

KIC 012303426

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})
012303426-01	OBS	No	0.988022	131.909803	14.6	6.181	8.8	5.6	1.08	6095	0.42	3504.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012303426-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

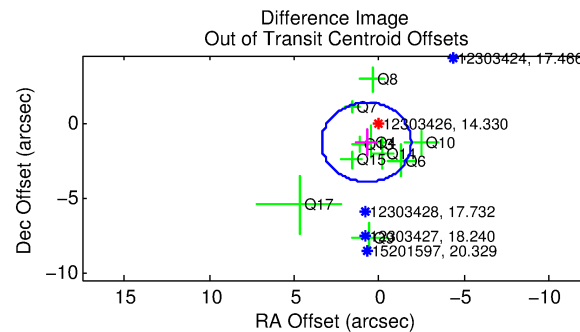
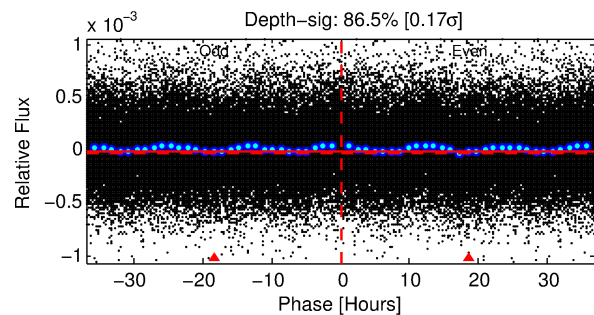
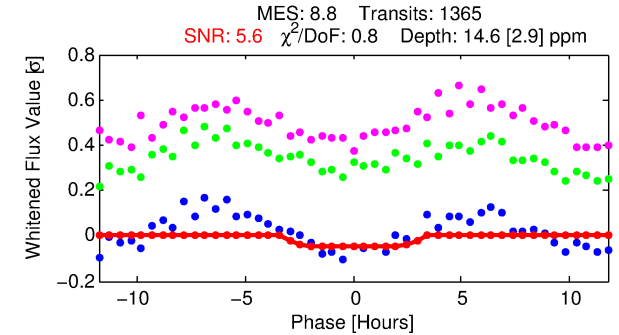
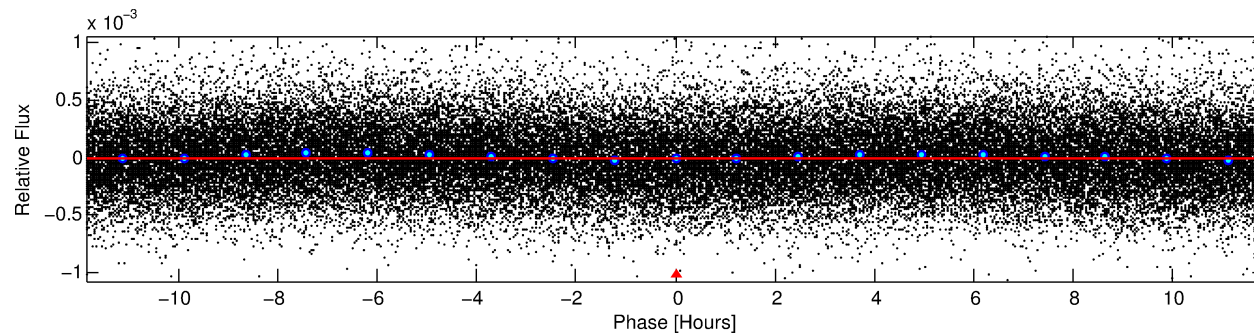
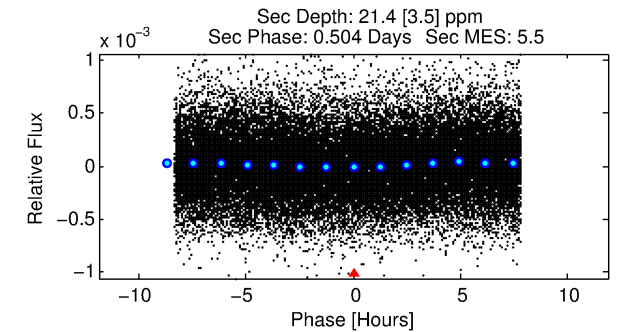
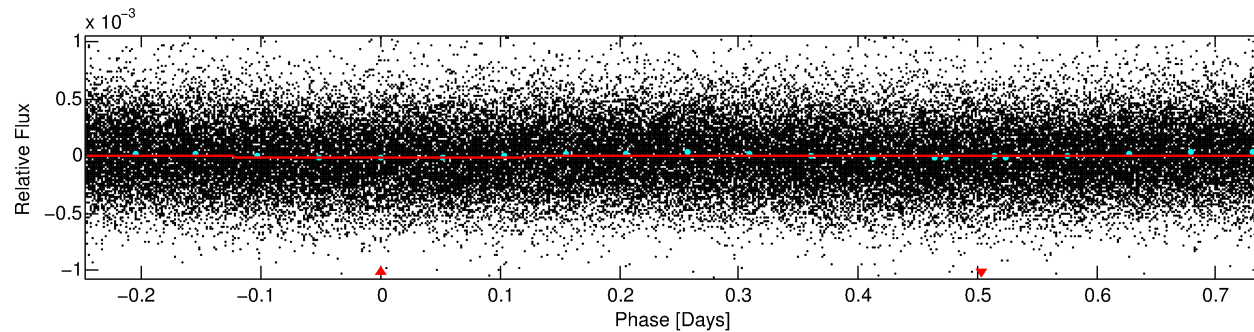
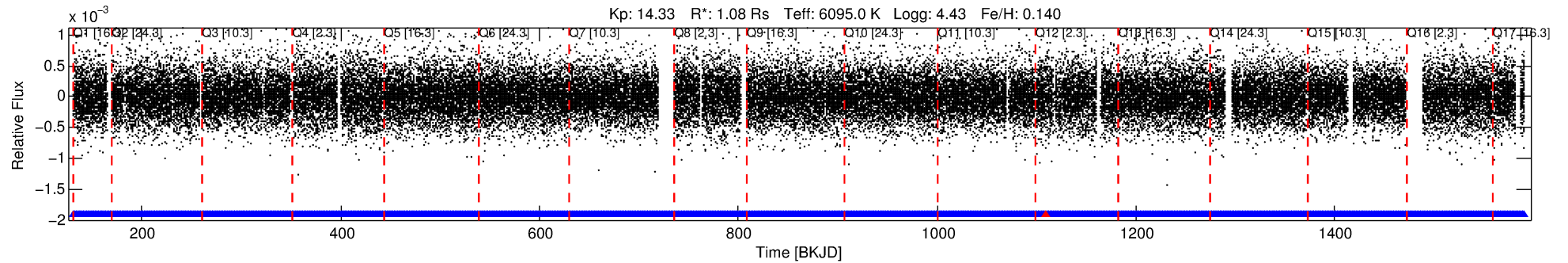
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012303426-01

No Significant Match Found

DV One-Page Summary

KIC: 12303426 Candidate: 1 of 1 Period: 0.988 d



DV Fit Results:

Period = 0.98802 [0.00003] d
Epoch = 131.9098 [0.0123] BKJD
Rp/R* = 0.0035 [0.0072]
b/R* = 1.35 [5.84]
b = 0.30 [30.14]
Seff = 3504.17 [1409.02]
Teq = 1962 [197] K
Rp = 0.42 [0.86] Re
a = 0.0203 [0.0052] AU
Ag = 28.05 [115.86] [0.23σ]
Teffp = 6981 [7185] K [0.70σ]

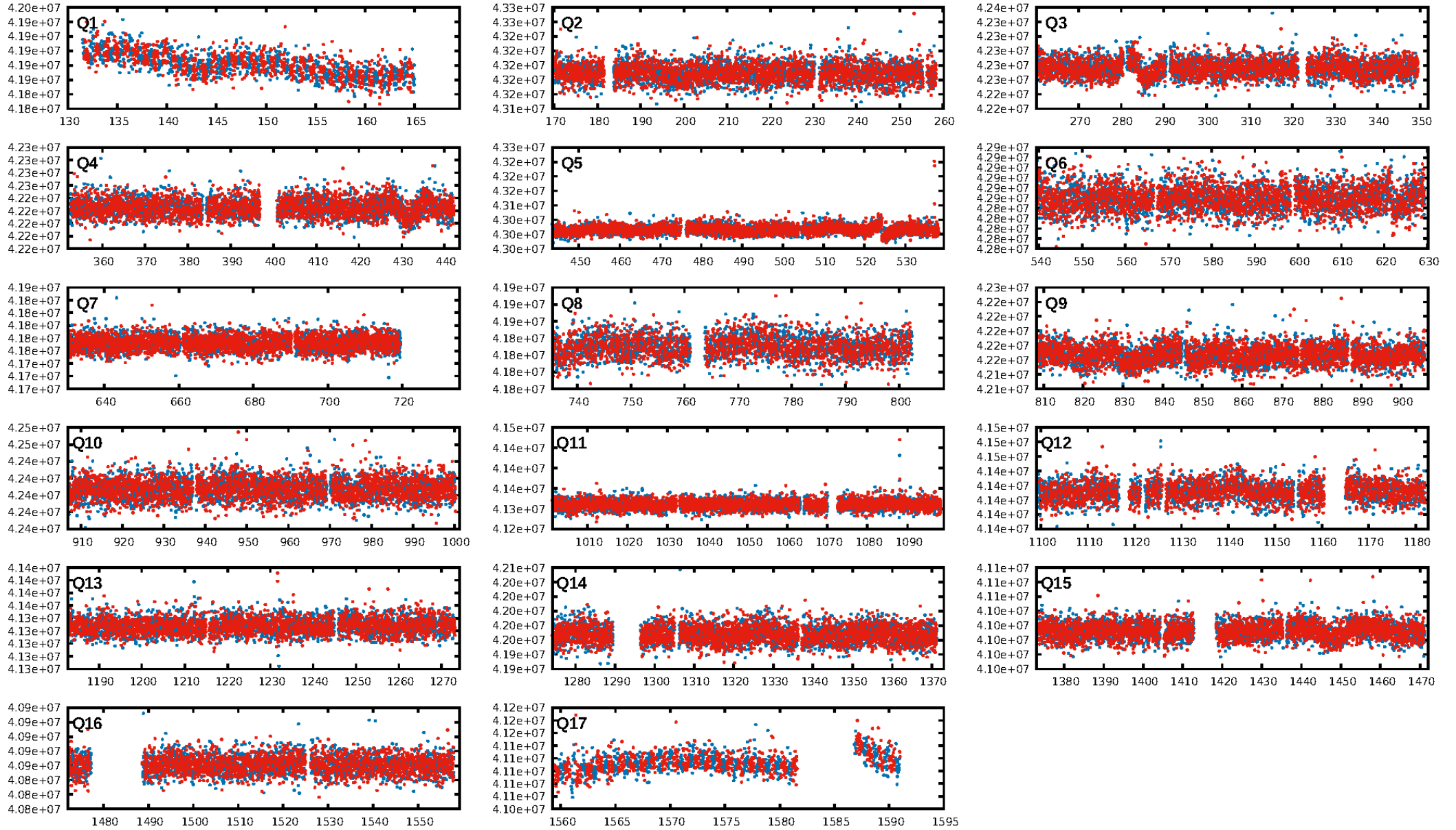
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.37e-11
RollingBand-fgt: 1.00 [1303/1304]
GhostDiagnostic-chr: 5.002
Centroid-sig: 19.2%
Centroid-so: 4.059 arcsec [1.68σ]
OotOffset-rm: 1.499 arcsec [1.70σ]
KicOffset-rm: 1.607 arcsec [1.75σ]
OotOffset-st: 3/2/2/3 [10]
KicOffset-st: 3/2/2/3 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 1.00 [17/17]

