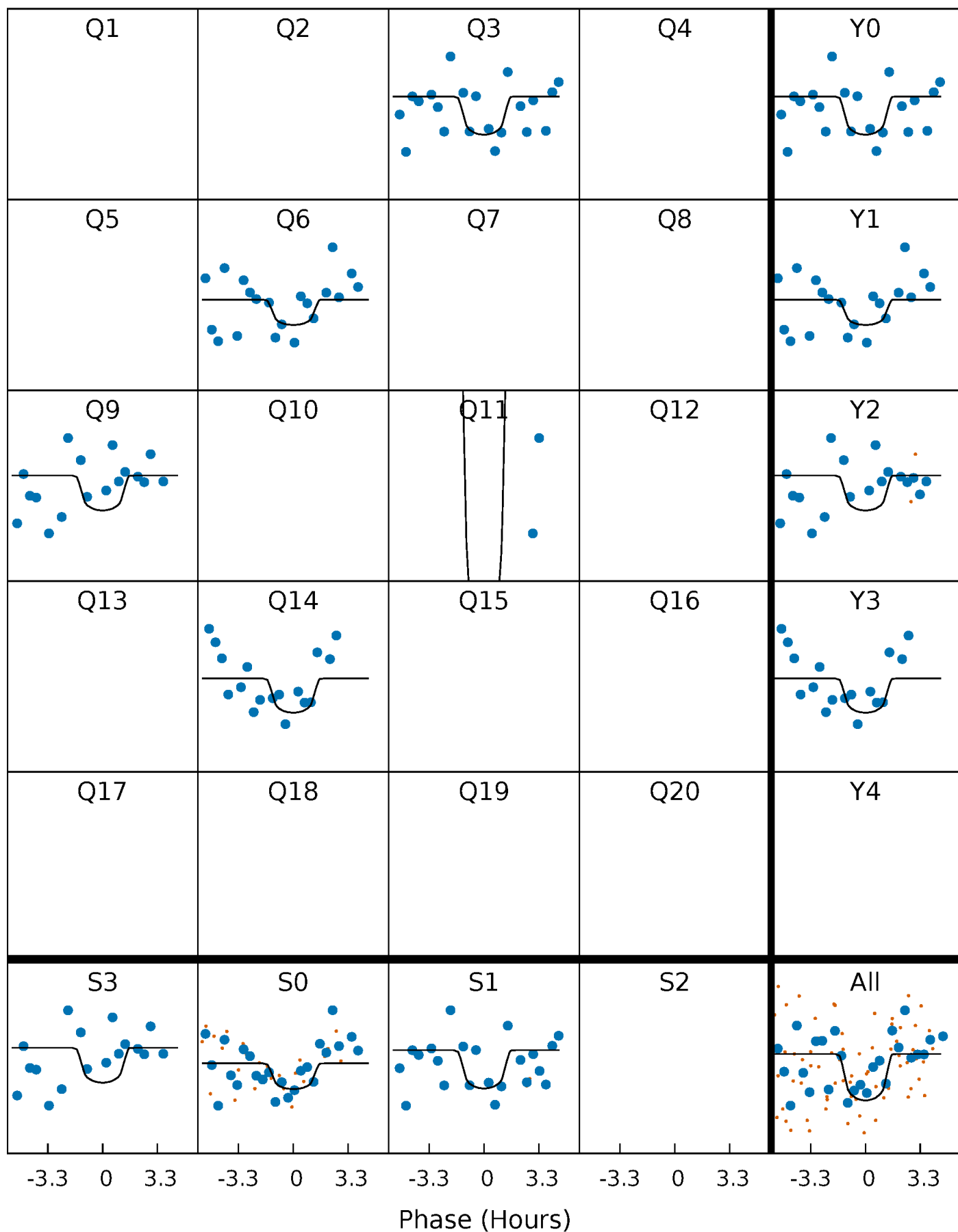
PDC Quarter-Phased Transit Curves

TCE 006869313-02 P= 88.317530 Days $T_0=210.438634$ (BKJD)



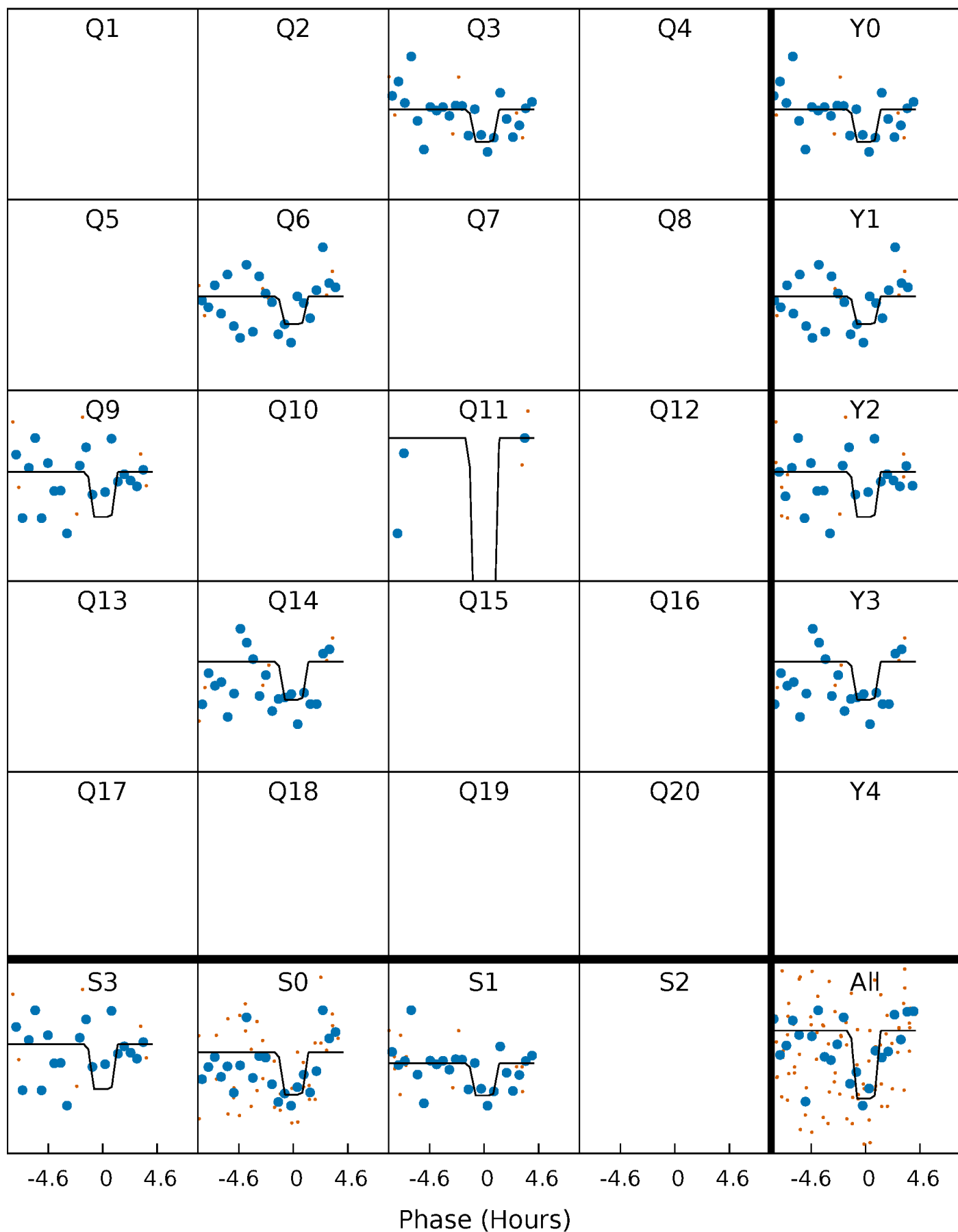
DV Quarter-Phased Transit Curves

TCE 006869313-02 P= 88.317530 Days $T_0=210.438634$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

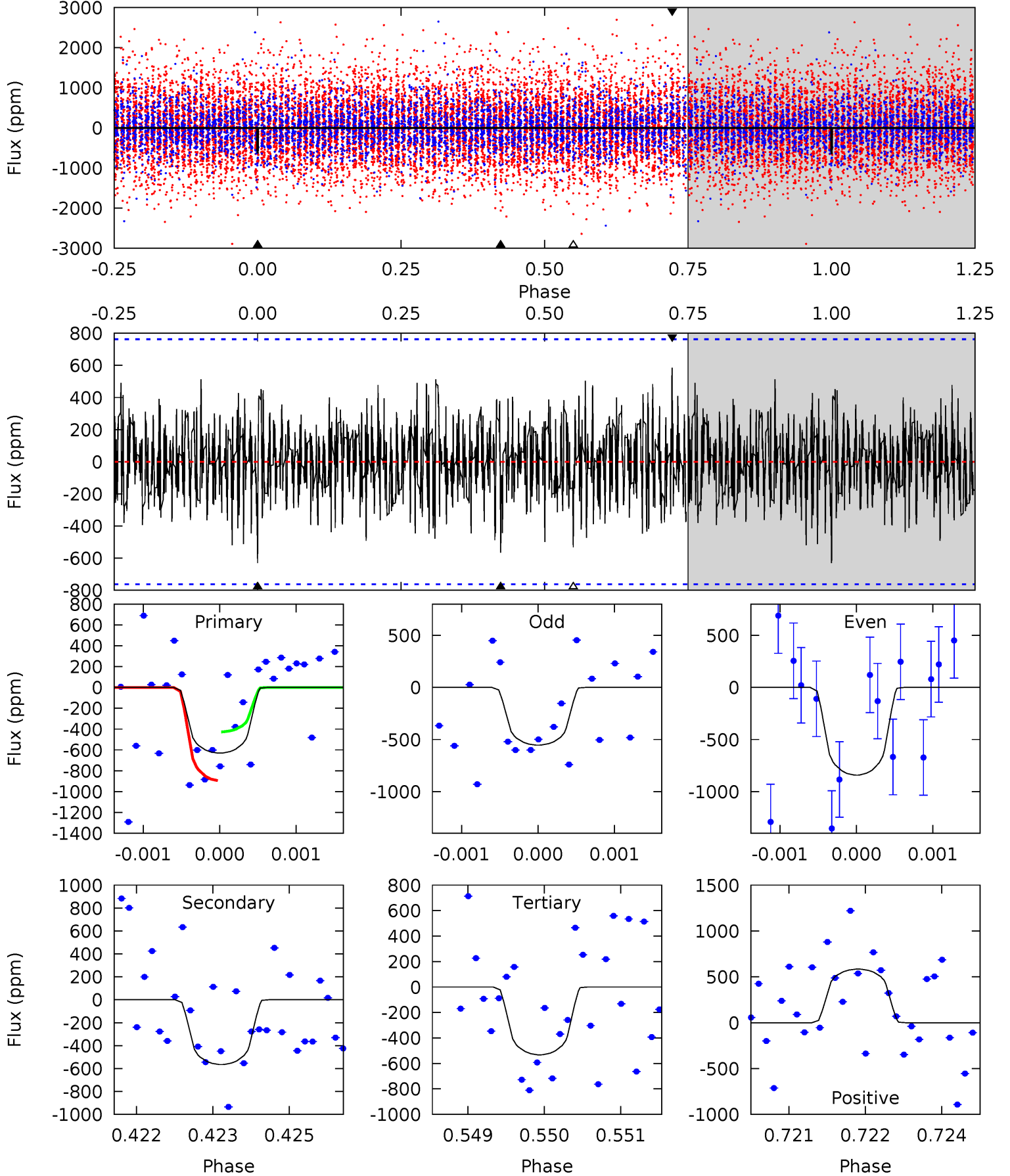
TCE 006869313-02 P= 88.313922 Days $T_0=210.454983$ (BKJD)



DV Model-Shift Uniqueness Test

006869313-02, P = 88.317530 Days, E = 122.121104 Days

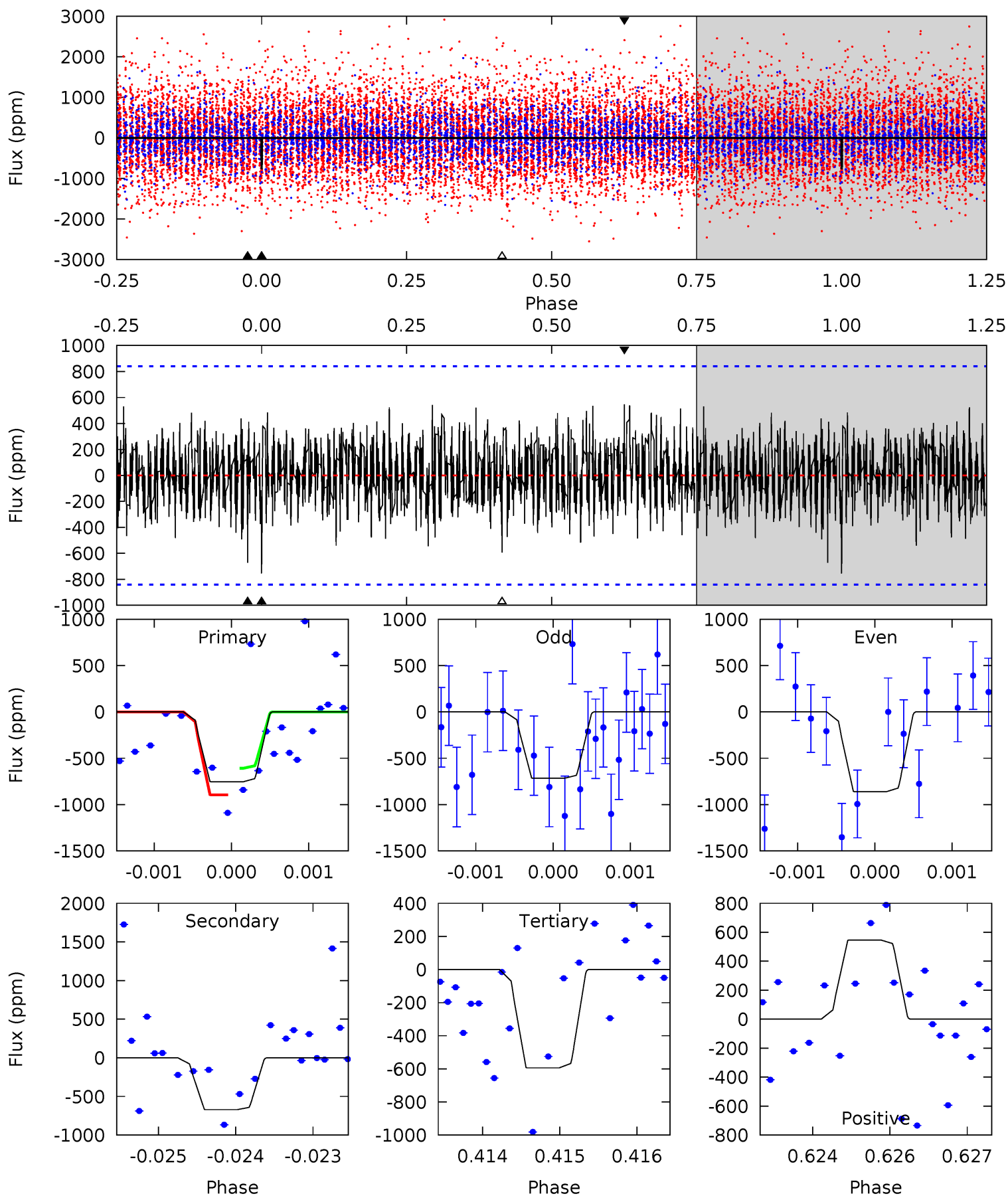
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.46	3.99	3.76	4.13	5.39	3.19	1.23	0.69	0.33	0.23	-0.14	0.88	0.79	0.48	1.63



Alt Model-Shift Uniqueness Test

006869313-02, P = 88.313922 Days, E = 122.141061 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.86	4.33	3.83	3.52	5.42	3.24	1.14	1.03	1.34	0.49	0.80	0.43	0.88	0.42	0.93



Stellar Parameters For KIC 006869313

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5325^{+204}_{-185}	$4.504^{+0.100}_{-0.100}$	$-0.340^{+0.350}_{-0.300}$	$0.797^{+0.122}_{-0.102}$	$0.740^{+0.113}_{-0.052}$	$2.058^{+0.874}_{-0.612}$
	+4%/-3%	+2%/-2%	+103%/-88%	+15%/-13%	+15%/-7%	+42%/-30%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006869313-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-565 ± 141	$4.12^{+3.83}_{-2.81}$	494^{+27}_{-25}	4057^{+2802}_{-816}	2264^{+20597}_{-1677}
Alt.	-671 ± 155	$4.41^{+3.94}_{-3.06}$	495^{+28}_{-26}	4090^{+2785}_{-832}	2434^{+20453}_{-1801}

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

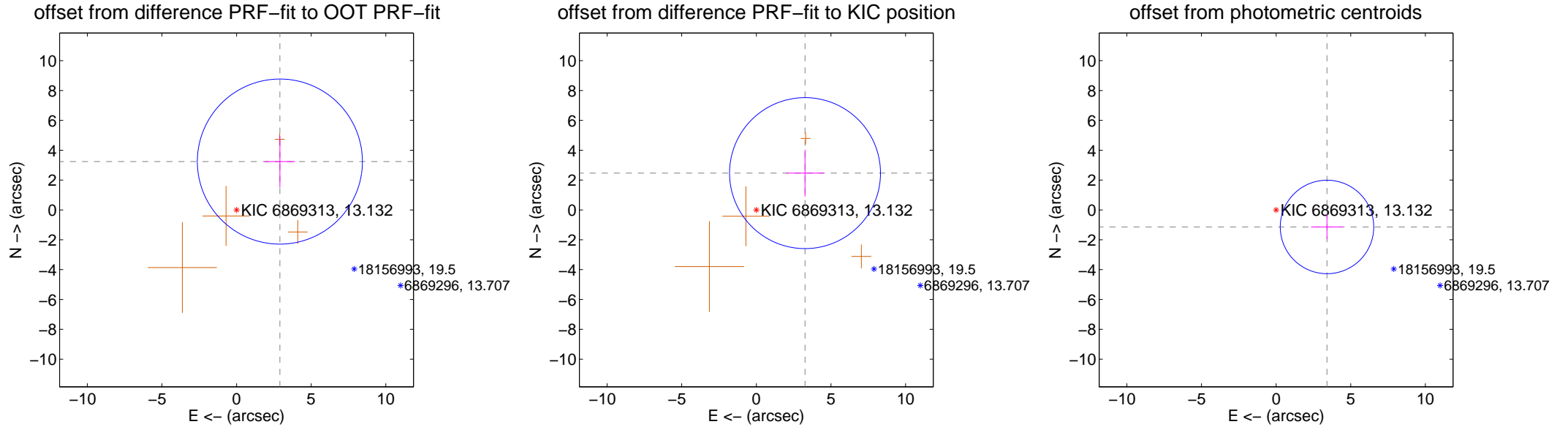
DV Centroid Data

Supplemental centroid analysis for 006869313-02. Kepler magnitude: 13.13. Transit SNR 6.89

There are 0 quarters with good PRF difference image offsets

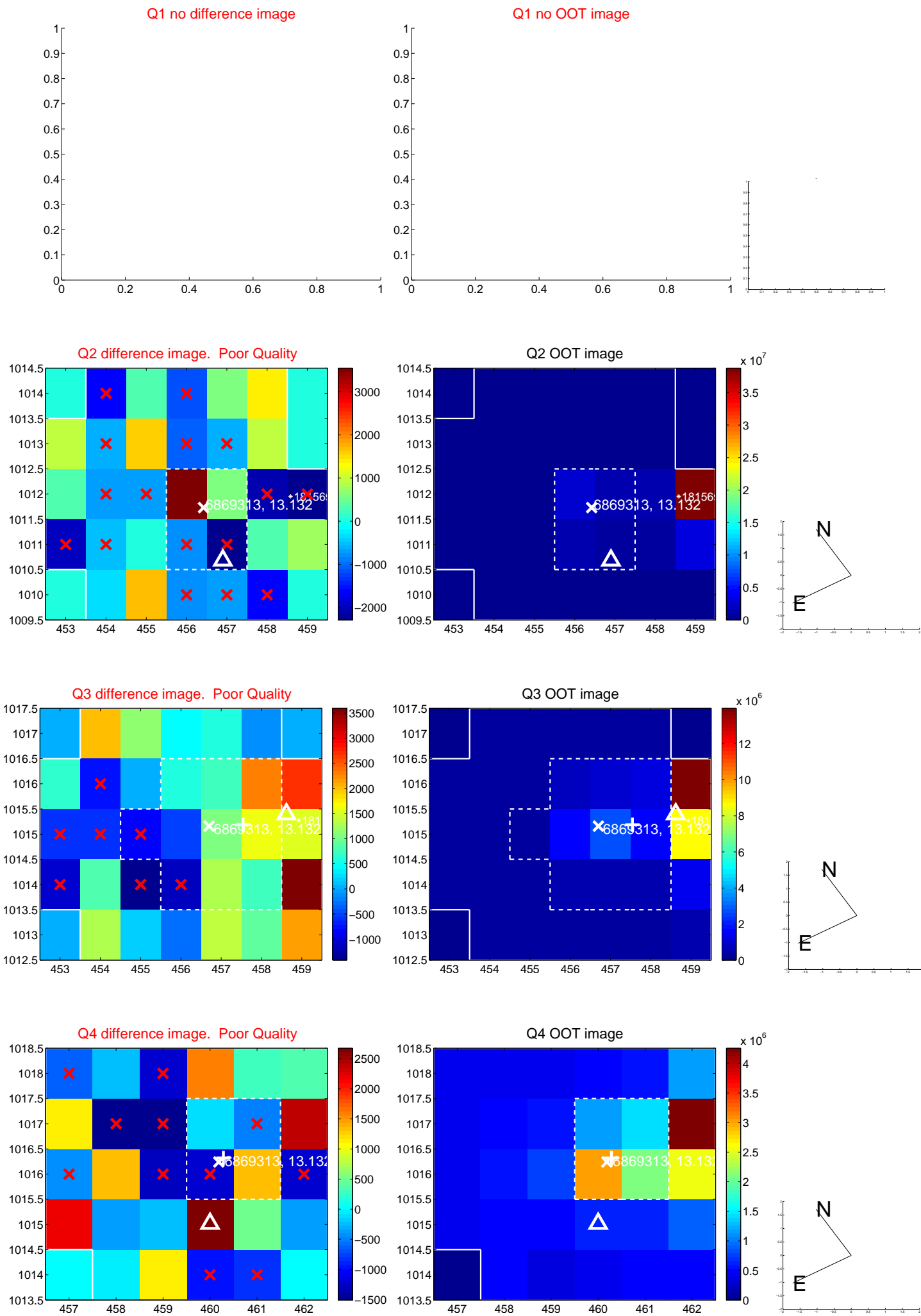
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.349 ± 1.843	2.36	-2.902 ± 1.028	3.239 ± 1.727
PRF-fit source offset from KIC position	4.089 ± 1.686	2.43	-3.262 ± 1.250	2.465 ± 1.567
photometric centroid source offset	3.60 ± 1.04	3.45	-3.41 ± 1.07	-1.14 ± 0.82

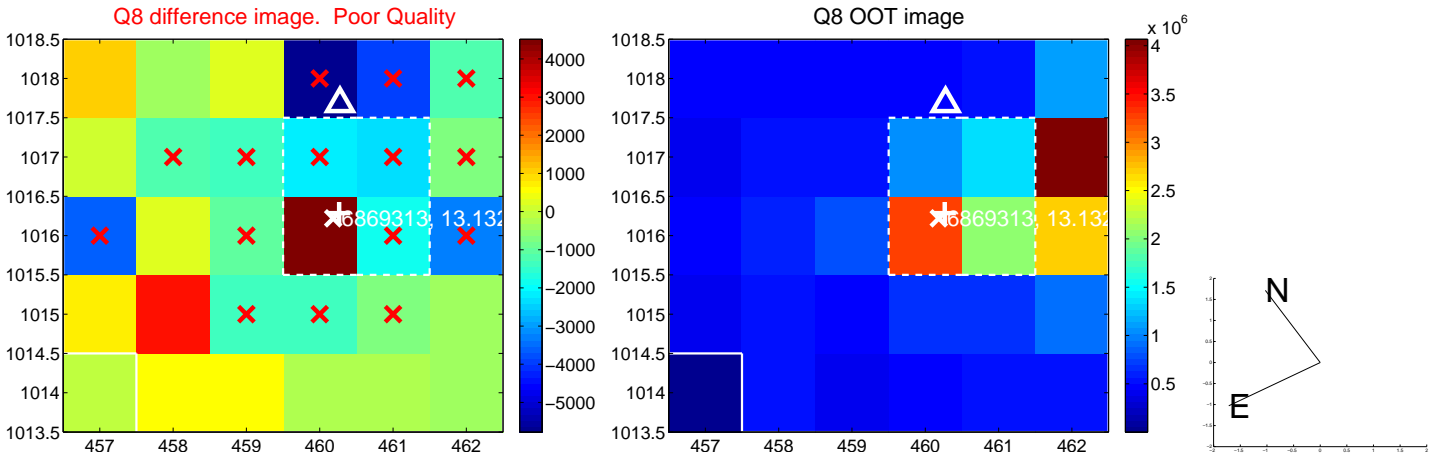
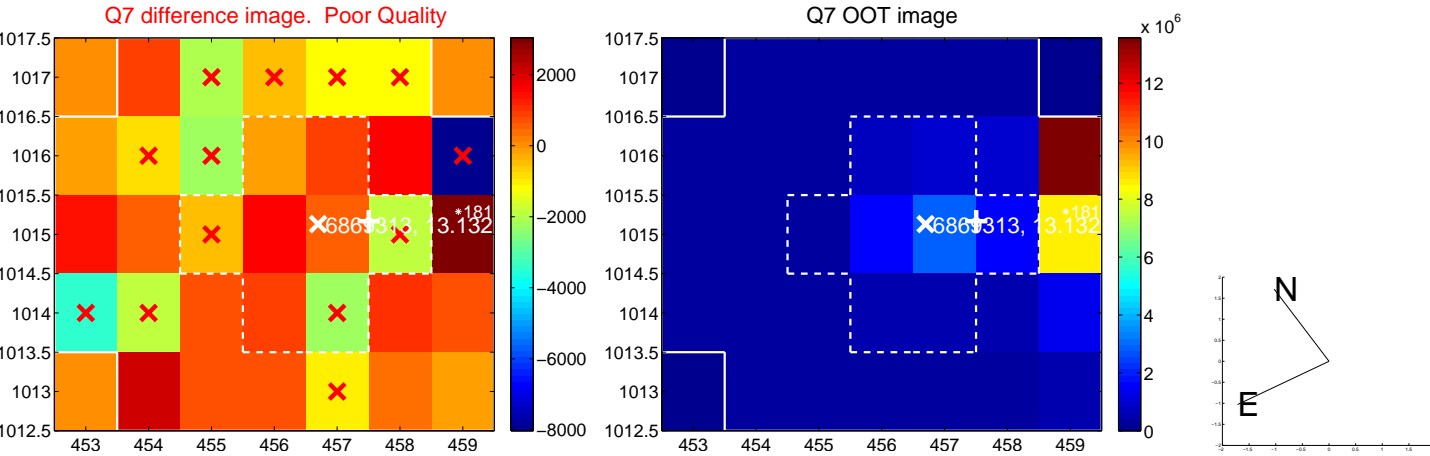
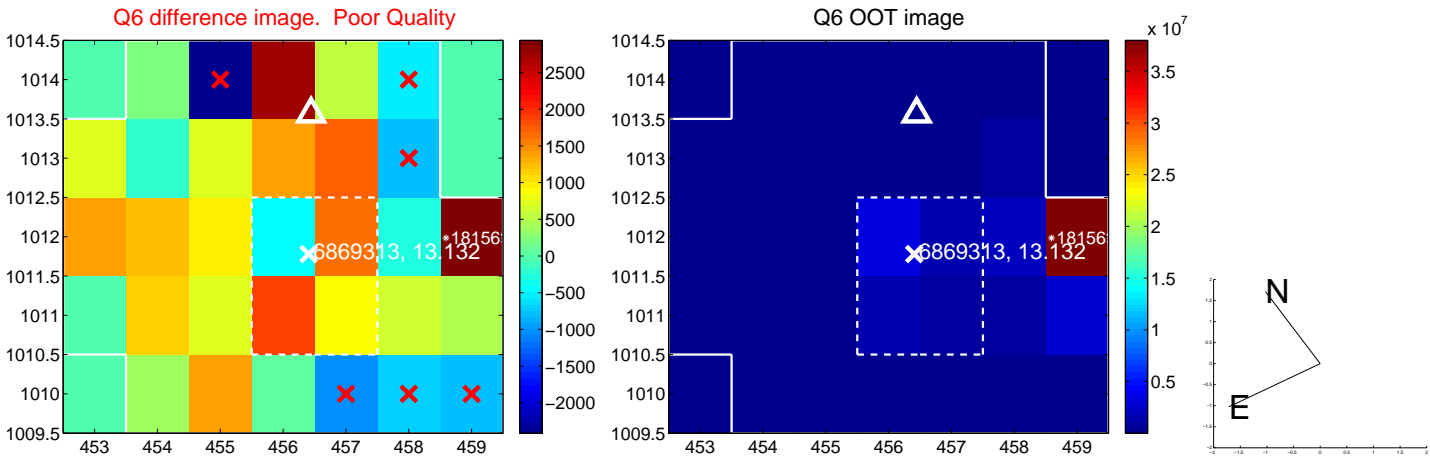
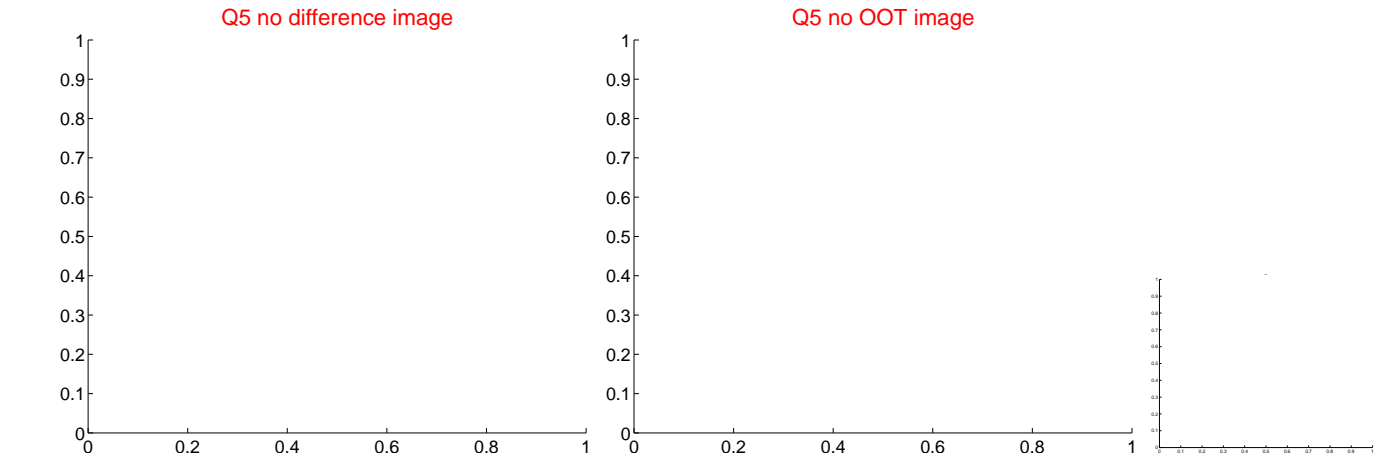


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

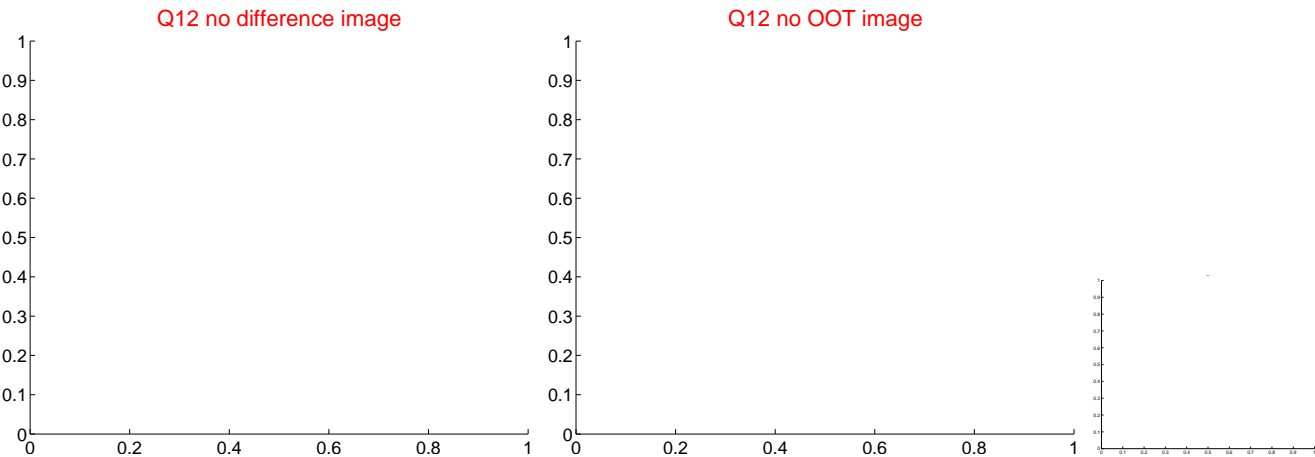
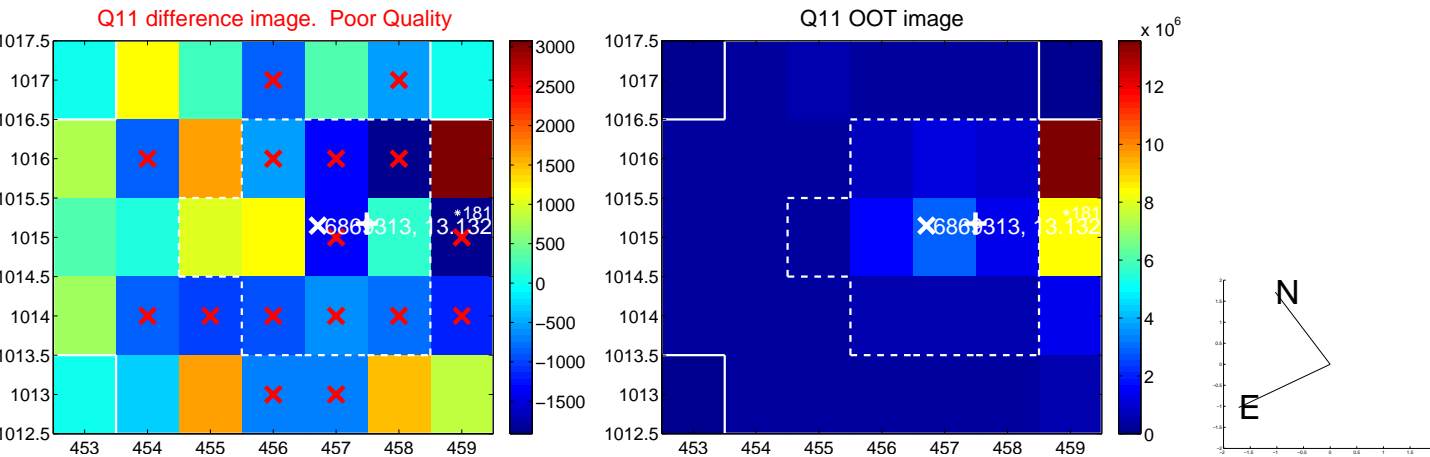
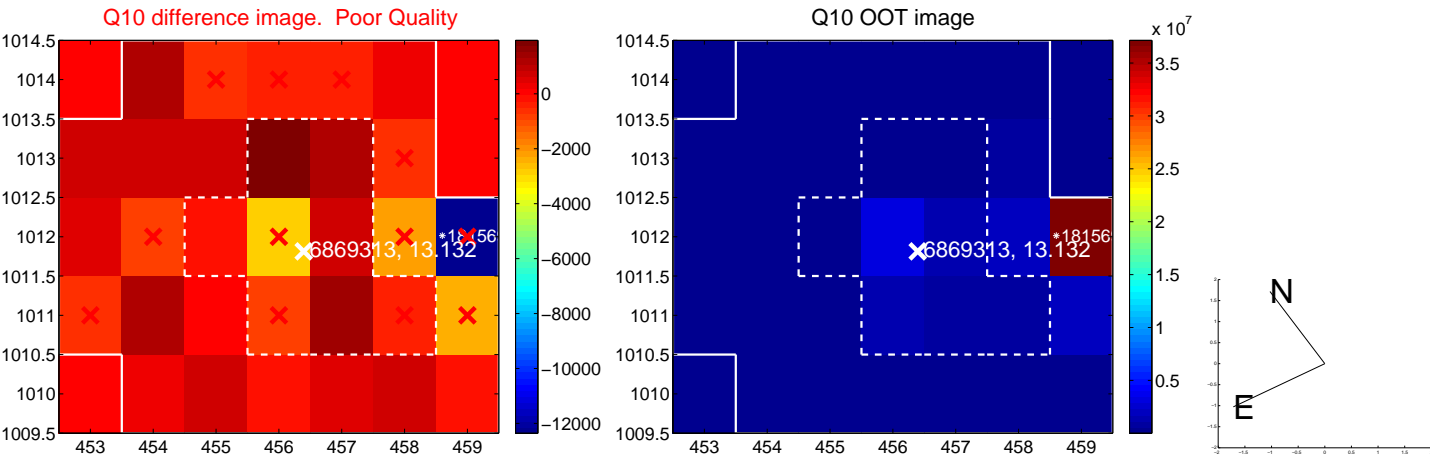
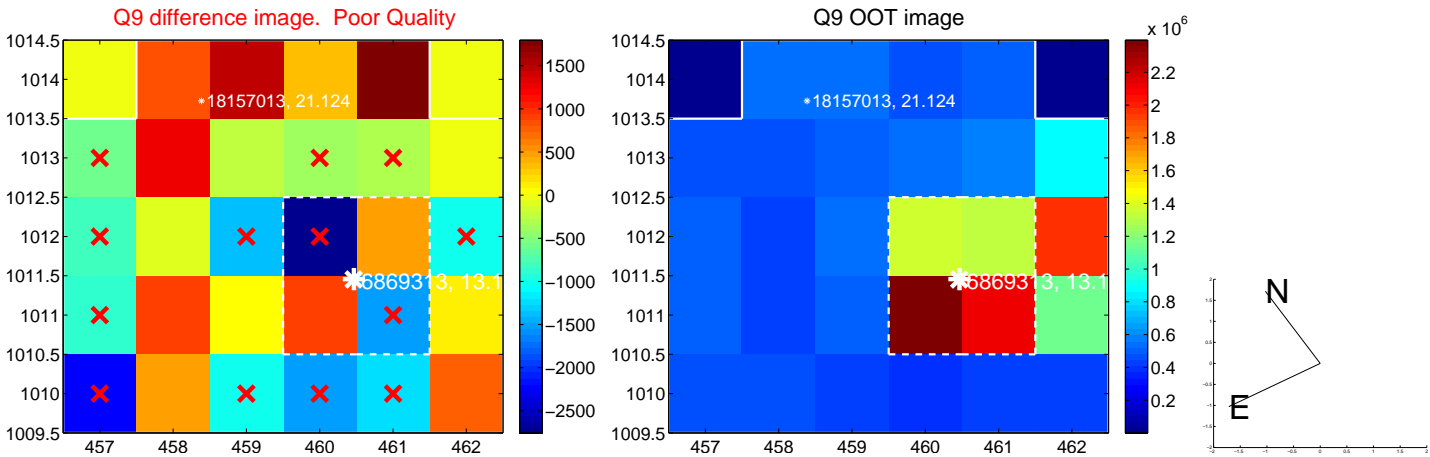
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



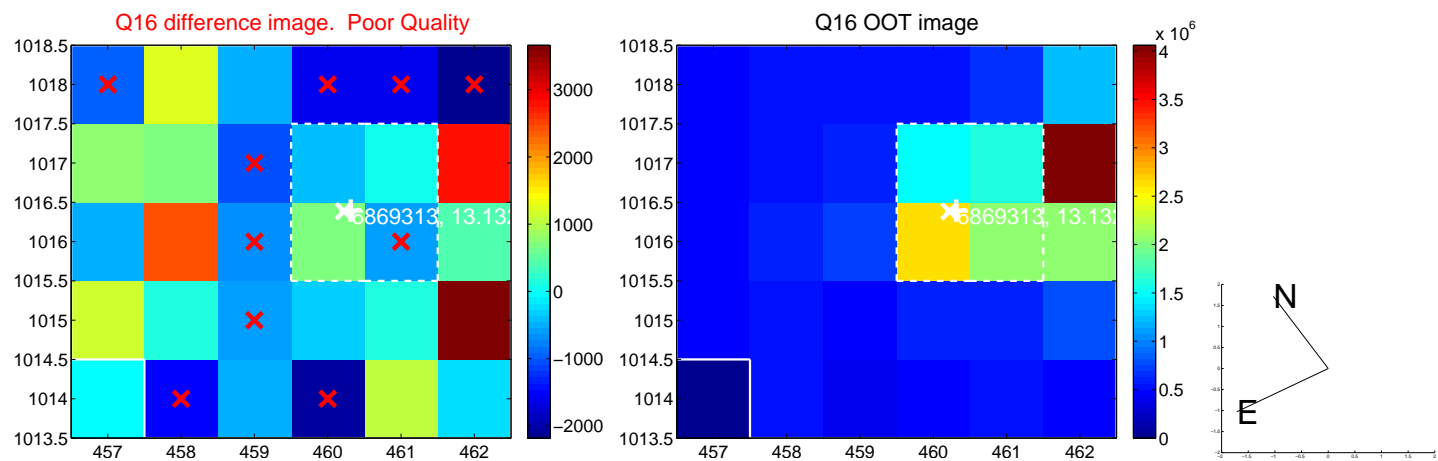
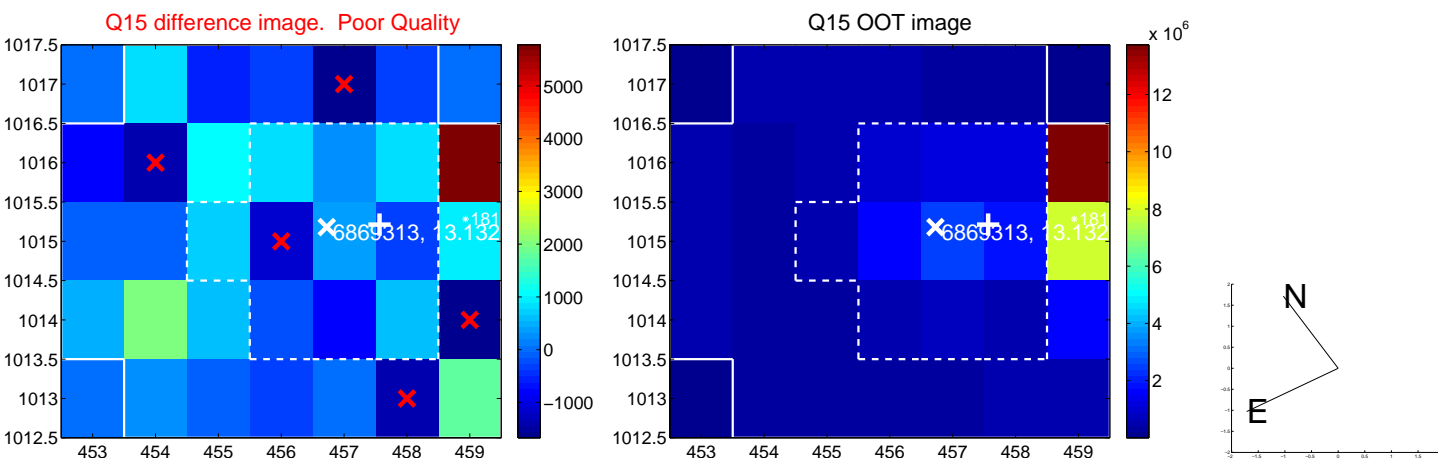
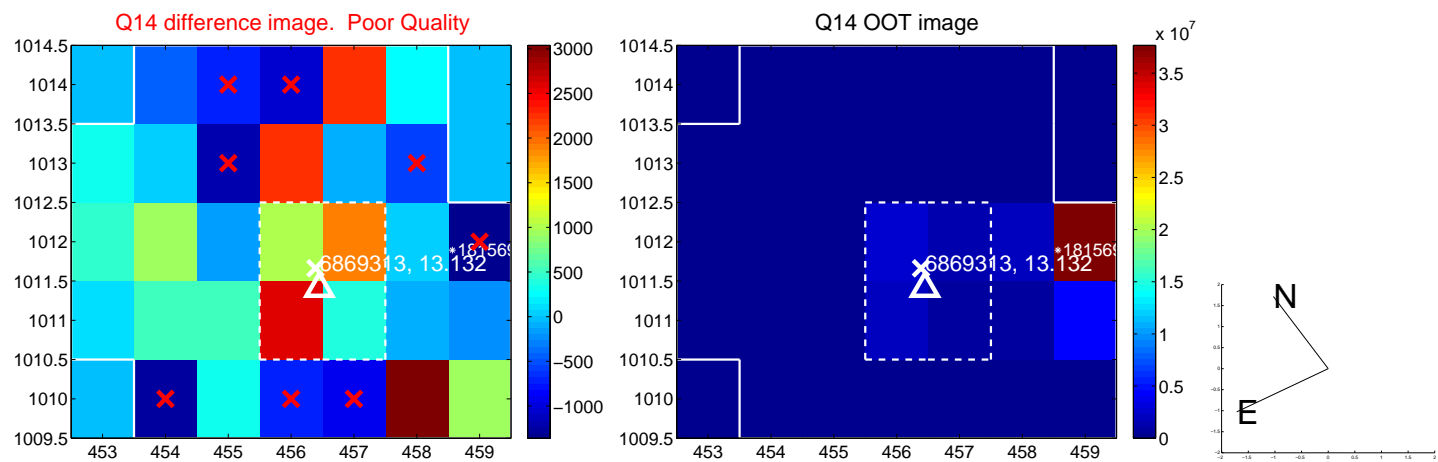
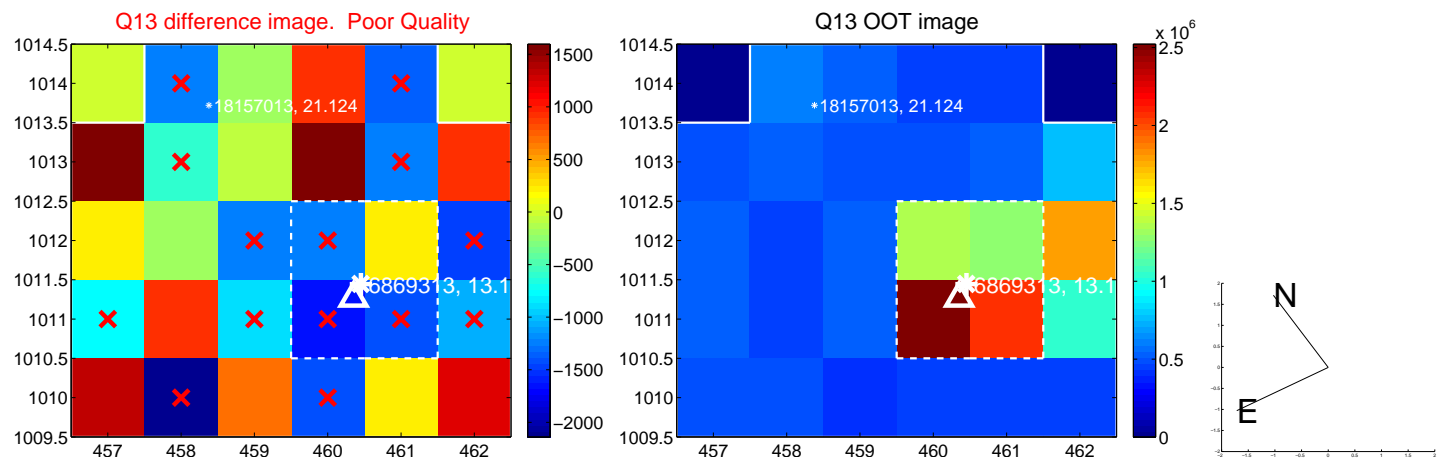
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



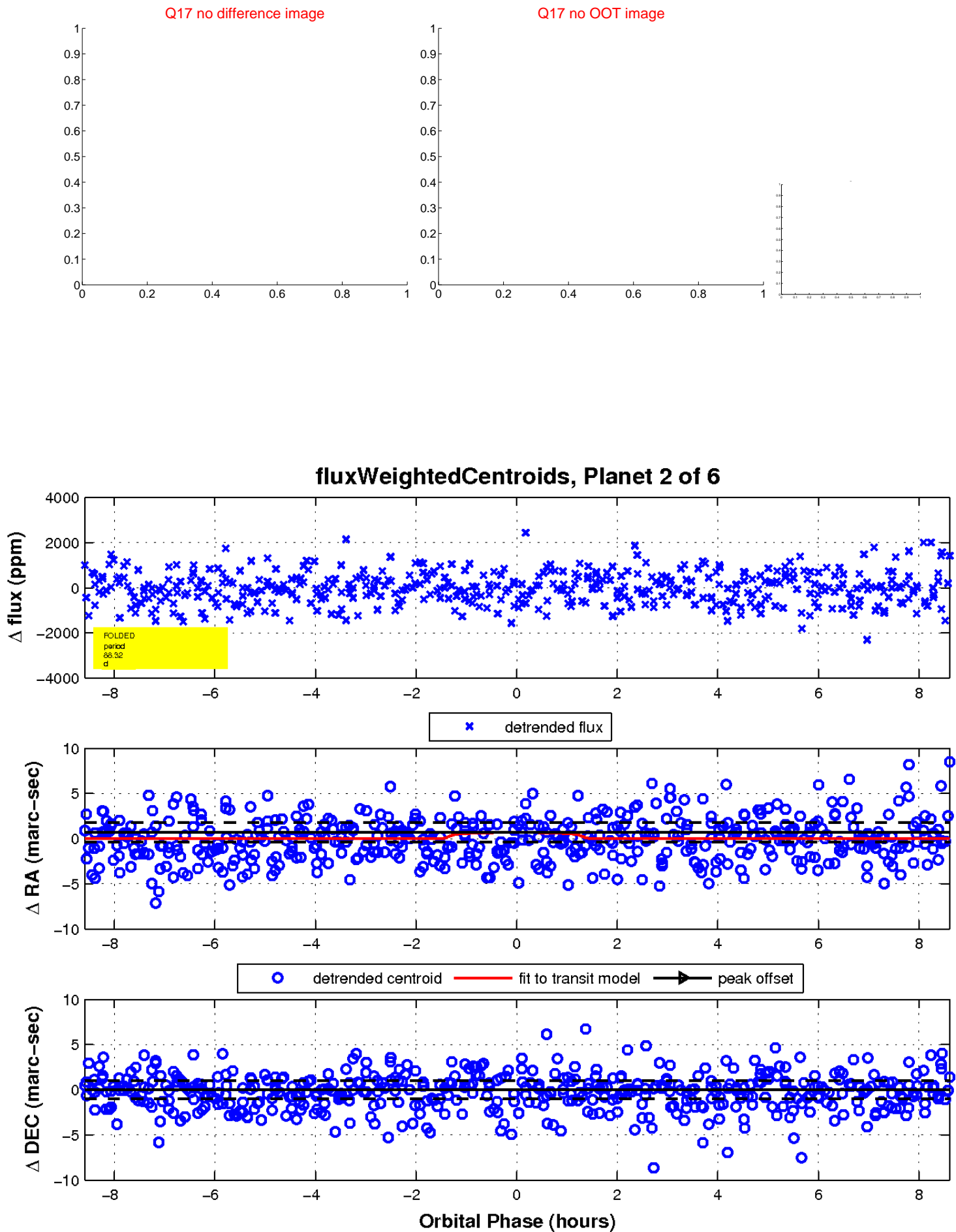
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

