

KIC 005207966

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})
005207966-01	OBS	No	0.994164	131.693152	24.9	0.740	9.8	1.9	1.53	6850	0.78	9988.66
005207966-02	OBS	No	0.995038	131.963847	2.5	1.220	9.6	0.5	1.53	6850	0.24	9976.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005207966-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005207966-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

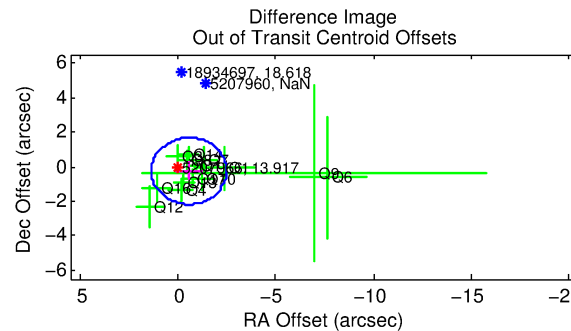
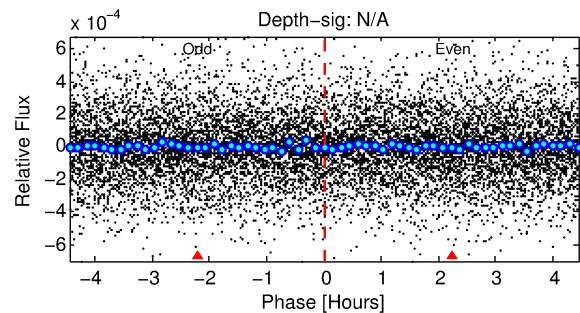
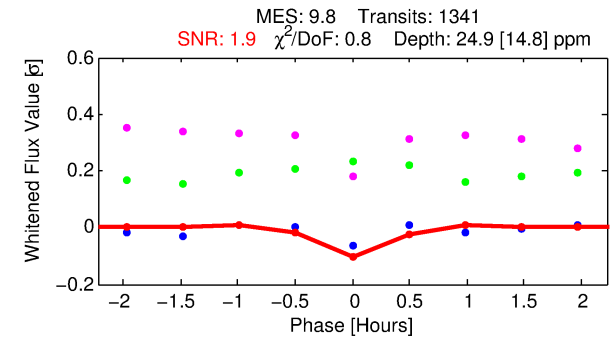
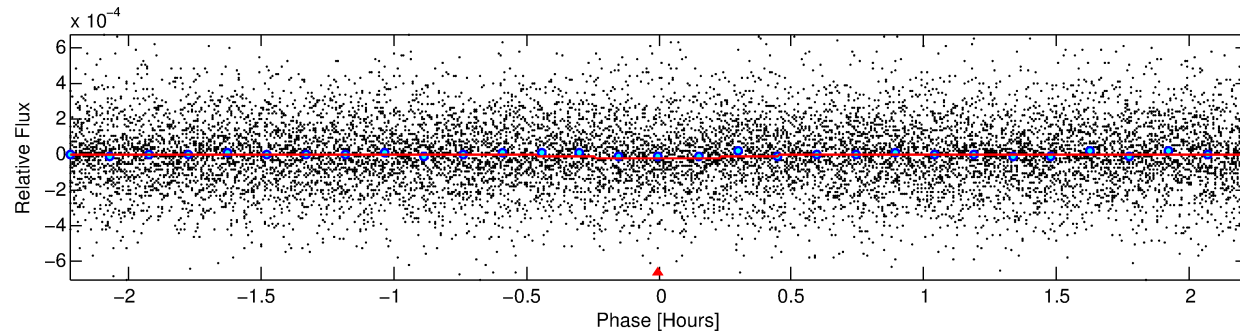
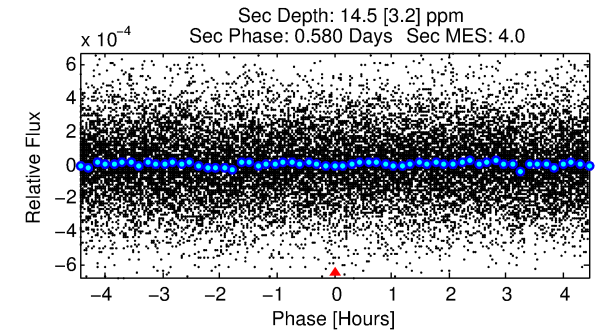
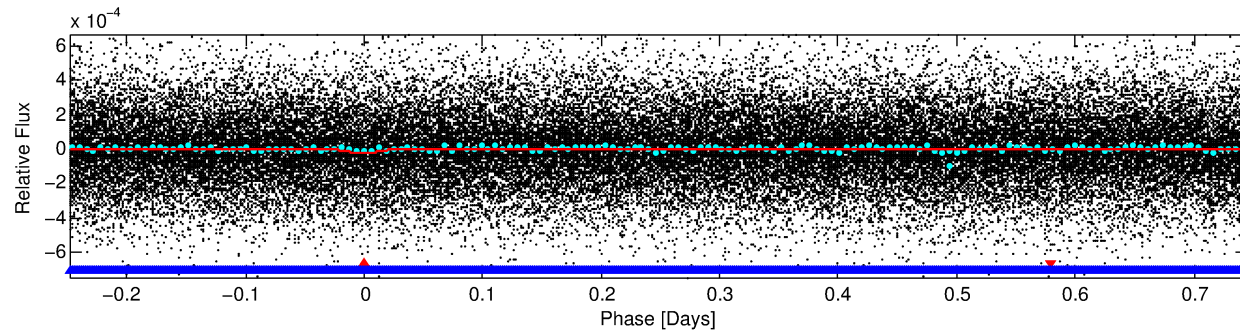
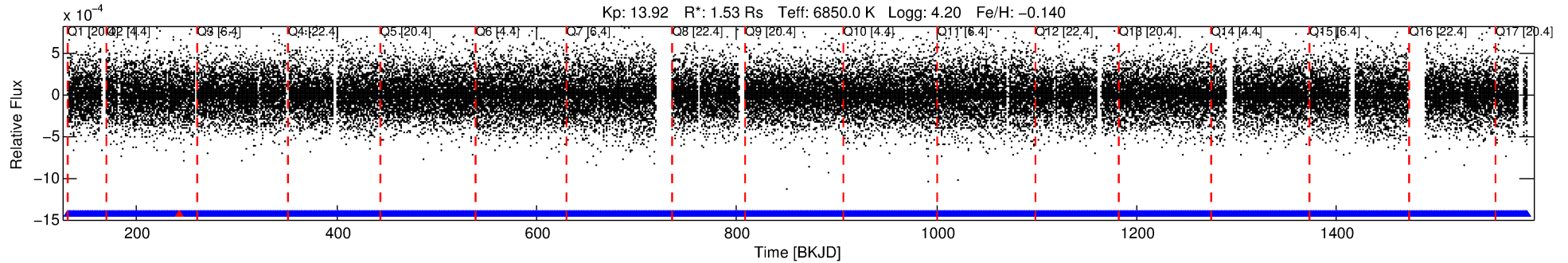
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005207966-01

No Significant Match Found

DV One-Page Summary

KIC: 5207966 Candidate: 1 of 2 Period: 0.994 d



DV Fit Results:

Period = 0.99416 [0.00005] d
Epoch = 131.6932 [0.0081] BKJD
Rp/R* = 0.0047 [0.0389]
a/R* = 10.31 [473.61]
b = 0.05 [861.06]
Seff = 9988.65 [3866.03]
Teff = 2549 [247] K
Rp = 0.78 [6.49] Re
a = 0.0215 [0.0053] AU
Ag = 6.02 [100.05] [0.05σ]
Teffp = 6174 [25636] K [0.14σ]

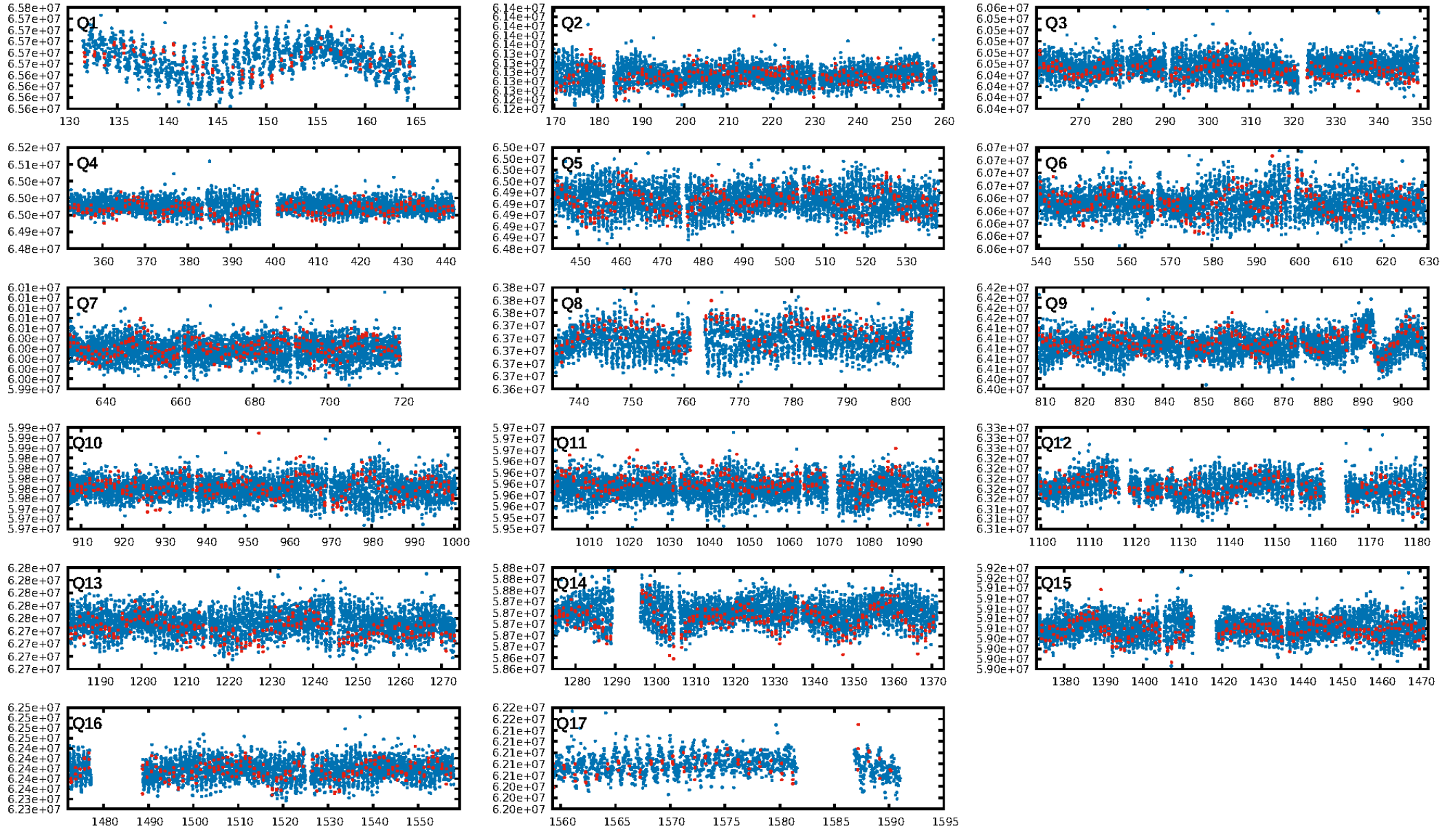
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 1.2% [0.01σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.09e-24
RollingBand-fgt: 1.00 [1279/1280]
GhostDiagnostic-chr: 3.038
Centroid-sig: 0.0%
Centroid-so: 11.261 arcsec [3.71σ]
OotOffset-rm: 0.610 arcsec [0.95σ]
KicOffset-rm: 0.497 arcsec [0.74σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.50 [7/14]
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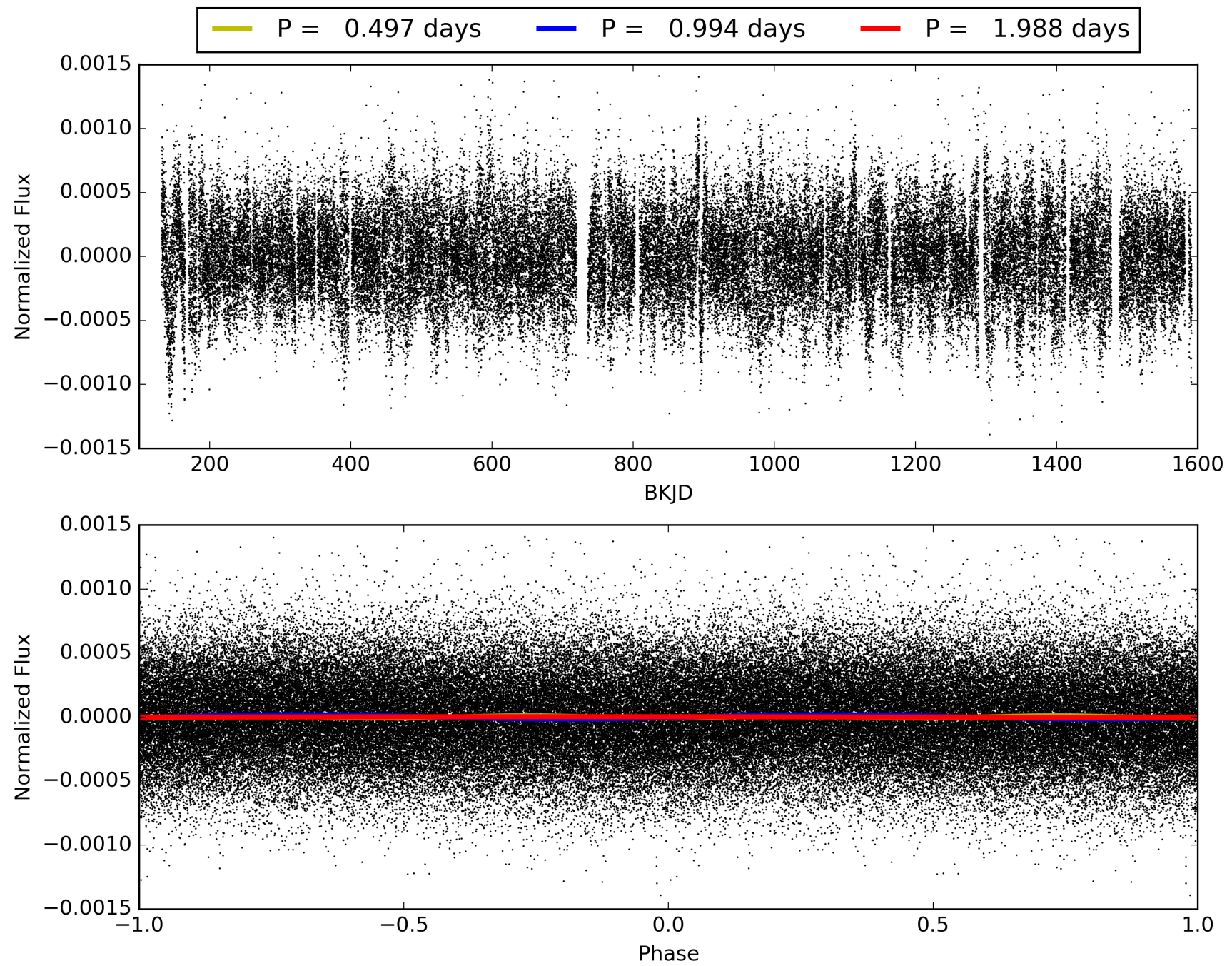
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005207966-01, PDC Light Curves

