

KIC 007463685

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})
007463685-01	OBS	2890.01	8.988321	138.833802	168.0	4.901	13.6	14.6	0.91	5984	1.35	132.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007463685-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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.

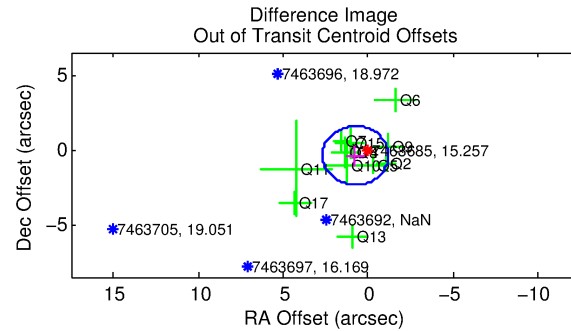
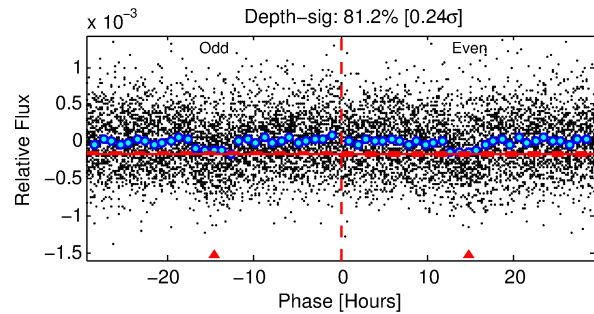
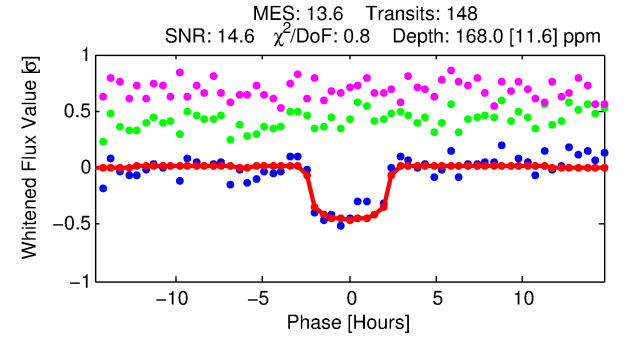
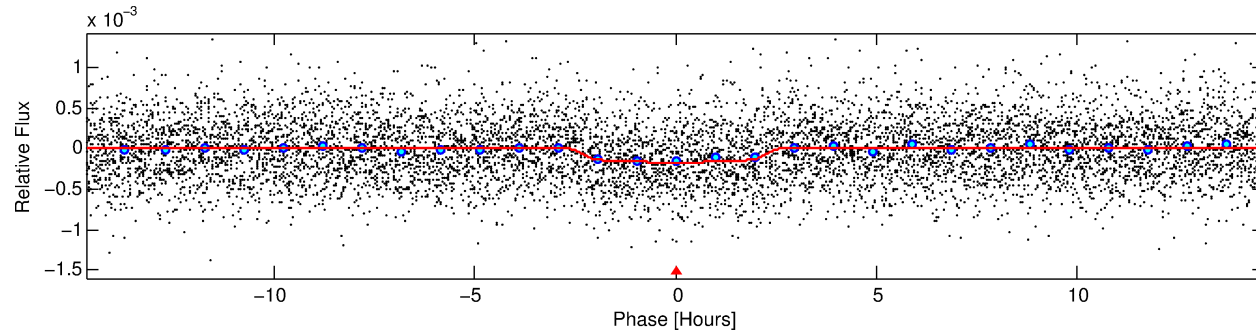
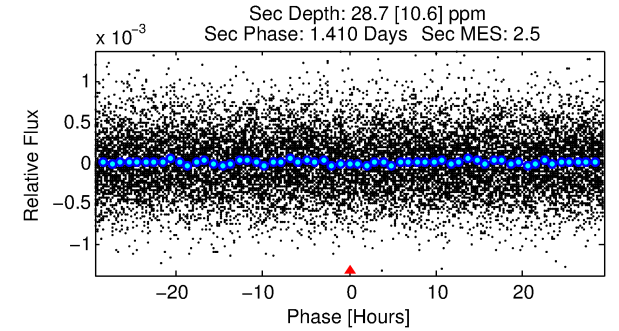
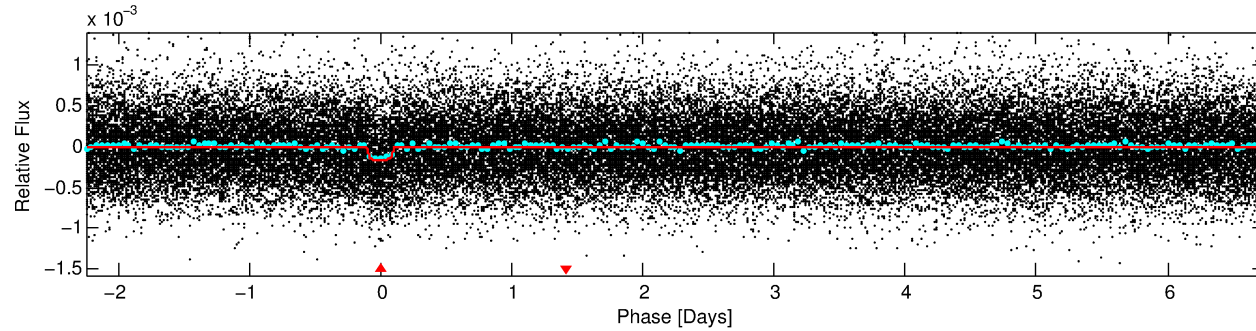
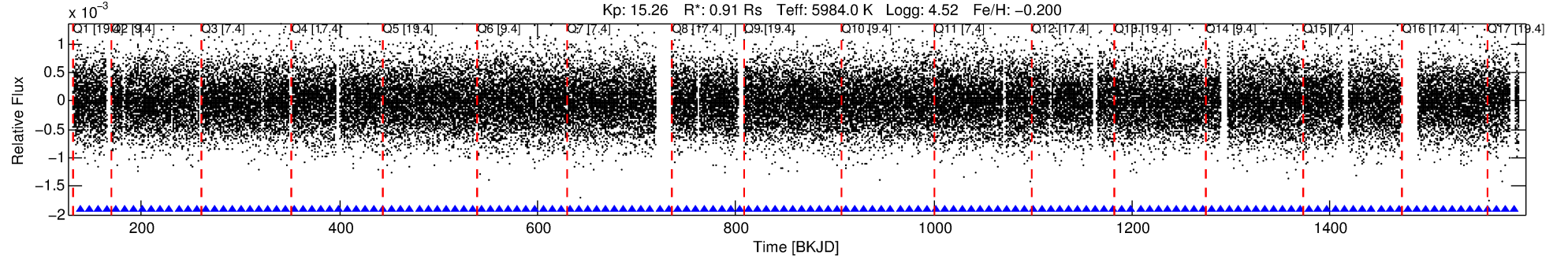
Ephemeris Match Information For 007463685-01

No Significant Match Found

DV One-Page Summary

KIC: 7463685 Candidate: 1 of 1 Period: 8.988 d

KOI: K02890.01 Corr: 0.974



DV Fit Results:

Period = 8.98832 [0.00007] d
Epoch = 138.8338 [0.0064] BKJD
Rp/R* = 0.0137 [0.0046]
a/R* = 7.29 [12.10]
b = 0.87 [0.47]
Seff = 132.24 [55.01]
Teff = 865 [90] K
Rp = 1.35 [0.61] Re
a = 0.0844 [0.0225] AU
Ag = 61.44 [52.79] [1.14σ]
Teffp = 3743 [723] K [3.95σ]

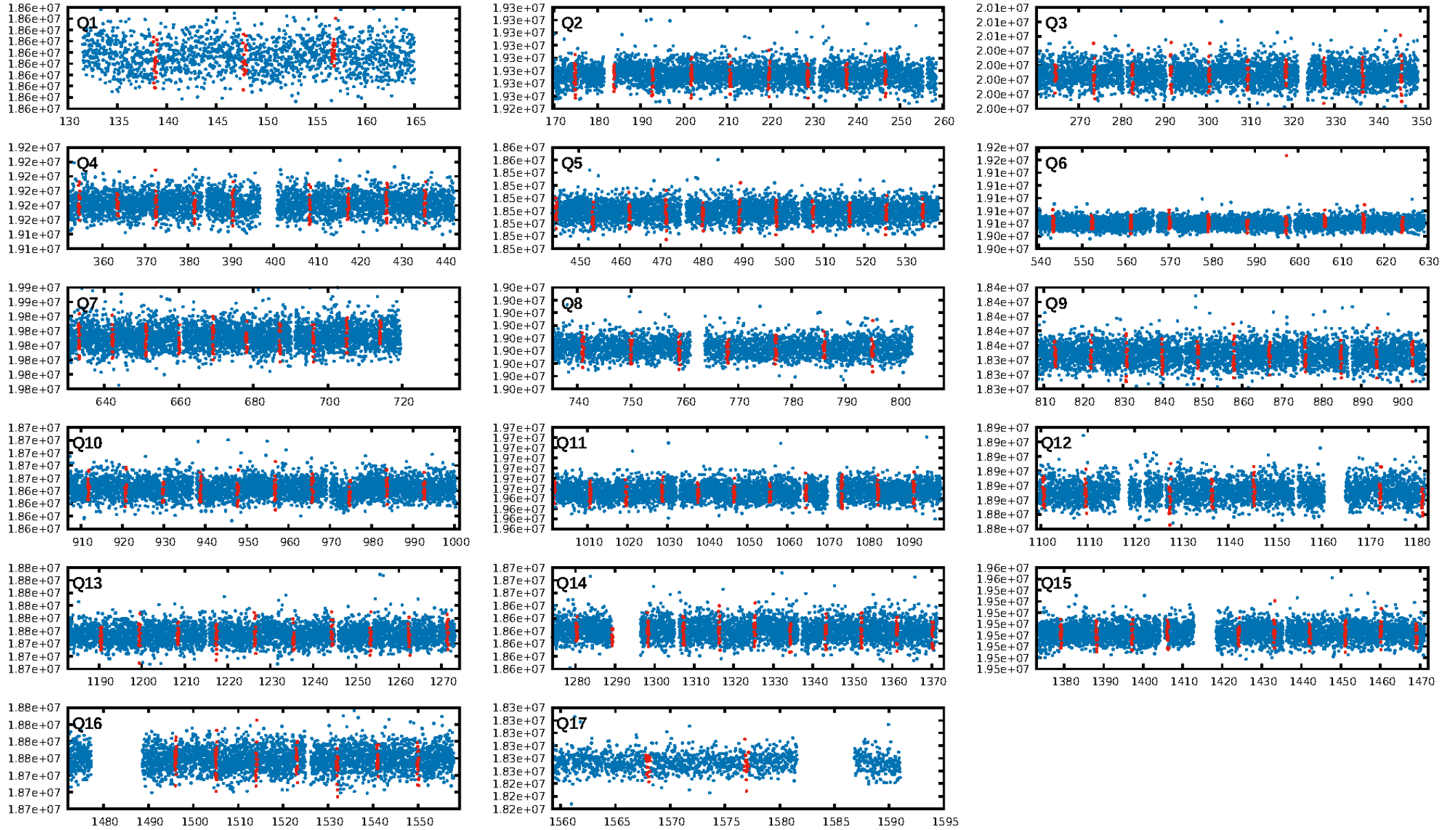
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.38e-42
RollingBand-fgt: 1.00 [143/143]
GhostDiagnostic-chr: 18.23
Centroid-sig: 9.5%
Centroid-so: 1.114 arcsec [1.16σ]
OotOffset-rm: 0.843 arcsec [1.29σ]
KicOffset-rm: 0.950 arcsec [1.57σ]
OotOffset-st: 4/3/1/4 [12]
KicOffset-st: 4/3/1/4 [12]
DiffImageQuality-fgm: 0.67 [8/12]
DiffImageOverlap-fno: 1.00 [17/17]

