

KIC 005892538

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})
005892538-01	OBS	No	2.371675	133.825360	53.4	17.608	8.4	9.1	0.85	5750	0.81	606.41
005892538-02	OBS	No	35.675941	139.556859	753.1	3.544	12.6	11.8	0.85	5750	2.68	16.33
005892538-03	OBS	No	33.060042	161.268062	788.7	1.962	10.5	9.8	0.85	5750	2.84	18.08
005892538-04	OBS	No	34.003292	135.704557	703.4	1.635	11.8	9.1	0.85	5750	3.47	17.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005892538-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
005892538-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005892538-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
005892538-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_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.

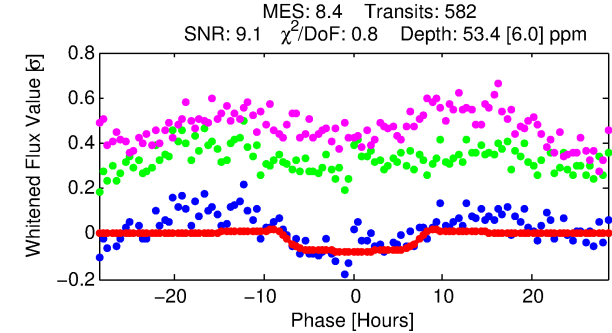
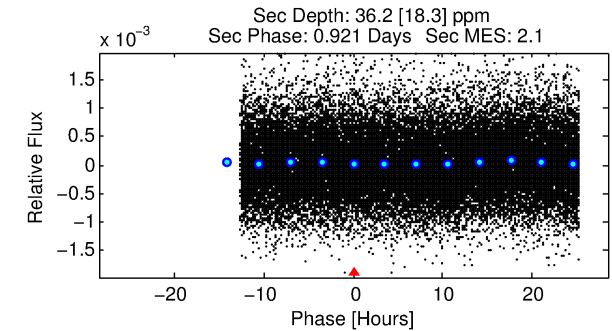
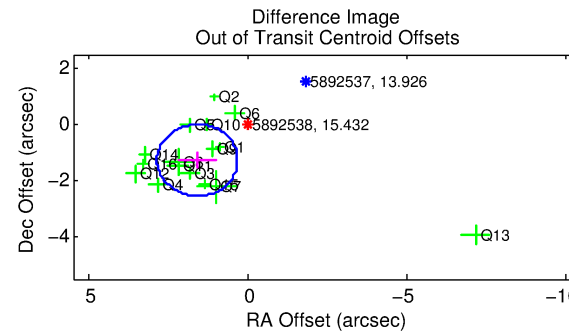
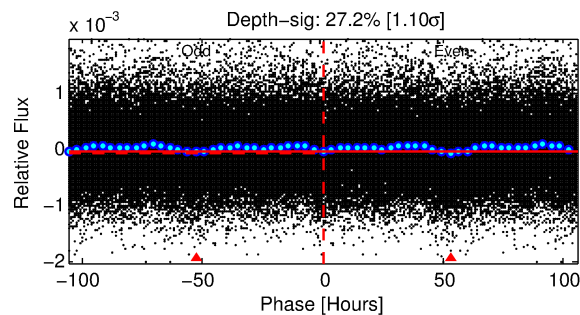
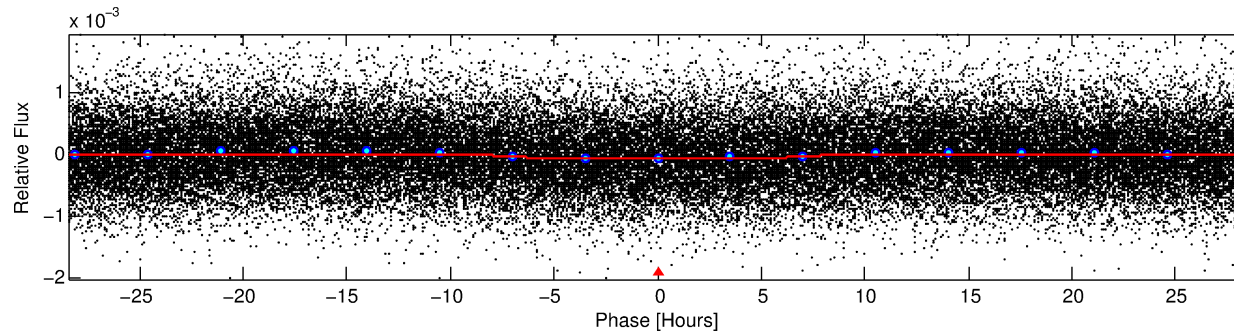
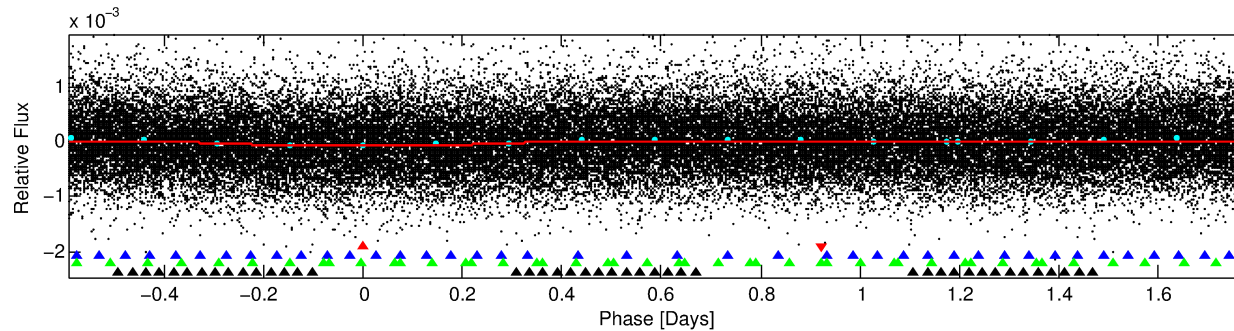
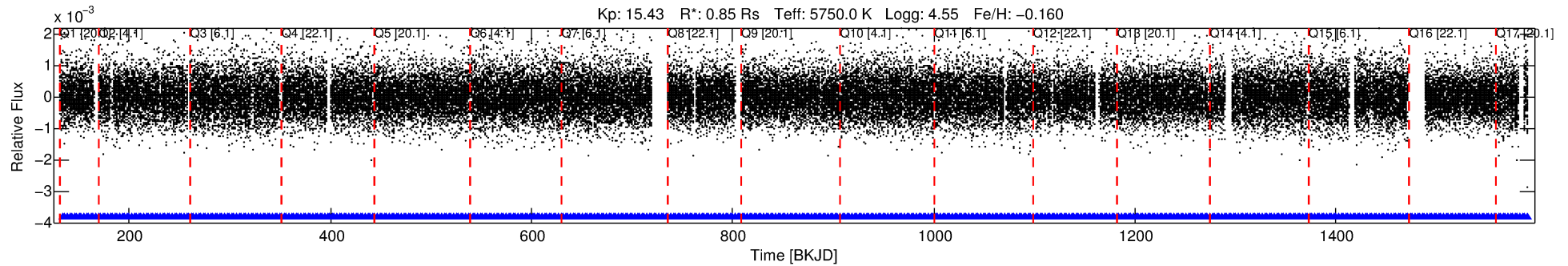
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005892538-01

No Significant Match Found

DV One-Page Summary

KIC: 5892538 Candidate: 1 of 4 Period: 2.372 d



DV Fit Results:

Period = 2.37168 [0.00009] d
Epoch = 133.8254 [0.0299] BKJD
Rp/R* = 0.0088 [0.0009]
a/R* = 1.03 [0.02]
b = 0.97 [0.03]
Seff = 606.41 [235.34]
Teff = 1265 [123] K
Rp = 0.81 [0.25] Re
a = 0.0341 [0.0085] AU
Ag = 35.13 [23.08] [1.48 σ]
Teffp = 4763 [663] K [5.19 σ]

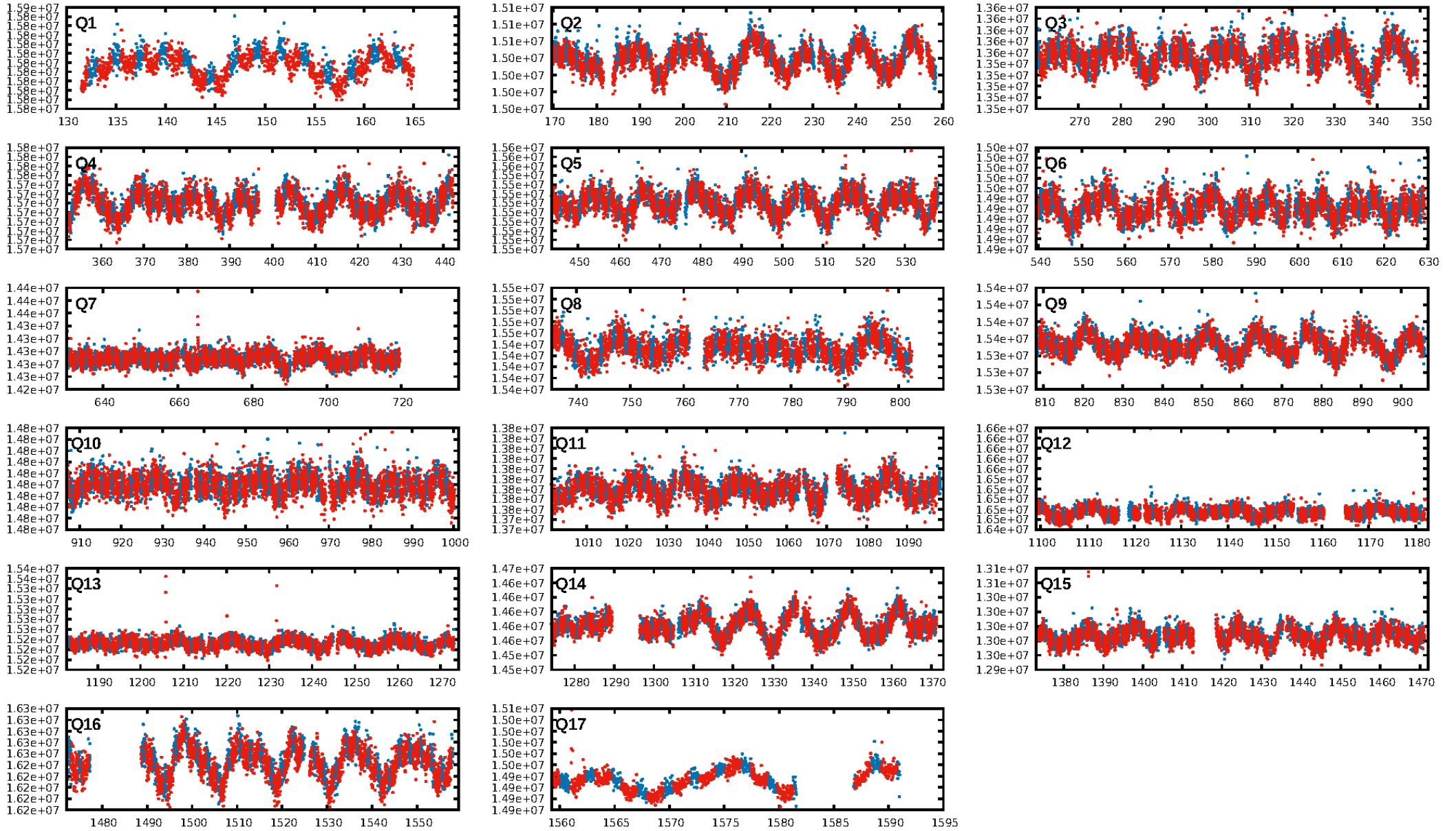
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [41.57 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.62e-36
RollingBand-fgt: 1.00 [555/555]
GhostDiagnostic-chr: 2.179
Centroid-sig: 0.0%
Centroid-so: 6.399 arcsec [7.56 σ]
OotOffset-rm: 2.040 arcsec [4.81 σ]
KicOffset-rm: 0.459 arcsec [1.85 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [17/17]

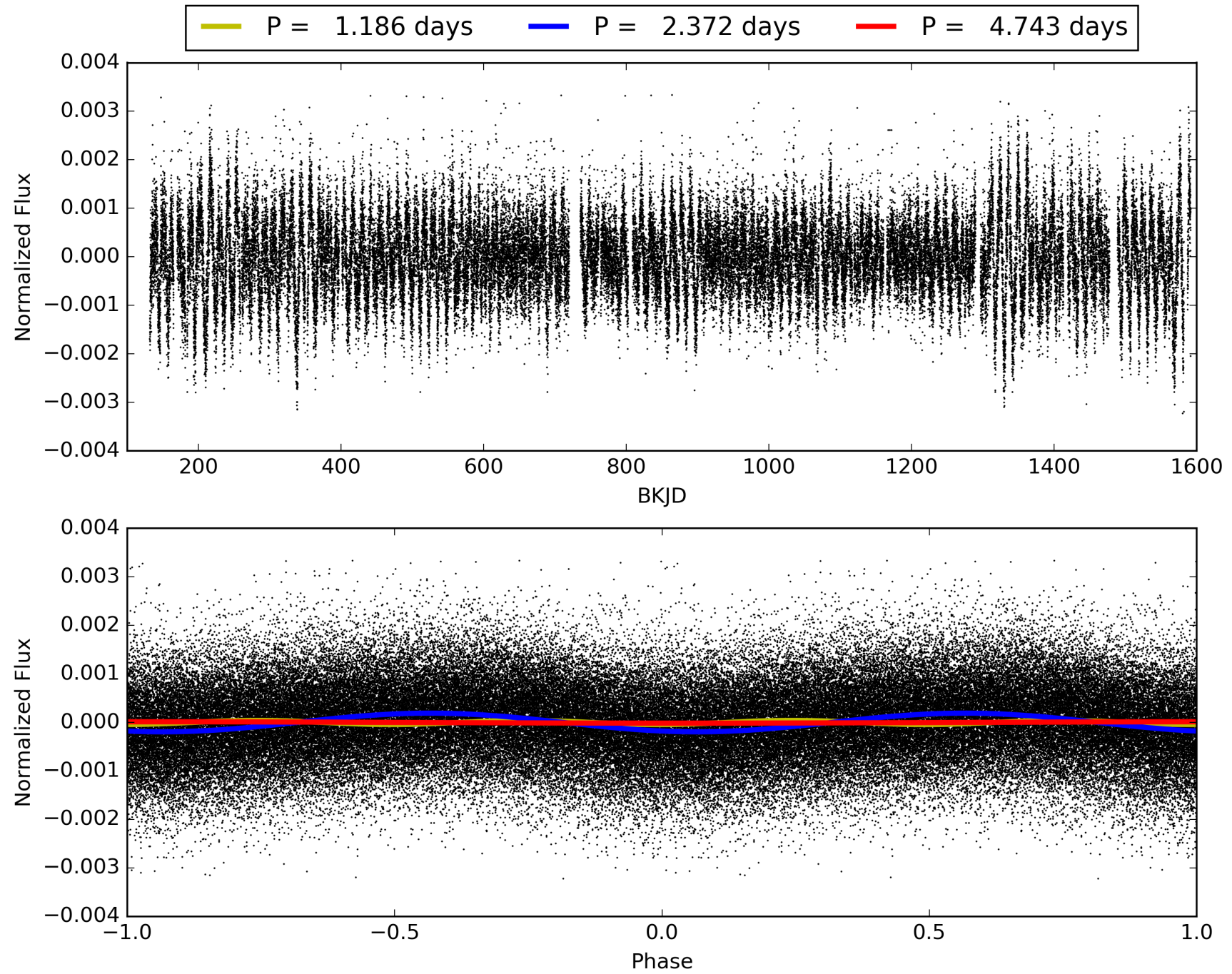
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005892538-01, PDC Light Curves

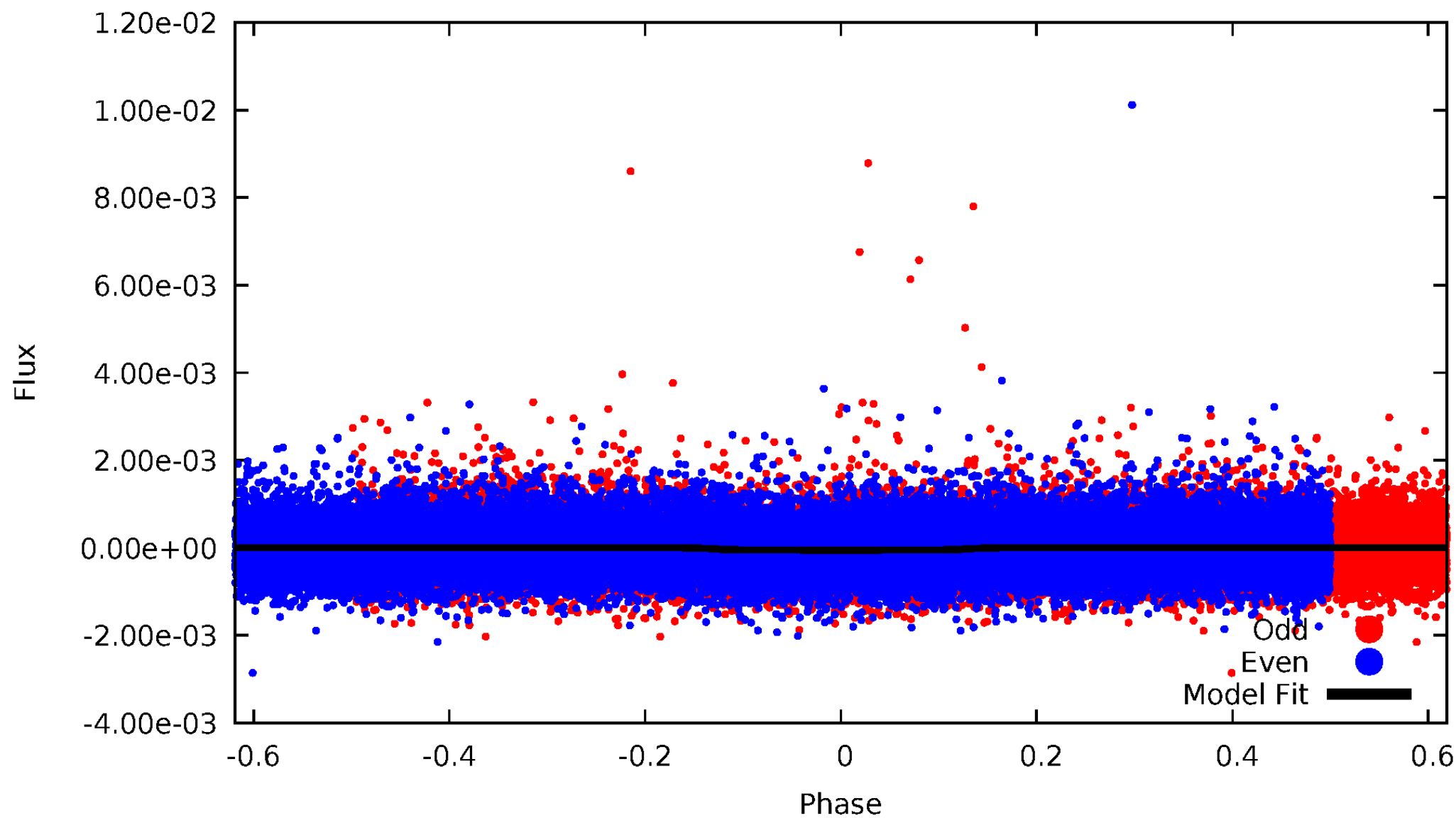


TCE 005892538-01



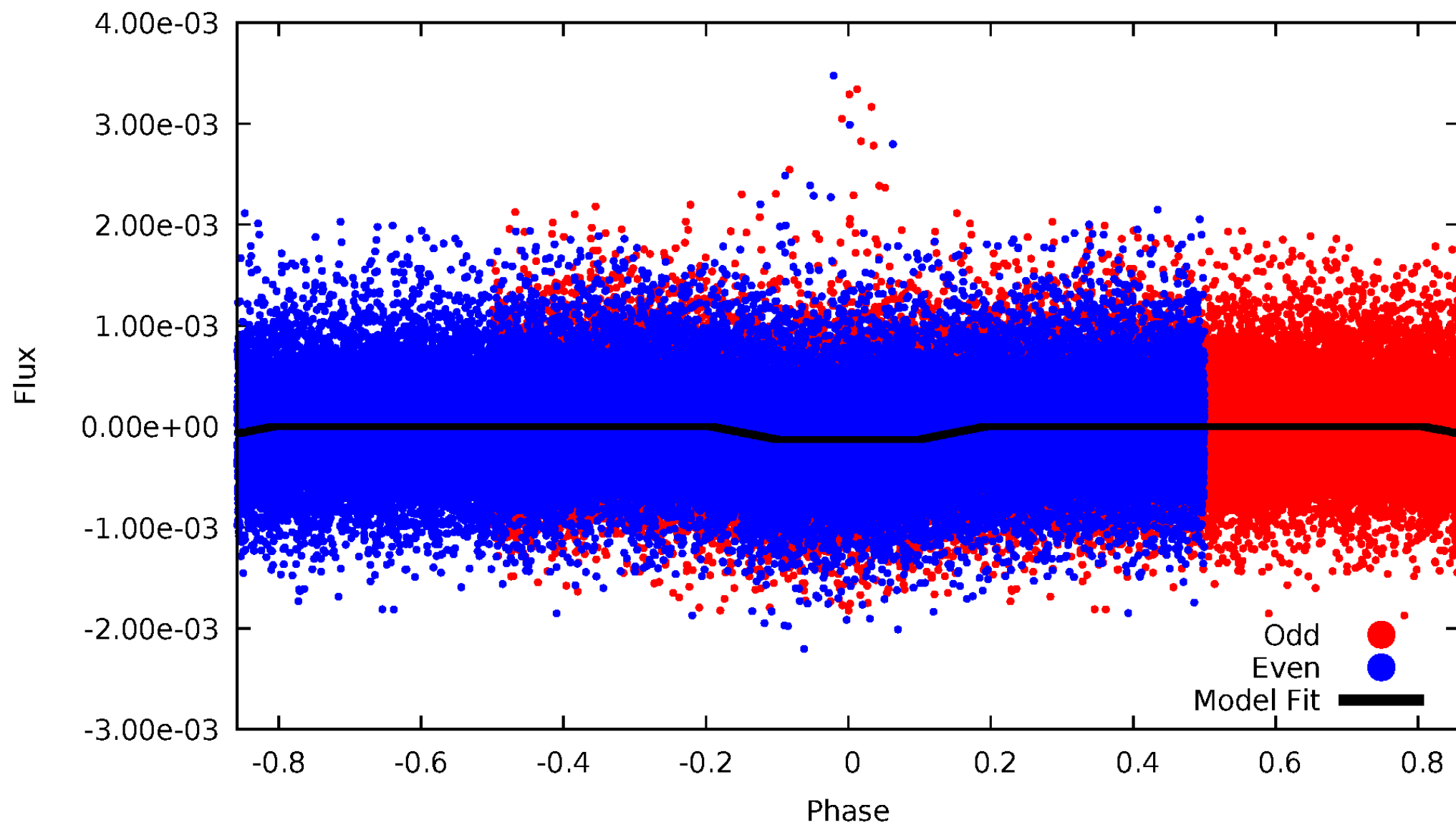
DV Odd/Even

TCE 005892538-01

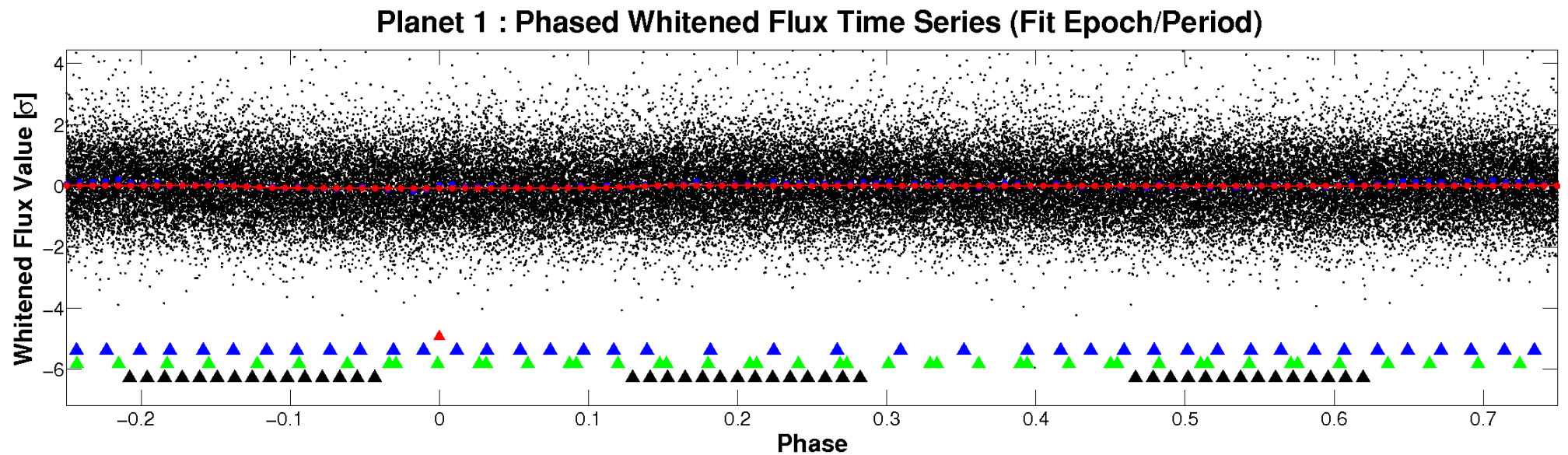
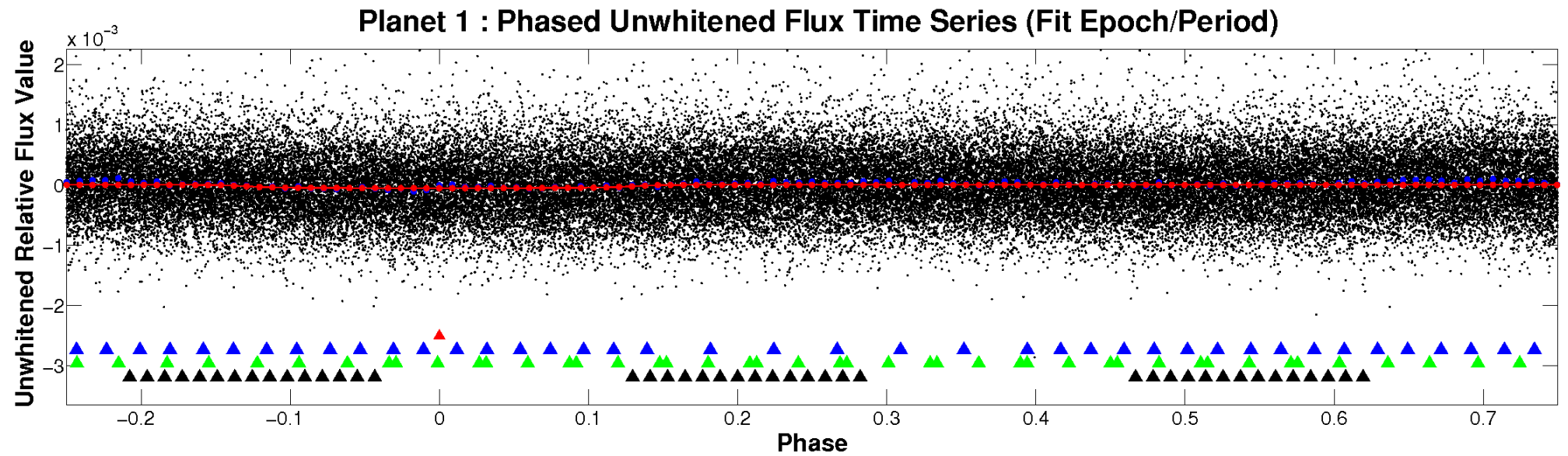


ALT Odd/Even

TCE 005892538-01

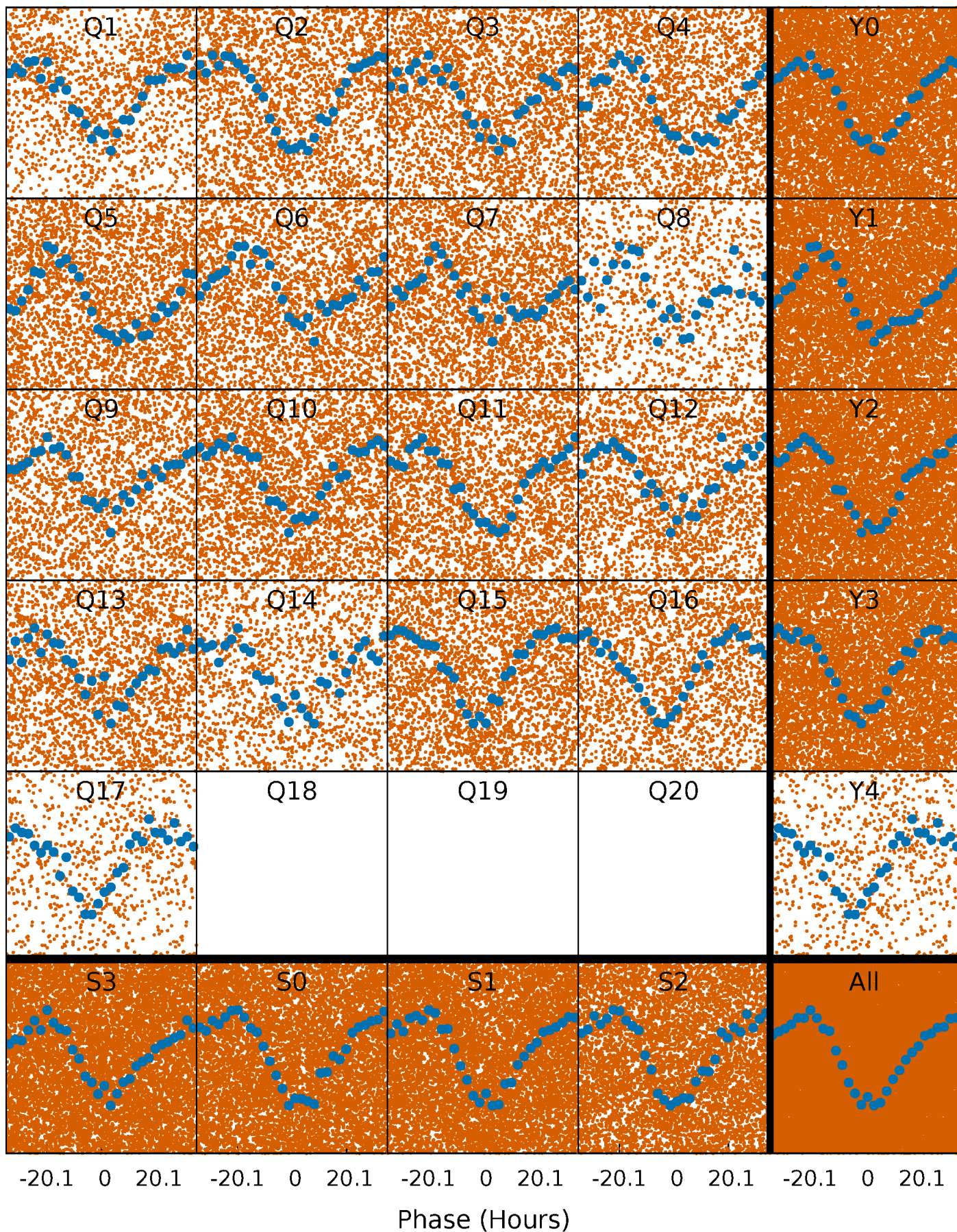


Non-Whitened Vs. Whitened Light Curve



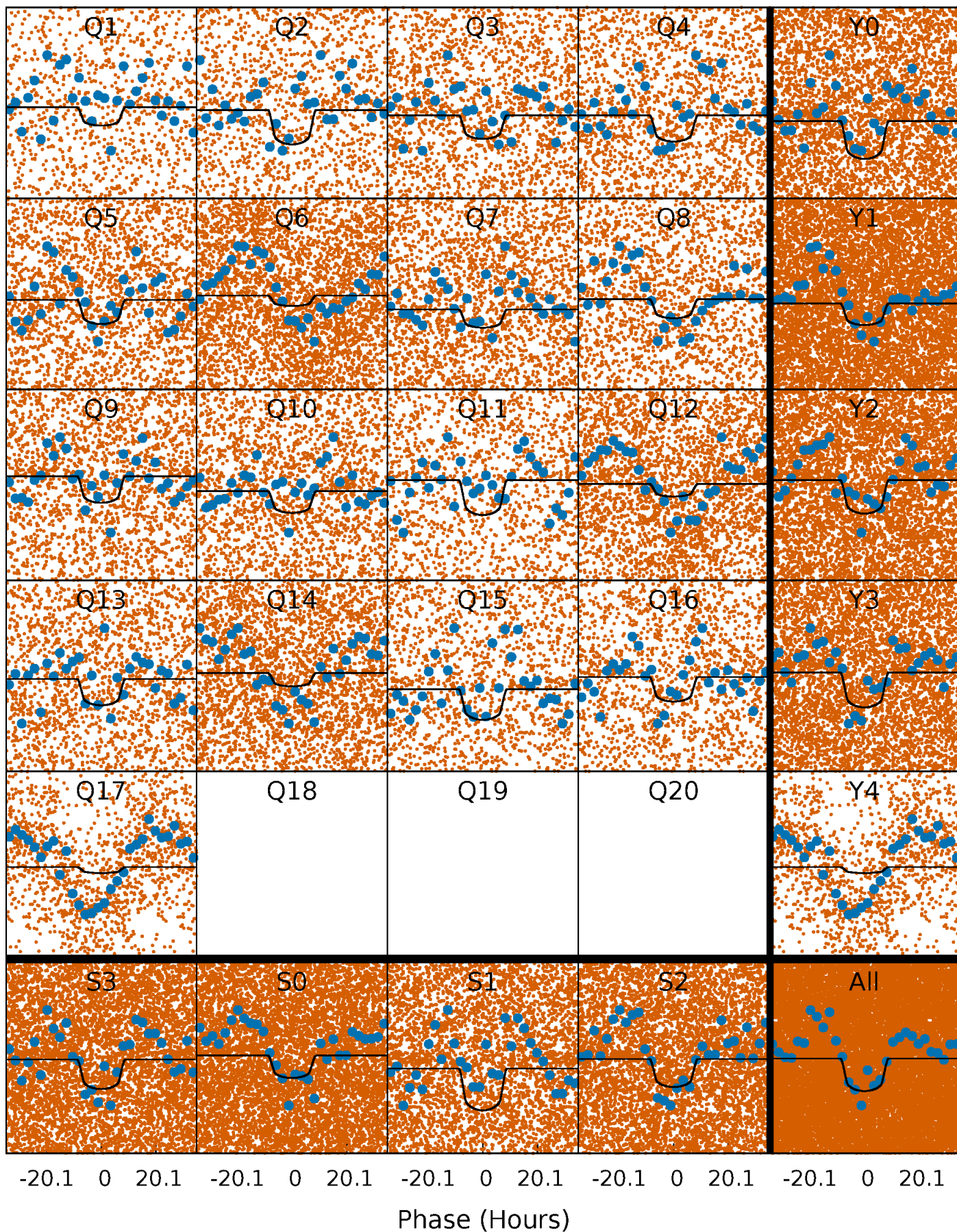
PDC Quarter-Phased Transit Curves

TCE 005892538-01 P= 2.371675 Days $T_0=133.825360$ (BKJD)



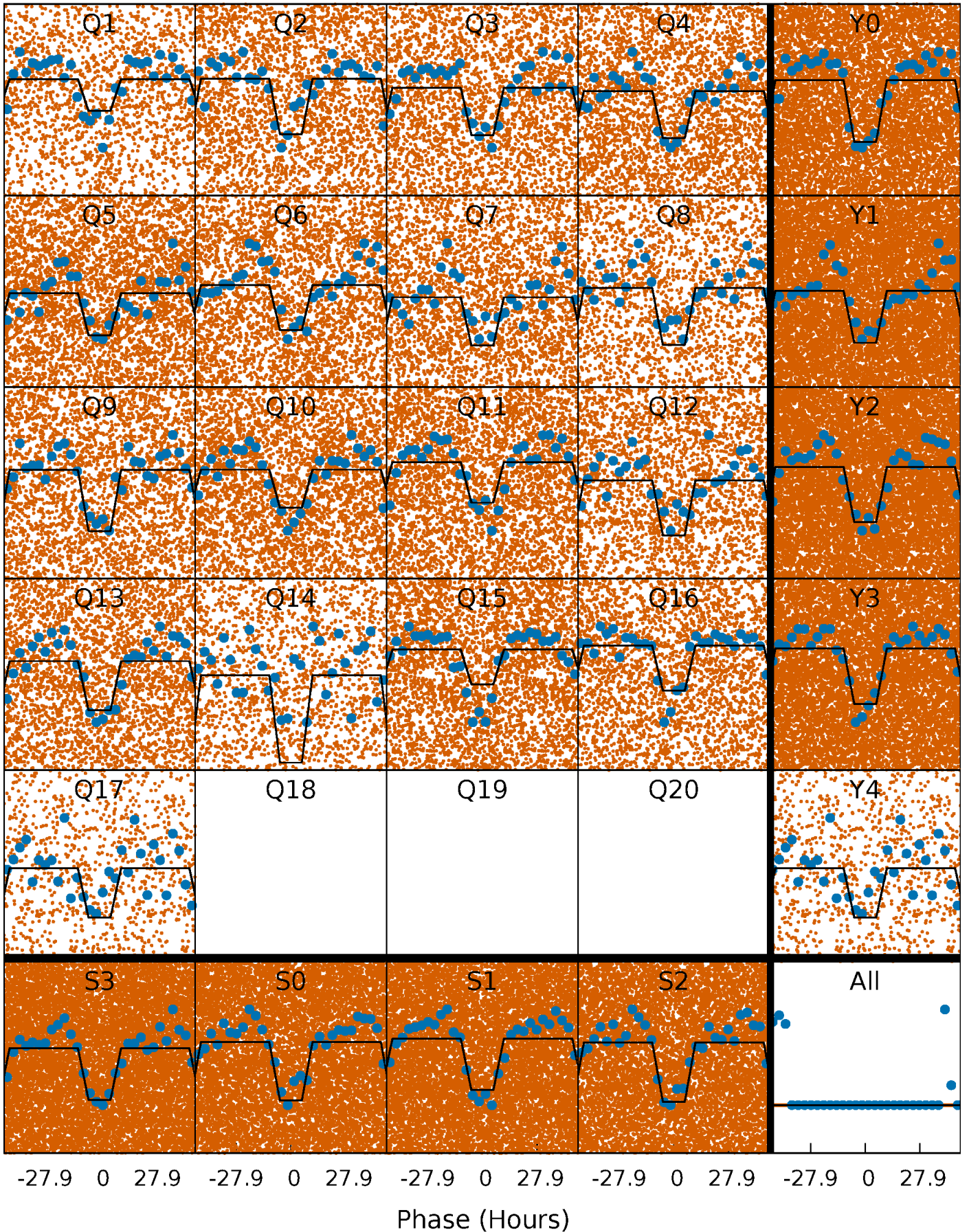
DV Quarter-Phased Transit Curves

TCE 005892538-01 P= 2.371675 Days $T_0=133.825360$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

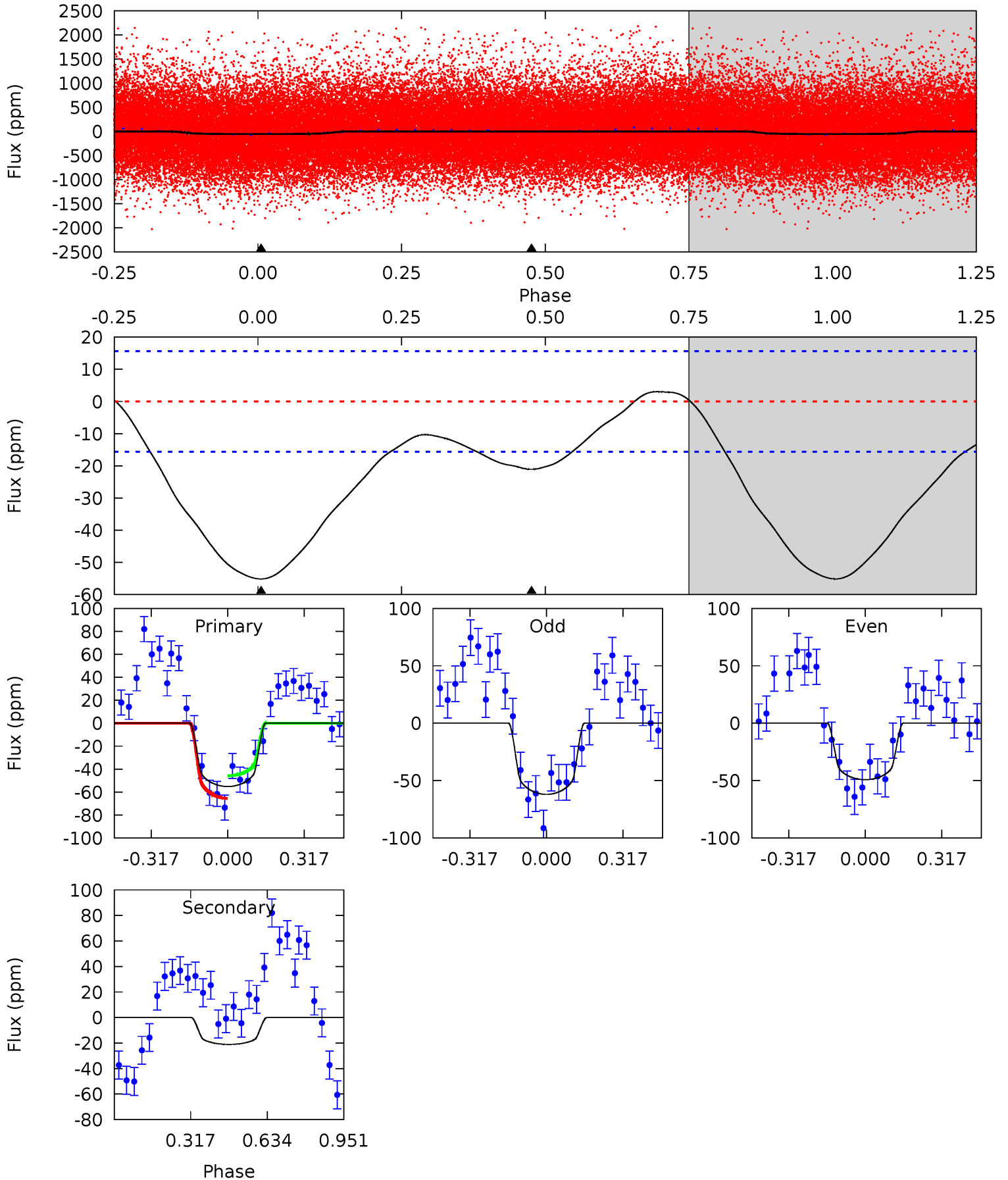
TCE 005892538-01 P= 2.371592 Days $T_0=133.864803$ (BKJD)



