

KIC 005306631

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})
005306631-01	OBS	No	4.697973	132.471314	64.4	23.799	10.8	10.9	1.22	6602	1.01	734.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005306631-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV

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

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

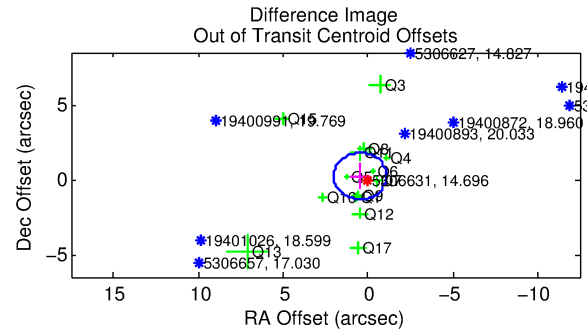
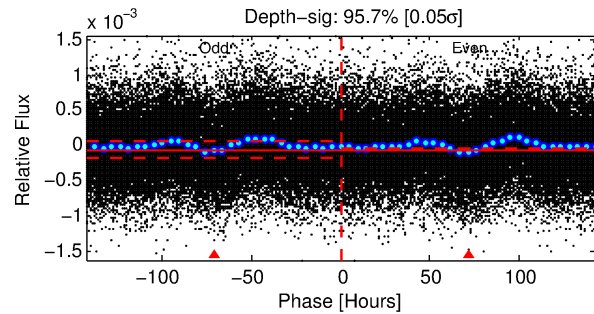
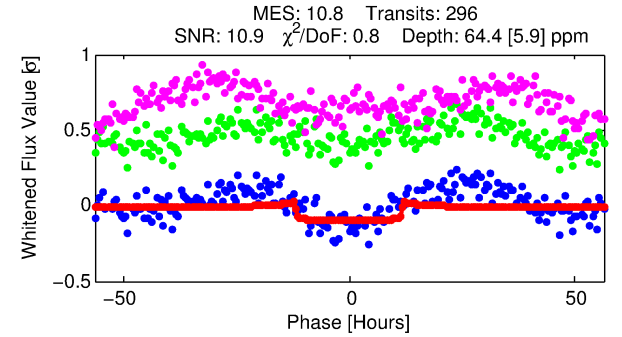
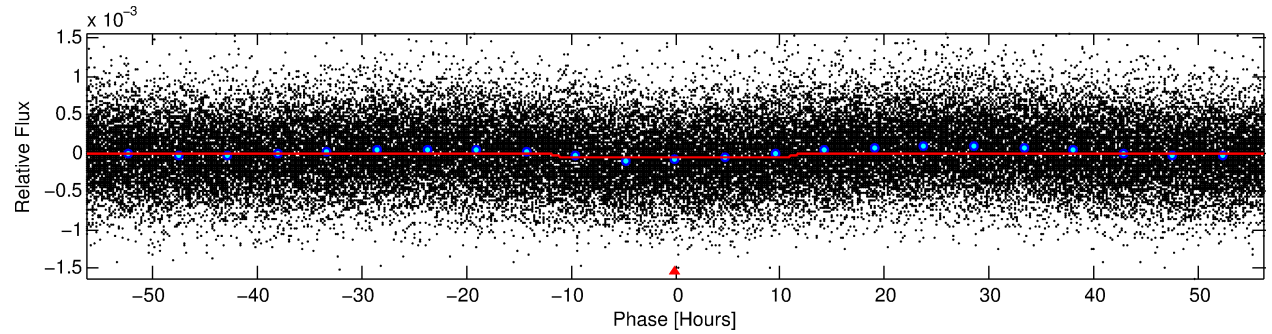
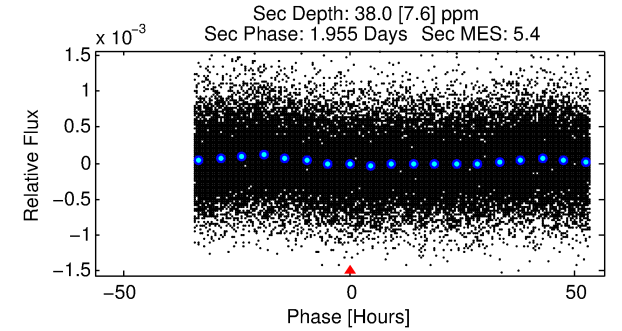
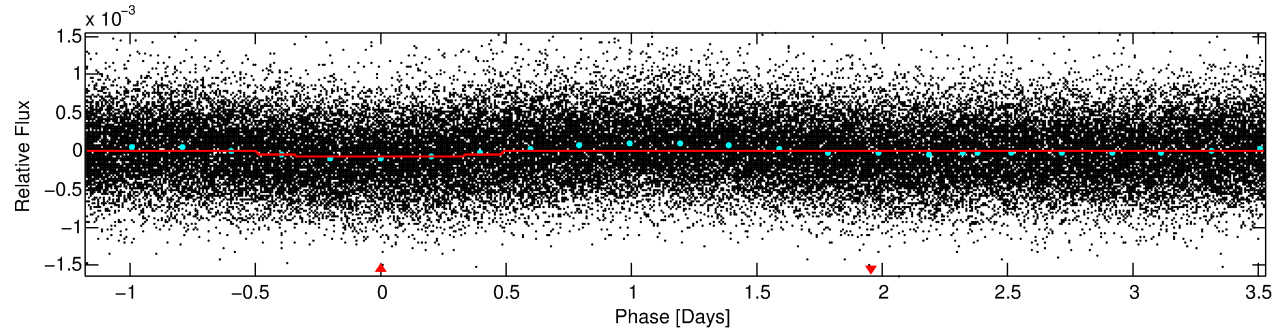
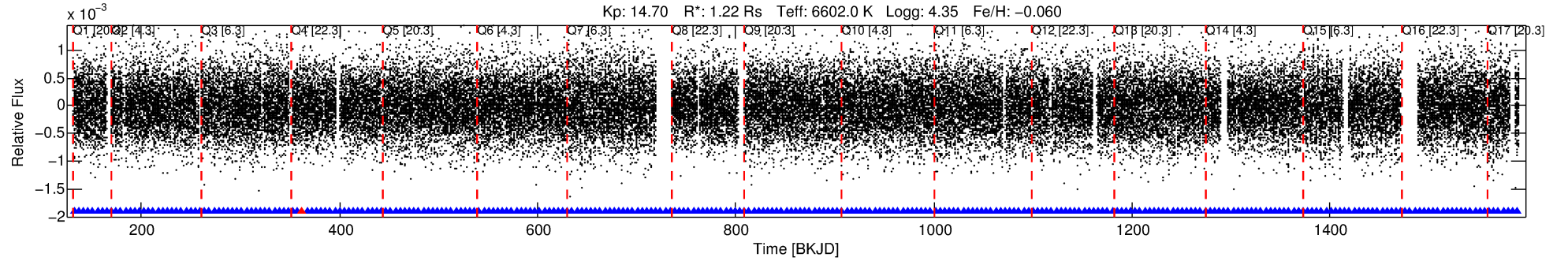
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005306631-01

No Significant Match Found

DV One-Page Summary

KIC: 5306631 Candidate: 1 of 1 Period: 4.698 d



DV Fit Results:

Period = 4.69797 [0.00009] d
Epoch = 132.4713 [0.0139] BKJD
Rp/R* = 0.0076 [0.0036]
a/R* = 1.52 [2.27]
b = 0.47 [4.37]
Seff = 734.51 [278.13]
Teff = 1327 [126] K
Rp = 1.01 [0.57] Re
a = 0.0589 [0.0145] AU
Ag = 71.04 [73.93] [0.95σ]
Teffp = 5958 [1481] K [3.12σ]

