

KIC 006543893

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})
006543893-01	OBS	1627.01	10.296705	132.197655	1015.4	2.999	25.8	28.4	1.80	6068	6.69	385.34
006543893-02	OBS	1627.02	5.939123	134.013996	388.8	2.413	12.8	13.3	1.80	6068	4.19	802.56
006543893-03	OBS	1627.03	3.806763	133.751063	237.7	2.668	8.8	10.5	1.80	6068	3.28	1452.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006543893-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
006543893-02	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
006543893-03	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS

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

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

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

Ephemeris Match Information For 006543893-01

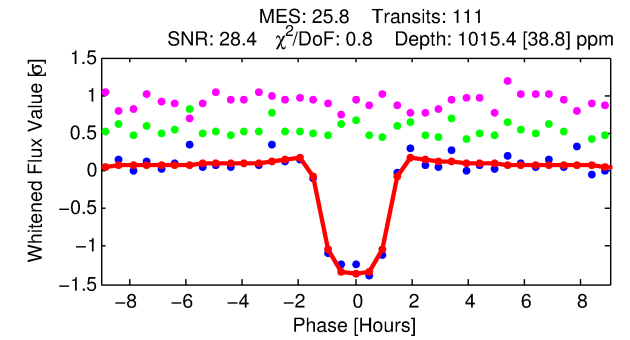
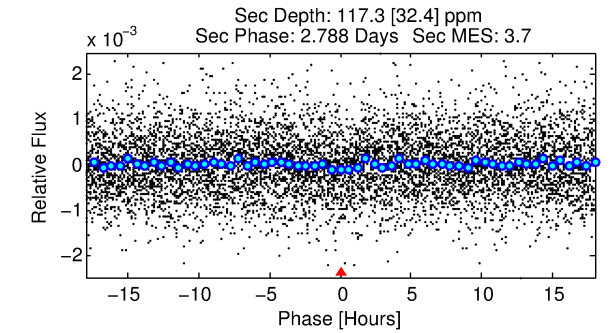
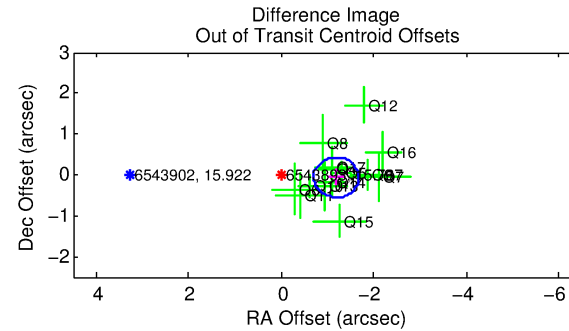
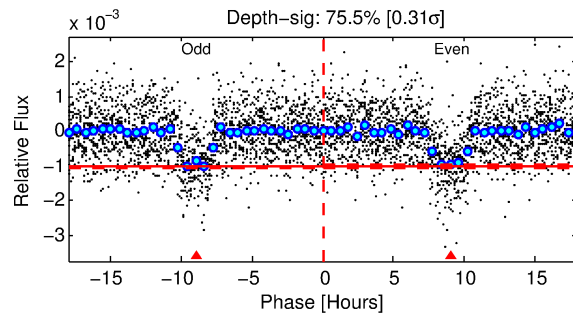
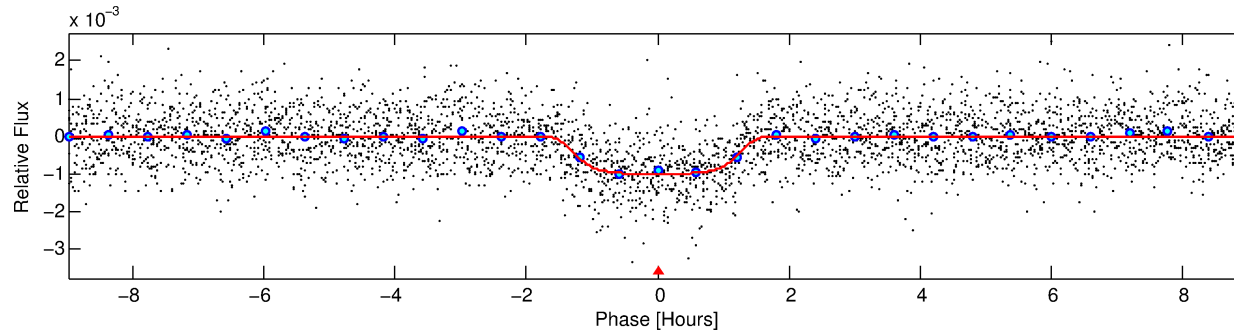
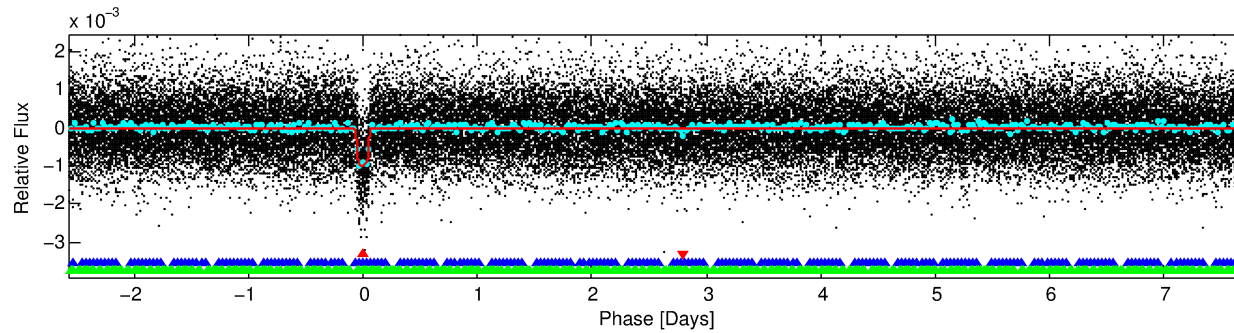
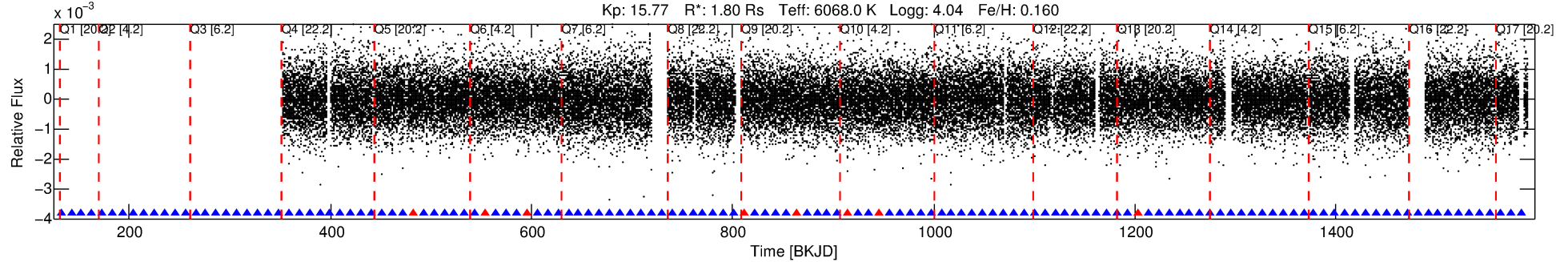
No Significant Match Found

DV One-Page Summary

KIC: 6543893 Candidate: 1 of 3 Period: 10.297 d

KOI: K01627.01 Corr: 0.953

Kp: 15.77 R*: 1.80 Rs Teff: 6068.0 K Logg: 4.04 Fe/H: 0.160



DV Fit Results:

Period = 10.29670 [0.00003] d
Epoch = 132.1977 [0.0028] BKJD
Rp/R* = 0.0341 [0.0028]
a/R* = 14.00 [5.26]
b = 0.89 [0.09]
Seff = 385.34 [124.07]
Teq = 1130 [91] K
Rp = 6.69 [1.61] Re
a = 0.1009 [0.0207] AU
Ag = 14.66 [6.63] [2.06σ]
Teffp = 3418 [279] K [7.79σ]

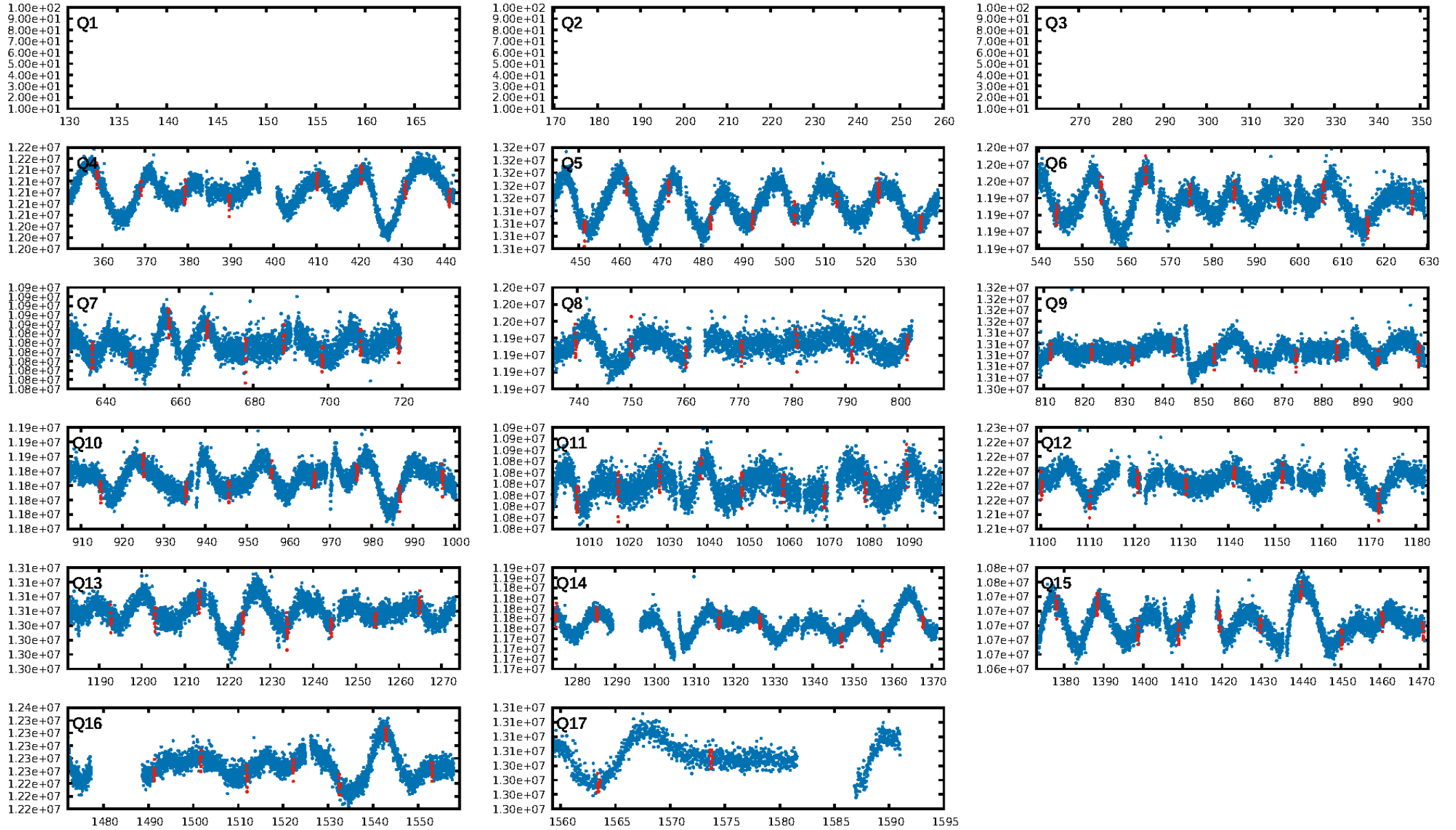
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [27.17σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.49e-136
RollingBand-fgt: 0.93 [101/109]
GhostDiagnostic-chr: 3.217
Centroid-sig: 0.0%
Centroid-so: 0.240 arcsec [0.77σ]
OotOffset-rm: 1.187 arcsec [7.28σ]
KicOffset-rm: 0.444 arcsec [3.19σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

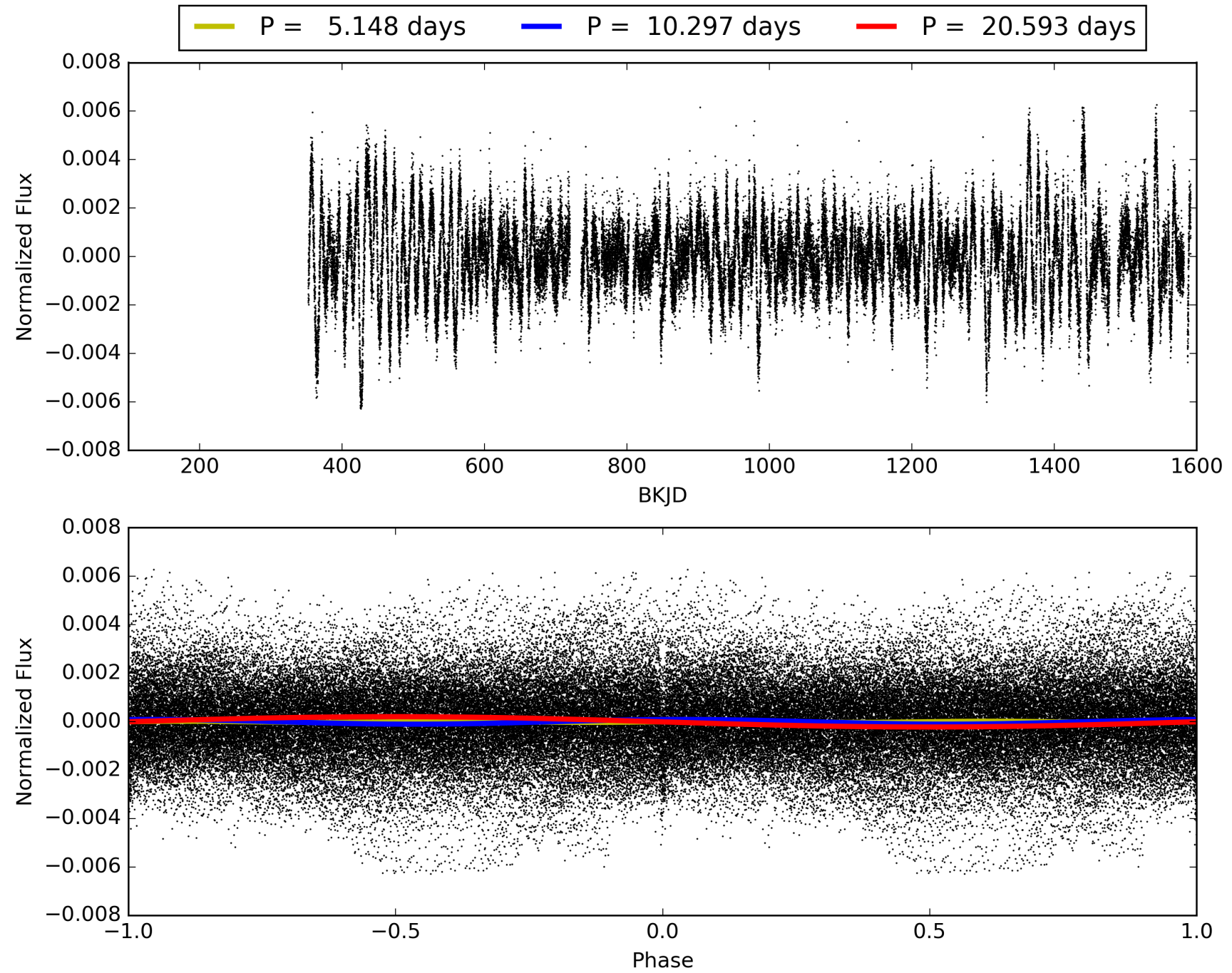
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:19:53 Z

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

TCE 006543893-01, PDC Light Curves

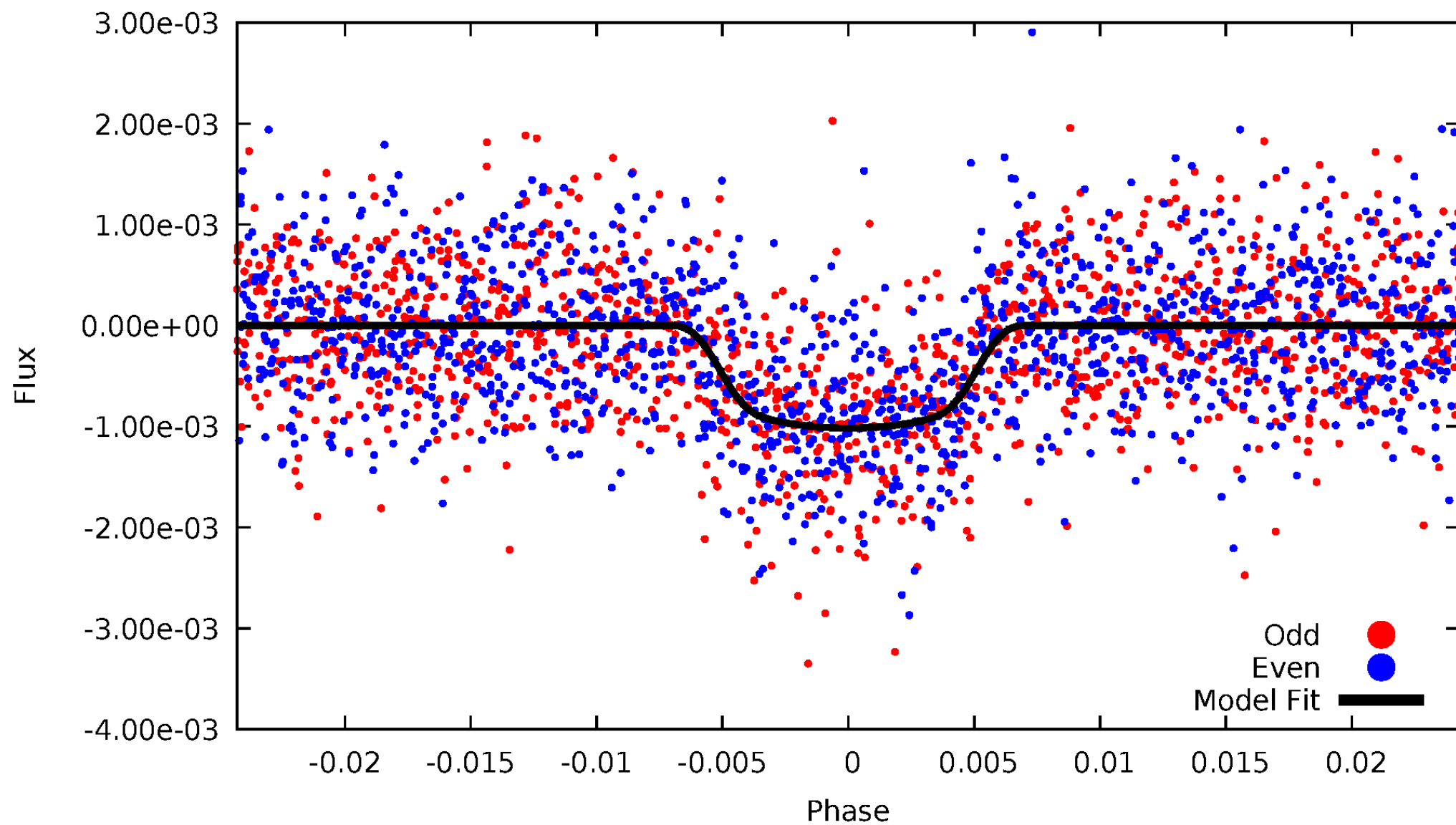


TCE 006543893-01



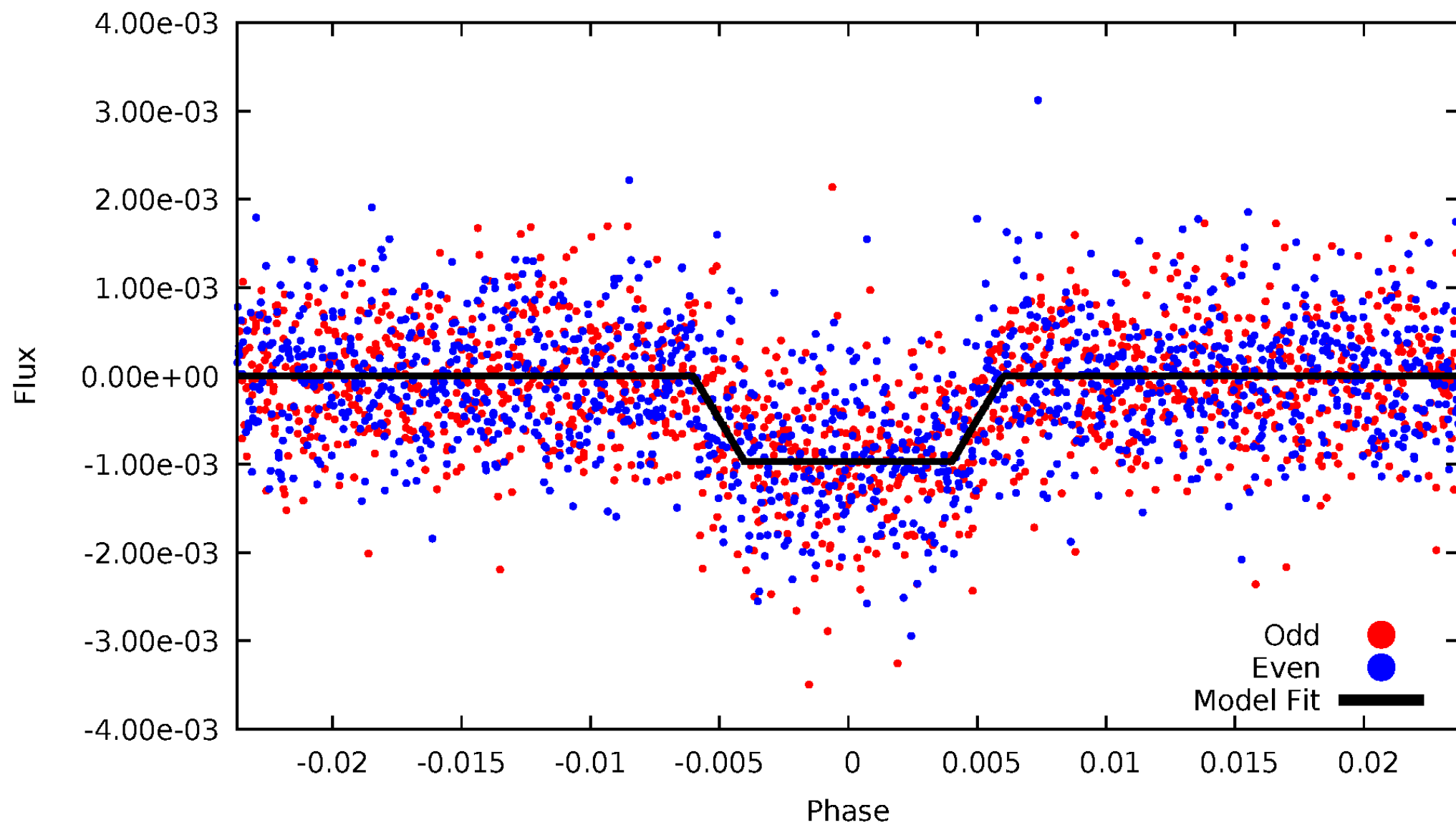
DV Odd/Even

TCE 006543893-01

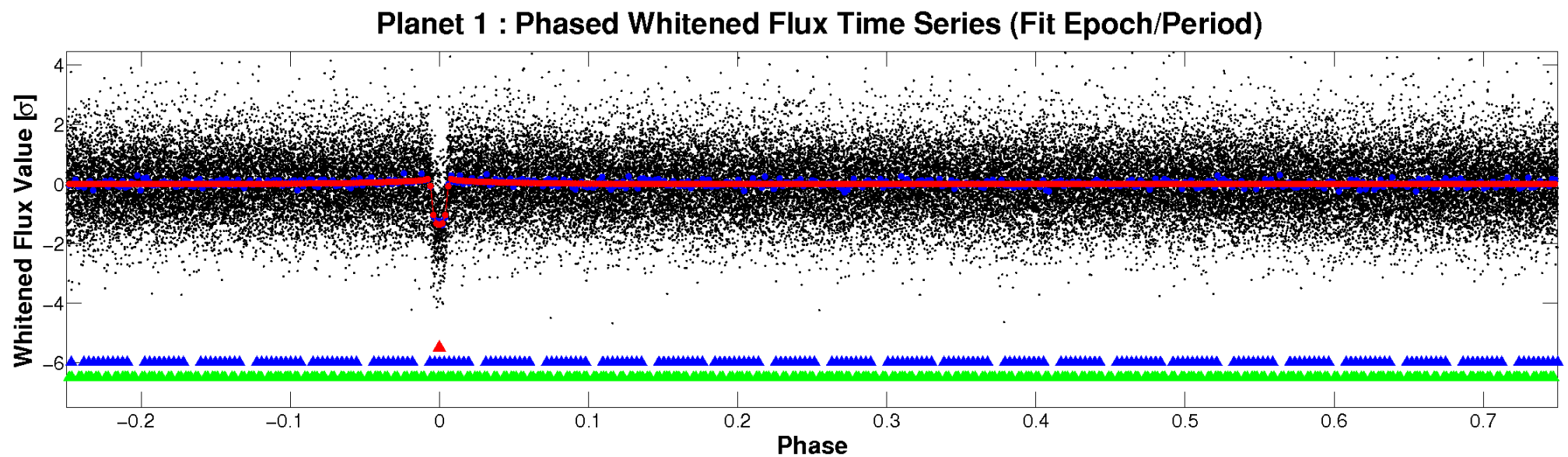
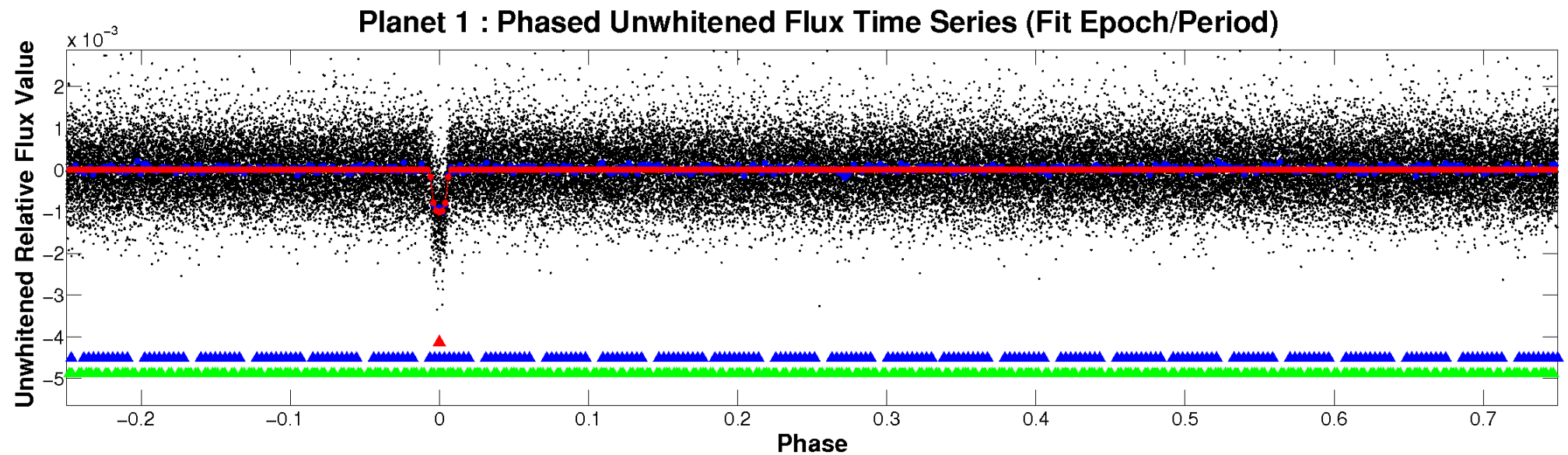


ALT Odd/Even

TCE 006543893-01

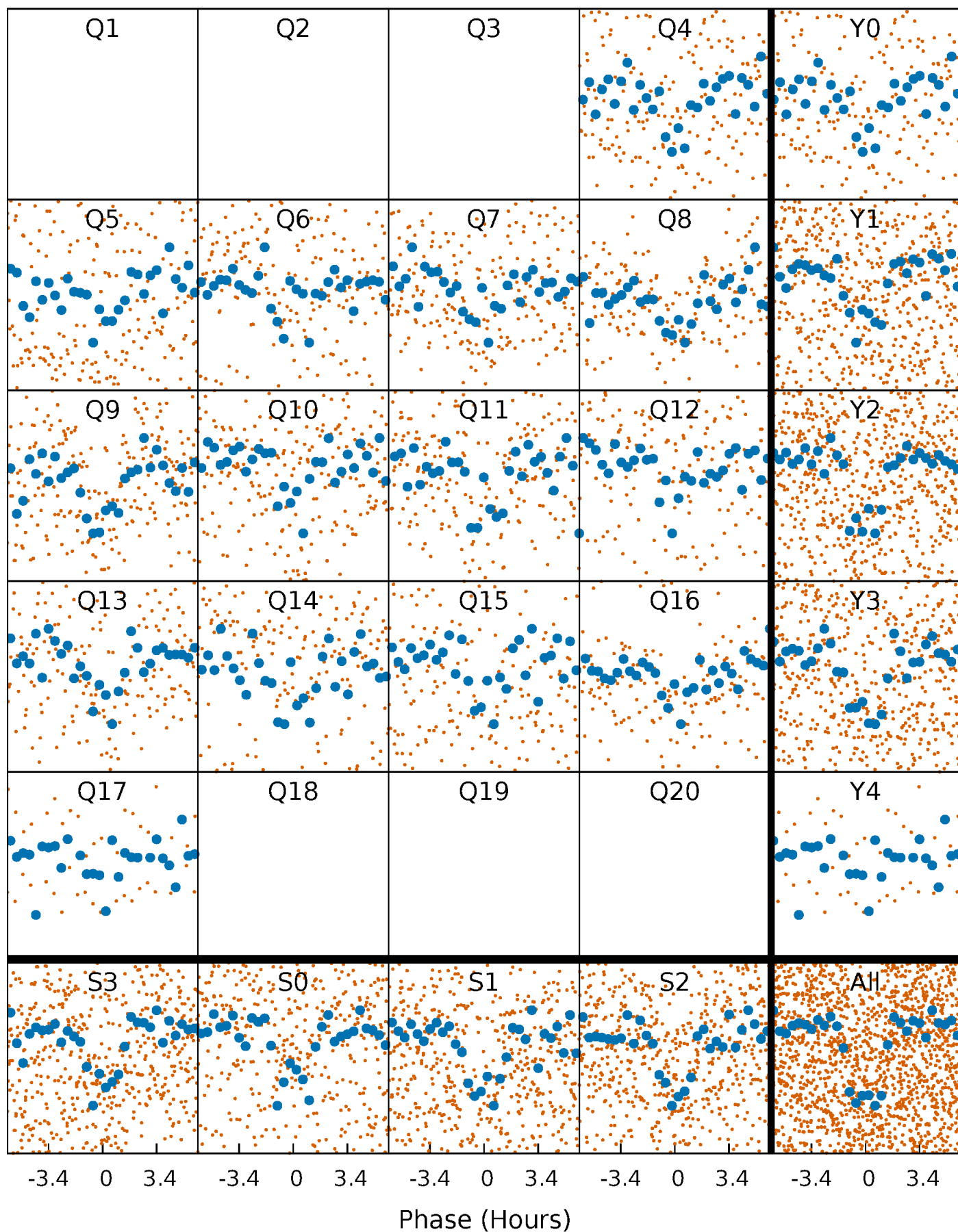


Non-Whitened Vs. Whitened Light Curve



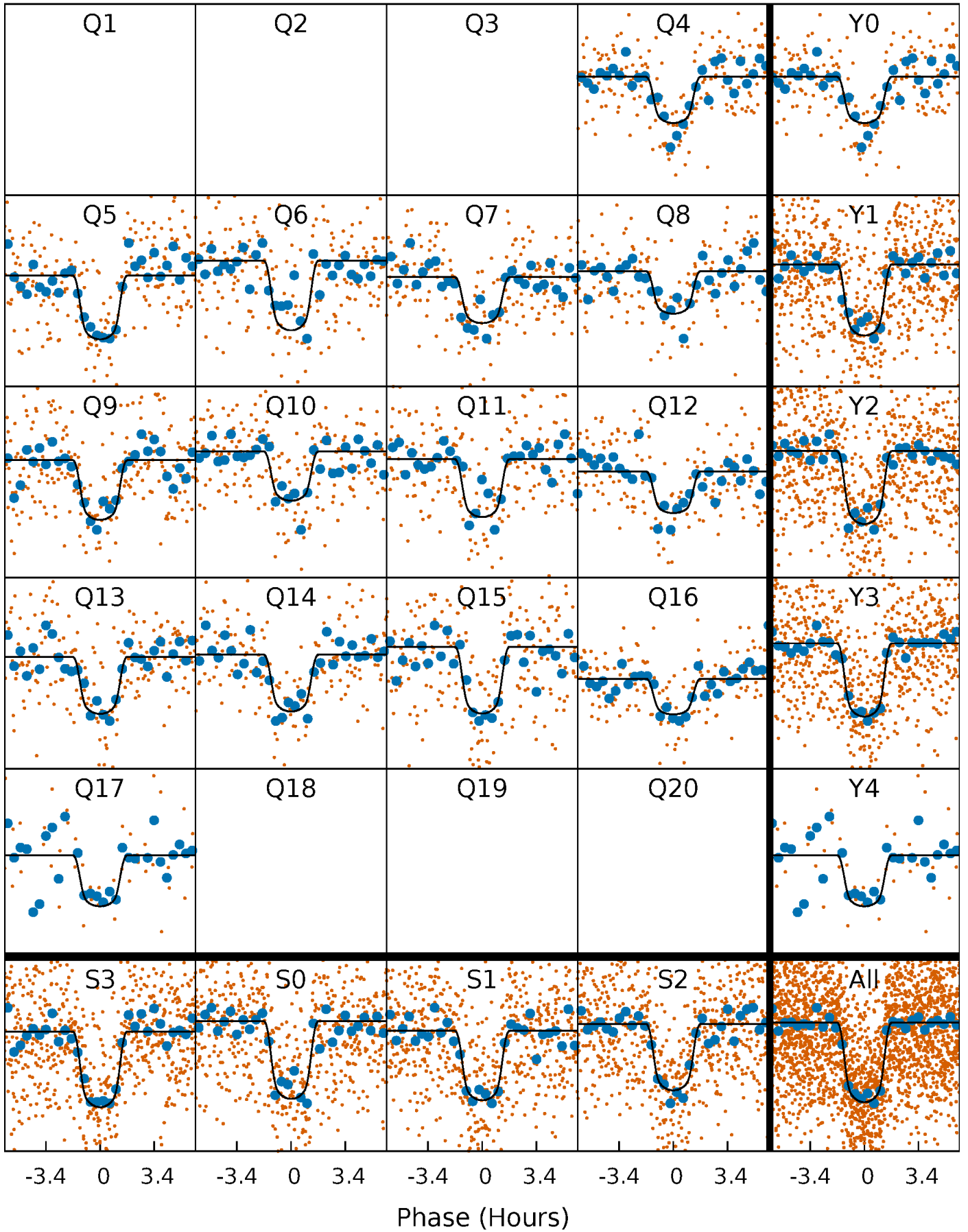
PDC Quarter-Phased Transit Curves

TCE 006543893-01 P= 10.296705 Days $T_0=132.197655$ (BKJD)