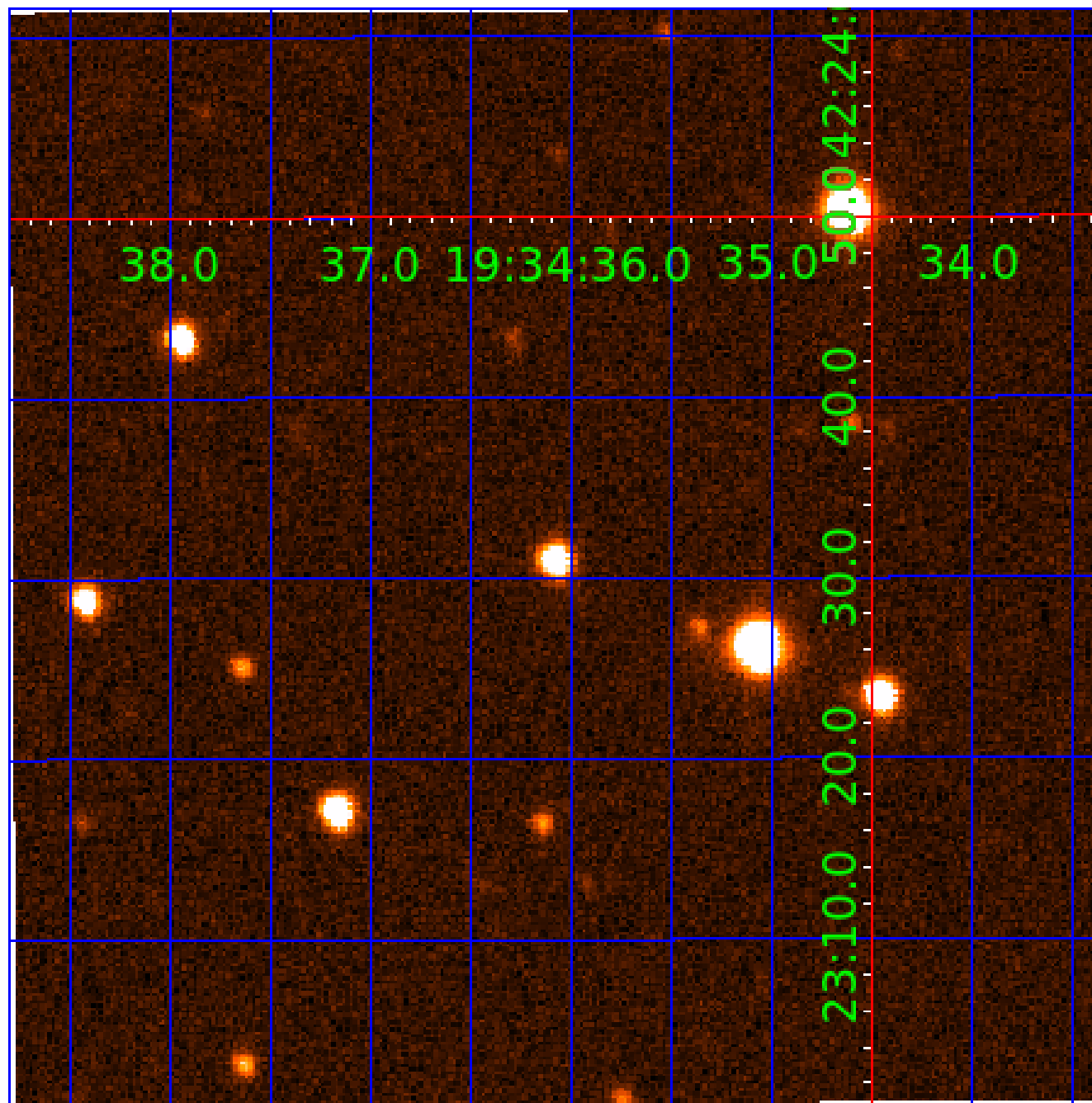


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006869313

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})
006869313-01	OBS	No	2.818444	133.794584	101.6	17.976	11.8	12.6	0.80	5325	0.79	366.83
006869313-02	OBS	No	88.317530	210.438634	902.3	2.871	9.0	6.9	0.80	5325	2.63	3.71
006869313-03	OBS	No	76.606449	136.715273	1014.4	3.081	7.8	9.0	0.80	5325	2.73	4.49
006869313-04	OBS	No	68.752966	144.455714	1038.4	2.808	7.6	7.7	0.80	5325	3.23	5.18
006869313-05	OBS	No	25.026820	153.515985	861.8	1.502	8.4	9.0	0.80	5325	2.59	19.95
006869313-06	OBS	No	44.805878	165.228744	752.3	3.694	8.1	7.9	0.80	5325	2.53	9.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006869313-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_CROWDED—HALO_GHOST
006869313-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
006869313-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

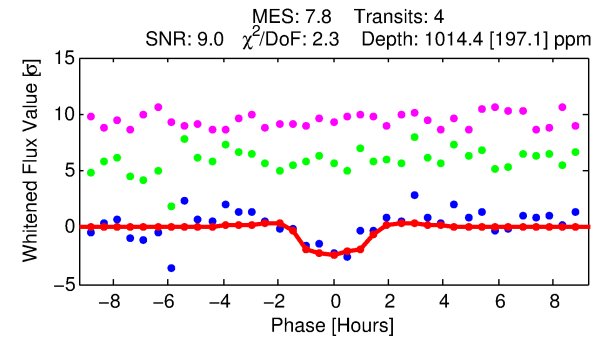
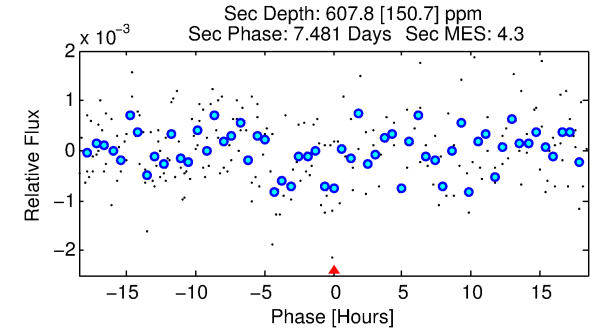
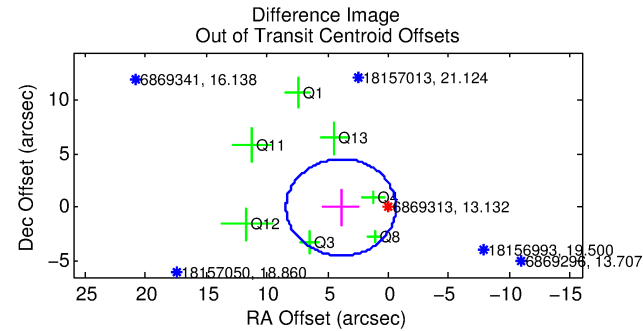
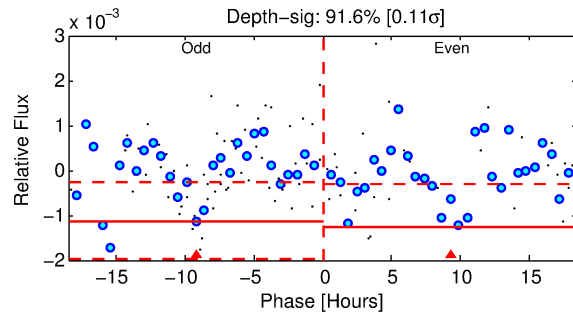
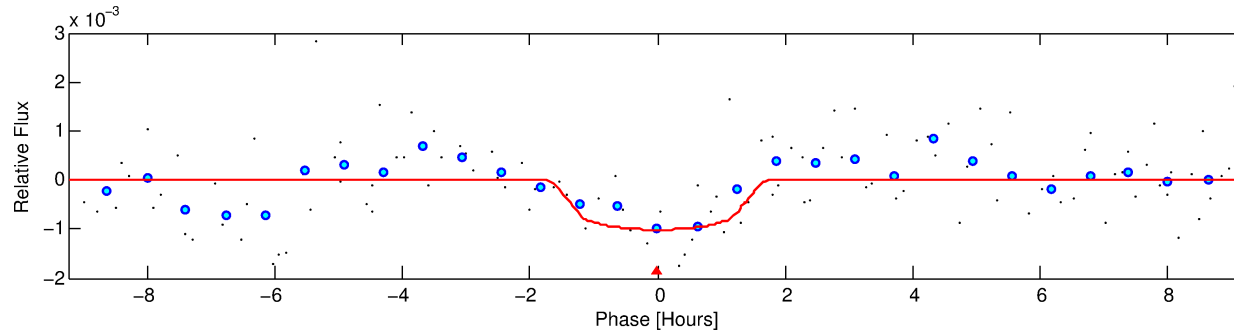
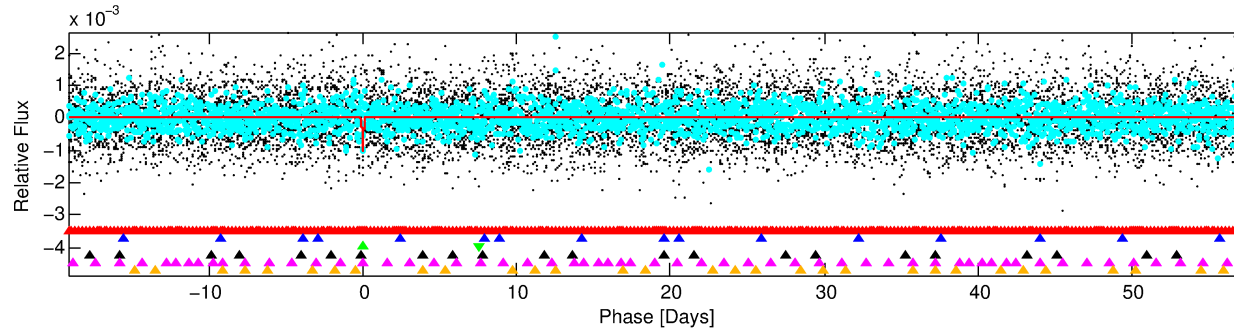
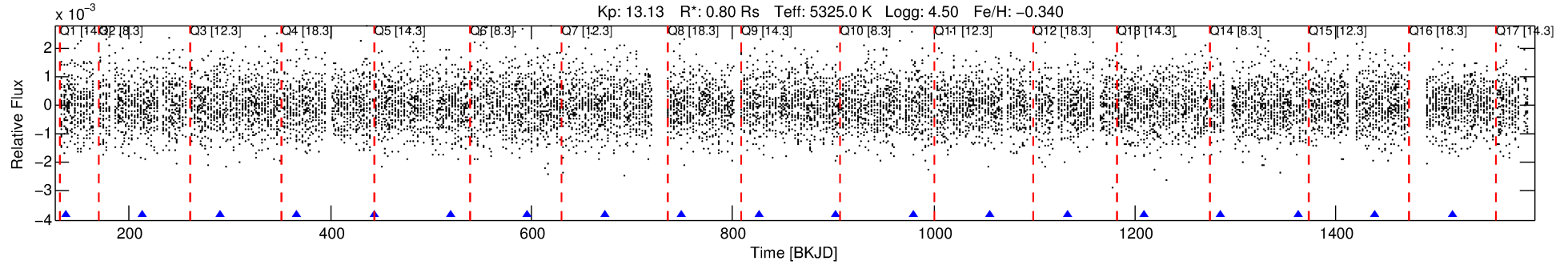
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006869313-03

No Significant Match Found

DV One-Page Summary

KIC: 6869313 Candidate: 3 of 6 Period: 76.606 d



DV Fit Results:

Period = 76.60645 [0.00166] d
Epoch = 136.7153 [0.0156] BKJD
Rp/R* = 0.0314 [0.1116]
a/R* = 140.42 [1990.47]
b = 0.72 [9.71]
Seff = 4.49 [1.08]
Teq = 371 [22] K
Rp = 2.73 [9.72] Re
a = 0.3193 [0.0408] AU
Ag = 4577.78 [32601.79] [0.14 σ]
Teffp = 4720 [8403] K [0.52 σ]

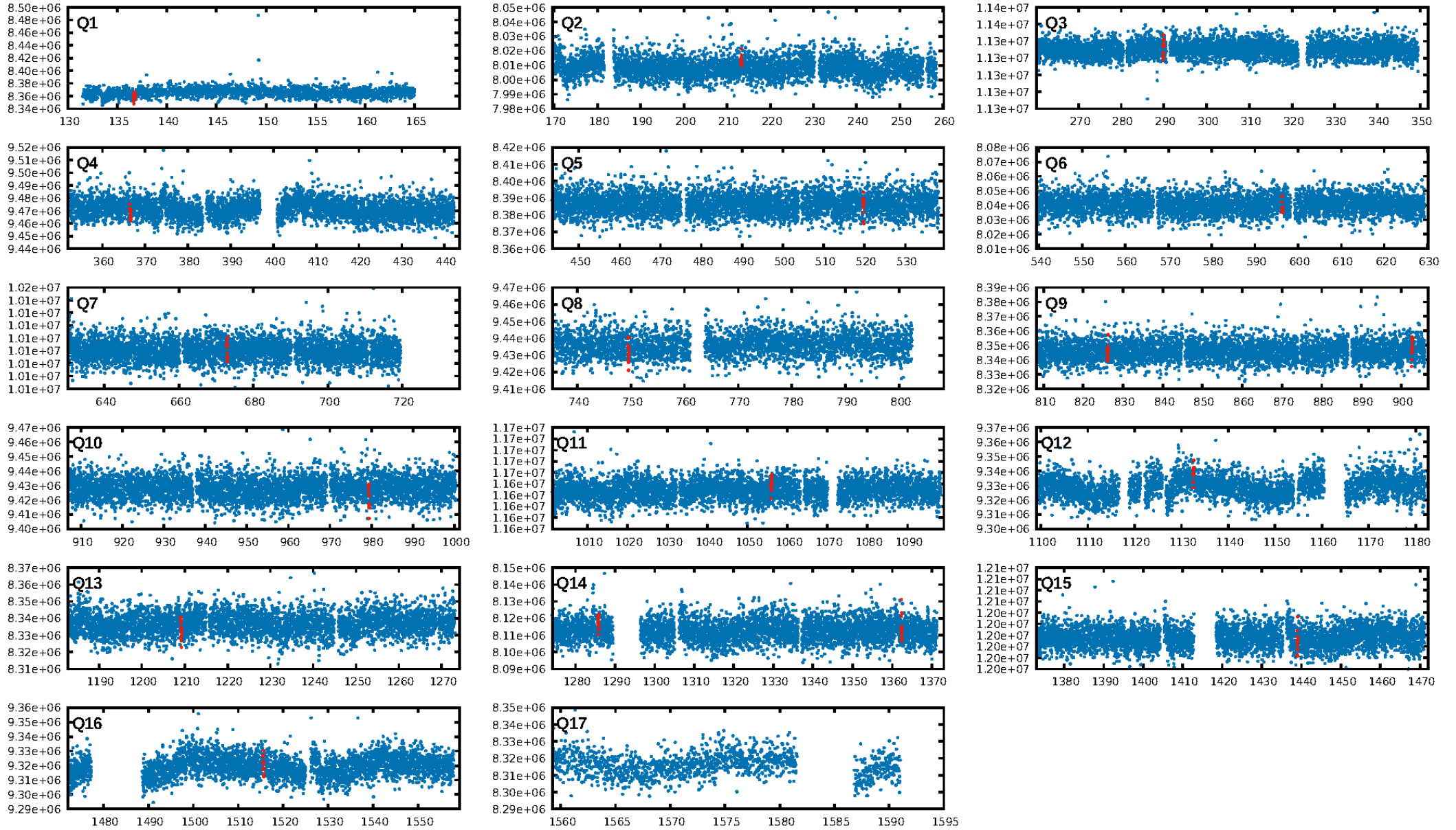
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [45.22 σ]
LongPeriod-sig: 100.0% [66.75 σ]
ModelChiSquare2-sig: 67.0%
ModelChiSquareGof-sig: 91.9%
Bootstrap-pfa: 5.89e-08
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.57
Centroid-sig: 51.6%
Centroid-so: 2.391 arcsec [3.12 σ]
OotOffset-rm: 3.898 arcsec [2.59 σ]
KicOffset-rm: 2.690 arcsec [2.52 σ]
OotOffset-st: 0/2/3/2 [7]
KicOffset-st: 3/2/3/2 [10]
DiffImageQuality-fgm: 0.10 [1/10]
DiffImageOverlap-fno: 0.56 [9/16]

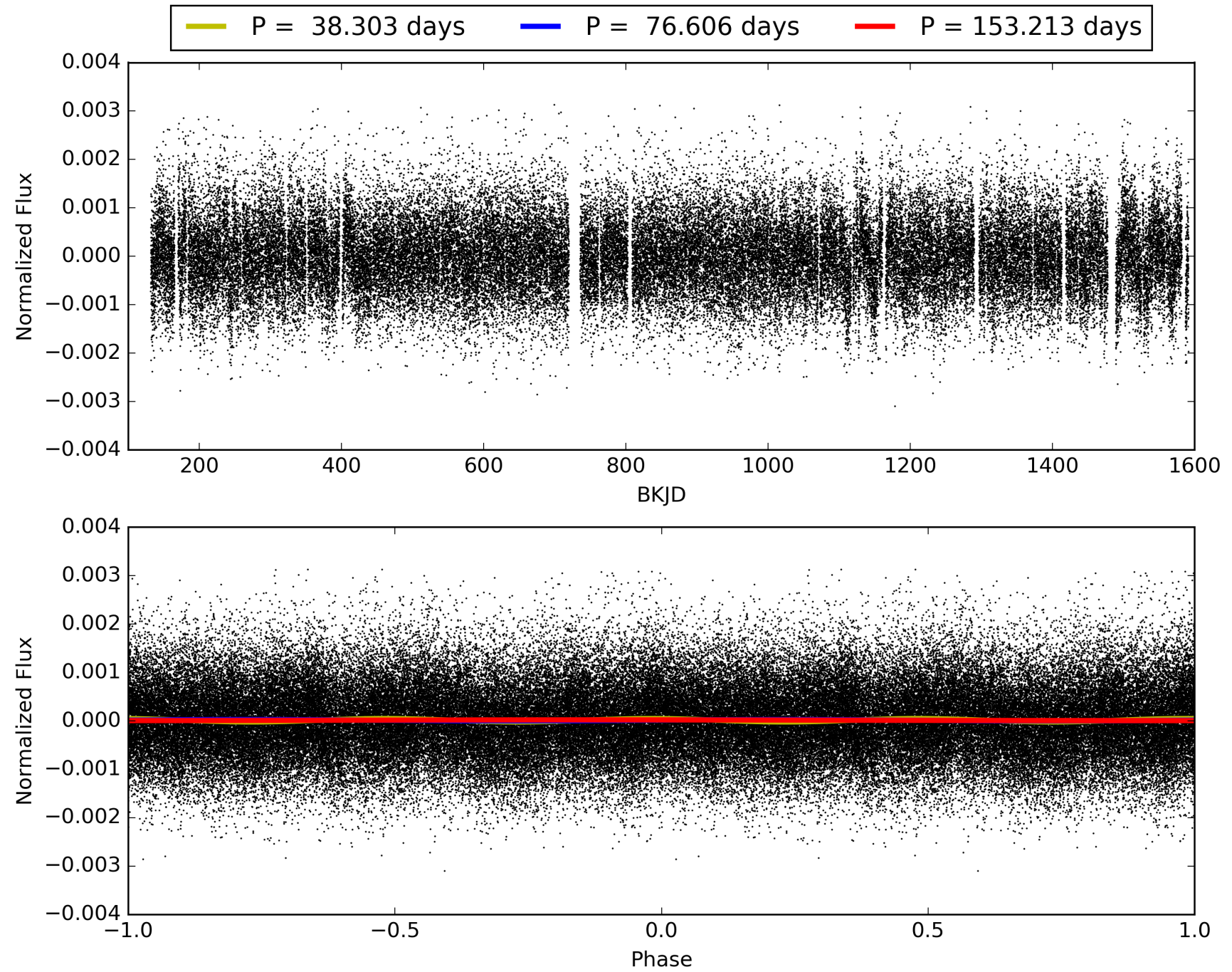
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:33:27 Z

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

TCE 006869313-03, PDC Light Curves

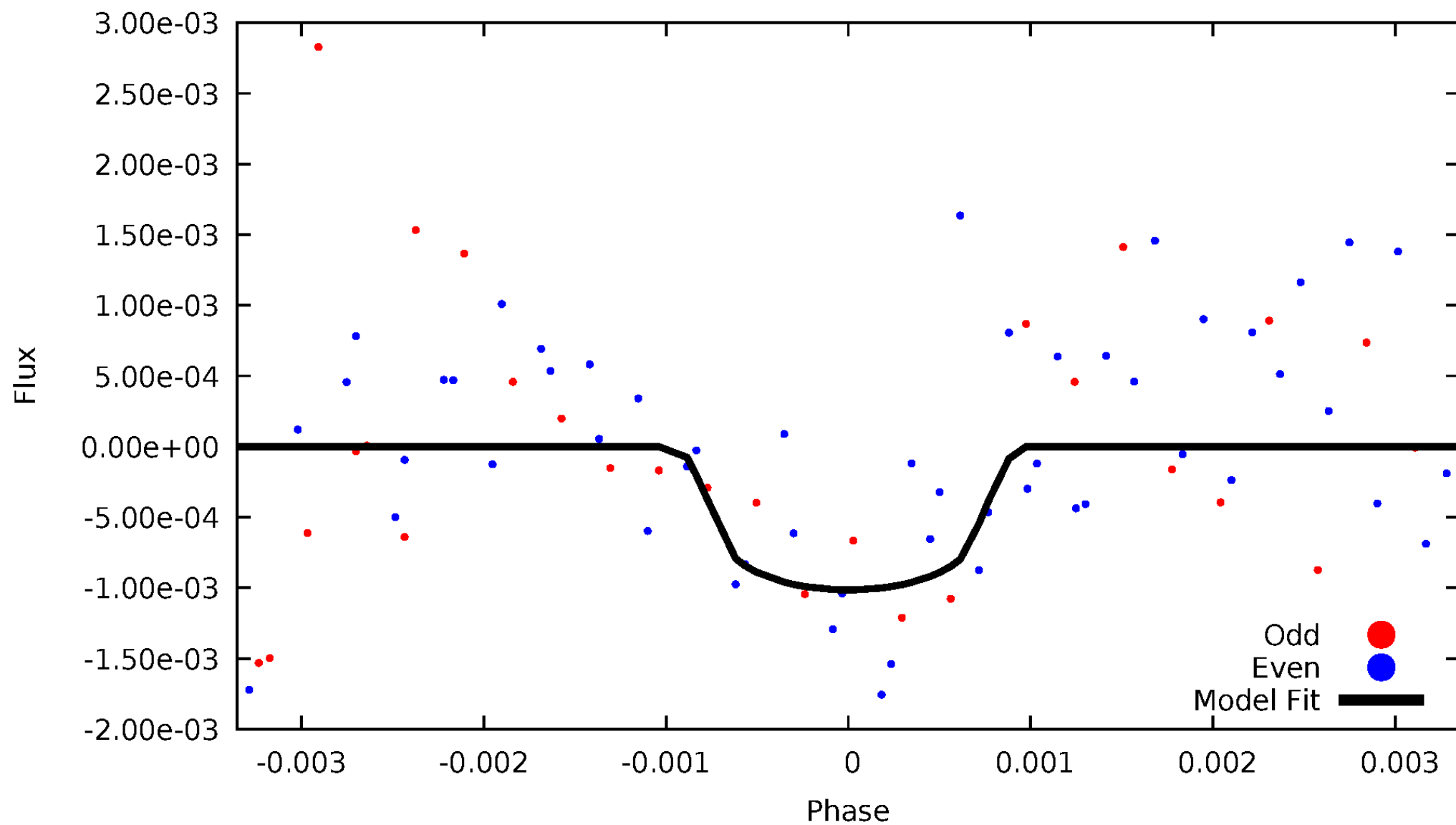


TCE 006869313-03



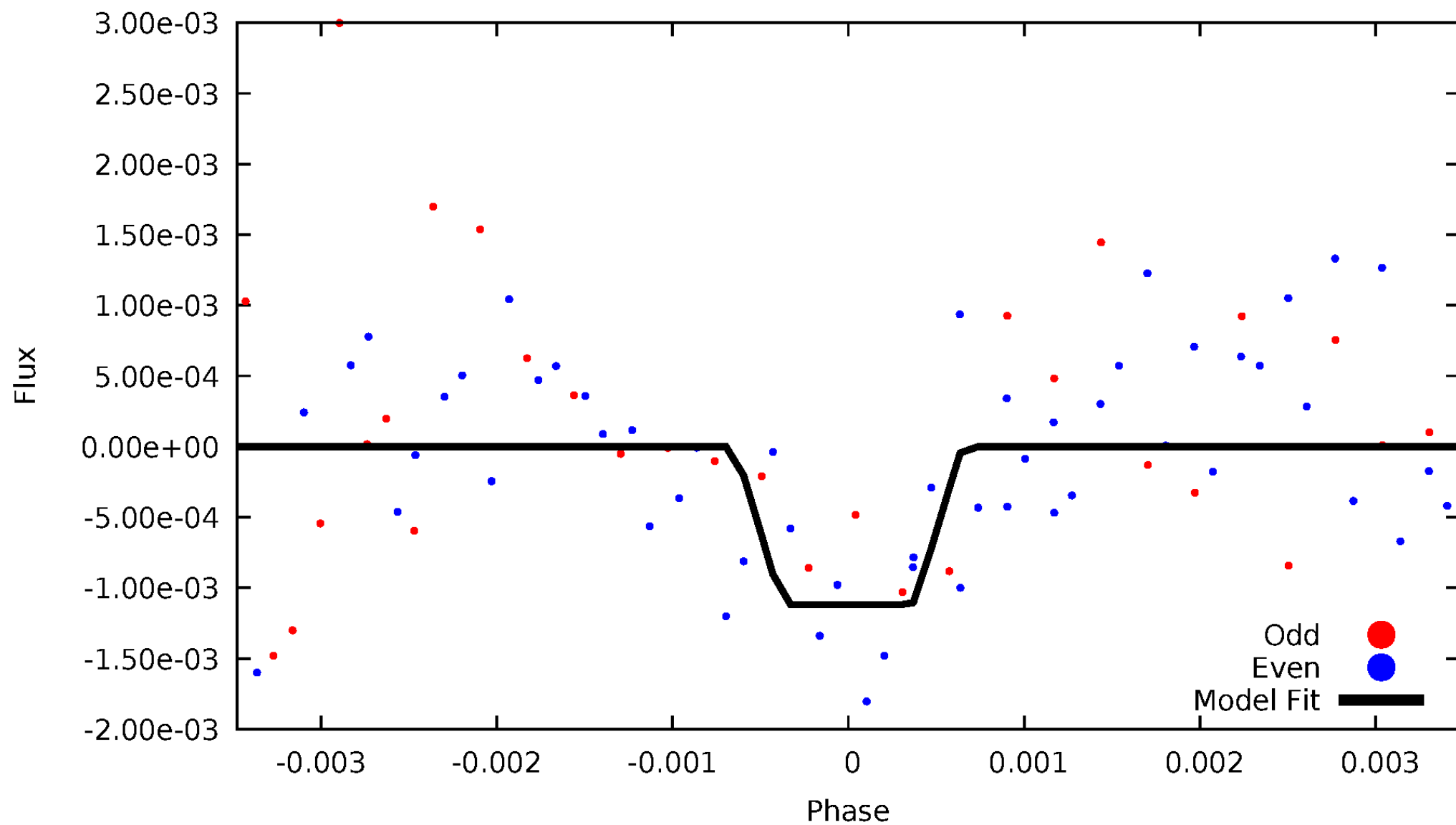
DV Odd/Even

TCE 006869313-03



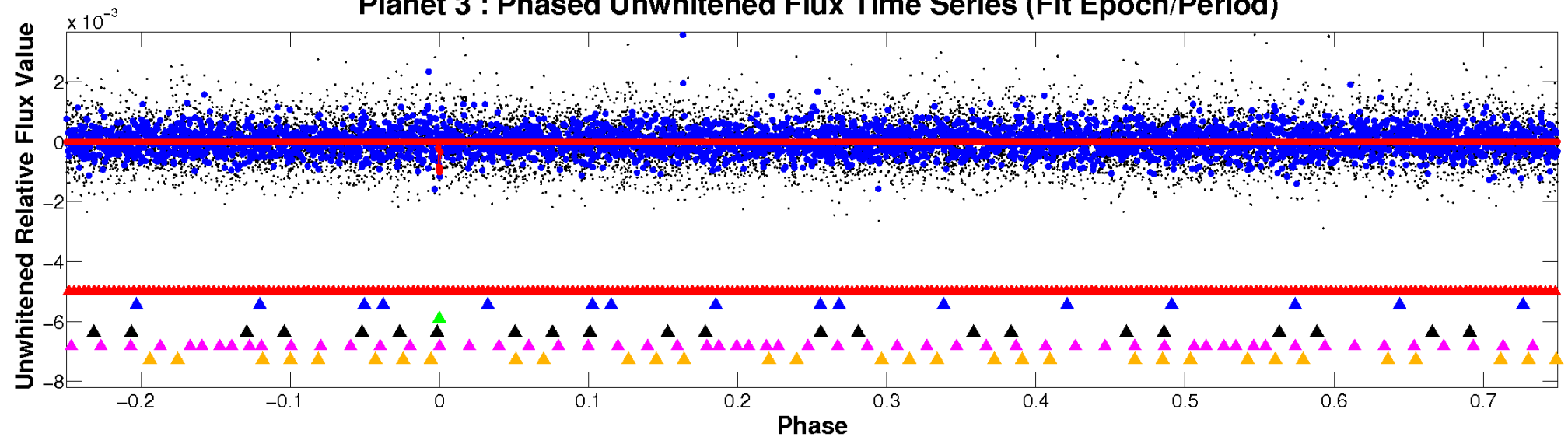
ALT Odd/Even

TCE 006869313-03

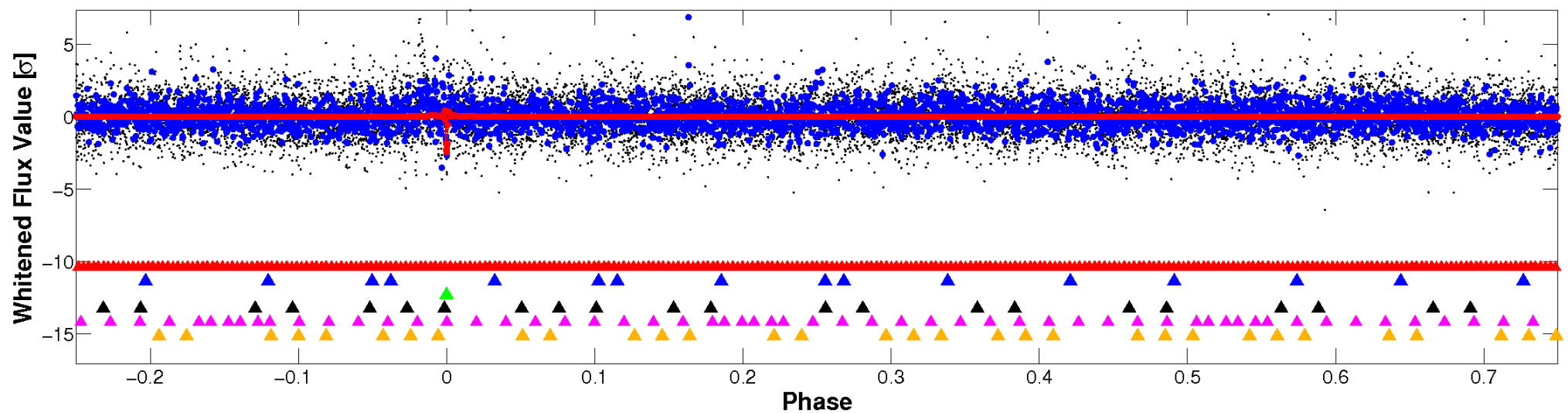


Non-Whitened Vs. Whitened Light Curve

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

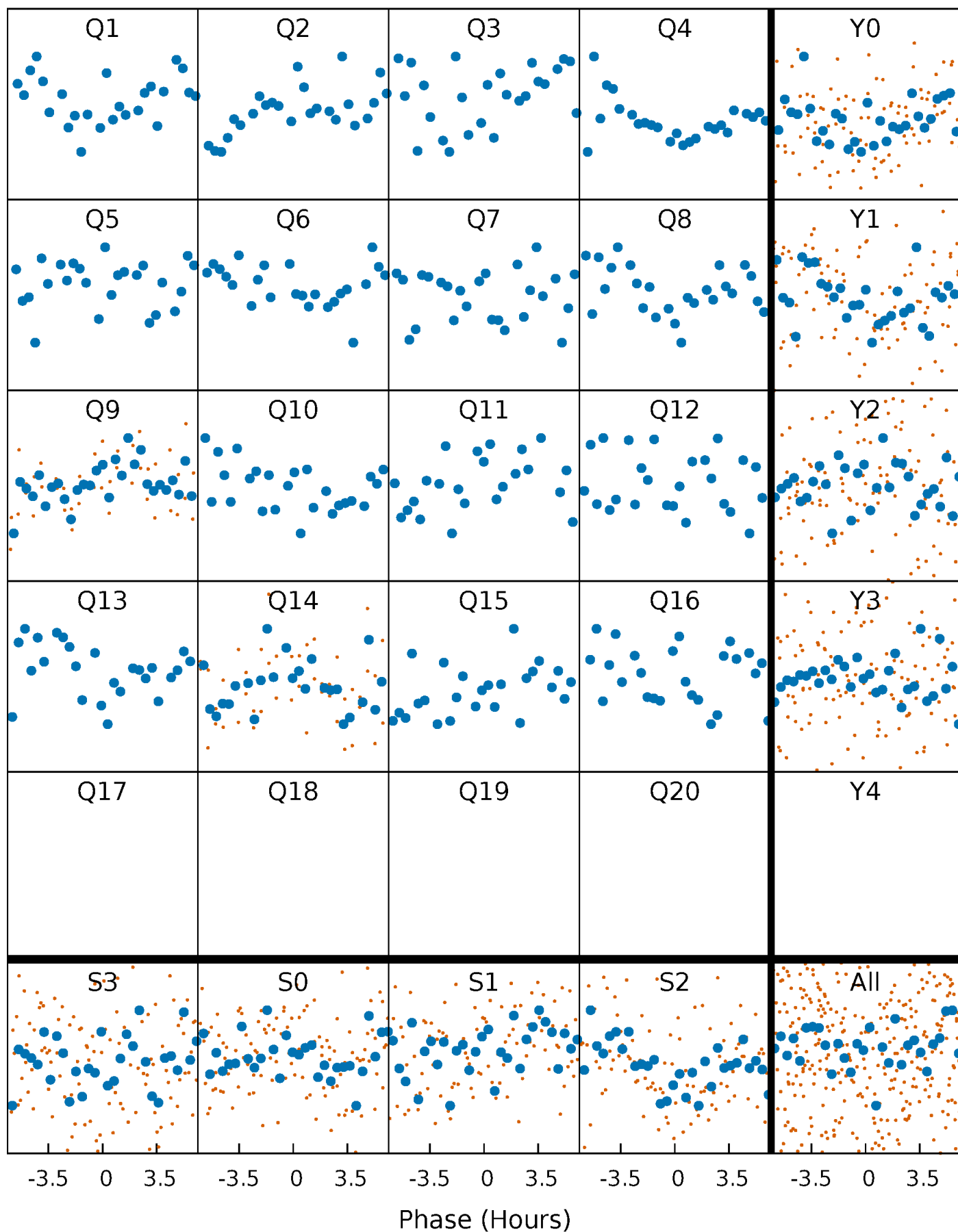


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



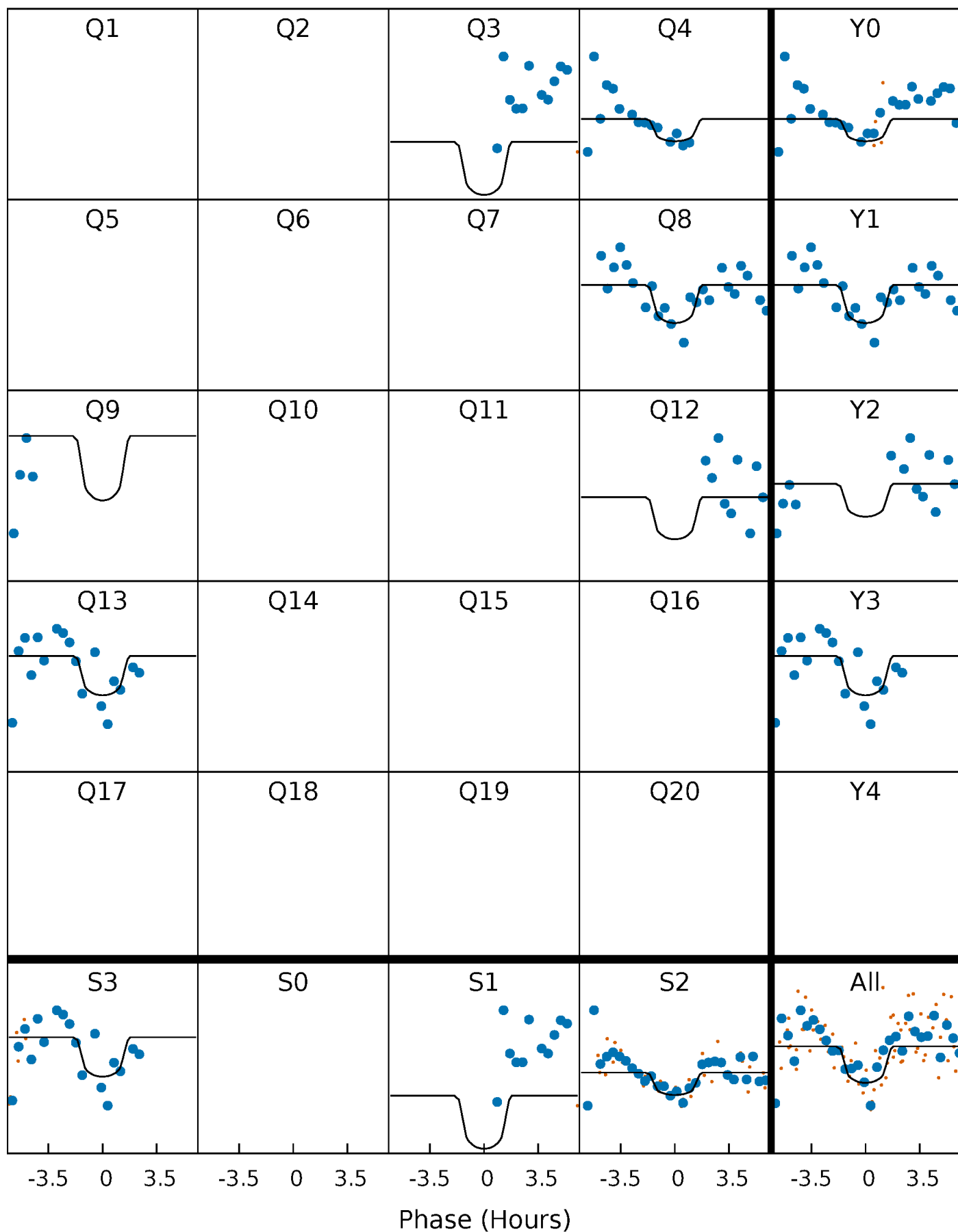
PDC Quarter-Phased Transit Curves

TCE 006869313-03 P= 76.606449 Days $T_0=136.715273$ (BKJD)



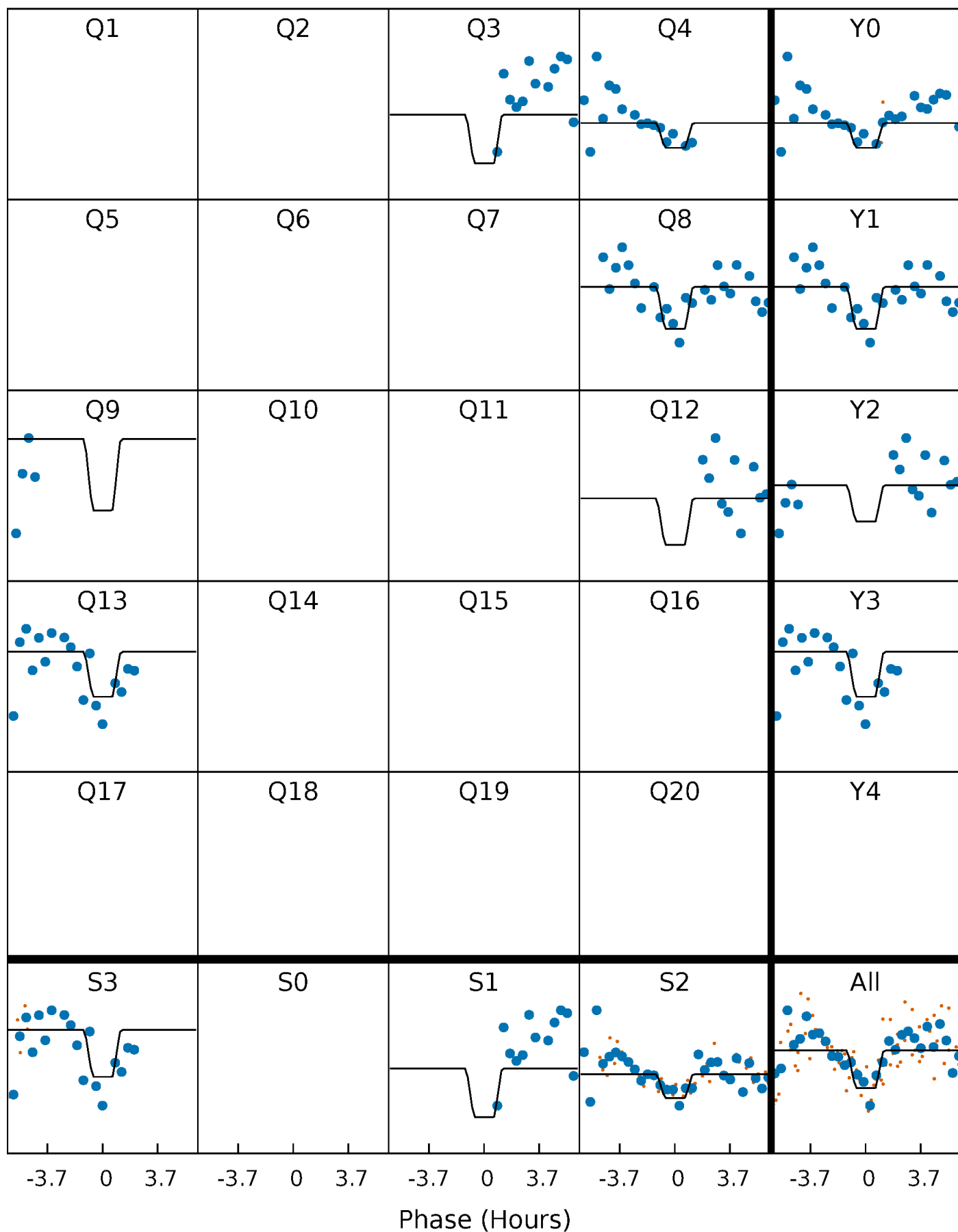
DV Quarter-Phased Transit Curves

TCE 006869313-03 $P = 76.606449$ Days $T_0 = 136.715273$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

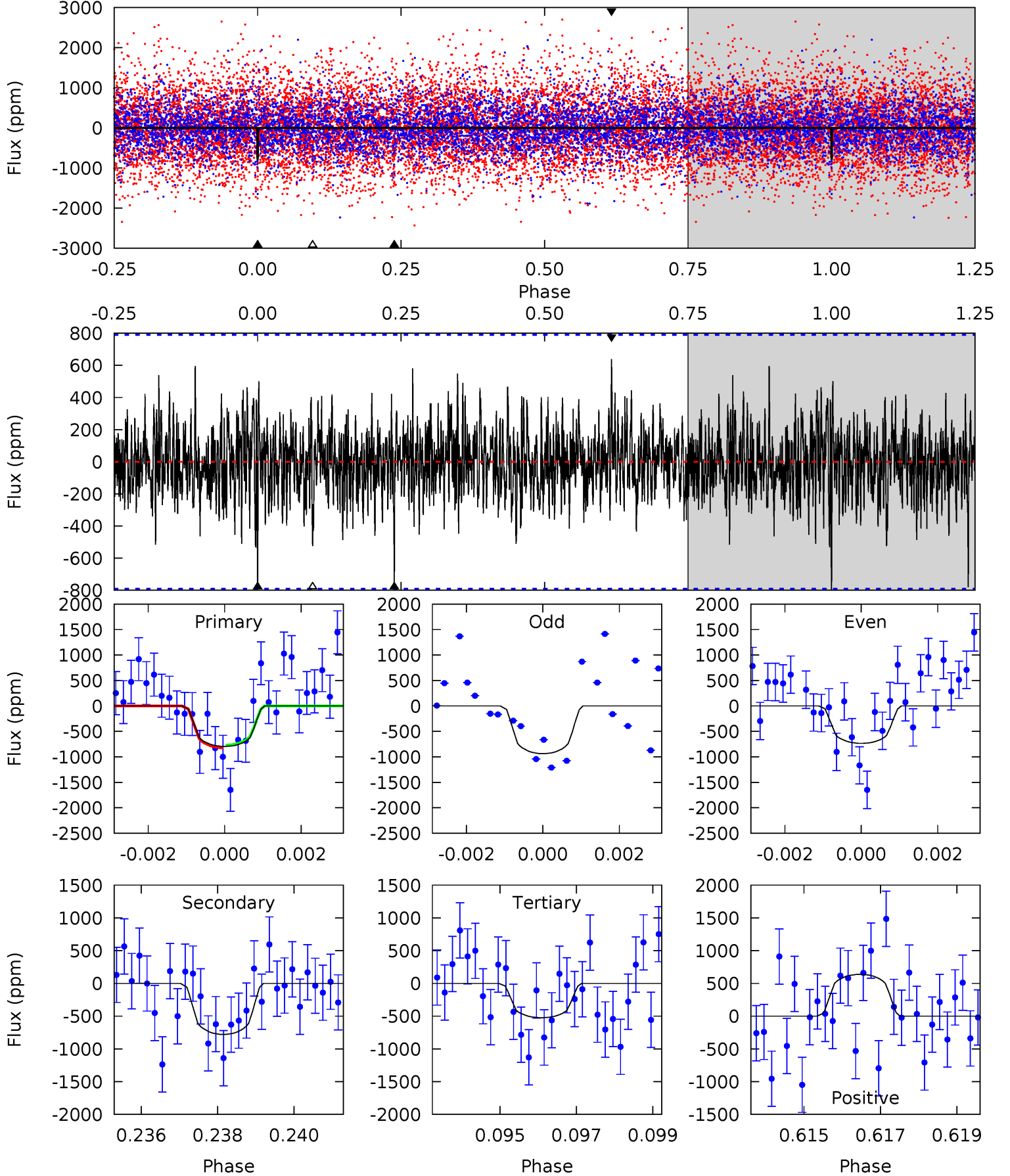
TCE 006869313-03 P= 76.607076 Days $T_0=136.712452$ (BKJD)



DV Model-Shift Uniqueness Test

006869313-03, P = 76.606449 Days, E = 60.108824 Days

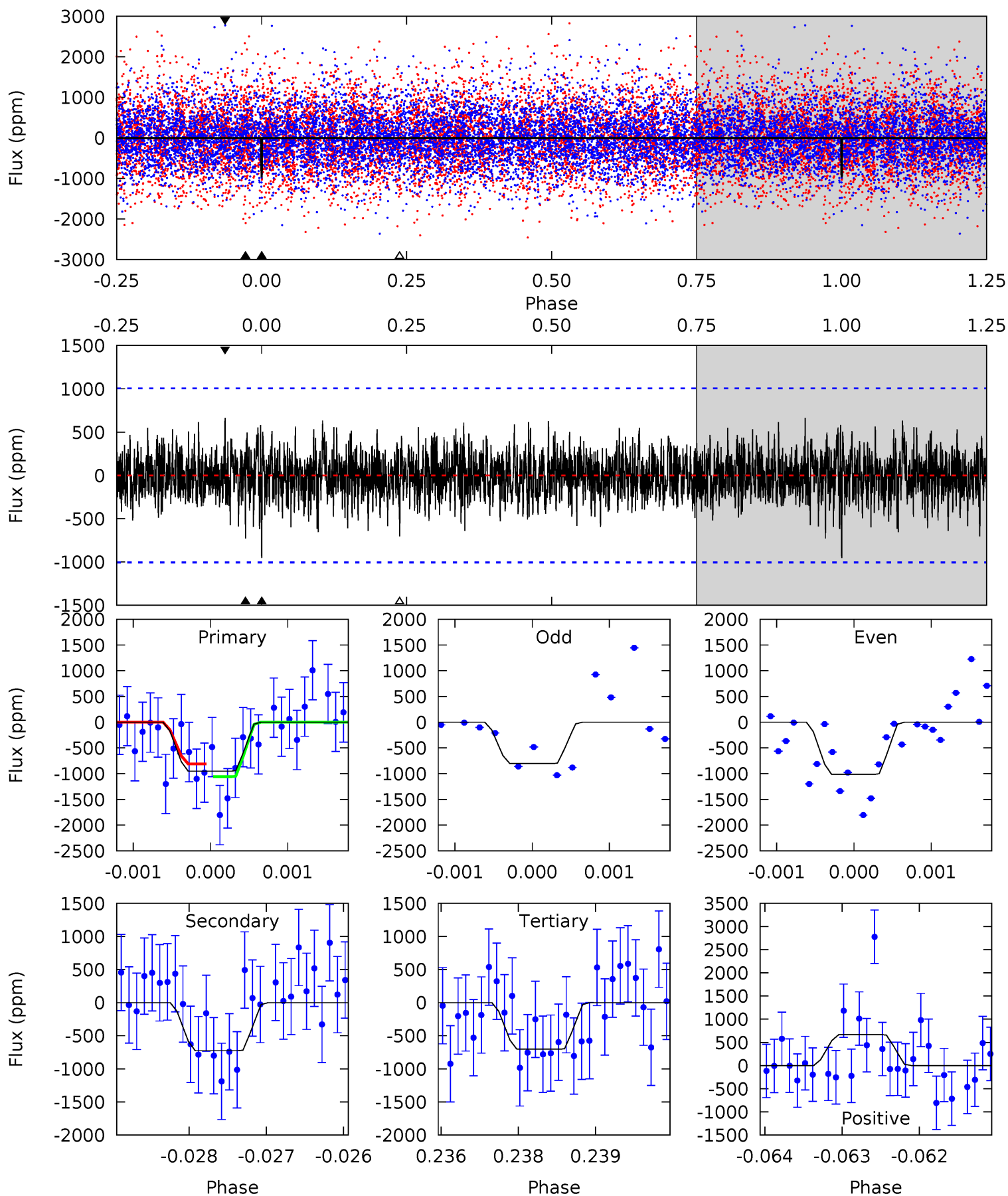
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.37	5.27	3.54	4.31	5.34	3.11	1.17	1.83	1.06	1.73	0.96	0.61	0.56	0.45	0.18



Alt Model-Shift Uniqueness Test

006869313-03, P = 76.607076 Days, E = 60.105376 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.13	3.92	3.80	3.59	5.43	3.26	1.11	1.34	1.54	0.12	0.33	0.51	1.03	0.41	0.65



Stellar Parameters For KIC 006869313

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5325^{+204}_{-185}	$4.504^{+0.100}_{-0.100}$	$-0.340^{+0.350}_{-0.300}$	$0.797^{+0.122}_{-0.102}$	$0.740^{+0.113}_{-0.052}$	$2.058^{+0.874}_{-0.612}$
	+4%/-3%	+2%/-2%	+103%/-88%	+15%/-13%	+15%/-7%	+42%/-30%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006869313-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-780 ± 148	$7.69^{+7.69}_{-5.19}$	521^{+26}_{-28}	3492^{+1730}_{-669}	767^{+5564}_{-584}
Alt.	-726 ± 185	$7.69^{+7.78}_{-5.48}$	521^{+27}_{-28}	3441^{+1924}_{-633}	696^{+7124}_{-527}

