

KIC 008355131

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})
008355131-01	OBS	4711.01	8.727638	139.704656	275.7	1.369	9.2	10.3	0.76	5623	1.31	85.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008355131-01	OBS	PC	0.89	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 008355131-01

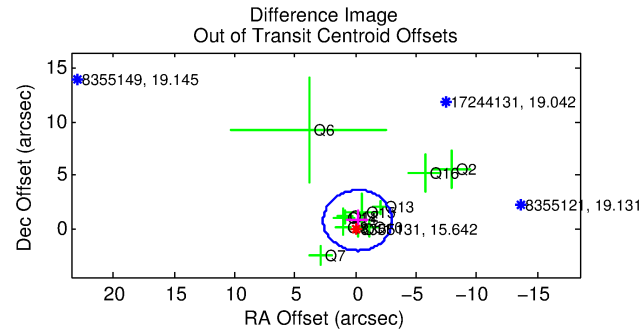
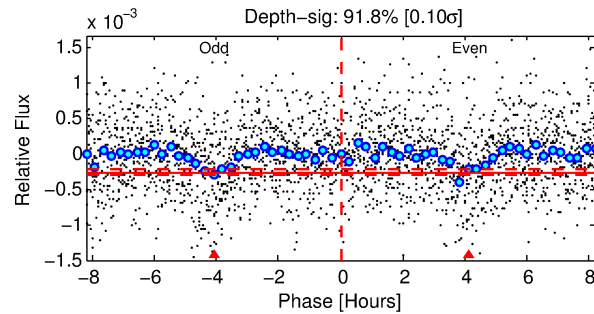
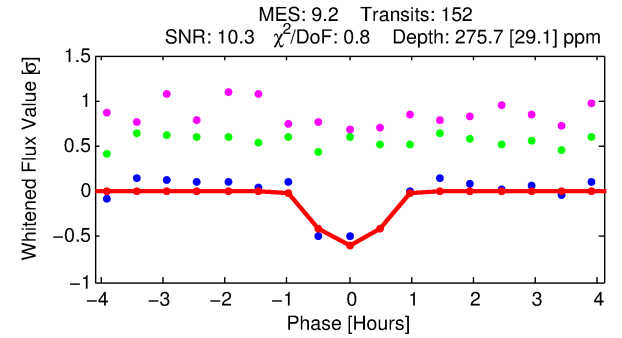
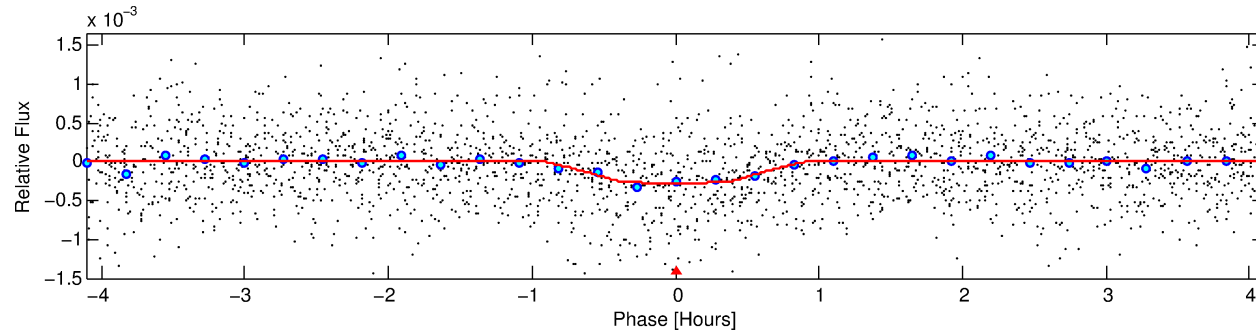
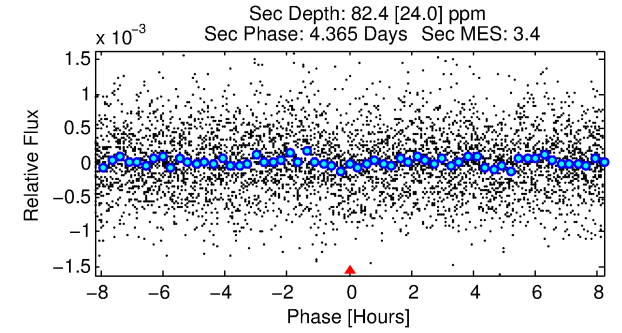
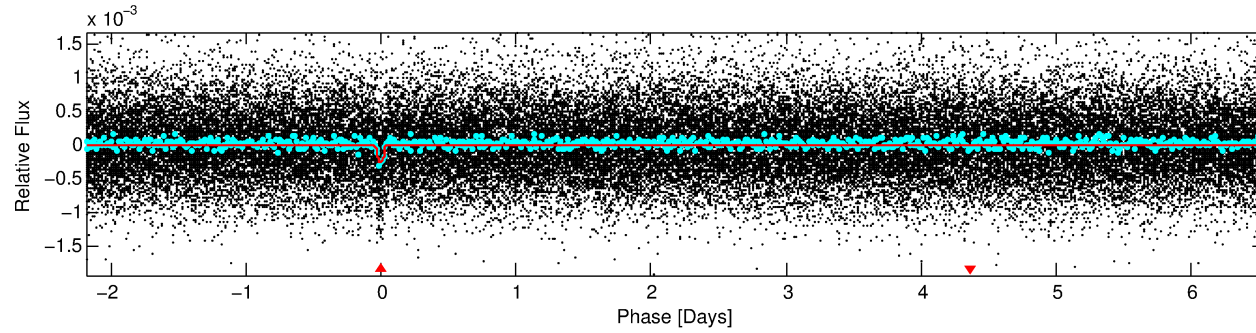
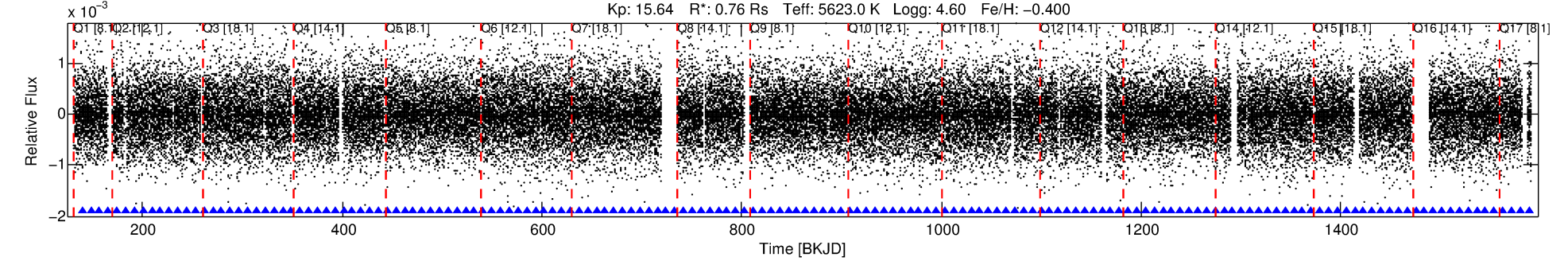
No Significant Match Found

DV One-Page Summary

KIC: 8355131 Candidate: 1 of 1 Period: 8.728 d

KOI: K04711 Corr: No Ephemeris Match

Kp: 15.64 R*: 0.76 Rs Teff: 5623.0 K Logg: 4.60 Fe/H: -0.400



DV Fit Results:

Period = 8.72764 [0.00004] d
Epoch = 139.7047 [0.0036] BKJD
Rp/R* = 0.0157 [0.0125]
a/R* = 42.42 [150.62]
b = 0.52 [5.00]
Seff = 85.23 [22.79]
Teff = 775 [52] K
Rp = 1.31 [1.08] Re
a = 0.0782 [0.0132] AU
Ag = 162.52 [267.10] [0.60σ]
Teffp = 4277 [1743] K [2.01σ]

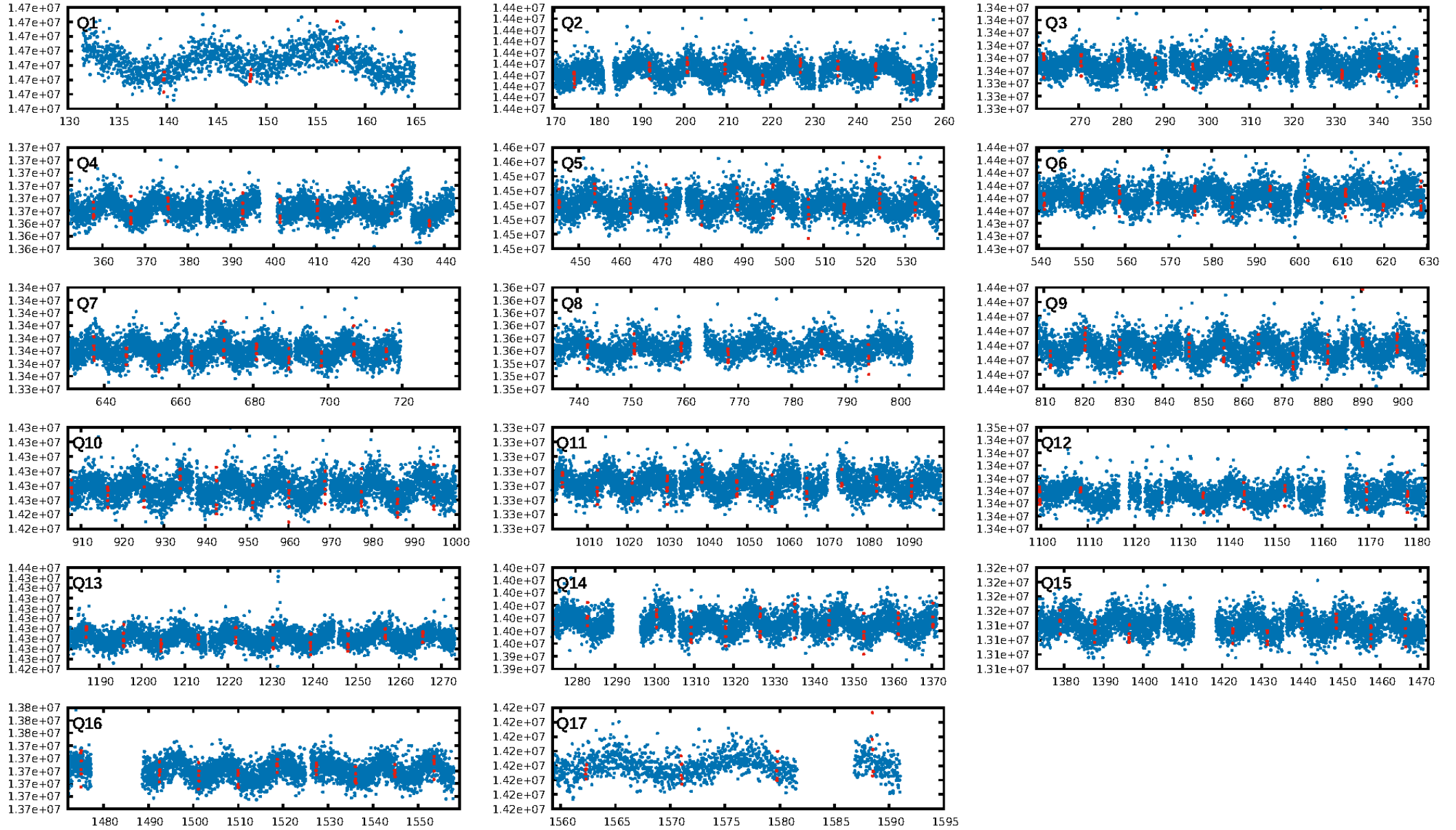
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.66e-19
RollingBand-fgt: 1.00 [145/145]
GhostDiagnostic-chr: -32.71
Centroid-sig: 0.1%
Centroid-so: 3.935 arcsec [2.79σ]
OotOffset-rm: 0.796 arcsec [0.84σ]
KicOffset-rm: 0.652 arcsec [0.60σ]
OotOffset-st: 4/3/3/1 [11]
KicOffset-st: 4/3/3/1 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 1.00 [17/17]

