

KIC 010001145

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})
010001145-01	OBS	No	1.285260	132.442160	57.2	4.935	10.0	9.7	2.32	7865	1.81	24077.39
010001145-02	OBS	No	1.285378	131.720707	74.5	6.310	9.6	11.7	2.32	7865	2.06	24074.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010001145-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
010001145-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_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.

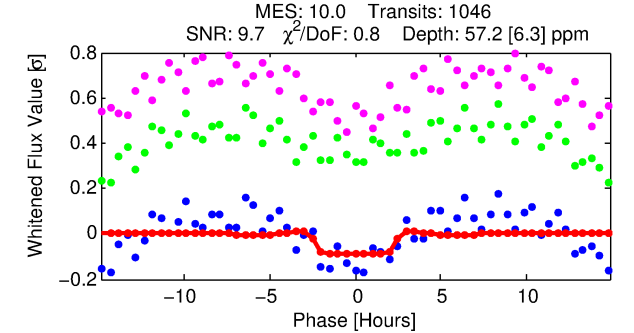
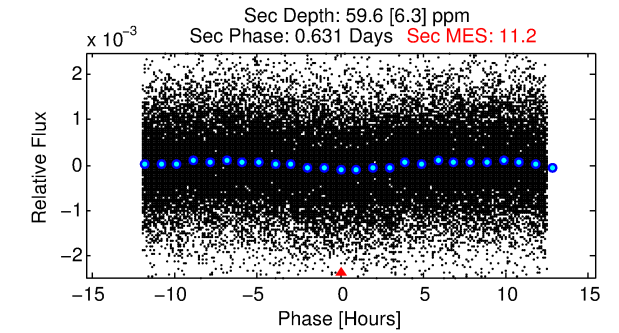
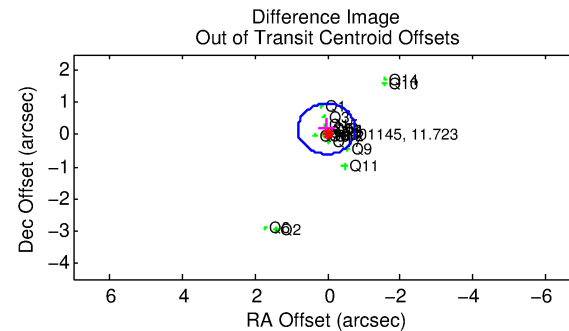
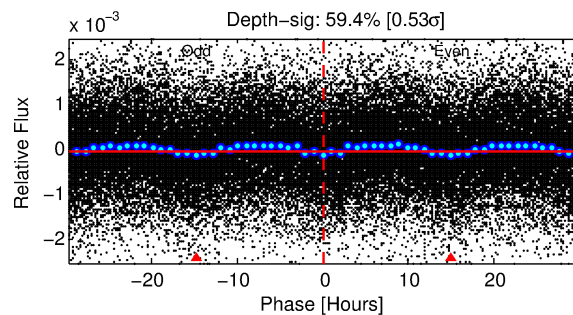
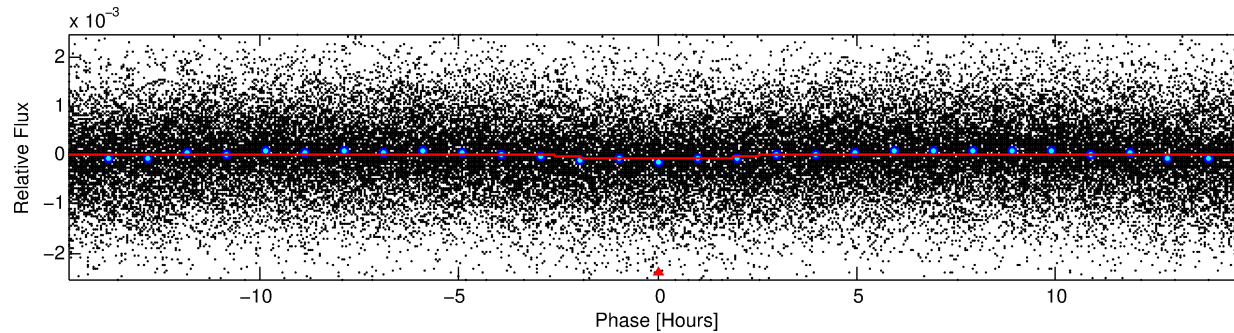
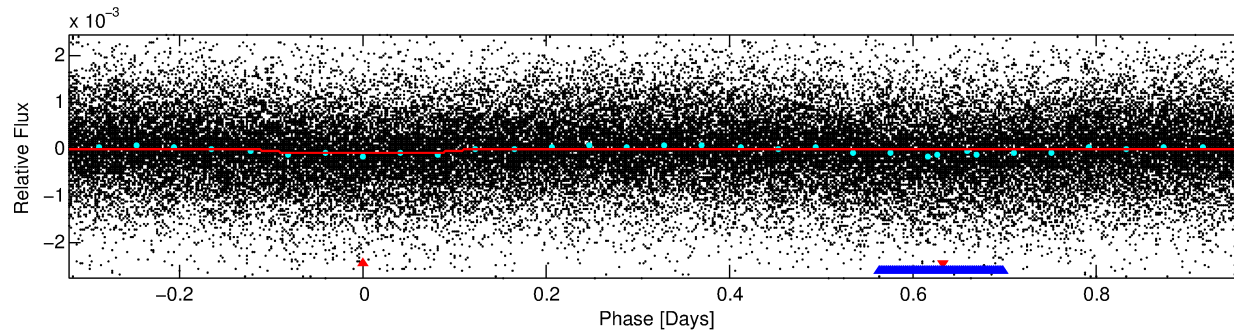
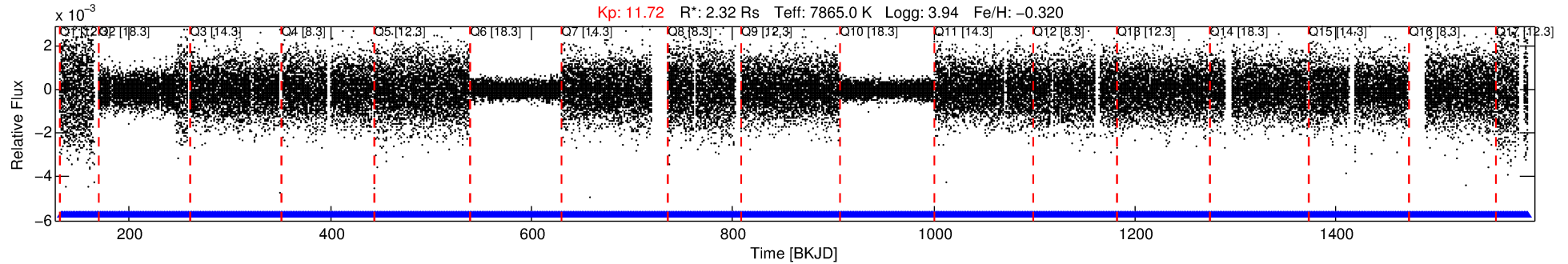
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010001145-01

No Significant Match Found

DV One-Page Summary

KIC: 10001145 Candidate: 1 of 2 Period: 1.285 d



DV Fit Results:

Period = 1.28526 [0.00002] d
Epoch = 132.4422 [0.0055] BKJD
Rp/R* = 0.0072 [0.0051]
a/R* = 1.89 [5.27]
b = 0.49 [6.08]
Seff = 24077.39 [12508.85]
Teq = 3176 [413] K
Rp = 1.81 [1.43] Re
a = 0.0277 [0.0086] AU
Ag = 7.66 [11.63] [0.57 σ]
Teffp = 8171 [2952] K [1.68 σ]

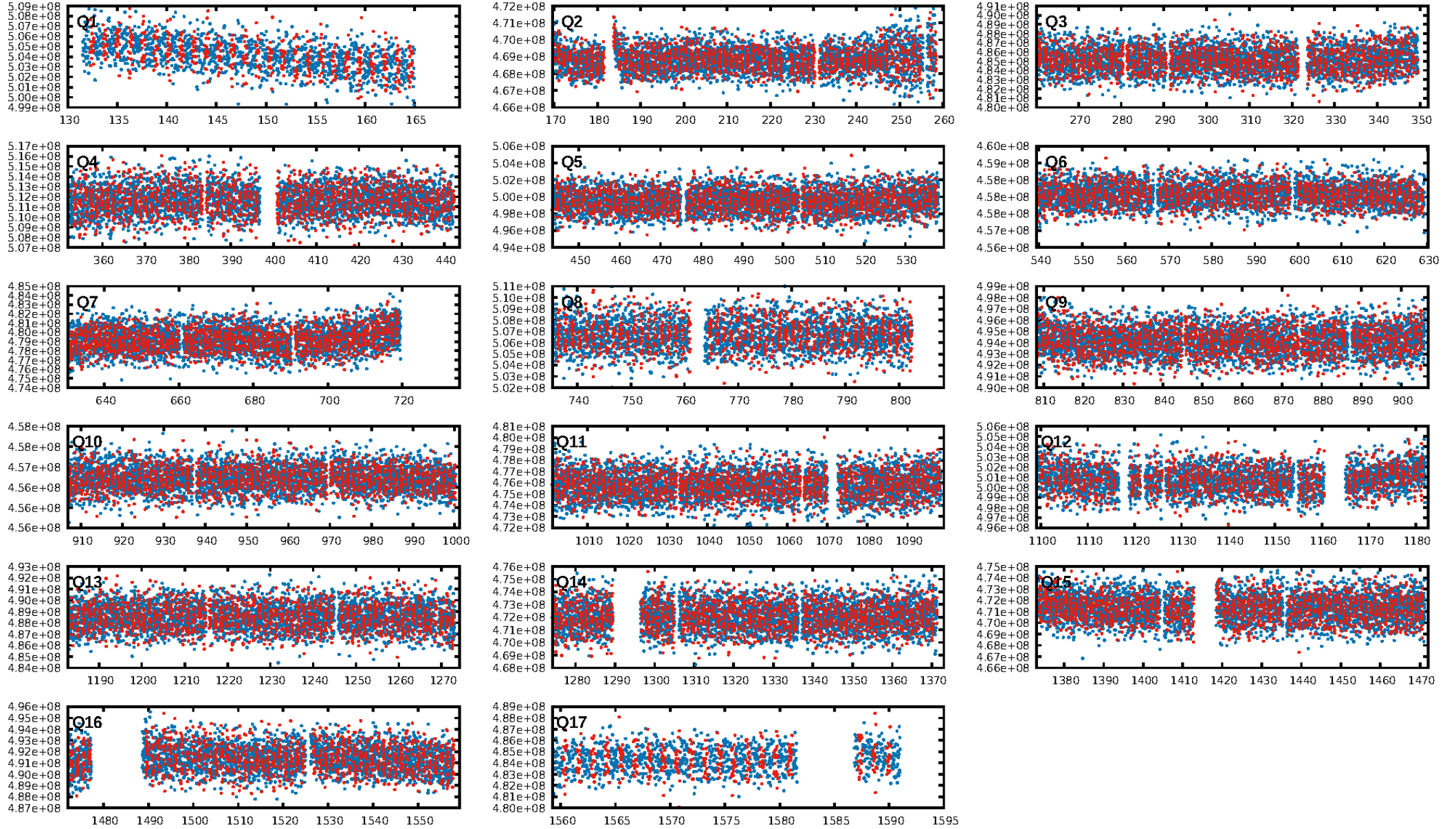
DV Diagnostic Results:

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 [1000/1000]
GhostDiagnostic-chr: 3.412
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.181 arcsec [0.69 σ]
KicOffset-rm: 0.155 arcsec [1.28 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.88 [15/17]
DiffImageOverlap-fno: 1.00 [17/17]

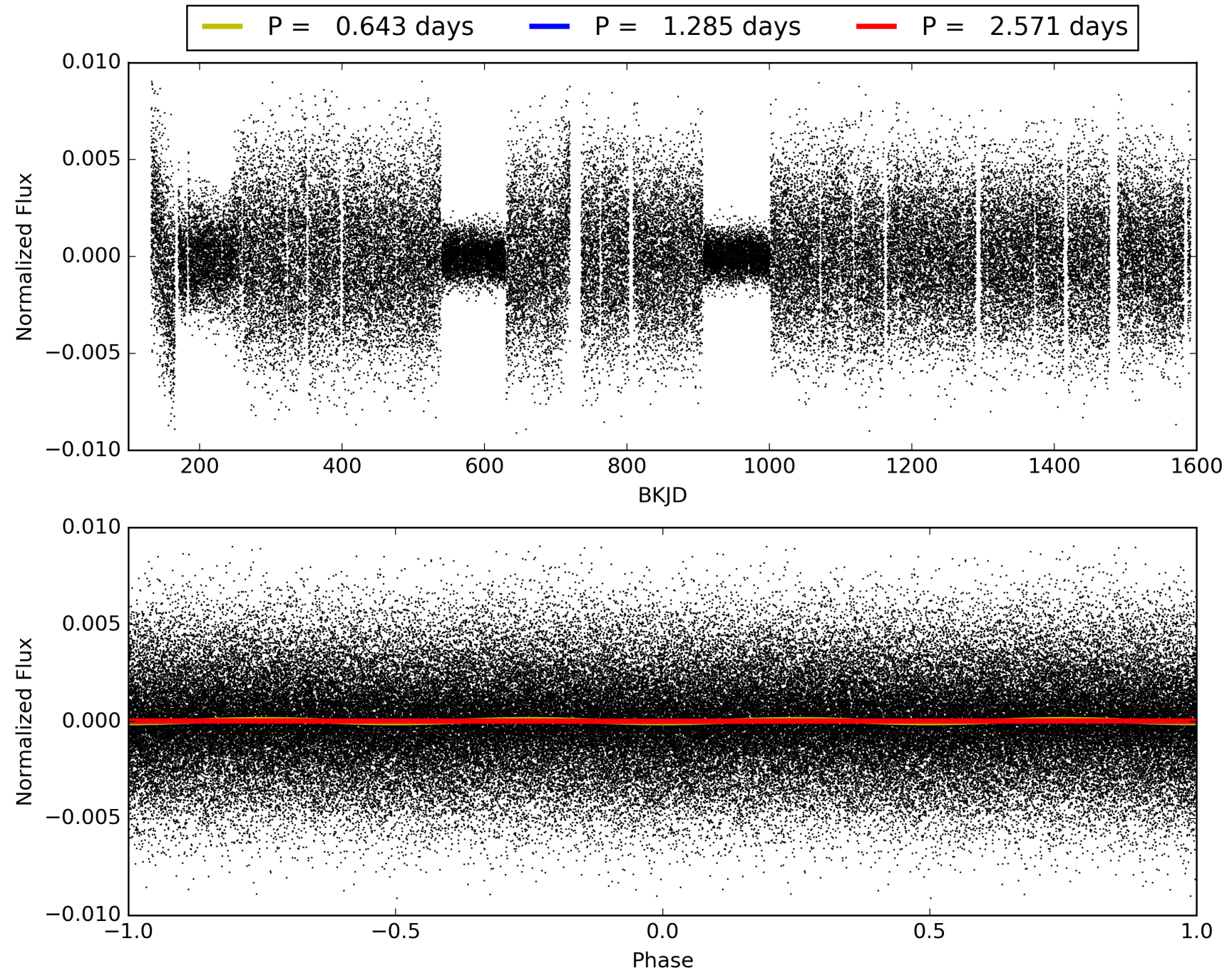
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:57:04 Z