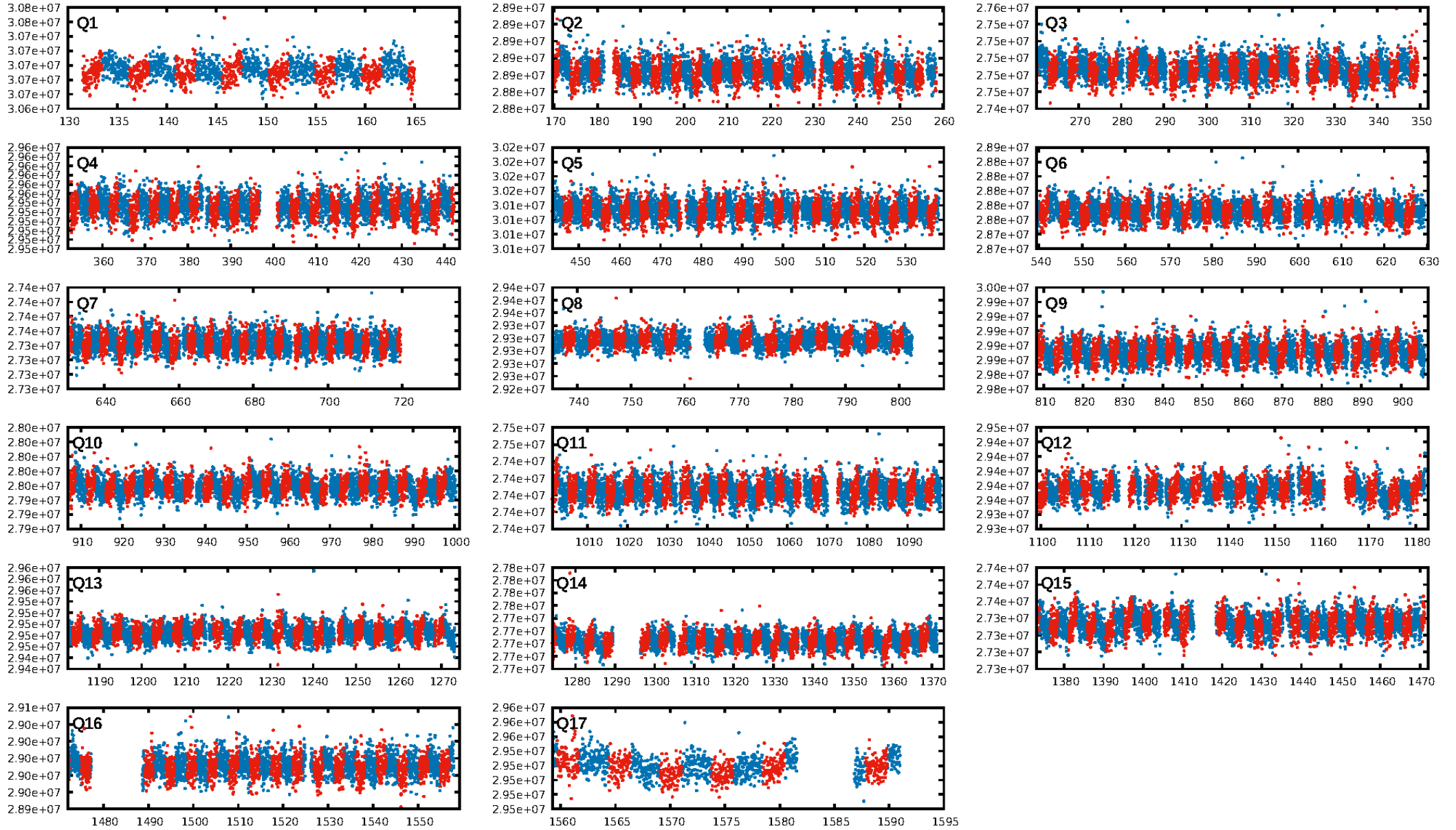
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.01e-27
RollingBand-fgt: 1.00 [281/282]
GhostDiagnostic-chr: 4.815
Centroid-sig: 54.3%
Centroid-so: 0.494 arcsec [0.69σ]
OotOffset-rm: 0.521 arcsec [1.00σ]
KicOffset-rm: 0.592 arcsec [1.07σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.43 [6/14]
DiffImageOverlap-fno: 1.00 [17/17]

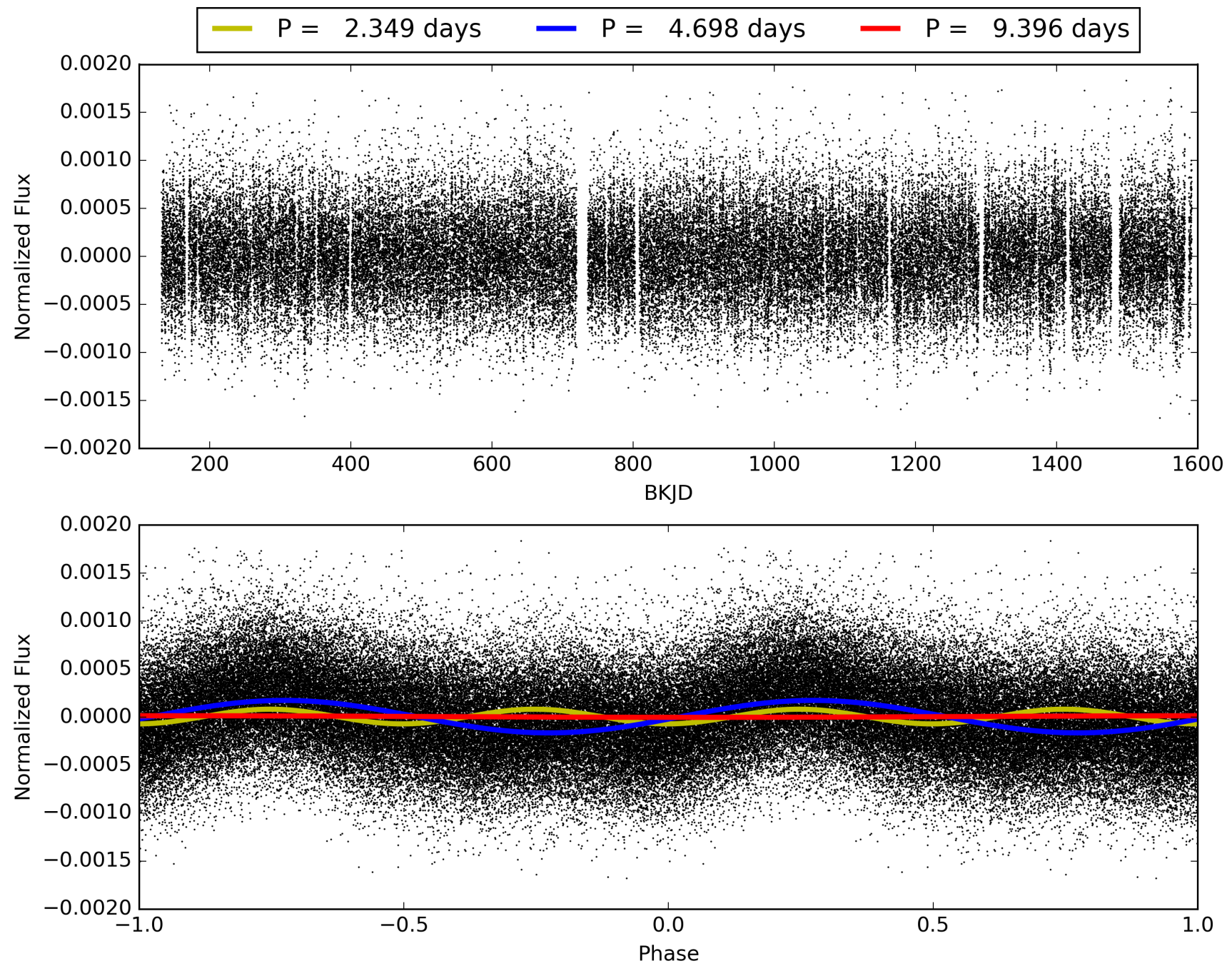
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:46:22 Z