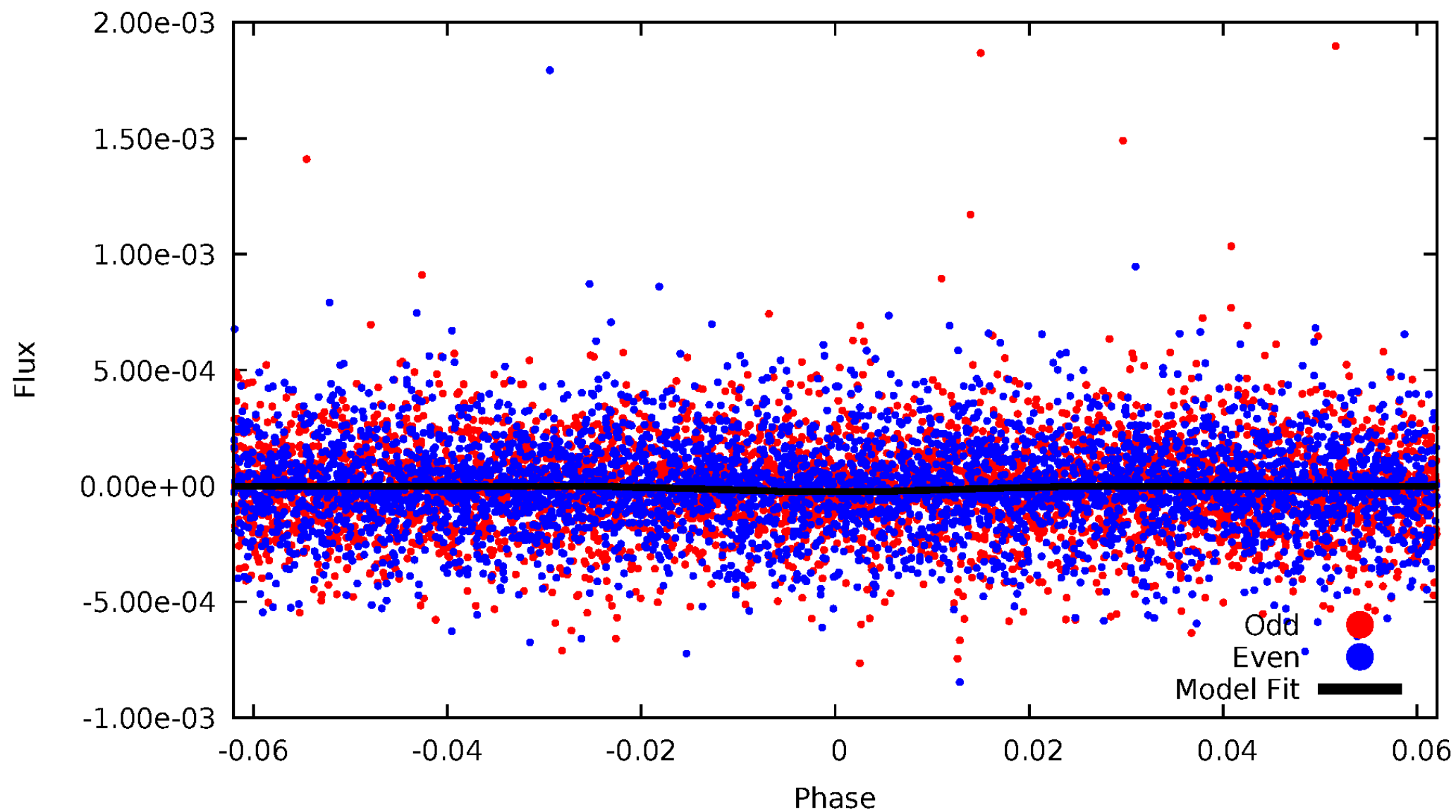


TCE 005207966-01



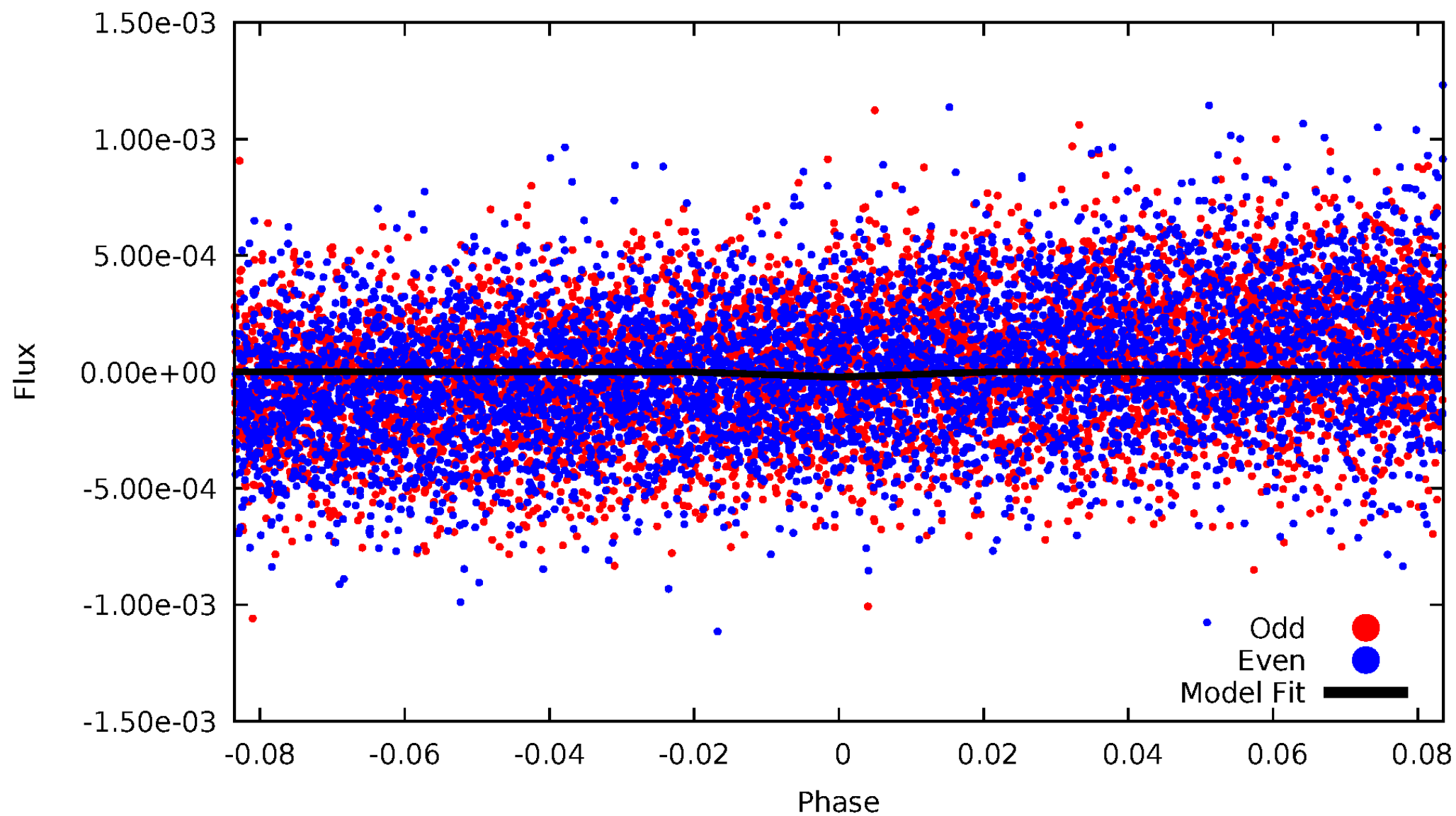
DV Odd/Even

TCE 005207966-01

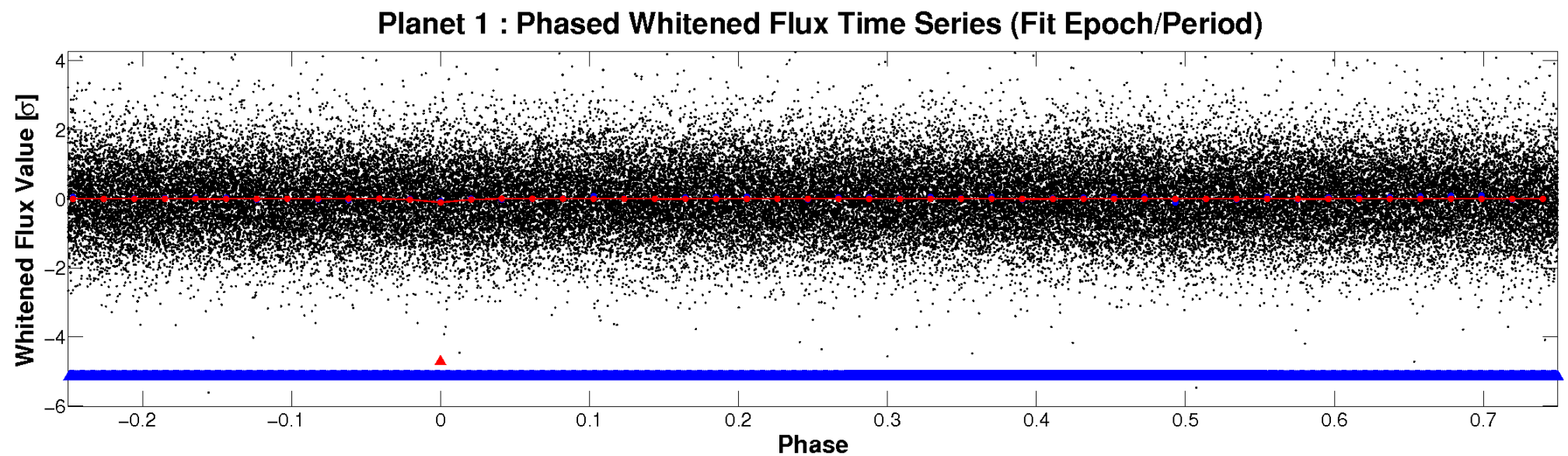
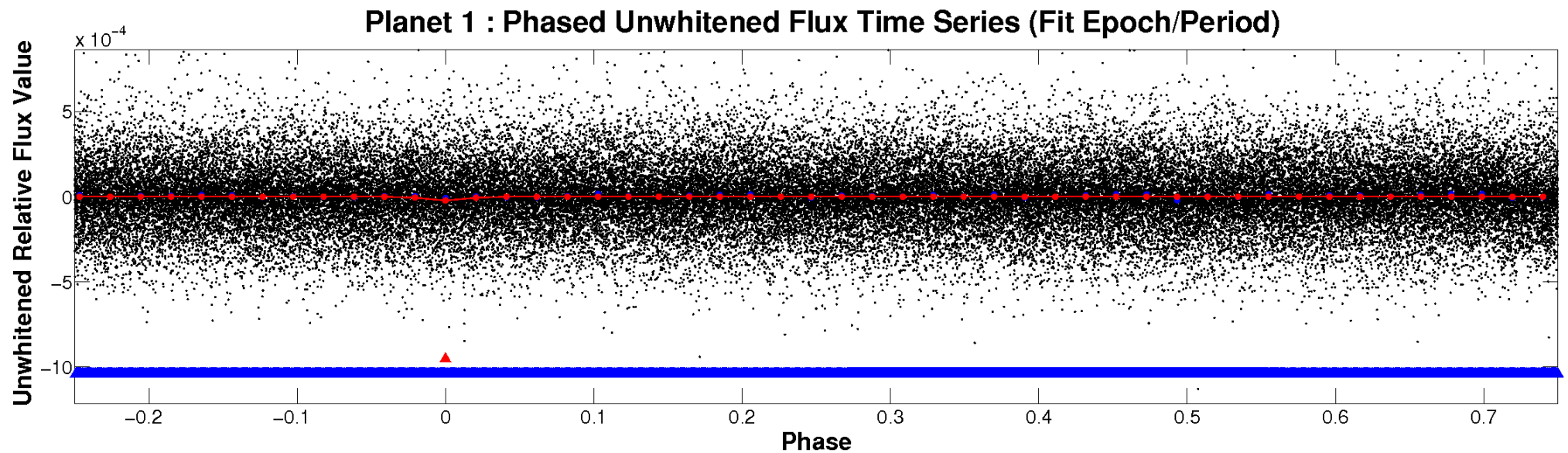


ALT Odd/Even

TCE 005207966-01

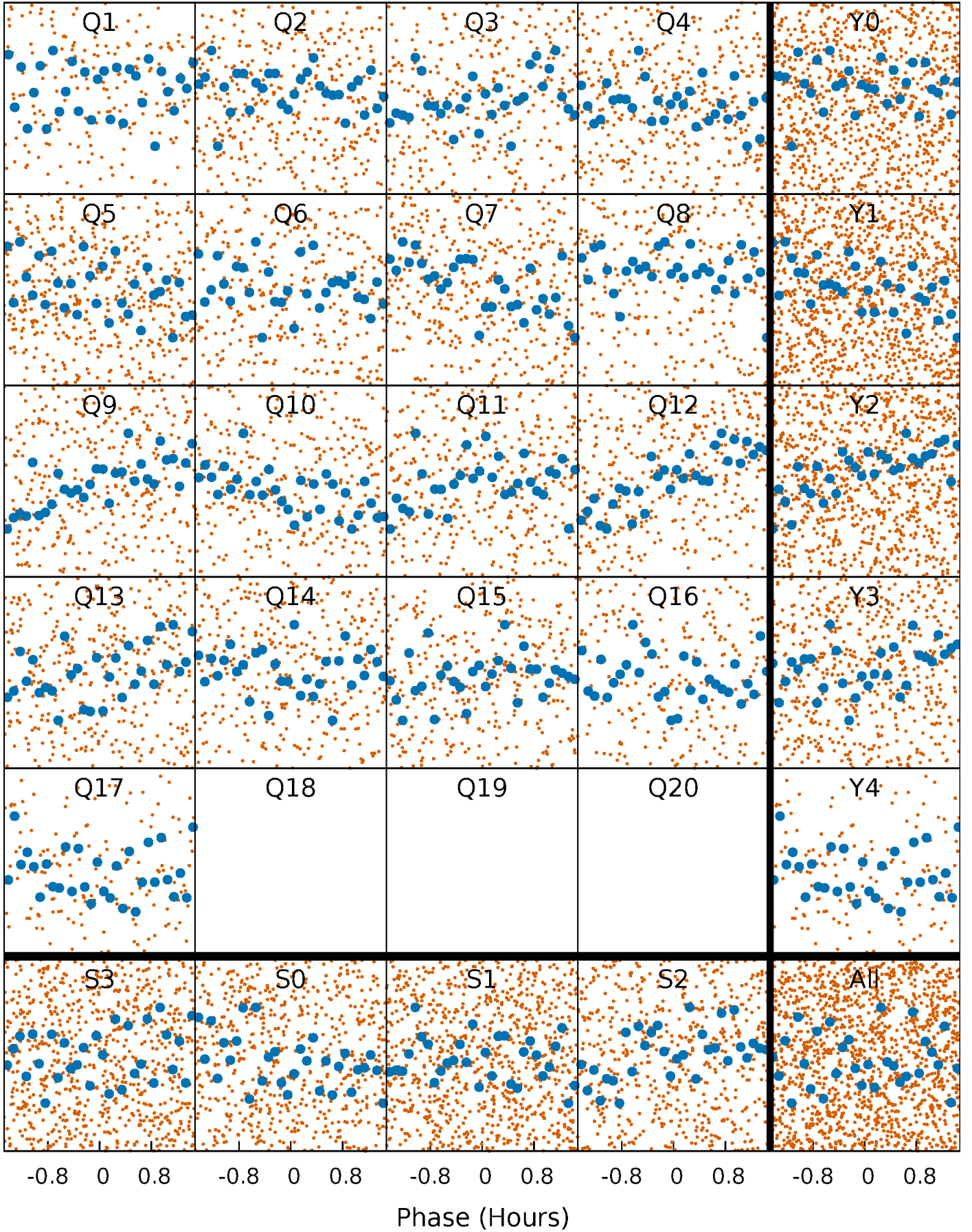


Non-Whitened Vs. Whitened Light Curve



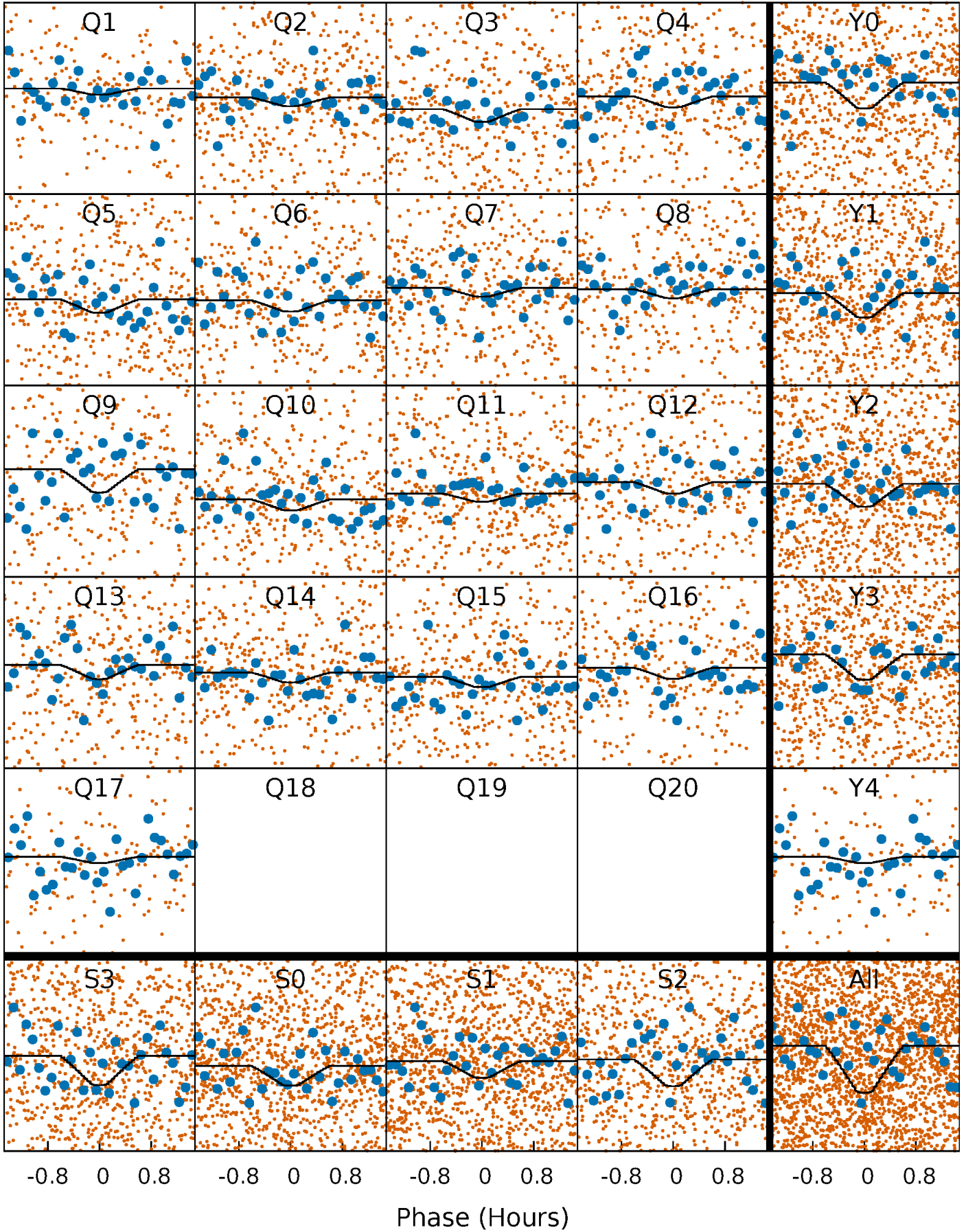
PDC Quarter-Phased Transit Curves

TCE 005207966-01 P= 0.994164 Days $T_0=131.693152$ (BKJD)



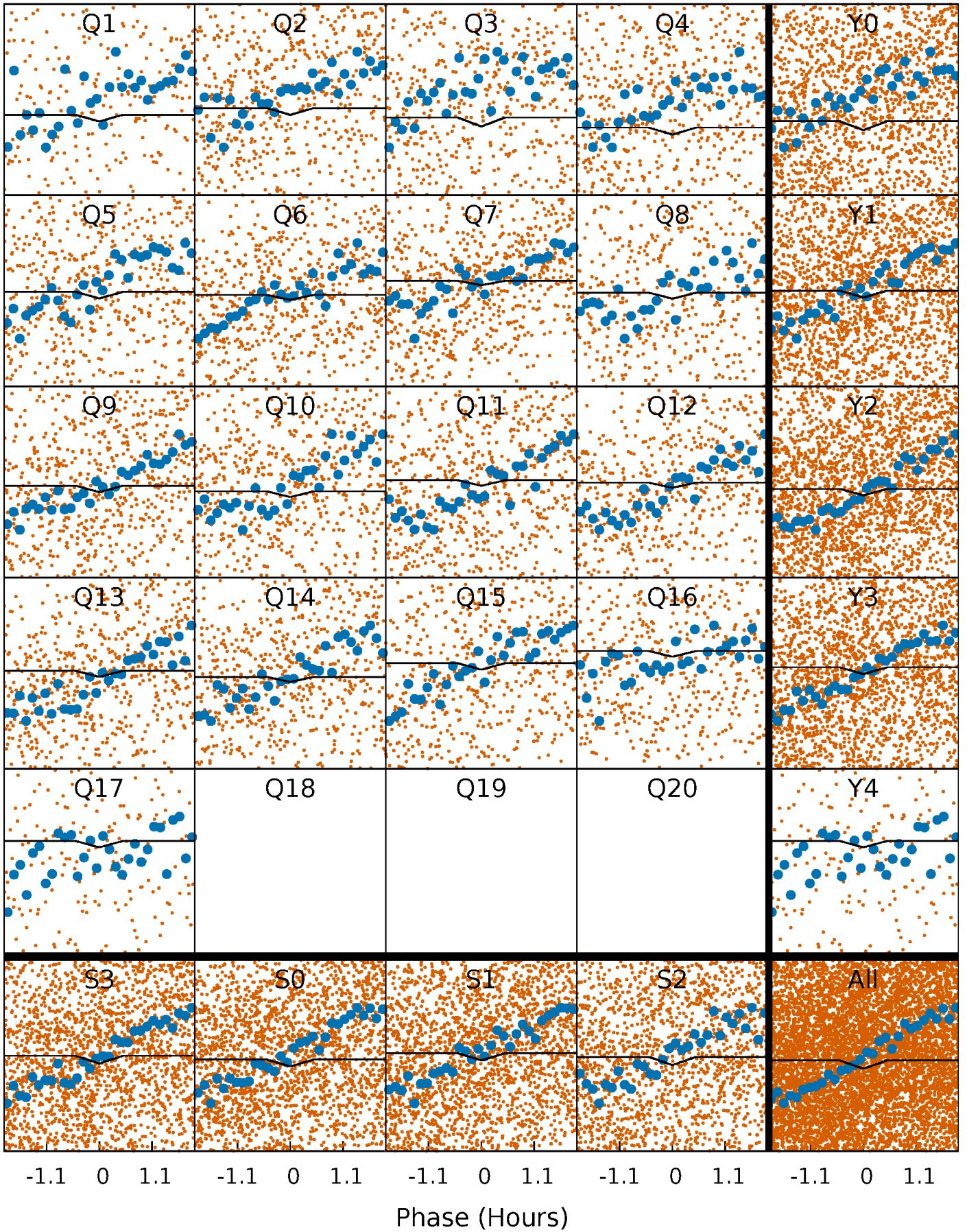
DV Quarter-Phased Transit Curves

TCE 005207966-01 P= 0.994164 Days $T_0=131.693152$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

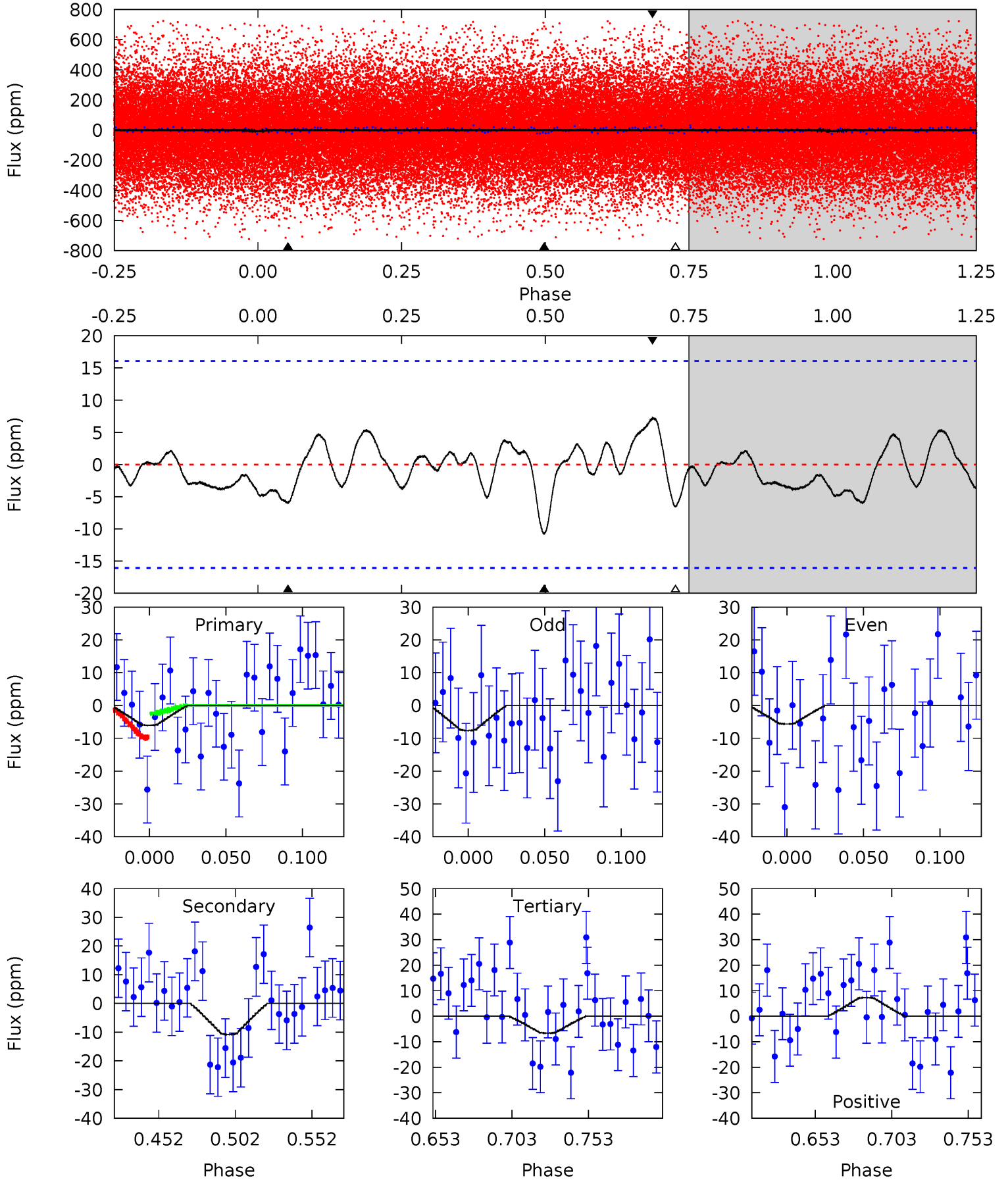
TCE 005207966-01 P= 0.995043 Days $T_0=131.763378$ (BKJD)



