

KIC 006881829

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})
006881829-01	OBS	No	5.471042	131.738090	50.5	30.245	7.3	9.5	0.80	5777	0.68	189.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006881829-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

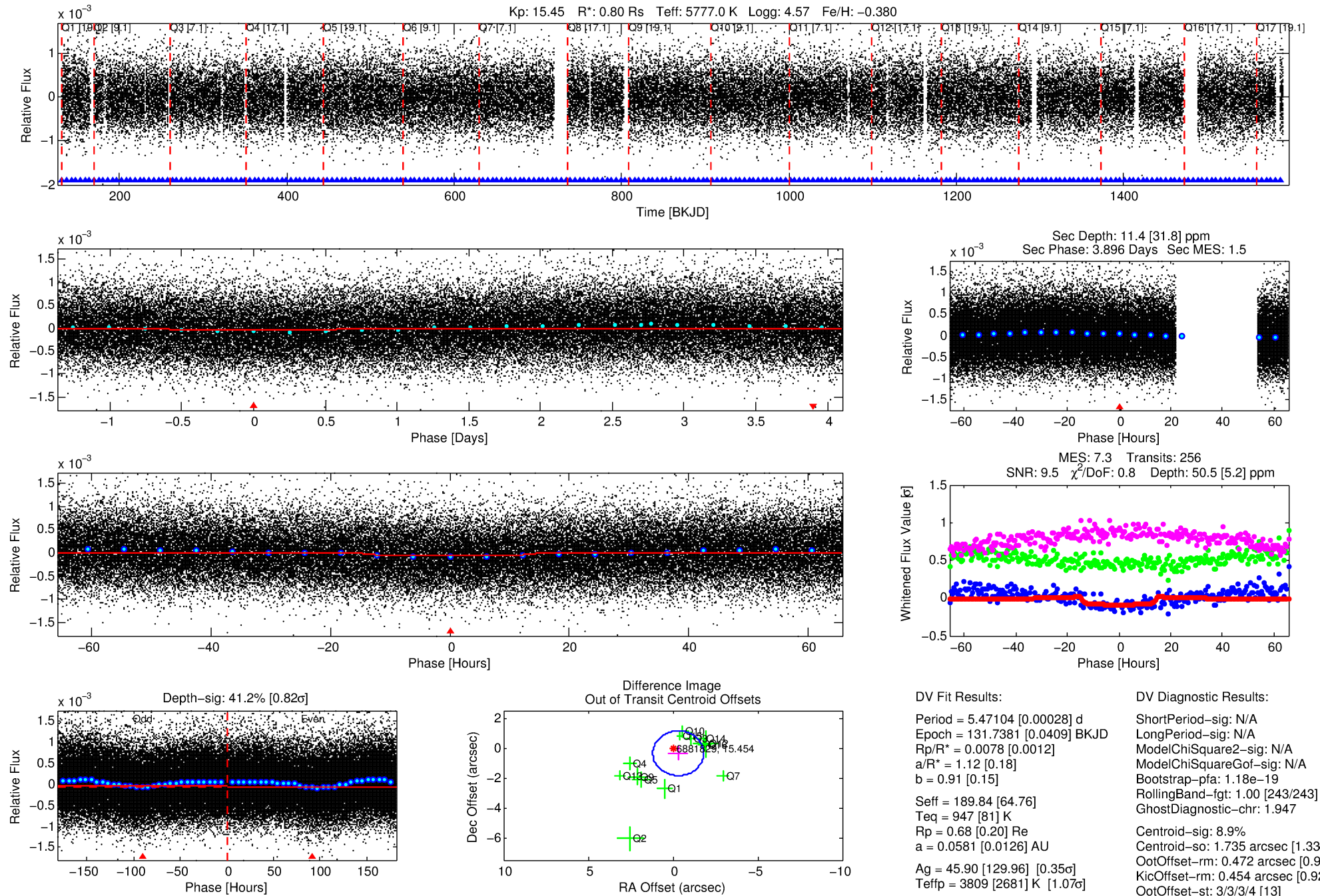
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006881829-01

No Significant Match Found

DV One-Page Summary

KIC: 6881829 Candidate: 1 of 1 Period: 5.471 d



DV Fit Results:

Period = 5.47104 [0.00028] d
Epoch = 131.7381 [0.0409] BKJD
Rp/R* = 0.0078 [0.0012]
a/R* = 1.12 [0.18]
b = 0.91 [0.15]
Seff = 189.84 [64.76]
Teff = 947 [81] K
Rp = 0.68 [0.20] Re
a = 0.0581 [0.0126] AU
Ag = 45.90 [129.96] [0.35 σ]
Teffp = 3809 [2681] K [1.07 σ]

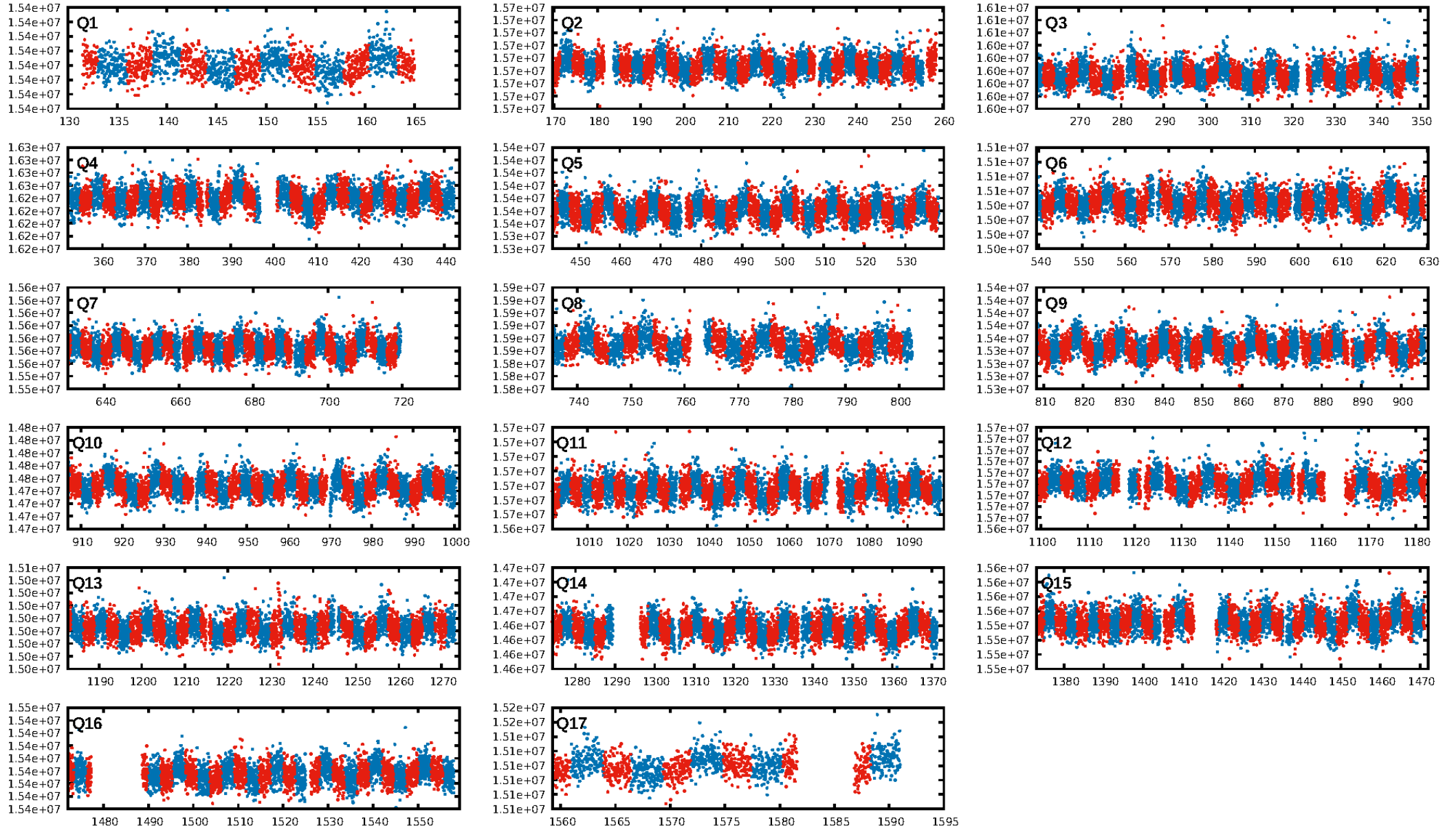
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.18e-19
RollingBand-fgt: 1.00 [243/243]
GhostDiagnostic-chr: 1.947
Centroid-sig: 8.9%
Centroid-so: 1.735 arcsec [1.33 σ]
OotOffset-rm: 0.472 arcsec [0.94 σ]
KicOffset-rm: 0.454 arcsec [0.92 σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 1.00 [17/17]