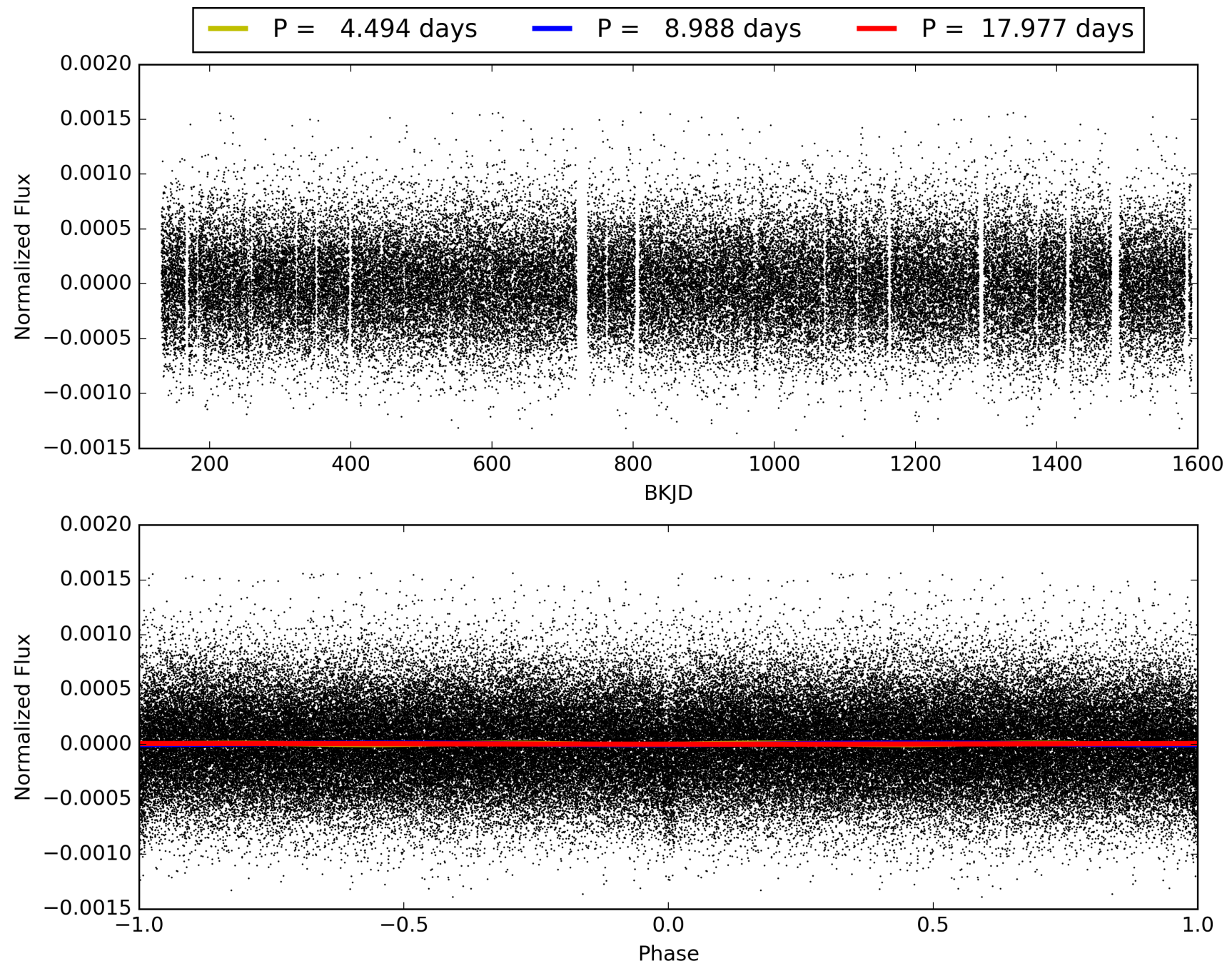
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:04:40 Z