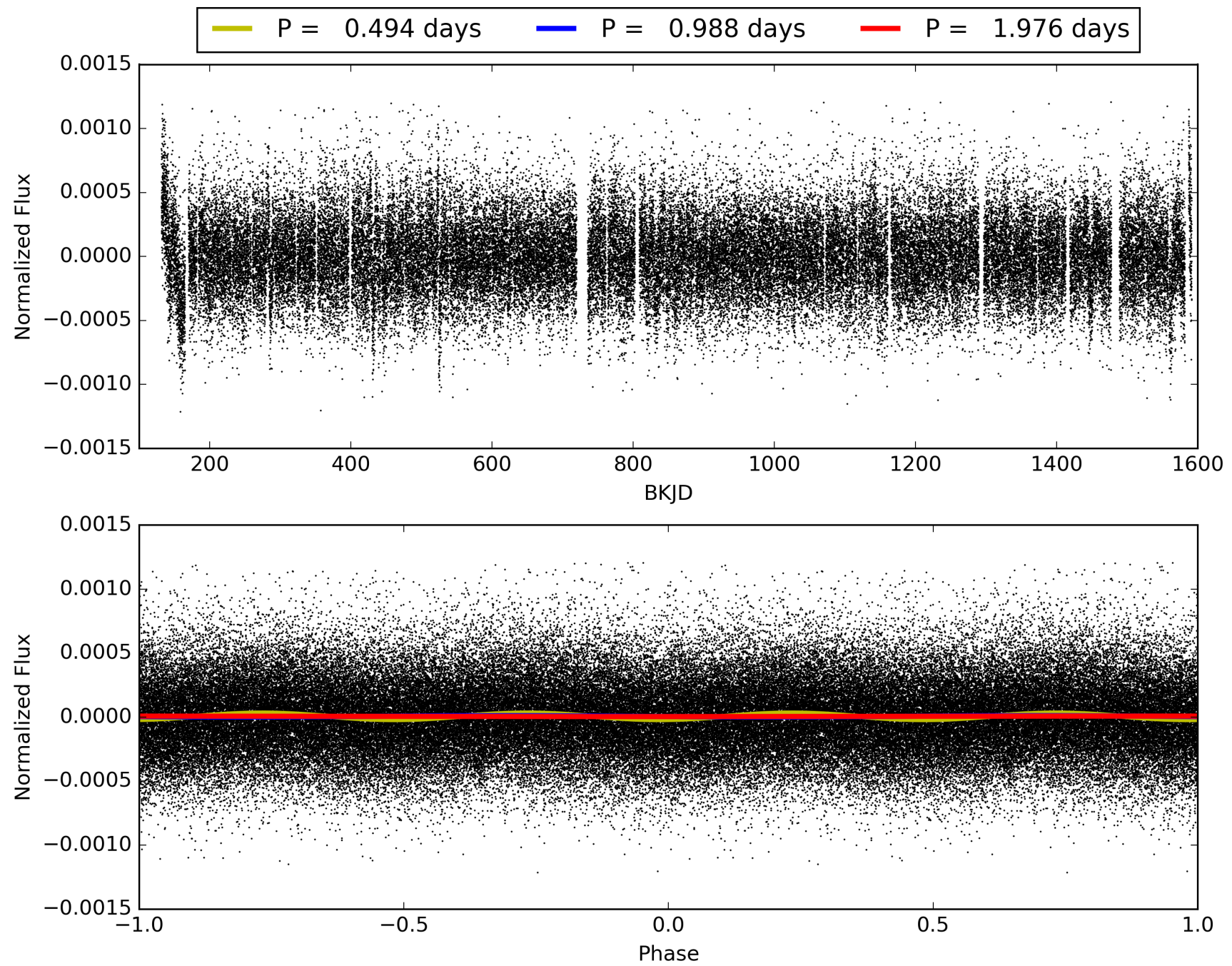
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 03:11:42 Z