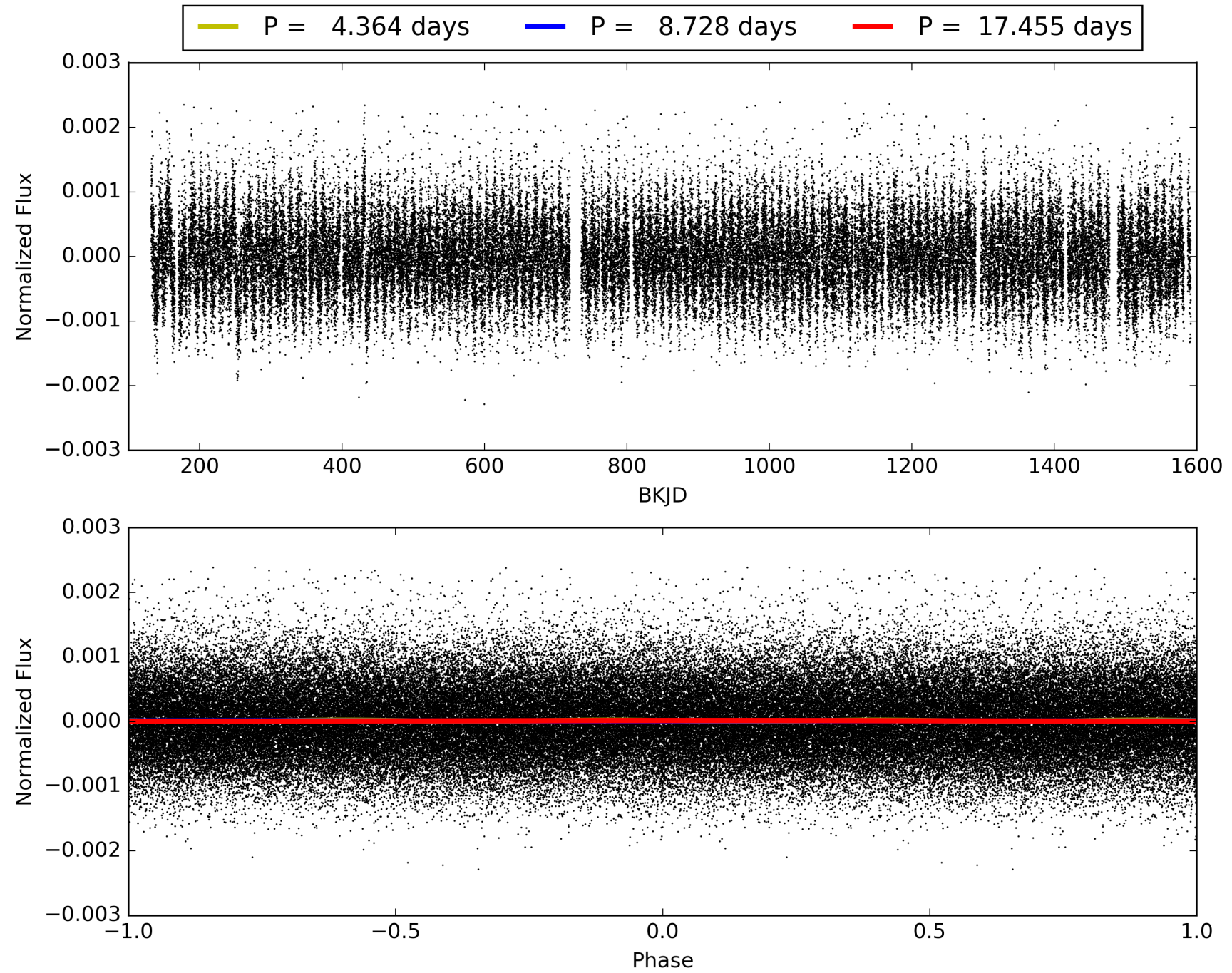
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:09:15 Z