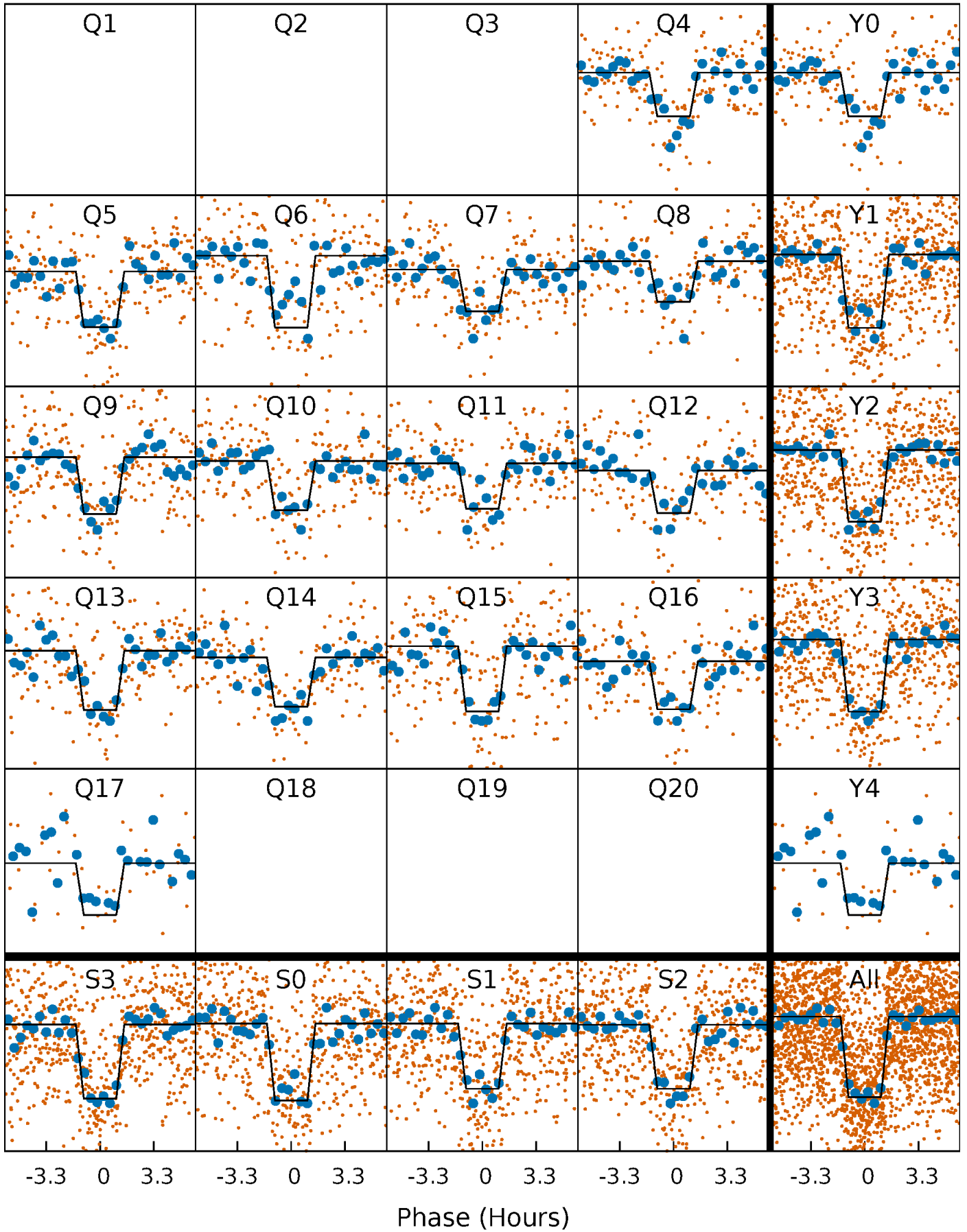
DV Quarter-Phased Transit Curves

TCE 006543893-01 P= 10.296705 Days $T_0=132.197655$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

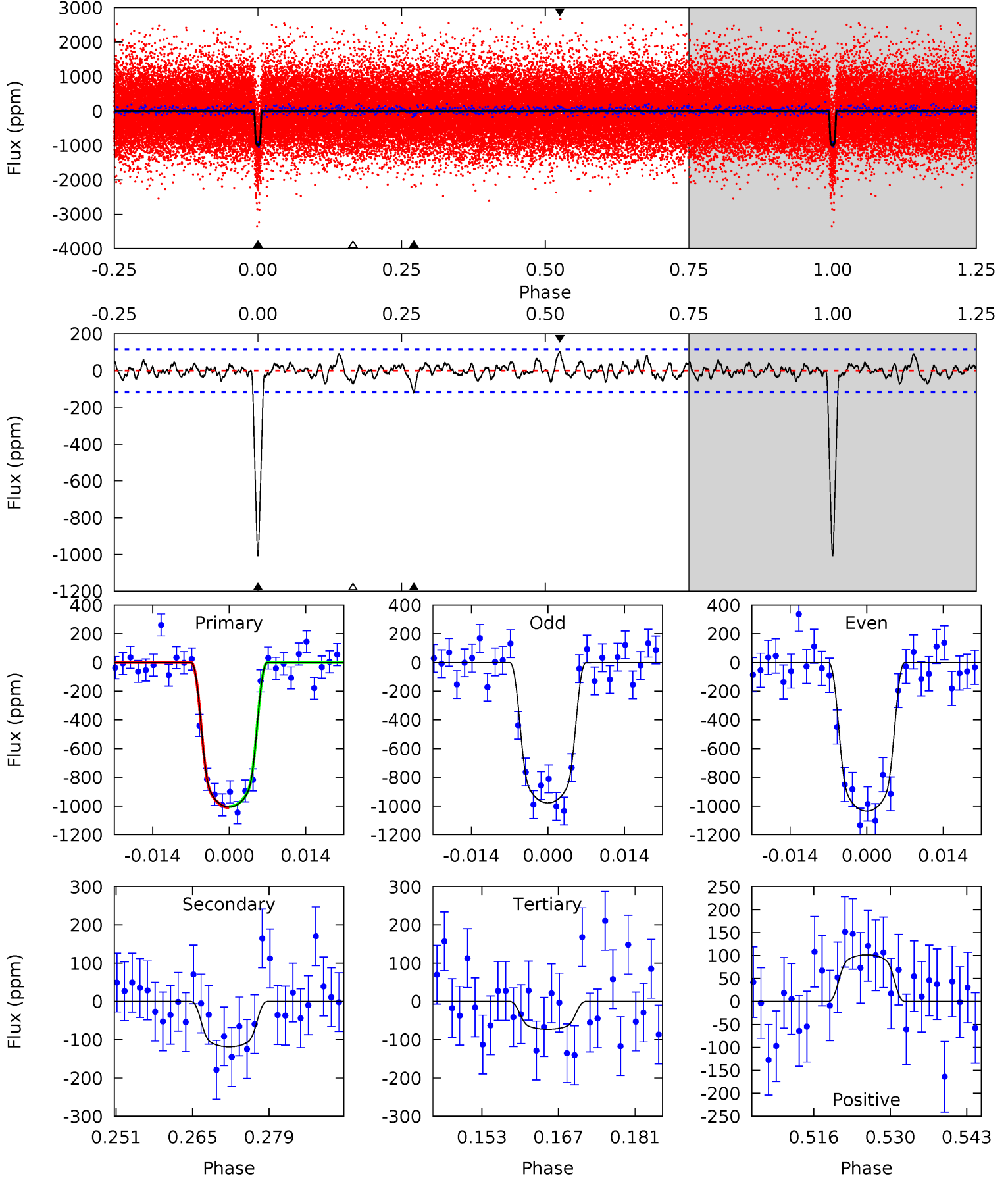
TCE 006543893-01 P= 10.296722 Days $T_0=132.196006$ (BKJD)



DV Model-Shift Uniqueness Test

006543893-01, $P = 10.296705$ Days, $E = 132.197655$ Days

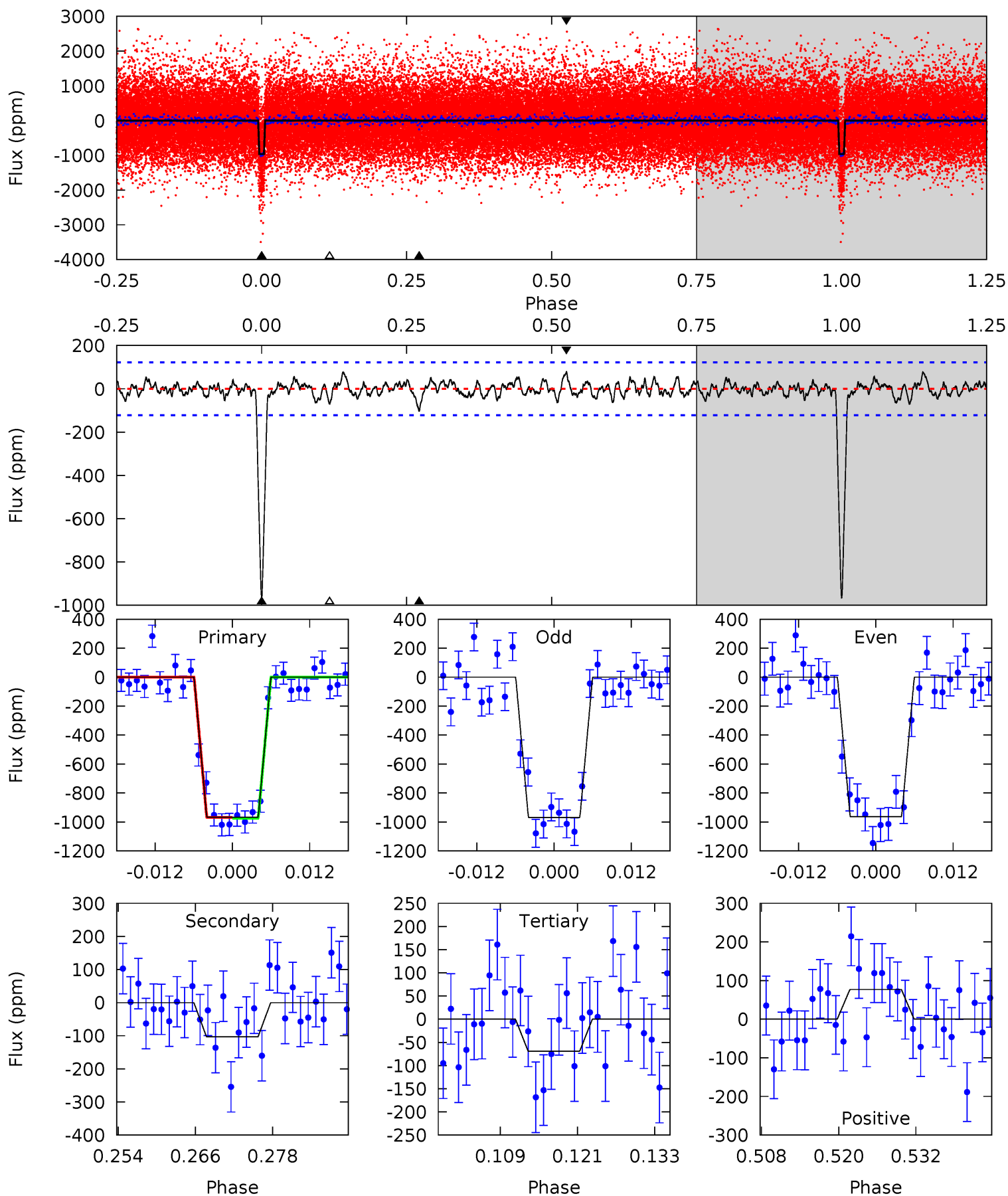
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.2	5.08	3.12	4.35	4.96	2.46	1.24	40.1	38.8	1.96	0.73	1.23	0.95	0.09	0.12



Alt Model-Shift Uniqueness Test

006543893-01, P = 10.296722 Days, E = 132.196006 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.4	4.22	2.83	3.14	4.99	2.51	1.06	36.6	36.3	1.40	1.08	0.11	0.94	0.07	0.12



Stellar Parameters For KIC 006543893

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6068^{+82}_{-82}	$4.040^{+0.182}_{-0.112}$	$0.160^{+0.150}_{-0.100}$	$1.797^{+0.295}_{-0.406}$	$1.294^{+0.131}_{-0.145}$	$0.314^{+0.315}_{-0.097}$
	+1%/-1%	+5%/-3%	+94%/-62%	+16%/-23%	+10%/-11%	+100%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 006543893-01 / KOI 1627.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-119 ± 23	$6.70^{+0.97}_{-0.95}$	1578^{+76}_{-90}	3783^{+171}_{-165}	15^{+6}_{-4}
Alt.	-103 ± 25	$6.04^{+0.90}_{-0.89}$	1571^{+79}_{-93}	3821^{+205}_{-201}	16^{+8}_{-5}

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 $A_{obs} \gg 1.0$

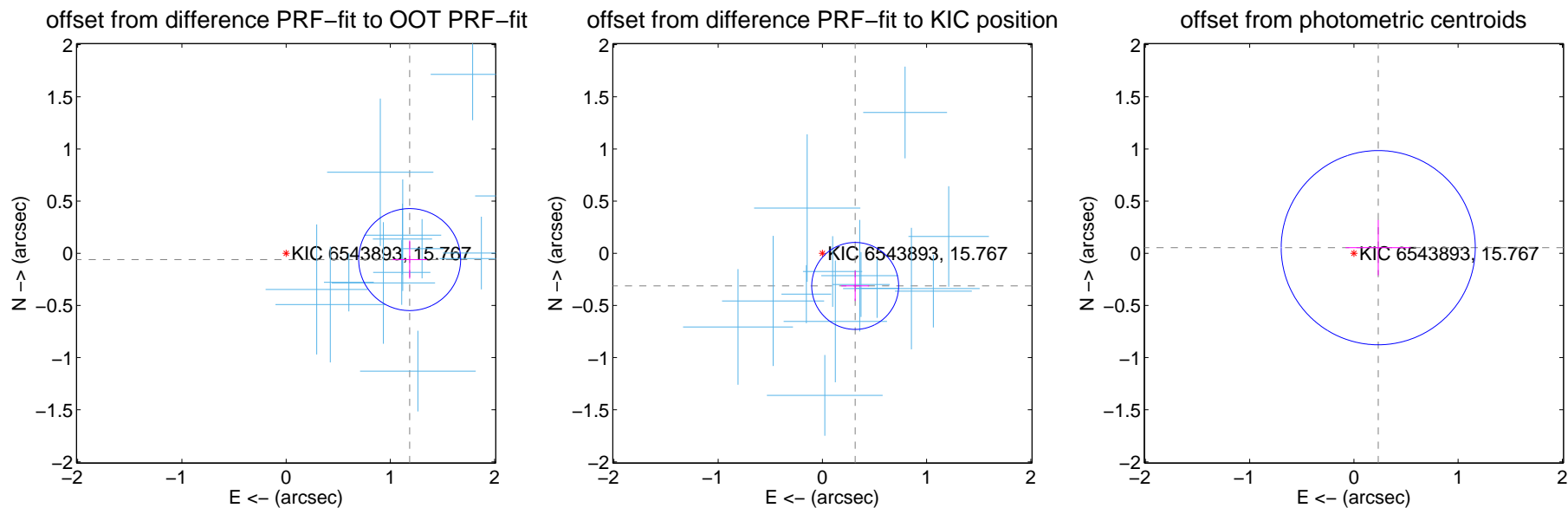
DV Centroid Data

Supplemental centroid analysis for 006543893-01. Kepler magnitude: 15.77. Transit SNR 28.41

There are 14 quarters with good PRF difference image offsets

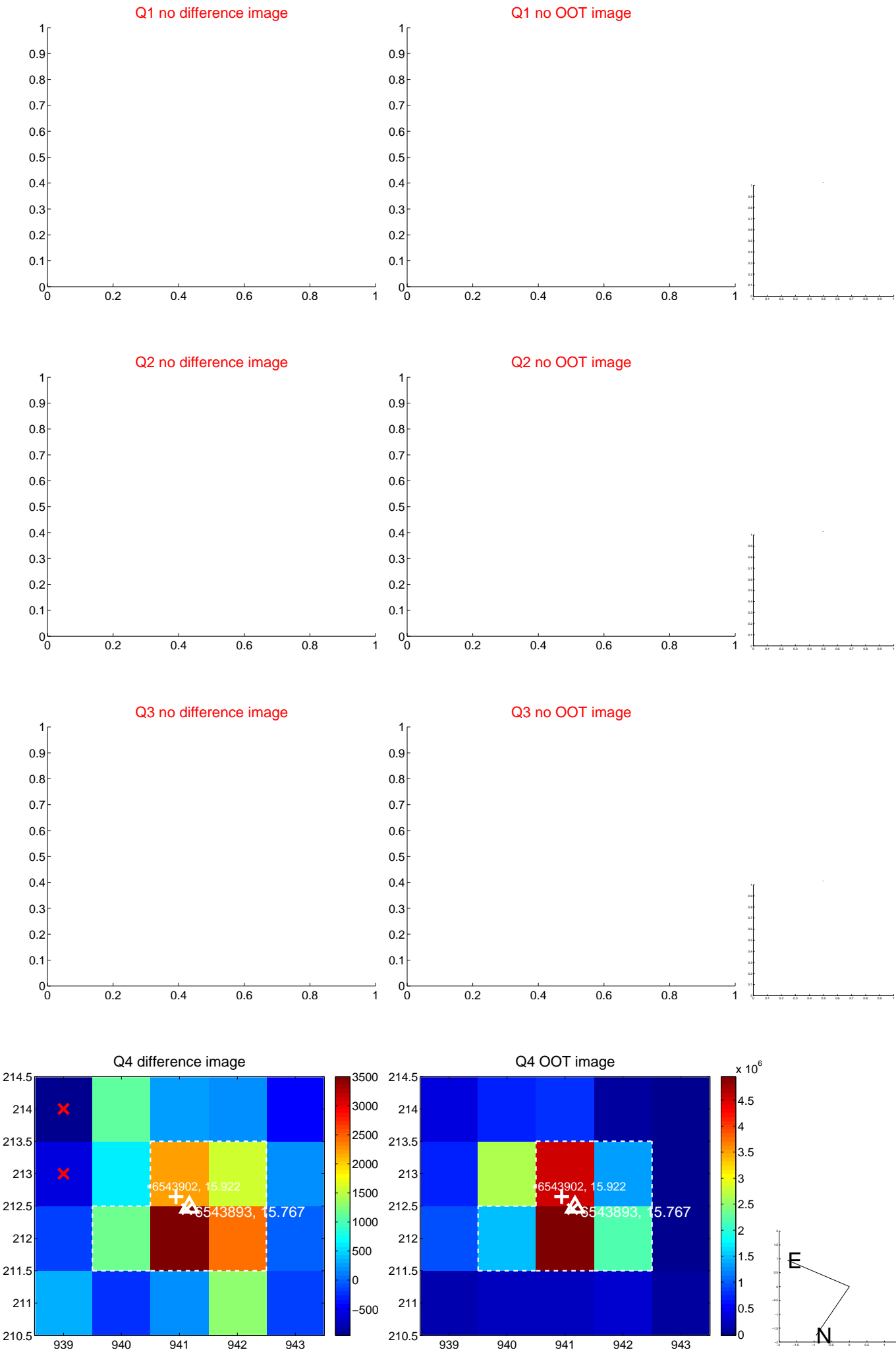
The direct PRF centroid is offset from the target star catalog position by about 0.85 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.187 ± 0.163	7.28	-1.185 ± 0.166	-0.060 ± 0.183
PRF-fit source offset from KIC position	0.444 ± 0.139	3.19	-0.314 ± 0.133	-0.313 ± 0.145
photometric centroid source offset	0.24 ± 0.31	0.77	-0.23 ± 0.31	0.05 ± 0.27

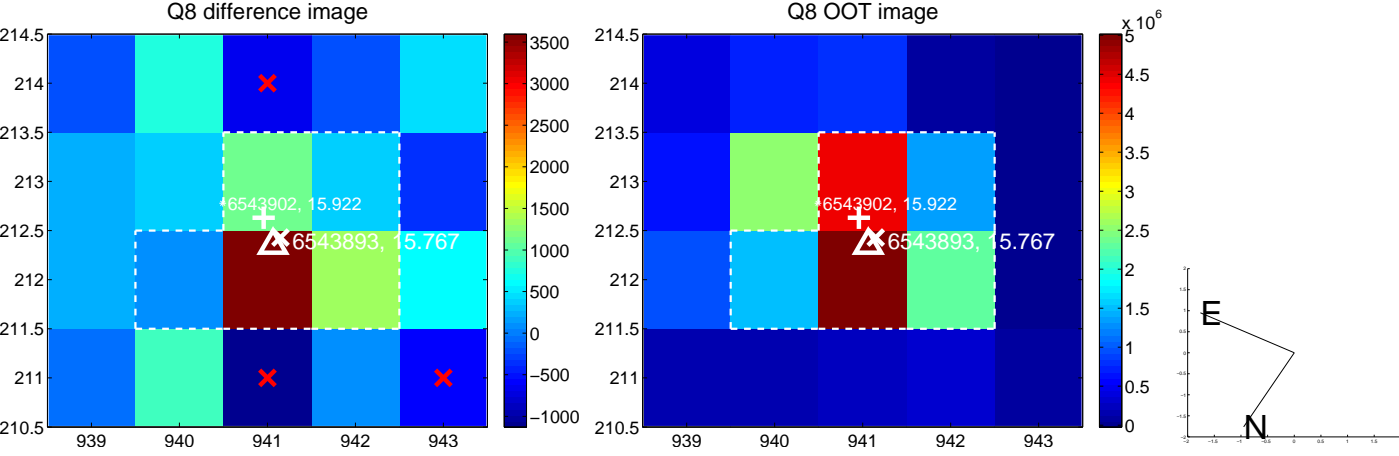
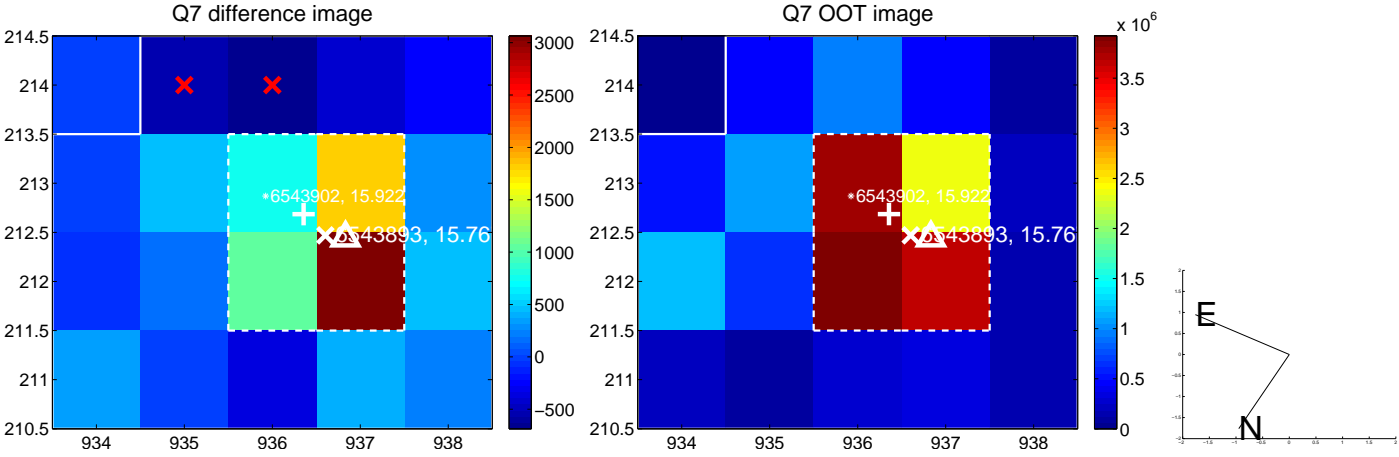
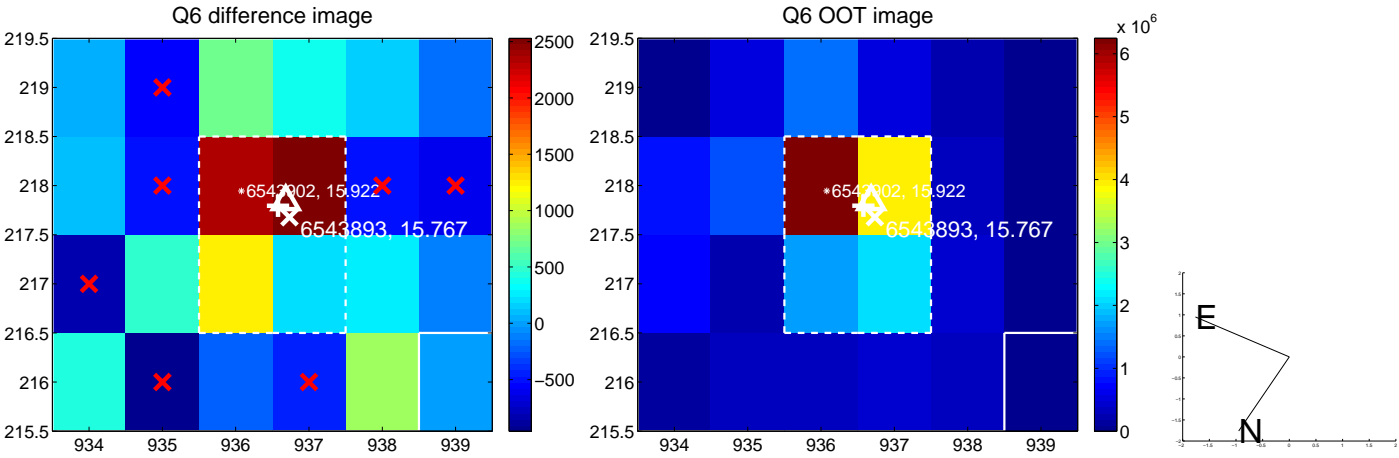
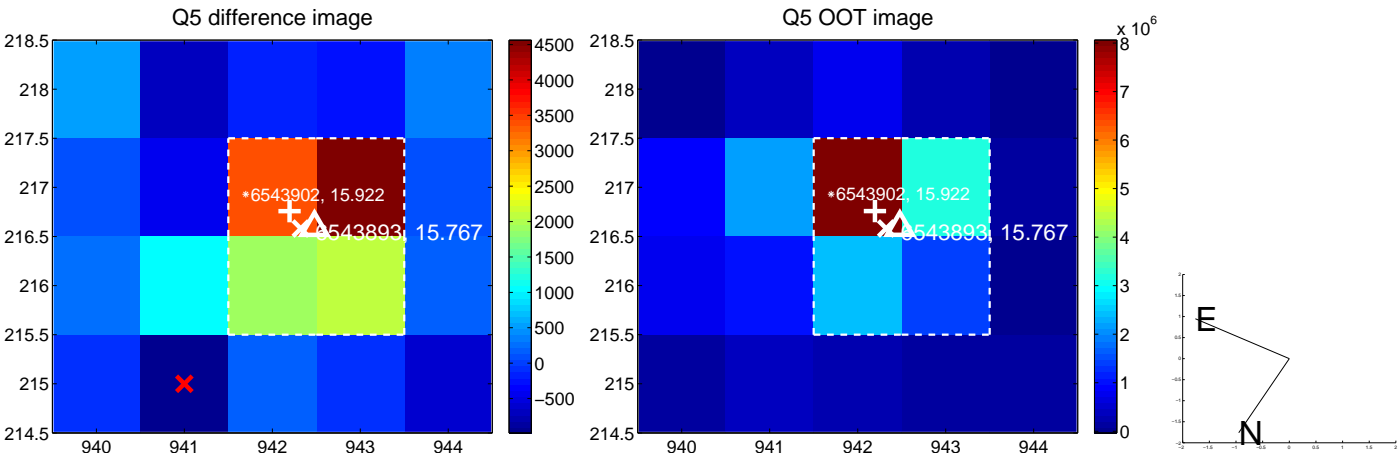


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

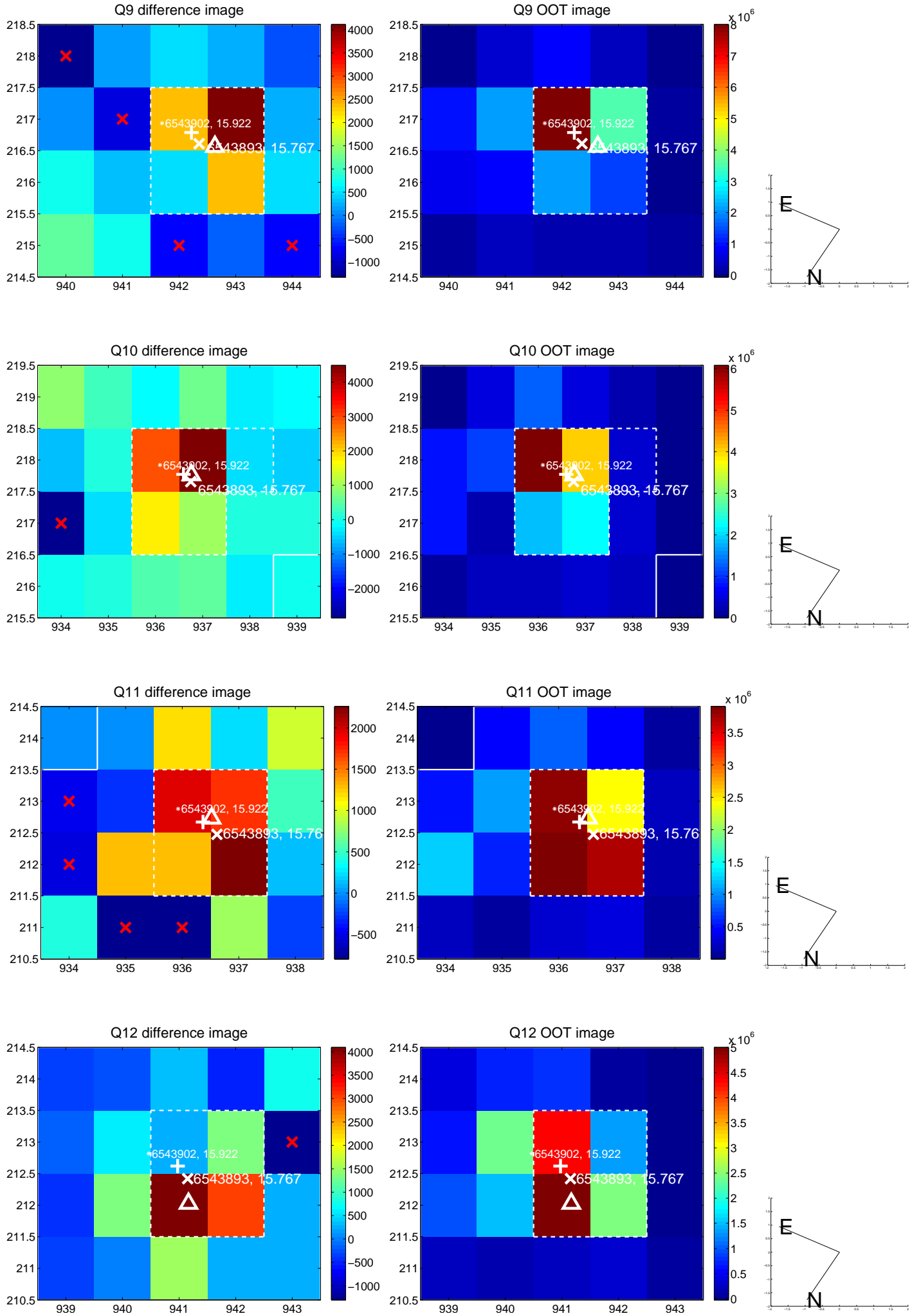
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