DV Model-Shift Uniqueness Test

005892538-01, P = 2.371675 Days, E = 131.453685 Days

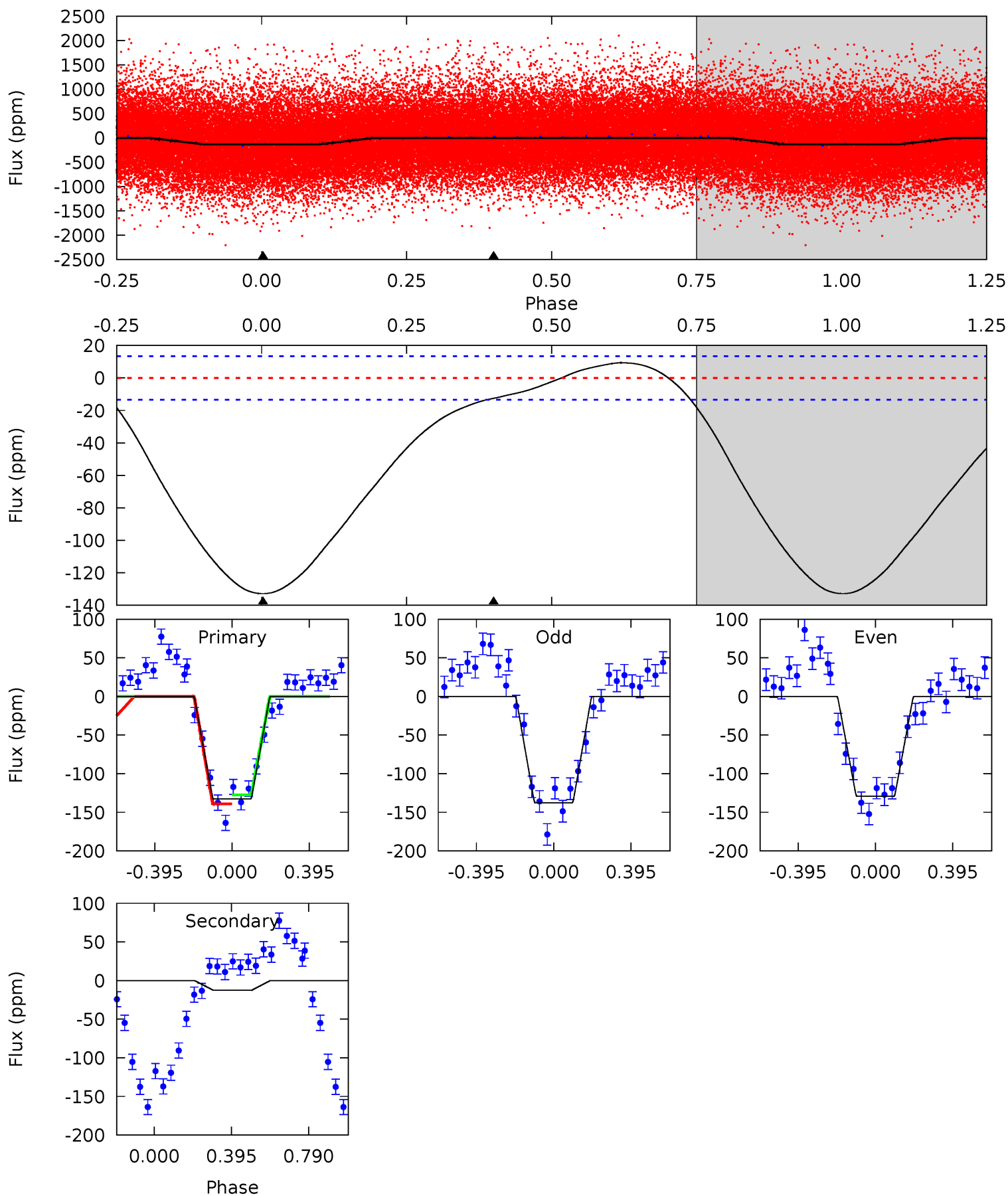
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	5.82	0	0	4.32	1.00	1.84	15.2	15.2	5.82	5.82	1.76	1.16	0.05	2.77



Alt Model-Shift Uniqueness Test

005892538-01, P = 2.371592 Days, E = 131.493211 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.4	4.00	0	0	4.27	0.85	2.55	42.4	42.4	4.00	4.00	1.35	0.97	0.07	1.82



Stellar Parameters For KIC 005892538

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5750^{+172}_{-172}	$4.554^{+0.036}_{-0.204}$	$-0.160^{+0.300}_{-0.300}$	$0.849^{+0.249}_{-0.083}$	$0.945^{+0.106}_{-0.118}$	$2.174^{+0.437}_{-1.138}$
	+3%/-3%	+1%/-4%	+188%/-188%	+29%/-10%	+11%/-12%	+20%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005892538-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-21 ± 4	$0.85^{+0.14}_{-0.12}$	1814^{+115}_{-82}	4354^{+259}_{-233}	18^{+6}_{-5}
Alt.	-13 ± 3	$1.11^{+0.18}_{-0.12}$	1811^{+136}_{-85}	3577^{+214}_{-178}	$6.152^{+2.415}_{-1.946}$

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 $A_{obs} \gg 1.0$

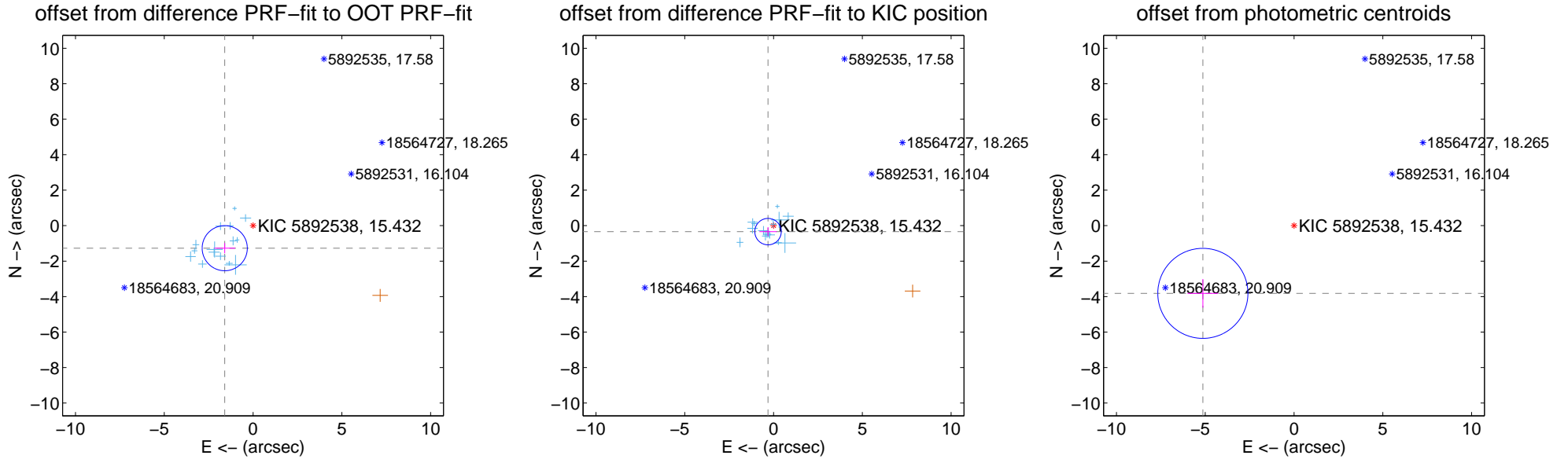
DV Centroid Data

Supplemental centroid analysis for 005892538-01. Kepler magnitude: 15.43. Transit SNR 9.12

There are 15 quarters with good PRF difference image offsets

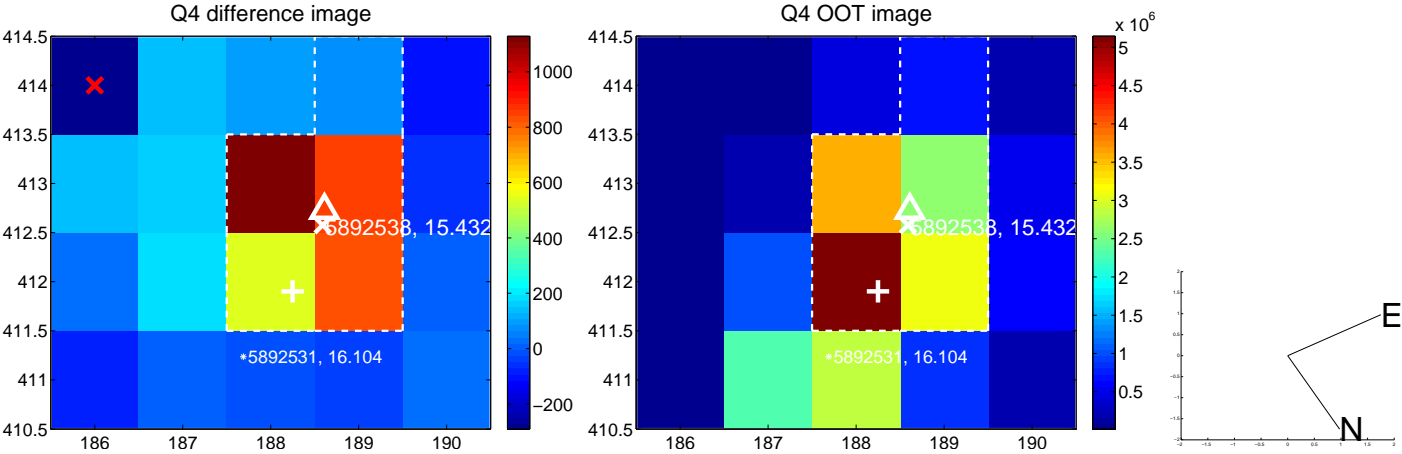
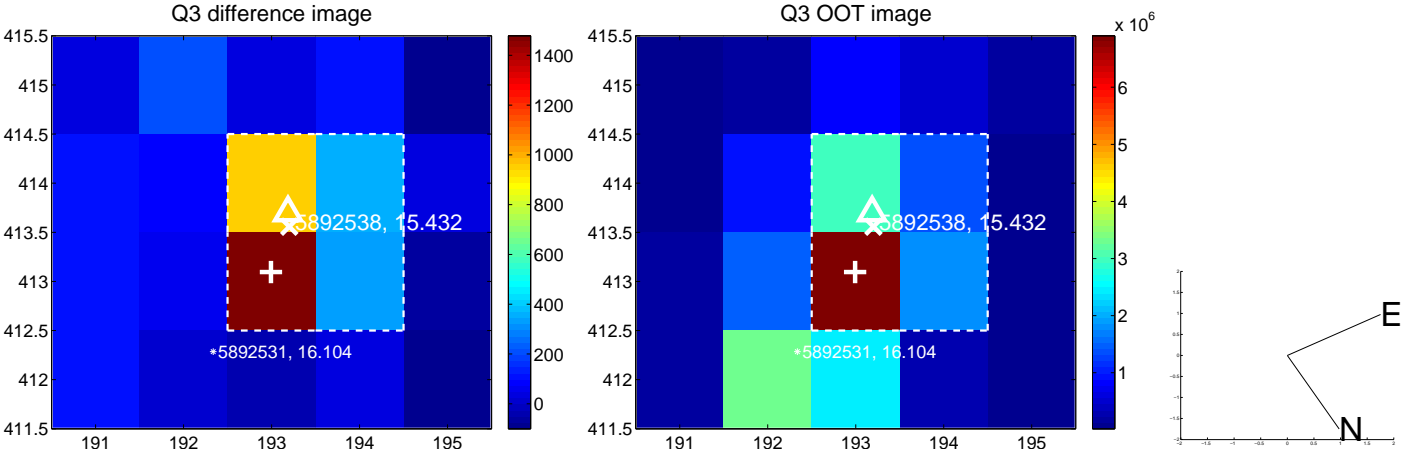
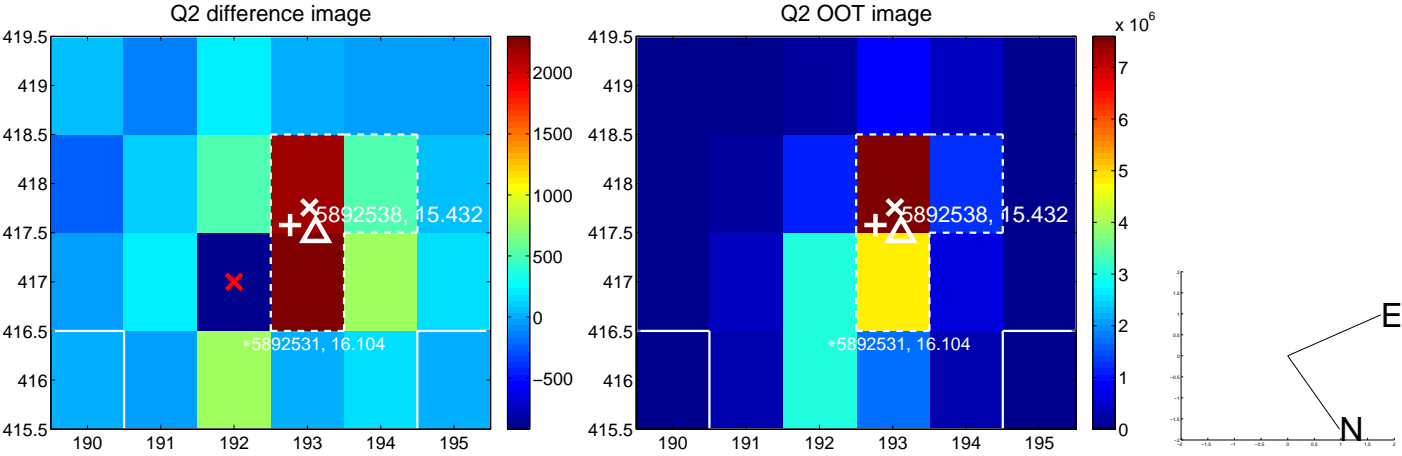
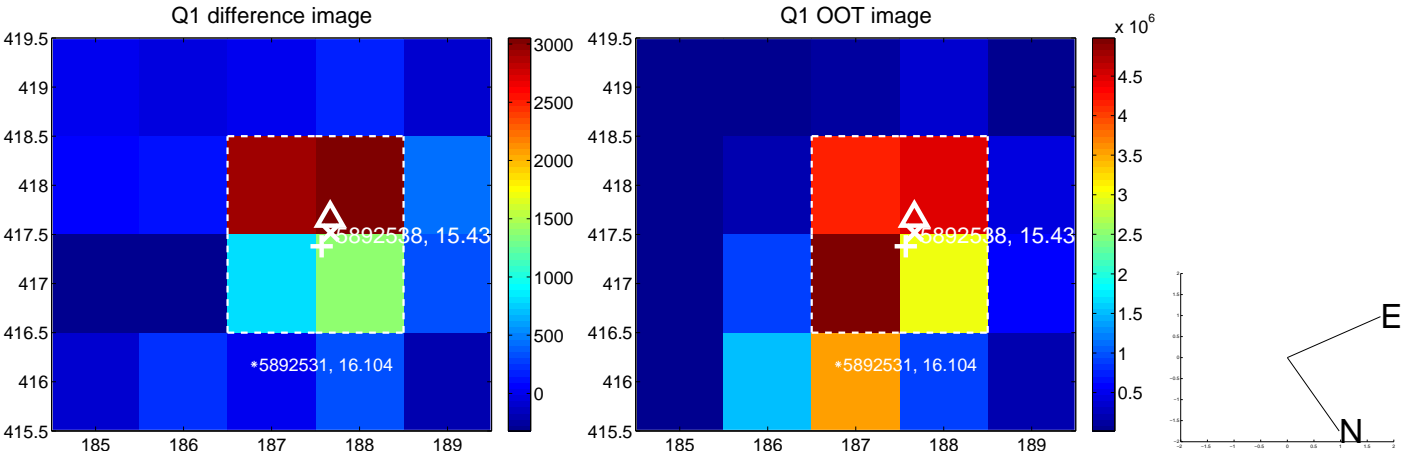
The OOT PRF centroid is offset from the target star catalog position by about 2.69 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.040 ± 0.424	4.81	1.596 ± 0.588	-1.271 ± 0.290
PRF-fit source offset from KIC position	0.459 ± 0.248	1.85	0.311 ± 0.490	-0.337 ± 0.254
photometric centroid source offset	6.40 ± 0.85	7.56	5.14 ± 0.87	-3.82 ± 0.81

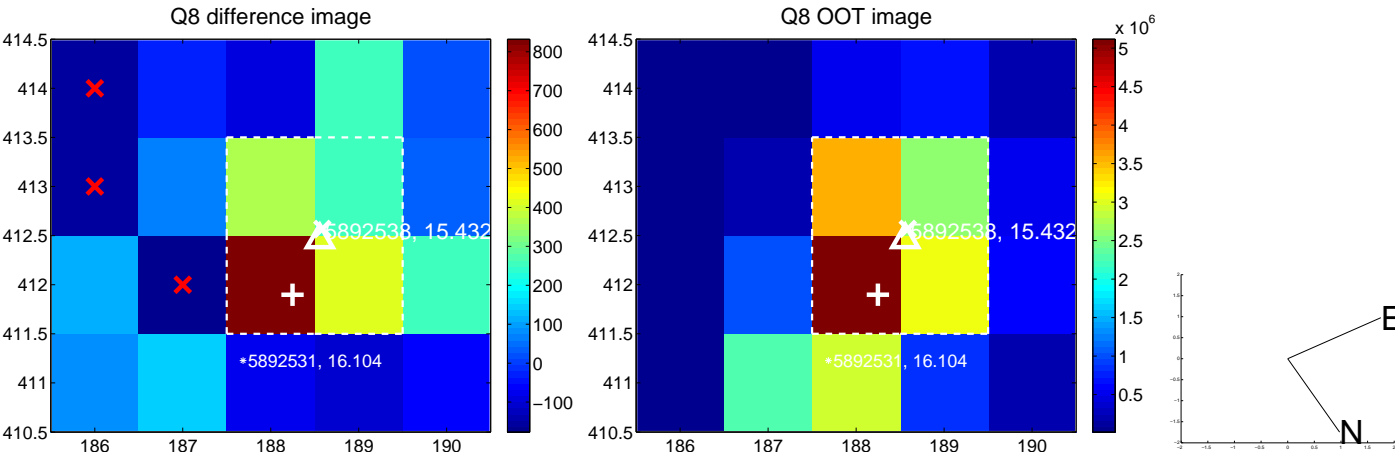
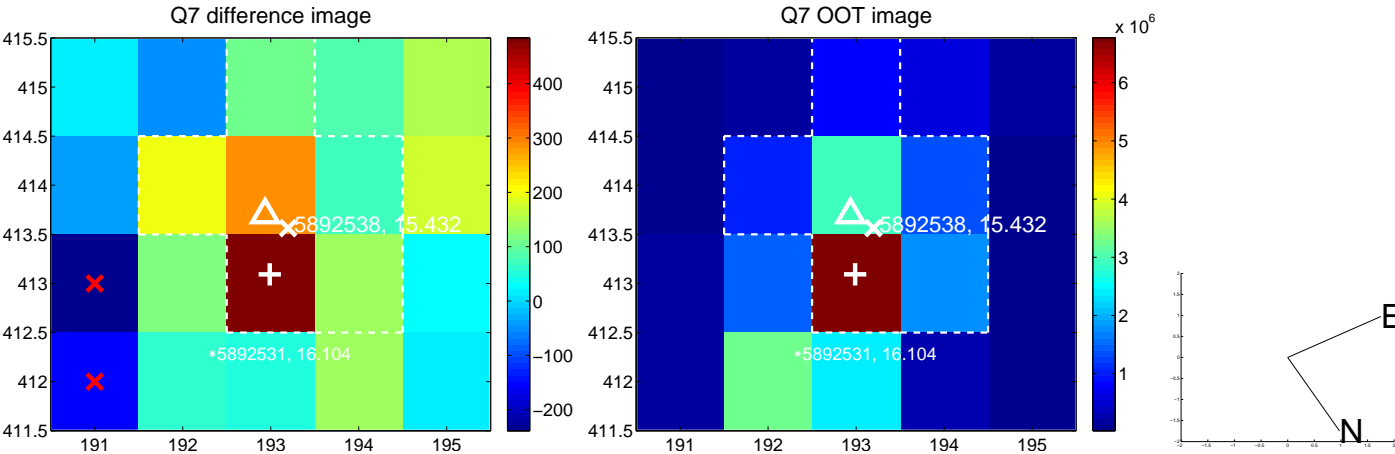
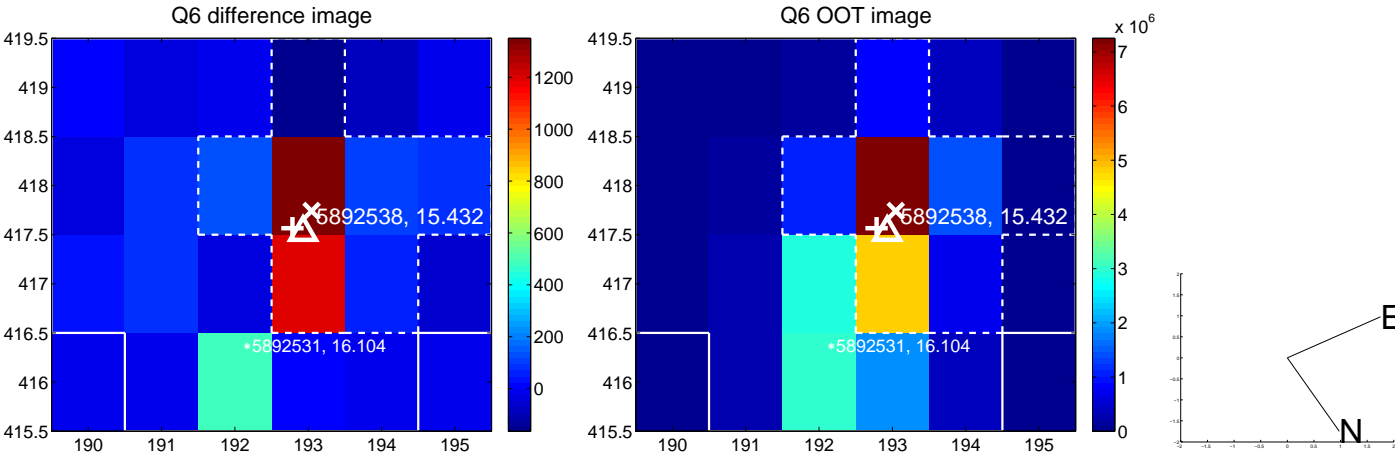
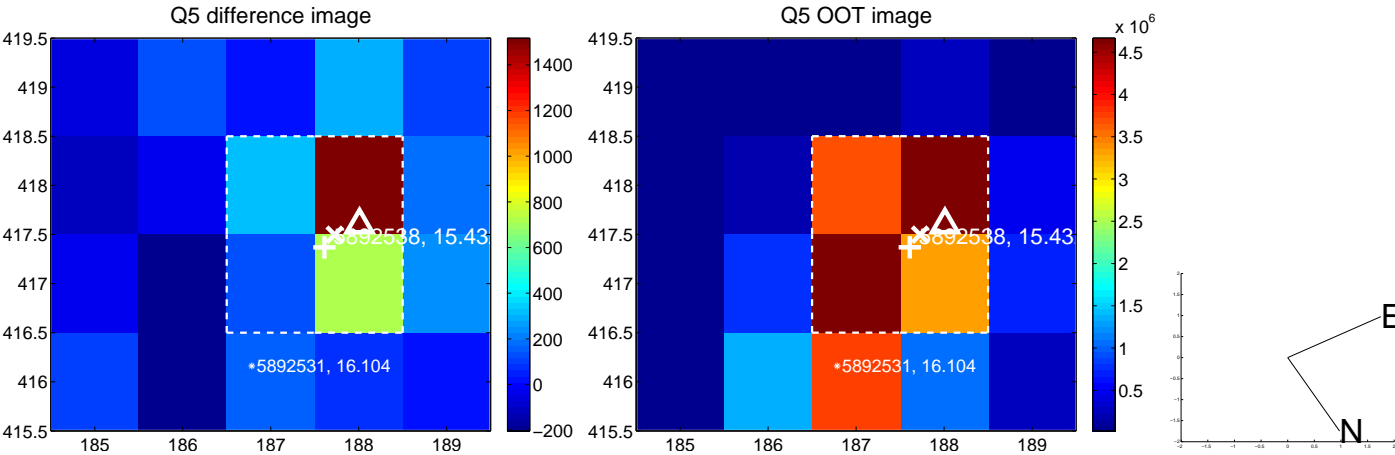


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

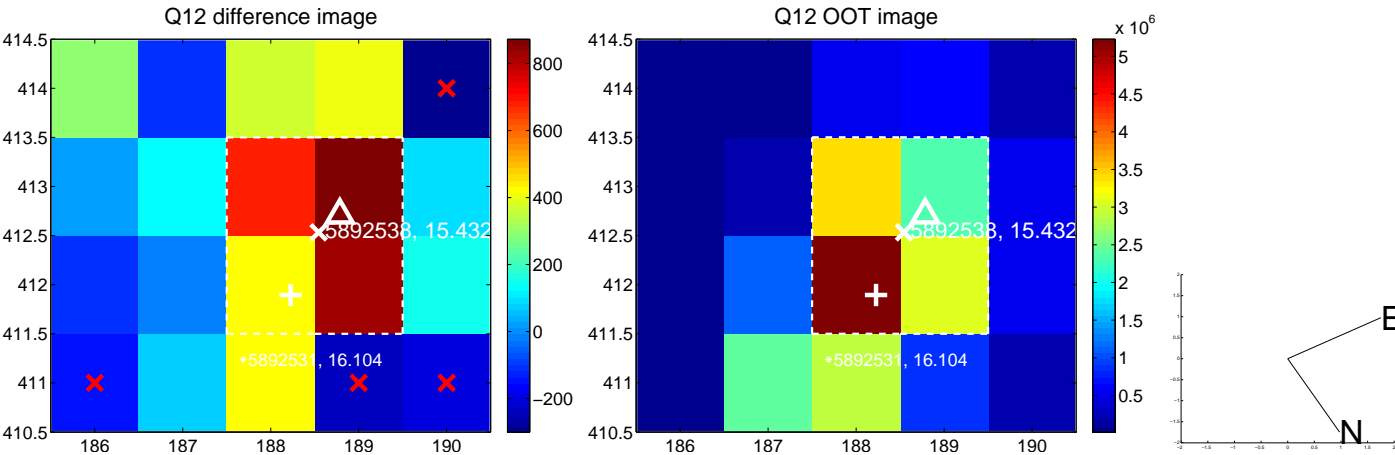
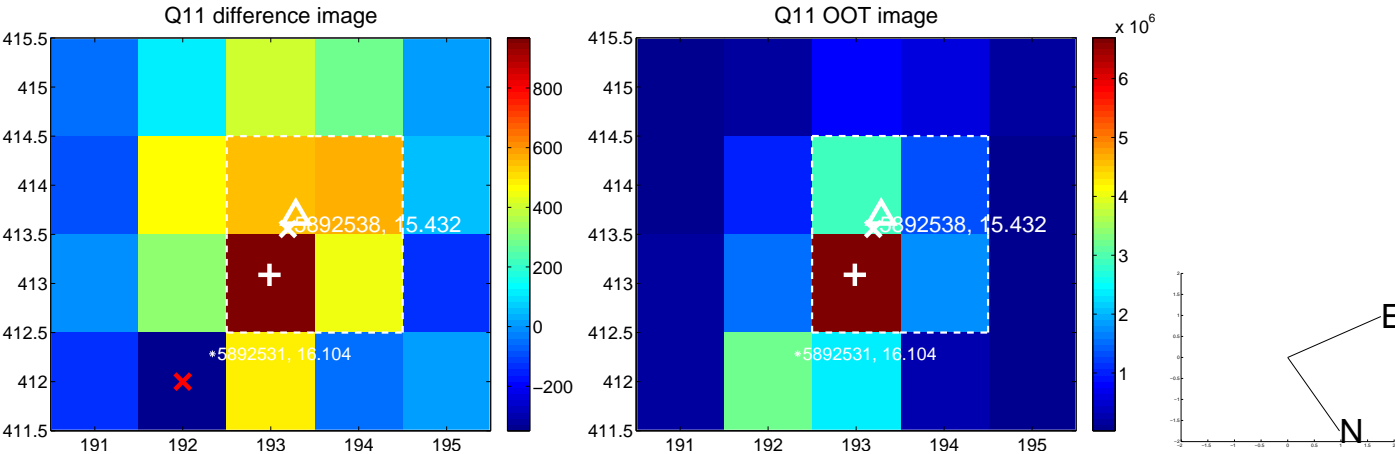
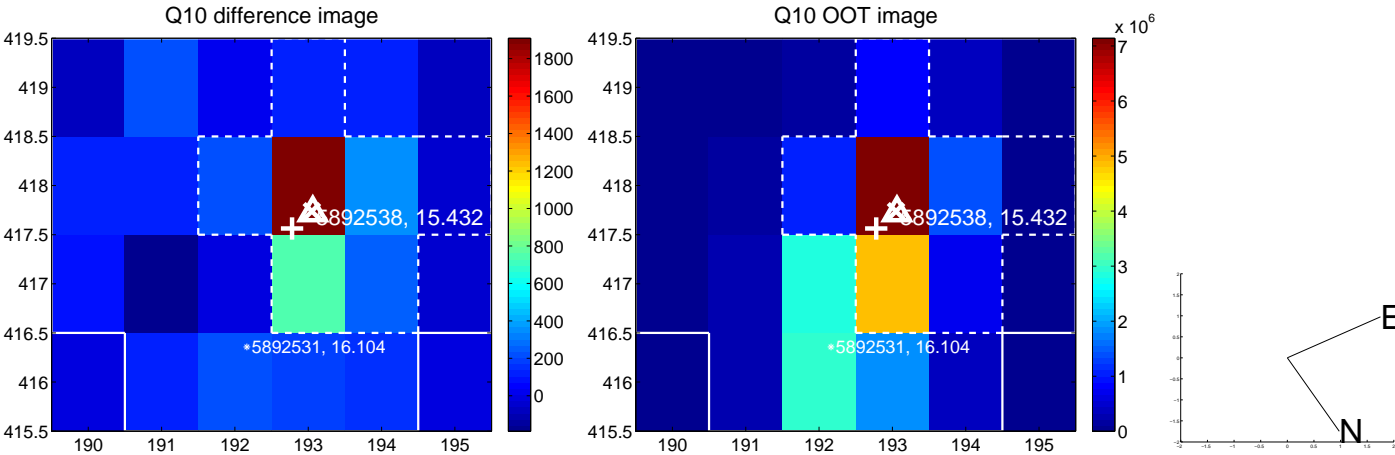
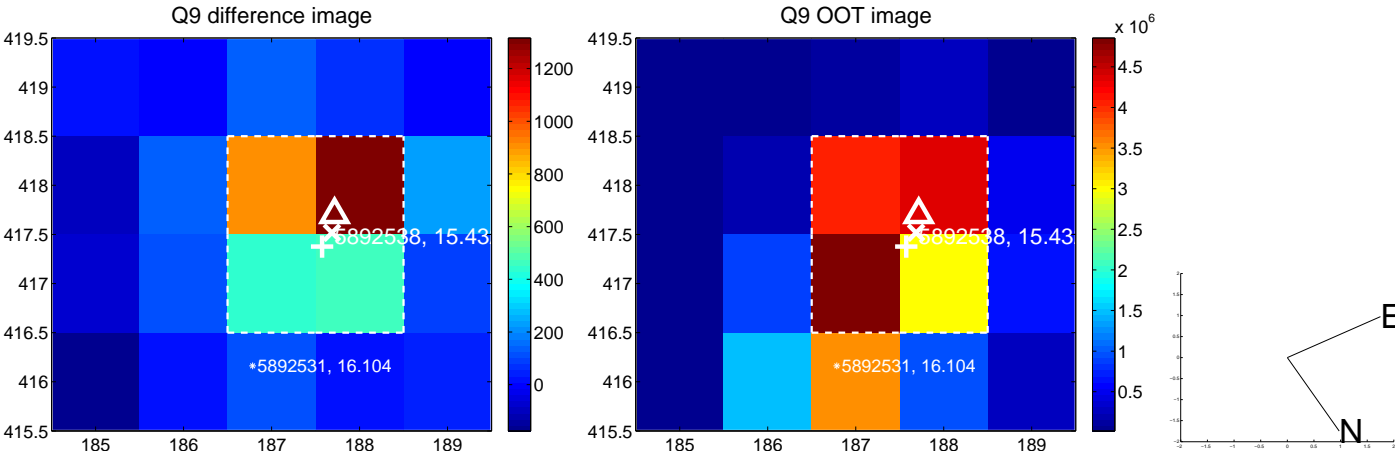
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



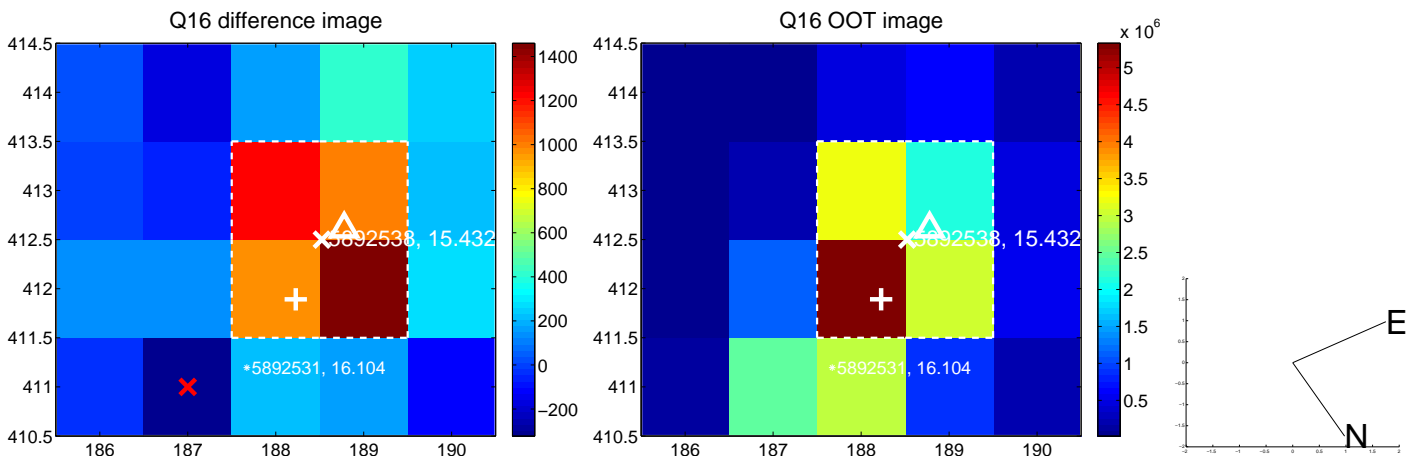
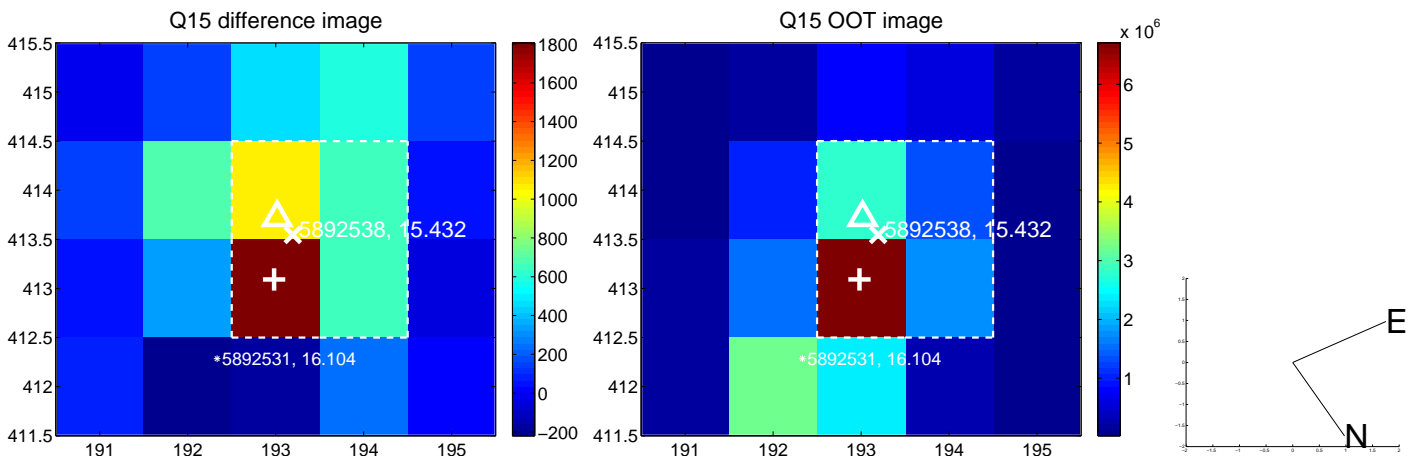
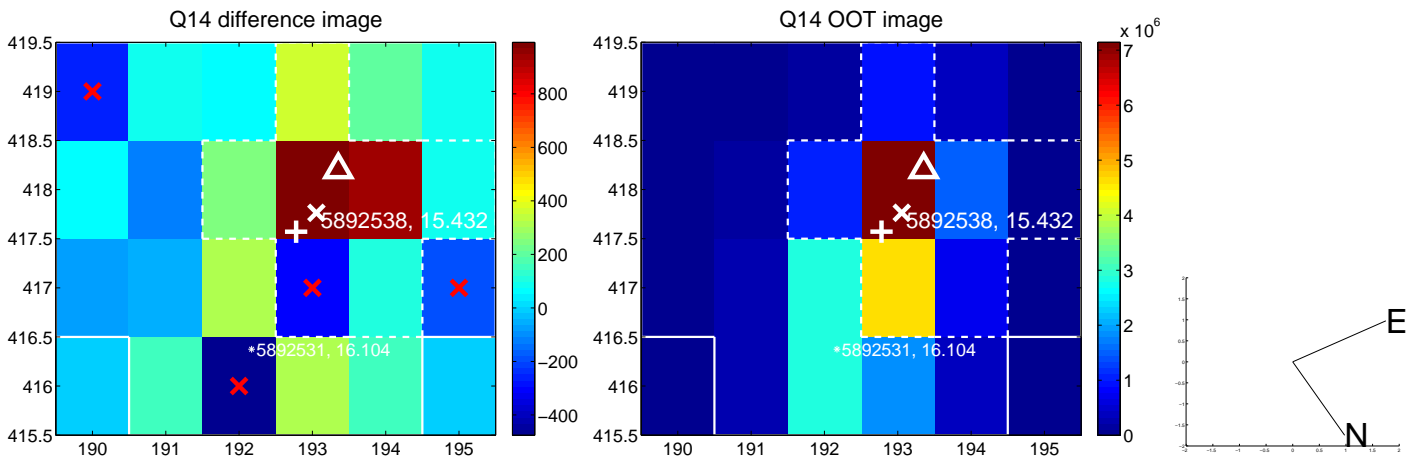
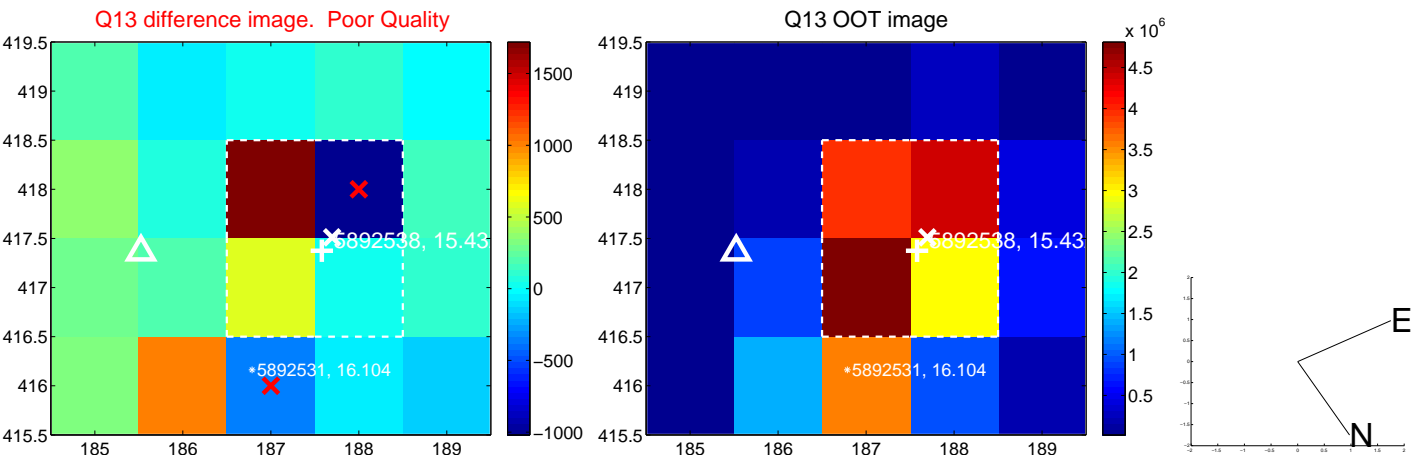
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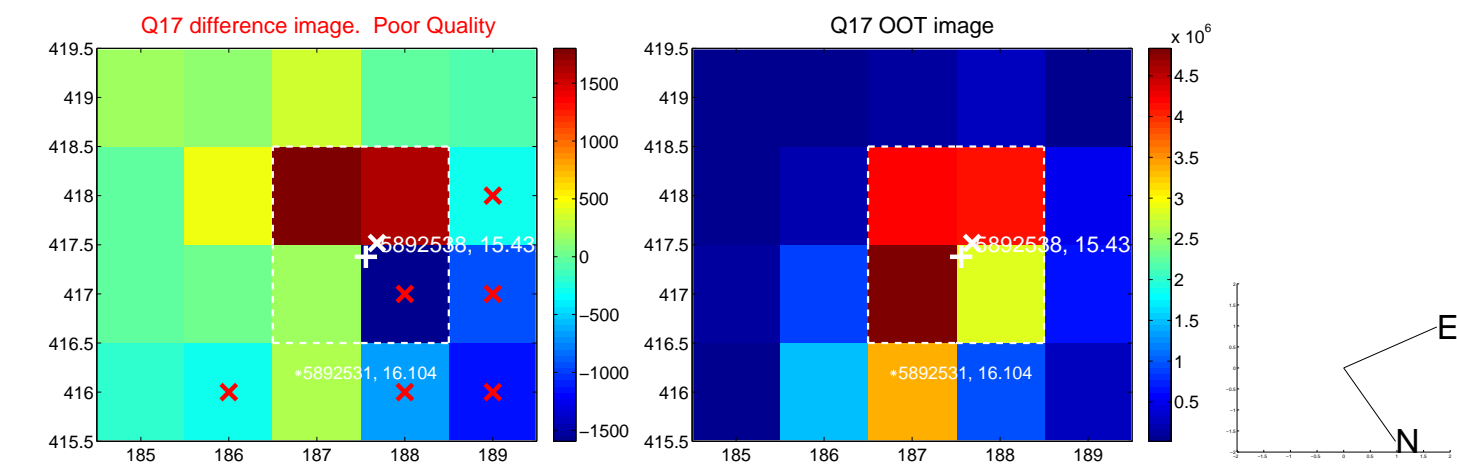
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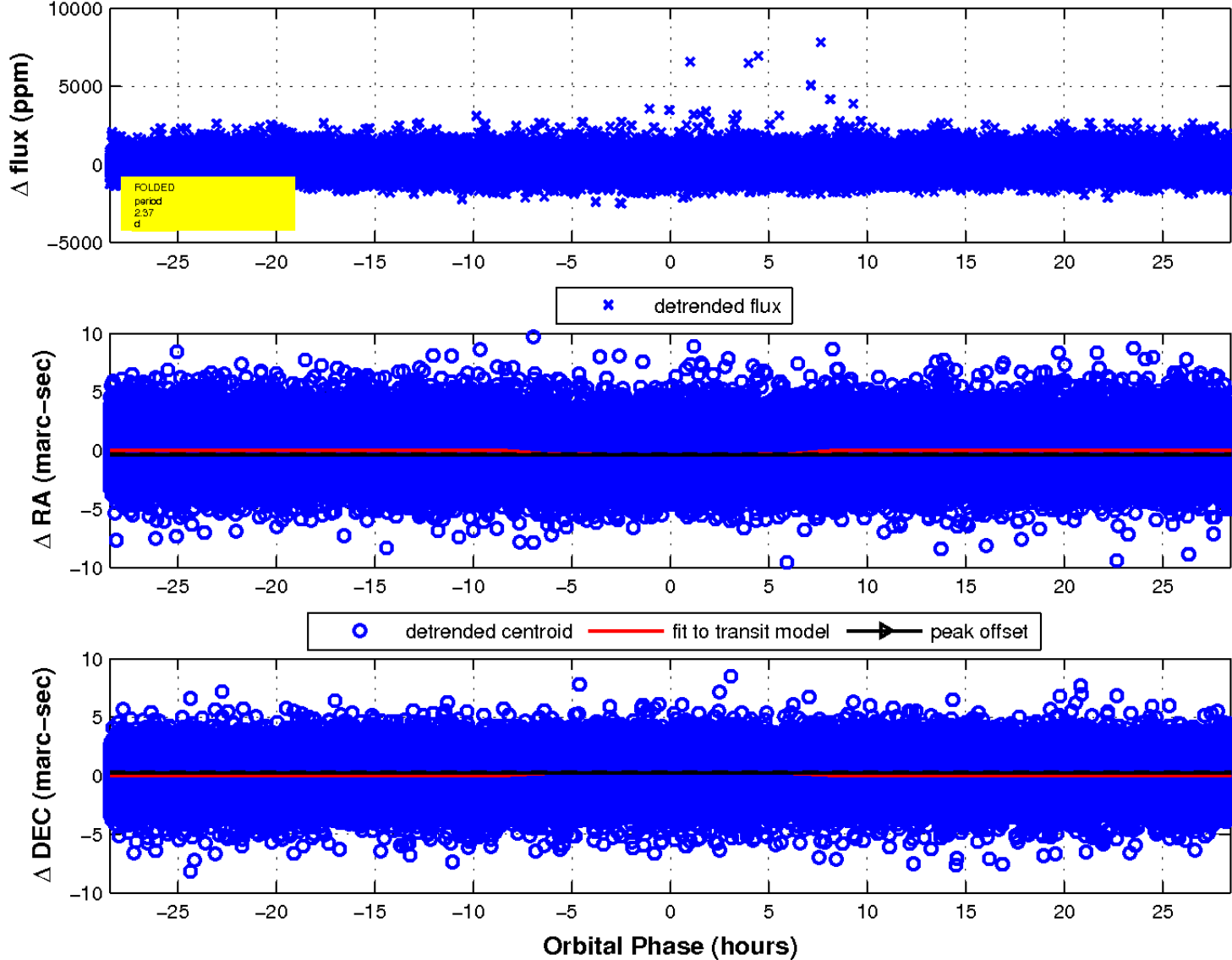
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



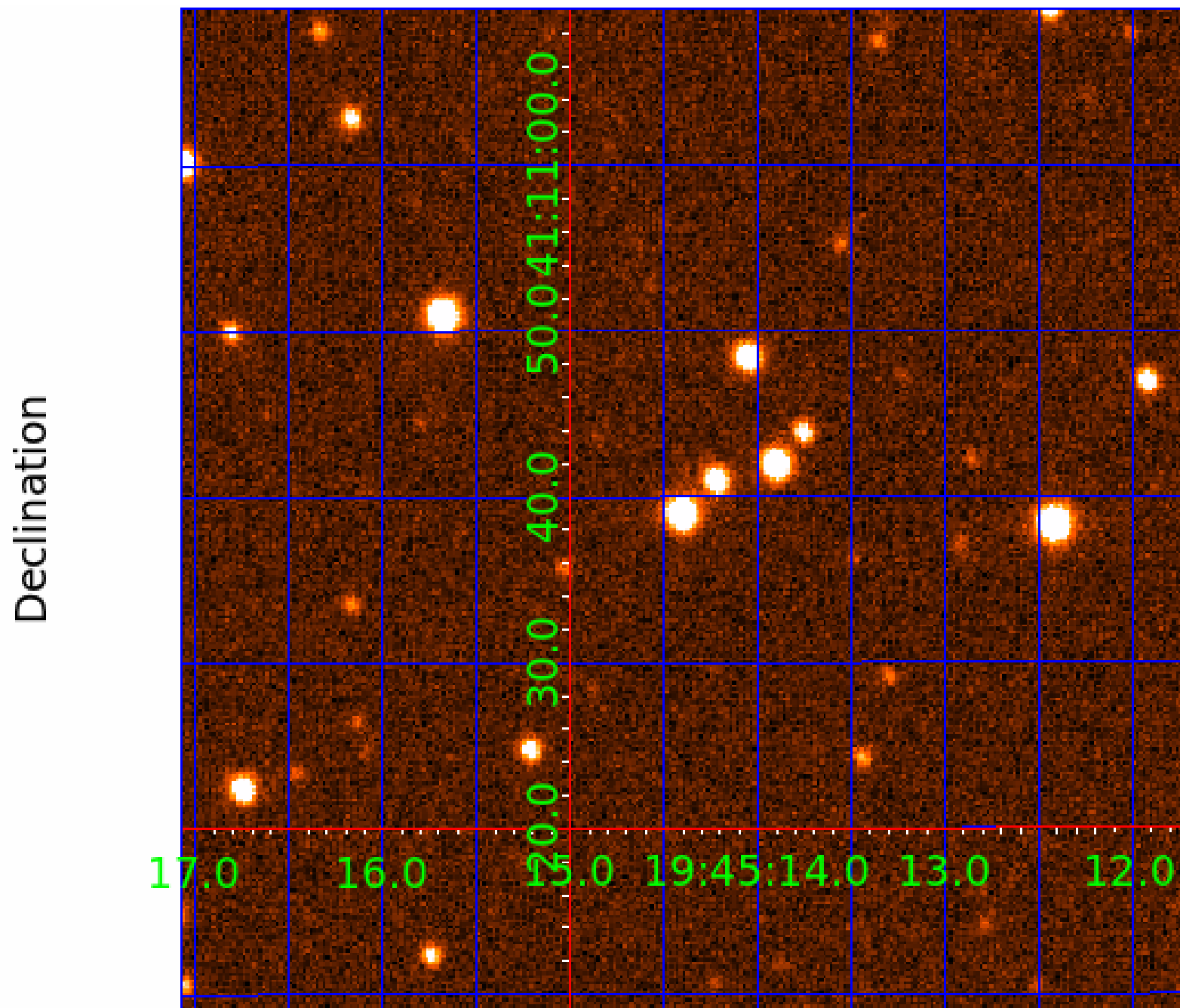
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 4



UKIRT Image



KIC 005892538

Q1-17 DR25 TCE Parameters

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005892538-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
005892538-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_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.