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

TCE 008355131-01, PDC Light Curves

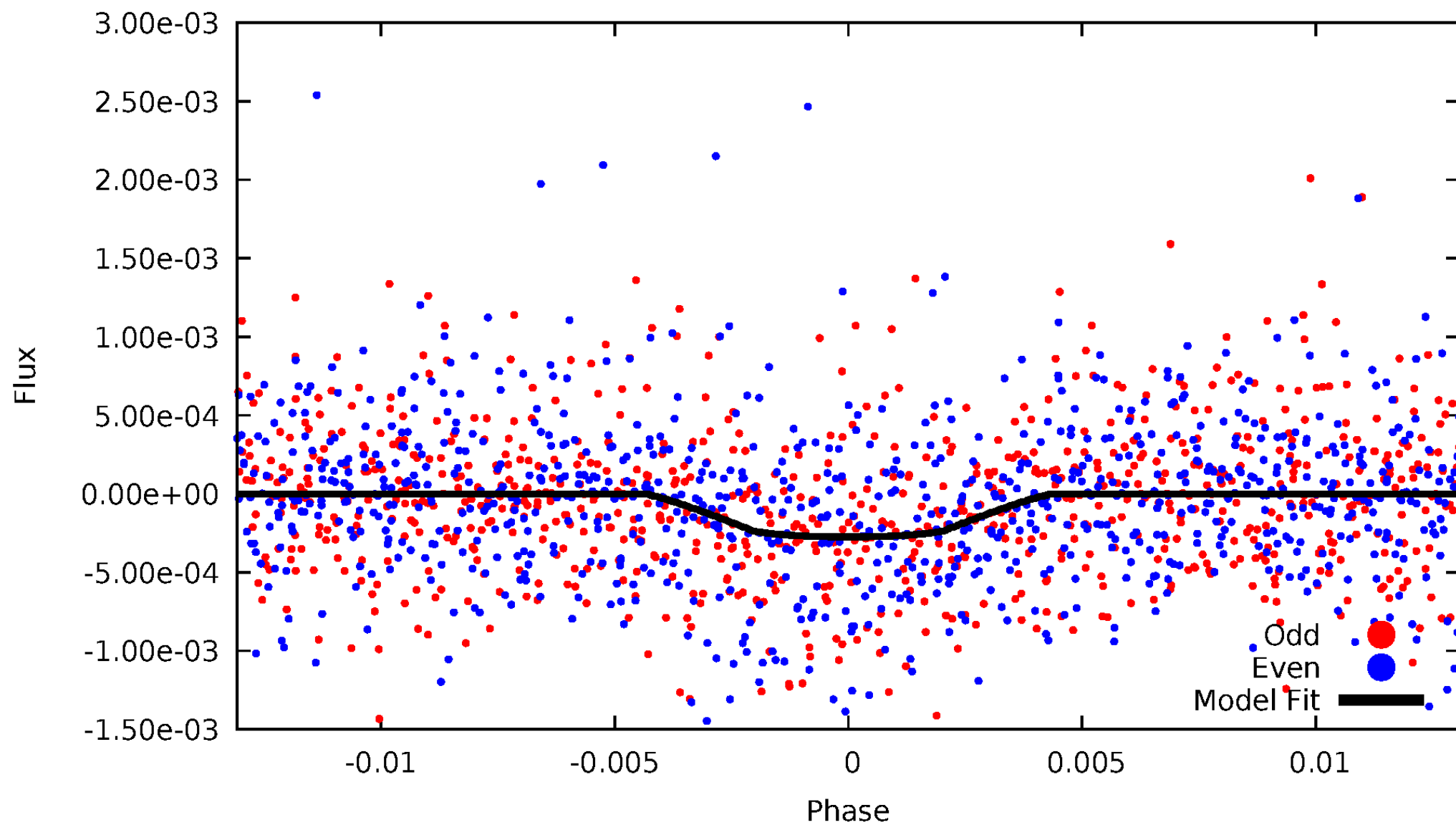


TCE 008355131-01



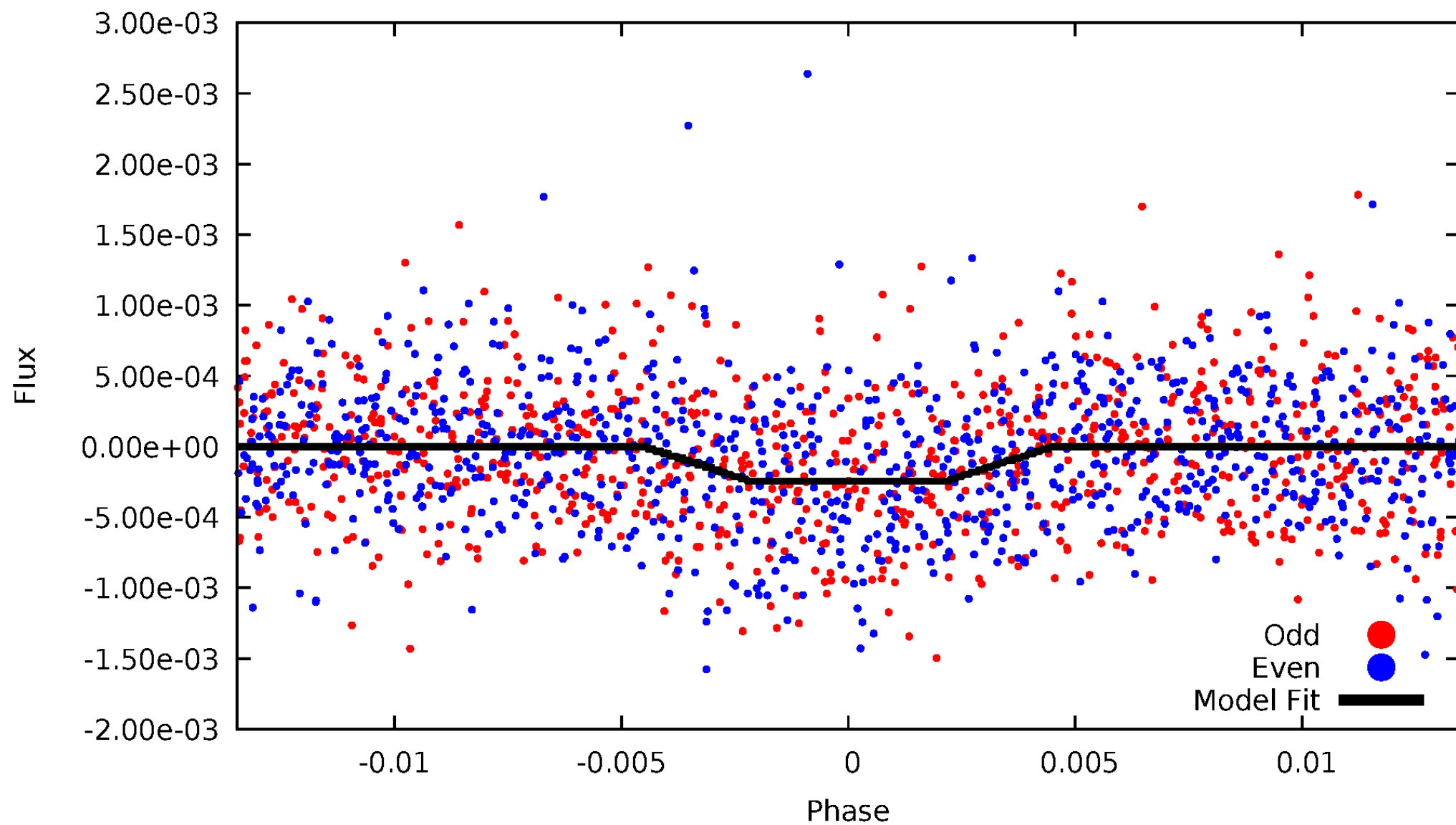
DV Odd/Even

TCE 008355131-01



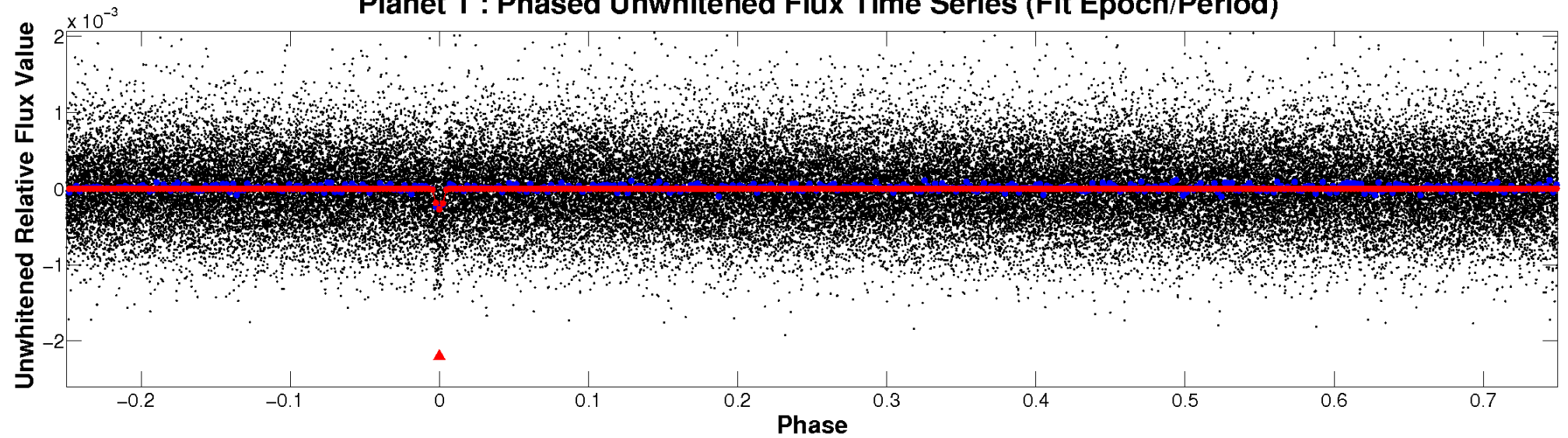
ALT Odd/Even

TCE 008355131-01

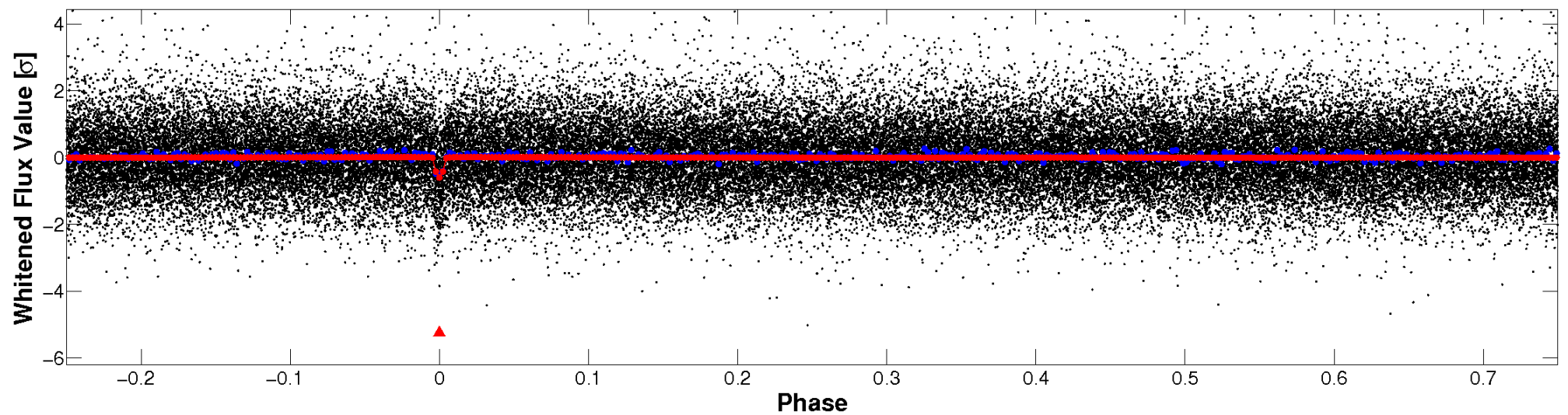


Non-Whitened Vs. Whitened Light Curve

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

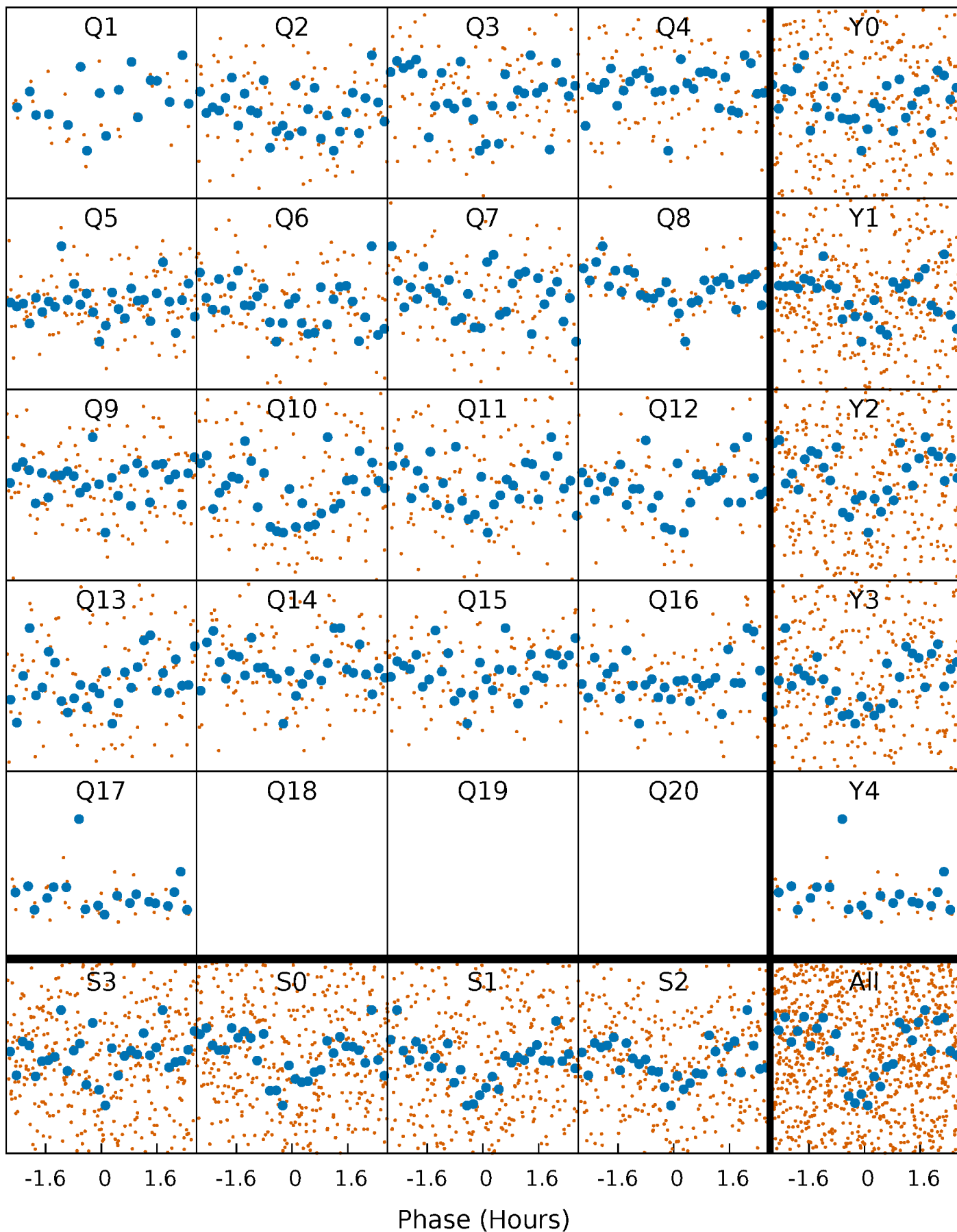


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



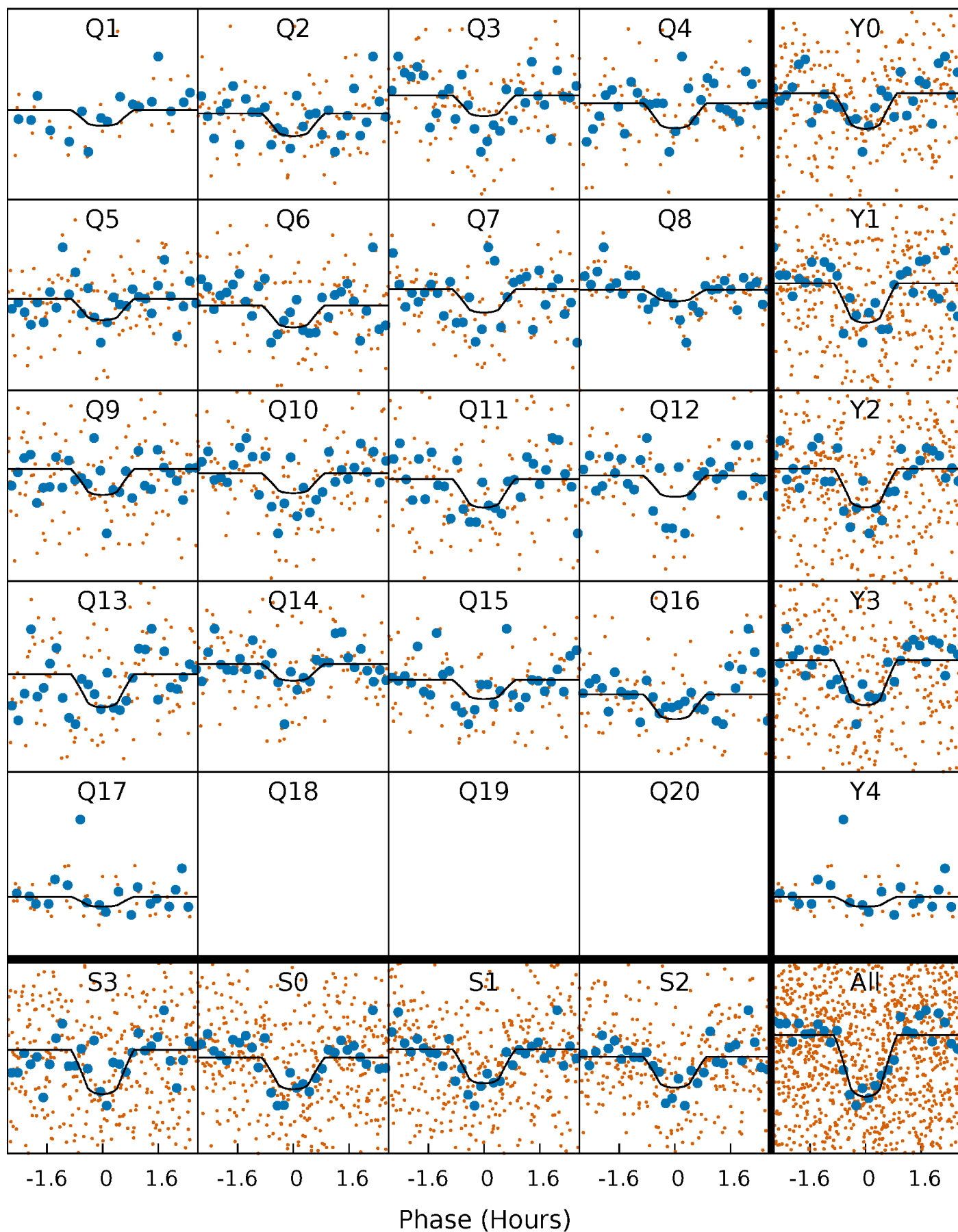
PDC Quarter-Phased Transit Curves

TCE 008355131-01 P= 8.727638 Days $T_0=139.704656$ (BKJD)