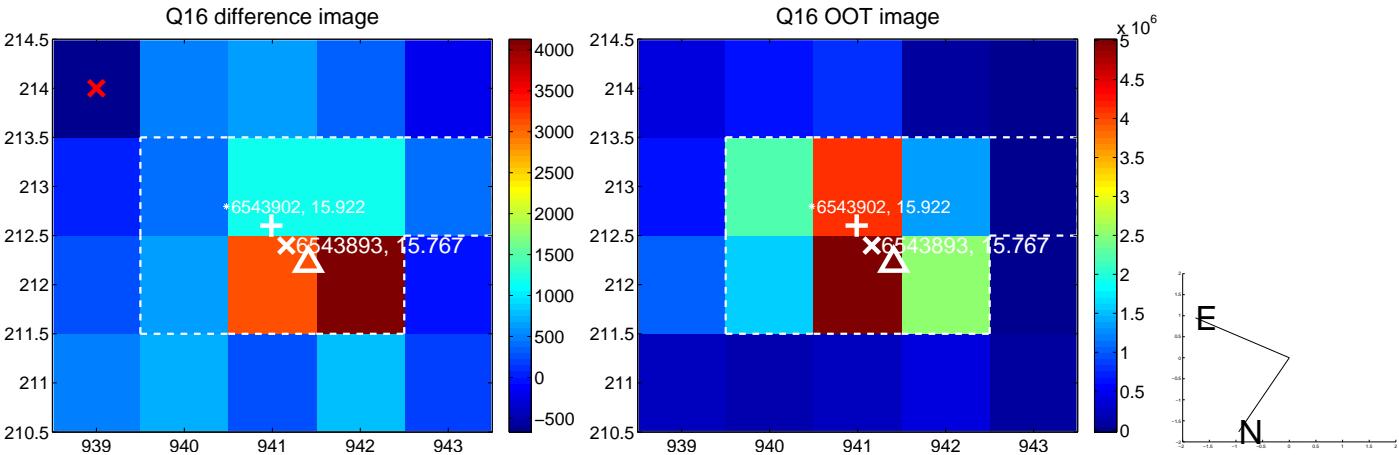
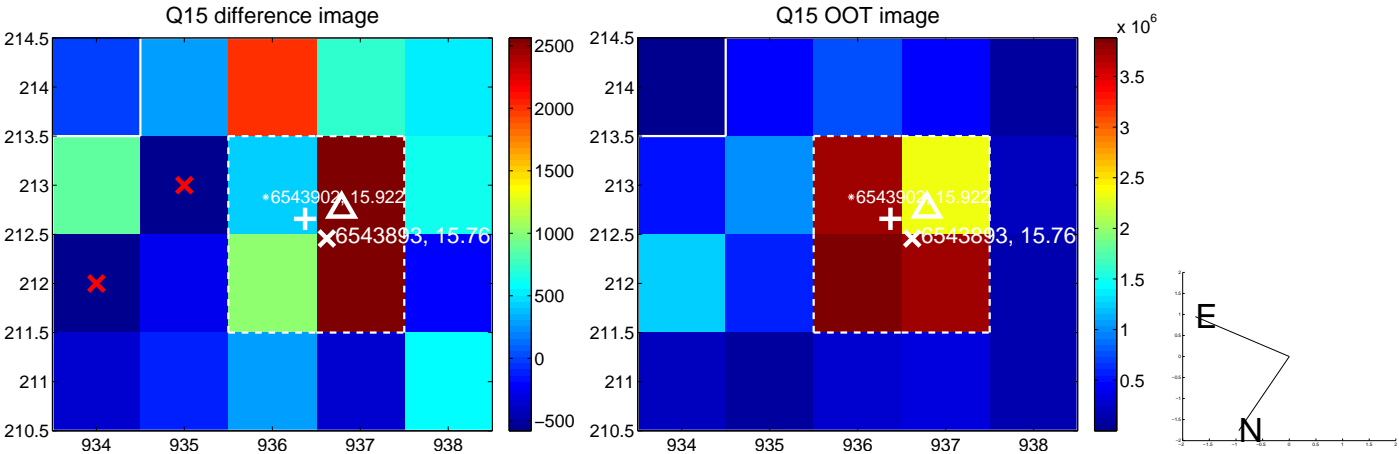
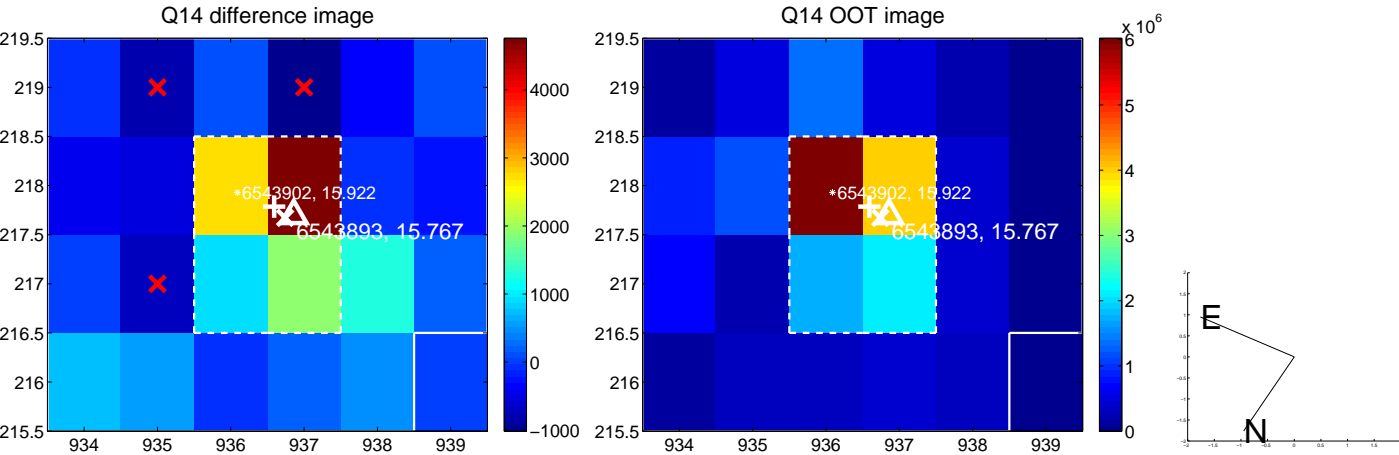
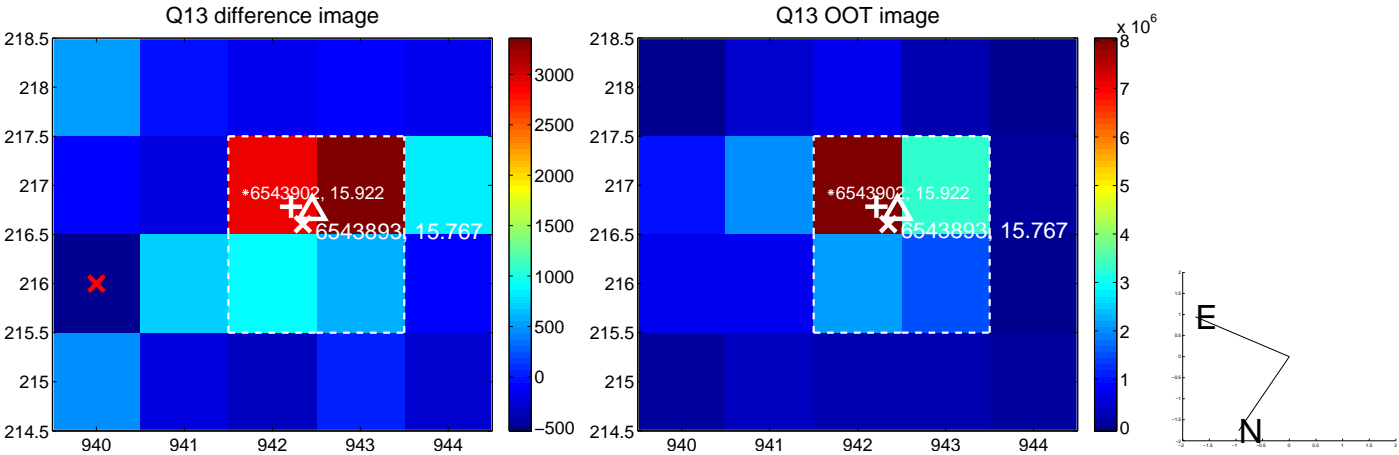
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



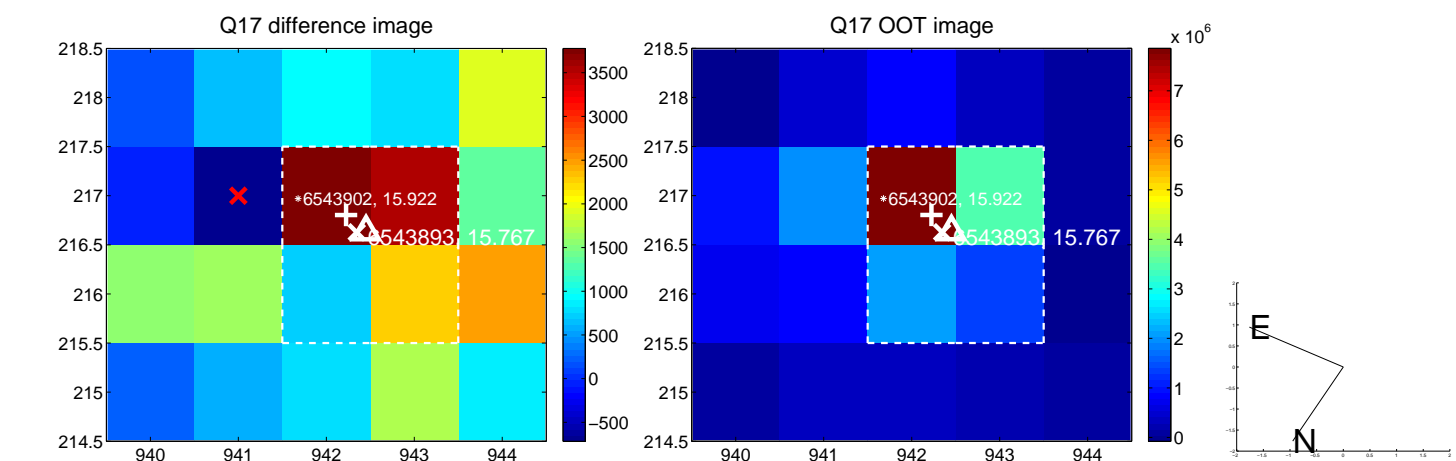
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



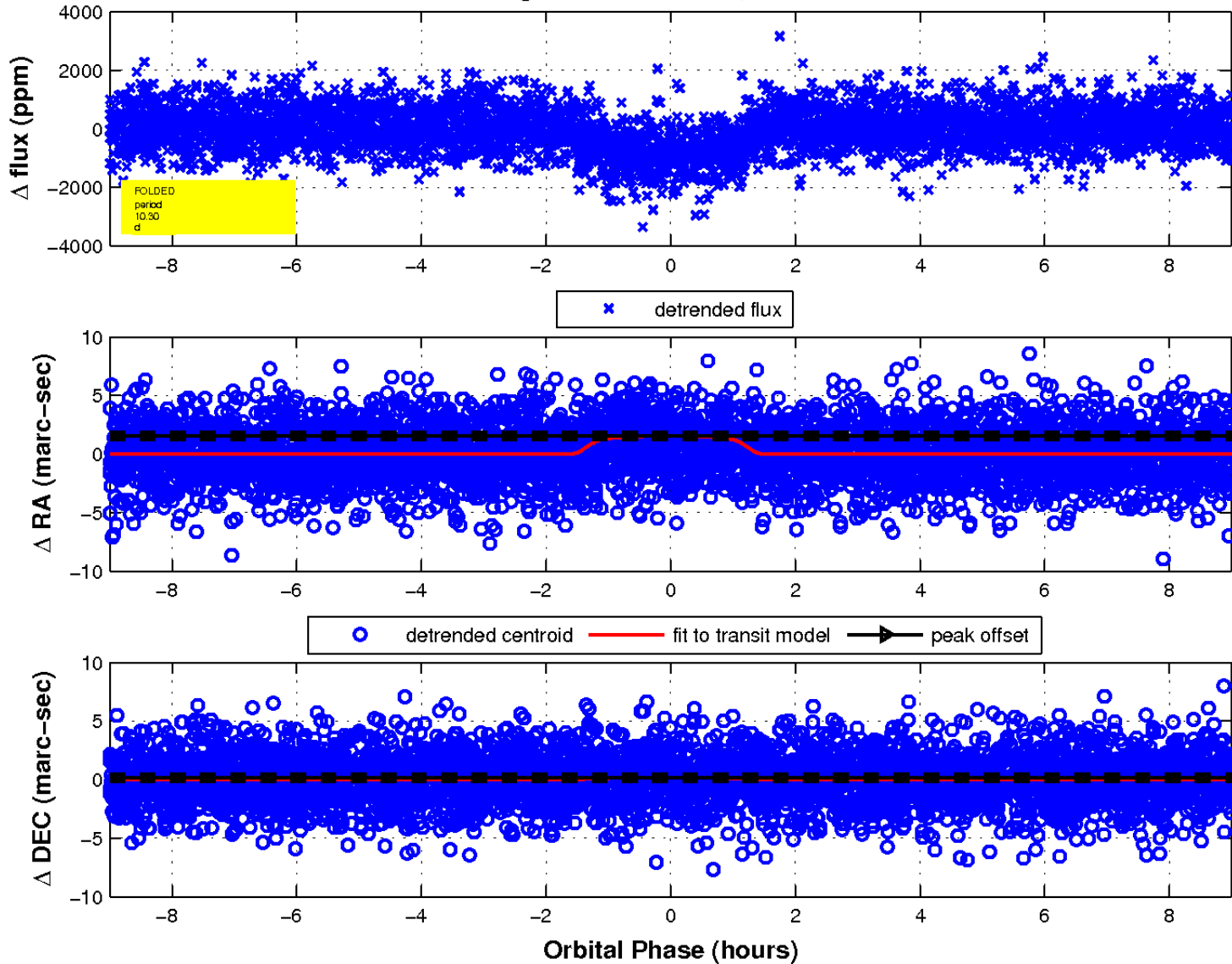
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

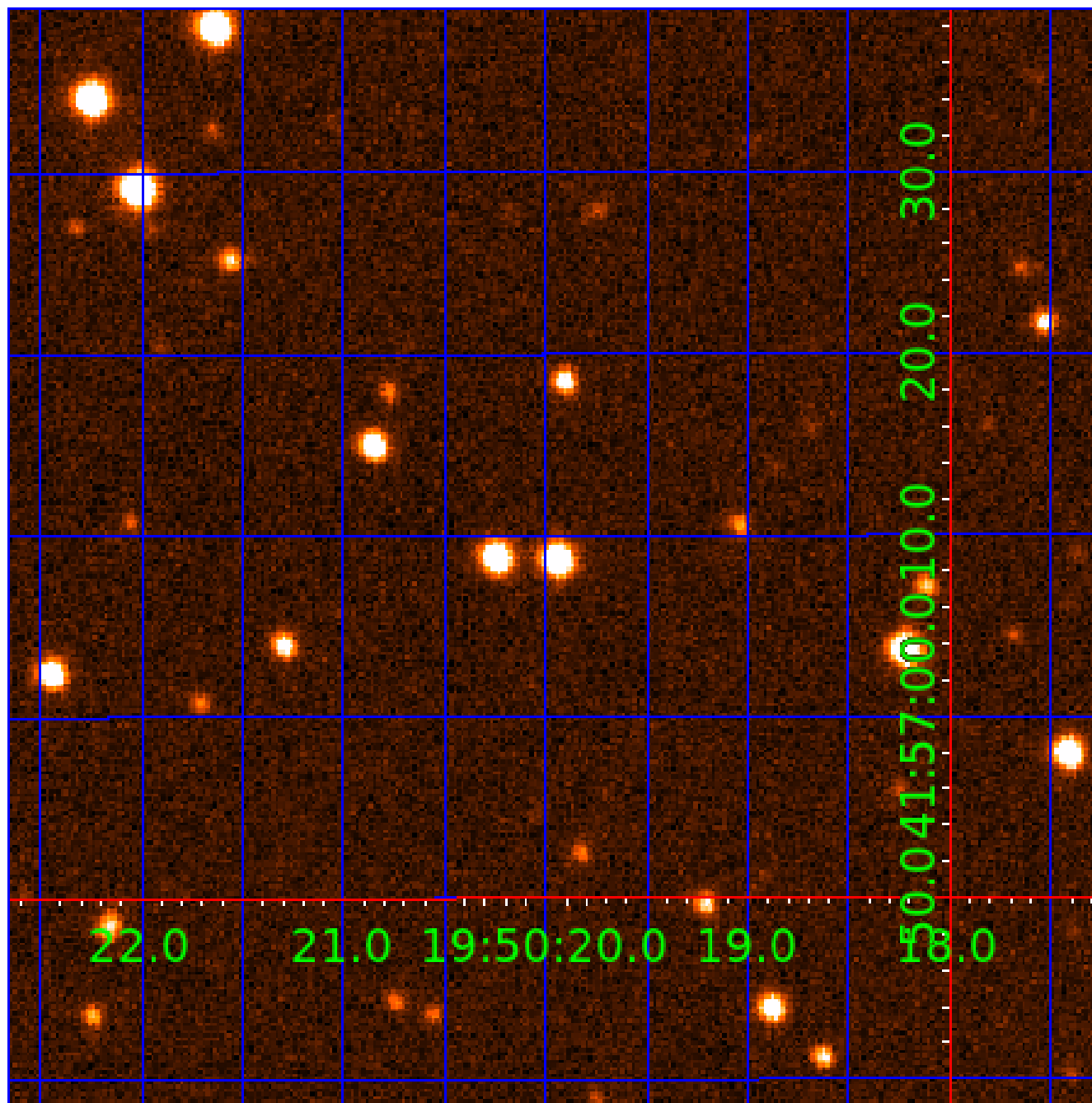


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 006543893

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})
006543893-01	OBS	1627.01	10.296705	132.197655	1015.4	2.999	25.8	28.4	1.80	6068	6.69	385.34
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006543893-03	OBS	1627.03	3.806763	133.751063	237.7	2.668	8.8	10.5	1.80	6068	3.28	1452.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006543893-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
006543893-02	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
006543893-03	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS

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

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

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

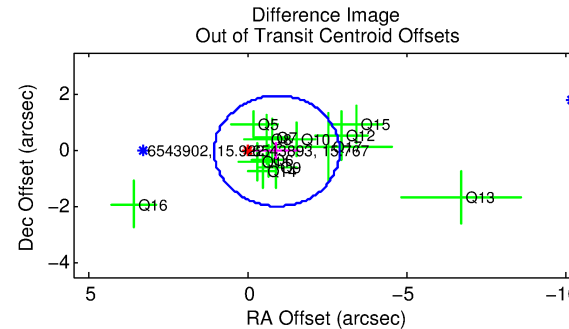
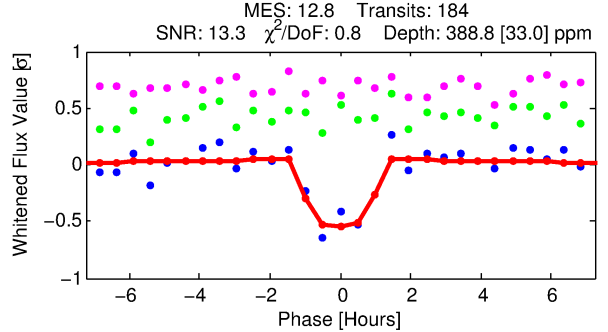
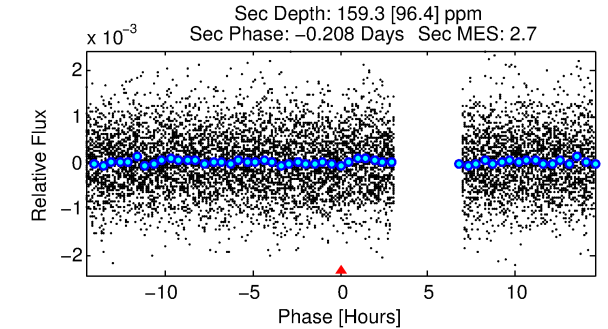
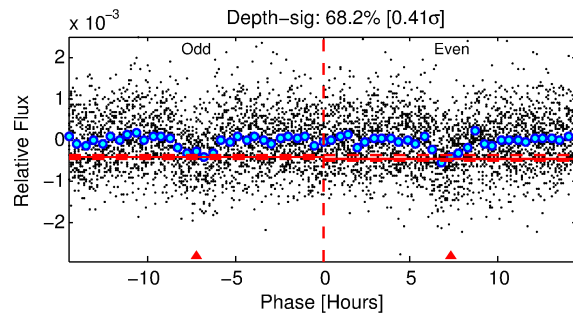
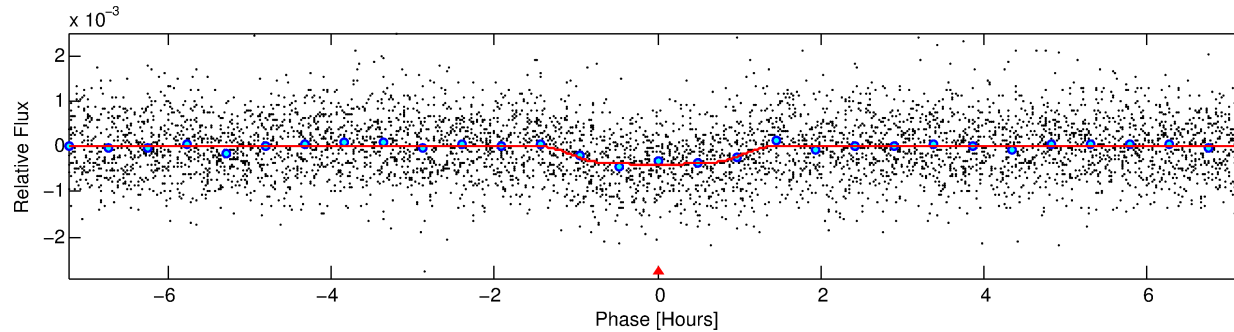
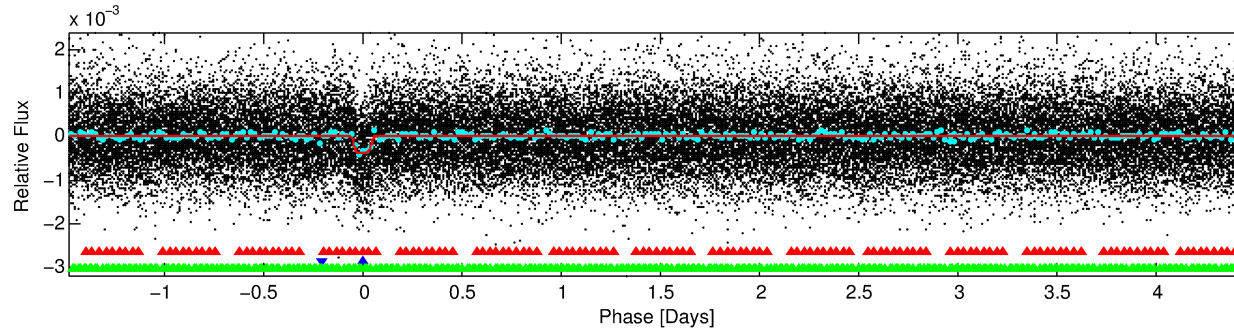
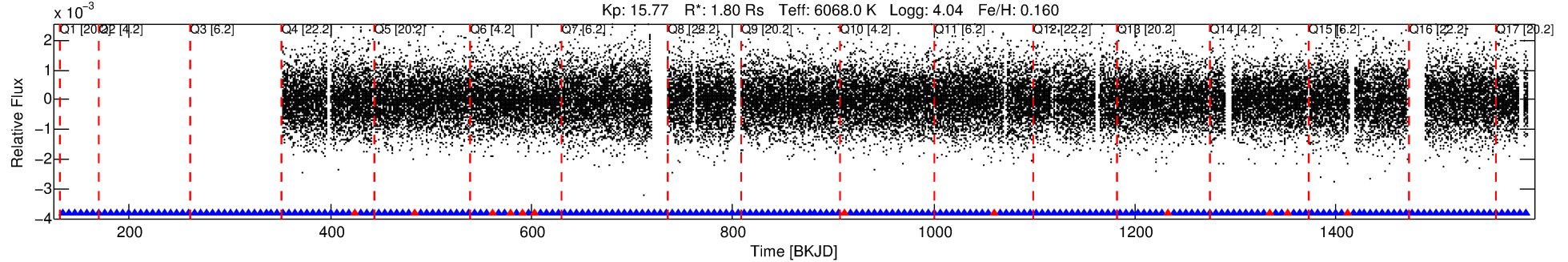
Ephemeris Match Information For 006543893-02

No Significant Match Found

DV One-Page Summary

KIC: 6543893 Candidate: 2 of 3 Period: 5.939 d
KOI: K01627.02 Corr: 0.948

Kp: 15.77 R*: 1.80 Rs Teff: 6068.0 K Logg: 4.04 Fe/H: 0.160



DV Fit Results:

Period = 5.93912 [0.00003] d
Epoch = 134.0140 [0.0038] BKJD
Rp/R* = 0.0214 [0.0066]
a/R* = 9.14 [13.90]
b = 0.90 [0.33]
Seff = 802.56 [258.40]
Teq = 1357 [109] K
Rp = 4.19 [1.61] Re
a = 0.0699 [0.0144] AU
Ag = 24.39 [22.55] [1.04σ]
Teffp = 4663 [1014] K [3.24σ]

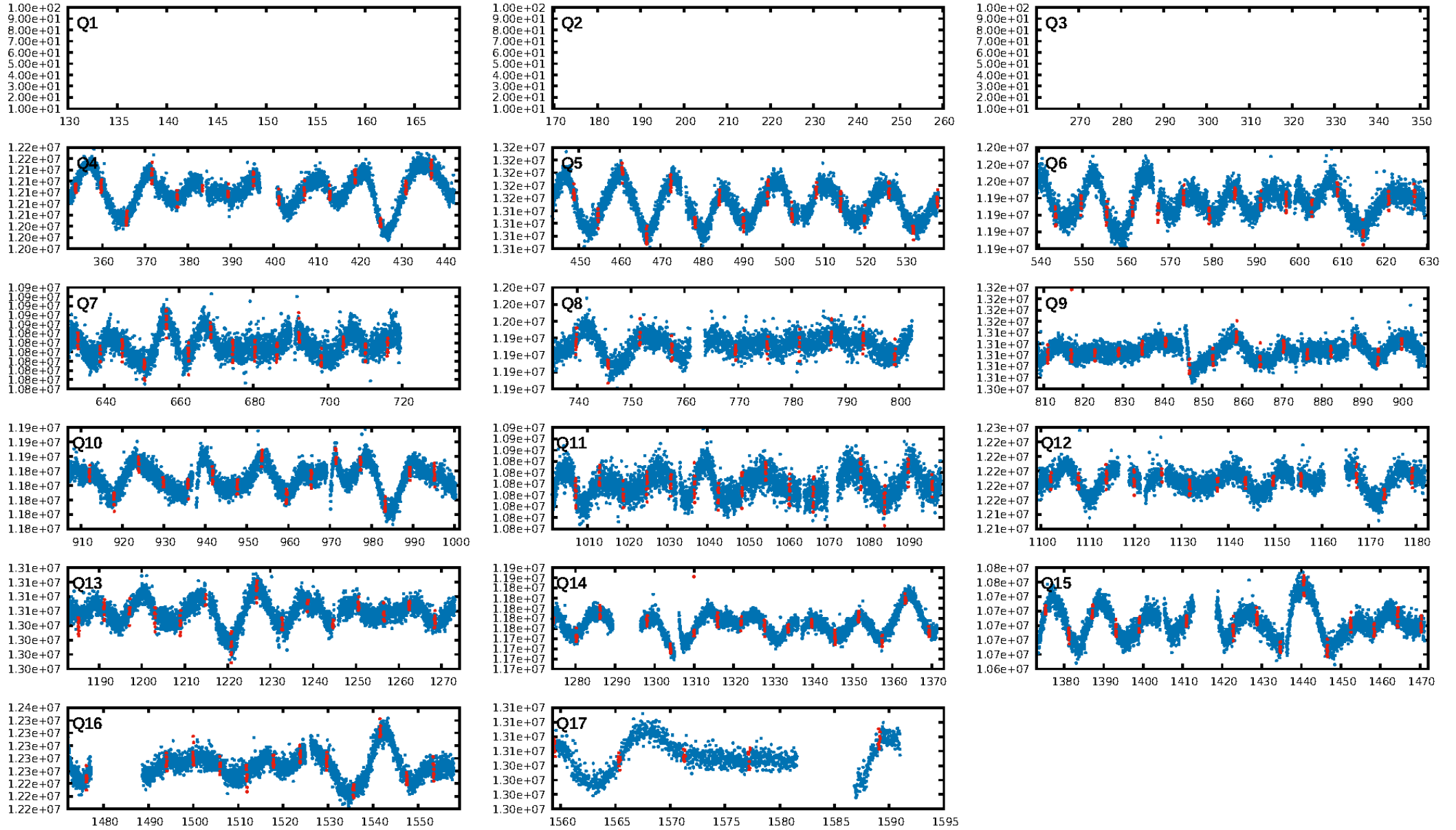
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [14.22σ]
LongPeriod-sig: 100.0% [27.17σ]
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.41e-35
RollingBand-fgt: 0.93 [167/179]
GhostDiagnostic-chr: 11.47
Centroid-sig: 75.7%
Centroid-so: 0.936 arcsec [1.40σ]
OotOffset-rm: 0.910 arcsec [1.39σ]
KicOffset-rm: 0.258 arcsec [0.97σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.54 [7/13]
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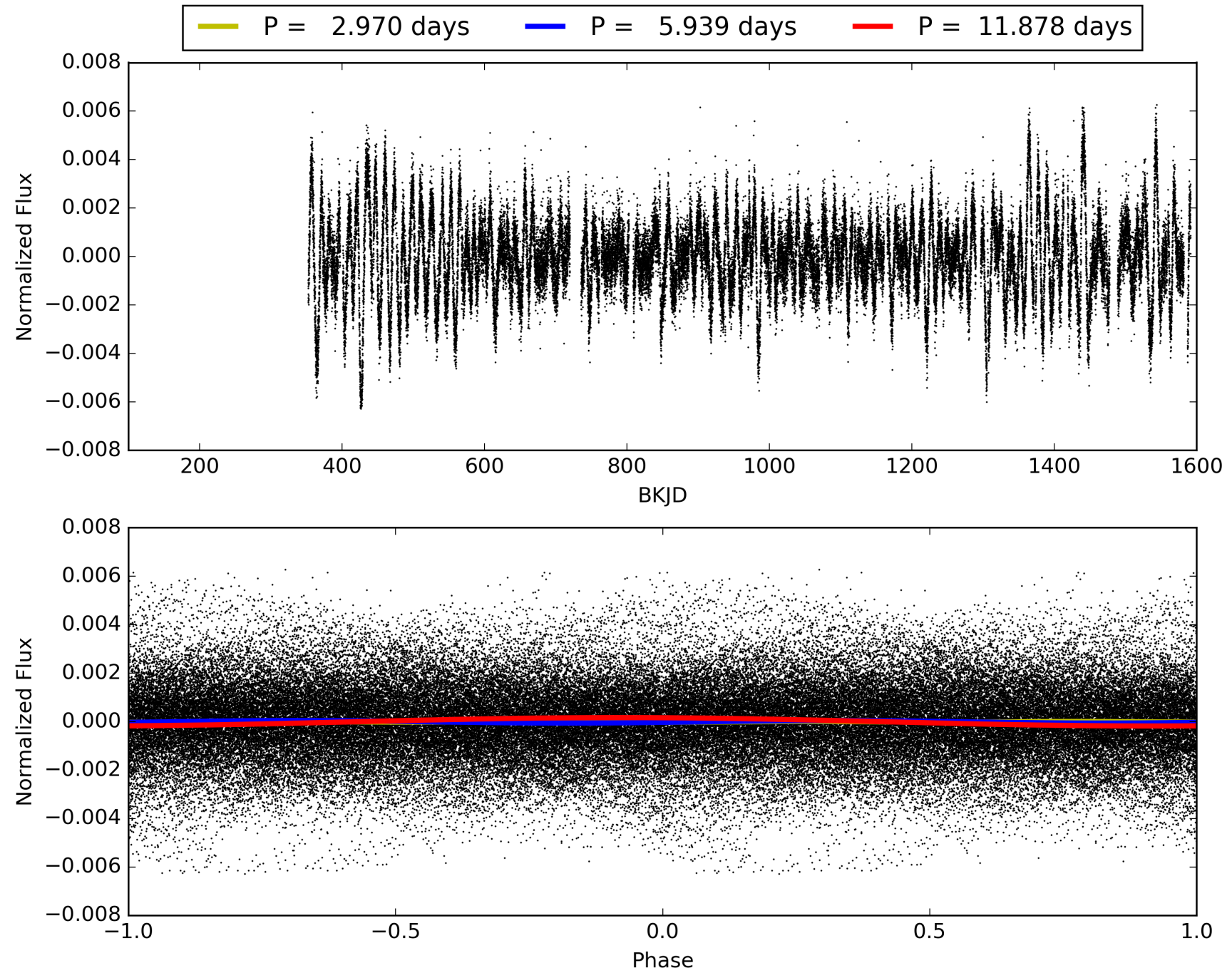
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006543893-02, PDC Light Curves

