

KIC 005822171

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})
005822171-01	OBS	No	0.679046	132.072407	10.3	4.956	10.4	5.1	1.76	6395	0.57	18206.26
005822171-02	OBS	No	11.648739	136.135338	276.4	1.002	13.4	12.0	1.76	6395	3.10	411.51
005822171-03	OBS	No	23.795057	143.871143	570.8	0.784	11.7	11.3	1.76	6395	4.58	158.77
005822171-04	OBS	No	9.111463	131.870581	46.4	10.824	10.4	5.6	1.76	6395	1.27	571.00
005822171-05	OBS	No	20.015237	148.079857	109.8	4.248	11.6	7.0	1.76	6395	2.16	199.96
005822171-06	OBS	No	6.627670	136.770988	220.2	1.310	14.1	12.0	1.76	6395	2.64	872.85
005822171-07	OBS	No	12.314166	143.669208	338.3	0.835	12.9	13.0	1.76	6395	3.33	382.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005822171-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005822171-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
005822171-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005822171-04	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_MEAS
005822171-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
005822171-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005822171-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—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.

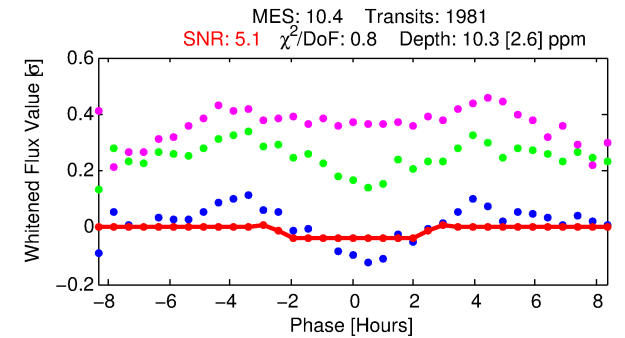
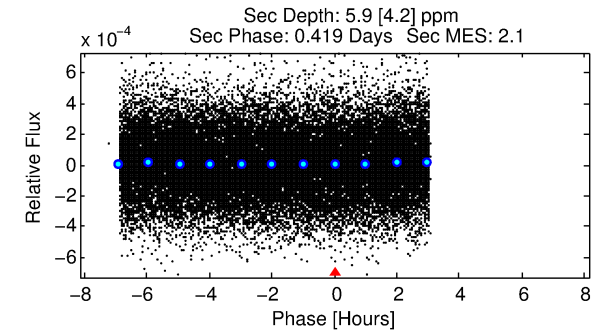
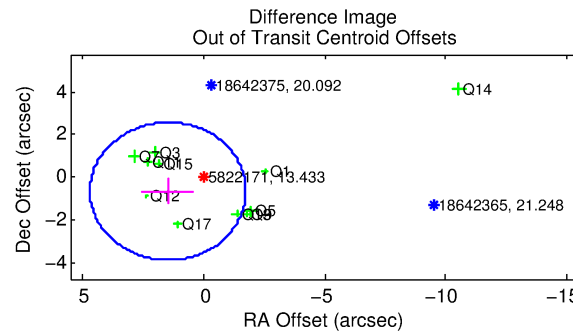
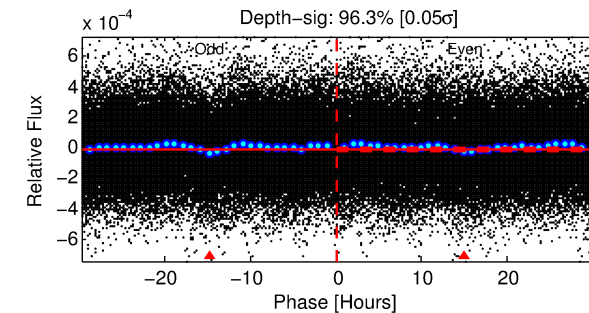
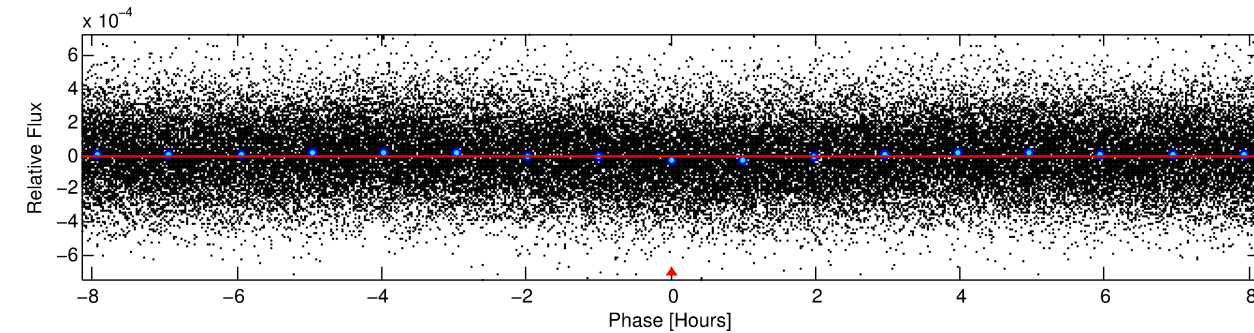
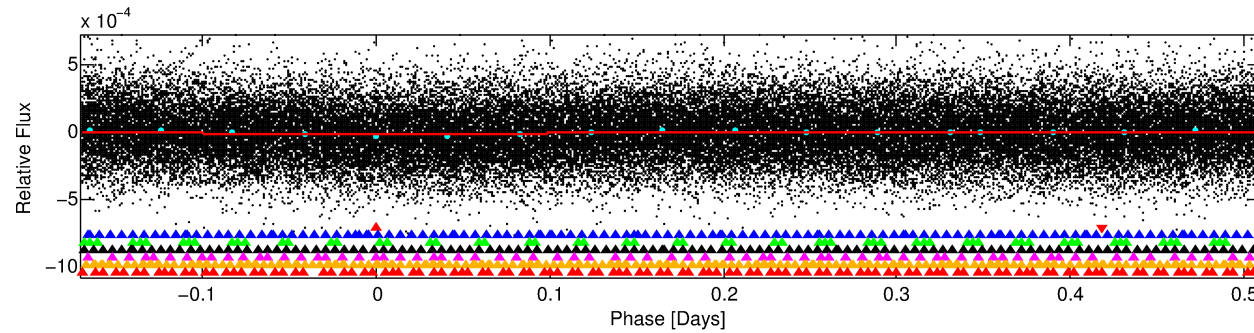
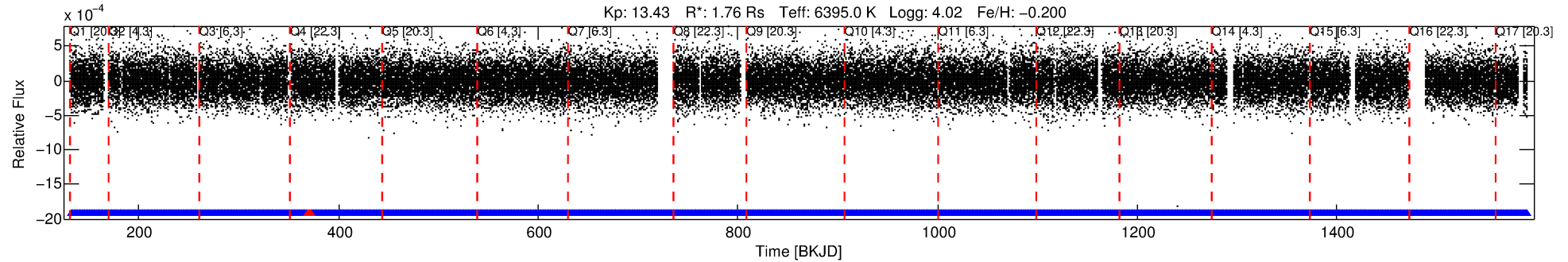
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005822171-01

No Significant Match Found

DV One-Page Summary

KIC: 5822171 Candidate: 1 of 7 Period: 0.679 d



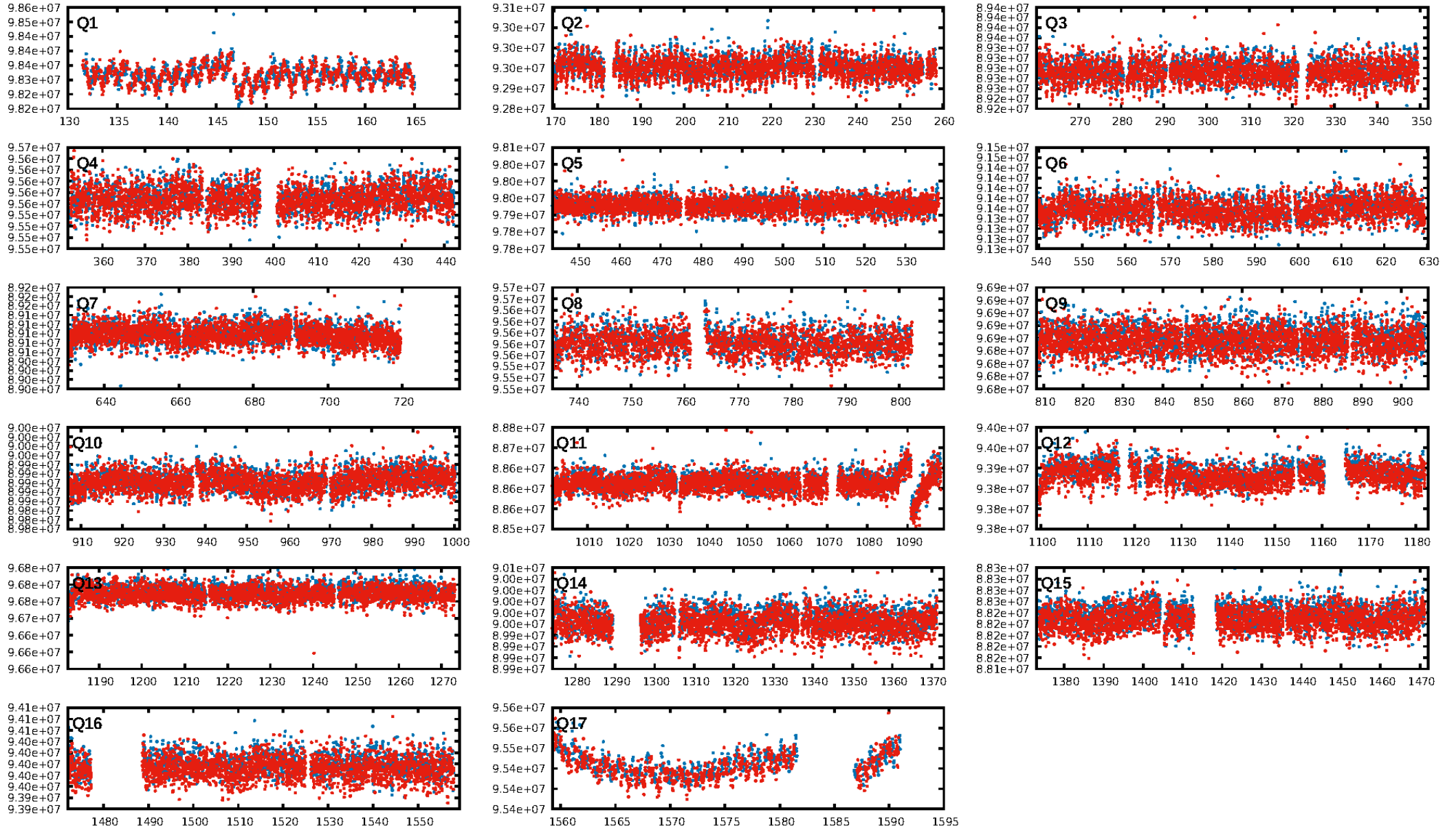
DV Fit Results:

Period = 0.67905 [0.00002] d
Epoch = 132.0724 [0.0089] BKJD
Rp/R* = 0.0030 [0.0049]
a/R* = 1.21 [3.30]
b = 0.30 [26.36]
Seff = 18206.26 [10376.79]
Teff = 2962 [422] K
Rp = 0.57 [0.97] Re
a = 0.0160 [0.0054] AU
Ag = 2.51 [8.56] [0.18 σ]
Teffp = 5764 [4855] K [0.57 σ]

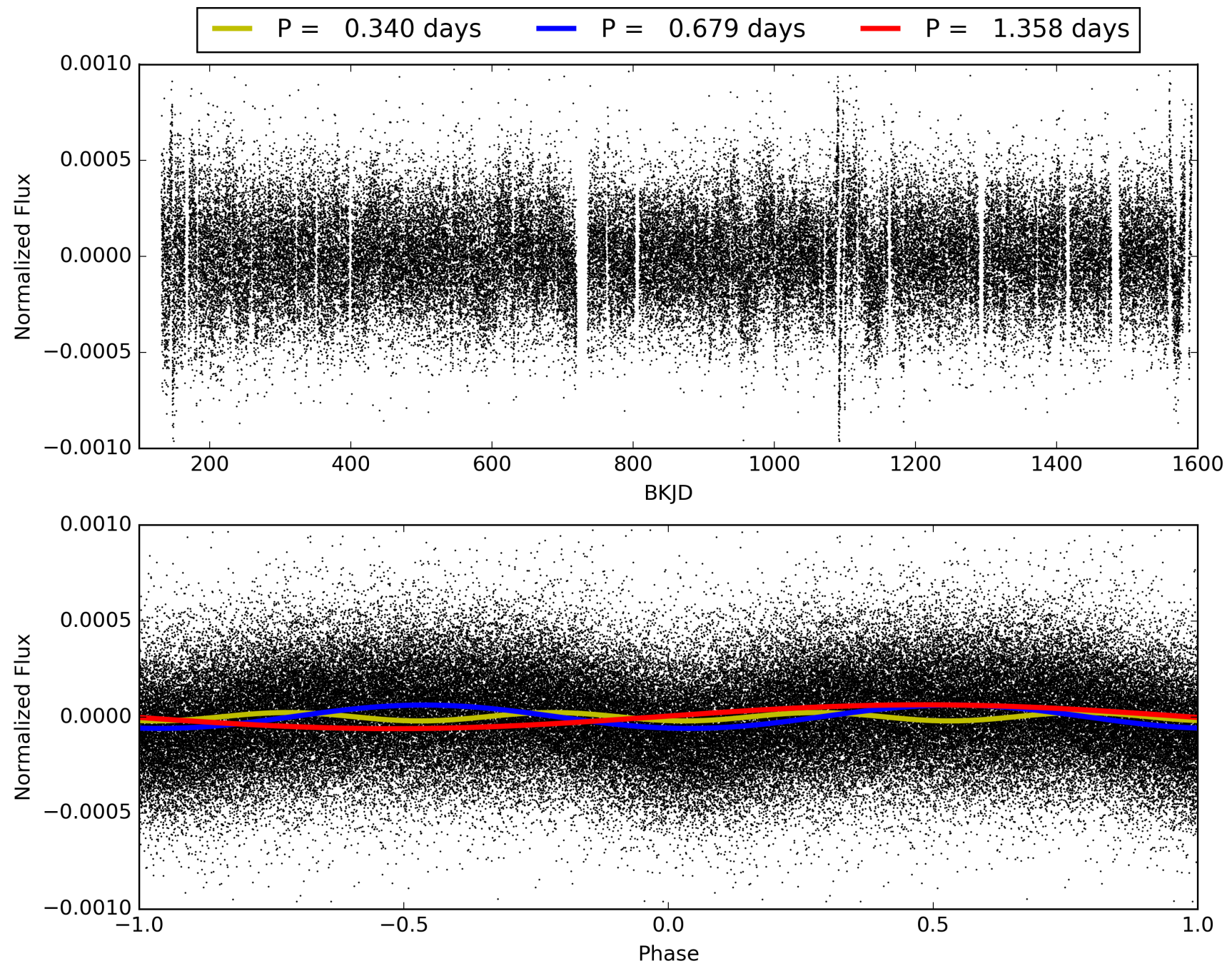
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [27.85 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.99e-24
RollingBand-fgt: 1.00 [1889/1893]
GhostDiagnostic-chr: 1.365
Centroid-sig: 0.0%
Centroid-so: 4.890 arcsec [3.00 σ]
OotOffset-rm: 1.607 arcsec [1.50 σ]
KicOffset-rm: 1.474 arcsec [1.27 σ]
OotOffset-st: 1/4/1/5 [11]
KicOffset-st: 1/4/1/5 [11]
DiffImageQuality-fgm: 0.55 [6/11]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005822171-01, PDC Light Curves

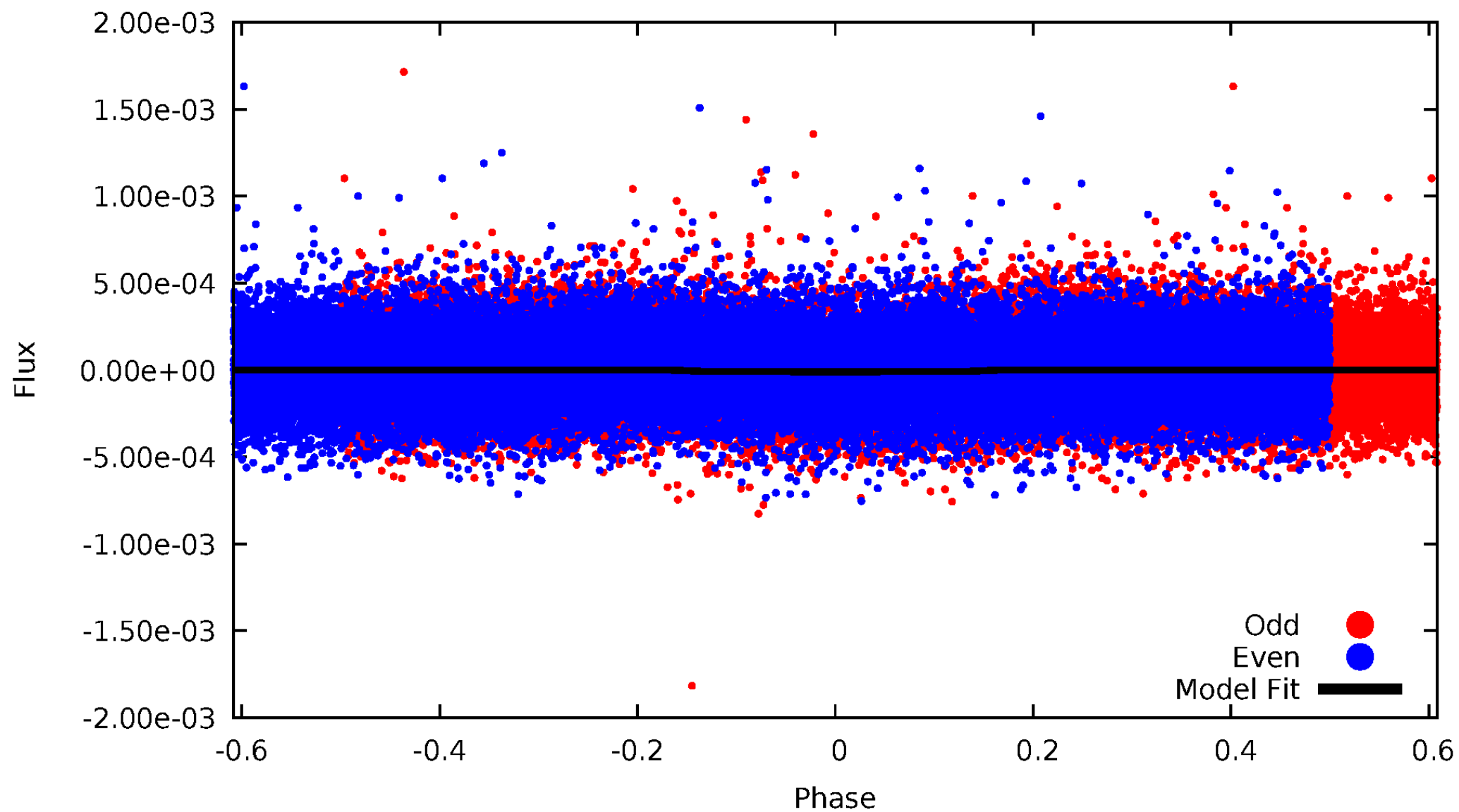


TCE 005822171-01



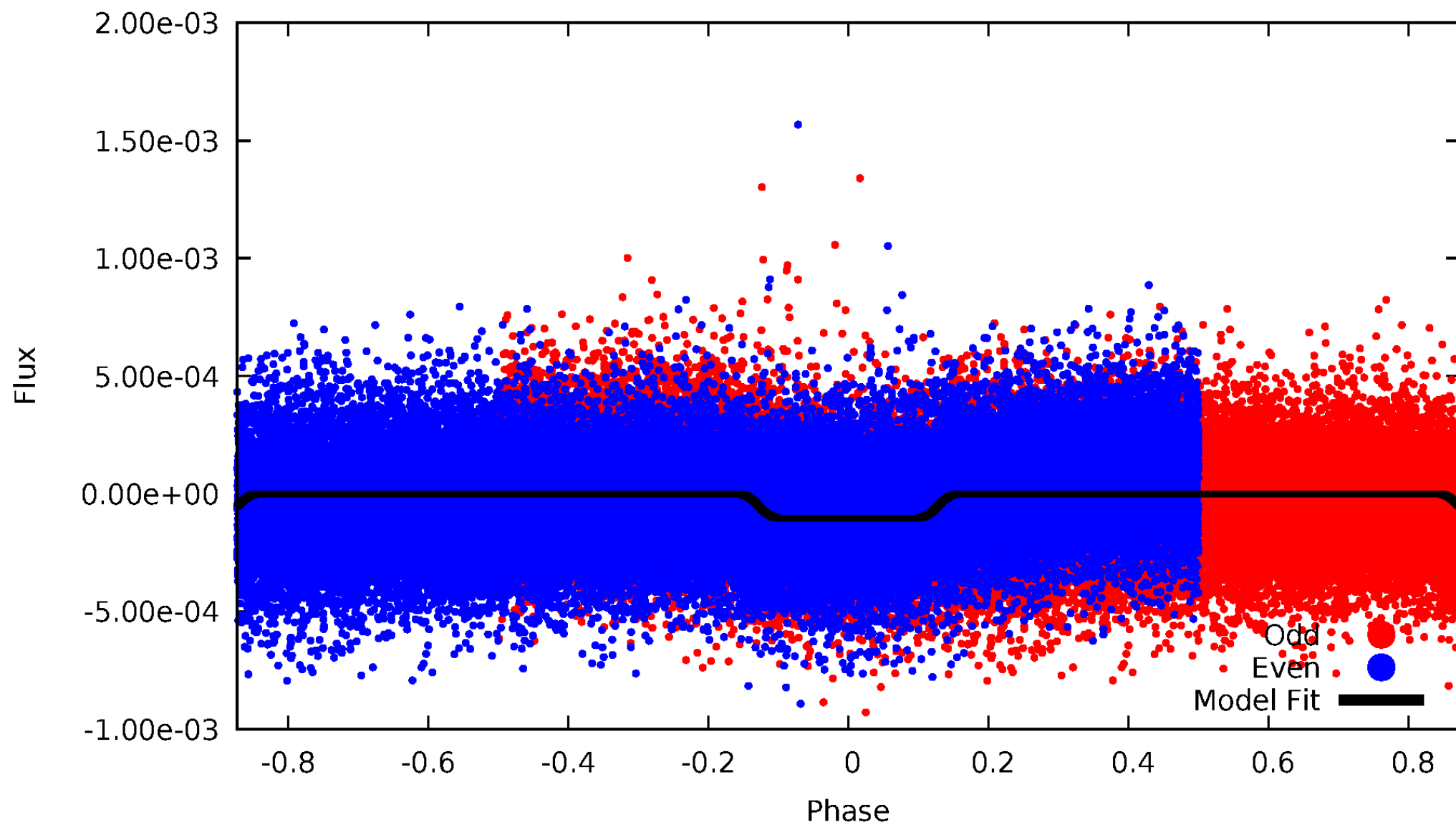
DV Odd/Even

TCE 005822171-01



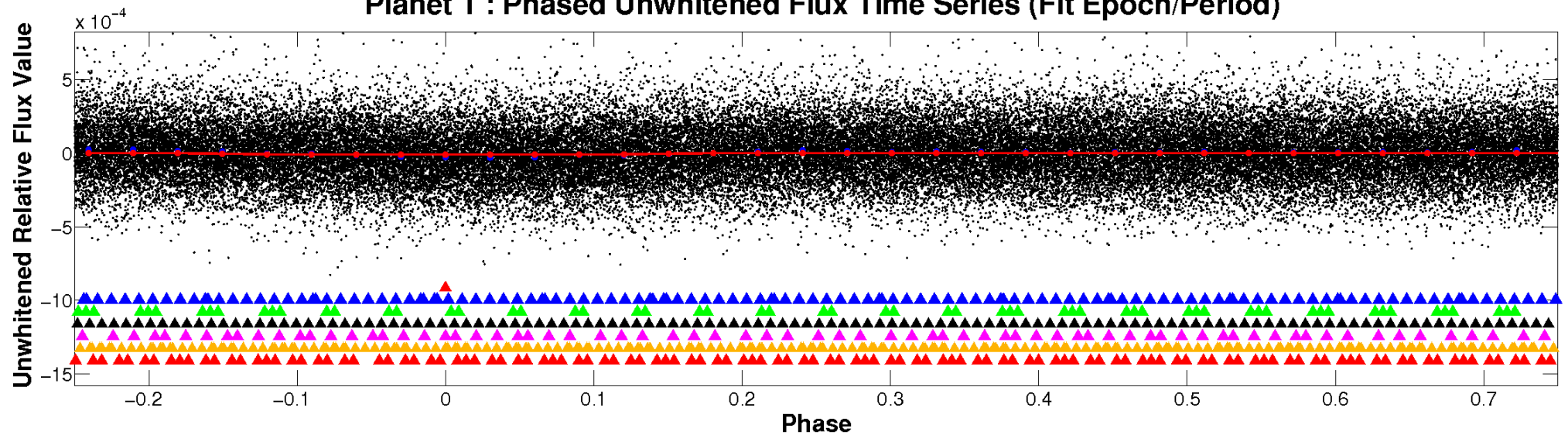
ALT Odd/Even

TCE 005822171-01

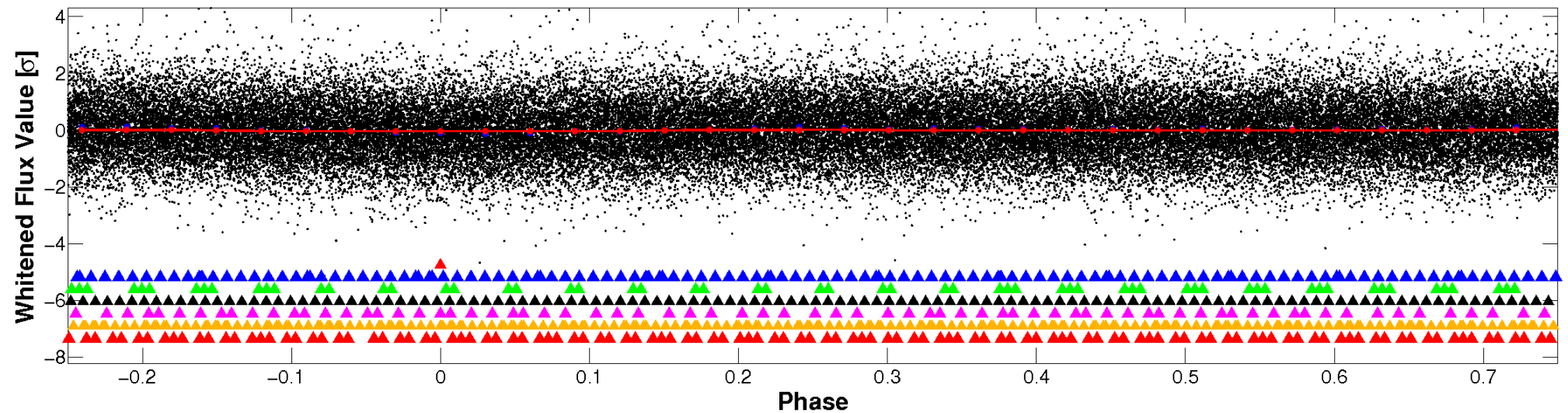


Non-Whitened Vs. Whitened Light Curve

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

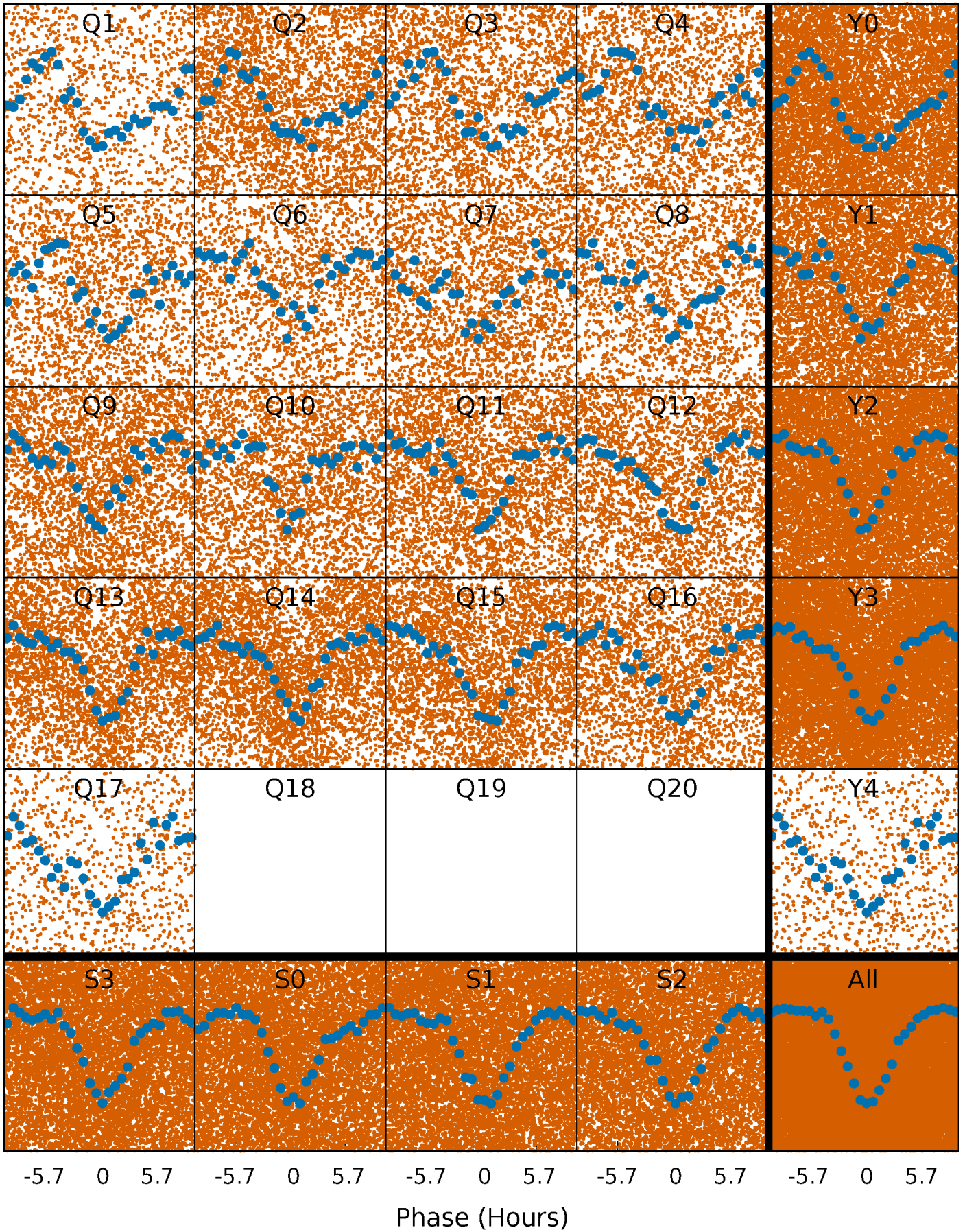


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



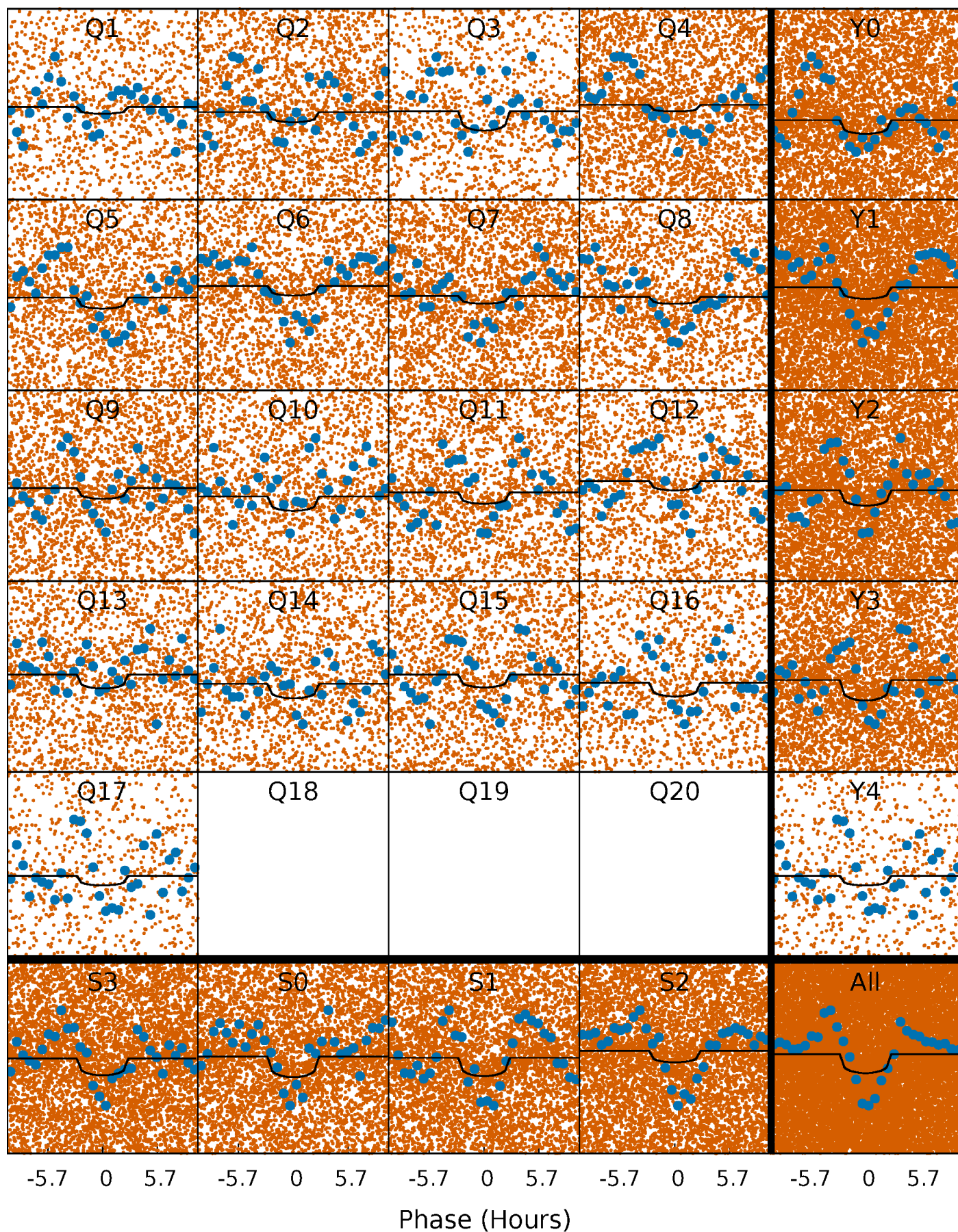
PDC Quarter-Phased Transit Curves

TCE 005822171-01 P= 0.679046 Days $T_0=132.072407$ (BKJD)



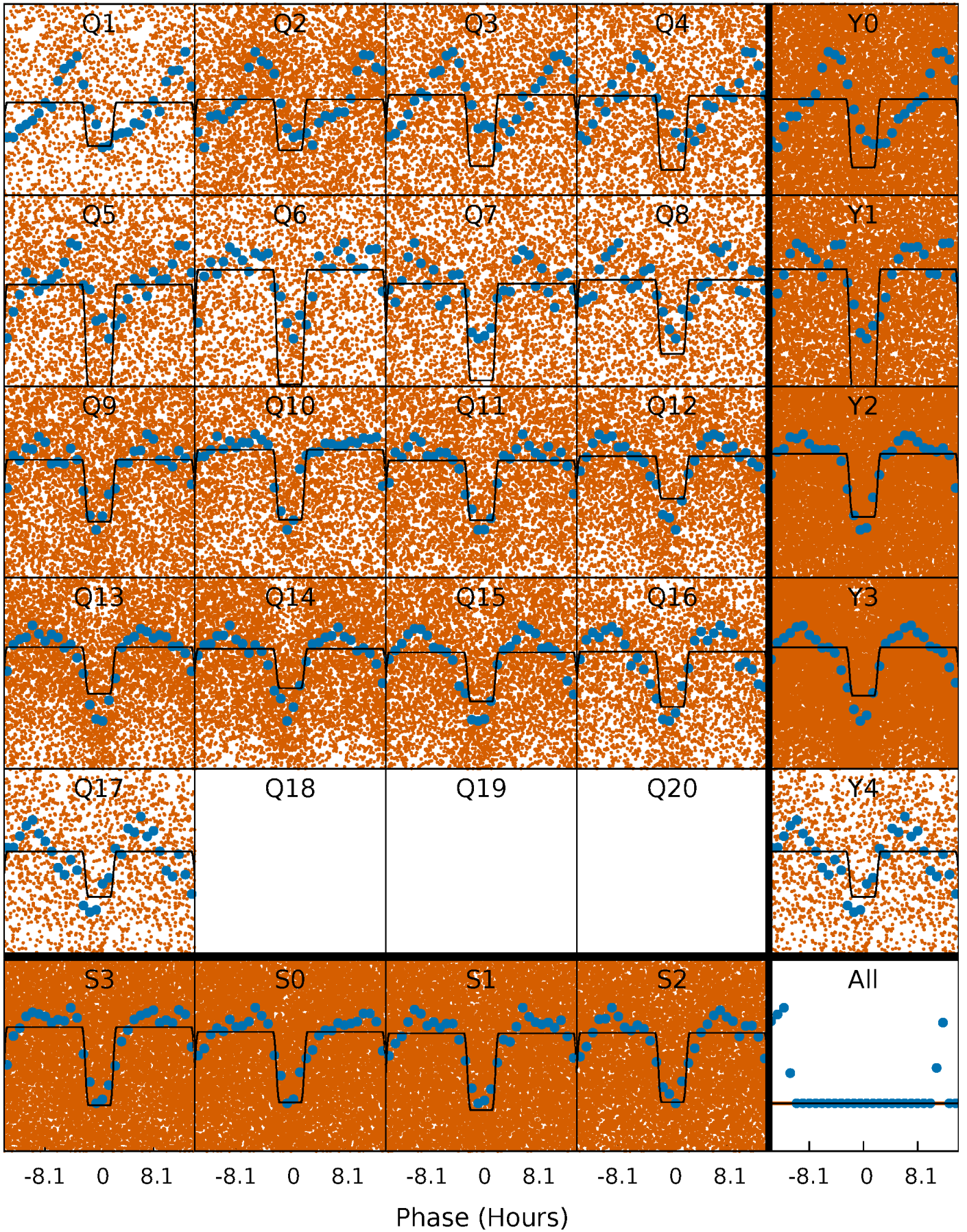
DV Quarter-Phased Transit Curves

TCE 005822171-01 P= 0.679046 Days $T_0=132.072407$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

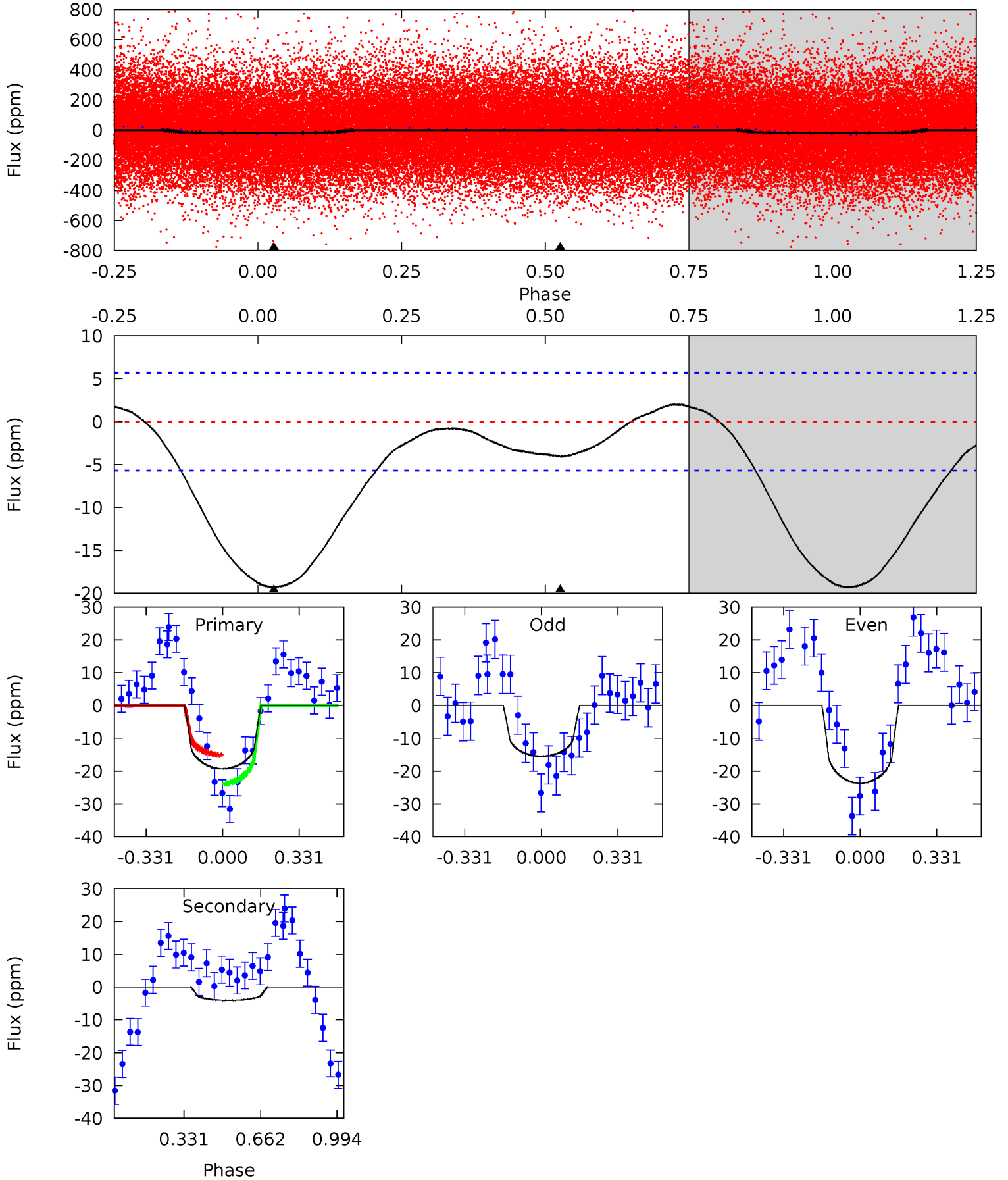
TCE 005822171-01 P= 0.679103 Days $T_0=132.018782$ (BKJD)



DV Model-Shift Uniqueness Test

005822171-01, P = 0.679046 Days, E = 131.393361 Days

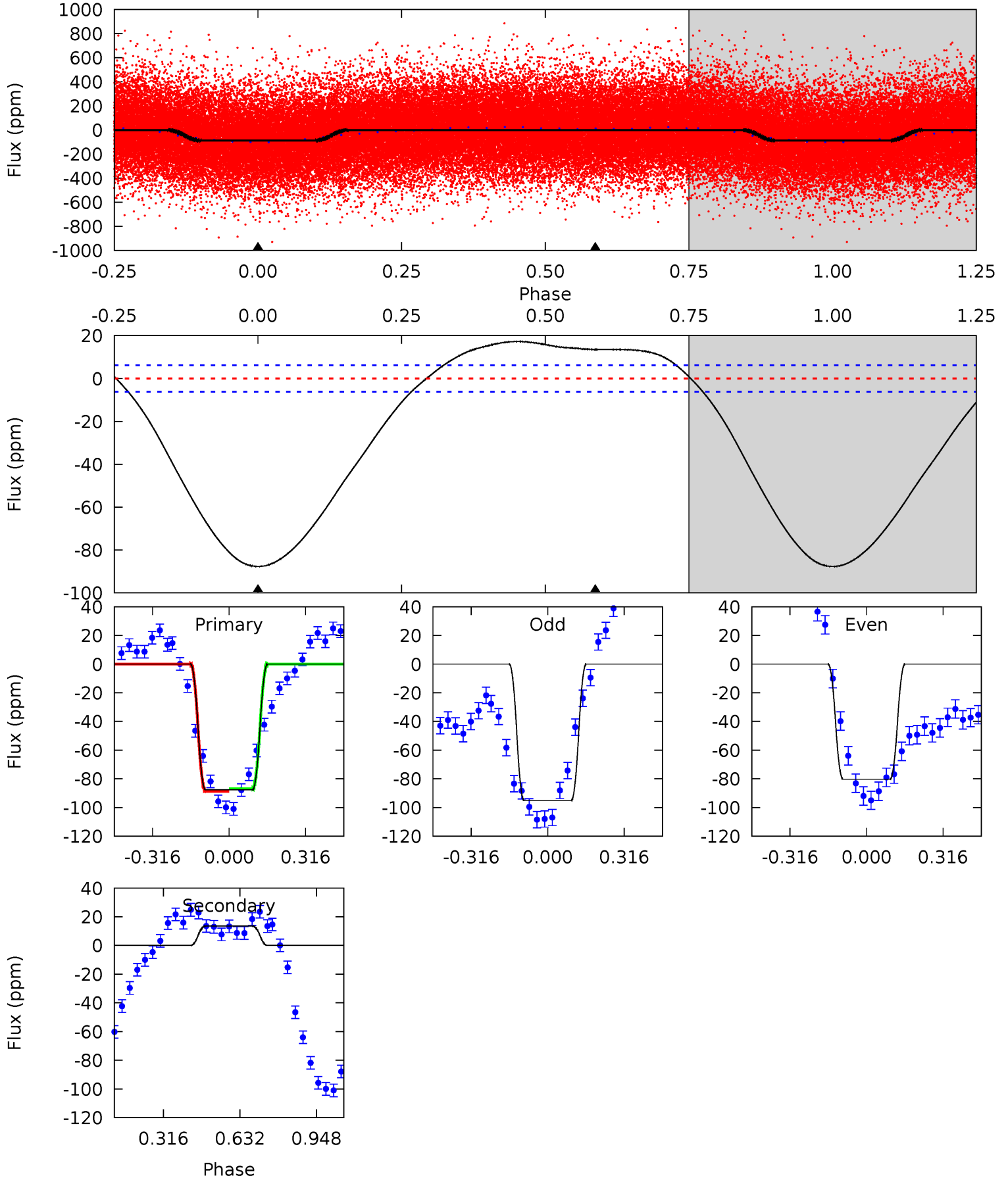
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	3.08	0	0	4.31	0.97	1.15	14.6	14.6	3.08	3.08	3.12	0.94	0.09	3.38



Alt Model-Shift Uniqueness Test

005822171-01, P = 0.679103 Days, E = 131.339679 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
60.8	-9.39	0	0	4.32	1.00	4.53	60.8	60.8	-9.39	-9.39	5.11	1.00	0.16	0.61



Stellar Parameters For KIC 005822171

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6395^{+175}_{-214}	$4.019^{+0.329}_{-0.165}$	$-0.200^{+0.250}_{-0.300}$	$1.765^{+0.494}_{-0.603}$	$1.187^{+0.188}_{-0.188}$	$0.304^{+0.653}_{-0.139}$
	+3%/-3%	+8%/-4%	+125%/-150%	+28%/-34%	+16%/-16%	+215%/-46%
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 005822171-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4 ± 1	$0.84^{+0.84}_{-0.56}$	4063^{+347}_{-401}	4005^{+2872}_{-7204}	$0.809^{+5.387}_{-0.623}$
Alt.	14 ± 1	$1.85^{+1.01}_{-0.96}$	4081^{+327}_{-419}	-4510^{+374}_{-978}	$-0.563^{+0.332}_{-1.788}$

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 $A_{obs} \gg 1.0$

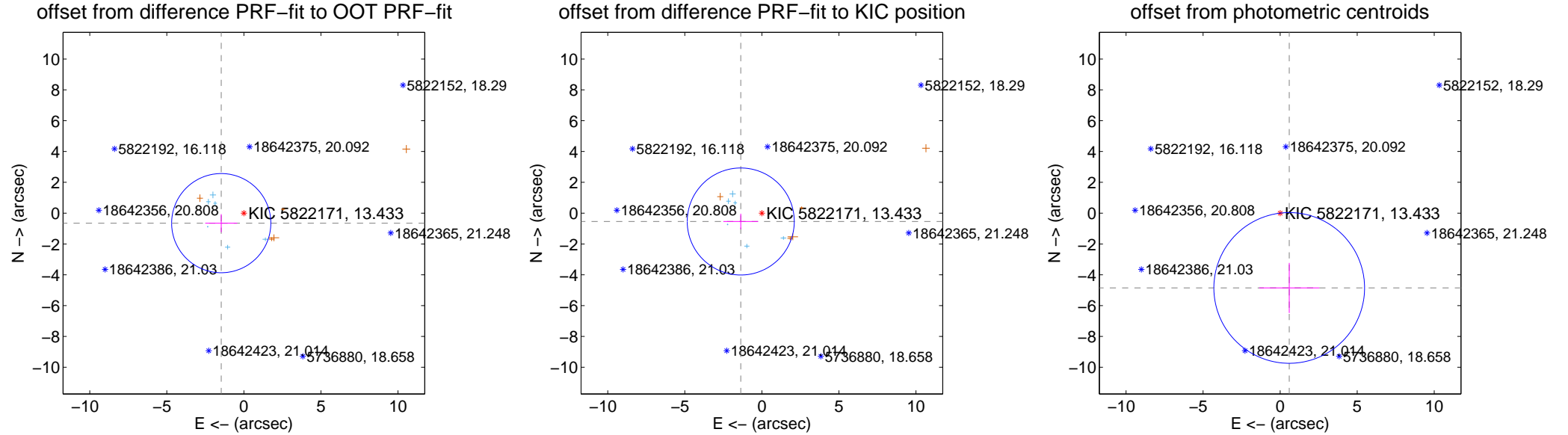
DV Centroid Data

Supplemental centroid analysis for 005822171-01. Kepler magnitude: 13.43. Transit SNR 5.12

There are 6 quarters with good PRF difference image offsets

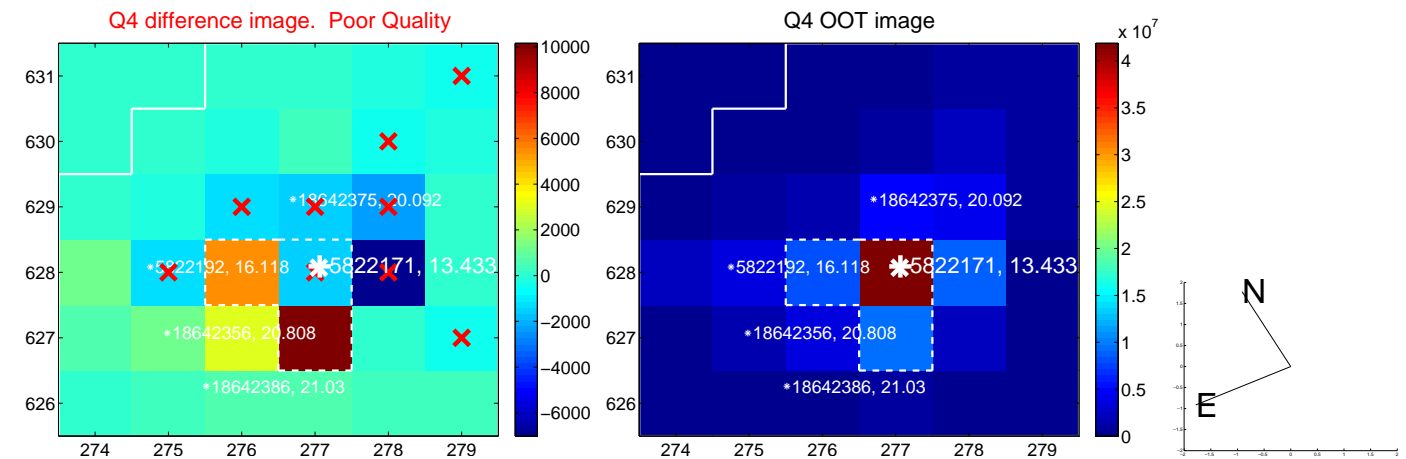
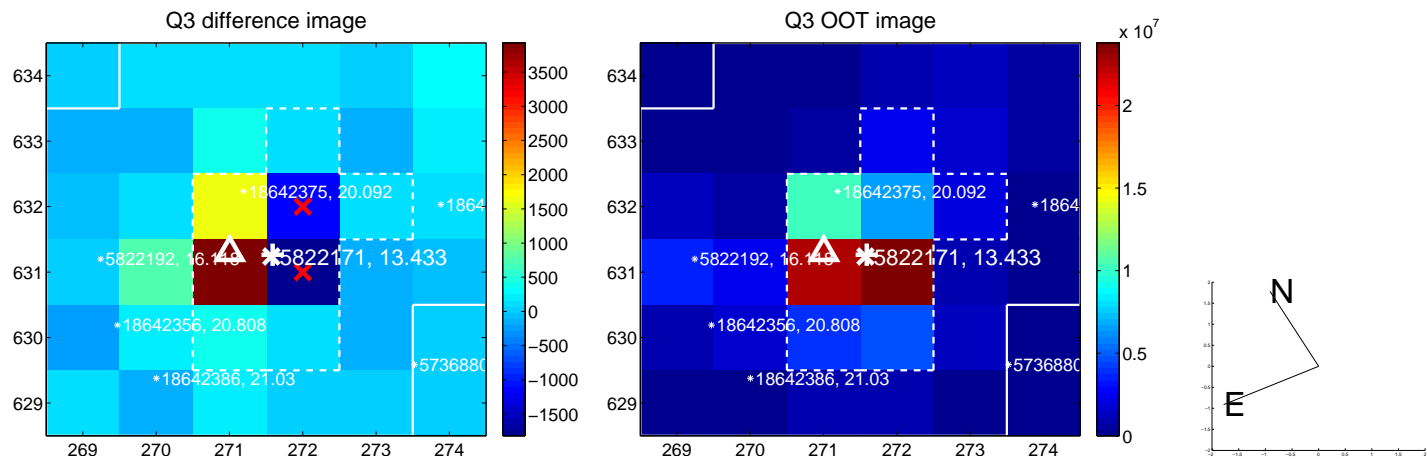
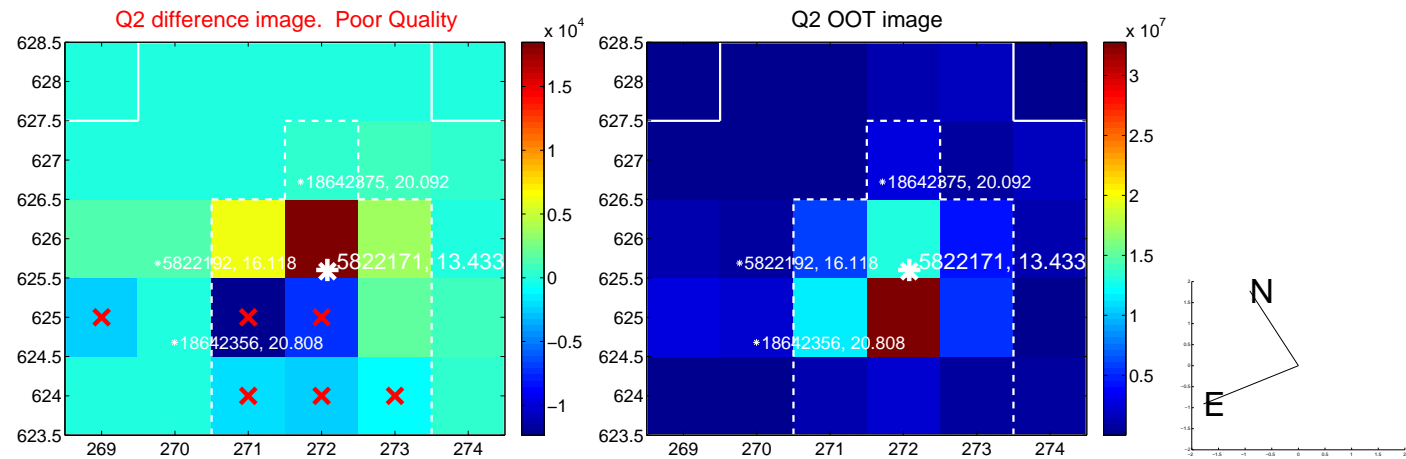
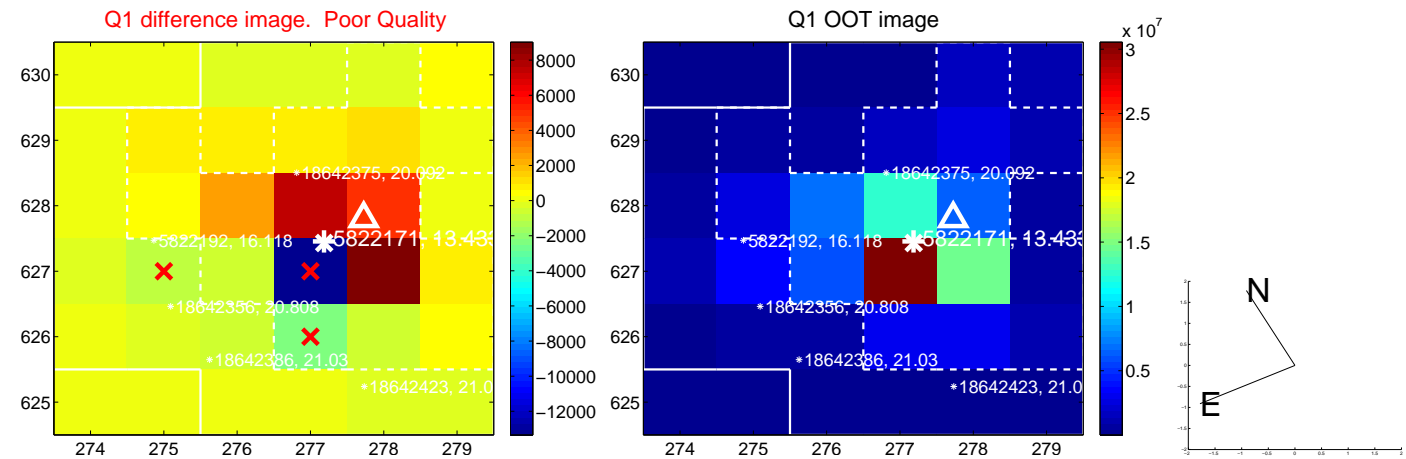
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.607 ± 1.073	1.50	1.469 ± 1.039	-0.650 ± 0.584
PRF-fit source offset from KIC position	1.474 ± 1.158	1.27	1.371 ± 1.132	-0.542 ± 0.504
photometric centroid source offset	4.89 ± 1.63	3.00	-0.59 ± 1.95	-4.85 ± 1.62

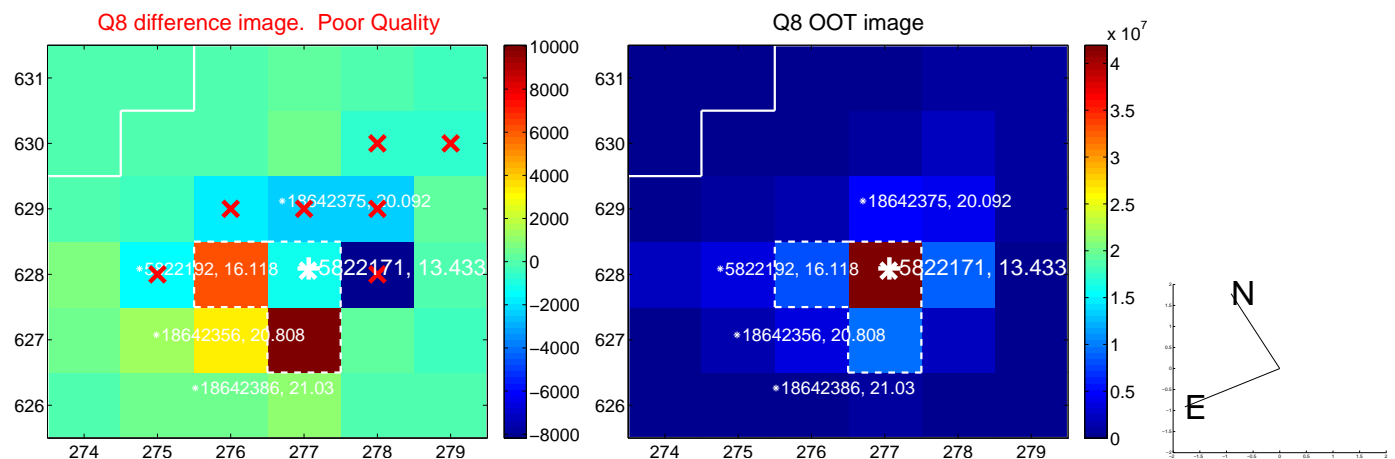
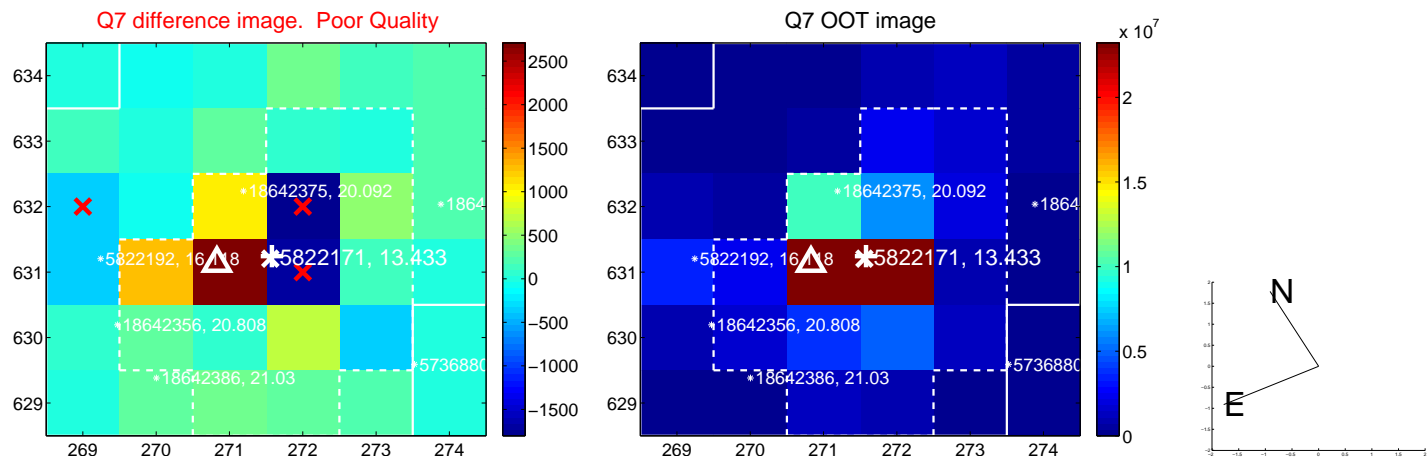
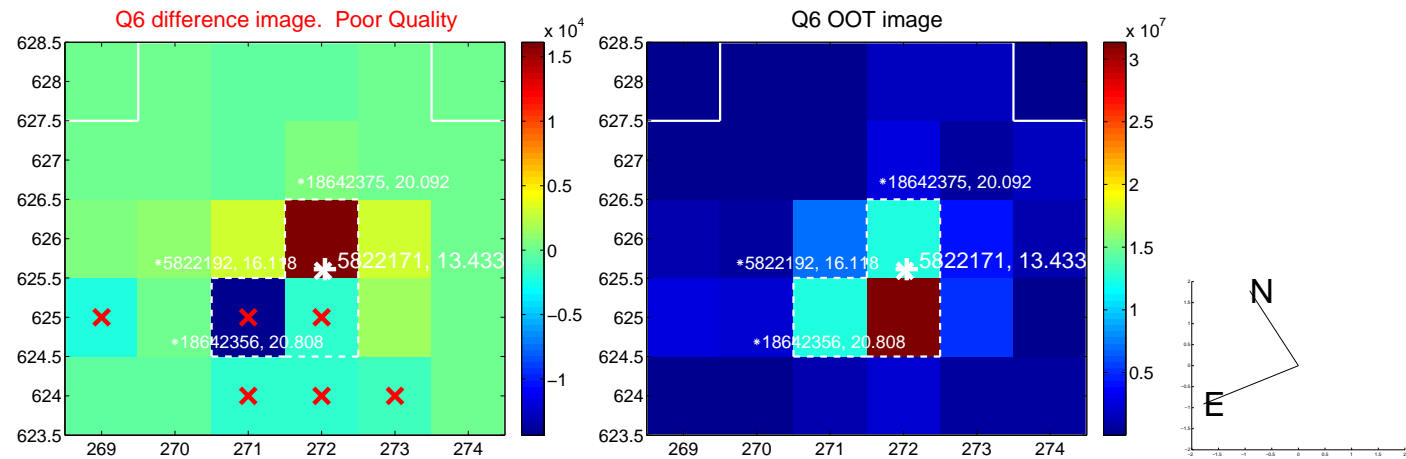
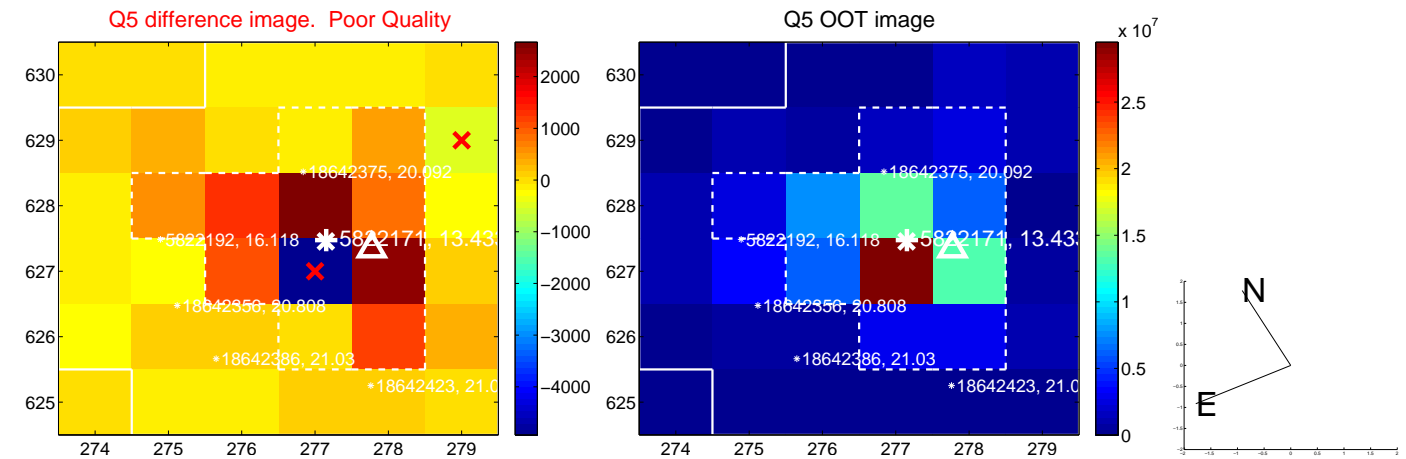