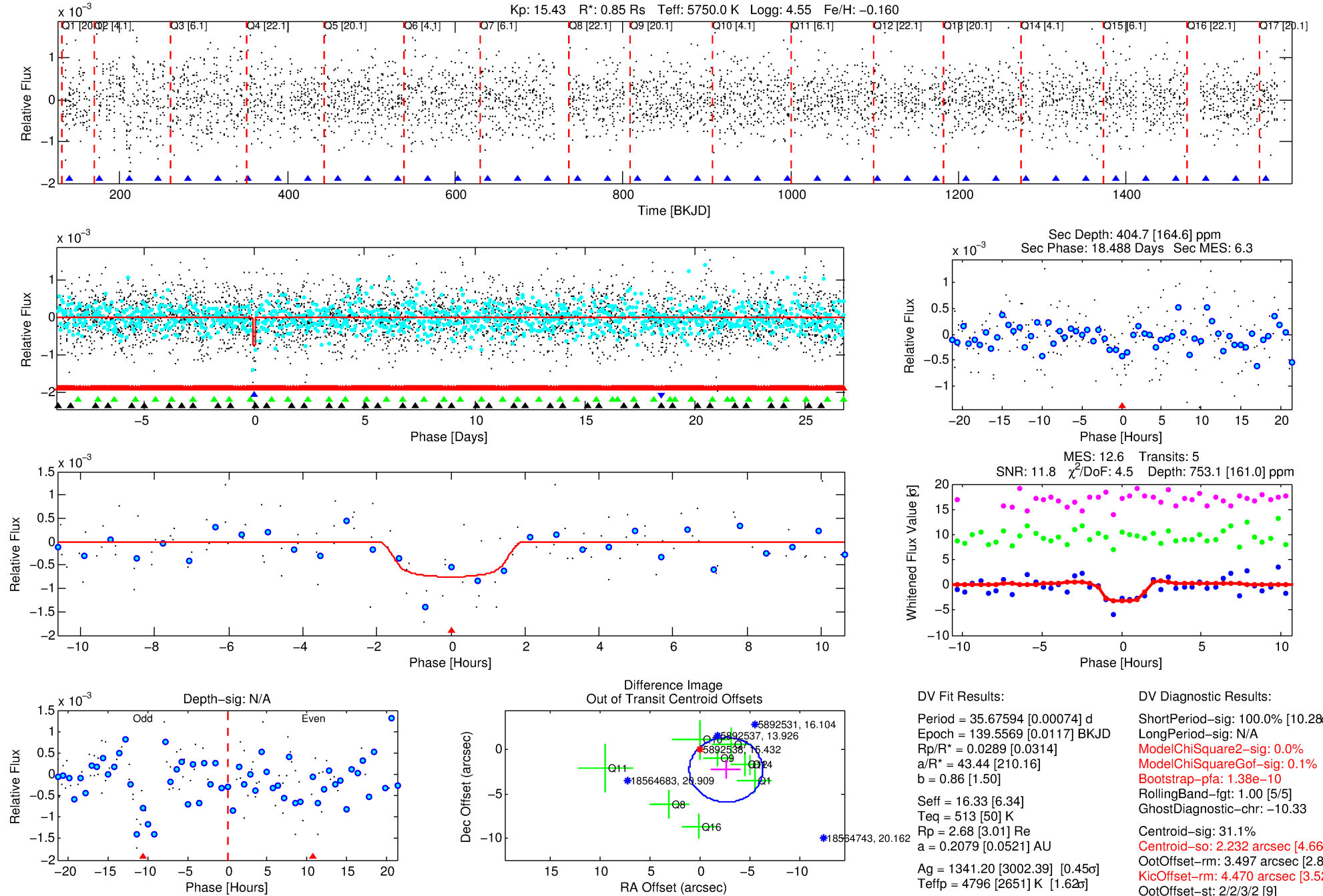
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005892538-02

No Significant Match Found

DV One-Page Summary

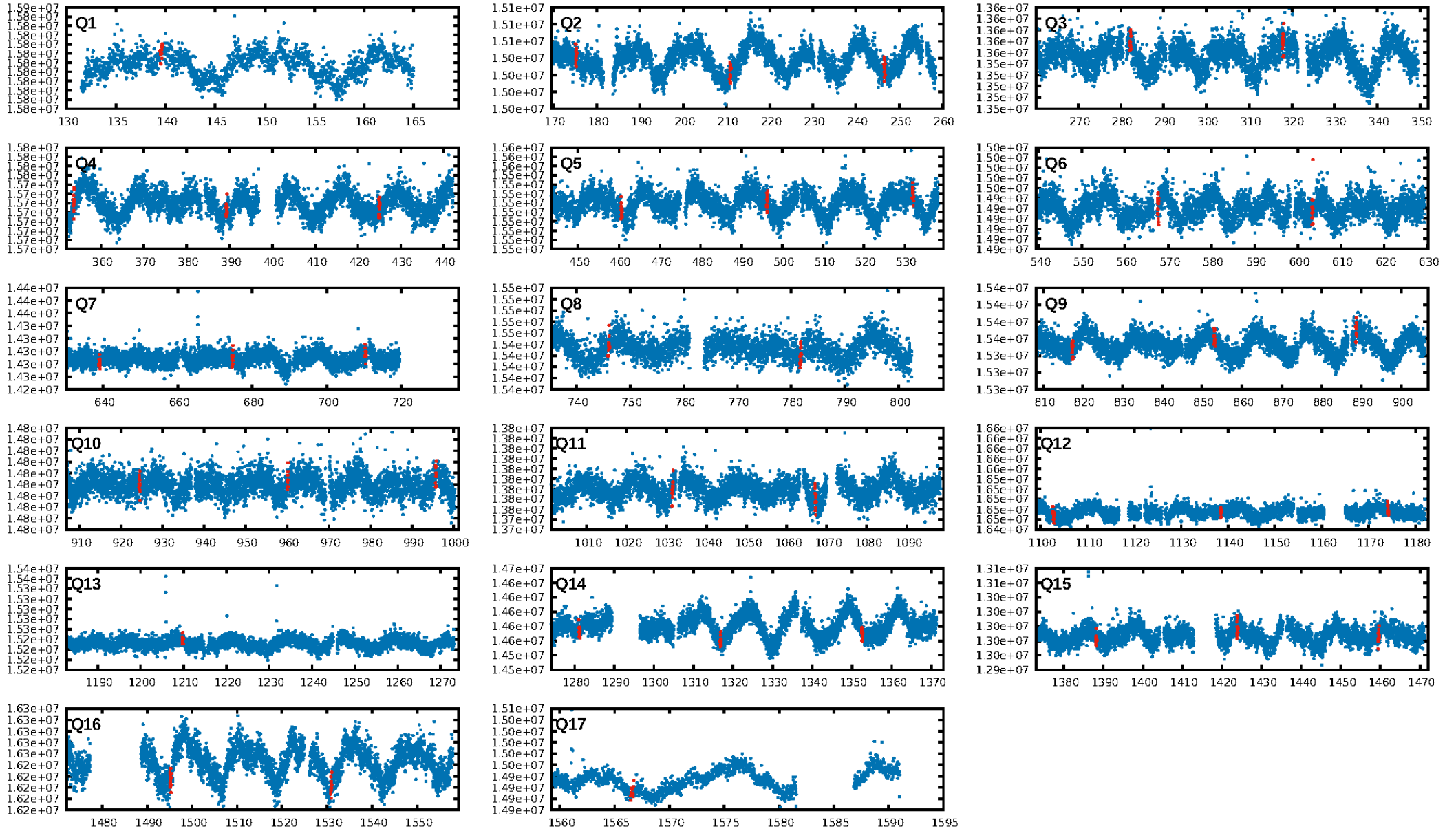
KIC: 5892538 Candidate: 2 of 4 Period: 35.676 d



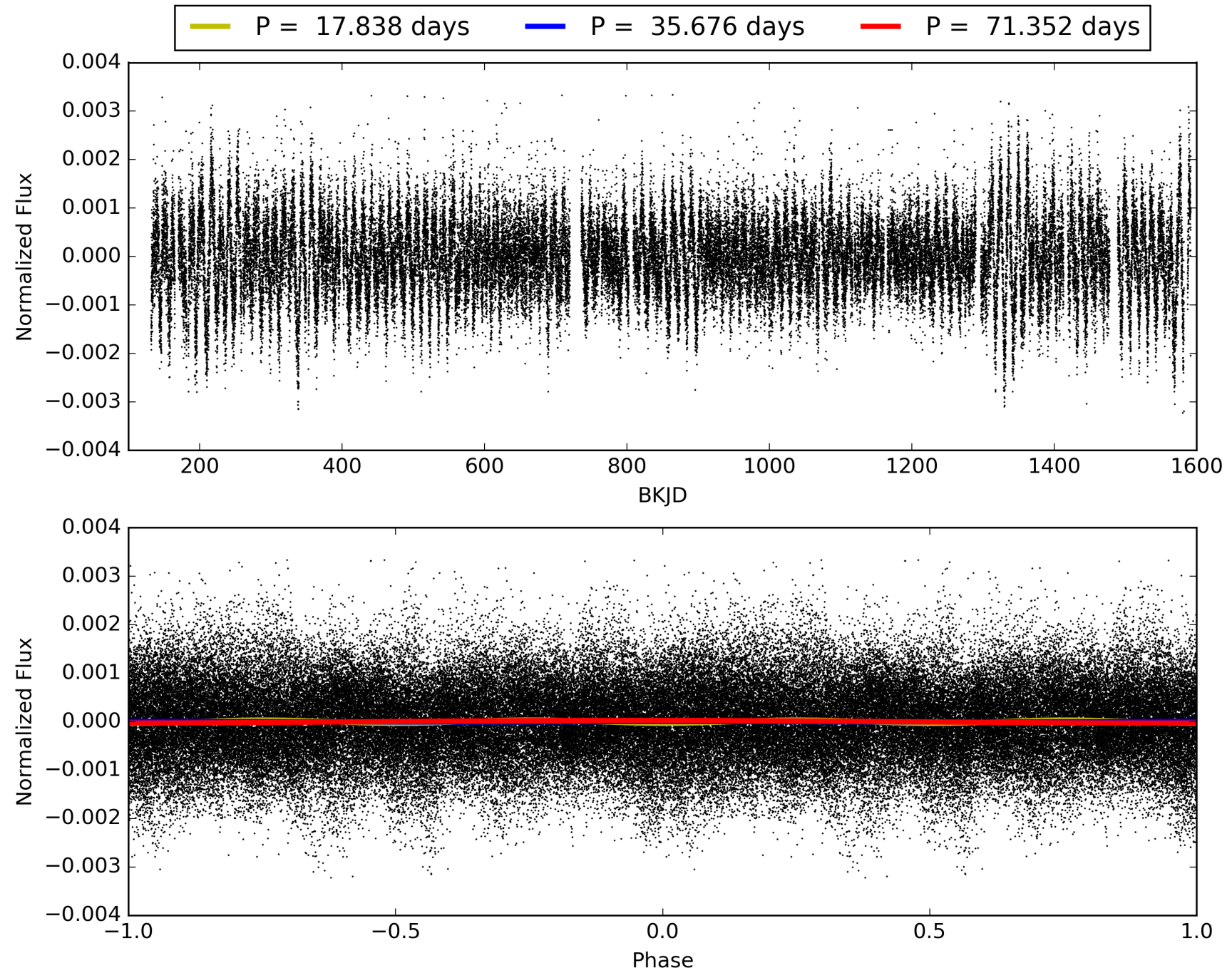
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:57:26 Z

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

TCE 005892538-02, PDC Light Curves

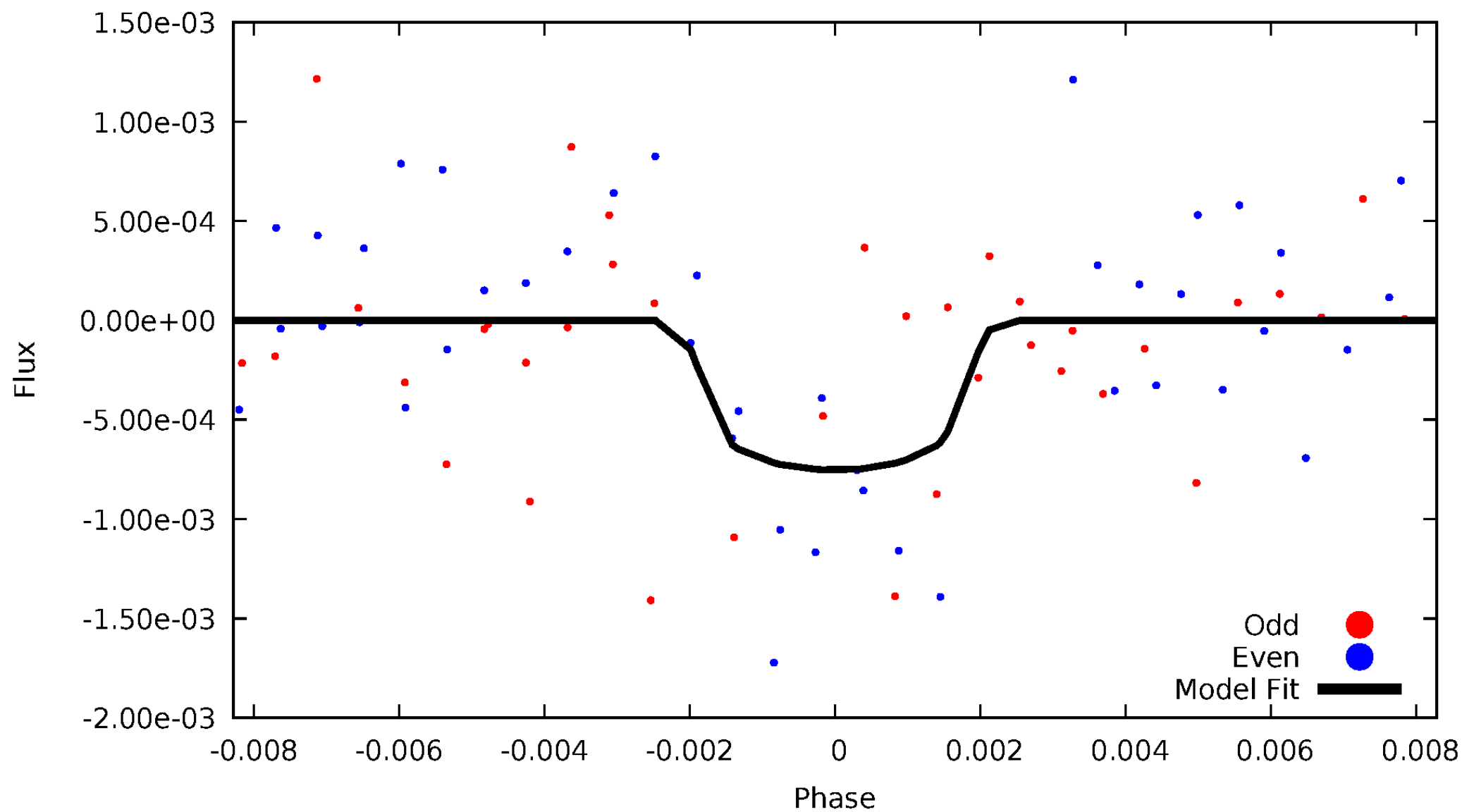


TCE 005892538-02



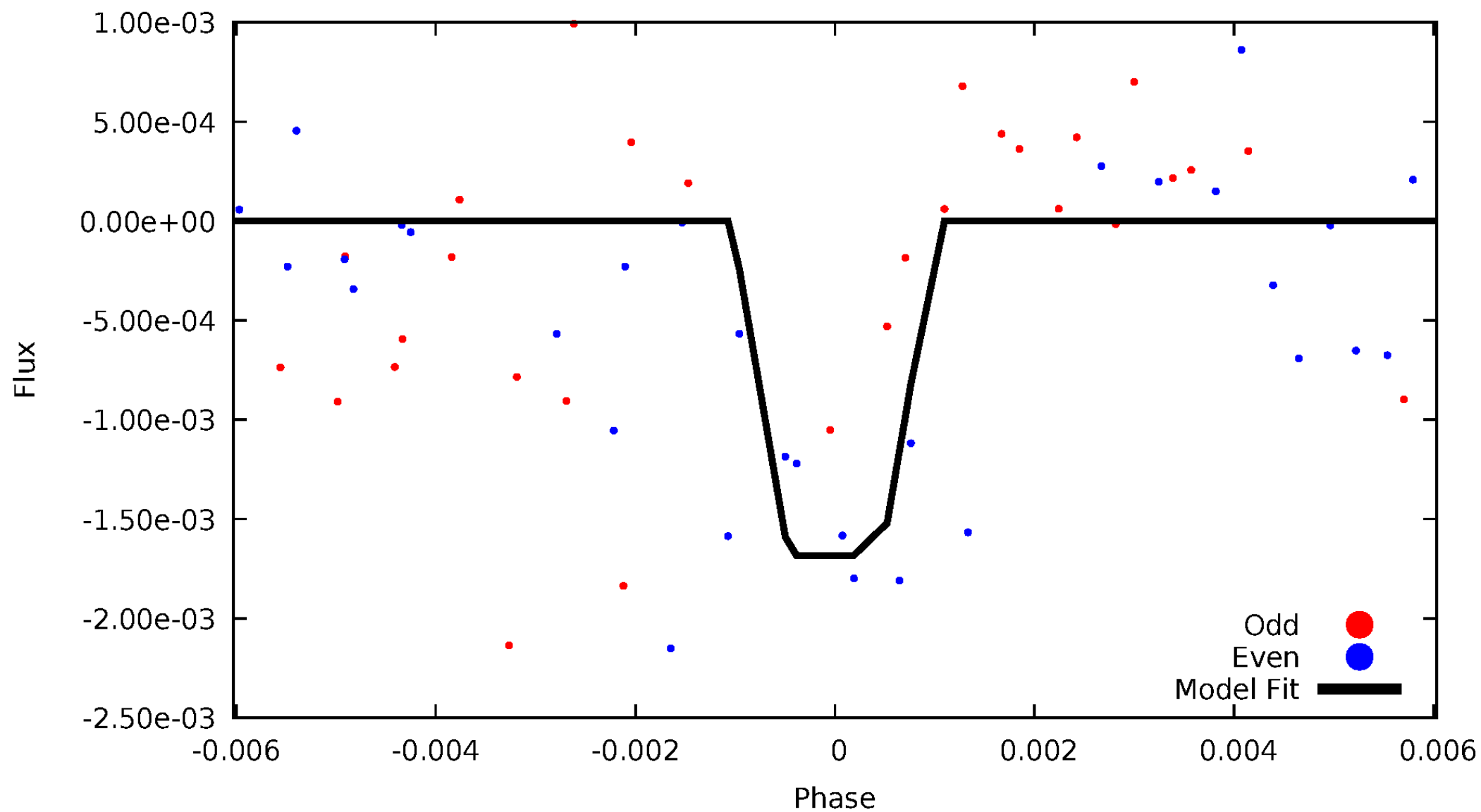
DV Odd/Even

TCE 005892538-02



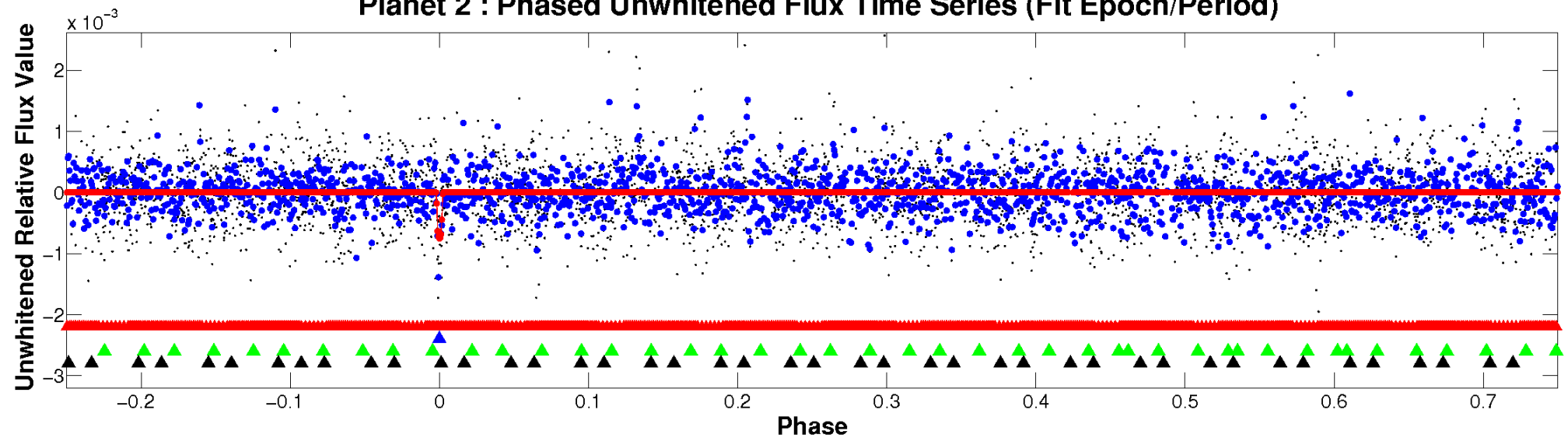
ALT Odd/Even

TCE 005892538-02

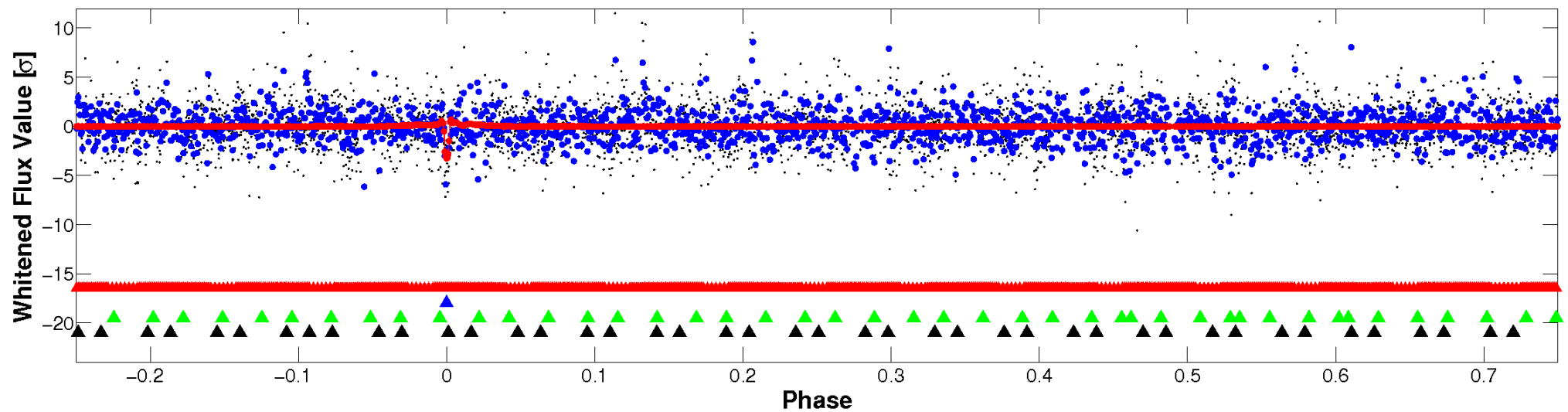


Non-Whitened Vs. Whitened Light Curve

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

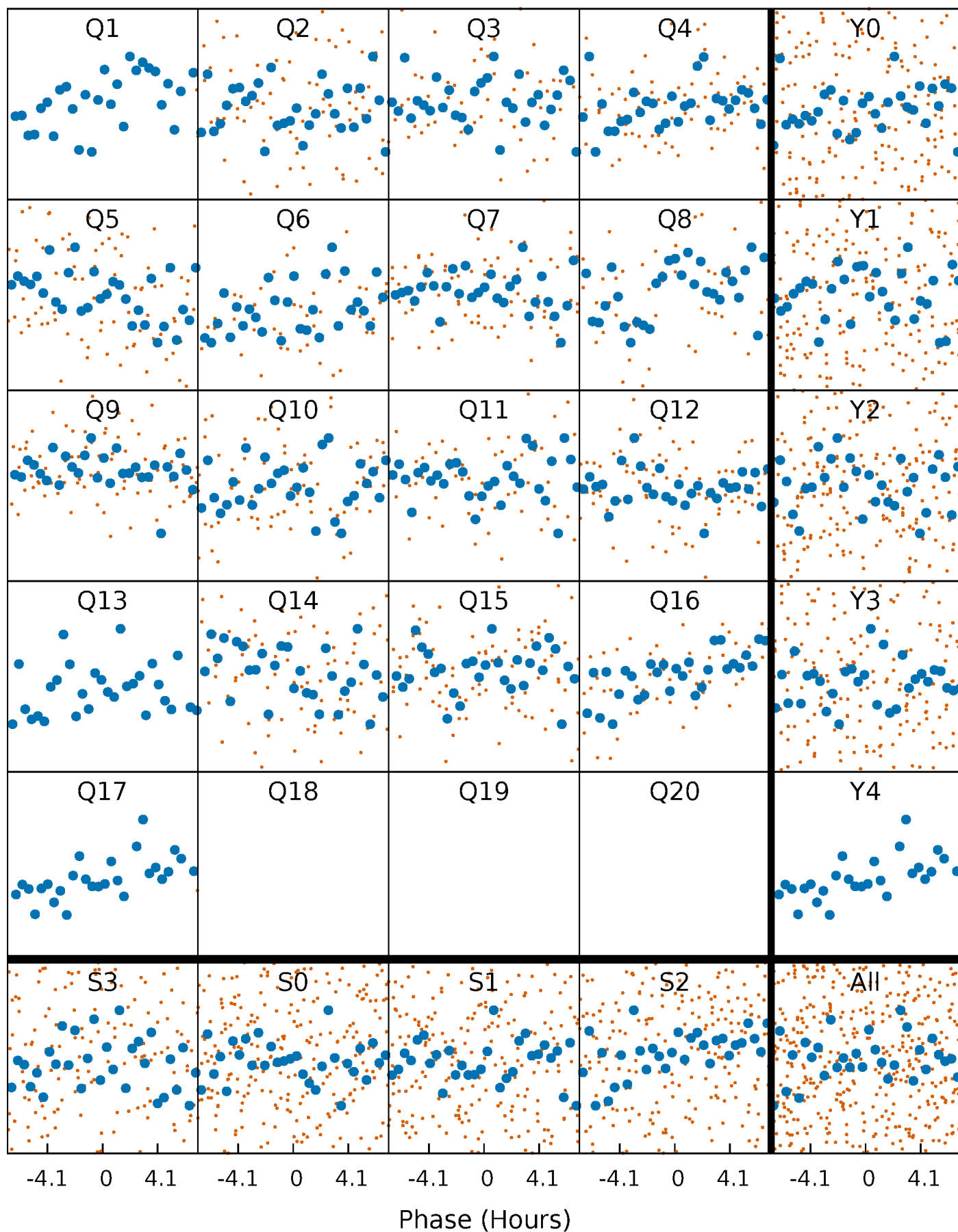


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



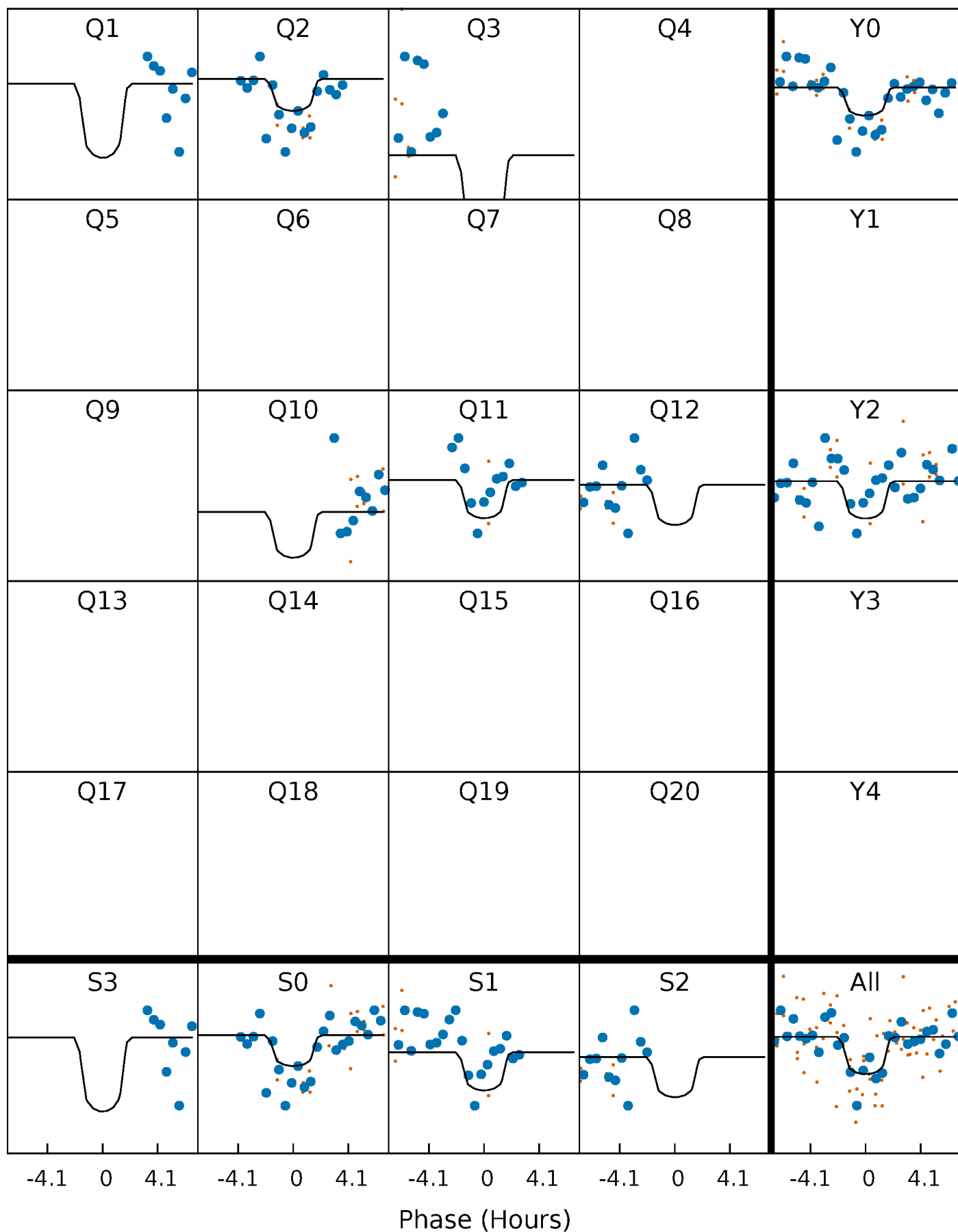
PDC Quarter-Phased Transit Curves

TCE 005892538-02 P= 35.675941 Days $T_0=139.556859$ (BKJD)



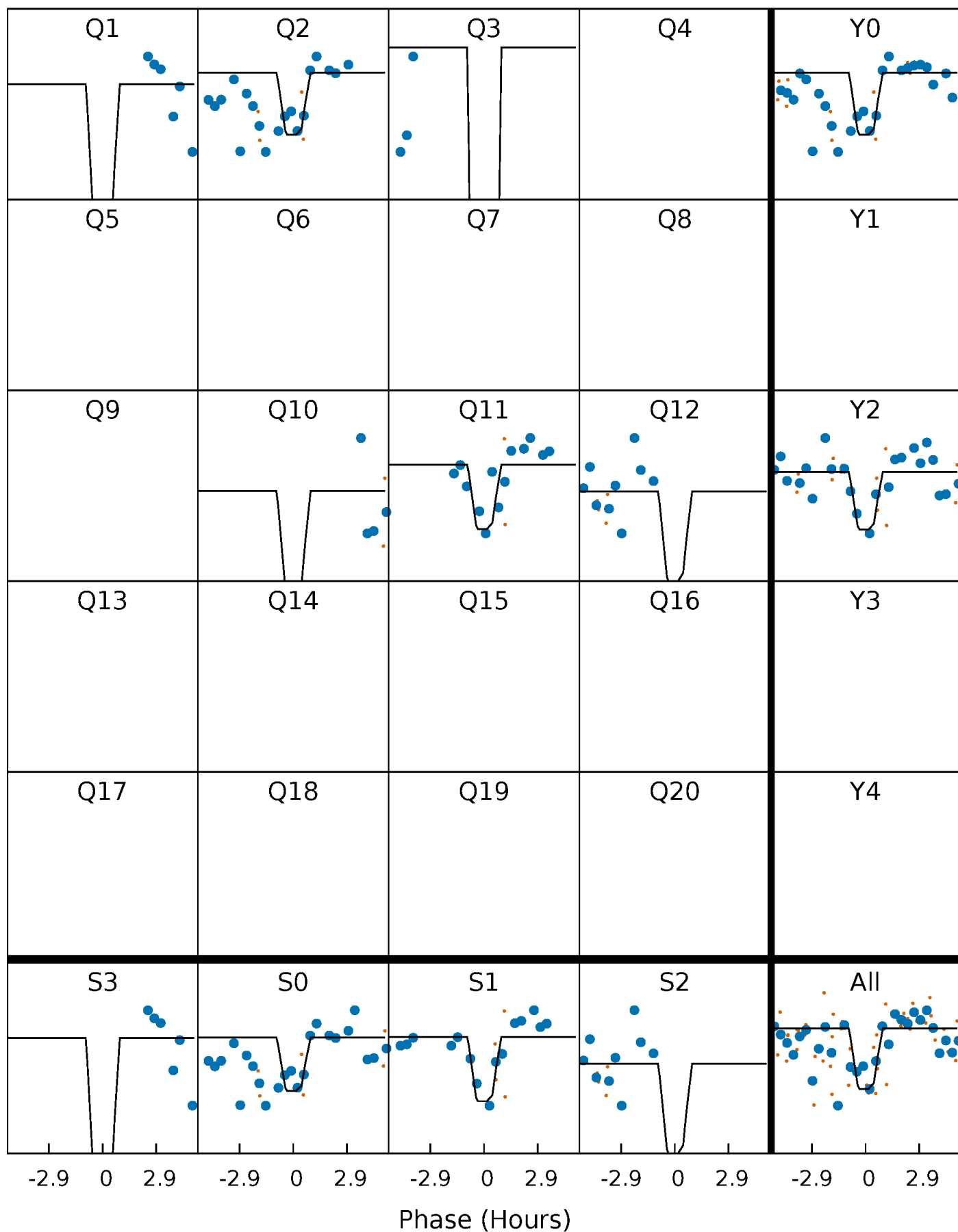
DV Quarter-Phased Transit Curves

TCE 005892538-02 P= 35.675941 Days $T_0=139.556859$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

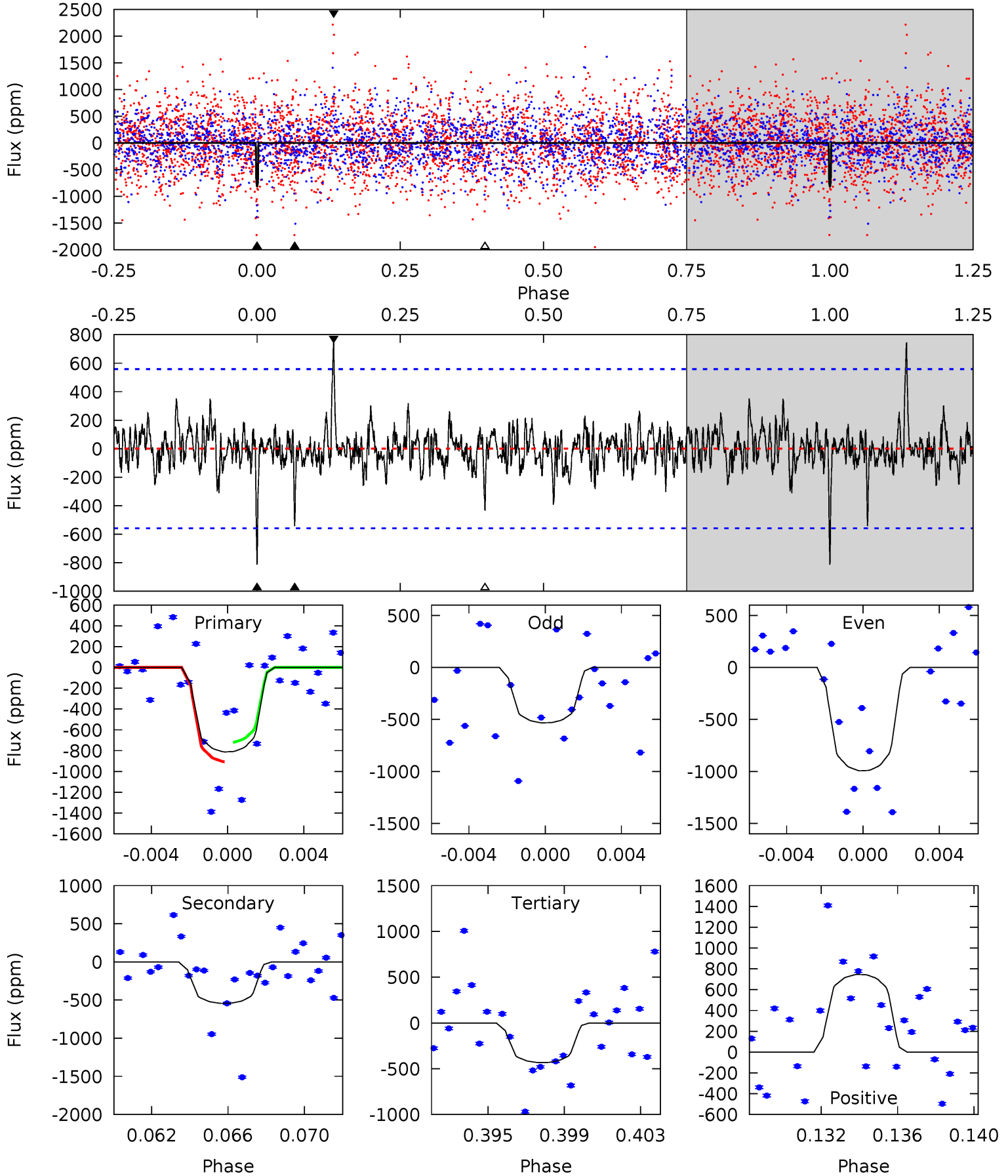
TCE 005892538-02 $P = 35.673348$ Days $T_0 = 139.590668$ (BKJD)