DV Model-Shift Uniqueness Test

005207966-01, P = 0.994164 Days, E = 130.698988 Days

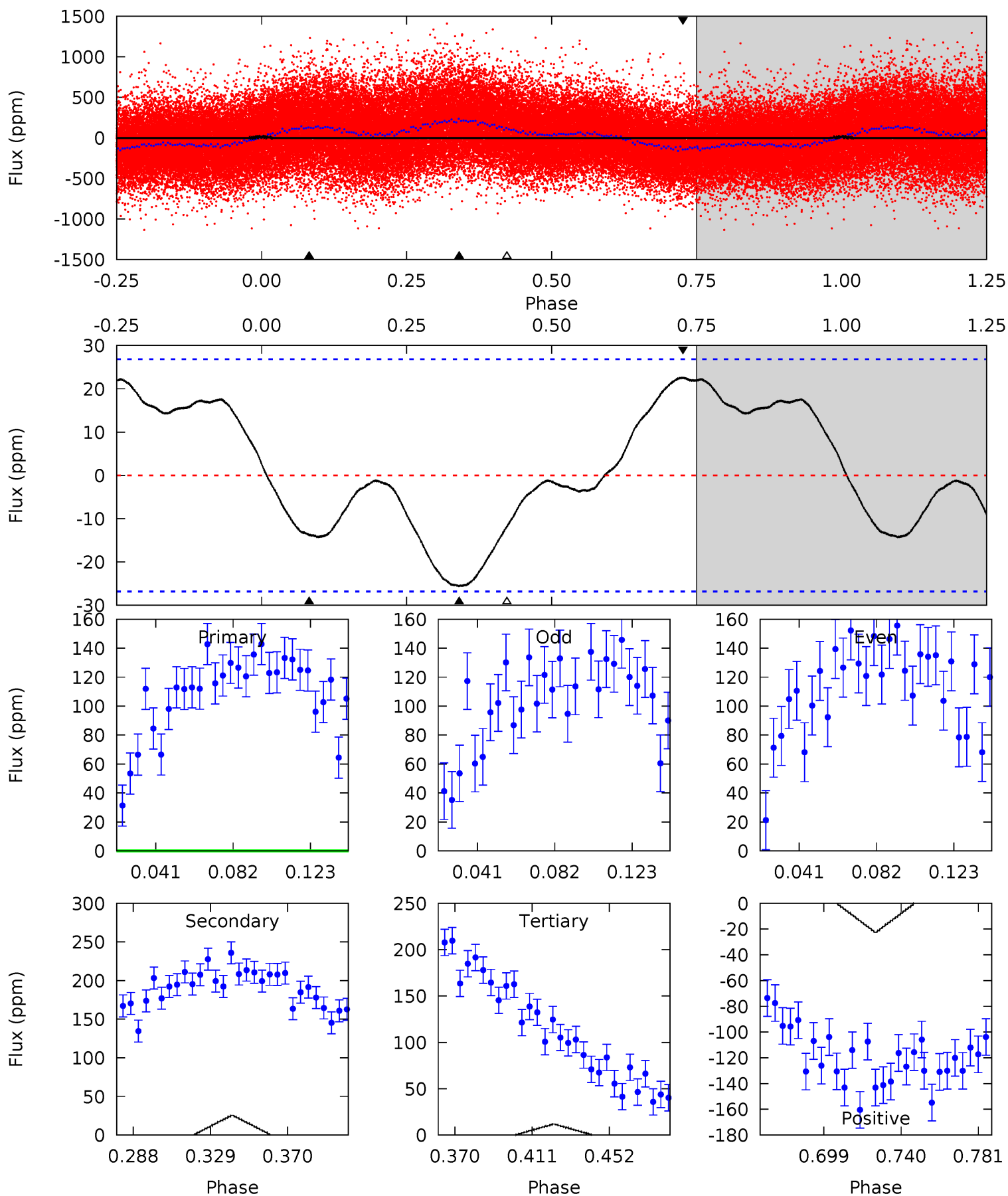
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.78	3.18	1.95	2.14	4.71	1.96	0.85	-0.17	-0.37	1.23	1.03	0.29	0.33	0.40	1.10



Alt Model-Shift Uniqueness Test

005207966-01, P = 0.995043 Days, E = 130.768335 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.44	4.53	2.10	3.99	4.75	2.04	2.14	0.35	-1.55	2.43	0.54	1.07	0.58	0.47	2.60



Stellar Parameters For KIC 005207966

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6850^{+190}_{-299}	$4.196^{+0.132}_{-0.181}$	$-0.140^{+0.250}_{-0.350}$	$1.530^{+0.471}_{-0.314}$	$1.350^{+0.189}_{-0.231}$	$0.531^{+0.400}_{-0.284}$
	+3%/-4%	+3%/-4%	+179%/-250%	+31%/-21%	+14%/-17%	+75%/-53%
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 005207966-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-11 ± 3	$4.64^{+4.70}_{-3.27}$	3564^{+272}_{-257}	-3104^{+7391}_{-313}	$0.122^{+1.319}_{-0.093}$
Alt.	-26 ± 6	$4.52^{+5.12}_{-3.13}$	3571^{+245}_{-211}	2373^{+2904}_{-5681}	$0.325^{+3.112}_{-0.259}$

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 $A_{obs} \gg 1.0$

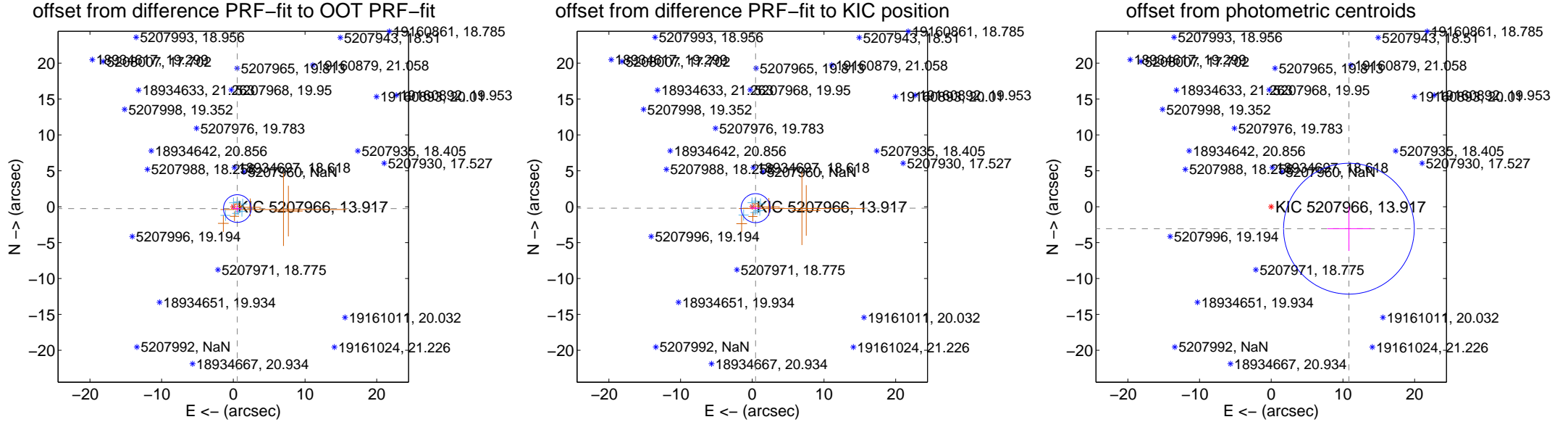
DV Centroid Data

Supplemental centroid analysis for 005207966-01. Kepler magnitude: 13.92. Transit SNR 1.89

There are 7 quarters with good PRF difference image offsets

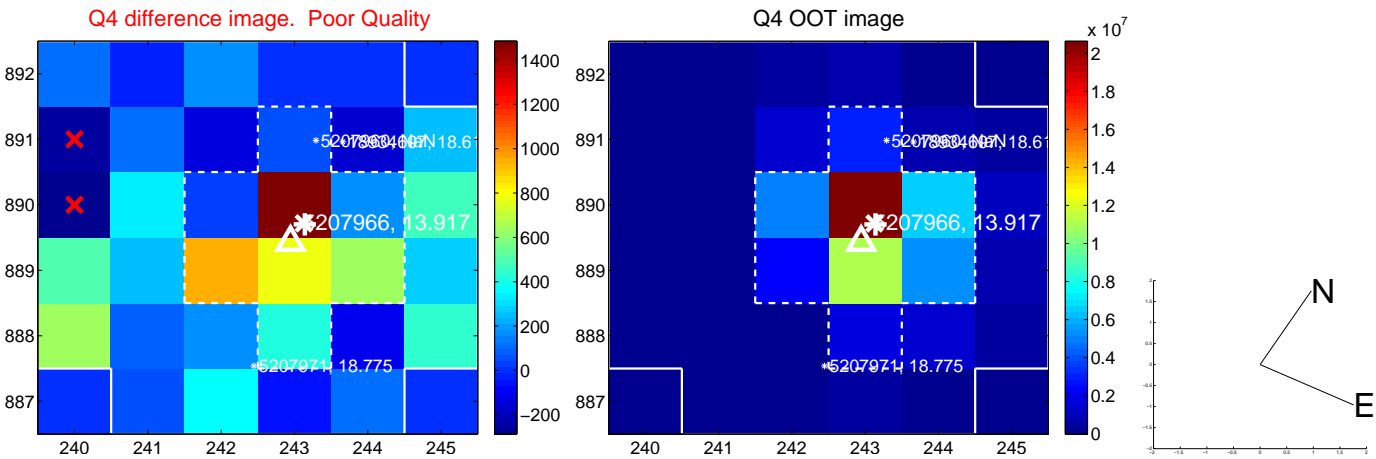
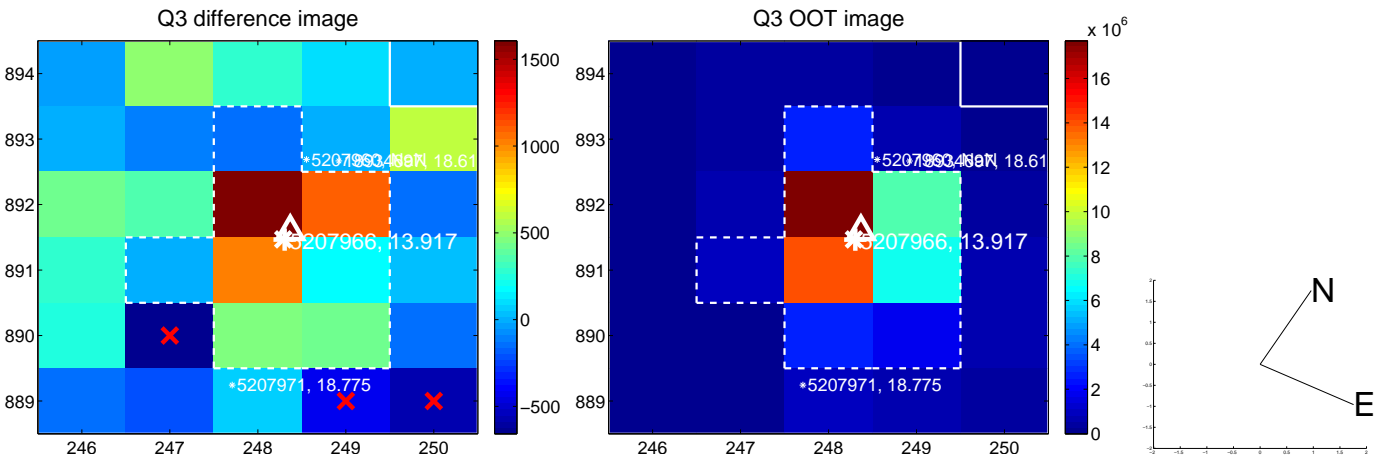
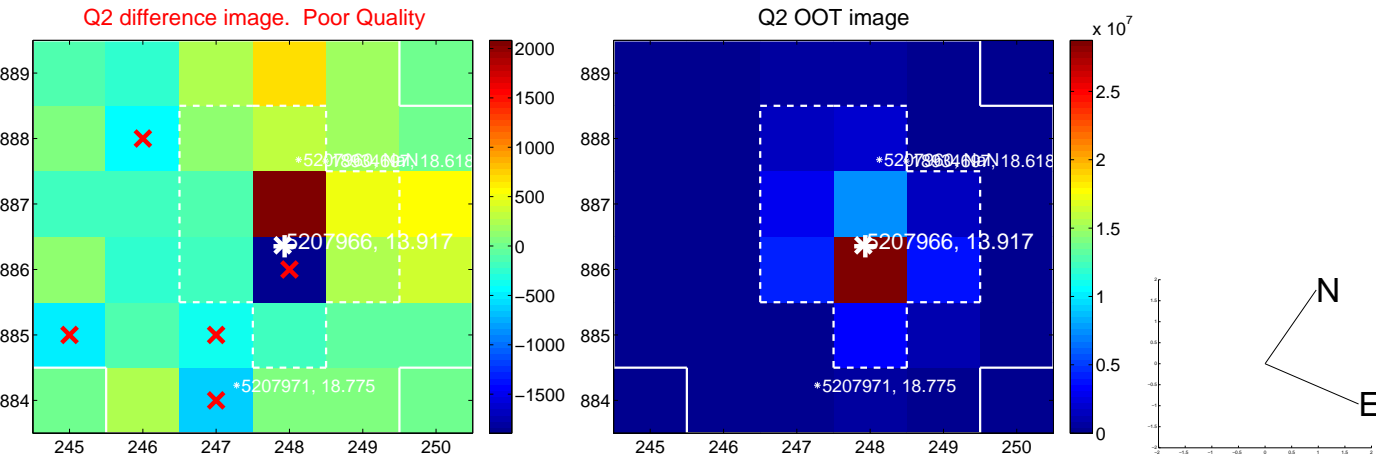
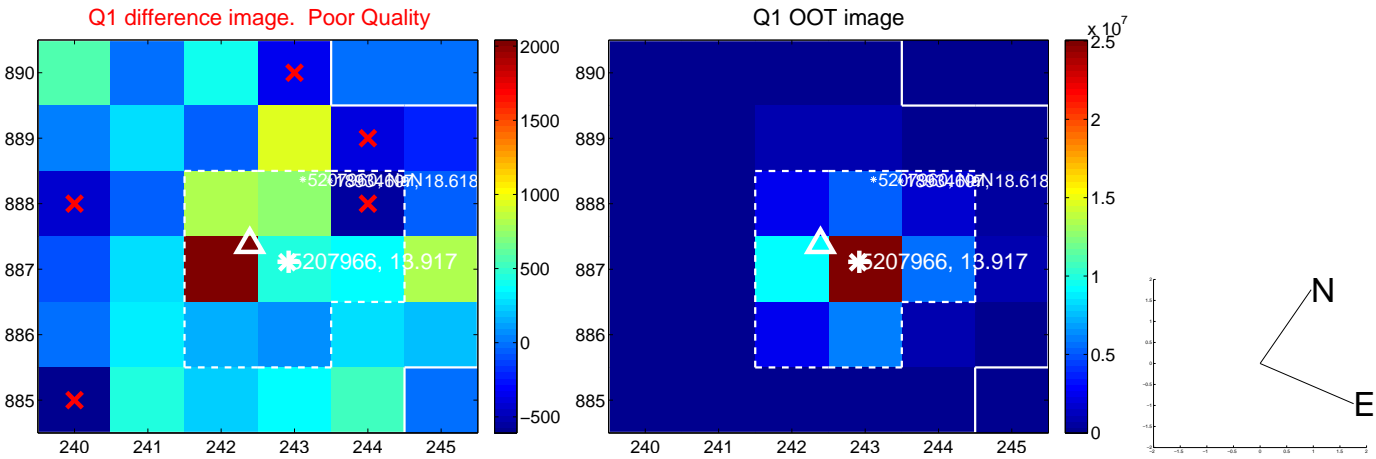
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.610 ± 0.643	0.95	-0.555 ± 0.671	-0.255 ± 0.484
PRF-fit source offset from KIC position	0.497 ± 0.674	0.74	-0.455 ± 0.755	-0.200 ± 0.220
photometric centroid source offset	11.26 ± 3.04	3.71	-10.84 ± 3.03	-3.06 ± 3.10

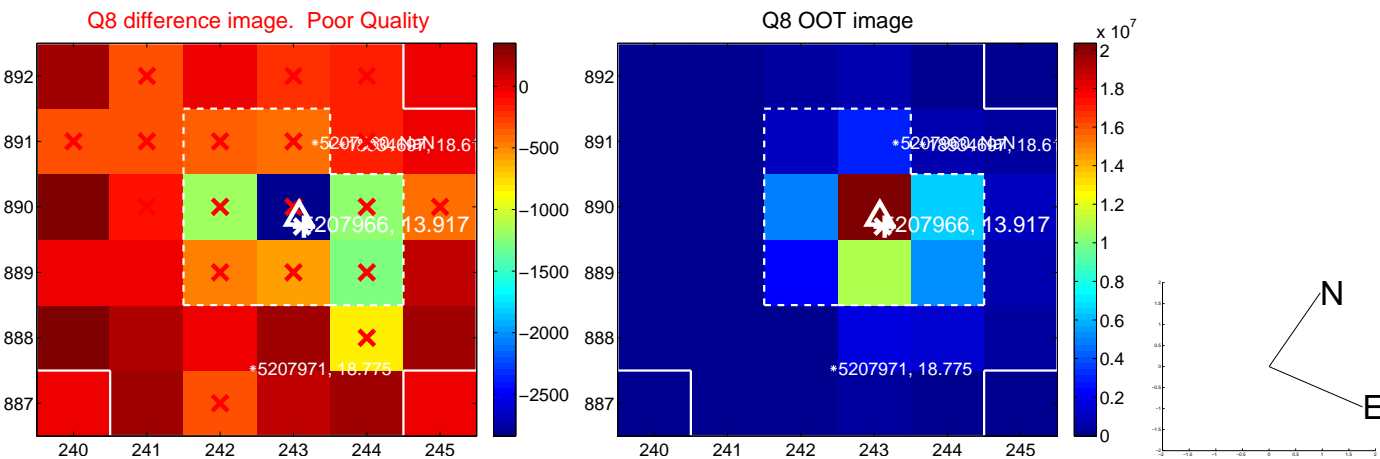
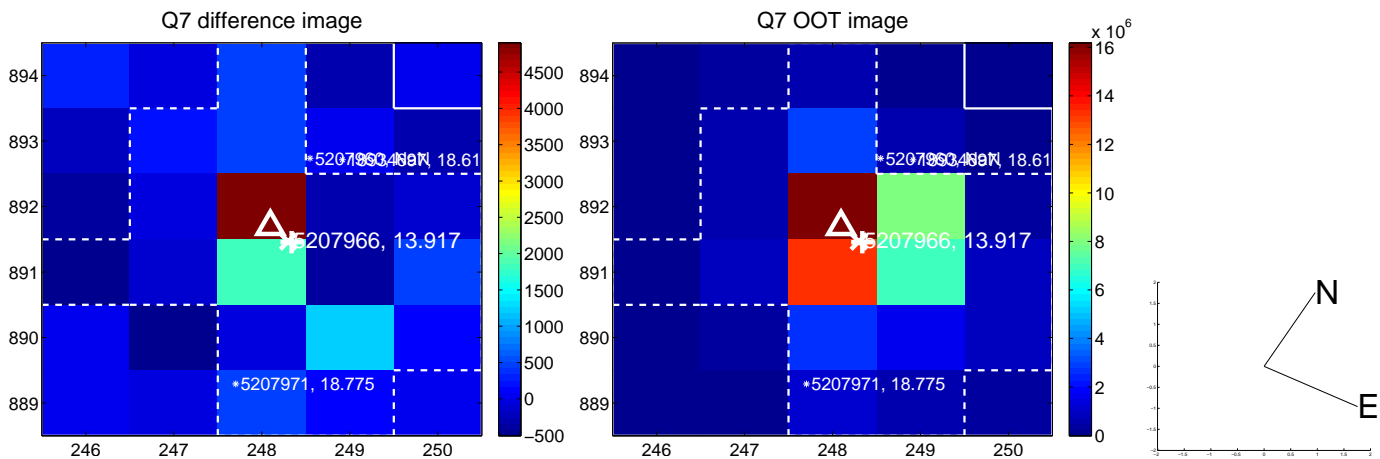
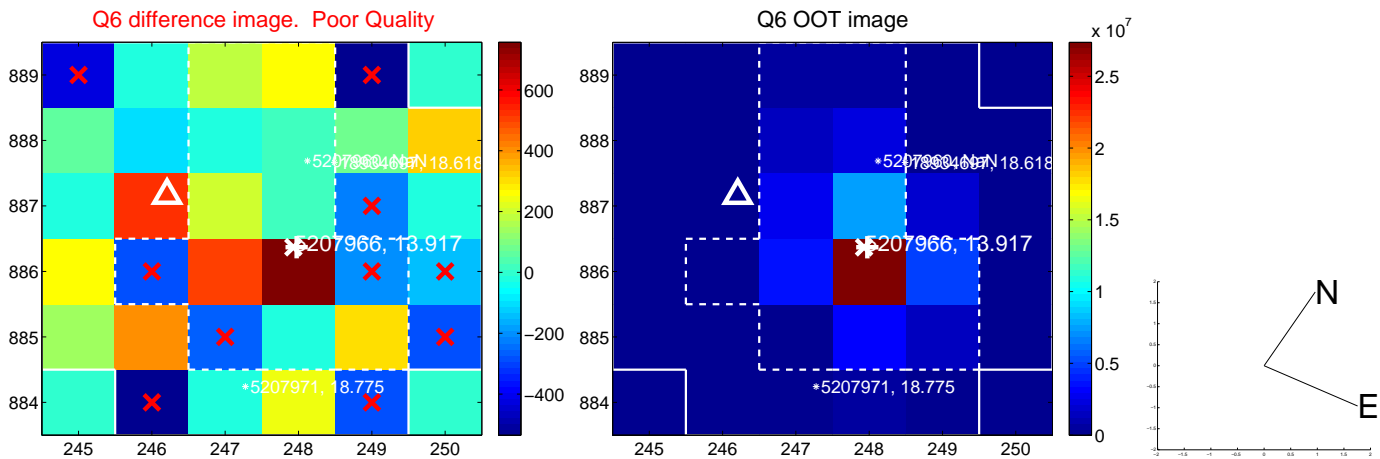
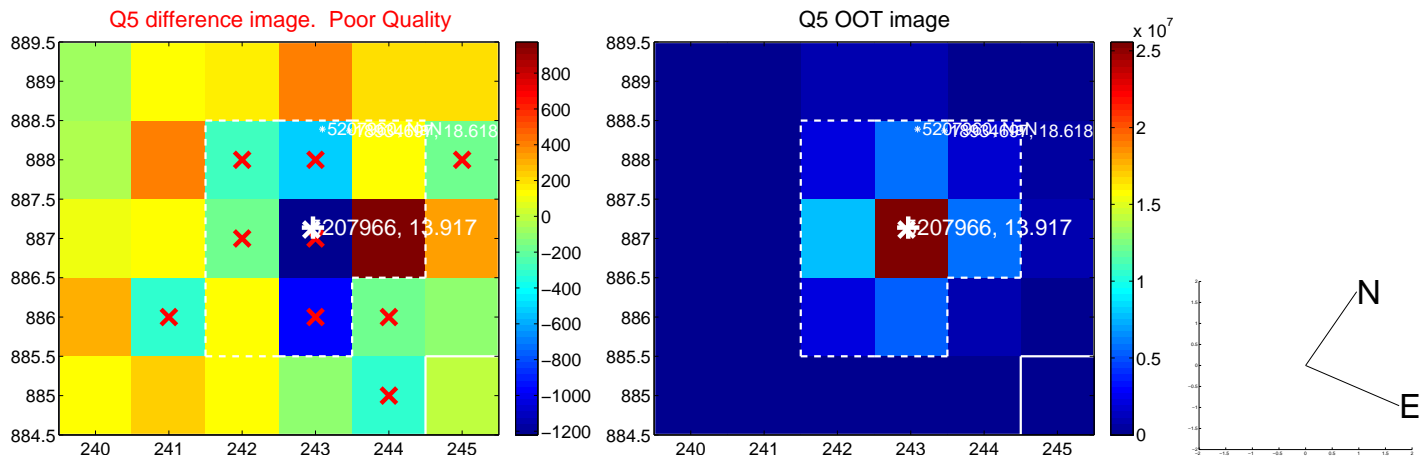