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

TCE 012303426-01, PDC Light Curves

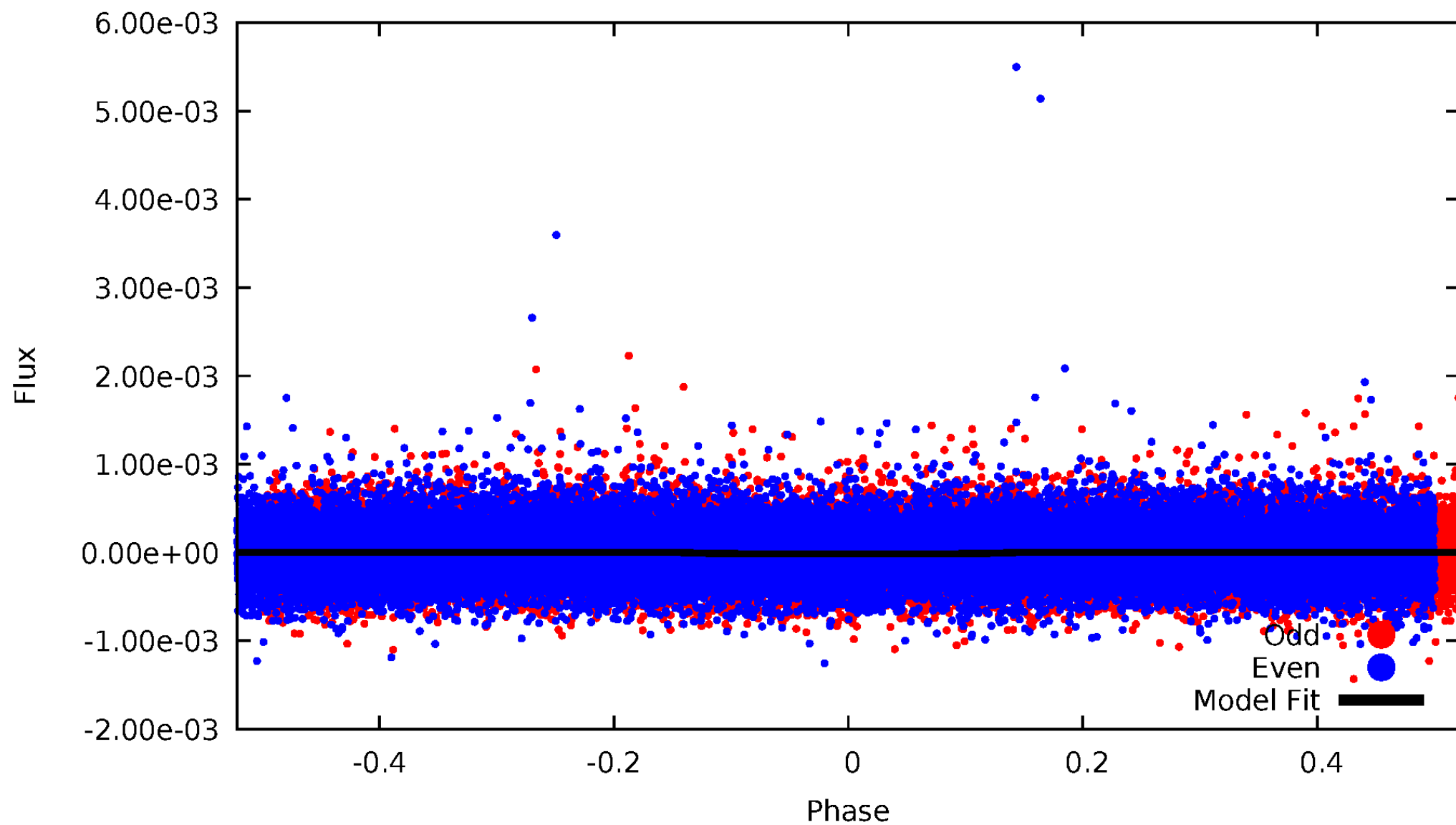


TCE 012303426-01



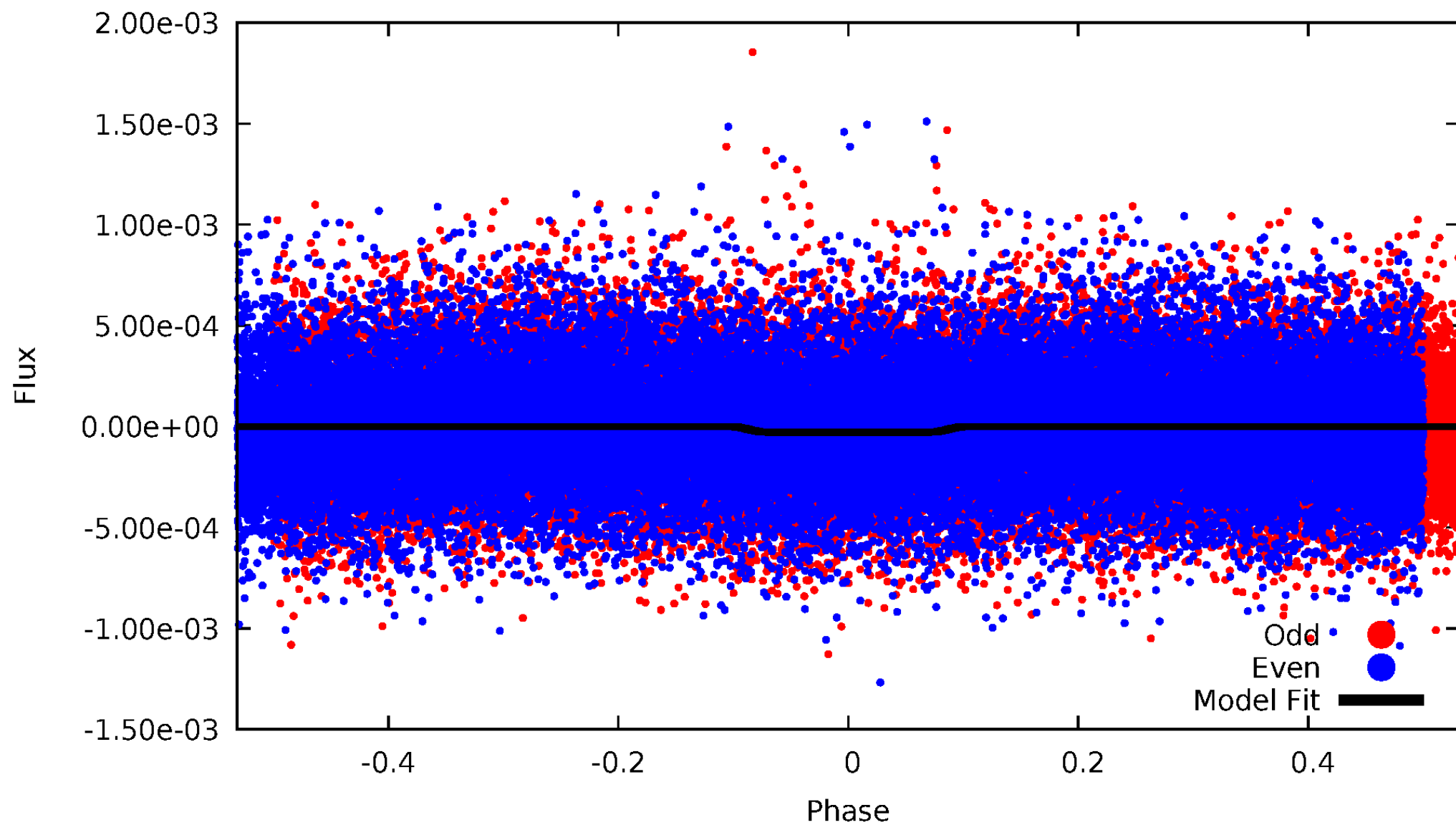
DV Odd/Even

TCE 012303426-01

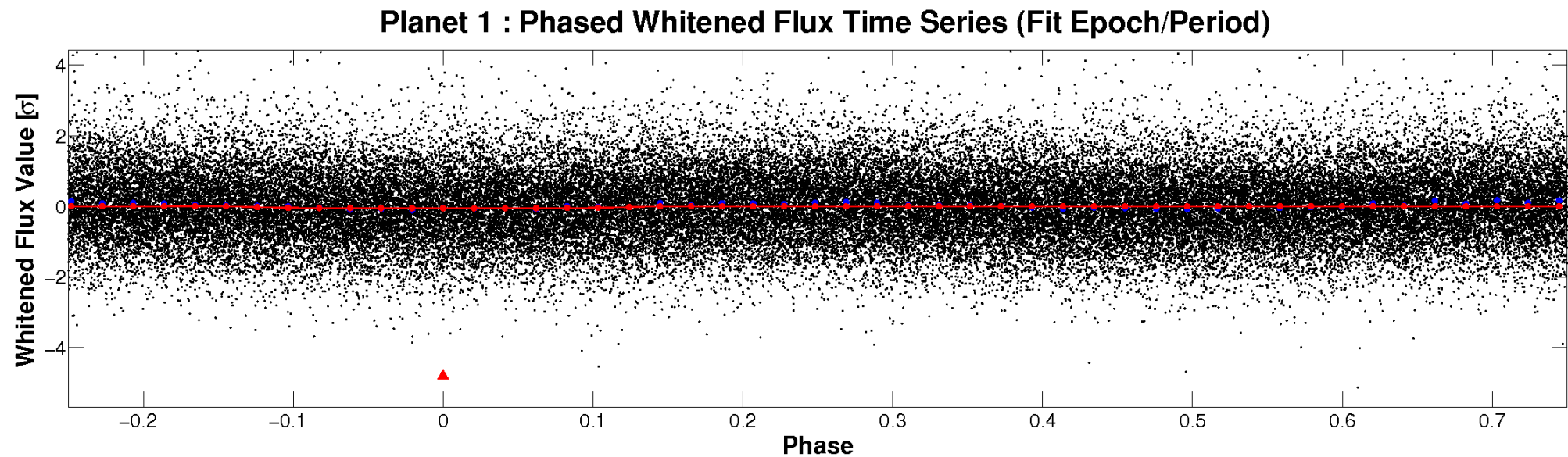
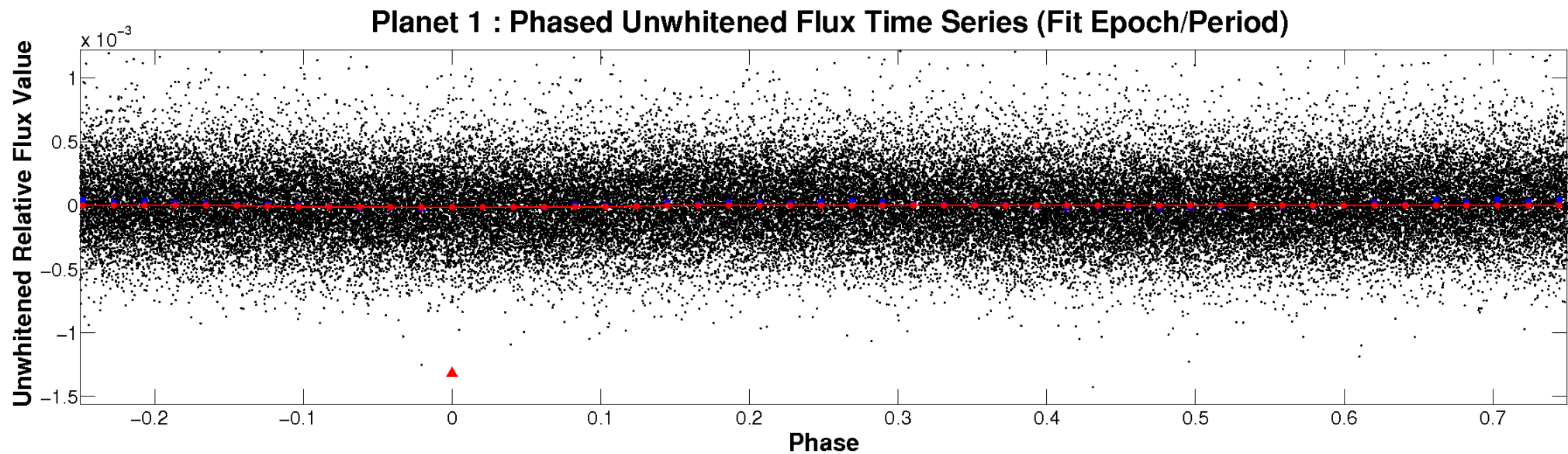


