

KIC 005728843

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})
005728843-01	OBS	No	1.024443	131.533624	229.0	2.480	9.9	11.2	0.98	6764	1.73	4393.00
005728843-02	OBS	No	0.654409	131.835553	531.3	0.850	9.7	13.5	0.98	6764	2.33	7985.06
005728843-03	OBS	No	0.654408	131.513959	421.5	0.887	8.8	10.5	0.98	6764	2.38	7985.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005728843-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005728843-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005728843-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD

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

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

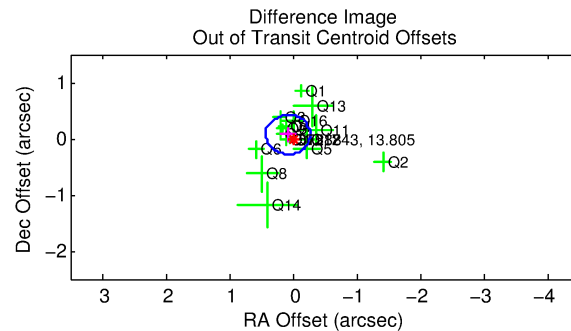
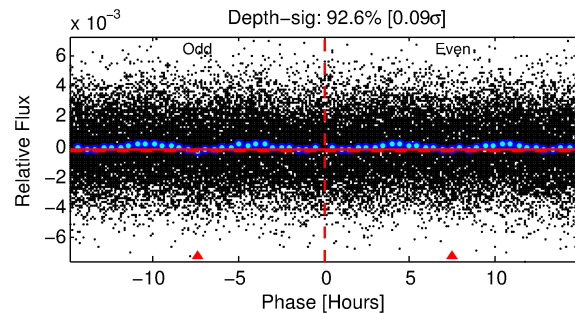
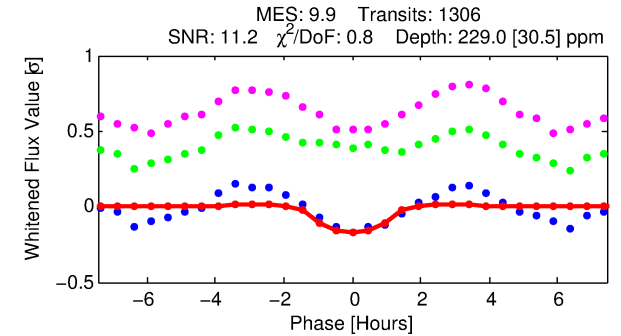
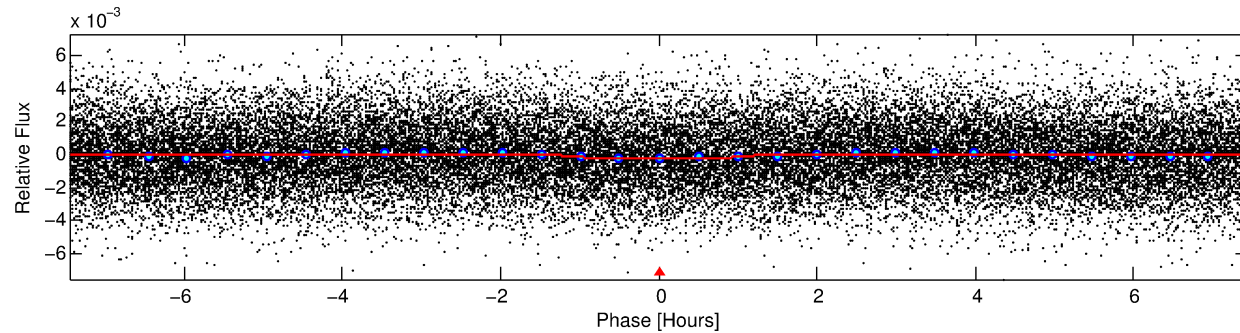
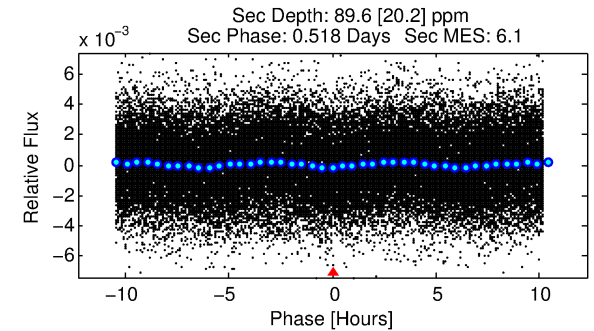
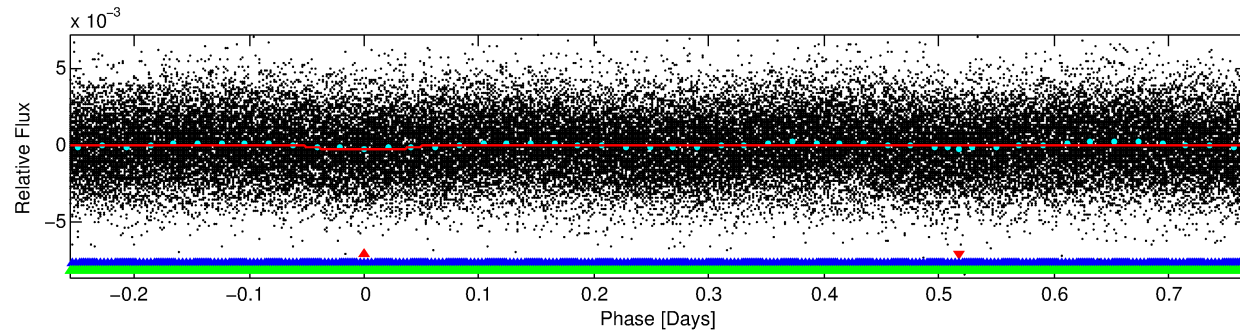
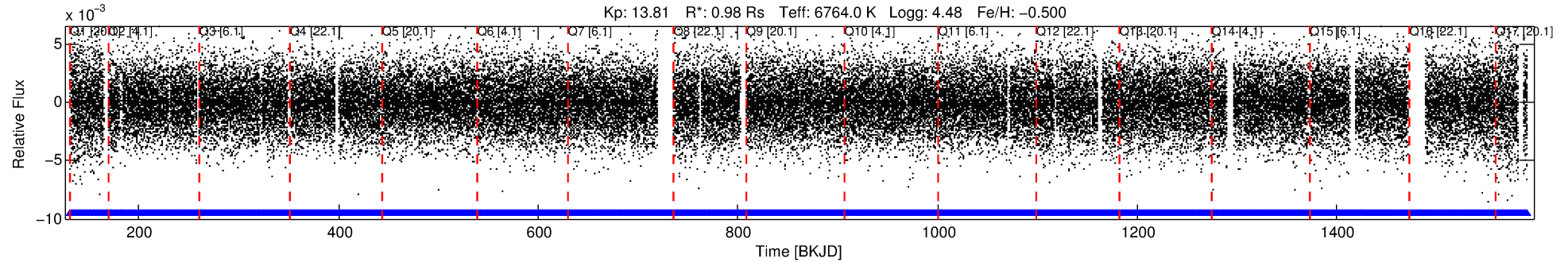
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005728843-01

No Significant Match Found

DV One-Page Summary

KIC: 5728843 Candidate: 1 of 3 Period: 1.024 d



DV Fit Results:

Period = 1.02444 [0.00001] d
Epoch = 131.5336 [0.0036] BKJD
Rp/R* = 0.0162 [0.0102]
a/R* = 1.76 [4.49]
b = 0.90 [0.81]
Seff = 4393.00 [1948.91]
Teq = 2076 [230] K
Rp = 1.73 [1.24] Re
a = 0.0203 [0.0058] AU
Ag = 6.77 [9.13] [0.63σ]
Teffp = 5178 [1671] K [1.84σ]

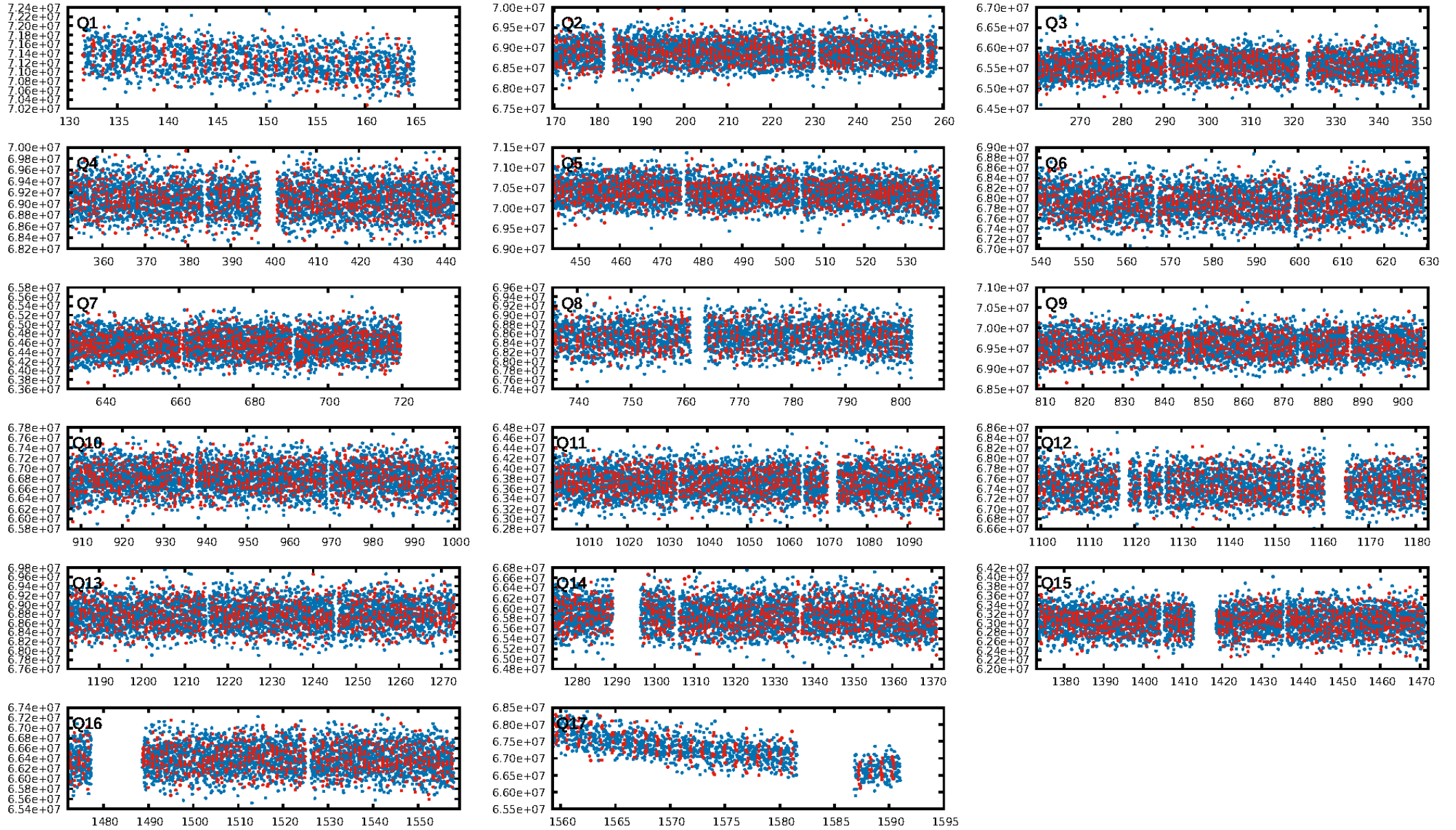
DV Diagnostic Results:

ShortPeriod-sig: 99.9% [3.39σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.26e-36
RollingBand-fgt: 1.00 [1247/1247]
GhostDiagnostic-chr: 0.7783
Centroid-sig: 62.5%
Centroid-so: 0.185 arcsec [1.04σ]
OotOffset-rm: 0.105 arcsec [0.90σ]
KicOffset-rm: 0.109 arcsec [0.83σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

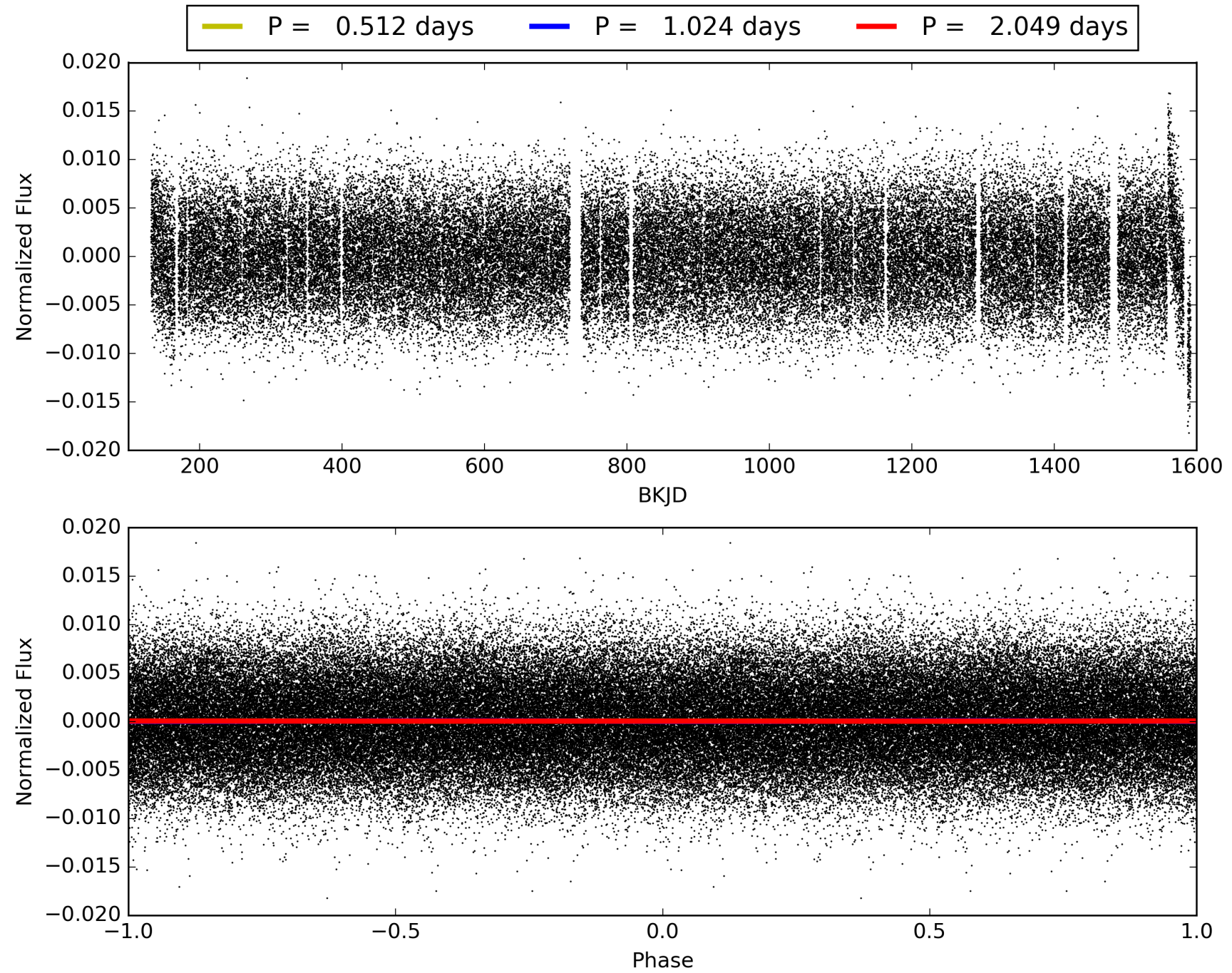
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 12:06:07 Z

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

TCE 005728843-01, PDC Light Curves

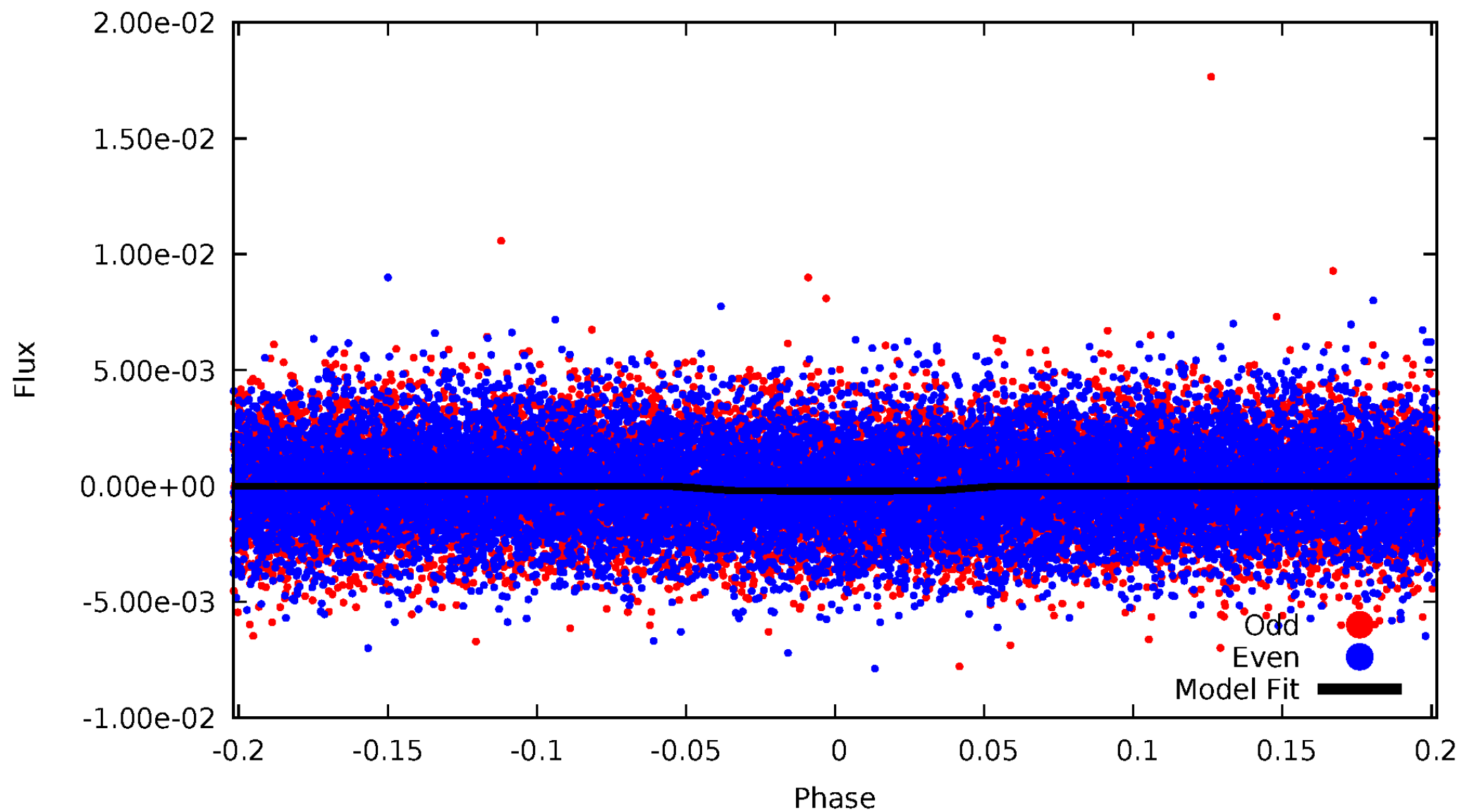


TCE 005728843-01



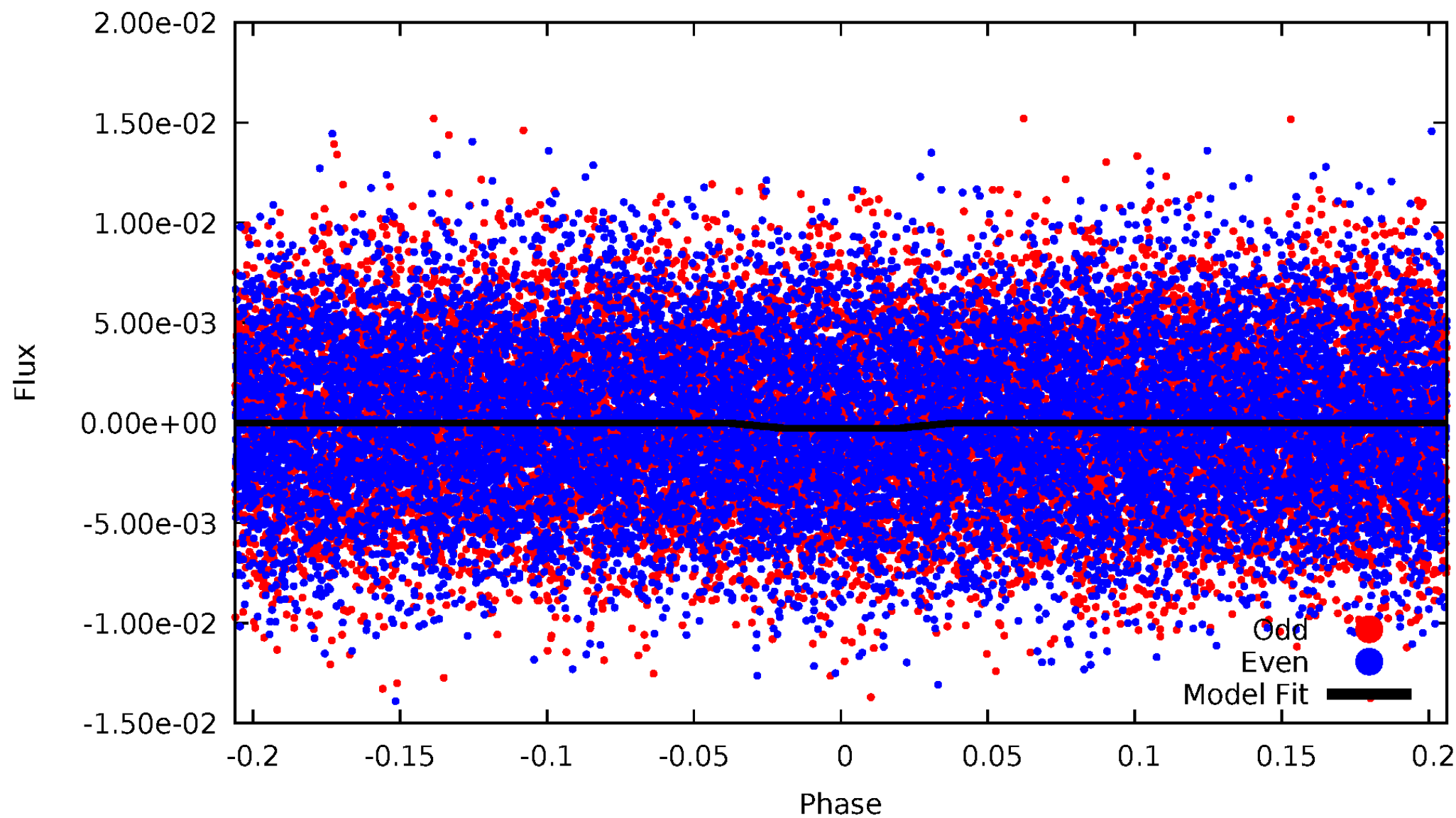
DV Odd/Even

TCE 005728843-01

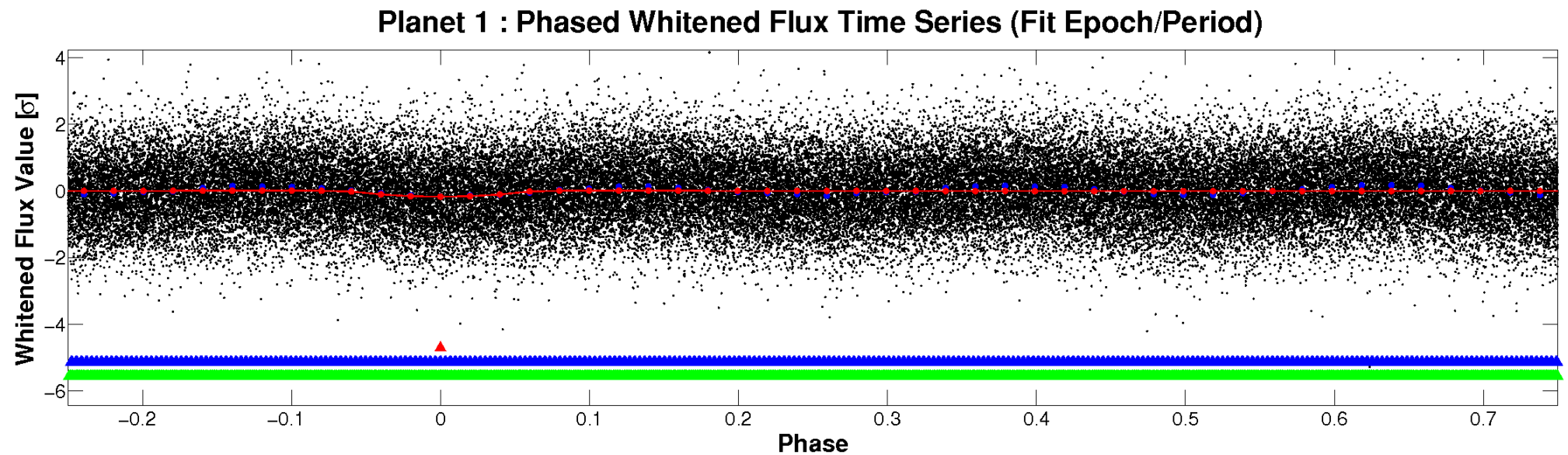
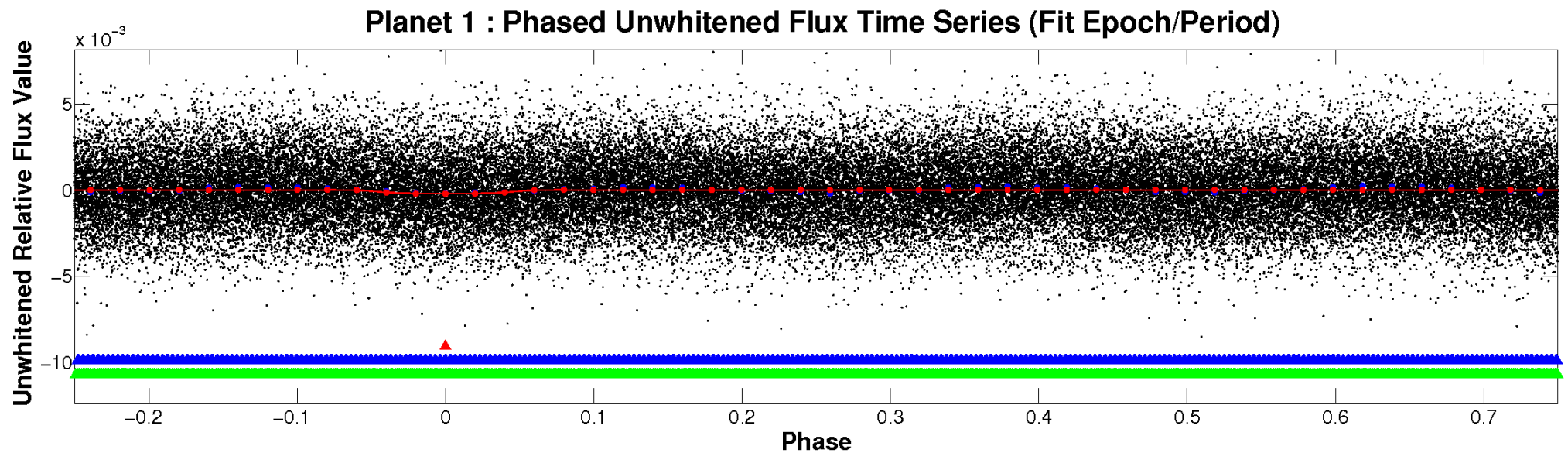


ALT Odd/Even

TCE 005728843-01

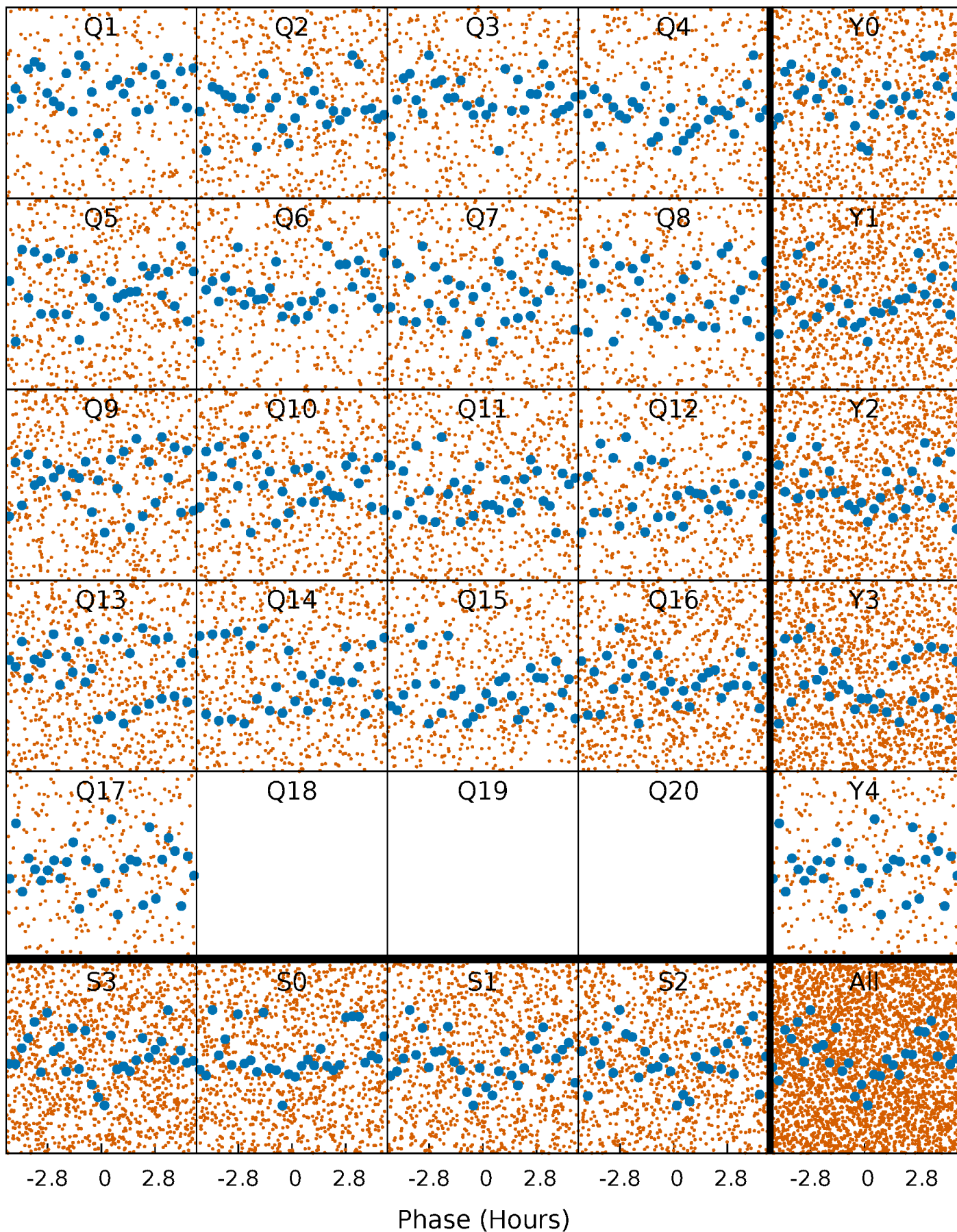


Non-Whitened Vs. Whitened Light Curve



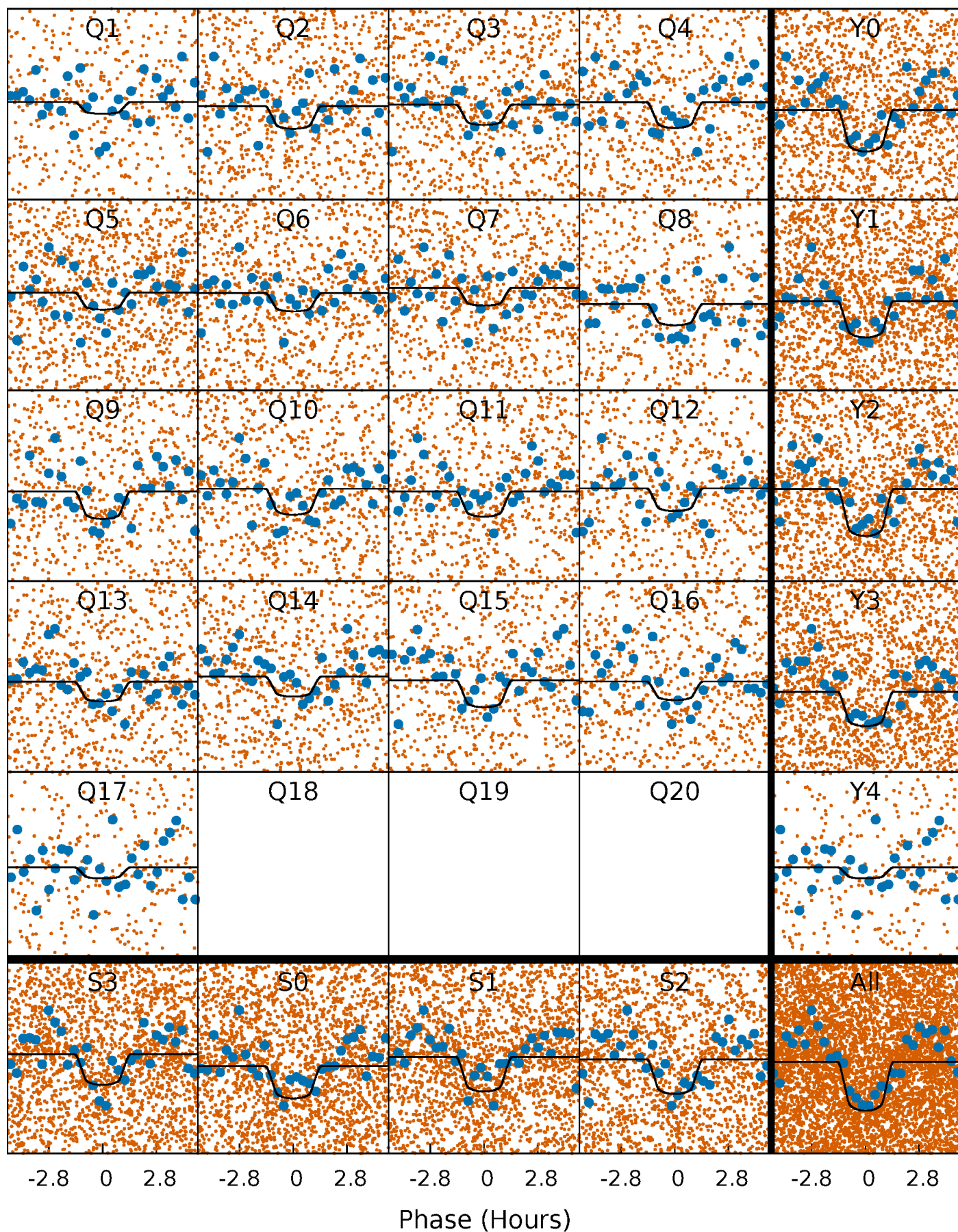
PDC Quarter-Phased Transit Curves

TCE 005728843-01 P= 1.024443 Days $T_0=131.533624$ (BKJD)