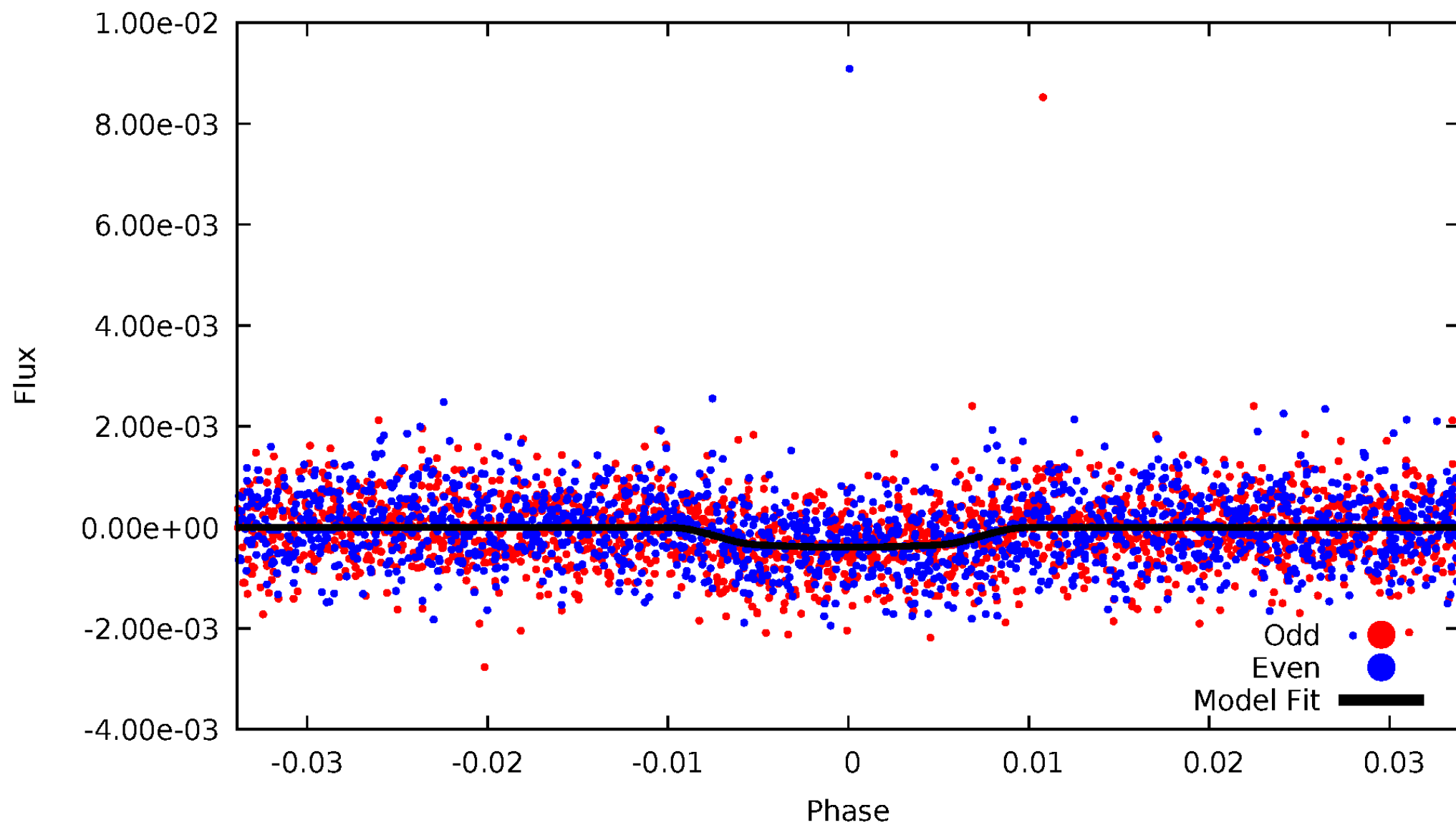


TCE 006543893-02



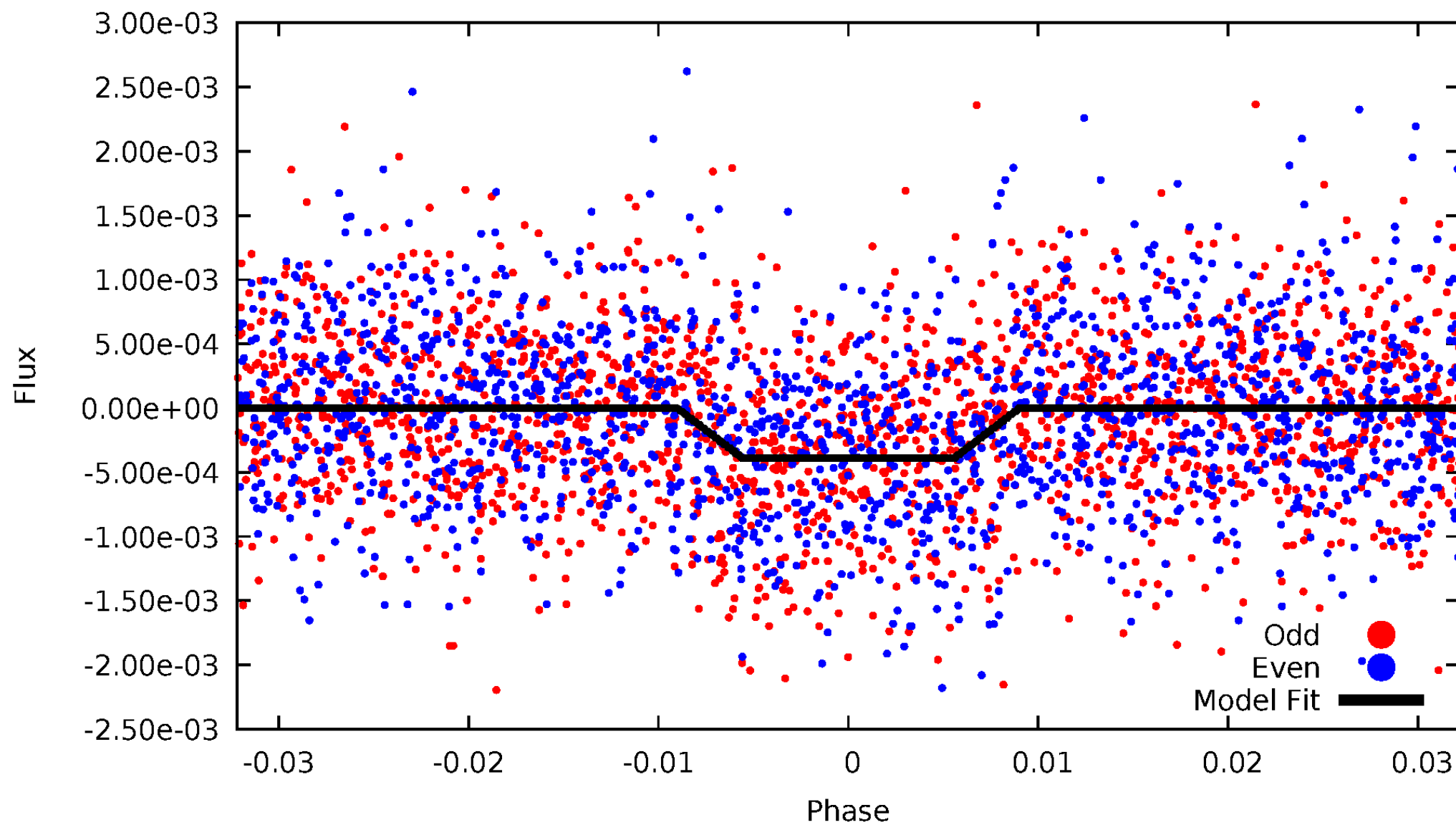
DV Odd/Even

TCE 006543893-02



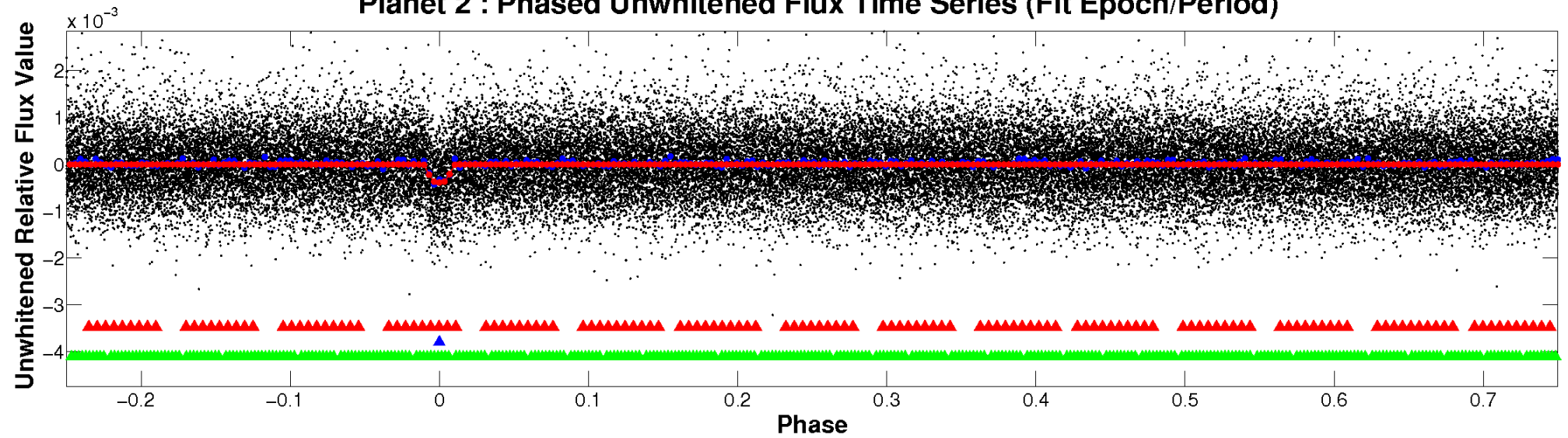
ALT Odd/Even

TCE 006543893-02

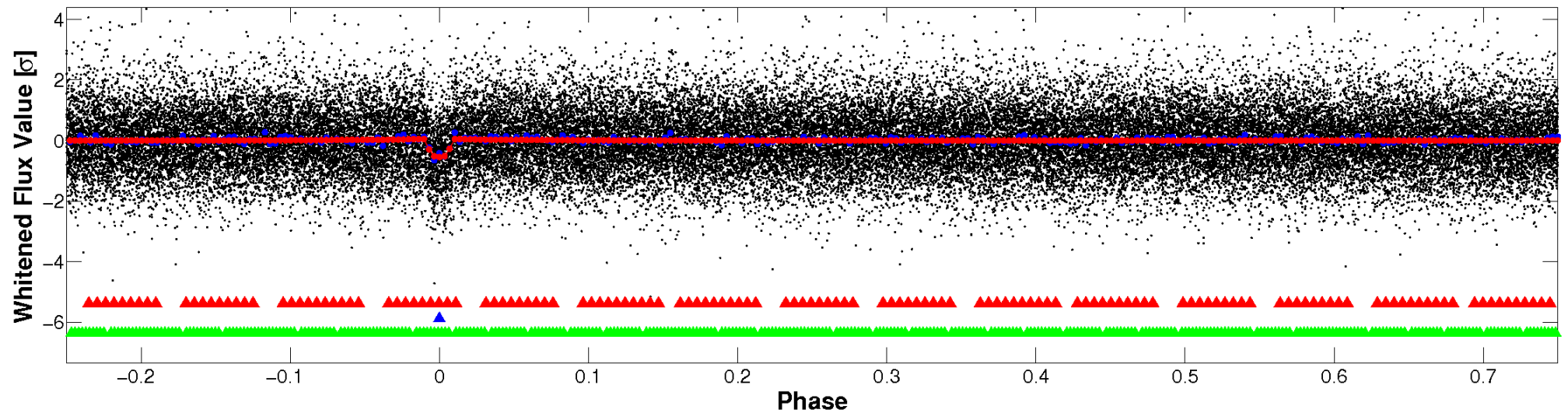


Non-Whitened Vs. Whitened Light Curve

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

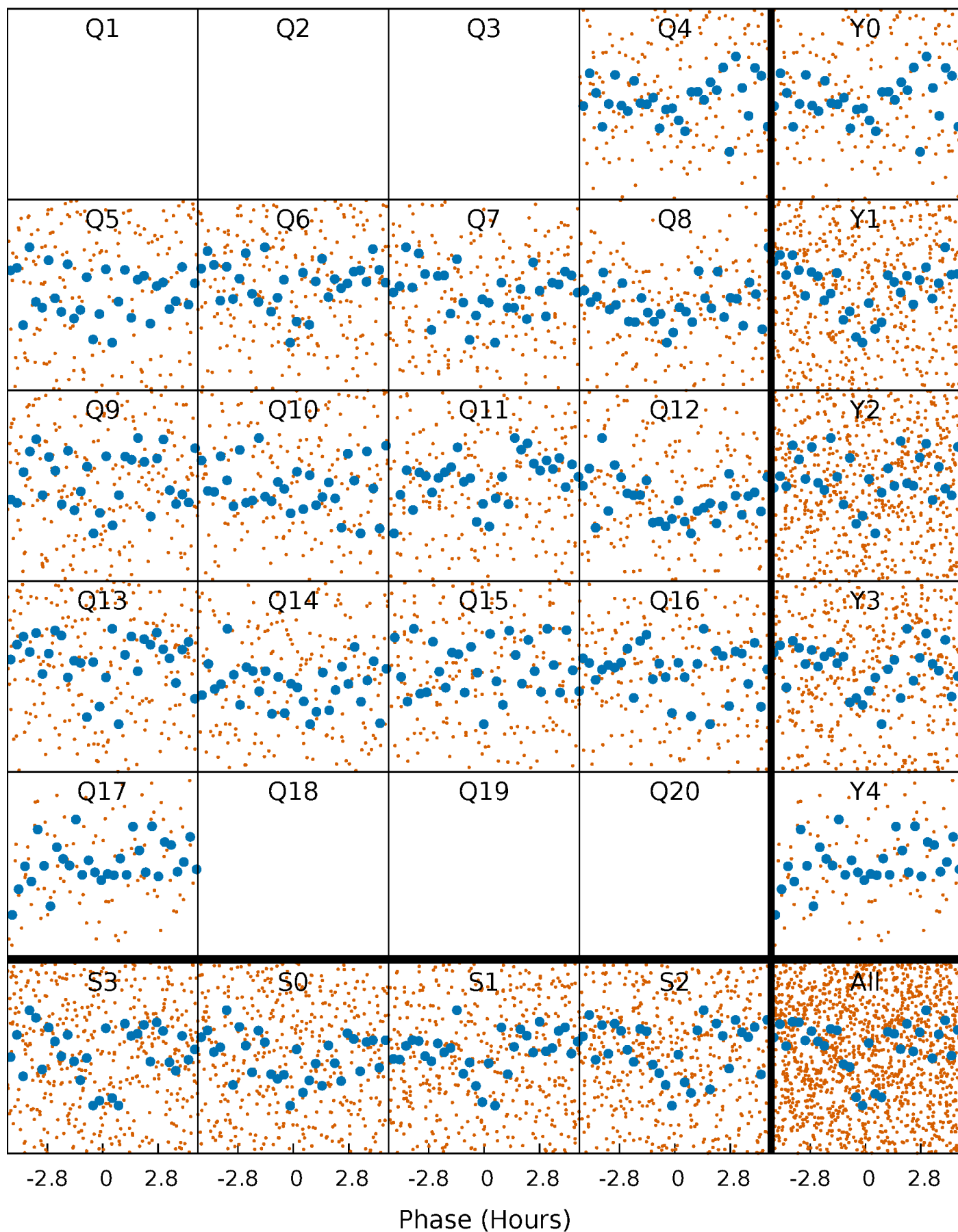


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



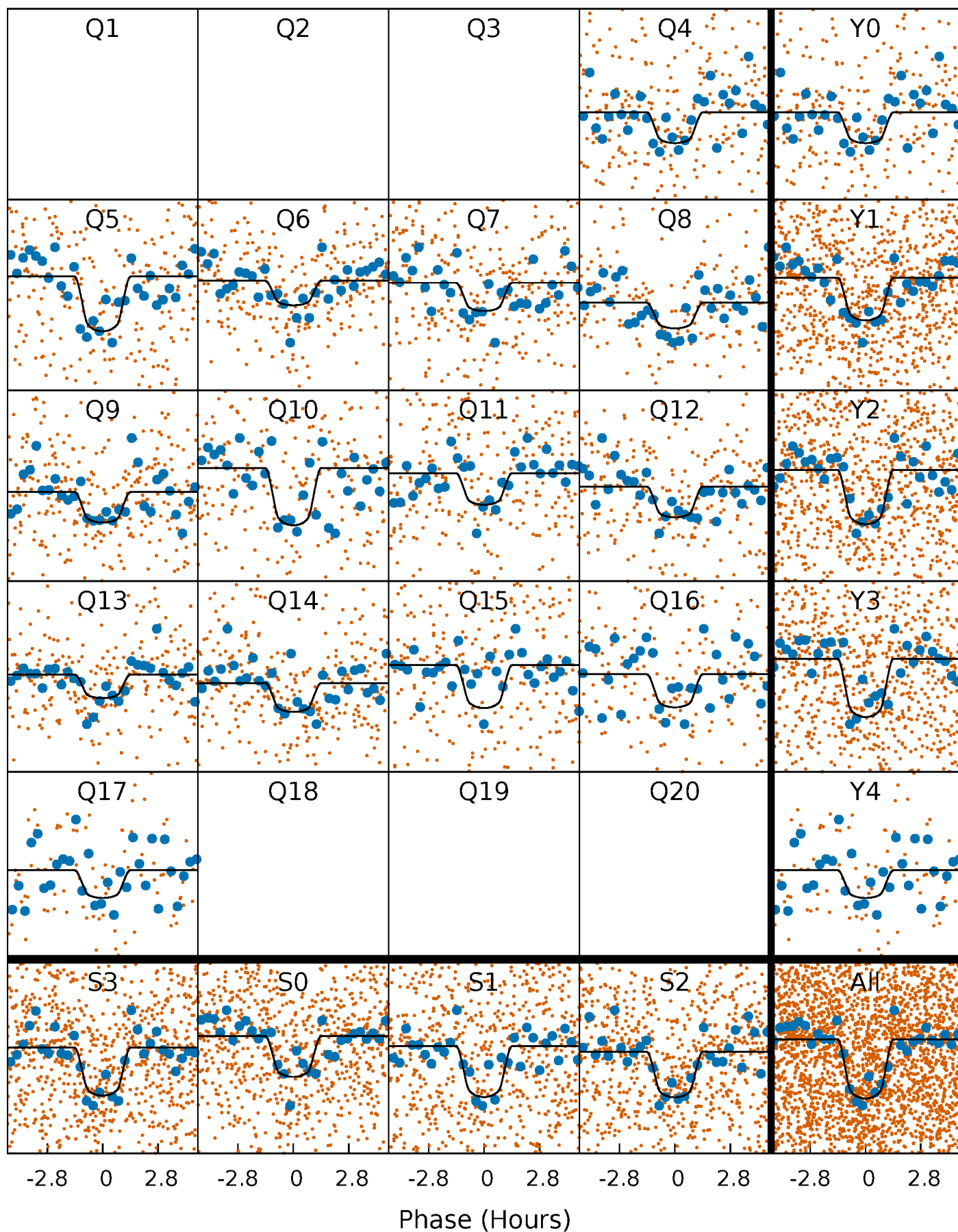
PDC Quarter-Phased Transit Curves

TCE 006543893-02 P= 5.939123 Days $T_0=134.013996$ (BKJD)



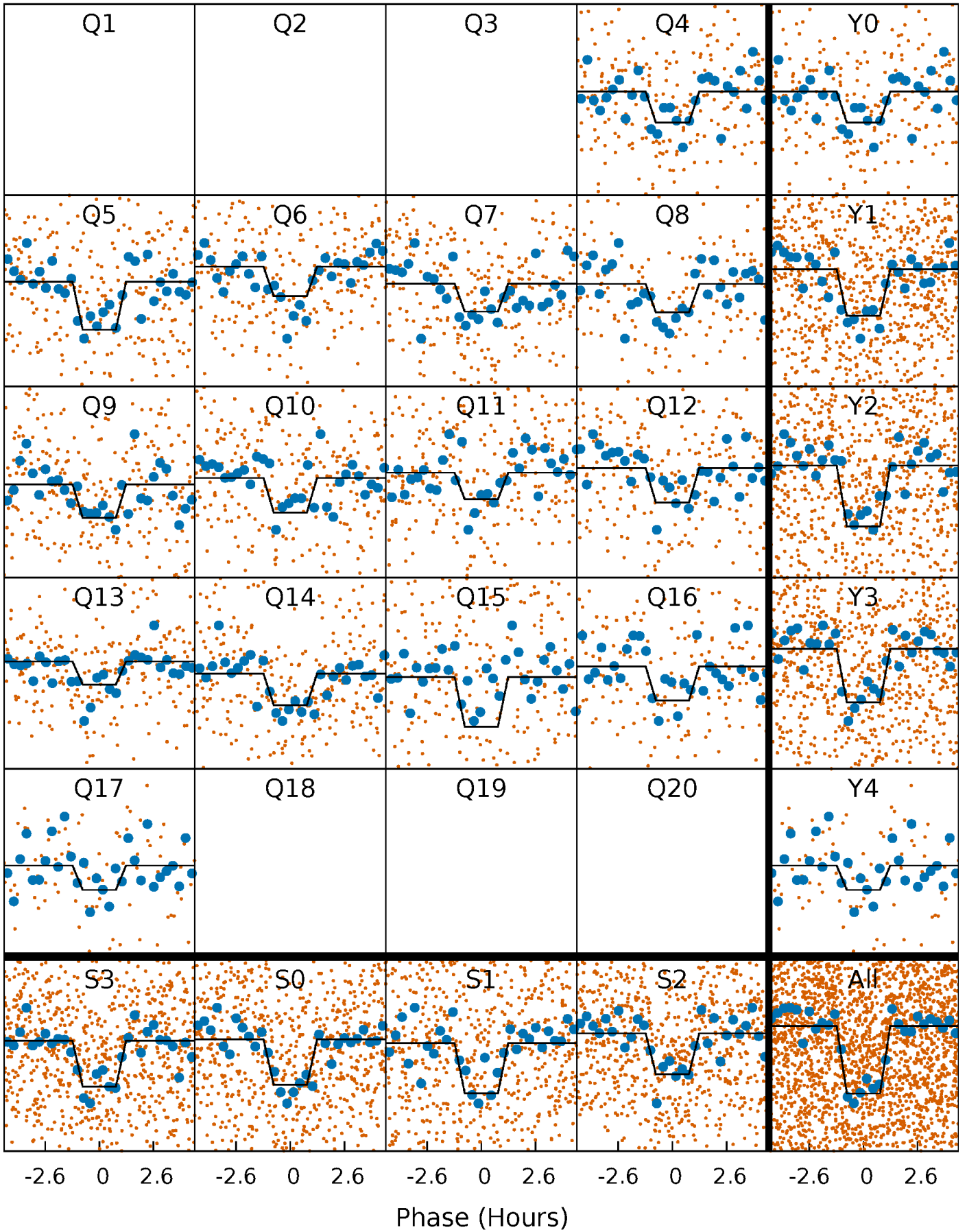
DV Quarter-Phased Transit Curves

TCE 006543893-02 P= 5.939123 Days $T_0=134.013996$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

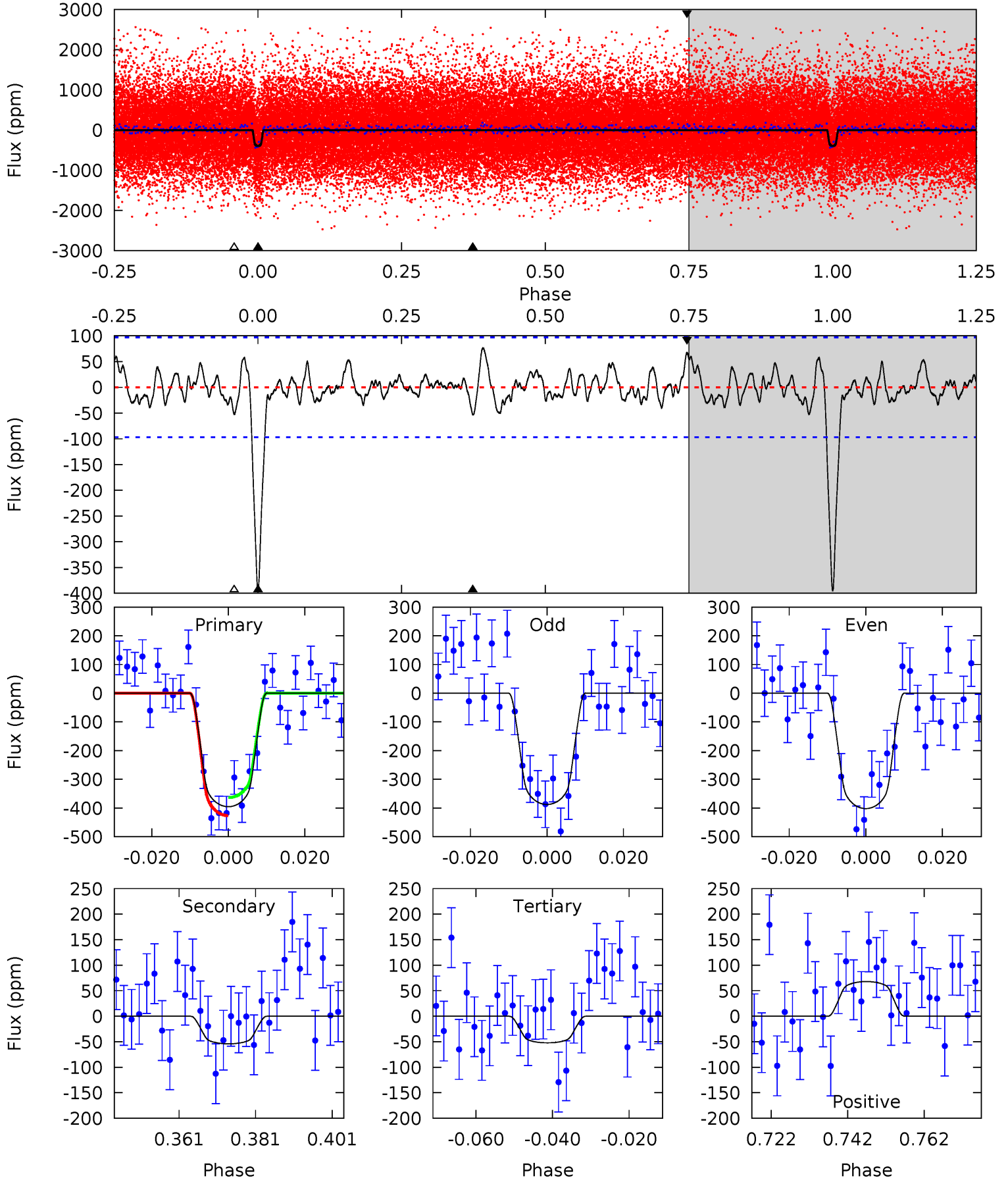
TCE 006543893-02 P= 5.939172 Days $T_0=134.008692$ (BKJD)



DV Model-Shift Uniqueness Test

006543893-02, P = 5.939123 Days, E = 134.013996 Days

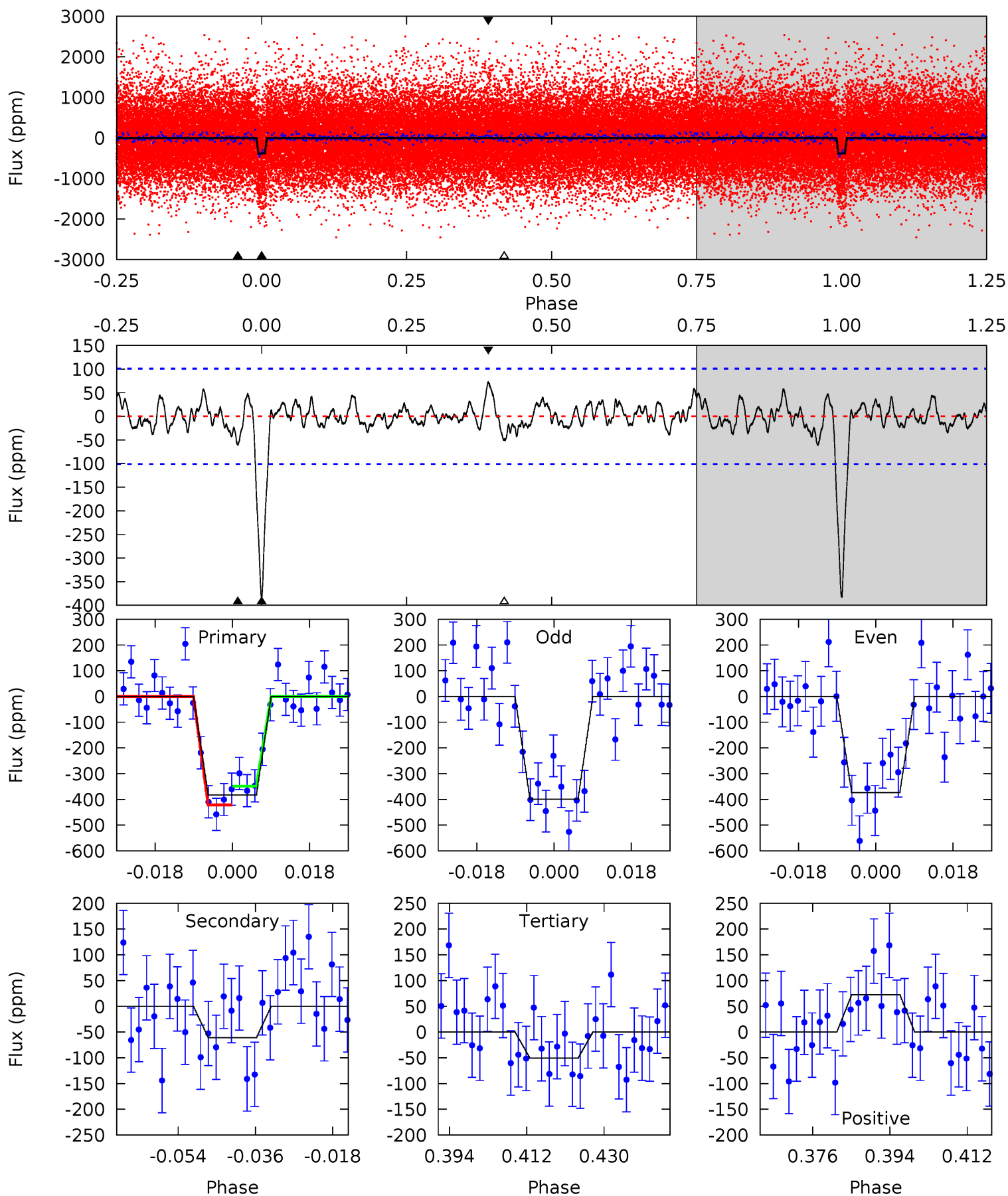
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.0	2.73	2.63	3.43	4.89	2.33	1.12	17.3	16.5	0.10	-0.70	0.36	1.03	0.16	1.59



