

KIC 006718300

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})
006718300-01	OBS	No	0.766413	131.917872	0.9	5.026	8.0	0.1	1.05	6215	0.10	5129.23
006718300-02	OBS	No	1.503666	131.847797	562.3	14.611	14.2	14.0	1.05	6215	2.52	2088.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006718300-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006718300-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

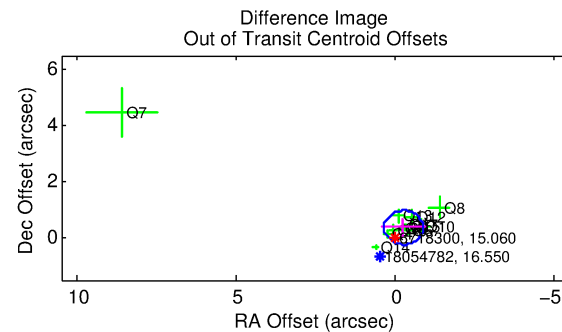
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 006718300-01

No Significant Match Found

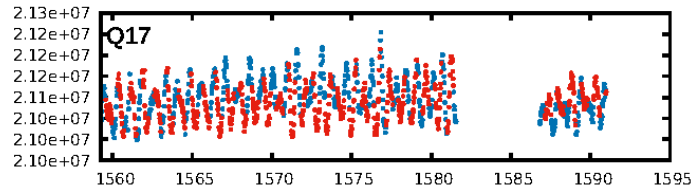
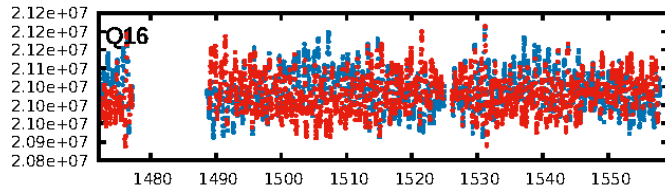
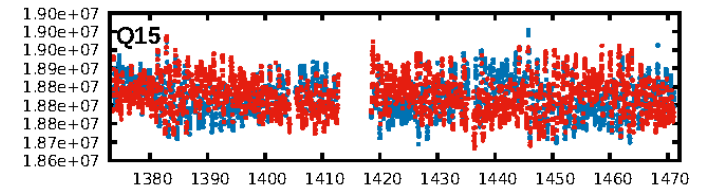
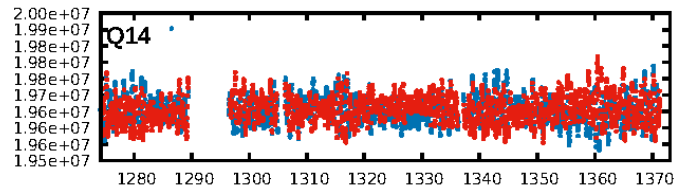
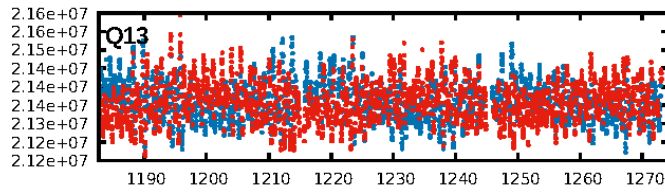
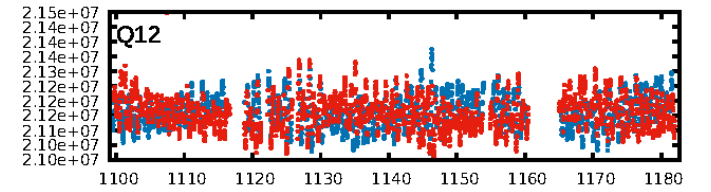
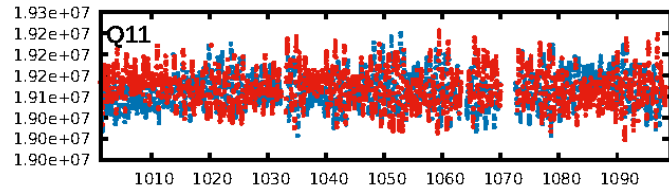
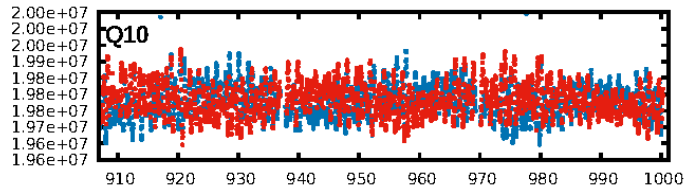
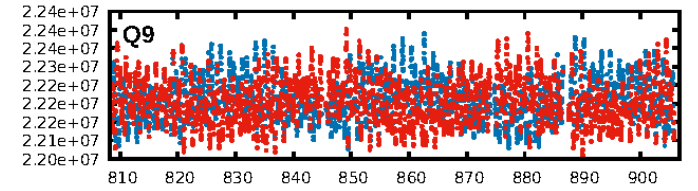
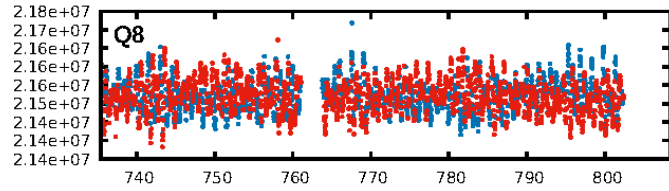
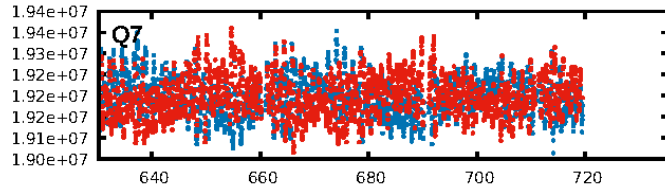
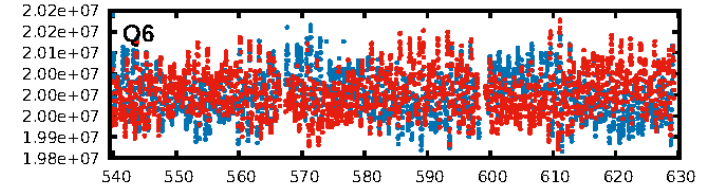
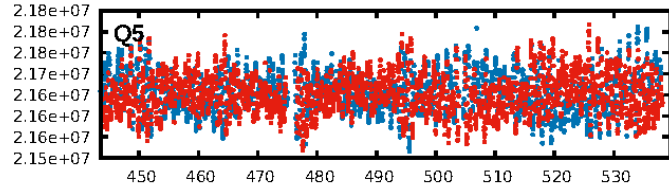
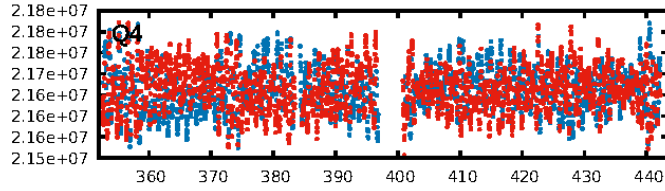
KIC: 6718300 Candidate: 1 of 2 Period: 0.766 d



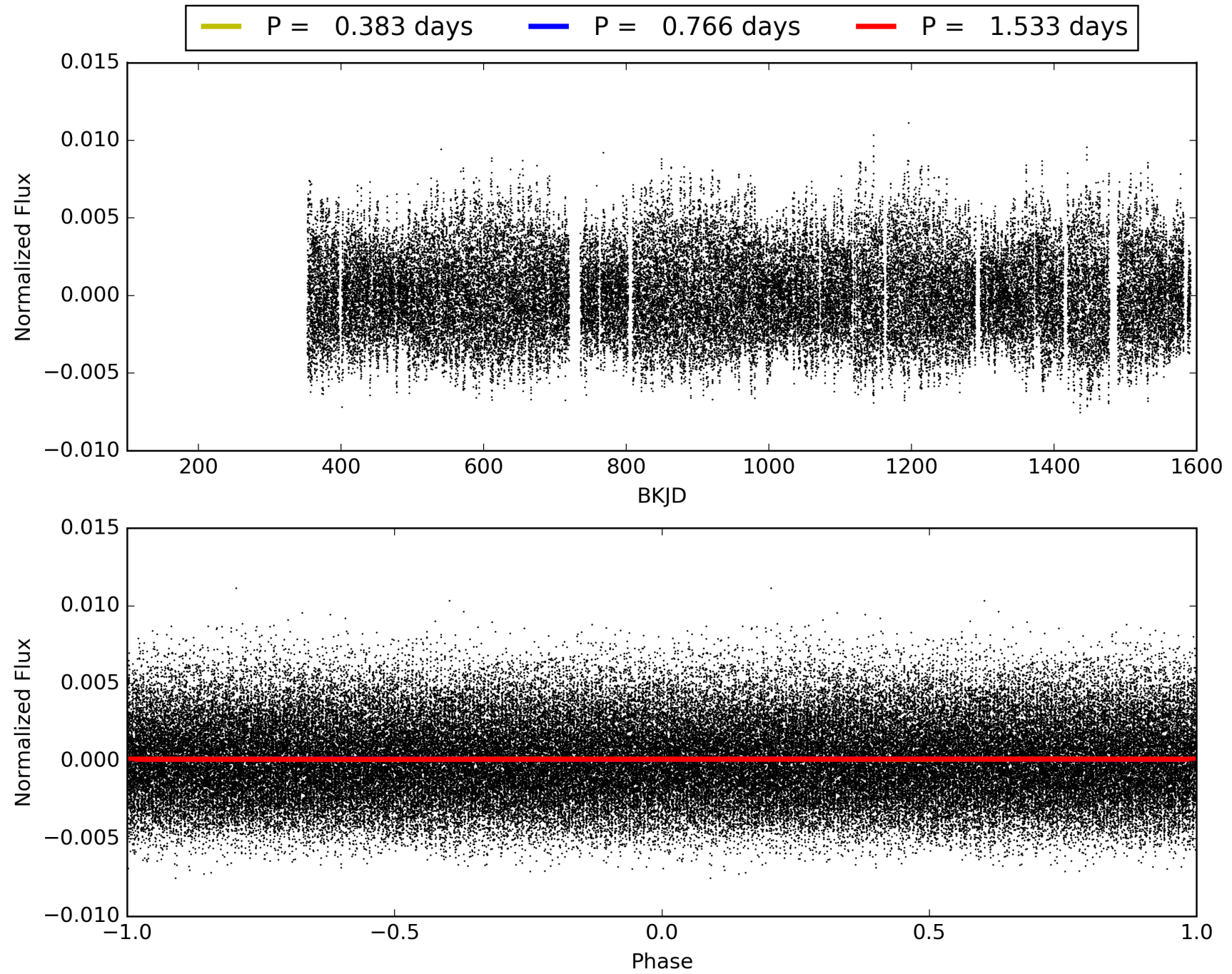
ShortPeriod-sig: N/A
LongPeriod-sig: 74.8% [1.15 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1452/1454]
GhostDiagnostic-chr: N/A

Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.450 arcsec [2.22 σ]
KicOffset-rm: 0.528 arcsec [2.44 σ]
OotOffset-st: 3/2/4/4 [13]
KicOffset-st: 3/2/4/4 [13]
DiffImageQuality-fgm: 0.46 [6/13]
DiffImageOverlap-fno: 0.29 [4/14]

TCE 006718300-01, PDC Light Curves

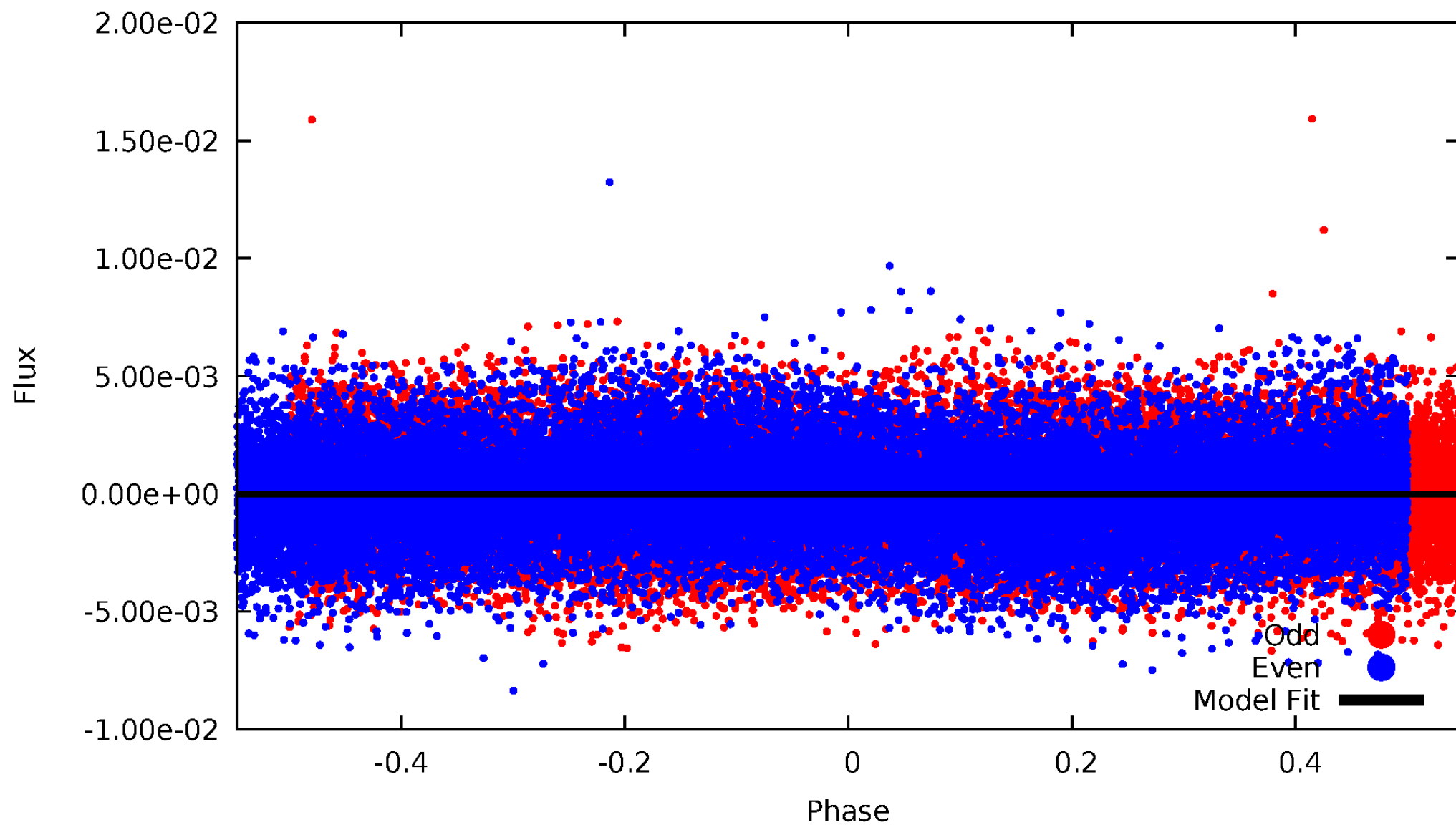


TCE 006718300-01



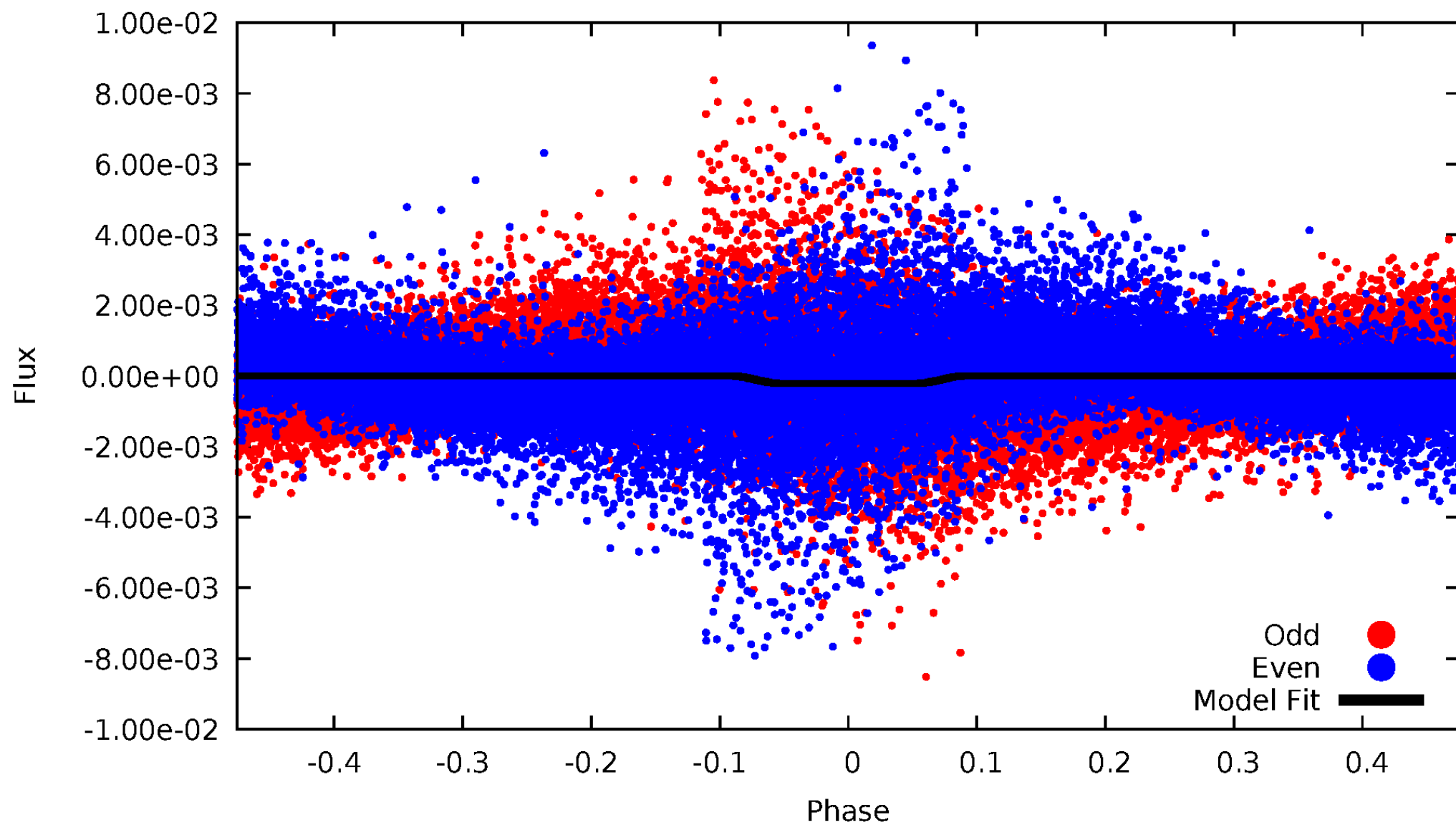
DV Odd/Even

TCE 006718300-01

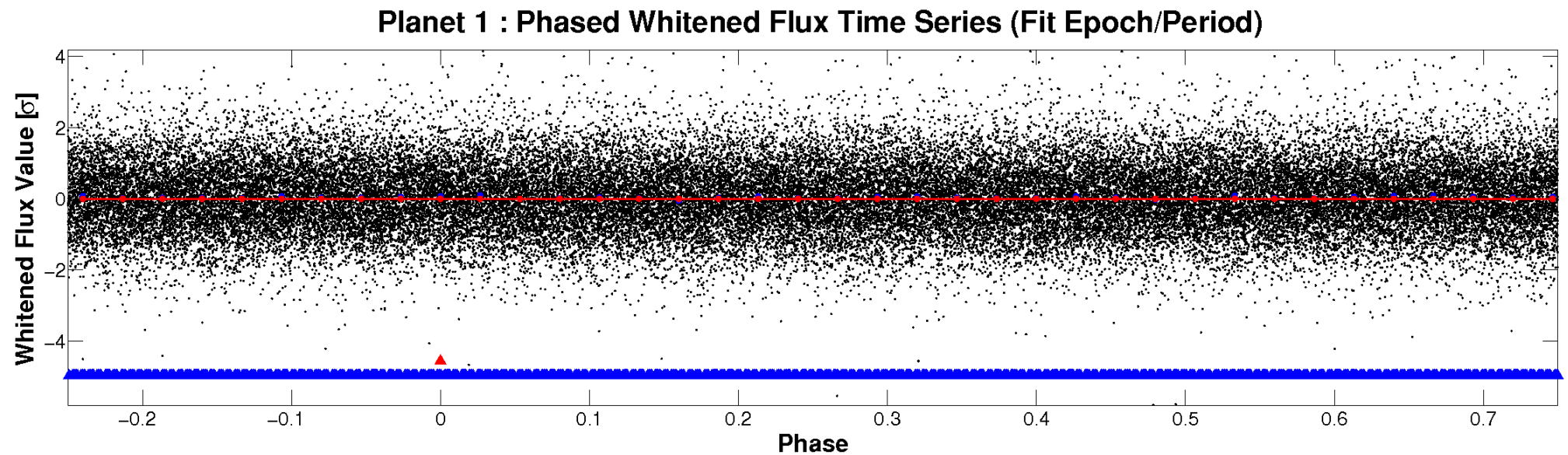
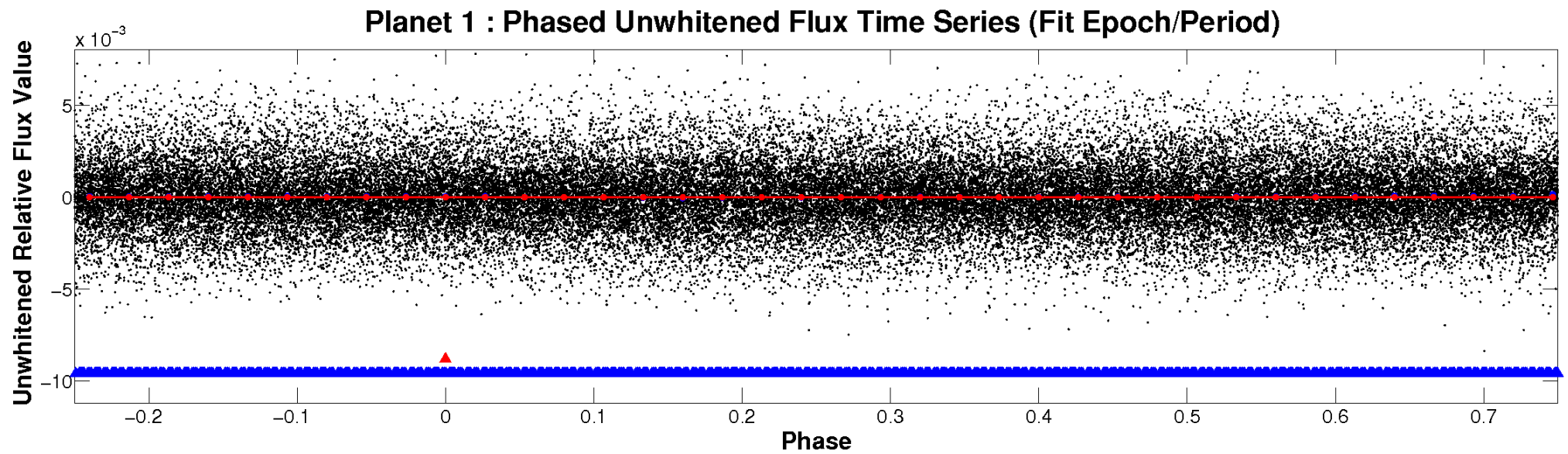