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

TCE 007463685-01, PDC Light Curves

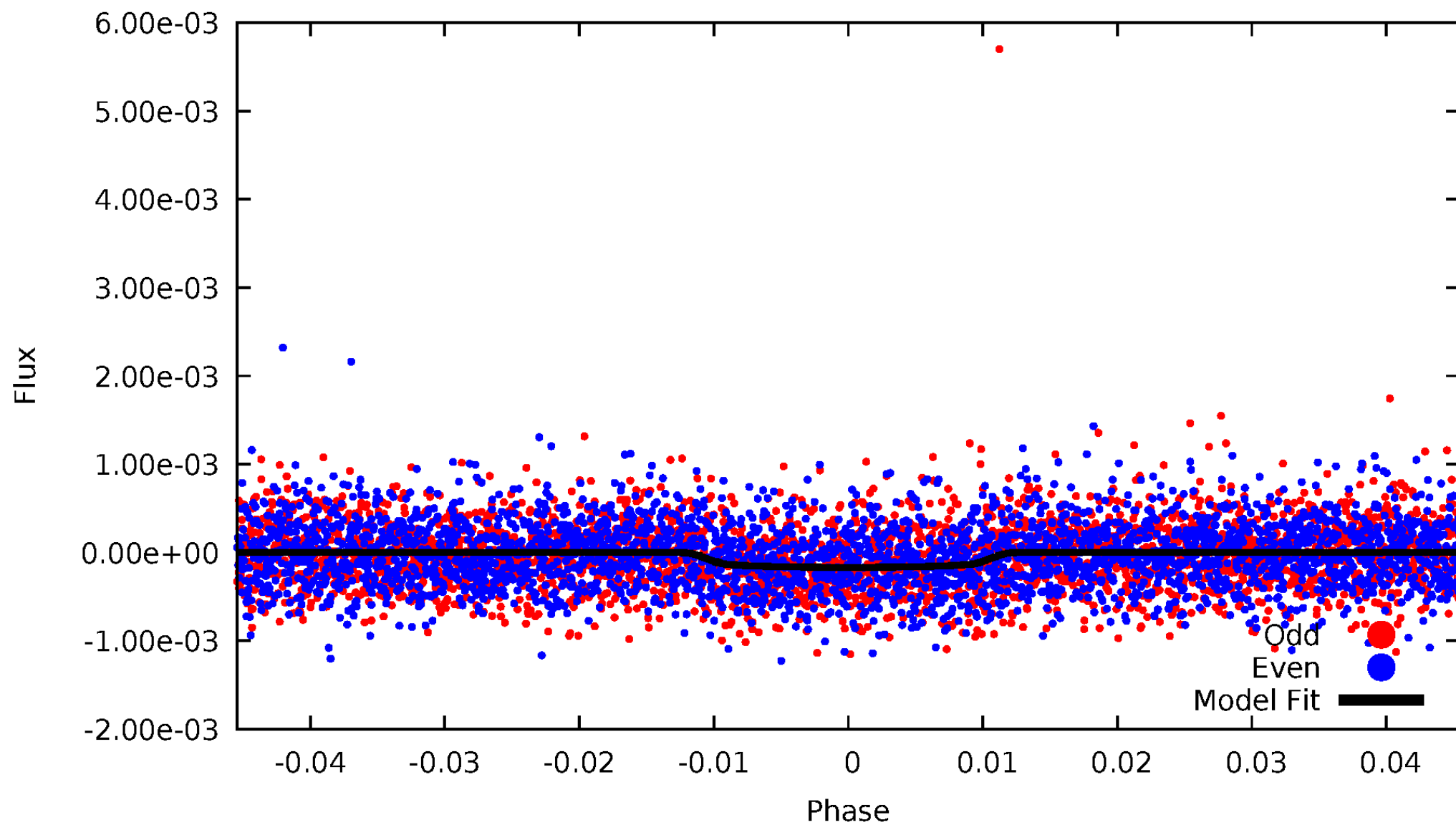


TCE 007463685-01



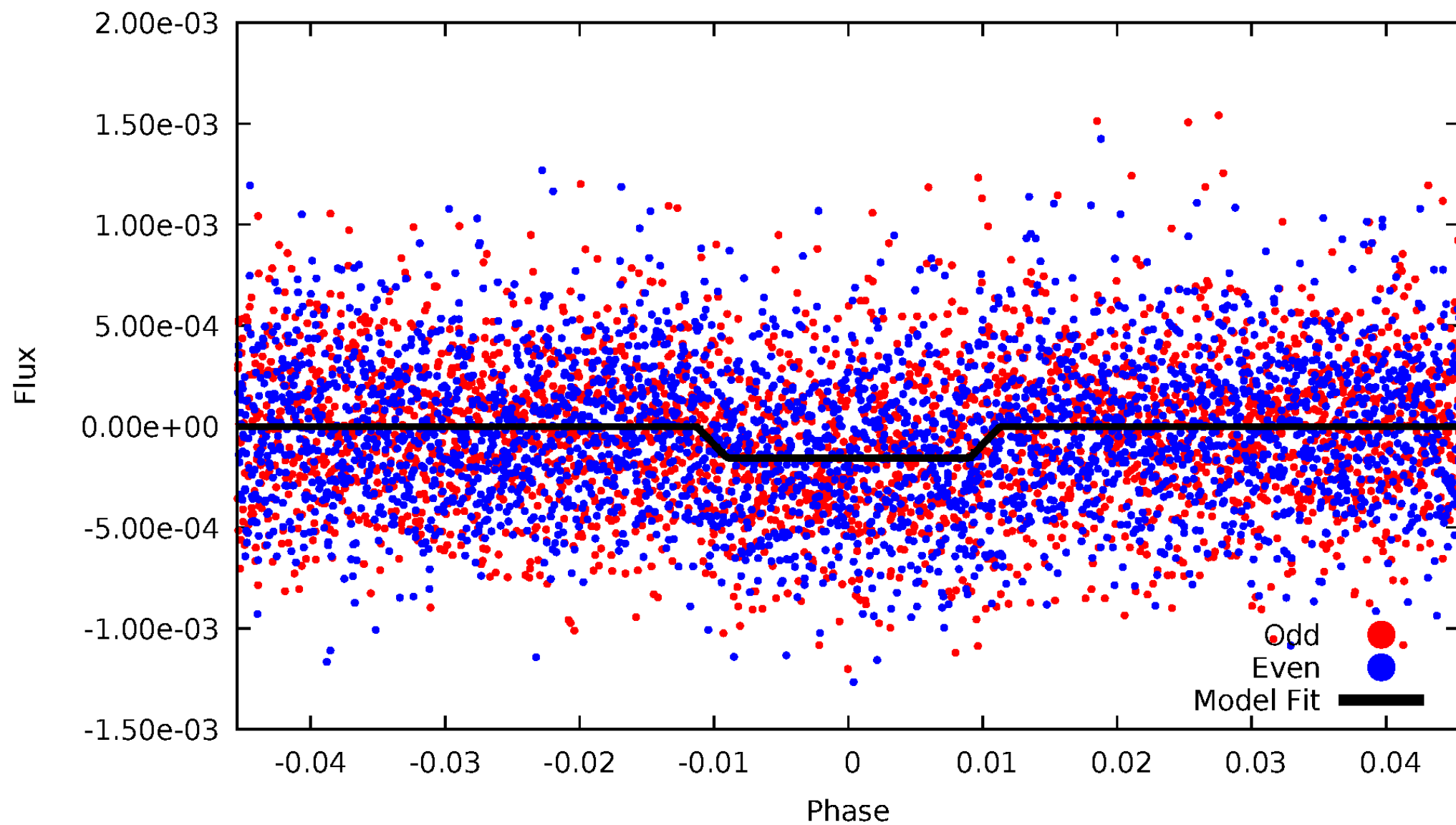
DV Odd/Even

TCE 007463685-01



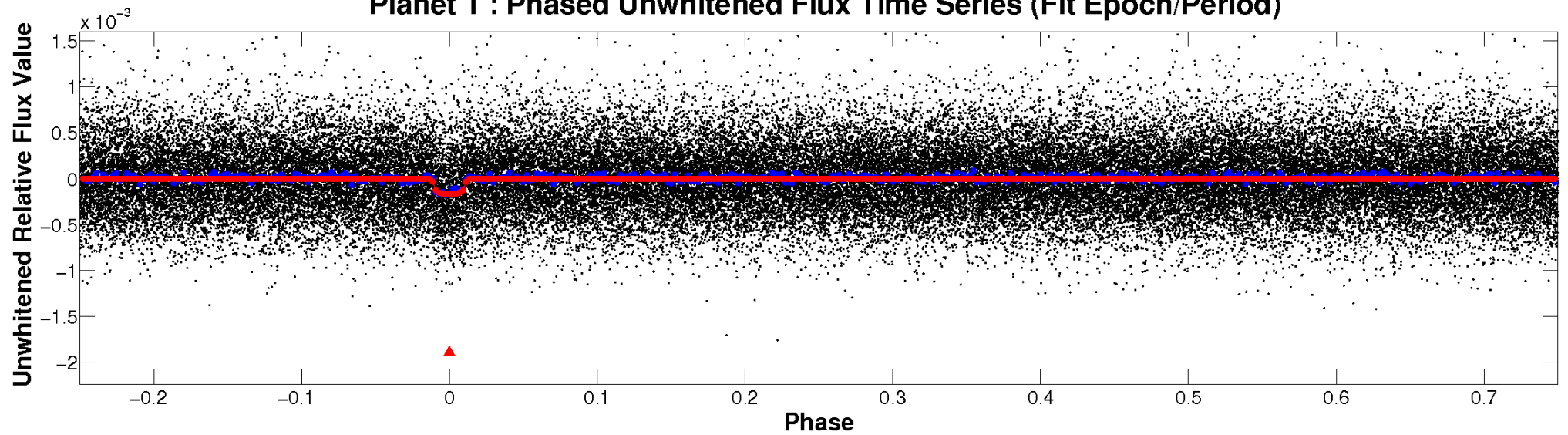
ALT Odd/Even

TCE 007463685-01

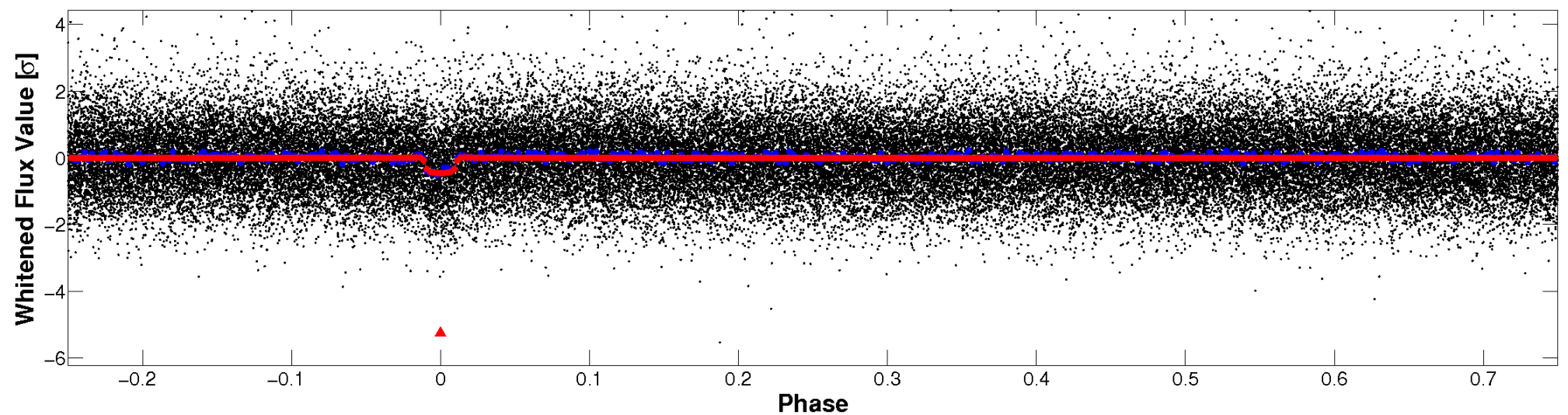


Non-Whitened Vs. Whitened Light Curve

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

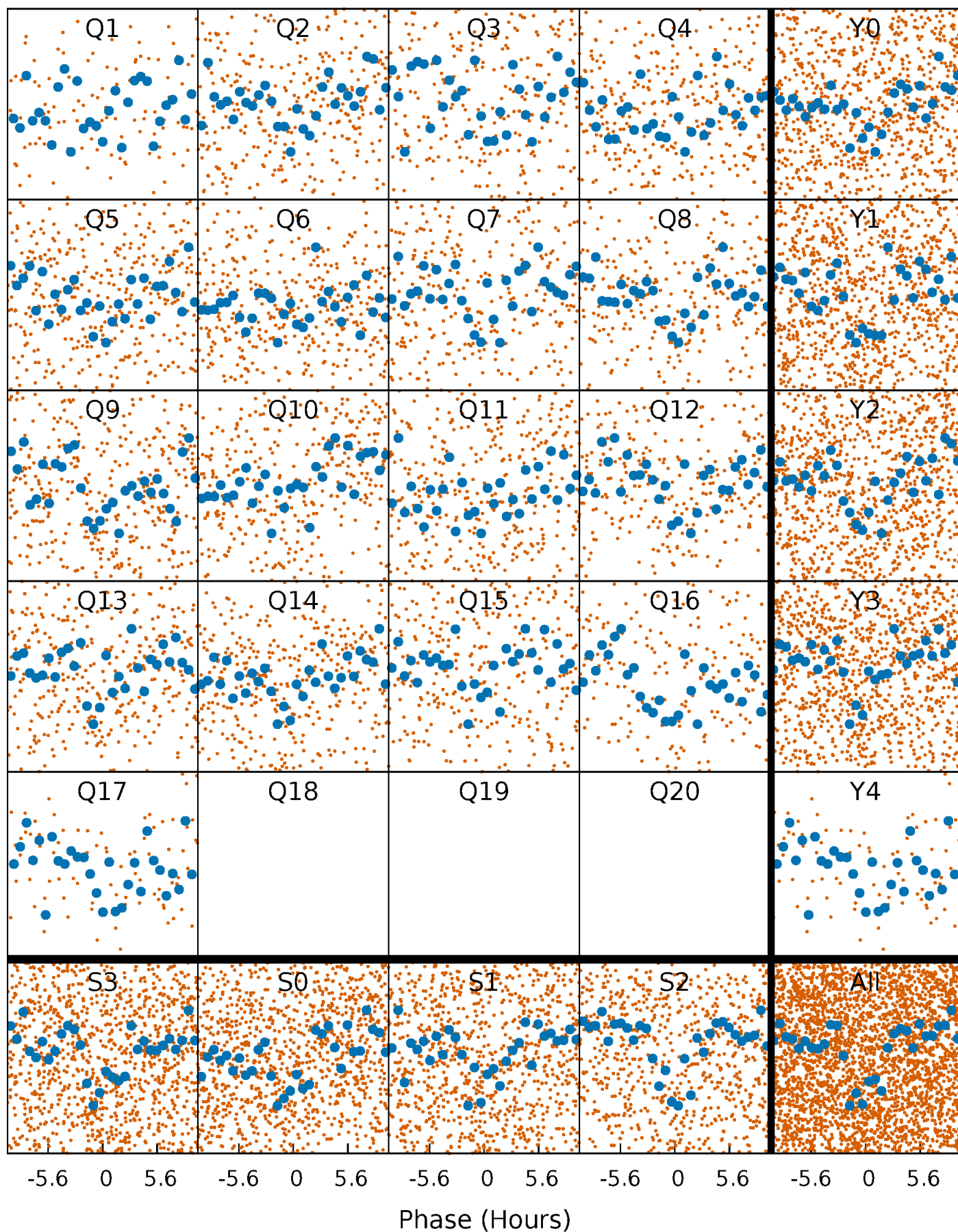