ALT Odd/Even

TCE 012303426-01

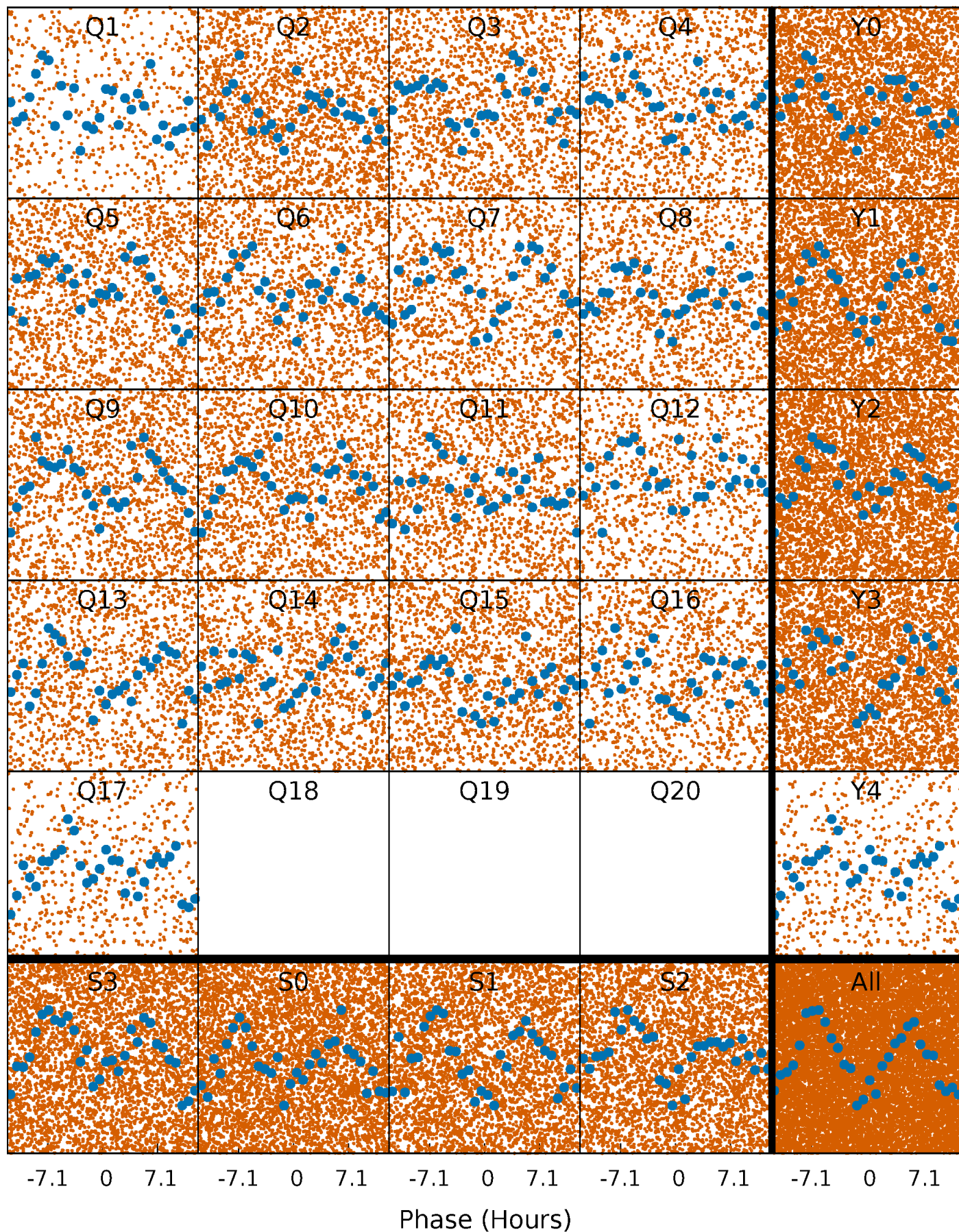


Non-Whitened Vs. Whitened Light Curve



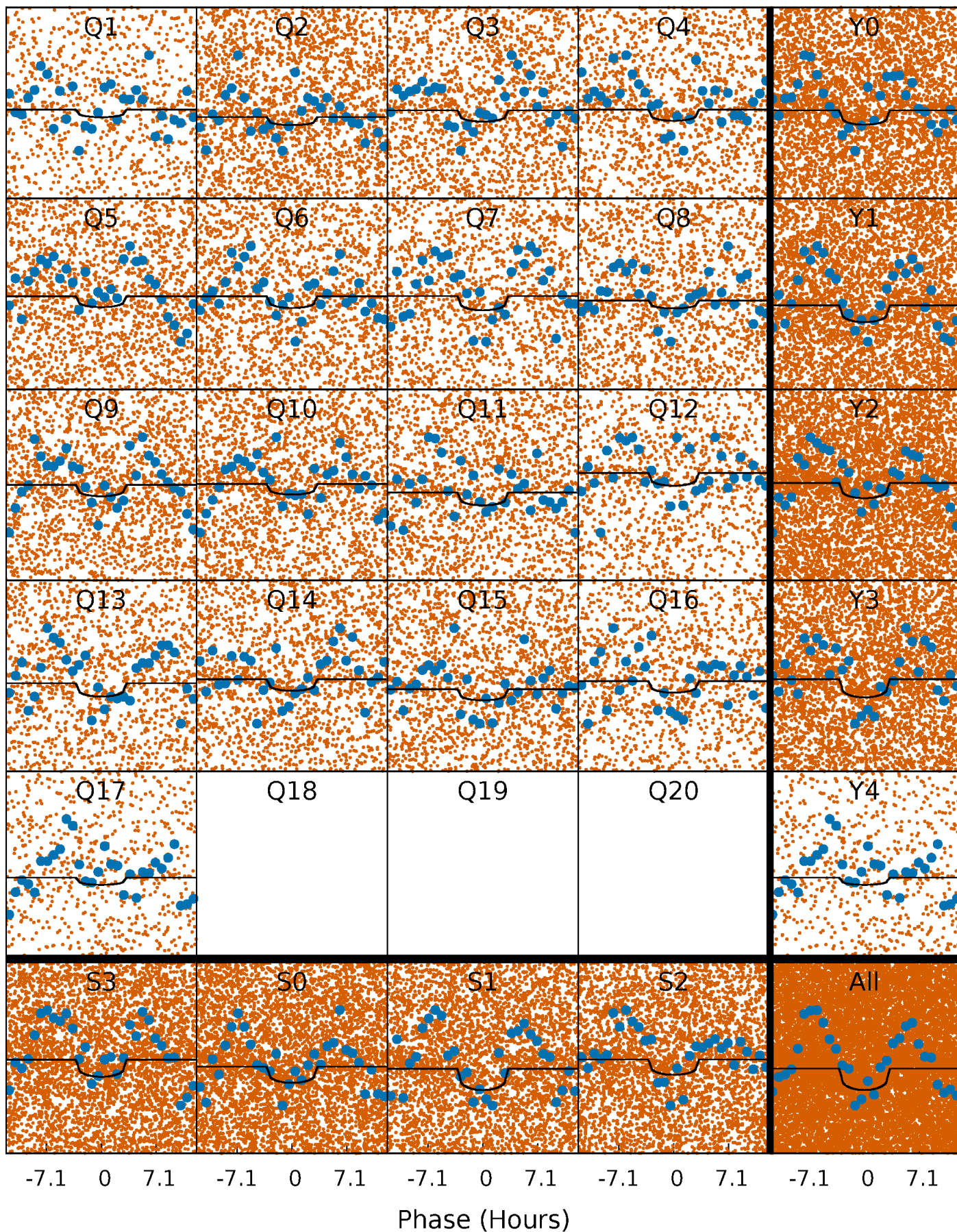
PDC Quarter-Phased Transit Curves

TCE 012303426-01 P= 0.988022 Days $T_0=131.909803$ (BKJD)



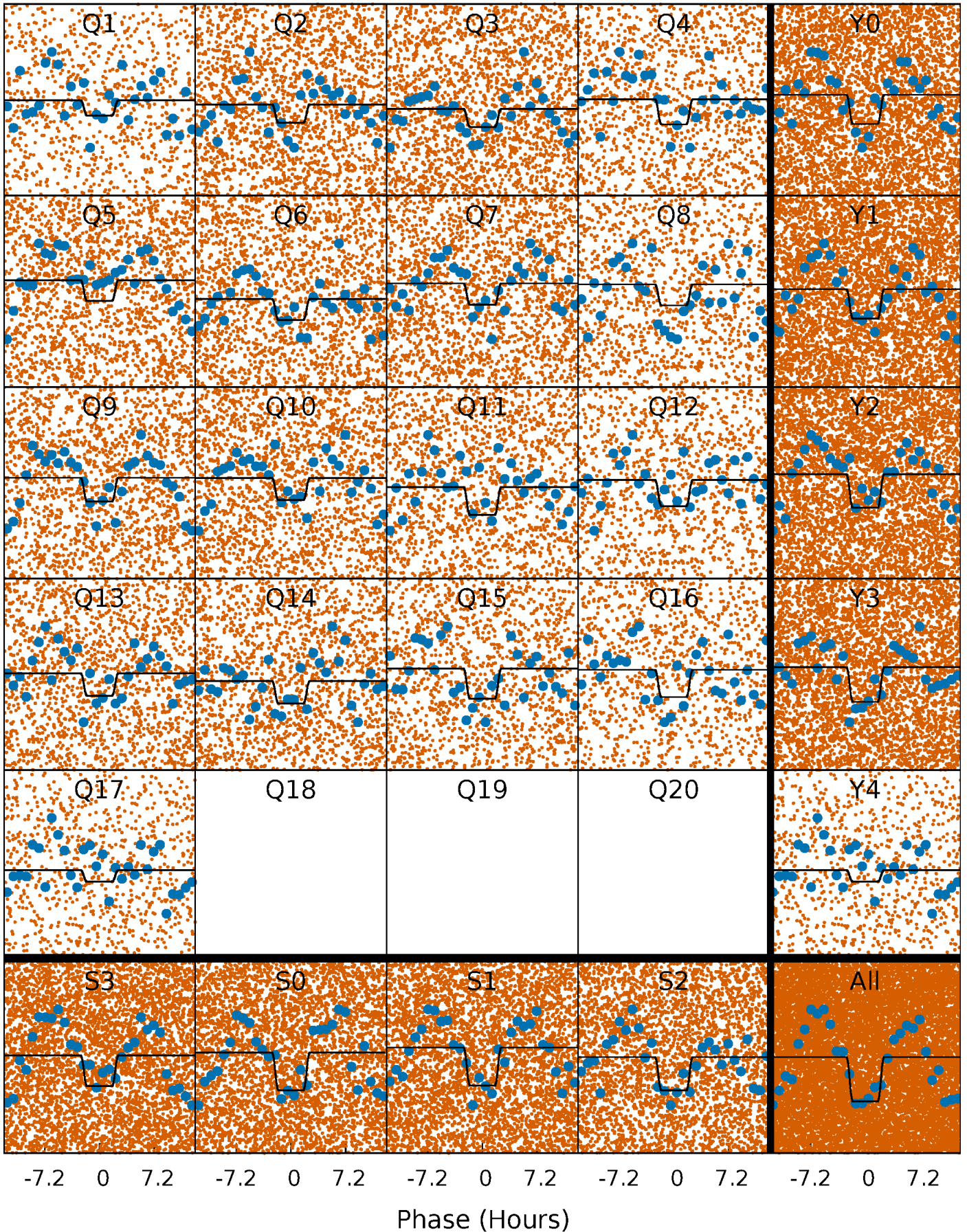
DV Quarter-Phased Transit Curves

TCE 012303426-01 P= 0.988022 Days $T_0=131.909803$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