Alt Model-Shift Uniqueness Test

006543893-02, P = 5.939172 Days, E = 134.008692 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.6	2.97	2.47	3.53	4.91	2.37	1.01	16.2	15.1	0.50	-0.56	0.64	0.96	0.16	1.78



Stellar Parameters For KIC 006543893

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6068^{+82}_{-82}	$4.040^{+0.182}_{-0.112}$	$0.160^{+0.150}_{-0.100}$	$1.797^{+0.295}_{-0.406}$	$1.294^{+0.131}_{-0.145}$	$0.314^{+0.315}_{-0.097}$
	+1%/-1%	+5%/-3%	+94%/-62%	+16%/-23%	+10%/-11%	+100%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 006543893-02 / KOI 1627.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-54 ± 20	$4.04^{+1.50}_{-1.18}$	1886^{+84}_{-103}	3861^{+613}_{-470}	$8.400^{+11.327}_{-4.592}$
Alt.	-61 ± 21	$3.92^{+1.46}_{-1.47}$	1890^{+91}_{-118}	4017^{+727}_{-474}	11^{+17}_{-6}

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

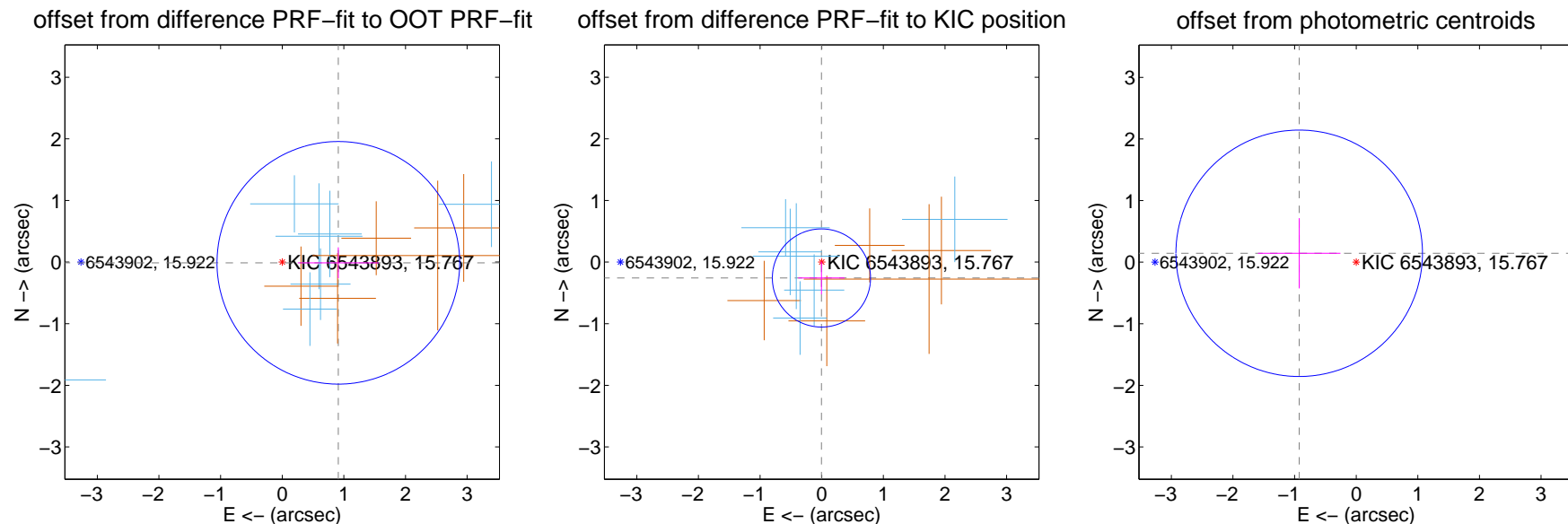
DV Centroid Data

Supplemental centroid analysis for 006543893-02. Kepler magnitude: 15.77. Transit SNR 13.34

There are 7 quarters with good PRF difference image offsets

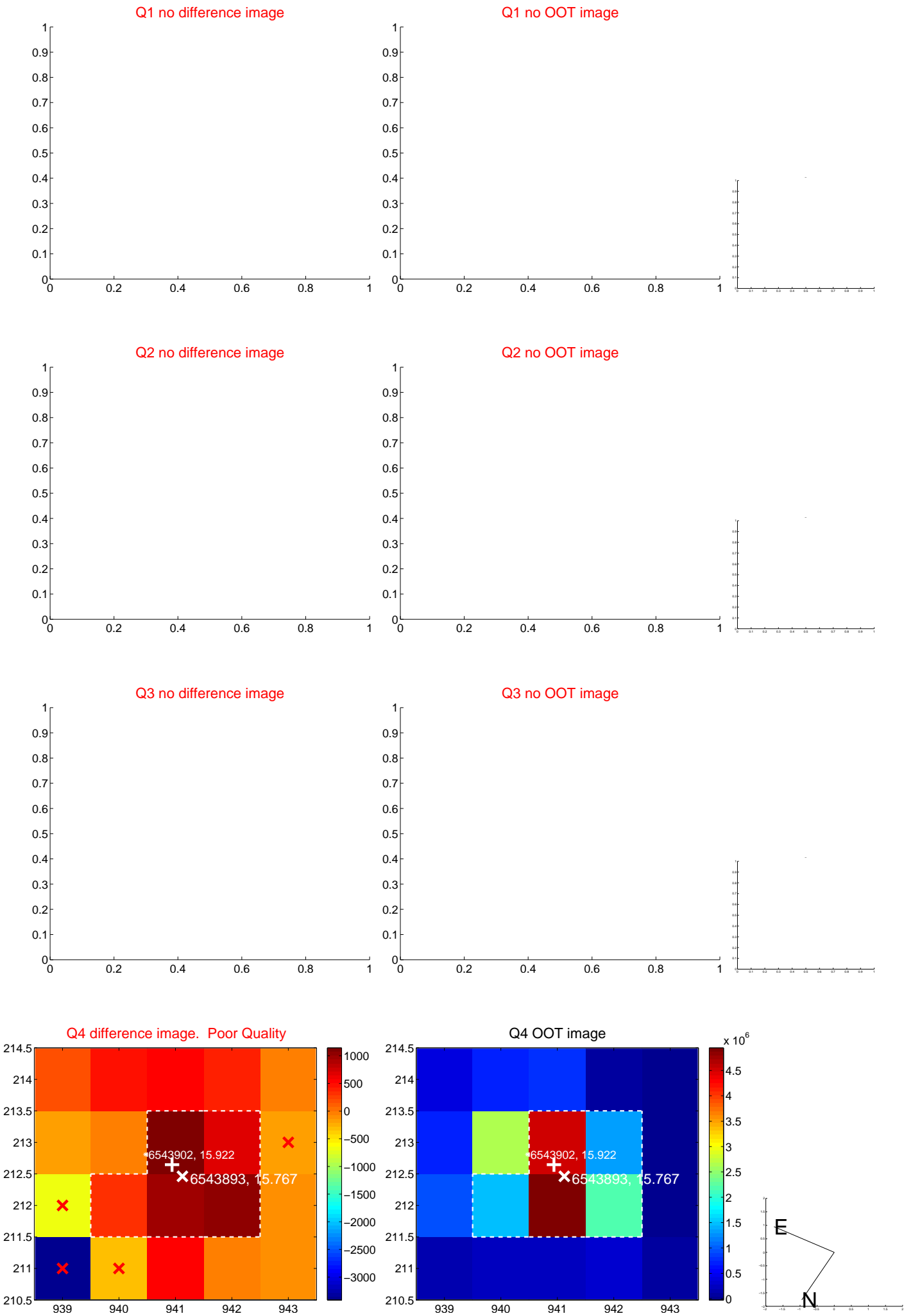
The direct PRF centroid is offset from the target star catalog position by about 0.87 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.910 ± 0.656	1.39	-0.910 ± 0.657	-0.012 ± 0.252
PRF-fit source offset from KIC position	0.258 ± 0.265	0.97	0.004 ± 0.376	-0.258 ± 0.265
photometric centroid source offset	0.94 ± 0.67	1.40	0.93 ± 0.67	0.14 ± 0.57

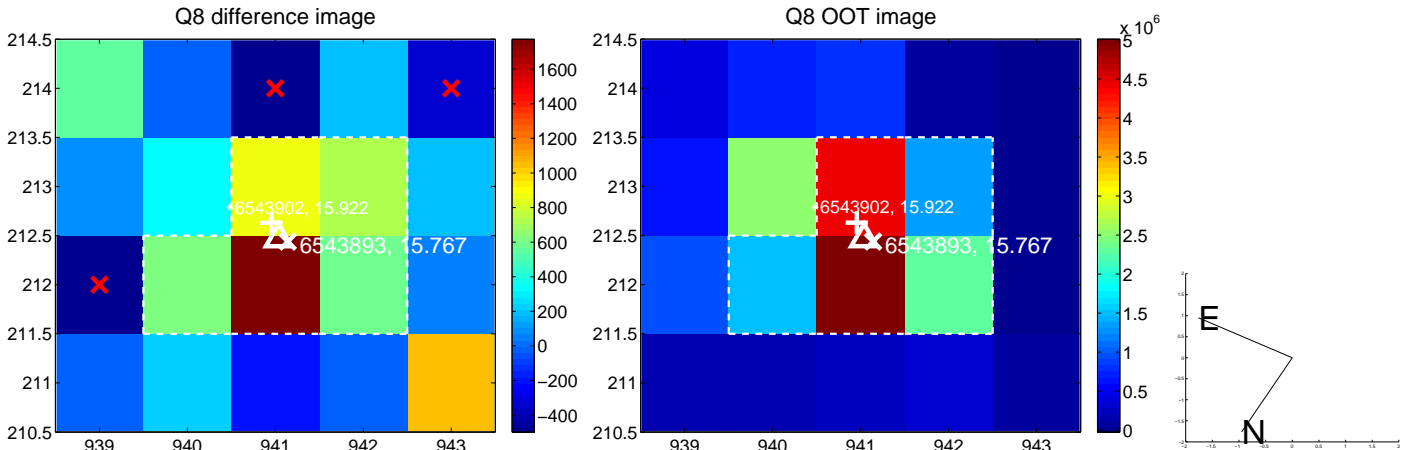
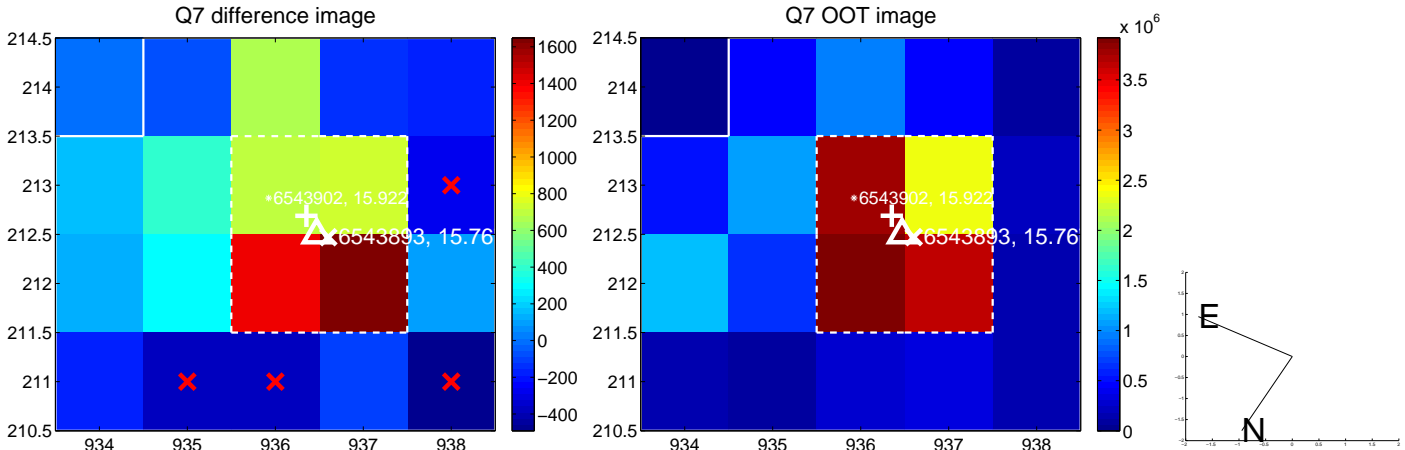
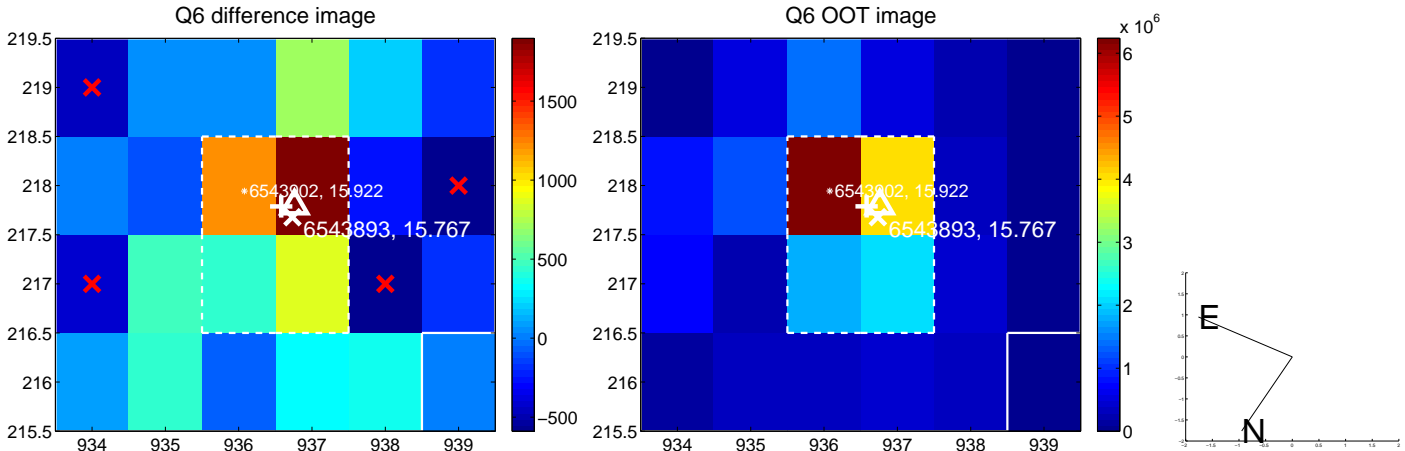
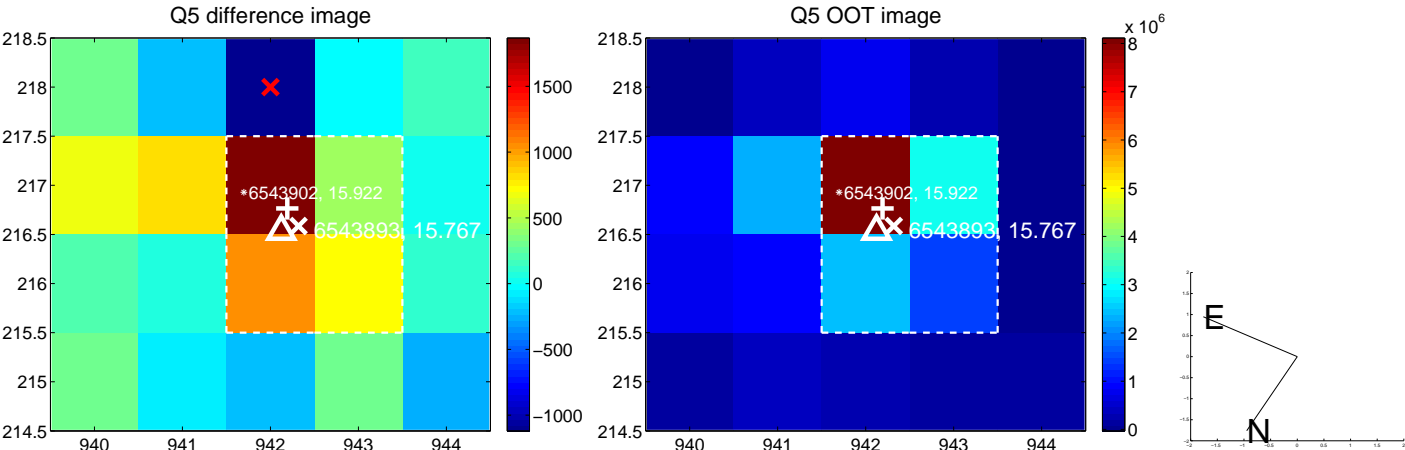


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

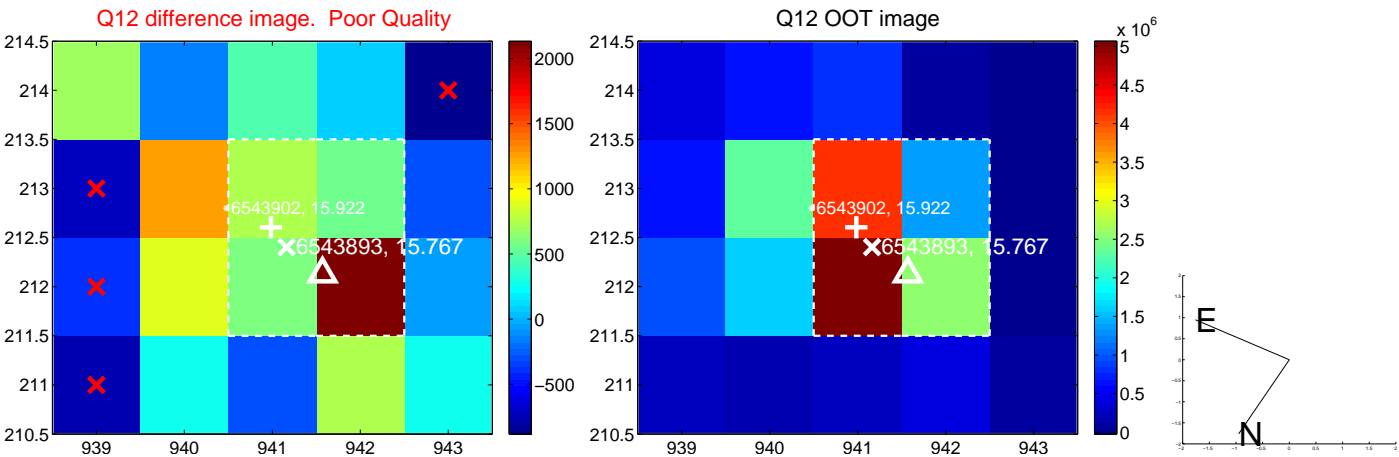
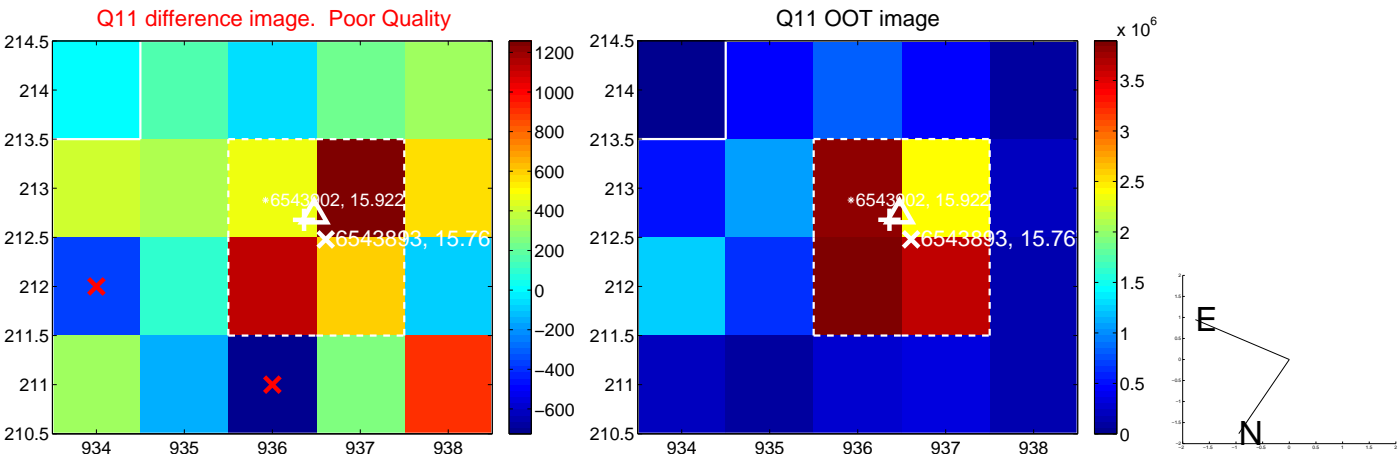
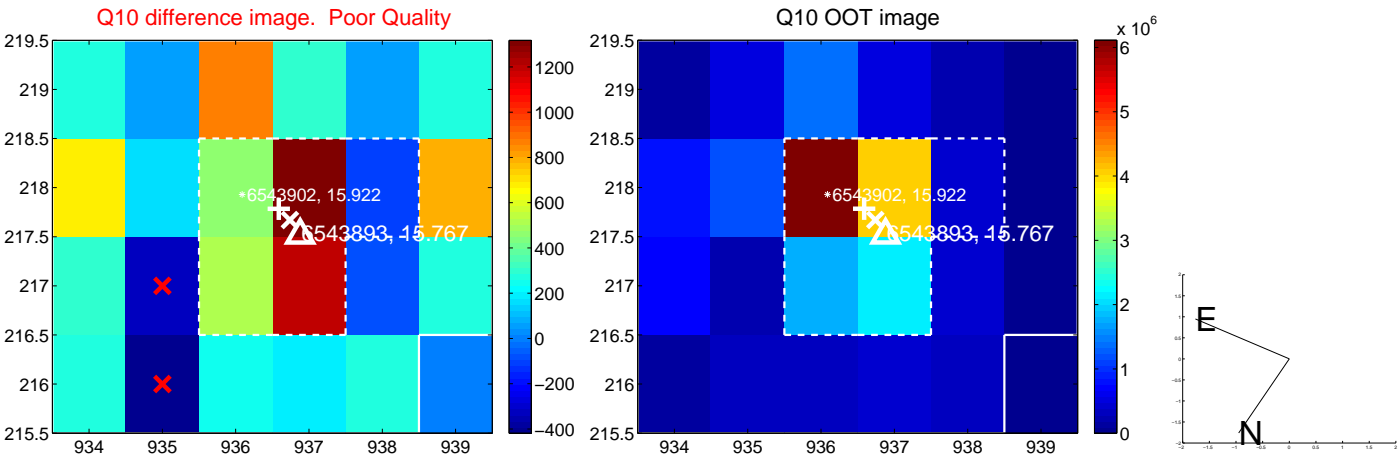
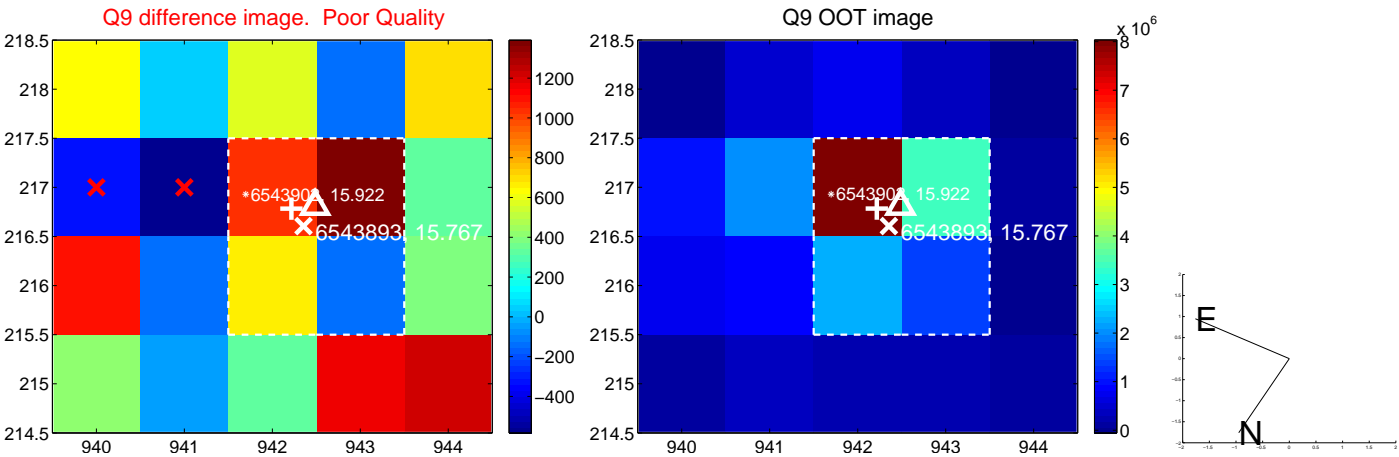
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



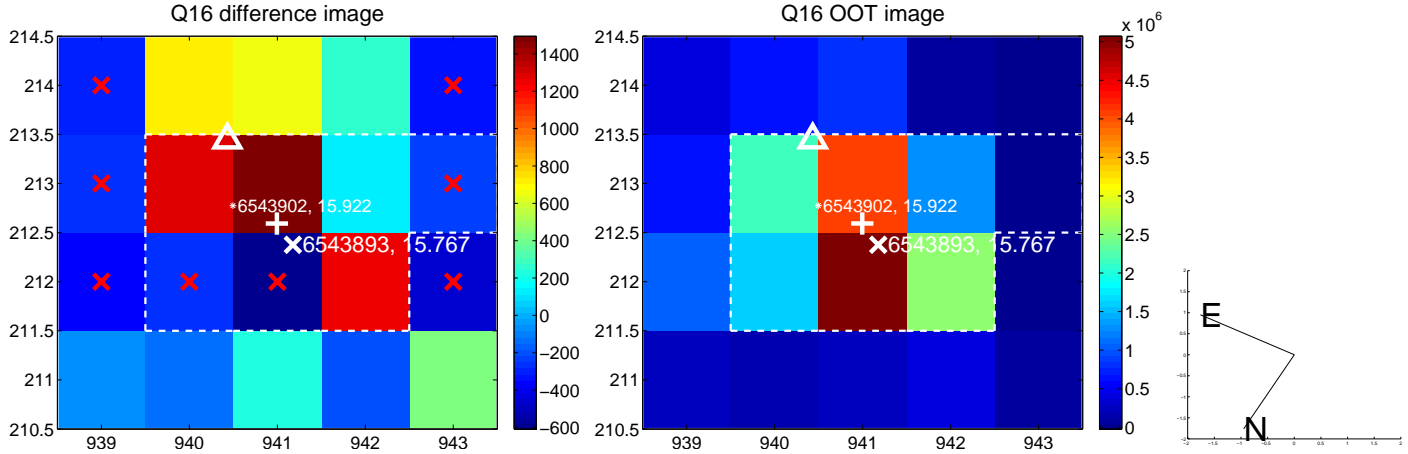
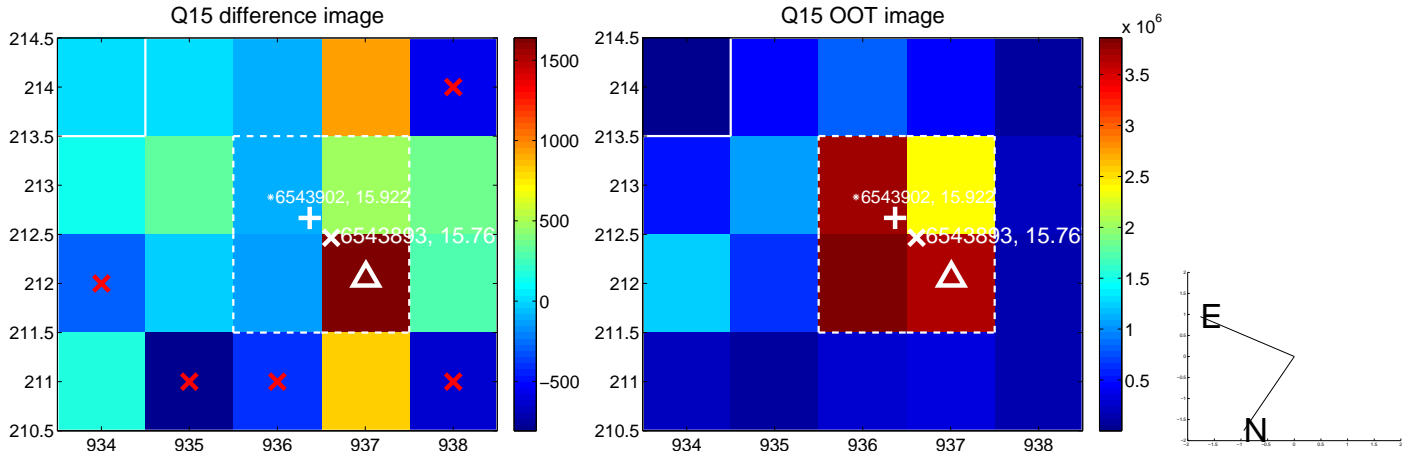
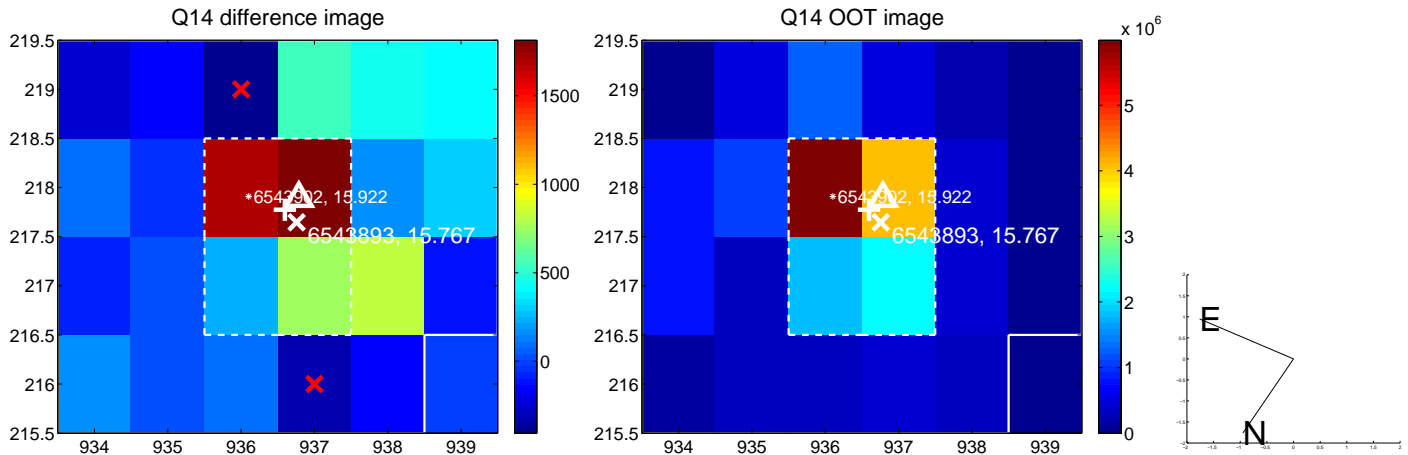
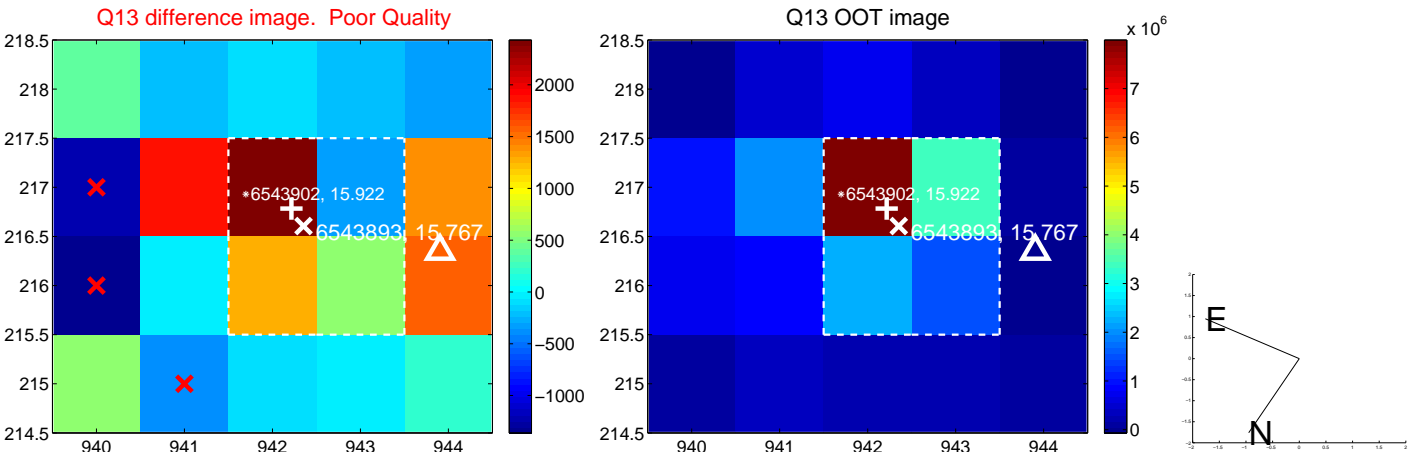
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