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

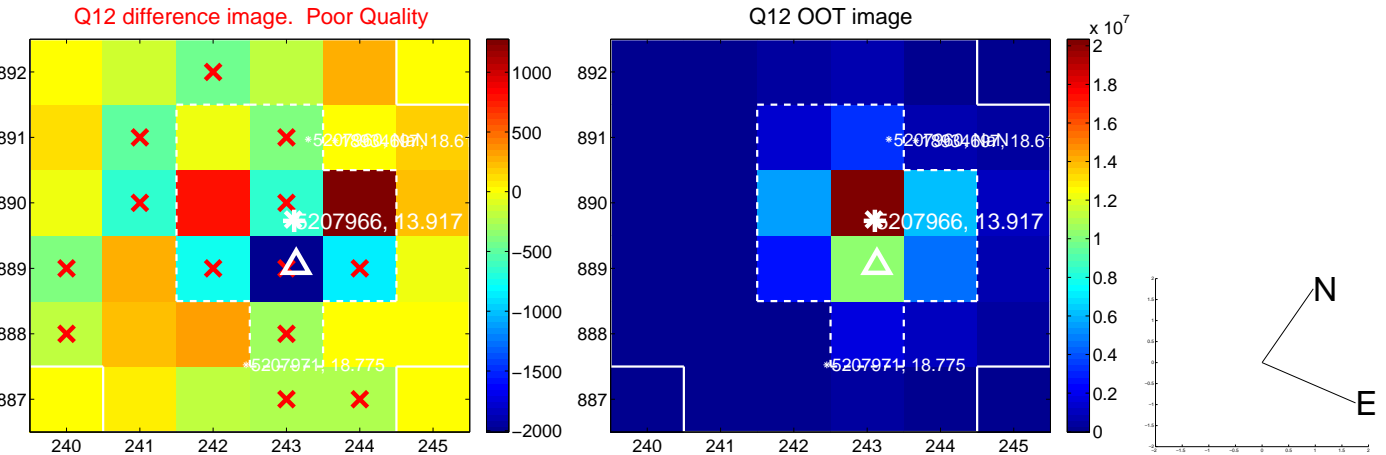
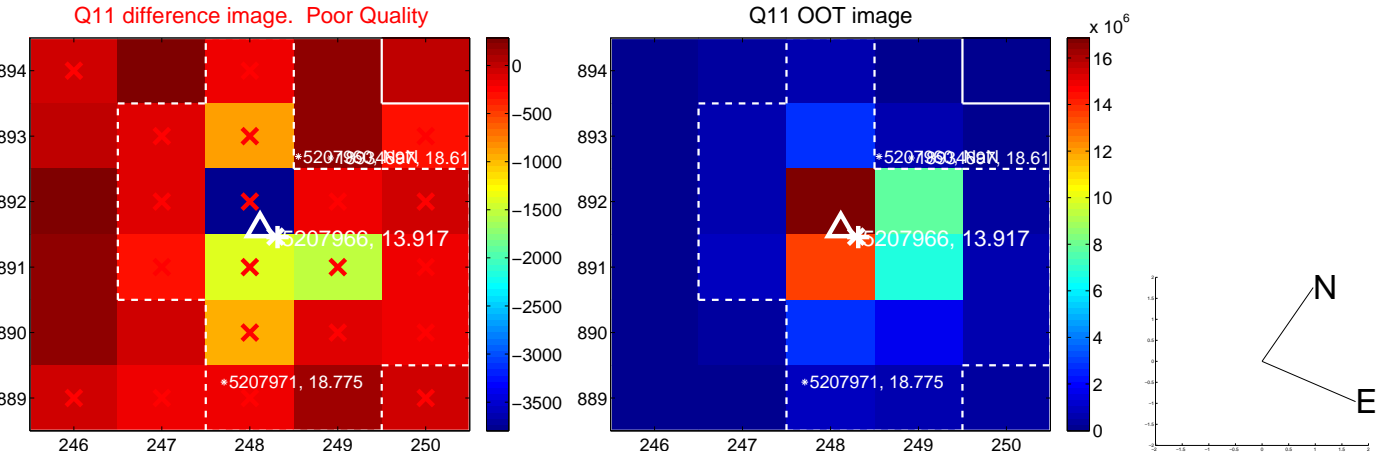
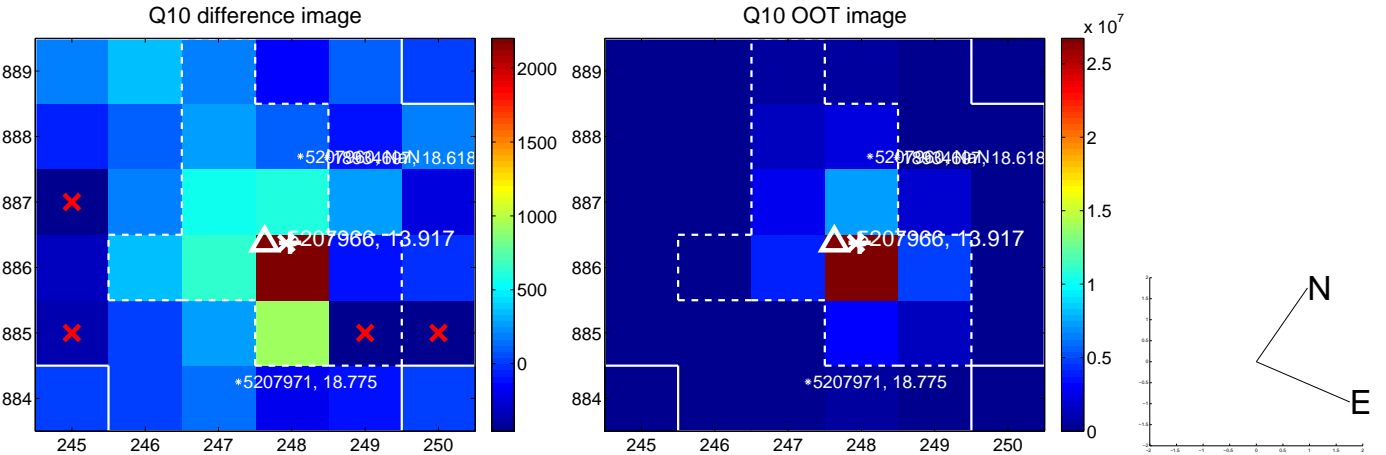
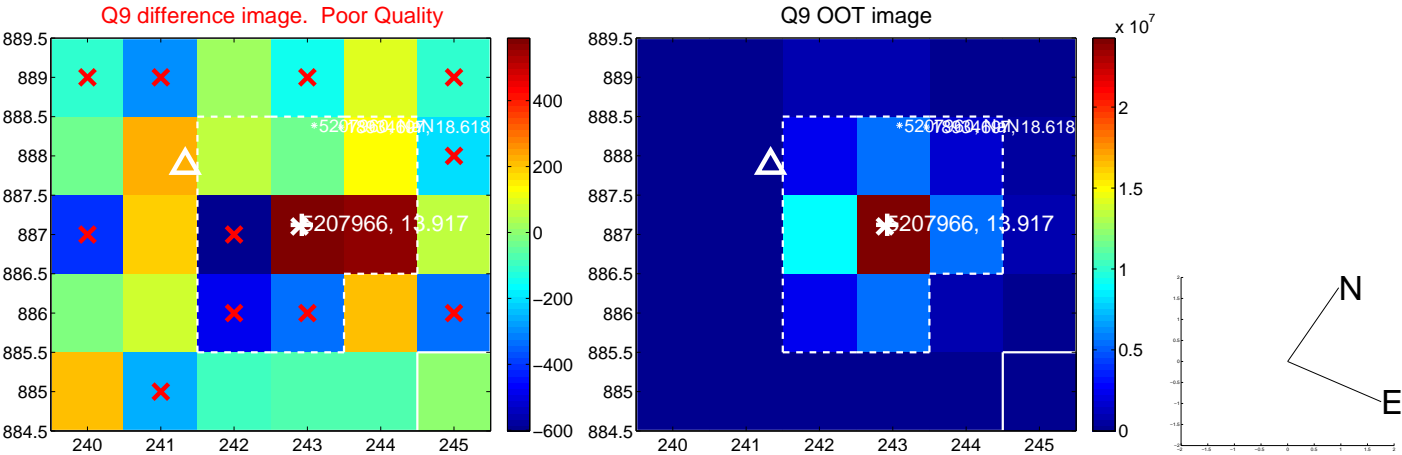
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



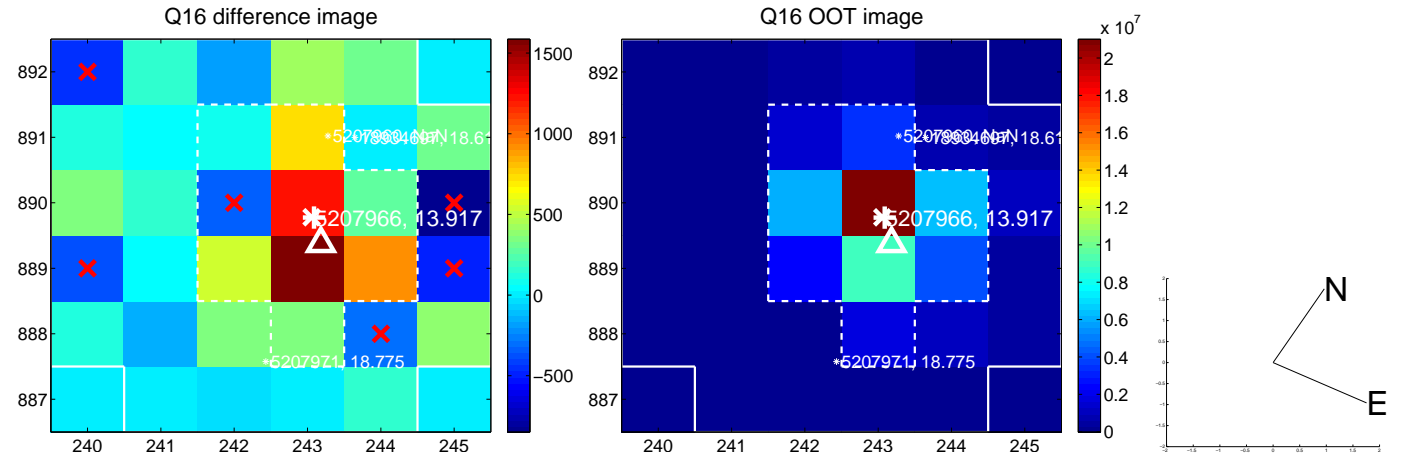
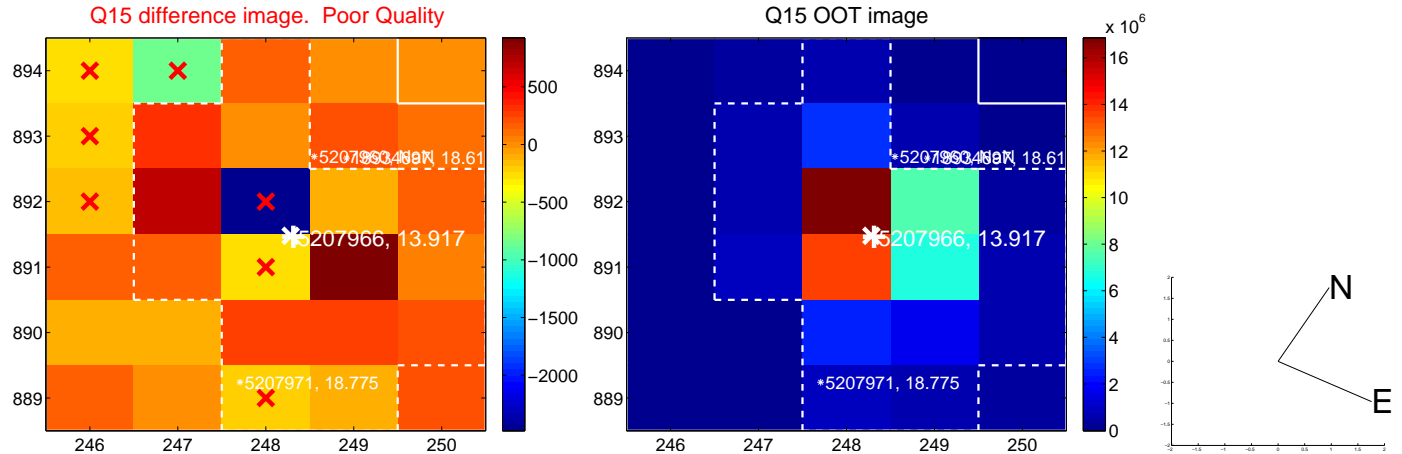
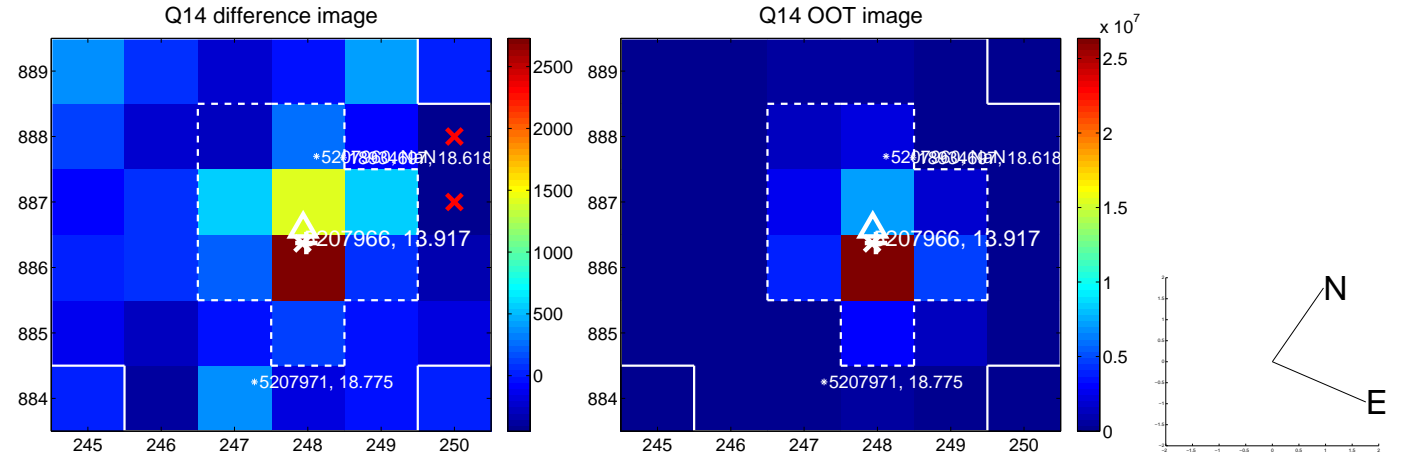
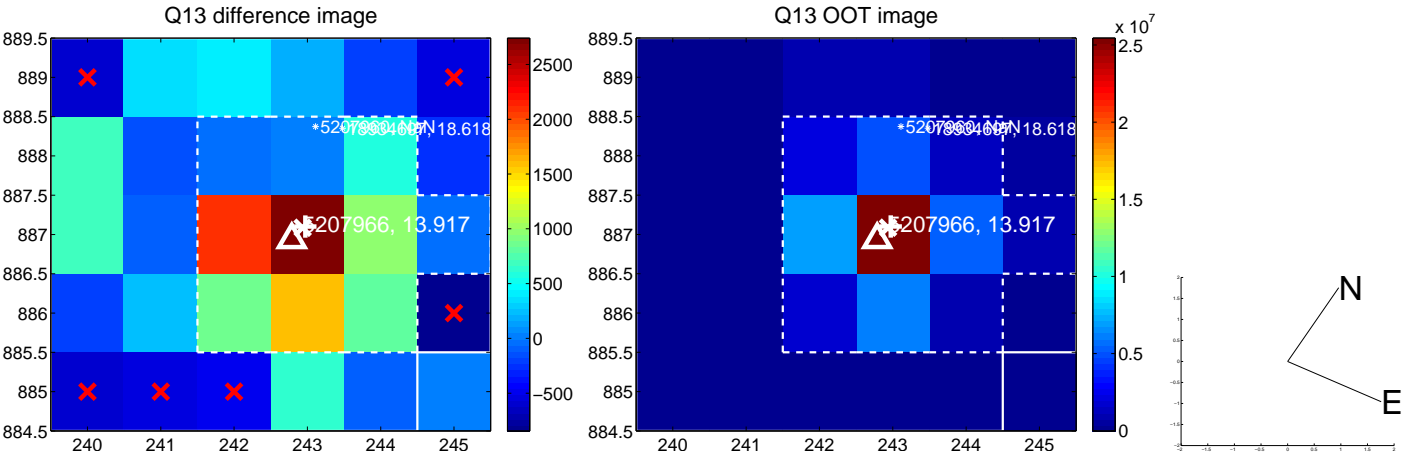
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



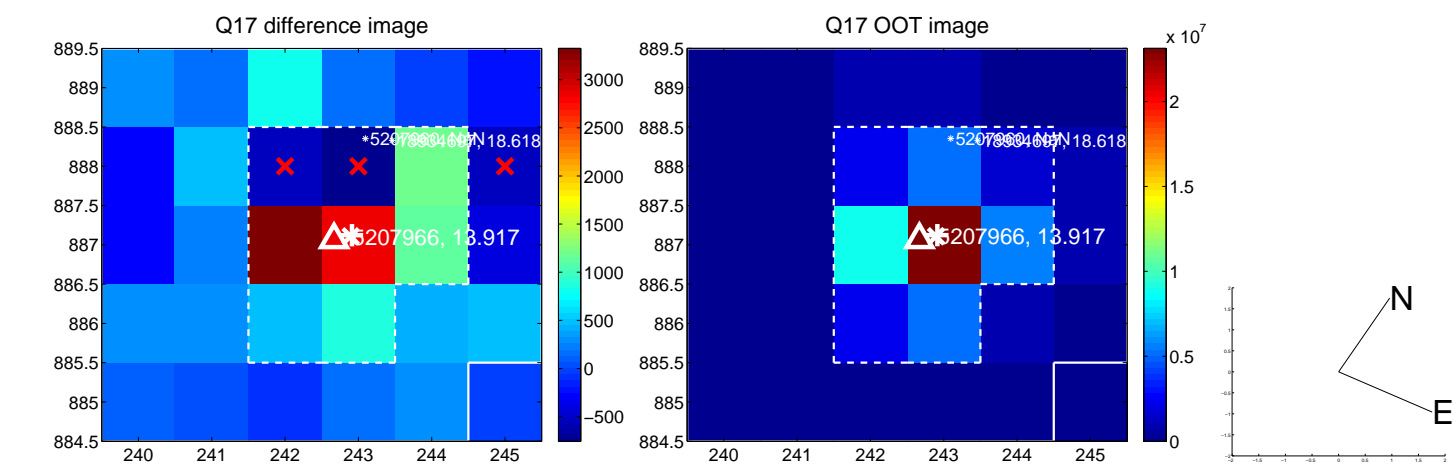
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



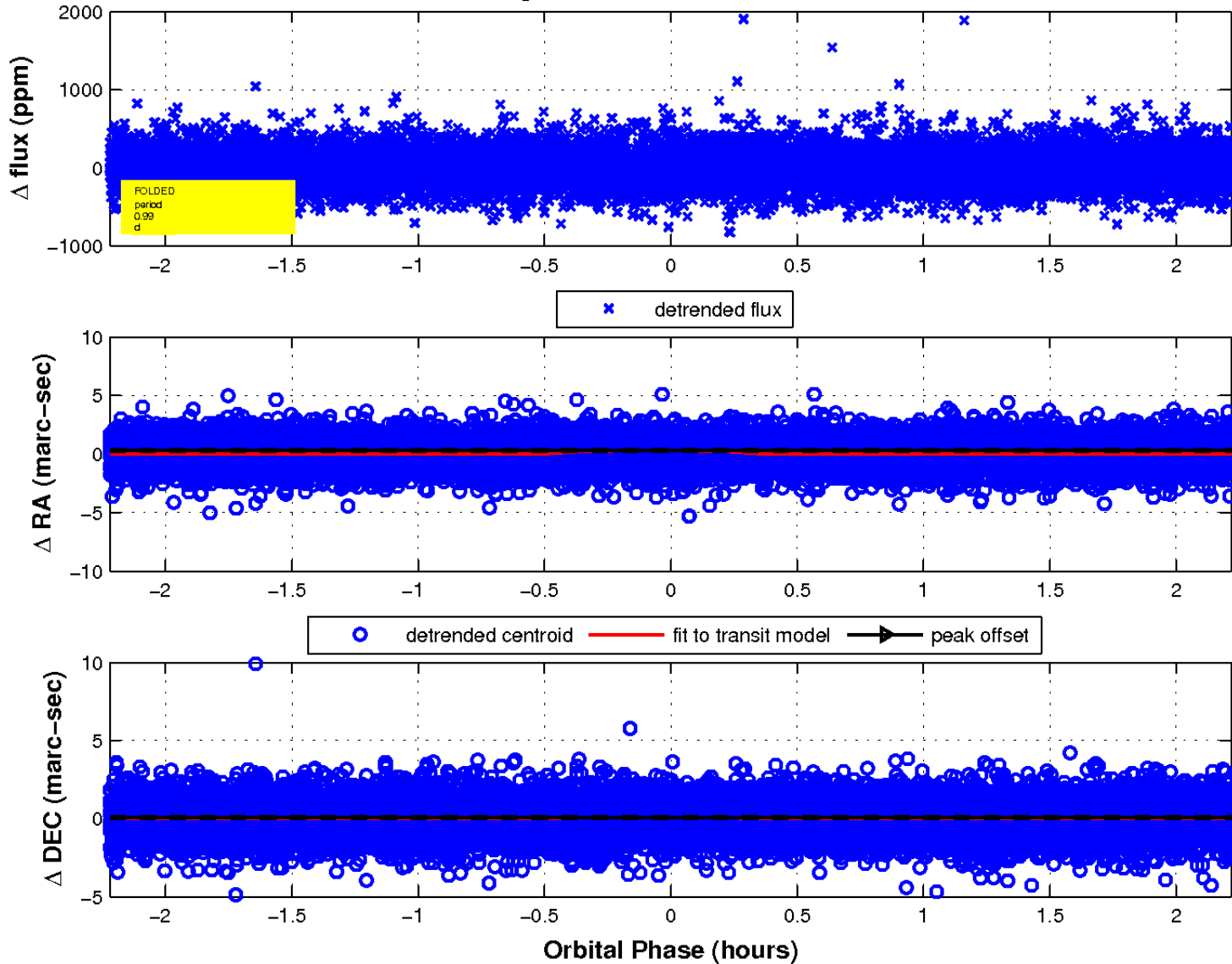
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