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



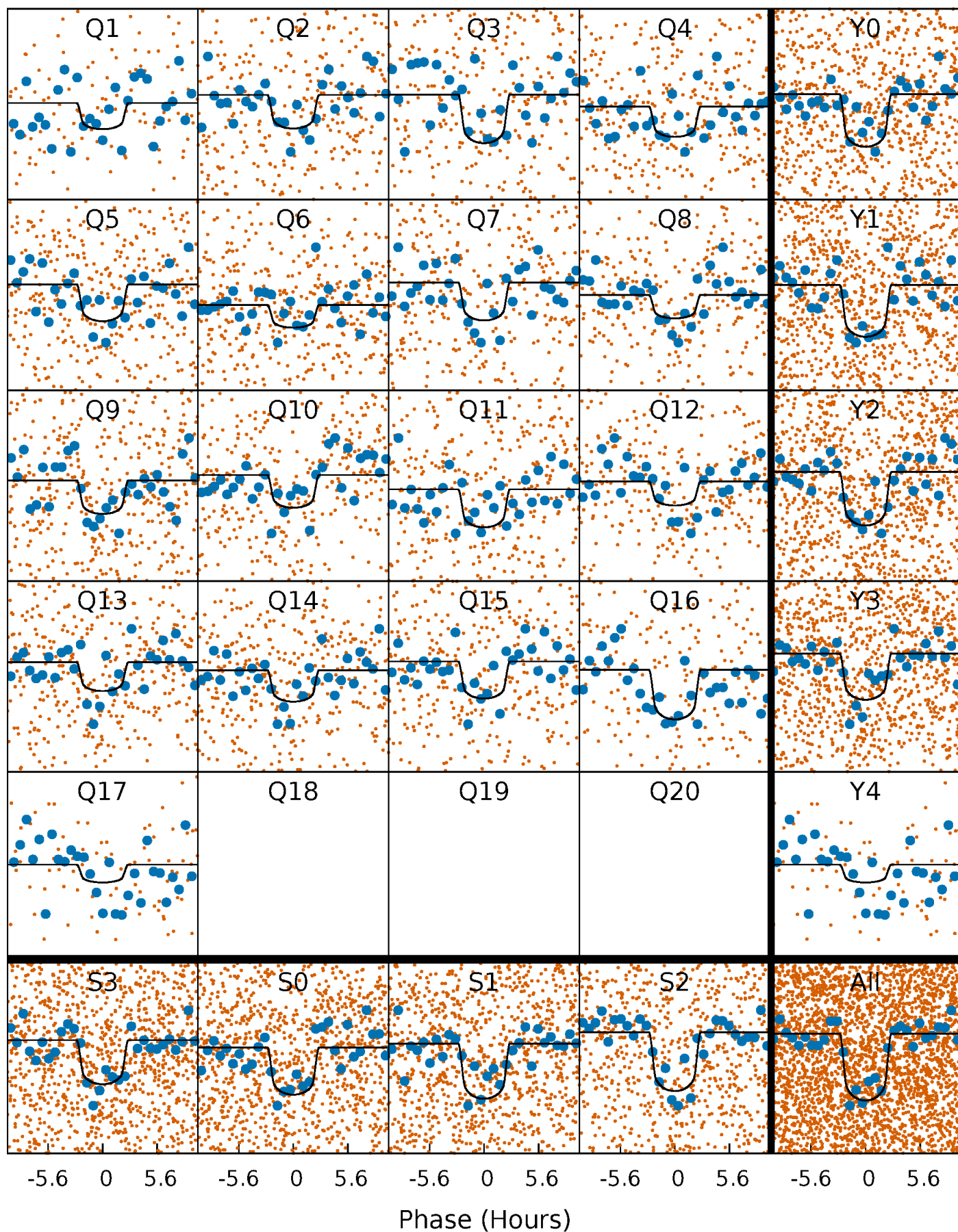
PDC Quarter-Phased Transit Curves

TCE 007463685-01 P= 8.988321 Days $T_0=138.833802$ (BKJD)



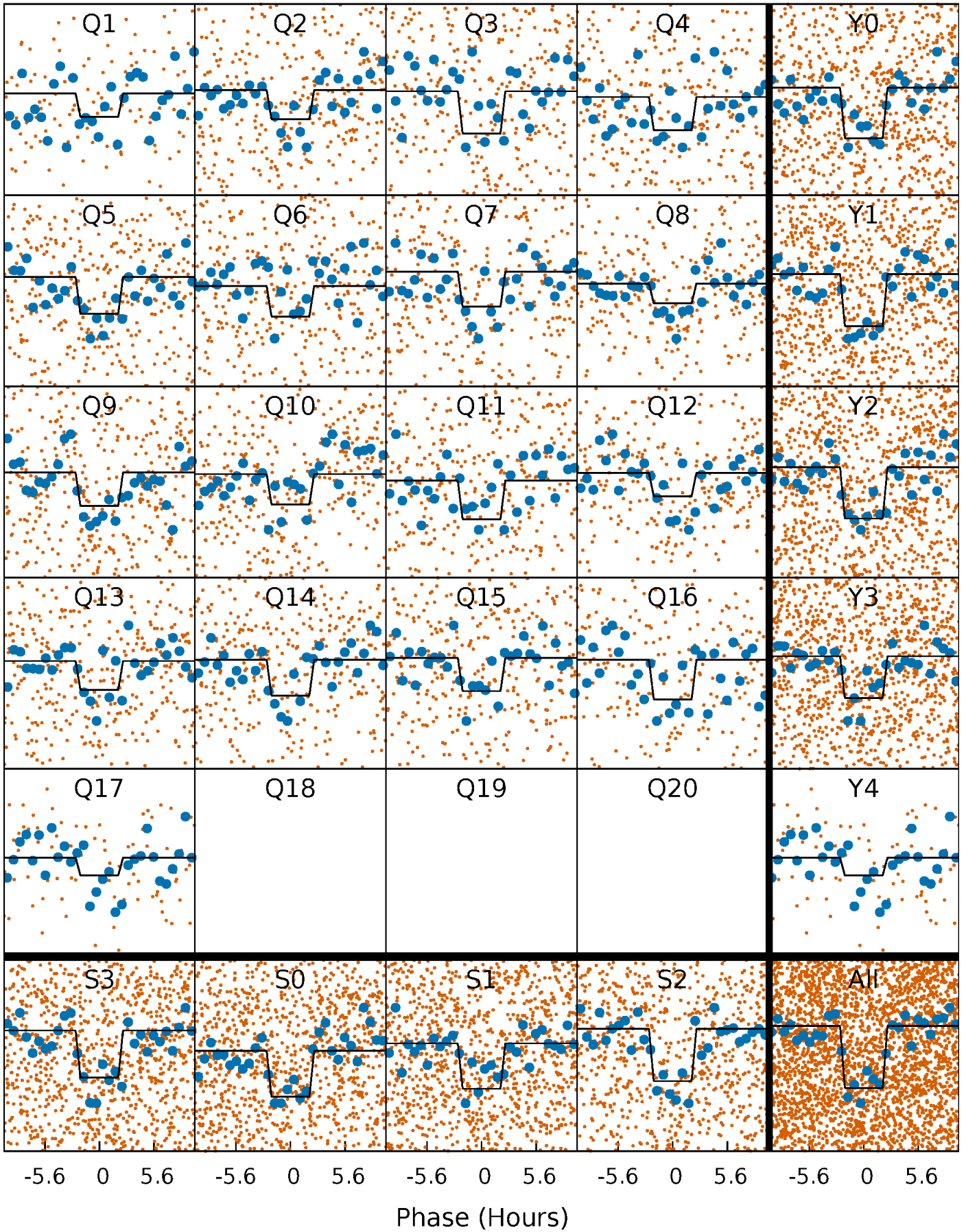
DV Quarter-Phased Transit Curves

TCE 007463685-01 P= 8.988321 Days $T_0=138.833802$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

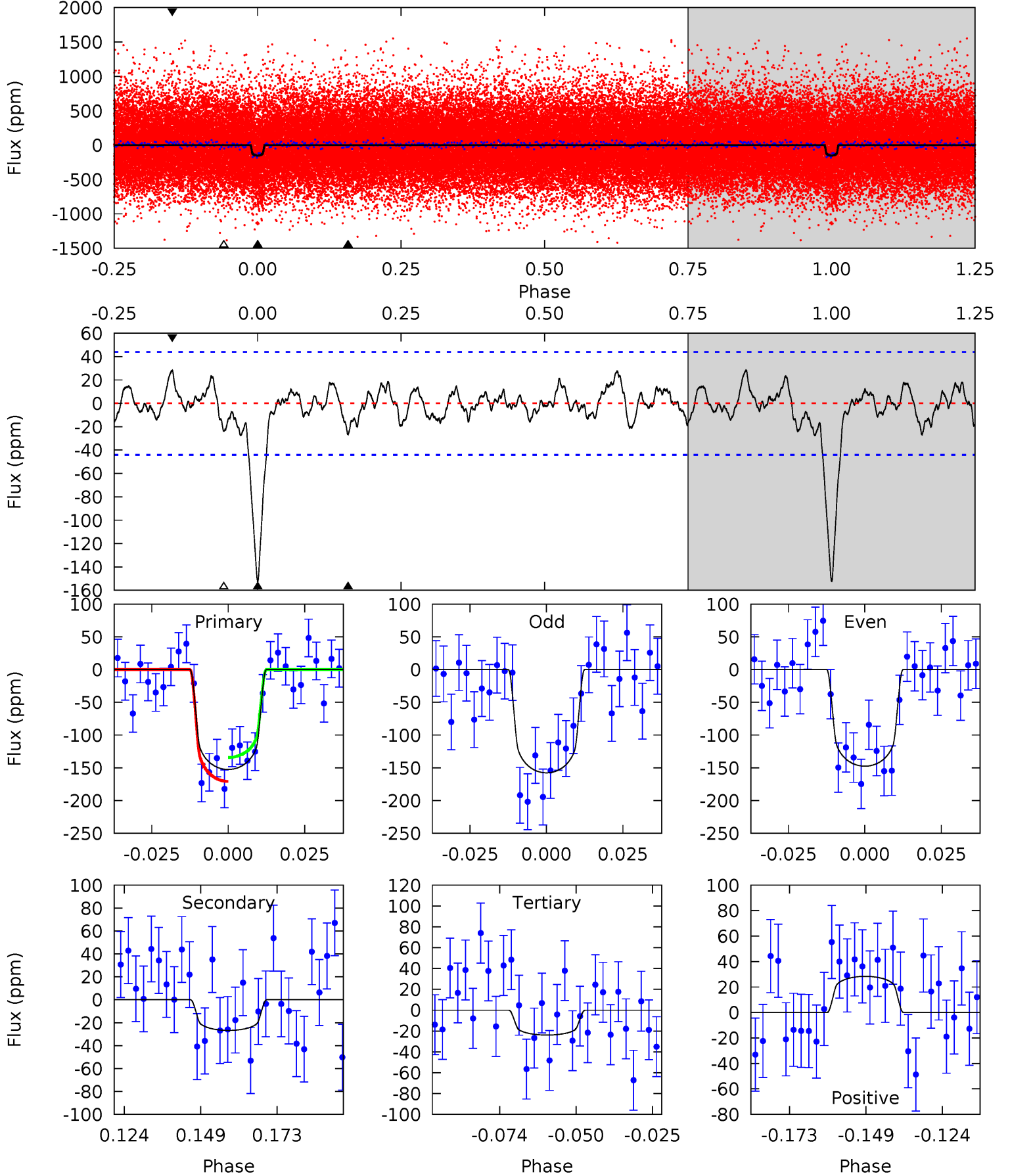
TCE 007463685-01 P= 8.988257 Days $T_0=138.837911$ (BKJD)



