

KIC 008653183

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})
008653183-01	OBS	No	3.116681	134.466398	26.2	8.720	8.8	7.7	3.02	6305	1.86	5845.37
008653183-02	OBS	No	308.541703	309.524519	203.6	24.293	7.4	5.6	3.02	6305	4.77	12.76
008653183-03	OBS	No	157.703270	146.483175	257.8	6.793	7.2	7.5	3.02	6305	6.94	31.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008653183-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
008653183-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV
008653183-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES

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

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

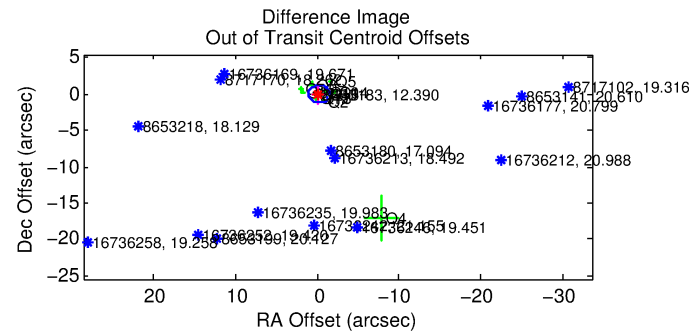
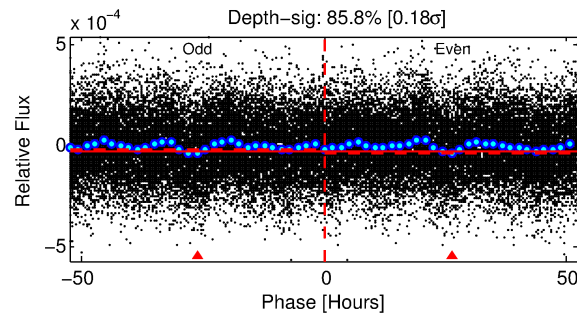
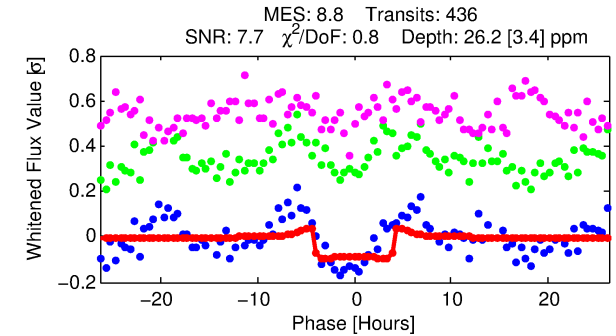
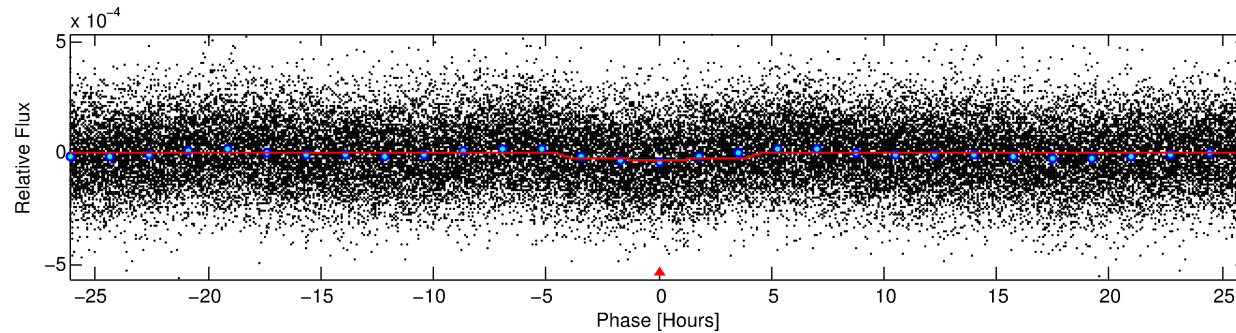
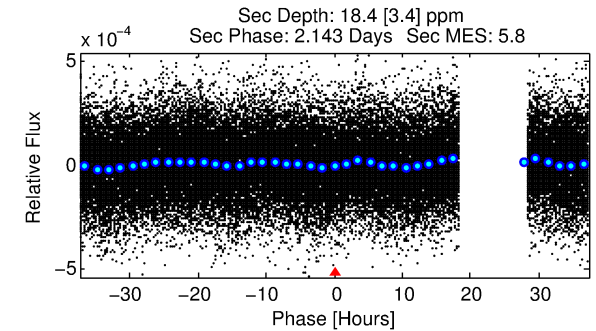
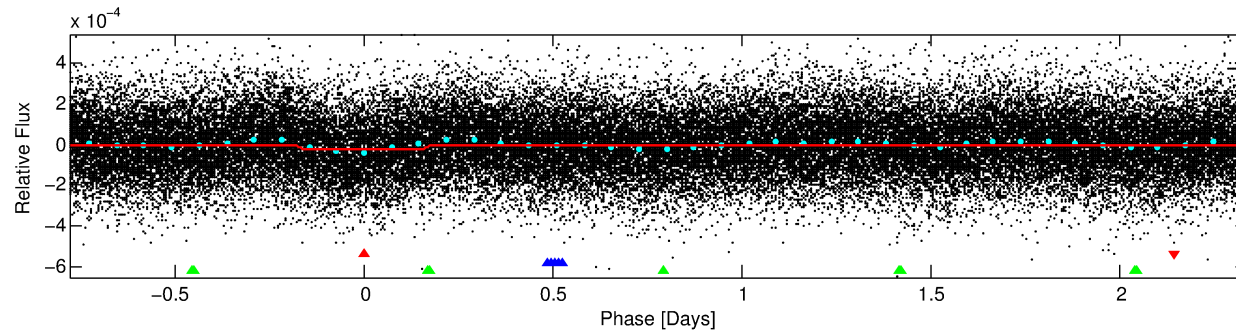
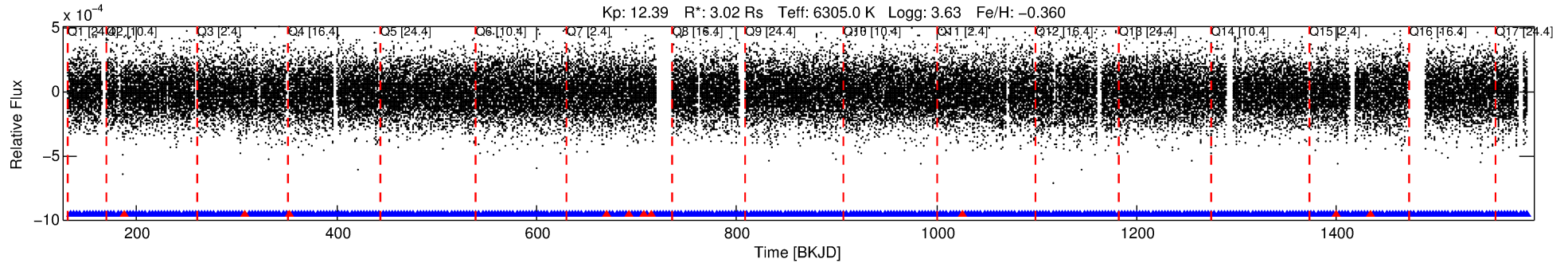
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008653183-01

No Significant Match Found

DV One-Page Summary

KIC: 8653183 Candidate: 1 of 3 Period: 3.117 d



DV Fit Results:

Period = 3.11668 [0.00003] d
Epoch = 134.4664 [0.0061] BKJD
Rp/R* = 0.0056 [0.0009]
a/R* = 1.42 [0.60]
b = 0.93 [0.12]
Seff = 5845.37 [3568.87]
Teq = 2230 [340] K
Rp = 1.86 [0.79] Re
a = 0.0470 [0.0177] AU
Ag = 6.46 [4.55] [1.20σ]
Teffp = 5496 [528] K [5.20σ]

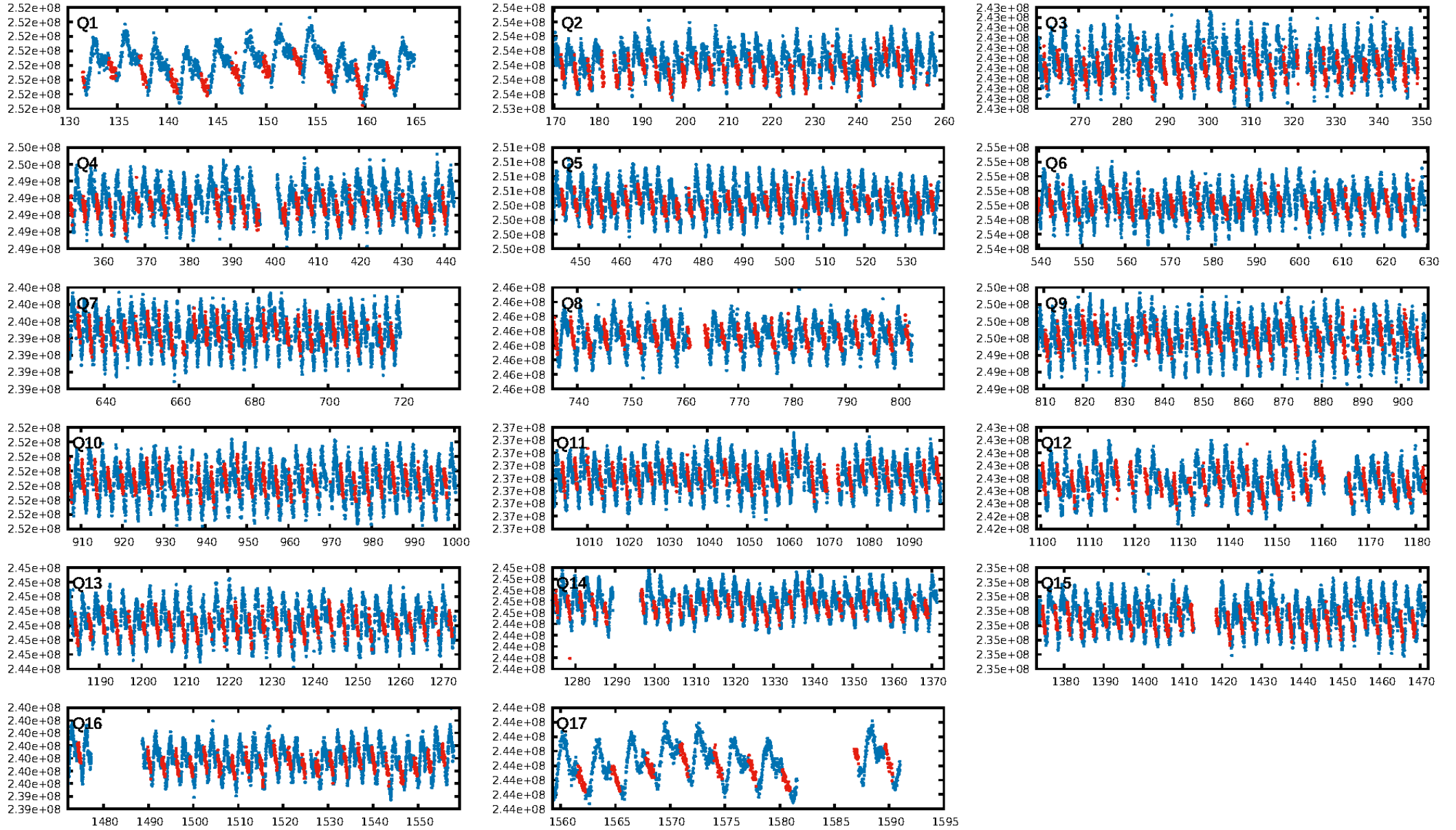
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [335.64σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.83e-14
RollingBand-fgt: 0.98 [406/416]
GhostDiagnostic-chr: 0.2554
Centroid-sig: 43.3%
Centroid-so: 0.793 arcsec [0.86σ]
OotOffset-rm: 0.209 arcsec [0.50σ]
KicOffset-rm: 0.152 arcsec [0.21σ]
OotOffset-st: 4/2/3/3 [12]
KicOffset-st: 4/2/3/3 [12]
DiffImageQuality-fgm: 0.08 [1/12]
DiffImageOverlap-fno: 1.00 [17/17]

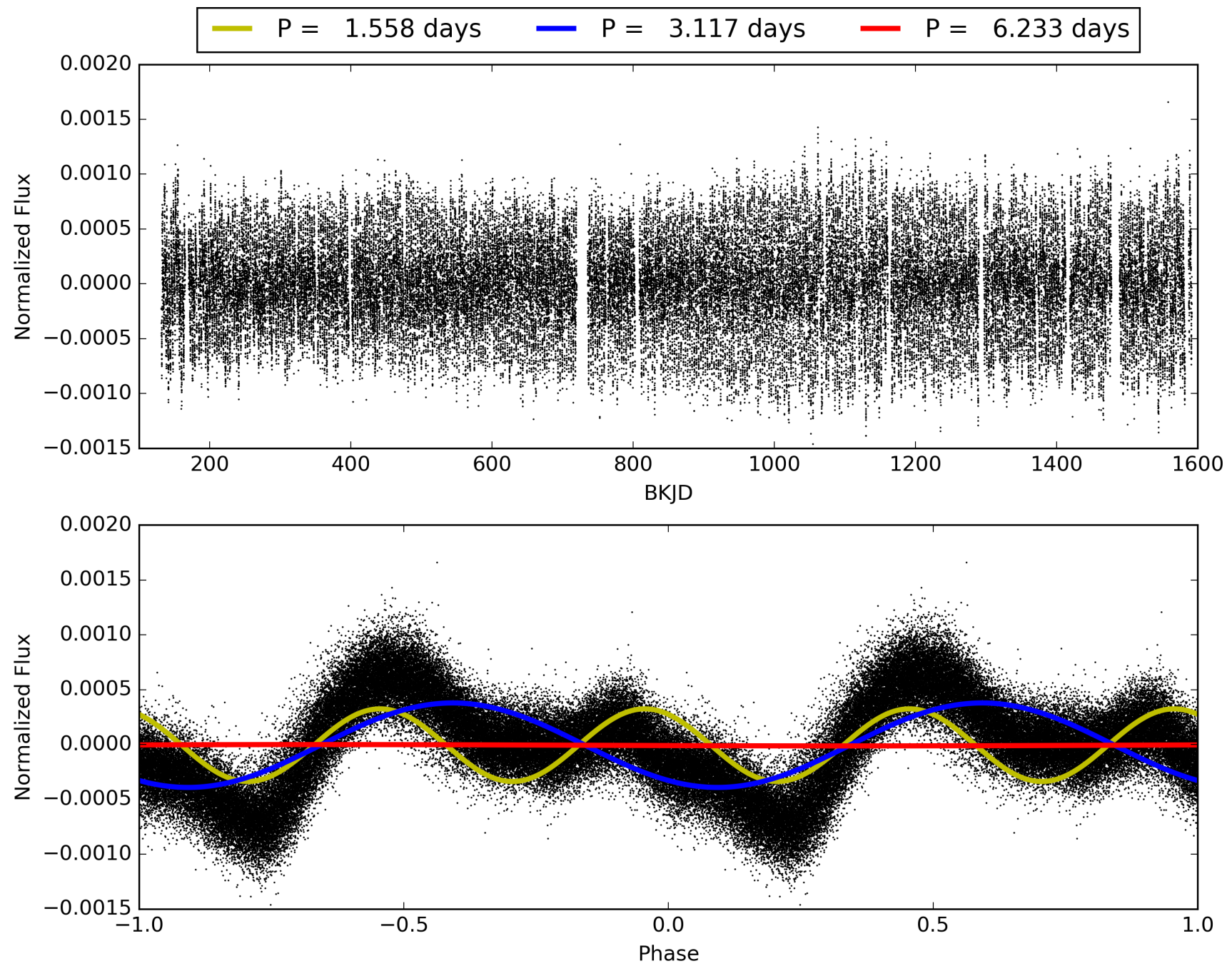
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:33:48 Z

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

TCE 008653183-01, PDC Light Curves

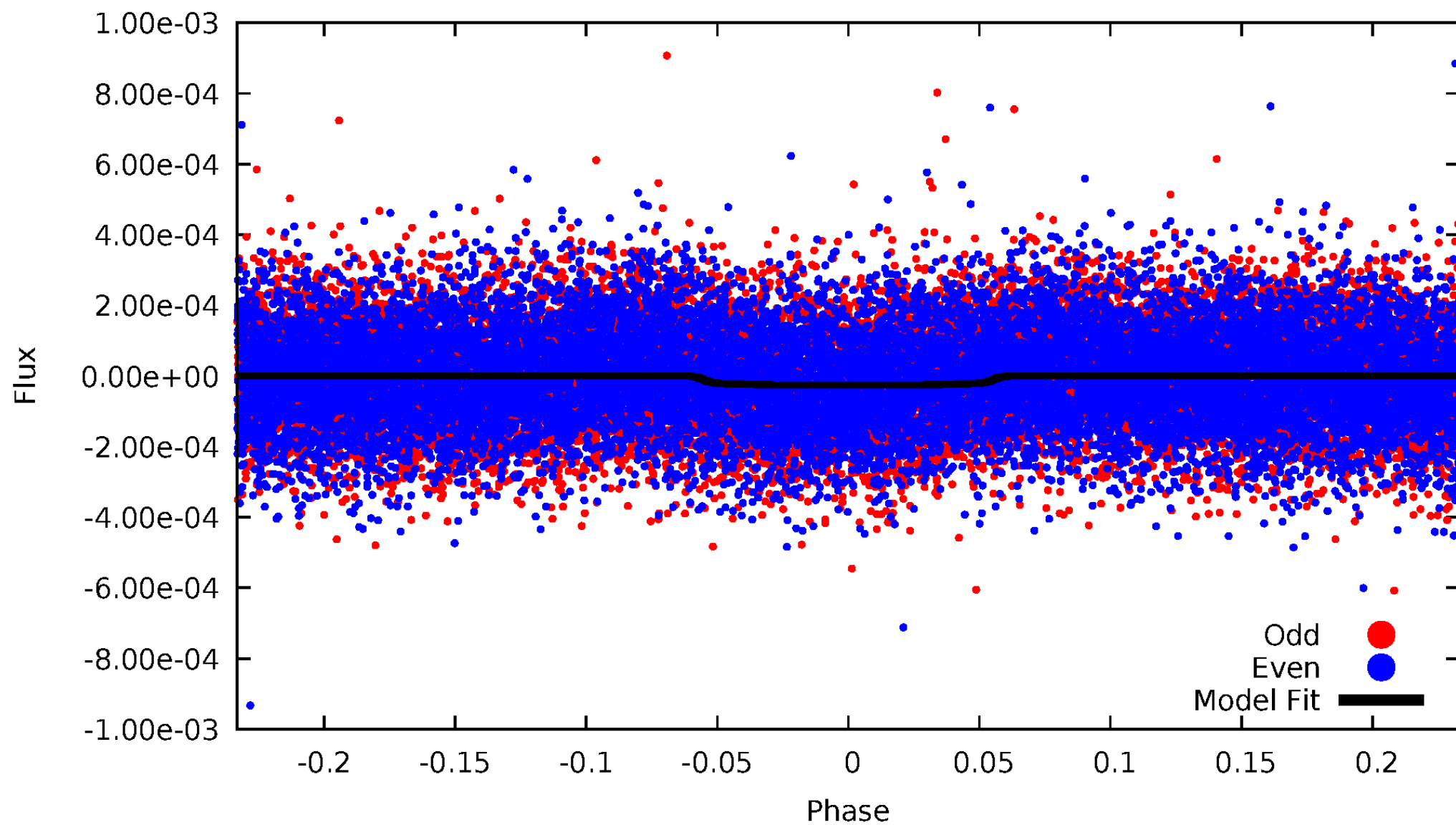


TCE 008653183-01



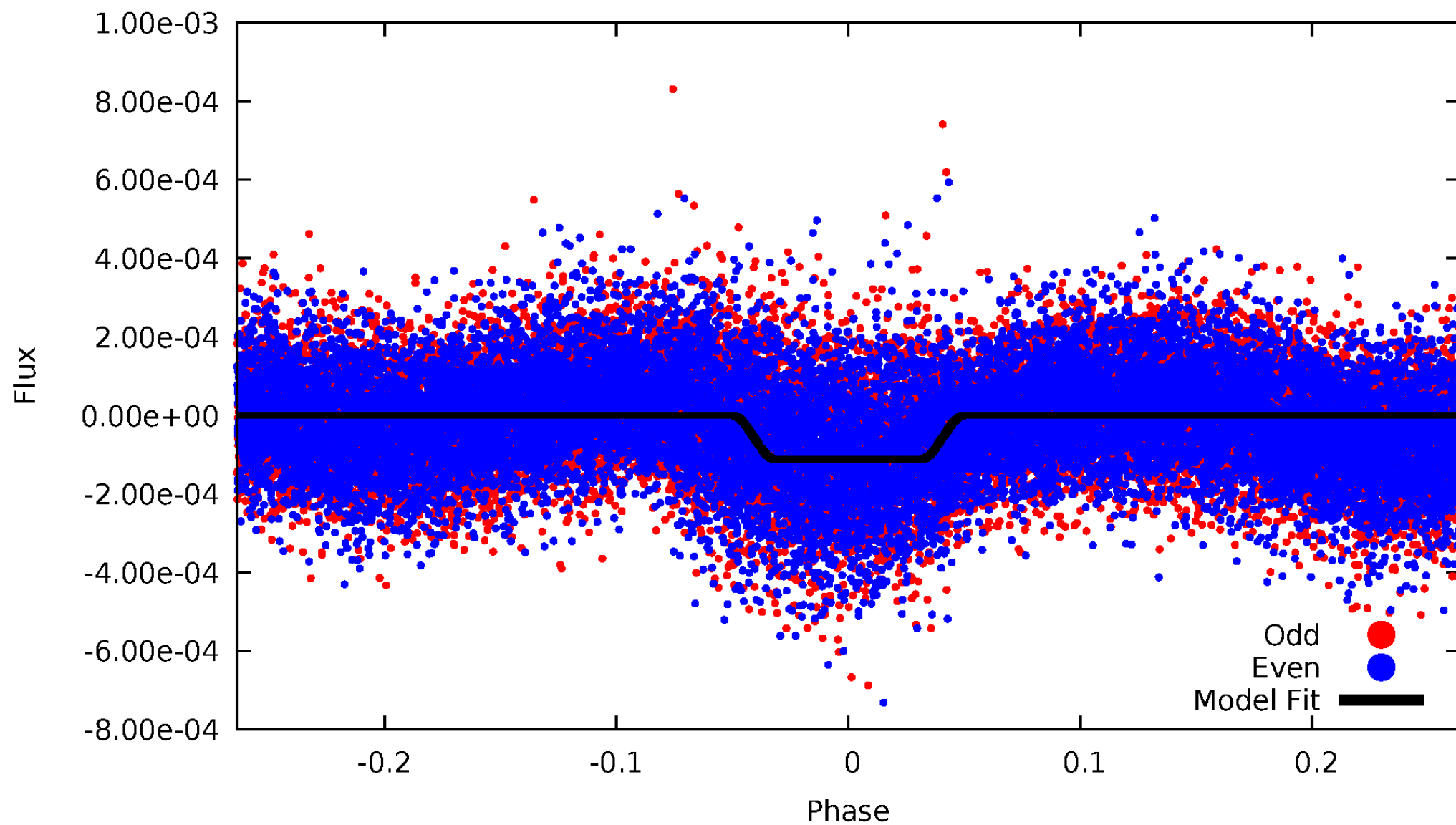
DV Odd/Even

TCE 008653183-01



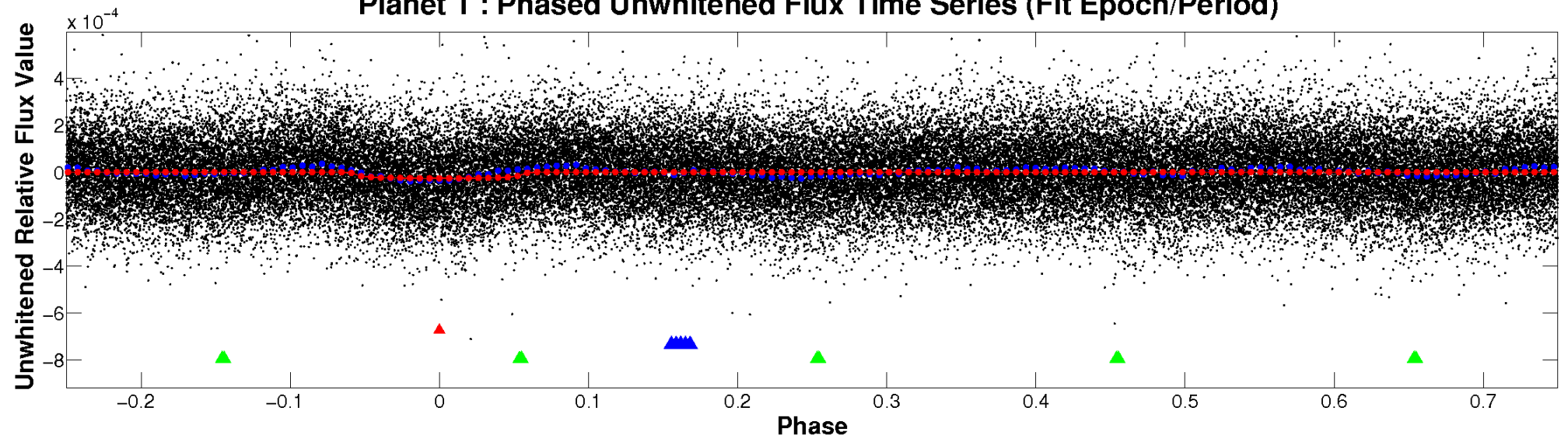
ALT Odd/Even

TCE 008653183-01

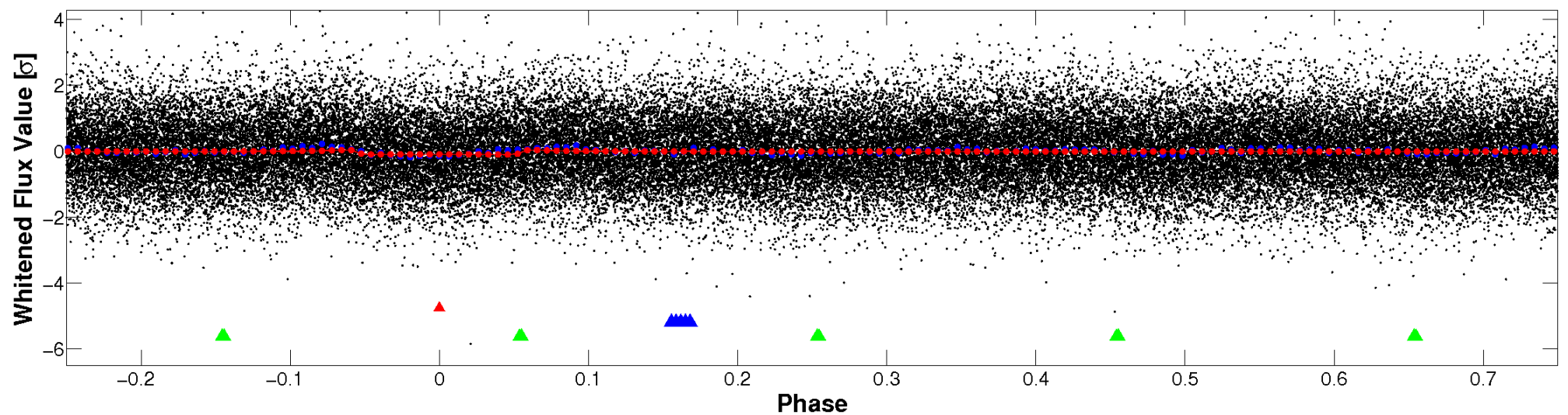


Non-Whitened Vs. Whitened Light Curve

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

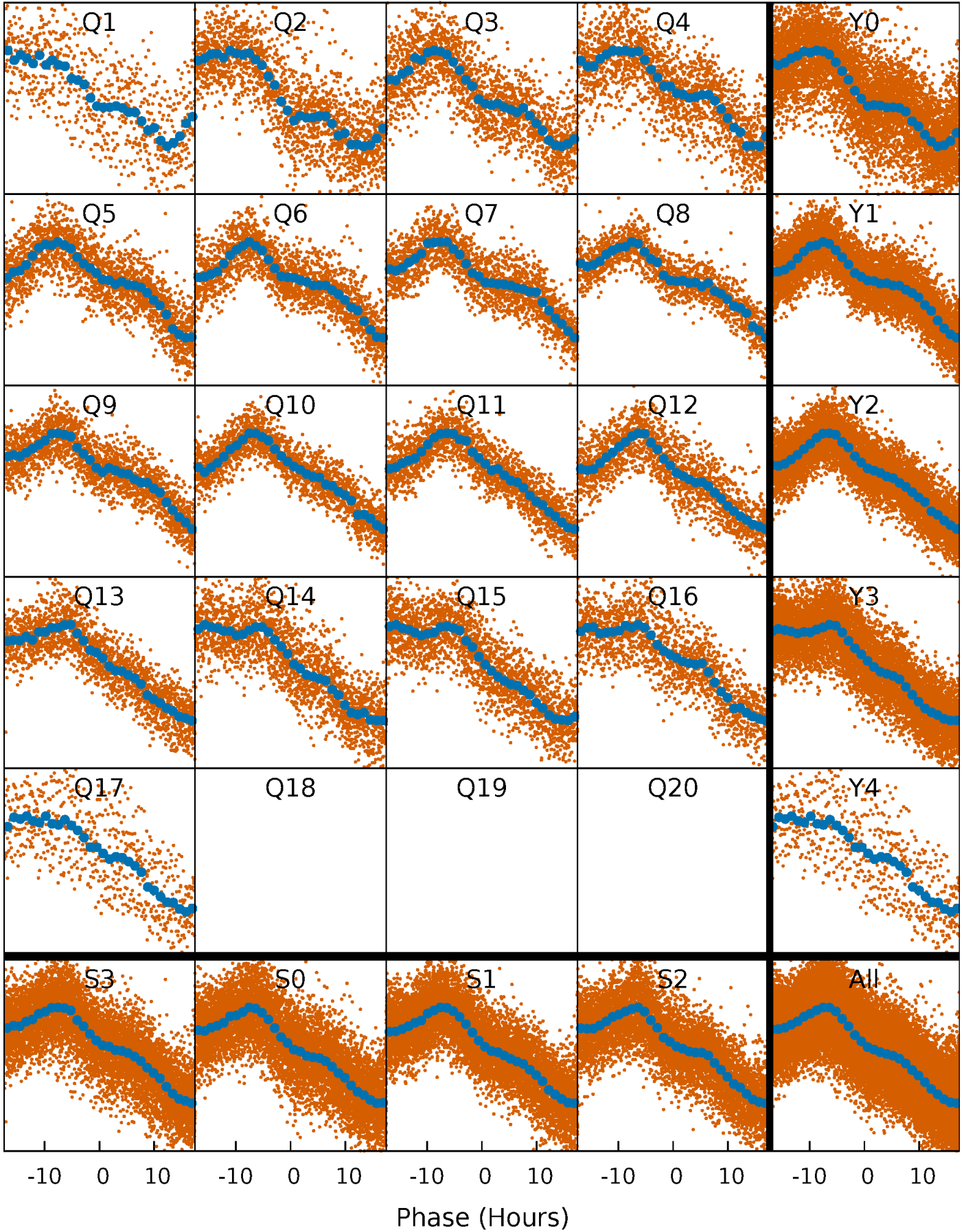


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



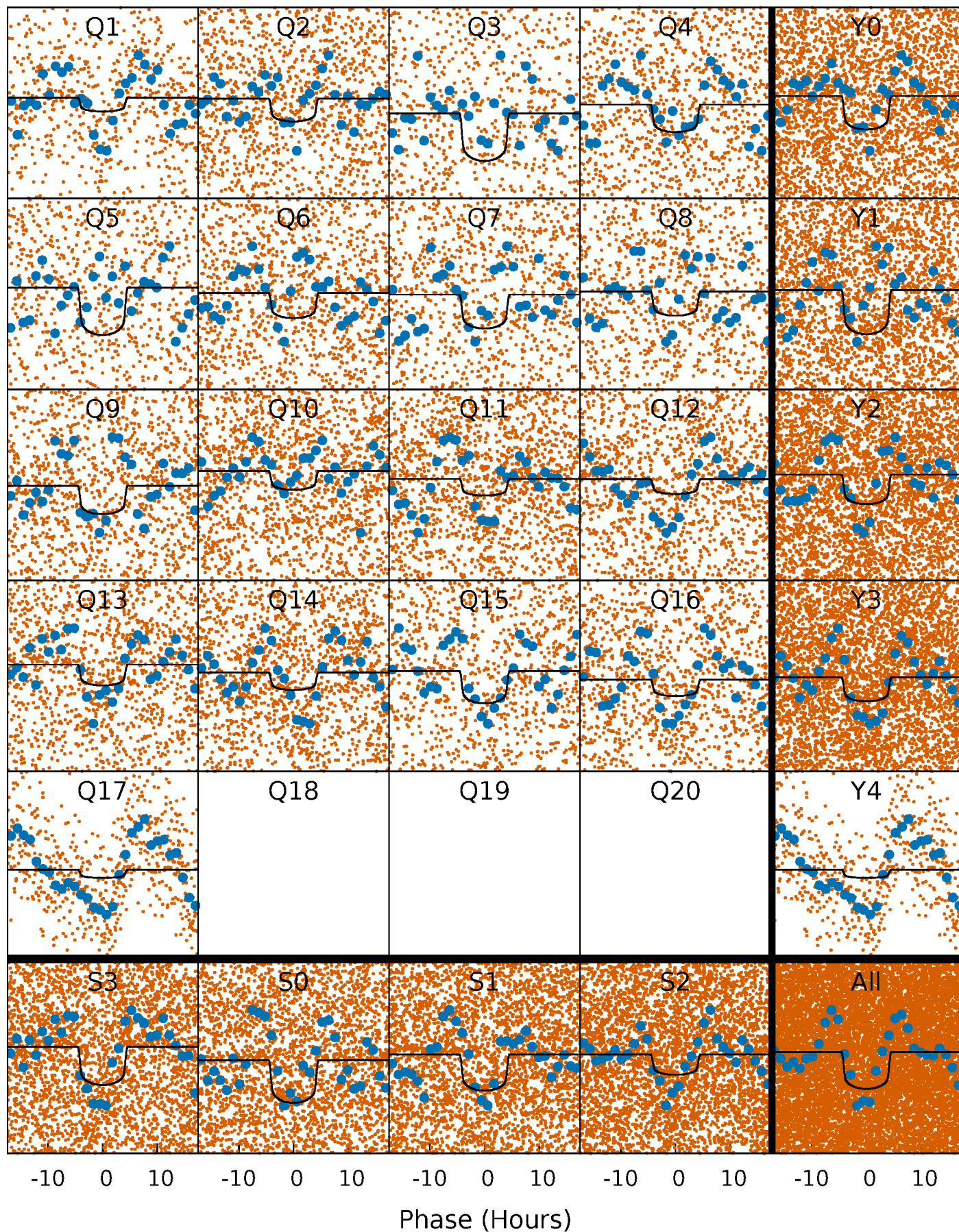
PDC Quarter-Phased Transit Curves

TCE 008653183-01 P= 3.116681 Days $T_0=134.466398$ (BKJD)



