

KIC 006851626

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})
006851626-01	OBS	No	3.954706	132.355746	50.3	24.087	7.1	6.8	0.79	5473	0.65	248.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006851626-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET

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

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

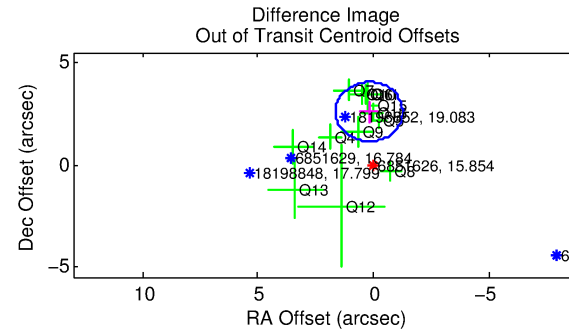
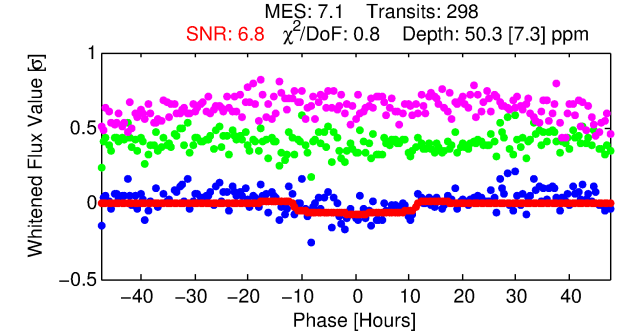
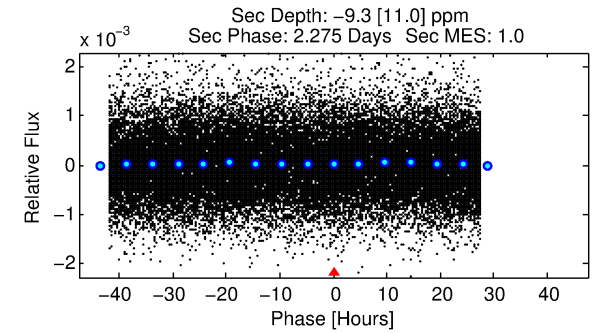
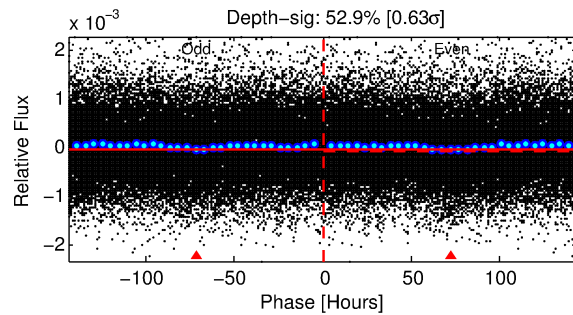
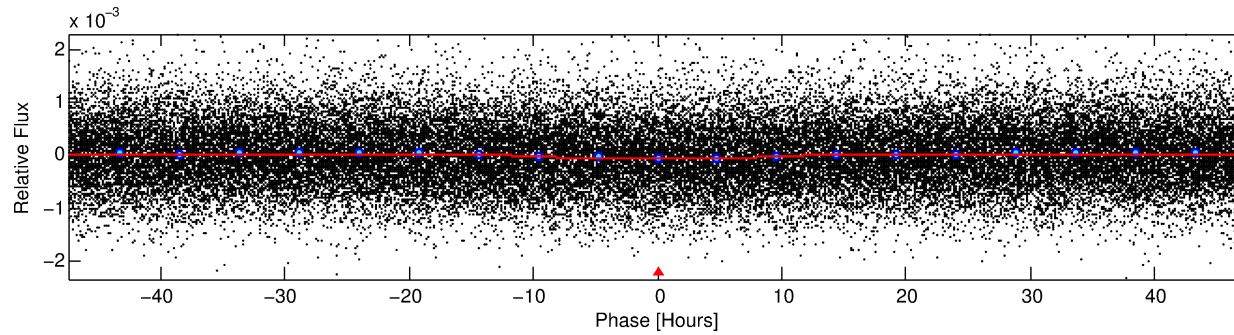
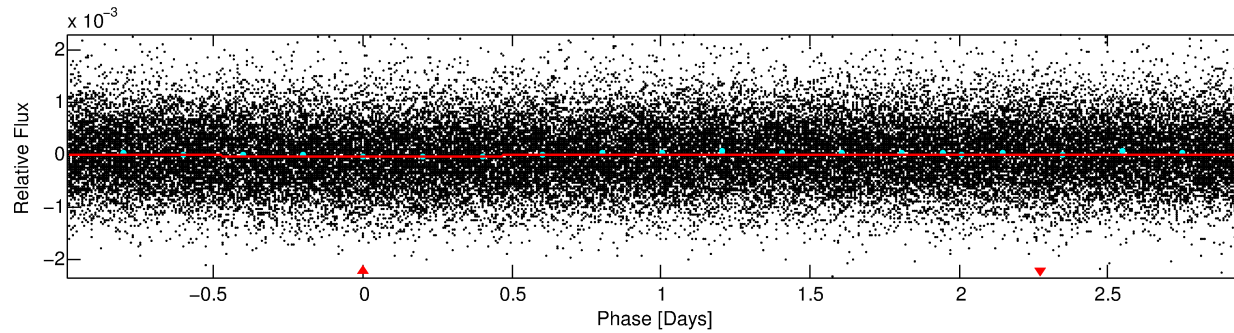
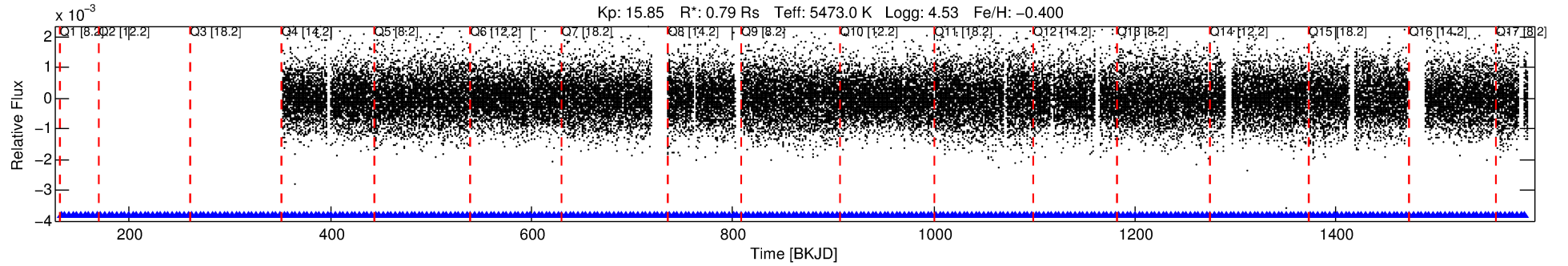
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006851626-01

No Significant Match Found

DV One-Page Summary

KIC: 6851626 Candidate: 1 of 1 Period: 3.955 d



DV Fit Results:

Period = 3.95471 [0.00021] d
Epoch = 132.3557 [0.0426] BKJD
Rp/R* = 0.0076 [0.0025]
a/R* = 1.12 [0.34]
b = 0.88 [0.41]
Seff = 248.50 [65.78]
Teq = 1012 [67] K
Rp = 0.65 [0.25] Re
a = 0.0448 [0.0069] AU
Ag = N/A
Teffp = N/A

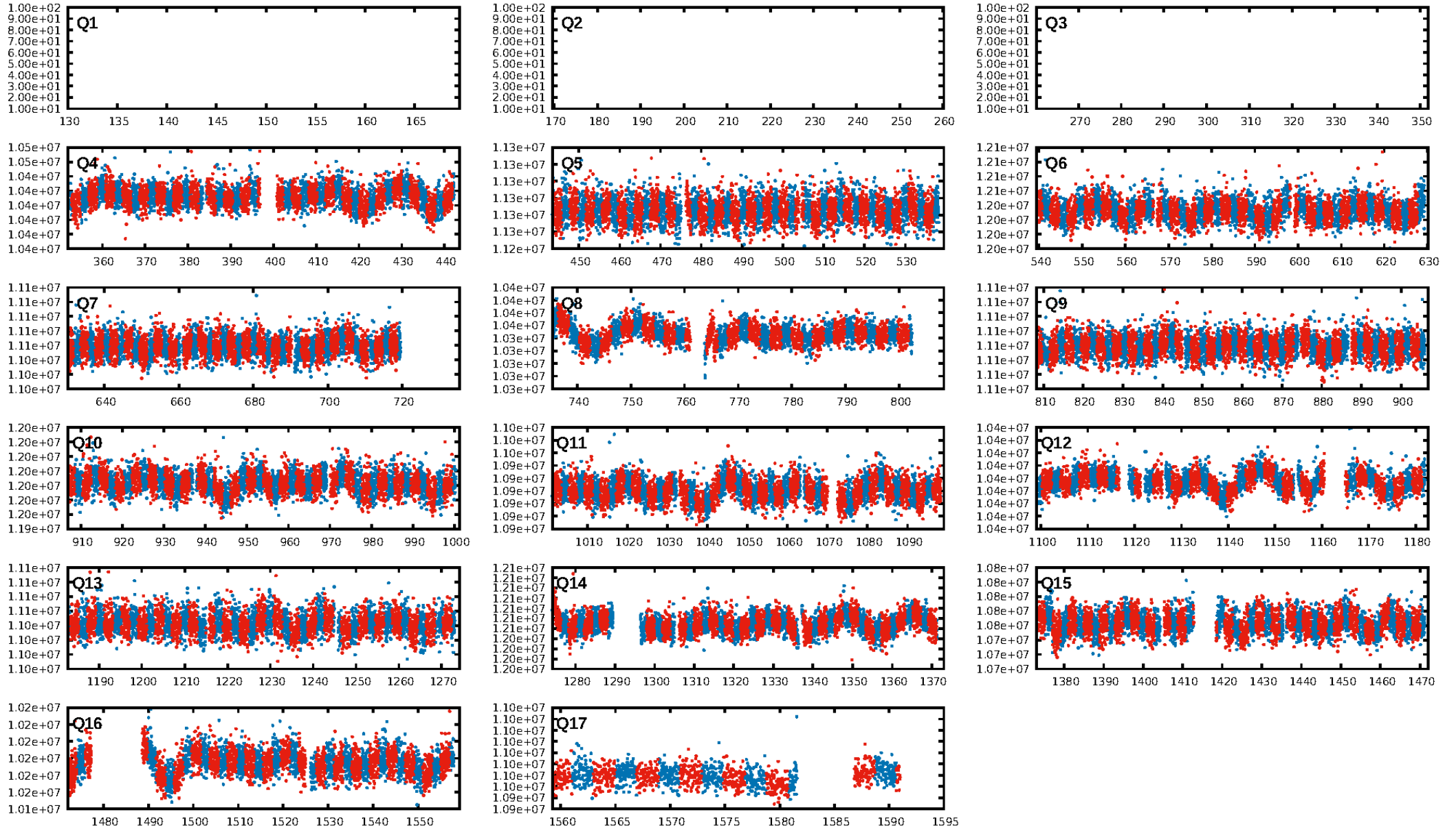
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.63e-13
RollingBand-fgt: 1.00 [291/291]
GhostDiagnostic-chr: 1.336
Centroid-sig: 0.0%
Centroid-so: 4.036 arcsec [3.08σ]
OotOffset-rm: 2.601 arcsec [5.36σ]
KicOffset-rm: 2.425 arcsec [5.50σ]
OotOffset-st: 3/3/4/3 [13]
KicOffset-st: 3/3/4/3 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [14/14]