DV Model-Shift Uniqueness Test

007463685-01, P = 8.988321 Days, E = 129.845481 Days

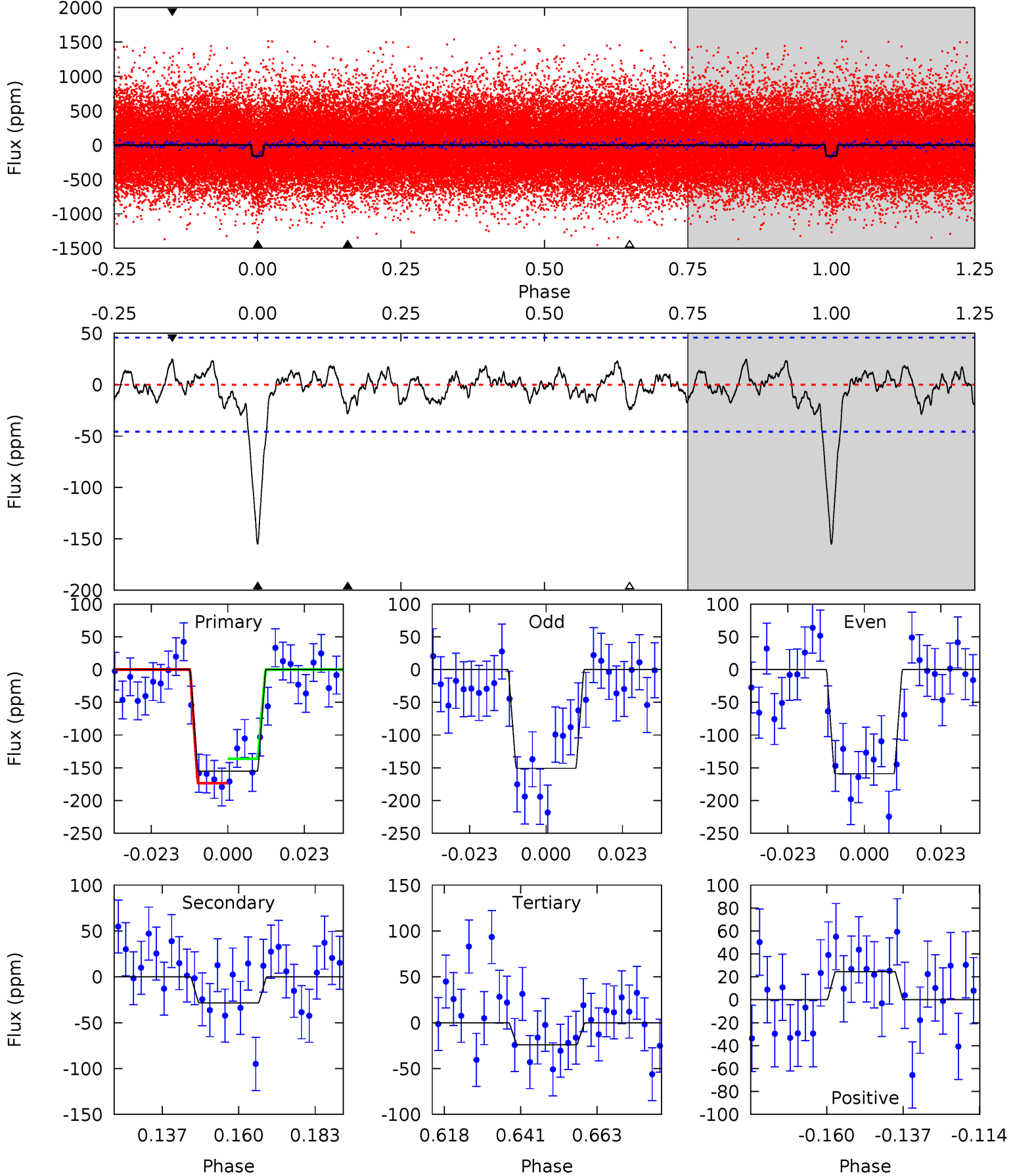
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	2.94	2.62	3.12	4.85	2.25	1.13	14.1	13.6	0.32	-0.18	0.56	0.97	0.16	2.01



Alt Model-Shift Uniqueness Test

007463685-01, P = 8.988257 Days, E = 129.849654 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	3.02	2.57	2.61	4.87	2.28	1.07	13.9	13.9	0.45	0.41	0.44	0.99	0.14	1.98



Stellar Parameters For KIC 007463685

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5984^{+188}_{-188}	$4.521^{+0.039}_{-0.221}$	$-0.200^{+0.300}_{-0.300}$	$0.906^{+0.279}_{-0.093}$	$0.993^{+0.131}_{-0.131}$	$1.883^{+0.404}_{-1.020}$
	+3%/-3%	+1%/-5%	+150%/-150%	+31%/-10%	+13%/-13%	+21%/-54%
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 007463685-01 / KOI 2890.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-27 ± 9	$1.39^{+0.52}_{-0.45}$	1240^{+88}_{-59}	4014^{+683}_{-462}	51^{+72}_{-27}
Alt.	-28 ± 9	$1.30^{+0.51}_{-0.47}$	1247^{+84}_{-61}	4184^{+720}_{-522}	60^{+89}_{-32}

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 $A_{obs} \gg 1.0$

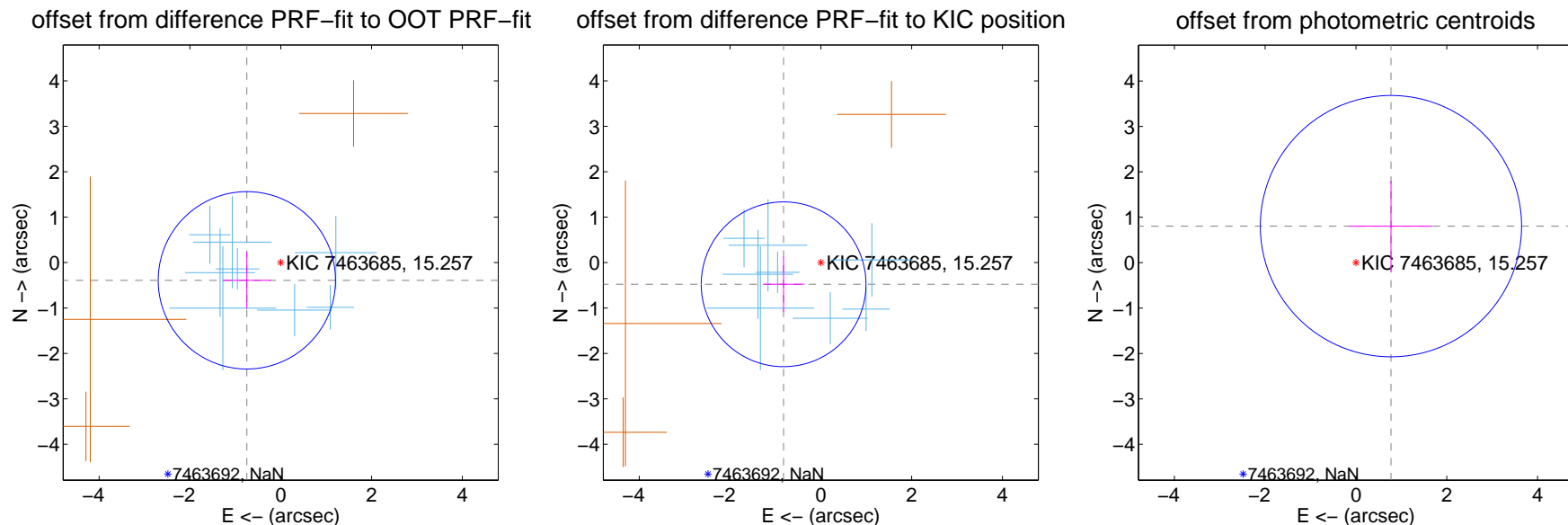
DV Centroid Data

Supplemental centroid analysis for 007463685-01. Kepler magnitude: 15.26. Transit SNR 14.63