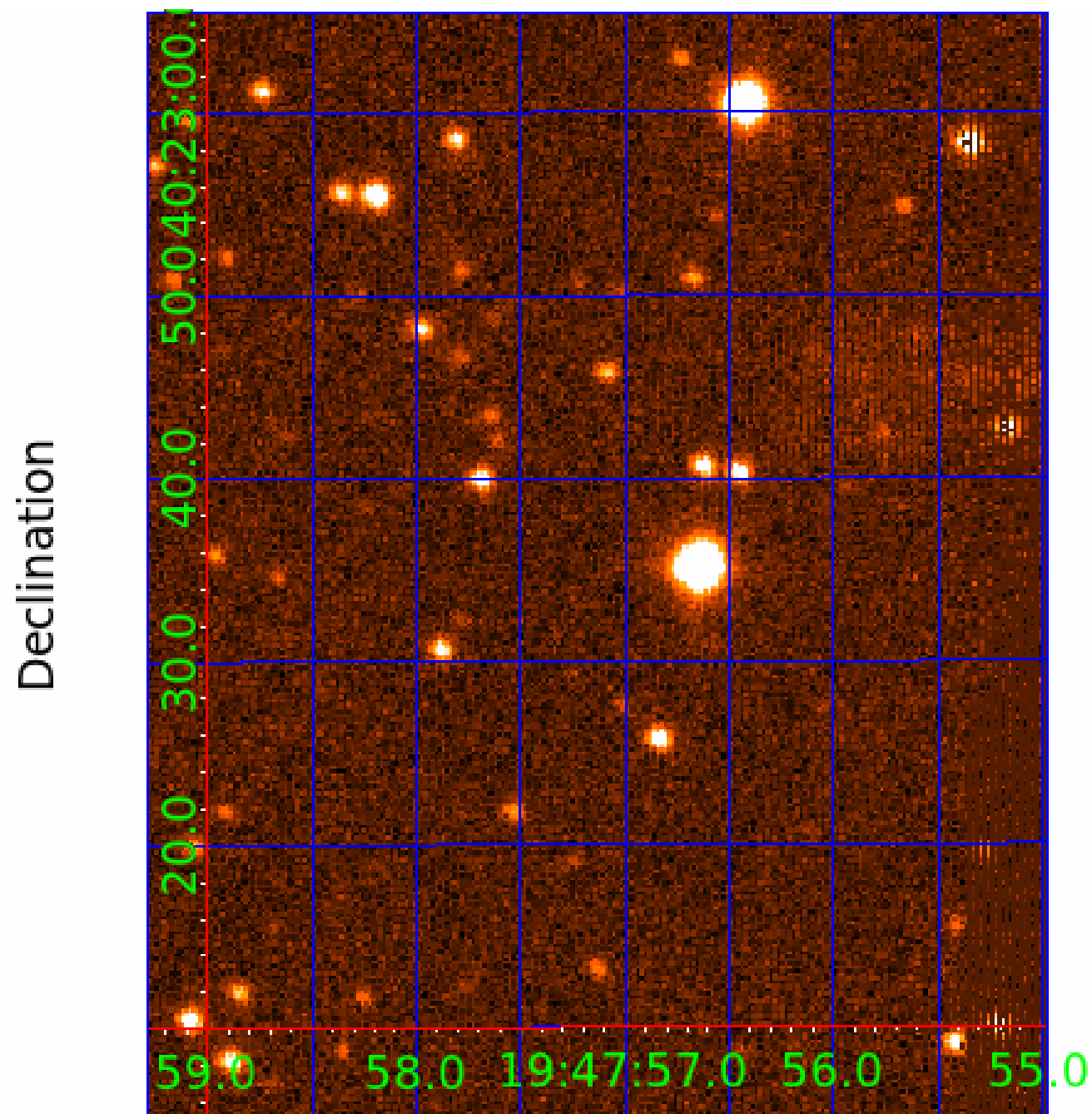
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 2



UKIRT Image



KIC 005207966

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})
005207966-01	OBS	No	0.994164	131.693152	24.9	0.740	9.8	1.9	1.53	6850	0.78	9988.66
005207966-02	OBS	No	0.995038	131.963847	2.5	1.220	9.6	0.5	1.53	6850	0.24	9976.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005207966-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005207966-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

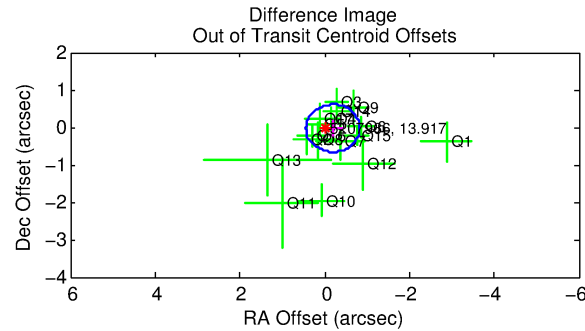
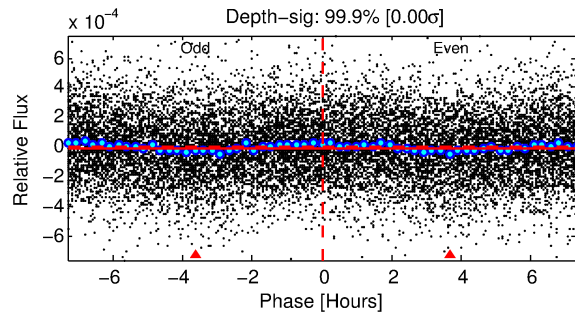
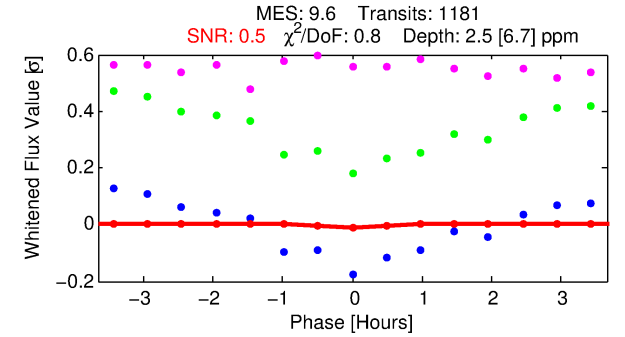
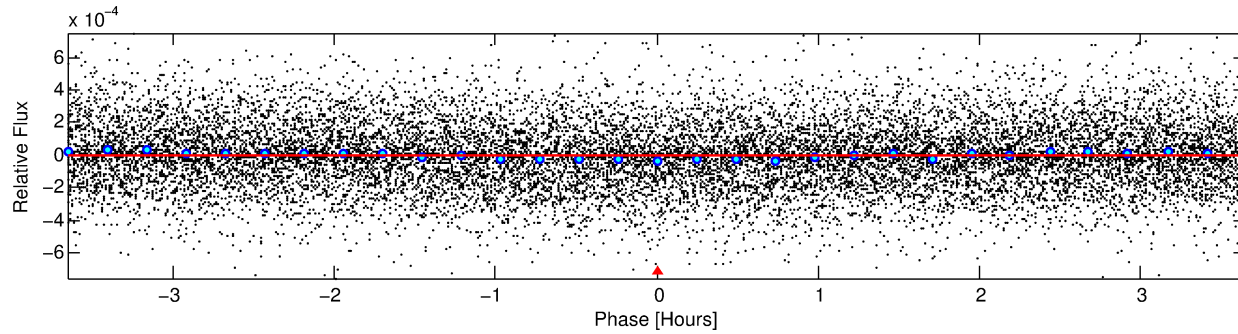
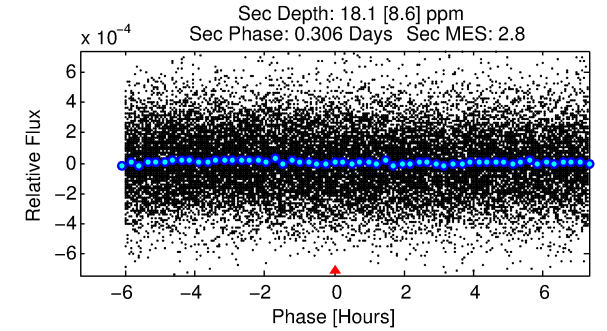
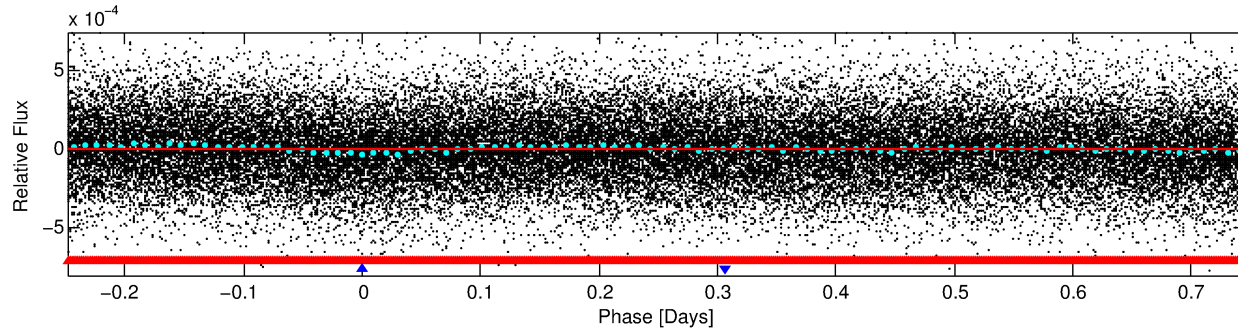
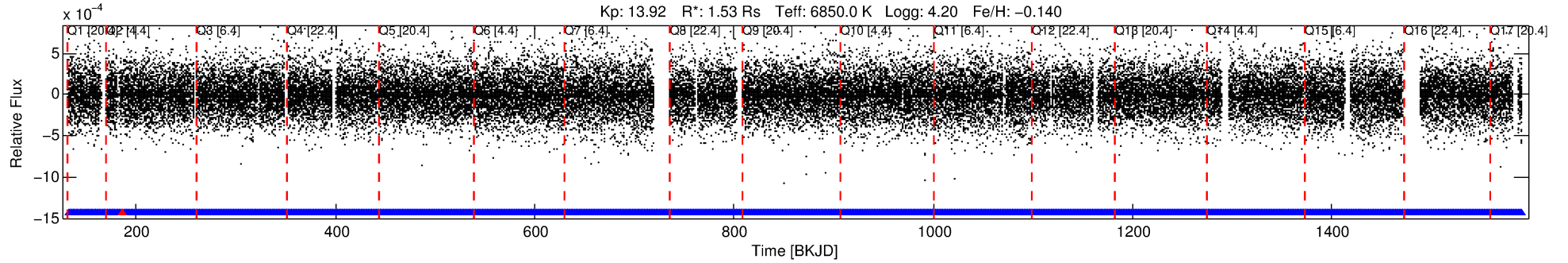
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005207966-02

No Significant Match Found

DV One-Page Summary

KIC: 5207966 Candidate: 2 of 2 Period: 0.995 d



DV Fit Results:

Period = 0.99504 [0.00020] d
Epoch = 131.9638 [0.0401] BKJD
Rp/R* = 0.0015 [0.0200]
a/R* = 6.27 [464.24]
b = 0.03 [2283.68]
Seff = 9976.95 [3861.50]
Teq = 2548 [247] K
Rp = 0.25 [3.35] Re
a = 0.0215 [0.0053] AU
Ag = 76.54 [2090.41] [0.04σ]
Teffp = 11655 [79566] K [0.1σ]

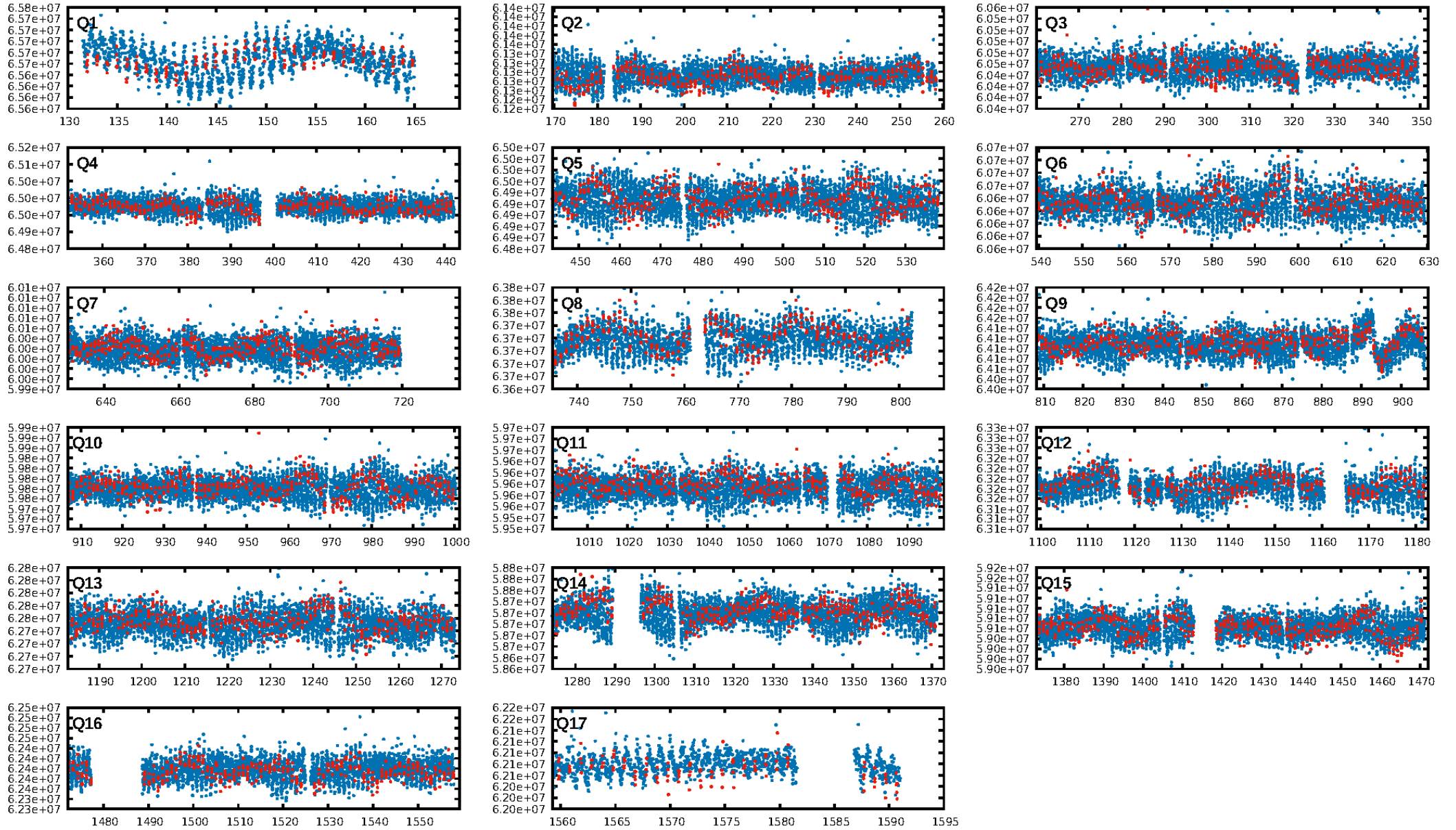
DV Diagnostic Results:

ShortPeriod-sig: 1.2% [0.01σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.45e-24
RollingBand-fgt: 1.00 [1120/1121]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.193 arcsec [0.91σ]
KicOffset-rm: 0.100 arcsec [0.43σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
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DiffImageOverlap-fno: 0.71 [12/17]

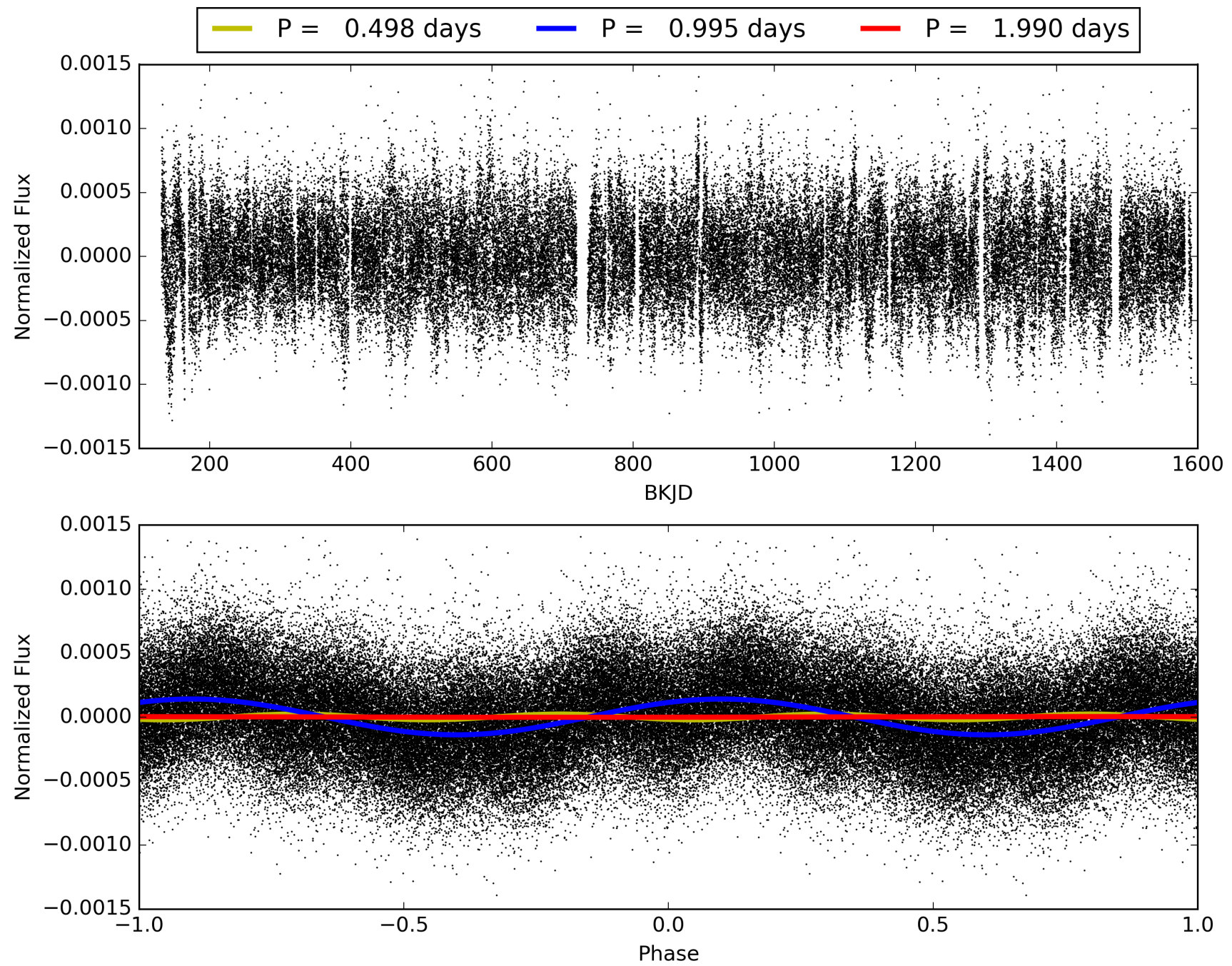
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:24:10 Z