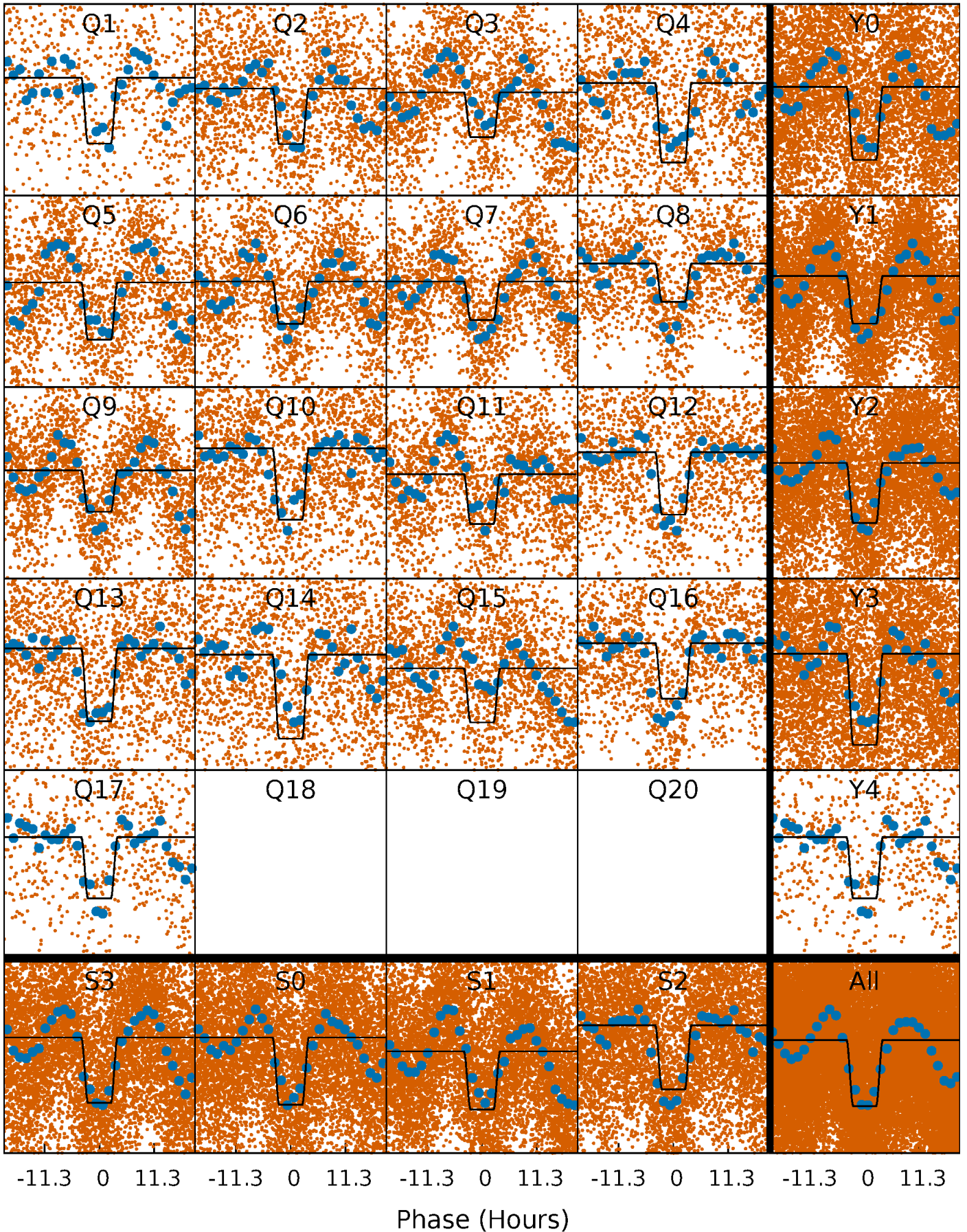
DV Quarter-Phased Transit Curves

TCE 008653183-01 P= 3.116681 Days $T_0=134.466398$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

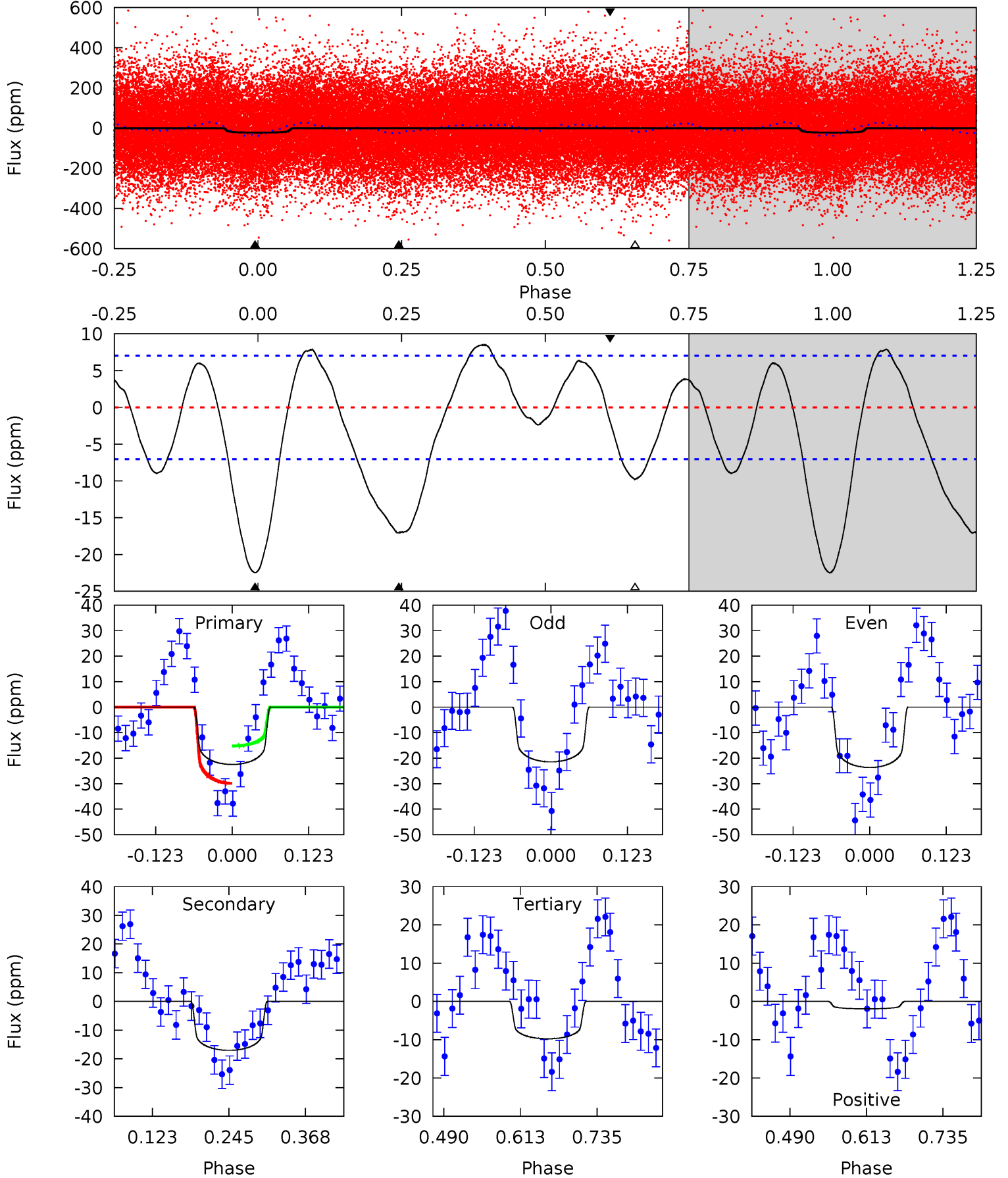
TCE 008653183-01 P= 3.116880 Days $T_0=134.421936$ (BKJD)



DV Model-Shift Uniqueness Test

008653183-01, P = 3.116681 Days, E = 131.349717 Days

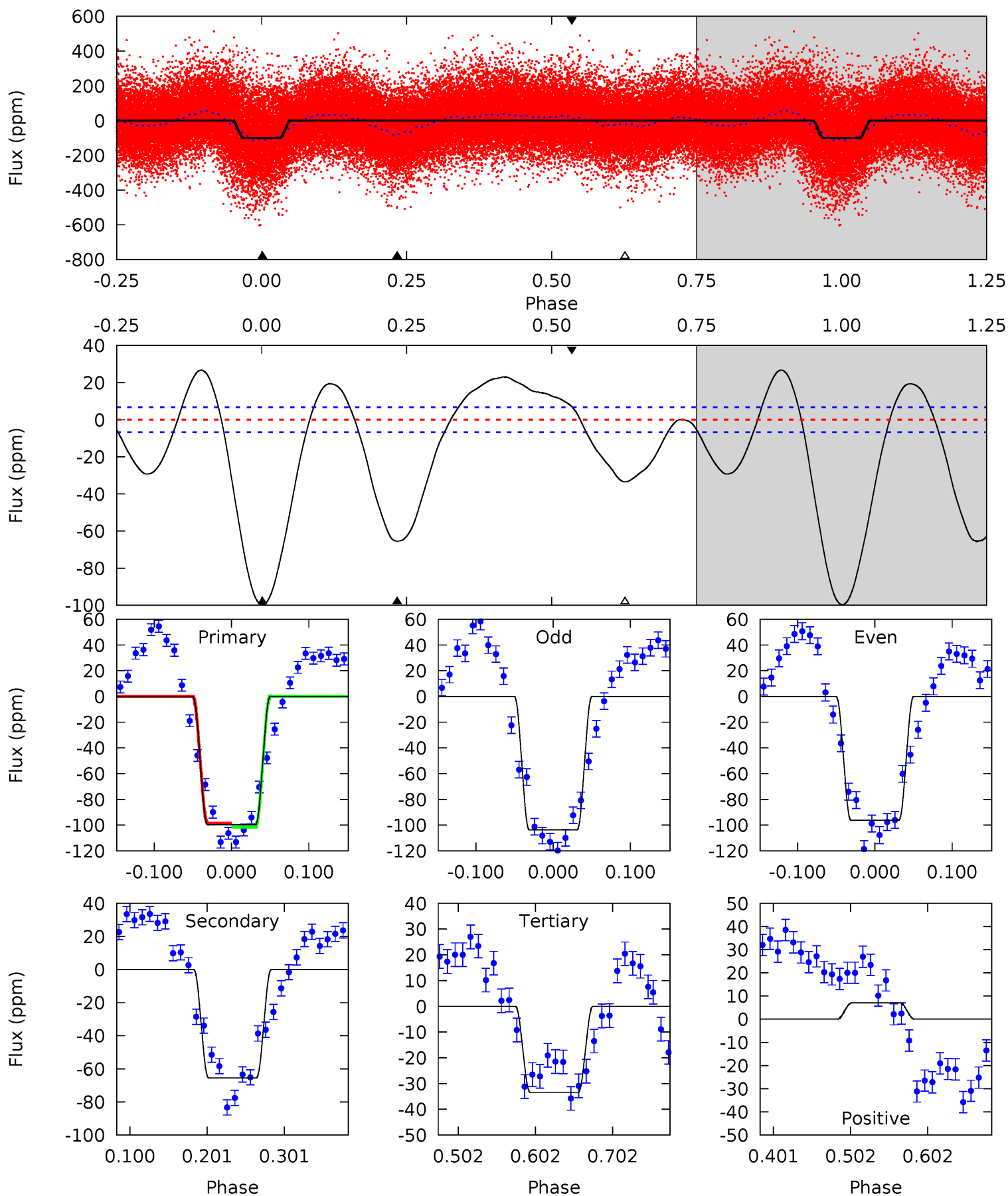
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	10.9	6.26	-1.24	4.52	1.54	3.39	8.16	15.7	4.67	12.2	0.71	1.04	0.27	4.74



Alt Model-Shift Uniqueness Test

008653183-01, P = 3.116880 Days, E = 131.305056 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
67.7	44.4	22.7	4.78	4.56	1.64	12.8	44.9	62.9	21.7	39.6	2.53	1.02	0.21	1.06



Stellar Parameters For KIC 008653183

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6305^{+174}_{-174}	$3.632^{+0.352}_{-0.110}$	$-0.360^{+0.400}_{-0.250}$	$3.021^{+0.509}_{-1.187}$	$1.426^{+0.249}_{-0.332}$	$0.073^{+0.197}_{-0.020}$
	+3%/-3%	+10%/-3%	+111%/-69%	+17%/-39%	+17%/-23%	+271%/-28%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008653183-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-17 ± 2	$1.76^{+0.44}_{-0.41}$	3057^{+211}_{-273}	5361^{+499}_{-389}	$6.630^{+4.448}_{-2.202}$
Alt.	-65 ± 1	$3.37^{+0.56}_{-0.71}$	3051^{+192}_{-282}	5462^{+299}_{-233}	$7.184^{+3.731}_{-1.942}$

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

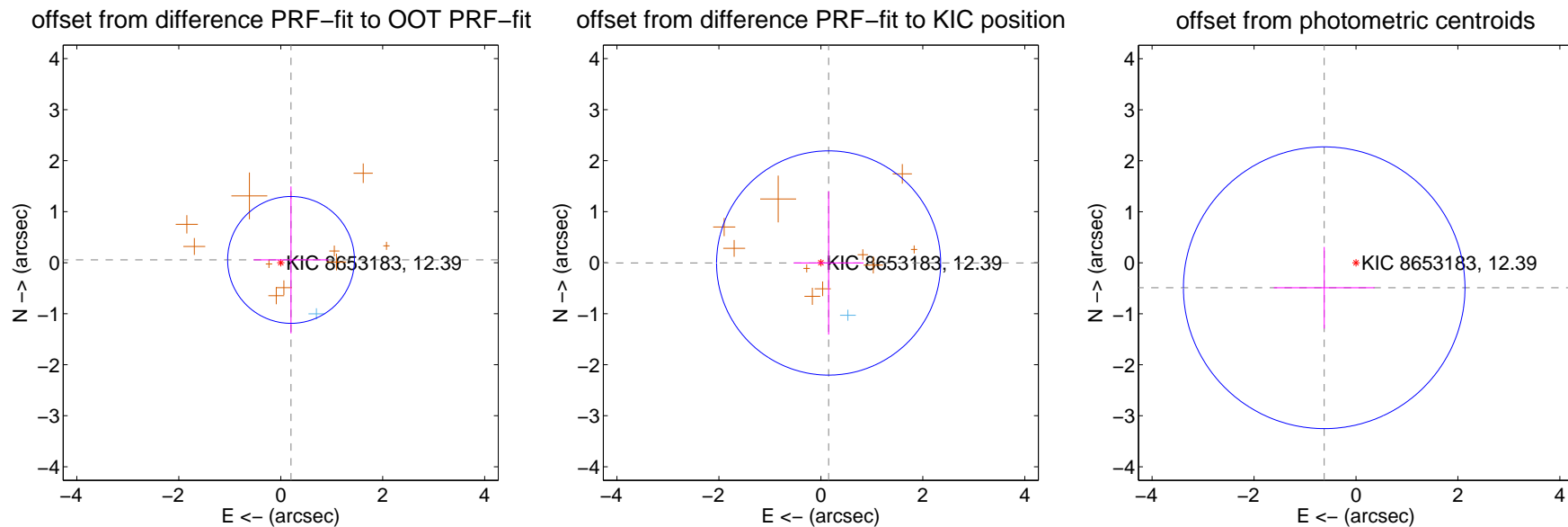
DV Centroid Data

Supplemental centroid analysis for 008653183-01. Kepler magnitude: 12.39. Transit SNR 7.75

There are 1 quarters with good PRF difference image offsets

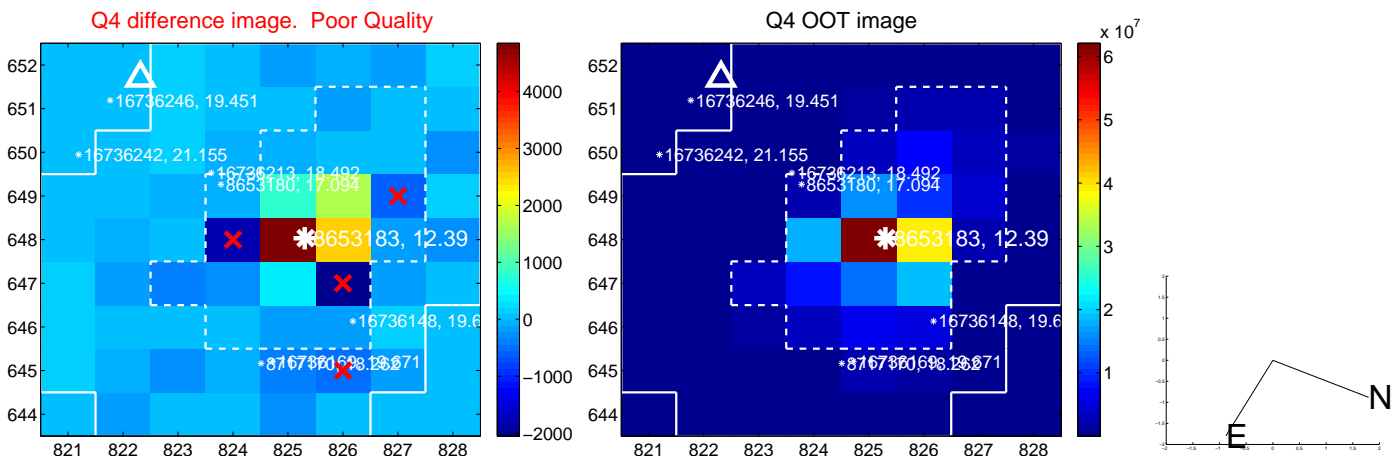
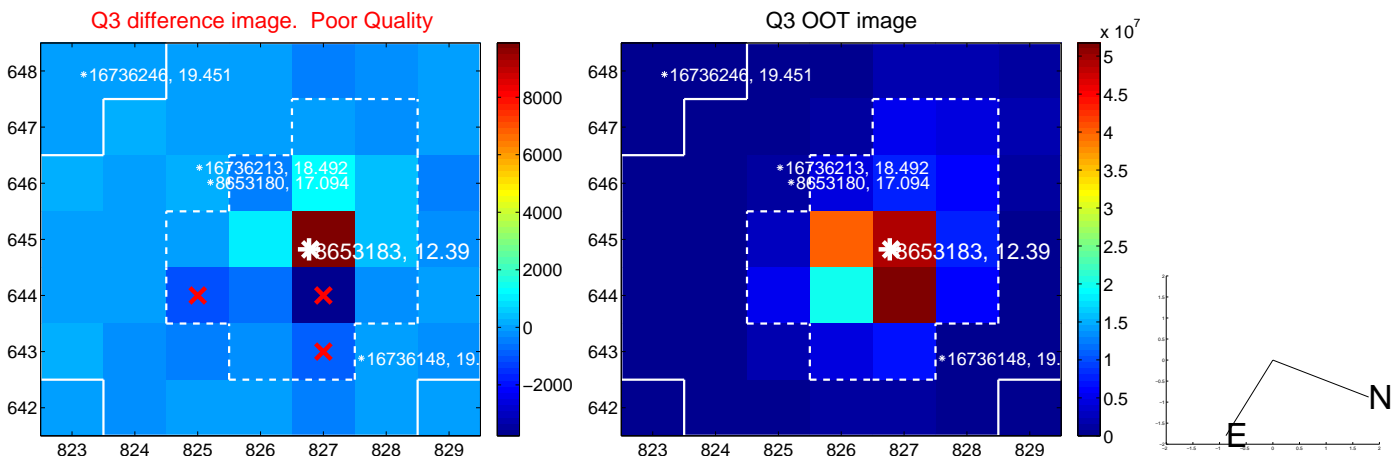
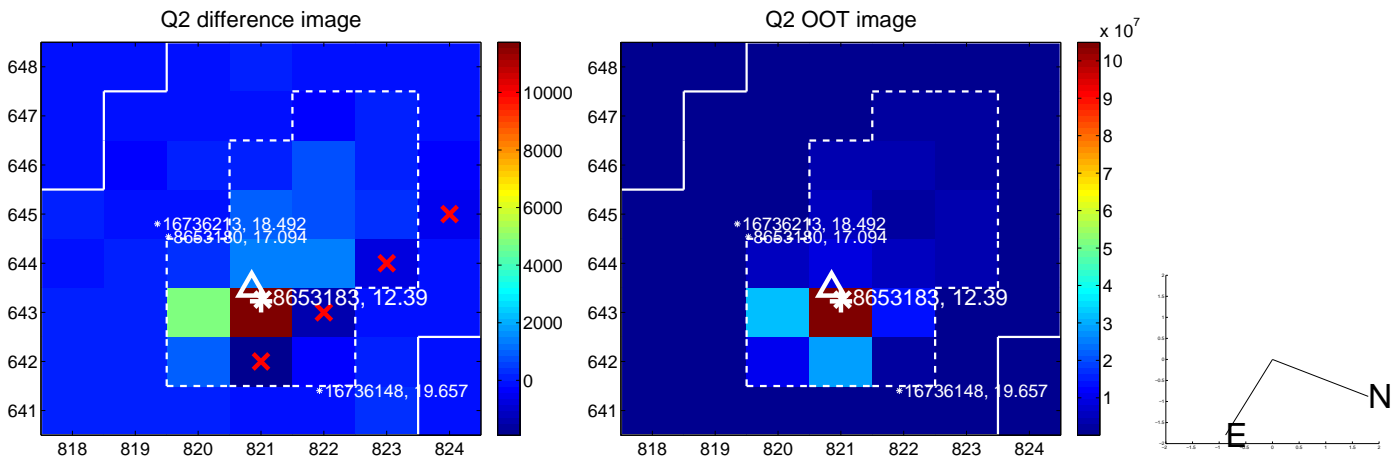
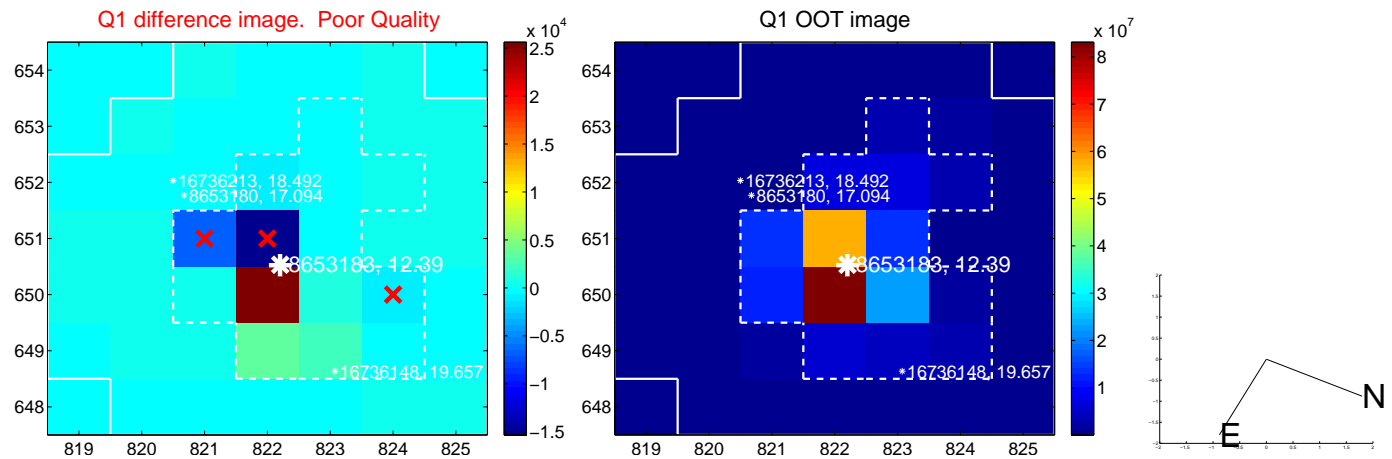
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.209 ± 0.414	0.50	-0.202 ± 0.736	0.055 ± 1.440
PRF-fit source offset from KIC position	0.152 ± 0.733	0.21	-0.152 ± 0.684	-0.006 ± 1.404
photometric centroid source offset	0.79 ± 0.92	0.86	0.62 ± 0.99	-0.49 ± 0.80