DV Model-Shift Uniqueness Test

005892538-02, P = 35.675941 Days, E = 103.880918 Days

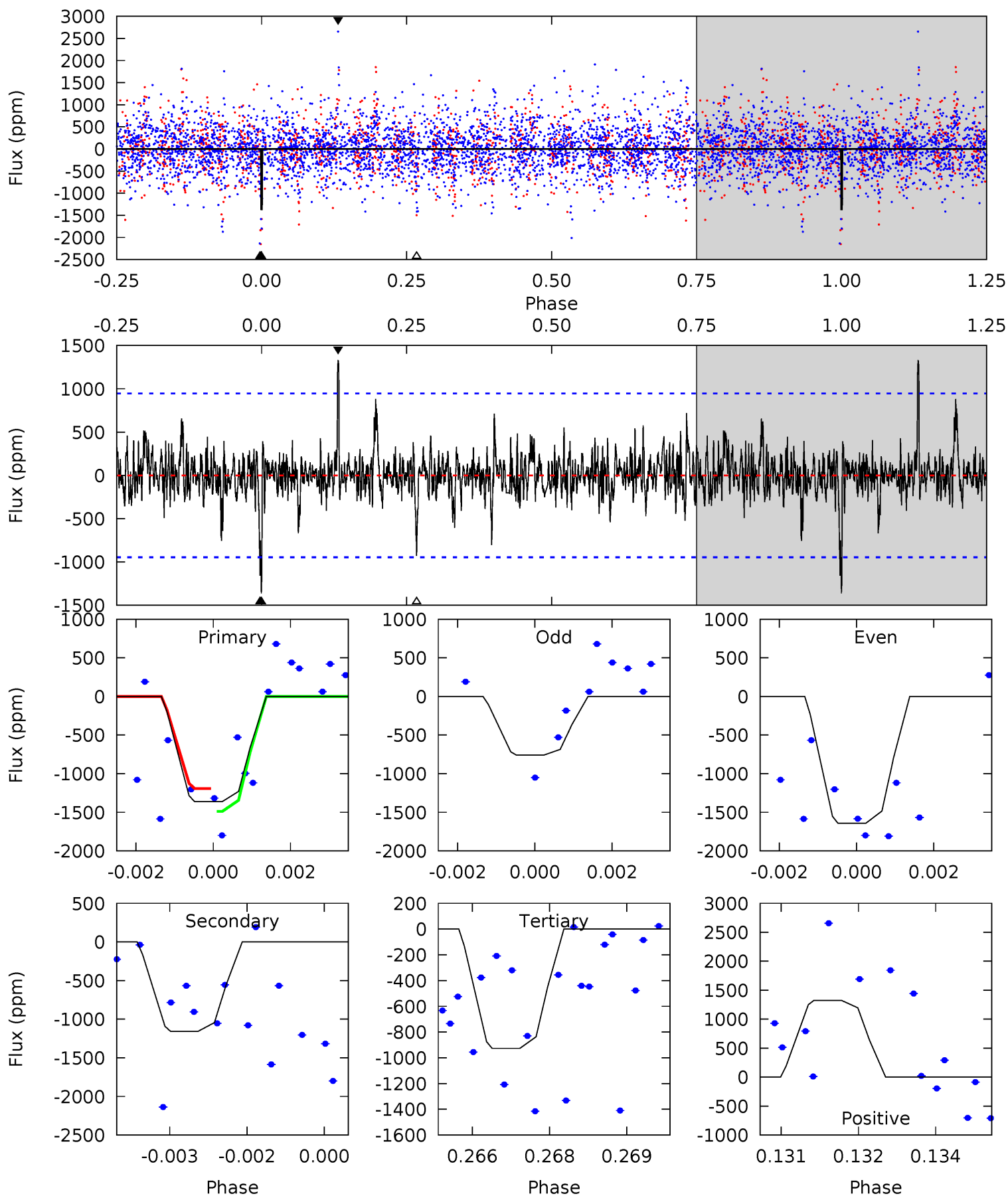
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.56	5.06	4.04	6.95	5.19	2.87	1.09	3.53	0.61	1.02	-1.89	2.12	0.73	0.48	0.87



Alt Model-Shift Uniqueness Test

005892538-02, P = 35.673348 Days, E = 103.917320 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.72	6.56	5.26	7.52	5.37	3.16	1.21	2.46	0.21	1.30	-0.95	2.42	0.85	0.49	0.73



Stellar Parameters For KIC 005892538

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5750^{+172}_{-172}	$4.554^{+0.036}_{-0.204}$	$-0.160^{+0.300}_{-0.300}$	$0.849^{+0.249}_{-0.083}$	$0.945^{+0.106}_{-0.118}$	$2.174^{+0.437}_{-1.138}$
	+3%/-3%	+1%/-4%	+188%/-188%	+29%/-10%	+11%/-12%	+20%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005892538-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-543 ± 107	$3.54^{+2.94}_{-2.18}$	737^{+50}_{-36}	4736^{+2799}_{-974}	1003^{+5854}_{-709}
Alt.	-1156 ± 176	$4.50^{+2.98}_{-2.68}$	736^{+47}_{-33}	5034^{+2947}_{-900}	1333^{+7174}_{-845}

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

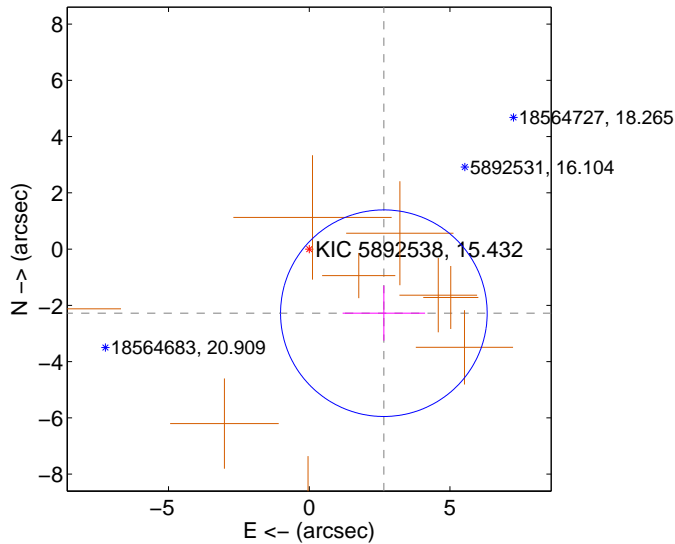
Supplemental centroid analysis for 005892538-02. Kepler magnitude: 15.43. Transit SNR 11.82

There are 0 quarters with good PRF difference image offsets

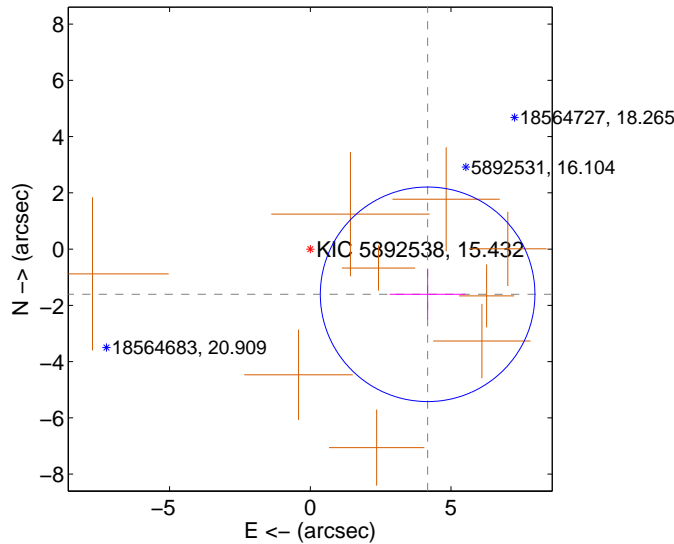
The OOT PRF centroid is offset from the target star catalog position by about 2.92 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.497 ± 1.224	2.86	-2.653 ± 1.467	-2.279 ± 0.977
PRF-fit source offset from KIC position	4.470 ± 1.271	3.52	-4.171 ± 1.346	-1.607 ± 0.882
photometric centroid source offset	2.23 ± 0.48	4.66	-2.14 ± 0.48	0.62 ± 0.44

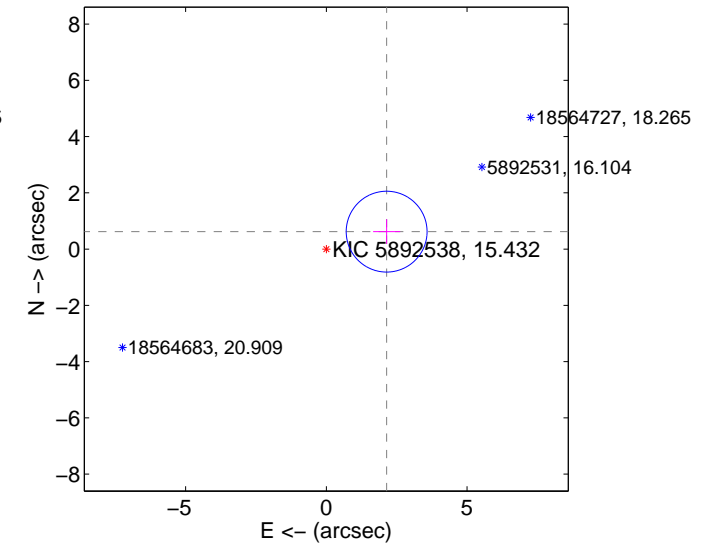
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

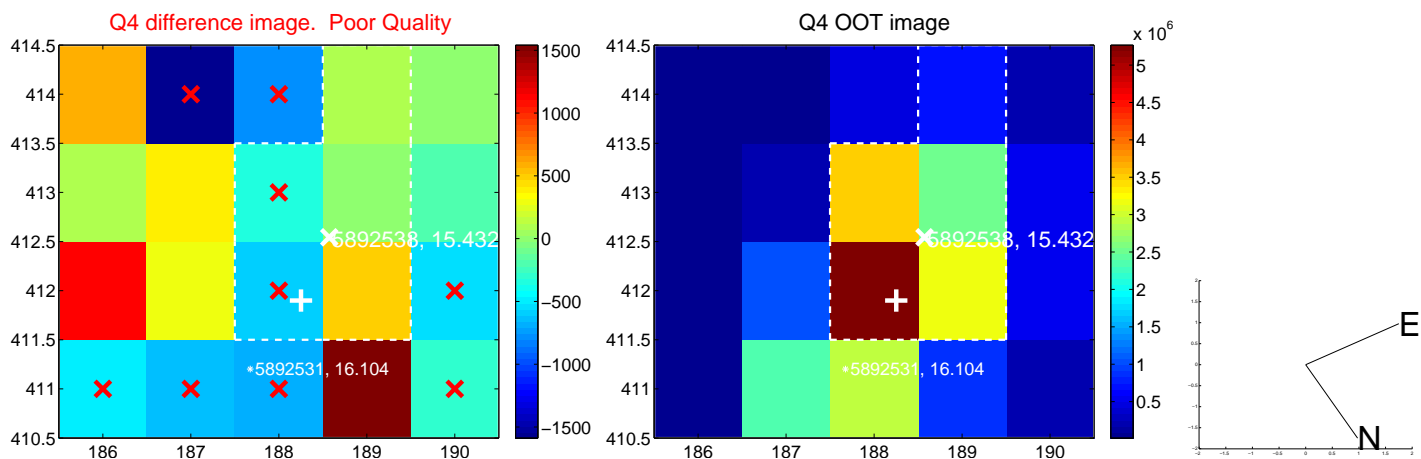
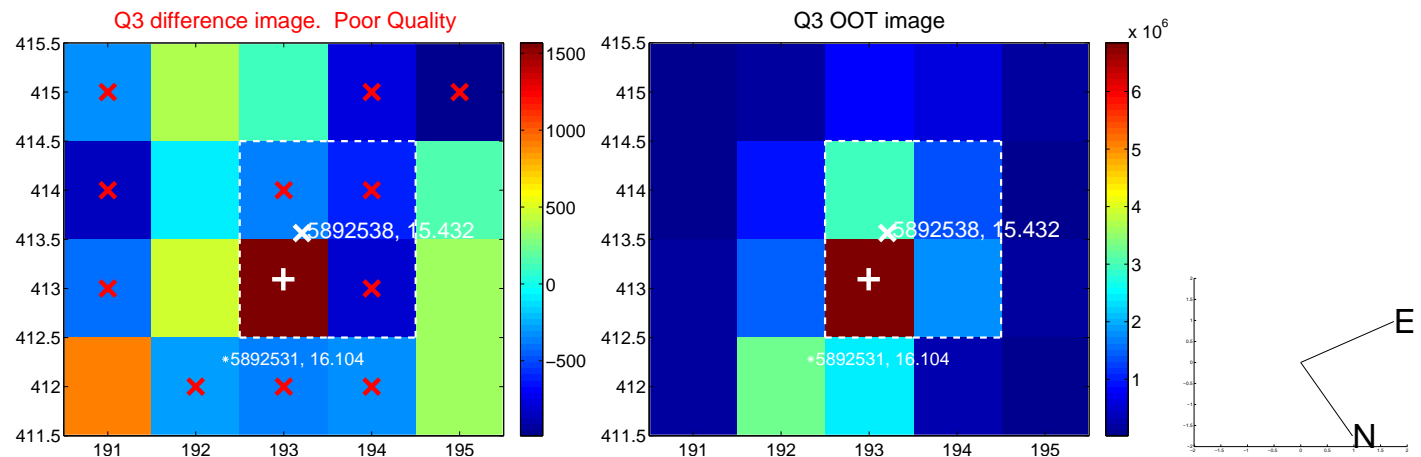
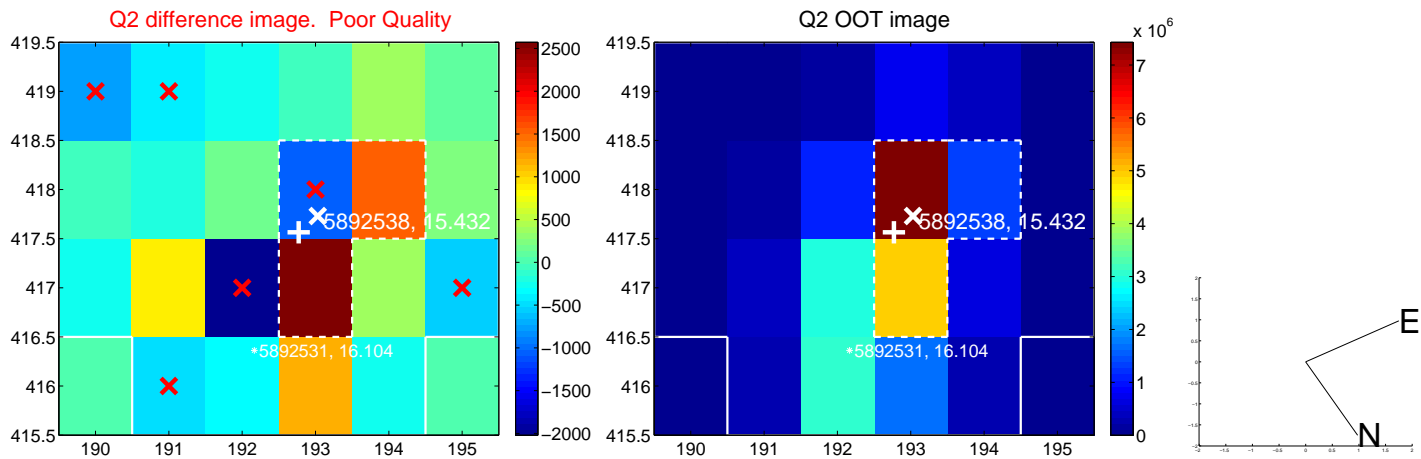
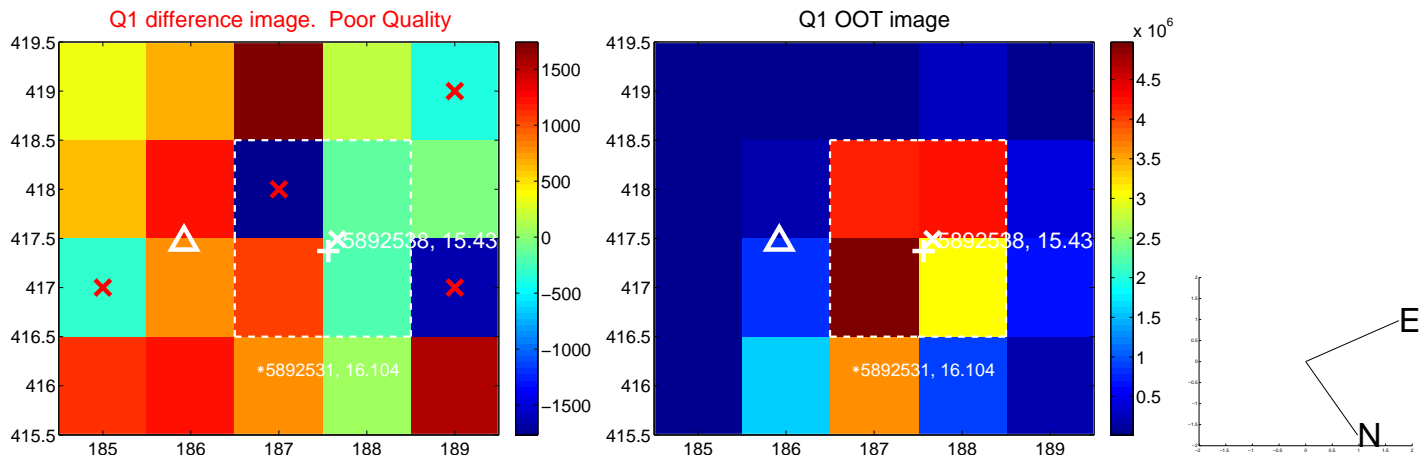


offset from photometric centroids

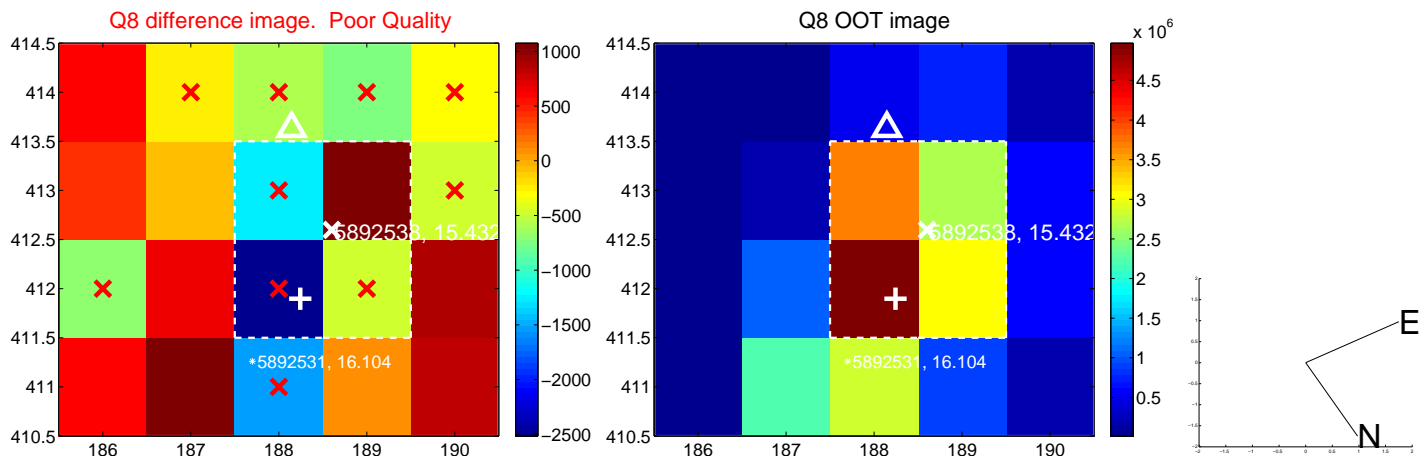
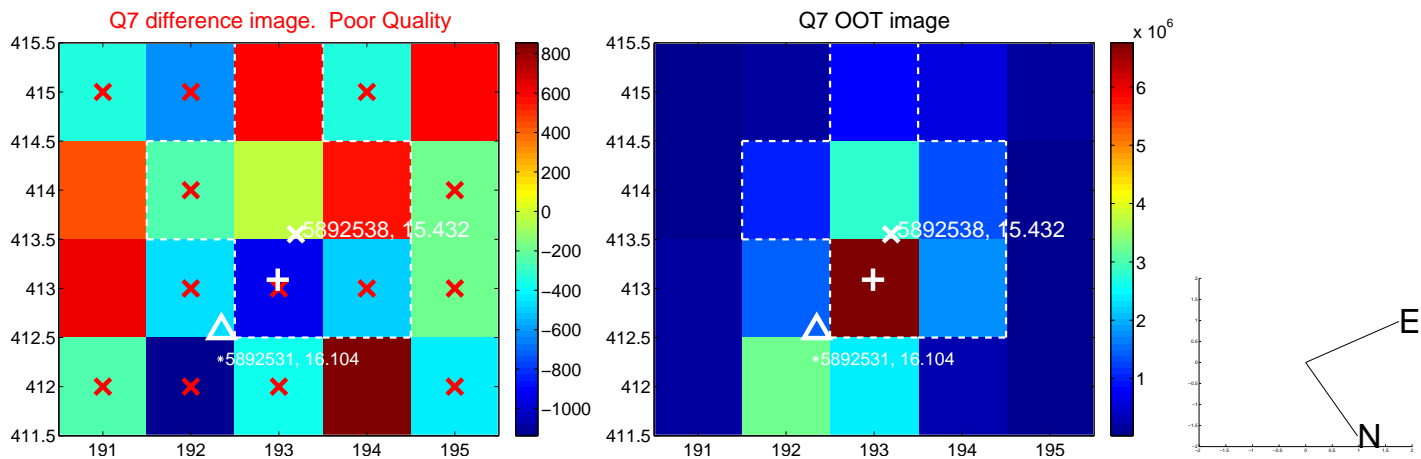
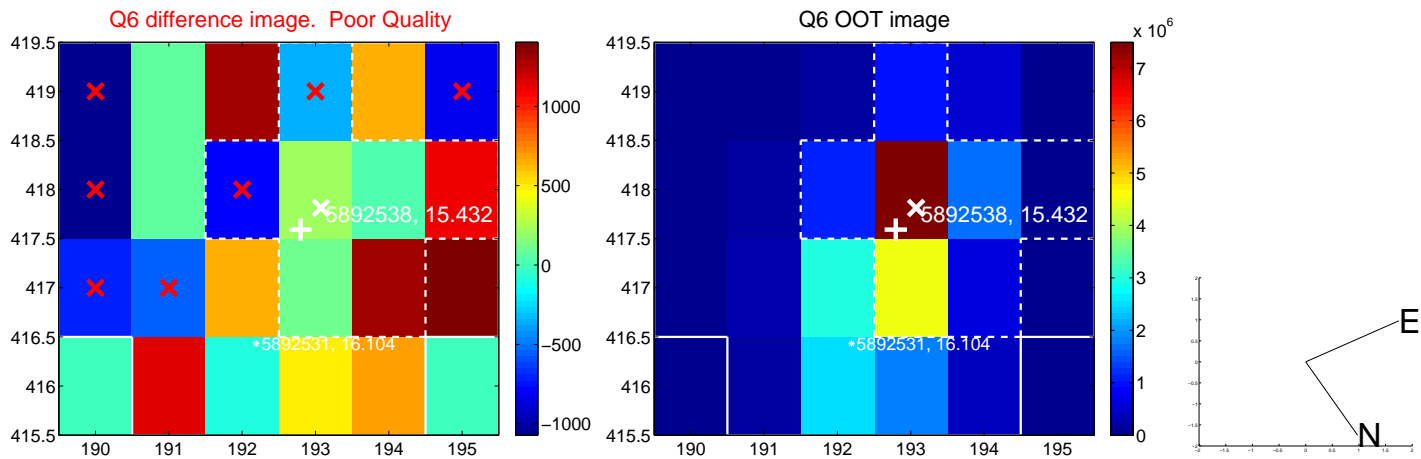
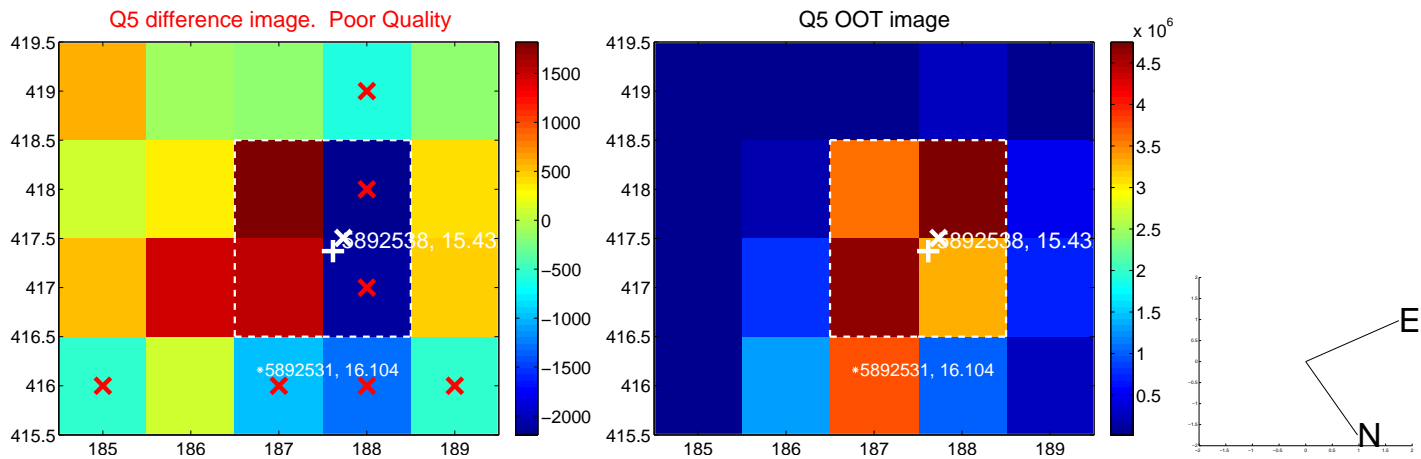


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

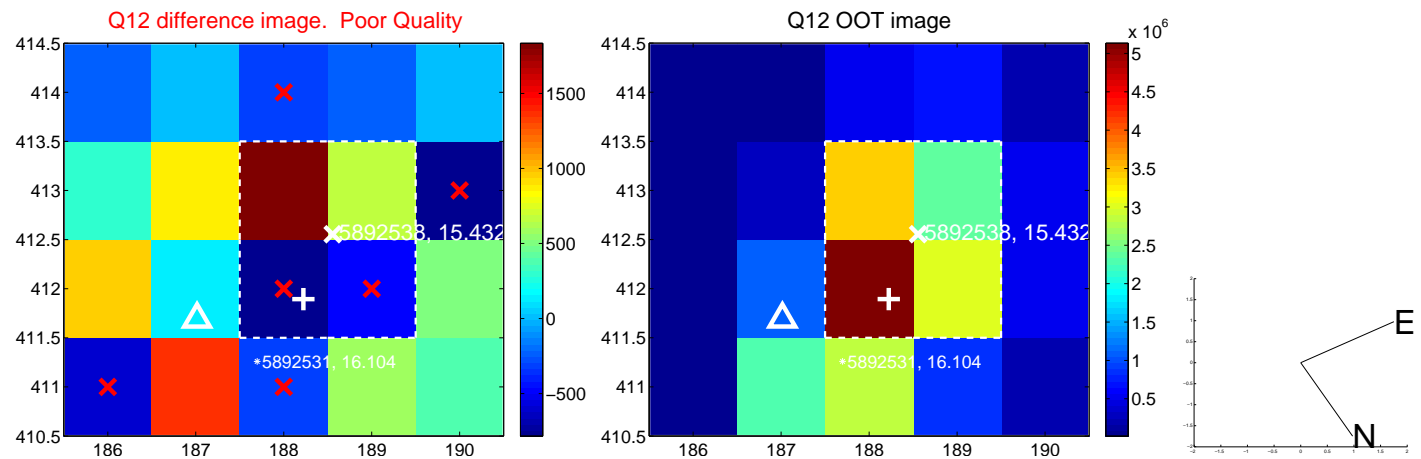
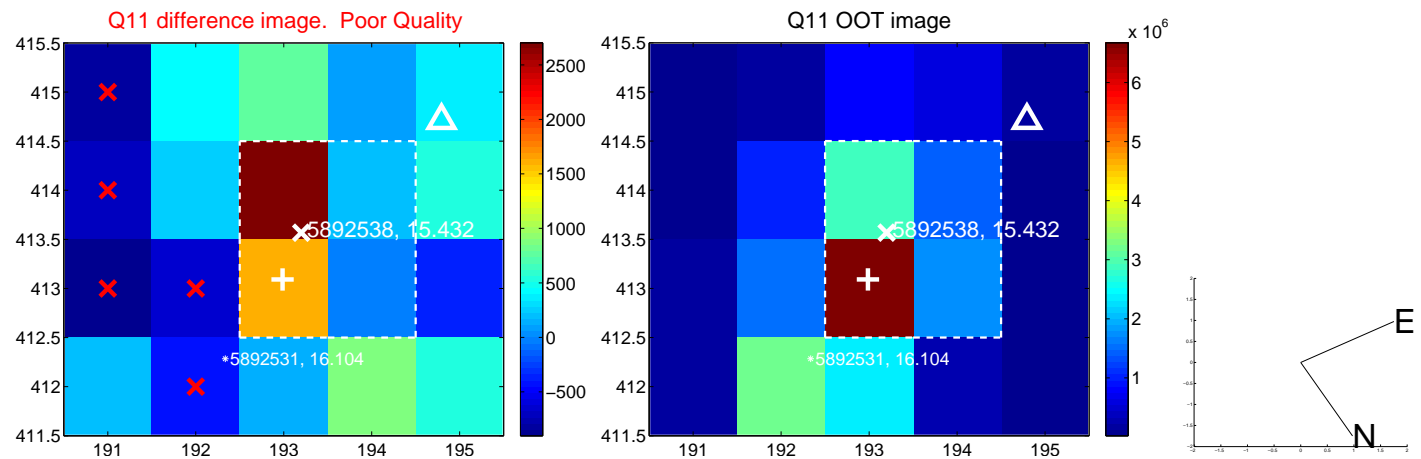
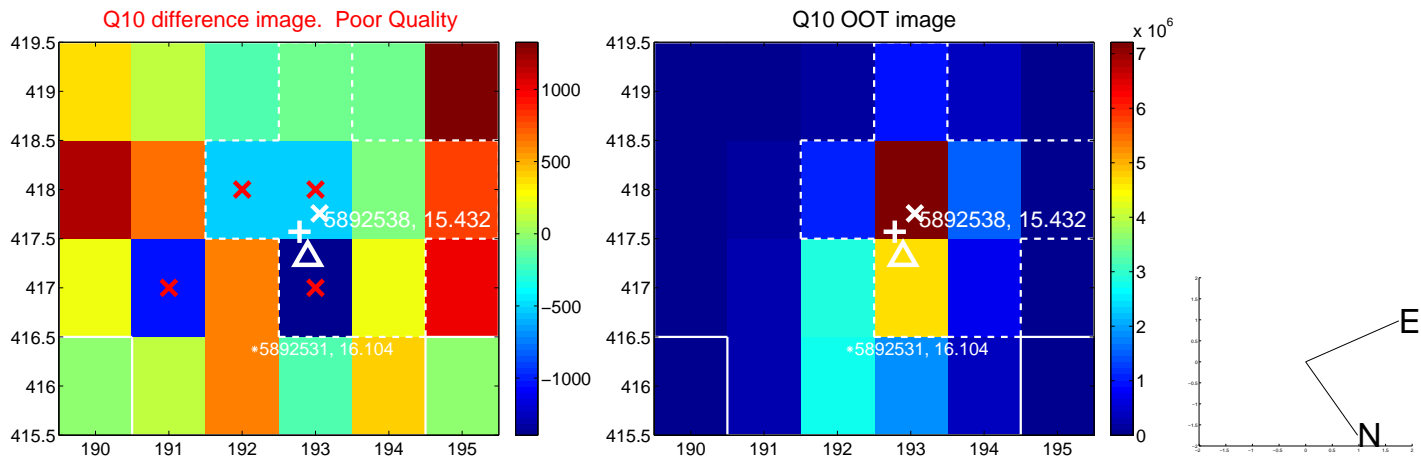
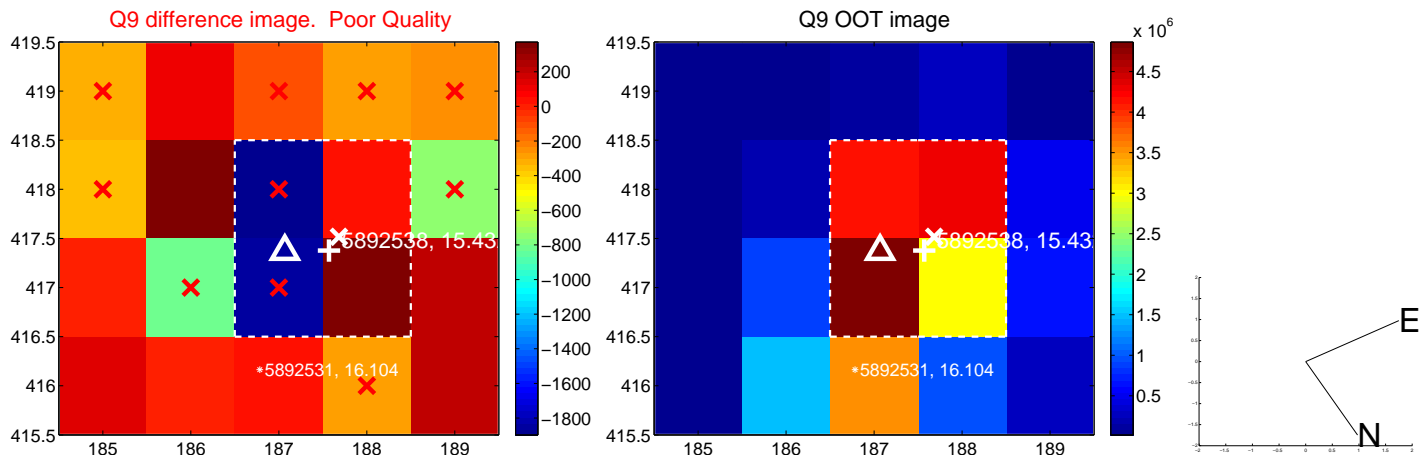
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



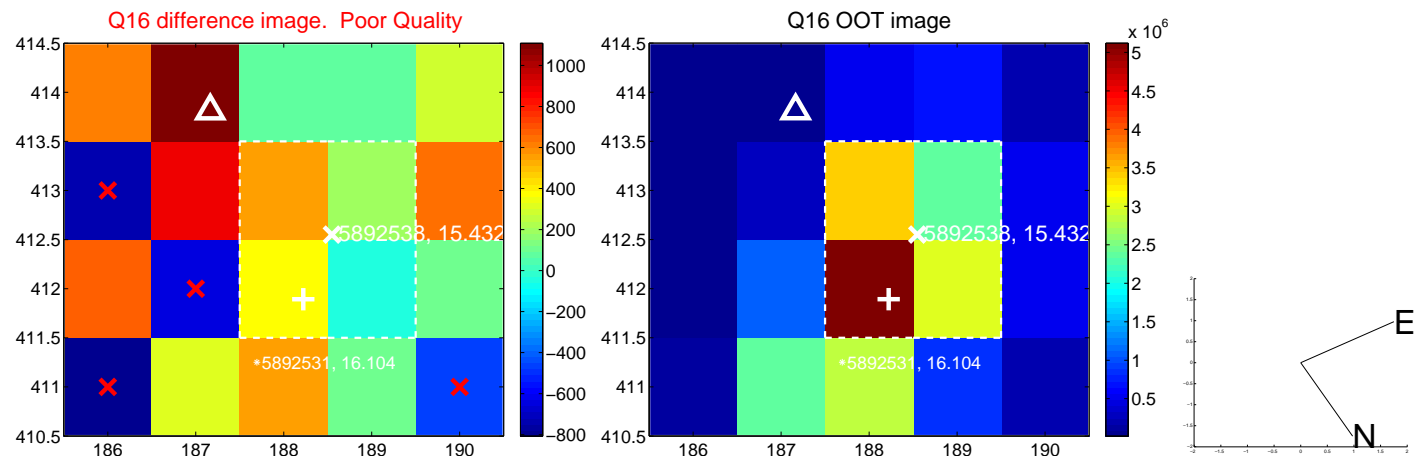
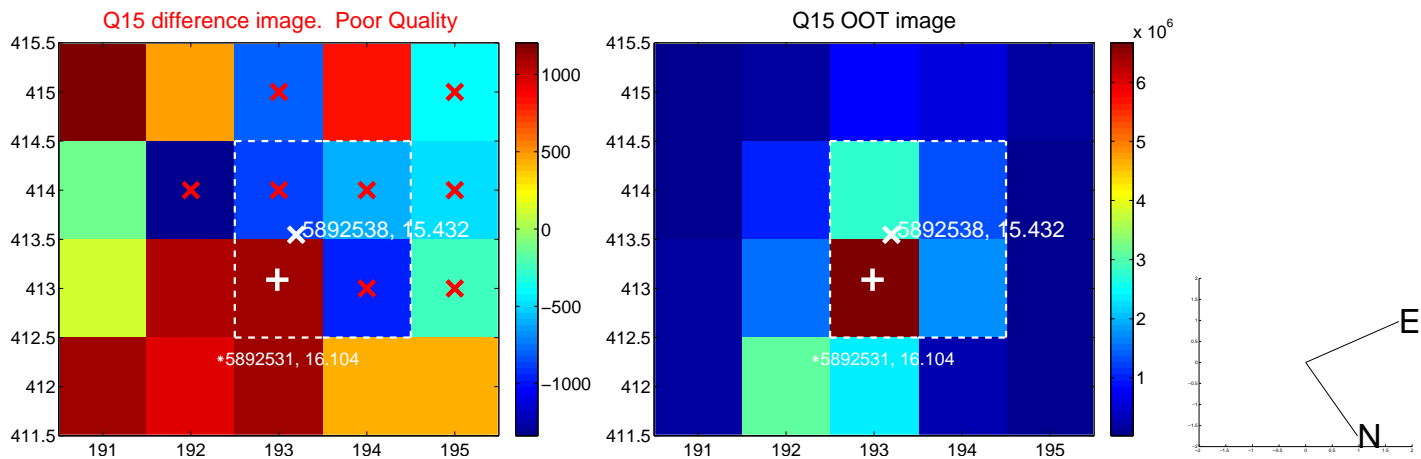
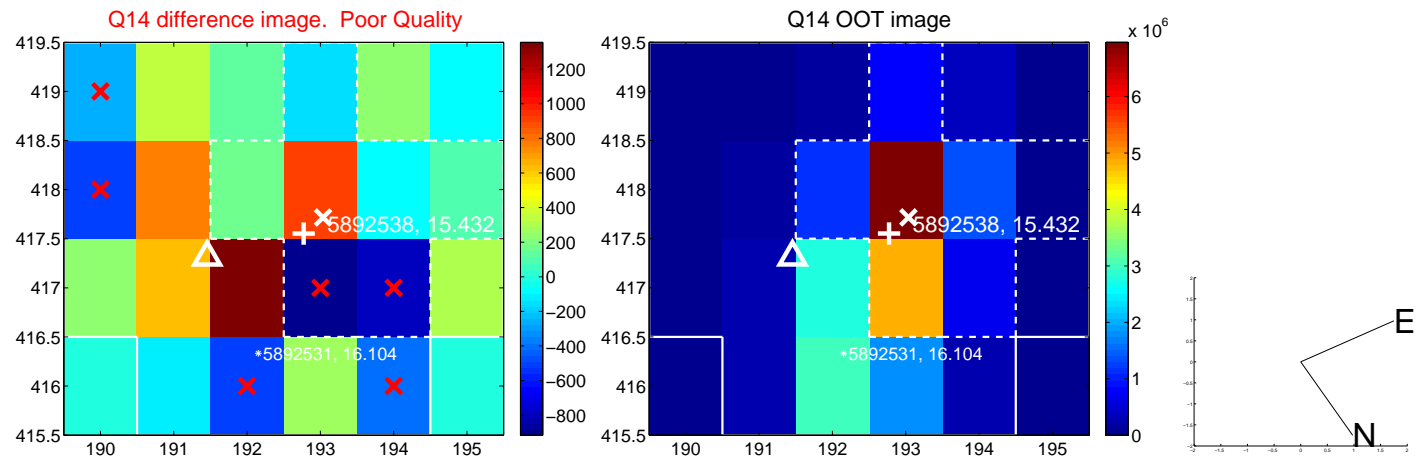
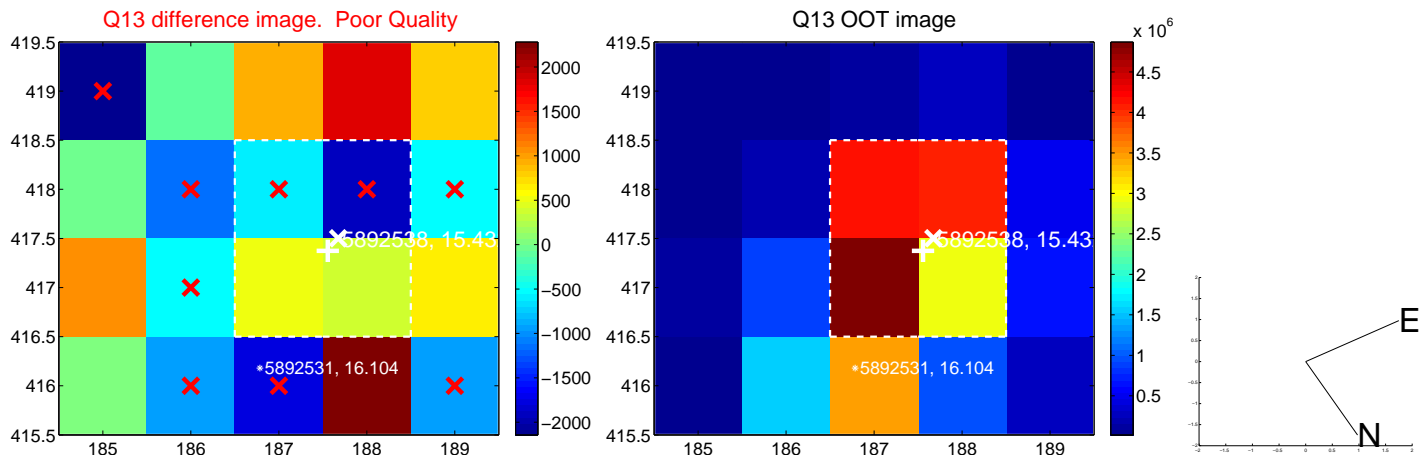
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



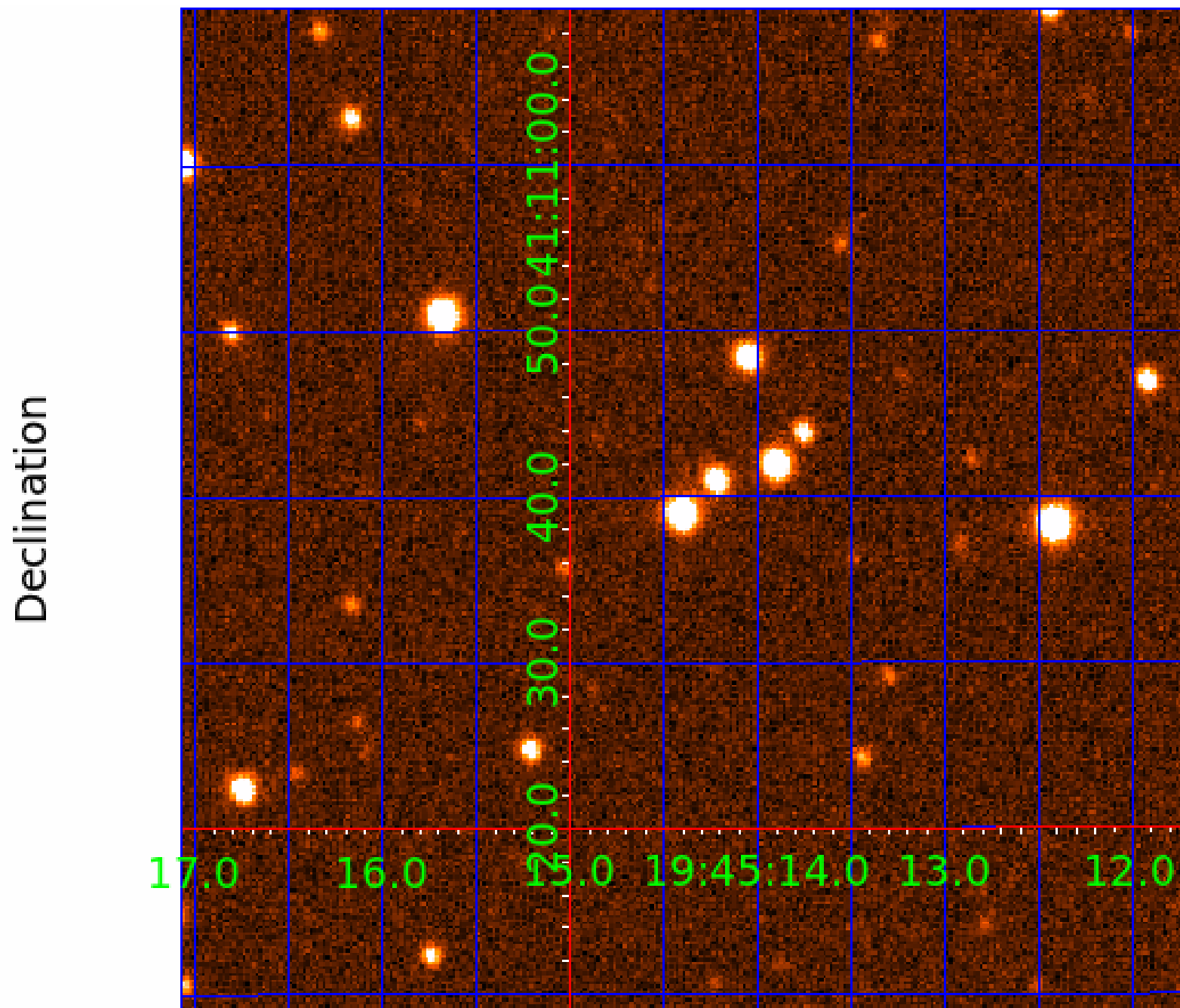
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005892538

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})
005892538-01	OBS	No	2.371675	133.825360	53.4	17.608	8.4	9.1	0.85	5750	0.81	606.41
005892538-02	OBS	No	35.675941	139.556859	753.1	3.544	12.6	11.8	0.85	5750	2.68	16.33
005892538-03	OBS	No	33.060042	161.268062	788.7	1.962	10.5	9.8	0.85	5750	2.84	18.08
005892538-04	OBS	No	34.003292	135.704557	703.4	1.635	11.8	9.1	0.85	5750	3.47	17.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005892538-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
005892538-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005892538-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
005892538-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_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.