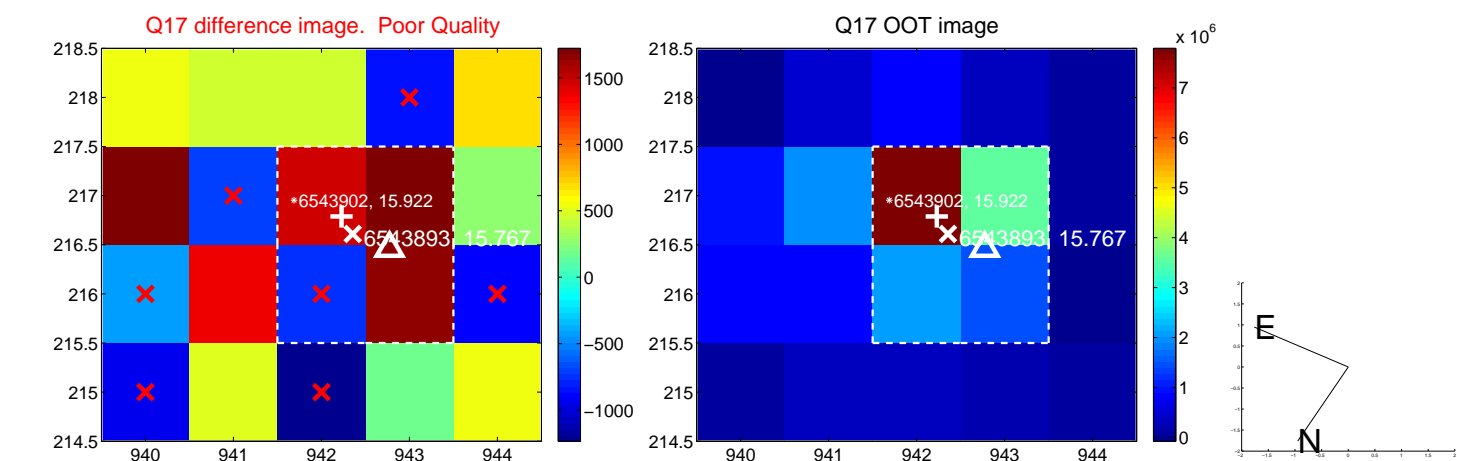
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



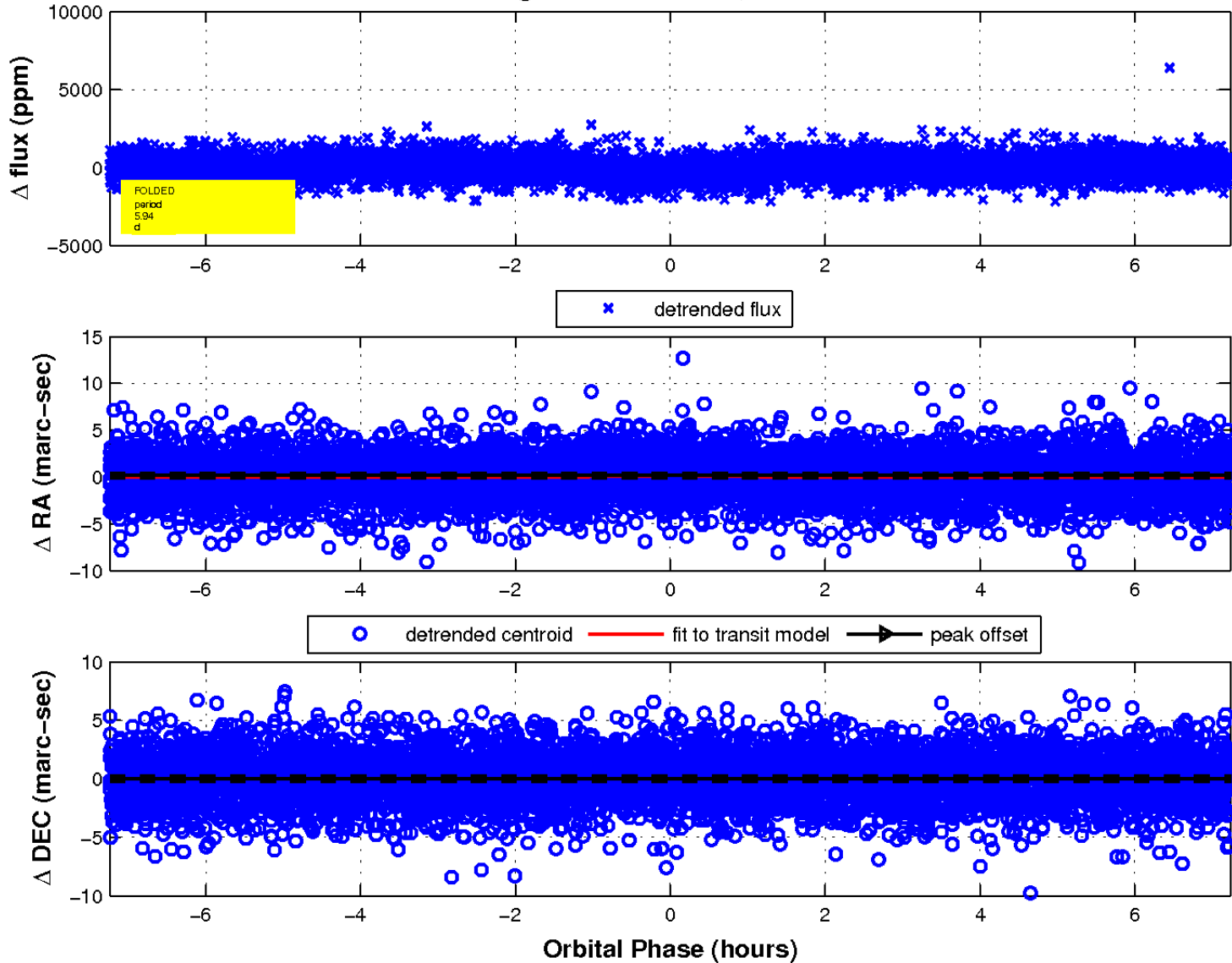
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

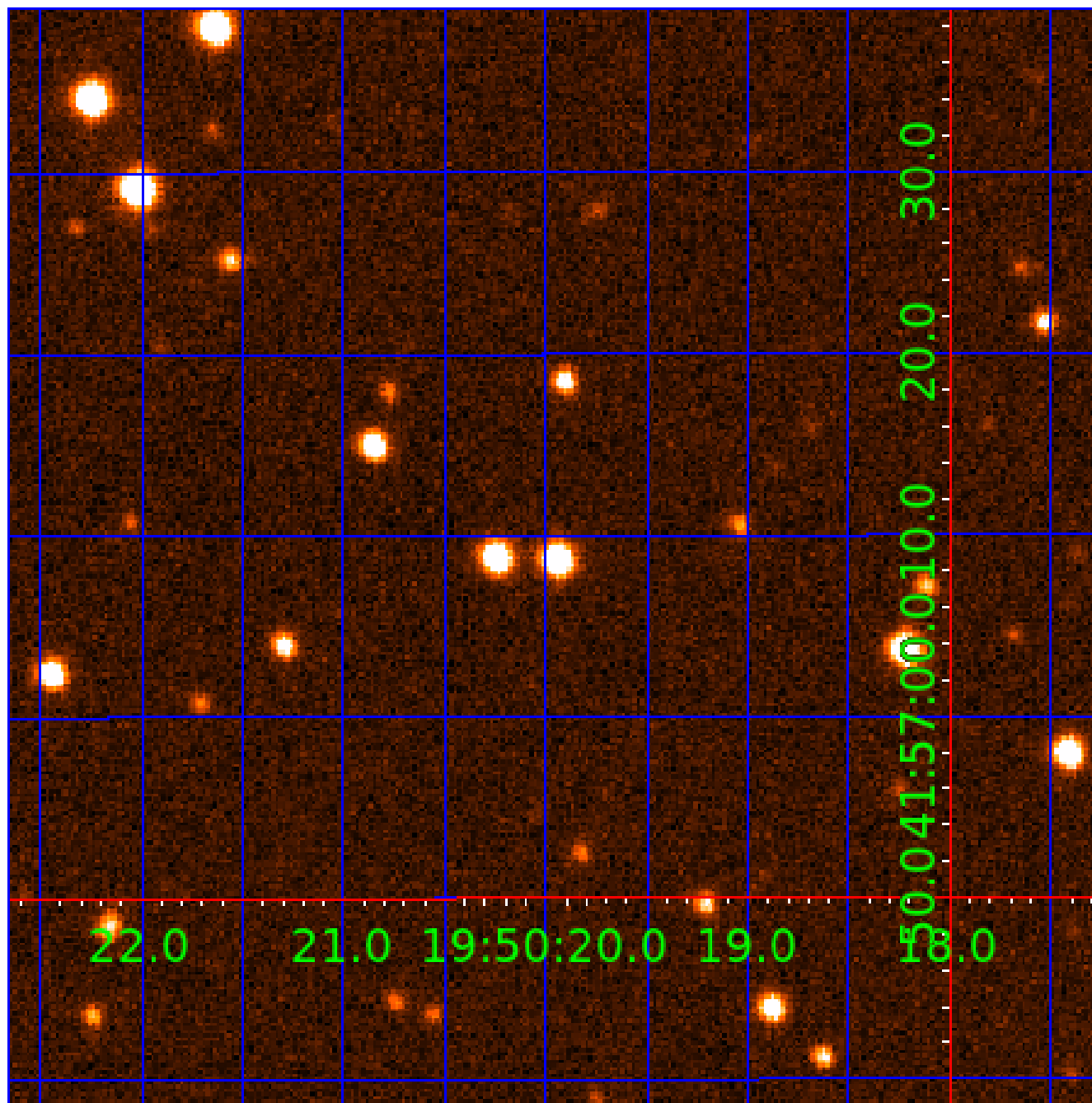


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 006543893

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})
006543893-01	OBS	1627.01	10.296705	132.197655	1015.4	2.999	25.8	28.4	1.80	6068	6.69	385.34
006543893-02	OBS	1627.02	5.939123	134.013996	388.8	2.413	12.8	13.3	1.80	6068	4.19	802.56
006543893-03	OBS	1627.03	3.806763	133.751063	237.7	2.668	8.8	10.5	1.80	6068	3.28	1452.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006543893-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
006543893-02	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
006543893-03	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS

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

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

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

Ephemeris Match Information For 006543893-03

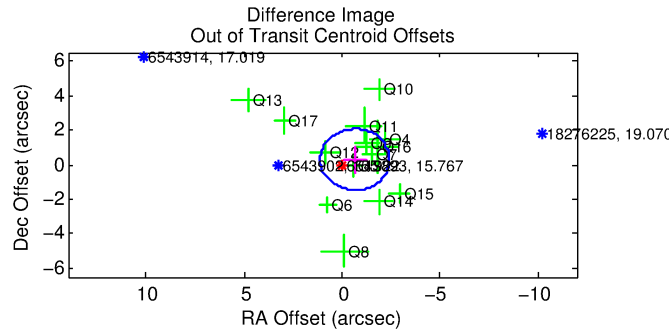
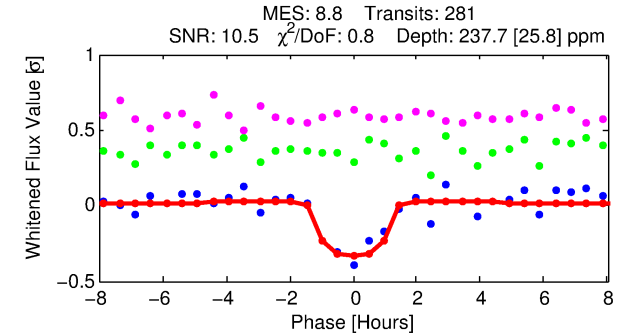
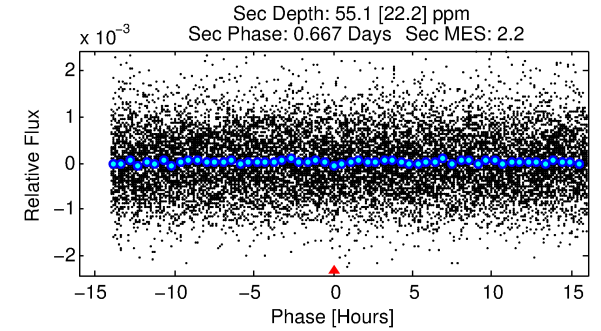
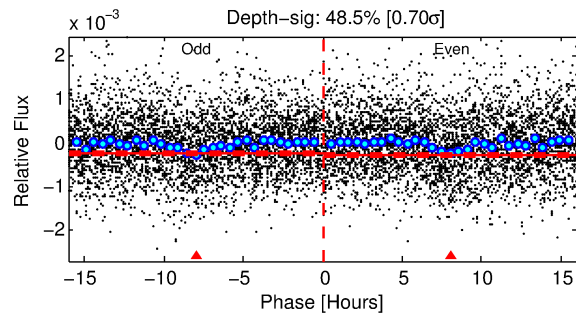
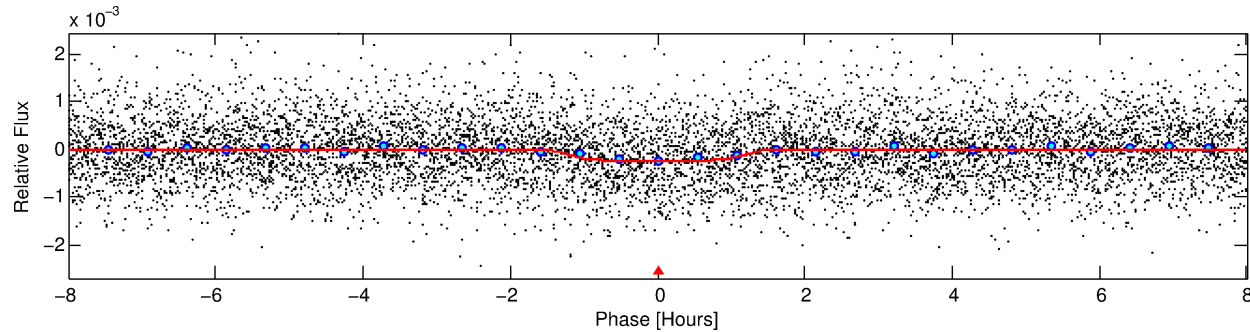
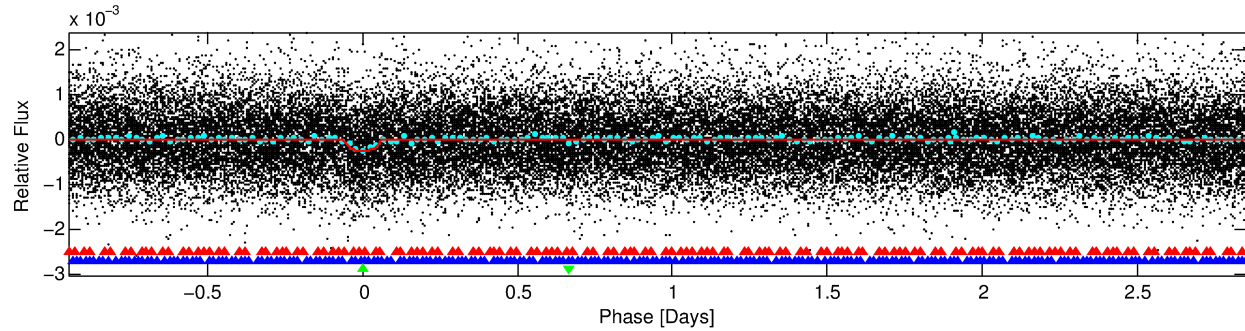
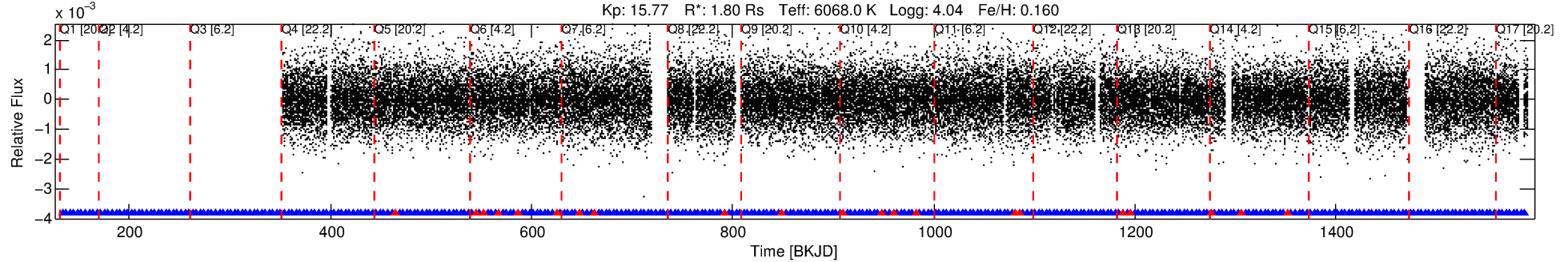
No Significant Match Found

DV One-Page Summary

KIC: 6543893 Candidate: 3 of 3 Period: 3.807 d

KOI: K01627.03 Corr: 0.905

Kp: 15.77 R*: 1.80 Rs Teff: 6068.0 K Logg: 4.04 Fe/H: 0.160



DV Fit Results:

Period = 3.80676 [0.00002] d
Epoch = 133.7511 [0.0042] BKJD
Rp/R* = 0.0167 [0.0076]
a/R* = 5.20 [11.45]
b = 0.90 [0.48]
Seff = 1452.23 [467.57]
Teq = 1574 [127] K
Rp = 3.28 [1.66] Re
a = 0.0520 [0.0107] AU
Ag = 7.61 [7.93] [0.83σ]
Teffp = 4042 [1004] K [2.44σ]

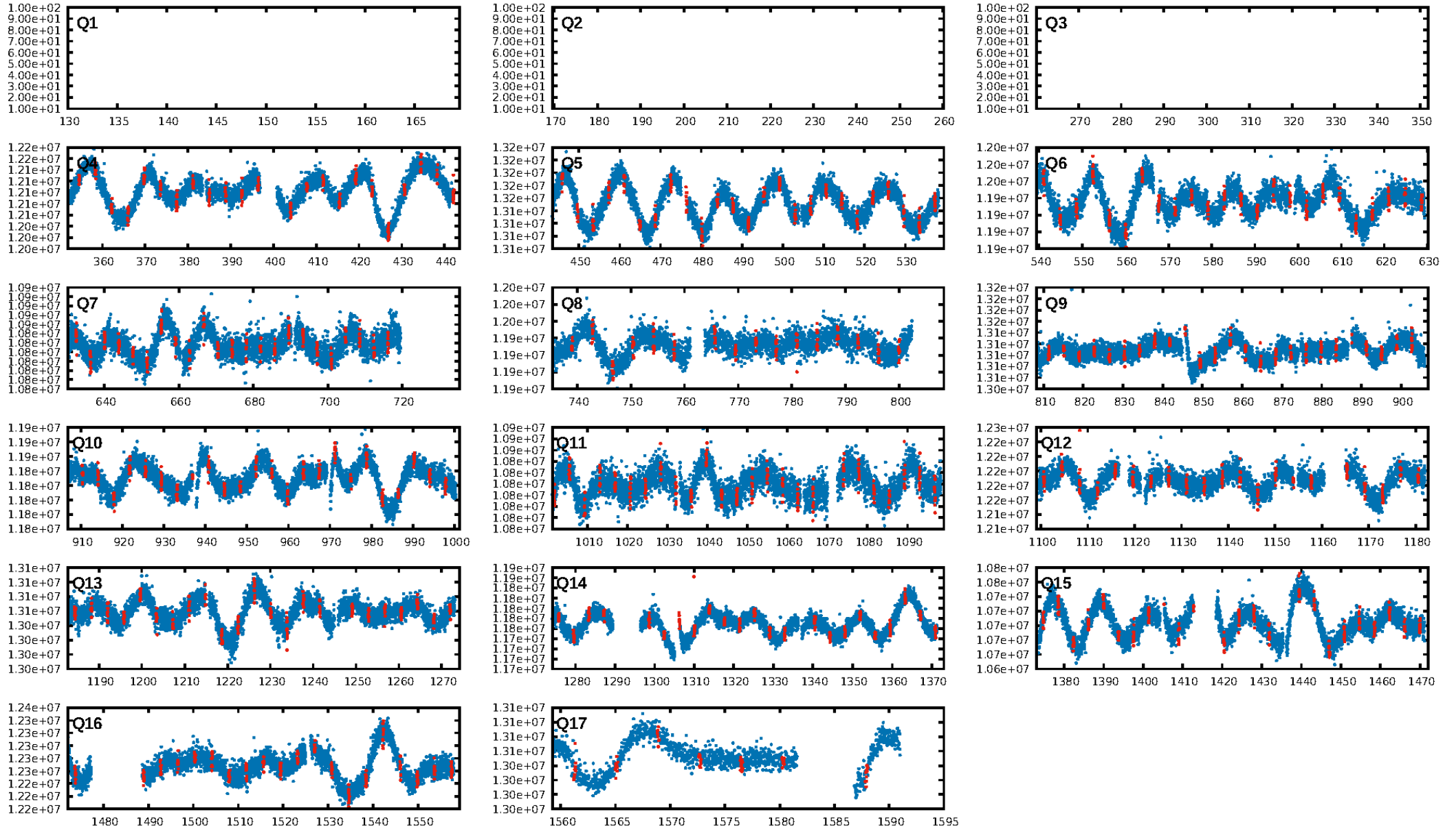
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [14.22σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.27e-18
RollingBand-fgt: 0.92 [253/274]
GhostDiagnostic-chr: 78.97
Centroid-sig: 20.9%
Centroid-so: 1.849 arcsec [2.31σ]
OotOffset-rm: 0.713 arcsec [1.21σ]
KicOffset-rm: 0.358 arcsec [0.68σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.36 [5/14]
DiffImageOverlap-fno: 1.00 [14/14]

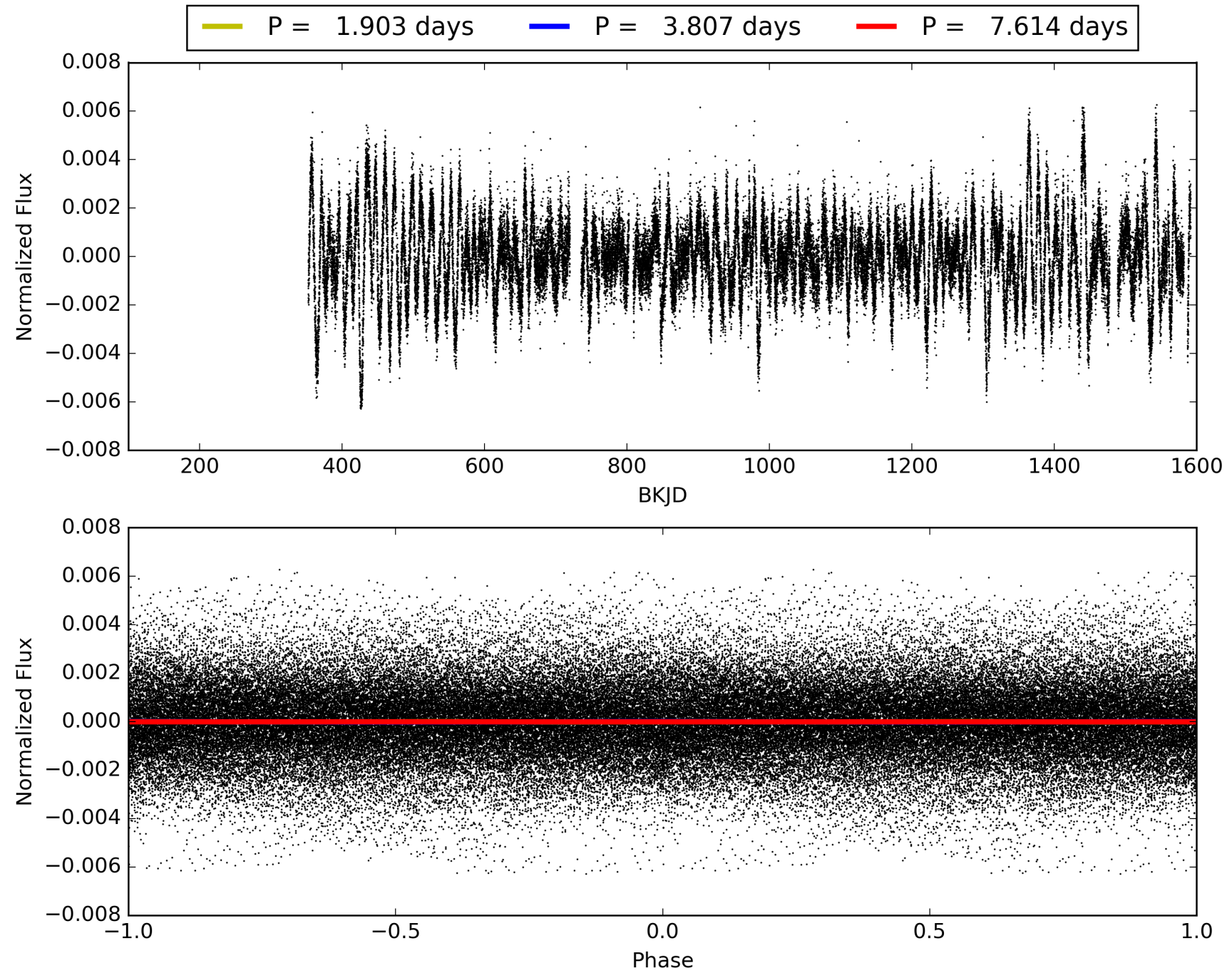
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:20:05 Z