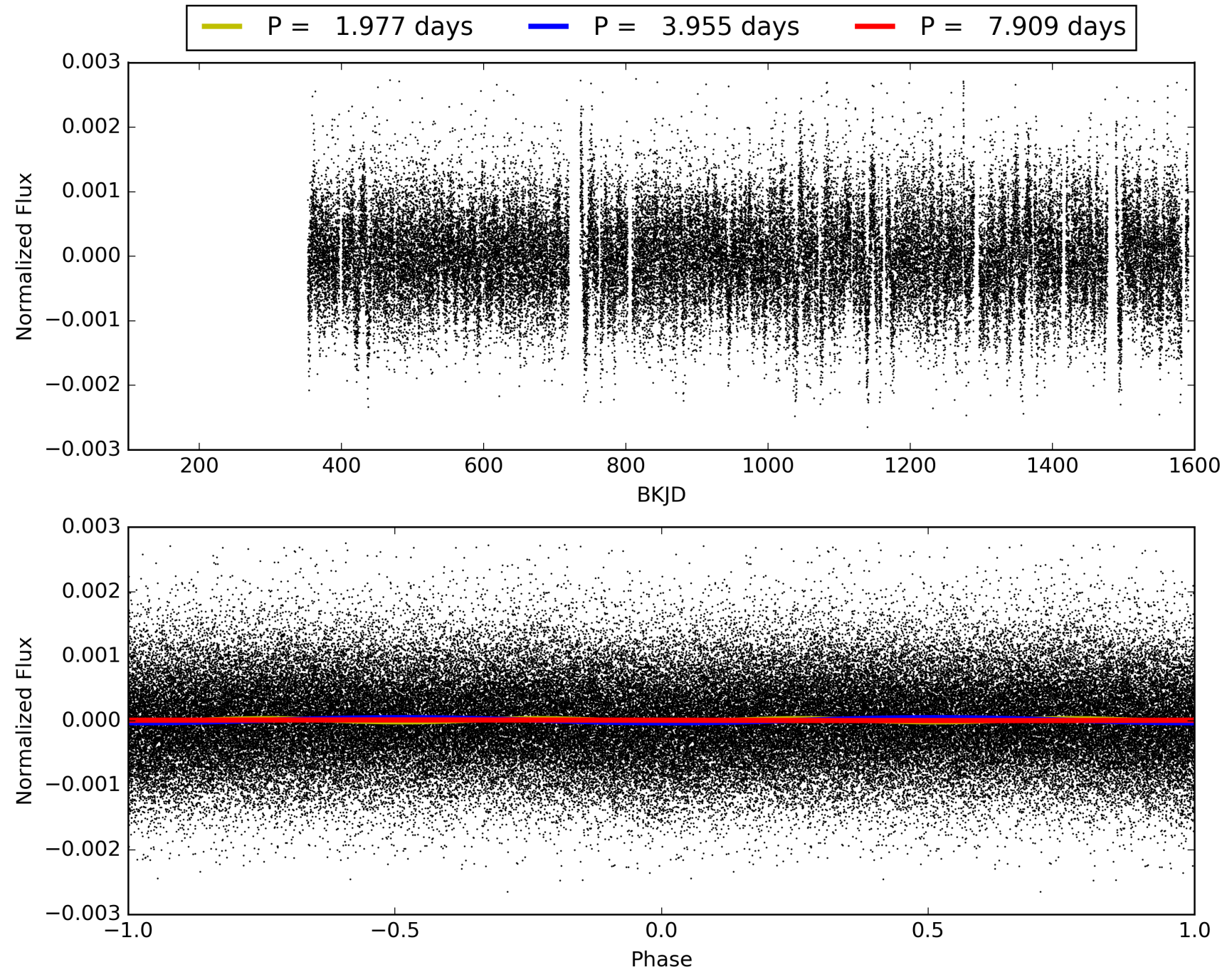
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:04:49 Z