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

TCE 005306631-01, PDC Light Curves

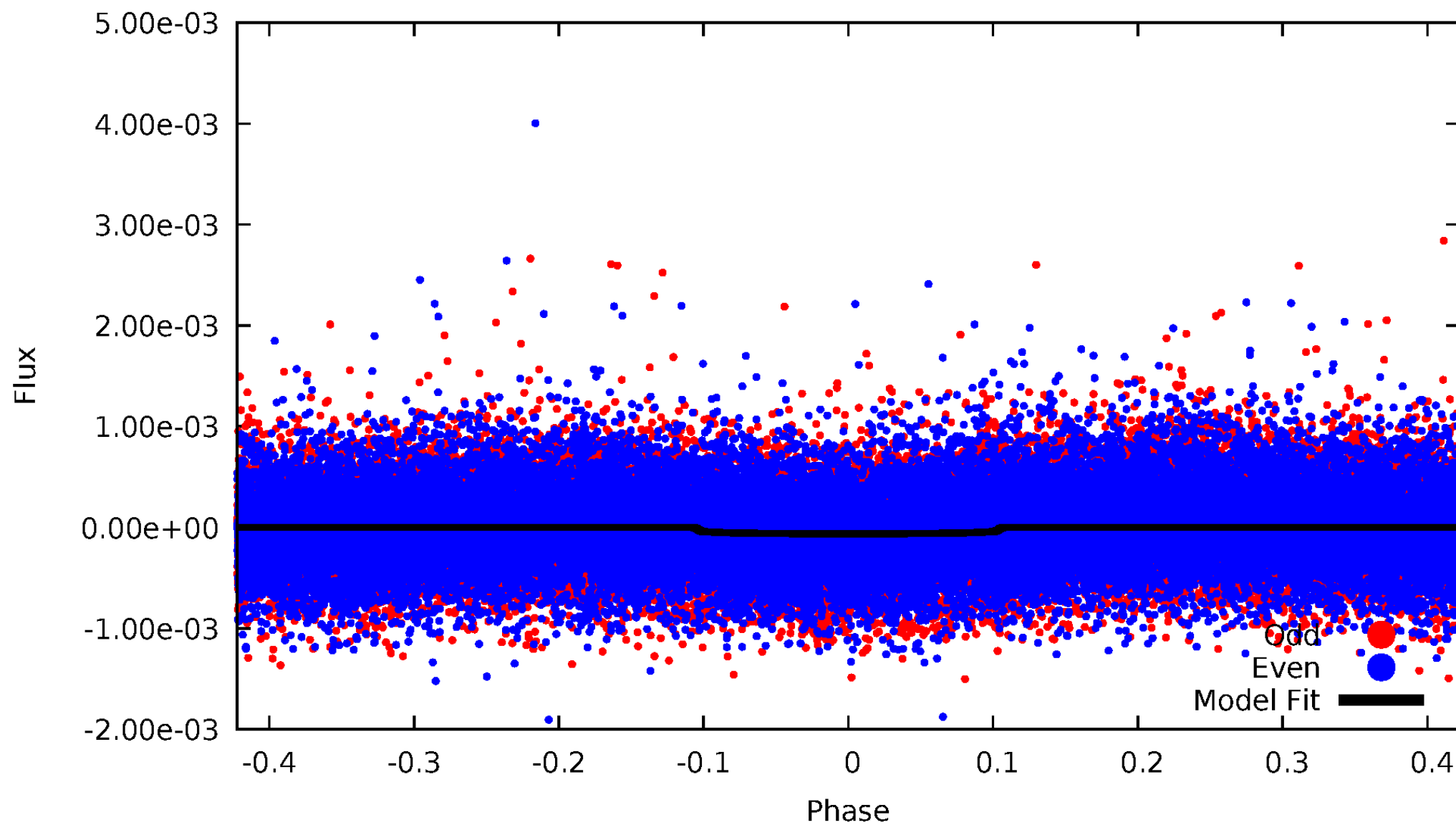


TCE 005306631-01



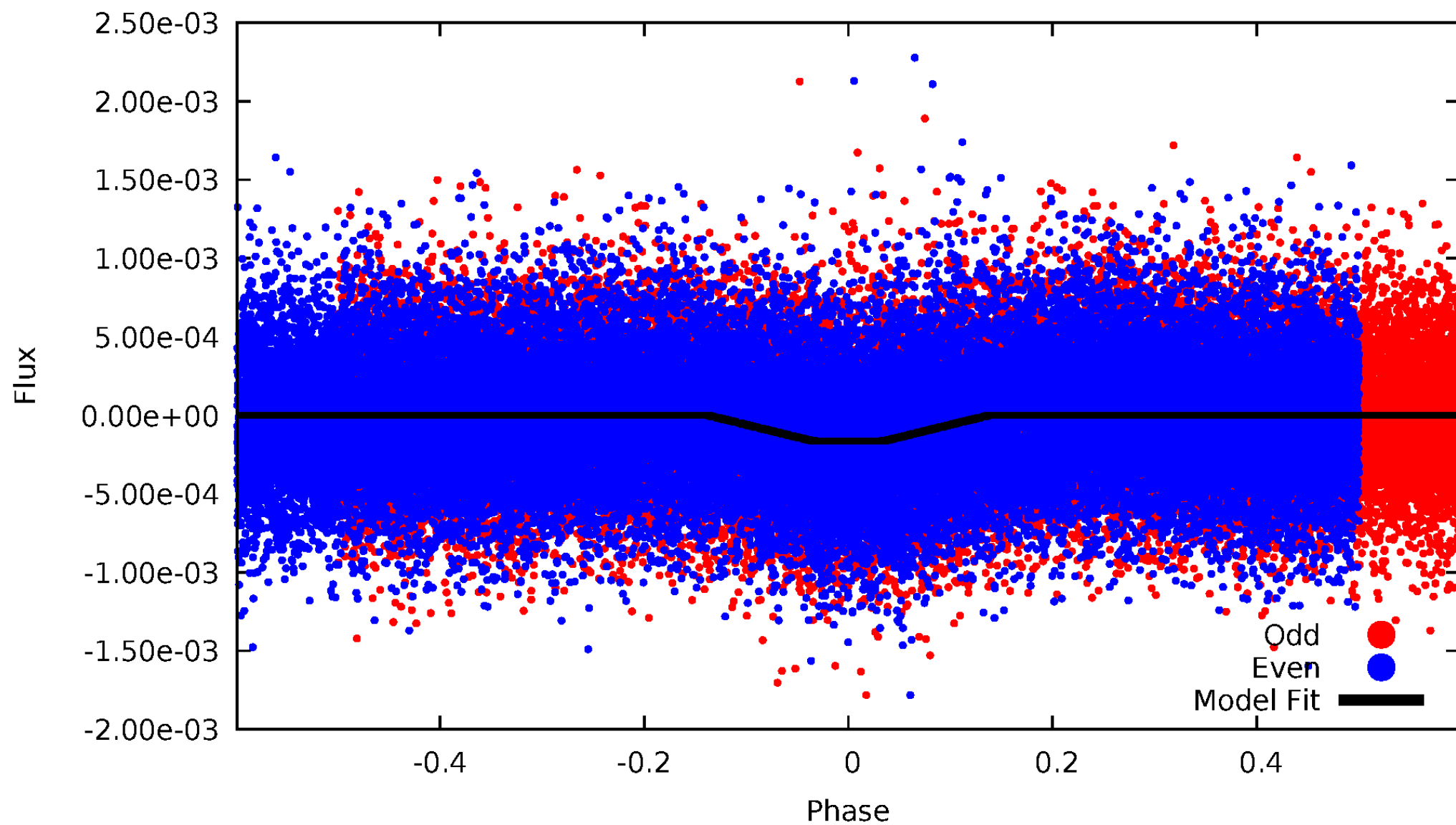
DV Odd/Even

TCE 005306631-01