ALT Odd/Even

TCE 006718300-01

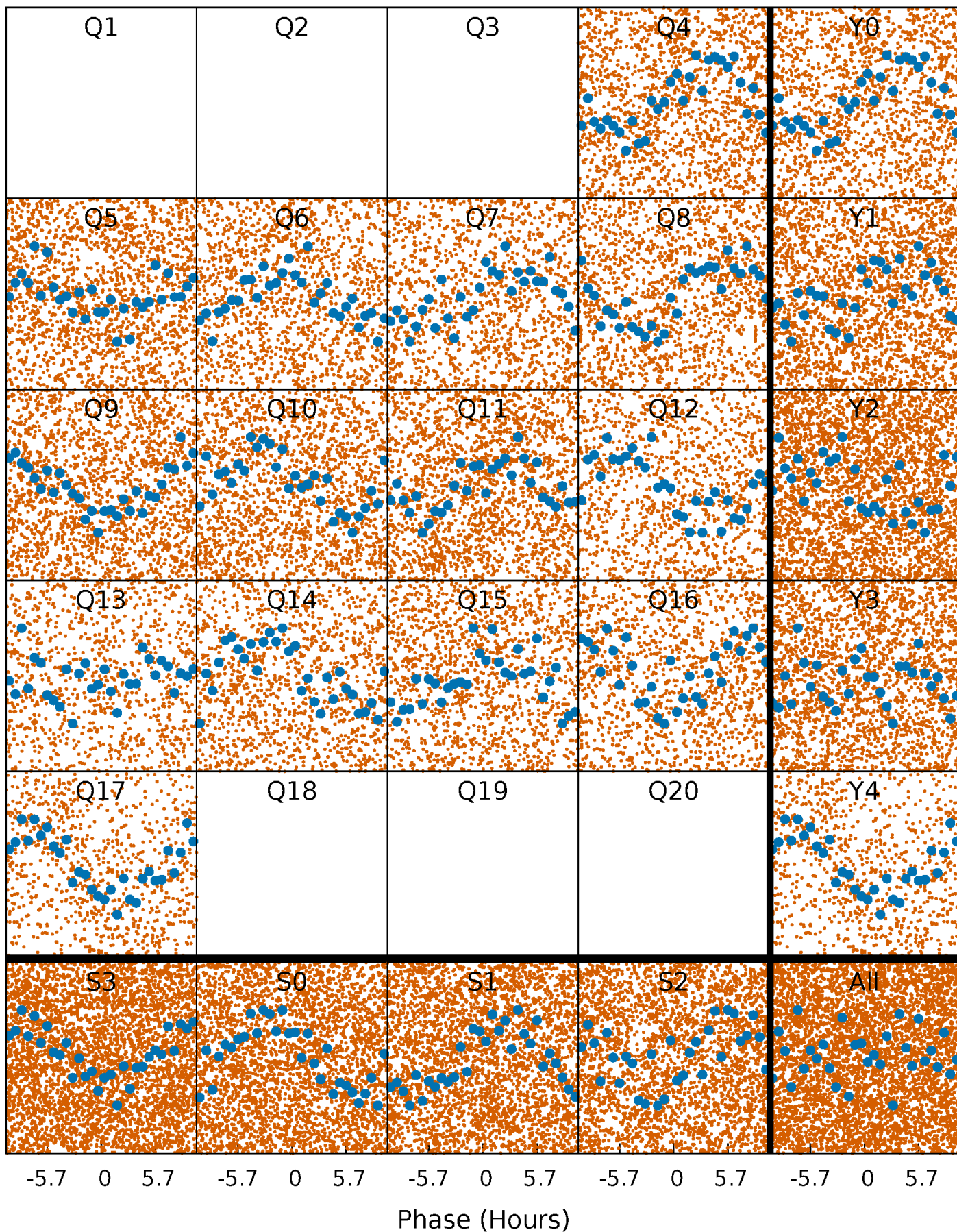


Non-Whitened Vs. Whitened Light Curve



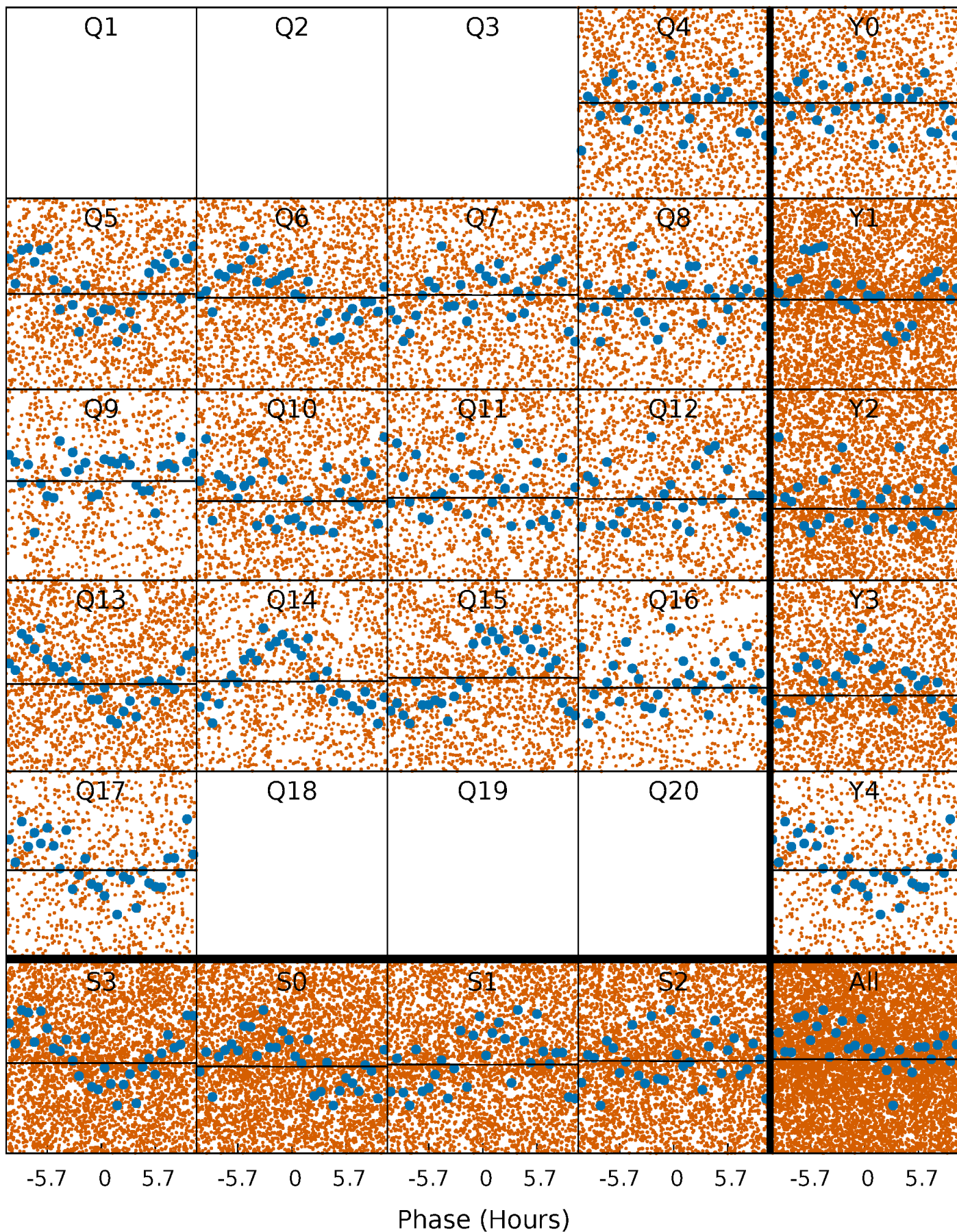
PDC Quarter-Phased Transit Curves

TCE 006718300-01 P= 0.766413 Days $T_0=131.917872$ (BKJD)



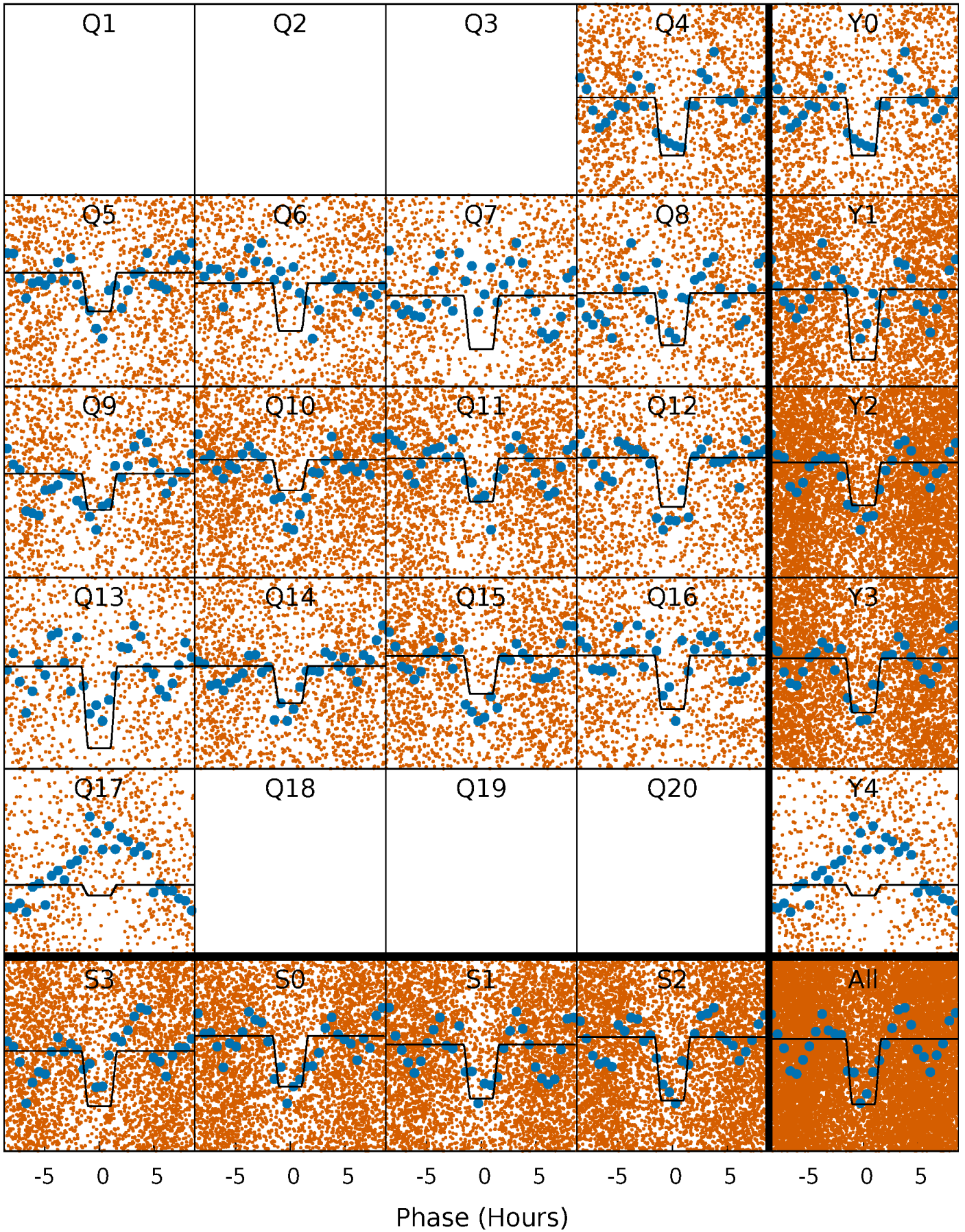
DV Quarter-Phased Transit Curves

TCE 006718300-01 P= 0.766413 Days $T_0=131.917872$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

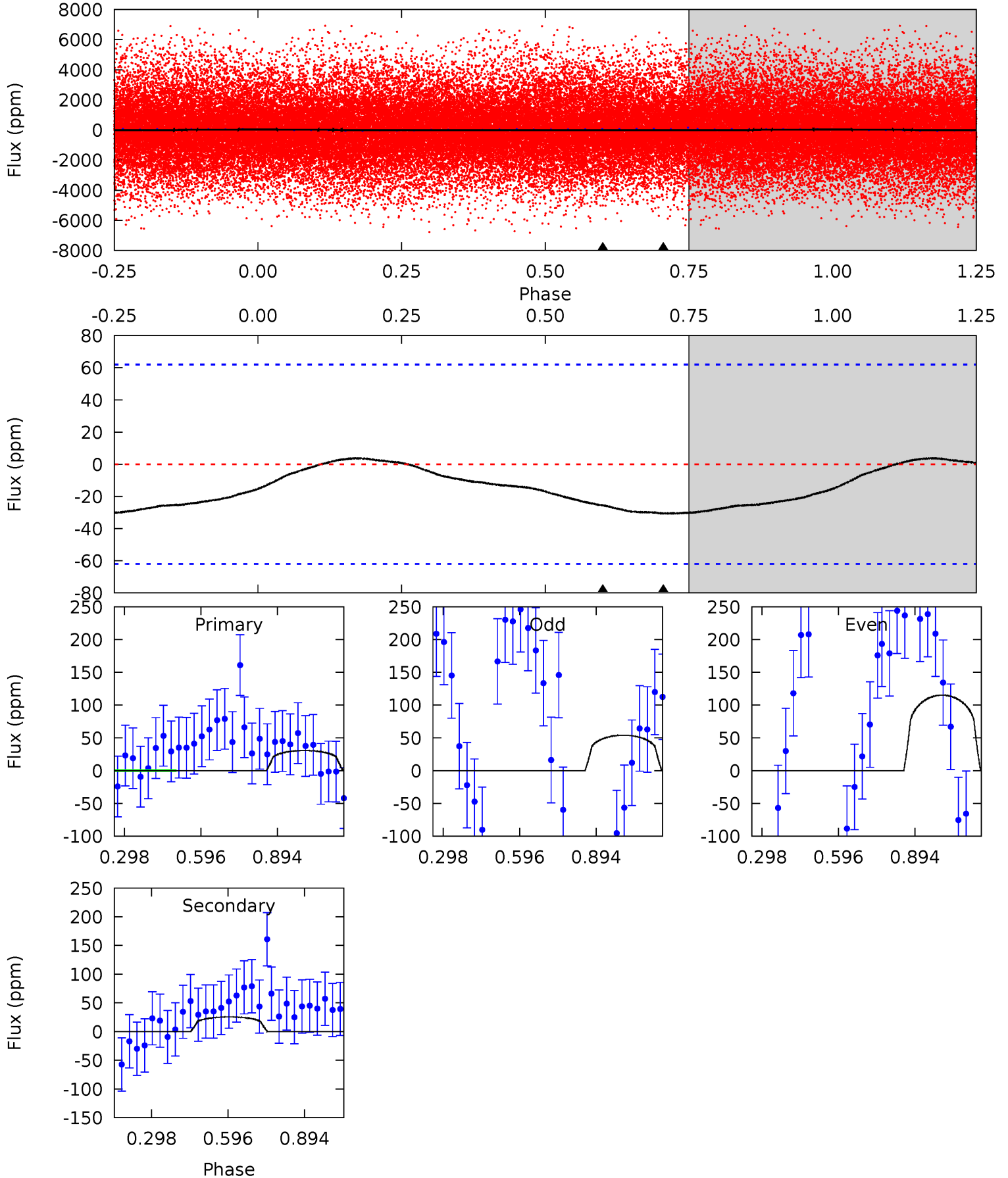
TCE 006718300-01 P= 0.766639 Days $T_0=131.927889$ (BKJD)



DV Model-Shift Uniqueness Test

006718300-01, P = 0.766413 Days, E = 131.917872 Days

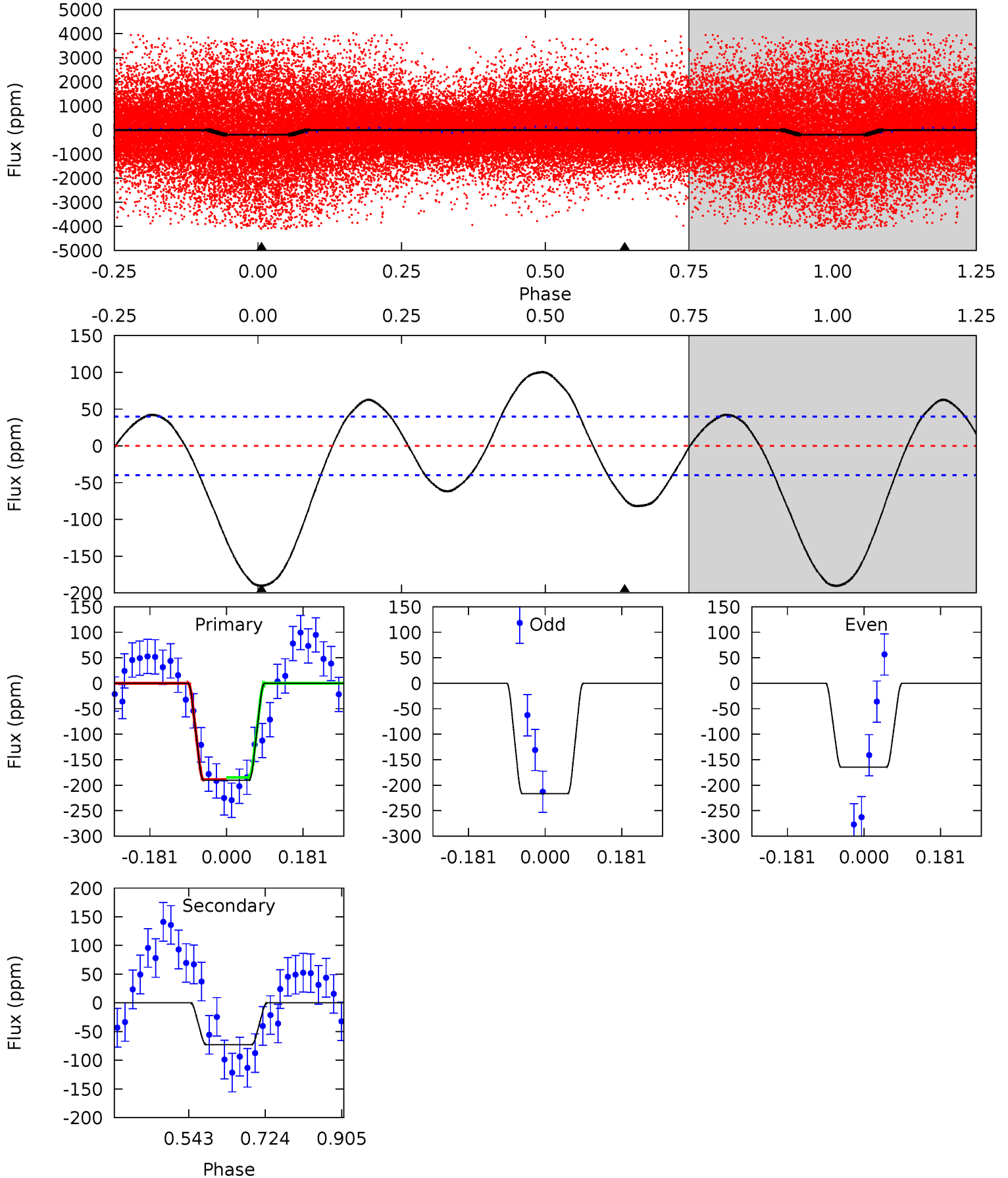
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.14	1.78	0	0	4.33	1.04	0.35	2.14	2.14	1.78	1.78	2.08	-4.58	0.11	2.15



Alt Model-Shift Uniqueness Test

006718300-01, P = 0.766639 Days, E = 131.927889 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	8.10	0	0	4.44	1.34	5.12	21.2	21.2	8.10	8.10	2.08	0.80	0.35	0.22