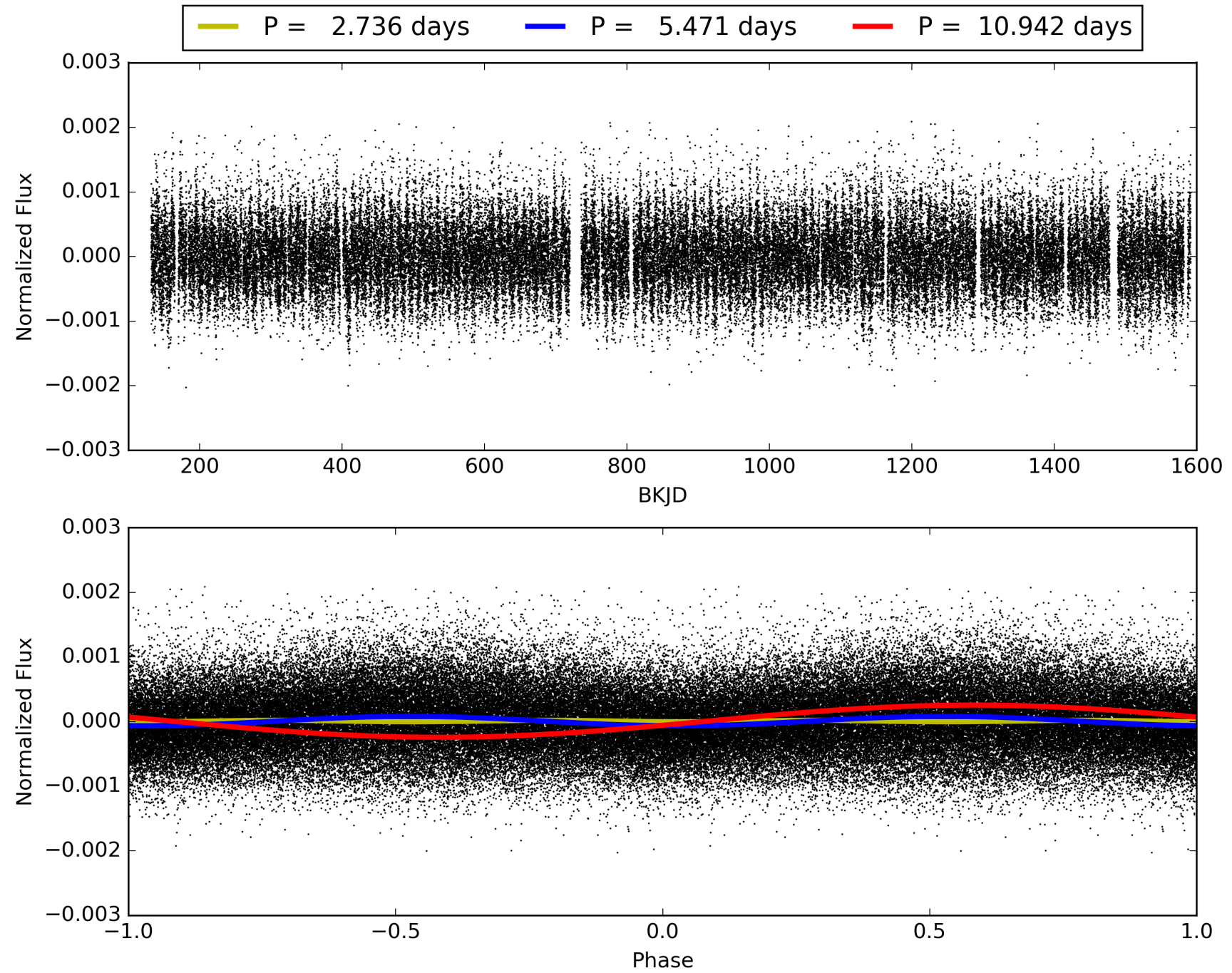
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:49:52 Z