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 $A_{obs} \gg 1.0$

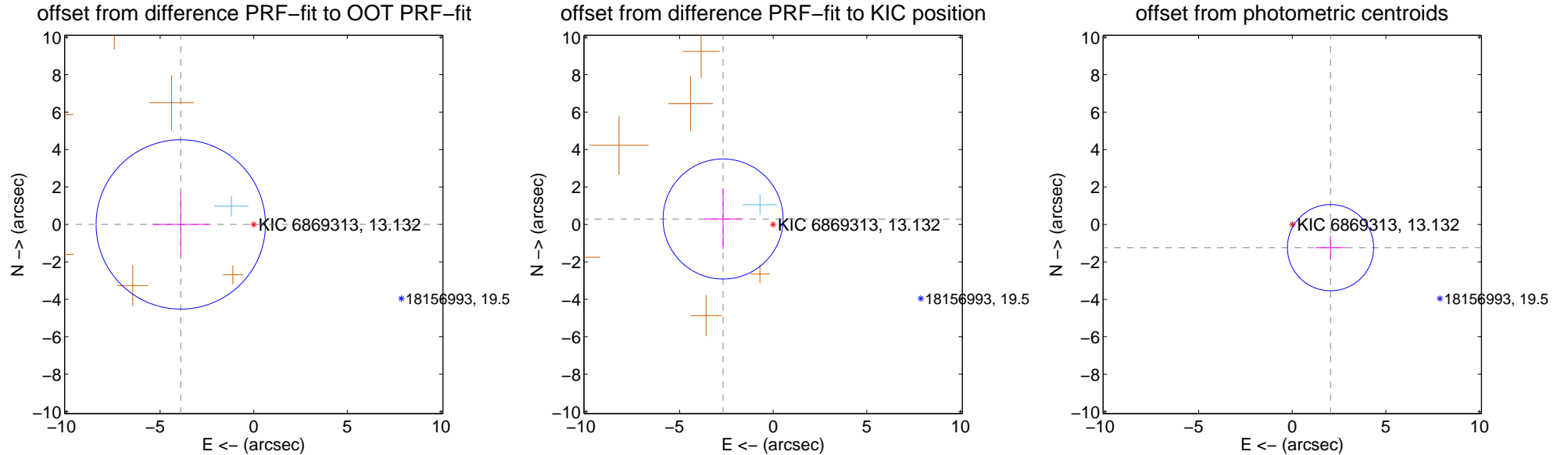
DV Centroid Data

Supplemental centroid analysis for 006869313-03. Kepler magnitude: 13.13. Transit SNR 8.97

There are 1 quarters with good PRF difference image offsets

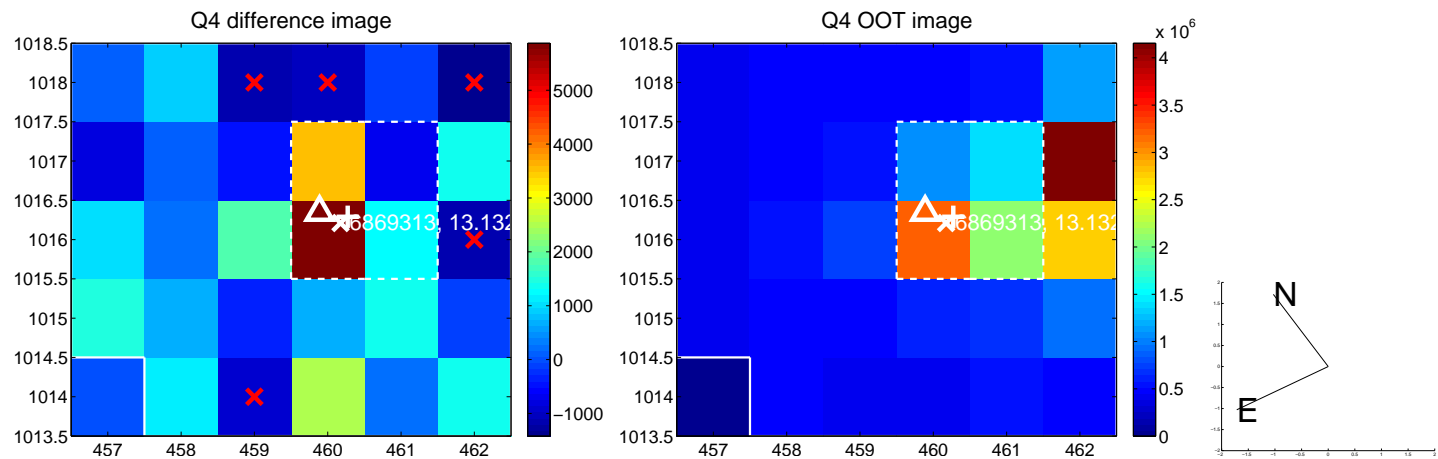
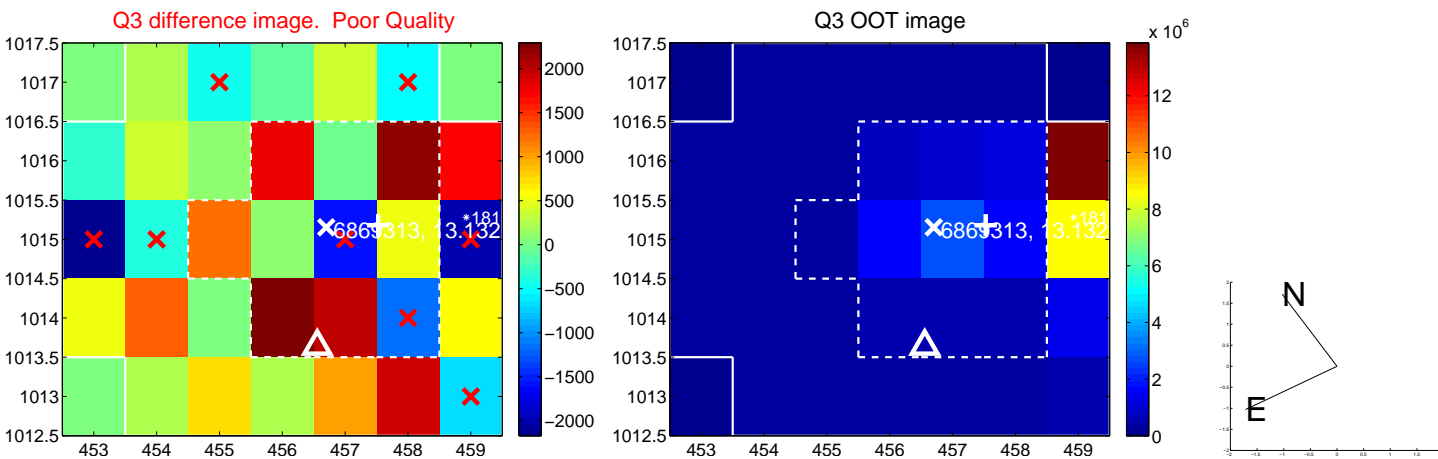
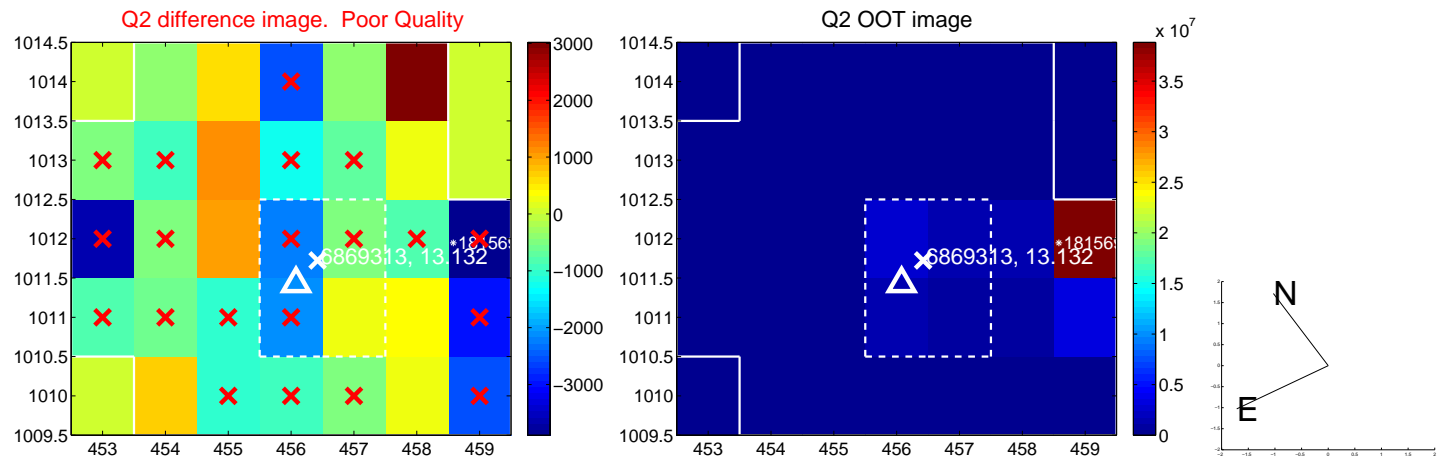
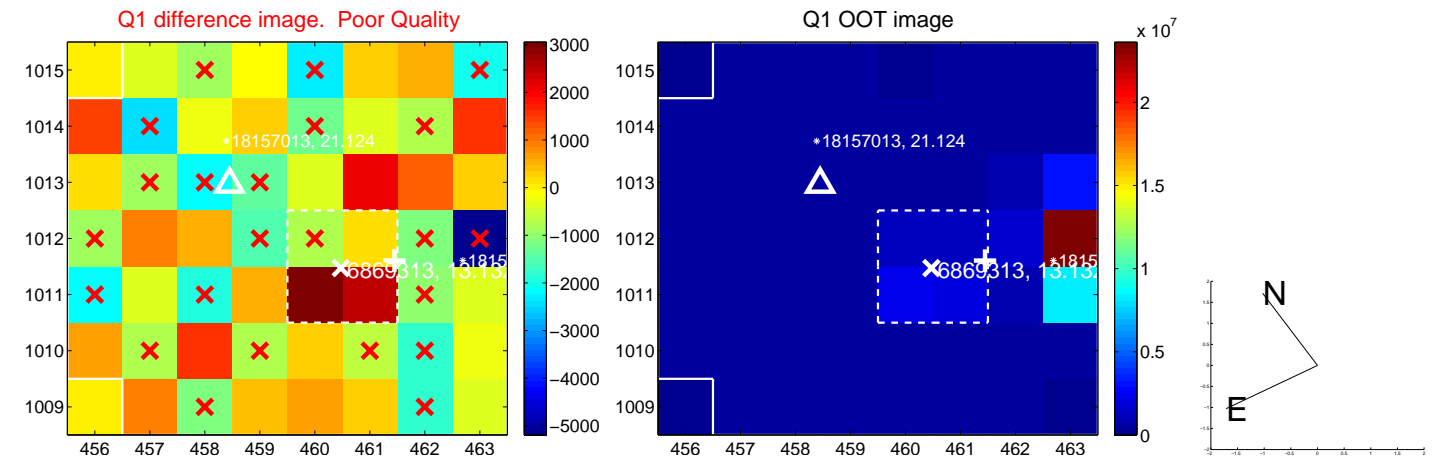
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.898 ± 1.508	2.59	3.898 ± 1.508	0.002 ± 1.680
PRF-fit source offset from KIC position	2.690 ± 1.069	2.52	2.675 ± 1.009	0.291 ± 1.606
photometric centroid source offset	2.39 ± 0.77	3.12	-2.04 ± 0.81	-1.24 ± 0.65

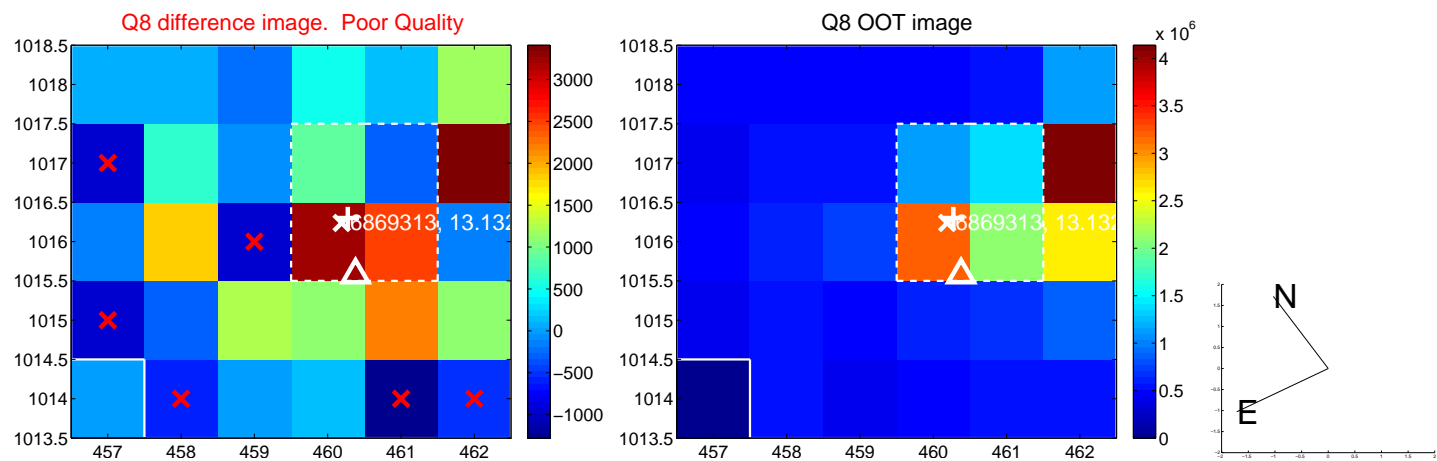
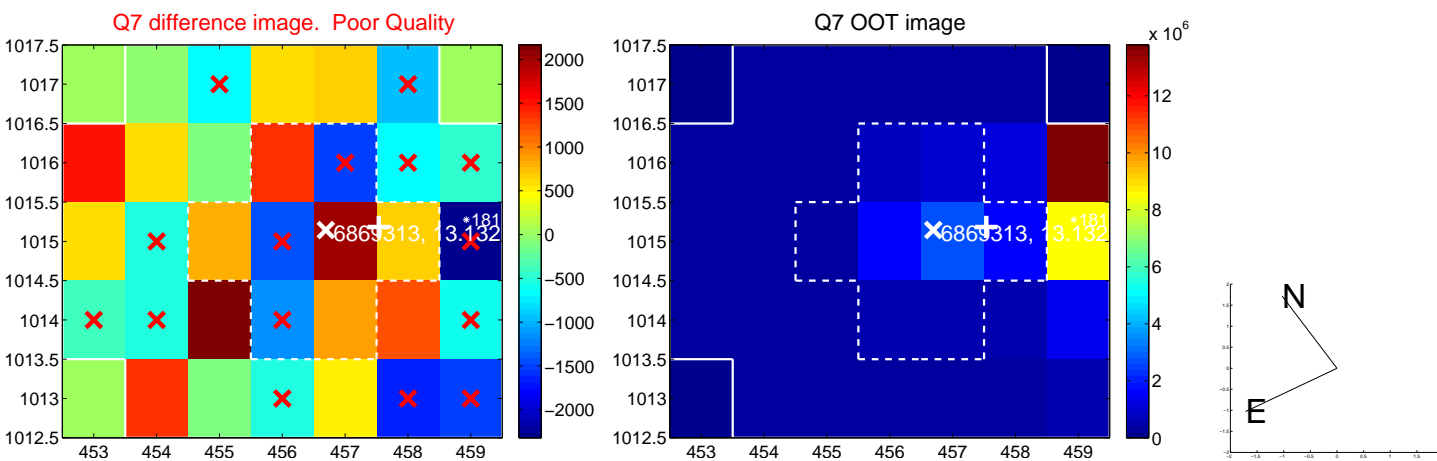
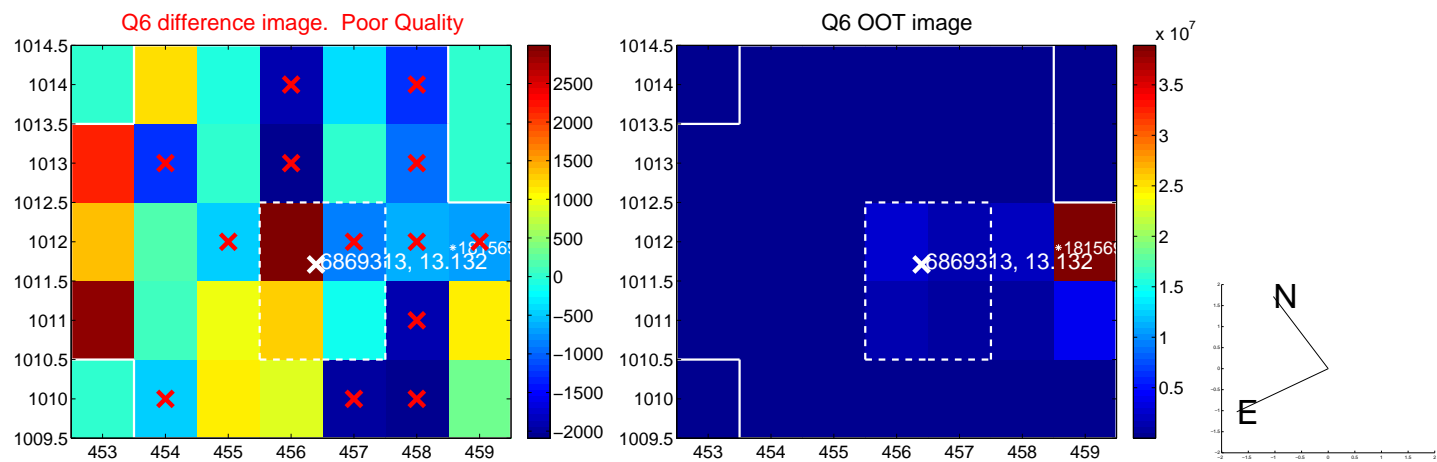
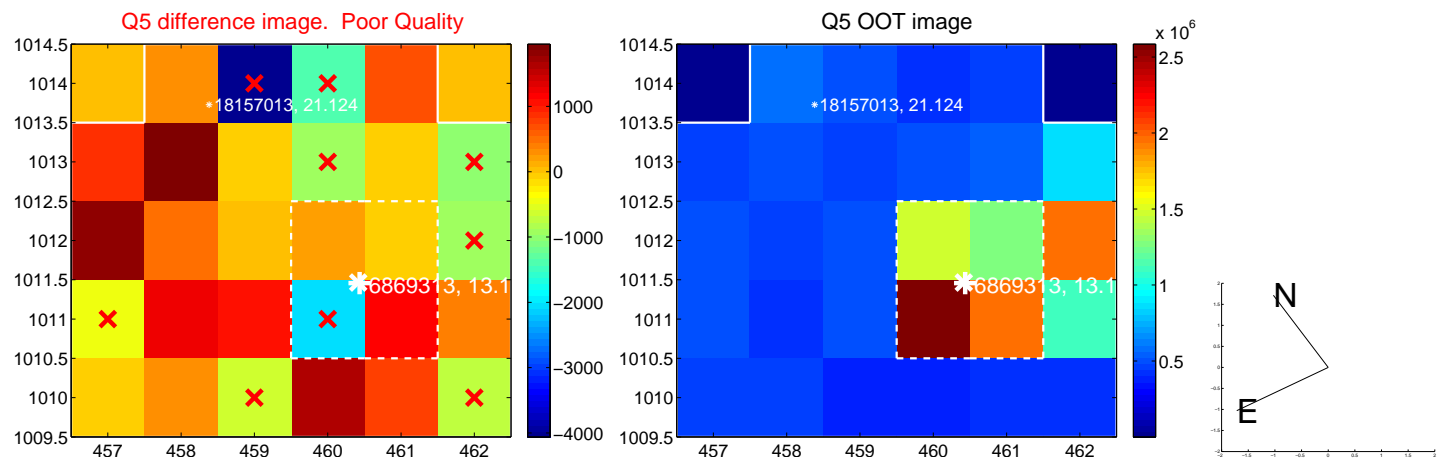


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

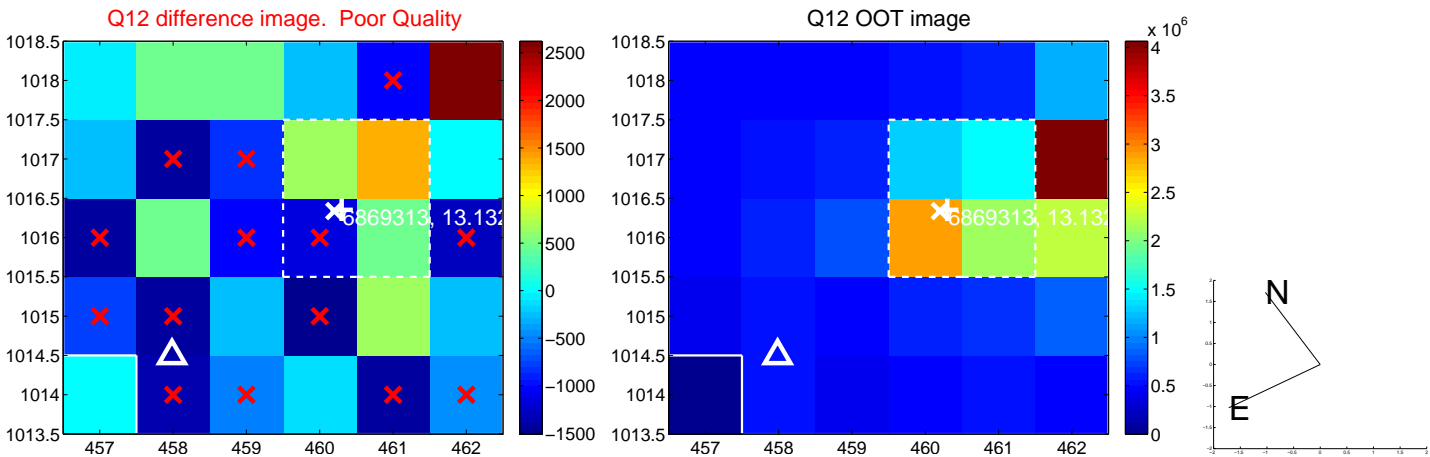
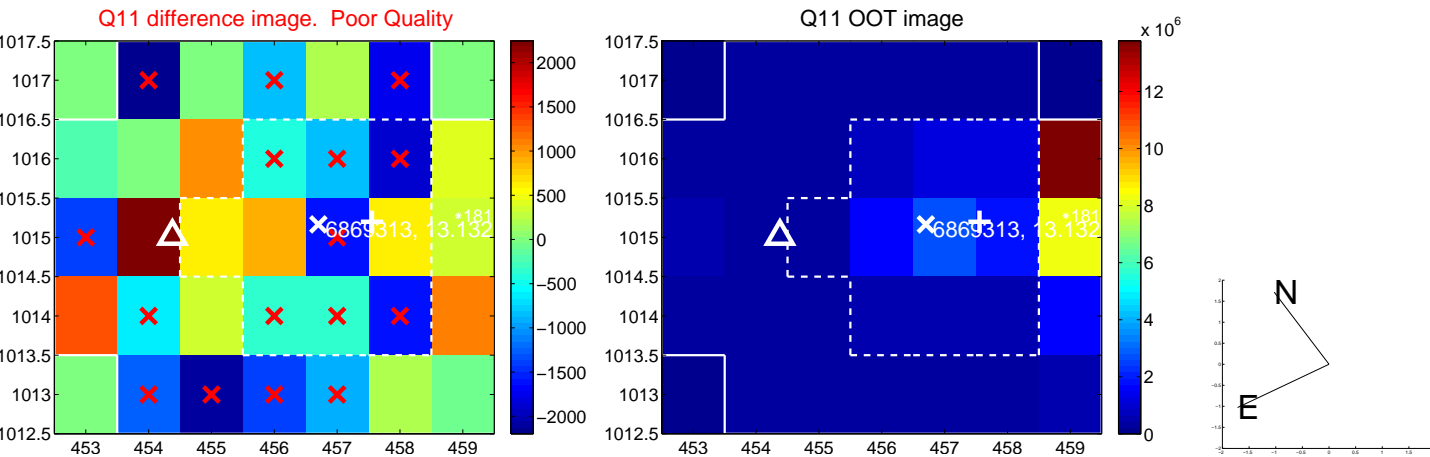
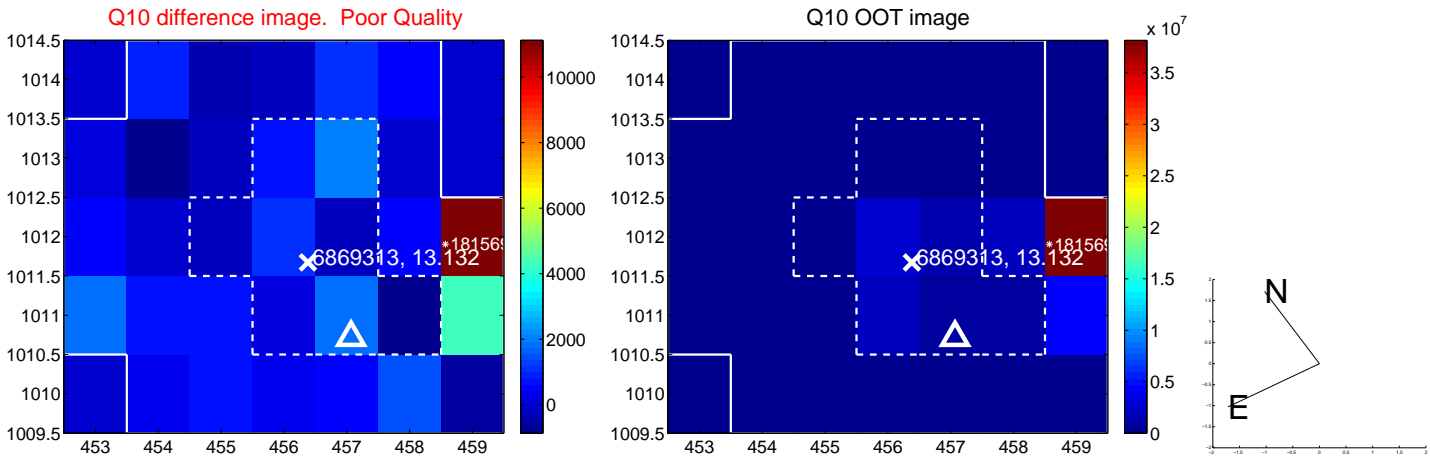
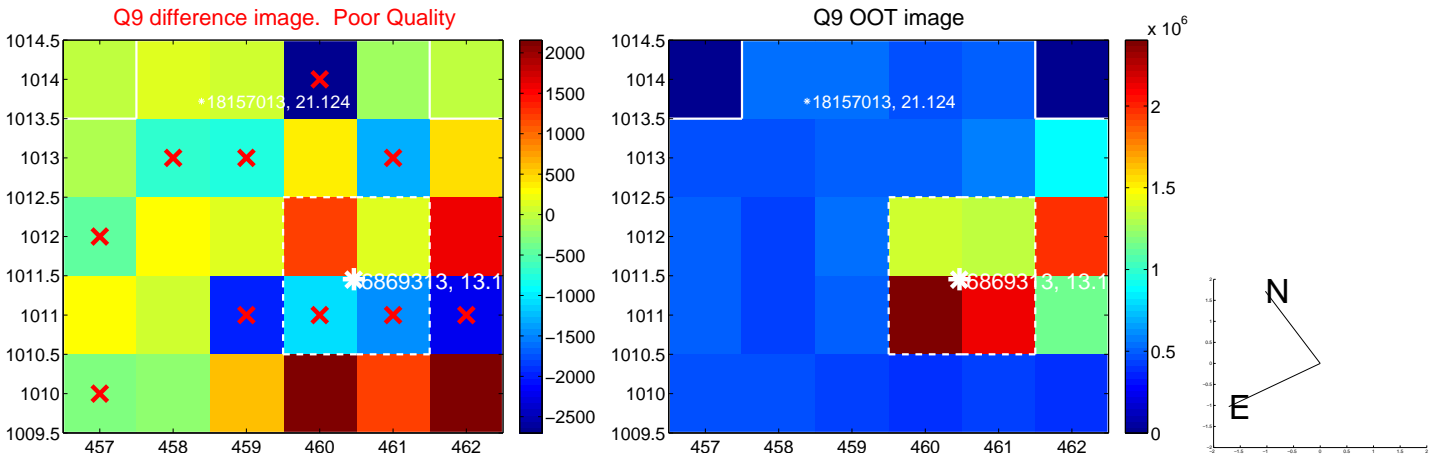
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



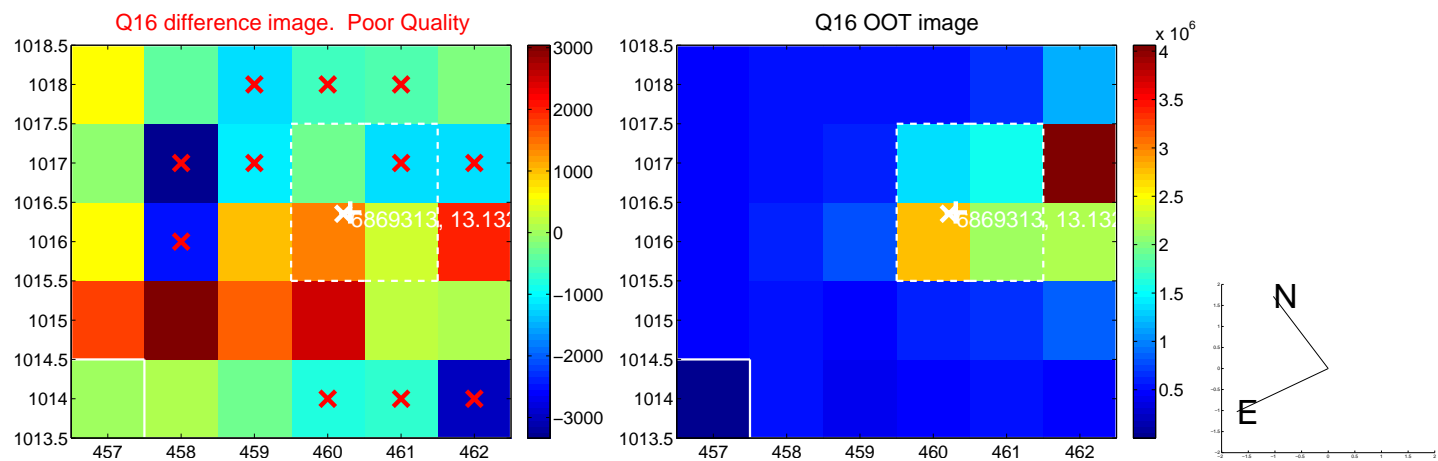
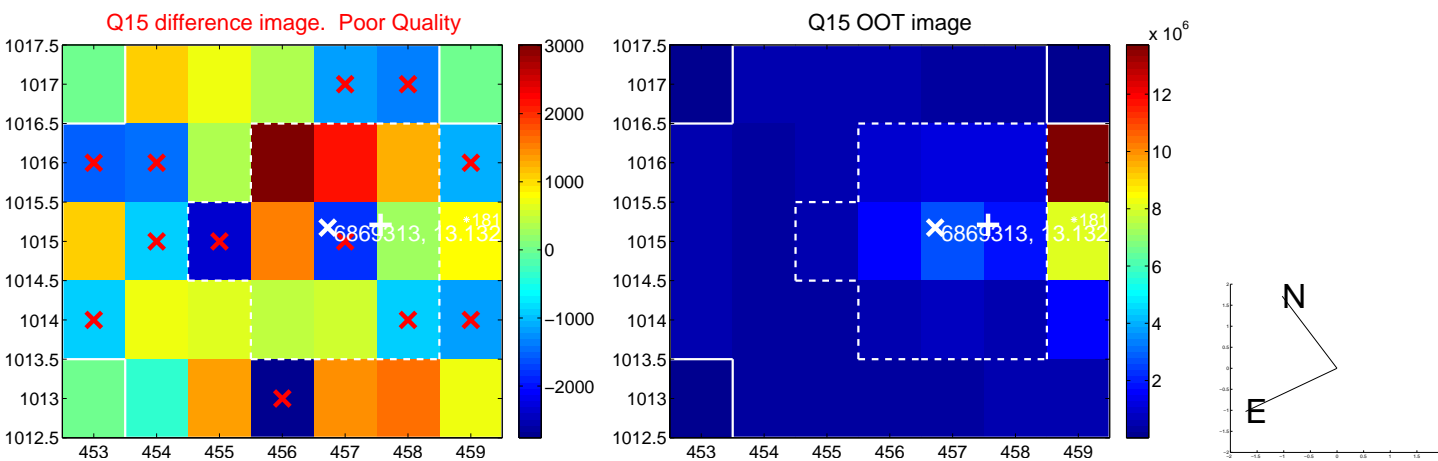
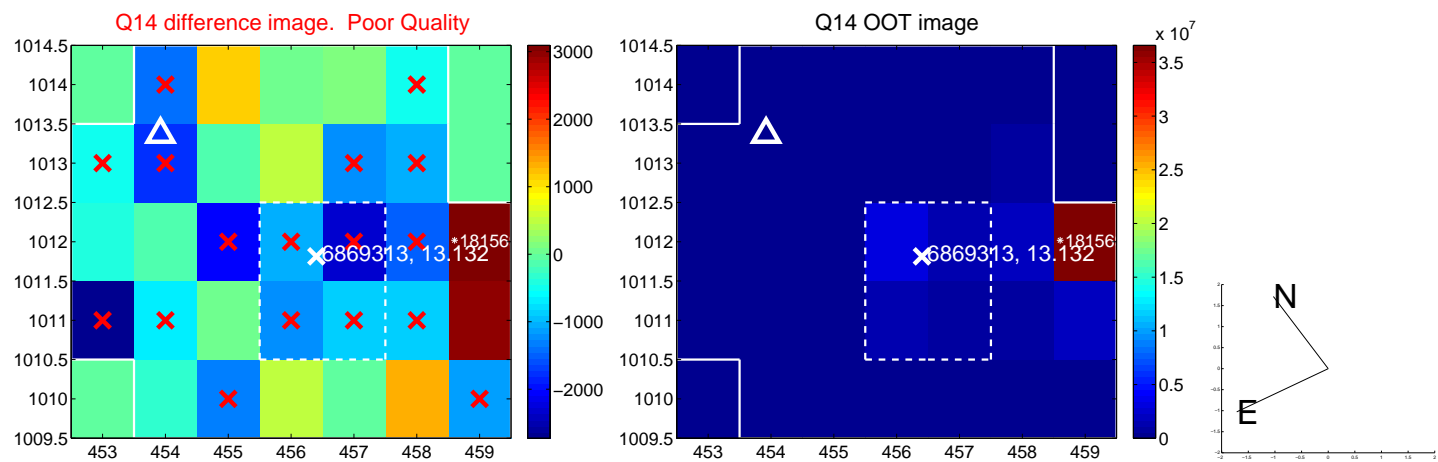
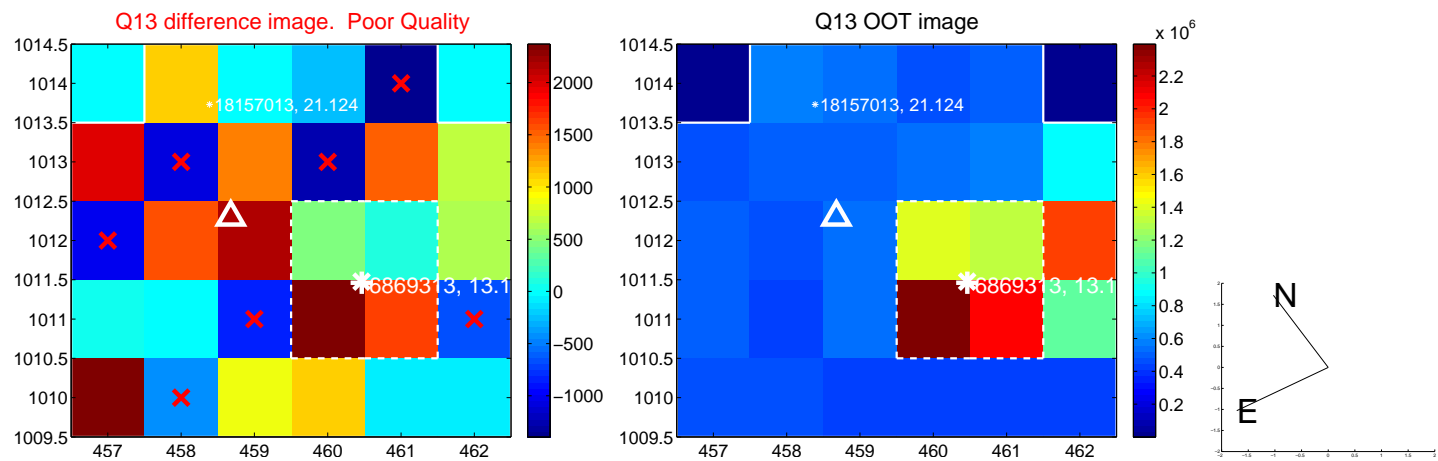
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



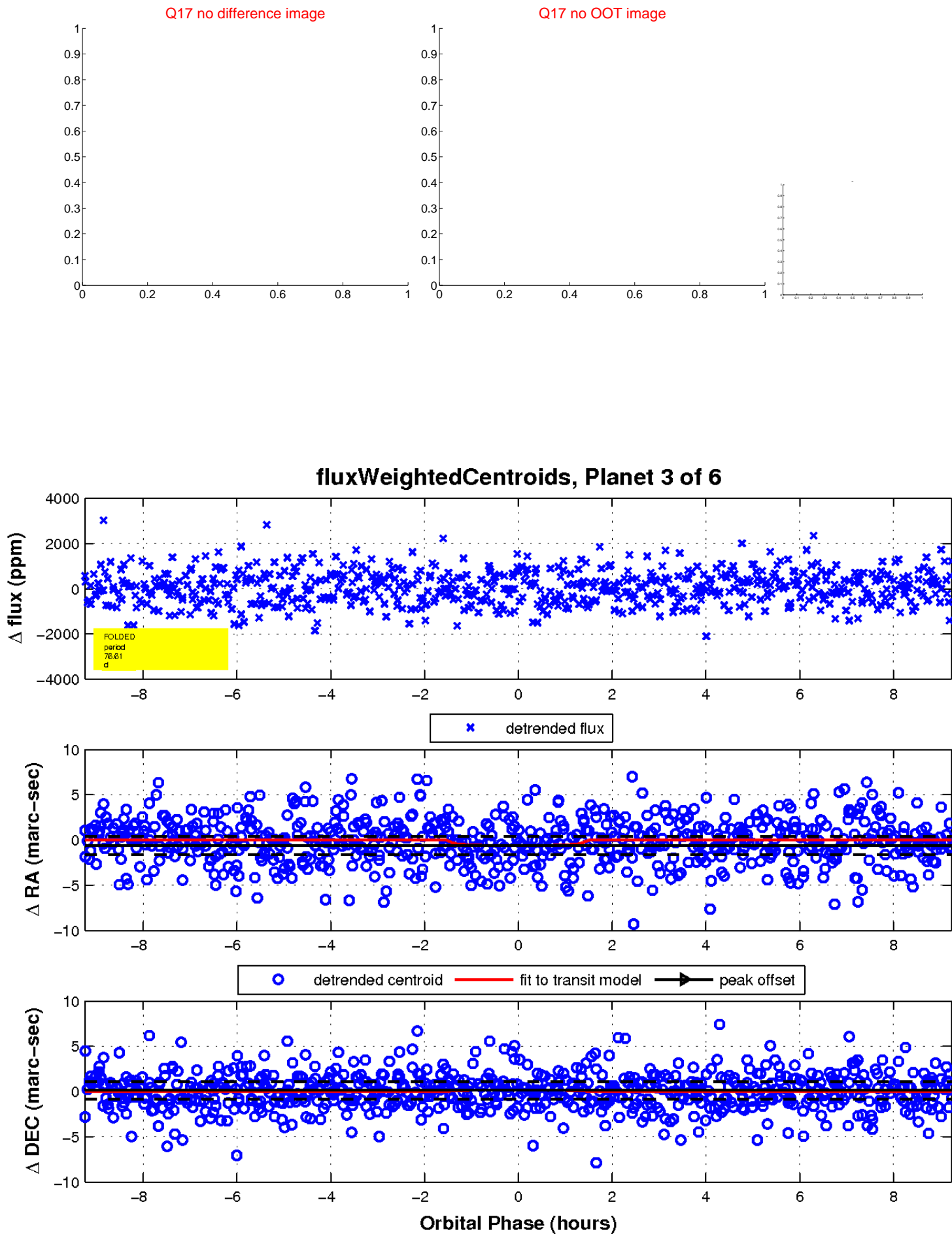
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

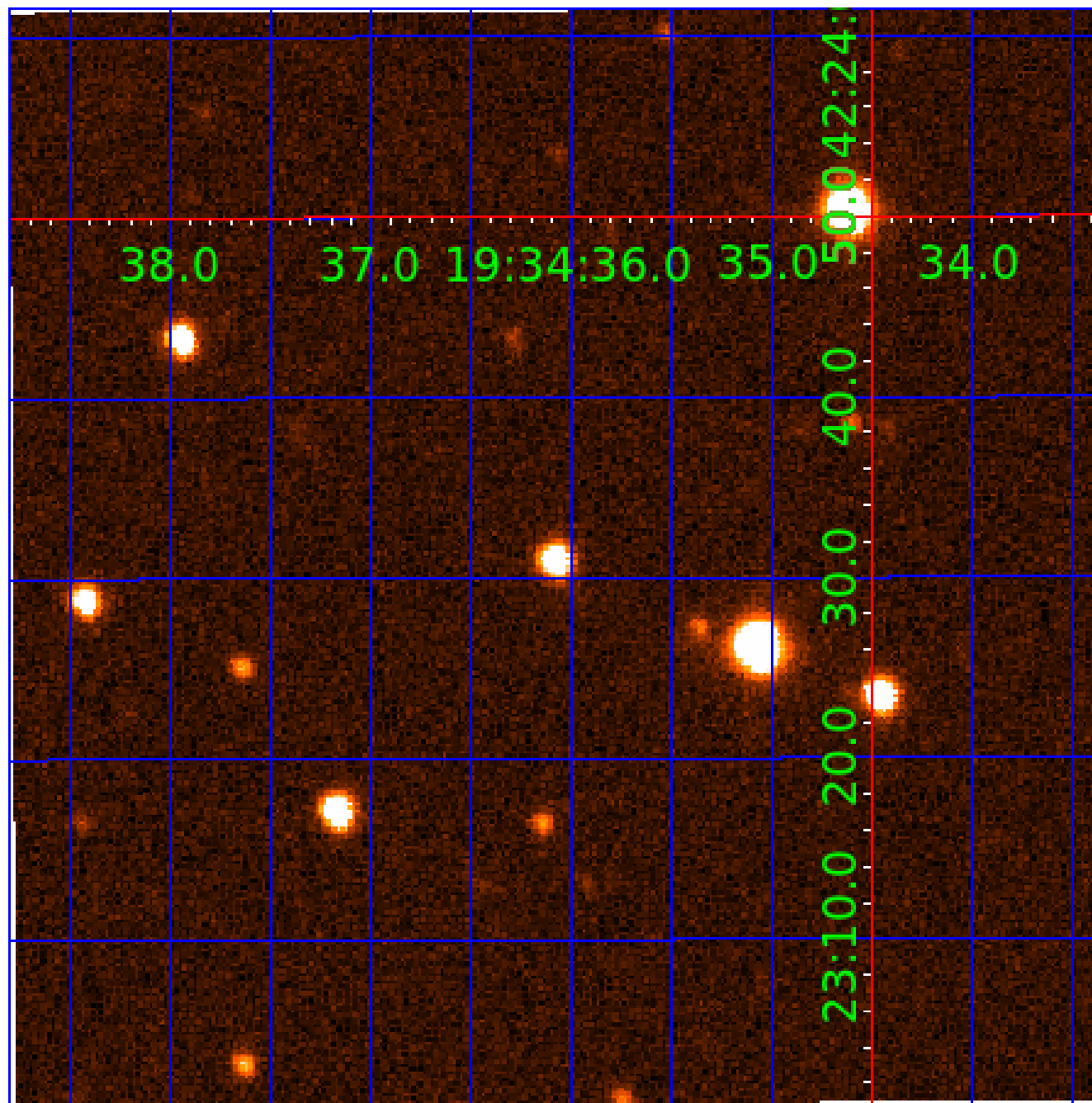


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006869313

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})
006869313-01	OBS	No	2.818444	133.794584	101.6	17.976	11.8	12.6	0.80	5325	0.79	366.83
006869313-02	OBS	No	88.317530	210.438634	902.3	2.871	9.0	6.9	0.80	5325	2.63	3.71
006869313-03	OBS	No	76.606449	136.715273	1014.4	3.081	7.8	9.0	0.80	5325	2.73	4.49
006869313-04	OBS	No	68.752966	144.455714	1038.4	2.808	7.6	7.7	0.80	5325	3.23	5.18
006869313-05	OBS	No	25.026820	153.515985	861.8	1.502	8.4	9.0	0.80	5325	2.59	19.95
006869313-06	OBS	No	44.805878	165.228744	752.3	3.694	8.1	7.9	0.80	5325	2.53	9.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006869313-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_CROWDED—HALO_GHOST
006869313-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
006869313-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

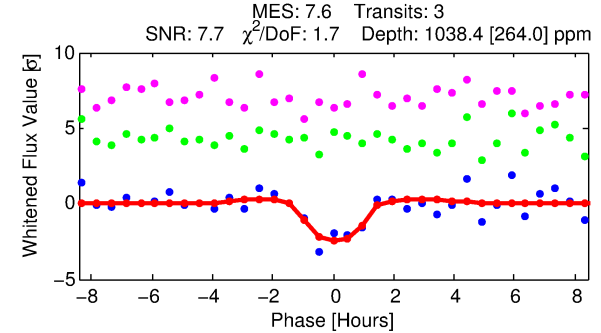
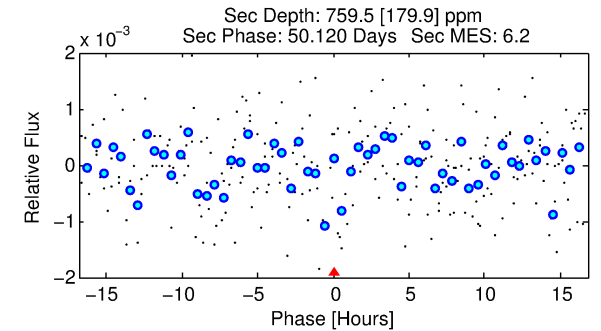
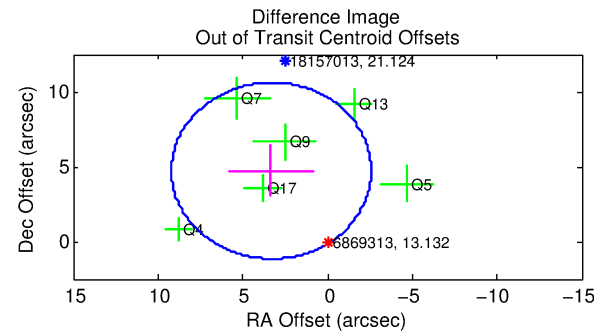
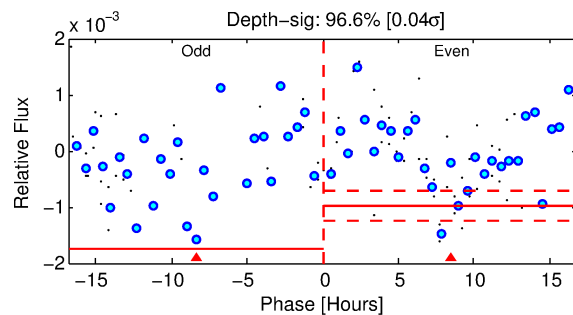
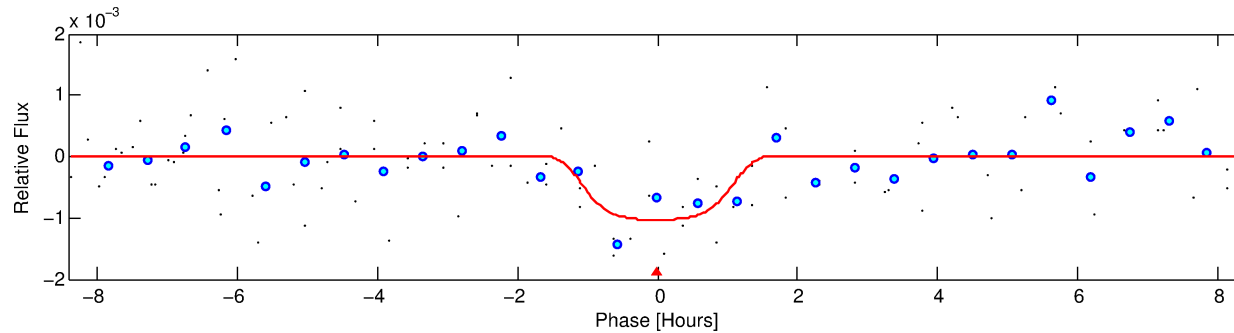
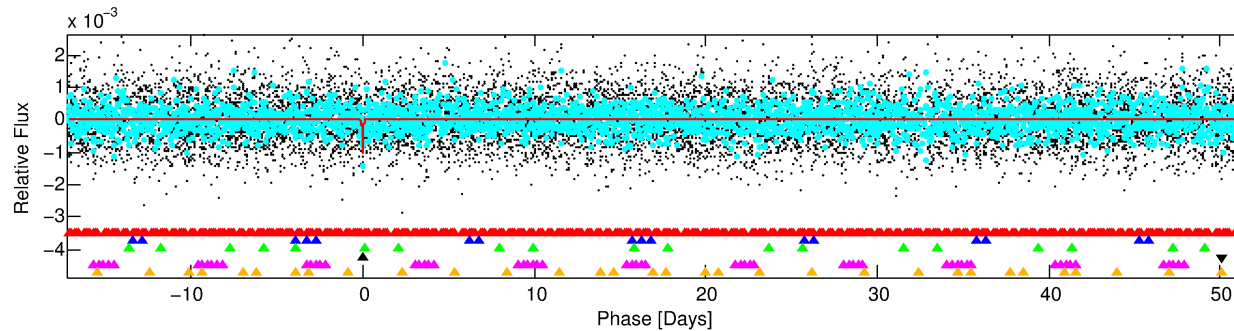
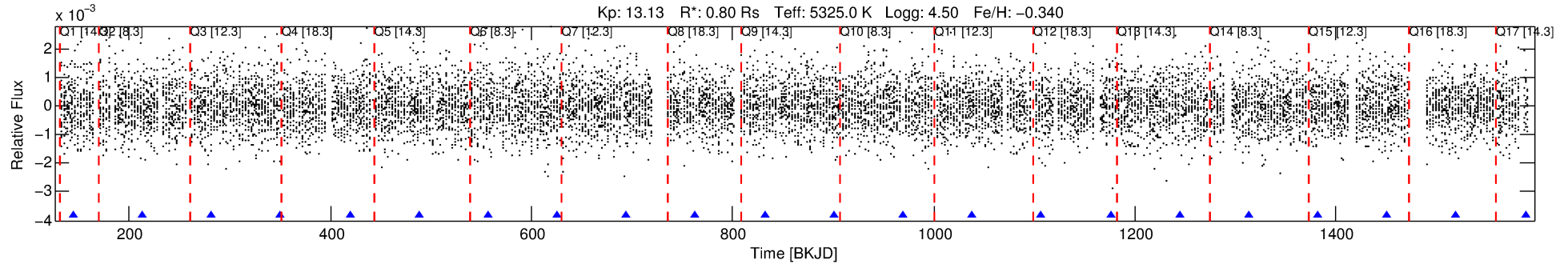
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006869313-04

No Significant Match Found

DV One-Page Summary

KIC: 6869313 Candidate: 4 of 6 Period: 68.753 d



DV Fit Results:

Period = 68.75297 [0.00116] d
Epoch = 144.4557 [0.0119] BKJD
Rp/R* = 0.0371 [0.0145]
a/R* = 84.53 [114.36]
b = 0.93 [0.20]
Seff = 5.19 [1.24]
Teq = 385 [23] K
Rp = 3.23 [1.35] Re
a = 0.2971 [0.0379] AU
Ag = 3545.33 [2970.84] [1.19 σ]
Teff = 4591 [954] K [4.41 σ]