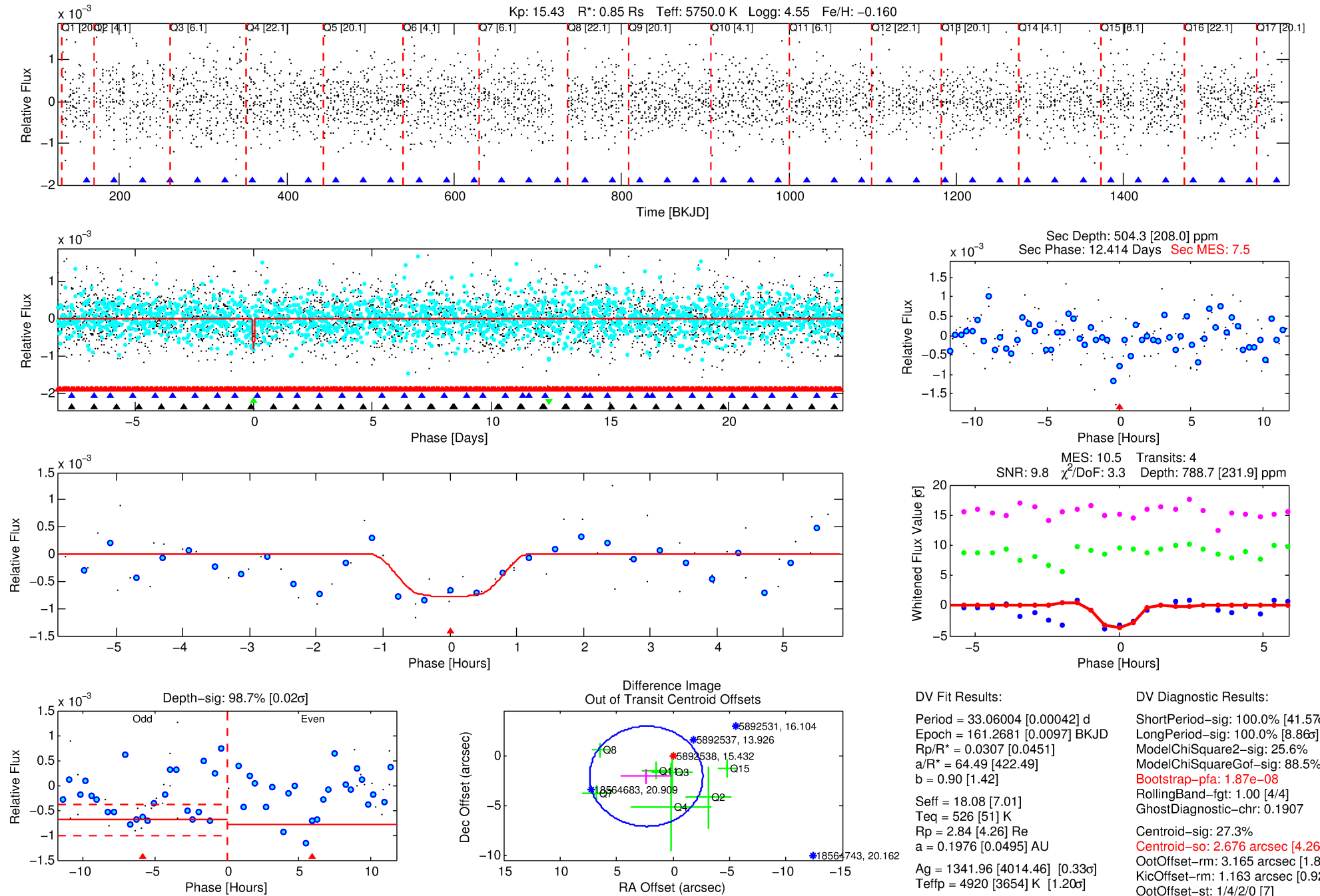
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005892538-03

No Significant Match Found

DV One-Page Summary

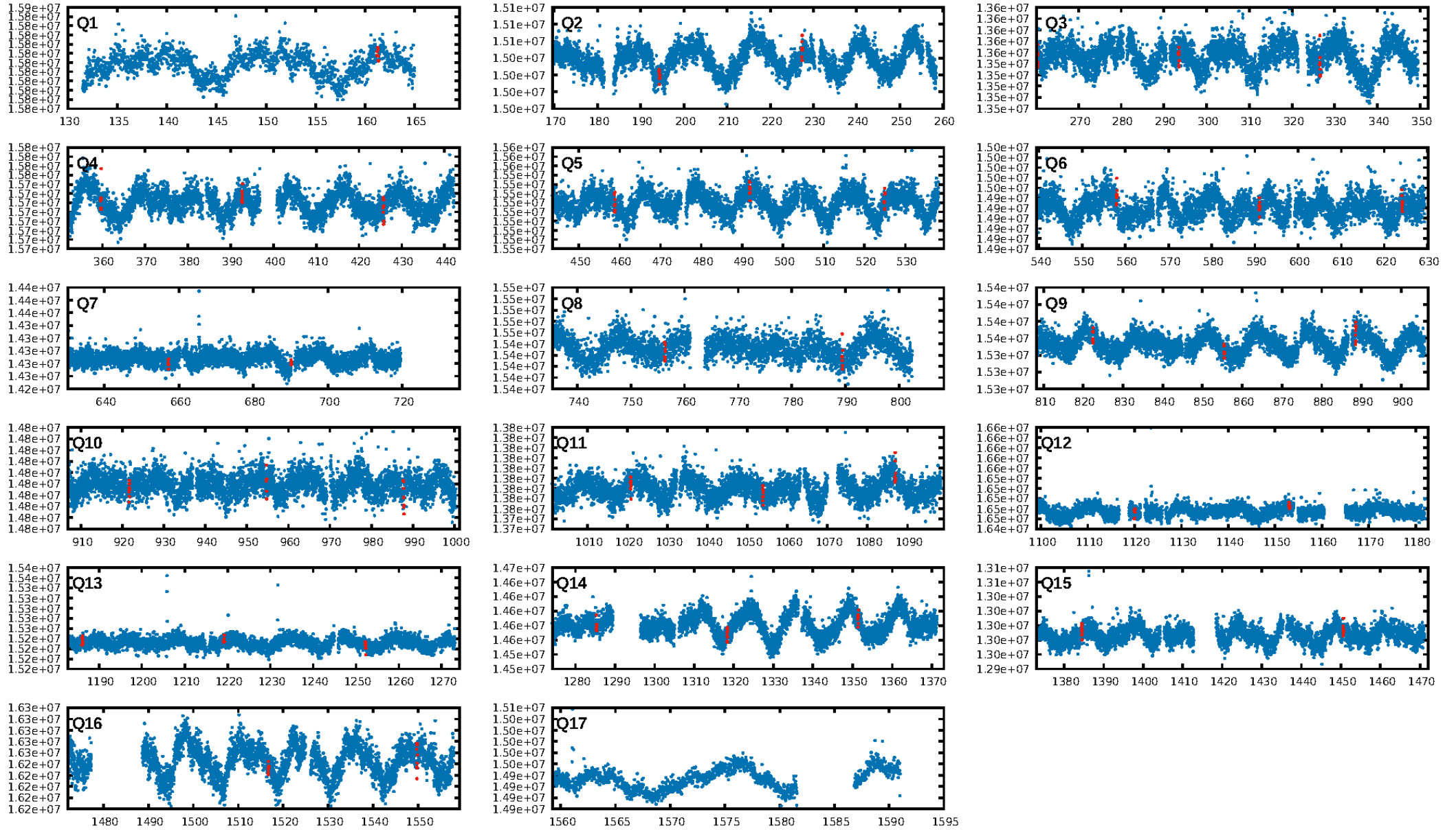
KIC: 5892538 Candidate: 3 of 4 Period: 33.060 d



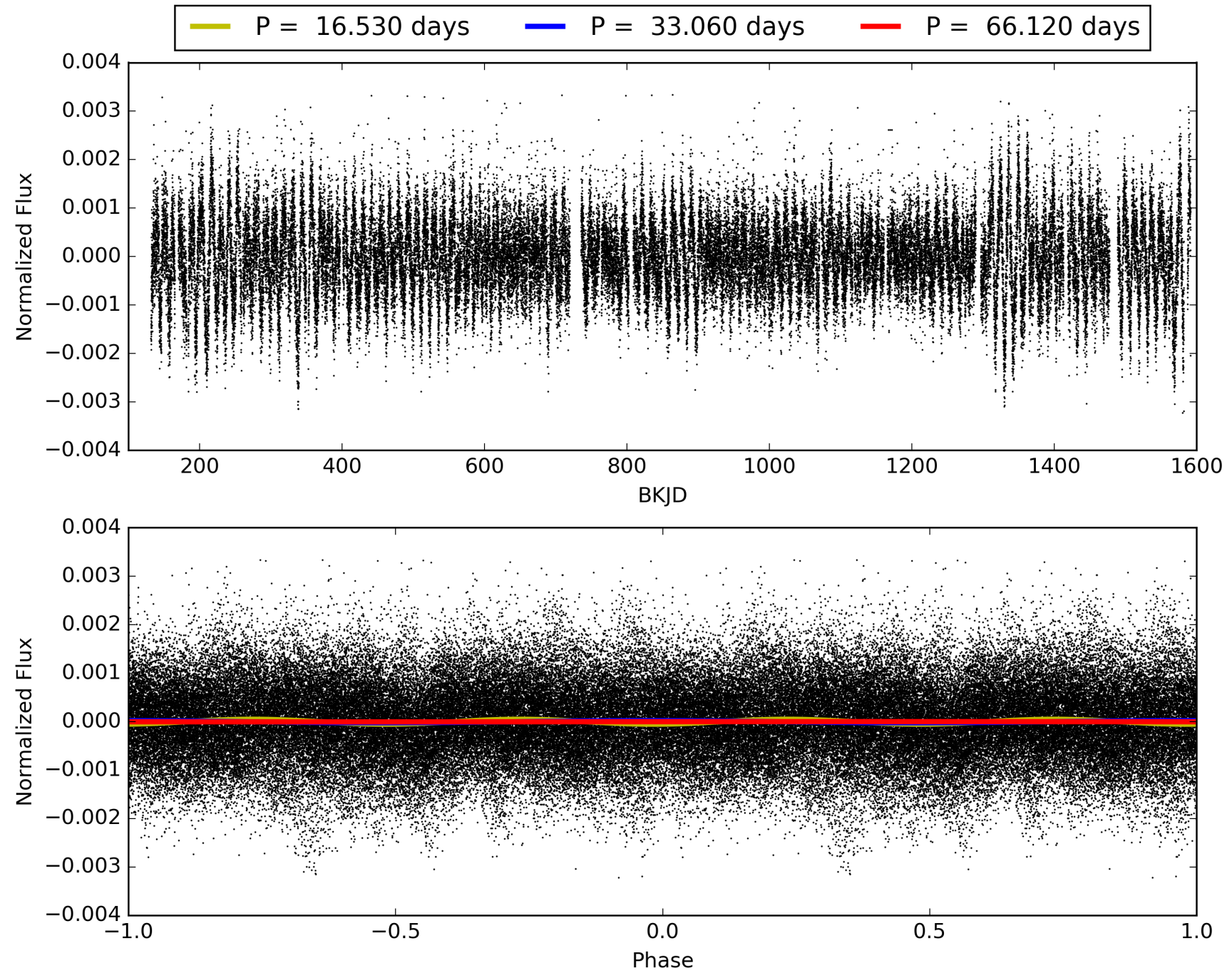
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:57:29 Z

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

TCE 005892538-03, PDC Light Curves

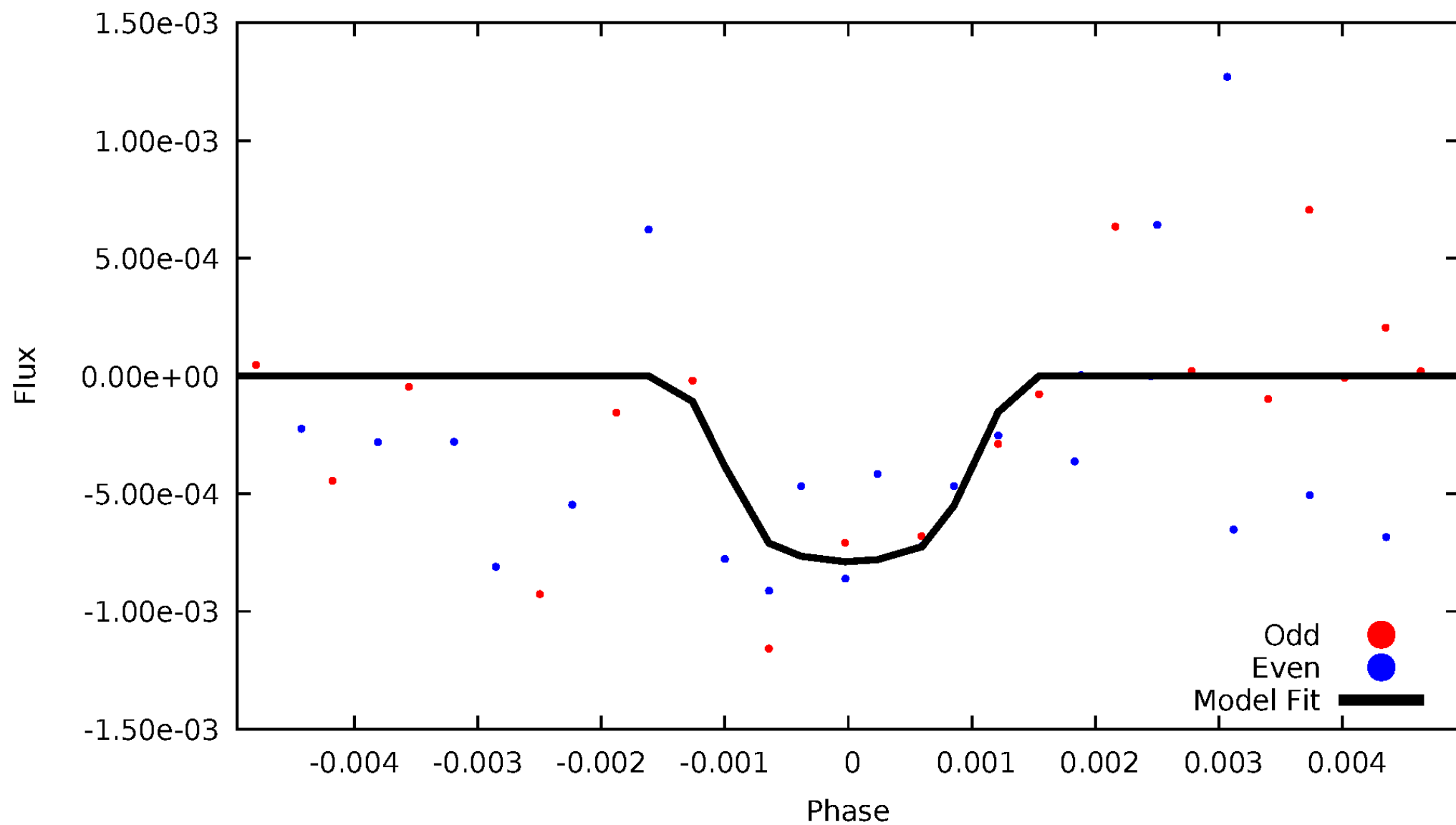


TCE 005892538-03



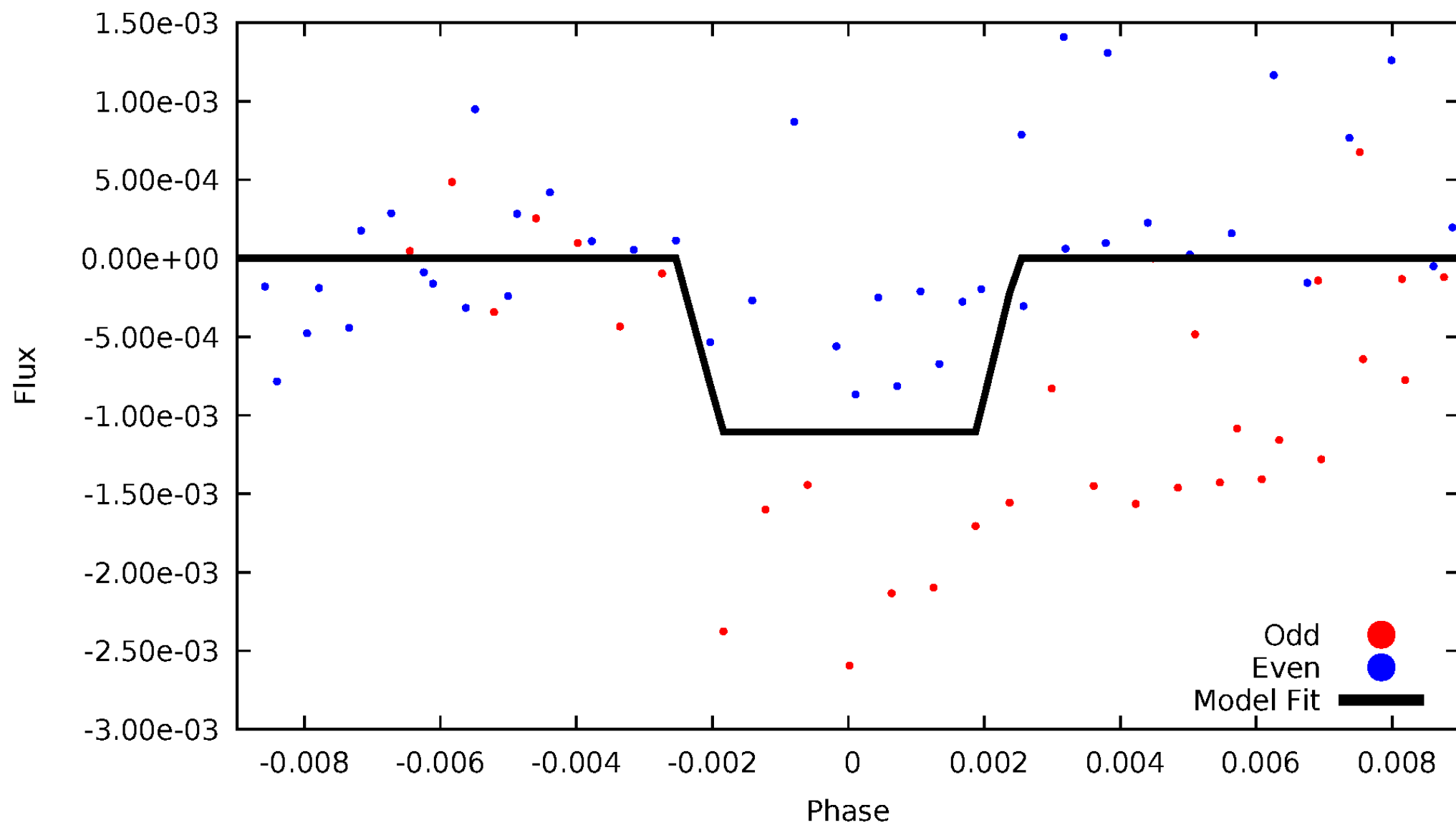
DV Odd/Even

TCE 005892538-03



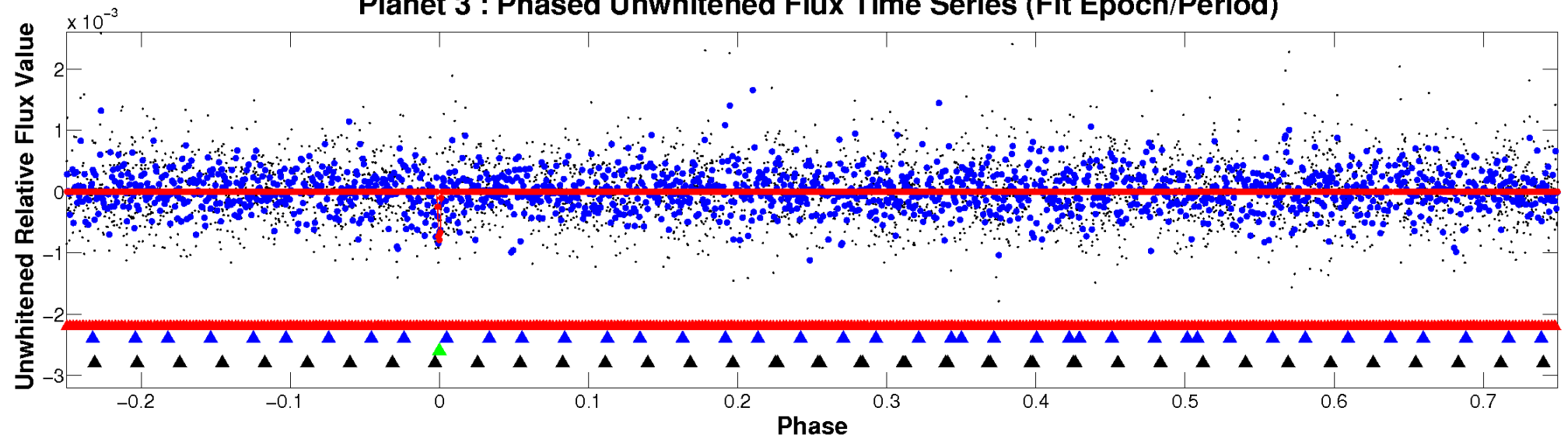
ALT Odd/Even

TCE 005892538-03

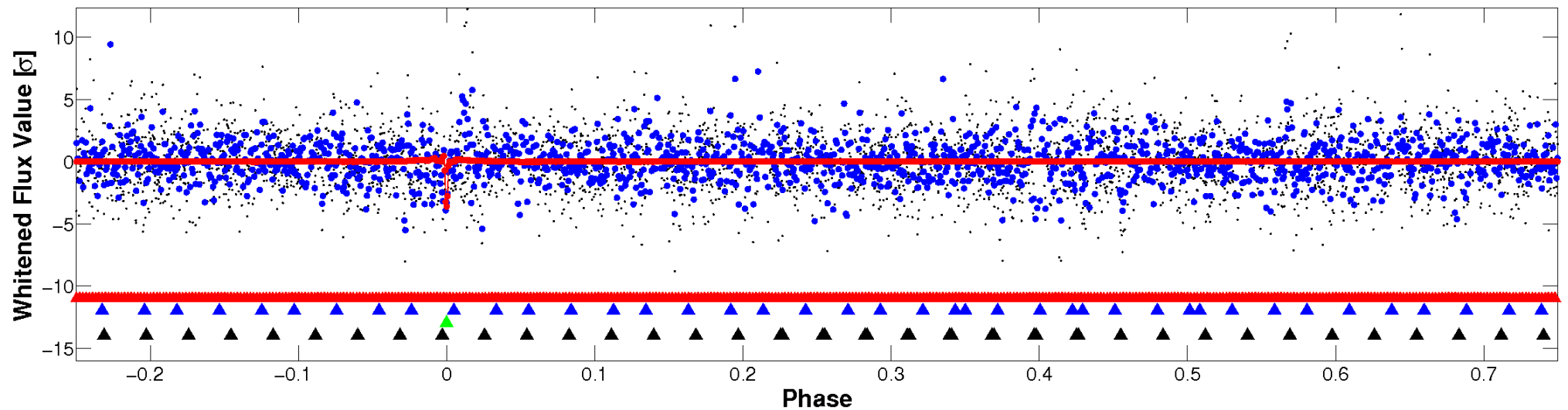


Non-Whitened Vs. Whitened Light Curve

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

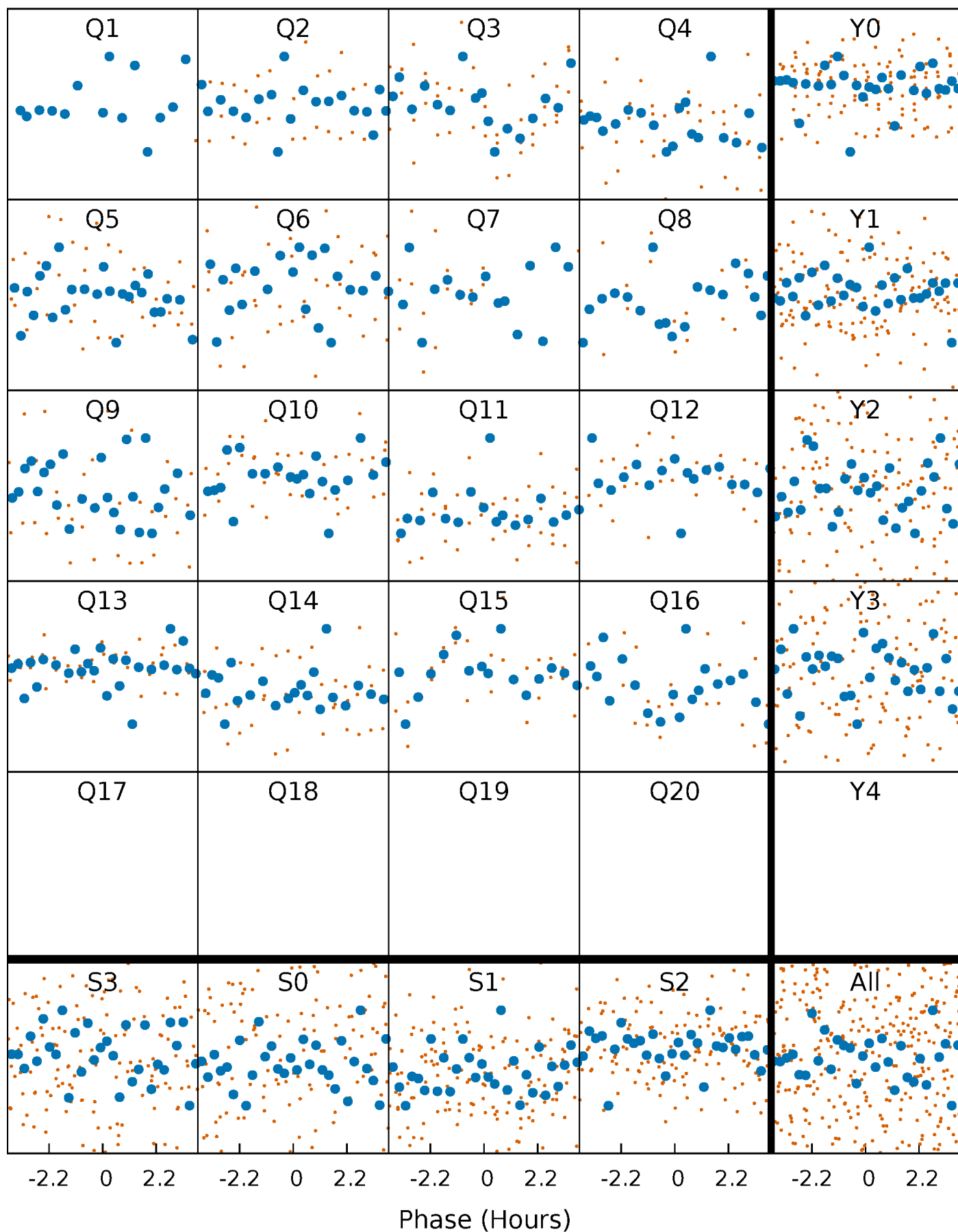


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



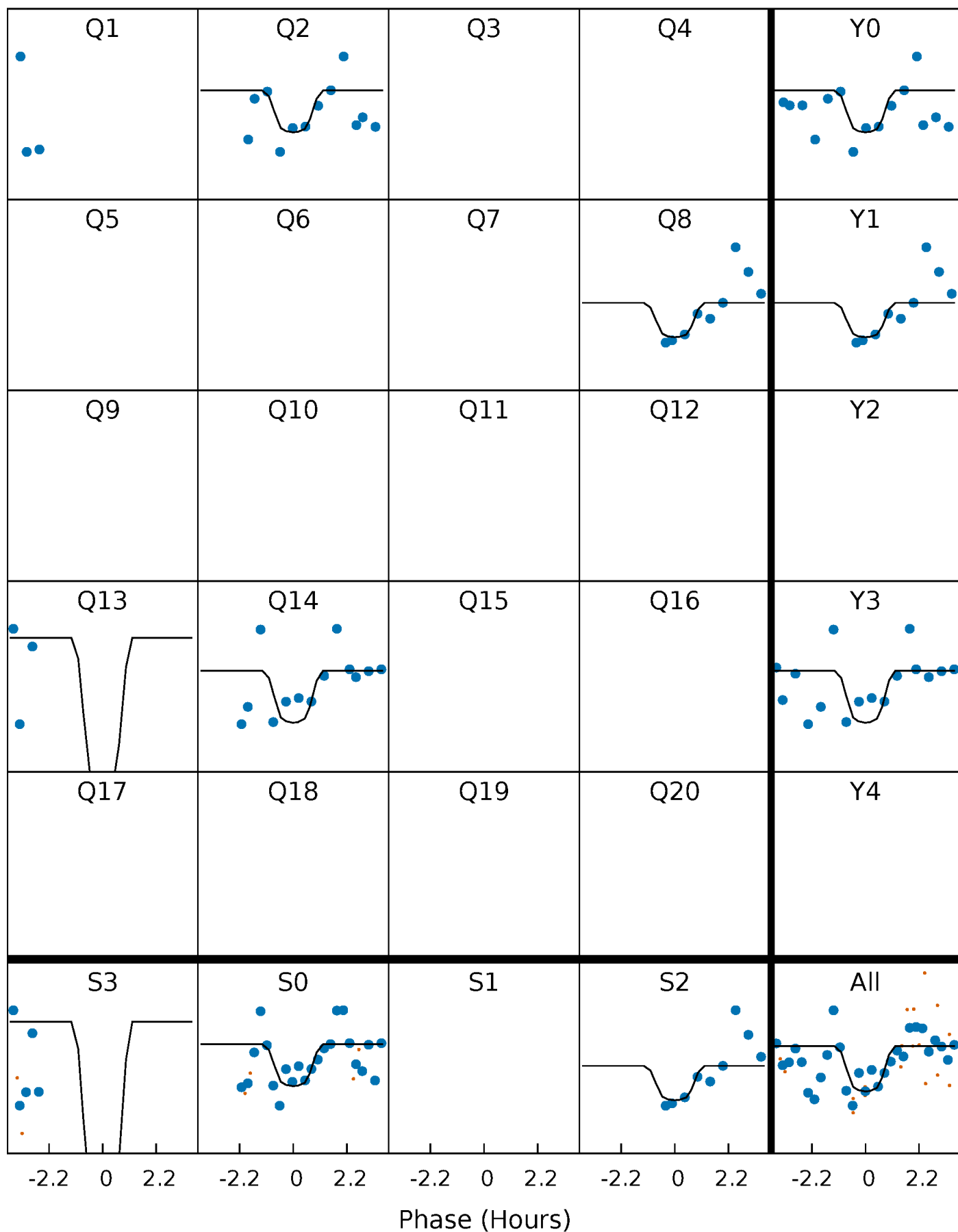
PDC Quarter-Phased Transit Curves

TCE 005892538-03 P= 33.060042 Days $T_0=161.268062$ (BKJD)



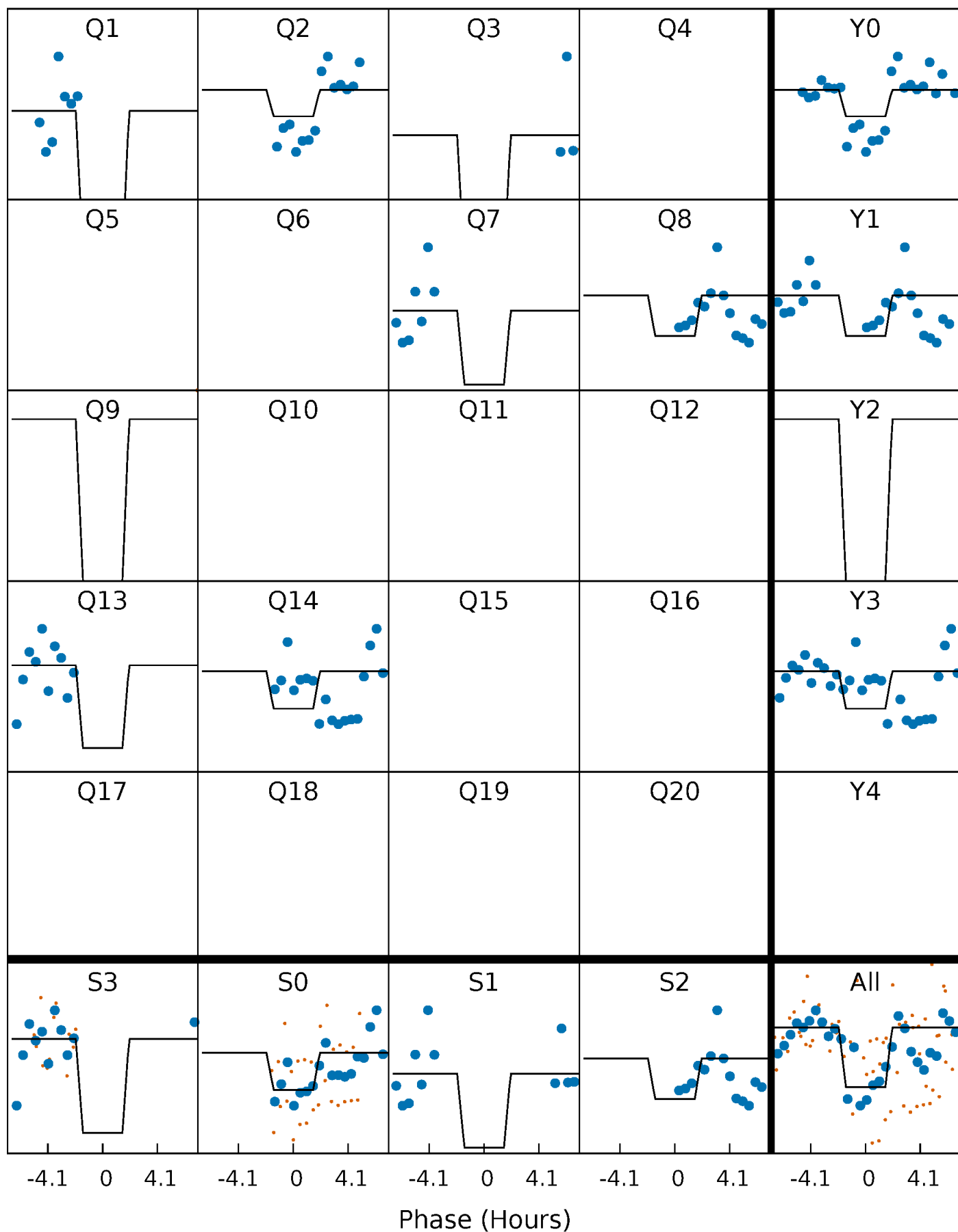
DV Quarter-Phased Transit Curves

TCE 005892538-03 P= 33.060042 Days $T_0=161.268062$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

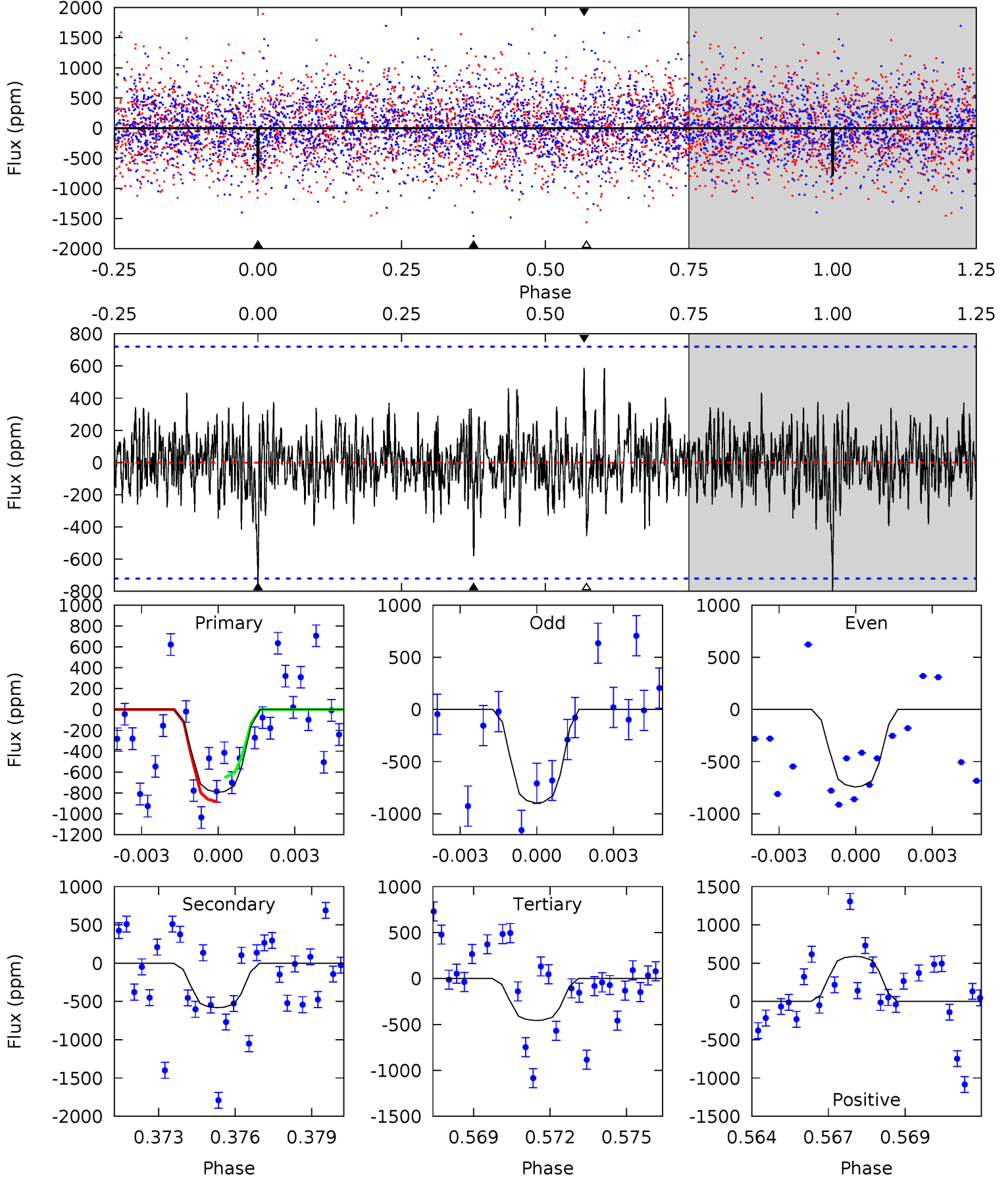
TCE 005892538-03 P= 33.059879 Days $T_0=161.246373$ (BKJD)



DV Model-Shift Uniqueness Test

005892538-03, P = 33.060042 Days, E = 128.208020 Days

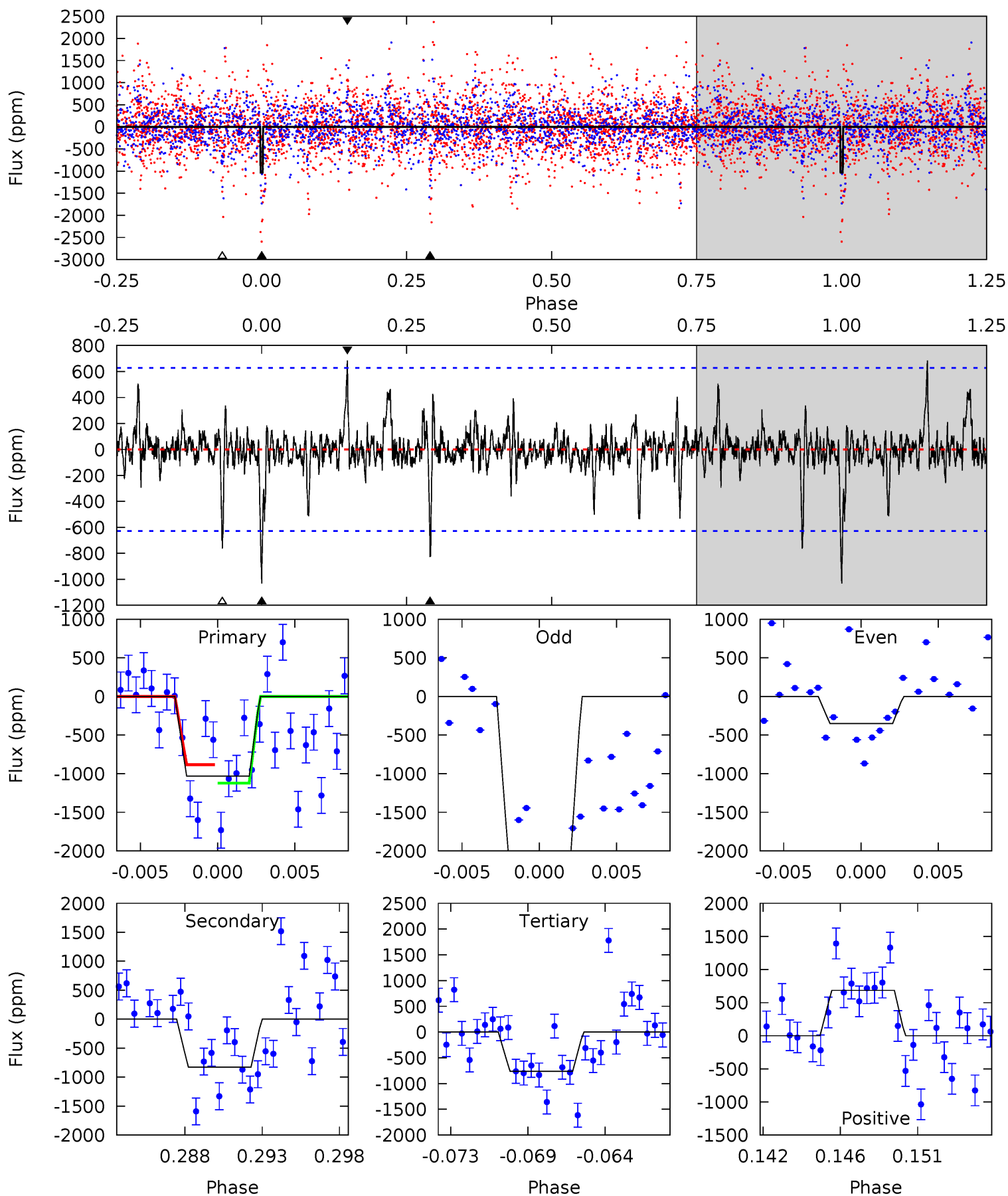
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.81	4.25	3.35	4.31	5.26	2.99	1.09	2.46	1.50	0.90	-0.06	0.54	0.89	0.43	0.86



Alt Model-Shift Uniqueness Test

005892538-03, P = 33.059879 Days, E = 128.186494 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.51	6.83	6.29	5.64	5.17	2.84	1.10	2.22	2.87	0.54	1.19	6.96	1.40	0.40	0.95