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

TCE 006881829-01, PDC Light Curves

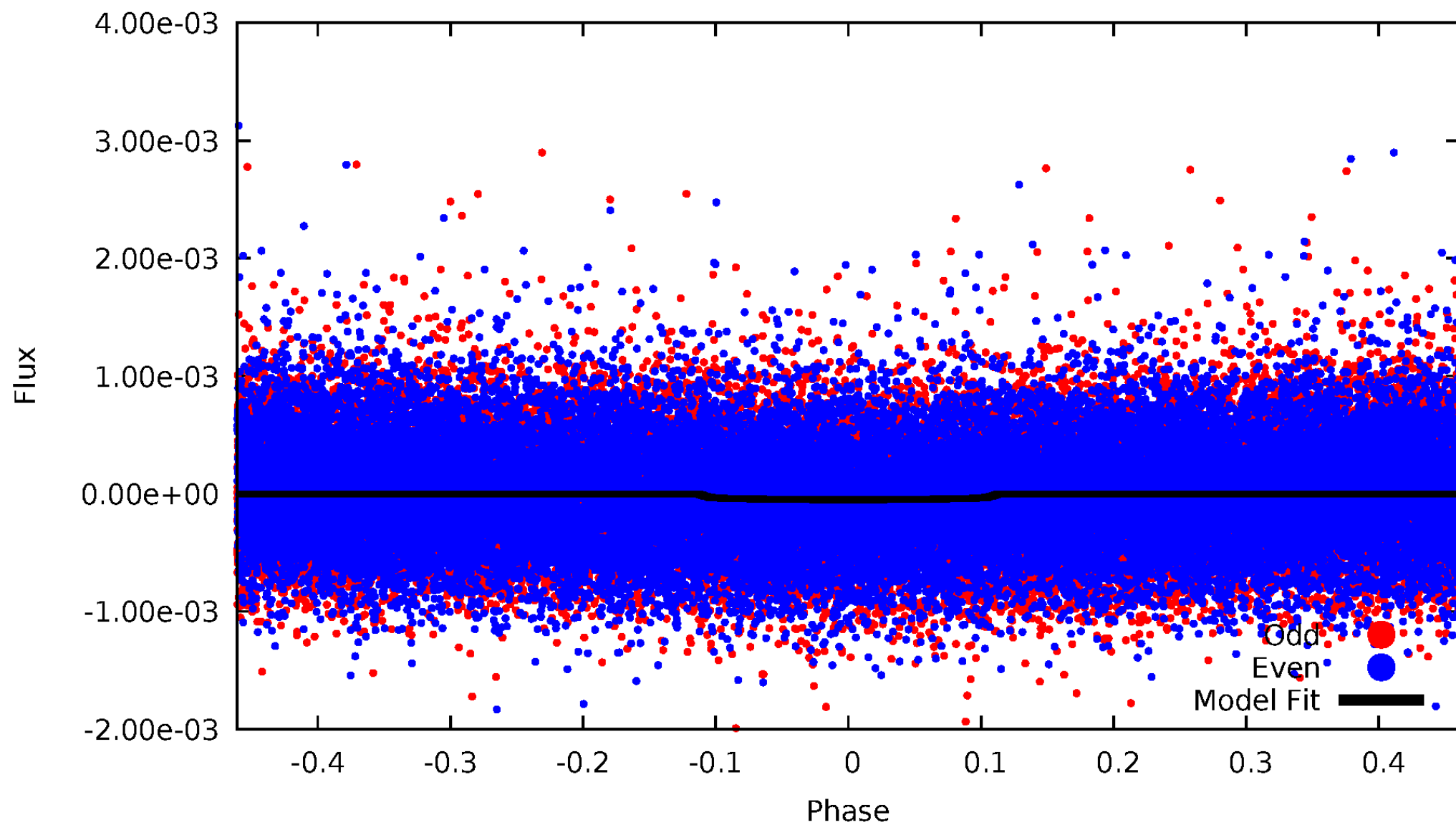


TCE 006881829-01



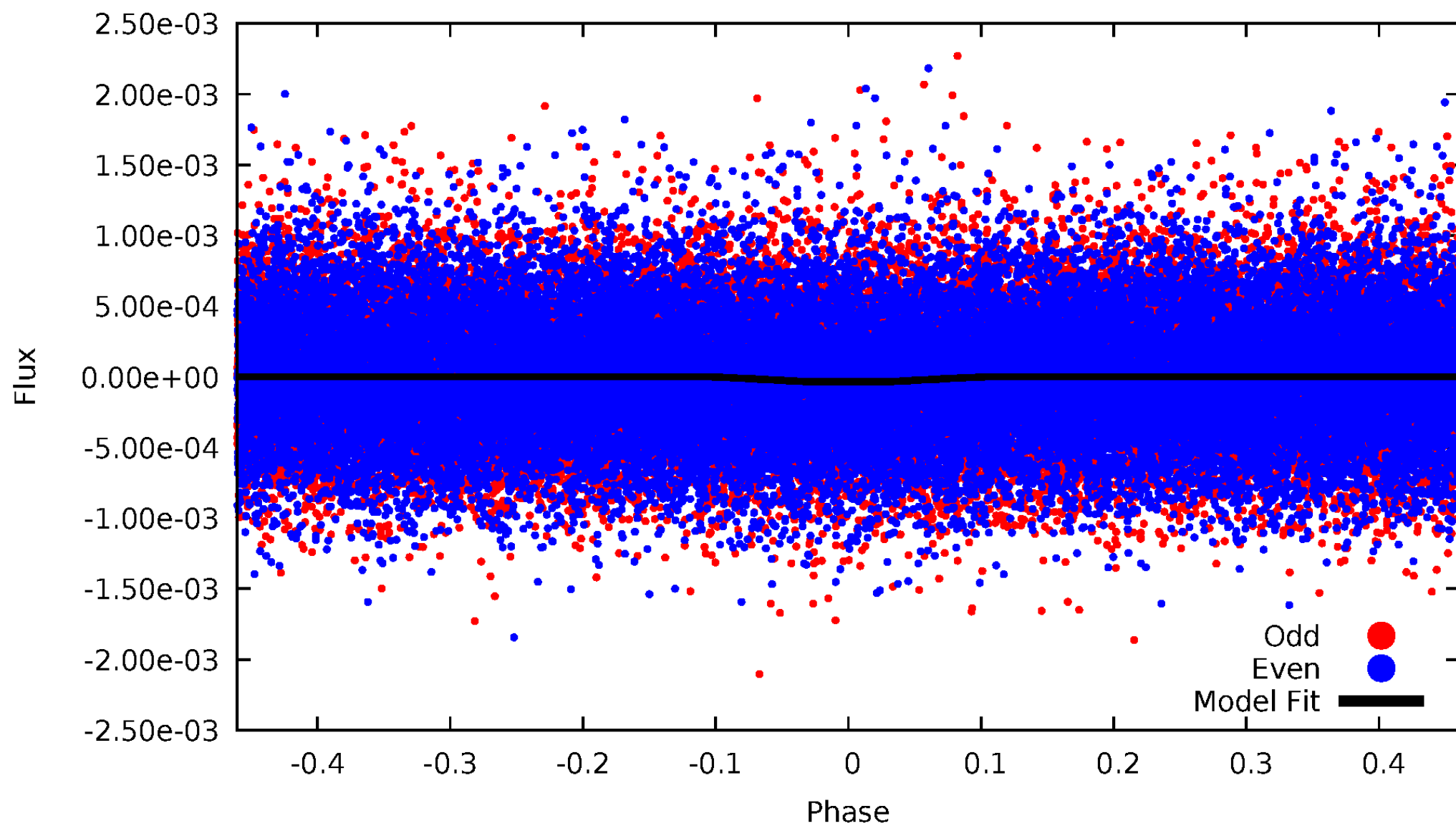
DV Odd/Even

TCE 006881829-01



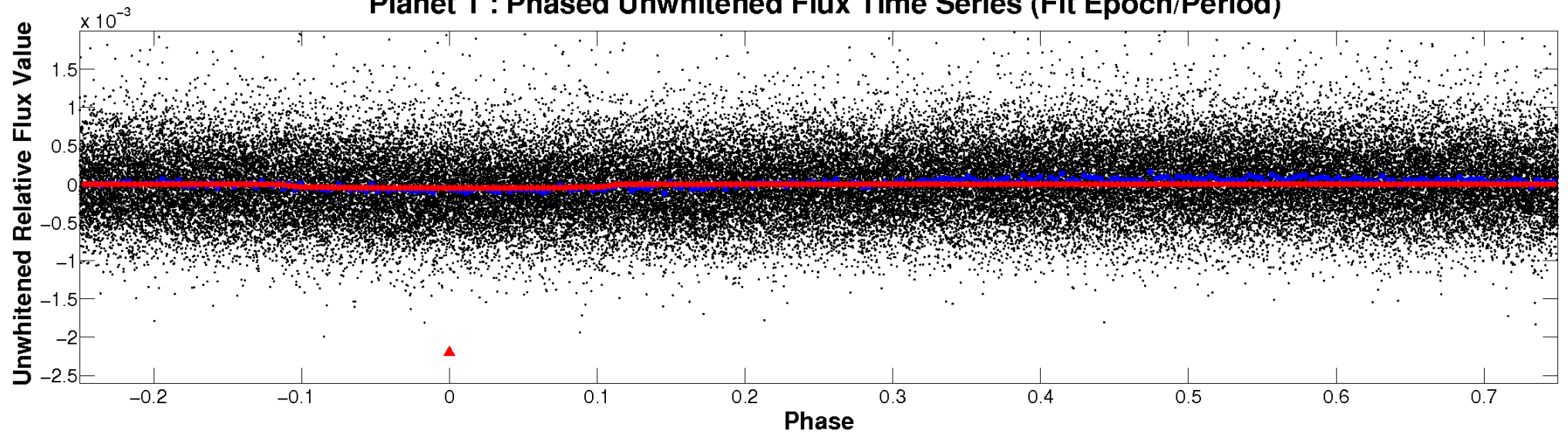
ALT Odd/Even

TCE 006881829-01

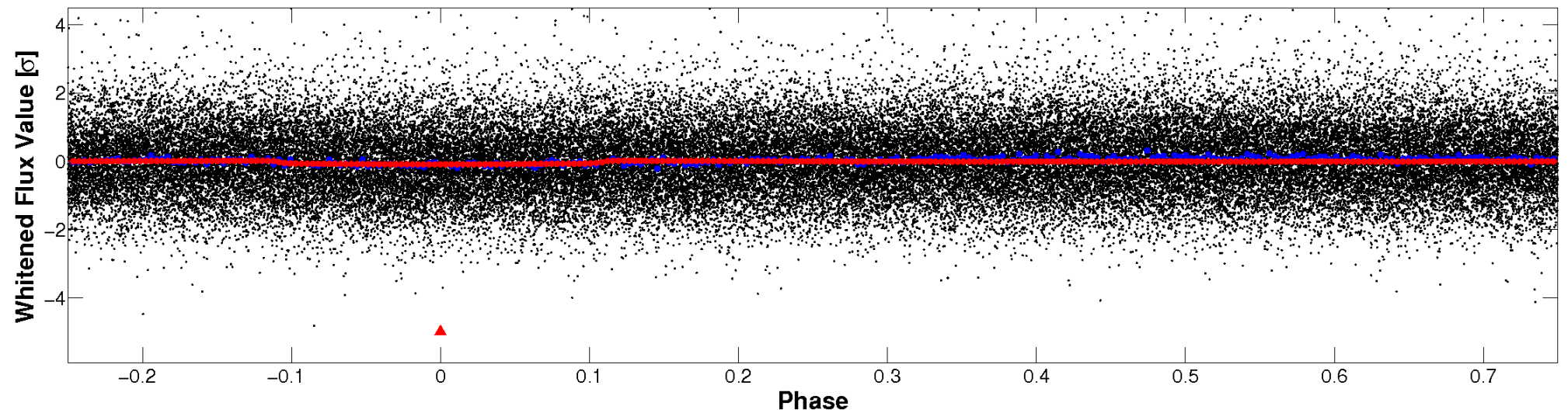


Non-Whitened Vs. Whitened Light Curve

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

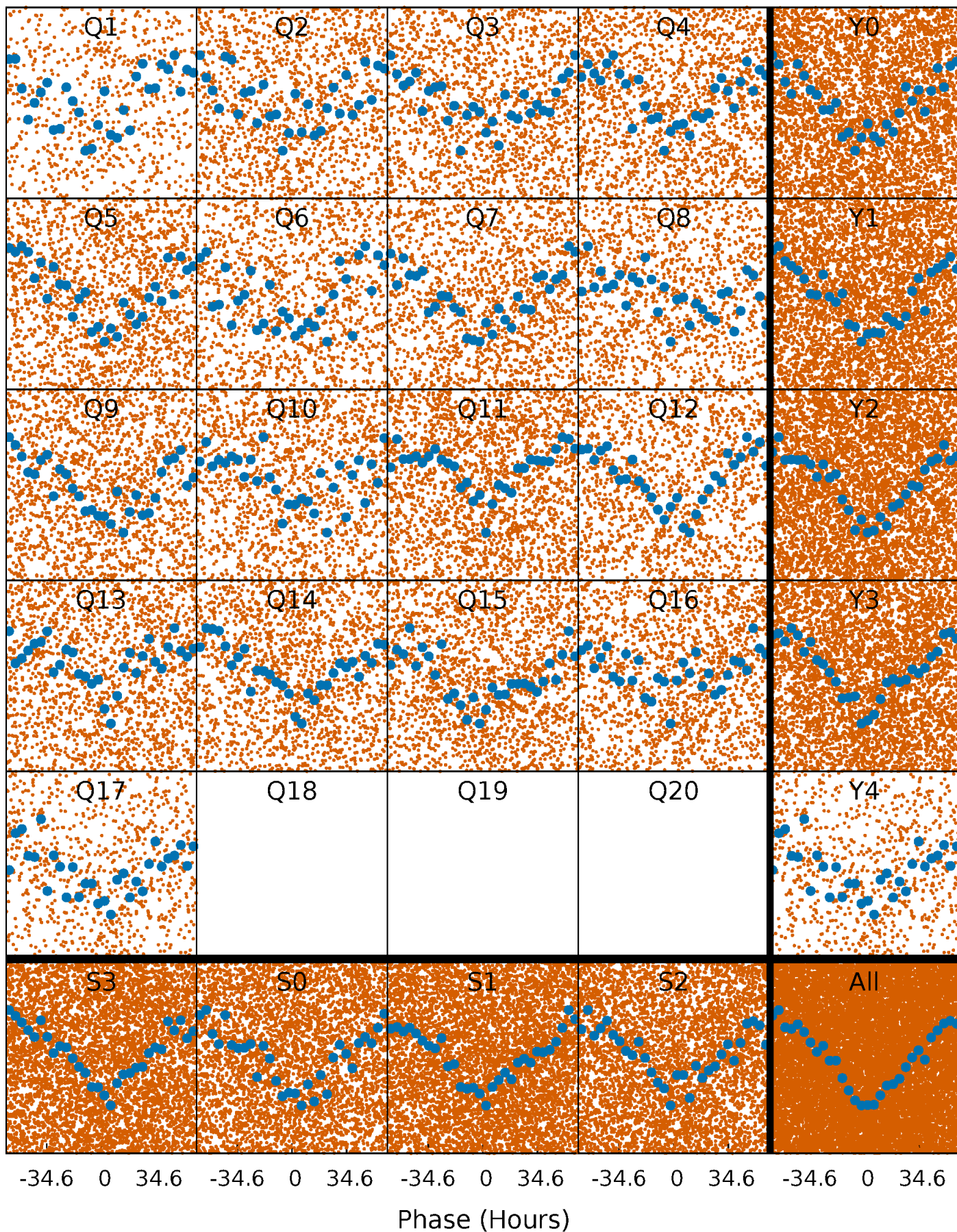