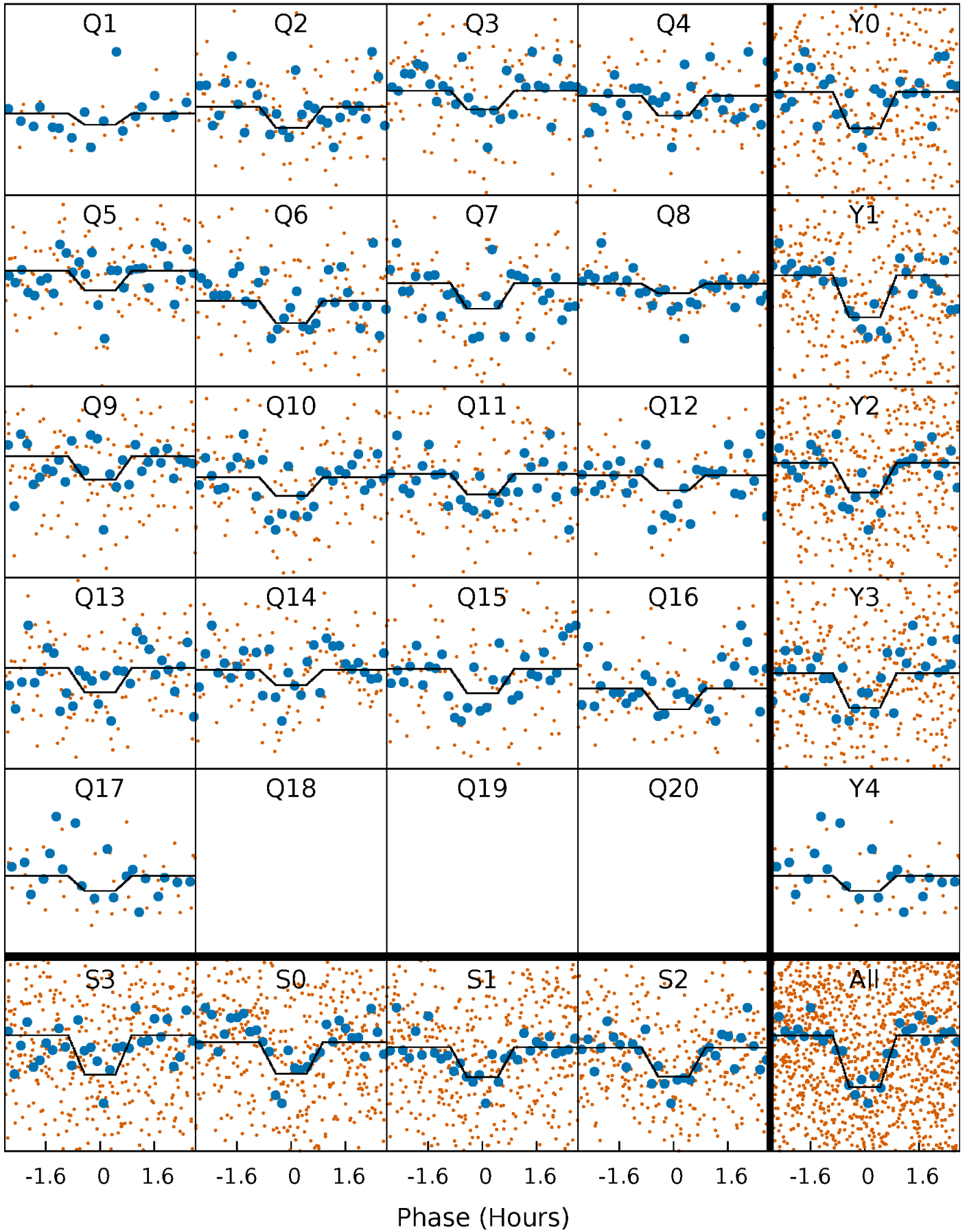
DV Quarter-Phased Transit Curves

TCE 008355131-01 P= 8.727638 Days $T_0=139.704656$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

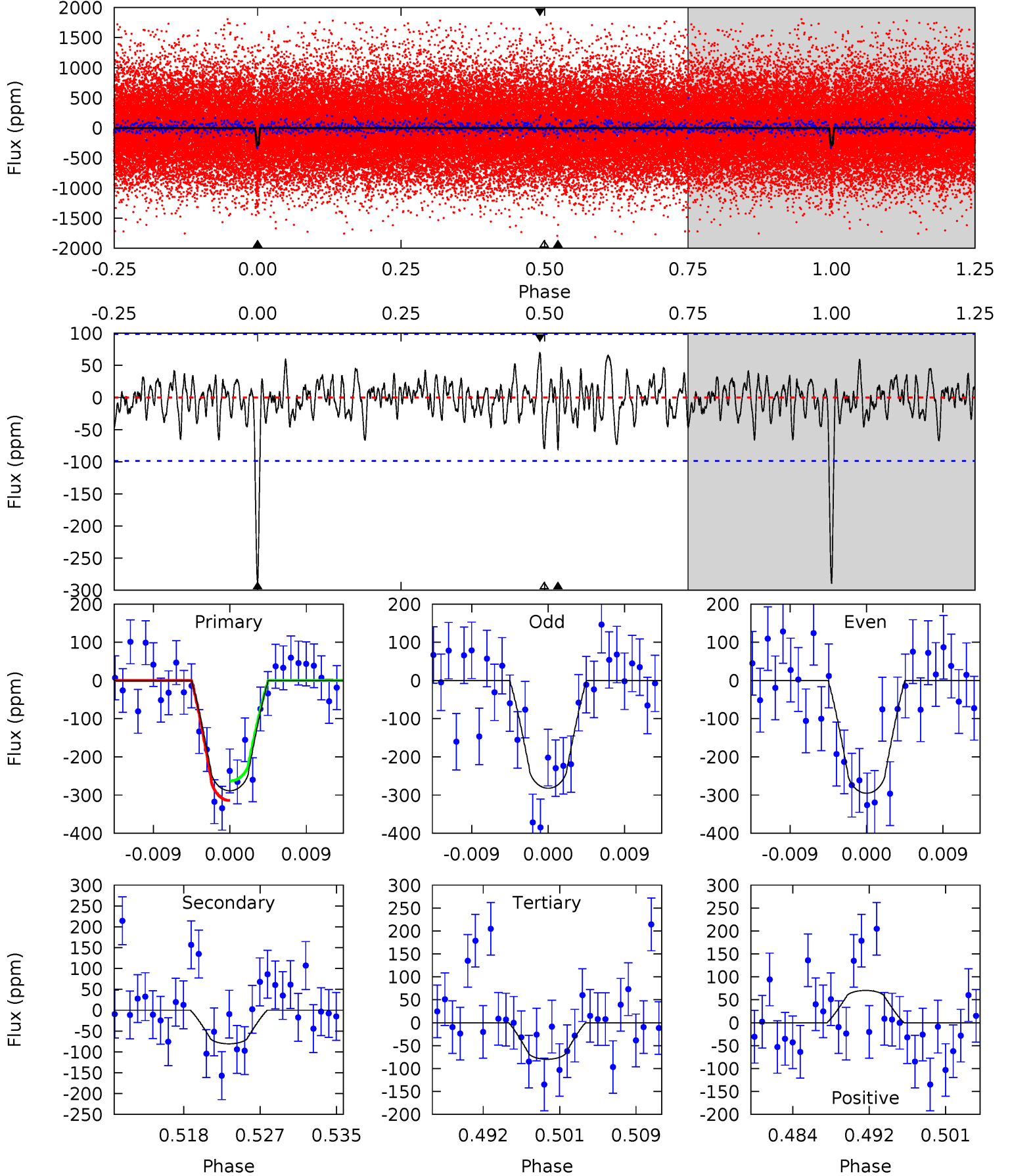
TCE 008355131-01 P= 8.727710 Days $T_0=139.698770$ (BKJD)



DV Model-Shift Uniqueness Test

008355131-01, P = 8.727638 Days, E = 130.977018 Days

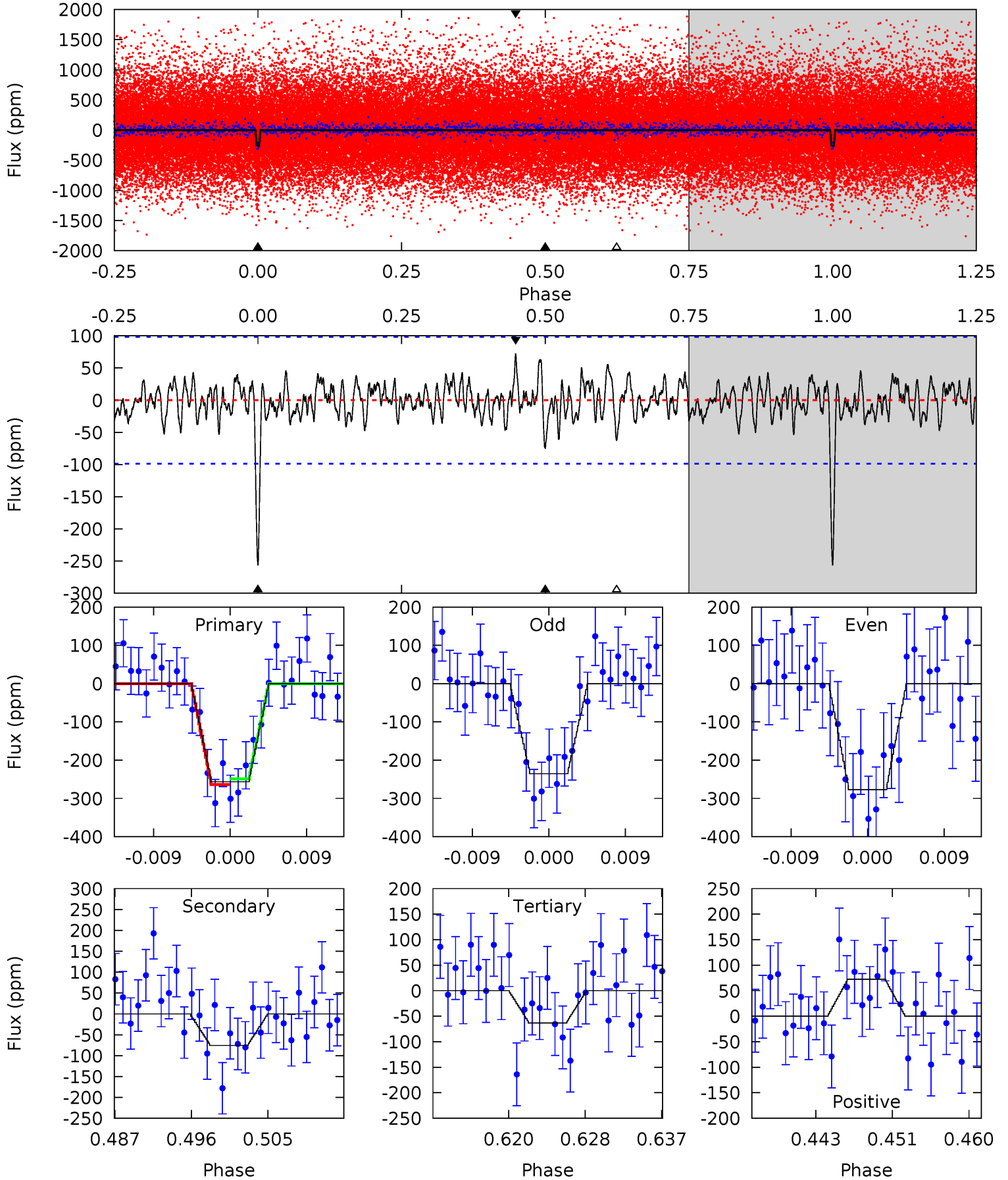
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.8	4.13	4.08	3.60	5.05	2.63	1.20	10.7	11.2	0.04	0.53	0.33	1.03	0.20	1.31