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

TCE 010001145-01, PDC Light Curves

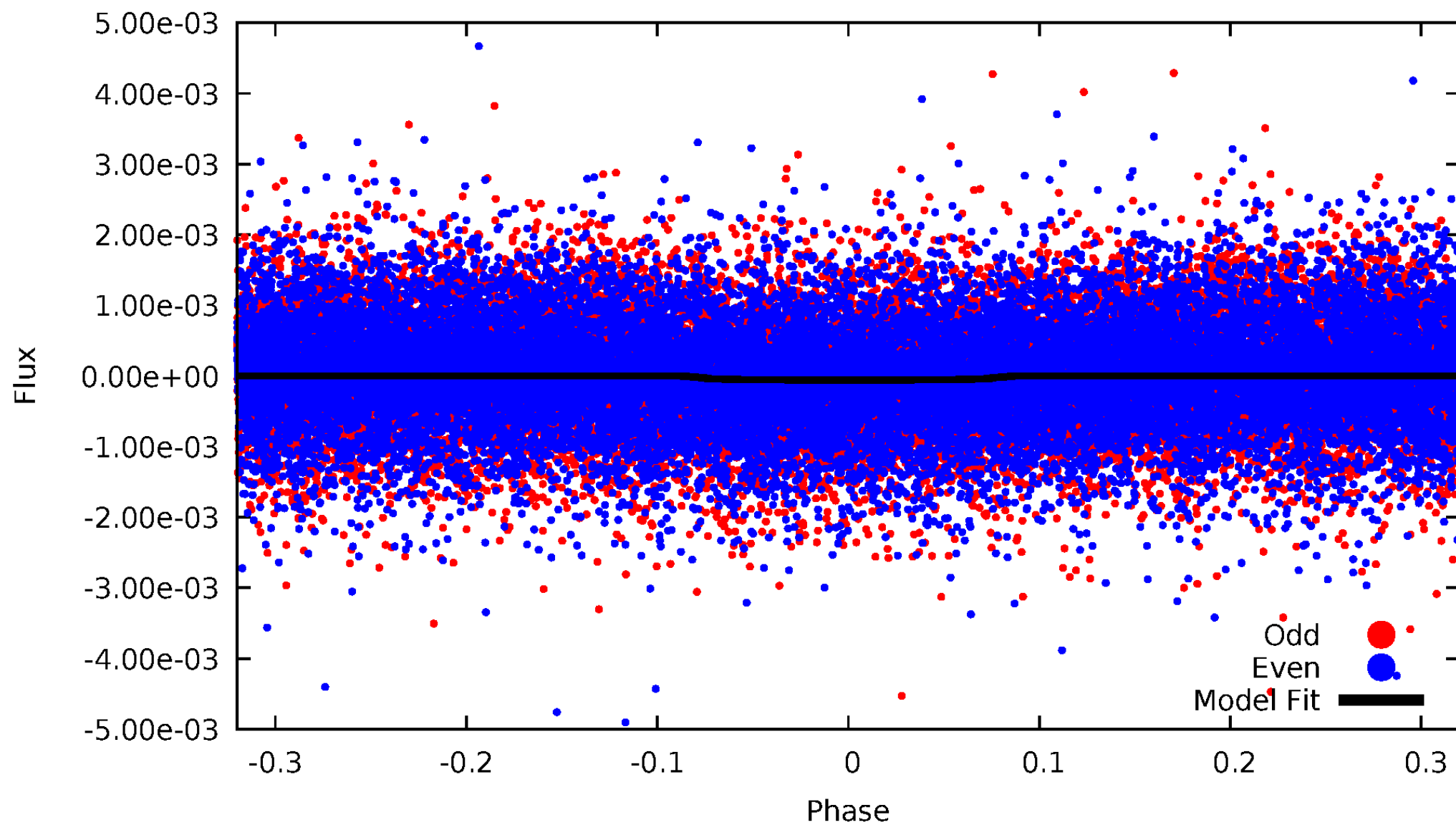


TCE 010001145-01



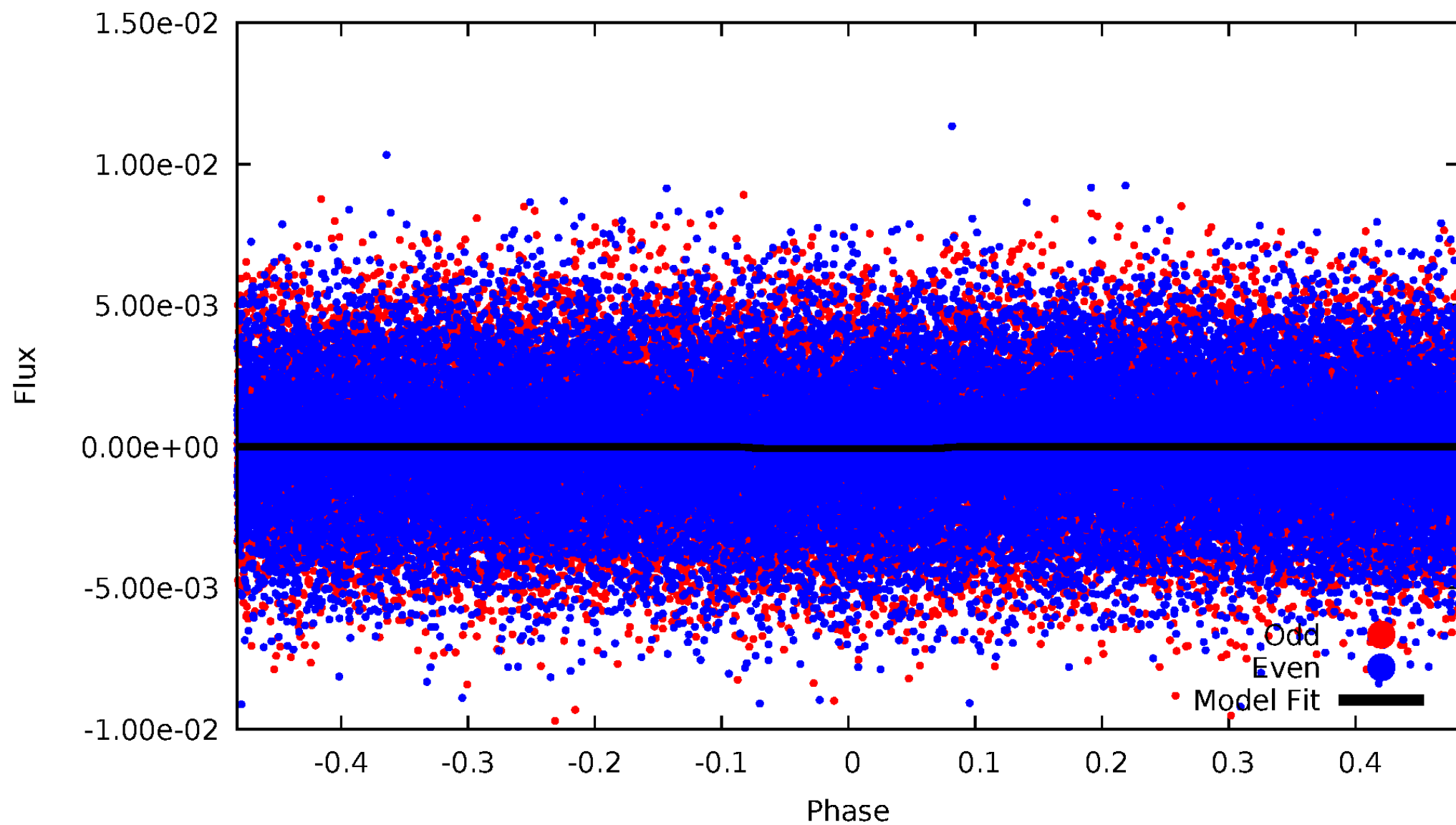
DV Odd/Even

TCE 010001145-01



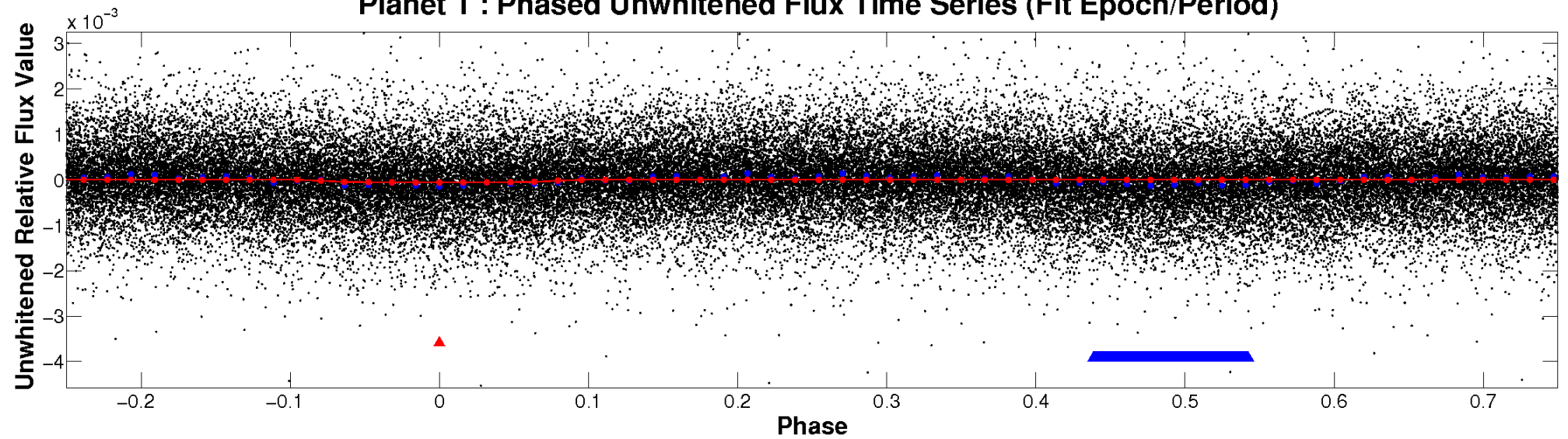
ALT Odd/Even

TCE 010001145-01

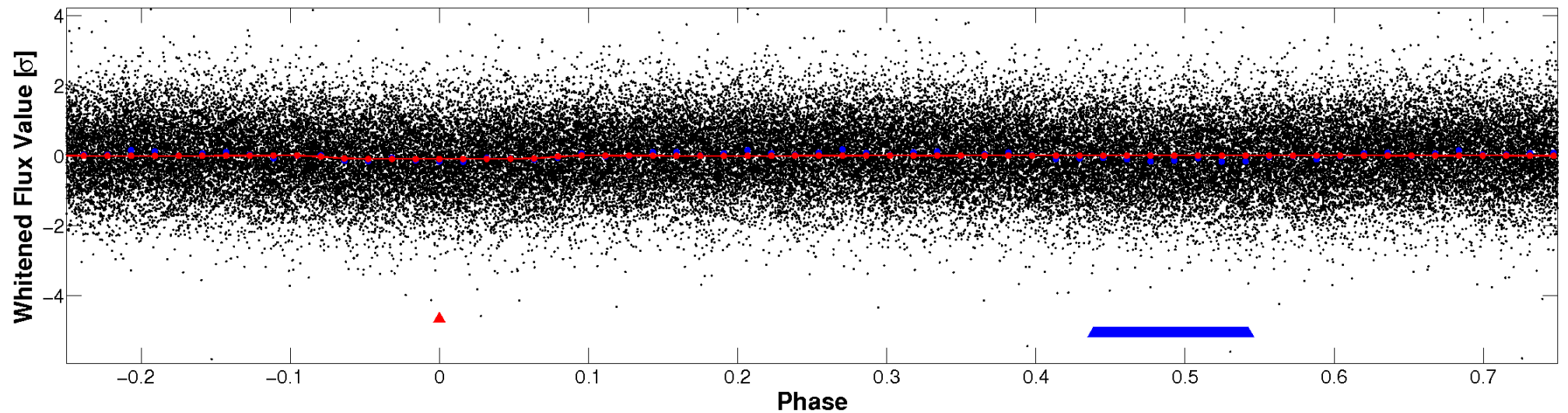


Non-Whitened Vs. Whitened Light Curve

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

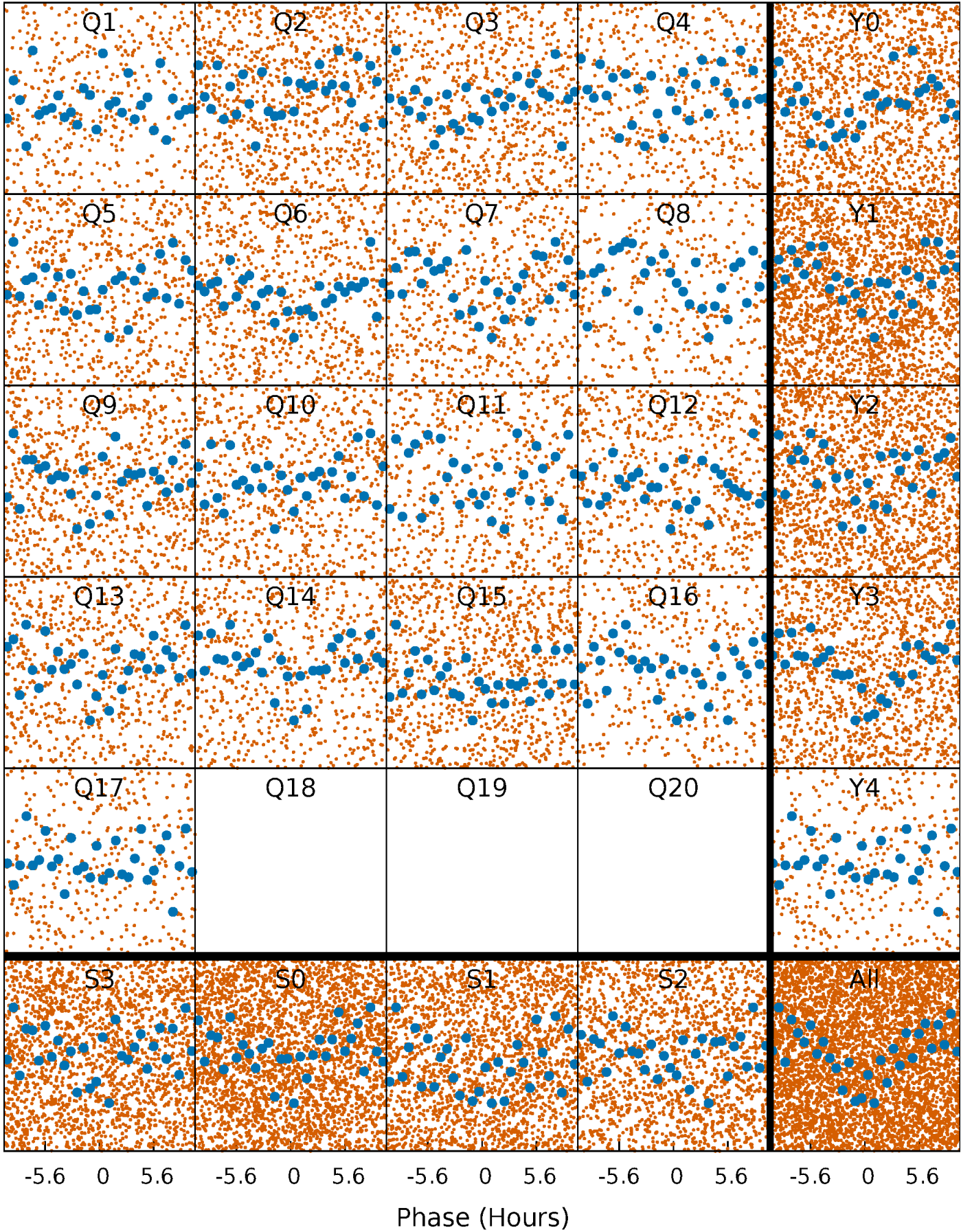


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



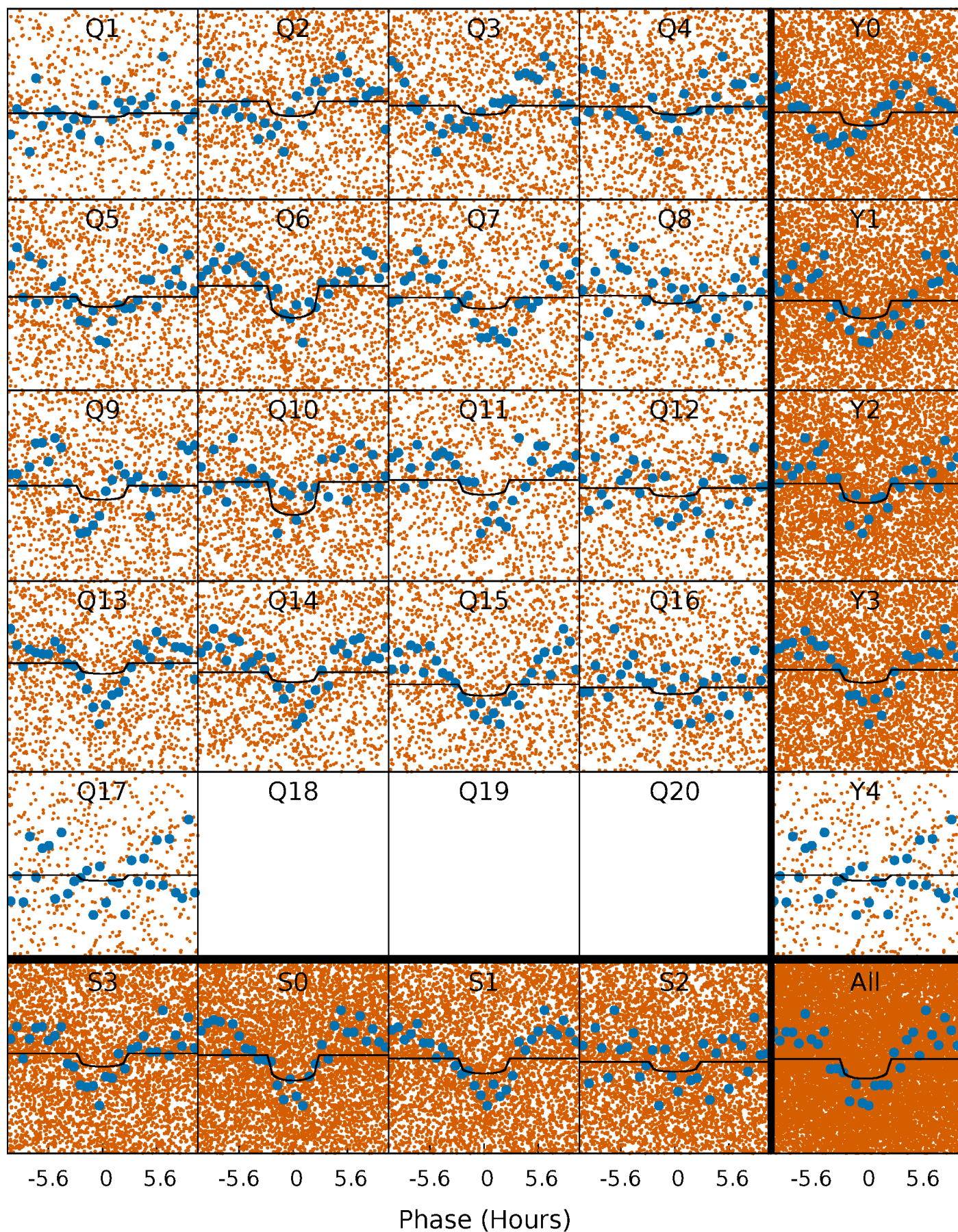
PDC Quarter-Phased Transit Curves

TCE 010001145-01 P= 1.285260 Days $T_0=132.442160$ (BKJD)



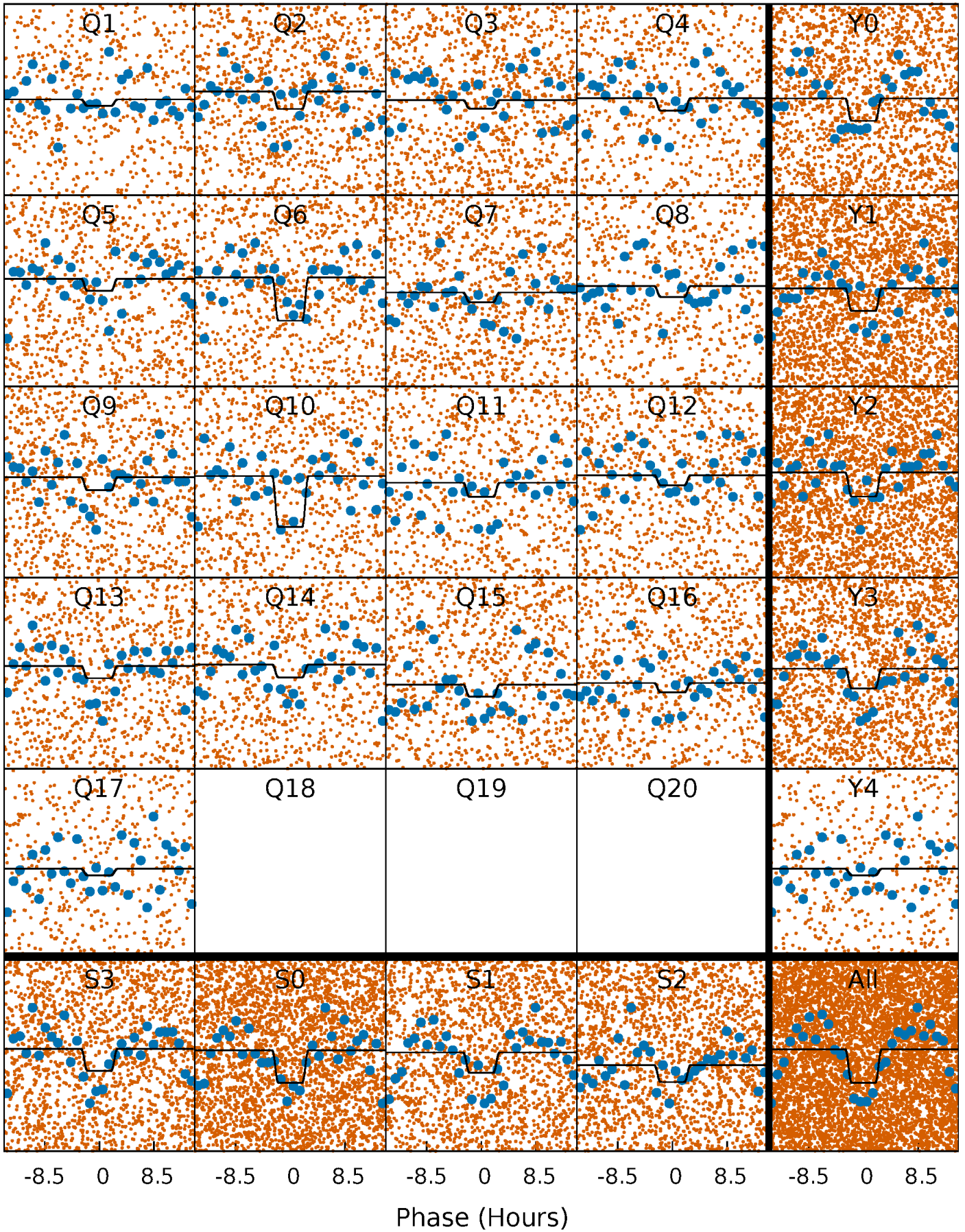
DV Quarter-Phased Transit Curves

TCE 010001145-01 P= 1.285260 Days $T_0=132.442160$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

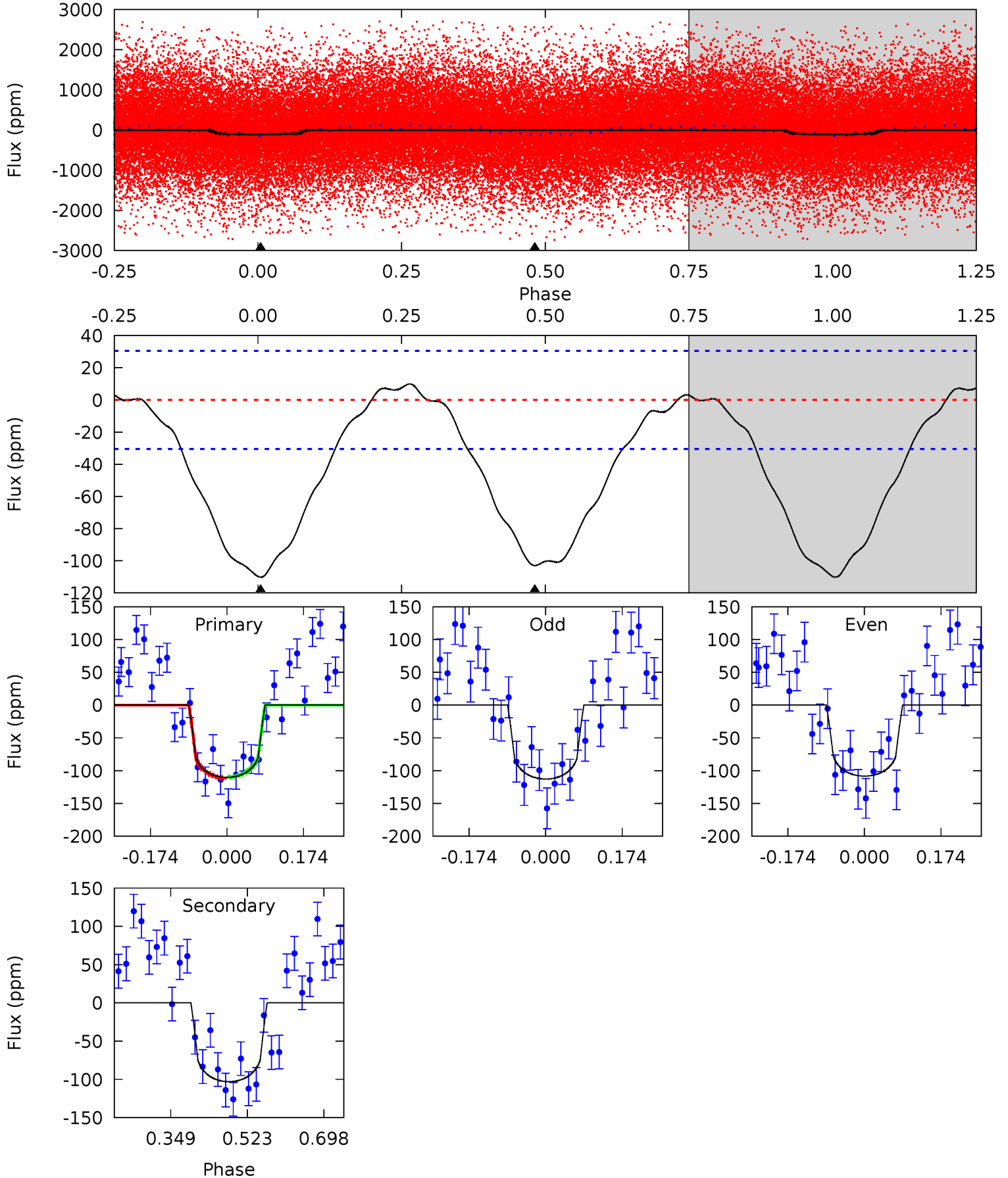
TCE 010001145-01 P= 1.285324 Days $T_0=132.391884$ (BKJD)