Stellar Parameters For KIC 005892538

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5750^{+172}_{-172}	$4.554^{+0.036}_{-0.204}$	$-0.160^{+0.300}_{-0.300}$	$0.849^{+0.249}_{-0.083}$	$0.945^{+0.106}_{-0.118}$	$2.174^{+0.437}_{-1.138}$
	+3%/-3%	+1%/-4%	+188%/-188%	+29%/-10%	+11%/-12%	+20%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005892538-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-582 ± 137	$4.56^{+3.99}_{-3.07}$	754^{+52}_{-36}	4327^{+2933}_{-816}	556^{+4861}_{-394}
Alt.	-828 ± 121	$4.58^{+3.99}_{-3.01}$	755^{+53}_{-33}	4671^{+3185}_{-937}	805^{+5760}_{-562}

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

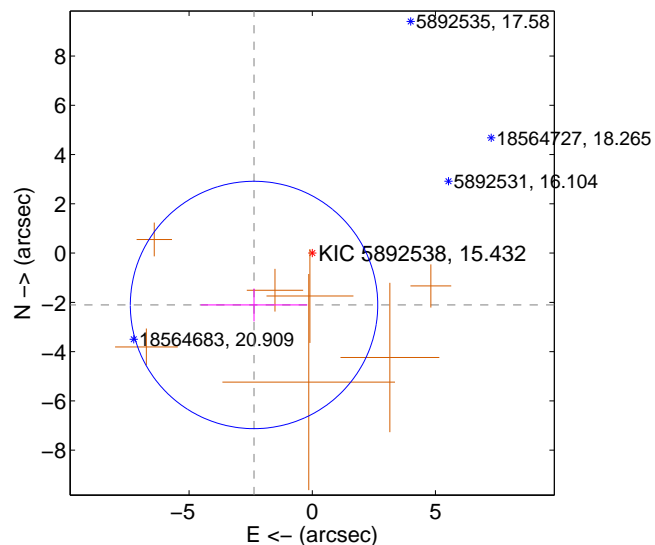
Supplemental centroid analysis for 005892538-03. Kepler magnitude: 15.43. Transit SNR 9.79

There are 0 quarters with good PRF difference image offsets

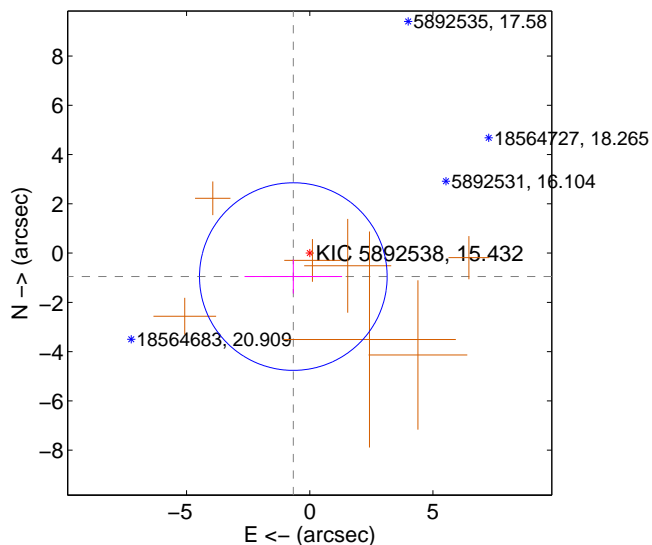
The OOT PRF centroid is offset from the target star catalog position by about 2.01 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.165 ± 1.674	1.89	2.363 ± 2.161	-2.105 ± 0.667
PRF-fit source offset from KIC position	1.163 ± 1.269	0.92	0.667 ± 1.981	-0.953 ± 0.692
photometric centroid source offset	2.68 ± 0.63	4.26	-2.54 ± 0.63	0.83 ± 0.57

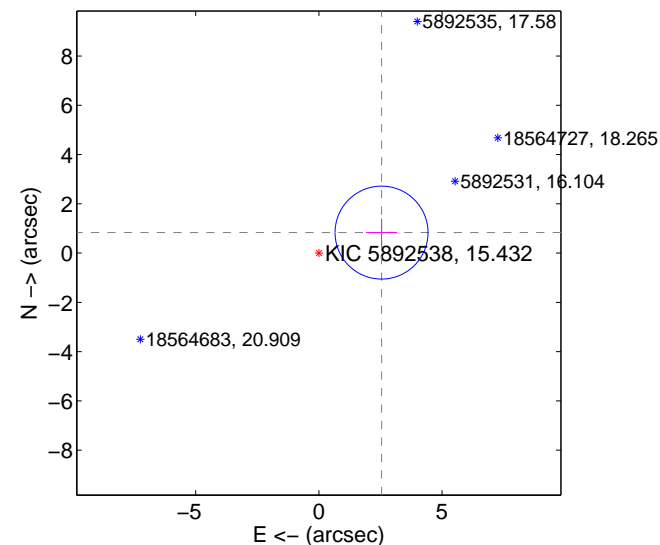
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

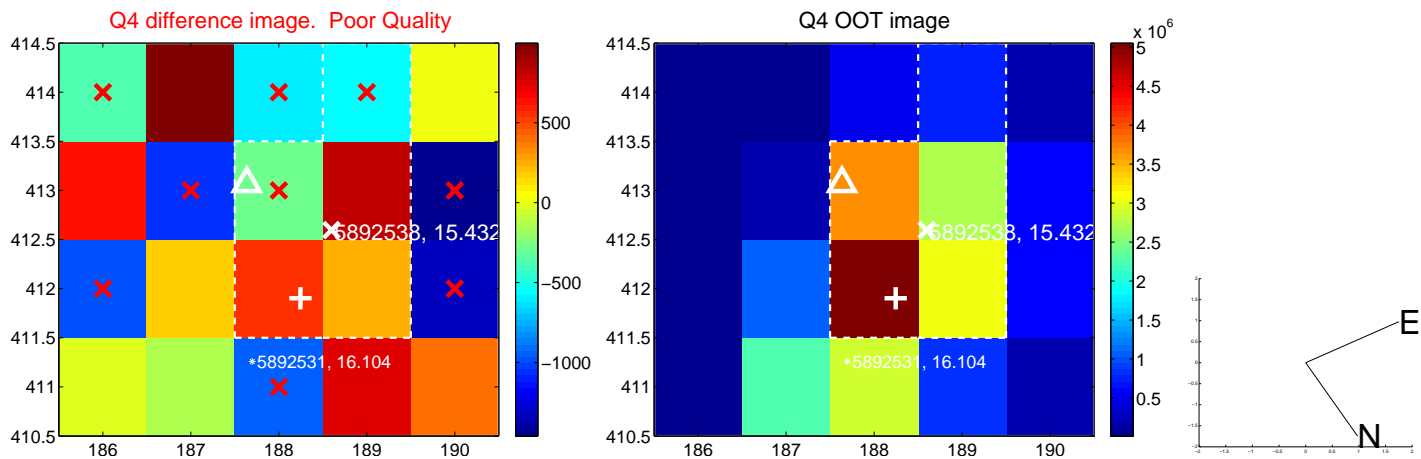
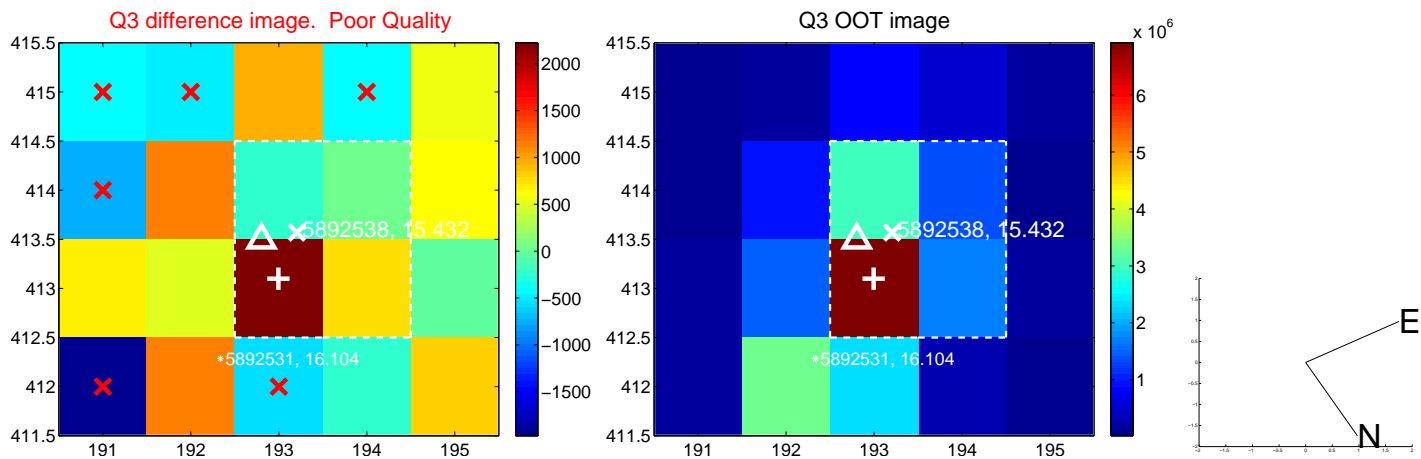
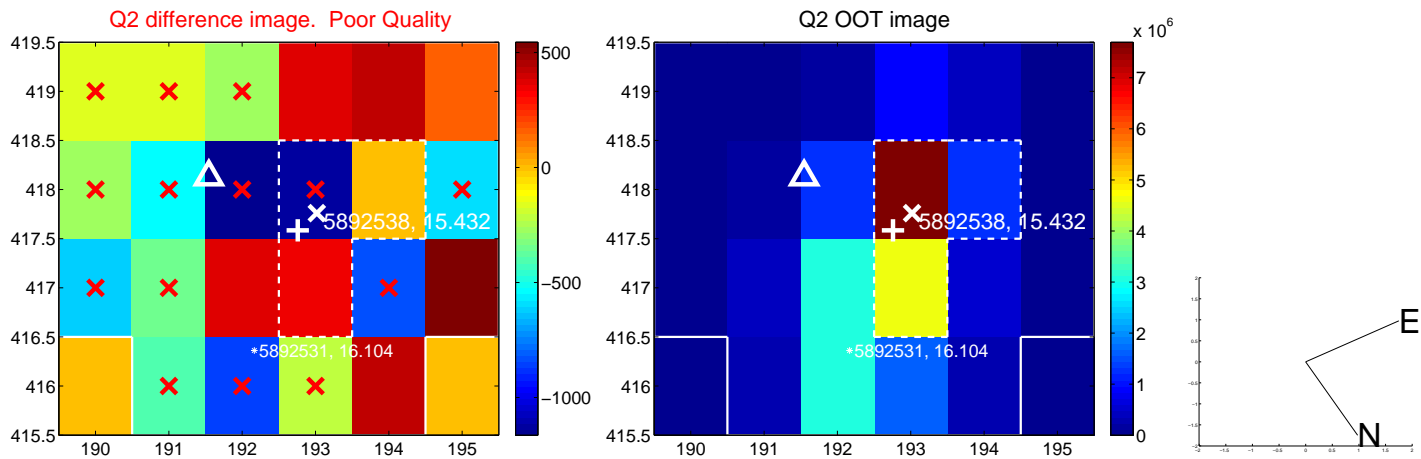
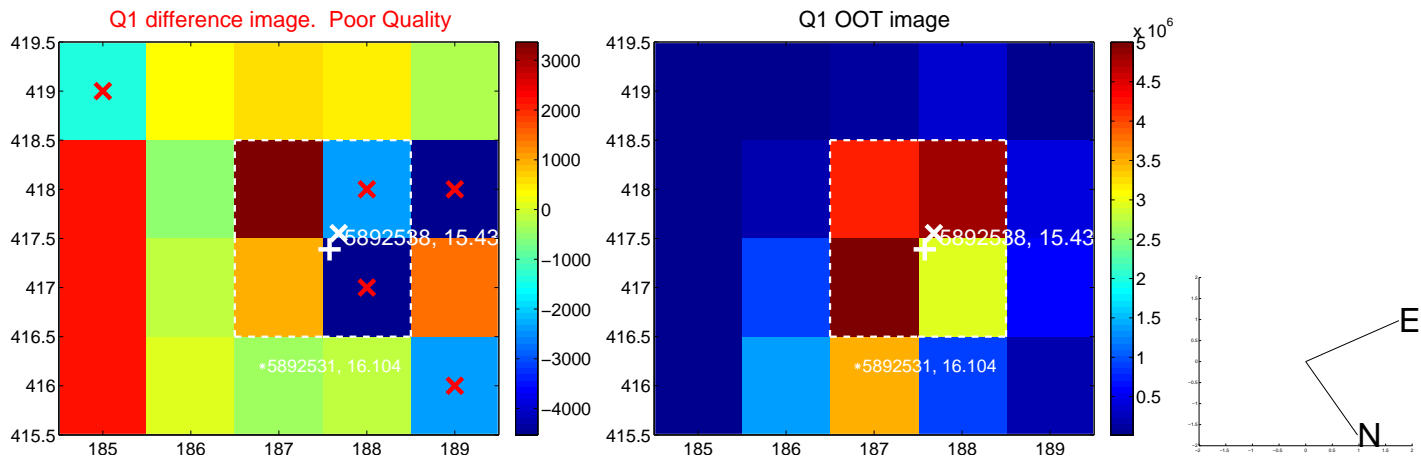


offset from photometric centroids

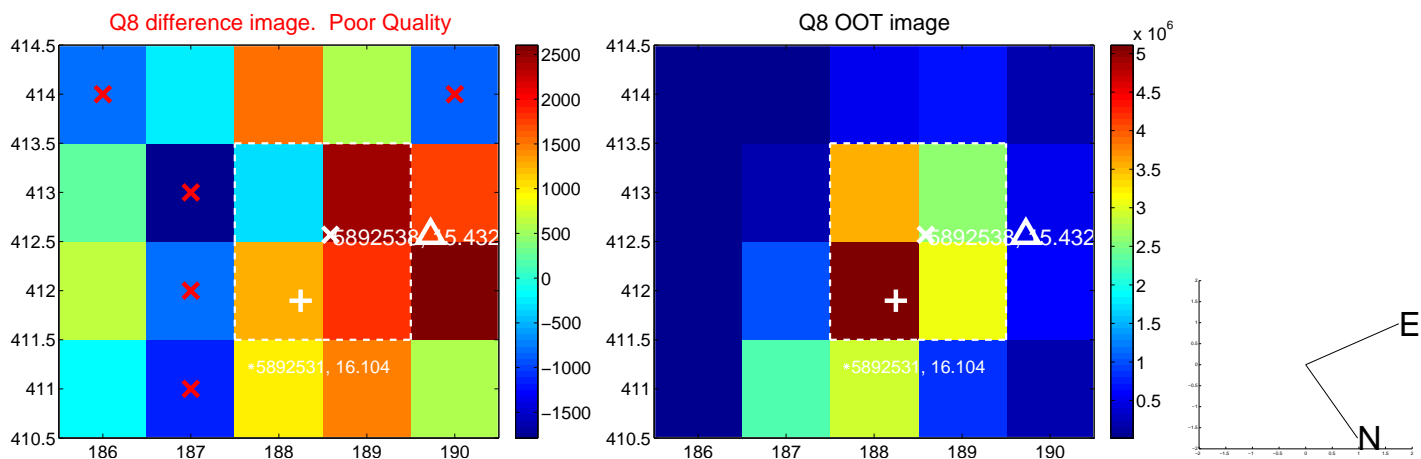
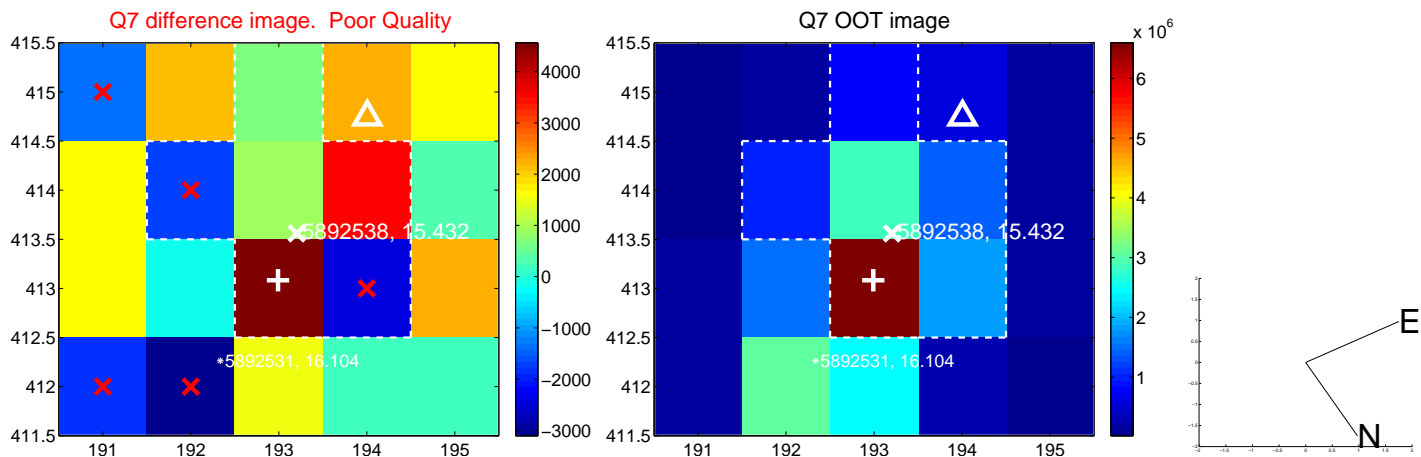
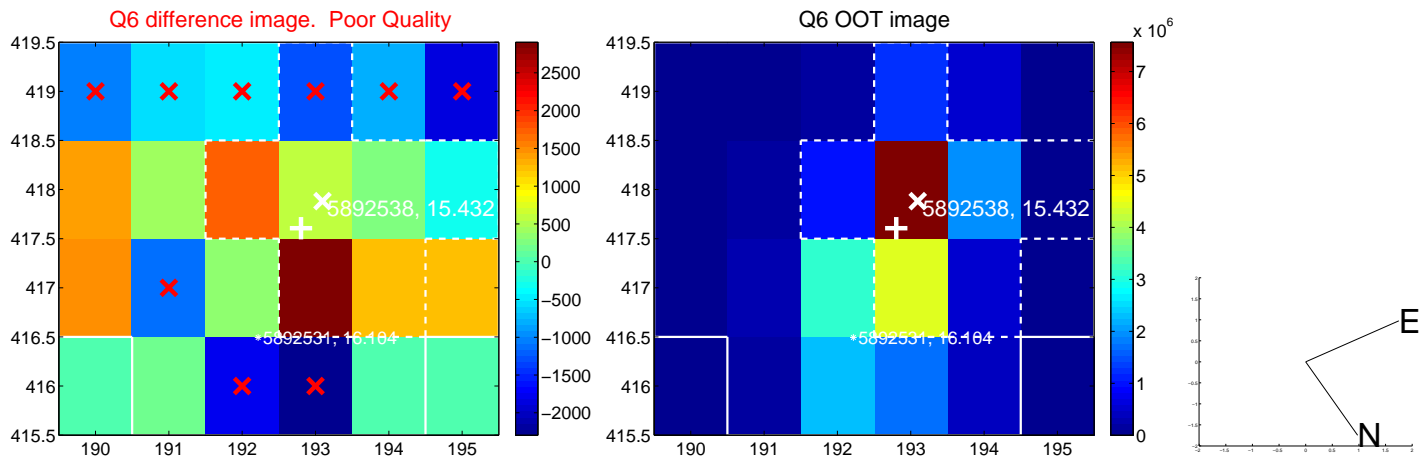
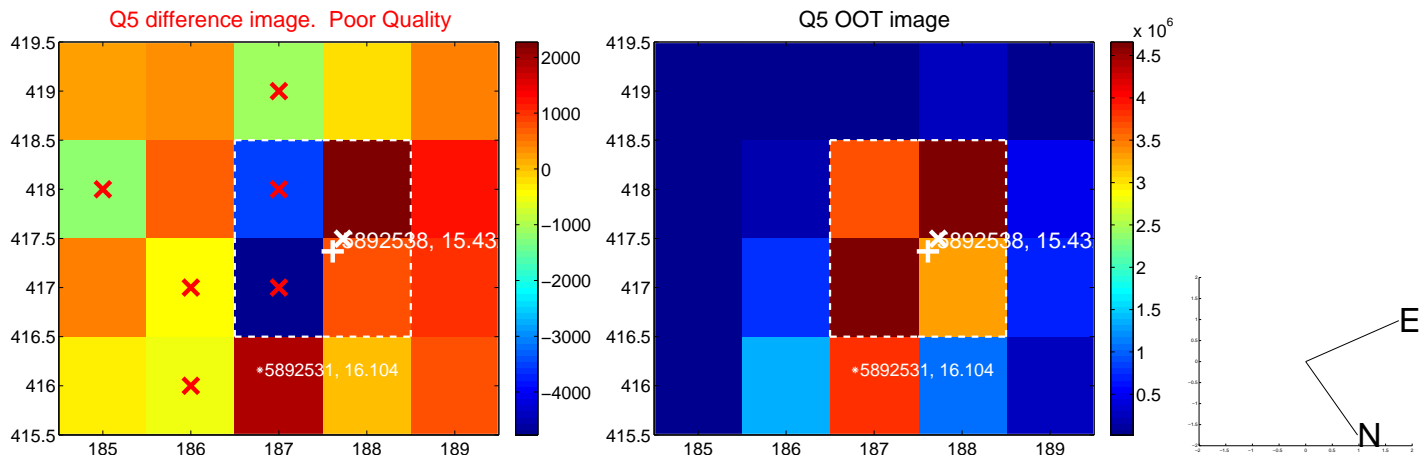


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

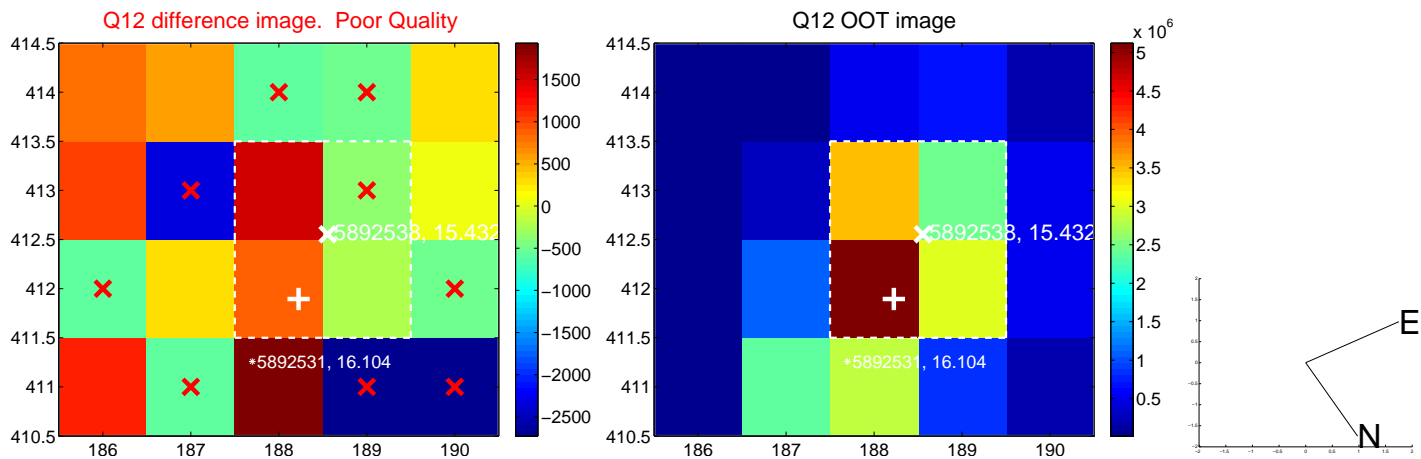
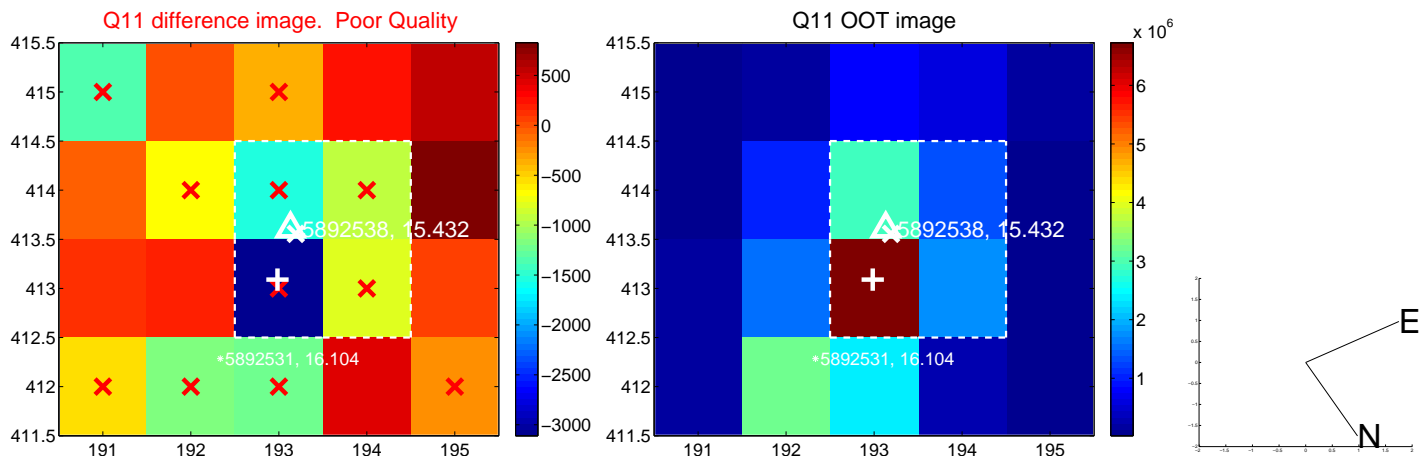
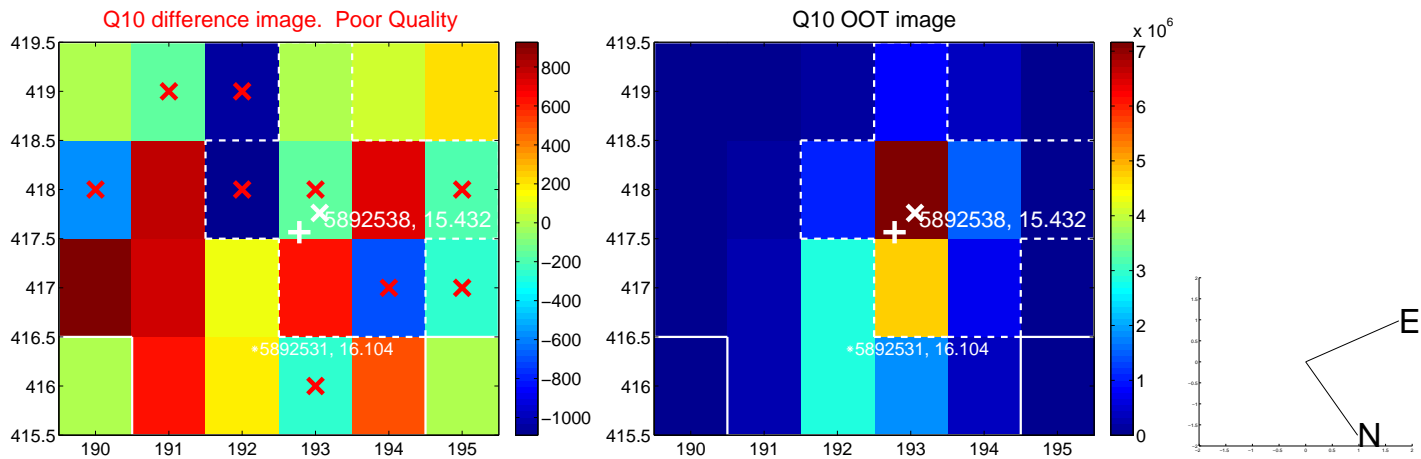
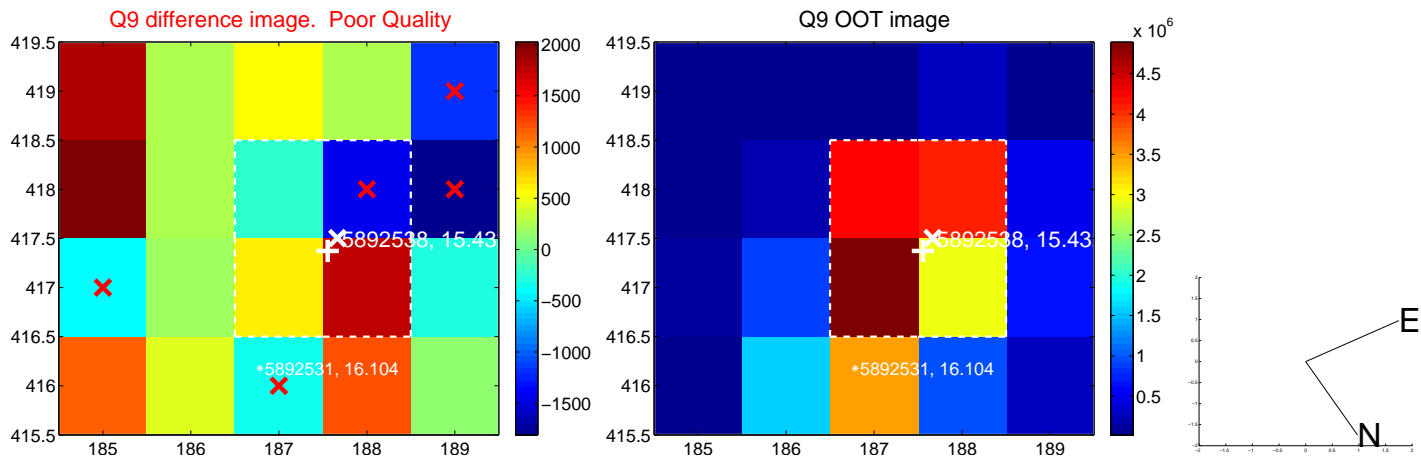
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



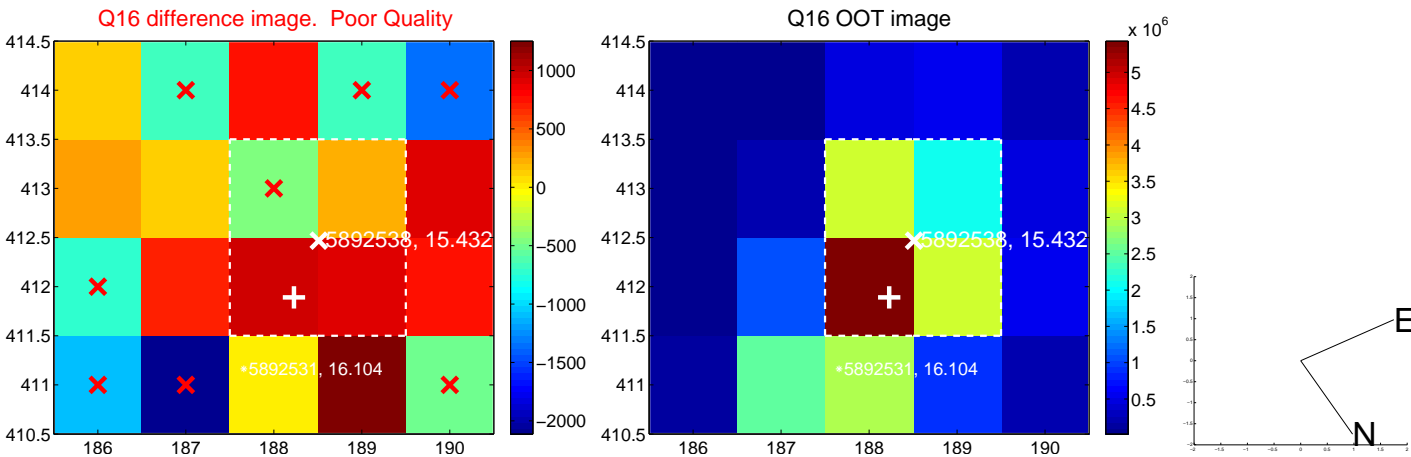
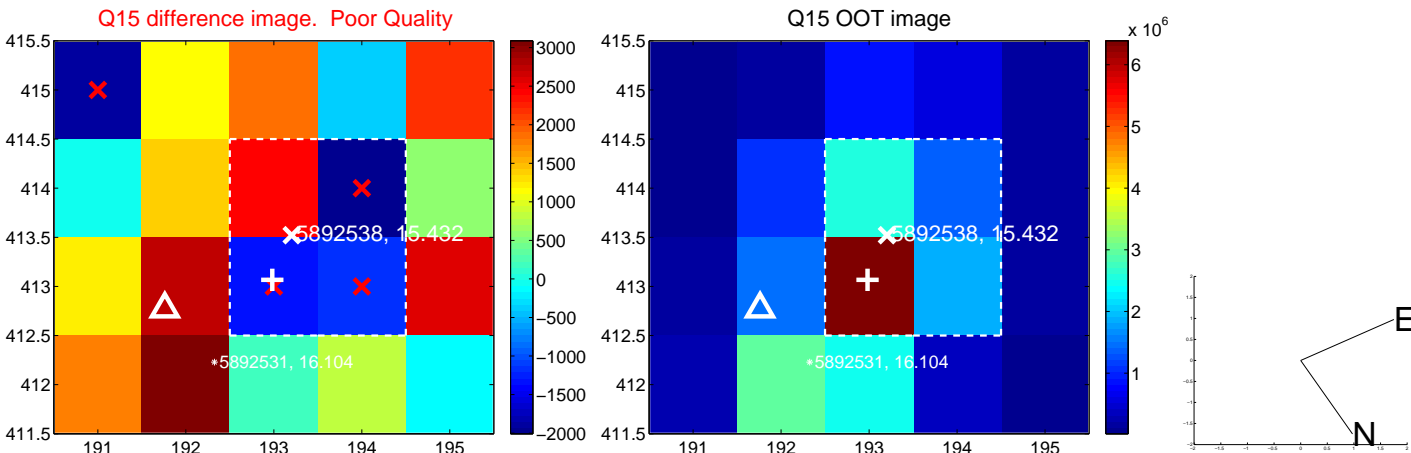
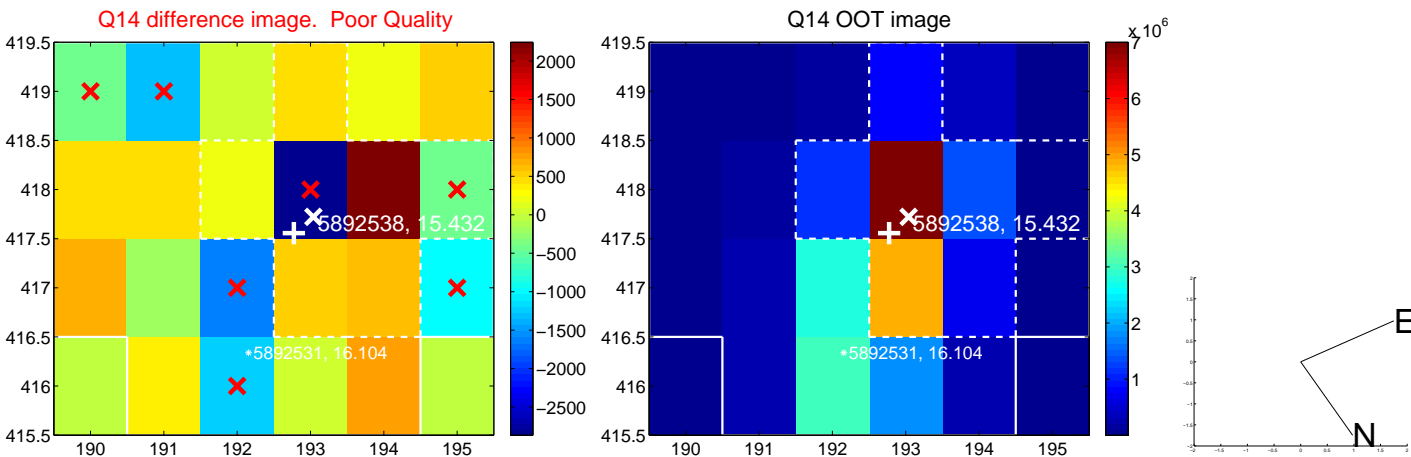
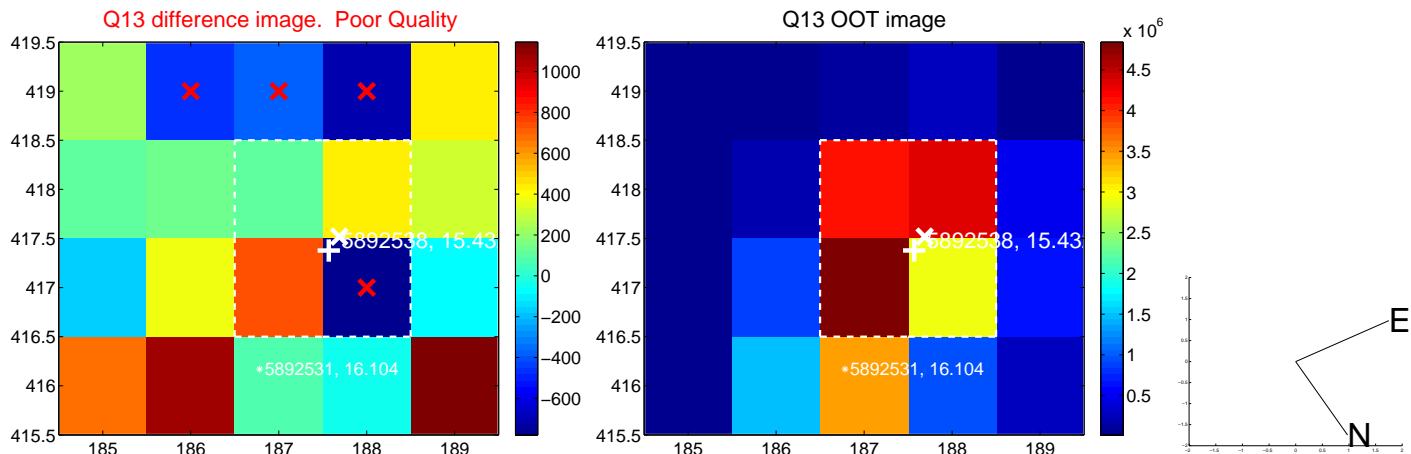
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



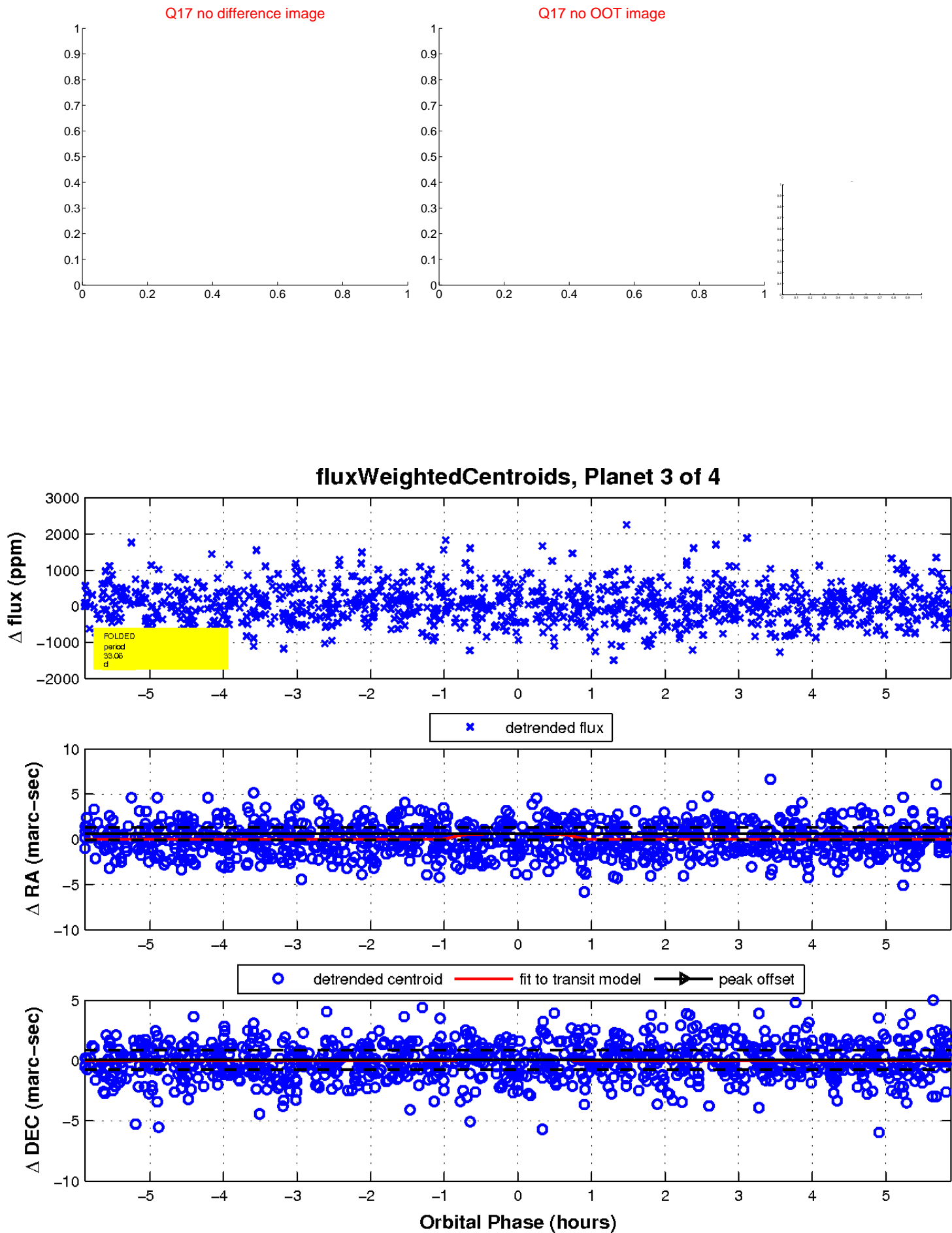
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



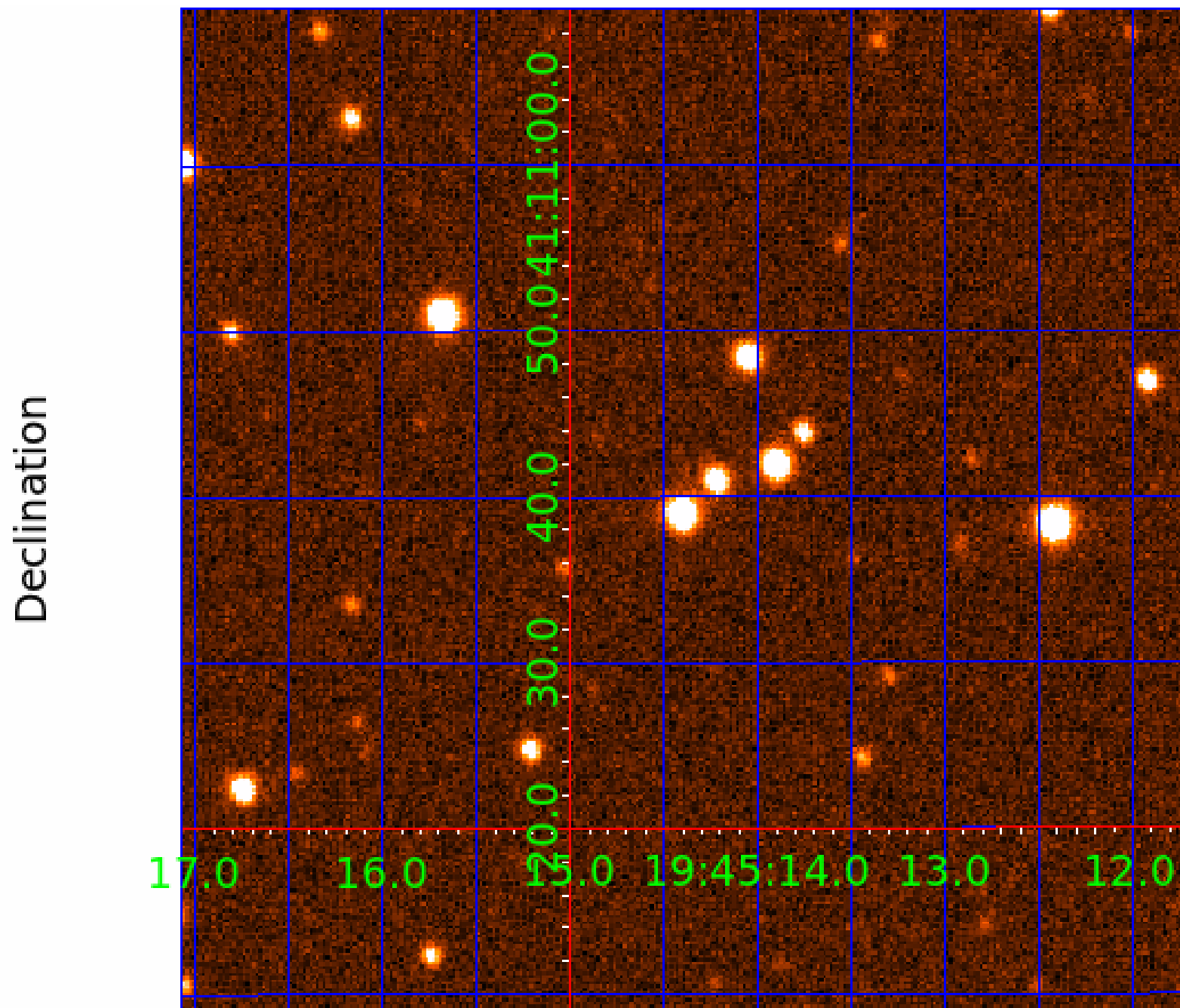
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005892538

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})
005892538-01	OBS	No	2.371675	133.825360	53.4	17.608	8.4	9.1	0.85	5750	0.81	606.41
005892538-02	OBS	No	35.675941	139.556859	753.1	3.544	12.6	11.8	0.85	5750	2.68	16.33
005892538-03	OBS	No	33.060042	161.268062	788.7	1.962	10.5	9.8	0.85	5750	2.84	18.08
005892538-04	OBS	No	34.003292	135.704557	703.4	1.635	11.8	9.1	0.85	5750	3.47	17.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005892538-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
005892538-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005892538-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
005892538-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_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.