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

TCE 006851626-01, PDC Light Curves

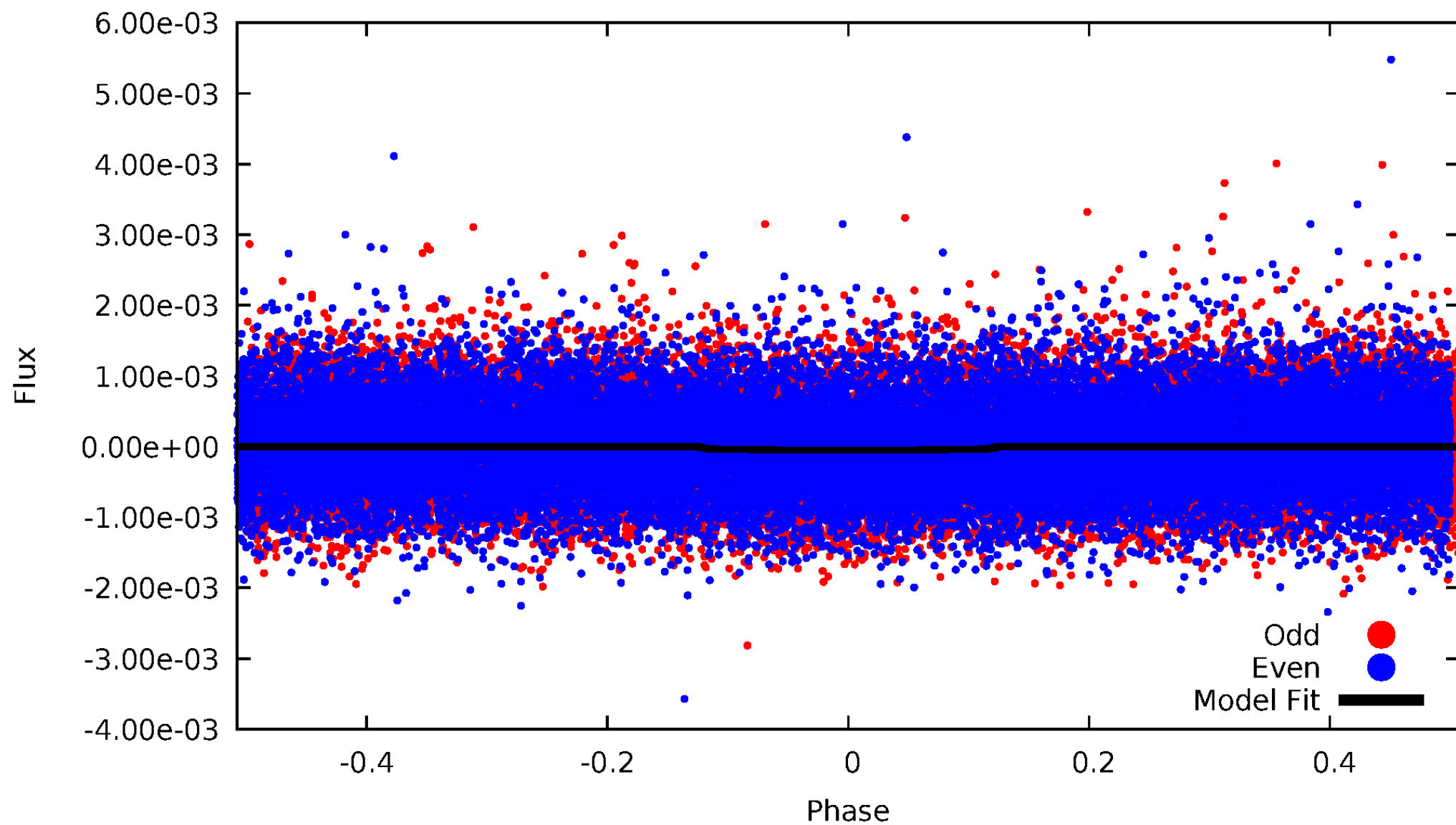


TCE 006851626-01



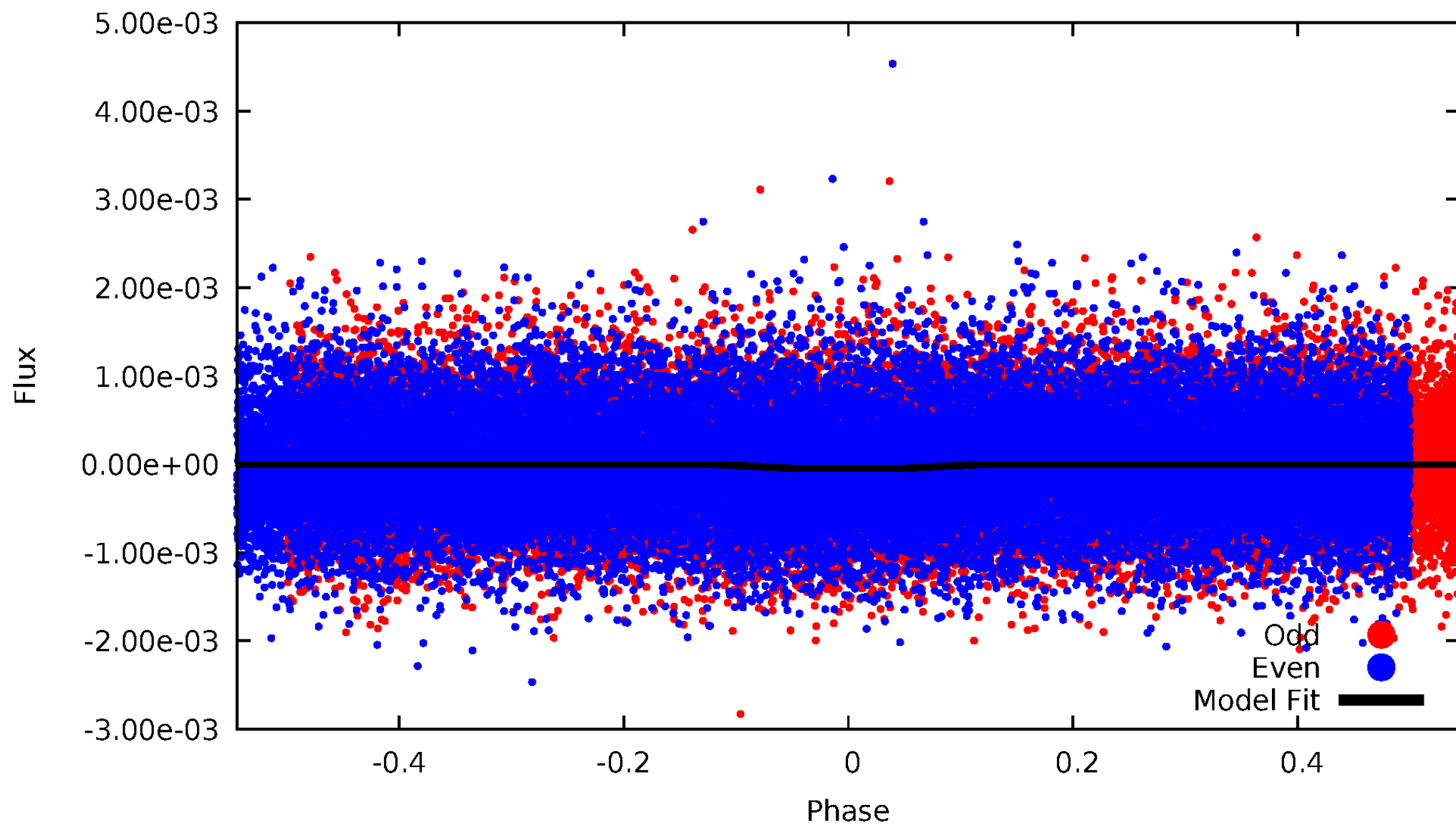
DV Odd/Even

TCE 006851626-01

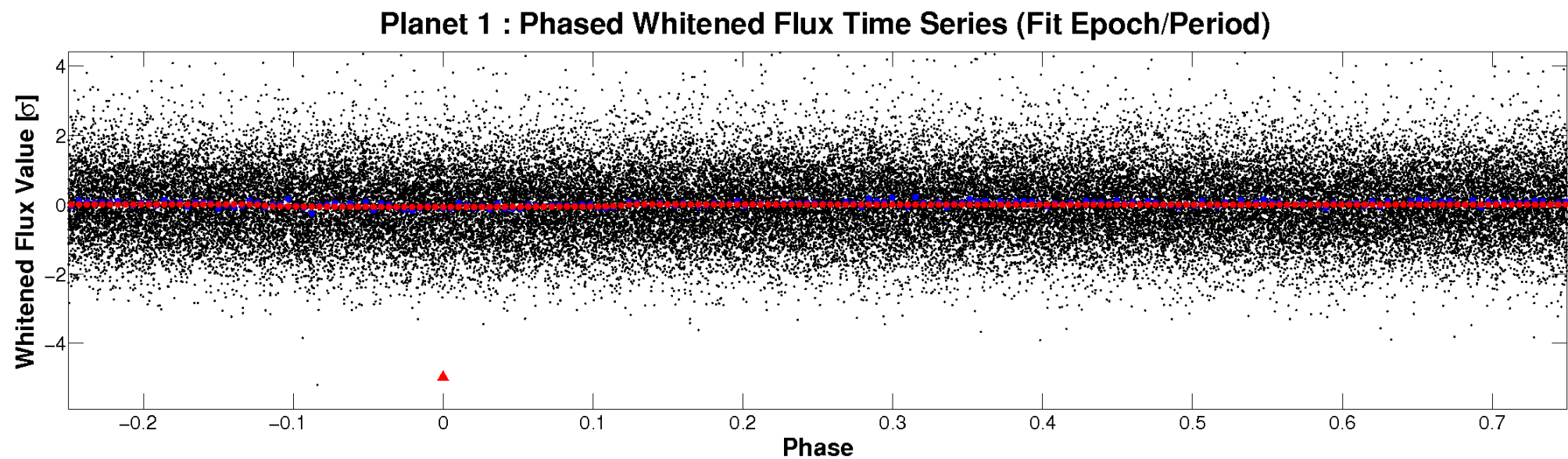
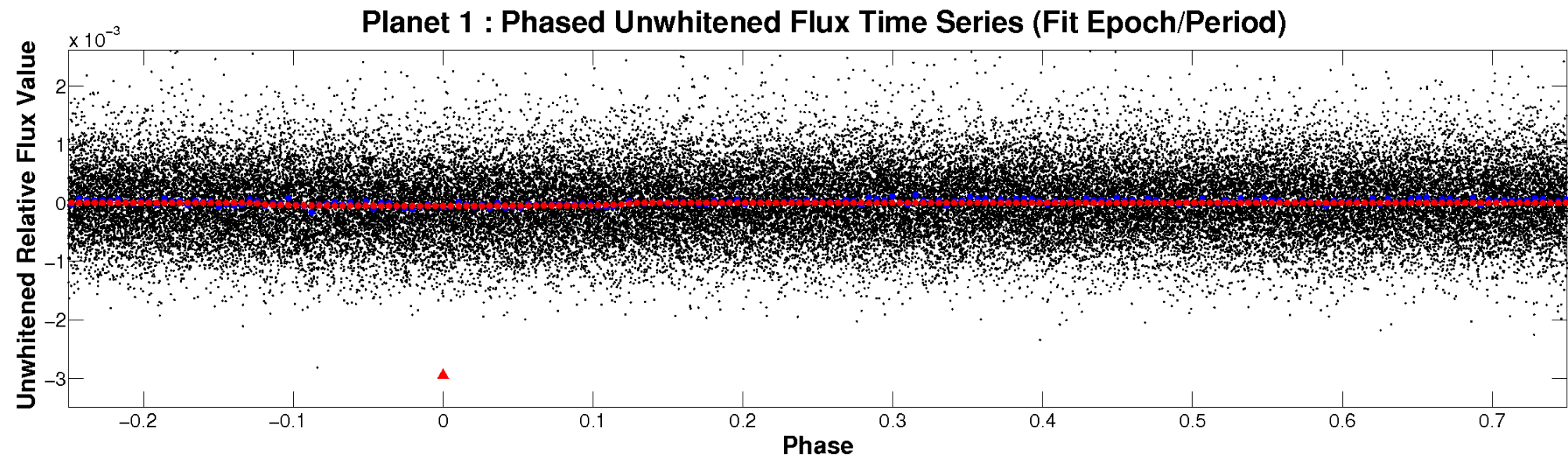


