

KIC 009488426

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})
009488426-01	OBS	No	2.066128	132.482287	18.5	19.041	9.4	11.8	3.18	7507	1.43	18571.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009488426-01	OBS	FP	0.00	1	0	0	1	LPP_DV—LPP_ALT—CENT_FEW_DIFFS—EPHEM_MATCH

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.

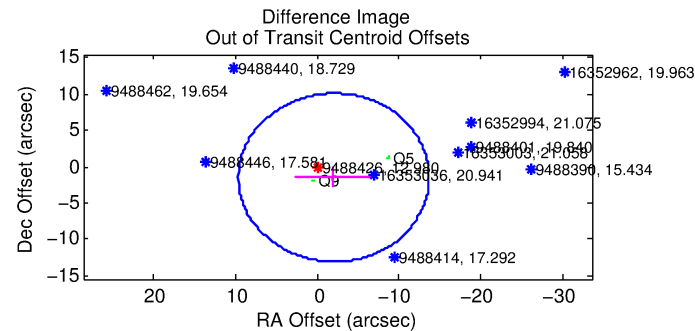
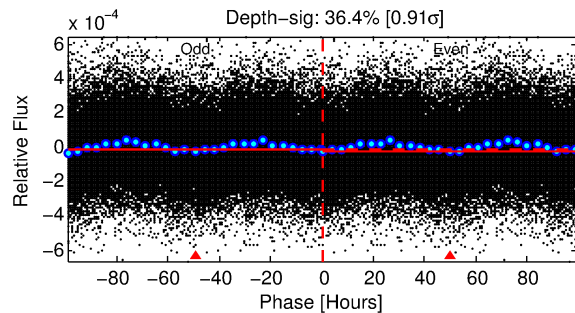
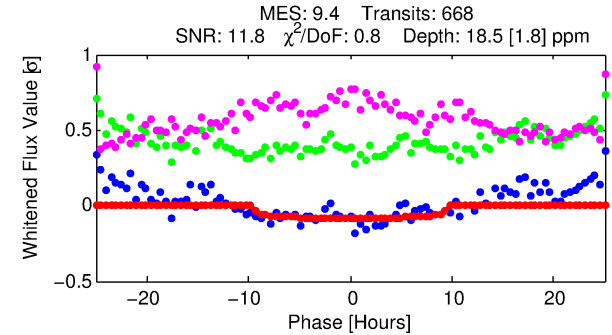
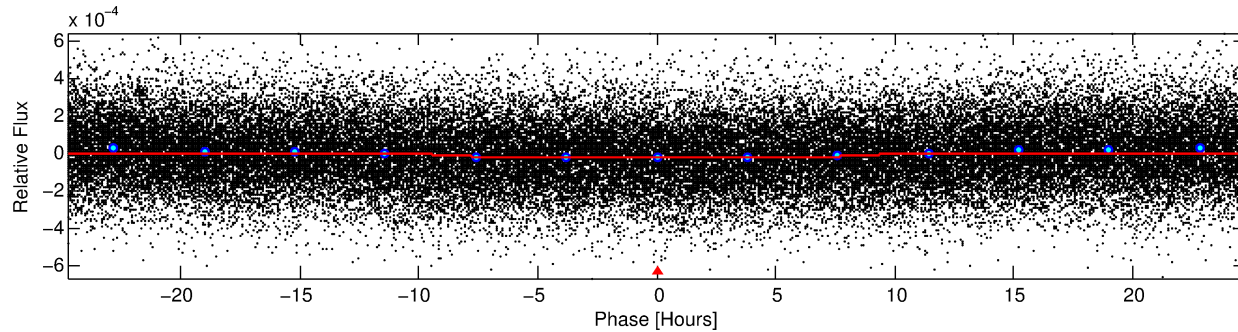
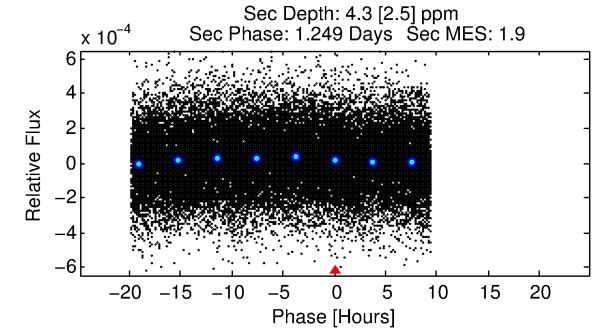
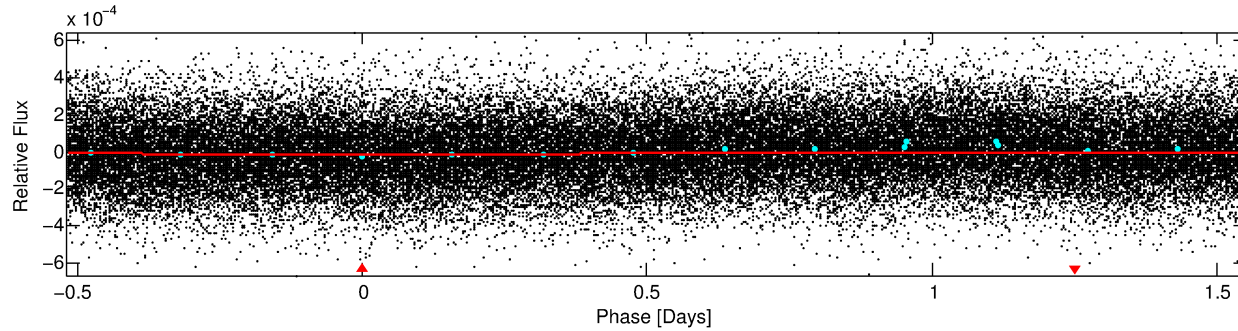
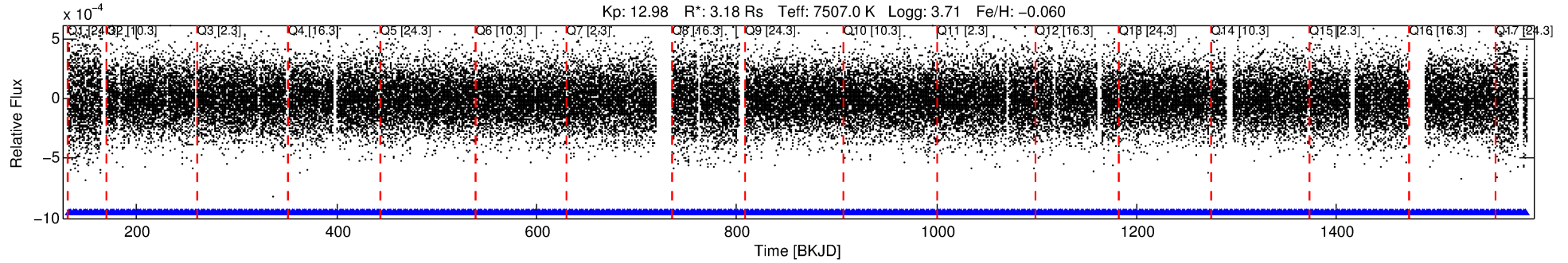
Ephemeris Match Information For 009488426-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
009488426-01	9488426	007848303-02	7848303	4:1	9269.6	340	9	11.28	12.98	1.50	Col-Anomaly	1	3.24	1.95

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 9488426 Candidate: 1 of 1 Period: 2.066 d



DV Fit Results:

Period = 2.06613 [0.00004] d
Epoch = 132.4823 [0.0104] BKJD
Rp/R* = 0.0041 [0.0029]
a/R* = 1.05 [0.44]
b = 0.55 [5.31]
Seff = 18571.00 [13750.10]
Teq = 2977 [551] K
Rp = 1.43 [1.19] Re
a = 0.0394 [0.0176] AU
Ag = 1.81 [3.02] [0.27σ]
Teffp = 5337 [2022] K [1.13σ]

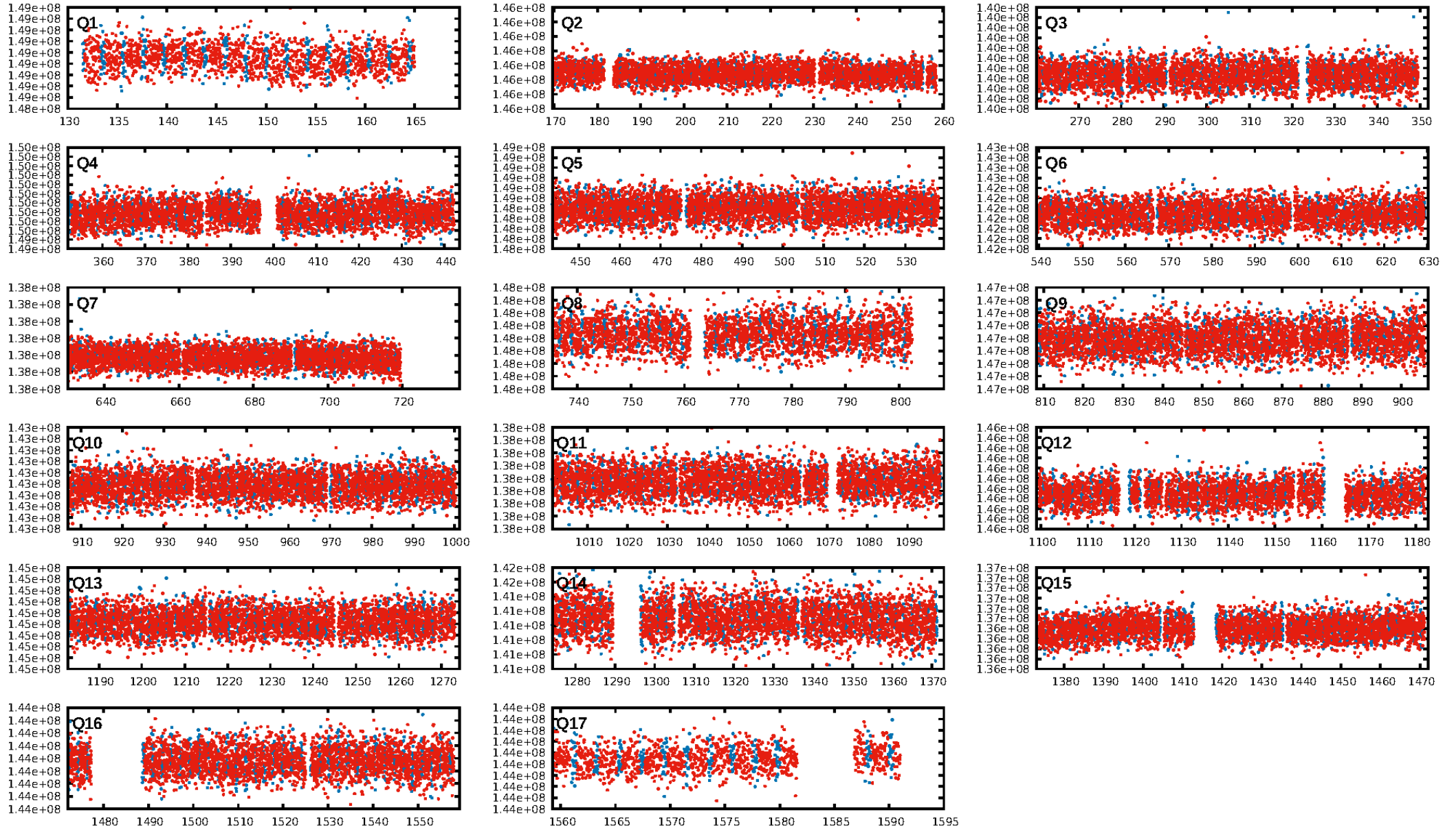
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [638/638]
GhostDiagnostic-chr: 3.909
Centroid-sig: 8.4%
Centroid-so: 1.756 arcsec [1.64σ]
OotOffset-rm: 2.519 arcsec [0.65σ]
KicOffset-rm: 2.636 arcsec [0.69σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [17/17]