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



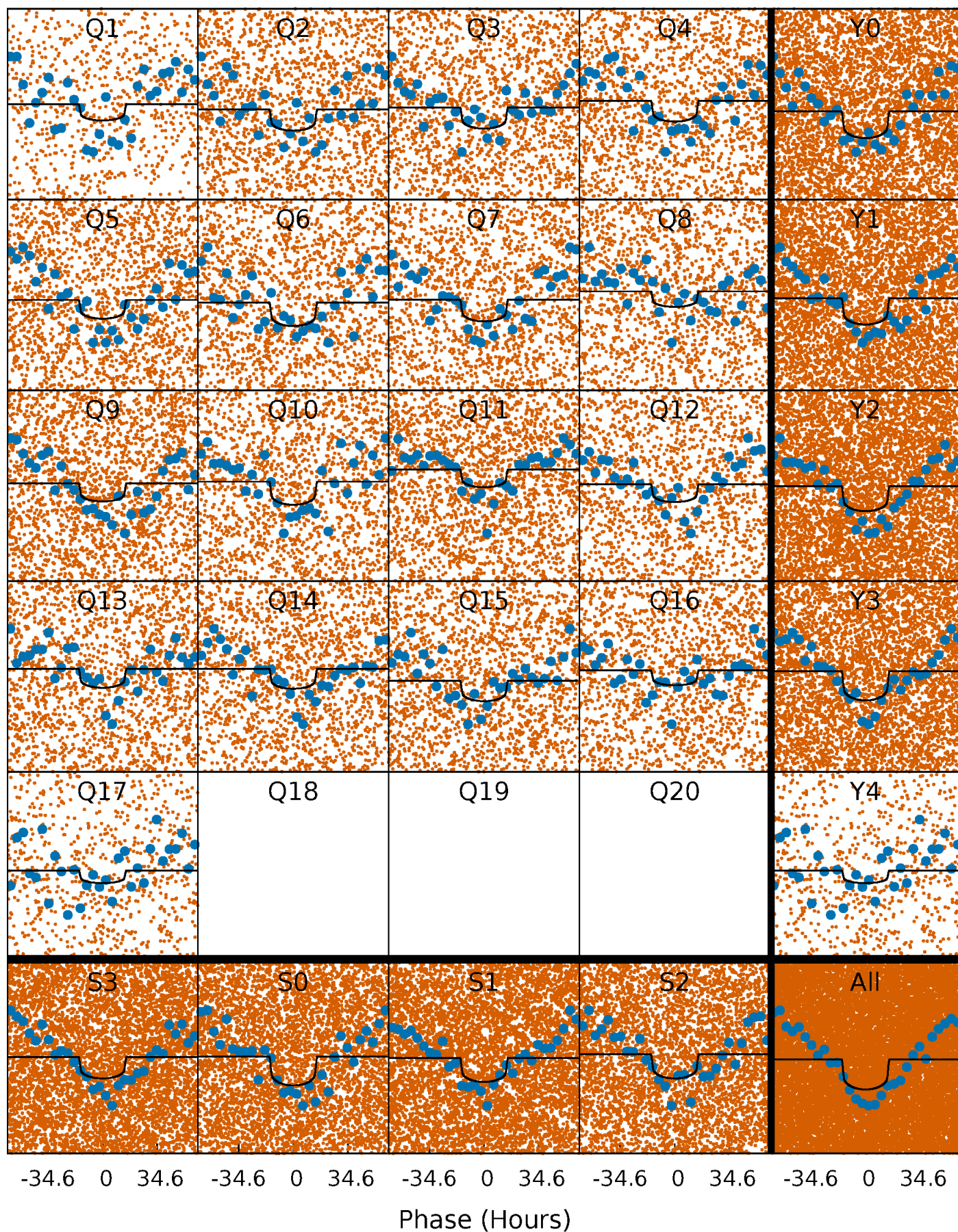
PDC Quarter-Phased Transit Curves

TCE 006881829-01 P= 5.471042 Days $T_0=131.738090$ (BKJD)



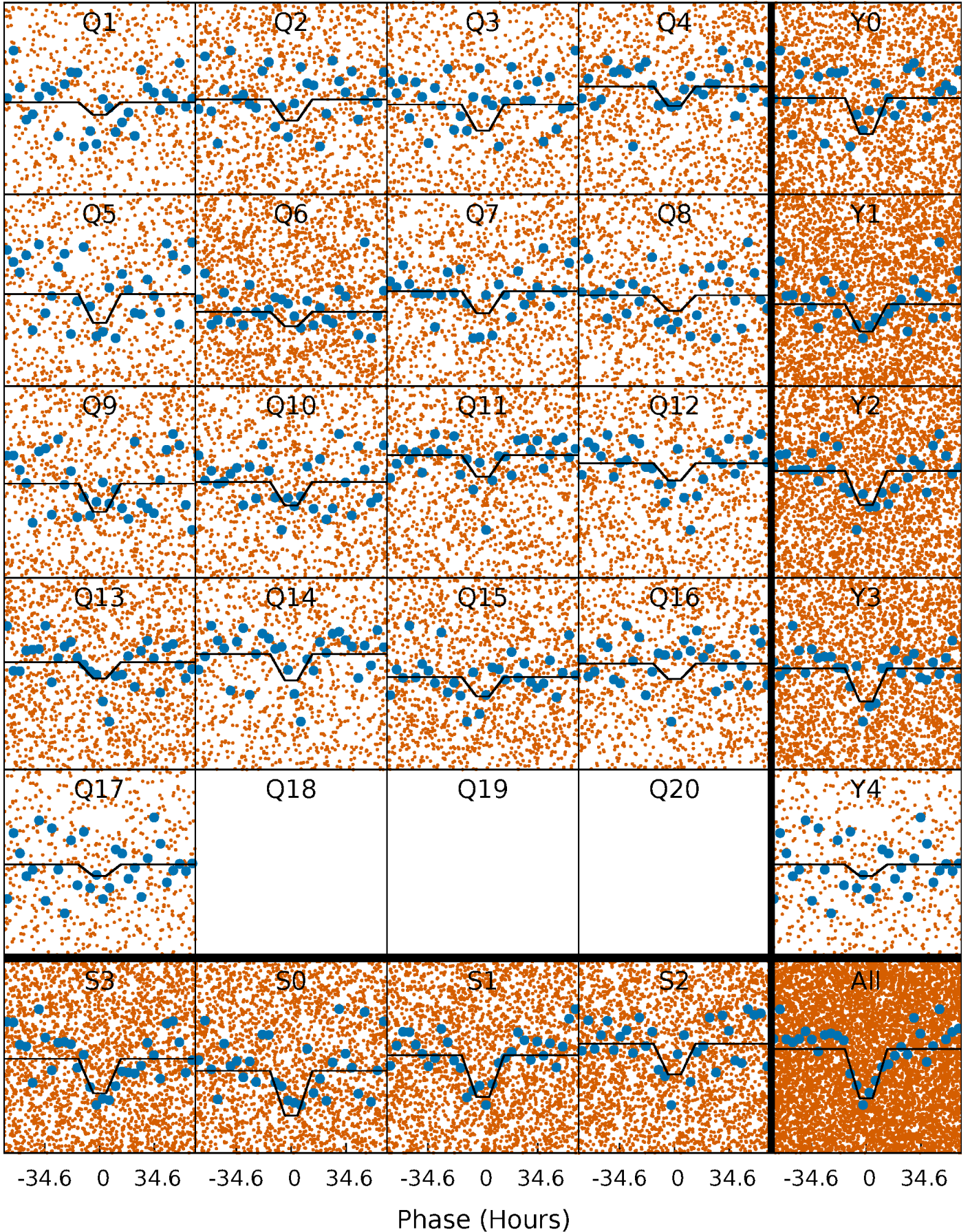
DV Quarter-Phased Transit Curves

TCE 006881829-01 P= 5.471042 Days $T_0=131.738090$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

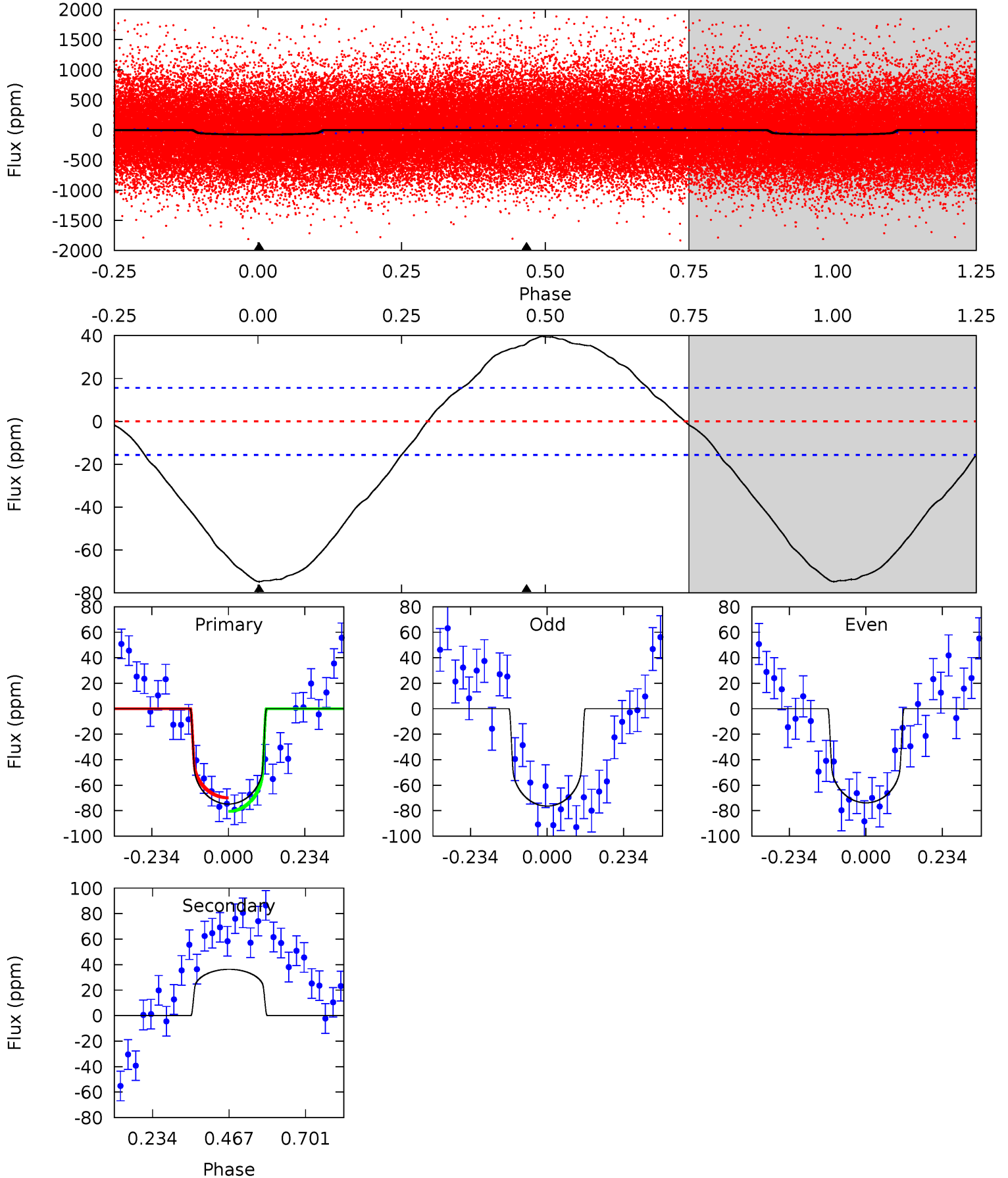
TCE 006881829-01 P= 5.471512 Days $T_0=131.637079$ (BKJD)