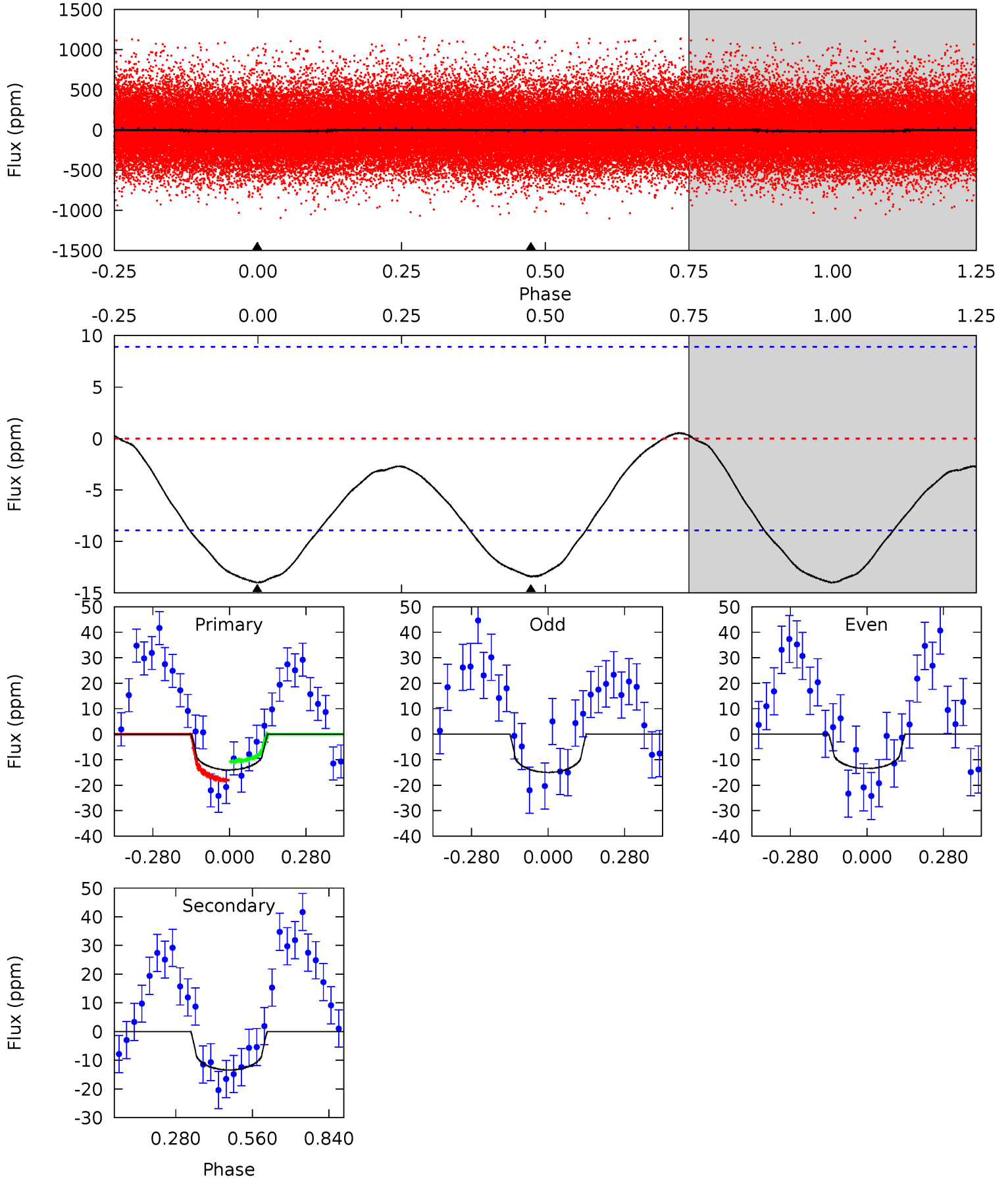
TCE 012303426-01 P= 0.988110 Days $T_0=131.842124$ (BKJD)



DV Model-Shift Uniqueness Test

012303426-01, P = 0.988022 Days, E = 130.921781 Days

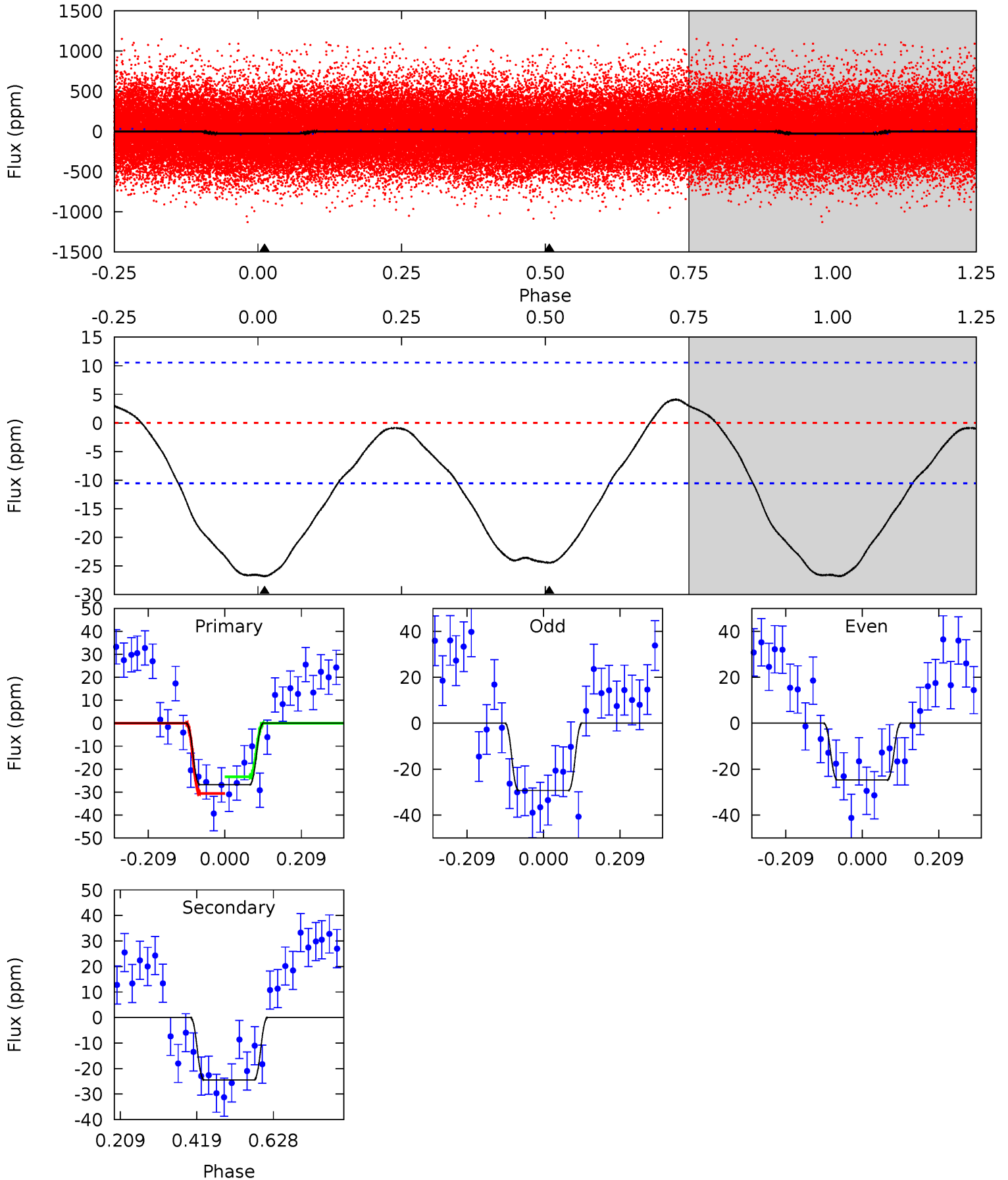
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.82	6.53	0	0	4.34	1.08	0.66	6.82	6.82	6.53	6.53	0.37	1.03	0.04	1.77



Alt Model-Shift Uniqueness Test

012303426-01, P = 0.988110 Days, E = 130.854014 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	10.2	0	0	4.41	1.26	1.08	11.2	11.2	10.2	10.2	0.96	1.02	0.13	1.51



Stellar Parameters For KIC 012303426

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6095^{+169}_{-232}	$4.429^{+0.067}_{-0.202}$	$0.140^{+0.200}_{-0.300}$	$1.082^{+0.334}_{-0.133}$	$1.150^{+0.136}_{-0.151}$	$1.278^{+0.359}_{-0.670}$
	+3%/-4%	+2%/-5%	+143%/-214%	+31%/-12%	+12%/-13%	+28%/-52%
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 012303426-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-13 ± 2	$0.77^{+0.84}_{-0.52}$	2793^{+194}_{-156}	4695^{+3952}_{-1212}	$5.270^{+42.099}_{-4.128}$
Alt.	-24 ± 2	$0.90^{+0.80}_{-0.59}$	2775^{+198}_{-132}	5021^{+3971}_{-1188}	$6.766^{+52.831}_{-4.925}$