There are 8 quarters with good PRF difference image offsets

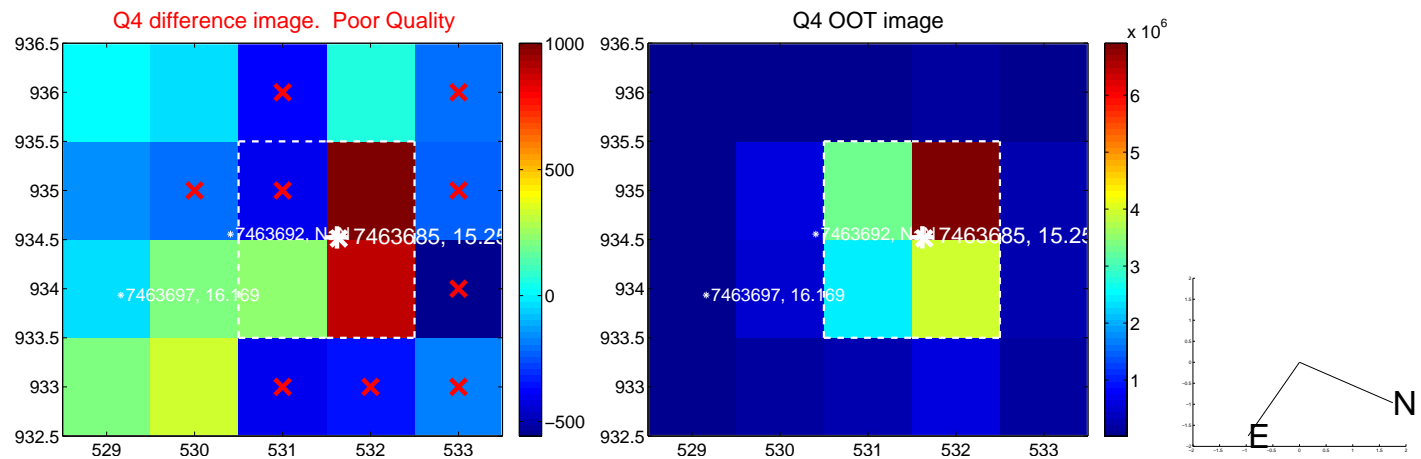
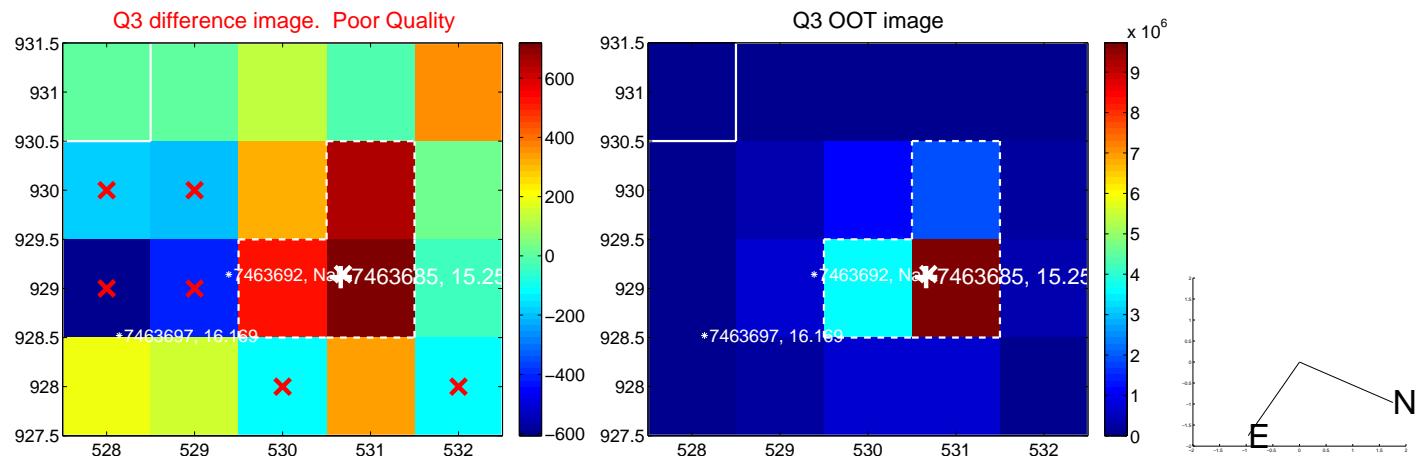
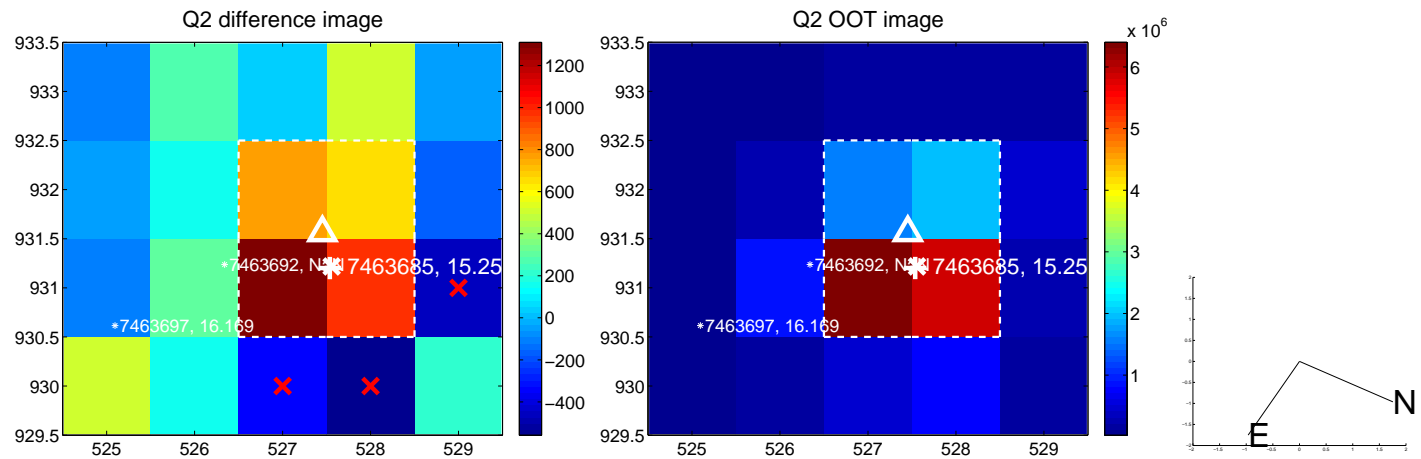
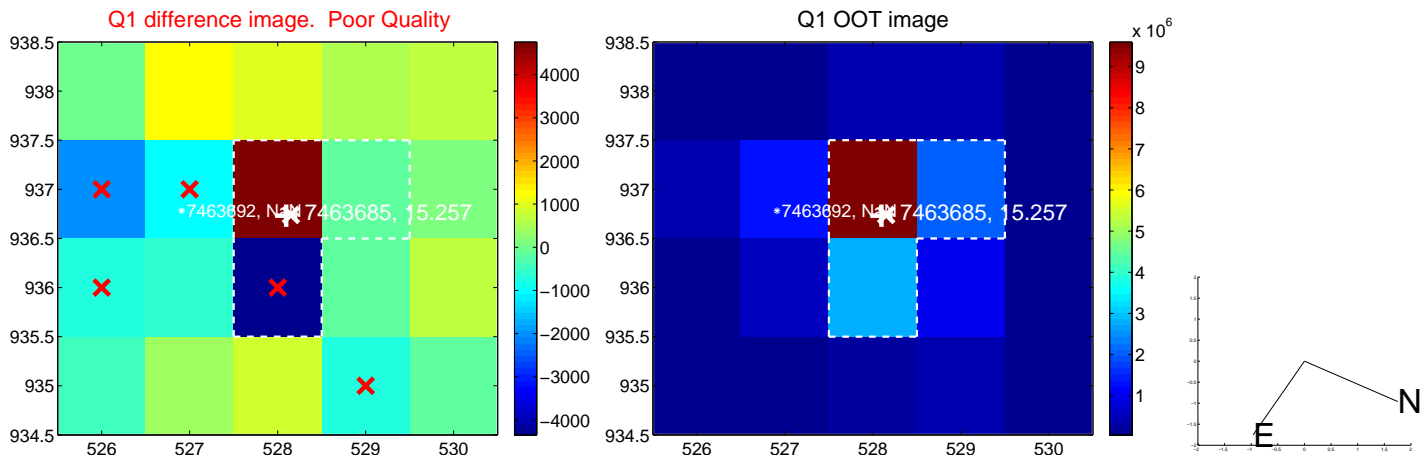
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.843 ± 0.651	1.29	0.747 ± 0.530	-0.390 ± 0.627
PRF-fit source offset from KIC position	0.950 ± 0.605	1.57	0.821 ± 0.460	-0.478 ± 0.605
photometric centroid source offset	1.11 ± 0.96	1.16	-0.77 ± 0.91	0.80 ± 1.00