ALT Odd/Even

TCE 006851626-01

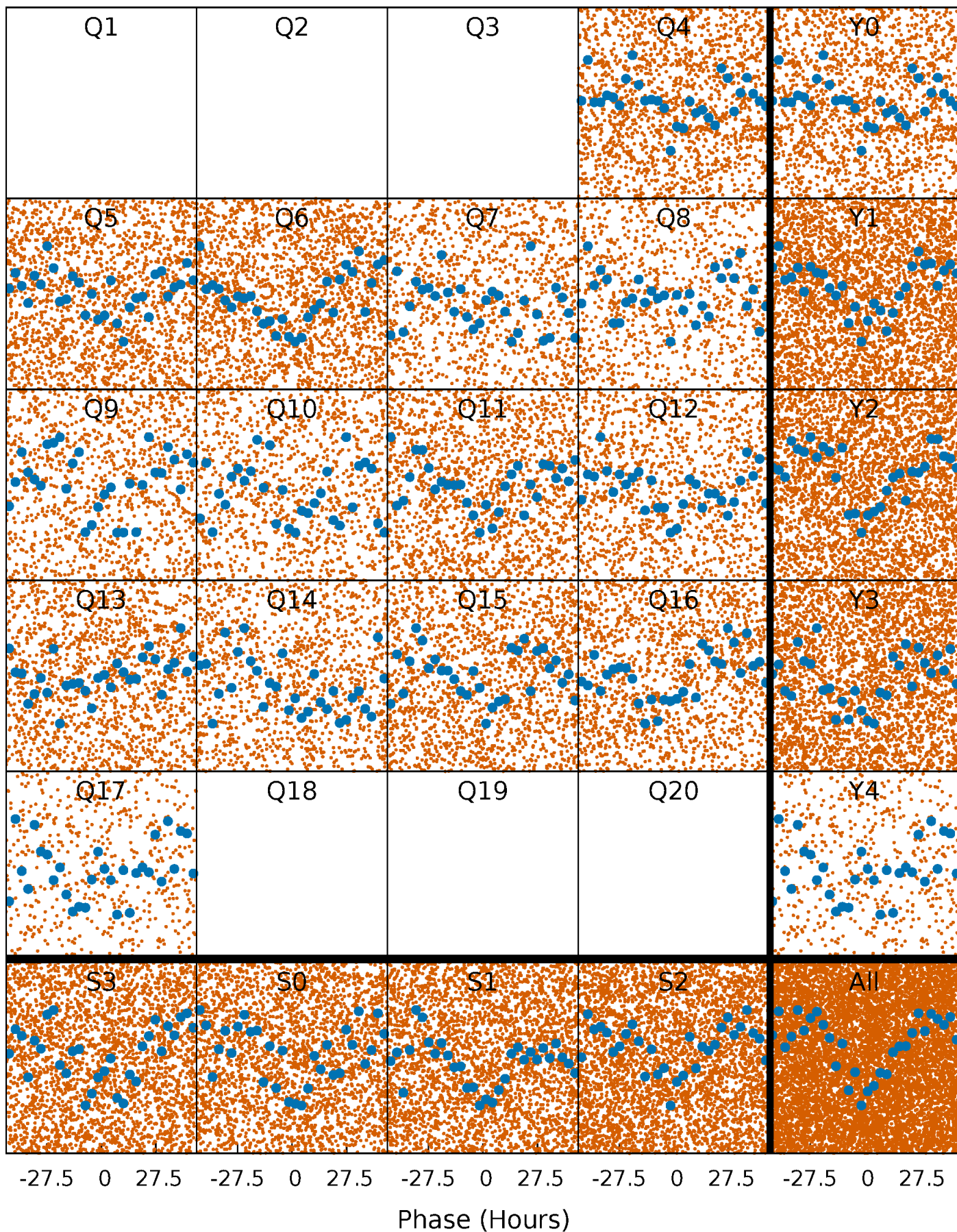


Non-Whitened Vs. Whitened Light Curve



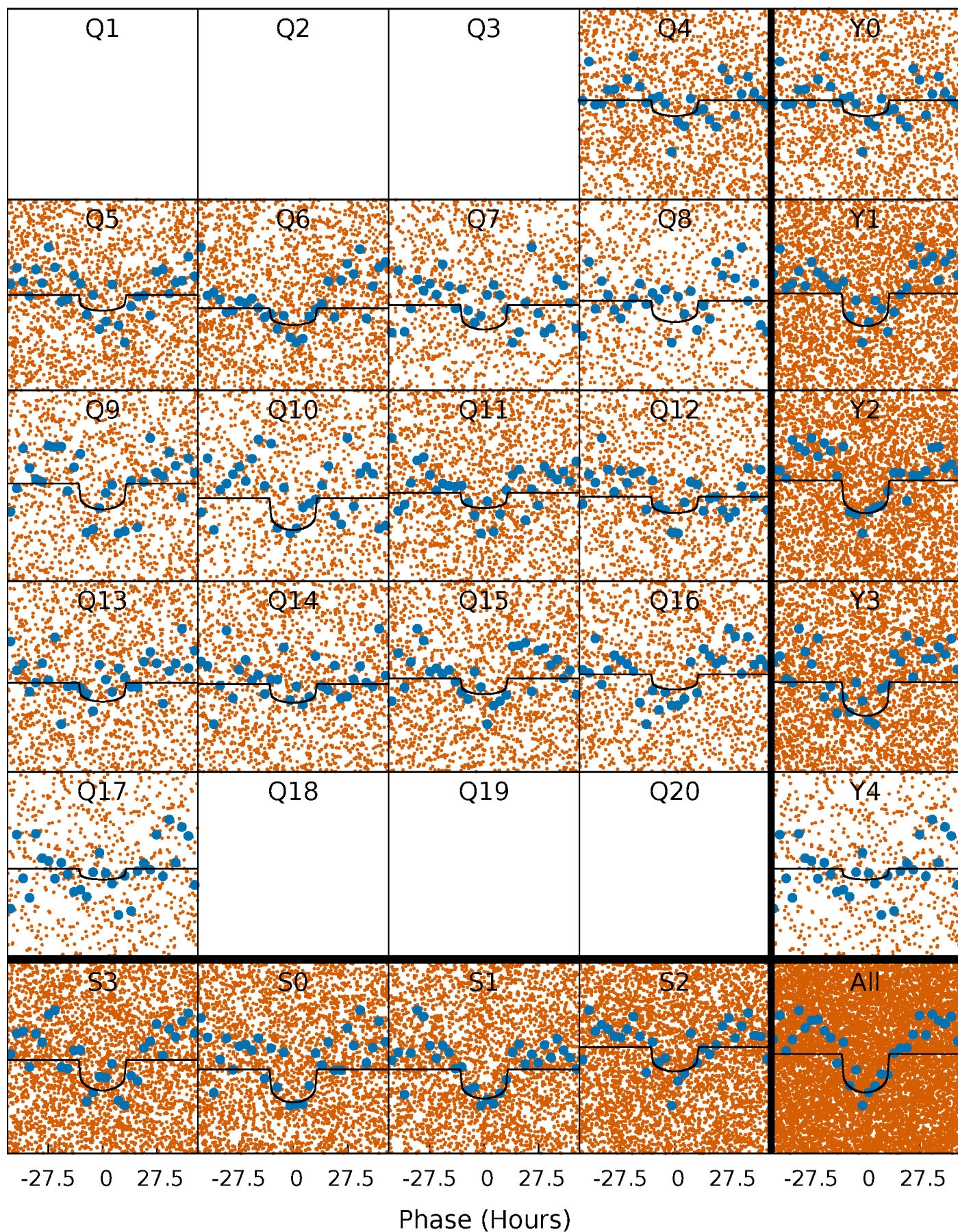
PDC Quarter-Phased Transit Curves

TCE 006851626-01 P= 3.954706 Days $T_0=132.355746$ (BKJD)



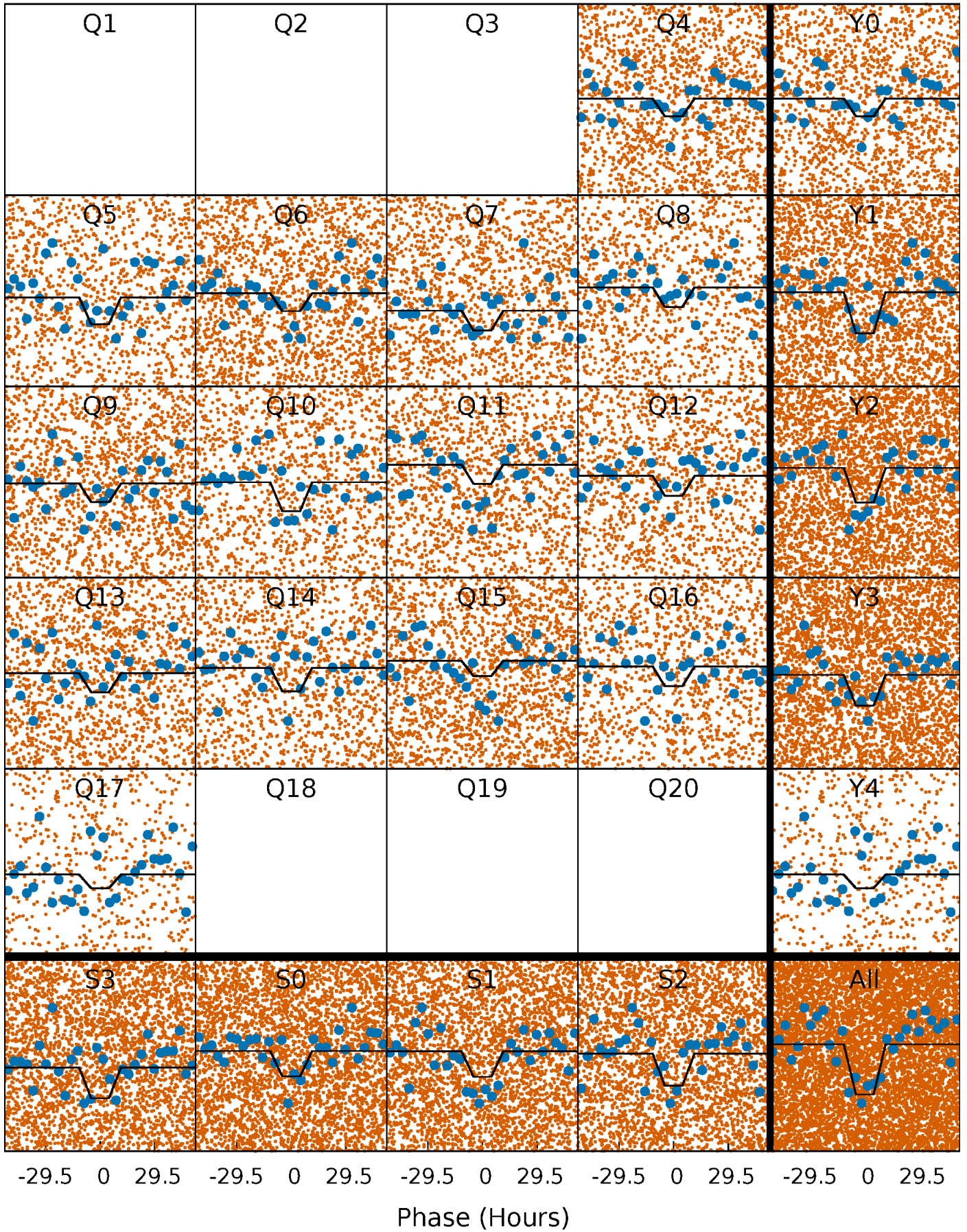
DV Quarter-Phased Transit Curves

TCE 006851626-01 P= 3.954706 Days $T_0=132.355746$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

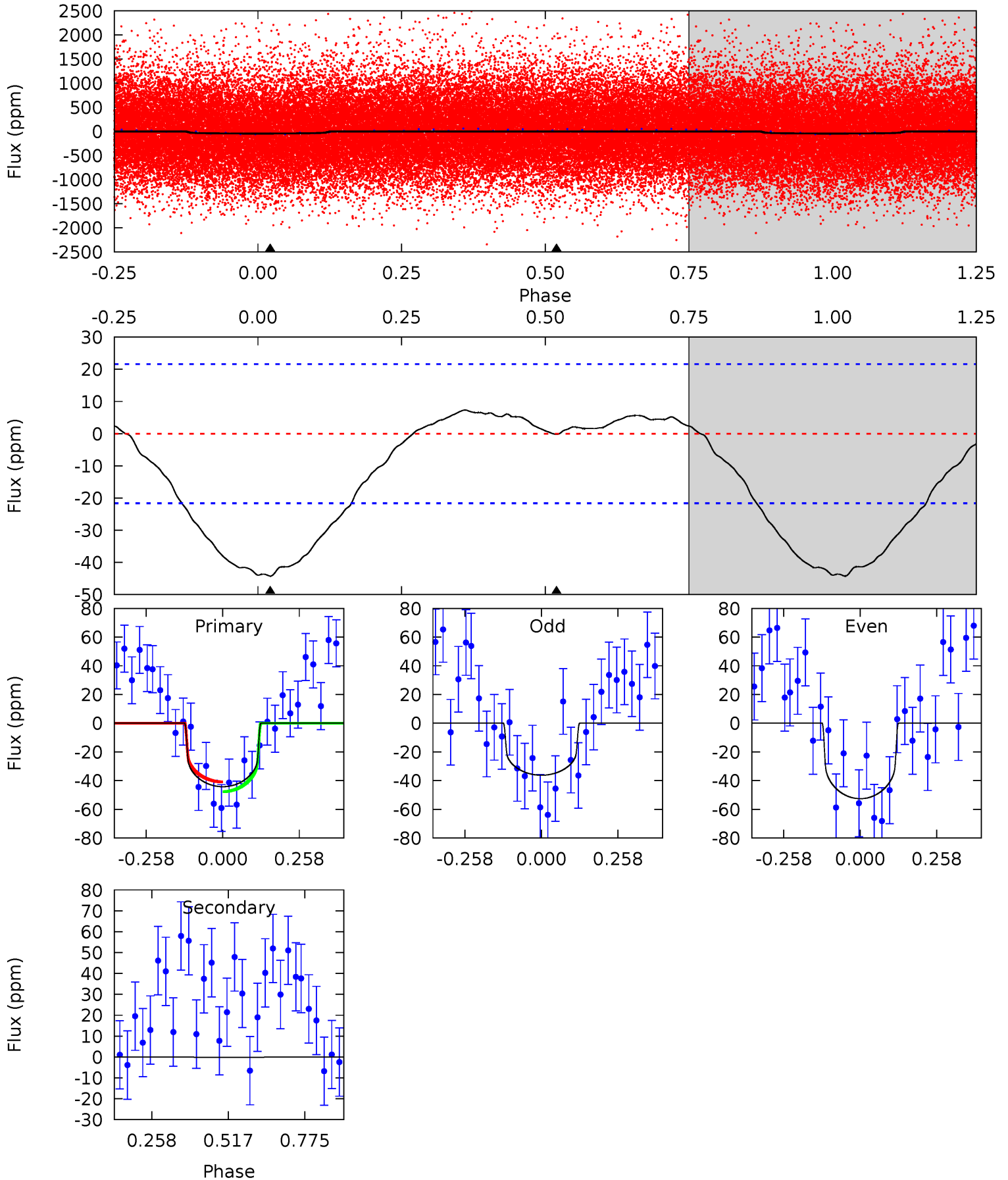
TCE 006851626-01 P= 3.954654 Days $T_0=132.406129$ (BKJD)