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 $A_{obs} \gg 1.0$

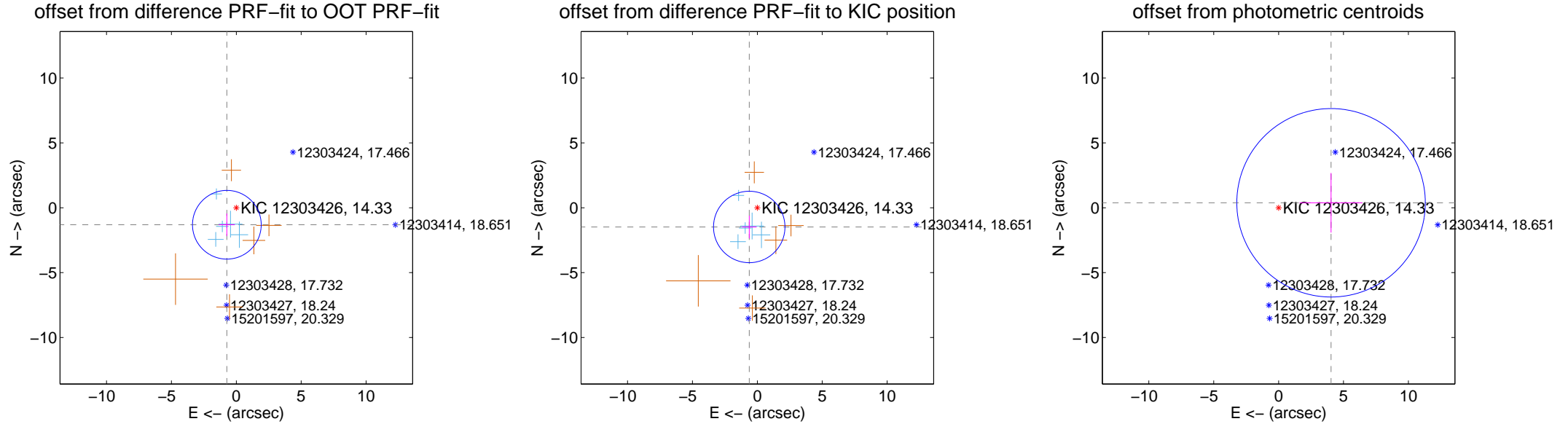
DV Centroid Data

Supplemental centroid analysis for 012303426-01. Kepler magnitude: 14.33. Transit SNR 5.55

There are 5 quarters with good PRF difference image offsets

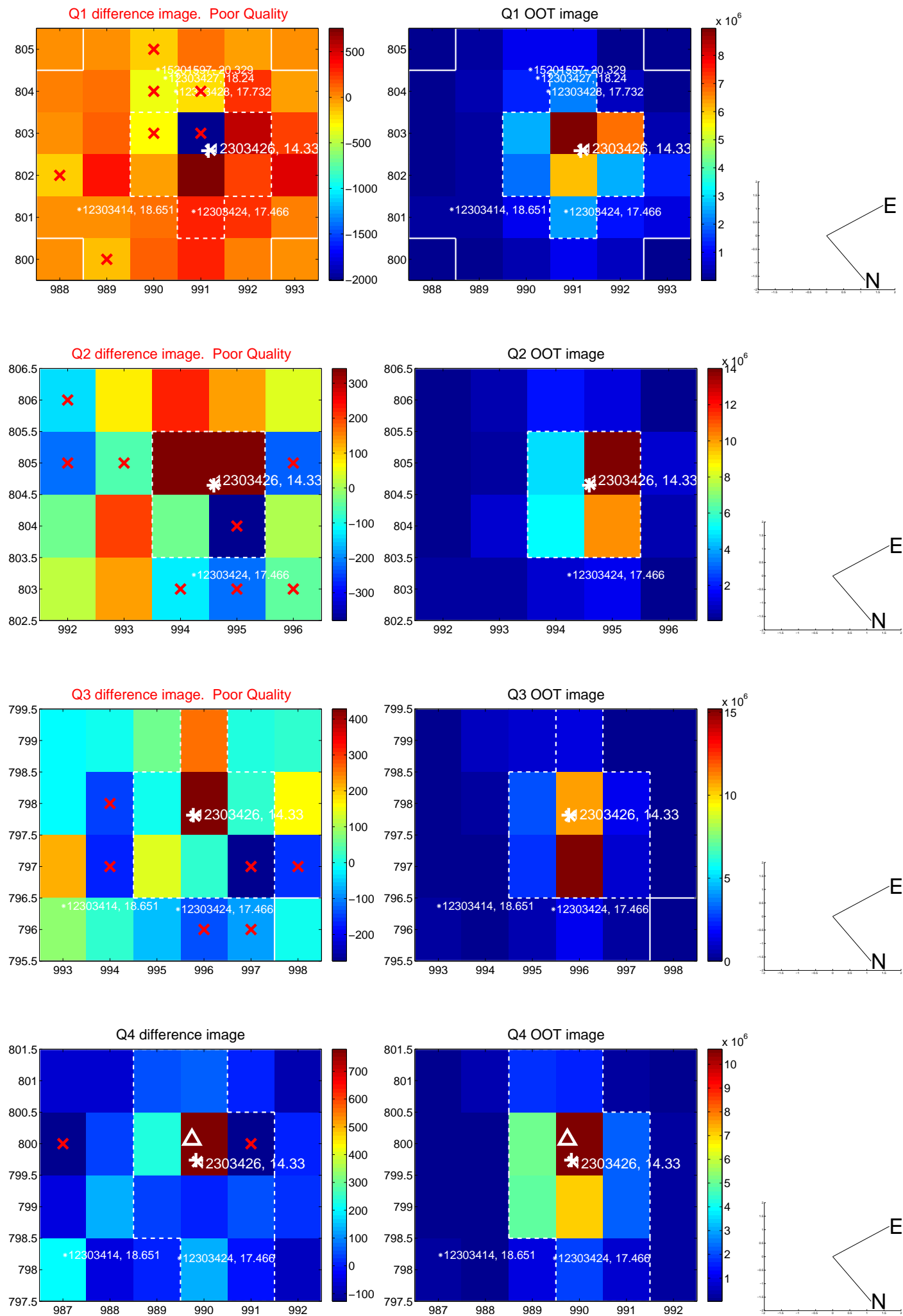
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.499 ± 0.883	1.70	0.729 ± 0.619	-1.310 ± 0.865
PRF-fit source offset from KIC position	1.607 ± 0.918	1.75	0.623 ± 0.565	-1.481 ± 0.873
photometric centroid source offset	4.06 ± 2.42	1.68	-4.04 ± 2.42	0.38 ± 2.30