Alt Model-Shift Uniqueness Test

008355131-01, P = 8.727710 Days, E = 130.971060 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	3.87	3.23	3.71	5.05	2.62	1.11	9.91	9.42	0.64	0.15	1.06	1.11	0.22	0.37



Stellar Parameters For KIC 008355131

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5623^{+169}_{-152}	$4.596^{+0.042}_{-0.127}$	$-0.400^{+0.300}_{-0.300}$	$0.763^{+0.158}_{-0.056}$	$0.853^{+0.080}_{-0.097}$	$2.704^{+0.471}_{-1.033}$
	+3%/-3%	+1%/-3%	+75%/-75%	+21%/-7%	+9%/-11%	+17%/-38%
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 008355131-01 / KOI 4711.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-81 ± 20	$1.50^{+0.95}_{-0.86}$	1099^{+48}_{-42}	4301^{+1885}_{-721}	119^{+543}_{-76}
Alt.	-75 ± 20	$1.51^{+1.05}_{-0.92}$	1094^{+54}_{-41}	4205^{+2049}_{-716}	113^{+551}_{-77}

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 $A_{obs} \gg 1.0$

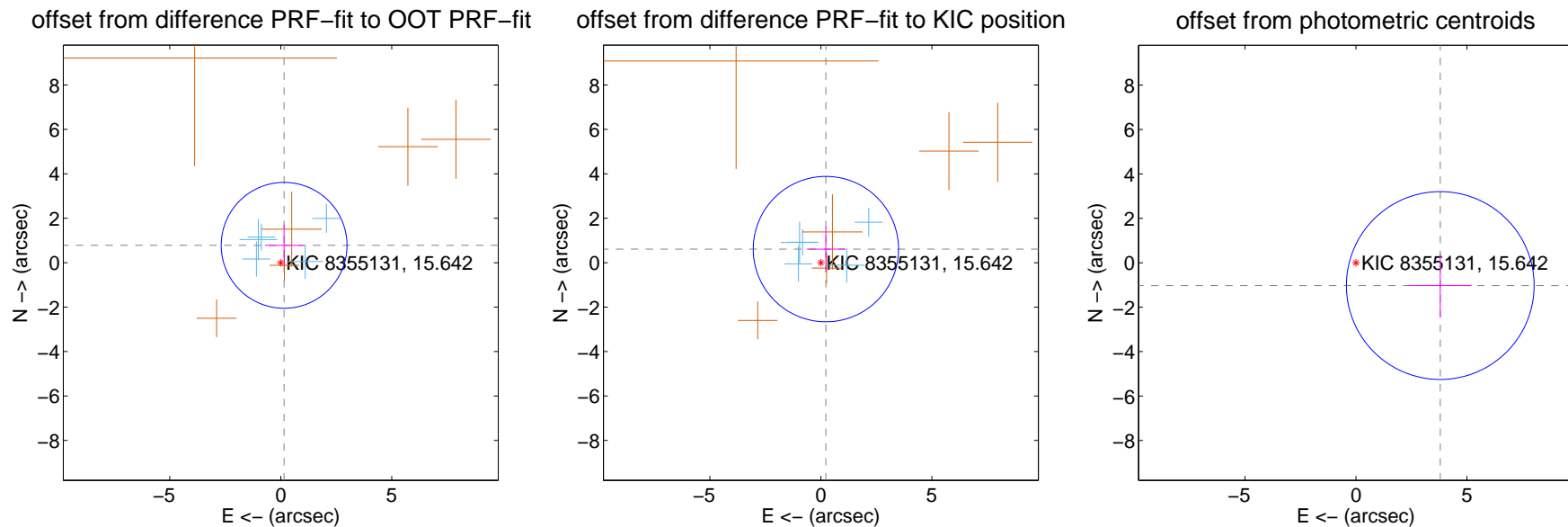
DV Centroid Data

Supplemental centroid analysis for 008355131-01. Kepler magnitude: 15.64. Transit SNR 10.29

There are 5 quarters with good PRF difference image offsets

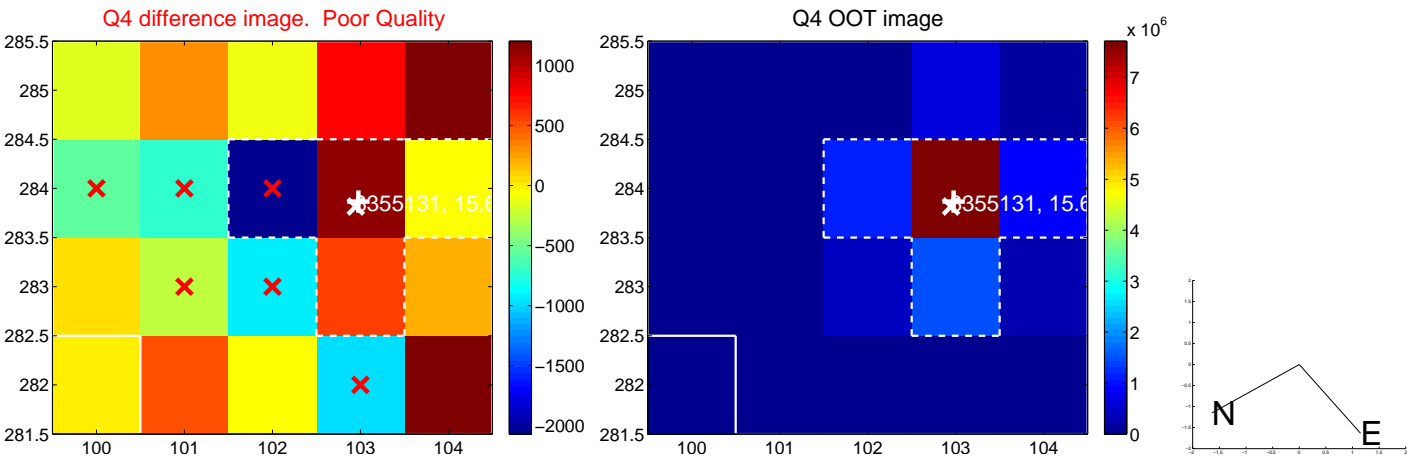
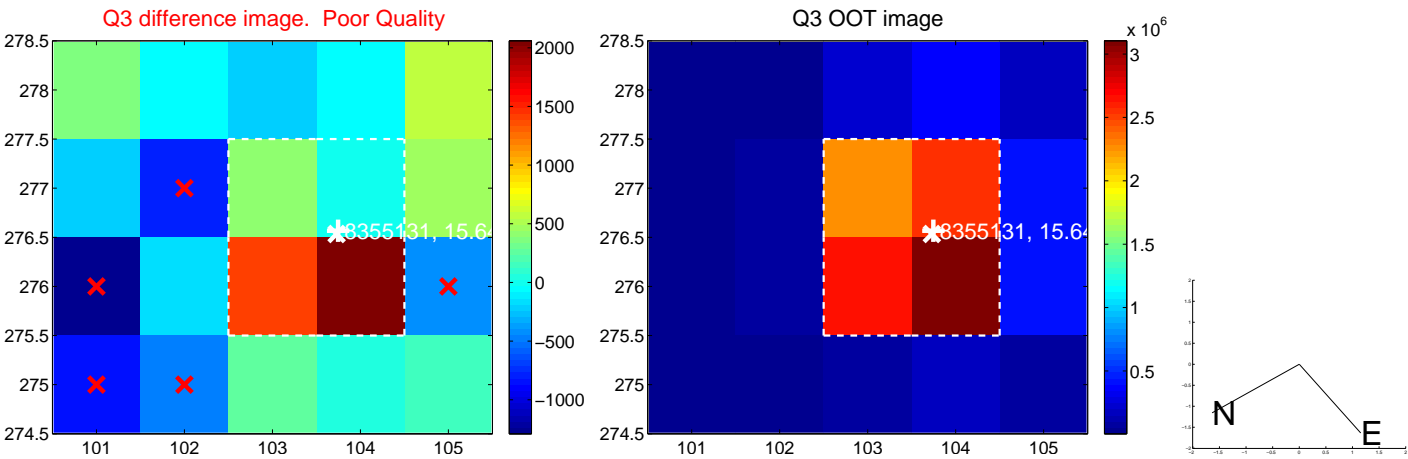
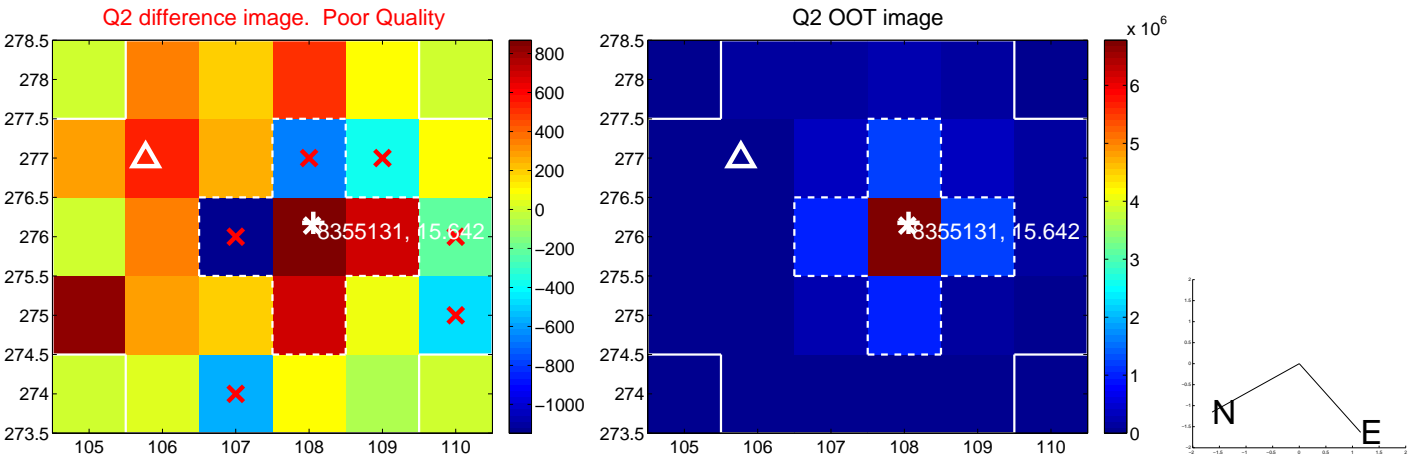
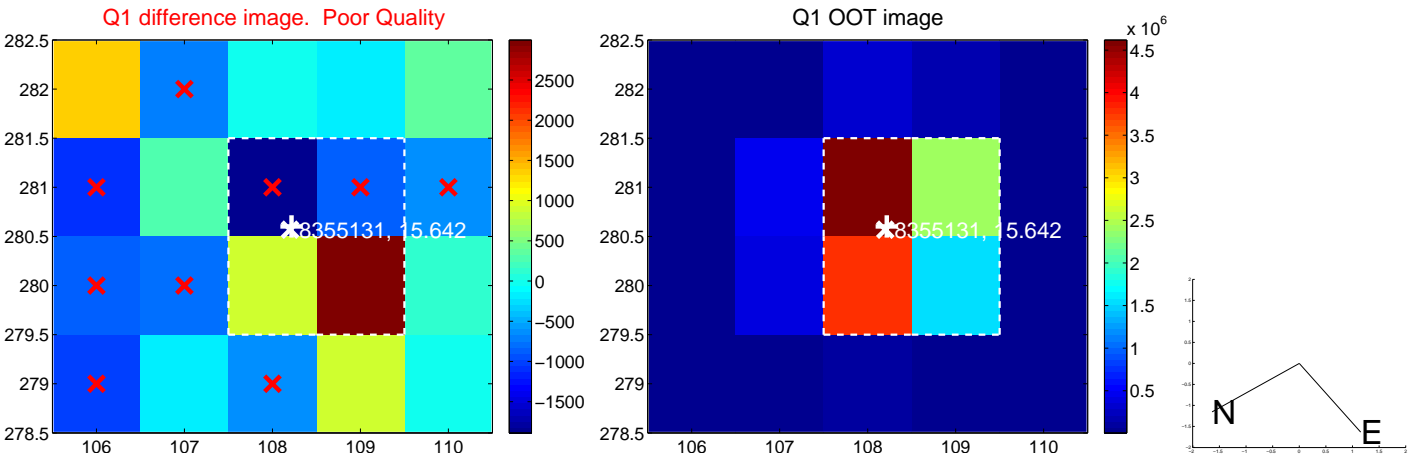
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.796 ± 0.945	0.84	-0.152 ± 0.861	0.781 ± 0.921
PRF-fit source offset from KIC position	0.652 ± 1.091	0.60	-0.227 ± 0.862	0.611 ± 1.015
photometric centroid source offset	3.94 ± 1.41	2.79	-3.80 ± 1.41	-1.03 ± 1.43