DV Model-Shift Uniqueness Test

006851626-01, P = 3.954706 Days, E = 132.355746 Days

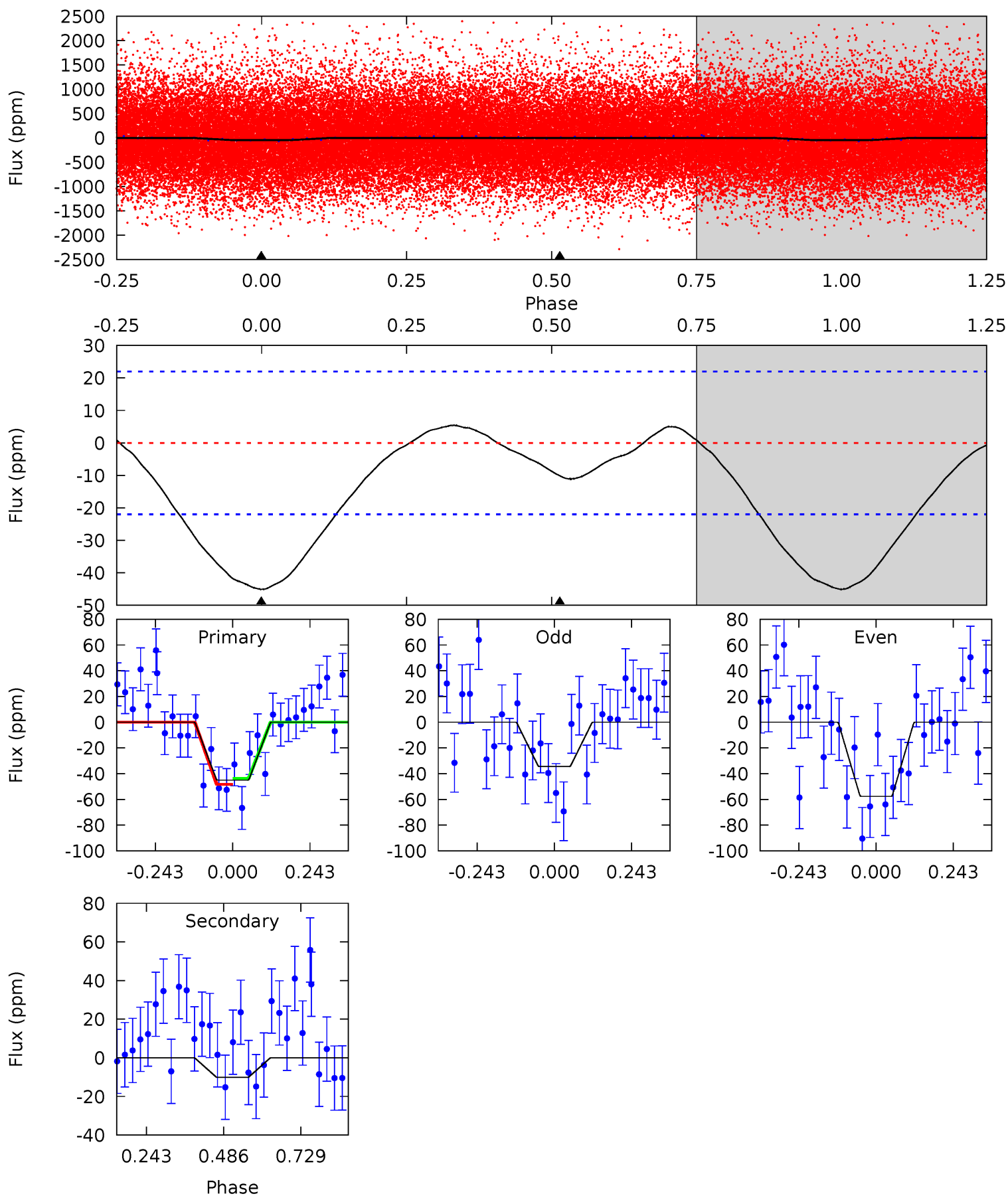
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.92	0.04	0	0	4.36	1.13	0.46	8.92	8.92	0.04	0.04	1.62	1.34	0.14	0.69



Alt Model-Shift Uniqueness Test

006851626-01, P = 3.954654 Days, E = 132.406129 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.96	2.01	0	0	4.37	1.17	0.38	8.96	8.96	2.01	2.01	2.33	0.90	0.11	0.47



Stellar Parameters For KIC 006851626

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5473^{+209}_{-190}	$4.530^{+0.076}_{-0.114}$	$-0.400^{+0.350}_{-0.300}$	$0.788^{+0.150}_{-0.081}$	$0.769^{+0.108}_{-0.058}$	$2.214^{+0.724}_{-0.763}$
	+4%/-3%	+2%/-3%	+87%/-75%	+19%/-10%	+14%/-8%	+33%/-34%
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 006851626-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-0 ± 5	$0.68^{+0.22}_{-0.22}$	1428^{+76}_{-72}	2354^{+1192}_{-5828}	$1.014^{+13.837}_{-13.540}$
Alt.	-10 ± 5	$0.59^{+0.23}_{-0.23}$	1427^{+74}_{-67}	4032^{+935}_{-592}	32^{+59}_{-19}

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

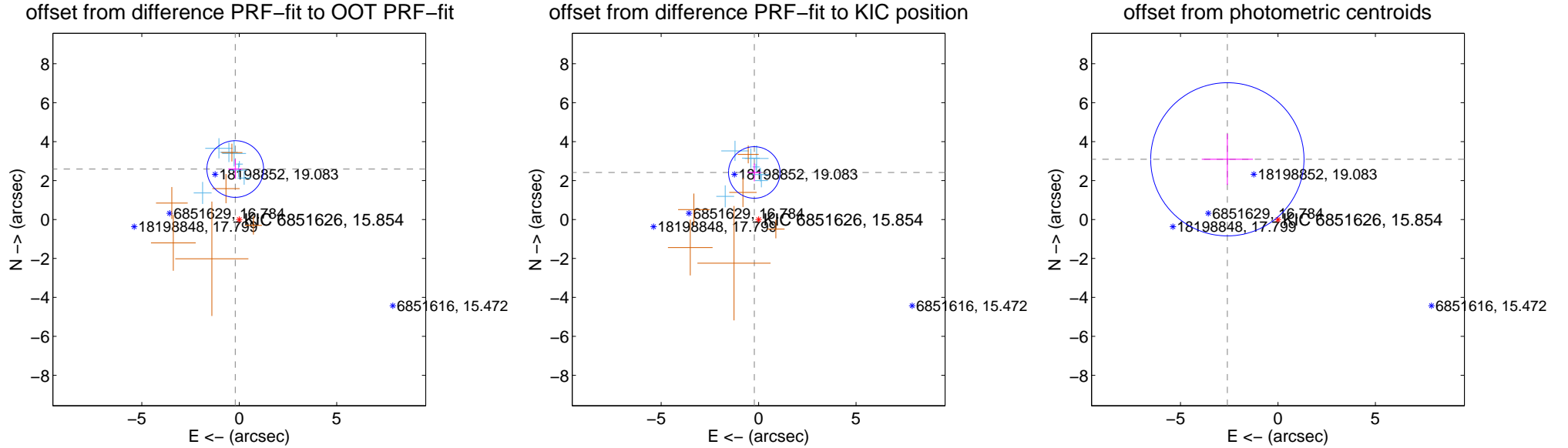
DV Centroid Data

Supplemental centroid analysis for 006851626-01. Kepler magnitude: 15.85. Transit SNR 6.76

There are 7 quarters with good PRF difference image offsets

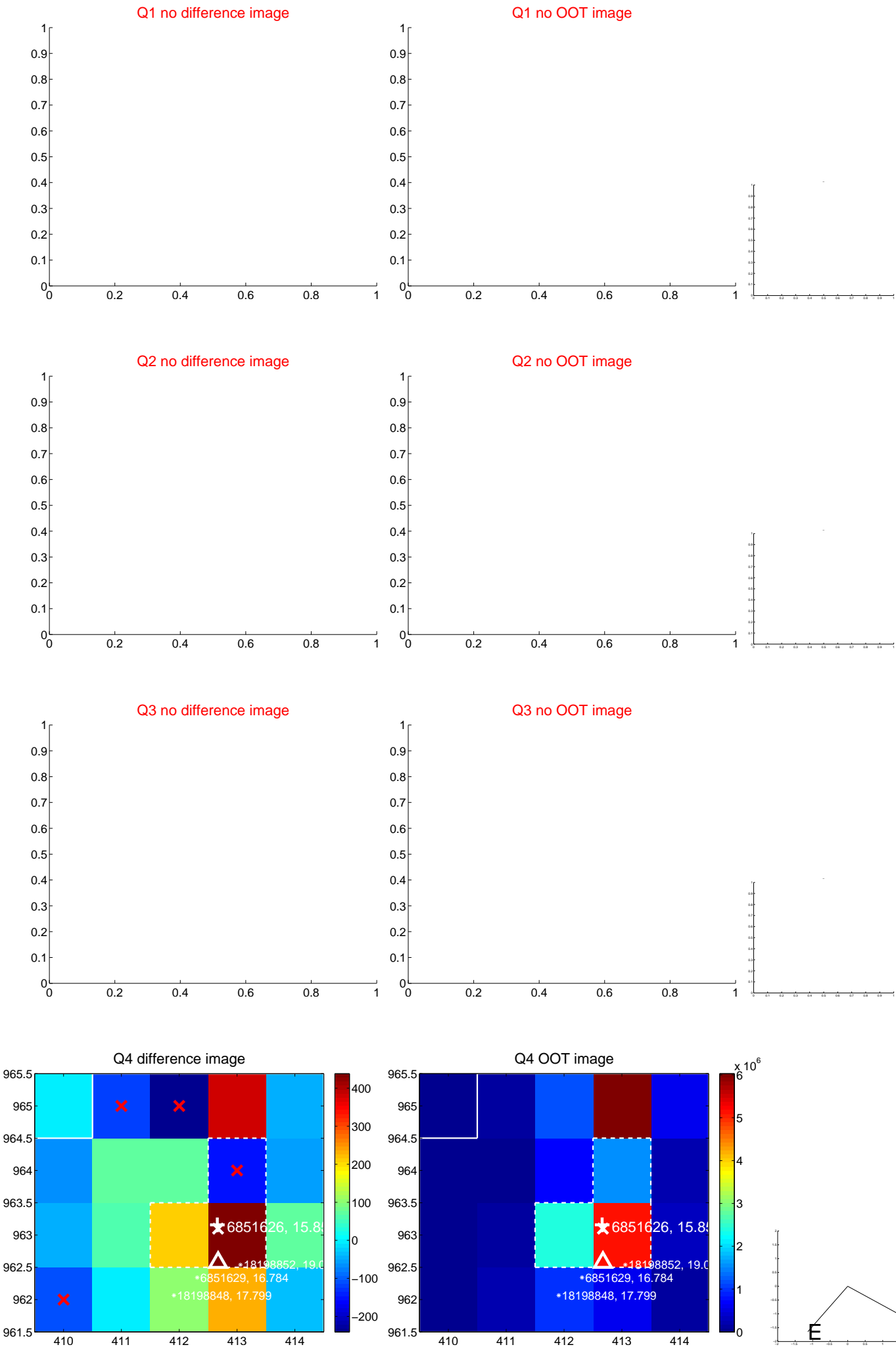
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.601 \pm 0.485	5.36	0.207 \pm 0.353	2.592 \pm 0.500
PRF-fit source offset from KIC position	2.425 \pm 0.441	5.50	0.221 \pm 0.340	2.415 \pm 0.455
photometric centroid source offset	4.04 \pm 1.31	3.08	2.60 \pm 1.31	3.09 \pm 1.31