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

TCE 005207966-02, PDC Light Curves

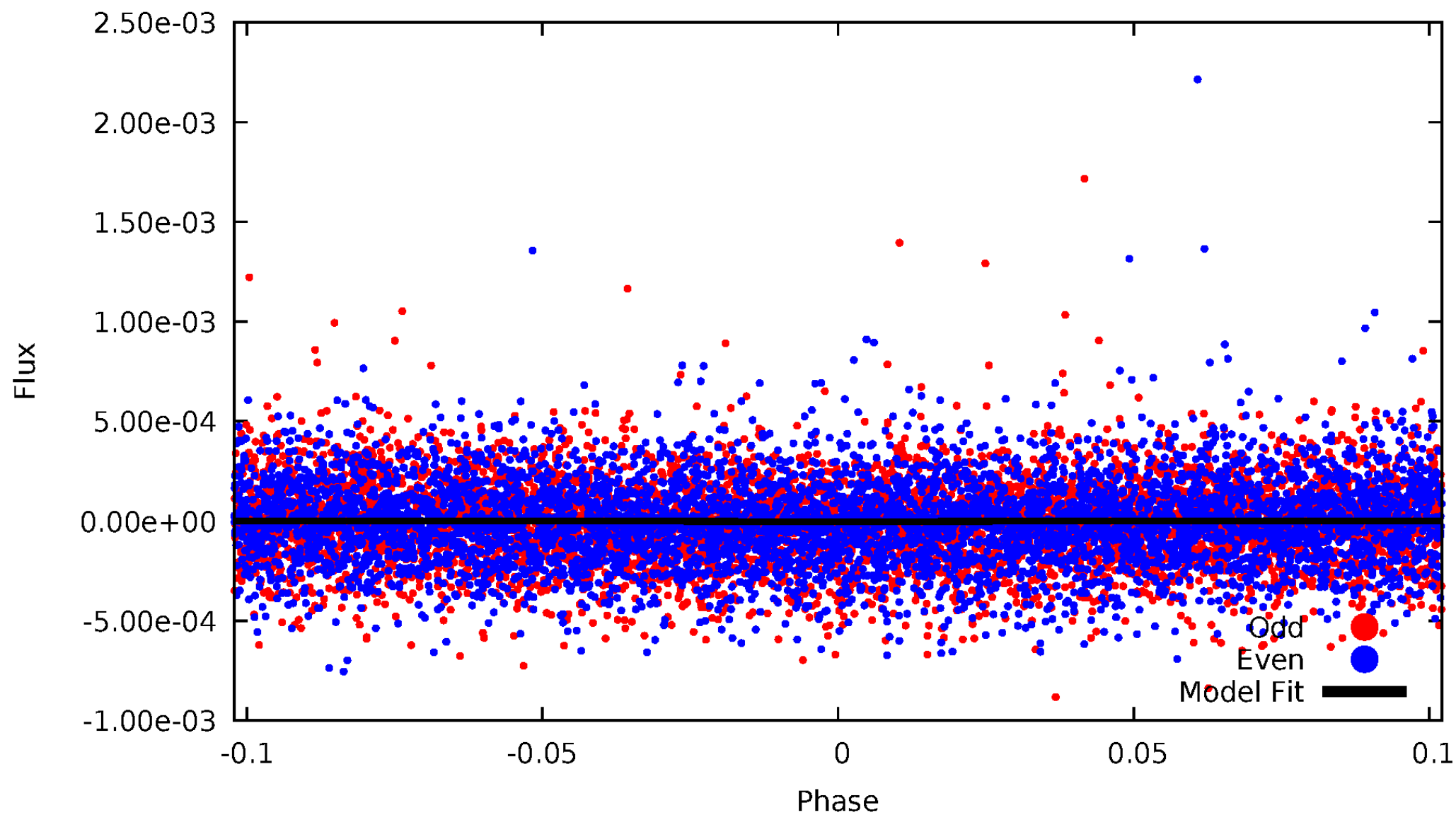


TCE 005207966-02



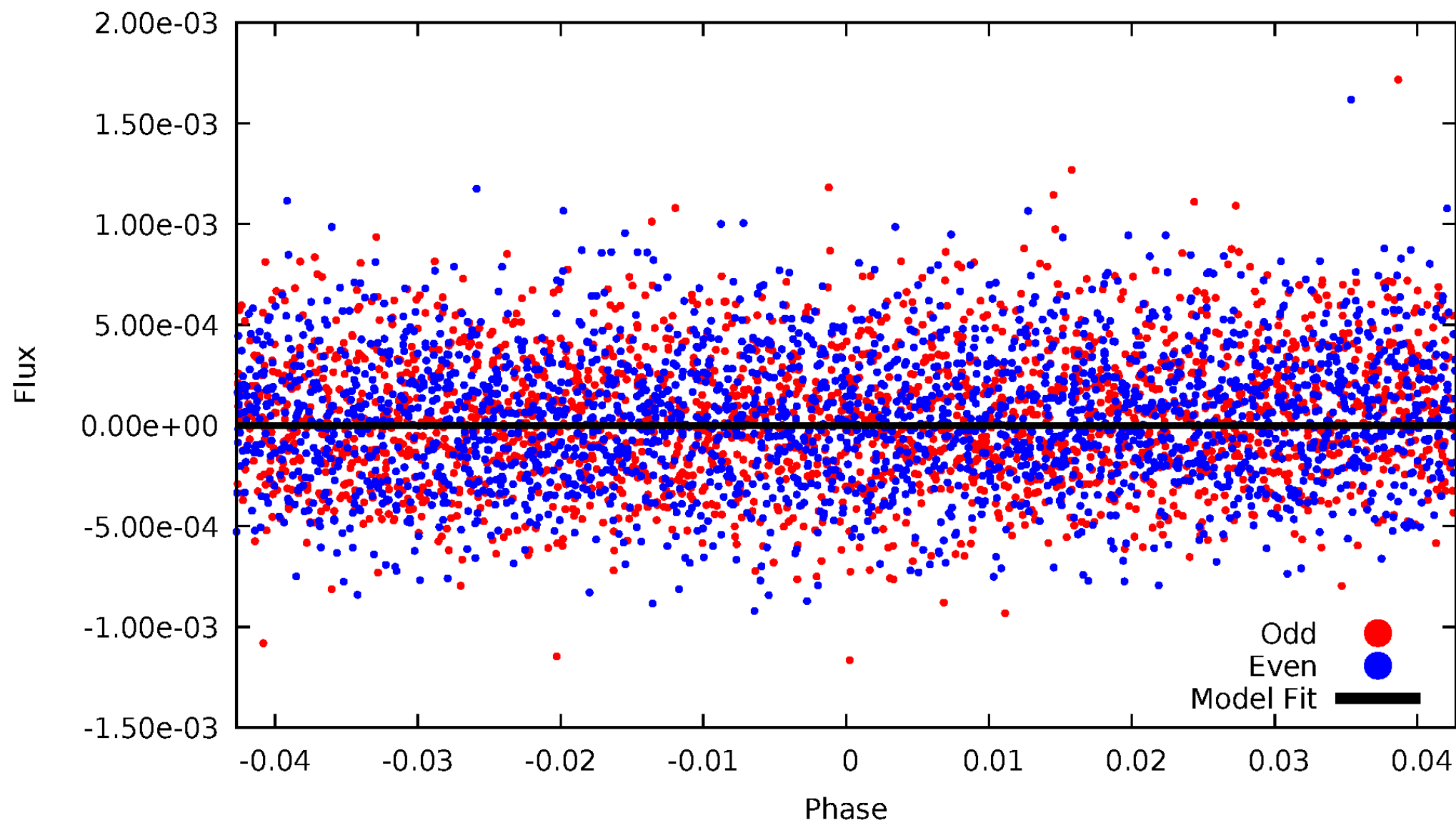
DV Odd/Even

TCE 005207966-02



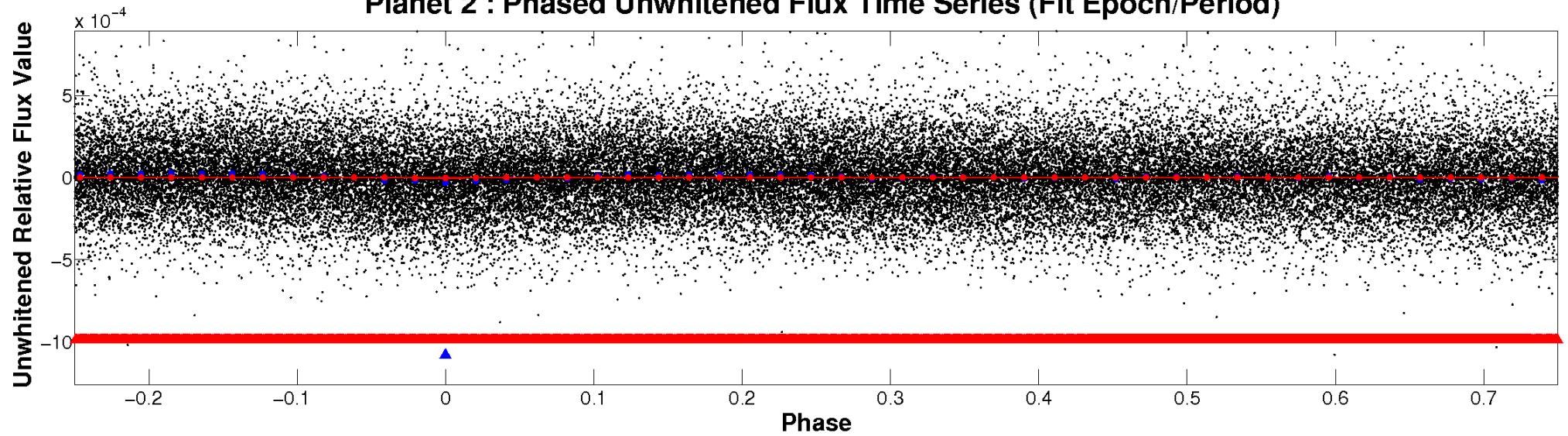
ALT Odd/Even

TCE 005207966-02

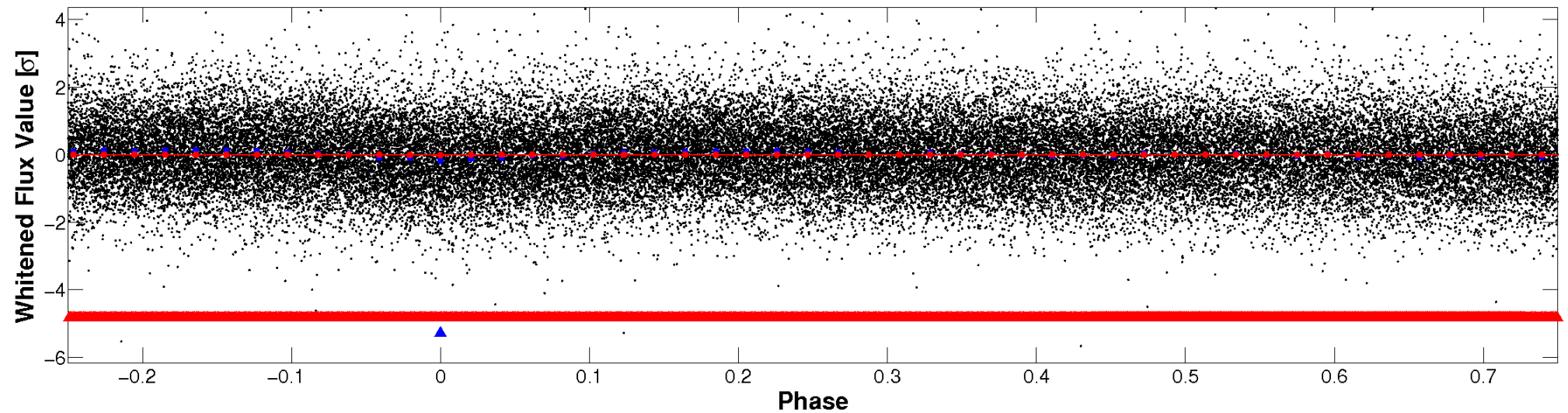


Non-Whitened Vs. Whitened Light Curve

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

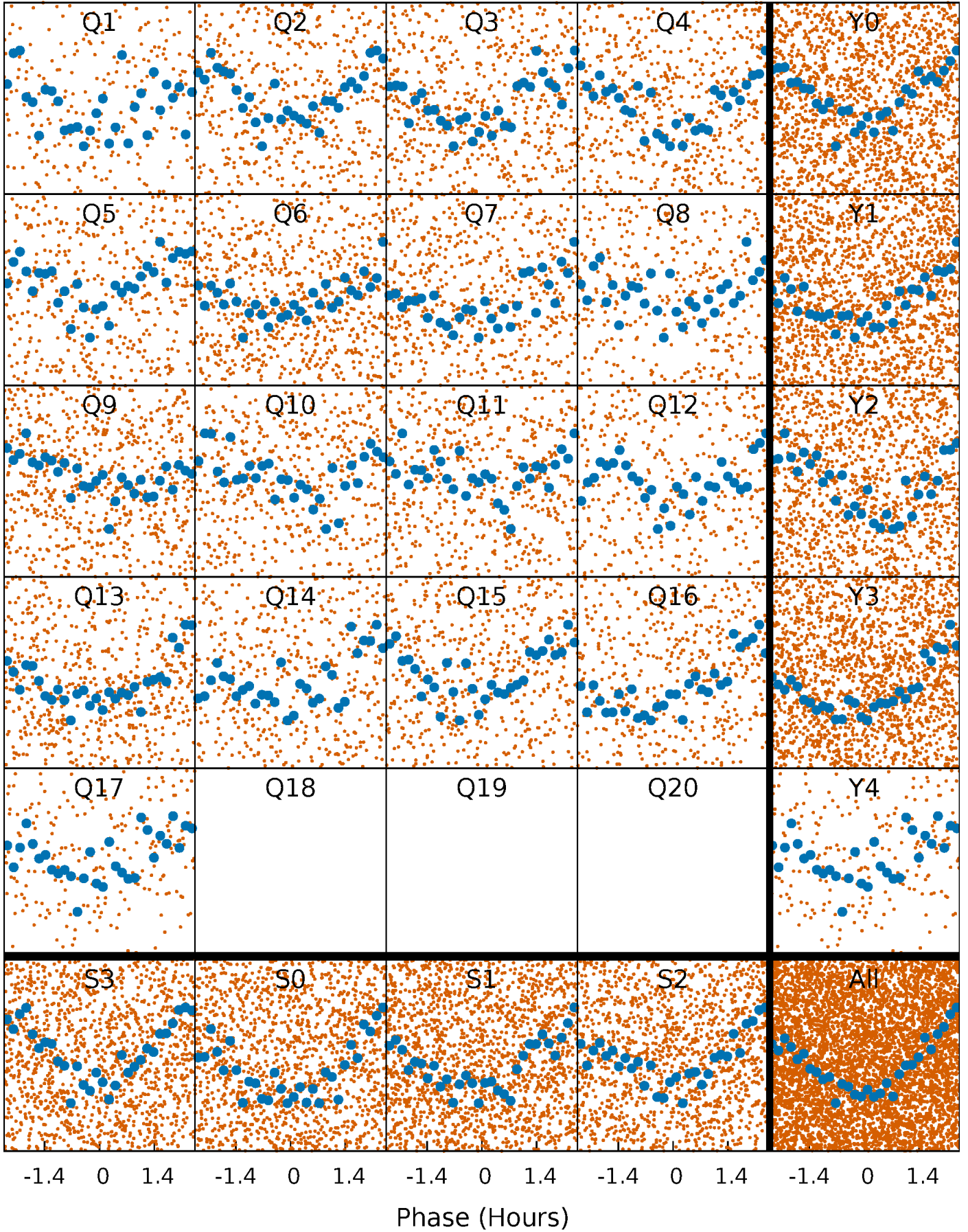


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



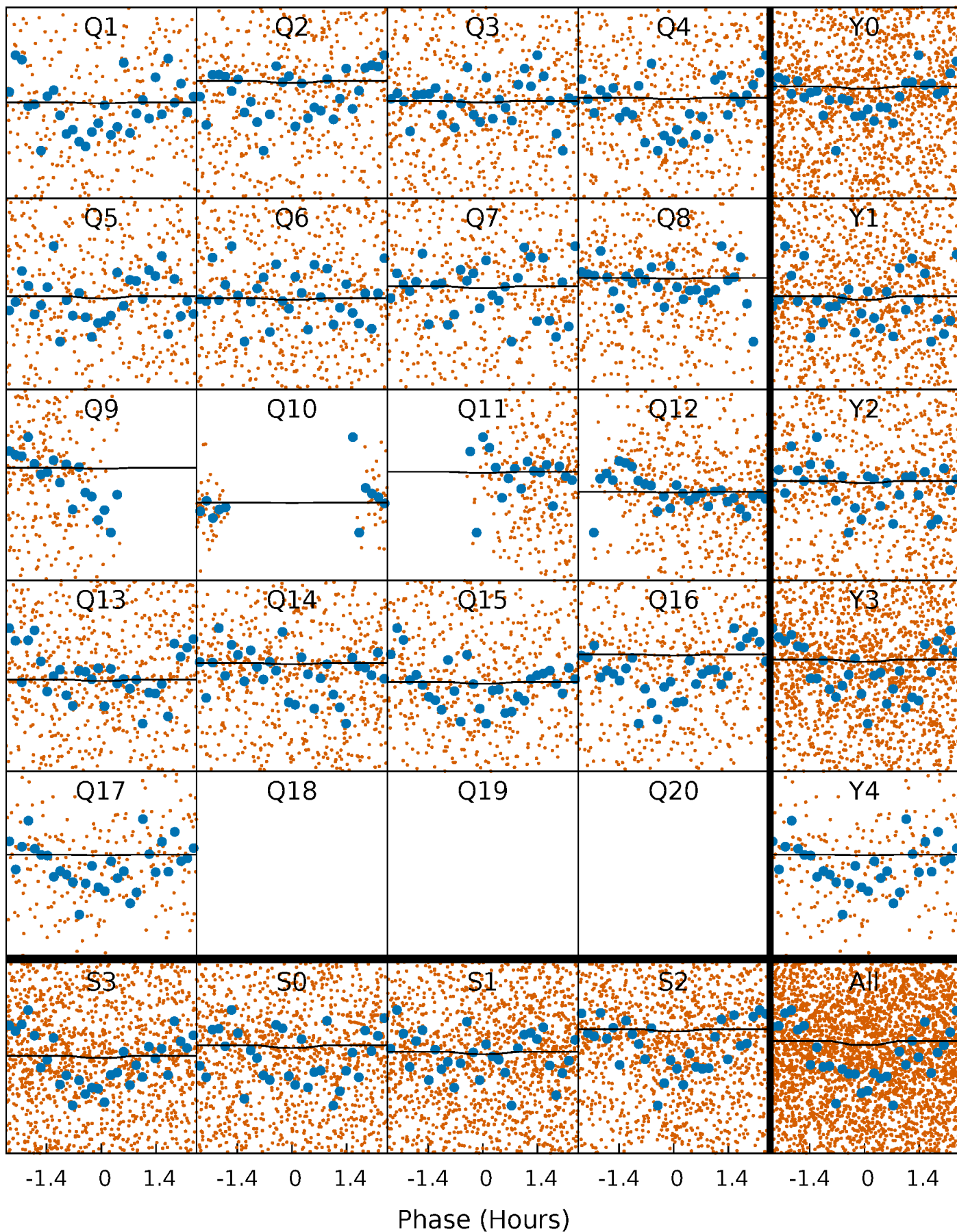
PDC Quarter-Phased Transit Curves

TCE 005207966-02 P= 0.995038 Days $T_0=131.963847$ (BKJD)



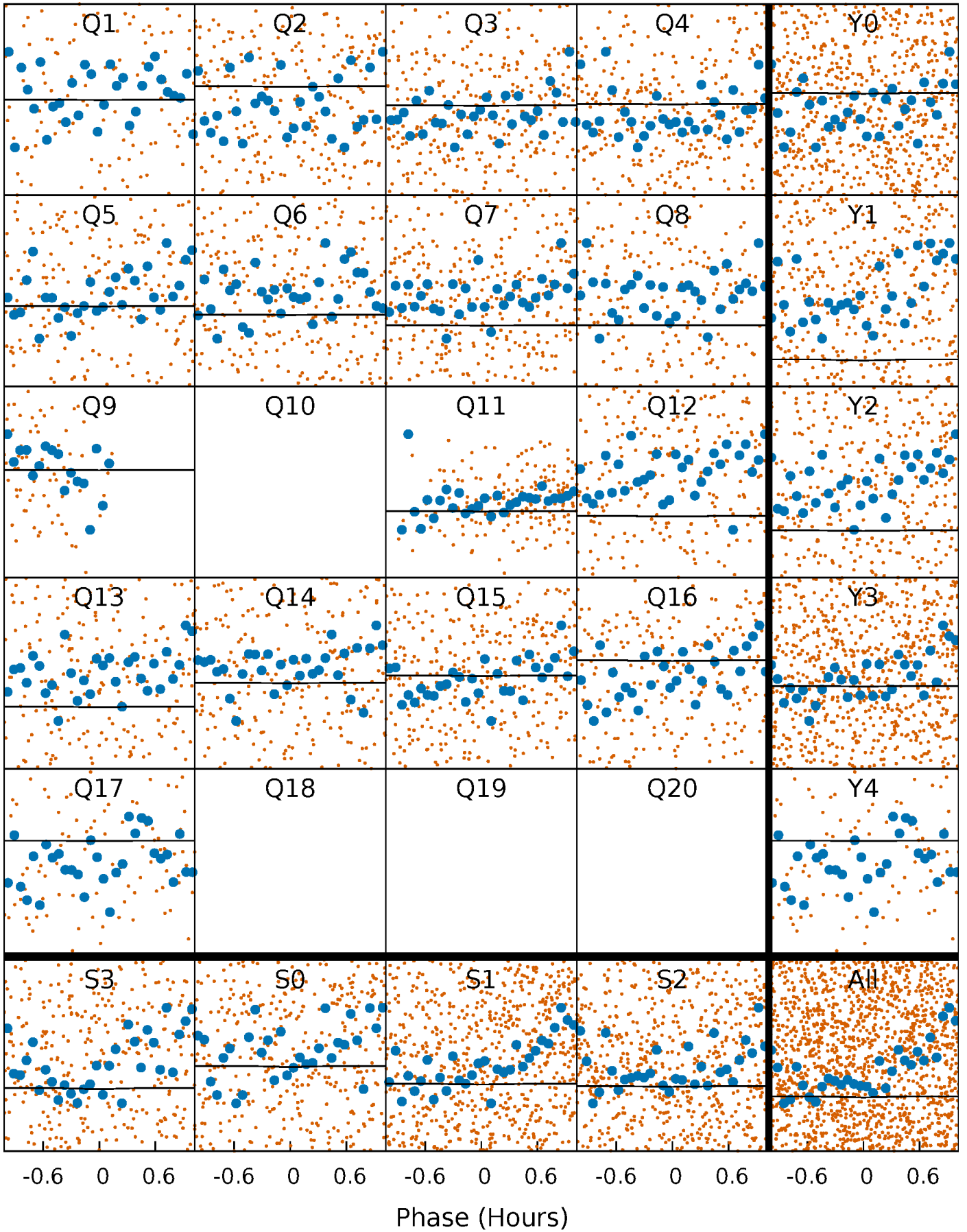
DV Quarter-Phased Transit Curves

TCE 005207966-02 P= 0.995038 Days $T_0=131.963847$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

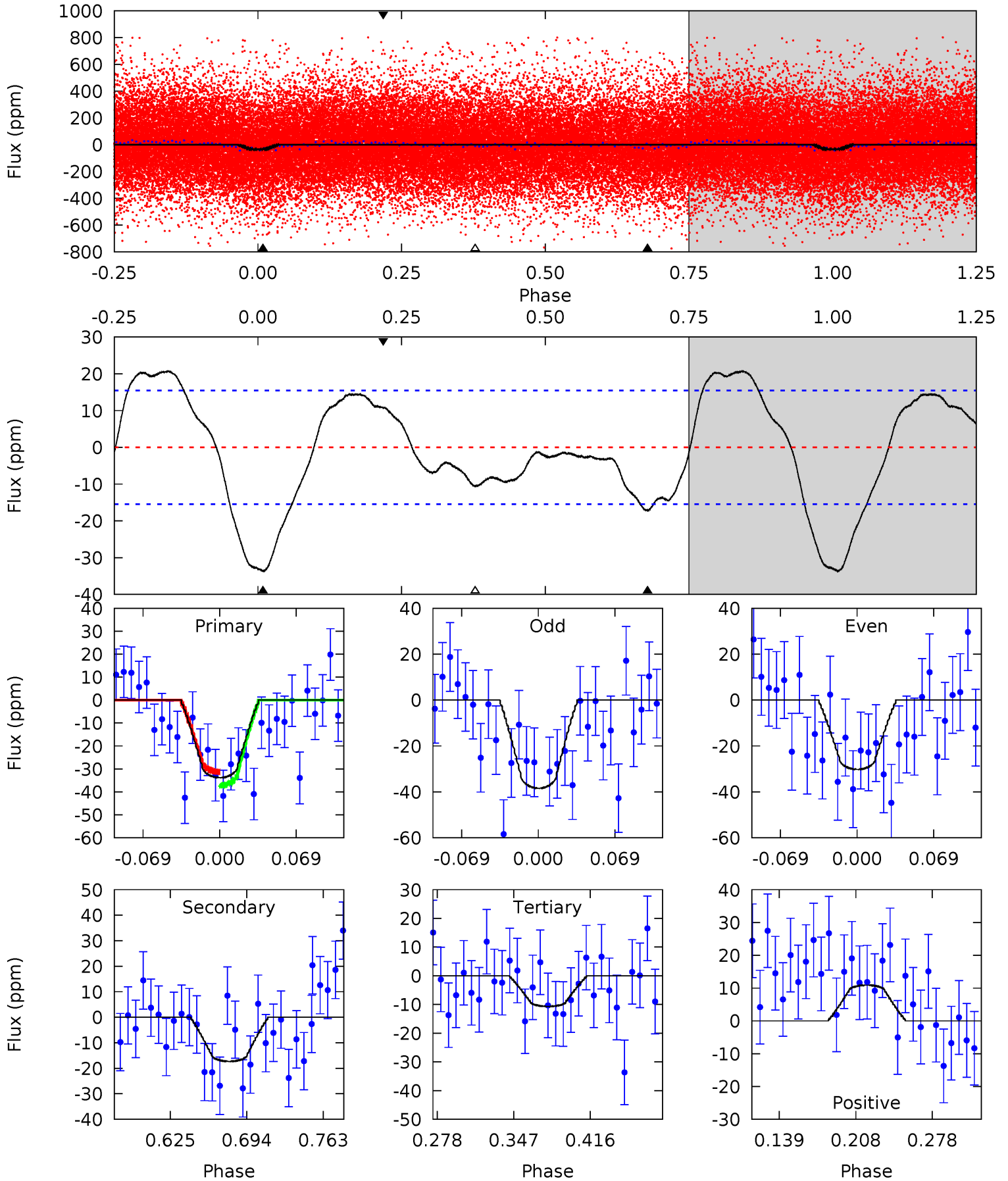
TCE 005207966-02 $P = 0.995059$ Days $T_0 = 131.963653$ (BKJD)



