

KIC 007699478

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})
007699478-01	OBS	No	0.964006	132.093824	1.5	5.386	10.4	0.3	1.64	7053	0.22	12888.96
007699478-02	OBS	No	0.964008	132.304771	319.2	11.568	14.7	18.0	1.64	7053	3.43	12888.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007699478-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
007699478-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—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.

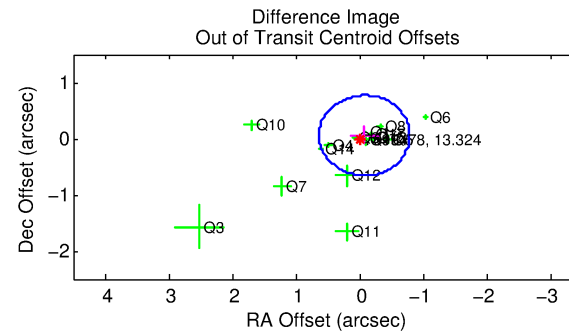
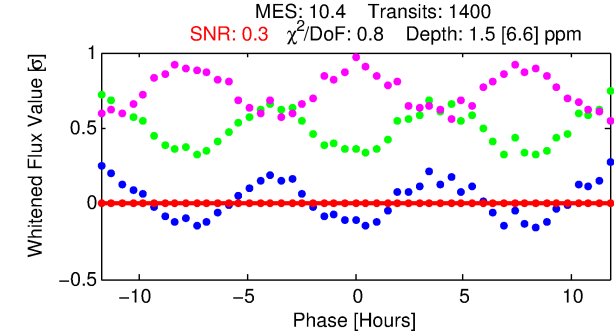
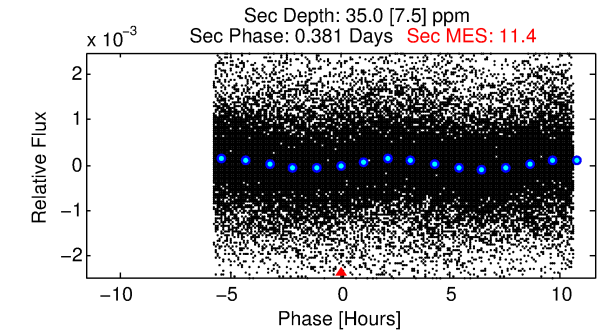
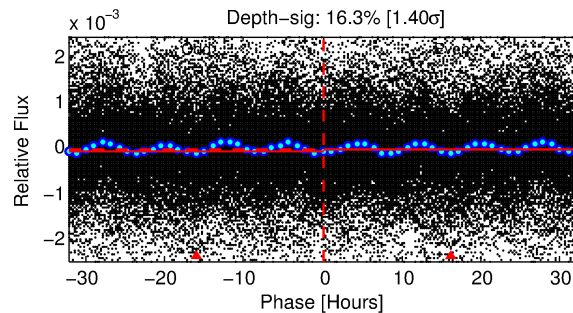
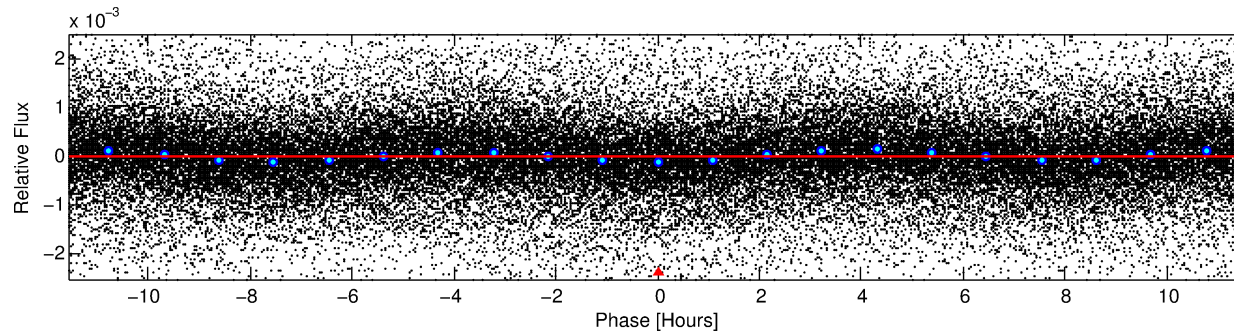
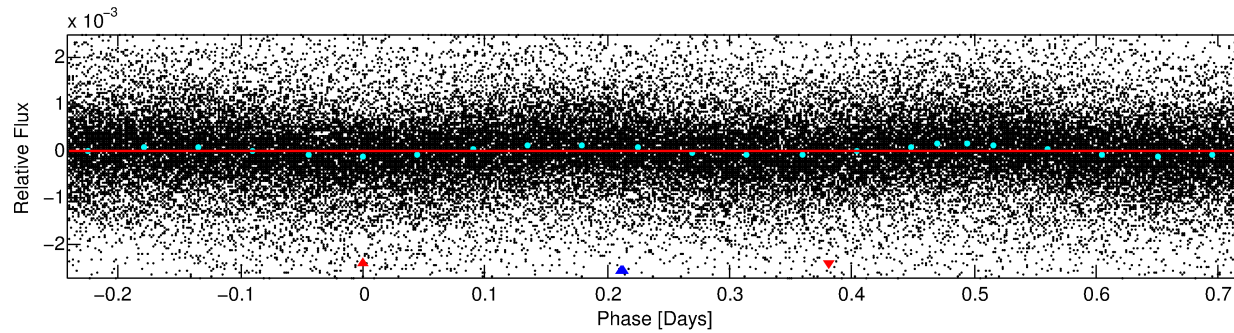
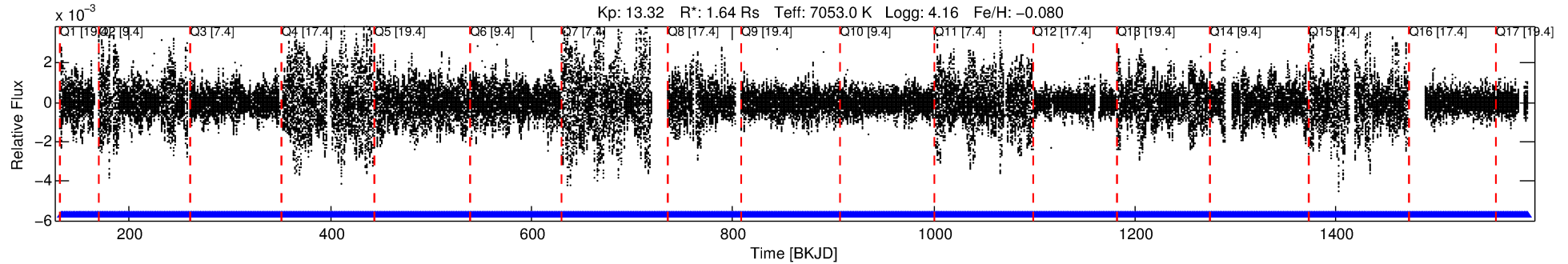
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007699478-01

No Significant Match Found

DV One-Page Summary

KIC: 7699478 Candidate: 1 of 2 Period: 0.964 d



DV Fit Results:

Period = 0.96401 [0.00038] d
Epoch = 132.0938 [0.0613] BKJD
Rp/R* = 0.0012 [0.0029]
a/R* = 1.20 [1.72]
b = 0.81 [2.04]
Seff = 12888.96 [5225.12]
Teq = 2717 [275] K
Rp = 0.22 [0.53] Re
a = 0.0216 [0.0056] AU
Ag = 186.07 [901.66] [0.21 σ]
Teffp = 15515 [18753] K [0.68 σ]

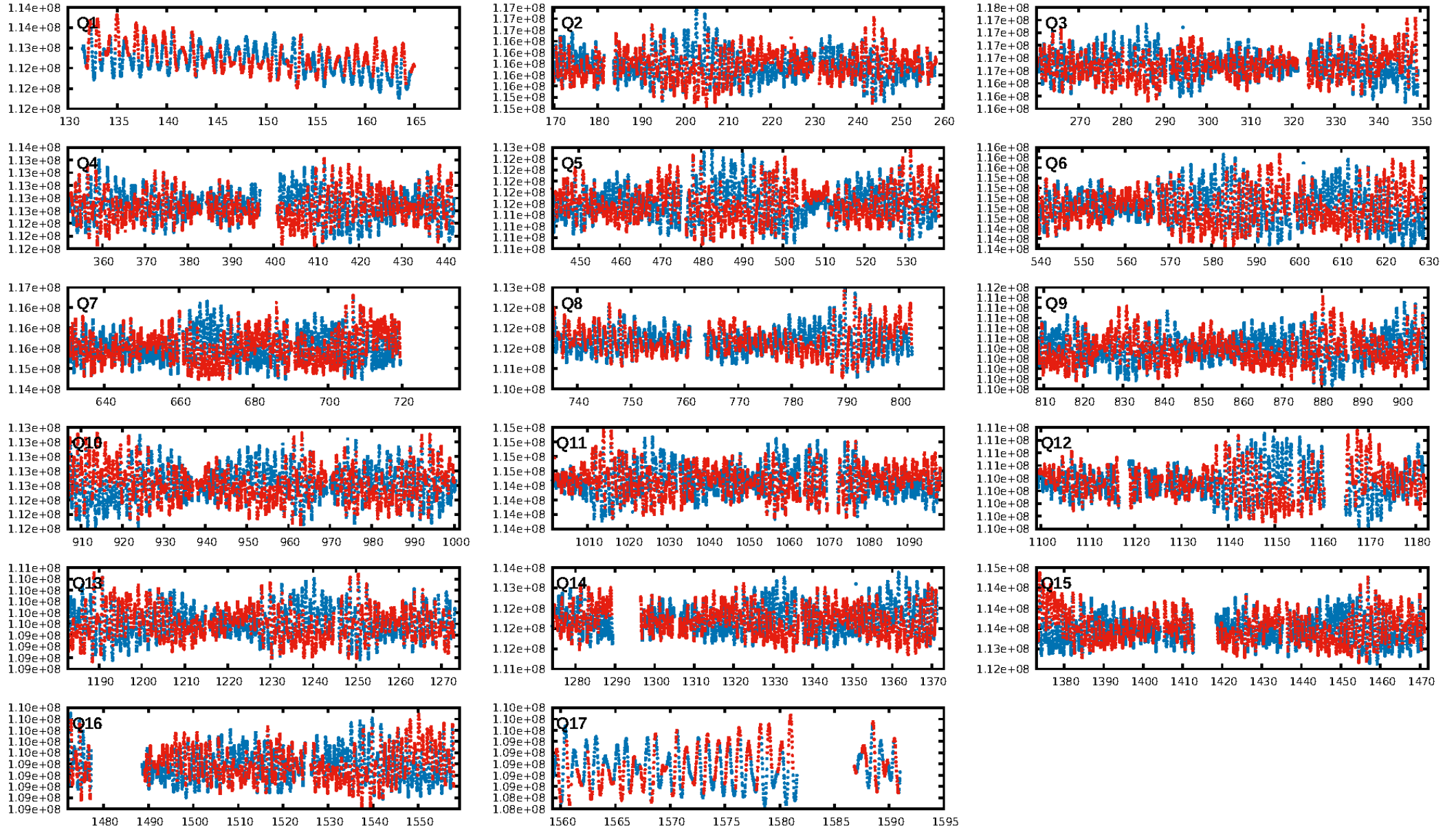
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1337/1337]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.096 arcsec [0.40 σ]
Centroid-so: N/A
KicOffset-rm: 0.146 arcsec [0.61 σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.75 [12/16]
DiffImageOverlap-fno: 0.00 [0/17]

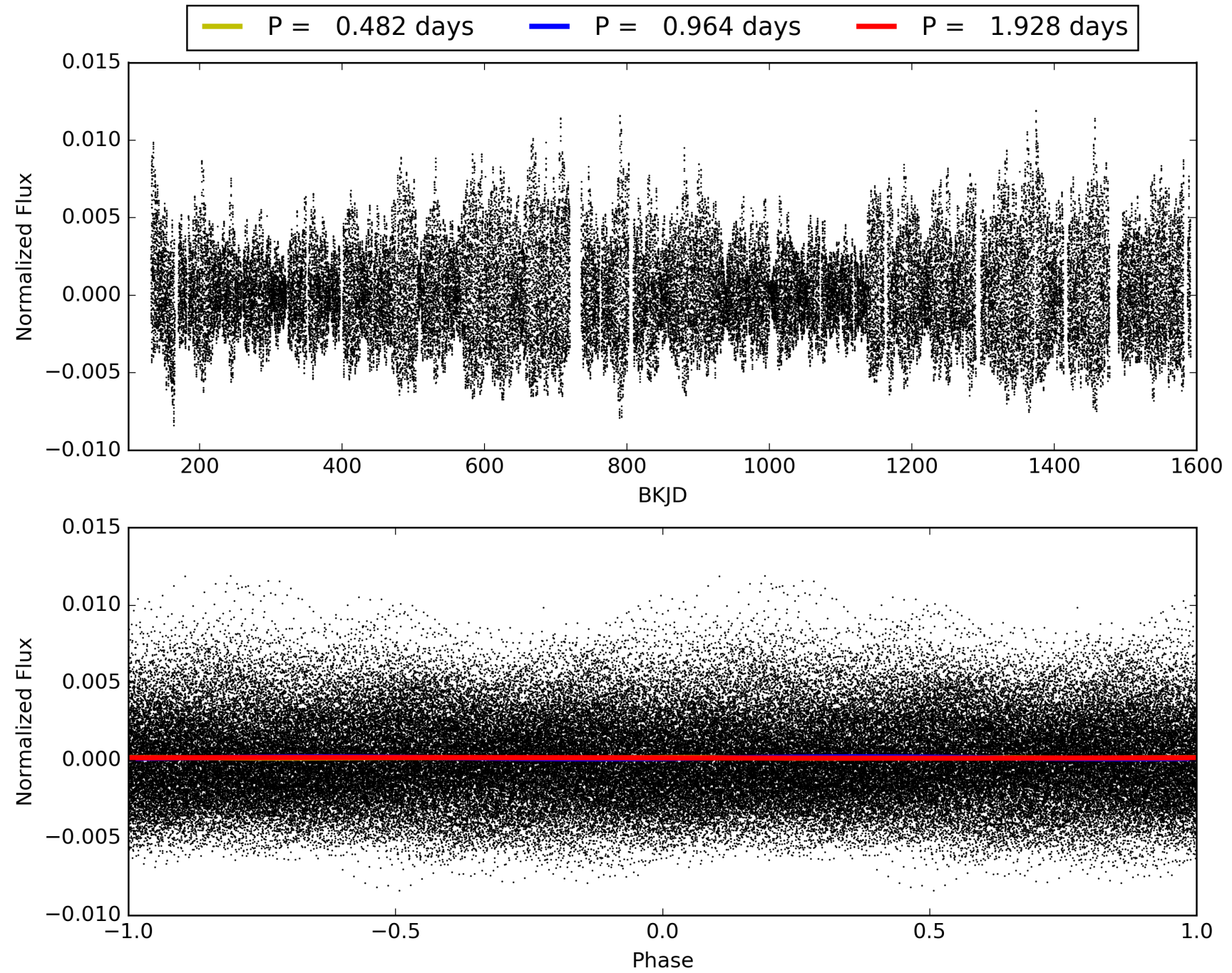
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 04:13:11 Z

