

KIC 008488381

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})
008488381-01	OBS	7888.01	4.736967	131.762829	37.2	2.535	7.2	6.5	1.01	6088	0.70	395.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008488381-01	OBS	PC	0.53	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.

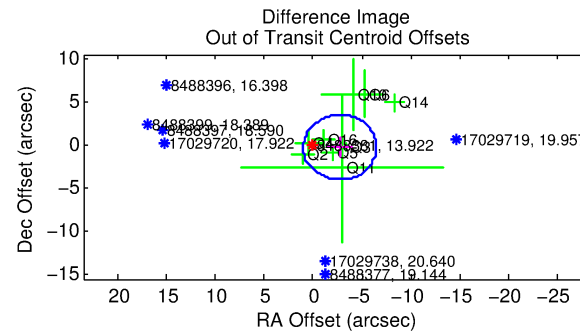
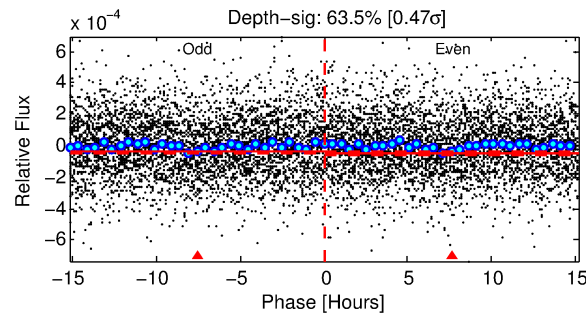
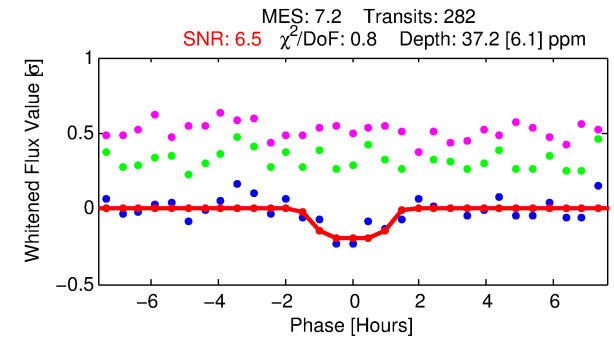
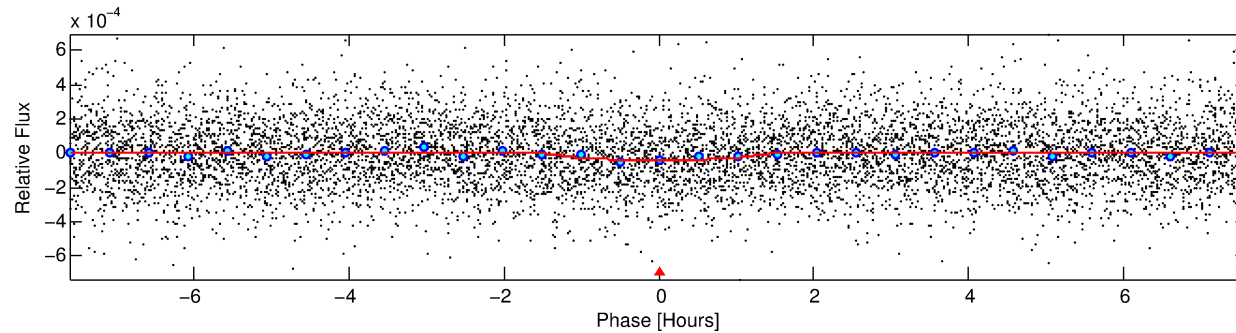
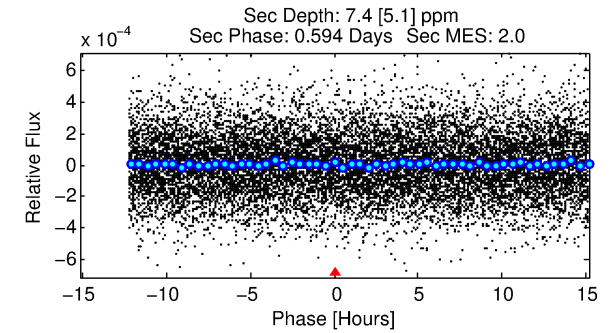
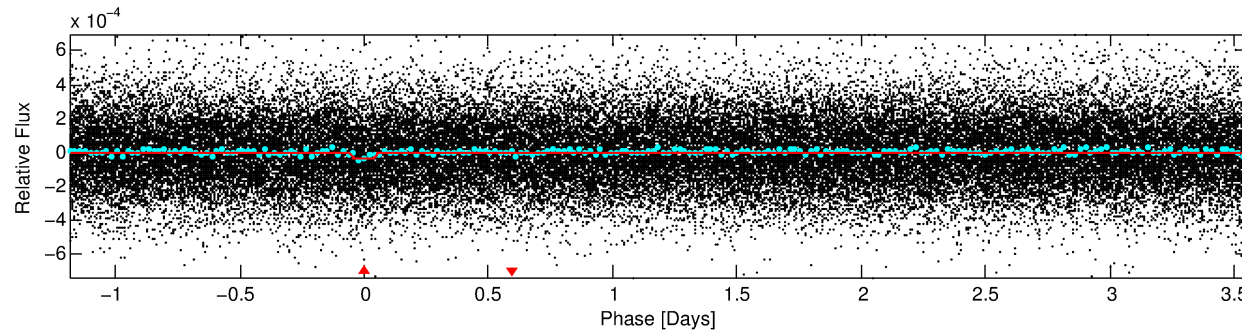
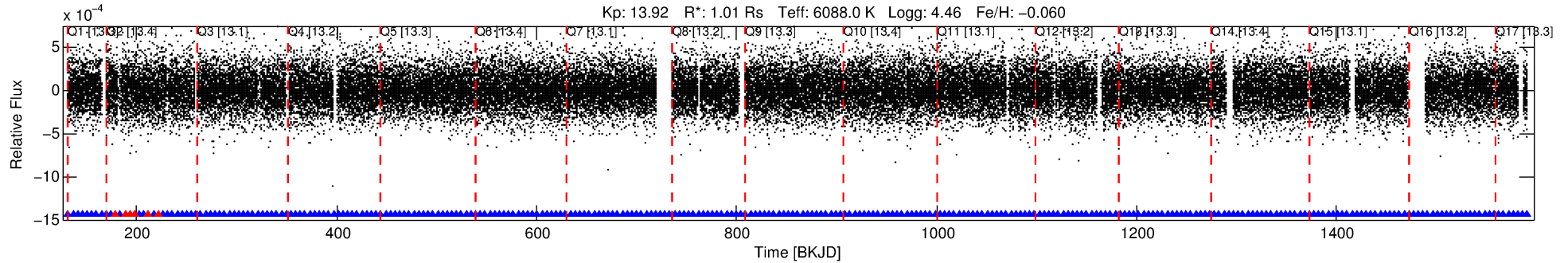
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008488381-01

No Significant Match Found

DV One-Page Summary

KIC: 8488381 Candidate: 1 of 1 Period: 4.737 d



DV Fit Results:

Period = 4.73697 [0.00005] d
Epoch = 131.7628 [0.0074] BKJD
Rp/R* = 0.0063 [0.0044]
a/R* = 8.01 [27.41]
b = 0.84 [1.26]
Seff = 395.63 [169.13]
Teq = 1137 [122] K
Rp = 0.70 [0.53] Re
a = 0.0564 [0.0156] AU
Ag = 26.75 [42.62] [0.60σ]
Teffp = 3999 [1546] K [1.85σ]

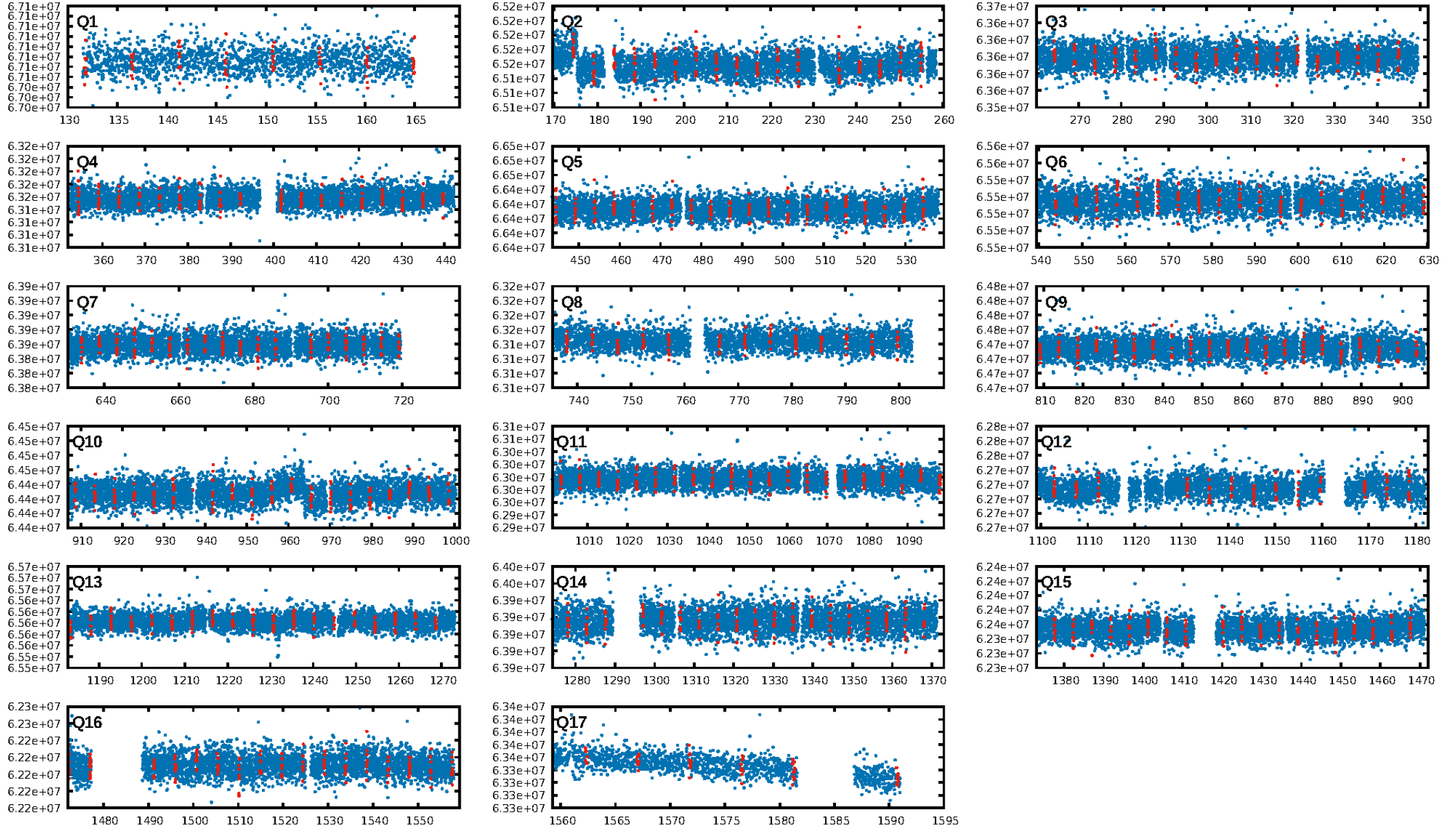
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.04e-12
RollingBand-fgt: 0.98 [262/268]
GhostDiagnostic-chr: 3.122
Centroid-sig: 99.6%
Centroid-so: 0.064 arcsec [0.03σ]
OotOffset-rm: 2.734 arcsec [2.19σ]
KicOffset-rm: 2.626 arcsec [2.11σ]
OotOffset-st: 4/2/2/1 [9]
KicOffset-st: 4/2/2/1 [9]
DiffImageQuality-fgm: 0.22 [2/9]
DiffImageOverlap-fno: 1.00 [17/17]