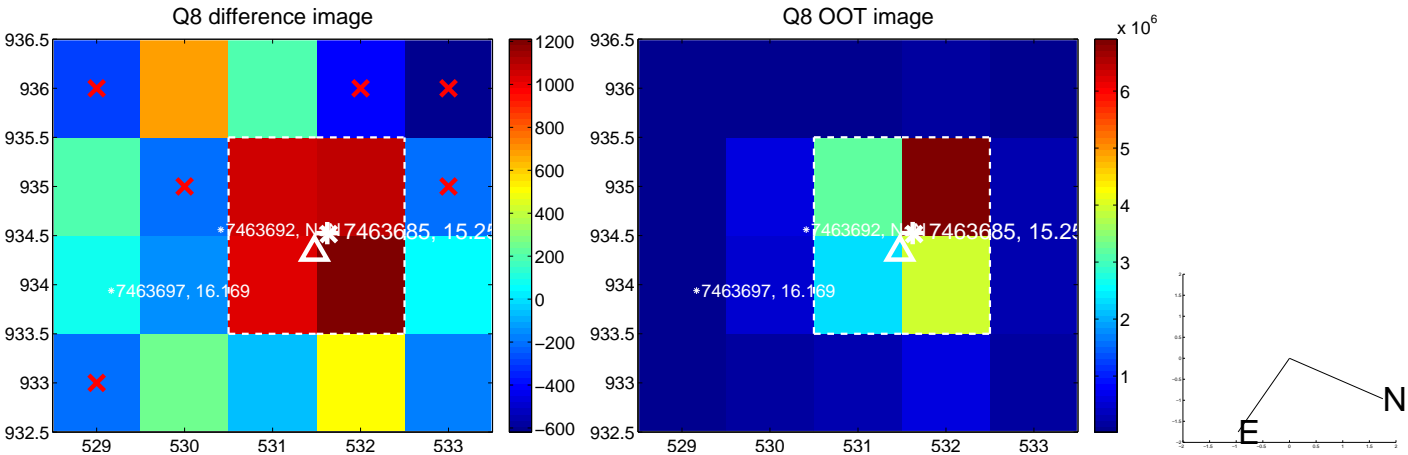
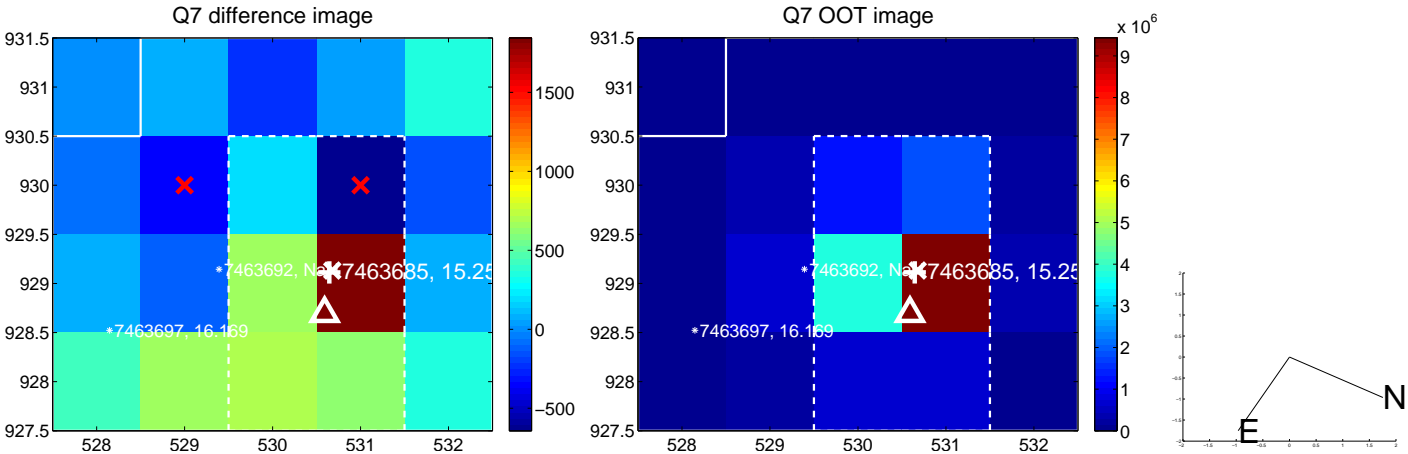
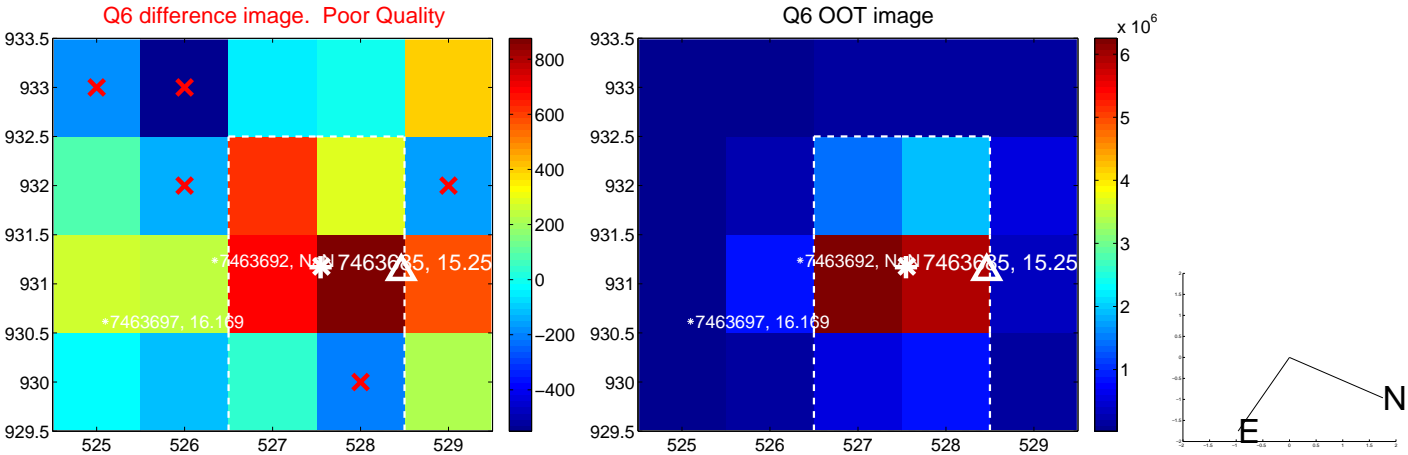
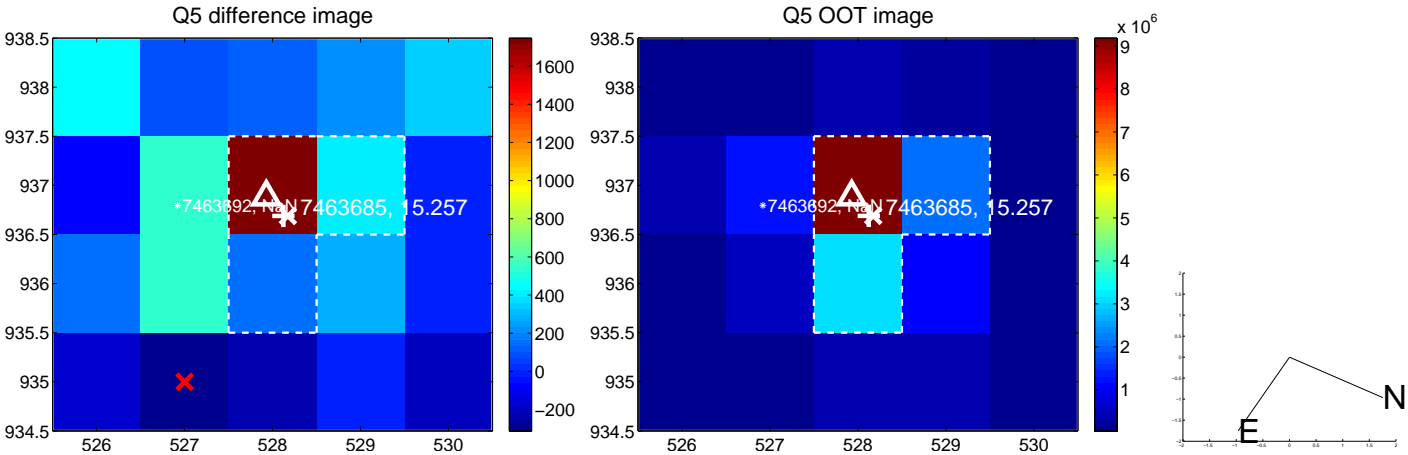


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

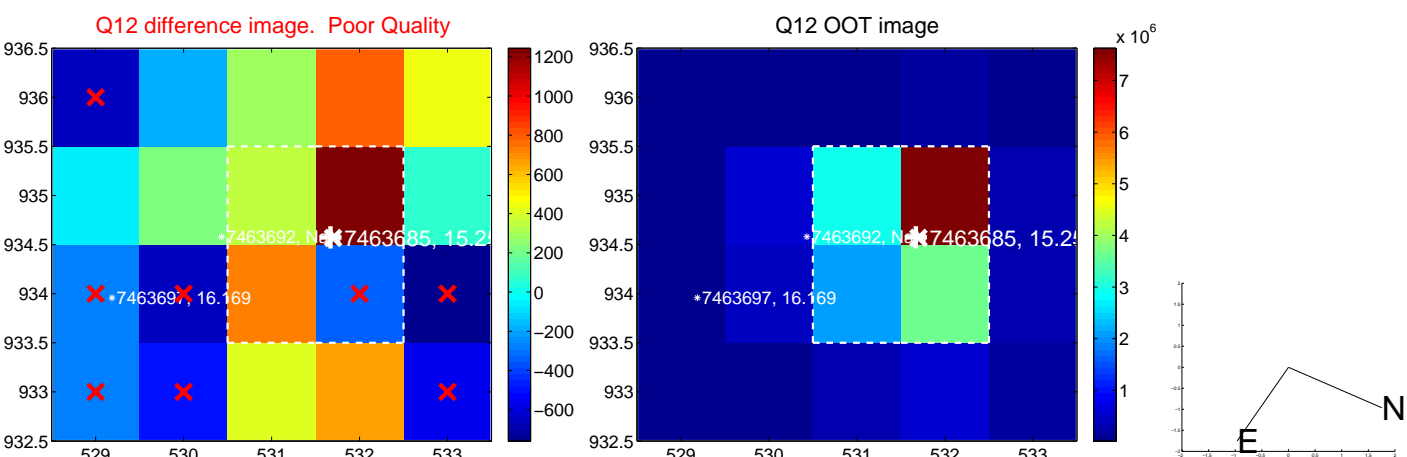
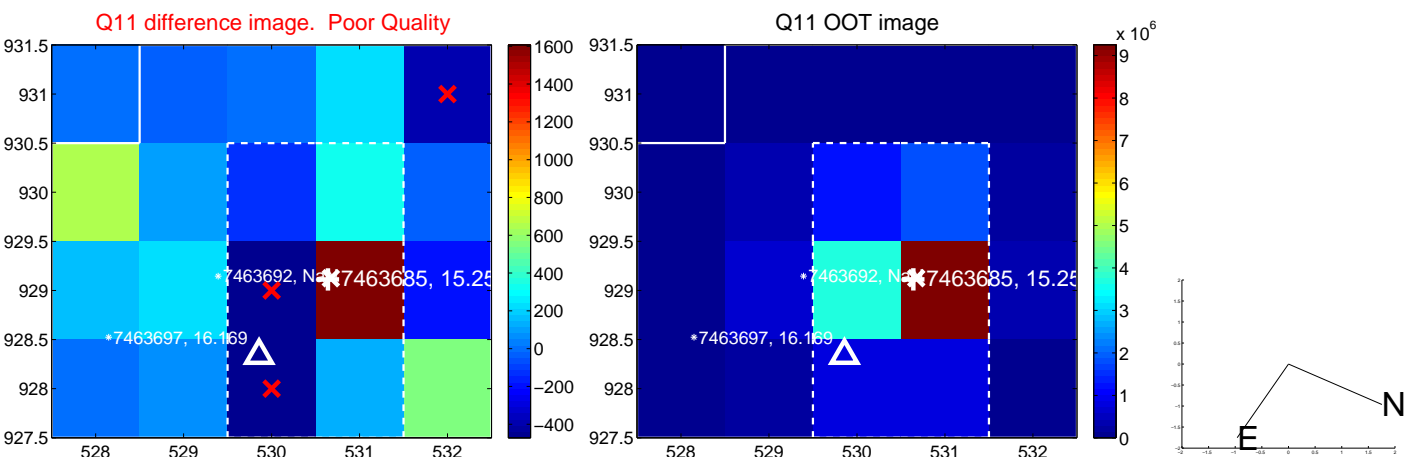
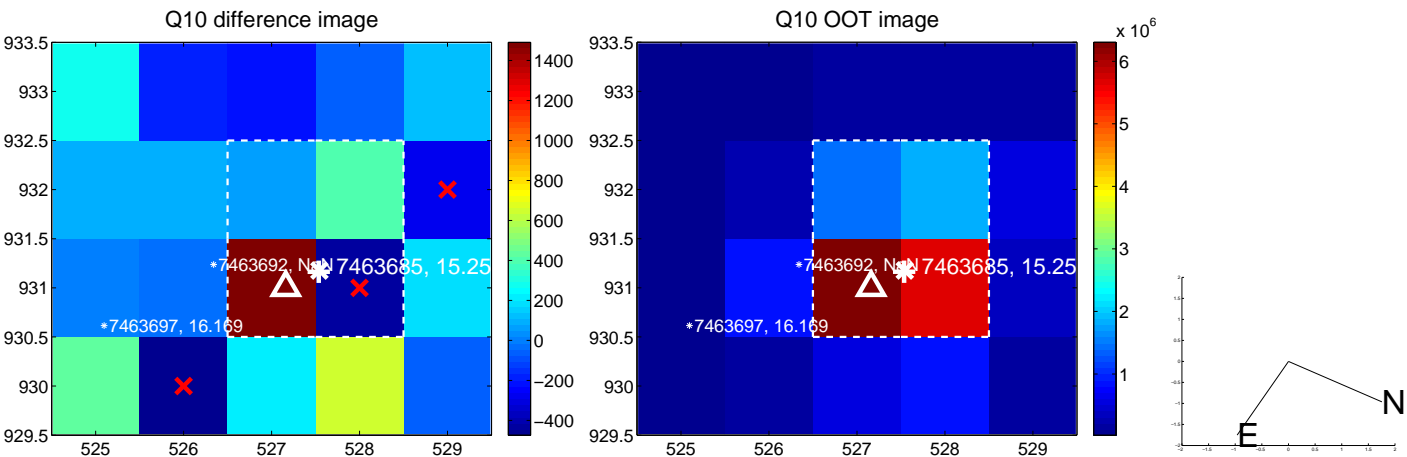
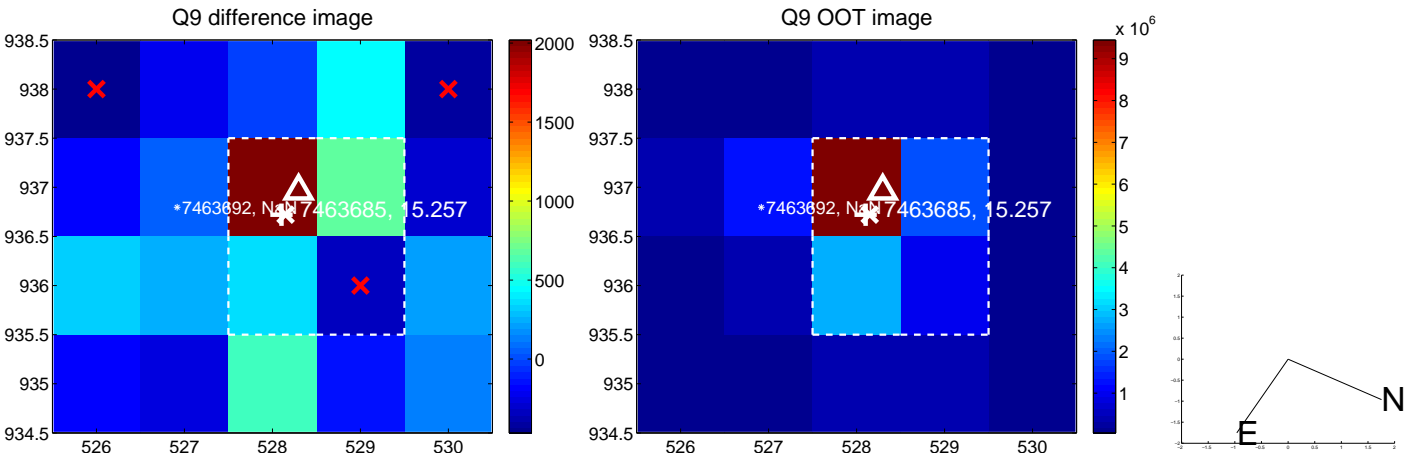
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