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

TCE 007699478-01, PDC Light Curves

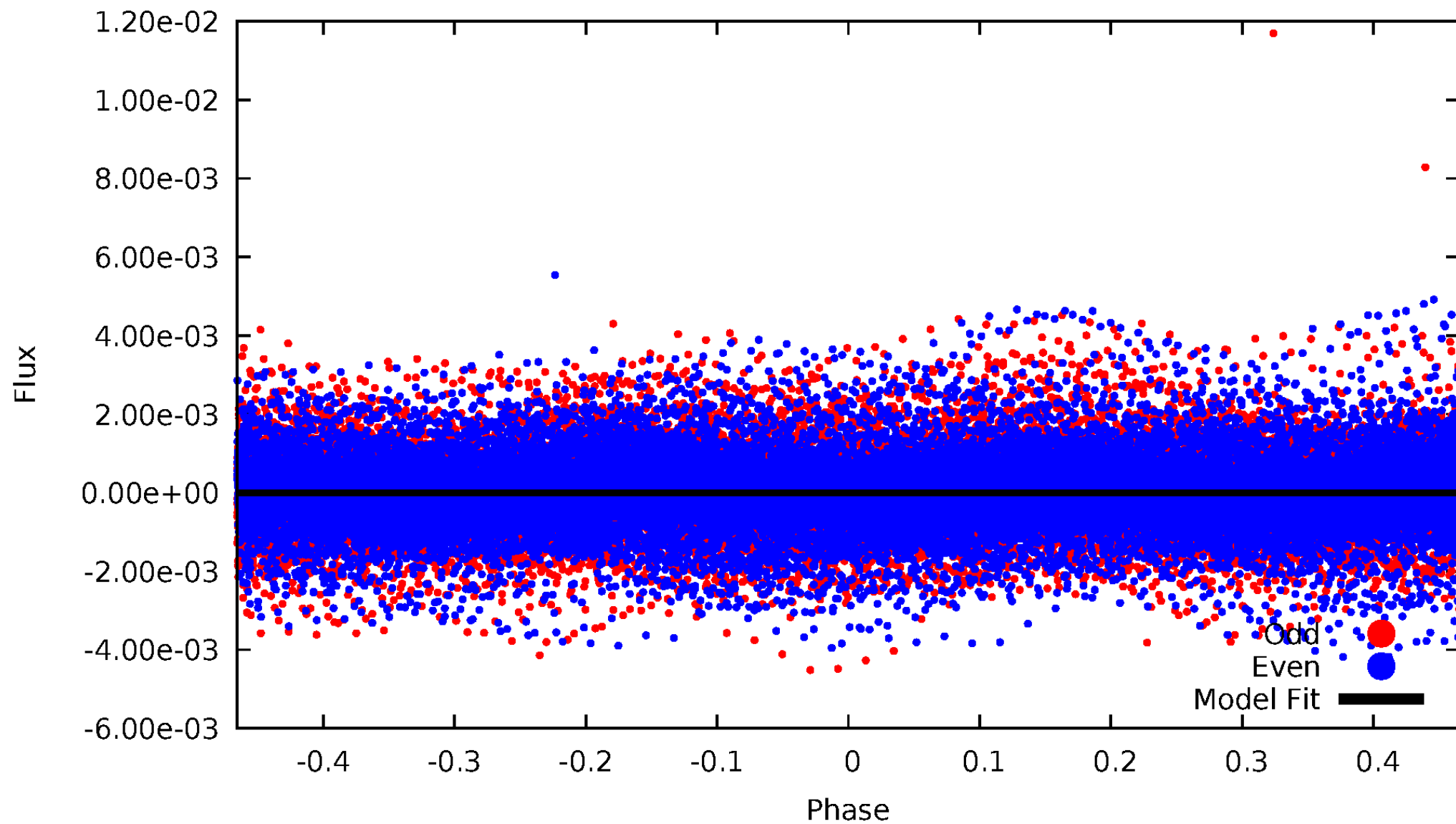


TCE 007699478-01



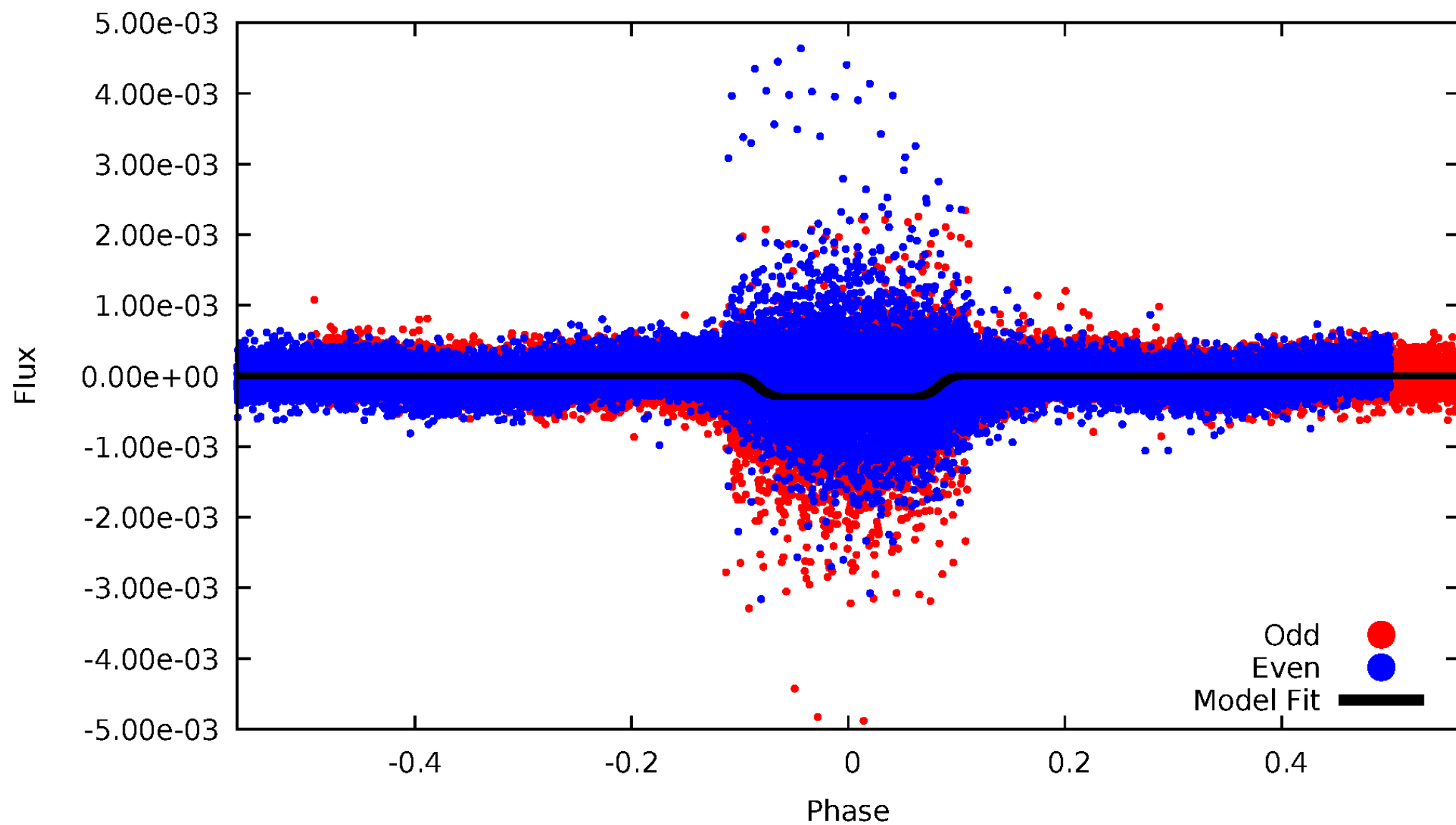
DV Odd/Even

TCE 007699478-01



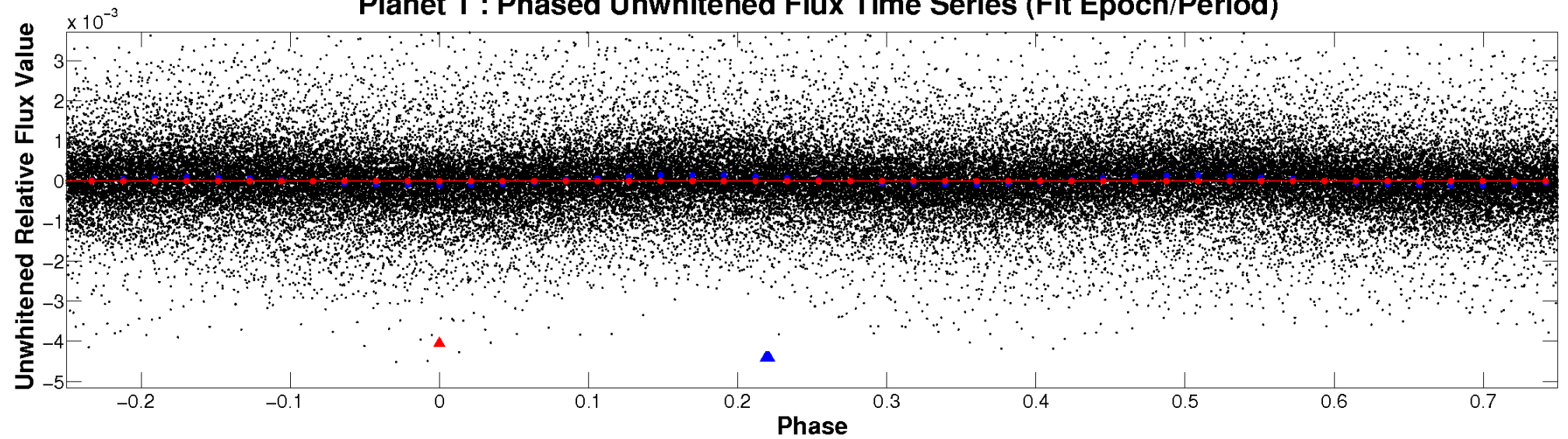
ALT Odd/Even

TCE 007699478-01

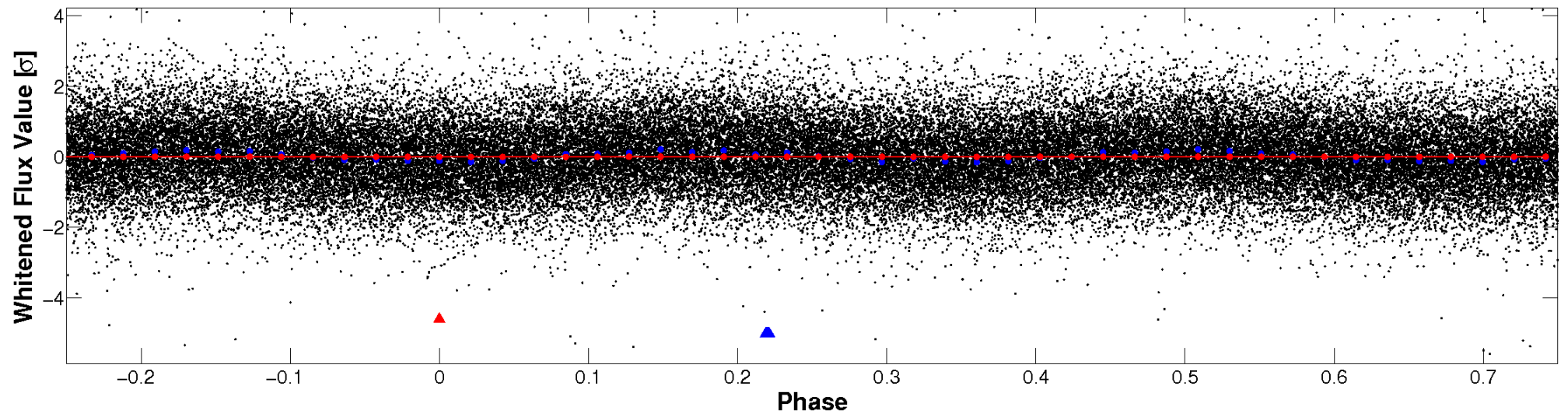


Non-Whitened Vs. Whitened Light Curve

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

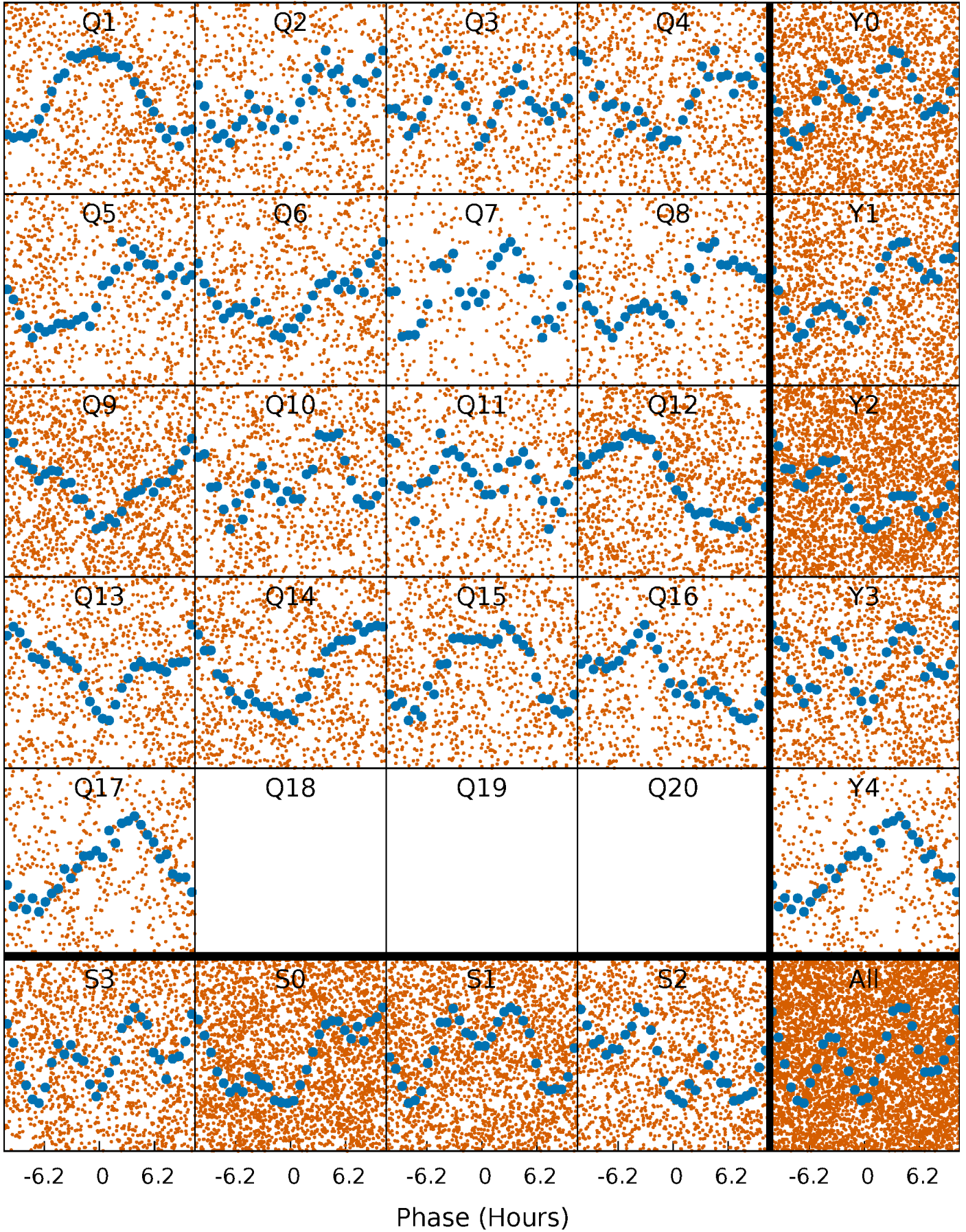


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



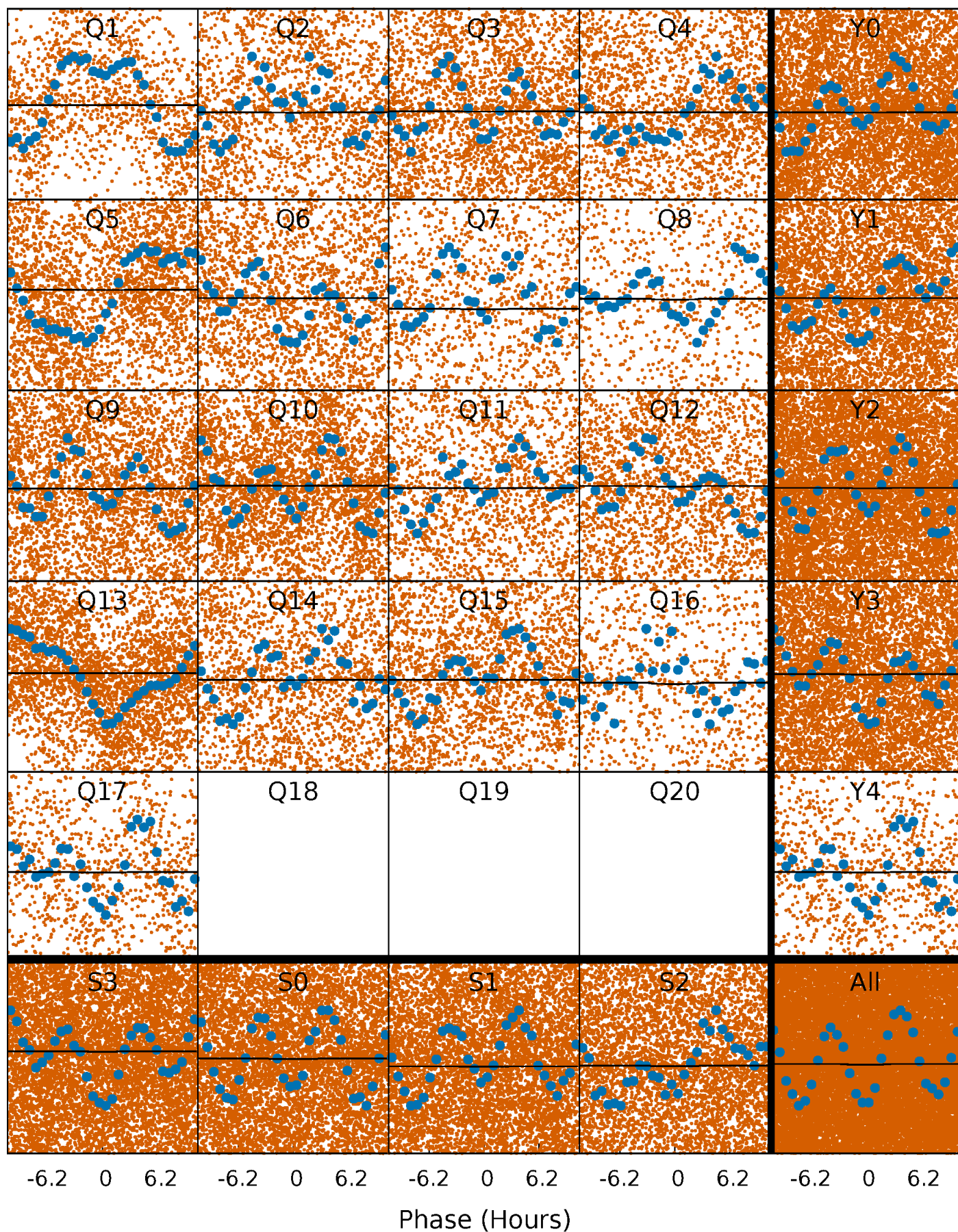
PDC Quarter-Phased Transit Curves

TCE 007699478-01 P= 0.964006 Days $T_0=132.093824$ (BKJD)



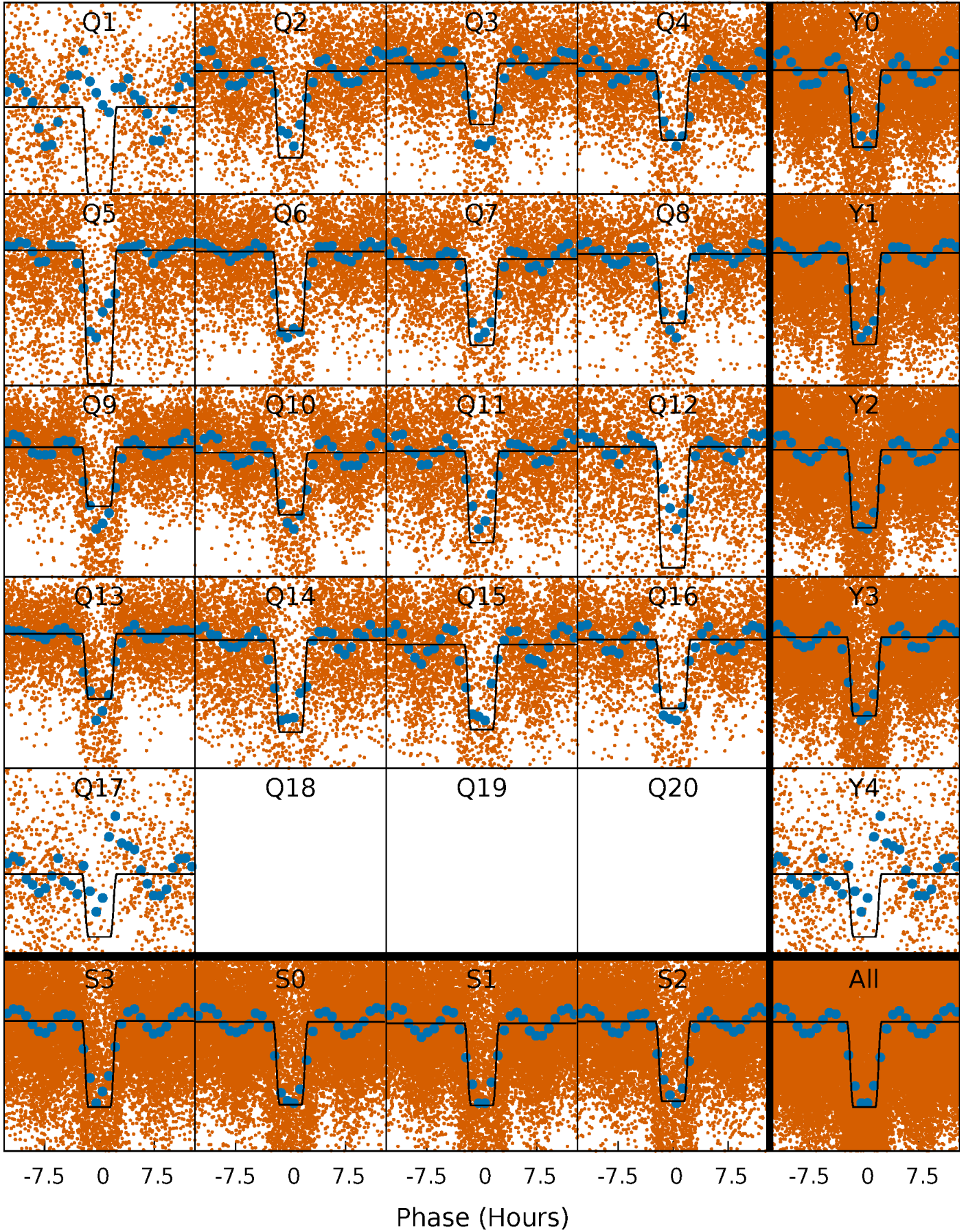
DV Quarter-Phased Transit Curves

TCE 007699478-01 P= 0.964006 Days $T_0=132.093824$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

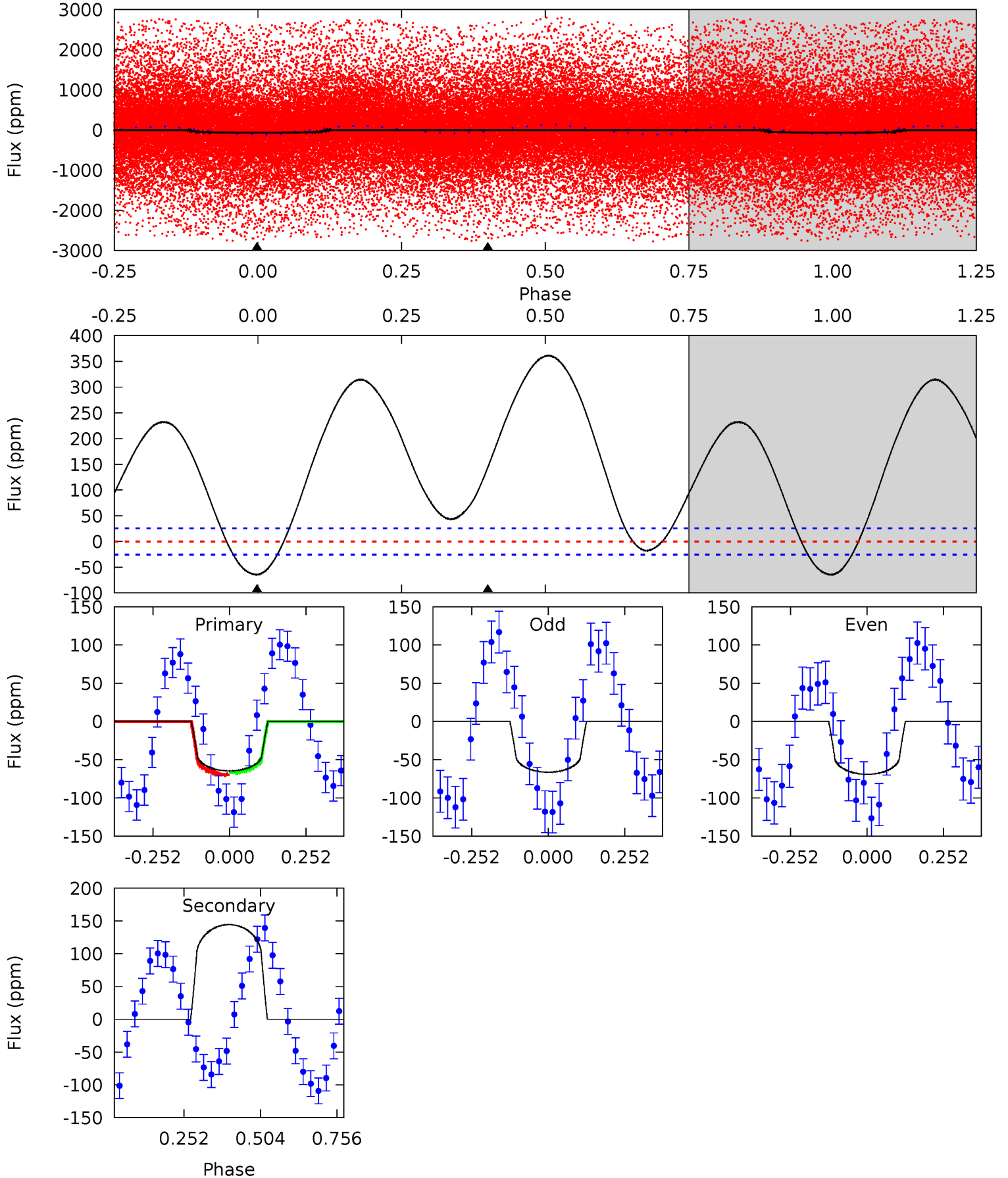
TCE 007699478-01 P= 0.964049 Days $T_0=132.064729$ (BKJD)