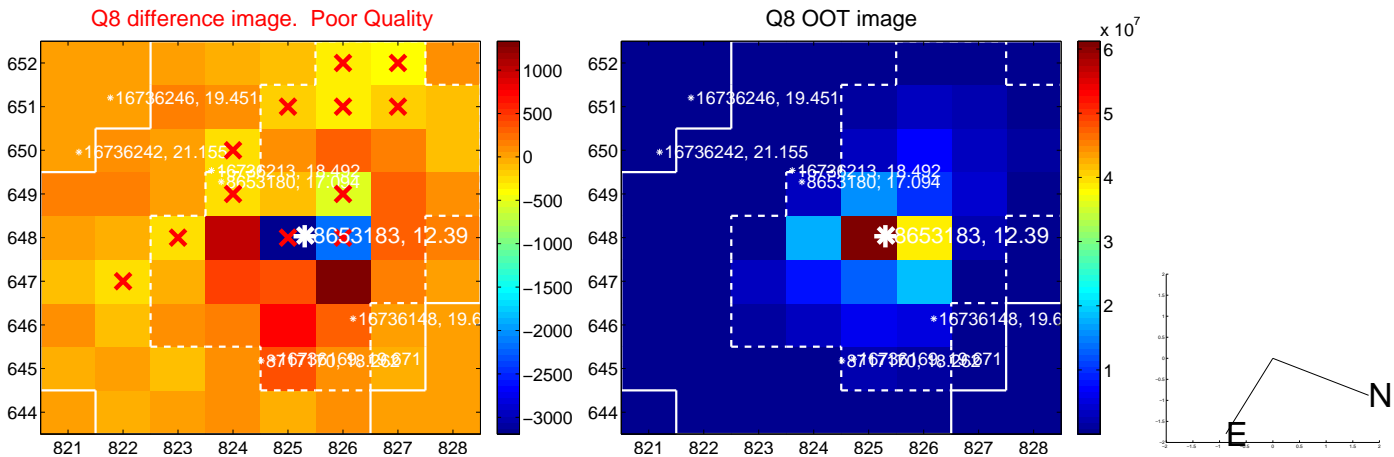
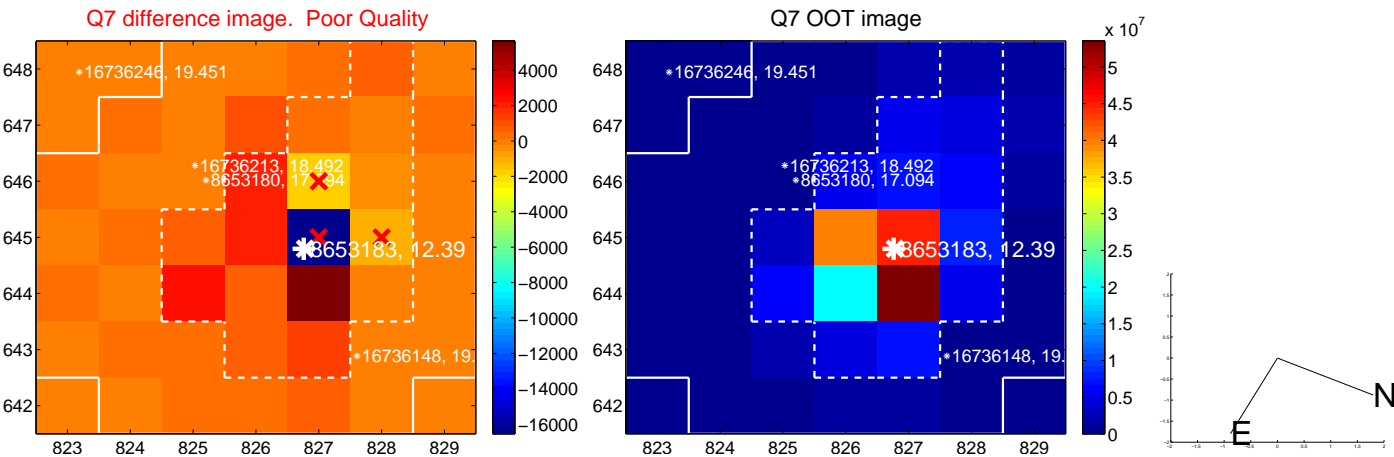
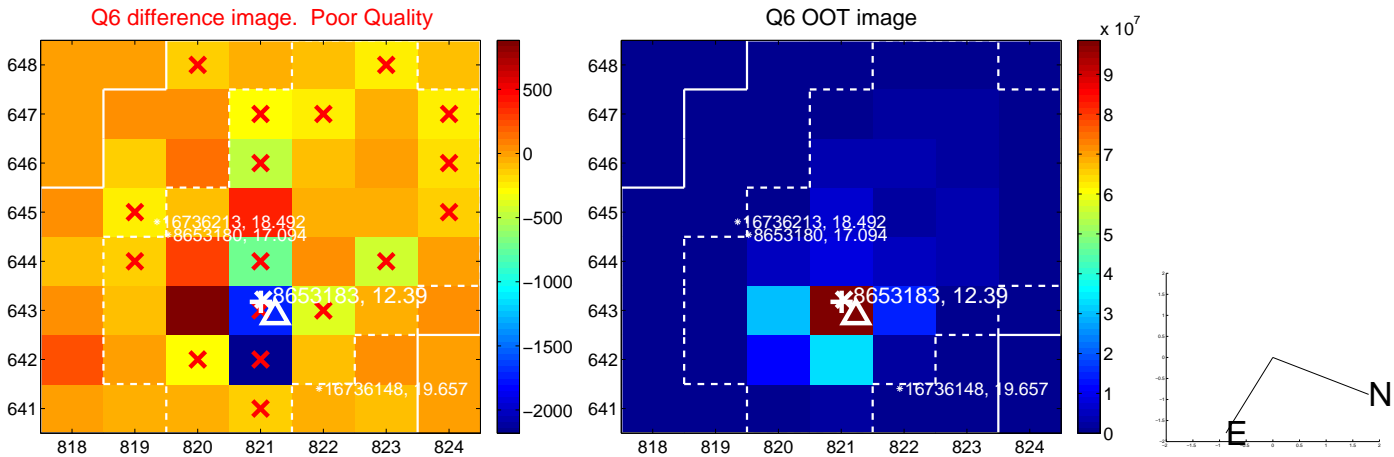
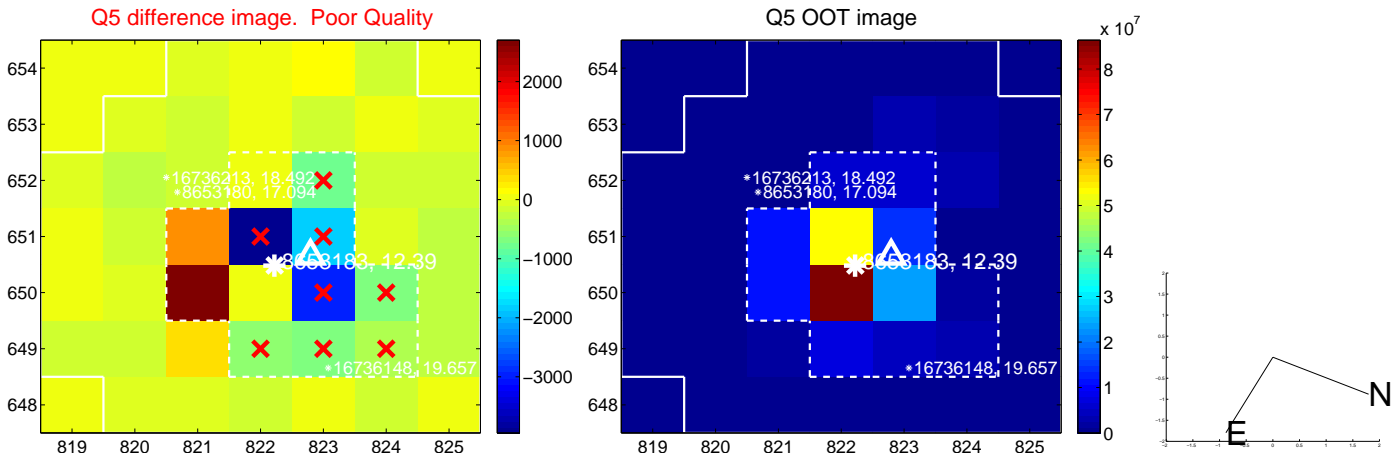


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

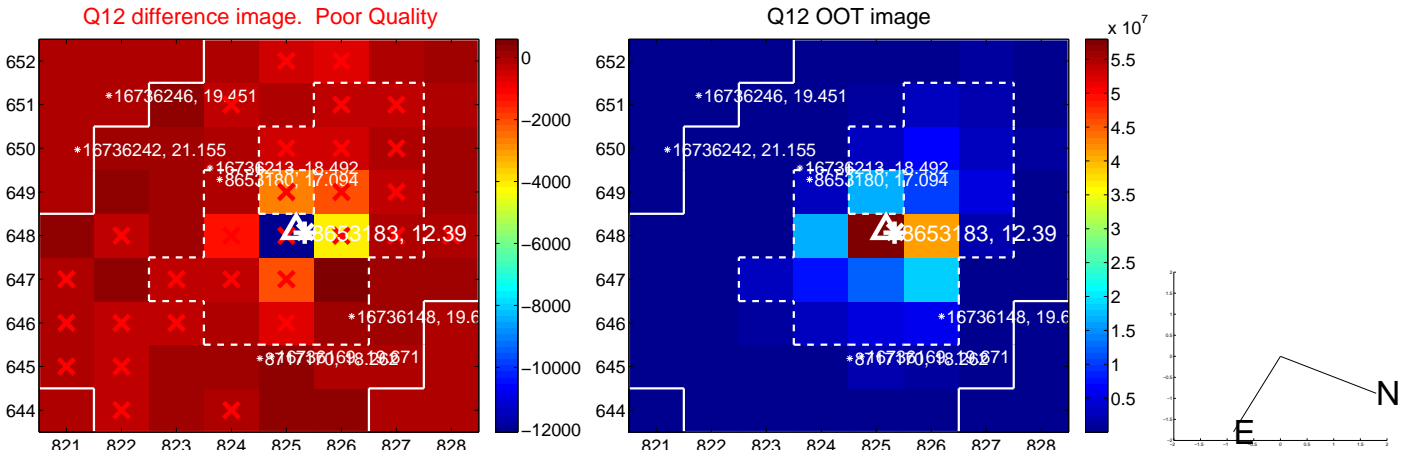
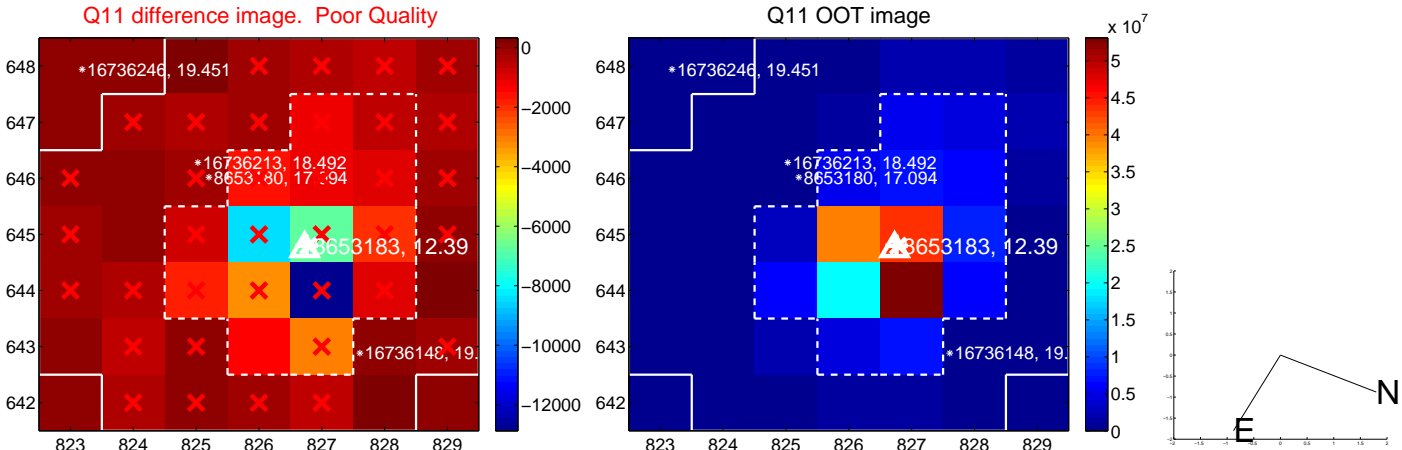
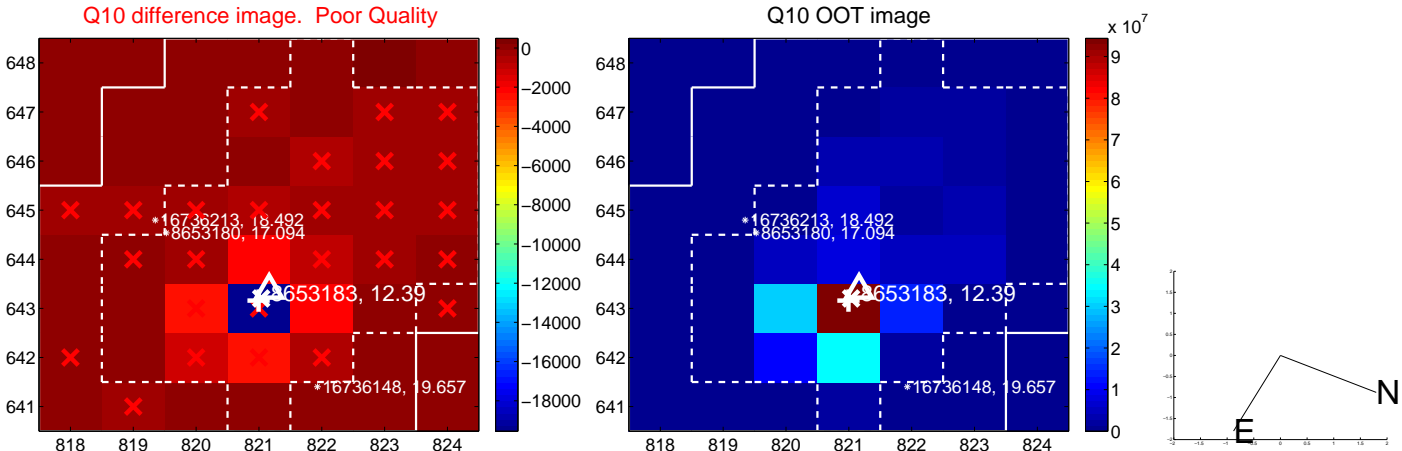
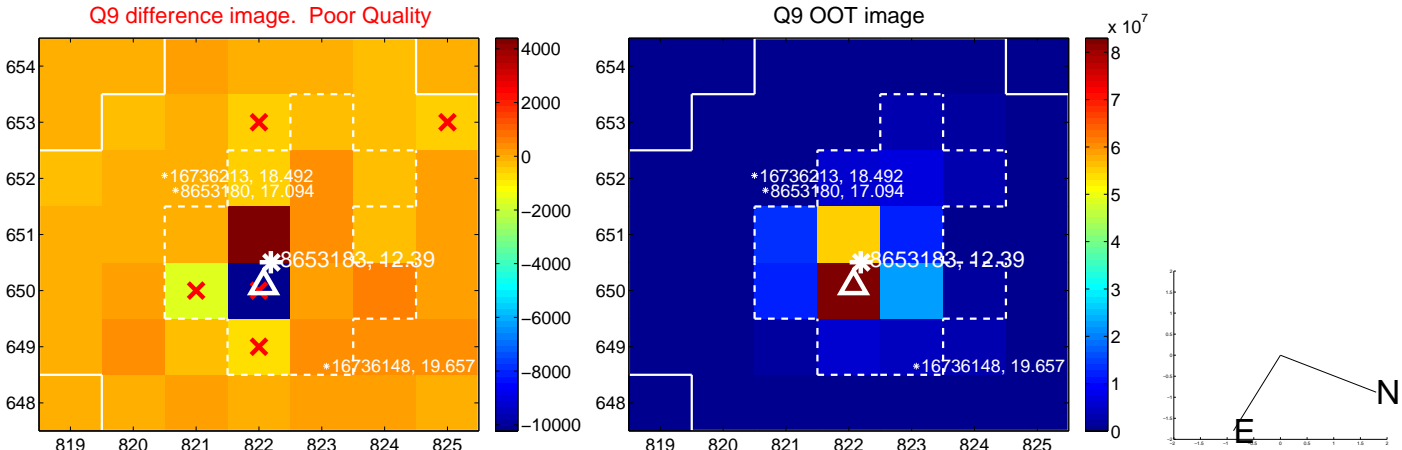
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



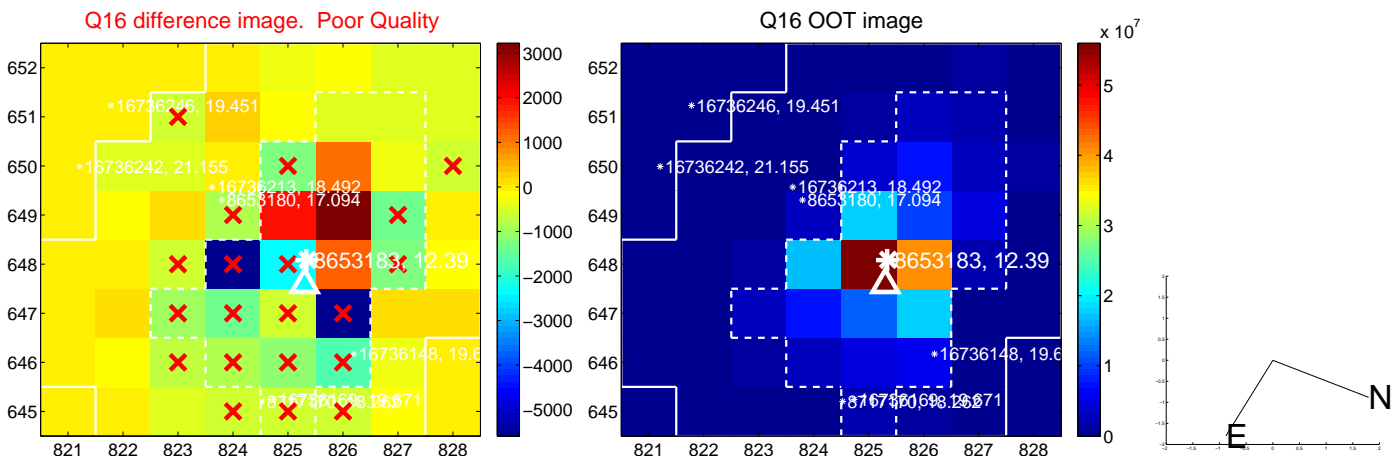
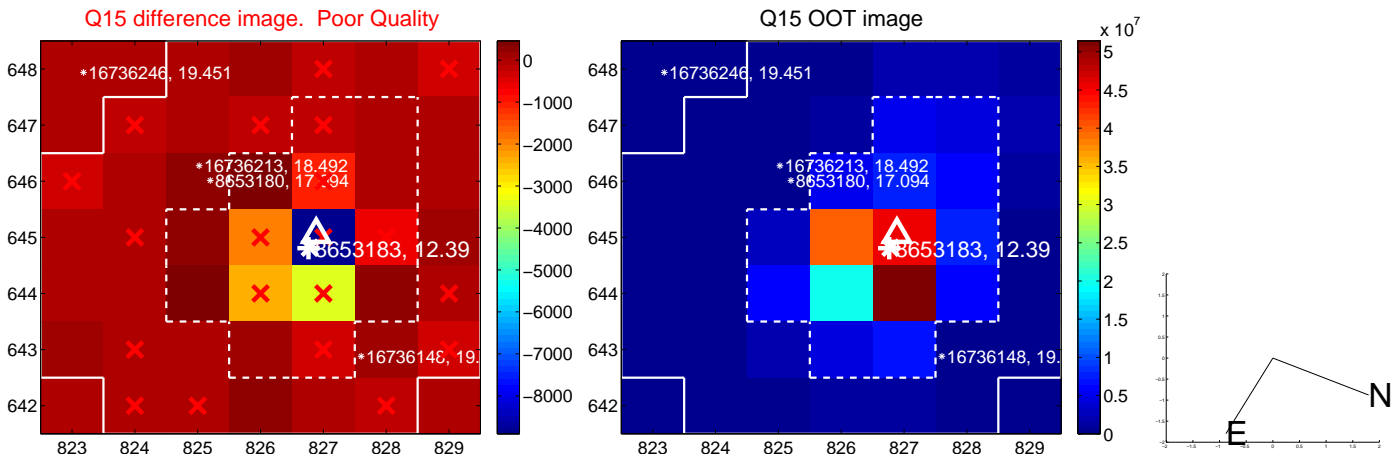
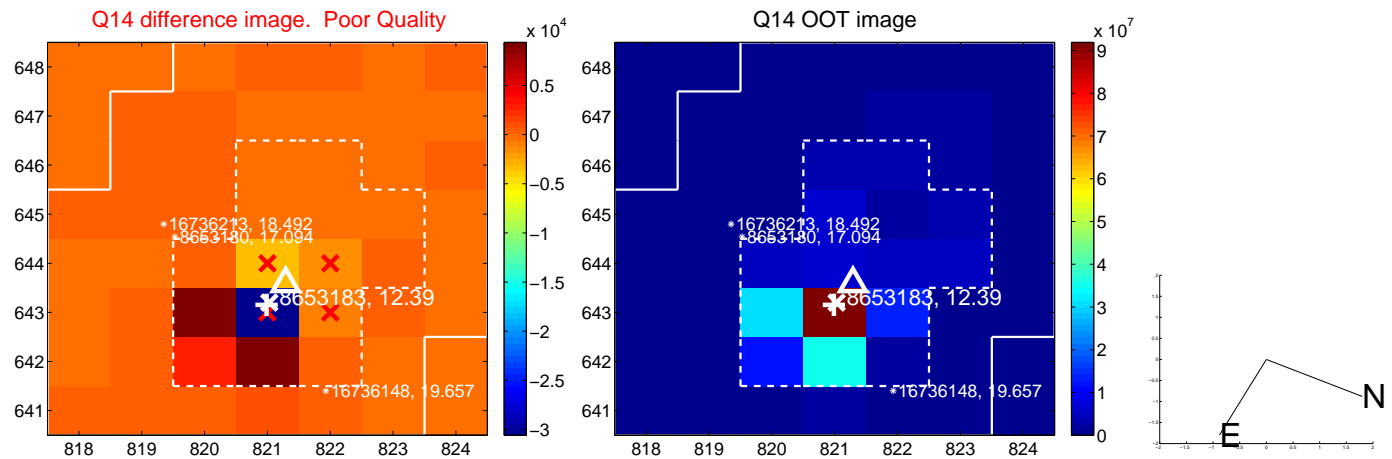
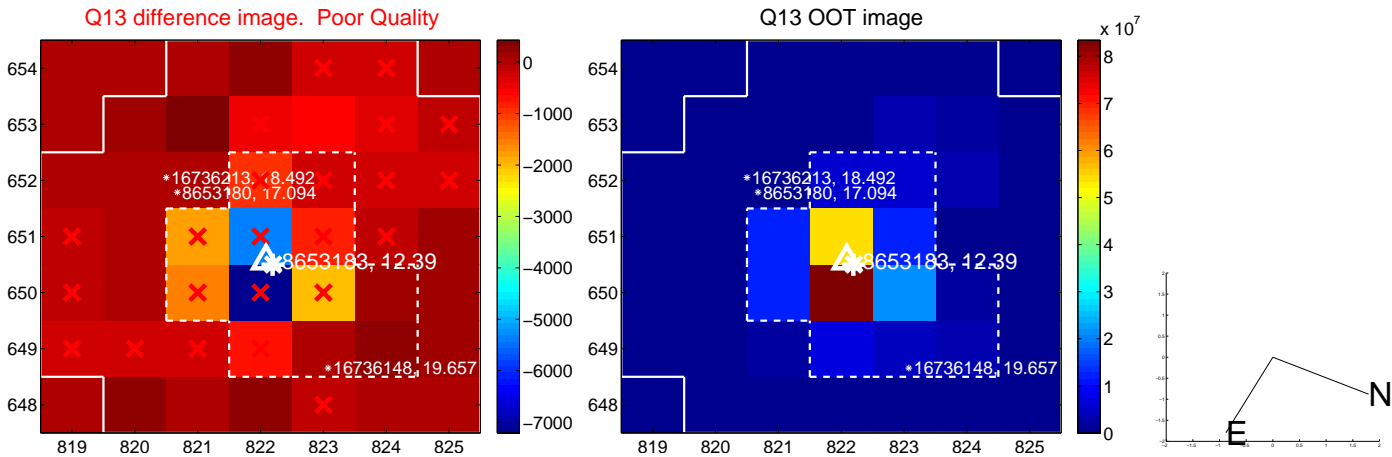
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



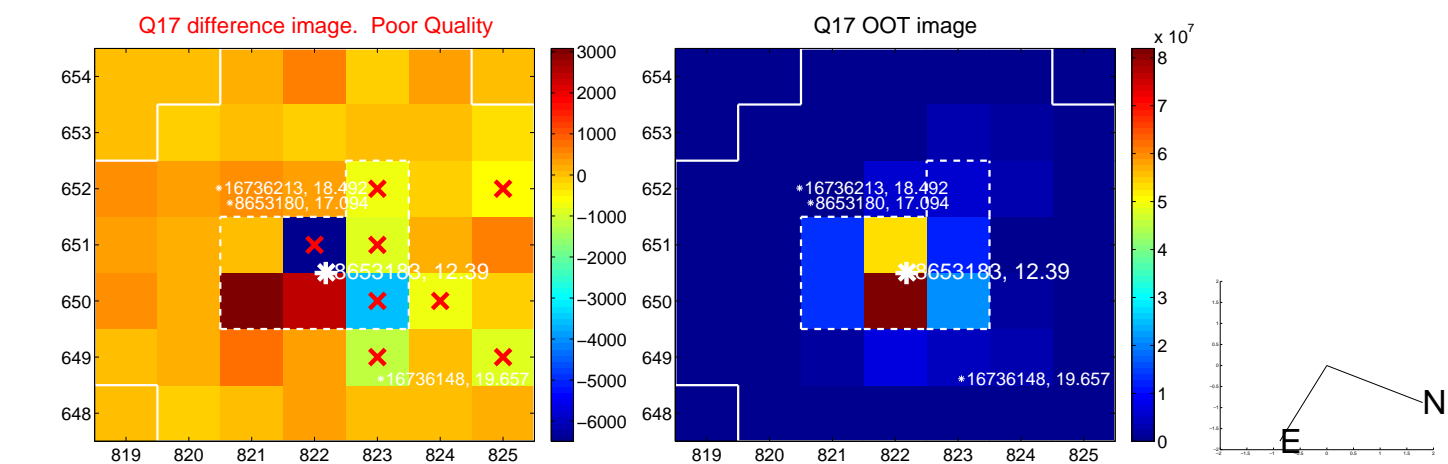
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



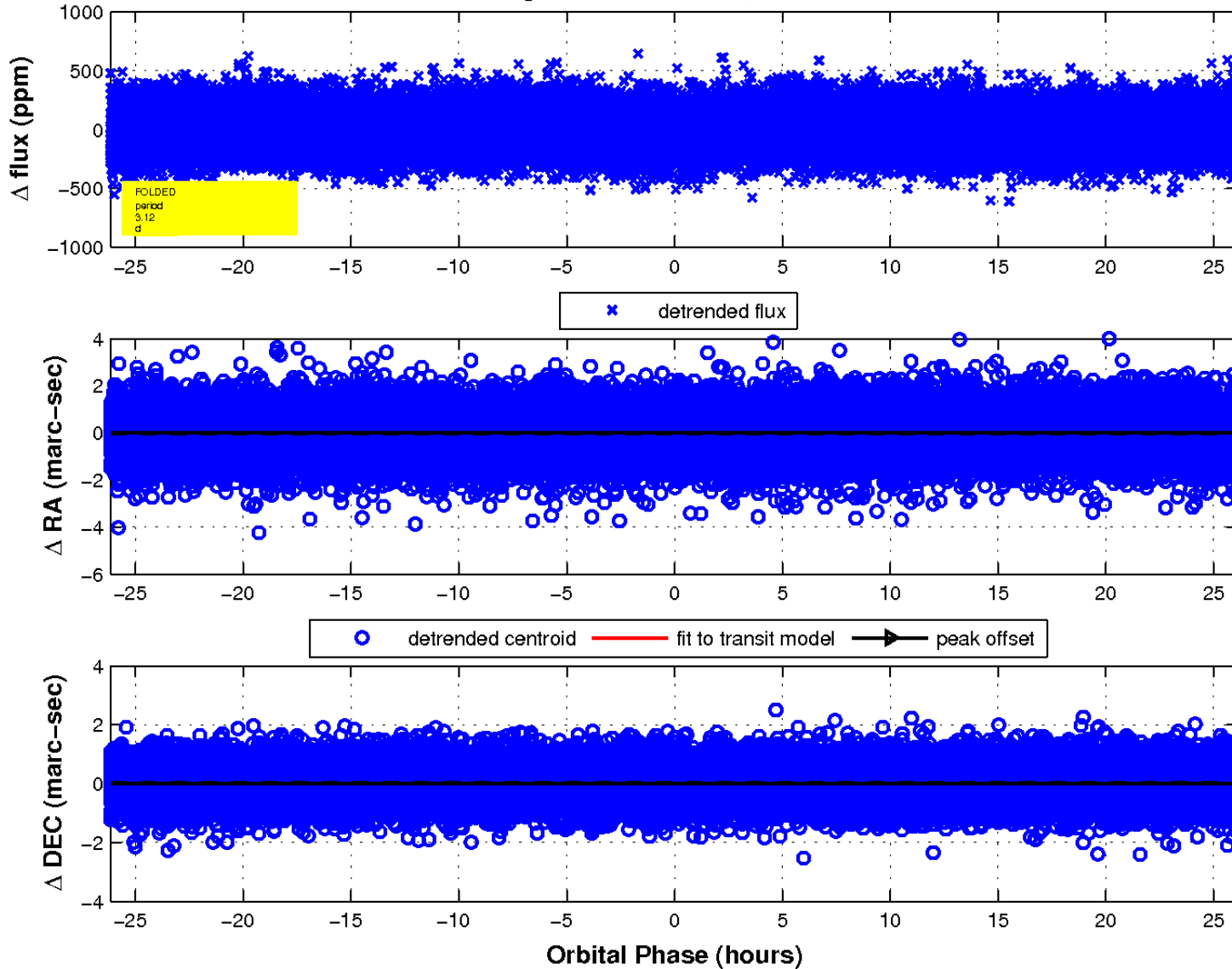
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



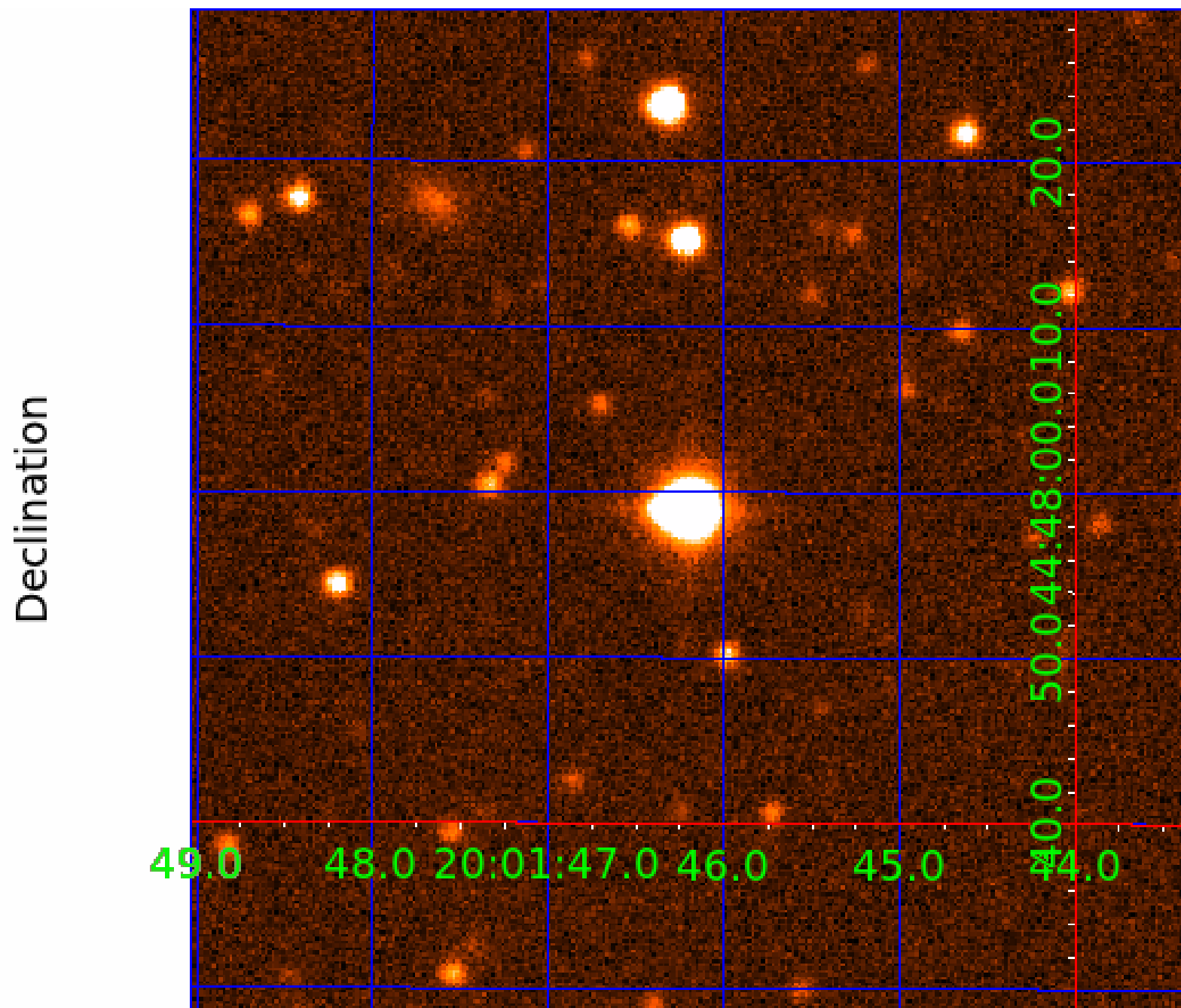
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 3