DV Model-Shift Uniqueness Test

006881829-01, P = 5.471042 Days, E = 126.267048 Days

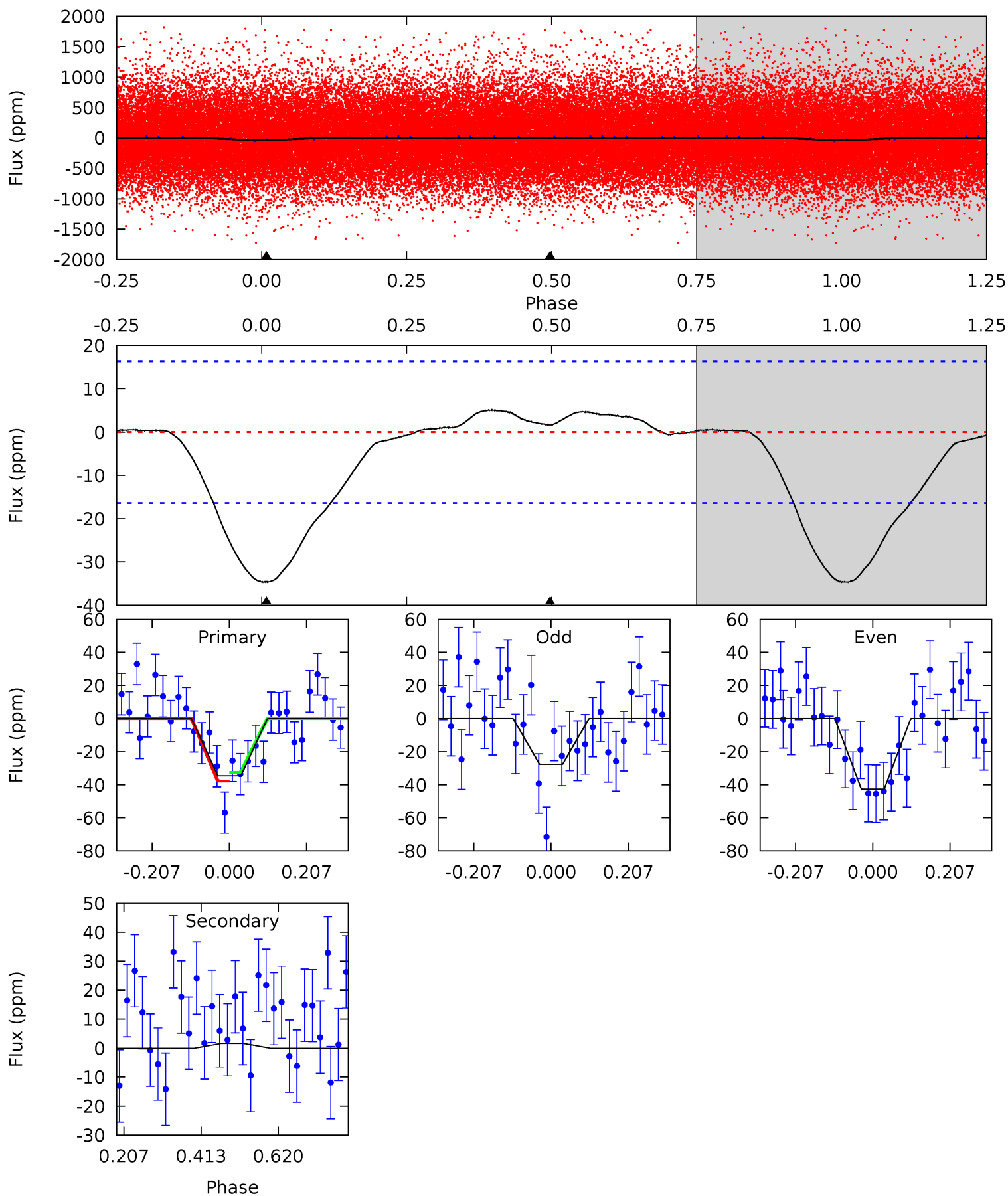
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.0	-10.2	0	0	4.38	1.19	2.85	21.0	21.0	-10.2	-10.2	0.36	1.01	0.35	1.51



Alt Model-Shift Uniqueness Test

006881829-01, P = 5.471512 Days, E = 126.165567 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.33	-0.44	0	0	4.41	1.26	0.19	9.33	9.33	-0.44	-0.44	1.97	1.32	0.13	0.72



Stellar Parameters For KIC 006881829

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5777^{+155}_{-173}	$4.572^{+0.033}_{-0.176}$	$-0.380^{+0.300}_{-0.300}$	$0.802^{+0.205}_{-0.068}$	$0.877^{+0.096}_{-0.096}$	$2.393^{+0.419}_{-1.138}$
	+3%/-3%	+1%/-4%	+79%/-79%	+26%/-8%	+11%/-11%	+18%/-48%
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 006881829-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	36 ± 4	$0.71^{+0.15}_{-0.12}$	1351^{+83}_{-60}	-5130^{+349}_{-469}	$-131.424^{+41.642}_{-62.160}$
Alt.	2 ± 4	$0.54^{+0.13}_{-0.12}$	1350^{+80}_{-55}	-3216^{+6620}_{-775}	$-8.654^{+22.912}_{-26.376}$

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 $A_{obs} \gg 1.0$

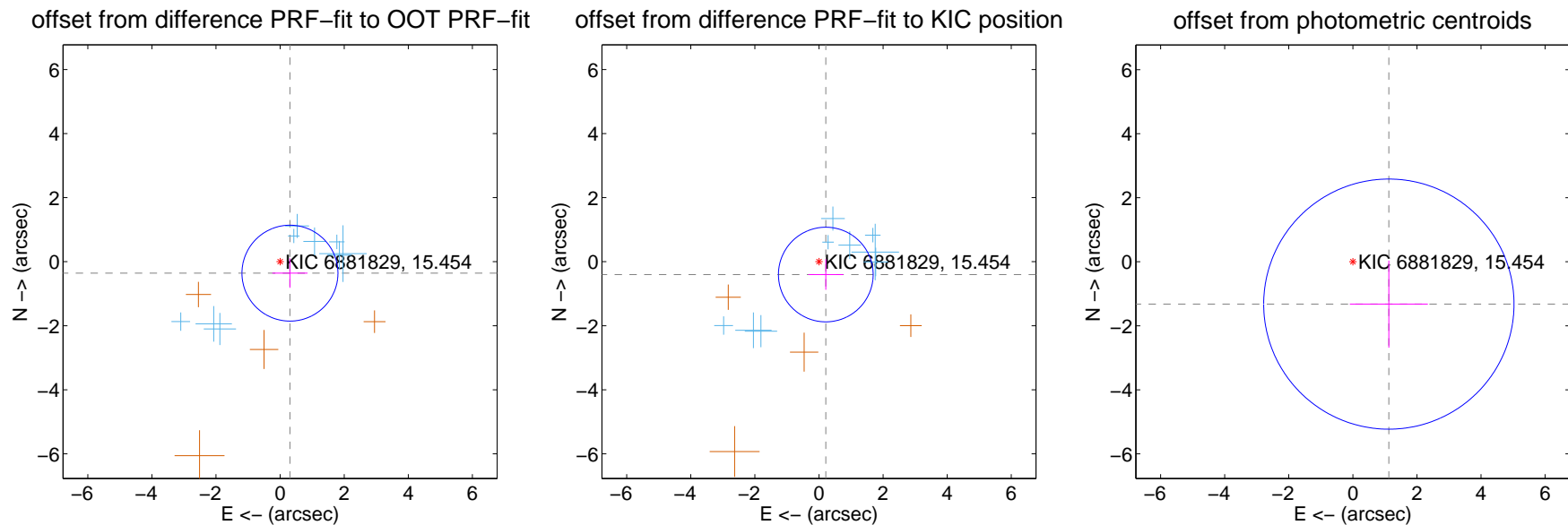
DV Centroid Data

Supplemental centroid analysis for 006881829-01. Kepler magnitude: 15.45. Transit SNR 9.47