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

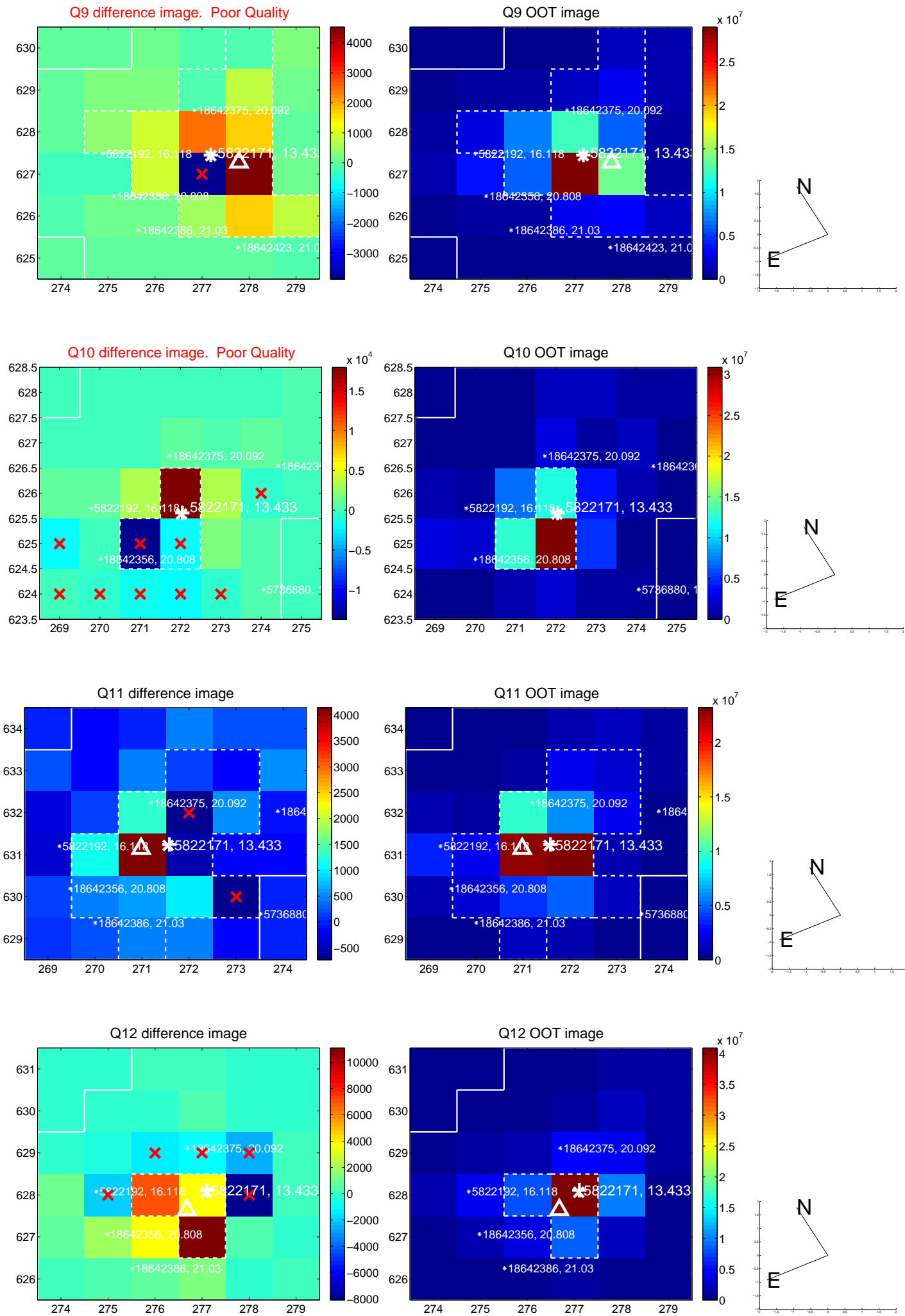
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



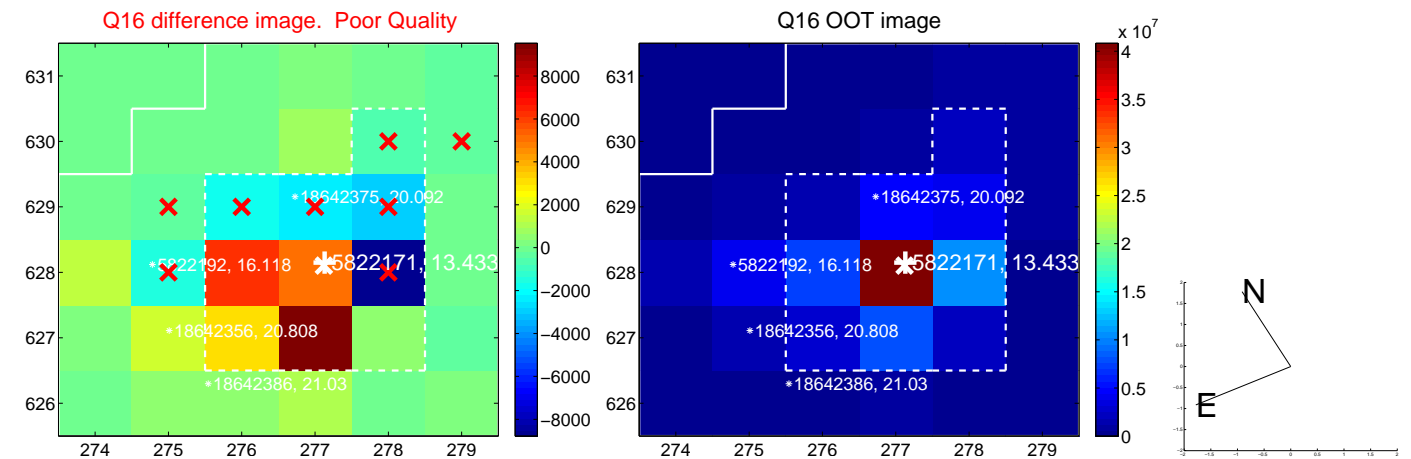
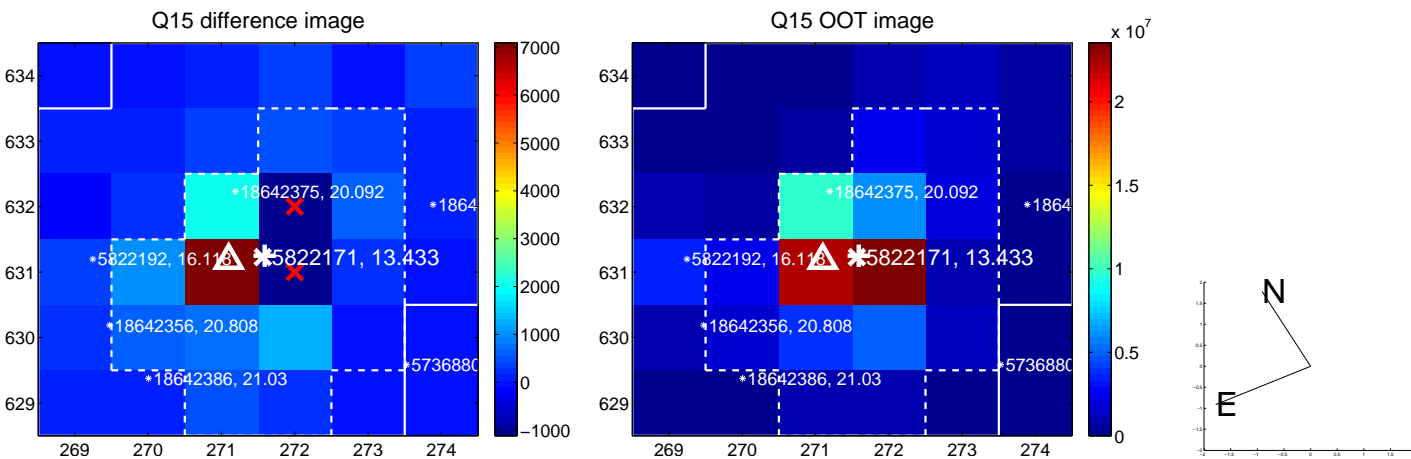
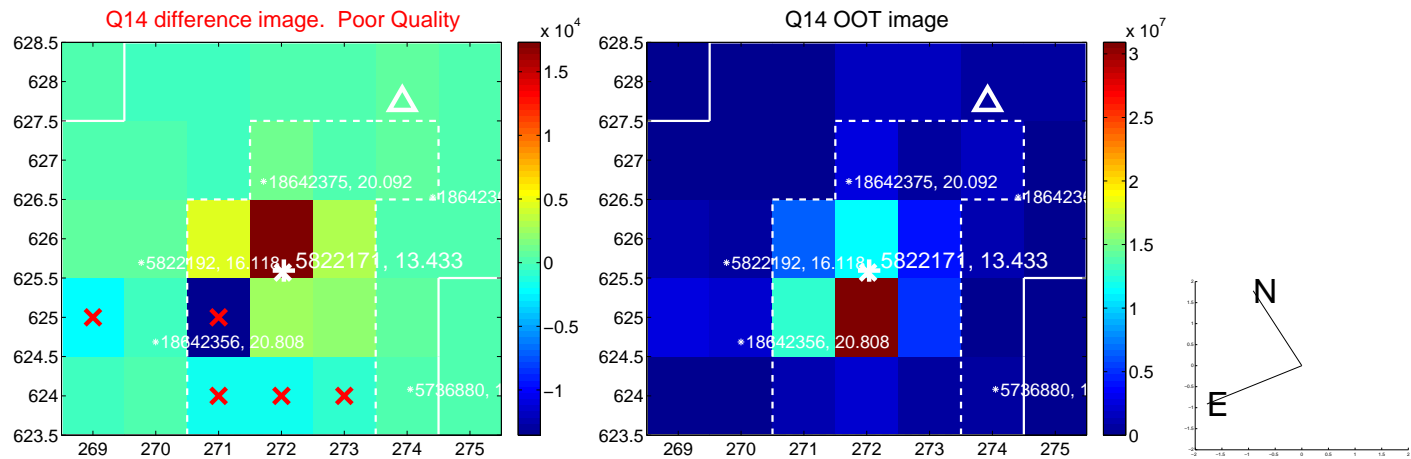
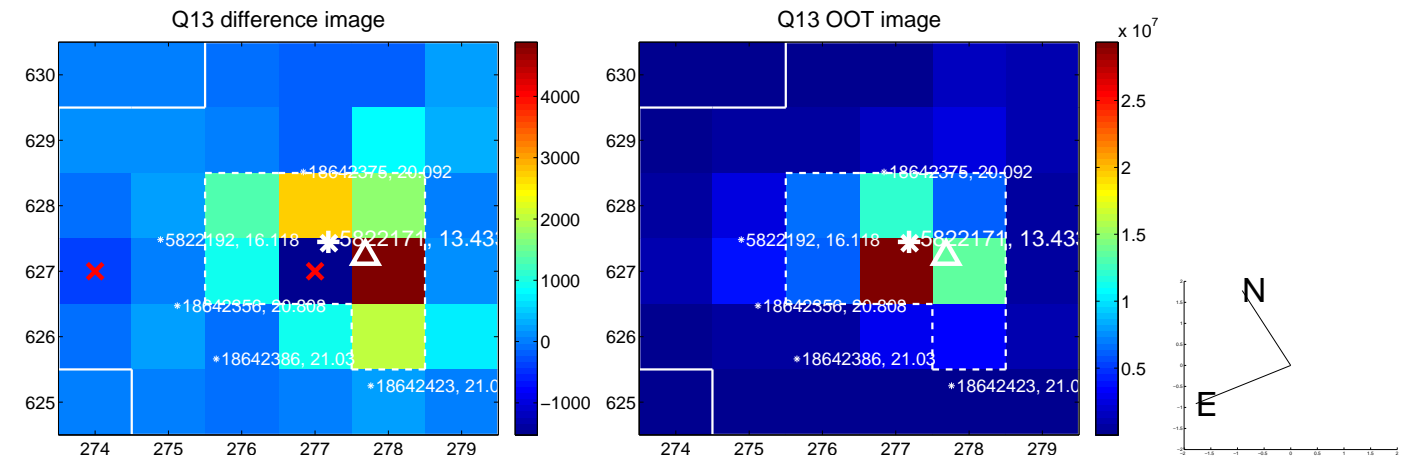
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



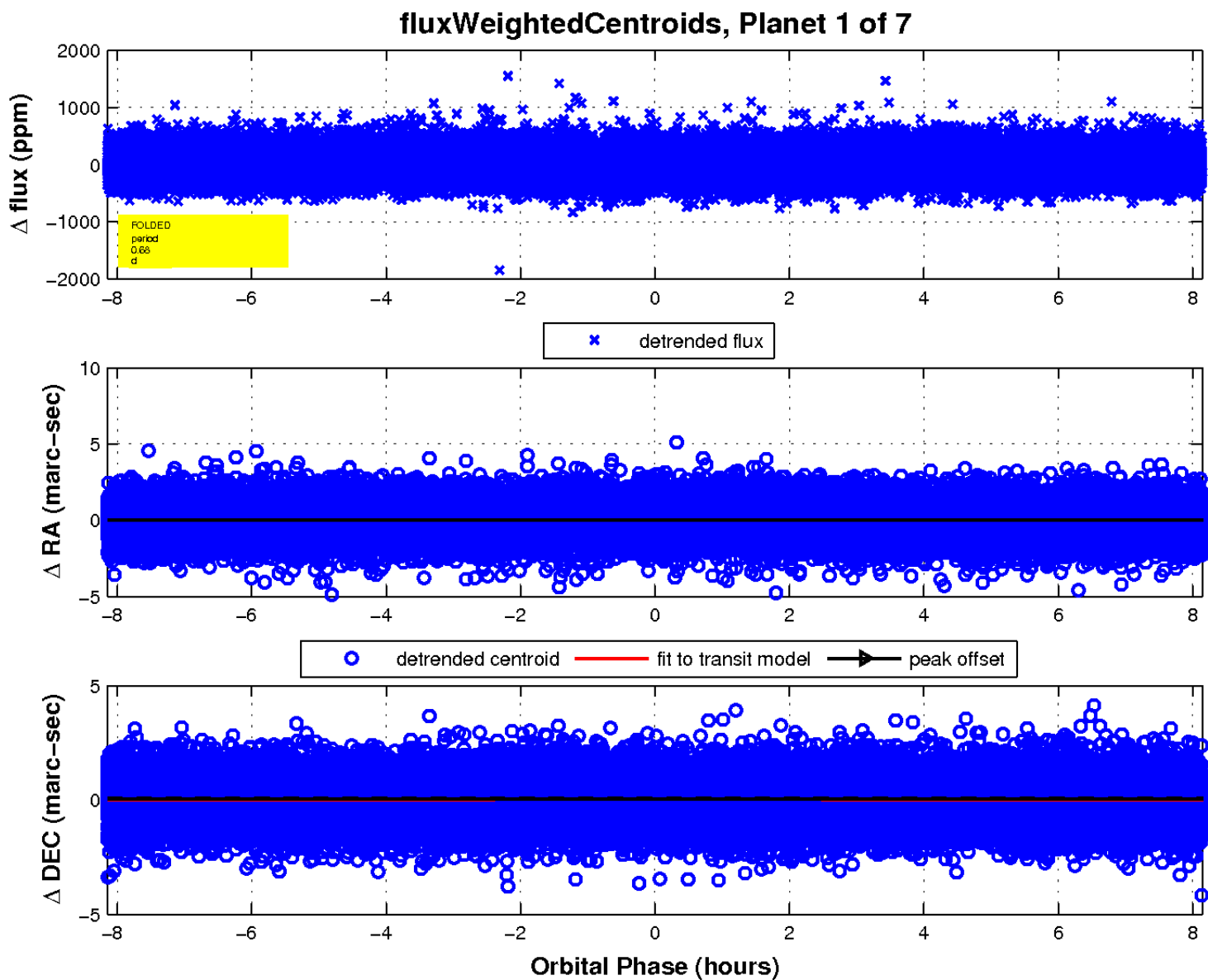
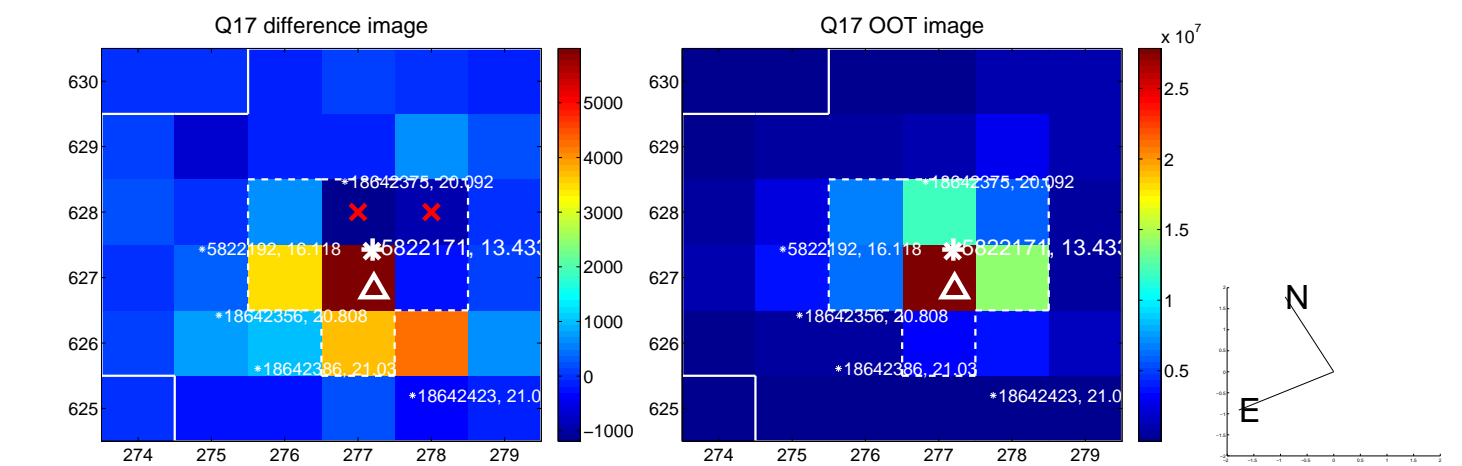
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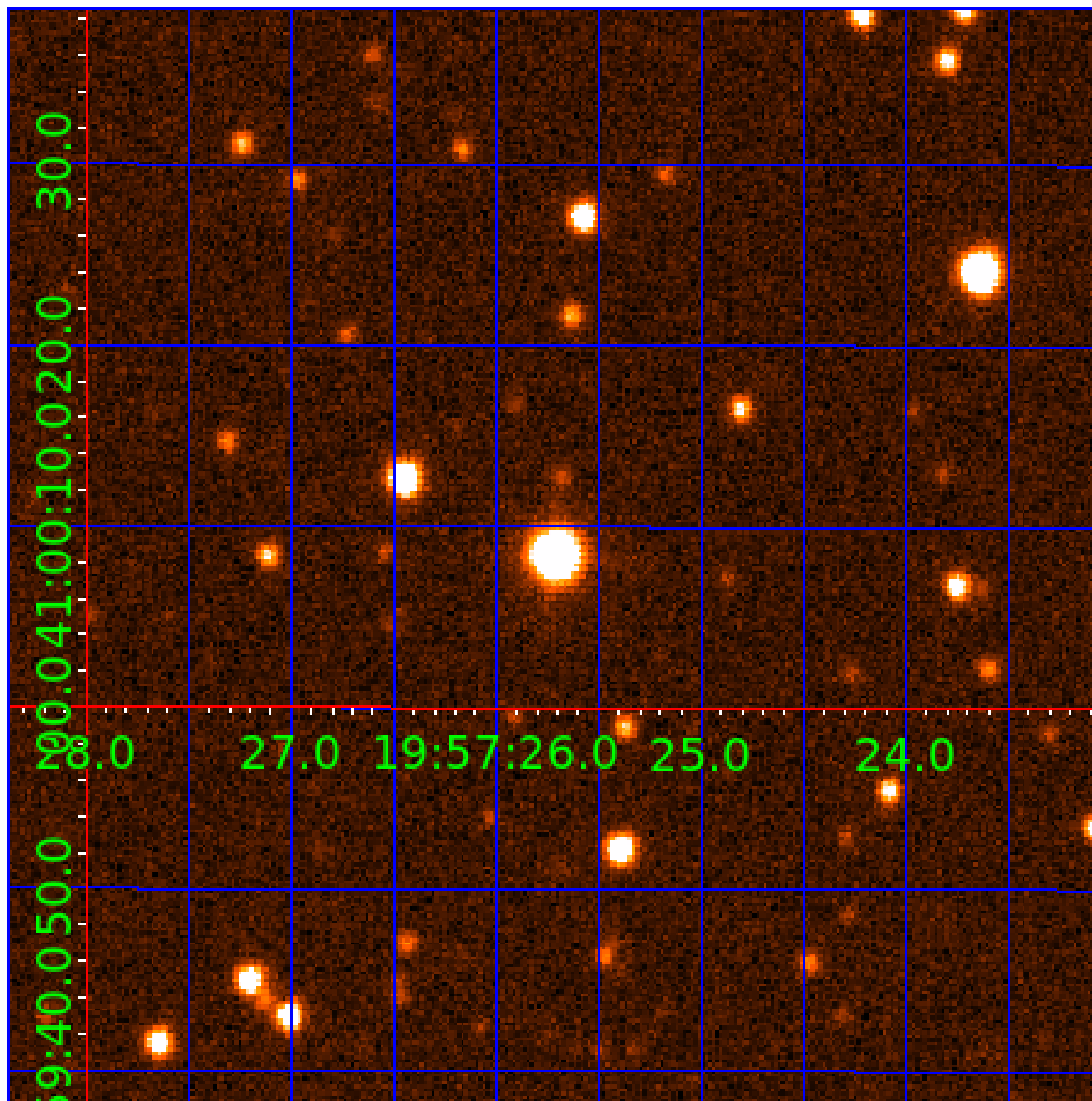


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UKIRT Image

Declination



KIC 005822171

Q1-17 DR25 TCE Parameters

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005822171-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005822171-04	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_MEAS
005822171-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
005822171-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005822171-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—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.

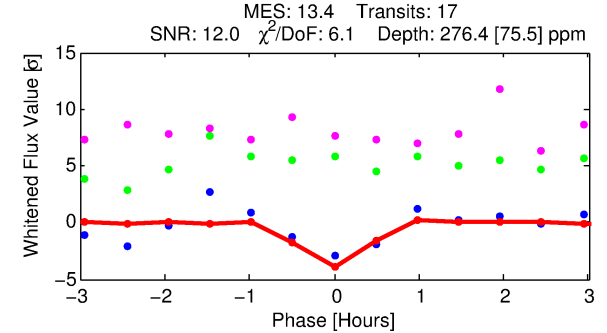
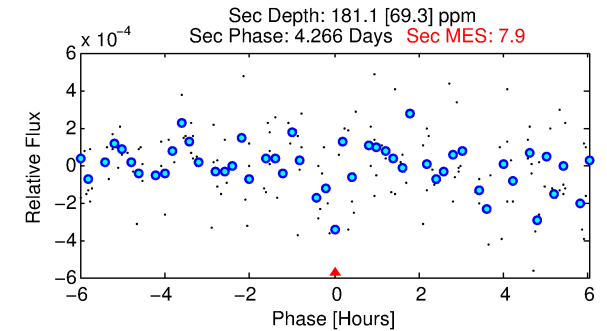
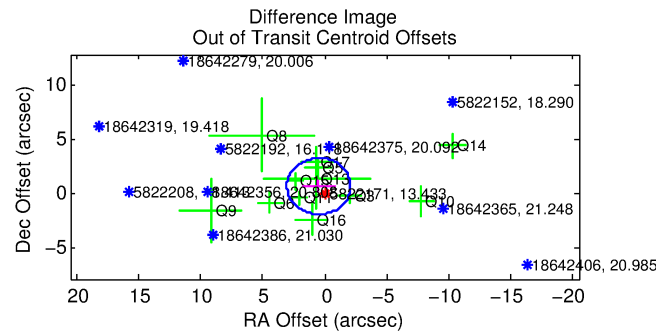
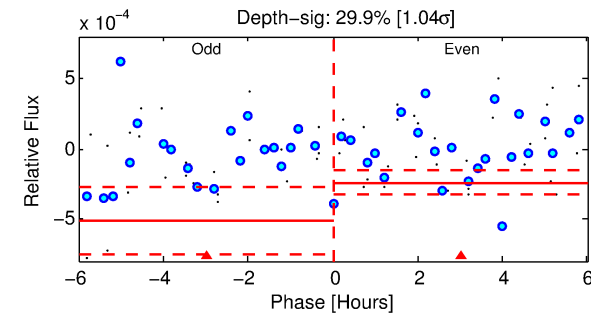
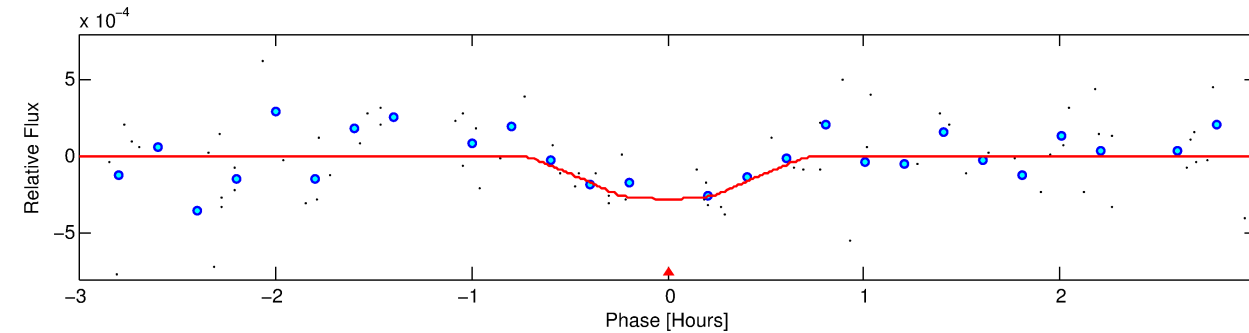
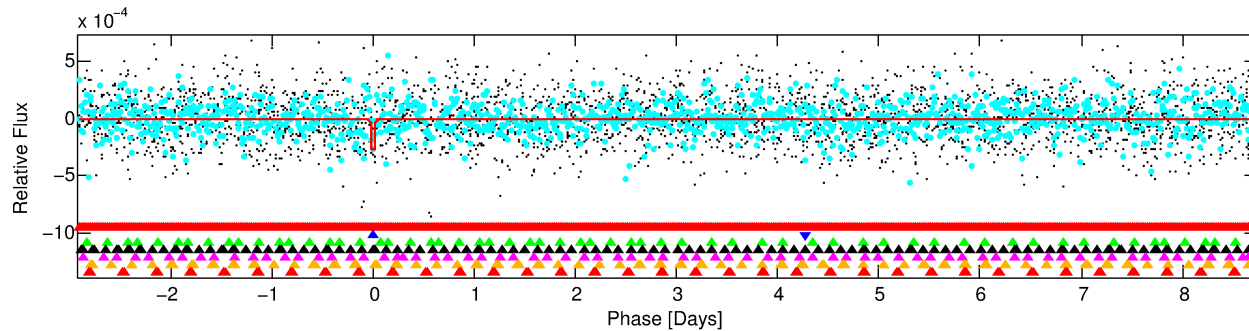
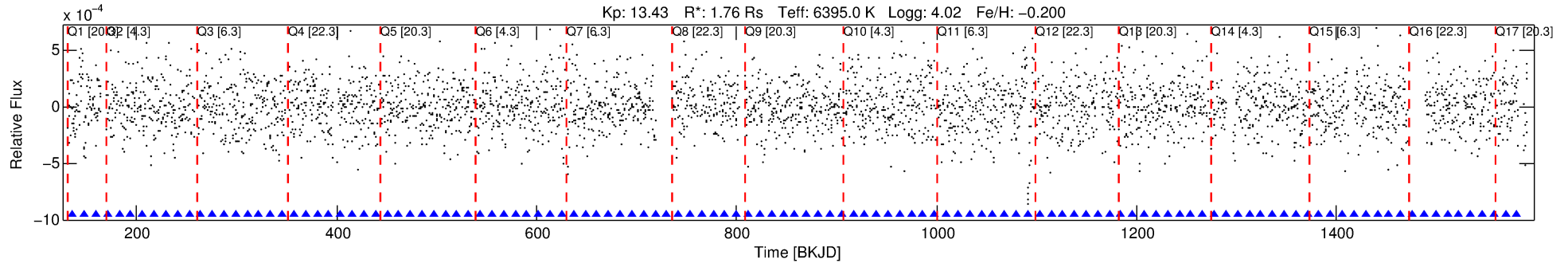
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005822171-02

No Significant Match Found

DV One-Page Summary

KIC: 5822171 Candidate: 2 of 7 Period: 11.649 d



DV Fit Results:

Period = 11.64874 [0.00012] d
Epoch = 136.1353 [0.0097] BKJD
Rp/R* = 0.0161 [0.0194]
a/R* = 72.98 [472.89]
b = 0.60 [6.96]
Seff = 411.51 [234.54]
Teq = 1148 [164] K
Rp = 3.10 [3.88] Re
a = 0.1065 [0.0362] AU
Ag = 117.74 [294.29] [0.40 σ]
Teffp = 5849 [3569] K [1.32 σ]

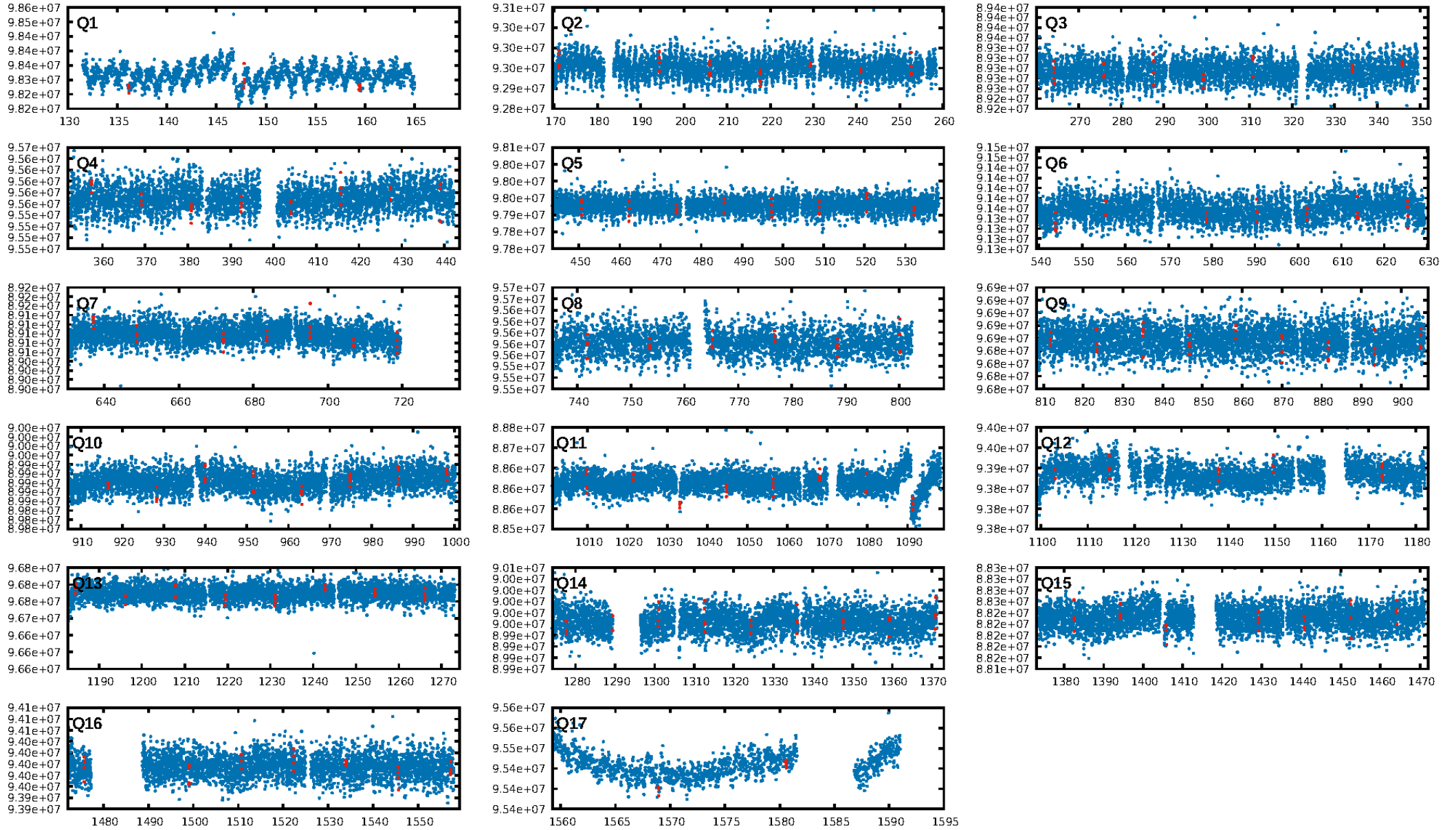
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [5.60 σ]
LongPeriod-sig: 100.0% [12.25 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 39.6%
Bootstrap-pfa: 8.90e-14
RollingBand-fgt: 1.00 [17/17]
GhostDiagnostic-chr: 0.6772
Centroid-sig: 0.2%
Centroid-so: 2.188 arcsec [3.41 σ]
OotOffset-rm: 0.864 arcsec [1.01 σ]
KicOffset-rm: 0.856 arcsec [1.16 σ]
OotOffset-st: 3/3/2/4 [12]
KicOffset-st: 3/3/2/4 [12]
DiffImageQuality-fgm: 0.17 [2/12]
DiffImageOverlap-fno: 0.12 [2/17]

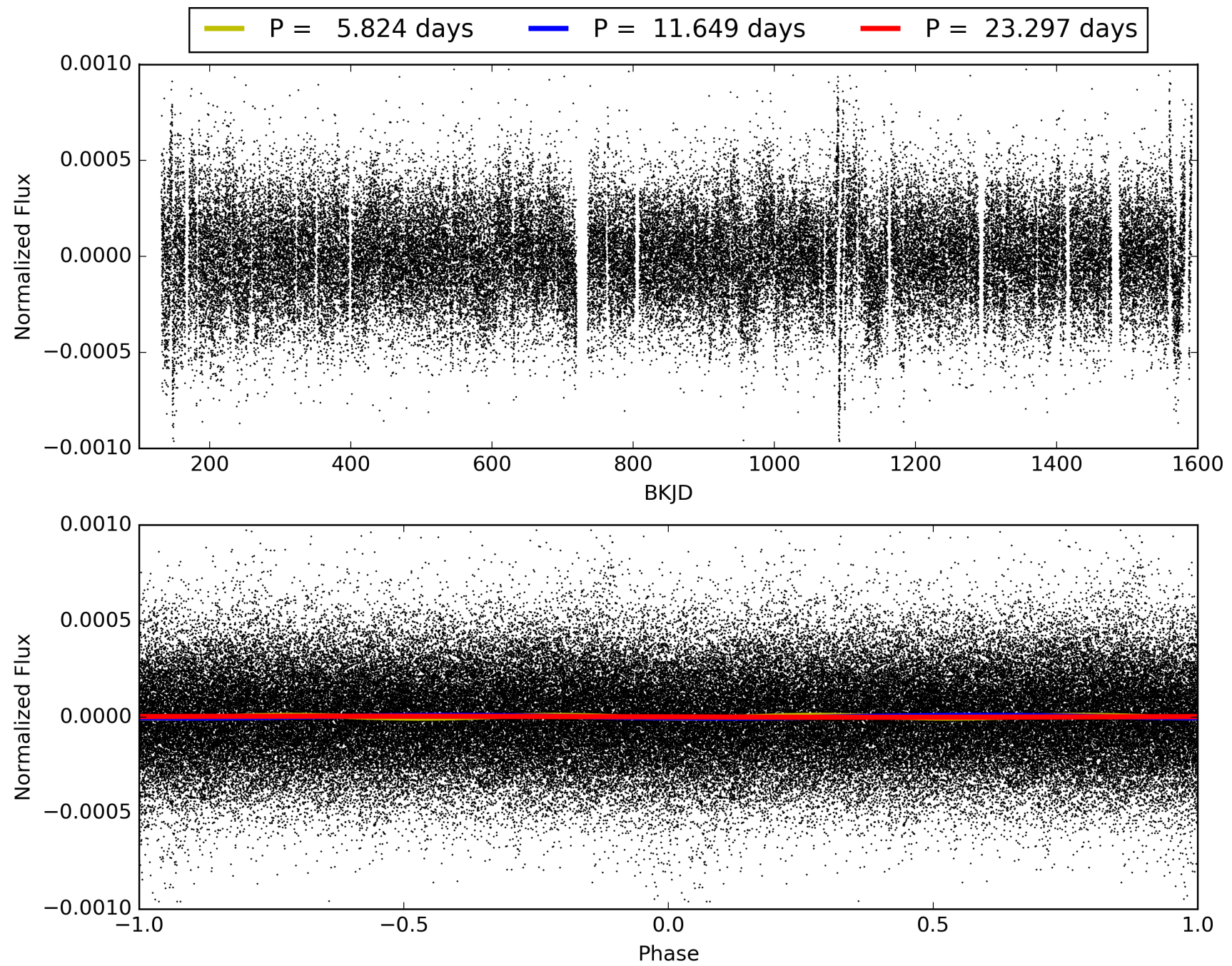
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:29:55 Z

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

TCE 005822171-02, PDC Light Curves

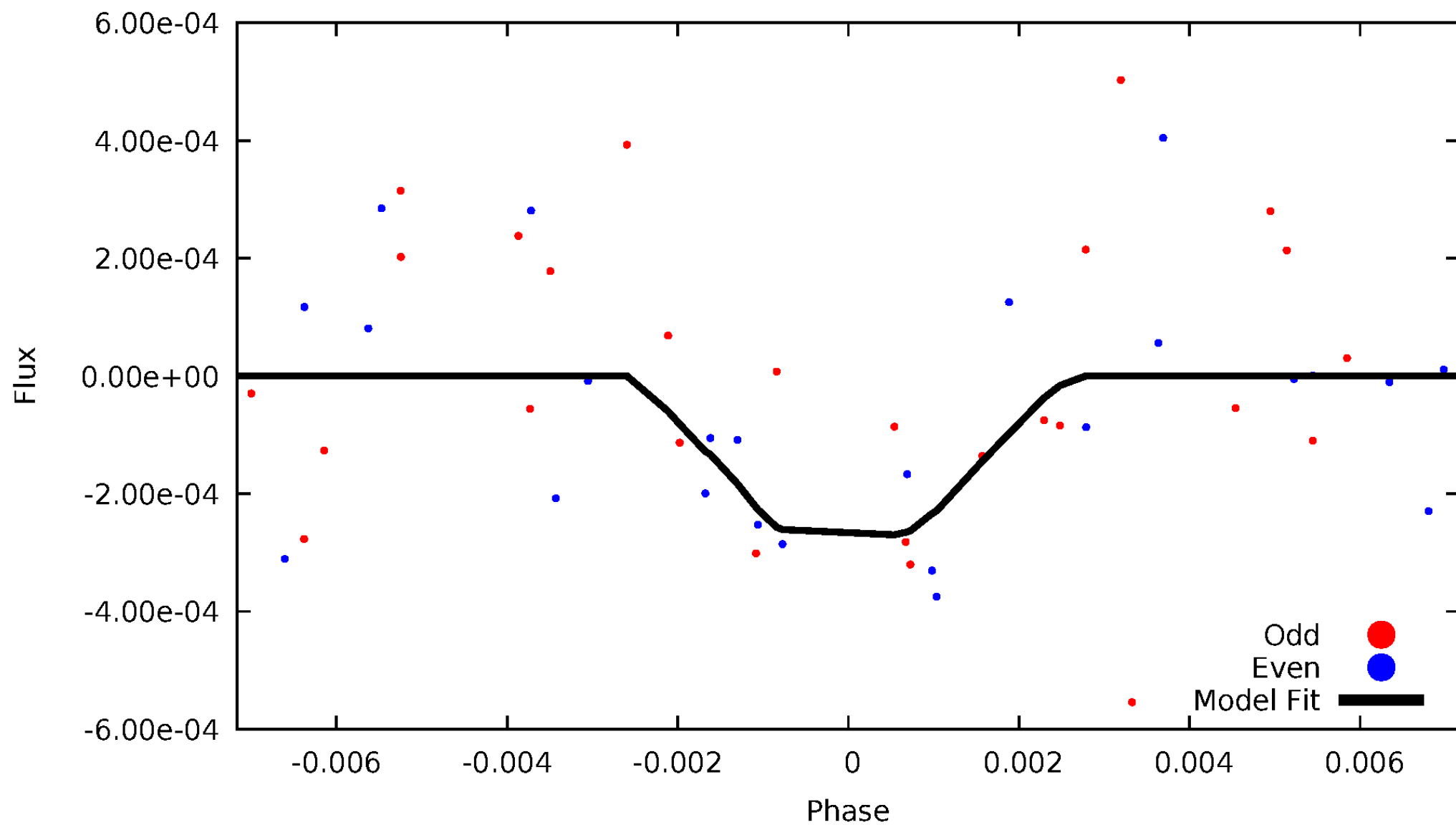


TCE 005822171-02



DV Odd/Even

TCE 005822171-02

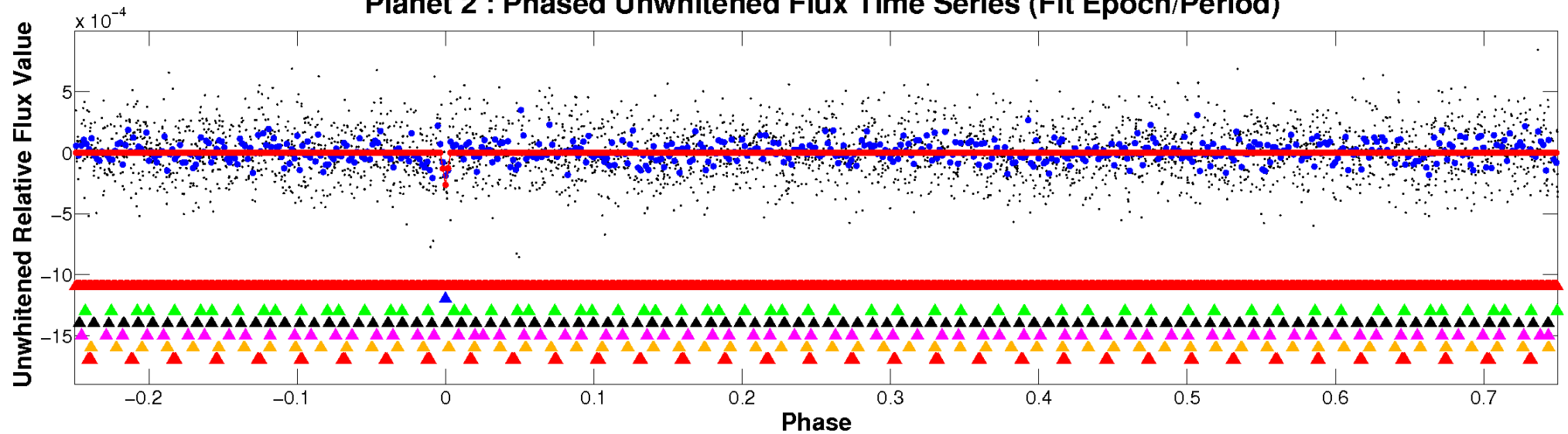


ALT Odd/Even

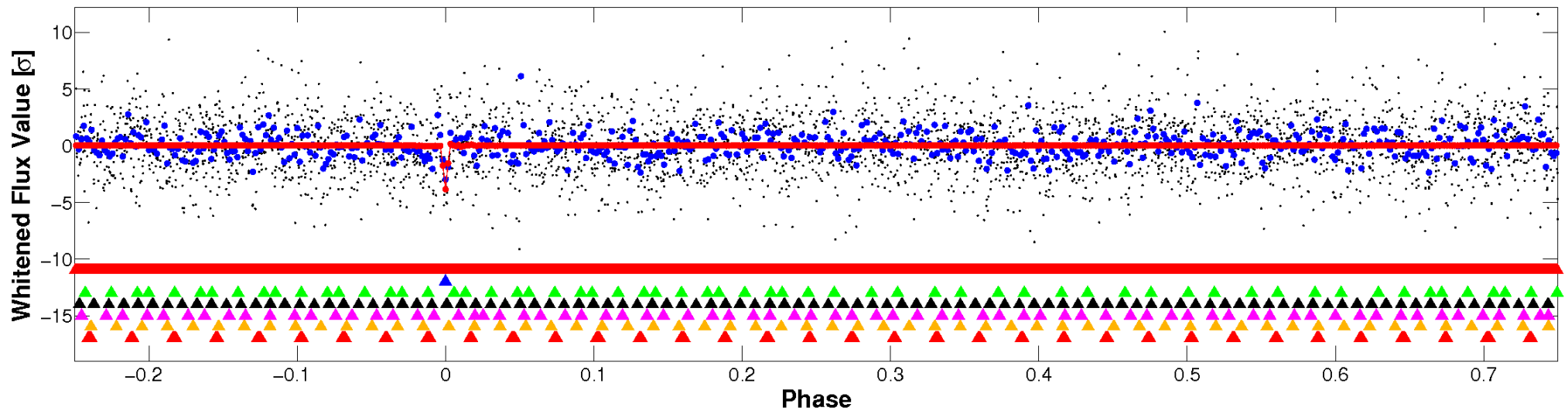
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

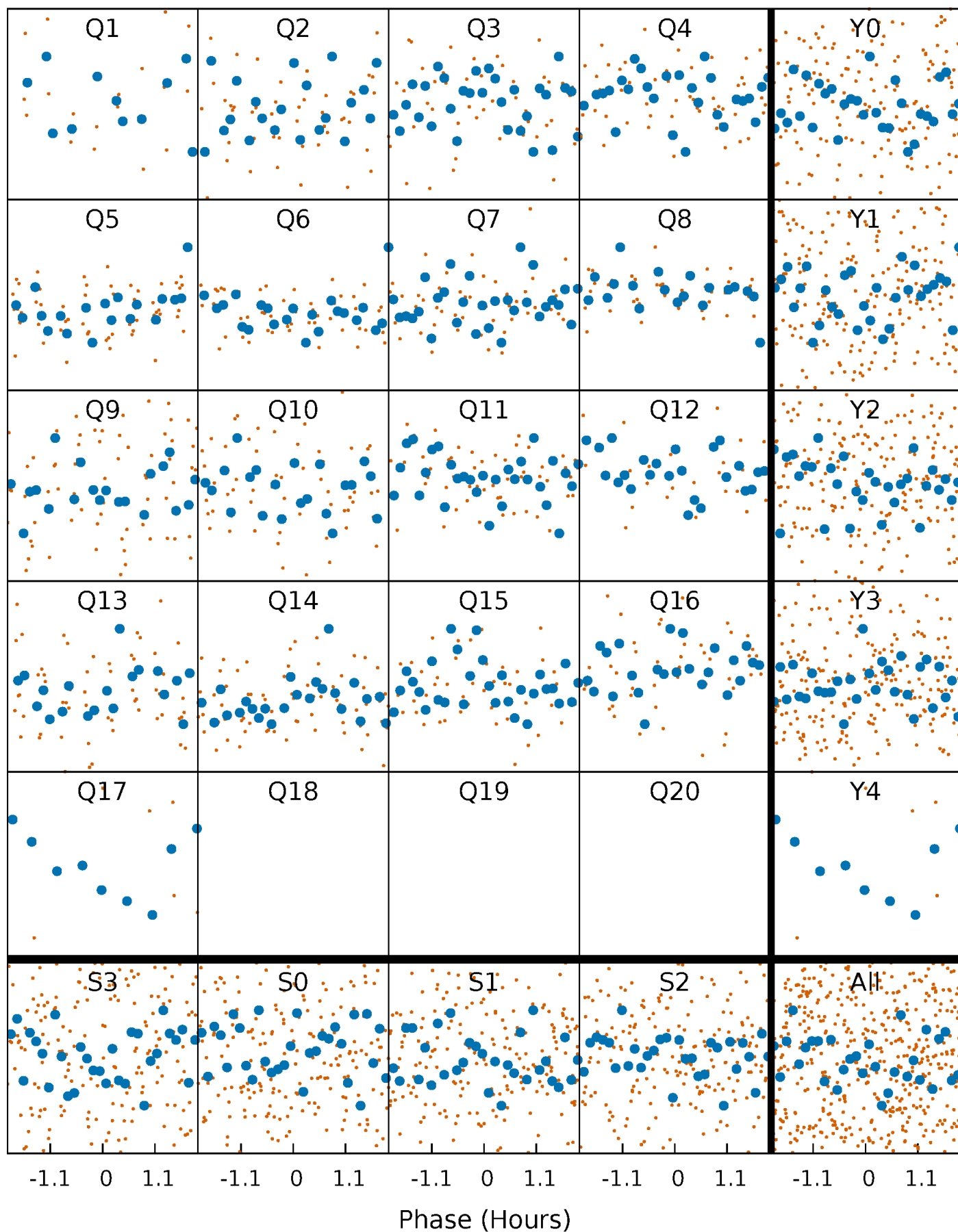


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



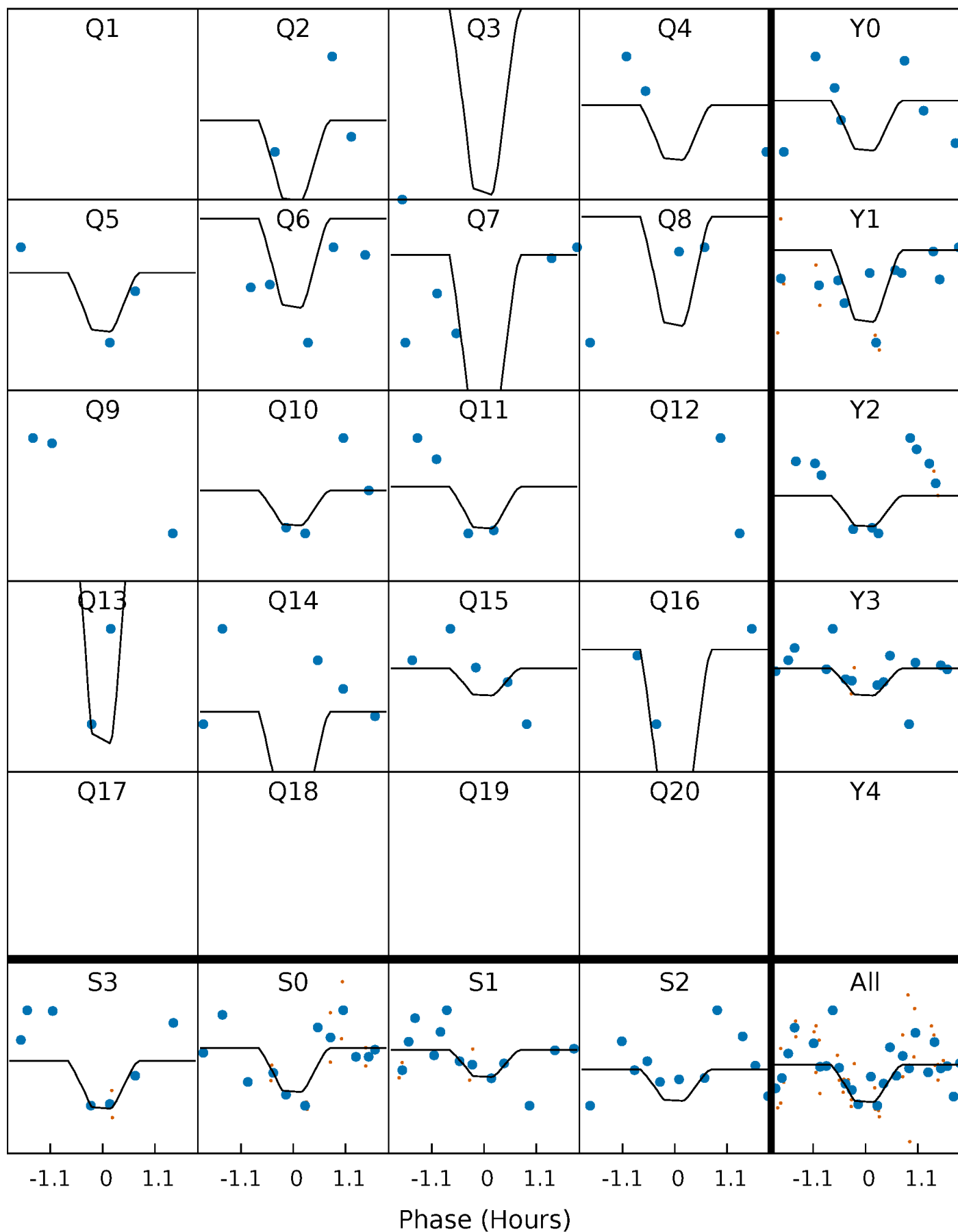
PDC Quarter-Phased Transit Curves

TCE 005822171-02 P= 11.648739 Days $T_0=136.135338$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 005822171-02 P= 11.648739 Days $T_0=136.135338$ (BKJD)

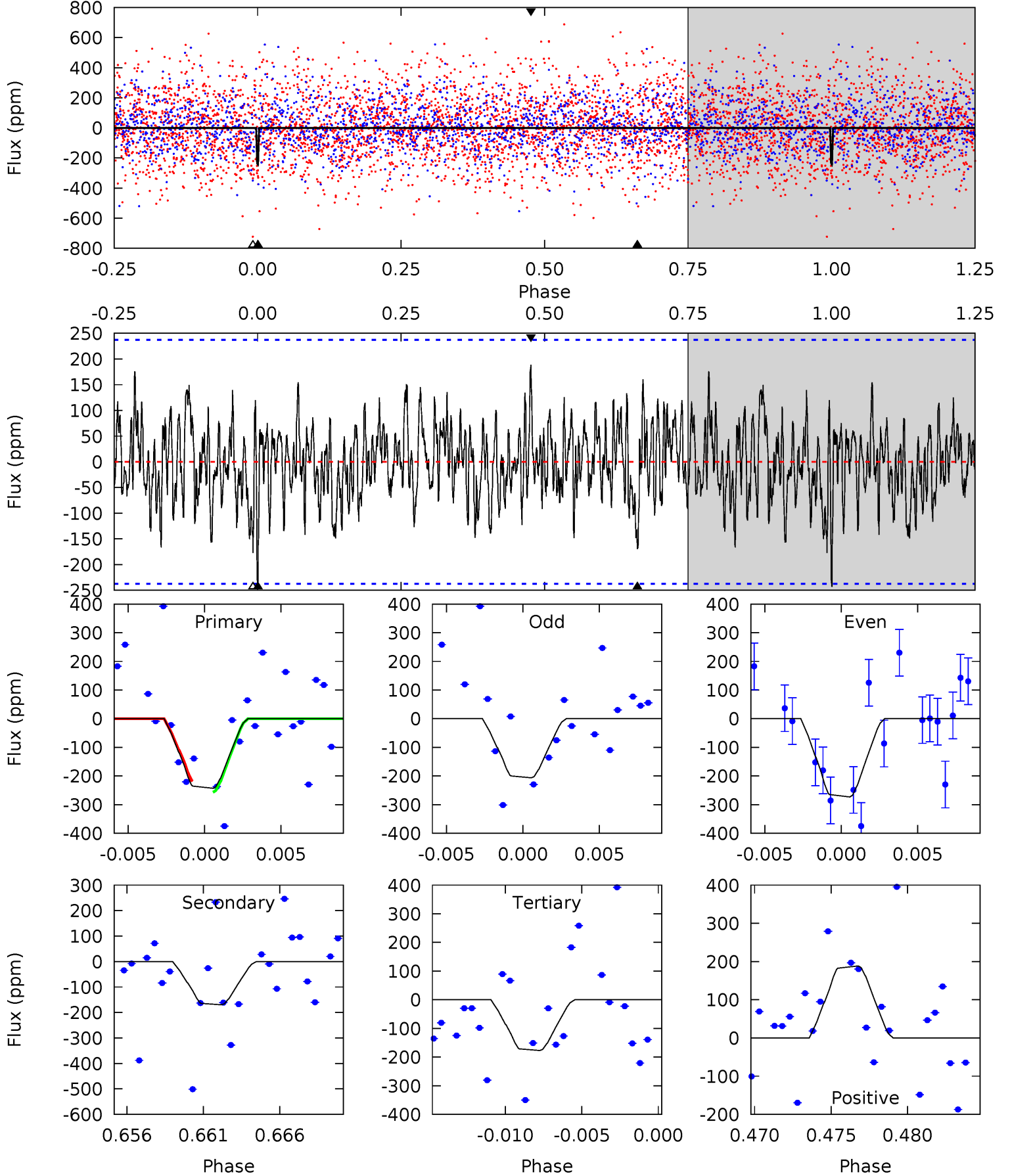


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

005822171-02, P = 11.648739 Days, E = 124.486599 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.29	3.69	3.85	4.10	5.16	2.81	1.39	1.44	1.19	-0.16	-0.41	0.73	0.82	0.44	0.42



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 005822171

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6395^{+175}_{-214}	$4.019^{+0.329}_{-0.165}$	$-0.200^{+0.250}_{-0.300}$	$1.765^{+0.494}_{-0.603}$	$1.187^{+0.188}_{-0.188}$	$0.304^{+0.653}_{-0.139}$
	+3%/-3%	+8%/-4%	+125%/-150%	+28%/-34%	+16%/-16%	+215%/-46%
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 005822171-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-170 ± 46	$3.76^{+3.37}_{-2.41}$	1572^{+131}_{-148}	5047^{+3673}_{-1054}	72^{+517}_{-52}
Alt.	N/A	N/A	N/A	N/A	N/A

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

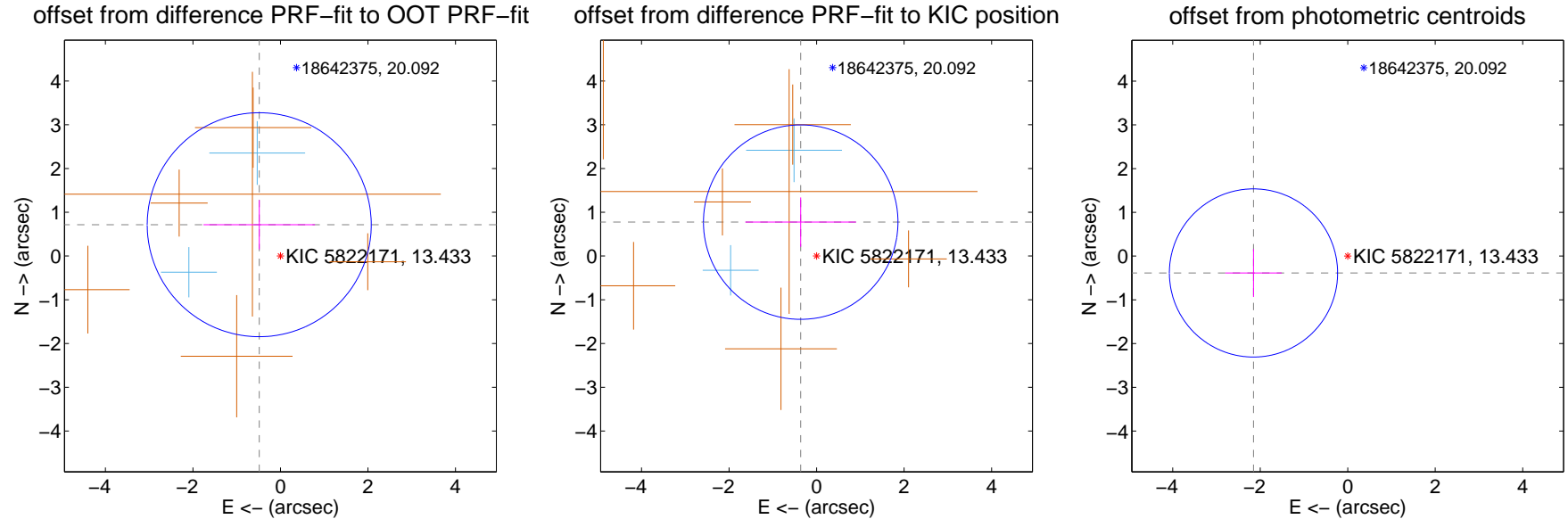
DV Centroid Data

Supplemental centroid analysis for 005822171-02. Kepler magnitude: 13.43. Transit SNR 12.01

There are 2 quarters with good PRF difference image offsets

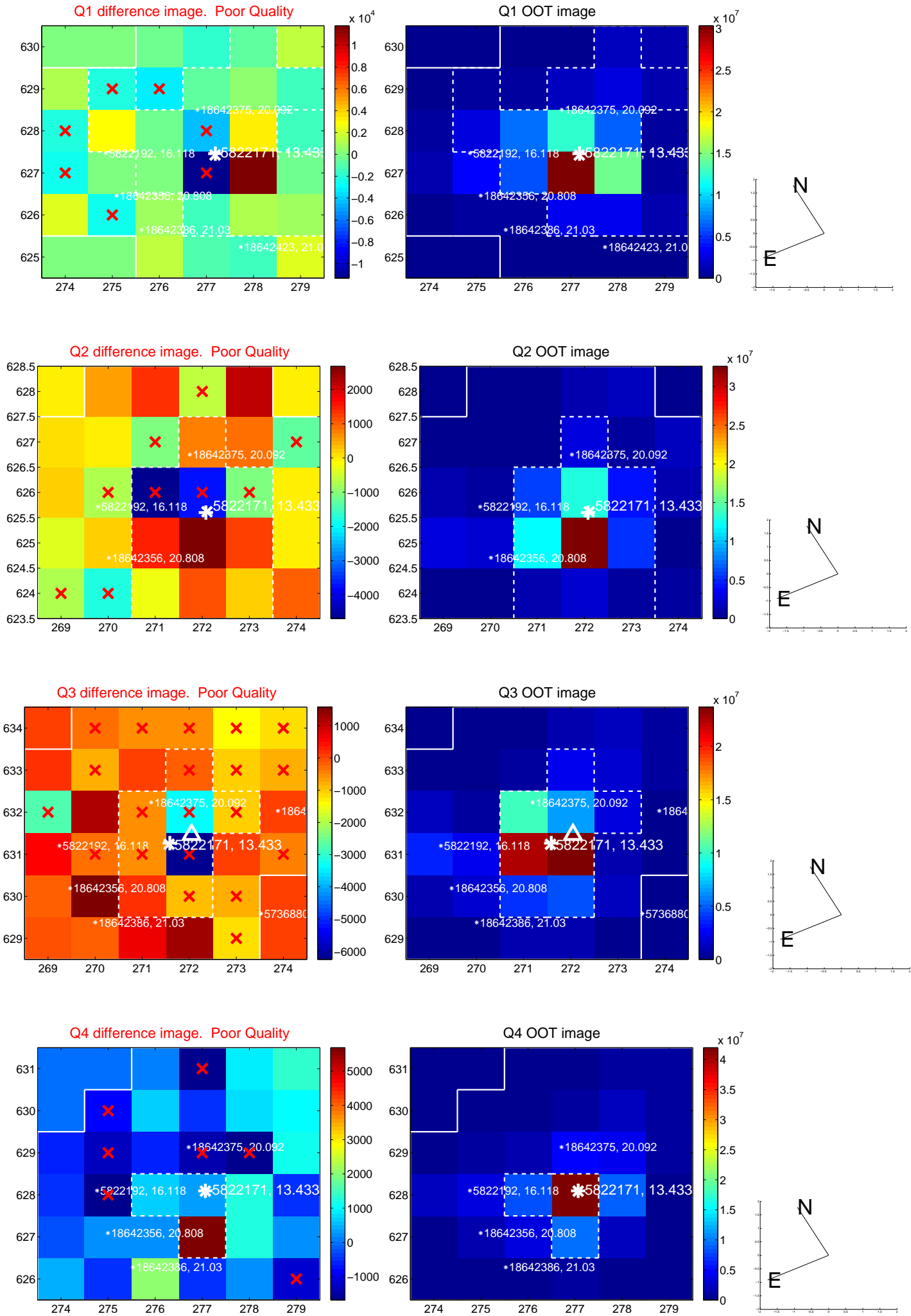
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.864 ± 0.853	1.01	0.485 ± 1.273	0.715 ± 0.563
PRF-fit source offset from KIC position	0.856 ± 0.741	1.16	0.363 ± 1.264	0.775 ± 0.564
photometric centroid source offset	2.19 ± 0.64	3.41	2.15 ± 0.64	-0.39 ± 0.55

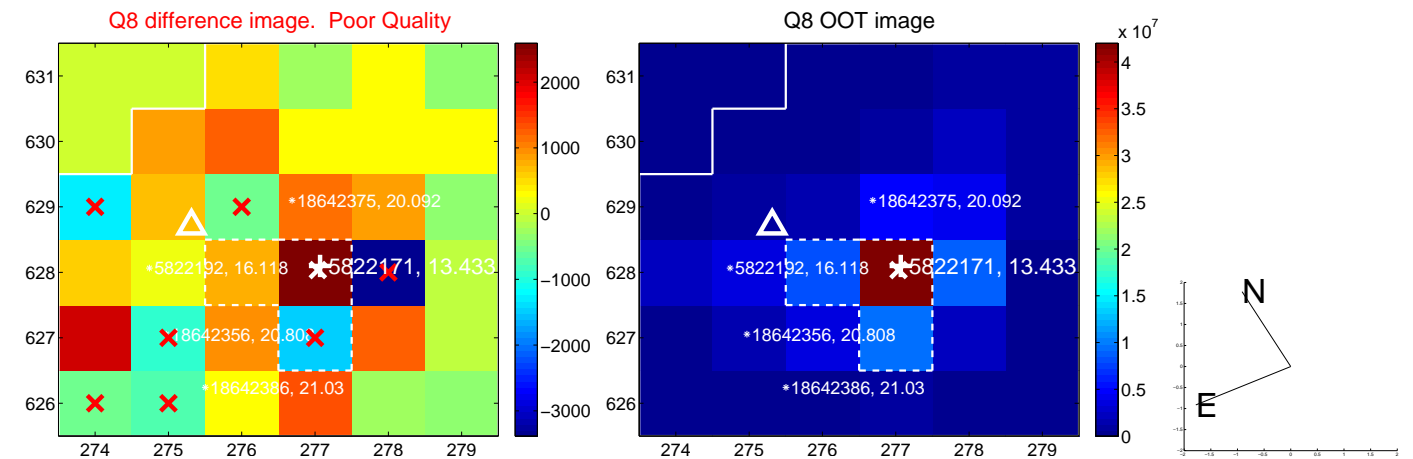
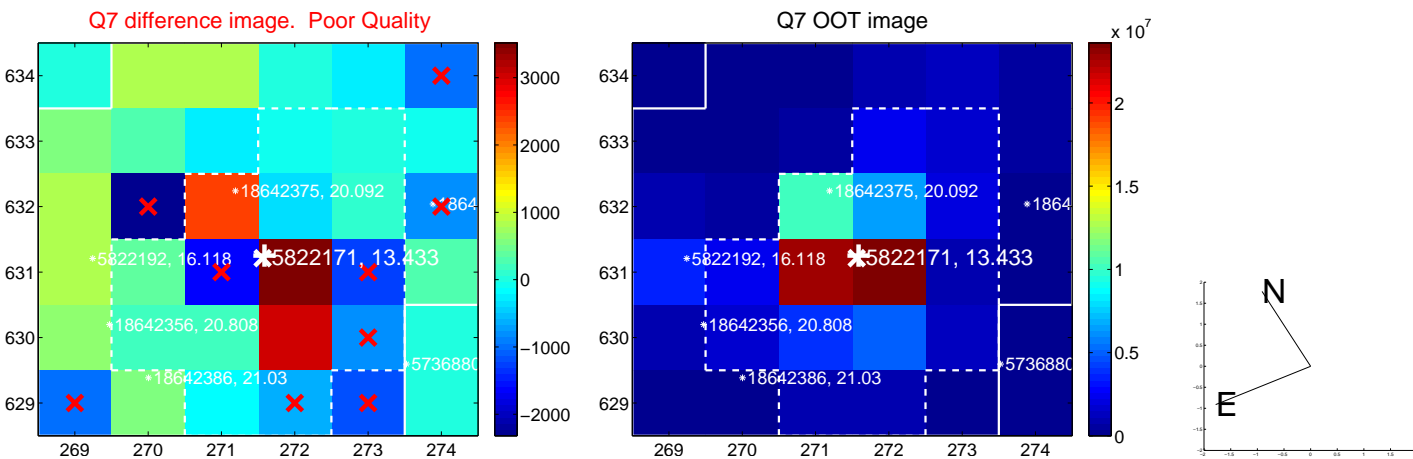
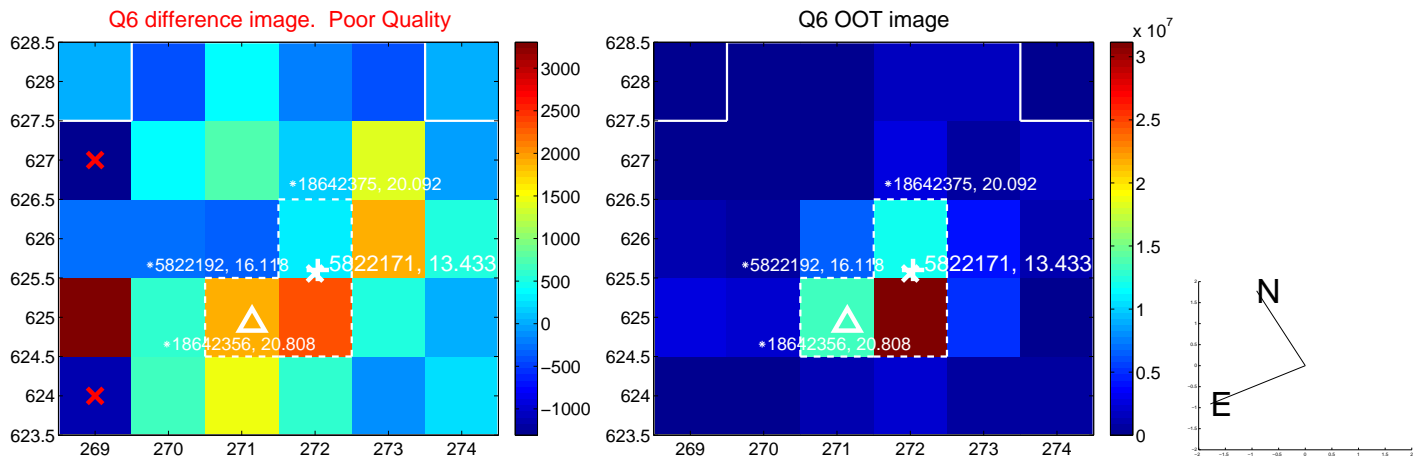
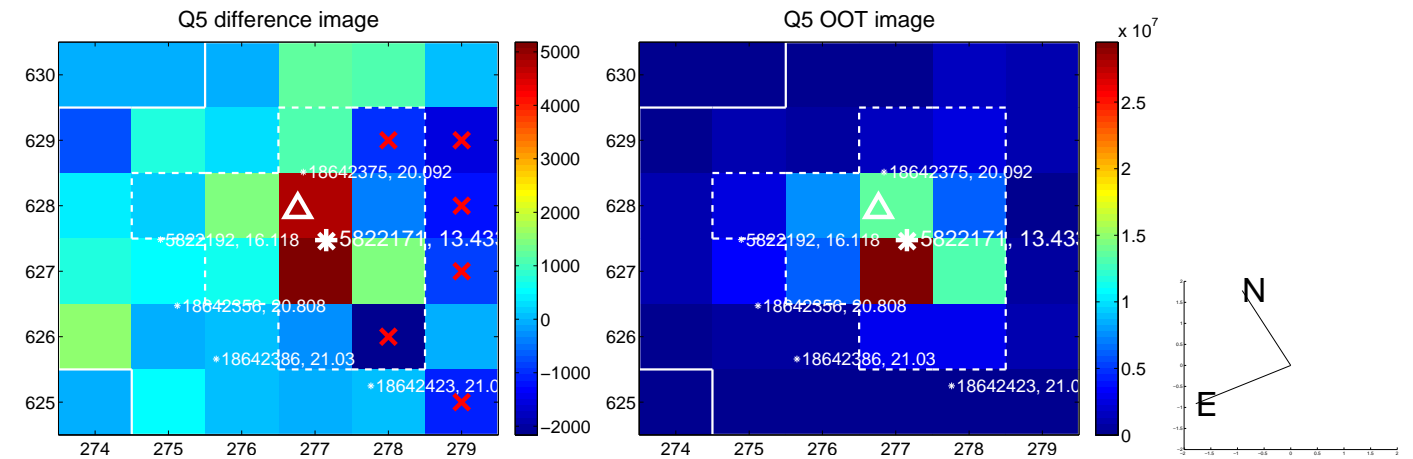