UKIRT Image



KIC 008653183

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})
008653183-01	OBS	No	3.116681	134.466398	26.2	8.720	8.8	7.7	3.02	6305	1.86	5845.37
008653183-02	OBS	No	308.541703	309.524519	203.6	24.293	7.4	5.6	3.02	6305	4.77	12.76
008653183-03	OBS	No	157.703270	146.483175	257.8	6.793	7.2	7.5	3.02	6305	6.94	31.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008653183-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
008653183-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV
008653183-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES

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

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

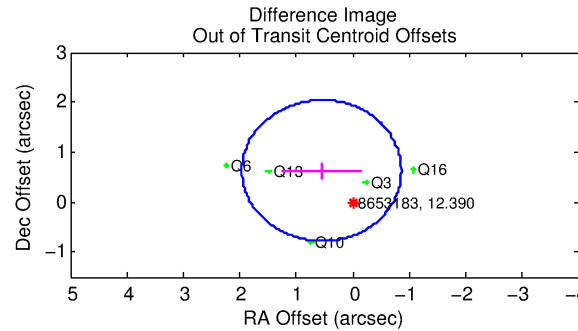
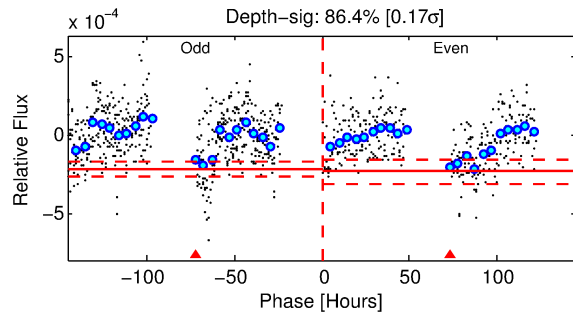
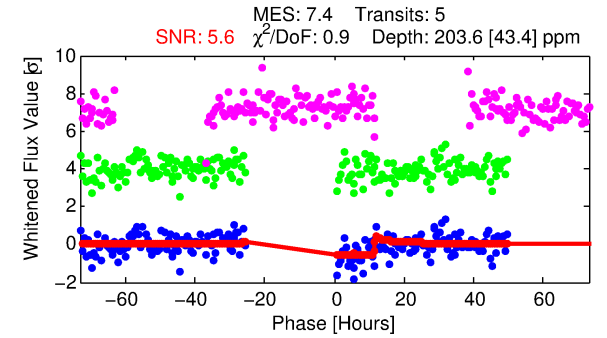
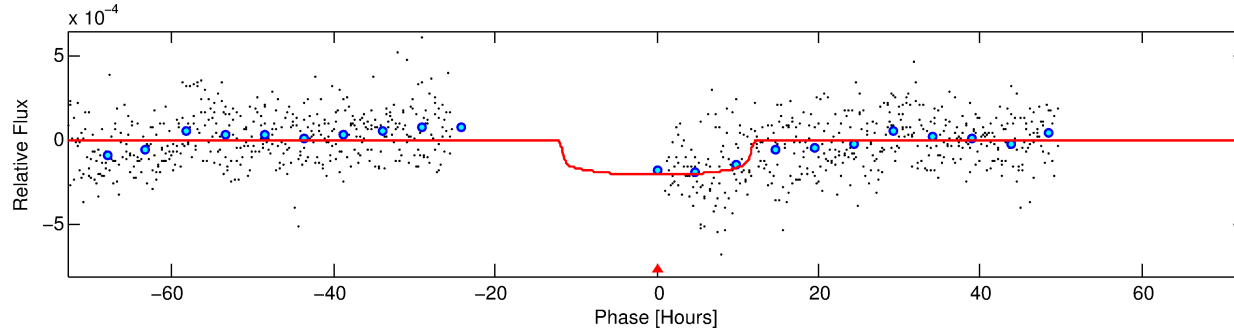
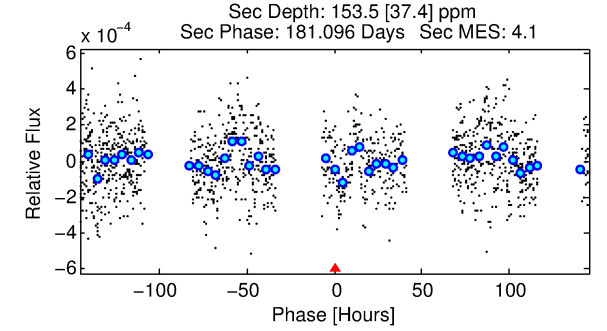
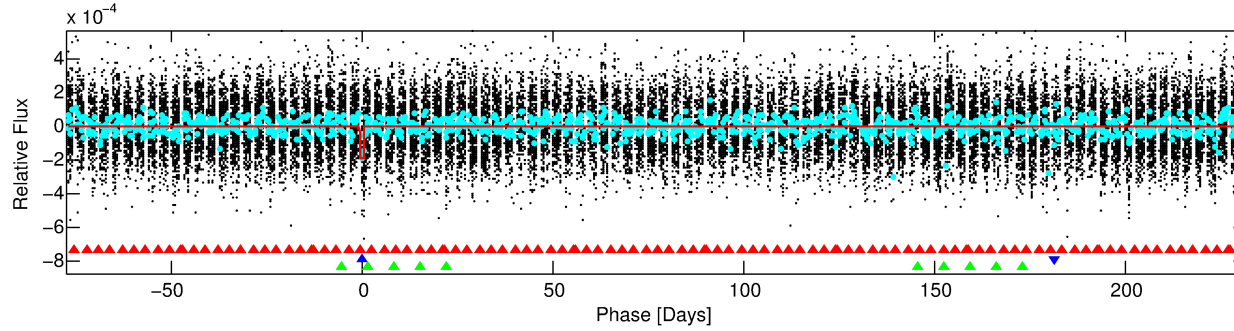
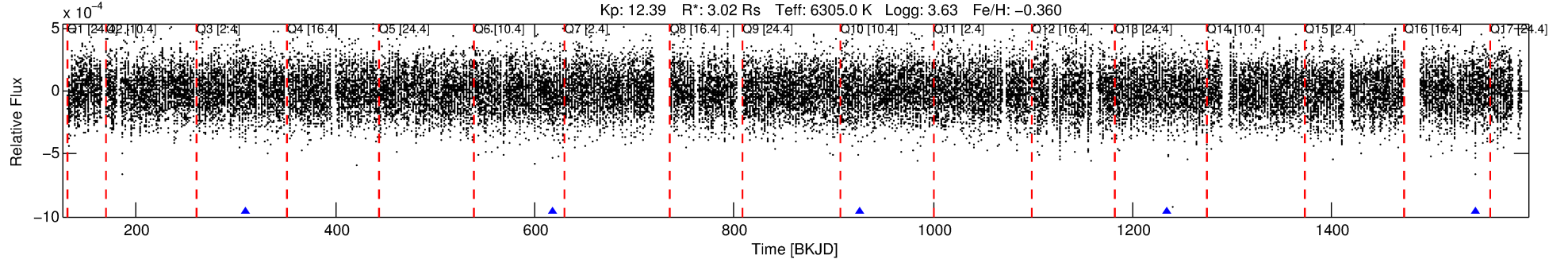
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008653183-02

No Significant Match Found

DV One-Page Summary

KIC: 8653183 Candidate: 2 of 3 Period: 308.542 d



DV Fit Results:

Period = 308.54170 [0.00884] d
Epoch = 309.5245 [0.1843] BKJD
Rp/R* = 0.0145 [0.0033]
a/R* = 59.79 [72.49]
b = 0.81 [0.39]
Seff = 12.76 [7.79]
Teq = 482 [74] K
Rp = 4.77 [2.17] Re
a = 1.0062 [0.3786] AU
Ag = 3750.41 [2972.29] [1.26σ]
Teffp = 5832 [771] K [6.91σ]

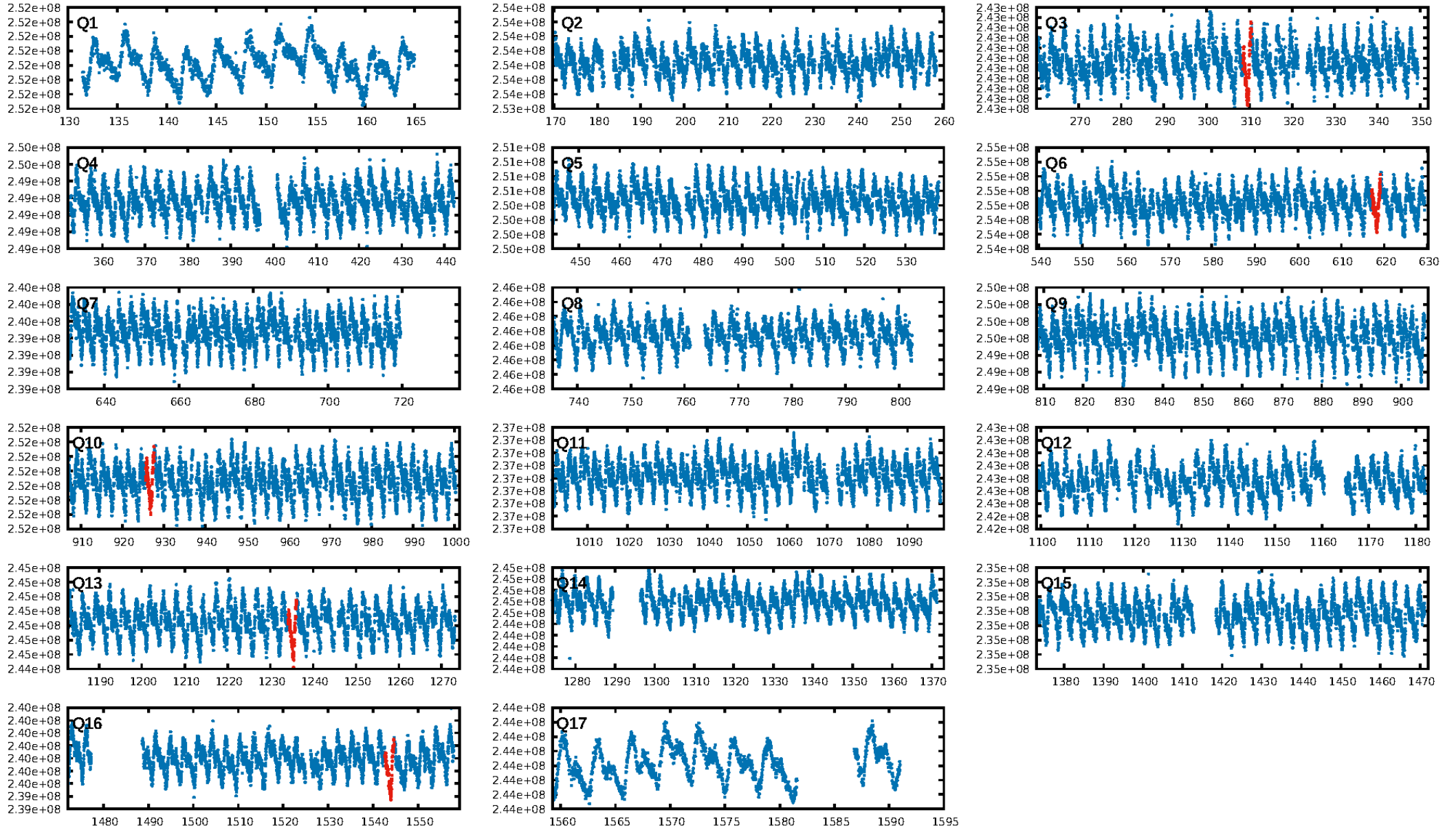
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [143.51σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.49e-10
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 3.572
Centroid-sig: 53.6%
Centroid-so: 1.026 arcsec [0.91σ]
OotOffset-rm: 0.839 arcsec [1.78σ]
KicOffset-rm: 0.878 arcsec [1.55σ]
OotOffset-st: 2/1/1/1 [5]
KicOffset-st: 2/1/1/1 [5]
DiffImageQuality-fgm: 0.80 [4/5]
DiffImageOverlap-fno: 0.00 [0/5]

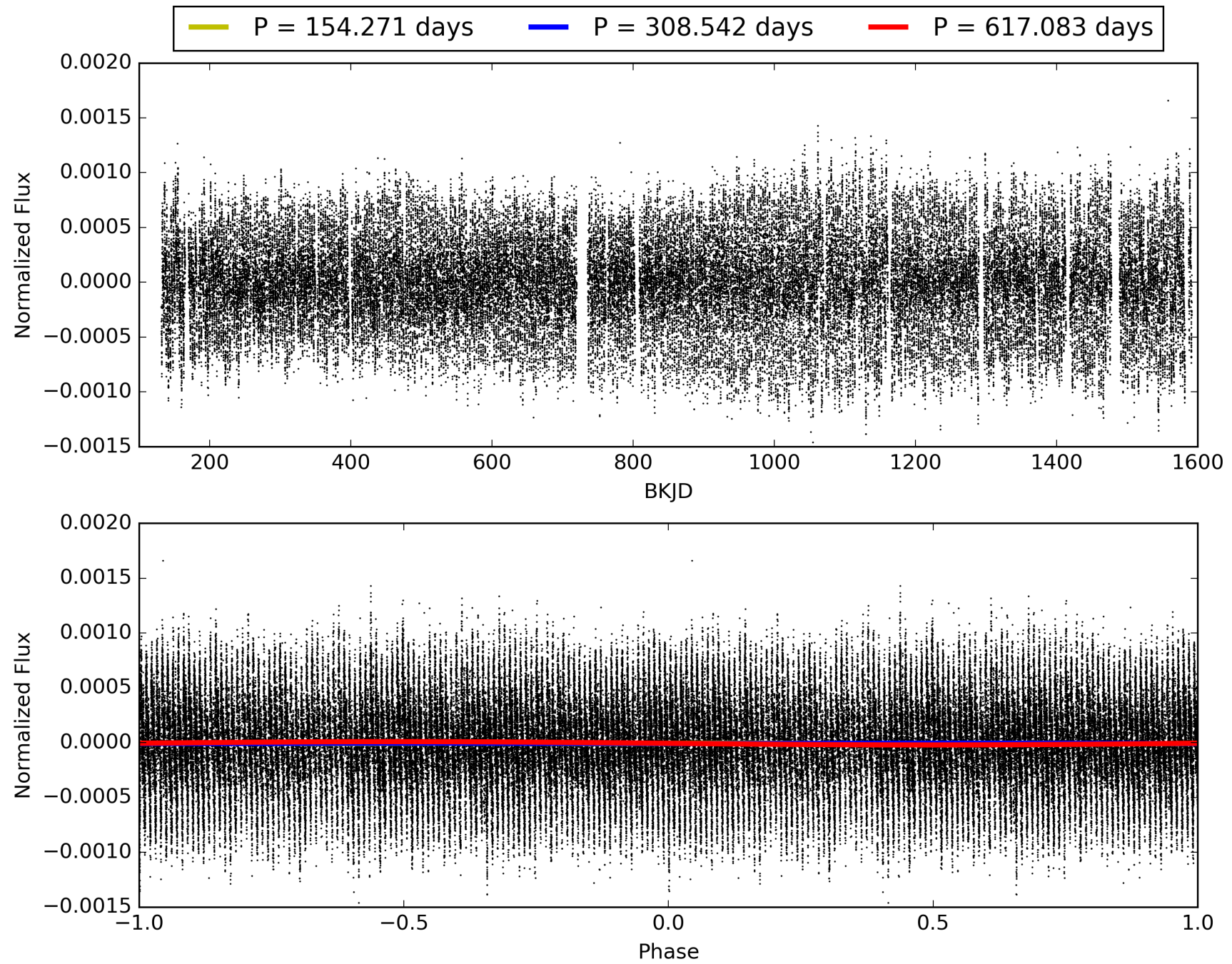
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:33:59 Z