There are 9 quarters with good PRF difference image offsets

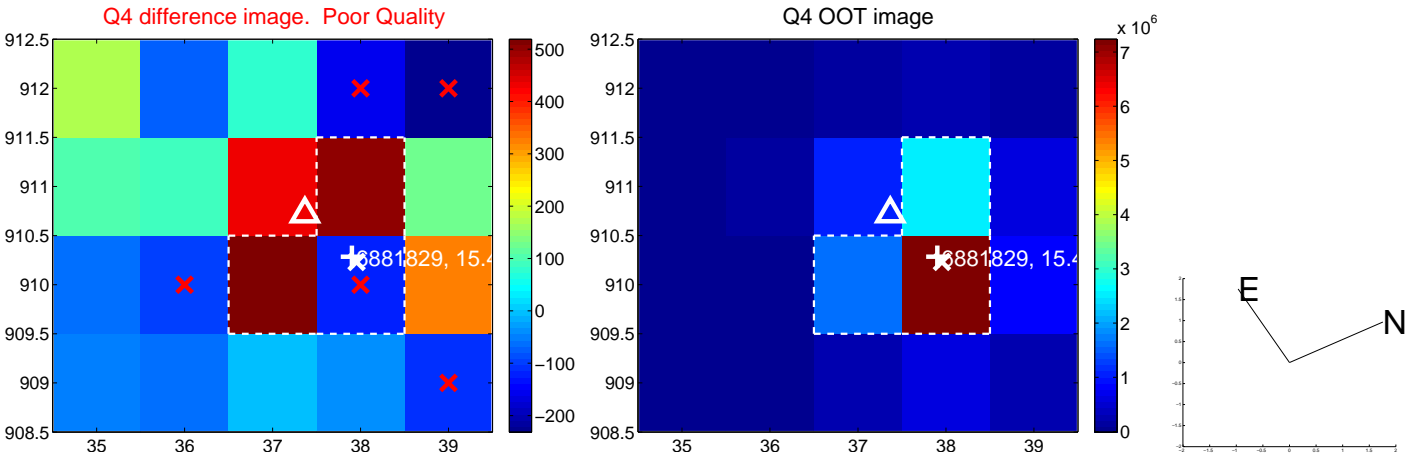
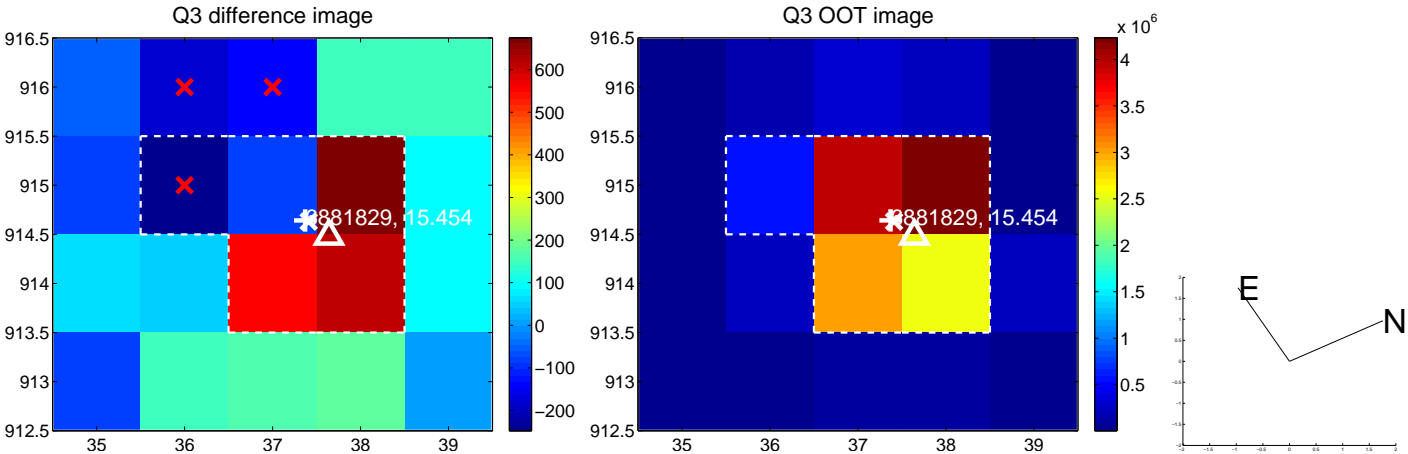
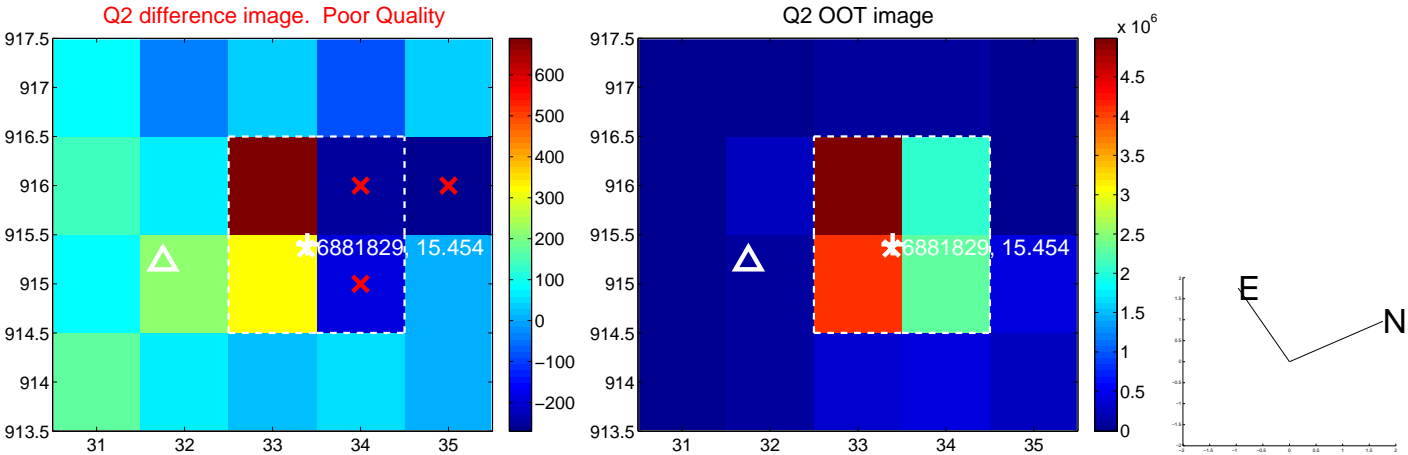
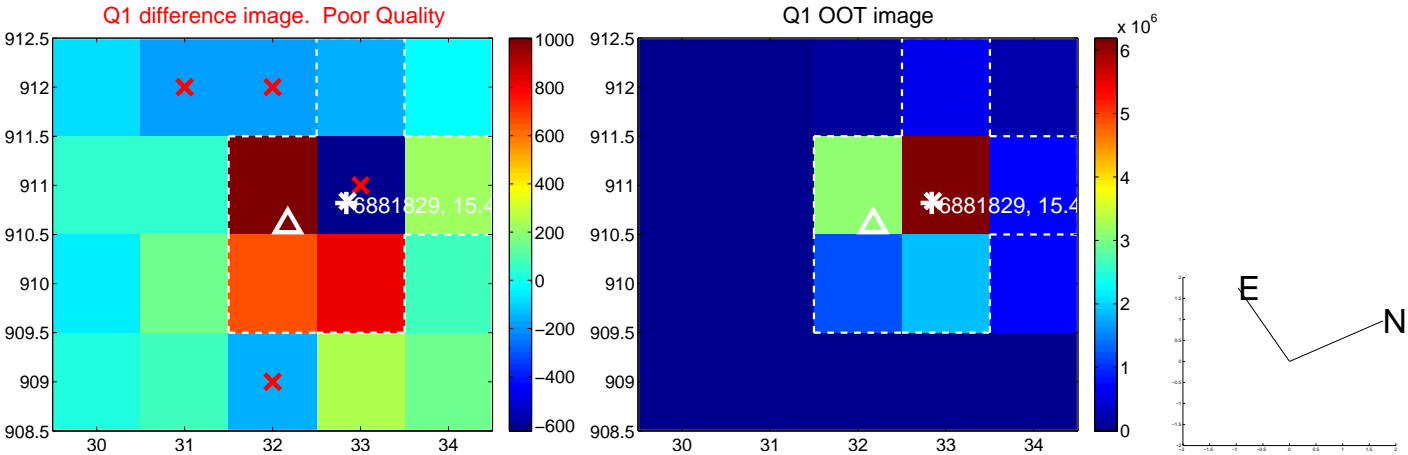
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.472 ± 0.499	0.94	-0.307 ± 0.550	-0.358 ± 0.458
PRF-fit source offset from KIC position	0.454 ± 0.493	0.92	-0.212 ± 0.545	-0.401 ± 0.477
photometric centroid source offset	1.74 ± 1.30	1.33	-1.12 ± 1.22	-1.32 ± 1.36