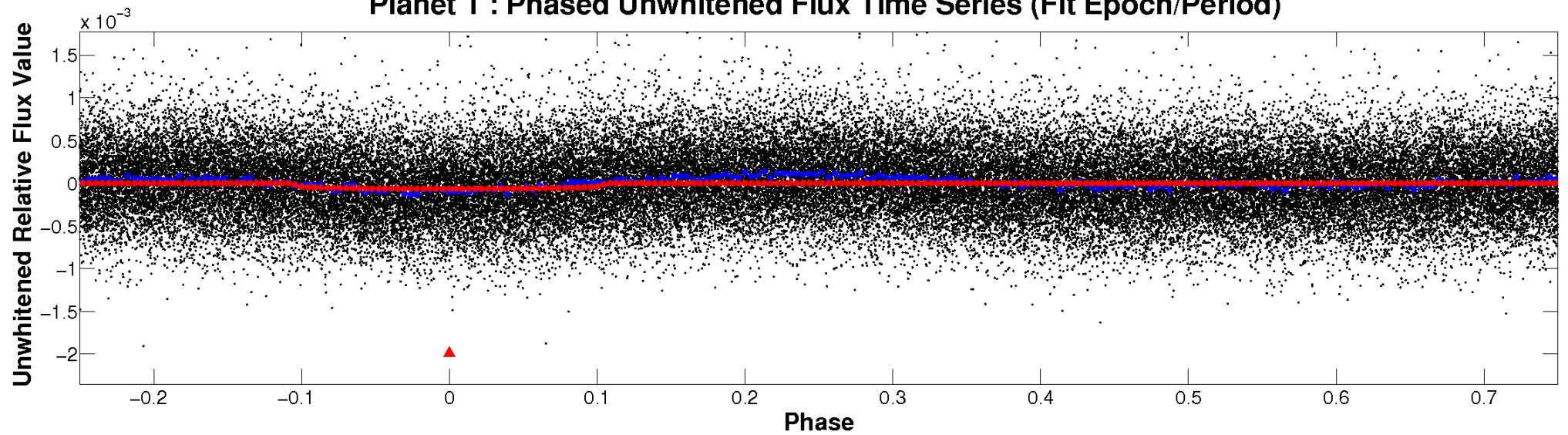
ALT Odd/Even

TCE 005306631-01

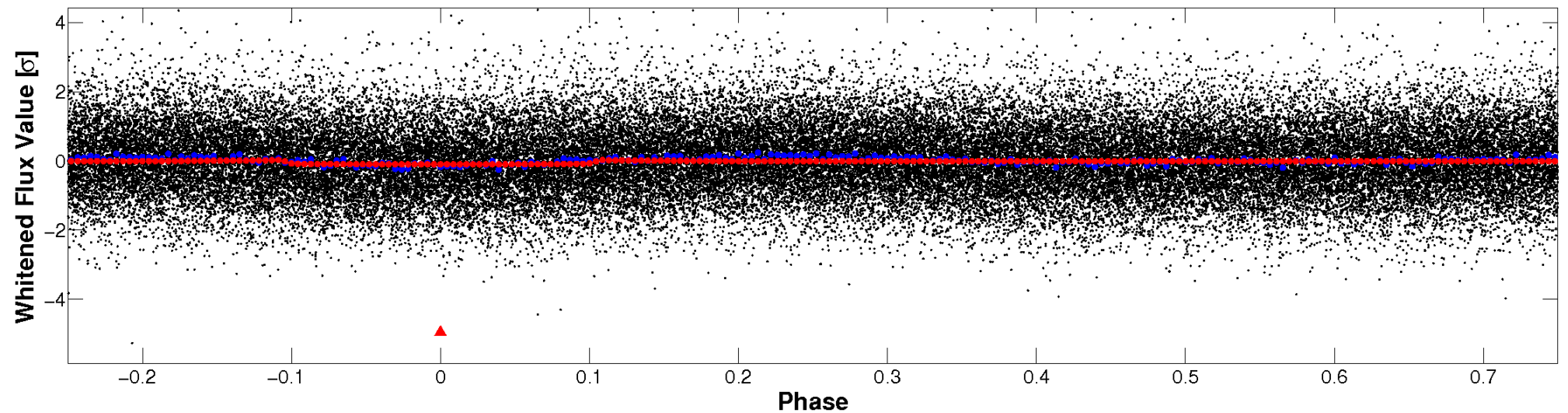


Non-Whitened Vs. Whitened Light Curve

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