Stellar Parameters For KIC 006718300

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6215^{+194}_{-259}	$4.440^{+0.058}_{-0.232}$	$-0.060^{+0.250}_{-0.300}$	$1.052^{+0.366}_{-0.122}$	$1.111^{+0.164}_{-0.164}$	$1.345^{+0.407}_{-0.728}$
	+3%/-4%	+1%/-5%	+417%/-500%	+35%/-12%	+15%/-15%	+30%/-54%
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 006718300-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-26 ± 14	$1.20^{+1.24}_{-0.85}$	3082^{+259}_{-174}	4306^{+4060}_{-1425}	$2.439^{+30.231}_{-1.981}$
Alt.	-73 ± 9	$2.19^{+1.46}_{-1.36}$	3067^{+247}_{-166}	4355^{+2377}_{-942}	$2.375^{+13.842}_{-1.528}$

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

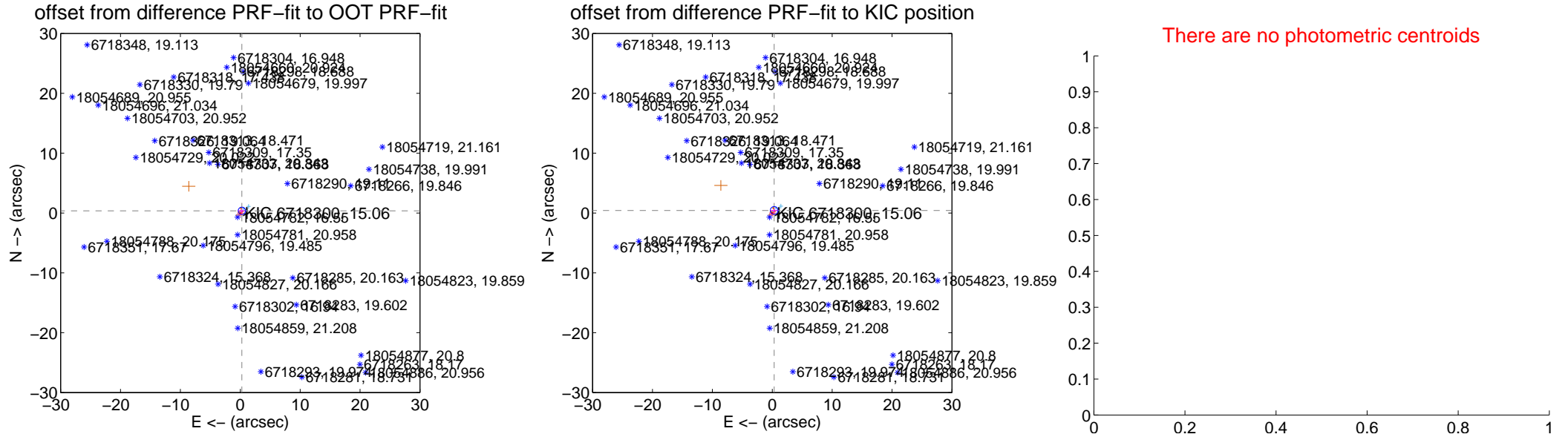
DV Centroid Data

Supplemental centroid analysis for 006718300-01. Kepler magnitude: 15.06. Transit SNR 0.07

There are 6 quarters with good PRF difference image offsets

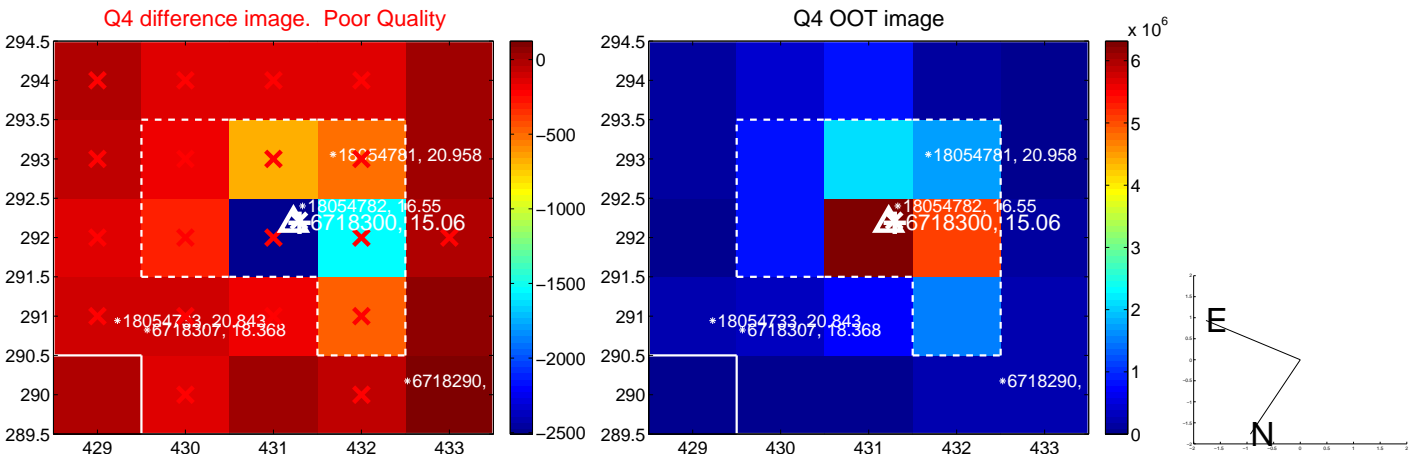
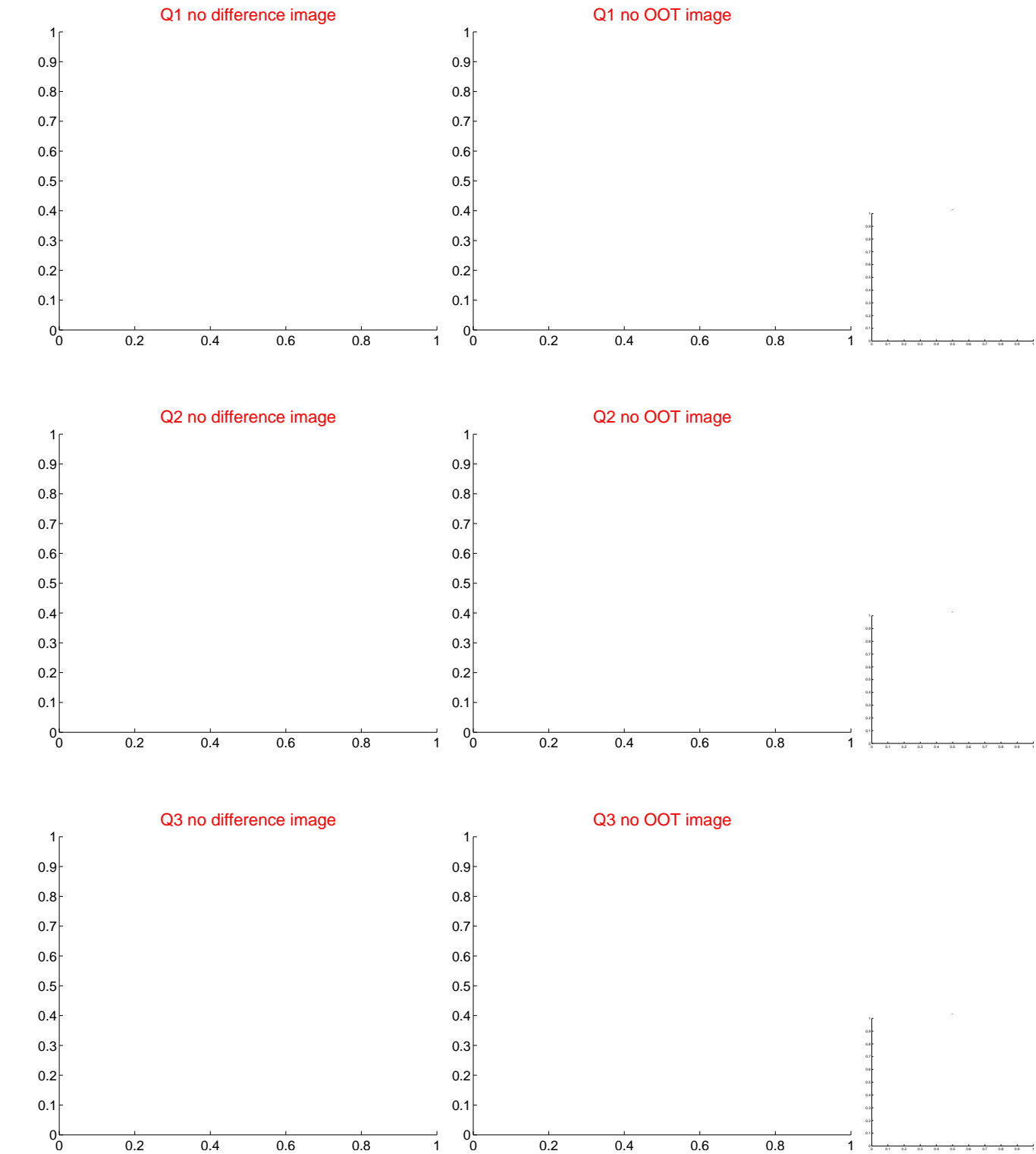
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.450 ± 0.203	2.22	-0.261 ± 0.663	0.367 ± 0.322
PRF-fit source offset from KIC position	0.528 ± 0.216	2.44	-0.315 ± 0.685	0.424 ± 0.325
photometric centroid source offset	—	—	—	—

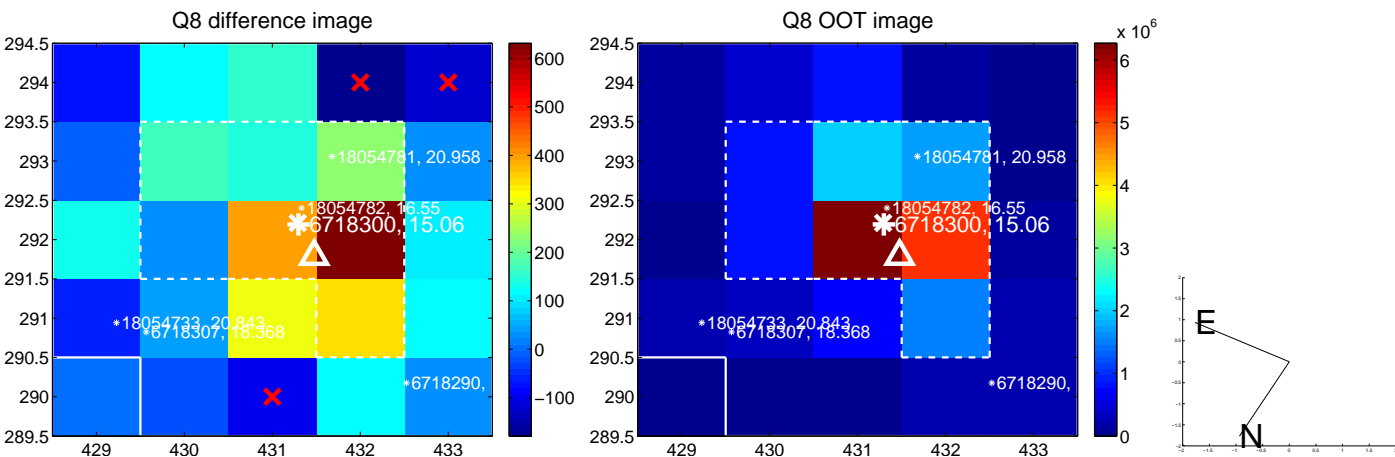
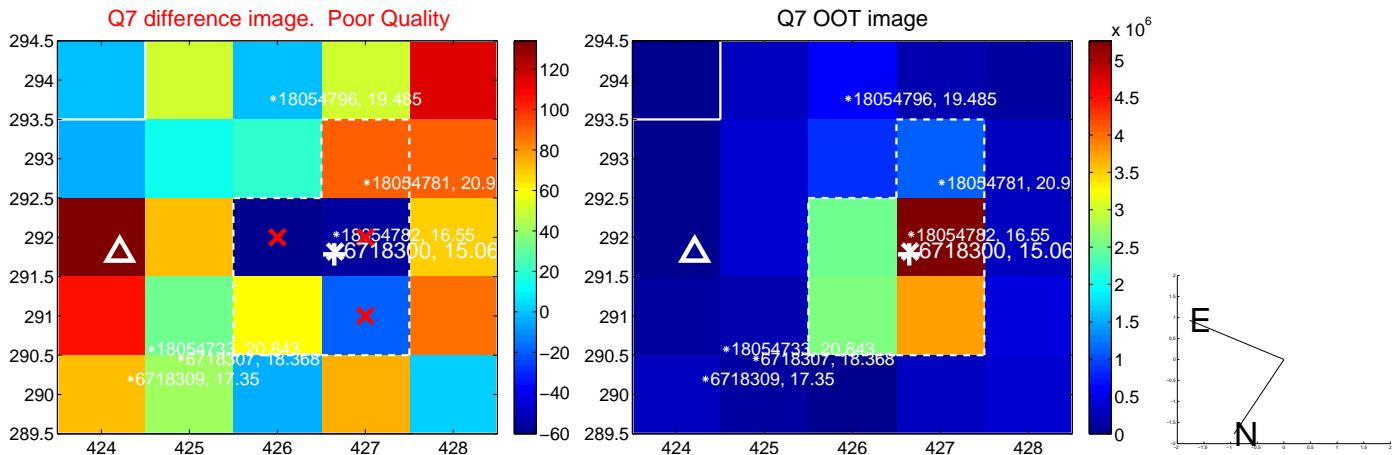
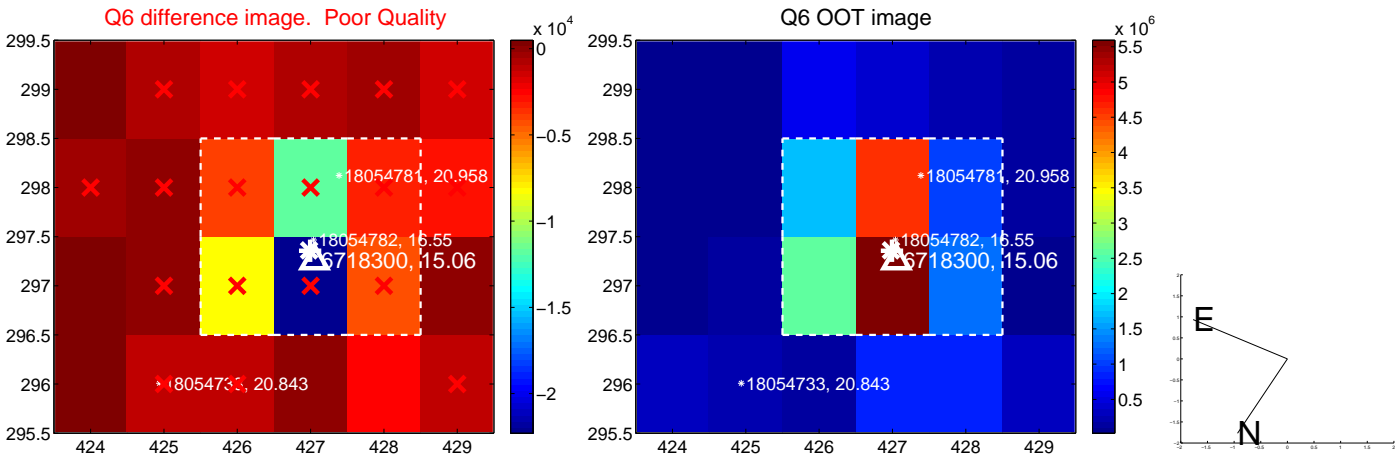
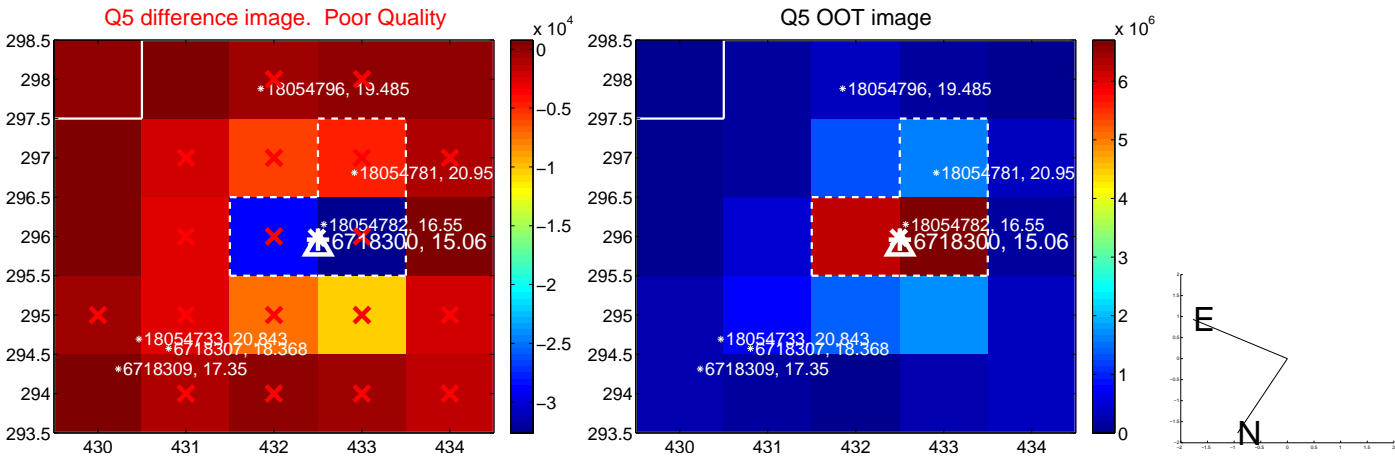