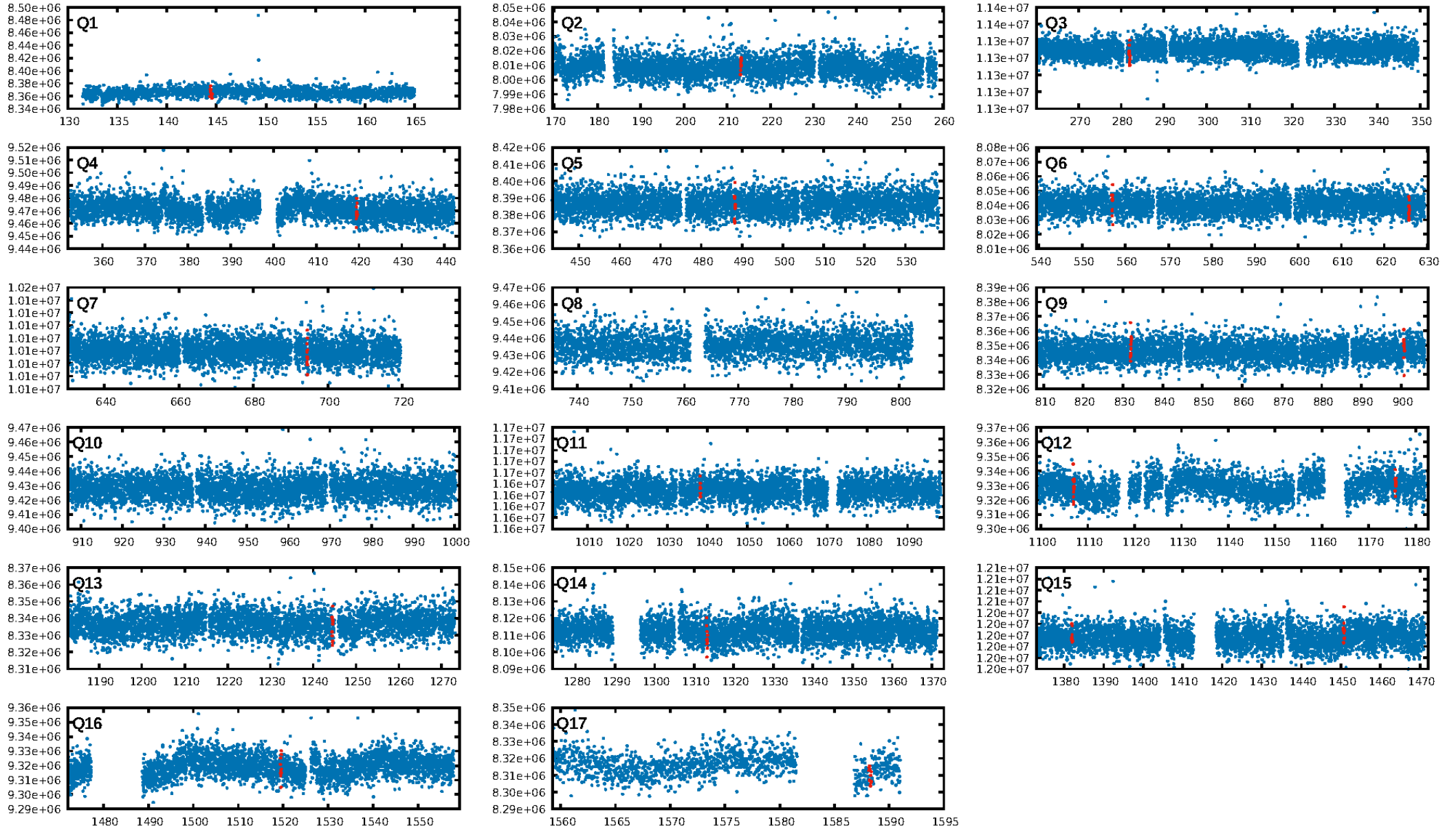
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [123.86 σ]
LongPeriod-sig: 100.0% [45.22 σ]
ModelChiSquare2-sig: 70.9%
ModelChiSquareGof-sig: 59.4%
Bootstrap-pfa: 1.20e-07
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.95
Centroid-sig: 27.8%
Centroid-so: 3.412 arcsec [3.78 σ]
OotOffset-rm: 5.771 arcsec [2.94 σ]
KicOffset-rm: 3.719 arcsec [2.29 σ]
OotOffset-st: 0/1/1/4 [6]
KicOffset-st: 1/1/1/4 [7]
DiffImageQuality-fgm: 0.00 [0/7]
DiffImageOverlap-fno: 0.64 [9/14]

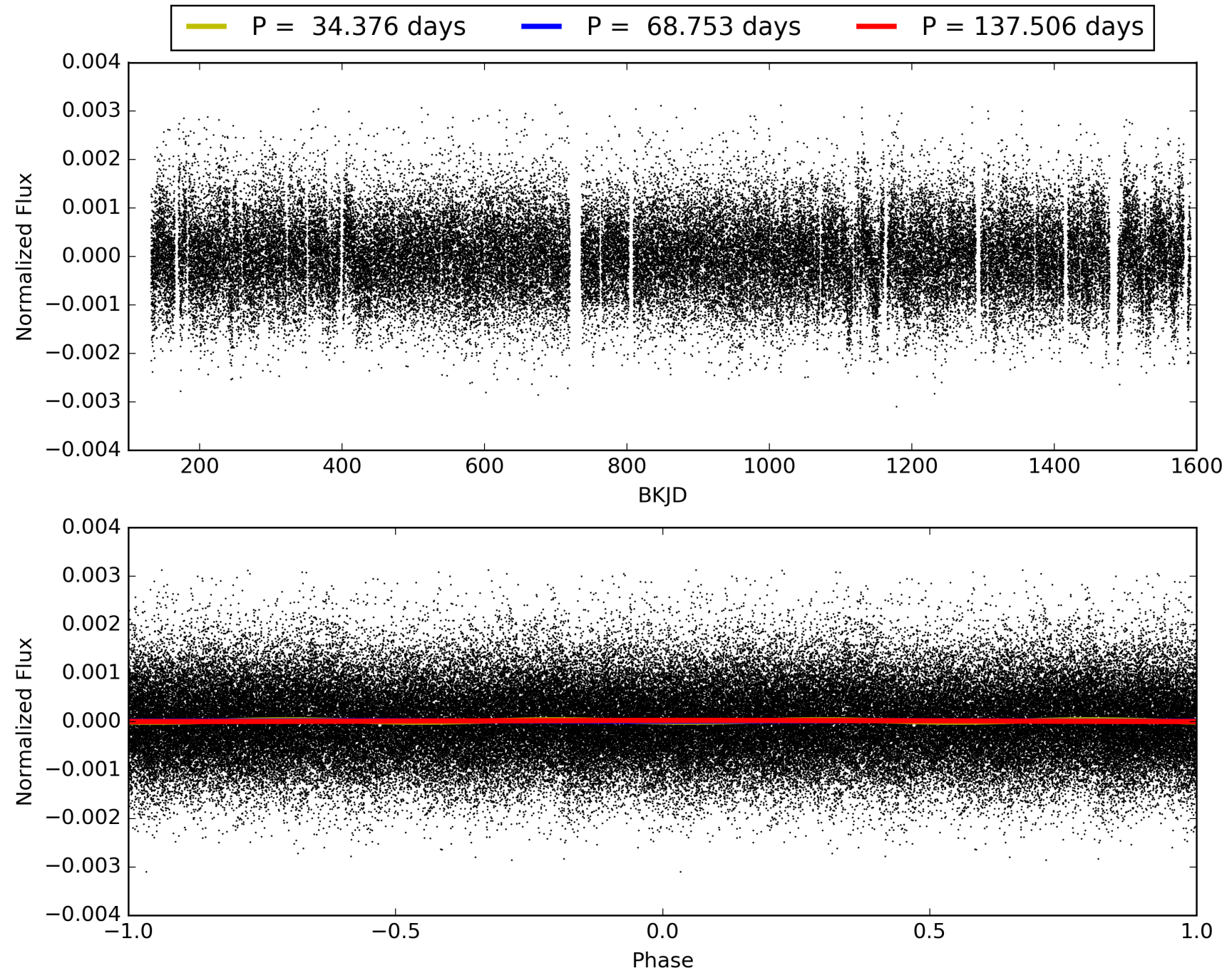
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:33:31 Z

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

TCE 006869313-04, PDC Light Curves

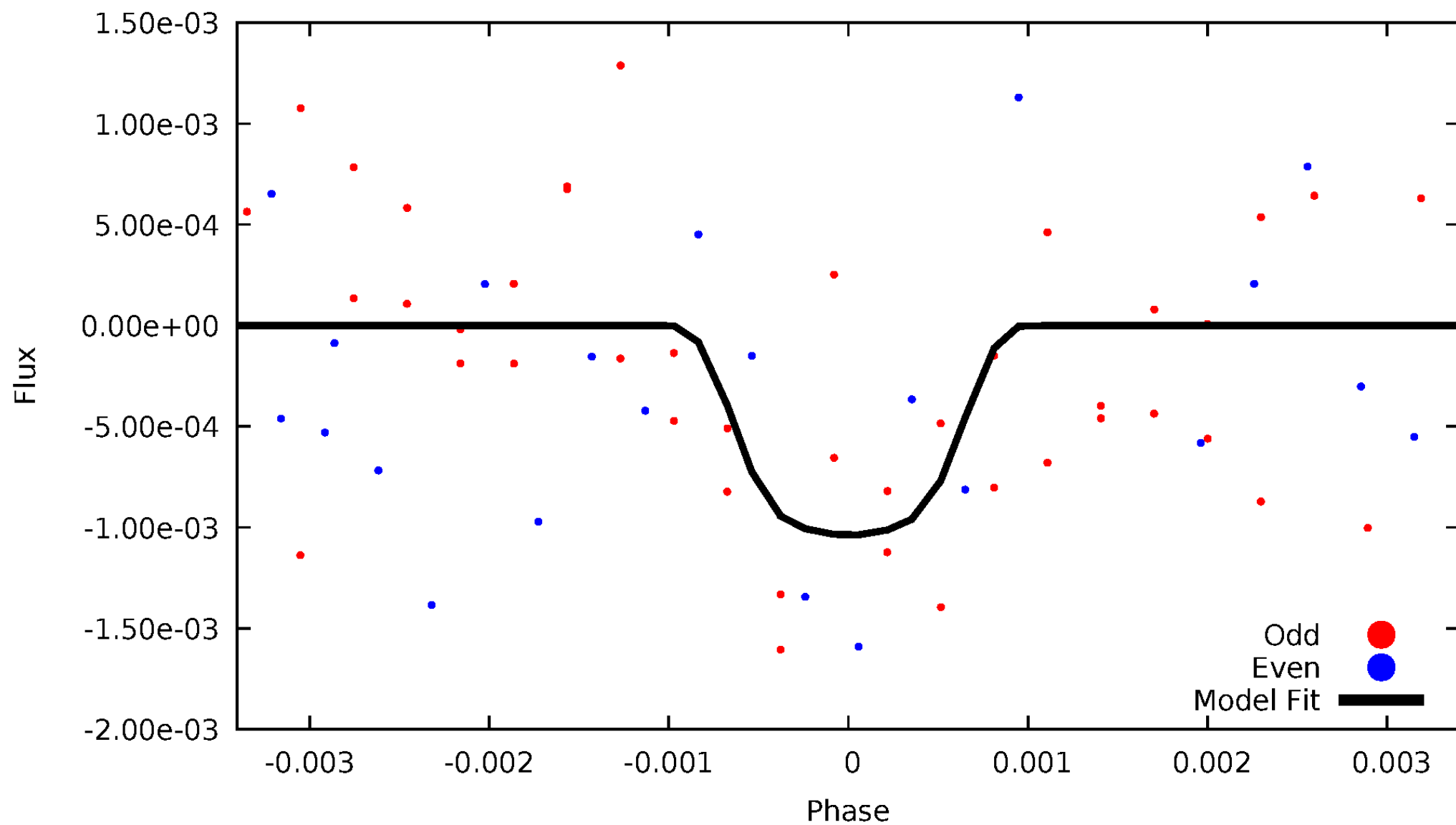


TCE 006869313-04



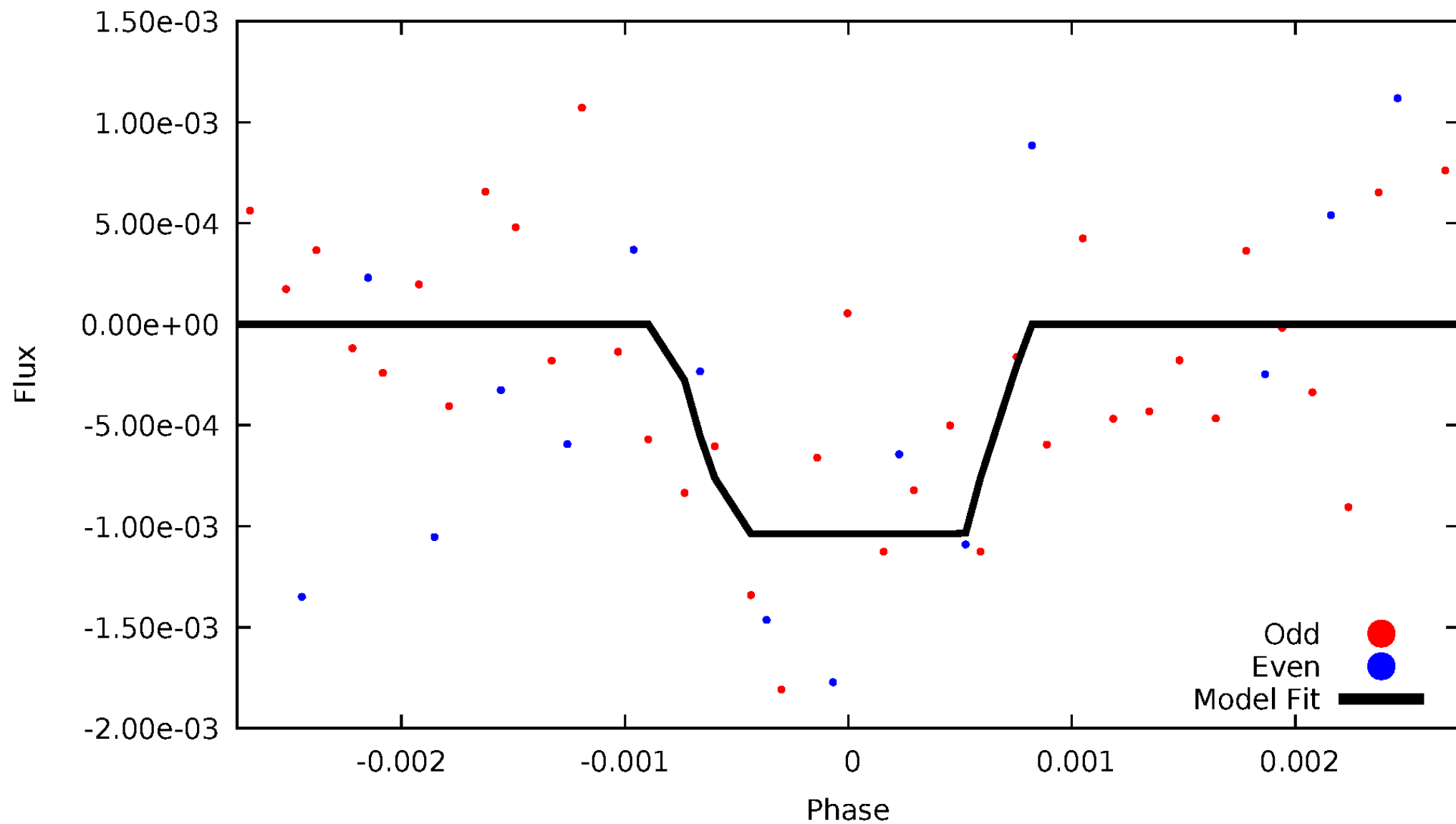
DV Odd/Even

TCE 006869313-04



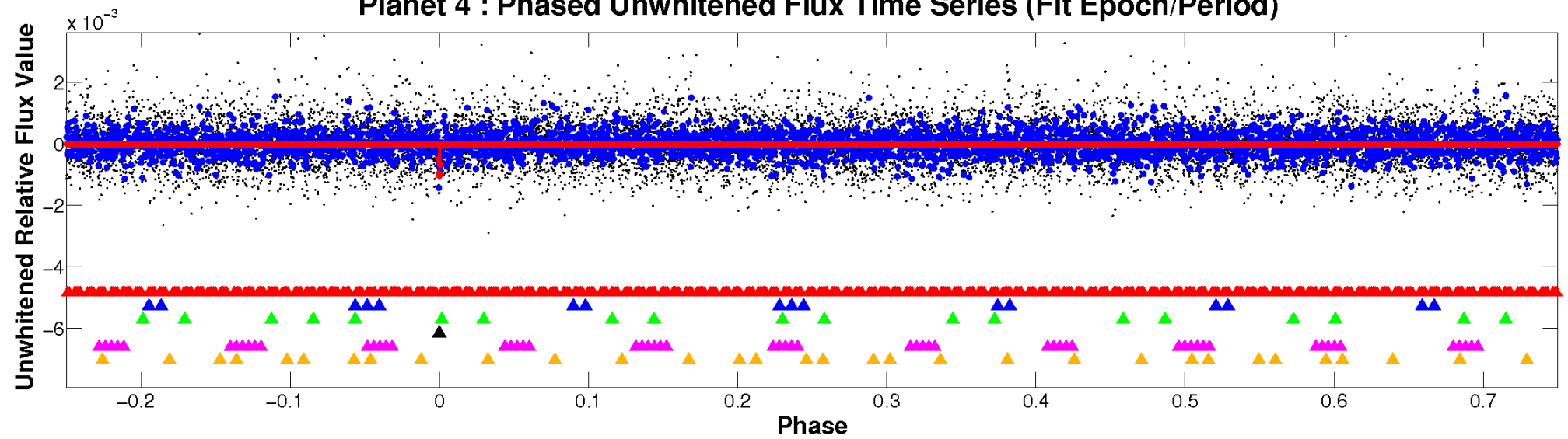
ALT Odd/Even

TCE 006869313-04

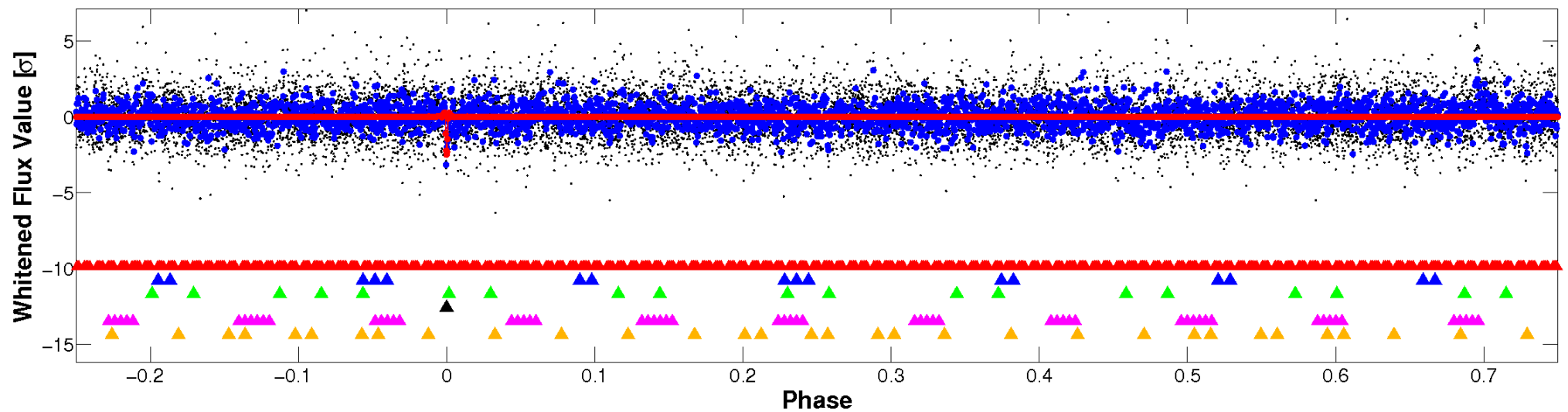


Non-Whitened Vs. Whitened Light Curve

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

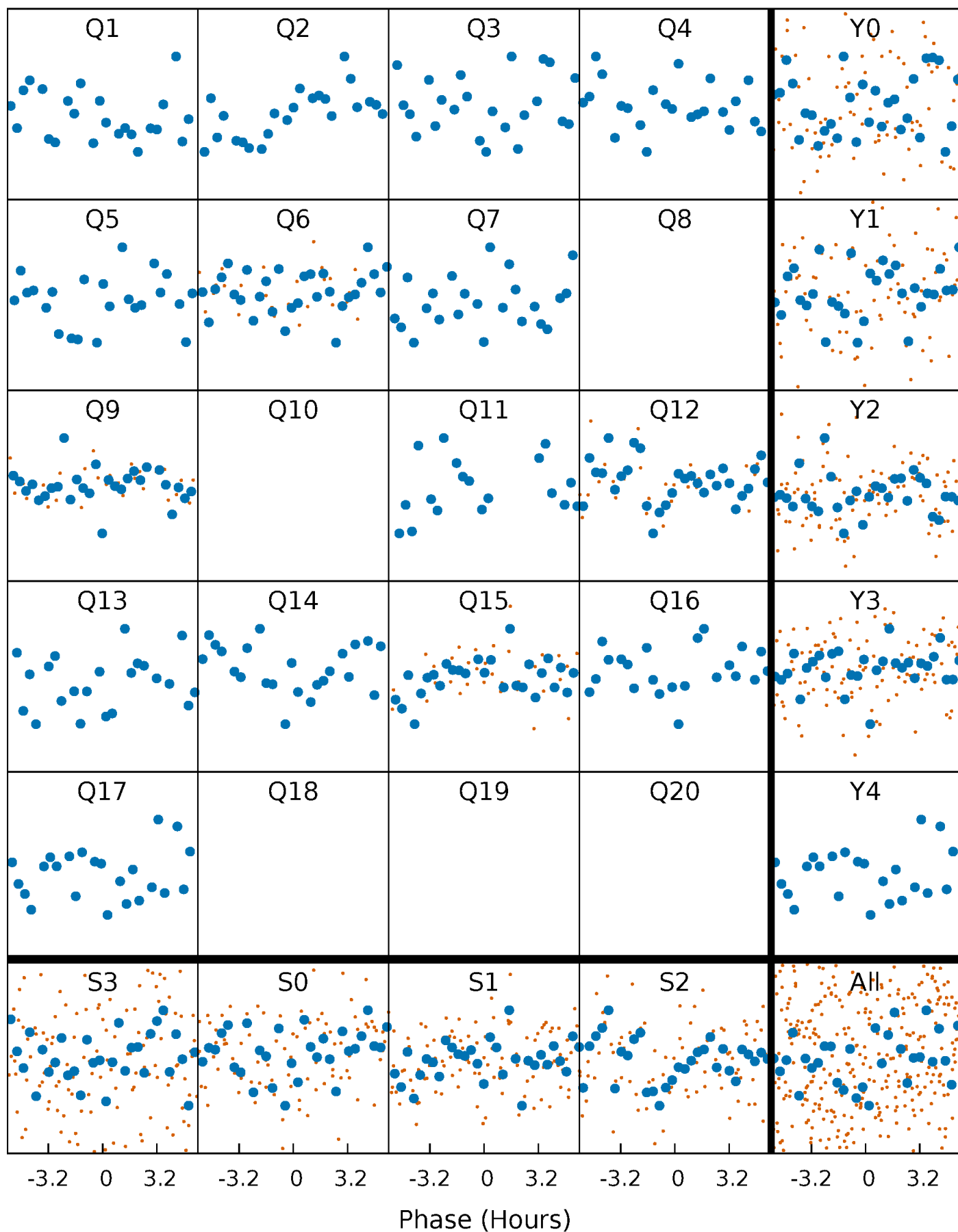


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



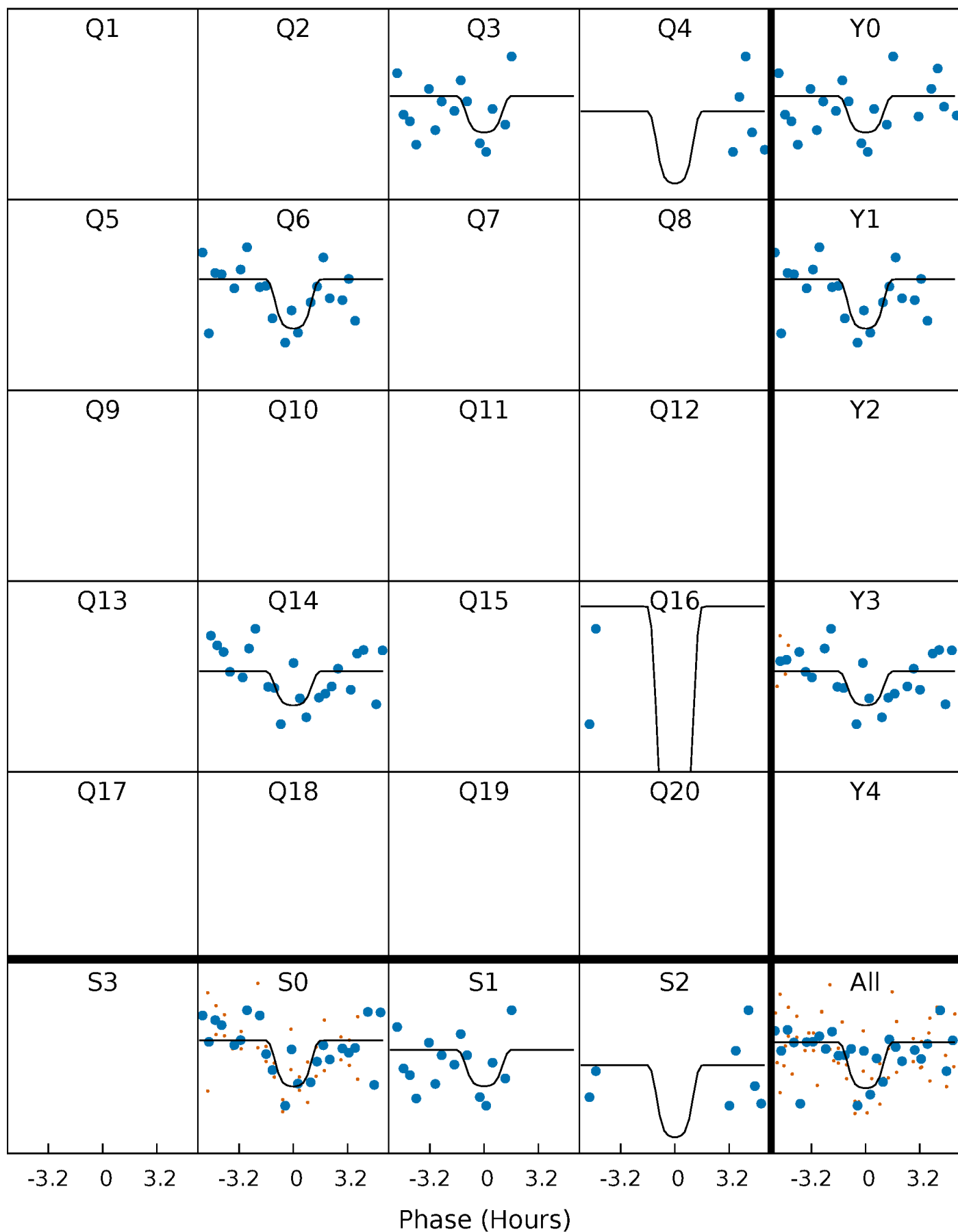
PDC Quarter-Phased Transit Curves

TCE 006869313-04 P= 68.752966 Days $T_0=144.455714$ (BKJD)



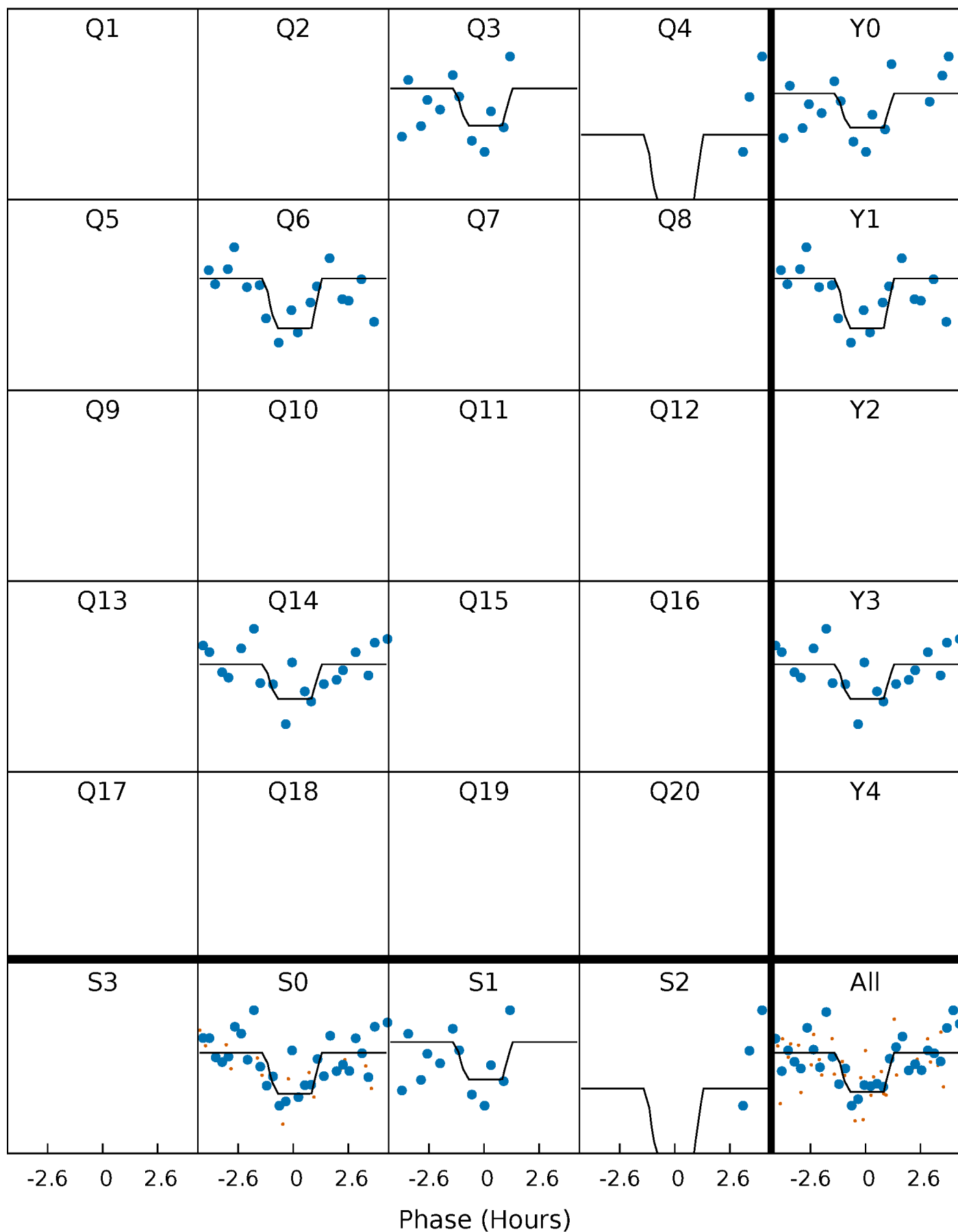
DV Quarter-Phased Transit Curves

TCE 006869313-04 P= 68.752966 Days $T_0=144.455714$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

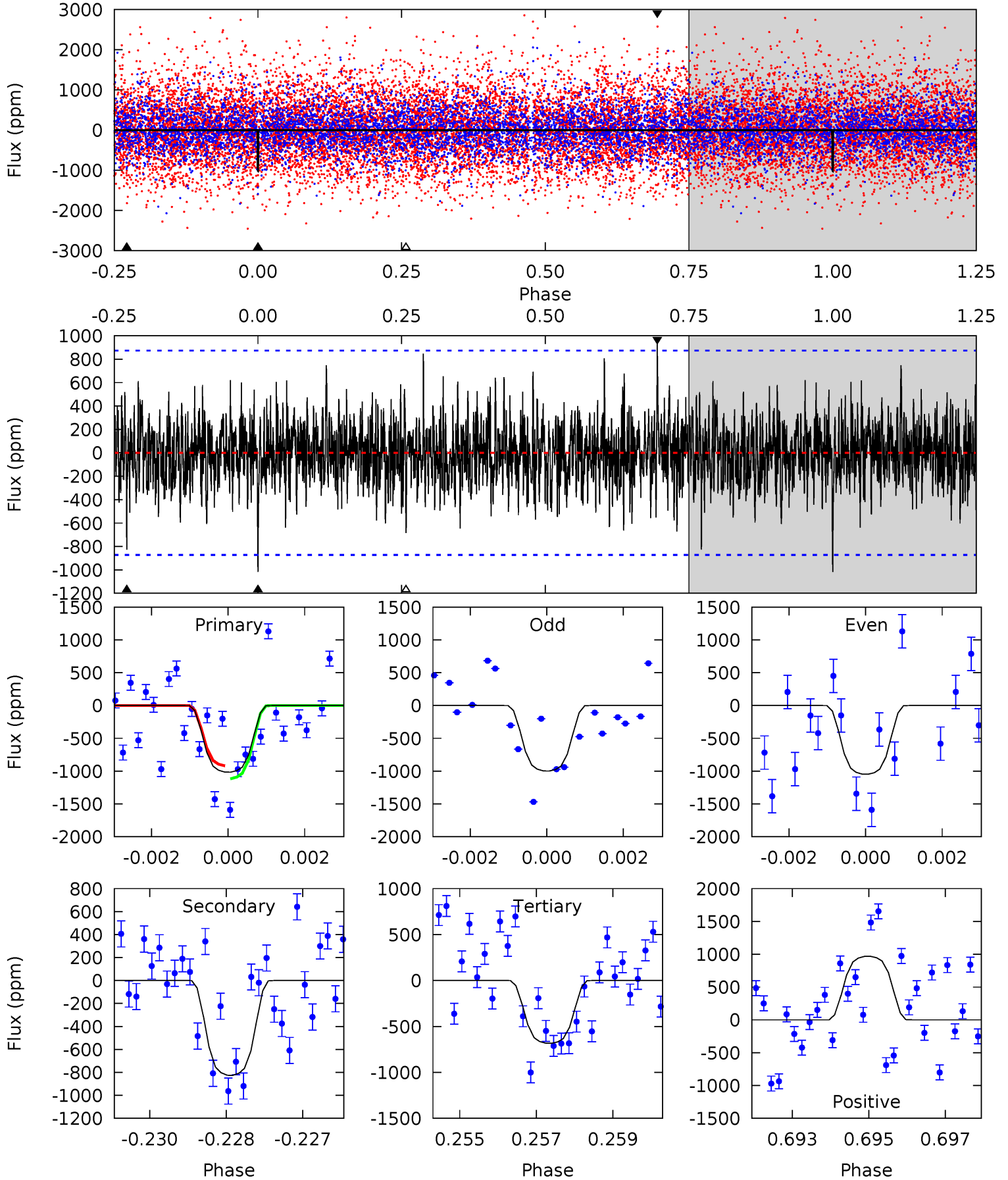
TCE 006869313-04 P= 68.752039 Days $T_0=144.466243$ (BKJD)



DV Model-Shift Uniqueness Test

006869313-04, P = 68.752966 Days, E = 75.702748 Days

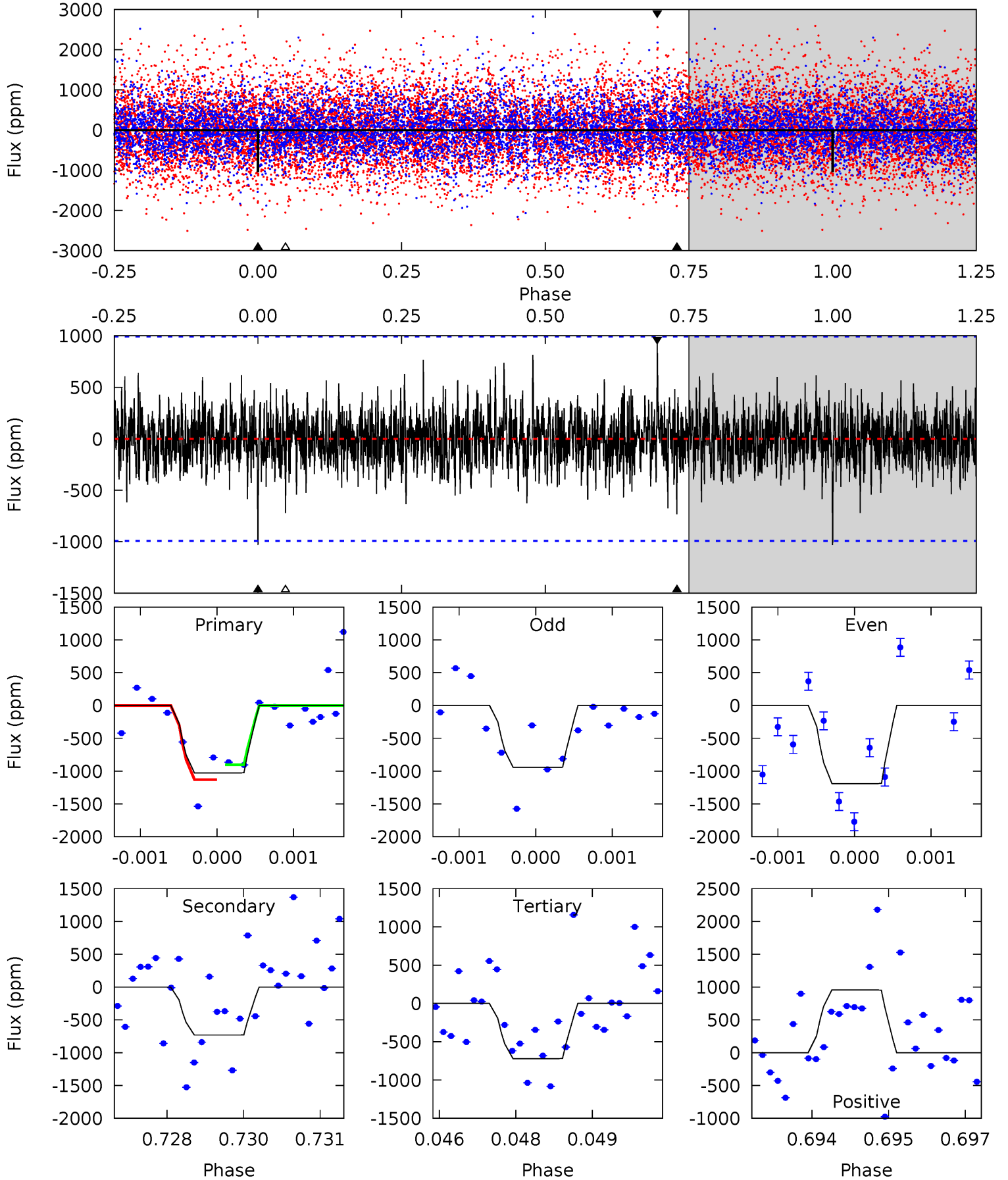
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.21	5.05	4.18	5.92	5.33	3.10	1.35	2.03	0.29	0.87	-0.87	0.15	0.97	0.49	0.60



Alt Model-Shift Uniqueness Test

006869313-04, P = 68.752039 Days, E = 75.714204 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.58	3.97	3.91	5.18	5.38	3.18	1.09	1.67	0.40	0.06	-1.21	0.65	1.09	0.48	0.61



Stellar Parameters For KIC 006869313

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5325^{+204}_{-185}	$4.504^{+0.100}_{-0.100}$	$-0.340^{+0.350}_{-0.300}$	$0.797^{+0.122}_{-0.102}$	$0.740^{+0.113}_{-0.052}$	$2.058^{+0.874}_{-0.612}$
	+4%/-3%	+2%/-2%	+103%/-88%	+15%/-13%	+15%/-7%	+42%/-30%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006869313-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-826 ± 164	$3.24^{+1.24}_{-1.22}$	537^{+30}_{-26}	4813^{+1041}_{-644}	3890^{+5770}_{-1895}
Alt.	-731 ± 184	$2.82^{+1.37}_{-1.26}$	538^{+30}_{-29}	4933^{+1517}_{-731}	4372^{+10925}_{-2374}

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

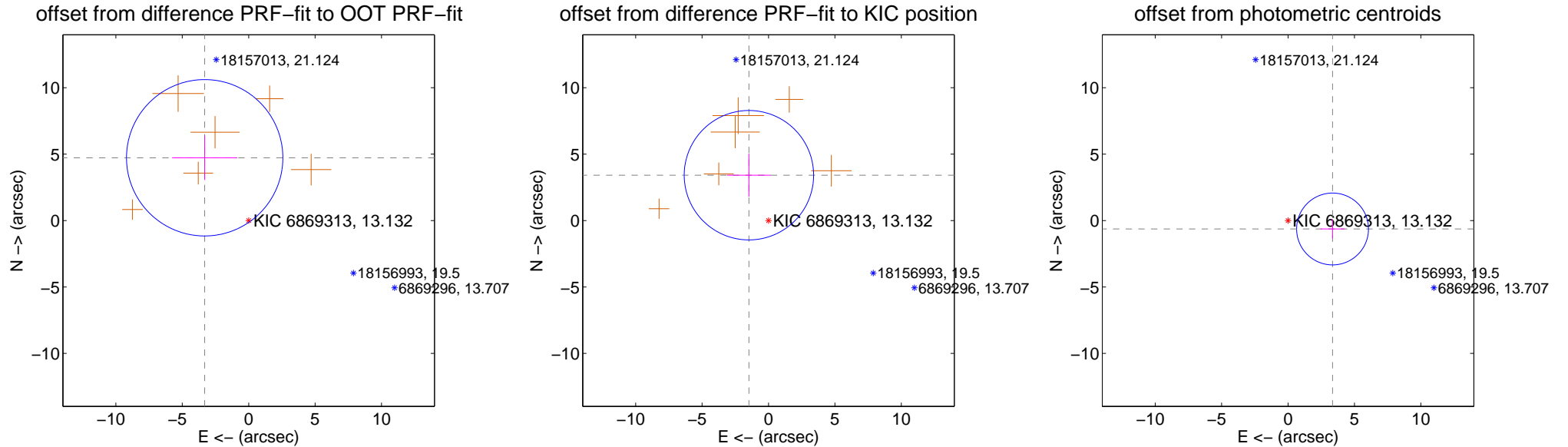
DV Centroid Data

Supplemental centroid analysis for 006869313-04. Kepler magnitude: 13.13. Transit SNR 7.74

There are 0 quarters with good PRF difference image offsets

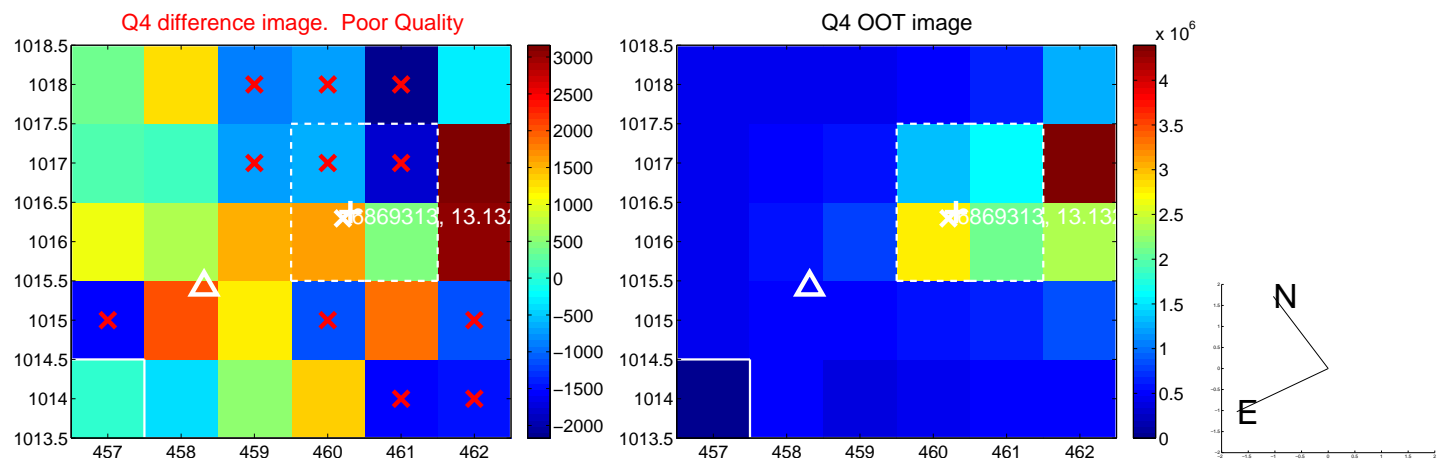
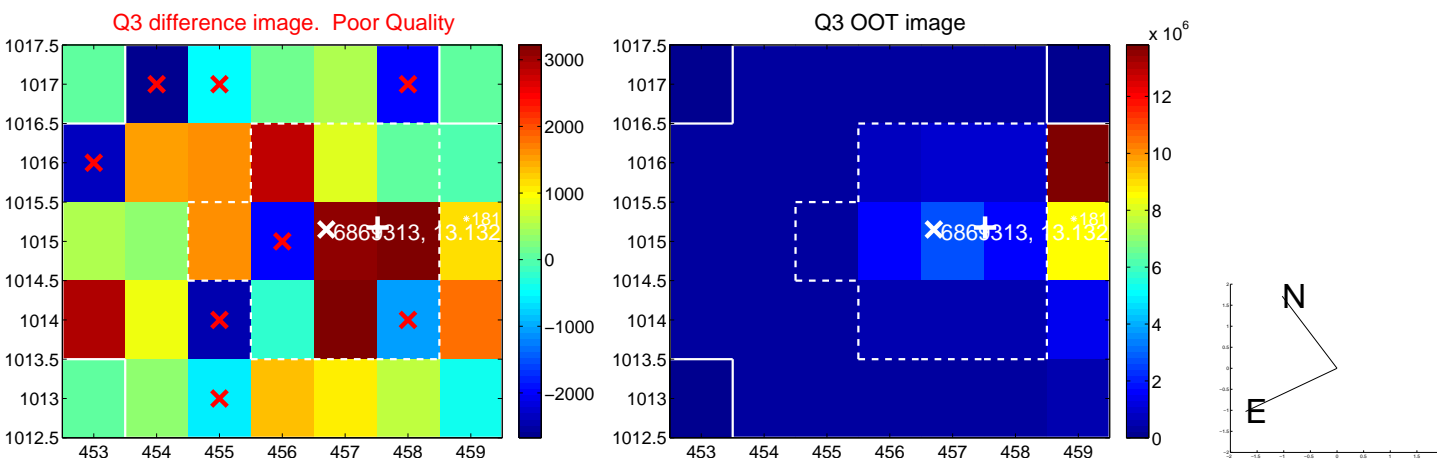
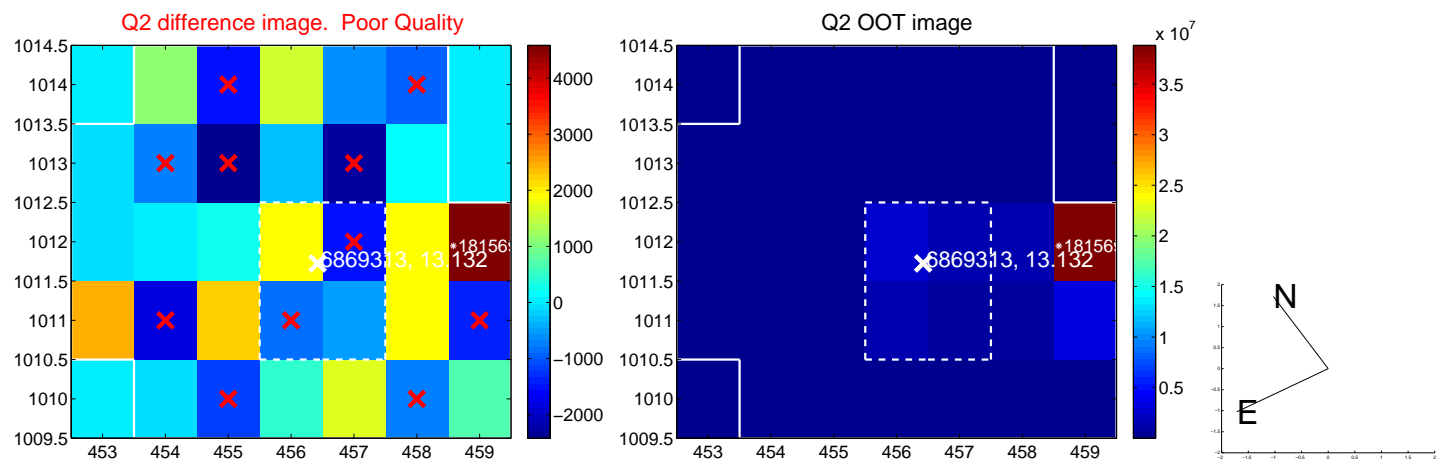
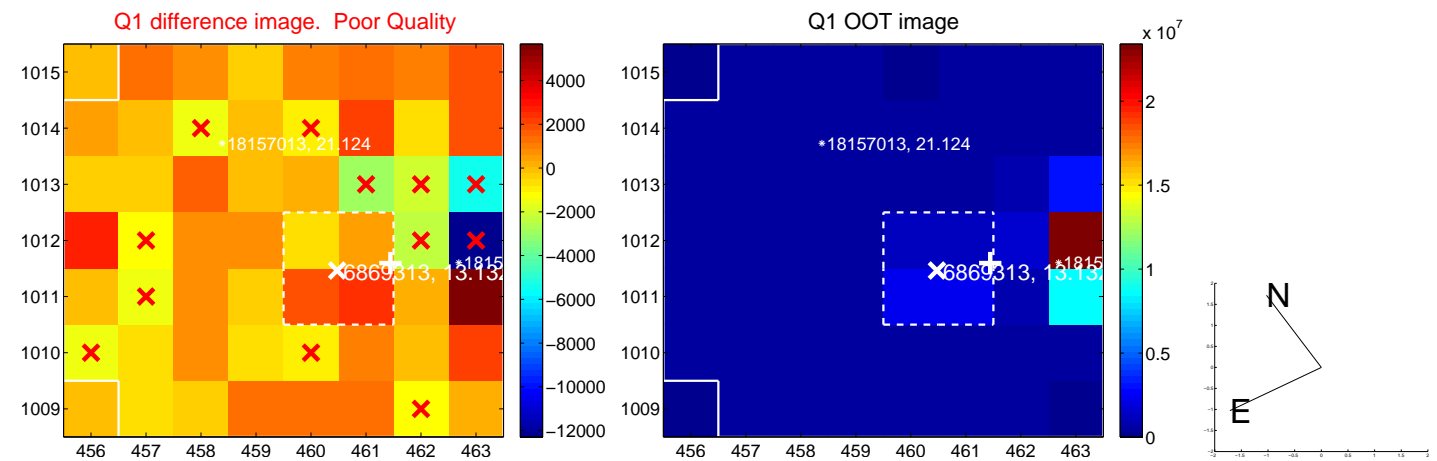
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.771 ± 1.962	2.94	3.313 ± 2.453	4.726 ± 1.668
PRF-fit source offset from KIC position	3.719 ± 1.624	2.29	1.474 ± 1.651	3.414 ± 1.618
photometric centroid source offset	3.41 ± 0.90	3.78	-3.35 ± 0.91	-0.63 ± 0.72