DV Model-Shift Uniqueness Test

007699478-01, P = 0.964006 Days, E = 131.129818 Days

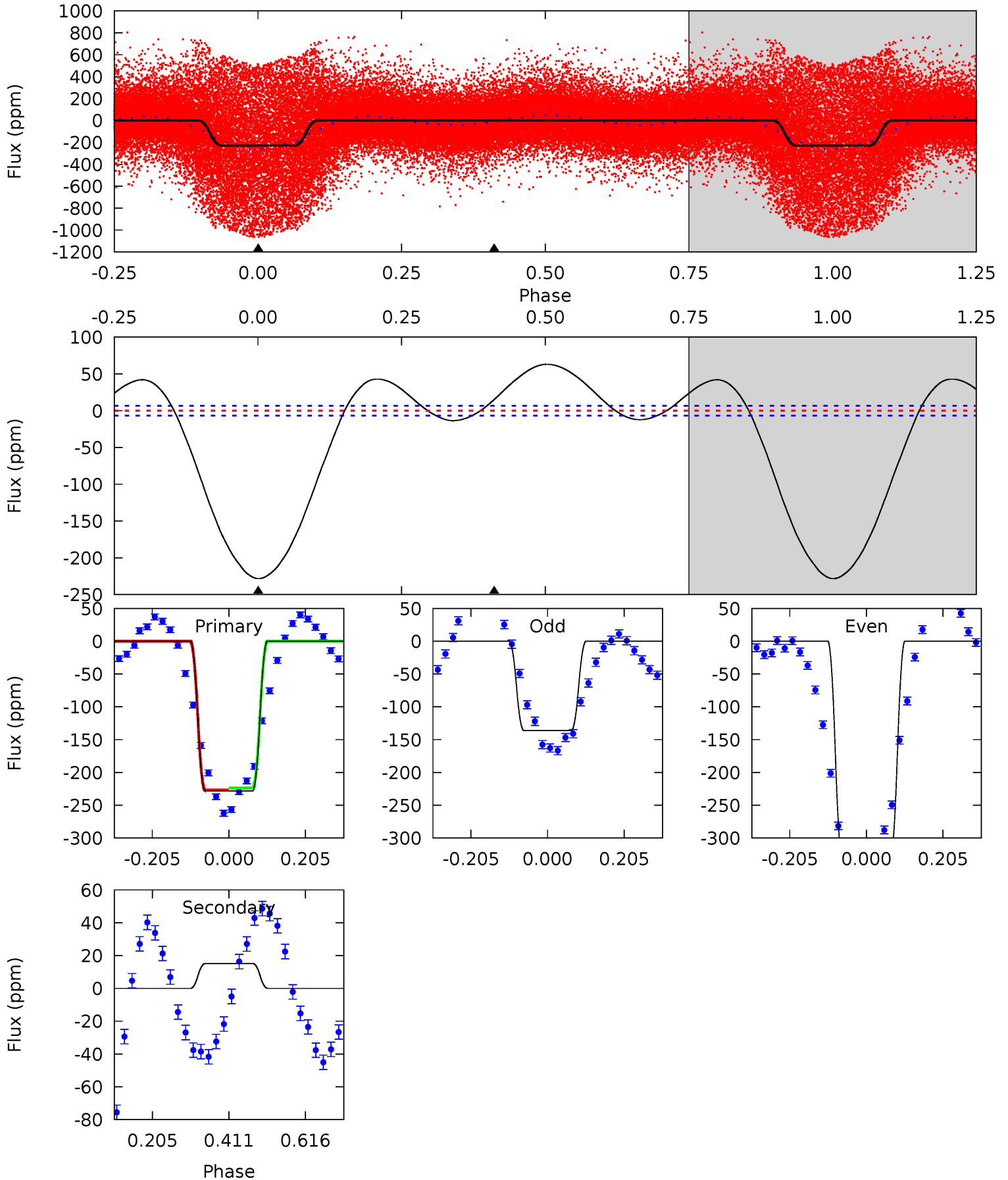
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	-24.7	0	0	4.37	1.15	5.64	11.1	11.1	-24.7	-24.7	0.23	1.60	0.85	0.22



Alt Model-Shift Uniqueness Test

007699478-01, P = 0.964049 Days, E = 131.100680 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
150.7	-10.0	0	0	4.41	1.27	12.1	150.7	150.7	-10.0	-10.0	64.8	1.08	0.22	1.03



Stellar Parameters For KIC 007699478

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7053^{+197}_{-296}	$4.164^{+0.132}_{-0.198}$	$-0.080^{+0.250}_{-0.350}$	$1.644^{+0.516}_{-0.344}$	$1.444^{+0.220}_{-0.242}$	$0.458^{+0.335}_{-0.234}$
	+3%/-4%	+3%/-5%	+312%/-438%	+31%/-21%	+15%/-17%	+73%/-51%
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 007699478-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	144 ± 6	$0.47^{+0.46}_{-0.31}$	3825^{+299}_{-244}	$-24694^{+11720}_{-128742}$	$-157.920^{+117.092}_{-1277.815}$
Alt.	15 ± 2	$3.12^{+0.73}_{-0.65}$	3817^{+271}_{-252}	-4149^{+186}_{-204}	$-0.391^{+0.133}_{-0.232}$

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

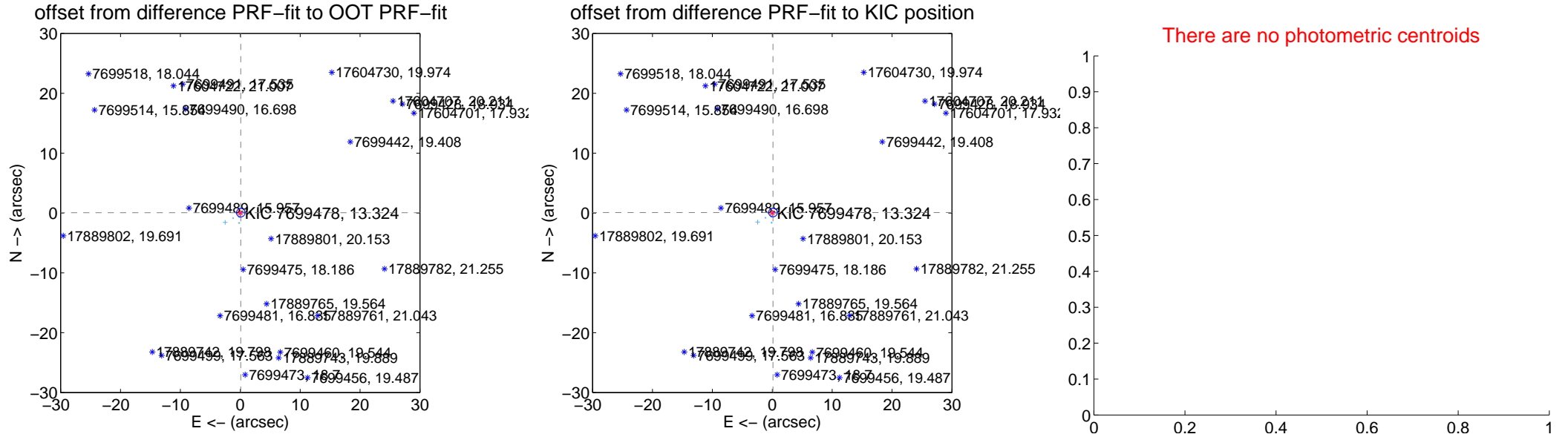
DV Centroid Data

Supplemental centroid analysis for 007699478-01. Kepler magnitude: 13.32. Transit SNR 0.26

There are 12 quarters with good PRF difference image offsets

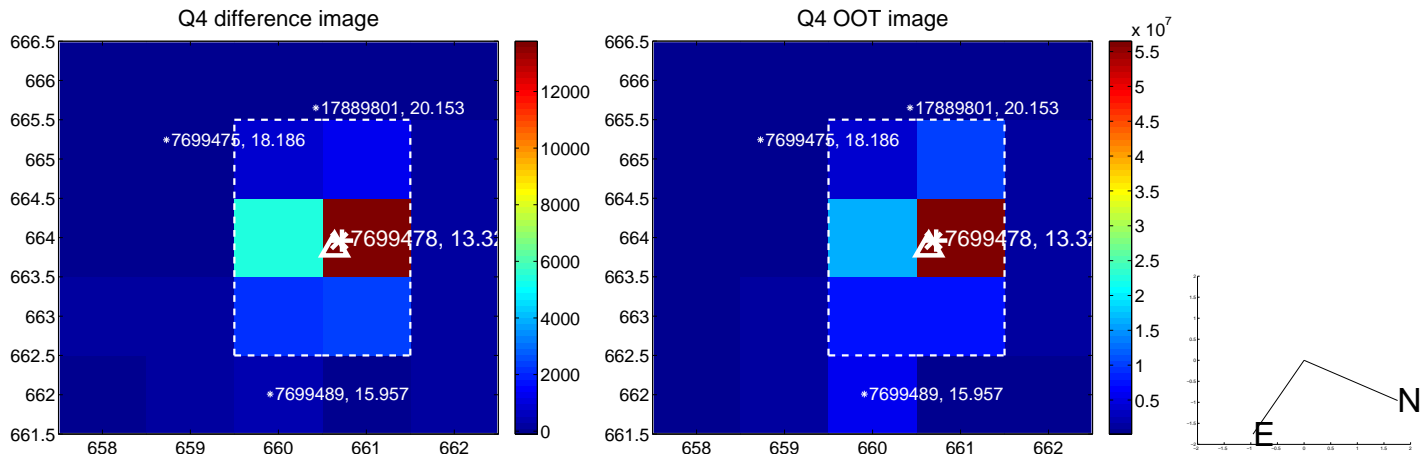
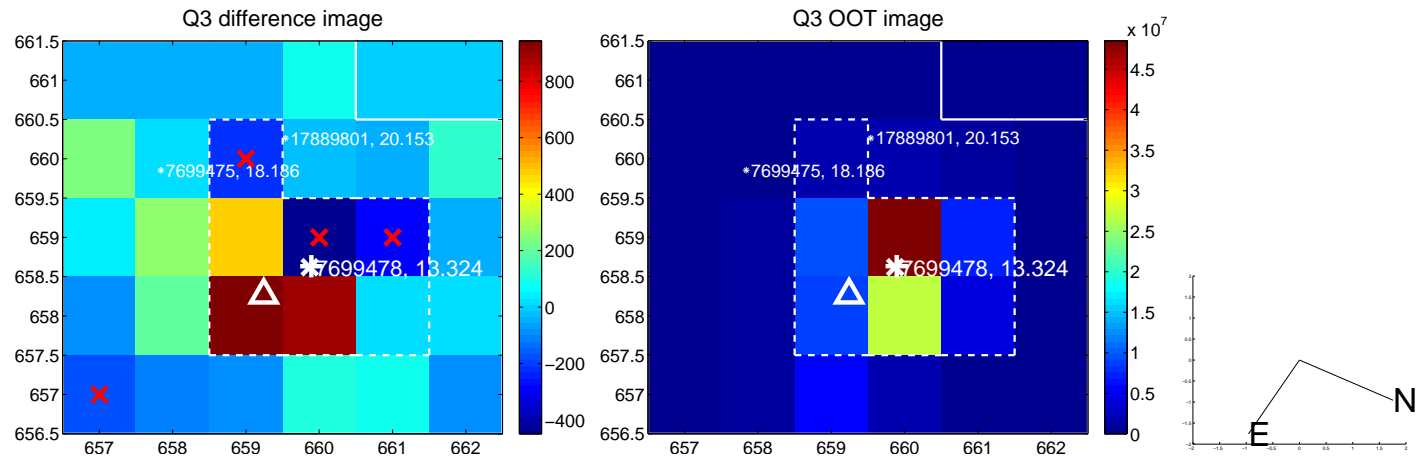
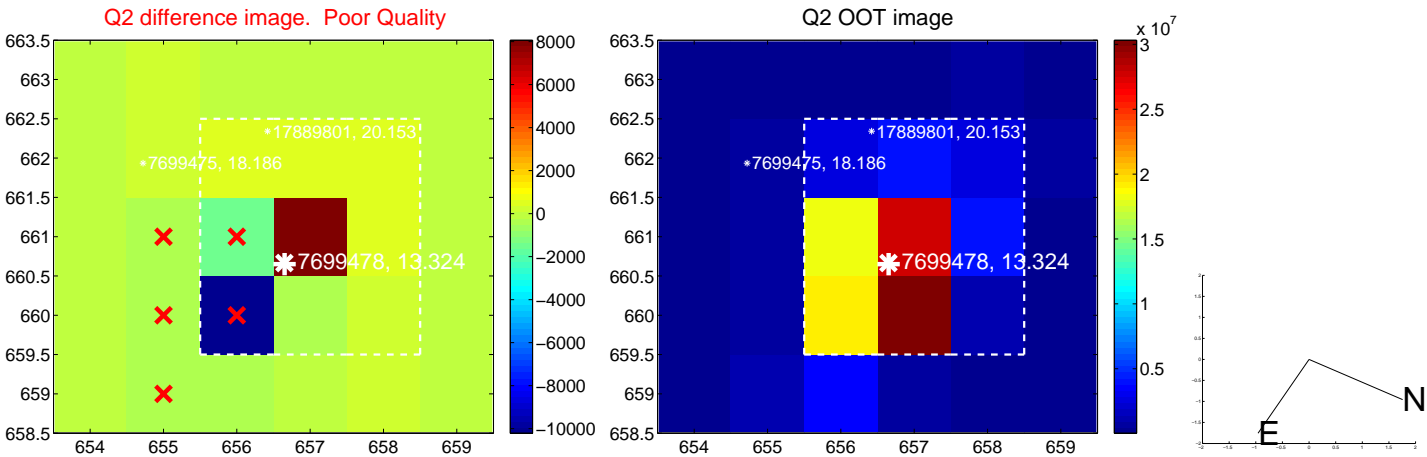
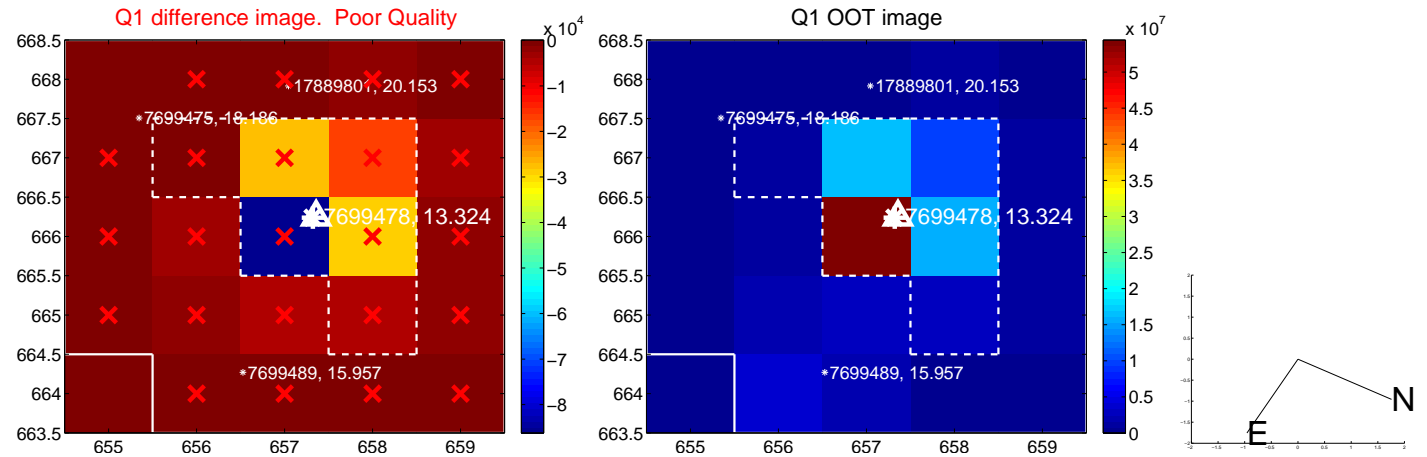
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.096 ± 0.238	0.40	-0.079 ± 0.225	0.055 ± 0.152
PRF-fit source offset from KIC position	0.146 ± 0.242	0.61	-0.119 ± 0.221	0.085 ± 0.170
photometric centroid source offset	—	—	—	—