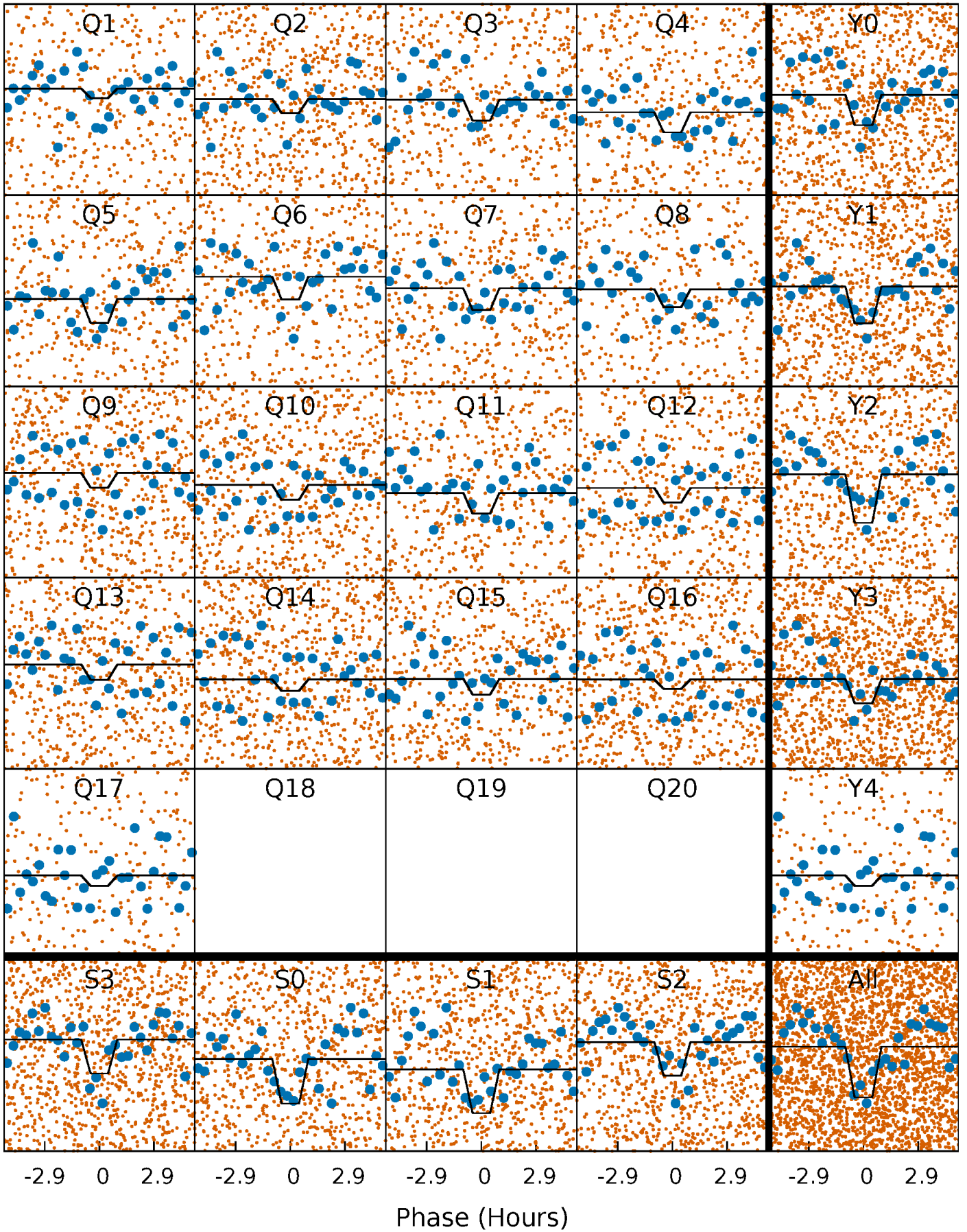
DV Quarter-Phased Transit Curves

TCE 005728843-01 P= 1.024443 Days $T_0=131.533624$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

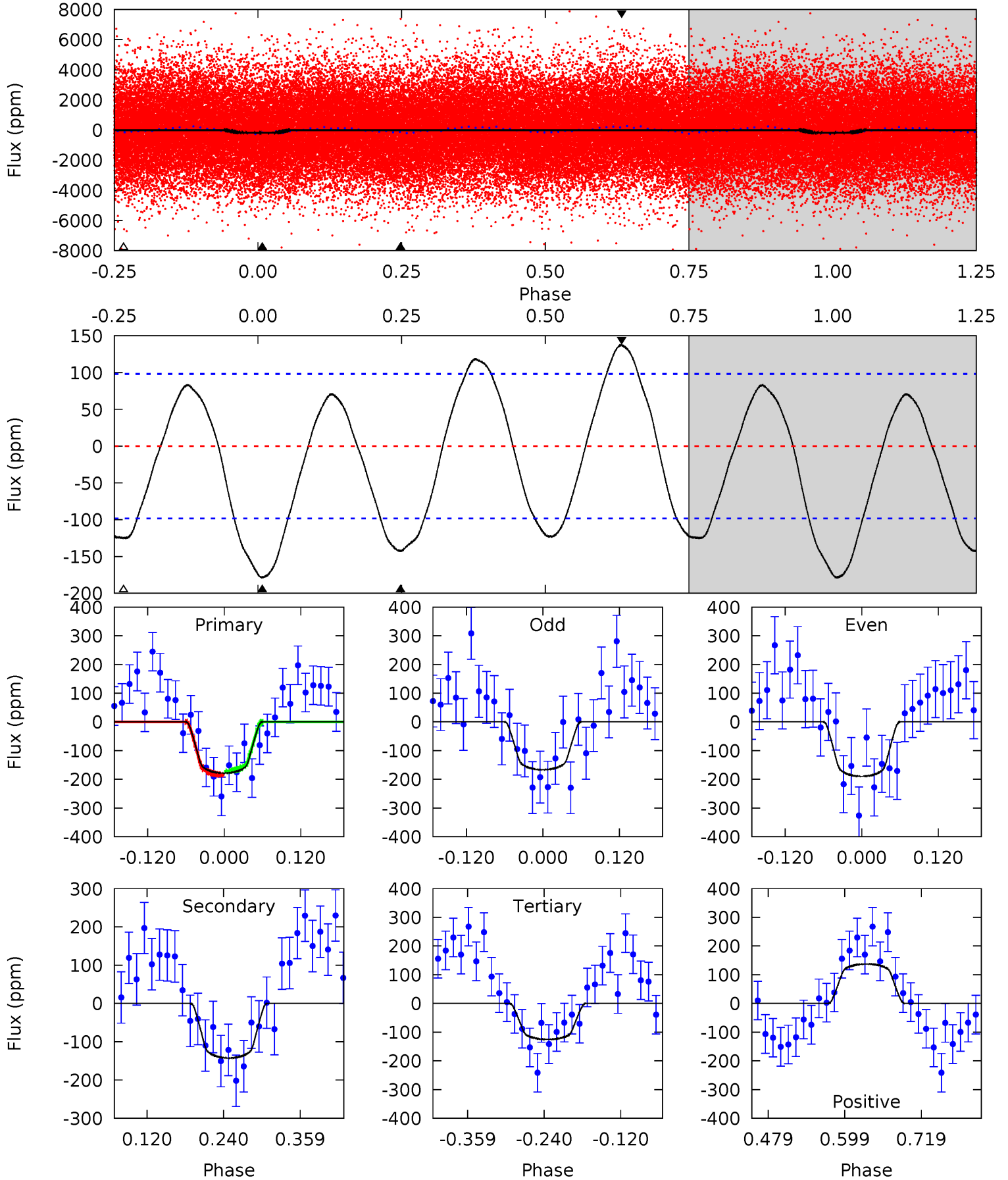
TCE 005728843-01 P= 1.024451 Days $T_0=131.526844$ (BKJD)



DV Model-Shift Uniqueness Test

005728843-01, P = 1.024443 Days, E = 130.509181 Days

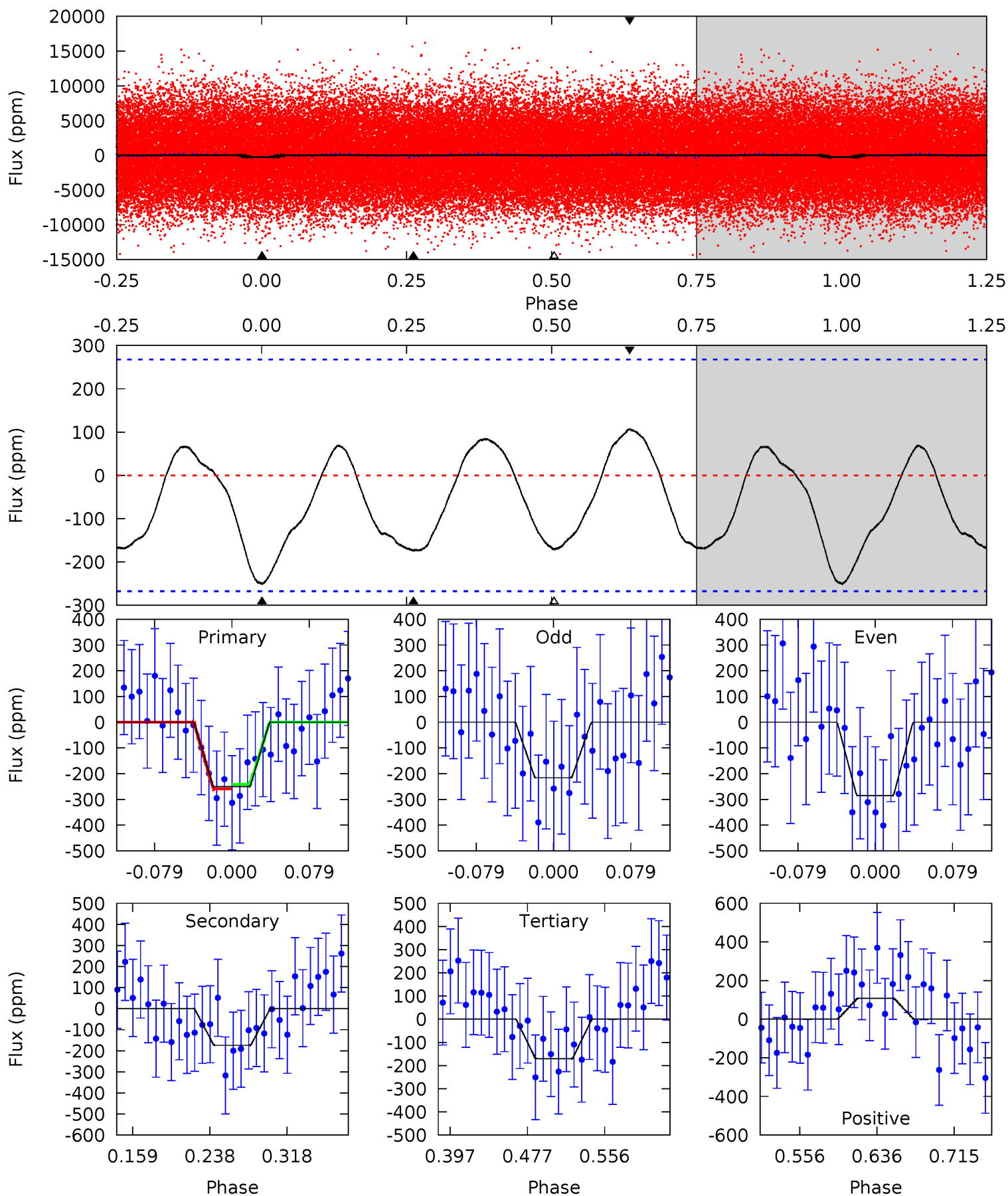
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.23	6.57	5.77	6.33	4.53	1.56	4.04	2.47	1.90	0.81	0.24	0.54	0.91	0.43	0.28



Alt Model-Shift Uniqueness Test

005728843-01, P = 1.024451 Days, E = 130.502393 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.32	3.00	2.95	1.85	4.61	1.75	1.53	1.37	2.47	0.06	1.15	0.60	1.10	0.30	0.15



Stellar Parameters For KIC 005728843

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6764^{+165}_{-259}	$4.480^{+0.040}_{-0.229}$	$-0.500^{+0.250}_{-0.350}$	$0.983^{+0.329}_{-0.082}$	$1.106^{+0.142}_{-0.142}$	$1.639^{+0.262}_{-0.929}$
	+2%/-4%	+1%/-5%	+50%/-70%	+33%/-8%	+13%/-13%	+16%/-57%
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 005728843-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-143 ± 22	$1.92^{+1.09}_{-1.09}$	2987^{+220}_{-157}	5674^{+3533}_{-1084}	$8.769^{+35.356}_{-5.305}$
Alt.	-174 ± 58	$1.99^{+1.29}_{-1.06}$	2970^{+252}_{-152}	5755^{+3388}_{-1208}	$9.593^{+35.647}_{-6.285}$

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

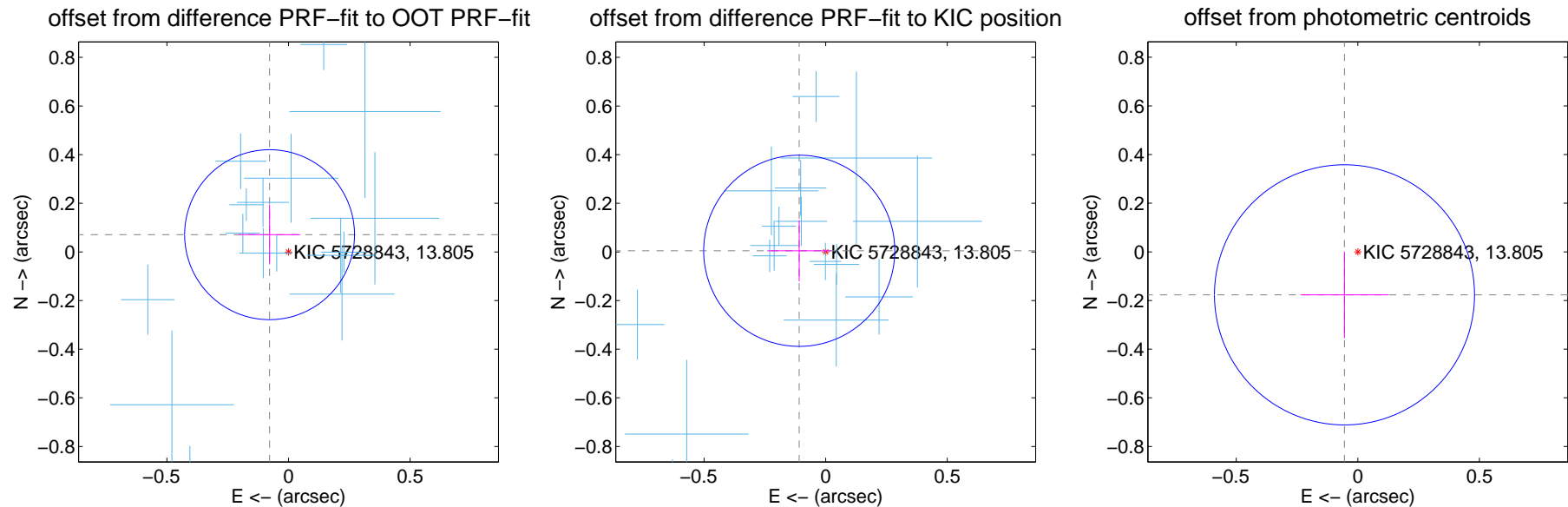
DV Centroid Data

Supplemental centroid analysis for 005728843-01. Kepler magnitude: 13.80. Transit SNR 11.25

There are 17 quarters with good PRF difference image offsets

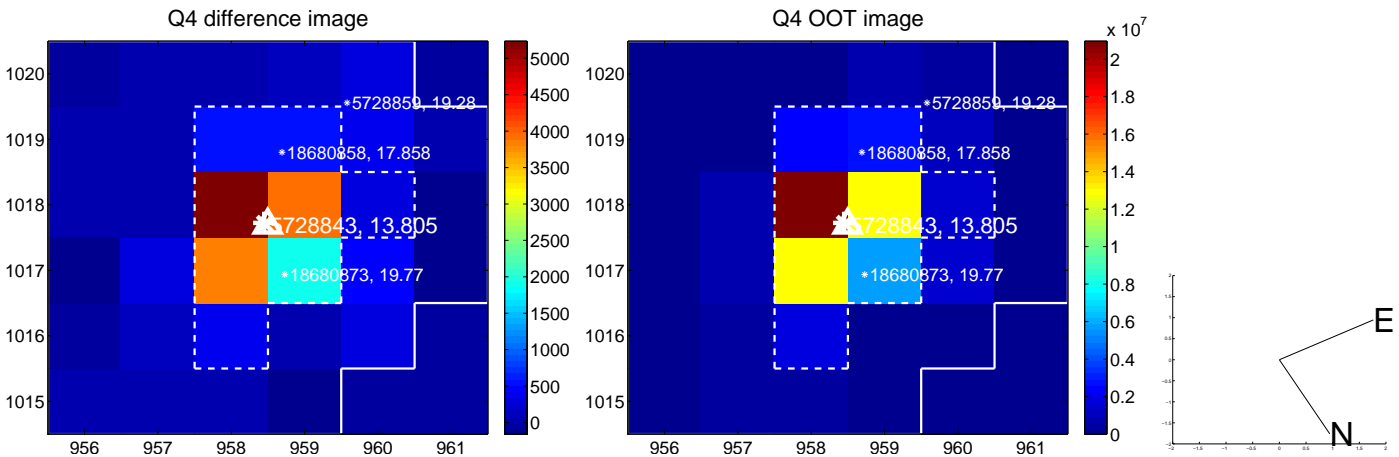
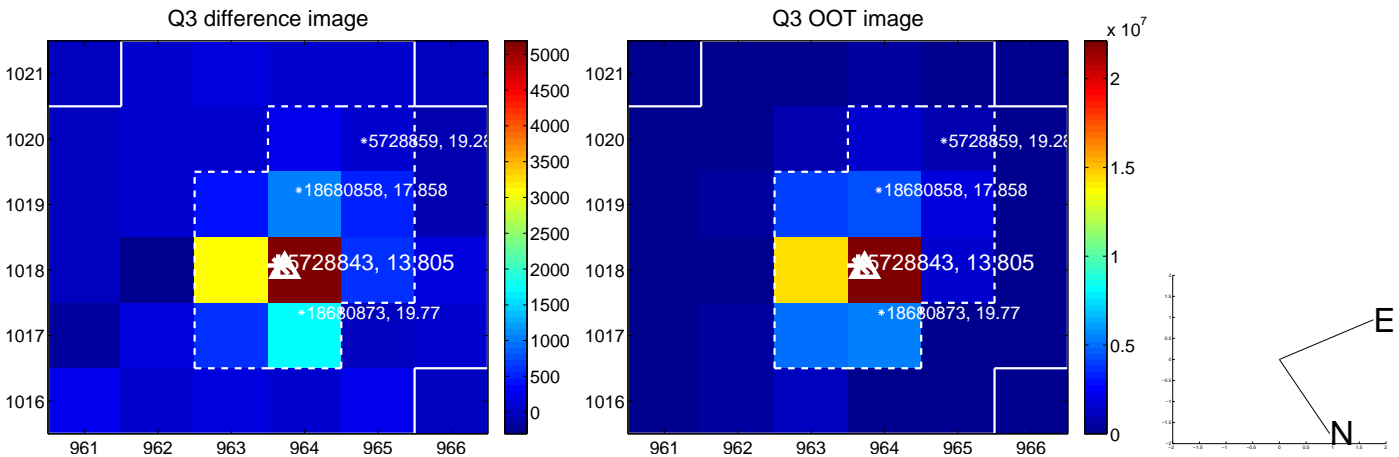
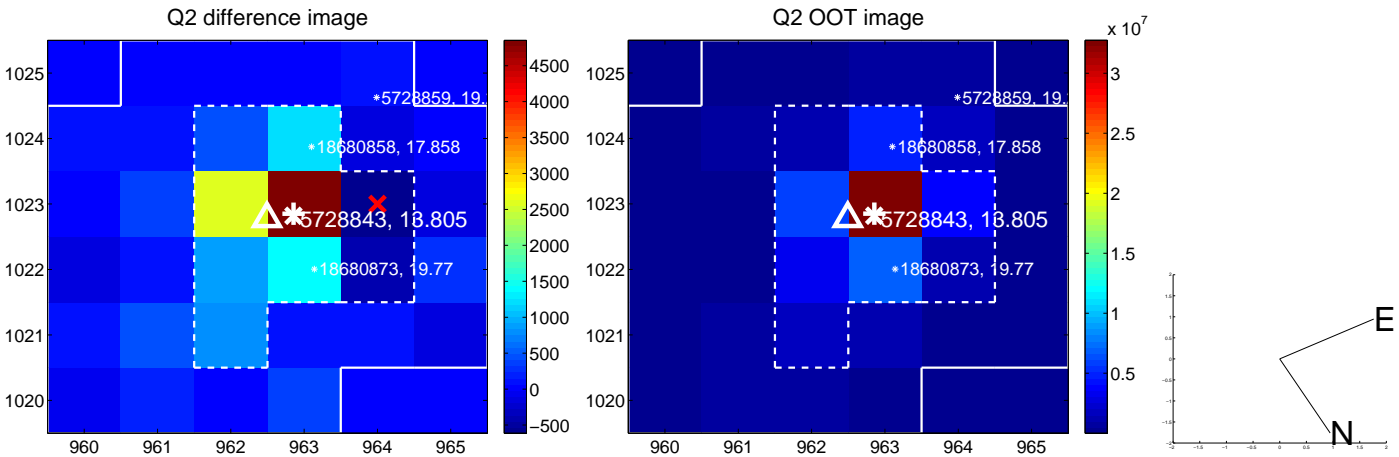
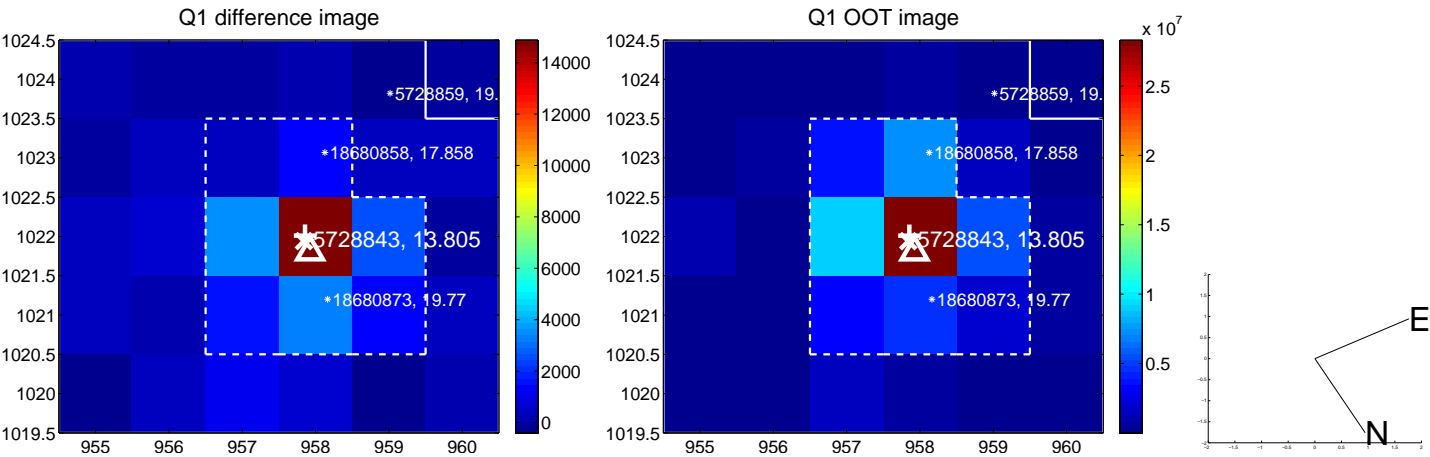
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.105 ± 0.116	0.90	0.078 ± 0.126	0.071 ± 0.122
PRF-fit source offset from KIC position	0.109 ± 0.131	0.83	0.109 ± 0.132	0.005 ± 0.126
photometric centroid source offset	0.19 ± 0.18	1.04	0.05 ± 0.18	-0.18 ± 0.18