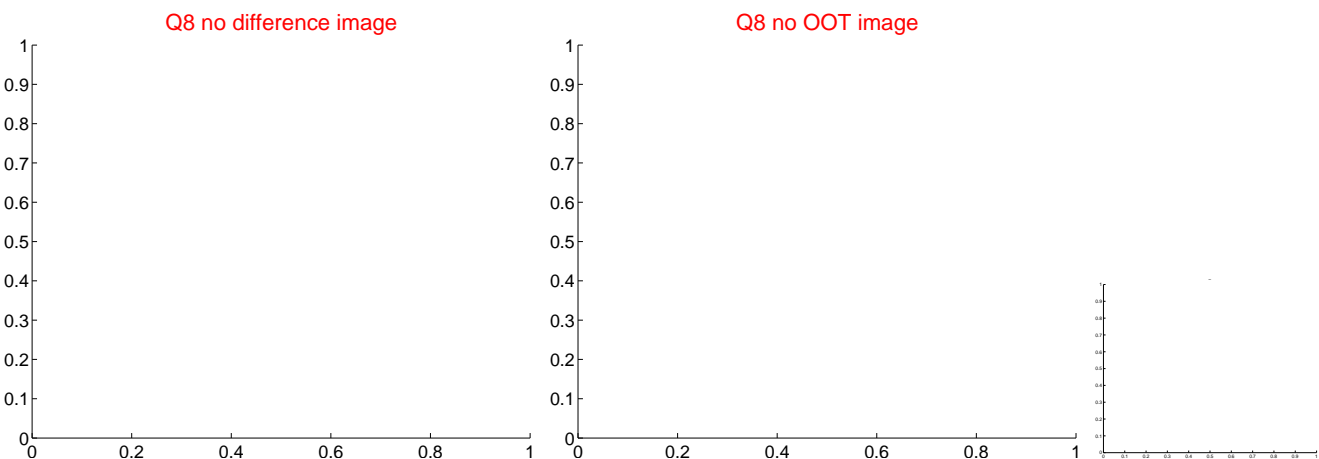
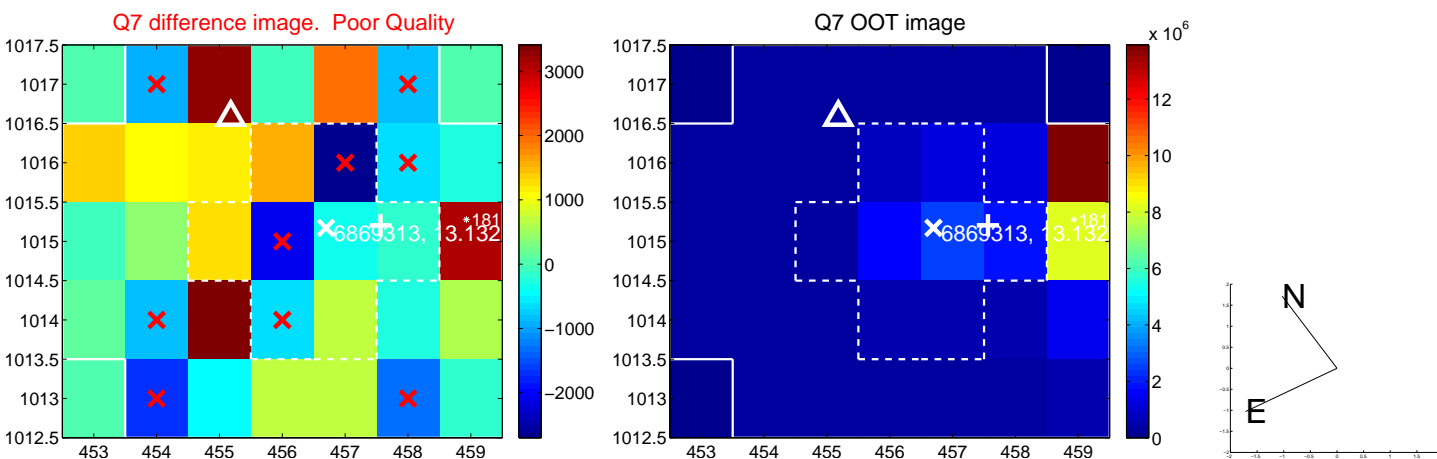
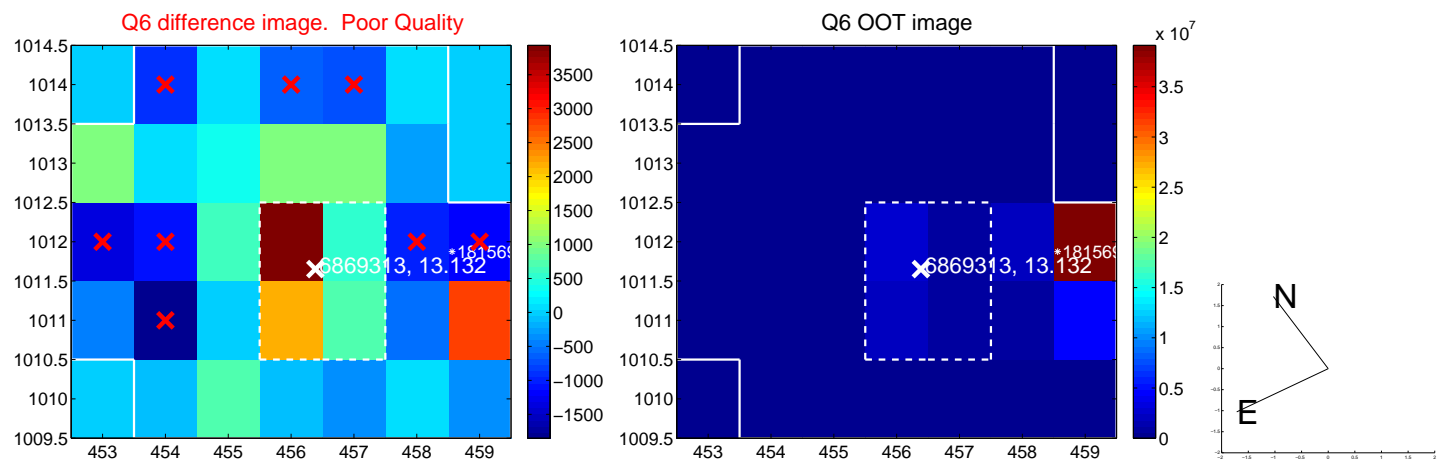
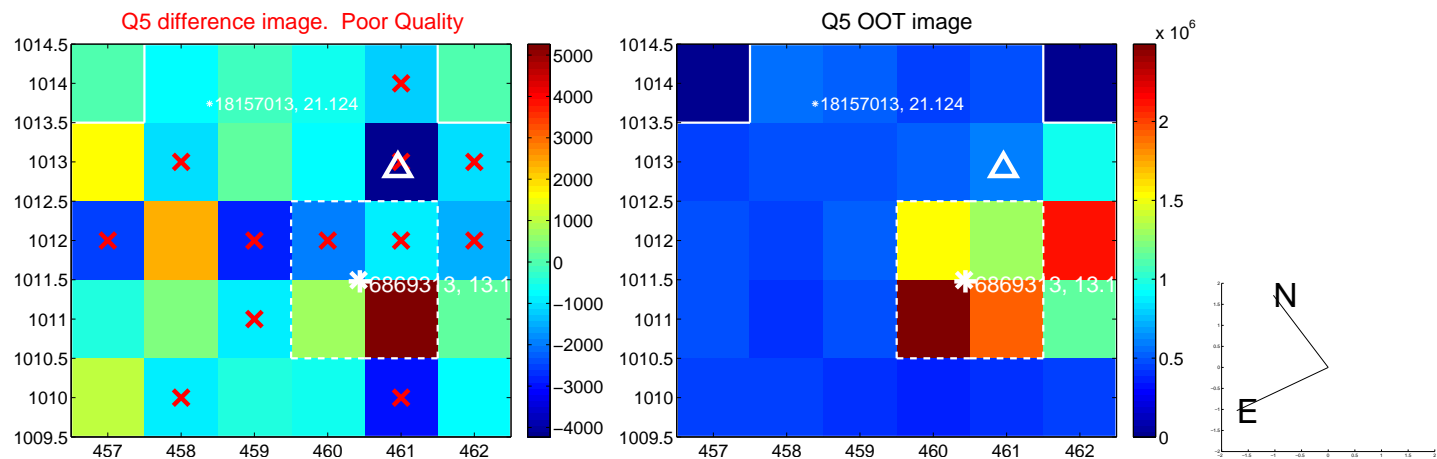


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

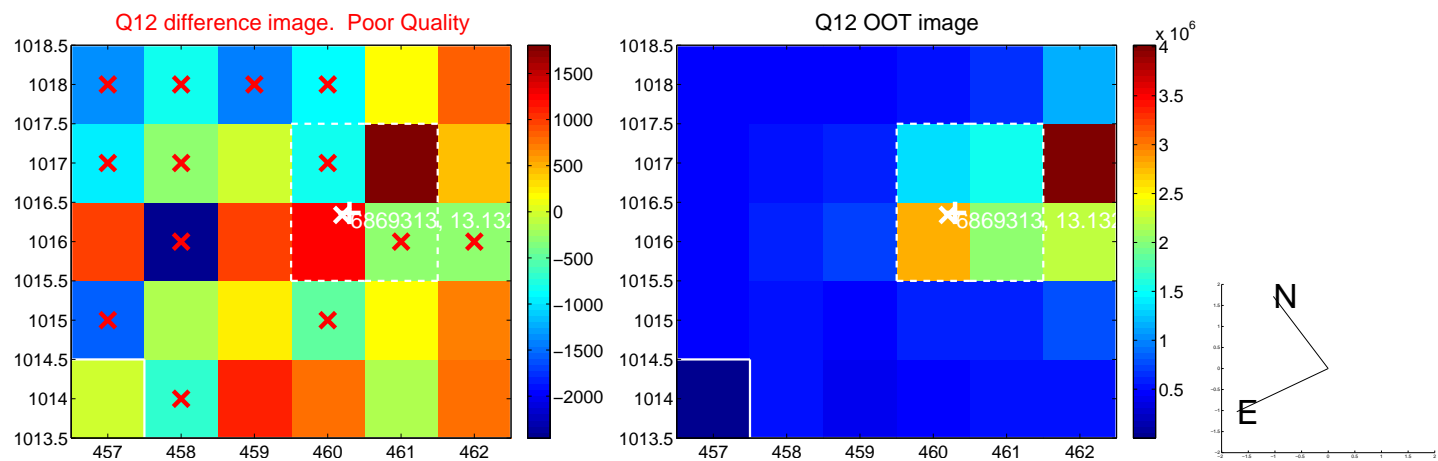
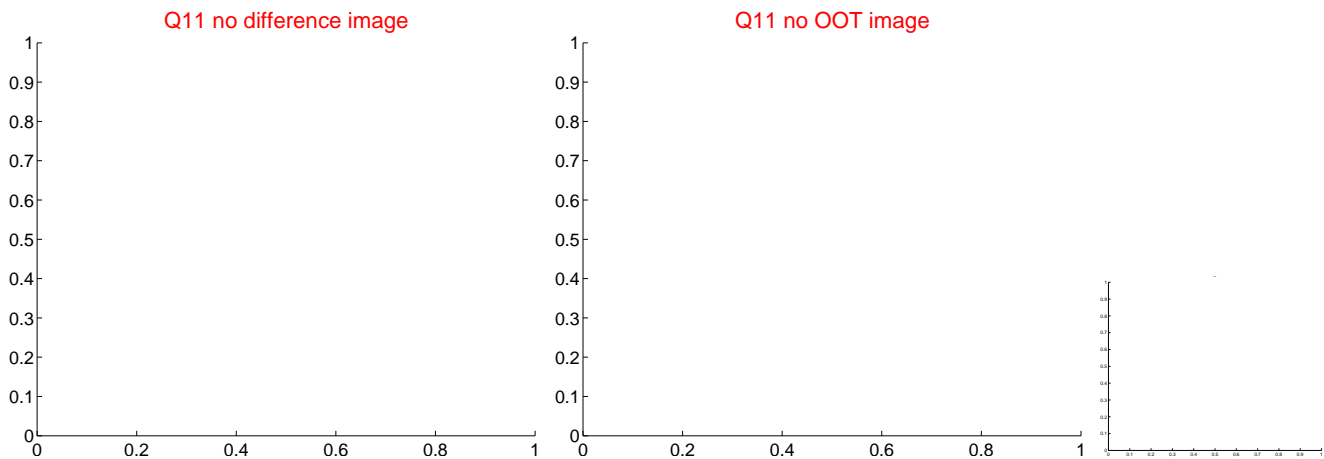
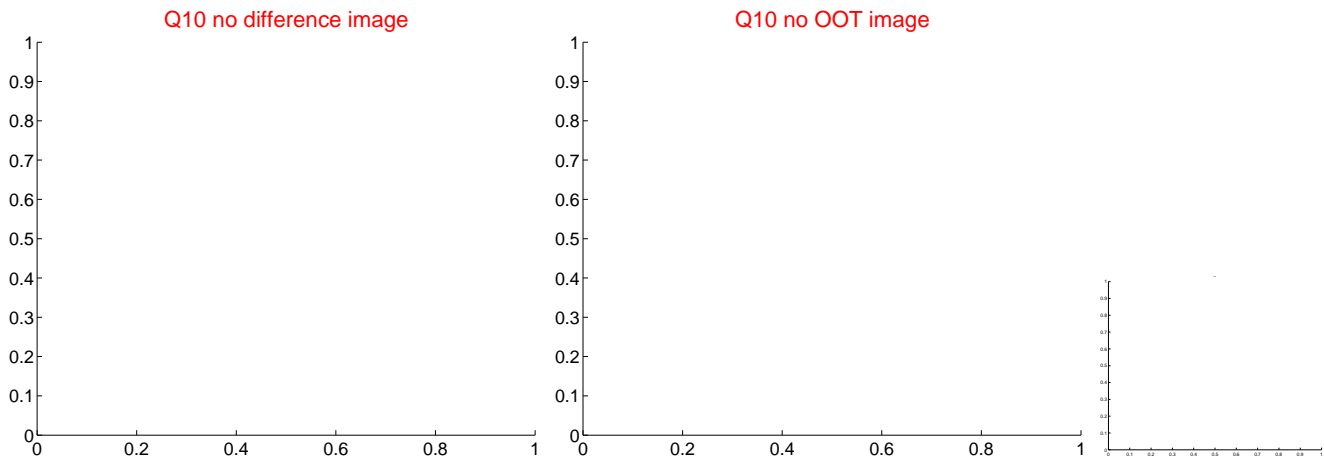
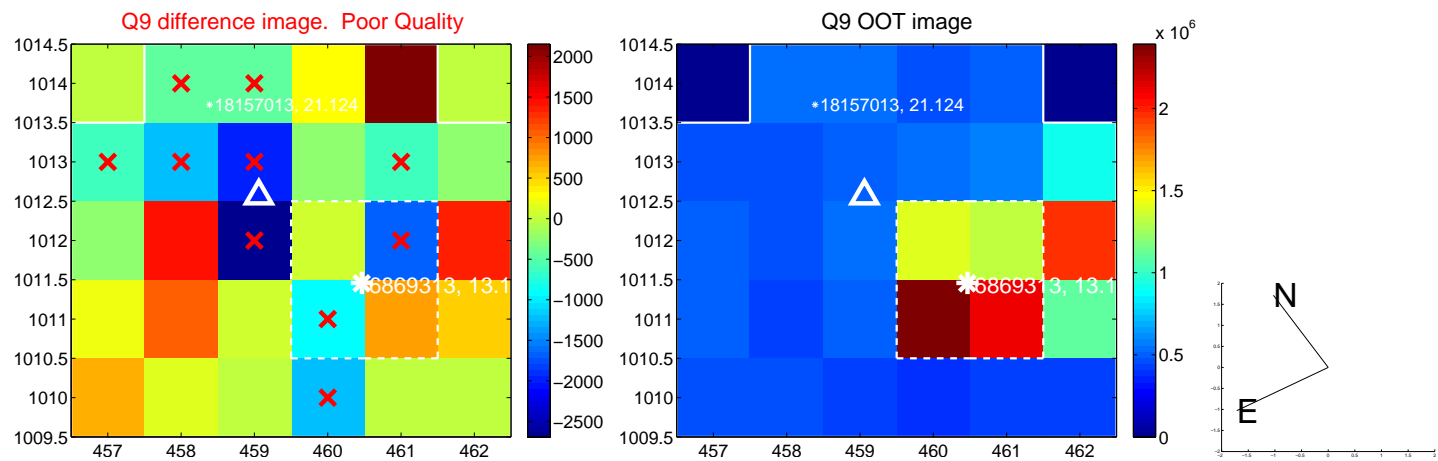
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



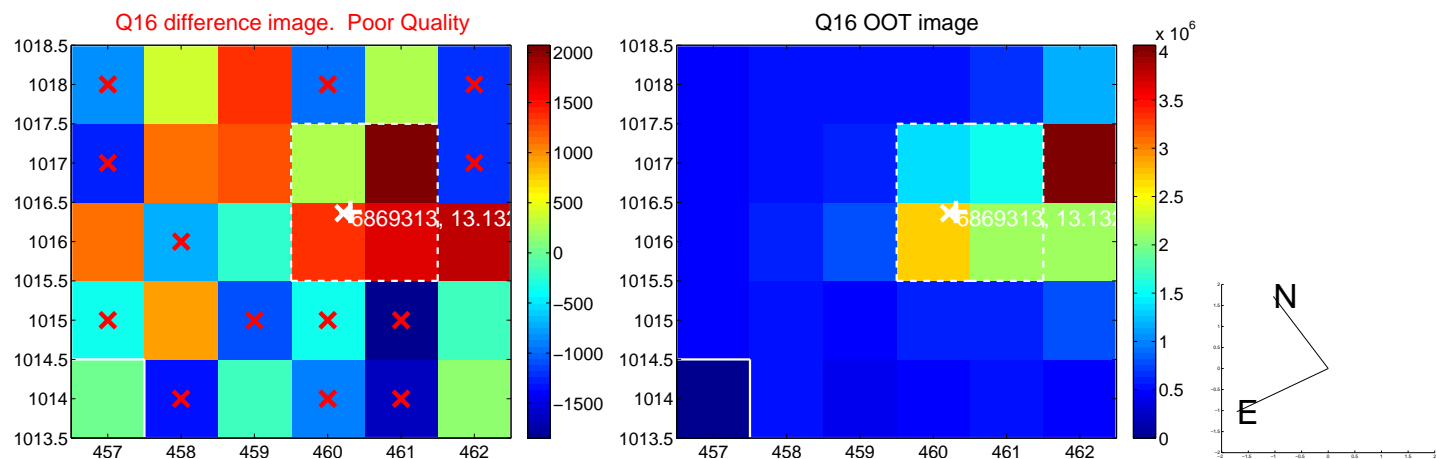
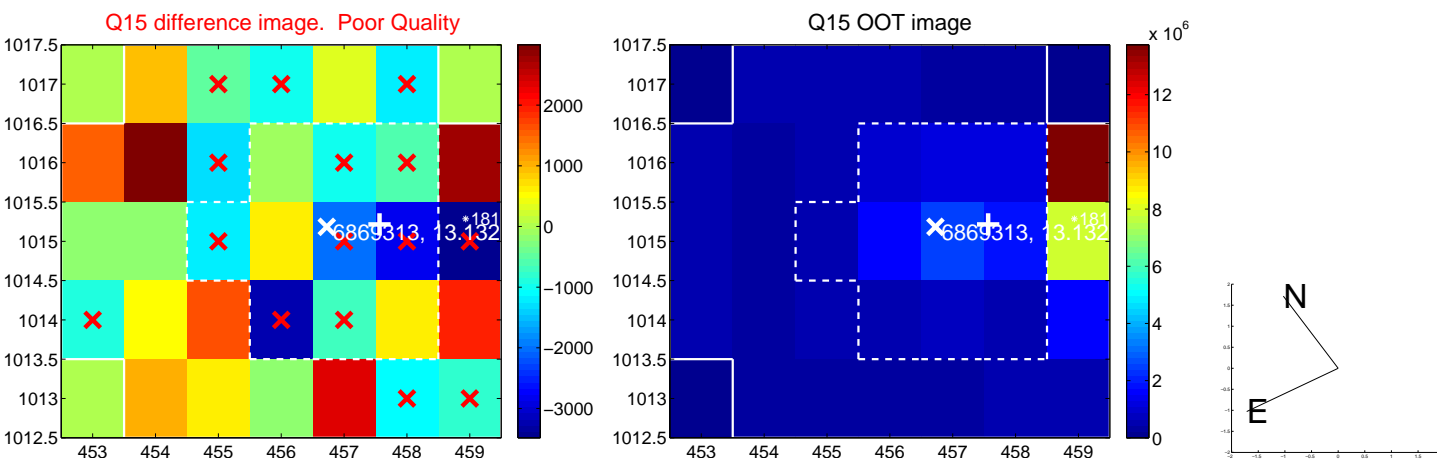
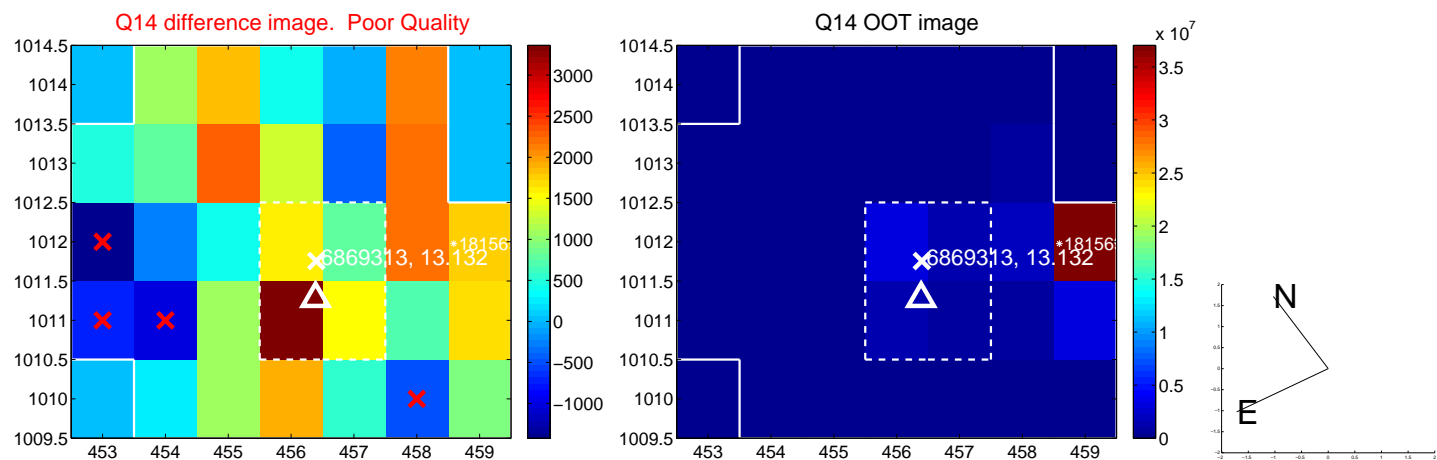
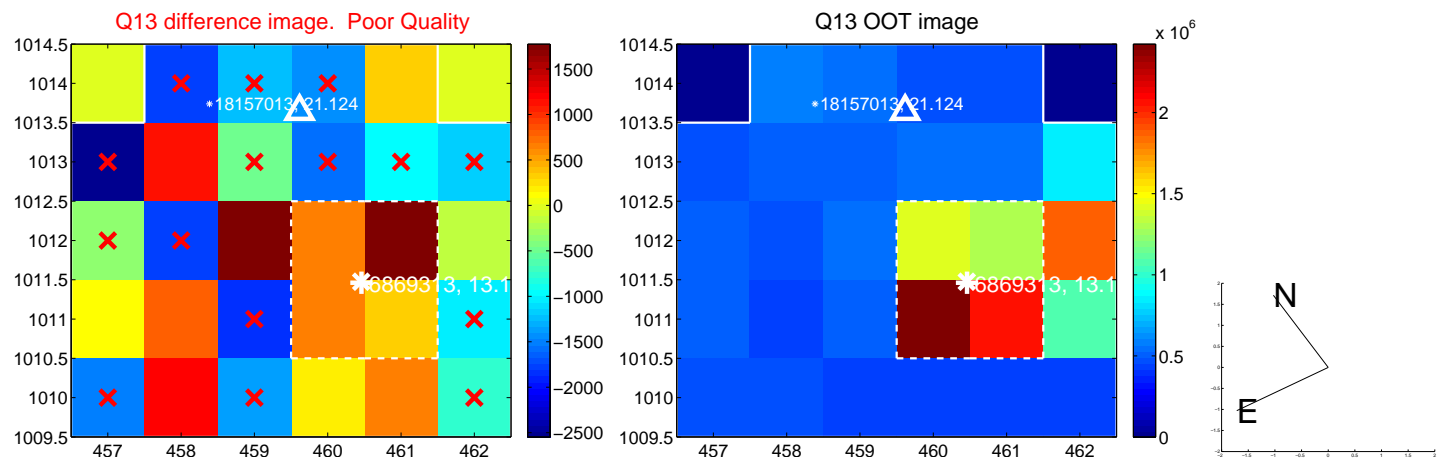
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



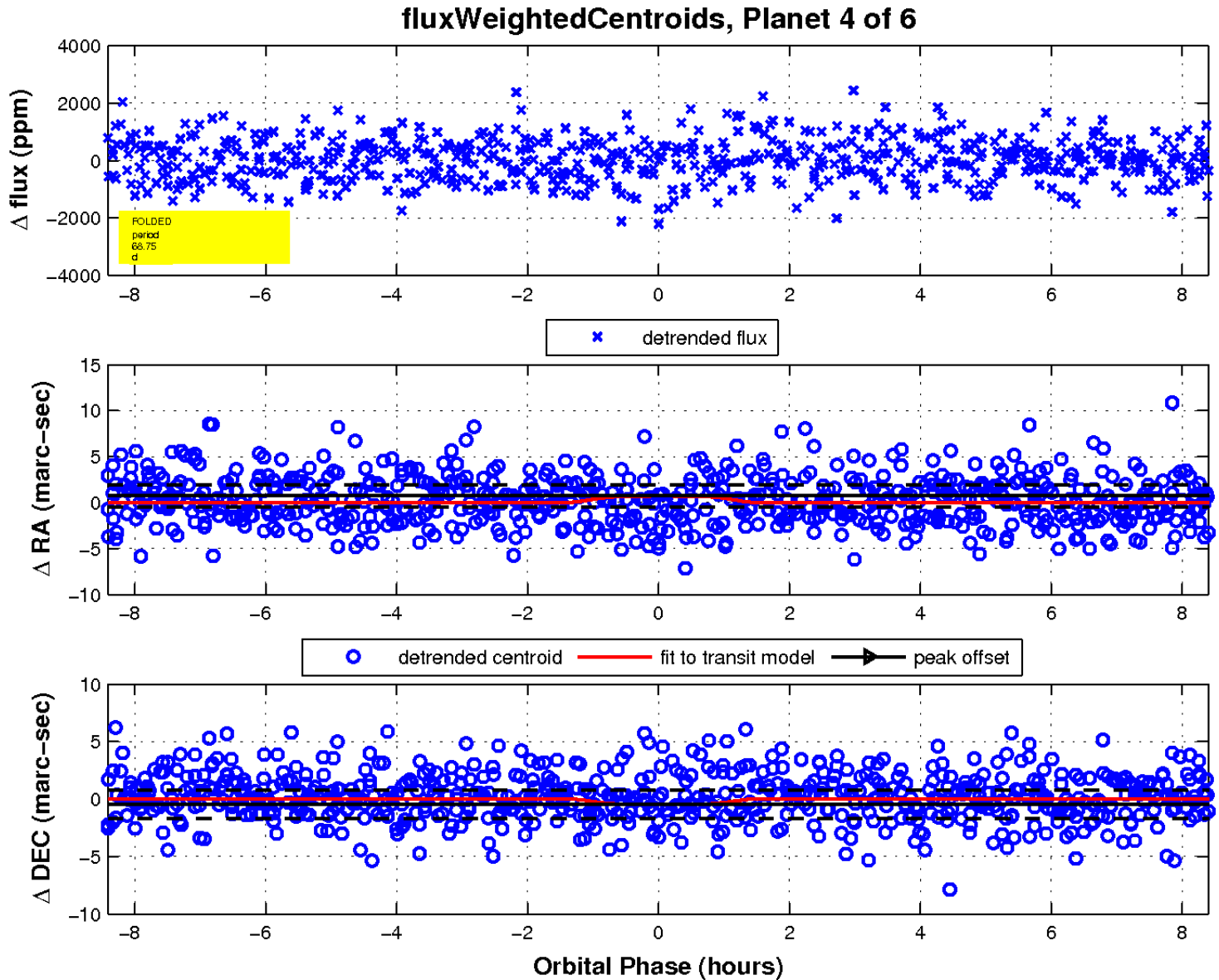
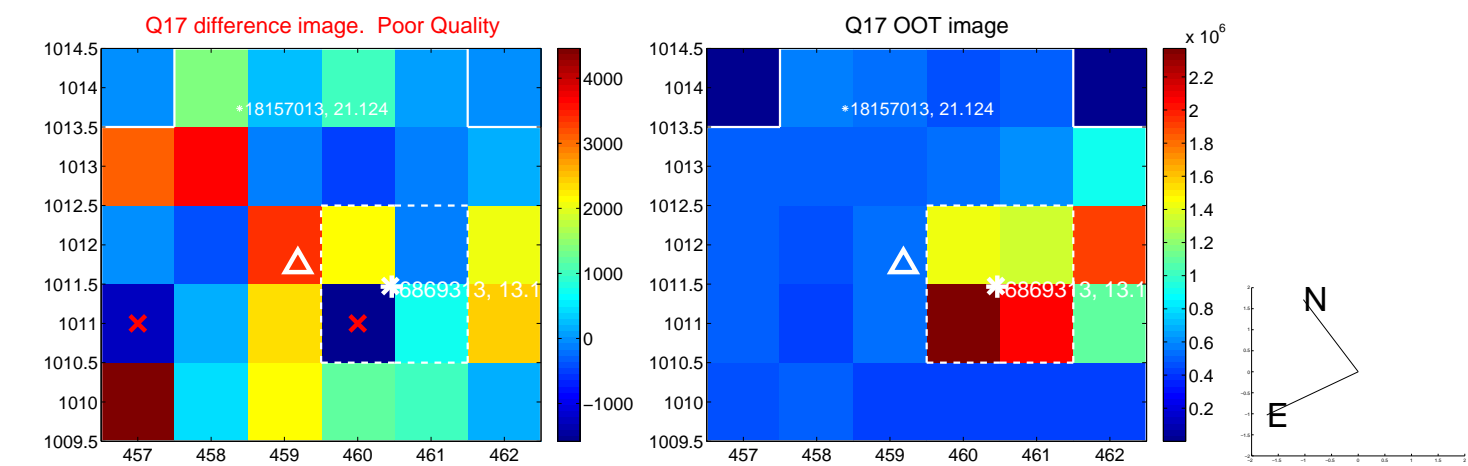
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

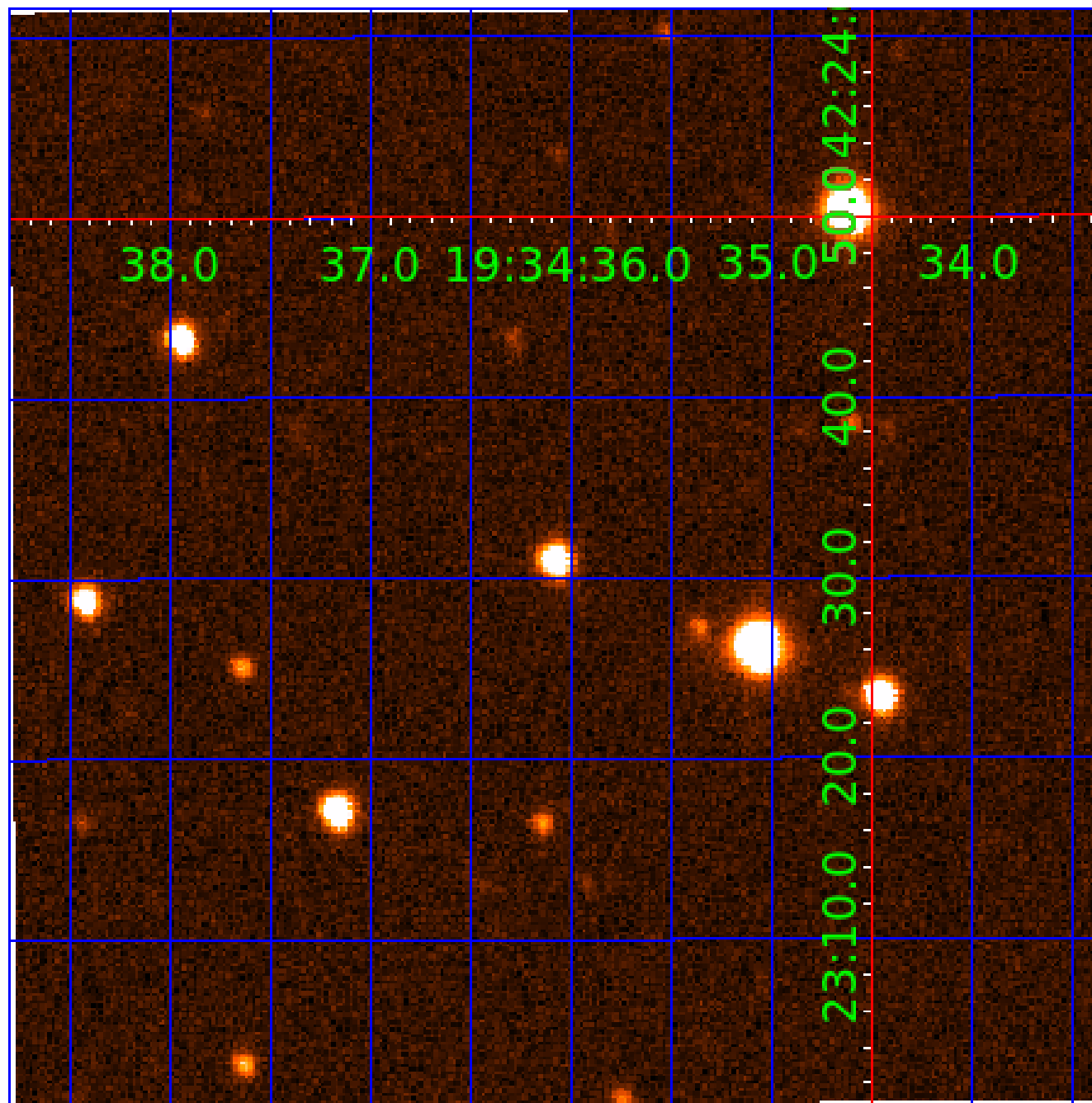


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006869313

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})
006869313-01	OBS	No	2.818444	133.794584	101.6	17.976	11.8	12.6	0.80	5325	0.79	366.83
006869313-02	OBS	No	88.317530	210.438634	902.3	2.871	9.0	6.9	0.80	5325	2.63	3.71
006869313-03	OBS	No	76.606449	136.715273	1014.4	3.081	7.8	9.0	0.80	5325	2.73	4.49
006869313-04	OBS	No	68.752966	144.455714	1038.4	2.808	7.6	7.7	0.80	5325	3.23	5.18
006869313-05	OBS	No	25.026820	153.515985	861.8	1.502	8.4	9.0	0.80	5325	2.59	19.95
006869313-06	OBS	No	44.805878	165.228744	752.3	3.694	8.1	7.9	0.80	5325	2.53	9.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006869313-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_CROWDED—HALO_GHOST
006869313-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
006869313-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

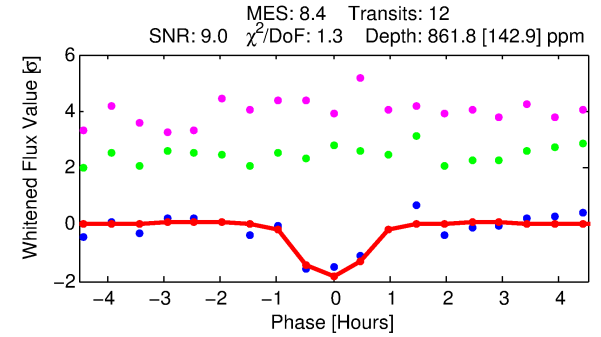
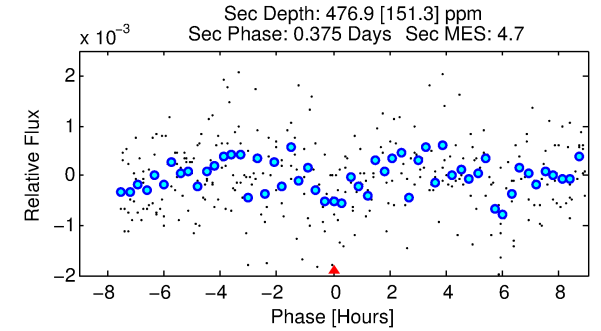
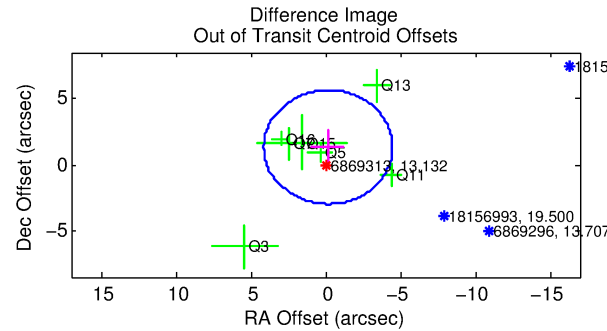
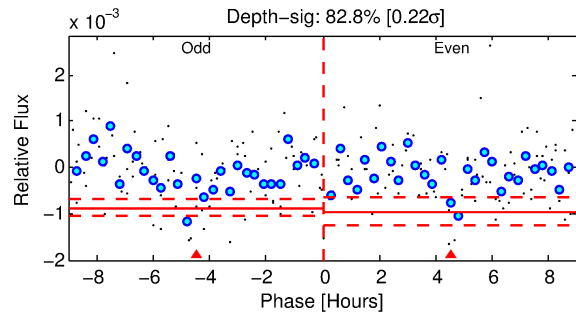
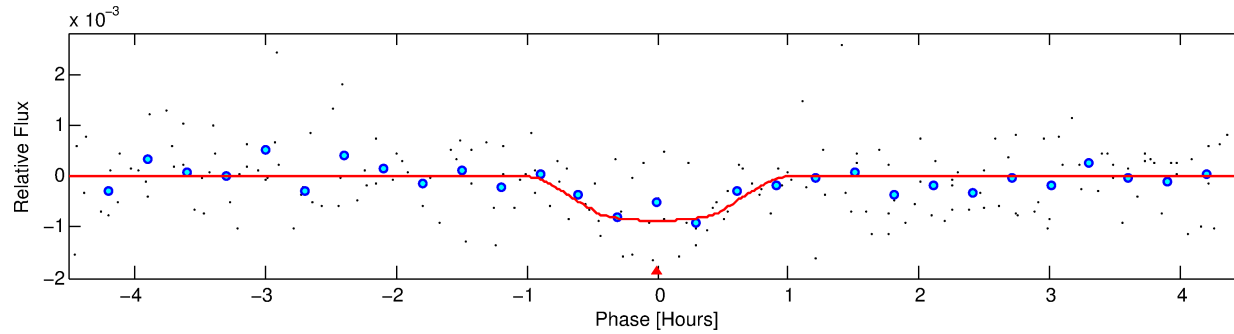
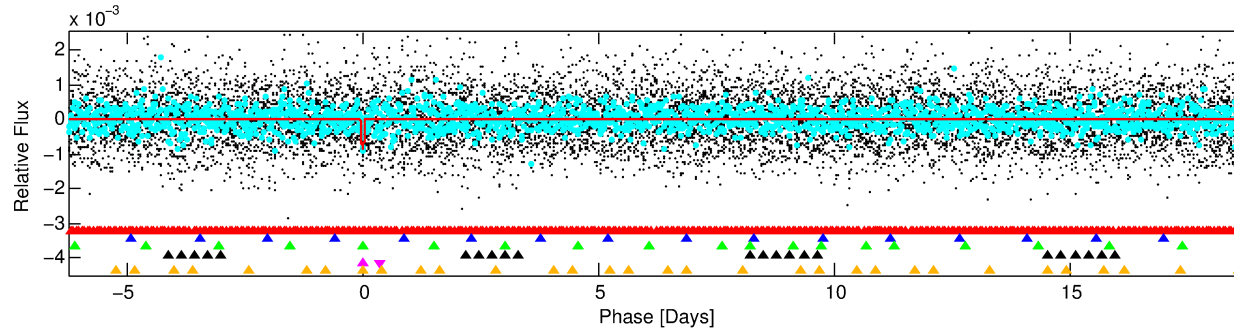
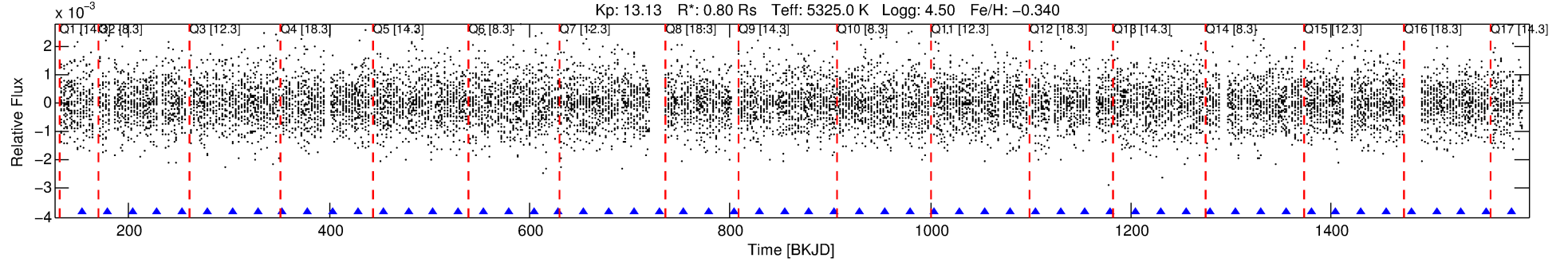
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006869313-05

No Significant Match Found

DV One-Page Summary

KIC: 6869313 Candidate: 5 of 6 Period: 25.027 d



DV Fit Results:

Period = 25.02682 [0.00022] d
Epoch = 153.5160 [0.0065] BKJD
Rp/R* = 0.0298 [0.0549]
a/R* = 85.78 [629.99]
b = 0.78 [3.82]
Seff = 19.95 [4.78]
Teq = 539 [32] K
Rp = 2.59 [4.79] Re
a = 0.1515 [0.0193] AU
Ag = 897.98 [3330.96] [0.27 σ]
Teffp = 4561 [4228] K [0.95 σ]

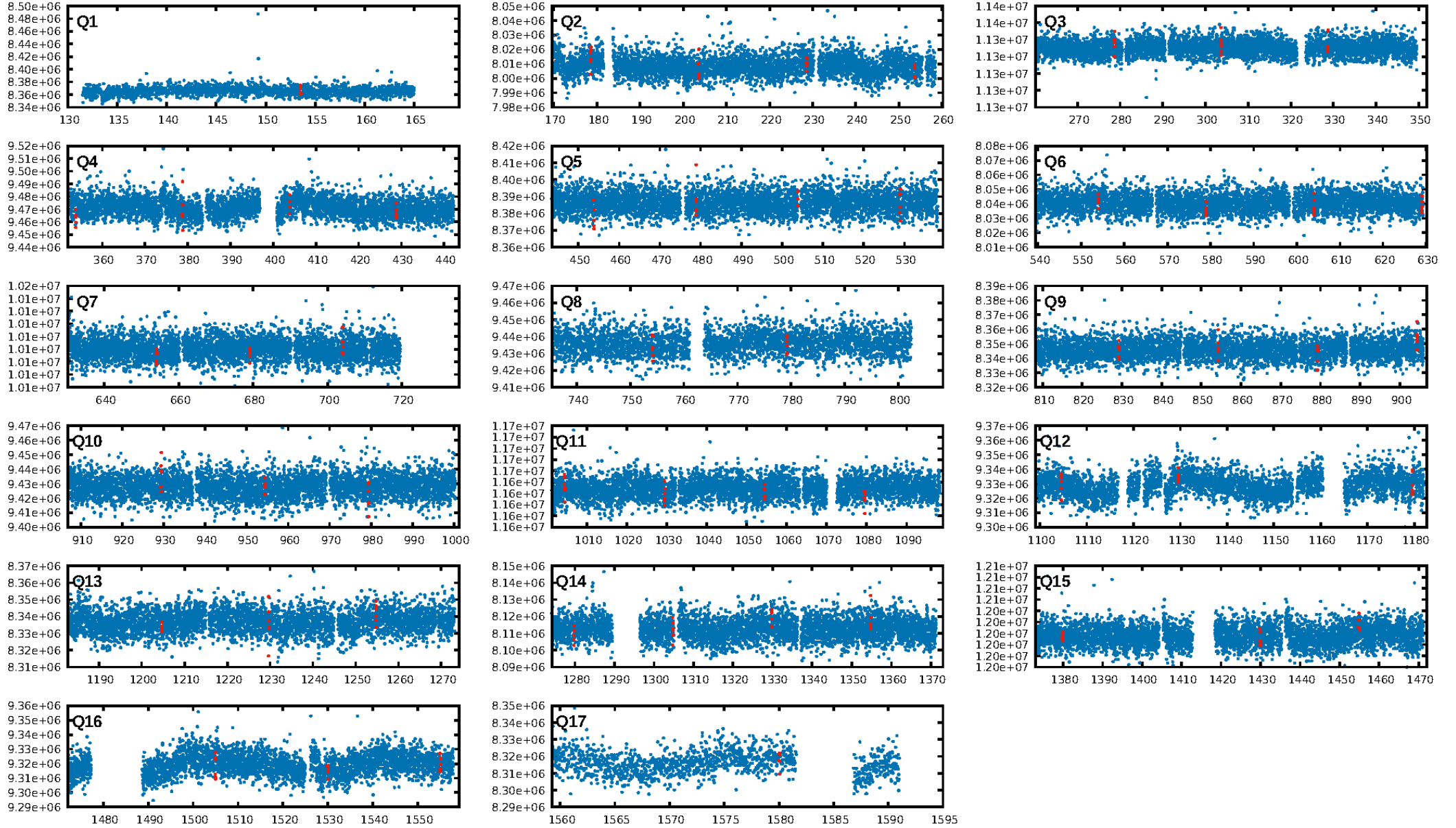
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [29.55 σ]
LongPeriod-sig: 100.0% [119.04 σ]
ModelChiSquare2-sig: 15.6%
ModelChiSquareGof-sig: 90.2%
Bootstrap-pfa: 9.63e-10
RollingBand-fgt: 1.00 [12/12]
GhostDiagnostic-chr: 14.81
Centroid-sig: 64.0%
Centroid-so: 2.769 arcsec [3.57 σ]
OotOffset-rm: 1.338 arcsec [0.93 σ]
KicOffset-rm: 1.295 arcsec [0.77 σ]
OotOffset-st: 0/4/1/2 [7]
KicOffset-st: 1/4/1/2 [8]
DiffImageQuality-fgm: 0.00 [0/8]
DiffImageOverlap-fno: 0.82 [14/17]

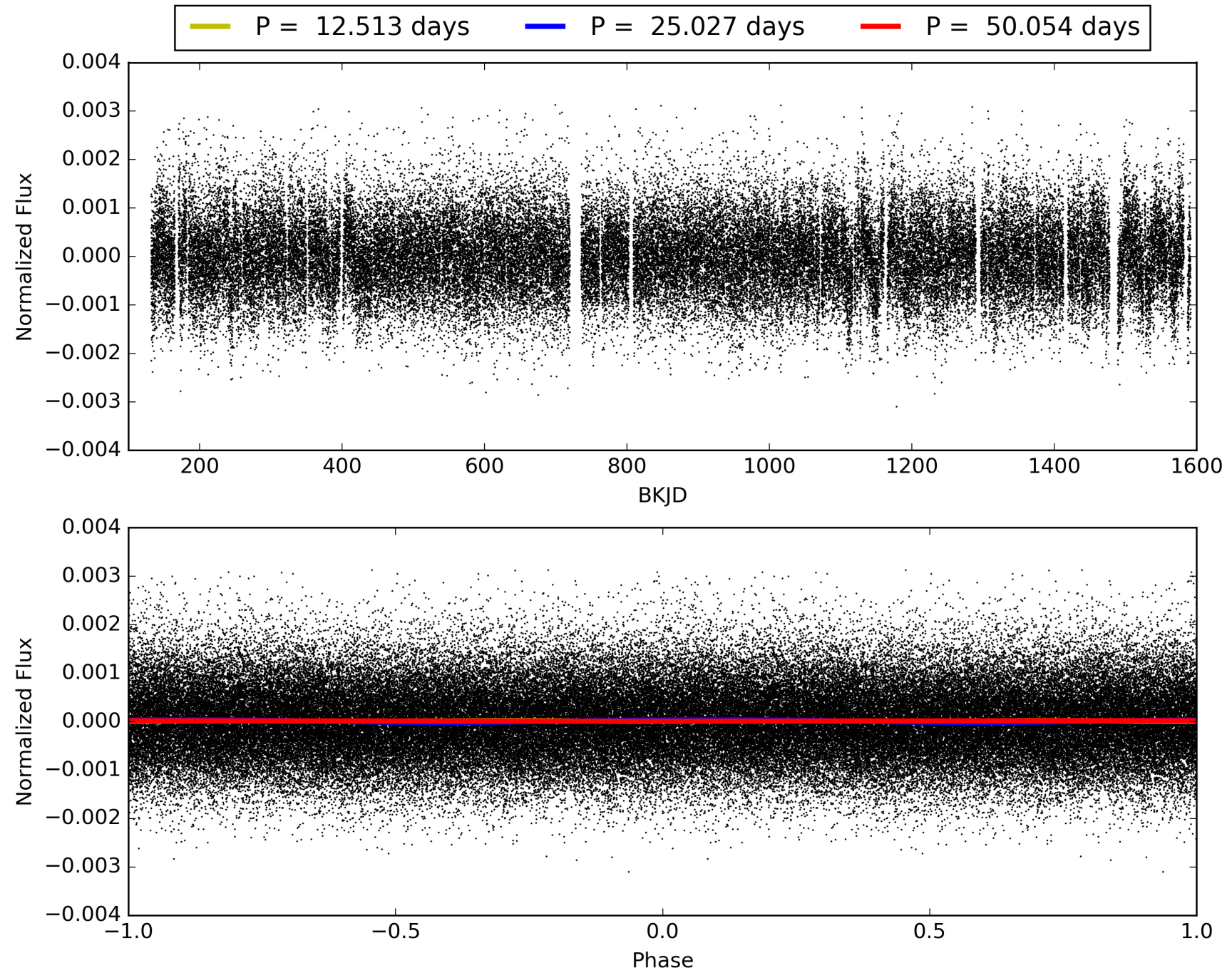
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:33:34 Z