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

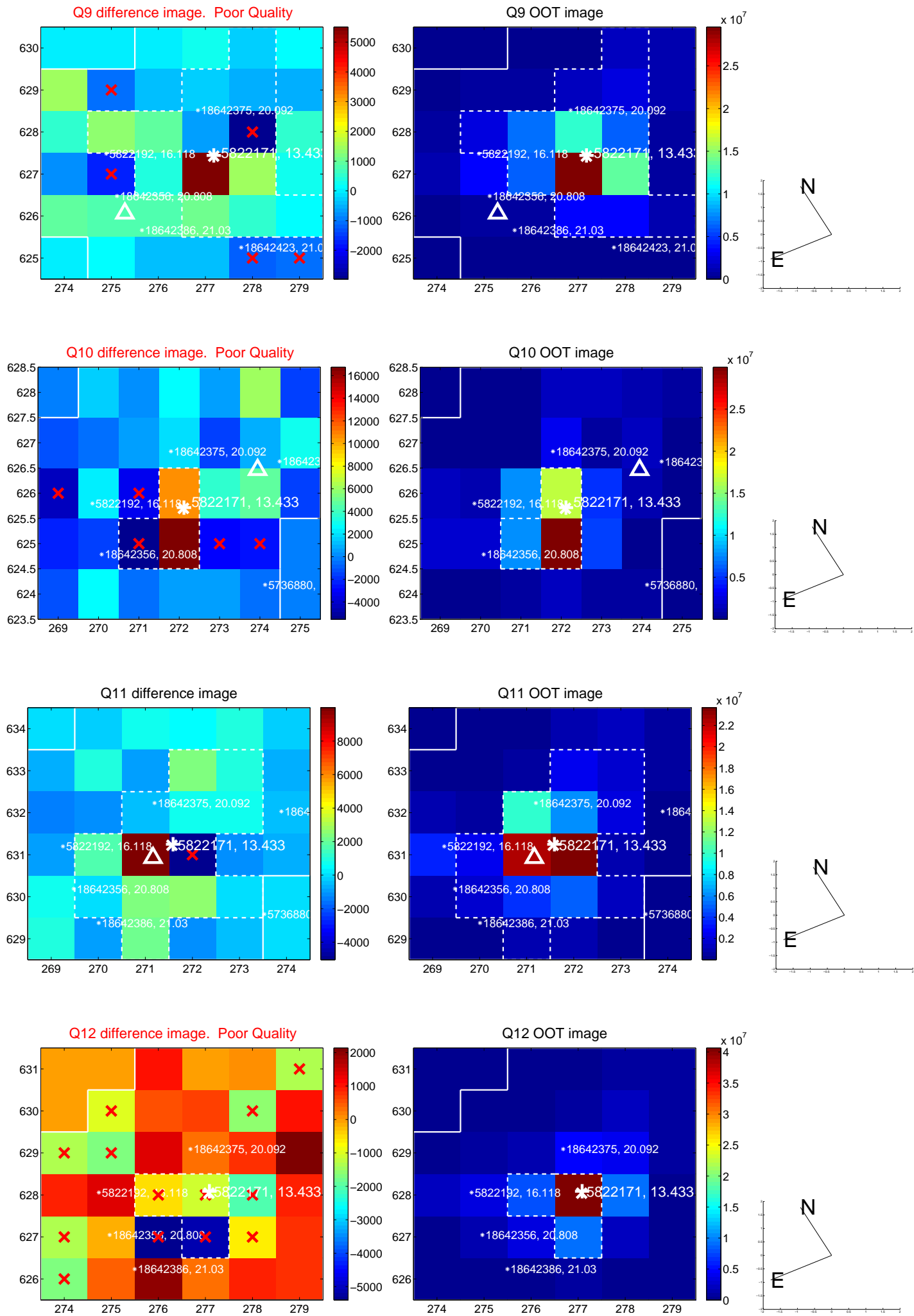
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



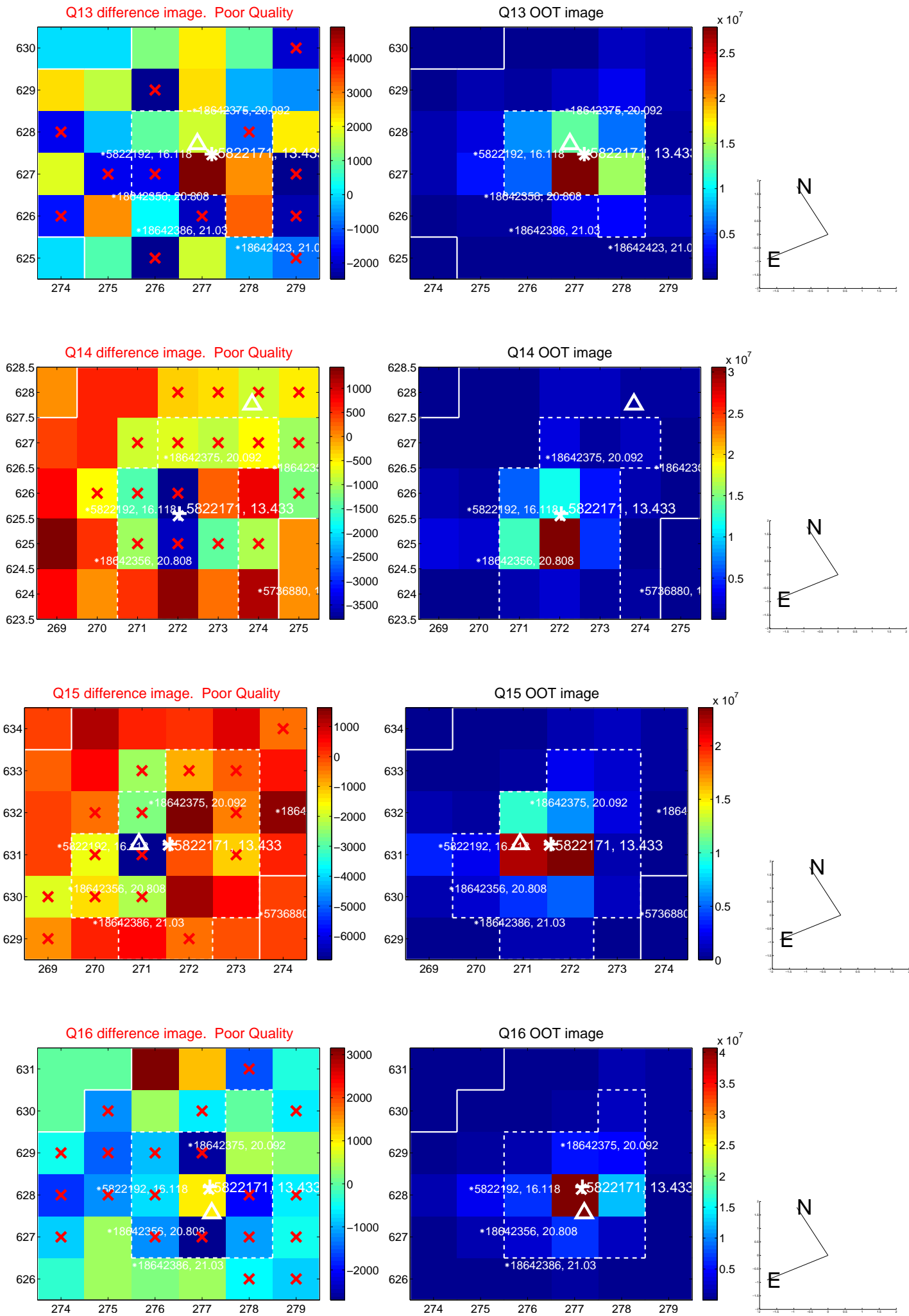
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



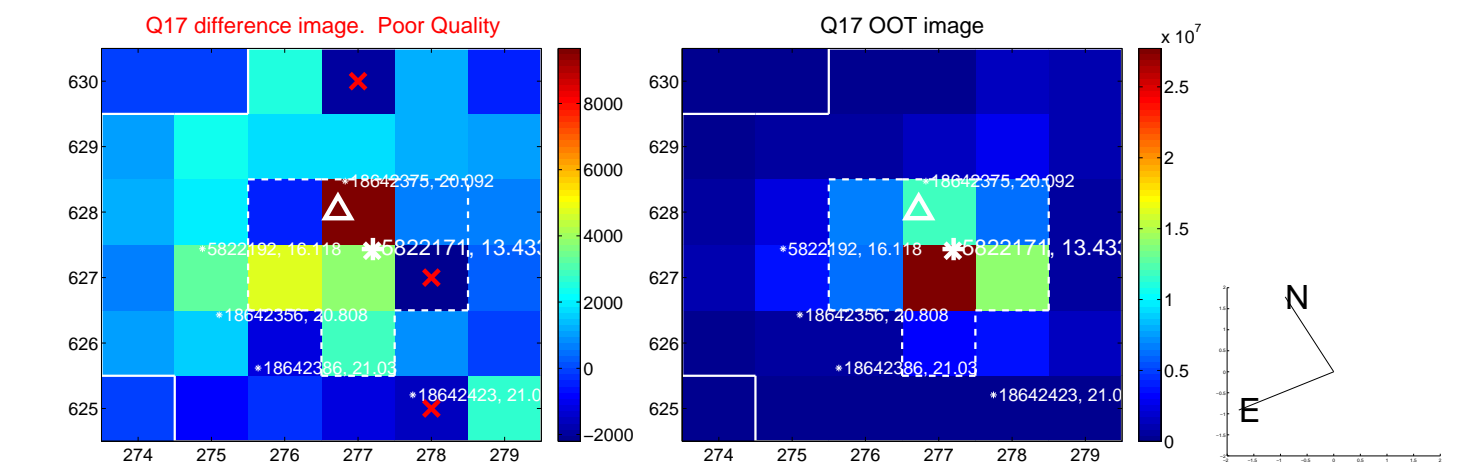
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



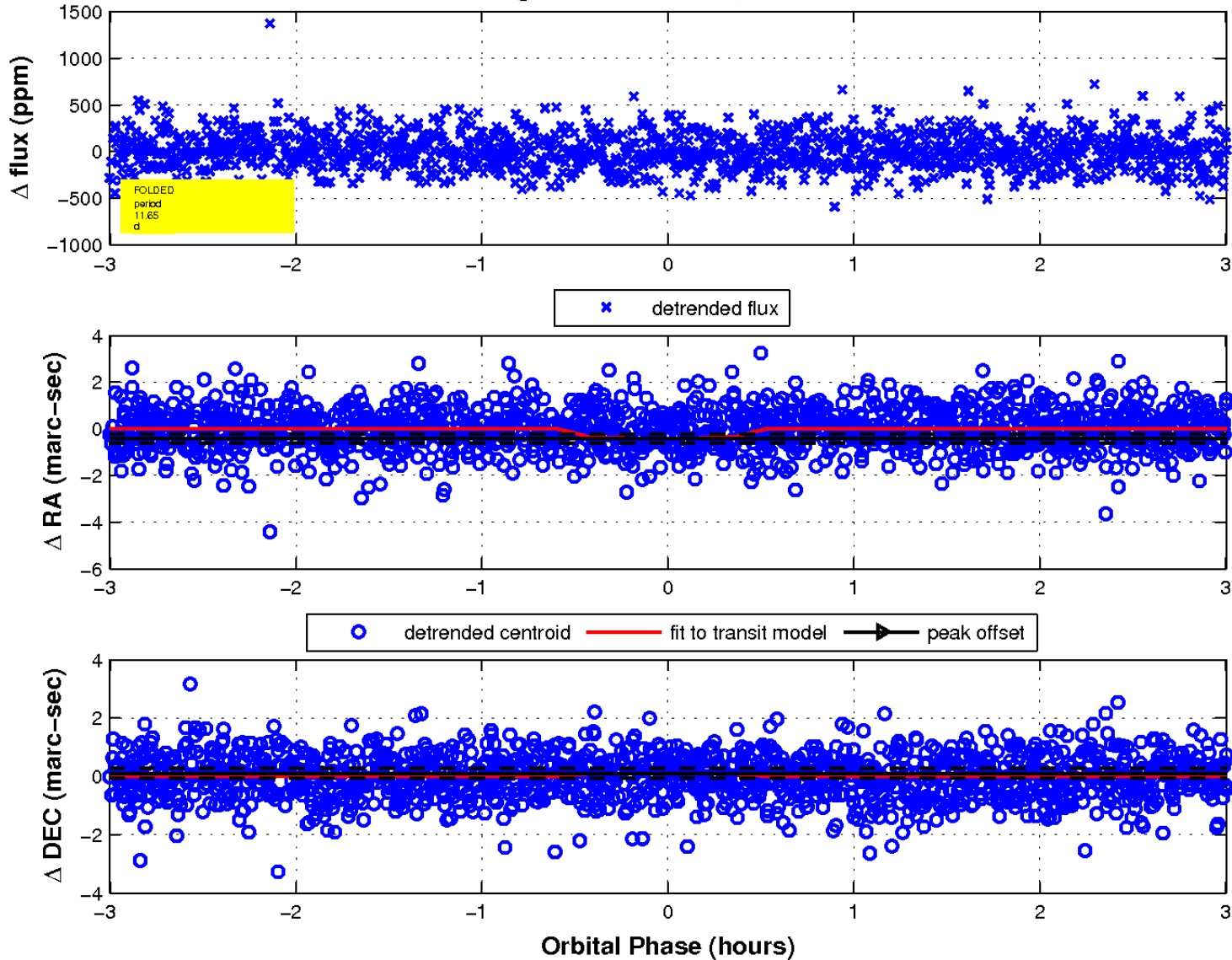
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

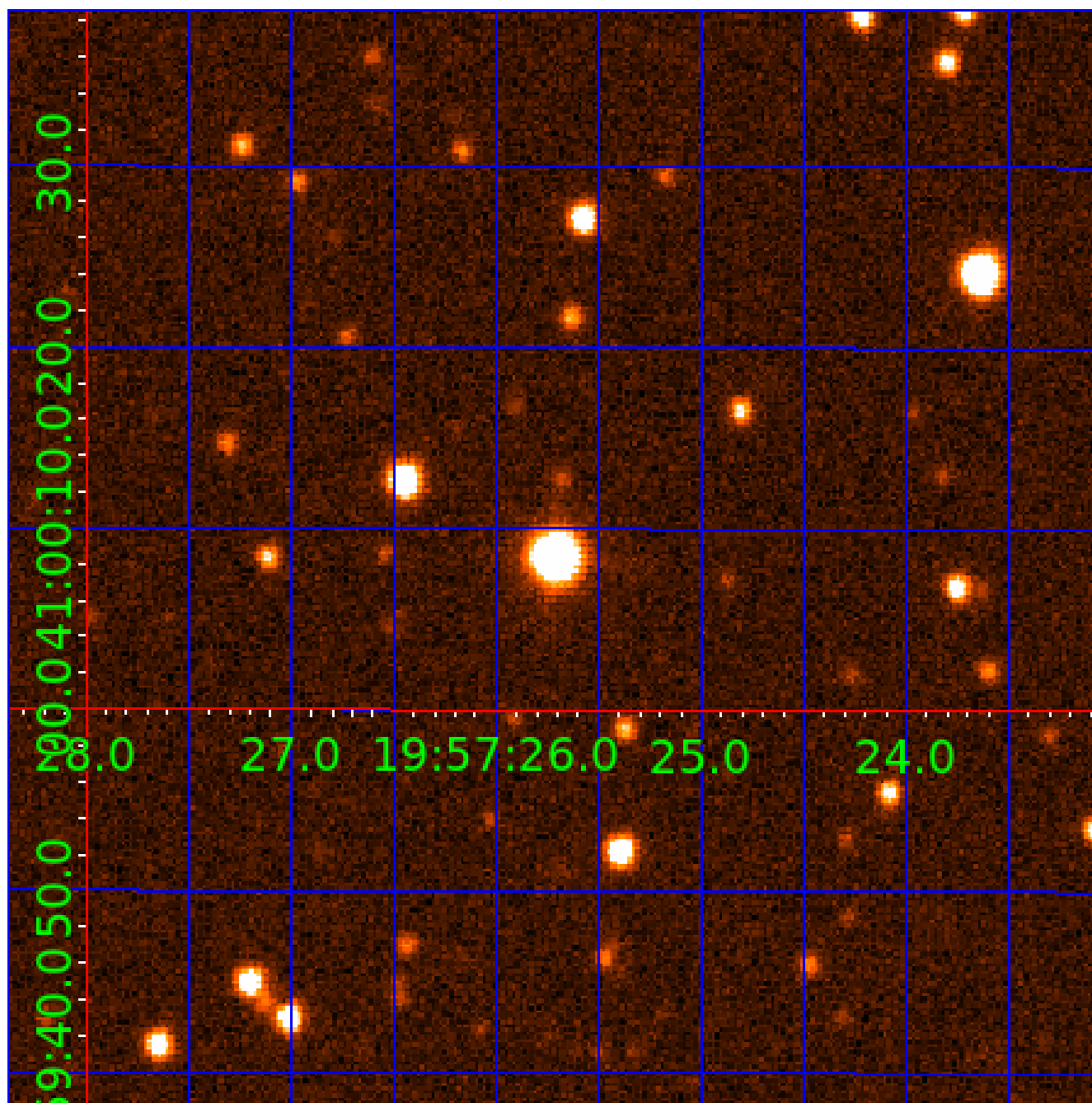


fluxWeightedCentroids, Planet 2 of 7



UKIRT Image

Declination



KIC 005822171

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})
005822171-01	OBS	No	0.679046	132.072407	10.3	4.956	10.4	5.1	1.76	6395	0.57	18206.26
005822171-02	OBS	No	11.648739	136.135338	276.4	1.002	13.4	12.0	1.76	6395	3.10	411.51
005822171-03	OBS	No	23.795057	143.871143	570.8	0.784	11.7	11.3	1.76	6395	4.58	158.77
005822171-04	OBS	No	9.111463	131.870581	46.4	10.824	10.4	5.6	1.76	6395	1.27	571.00
005822171-05	OBS	No	20.015237	148.079857	109.8	4.248	11.6	7.0	1.76	6395	2.16	199.96
005822171-06	OBS	No	6.627670	136.770988	220.2	1.310	14.1	12.0	1.76	6395	2.64	872.85
005822171-07	OBS	No	12.314166	143.669208	338.3	0.835	12.9	13.0	1.76	6395	3.33	382.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005822171-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005822171-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
005822171-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005822171-04	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_MEAS
005822171-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
005822171-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005822171-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—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.

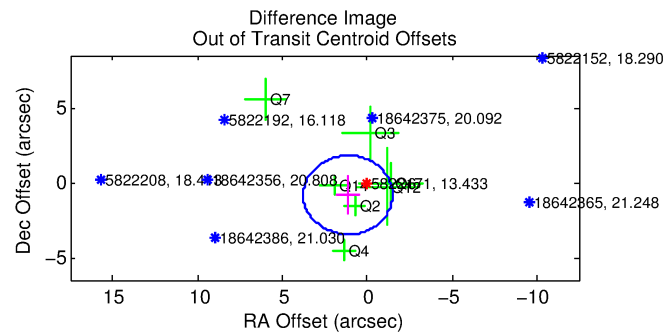
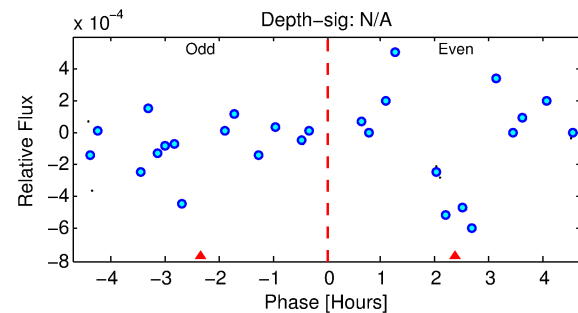
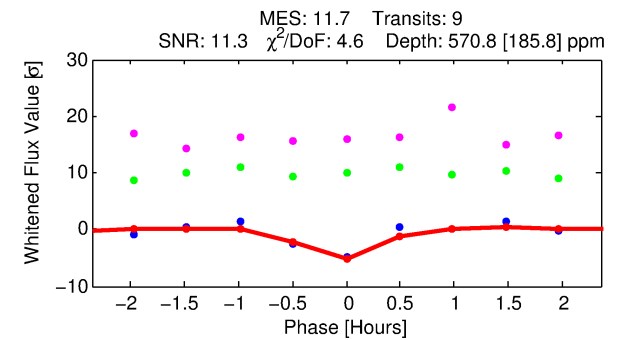
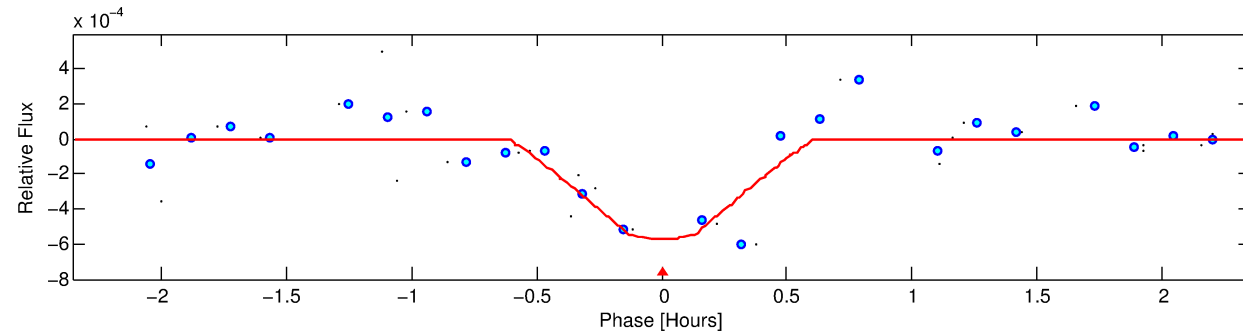
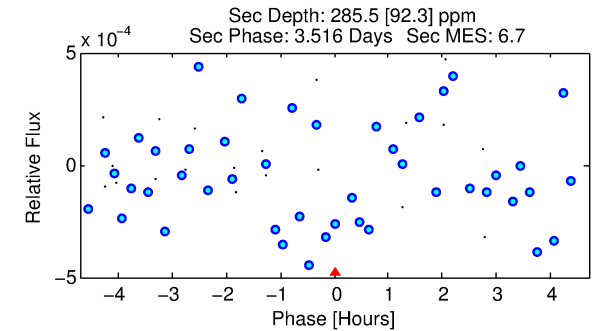
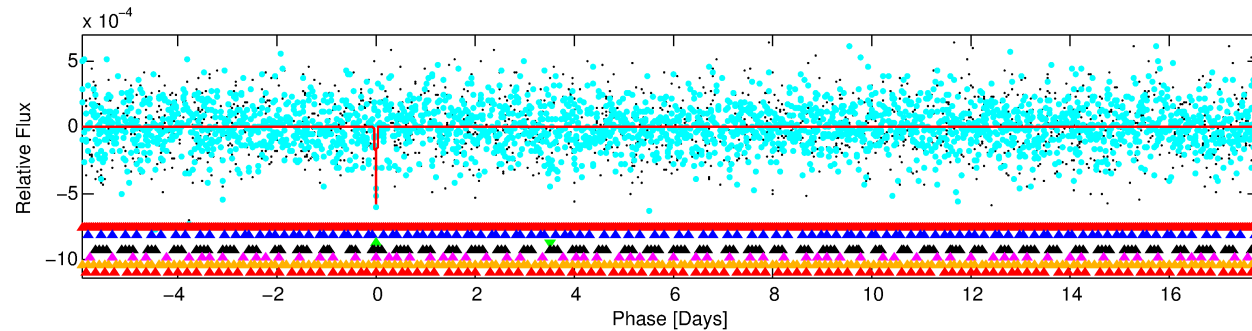
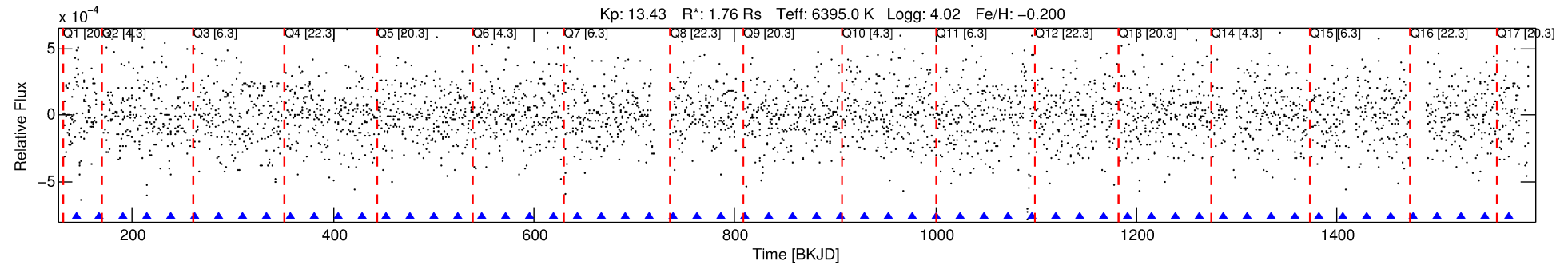
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005822171-03

No Significant Match Found

DV One-Page Summary

KIC: 5822171 Candidate: 3 of 7 Period: 23.795 d



DV Fit Results:

Period = 23.79506 [0.00012] d
Epoch = 143.8711 [0.0047] BKJD
Rp/R* = 0.0238 [0.0212]
a/R* = 172.81 [753.62]
b = 0.70 [3.25]
Seff = 158.77 [90.49]
Teq = 905 [129] K
Rp = 4.58 [4.37] Re
a = 0.1715 [0.0583] AU
Ag = 220.06 [416.24] [0.53 σ]
Teffp = 5390 [2444] K [1.83 σ]

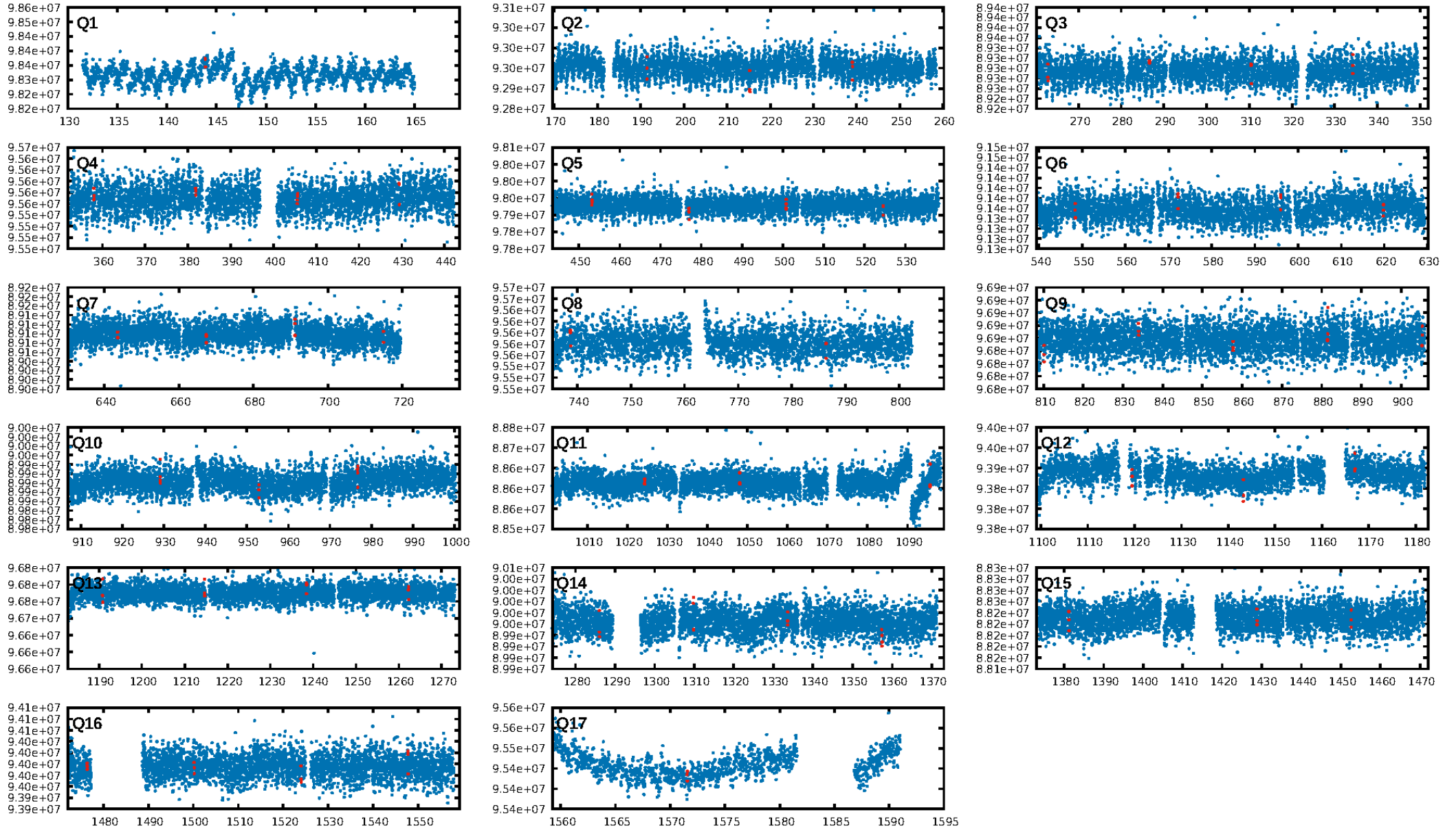
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [21.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.1%
ModelChiSquareGof-sig: 19.6%
Bootstrap-pfa: 2.46e-10
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: -1.764
Centroid-sig: 0.4%
Centroid-so: 0.998 arcsec [2.16 σ]
OotOffset-rm: 1.405 arcsec [1.60 σ]
OotOffset-st: 3/2/2/0 [7]
KicOffset-rm: 1.302 arcsec [1.45 σ]
KicOffset-st: 3/2/2/0 [7]
DiffImageQuality-fgm: 0.29 [2/7]
DiffImageOverlap-fno: 0.12 [2/17]

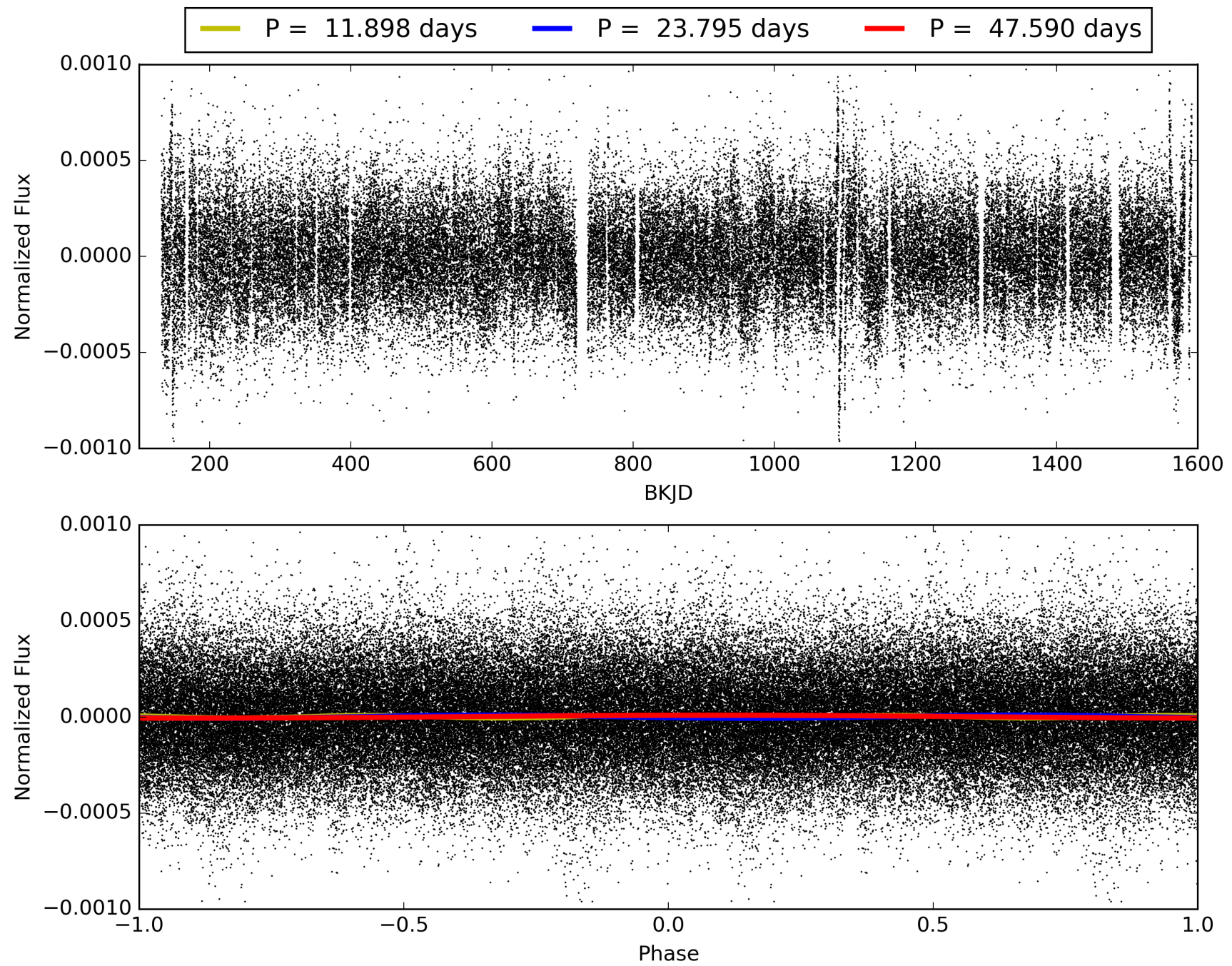
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:29:58 Z

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

TCE 005822171-03, PDC Light Curves

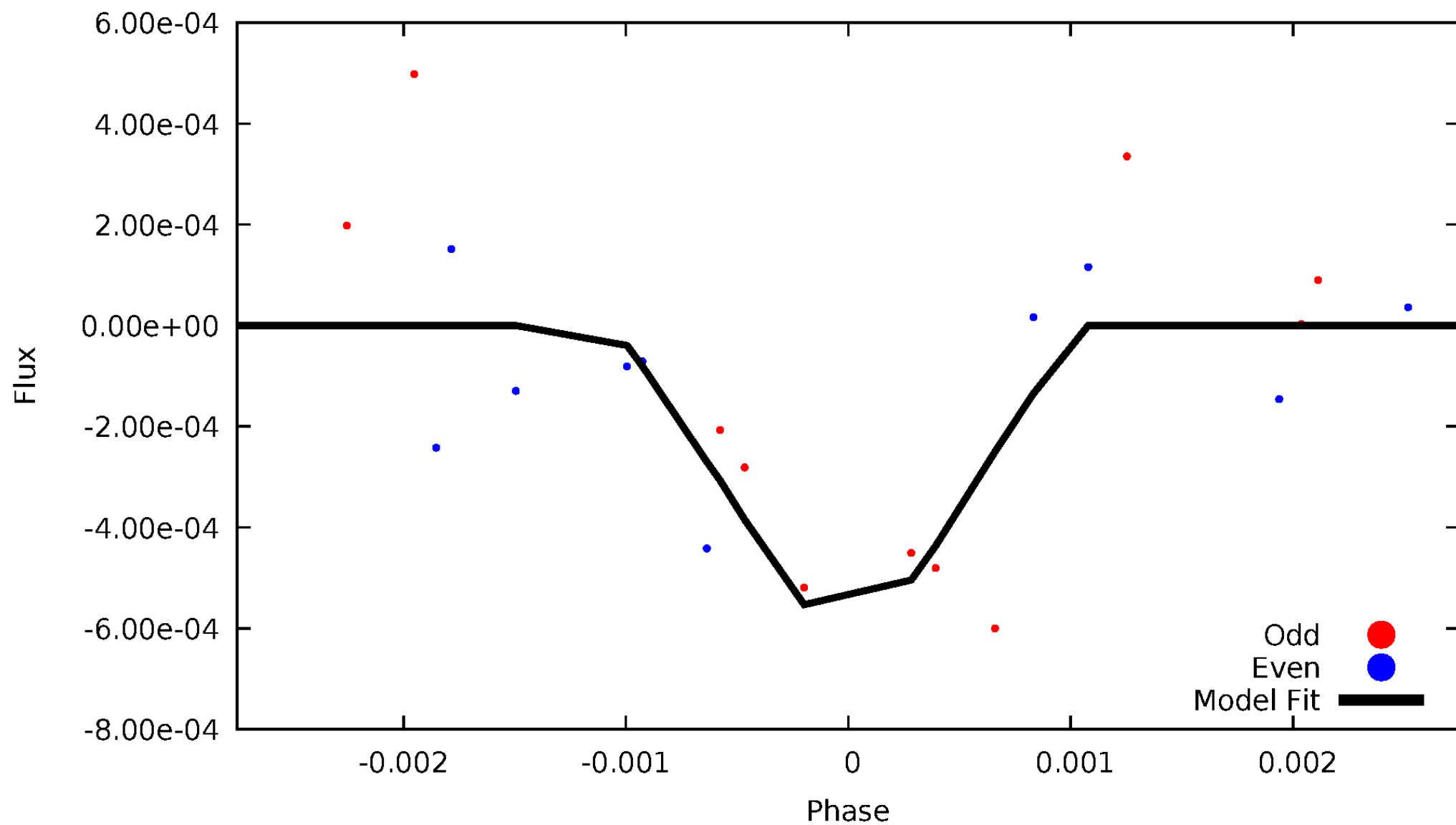


TCE 005822171-03



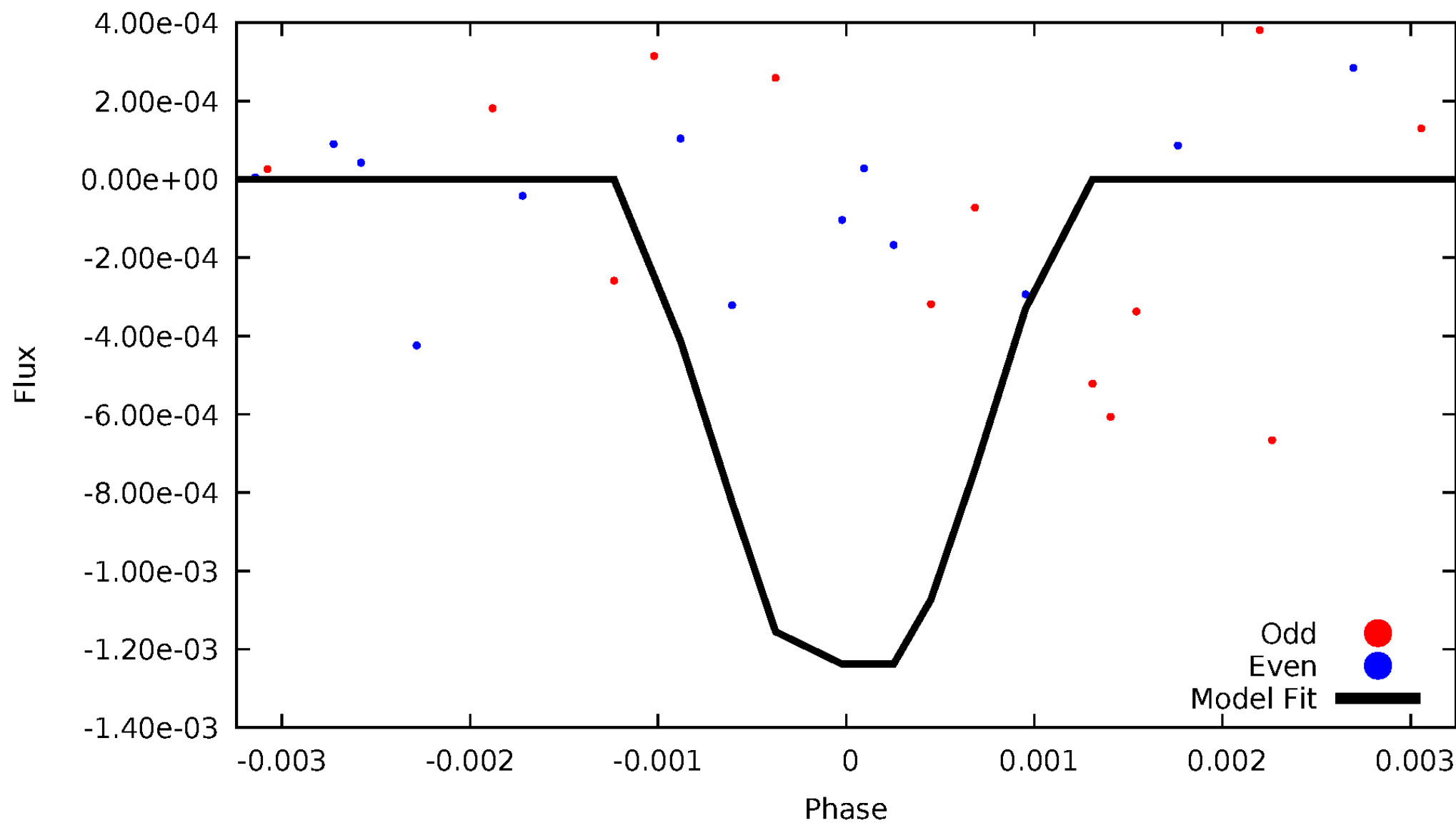
DV Odd/Even

TCE 005822171-03



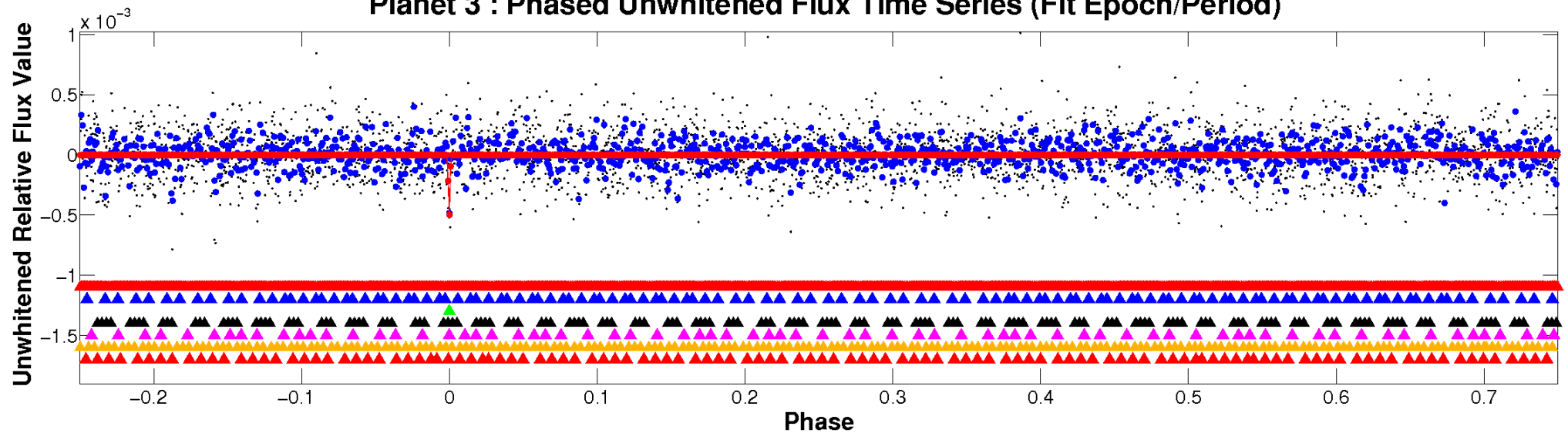
ALT Odd/Even

TCE 005822171-03

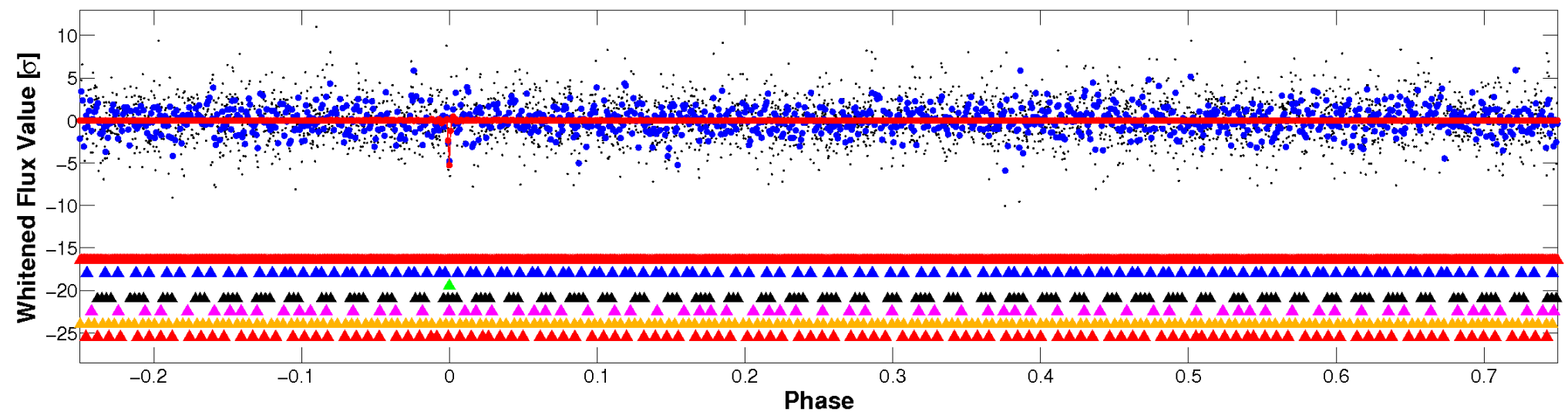


Non-Whitened Vs. Whitened Light Curve

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

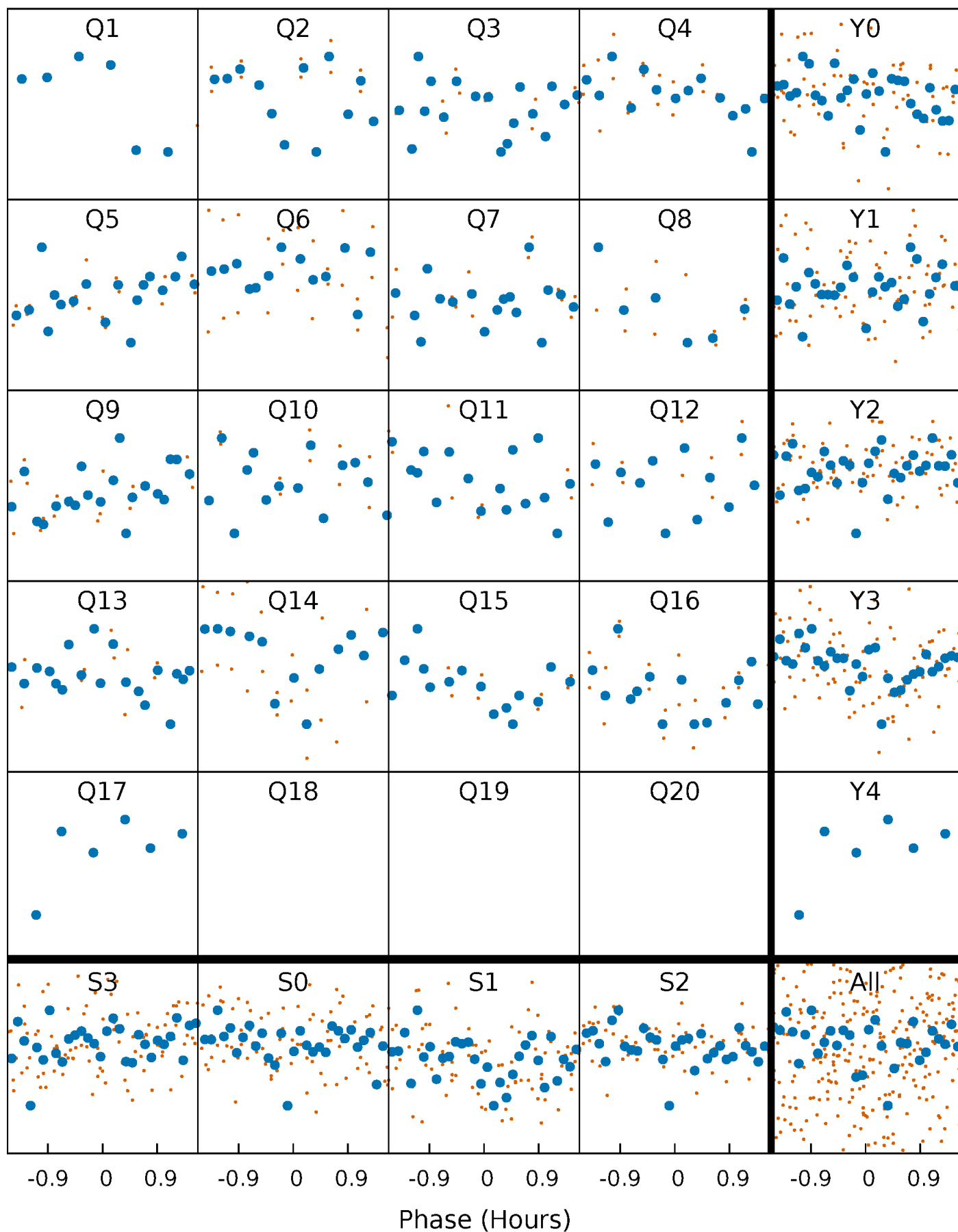


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



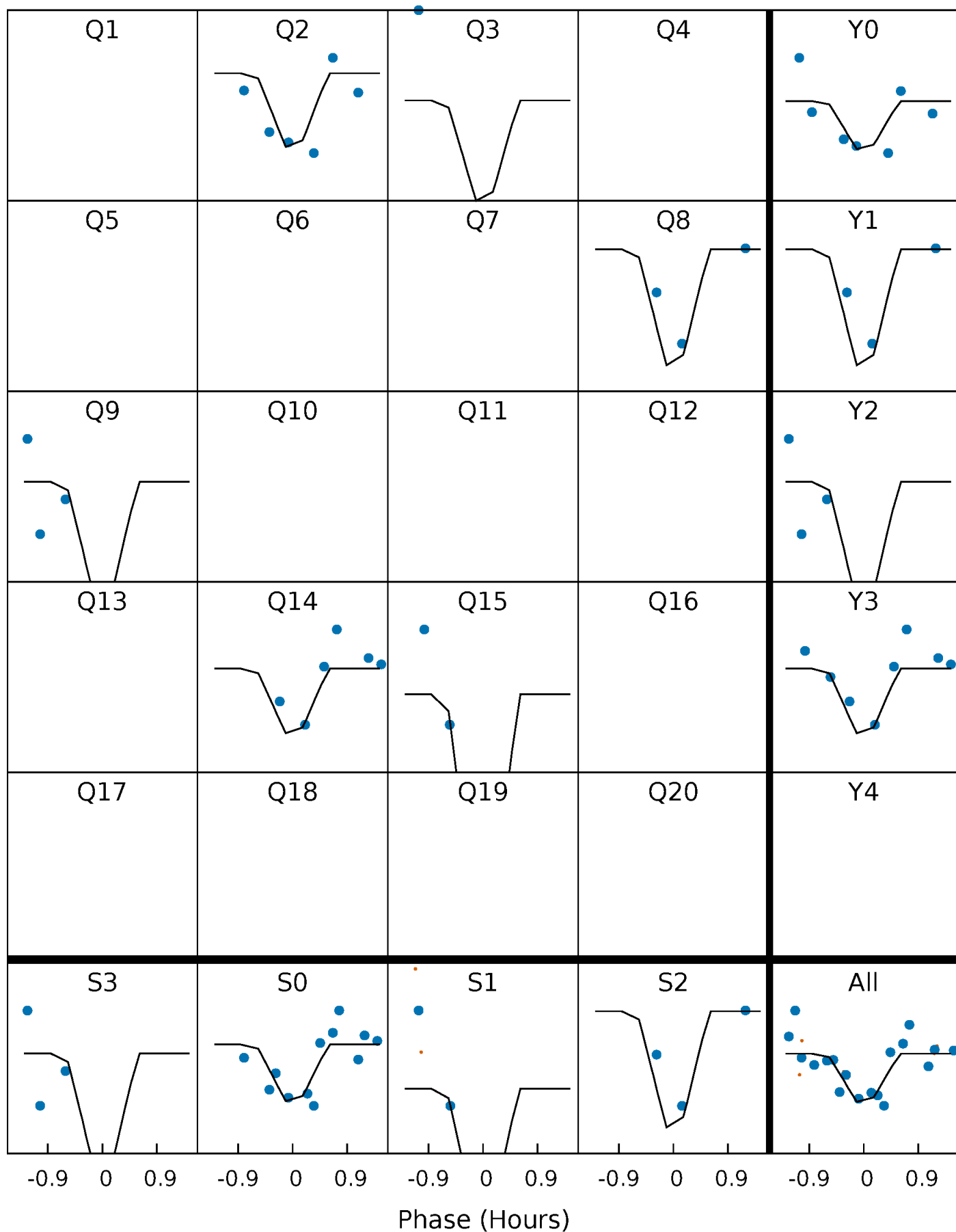
PDC Quarter-Phased Transit Curves

TCE 005822171-03 P= 23.795057 Days $T_0=143.871143$ (BKJD)



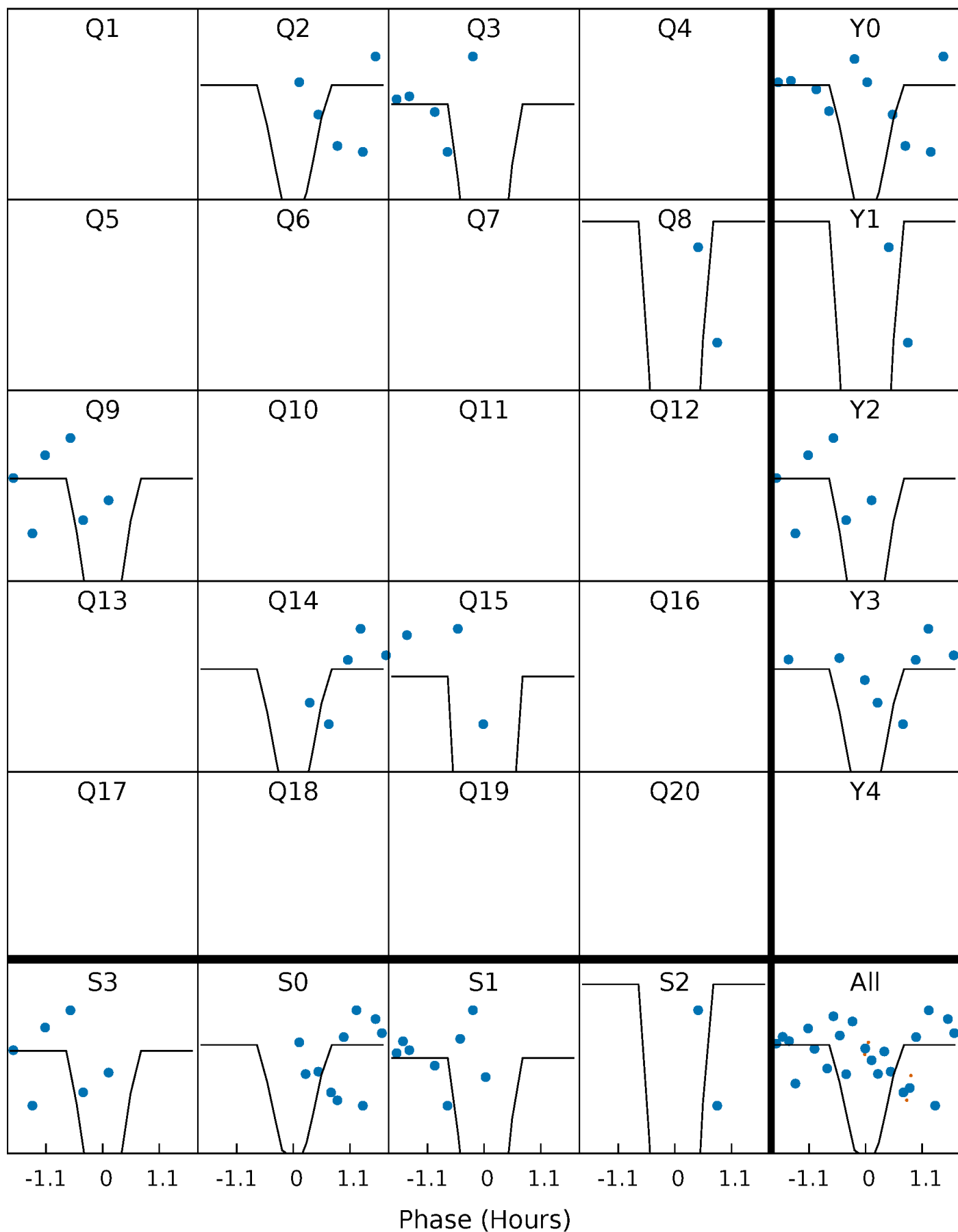
DV Quarter-Phased Transit Curves

TCE 005822171-03 P= 23.795057 Days $T_0=143.871143$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

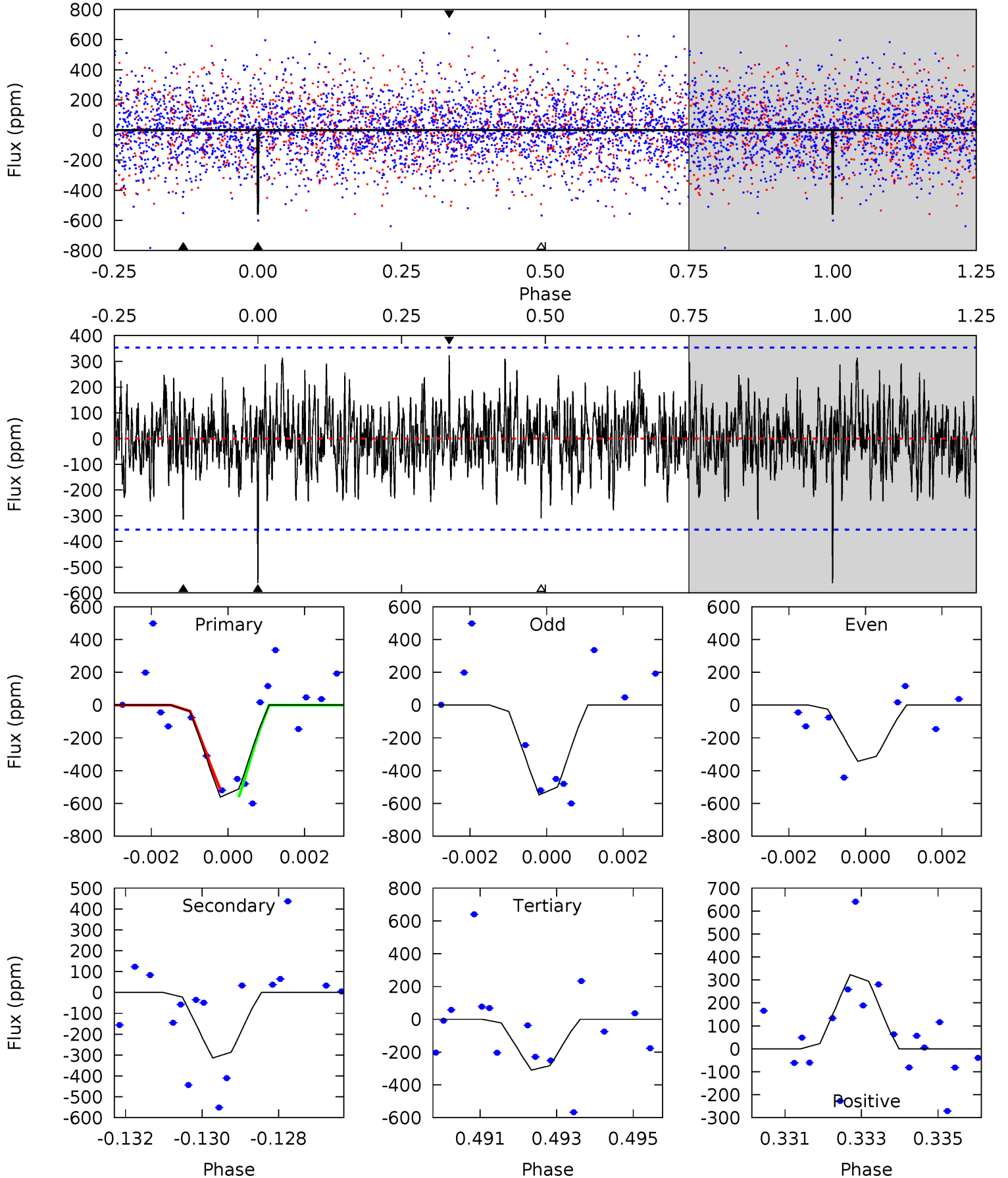
TCE 005822171-03 P= 23.795397 Days $T_0=143.831956$ (BKJD)



DV Model-Shift Uniqueness Test

005822171-03, $P = 23.795057$ Days, $E = 120.076086$ Days

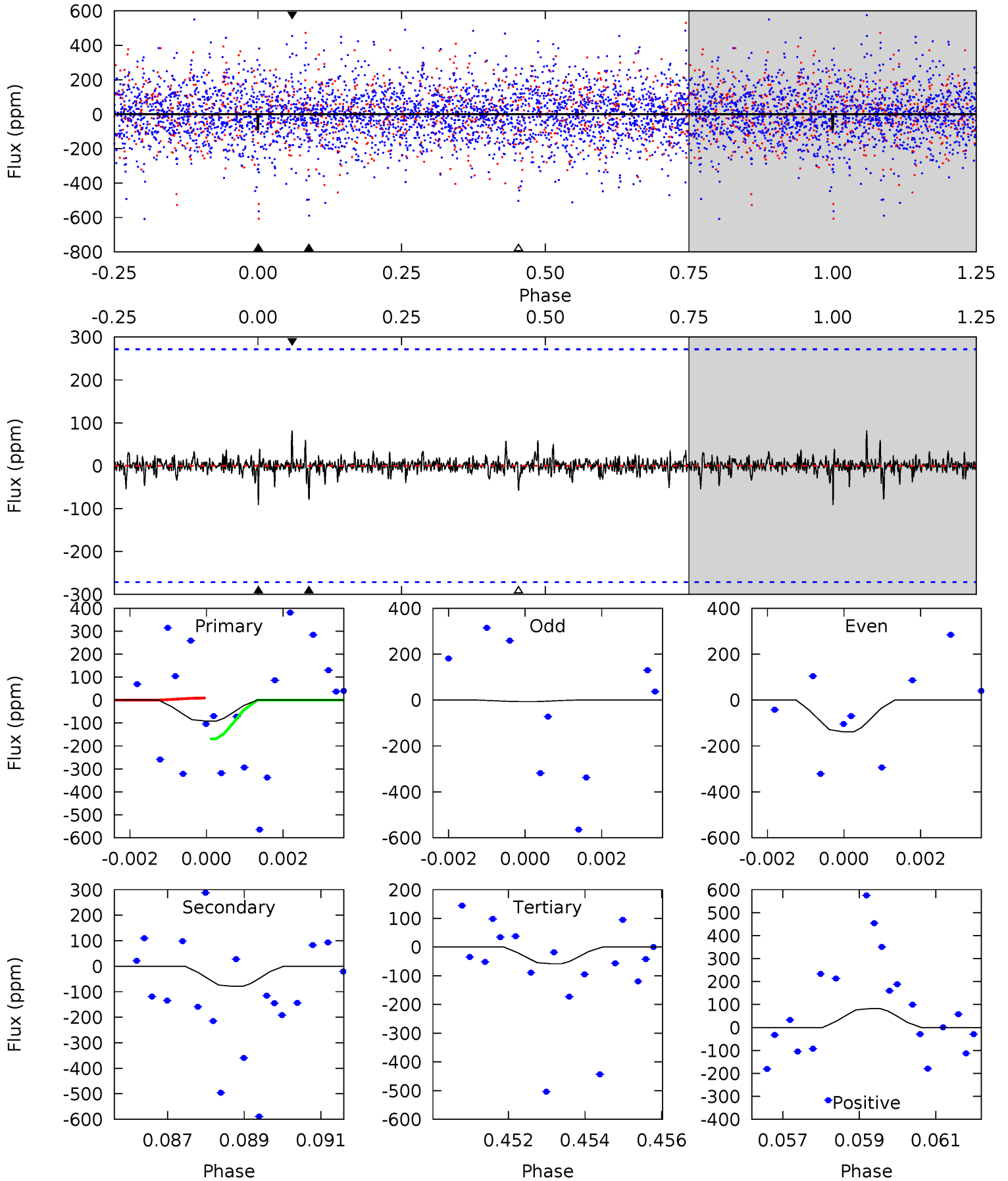
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.45	4.73	4.68	4.86	5.33	3.09	1.48	3.78	3.59	0.06	-0.13	1.32	1.05	0.37	0.34



Alt Model-Shift Uniqueness Test

005822171-03, P = 23.795397 Days, E = 120.036559 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.80	1.55	1.14	1.61	5.33	3.09	0.26	0.66	0.18	0.41	-0.07	1.27	2.00	0.47	1.60



Stellar Parameters For KIC 005822171

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6395^{+175}_{-214}	$4.019^{+0.329}_{-0.165}$	$-0.200^{+0.250}_{-0.300}$	$1.765^{+0.494}_{-0.603}$	$1.187^{+0.188}_{-0.188}$	$0.304^{+0.653}_{-0.139}$
	+3%/-3%	+8%/-4%	+125%/-150%	+28%/-34%	+16%/-16%	+215%/-46%
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 005822171-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-314 ± 66	$4.90^{+4.07}_{-2.99}$	1253^{+92}_{-126}	5217^{+3067}_{-1011}	208^{+1116}_{-144}
Alt.	-79 ± 51	$6.66^{+3.97}_{-3.47}$	1247^{+104}_{-116}	3587^{+1136}_{-655}	28^{+96}_{-21}