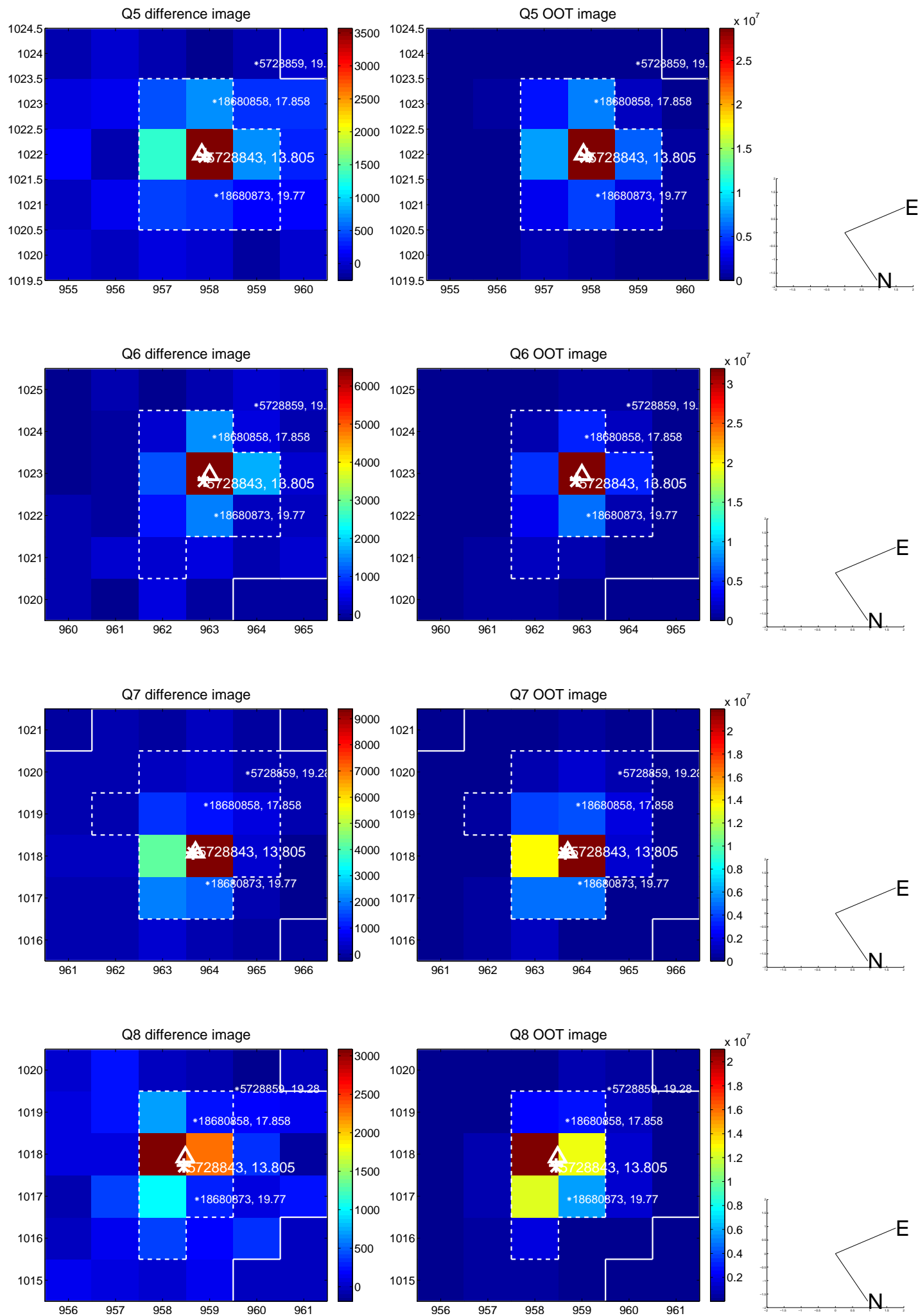


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

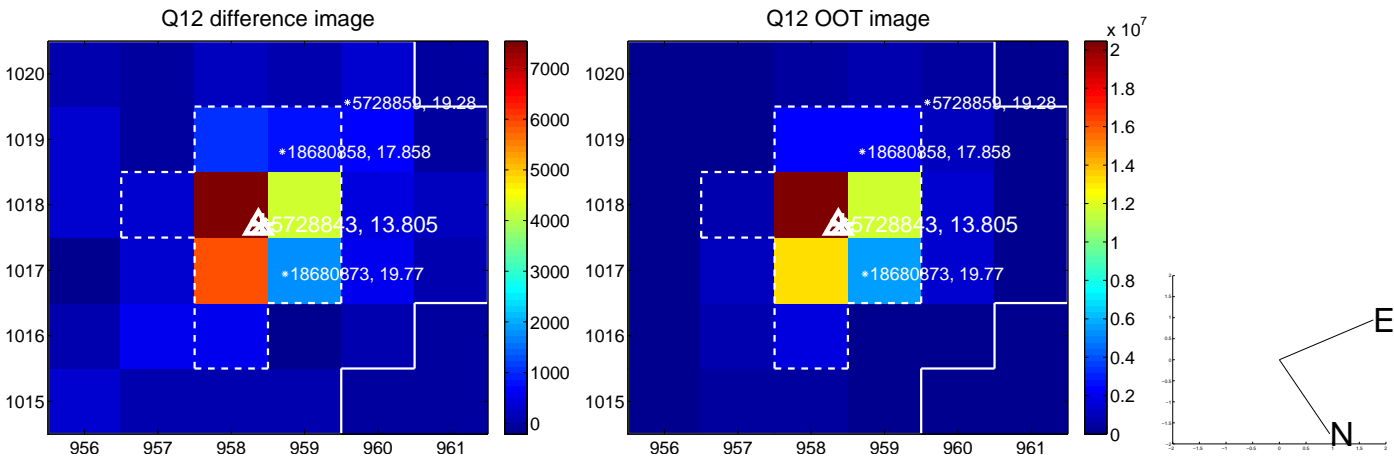
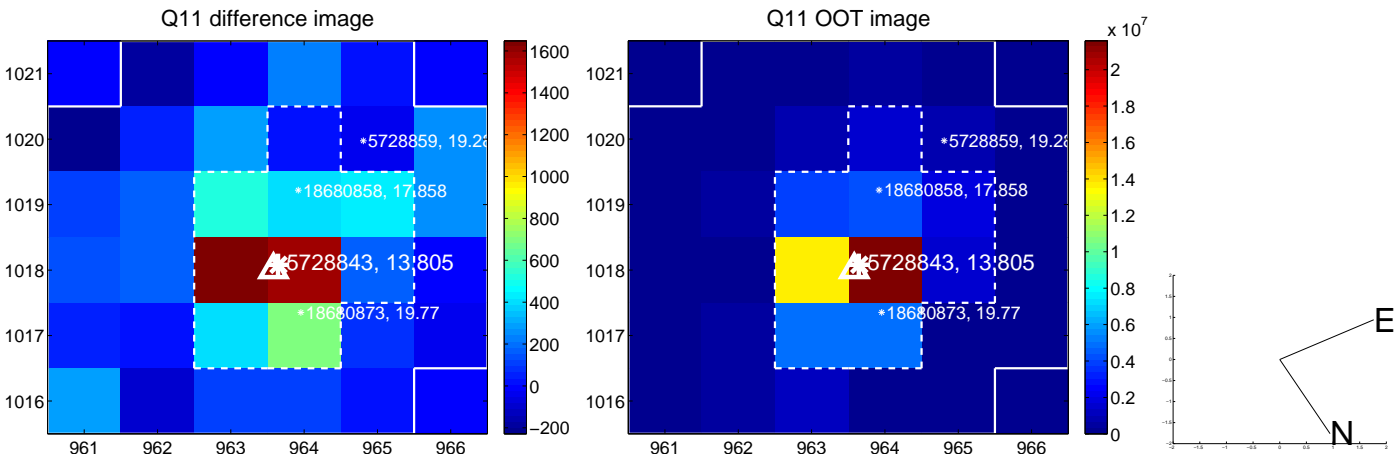
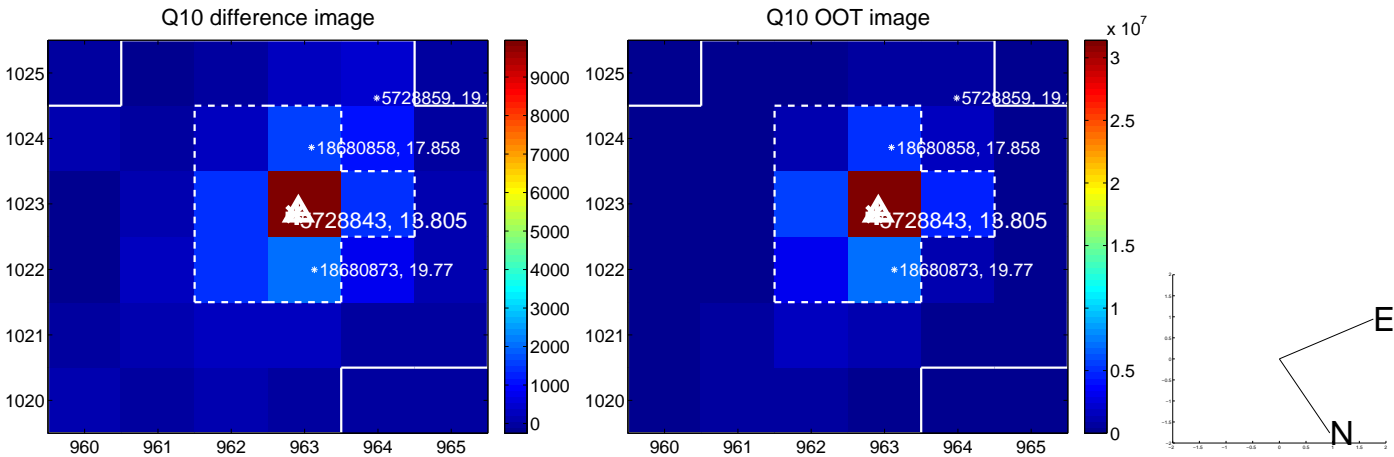
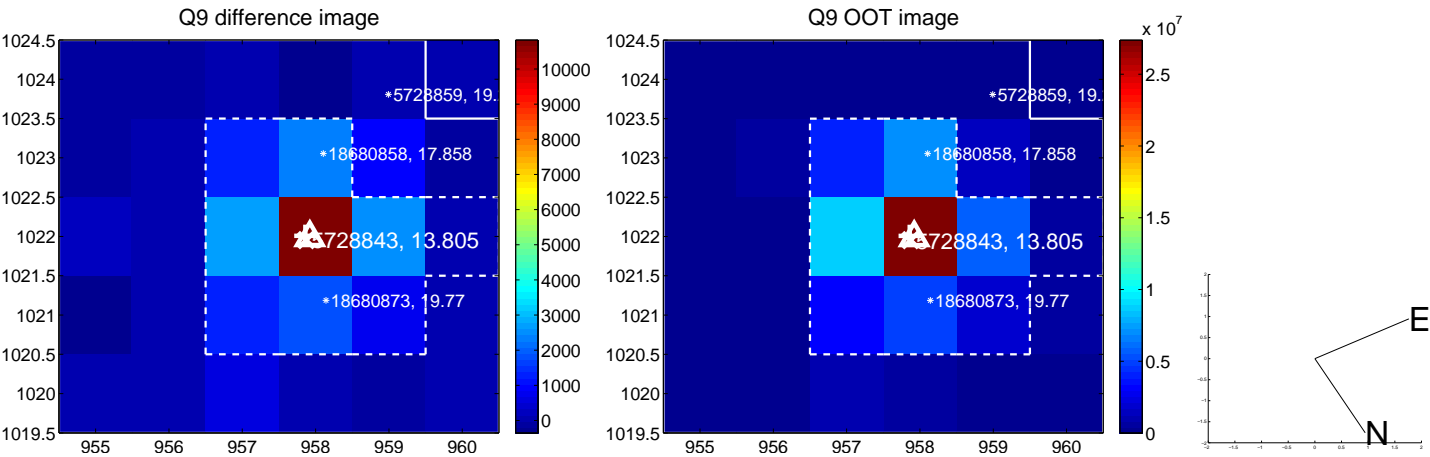
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



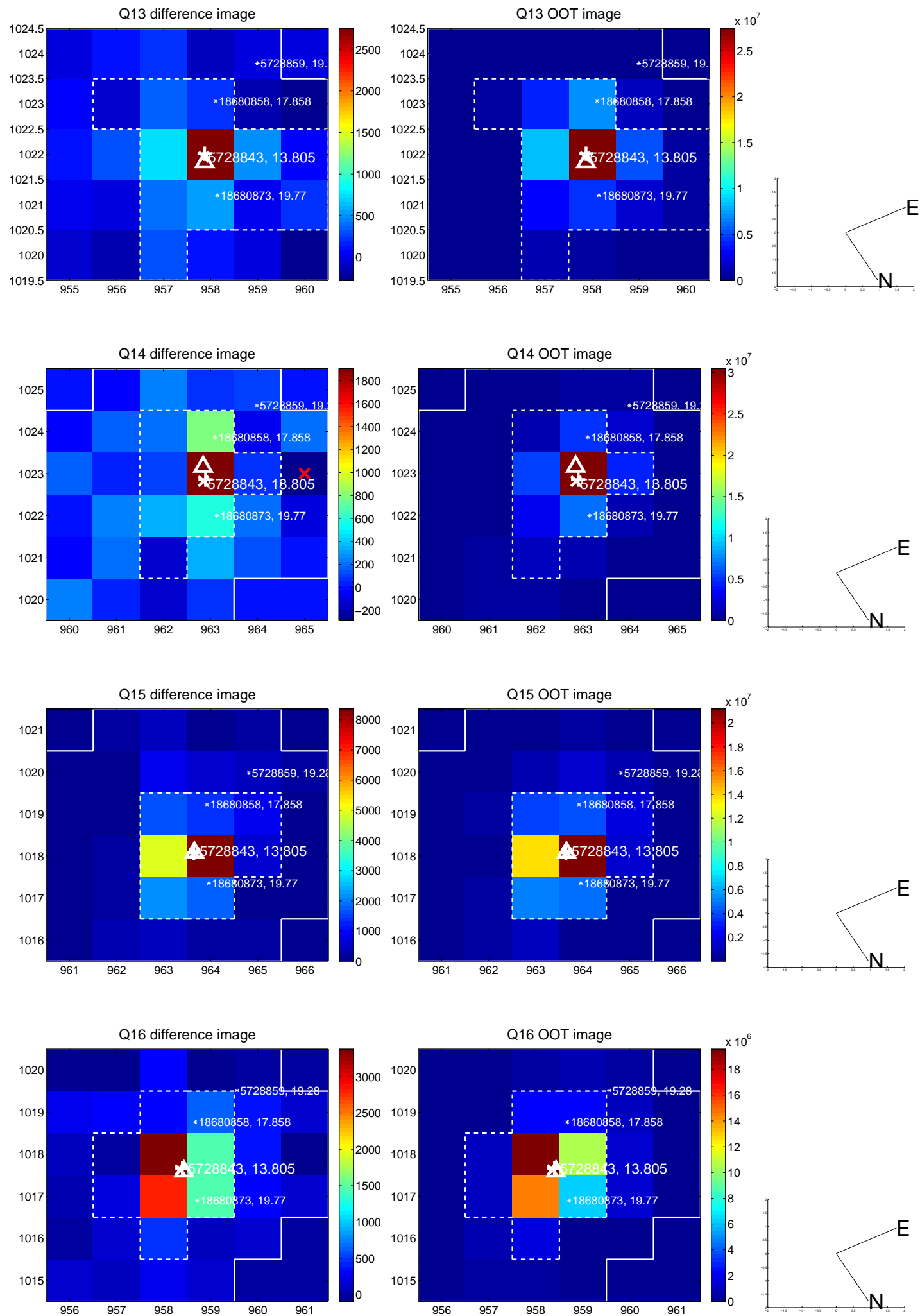
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



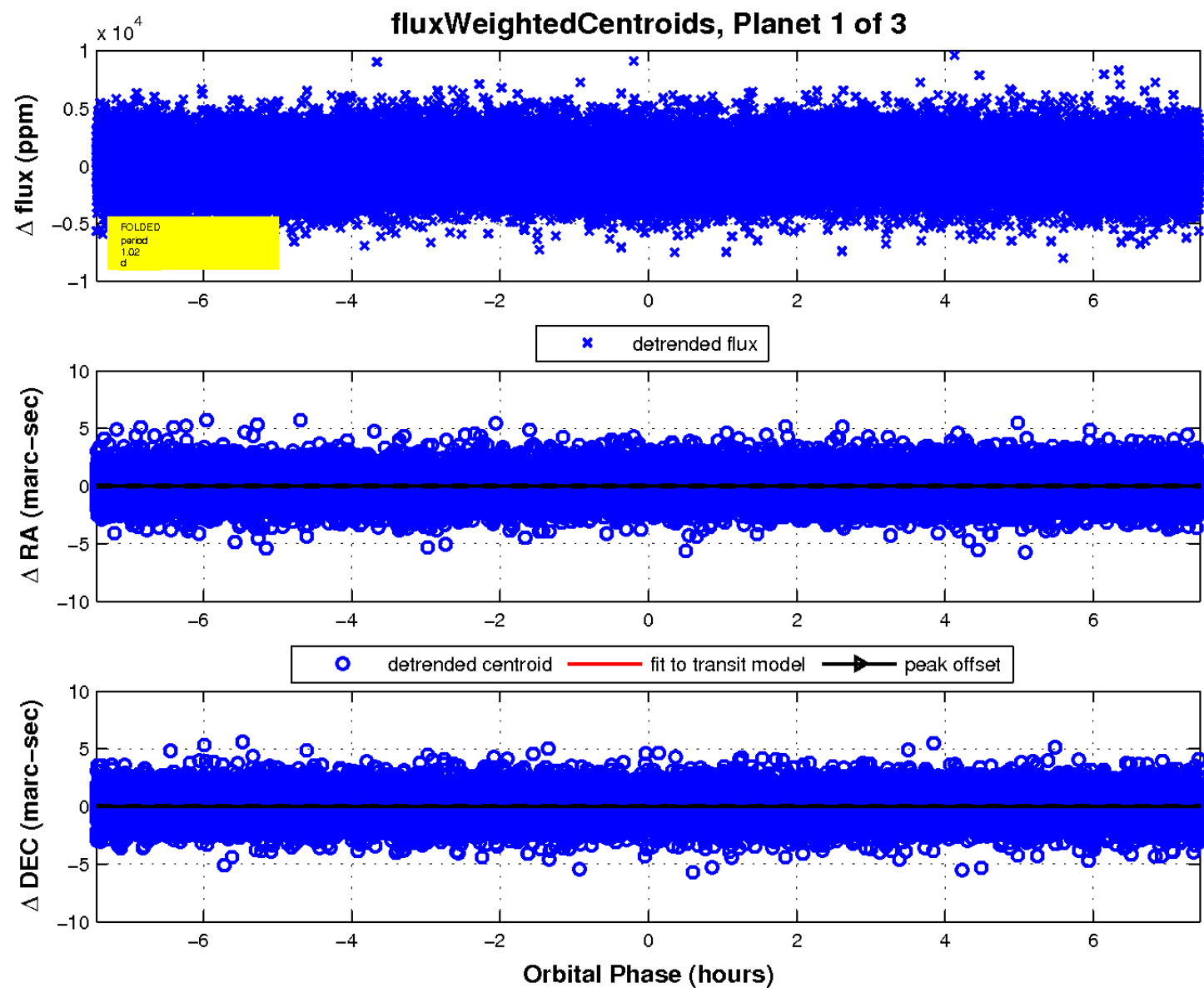
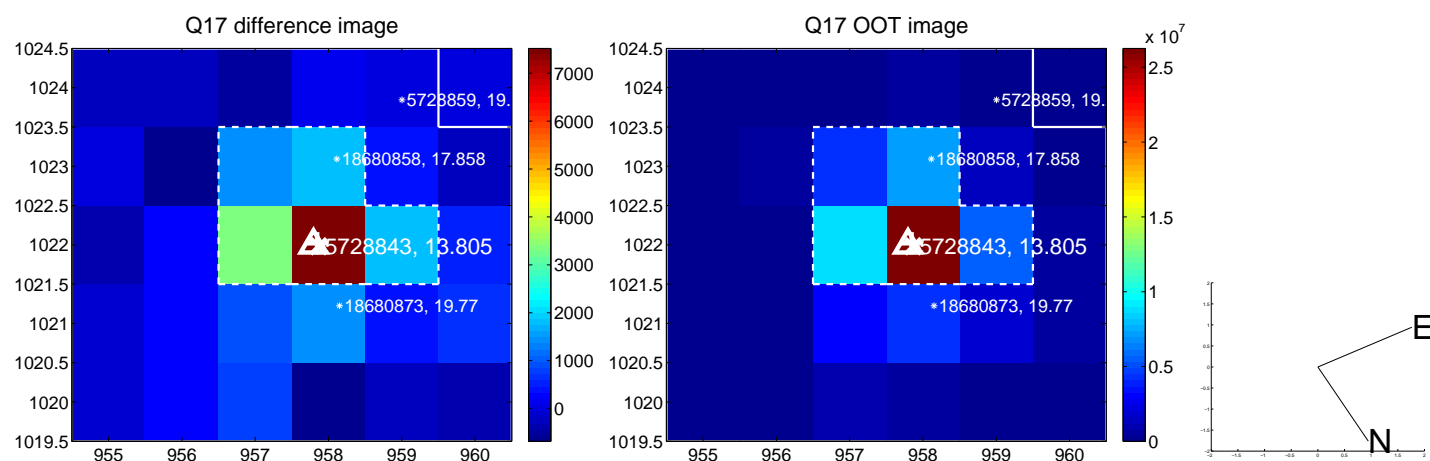
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

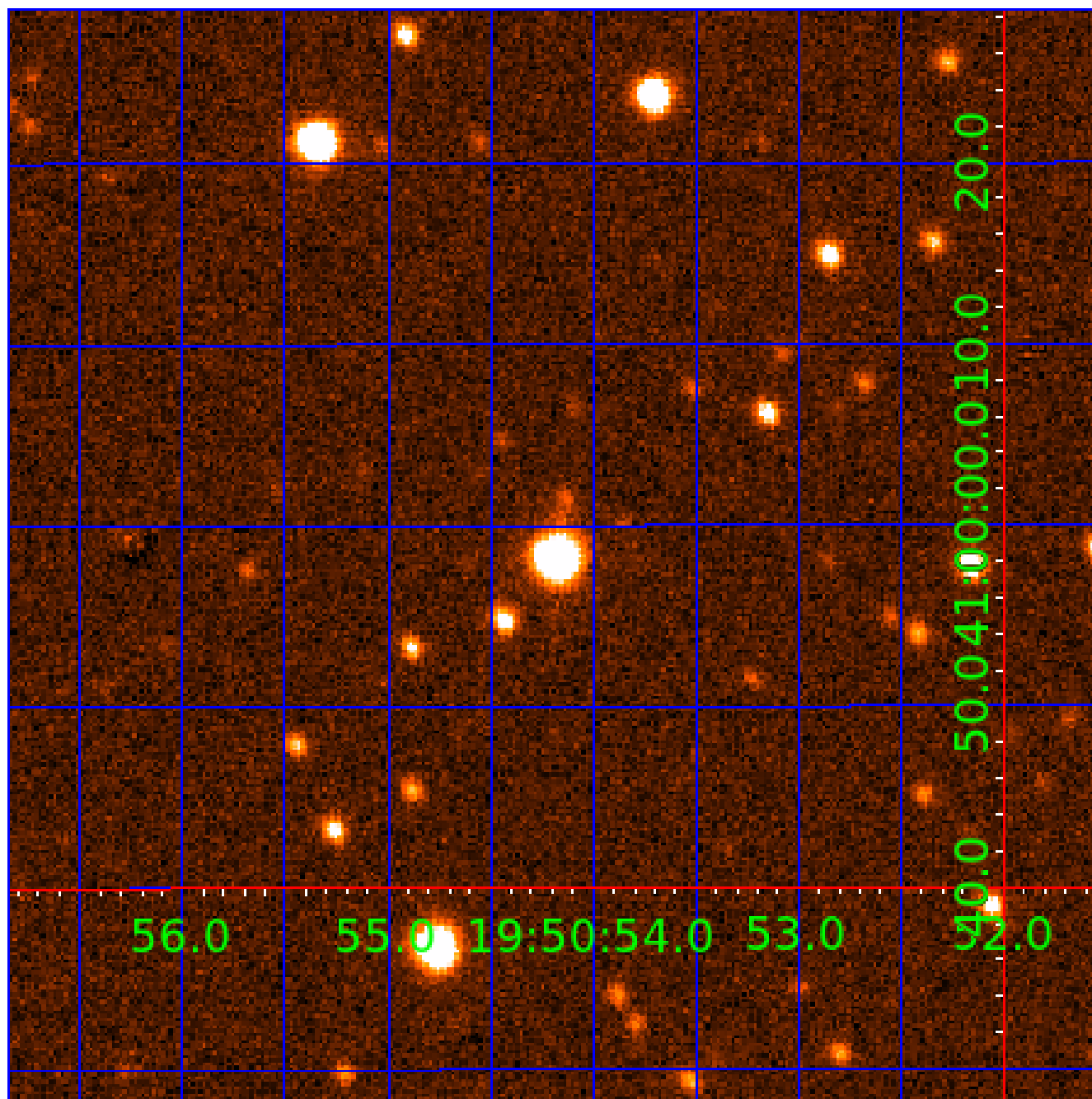


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005728843

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})
005728843-01	OBS	No	1.024443	131.533624	229.0	2.480	9.9	11.2	0.98	6764	1.73	4393.00
005728843-02	OBS	No	0.654409	131.835553	531.3	0.850	9.7	13.5	0.98	6764	2.33	7985.06
005728843-03	OBS	No	0.654408	131.513959	421.5	0.887	8.8	10.5	0.98	6764	2.38	7985.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005728843-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005728843-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005728843-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD

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

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

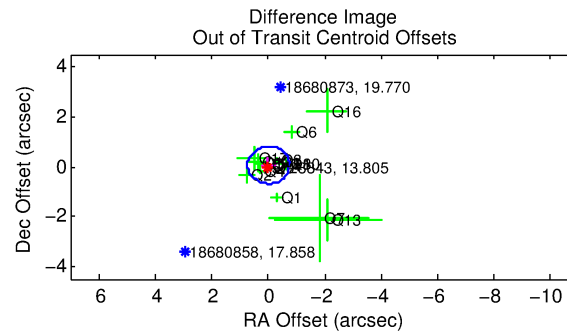
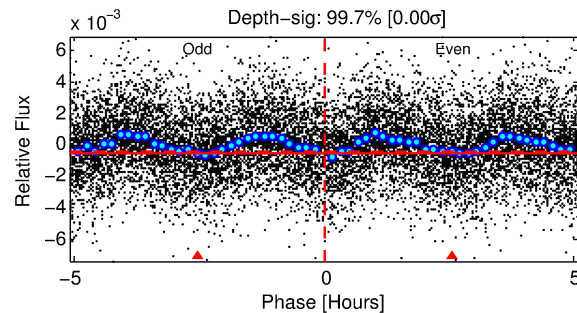
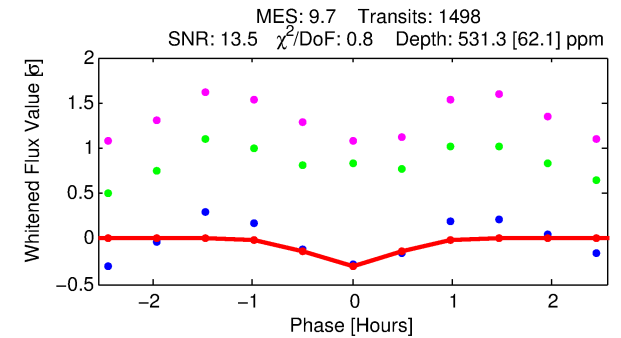
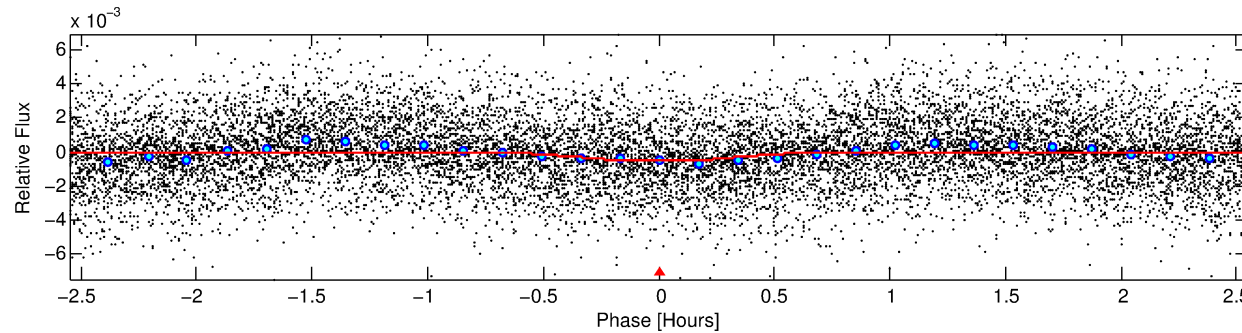
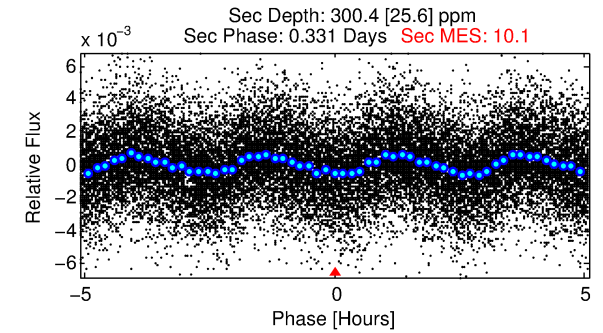
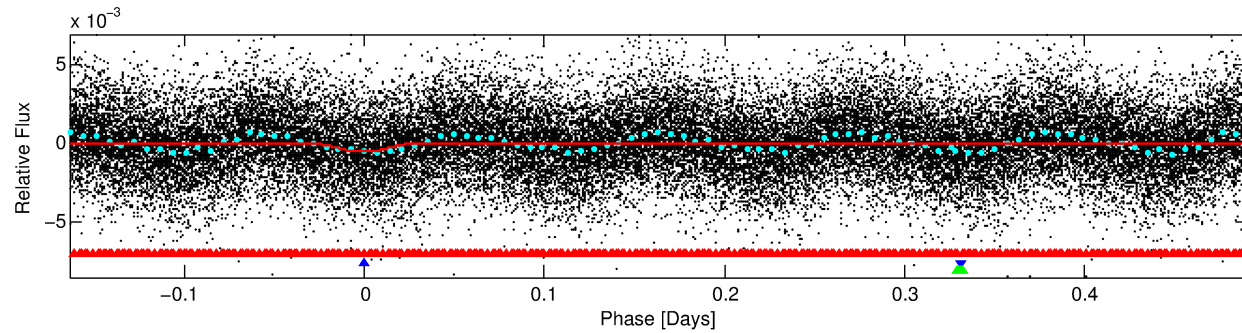
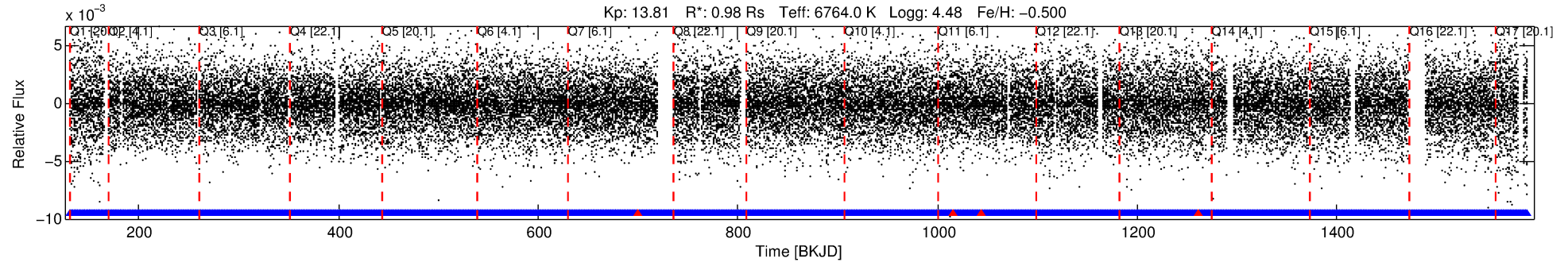
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005728843-02

No Significant Match Found

DV One-Page Summary

KIC: 5728843 Candidate: 2 of 3 Period: 0.654 d



DV Fit Results:

Period = 0.65441 [0.00001] d
Epoch = 131.8356 [0.0014] BKJD
Rp/R* = 0.0217 [0.0133]
a/R* = 5.77 [18.95]
b = 0.30 [10.14]
Seff = 7985.06 [3542.49]
Teq = 2410 [267] K
Rp = 2.33 [1.62] Re
a = 0.0151 [0.0043] AU
Ag = 6.90 [8.91] [0.66σ]
Teffp = 6040 [1862] K [1.93σ]

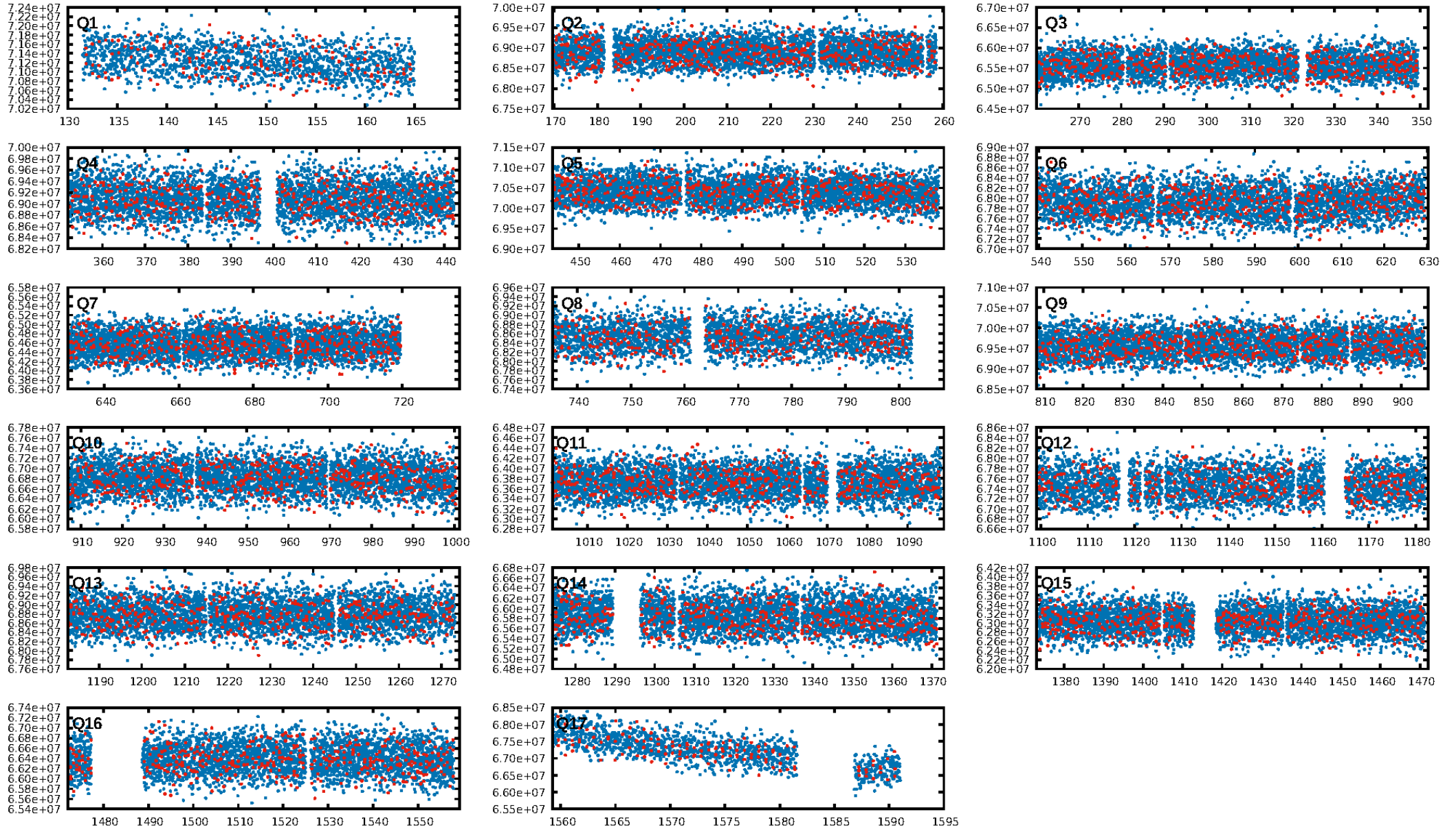
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 99.9% [3.39σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.59e-32
RollingBand-fgt: 1.00 [1427/1431]
GhostDiagnostic-chr: -75.71
Centroid-sig: 1.9%
Centroid-so: 0.070 arcsec [0.65σ]
OotOffset-rm: 0.063 arcsec [0.26σ]
KicOffset-rm: 0.040 arcsec [0.15σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 1.00 [17/17]

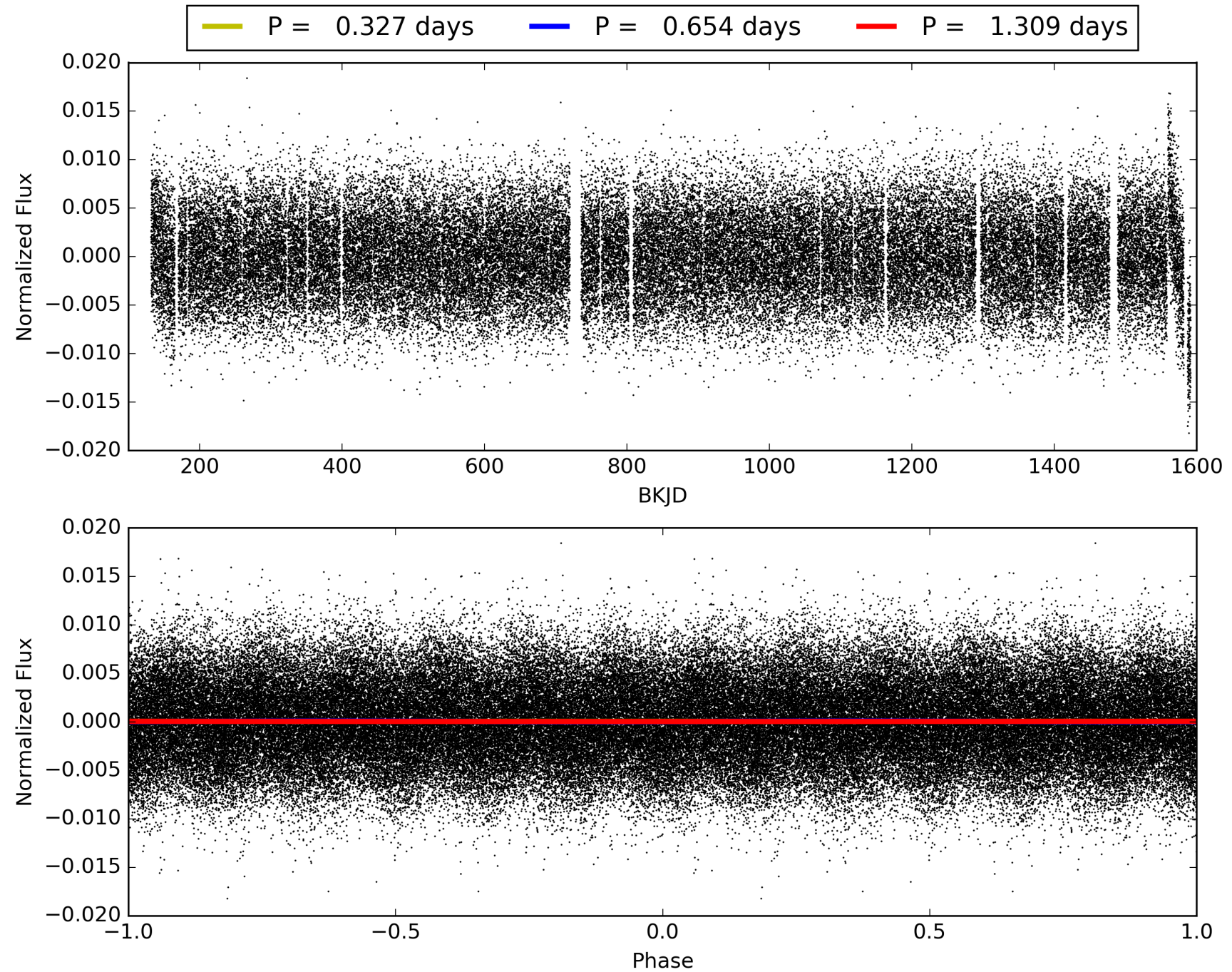
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 12:06:18 Z