DV Model-Shift Uniqueness Test

010001145-01, P = 1.285260 Days, E = 131.156900 Days

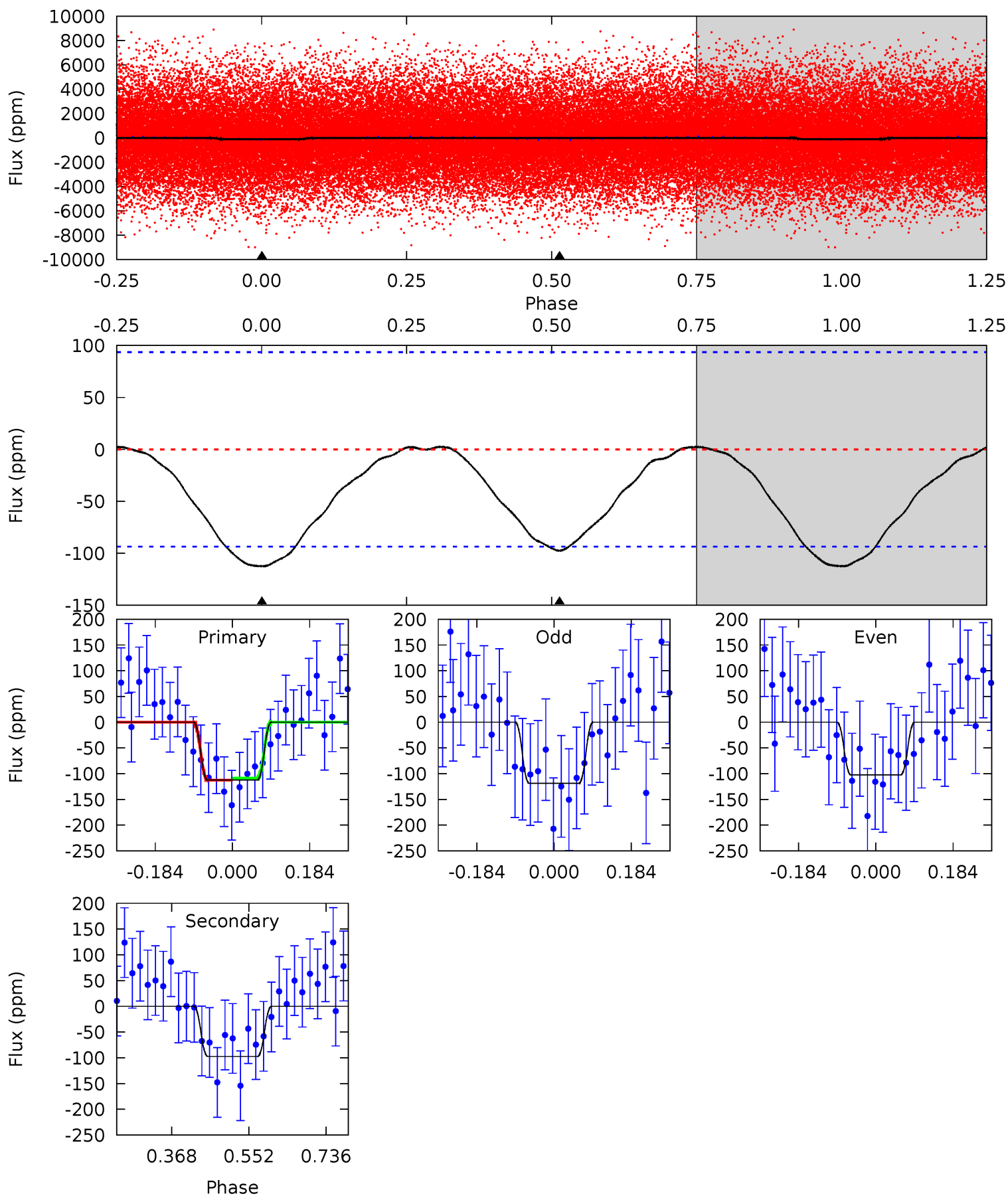
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.1	15.0	0	0	4.45	1.36	0.99	16.1	16.1	15.0	15.0	0.33	1.11	0.08	0.12



Alt Model-Shift Uniqueness Test

010001145-01, P = 1.285324 Days, E = 131.106560 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.33	4.62	0	0	4.44	1.33	0.22	5.33	5.33	4.62	4.62	0.39	1.17	0.02	0.10



Stellar Parameters For KIC 010001145

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7865^{+216}_{-325}	$3.941^{+0.287}_{-0.123}$	$-0.320^{+0.200}_{-0.350}$	$2.322^{+0.447}_{-0.767}$	$1.716^{+0.182}_{-0.364}$	$0.193^{+0.373}_{-0.071}$
	+3%/-4%	+7%/-3%	+62%/-109%	+19%/-33%	+11%/-21%	+193%/-37%
Source	KIC0	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 010001145-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-103 ± 7	$1.79^{+1.33}_{-0.99}$	4369^{+288}_{-372}	9439^{+9885}_{-2695}	13^{+50}_{-9}
Alt.	-97 ± 21	$2.18^{+1.32}_{-1.14}$	4354^{+307}_{-392}	8157^{+5757}_{-2005}	$8.726^{+26.950}_{-5.378}$

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

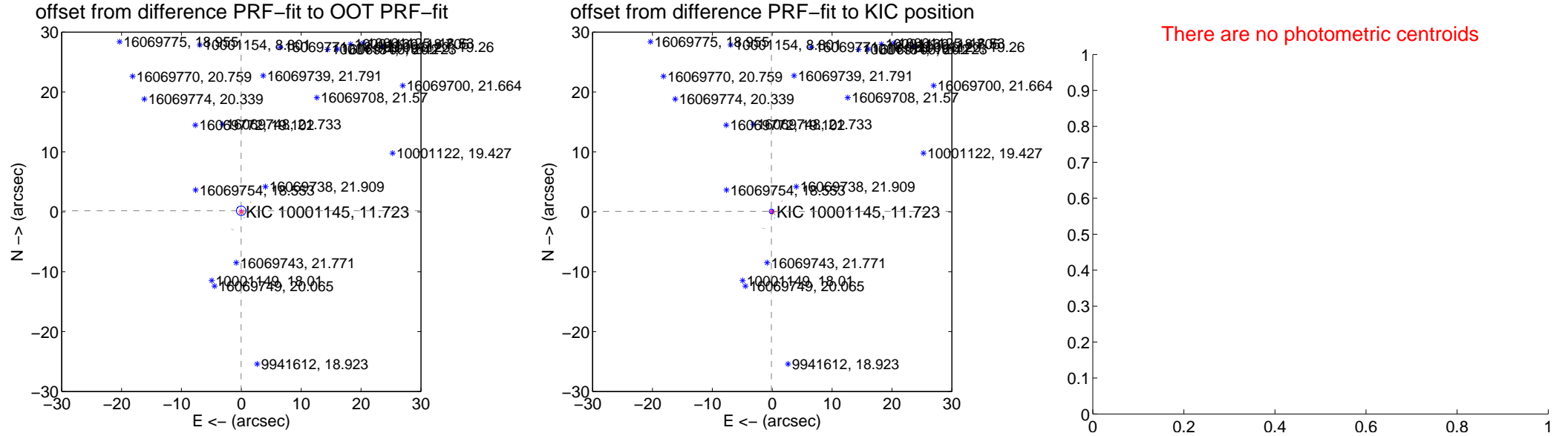
DV Centroid Data

Supplemental centroid analysis for 010001145-01. **Kepler magnitude: 11.72.** Transit SNR 9.69

There are 15 quarters with good PRF difference image offsets

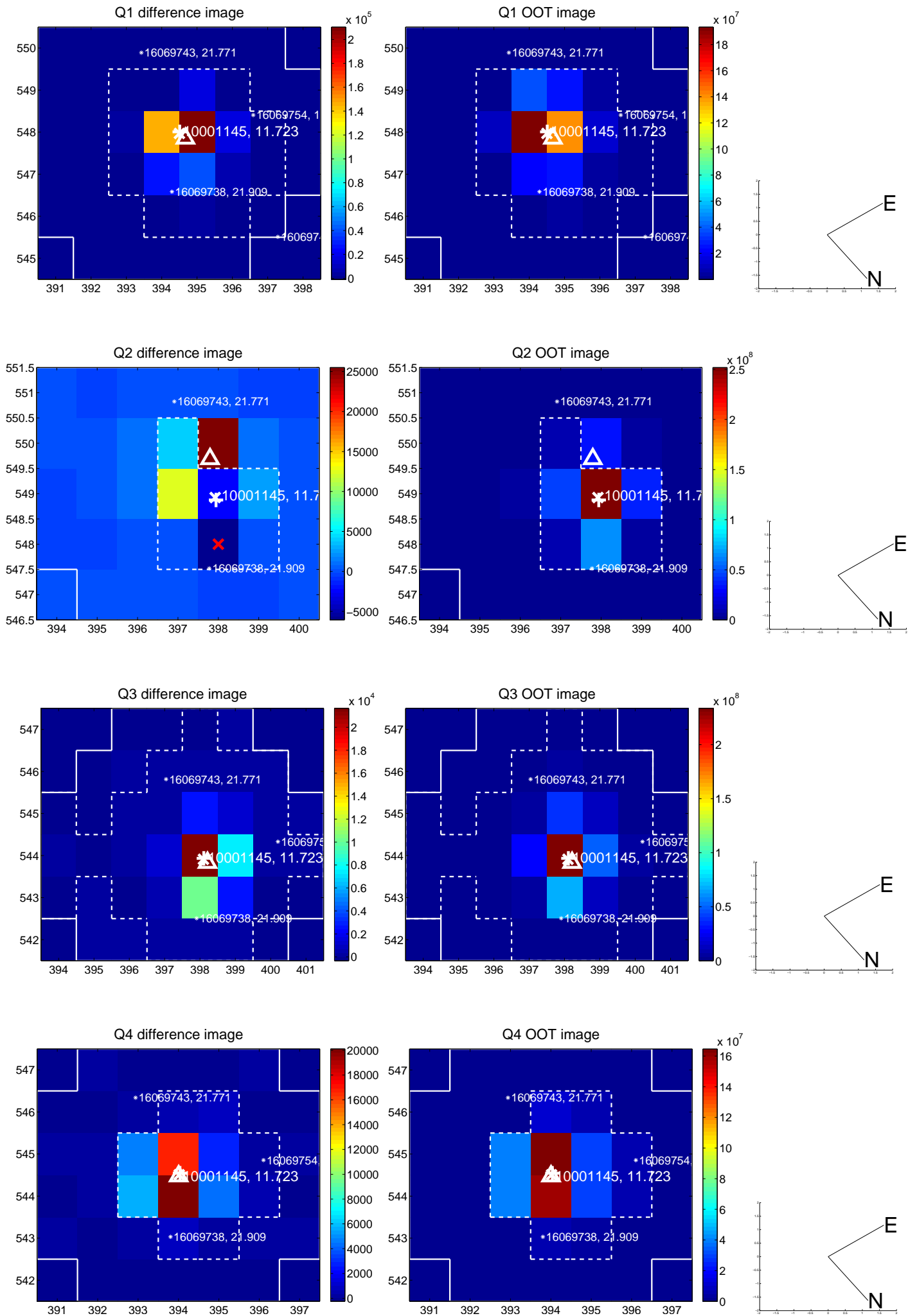
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.181 ± 0.263	0.69	0.029 ± 0.192	0.179 ± 0.290
PRF-fit source offset from KIC position	0.155 ± 0.122	1.28	0.136 ± 0.215	0.075 ± 0.289
photometric centroid source offset	—	—	—	—

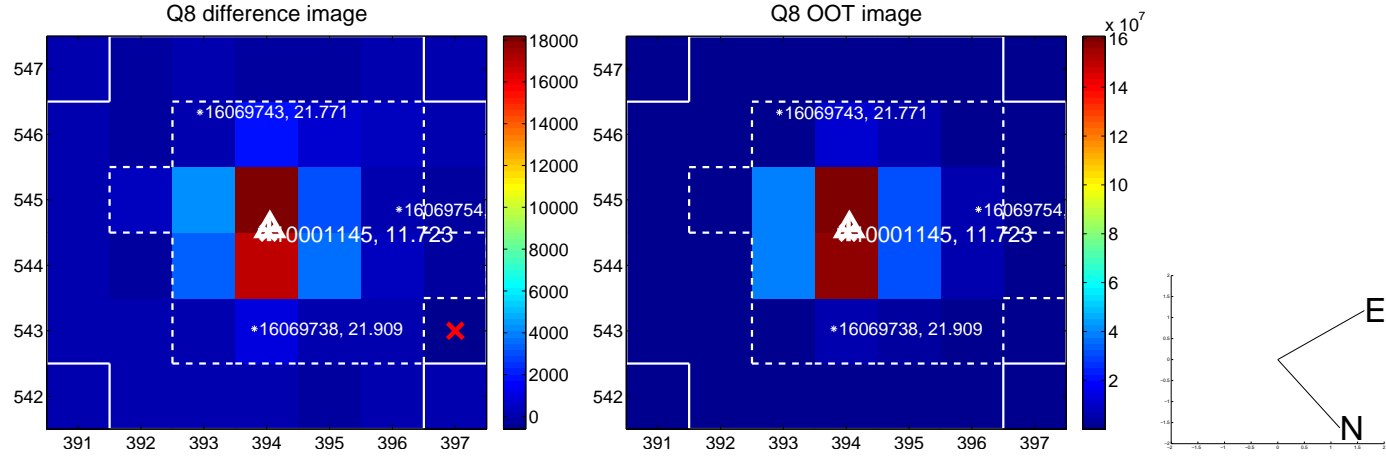
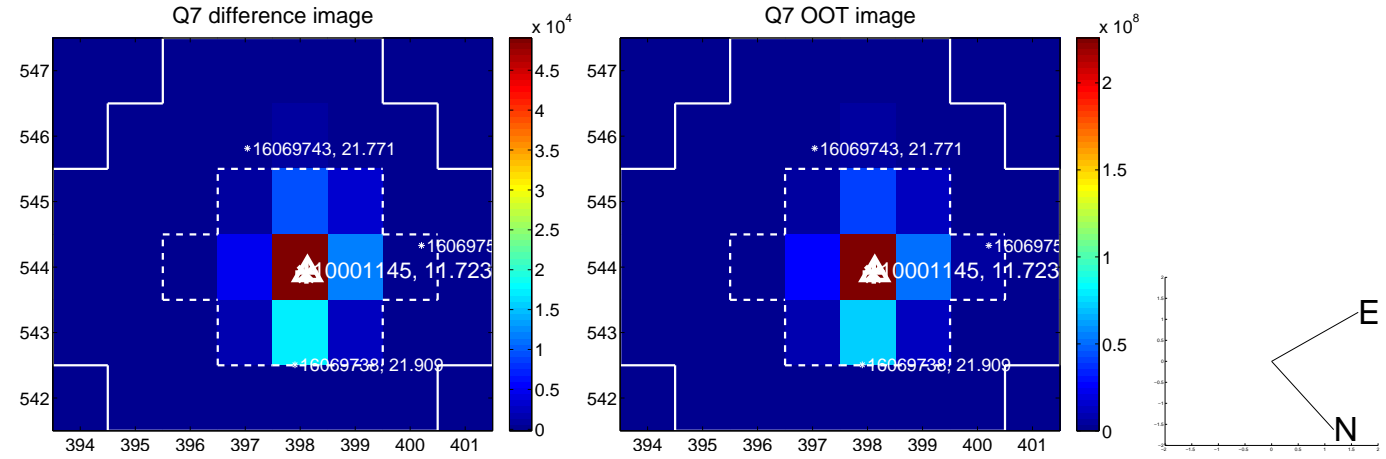
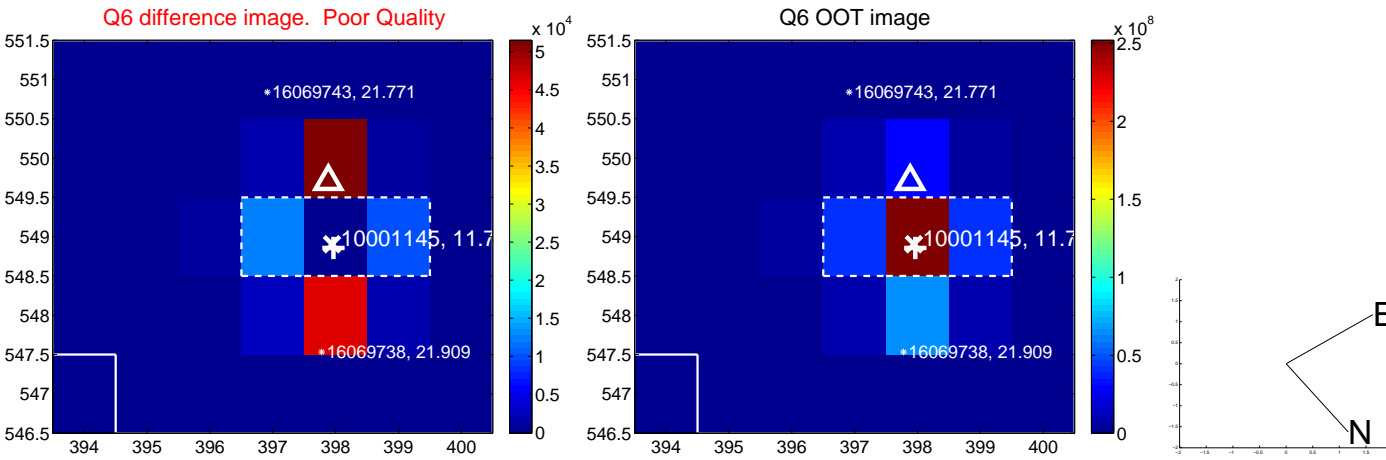
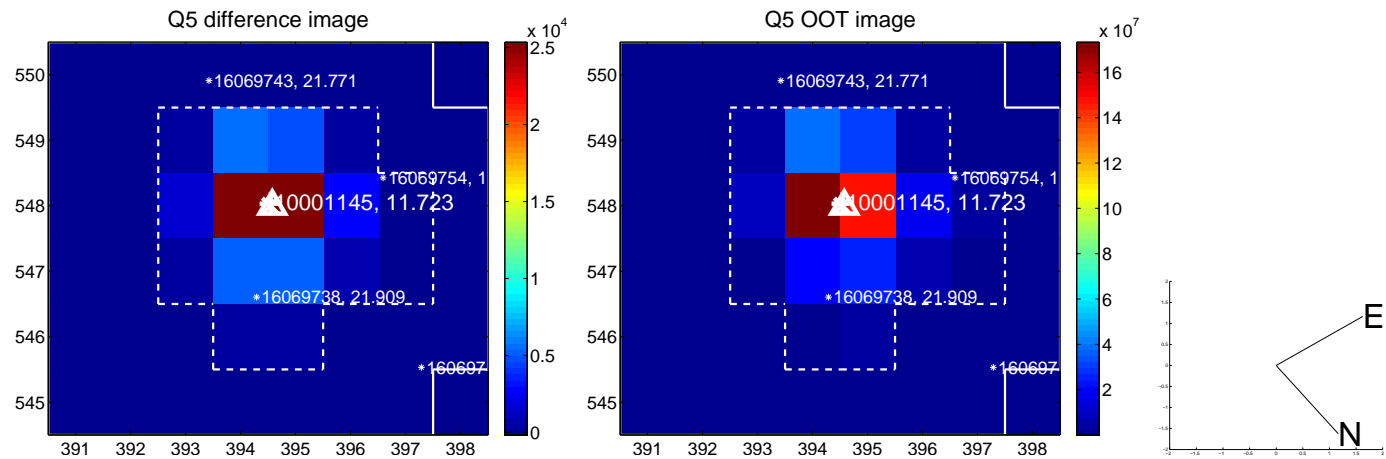