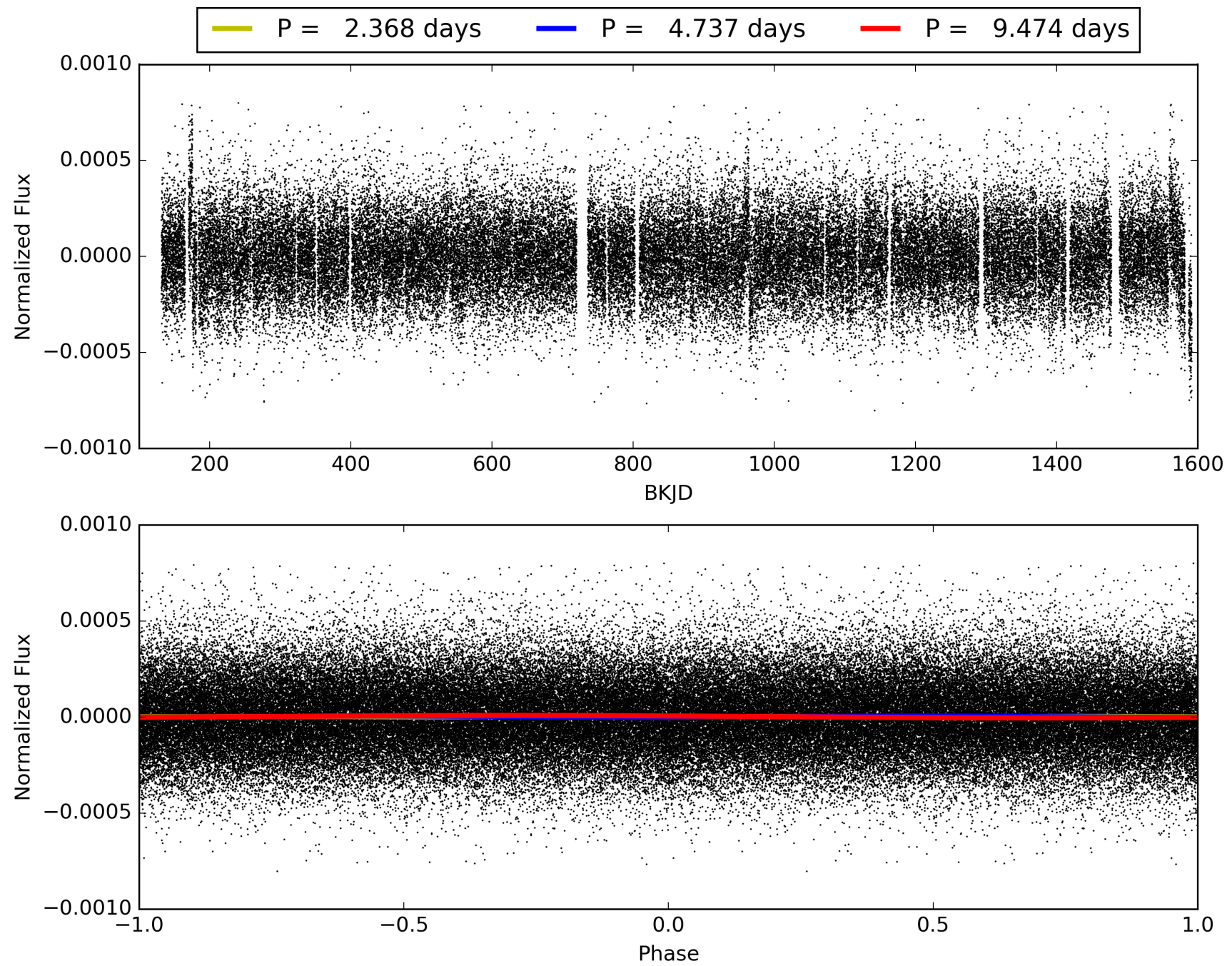
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:17:24 Z