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

TCE 005728843-02, PDC Light Curves

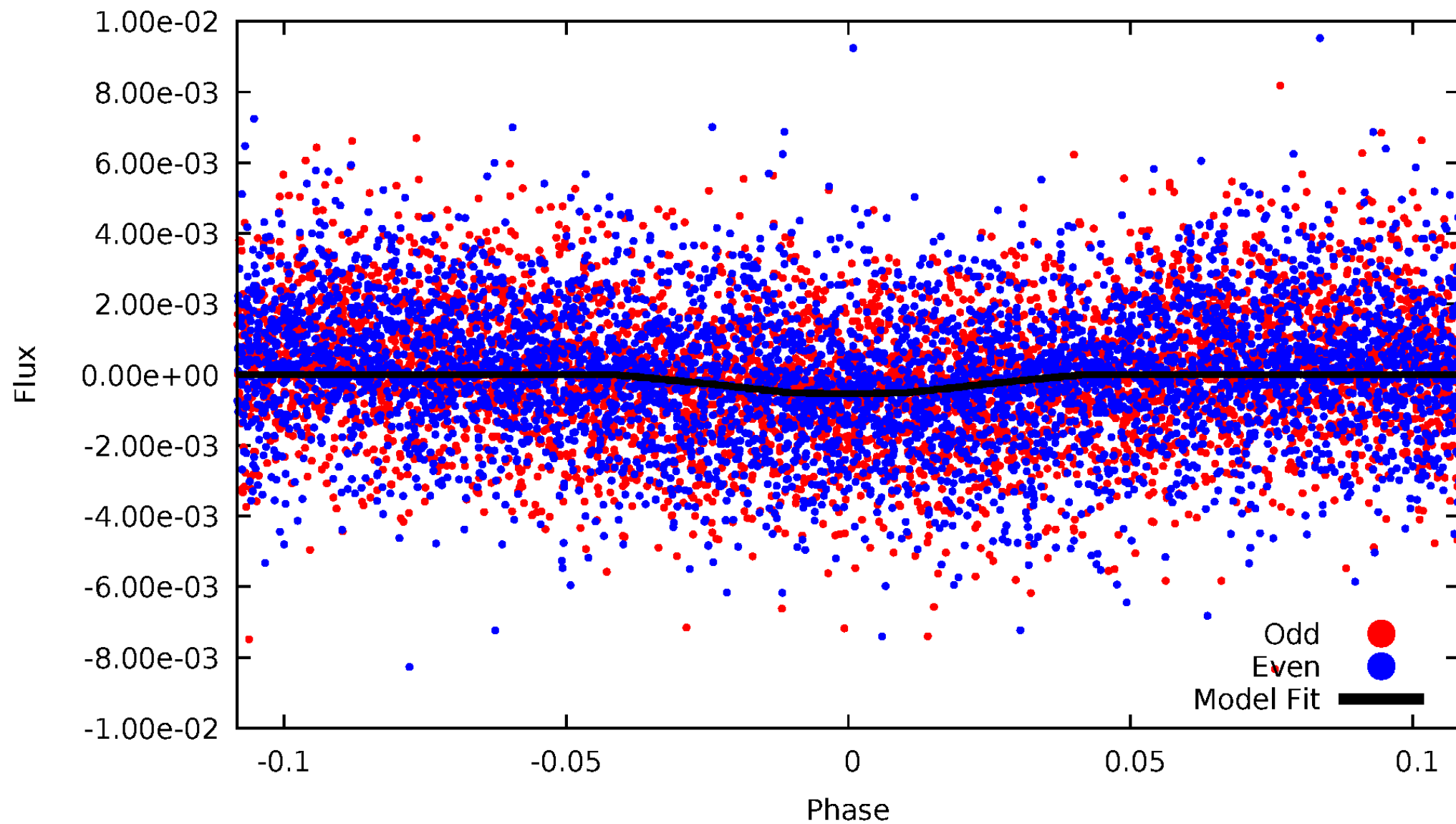


TCE 005728843-02



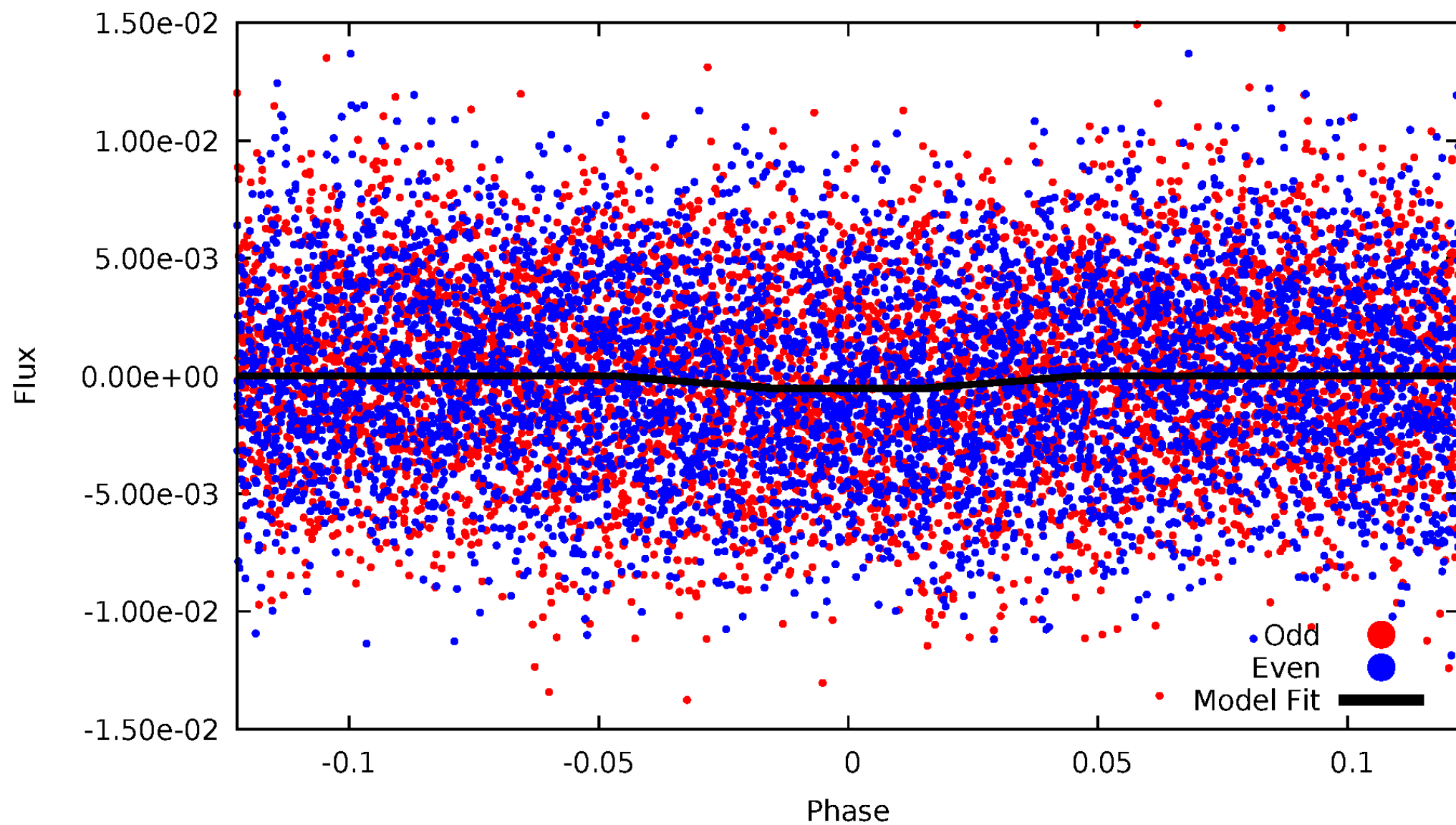
DV Odd/Even

TCE 005728843-02



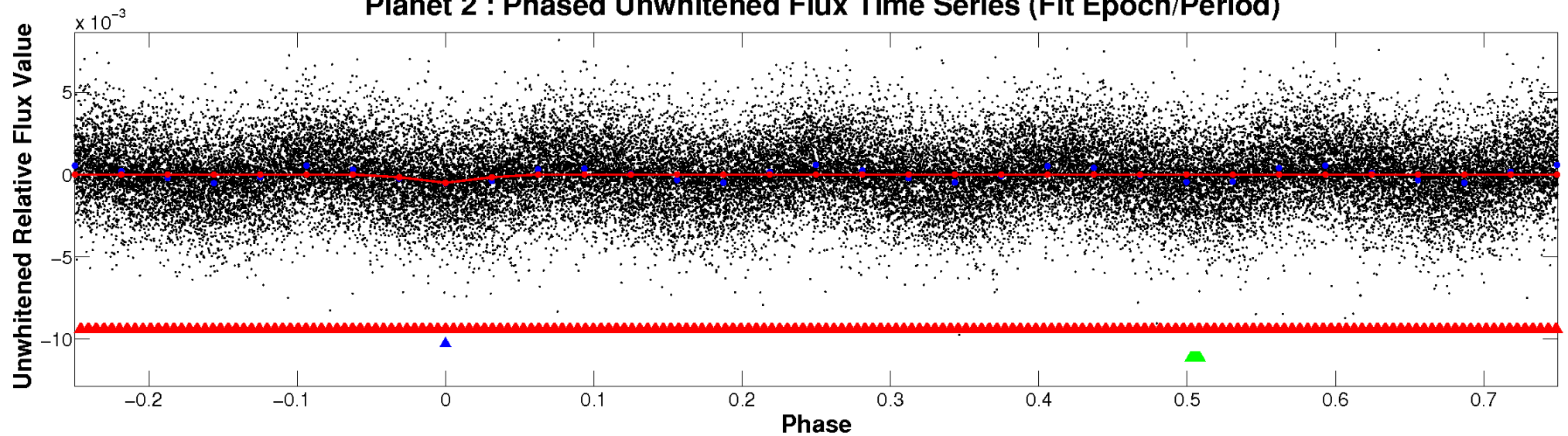
ALT Odd/Even

TCE 005728843-02

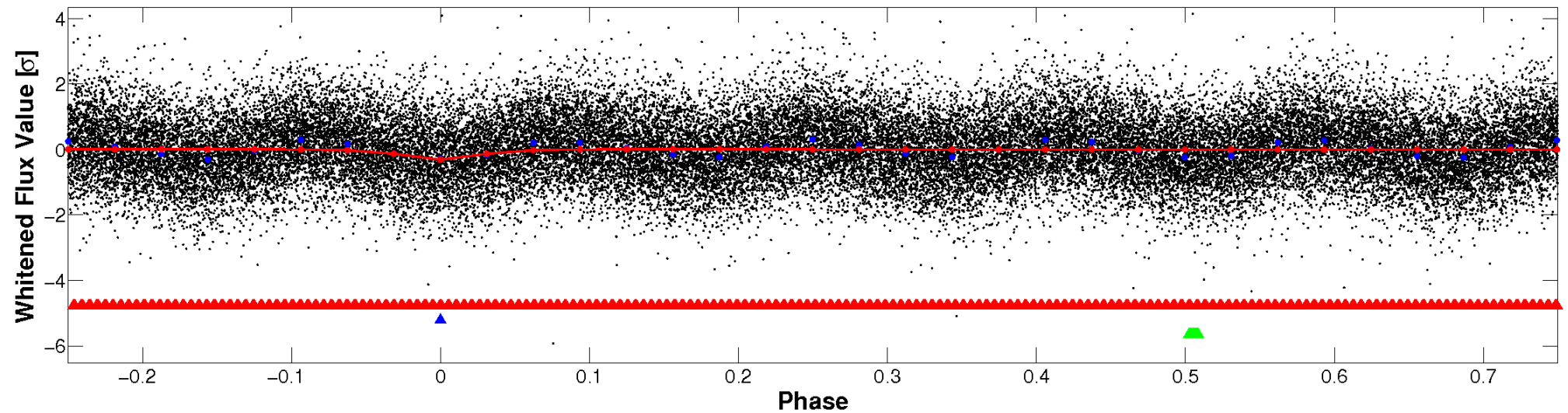


Non-Whitened Vs. Whitened Light Curve

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

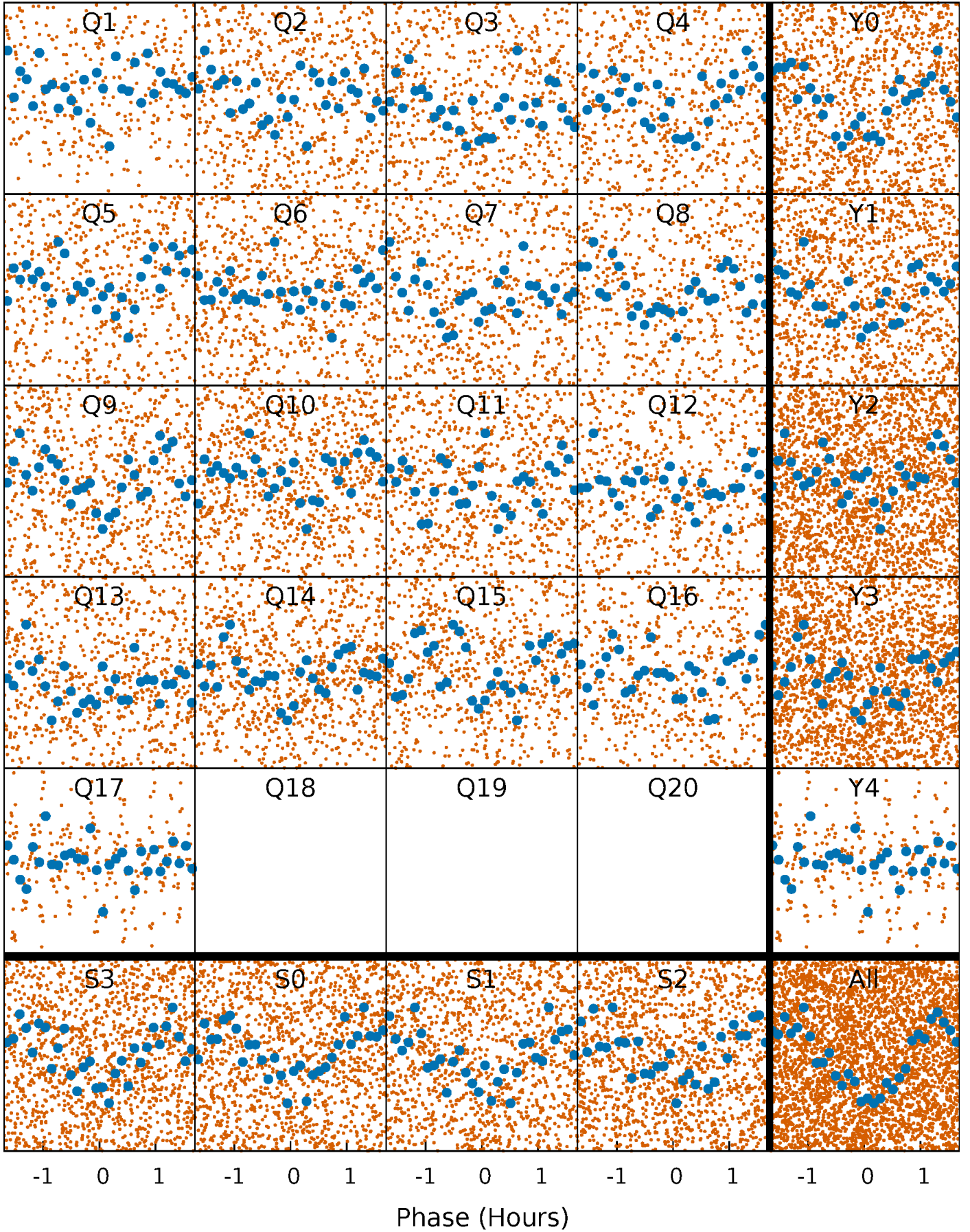


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



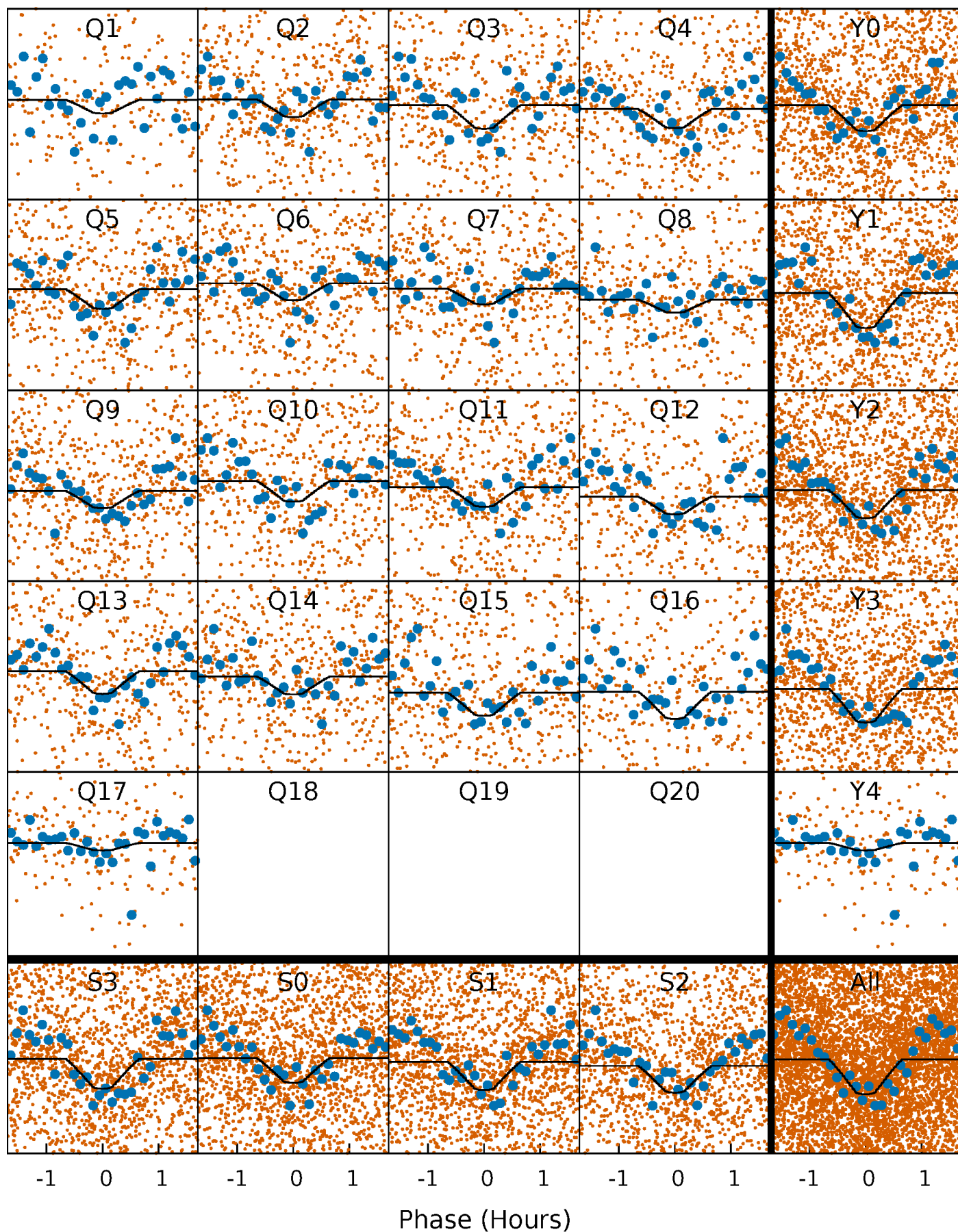
PDC Quarter-Phased Transit Curves

TCE 005728843-02 P= 0.654409 Days $T_0=131.835553$ (BKJD)



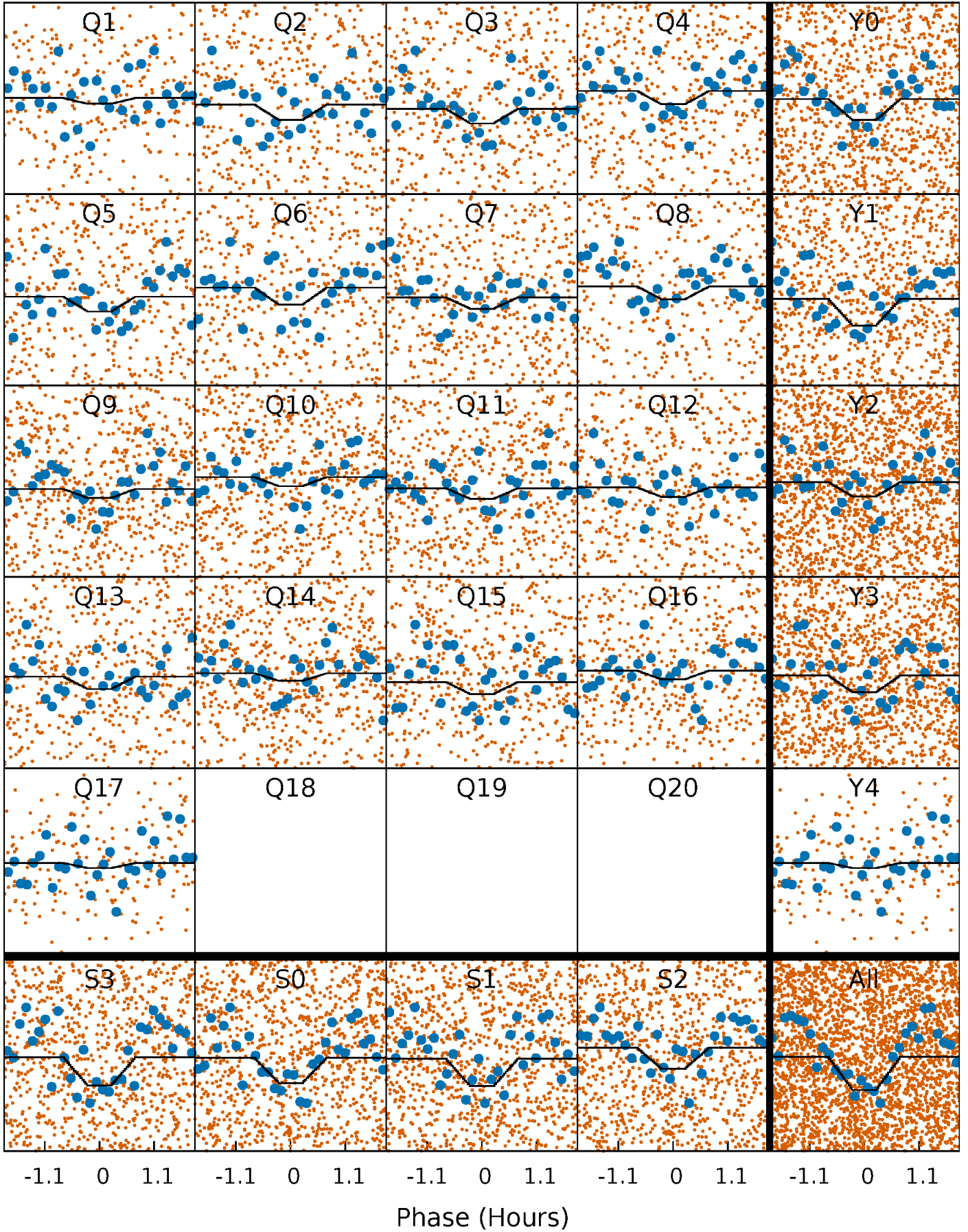
DV Quarter-Phased Transit Curves

TCE 005728843-02 P= 0.654409 Days $T_0=131.835553$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

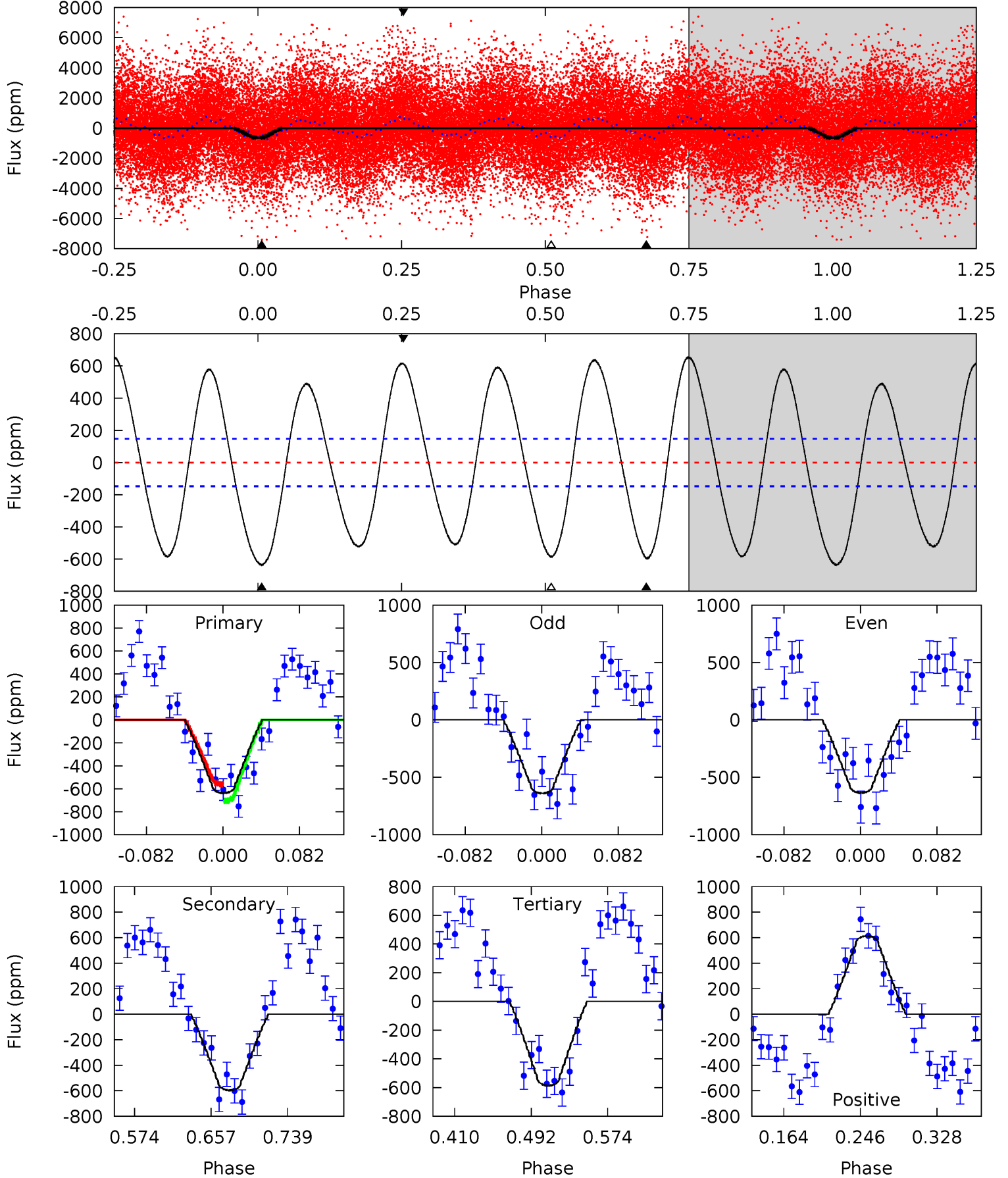
TCE 005728843-02 P= 0.654412 Days $T_0=131.836581$ (BKJD)



DV Model-Shift Uniqueness Test

005728843-02, P = 0.654409 Days, E = 131.181144 Days

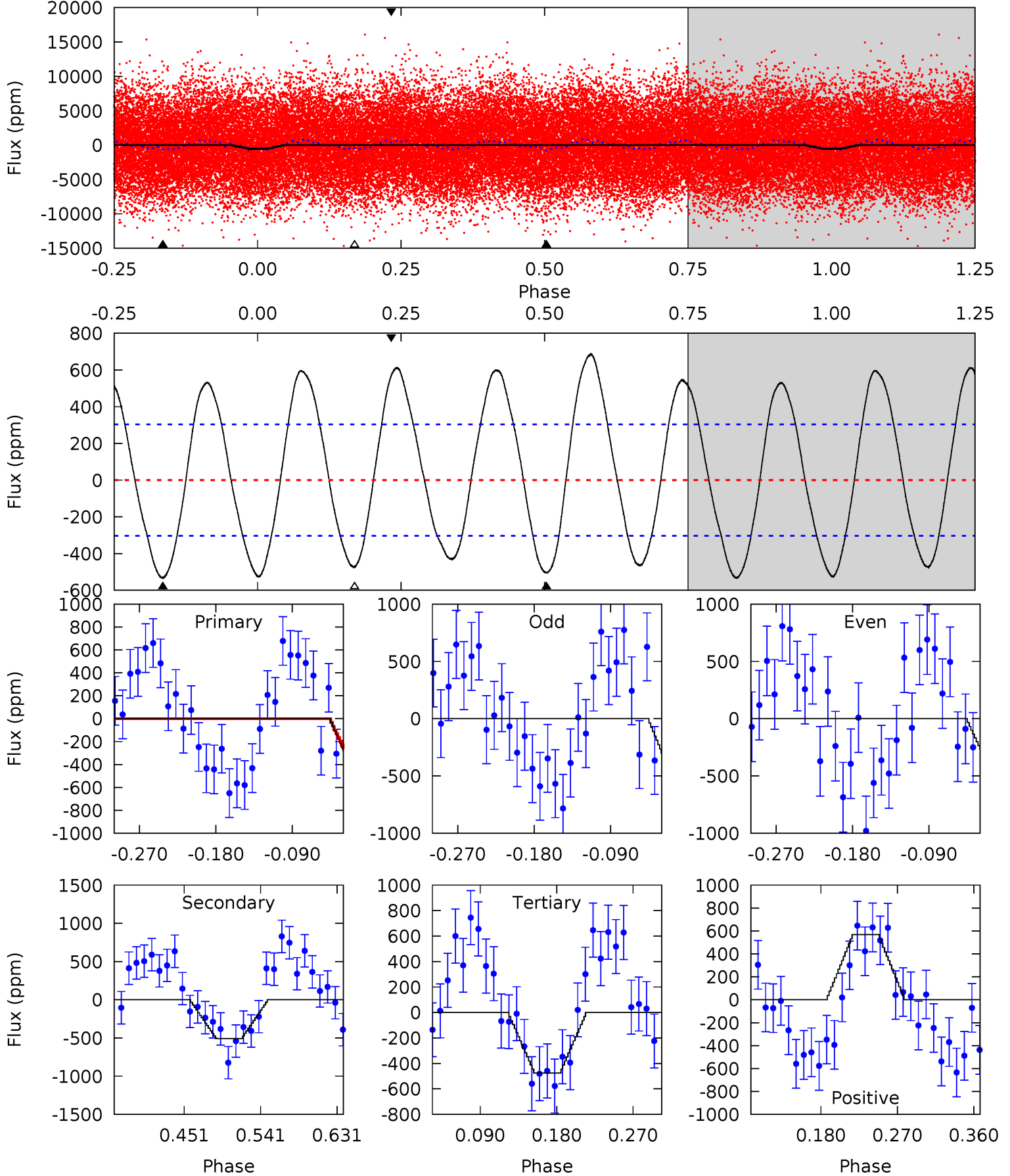
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	18.6	18.3	19.2	4.61	1.74	12.6	1.59	0.72	0.30	-0.57	0.06	0.94	0.51	2.27



Alt Model-Shift Uniqueness Test

005728843-02, P = 0.654412 Days, E = 131.182169 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.10	7.67	7.20	8.61	4.59	1.69	5.51	0.90	-0.51	0.48	-0.93	0.48	0.89	0.56	0.68