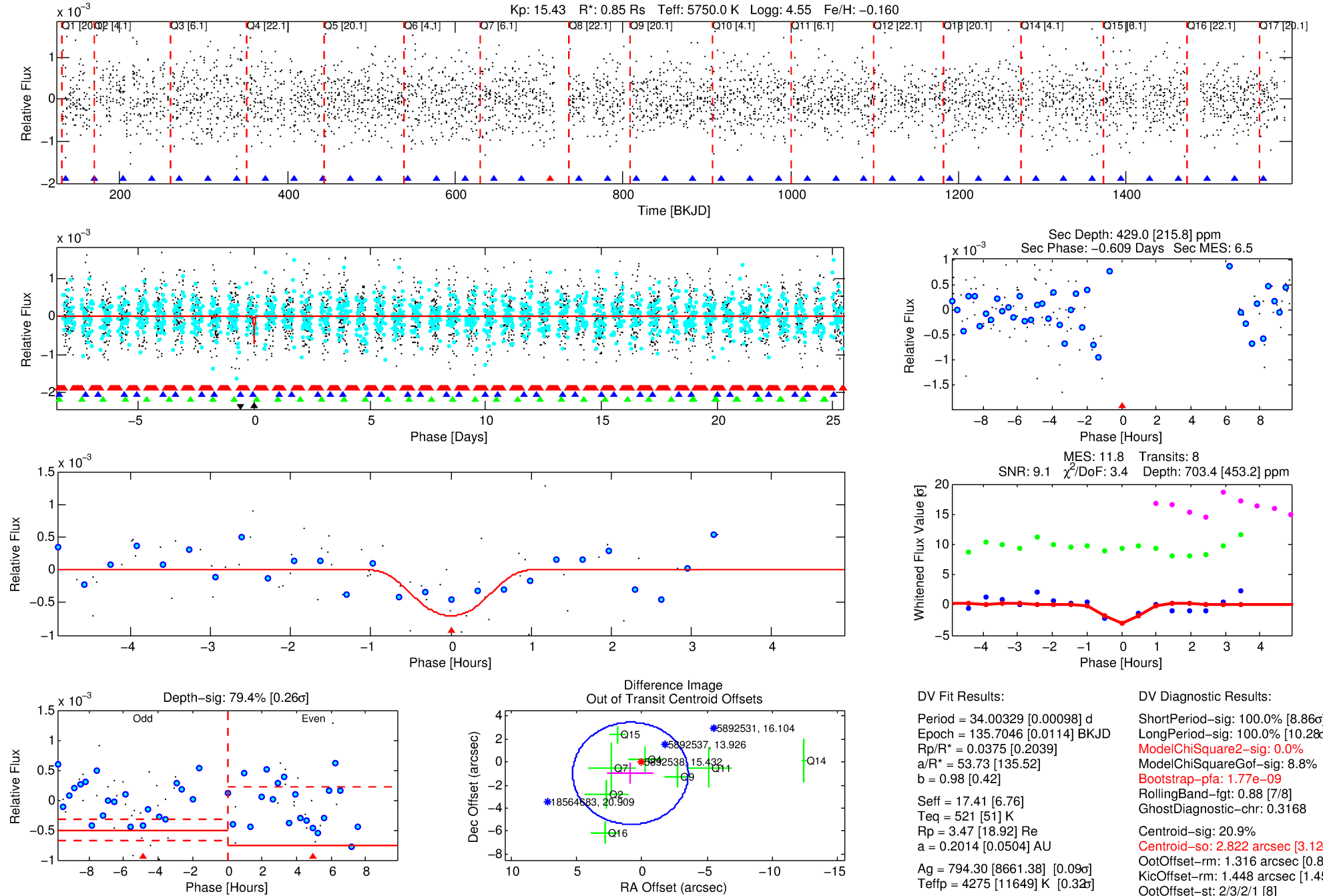
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005892538-04

No Significant Match Found

DV One-Page Summary

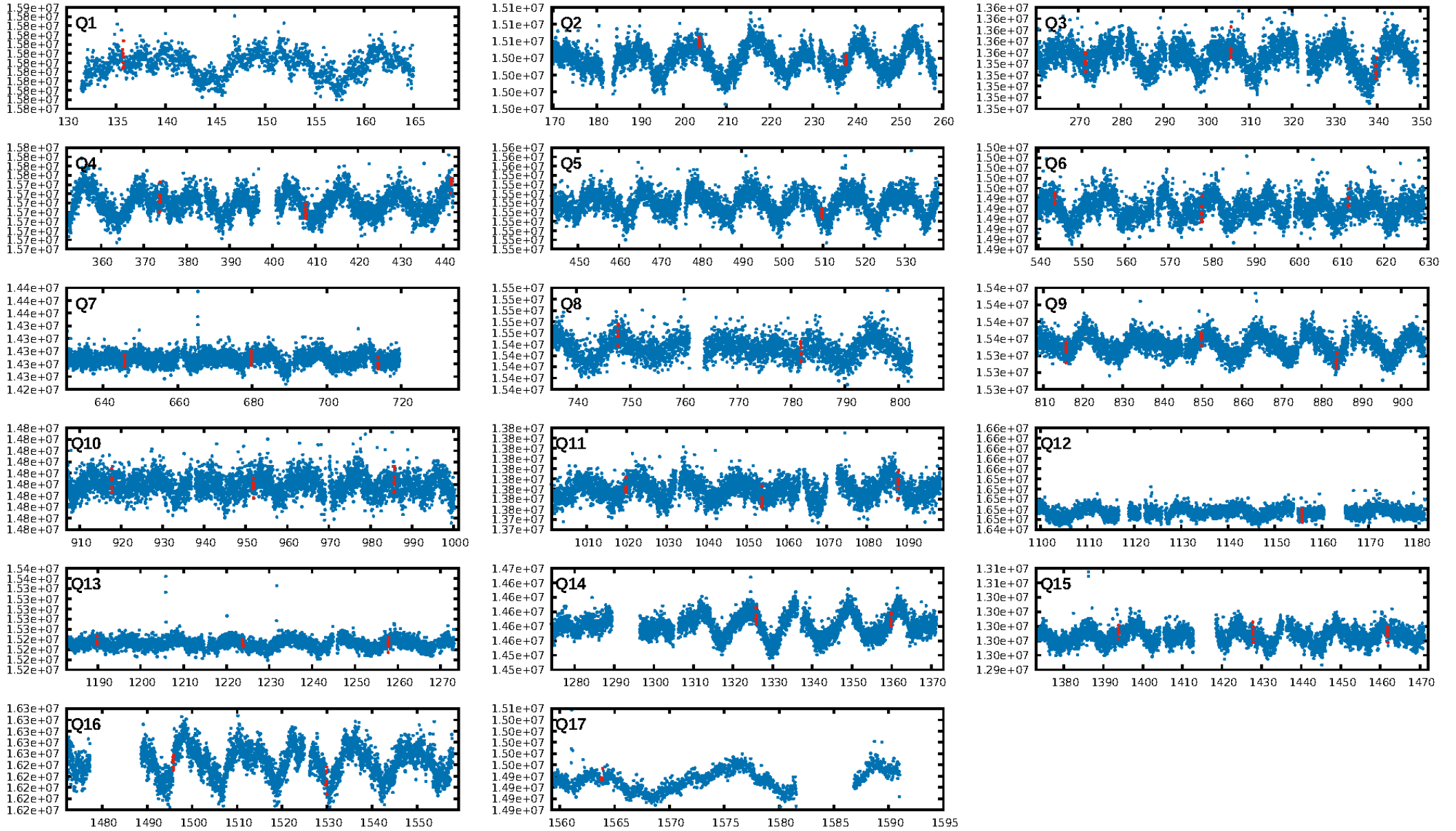
KIC: 5892538 Candidate: 4 of 4 Period: 34.003 d



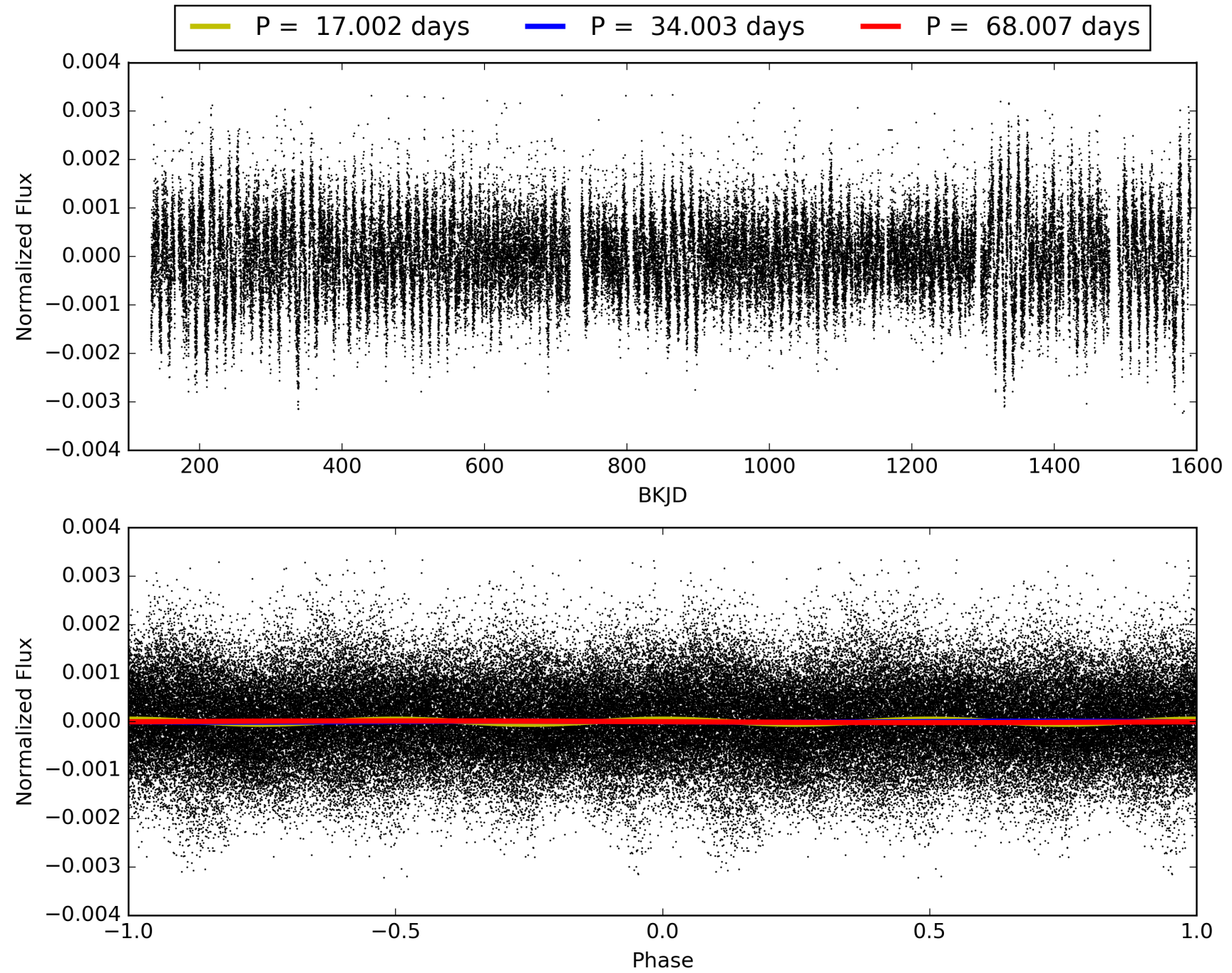
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:57:32 Z

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

TCE 005892538-04, PDC Light Curves

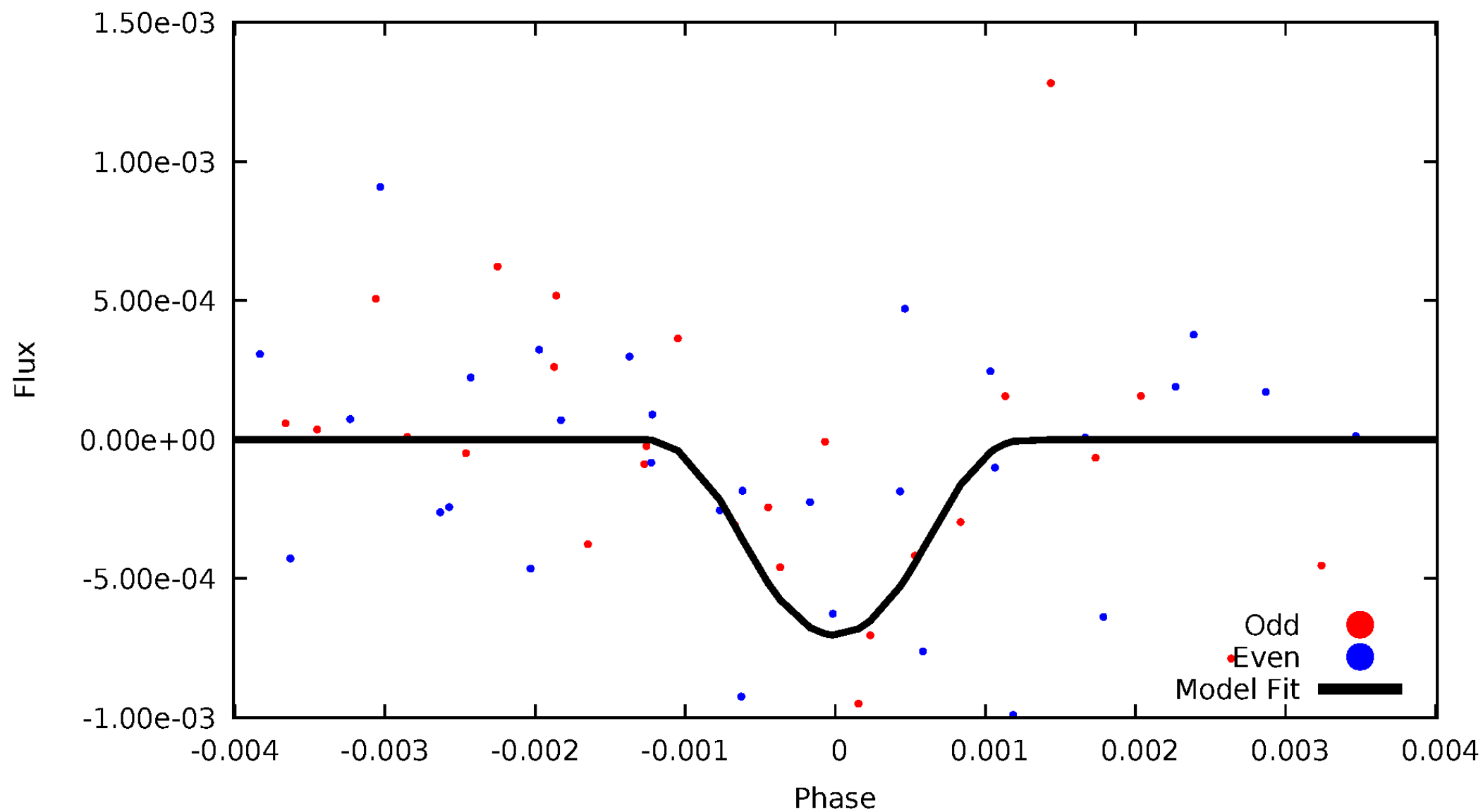


TCE 005892538-04



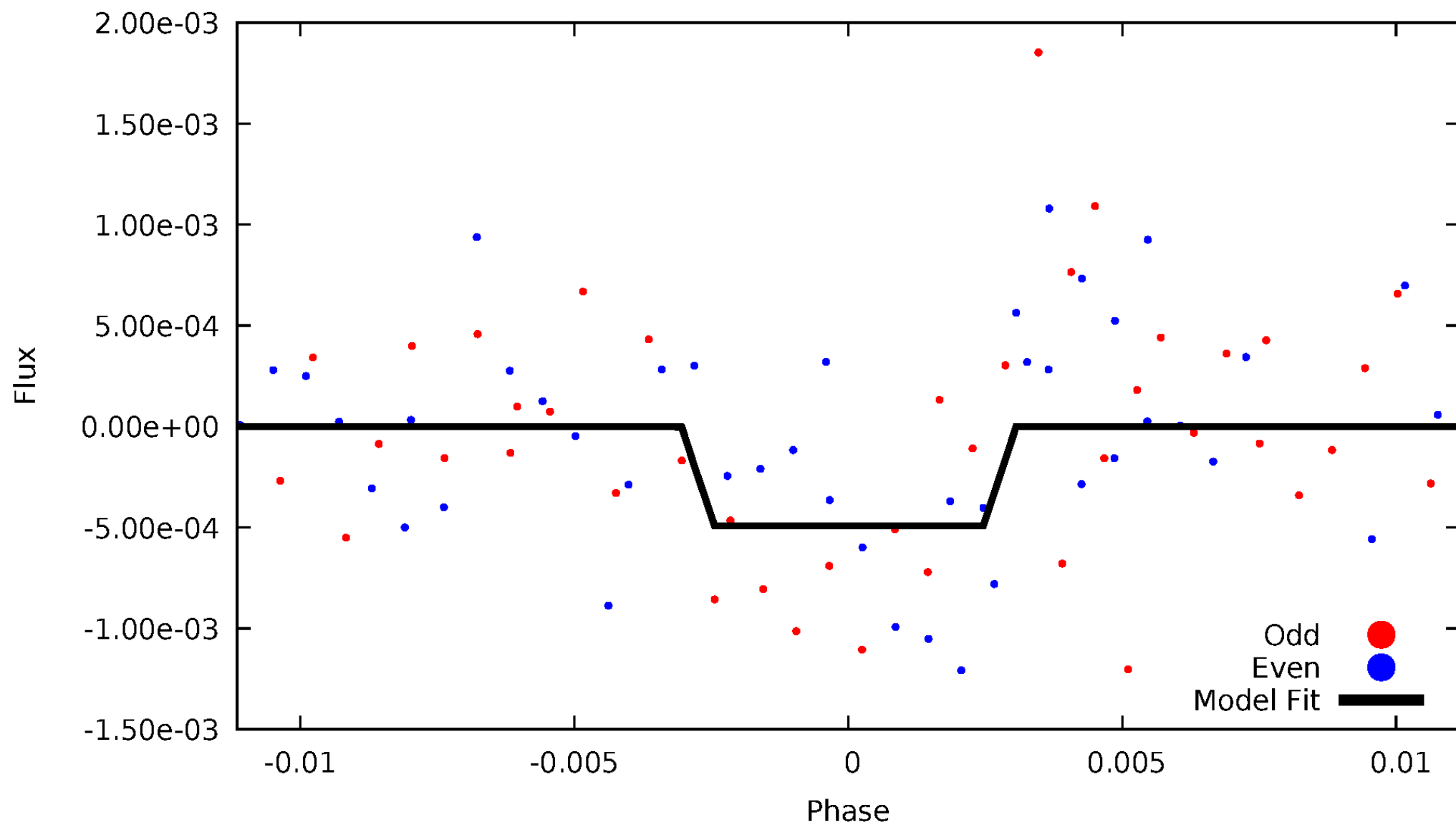
DV Odd/Even

TCE 005892538-04



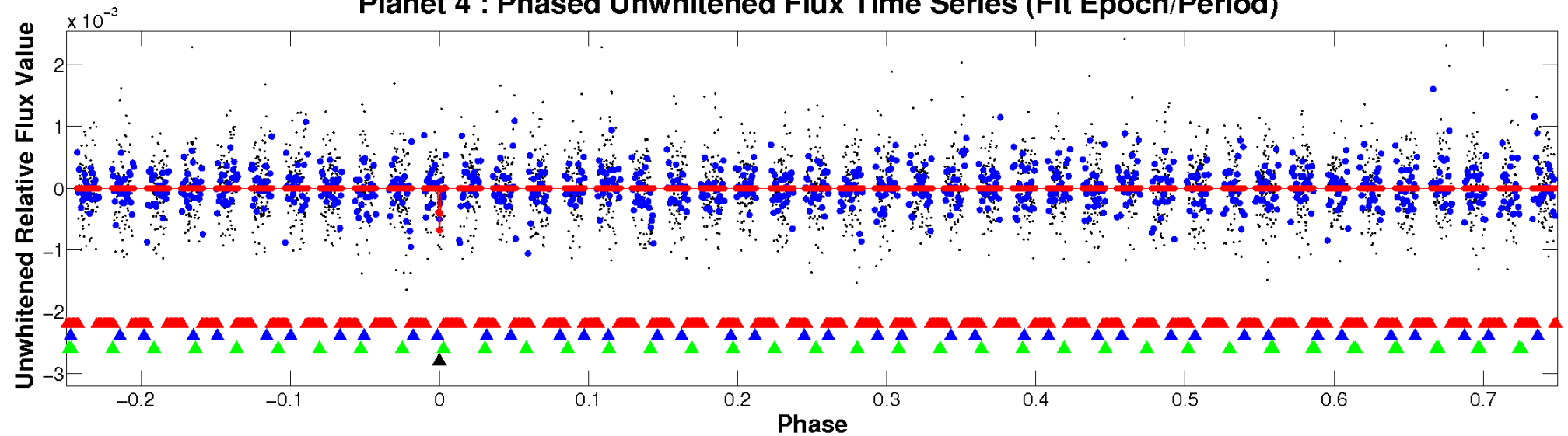
ALT Odd/Even

TCE 005892538-04

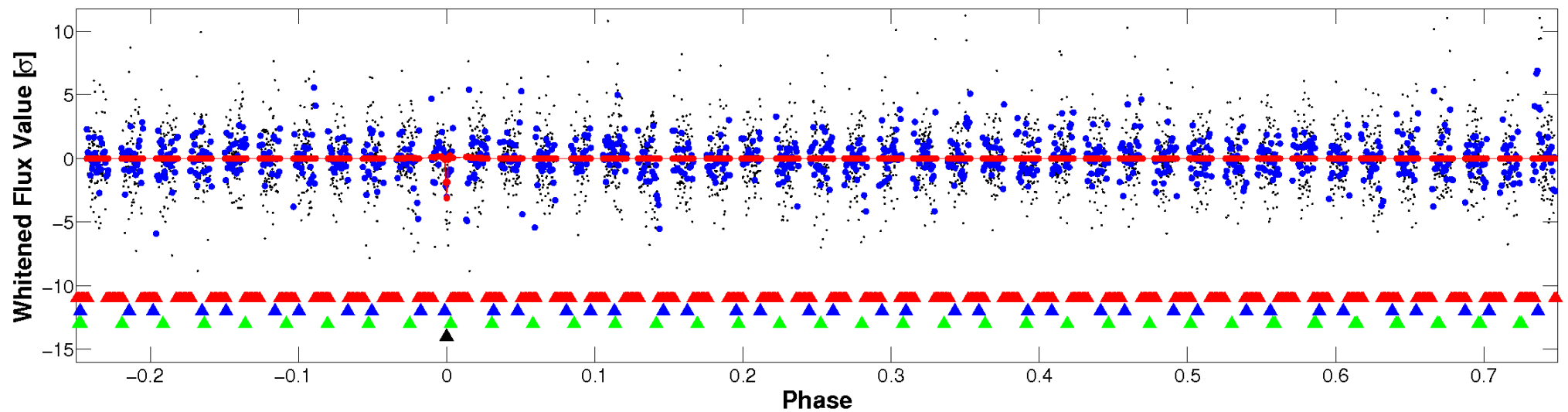


Non-Whitened Vs. Whitened Light Curve

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

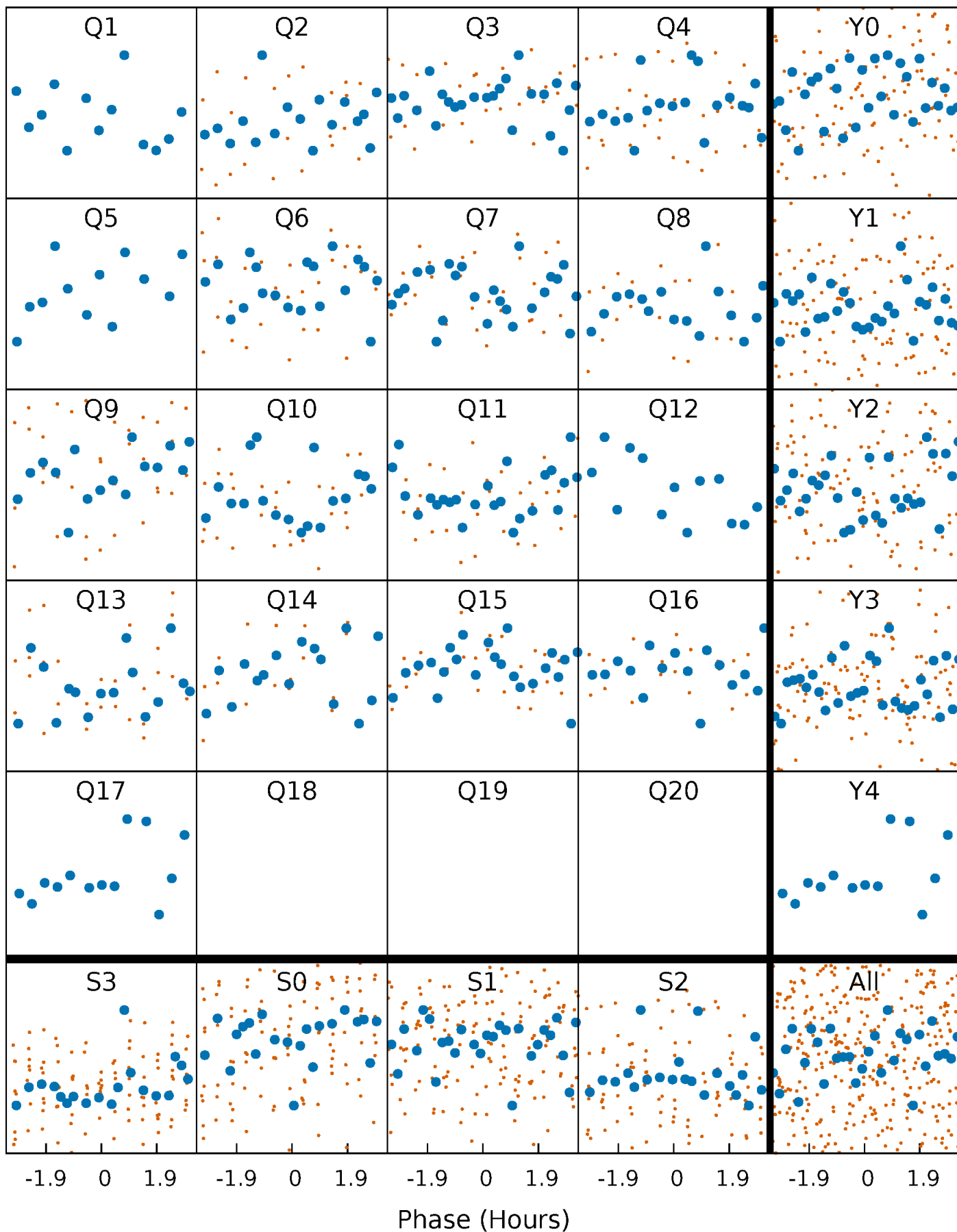


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



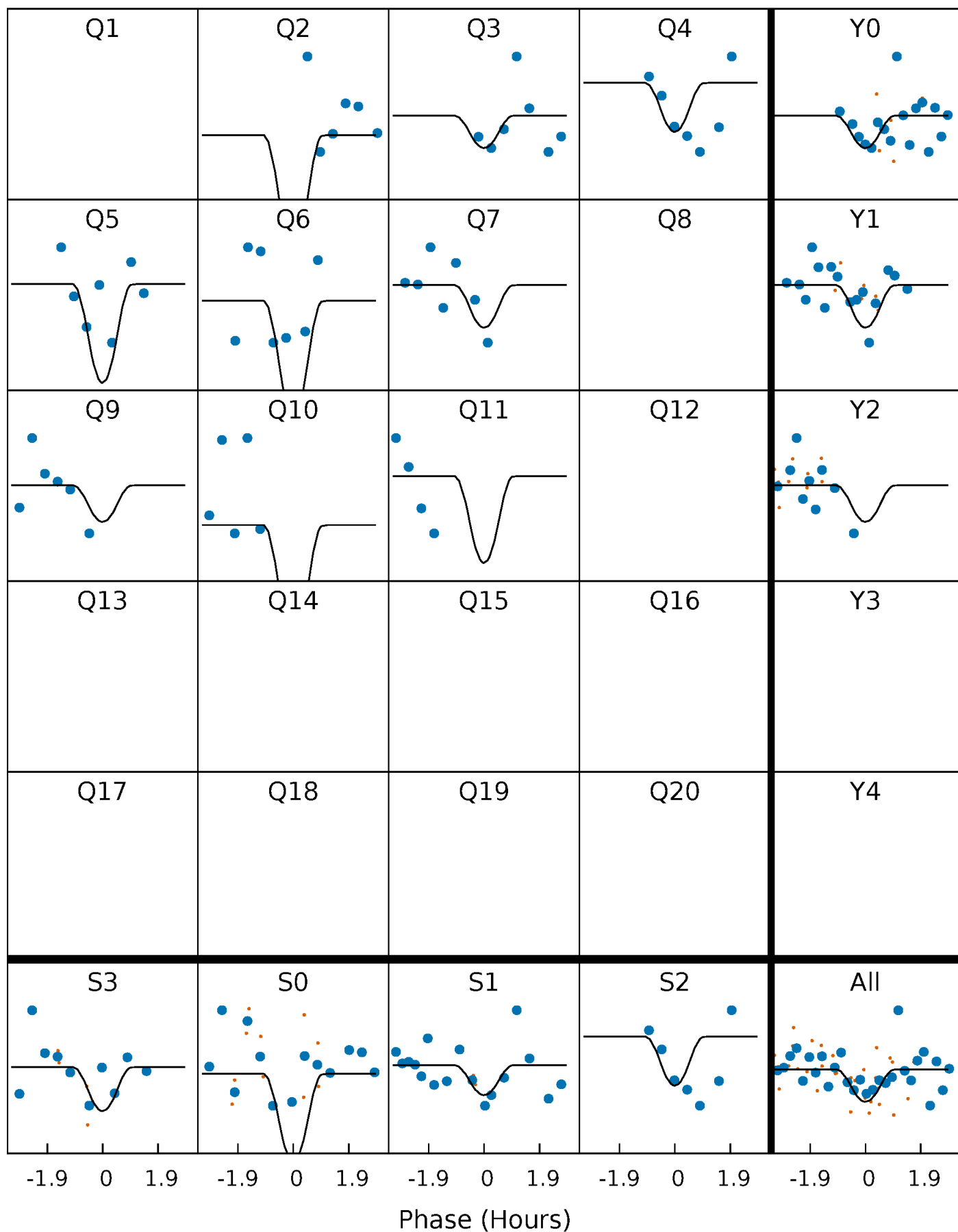
PDC Quarter-Phased Transit Curves

TCE 005892538-04 P= 34.003292 Days $T_0=135.704557$ (BKJD)



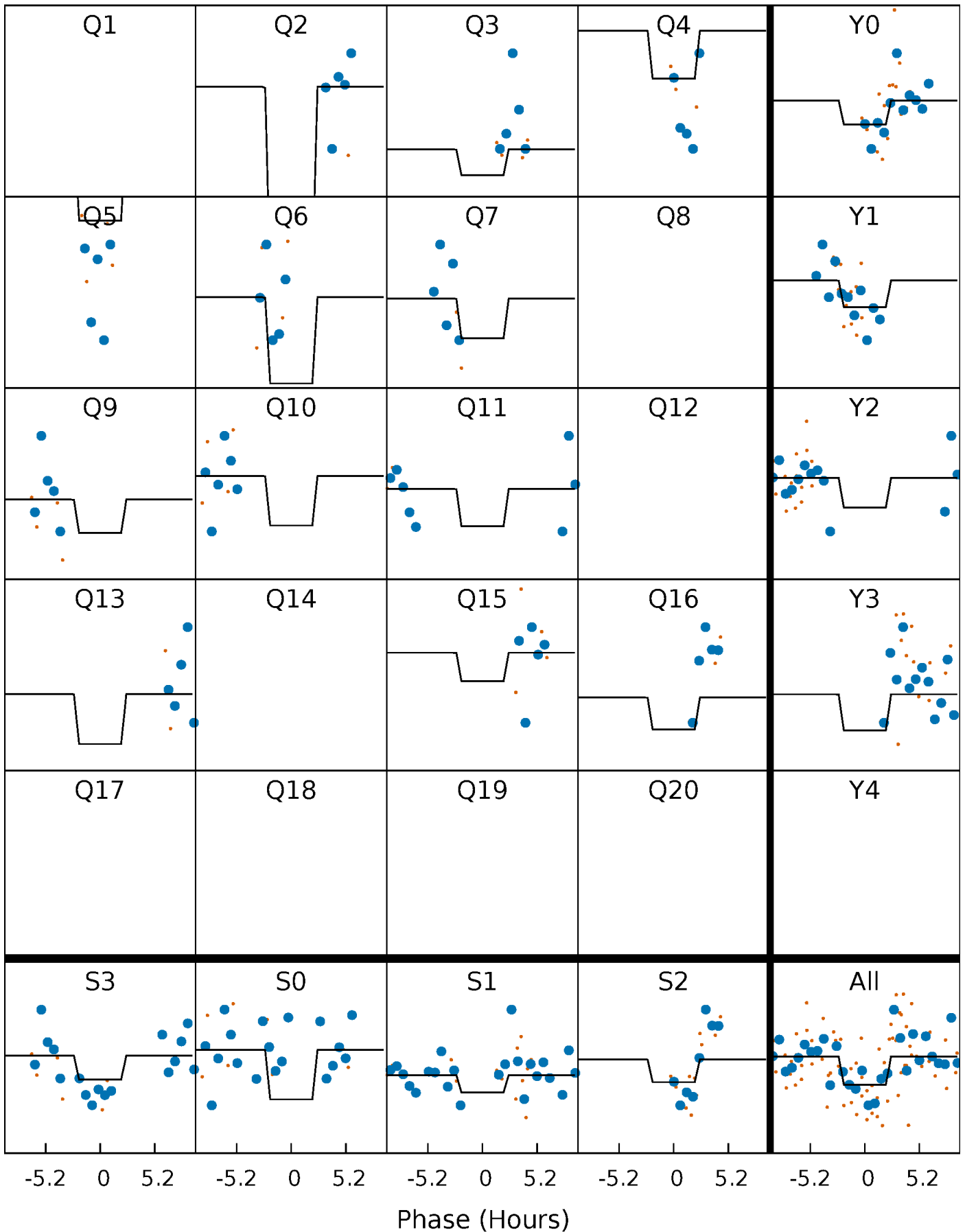
DV Quarter-Phased Transit Curves

TCE 005892538-04 P= 34.003292 Days $T_0=135.704557$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

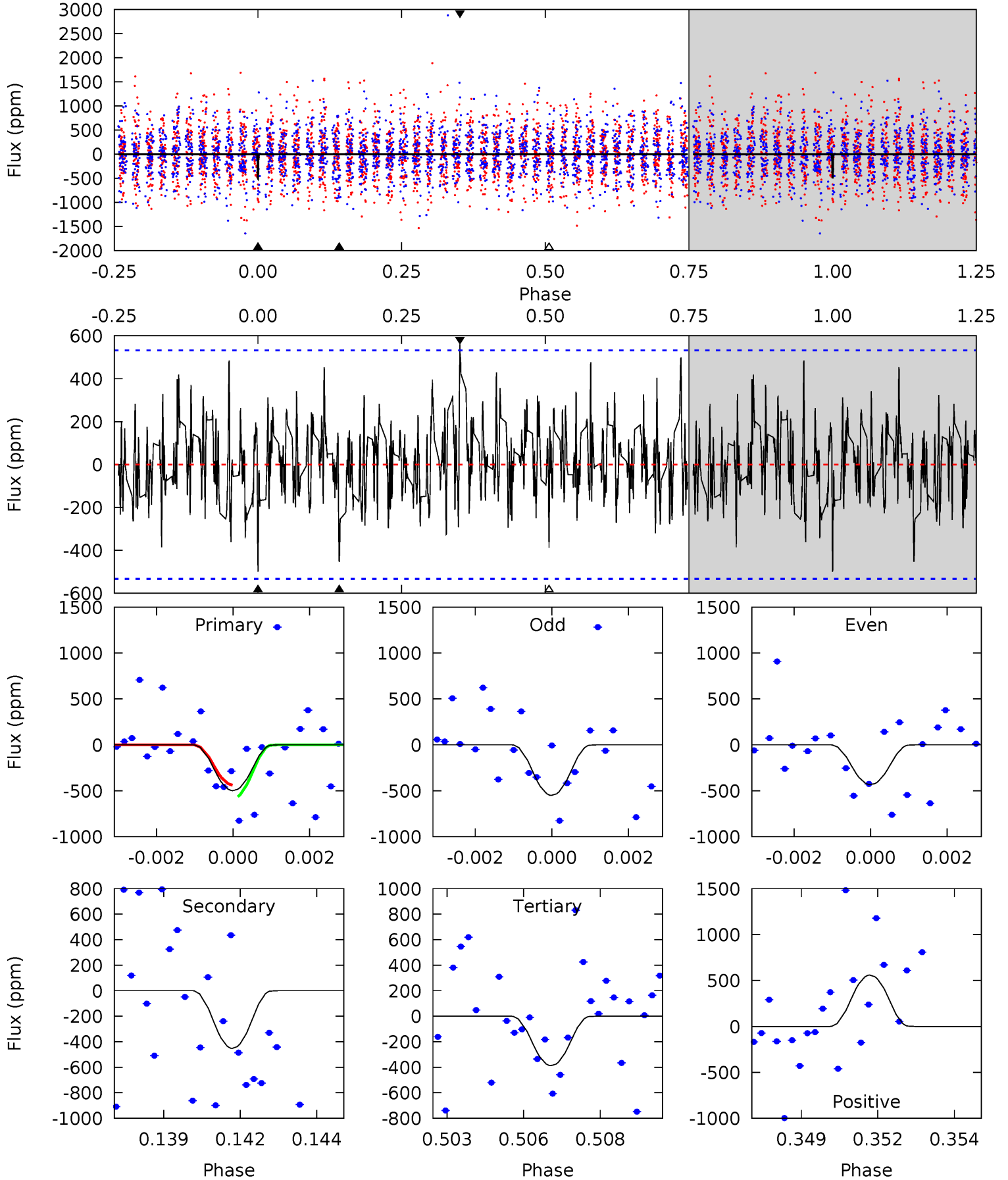
TCE 005892538-04 P= 34.016412 Days $T_0=135.569767$ (BKJD)



DV Model-Shift Uniqueness Test

005892538-04, P = 34.003292 Days, E = 101.701265 Days

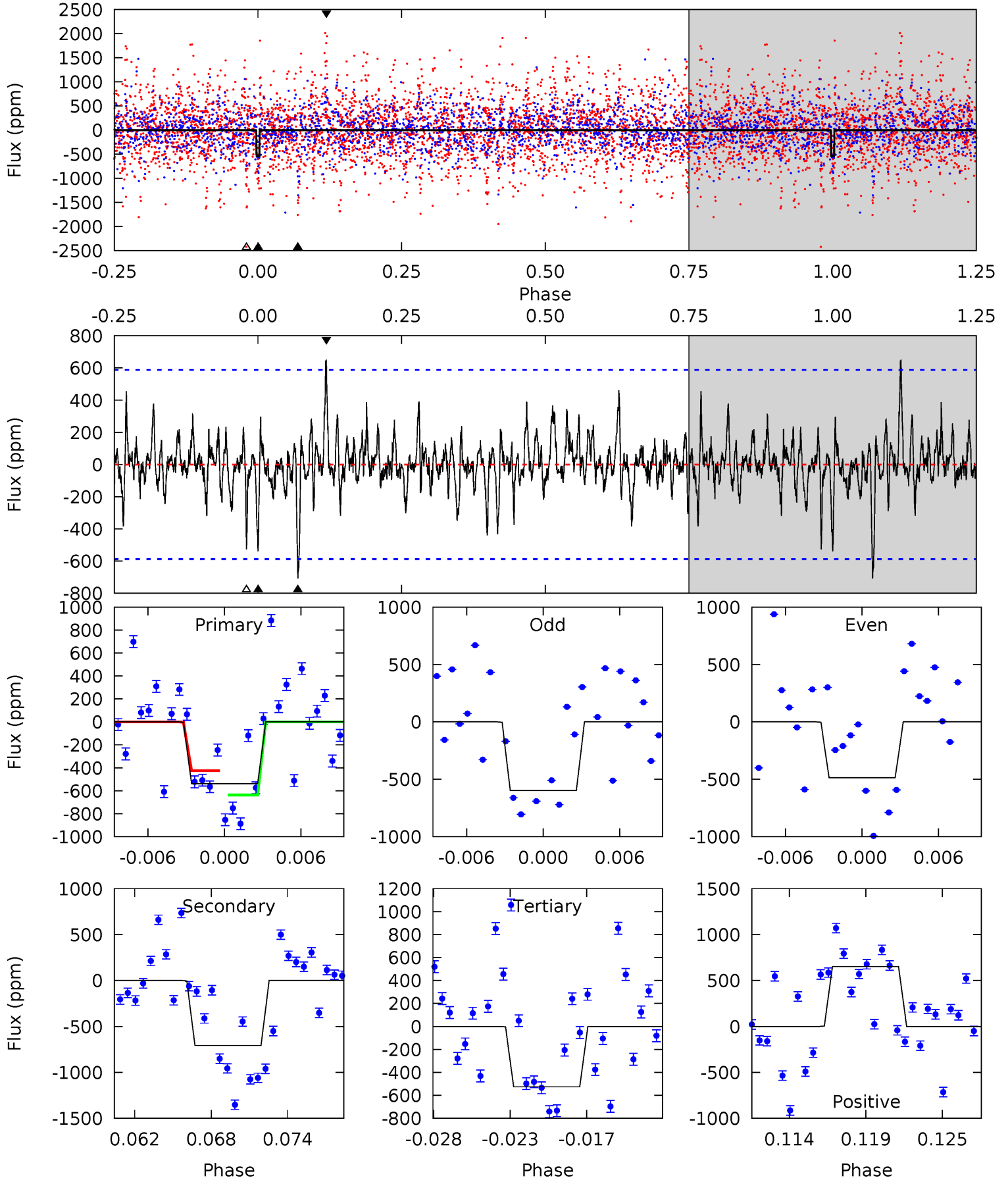
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.96	4.50	3.86	5.56	5.29	3.03	1.47	1.11	-0.60	0.65	-1.06	0.59	0.80	0.53	0.64