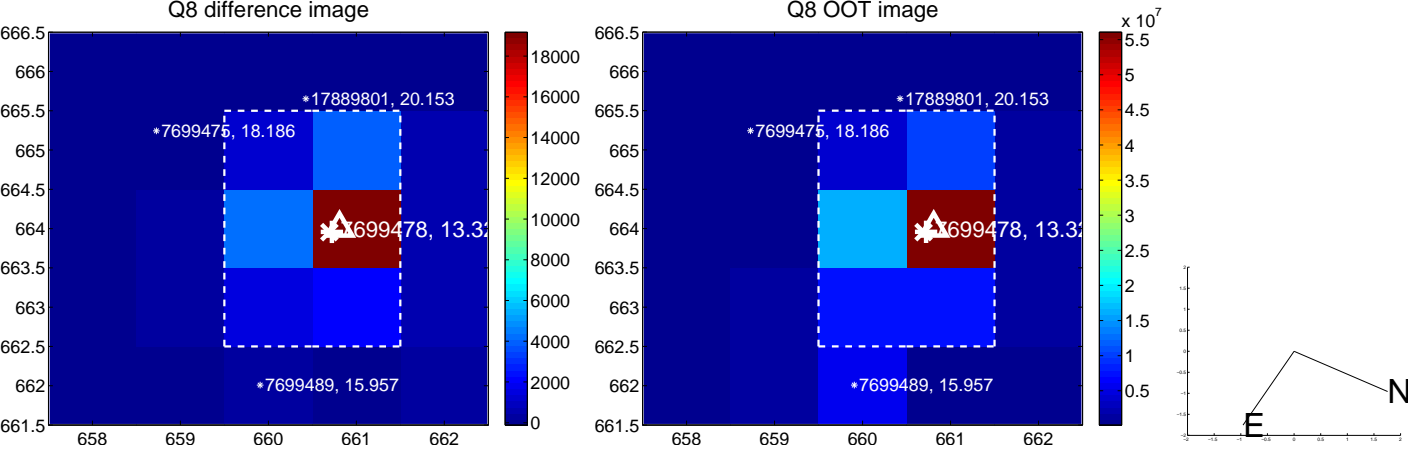
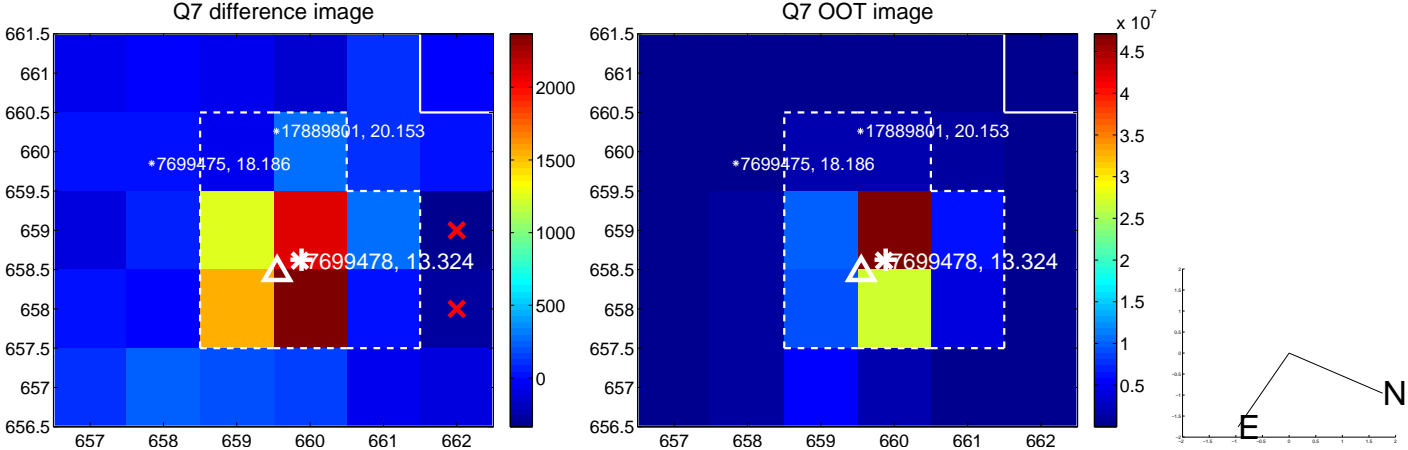
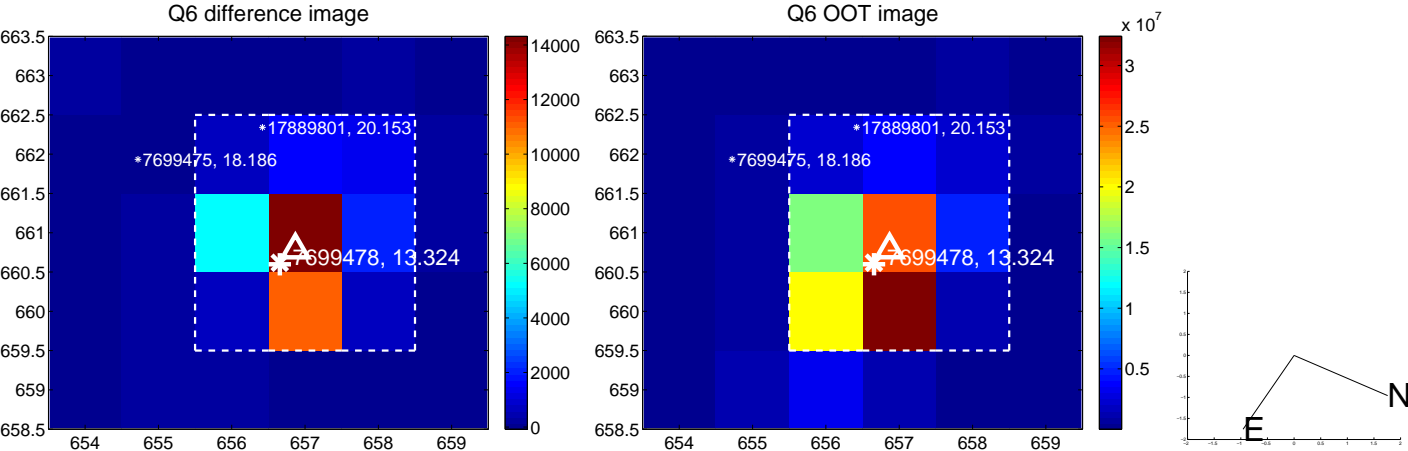
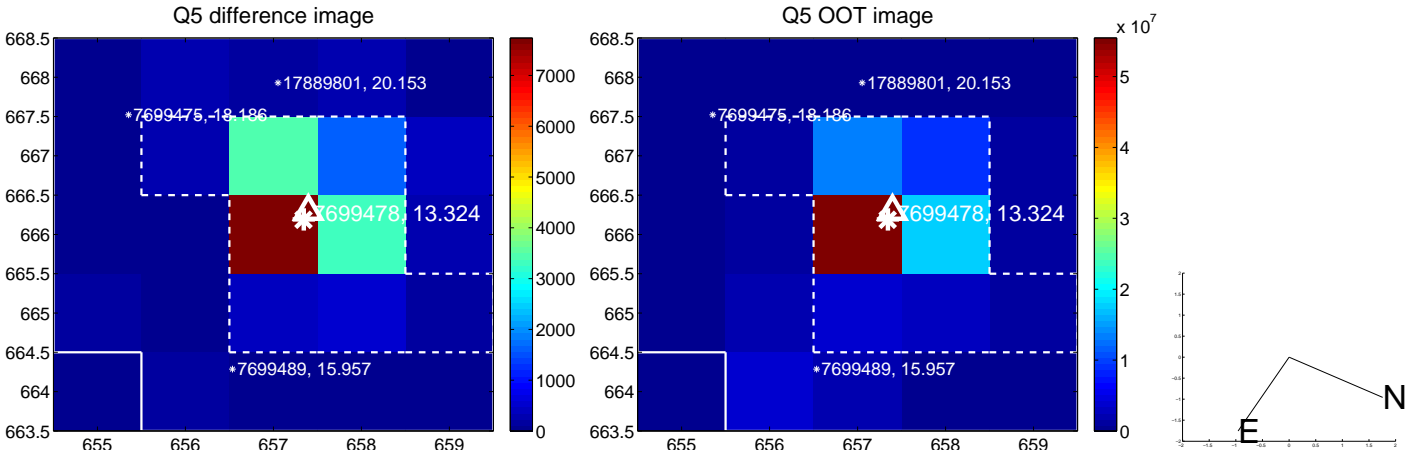


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

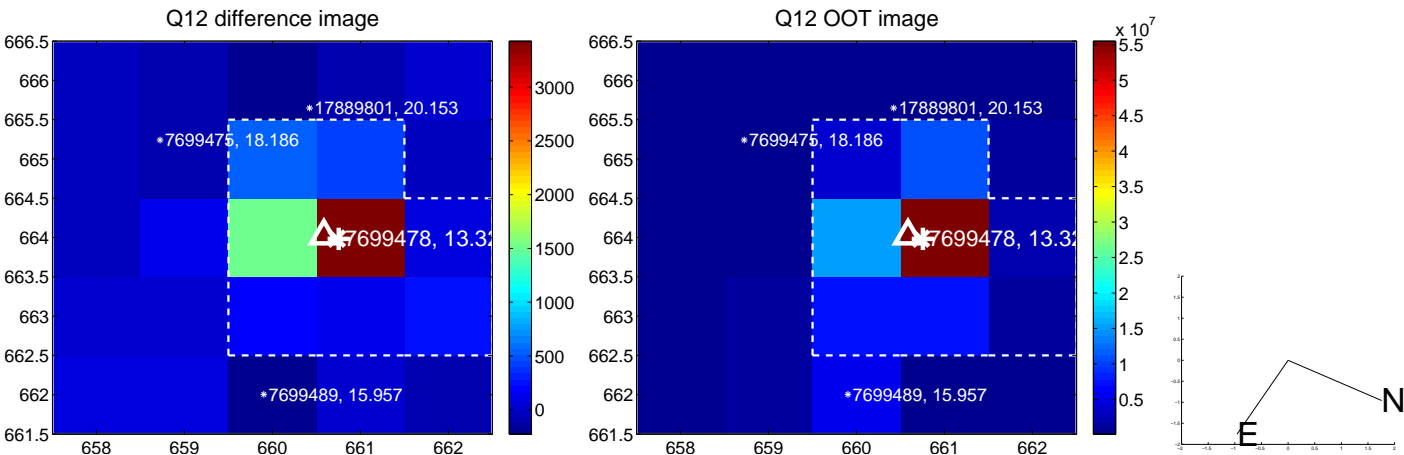
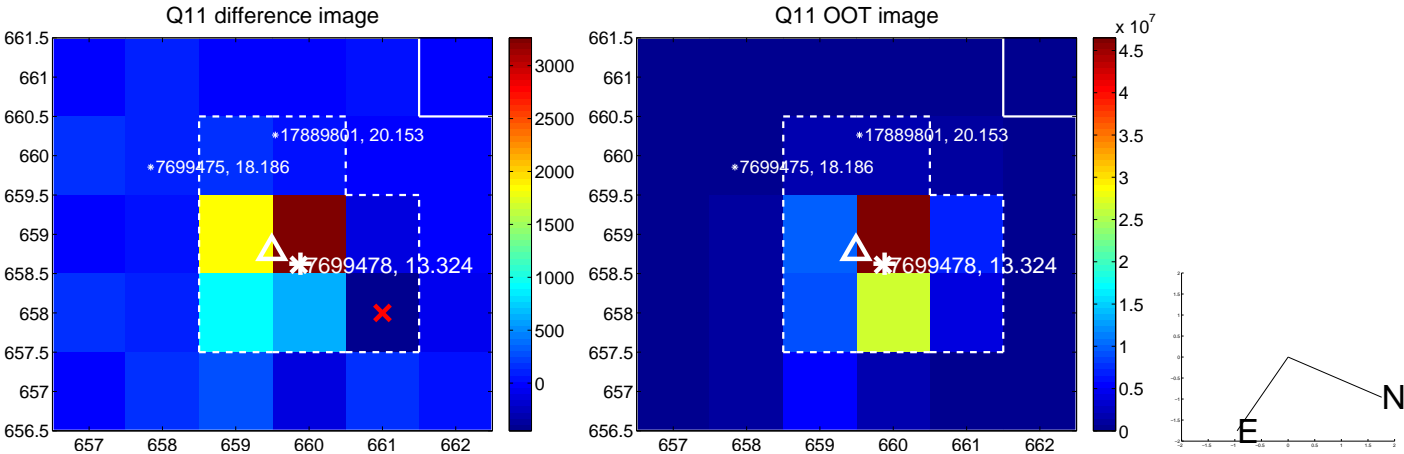
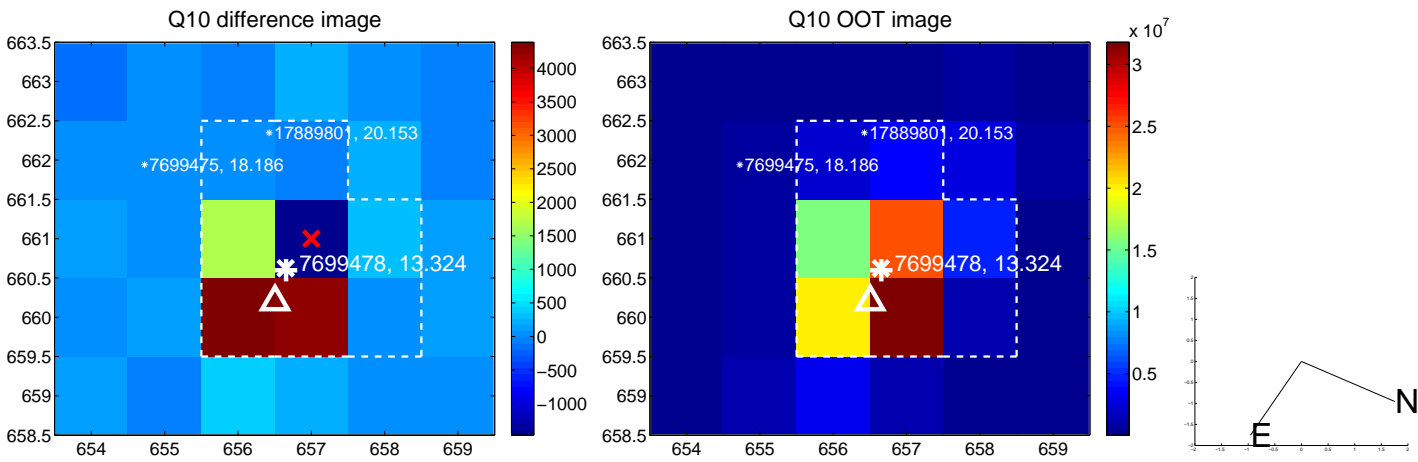
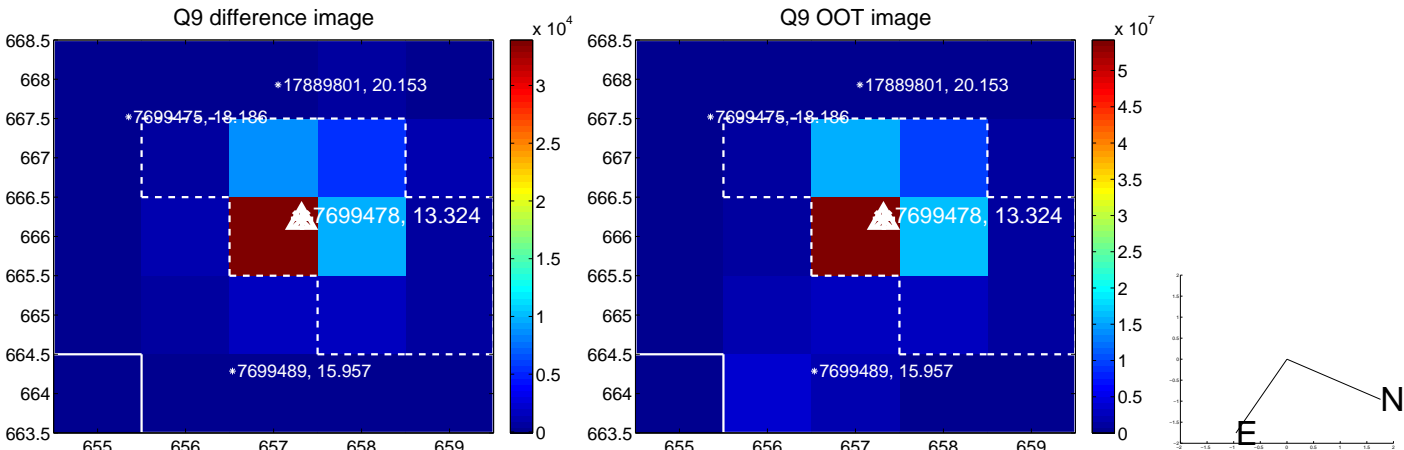
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



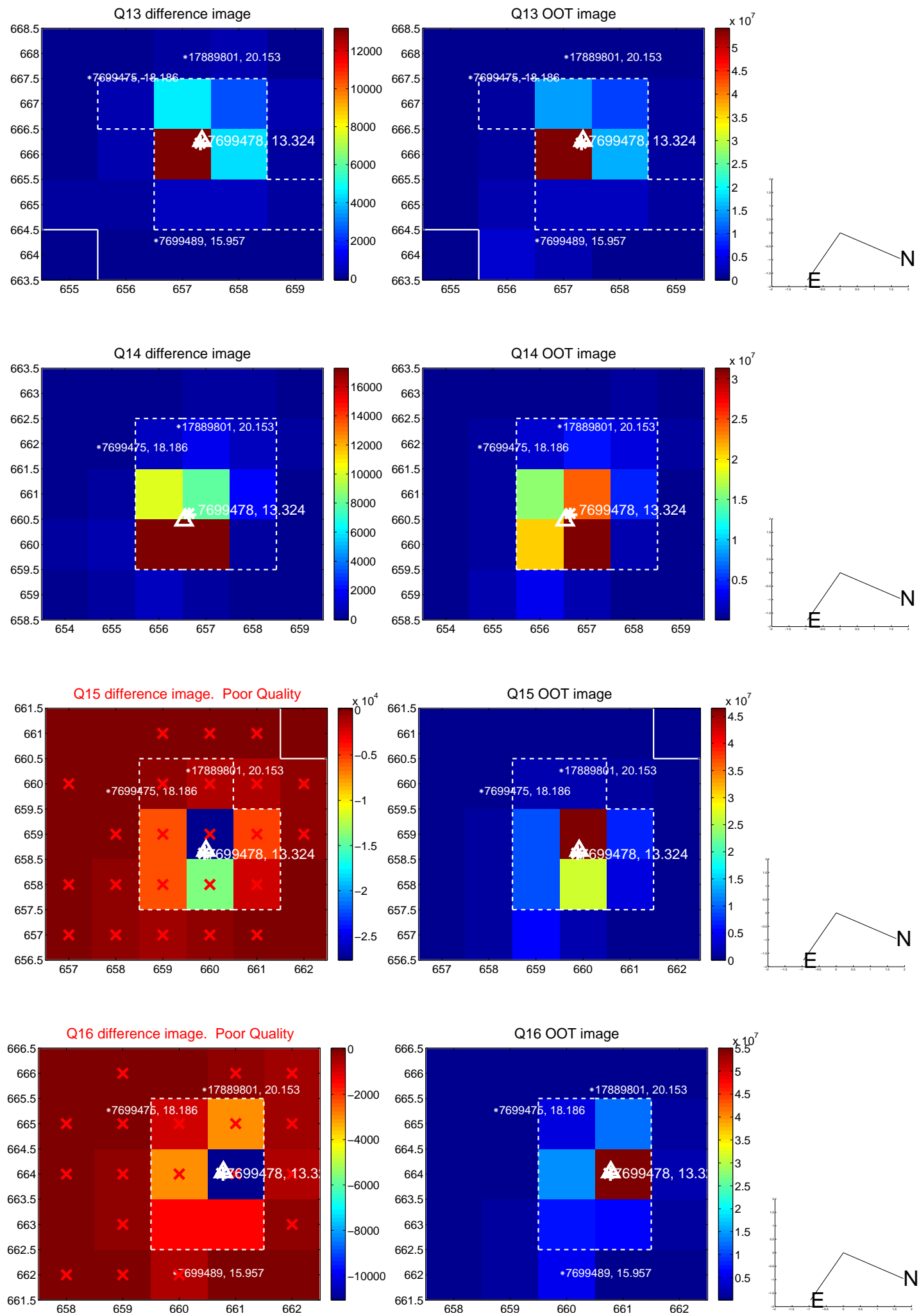
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



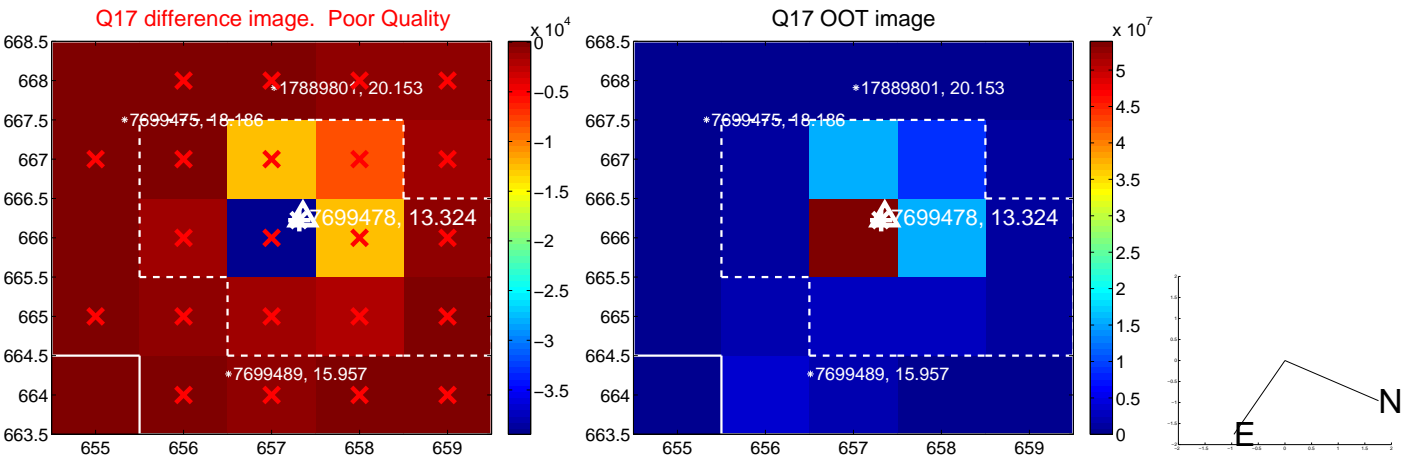
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

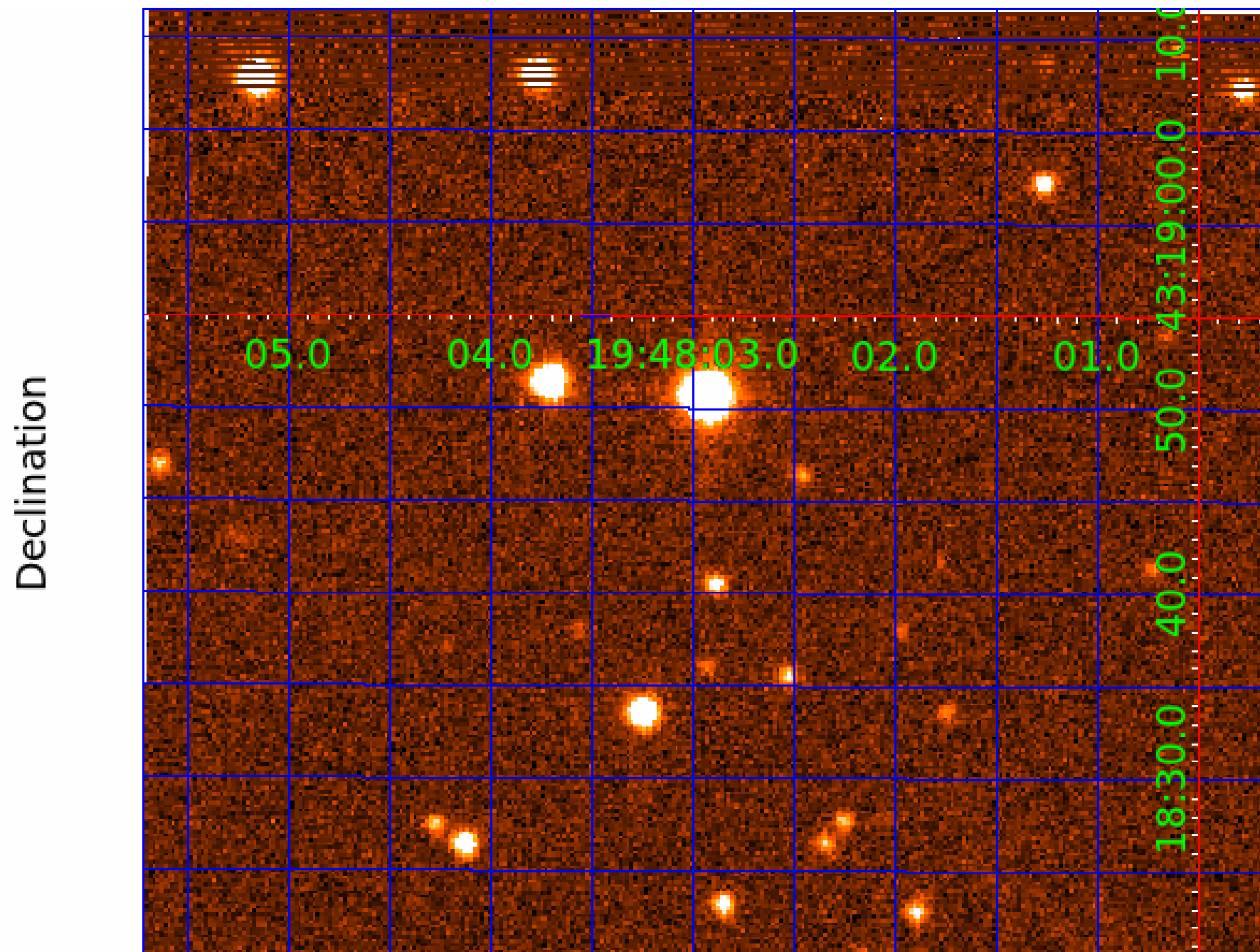


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image



KIC 007699478

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})
007699478-01	OBS	No	0.964006	132.093824	1.5	5.386	10.4	0.3	1.64	7053	0.22	12888.96
007699478-02	OBS	No	0.964008	132.304771	319.2	11.568	14.7	18.0	1.64	7053	3.43	12888.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007699478-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
007699478-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—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.