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

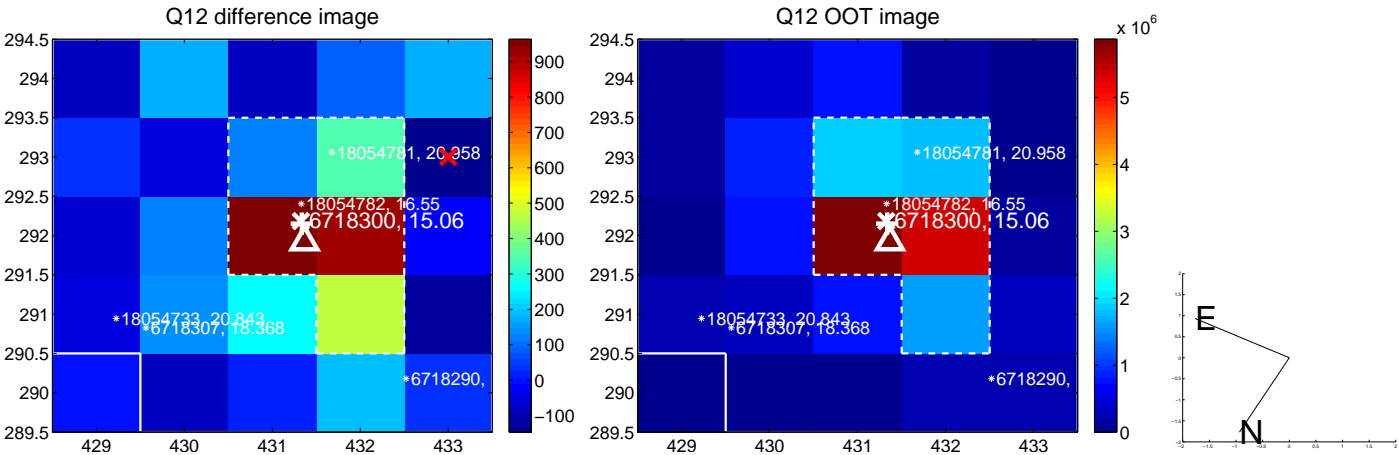
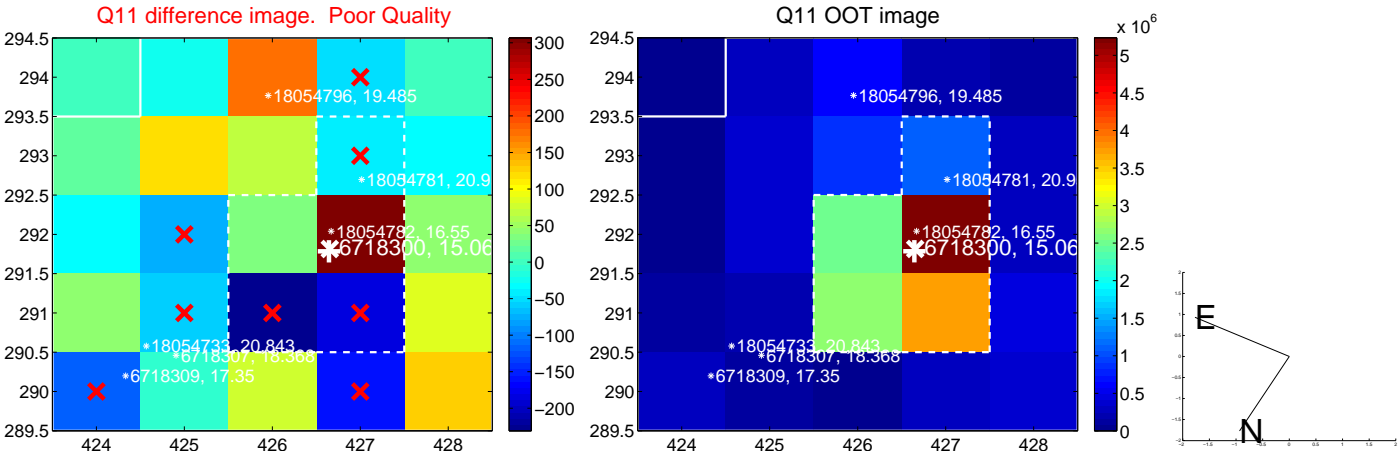
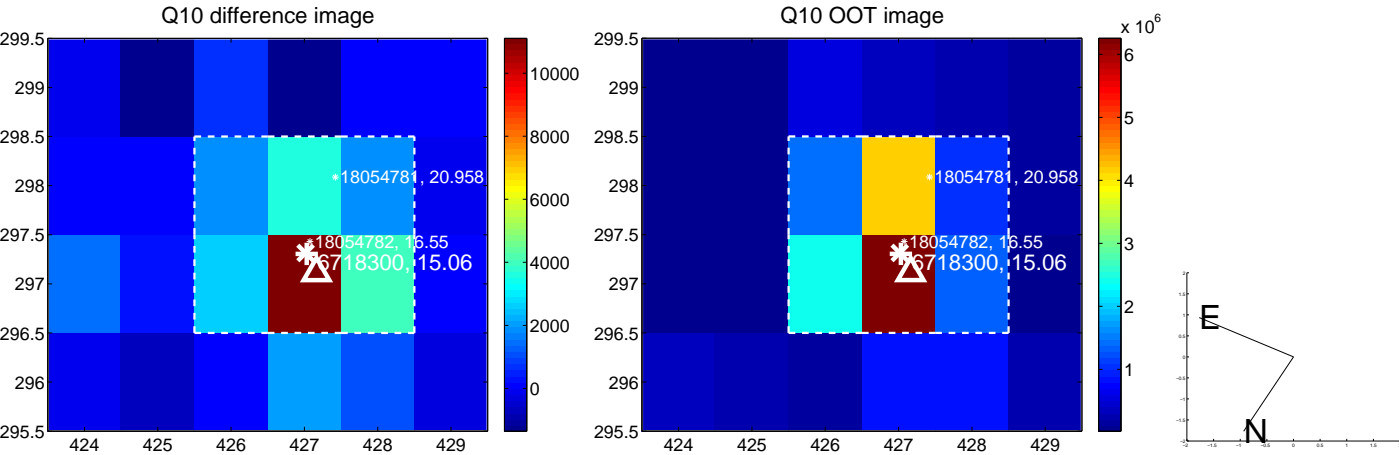
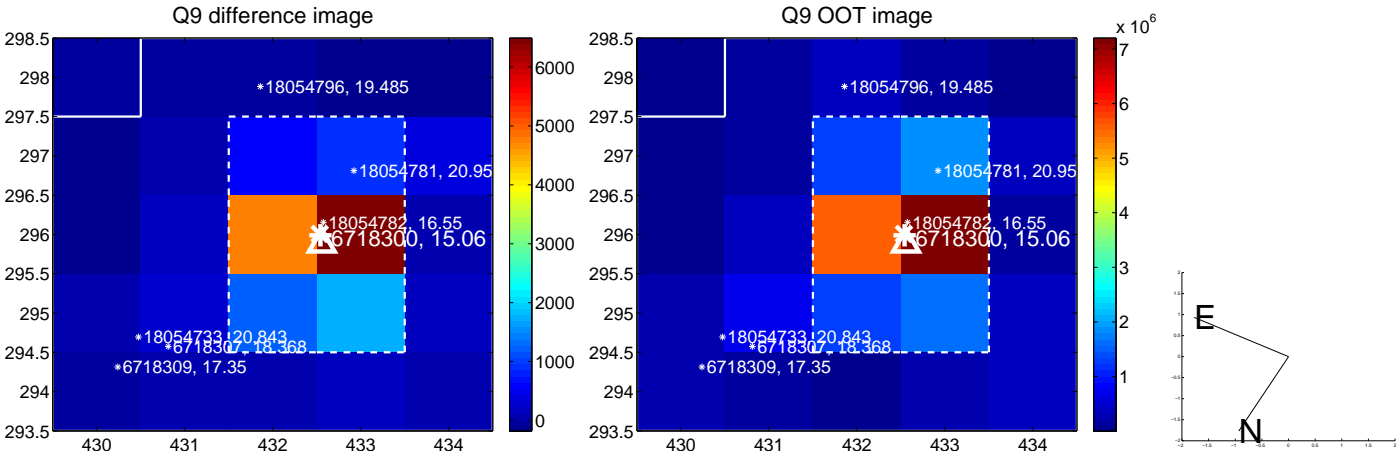
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



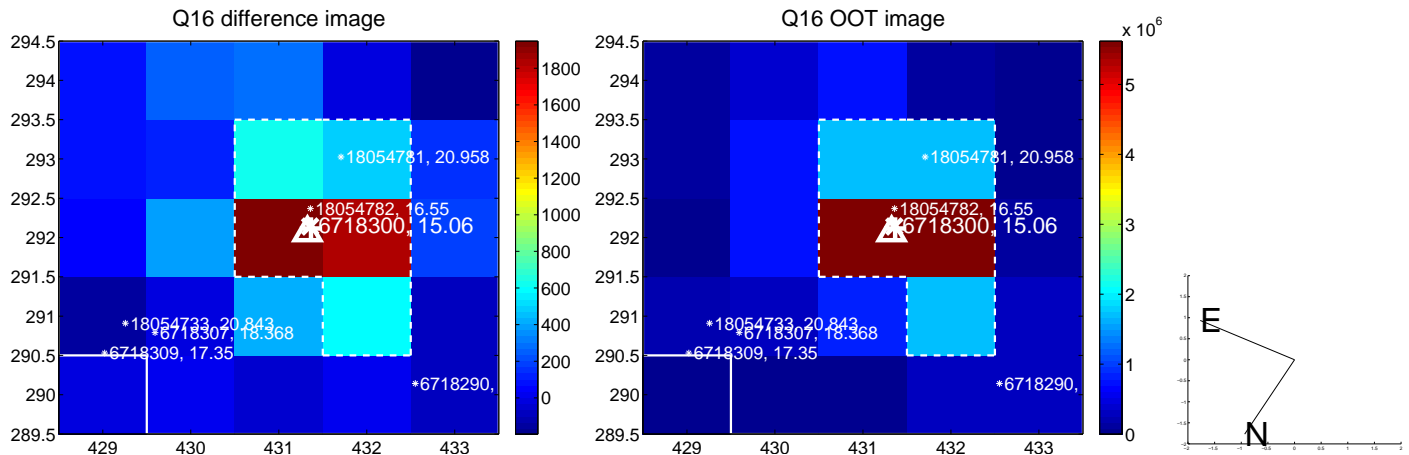
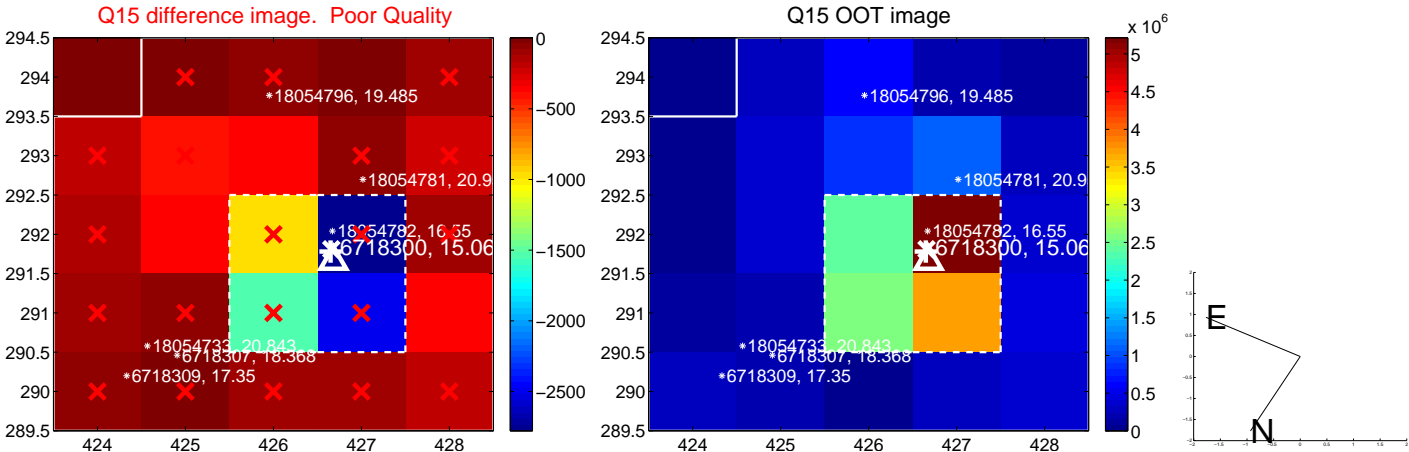
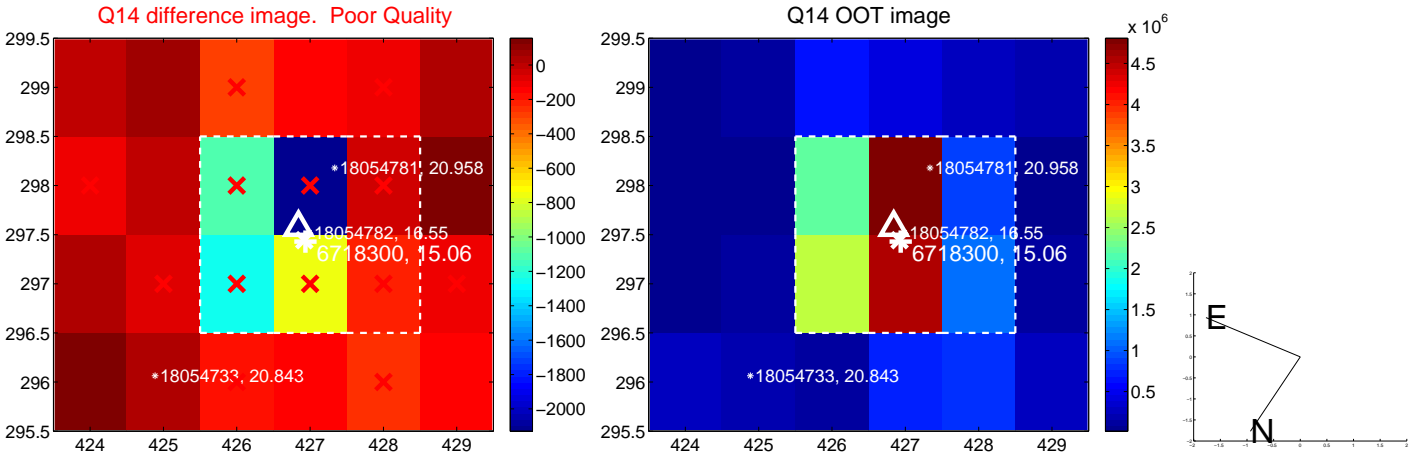
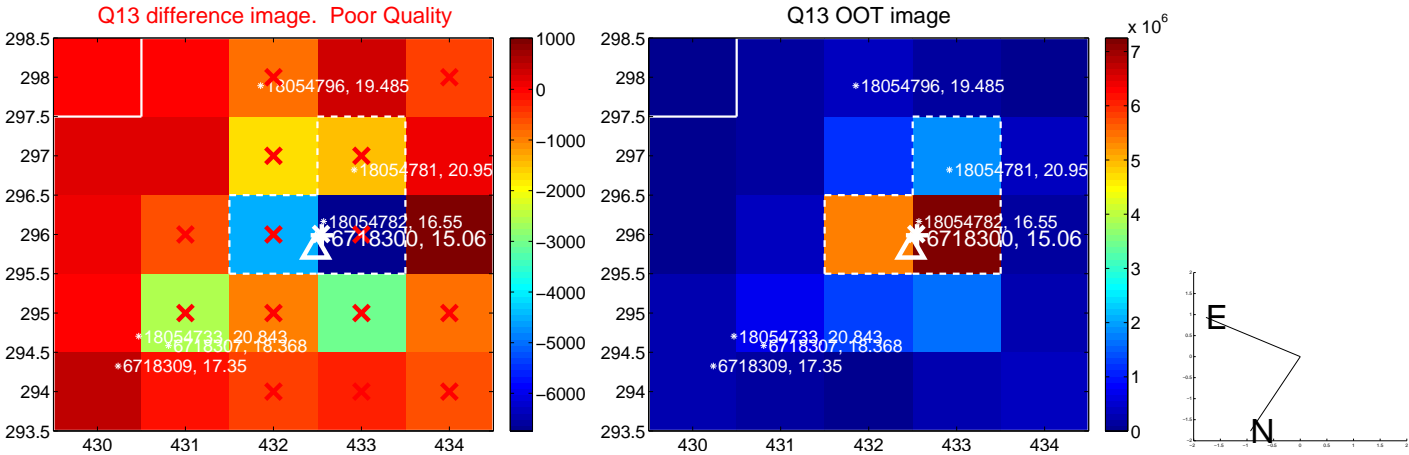
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



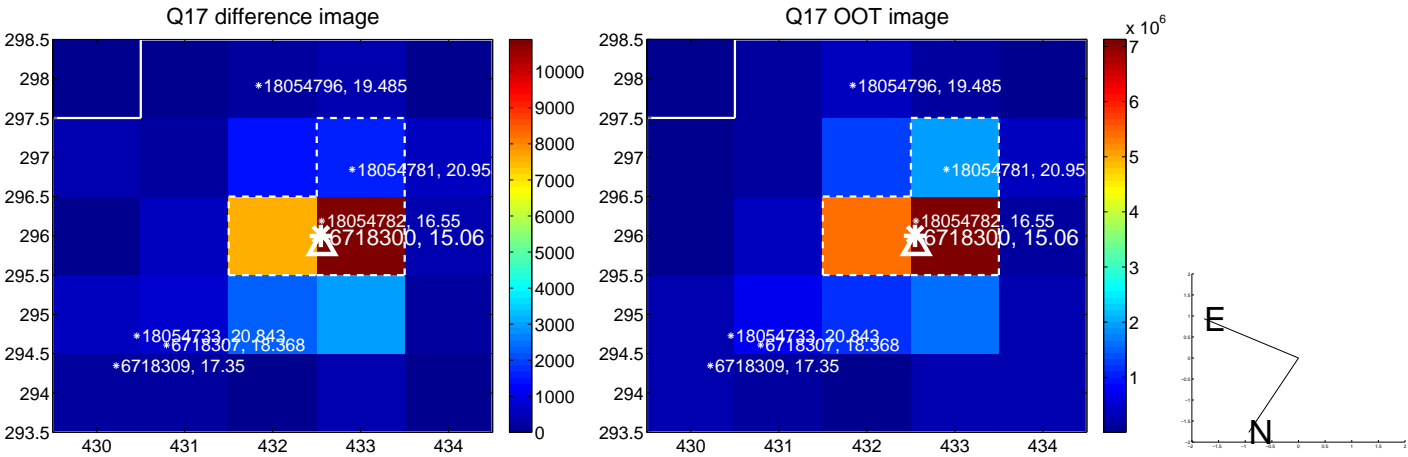
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



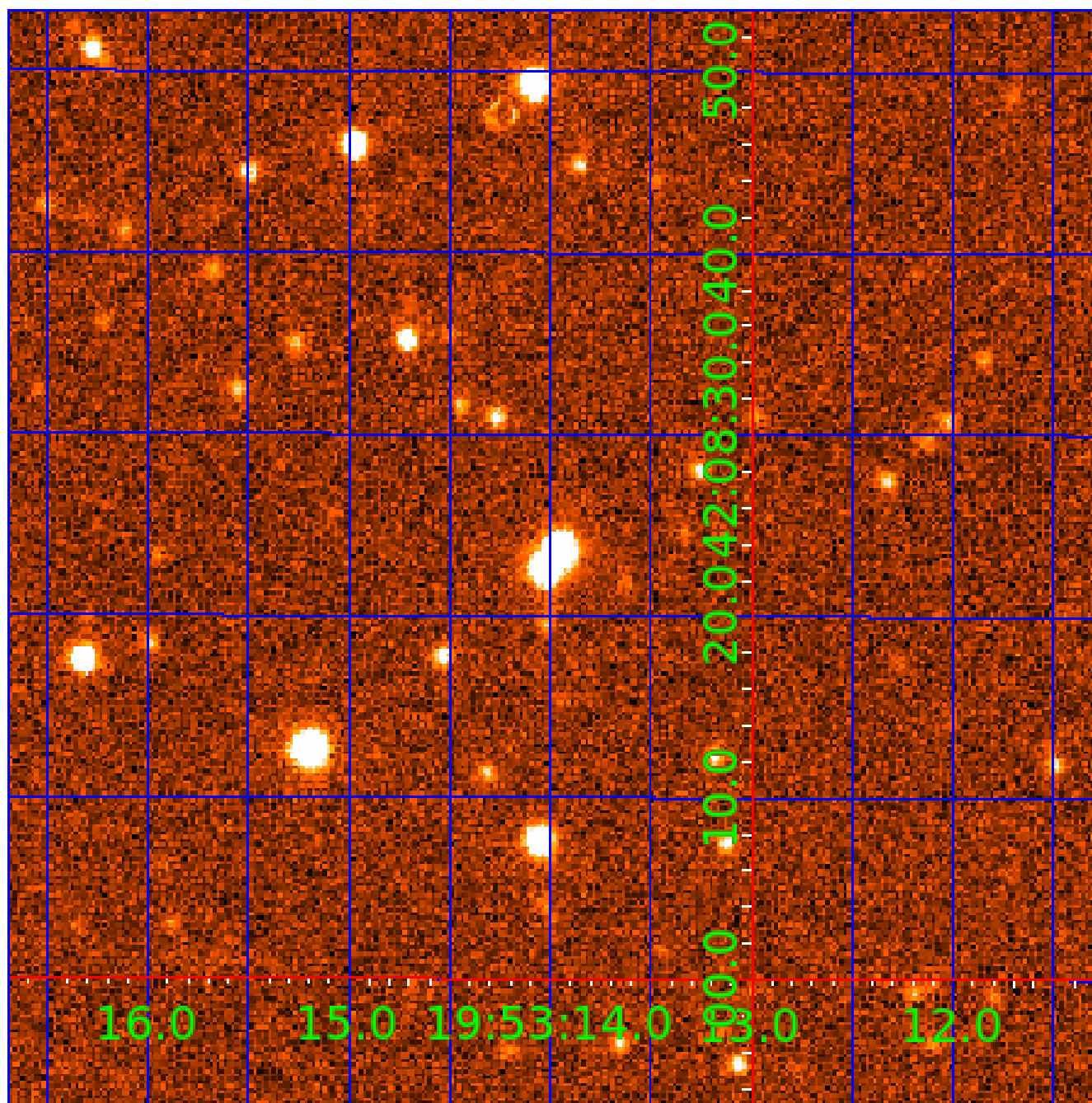
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 006718300

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})
006718300-01	OBS	No	0.766413	131.917872	0.9	5.026	8.0	0.1	1.05	6215	0.10	5129.23
006718300-02	OBS	No	1.503666	131.847797	562.3	14.611	14.2	14.0	1.05	6215	2.52	2088.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006718300-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006718300-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