Alt Model-Shift Uniqueness Test

005892538-04, P = 34.016412 Days, E = 101.553355 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.70	6.18	4.59	5.68	5.13	2.77	1.21	0.11	-0.98	1.59	0.49	0.49	0.83	0.48	0.93



Stellar Parameters For KIC 005892538

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5750^{+172}_{-172}	$4.554^{+0.036}_{-0.204}$	$-0.160^{+0.300}_{-0.300}$	$0.849^{+0.249}_{-0.083}$	$0.945^{+0.106}_{-0.118}$	$2.174^{+0.437}_{-1.138}$
	+3%/-3%	+1%/-4%	+188%/-188%	+29%/-10%	+11%/-12%	+20%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005892538-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-453 ± 101	$14.40^{+14.76}_{-9.64}$	746^{+53}_{-35}	2907^{+1194}_{-517}	50^{+396}_{-39}
Alt.	-707 ± 115	$13.74^{+14.87}_{-9.17}$	749^{+52}_{-36}	3110^{+1379}_{-537}	80^{+641}_{-62}

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

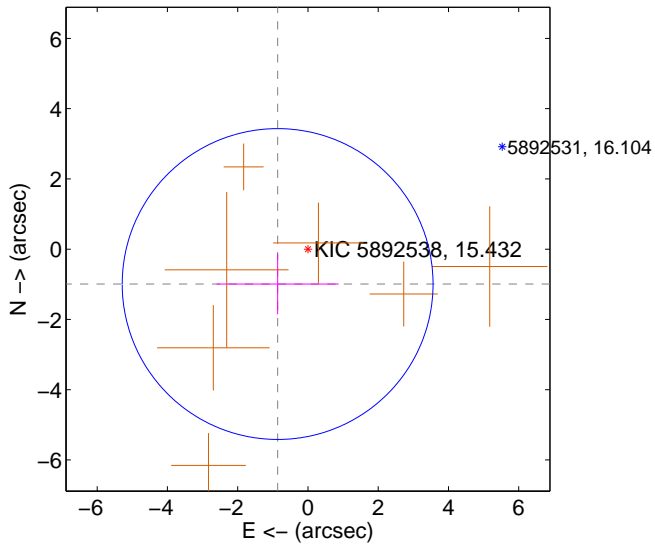
Supplemental centroid analysis for 005892538-04. Kepler magnitude: 15.43. Transit SNR 9.10

There are 0 quarters with good PRF difference image offsets

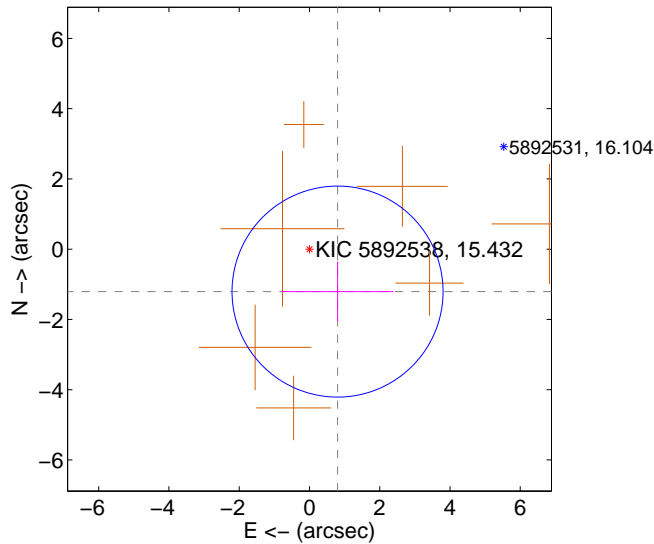
The OOT PRF centroid is offset from the target star catalog position by about 2.89 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.316 ± 1.475	0.89	0.863 ± 1.737	-0.993 ± 0.865
PRF-fit source offset from KIC position	1.448 ± 1.001	1.45	-0.799 ± 1.595	-1.208 ± 0.856
photometric centroid source offset	2.82 ± 0.90	3.12	-2.39 ± 0.93	1.50 ± 0.84

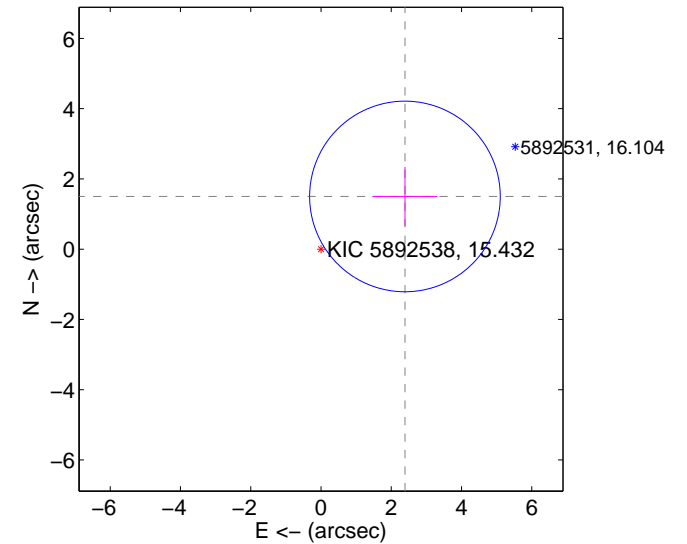
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

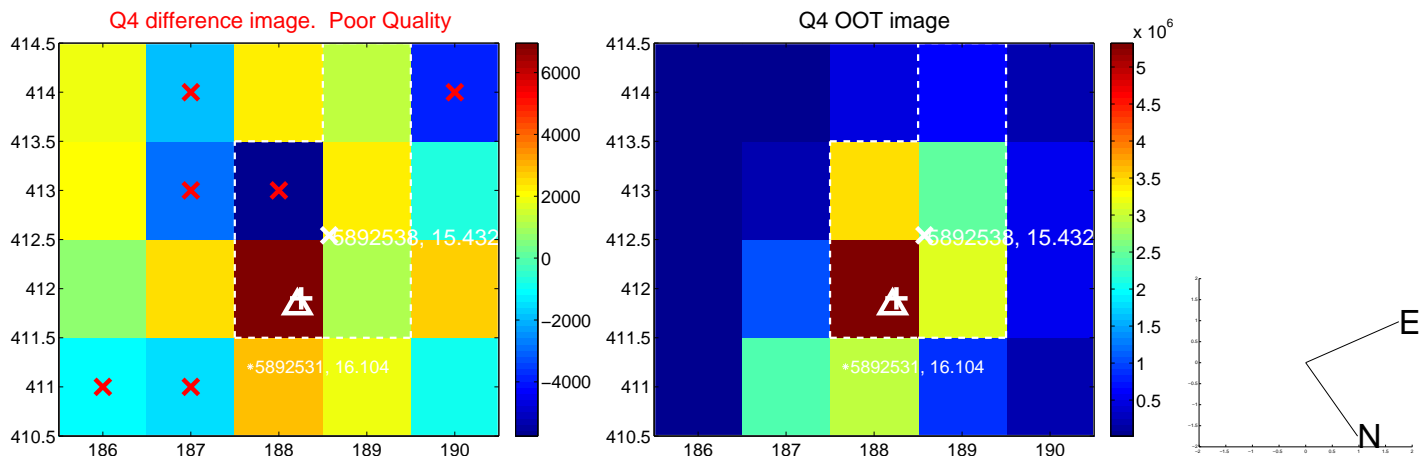
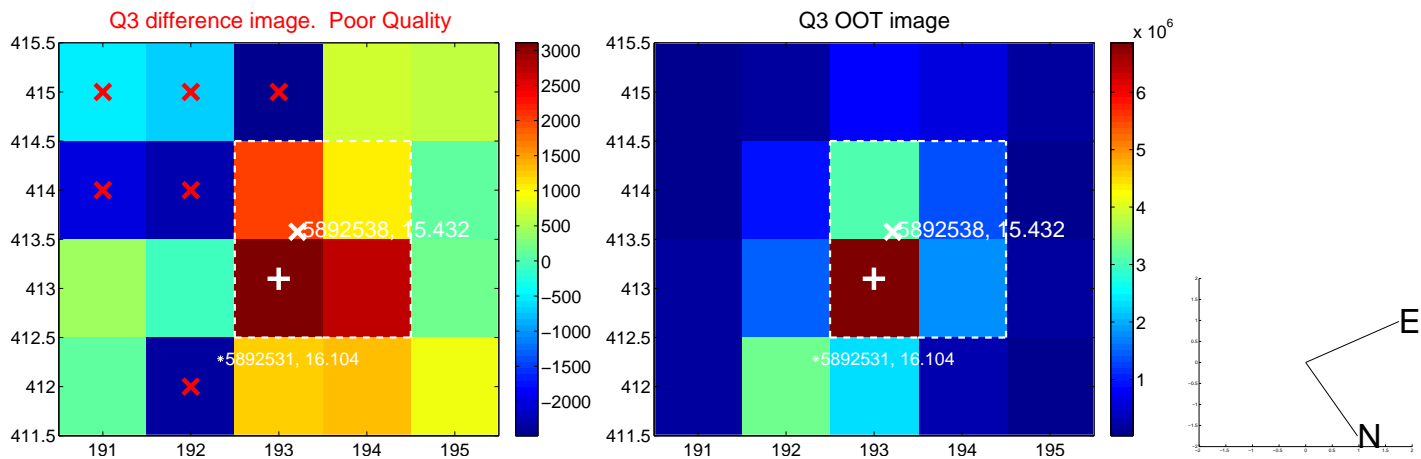
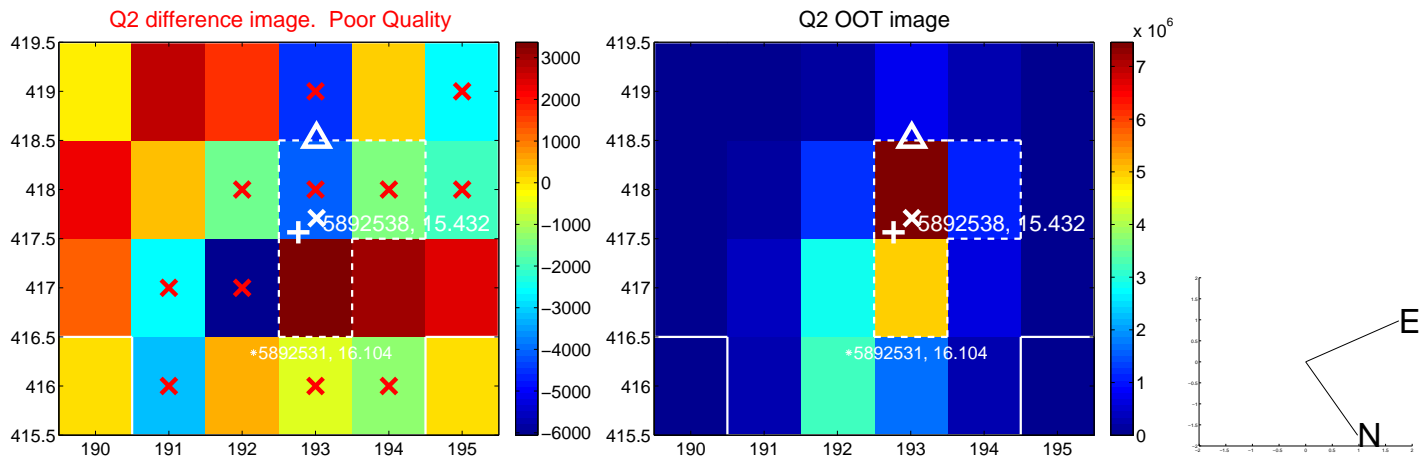
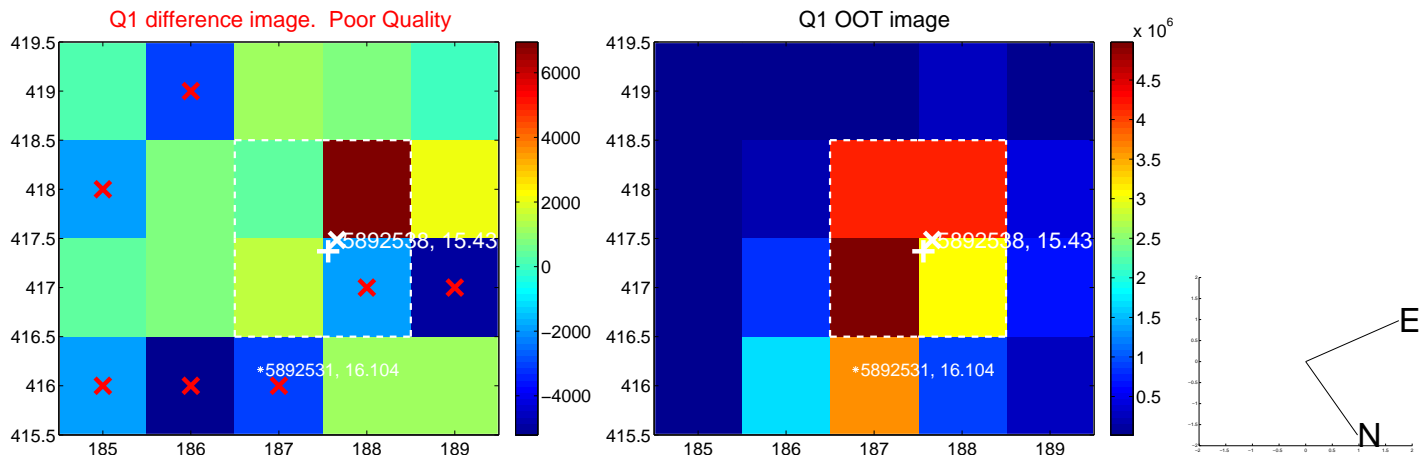


offset from photometric centroids

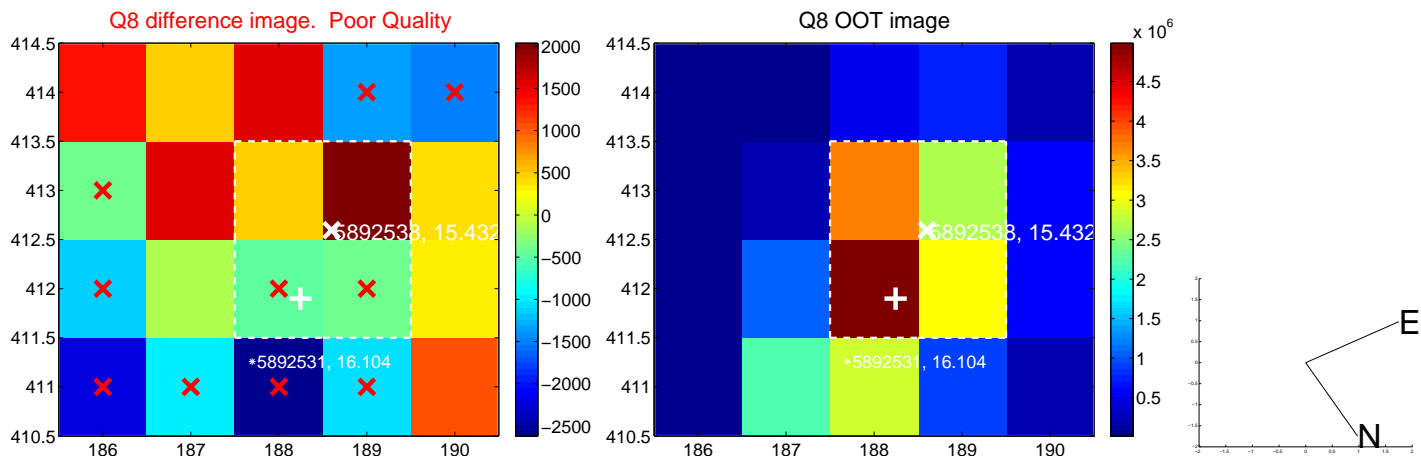
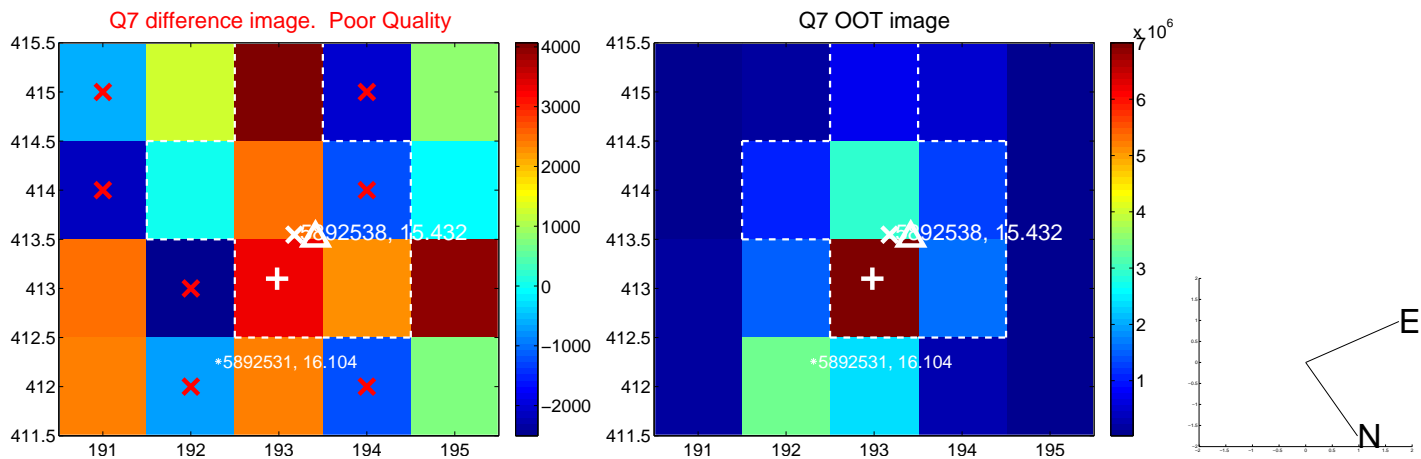
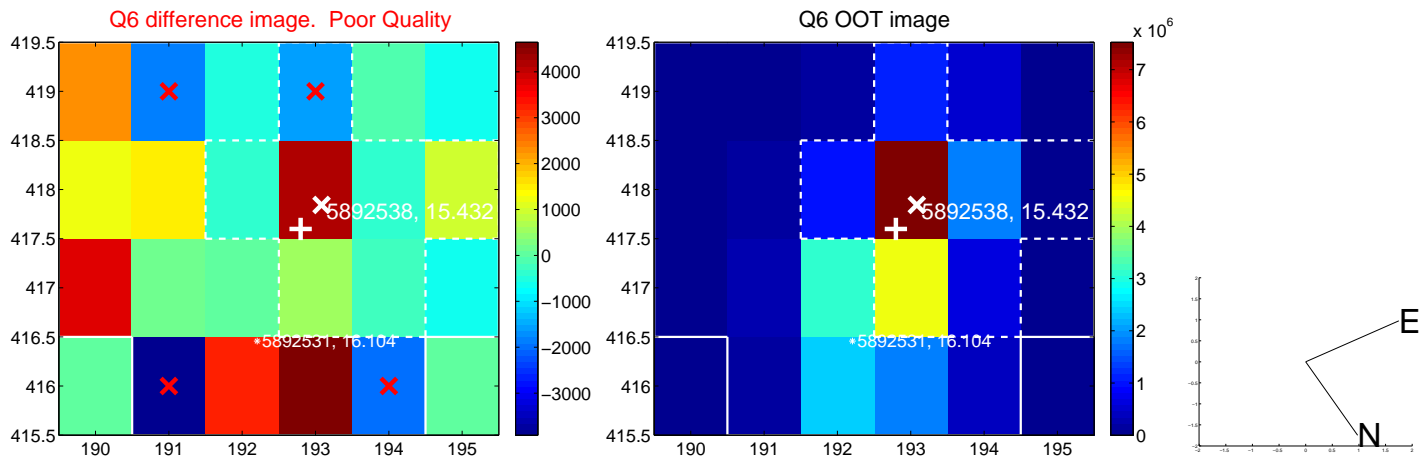
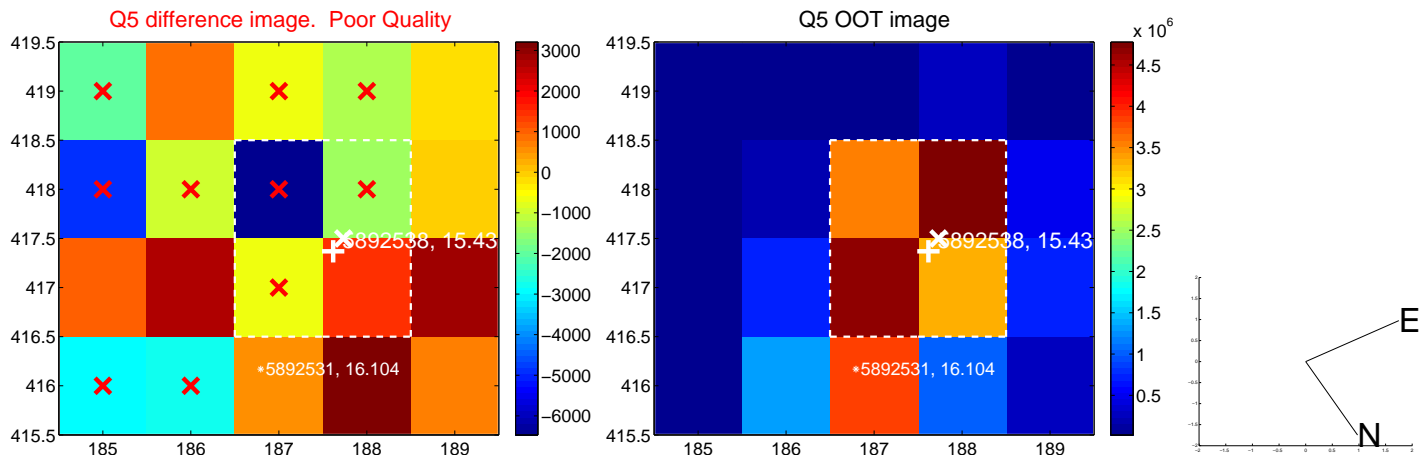


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

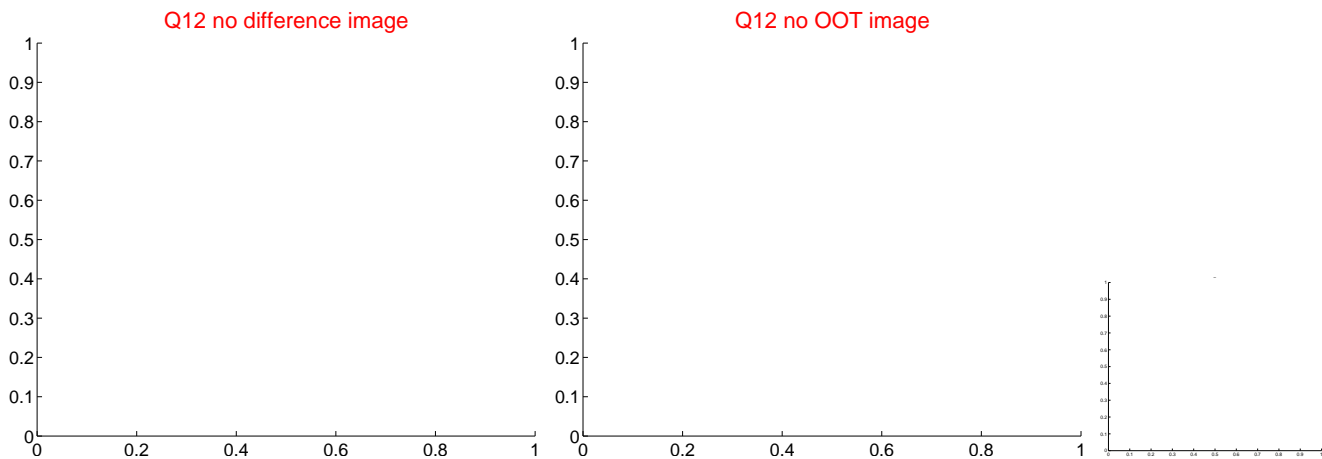
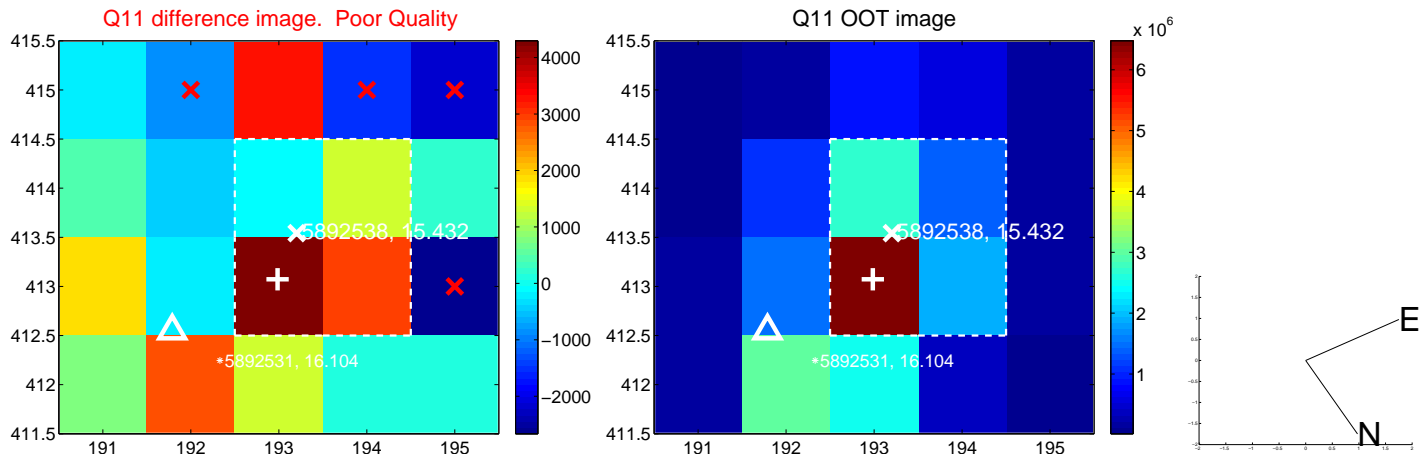
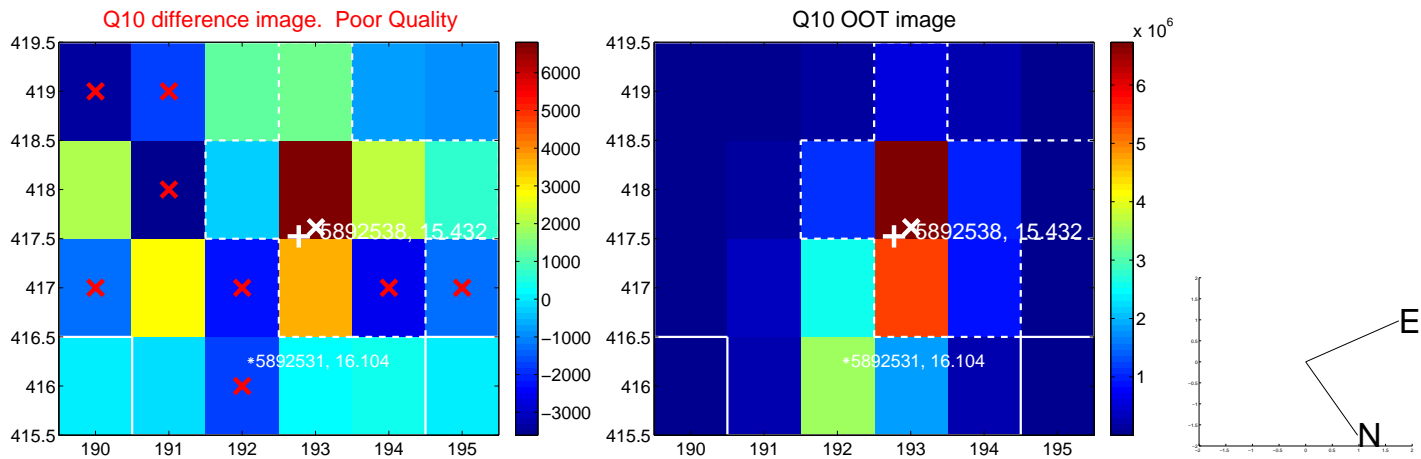
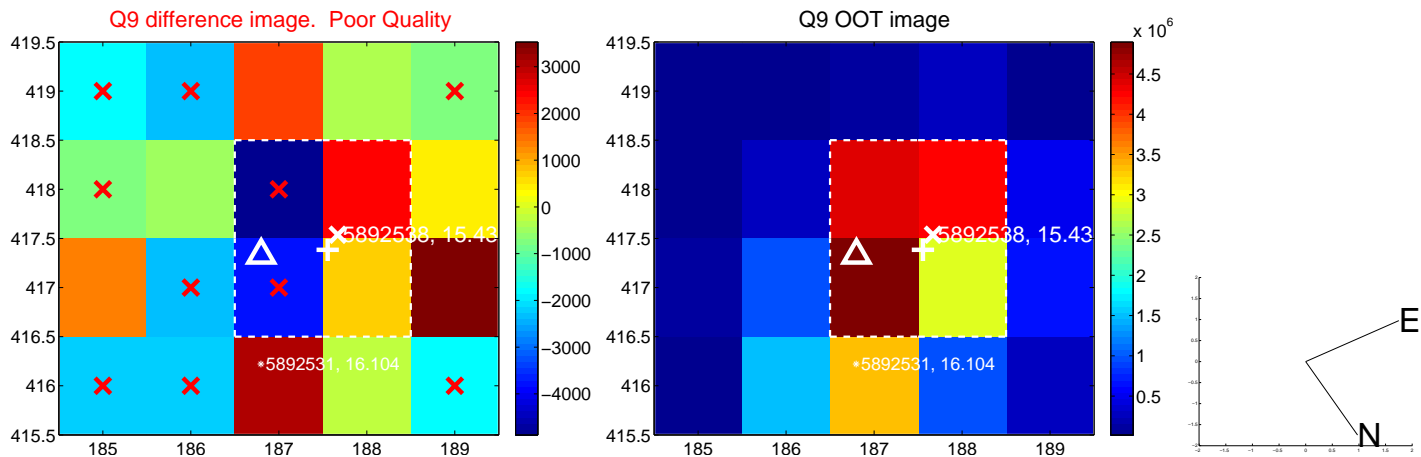
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



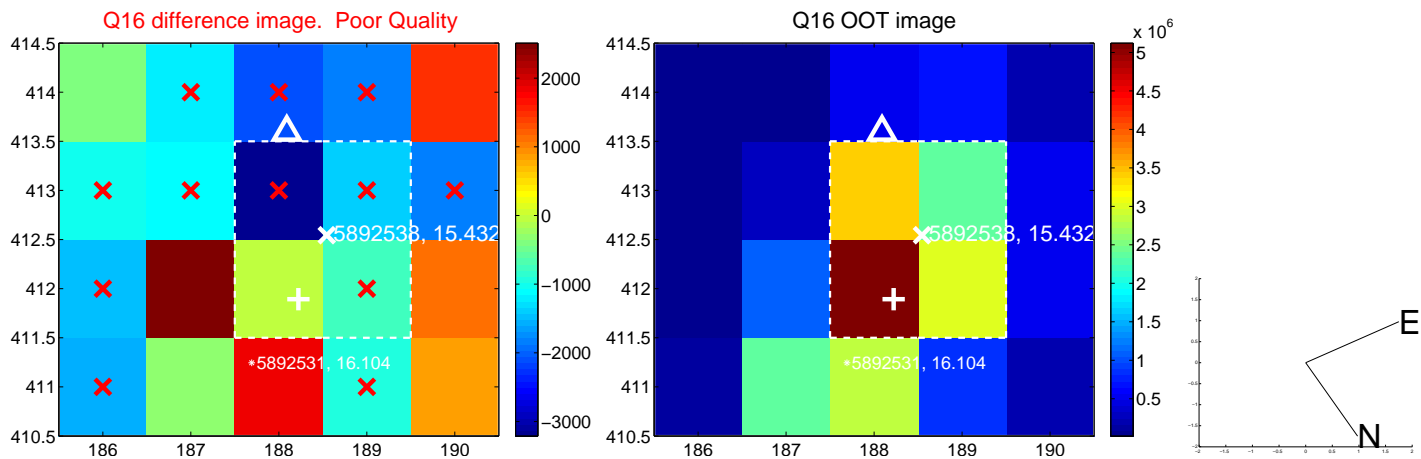
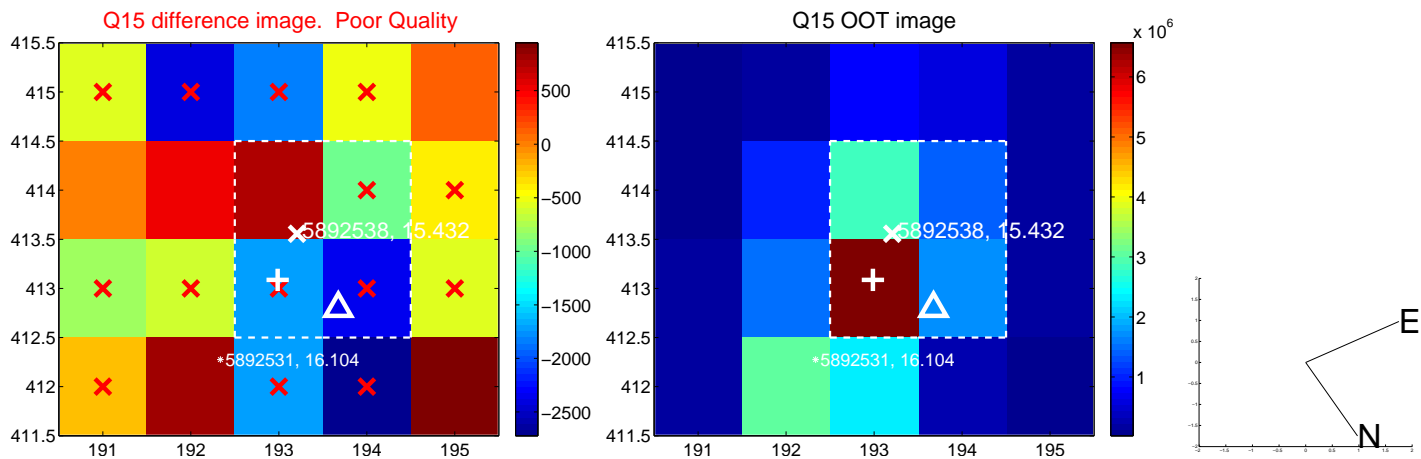
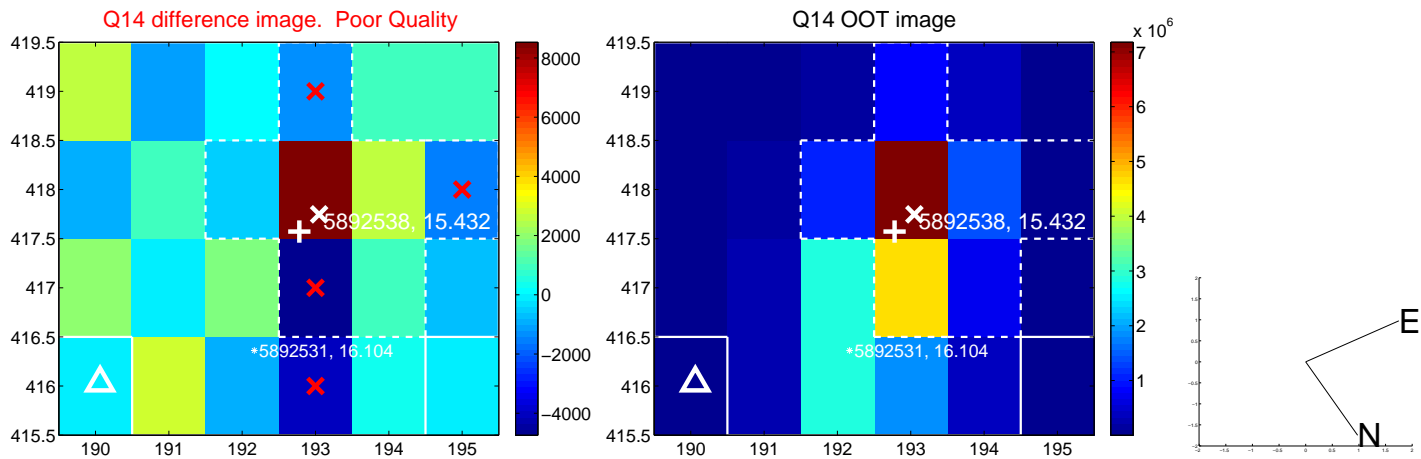
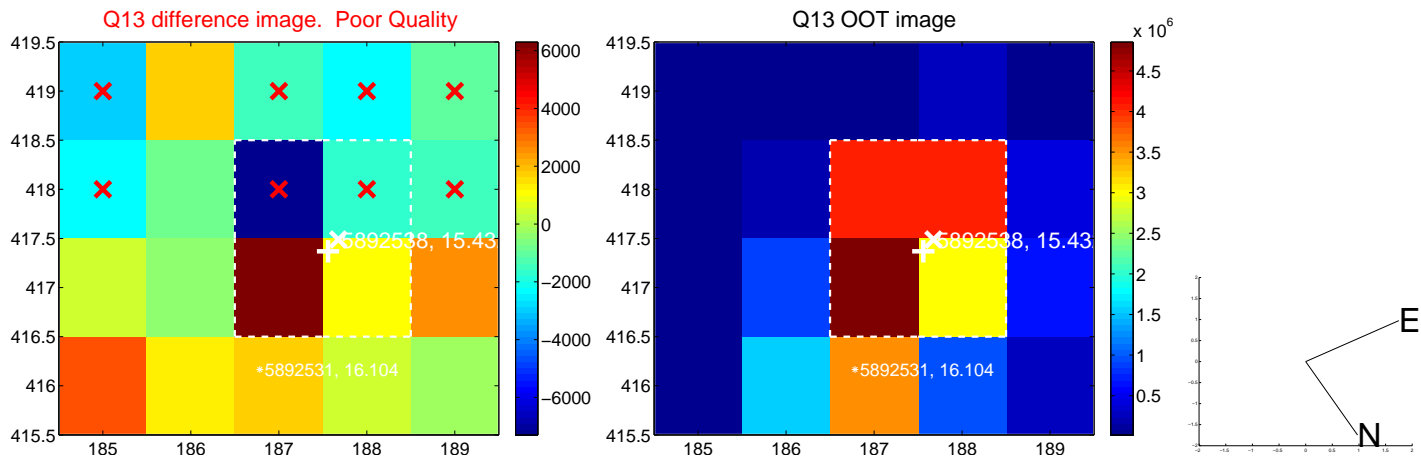
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



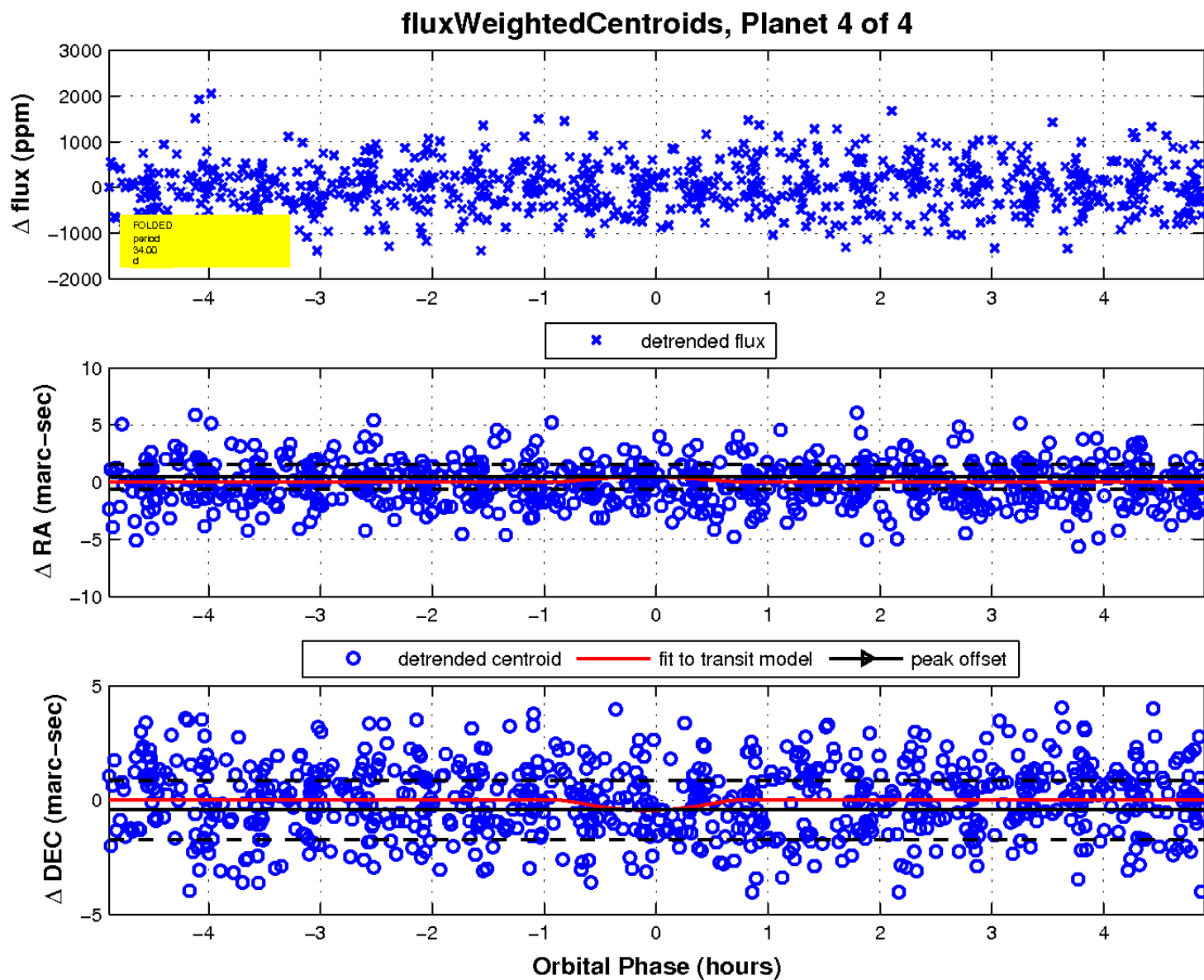
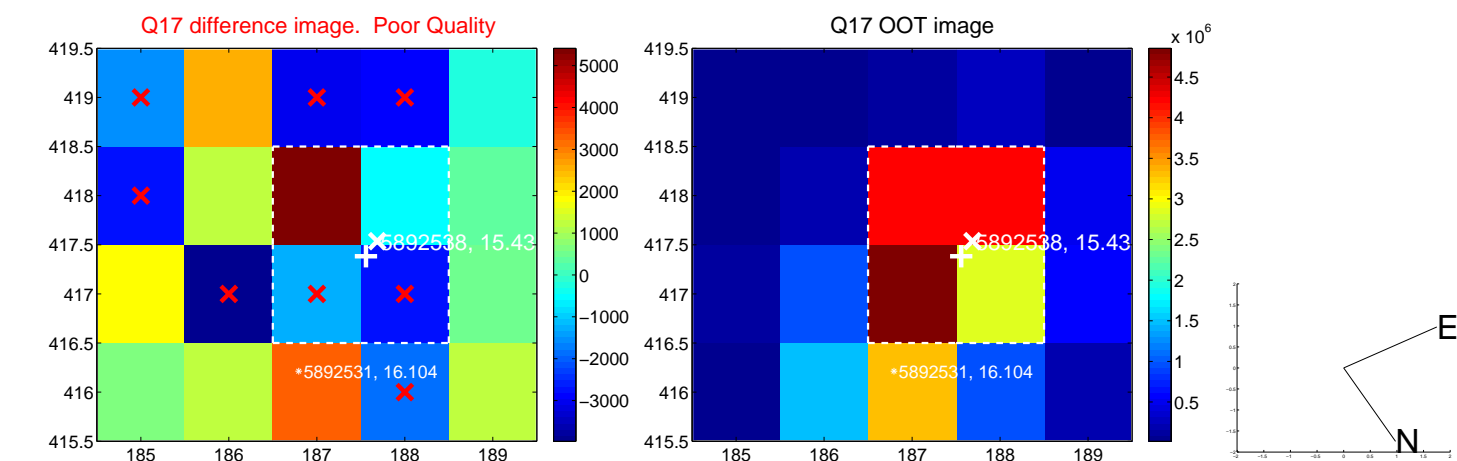
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