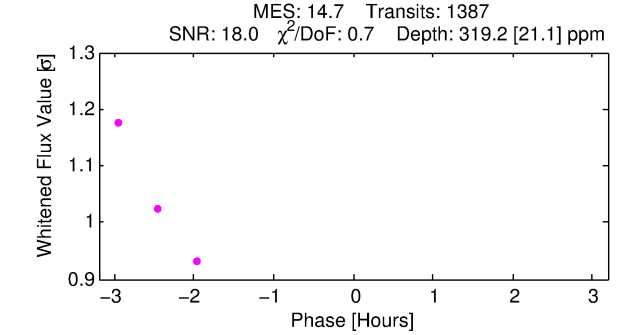
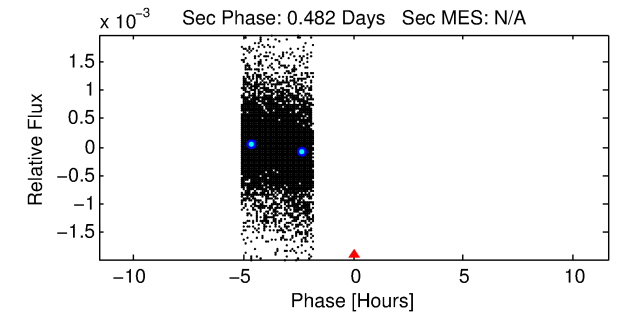
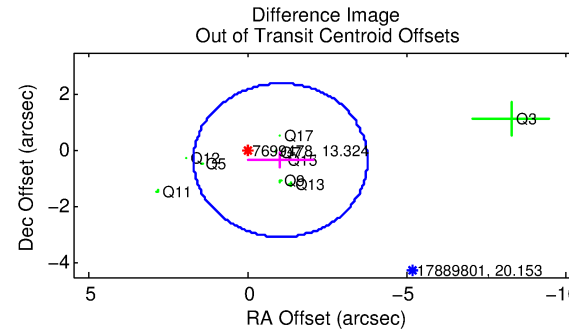
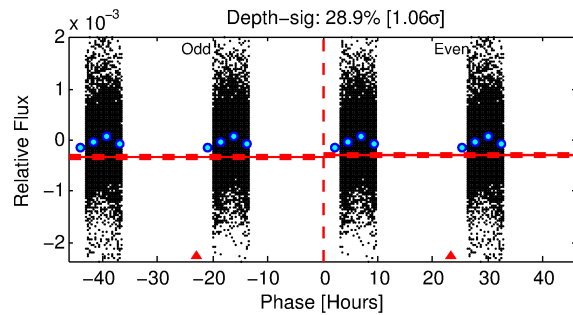
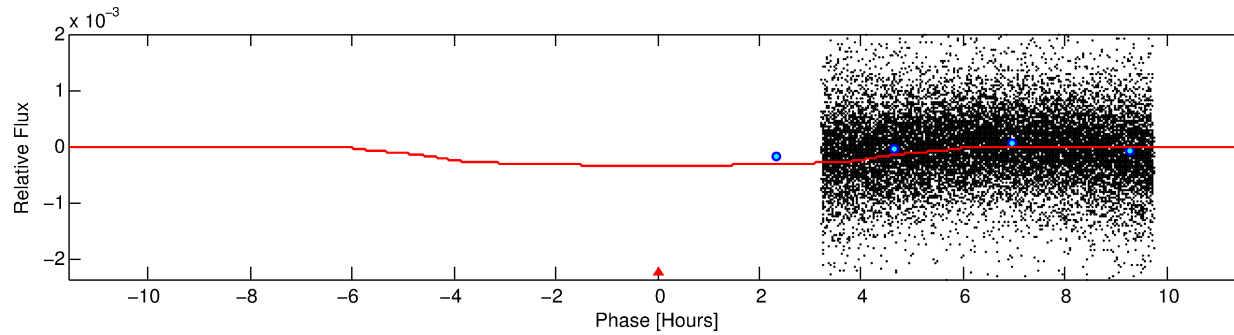
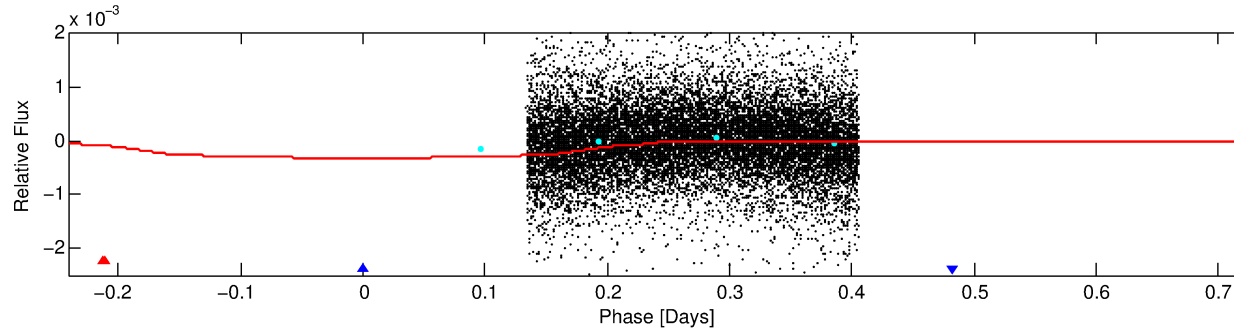
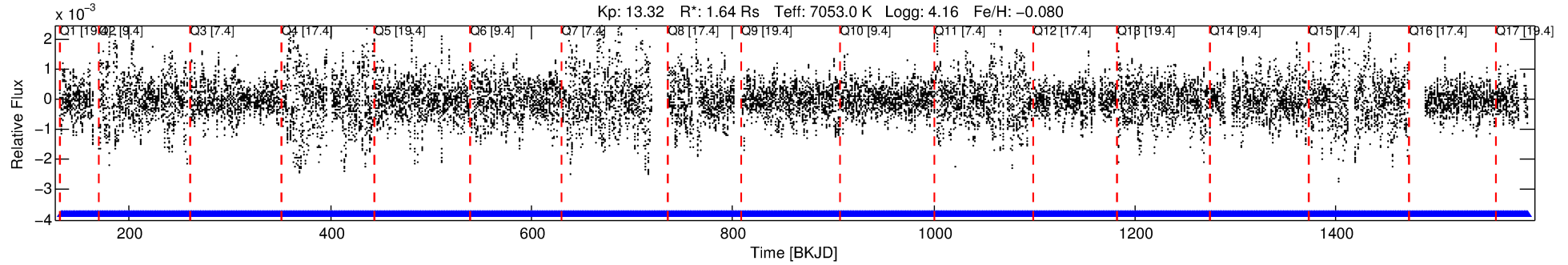
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007699478-02

No Significant Match Found

DV One-Page Summary

KIC: 7699478 Candidate: 2 of 2 Period: 0.964 d



DV Fit Results:

Period = 0.96401 [0.00000] d
Epoch = 132.3048 [0.0020] BKJD
Rp/R* = 0.0191 [0.0006]
a/R* = 1.01 [0.00]
b = 0.91 [0.01]
Seff = 12888.94 [5225.11]
Teq = 2717 [275] K
Rp = 3.43 [1.08] Re
a = 0.0216 [0.0056] AU

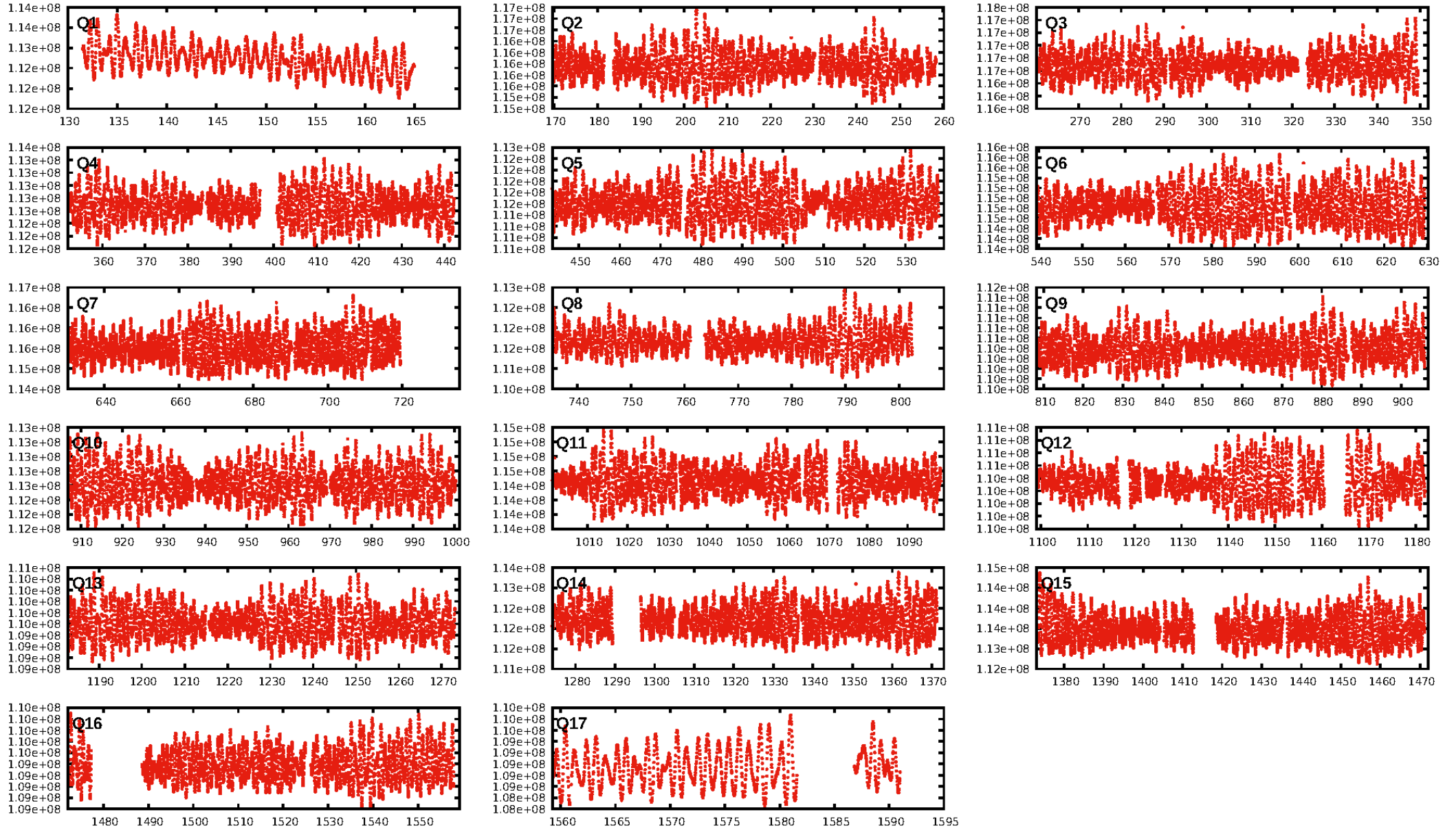
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1323/1323]
GhostDiagnostic-chr: -2.025
Centroid-sig: 0.0%
Centroid-so: 0.192 arcsec [3.83 σ]
OotOffset-rm: 1.081 arcsec [1.19 σ]
KicOffset-rm: 1.071 arcsec [1.21 σ]
OotOffset-st: 0/4/1/4 [9]
KicOffset-st: 0/4/1/4 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 0.00 [0/17]

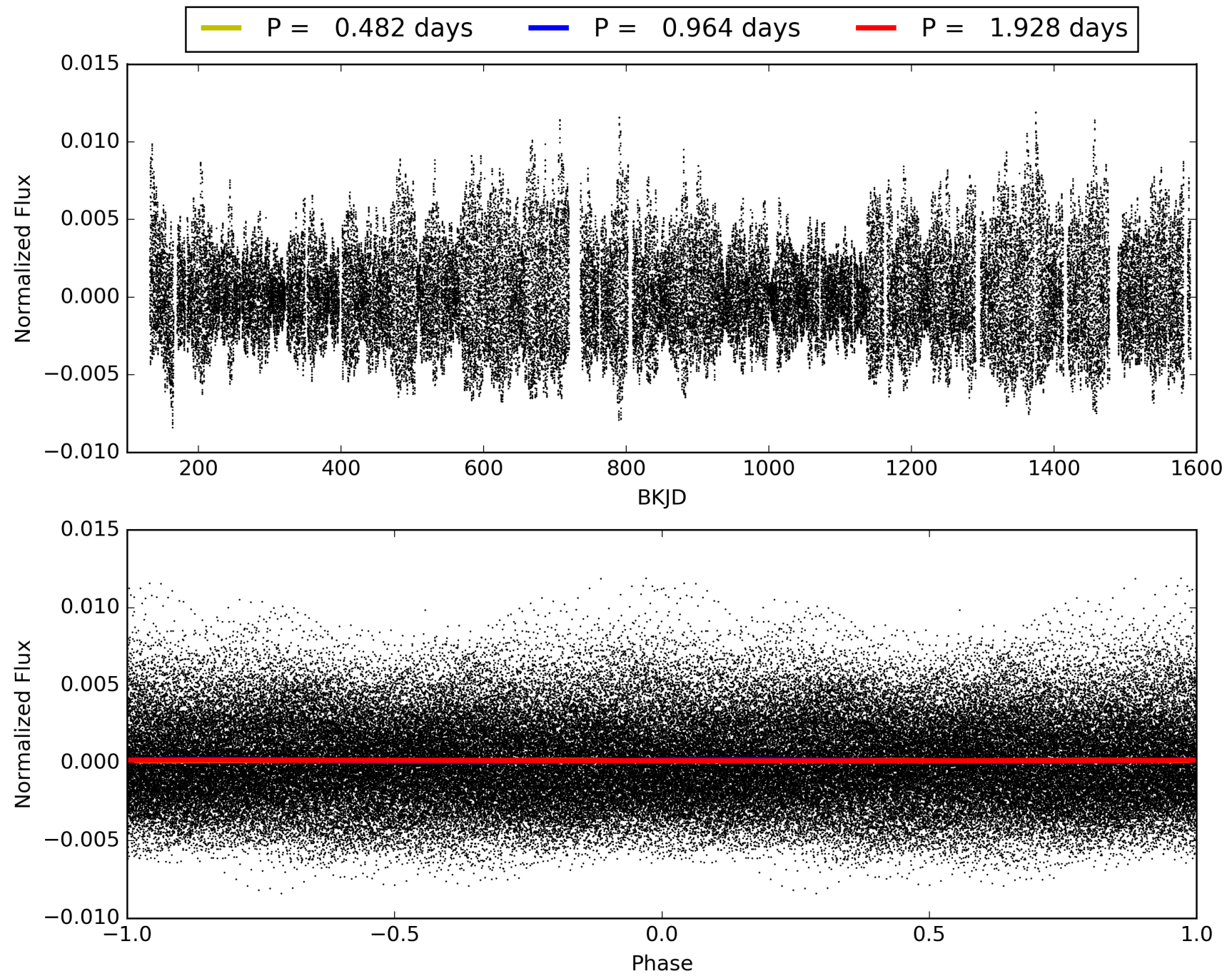
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 04:13:28 Z