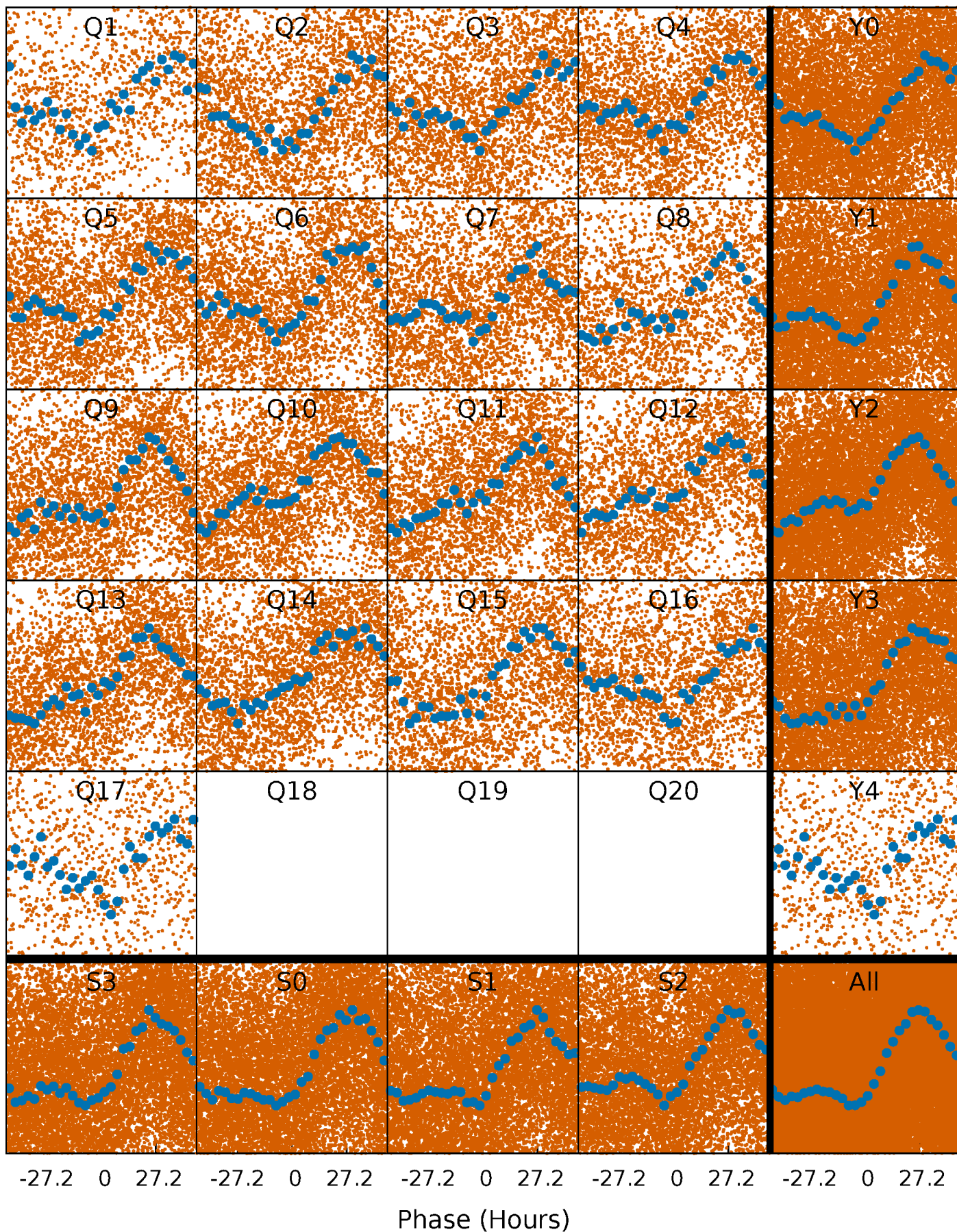


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



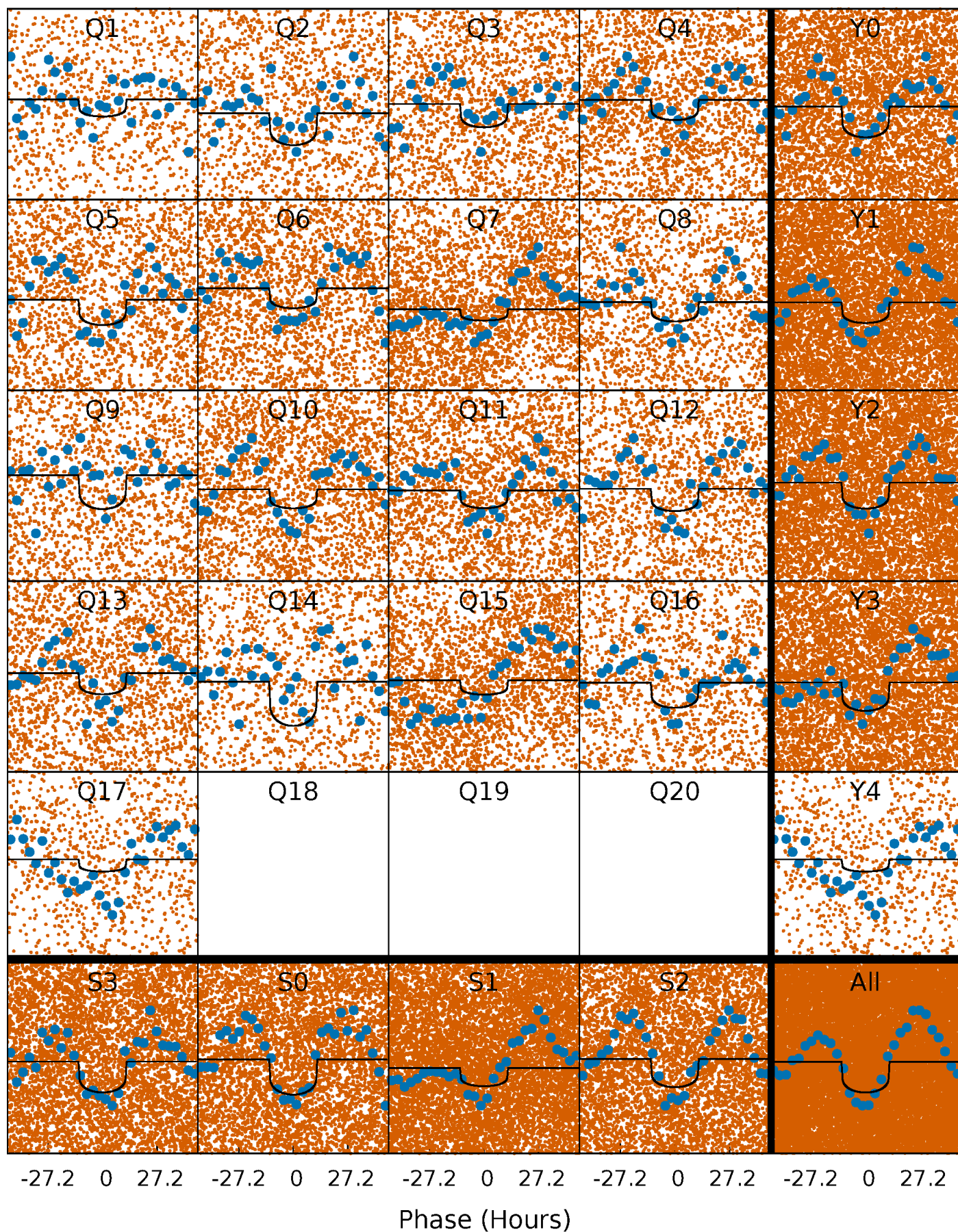
PDC Quarter-Phased Transit Curves

TCE 005306631-01 P= 4.697973 Days $T_0=132.471314$ (BKJD)