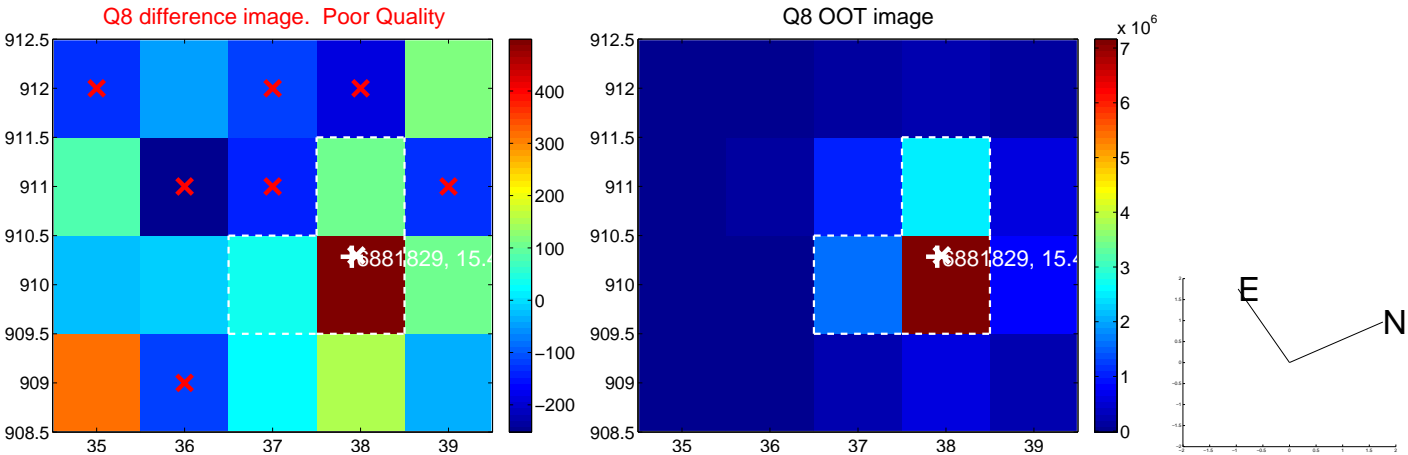
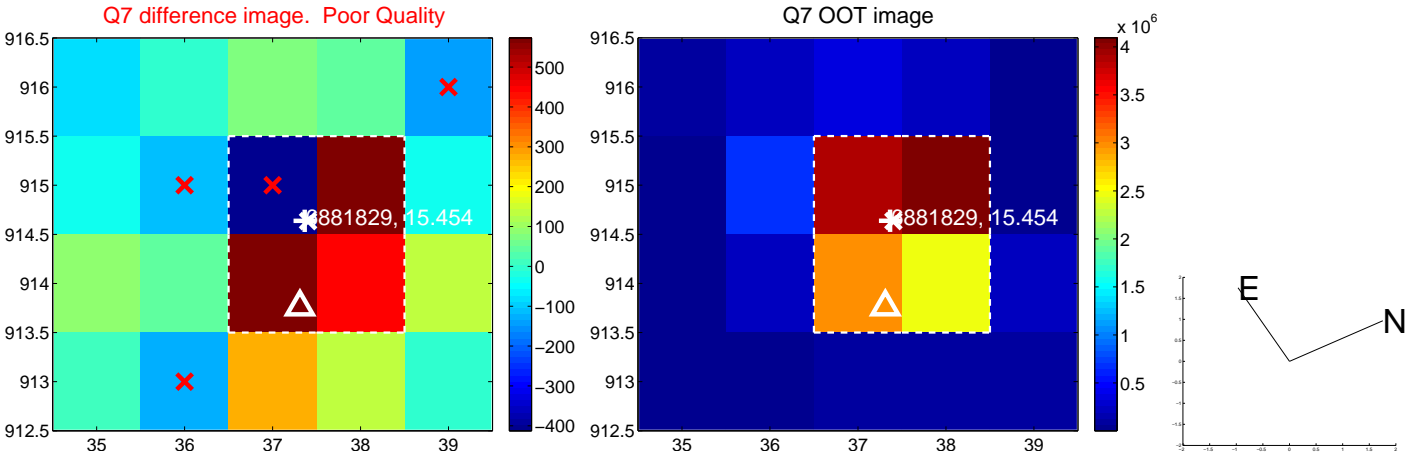
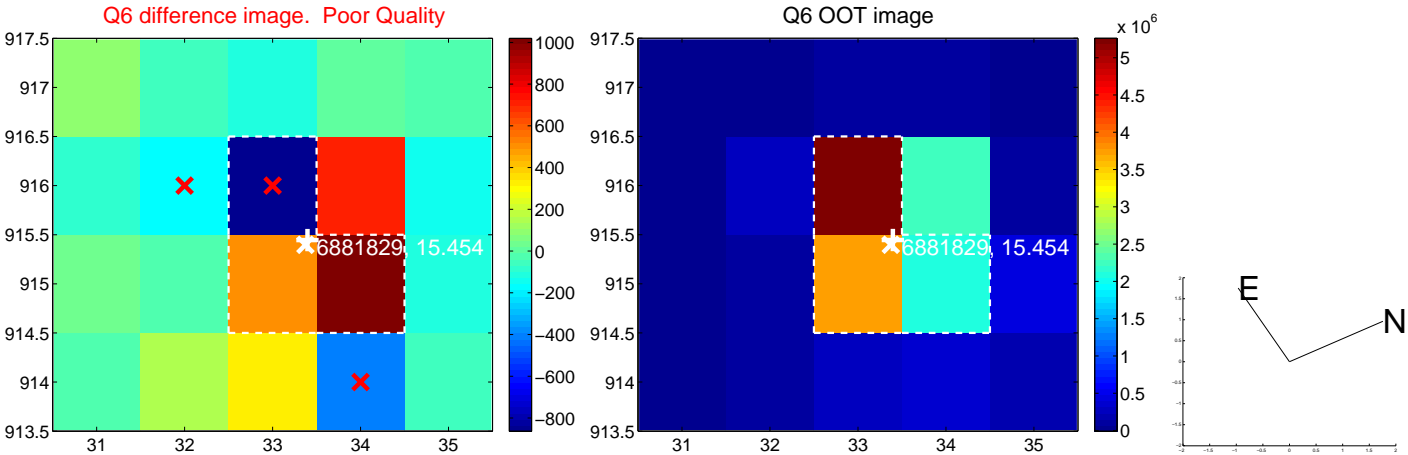
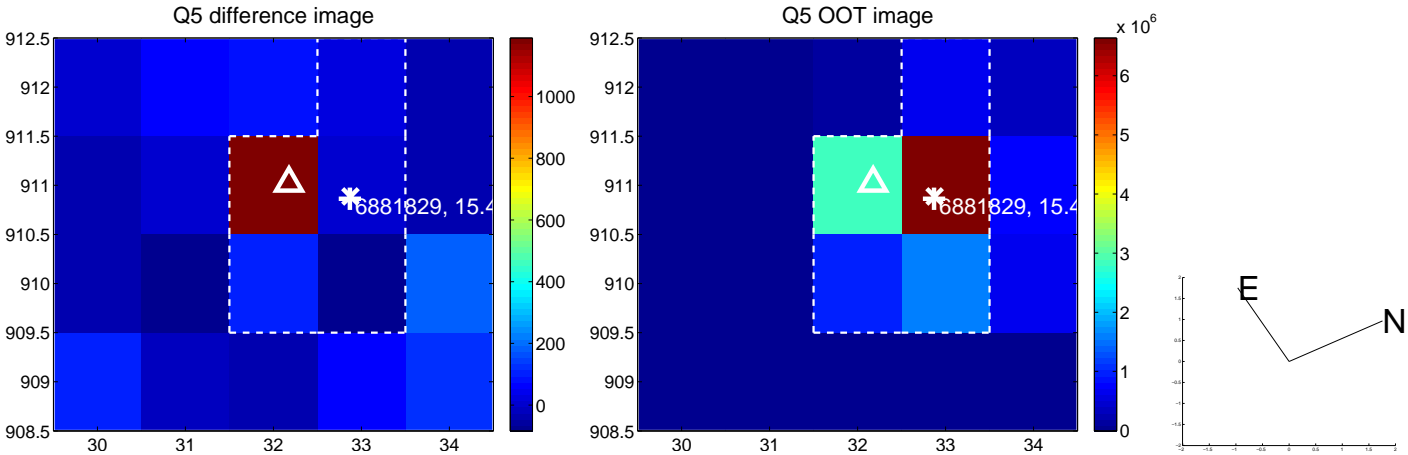


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

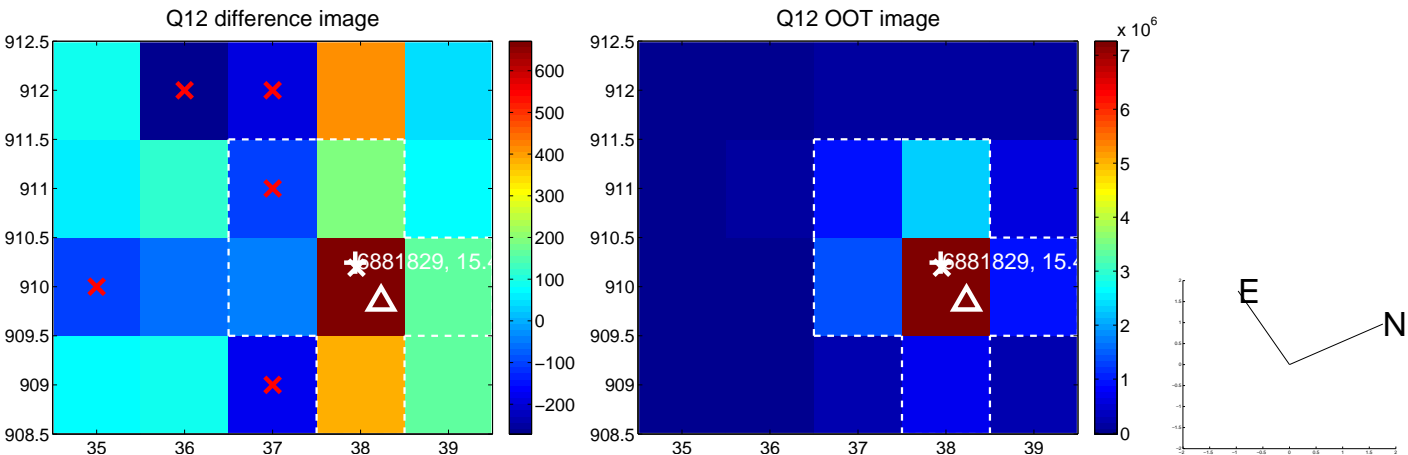
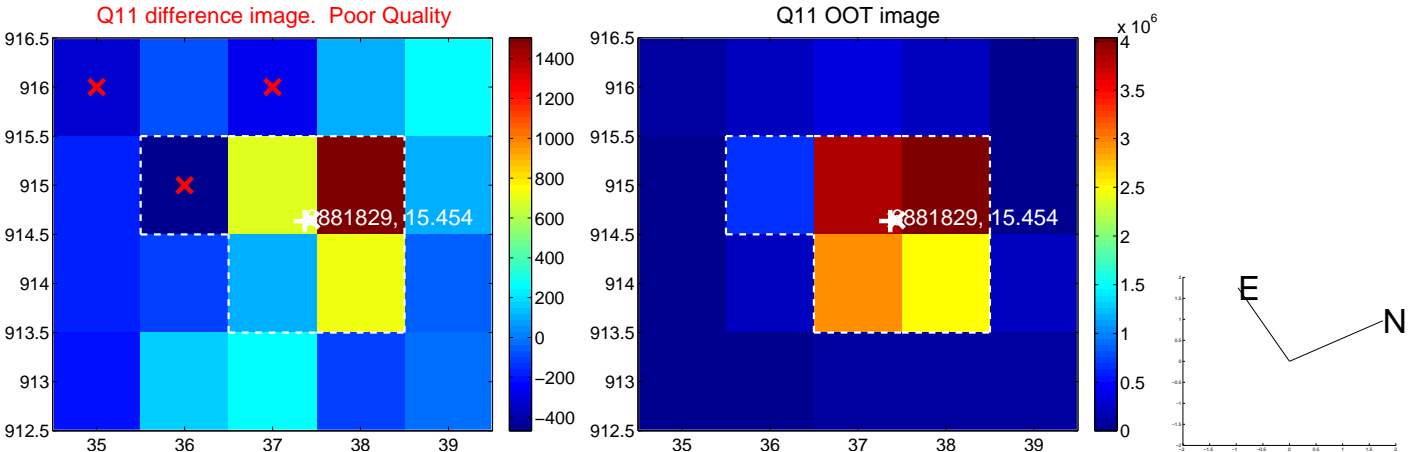
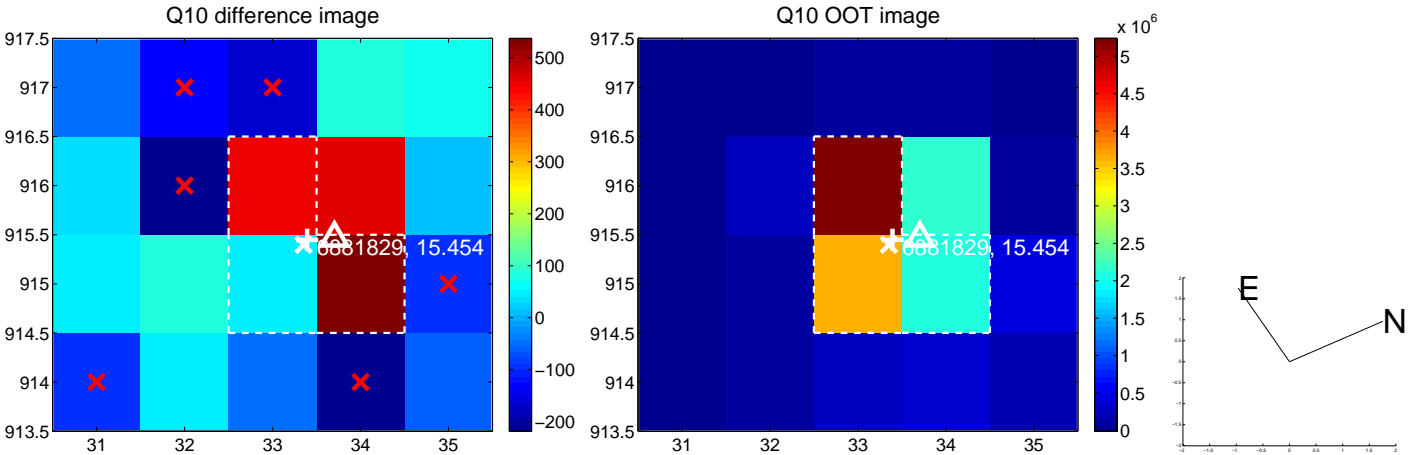
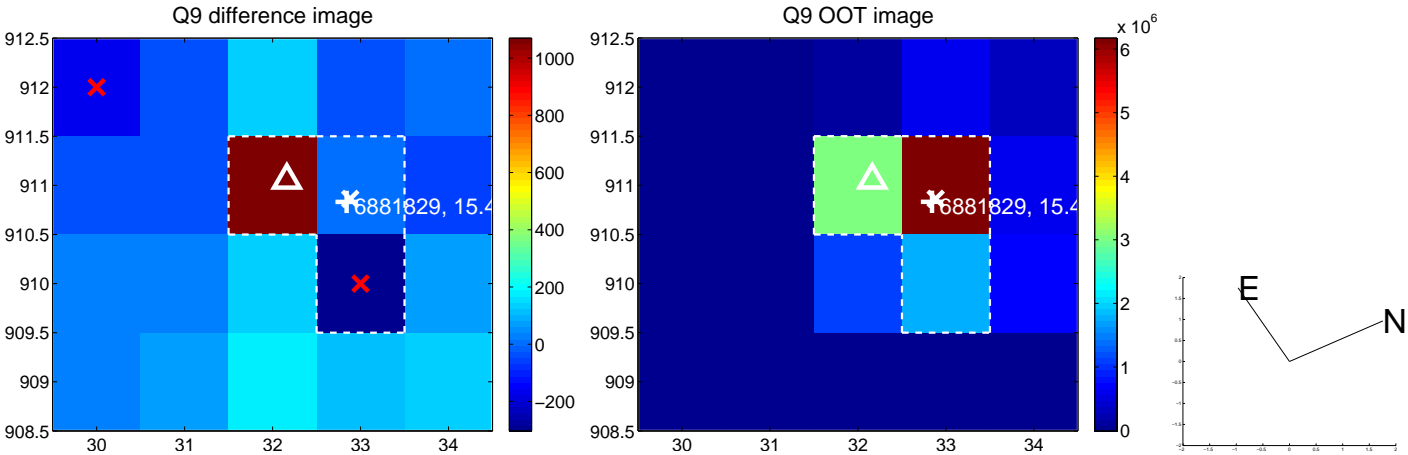
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