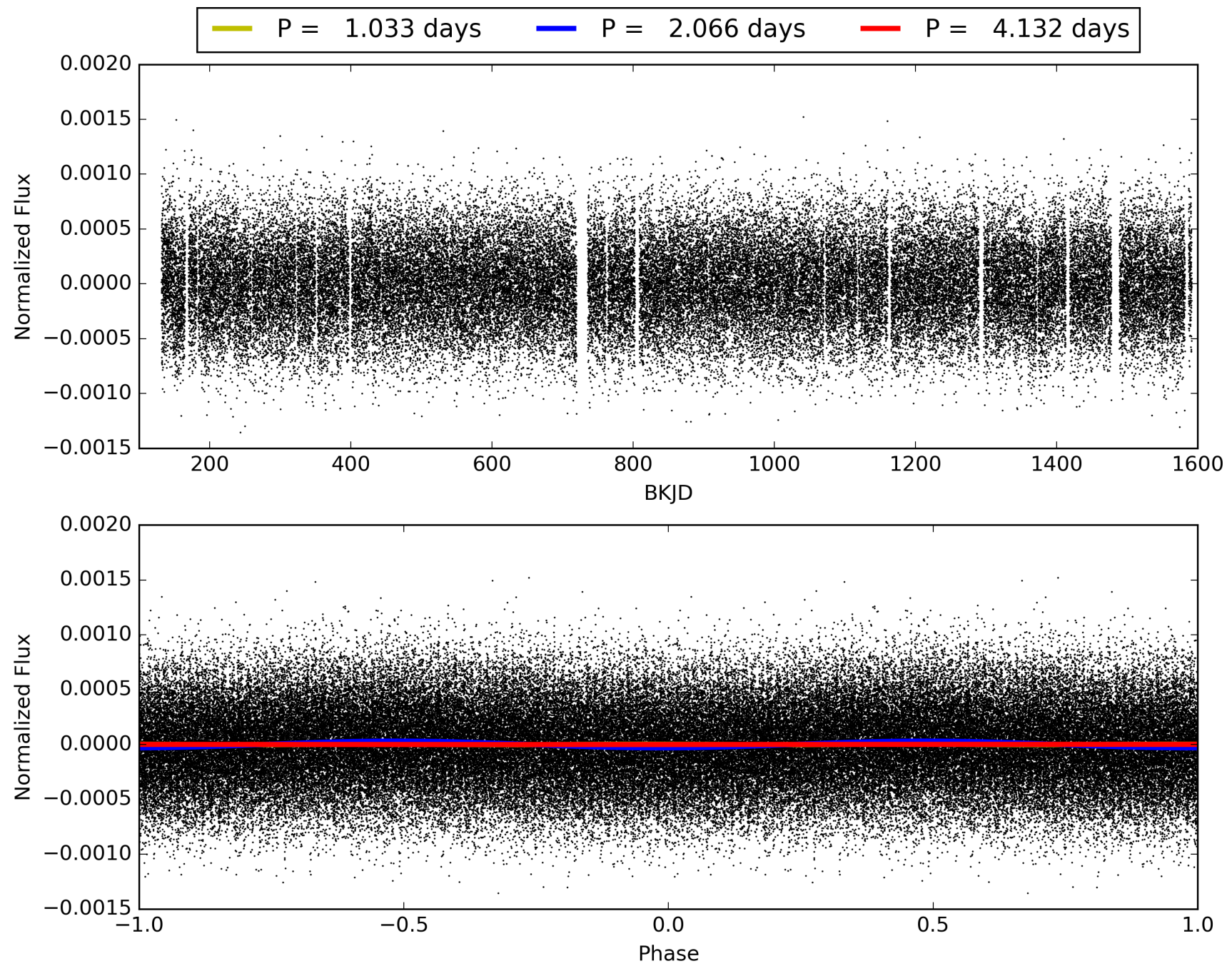
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:48:47 Z