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

TCE 008488381-01, PDC Light Curves

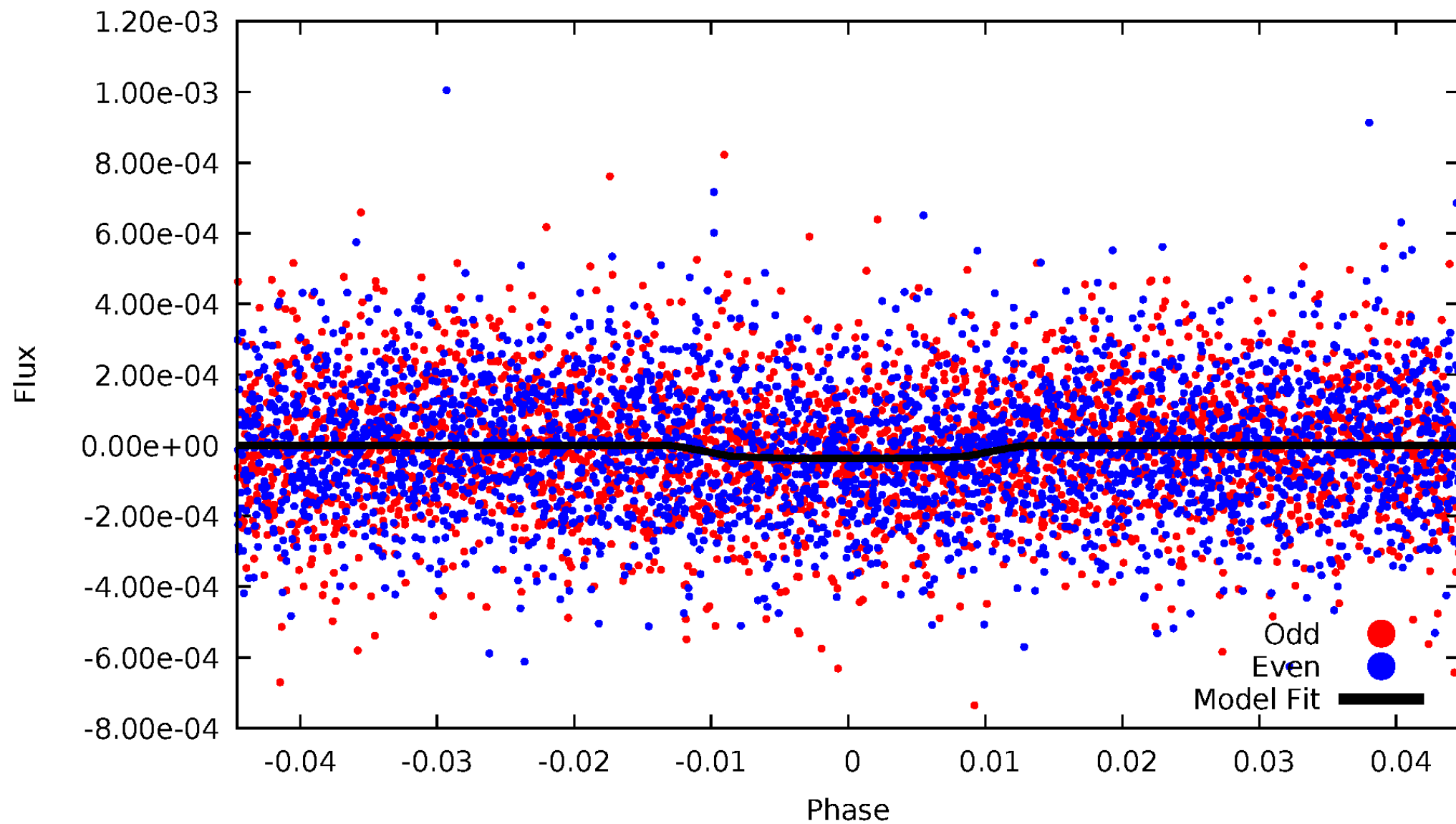


TCE 008488381-01



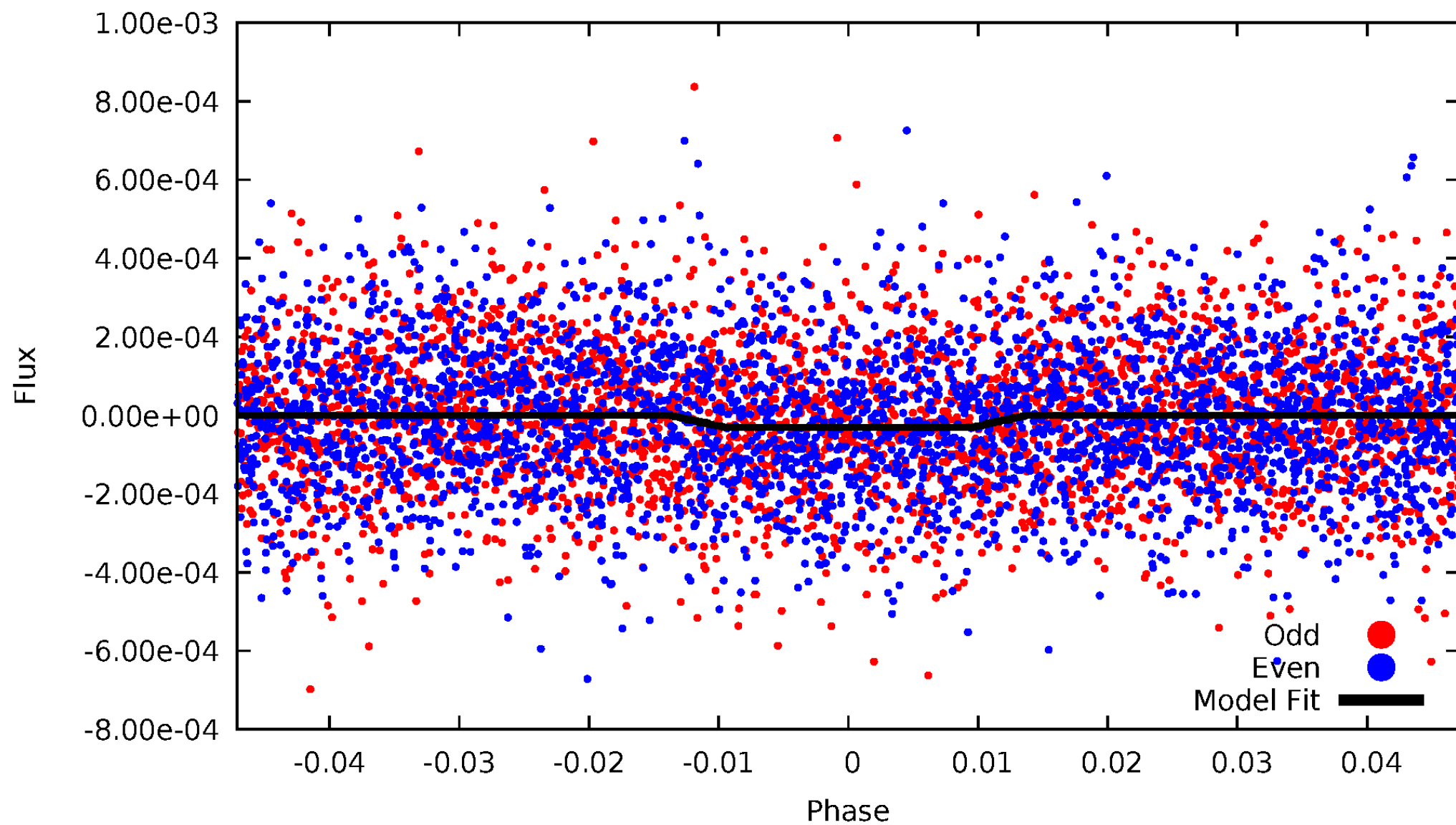
DV Odd/Even

TCE 008488381-01



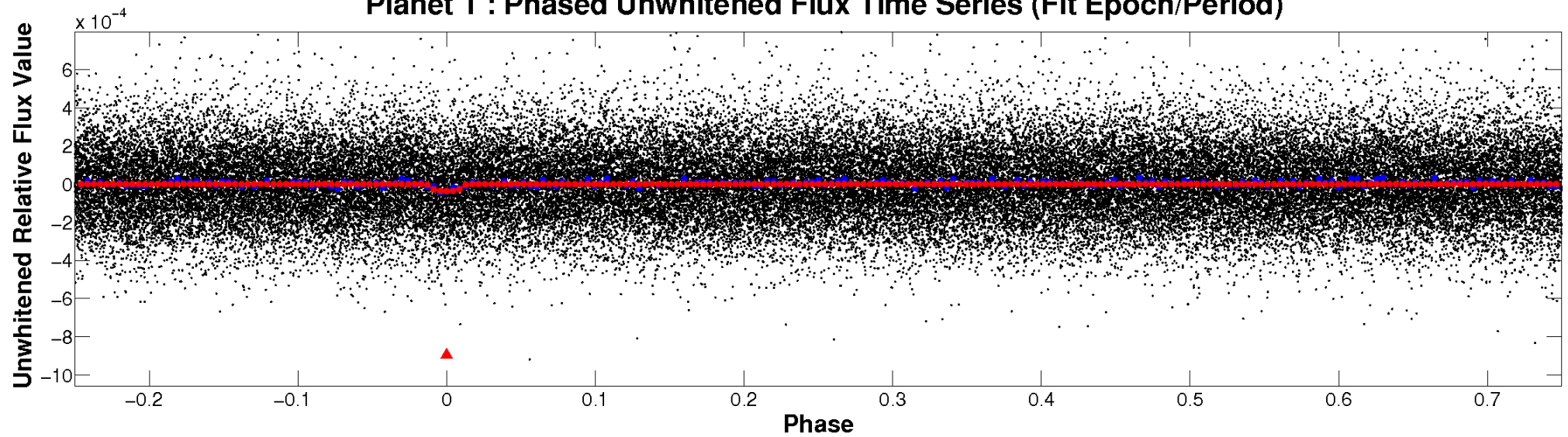
ALT Odd/Even

TCE 008488381-01

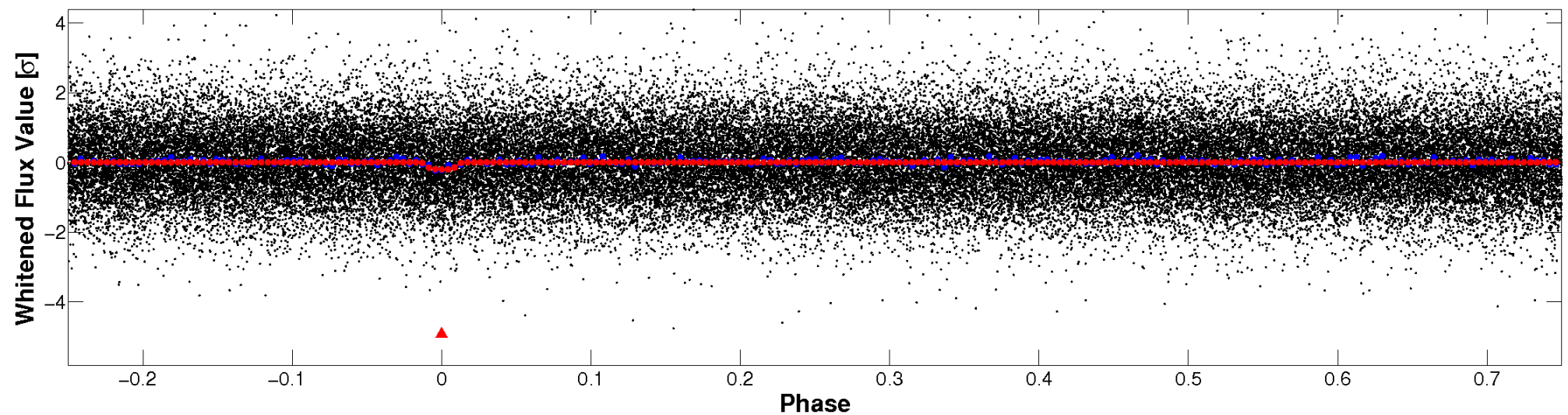


Non-Whitened Vs. Whitened Light Curve

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

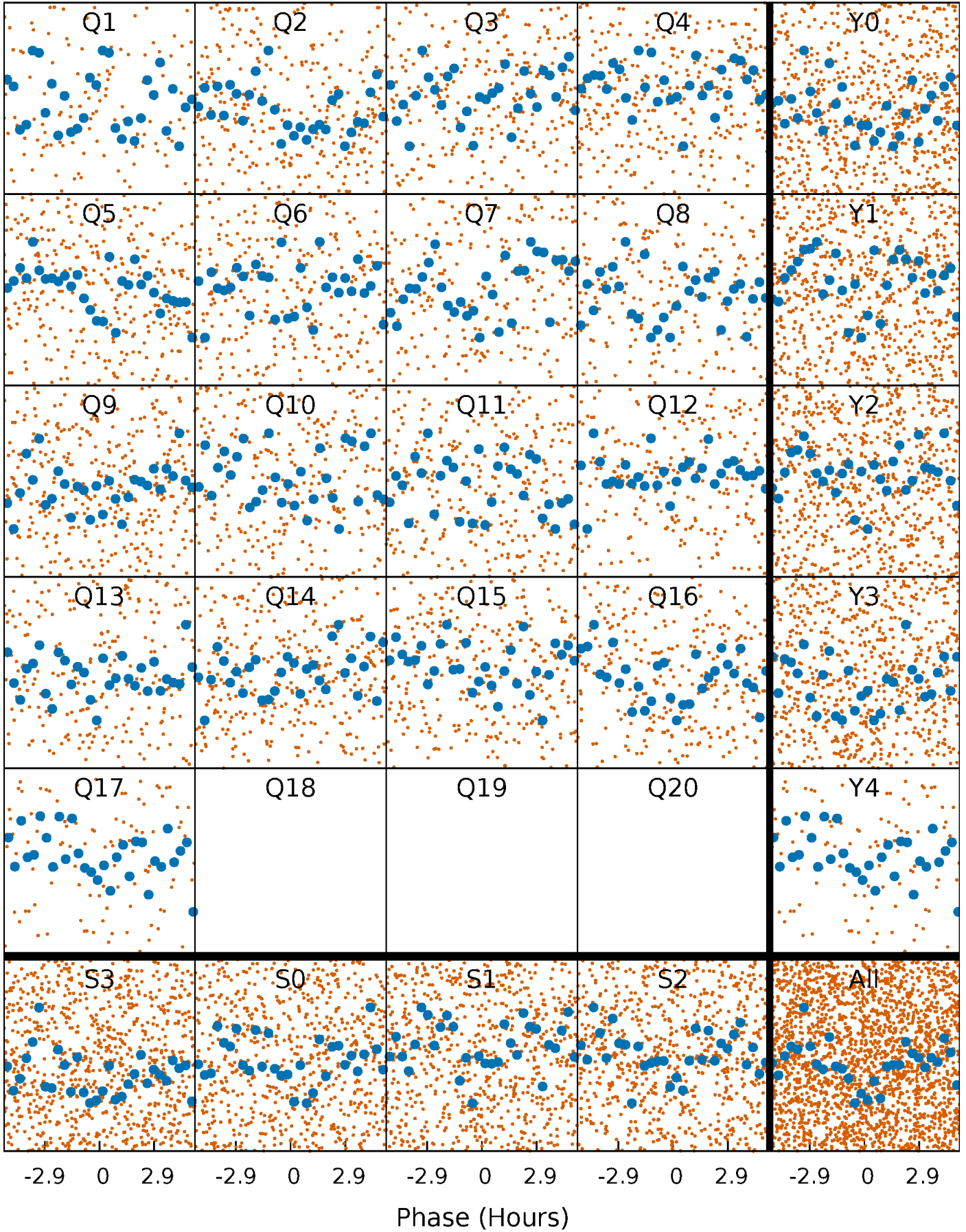


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



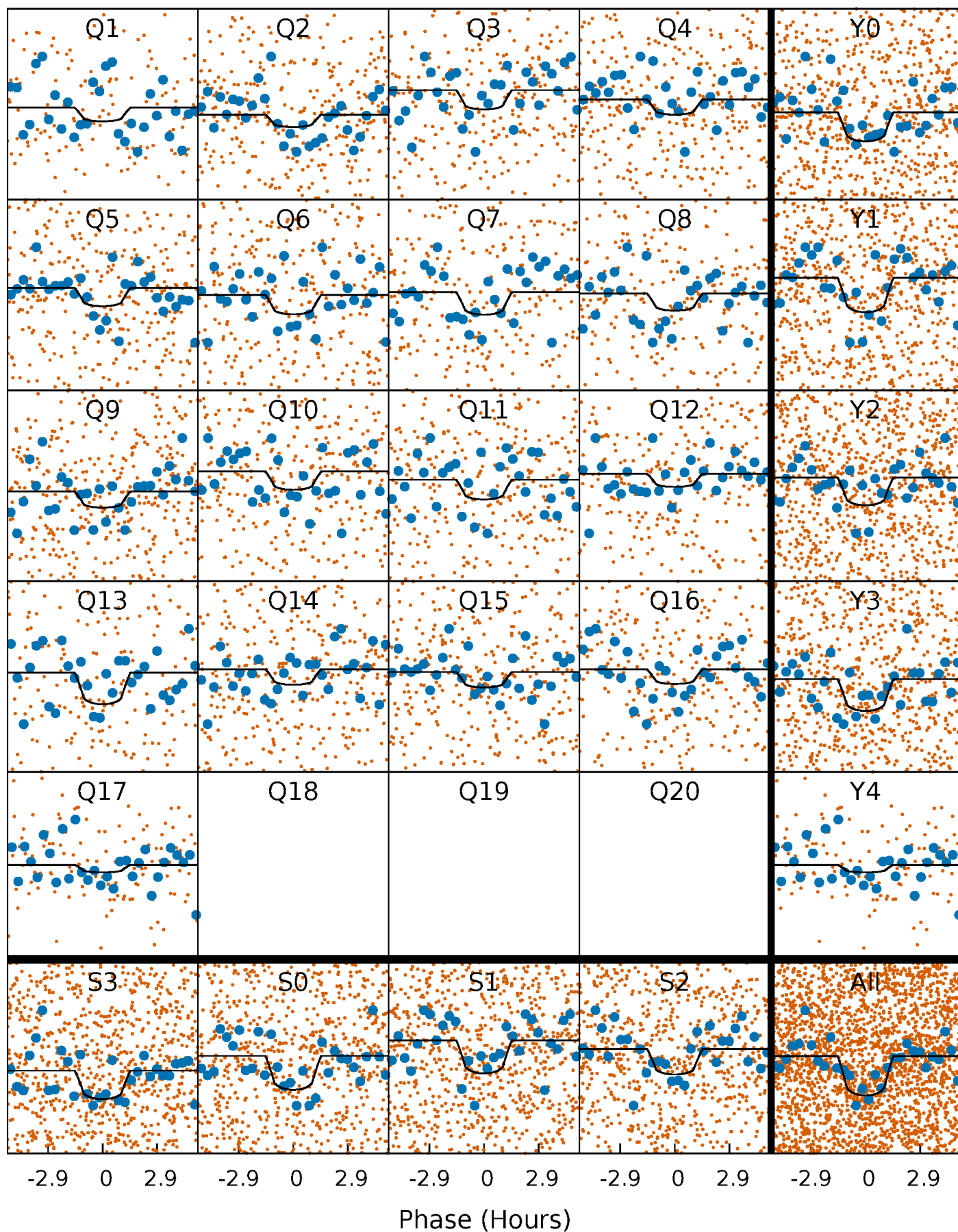
PDC Quarter-Phased Transit Curves

TCE 008488381-01 P= 4.736967 Days $T_0=131.762830$ (BKJD)