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

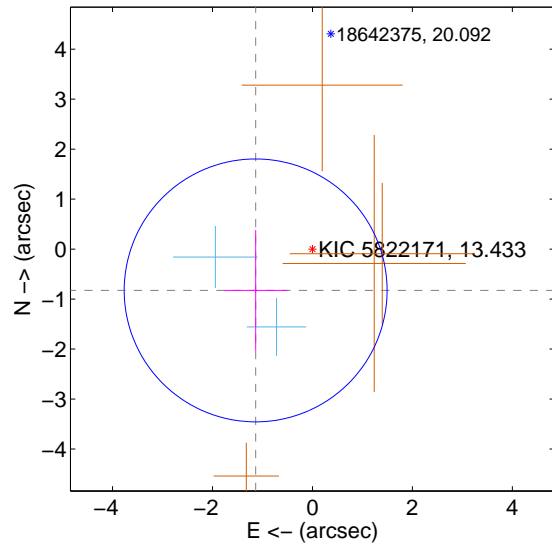
Supplemental centroid analysis for 005822171-03. Kepler magnitude: 13.43. Transit SNR 11.33

There are 2 quarters with good PRF difference image offsets

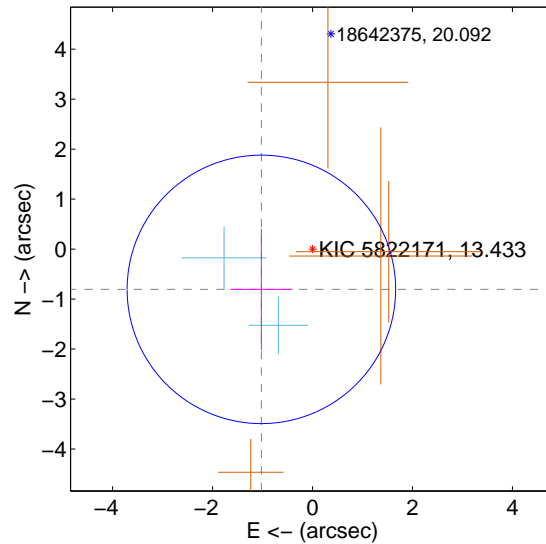
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.405 ± 0.877	1.60	1.136 ± 0.635	-0.826 ± 1.208
PRF-fit source offset from KIC position	1.302 ± 0.895	1.45	1.023 ± 0.620	-0.806 ± 1.214
photometric centroid source offset	1.00 ± 0.46	2.16	0.49 ± 0.52	-0.87 ± 0.44

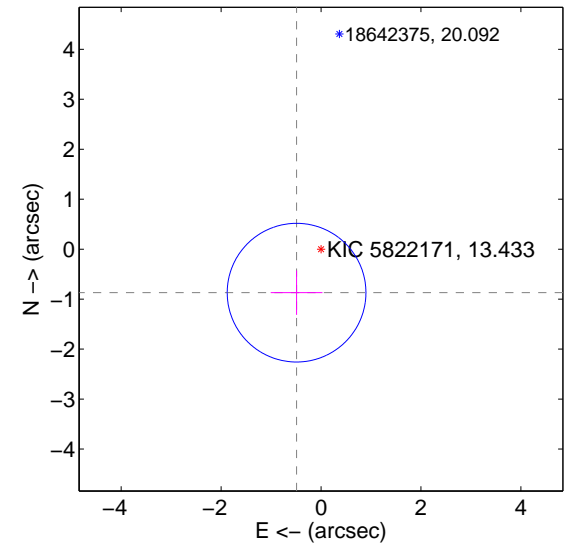
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

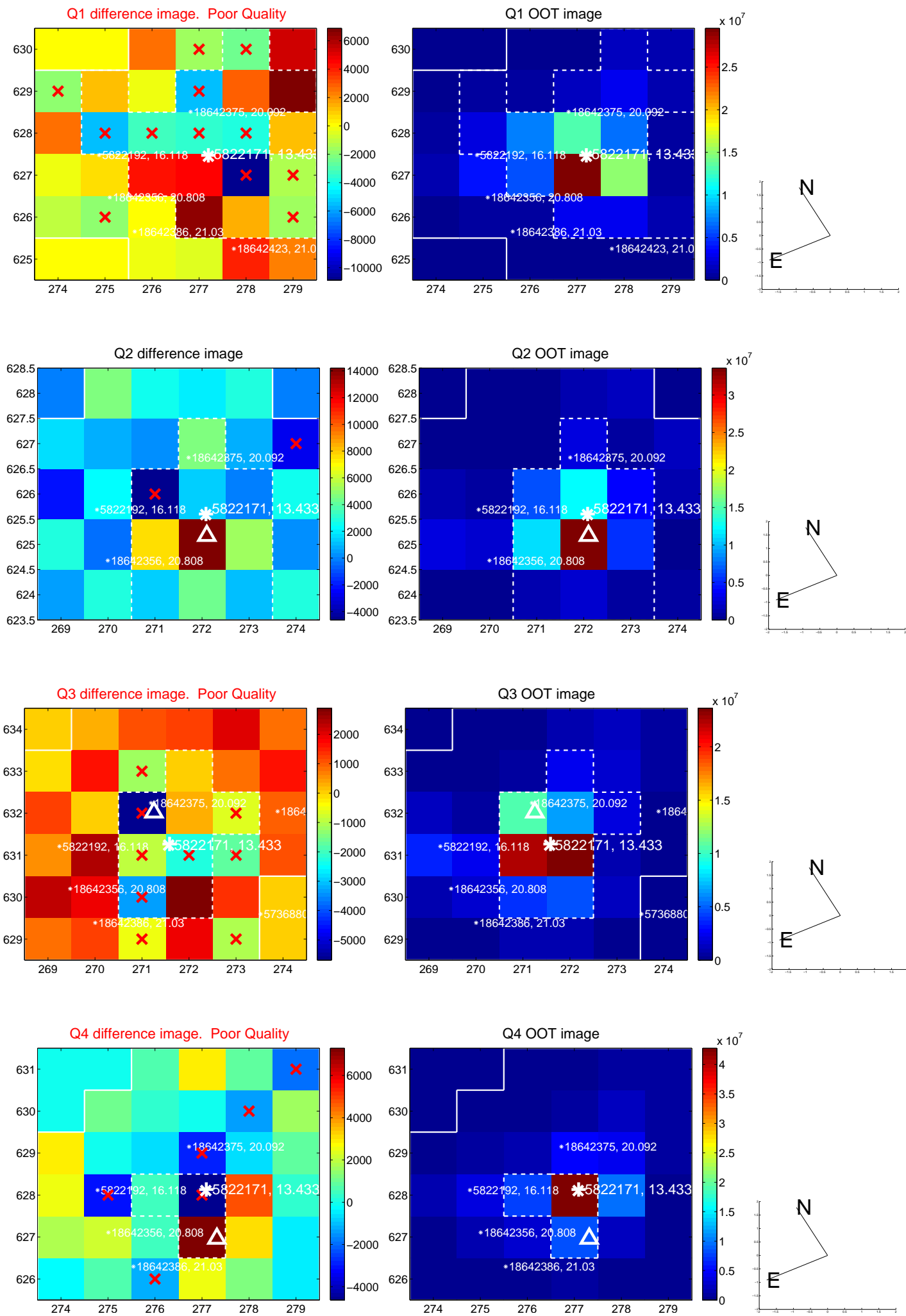


offset from photometric centroids

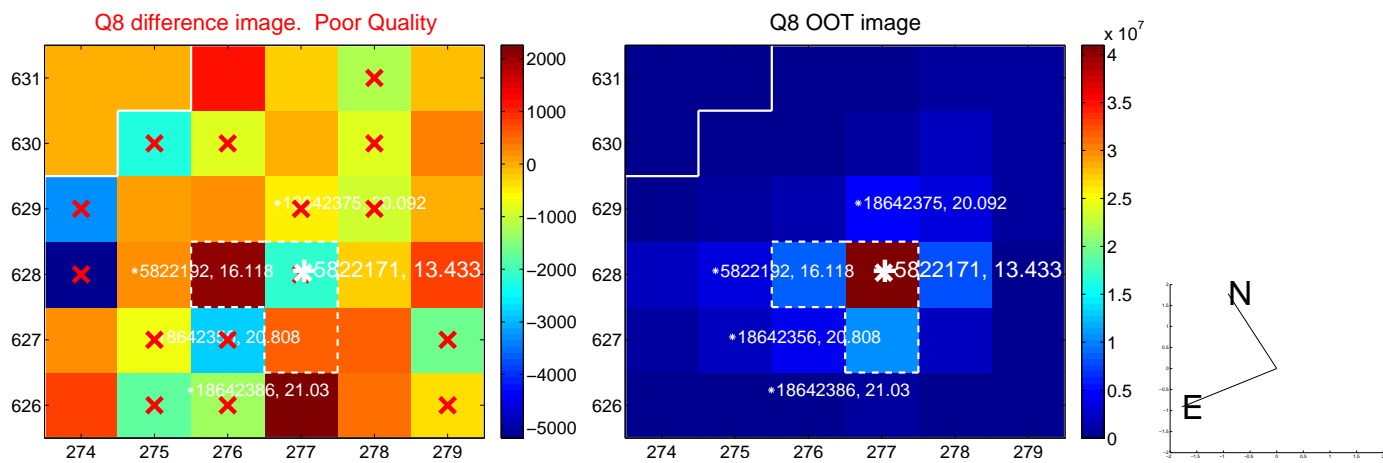
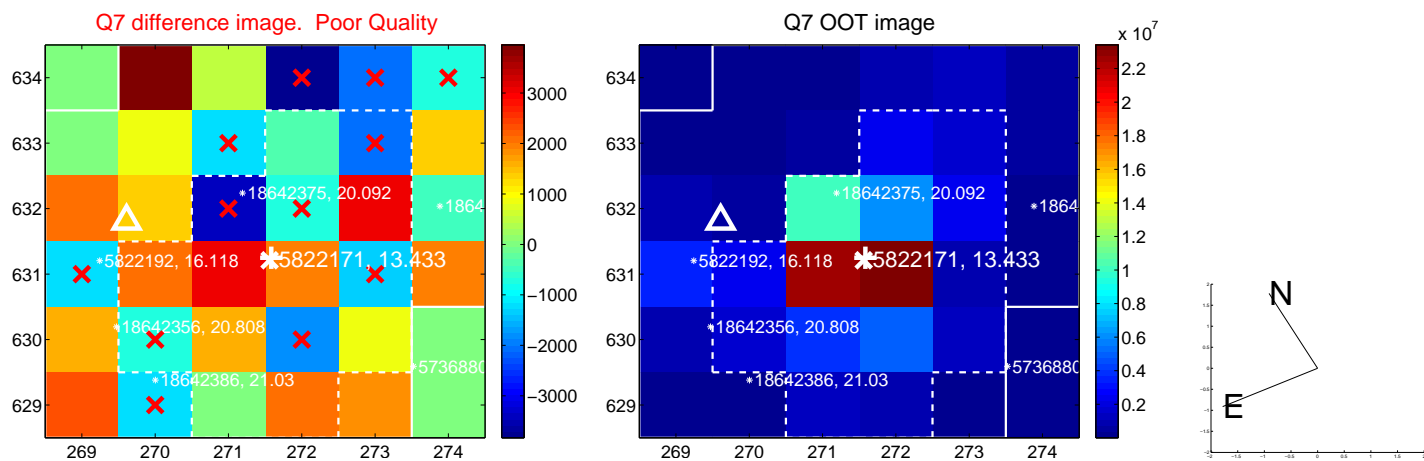
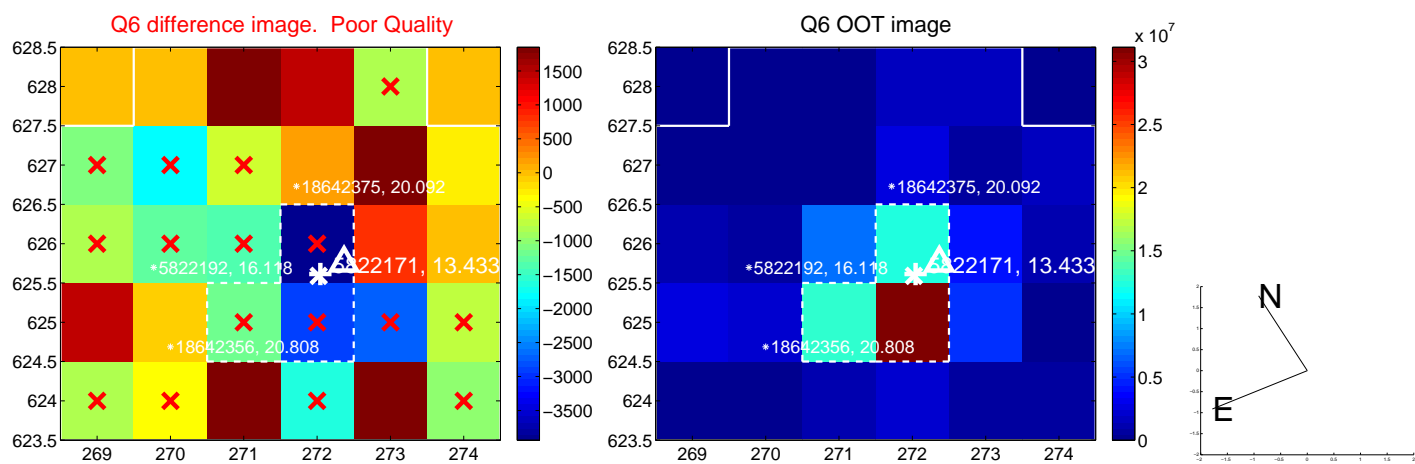
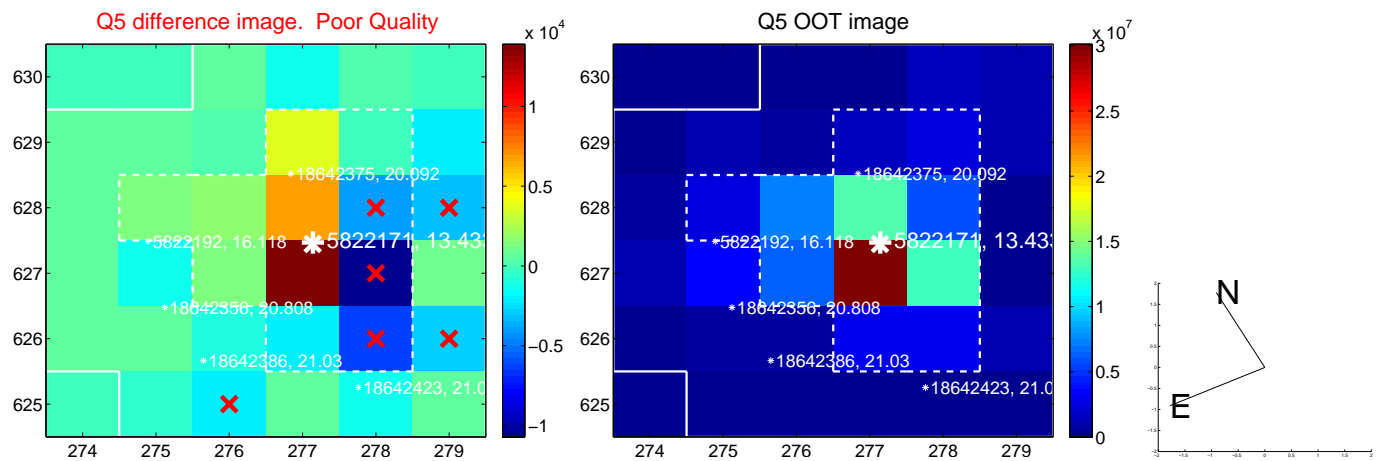


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

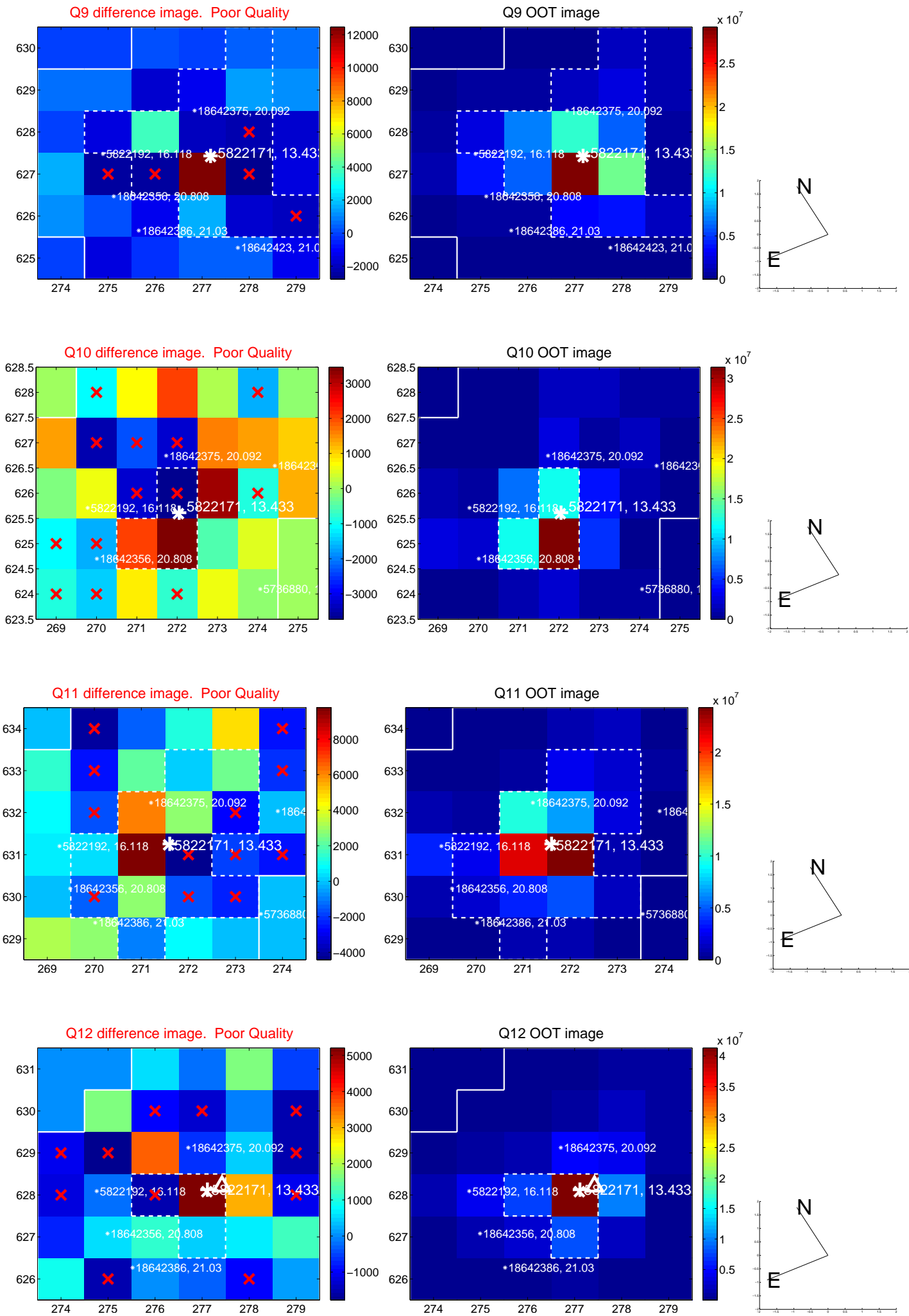
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



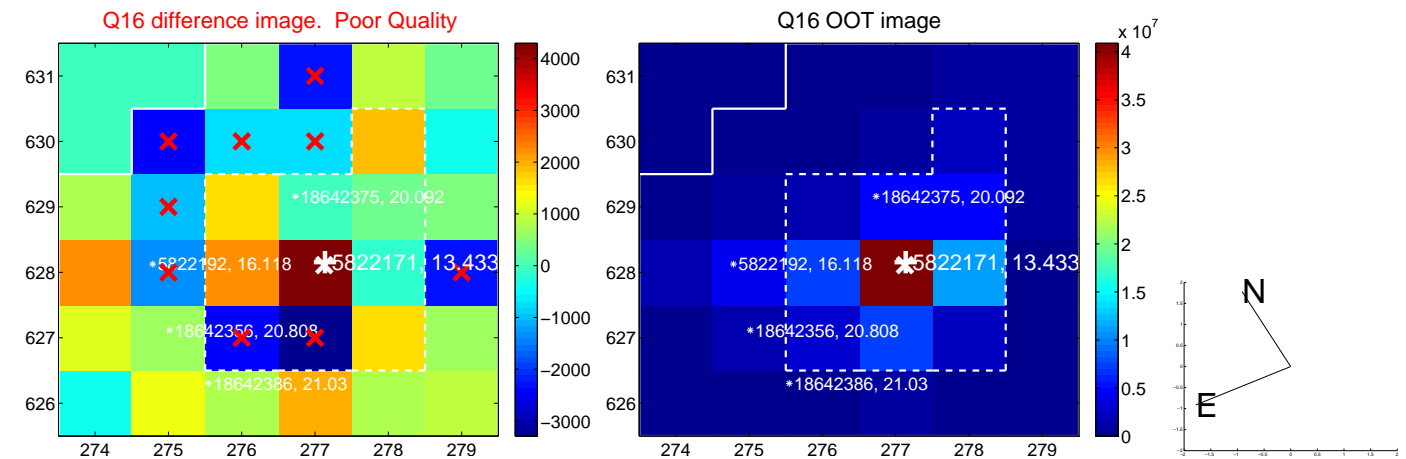
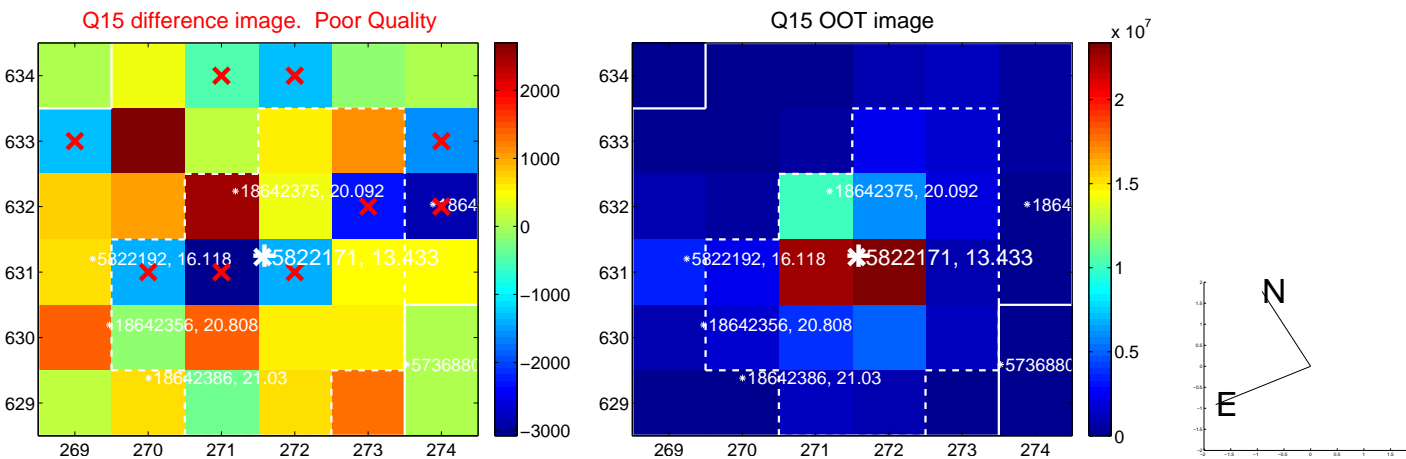
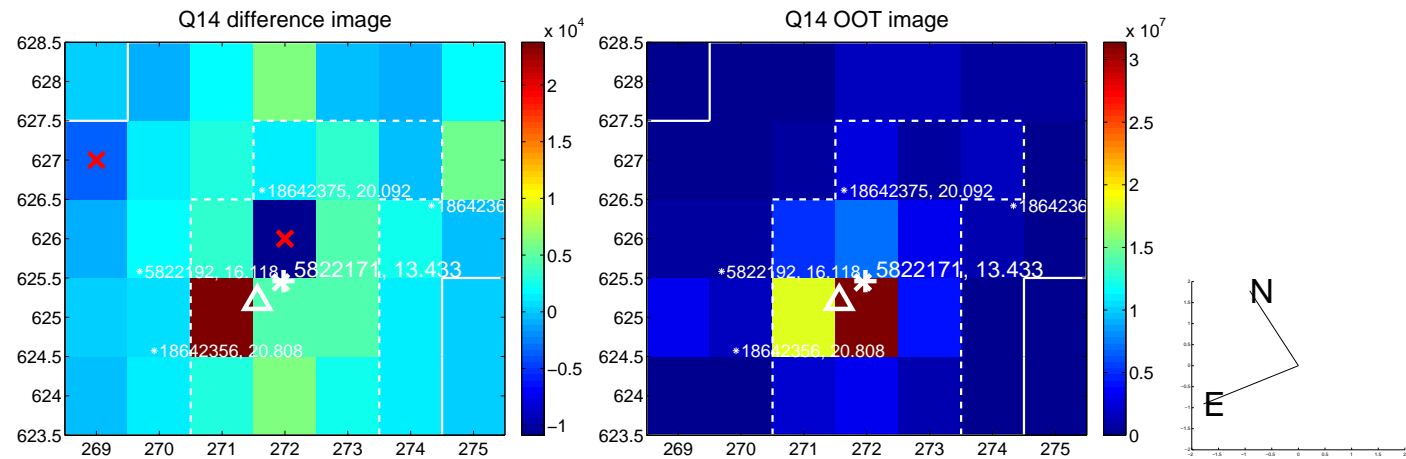
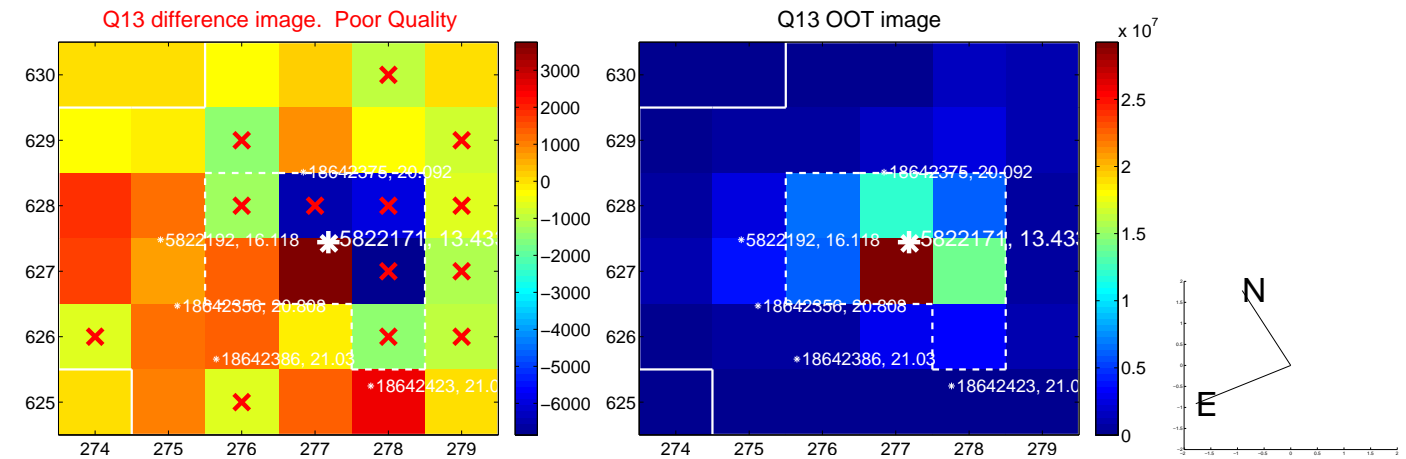
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



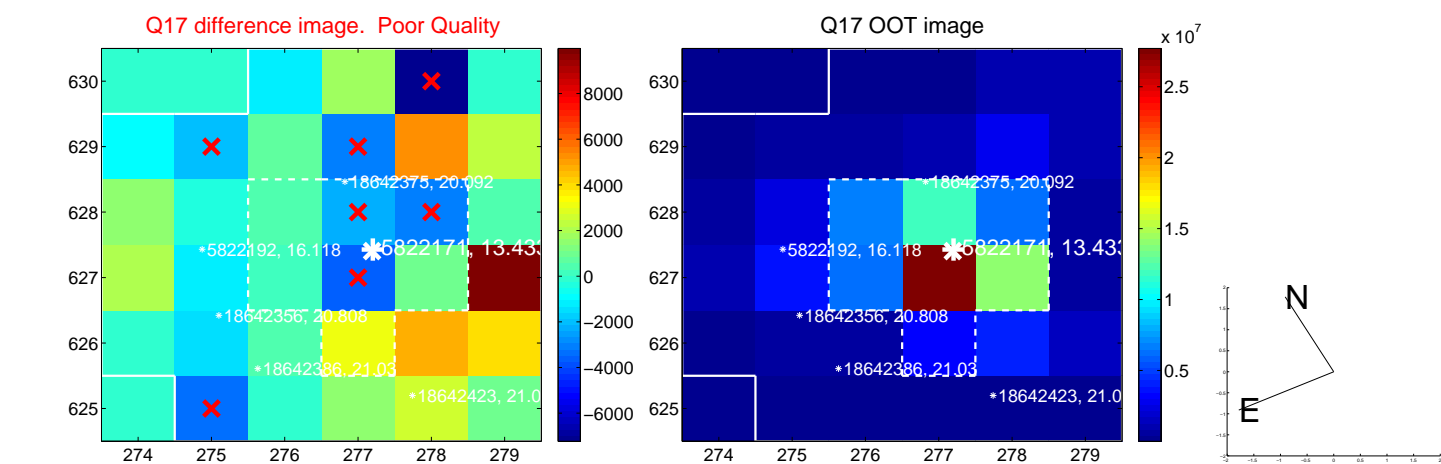
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



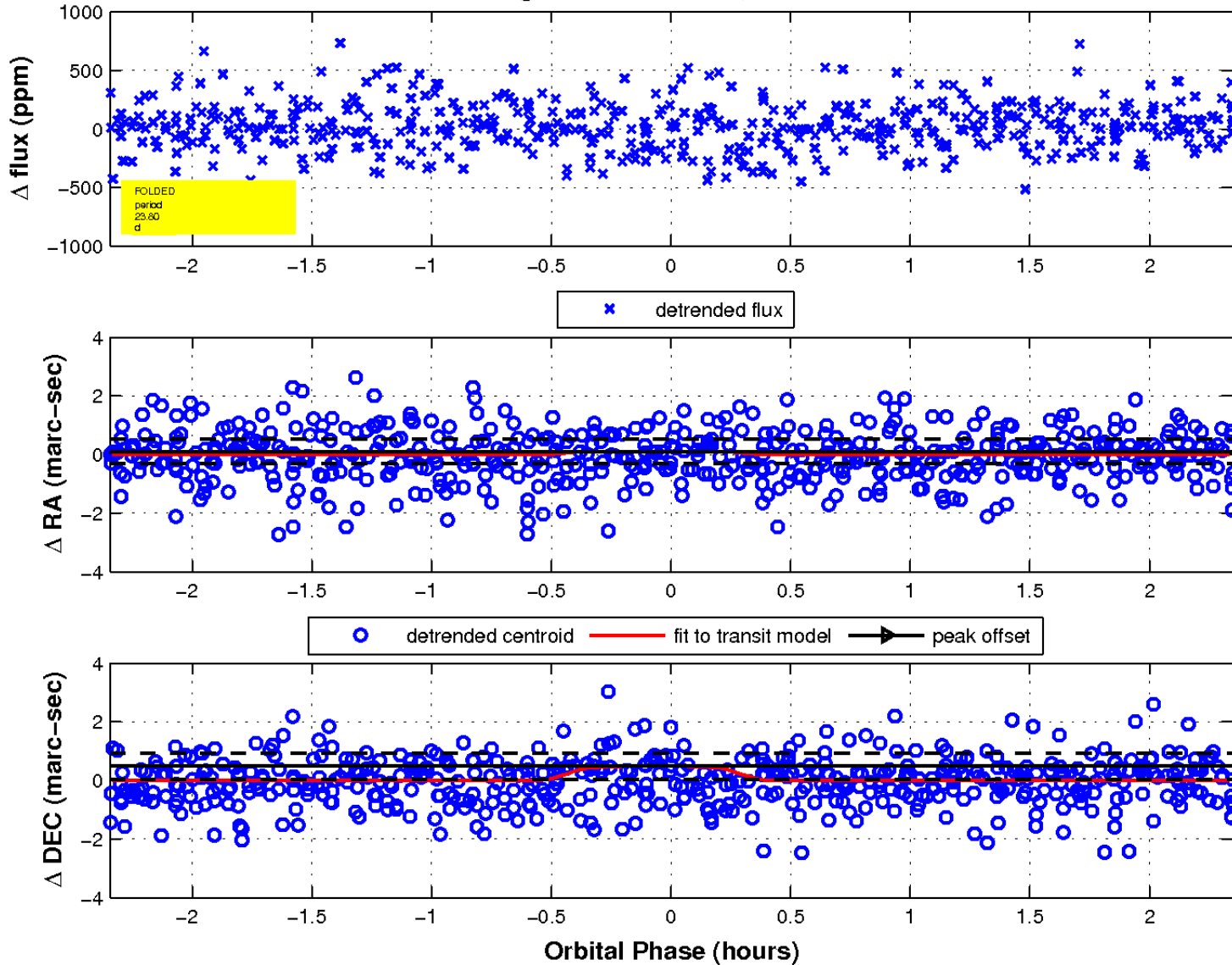
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

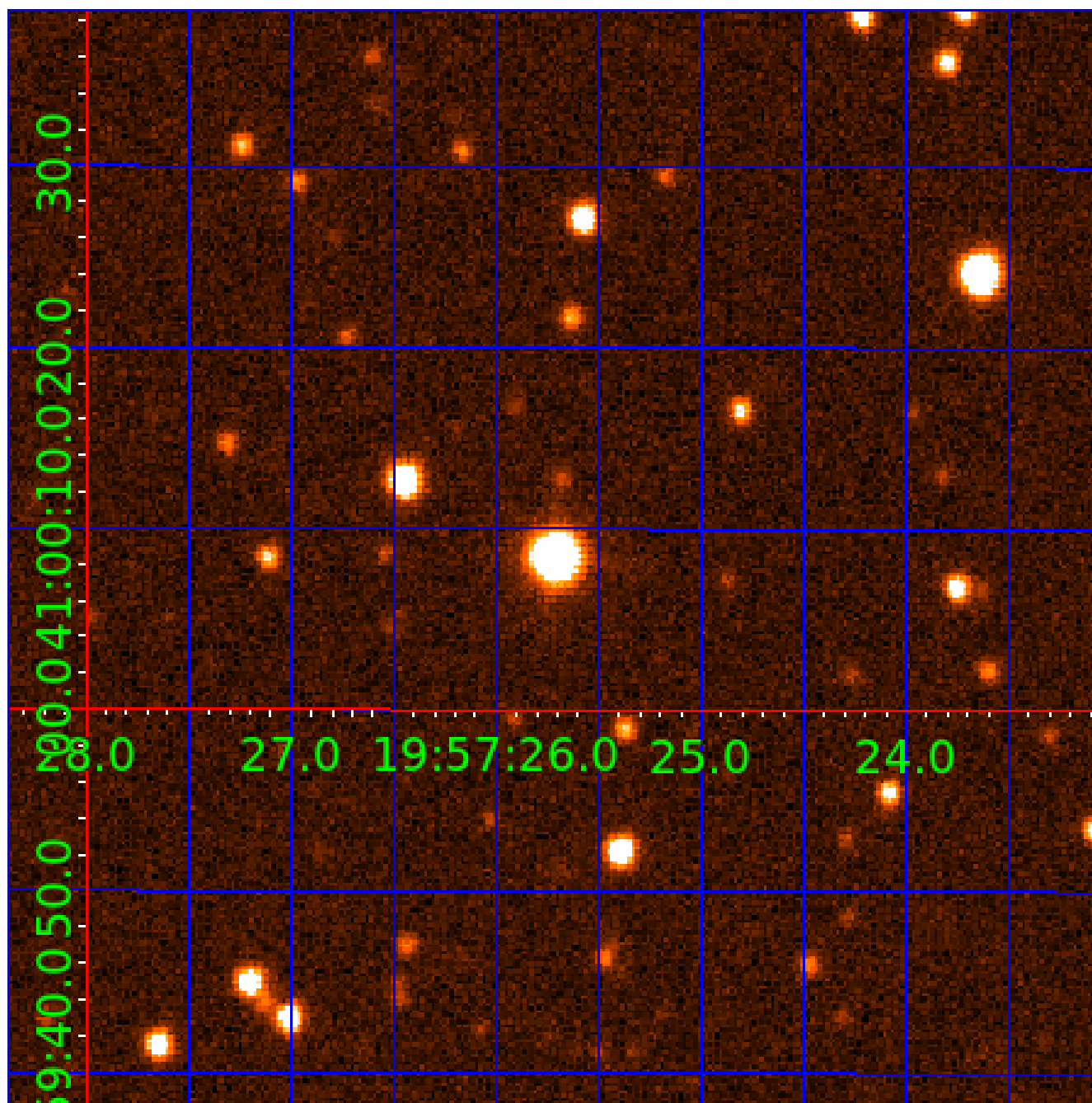


fluxWeightedCentroids, Planet 3 of 7



UKIRT Image

Declination



KIC 005822171

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})
005822171-01	OBS	No	0.679046	132.072407	10.3	4.956	10.4	5.1	1.76	6395	0.57	18206.26
005822171-02	OBS	No	11.648739	136.135338	276.4	1.002	13.4	12.0	1.76	6395	3.10	411.51
005822171-03	OBS	No	23.795057	143.871143	570.8	0.784	11.7	11.3	1.76	6395	4.58	158.77
005822171-04	OBS	No	9.111463	131.870581	46.4	10.824	10.4	5.6	1.76	6395	1.27	571.00
005822171-05	OBS	No	20.015237	148.079857	109.8	4.248	11.6	7.0	1.76	6395	2.16	199.96
005822171-06	OBS	No	6.627670	136.770988	220.2	1.310	14.1	12.0	1.76	6395	2.64	872.85
005822171-07	OBS	No	12.314166	143.669208	338.3	0.835	12.9	13.0	1.76	6395	3.33	382.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005822171-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005822171-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
005822171-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005822171-04	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_MEAS
005822171-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
005822171-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005822171-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—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.

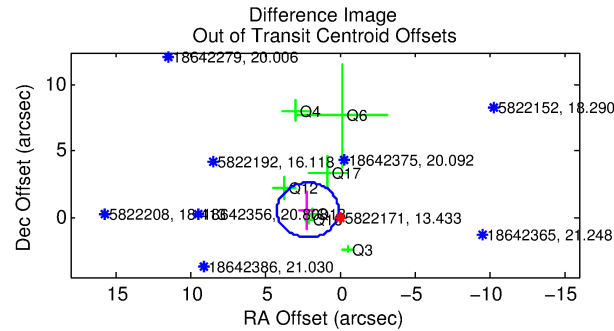
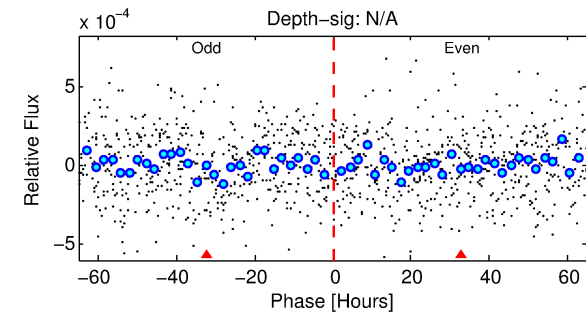
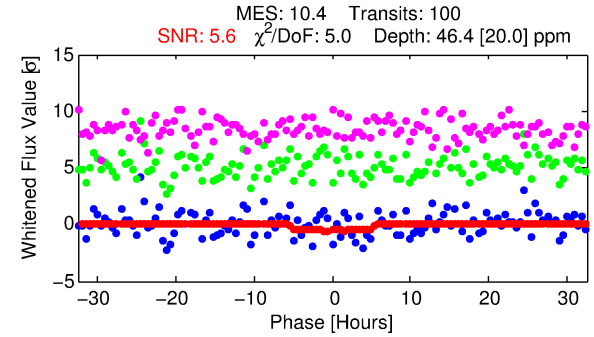
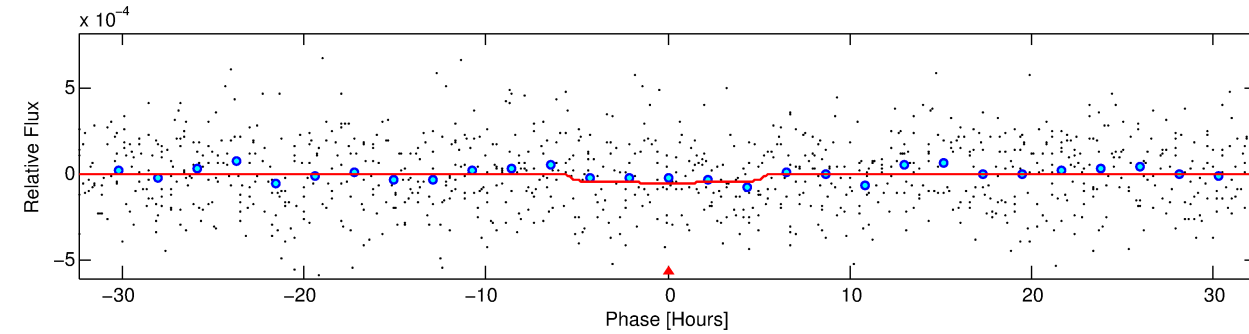
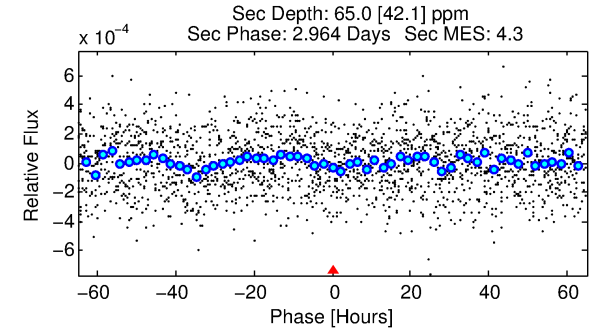
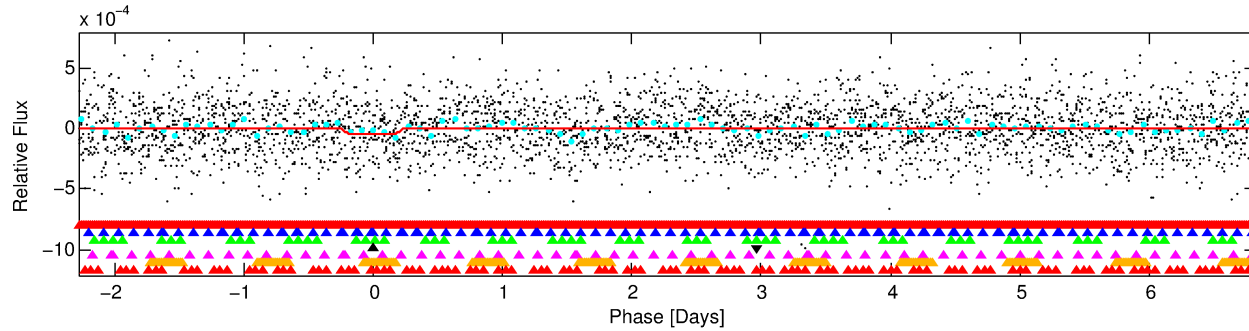
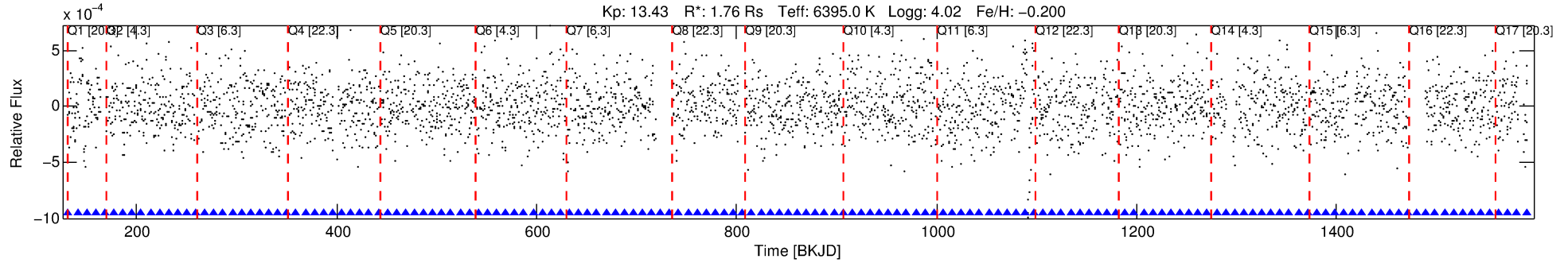
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005822171-04

No Significant Match Found

DV One-Page Summary

KIC: 5822171 Candidate: 4 of 7 Period: 9.111 d



DV Fit Results:

Period = 9.11146 [0.00099] d
Epoch = 131.8706 [0.0945] BKJD
Rp/R* = 0.0066 [0.0111]
a/R* = 4.97 [42.62]
b = 0.66 [7.79]
Seff = 571.00 [325.45]
Teq = 1246 [178] K
Rp = 1.27 [2.17] Re
a = 0.0904 [0.0307] AU
Ag = 180.30 [622.42] [0.29σ]
Teffp = 7062 [6020] K [0.97σ]

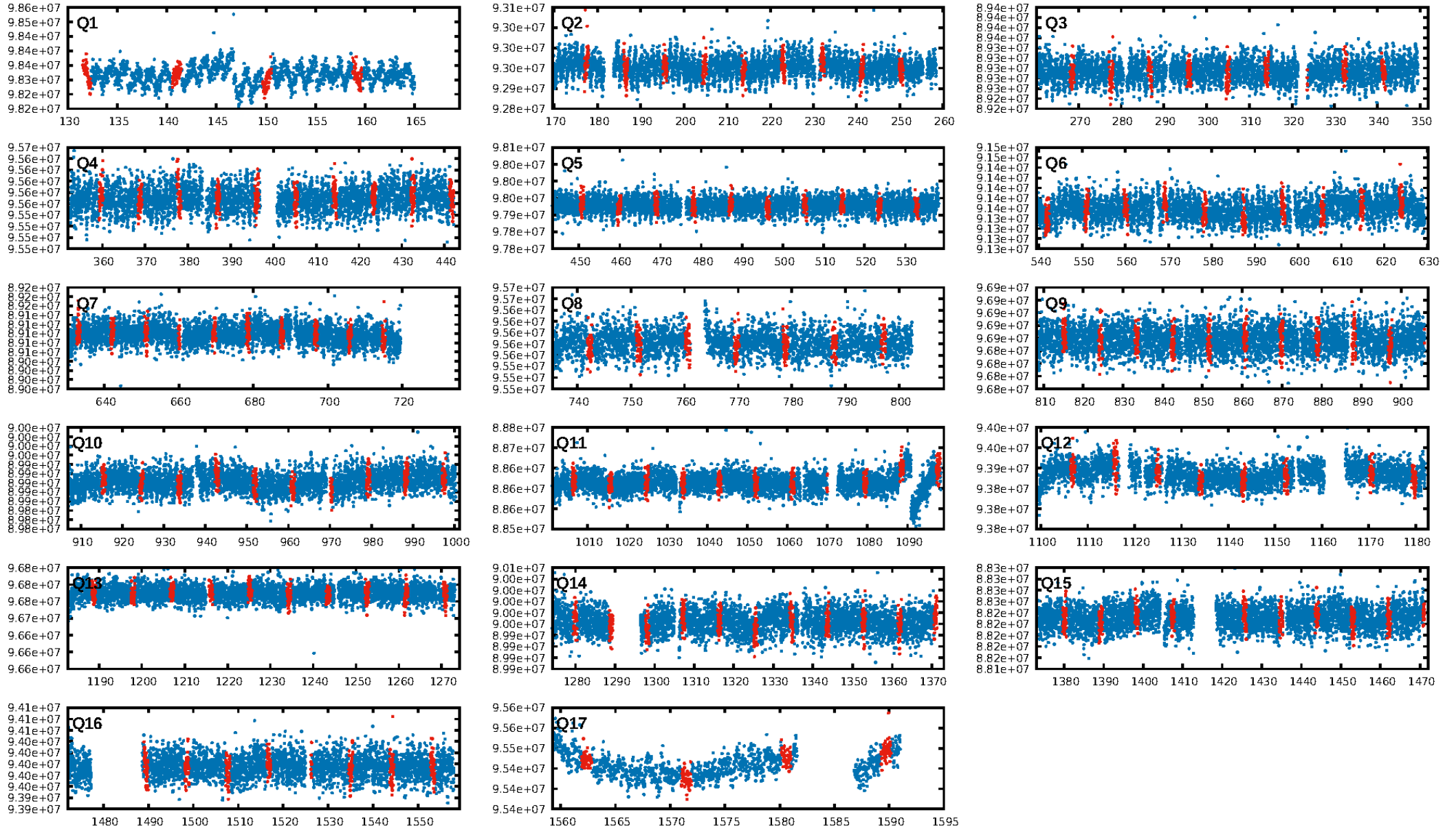
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [5.47σ]
LongPeriod-sig: 100.0% [5.60σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.94e-13
RollingBand-fgt: 1.00 [94/94]
GhostDiagnostic-chr: -3.579
Centroid-sig: 0.3%
Centroid-so: 1.905 arcsec [1.87σ]
OotOffset-rm: 2.213 arcsec [3.20σ]
KicOffset-rm: 2.152 arcsec [3.08σ]
OotOffset-st: 1/1/3/2 [7]
KicOffset-st: 1/1/3/2 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 0.00 [0/17]

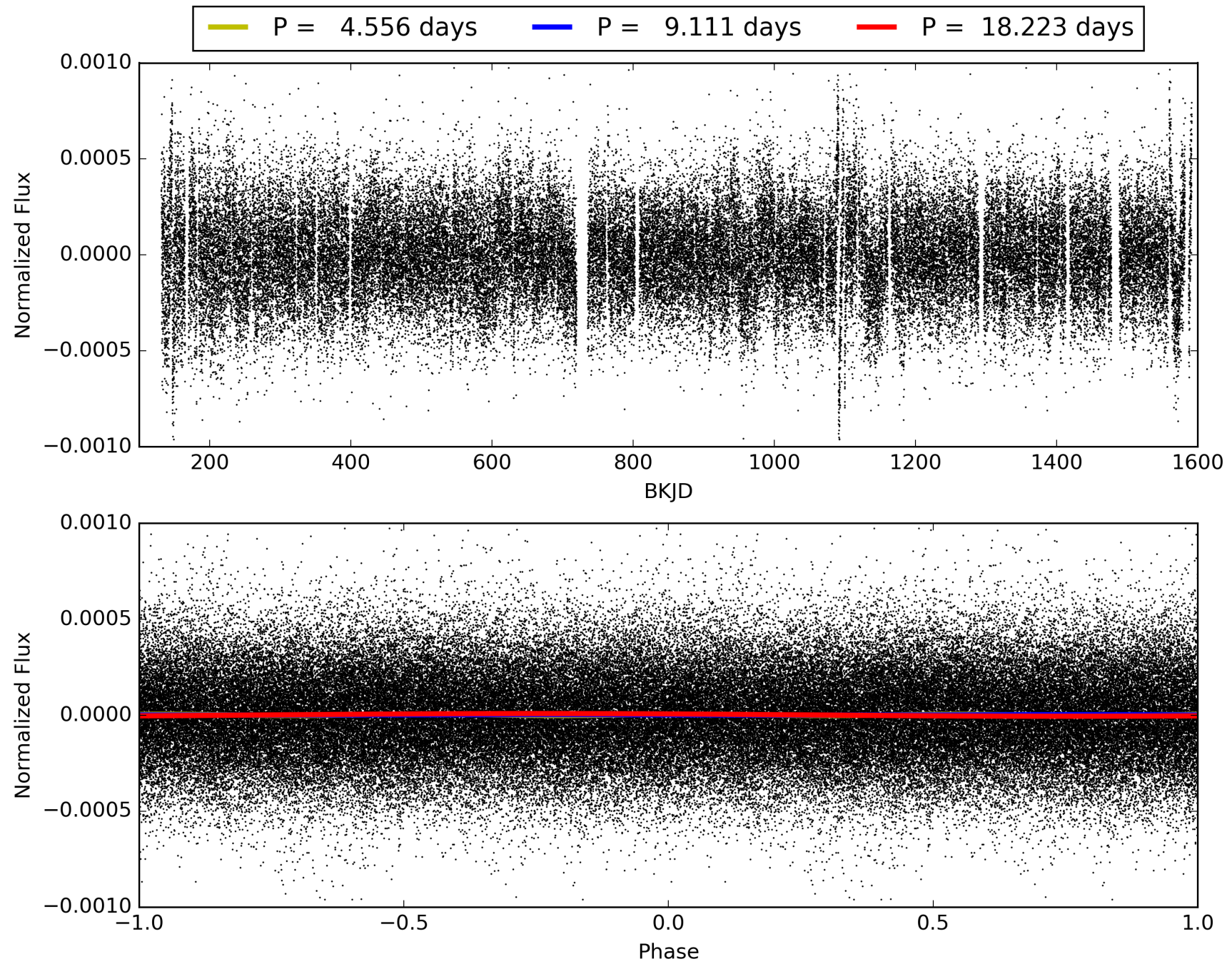
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:30:02 Z

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

TCE 005822171-04, PDC Light Curves

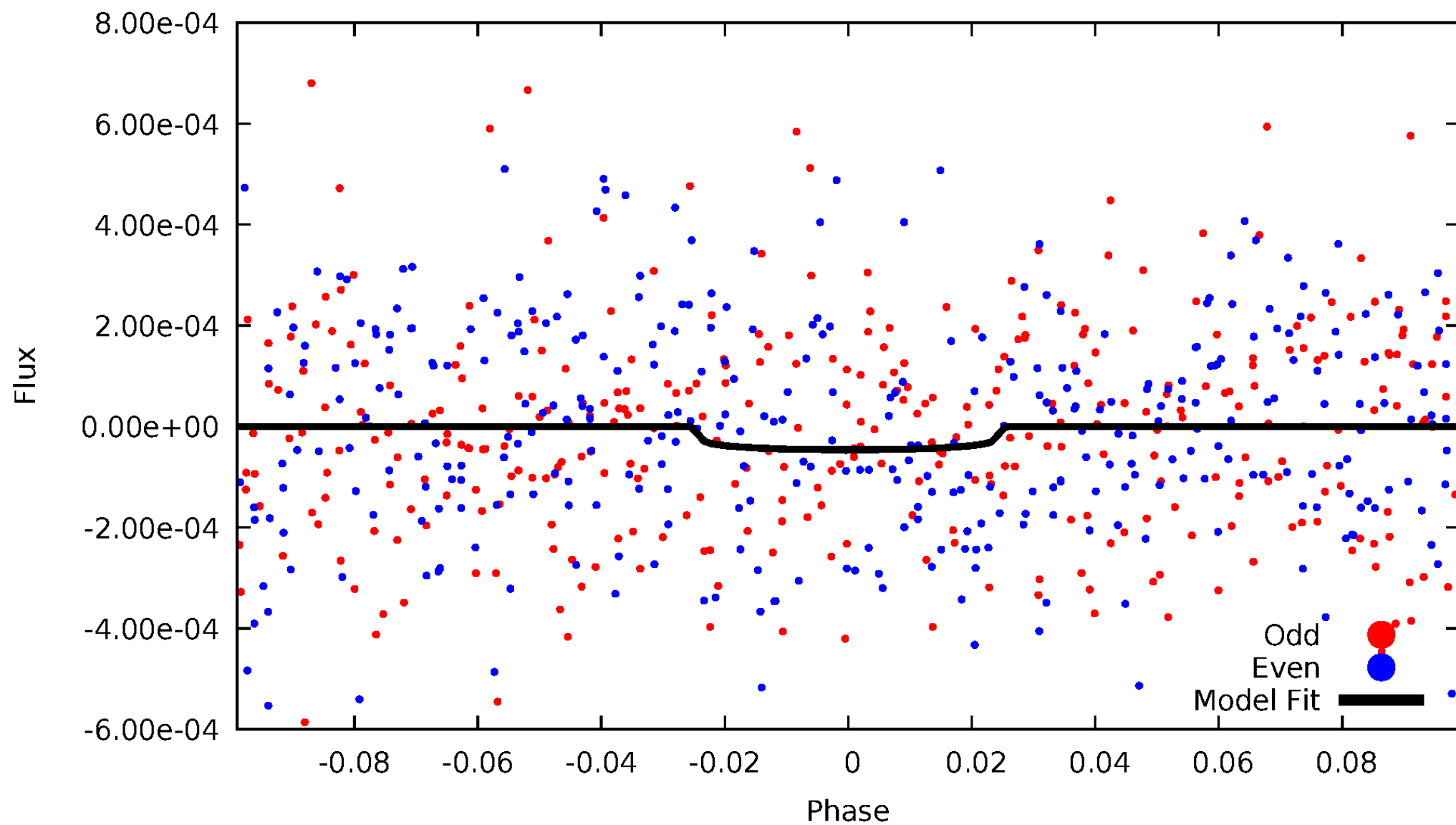


TCE 005822171-04



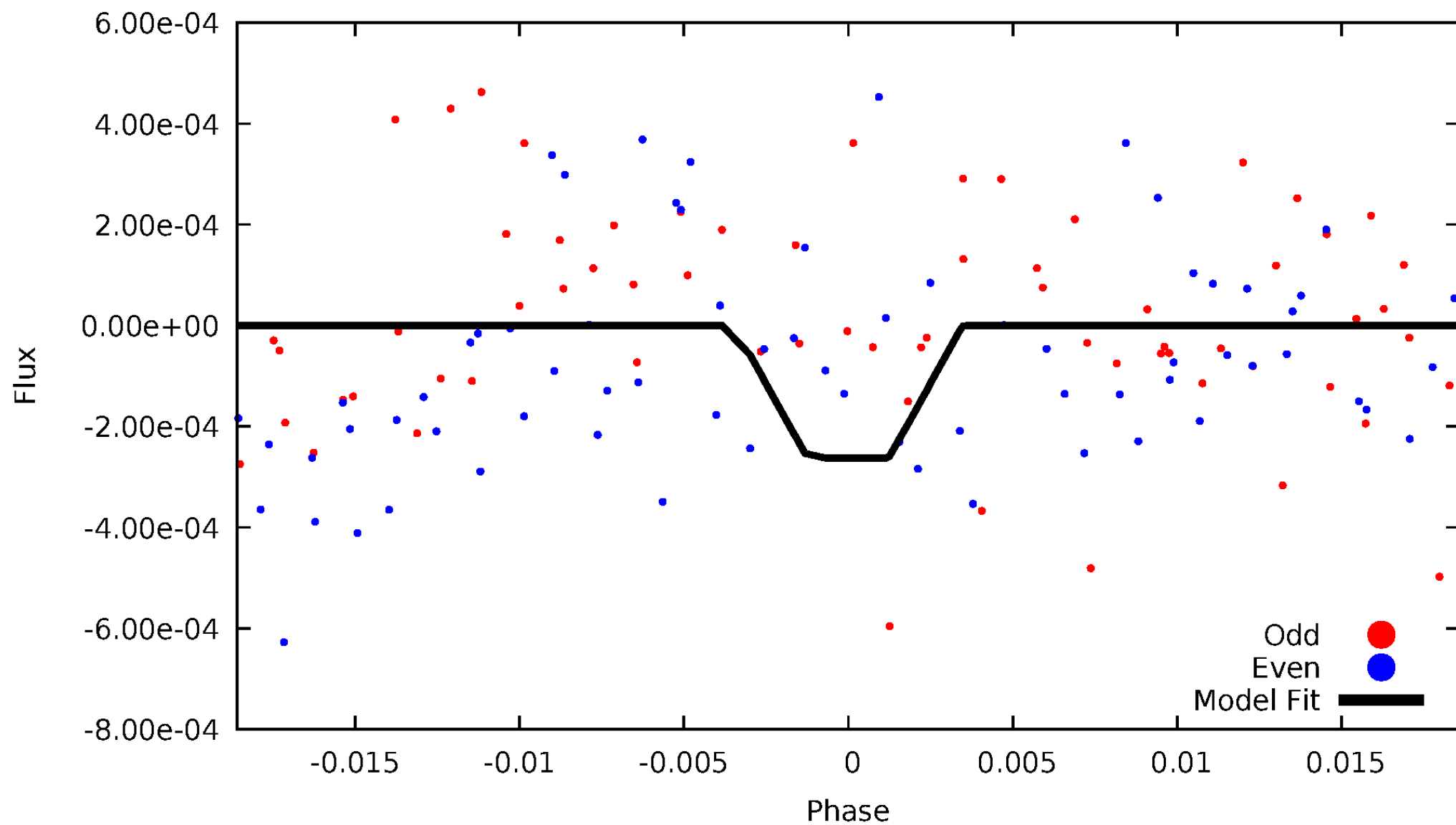
DV Odd/Even

TCE 005822171-04



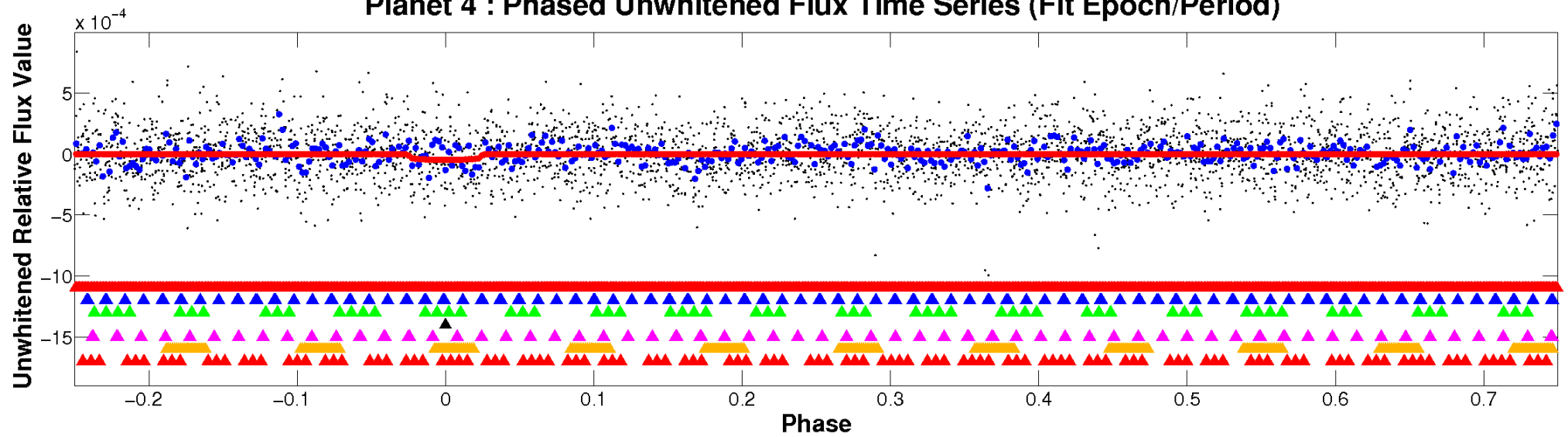
ALT Odd/Even

TCE 005822171-04

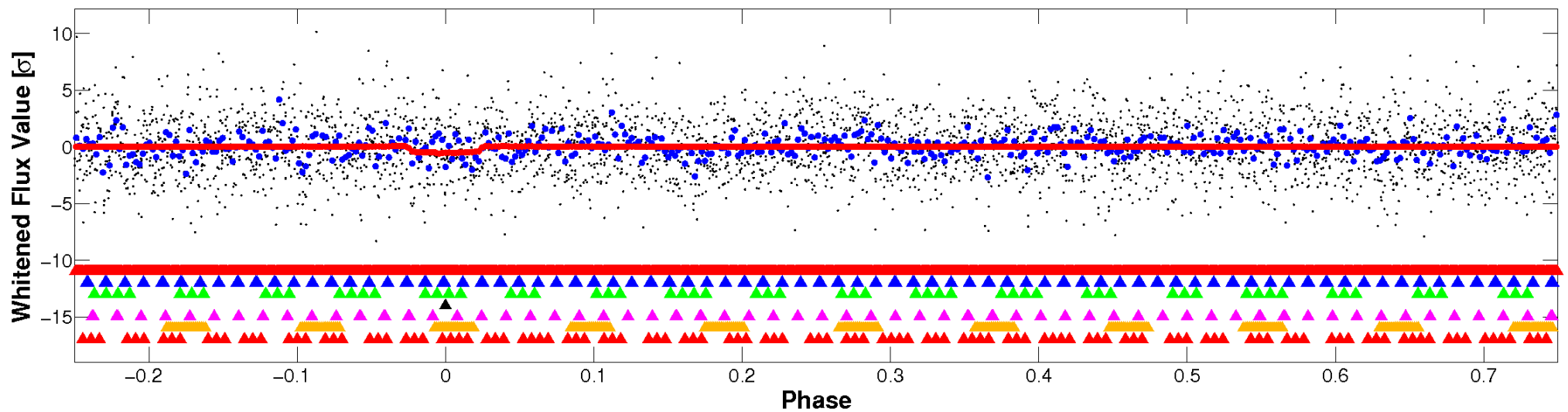


Non-Whitened Vs. Whitened Light Curve

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

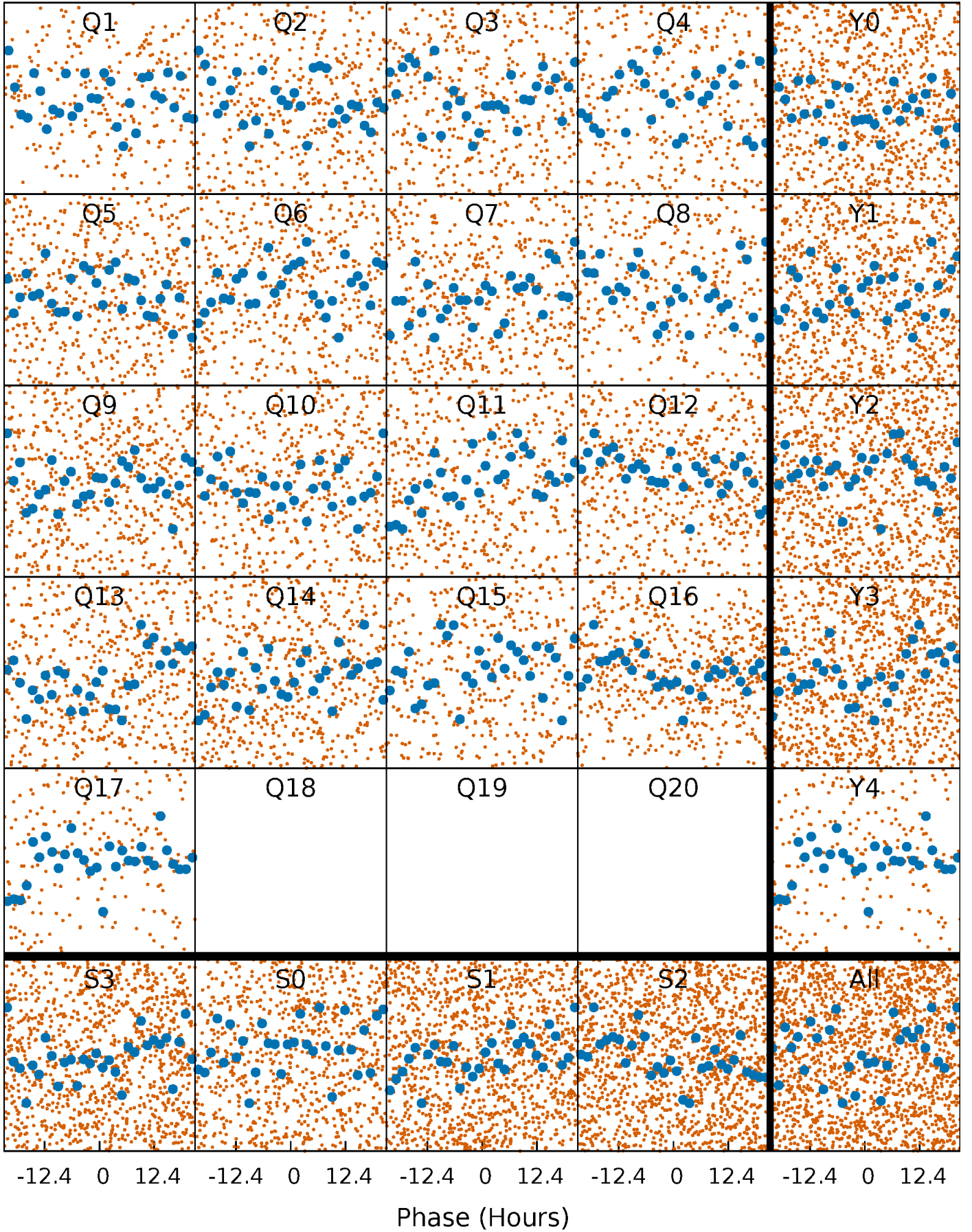


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



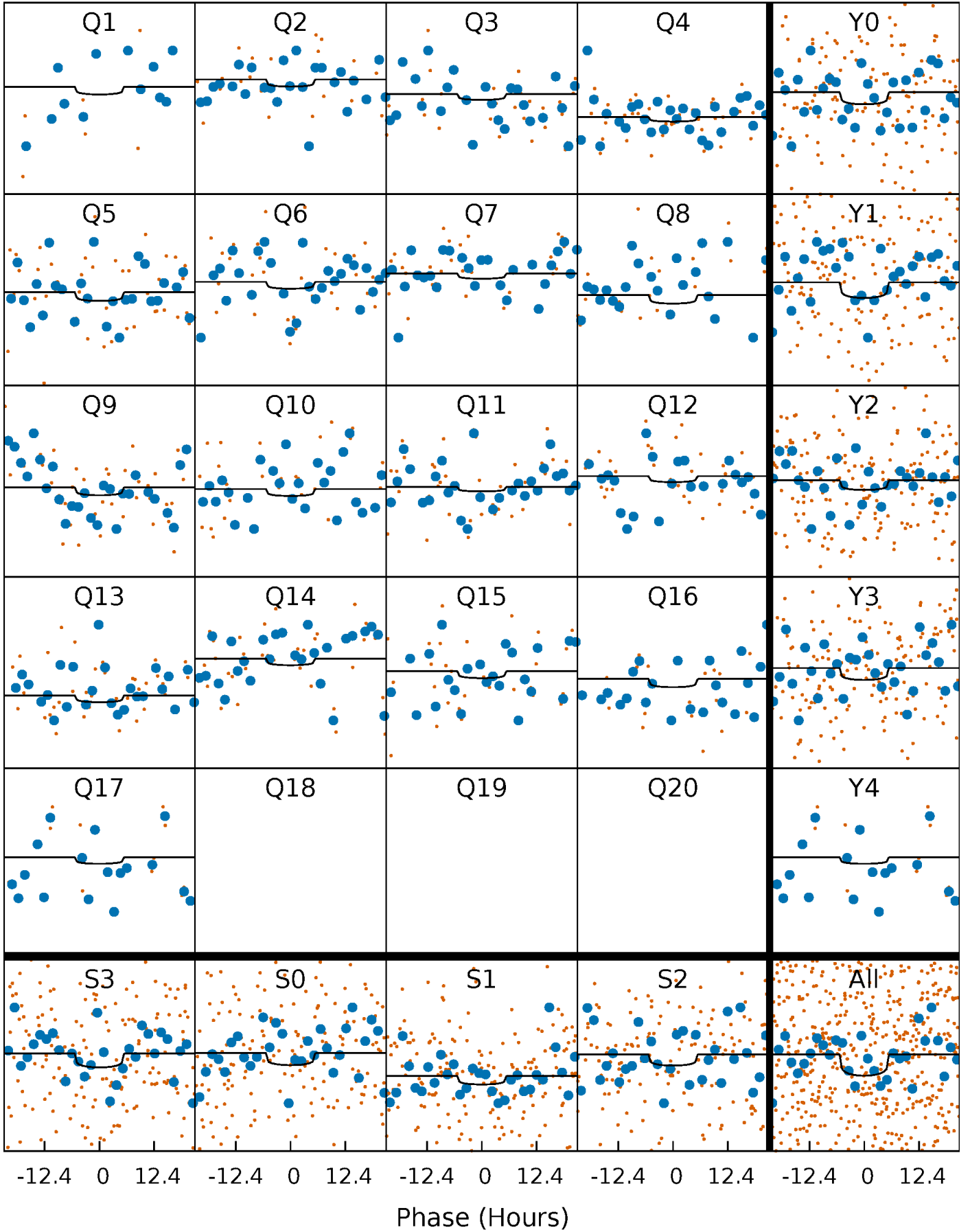
PDC Quarter-Phased Transit Curves

TCE 005822171-04 P= 9.111463 Days $T_0=131.870581$ (BKJD)