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

TCE 009488426-01, PDC Light Curves

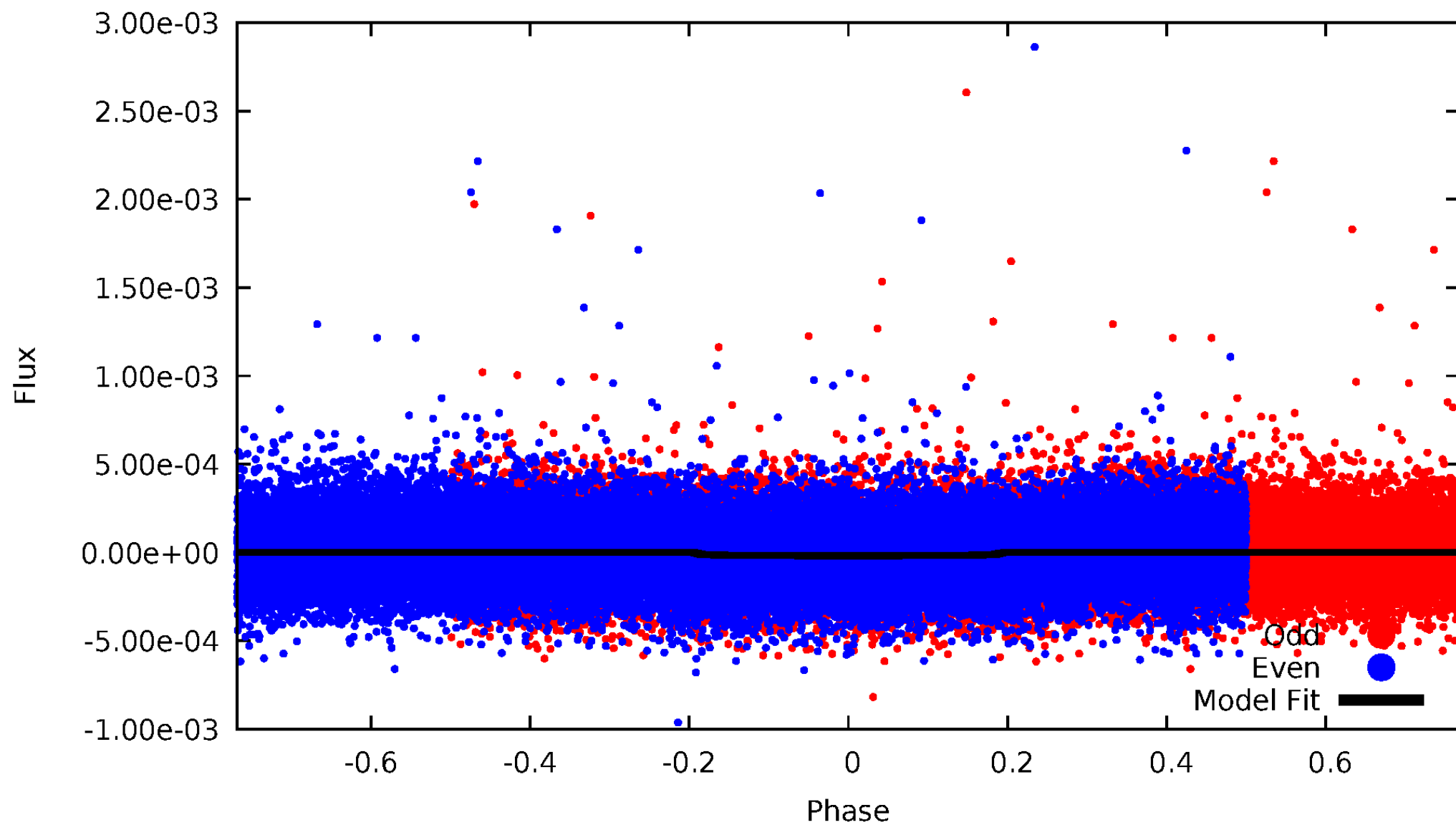


TCE 009488426-01



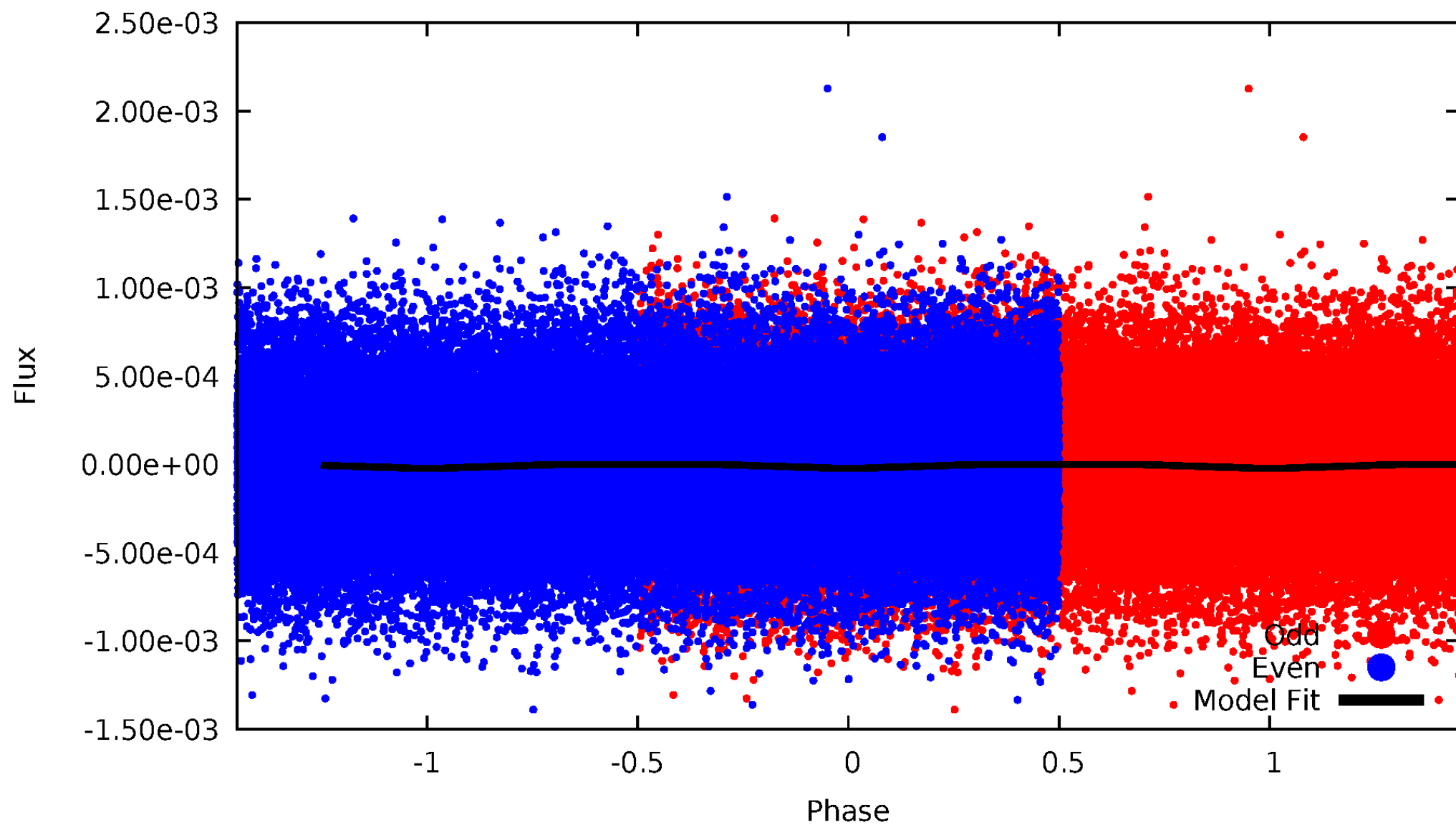
DV Odd/Even

TCE 009488426-01



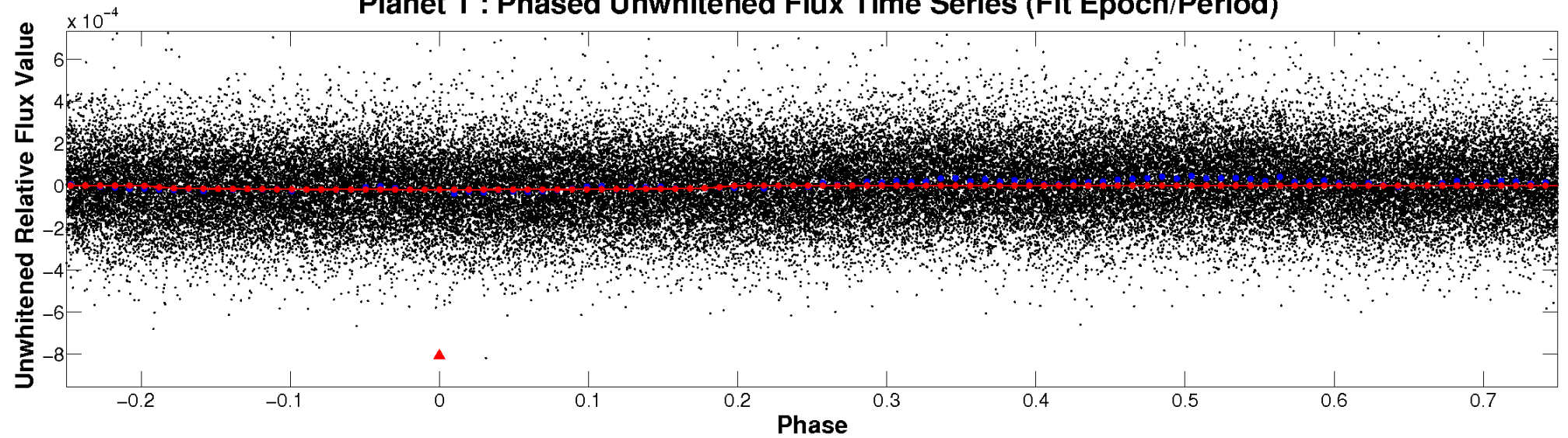
ALT Odd/Even

TCE 009488426-01

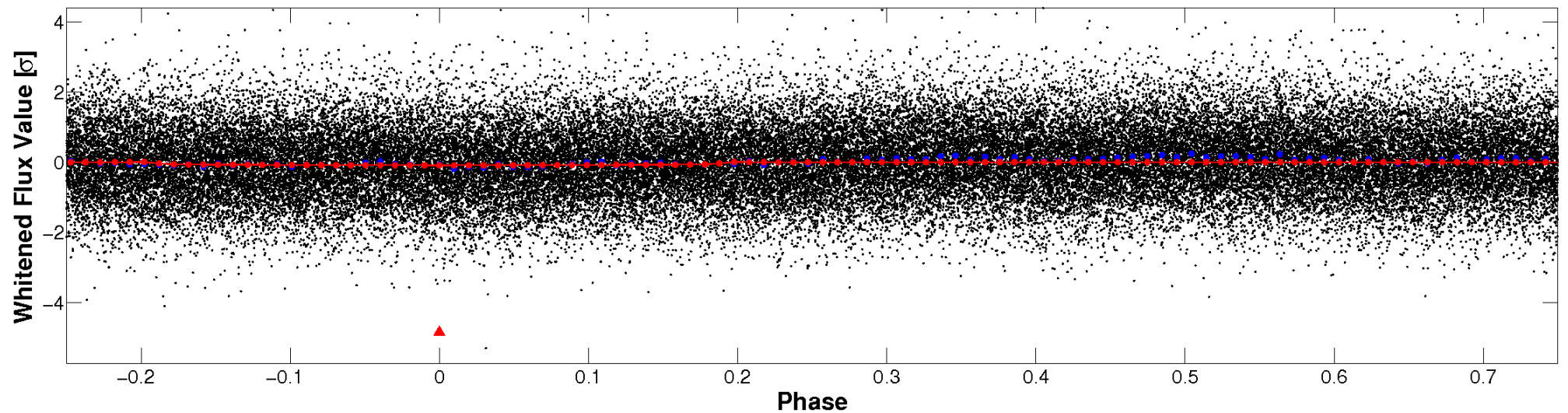


Non-Whitened Vs. Whitened Light Curve

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

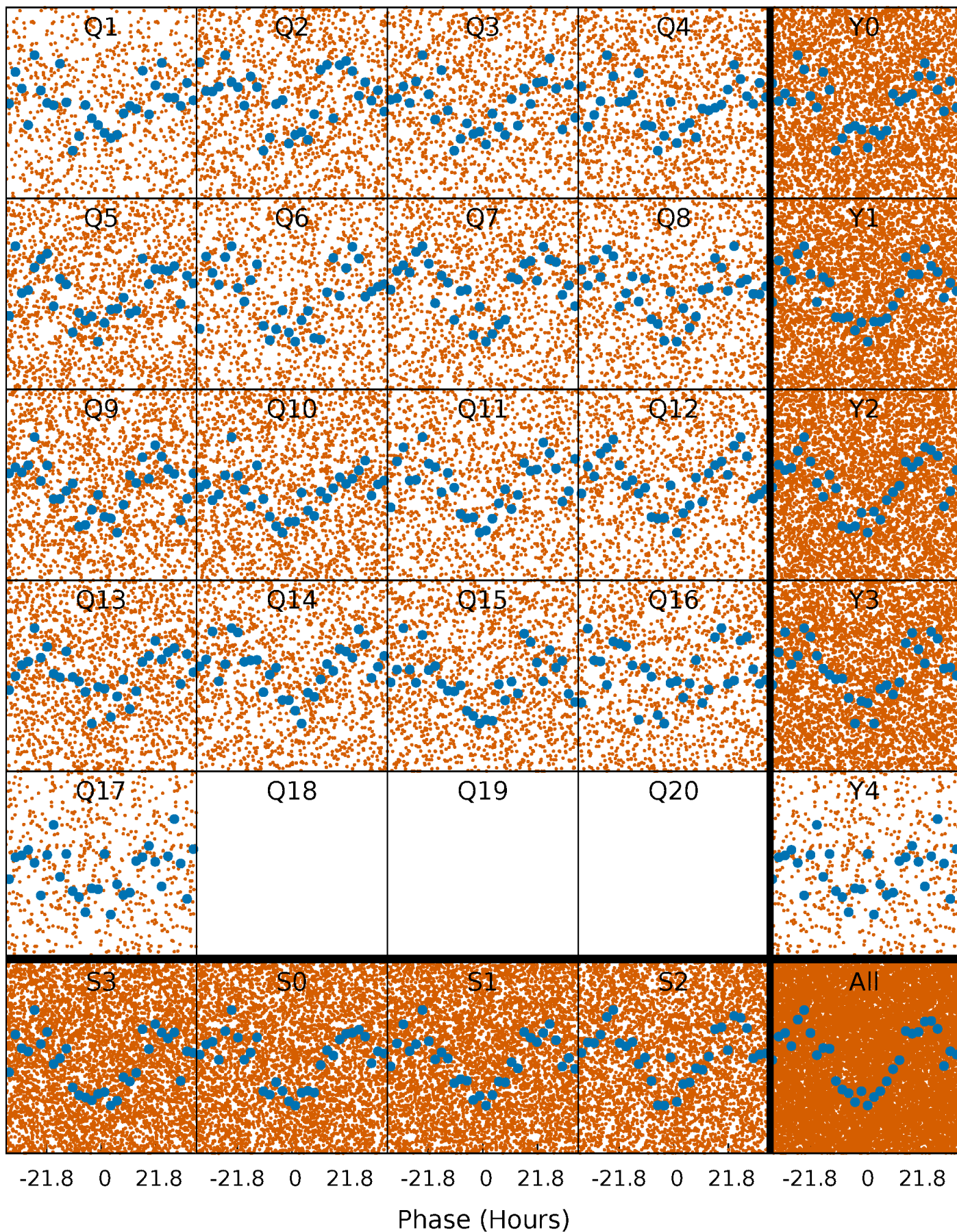