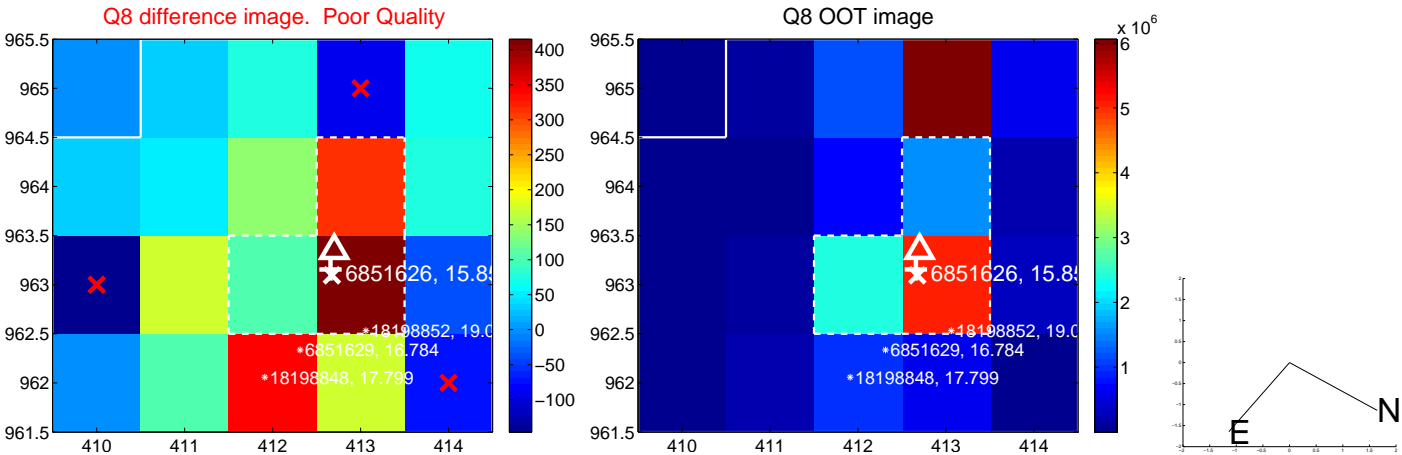
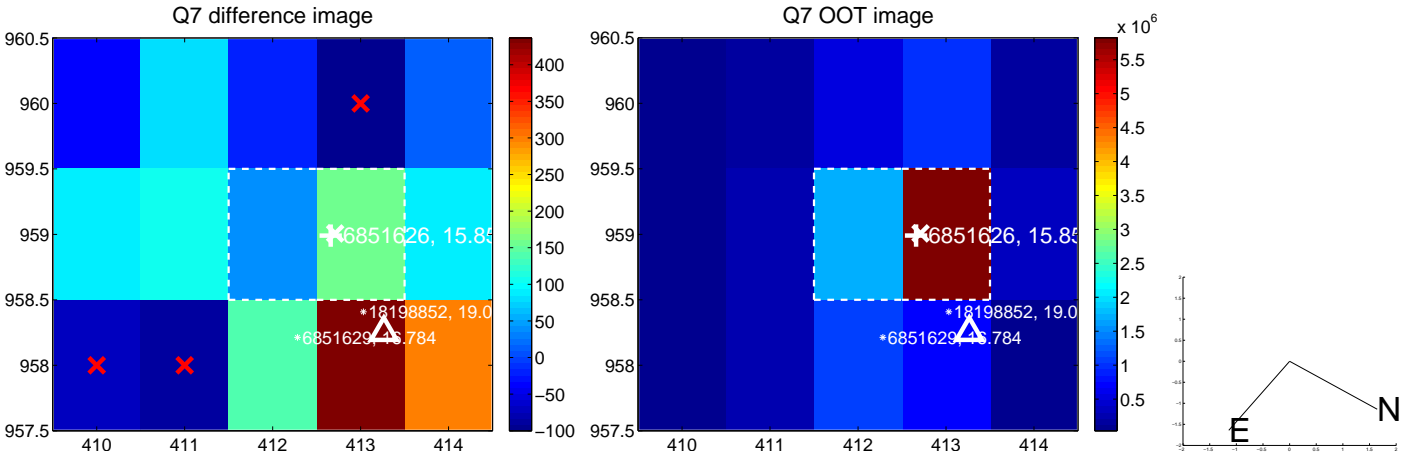
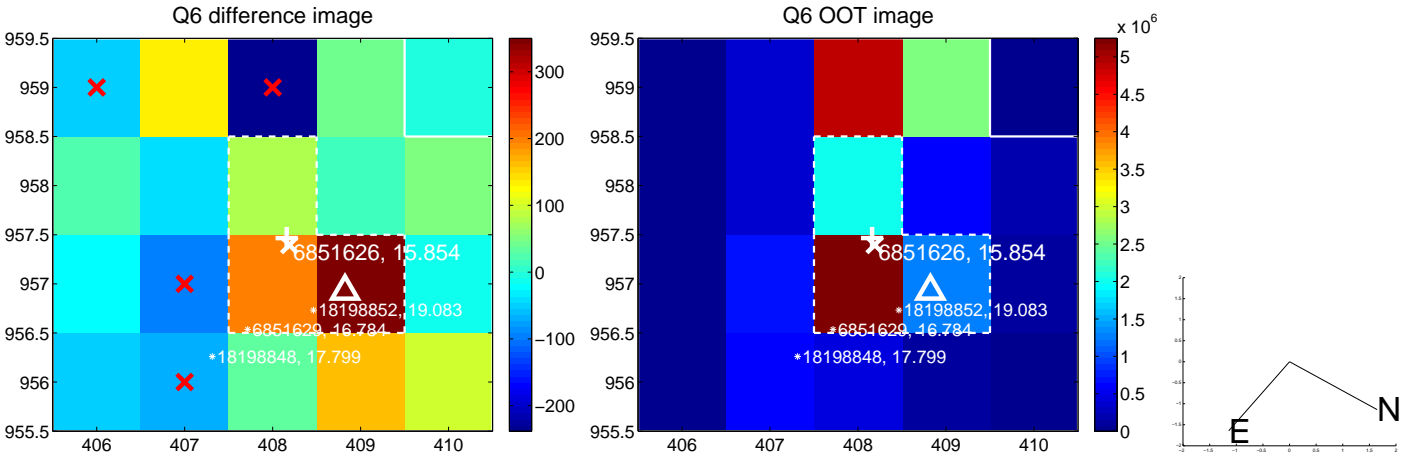
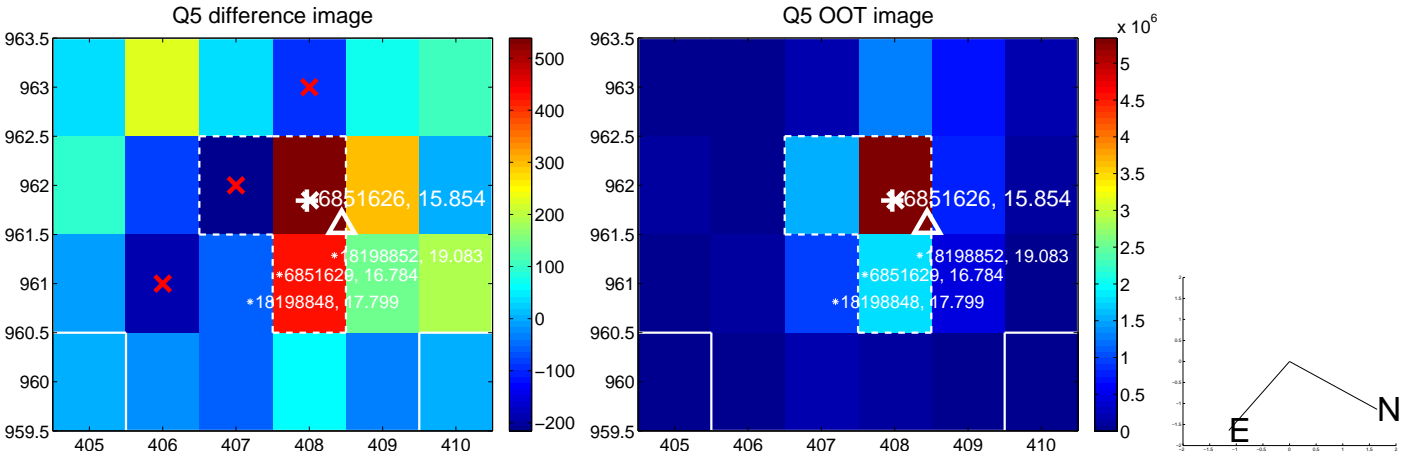