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

TCE 006869313-05, PDC Light Curves

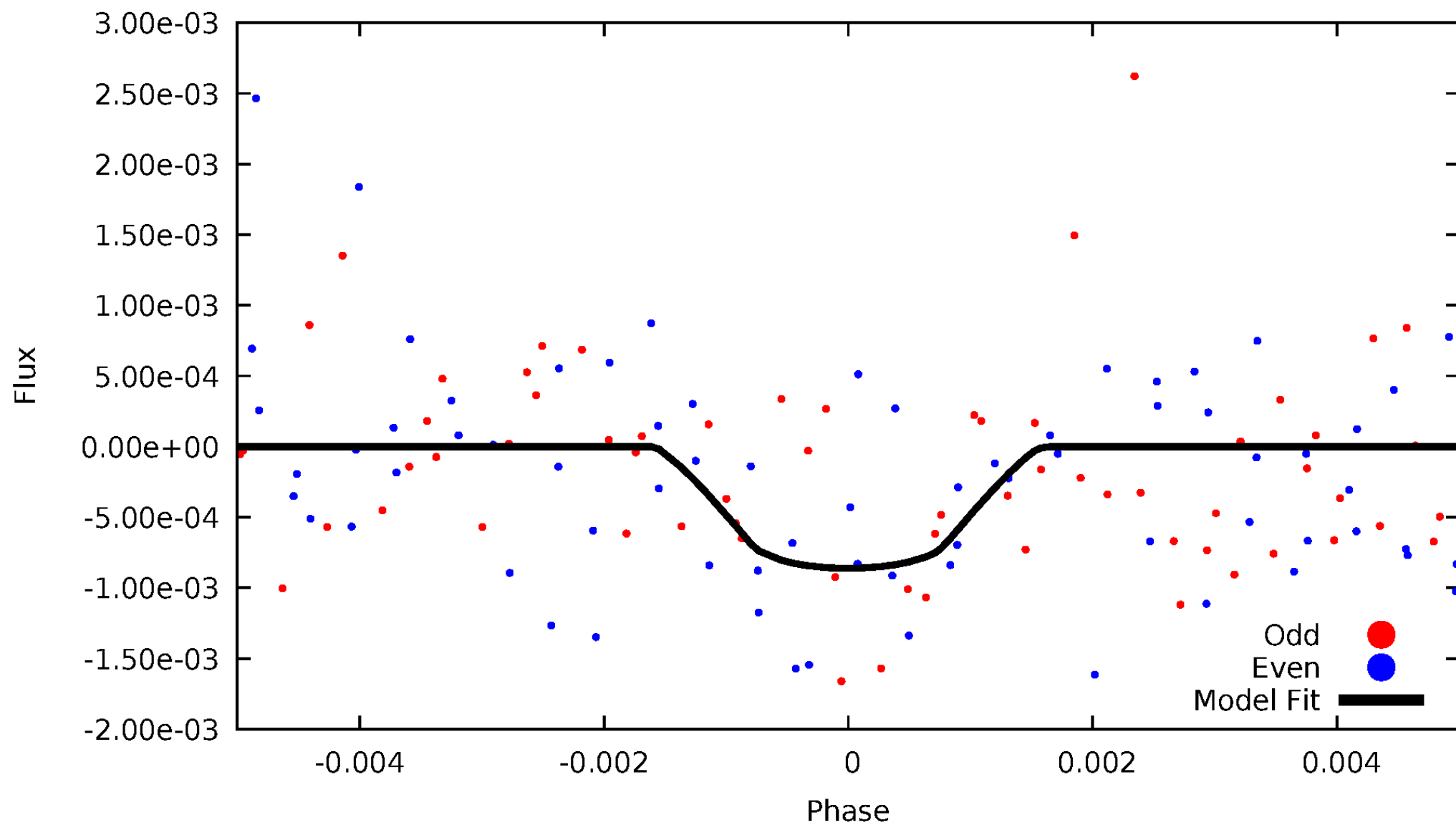


TCE 006869313-05



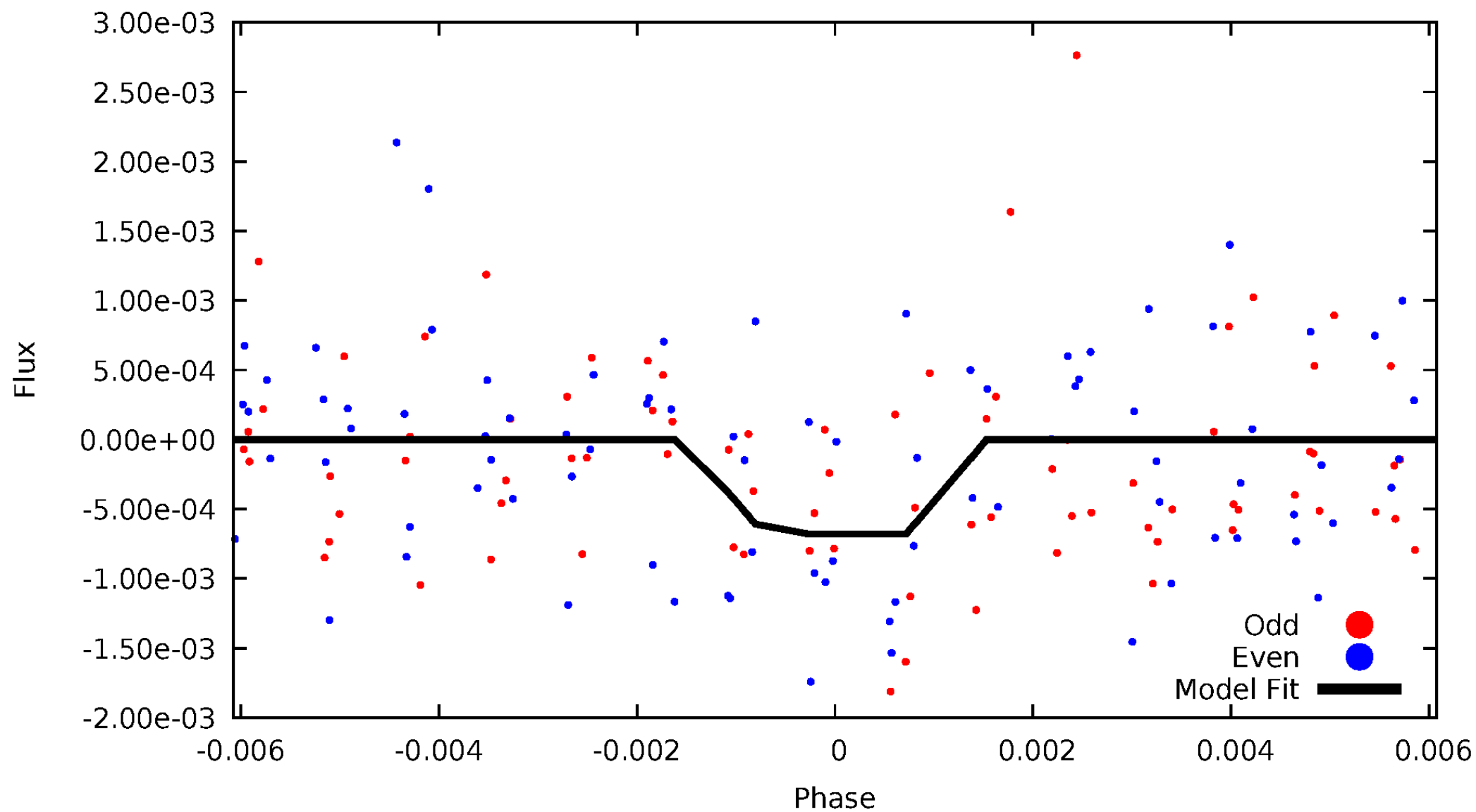
DV Odd/Even

TCE 006869313-05



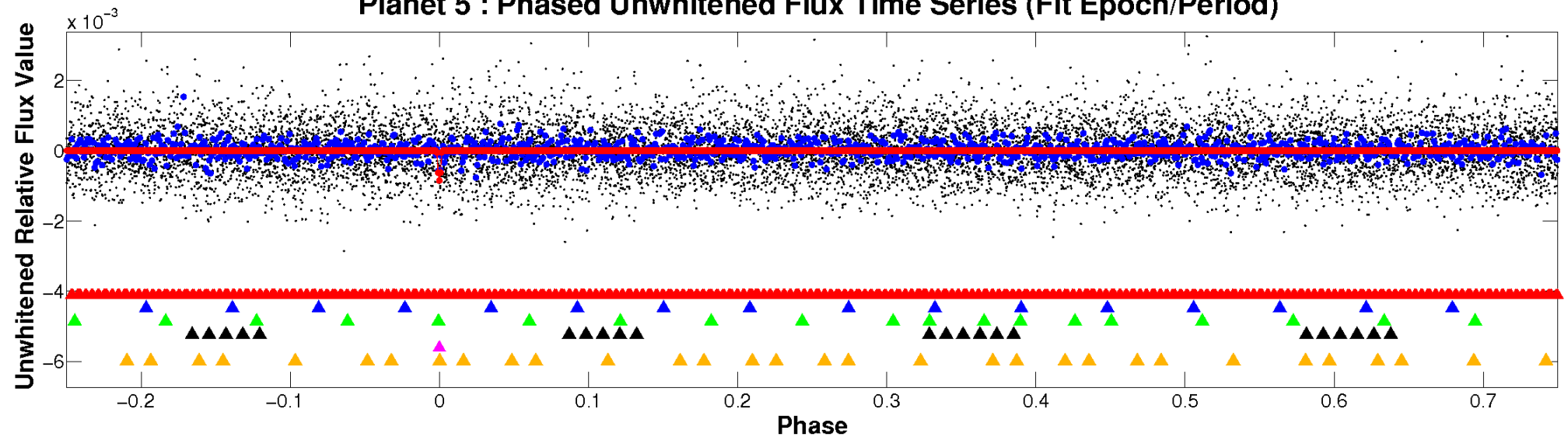
ALT Odd/Even

TCE 006869313-05

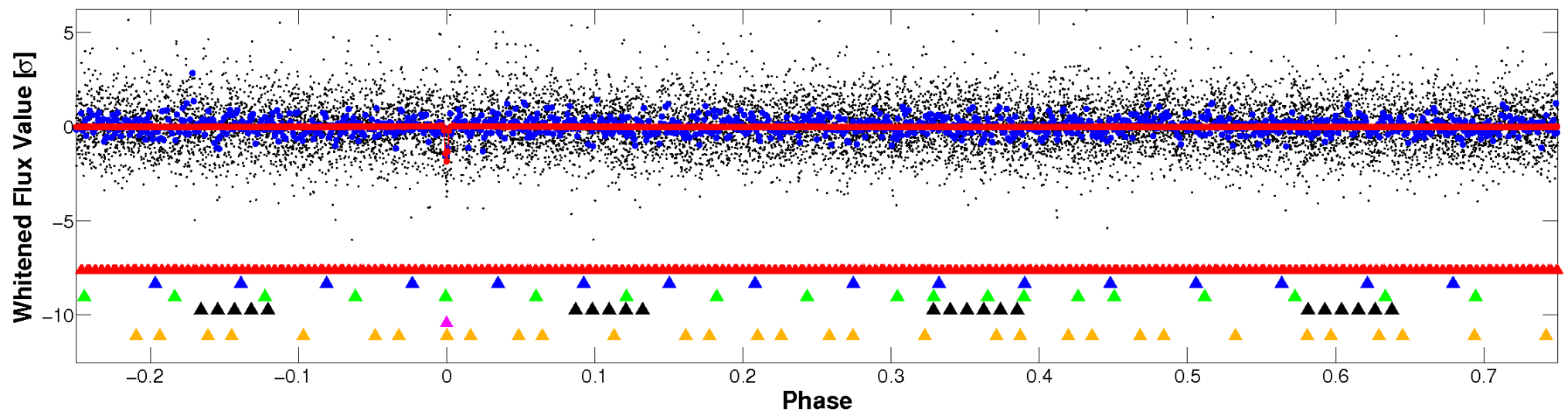


Non-Whitened Vs. Whitened Light Curve

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

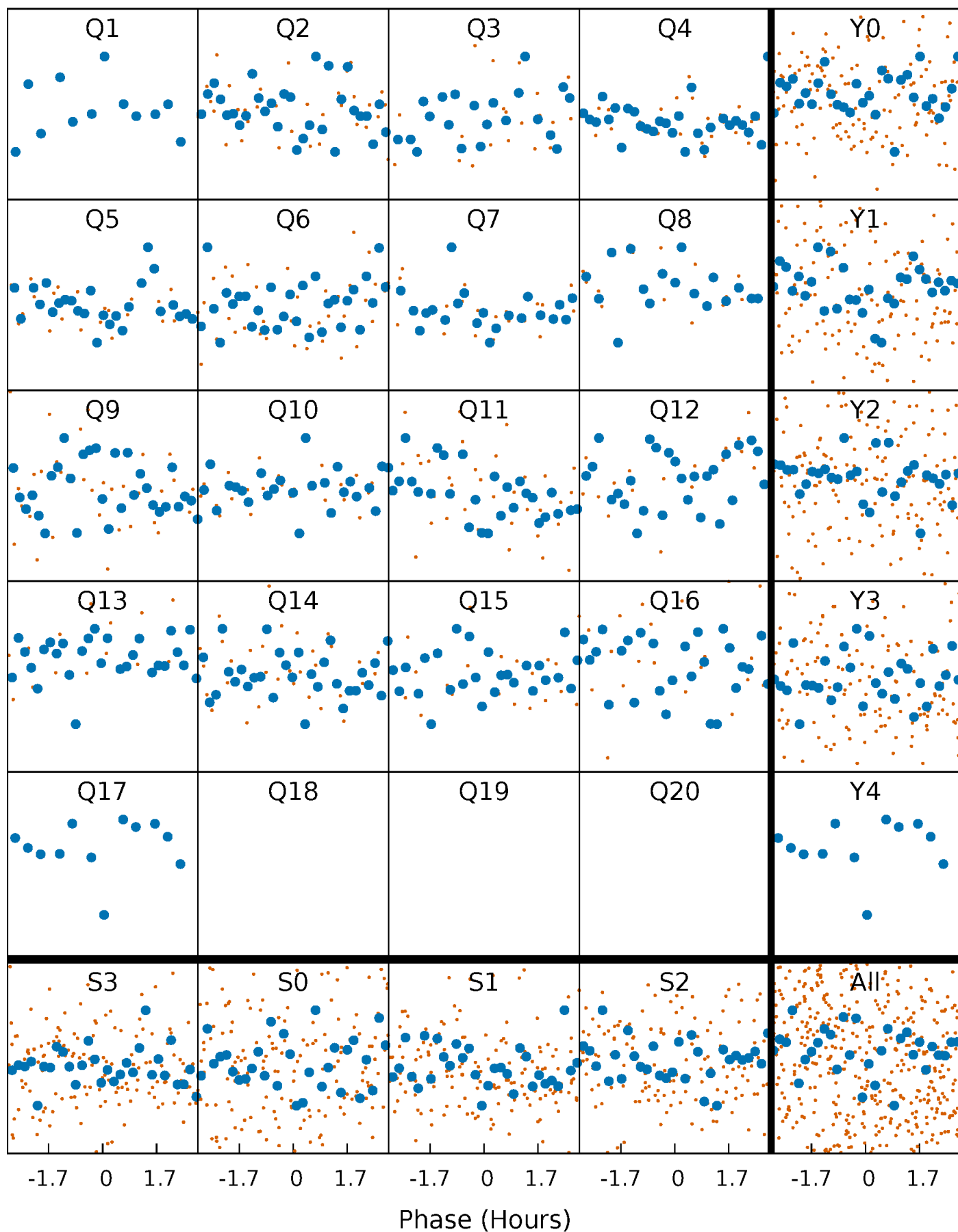


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



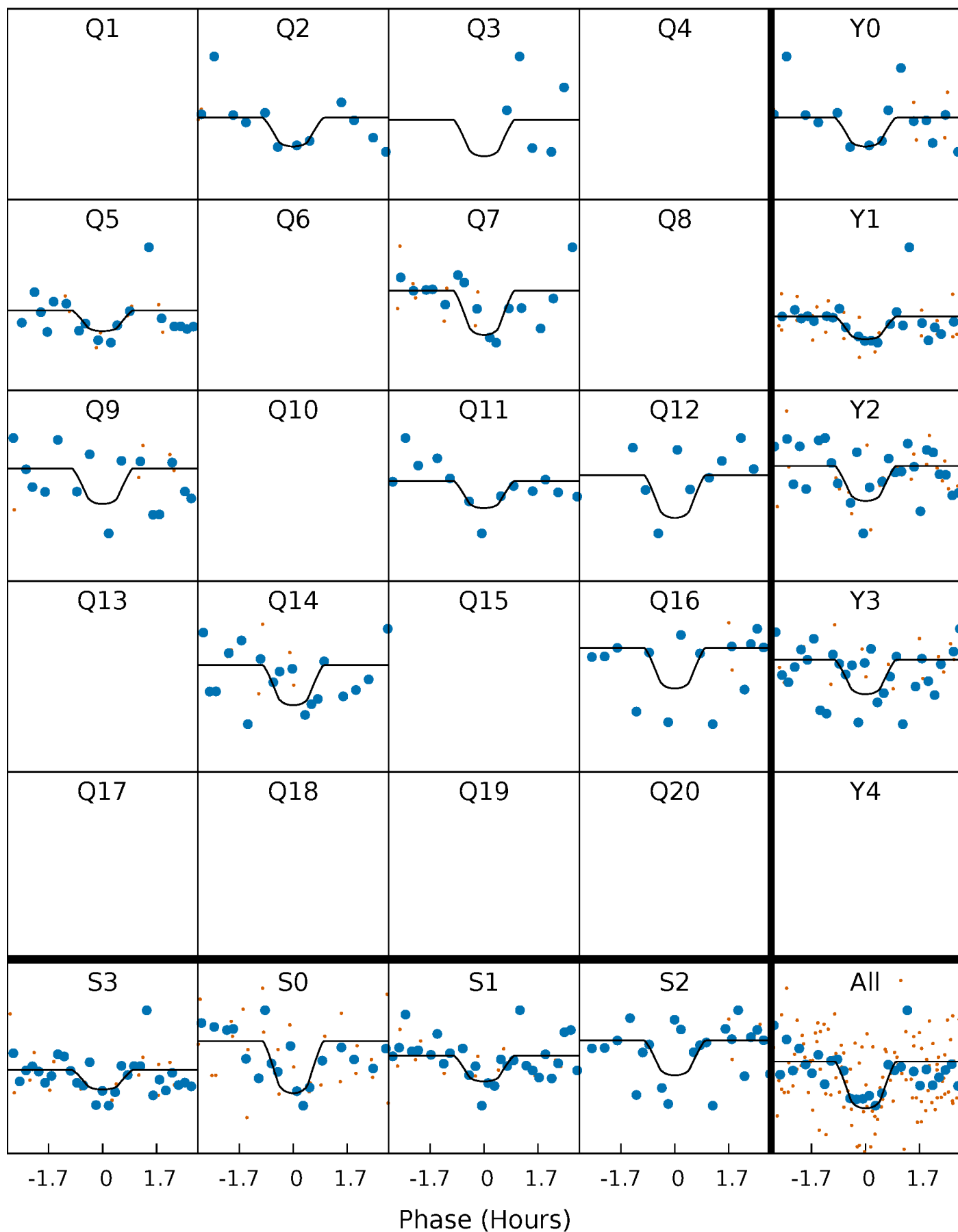
PDC Quarter-Phased Transit Curves

TCE 006869313-05 P= 25.026820 Days $T_0=153.515985$ (BKJD)



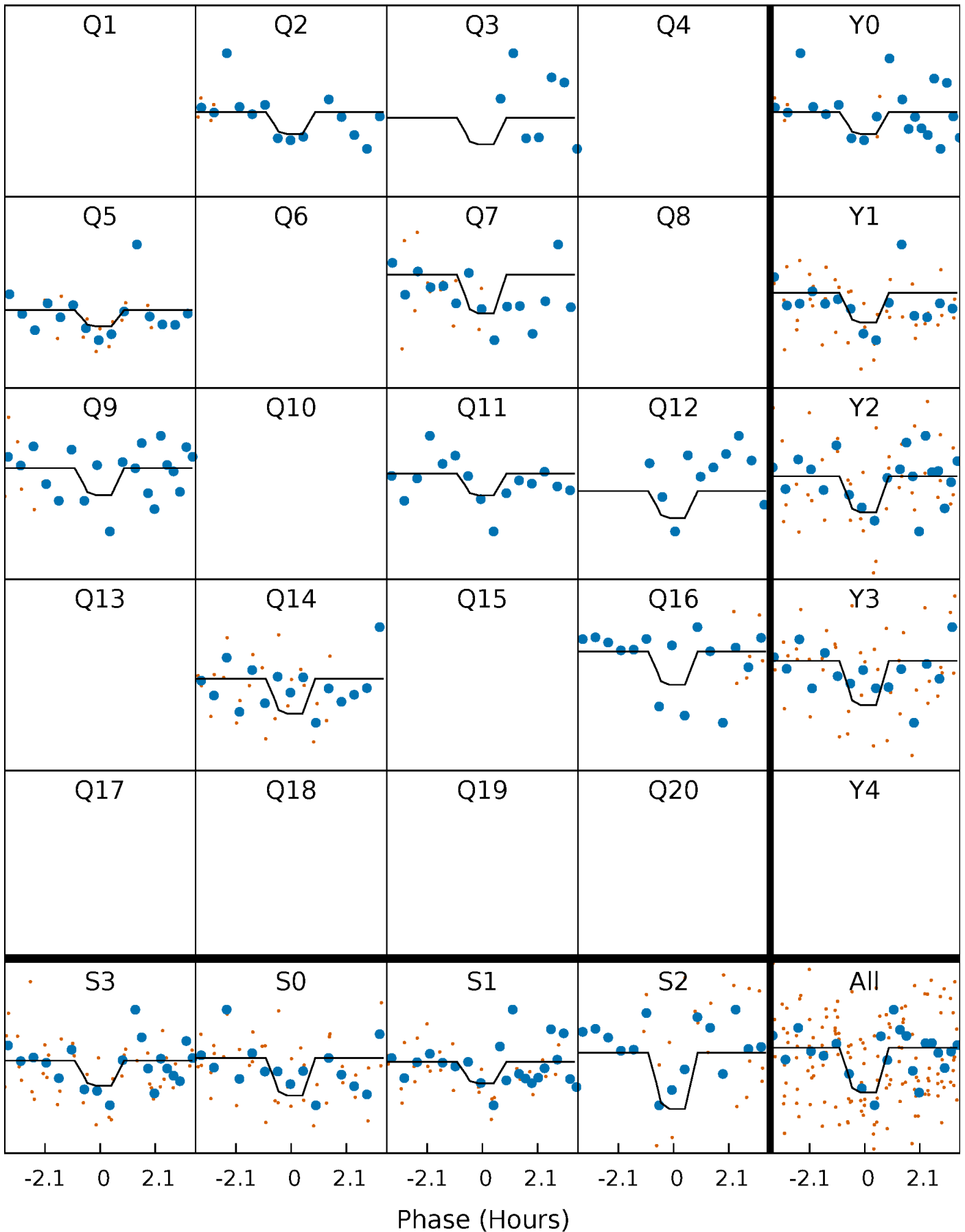
DV Quarter-Phased Transit Curves

TCE 006869313-05 P= 25.026820 Days $T_0=153.515985$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

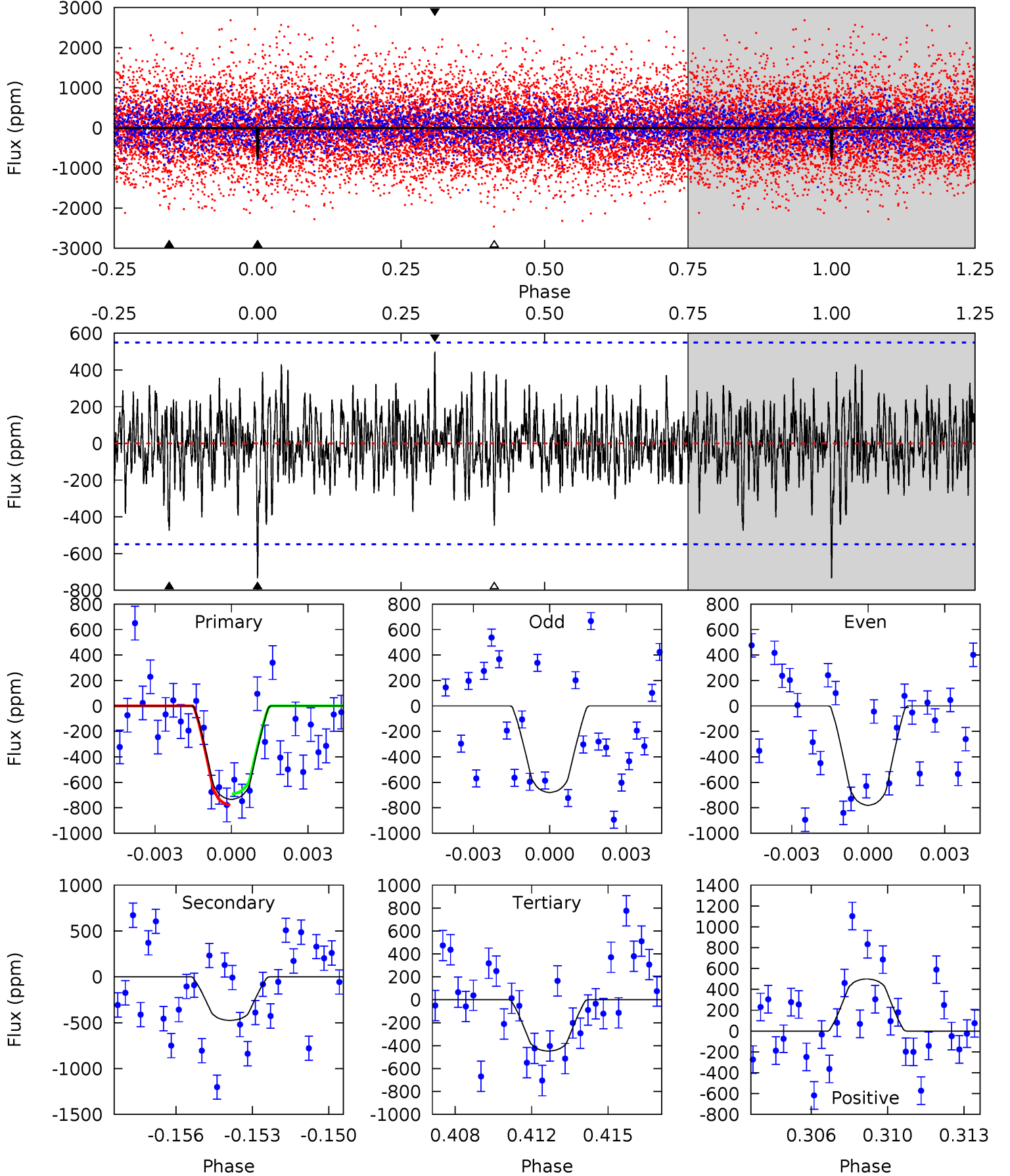
TCE 006869313-05 P= 25.026279 Days $T_0=153.520544$ (BKJD)



DV Model-Shift Uniqueness Test

006869313-05, $P = 25.026820$ Days, $E = 128.489165$ Days

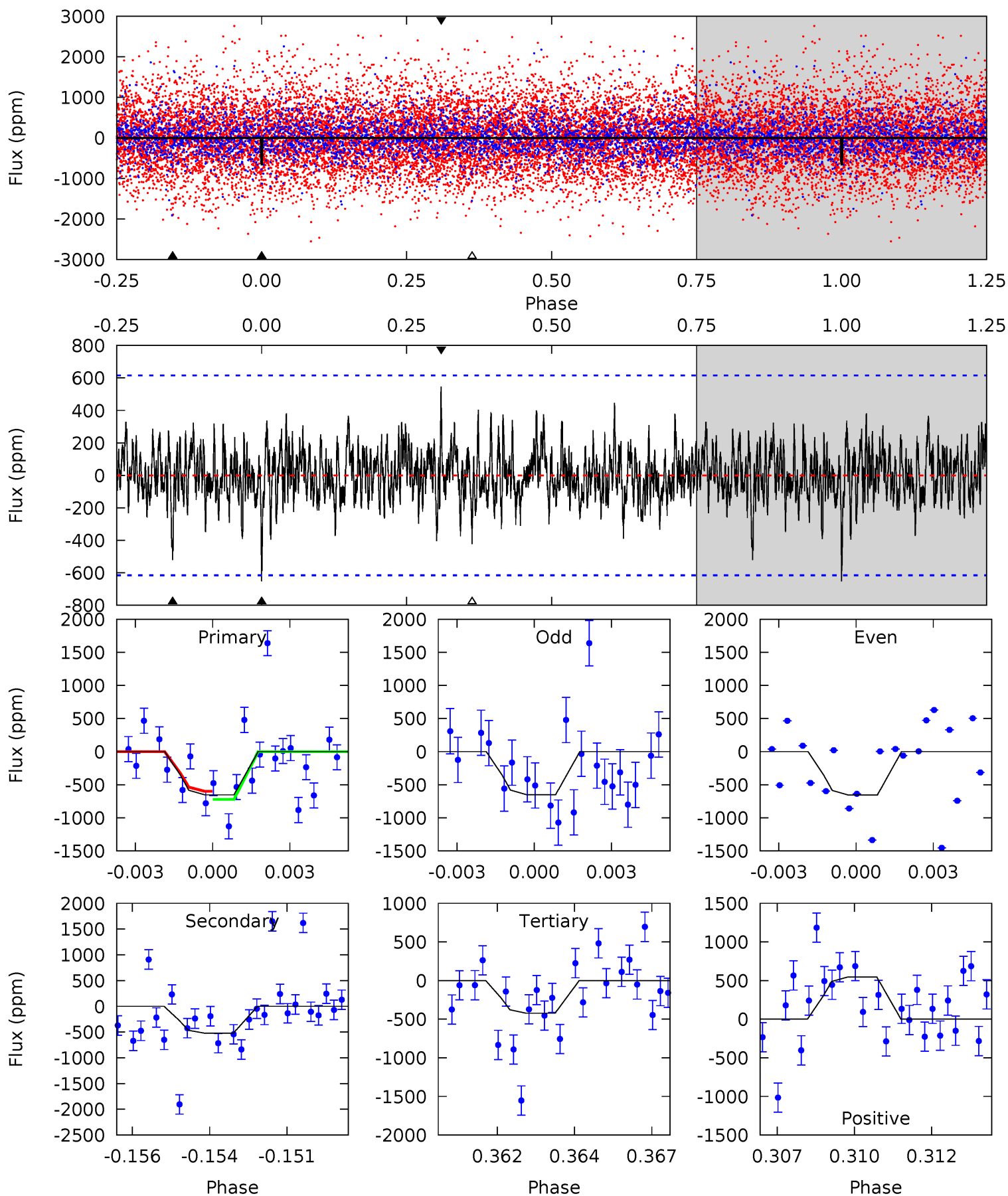
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.00	4.53	4.27	4.77	5.24	2.95	1.31	2.73	2.23	0.26	-0.24	0.48	1.17	0.41	0.42



Alt Model-Shift Uniqueness Test

006869313-05, P = 25.026279 Days, E = 128.494265 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.60	4.46	3.62	4.68	5.28	3.01	1.16	1.97	0.92	0.84	-0.22	0.02	0.95	0.46	0.52



Stellar Parameters For KIC 006869313

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5325^{+204}_{-185}	$4.504^{+0.100}_{-0.100}$	$-0.340^{+0.350}_{-0.300}$	$0.797^{+0.122}_{-0.102}$	$0.740^{+0.113}_{-0.052}$	$2.058^{+0.874}_{-0.612}$
	+4%/-3%	+2%/-2%	+103%/-88%	+15%/-13%	+15%/-7%	+42%/-30%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006869313-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-475 ± 105	$4.51^{+3.87}_{-2.91}$	756^{+38}_{-39}	3822^{+1942}_{-734}	296^{+2112}_{-216}
Alt.	-520 ± 117	$4.18^{+4.00}_{-2.76}$	753^{+44}_{-37}	3936^{+2343}_{-746}	361^{+2864}_{-268}

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 $A_{obs} \gg 1.0$

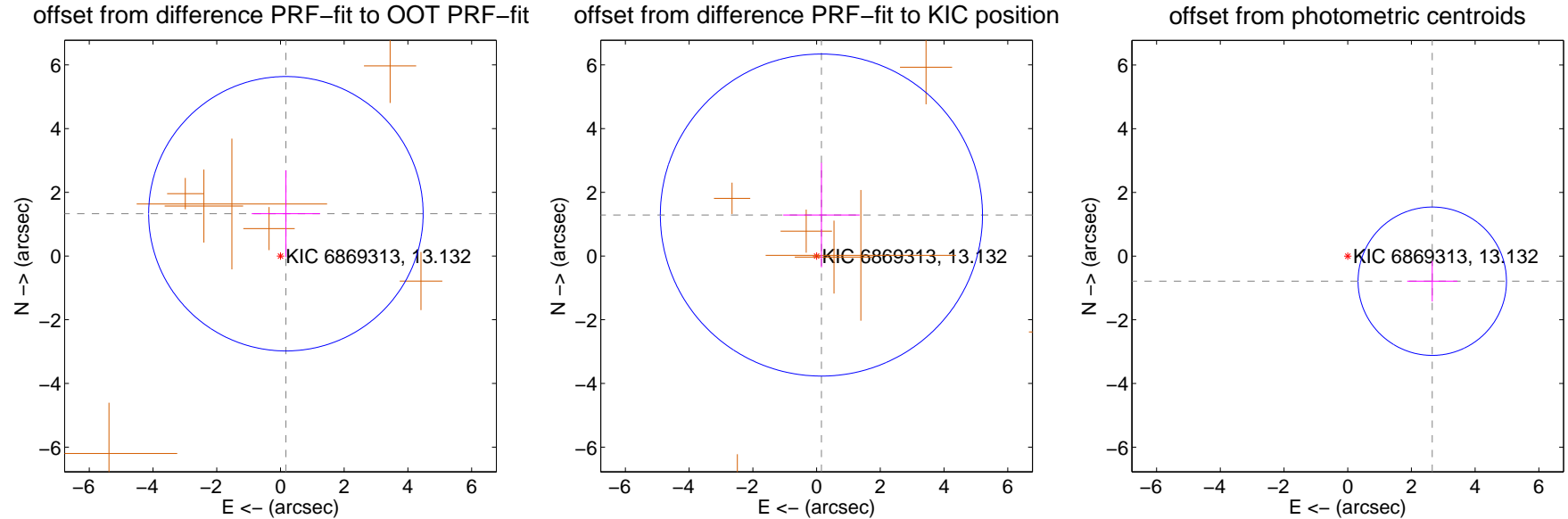
DV Centroid Data

Supplemental centroid analysis for 006869313-05. Kepler magnitude: 13.13. Transit SNR 9.03

There are 0 quarters with good PRF difference image offsets

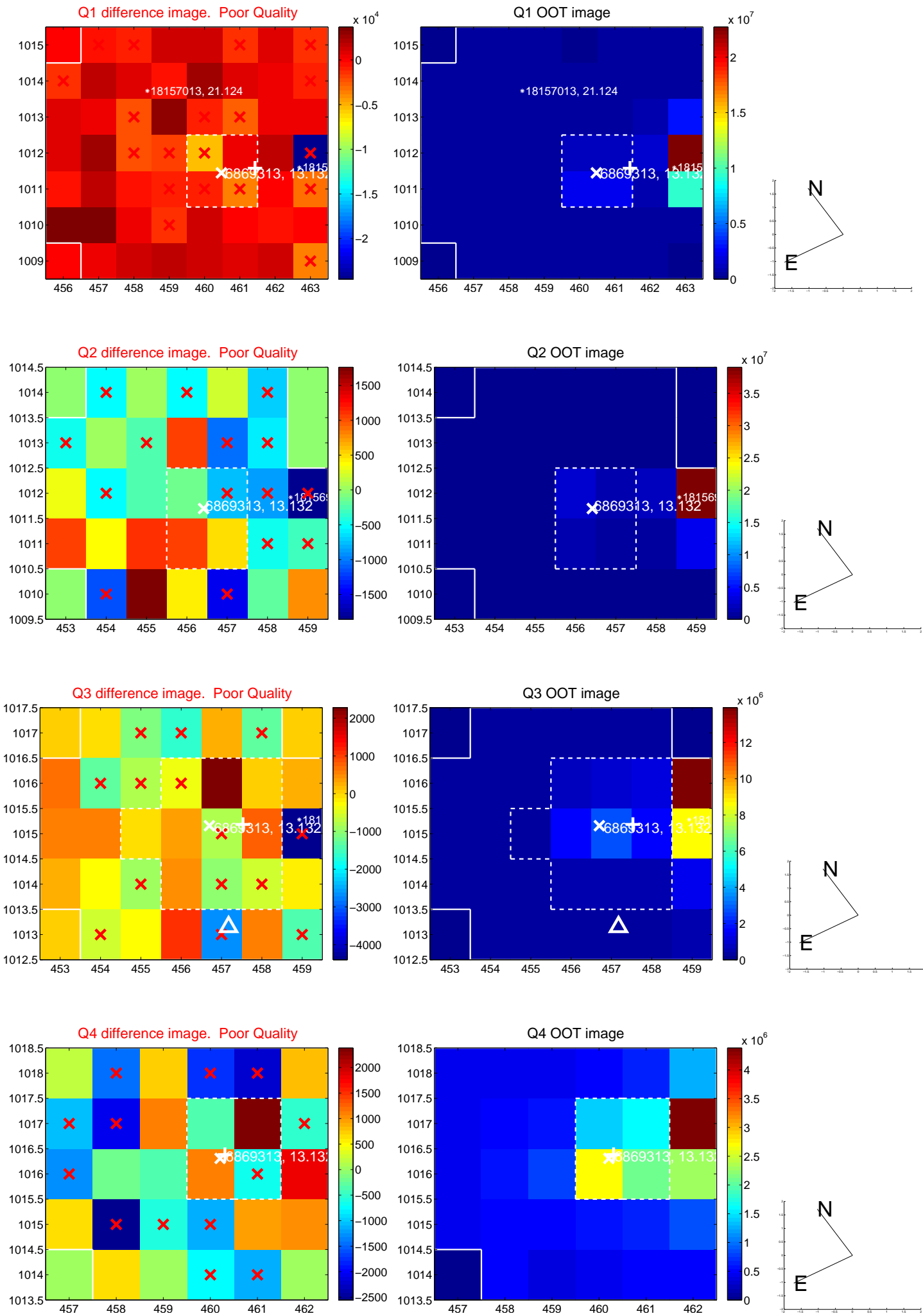
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.338 ± 1.436	0.93	-0.170 ± 1.072	1.327 ± 1.364
PRF-fit source offset from KIC position	1.295 ± 1.685	0.77	-0.152 ± 1.199	1.286 ± 1.641
photometric centroid source offset	2.77 ± 0.78	3.57	-2.65 ± 0.79	-0.79 ± 0.64

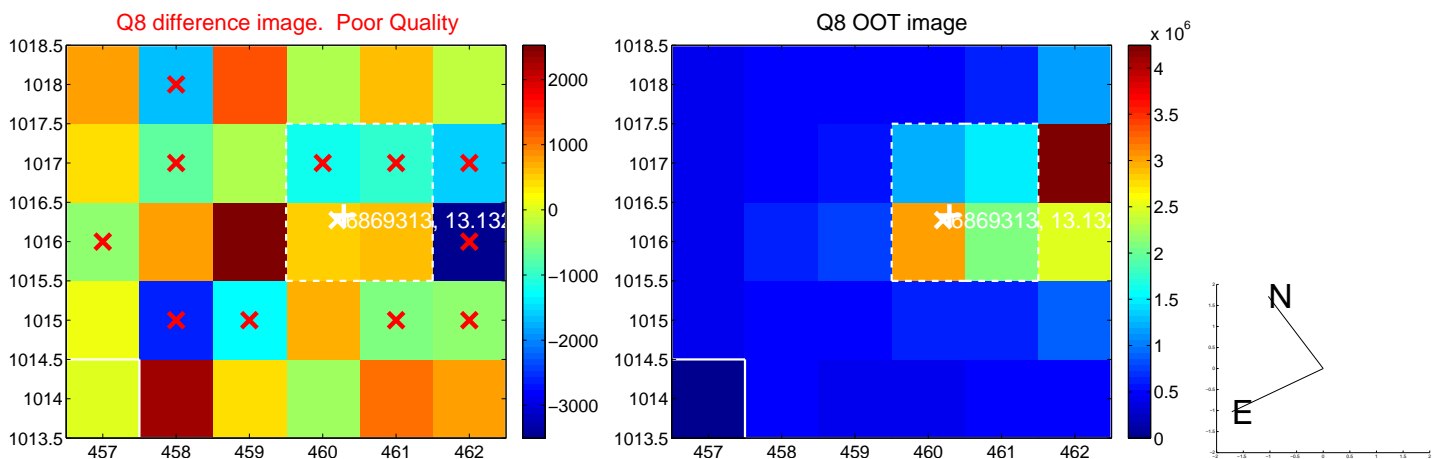
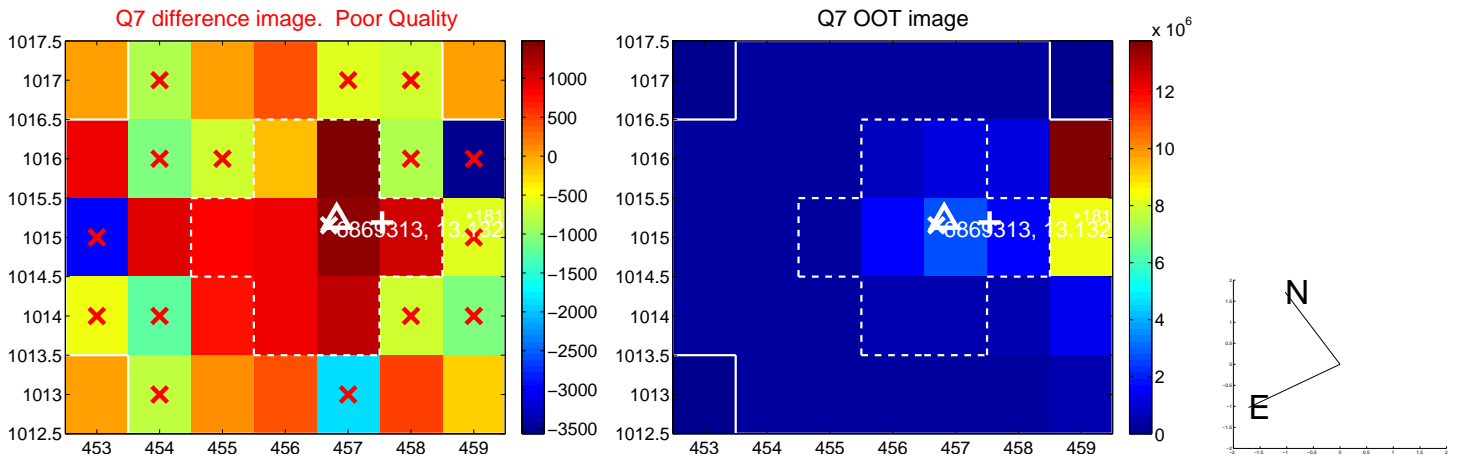
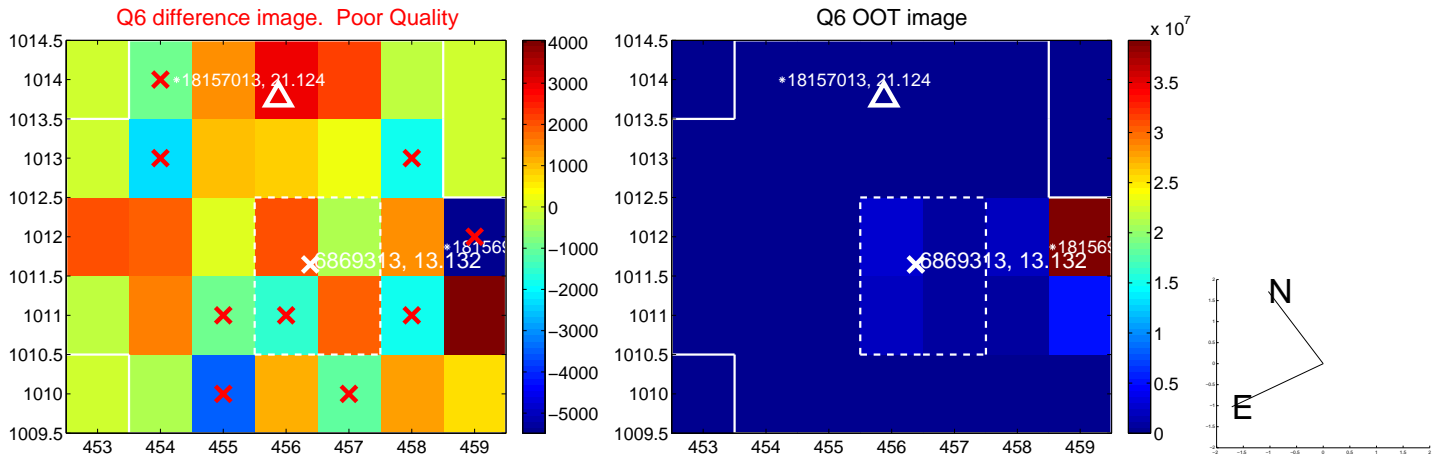
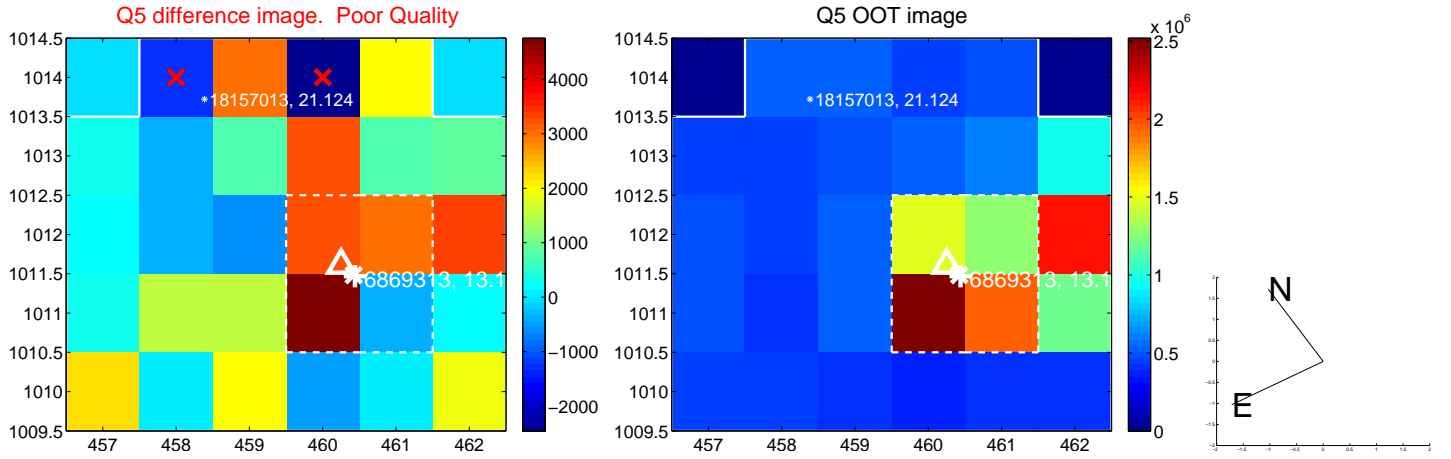


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

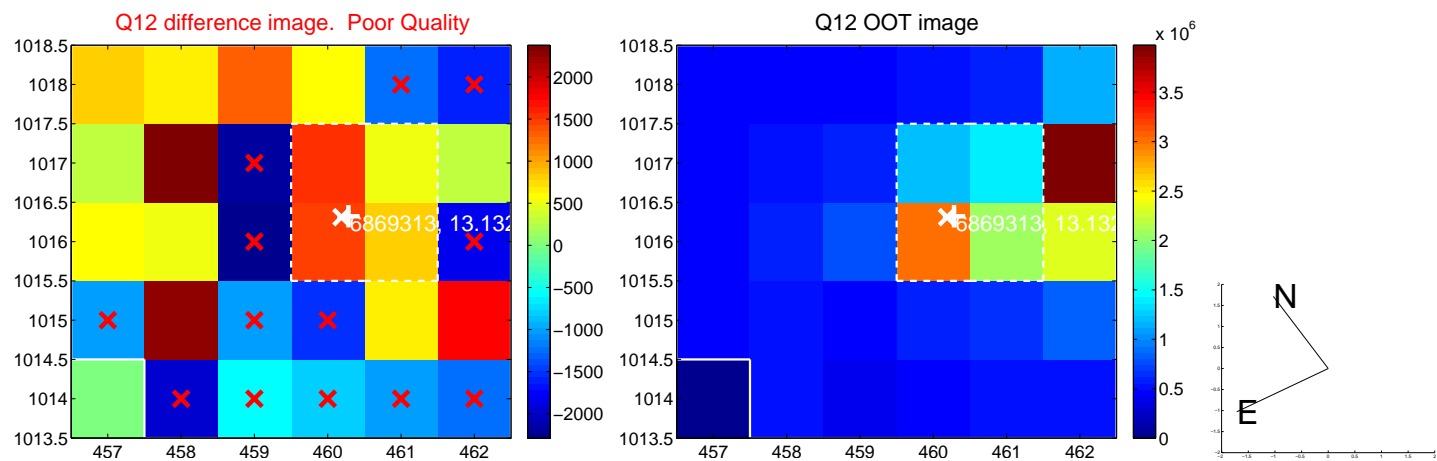
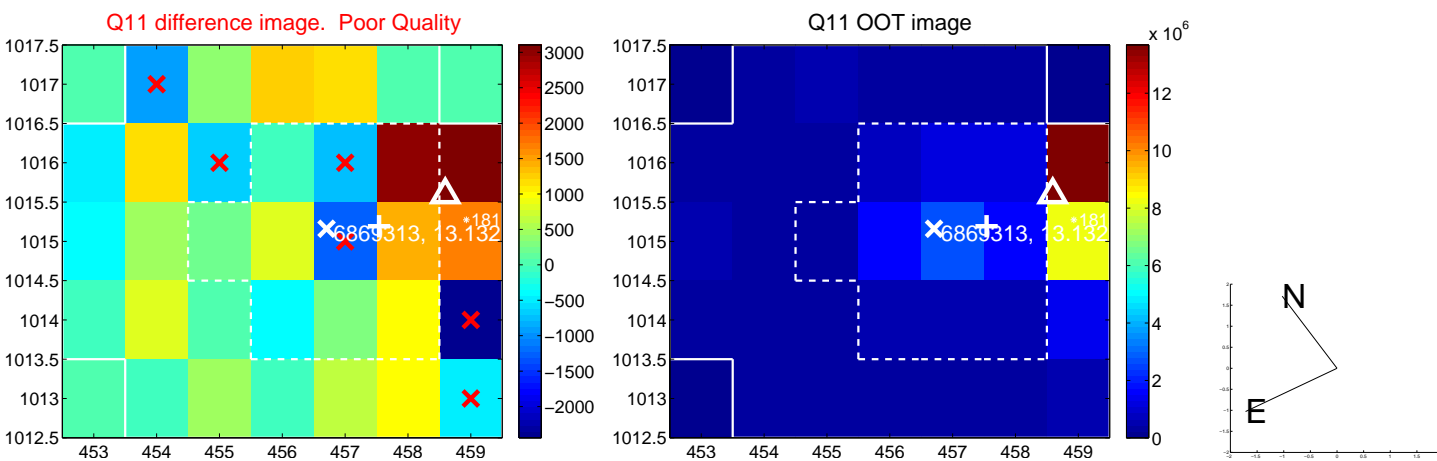
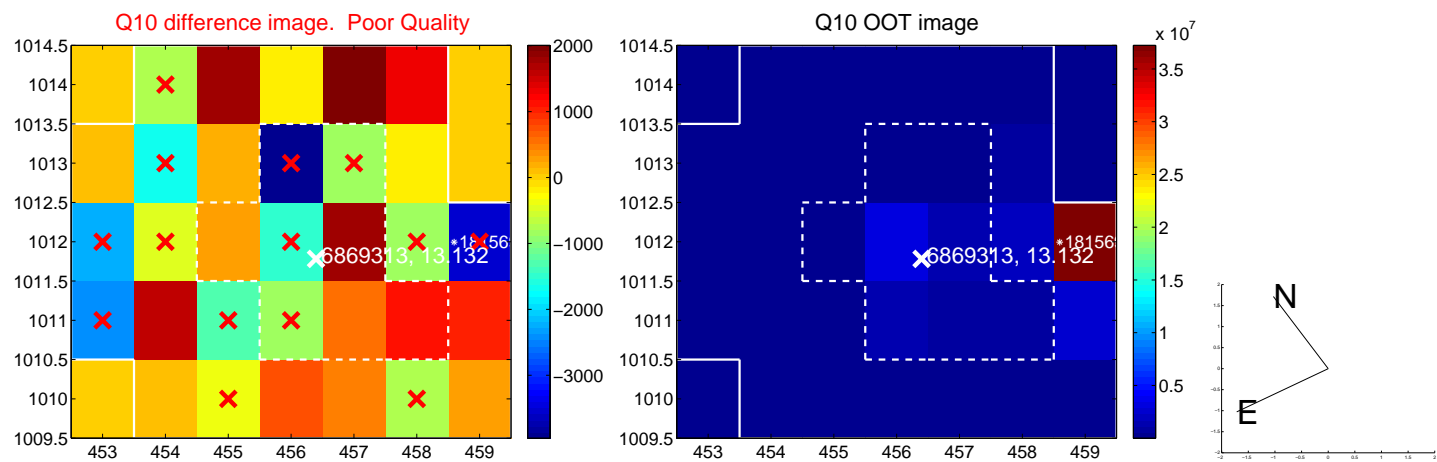
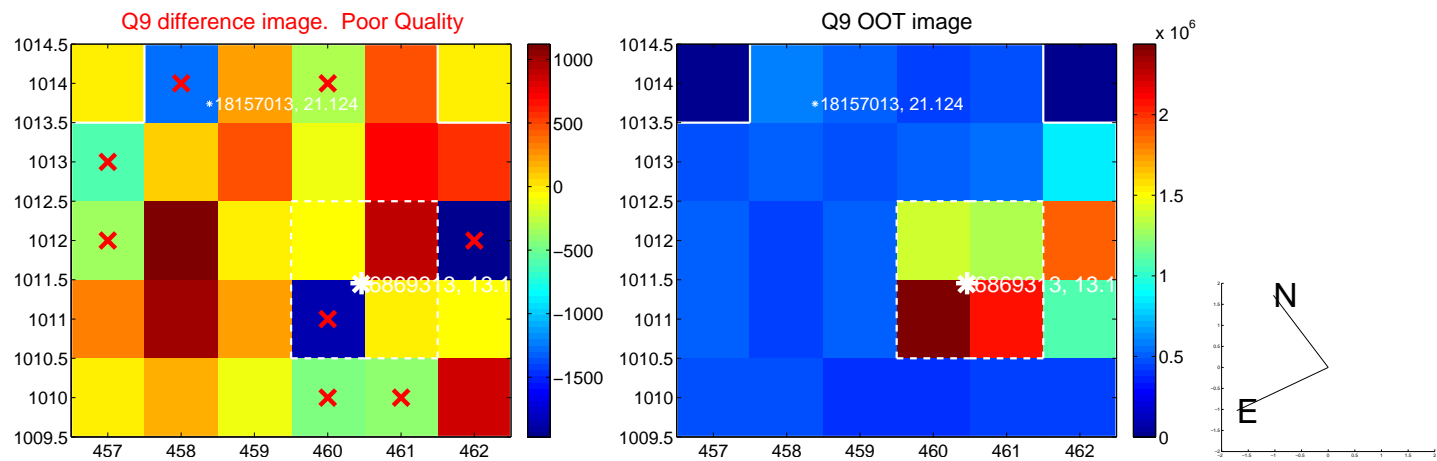
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