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



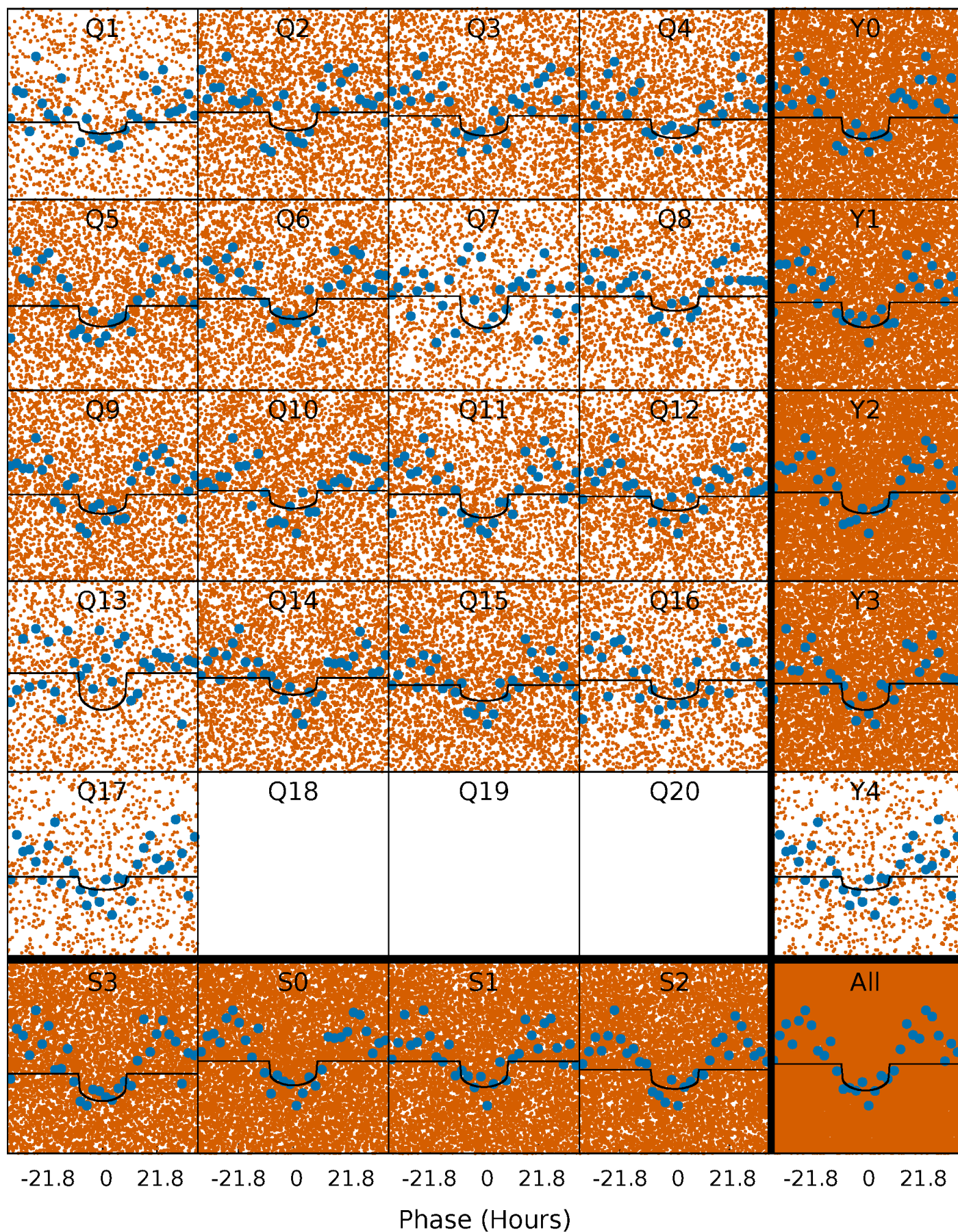
PDC Quarter-Phased Transit Curves

TCE 009488426-01 P= 2.066128 Days $T_0=132.482287$ (BKJD)



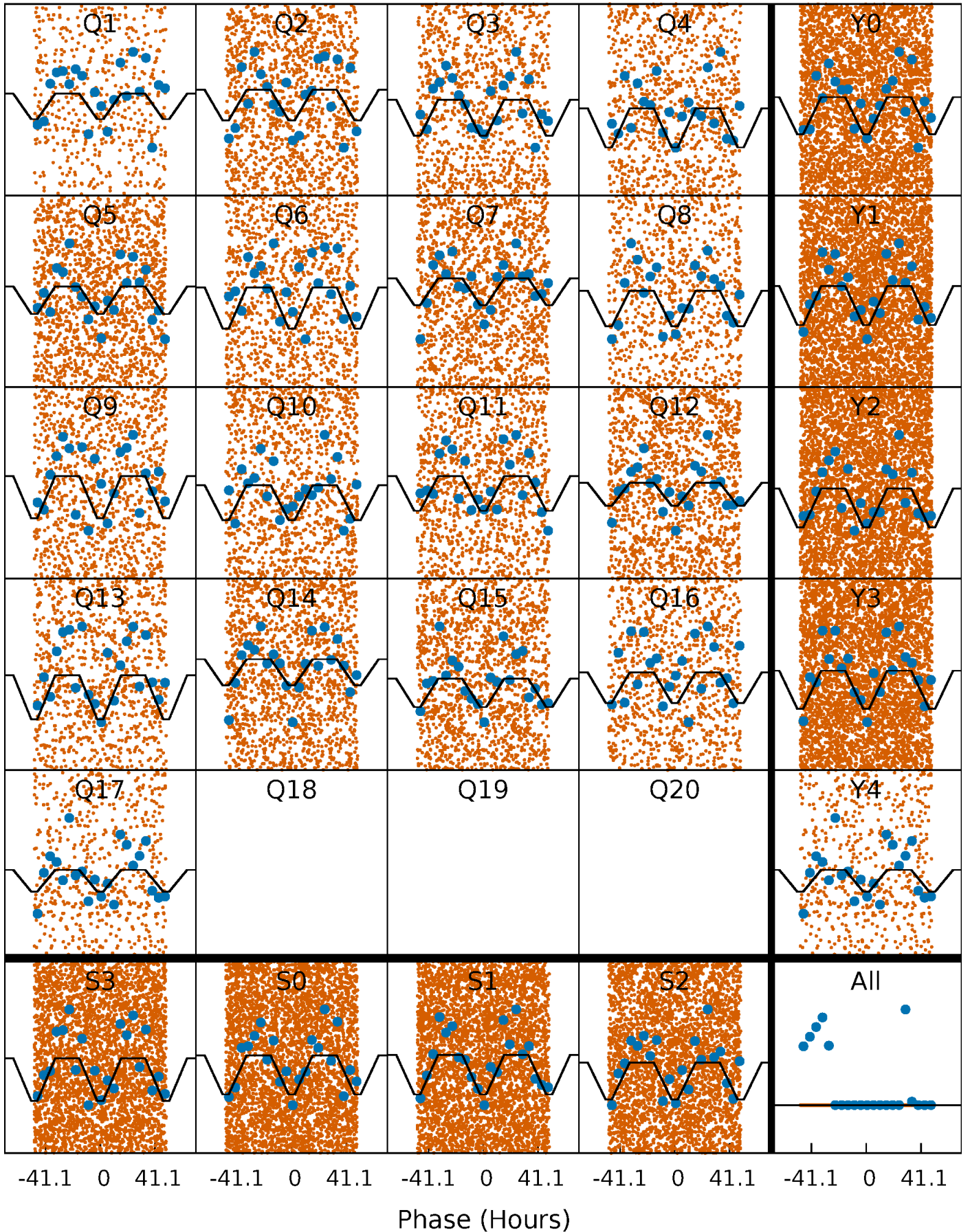
DV Quarter-Phased Transit Curves

TCE 009488426-01 P= 2.066128 Days $T_0=132.482287$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

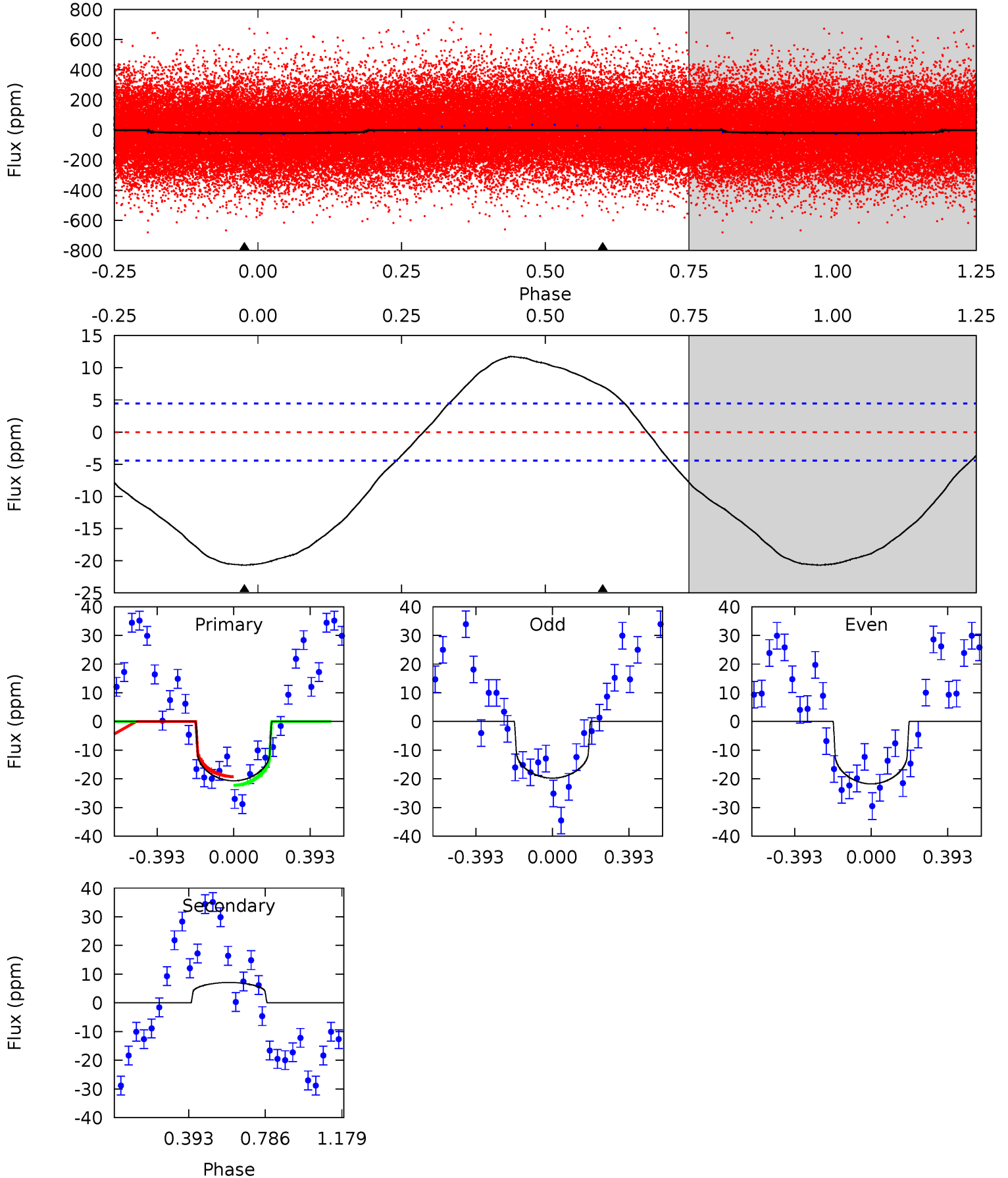
TCE 009488426-01 P= 2.066228 Days $T_0=132.487566$ (BKJD)