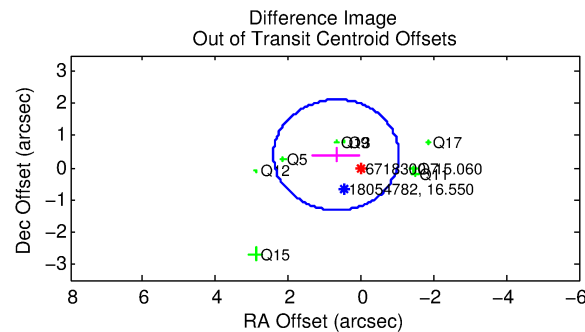
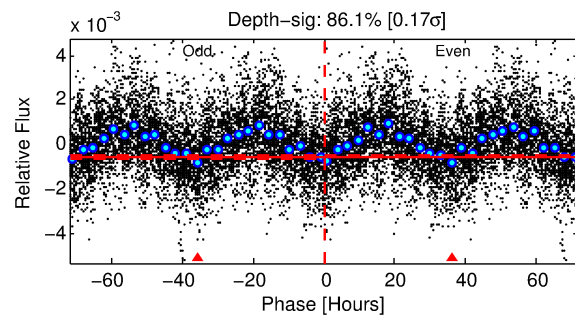
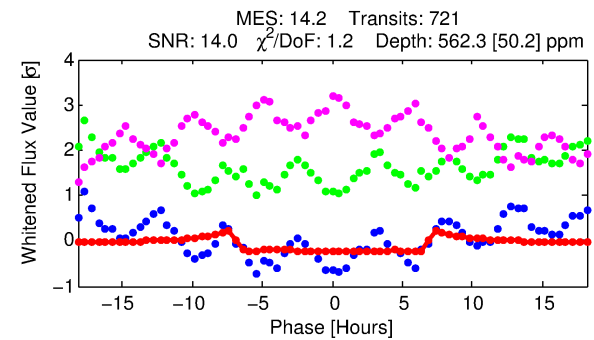
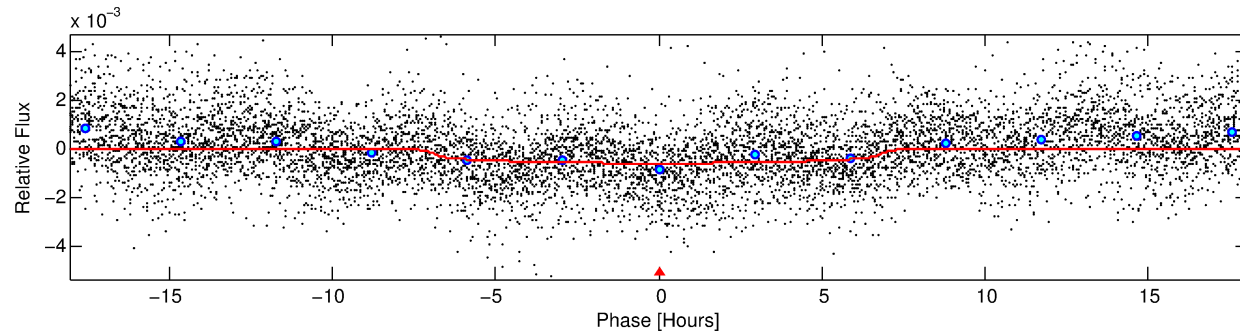
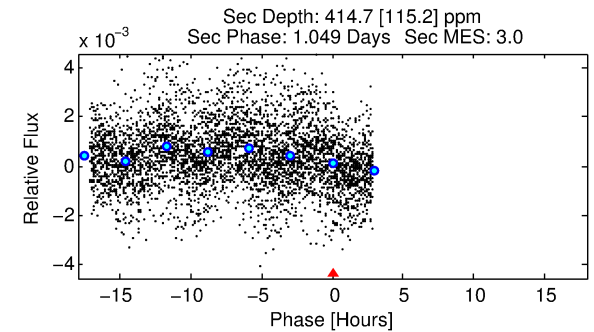
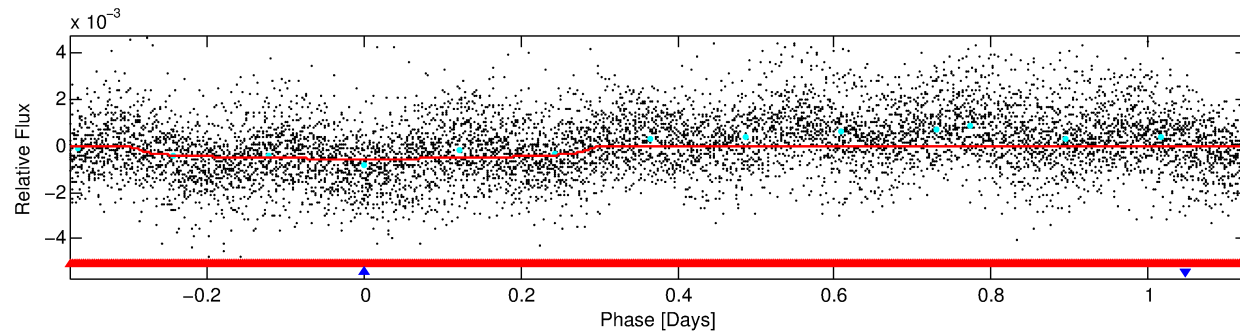
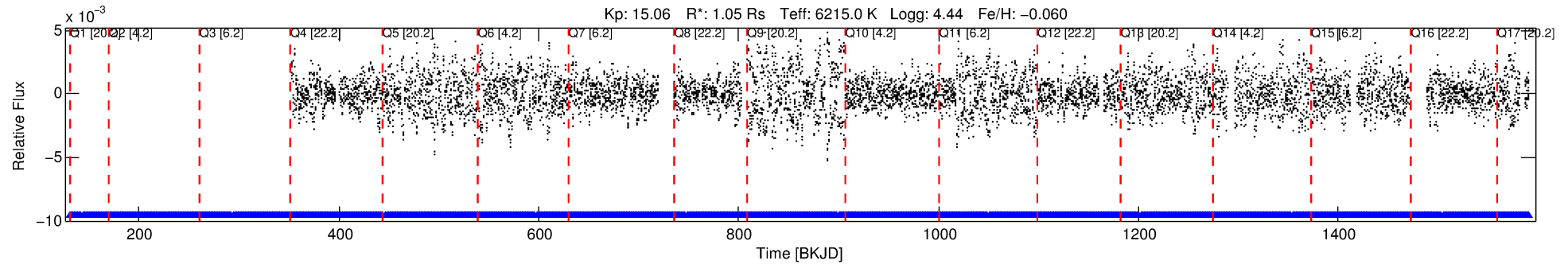
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006718300-02

No Significant Match Found

DV One-Page Summary

KIC: 6718300 Candidate: 2 of 2 Period: 1.504 d



DV Fit Results:

Period = 1.50367 [0.00001] d
Epoch = 131.8478 [0.0045] BKJD
Rp/R* = 0.0219 [0.0021]
a/R* = 1.07 [0.05]
b = 0.31 [1.24]
Seff = 2088.34 [953.37]
Teq = 1724 [197] K
Rp = 2.52 [0.91] Re
a = 0.0266 [0.0078] AU
Ag = 25.49 [13.87] [1.77σ]
Teffp = 5988 [567] K [7.11σ]

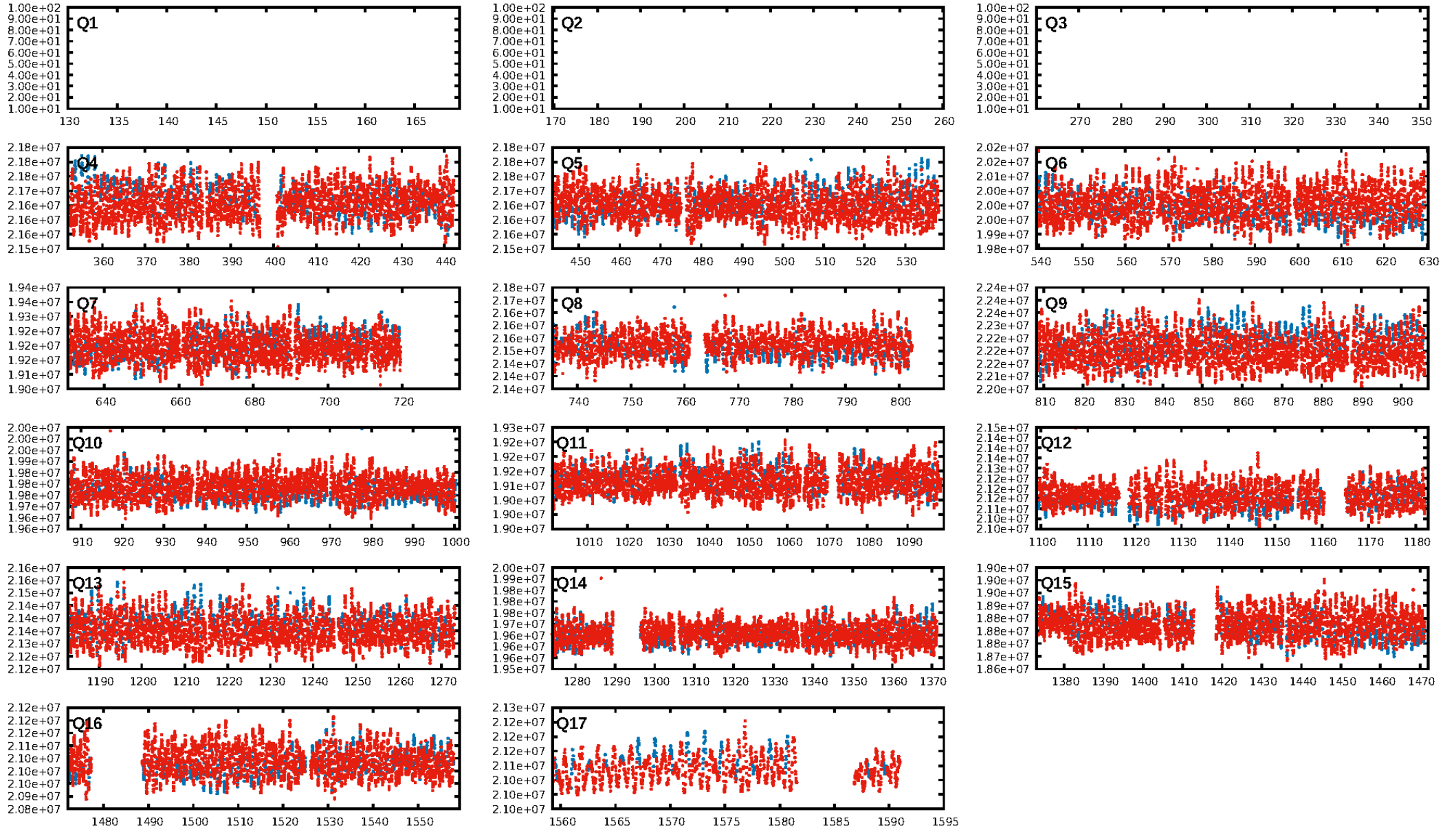
DV Diagnostic Results:

ShortPeriod-sig: 74.8% [1.15σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [704/704]
GhostDiagnostic-chr: -2.065
Centroid-sig: 1.7%
Centroid-so: 0.093 arcsec [0.93σ]
OotOffset-rm: 0.788 arcsec [1.37σ]
KicOffset-rm: 0.777 arcsec [1.46σ]
OotOffset-st: 0/3/1/4 [8]
KicOffset-st: 0/3/1/4 [8]
DiffImageQuality-fgm: 0.12 [1/8]
DiffImageOverlap-fno: 0.00 [0/14]

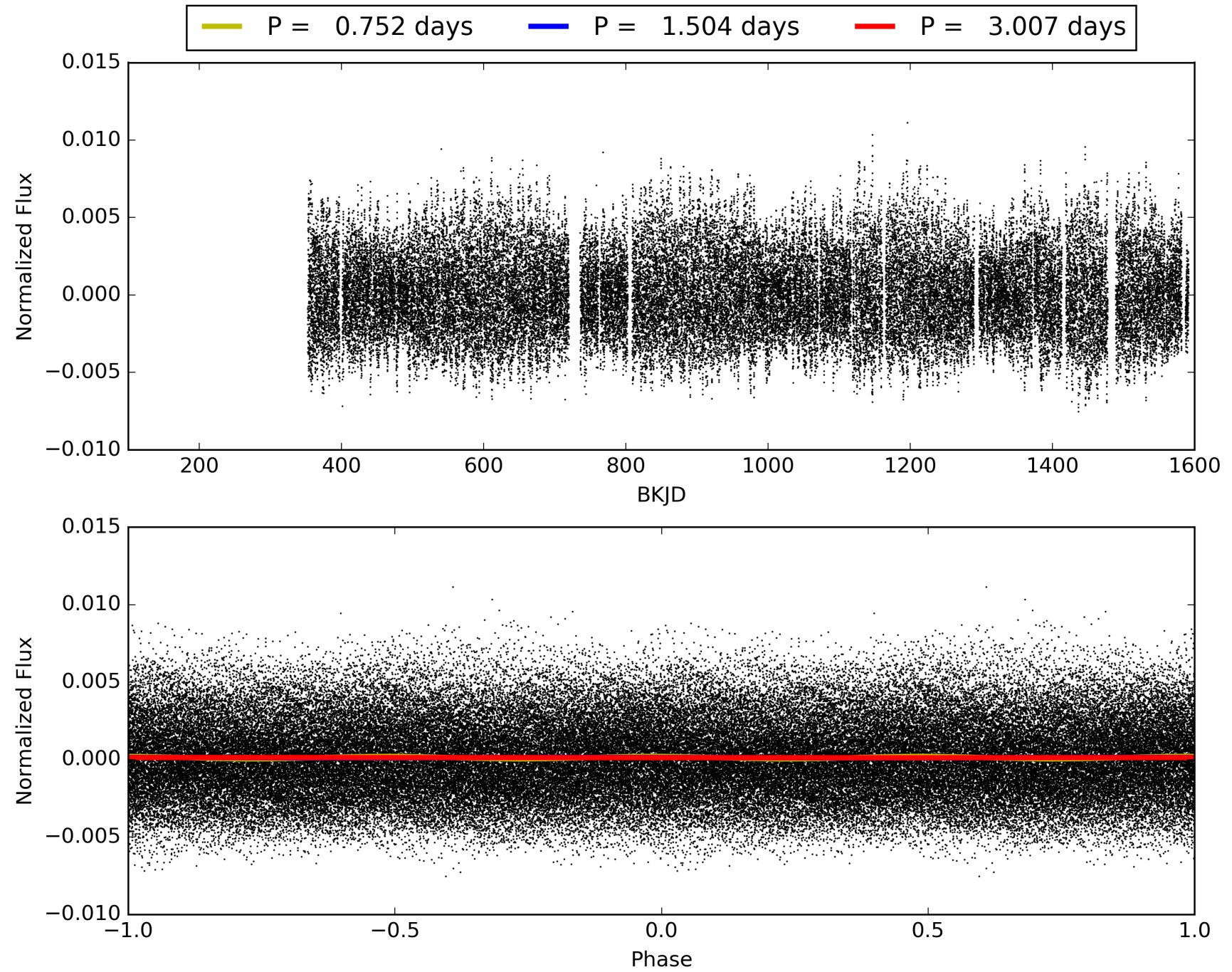
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:33:39 Z