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

TCE 008653183-02, PDC Light Curves

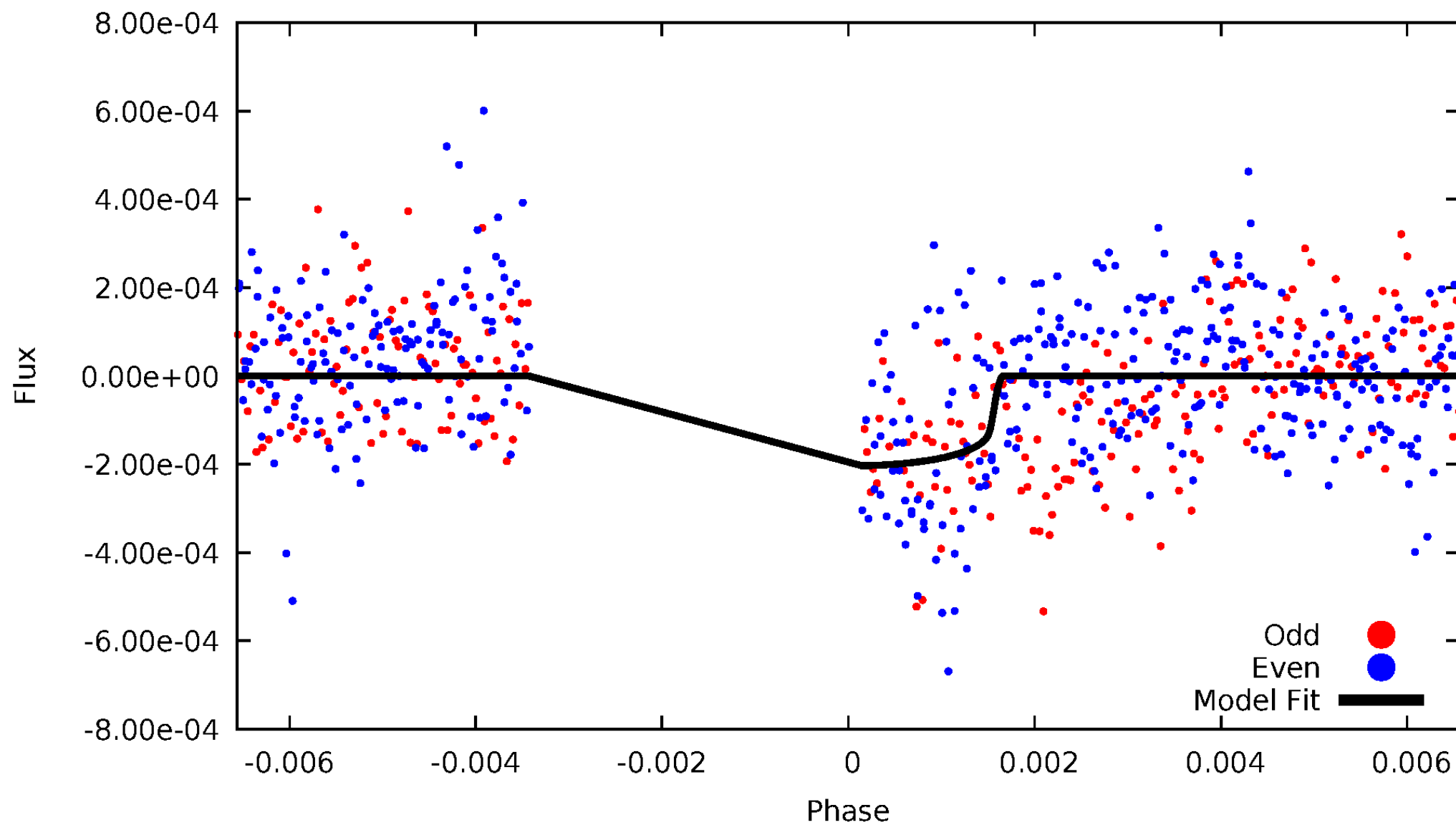


TCE 008653183-02



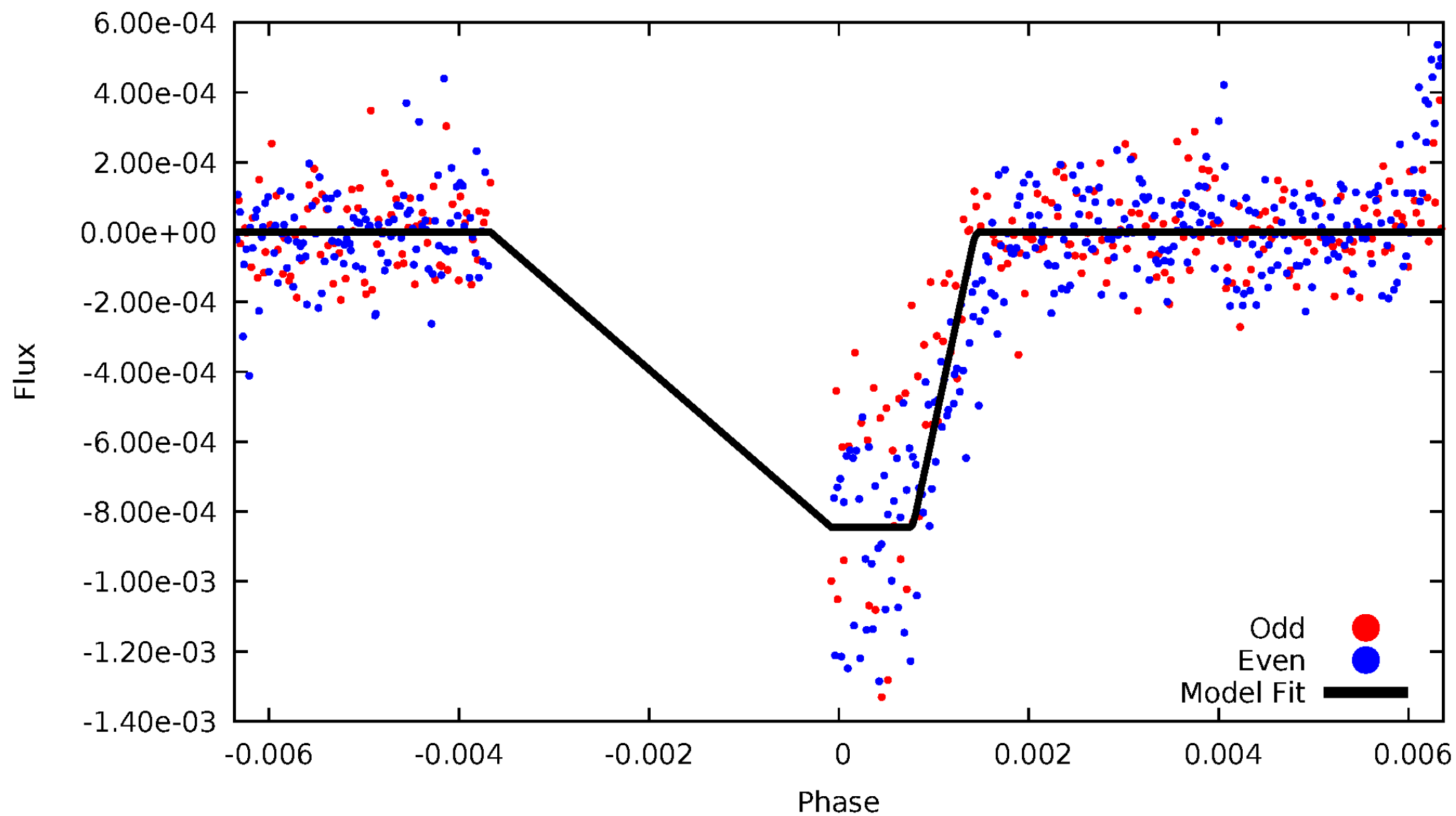
DV Odd/Even

TCE 008653183-02



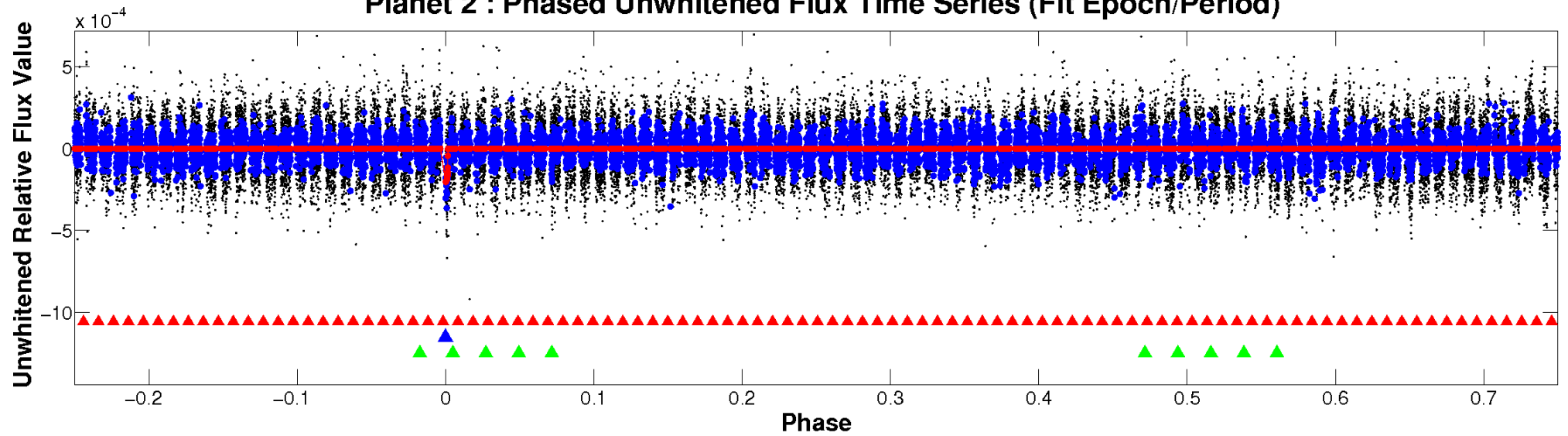
ALT Odd/Even

TCE 008653183-02

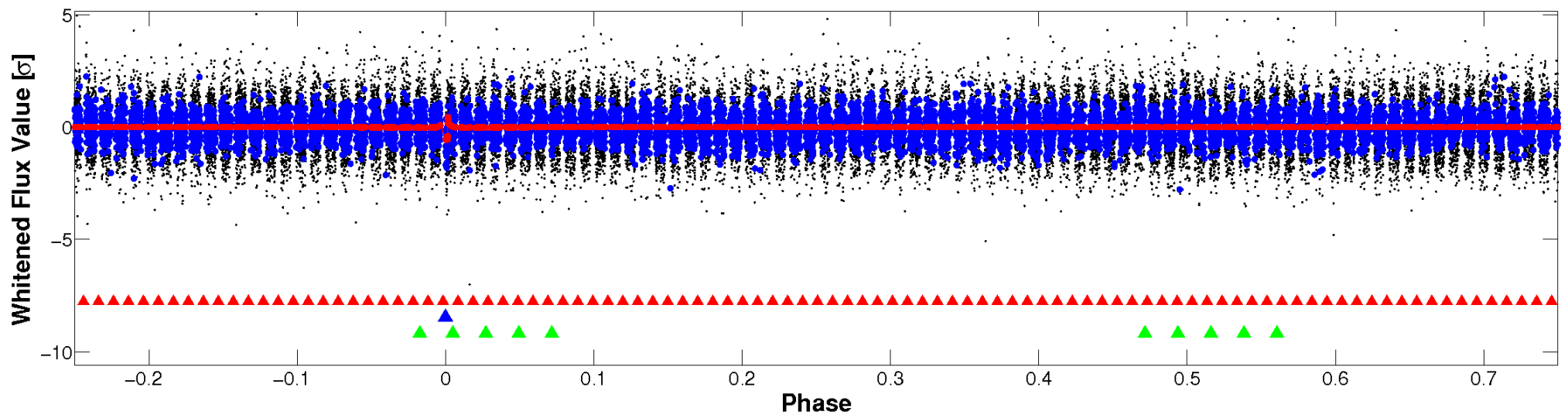


Non-Whitened Vs. Whitened Light Curve

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

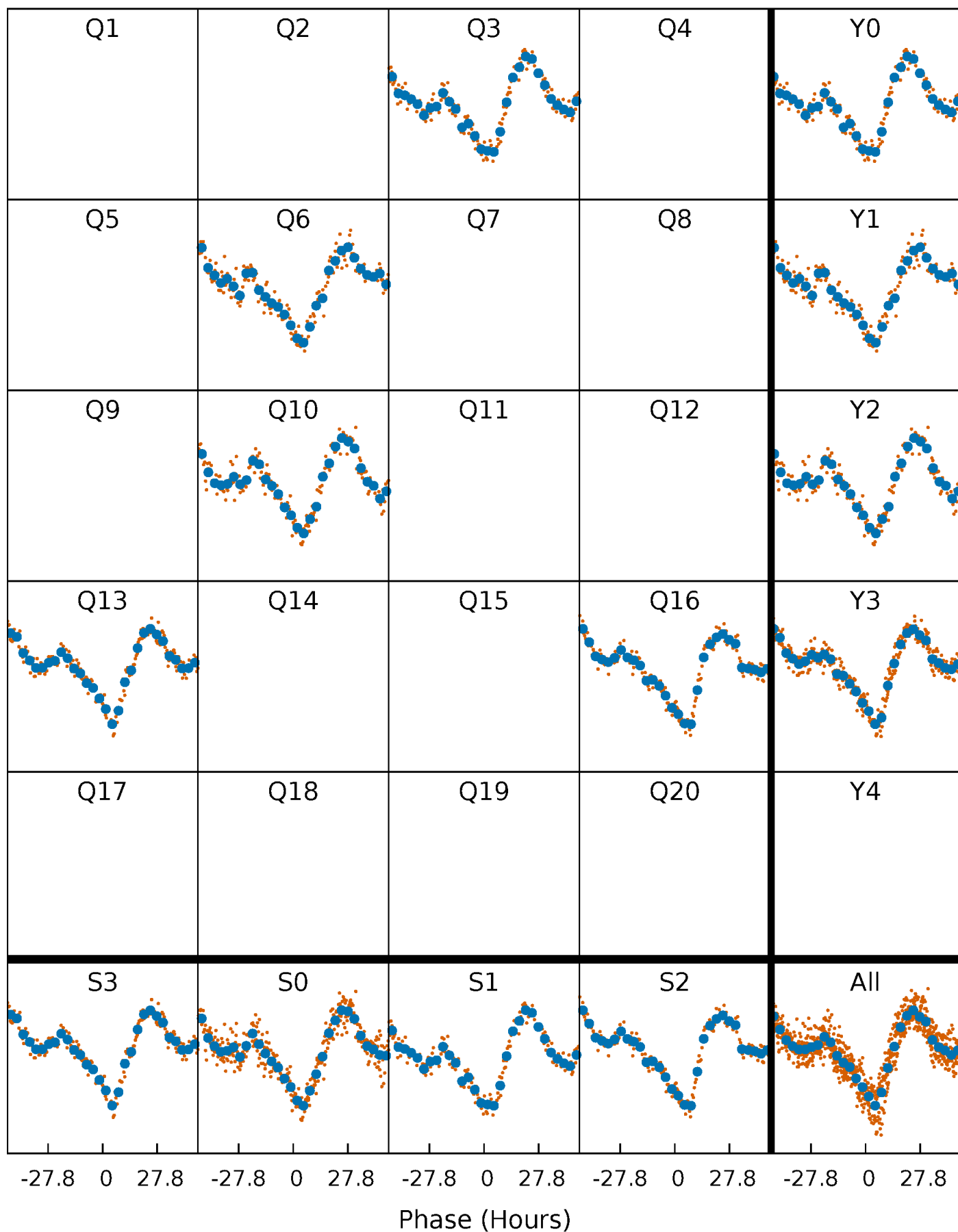


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



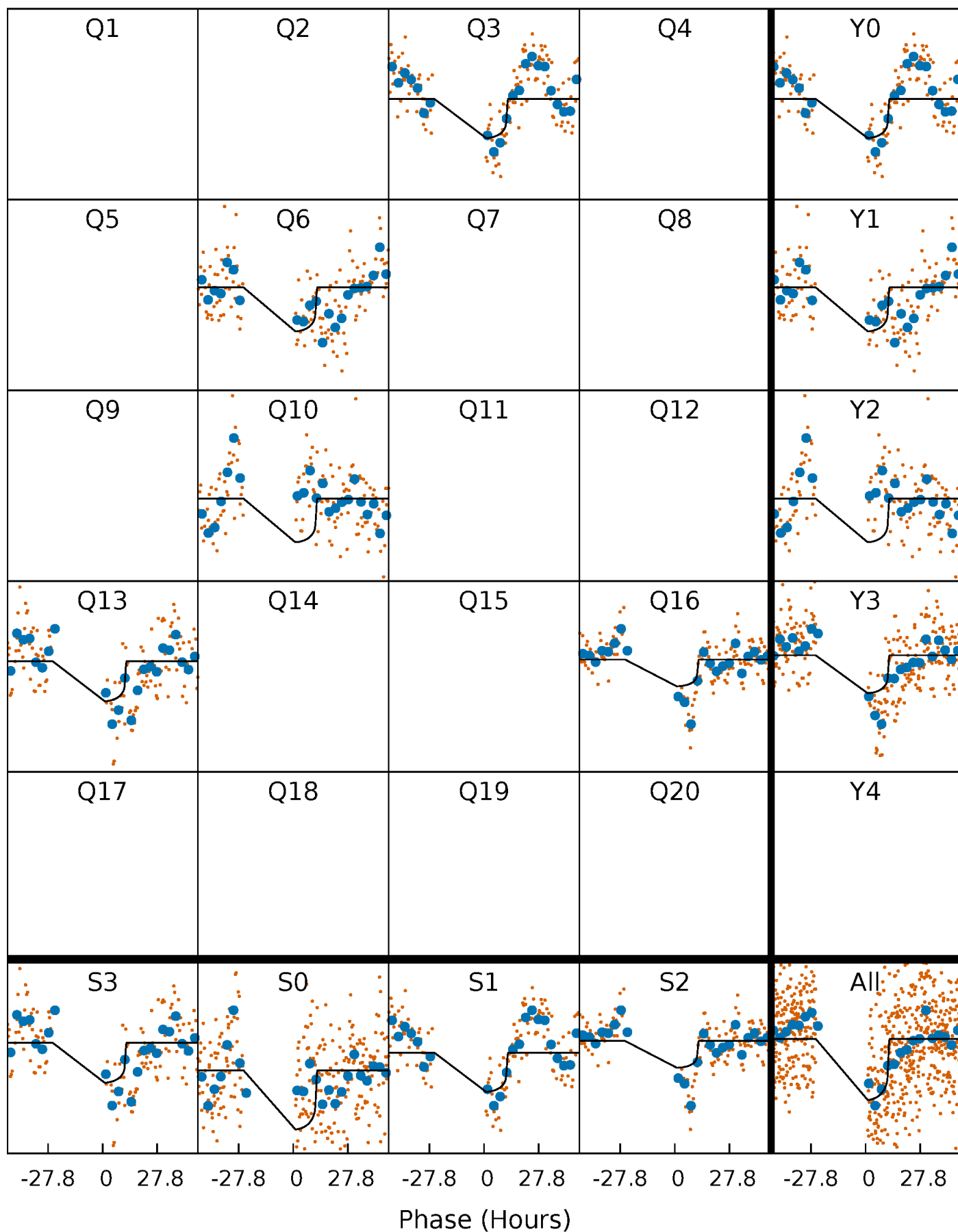
PDC Quarter-Phased Transit Curves

TCE 008653183-02 $P=308.541703$ Days $T_0=309.524519$ (BKJD)



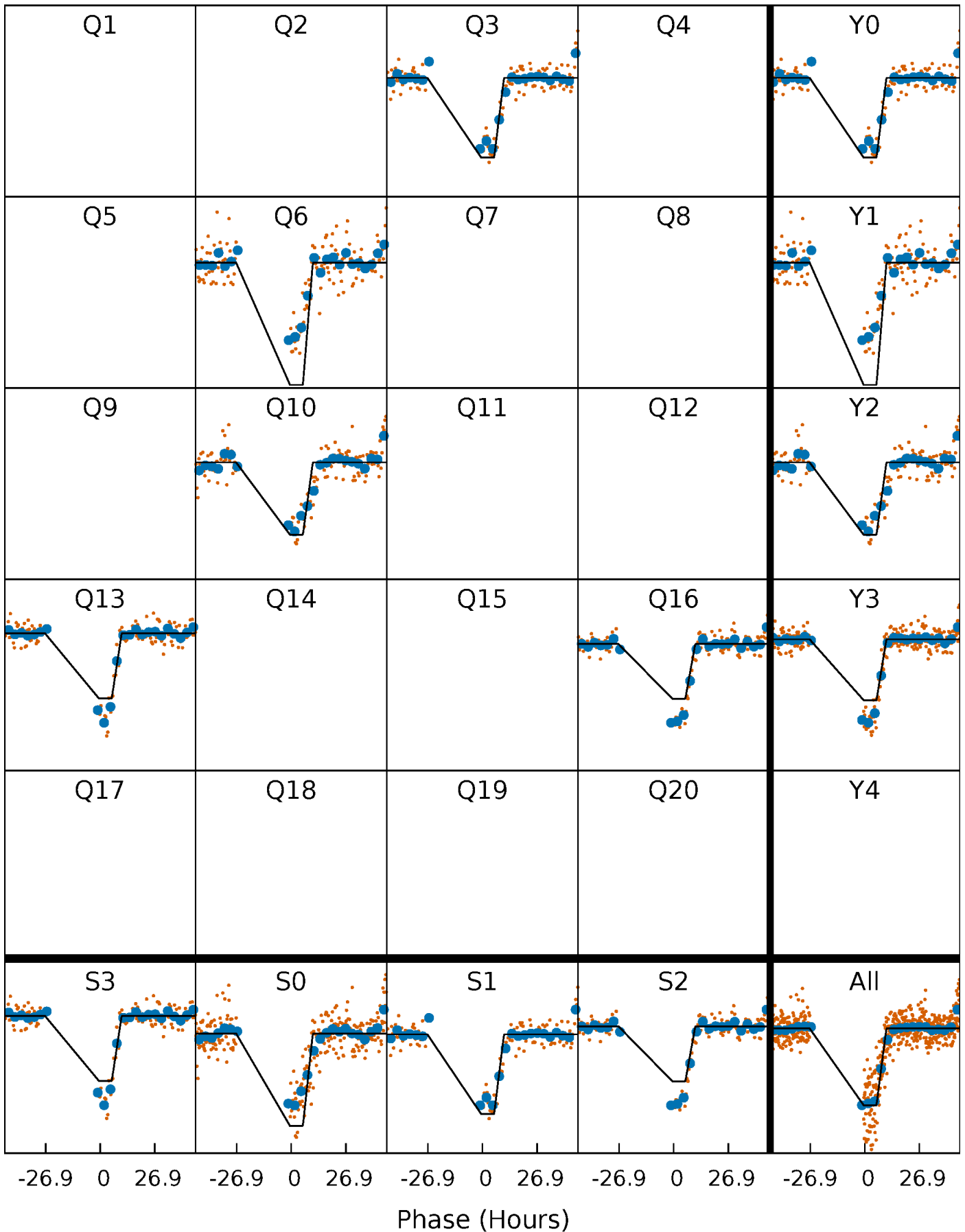
DV Quarter-Phased Transit Curves

TCE 008653183-02 P=308.541703 Days $T_0=309.524519$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

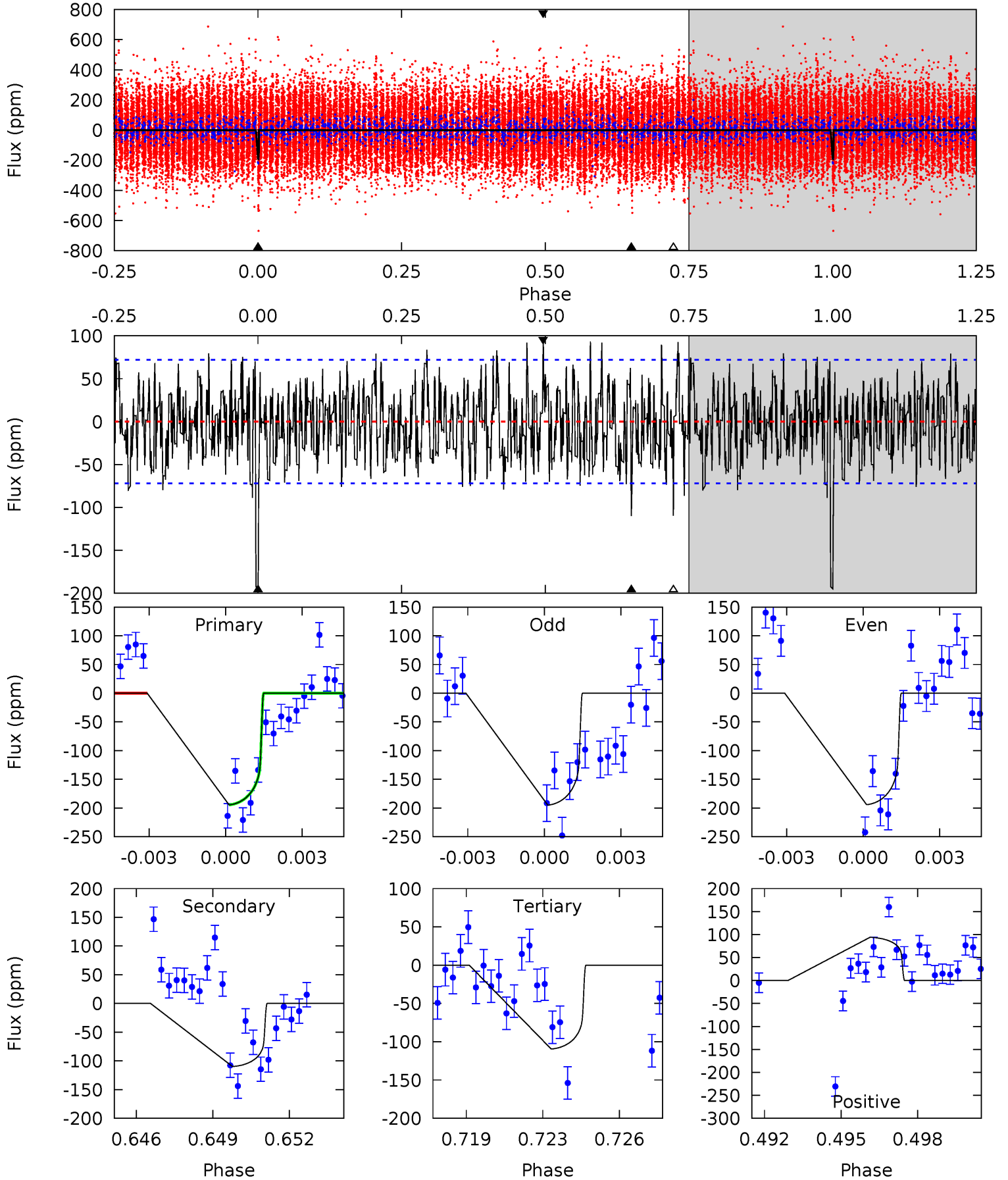
TCE 008653183-02 P=308.553567 Days $T_0=309.575228$ (BKJD)



DV Model-Shift Uniqueness Test

008653183-02, P = 308.541703 Days, E = 0.982816 Days

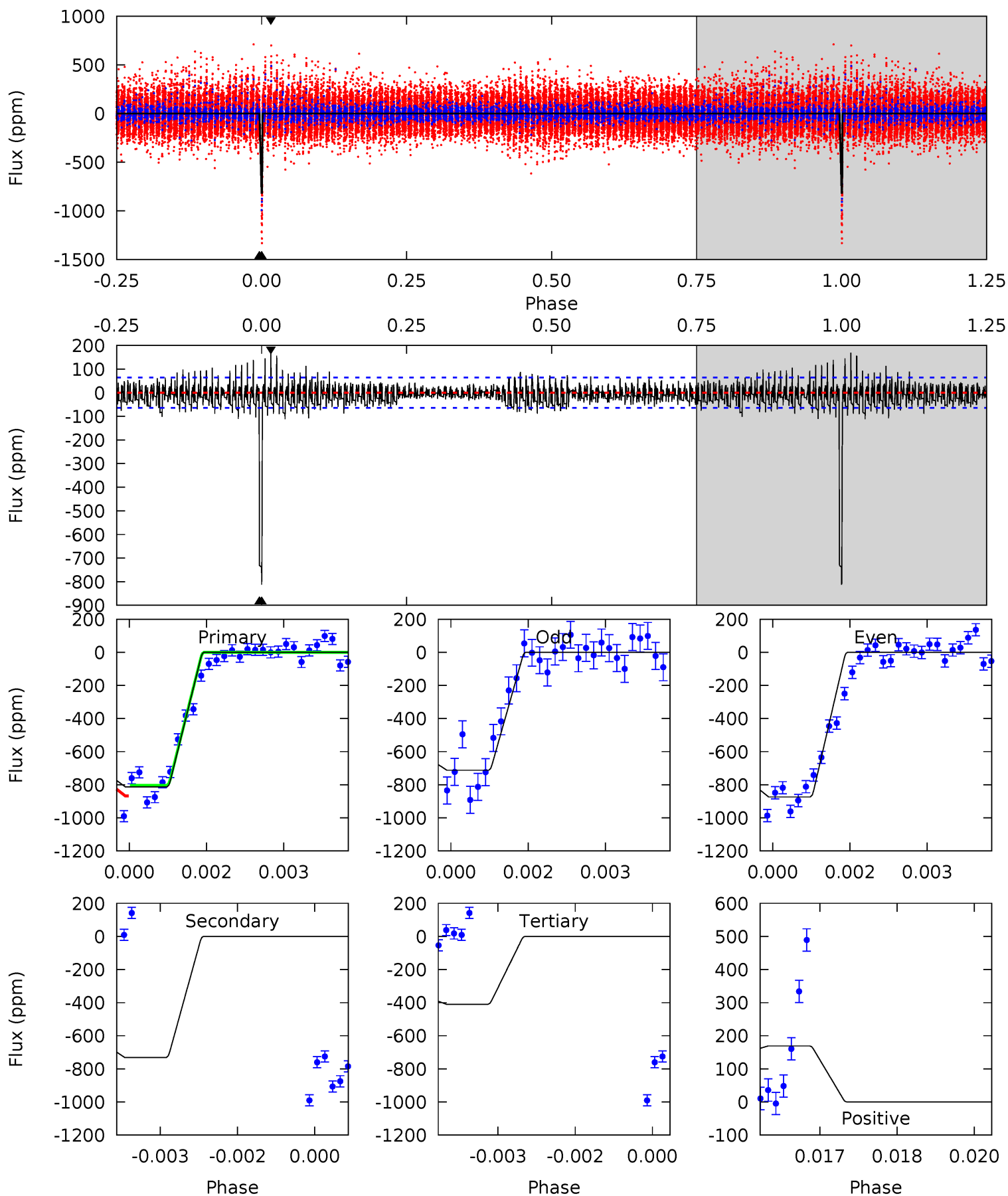
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	7.98	7.96	6.83	5.23	2.93	2.43	6.19	7.31	0.02	1.15	0.03	0.81	0.33	0



Alt Model-Shift Uniqueness Test

008653183-02, P = 308.553567 Days, E = 1.021661 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
67.9	61.1	34.2	14.1	5.38	3.17	2.42	33.7	53.7	26.9	47.0	6.66	1.09	0.17	1.15



Stellar Parameters For KIC 008653183

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6305^{+174}_{-174}	$3.632^{+0.352}_{-0.110}$	$-0.360^{+0.400}_{-0.250}$	$3.021^{+0.509}_{-1.187}$	$1.426^{+0.249}_{-0.332}$	$0.073^{+0.197}_{-0.020}$
	+3%/-3%	+10%/-3%	+111%/-69%	+17%/-39%	+17%/-23%	+271%/-28%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008653183-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-110 ± 14	$4.46^{+1.34}_{-1.29}$	661^{+43}_{-61}	5422^{+724}_{-505}	3094^{+3120}_{-1267}
Alt.	-731 ± 12	$9.29^{+1.80}_{-1.97}$	665^{+41}_{-64}	6073^{+436}_{-335}	4808^{+2562}_{-1355}

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 $A_{obs} \gg 1.0$

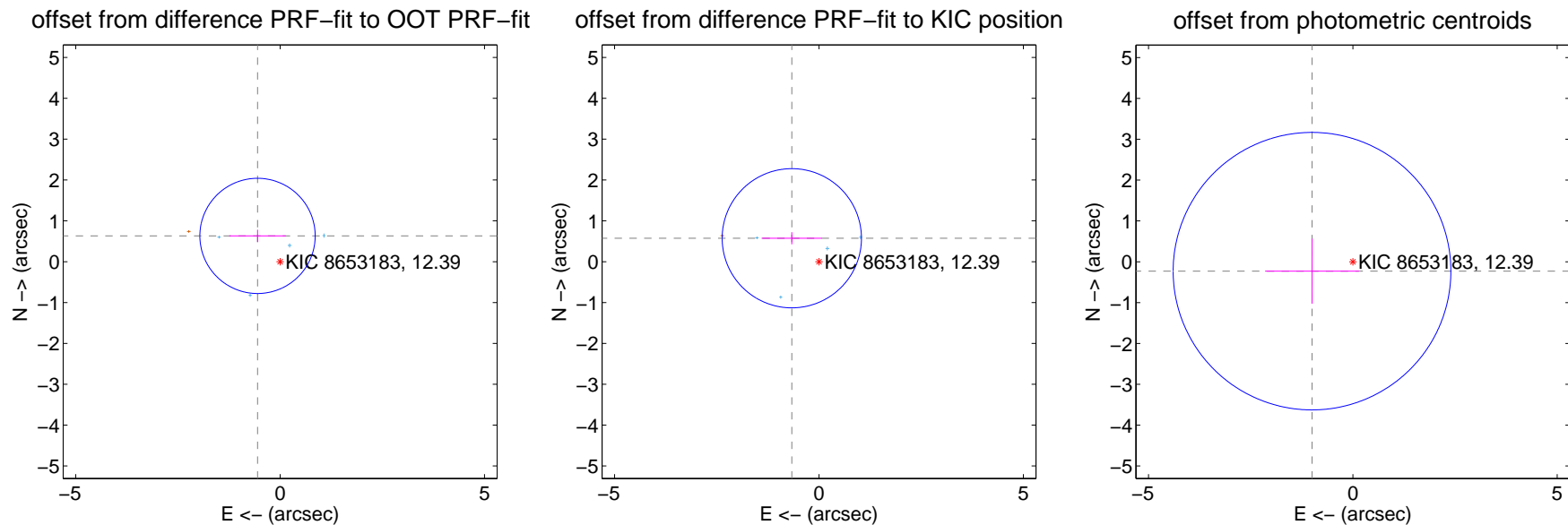
DV Centroid Data

Supplemental centroid analysis for 008653183-02. Kepler magnitude: 12.39. Transit SNR 5.58

There are 4 quarters with good PRF difference image offsets

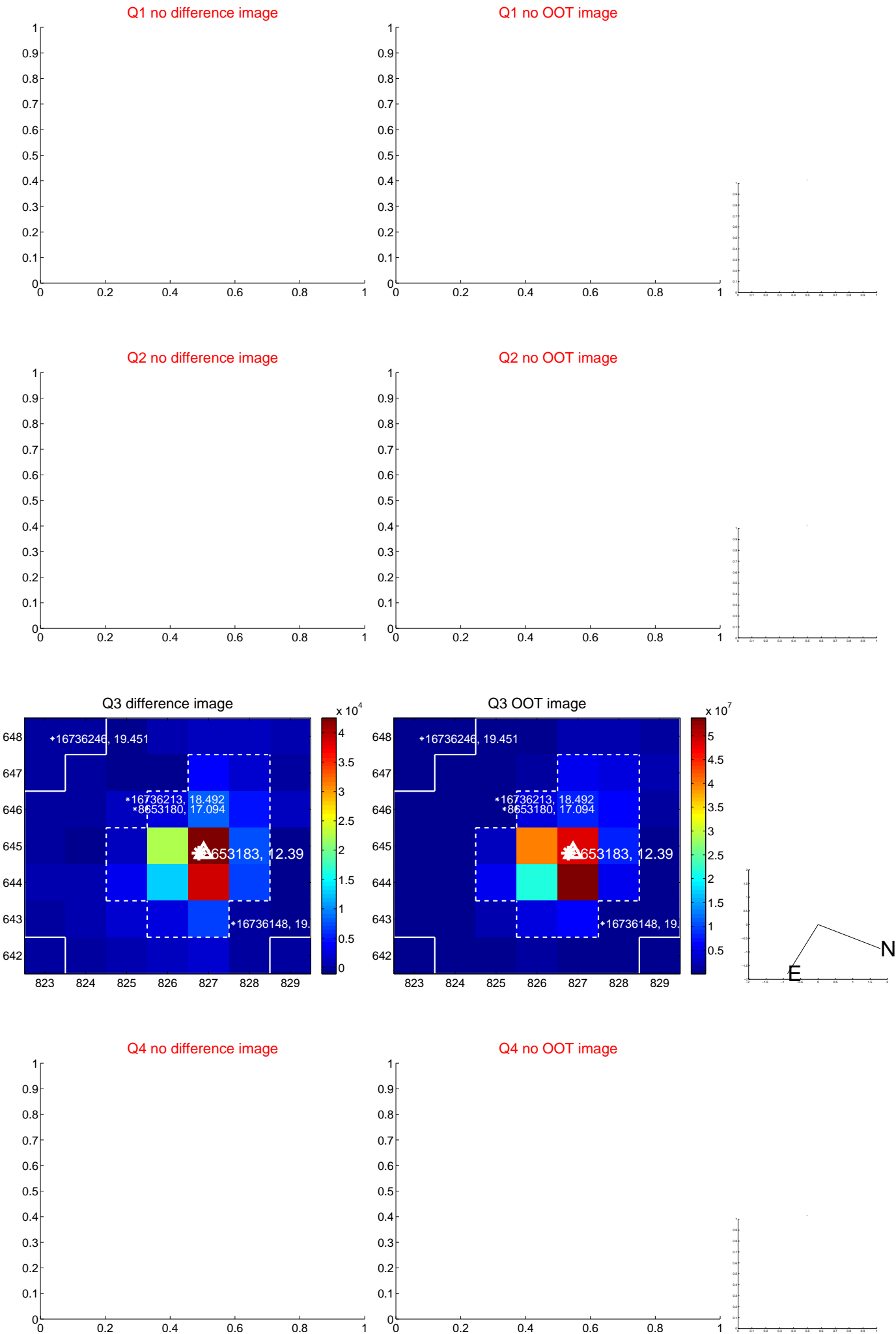
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.839 ± 0.470	1.78	0.552 ± 0.693	0.631 ± 0.151
PRF-fit source offset from KIC position	0.878 ± 0.568	1.55	0.665 ± 0.740	0.574 ± 0.147
photometric centroid source offset	1.03 ± 1.13	0.91	1.00 ± 1.15	-0.23 ± 0.80

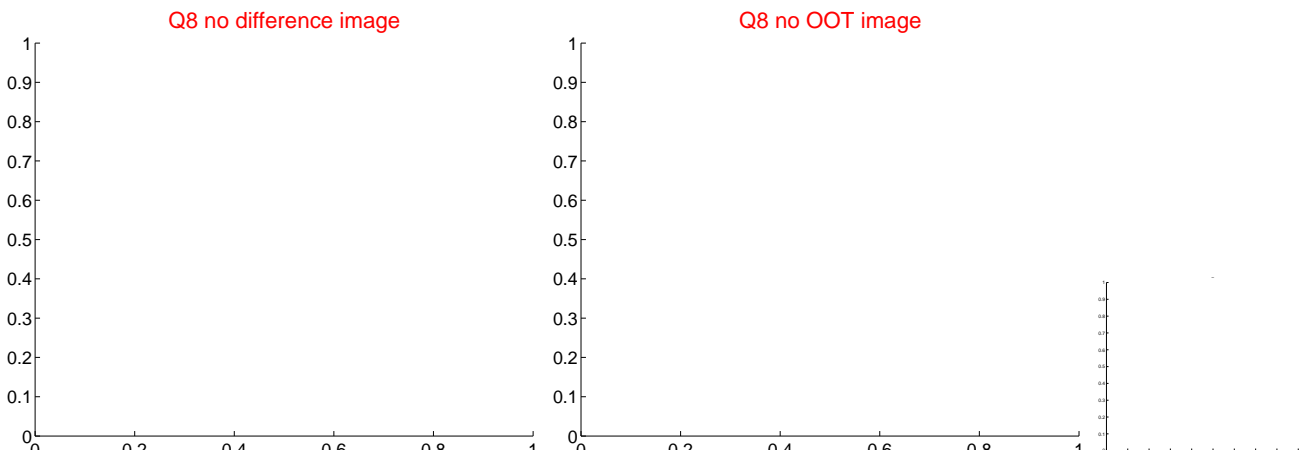
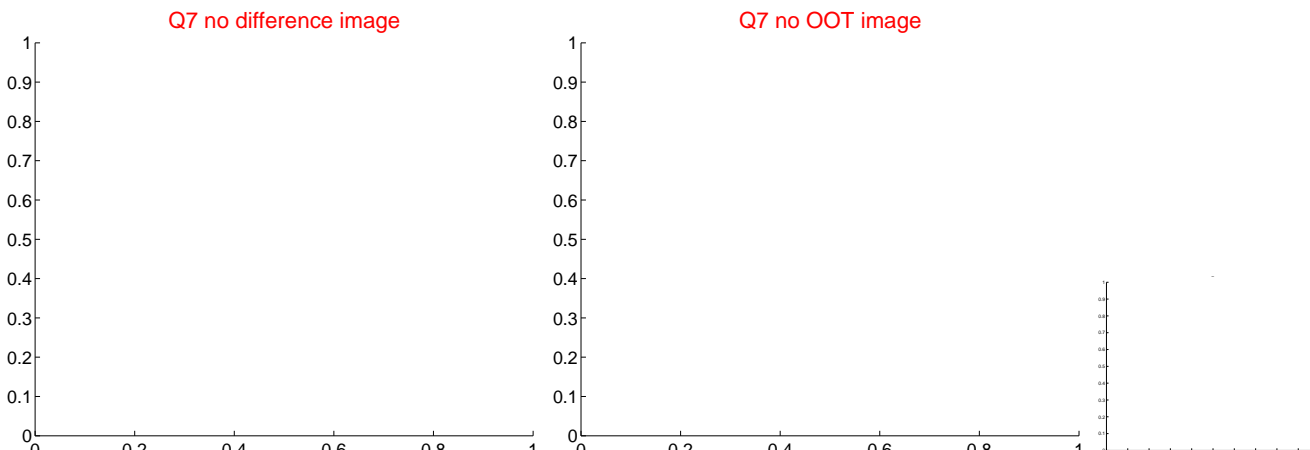
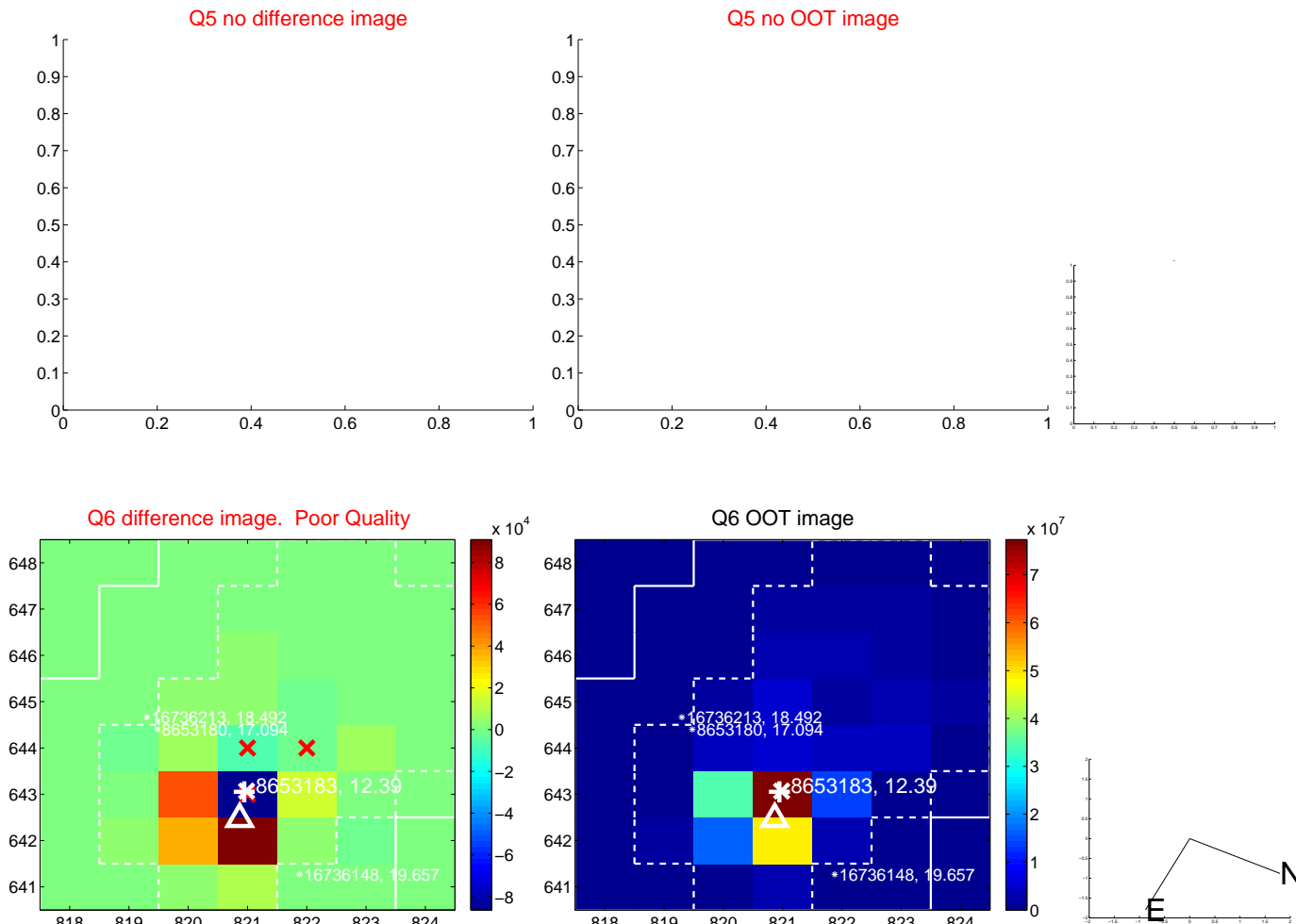