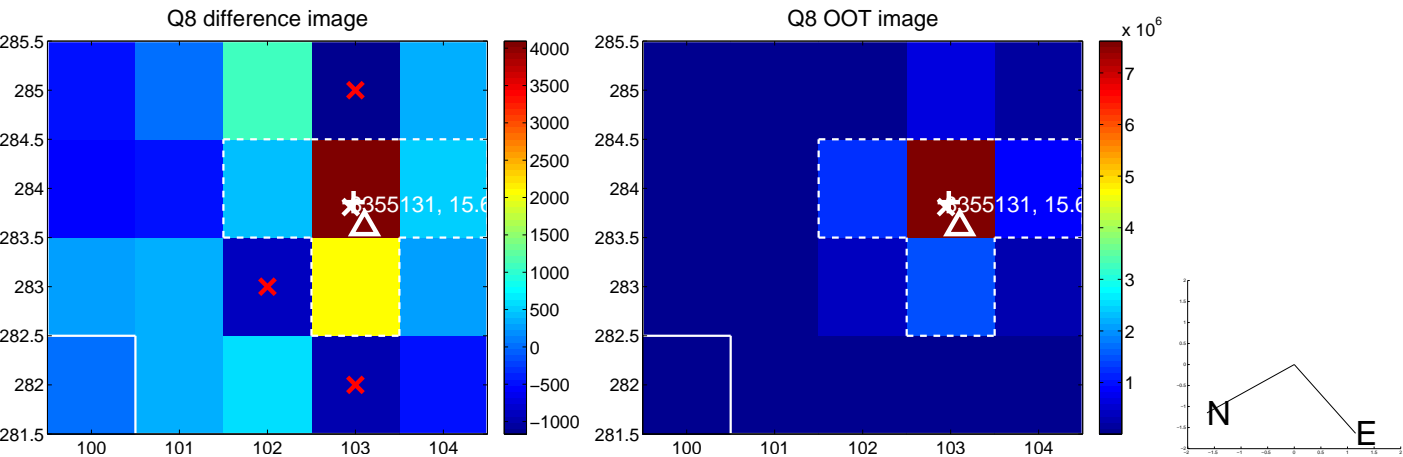
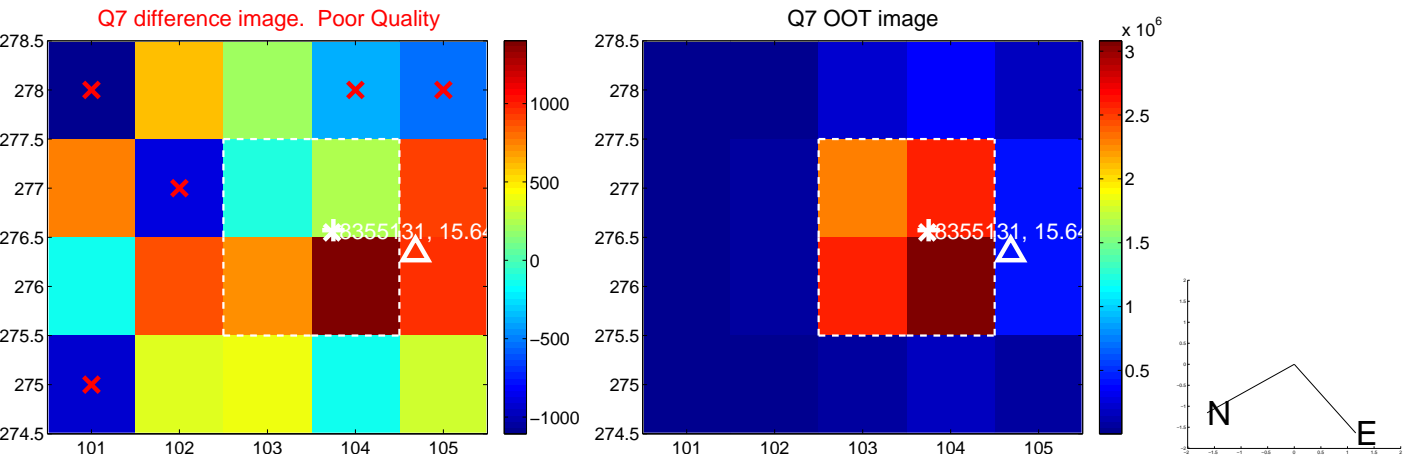
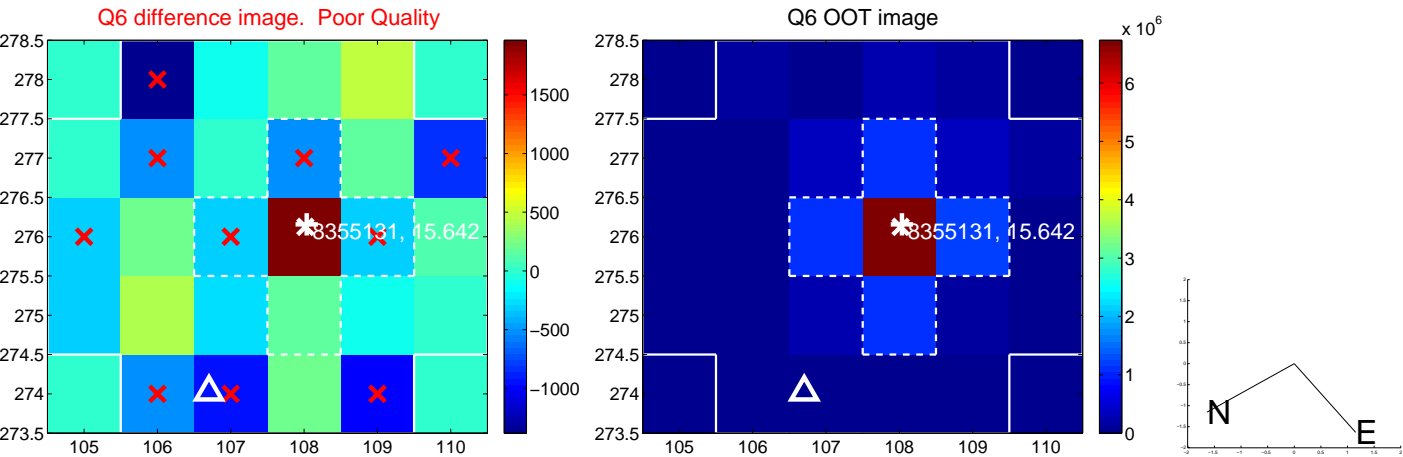
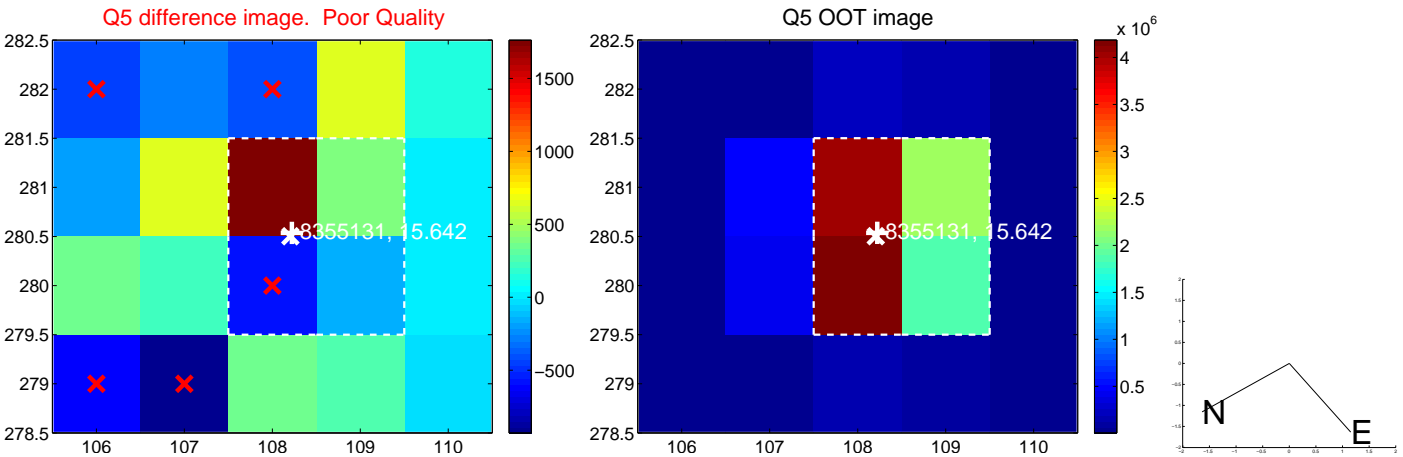