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

TCE 006718300-02, PDC Light Curves

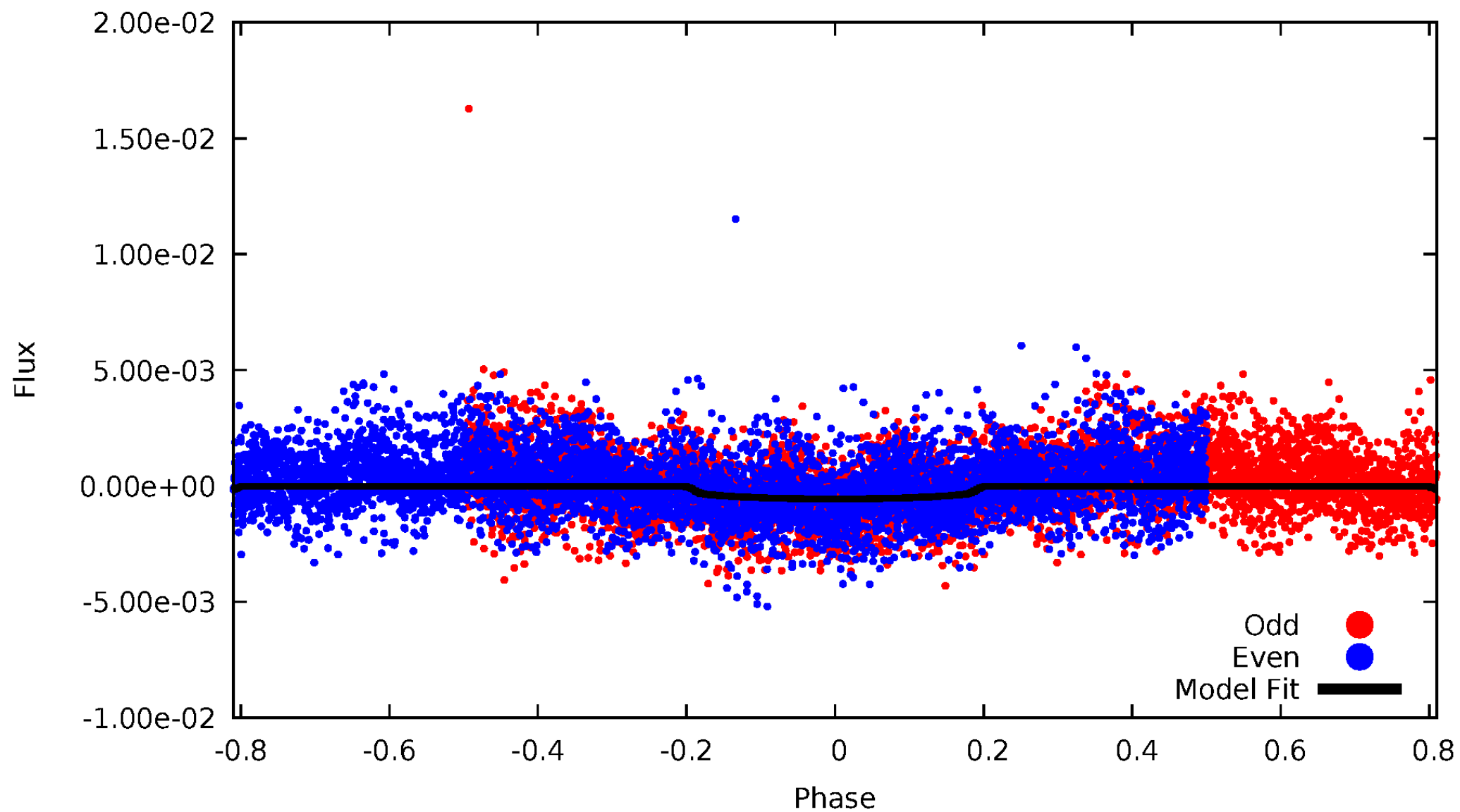


TCE 006718300-02



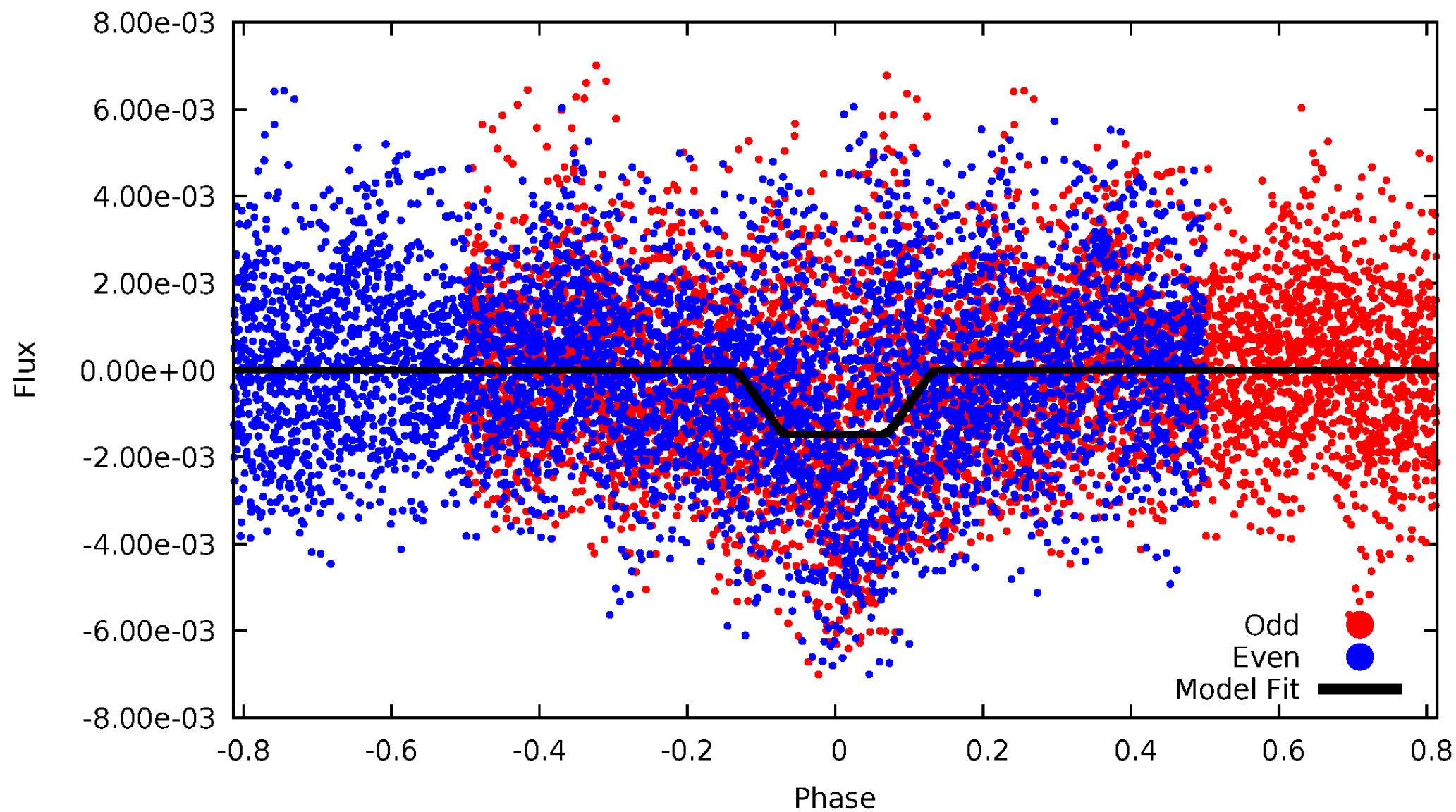
DV Odd/Even

TCE 006718300-02



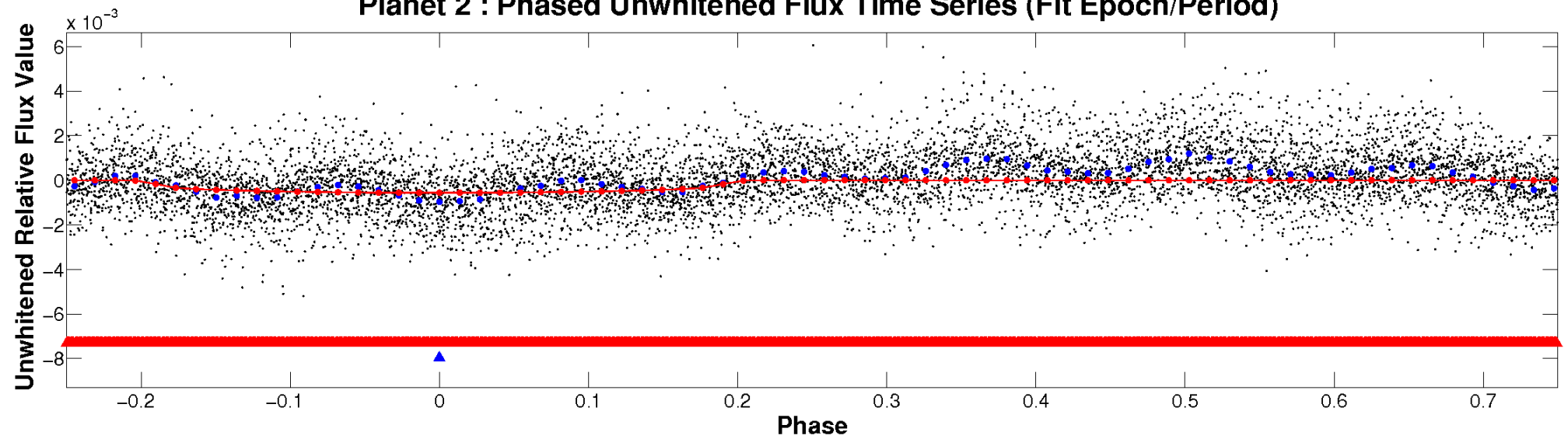
ALT Odd/Even

TCE 006718300-02

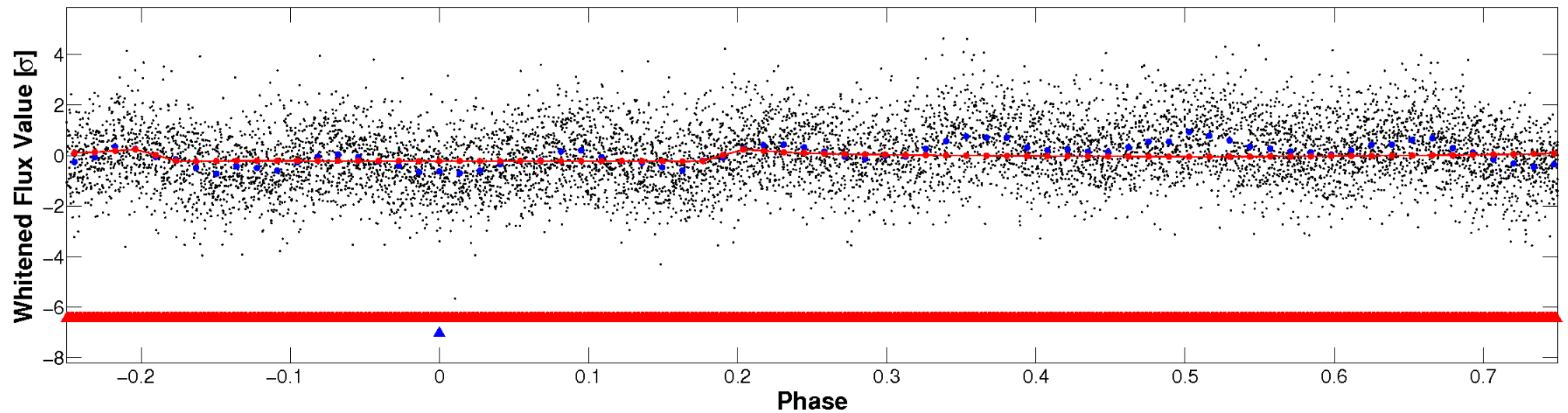


Non-Whitened Vs. Whitened Light Curve

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

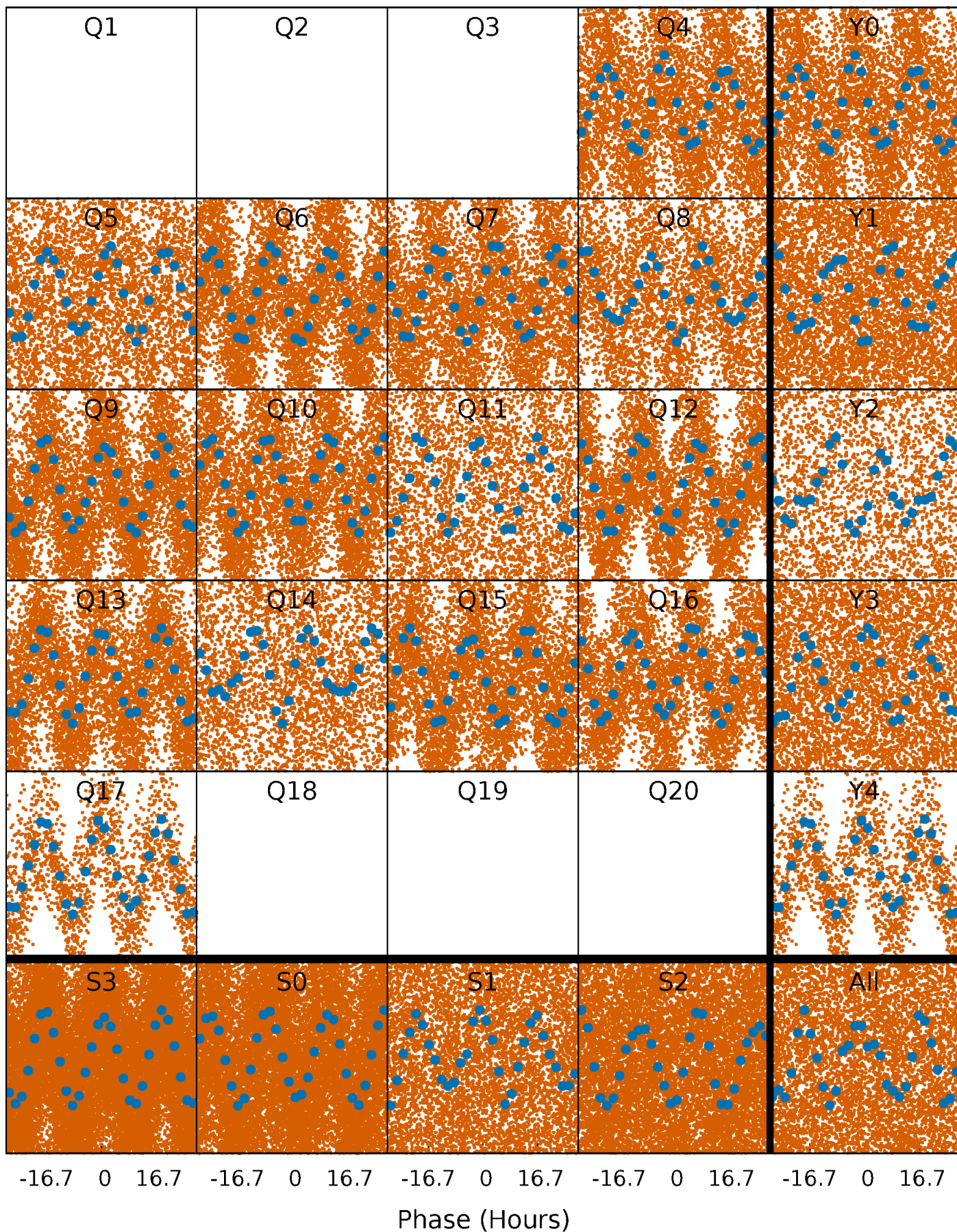


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



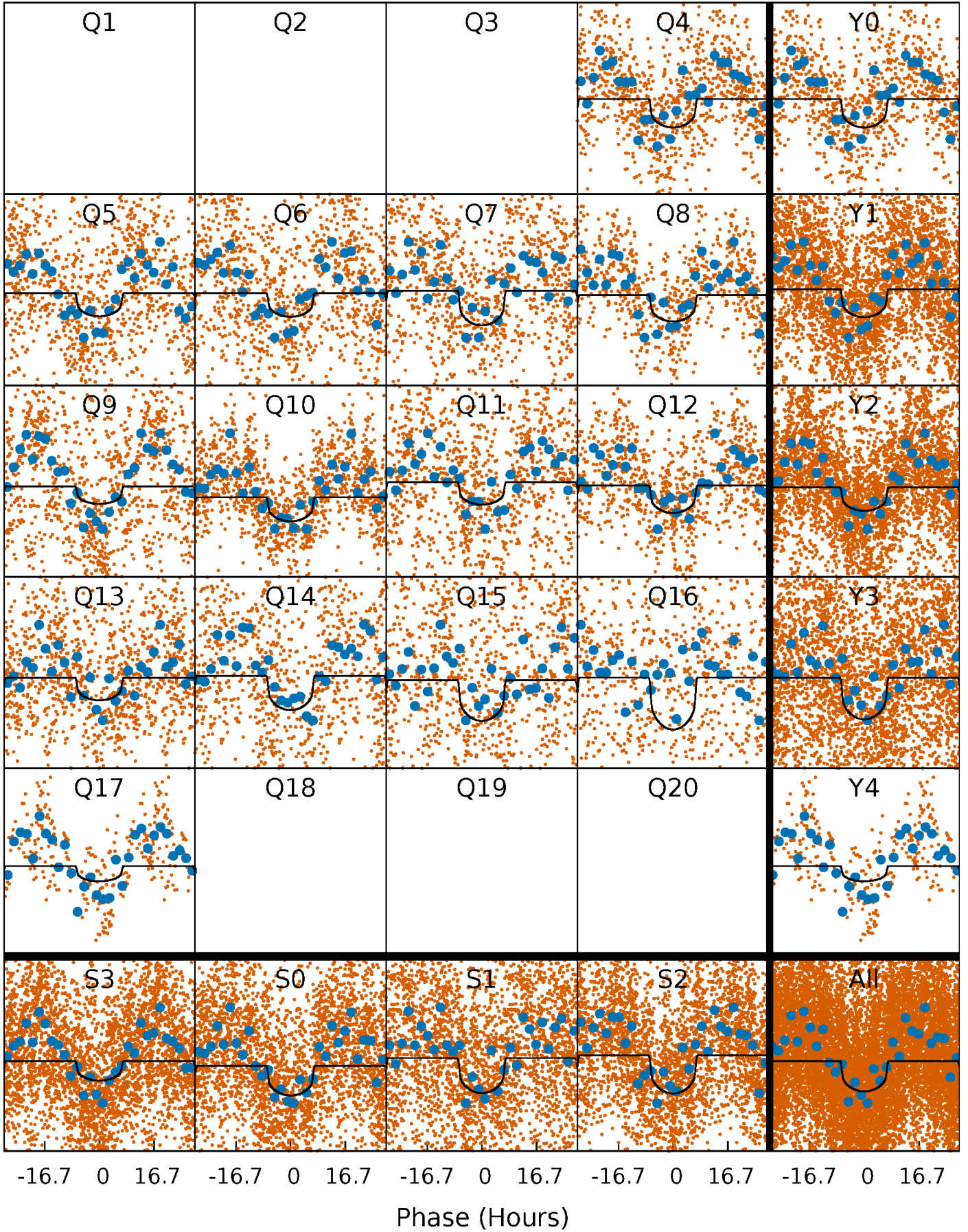
PDC Quarter-Phased Transit Curves

TCE 006718300-02 P= 1.503666 Days $T_0=131.847797$ (BKJD)



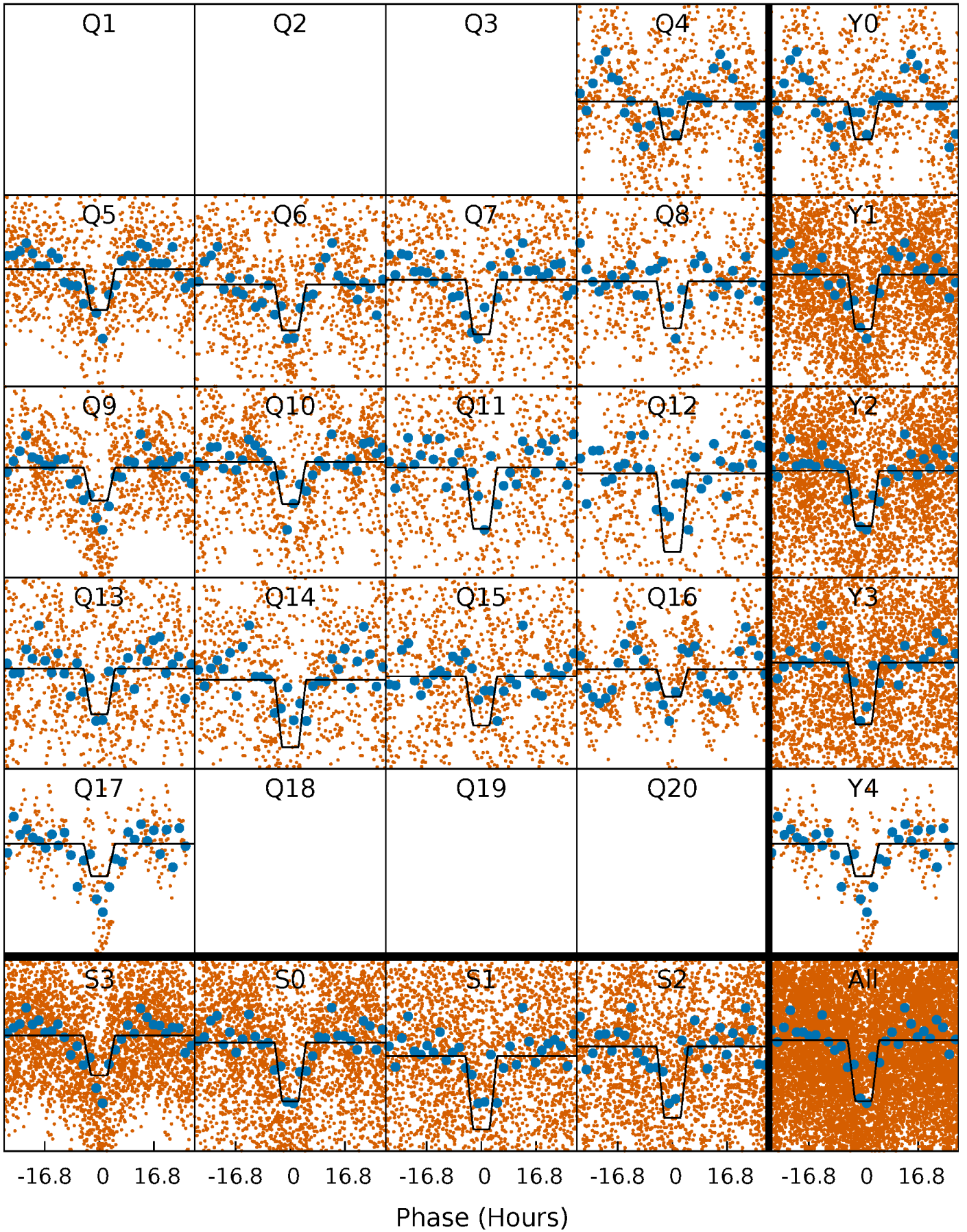
DV Quarter-Phased Transit Curves

TCE 006718300-02 $P = 1.503666$ Days $T_0 = 131.847797$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

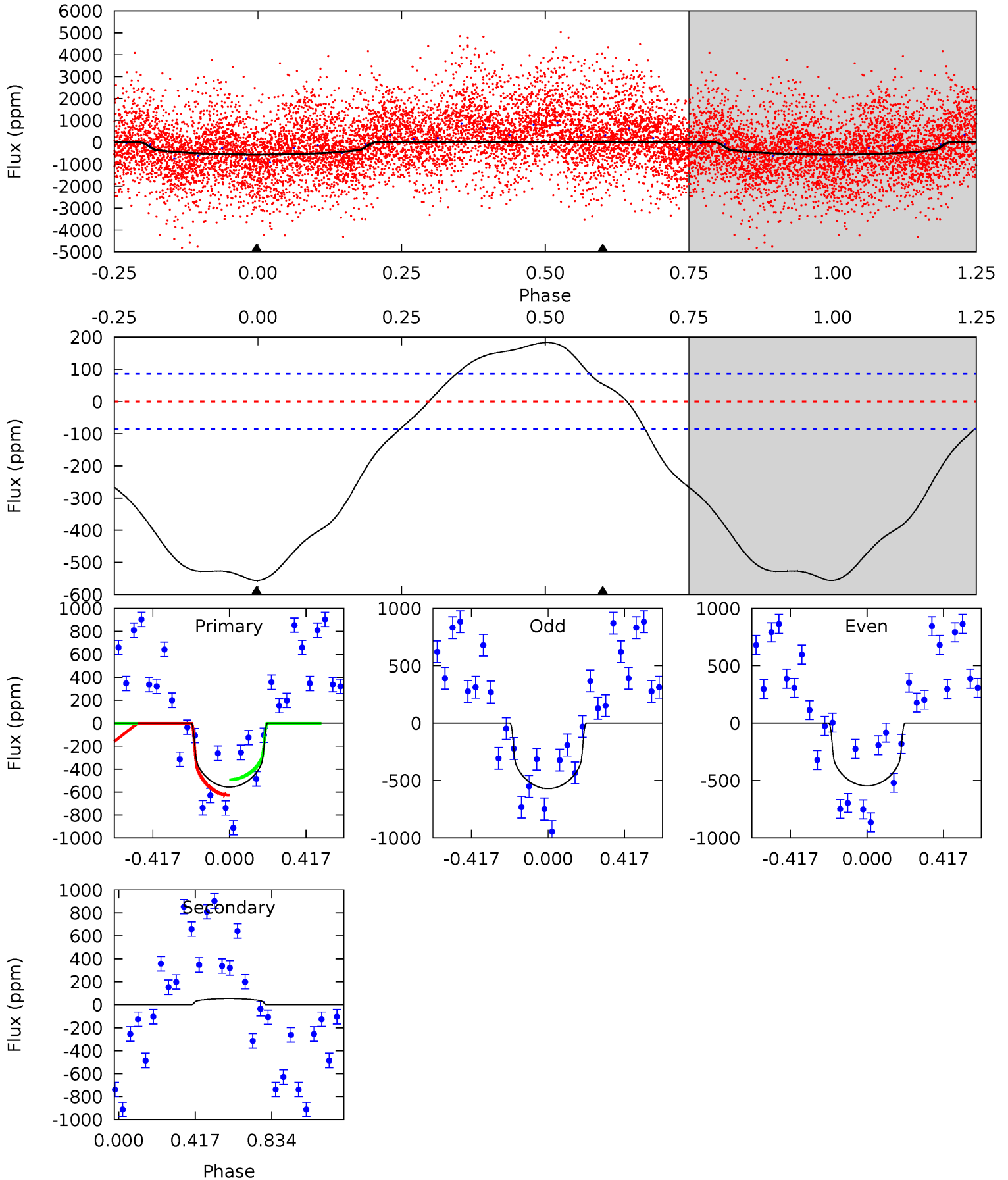
TCE 006718300-02 P= 1.503728 Days $T_0=131.816628$ (BKJD)



DV Model-Shift Uniqueness Test

006718300-02, P = 1.503666 Days, E = 131.847797 Days

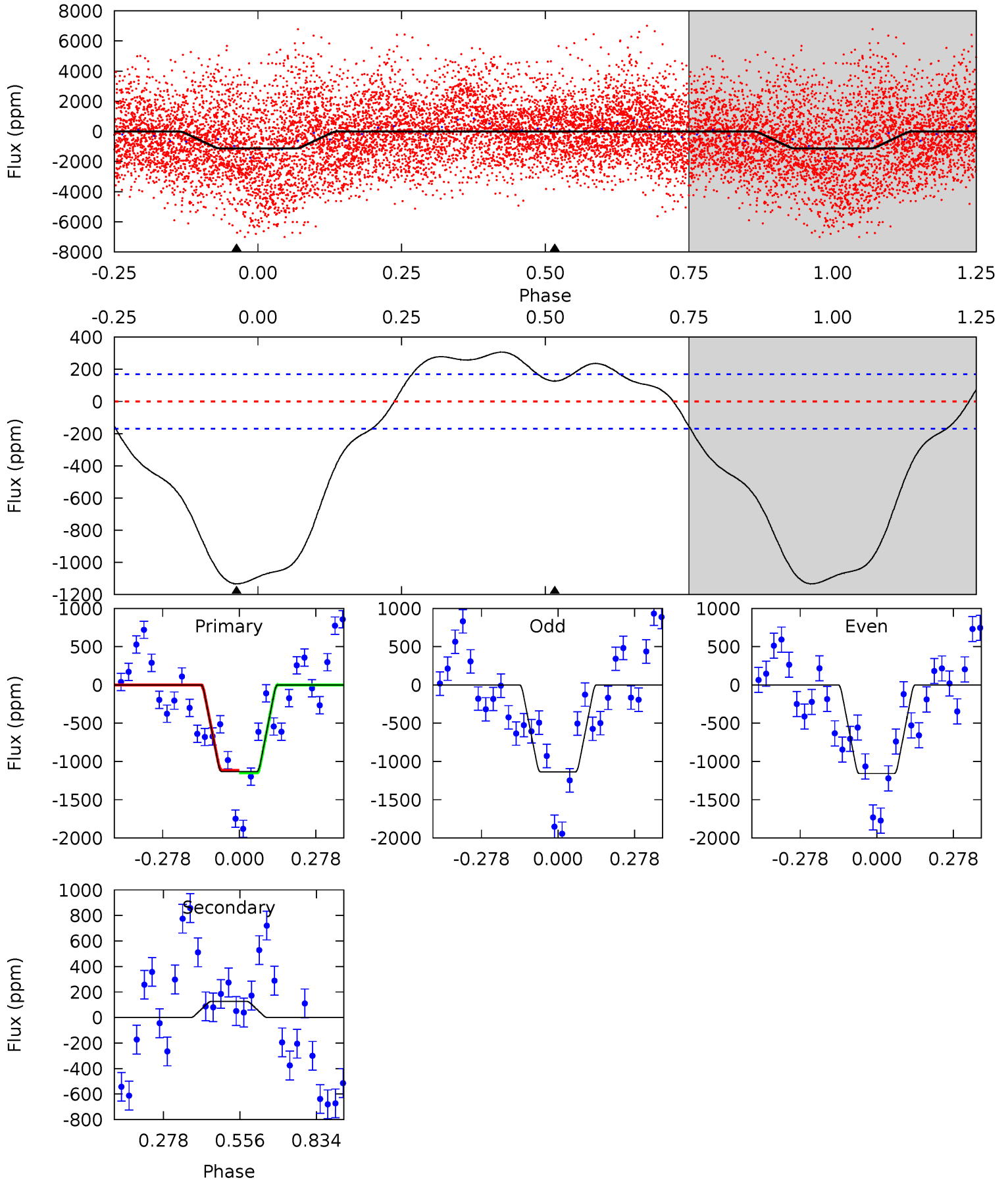
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.7	-2.69	0	0	4.26	0.81	2.95	27.7	27.7	-2.69	-2.69	0.60	1.02	0.25	3.81