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

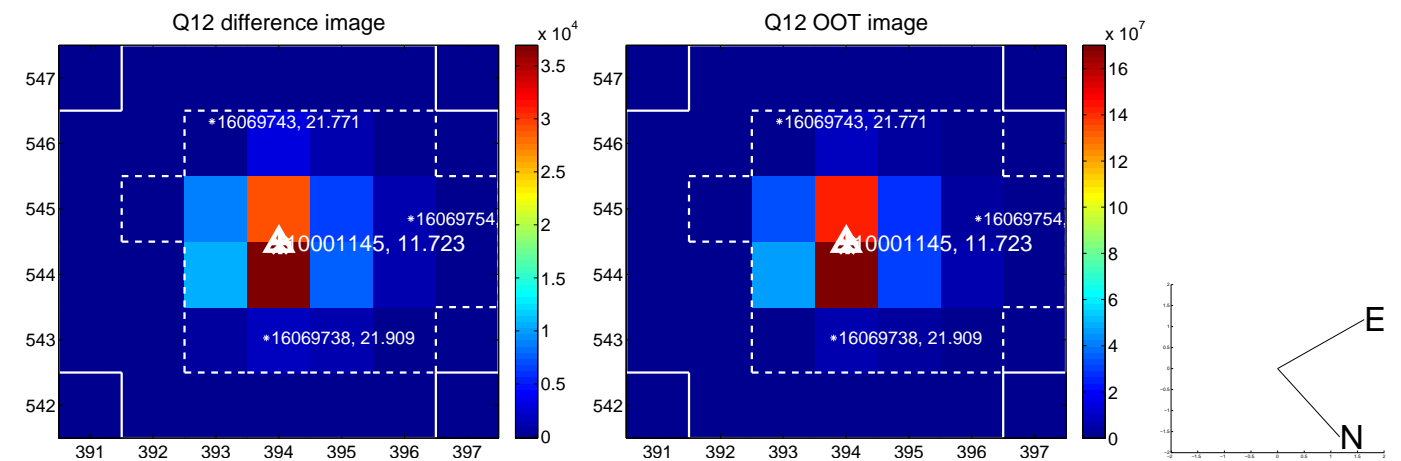
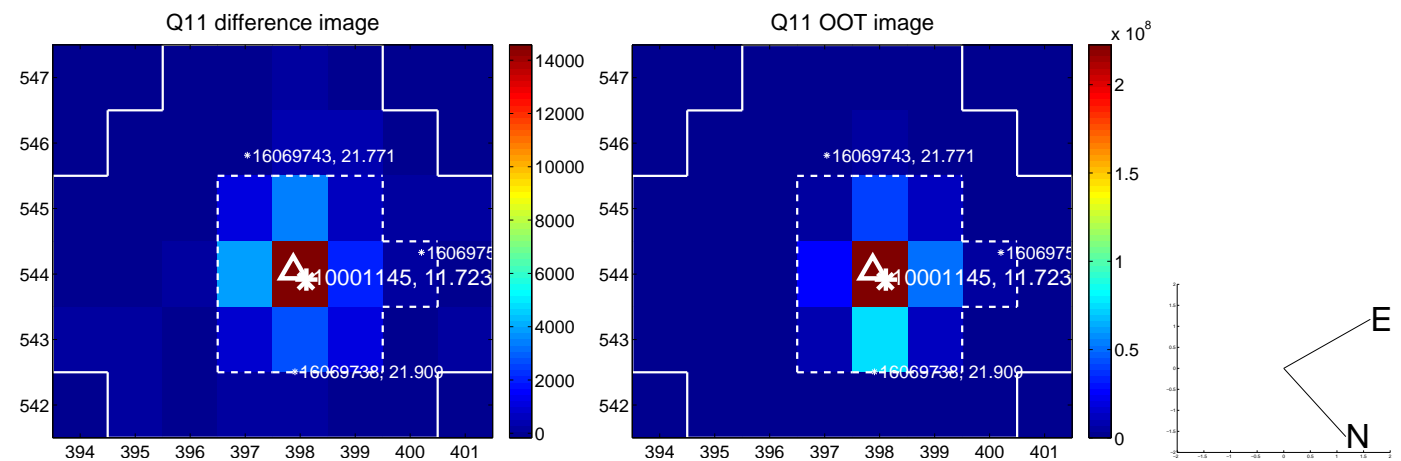
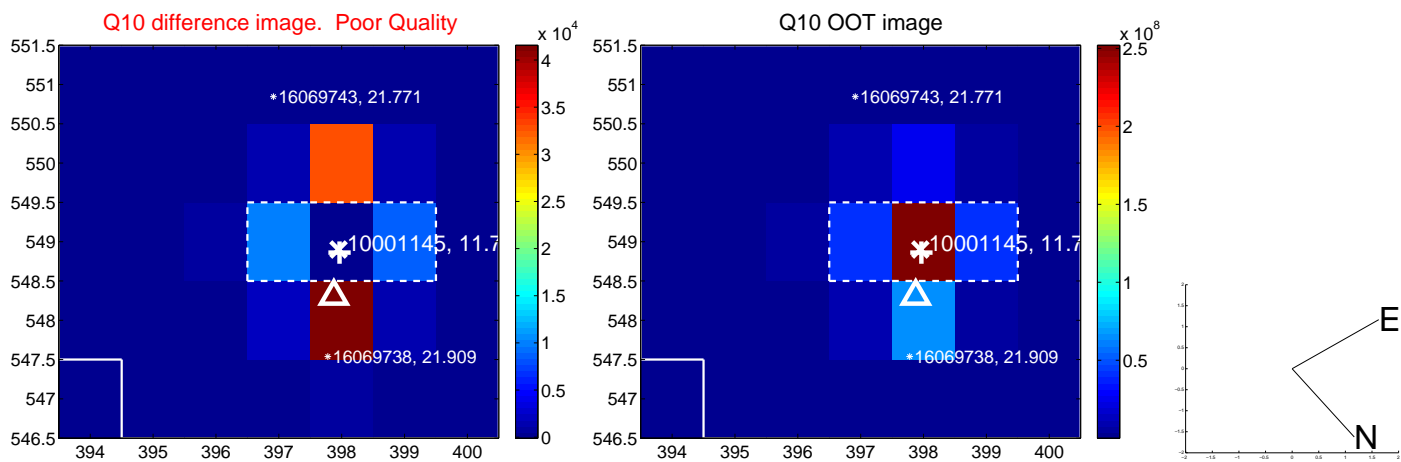
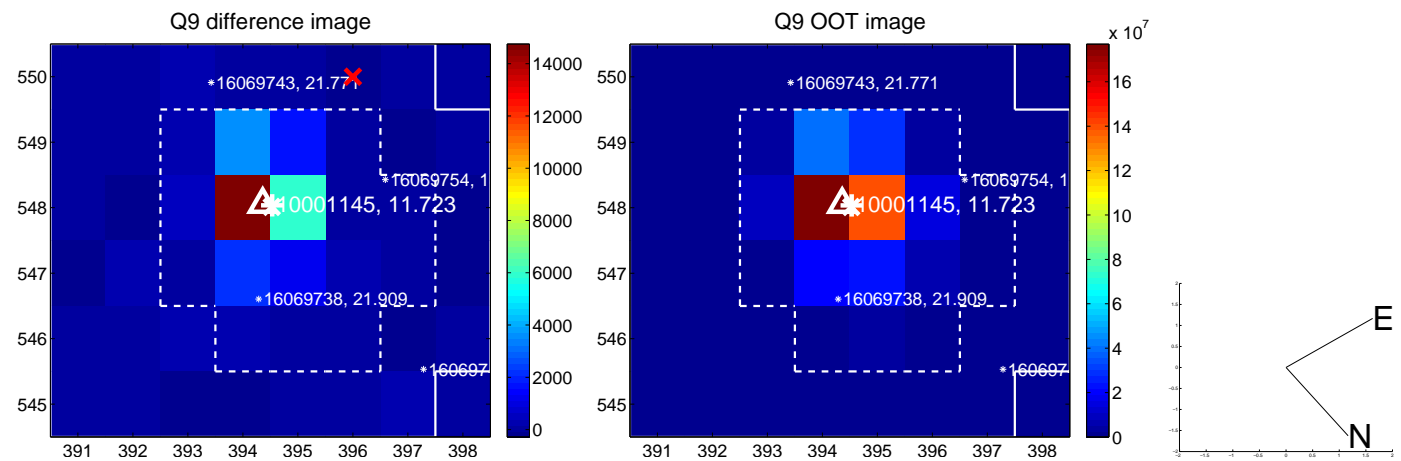
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



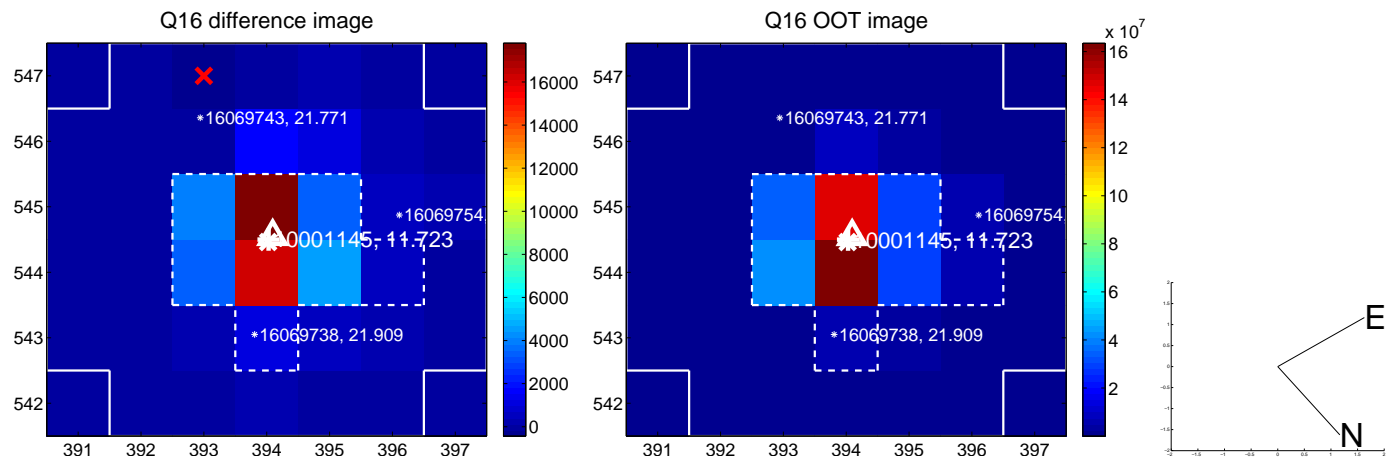
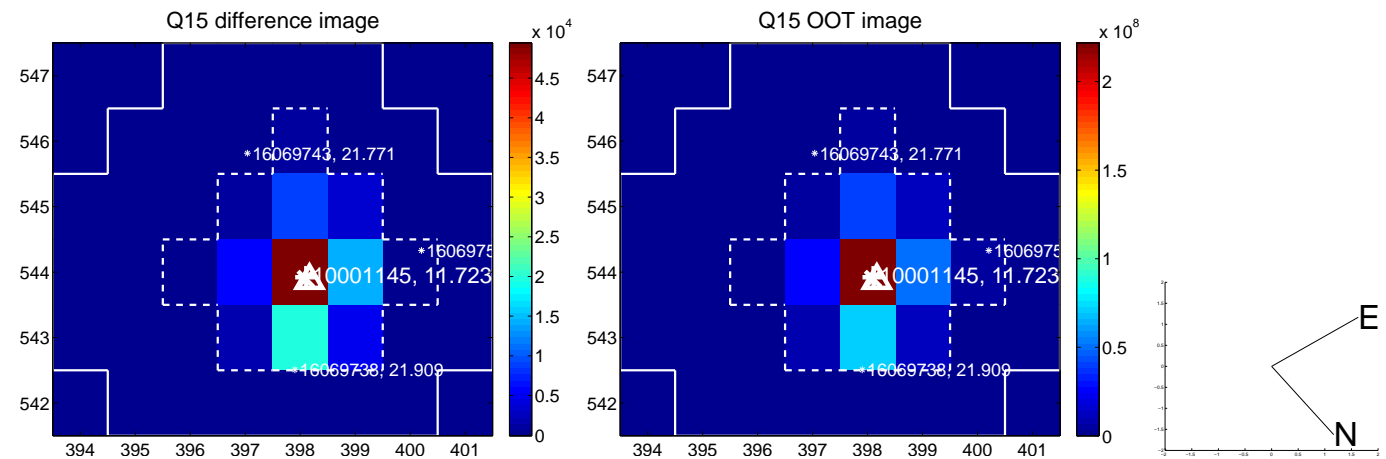
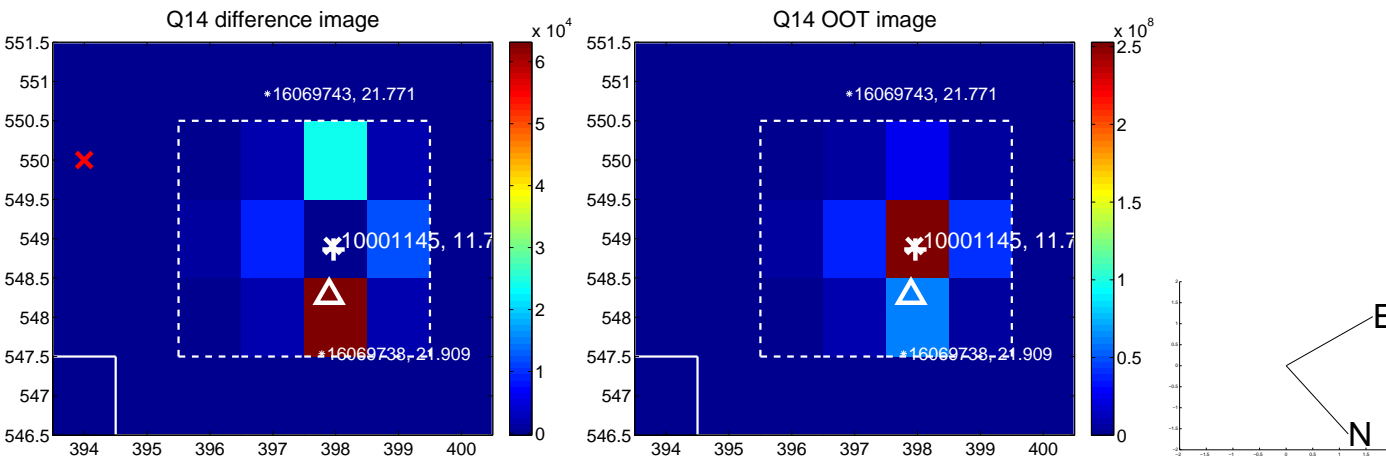
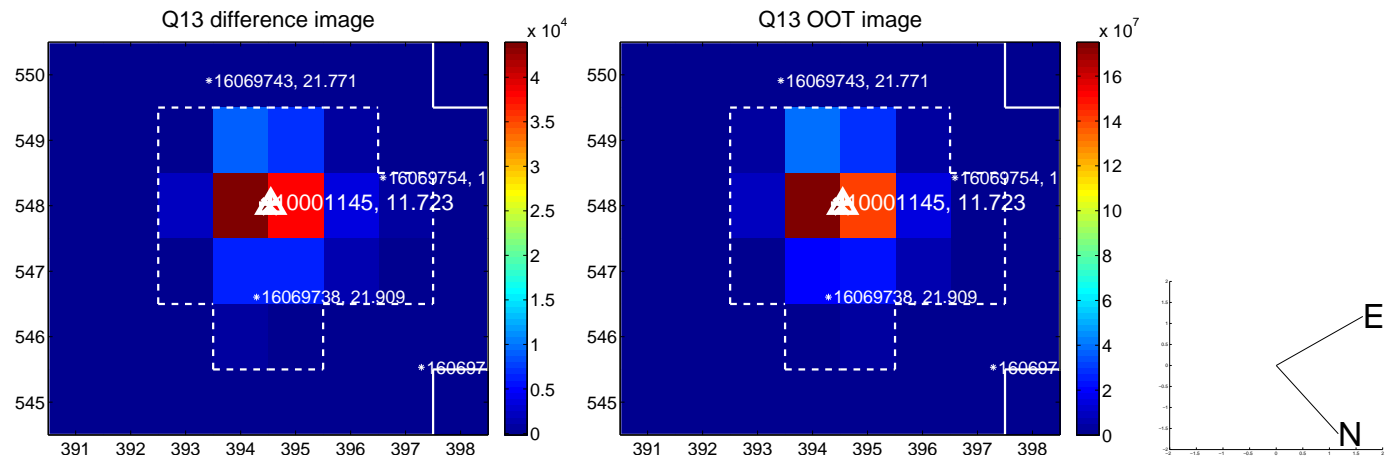
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



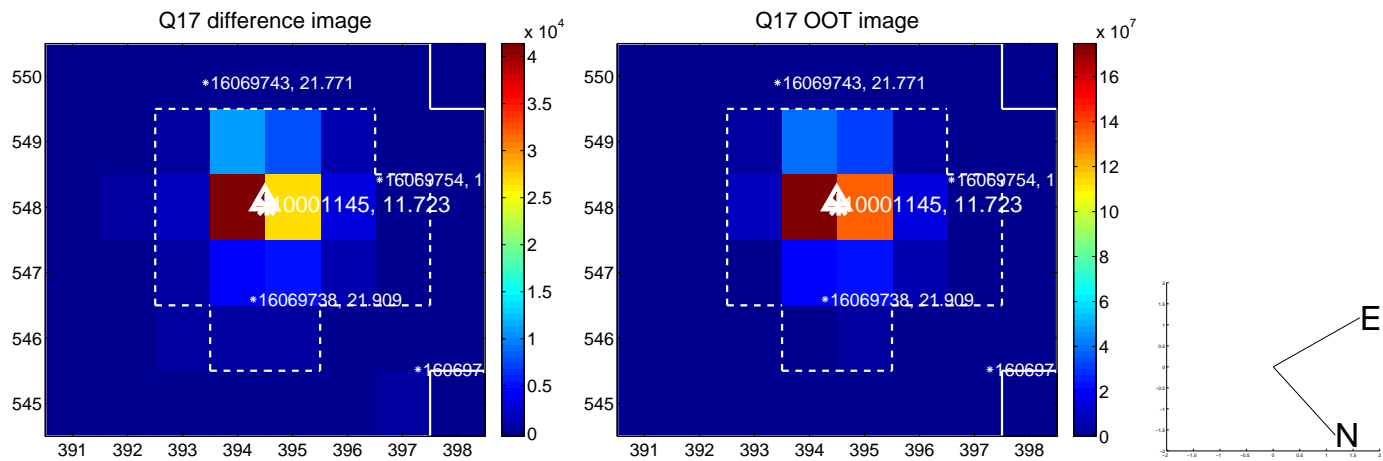
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



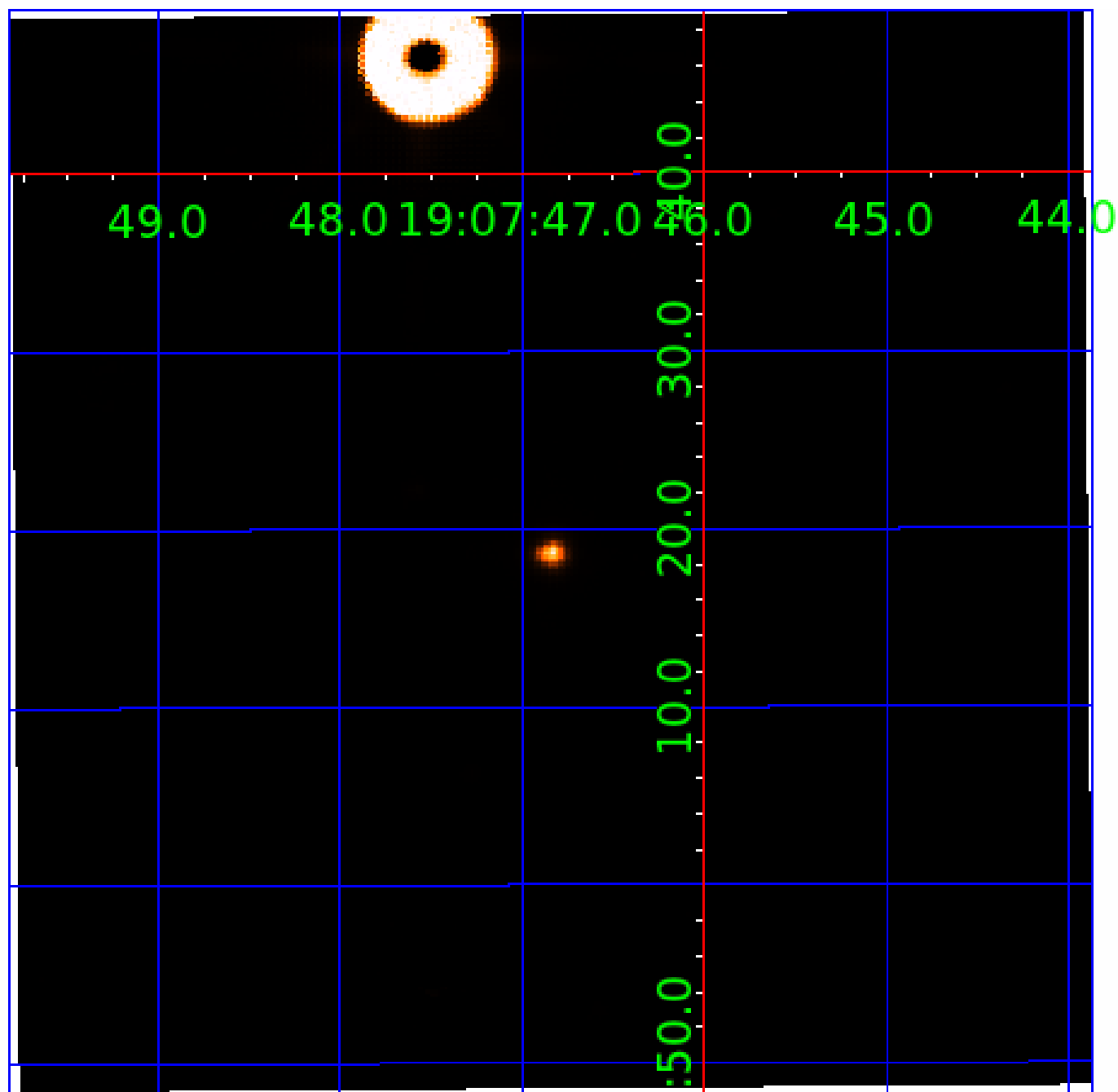
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 010001145

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})
010001145-01	OBS	No	1.285260	132.442160	57.2	4.935	10.0	9.7	2.32	7865	1.81	24077.39
010001145-02	OBS	No	1.285378	131.720707	74.5	6.310	9.6	11.7	2.32	7865	2.06	24074.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010001145-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
010001145-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_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.