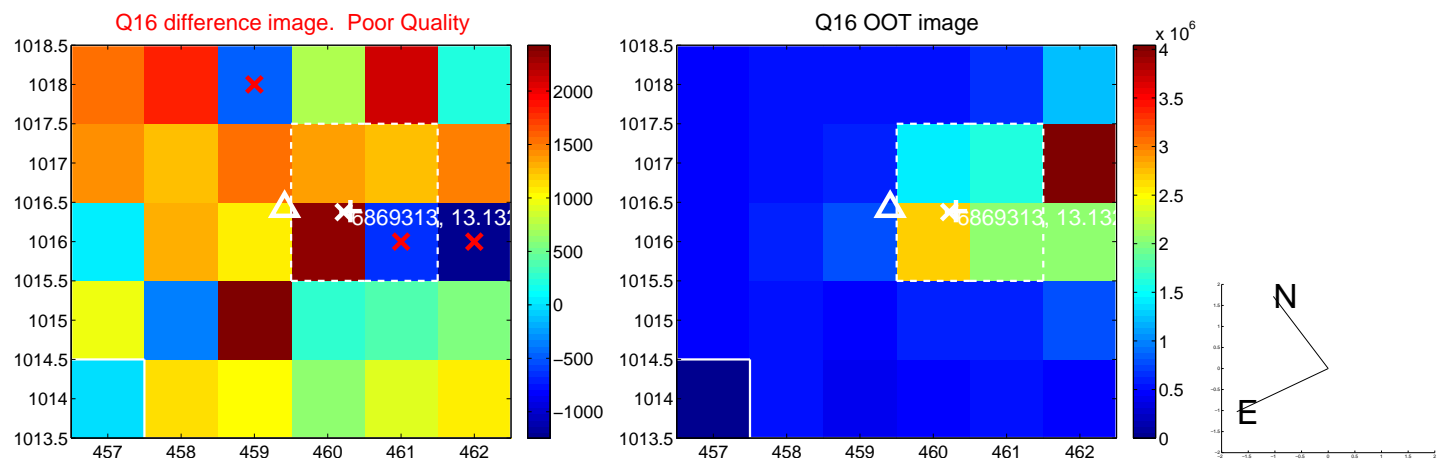
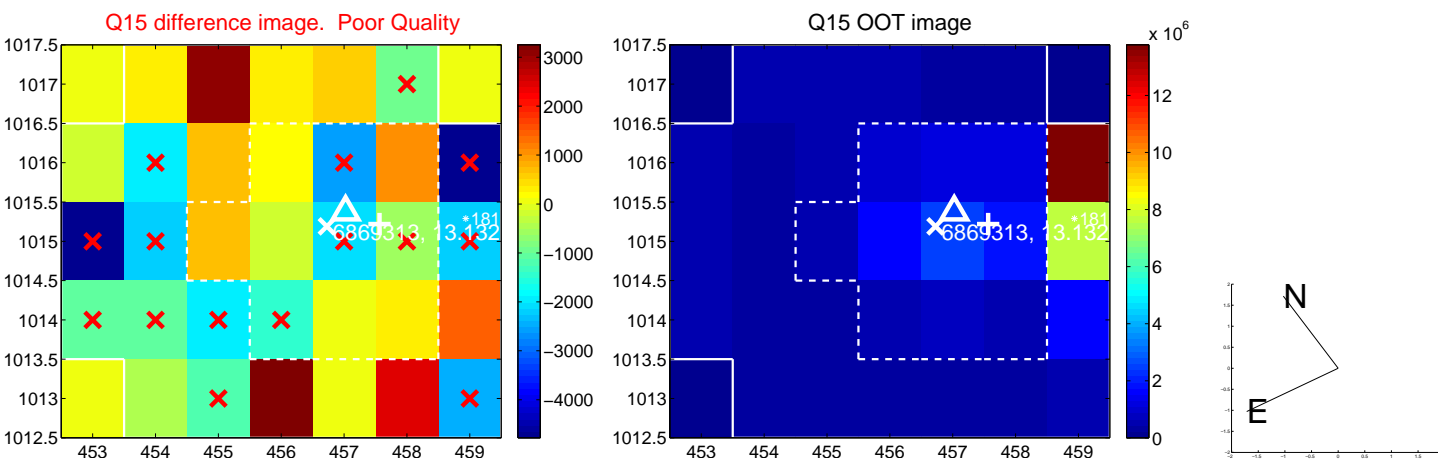
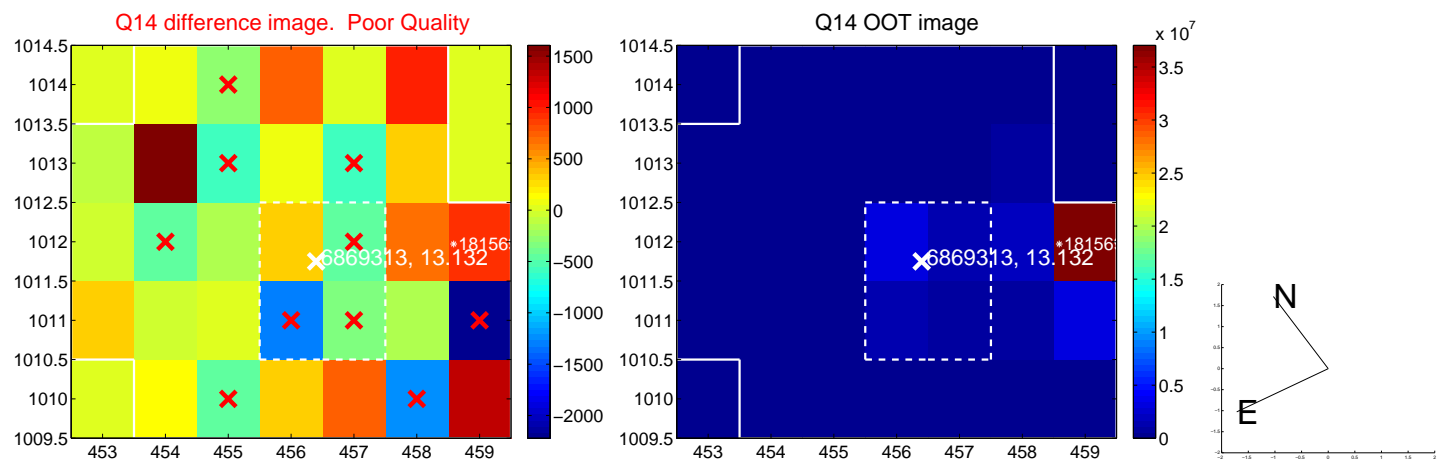
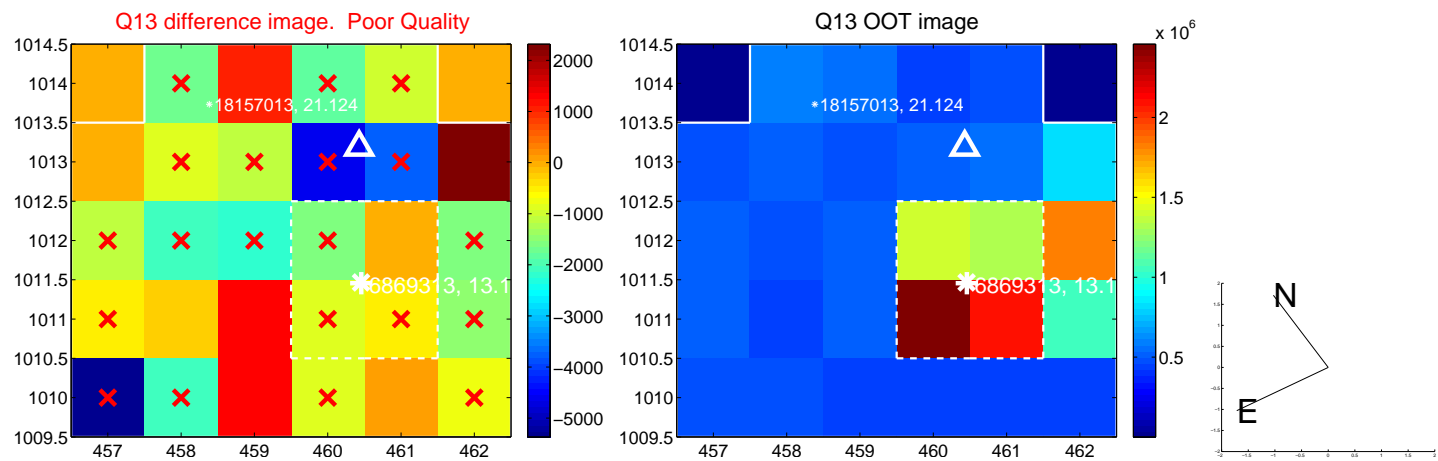
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



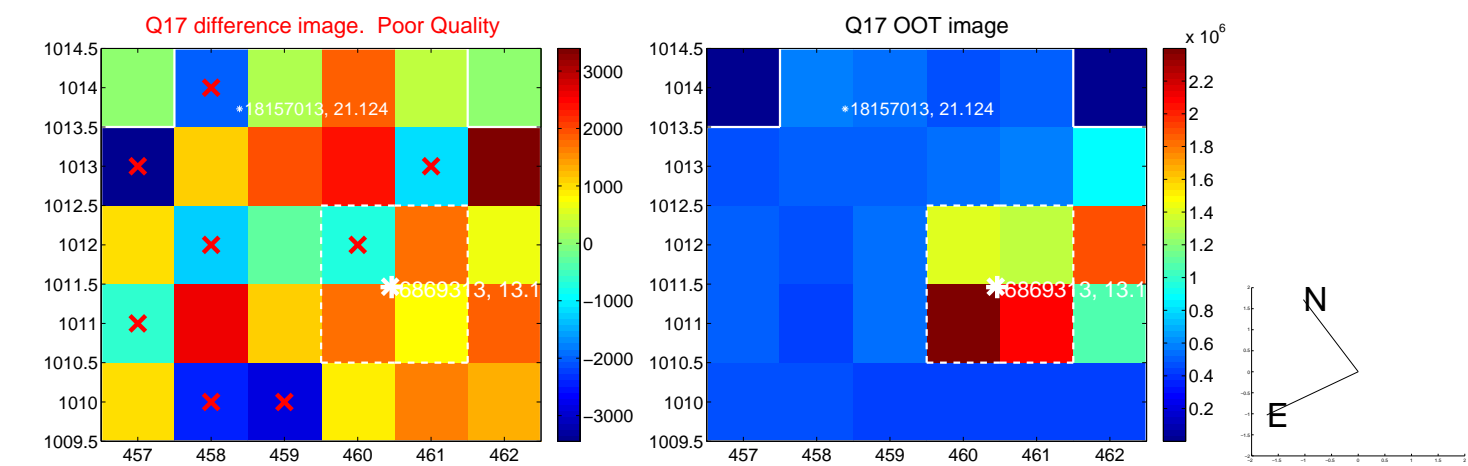
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



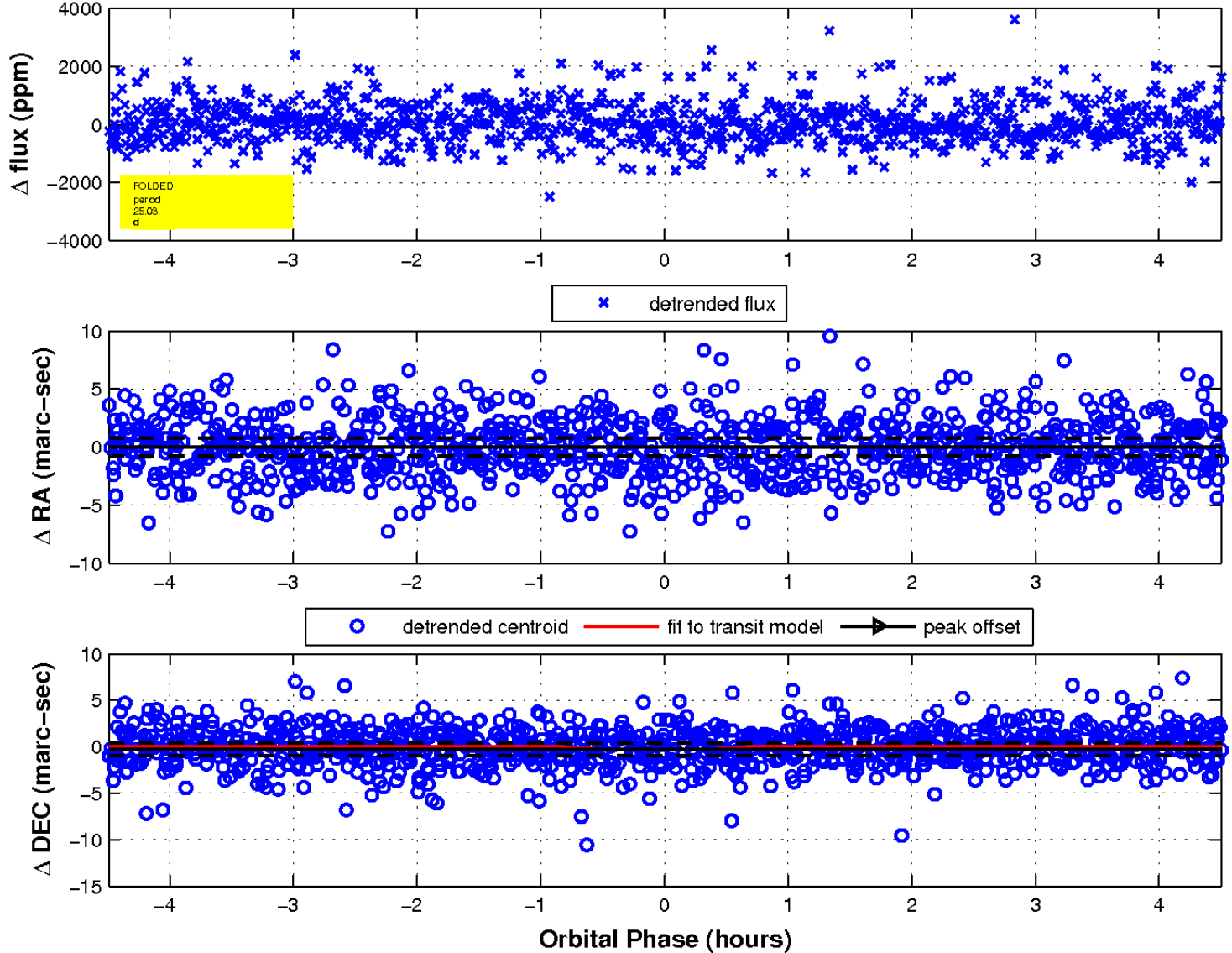
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

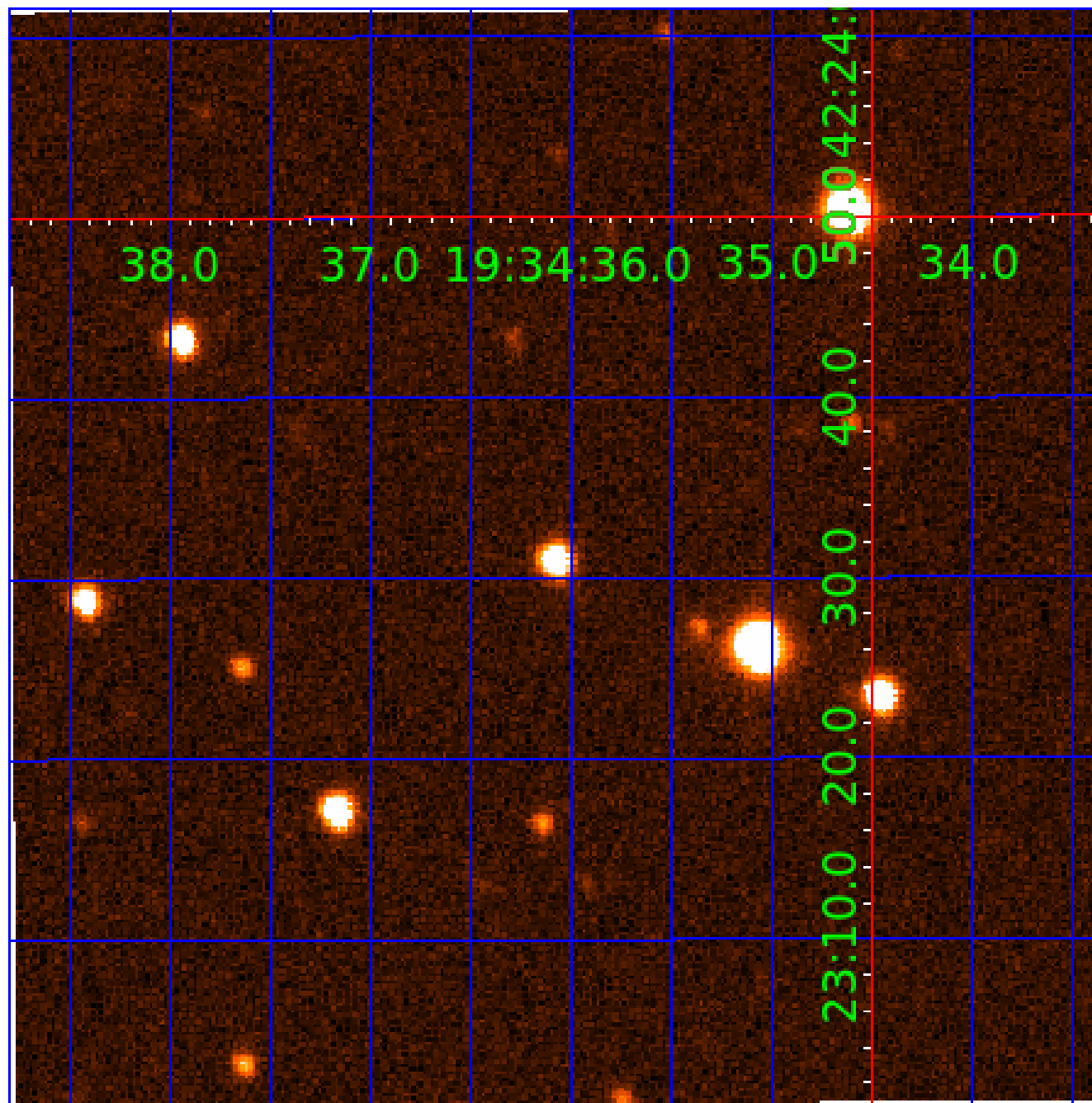


fluxWeightedCentroids, Planet 5 of 6



UKIRT Image

Declination



KIC 006869313

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})
006869313-01	OBS	No	2.818444	133.794584	101.6	17.976	11.8	12.6	0.80	5325	0.79	366.83
006869313-02	OBS	No	88.317530	210.438634	902.3	2.871	9.0	6.9	0.80	5325	2.63	3.71
006869313-03	OBS	No	76.606449	136.715273	1014.4	3.081	7.8	9.0	0.80	5325	2.73	4.49
006869313-04	OBS	No	68.752966	144.455714	1038.4	2.808	7.6	7.7	0.80	5325	3.23	5.18
006869313-05	OBS	No	25.026820	153.515985	861.8	1.502	8.4	9.0	0.80	5325	2.59	19.95
006869313-06	OBS	No	44.805878	165.228744	752.3	3.694	8.1	7.9	0.80	5325	2.53	9.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006869313-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_CROWDED—HALO_GHOST
006869313-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
006869313-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006869313-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

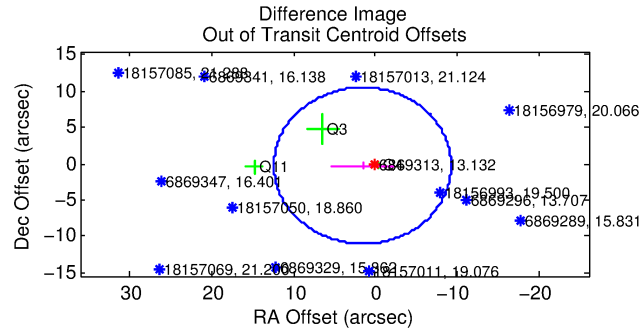
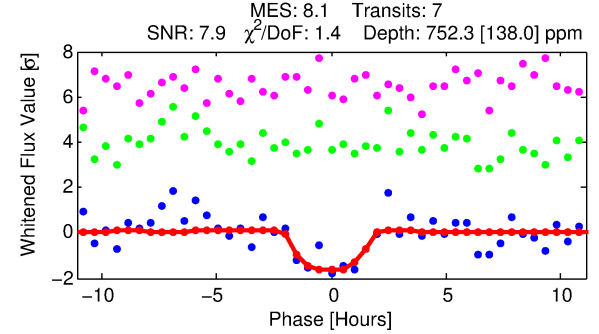
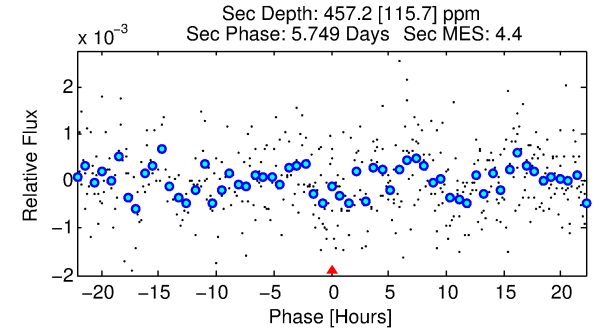
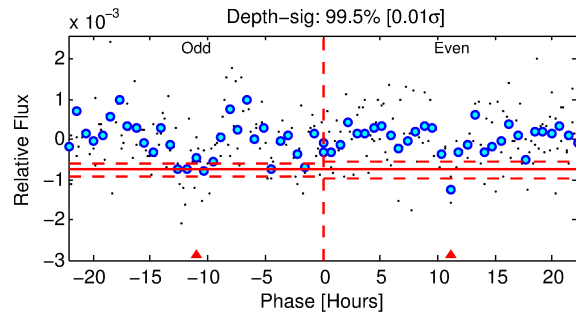
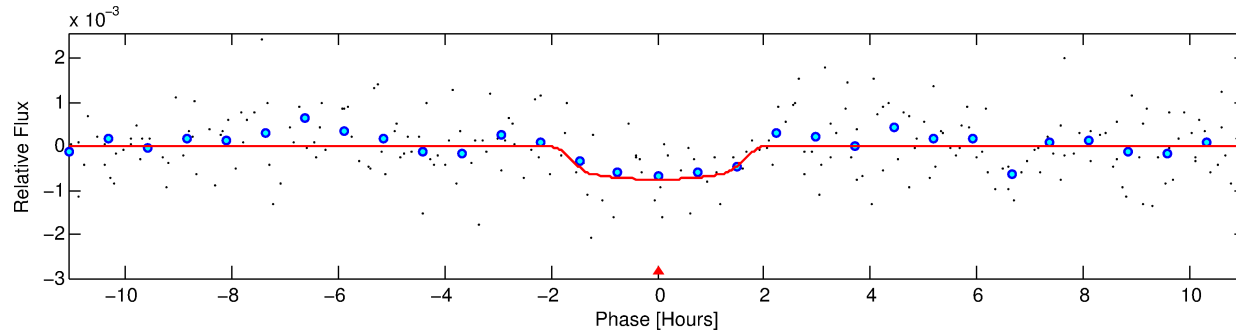
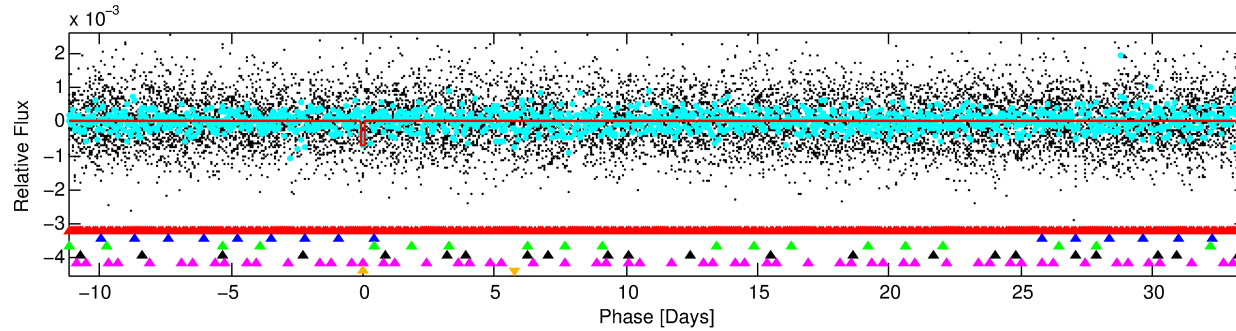
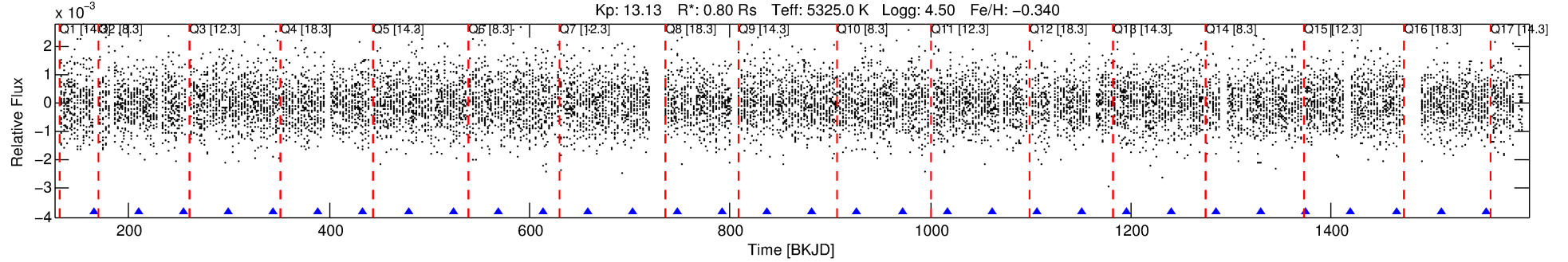
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006869313-06

No Significant Match Found

DV One-Page Summary

KIC: 6869313 Candidate: 6 of 6 Period: 44.806 d



DV Fit Results:

Period = 44.80588 [0.00115] d
Epoch = 165.2287 [0.0228] BKJD
Rp/R* = 0.0291 [0.0268]
a/R* = 52.20 [197.34]
b = 0.86 [1.17]
Seff = 9.18 [2.20]
Teq = 444 [27] K
Rp = 2.53 [2.36] Re
a = 0.2233 [0.0285] AU
Ag = 1954.34 [3651.24] [0.53 σ]
Teffp = 4562 [2128] K [1.94 σ]

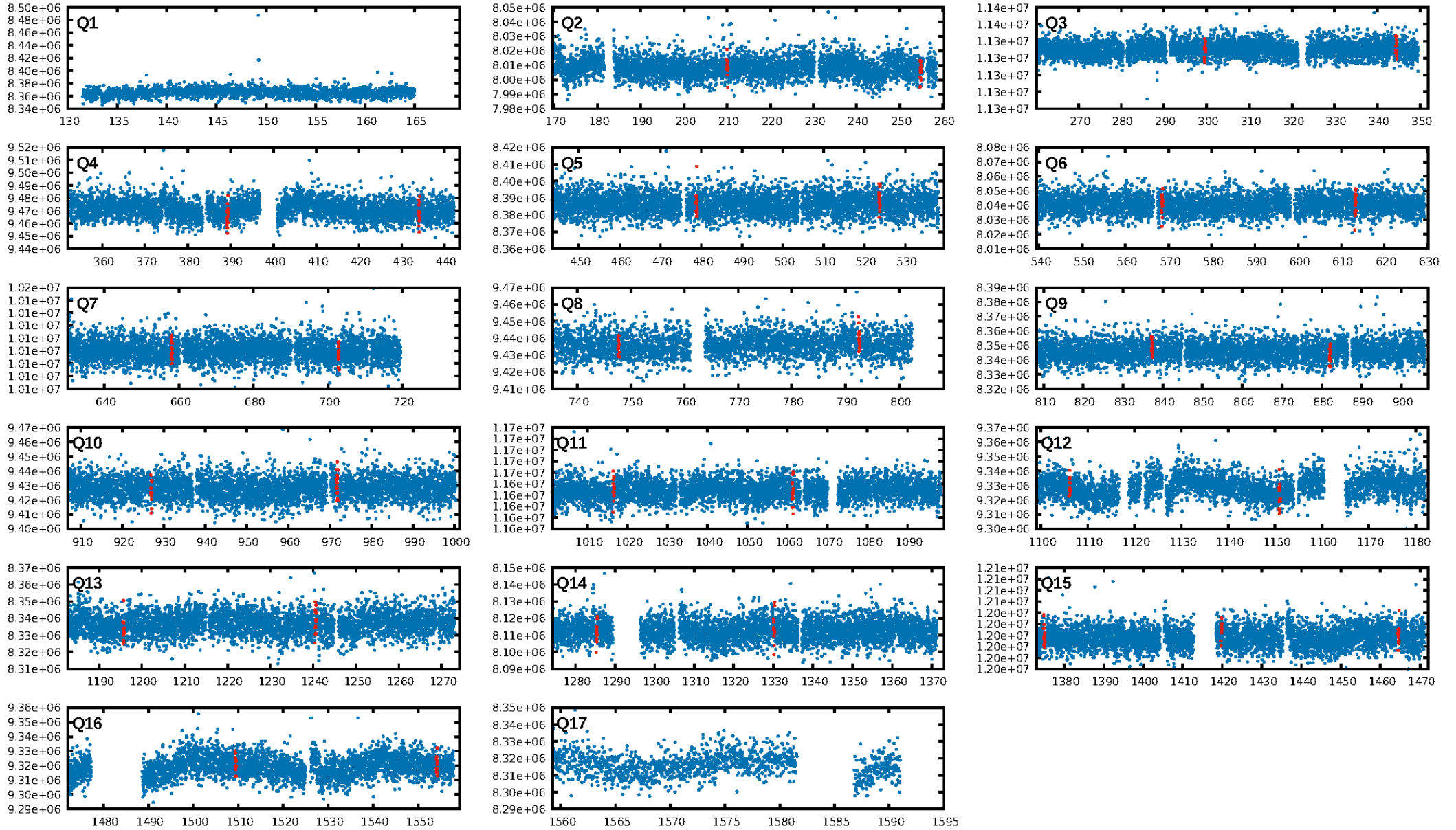
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [119.04 σ]
LongPeriod-sig: 100.0% [123.86 σ]
ModelChiSquare2-sig: 75.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.28e-08
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 1.948
Centroid-sig: 41.4%
Centroid-so: 3.572 arcsec [4.74 σ]
OotOffset-rm: 1.603 arcsec [0.45 σ]
KicOffset-rm: 0.387 arcsec [0.21 σ]
OotOffset-st: 0/2/1/0 [3]
KicOffset-st: 2/2/1/0 [5]
DiffImageQuality-fgm: 0.20 [1/5]
DiffImageOverlap-fno: 0.53 [8/15]

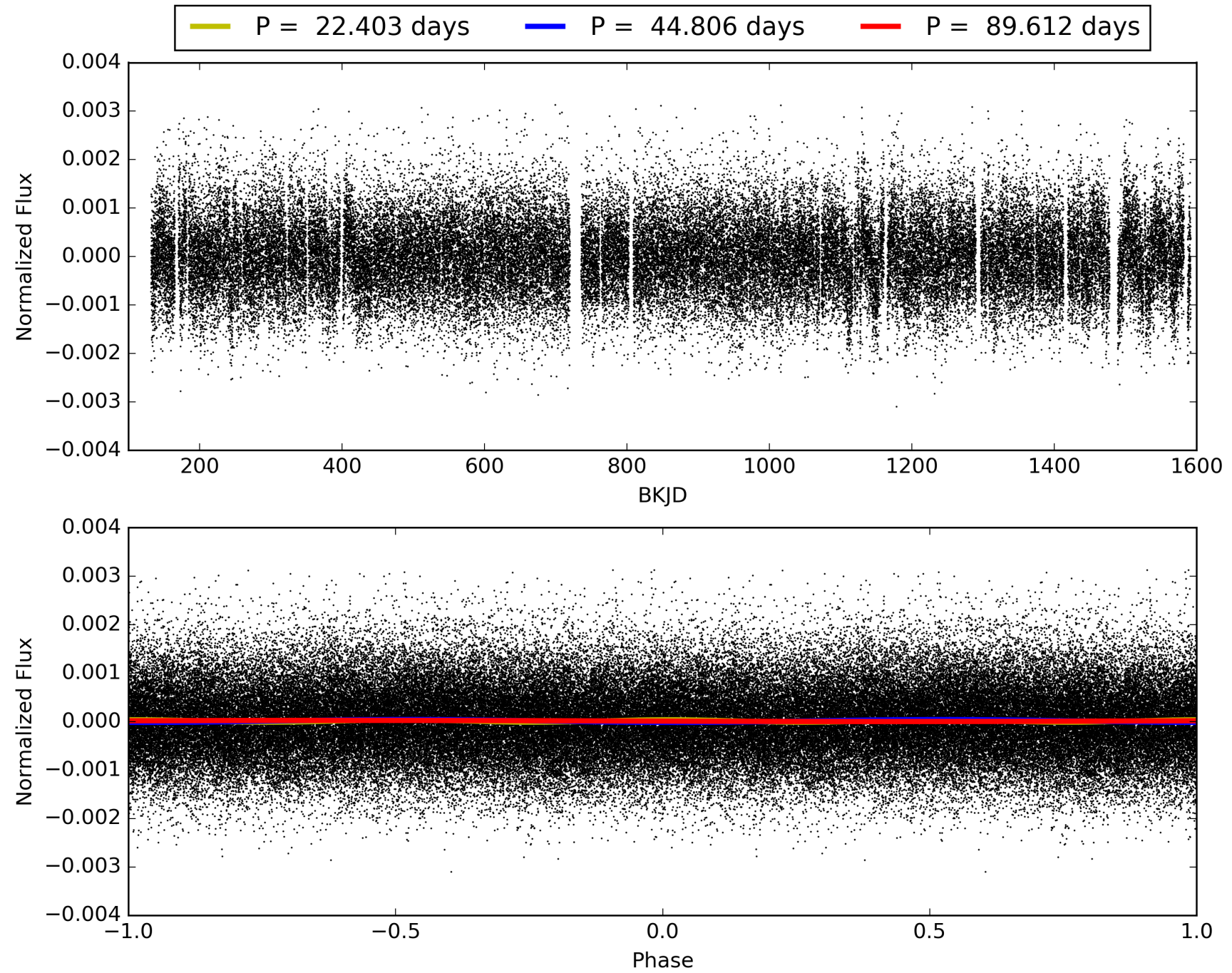
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:33:38 Z

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

TCE 006869313-06, PDC Light Curves

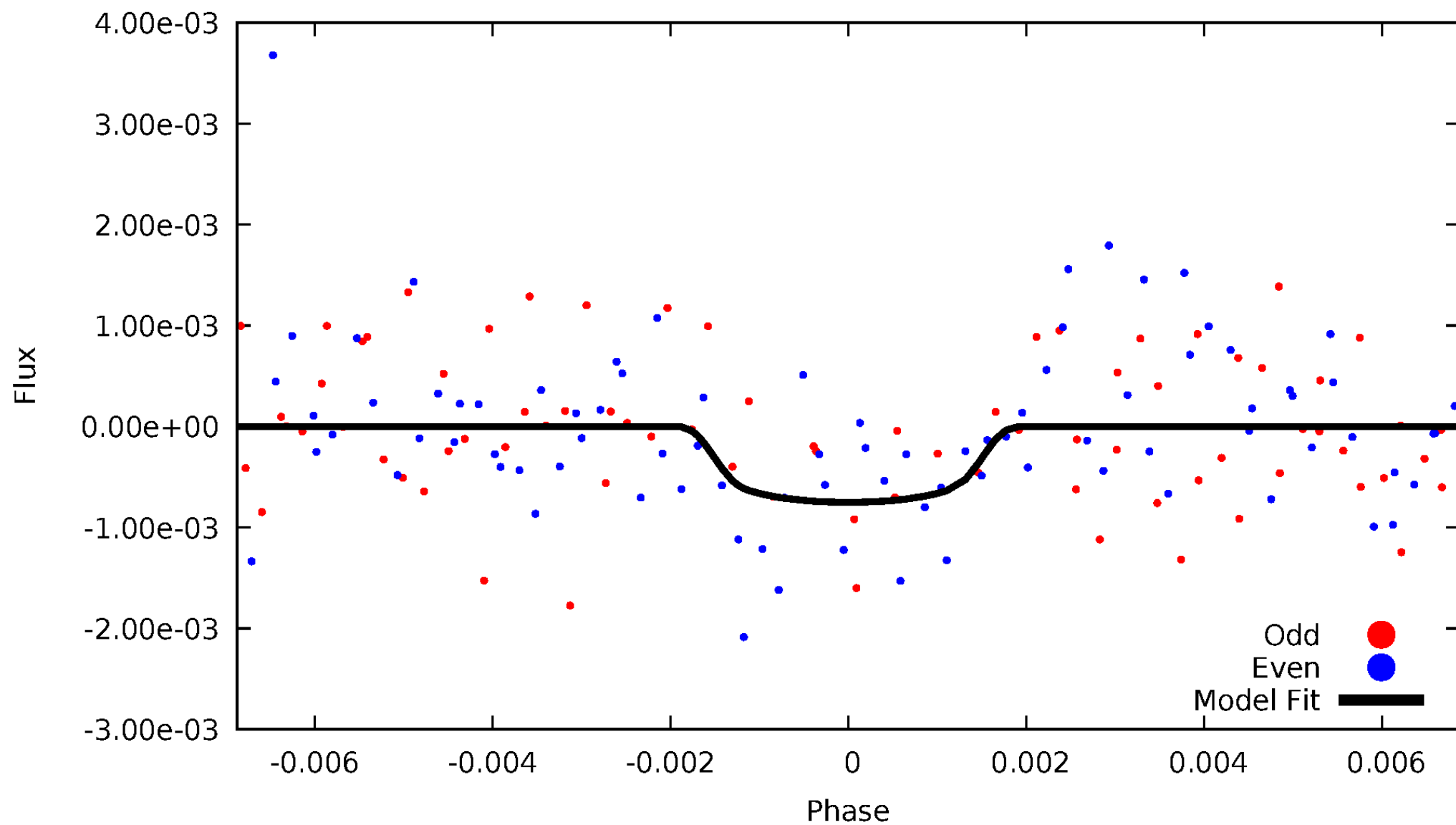


TCE 006869313-06



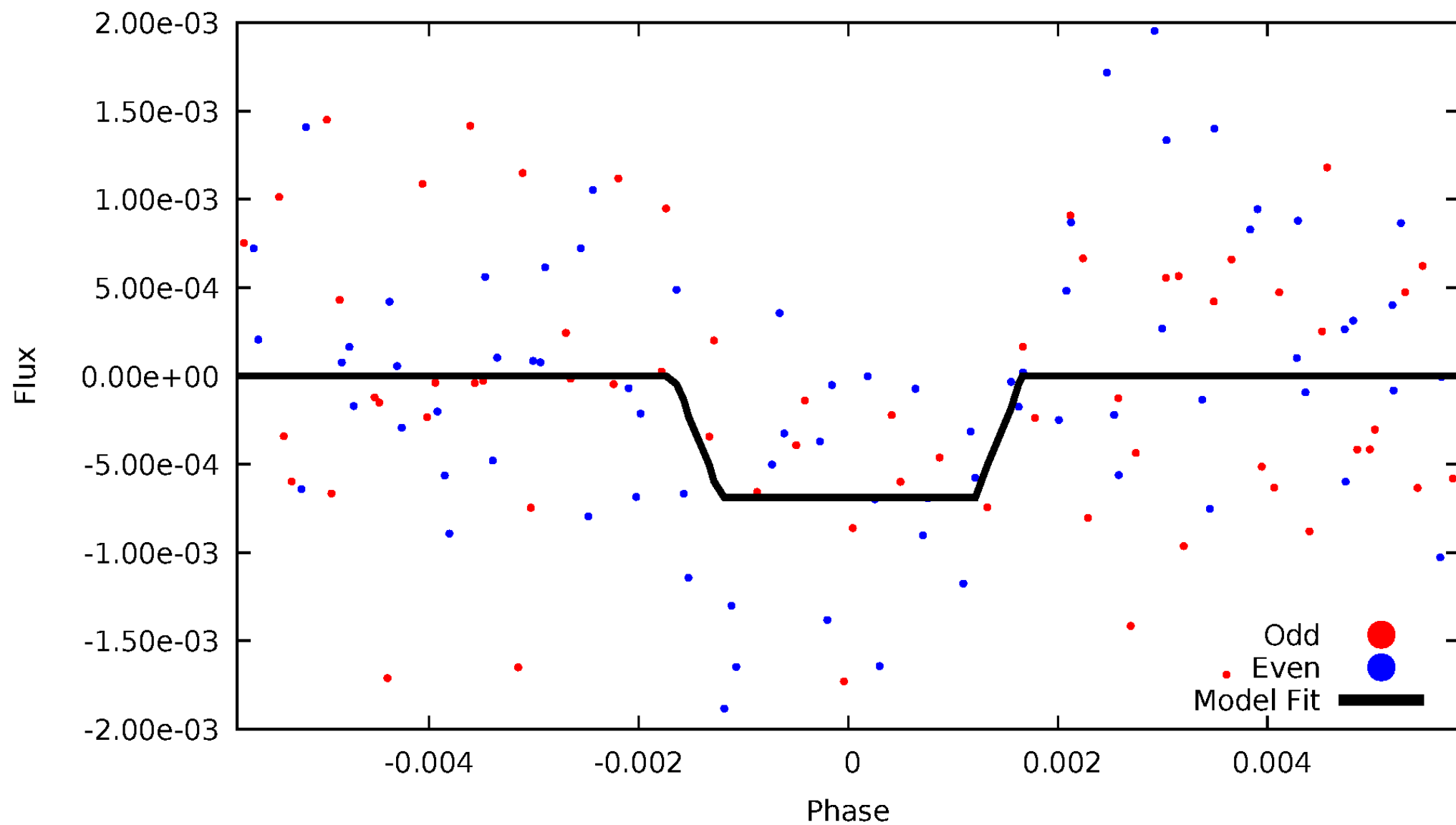
DV Odd/Even

TCE 006869313-06



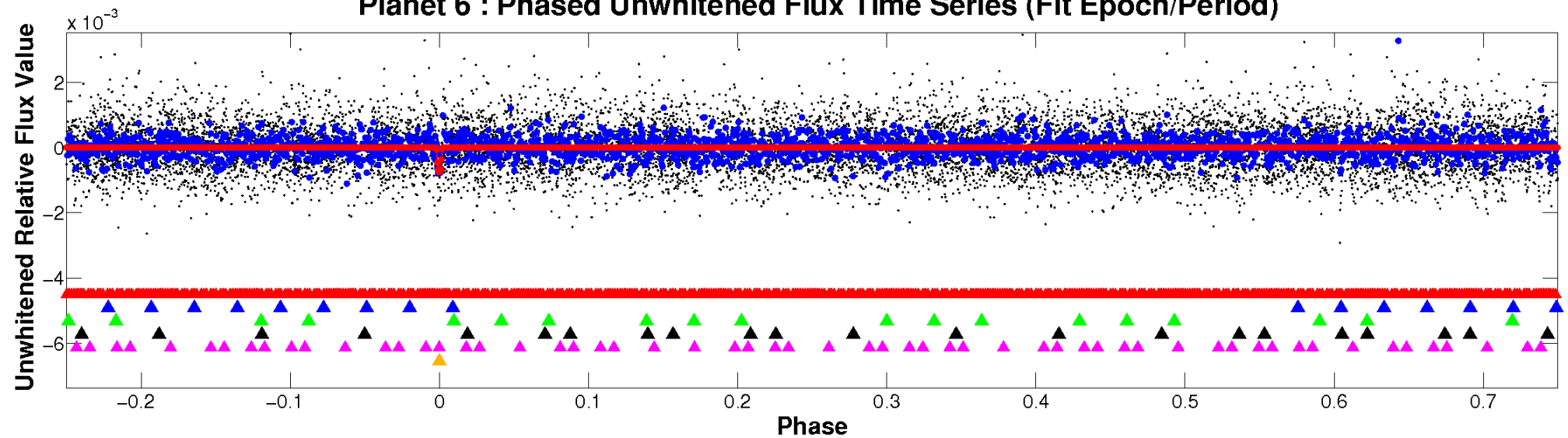
ALT Odd/Even

TCE 006869313-06

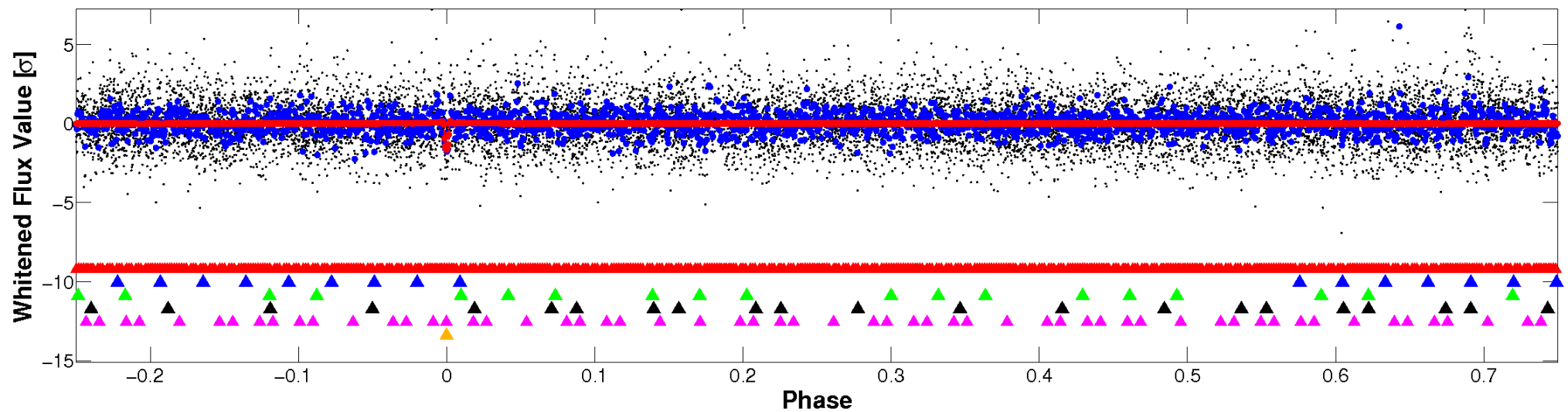


Non-Whitened Vs. Whitened Light Curve

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

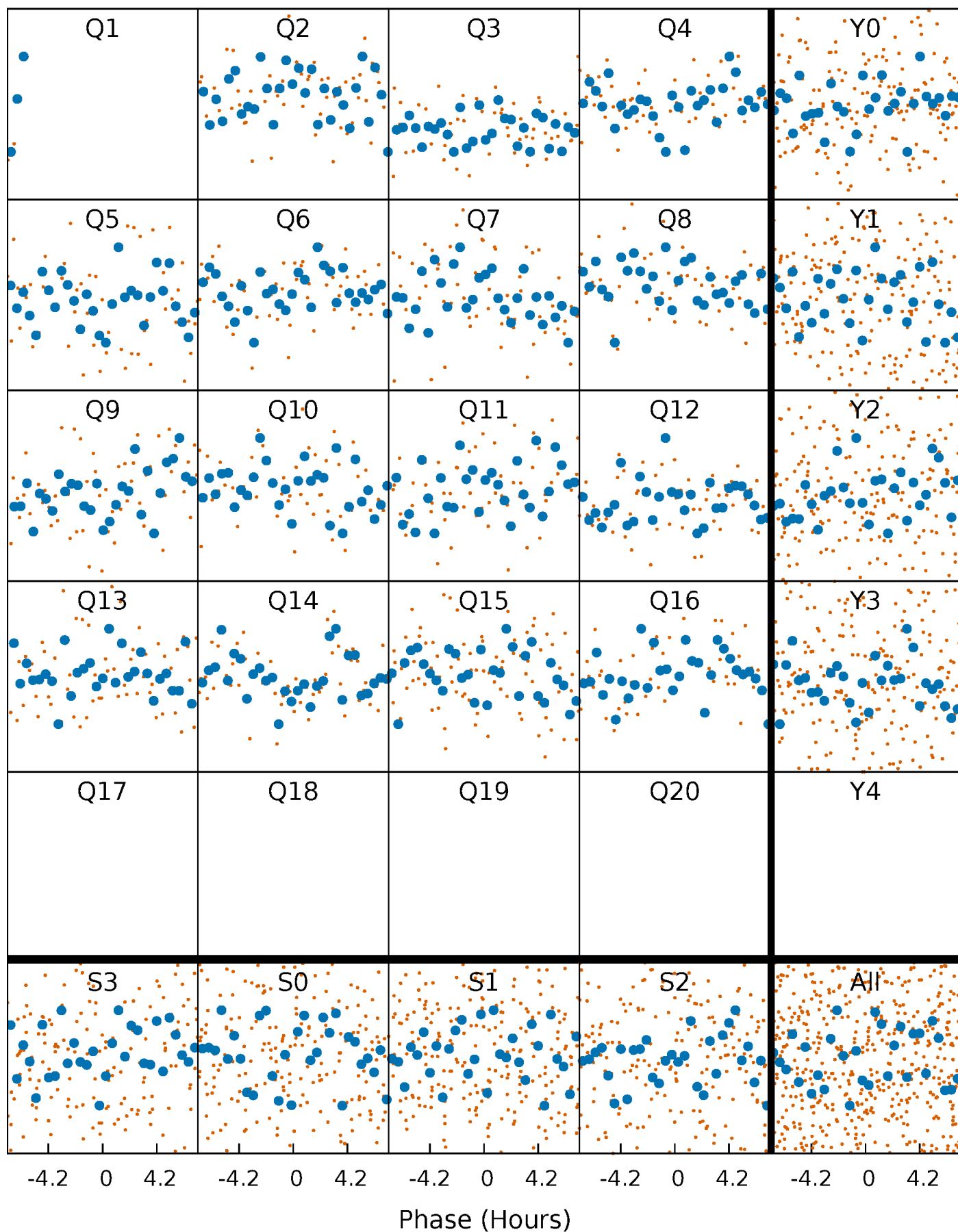


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



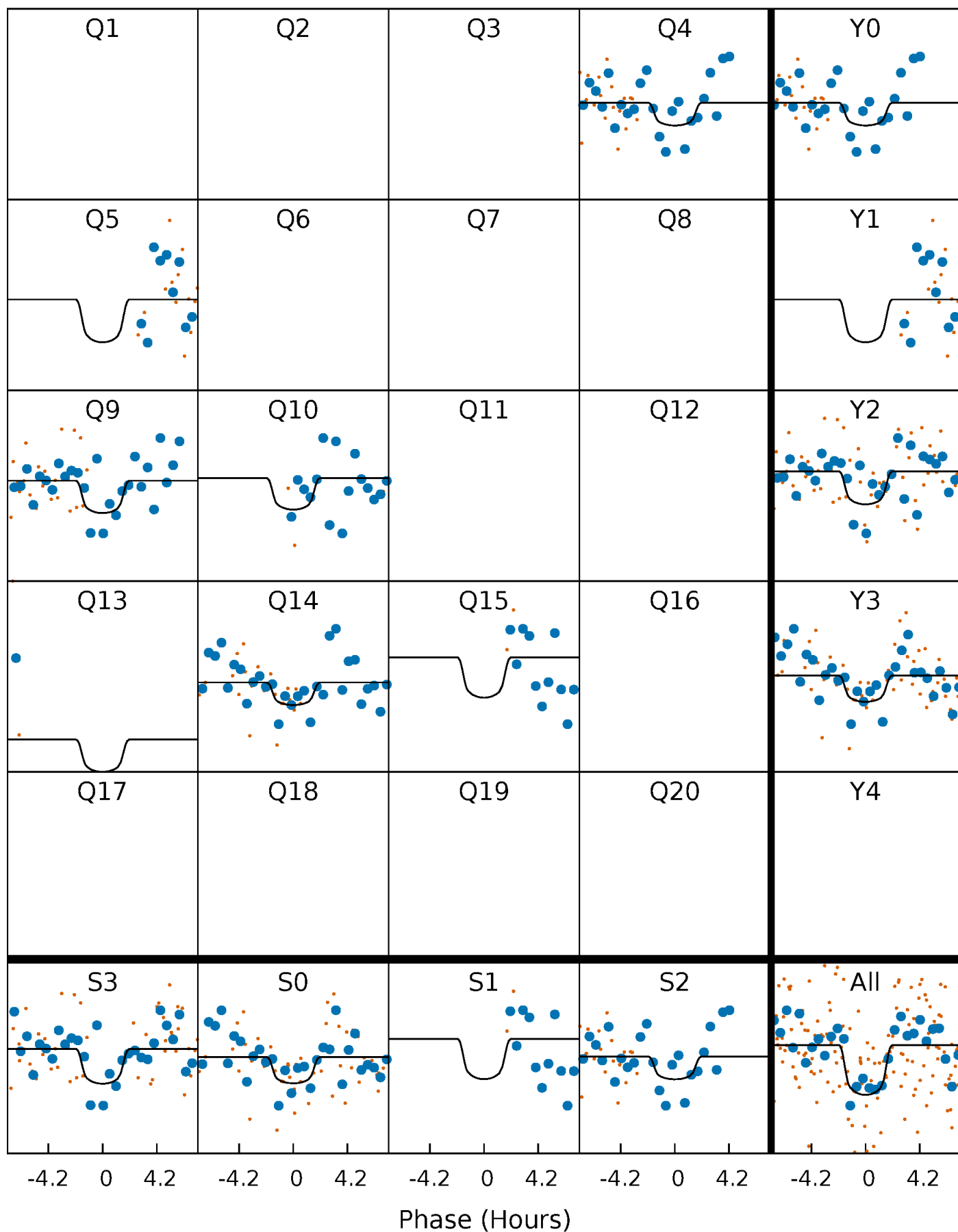
PDC Quarter-Phased Transit Curves

TCE 006869313-06 P= 44.805878 Days $T_0=165.228744$ (BKJD)