Alt Model-Shift Uniqueness Test

006718300-02, P = 1.503728 Days, E = 131.816628 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.1	-3.24	0	0	4.35	1.08	3.72	29.1	29.1	-3.24	-3.24	0.29	1.14	0.21	0.45



Stellar Parameters For KIC 006718300

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6215^{+194}_{-259}	$4.440^{+0.058}_{-0.232}$	$-0.060^{+0.250}_{-0.300}$	$1.052^{+0.366}_{-0.122}$	$1.111^{+0.164}_{-0.164}$	$1.345^{+0.407}_{-0.728}$
	+3%/-4%	+1%/-5%	+417%/-500%	+35%/-12%	+15%/-15%	+30%/-54%
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 006718300-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	54 ± 20	$2.63^{+0.55}_{-0.37}$	2470^{+196}_{-134}	-3985^{+291}_{-307}	$-2.823^{+1.189}_{-1.646}$
Alt.	126 ± 39	$4.60^{+0.86}_{-0.52}$	2467^{+204}_{-150}	-3822^{+228}_{-219}	$-2.205^{+0.877}_{-0.985}$

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

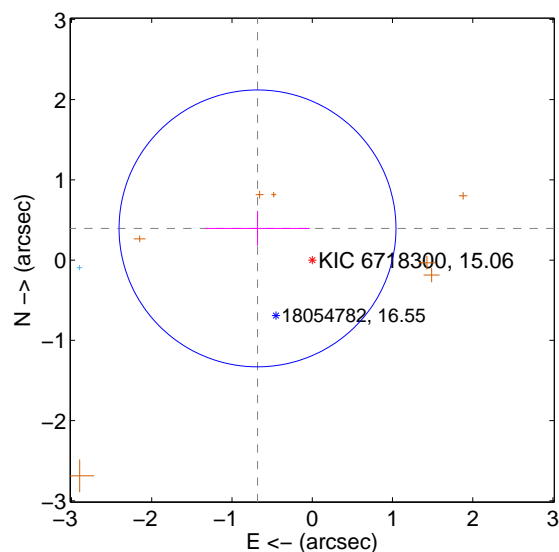
Supplemental centroid analysis for 006718300-02. Kepler magnitude: 15.06. Transit SNR 14.00

There are 1 quarters with good PRF difference image offsets

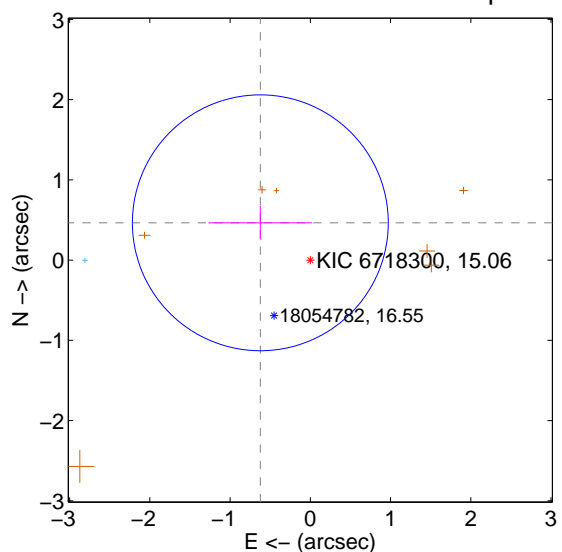
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.788 ± 0.575	1.37	0.682 ± 0.653	0.395 ± 0.217
PRF-fit source offset from KIC position	0.777 ± 0.531	1.46	0.623 ± 0.645	0.465 ± 0.209
photometric centroid source offset	0.09 ± 0.10	0.93	0.04 ± 0.10	-0.08 ± 0.10

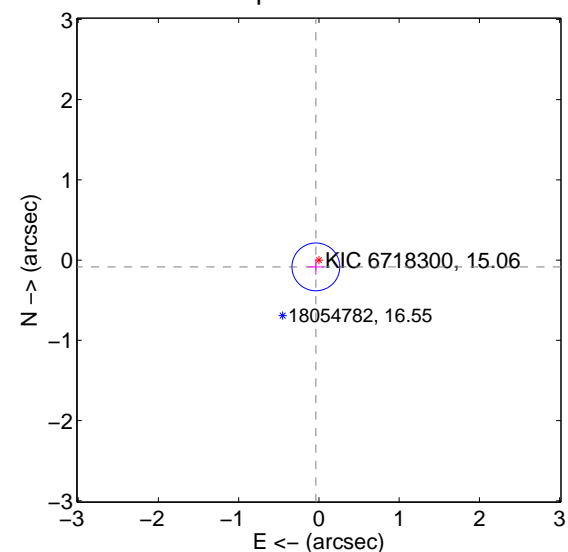
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

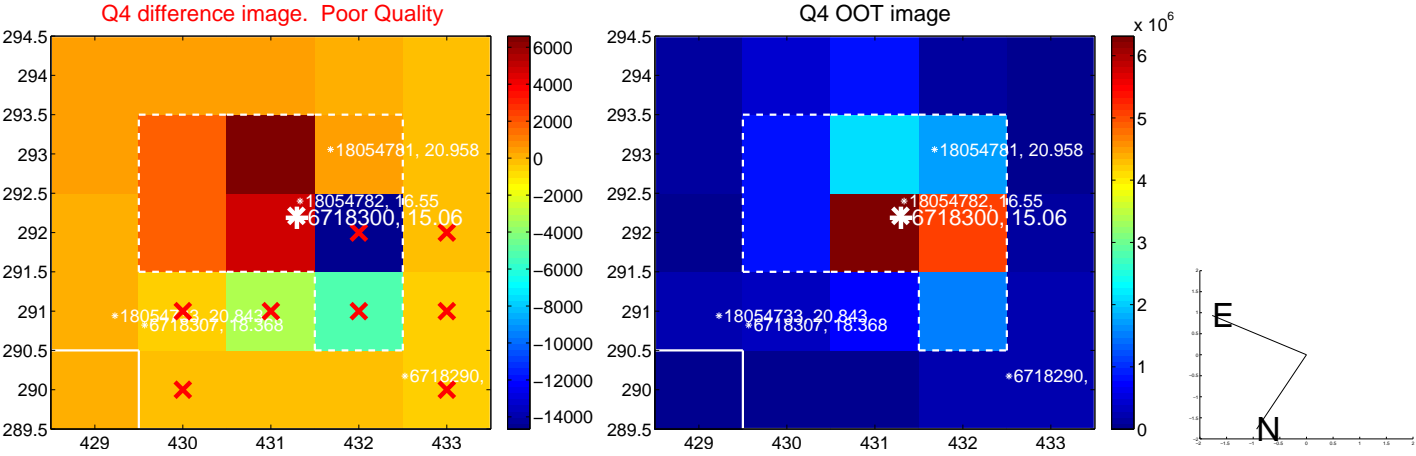
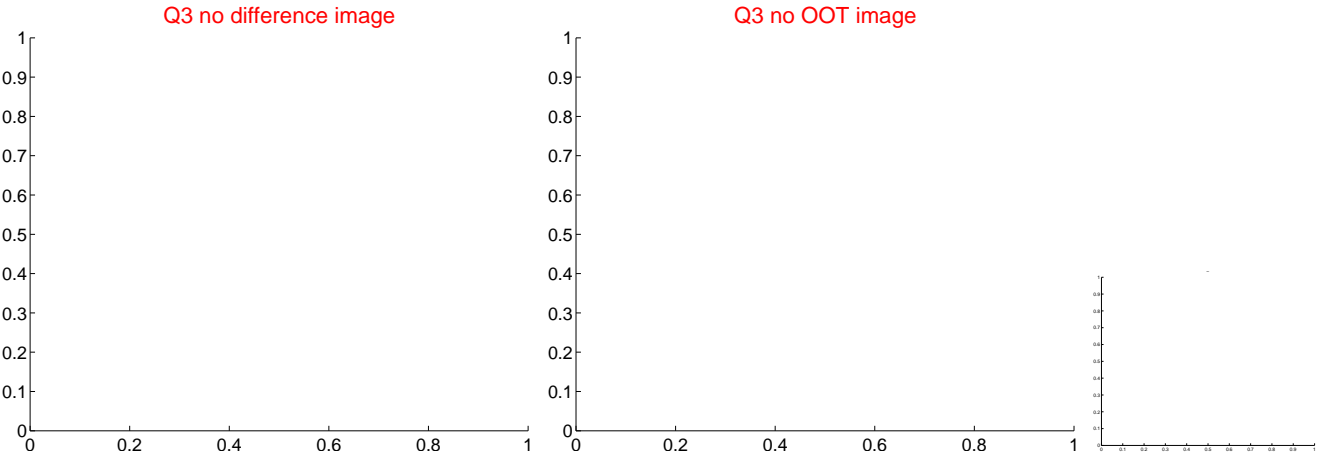
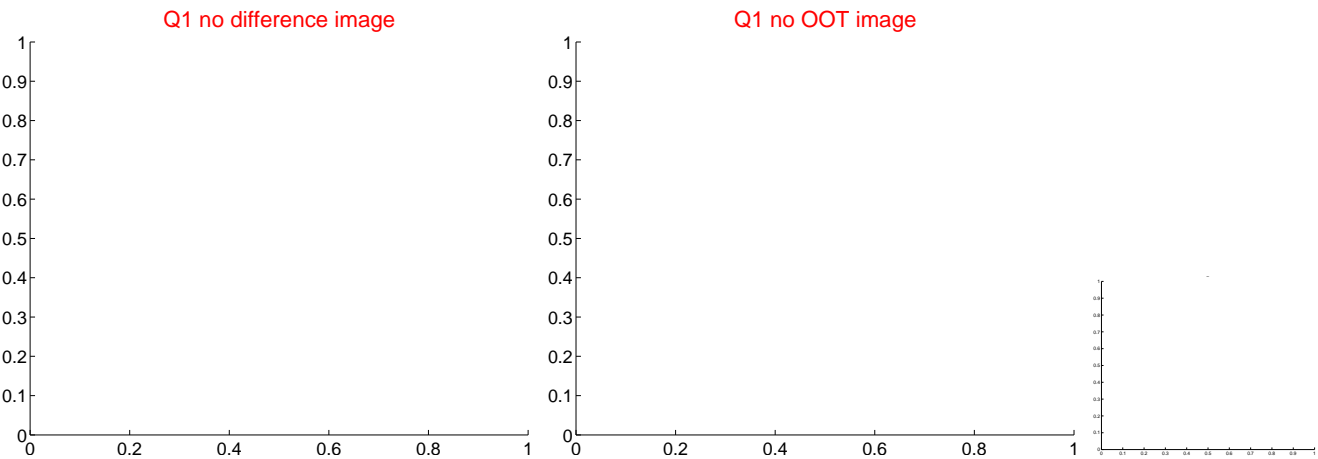


offset from photometric centroids

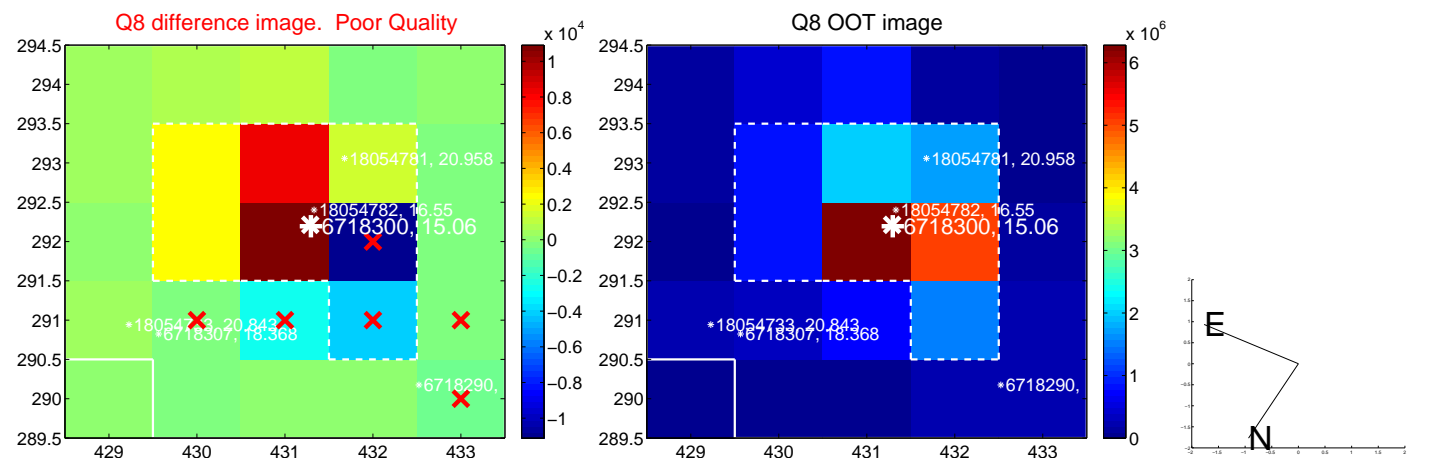
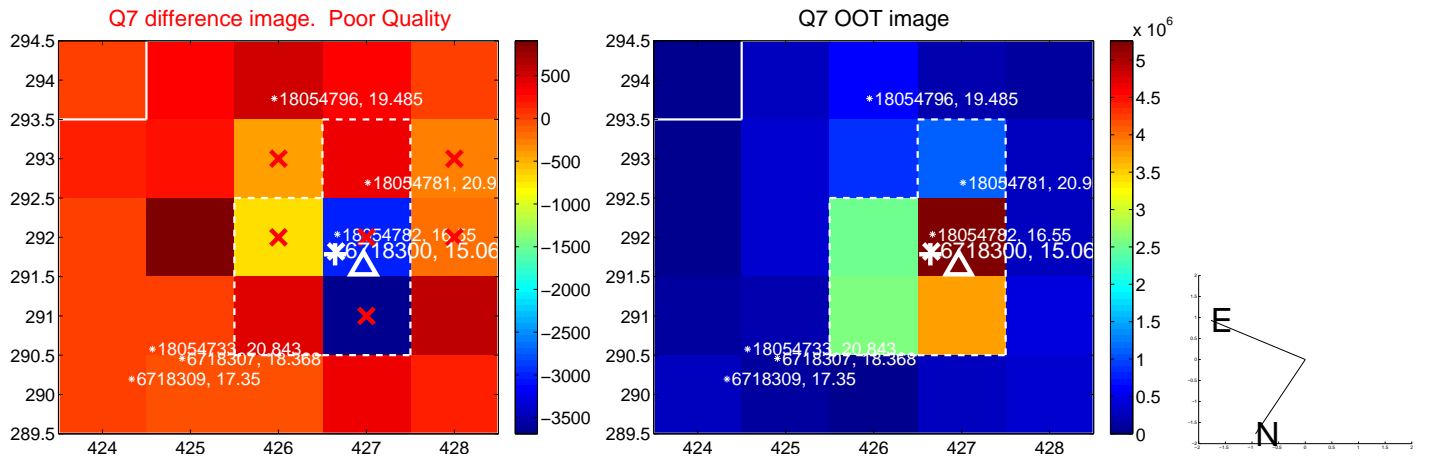
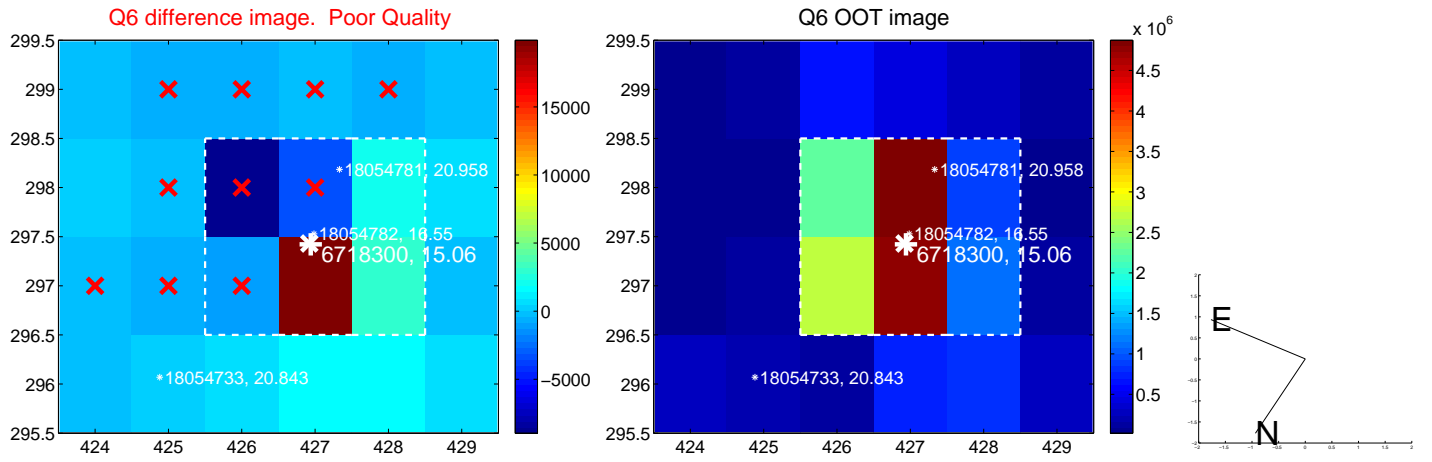
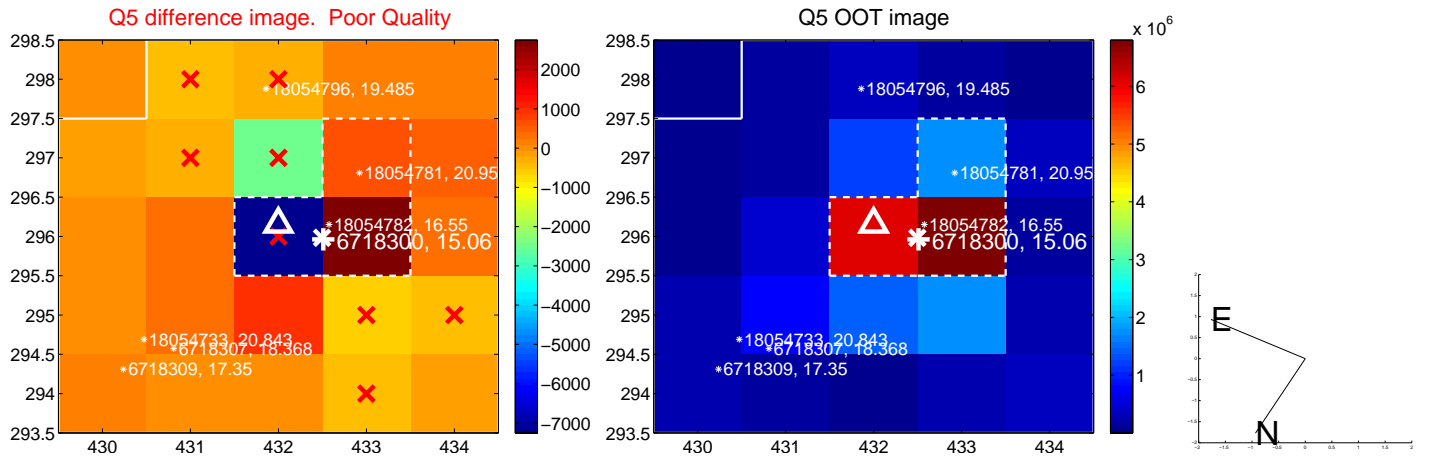