DV Model-Shift Uniqueness Test

009488426-01, P = 2.066128 Days, E = 130.416159 Days

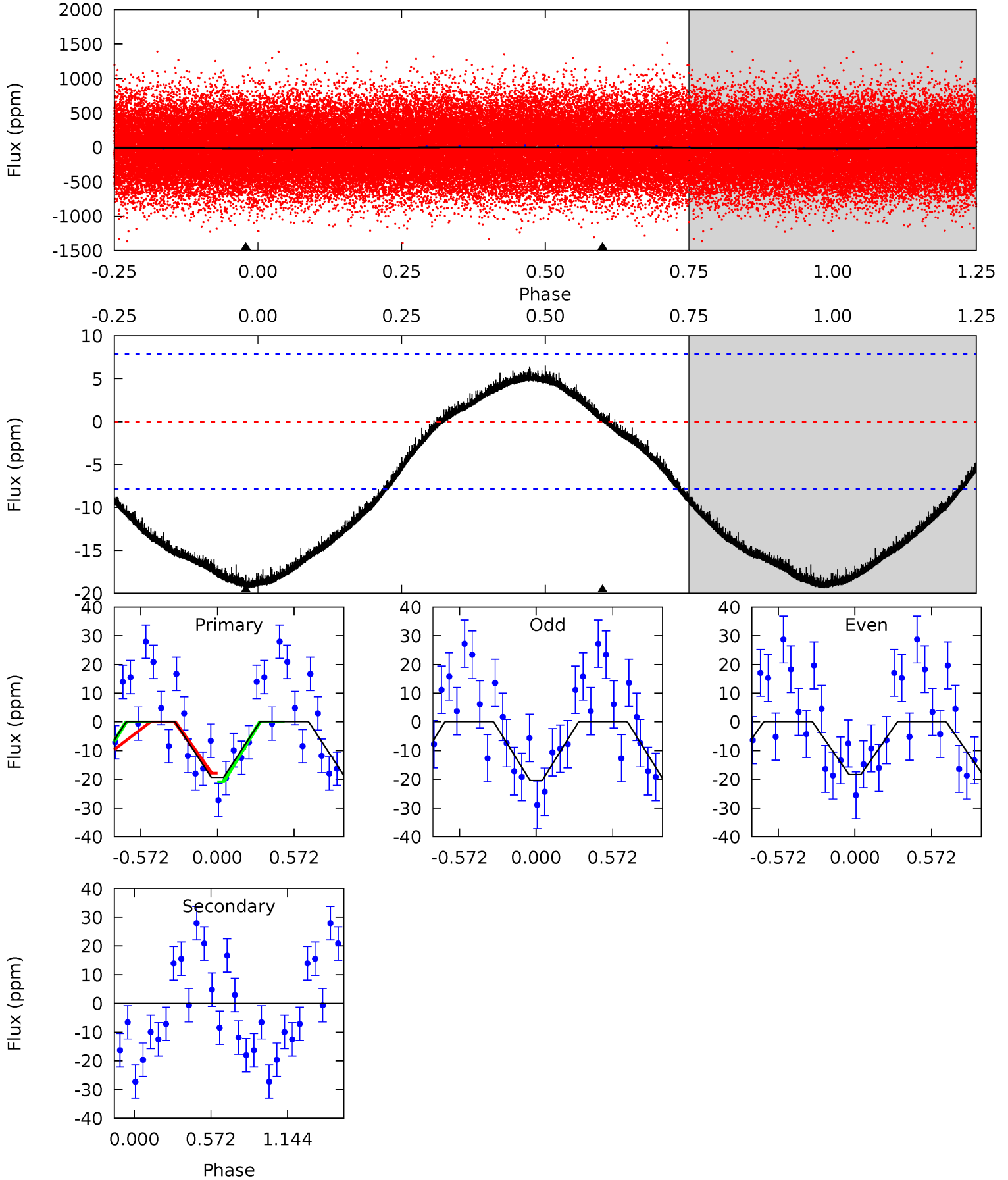
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	-6.83	0	0	4.27	0.85	2.72	19.9	19.9	-6.83	-6.83	0.96	0.94	0.36	1.47



Alt Model-Shift Uniqueness Test

009488426-01, P = 2.066228 Days, E = 130.421338 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	-0.02	0	0	4.18	0.57	0.86	10.3	10.3	-0.02	-0.02	0.57	1.05	0.25	0.81



Stellar Parameters For KIC 009488426

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7507^{+209}_{-314}	$3.713^{+0.425}_{-0.075}$	$-0.060^{+0.200}_{-0.350}$	$3.180^{+0.367}_{-1.467}$	$1.905^{+0.112}_{-0.447}$	$0.083^{+0.319}_{-0.020}$
	+3%/-4%	+11%/-2%	+333%/-583%	+12%/-46%	+6%/-23%	+382%/-24%
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 009488426-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	7 ± 1	$1.41^{+0.95}_{-0.78}$	4042^{+246}_{-433}	-5740^{+881}_{-2679}	$-2.869^{+1.816}_{-11.546}$
Alt.	0 ± 2	$1.51^{+0.99}_{-0.80}$	4029^{+260}_{-486}	-3668^{+7531}_{-1148}	$-0.011^{+0.784}_{-1.159}$

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

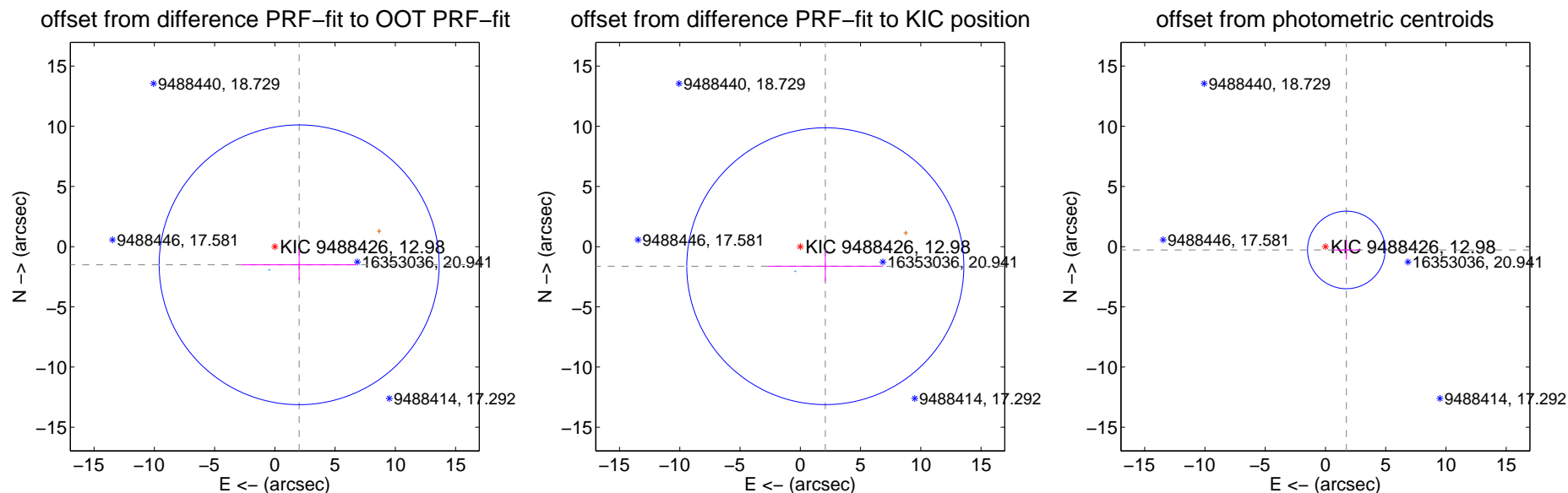
DV Centroid Data

Supplemental centroid analysis for 009488426-01. Kepler magnitude: 12.98. Transit SNR 11.80