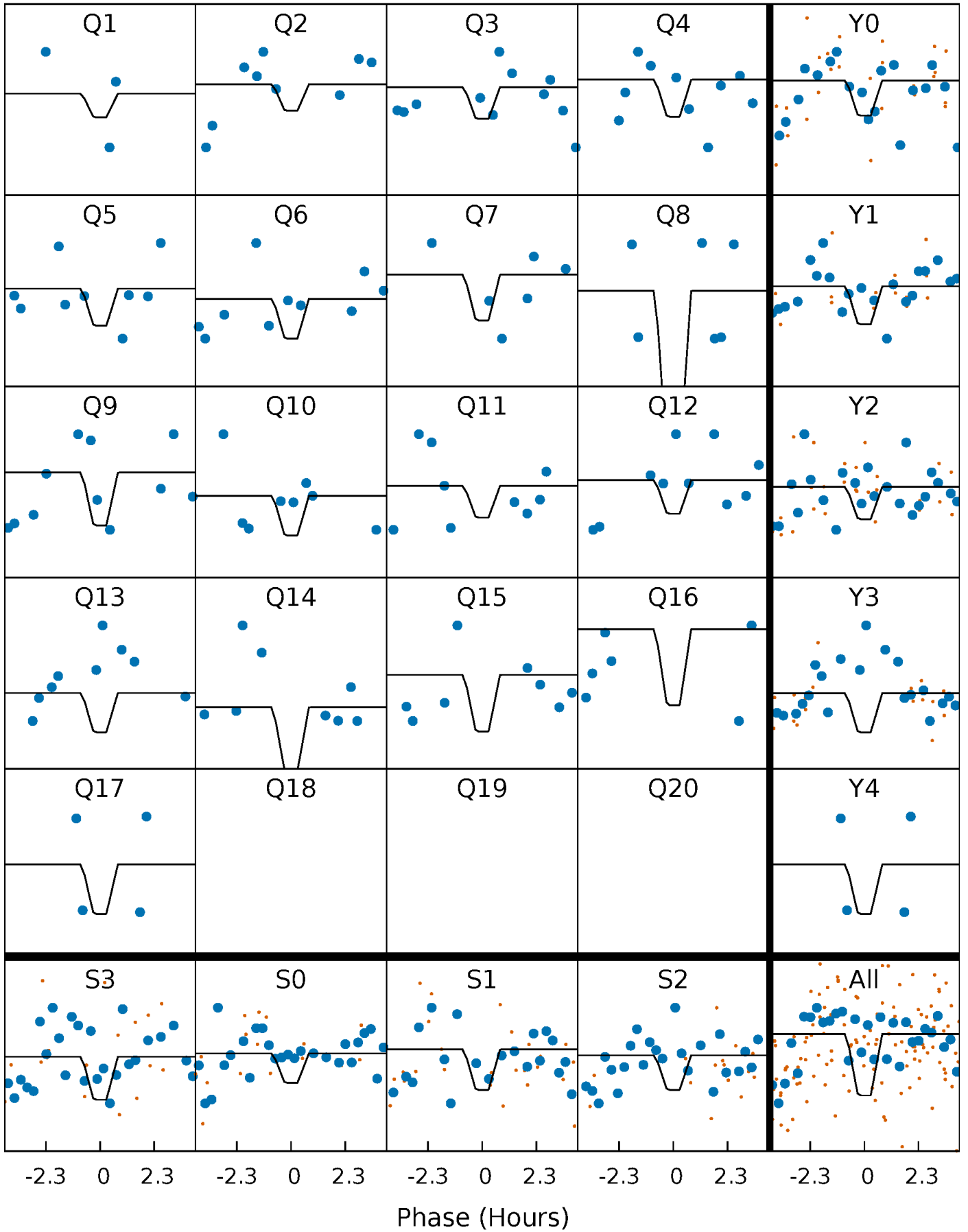
DV Quarter-Phased Transit Curves

TCE 005822171-04 $P = 9.111463$ Days $T_0 = 131.870581$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

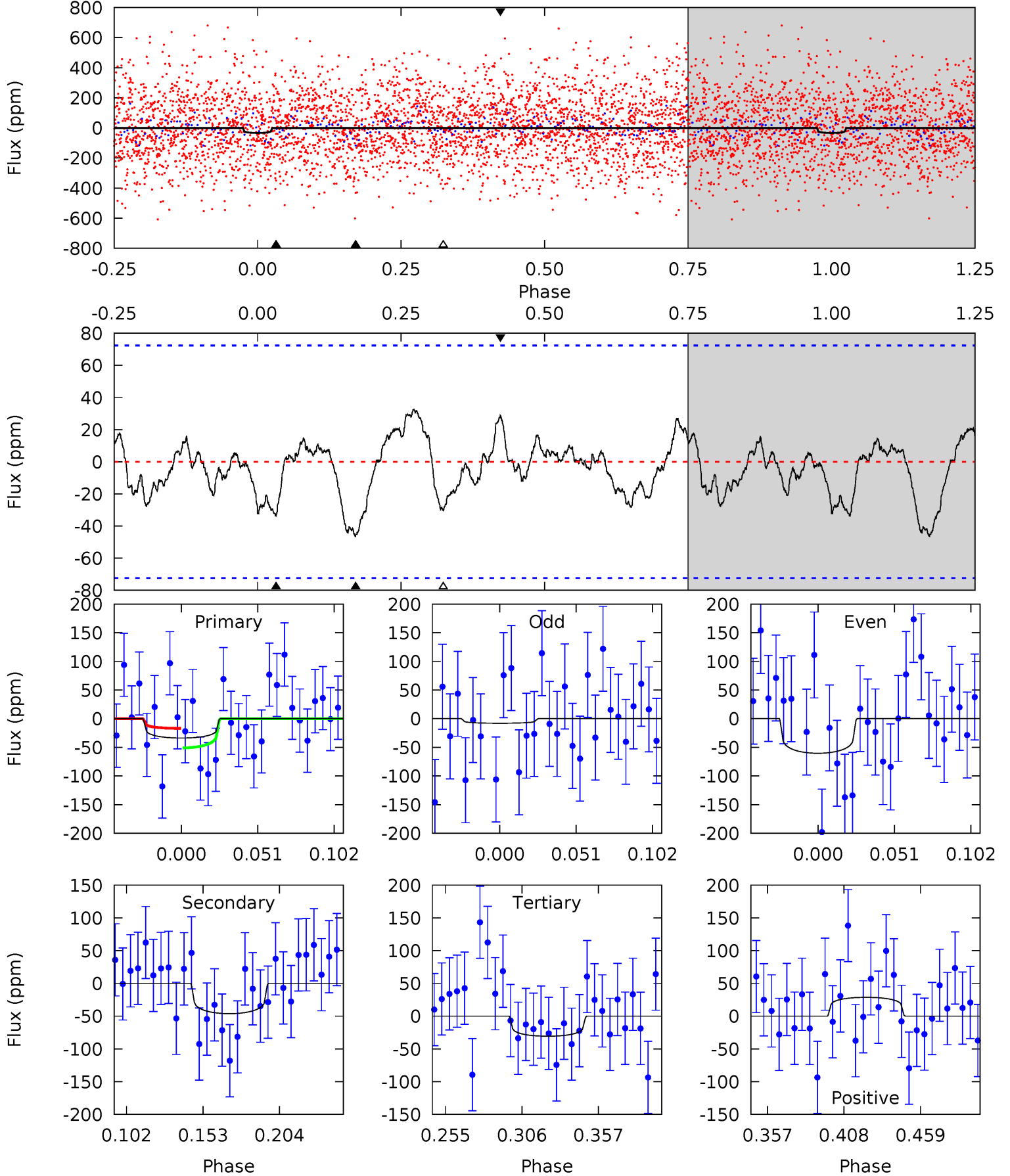
TCE 005822171-04 P= 9.108339 Days $T_0=132.232127$ (BKJD)



DV Model-Shift Uniqueness Test

005822171-04, P = 9.111463 Days, E = 122.759118 Days

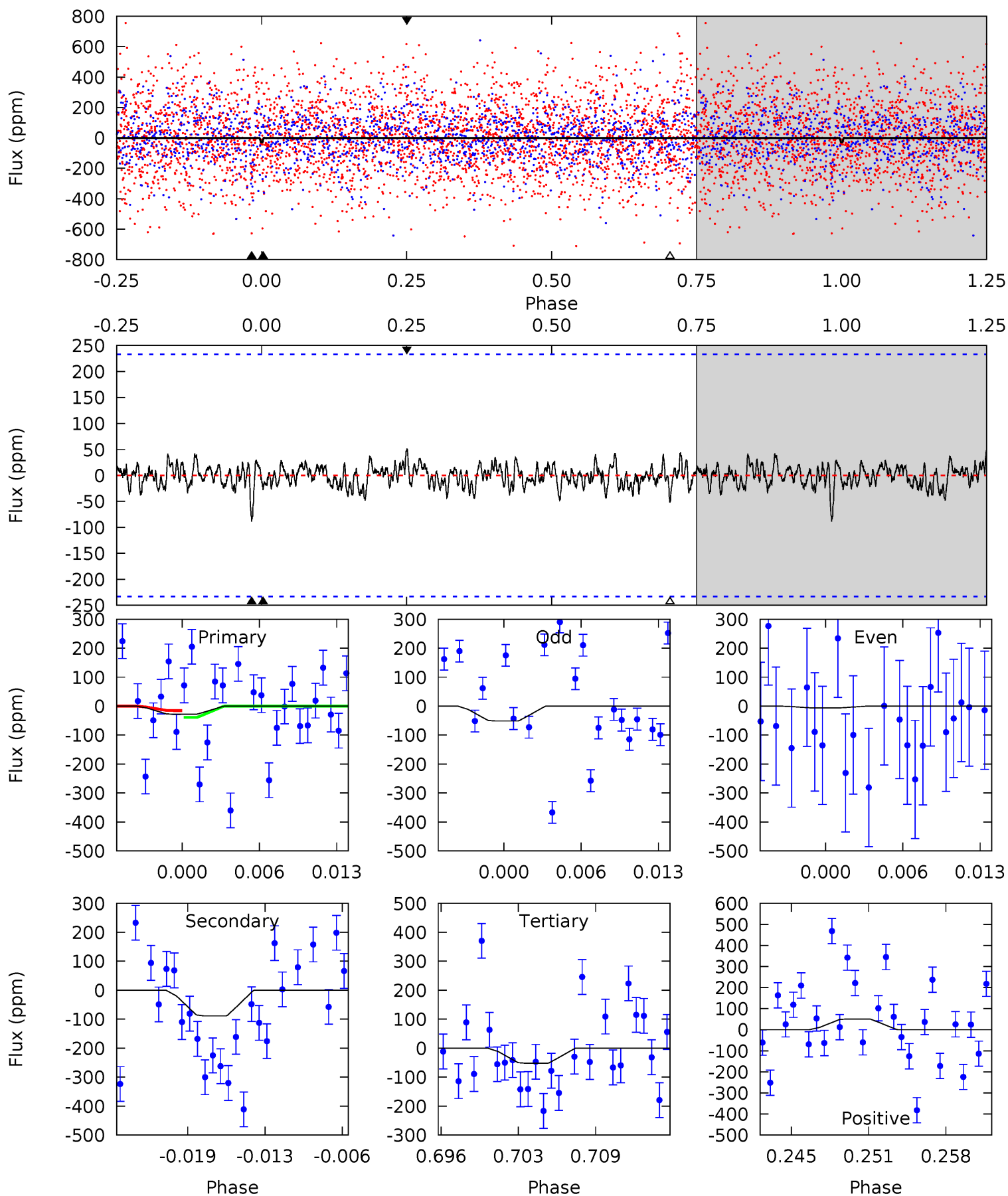
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.20	3.00	1.99	1.87	4.70	1.95	0.92	0.20	0.33	1.01	1.14	1.72	1.34	0.42	1.13



Alt Model-Shift Uniqueness Test

005822171-04, P = 9.108339 Days, E = 123.123788 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.62	1.94	1.14	1.11	5.11	2.72	0.39	-0.52	-0.50	0.81	0.83	0.50	1.68	0.36	0.25



Stellar Parameters For KIC 005822171

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6395^{+175}_{-214}	$4.019^{+0.329}_{-0.165}$	$-0.200^{+0.250}_{-0.300}$	$1.765^{+0.494}_{-0.603}$	$1.187^{+0.188}_{-0.188}$	$0.304^{+0.653}_{-0.139}$
	+3%/-3%	+8%/-4%	+125%/-150%	+28%/-34%	+16%/-16%	+215%/-46%
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 005822171-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-46 ± 15	$1.93^{+1.97}_{-1.33}$	1723^{+133}_{-158}	5124^{+4411}_{-1173}	52^{+525}_{-39}
Alt.	-89 ± 46	$3.14^{+2.08}_{-1.77}$	1712^{+155}_{-171}	4736^{+2345}_{-960}	36^{+172}_{-26}

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

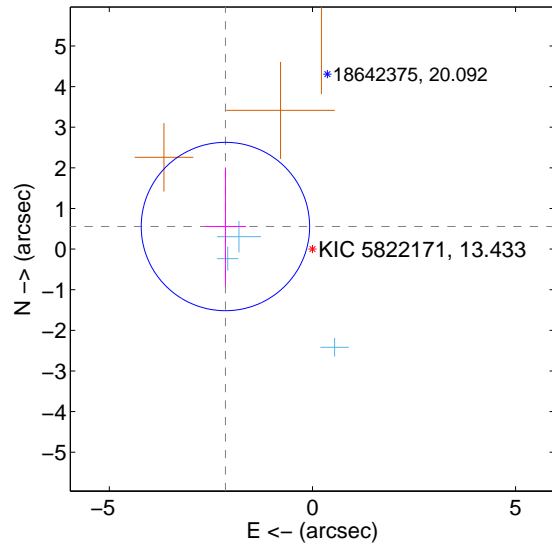
Supplemental centroid analysis for 005822171-04. Kepler magnitude: 13.43. Transit SNR 5.64

There are 3 quarters with good PRF difference image offsets

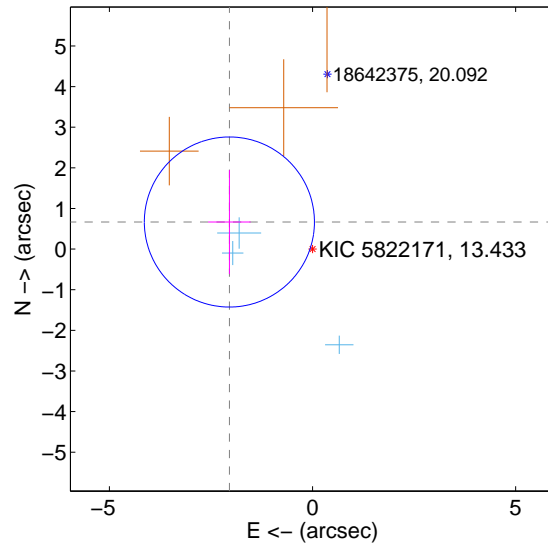
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.213 \pm 0.691	3.20	2.142 \pm 0.506	0.556 \pm 1.454
PRF-fit source offset from KIC position	2.152 \pm 0.698	3.08	2.046 \pm 0.523	0.667 \pm 1.277
photometric centroid source offset	1.91 \pm 1.02	1.87	0.67 \pm 1.15	1.78 \pm 1.00

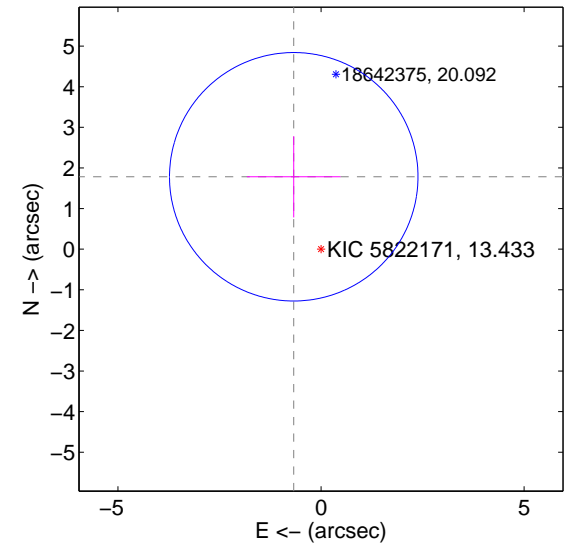
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

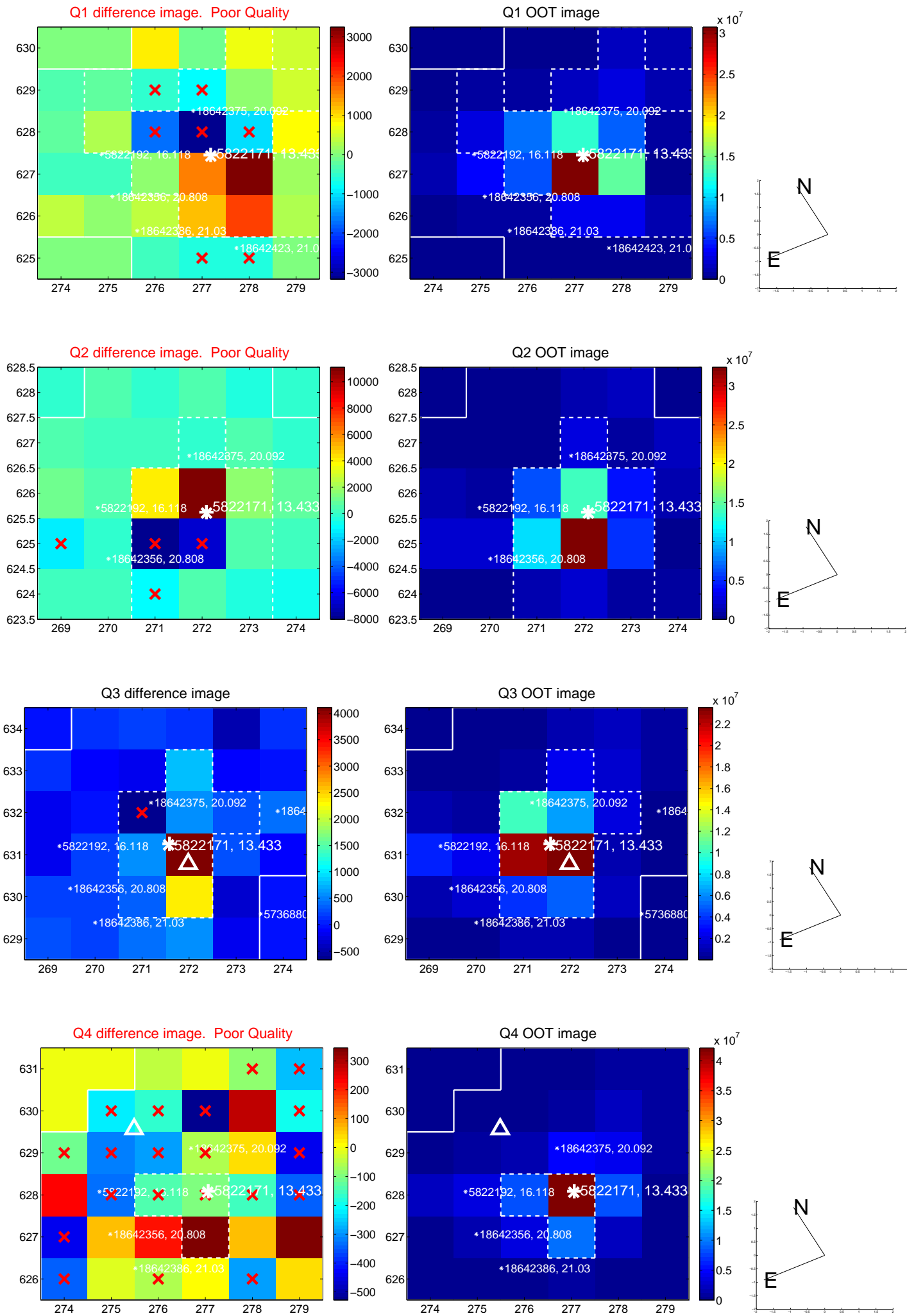


offset from photometric centroids

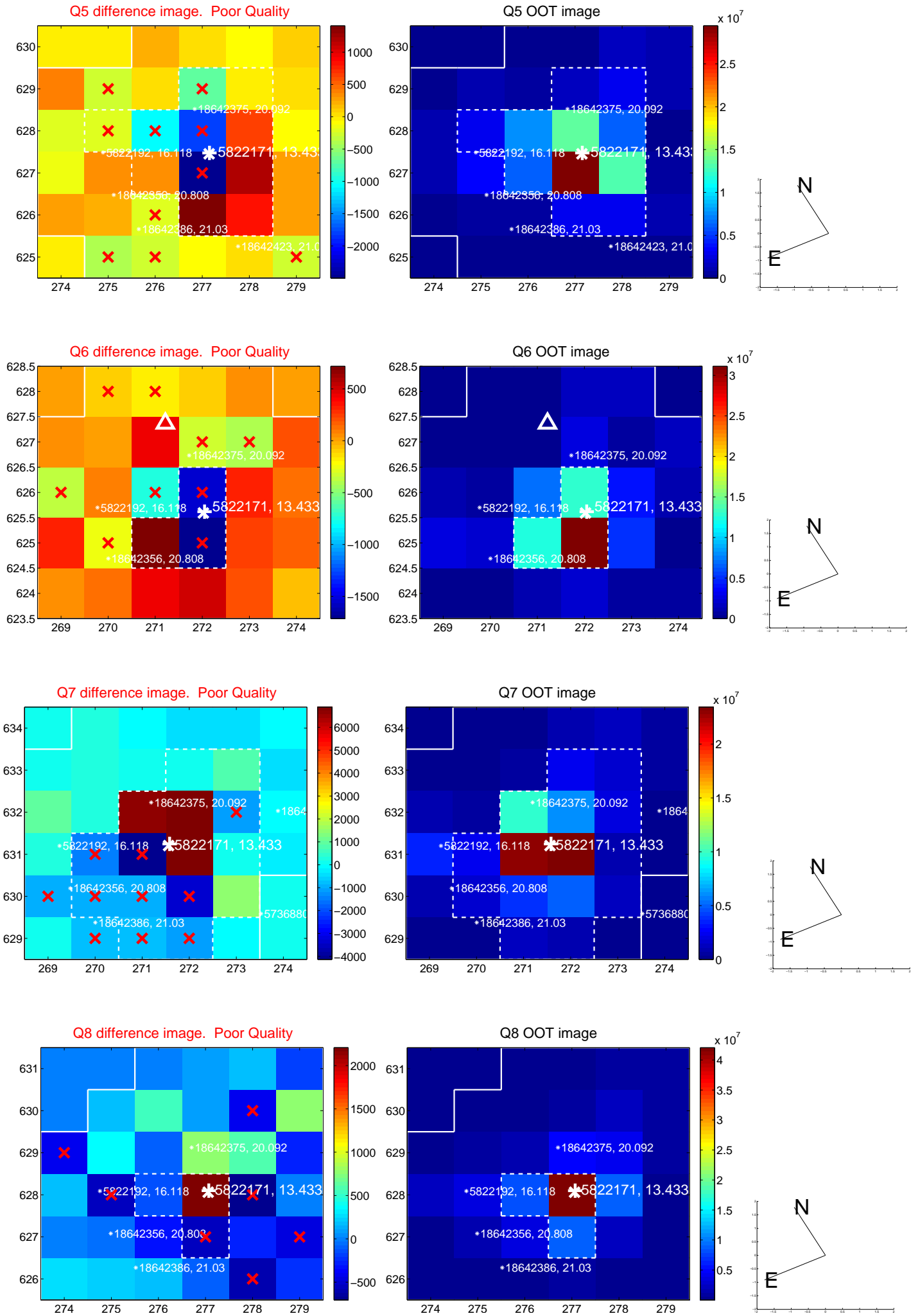


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

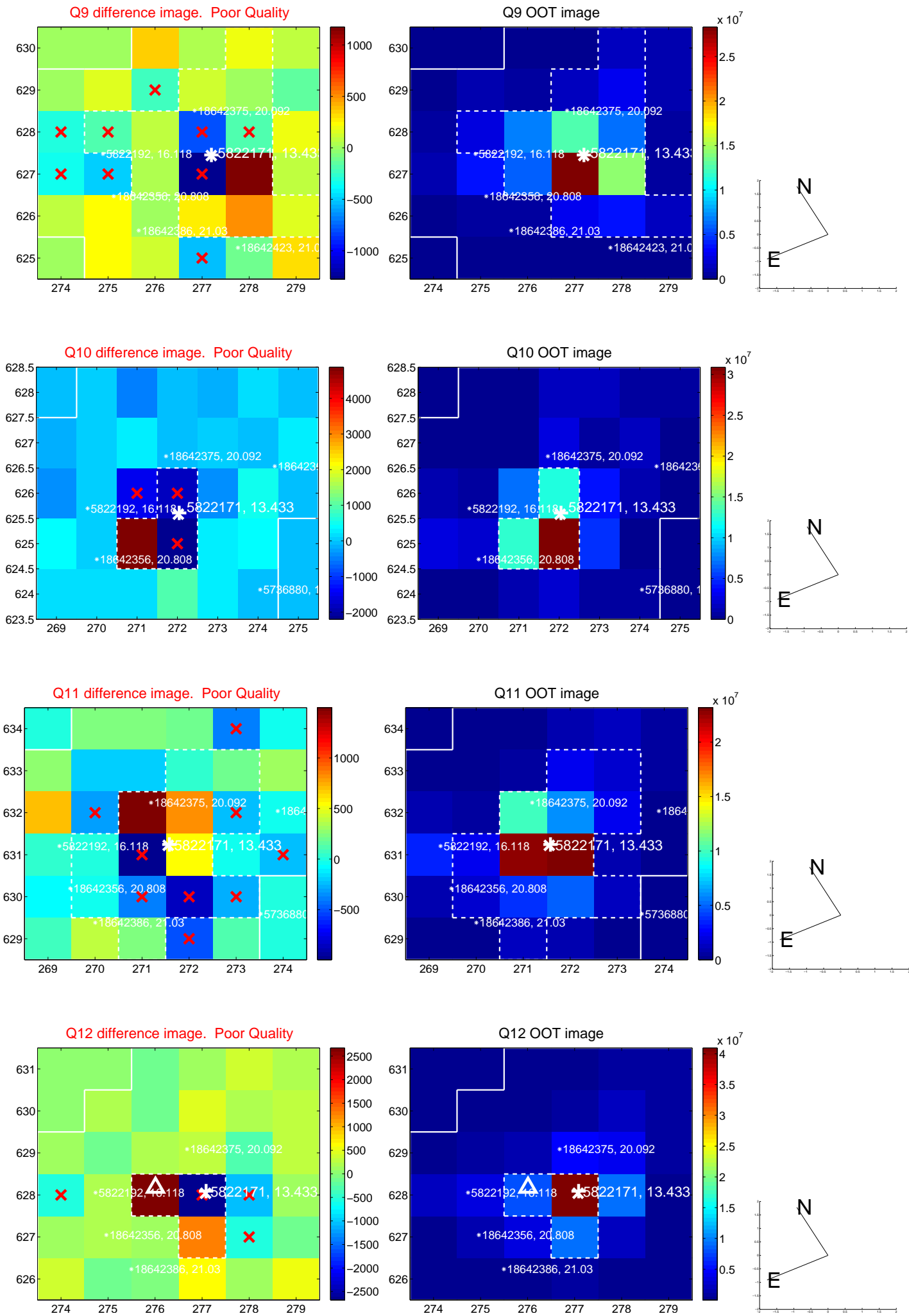
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



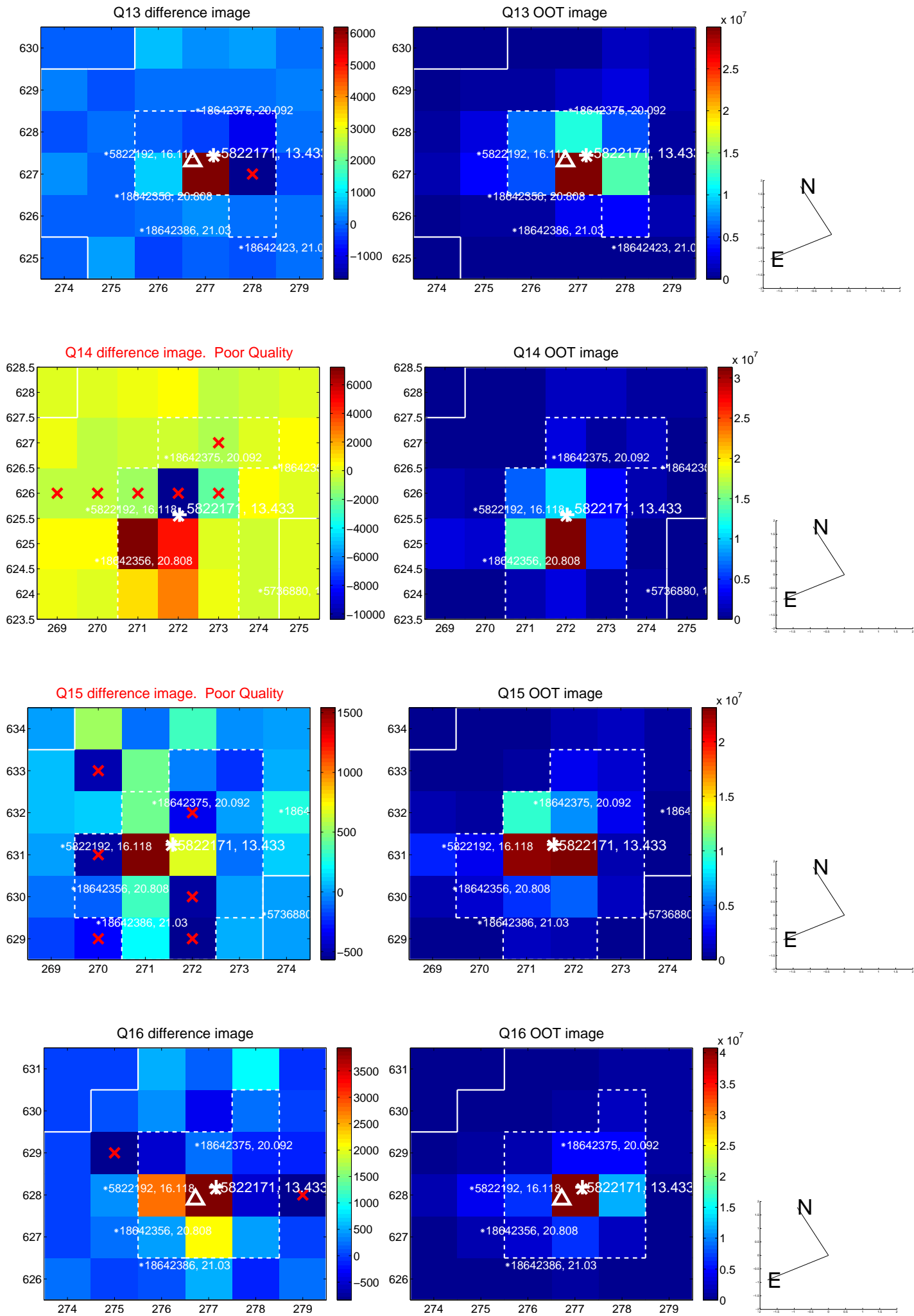
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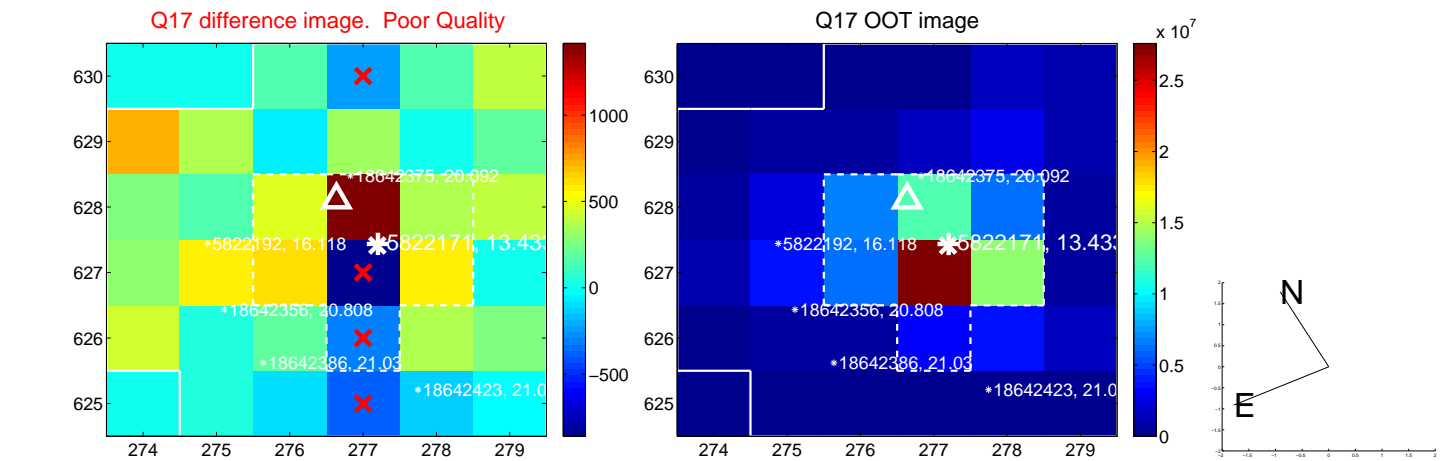
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



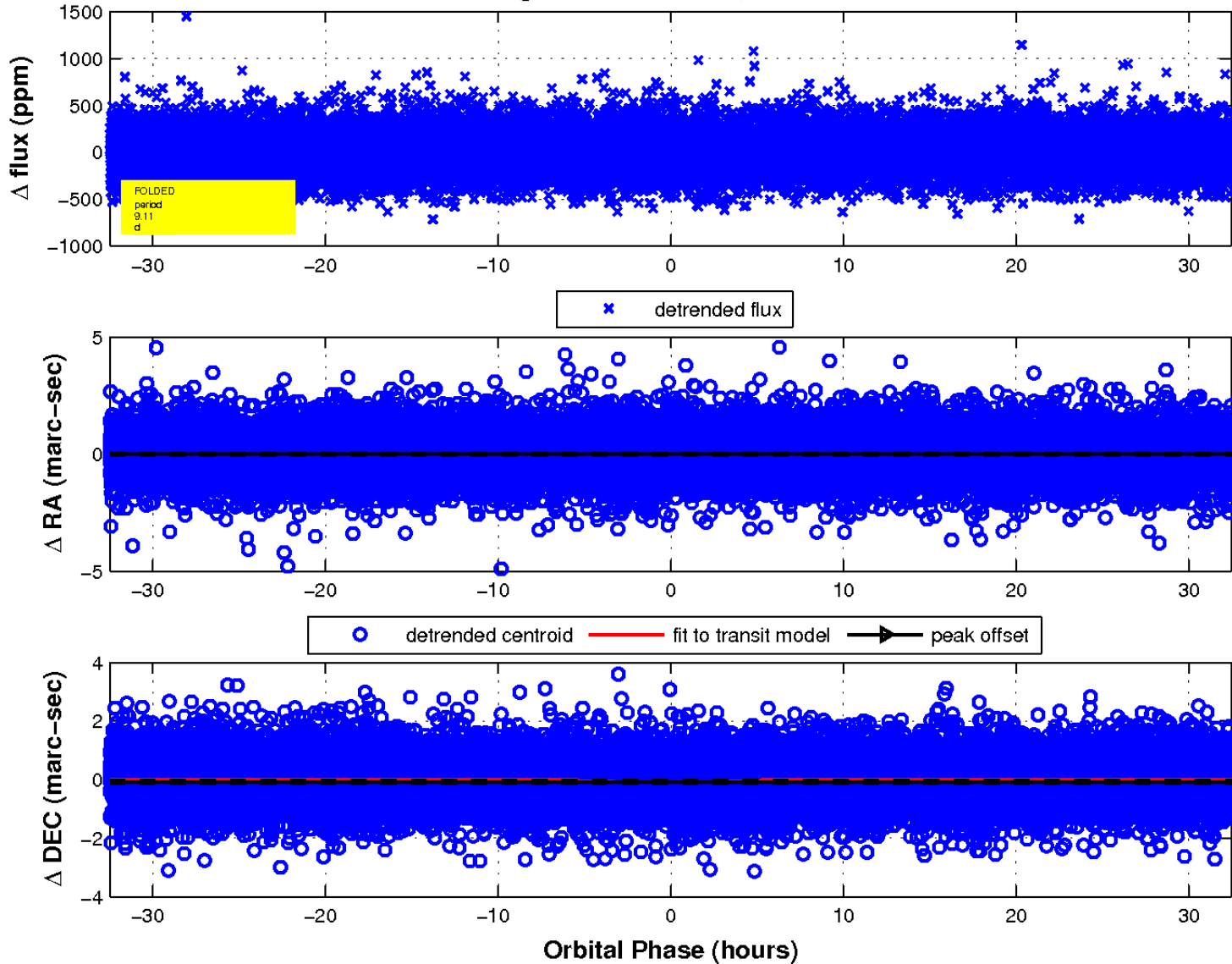
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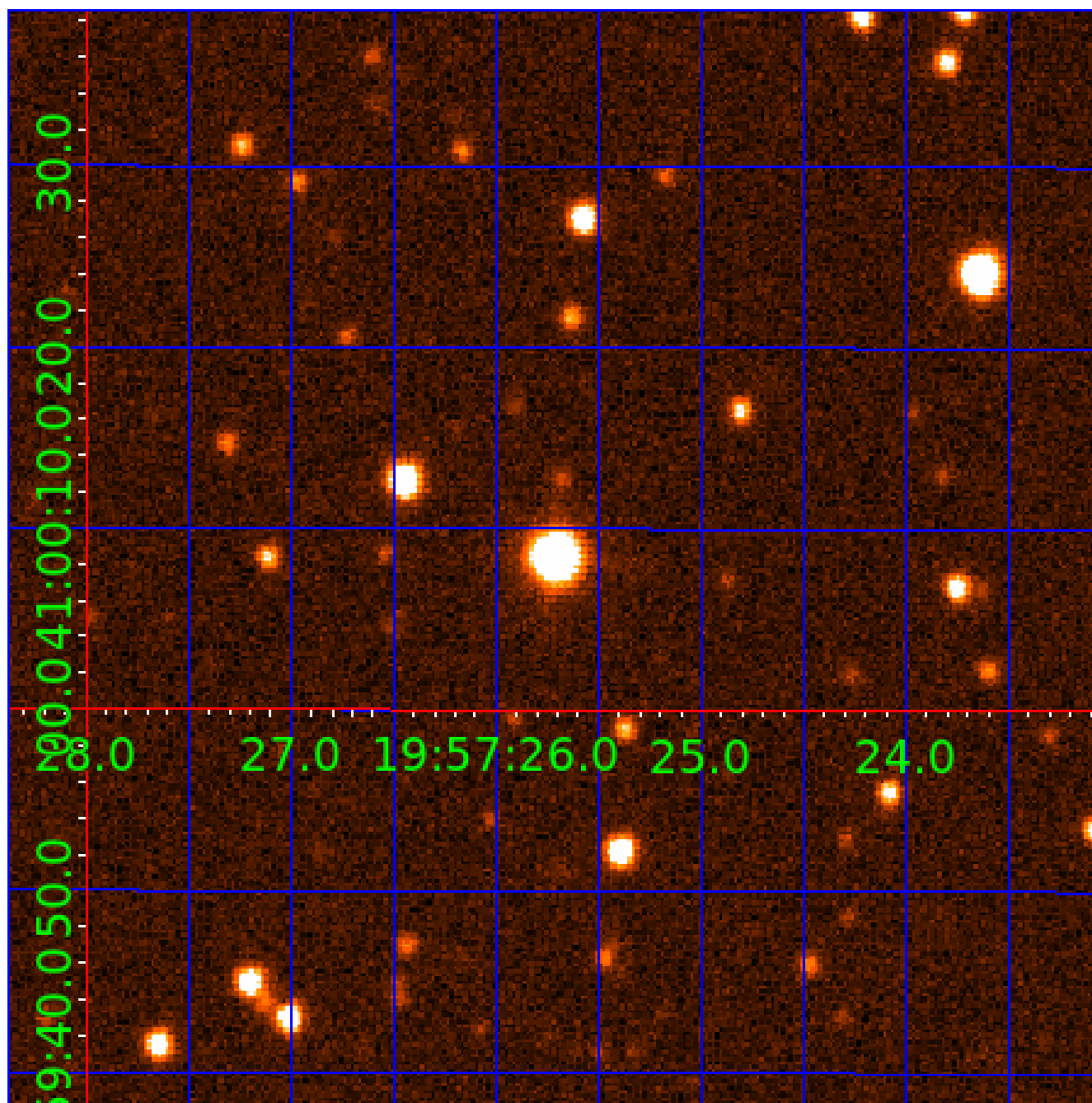


fluxWeightedCentroids, Planet 4 of 7



UKIRT Image

Declination



KIC 005822171

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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Robovetter Results

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005822171-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
005822171-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005822171-04	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_MEAS
005822171-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
005822171-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005822171-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—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.

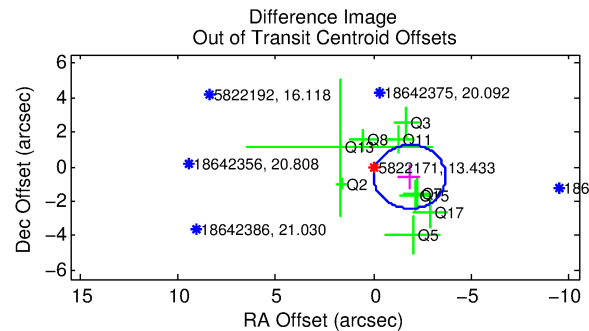
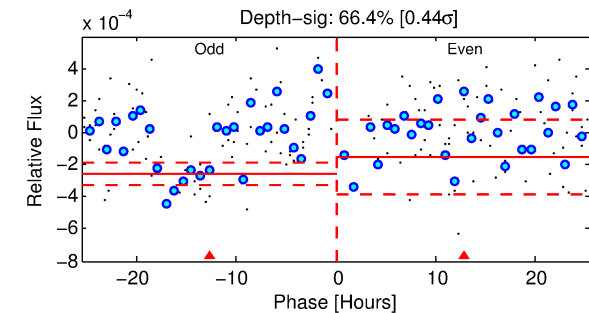
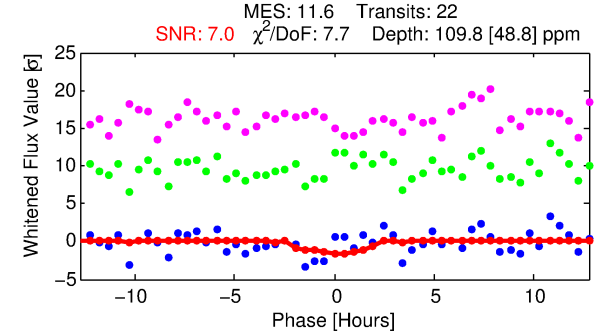
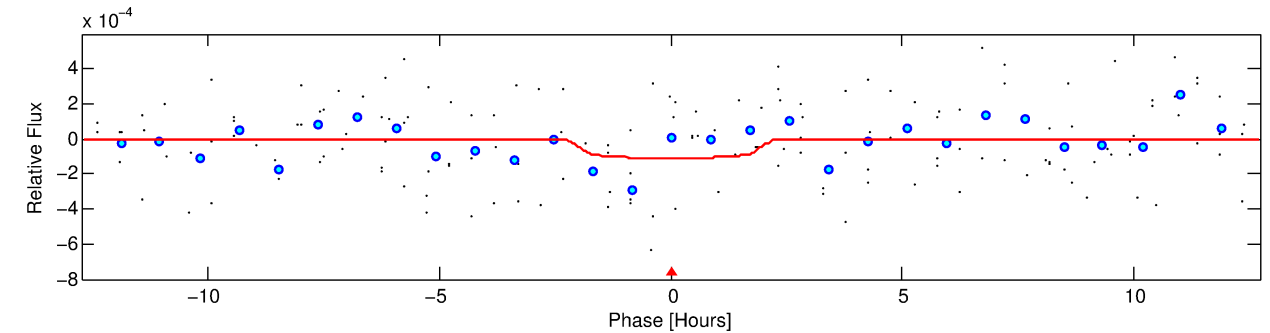
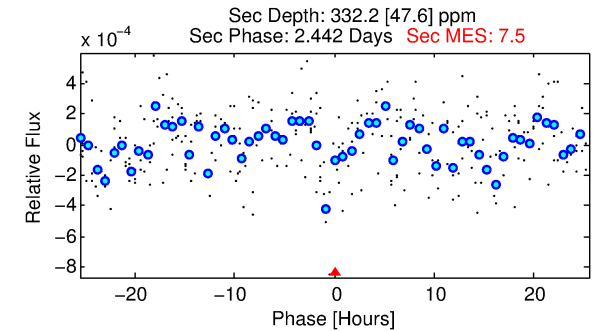
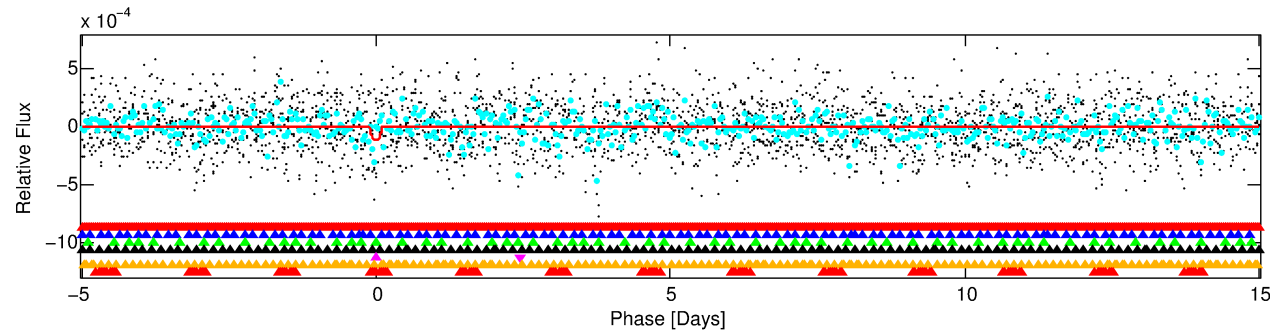
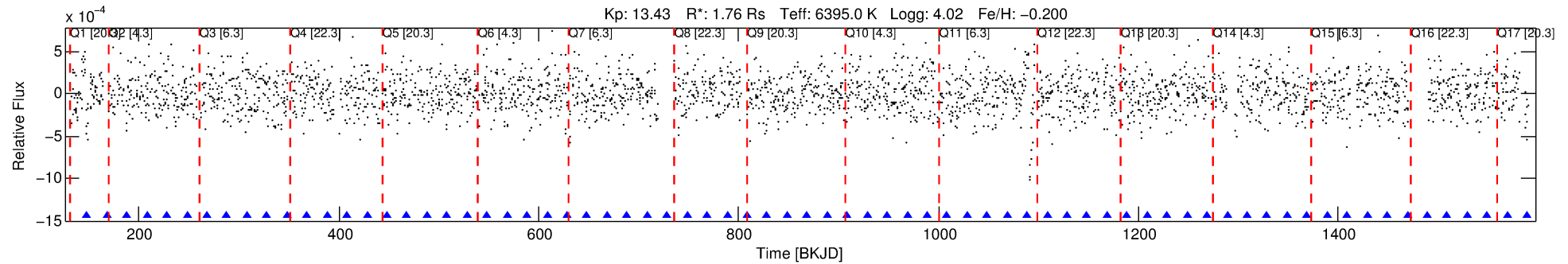
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005822171-05

No Significant Match Found

DV One-Page Summary

KIC: 5822171 Candidate: 5 of 7 Period: 20.015 d



DV Fit Results:

Period = 20.01524 [0.00126] d
Epoch = 148.0799 [0.0487] BKJD
Rp/R* = 0.0112 [0.0329]
a/R* = 16.60 [281.90]
b = 0.90 [3.58]
Self = 199.96 [113.97]
Teff = 959 [137] K
Rp = 2.16 [6.37] Re
a = 0.1528 [0.0520] AU
Ag = 910.69 [5353.15] [0.17σ]
Teffp = 8144 [11918] K [0.60σ]

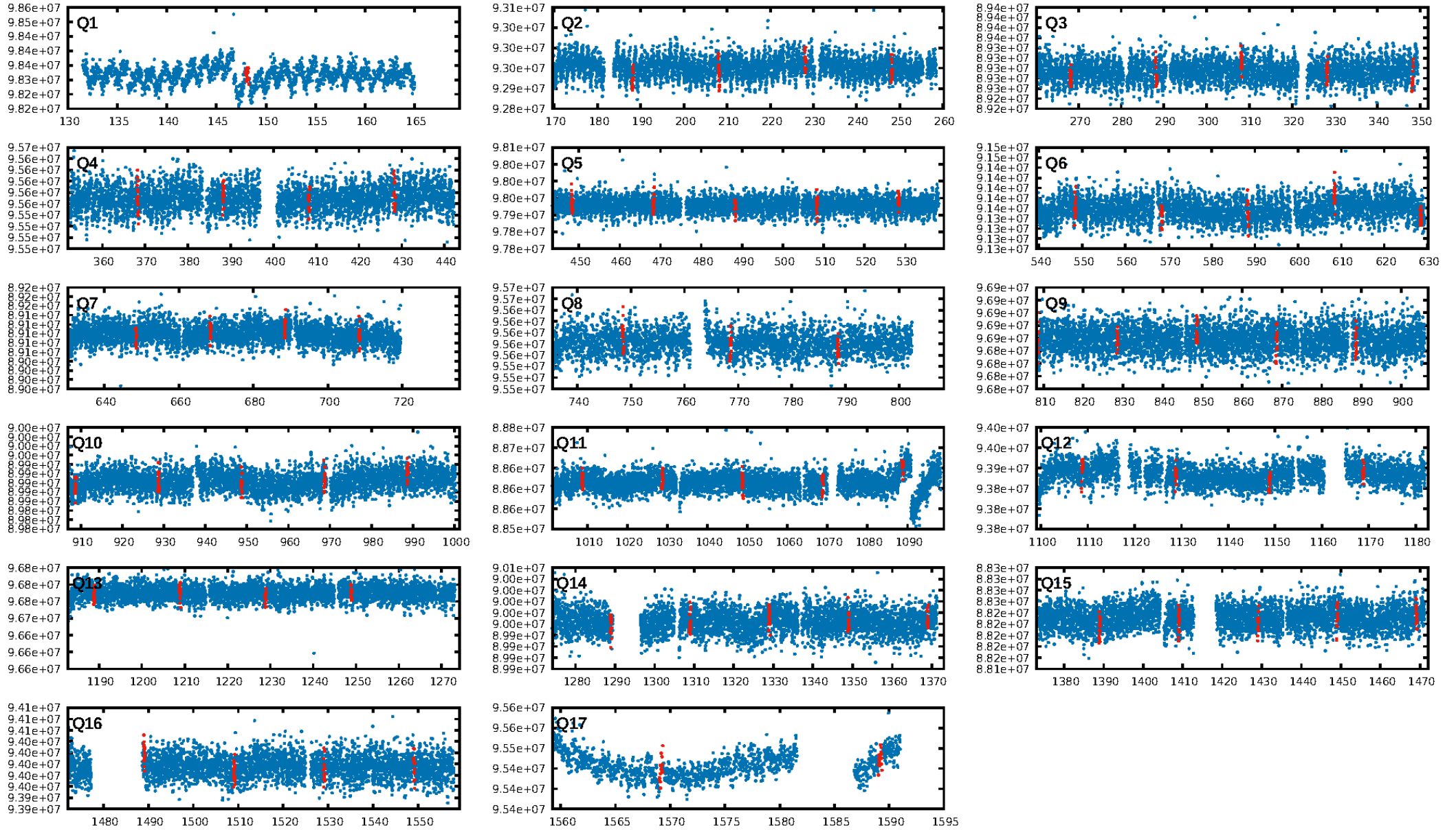
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [42.69σ]
LongPeriod-sig: 100.0% [21.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.3%
Bootstrap-pfa: 3.18e-12
RollingBand-fgt: 1.00 [20/20]
GhostDiagnostic-chr: 0.4143
Centroid-sig: 2.7%
Centroid-so: 1.390 arcsec [1.53σ]
OotOffset-rm: 1.935 arcsec [3.15σ]
KicOffset-rm: 2.038 arcsec [2.95σ]
OotOffset-st: 1/4/1/3 [9]
KicOffset-st: 1/4/1/3 [9]
DiffImageQuality-fgm: 0.33 [3/9]
DiffImageOverlap-fno: 0.00 [0/17]

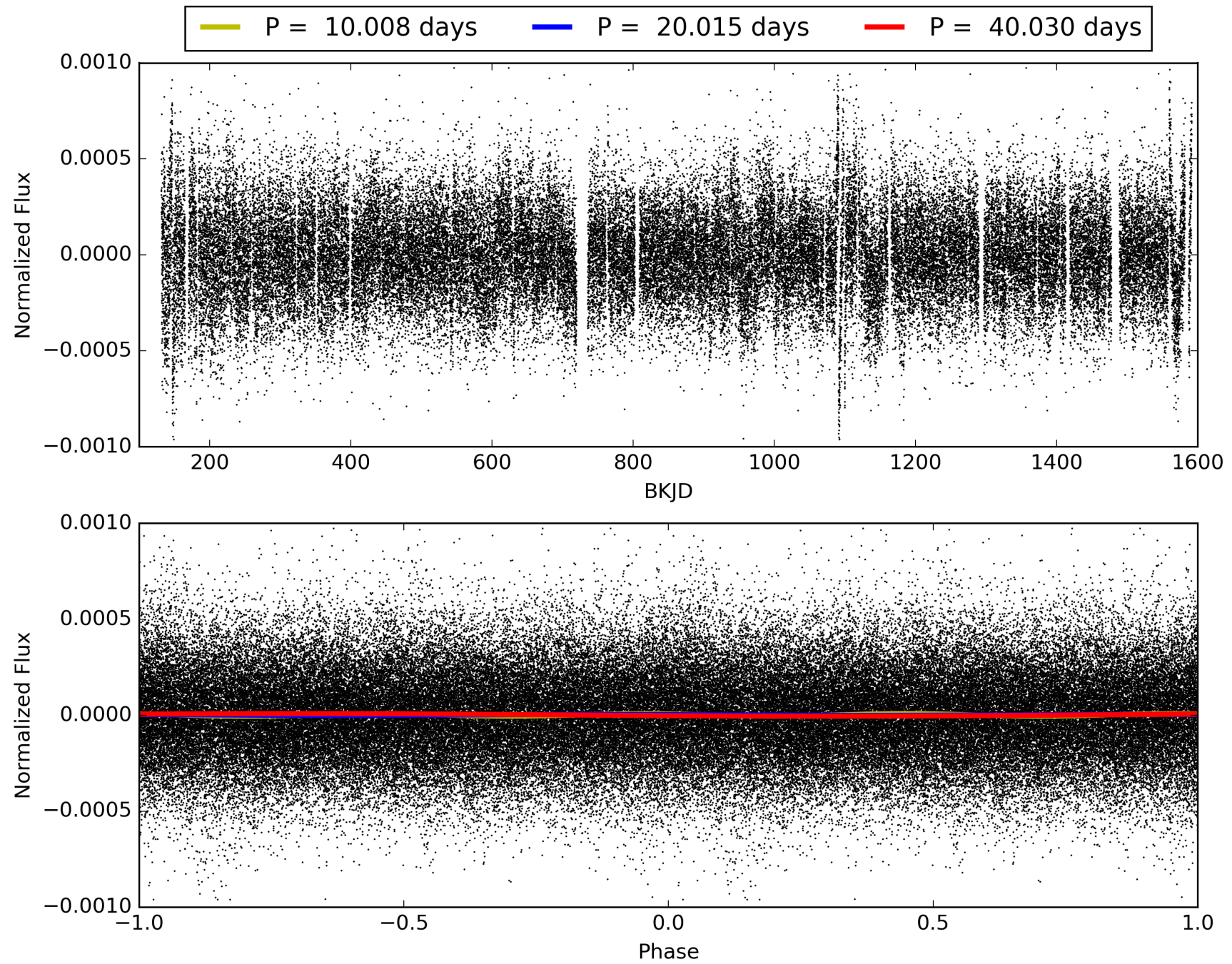
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:30:05 Z