Stellar Parameters For KIC 005728843

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6764^{+165}_{-259}	$4.480^{+0.040}_{-0.229}$	$-0.500^{+0.250}_{-0.350}$	$0.983^{+0.329}_{-0.082}$	$1.106^{+0.142}_{-0.142}$	$1.639^{+0.262}_{-0.929}$
	+2%/-4%	+1%/-5%	+50%/-70%	+33%/-8%	+13%/-13%	+16%/-57%
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 005728843-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-596 ± 32	$2.62^{+1.68}_{-1.38}$	3455^{+268}_{-164}	6961^{+4271}_{-1566}	10^{+38}_{-6}
Alt.	-508 ± 66	$2.70^{+1.51}_{-1.36}$	3441^{+260}_{-153}	6470^{+3588}_{-1275}	$8.625^{+26.350}_{-5.164}$

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

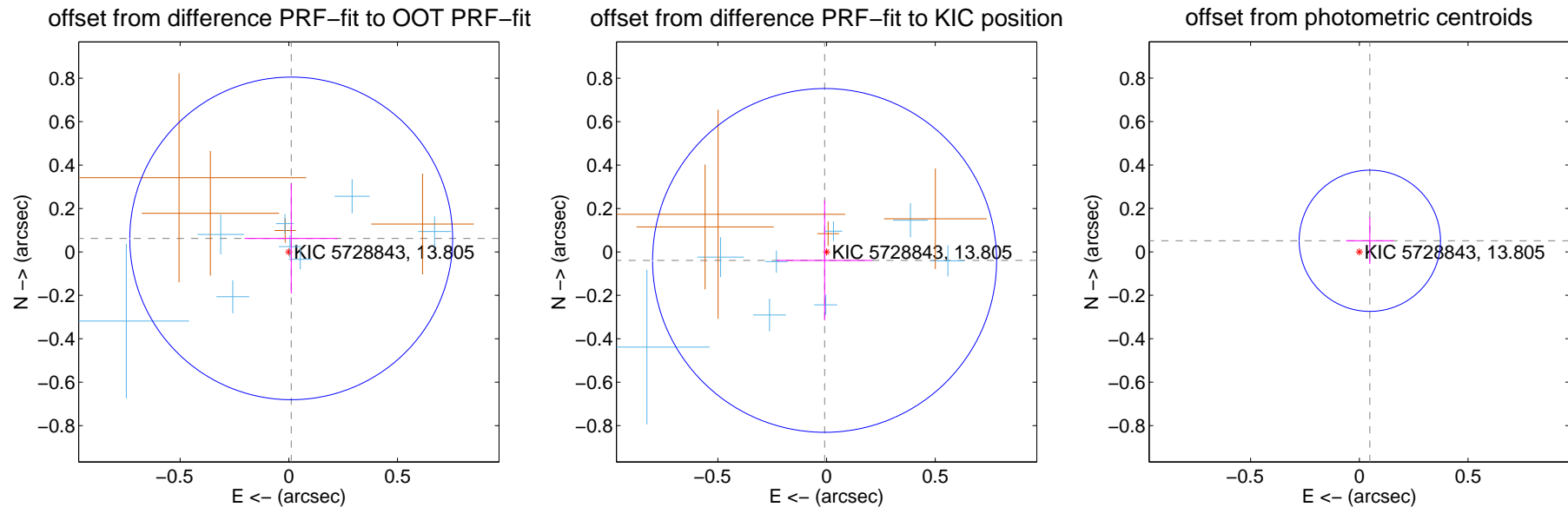
DV Centroid Data

Supplemental centroid analysis for 005728843-02. Kepler magnitude: 13.80. Transit SNR 13.52

There are 10 quarters with good PRF difference image offsets

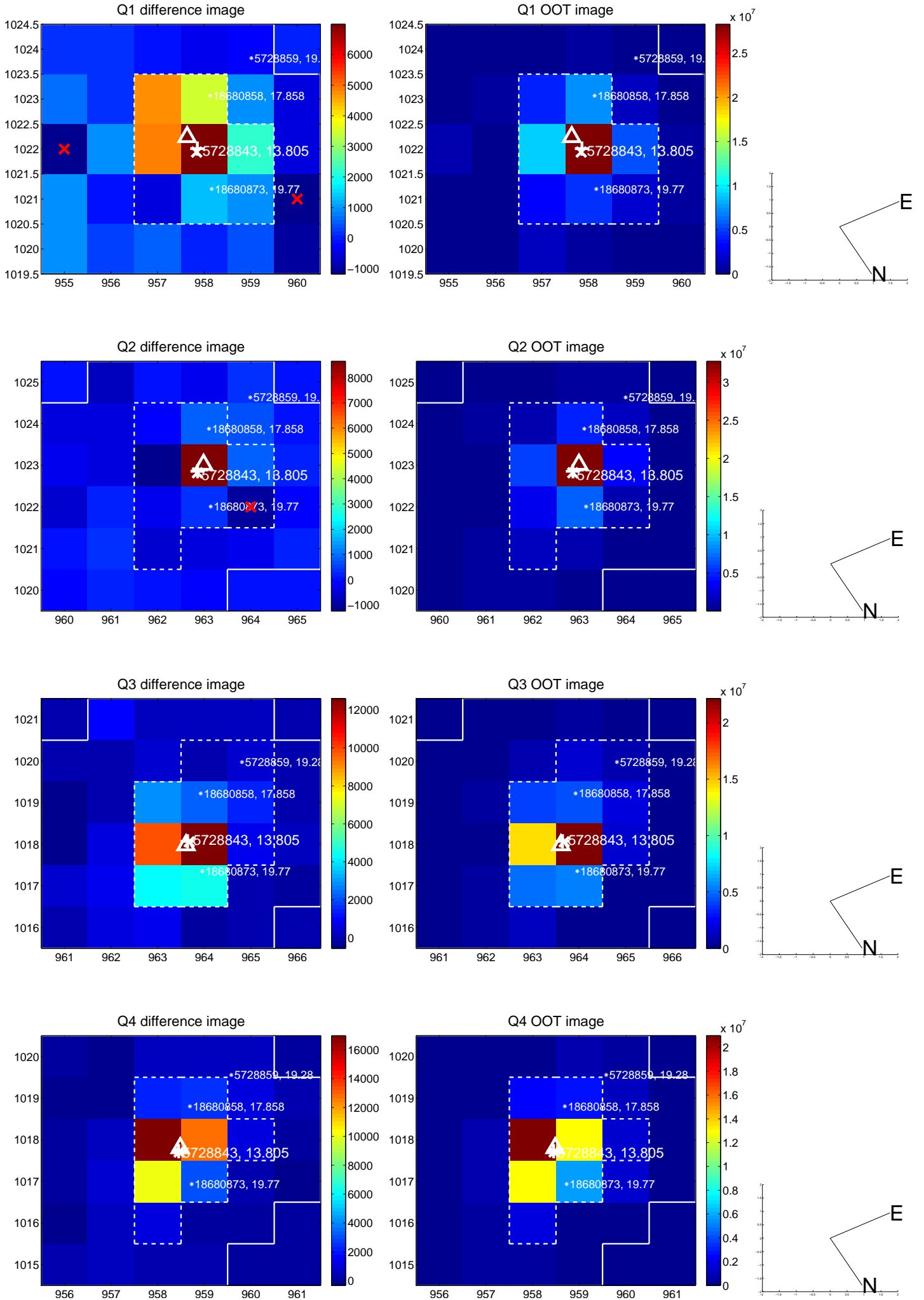
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.063 ± 0.248	0.26	-0.011 ± 0.215	0.062 ± 0.254
PRF-fit source offset from KIC position	0.040 ± 0.264	0.15	0.009 ± 0.220	-0.039 ± 0.275
photometric centroid source offset	0.07 ± 0.11	0.65	-0.05 ± 0.11	0.05 ± 0.11

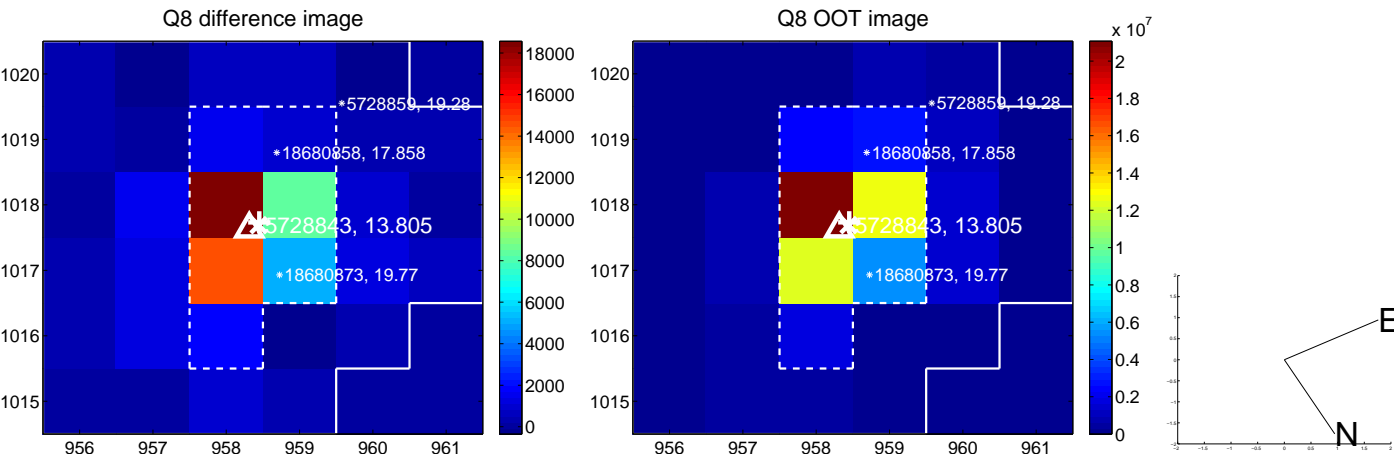
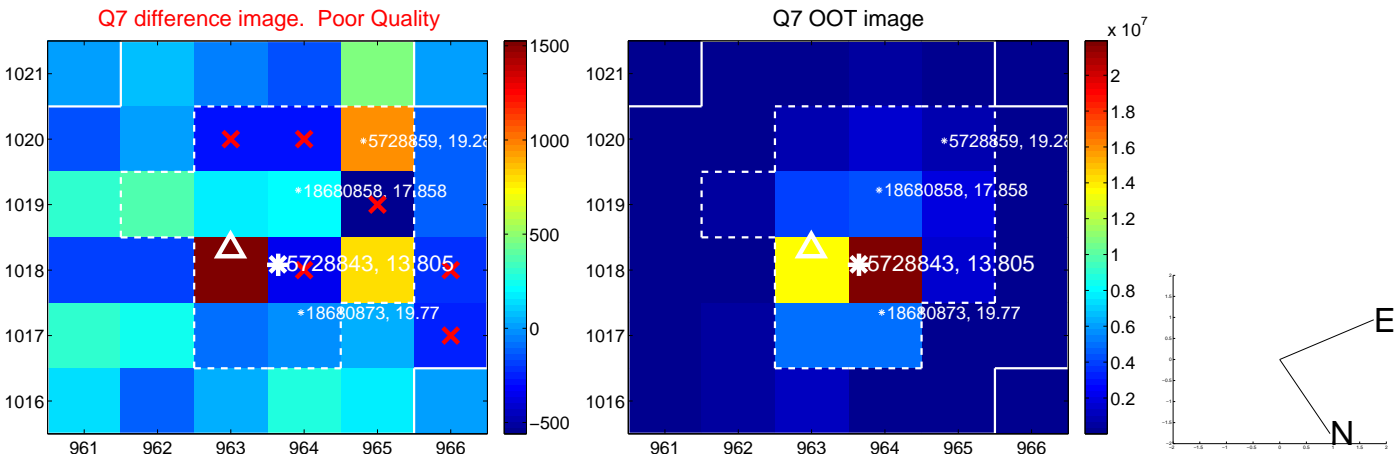
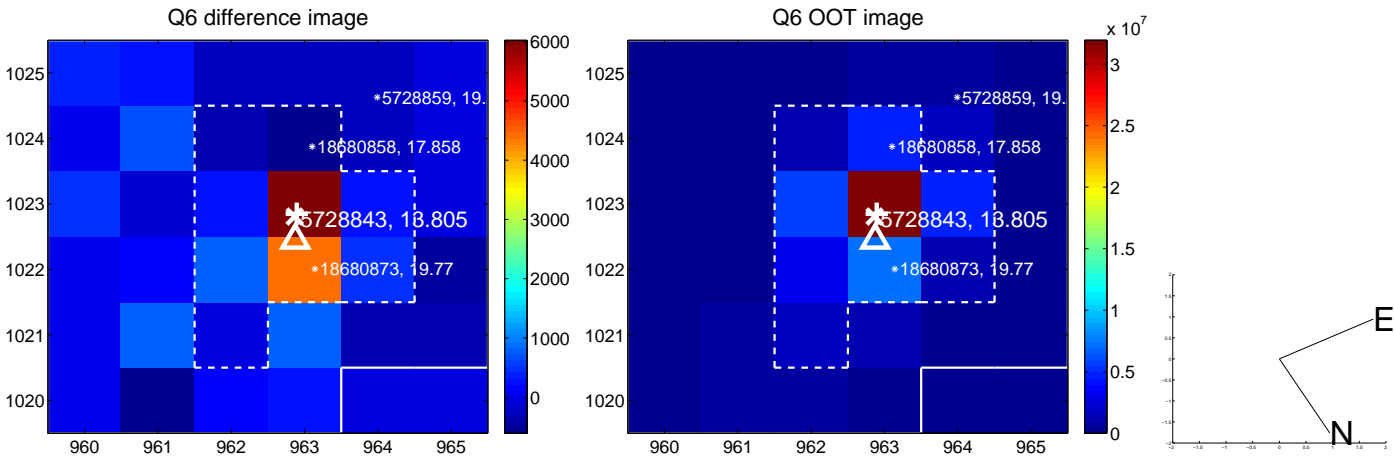
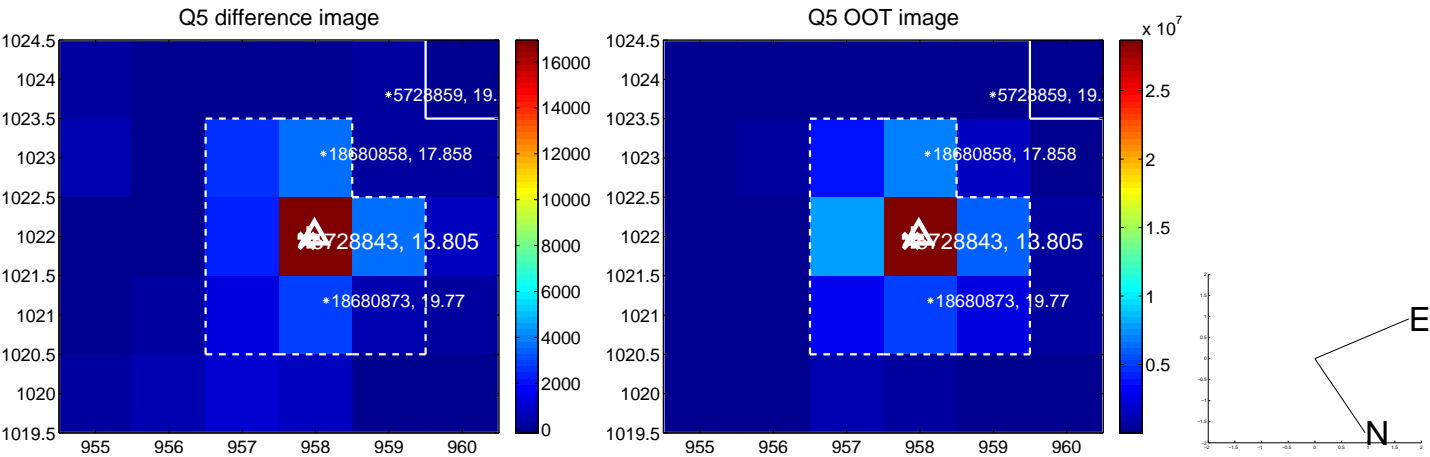


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

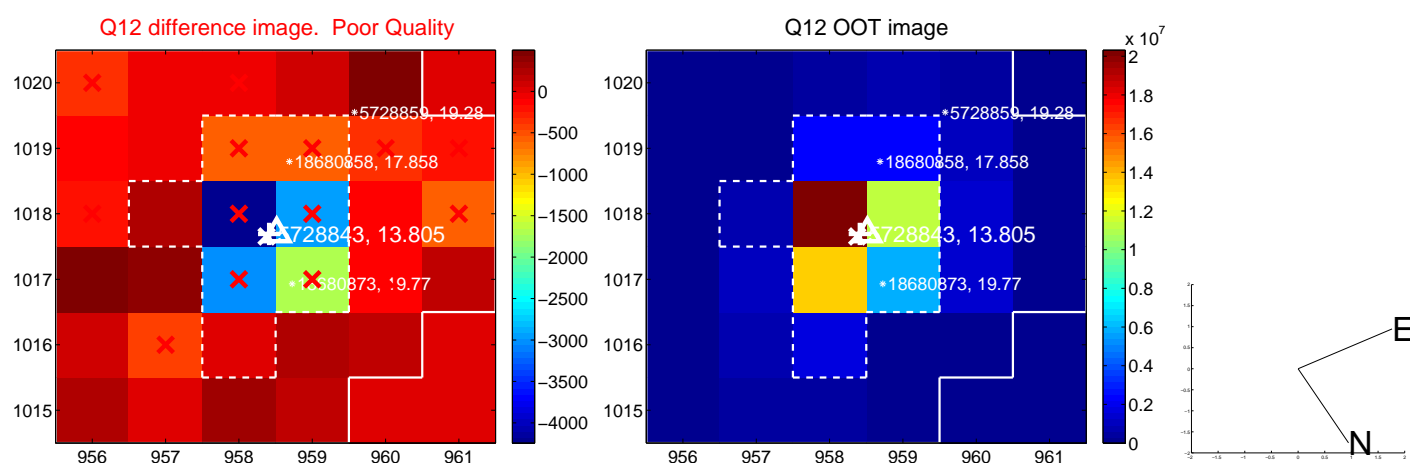
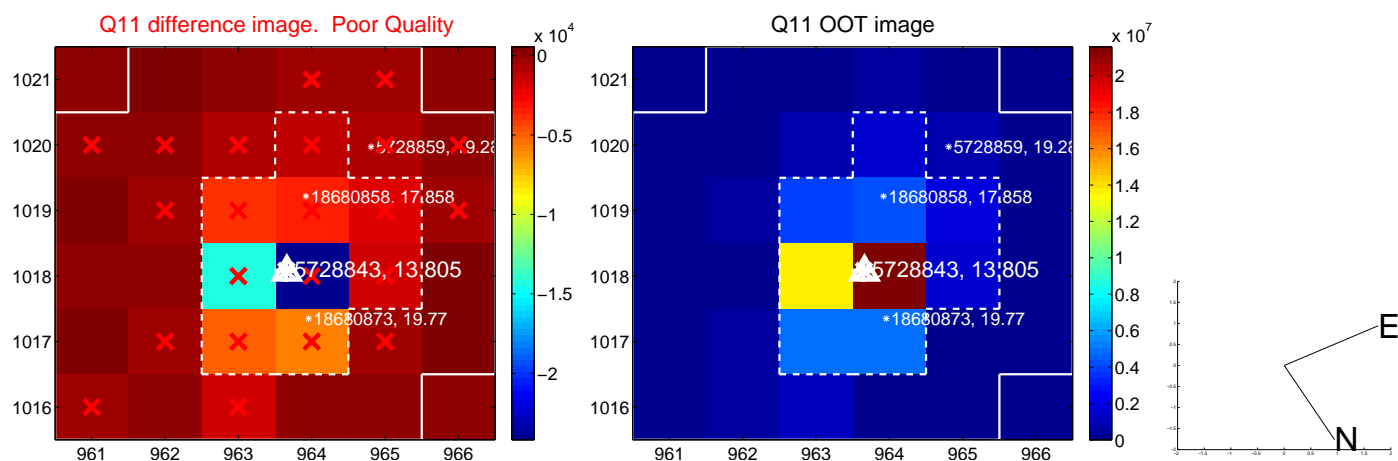
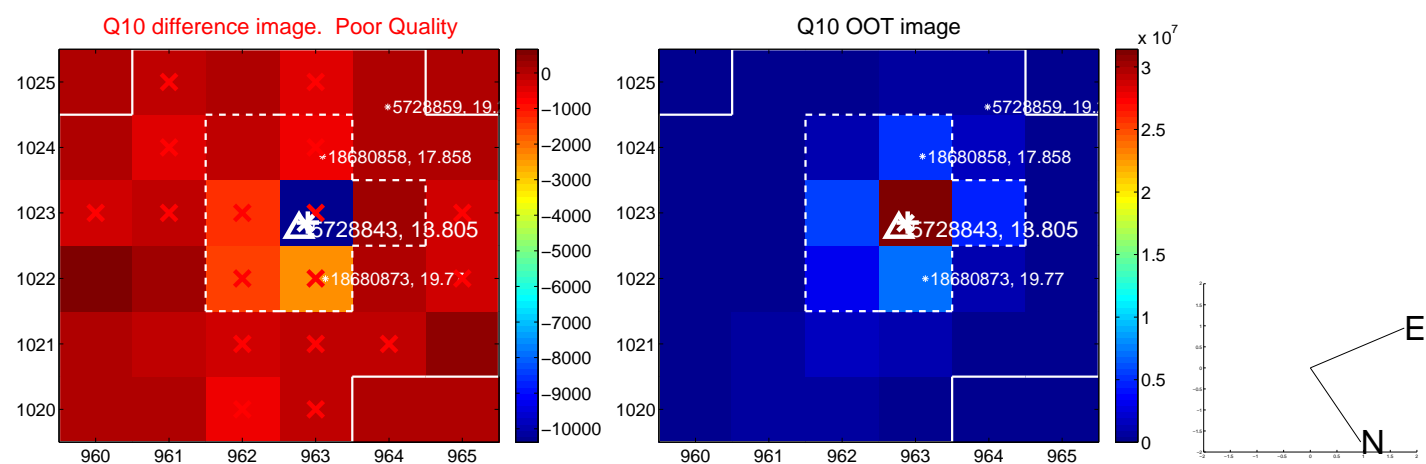
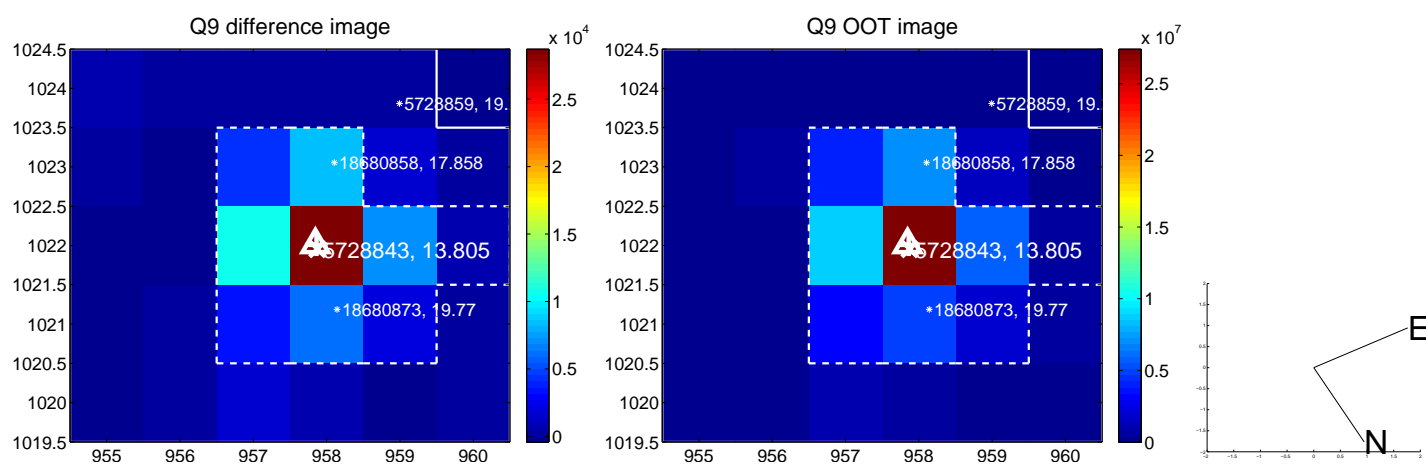
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



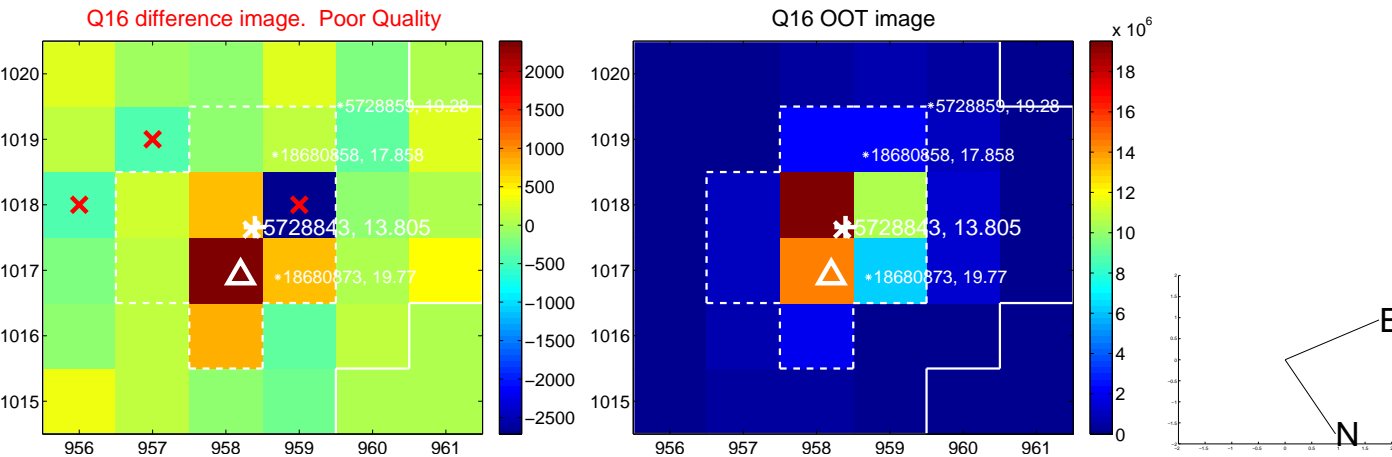
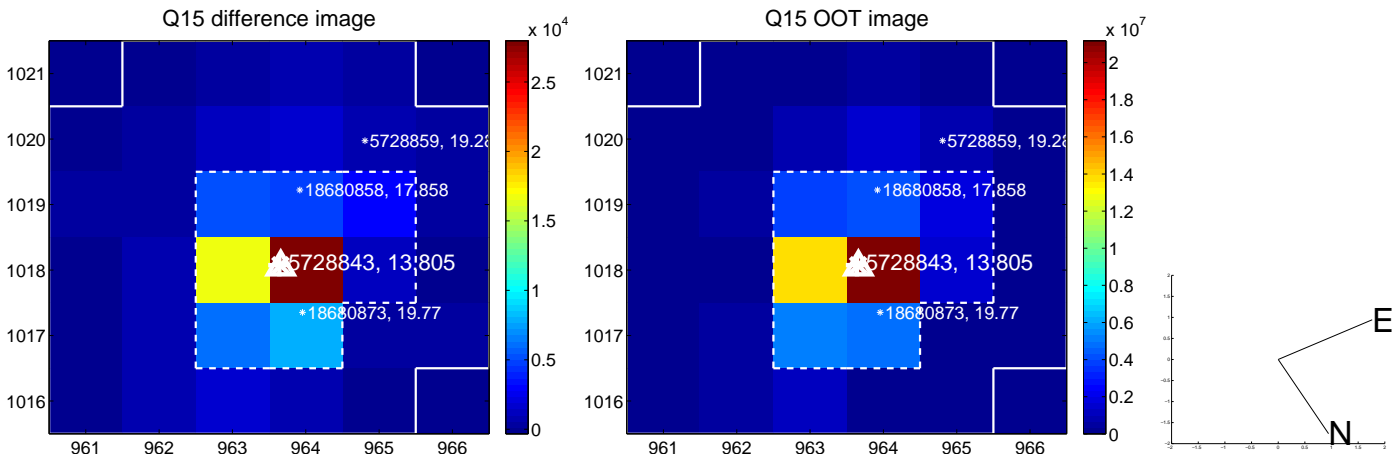
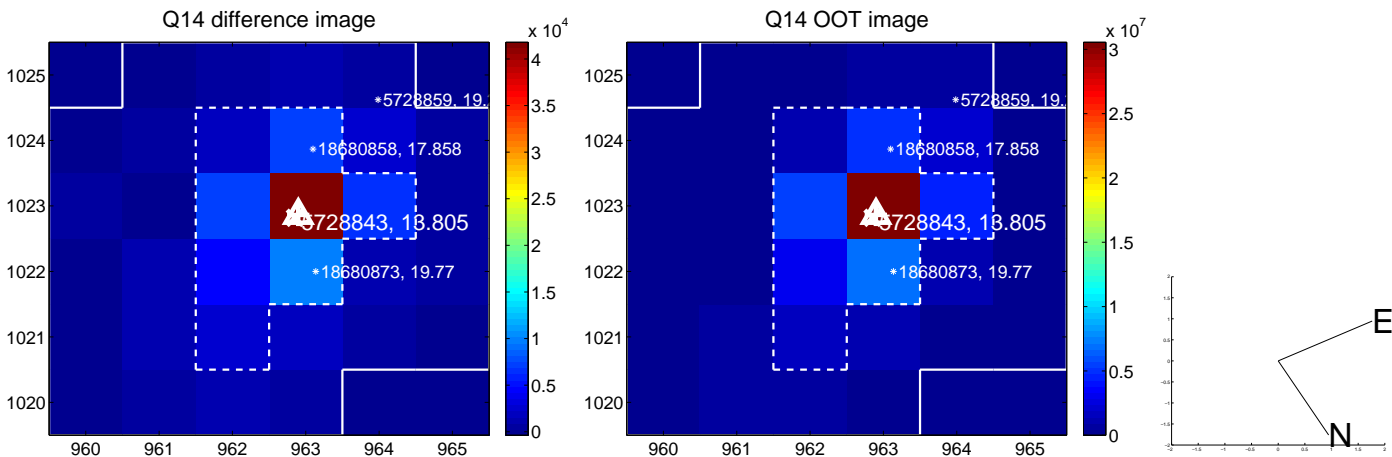
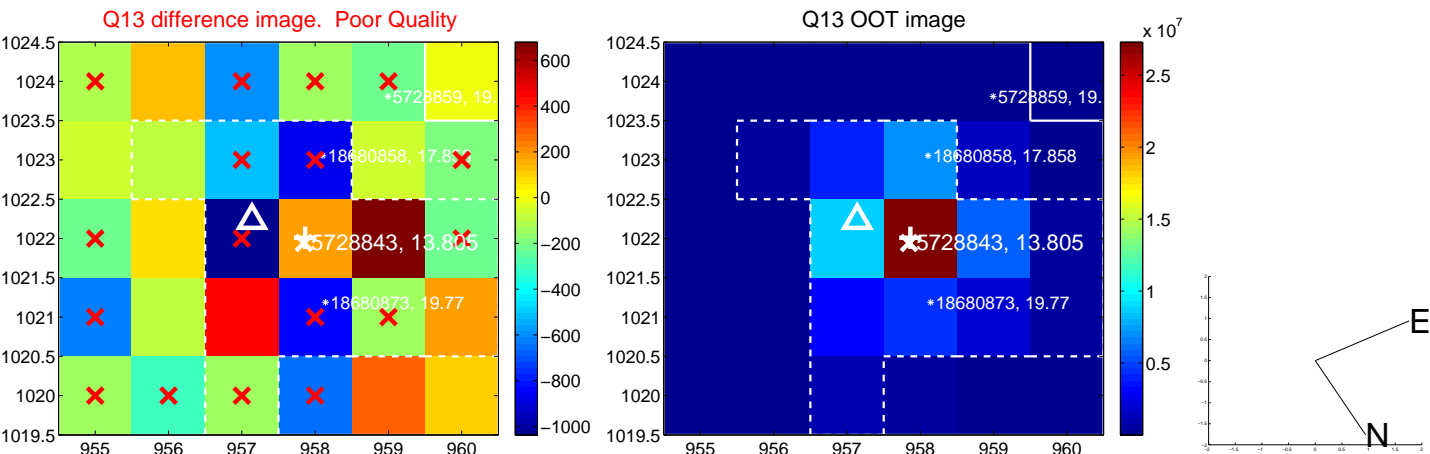
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