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

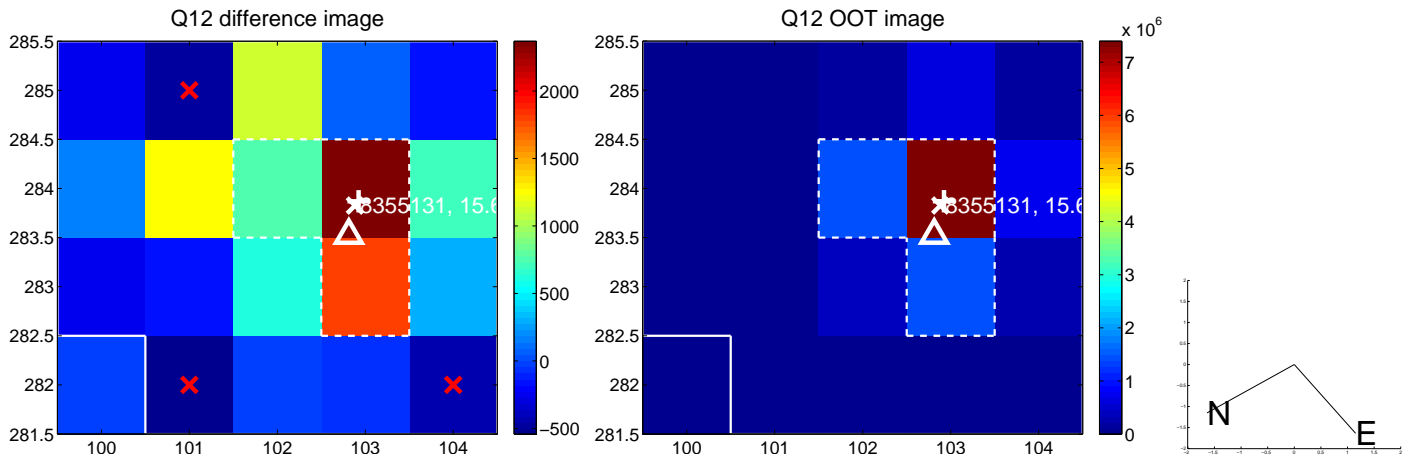
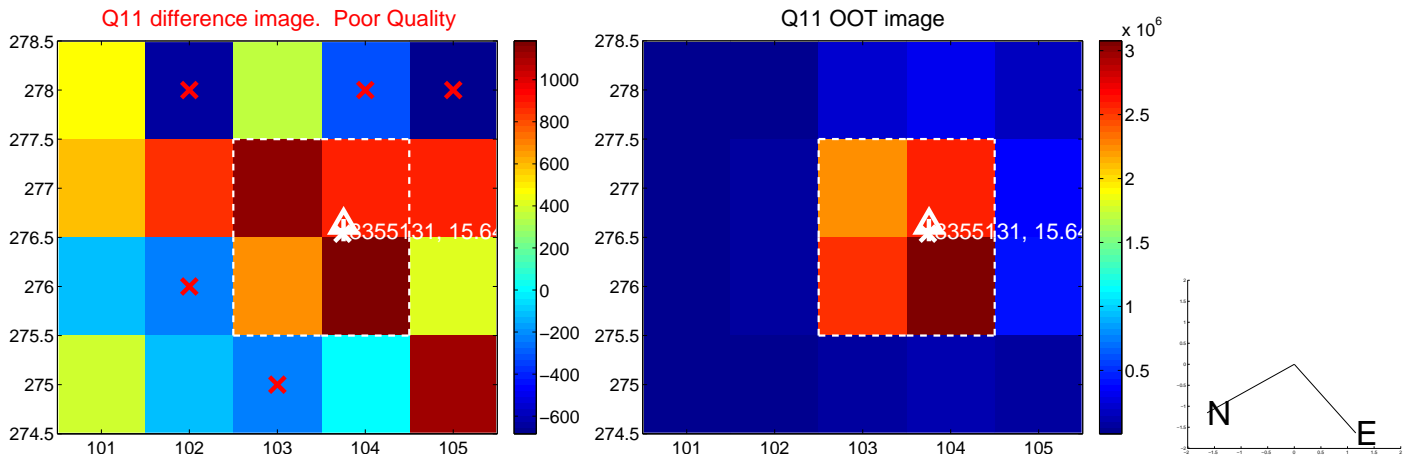
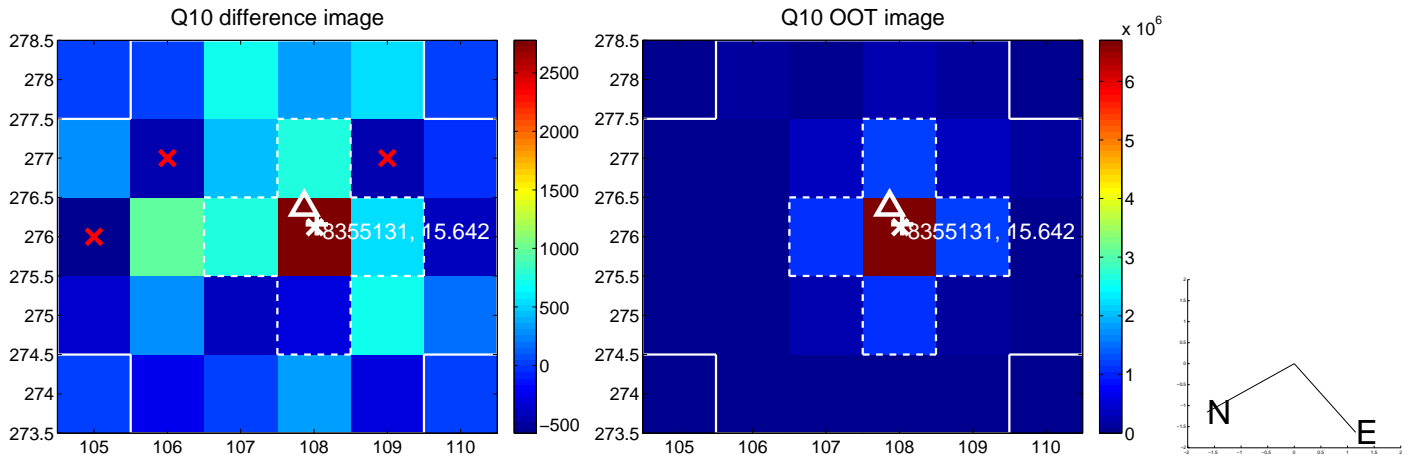
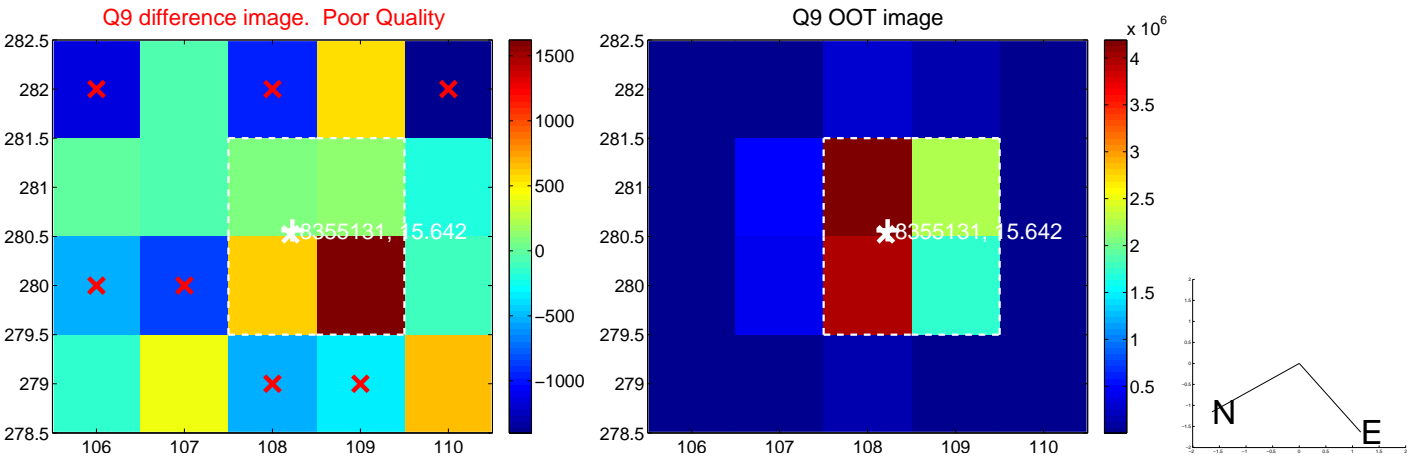
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