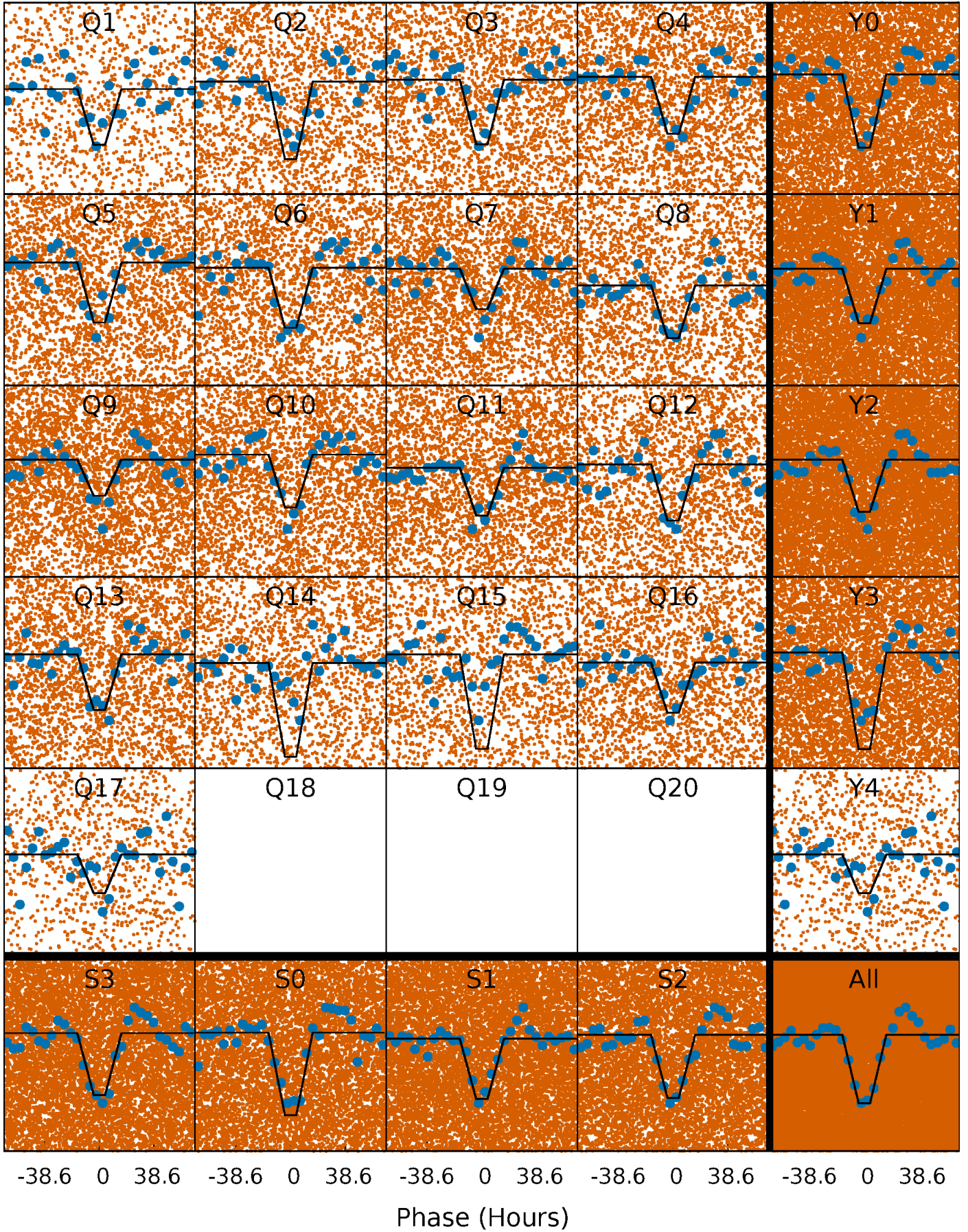
DV Quarter-Phased Transit Curves

TCE 005306631-01 P= 4.697973 Days $T_0=132.471314$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

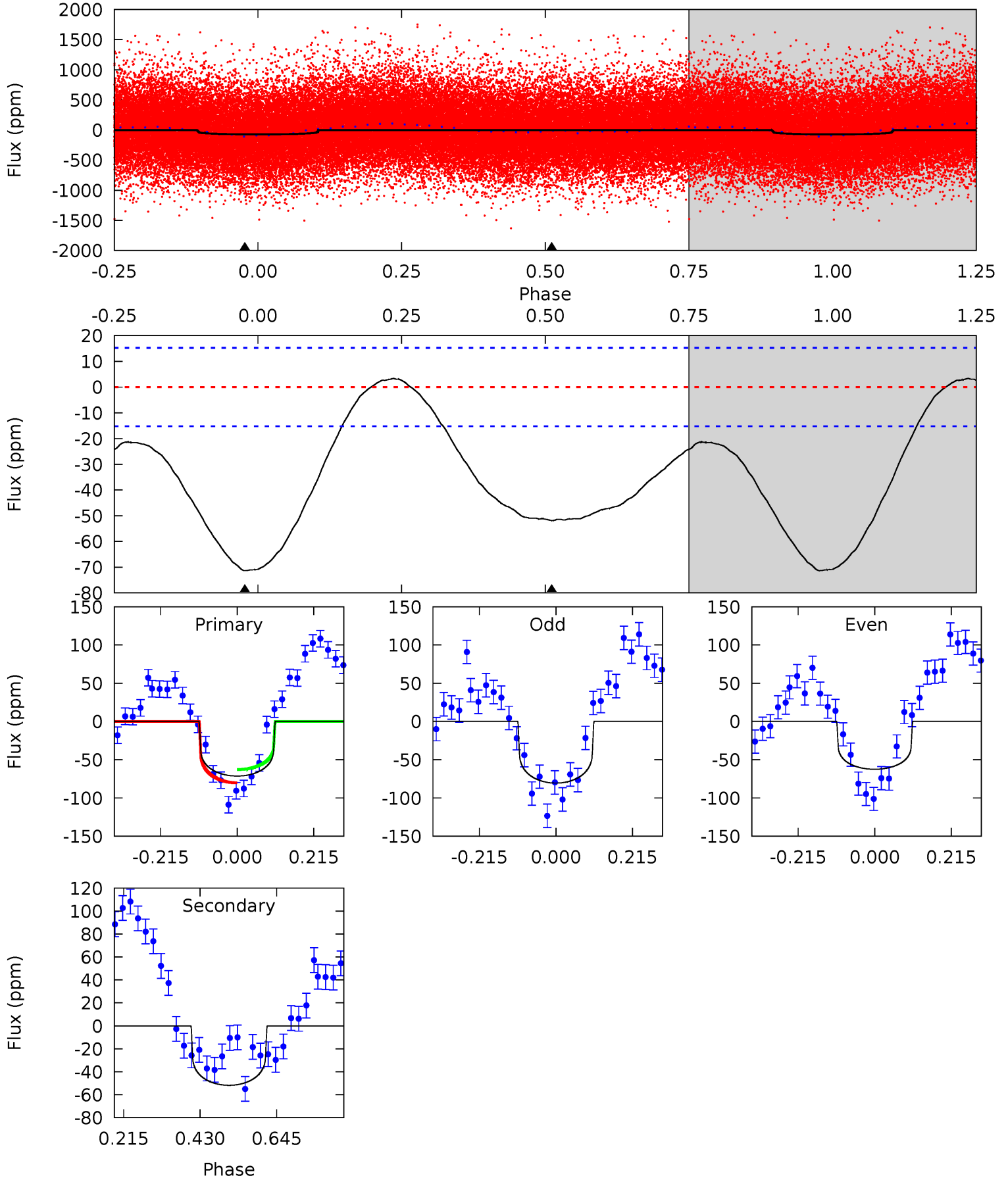
TCE 005306631-01 P= 4.698325 Days $T_0=132.385852$ (BKJD)