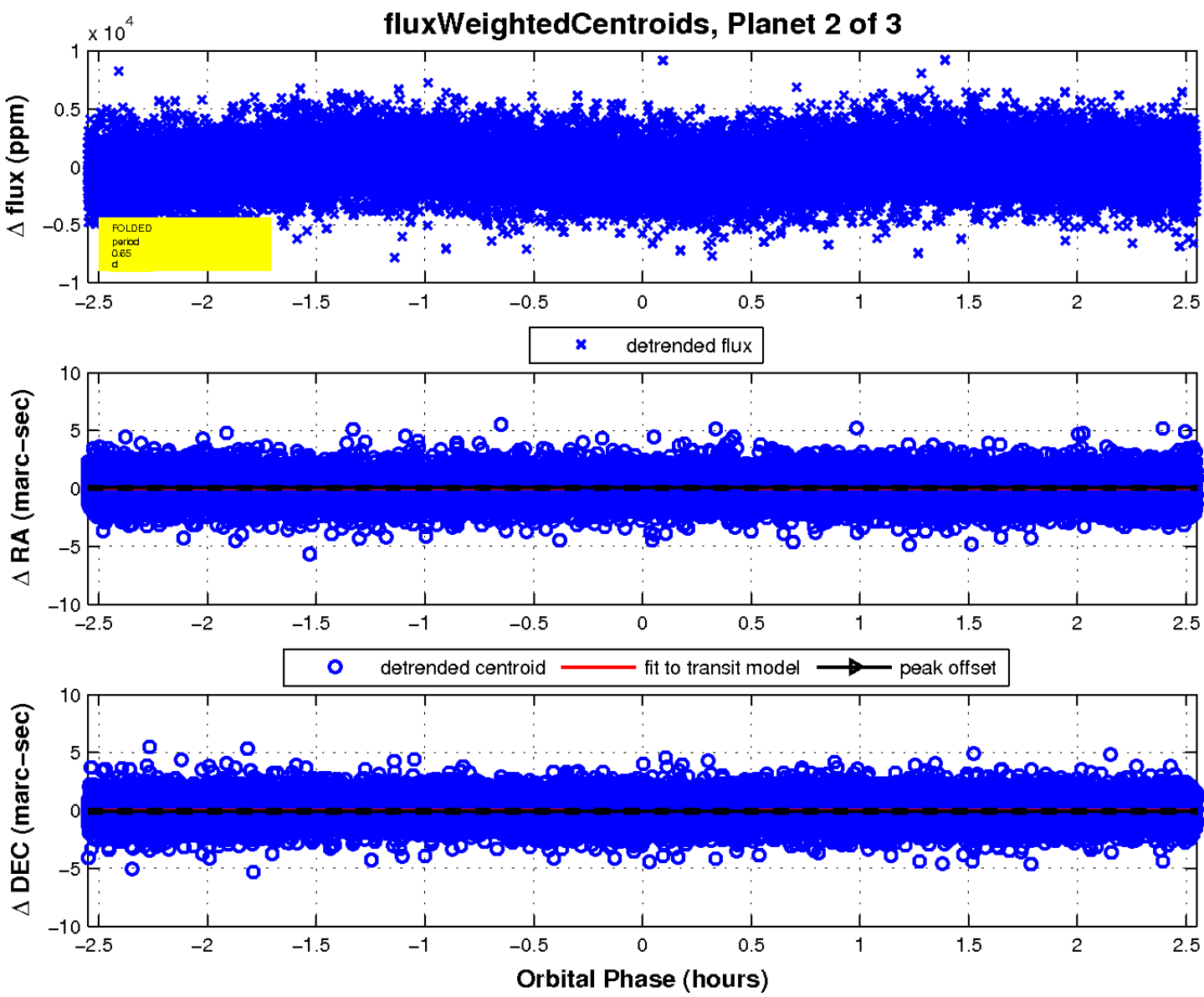
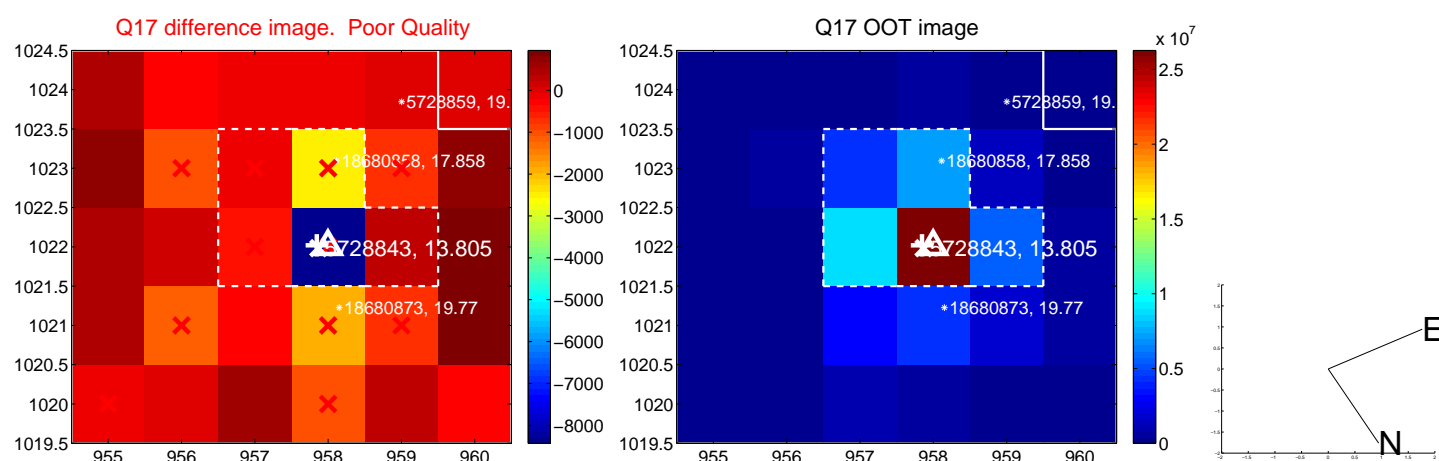
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

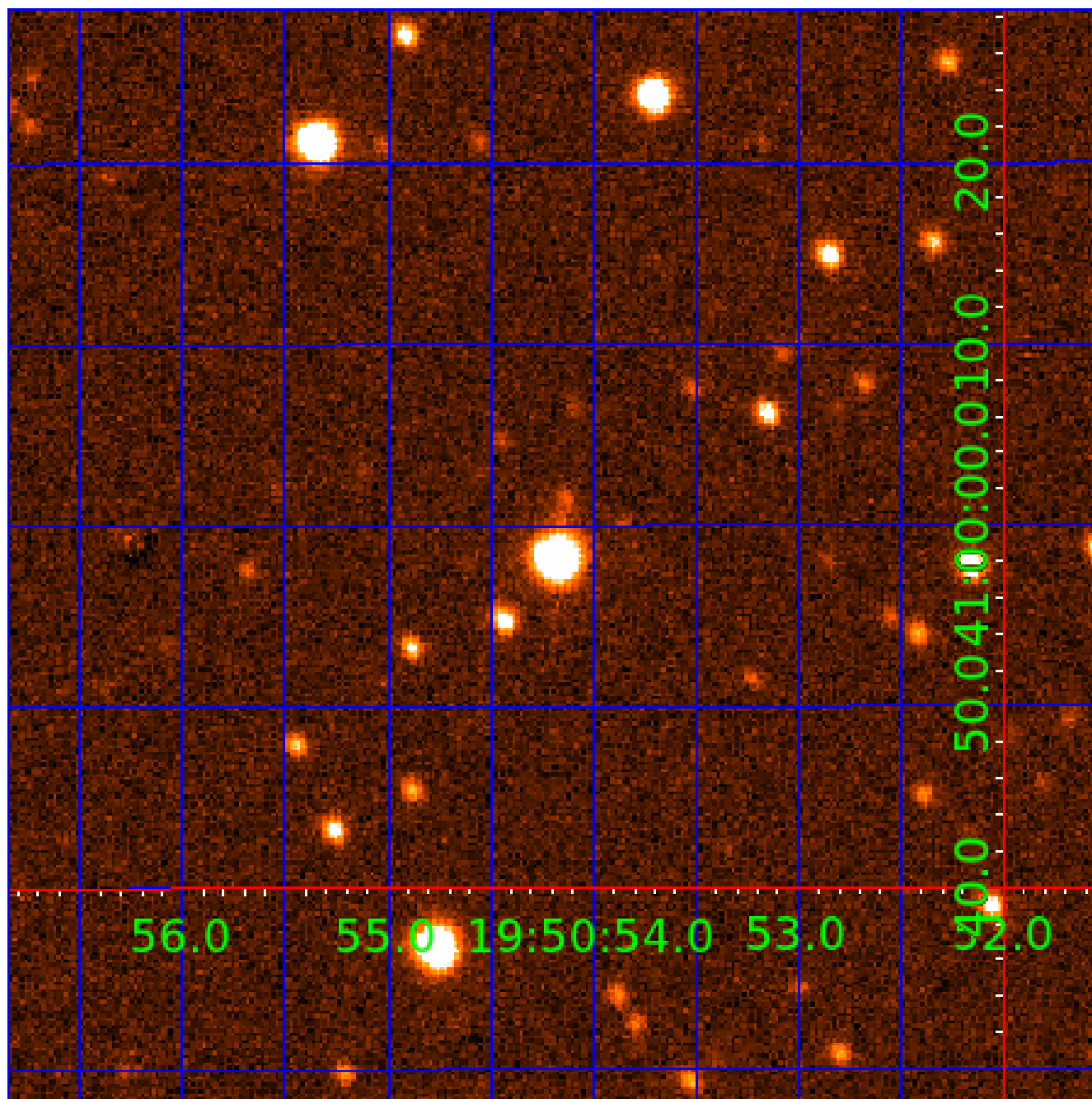


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005728843

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})
005728843-01	OBS	No	1.024443	131.533624	229.0	2.480	9.9	11.2	0.98	6764	1.73	4393.00
005728843-02	OBS	No	0.654409	131.835553	531.3	0.850	9.7	13.5	0.98	6764	2.33	7985.06
005728843-03	OBS	No	0.654408	131.513959	421.5	0.887	8.8	10.5	0.98	6764	2.38	7985.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005728843-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005728843-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005728843-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD

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

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

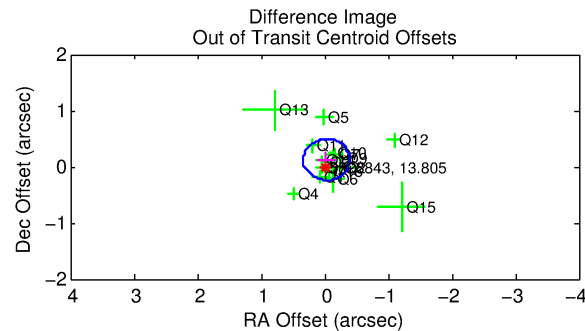
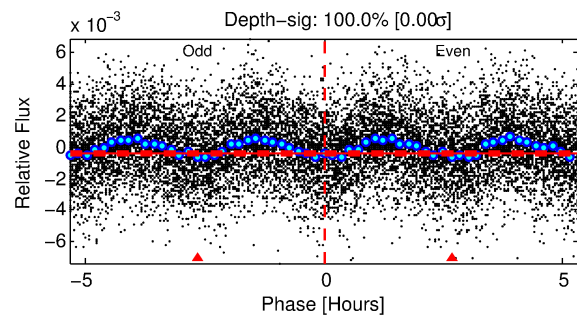
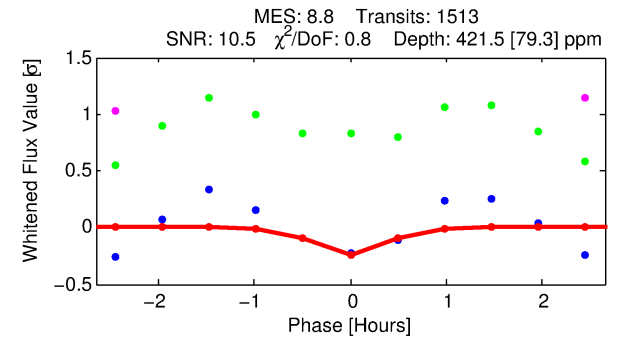
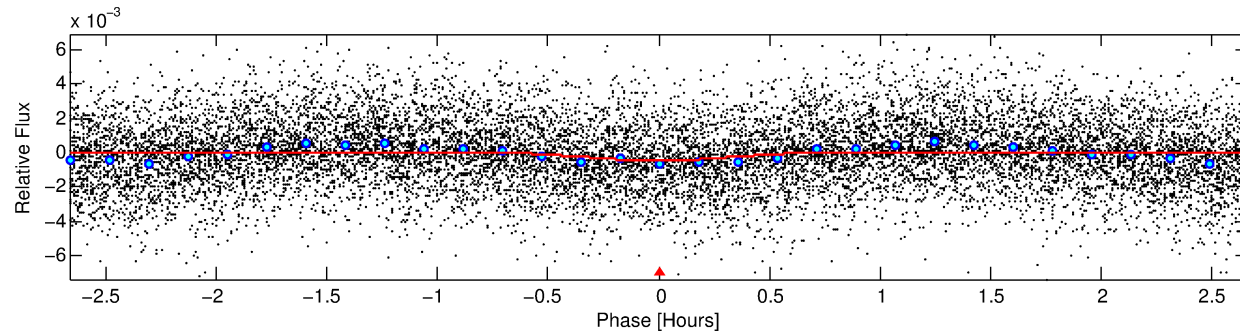
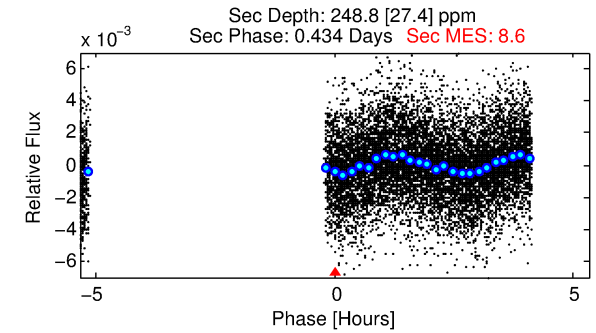
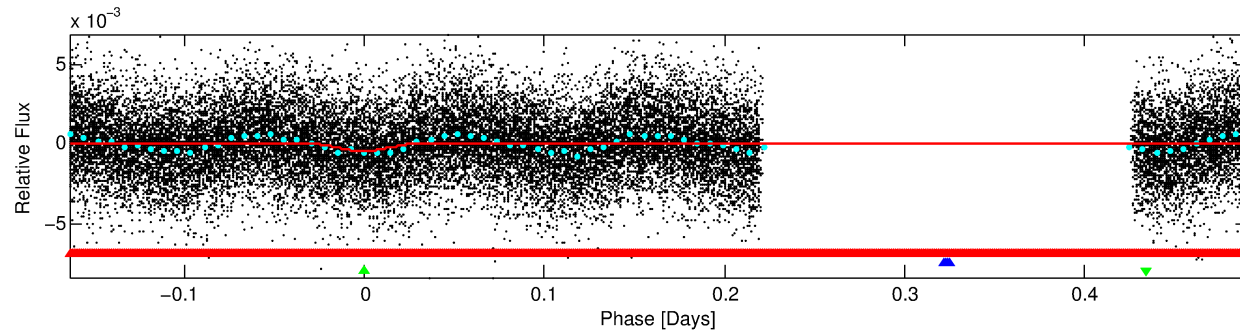
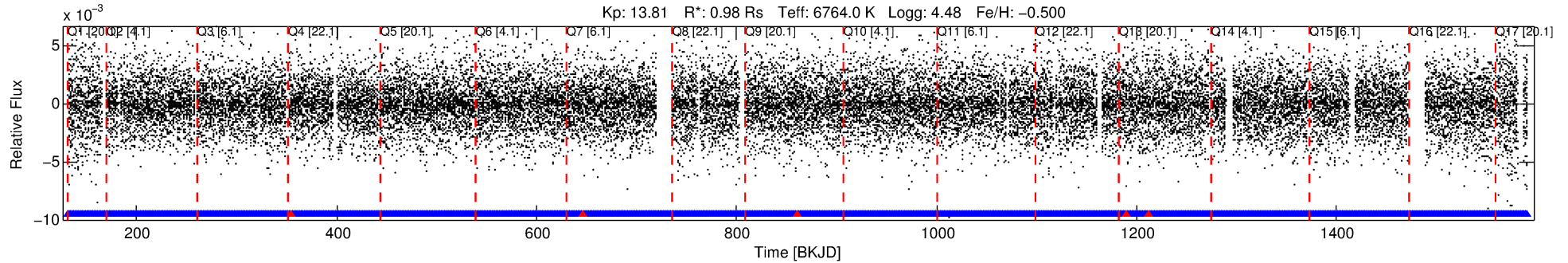
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005728843-03

No Significant Match Found

DV One-Page Summary

KIC: 5728843 Candidate: 3 of 3 Period: 0.654 d



DV Fit Results:

Period = 0.65441 [0.00001] d
Epoch = 131.5140 [0.0018] BKJD
Rp/R* = 0.0221 [0.0123]
a/R* = 2.89 [8.09]
b = 0.90 [0.69]
Seff = 7985.09 [3542.51]
Teq = 2410 [267] K
Rp = 2.38 [1.54] Re
a = 0.0151 [0.0043] AU
Ag = 5.50 [6.56] [0.69σ]
Teffp = 5708 [1608] K [2.02σ]

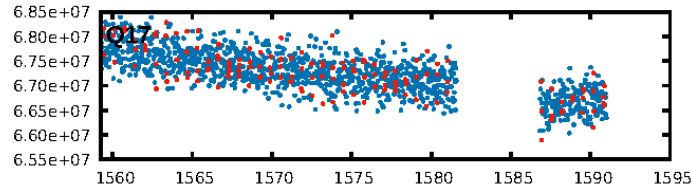
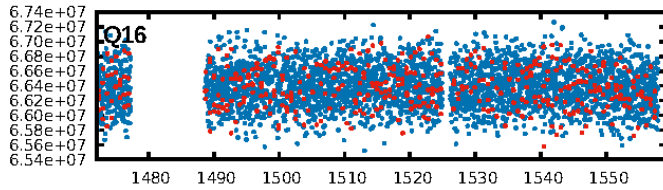
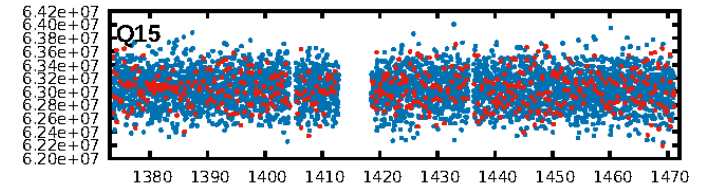
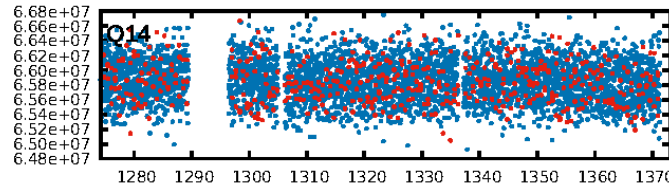
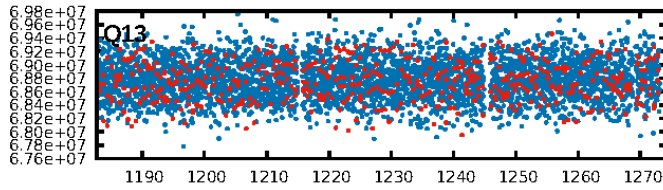
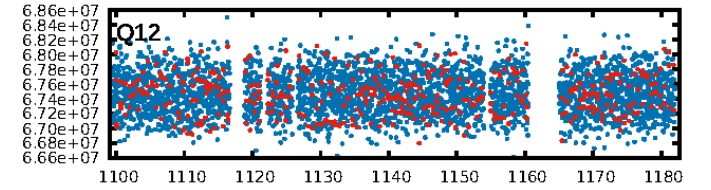
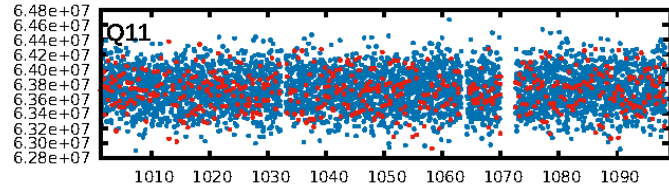
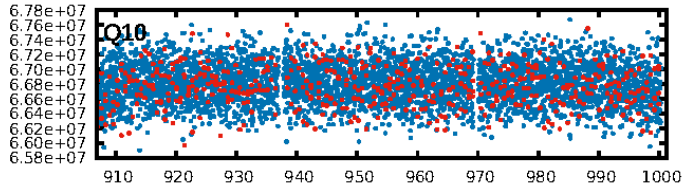
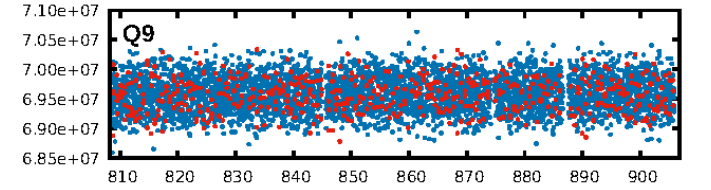
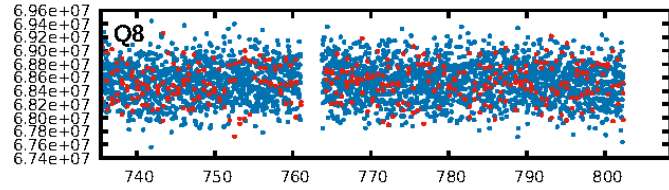
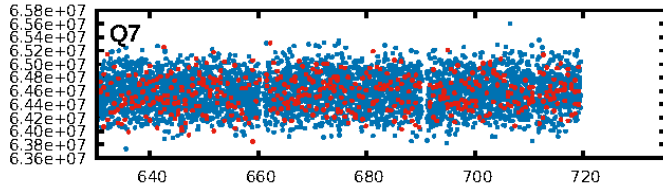
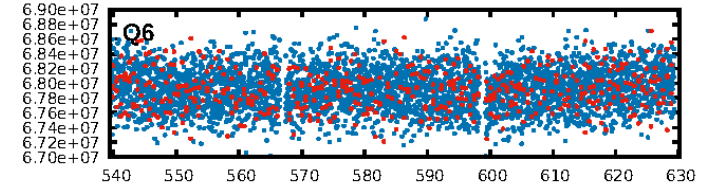
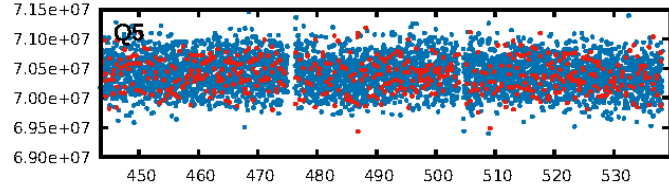
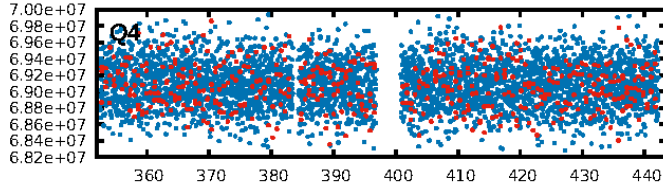
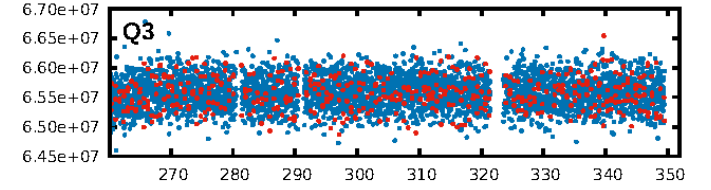
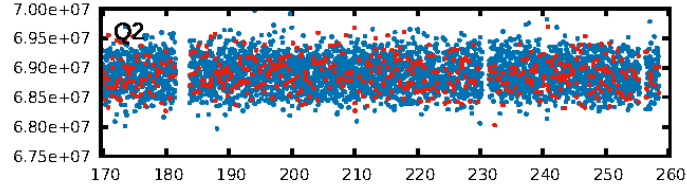
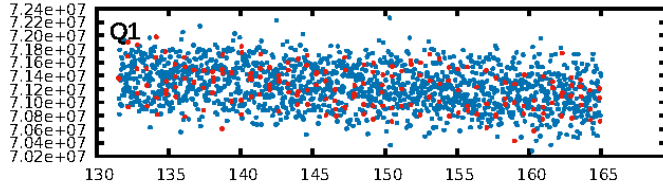
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.71e-27
RollingBand-fgt: 1.00 [1439/1444]
GhostDiagnostic-chr: 0.9622
Centroid-sig: 3.8%
Centroid-so: 0.276 arcsec [2.00σ]
OotOffset-rm: 0.129 arcsec [1.06σ]
KicOffset-rm: 0.079 arcsec [0.55σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.69 [11/16]
DiffImageOverlap-fno: 1.00 [17/17]

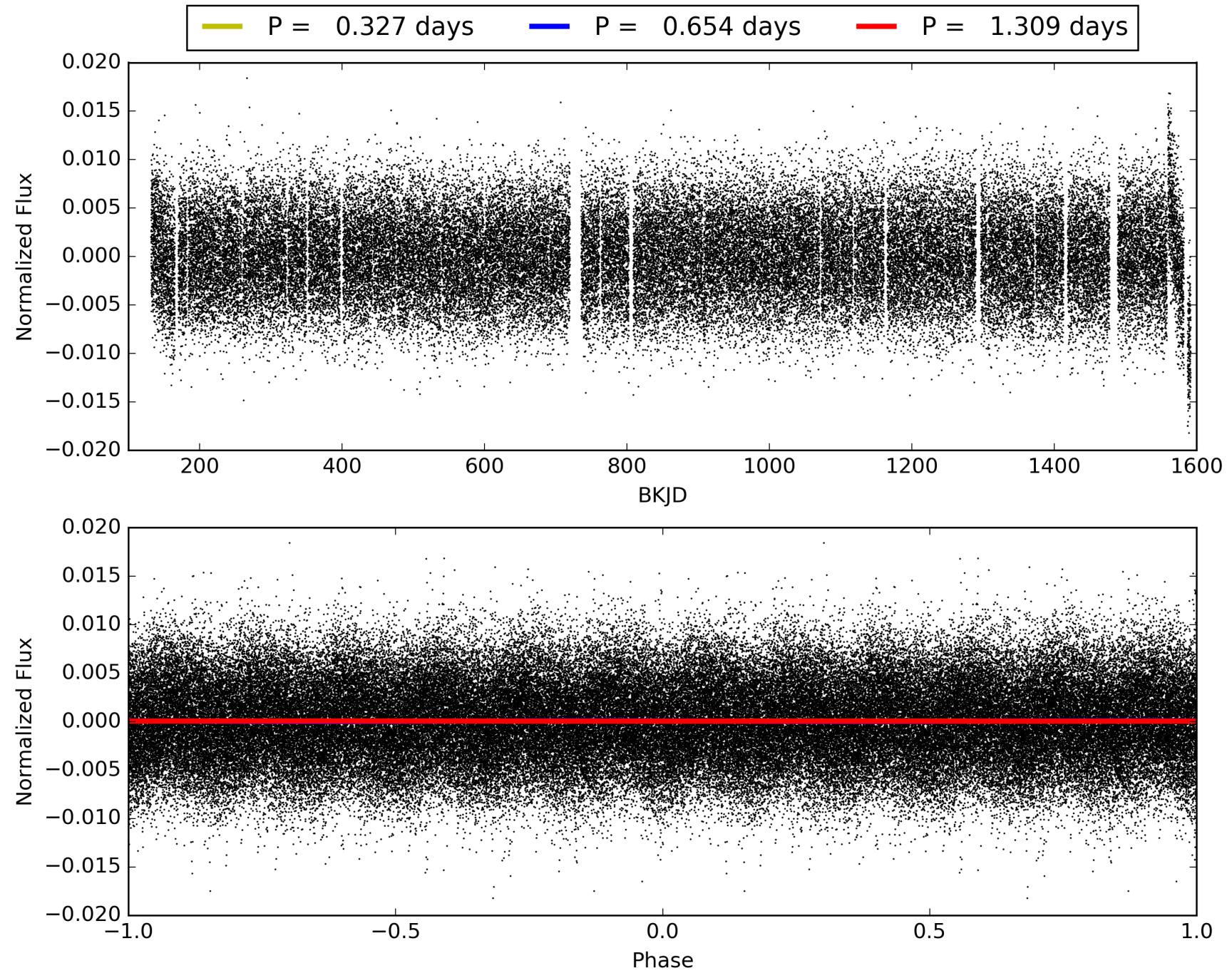
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 12:06:26 Z