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

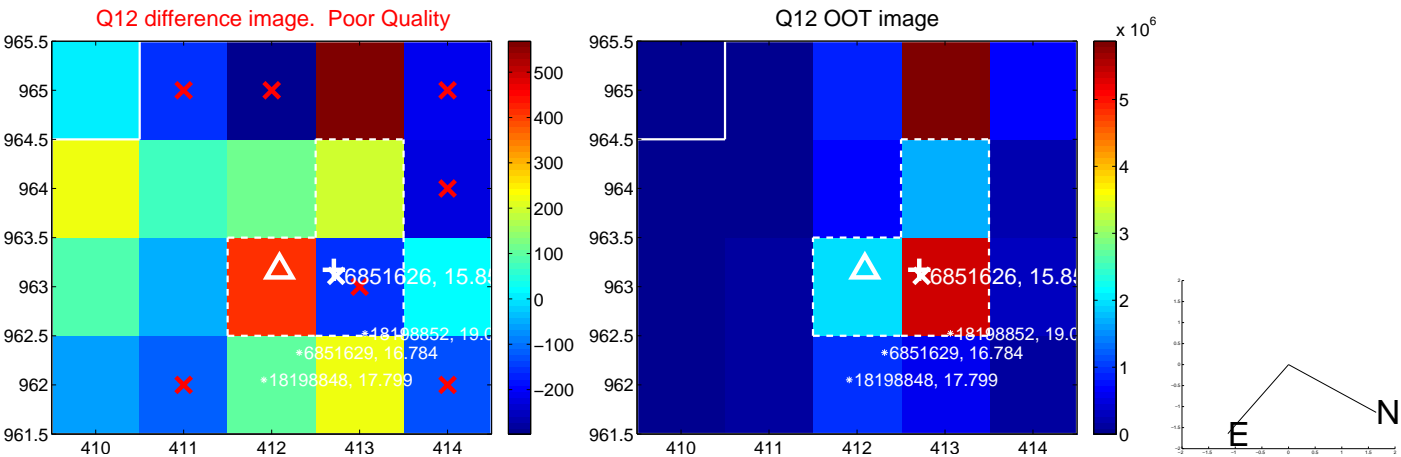
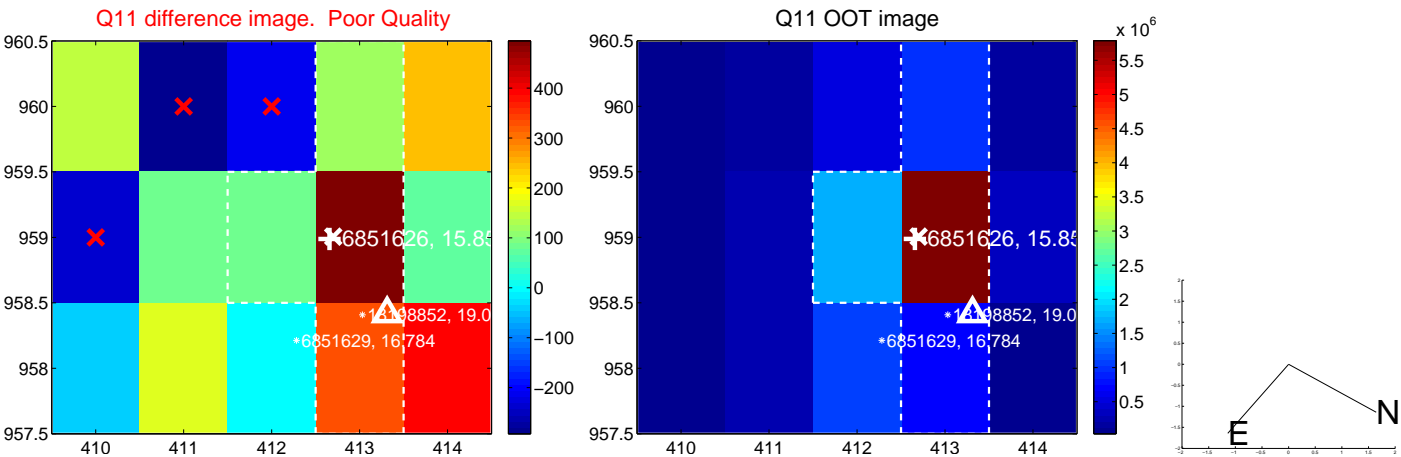
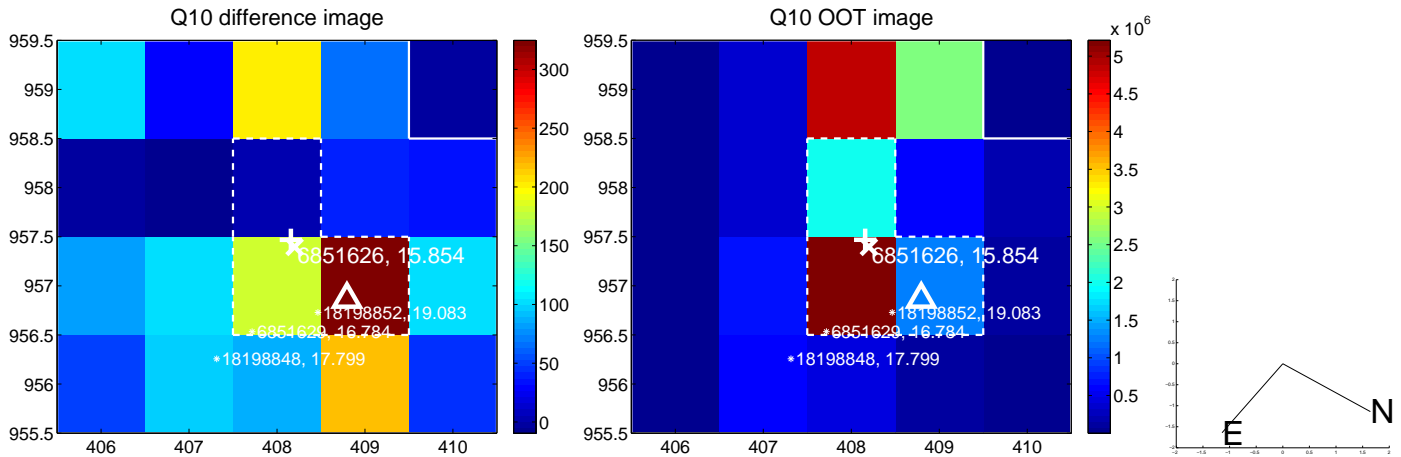
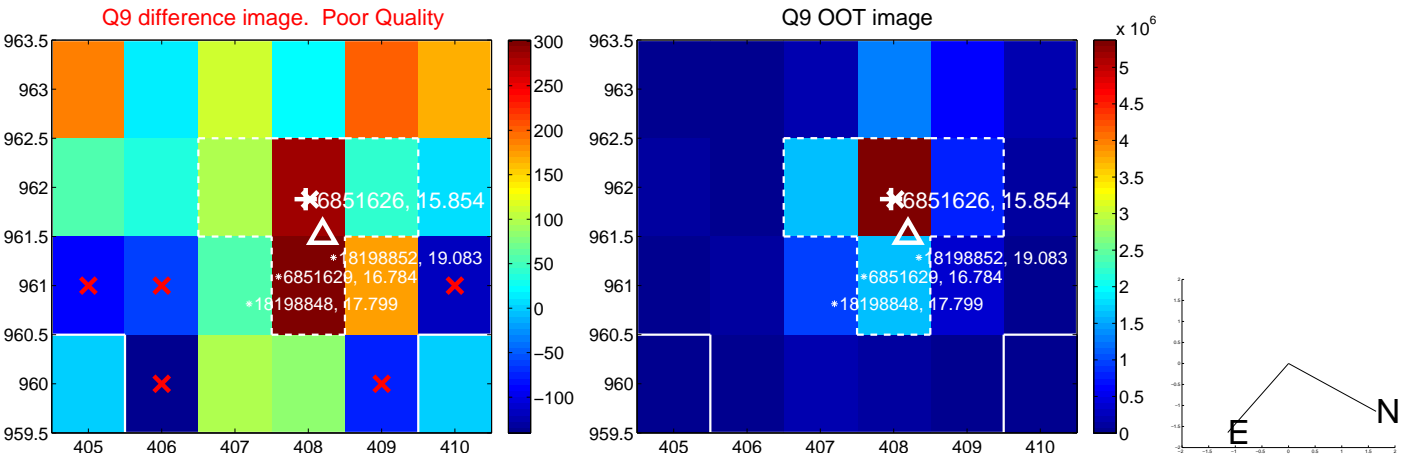
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