There are 1 quarters with good PRF difference image offsets

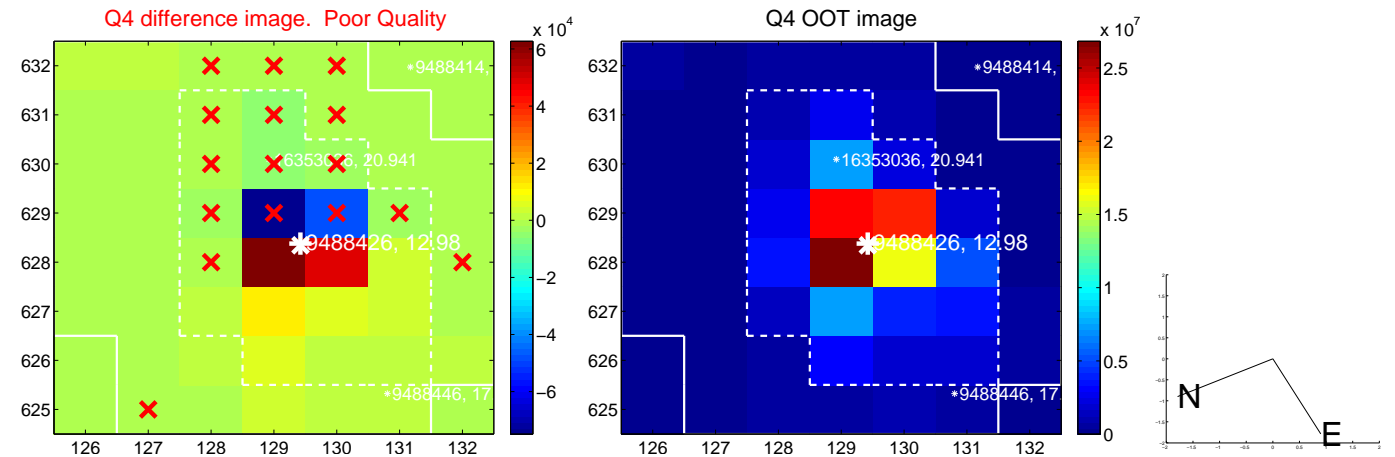
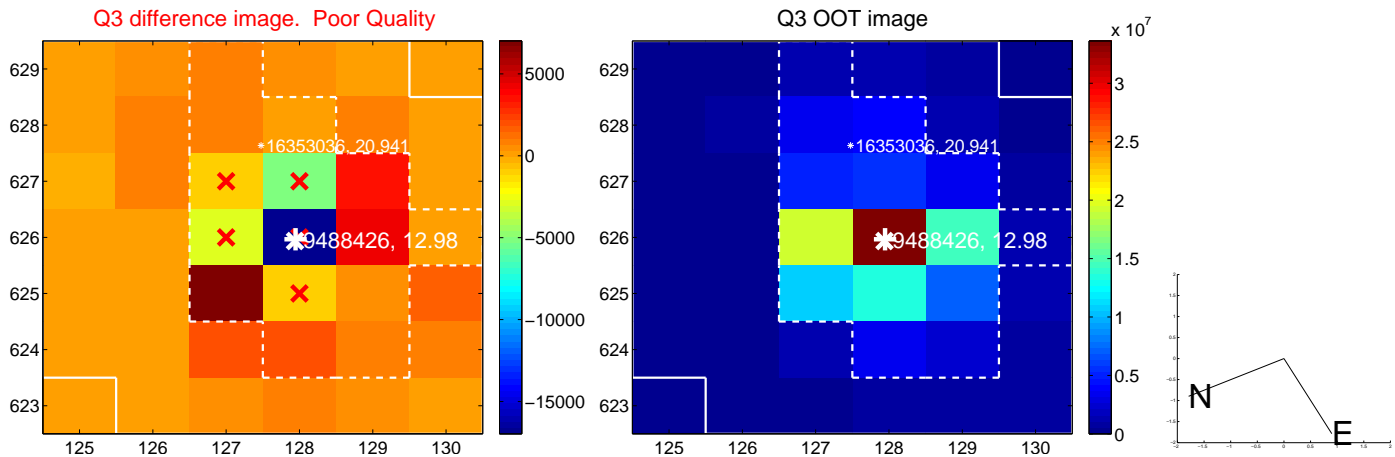
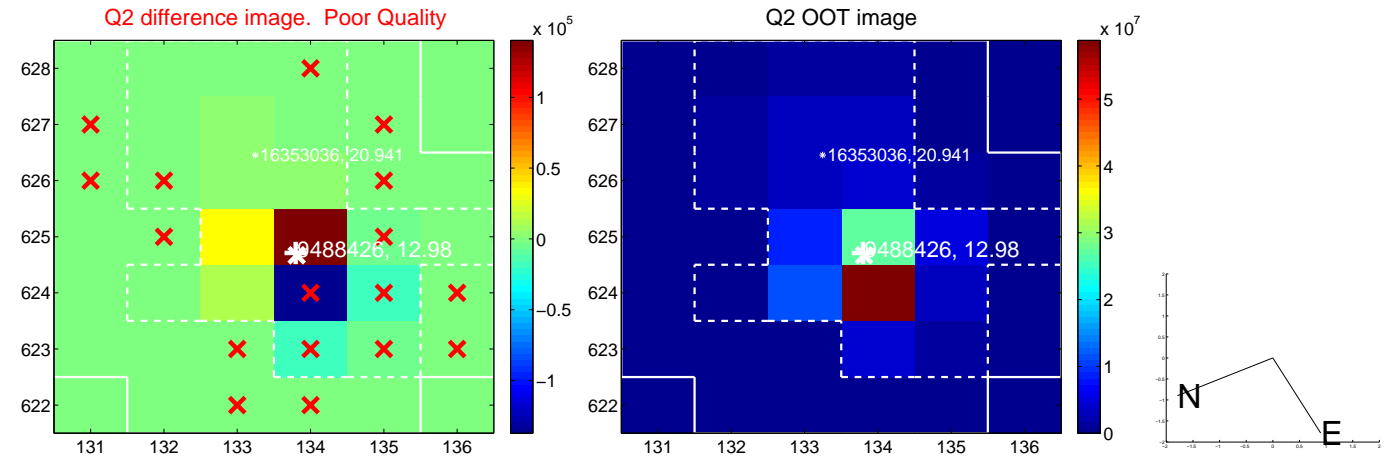
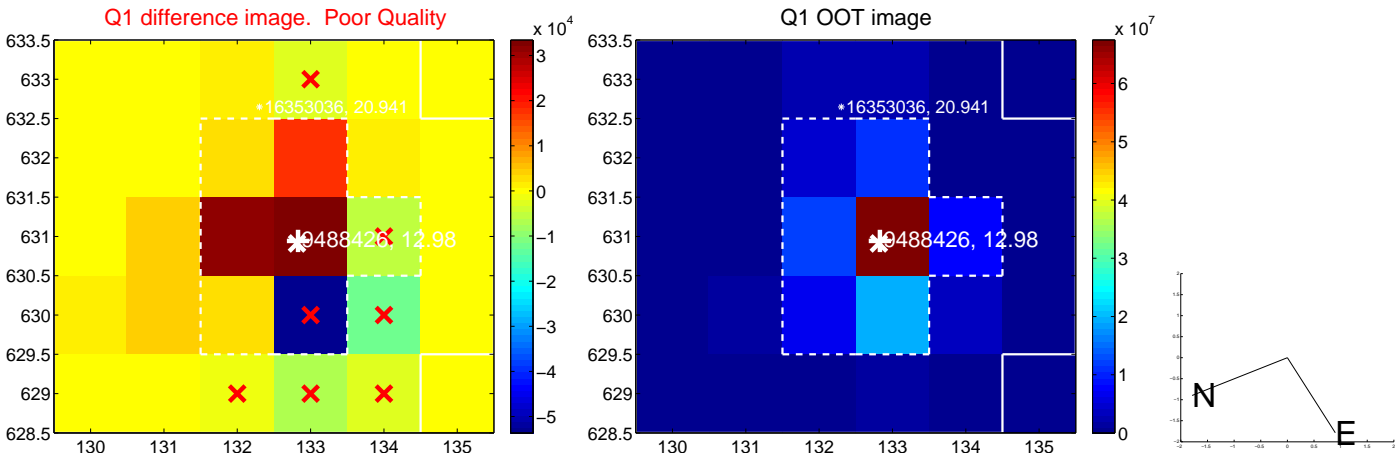
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.519 ± 3.873	0.65	-2.018 ± 4.741	-1.509 ± 1.273
PRF-fit source offset from KIC position	2.636 ± 3.832	0.69	-2.076 ± 4.766	-1.624 ± 1.259
photometric centroid source offset	1.76 ± 1.07	1.64	-1.73 ± 1.08	-0.27 ± 0.81