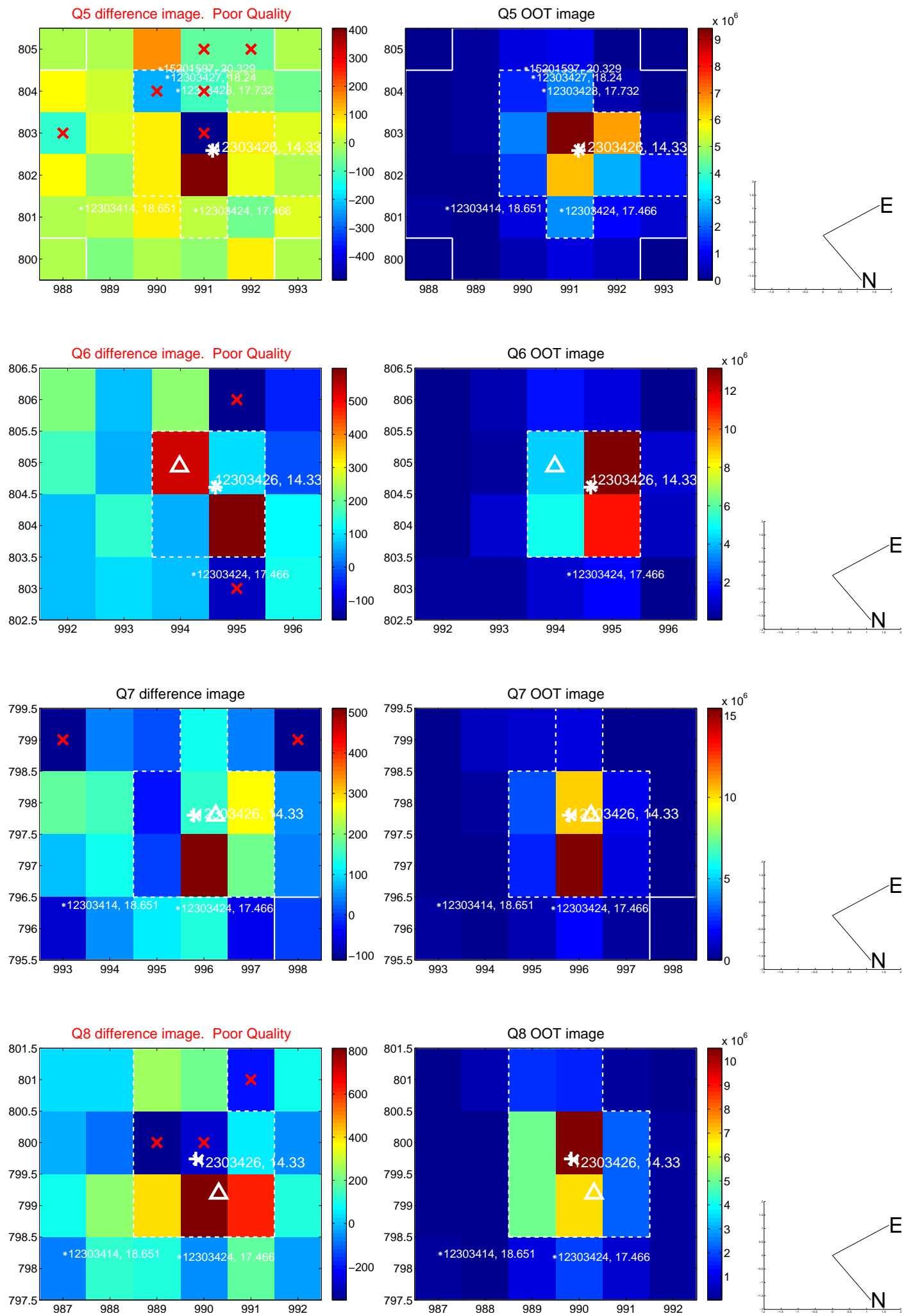


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

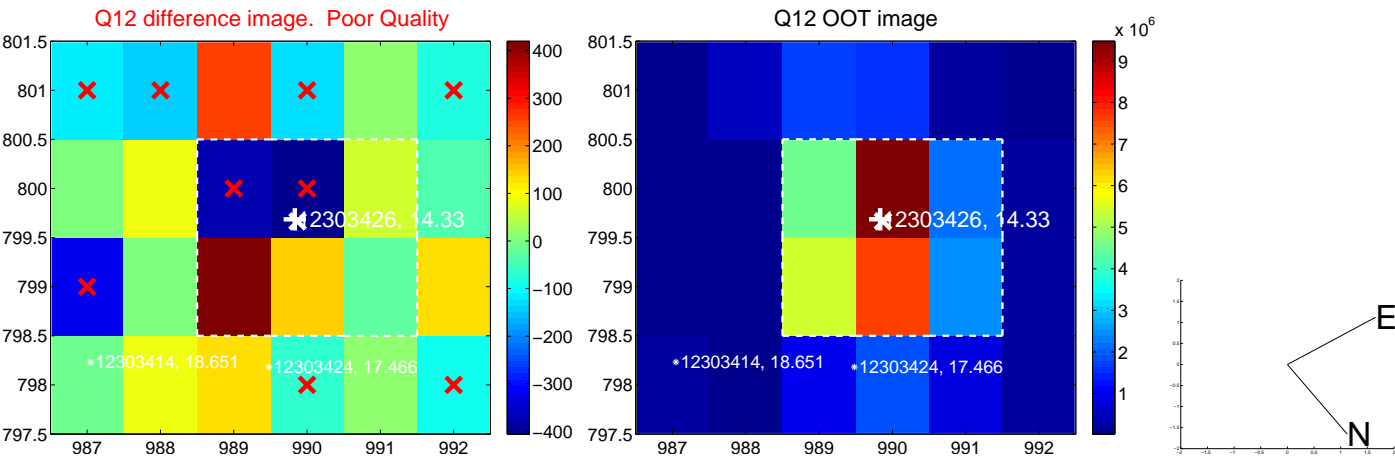
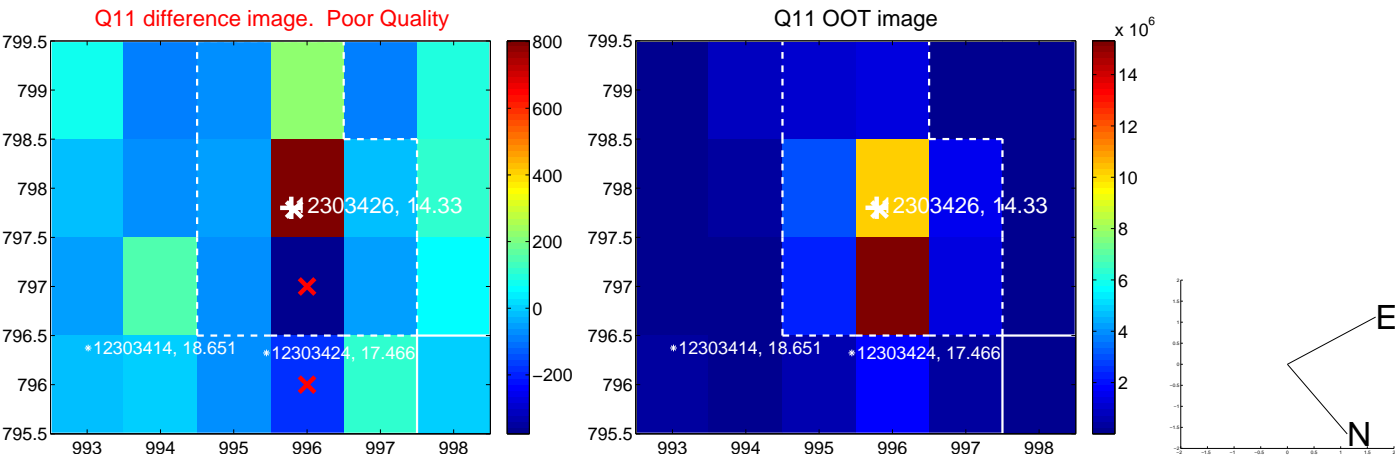
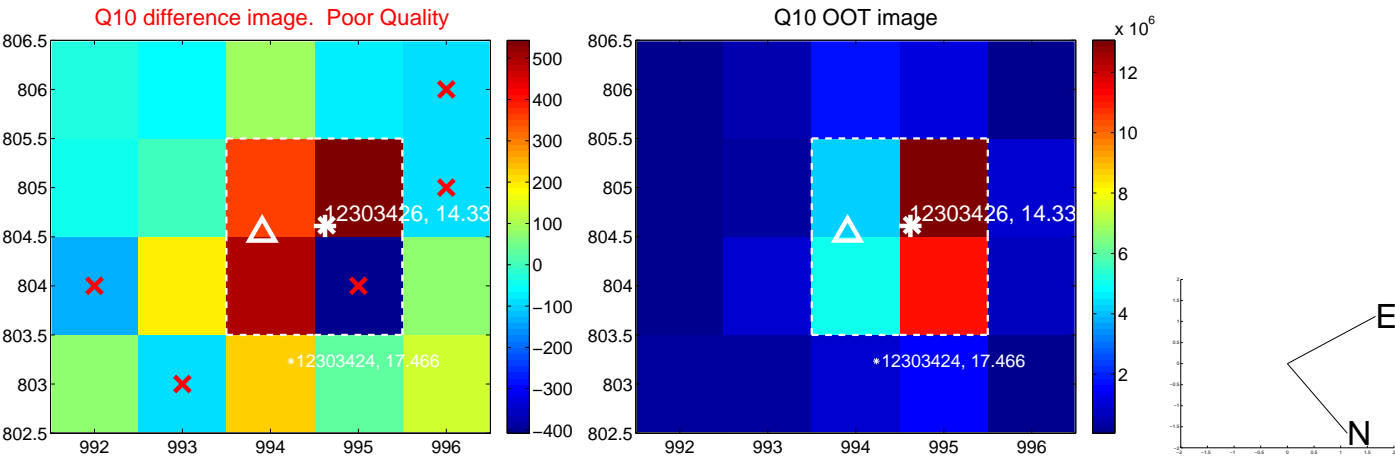
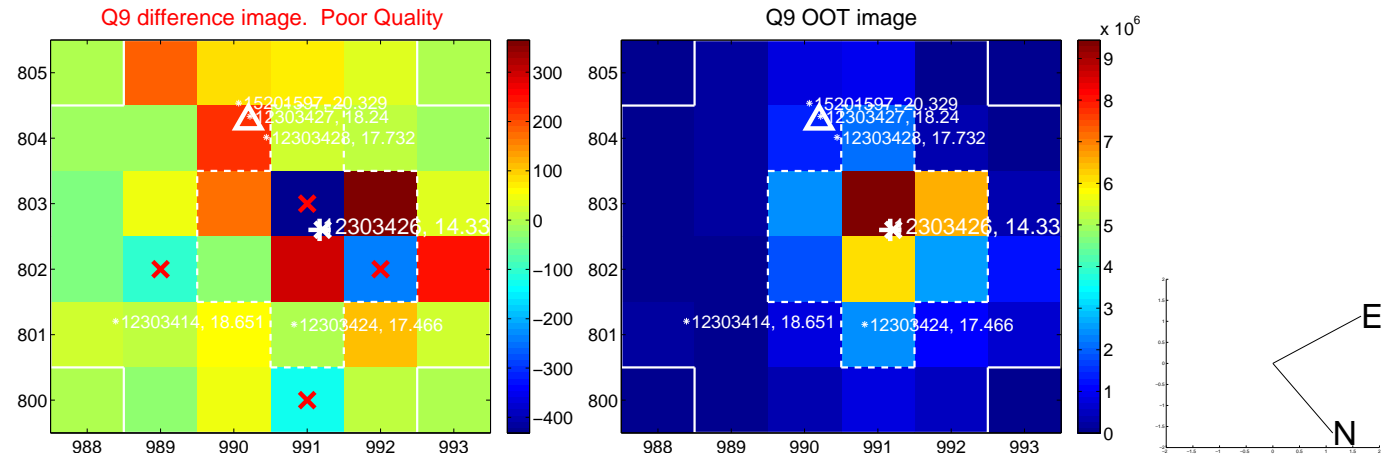
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