DV Model-Shift Uniqueness Test

005207966-02, P = 0.995038 Days, E = 130.968809 Days

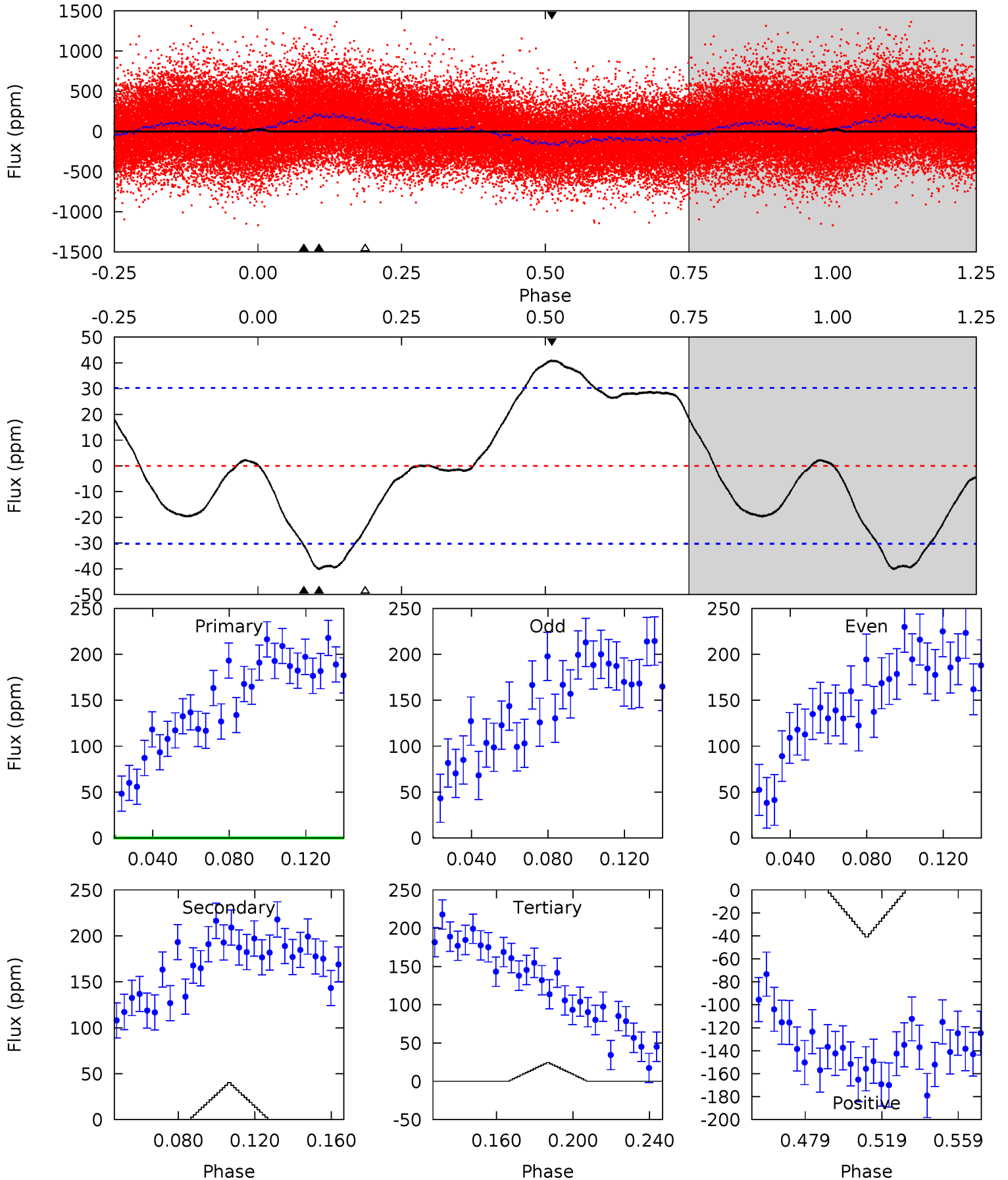
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	5.20	3.20	3.27	4.64	1.82	2.92	6.95	6.88	2.00	1.92	1.23	0.88	0.38	0.89



Alt Model-Shift Uniqueness Test

005207966-02, P = 0.995059 Days, E = 130.968594 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.86	6.30	3.86	6.43	4.75	2.05	3.15	1.01	-1.57	2.45	-0.13	1.71	2.24	0.51	0.77



Stellar Parameters For KIC 005207966

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6850^{+190}_{-299}	$4.196^{+0.132}_{-0.181}$	$-0.140^{+0.250}_{-0.350}$	$1.530^{+0.471}_{-0.314}$	$1.350^{+0.189}_{-0.231}$	$0.531^{+0.400}_{-0.284}$
	+3%/-4%	+3%/-4%	+179%/-250%	+31%/-21%	+14%/-17%	+75%/-53%
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 005207966-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-17 ± 3	$2.46^{+2.50}_{-1.72}$	3563^{+286}_{-224}	3597^{+3005}_{-6621}	$0.713^{+7.391}_{-0.539}$
Alt.	-40 ± 6	$2.40^{+2.60}_{-1.69}$	3552^{+271}_{-225}	4481^{+4224}_{-1565}	$1.792^{+18.566}_{-1.397}$

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 $A_{obs} \gg 1.0$

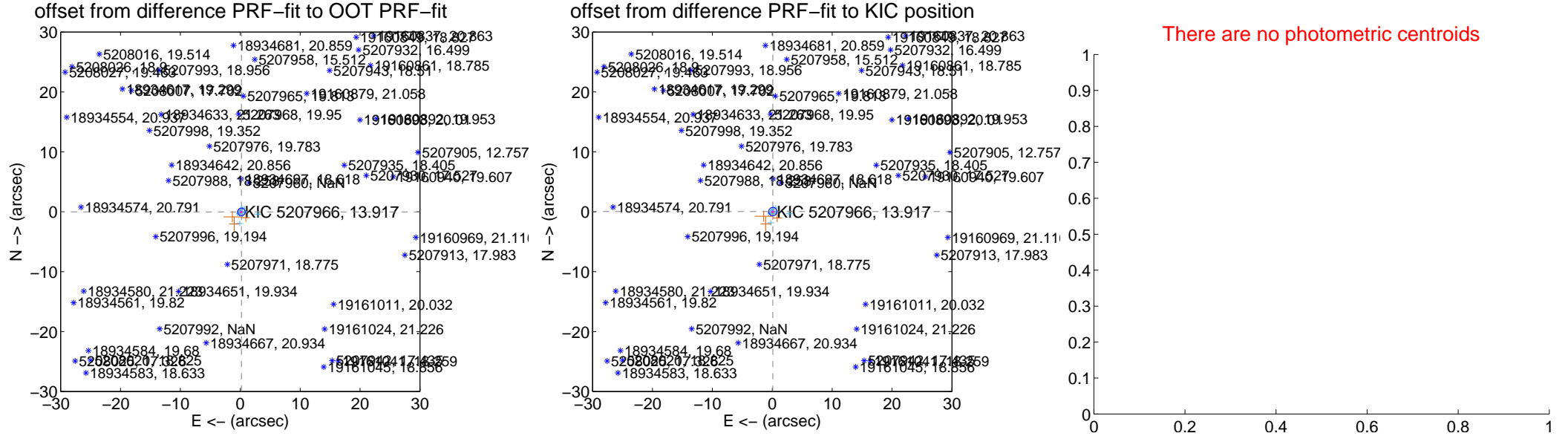
DV Centroid Data

Supplemental centroid analysis for 005207966-02. Kepler magnitude: 13.92. Transit SNR 0.49

There are 14 quarters with good PRF difference image offsets

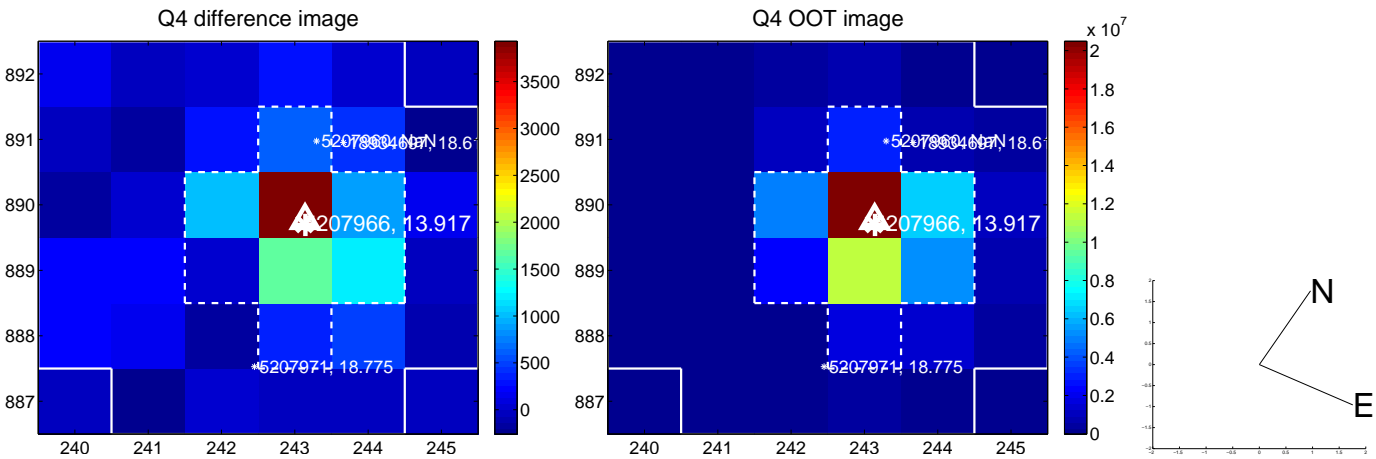
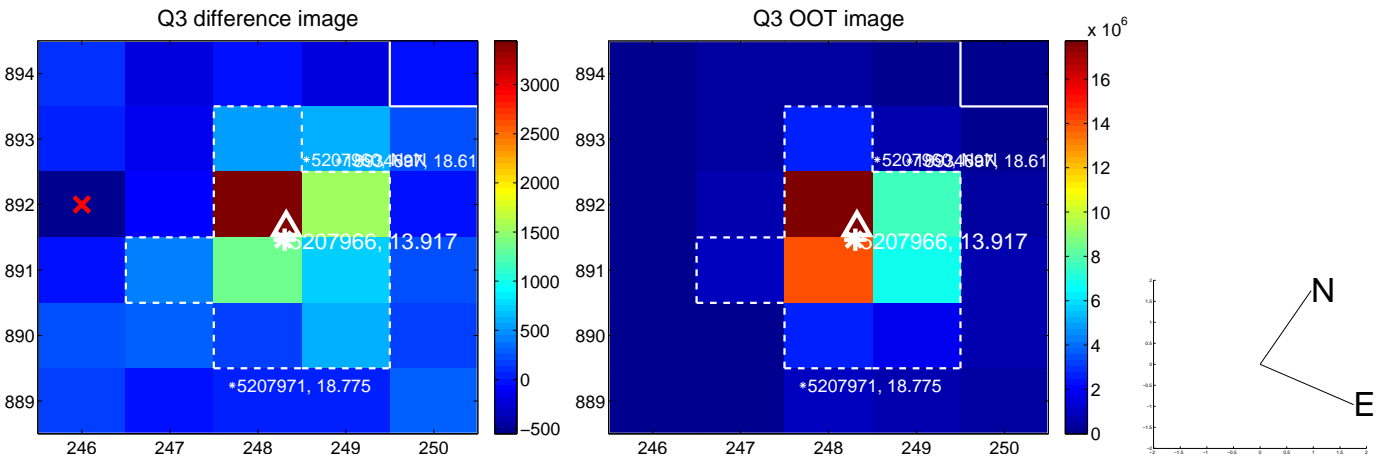
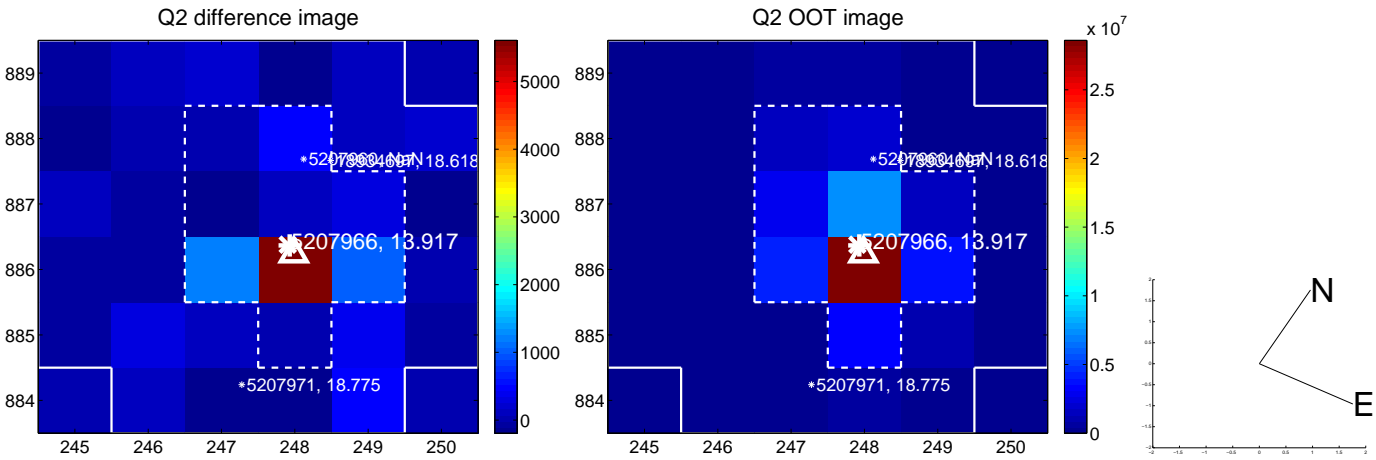
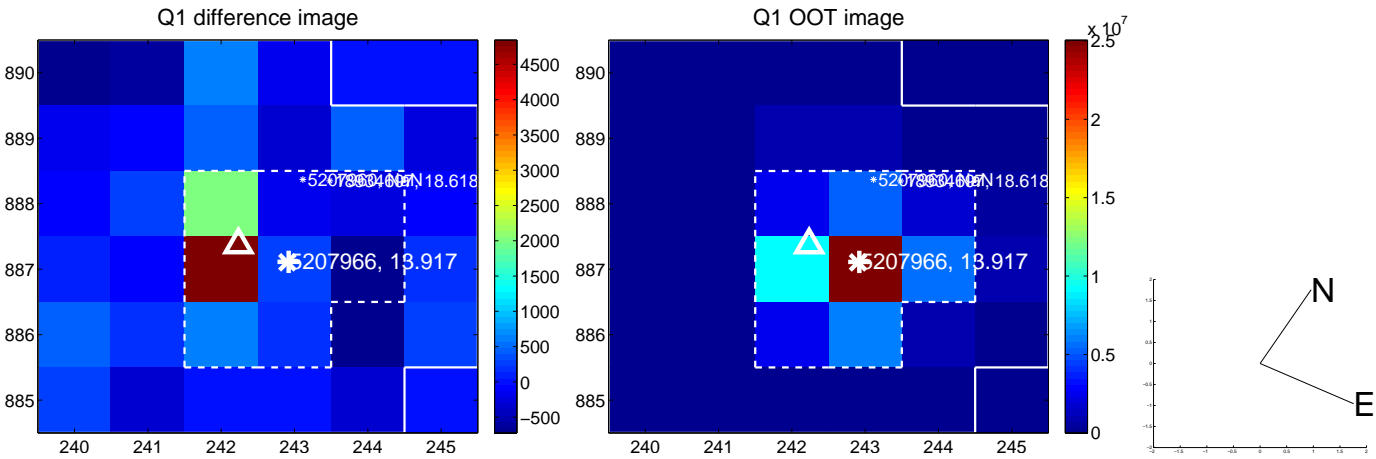
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.193 ± 0.211	0.91	-0.191 ± 0.219	-0.026 ± 0.196
PRF-fit source offset from KIC position	0.100 ± 0.231	0.43	-0.096 ± 0.220	0.030 ± 0.202
photometric centroid source offset	—	—	—	—

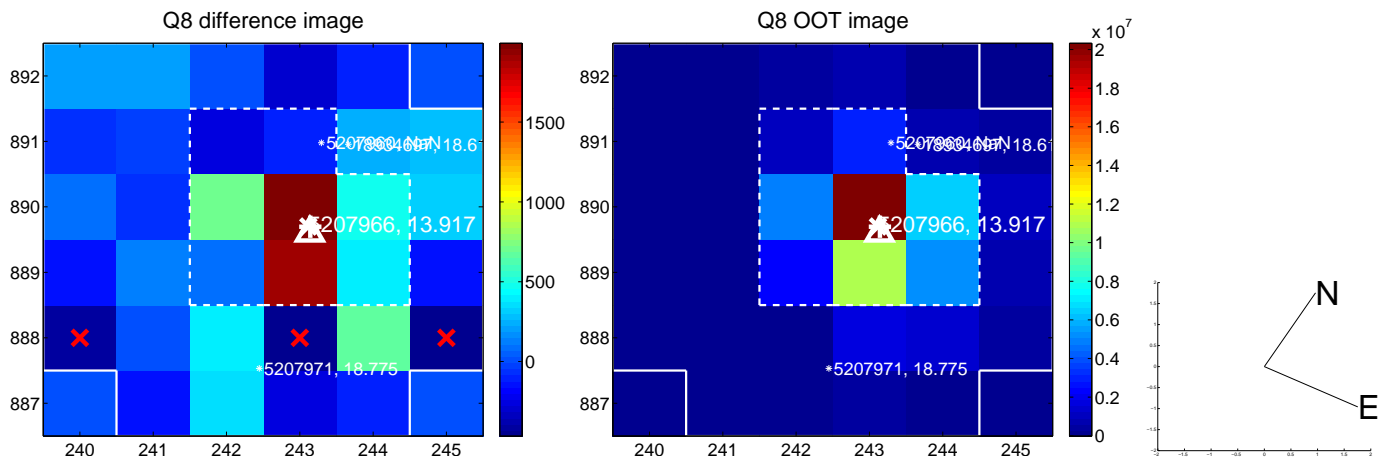
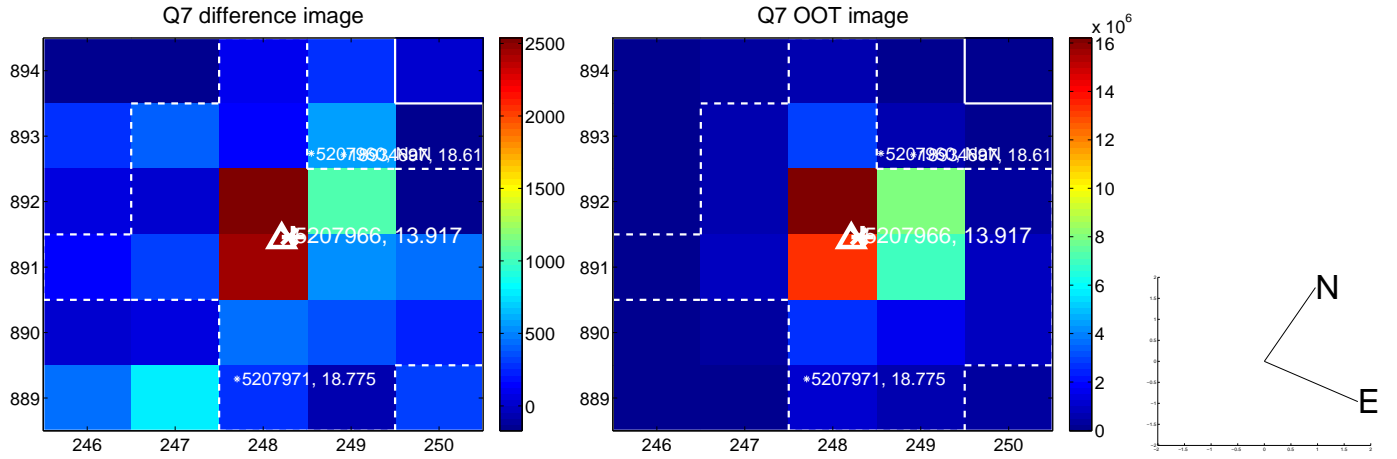
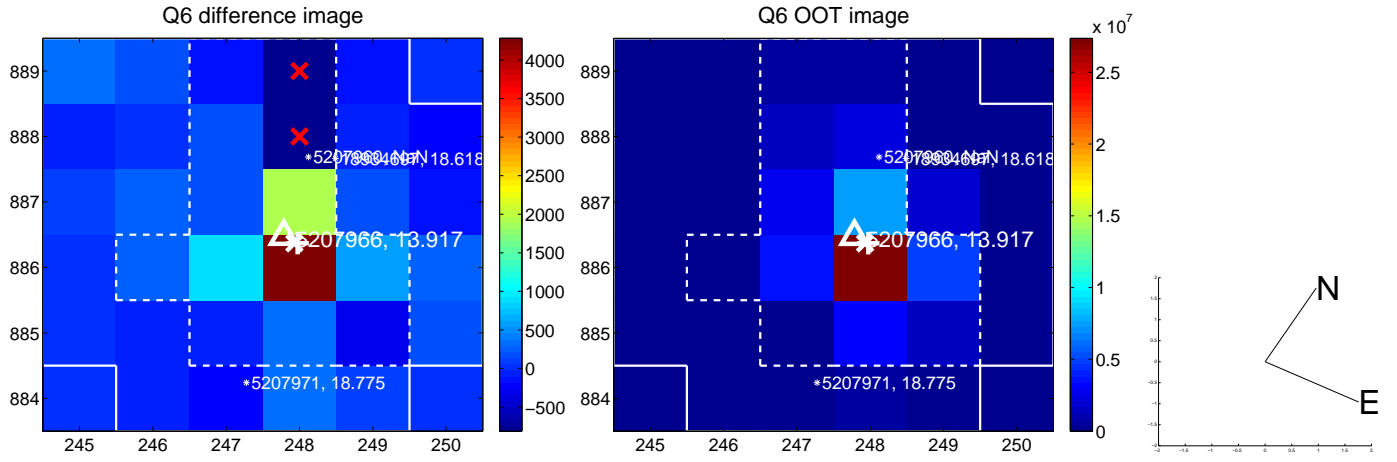
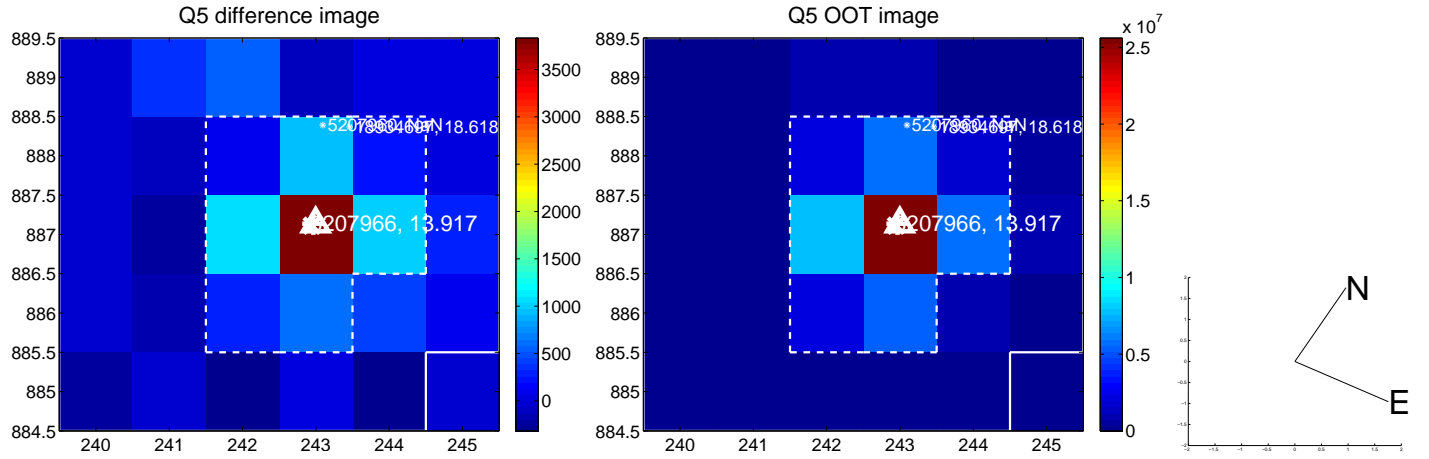