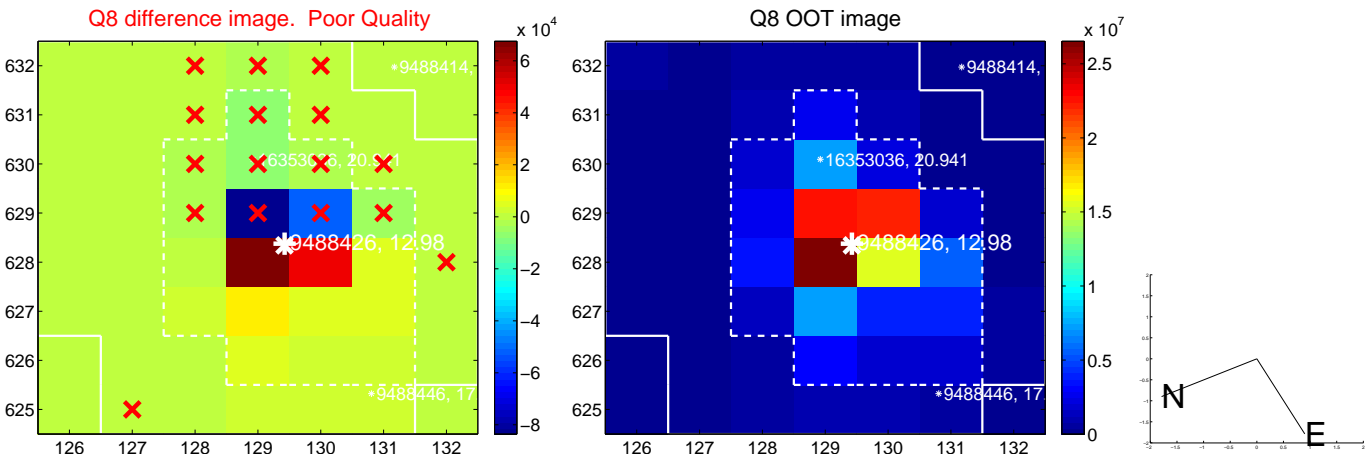
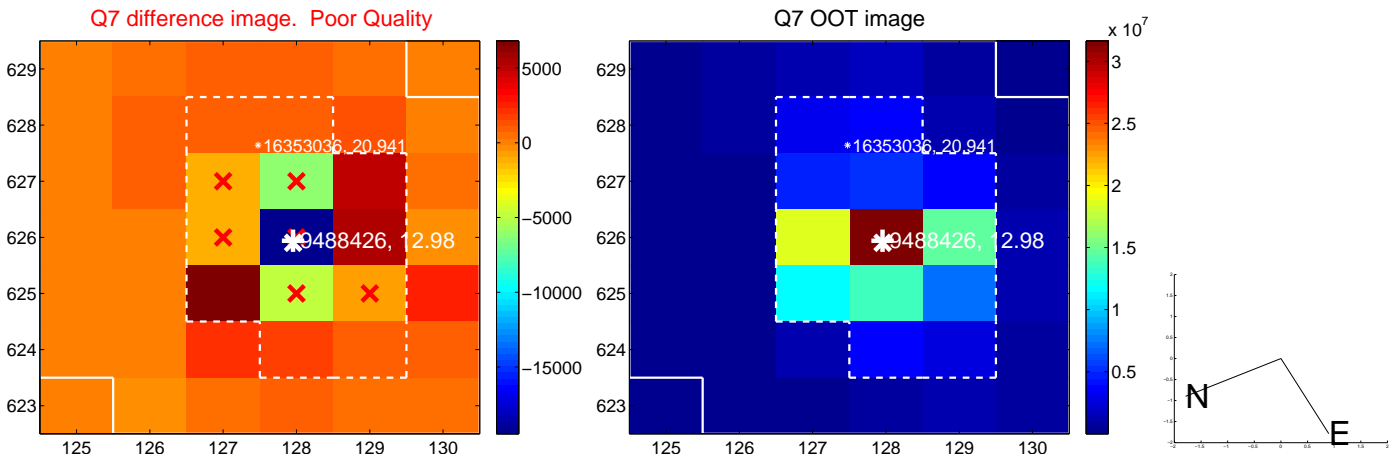
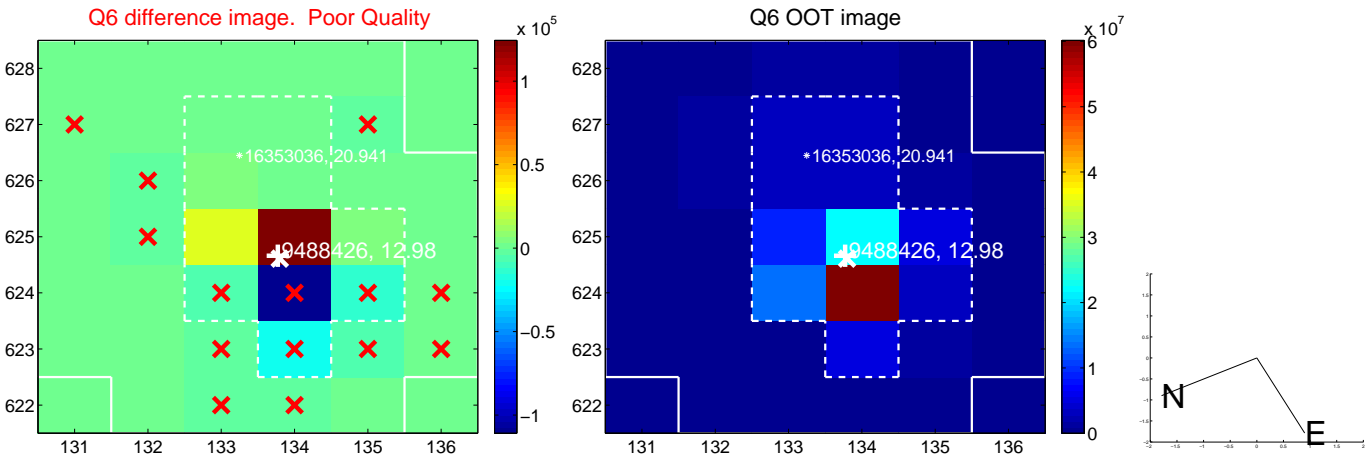
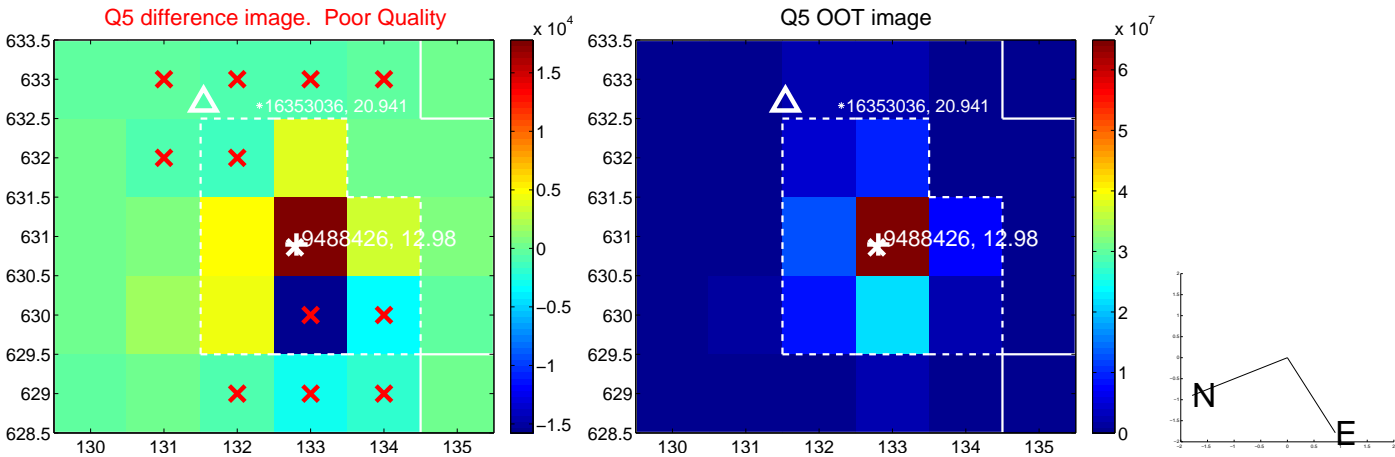


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

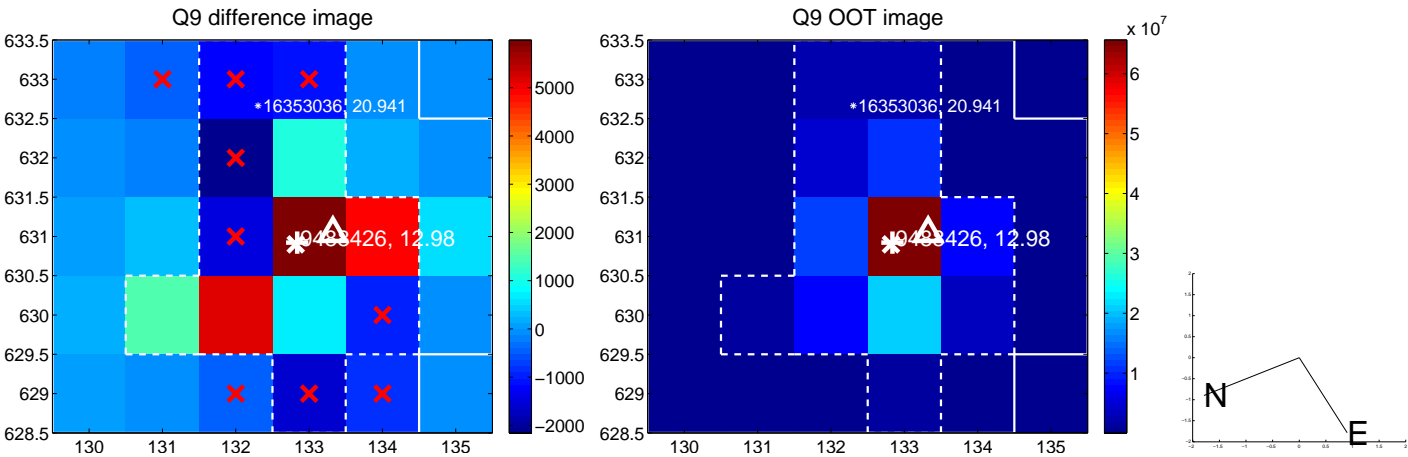
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