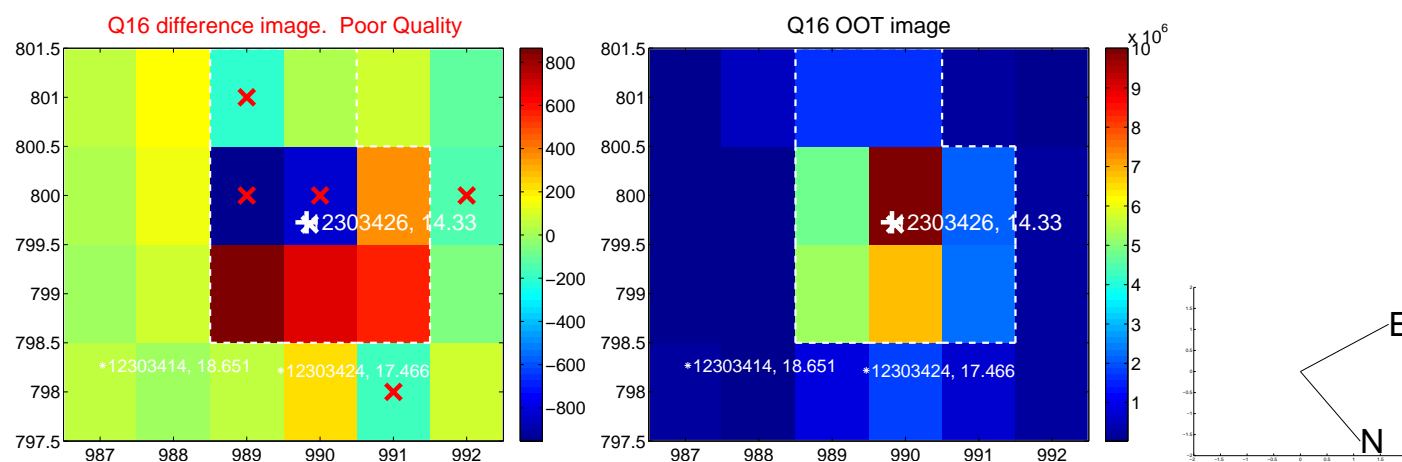
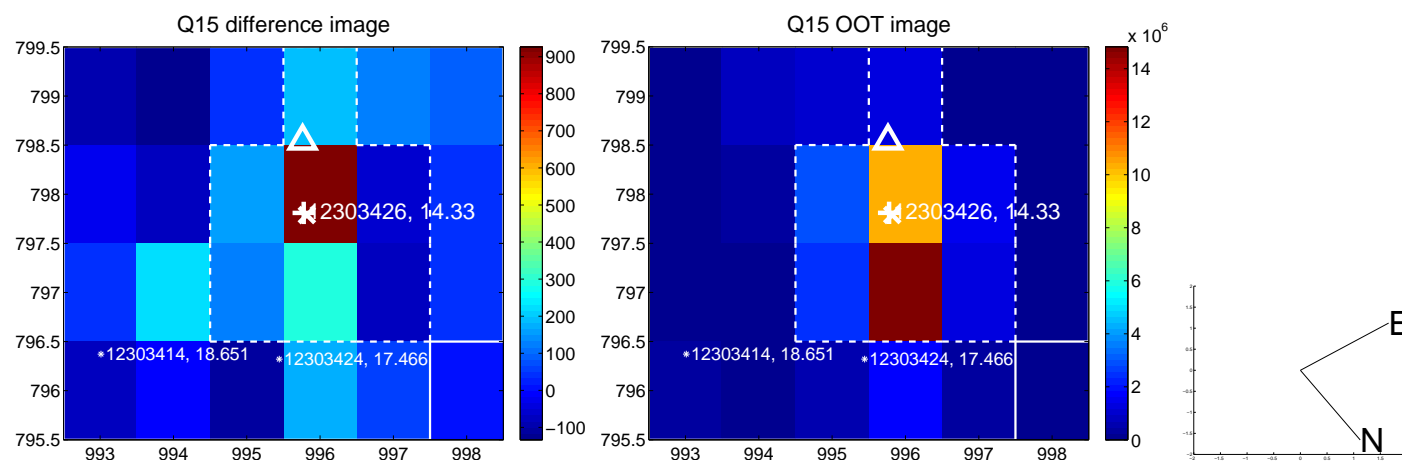
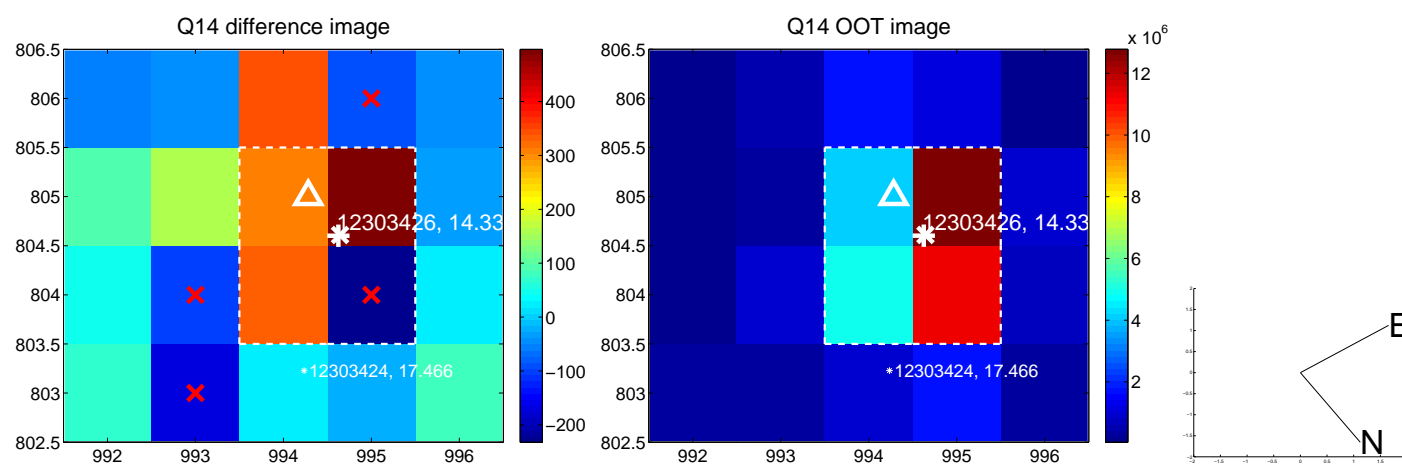
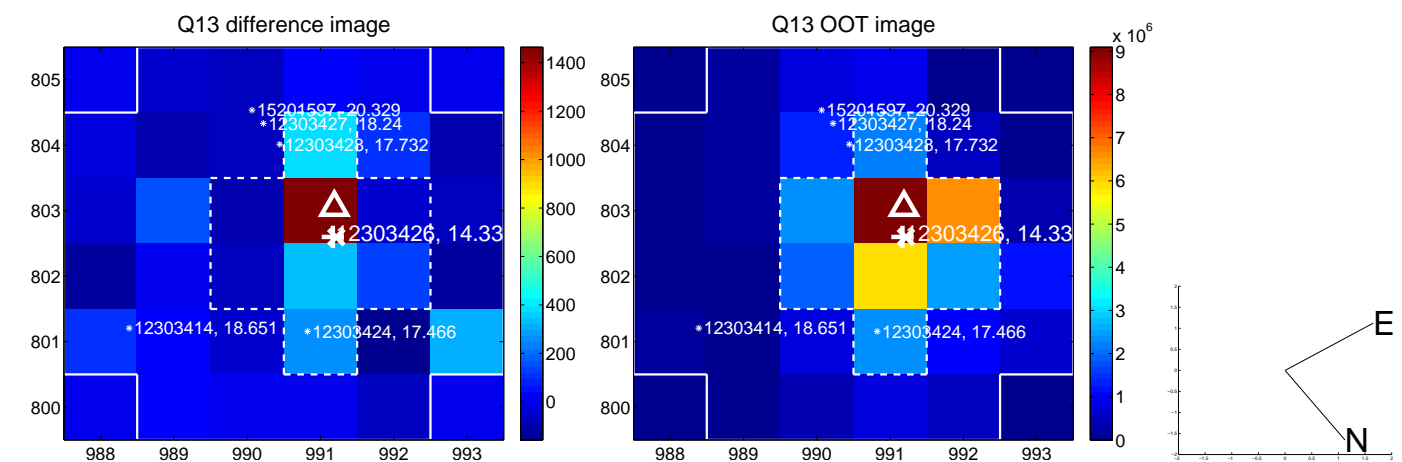
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



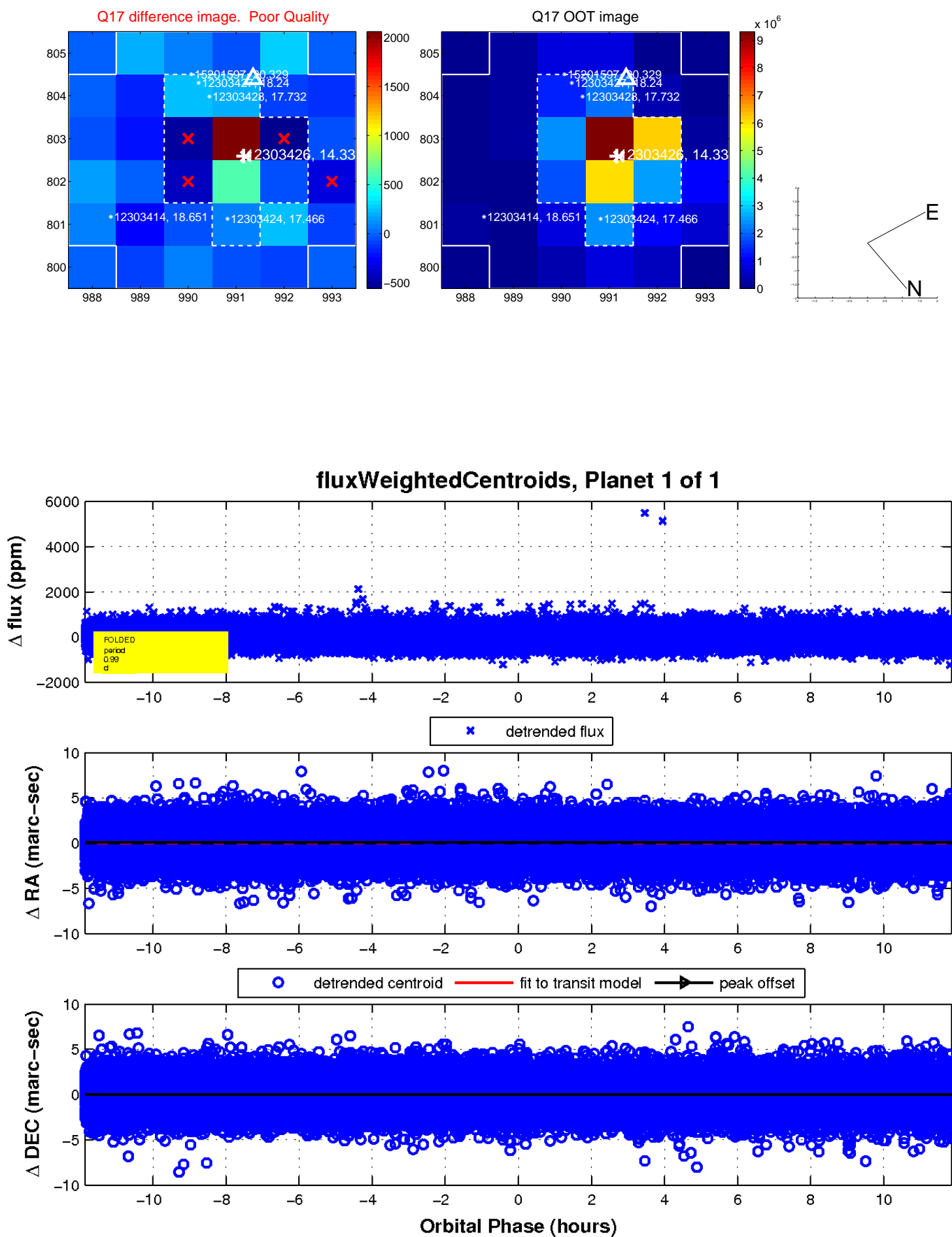
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UKIRT Image