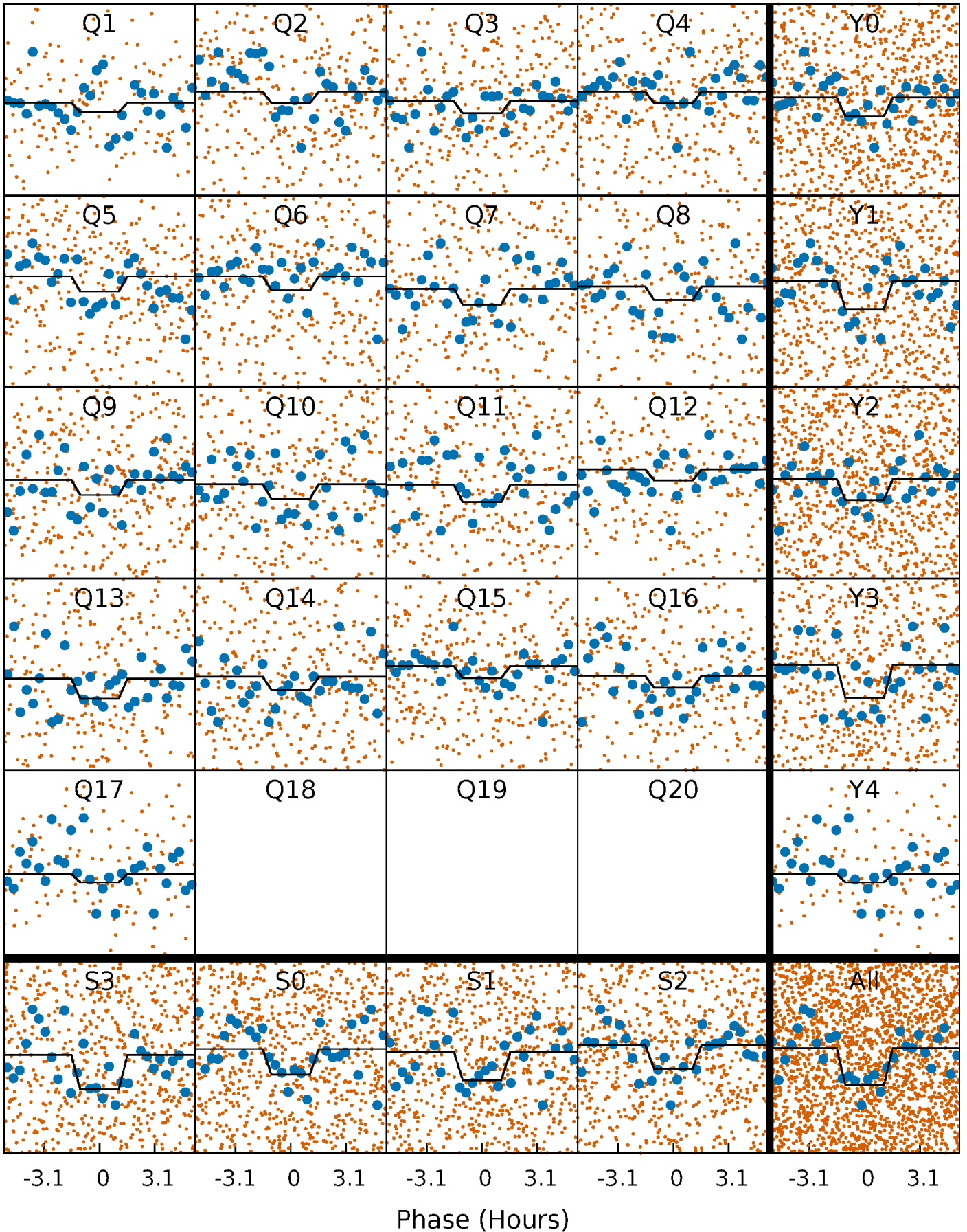
DV Quarter-Phased Transit Curves

TCE 008488381-01 P= 4.736967 Days $T_0=131.762830$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

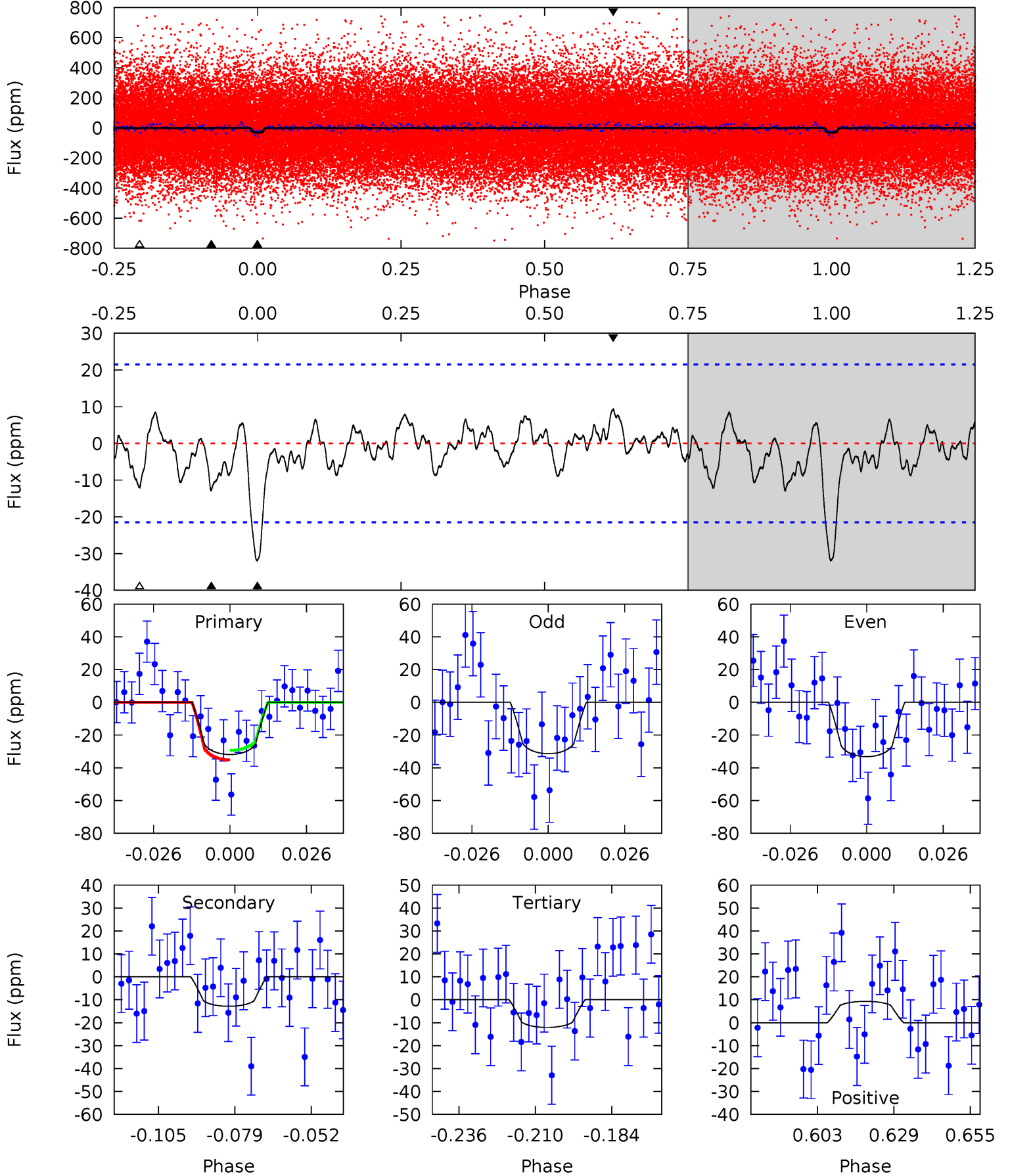
TCE 008488381-01 P= 4.736858 Days $T_0=131.778663$ (BKJD)



DV Model-Shift Uniqueness Test

008488381-01, P = 4.736967 Days, E = 127.025863 Days

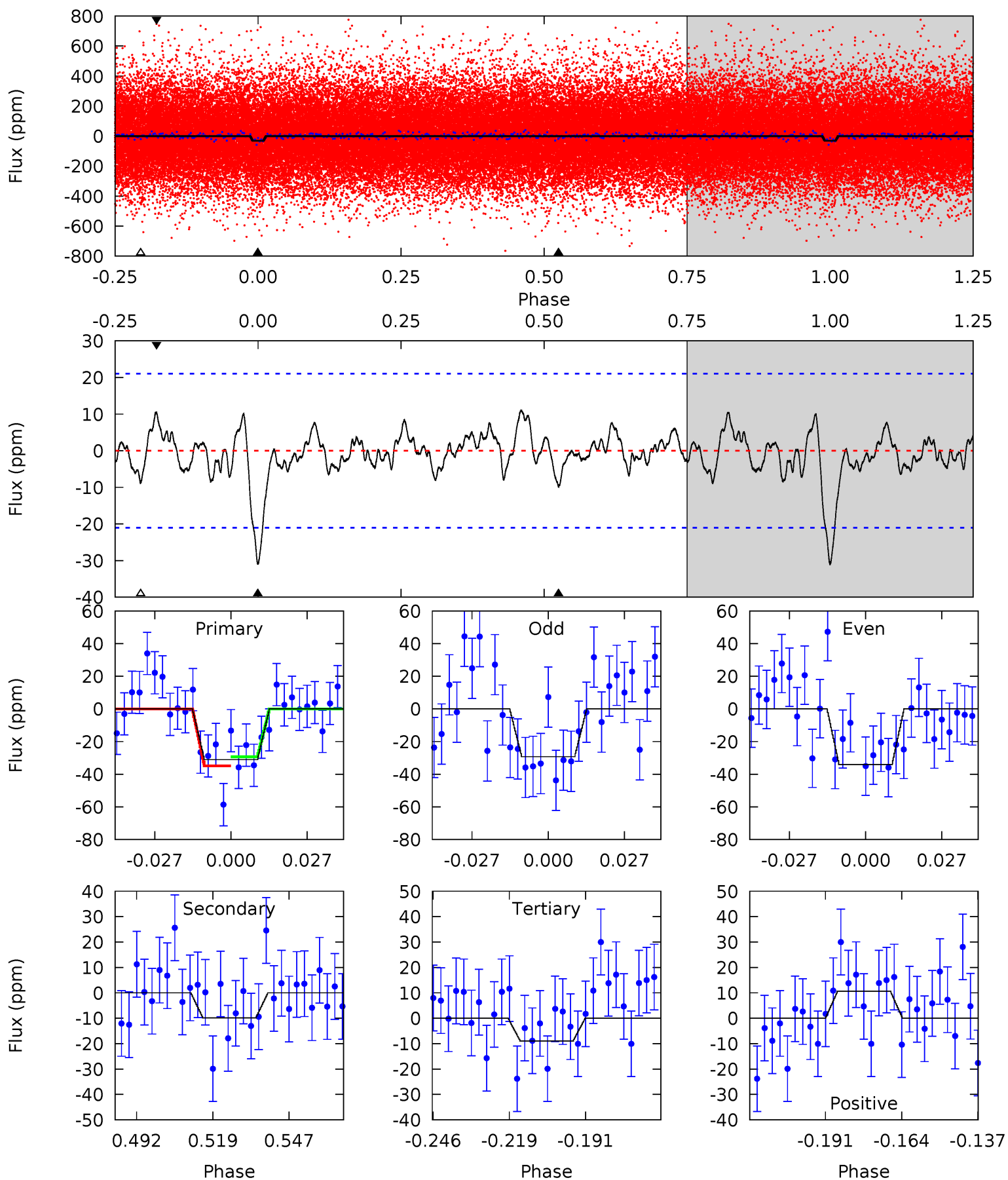
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.18	2.89	2.71	2.09	4.84	2.22	0.97	4.46	5.08	0.18	0.80	0.20	0.94	0.23	0.66