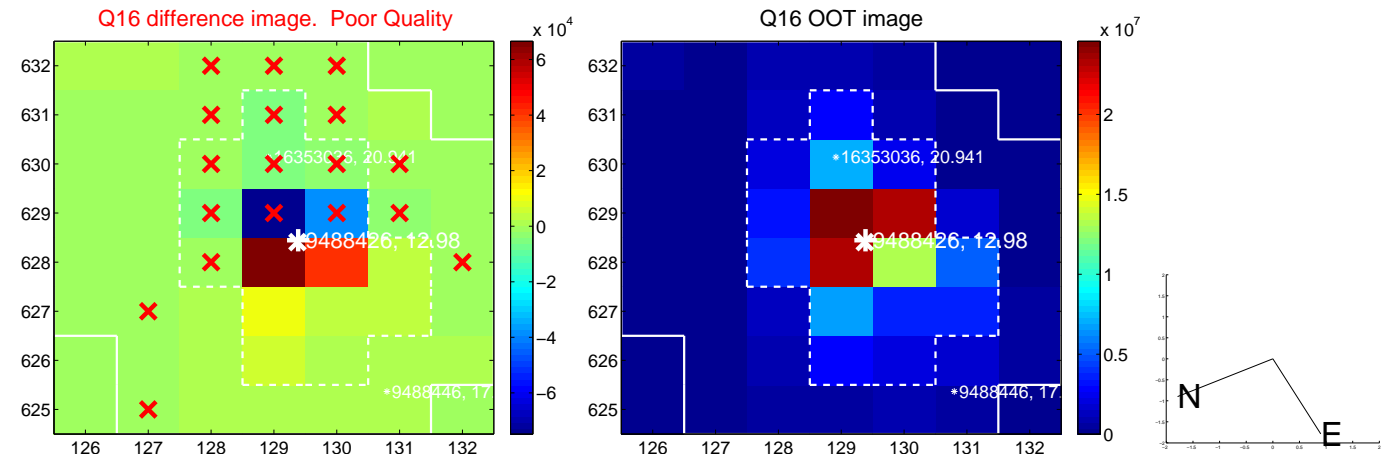
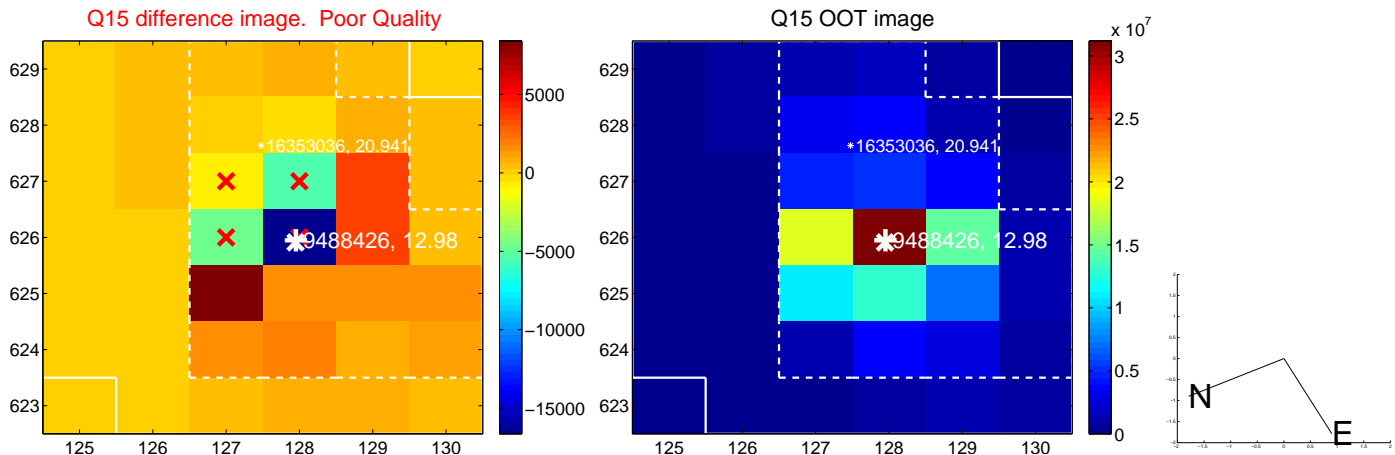
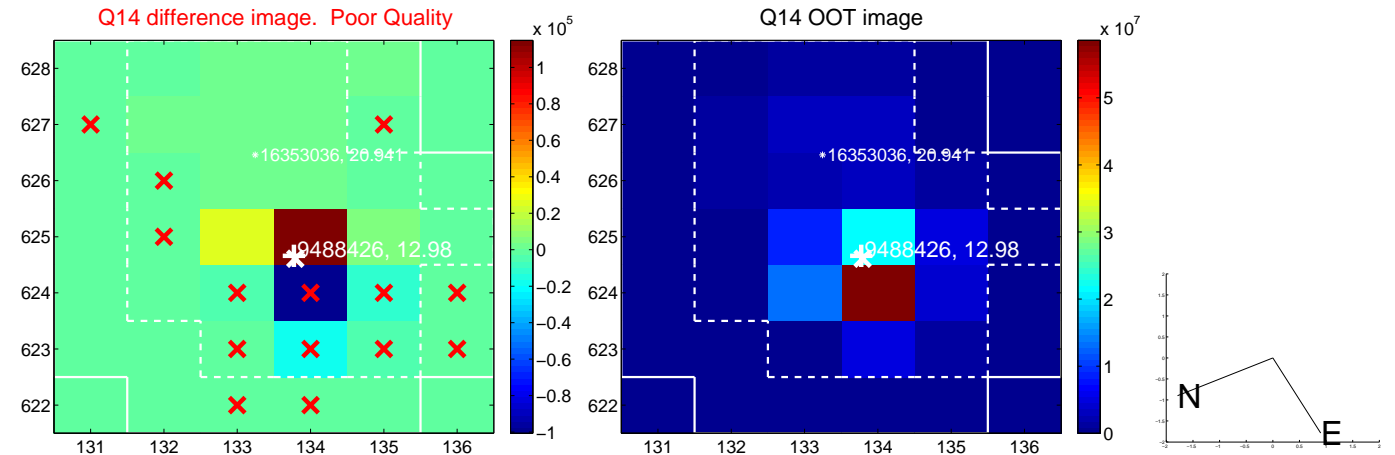
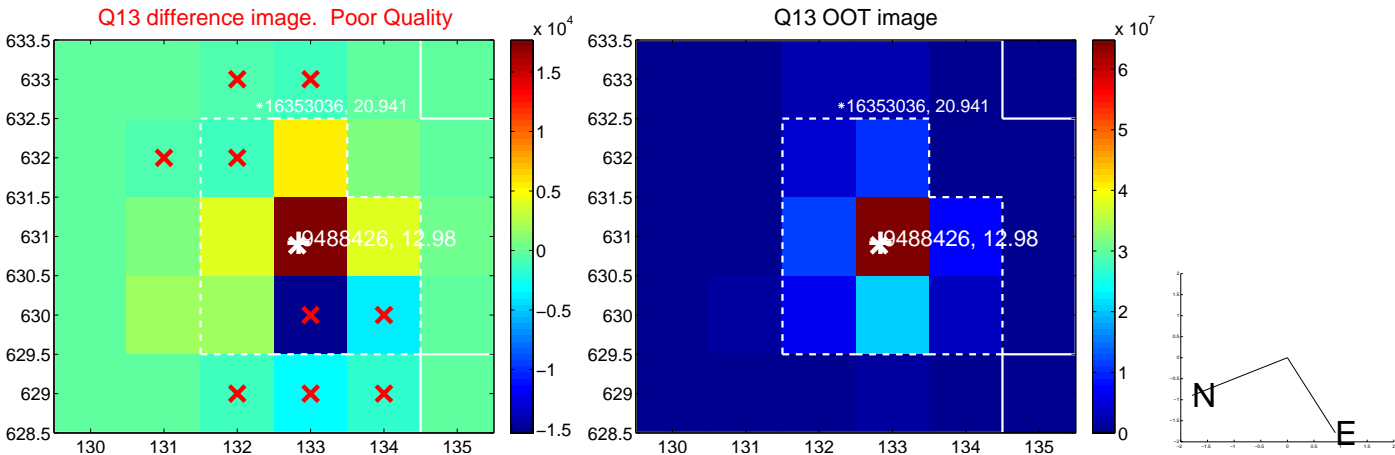
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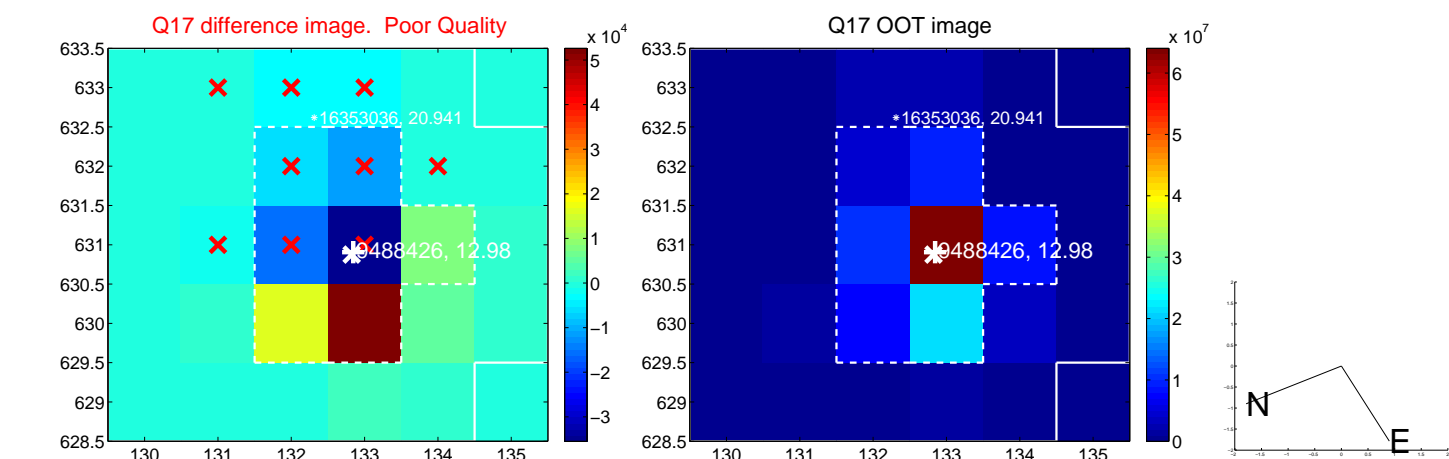
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



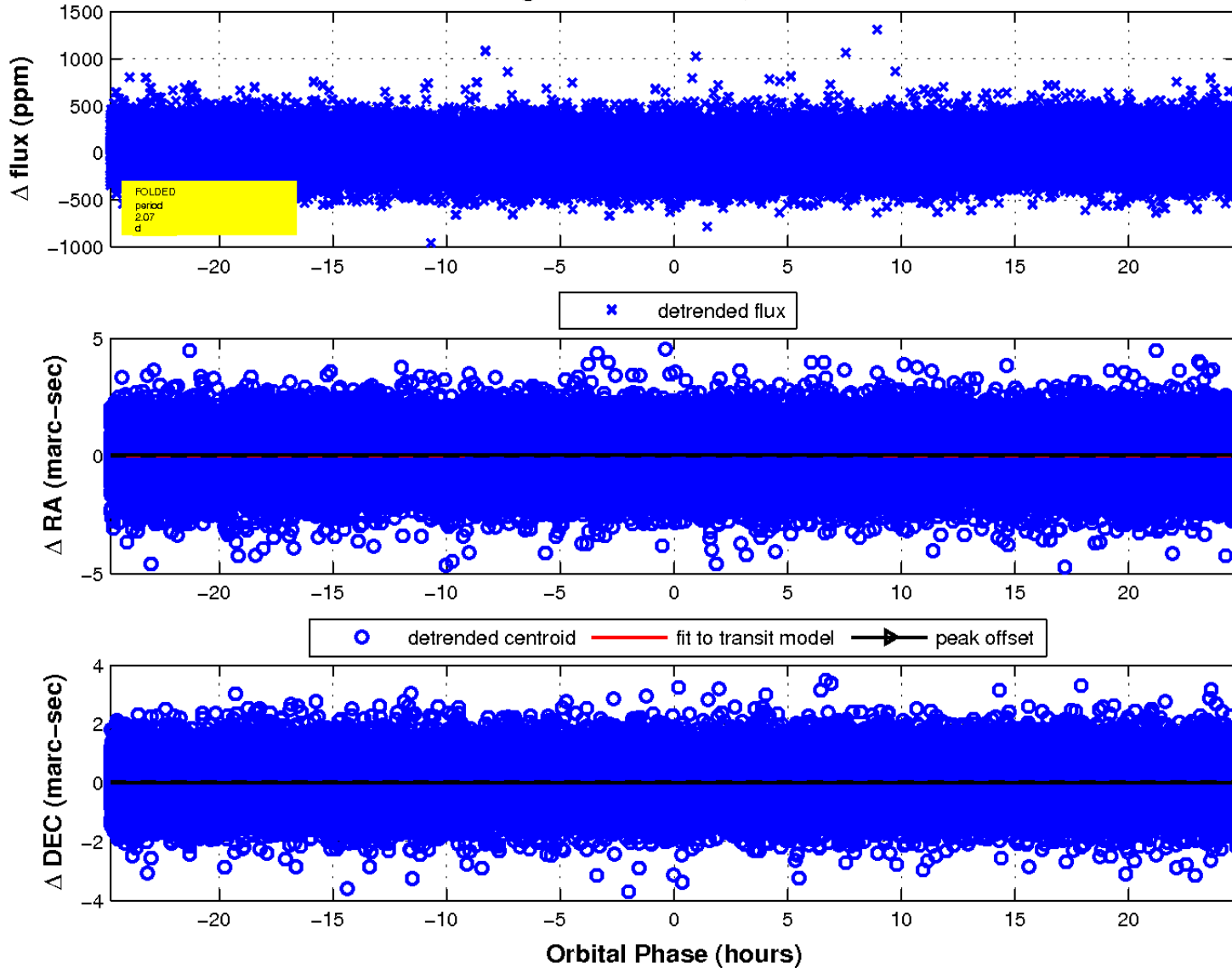
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