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

TCE 005822171-05, PDC Light Curves

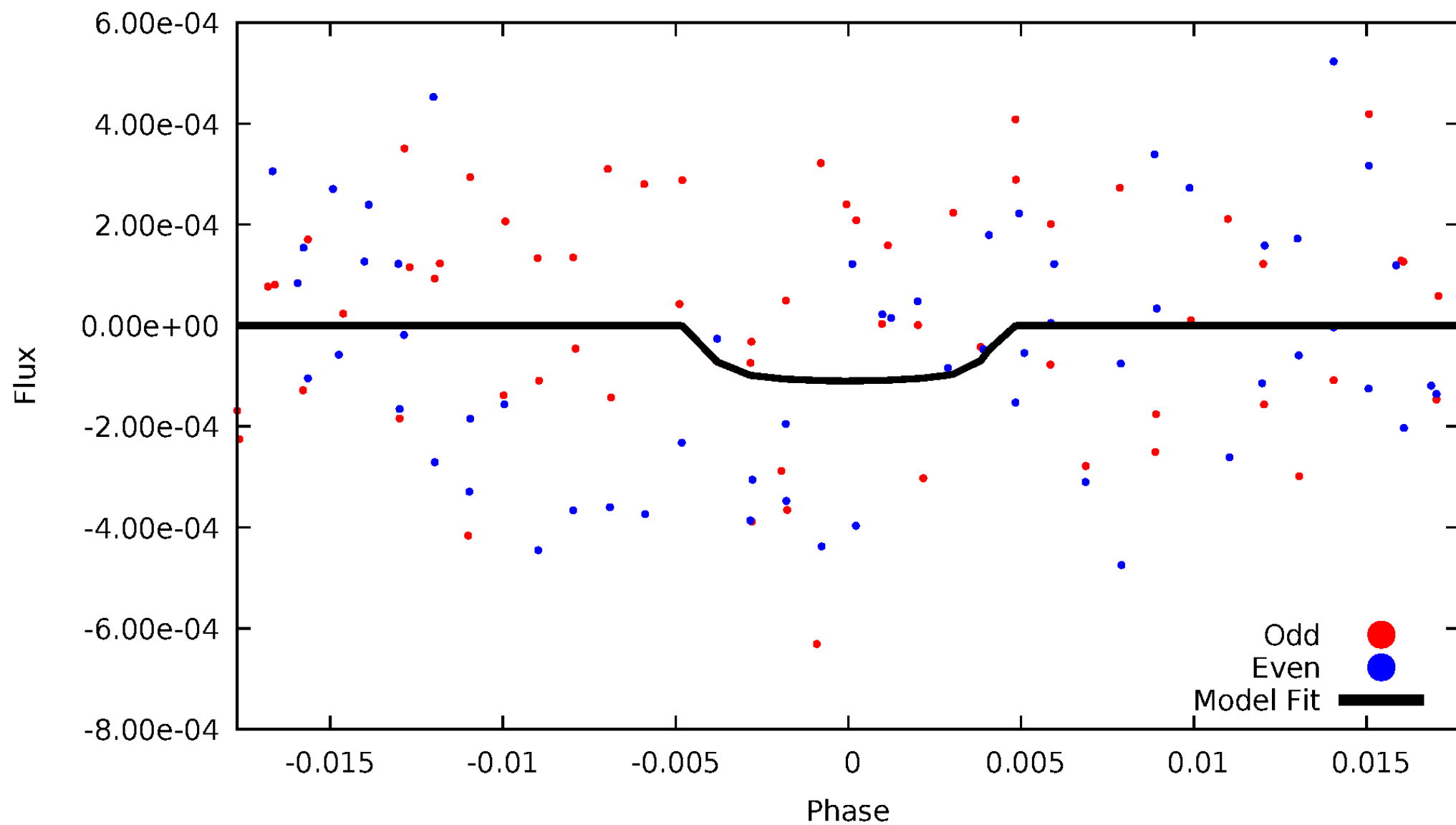


TCE 005822171-05



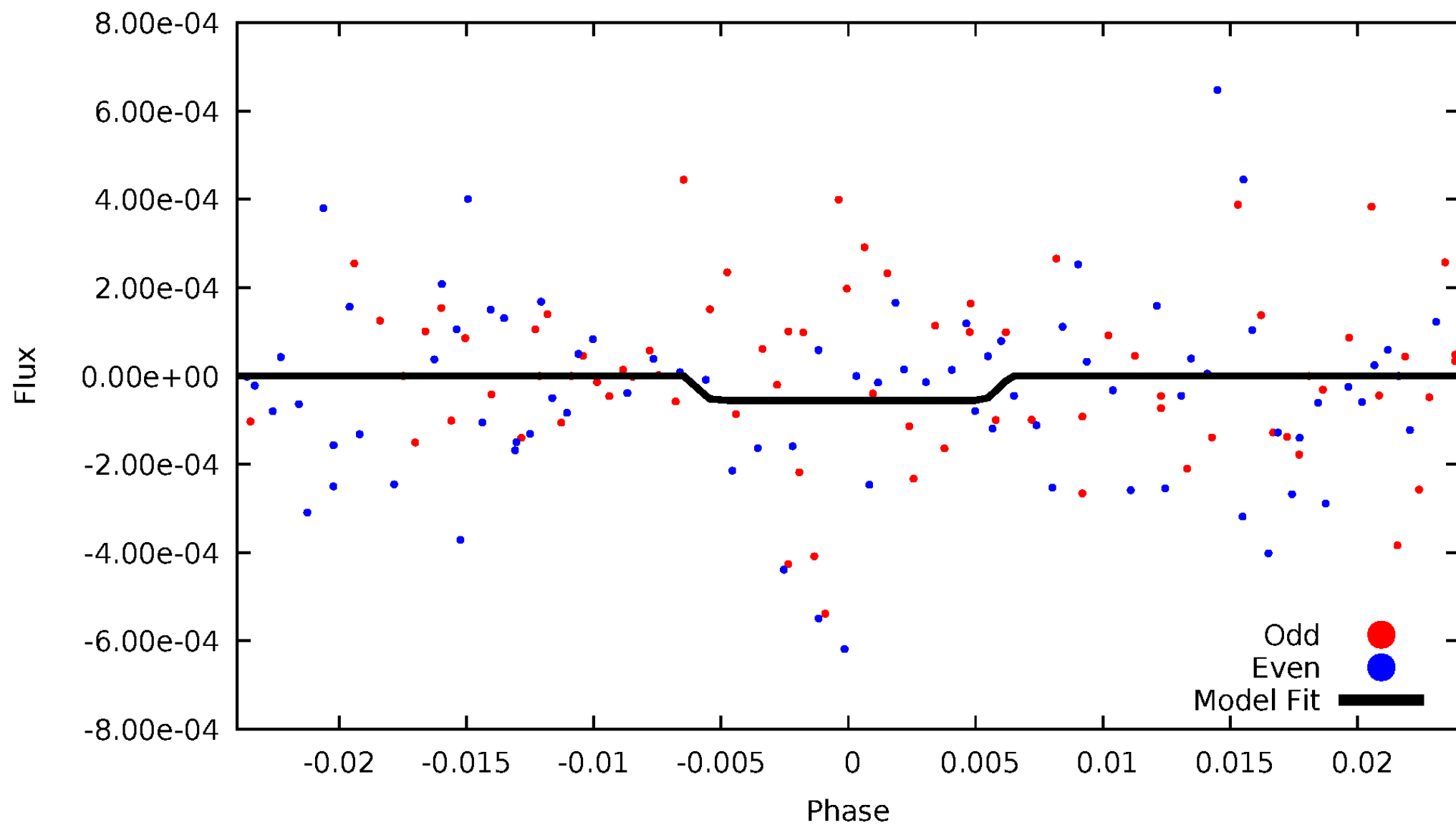
DV Odd/Even

TCE 005822171-05



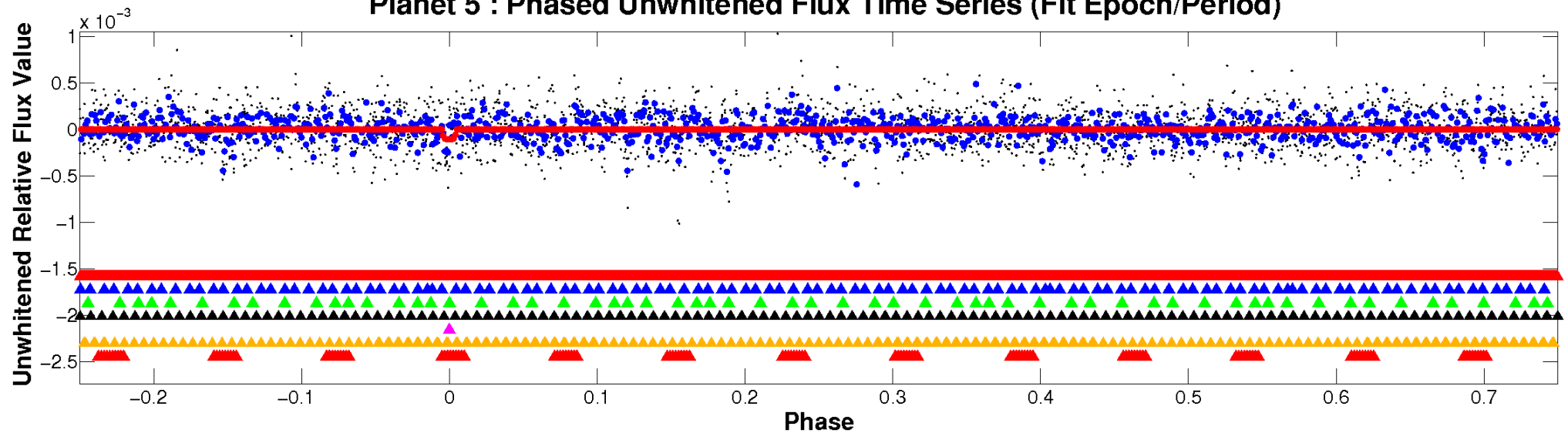
ALT Odd/Even

TCE 005822171-05

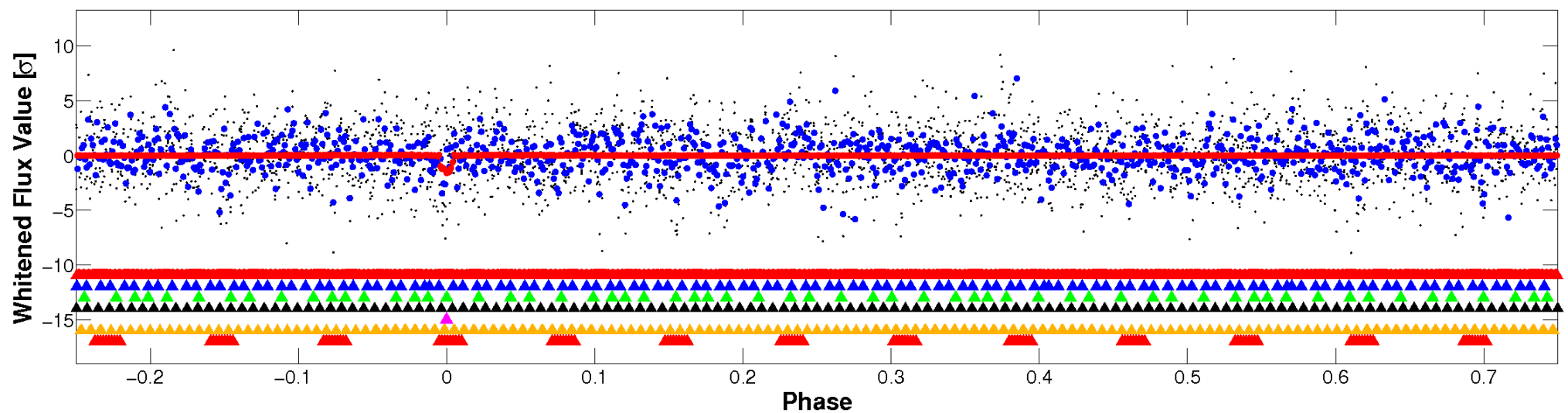


Non-Whitened Vs. Whitened Light Curve

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

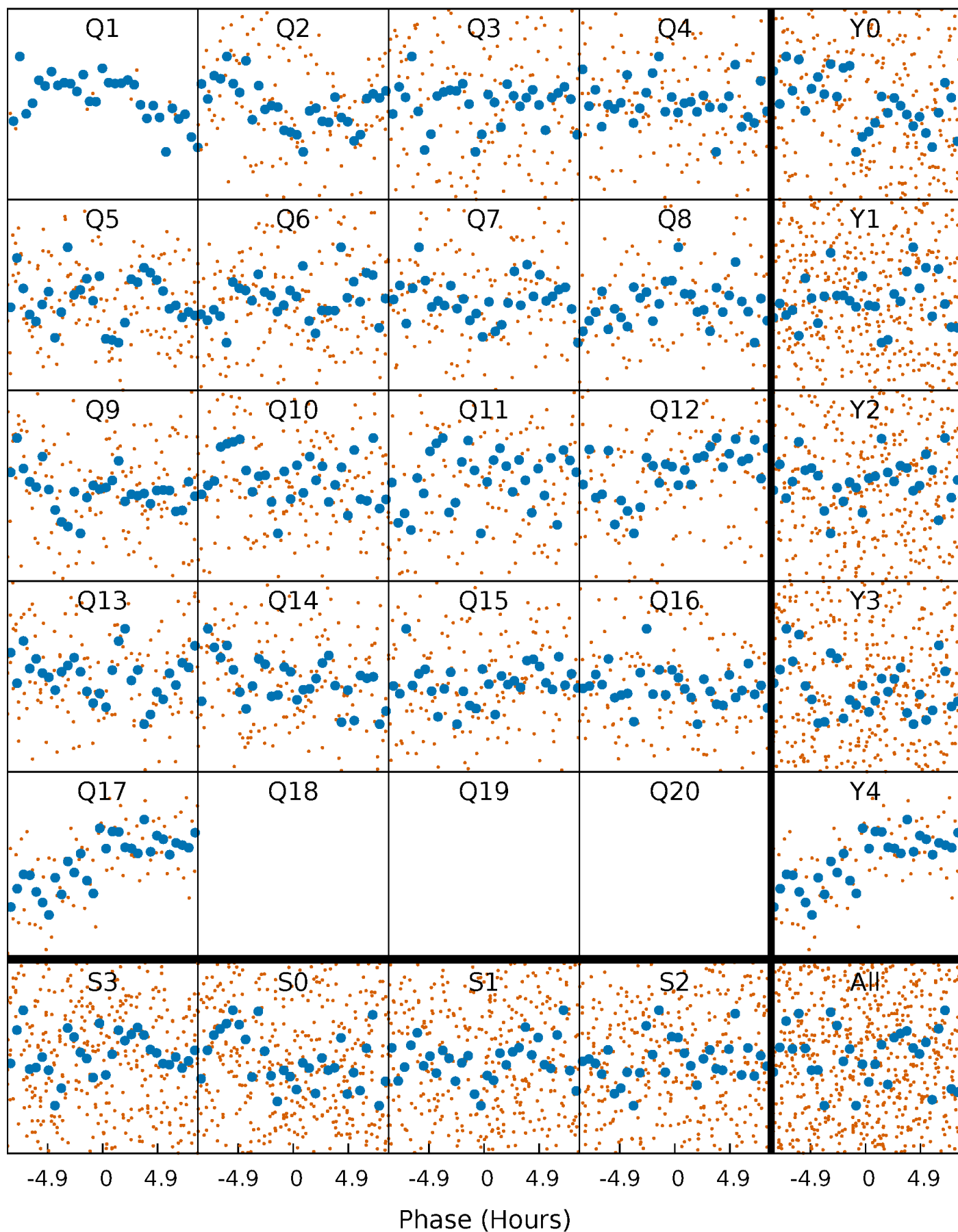


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



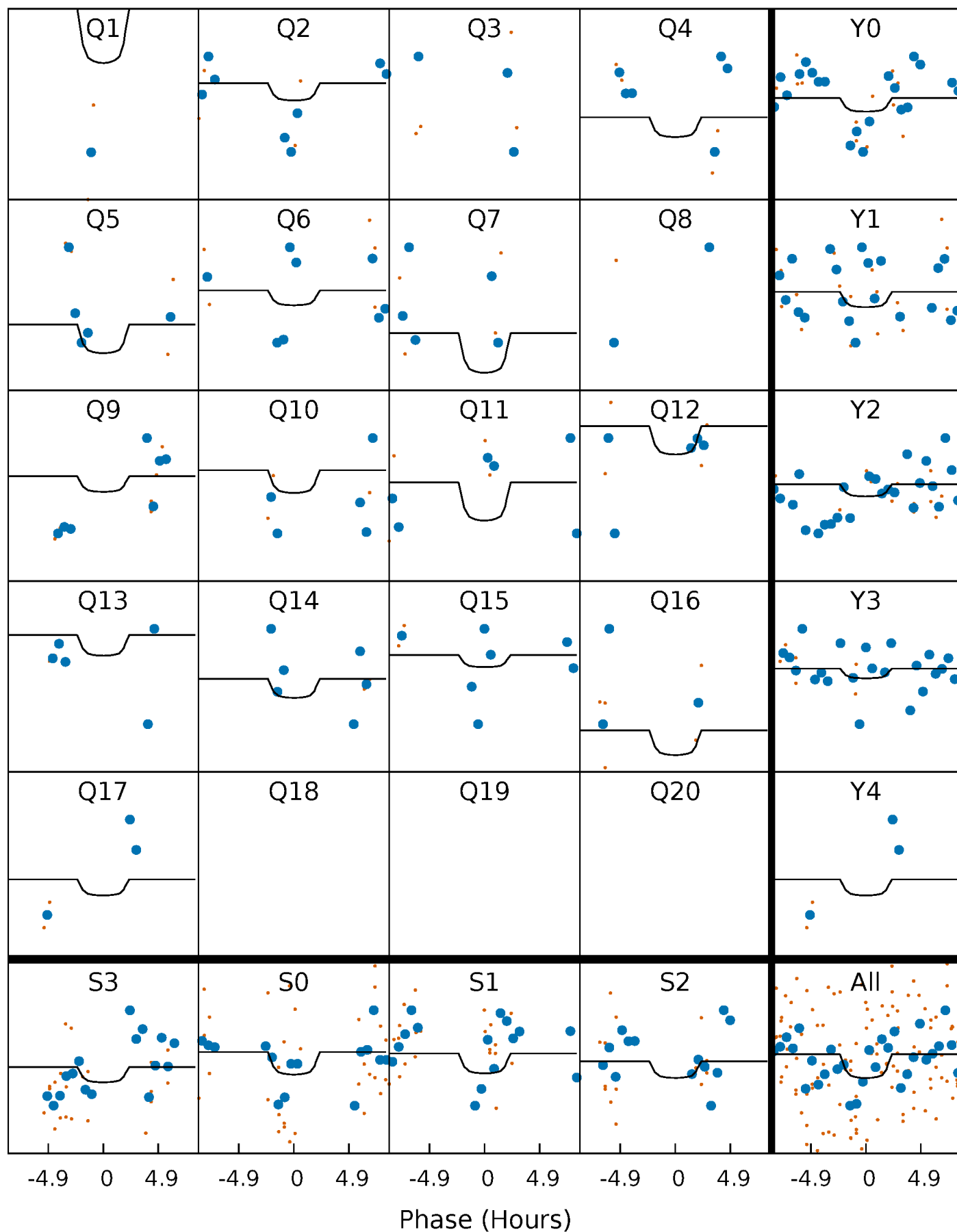
PDC Quarter-Phased Transit Curves

TCE 005822171-05 $P = 20.015237$ Days $T_0 = 148.079857$ (BKJD)



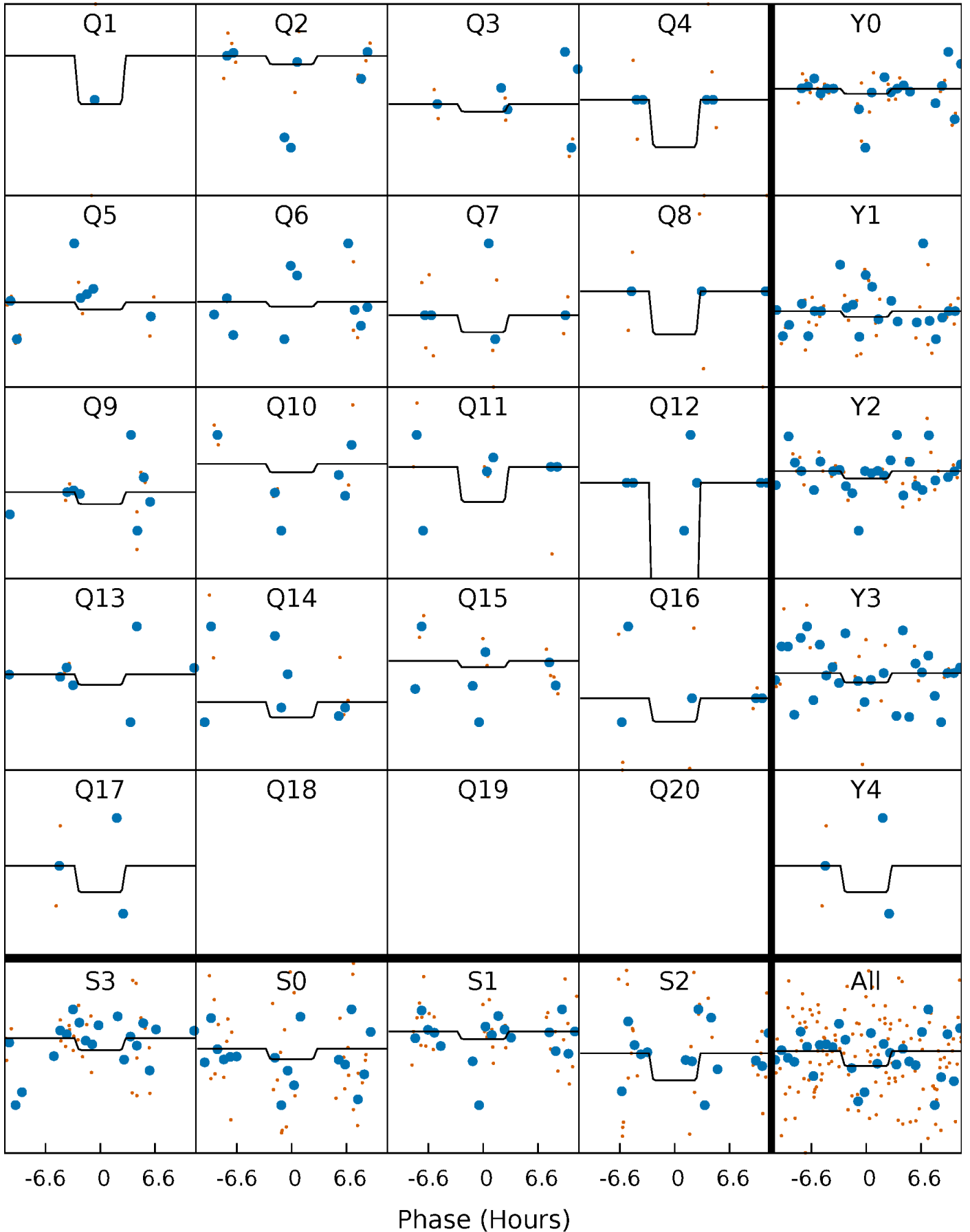
DV Quarter-Phased Transit Curves

TCE 005822171-05 P= 20.015237 Days $T_0=148.079857$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

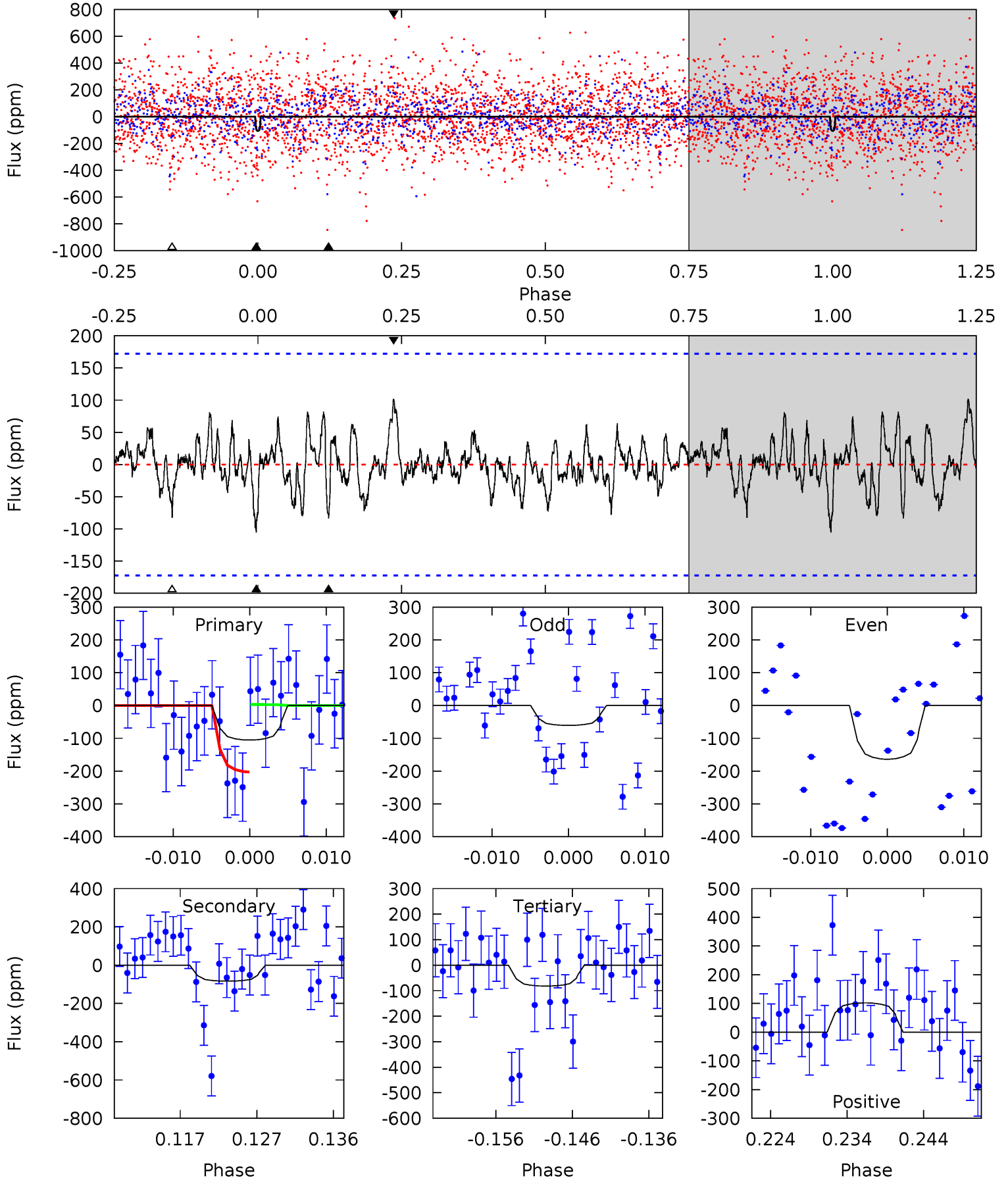
TCE 005822171-05 P= 20.015440 Days $T_0=148.066926$ (BKJD)



DV Model-Shift Uniqueness Test

005822171-05, $P = 20.015237$ Days, $E = 128.064620$ Days

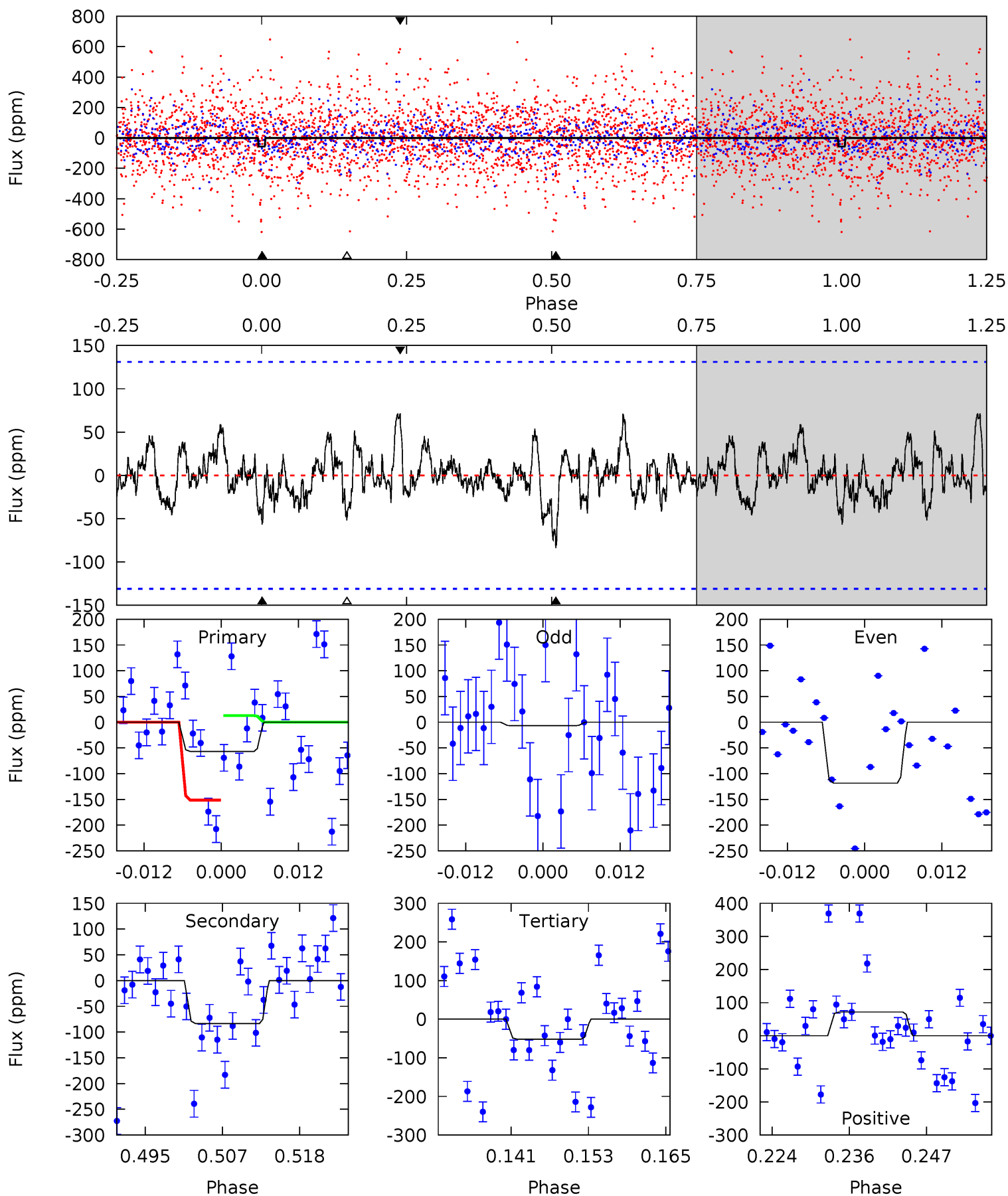
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.08	2.44	2.39	2.98	5.03	2.58	0.86	0.69	0.10	0.05	-0.54	1.48	1.70	0.49	2.90



Alt Model-Shift Uniqueness Test

005822171-05, P = 20.015440 Days, E = 128.051486 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.17	3.19	1.98	2.73	4.99	2.52	0.83	0.19	-0.57	1.21	0.45	2.11	0	0.46	2.64



Stellar Parameters For KIC 005822171

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6395^{+175}_{-214}	$4.019^{+0.329}_{-0.165}$	$-0.200^{+0.250}_{-0.300}$	$1.765^{+0.494}_{-0.603}$	$1.187^{+0.188}_{-0.188}$	$0.304^{+0.653}_{-0.139}$
	+3%/-3%	+8%/-4%	+125%/-150%	+28%/-34%	+16%/-16%	+215%/-46%
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 005822171-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-84 ± 34	$4.81^{+4.84}_{-3.30}$	1327^{+100}_{-137}	4024^{+2471}_{-874}	44^{+373}_{-34}
Alt.	-84 ± 26	$4.49^{+4.72}_{-3.11}$	1319^{+100}_{-134}	4205^{+2676}_{-967}	56^{+506}_{-45}

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 $A_{obs} \gg 1.0$

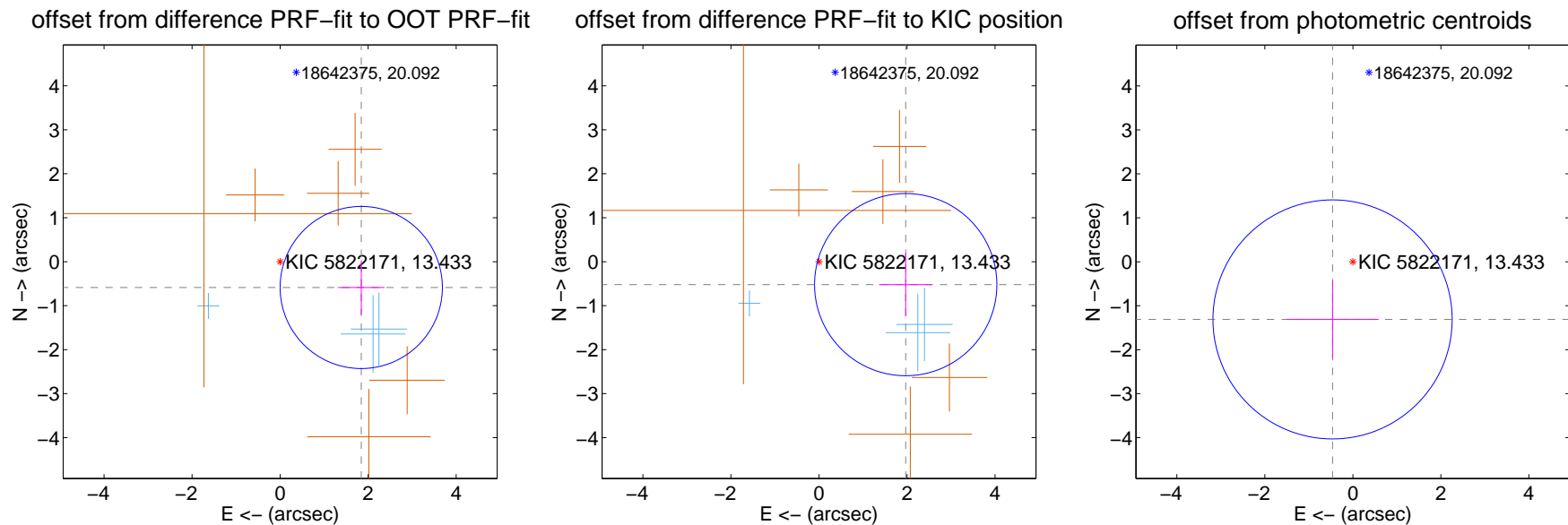
DV Centroid Data

Supplemental centroid analysis for 005822171-05. Kepler magnitude: 13.43. Transit SNR 6.96

There are 3 quarters with good PRF difference image offsets

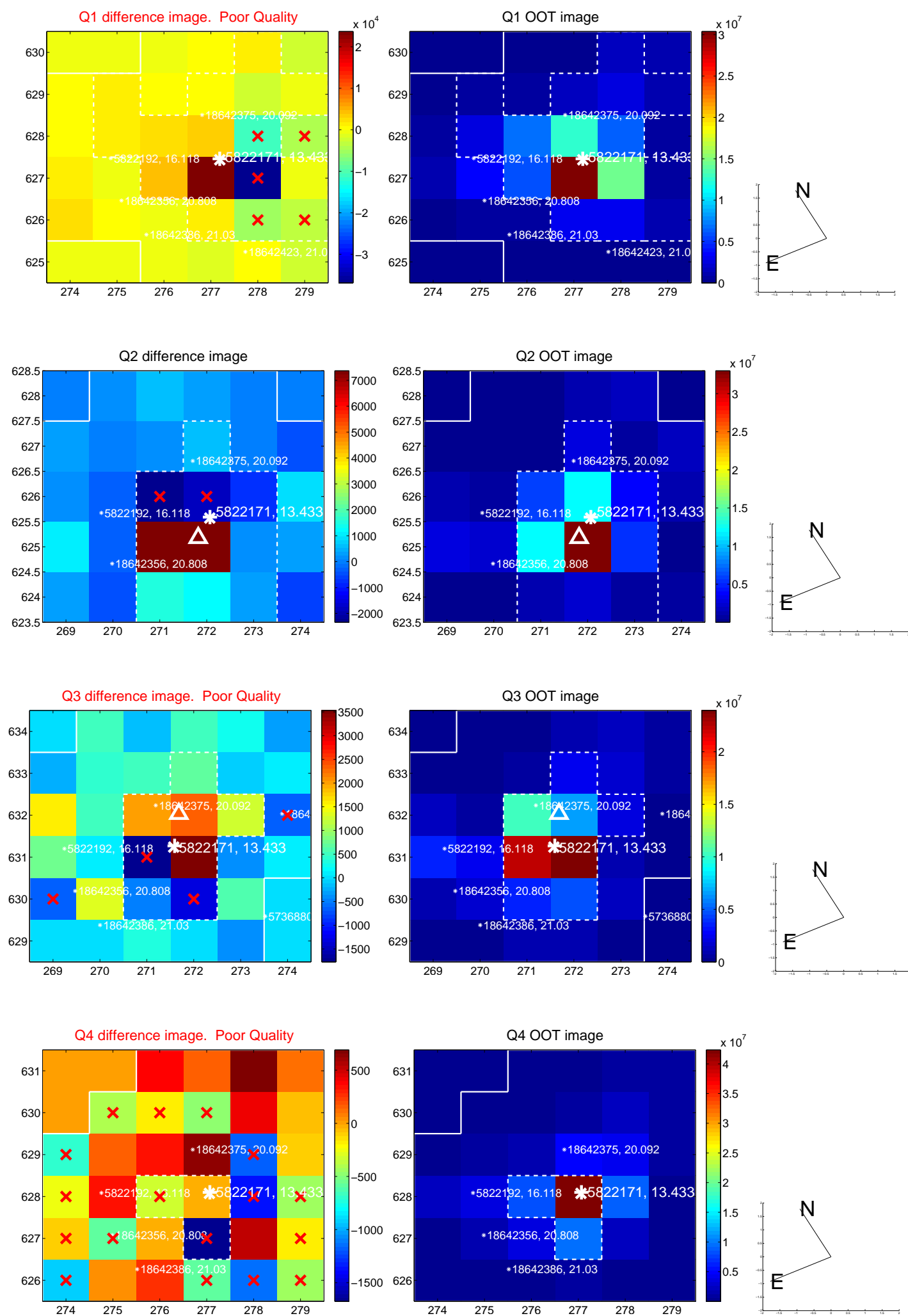
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.935 ± 0.614	3.15	-1.844 ± 0.530	-0.586 ± 0.616
PRF-fit source offset from KIC position	2.038 ± 0.690	2.95	-1.971 ± 0.606	-0.522 ± 0.723
photometric centroid source offset	1.39 ± 0.91	1.53	0.46 ± 1.05	-1.31 ± 0.89

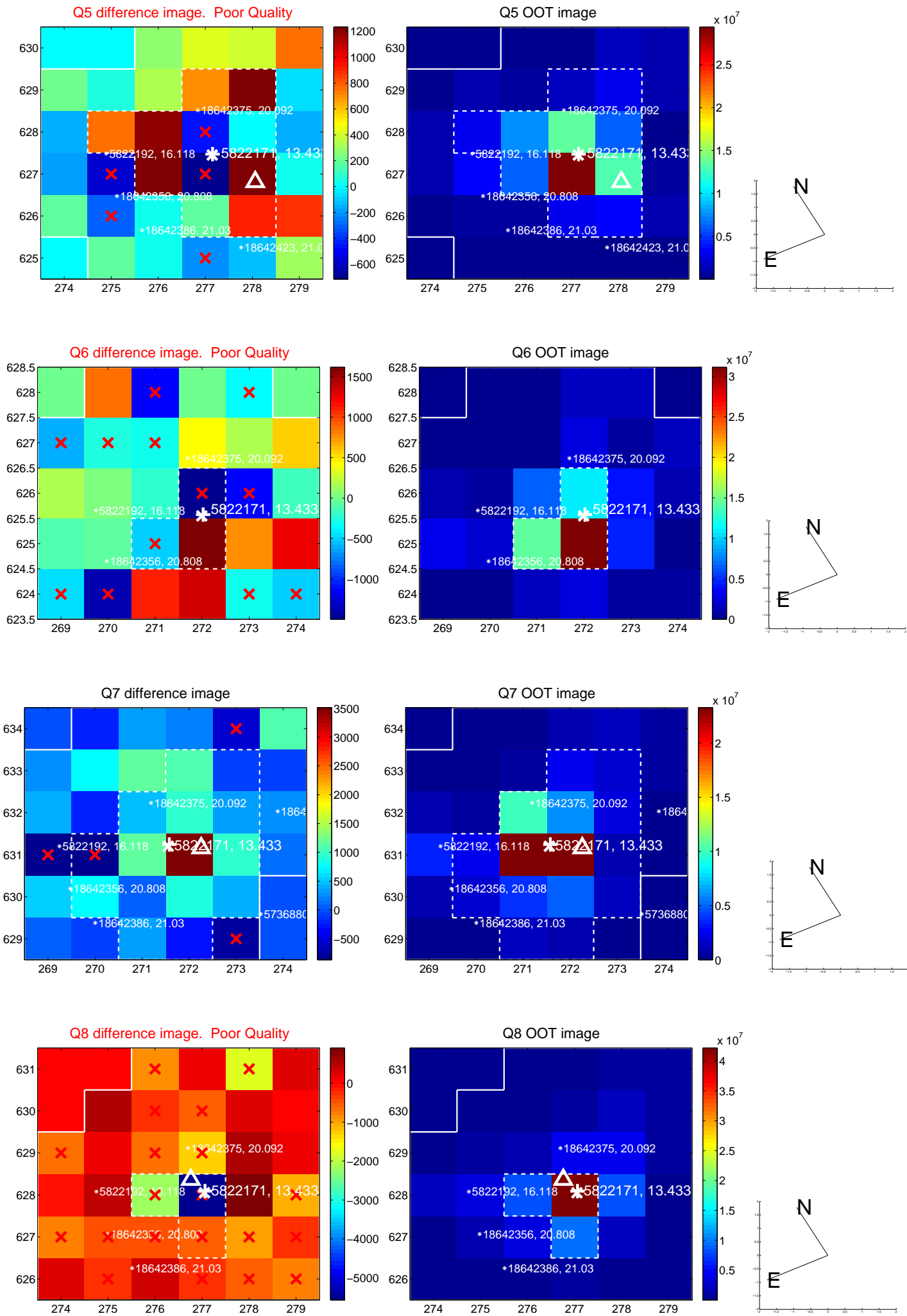


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

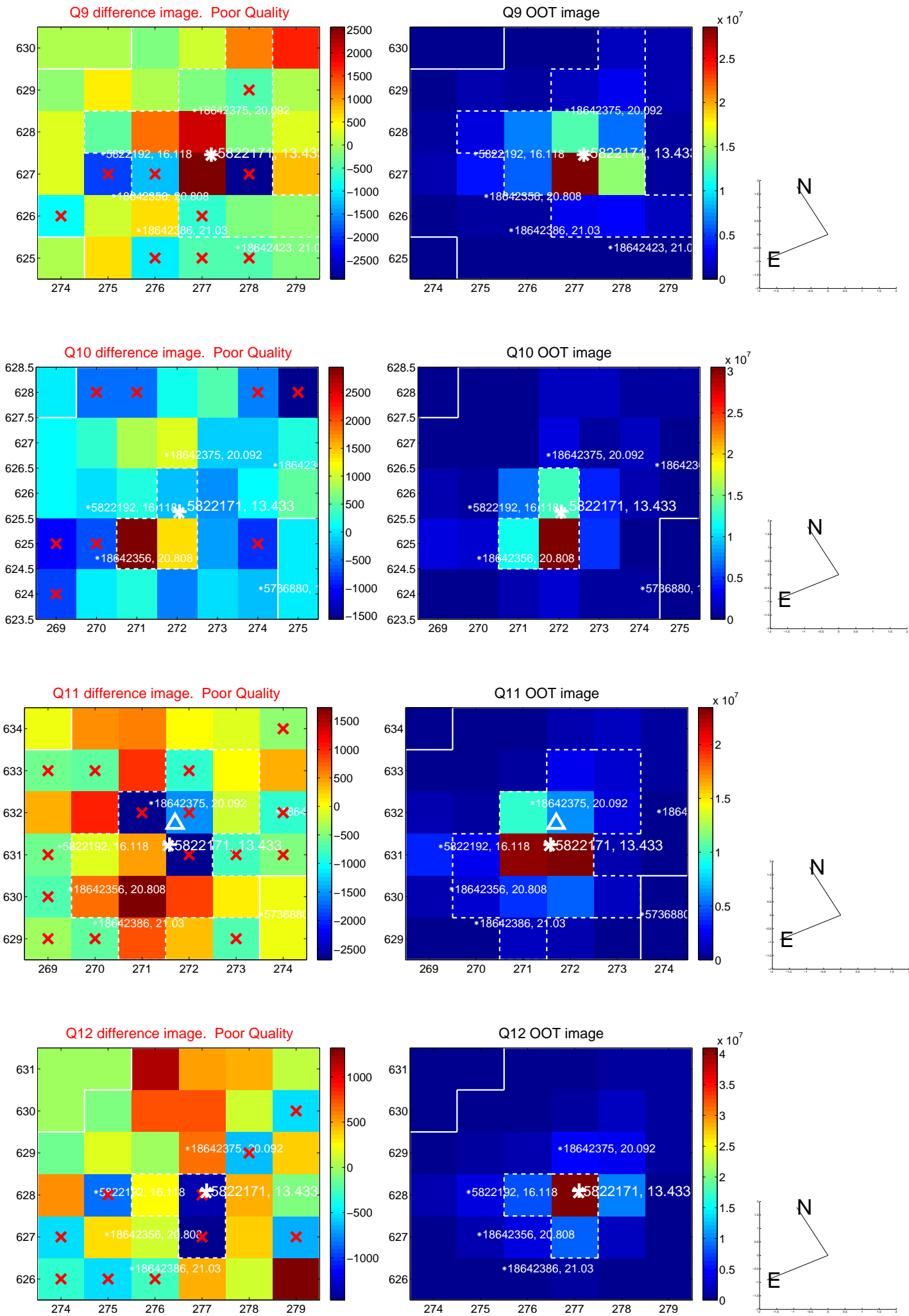
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



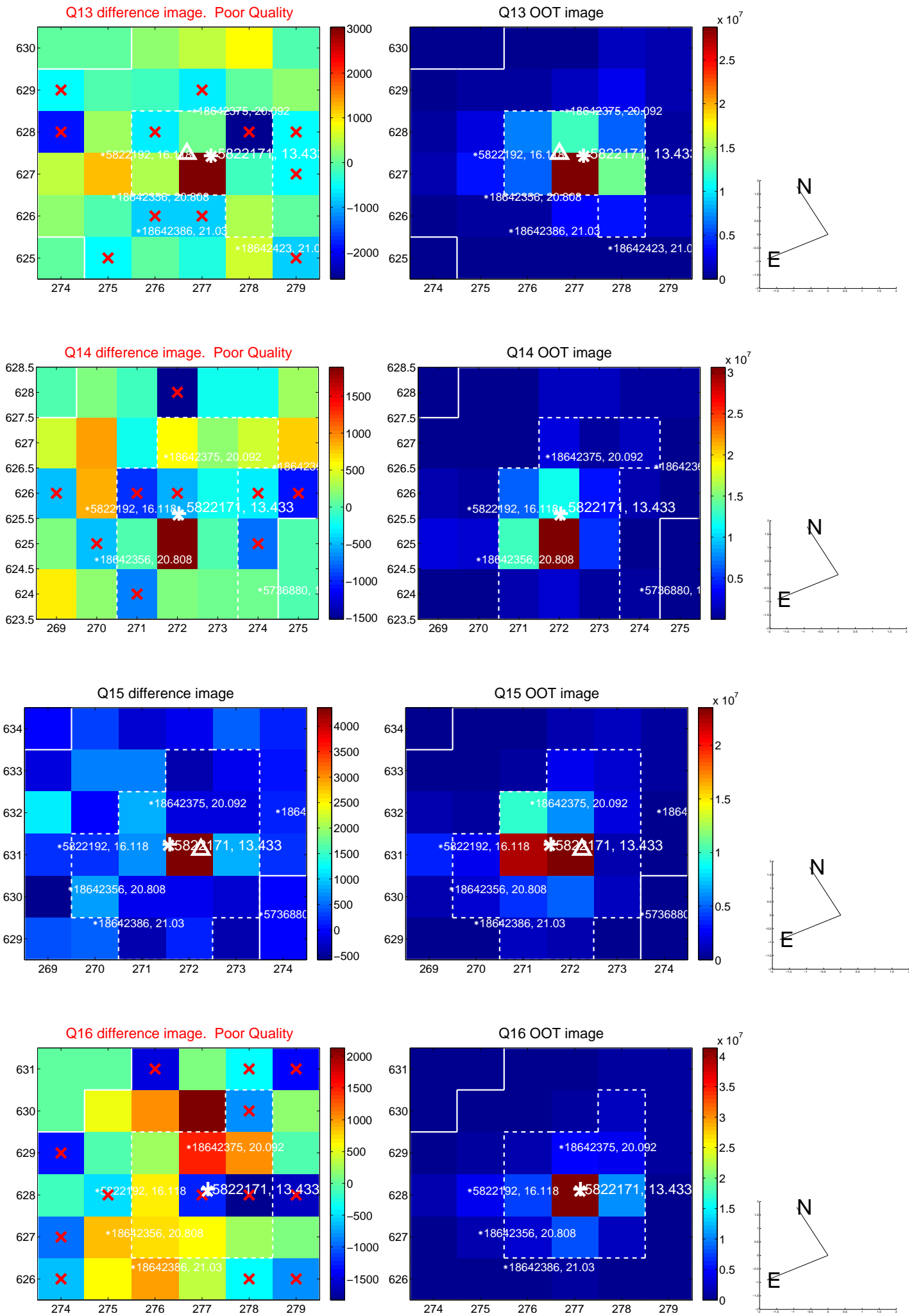
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



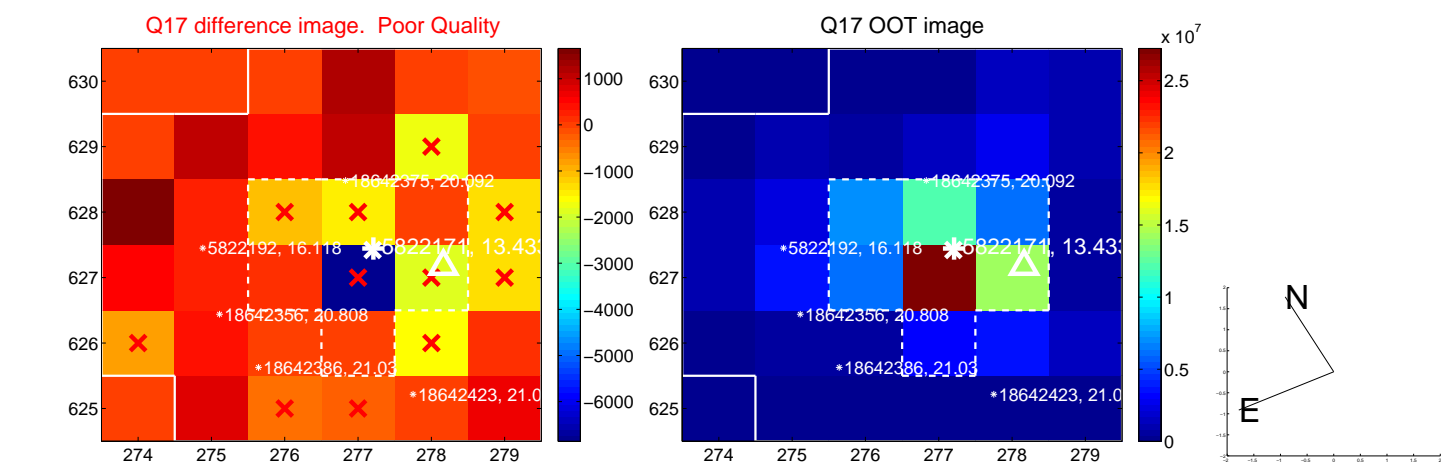
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



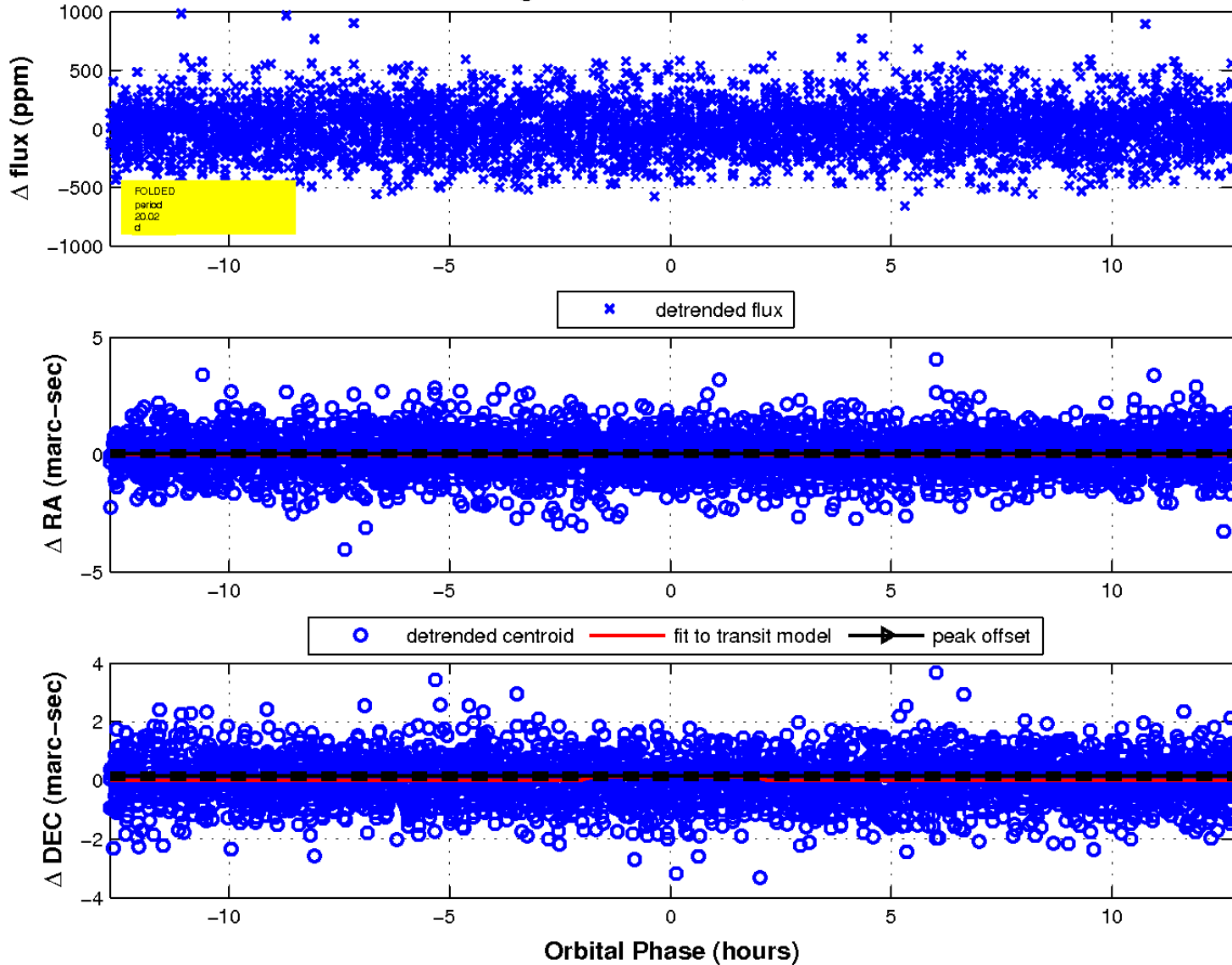
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

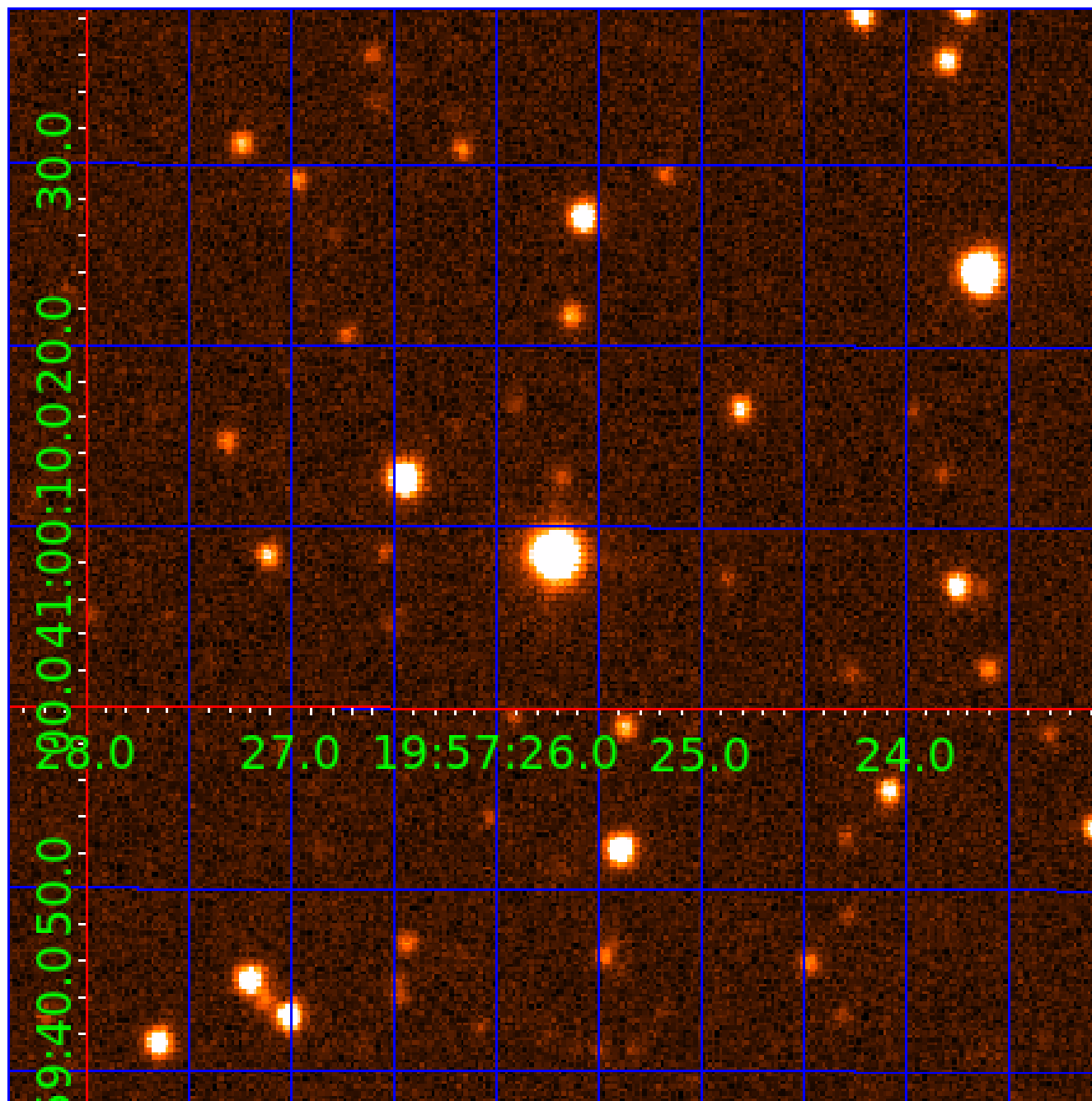


fluxWeightedCentroids, Planet 5 of 7



UKIRT Image

Declination



KIC 005822171

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})
005822171-01	OBS	No	0.679046	132.072407	10.3	4.956	10.4	5.1	1.76	6395	0.57	18206.26
005822171-02	OBS	No	11.648739	136.135338	276.4	1.002	13.4	12.0	1.76	6395	3.10	411.51
005822171-03	OBS	No	23.795057	143.871143	570.8	0.784	11.7	11.3	1.76	6395	4.58	158.77
005822171-04	OBS	No	9.111463	131.870581	46.4	10.824	10.4	5.6	1.76	6395	1.27	571.00
005822171-05	OBS	No	20.015237	148.079857	109.8	4.248	11.6	7.0	1.76	6395	2.16	199.96
005822171-06	OBS	No	6.627670	136.770988	220.2	1.310	14.1	12.0	1.76	6395	2.64	872.85
005822171-07	OBS	No	12.314166	143.669208	338.3	0.835	12.9	13.0	1.76	6395	3.33	382.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005822171-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005822171-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
005822171-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005822171-04	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_MEAS
005822171-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
005822171-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005822171-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—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.

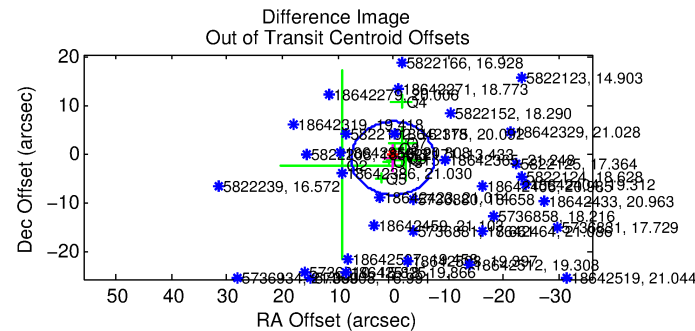
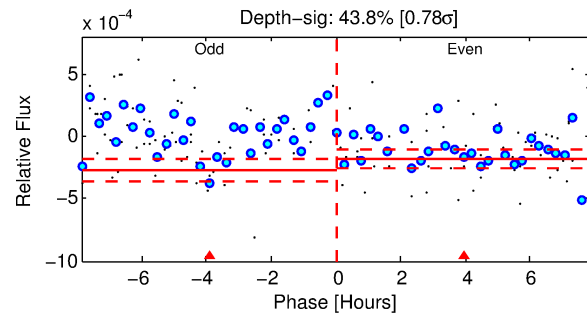
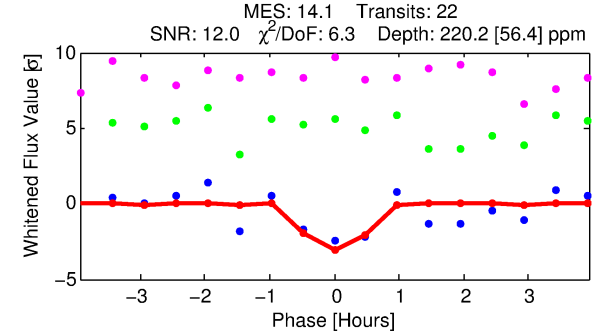
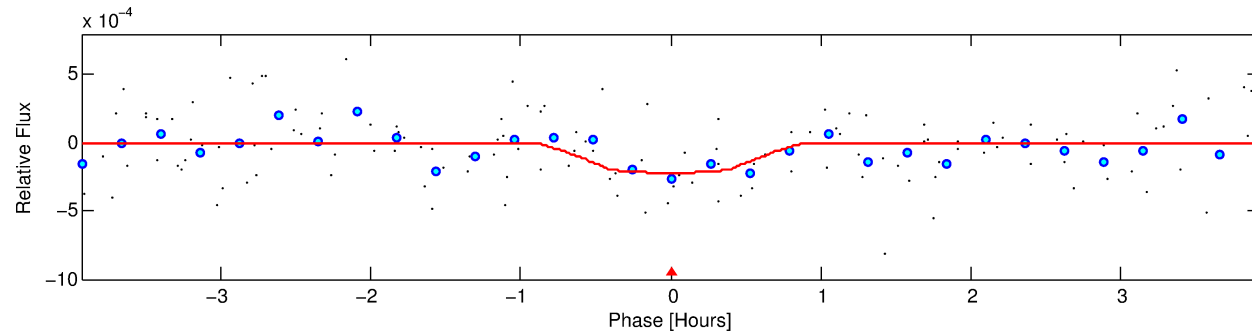
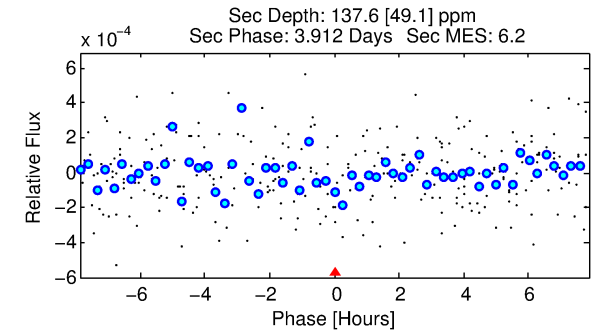
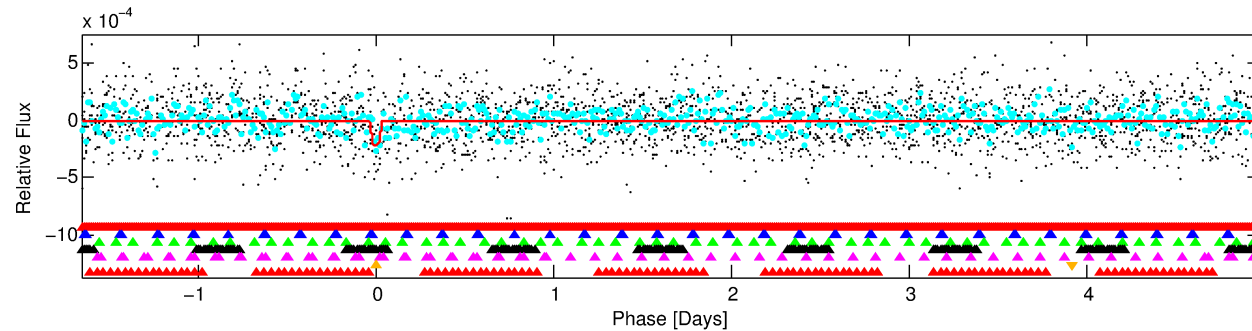
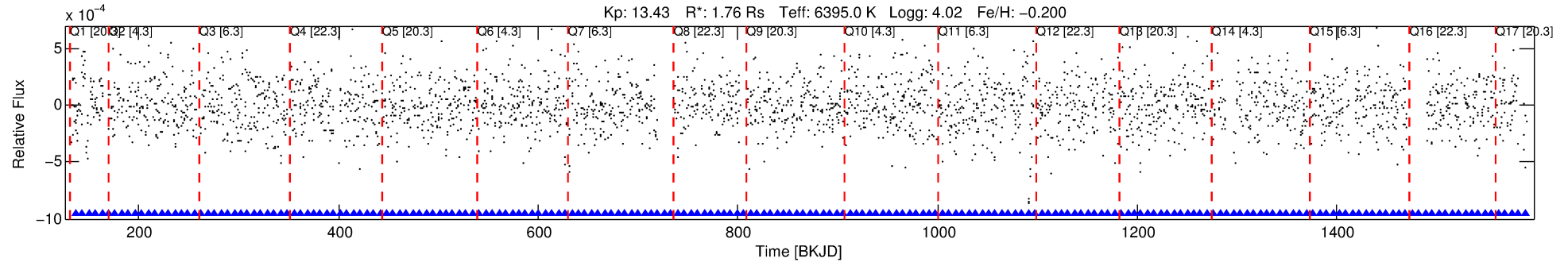
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005822171-06

No Significant Match Found

DV One-Page Summary

KIC: 5822171 Candidate: 6 of 7 Period: 6.628 d



DV Fit Results:

Period = 6.62767 [0.00009] d
Epoch = 136.7710 [0.0082] BKJD
Rp/R* = 0.0137 [0.0445]
a/R* = 39.16 [658.30]
b = 0.03 [524.79]
Seff = 872.85 [497.49]
Teq = 1386 [197] K
Rp = 2.64 [8.62] Re
a = 0.0731 [0.0249] AU
Ag = 58.08 [379.24] [0.15σ]
Teffp = 5916 [9623] K [0.47σ]

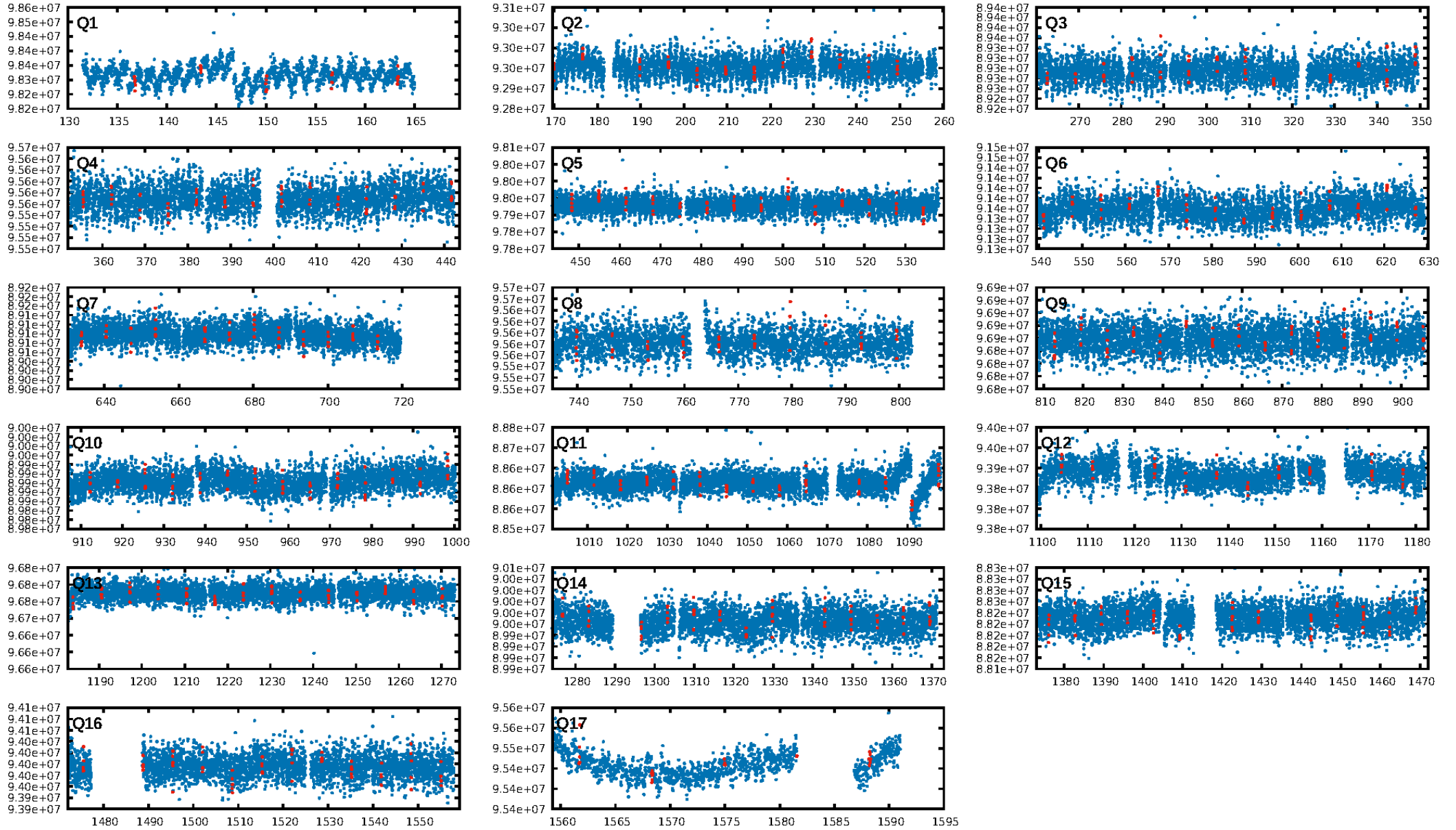
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [27.85σ]
LongPeriod-sig: 100.0% [5.47σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 6.76e-16
RollingBand-fgt: 1.00 [22/22]
GhostDiagnostic-chr: -2.563
Centroid-sig: 87.2%
Centroid-so: 0.778 arcsec [1.48σ]
OotOffset-rm: 0.789 arcsec [0.32σ]
OotOffset-st: 1/3/1/3 [8]
KicOffset-rm: 0.728 arcsec [0.29σ]
KicOffset-st: 1/3/1/3 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 0.24 [4/17]

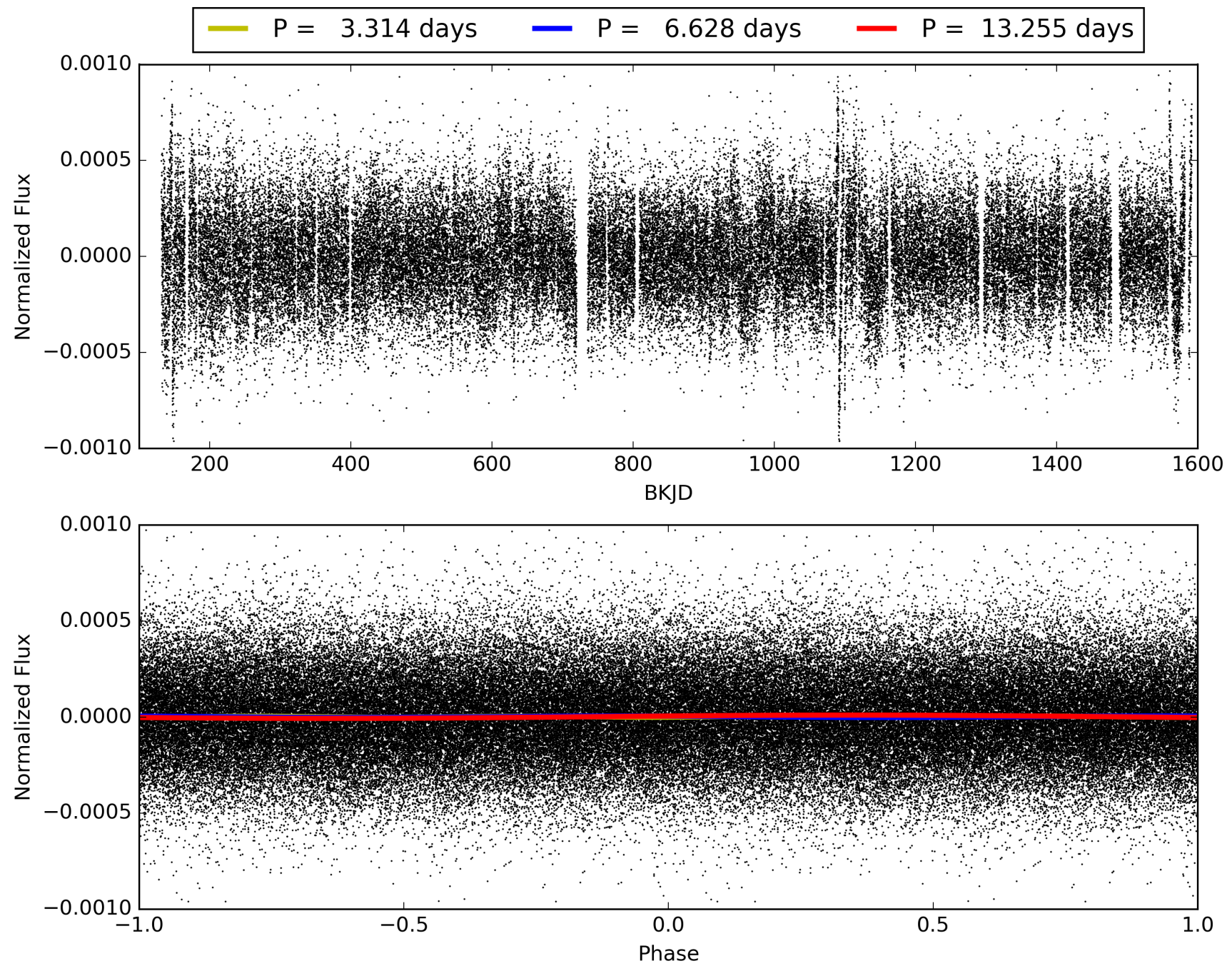
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:30:08 Z