Alt Model-Shift Uniqueness Test

008488381-01, P = 4.736858 Days, E = 127.041805 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.13	2.27	2.05	2.43	4.83	2.21	0.91	5.08	4.70	0.22	-0.17	0.55	1.05	0.26	0.64



Stellar Parameters For KIC 008488381

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6088^{+165}_{-201}	$4.456^{+0.056}_{-0.224}$	$-0.060^{+0.250}_{-0.300}$	$1.011^{+0.329}_{-0.110}$	$1.060^{+0.148}_{-0.133}$	$1.446^{+0.430}_{-0.787}$
	+3%/-3%	+1%/-5%	+417%/-500%	+33%/-11%	+14%/-13%	+30%/-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 008488381-01 / KOI 7888.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-13 ± 4	$0.76^{+0.52}_{-0.43}$	1631^{+118}_{-81}	4677^{+2263}_{-905}	37^{+164}_{-25}
Alt.	-10 ± 4	$0.70^{+0.51}_{-0.42}$	1623^{+120}_{-74}	4491^{+2228}_{-883}	30^{+172}_{-21}

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

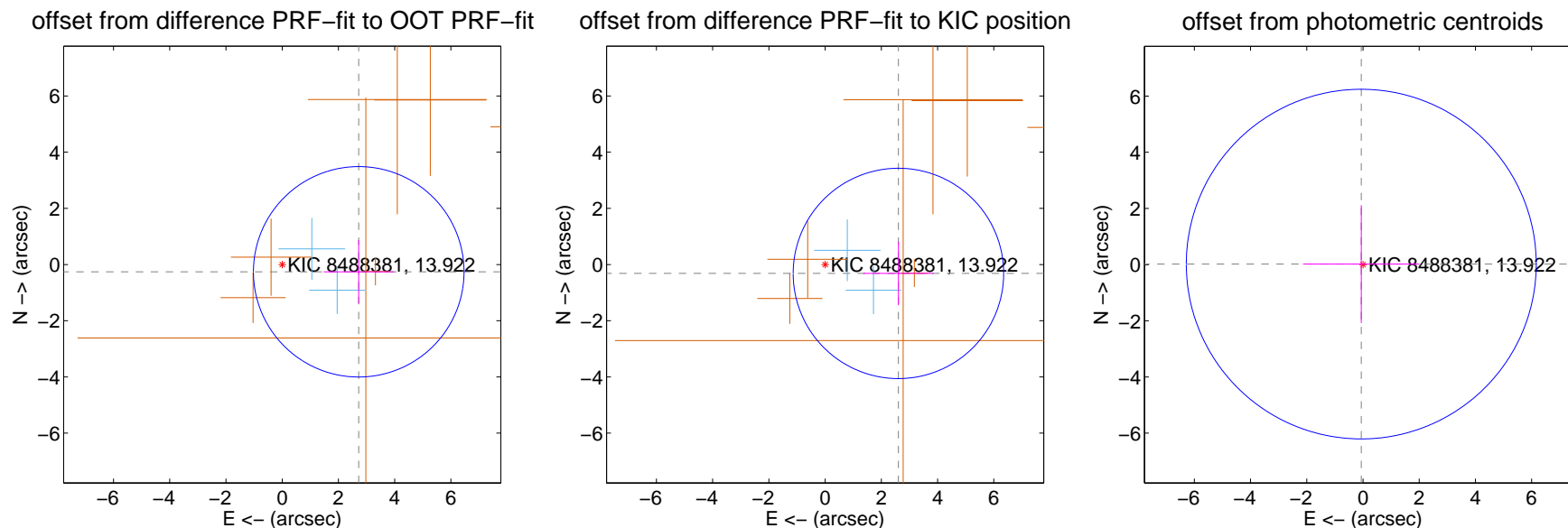
DV Centroid Data

Supplemental centroid analysis for 008488381-01. Kepler magnitude: 13.92. Transit SNR 6.53

There are 2 quarters with good PRF difference image offsets

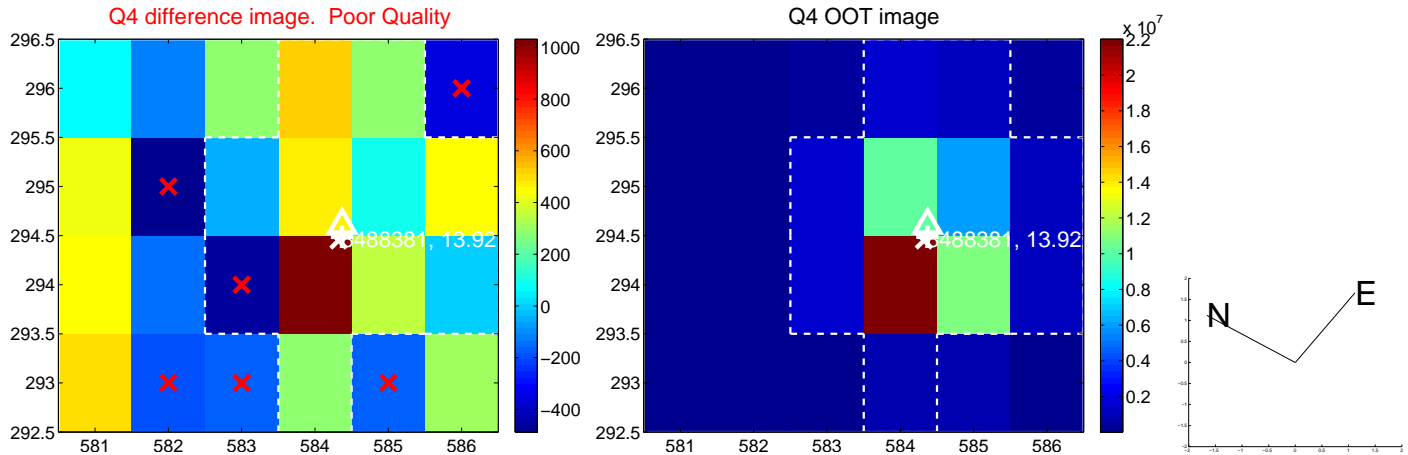
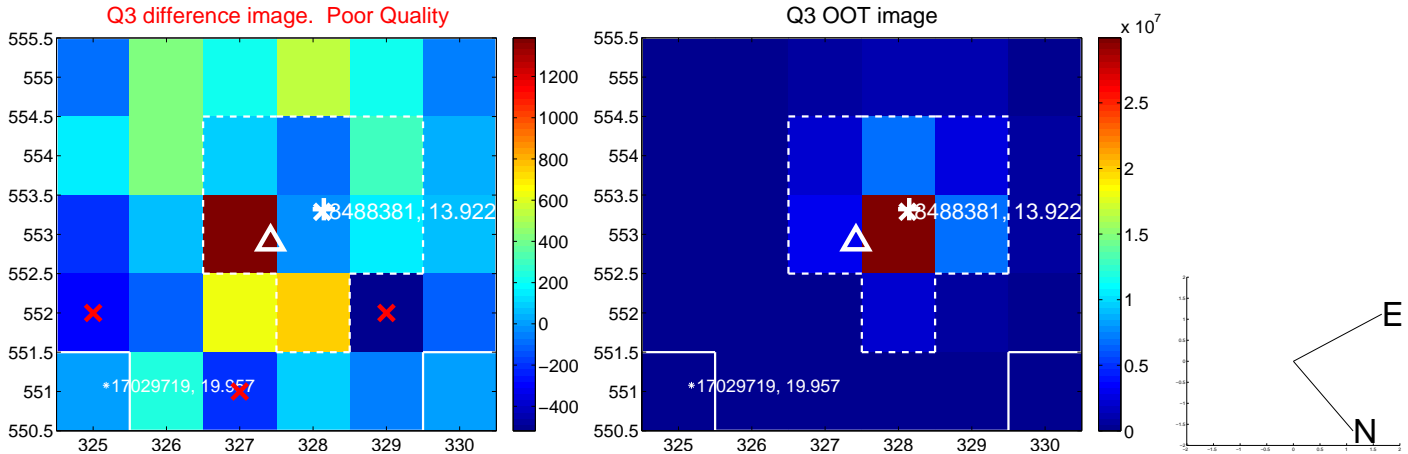
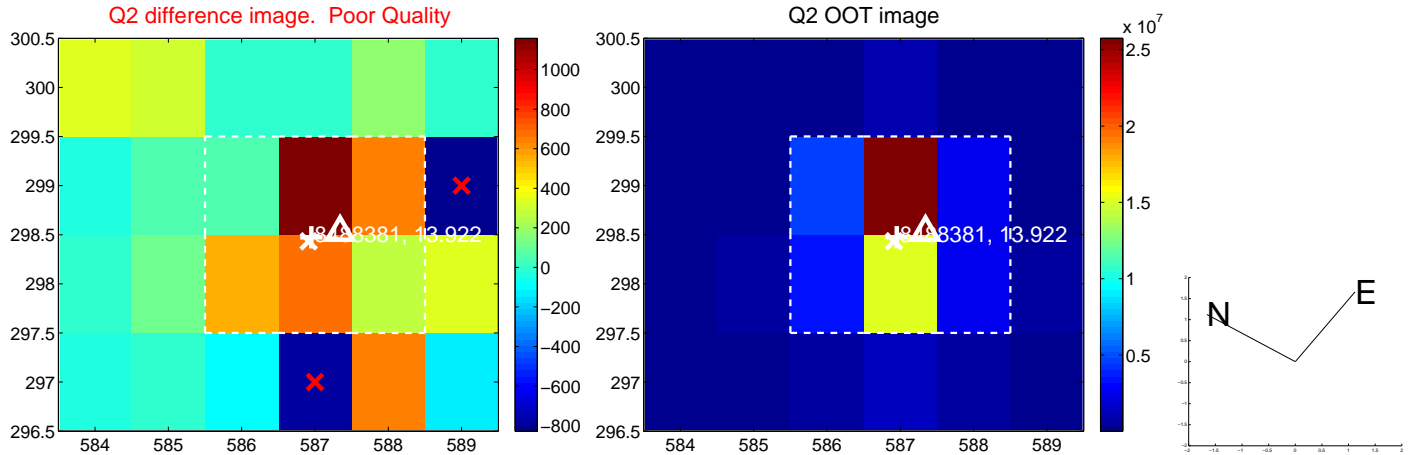
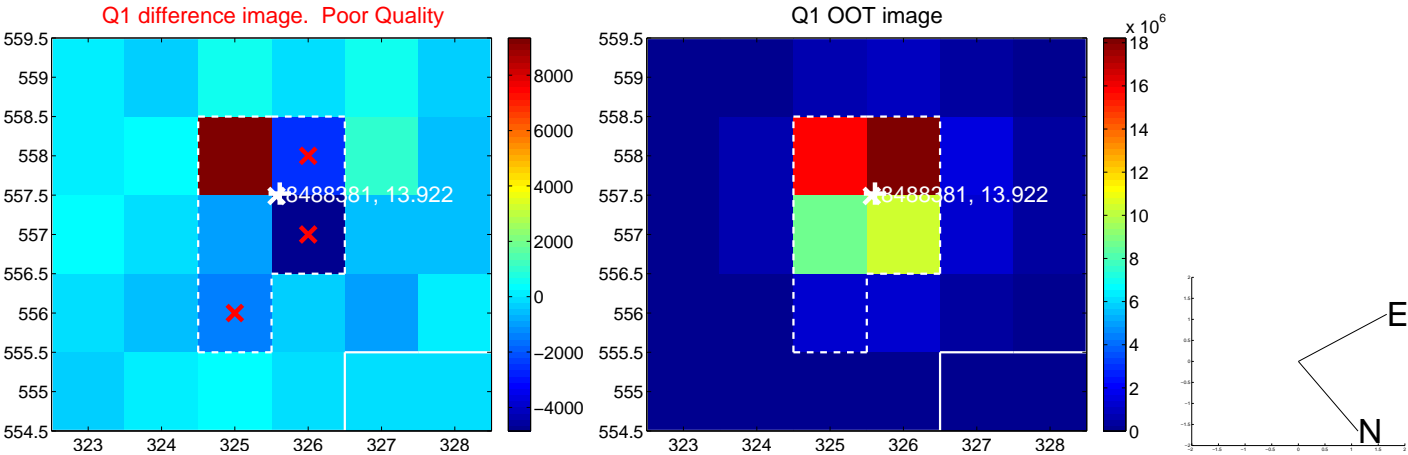
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.734 ± 1.248	2.19	-2.721 ± 1.249	-0.258 ± 1.130
PRF-fit source offset from KIC position	2.626 ± 1.247	2.11	-2.607 ± 1.249	-0.316 ± 1.130
photometric centroid source offset	0.06 ± 2.07	0.03	0.06 ± 2.07	0.02 ± 2.10