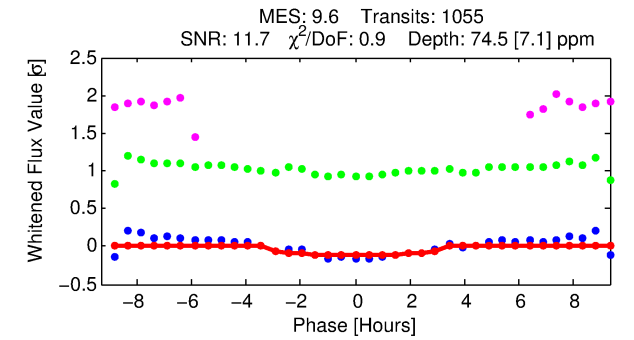
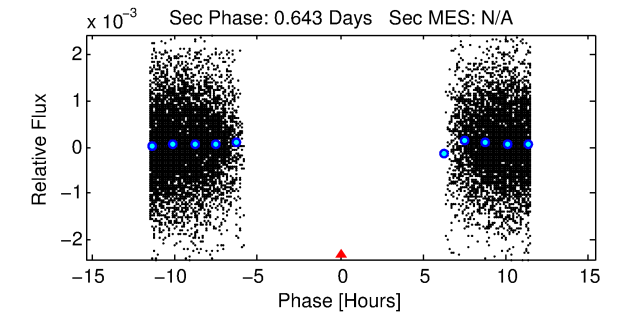
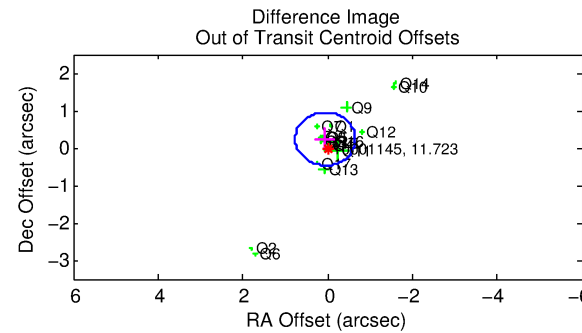
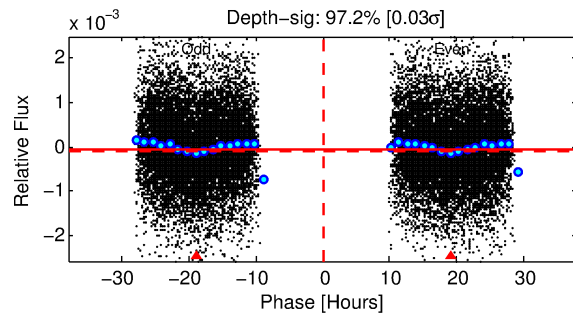
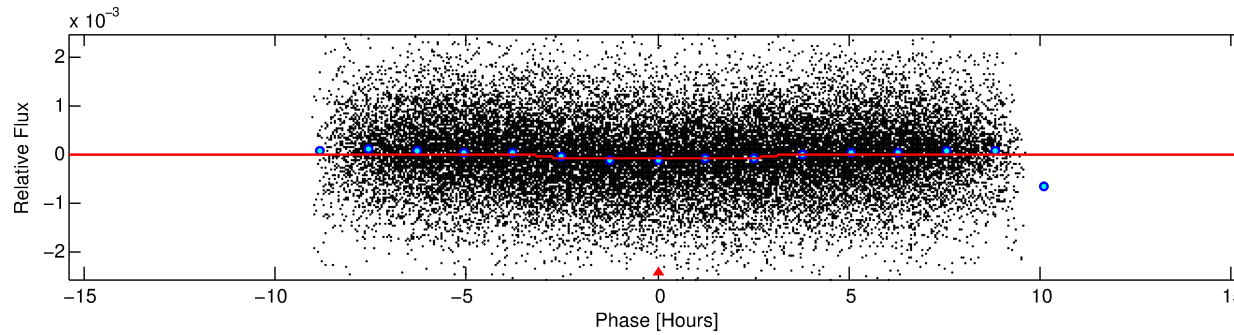
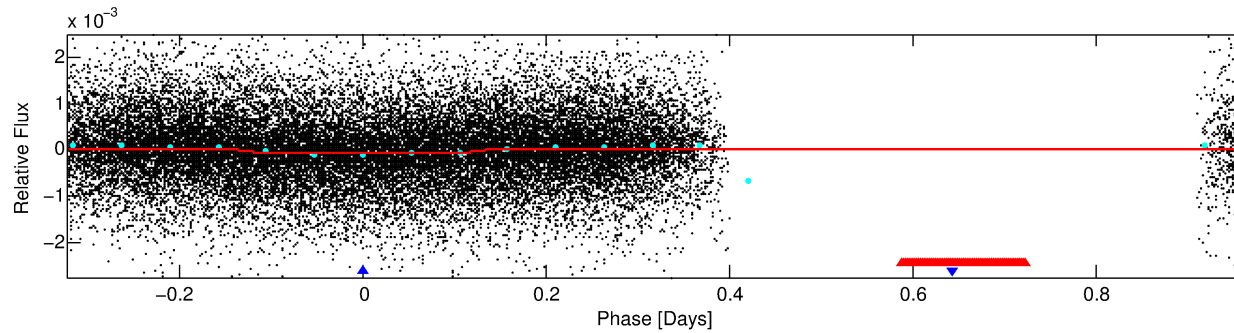
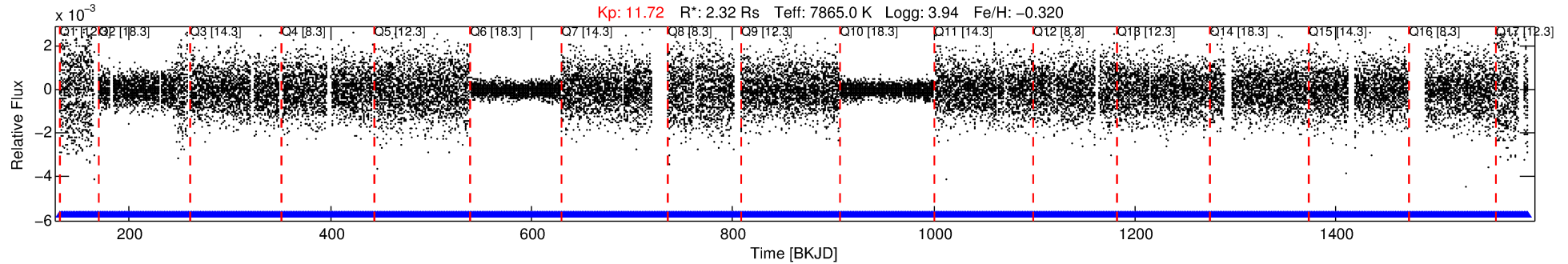
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010001145-02

No Significant Match Found

DV One-Page Summary

KIC: 10001145 Candidate: 2 of 2 Period: 1.285 d



DV Fit Results:

Period = 1.28538 [0.00002] d
Epoch = 131.7207 [0.0054] BKJD
Rp/R* = 0.0081 [0.0069]
a/R* = 1.56 [4.21]
b = 0.47 [7.57]
Seff = 24074.46 [12507.33]
Teq = 3176 [413] K
Rp = 2.06 [1.88] Re
a = 0.0277 [0.0086] AU

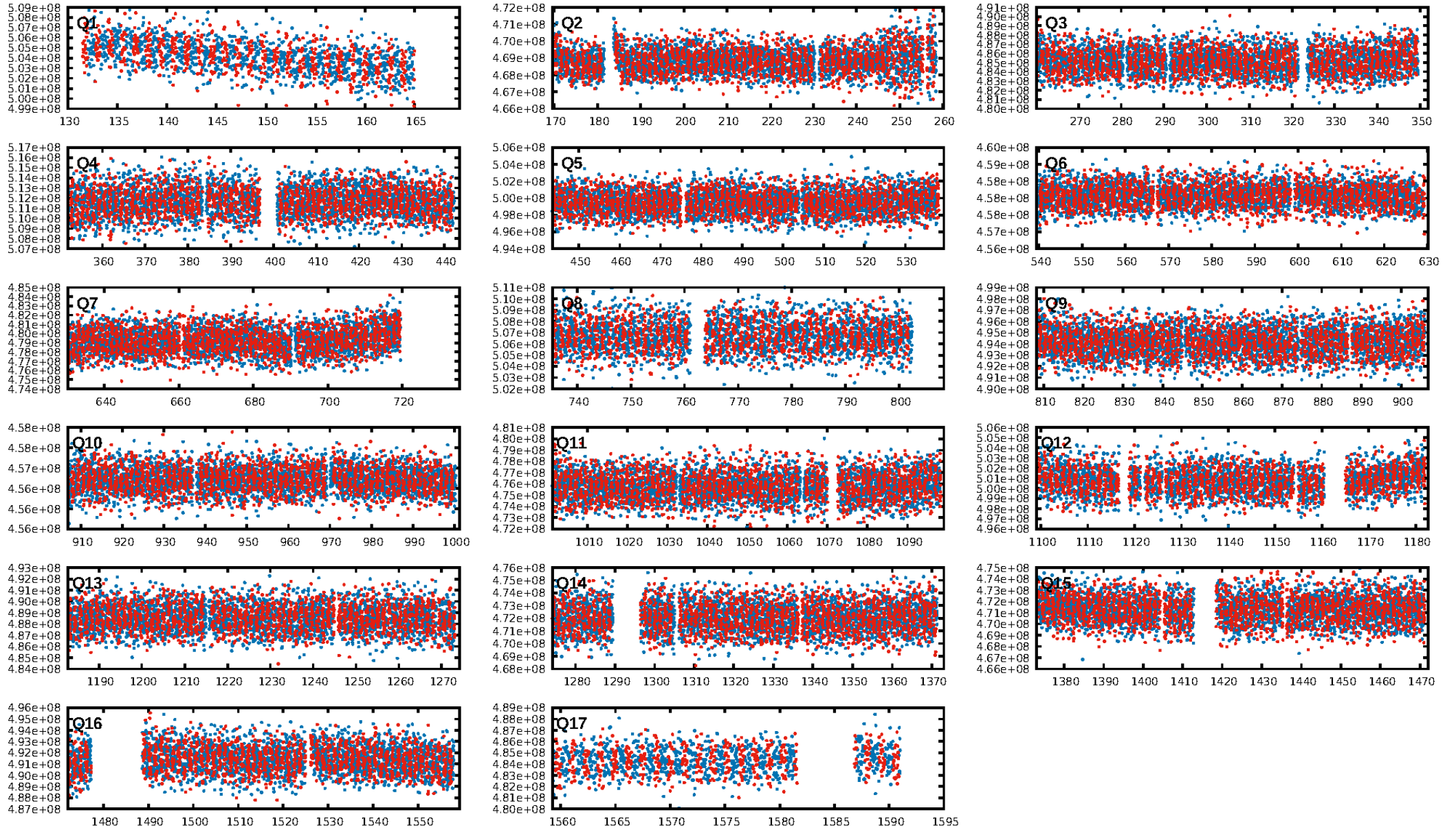
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1007/1007]
GhostDiagnostic-chr: 2.982
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.248 arcsec [1.05σ]
KicOffset-rm: 0.230 arcsec [2.09σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 0.35 [6/17]

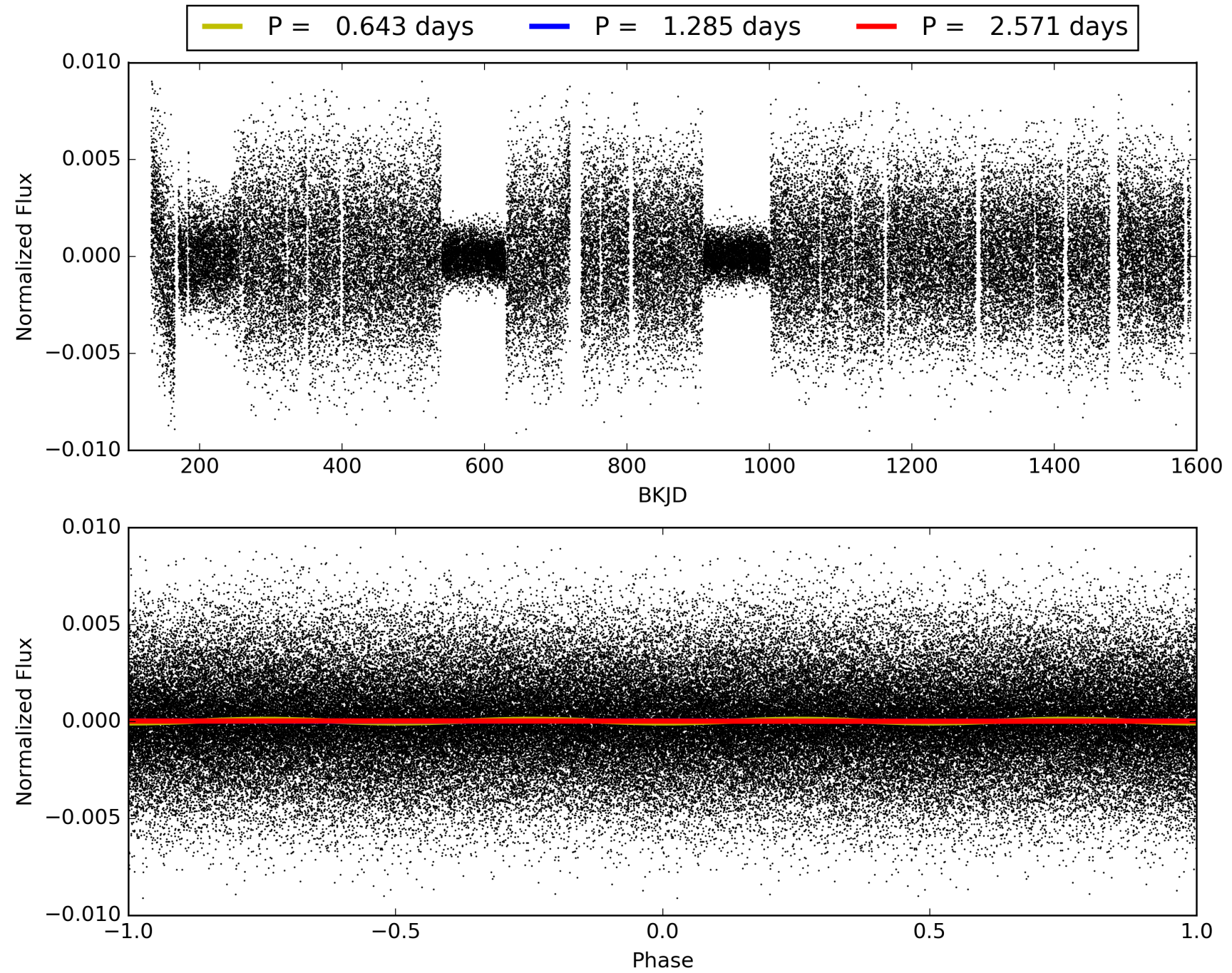
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:57:17 Z