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

TCE 005728843-03, PDC Light Curves

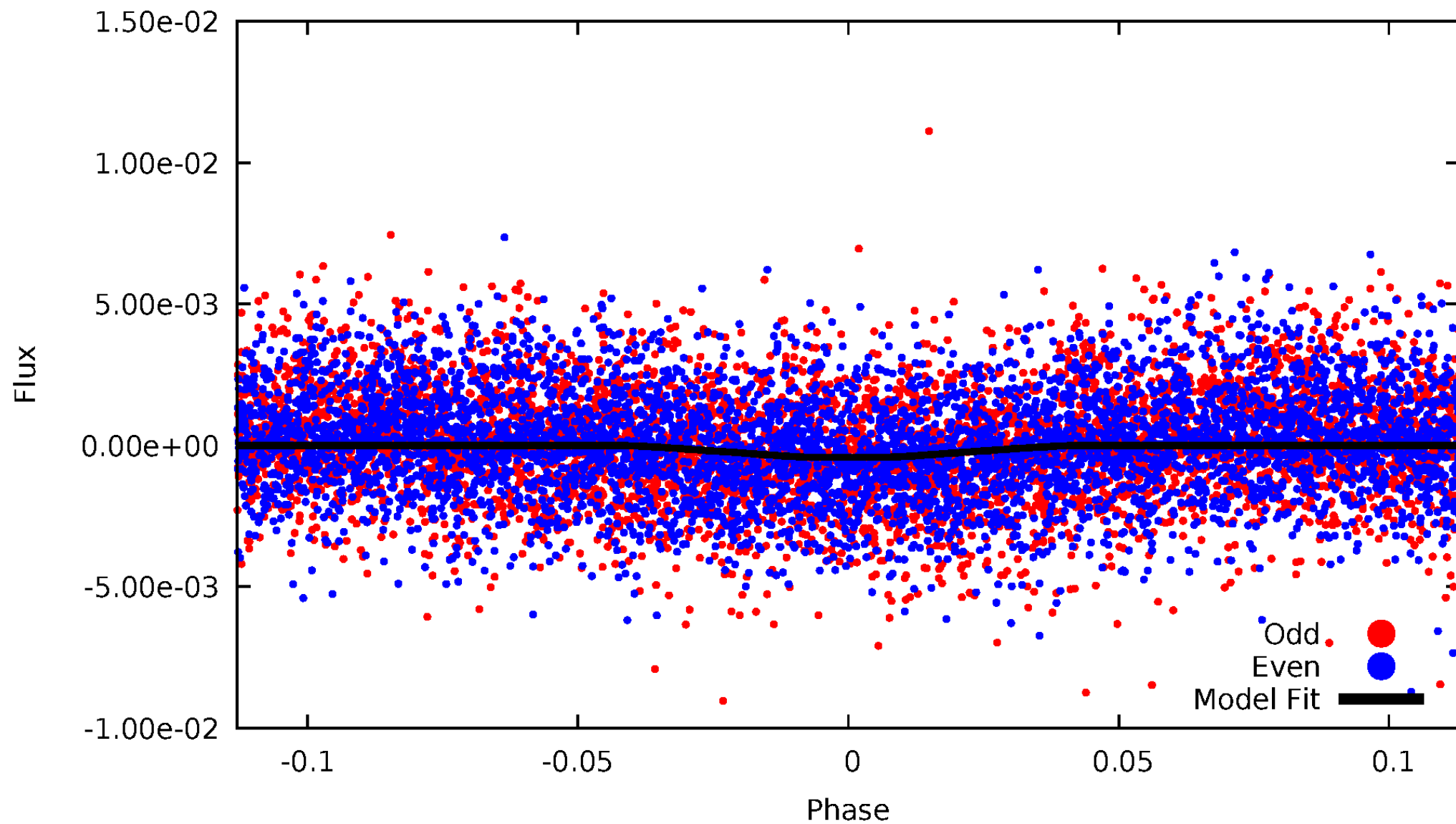


TCE 005728843-03



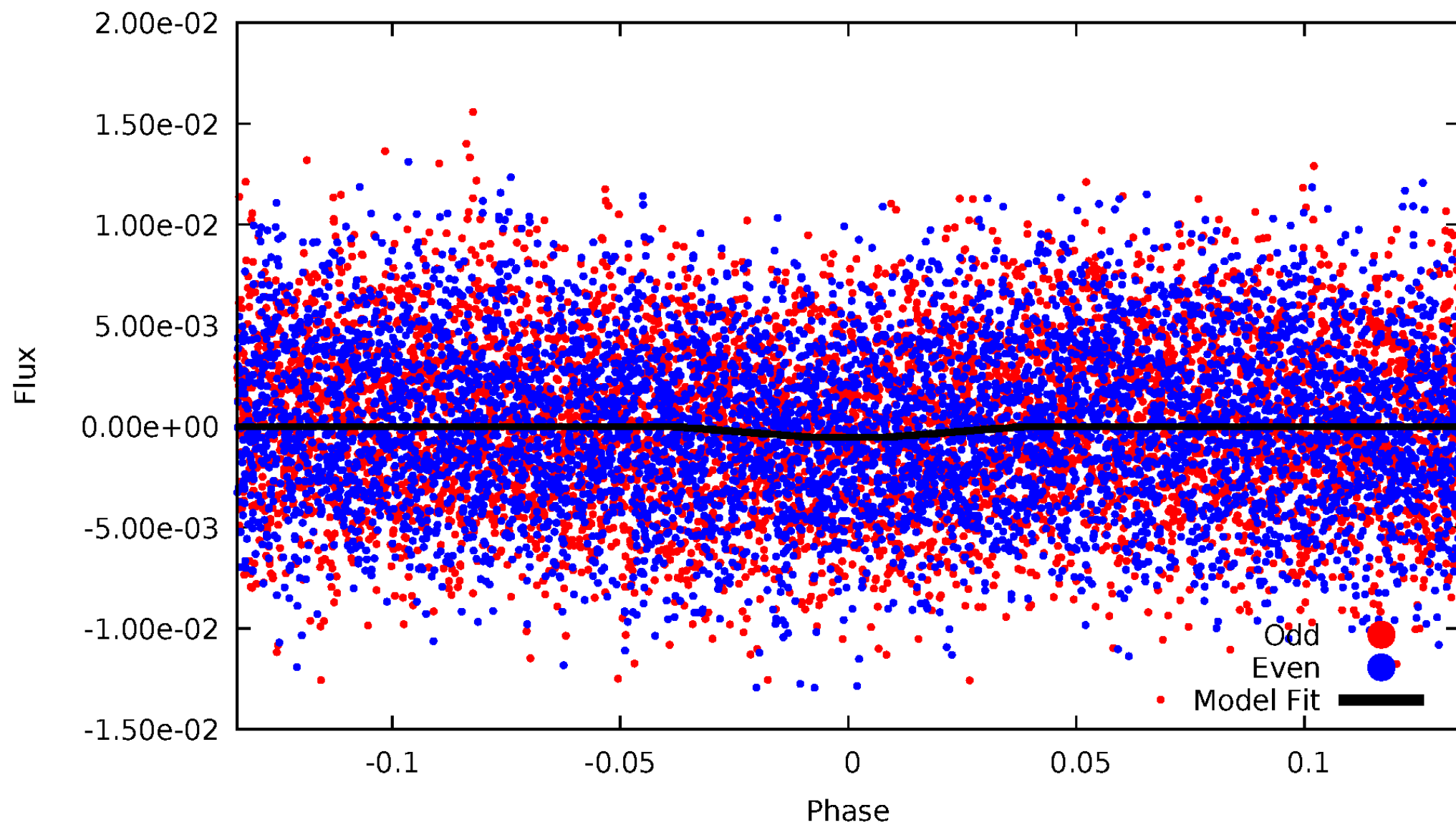
DV Odd/Even

TCE 005728843-03

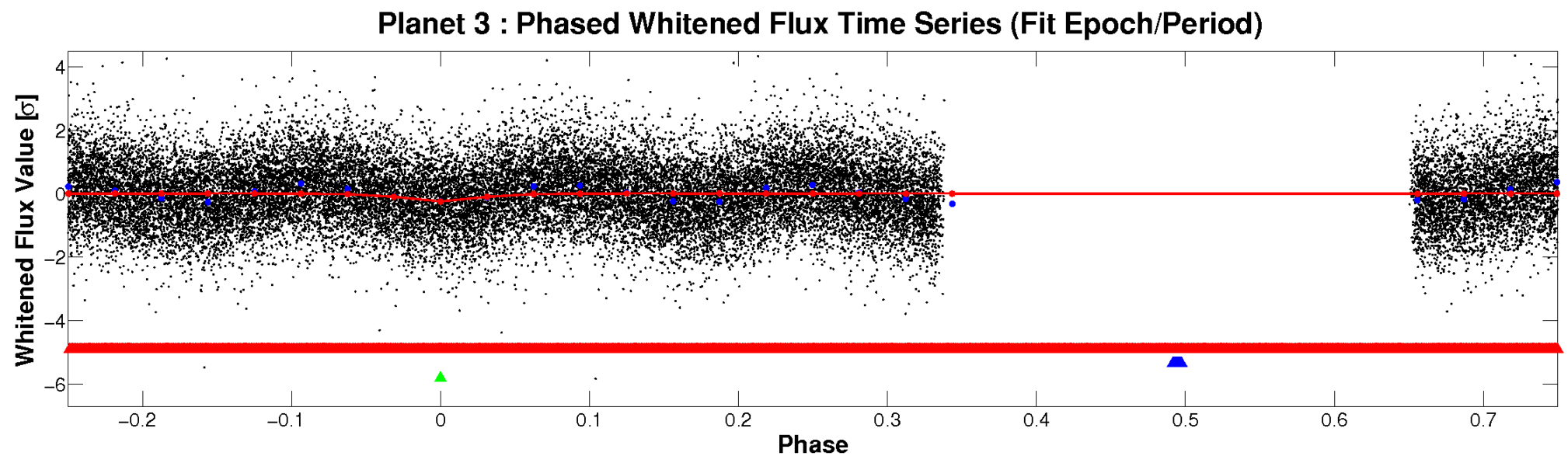
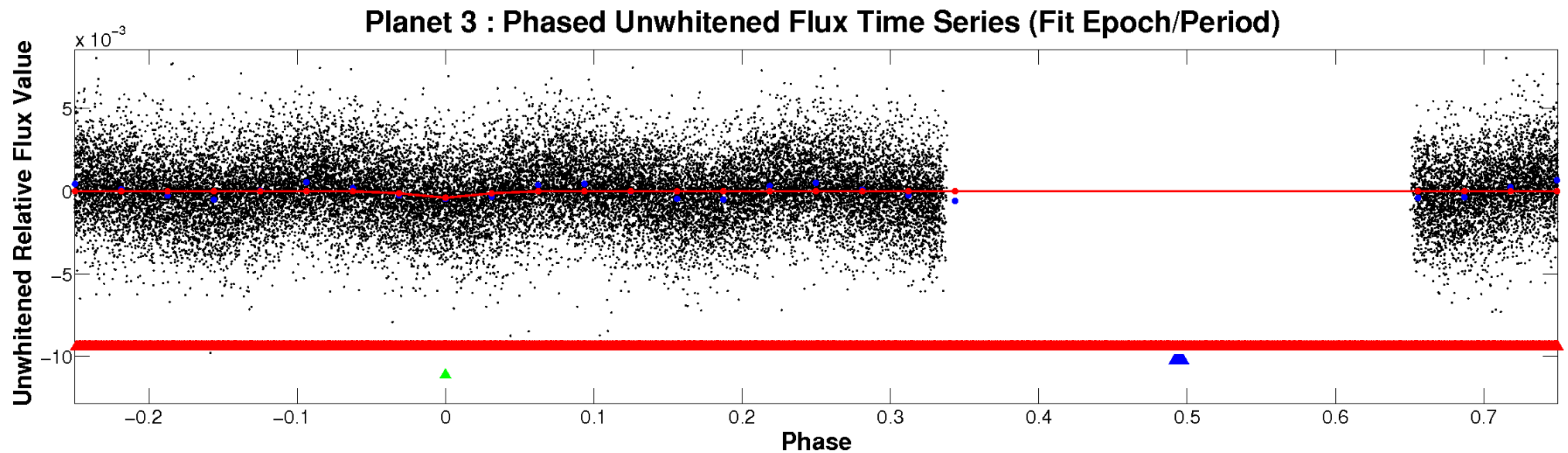


ALT Odd/Even

TCE 005728843-03

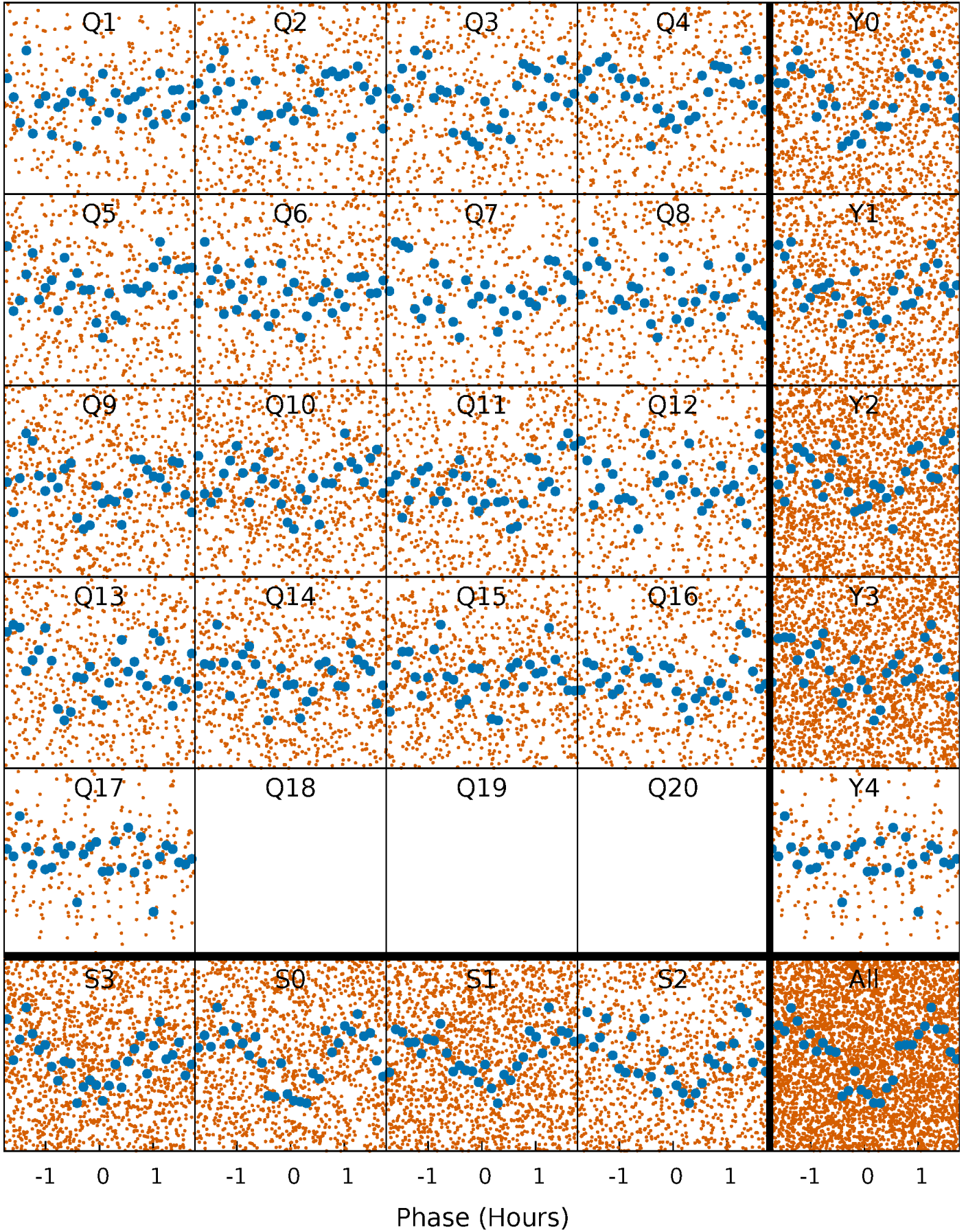


Non-Whitened Vs. Whitened Light Curve



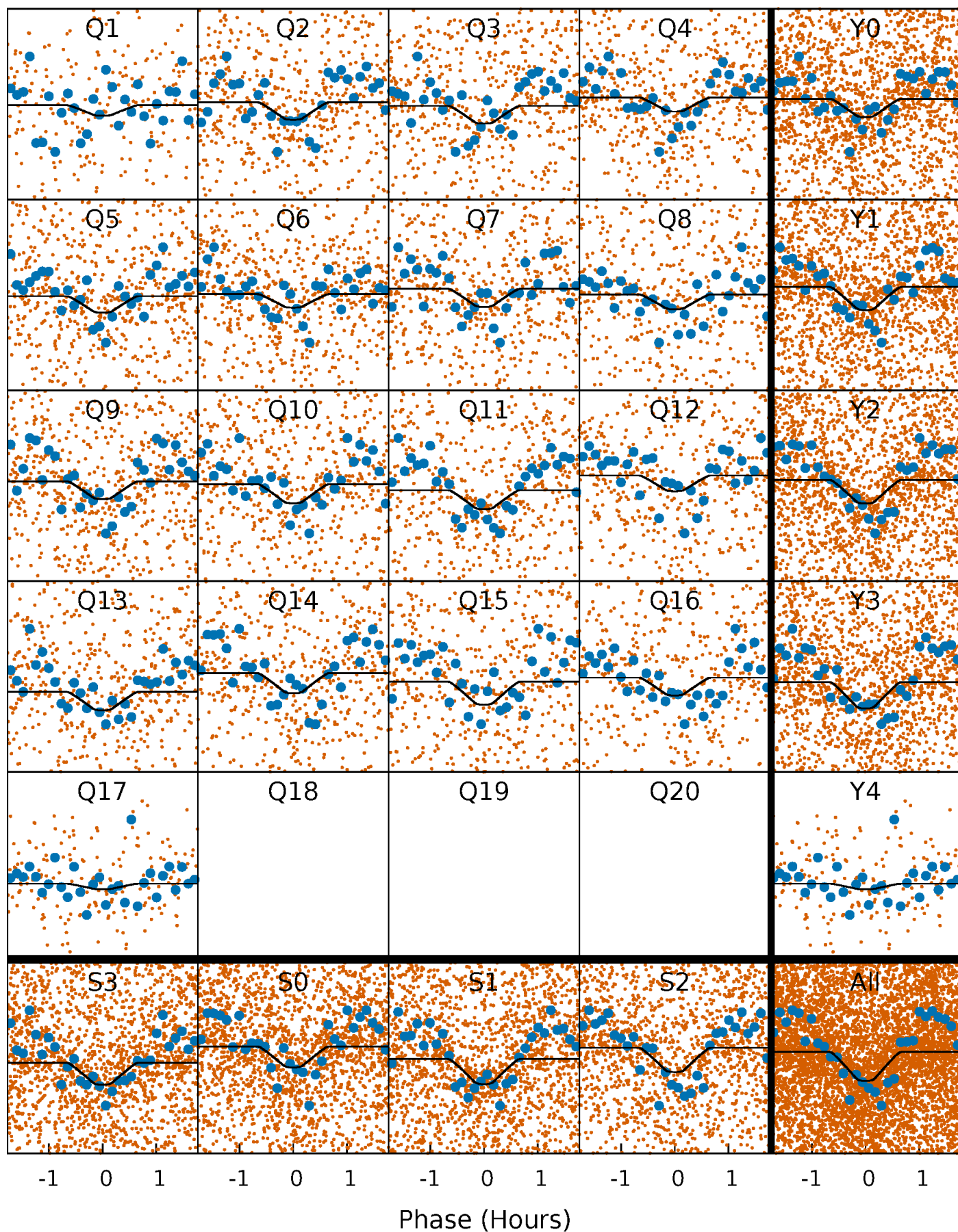
PDC Quarter-Phased Transit Curves

TCE 005728843-03 P= 0.654408 Days $T_0=131.513959$ (BKJD)



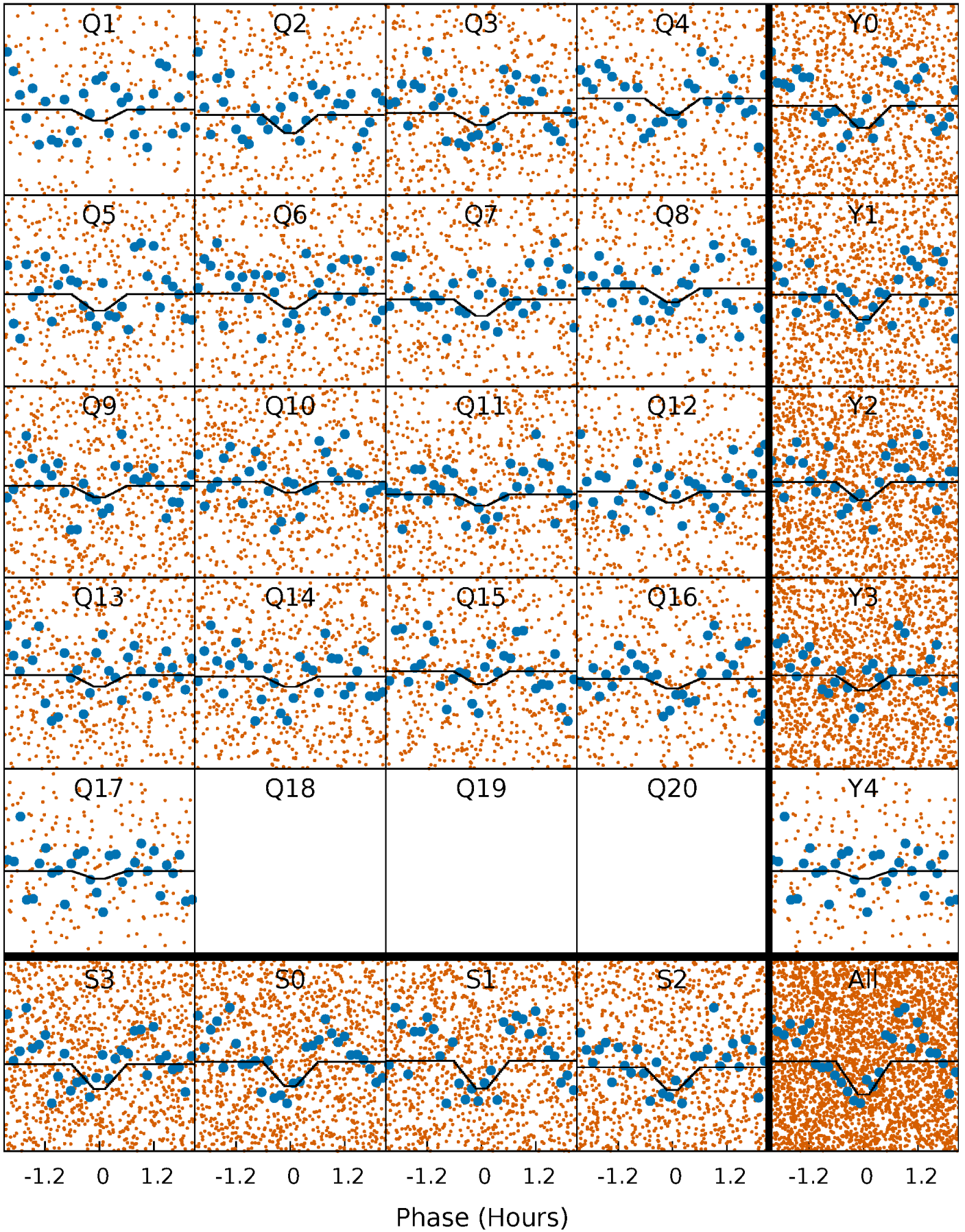
DV Quarter-Phased Transit Curves

TCE 005728843-03 P= 0.654408 Days $T_0=131.513959$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

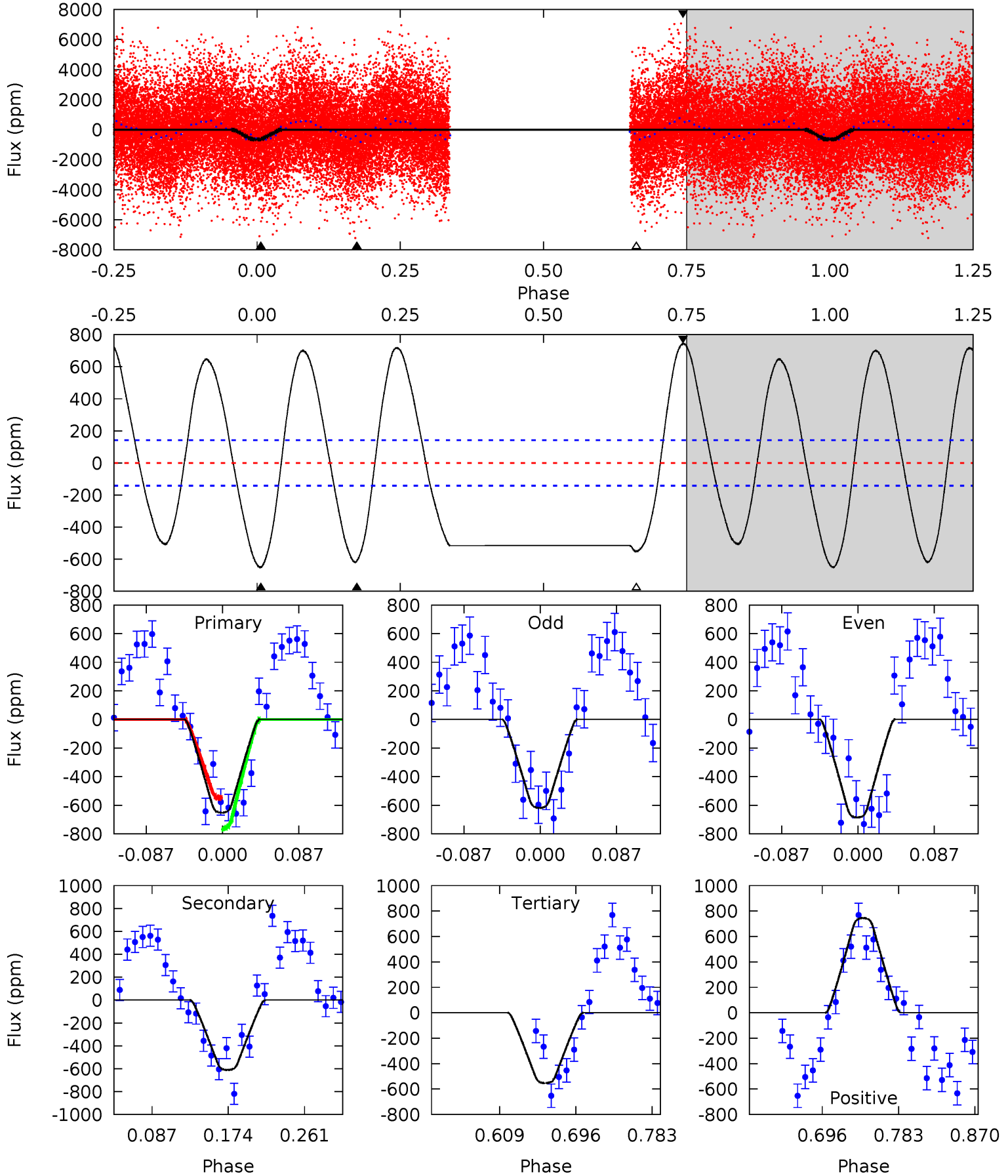
TCE 005728843-03 P= 0.654412 Days $T_0=131.520599$ (BKJD)



DV Model-Shift Uniqueness Test

005728843-03, P = 0.654408 Days, E = 131.513959 Days

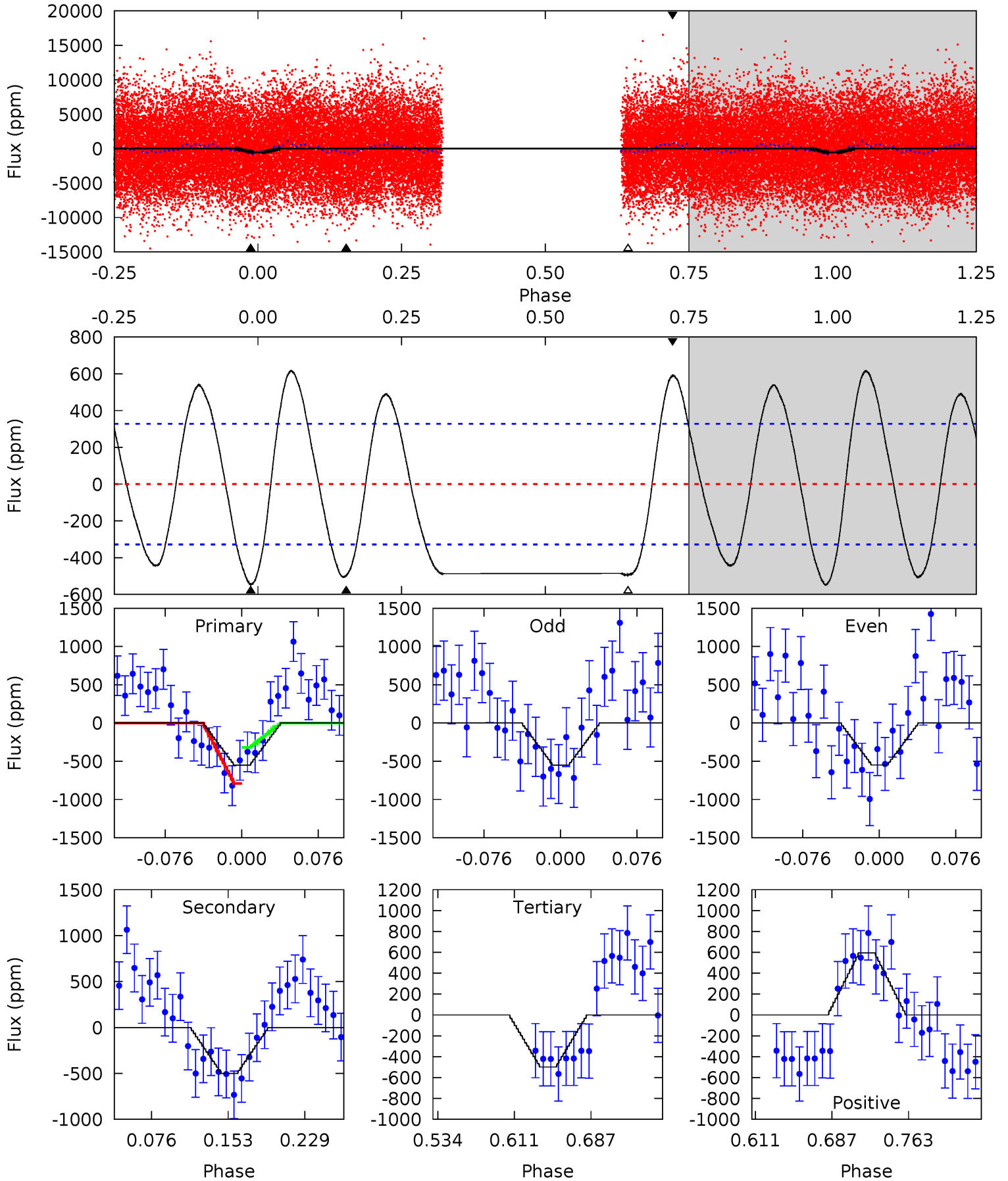
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.2	19.8	17.9	24.2	4.59	1.71	13.9	3.20	-3.02	1.88	-4.35	1.07	1.05	0.53	3.55



Alt Model-Shift Uniqueness Test

005728843-03, P = 0.654412 Days, E = 131.520599 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.75	7.06	7.03	8.38	4.62	1.77	5.23	0.72	-0.63	0.03	-1.32	0.02	0.94	0.53	3.29



Stellar Parameters For KIC 005728843

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6764^{+165}_{-259}	$4.480^{+0.040}_{-0.229}$	$-0.500^{+0.250}_{-0.350}$	$0.983^{+0.329}_{-0.082}$	$1.106^{+0.142}_{-0.142}$	$1.639^{+0.262}_{-0.929}$
	+2%/-4%	+1%/-5%	+50%/-70%	+33%/-8%	+13%/-13%	+16%/-57%
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 005728843-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-611±31	$2.70^{+1.42}_{-1.52}$	3461^{+254}_{-167}	6948^{+4880}_{-1405}	10^{+43}_{-6}
Alt.	-501±71	$2.79^{+1.50}_{-1.39}$	3448^{+260}_{-150}	6368^{+3448}_{-1228}	$7.865^{+24.016}_{-4.566}$

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 $A_{obs} \gg 1.0$

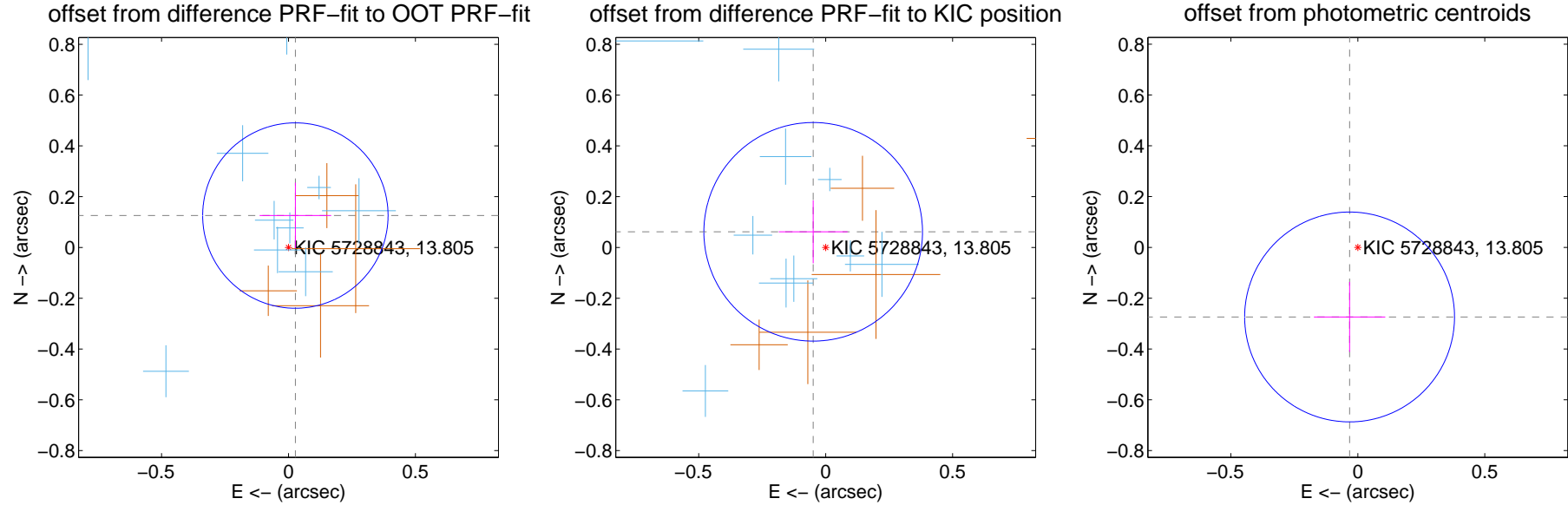
DV Centroid Data

Supplemental centroid analysis for 005728843-03. Kepler magnitude: 13.80. Transit SNR 10.47