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

TCE 007699478-02, PDC Light Curves

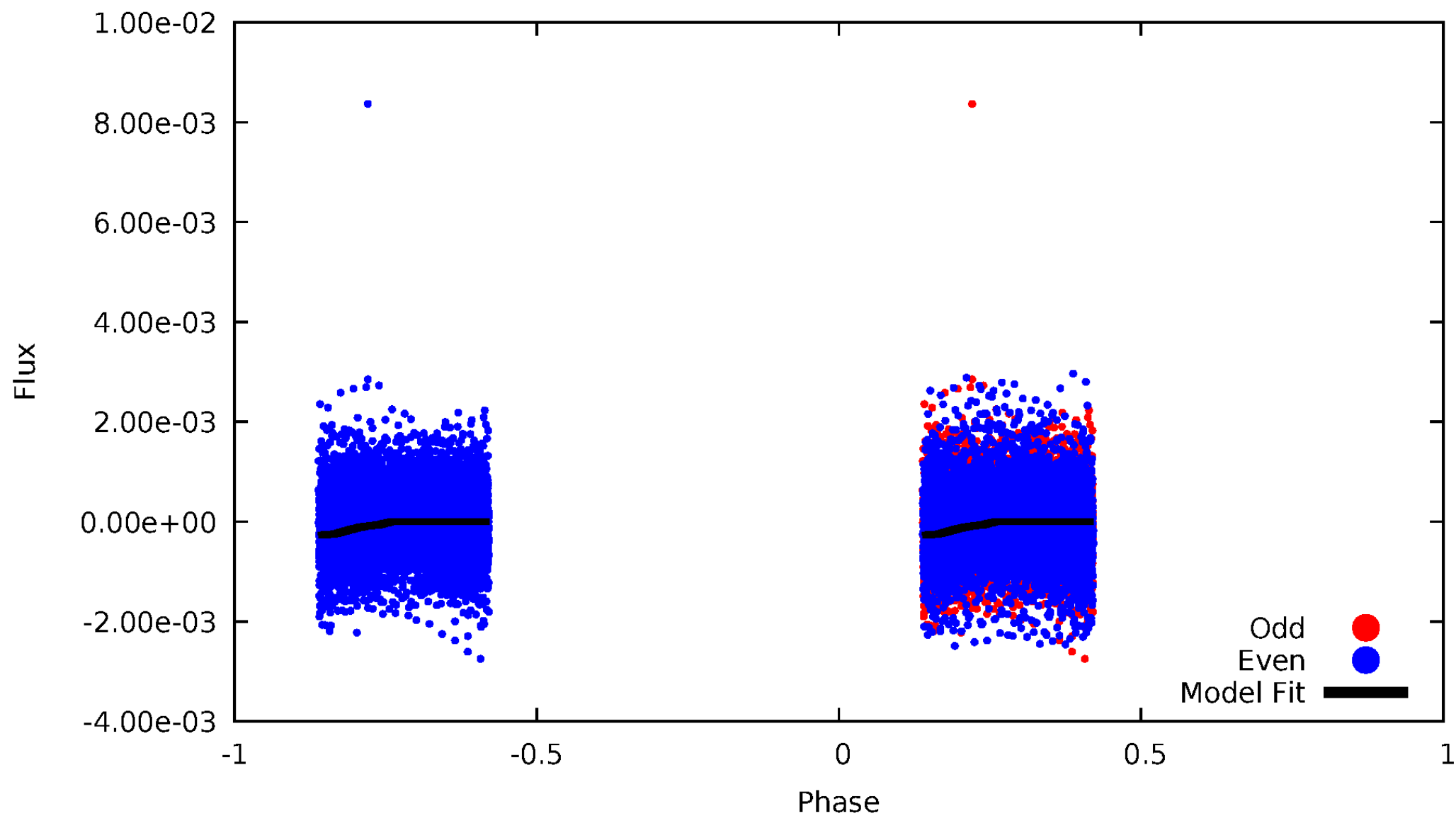


TCE 007699478-02



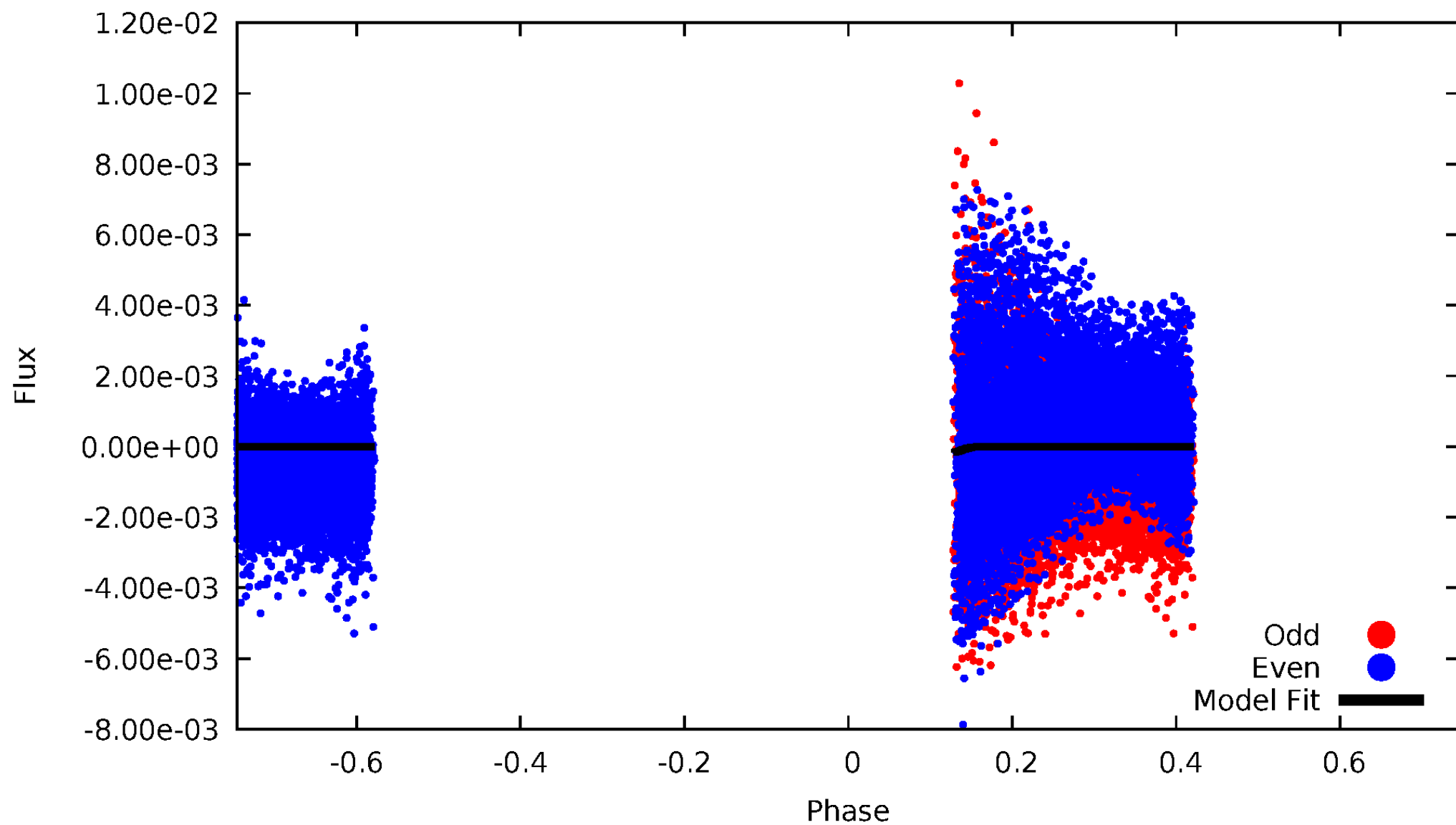
DV Odd/Even

TCE 007699478-02



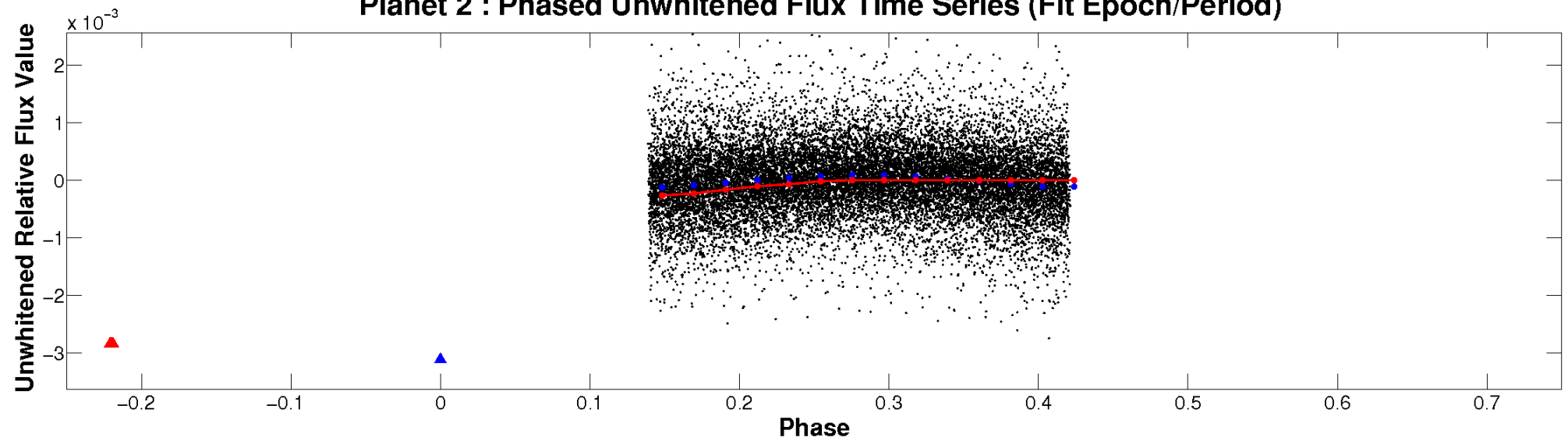
ALT Odd/Even

TCE 007699478-02

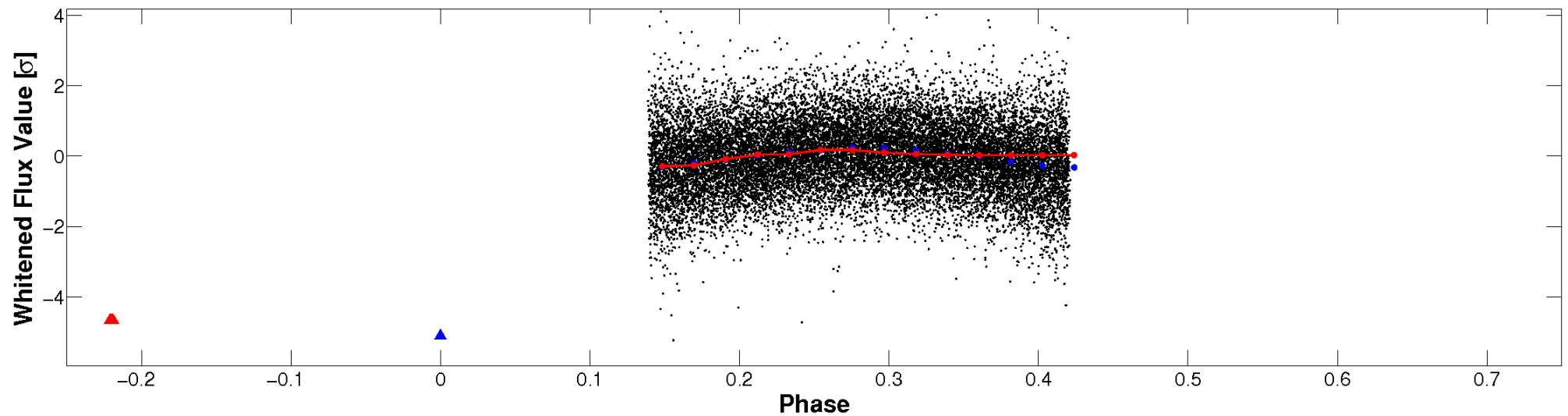


Non-Whitened Vs. Whitened Light Curve

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

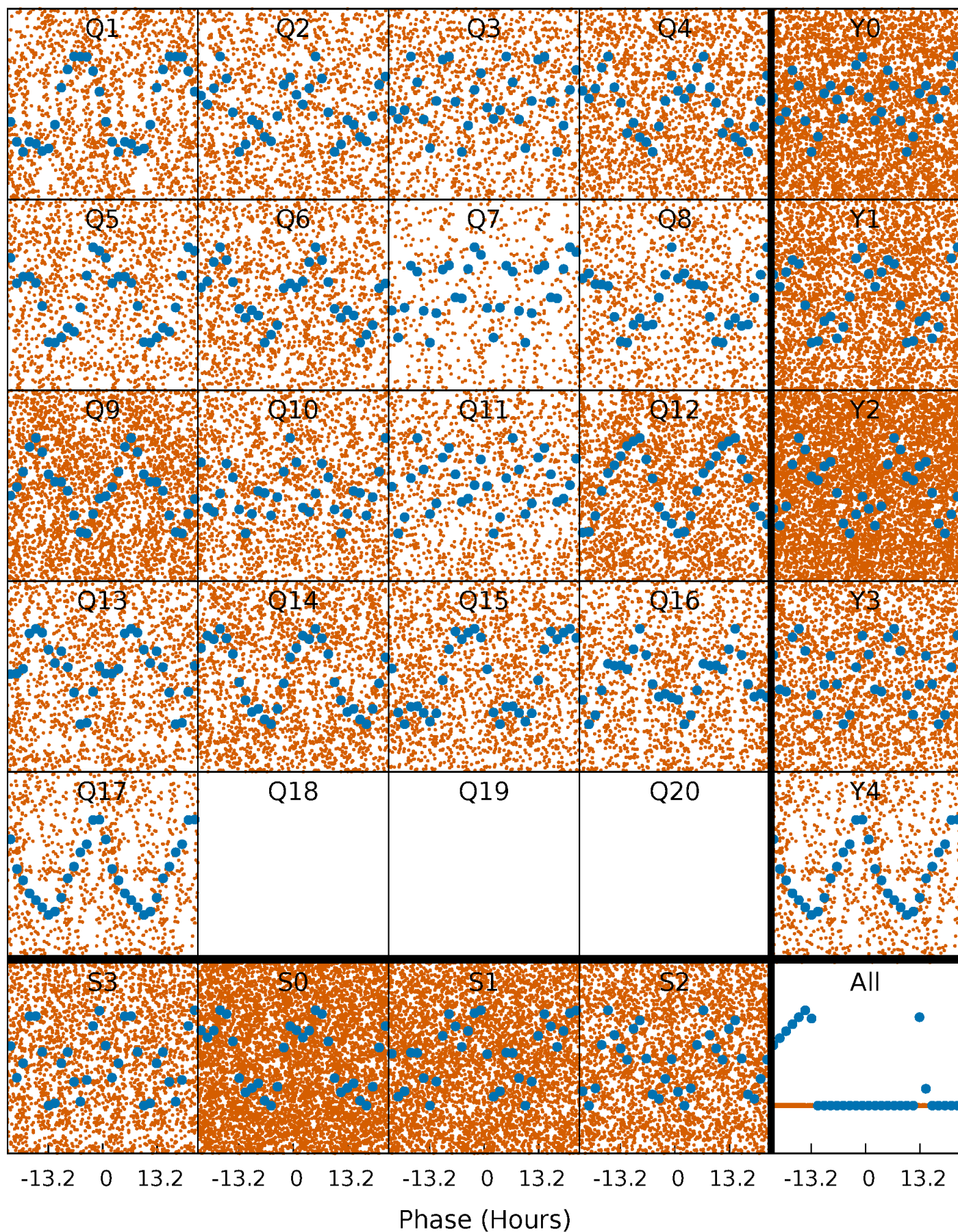


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



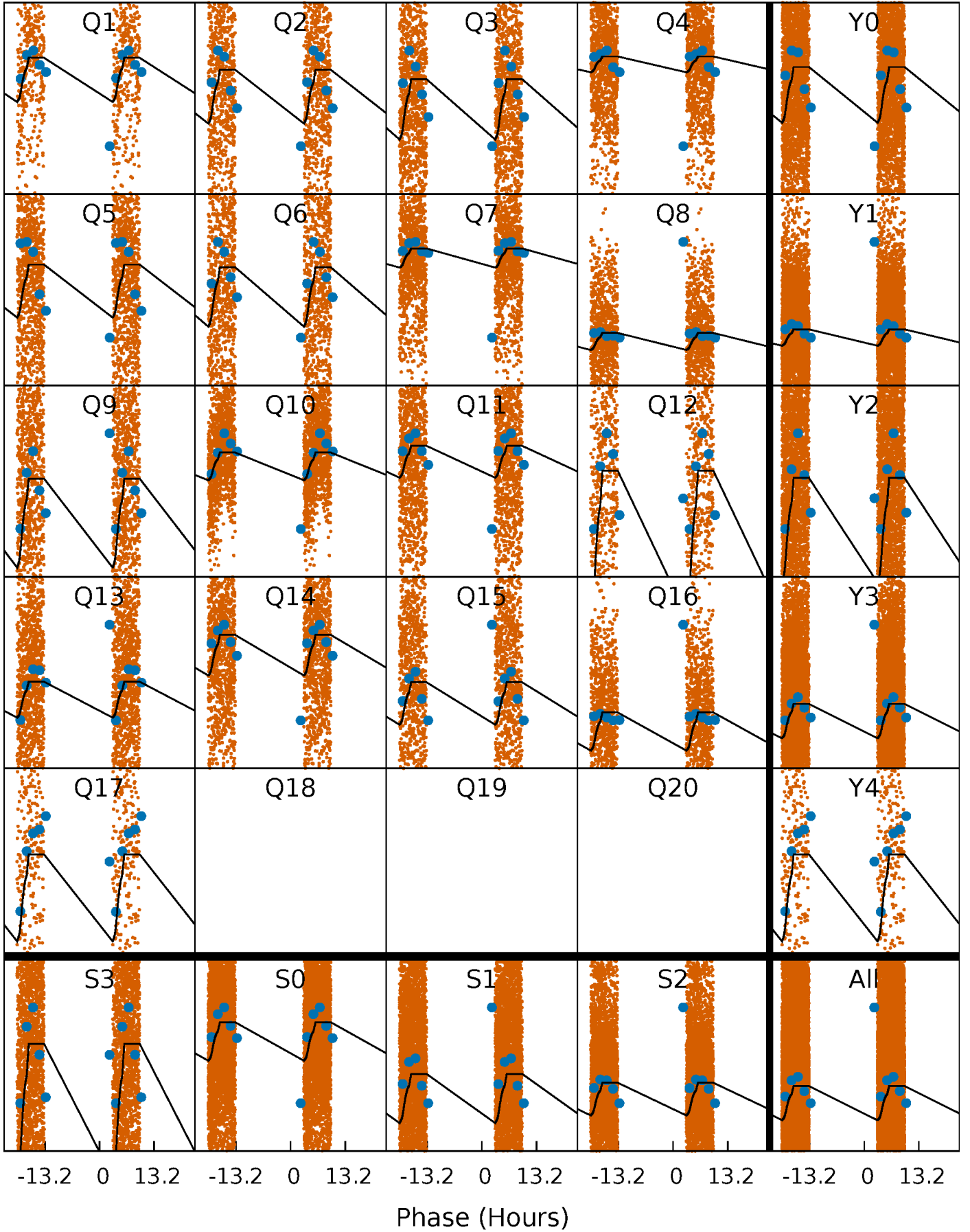
PDC Quarter-Phased Transit Curves

TCE 007699478-02 P= 0.964008 Days $T_0=132.304771$ (BKJD)



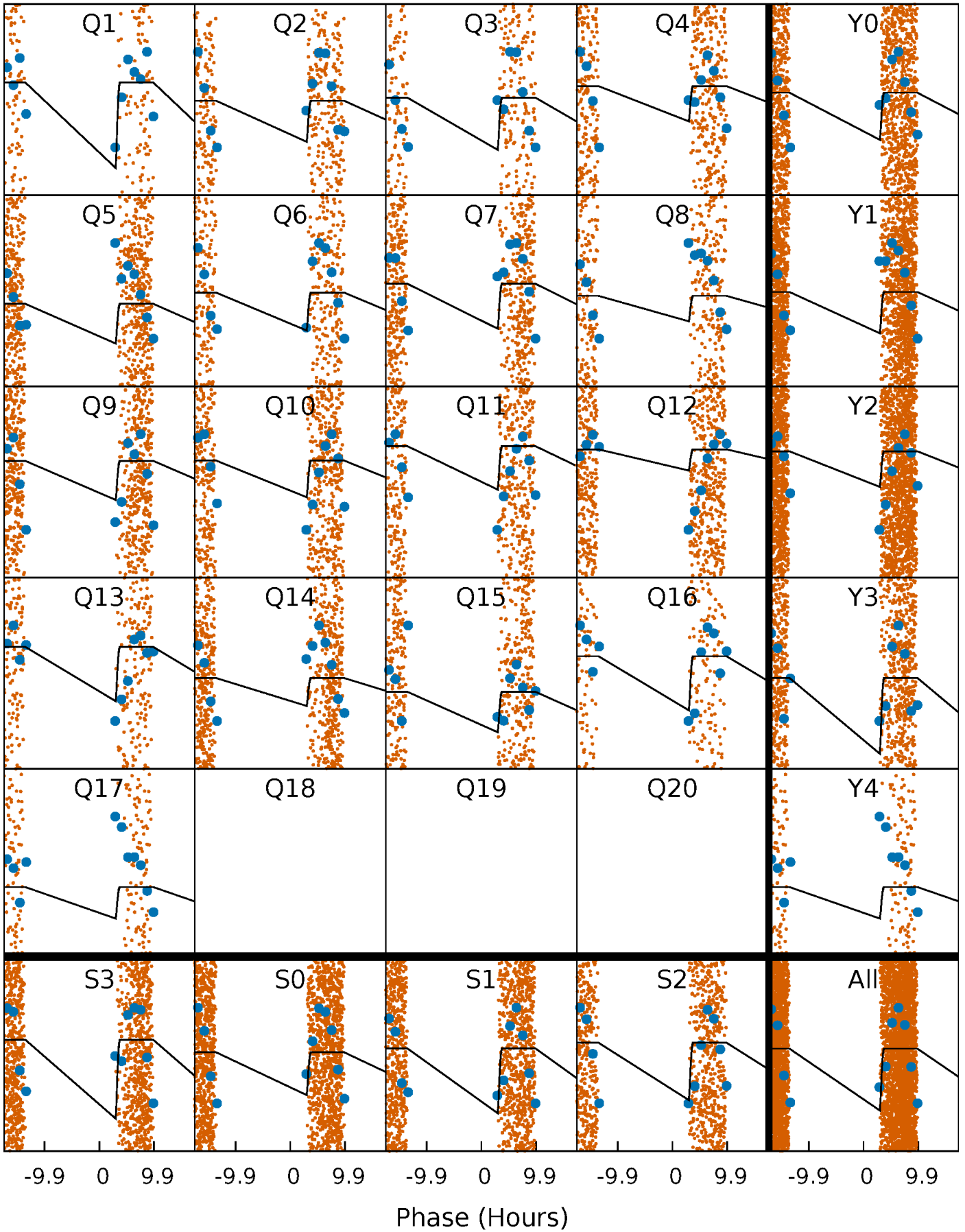
DV Quarter-Phased Transit Curves

TCE 007699478-02 P= 0.964008 Days $T_0=132.304771$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