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

TCE 010001145-02, PDC Light Curves

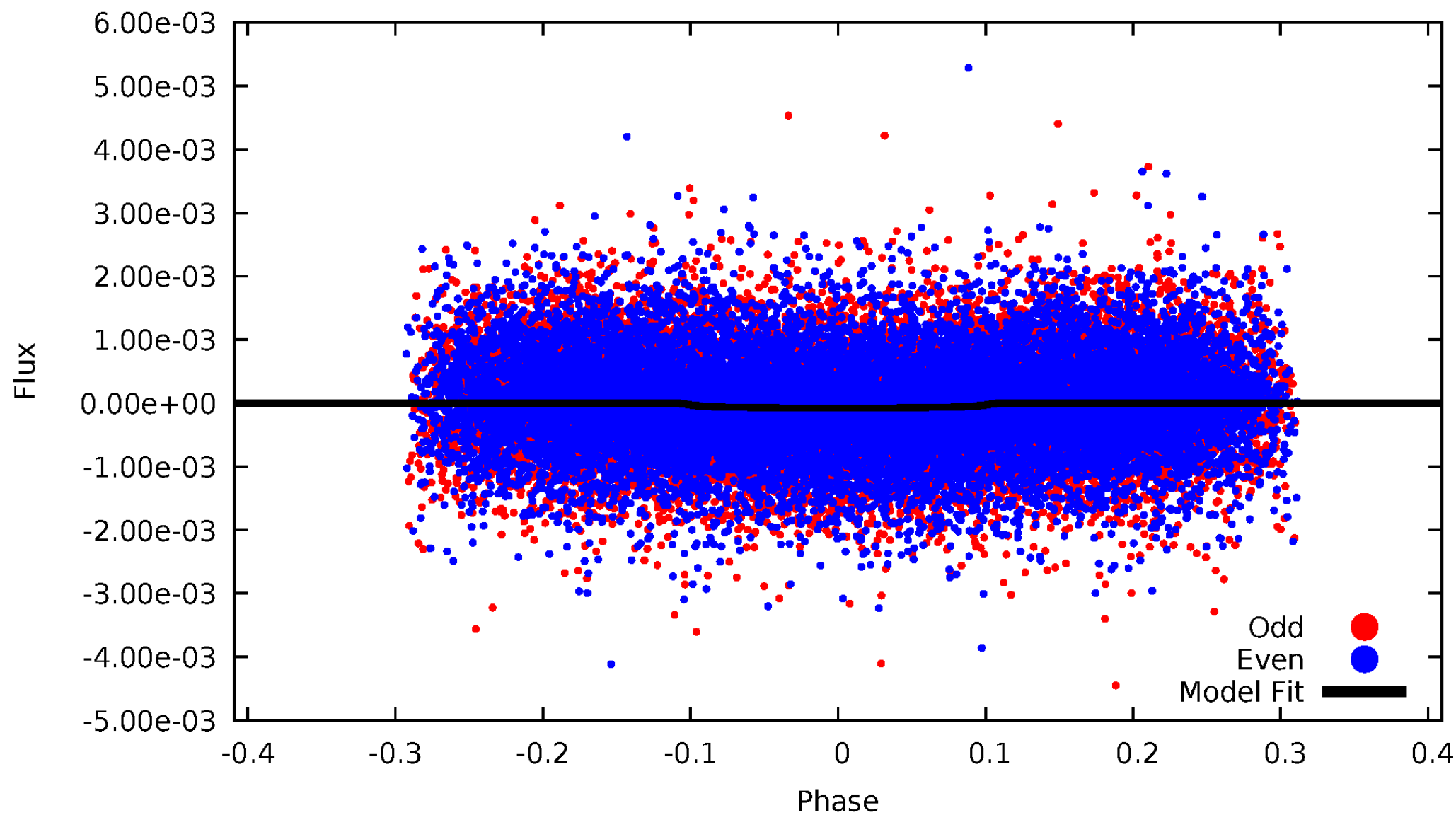


TCE 010001145-02



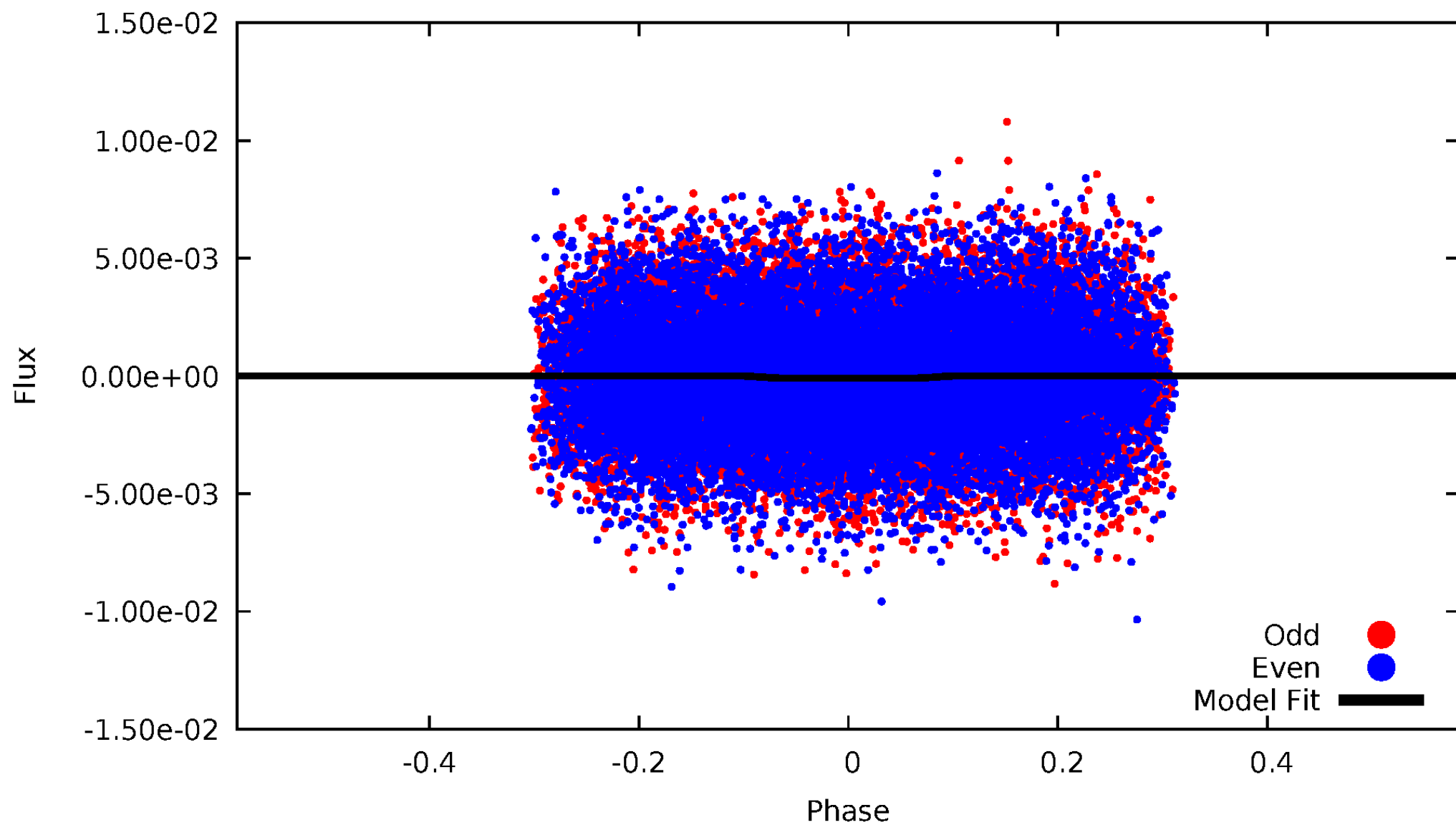
DV Odd/Even

TCE 010001145-02



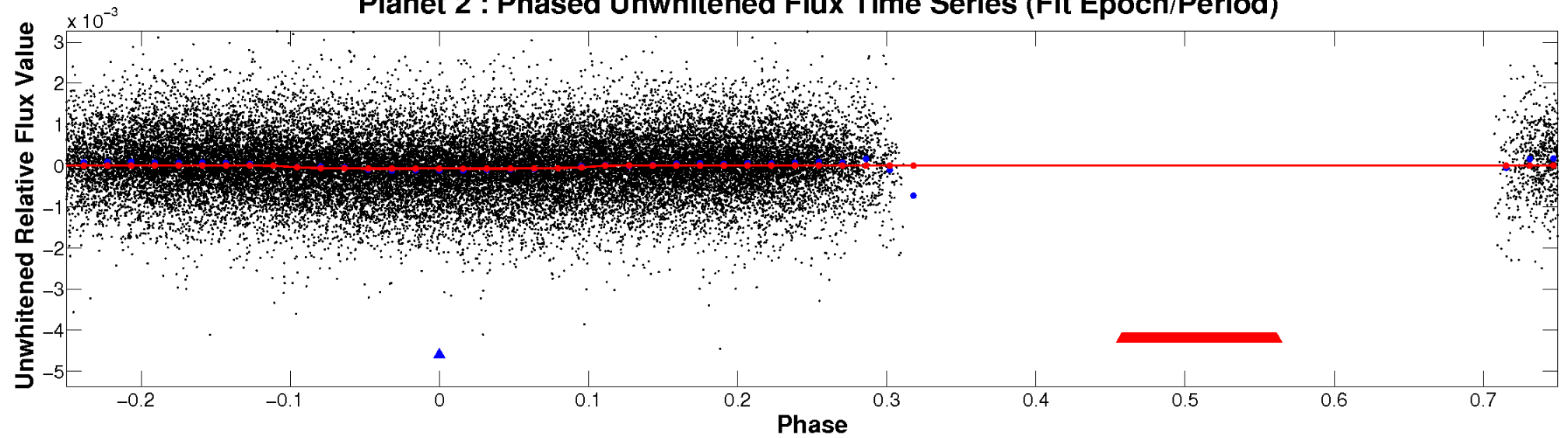
ALT Odd/Even

TCE 010001145-02

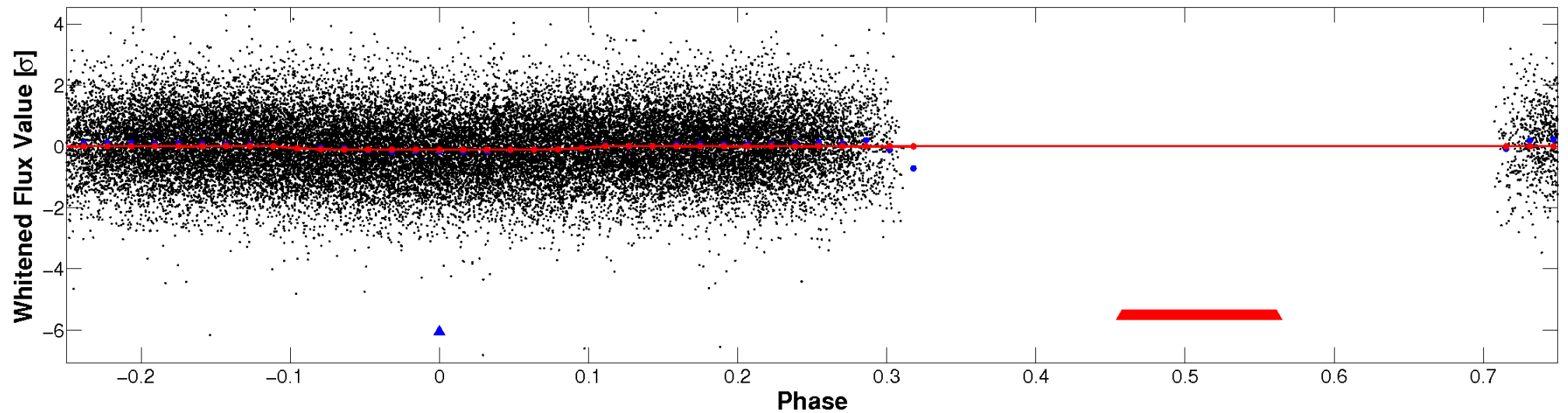


Non-Whitened Vs. Whitened Light Curve

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

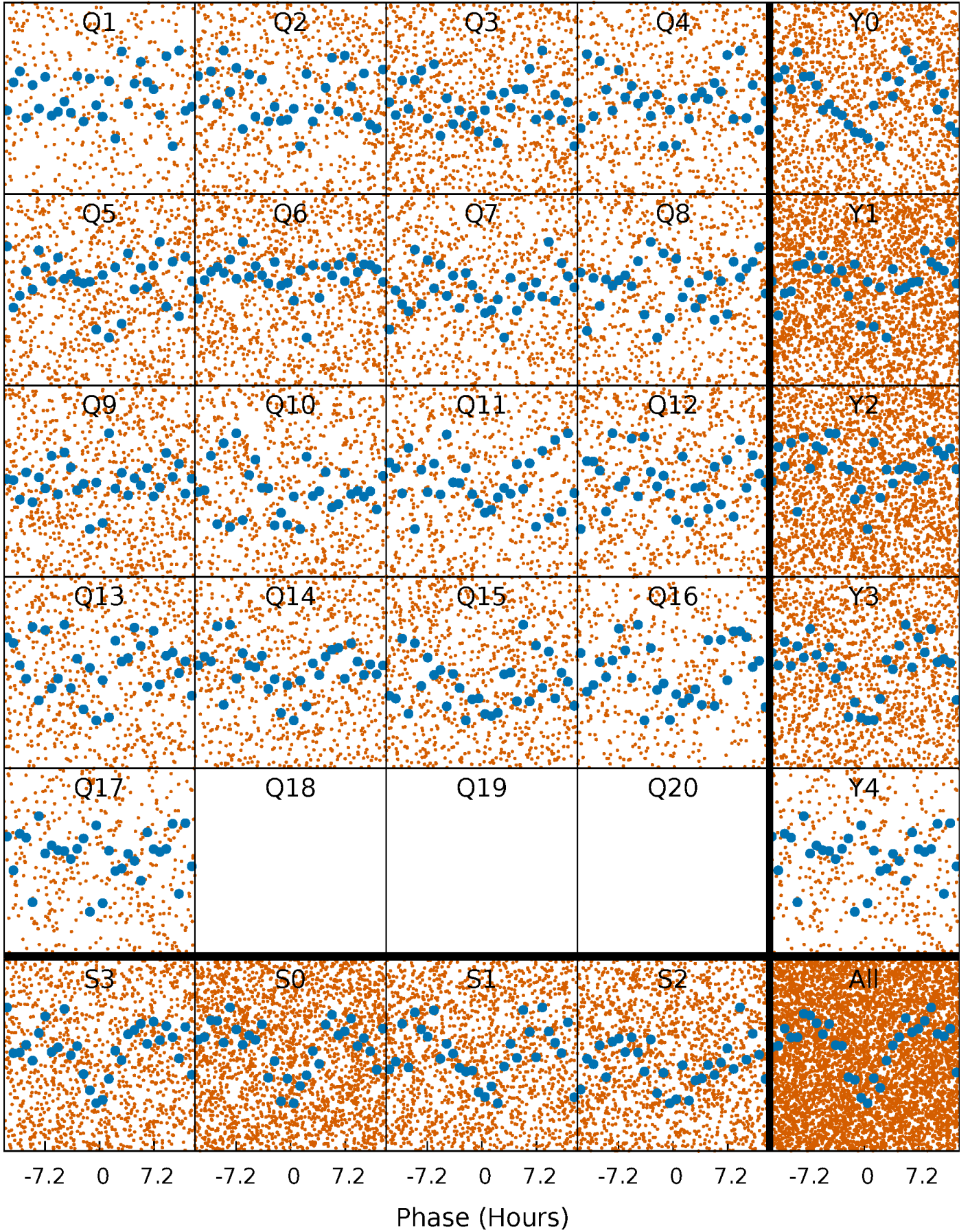


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



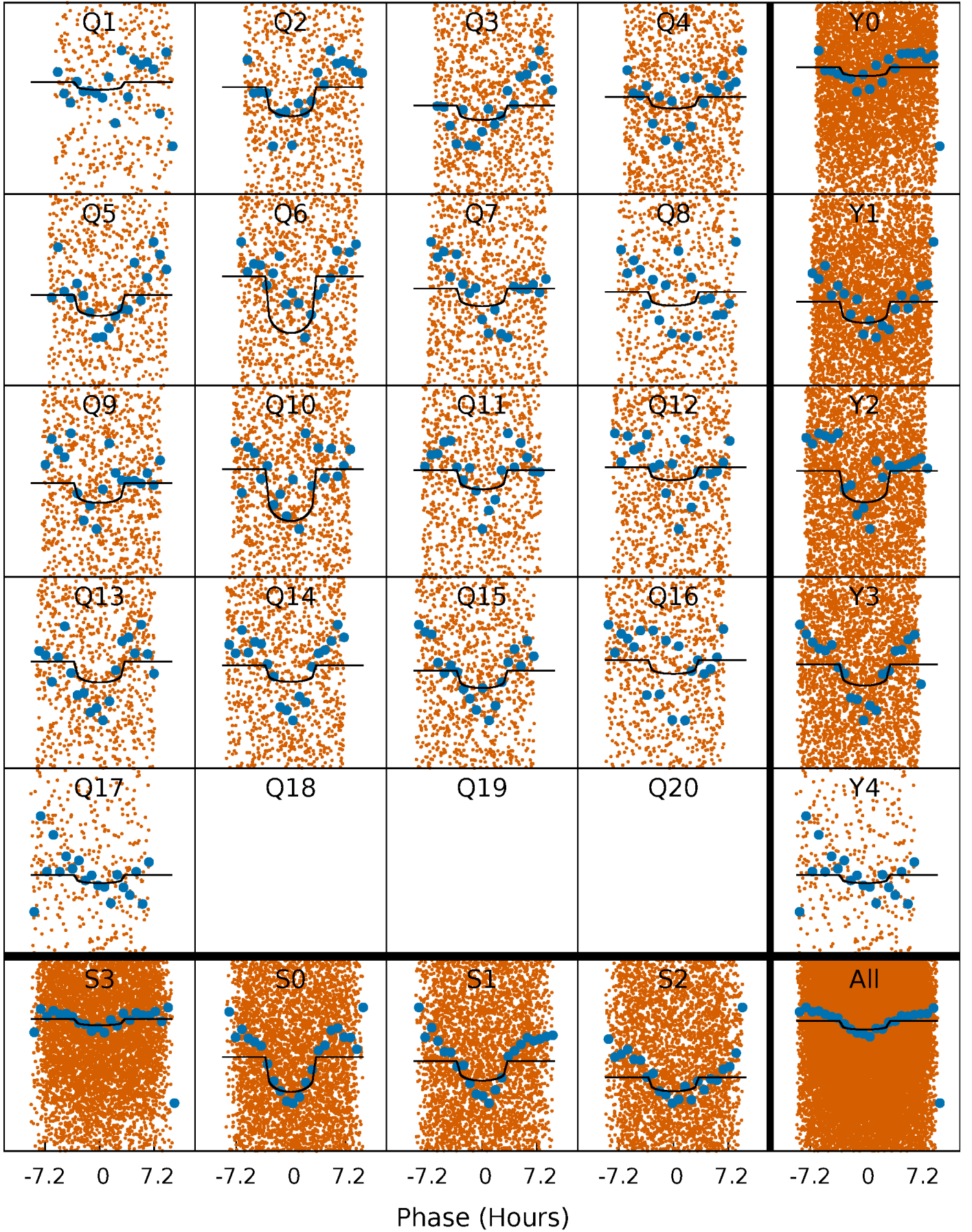
PDC Quarter-Phased Transit Curves

TCE 010001145-02 P= 1.285378 Days $T_0=131.720707$ (BKJD)



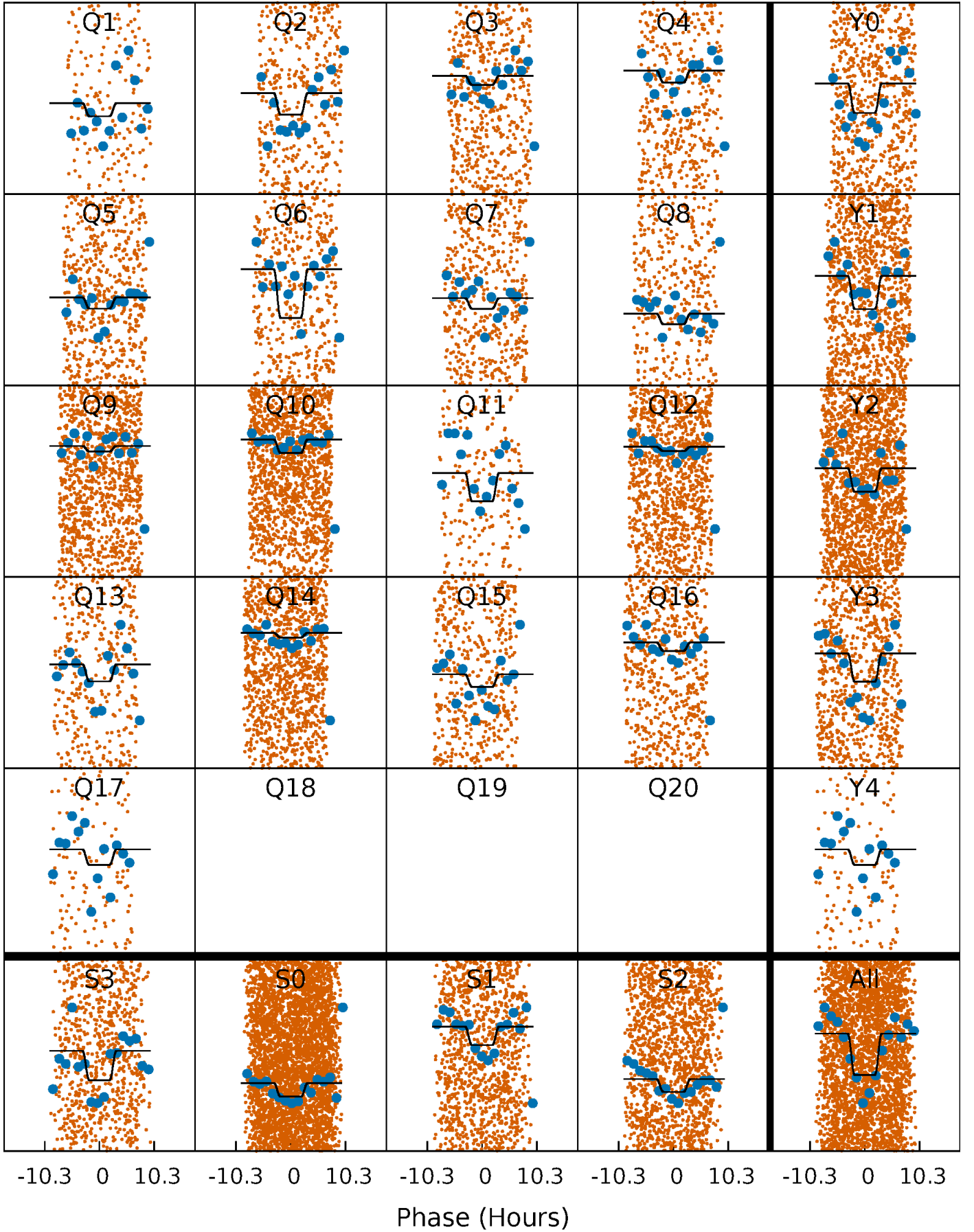
DV Quarter-Phased Transit Curves

TCE 010001145-02 $P = 1.285378$ Days $T_0 = 131.720707$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