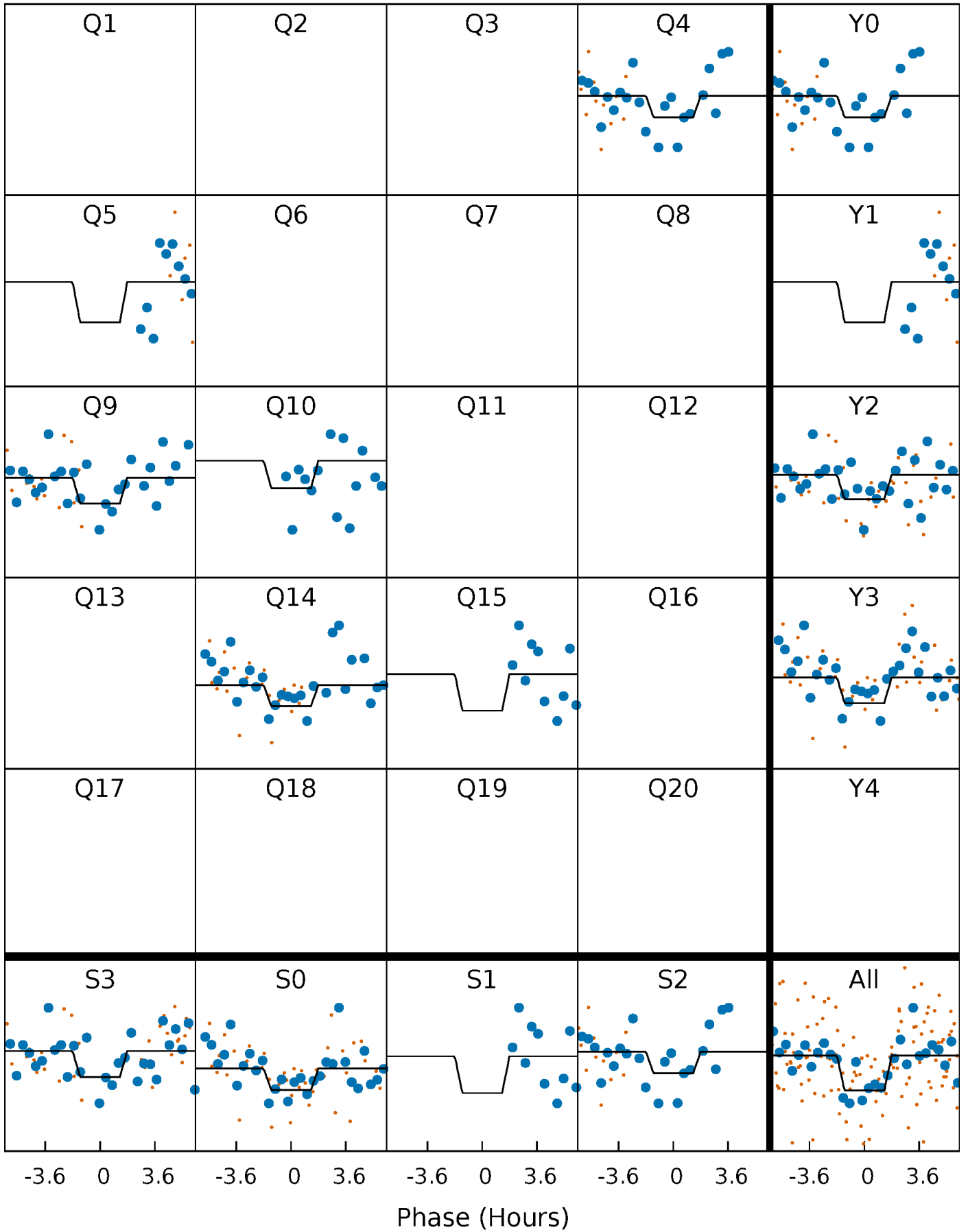
DV Quarter-Phased Transit Curves

TCE 006869313-06 $P = 44.805878$ Days $T_0 = 165.228744$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

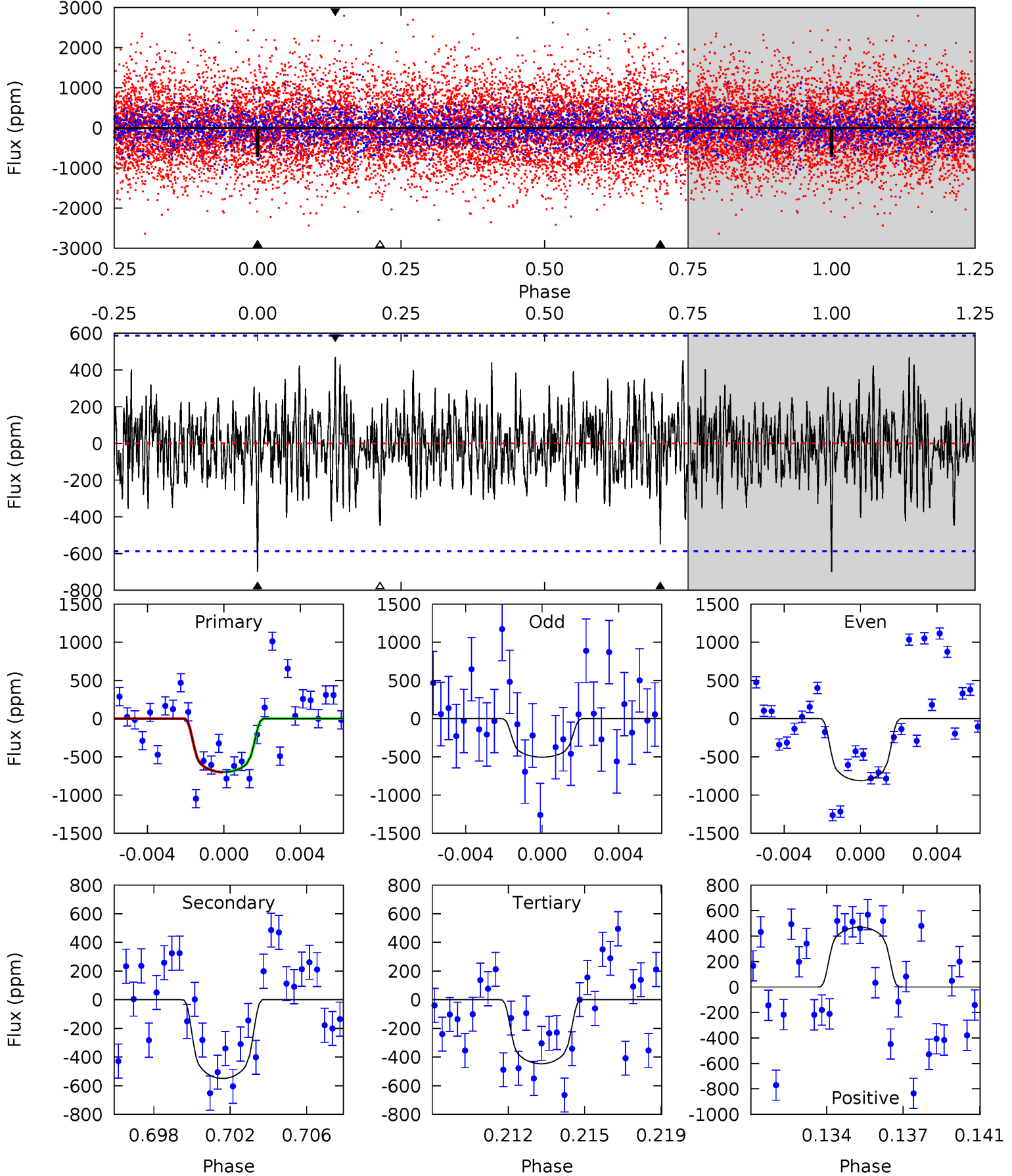
TCE 006869313-06 $P = 44.805255$ Days $T_0 = 165.245352$ (BKJD)



DV Model-Shift Uniqueness Test

006869313-06, $P = 44.805878$ Days, $E = 120.422866$ Days

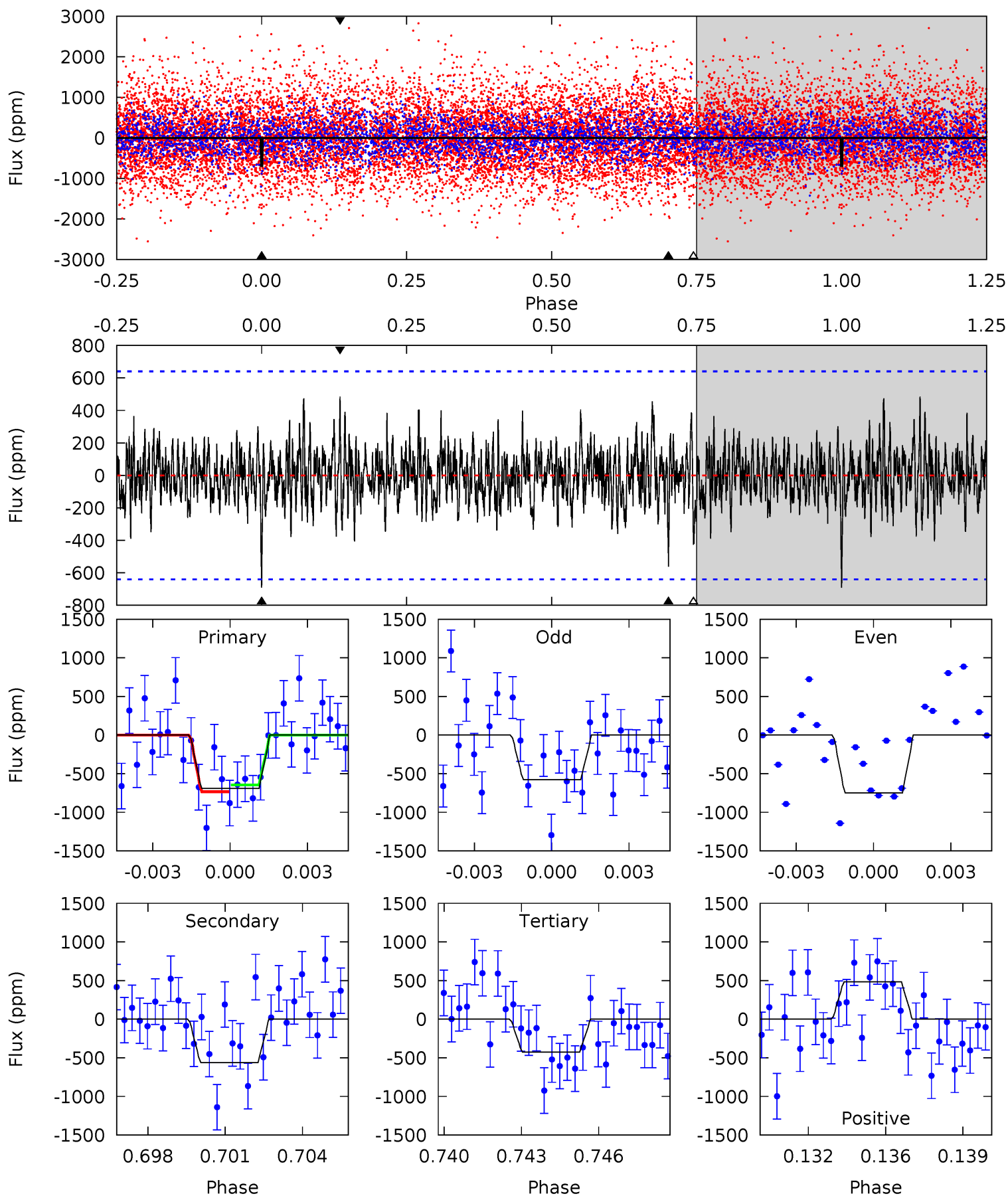
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.22	4.87	3.96	4.17	5.21	2.90	1.29	2.25	2.04	0.91	0.70	1.31	0.78	0.40	0.02



Alt Model-Shift Uniqueness Test

006869313-06, P = 44.805255 Days, E = 120.440097 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.64	4.59	3.48	3.96	5.24	2.94	1.12	2.17	1.68	1.12	0.63	0.67	0.98	0.41	0.36



Stellar Parameters For KIC 006869313

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5325^{+204}_{-185}	$4.504^{+0.100}_{-0.100}$	$-0.340^{+0.350}_{-0.300}$	$0.797^{+0.122}_{-0.102}$	$0.740^{+0.113}_{-0.052}$	$2.058^{+0.874}_{-0.612}$
	+4%/-3%	+2%/-2%	+103%/-88%	+15%/-13%	+15%/-7%	+42%/-30%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006869313-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-549 ± 113	$2.82^{+2.36}_{-1.64}$	618^{+34}_{-31}	4567^{+2494}_{-841}	1806^{+9678}_{-1249}
Alt.	-562 ± 122	$2.85^{+2.21}_{-1.81}$	621^{+32}_{-32}	4628^{+3051}_{-881}	1865^{+13702}_{-1275}

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

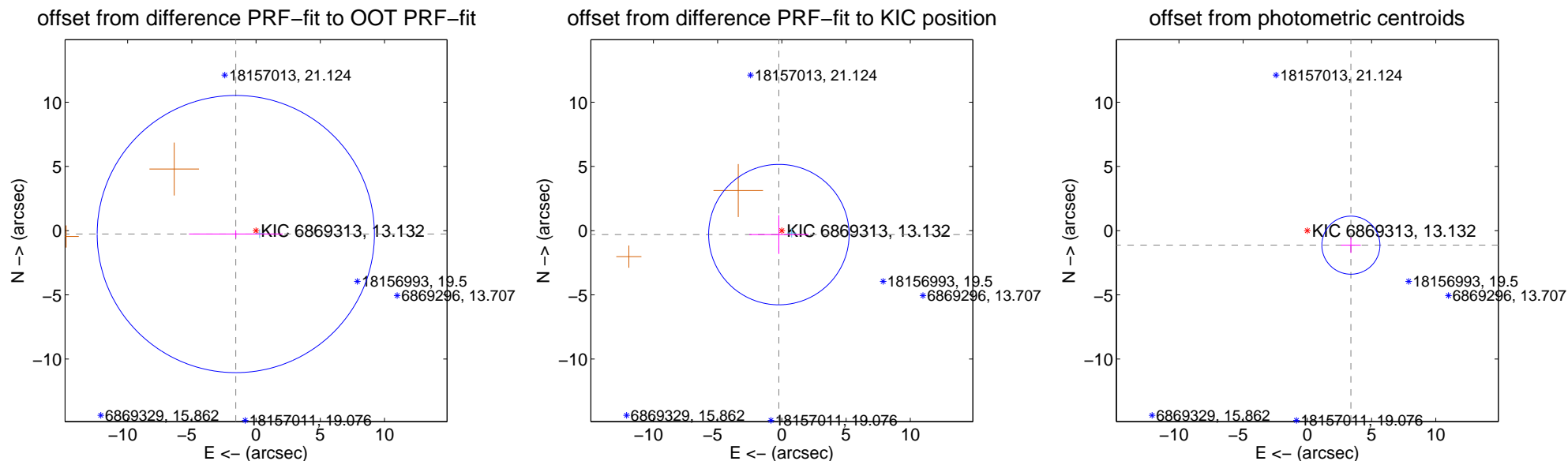
DV Centroid Data

Supplemental centroid analysis for 006869313-06. Kepler magnitude: 13.13. Transit SNR 7.92

There are 1 quarters with good PRF difference image offsets

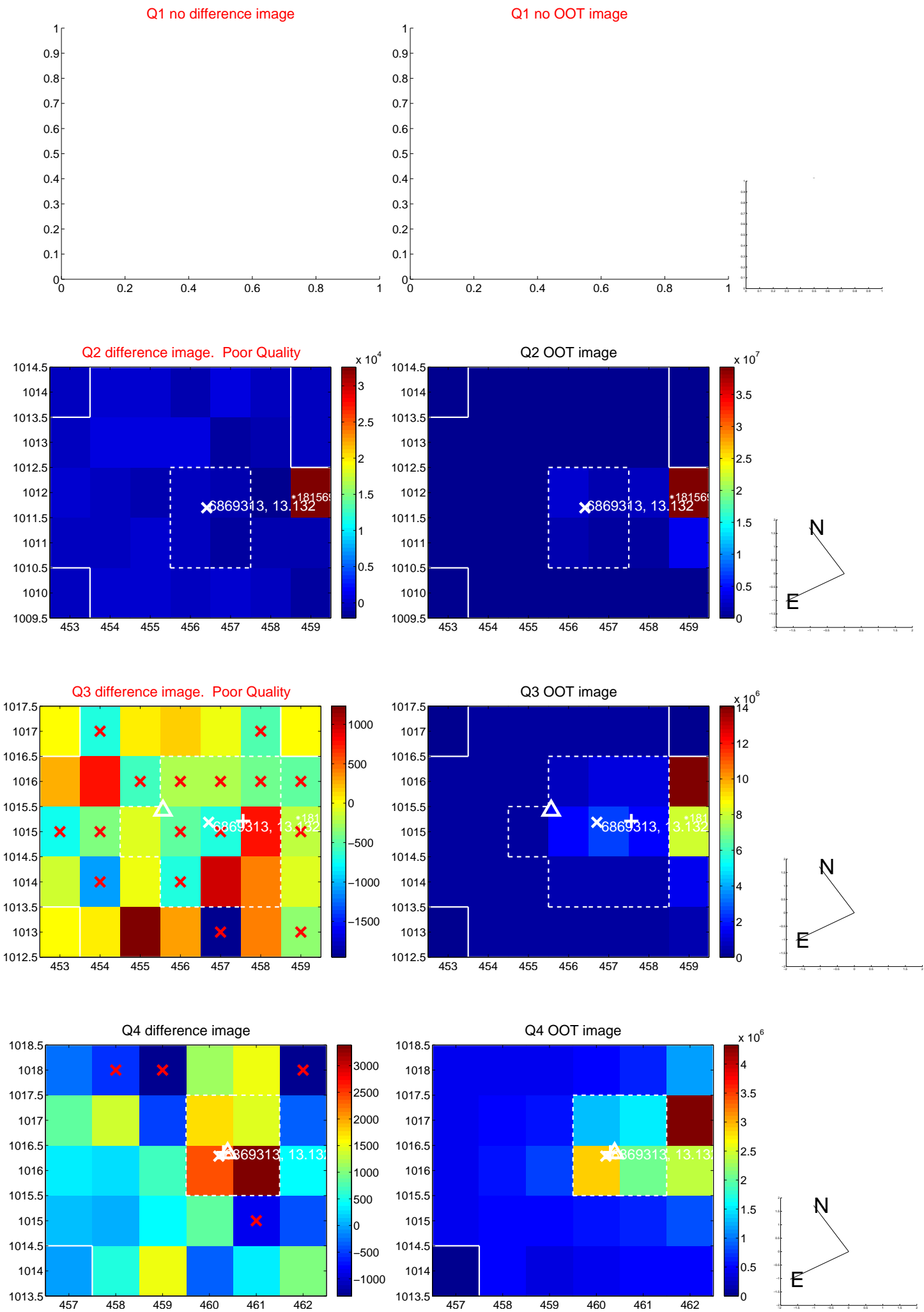
The OOT PRF centroid is offset from the target star catalog position by about 3.27 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.603 ± 3.598	0.45	1.580 ± 3.649	-0.266 ± 0.297
PRF-fit source offset from KIC position	0.387 ± 1.823	0.21	0.234 ± 2.305	-0.309 ± 1.507
photometric centroid source offset	3.57 ± 0.75	4.74	-3.39 ± 0.77	-1.13 ± 0.60

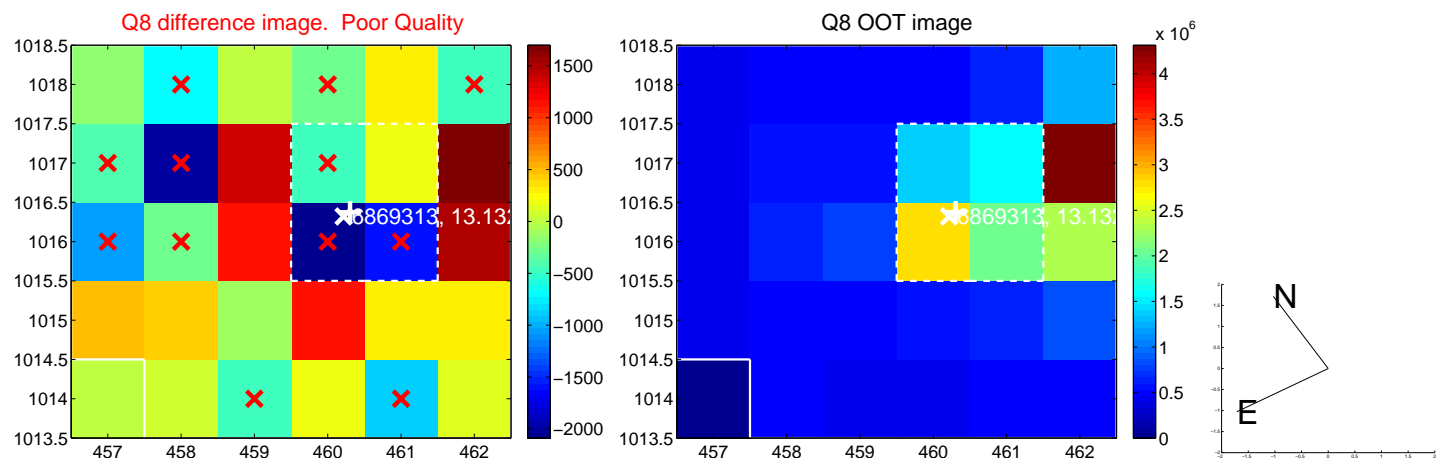
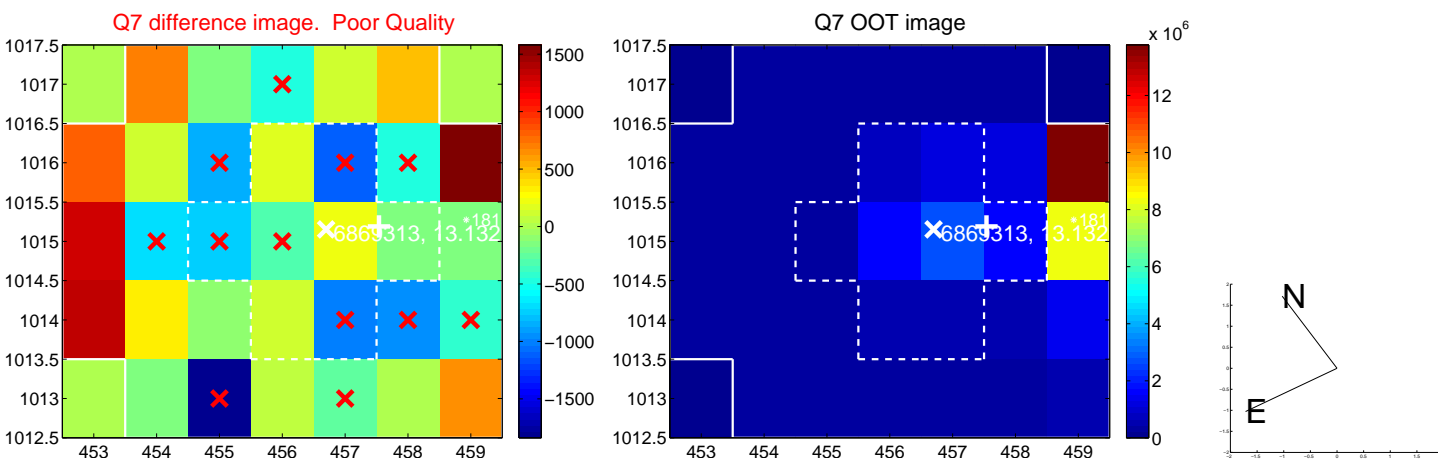
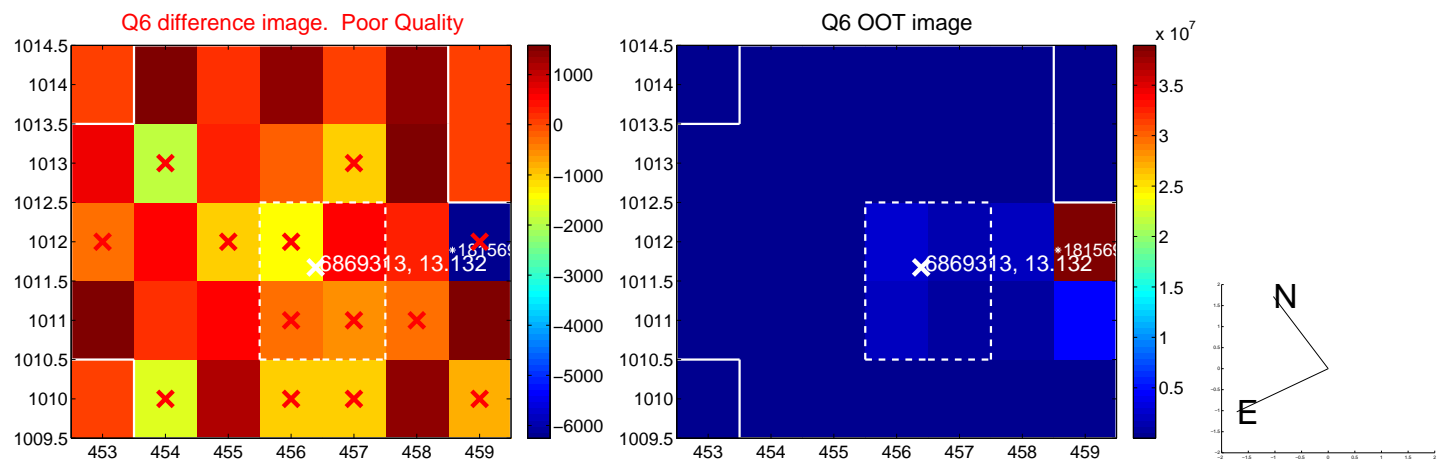
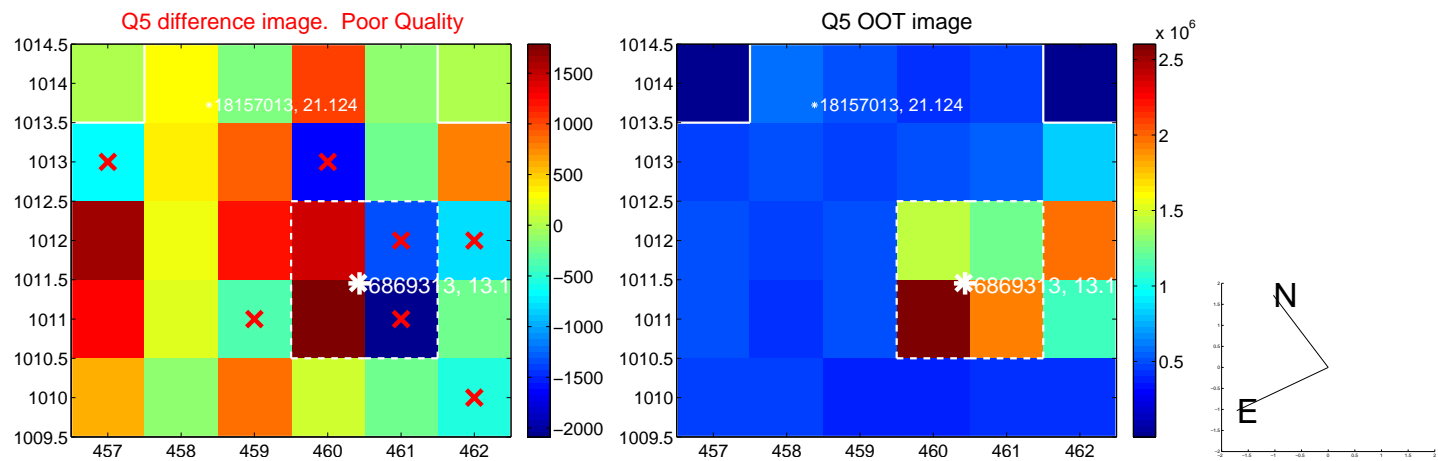


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

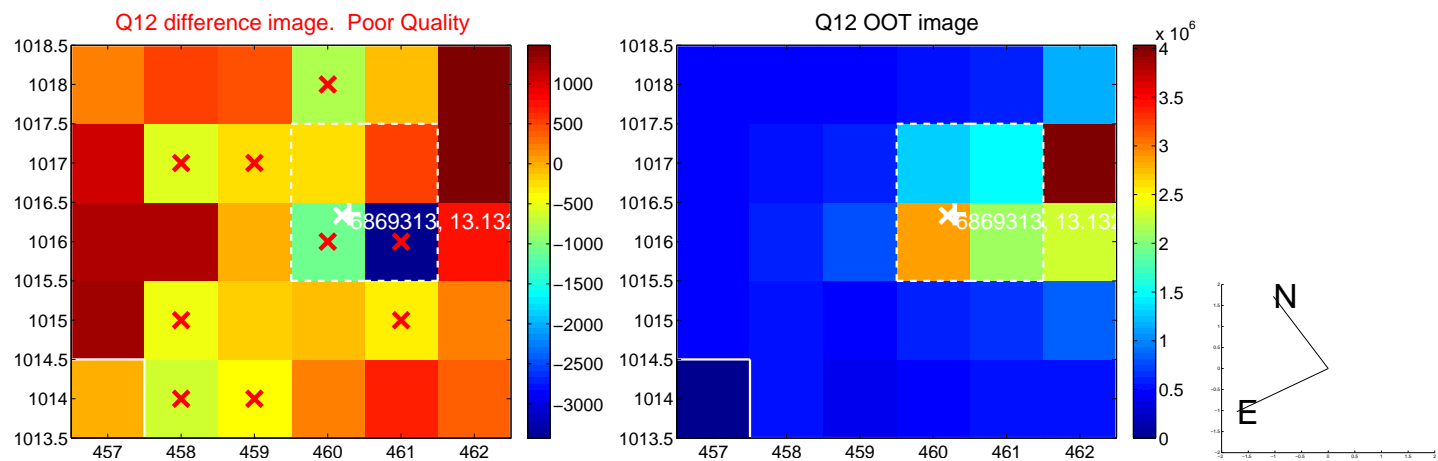
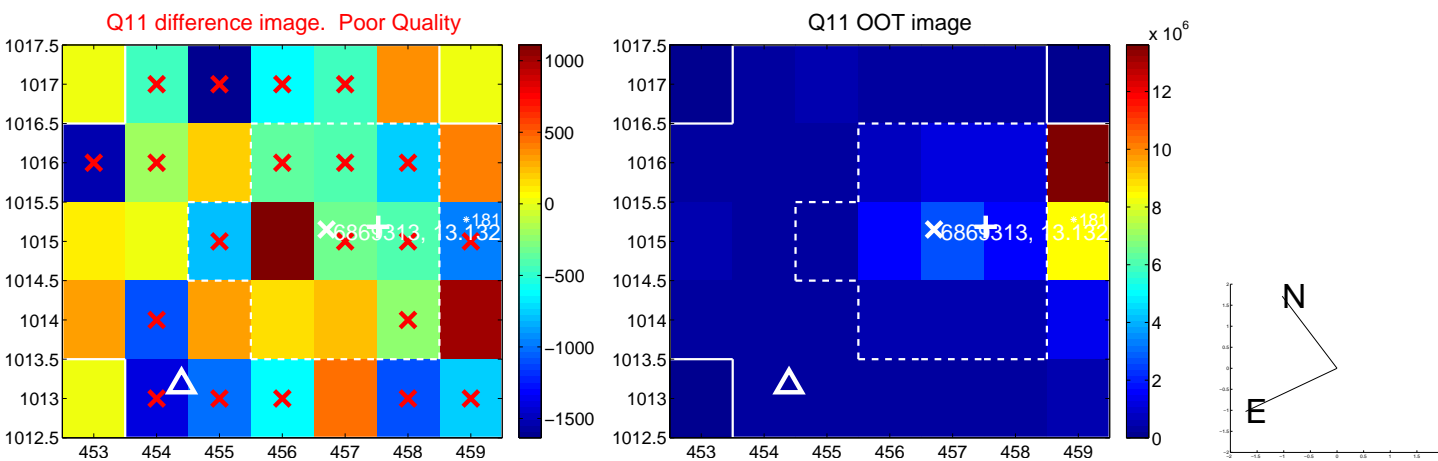
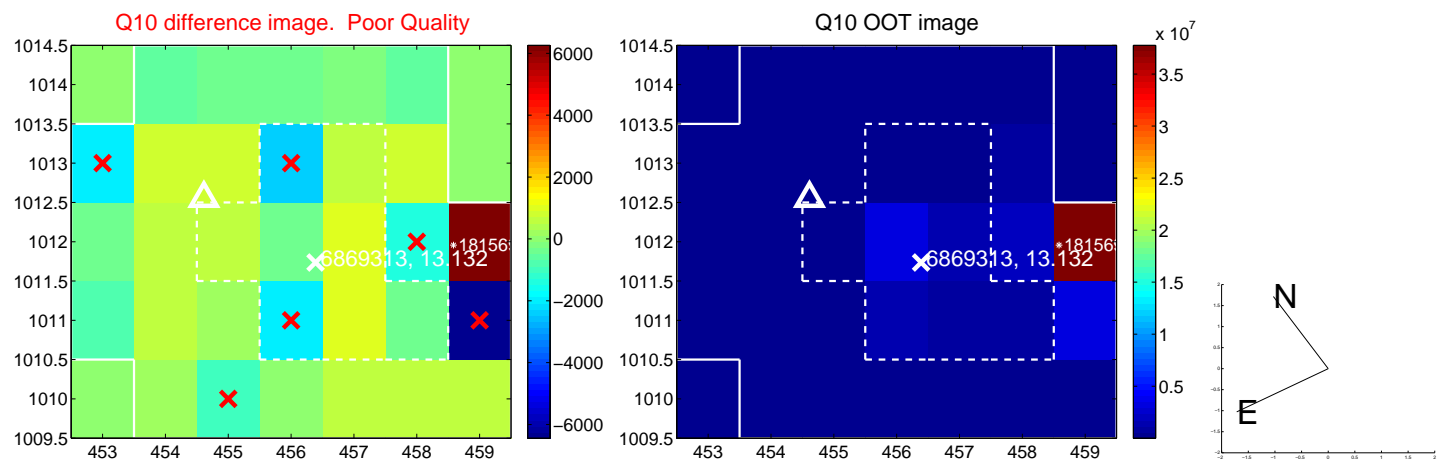
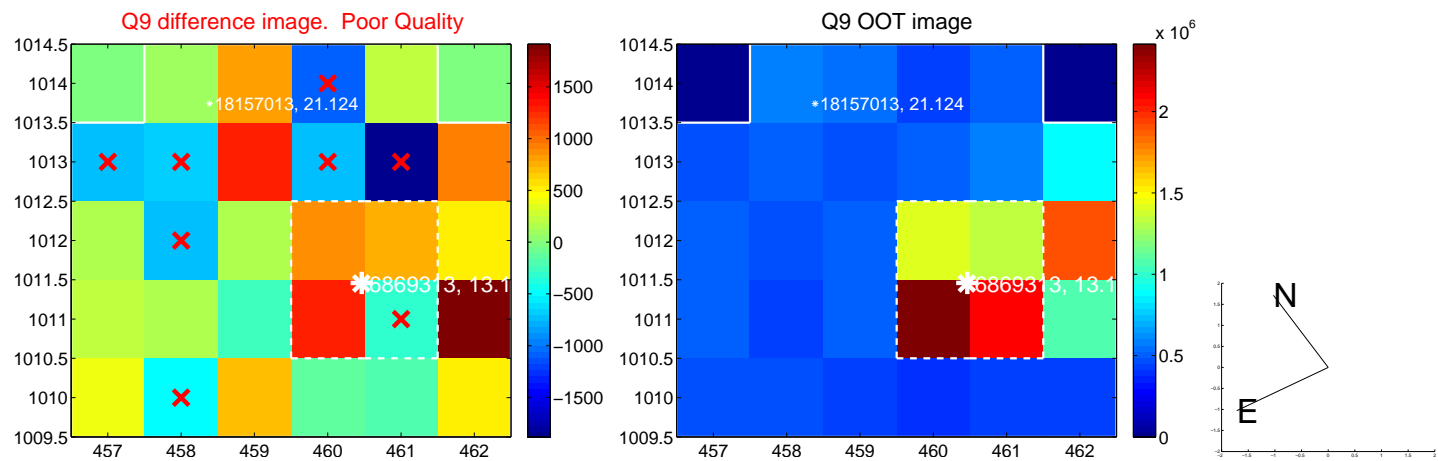
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



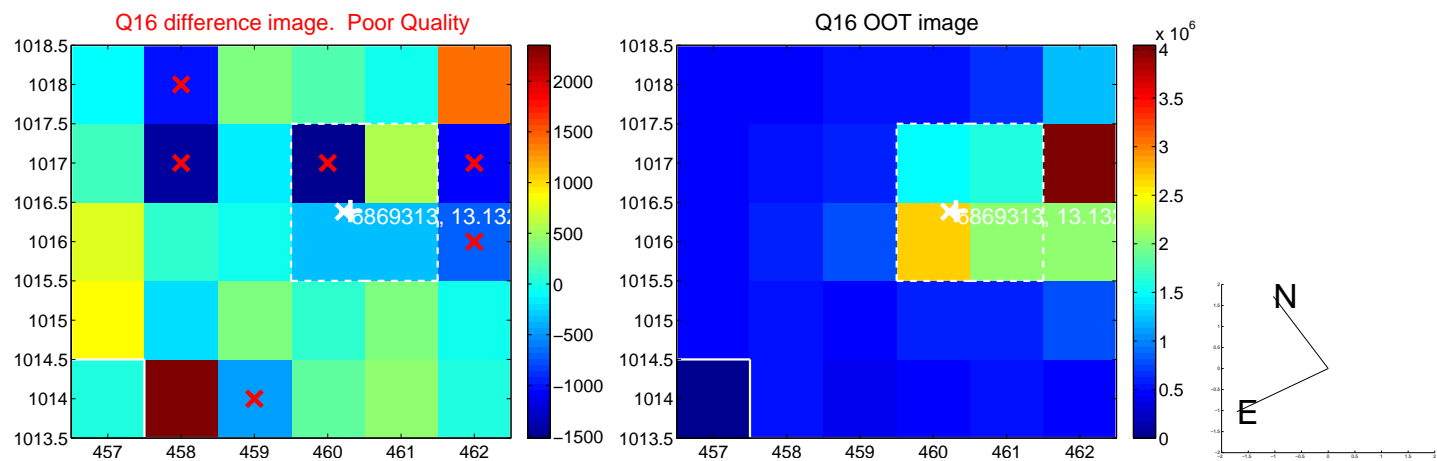
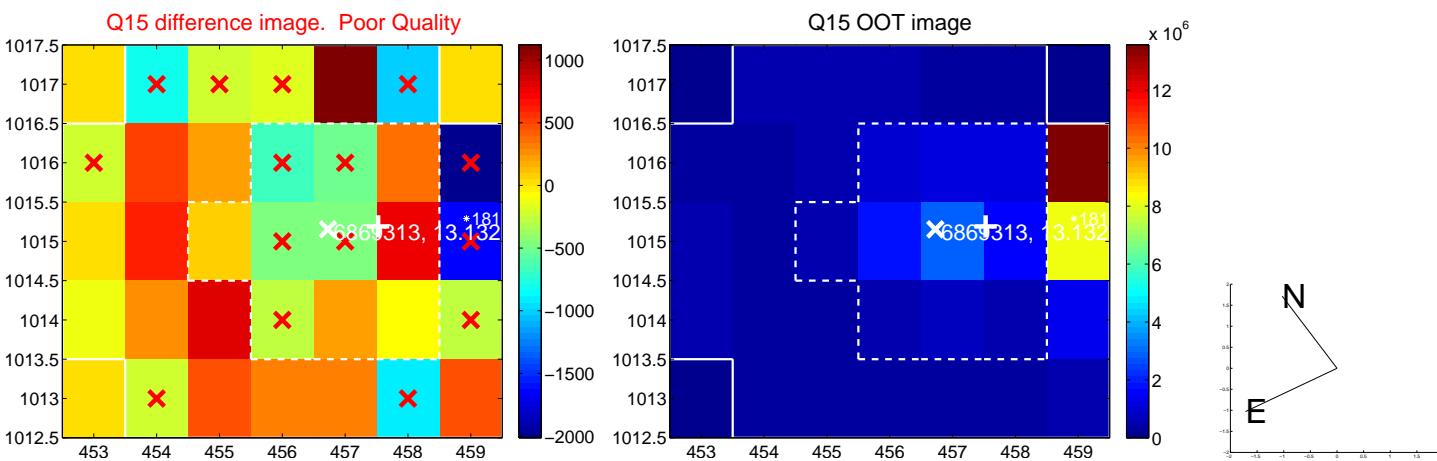
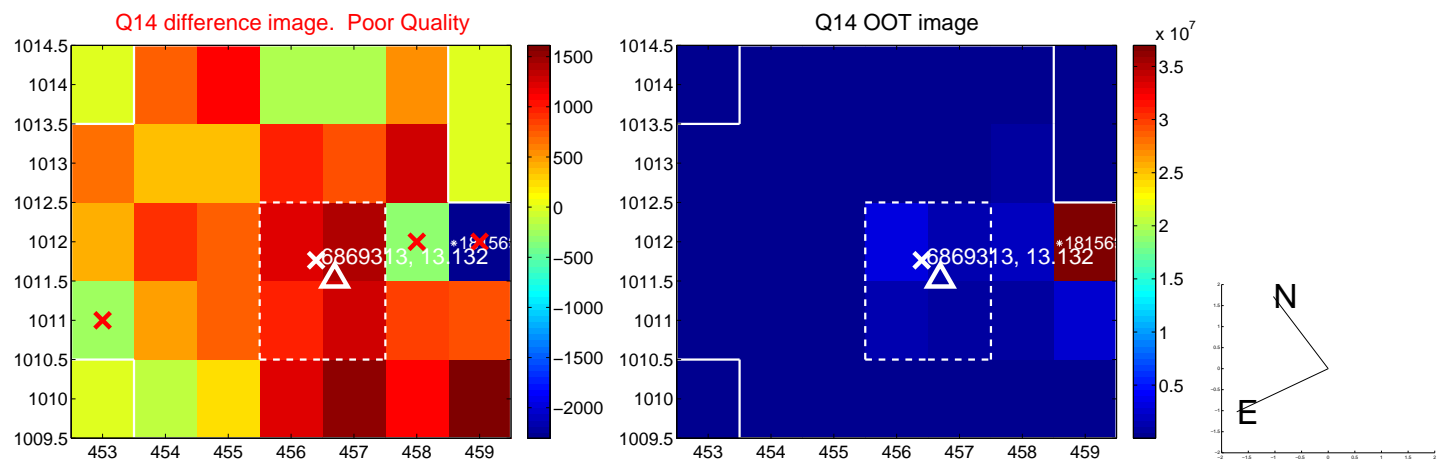
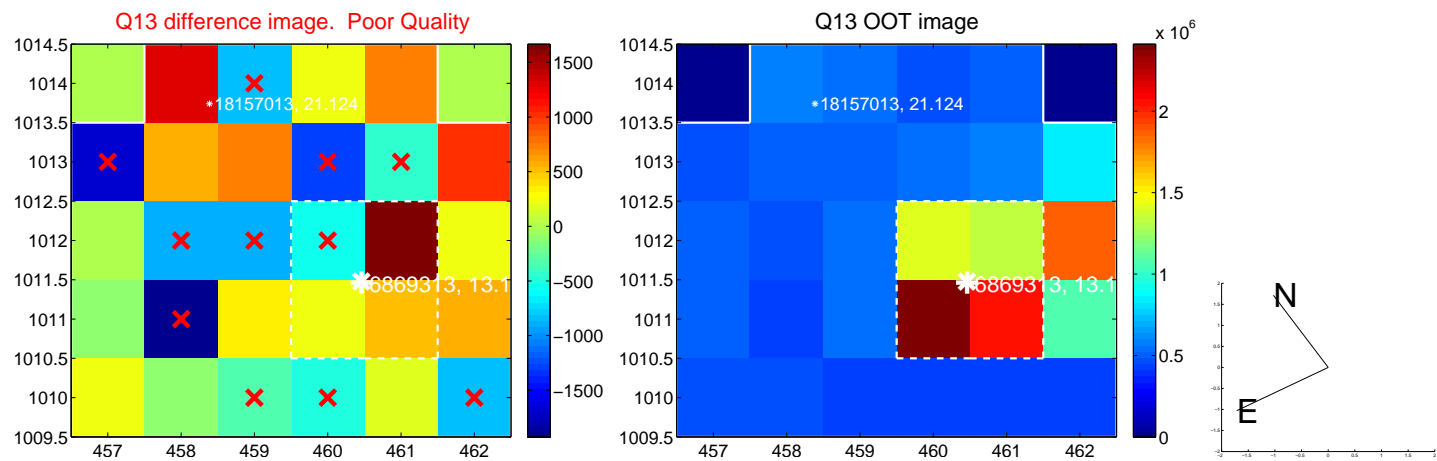
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



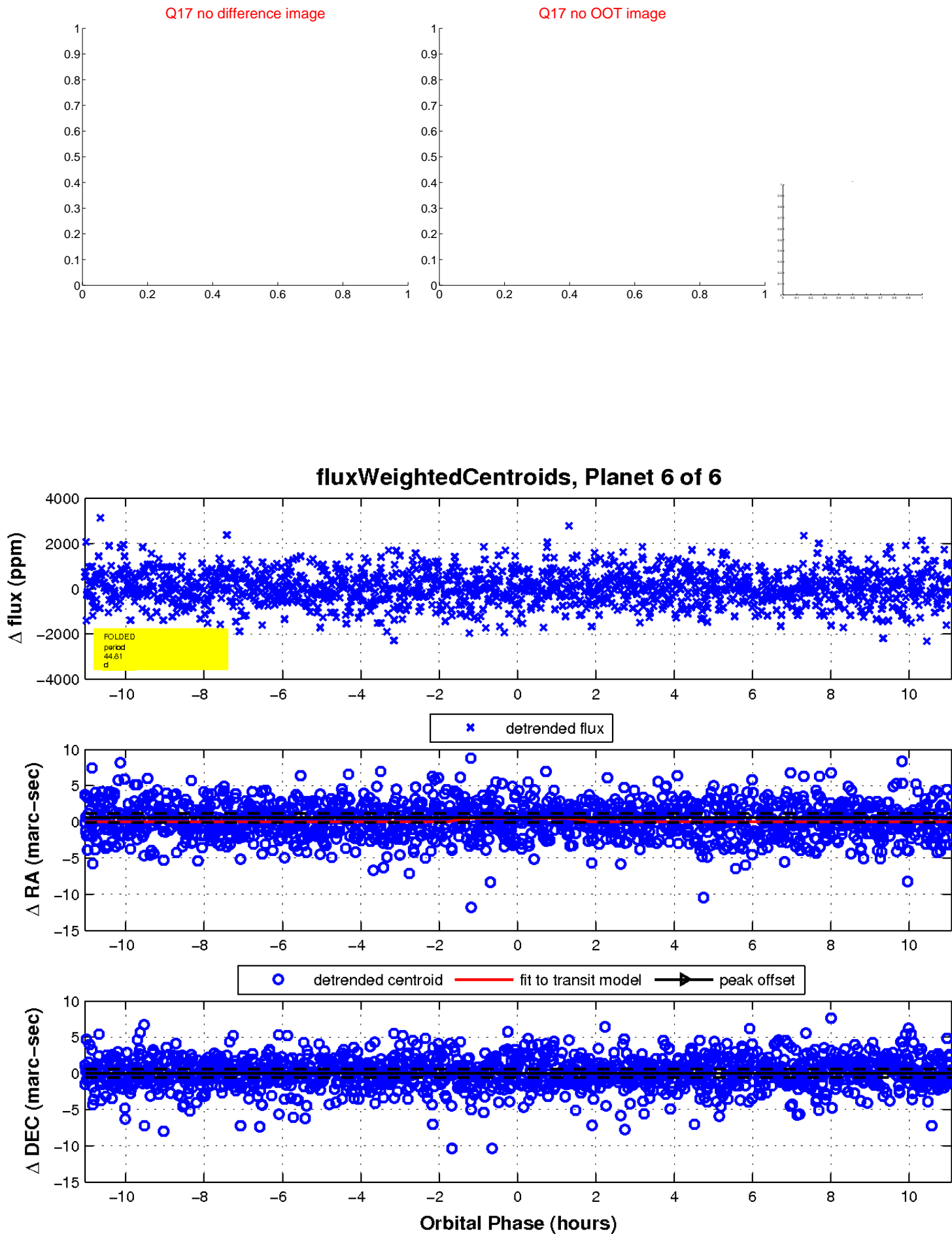
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