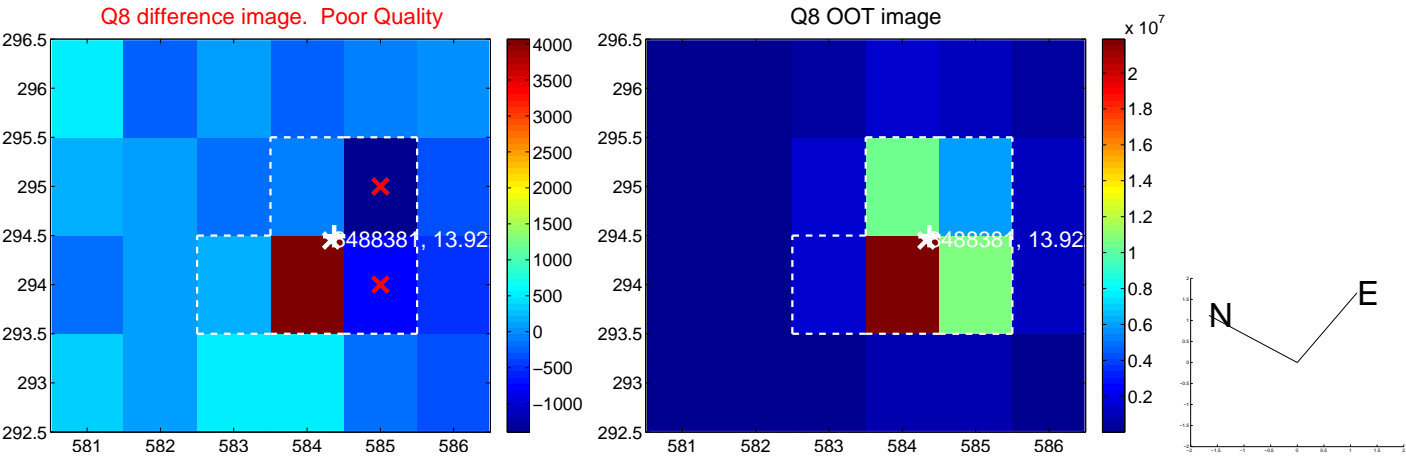
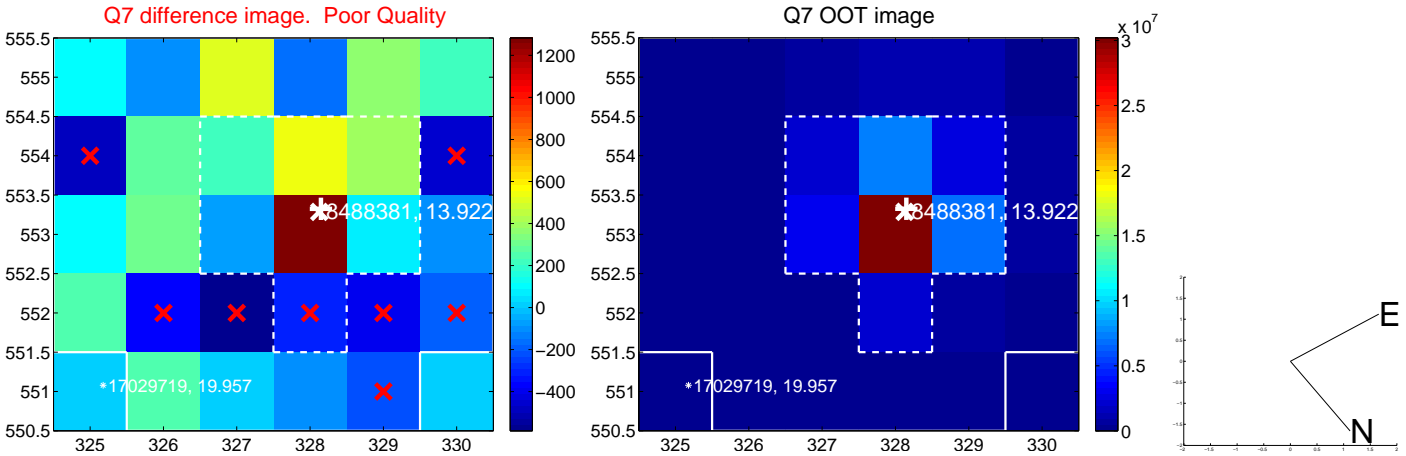
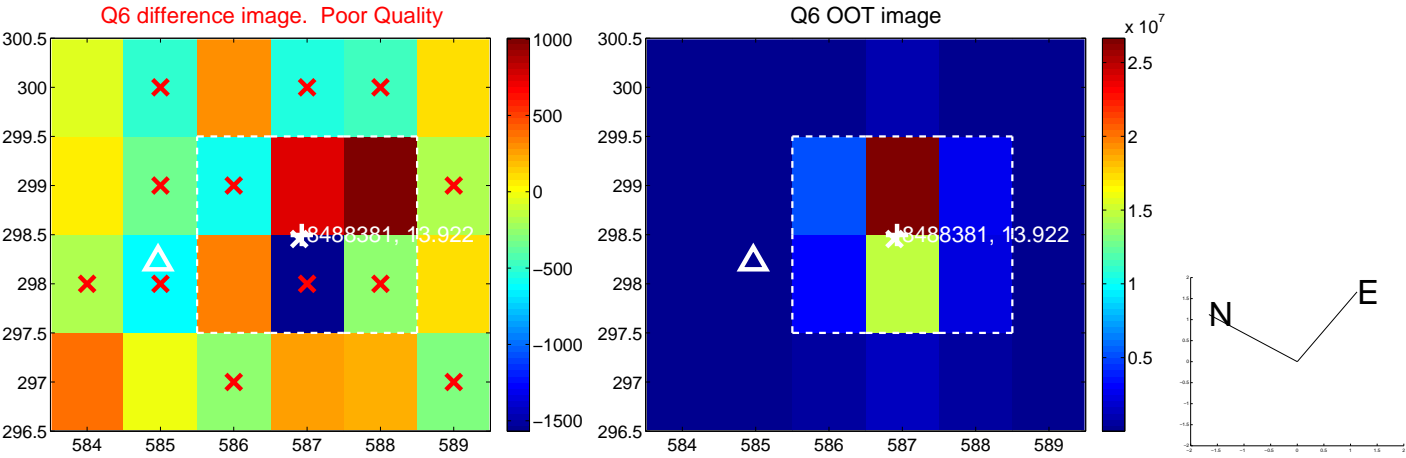
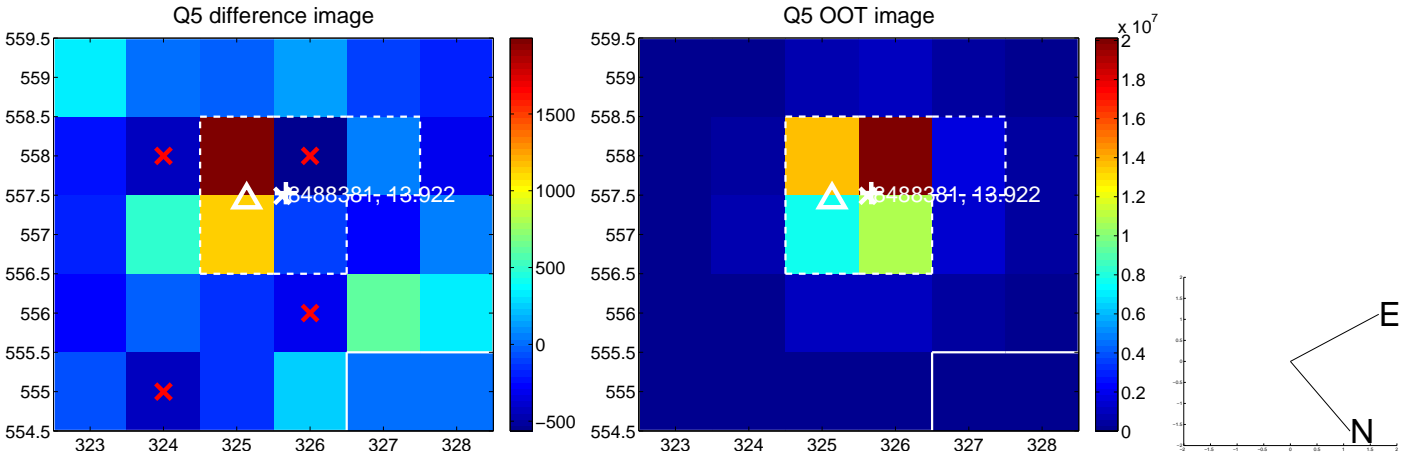