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

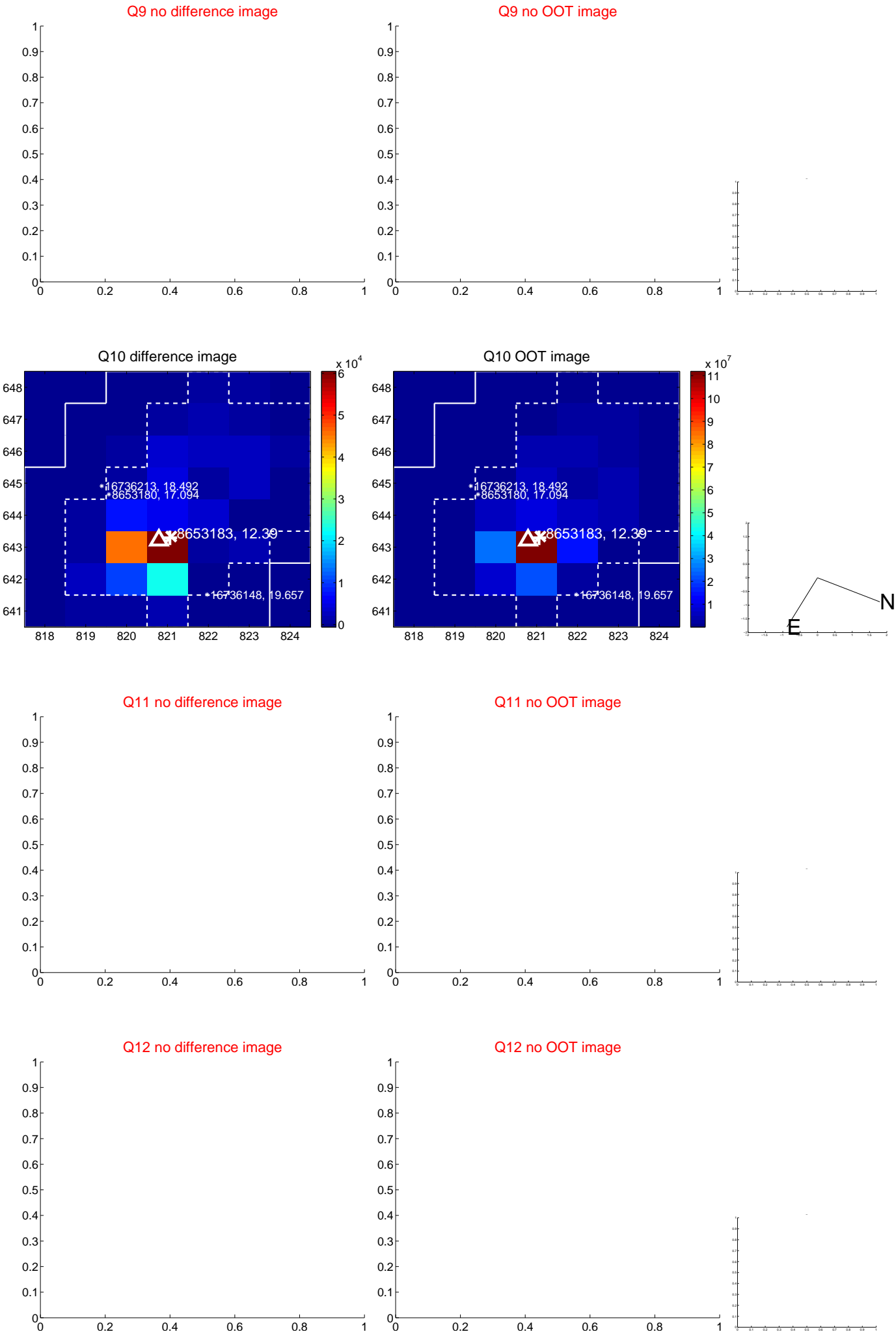
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



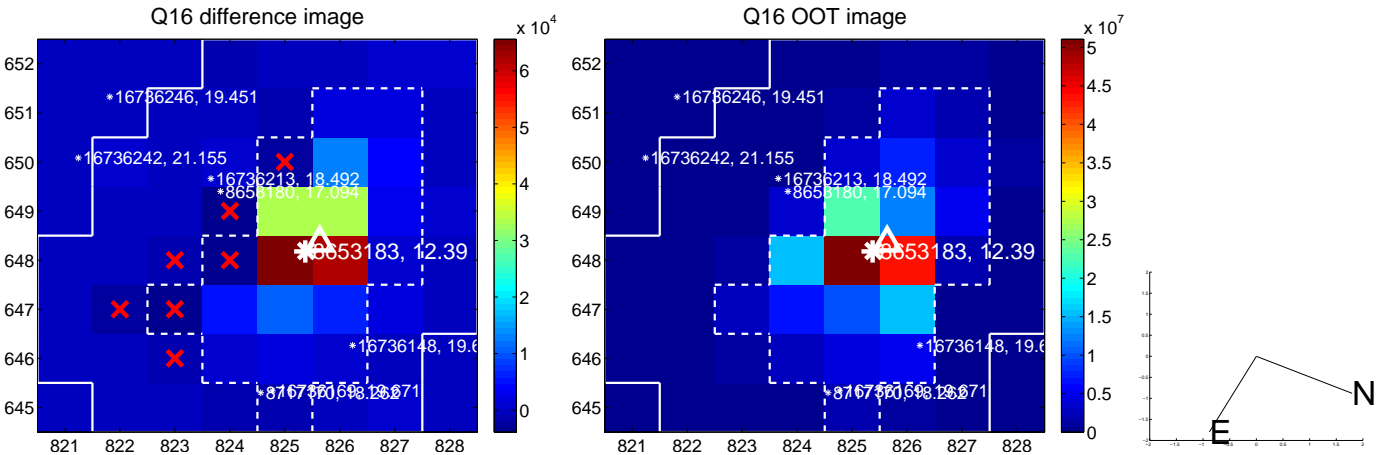
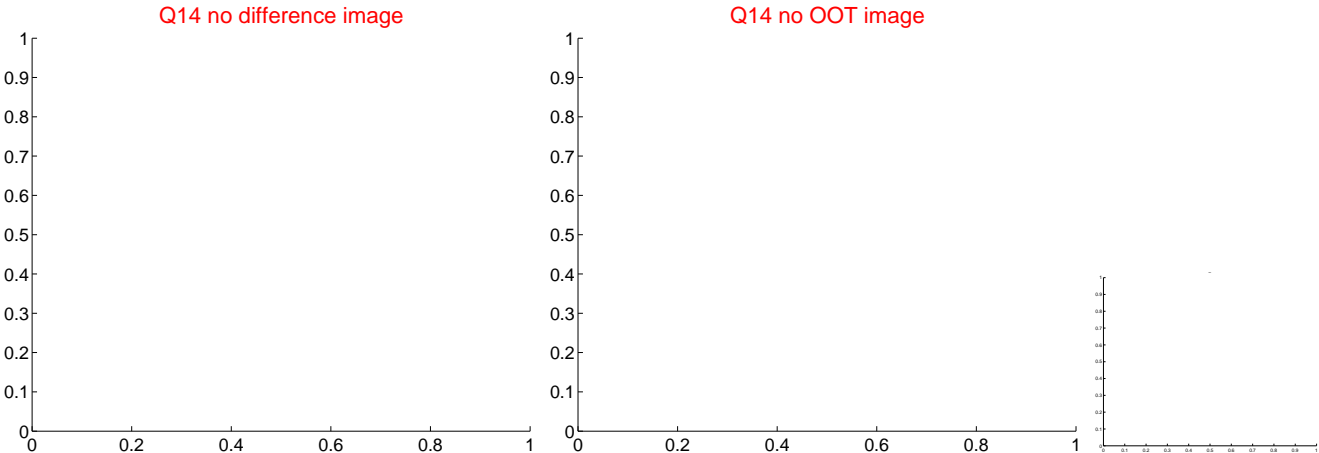
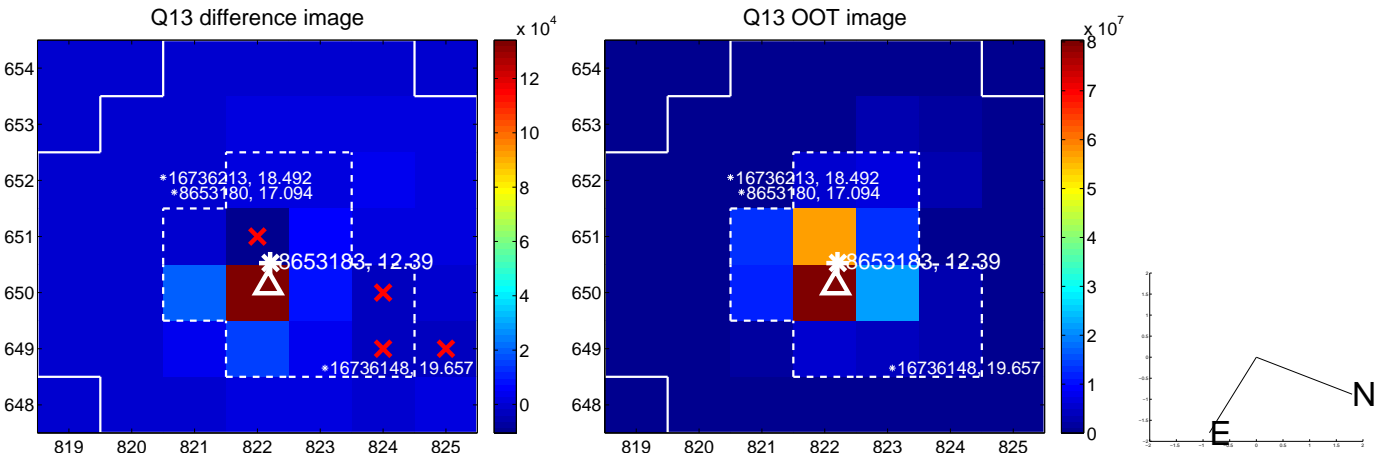
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



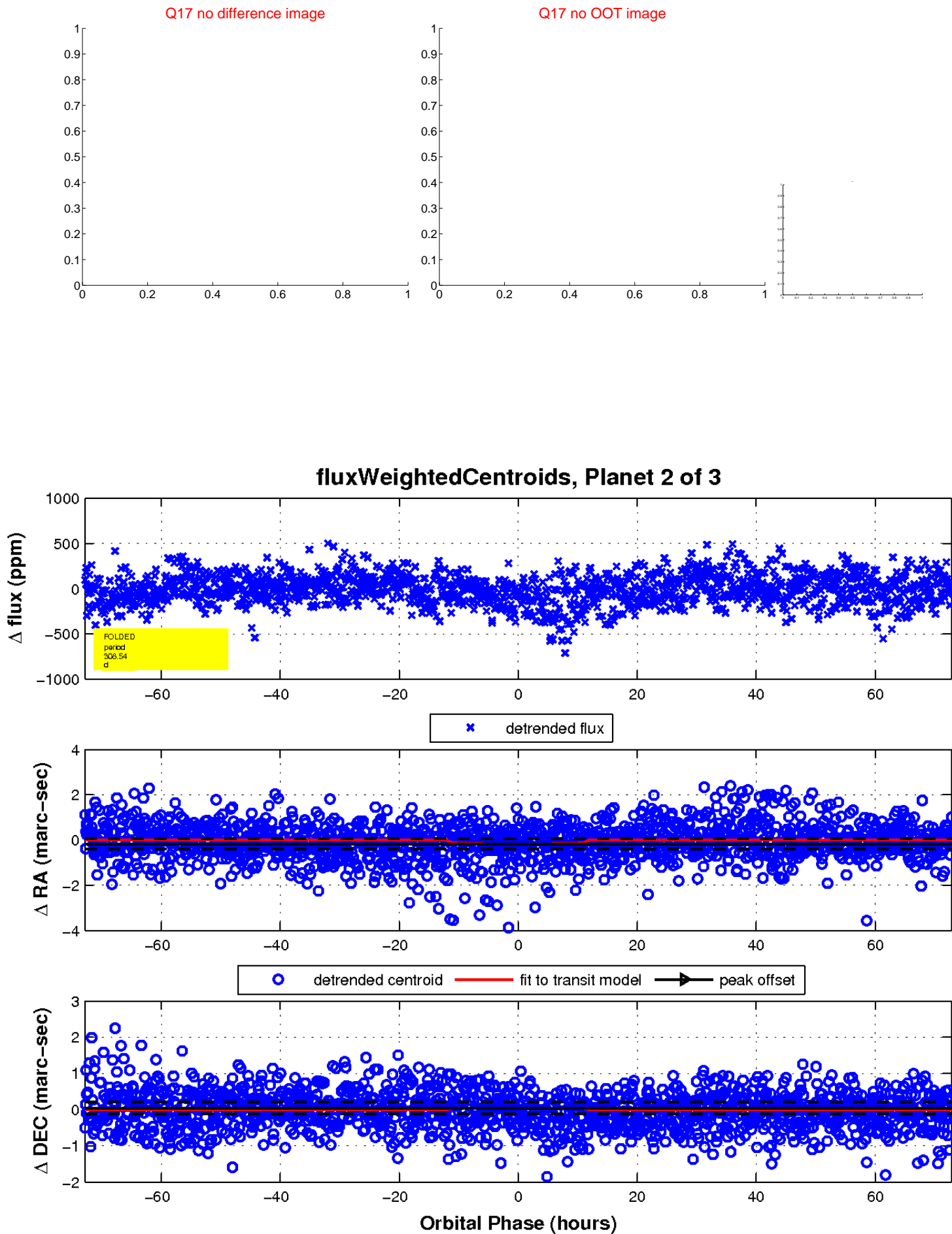
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



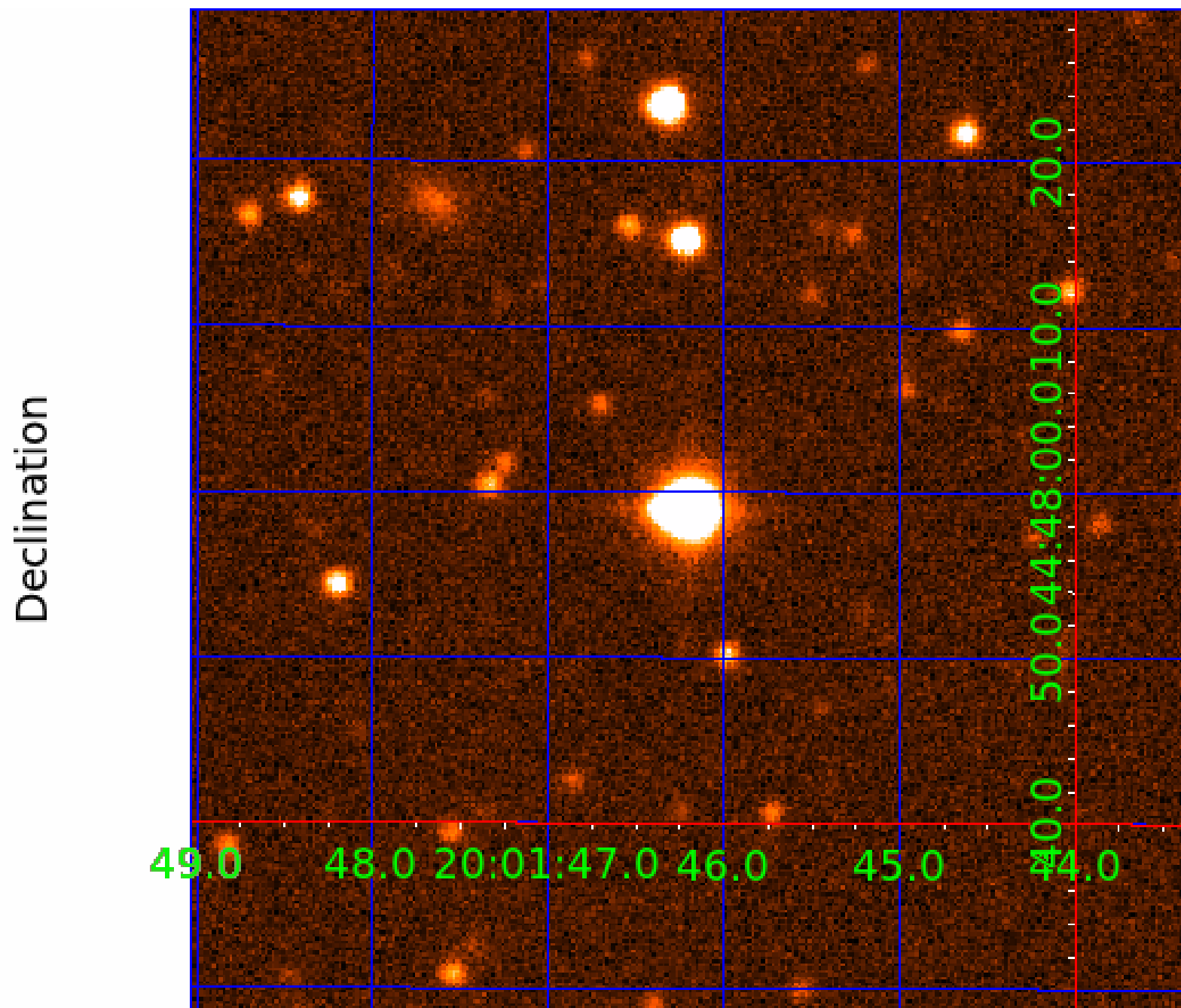
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008653183

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})
008653183-01	OBS	No	3.116681	134.466398	26.2	8.720	8.8	7.7	3.02	6305	1.86	5845.37
008653183-02	OBS	No	308.541703	309.524519	203.6	24.293	7.4	5.6	3.02	6305	4.77	12.76
008653183-03	OBS	No	157.703270	146.483175	257.8	6.793	7.2	7.5	3.02	6305	6.94	31.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008653183-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
008653183-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV
008653183-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES

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

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

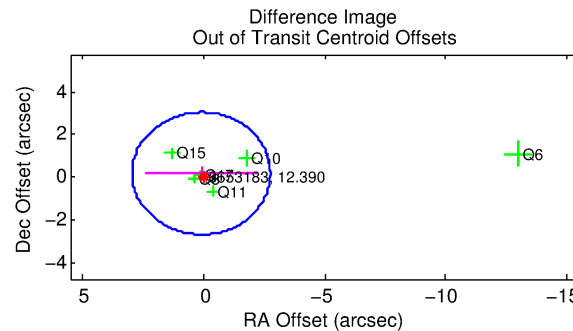
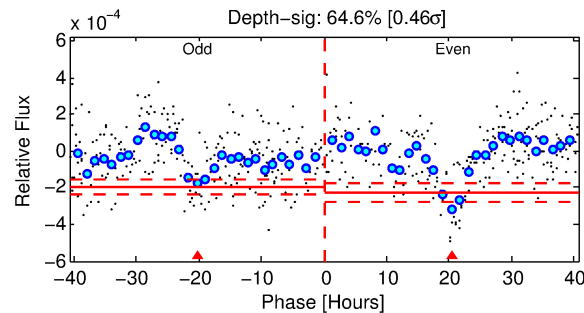
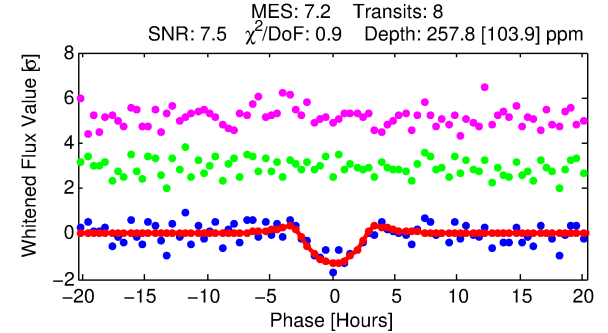
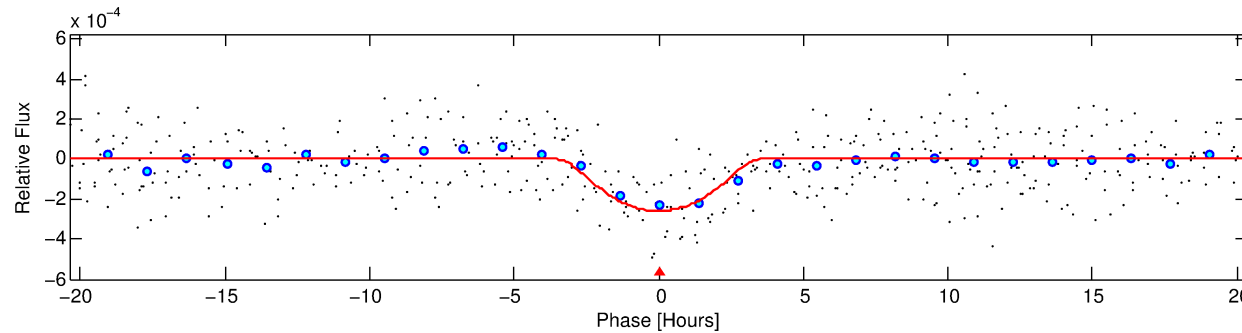
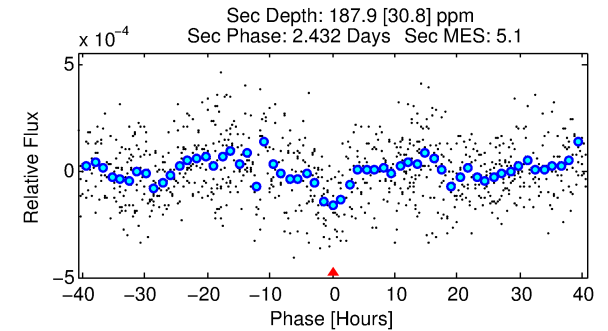
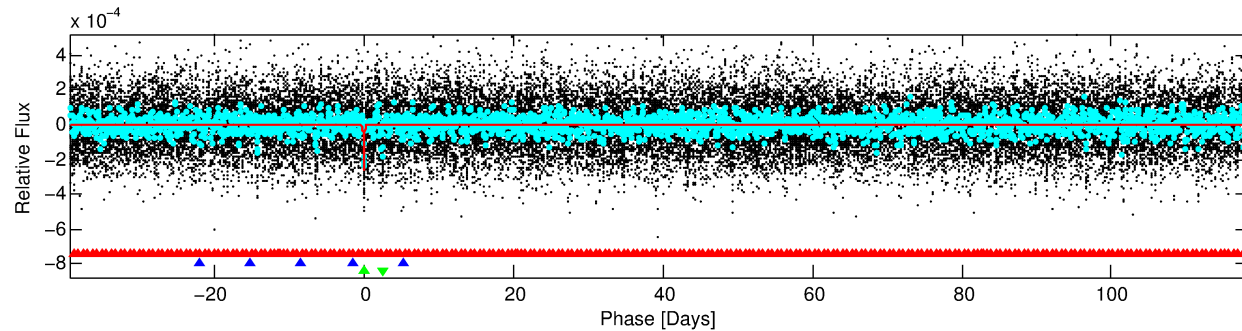
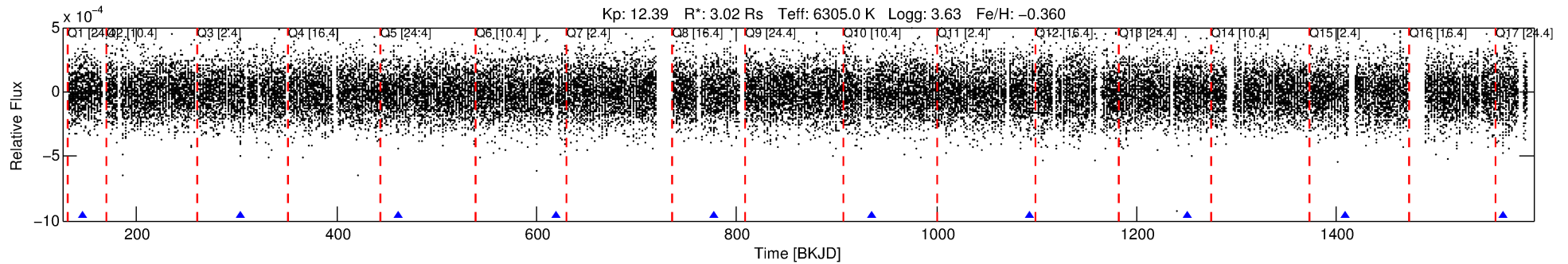
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008653183-03

No Significant Match Found

DV One-Page Summary

KIC: 8653183 Candidate: 3 of 3 Period: 157.703 d



DV Fit Results:

Period = 157.70327 [0.00291] d
Epoch = 146.4832 [0.0171] BKJD
Rp/R* = 0.0211 [0.0112]
a/R* = 47.48 [14.67]
b = 0.99 [0.03]
Seff = 31.23 [19.07]
Teq = 603 [92] K
Rp = 6.94 [4.59] Re
a = 0.6432 [0.2420] AU
Ag = 887.99 [1094.99] [0.81σ]
Teffp = 5088 [1377] K [3.25σ]

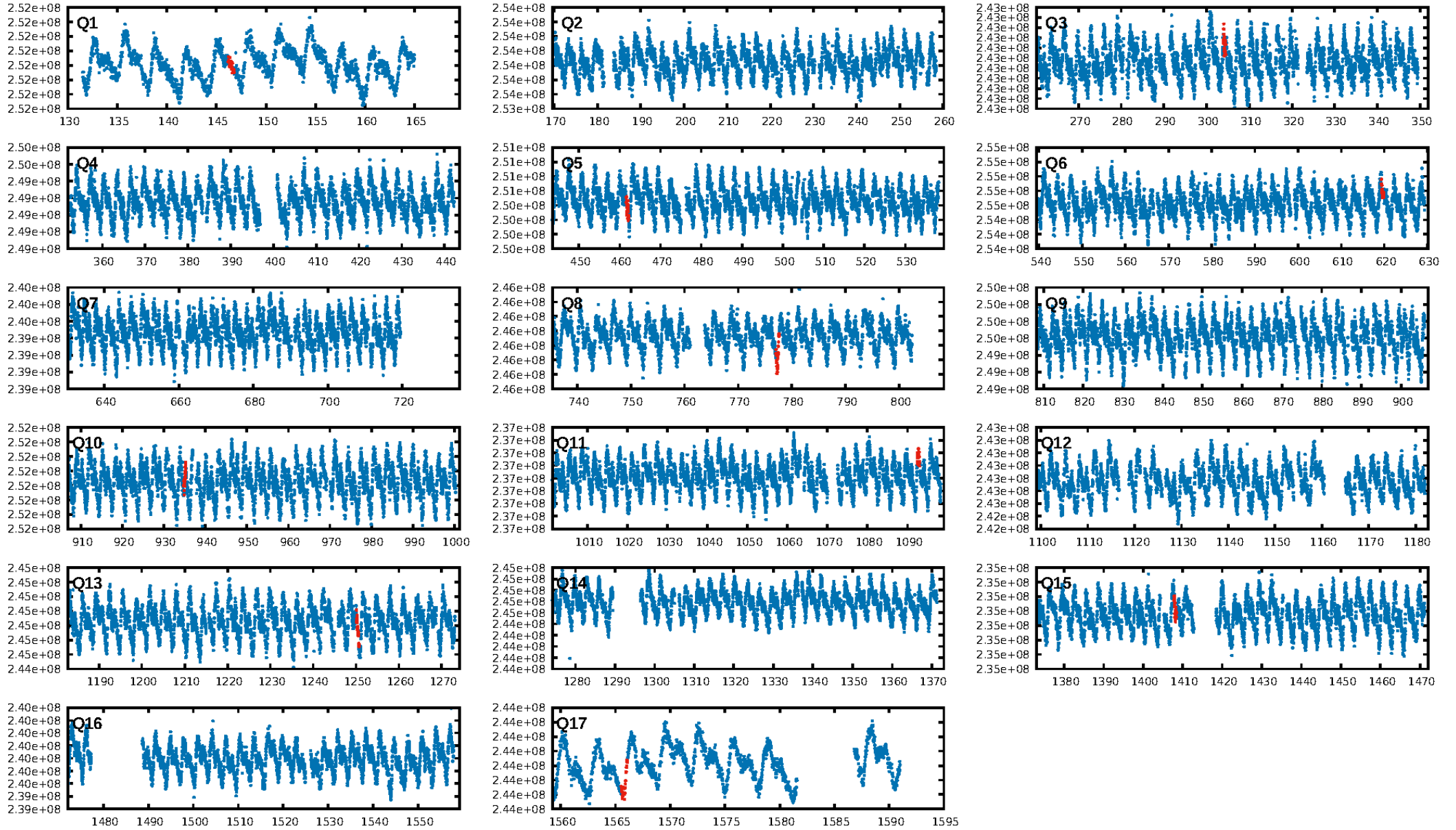
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [335.64σ]
LongPeriod-sig: 100.0% [143.51σ]
ModelChiSquare2-sig: 21.1%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 9.22e-10
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 1.816
Centroid-sig: 35.3%
Centroid-so: 0.985 arcsec [1.25σ]
OotOffset-rm: 0.206 arcsec [0.22σ]
KicOffset-rm: 0.232 arcsec [0.19σ]
OotOffset-st: 2/2/1/1 [6]
KicOffset-st: 2/2/1/1 [6]
DiffImageQuality-fgm: 0.50 [3/6]
DiffImageOverlap-fno: 0.60 [6/10]