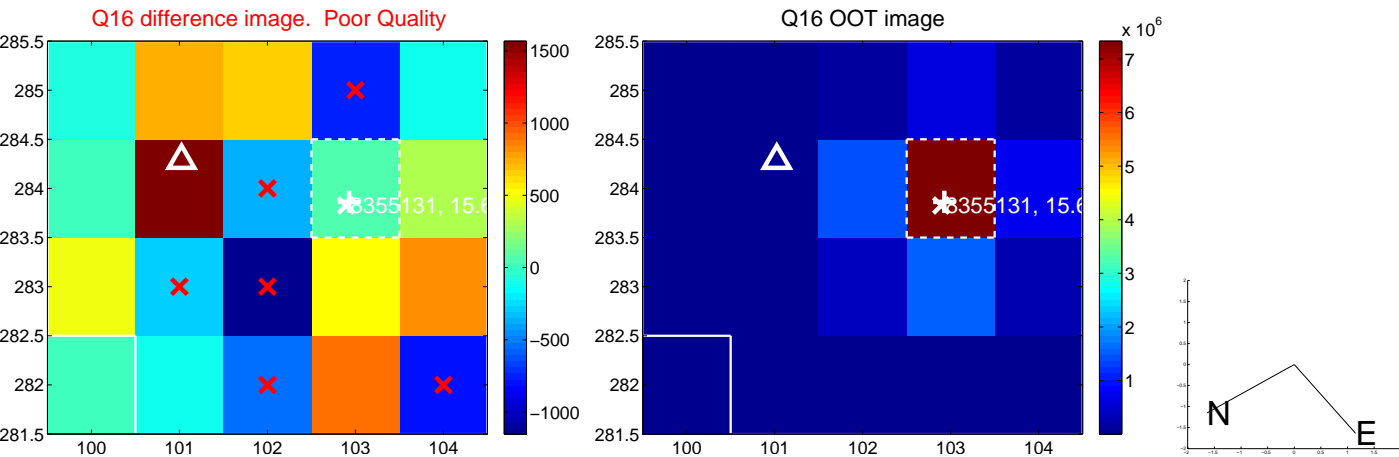
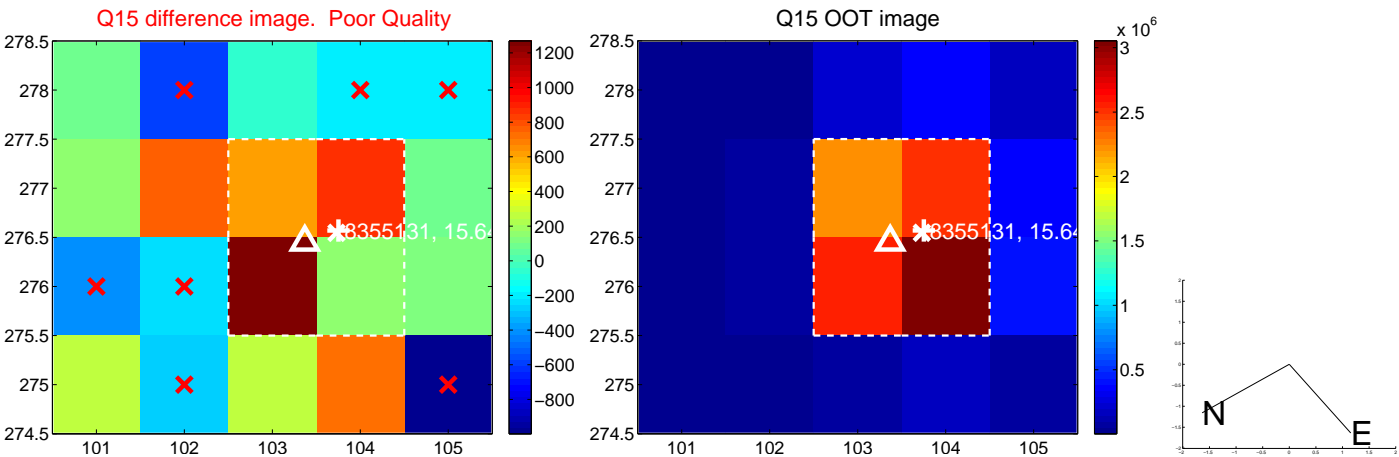
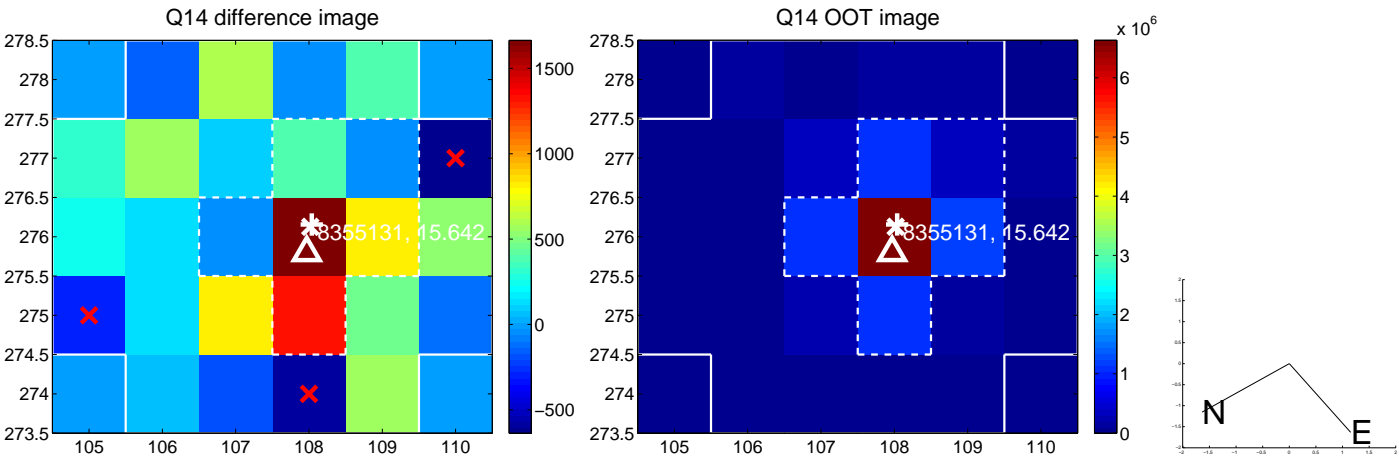
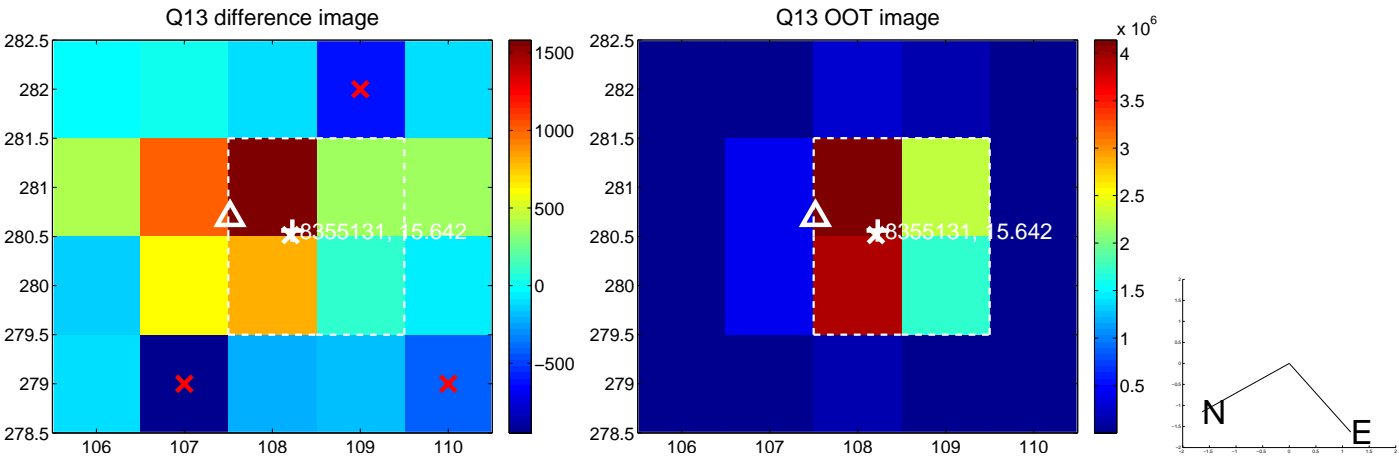
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



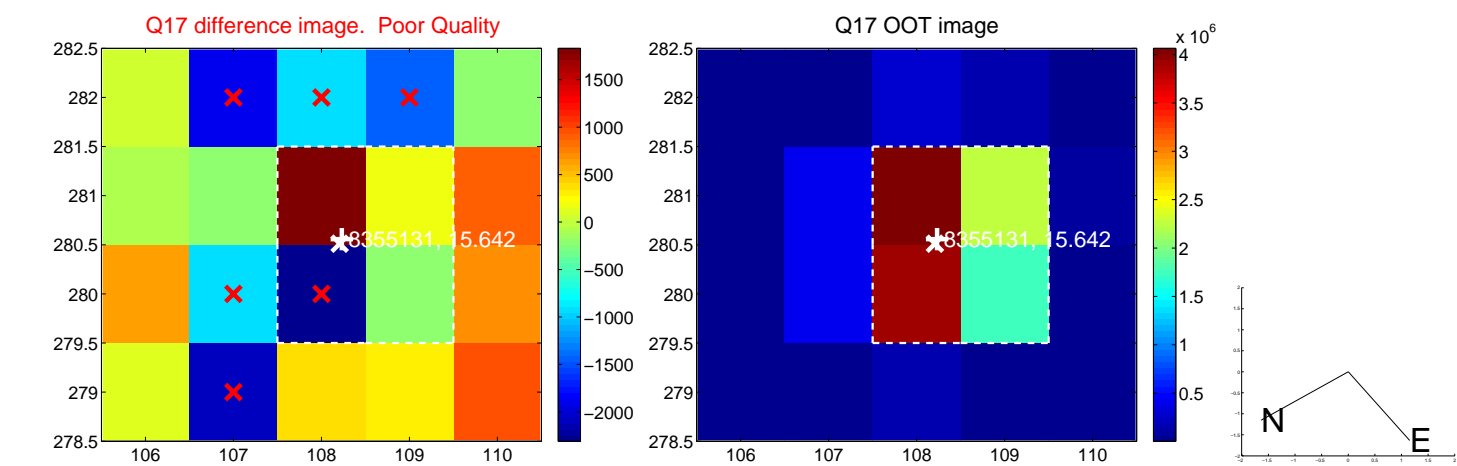
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



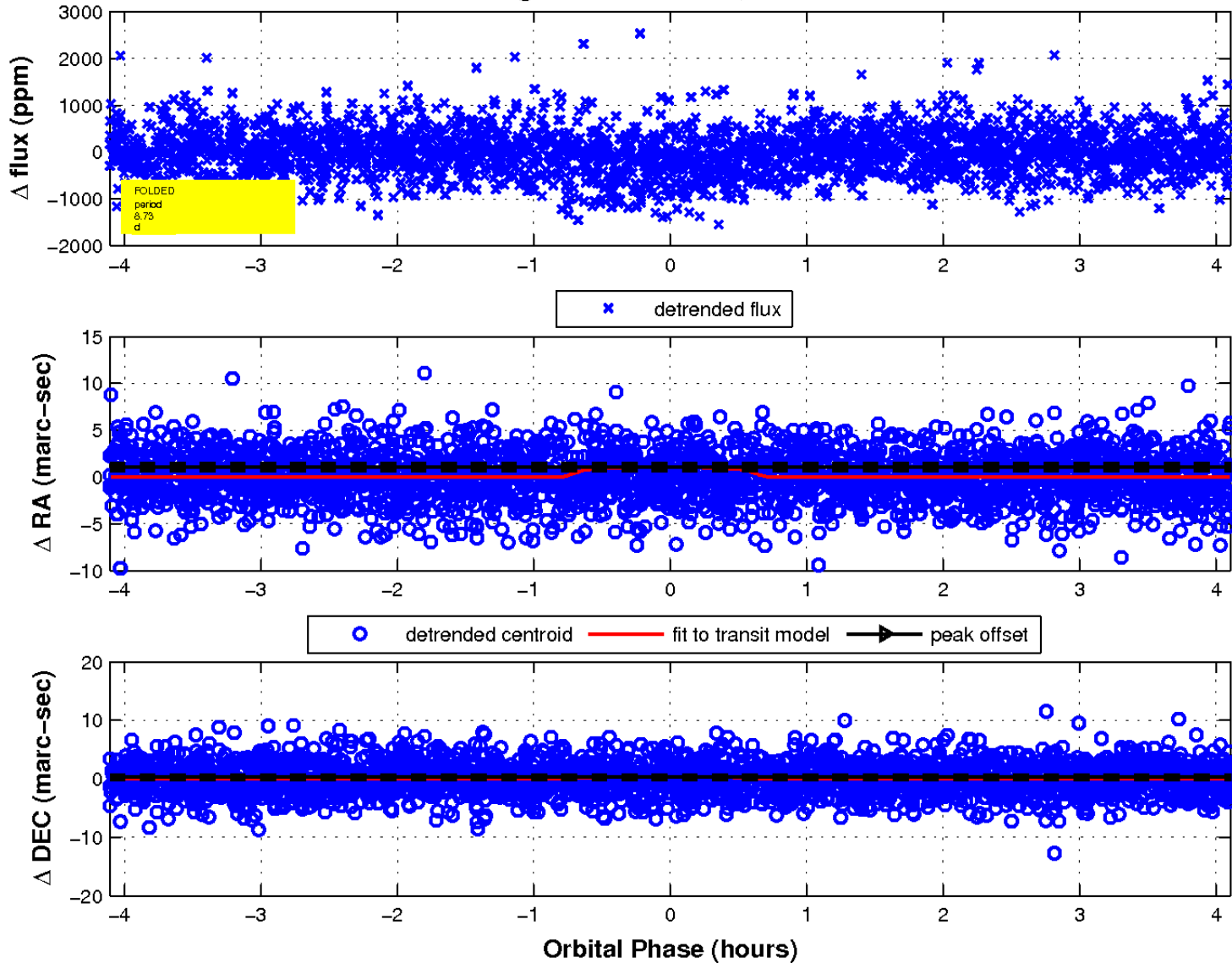
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