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

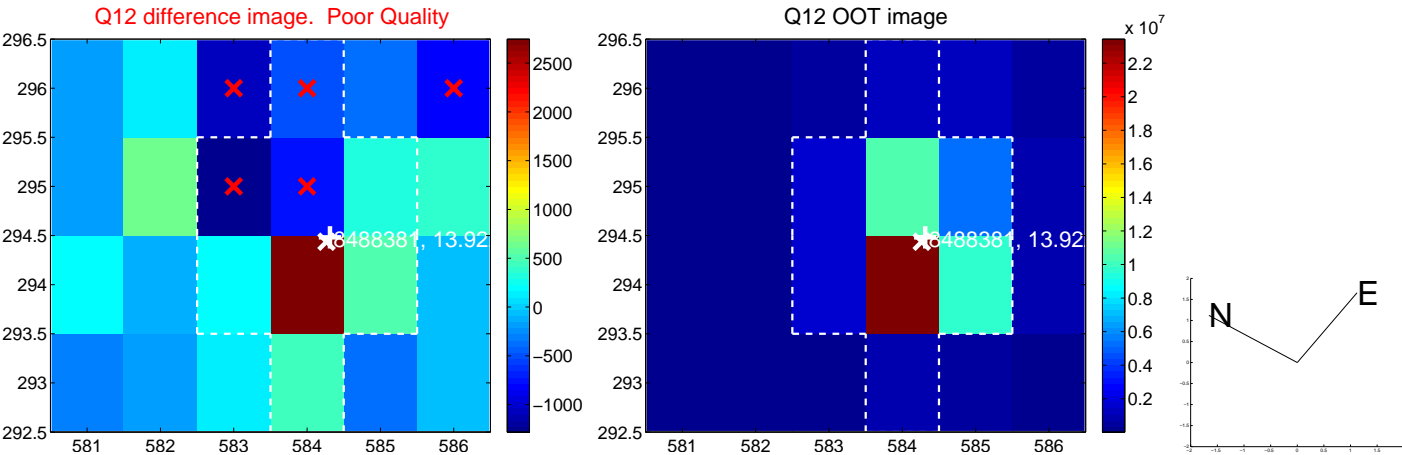
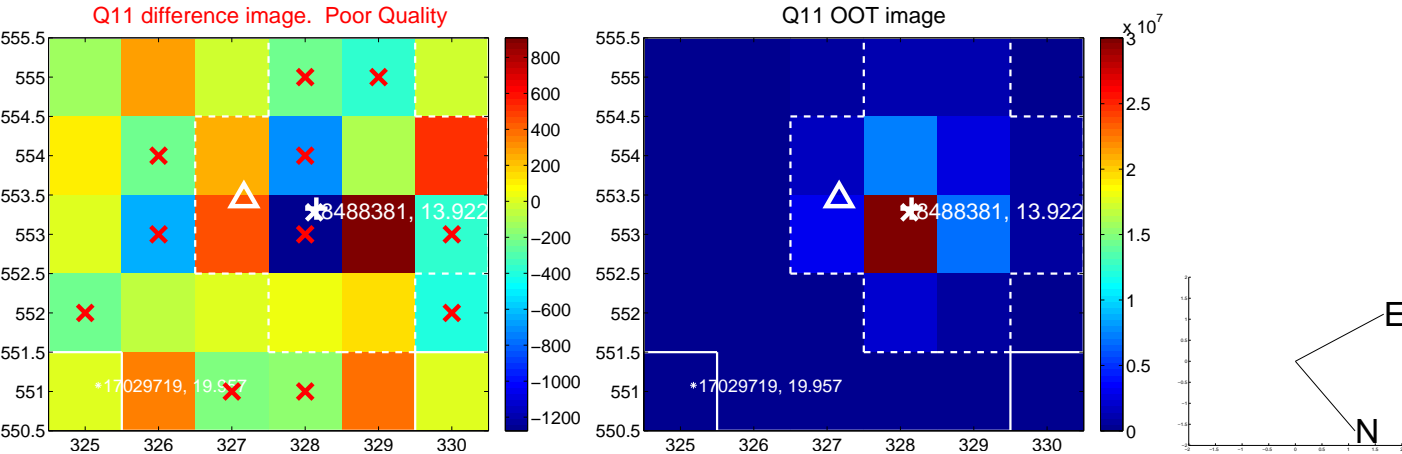
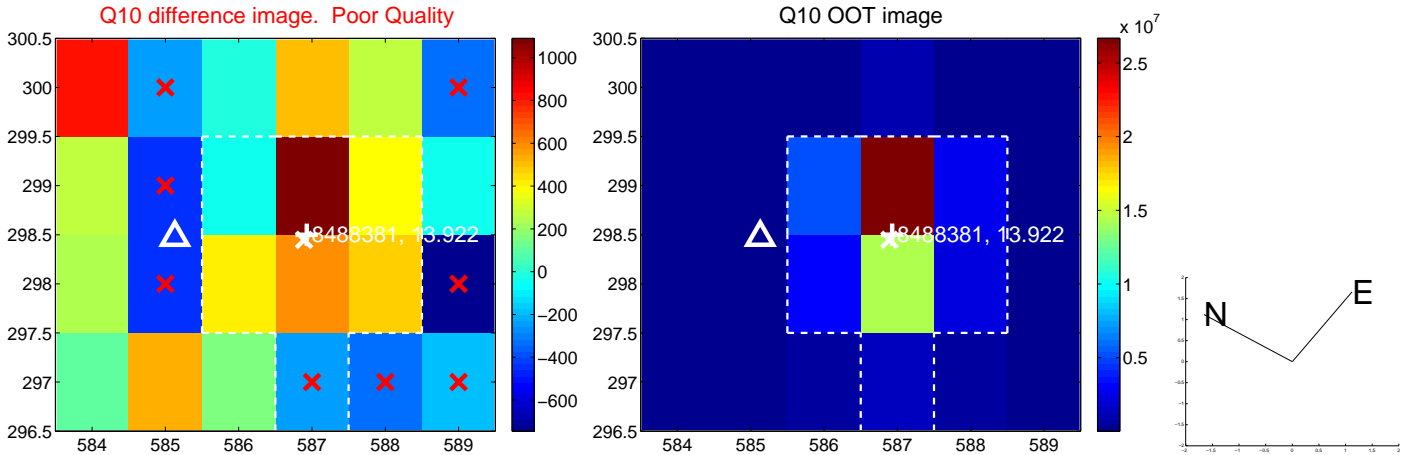
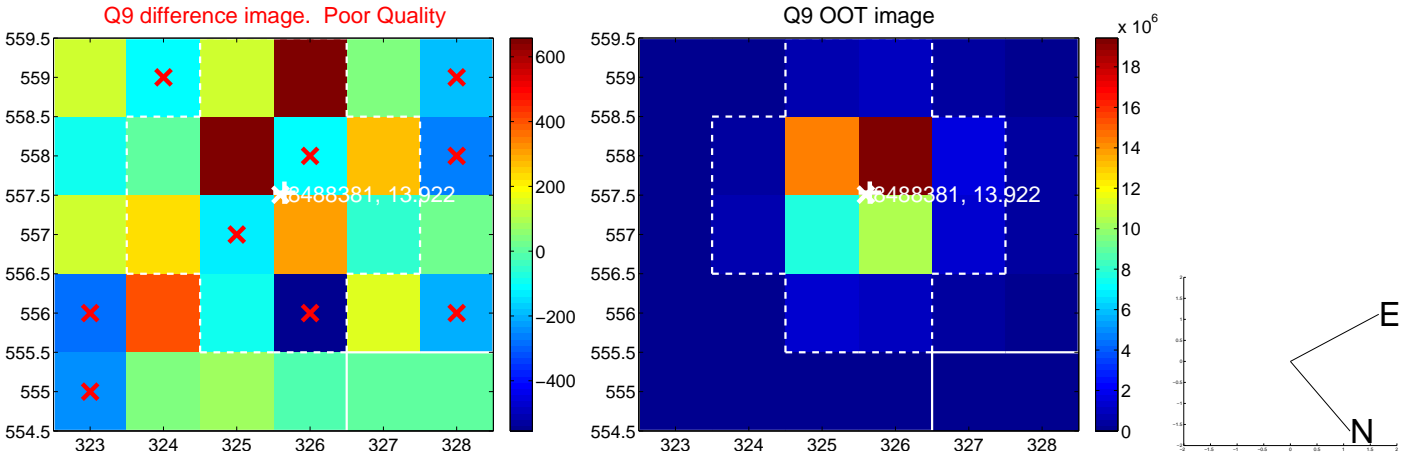
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