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

TCE 005822171-06, PDC Light Curves

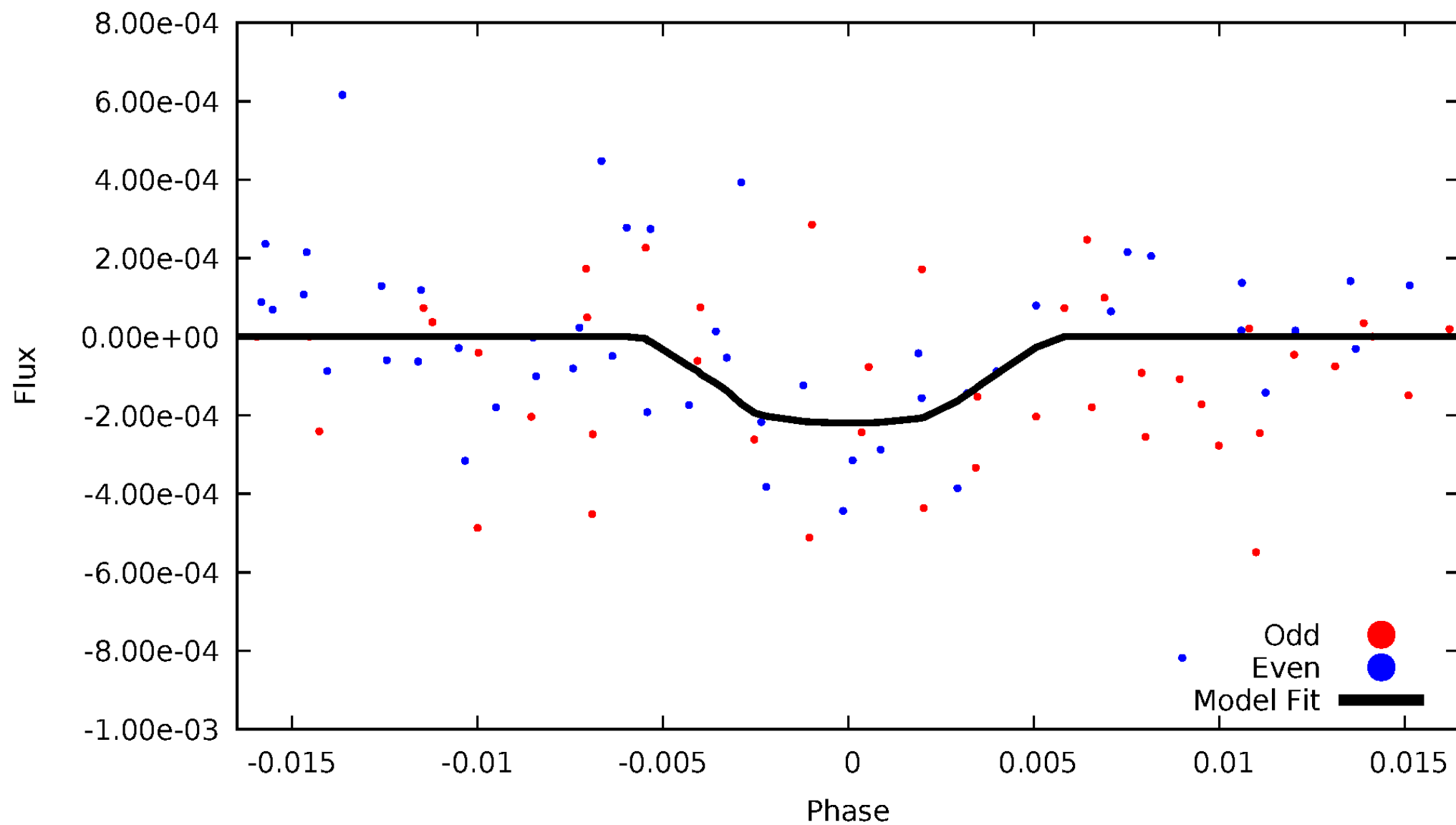


TCE 005822171-06



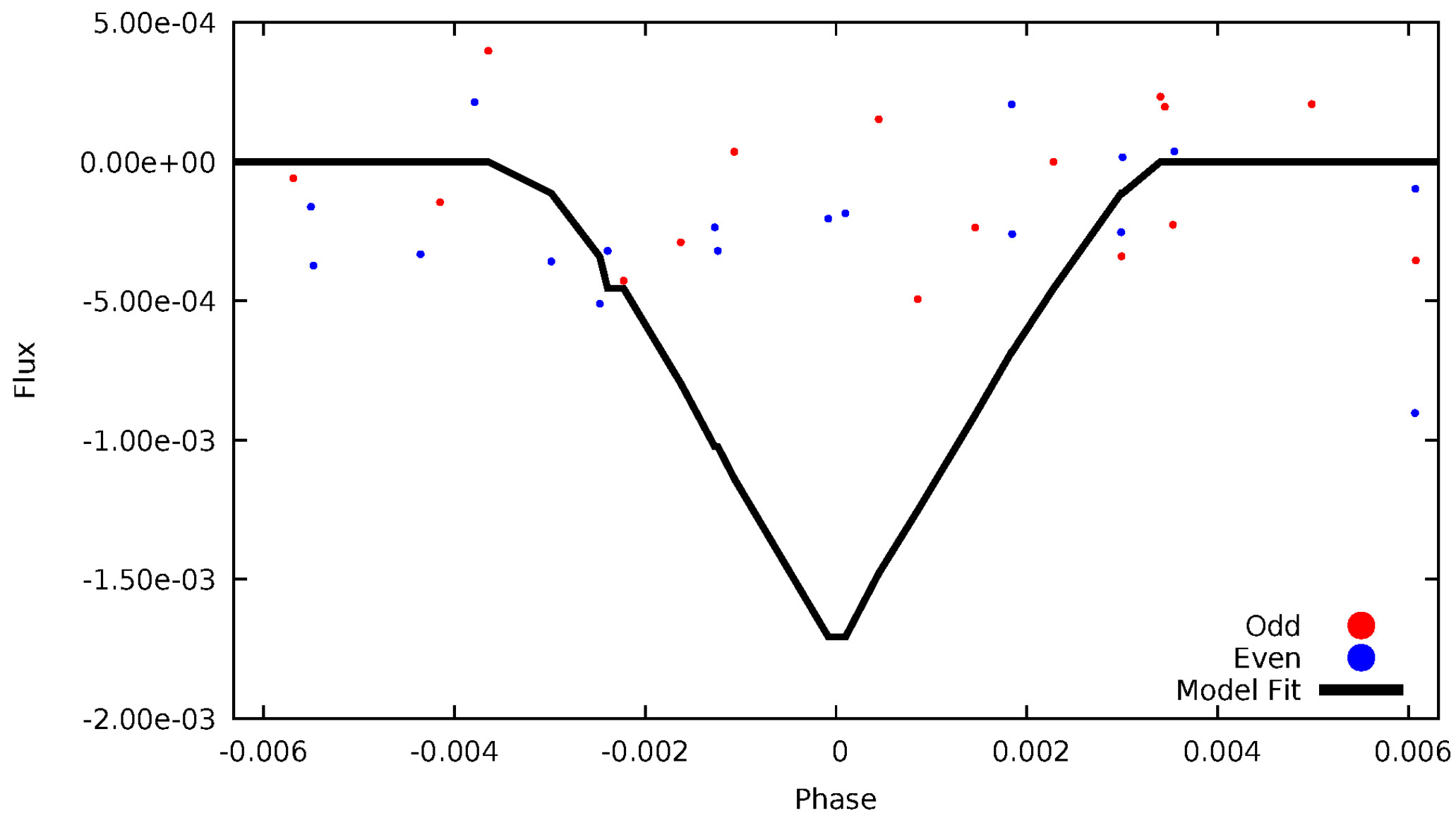
DV Odd/Even

TCE 005822171-06



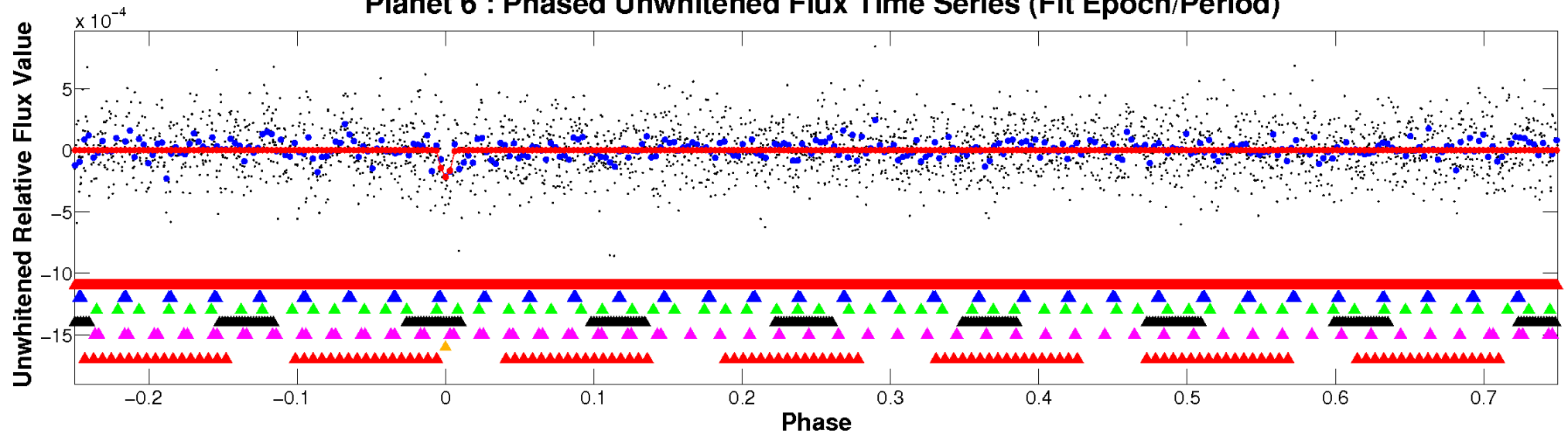
ALT Odd/Even

TCE 005822171-06

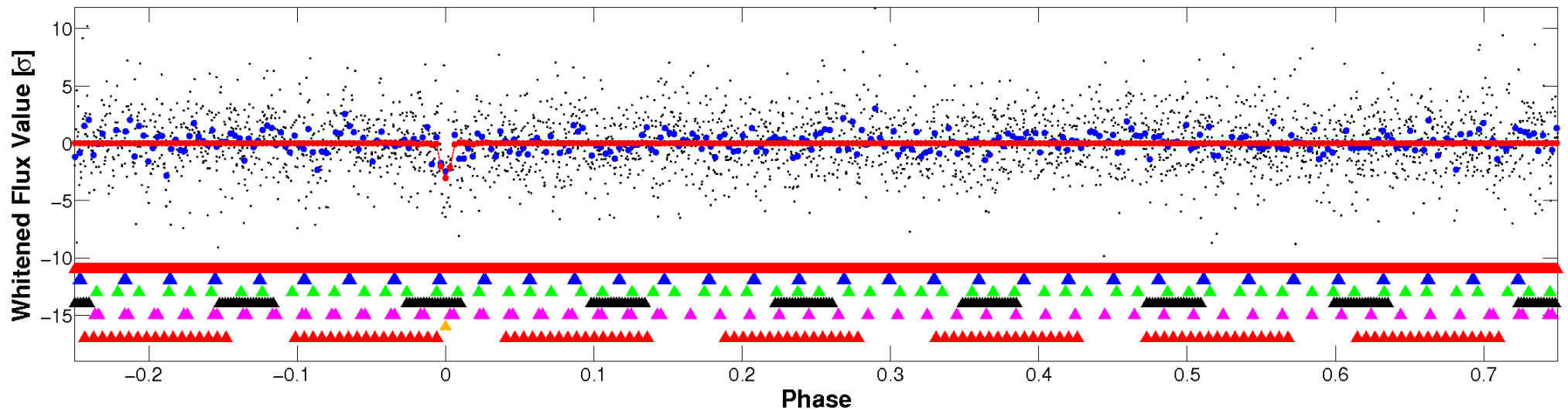


Non-Whitened Vs. Whitened Light Curve

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

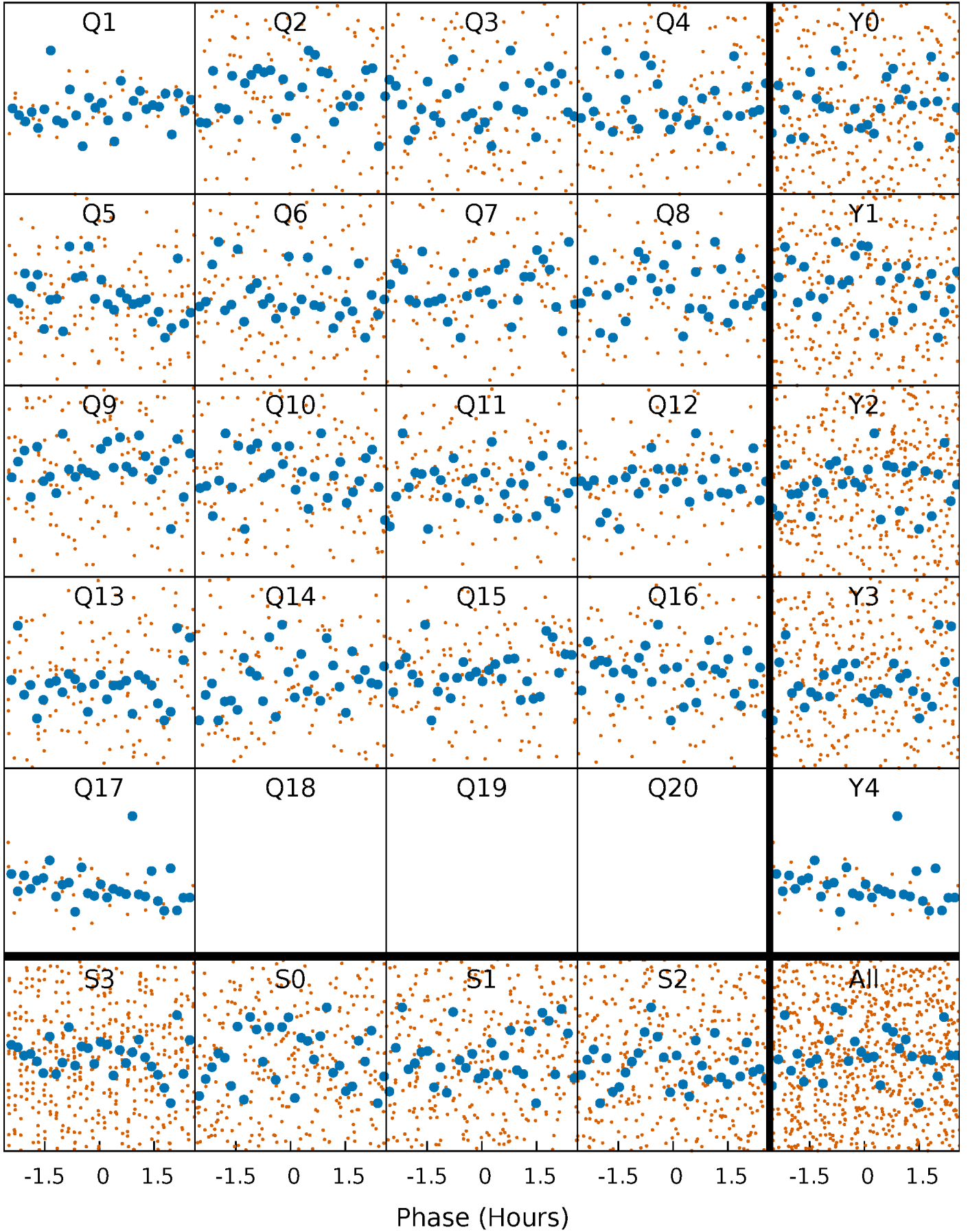


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



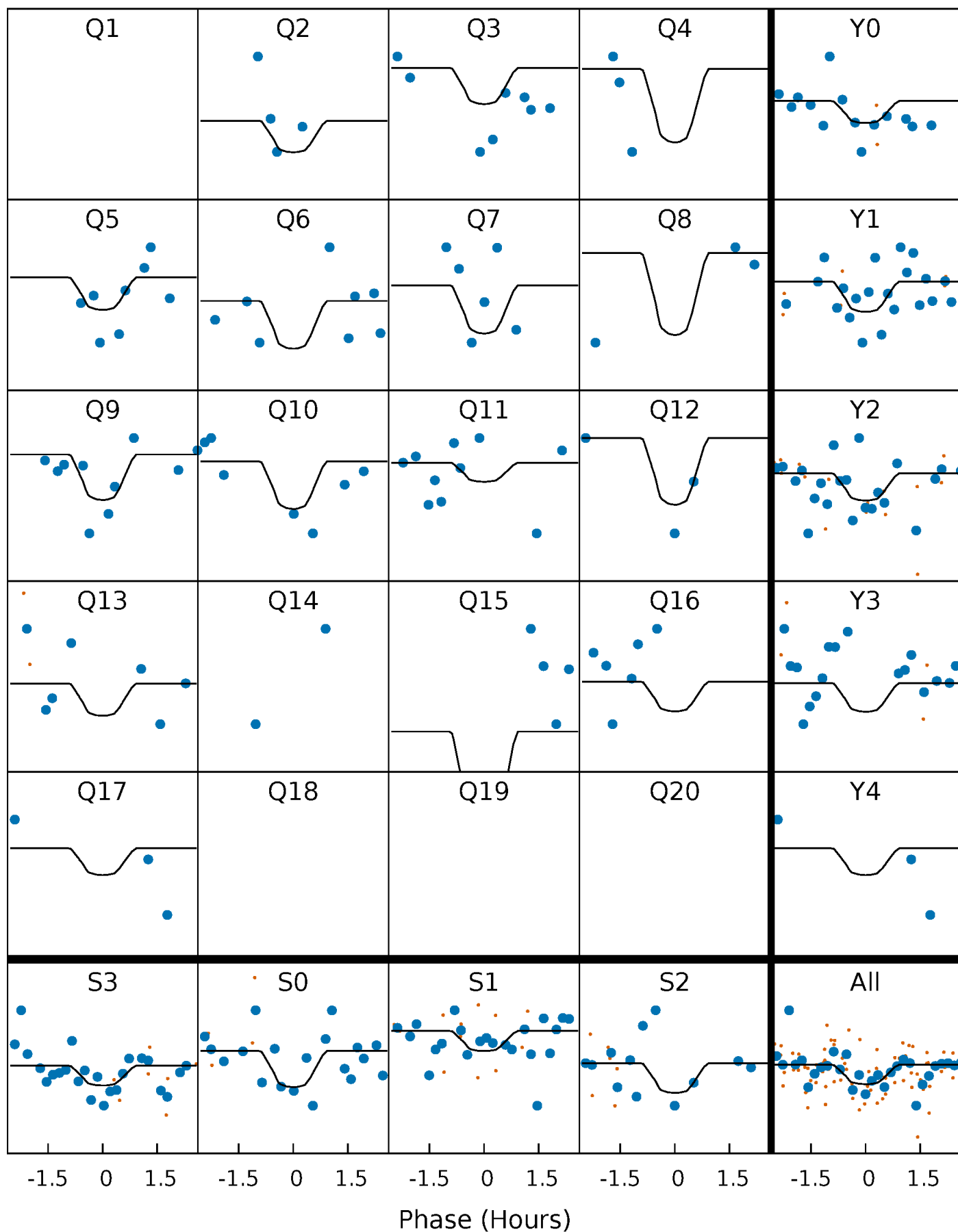
PDC Quarter-Phased Transit Curves

TCE 005822171-06 P= 6.627670 Days $T_0=136.770987$ (BKJD)



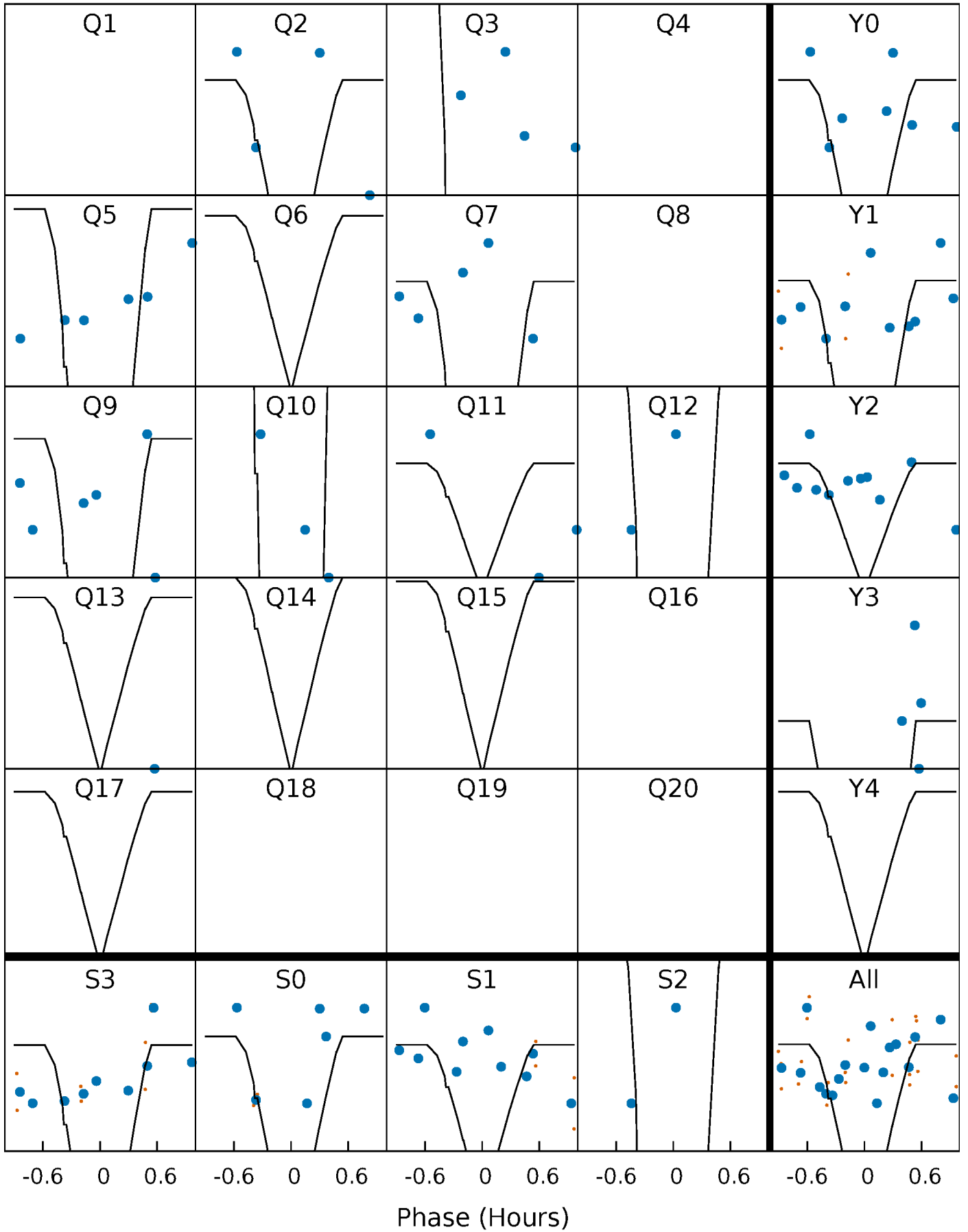
DV Quarter-Phased Transit Curves

TCE 005822171-06 P= 6.627670 Days $T_0=136.770987$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

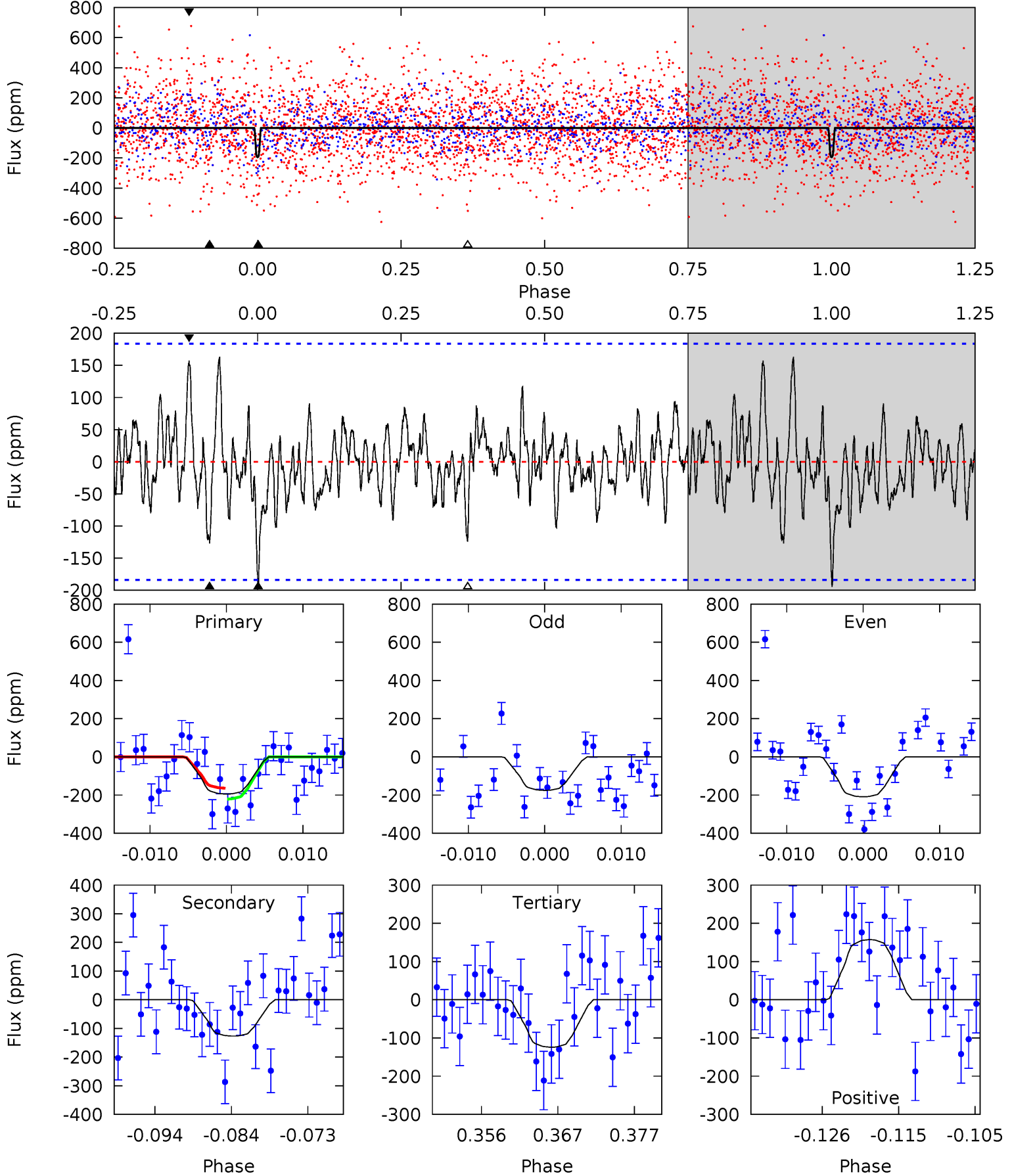
TCE 005822171-06 P= 6.627808 Days $T_0=136.770468$ (BKJD)



DV Model-Shift Uniqueness Test

005822171-06, P = 6.627670 Days, E = 130.143317 Days

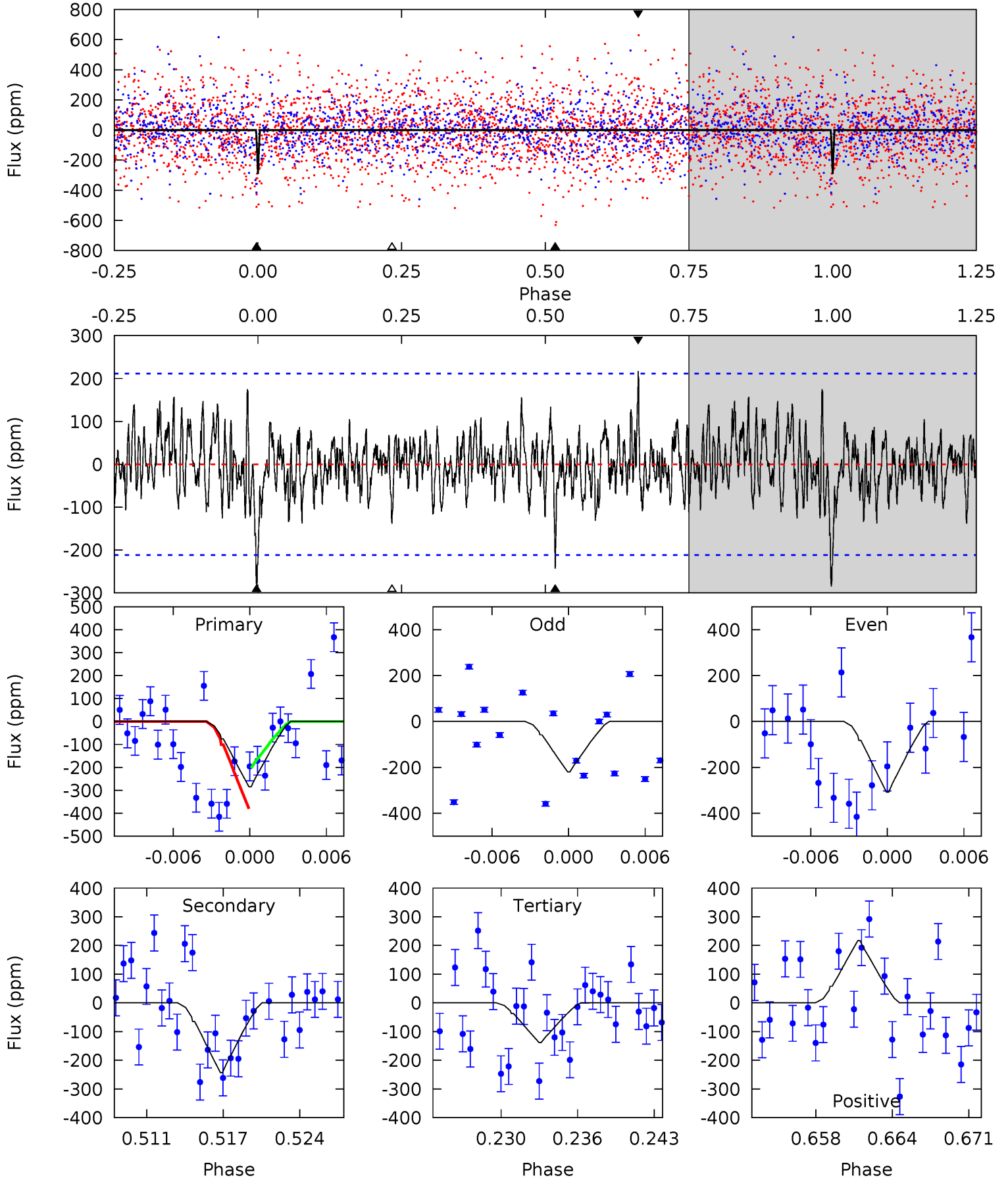
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.31	3.46	3.39	4.29	5.02	2.56	1.21	1.92	1.02	0.07	-0.83	0.45	0.89	0.46	0.78



Alt Model-Shift Uniqueness Test

005822171-06, P = 6.627808 Days, E = 130.142660 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.87	5.87	3.34	5.25	5.11	2.73	1.33	3.53	1.62	2.54	0.62	1.06	0.88	0.43	2.16



Stellar Parameters For KIC 005822171

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6395^{+175}_{-214}	$4.019^{+0.329}_{-0.165}$	$-0.200^{+0.250}_{-0.300}$	$1.765^{+0.494}_{-0.603}$	$1.187^{+0.188}_{-0.188}$	$0.304^{+0.653}_{-0.139}$
	+3%/-3%	+8%/-4%	+125%/-150%	+28%/-34%	+16%/-16%	+215%/-46%
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 005822171-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-127 ± 37	$6.49^{+6.94}_{-4.65}$	1910^{+143}_{-182}	3846^{+2695}_{-810}	$8.694^{+84.794}_{-6.649}$
Alt.	-243 ± 41	$9.19^{+7.86}_{-5.94}$	1919^{+155}_{-185}	3883^{+1966}_{-737}	$8.677^{+55.290}_{-6.228}$

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

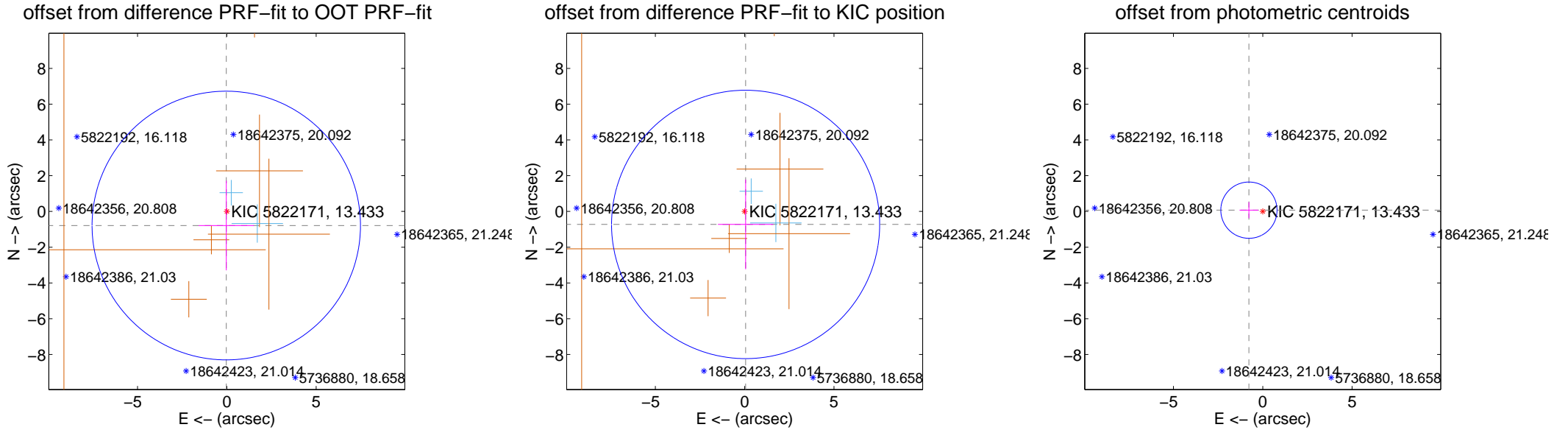
DV Centroid Data

Supplemental centroid analysis for 005822171-06. Kepler magnitude: 13.43. Transit SNR 12.04

There are 2 quarters with good PRF difference image offsets

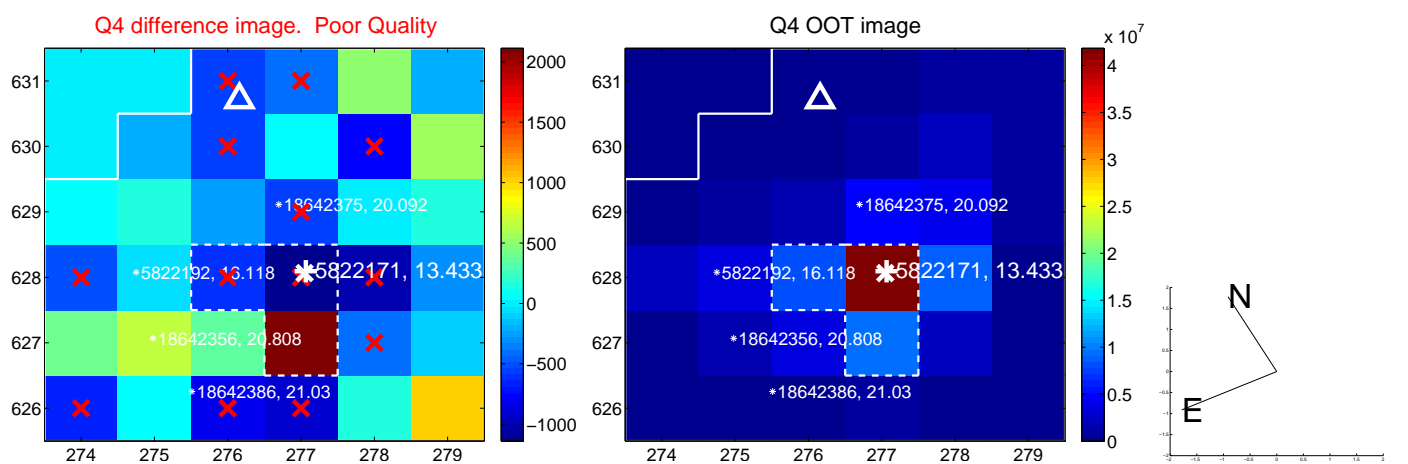
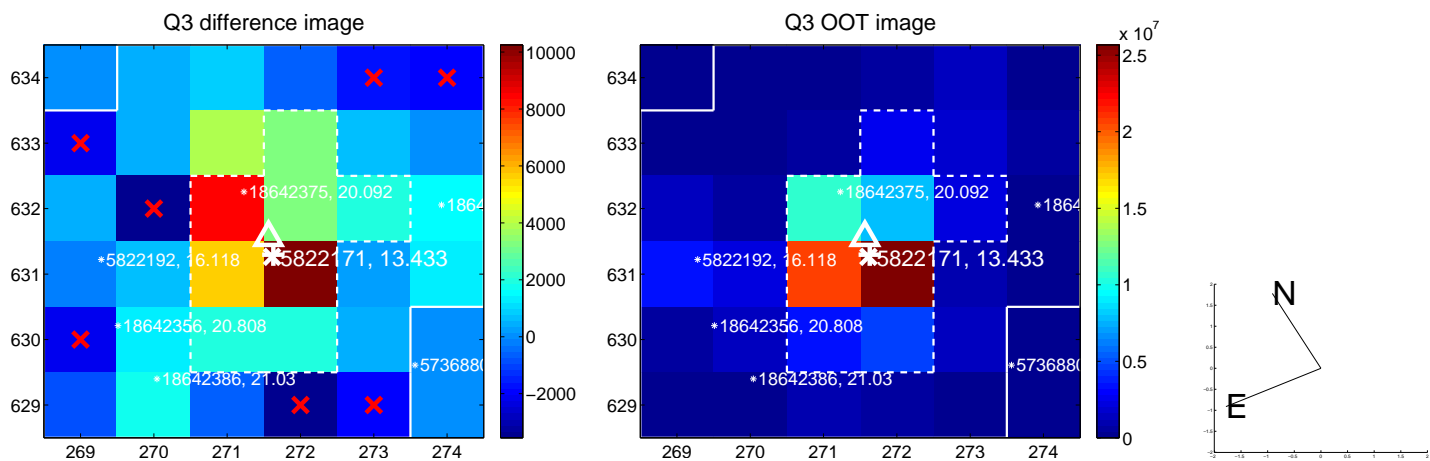
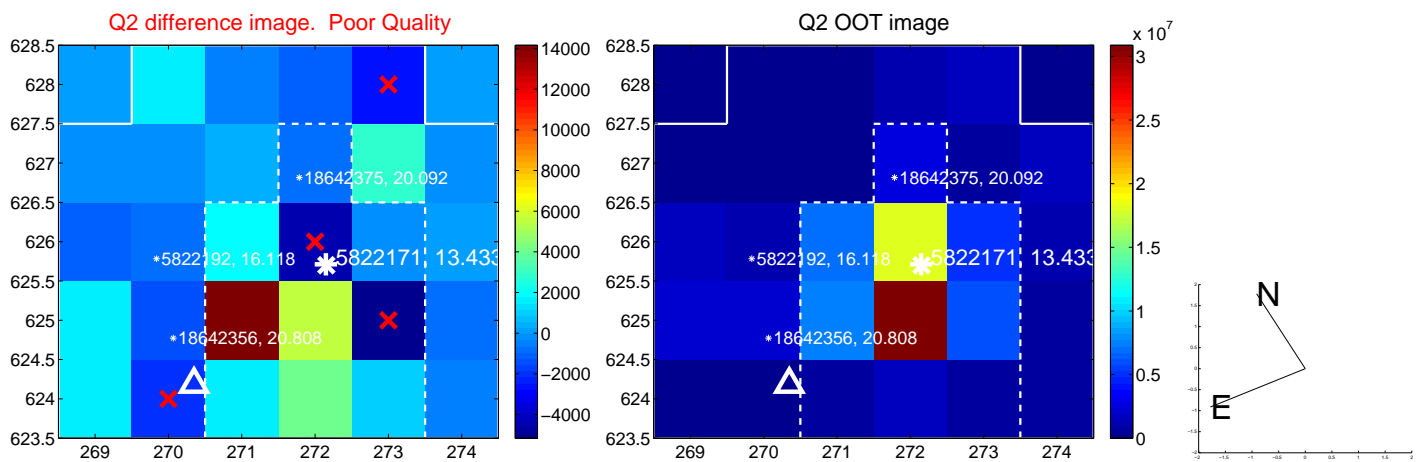
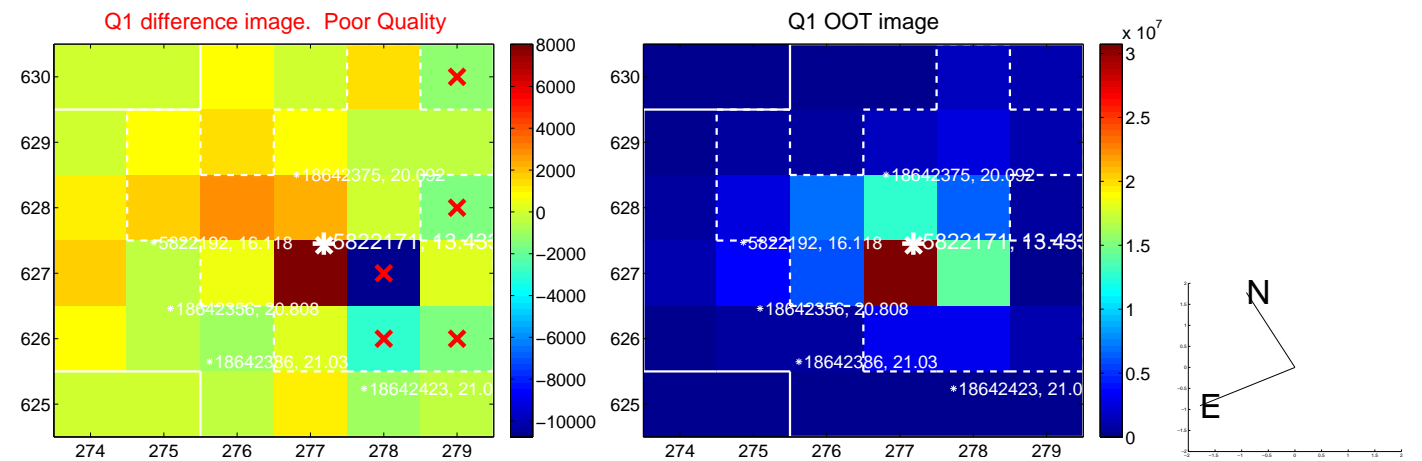
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.789 ± 2.505	0.32	0.032 ± 1.551	-0.789 ± 2.507
PRF-fit source offset from KIC position	0.728 ± 2.502	0.29	-0.053 ± 1.551	-0.726 ± 2.507
photometric centroid source offset	0.78 ± 0.52	1.48	0.78 ± 0.53	0.07 ± 0.45

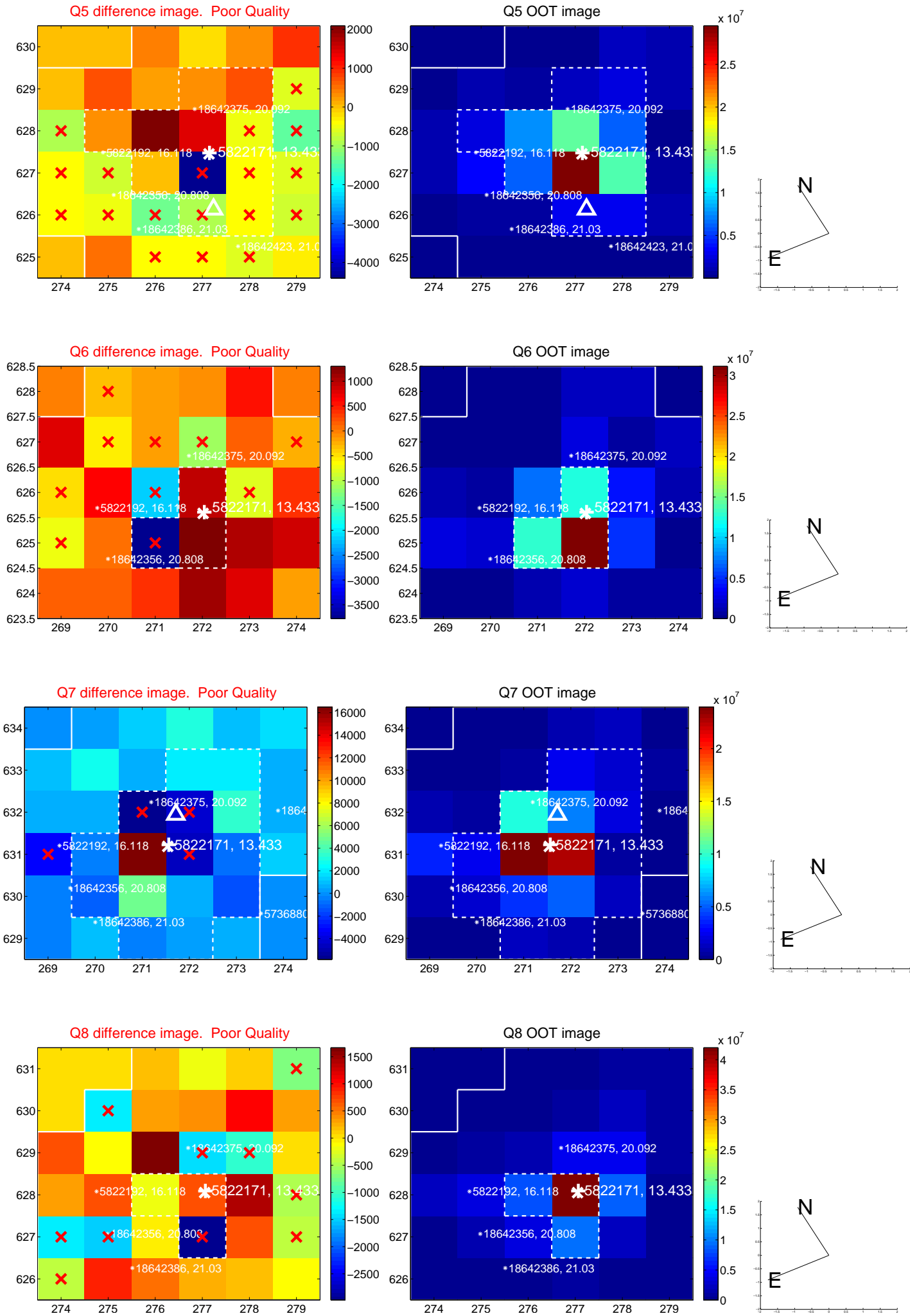


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

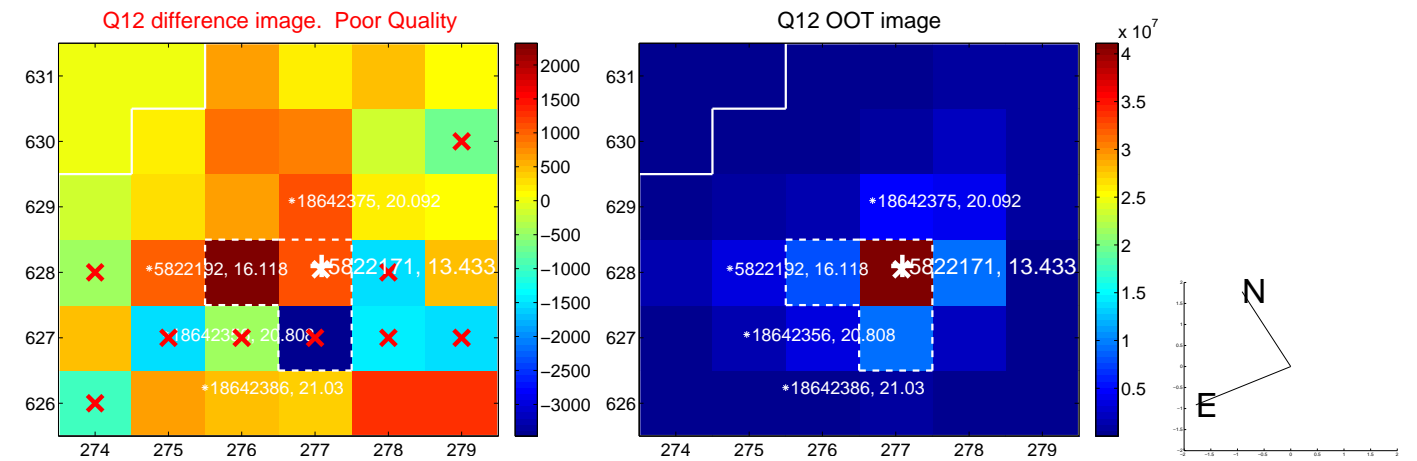
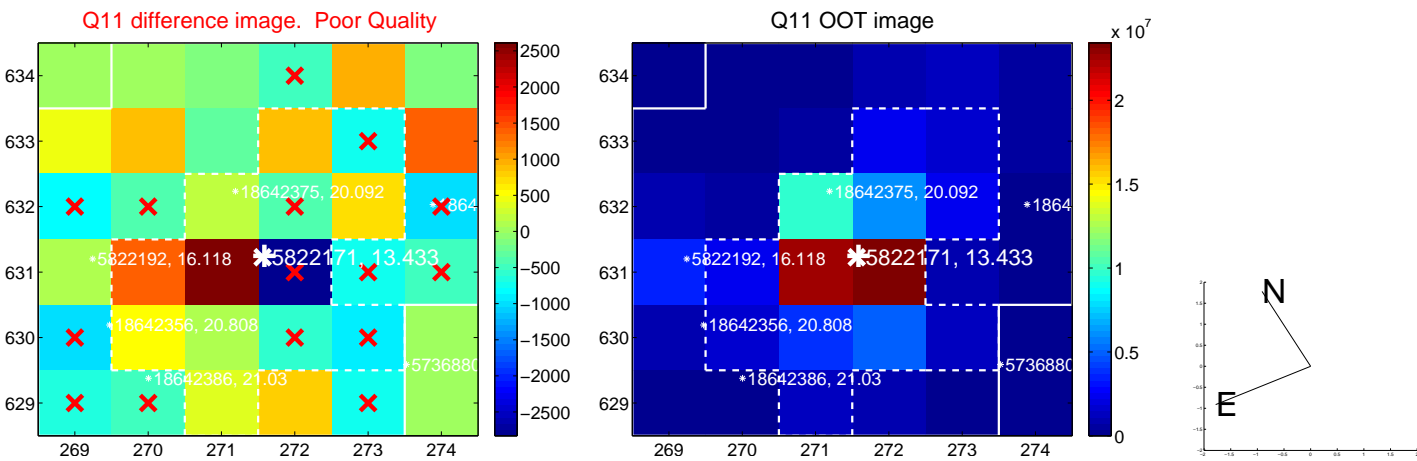
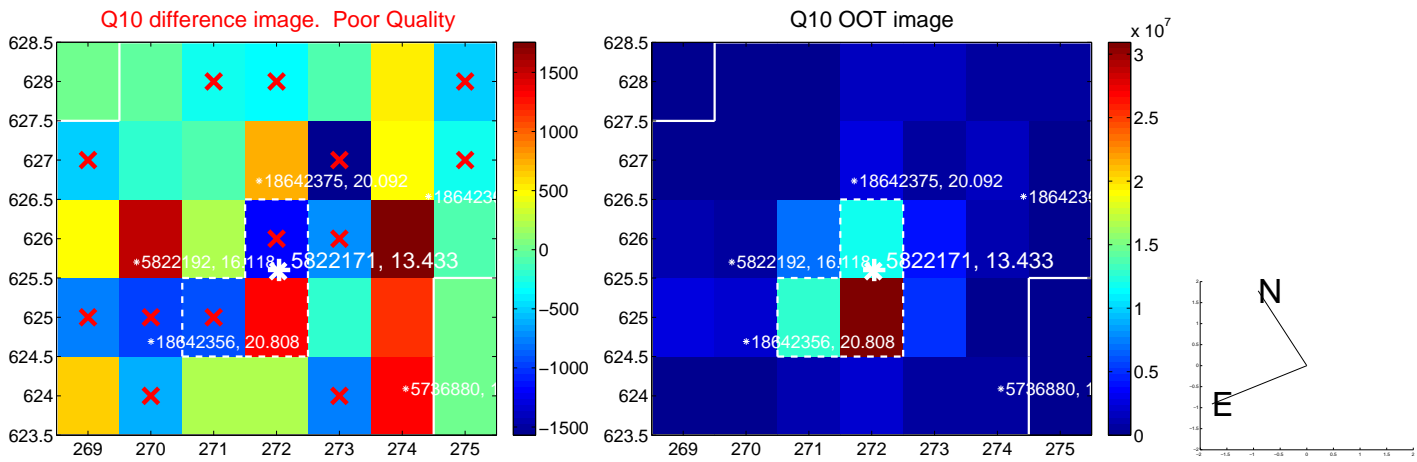
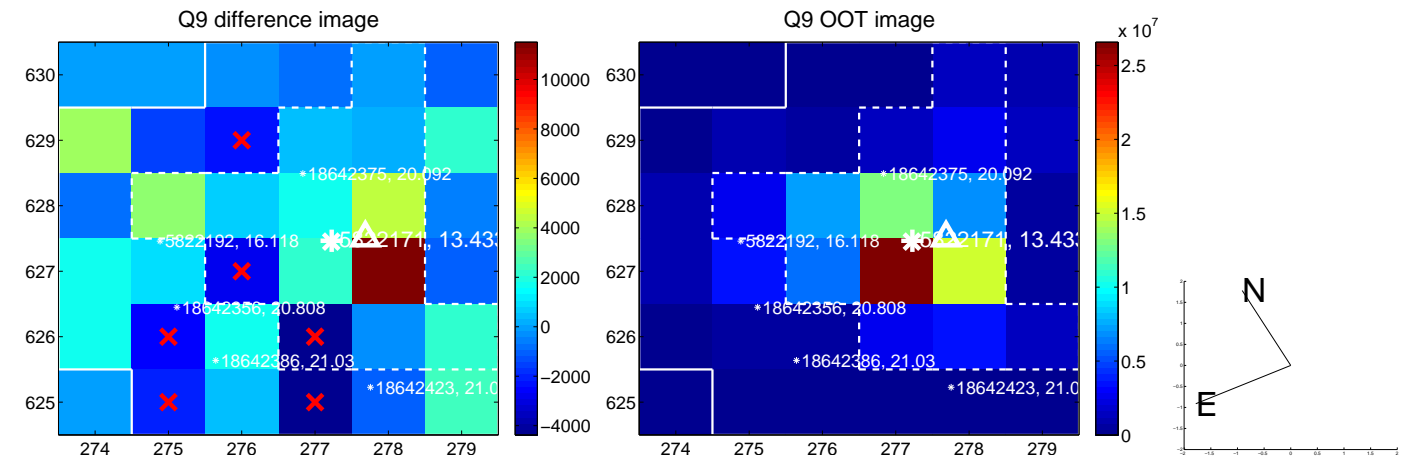
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



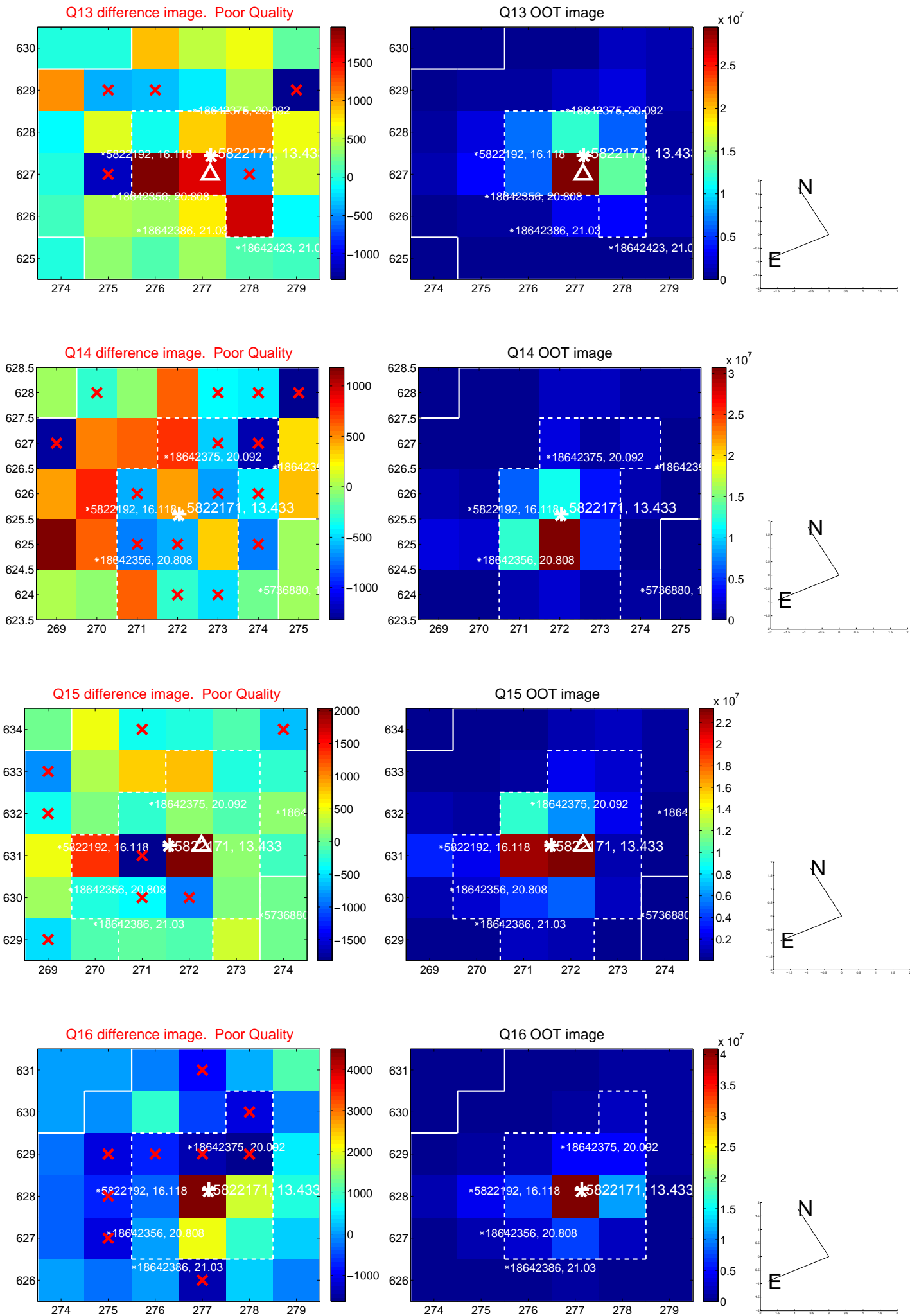
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



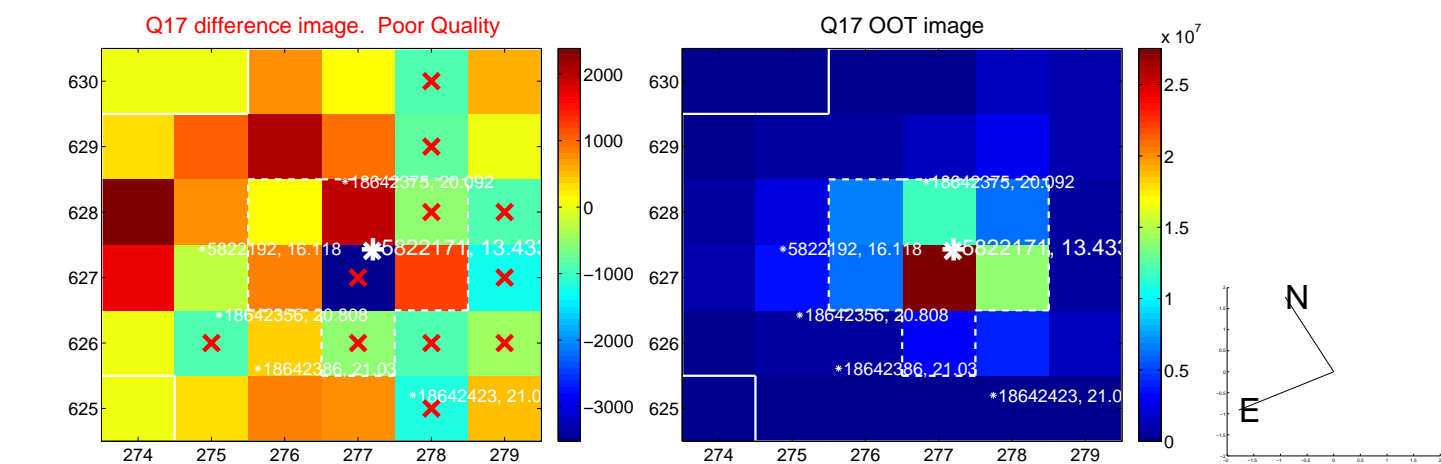
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



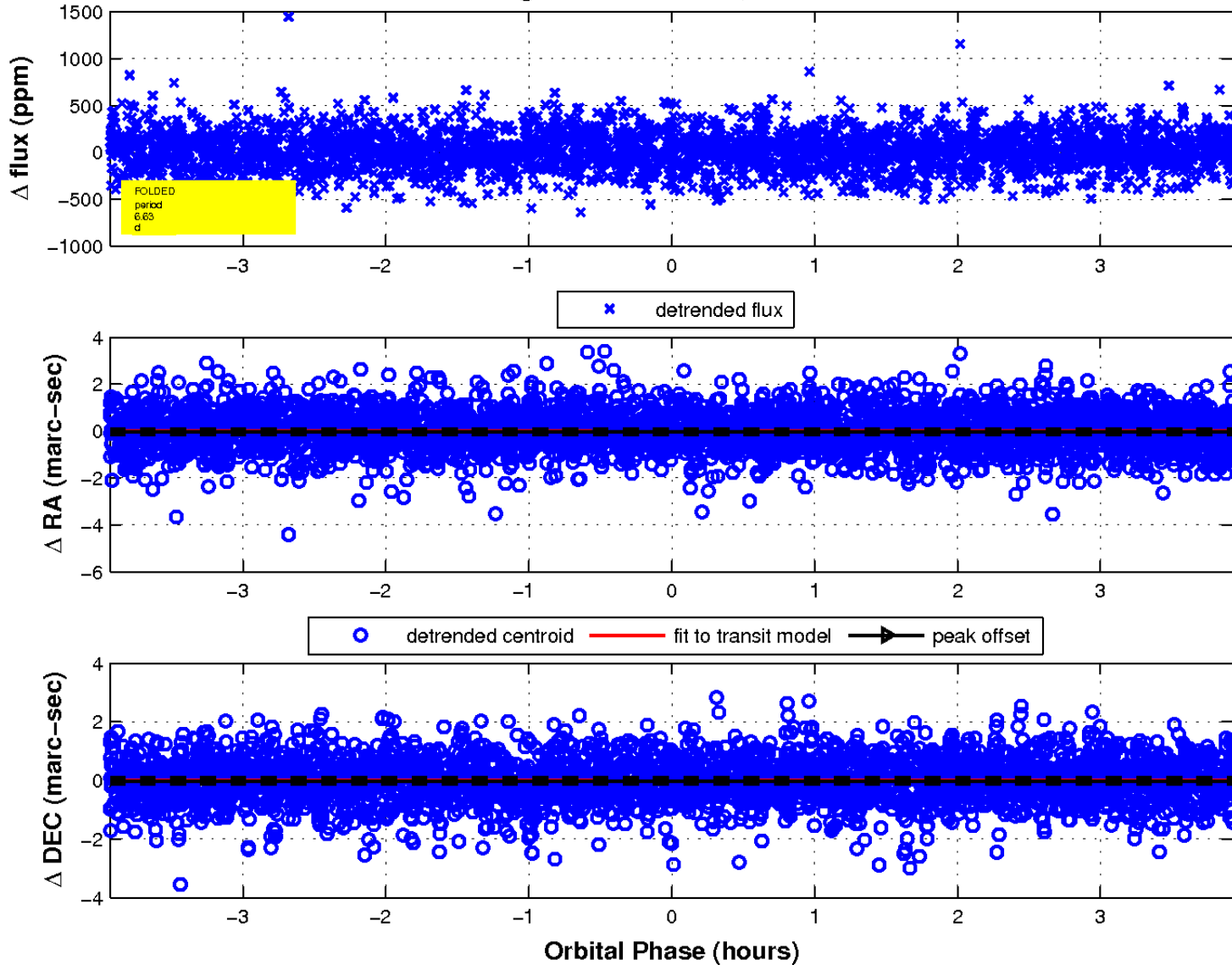
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

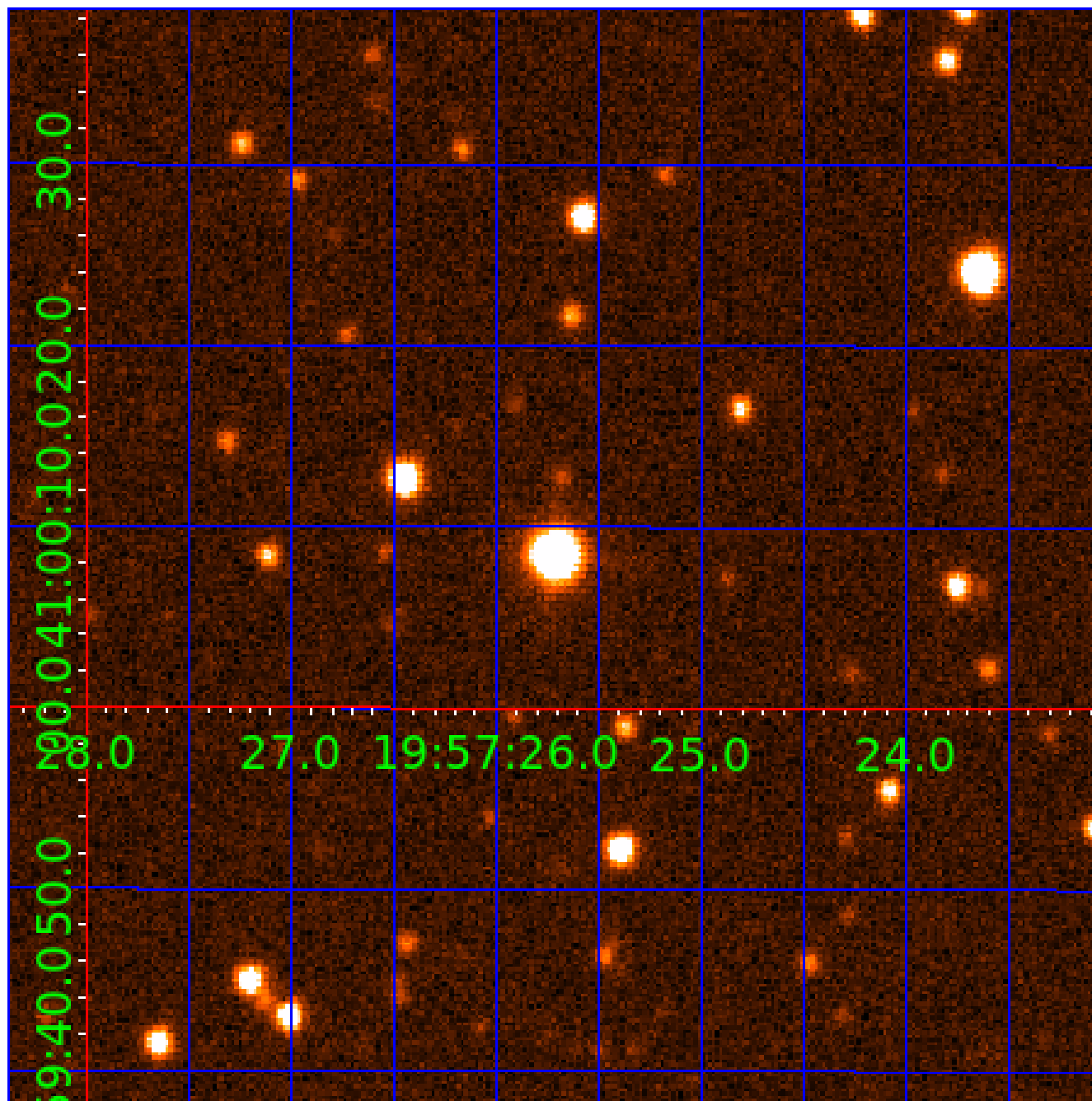


fluxWeightedCentroids, Planet 6 of 7



UKIRT Image

Declination



KIC 005822171

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})
005822171-01	OBS	No	0.679046	132.072407	10.3	4.956	10.4	5.1	1.76	6395	0.57	18206.26
005822171-02	OBS	No	11.648739	136.135338	276.4	1.002	13.4	12.0	1.76	6395	3.10	411.51
005822171-03	OBS	No	23.795057	143.871143	570.8	0.784	11.7	11.3	1.76	6395	4.58	158.77
005822171-04	OBS	No	9.111463	131.870581	46.4	10.824	10.4	5.6	1.76	6395	1.27	571.00
005822171-05	OBS	No	20.015237	148.079857	109.8	4.248	11.6	7.0	1.76	6395	2.16	199.96
005822171-06	OBS	No	6.627670	136.770988	220.2	1.310	14.1	12.0	1.76	6395	2.64	872.85
005822171-07	OBS	No	12.314166	143.669208	338.3	0.835	12.9	13.0	1.76	6395	3.33	382.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005822171-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005822171-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
005822171-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005822171-04	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_MEAS
005822171-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
005822171-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005822171-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—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.