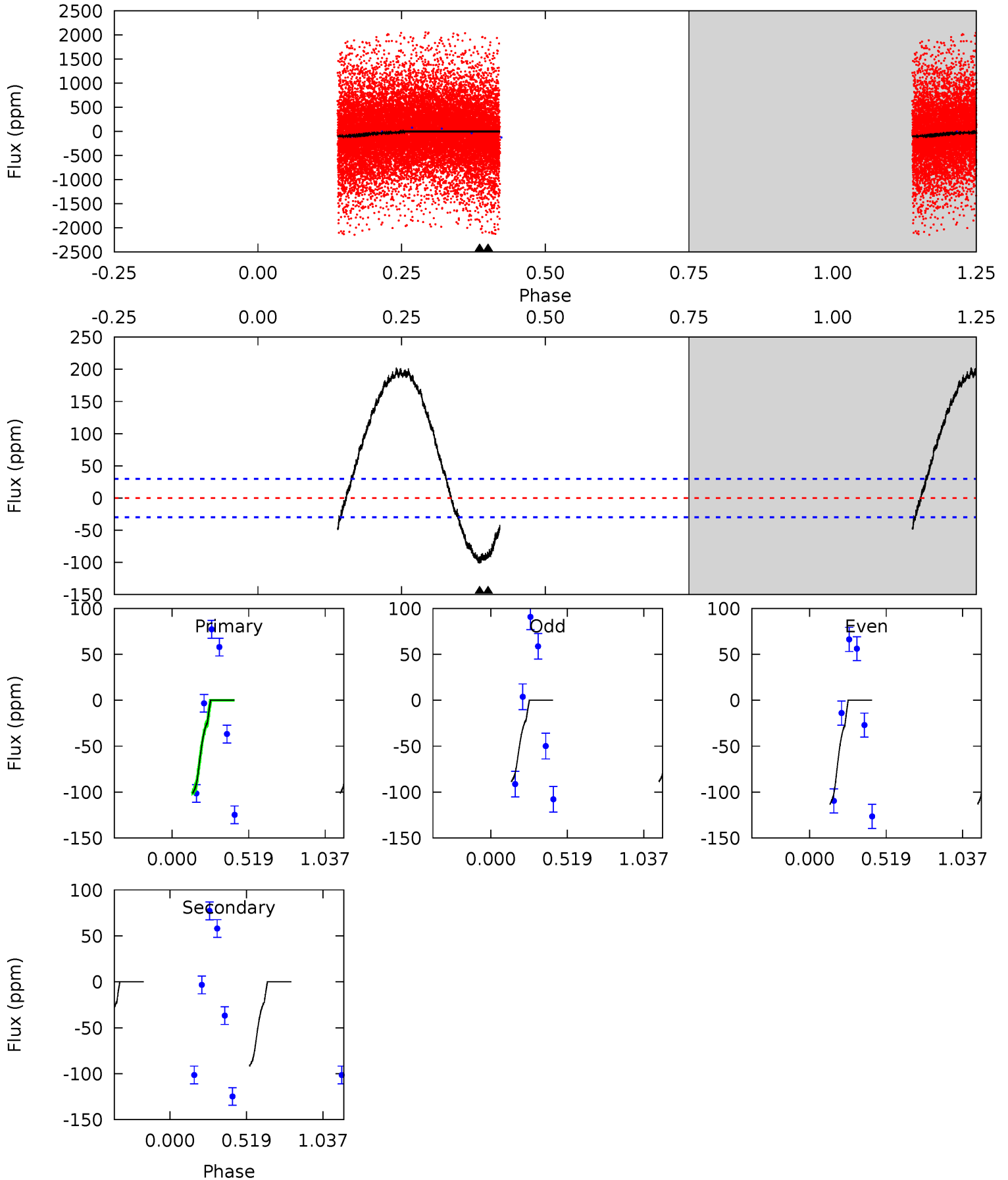
TCE 007699478-02 P= 0.964015 Days $T_0=132.304158$ (BKJD)



DV Model-Shift Uniqueness Test

007699478-02, P = 0.964008 Days, E = 131.340763 Days

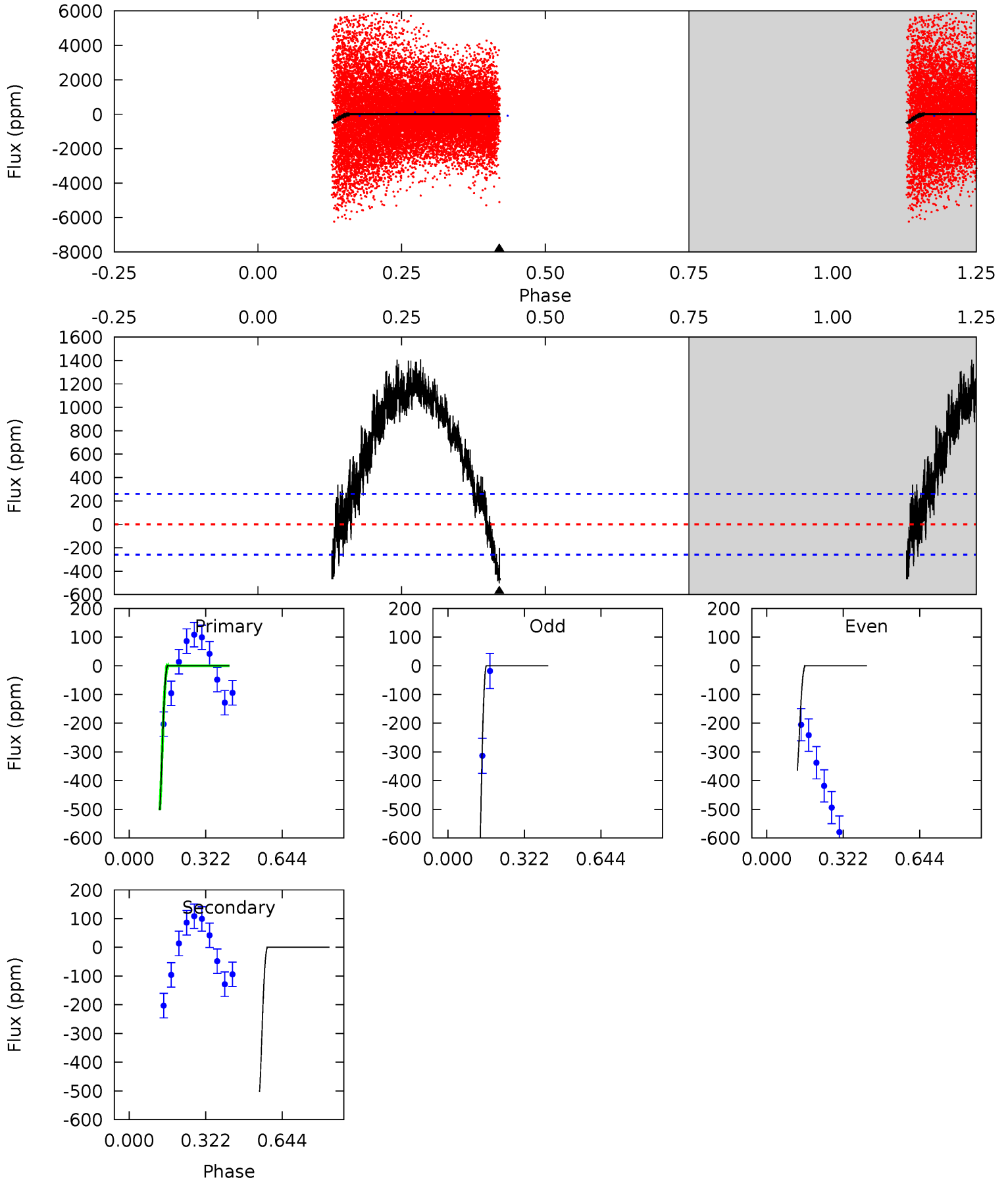
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	12.9	0	0	4.21	0.65	3.47	14.3	14.3	12.9	12.9	1.74	0.98	0.67	0



Alt Model-Shift Uniqueness Test

007699478-02, P = 0.964015 Days, E = 131.340143 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.34	8.34	0	0	4.31	0.99	2.50	8.34	8.34	8.34	8.34	4.90	0.50	0.74	0



Stellar Parameters For KIC 007699478

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7053^{+197}_{-296}	$4.164^{+0.132}_{-0.198}$	$-0.080^{+0.250}_{-0.350}$	$1.644^{+0.516}_{-0.344}$	$1.444^{+0.220}_{-0.242}$	$0.458^{+0.335}_{-0.234}$
	+3%/-4%	+3%/-5%	+312%/-438%	+31%/-21%	+15%/-17%	+73%/-51%
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 007699478-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-92 ± 7	$3.48^{+0.67}_{-0.45}$	3835^{+330}_{-279}	4839^{+178}_{-194}	$1.896^{+0.572}_{-0.509}$
Alt.	-503 ± 60	$2.59^{+0.45}_{-0.35}$	3809^{+333}_{-240}	9201^{+669}_{-594}	19^{+6}_{-5}

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

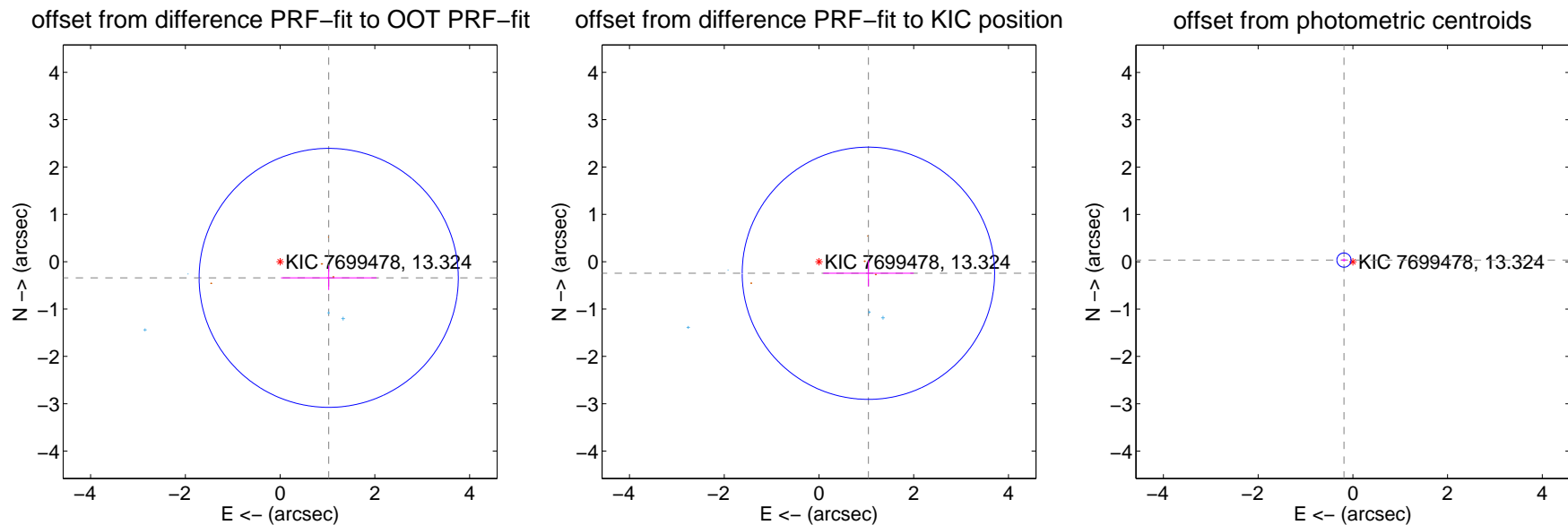
DV Centroid Data

Supplemental centroid analysis for 007699478-02. Kepler magnitude: 13.32. Transit SNR 18.02

There are 4 quarters with good PRF difference image offsets

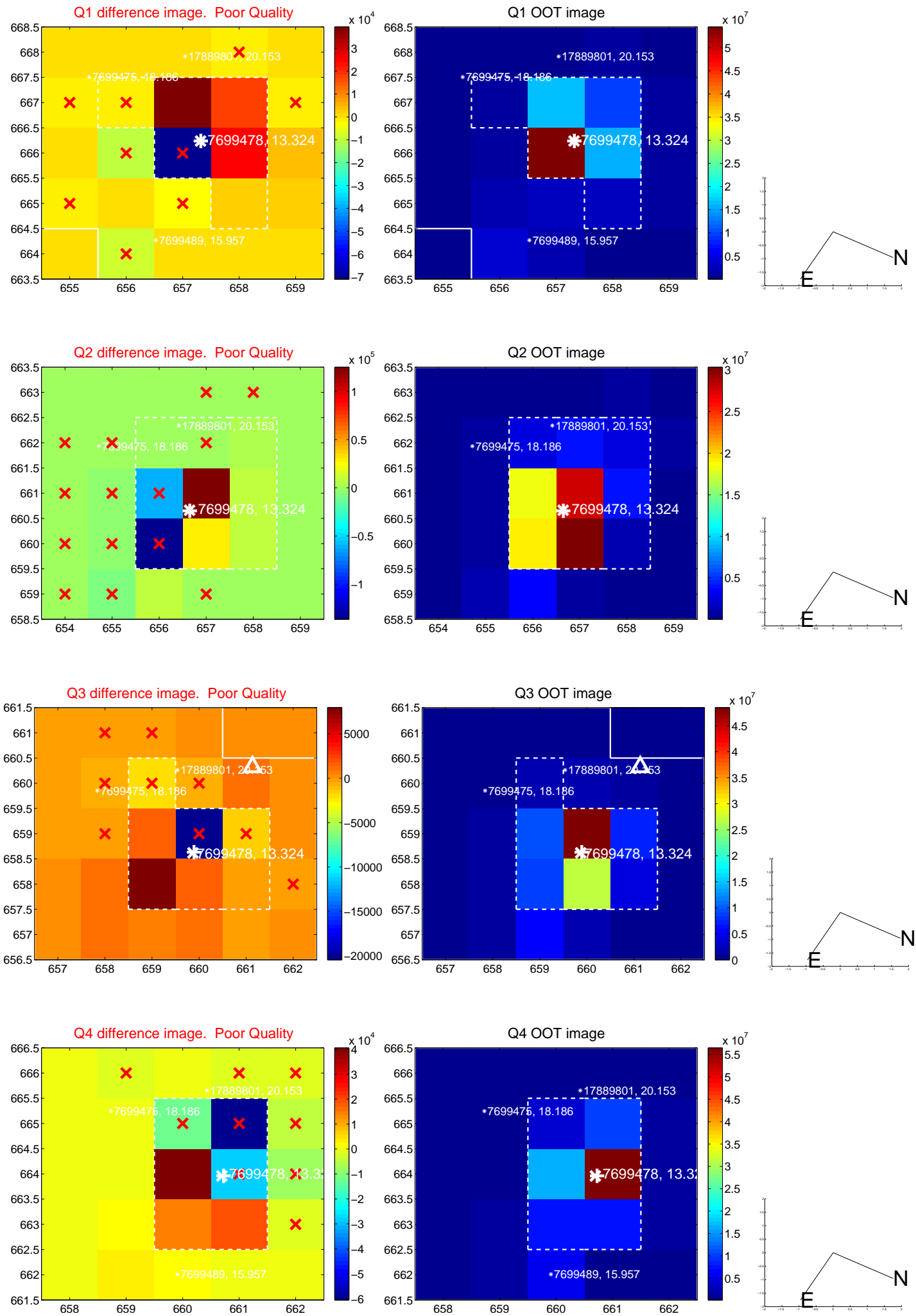
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.081 ± 0.912	1.19	-1.026 ± 1.008	-0.342 ± 0.257
PRF-fit source offset from KIC position	1.071 ± 0.888	1.21	-1.043 ± 0.956	-0.244 ± 0.277
photometric centroid source offset	0.19 ± 0.05	3.83	0.19 ± 0.05	0.04 ± 0.03

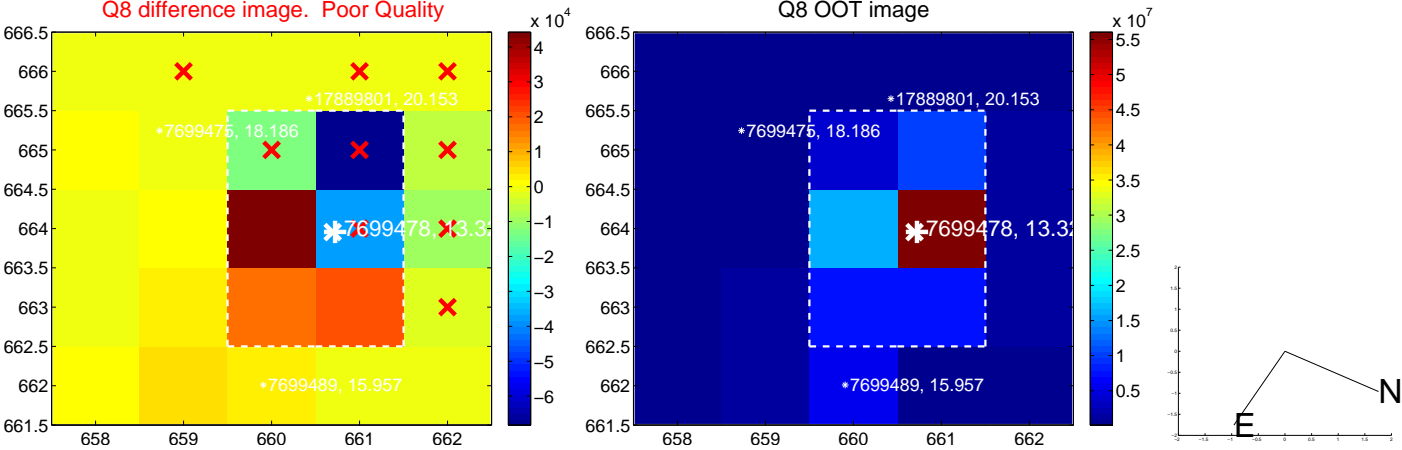
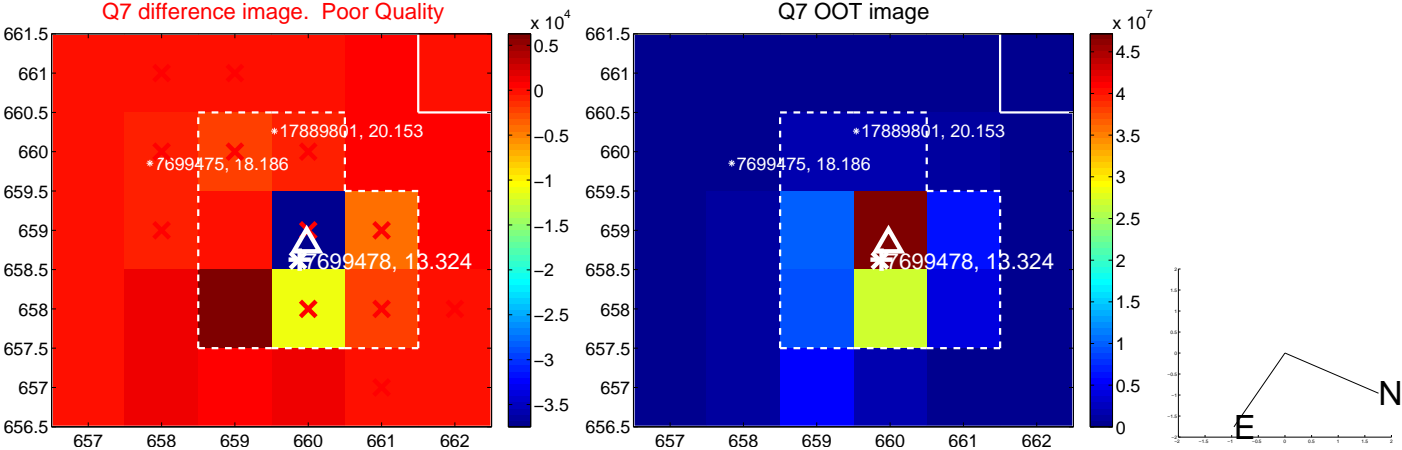
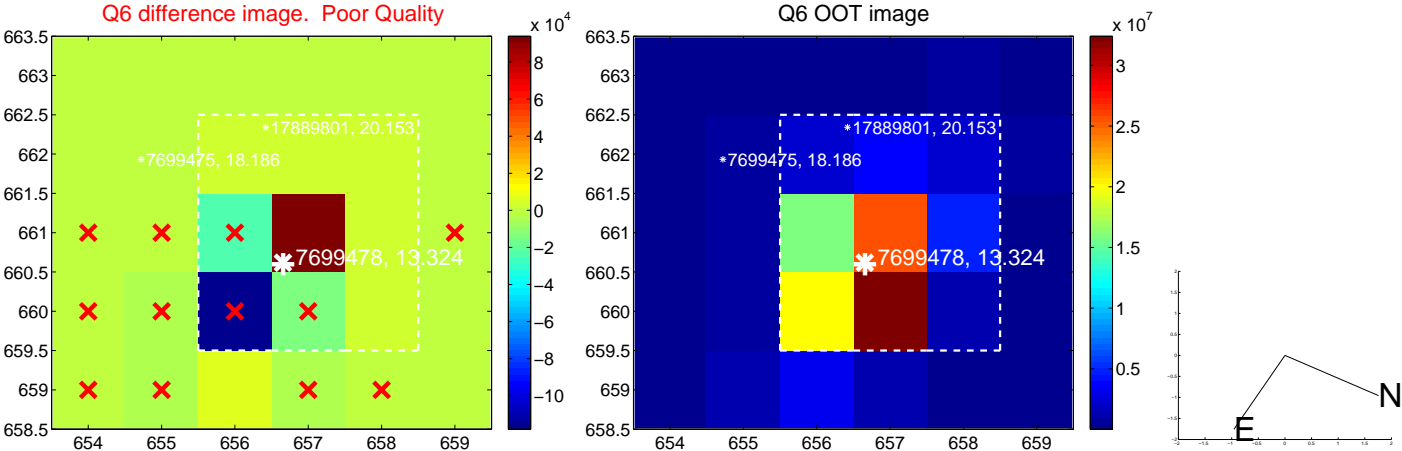
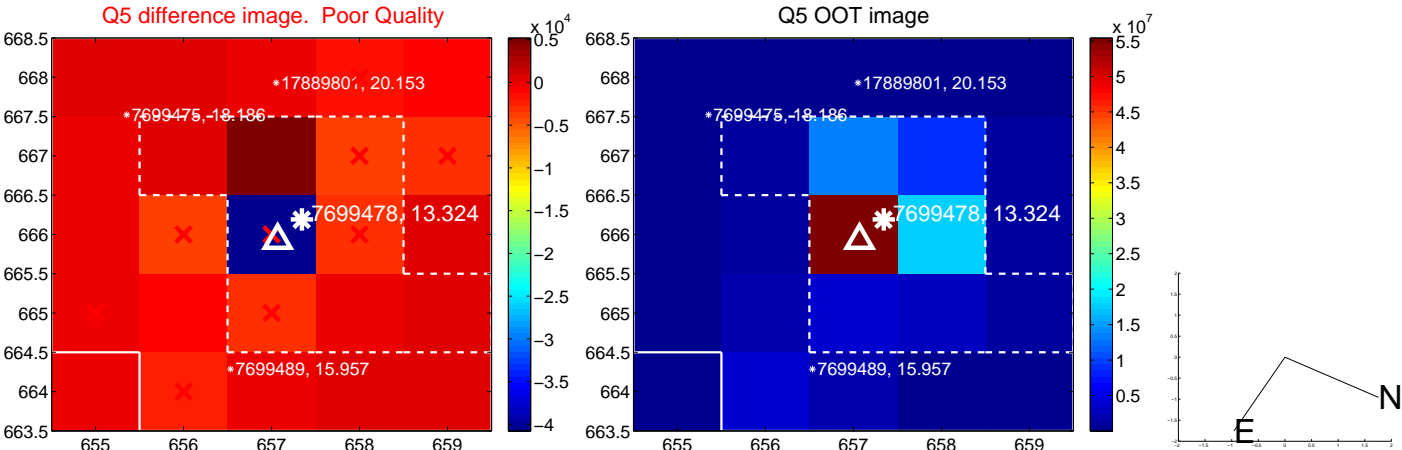