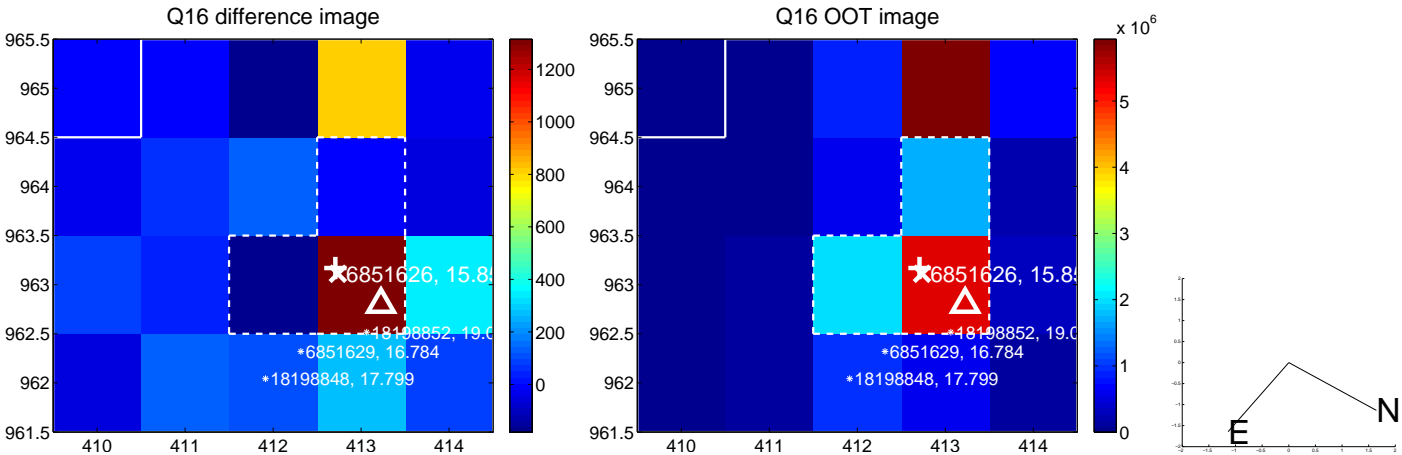
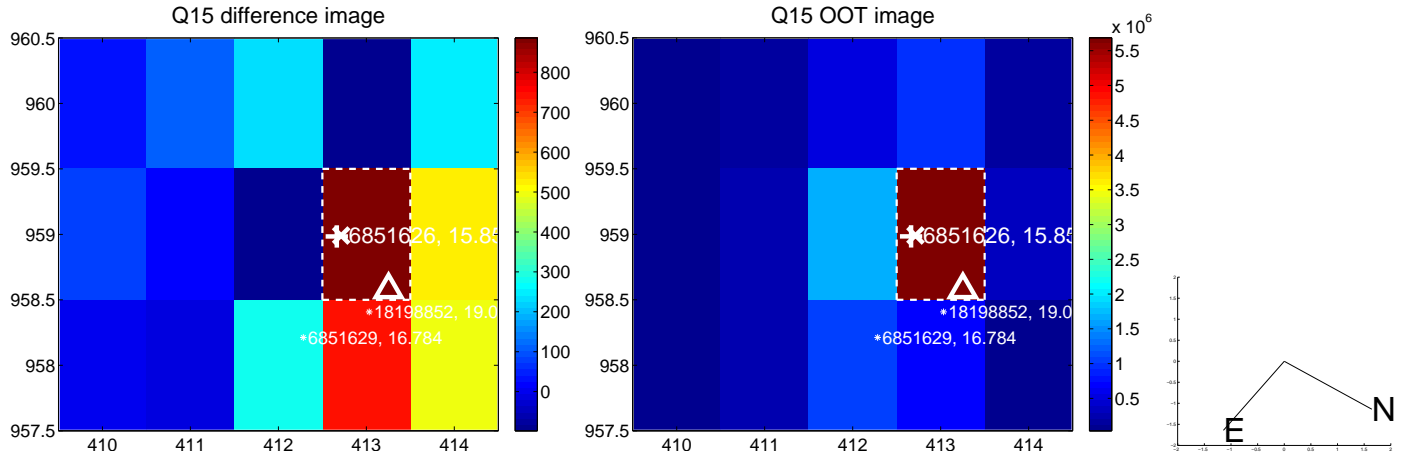
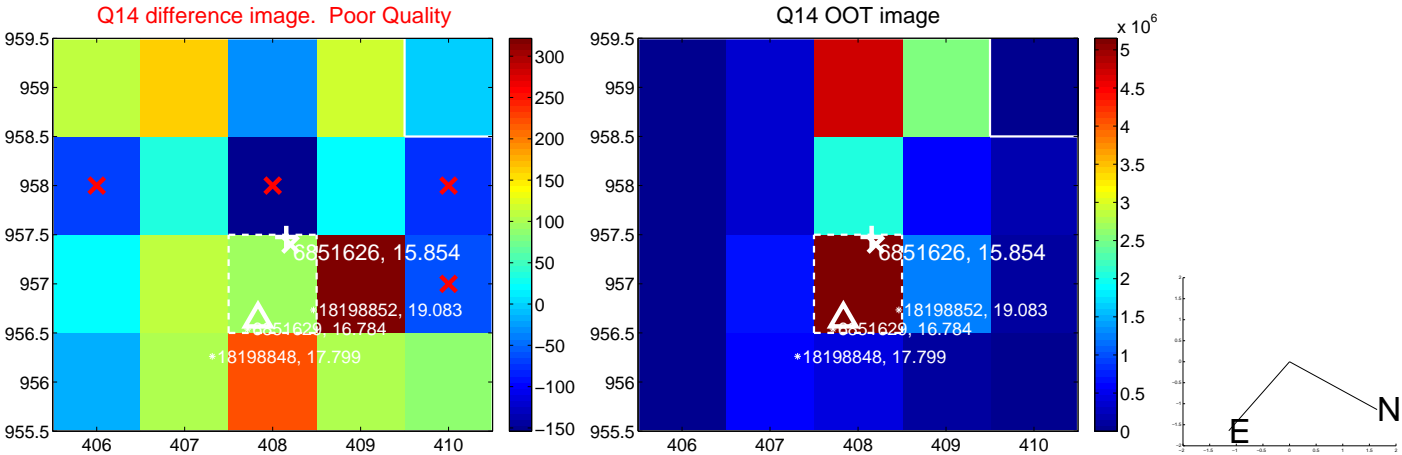
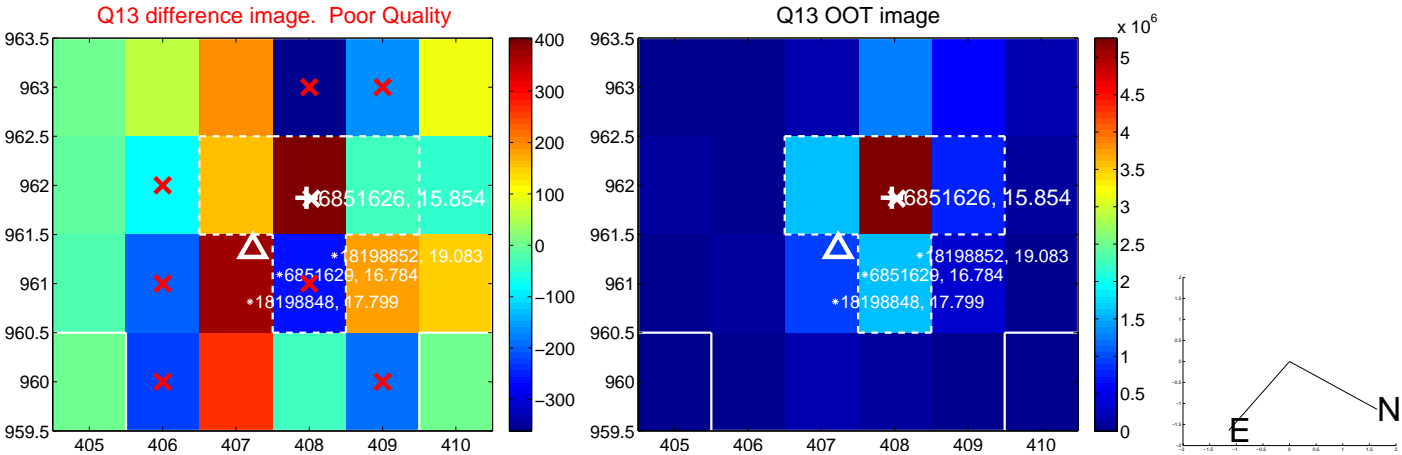
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



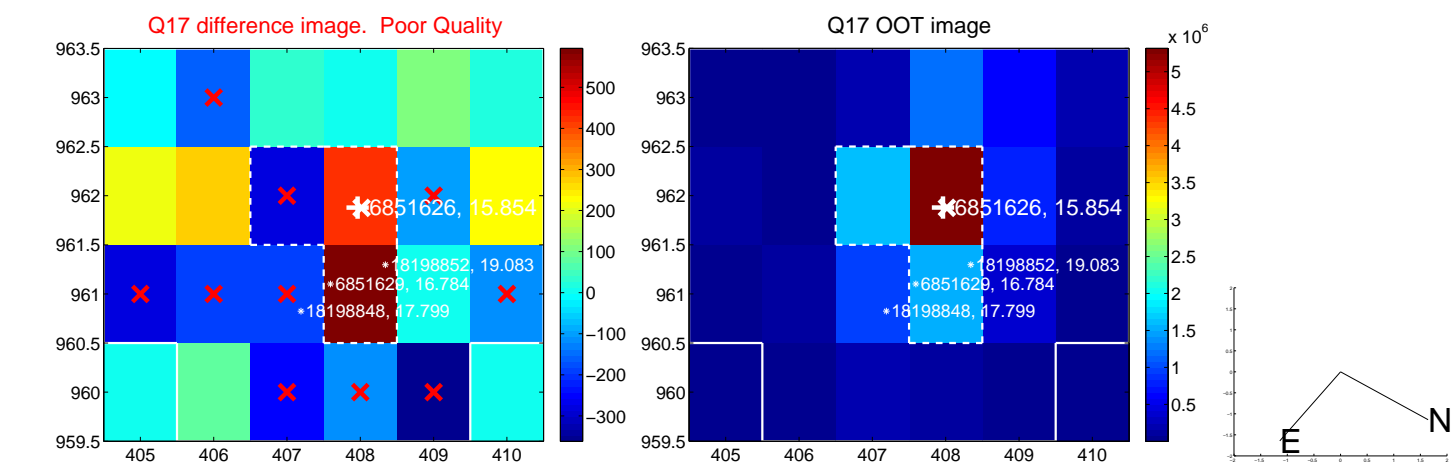
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



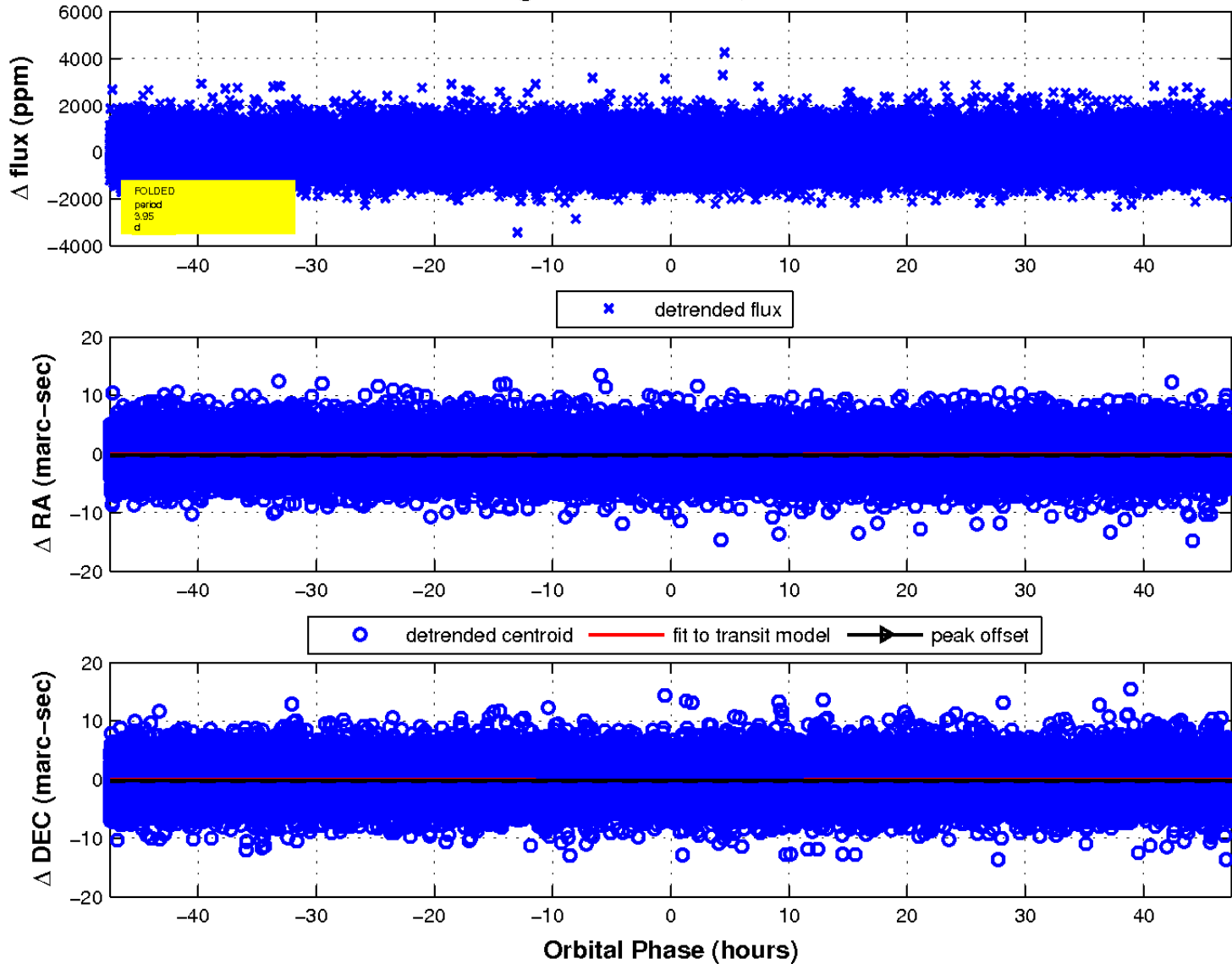
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