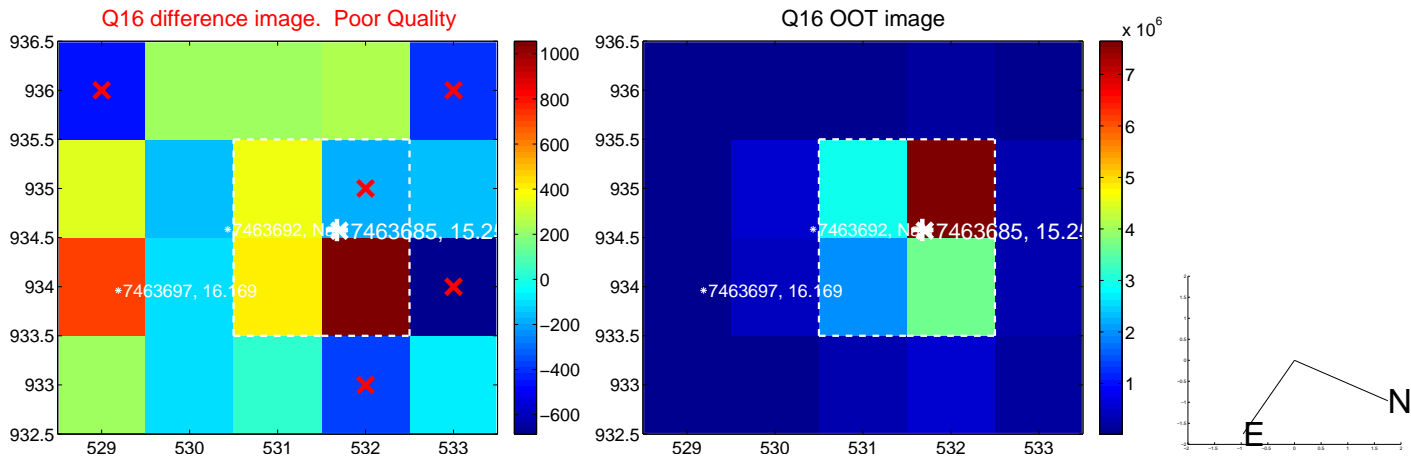
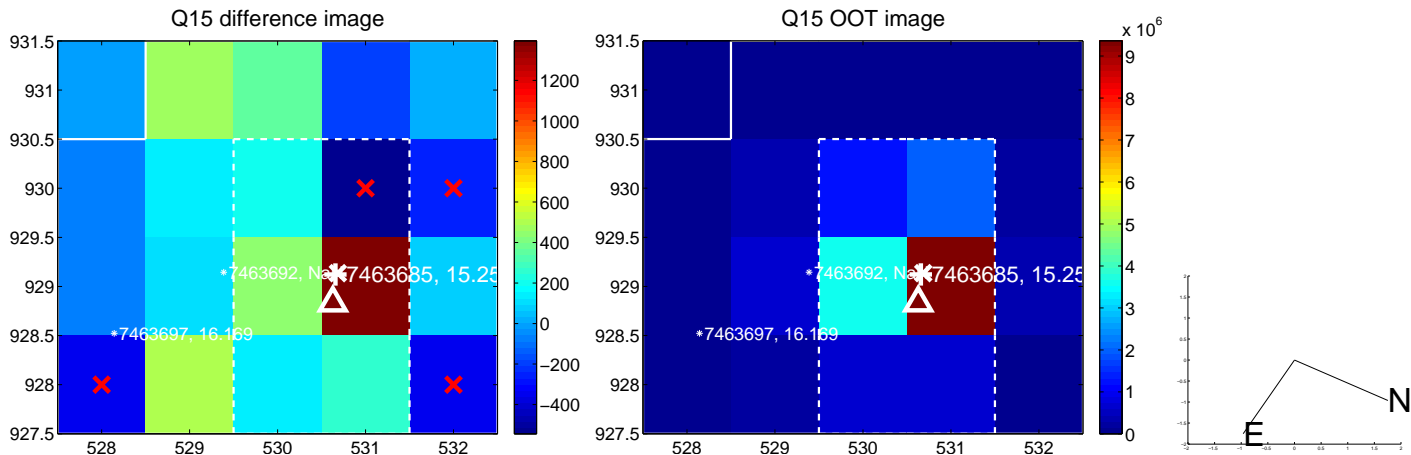
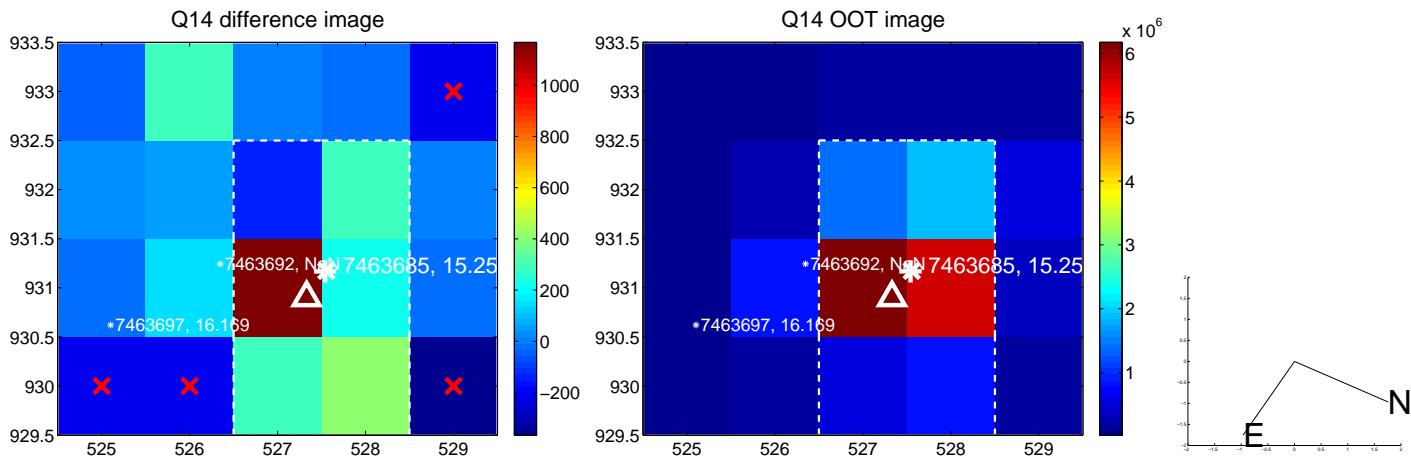
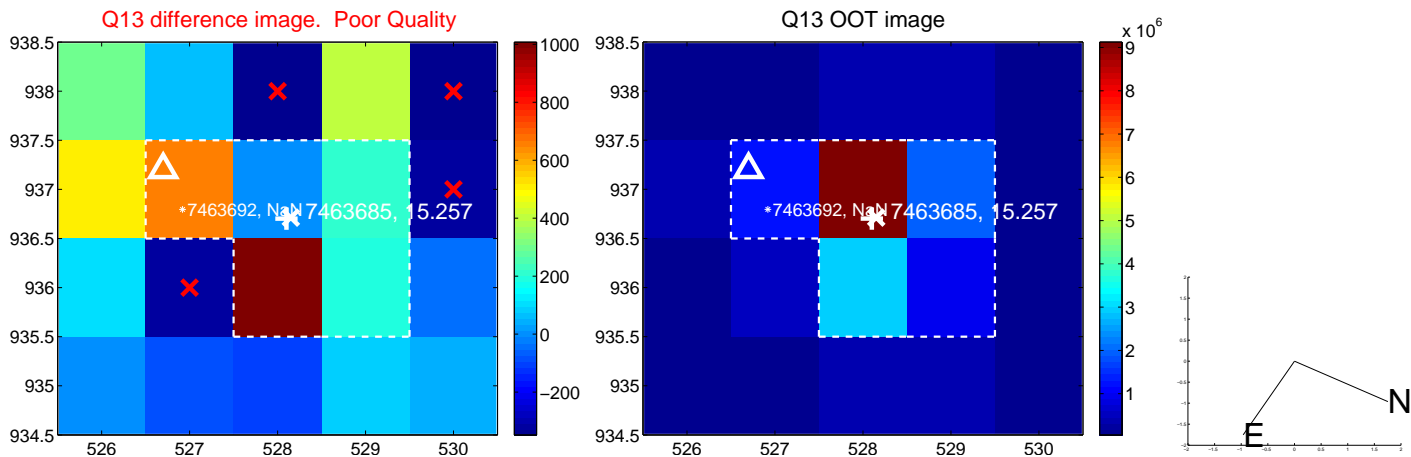
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