DV Model-Shift Uniqueness Test

005306631-01, P = 4.697973 Days, E = 127.773341 Days

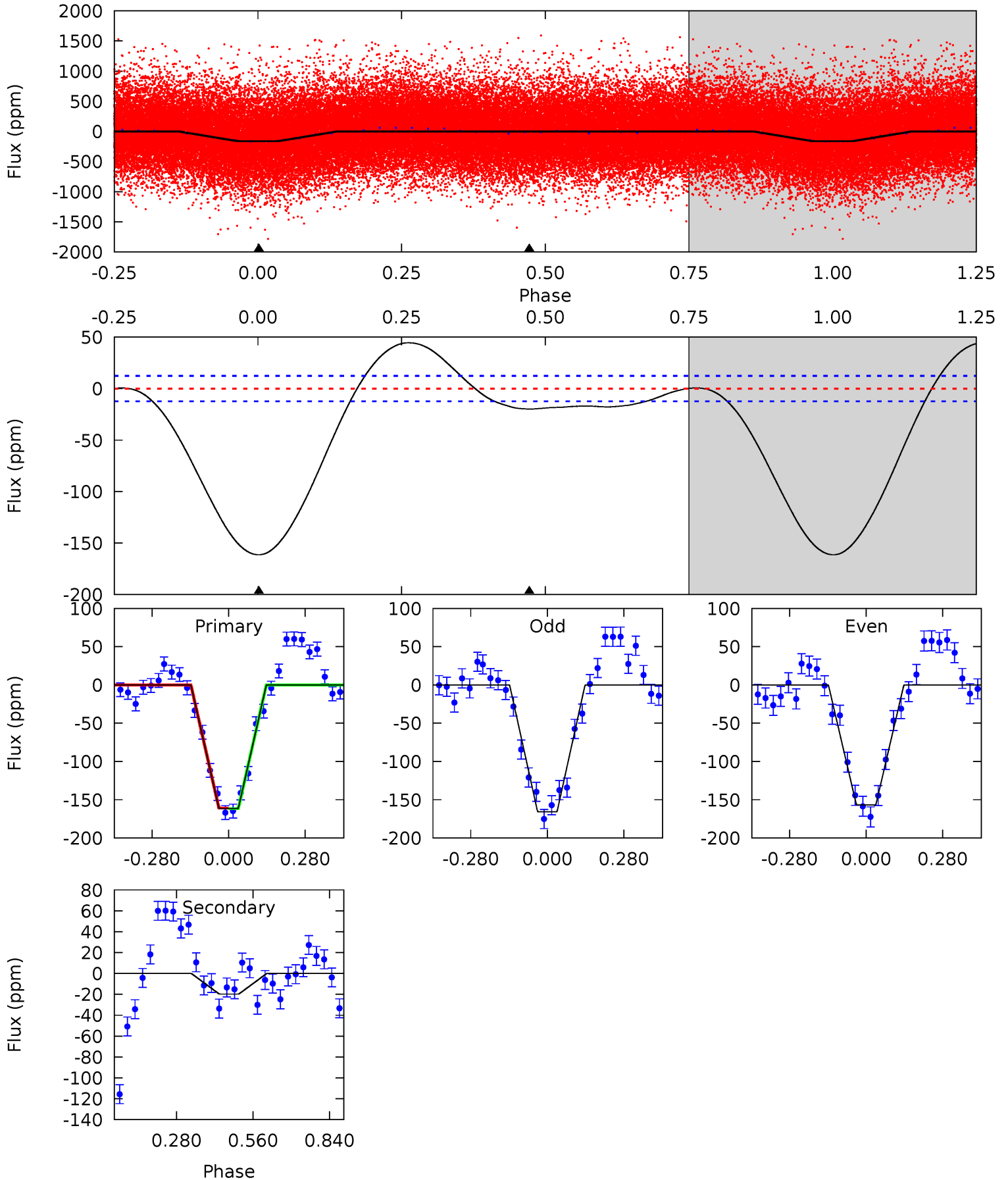
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	15.0	0	0	4.40	1.24	3.29	20.7	20.7	15.0	15.0	2.62	1.12	0.04	2.52



Alt Model-Shift Uniqueness Test

005306631-01, P = 4.698325 Days, E = 127.687527 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.5	6.93	0	0	4.34	1.08	6.30	56.5	56.5	6.93	6.93	1.60	1.65	0.22	0.11



Stellar Parameters For KIC 005306631

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6602^{+164}_{-258}	$4.354^{+0.065}_{-0.182}$	$-0.060^{+0.250}_{-0.300}$	$1.223^{+0.371}_{-0.159}$	$1.240^{+0.174}_{-0.174}$	$0.954^{+0.316}_{-0.461}$
	+2%/-4%	+1%/-4%	+417%/-500%	+30%/-13%	+14%/-14%	+33%/-48%
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 005306631-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-52 ± 3	$1.09^{+0.53}_{-0.52}$	1888^{+122}_{-100}	6327^{+2821}_{-1074}	84^{+217}_{-46}
Alt.	-20 ± 3	$1.76^{+0.54}_{-0.51}$	1875^{+119}_{-90}	4123^{+574}_{-373}	12^{+12}_{-5}

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

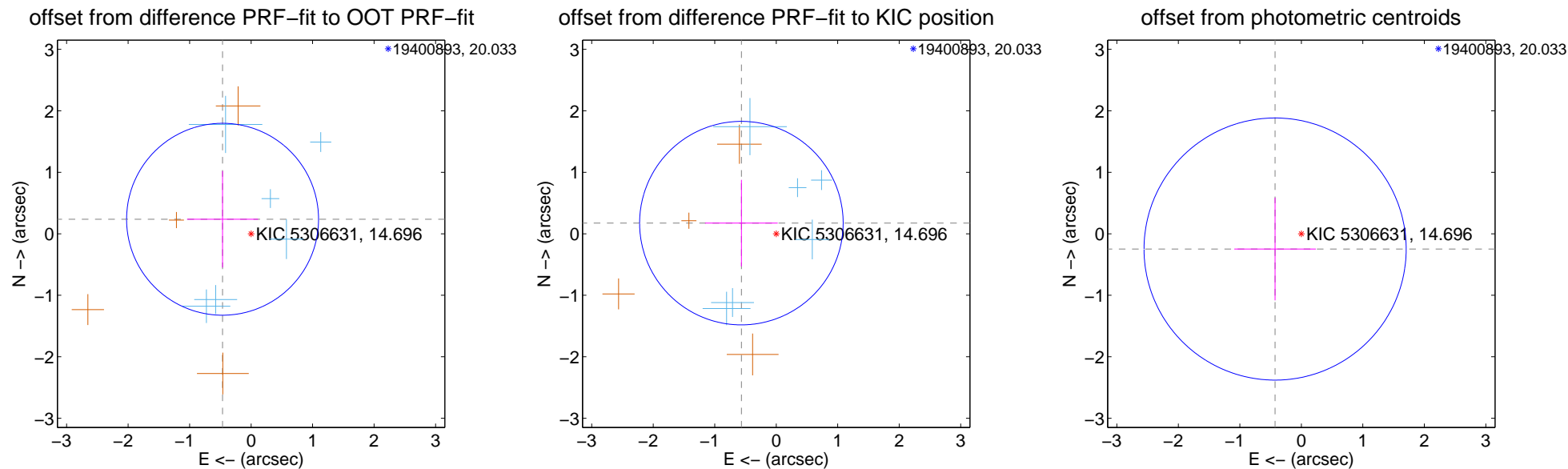
DV Centroid Data

Supplemental centroid analysis for 005306631-01. Kepler magnitude: 14.70. Transit SNR 10.91