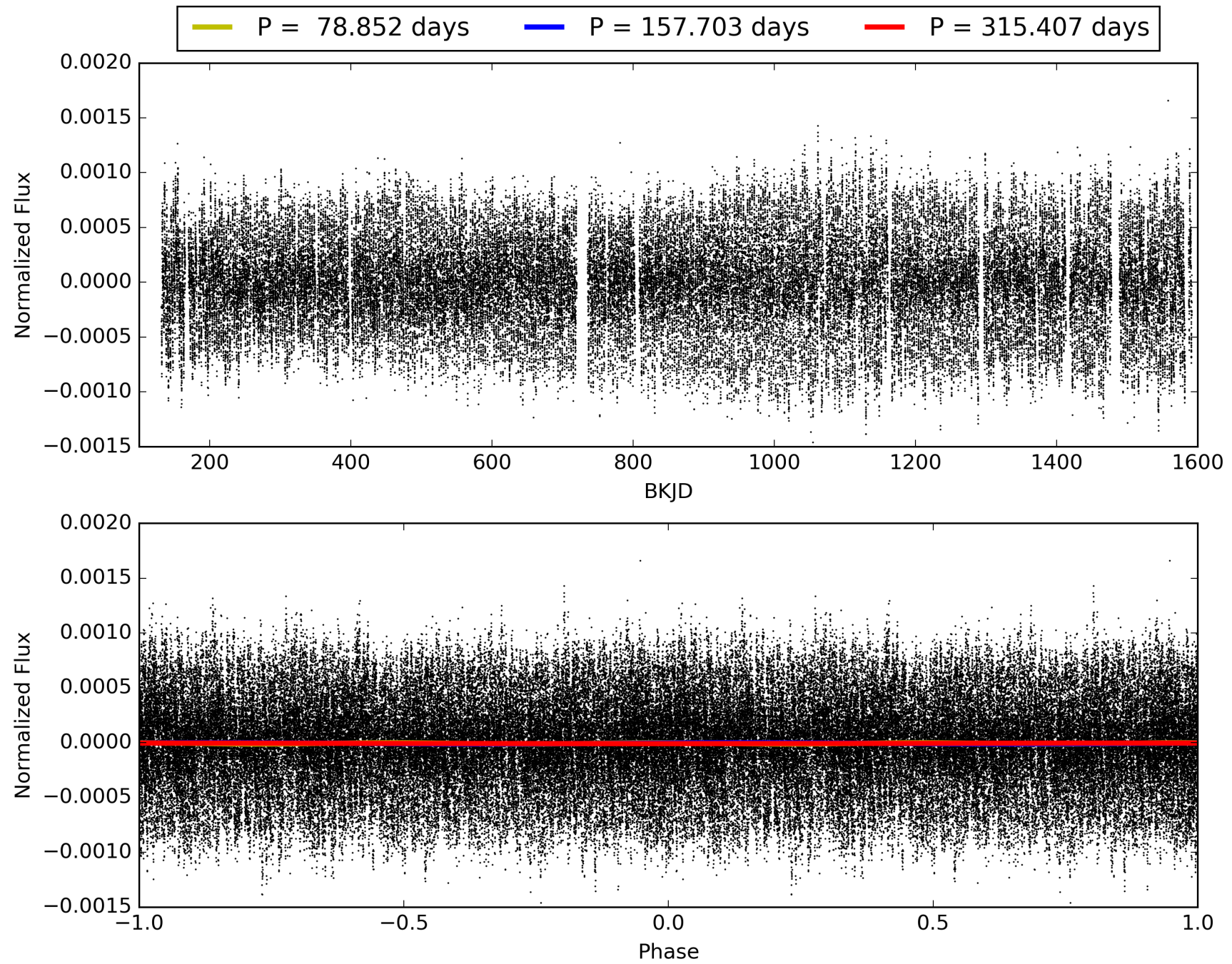
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:34:05 Z

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

TCE 008653183-03, PDC Light Curves

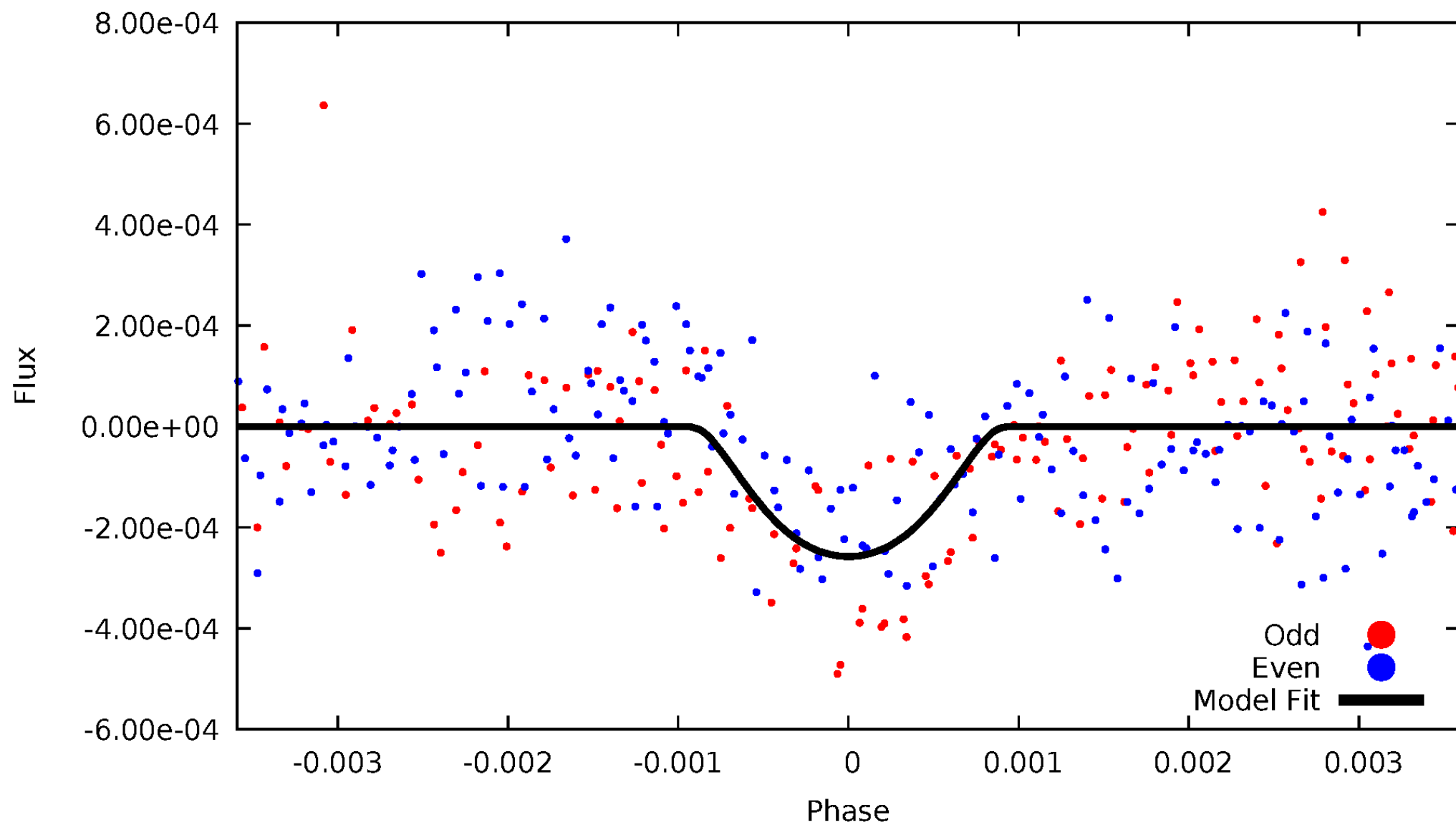


TCE 008653183-03



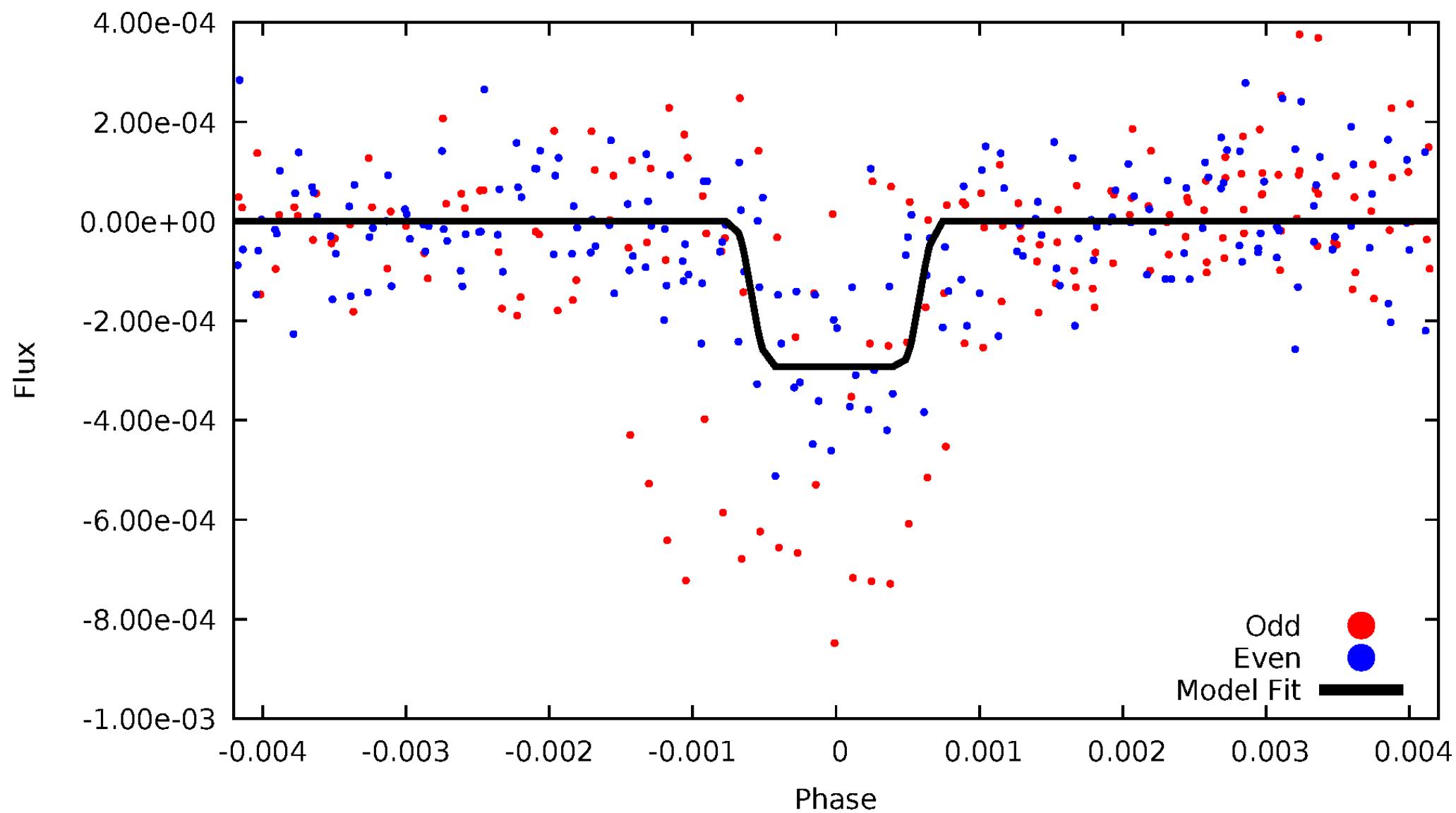
DV Odd/Even

TCE 008653183-03

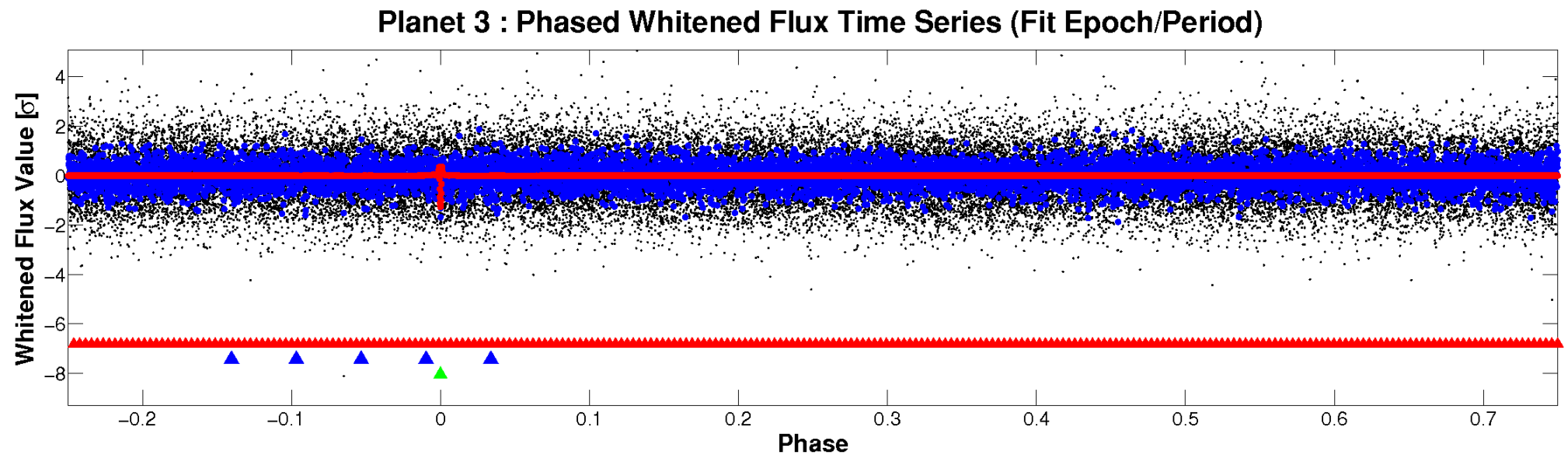
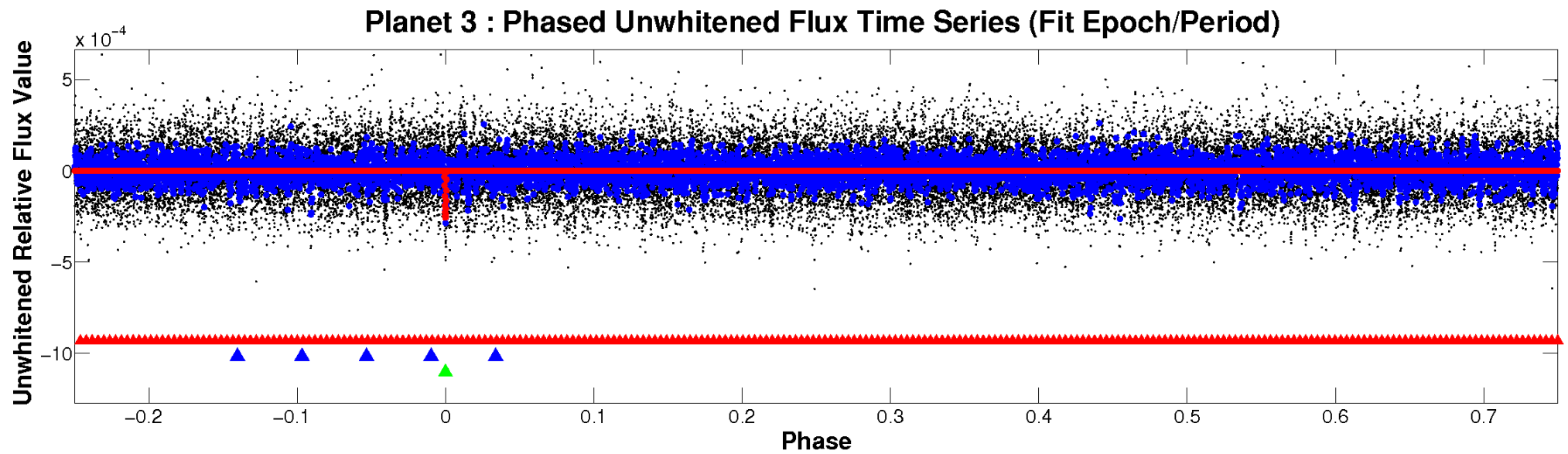


ALT Odd/Even

TCE 008653183-03

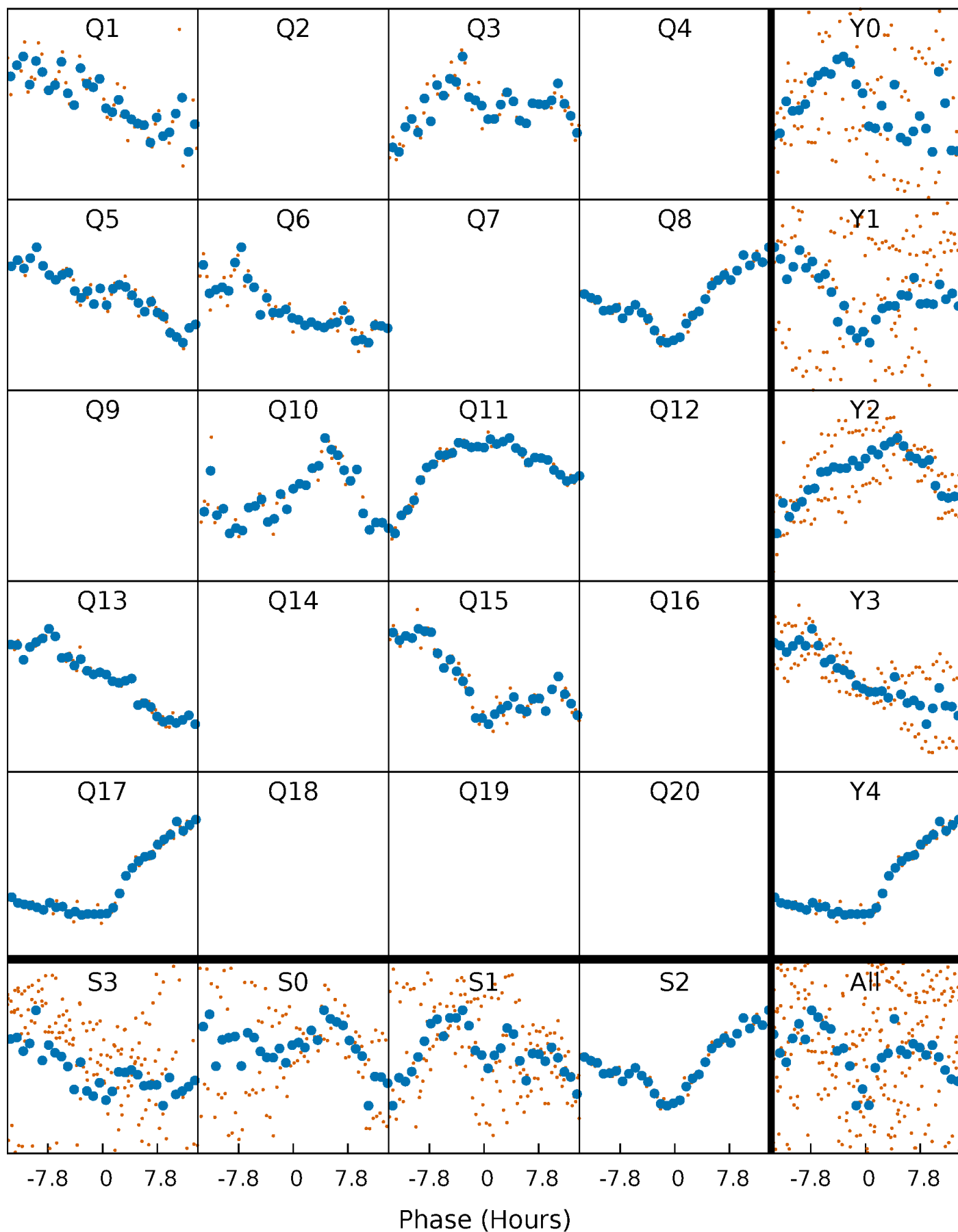


Non-Whitened Vs. Whitened Light Curve



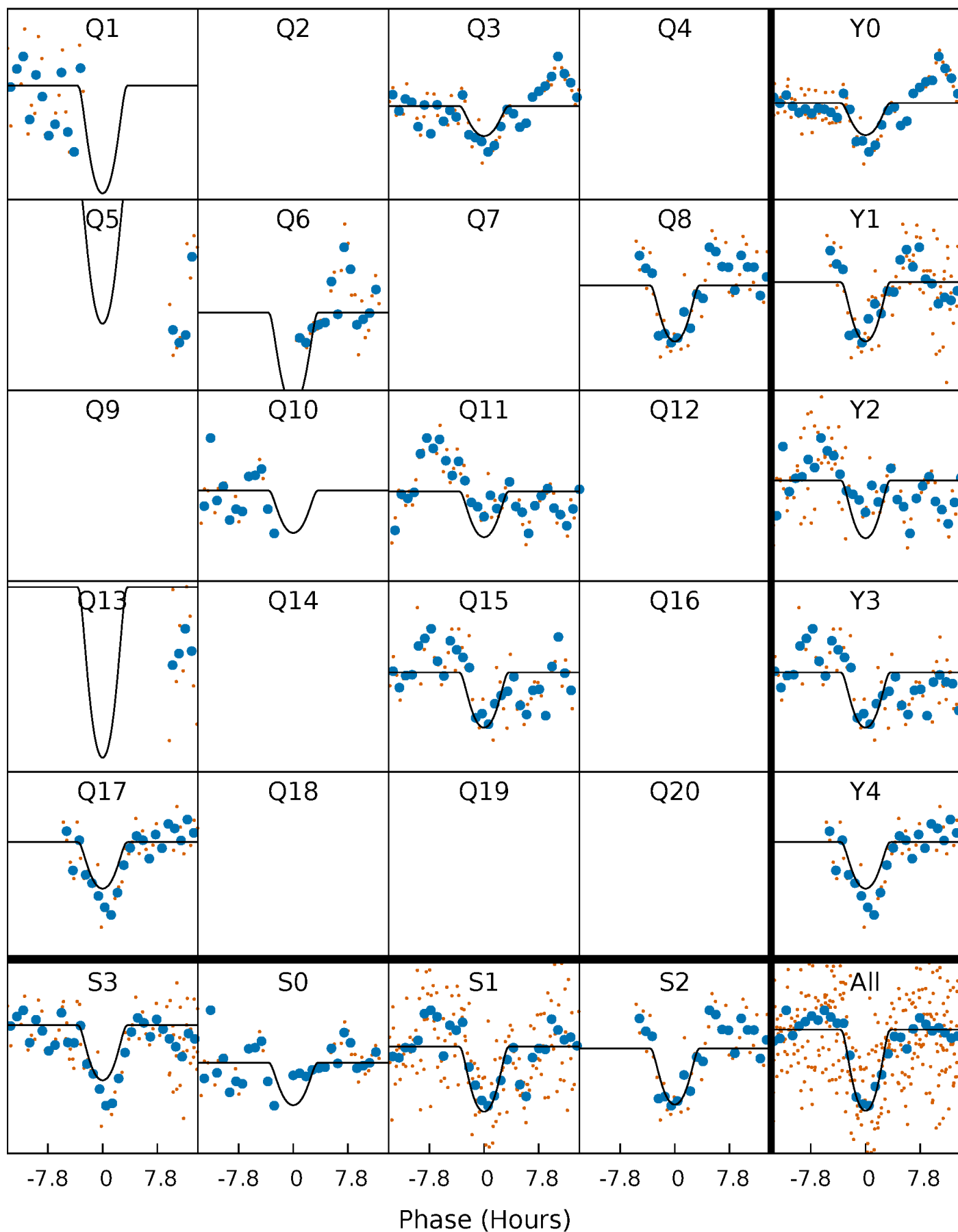
PDC Quarter-Phased Transit Curves

TCE 008653183-03 P=157.703270 Days $T_0=146.483175$ (BKJD)



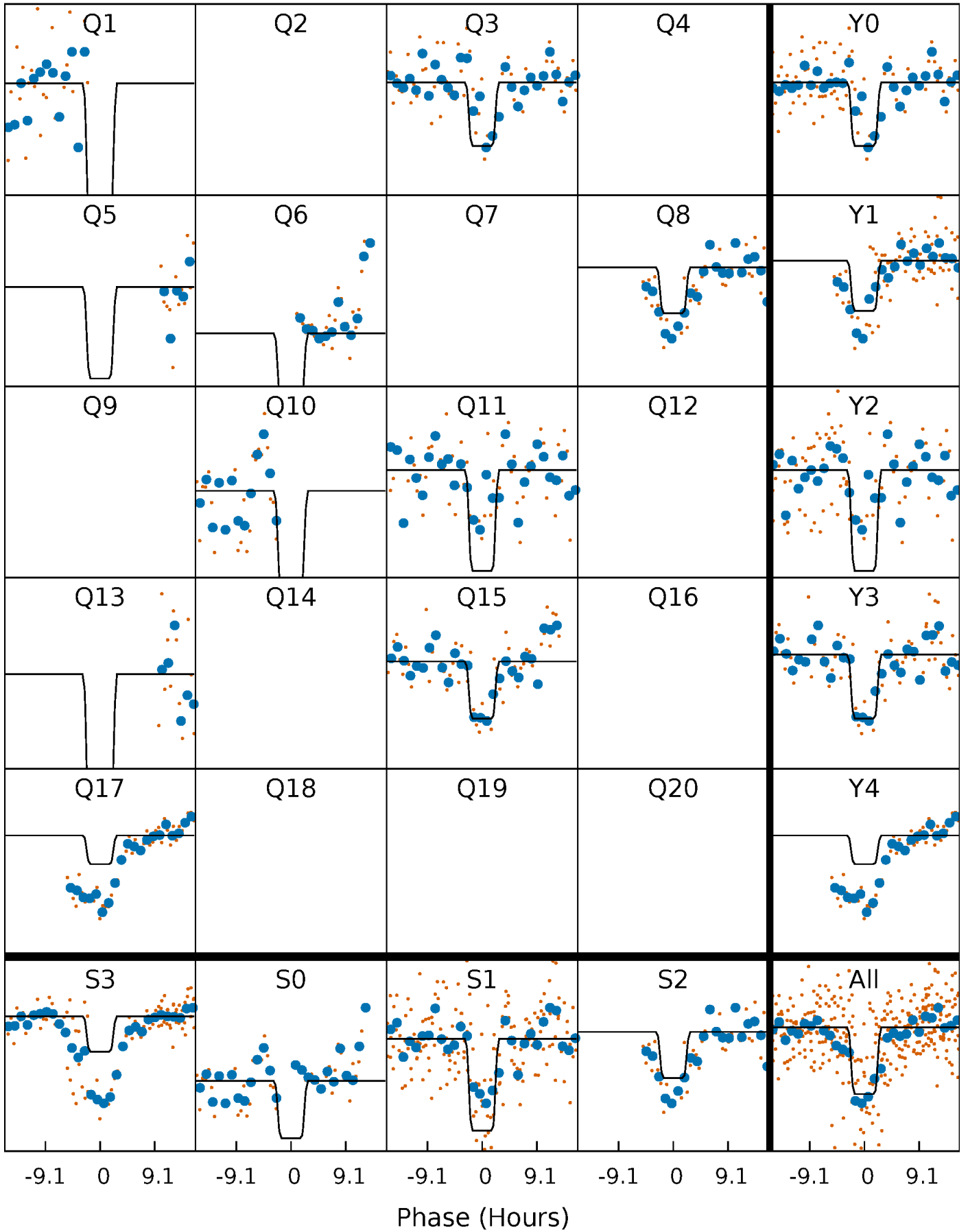
DV Quarter-Phased Transit Curves

TCE 008653183-03 P=157.703270 Days $T_0=146.483175$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

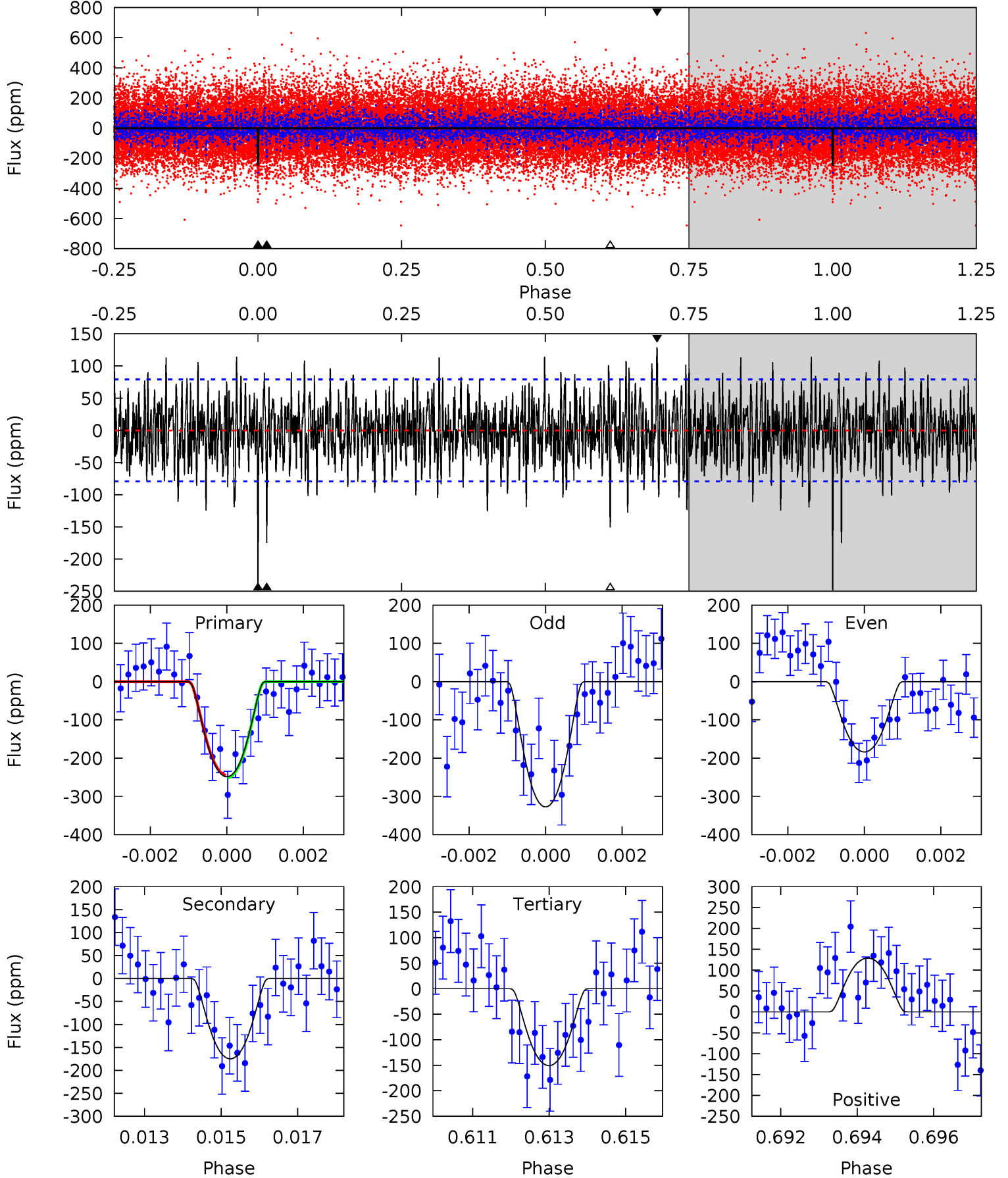
TCE 008653183-03 P=157.705911 Days $T_0=146.453670$ (BKJD)