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

TCE 006543893-03, PDC Light Curves

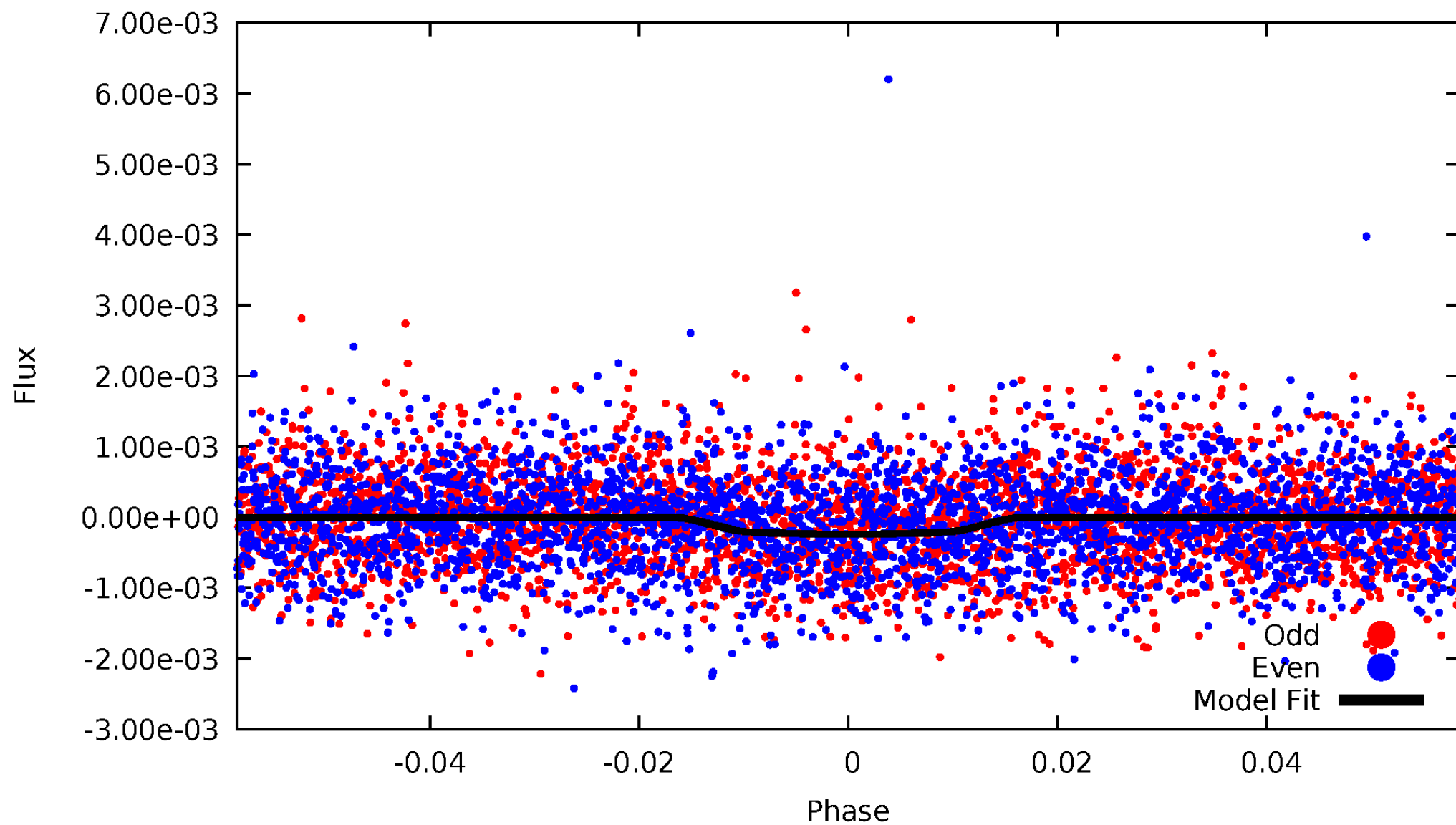


TCE 006543893-03



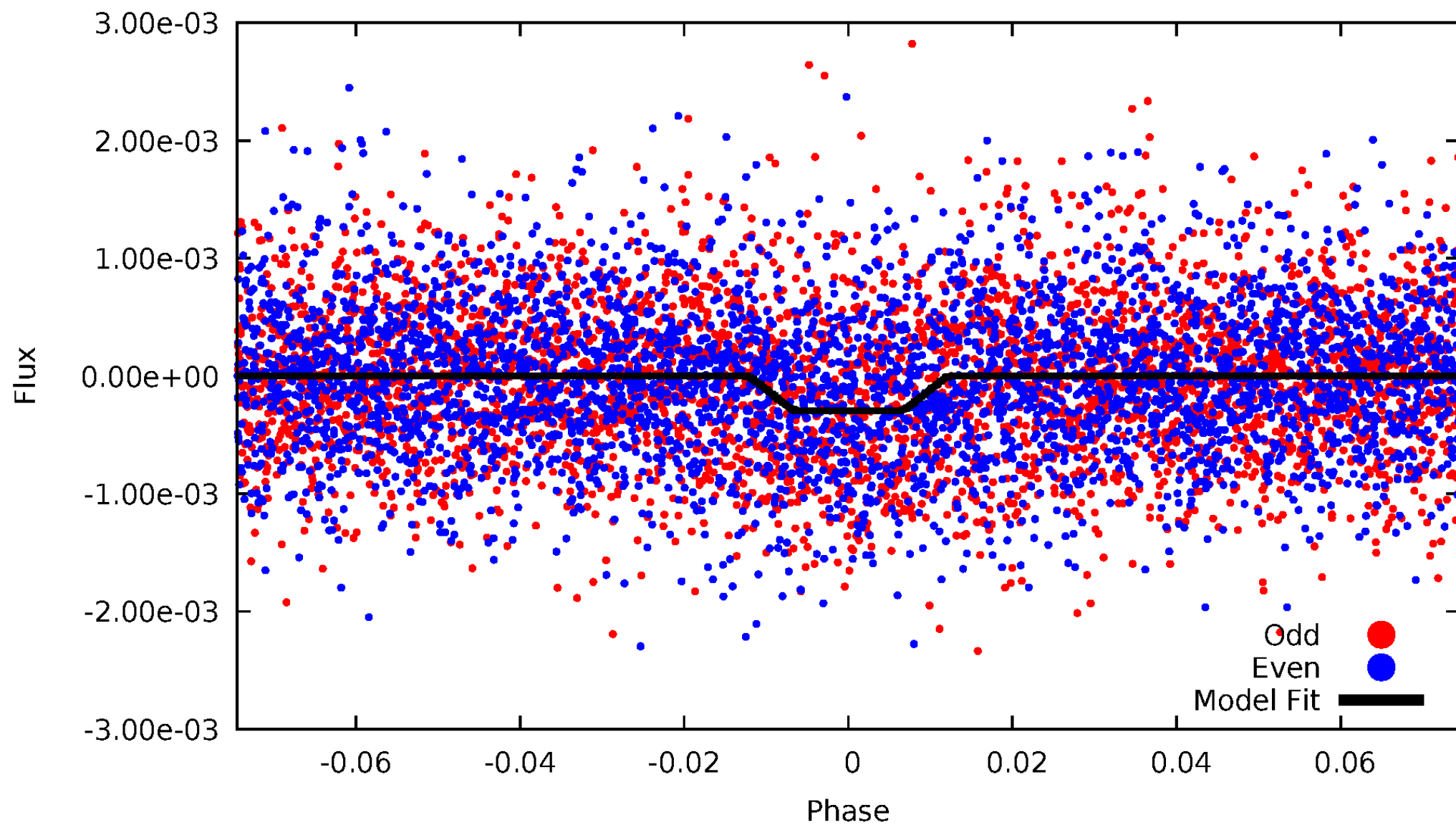
DV Odd/Even

TCE 006543893-03



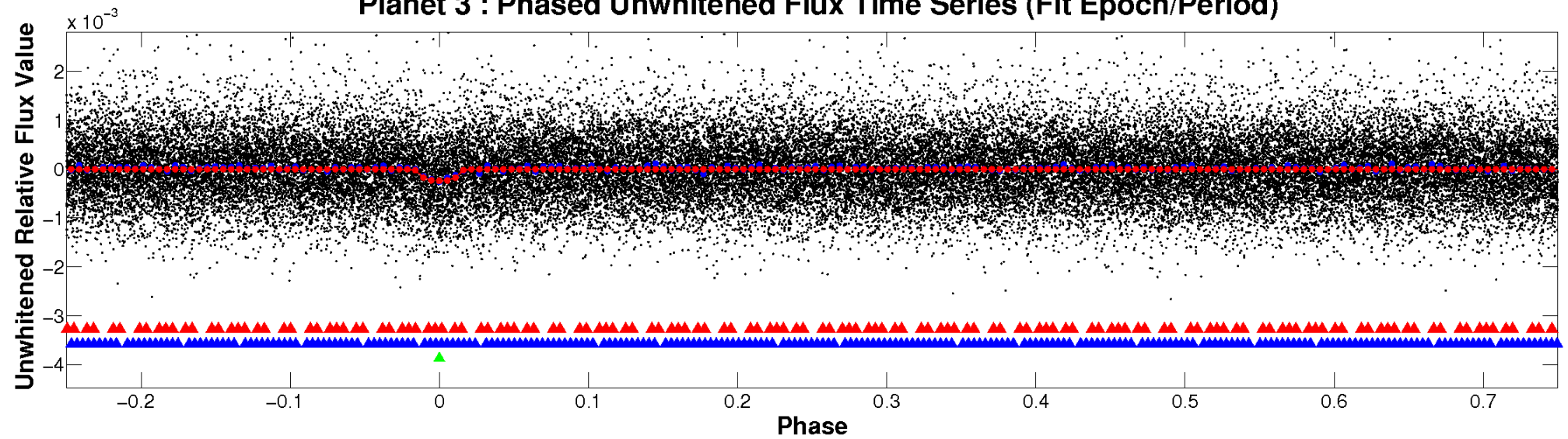
ALT Odd/Even

TCE 006543893-03

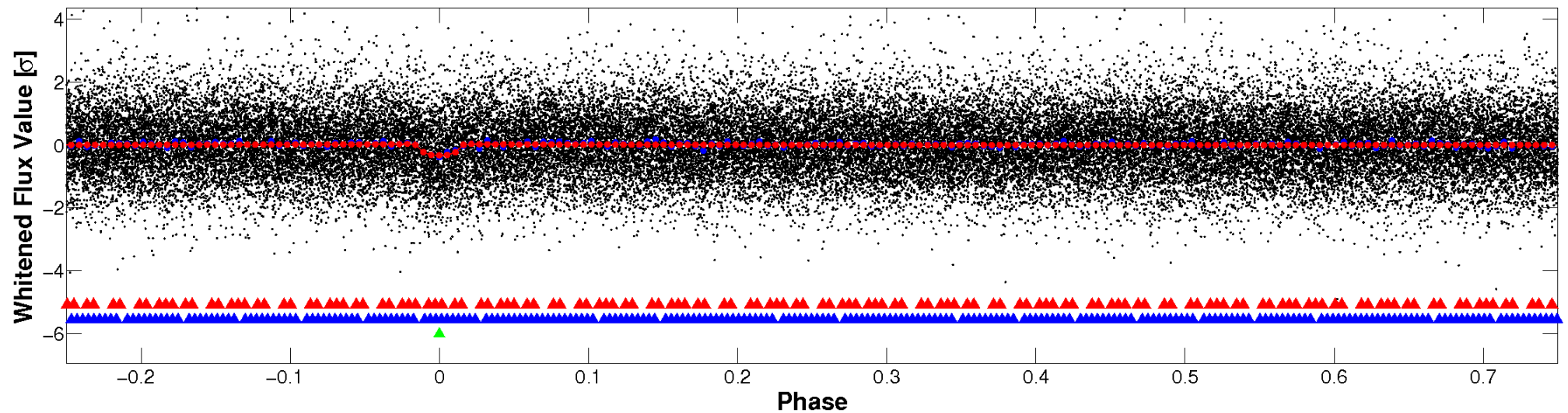


Non-Whitened Vs. Whitened Light Curve

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

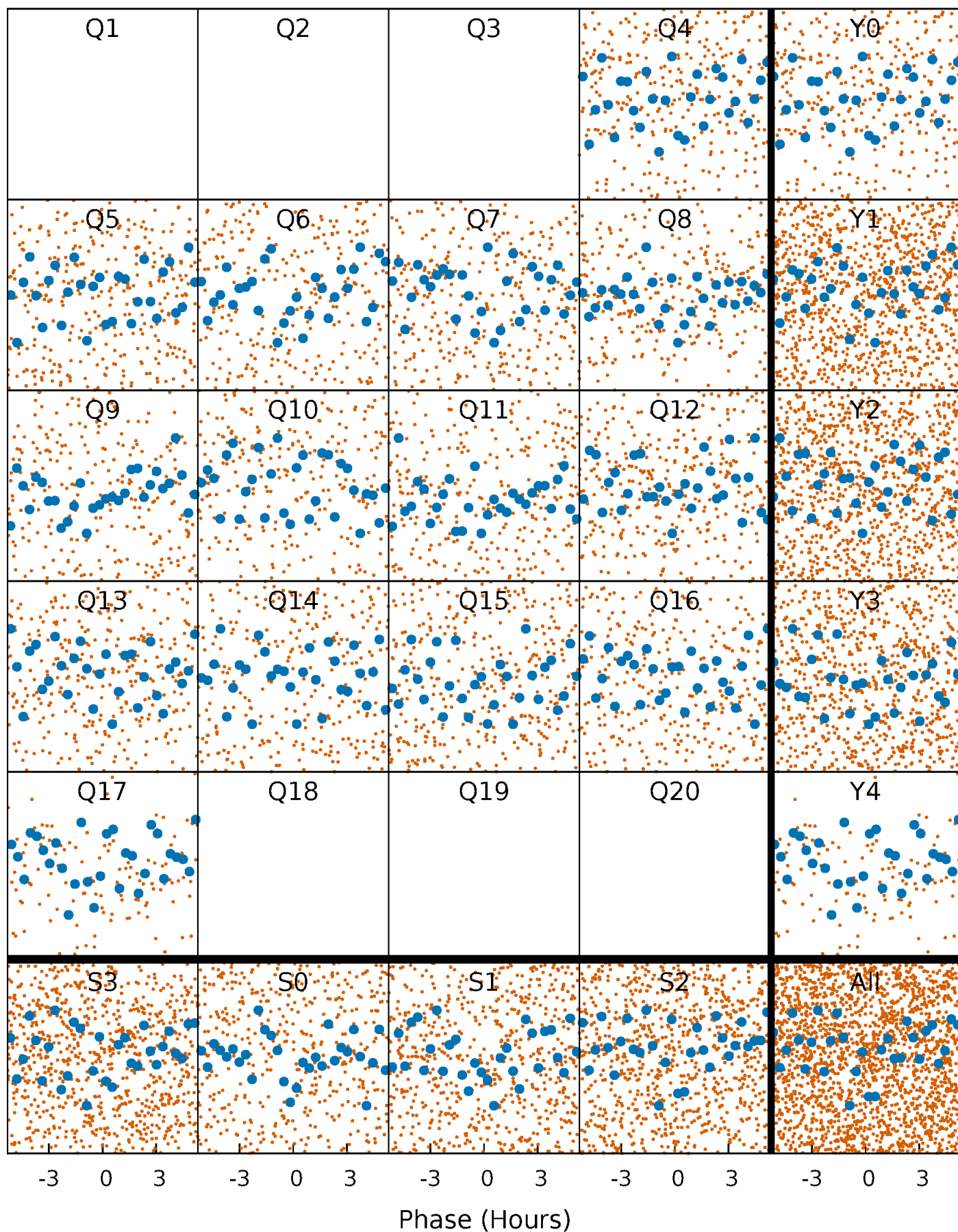


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



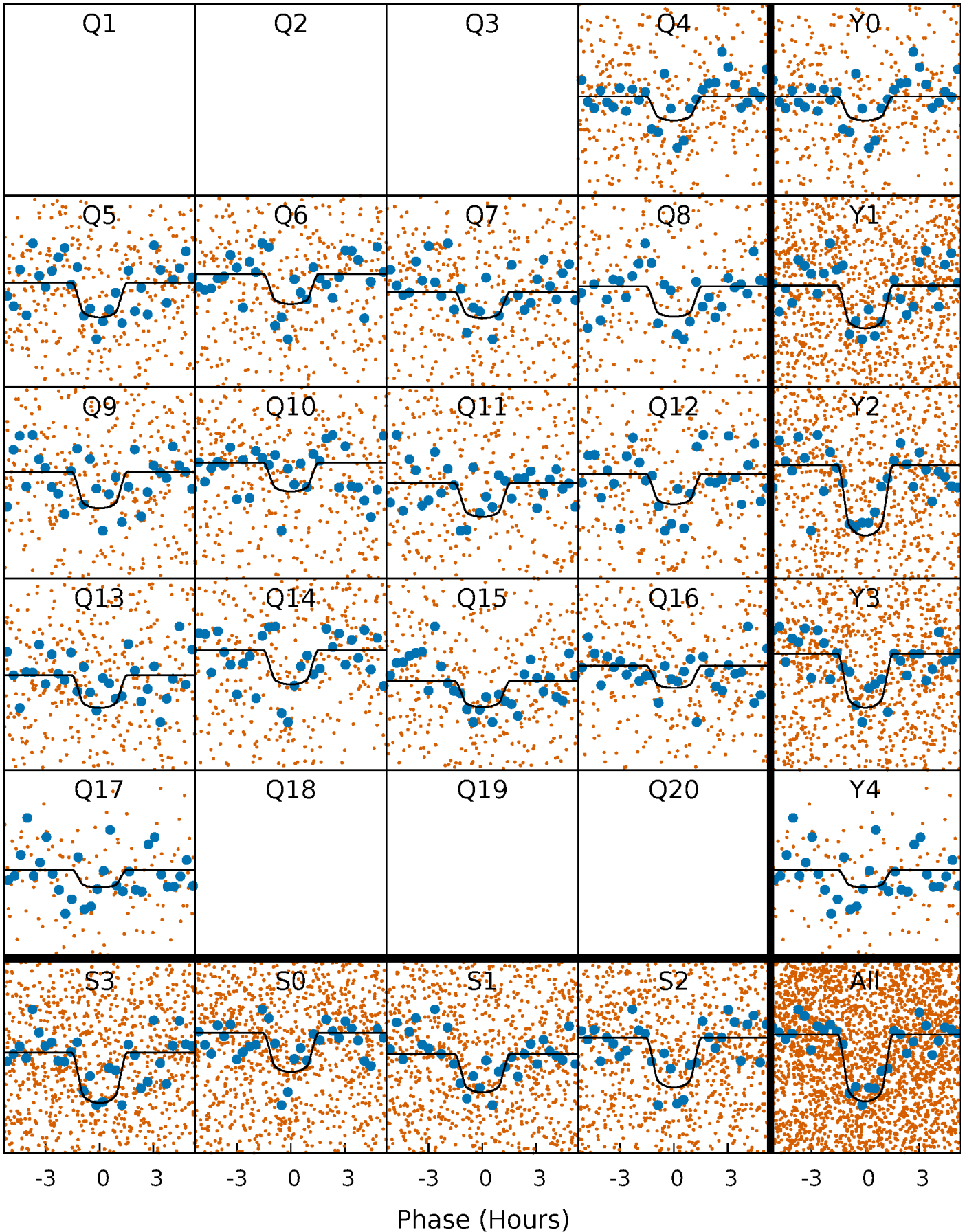
PDC Quarter-Phased Transit Curves

TCE 006543893-03 P= 3.806763 Days $T_0=133.751063$ (BKJD)



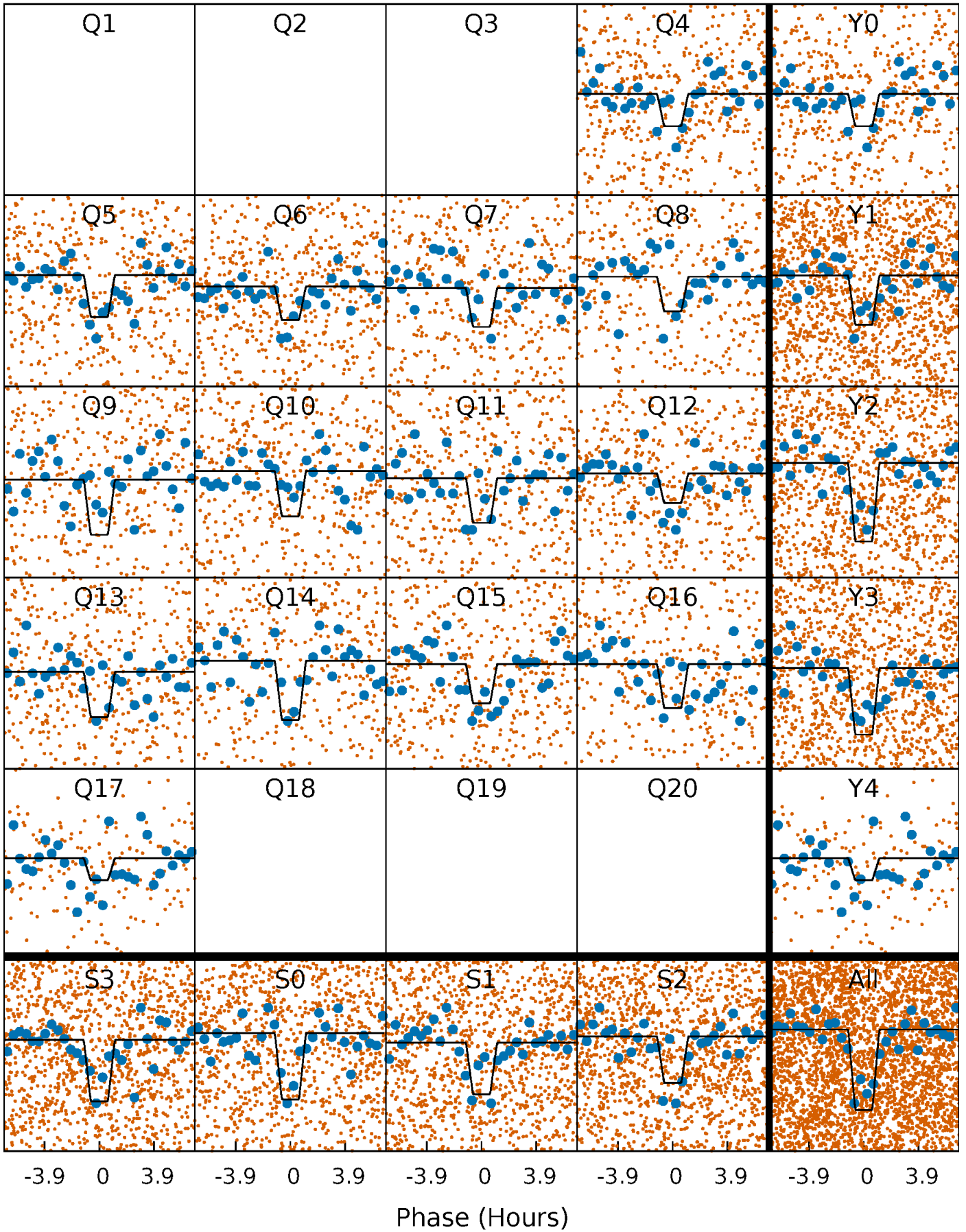
DV Quarter-Phased Transit Curves

TCE 006543893-03 $P = 3.806763$ Days $T_0 = 133.751063$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

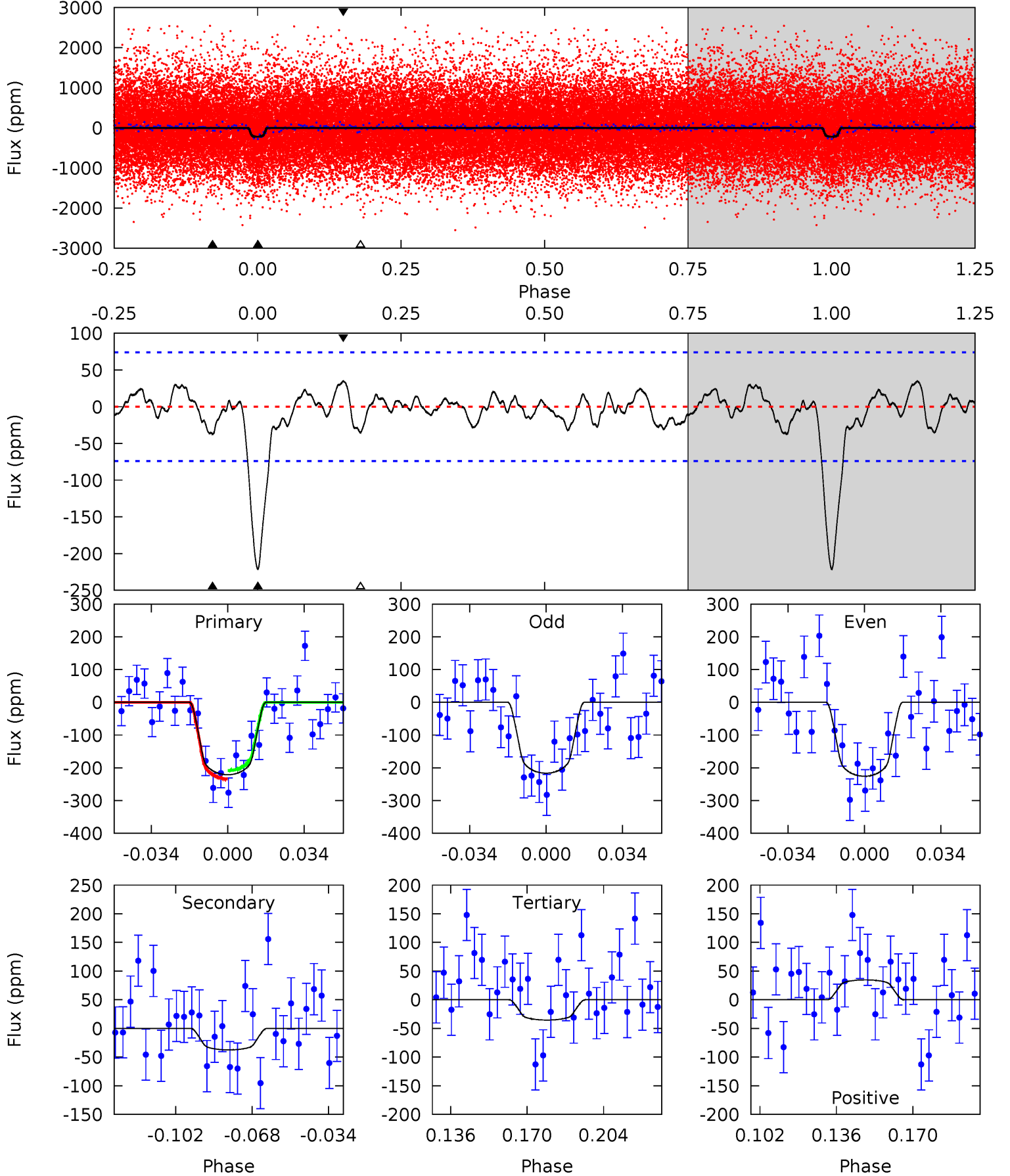
TCE 006543893-03 P= 3.806742 Days $T_0=133.751891$ (BKJD)



DV Model-Shift Uniqueness Test

006543893-03, P = 3.806763 Days, E = 133.751063 Days

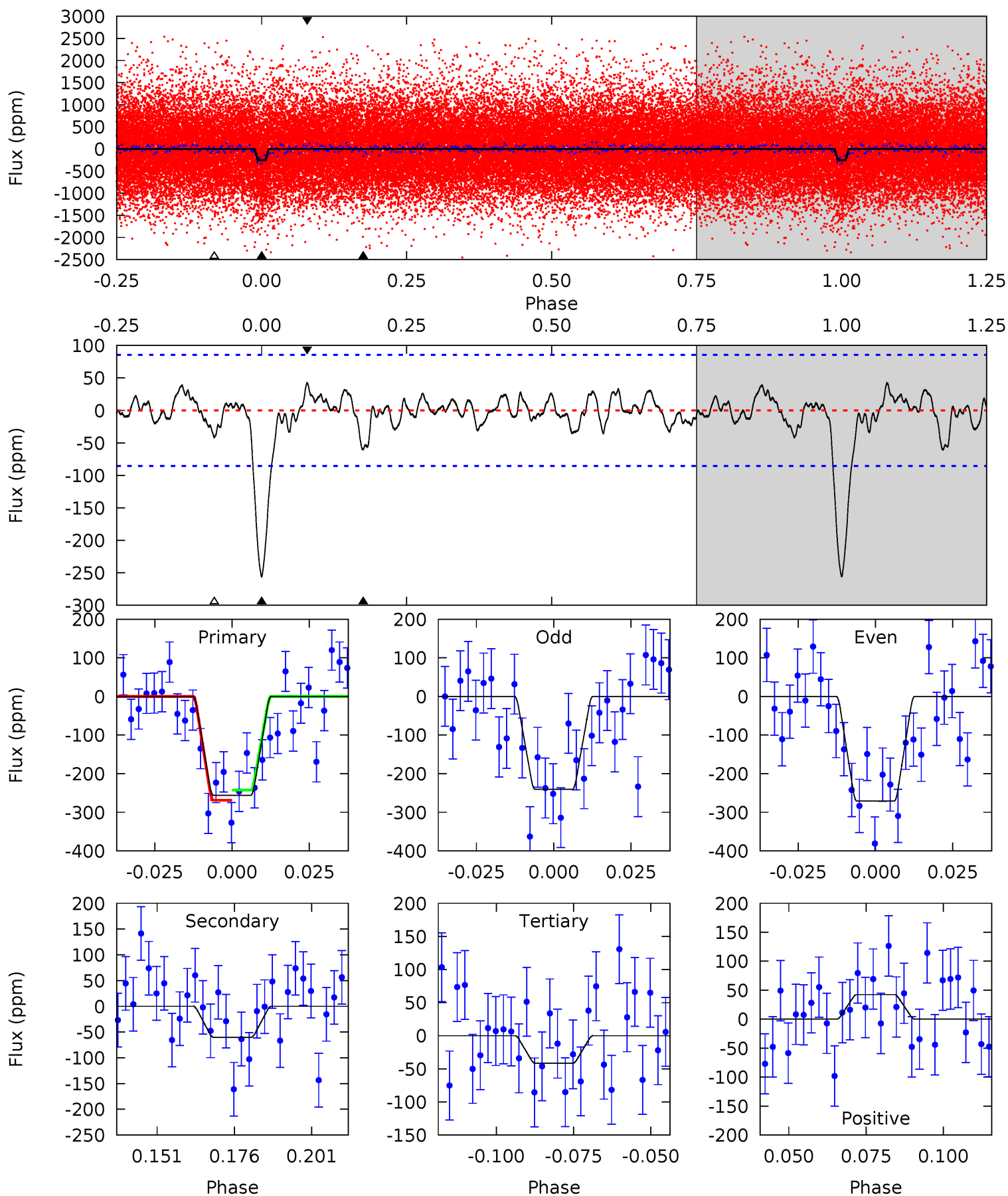
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	2.42	2.29	2.24	4.79	2.12	0.98	12.0	12.1	0.13	0.18	0.30	1.04	0.14	0.82



Alt Model-Shift Uniqueness Test

006543893-03, P = 3.806742 Days, E = 133.751891 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	3.41	2.36	2.41	4.85	2.24	0.94	12.2	12.1	1.05	1.00	0.87	1.01	0.14	0.76



Stellar Parameters For KIC 006543893

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6068^{+82}_{-82}	$4.040^{+0.182}_{-0.112}$	$0.160^{+0.150}_{-0.100}$	$1.797^{+0.295}_{-0.406}$	$1.294^{+0.131}_{-0.145}$	$0.314^{+0.315}_{-0.097}$
	+1%/-1%	+5%/-3%	+94%/-62%	+16%/-23%	+10%/-11%	+100%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 006543893-03 / KOI 1627.03

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-37 ± 15	$3.26^{+1.39}_{-1.41}$	2198^{+96}_{-137}	3921^{+975}_{-619}	$5.119^{+11.360}_{-3.163}$
Alt.	-60 ± 18	$3.25^{+1.61}_{-1.42}$	2190^{+103}_{-127}	4259^{+1206}_{-626}	$7.998^{+18.407}_{-4.685}$

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

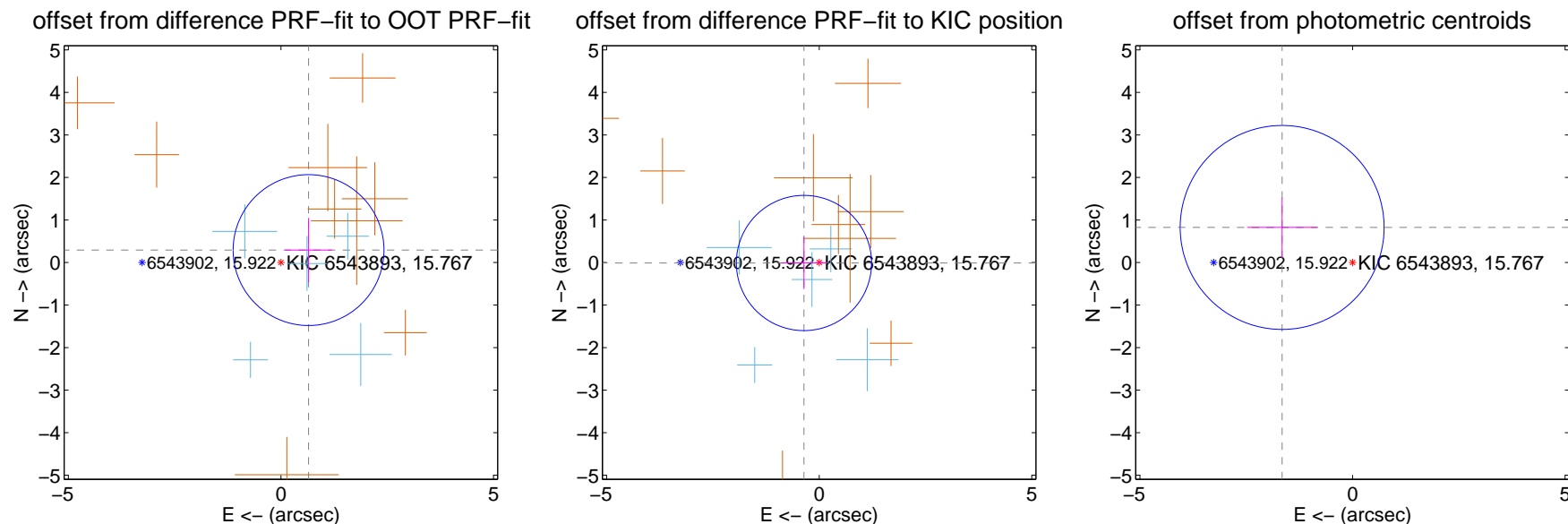
DV Centroid Data

Supplemental centroid analysis for 006543893-03. Kepler magnitude: 15.77. Transit SNR 10.50

There are 5 quarters with good PRF difference image offsets

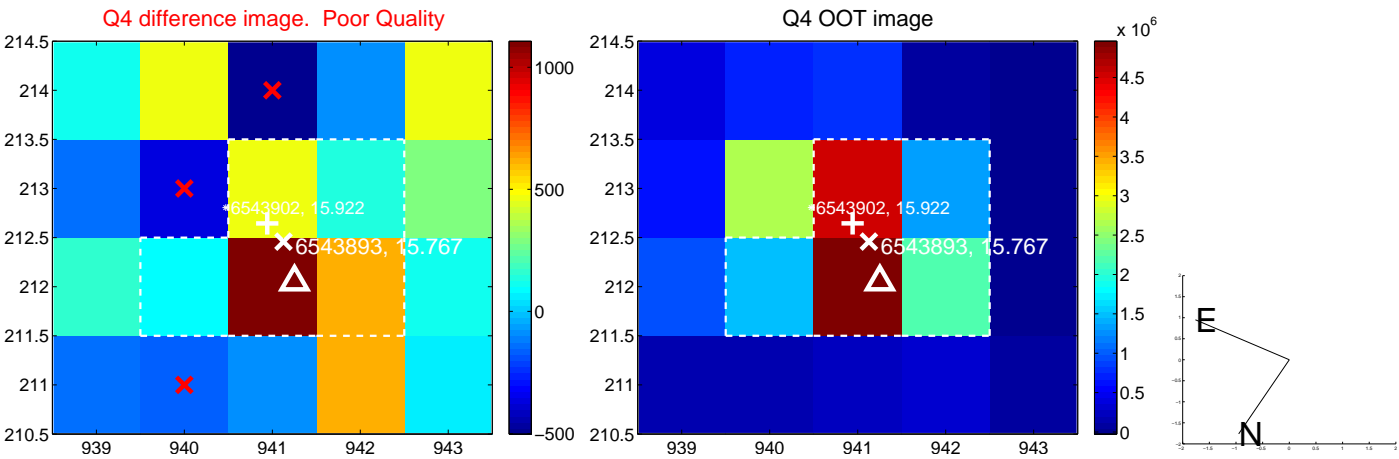
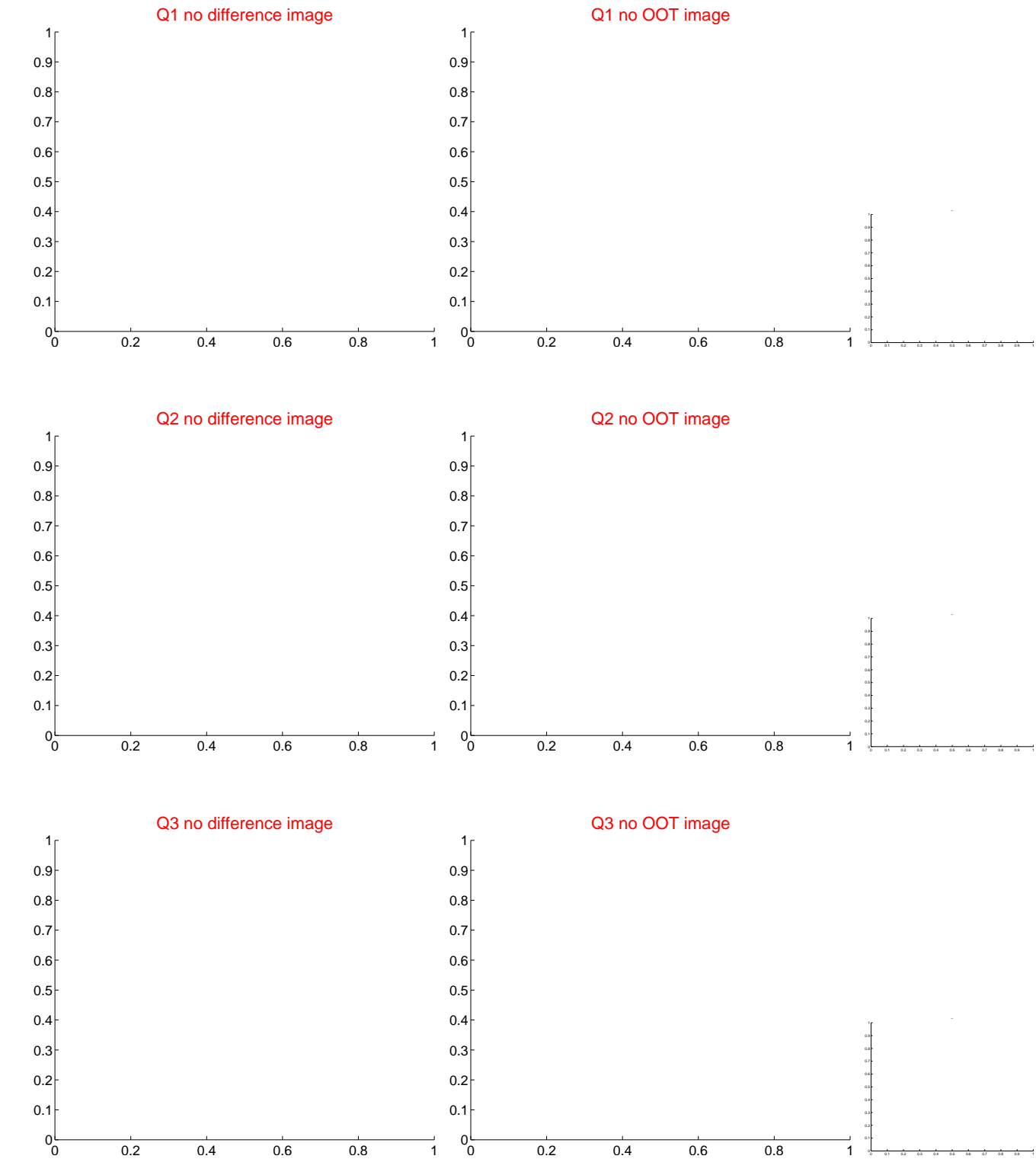
The direct PRF centroid is offset from the target star catalog position by about 0.85 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.713 ± 0.591	1.21	-0.650 ± 0.552	0.293 ± 0.754
PRF-fit source offset from KIC position	0.358 ± 0.530	0.68	0.358 ± 0.535	-0.011 ± 0.612
photometric centroid source offset	1.85 ± 0.80	2.31	1.66 ± 0.82	0.83 ± 0.70