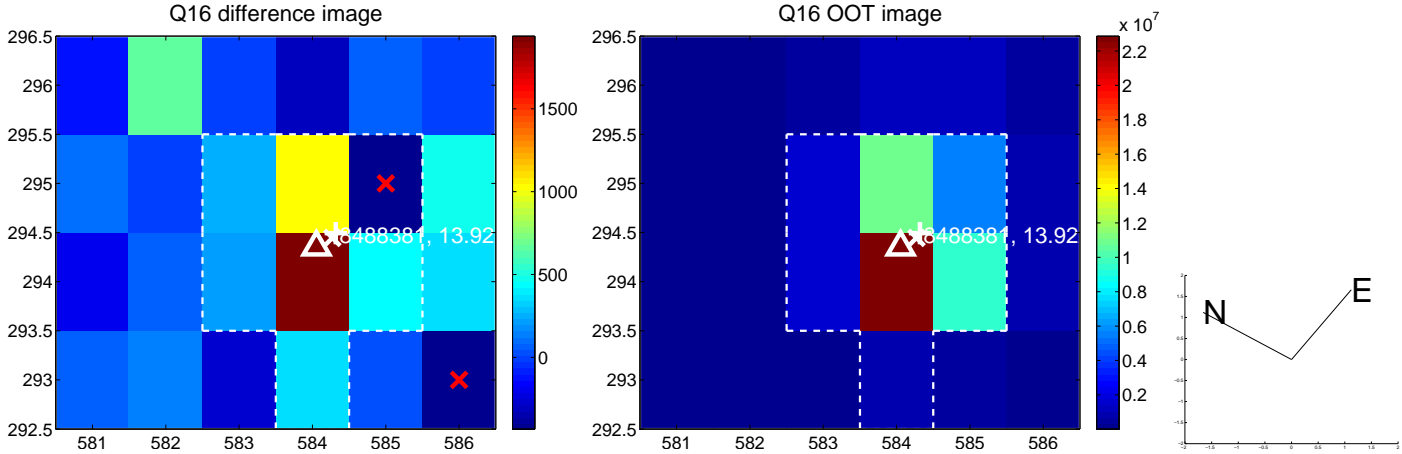
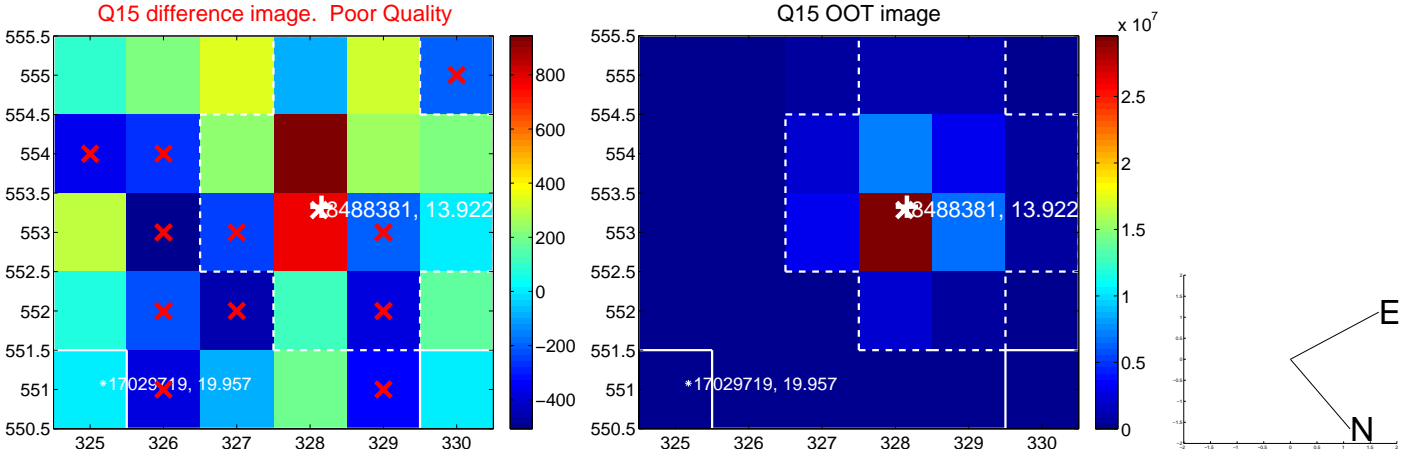
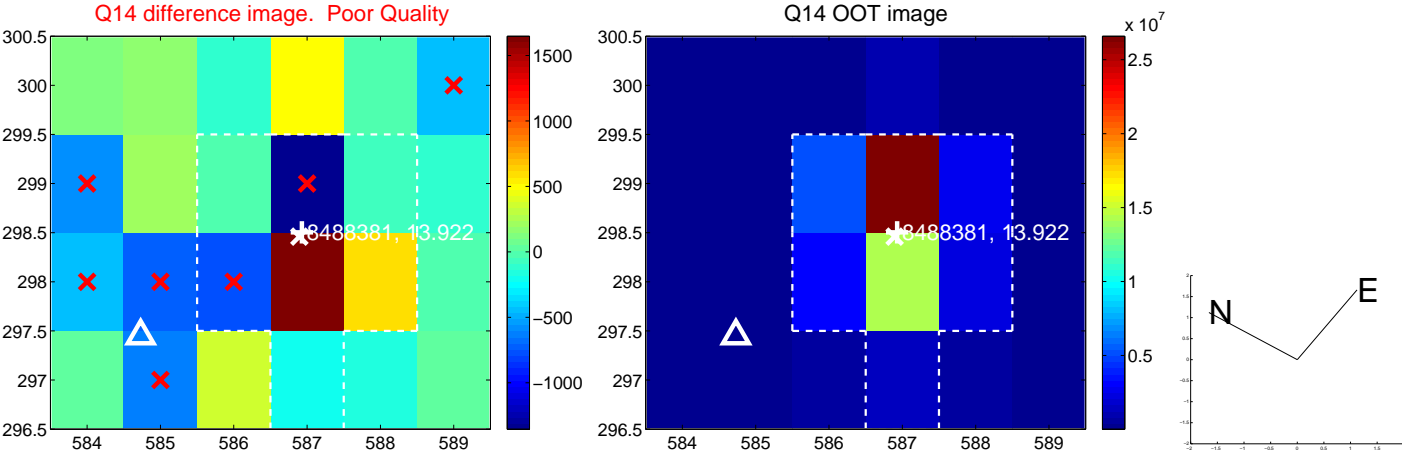
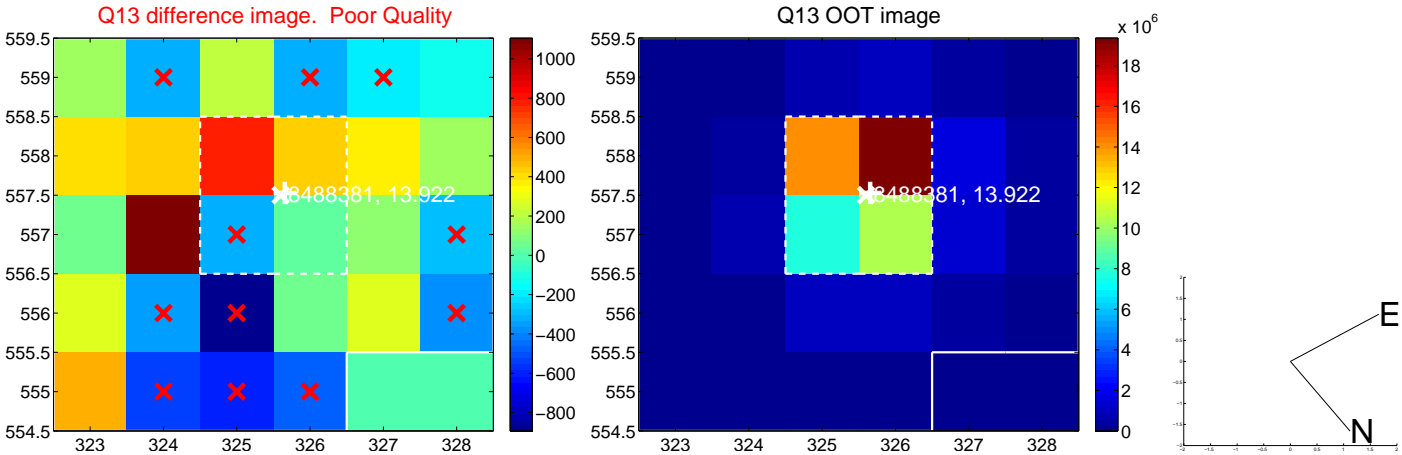
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



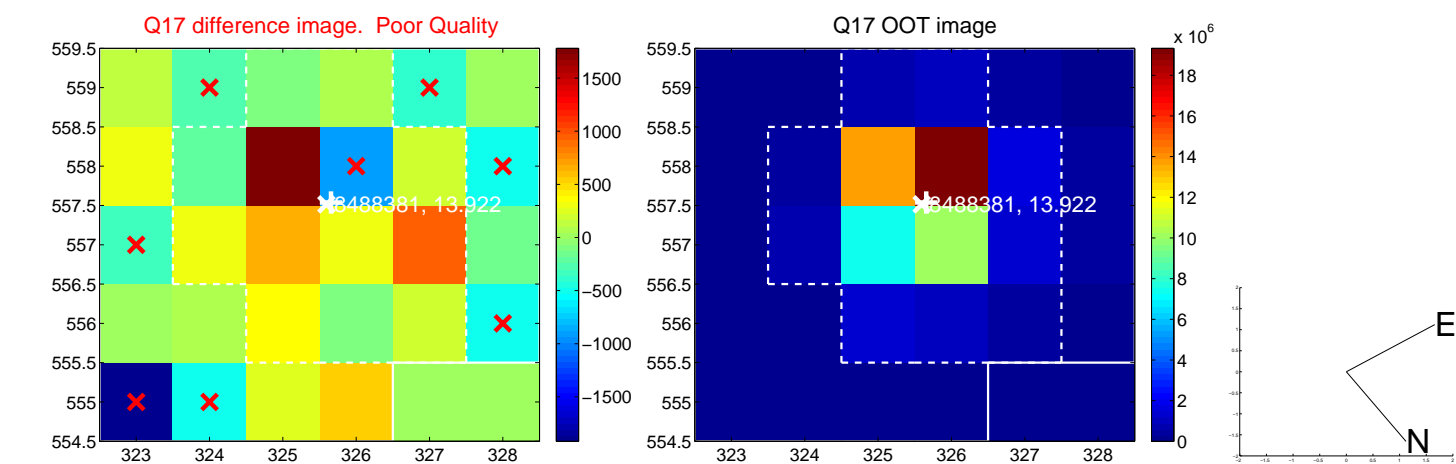
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



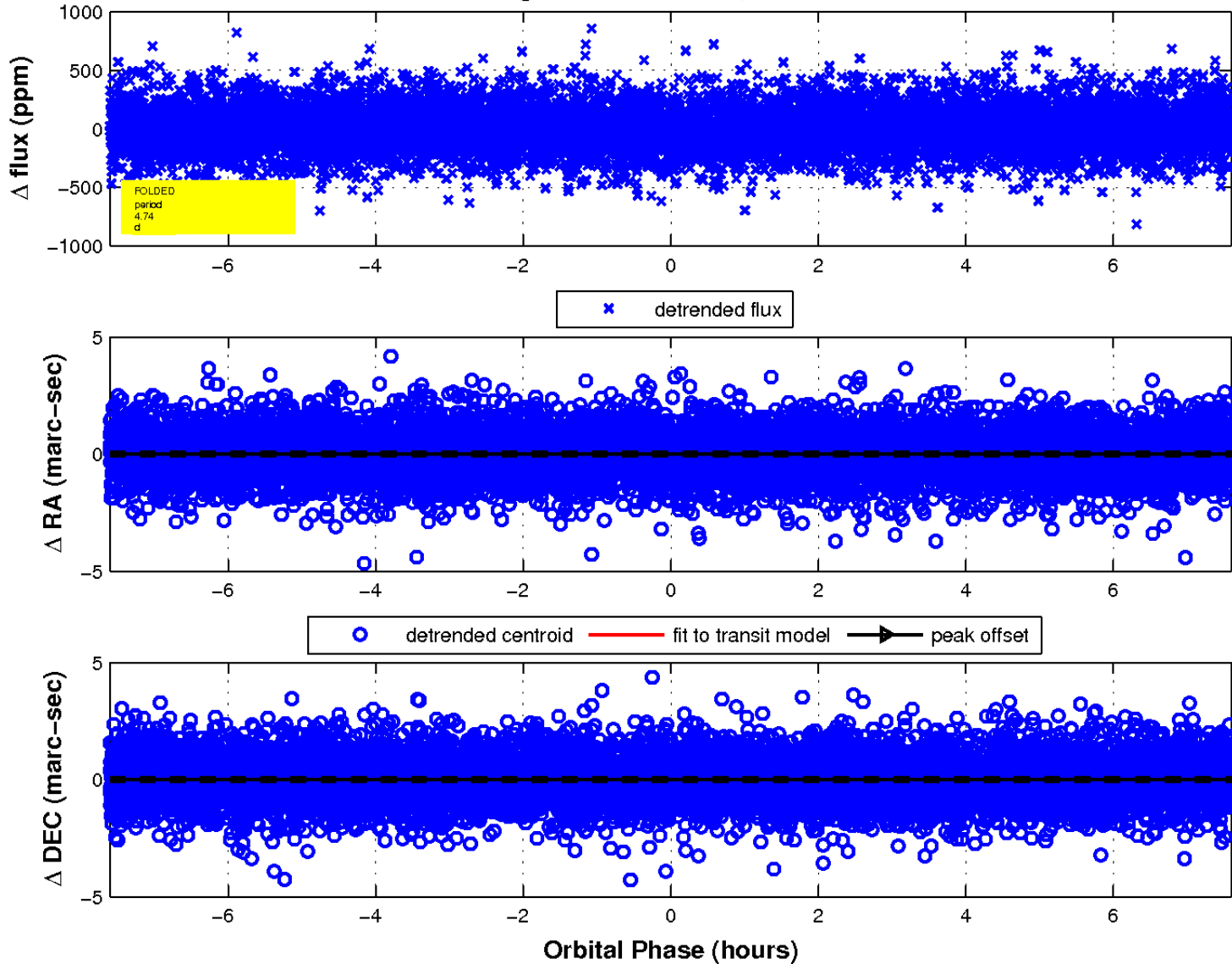
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