DV Model-Shift Uniqueness Test

008653183-03, P = 157.703270 Days, E = 146.483175 Days

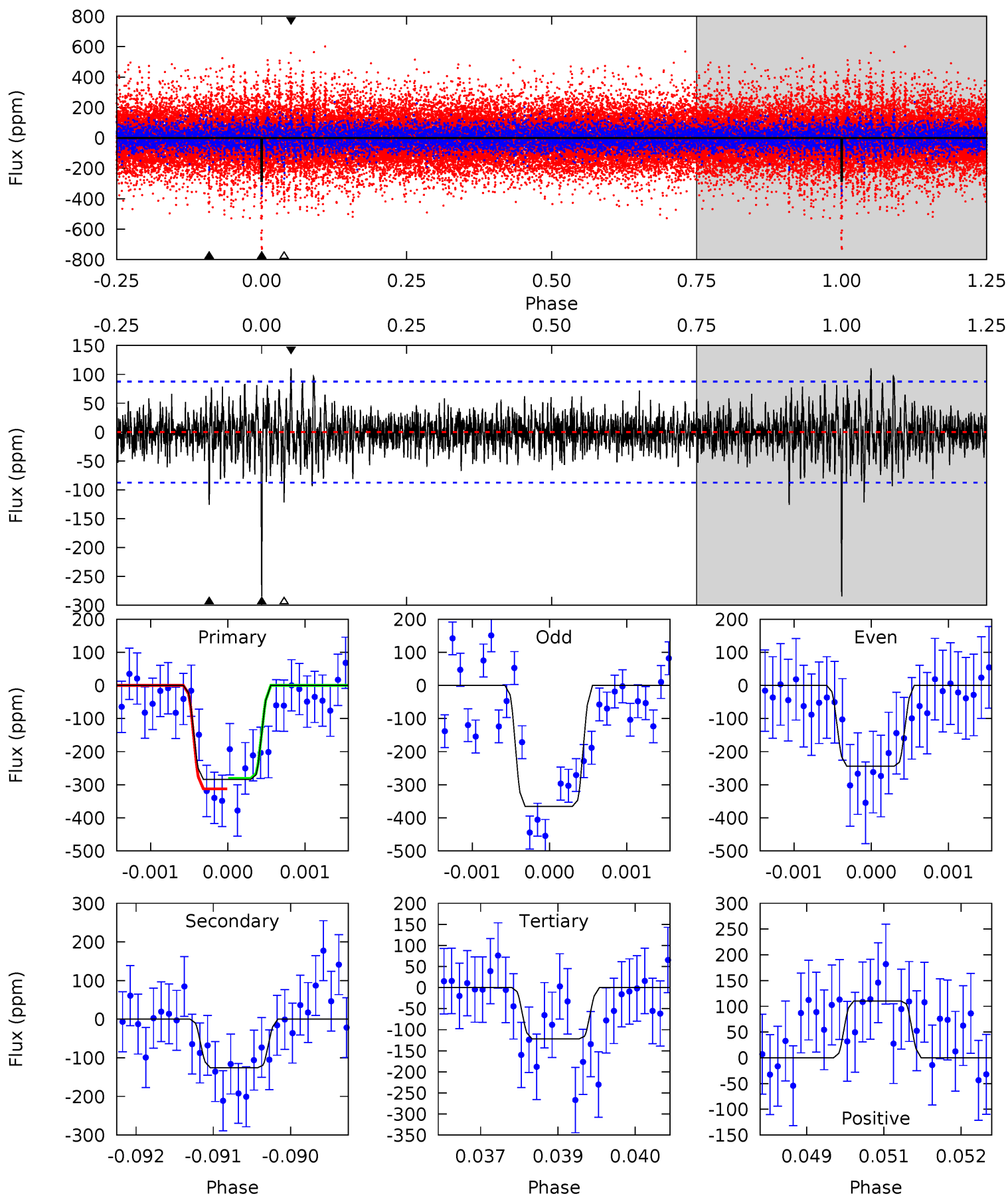
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	11.8	10.1	8.67	5.34	3.11	2.67	6.59	8.05	1.63	3.09	4.81	1.54	0.34	0.23



Alt Model-Shift Uniqueness Test

008653183-03, P = 157.705911 Days, E = 146.453670 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	7.76	7.51	6.81	5.40	3.21	1.59	10.0	10.7	0.25	0.96	3.74	1.36	0.28	1.00



Stellar Parameters For KIC 008653183

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6305^{+174}_{-174}	$3.632^{+0.352}_{-0.110}$	$-0.360^{+0.400}_{-0.250}$	$3.021^{+0.509}_{-1.187}$	$1.426^{+0.249}_{-0.332}$	$0.073^{+0.197}_{-0.020}$
	+3%/-3%	+10%/-3%	+111%/-69%	+17%/-39%	+17%/-23%	+271%/-28%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008653183-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-175 ± 15	$6.40^{+4.11}_{-3.11}$	825^{+54}_{-75}	5021^{+2016}_{-764}	990^{+2658}_{-607}
Alt.	-126 ± 16	$5.52^{+3.58}_{-3.19}$	829^{+50}_{-80}	5088^{+2743}_{-894}	948^{+4543}_{-607}

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

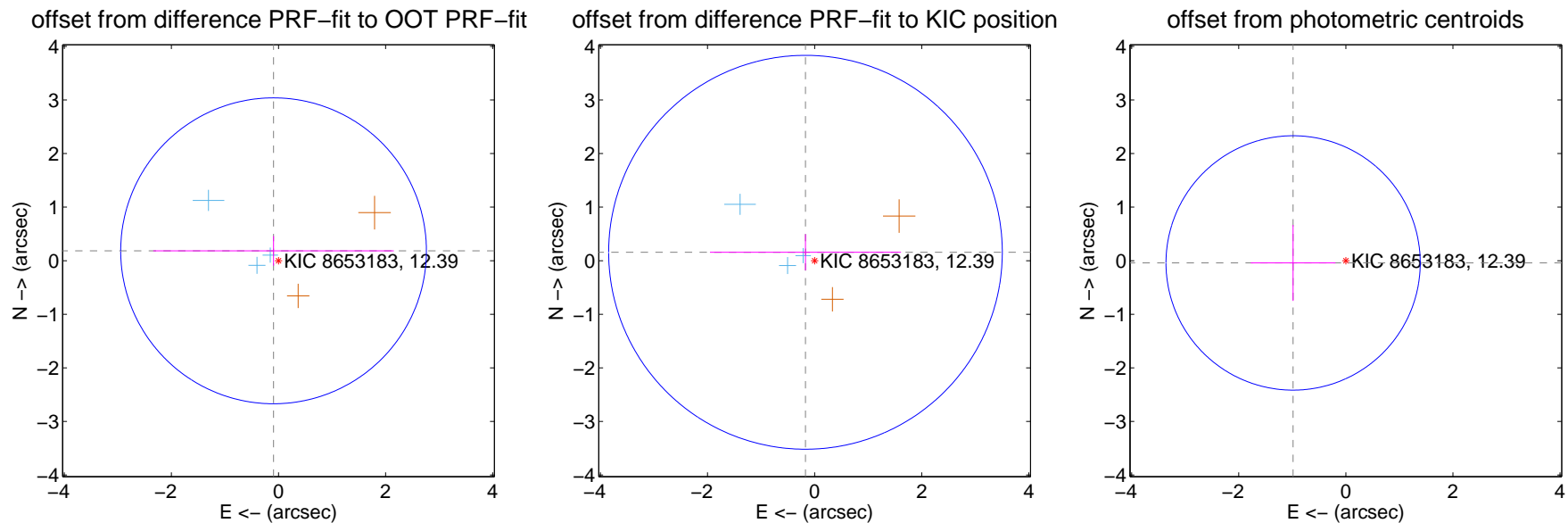
DV Centroid Data

Supplemental centroid analysis for 008653183-03. Kepler magnitude: 12.39. Transit SNR 7.49

There are 3 quarters with good PRF difference image offsets

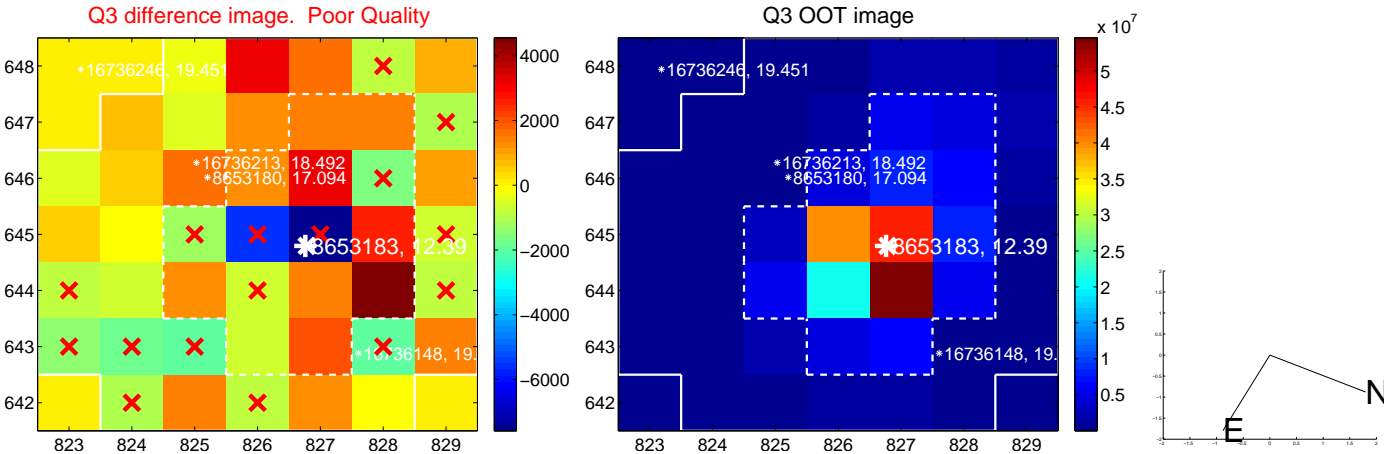
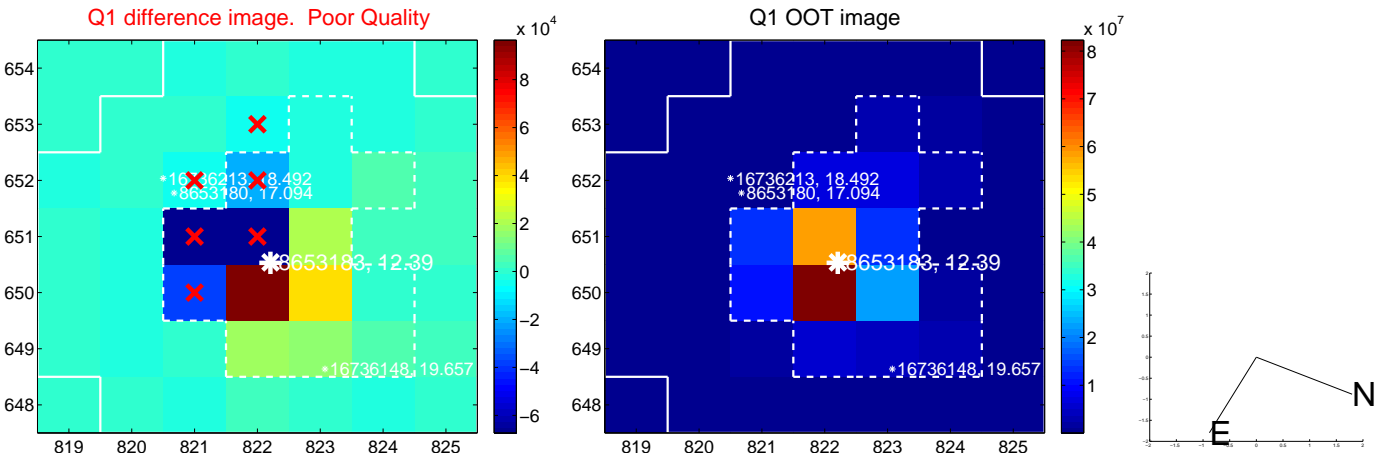
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.206 ± 0.951	0.22	0.092 ± 2.246	0.184 ± 0.277
PRF-fit source offset from KIC position	0.232 ± 1.225	0.19	0.171 ± 1.784	0.157 ± 0.337
photometric centroid source offset	0.99 ± 0.79	1.25	0.98 ± 0.79	-0.04 ± 0.71

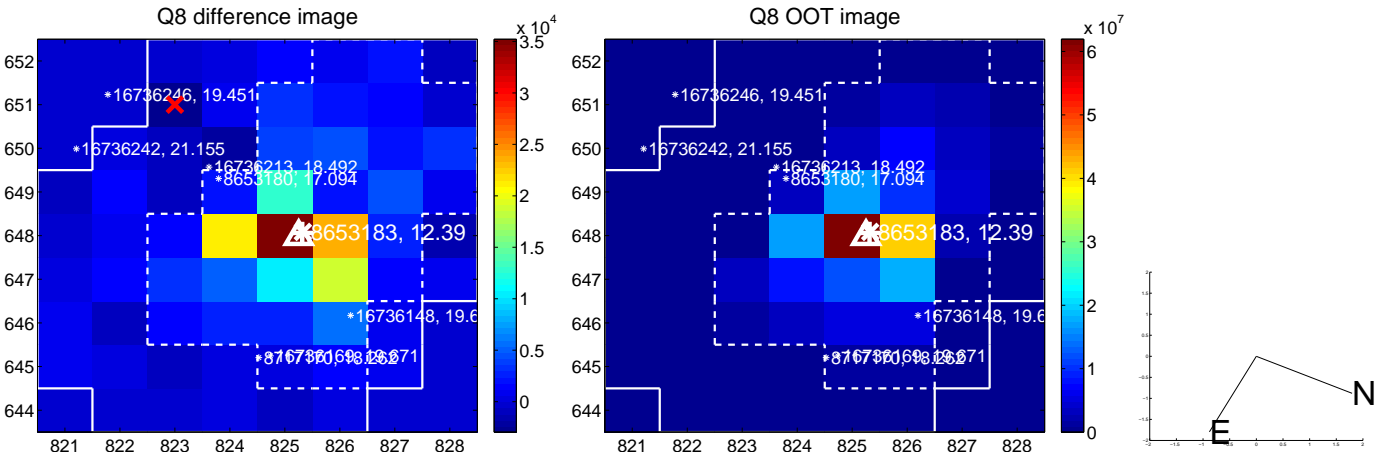
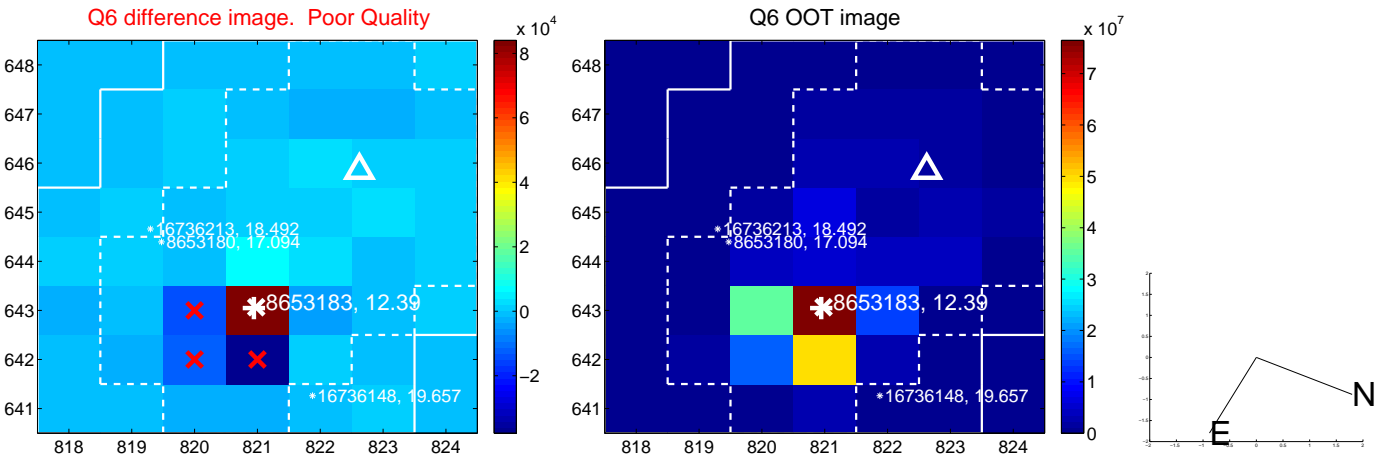
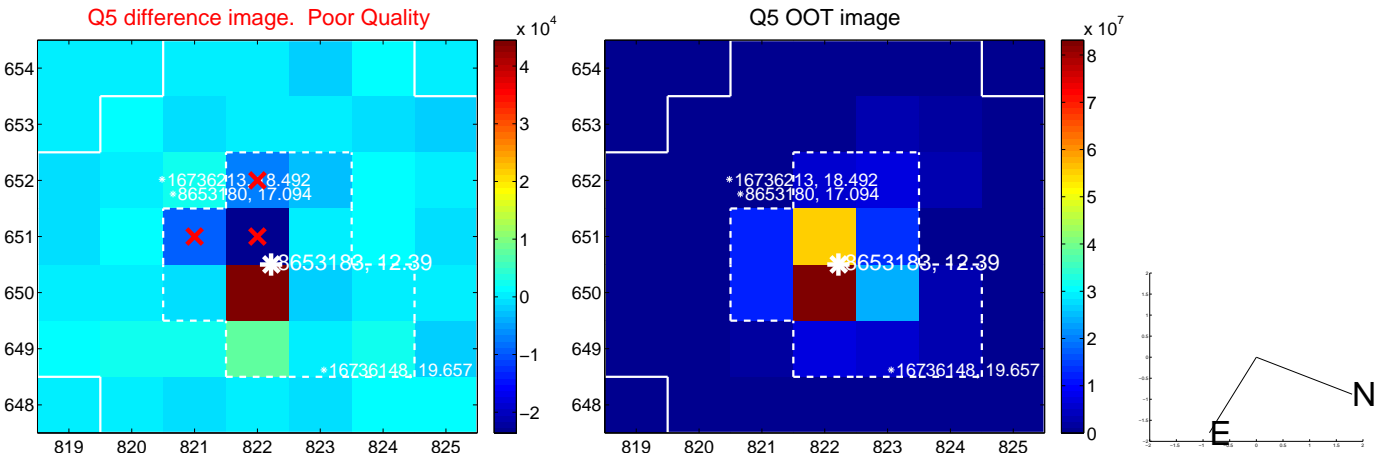


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

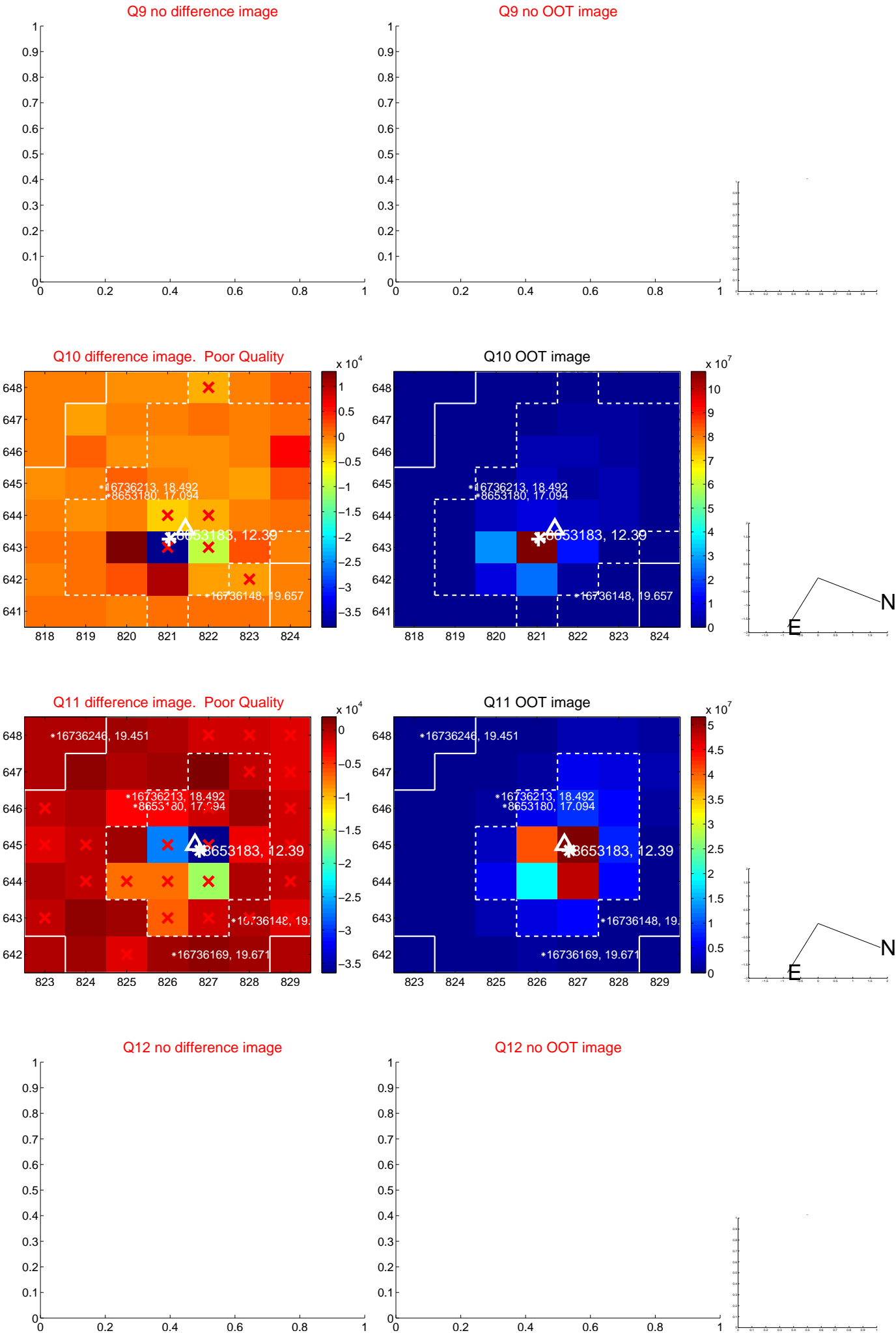
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



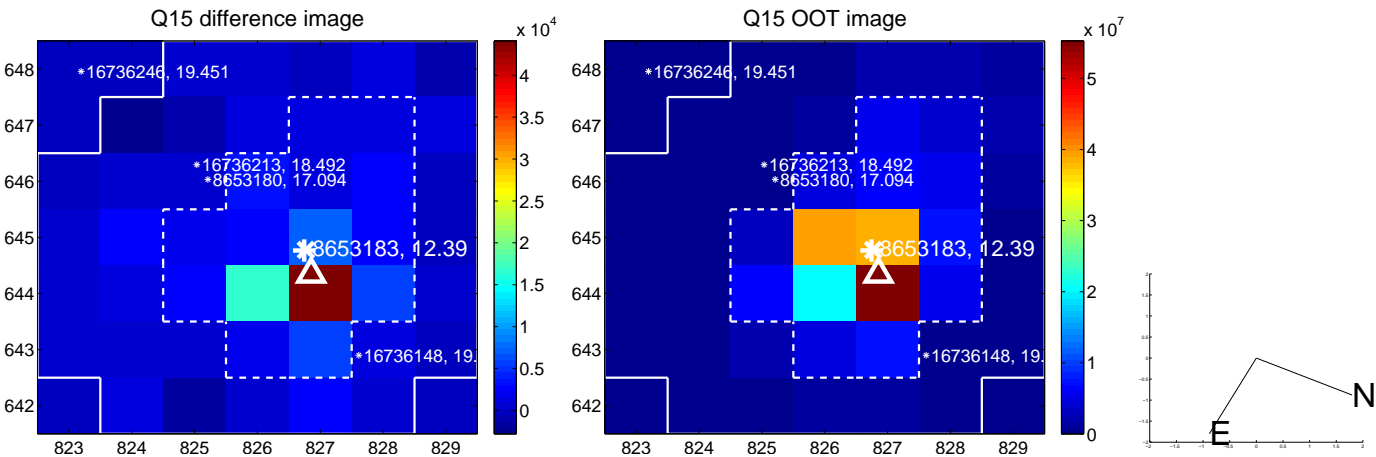
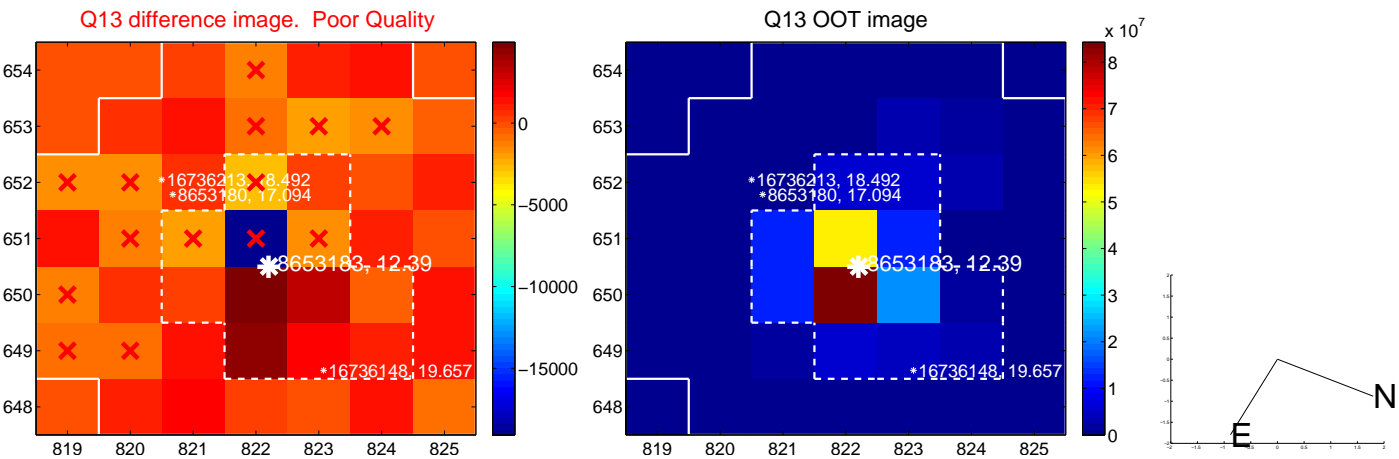
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



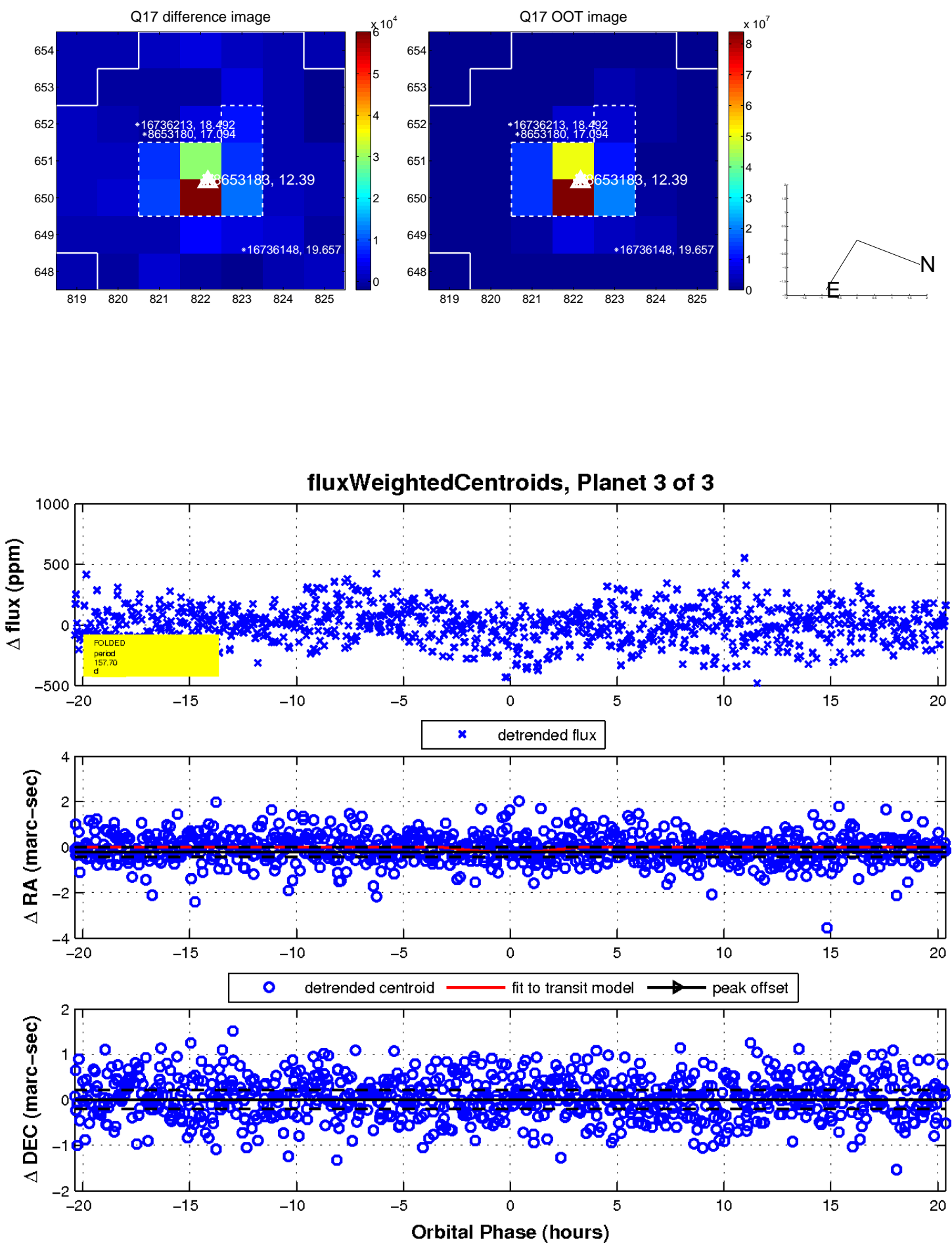
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