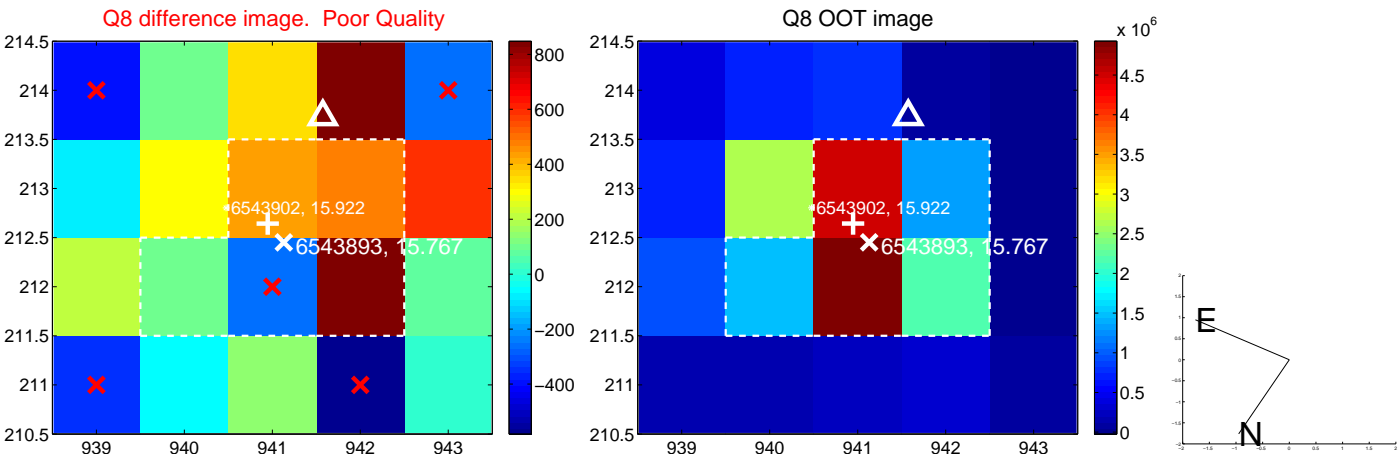
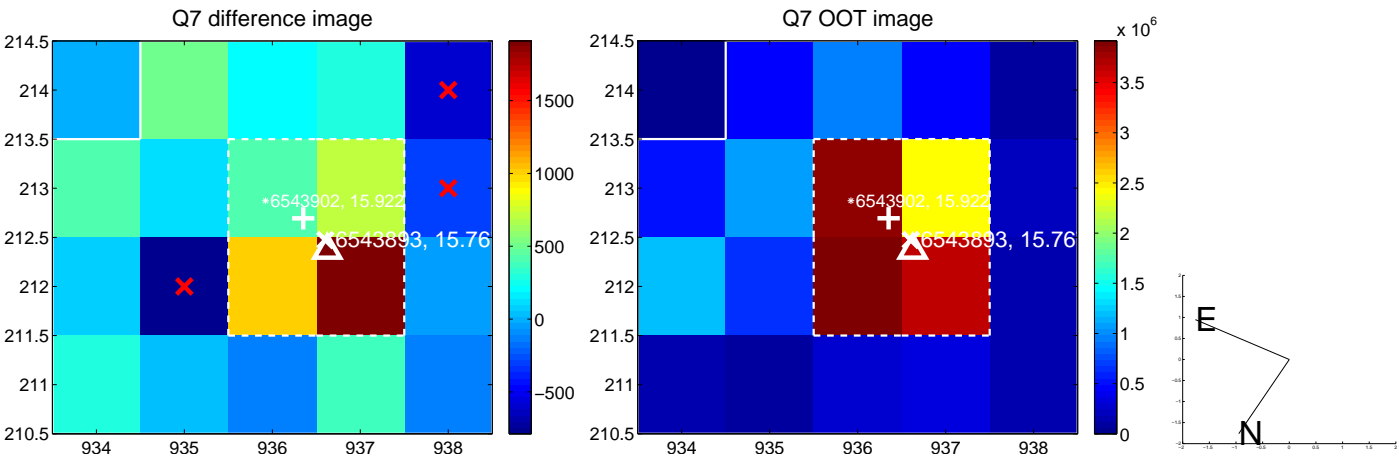
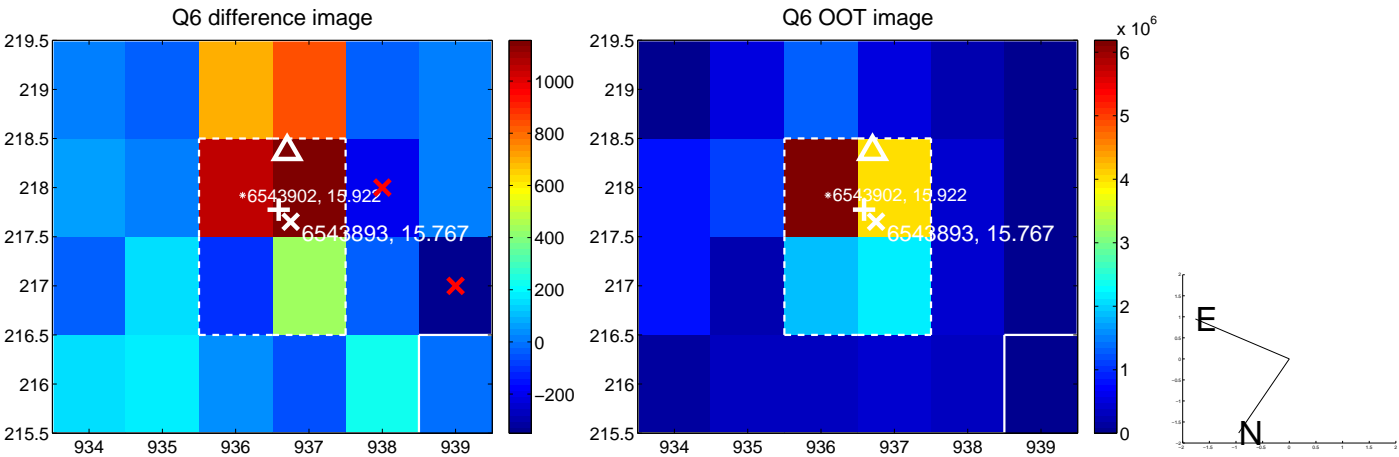
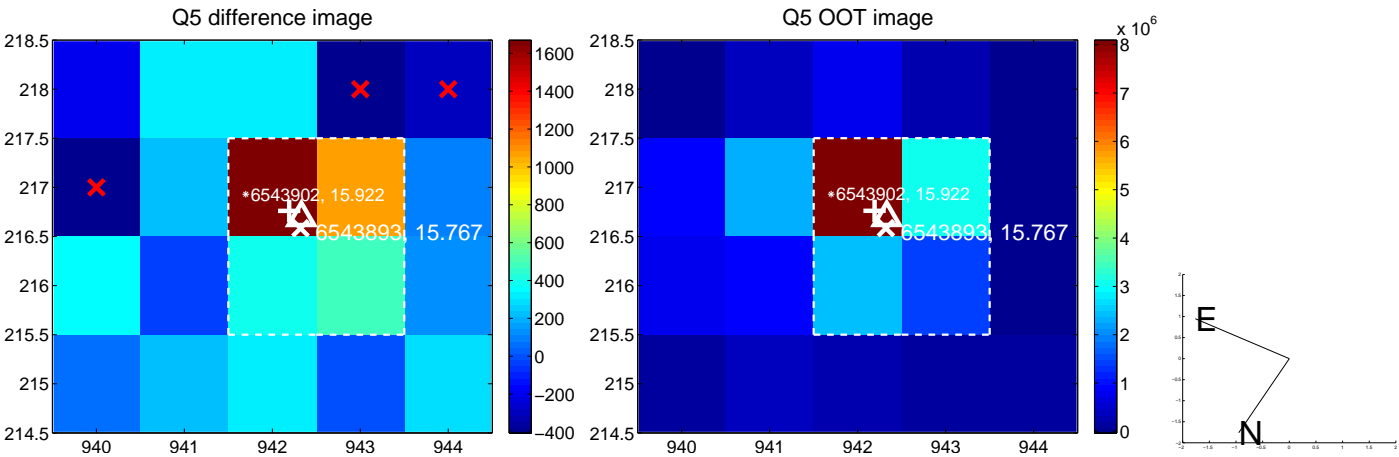


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

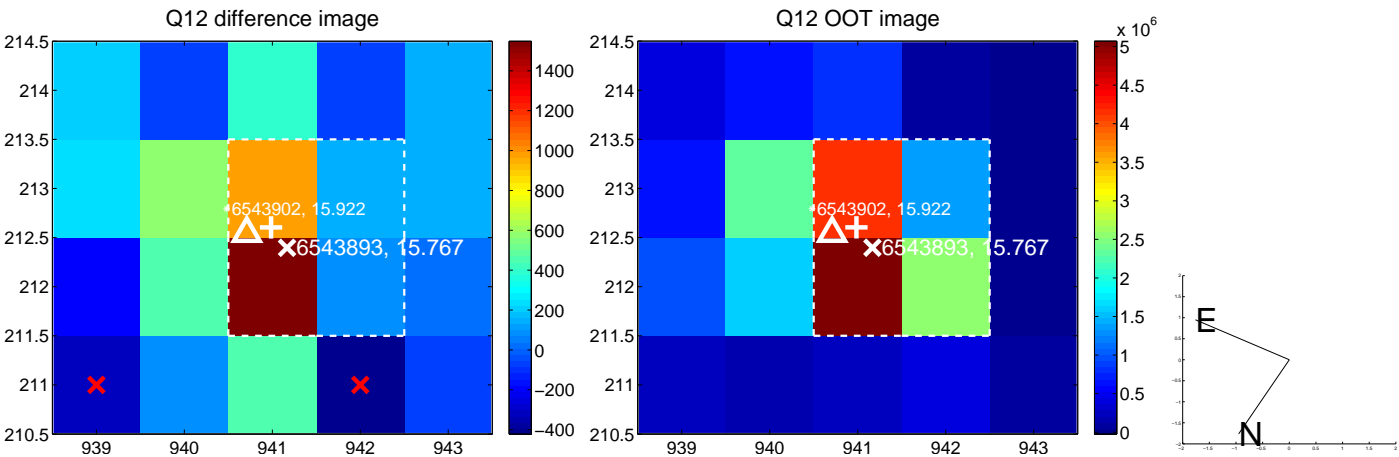
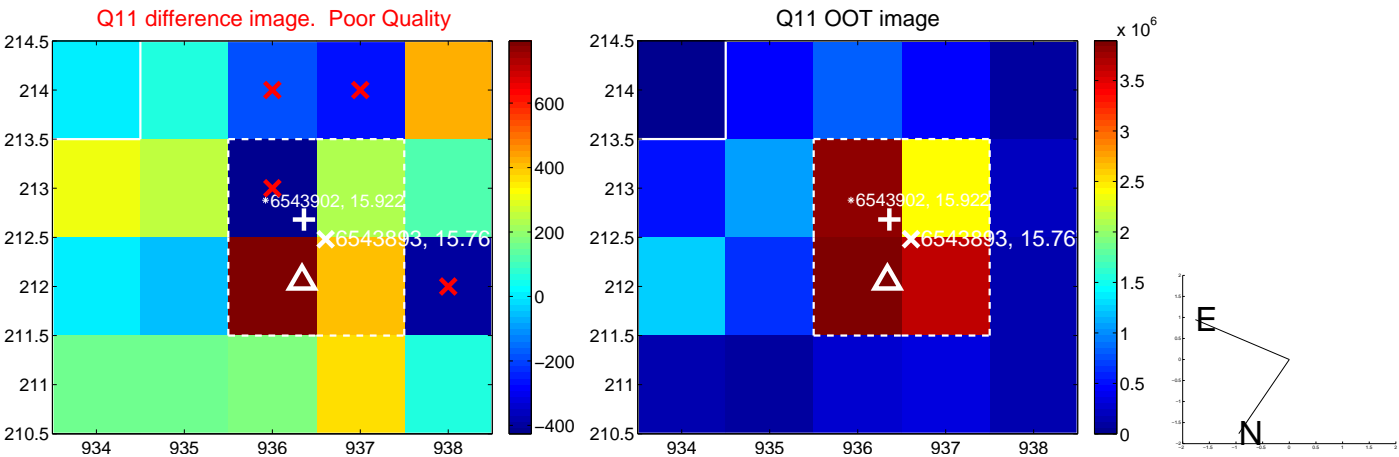
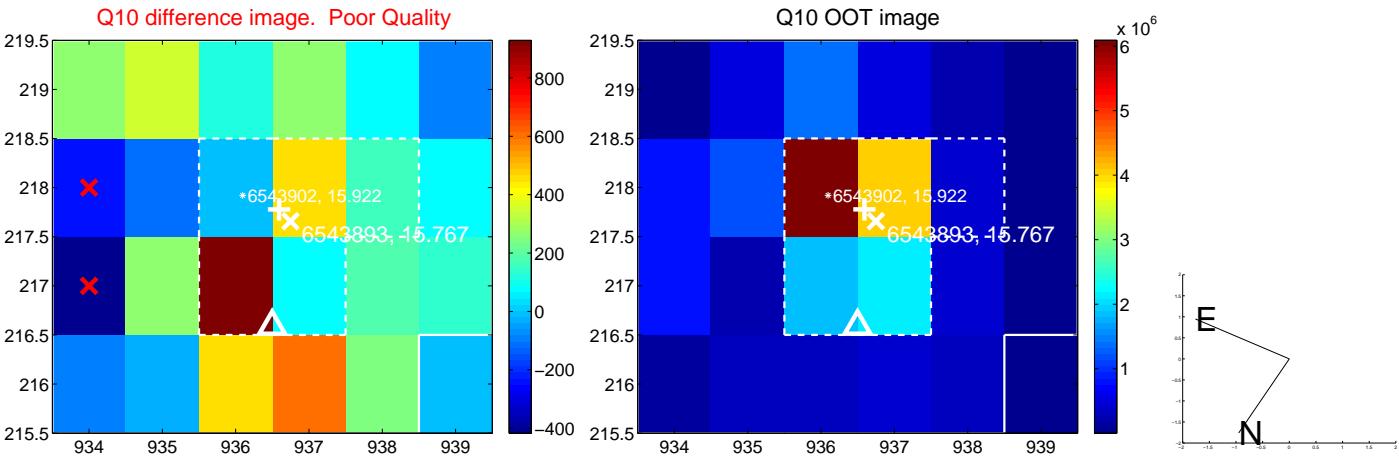
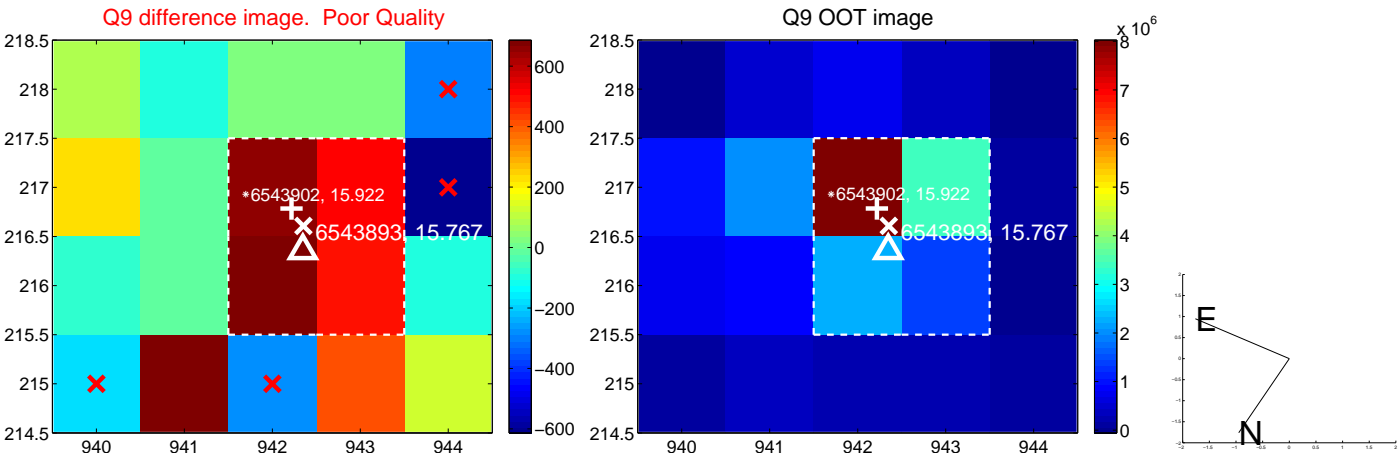
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



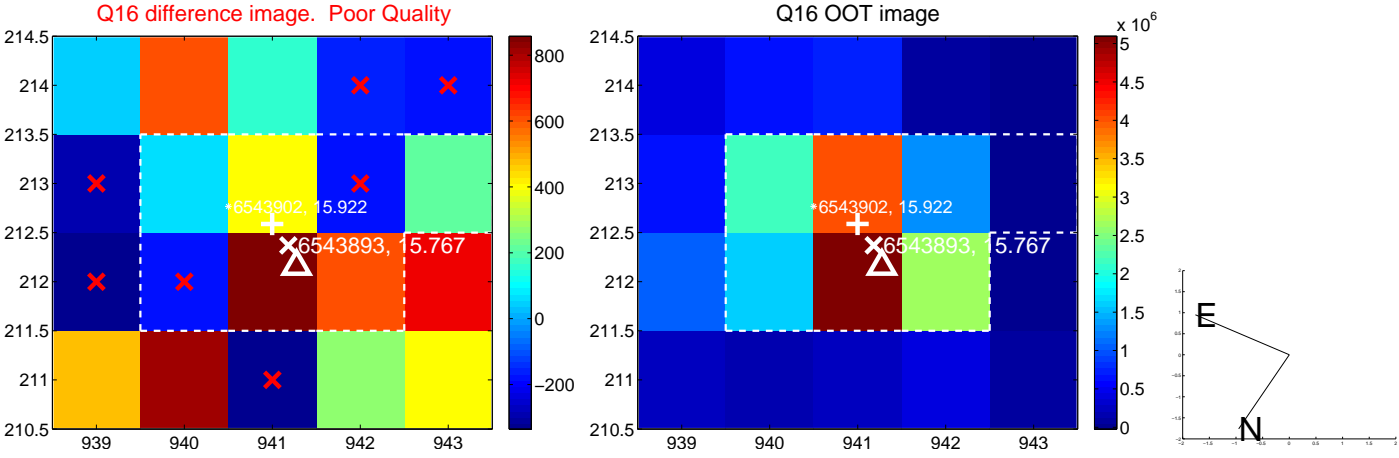
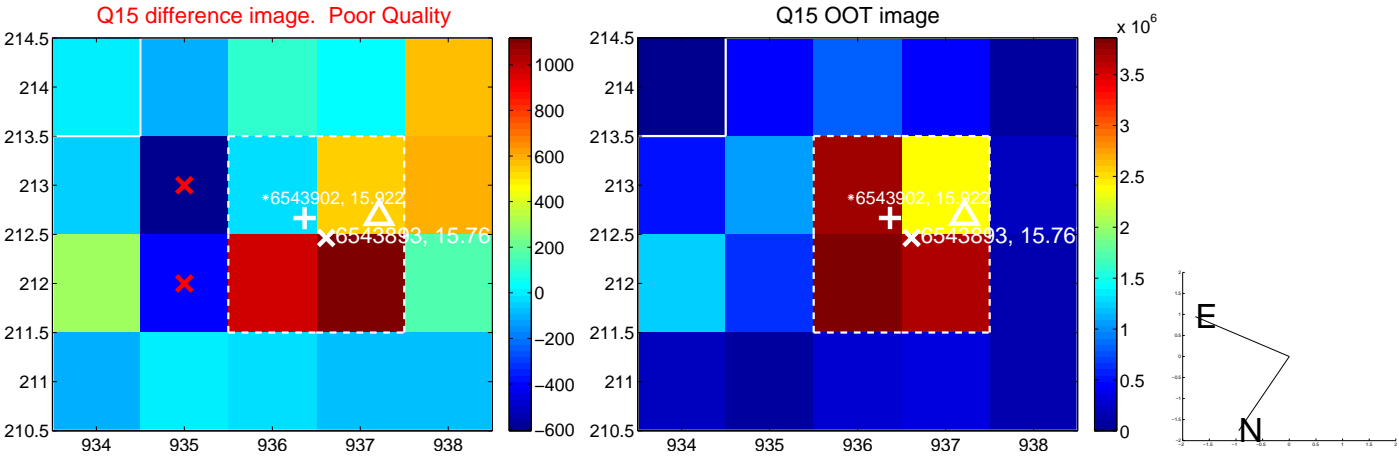
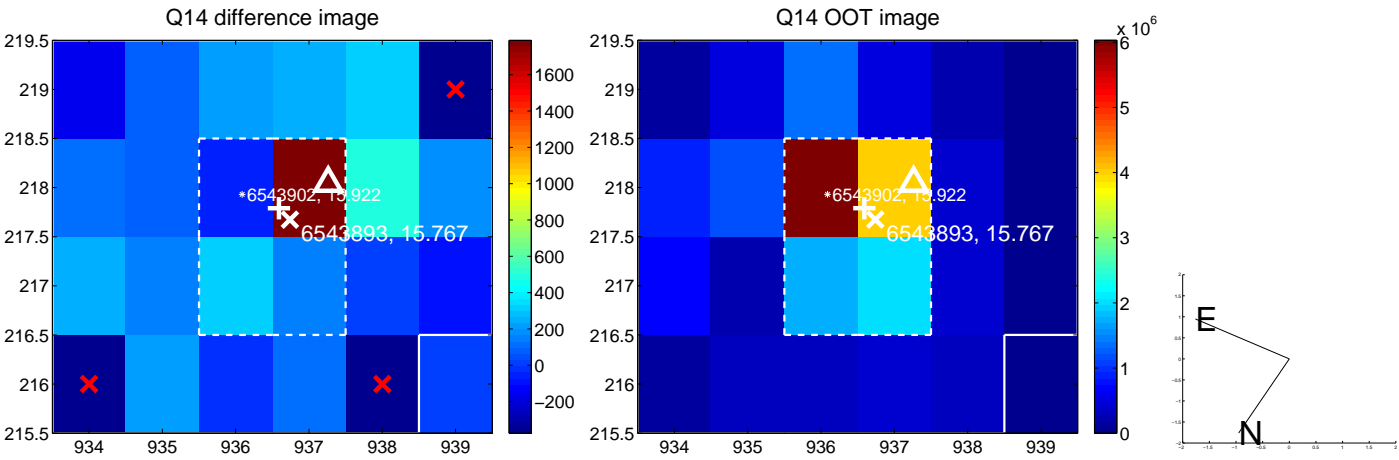
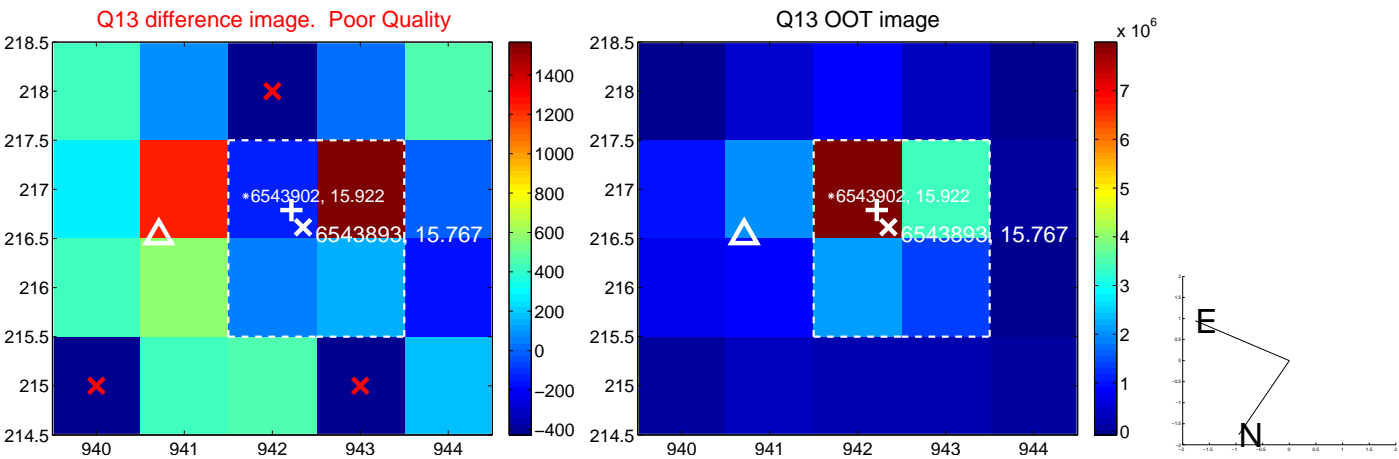
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



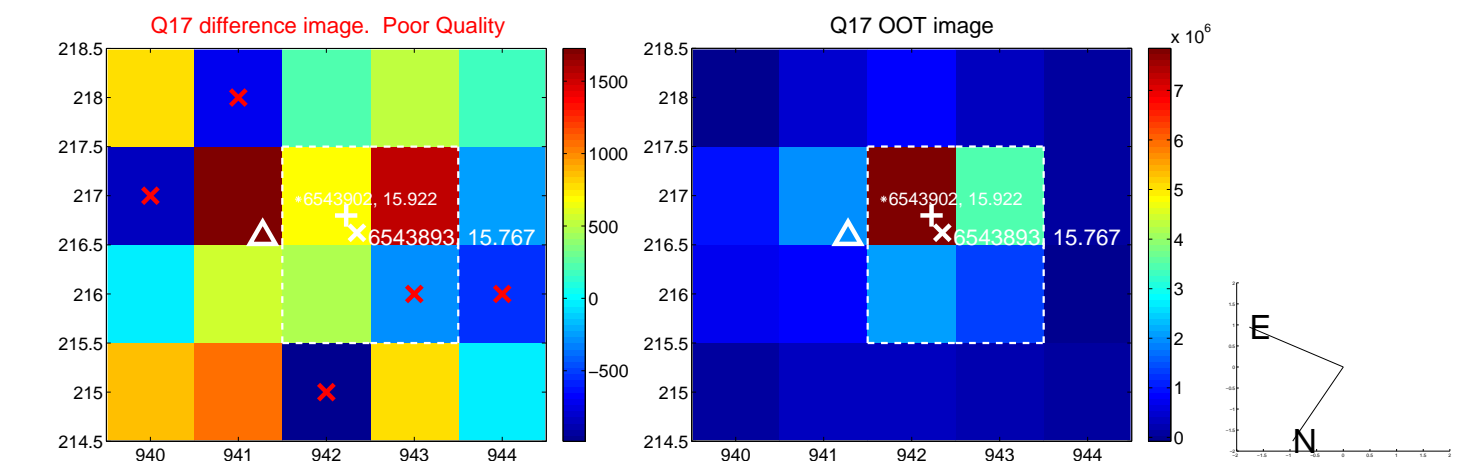
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



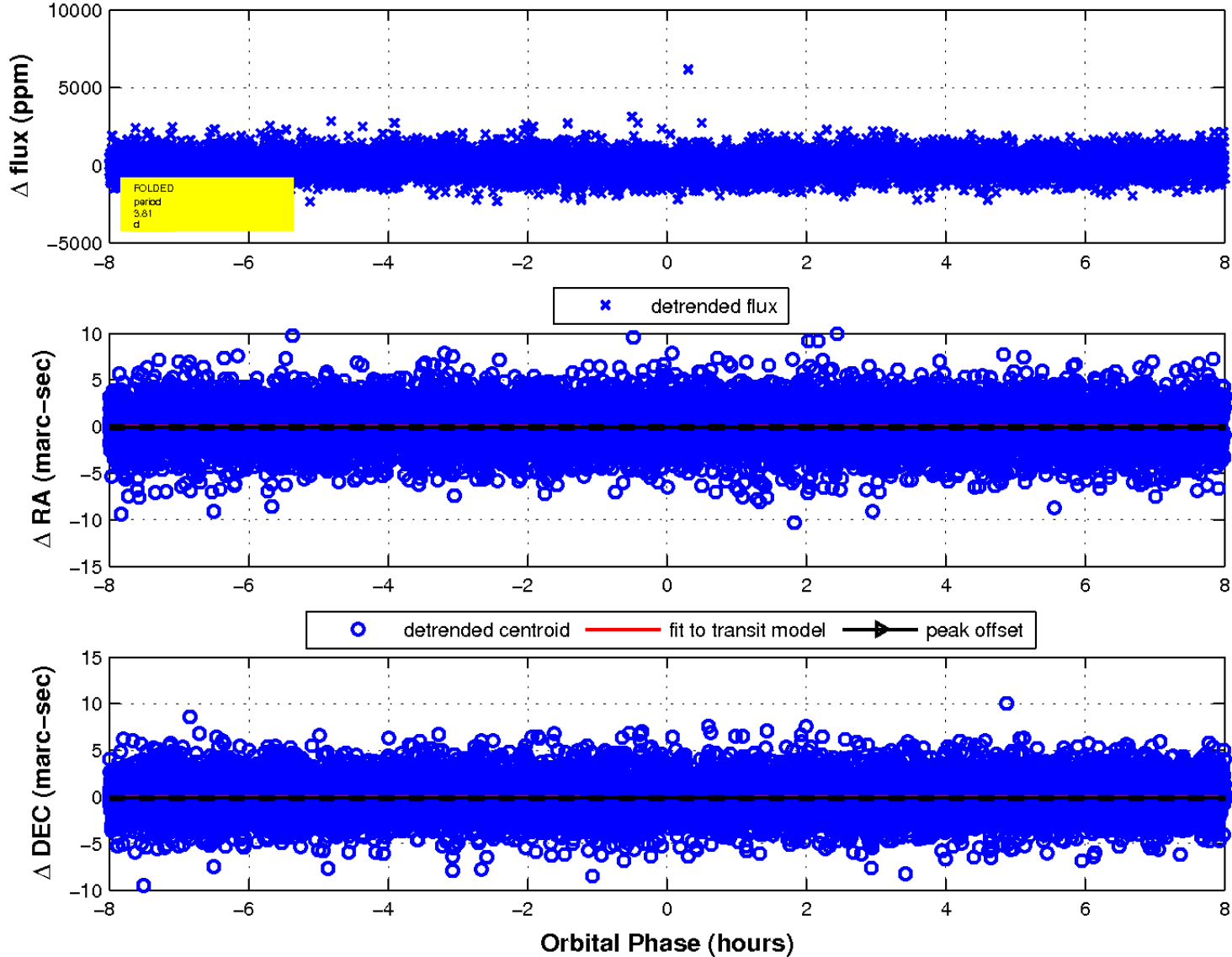
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