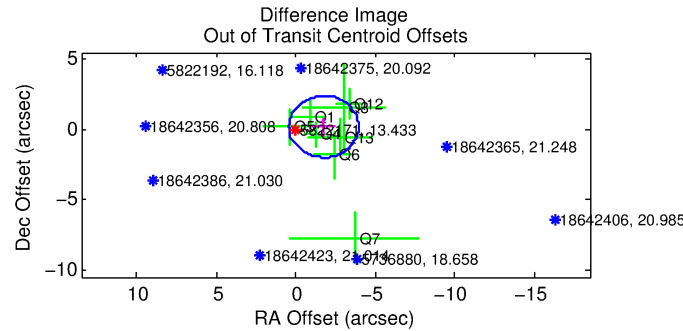
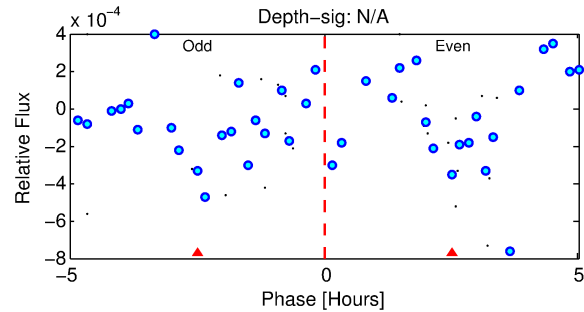
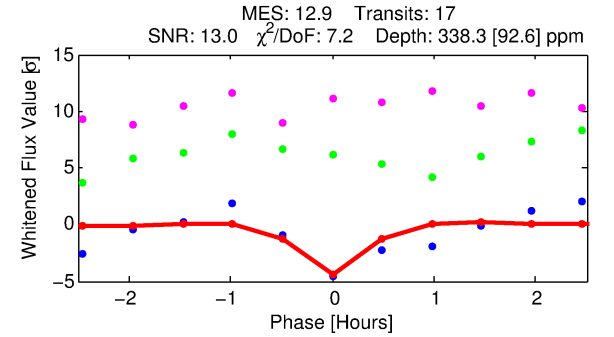
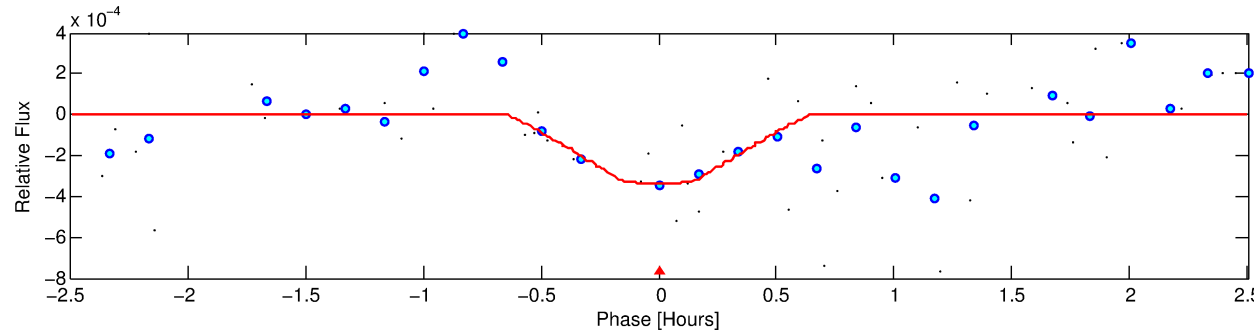
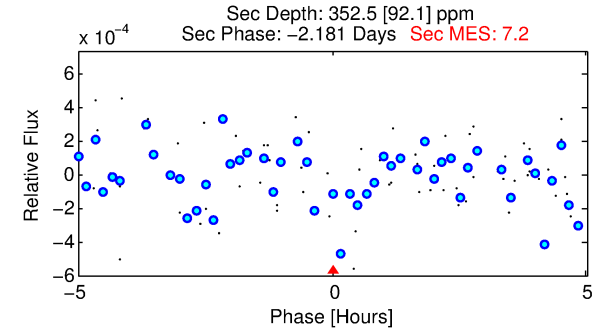
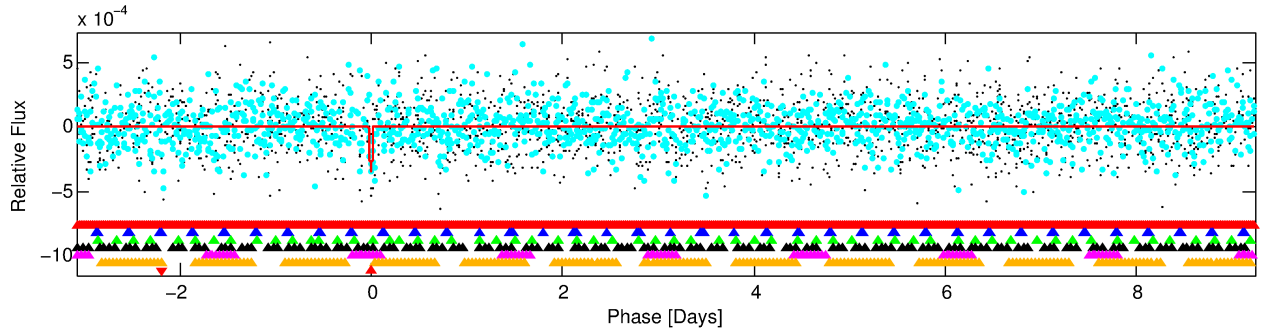
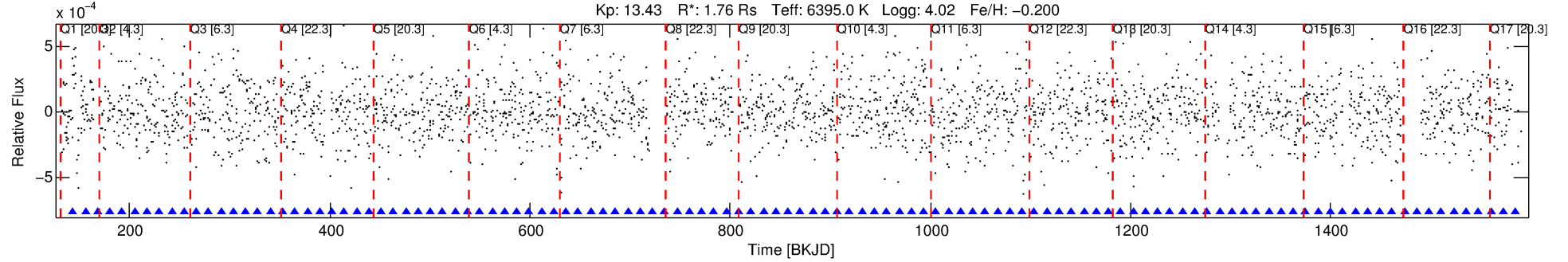
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005822171-07

No Significant Match Found

DV One-Page Summary

KIC: 5822171 Candidate: 7 of 7 Period: 12.314 d



DV Fit Results:

Period = 12.31417 [0.00011] d
Epoch = 143.6692 [0.0073] BKJD
Rp/R* = 0.0173 [0.0534]
a/R* = 108.77 [1719.27]
b = 0.32 [44.75]
Seff = 382.13 [217.80]
Teq = 1127 [161] K
Rp = 3.33 [10.35] Re
a = 0.1105 [0.0376] AU
Ag = 213.31 [1323.23] [0.16σ]
Teffp = 6662 [10292] K [0.54σ]

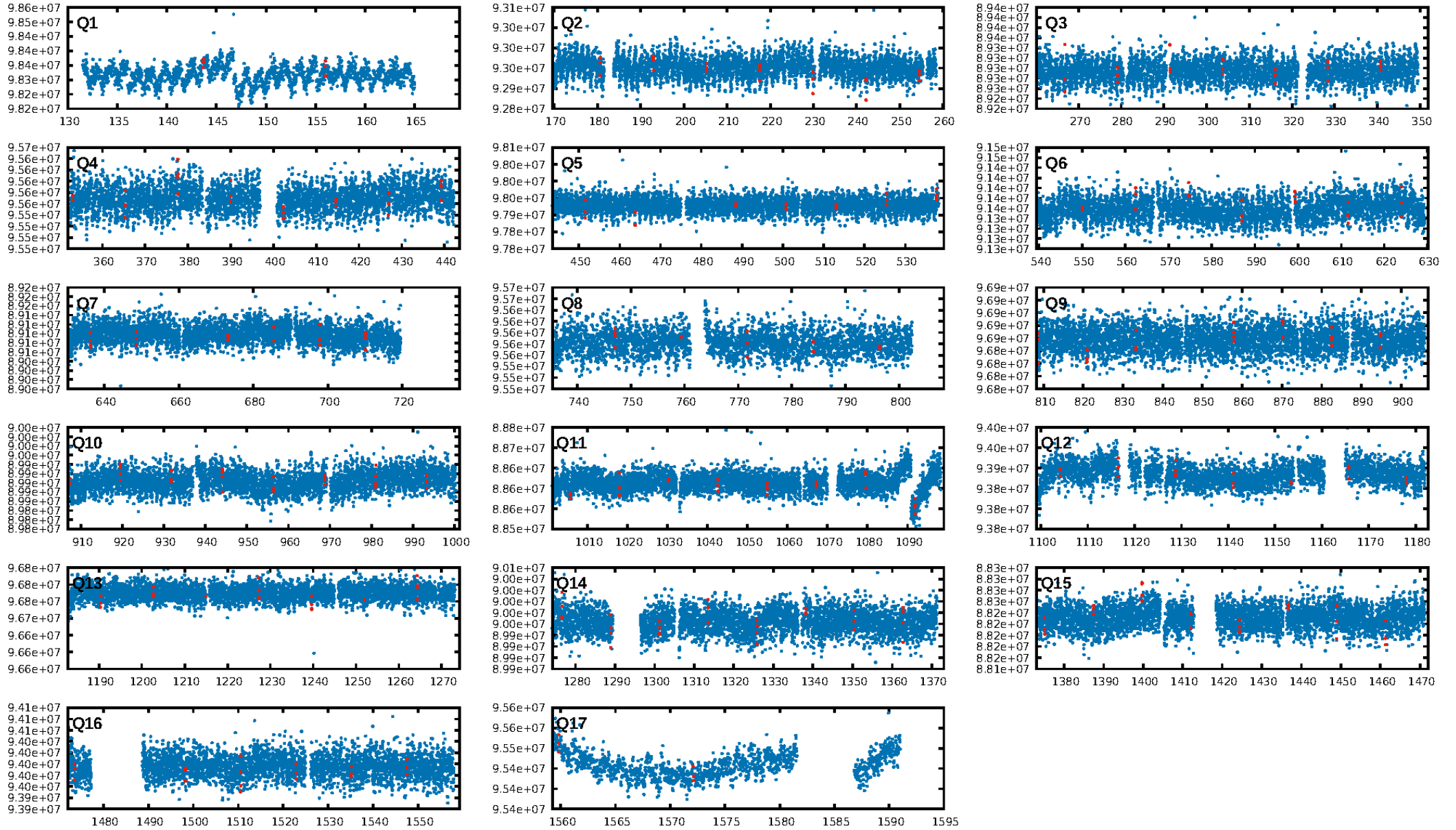
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [12.25σ]
LongPeriod-sig: 100.0% [42.69σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 7.8%
Bootstrap-pfa: 7.41e-13
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: -1.491
Centroid-sig: 13.8%
Centroid-so: 0.289 arcsec [0.57σ]
OotOffset-rm: 1.758 arcsec [2.41σ]
OotOffset-st: 1/2/2/3 [8]
KicOffset-rm: 1.861 arcsec [2.55σ]
KicOffset-st: 1/2/2/3 [8]
DiffImageQuality-fgm: 0.12 [1/8]
DiffImageOverlap-fno: 0.06 [1/17]

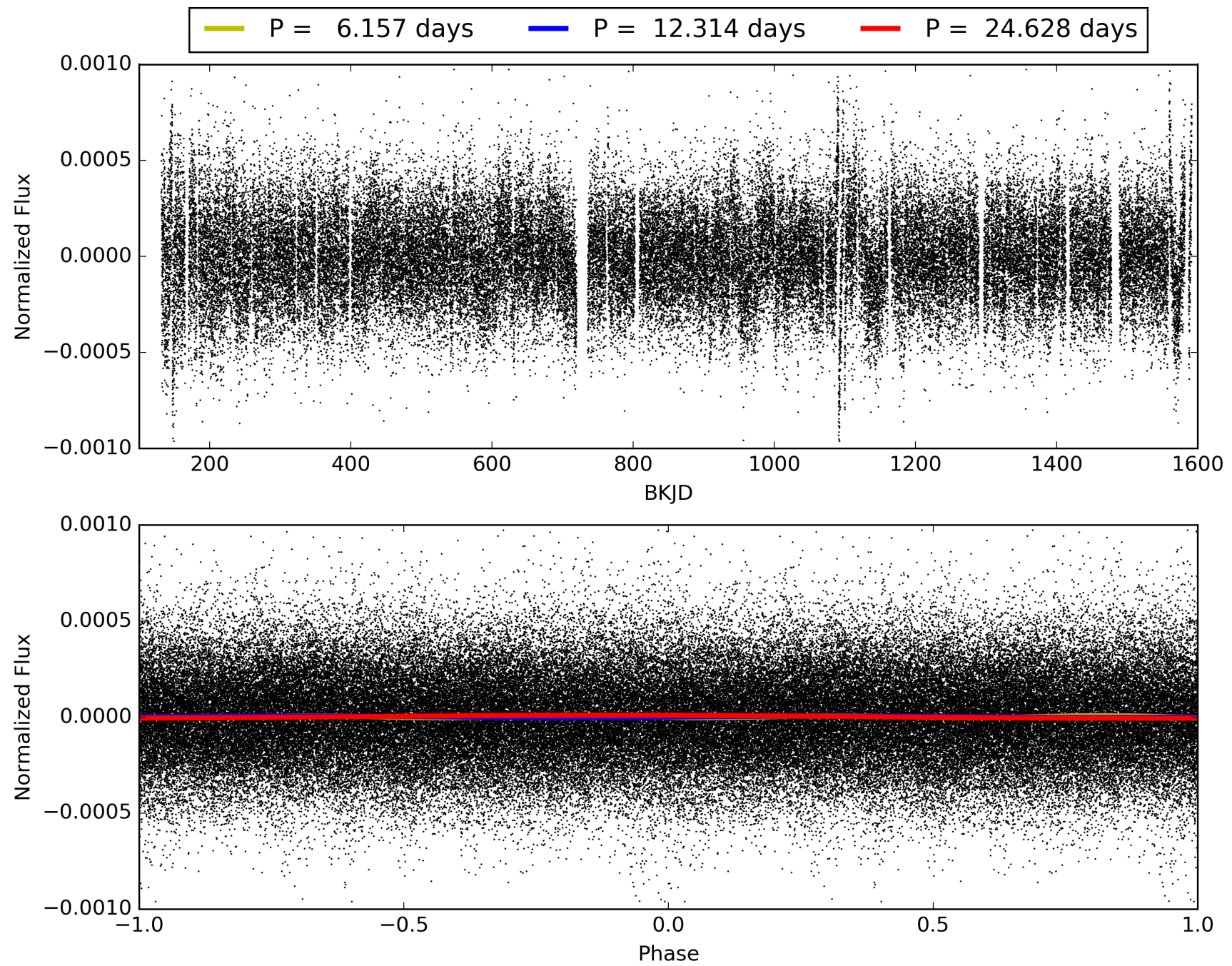
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:30:11 Z

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

TCE 005822171-07, PDC Light Curves

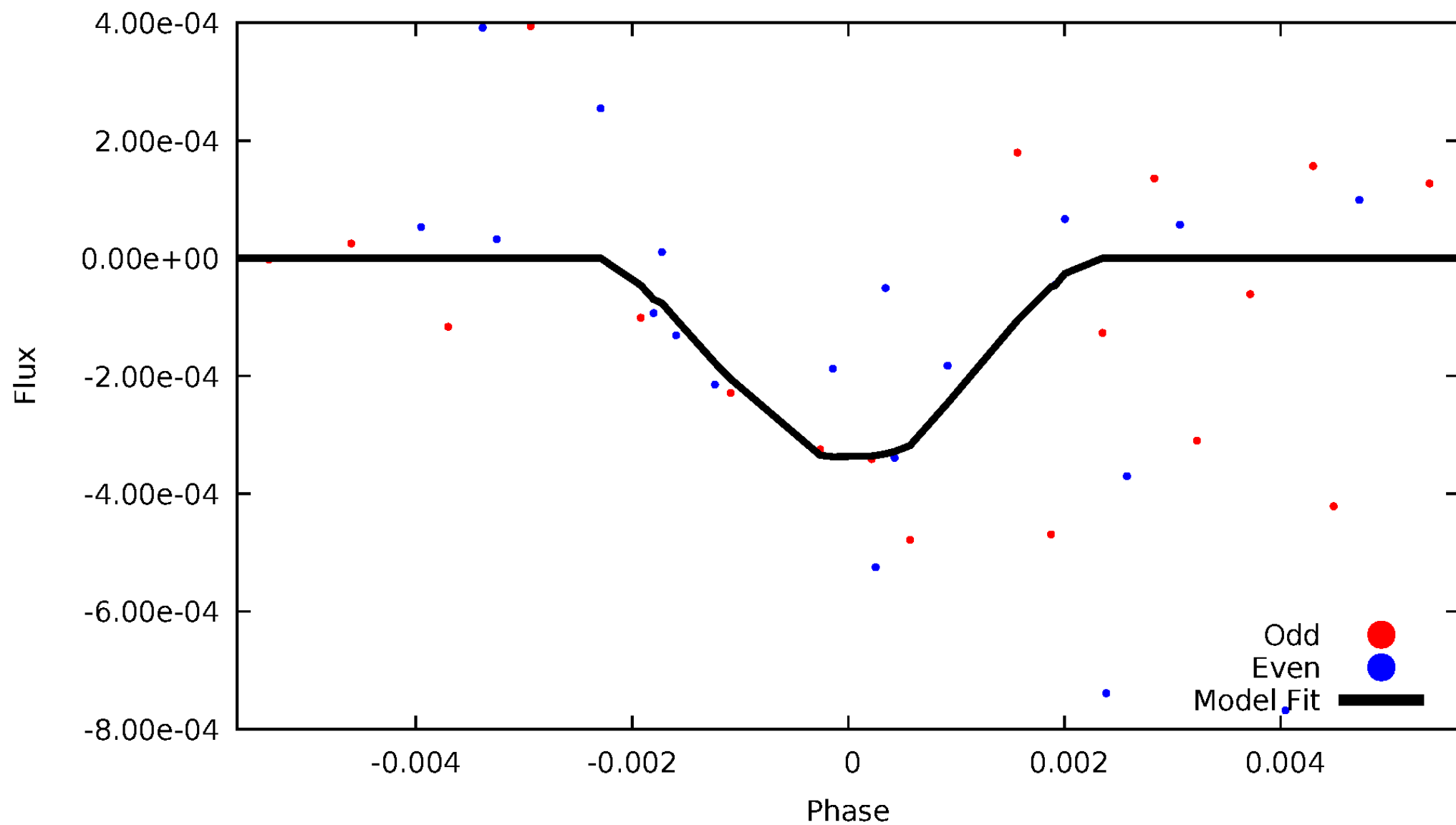


TCE 005822171-07



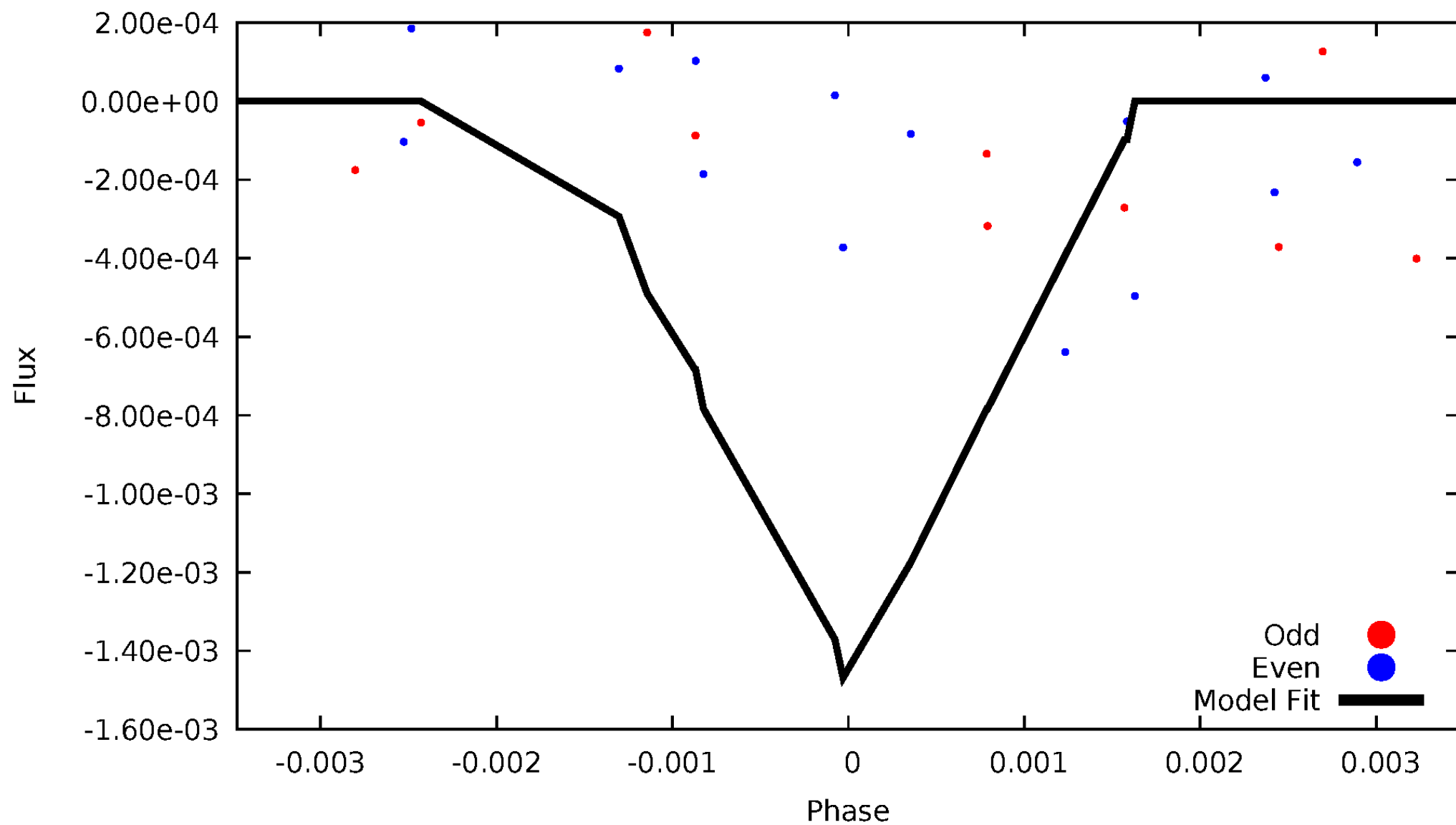
DV Odd/Even

TCE 005822171-07



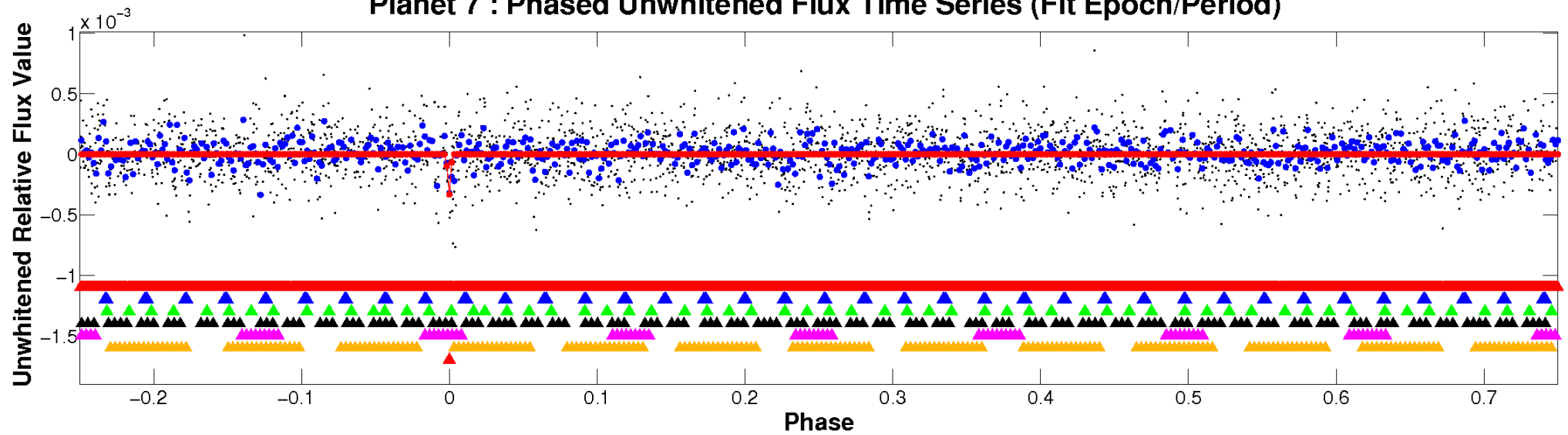
ALT Odd/Even

TCE 005822171-07

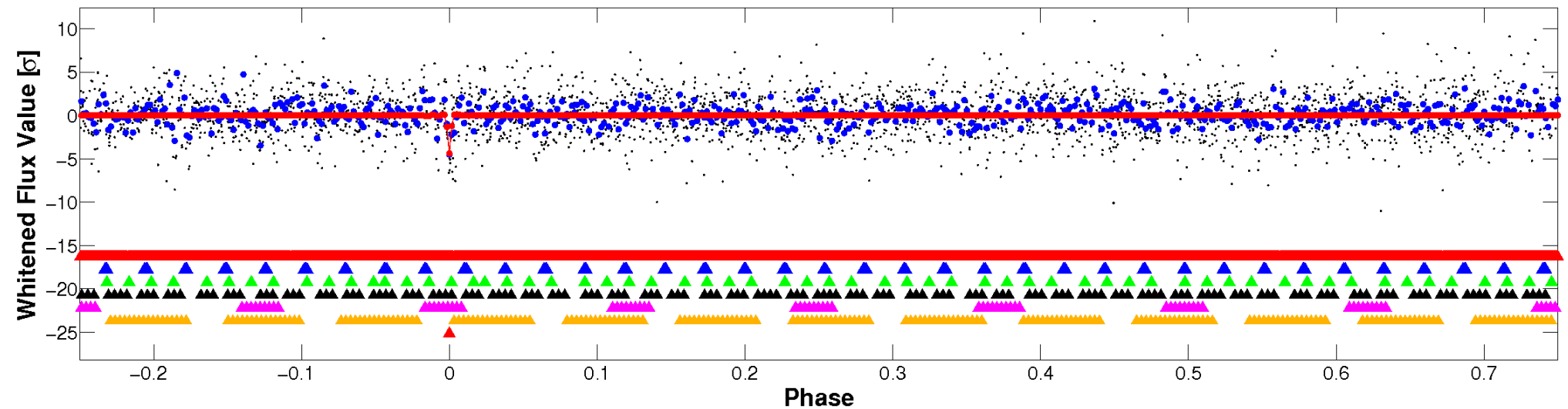


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

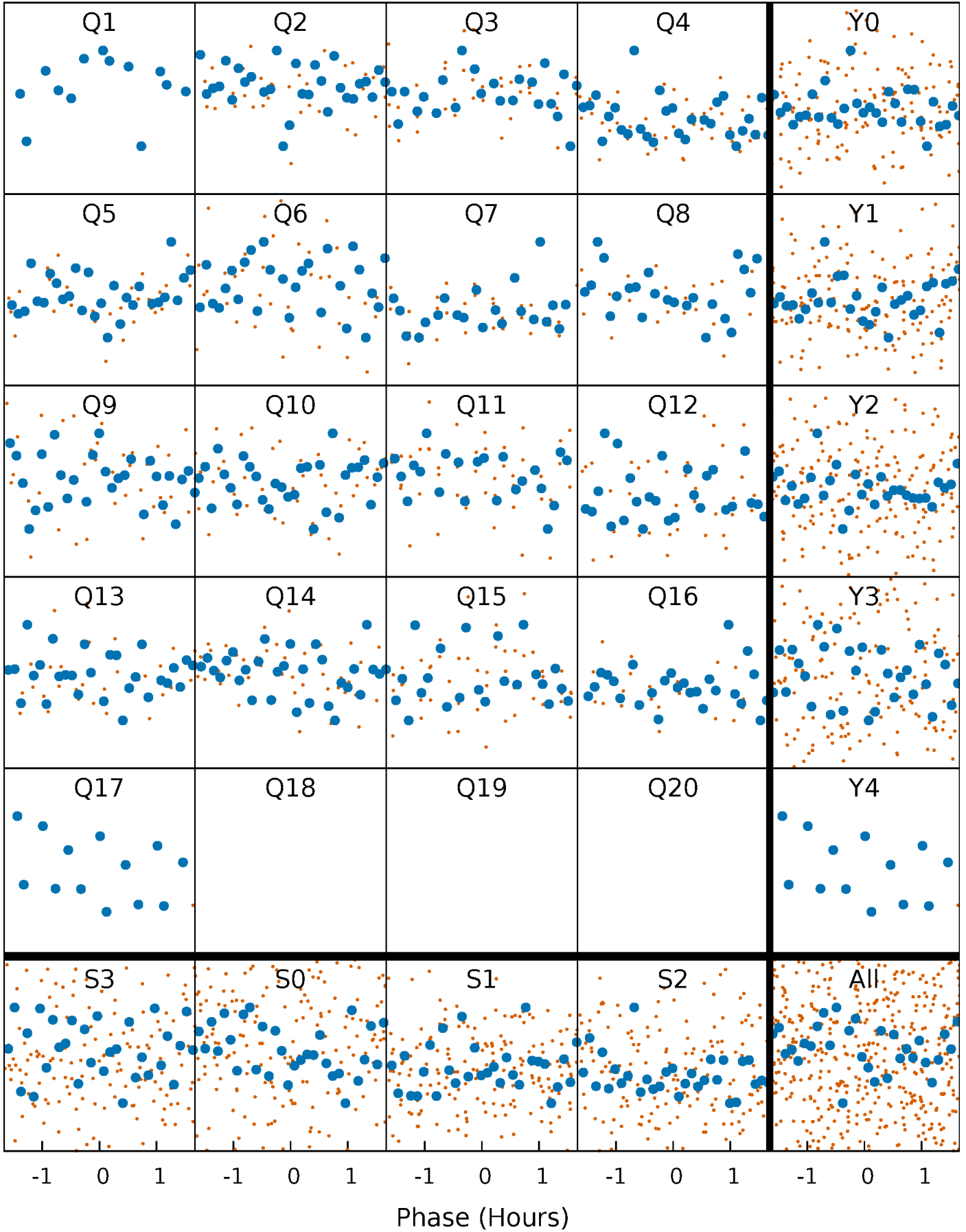


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



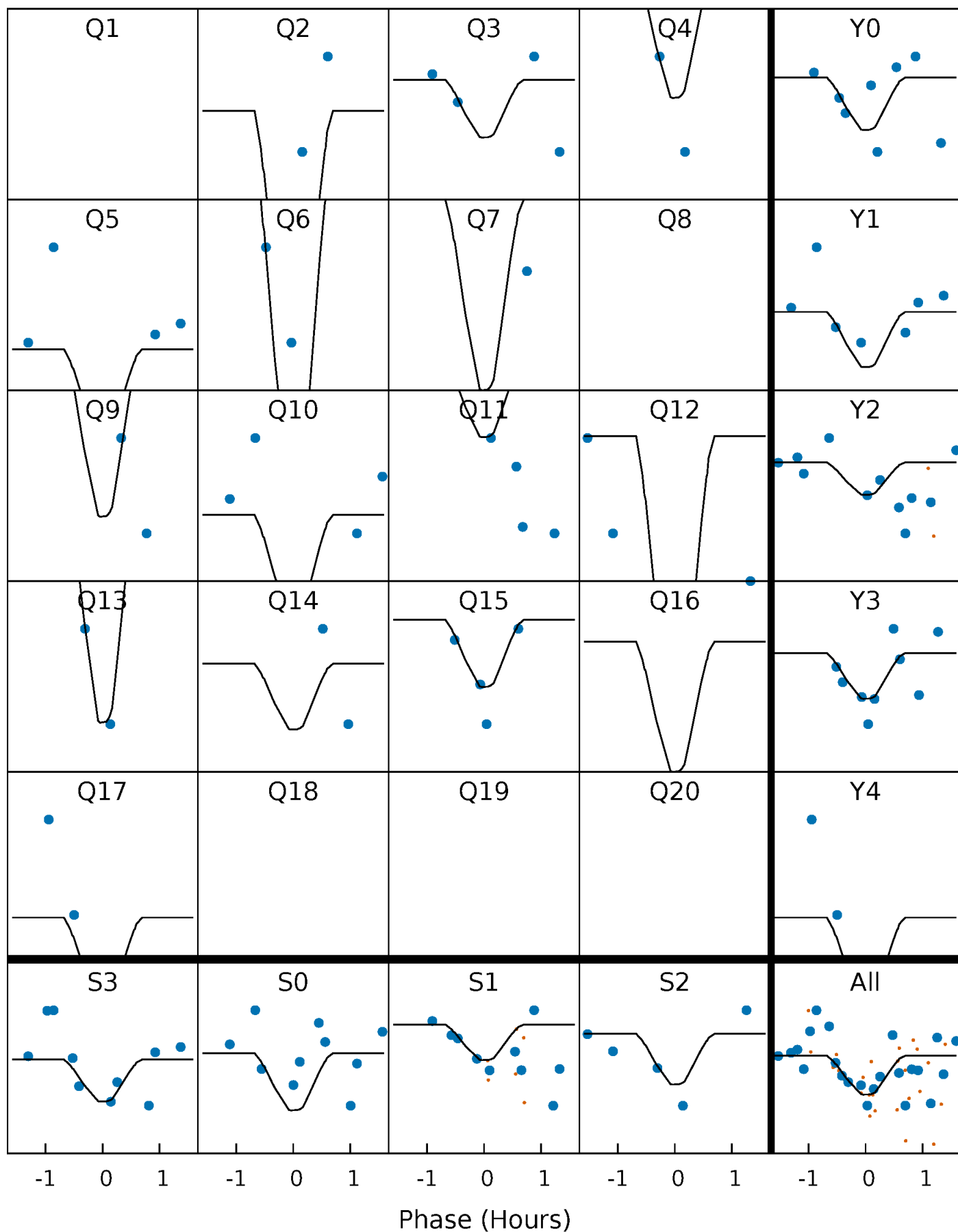
PDC Quarter-Phased Transit Curves

TCE 005822171-07 $P = 12.314166$ Days $T_0 = 143.669208$ (BKJD)



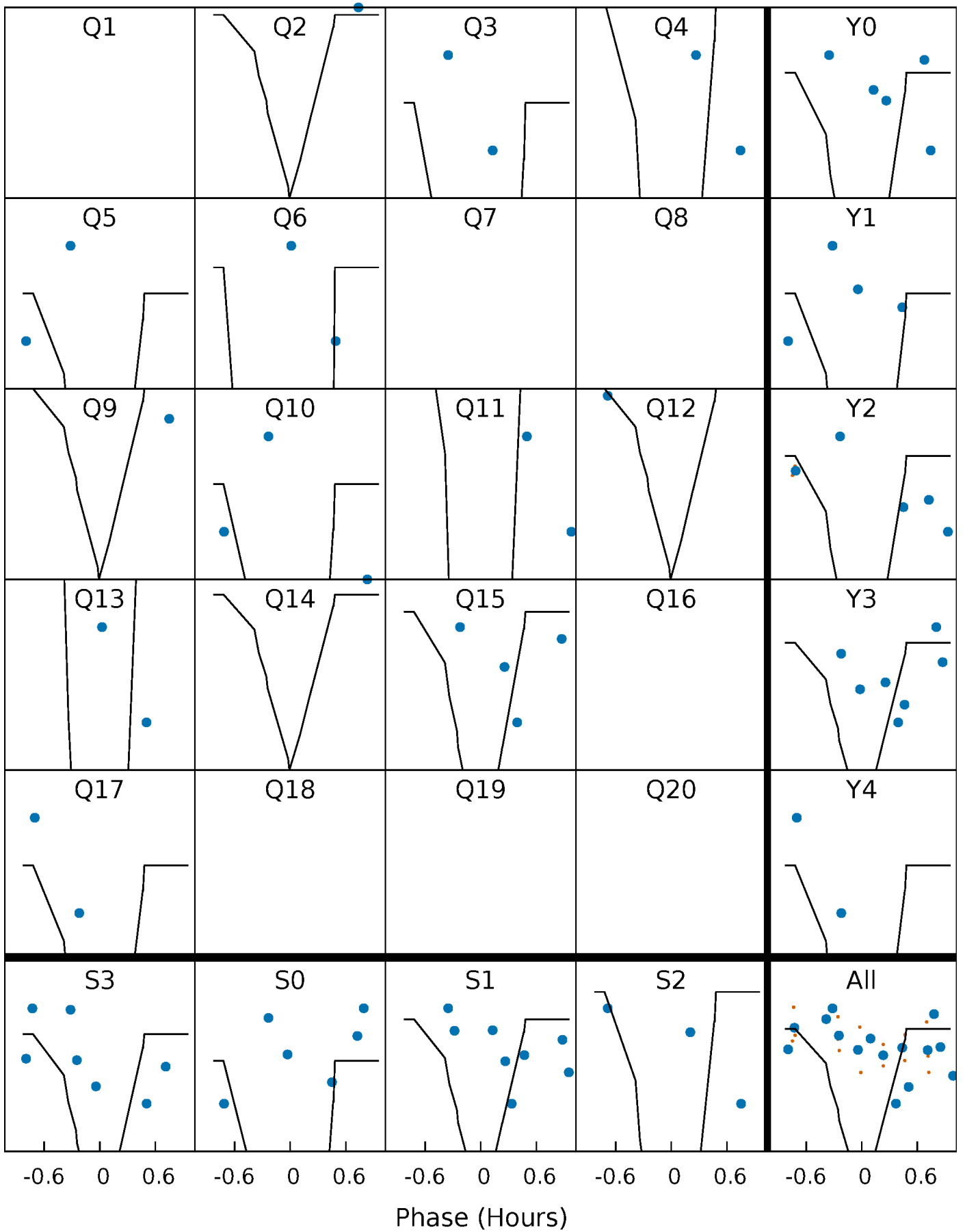
DV Quarter-Phased Transit Curves

TCE 005822171-07 P= 12.314166 Days $T_0=143.669208$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

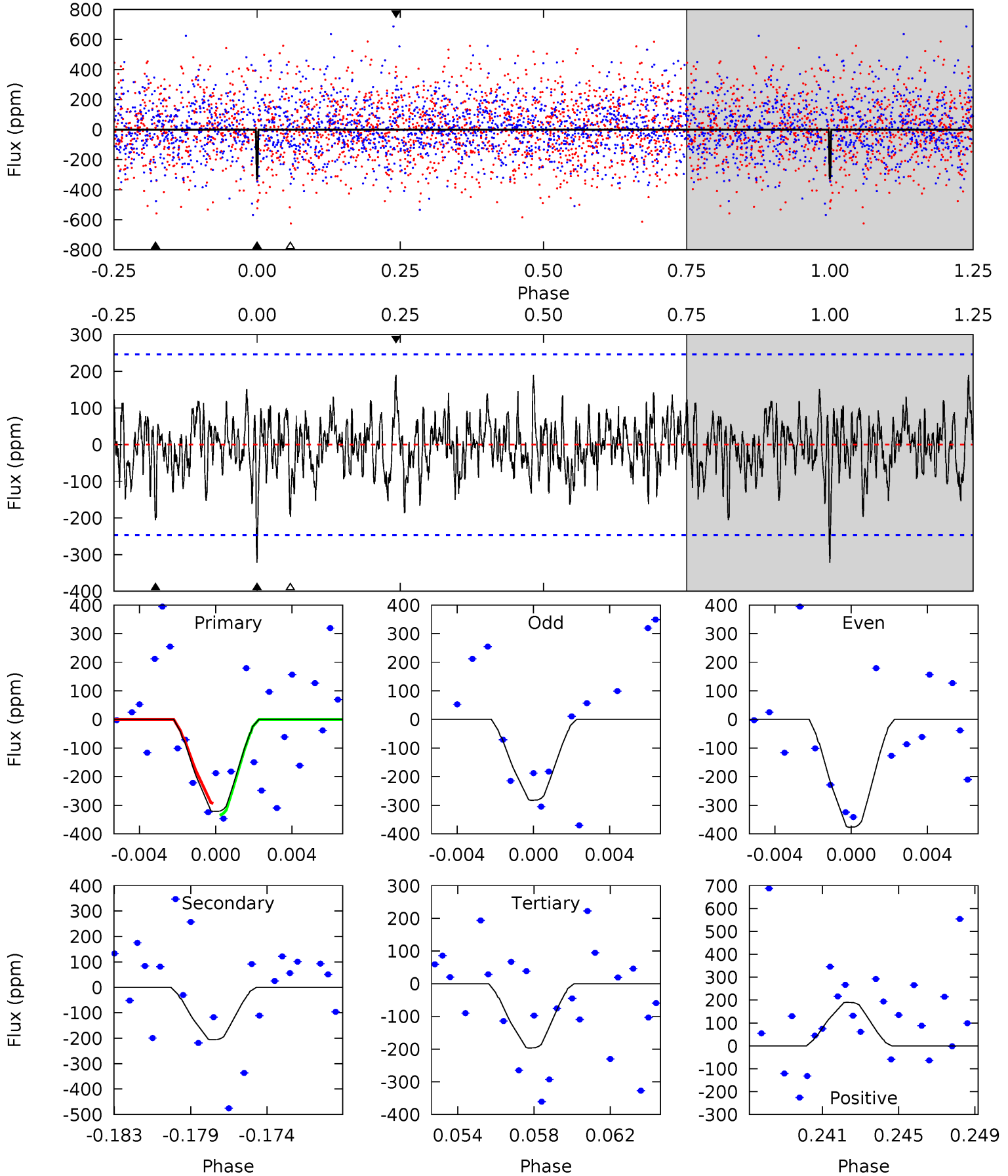
TCE 005822171-07 $P = 12.314290$ Days $T_0 = 143.643863$ (BKJD)



DV Model-Shift Uniqueness Test

005822171-07, P = 12.314166 Days, E = 131.355042 Days

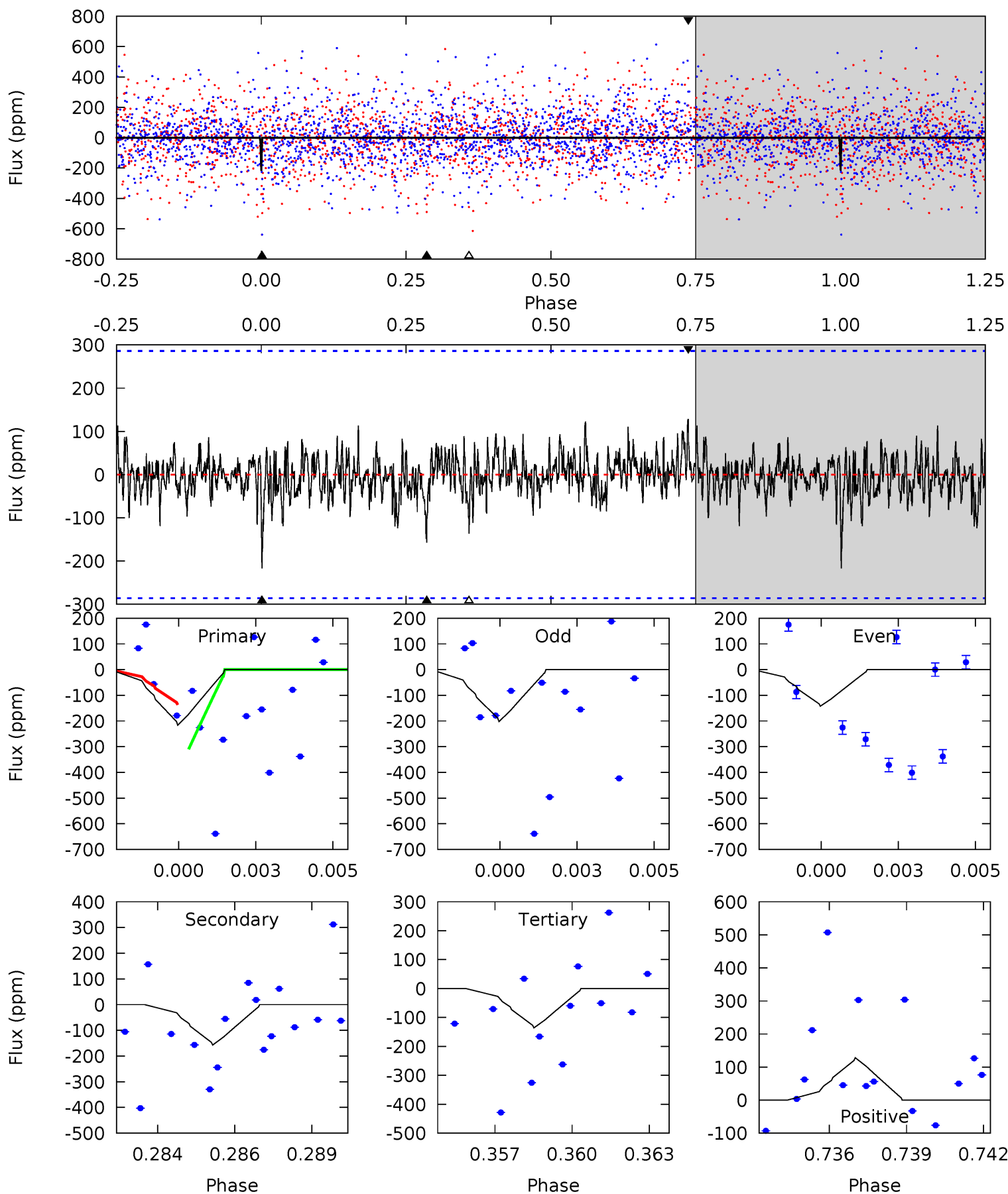
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.78	4.34	4.14	4.00	5.19	2.87	1.34	2.63	2.78	0.20	0.34	0.96	0.92	0.37	0.43



Alt Model-Shift Uniqueness Test

005822171-07, P = 12.314290 Days, E = 131.329573 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.00	2.90	2.51	2.37	5.27	3.00	0.73	1.49	1.63	0.39	0.53	0.54	2.18	0.37	1.62



Stellar Parameters For KIC 005822171

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6395^{+175}_{-214}	$4.019^{+0.329}_{-0.165}$	$-0.200^{+0.250}_{-0.300}$	$1.765^{+0.494}_{-0.603}$	$1.187^{+0.188}_{-0.188}$	$0.304^{+0.653}_{-0.139}$
	+3%/-3%	+8%/-4%	+125%/-150%	+28%/-34%	+16%/-16%	+215%/-46%
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 005822171-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-206 ± 47	$8.50^{+8.19}_{-6.19}$	1556^{+118}_{-160}	3847^{+2814}_{-716}	19^{+237}_{-14}
Alt.	-157 ± 54	$10.48^{+9.01}_{-7.07}$	1556^{+118}_{-142}	3481^{+1704}_{-614}	10^{+81}_{-7}

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

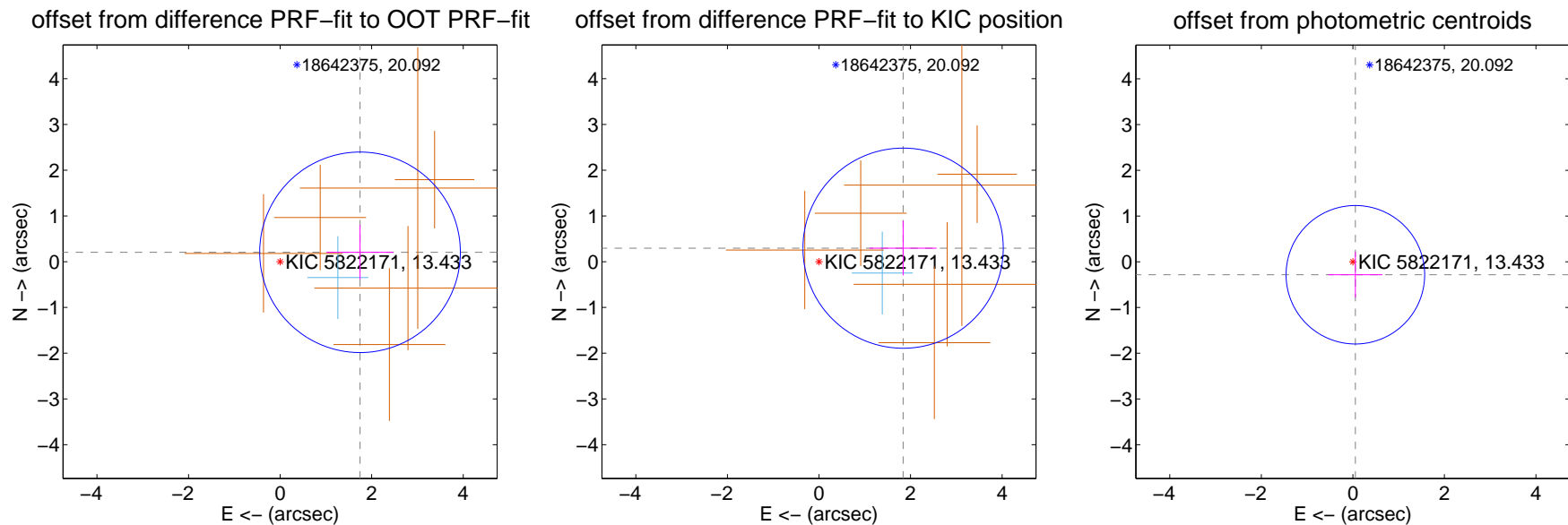
DV Centroid Data

Supplemental centroid analysis for 005822171-07. Kepler magnitude: 13.43. Transit SNR 12.98

There are 1 quarters with good PRF difference image offsets

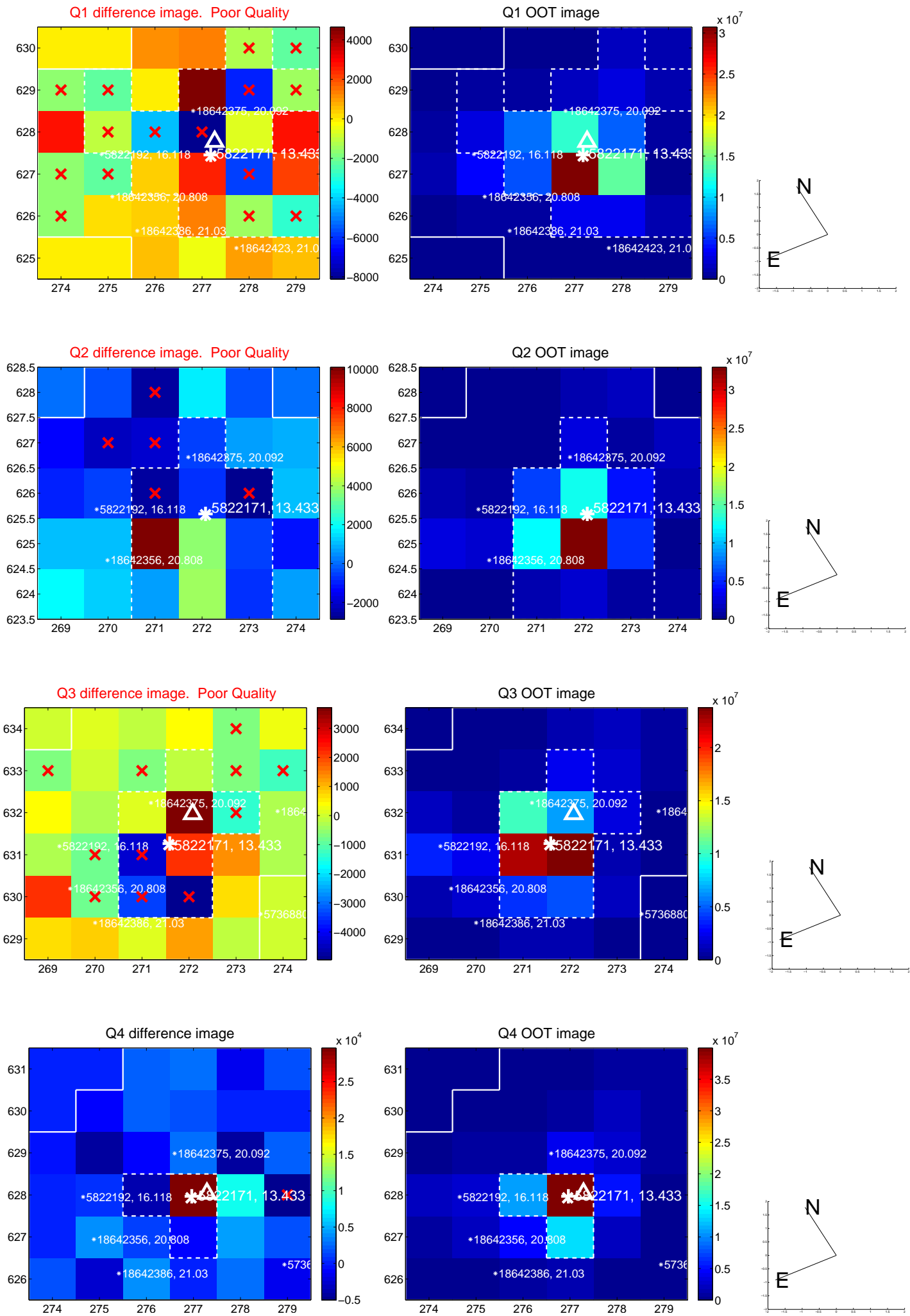
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.758 ± 0.731	2.41	-1.746 ± 0.732	0.205 ± 0.596
PRF-fit source offset from KIC position	1.861 ± 0.729	2.55	-1.837 ± 0.732	0.296 ± 0.596
photometric centroid source offset	0.29 ± 0.50	0.57	-0.05 ± 0.59	-0.28 ± 0.50

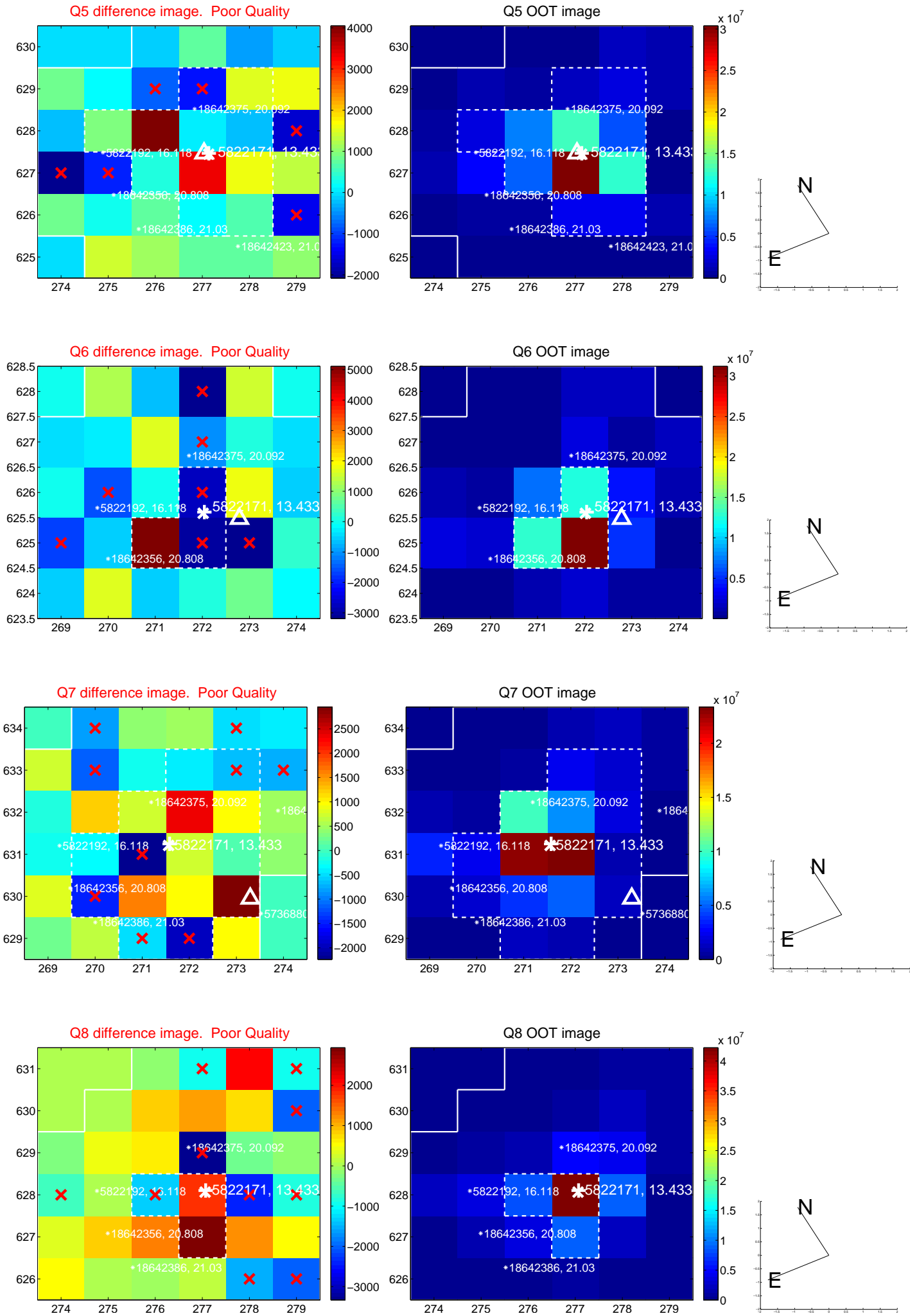


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

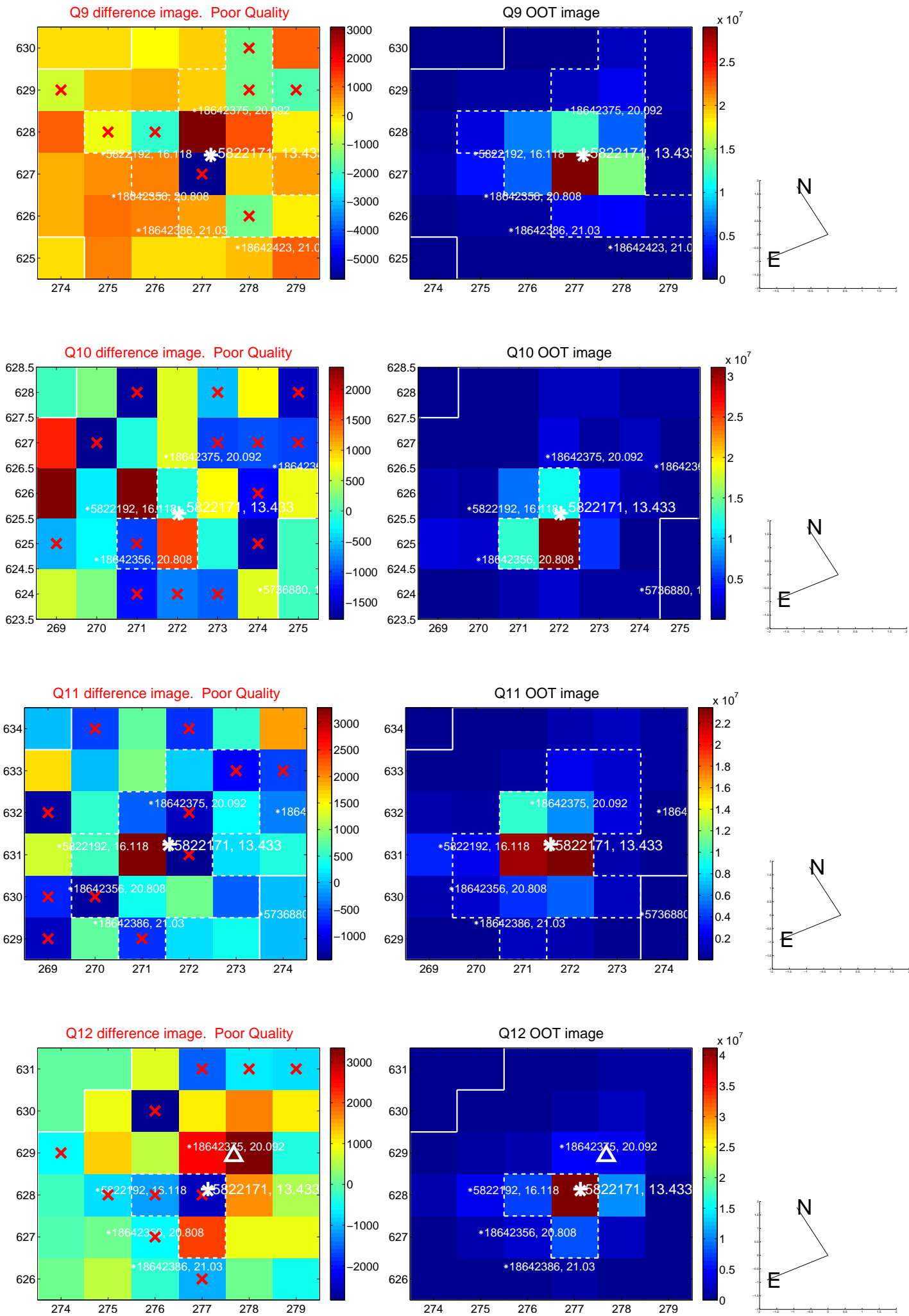
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



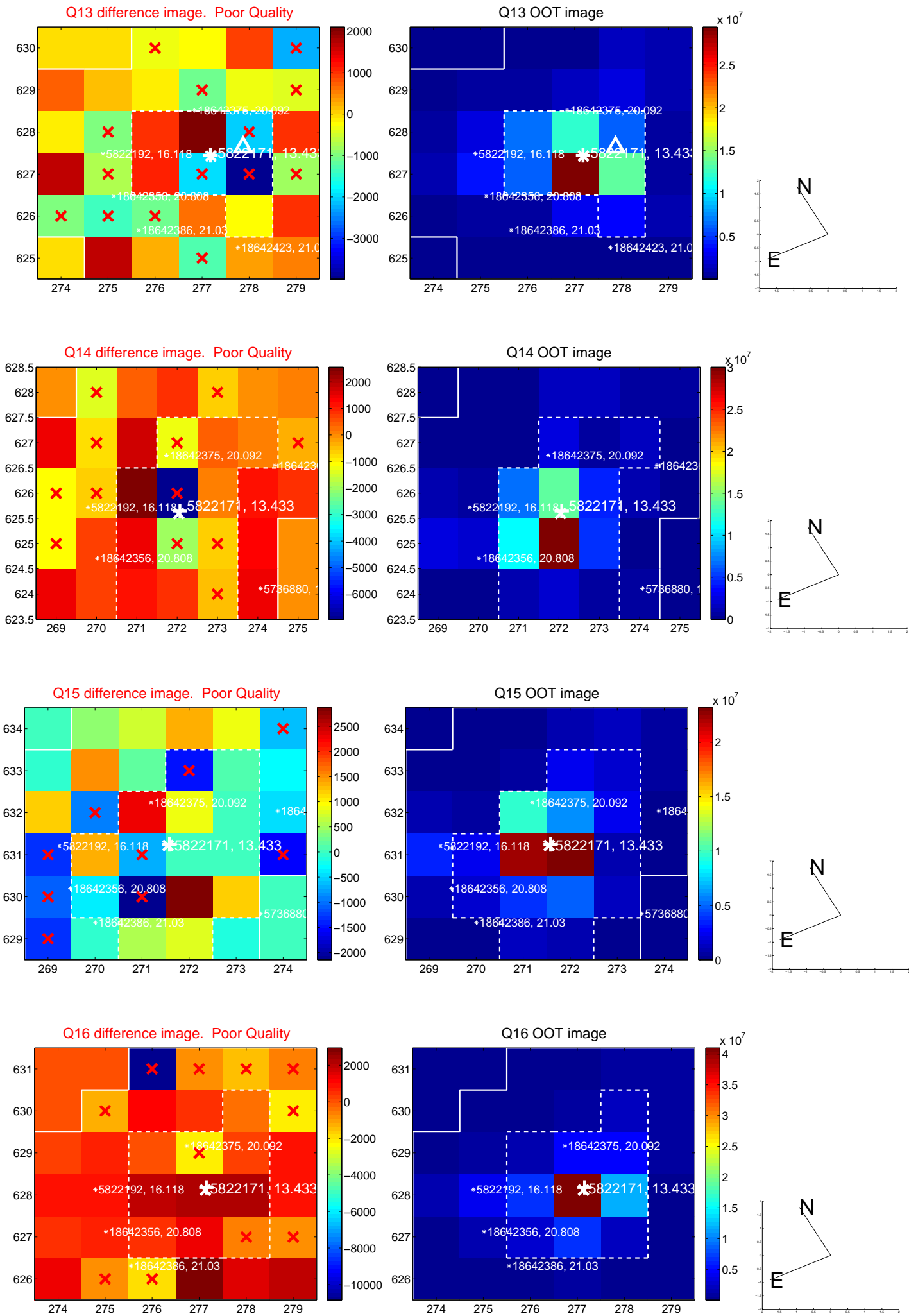
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



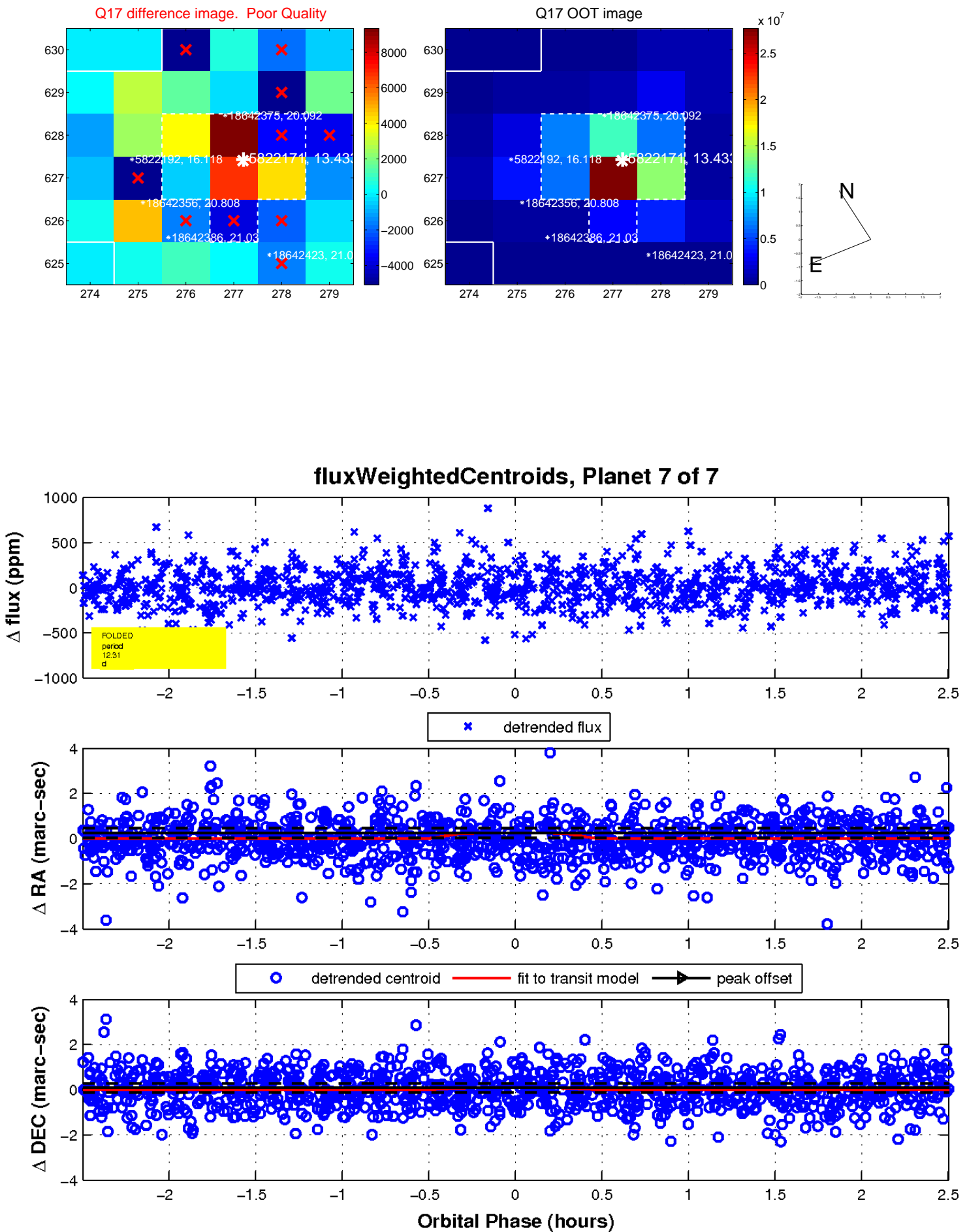
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