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

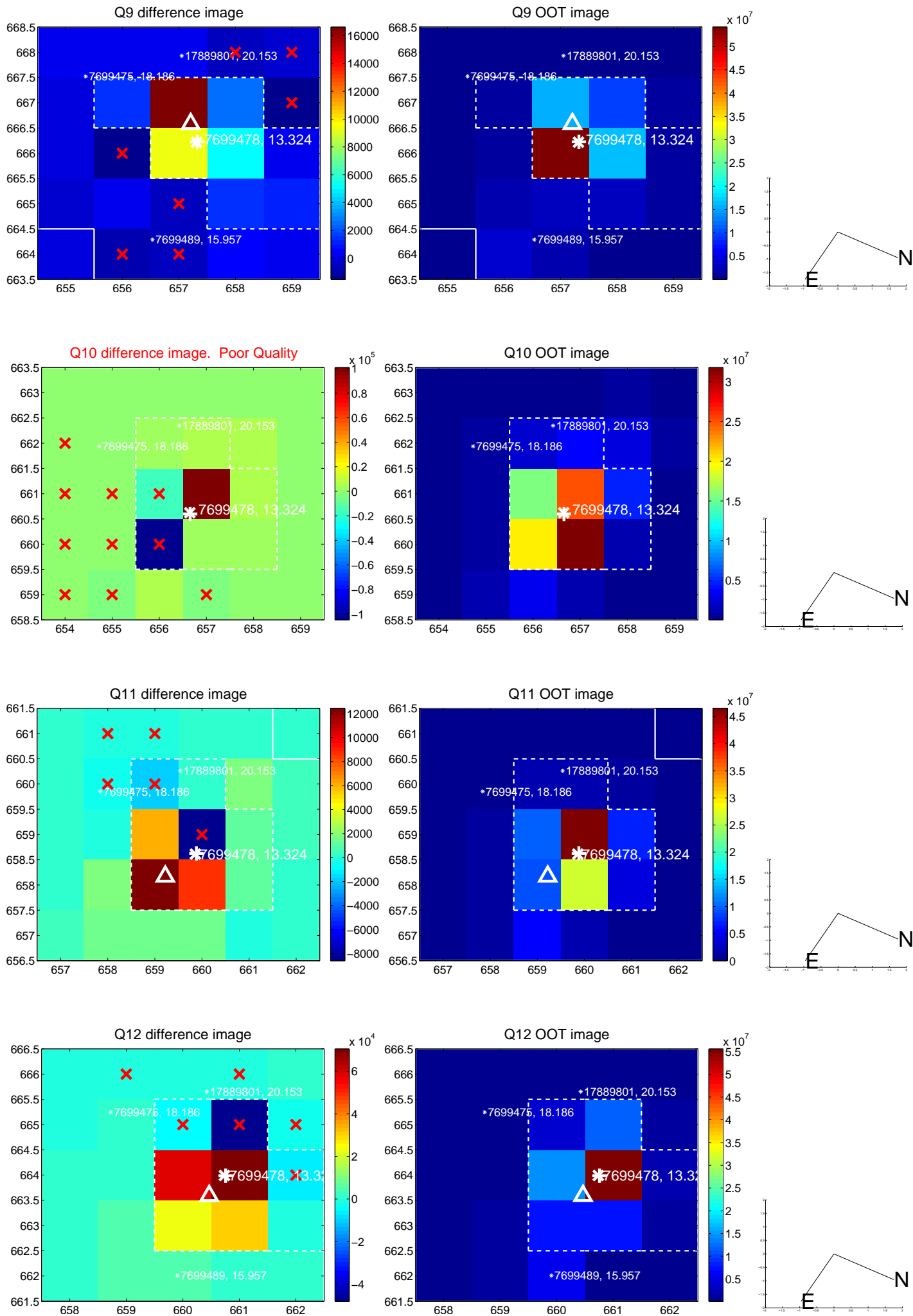
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



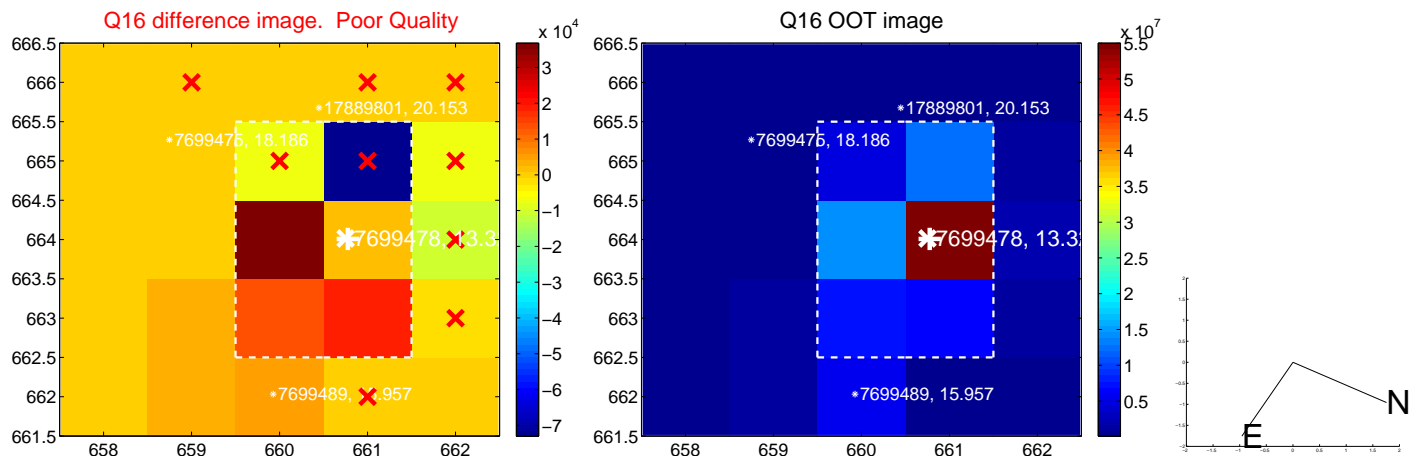
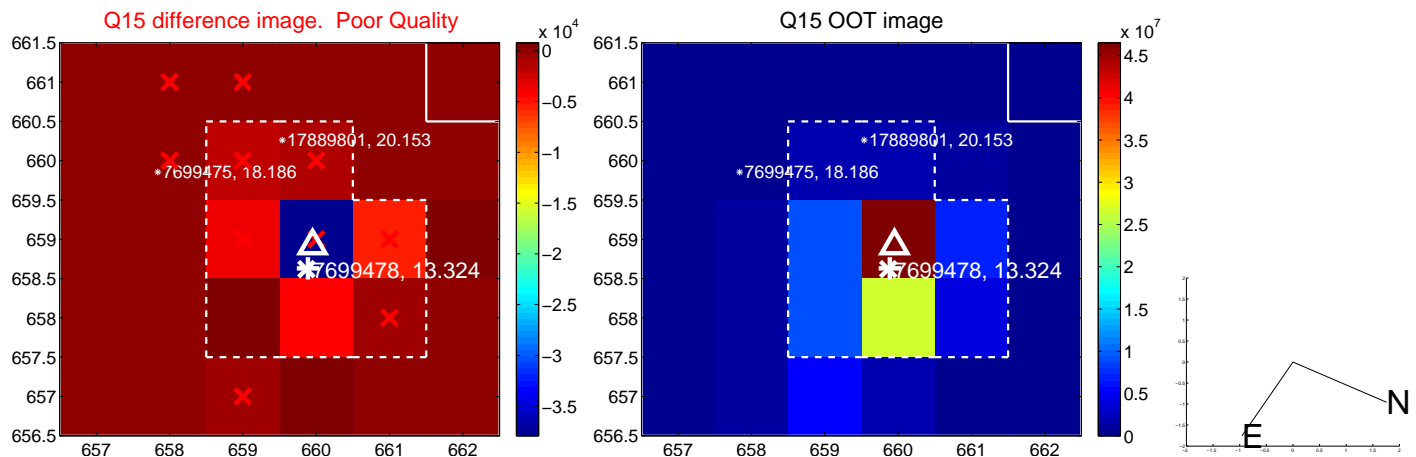
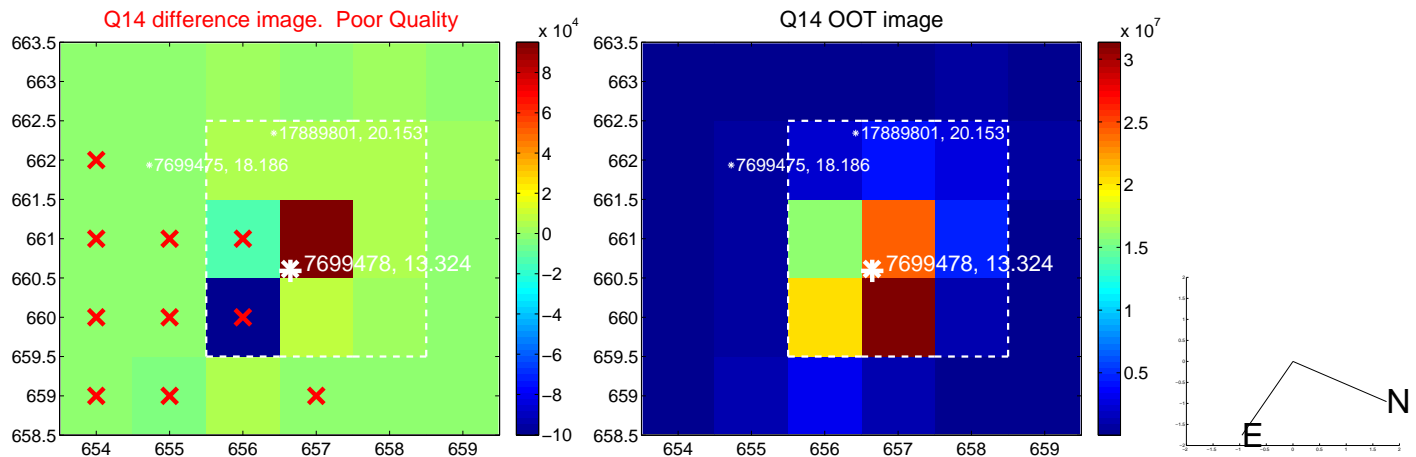
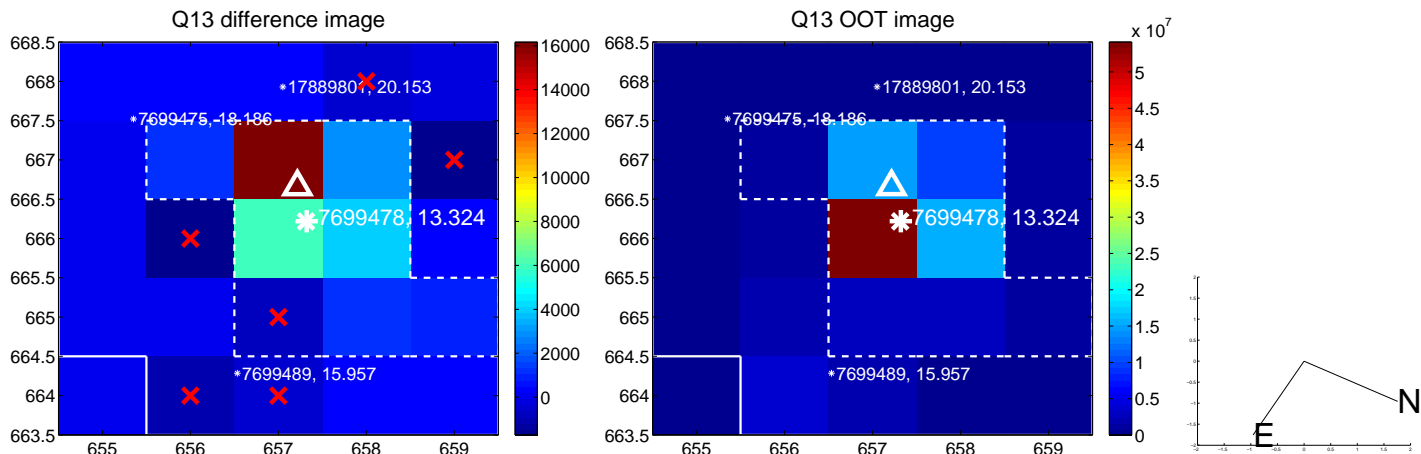
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



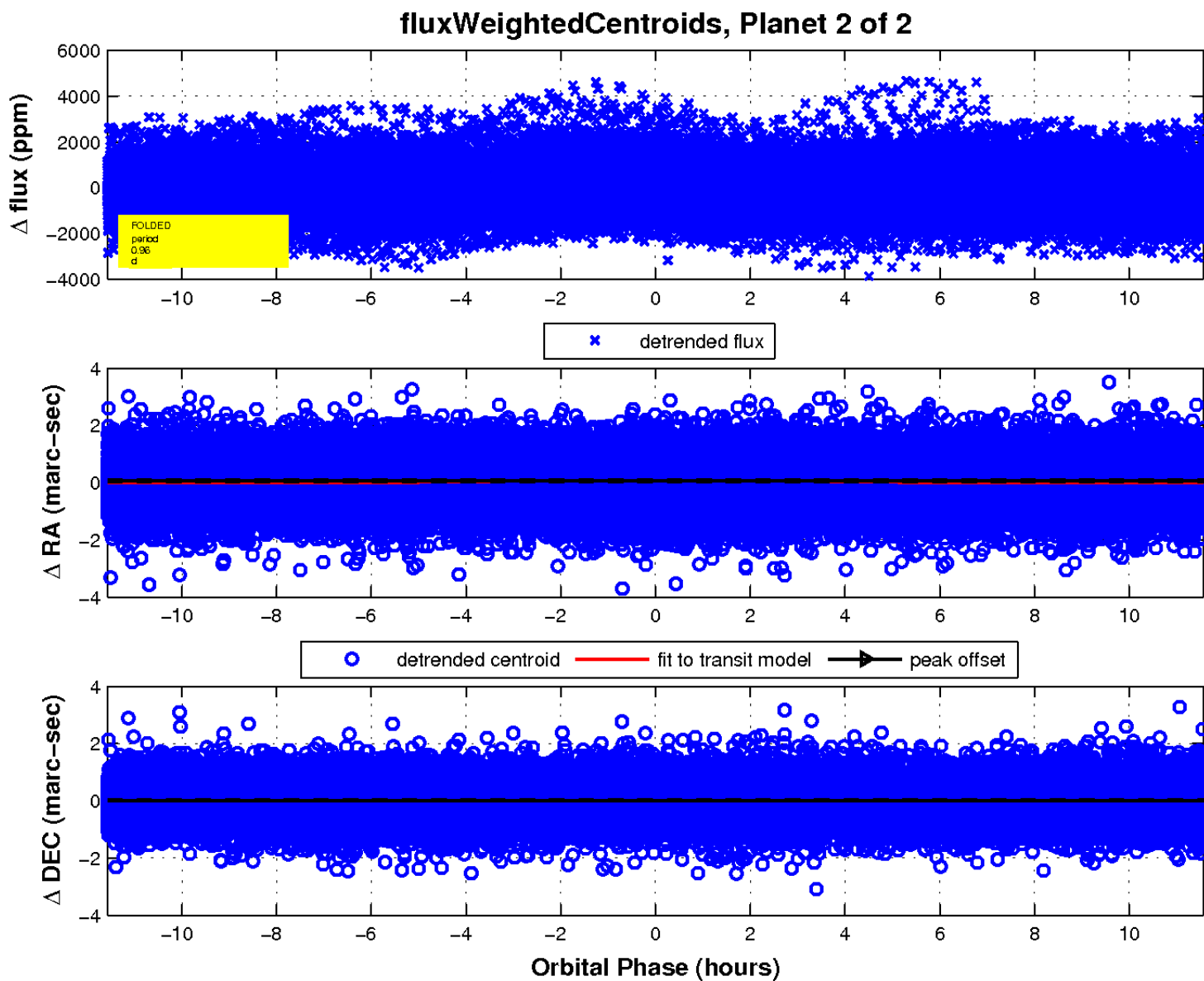
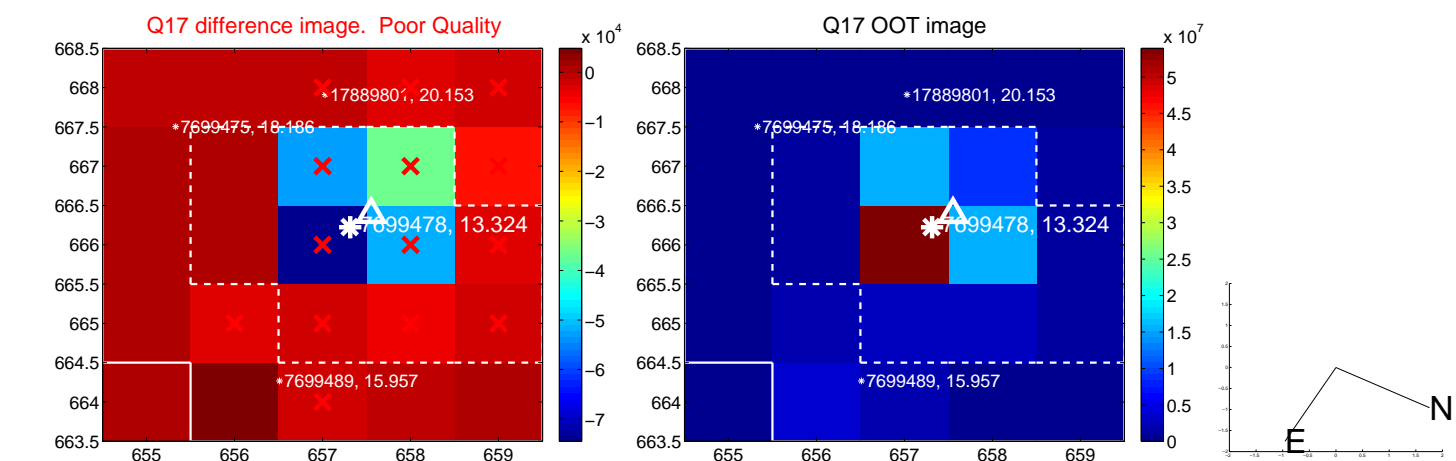
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