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

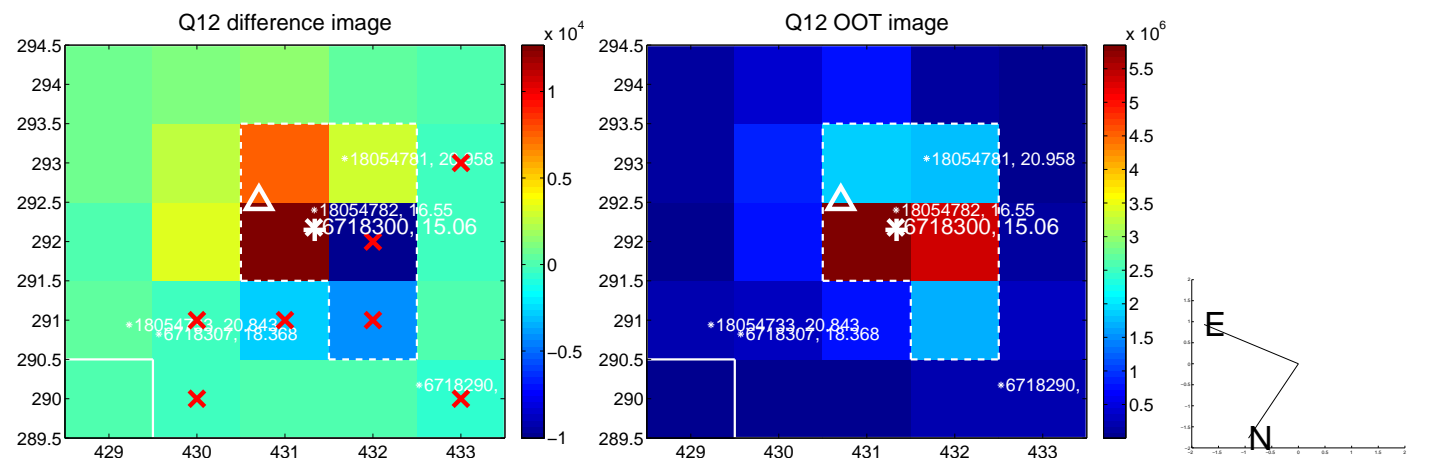
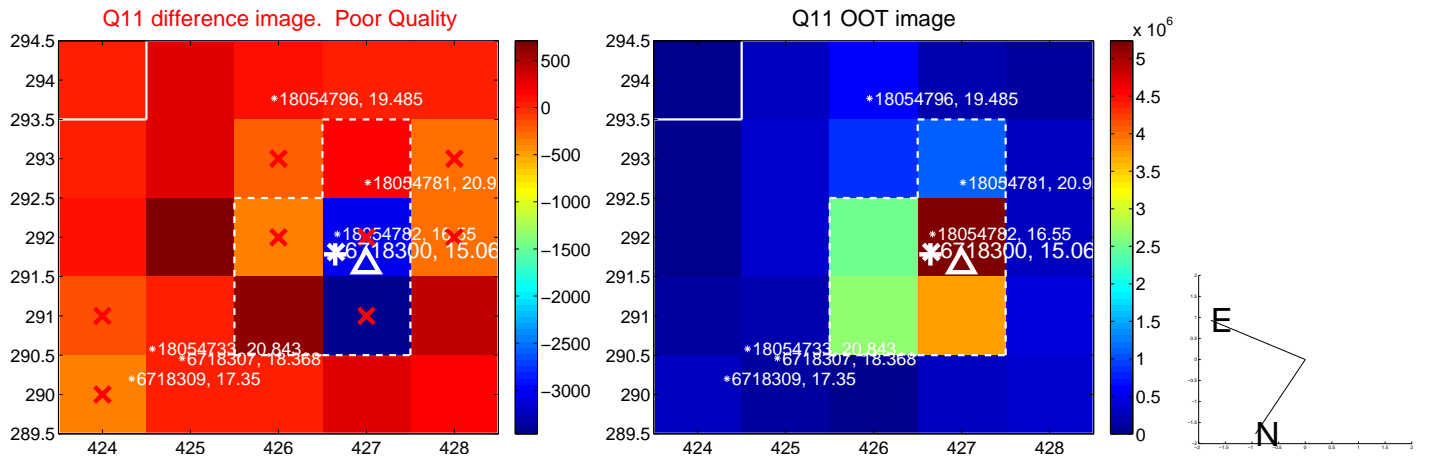
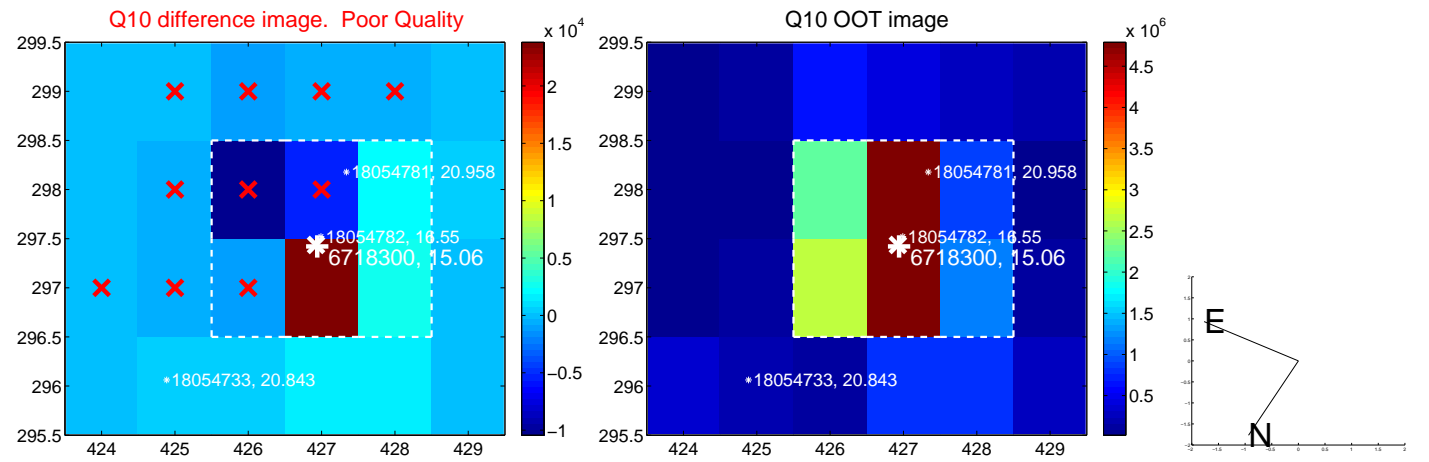
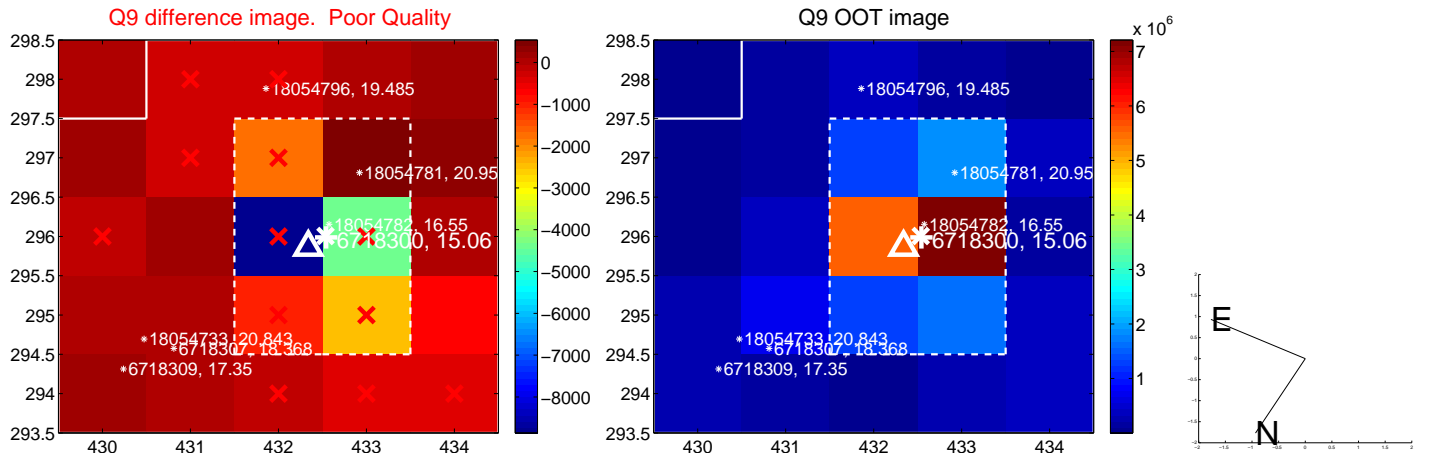
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



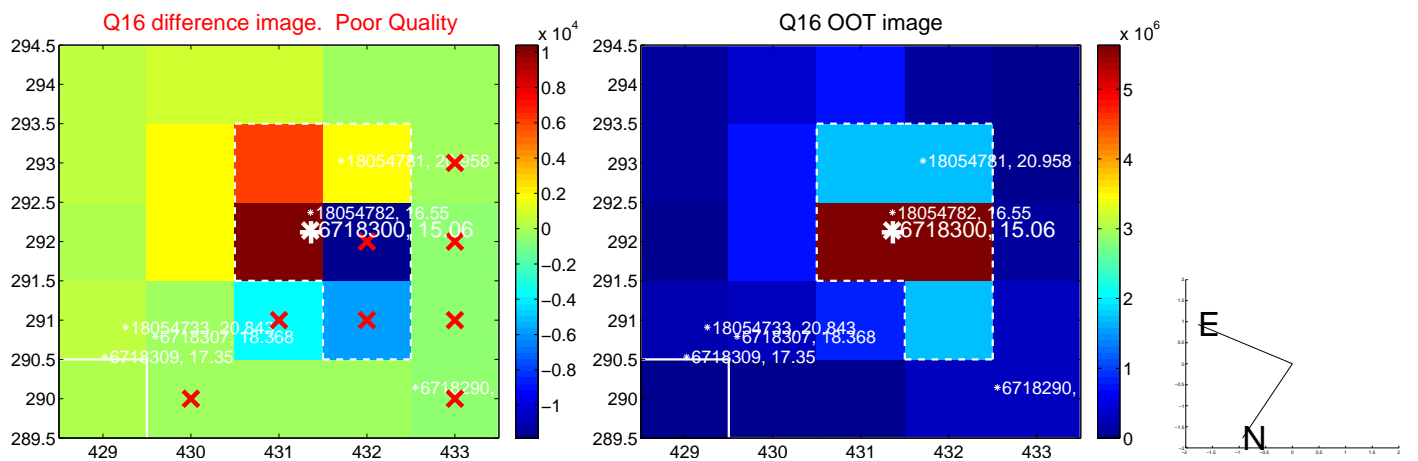
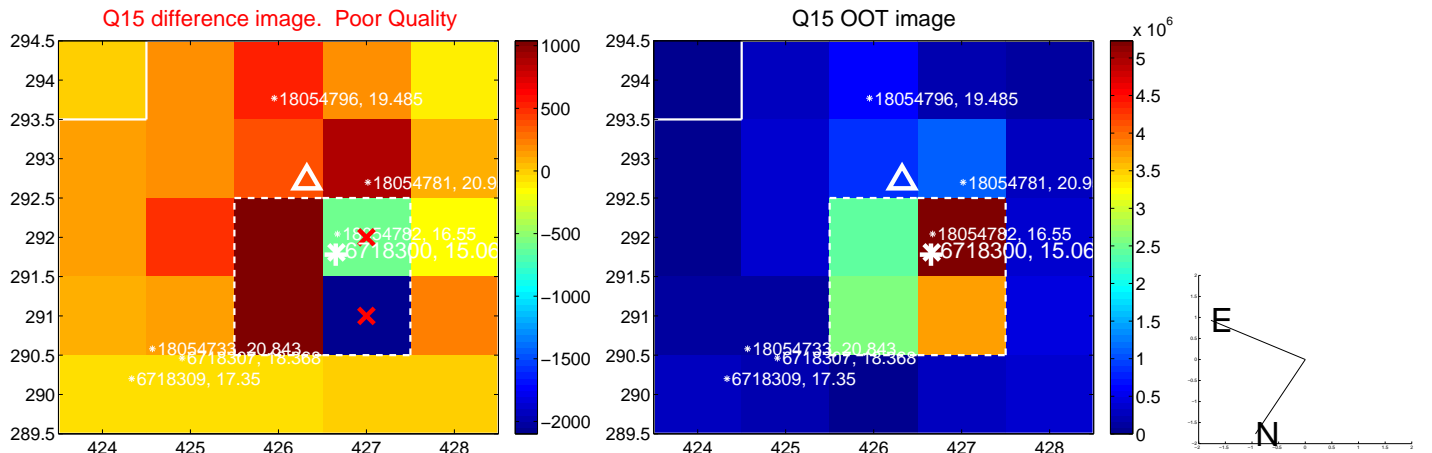
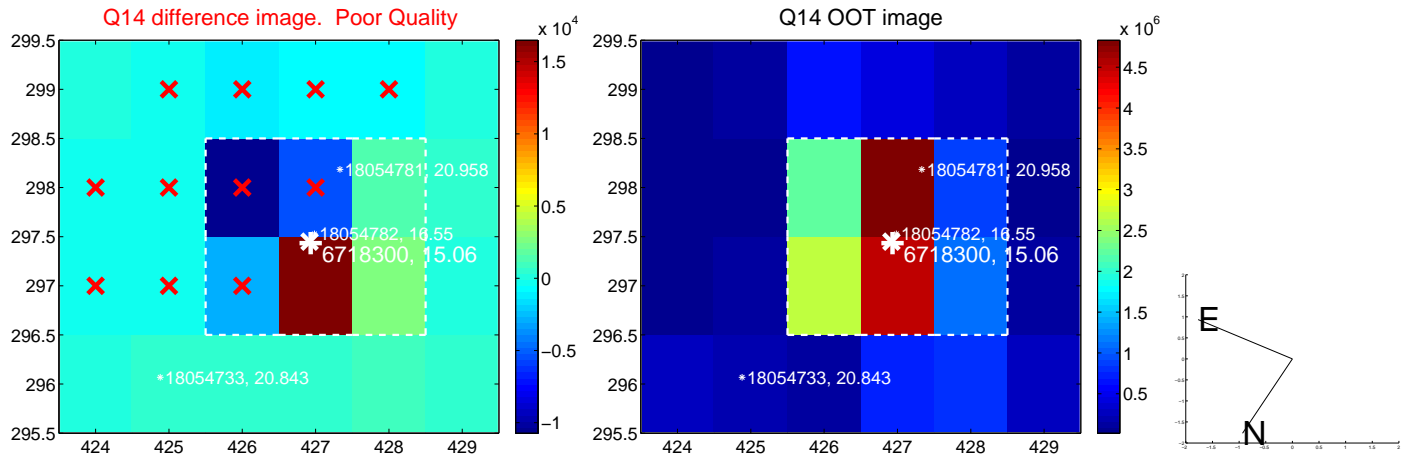
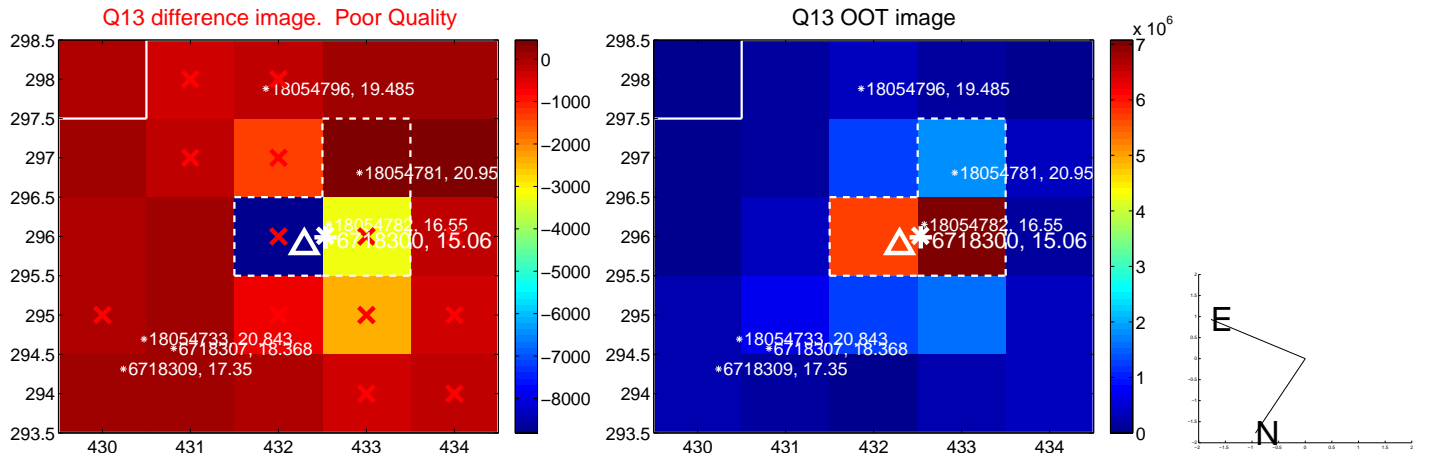
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



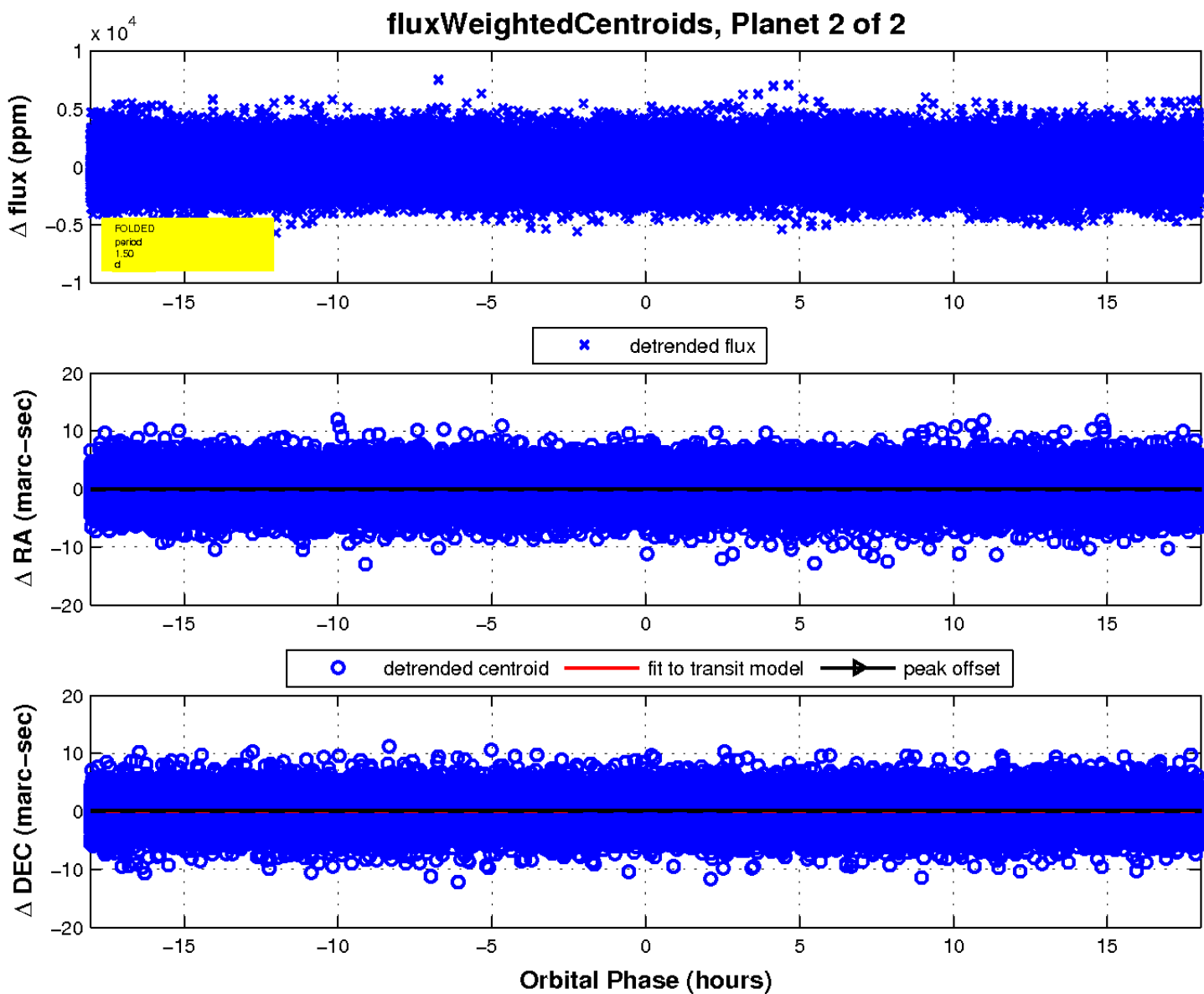
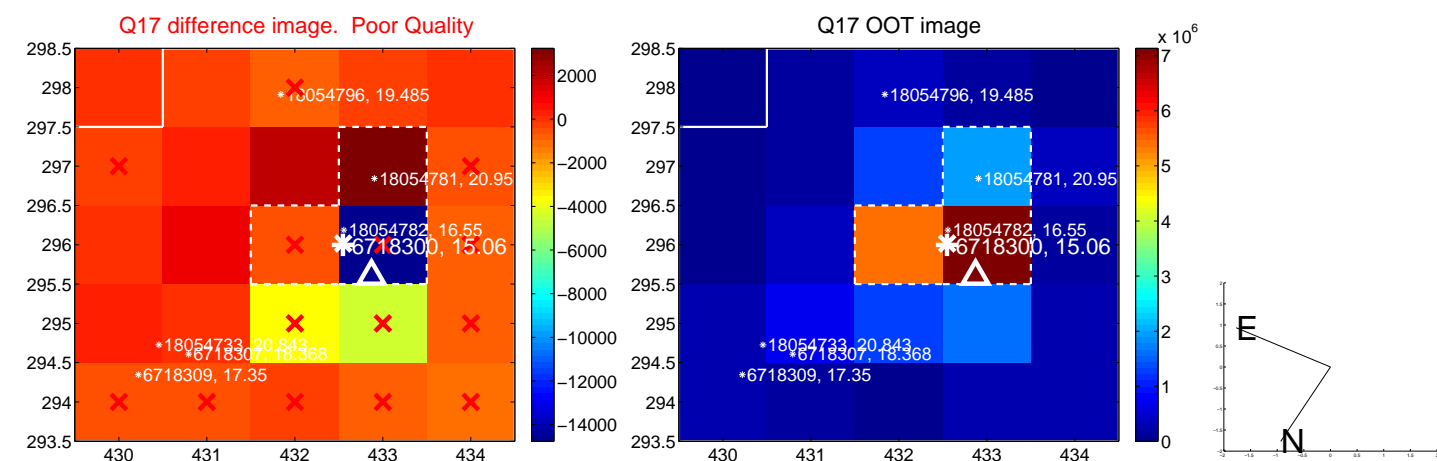
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