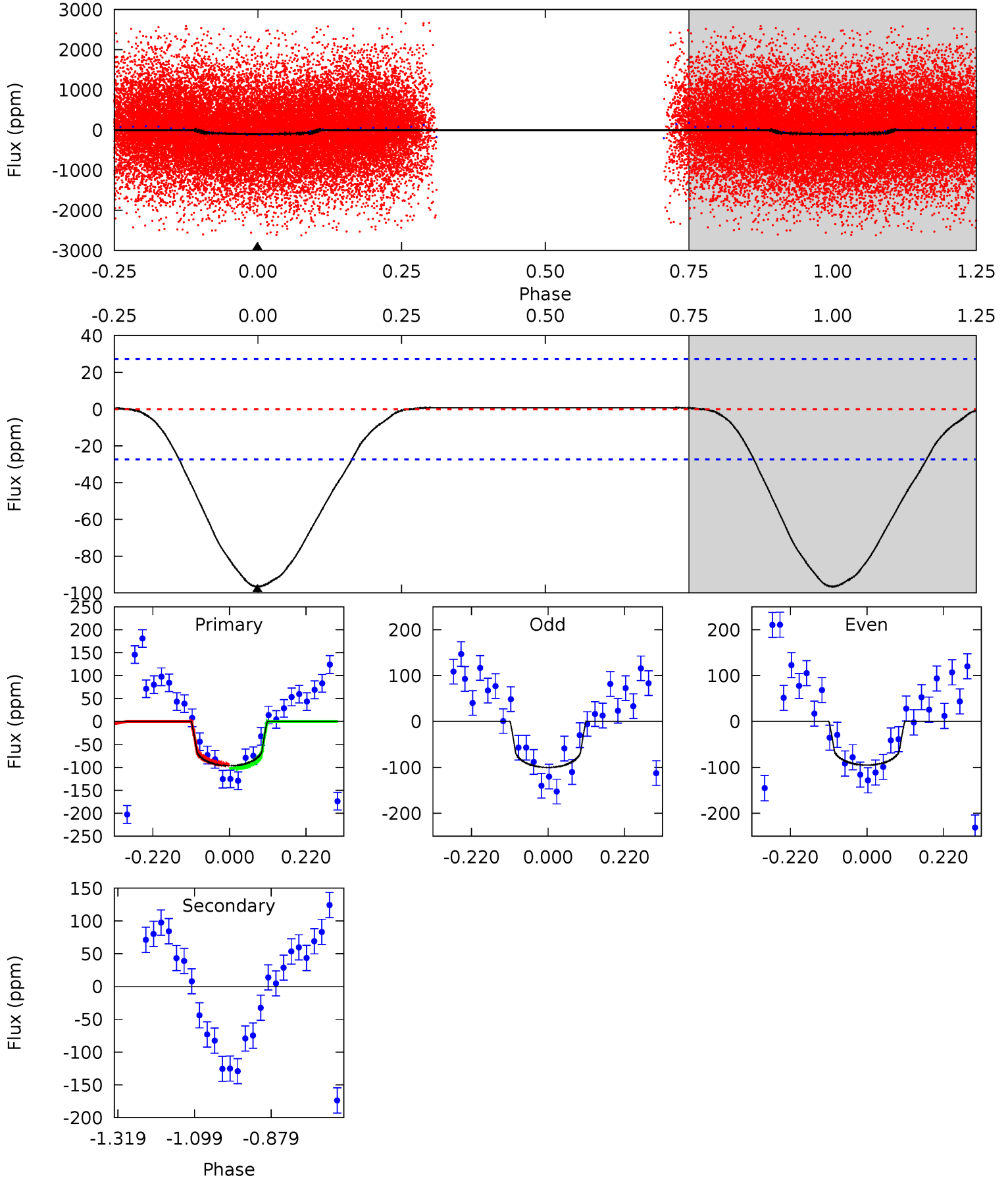
TCE 010001145-02 $P = 1.285390$ Days $T_0 = 131.720073$ (BKJD)



DV Model-Shift Uniqueness Test

010001145-02, P = 1.285378 Days, E = 130.435329 Days

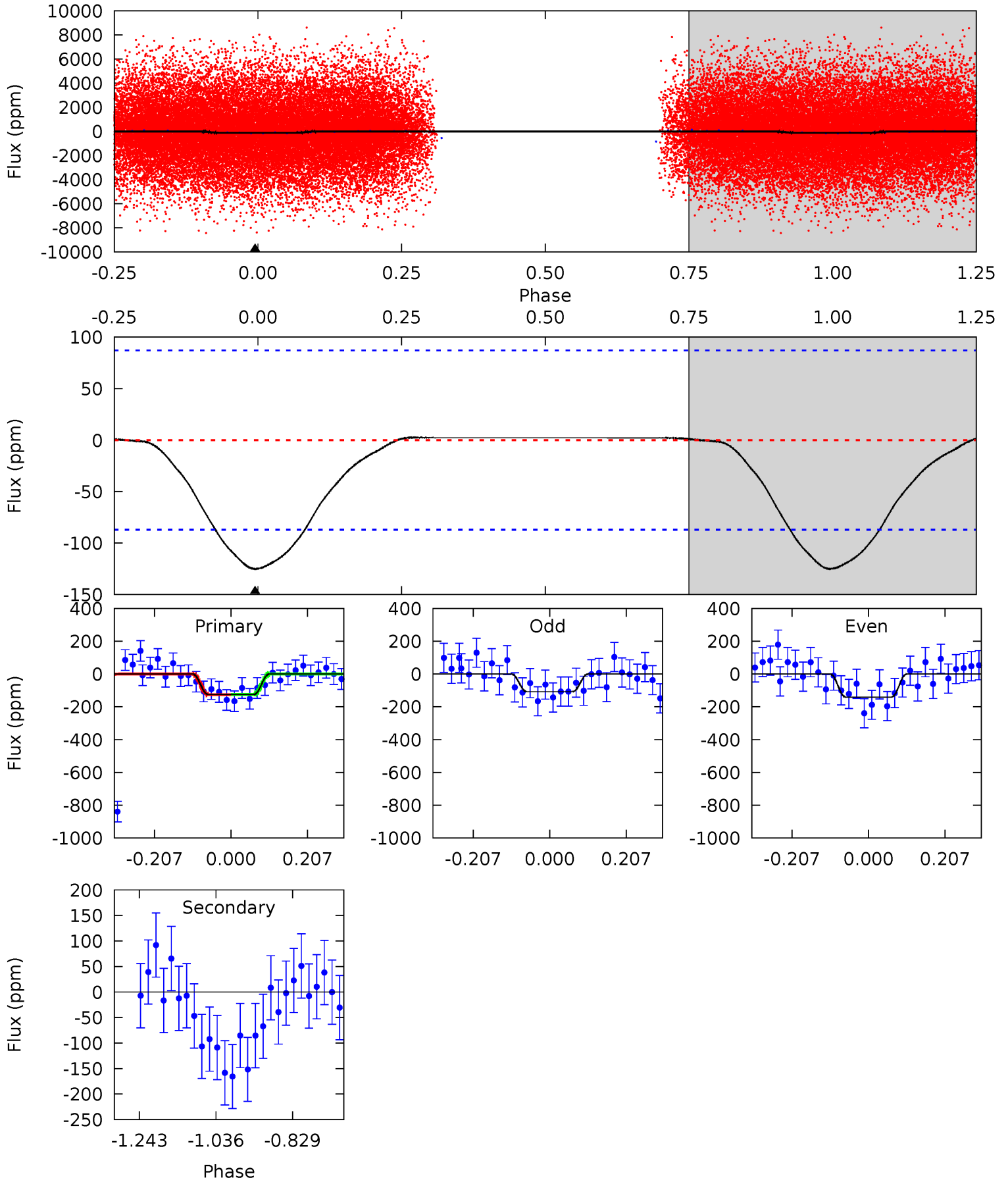
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	0	0	0	4.40	1.23	0.35	15.5	15.5	0	0	0.42	1.27	0.01	0.74



Alt Model-Shift Uniqueness Test

010001145-02, P = 1.285390 Days, E = 130.434683 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.33	0	0	0	4.41	1.26	0.22	6.33	6.33	0	0	0.84	1.25	0.02	0.03



Stellar Parameters For KIC 010001145

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7865^{+216}_{-325}	$3.941^{+0.287}_{-0.123}$	$-0.320^{+0.200}_{-0.350}$	$2.322^{+0.447}_{-0.767}$	$1.716^{+0.182}_{-0.364}$	$0.193^{+0.373}_{-0.071}$
	+3%/-4%	+7%/-3%	+62%/-109%	+19%/-33%	+11%/-21%	+193%/-37%
Source	KIC0	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 010001145-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 6	$2.12^{+1.67}_{-1.23}$	4351^{+311}_{-388}	-3843^{+7891}_{-1111}	$0.007^{+0.686}_{-0.854}$
Alt.	0 ± 20	$2.40^{+1.59}_{-1.31}$	4345^{+328}_{-405}	-3913^{+9000}_{-1820}	$-0.035^{+1.629}_{-1.921}$

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 $A_{obs} \gg 1.0$

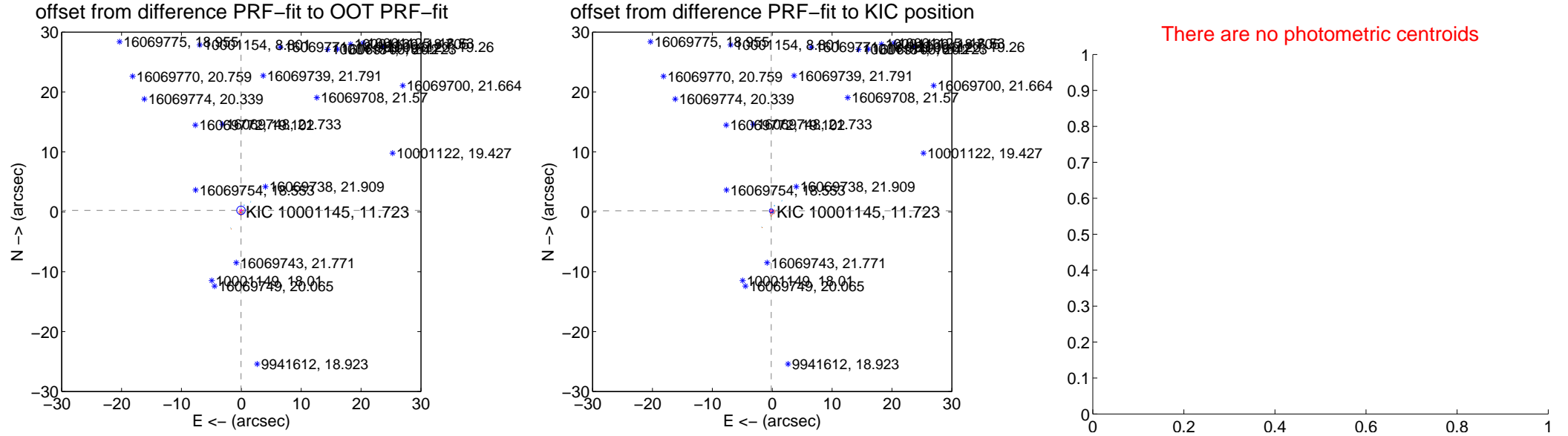
DV Centroid Data

Supplemental centroid analysis for 010001145-02. **Kepler magnitude: 11.72.** Transit SNR 11.74

There are 14 quarters with good PRF difference image offsets

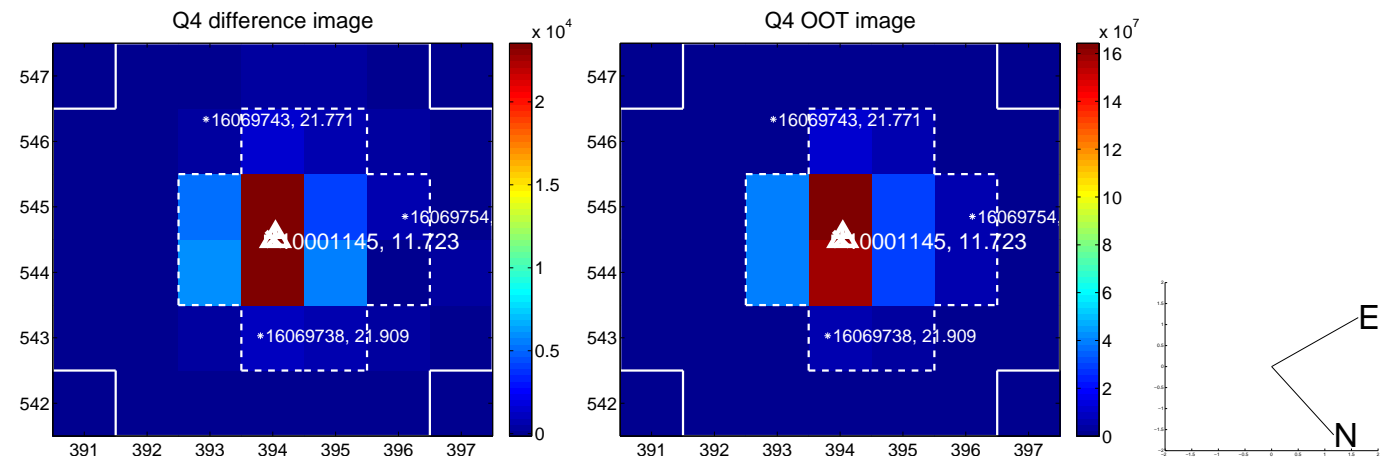
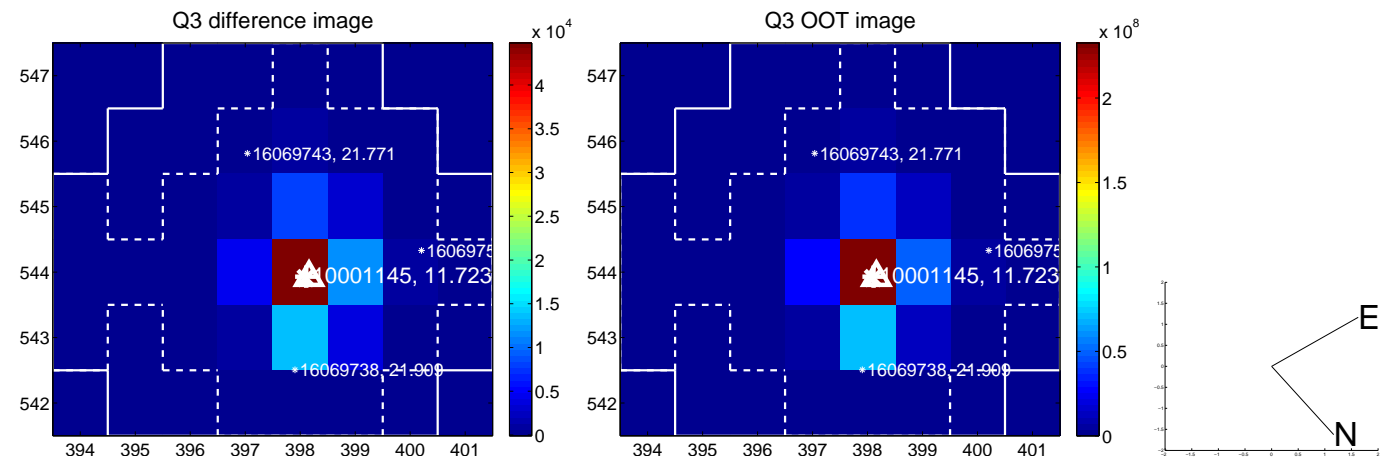
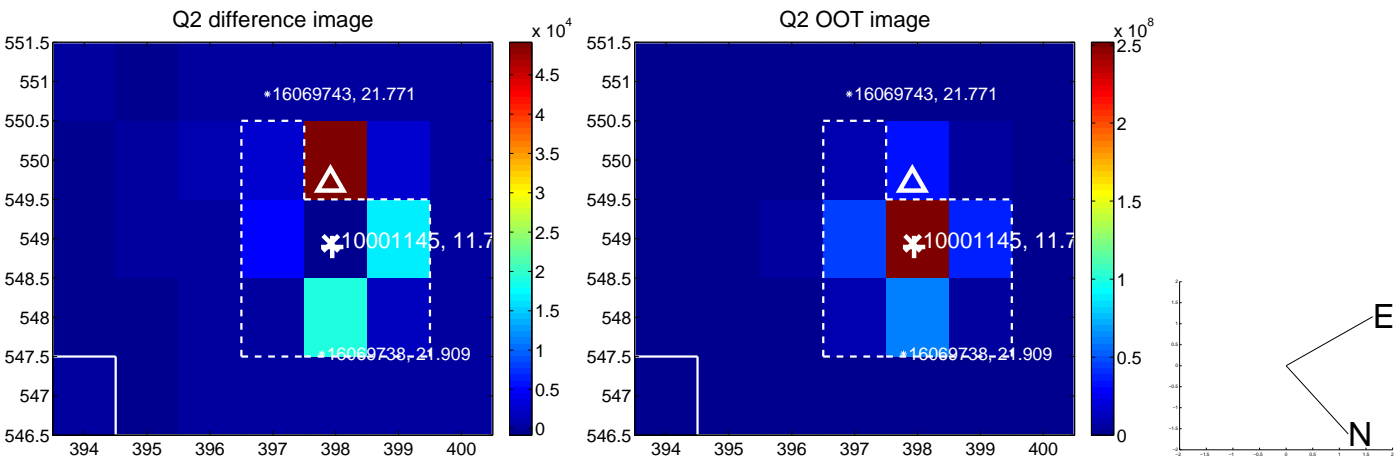
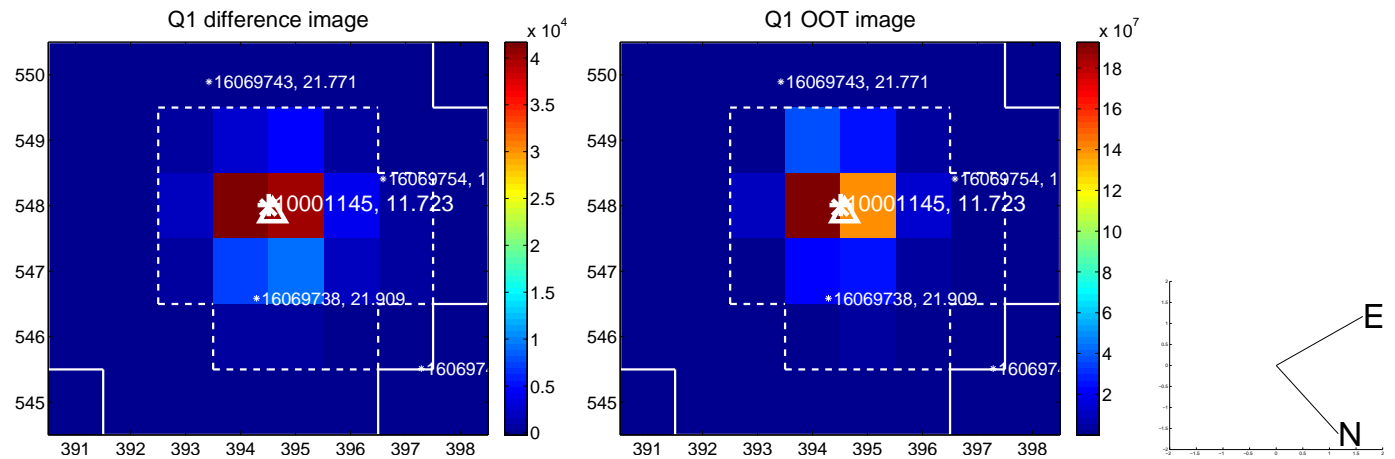
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.248 ± 0.236	1.05	0.057 ± 0.210	0.241 ± 0.283
PRF-fit source offset from KIC position	0.230 ± 0.110	2.09	0.164 ± 0.095	0.161 ± 0.123
photometric centroid source offset	—	—	—	—