There are 11 quarters with good PRF difference image offsets

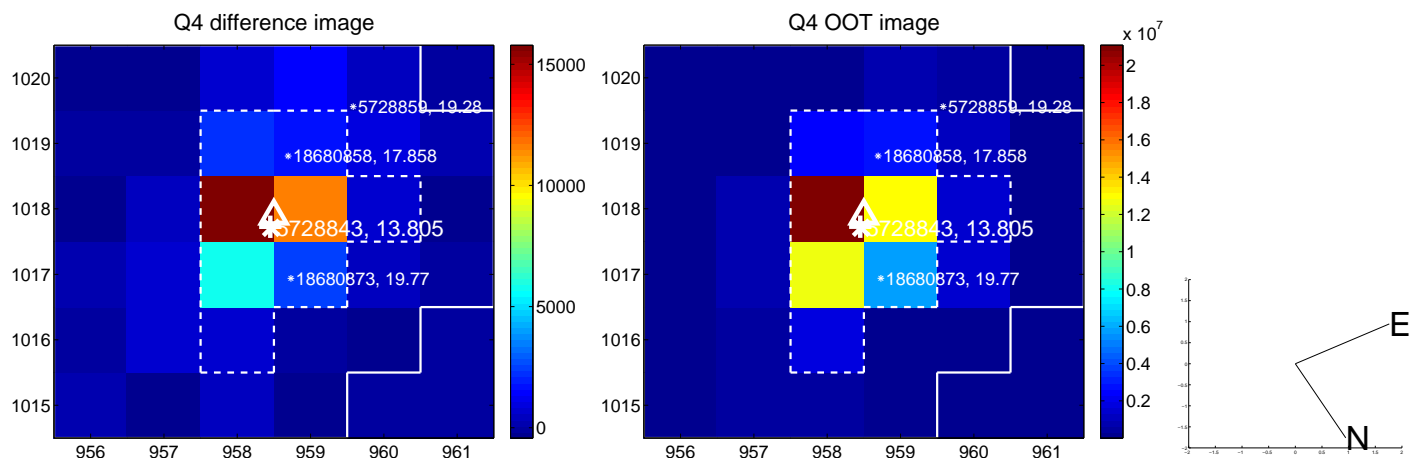
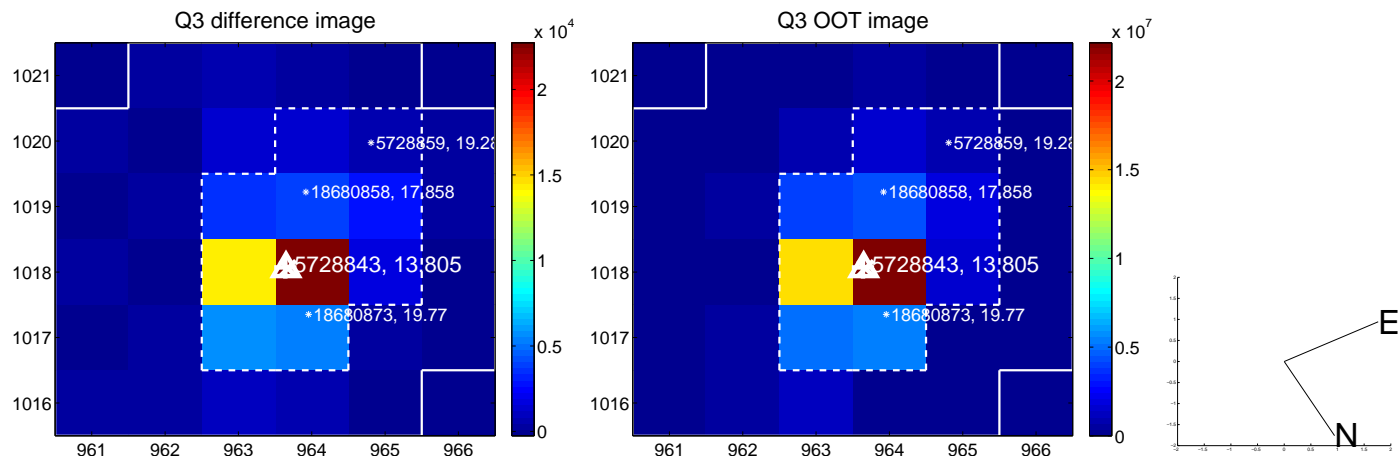
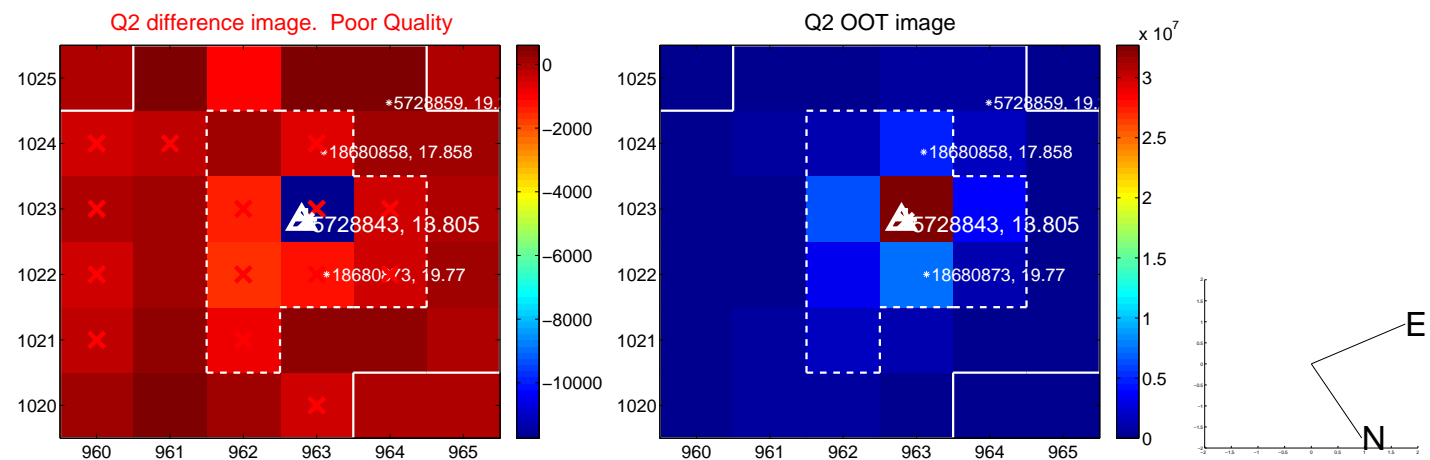
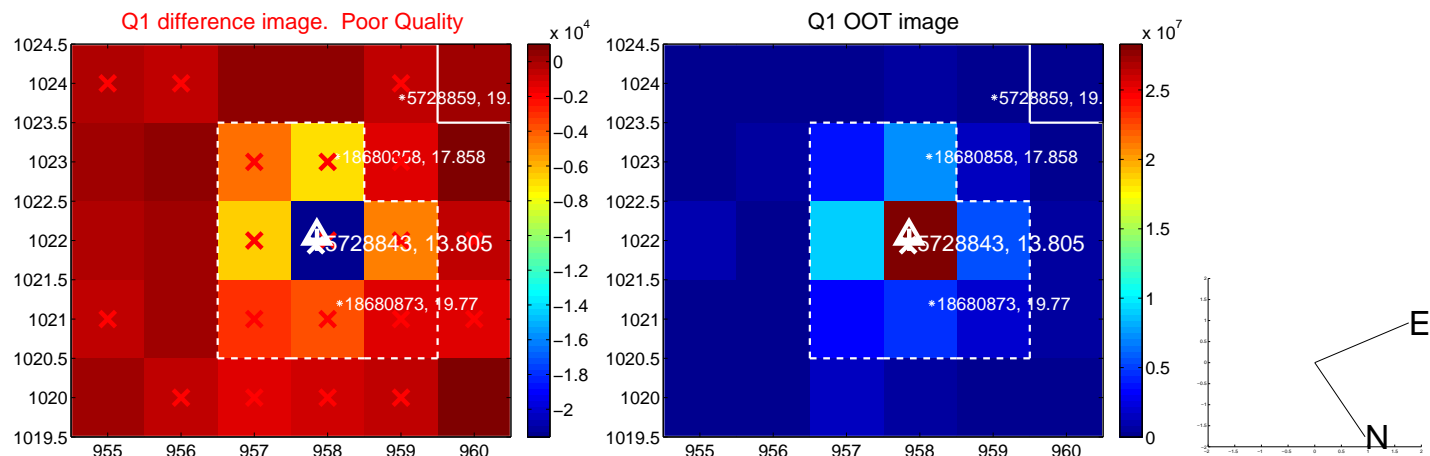
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.129 ± 0.122	1.06	-0.027 ± 0.141	0.126 ± 0.130
PRF-fit source offset from KIC position	0.079 ± 0.144	0.55	0.049 ± 0.136	0.062 ± 0.124
photometric centroid source offset	0.28 ± 0.14	2.00	0.03 ± 0.14	-0.27 ± 0.14

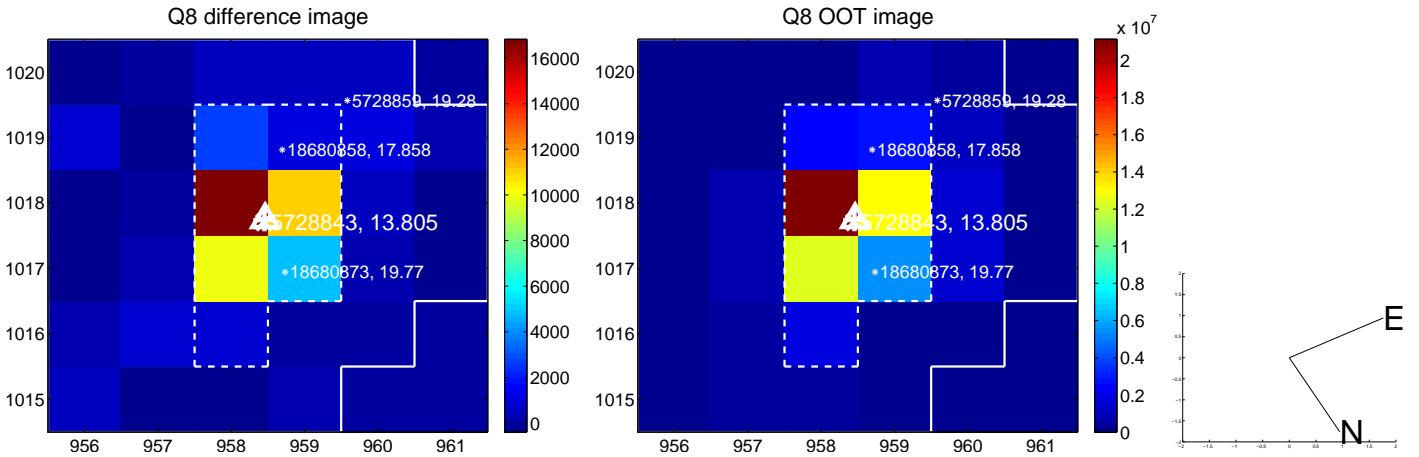
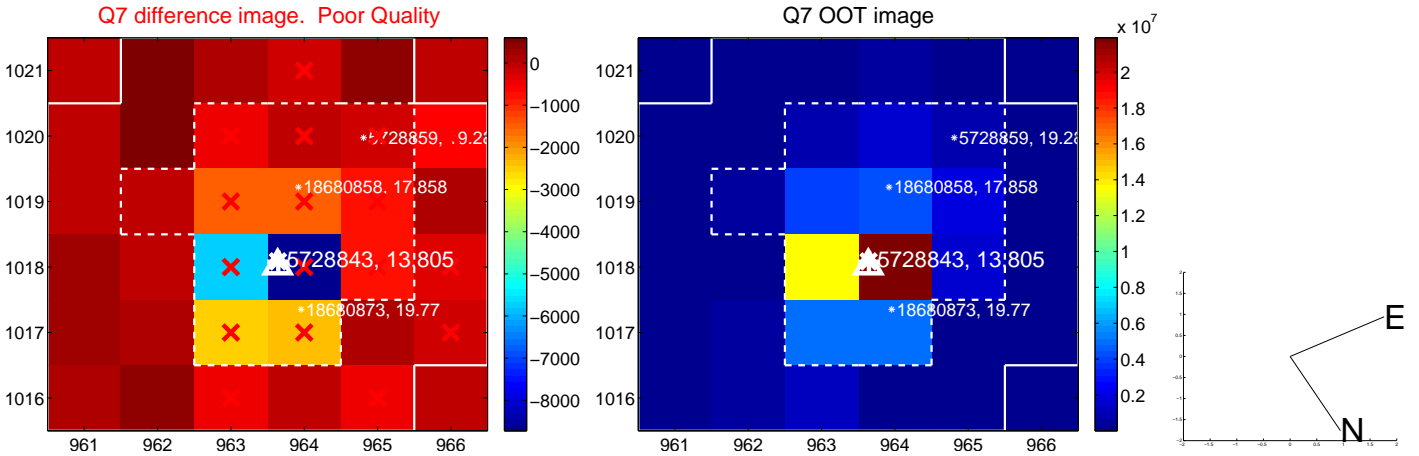
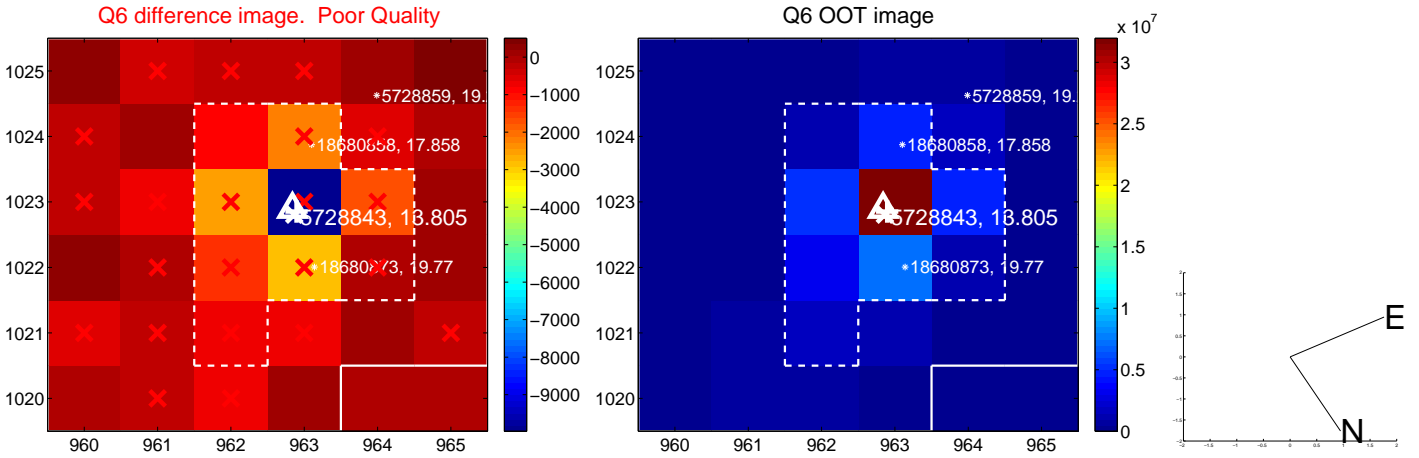
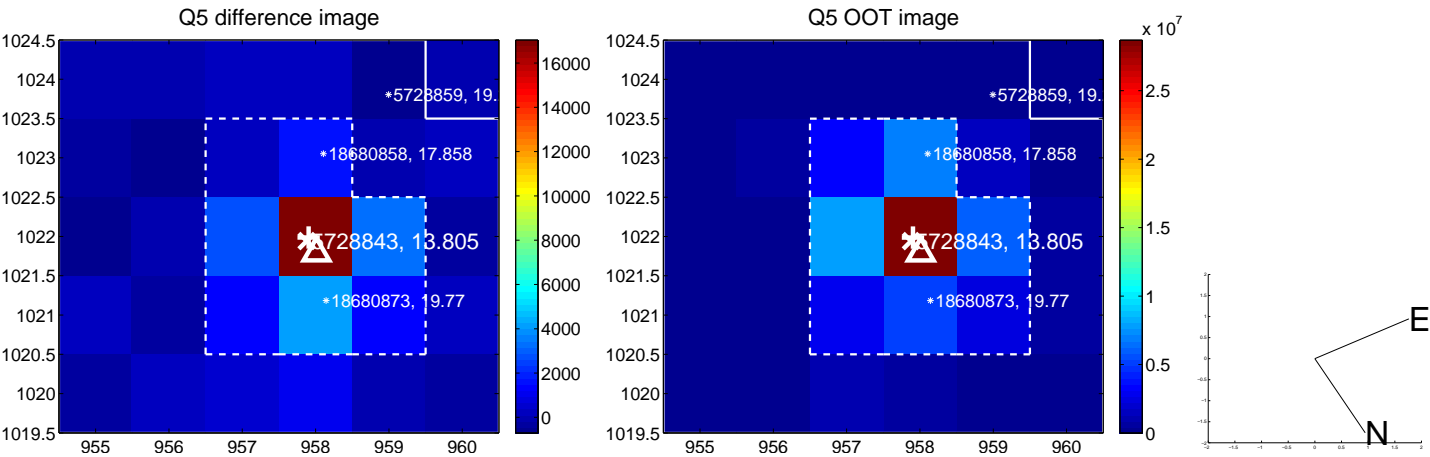


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

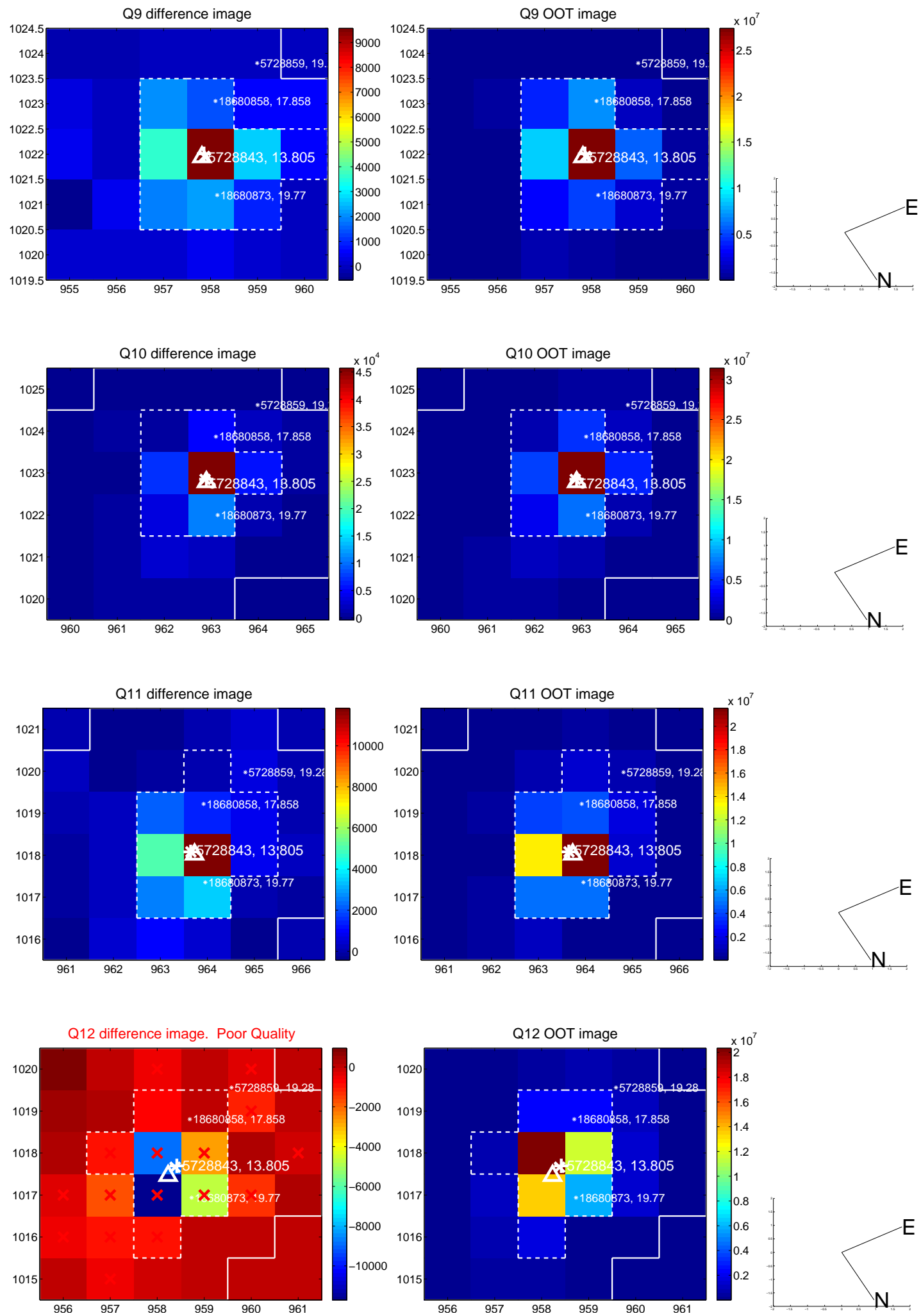
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



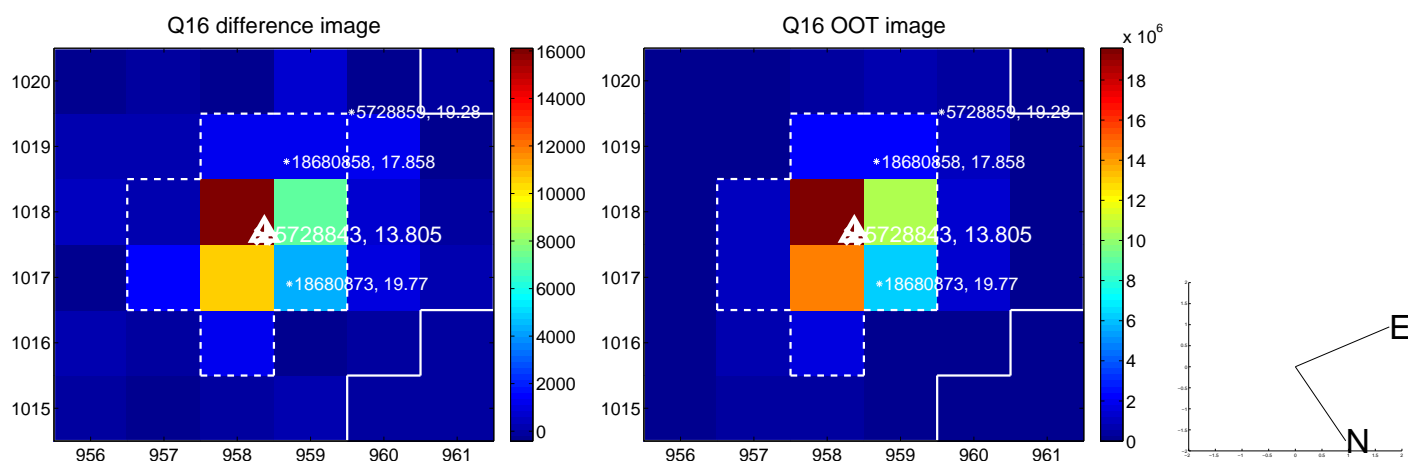
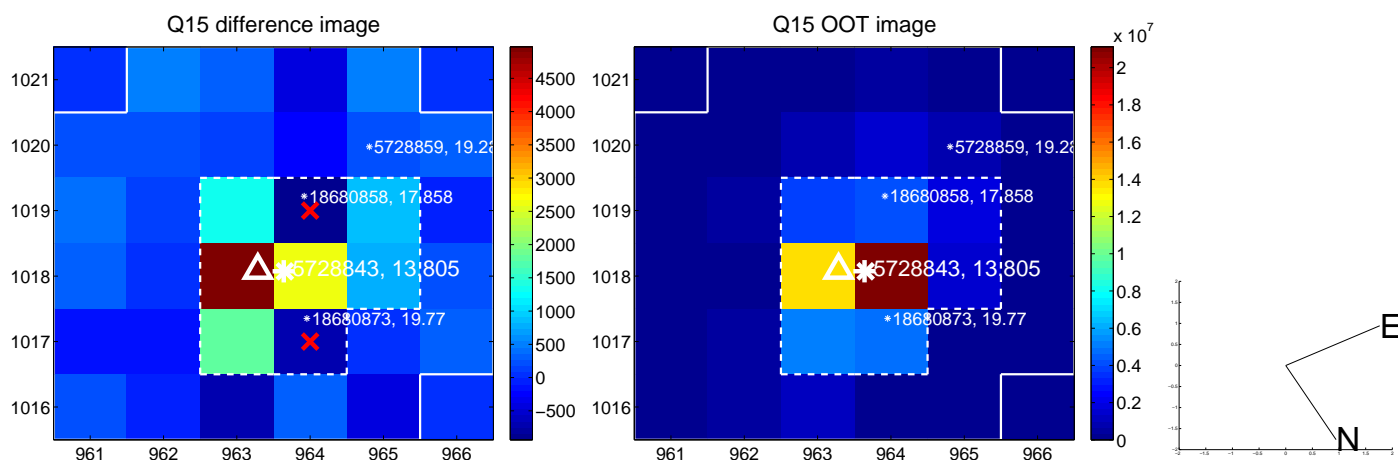
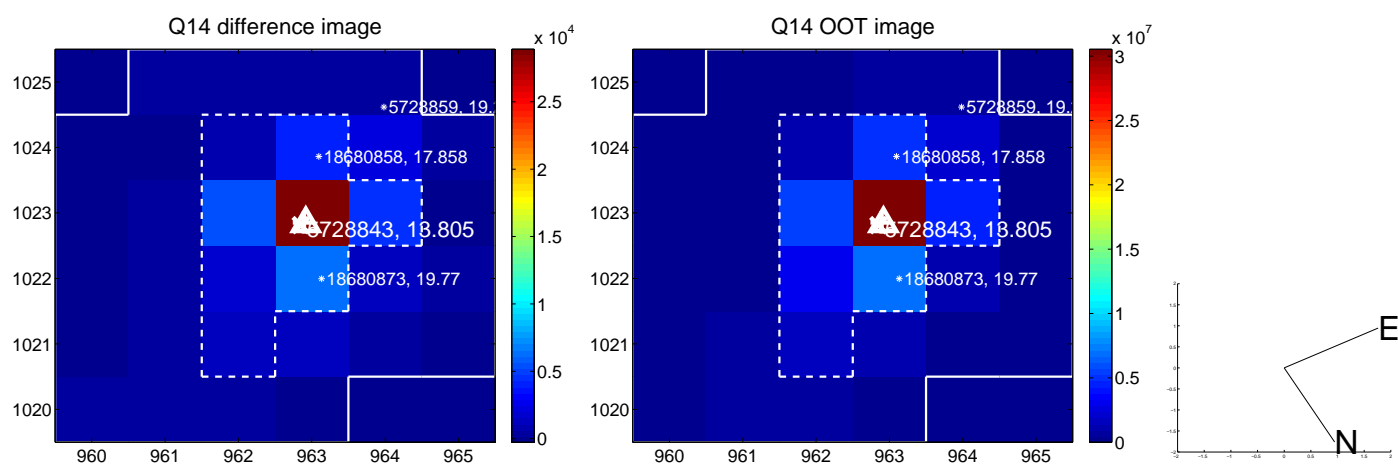
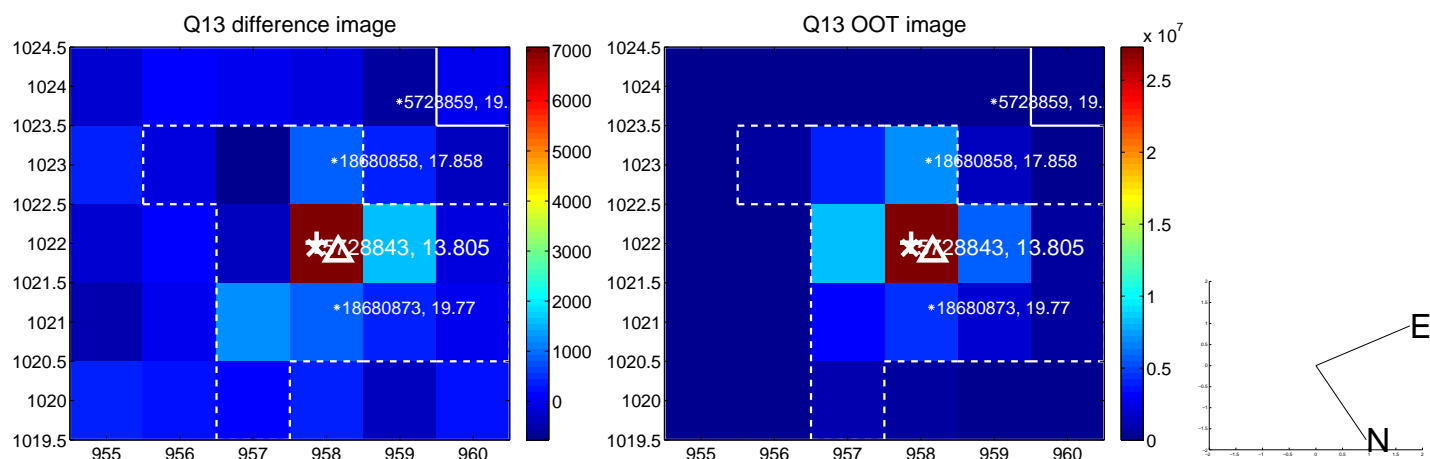
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



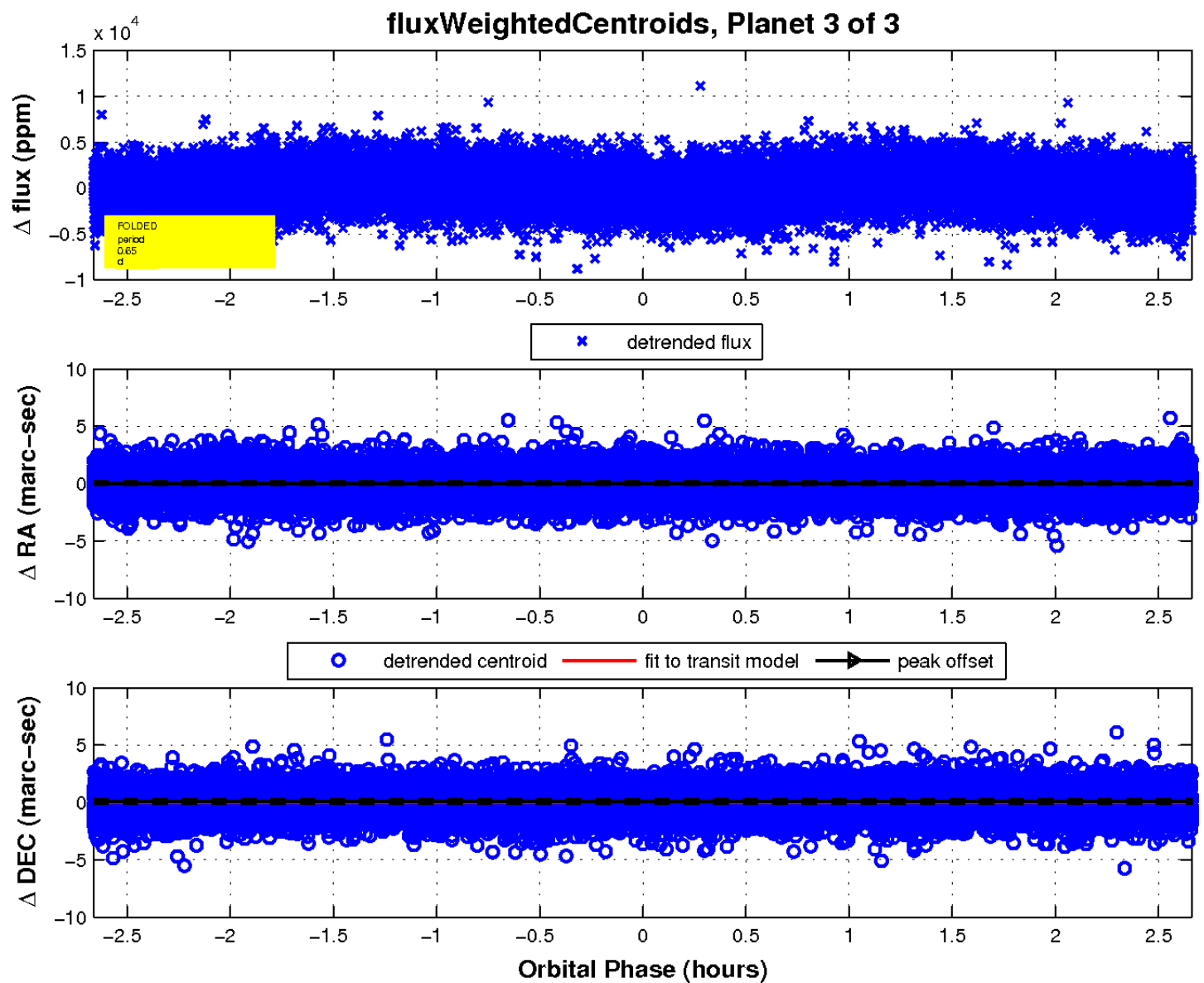
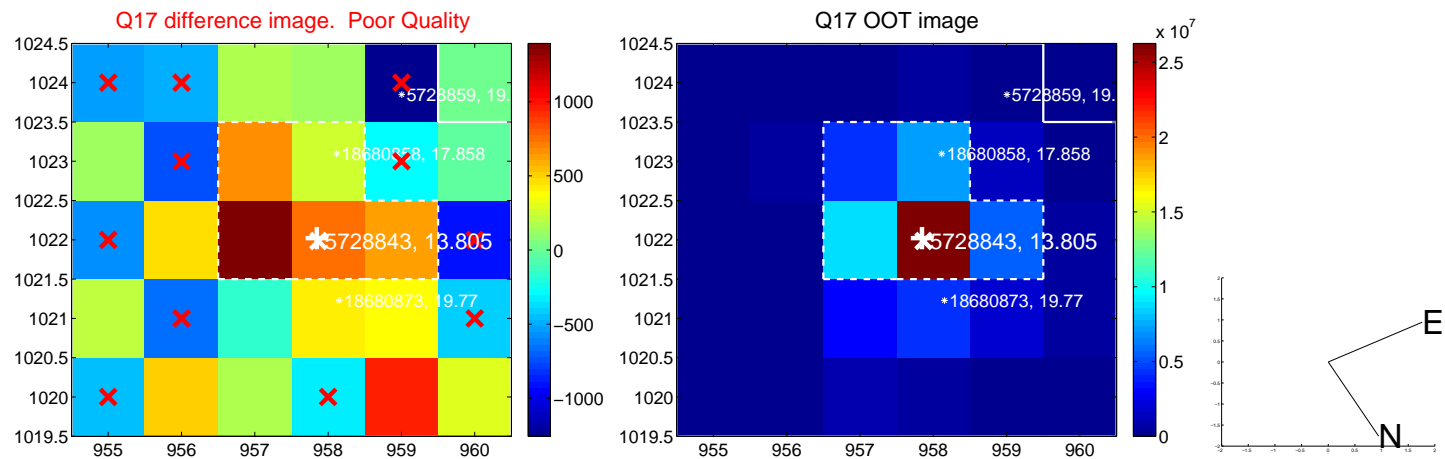
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