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

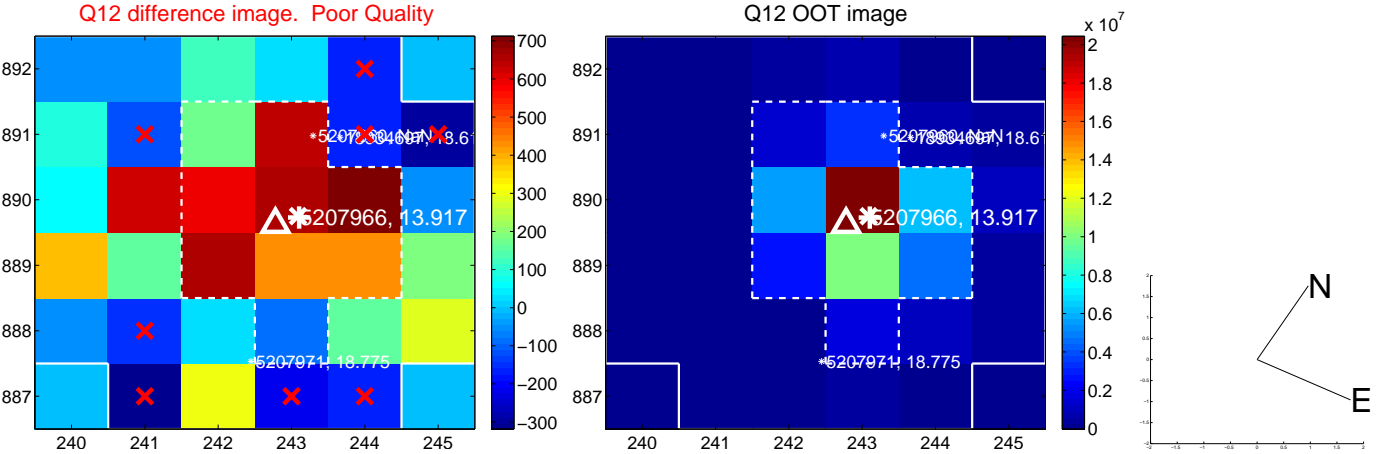
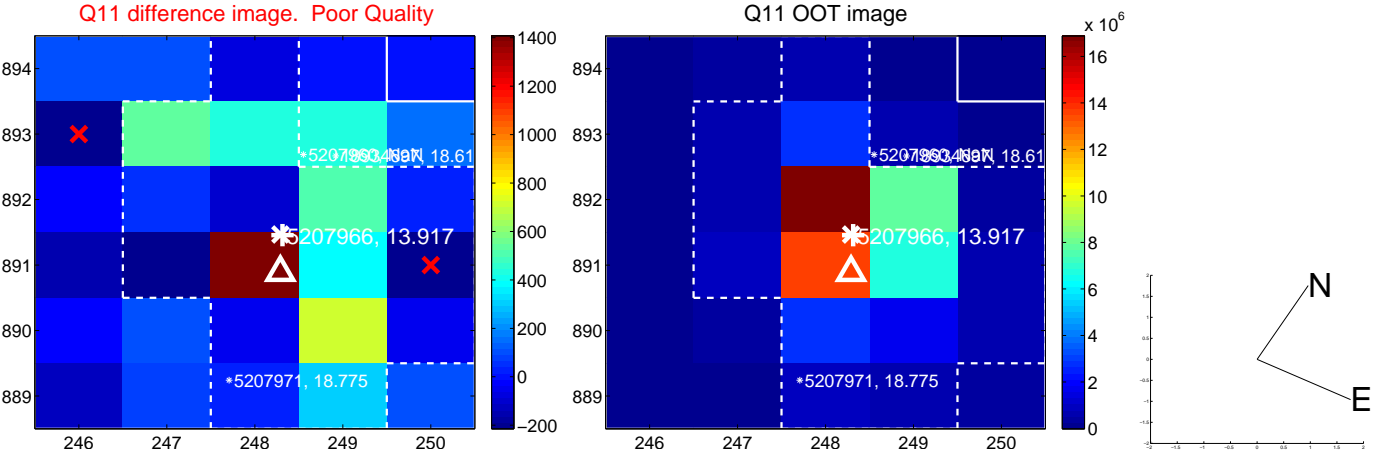
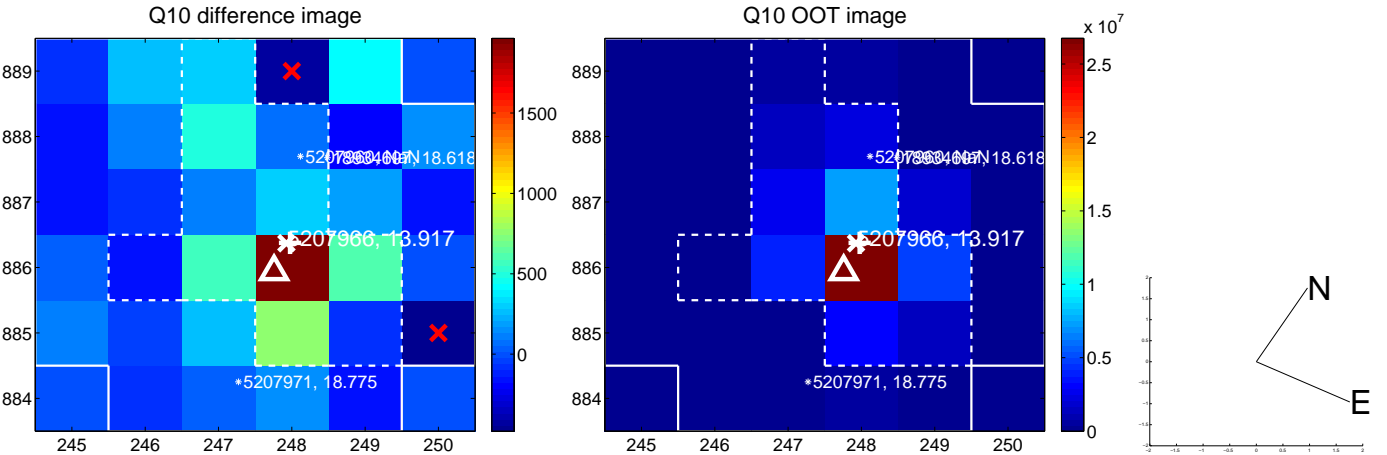
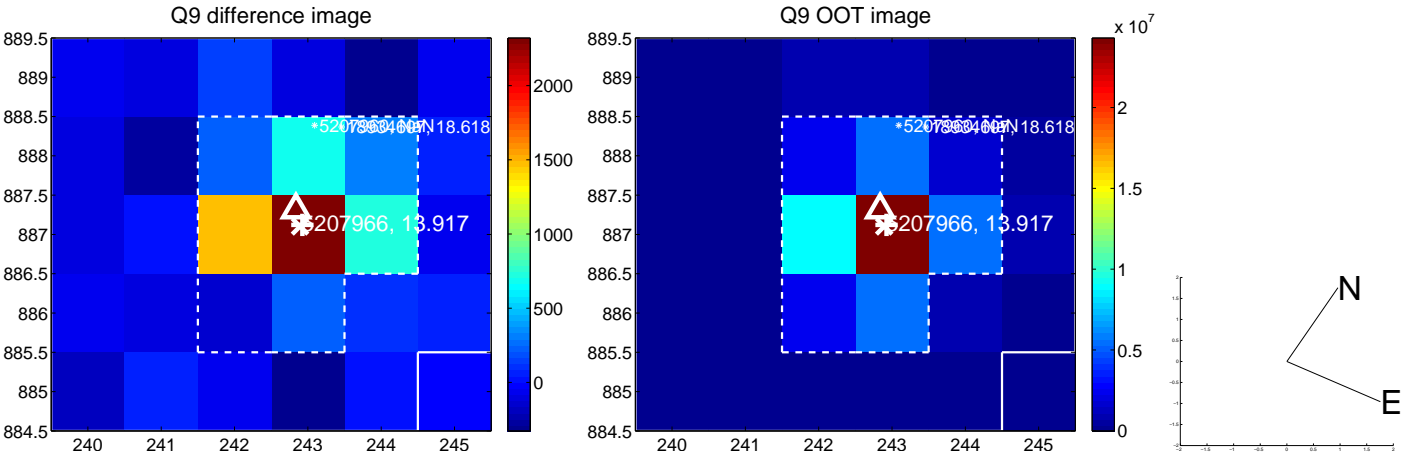
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



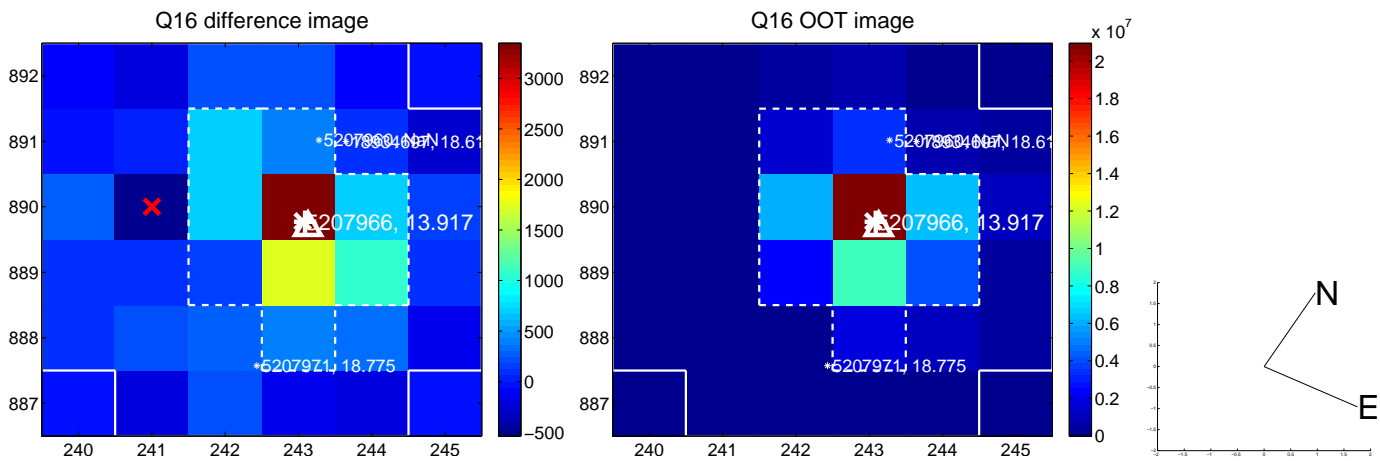
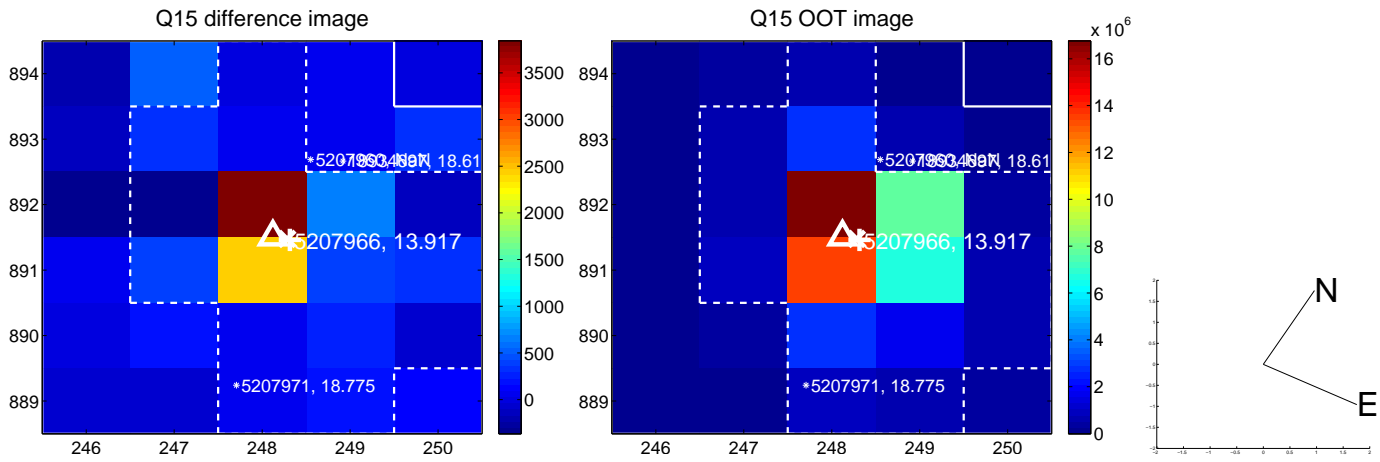
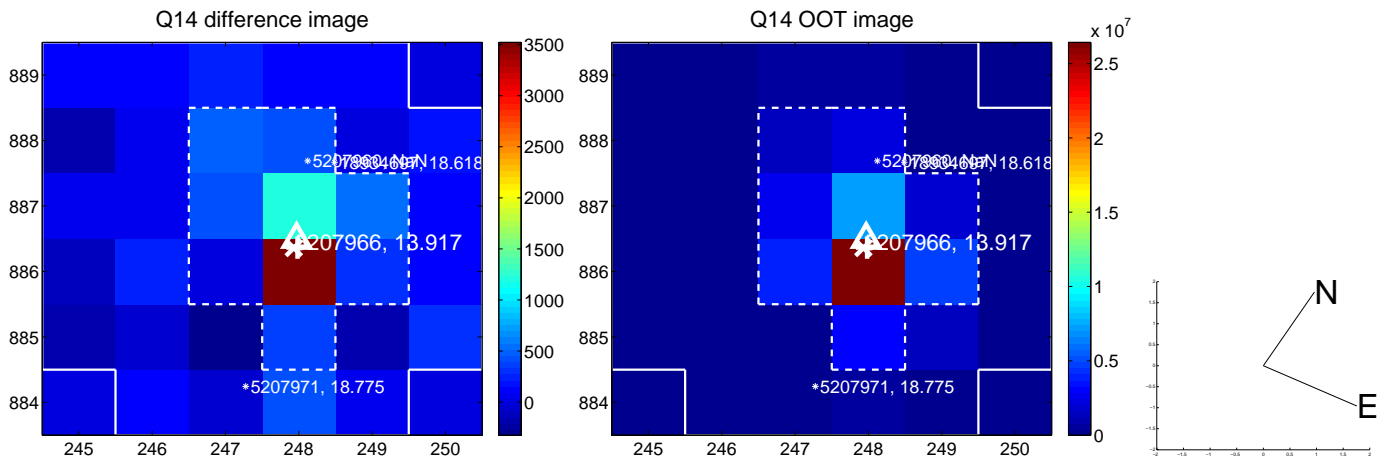
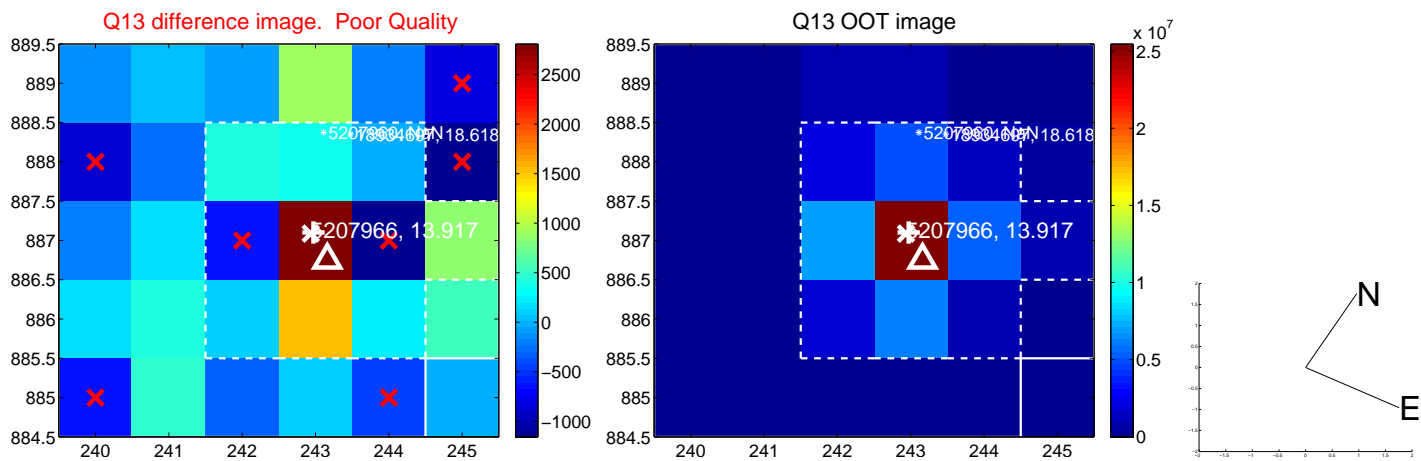
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



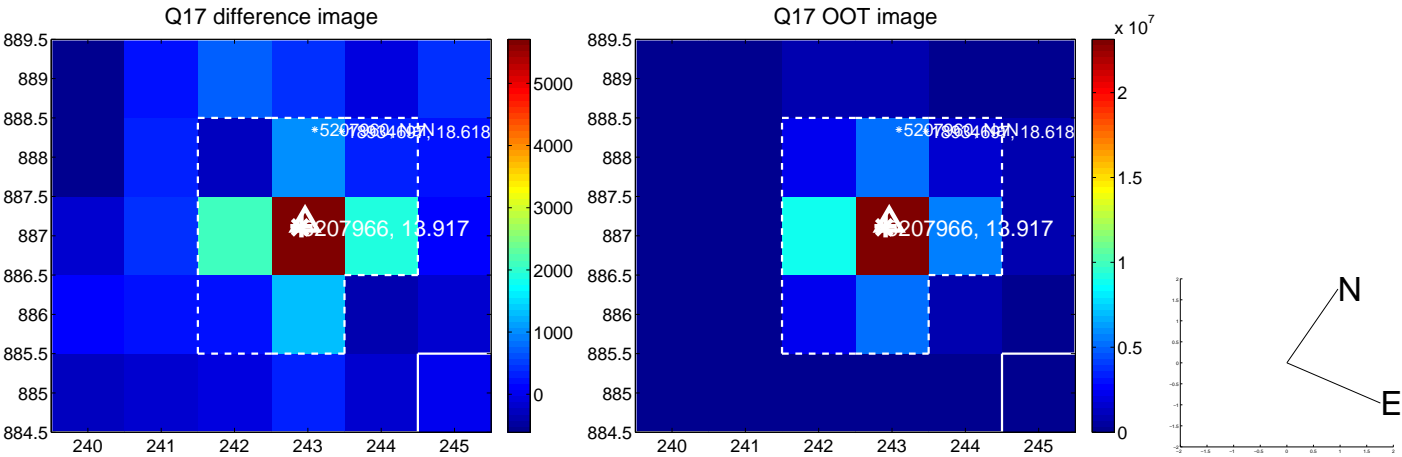
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folded centroid time series figure for this object.

UKIRT Image