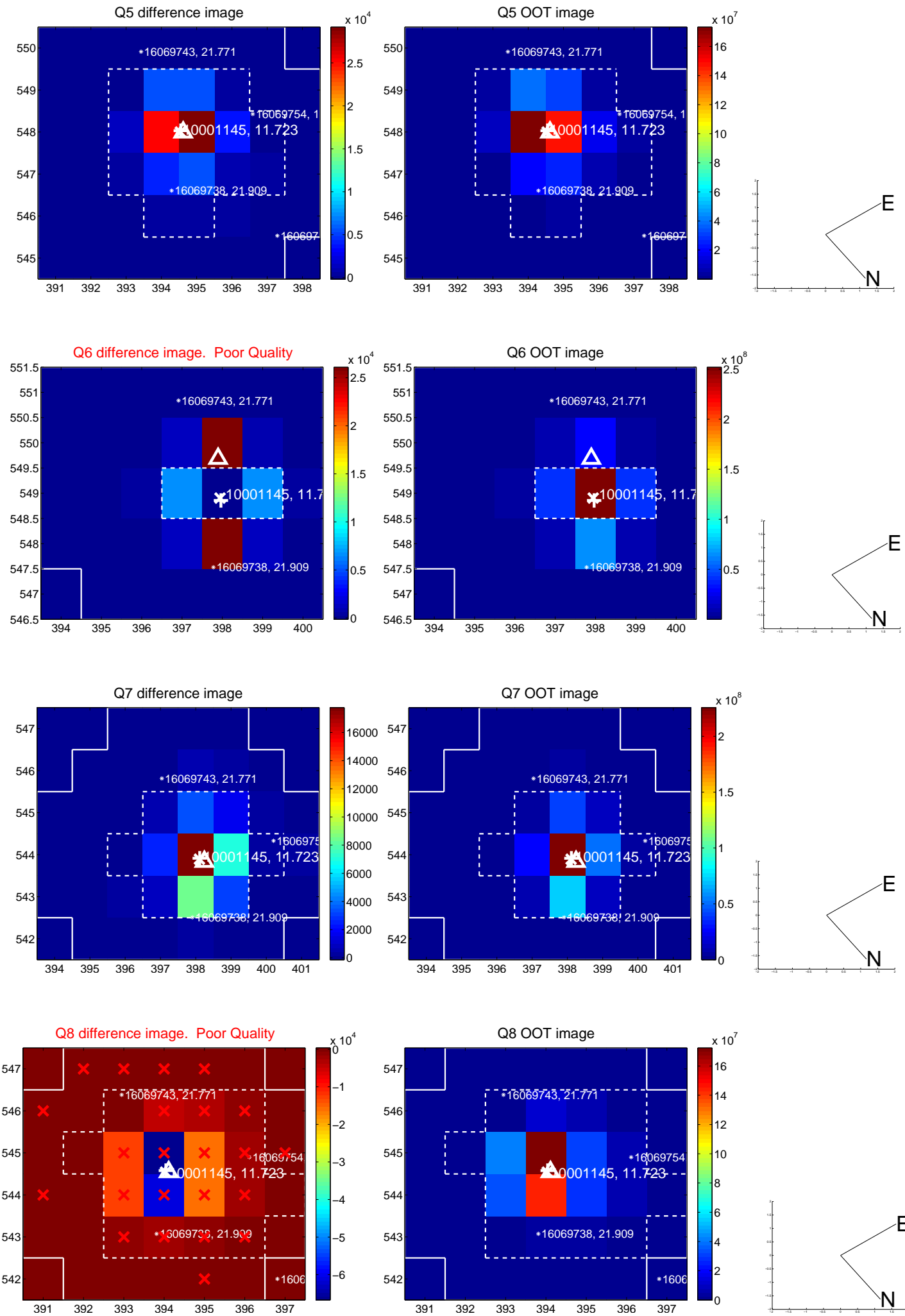


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

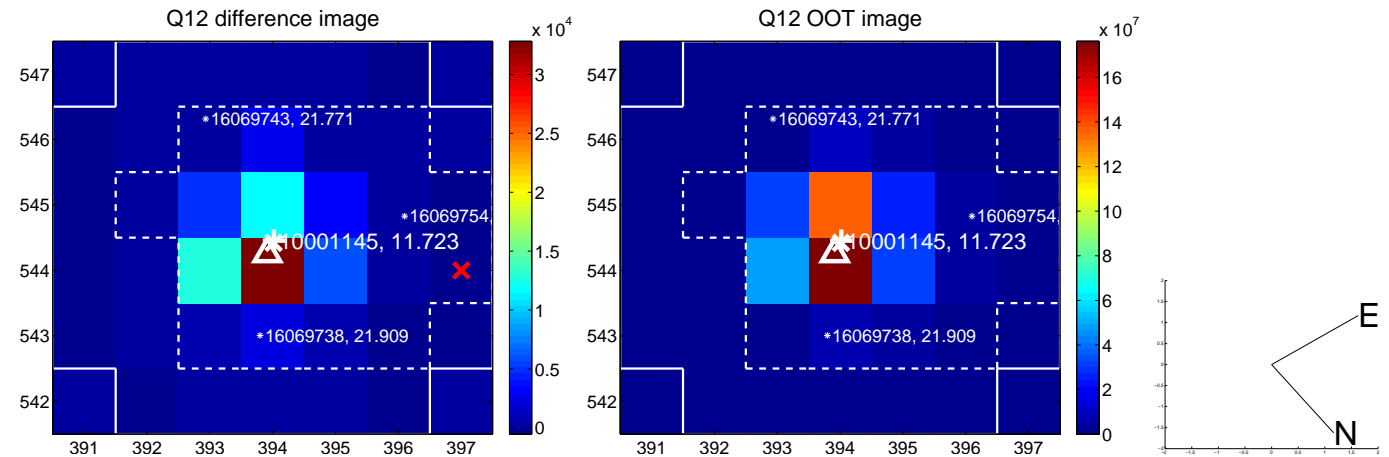
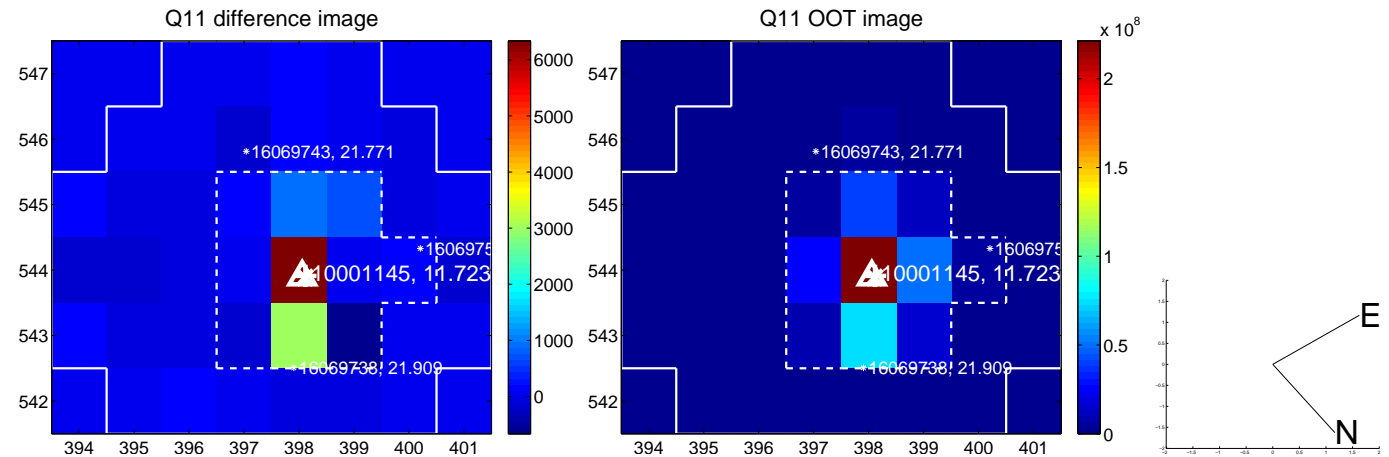
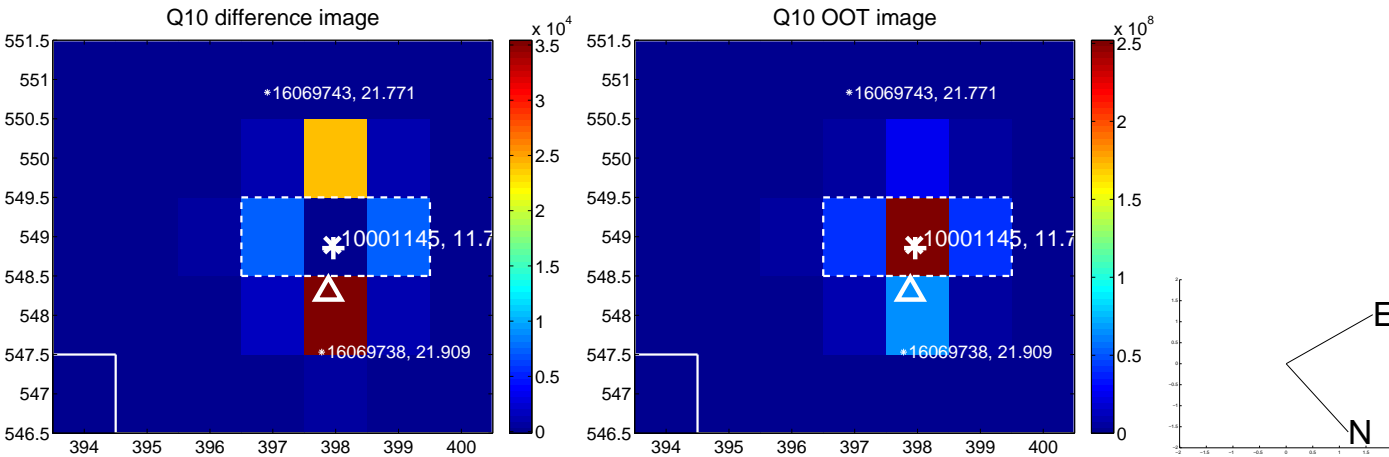
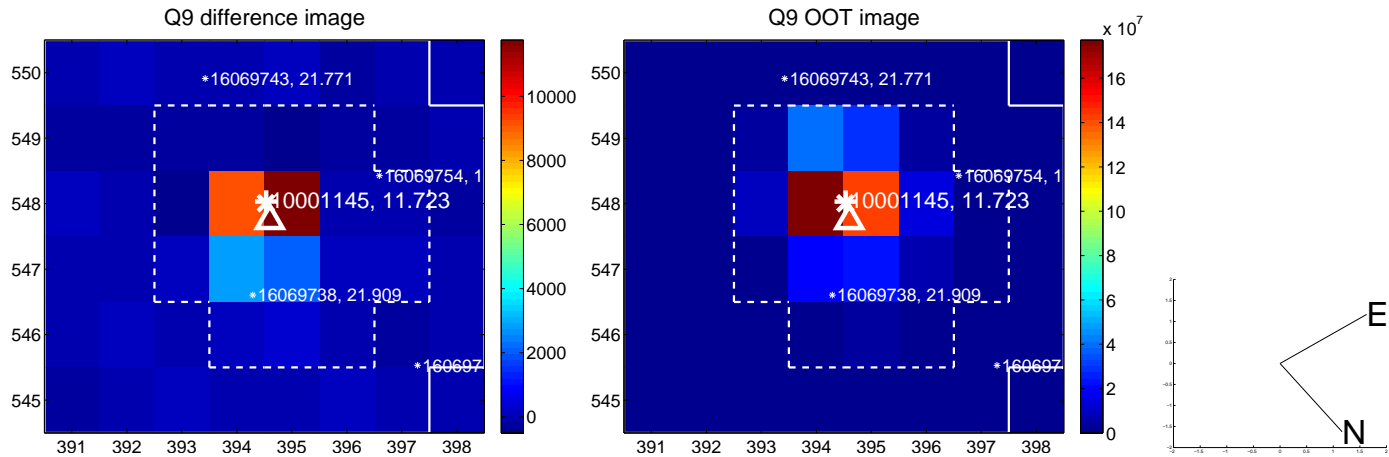
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



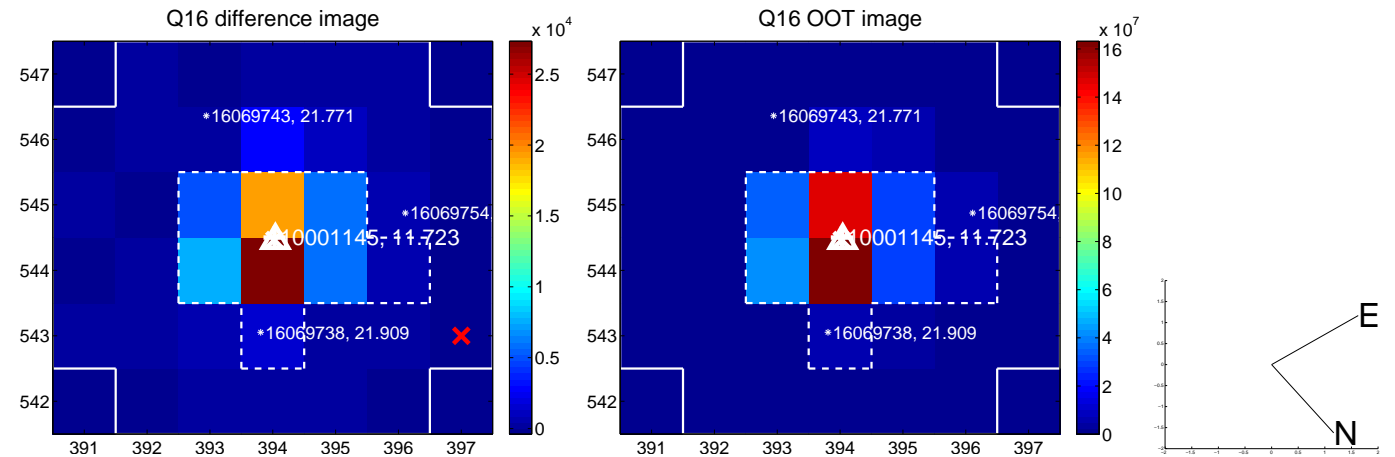
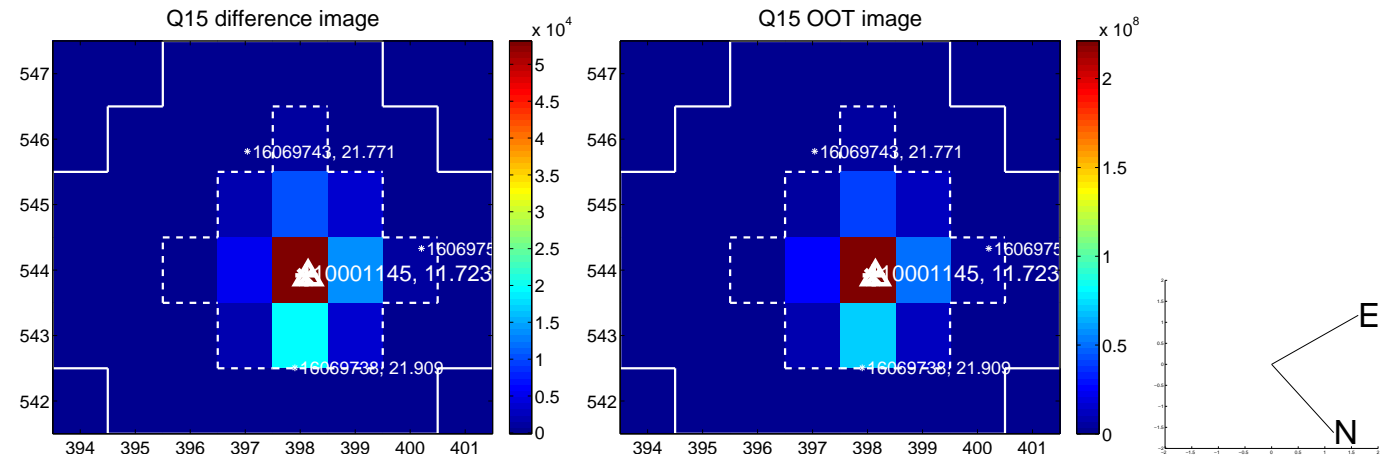
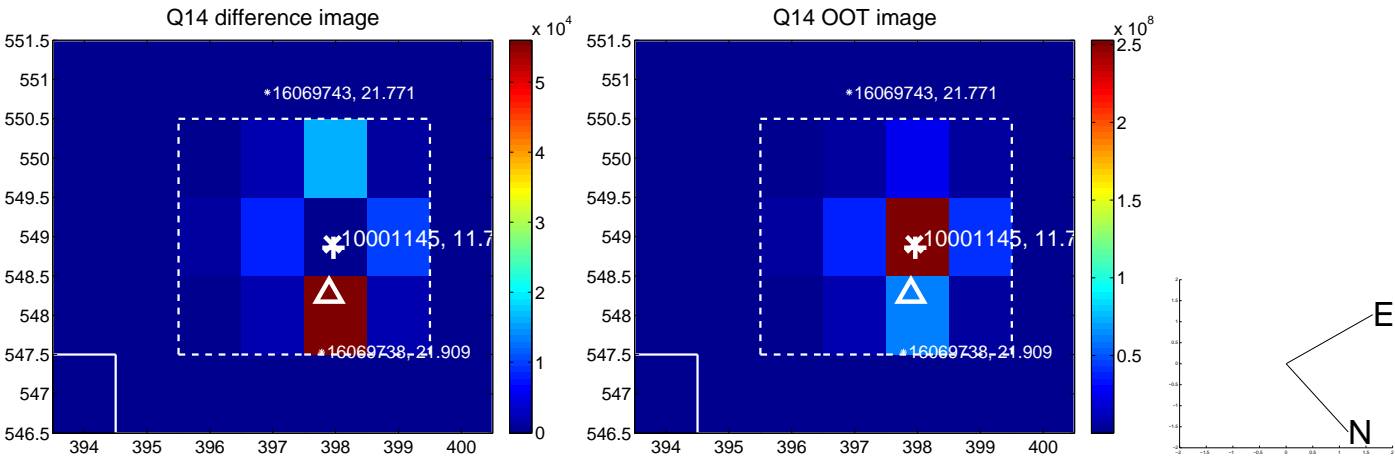
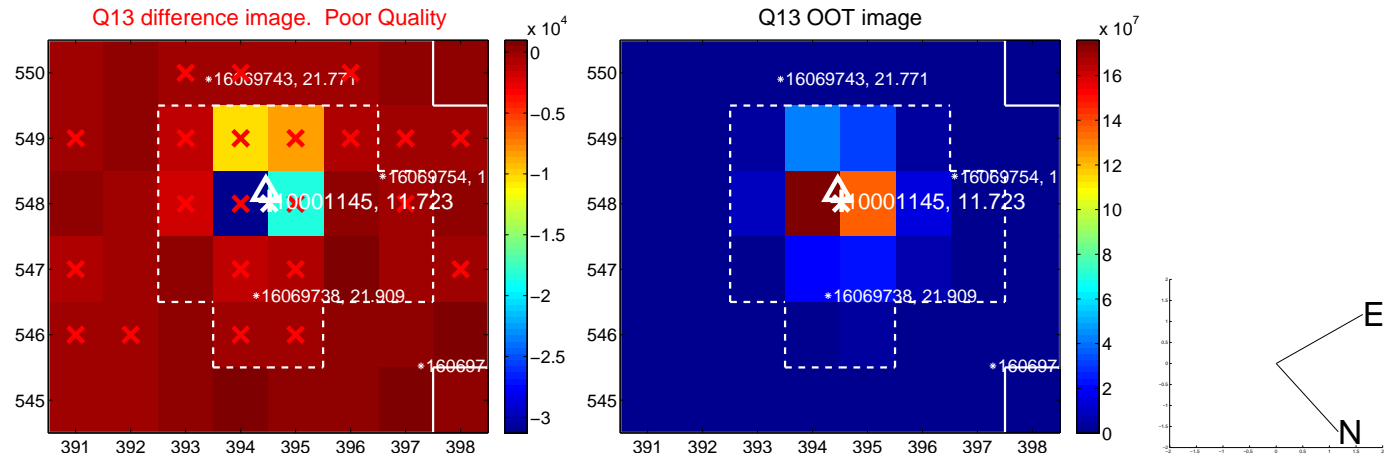
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



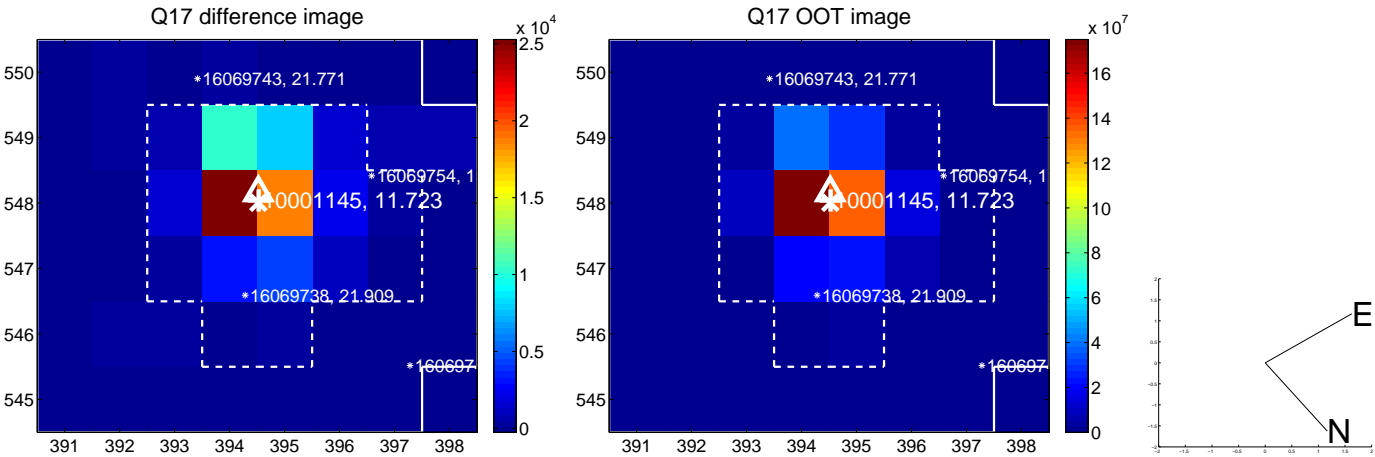
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Declination