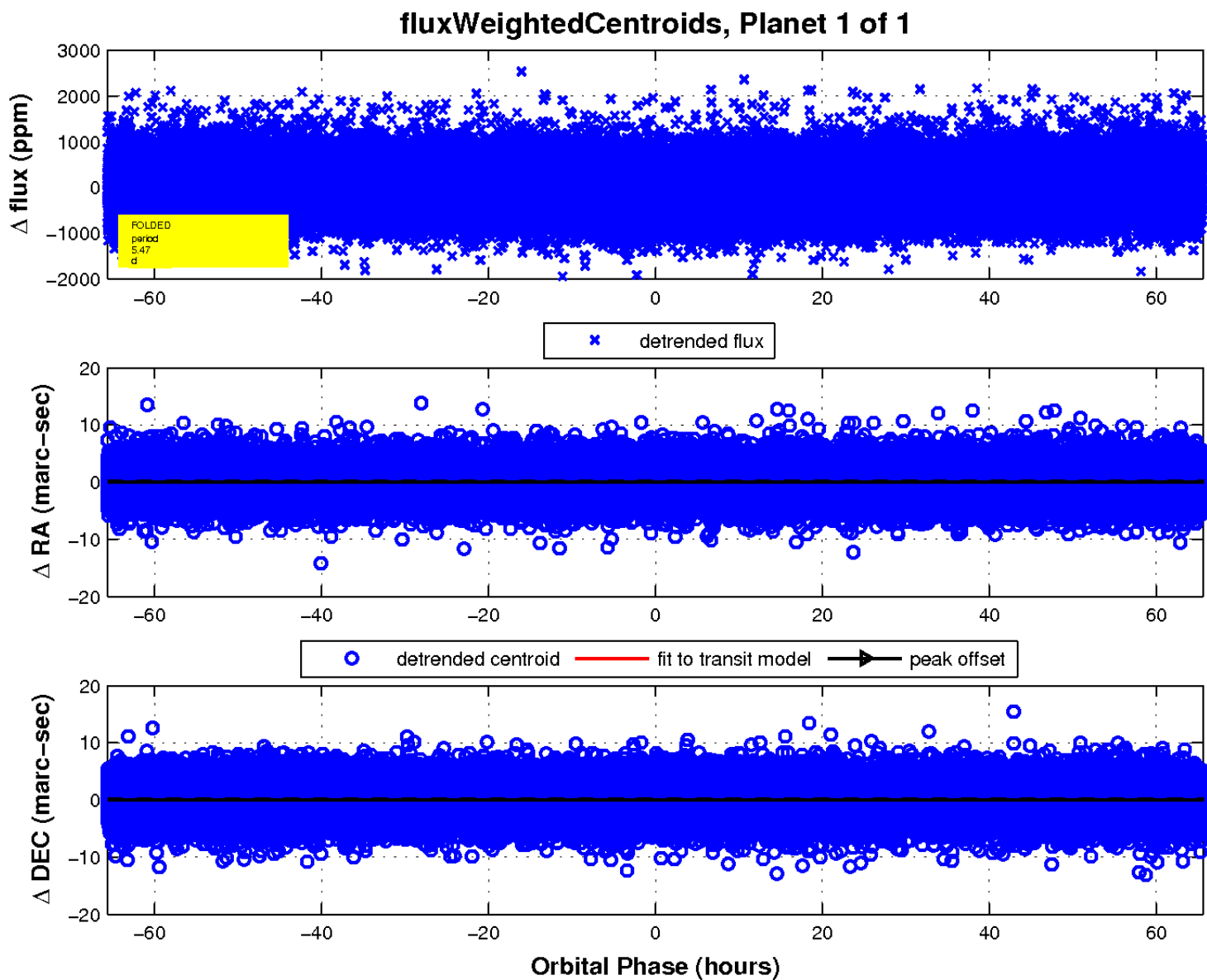
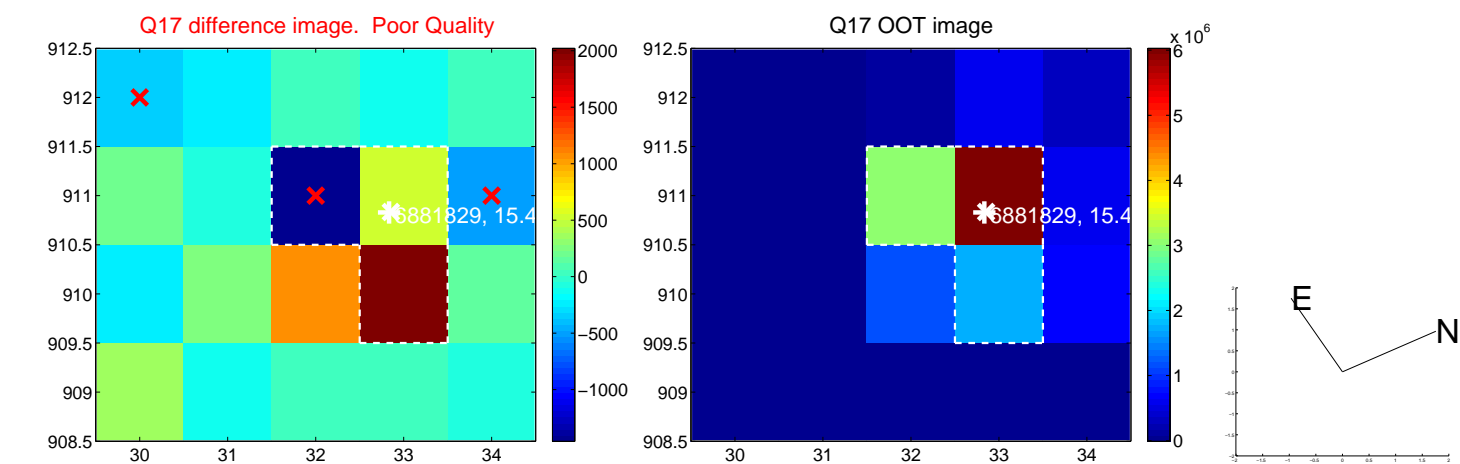
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