There are 6 quarters with good PRF difference image offsets

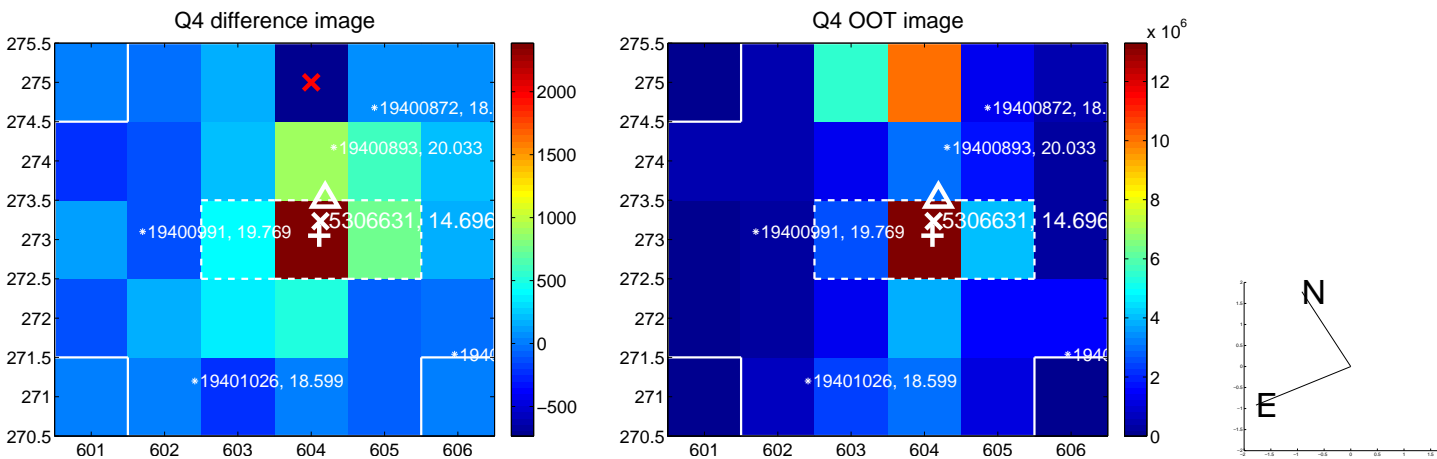
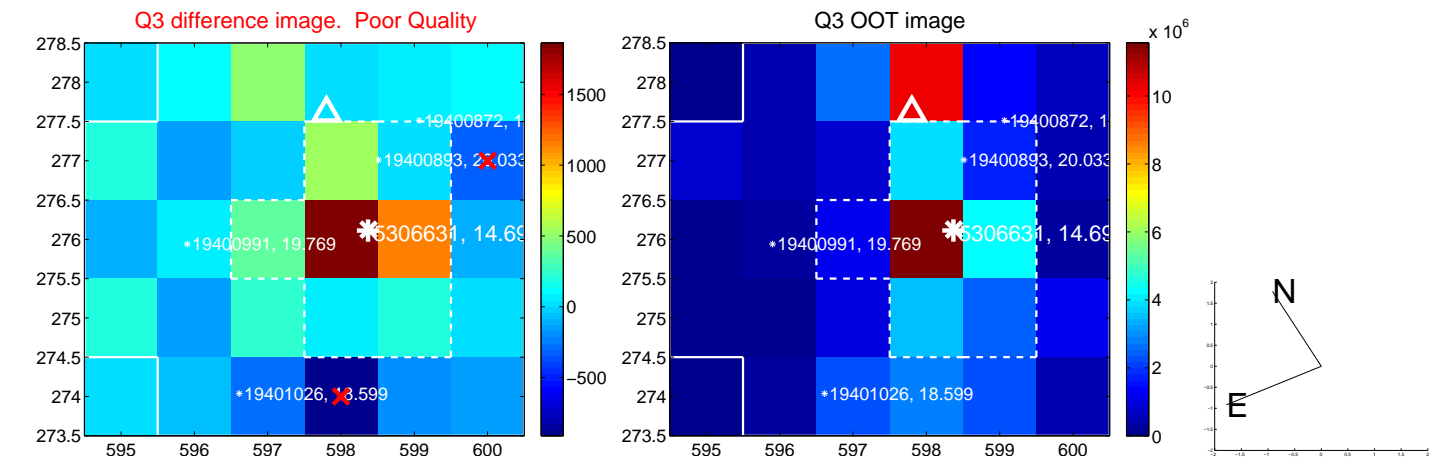
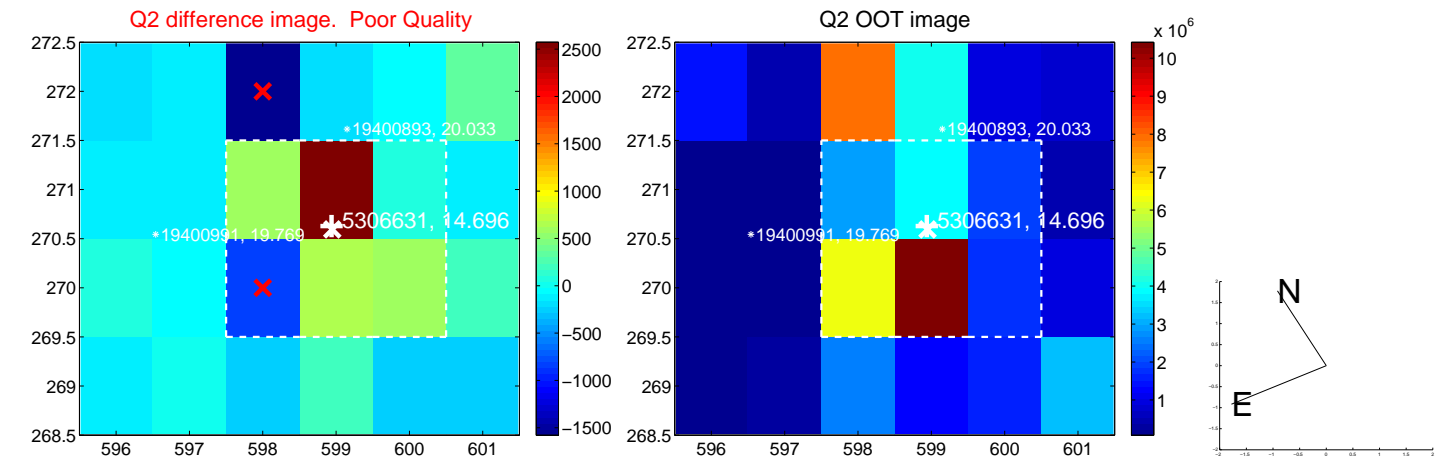
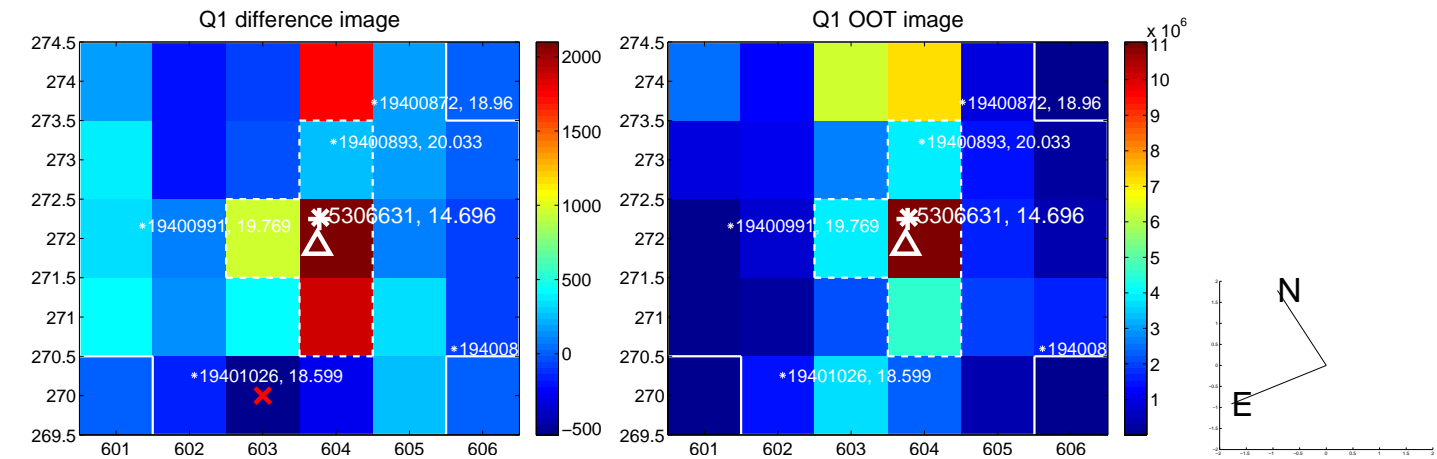
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.521 ± 0.520	1.00	0.464 ± 0.578	0.236 ± 0.785
PRF-fit source offset from KIC position	0.592 ± 0.552	1.07	0.566 ± 0.591	0.173 ± 0.703
photometric centroid source offset	0.49 ± 0.71	0.69	0.43 ± 0.66	-0.25 ± 0.83

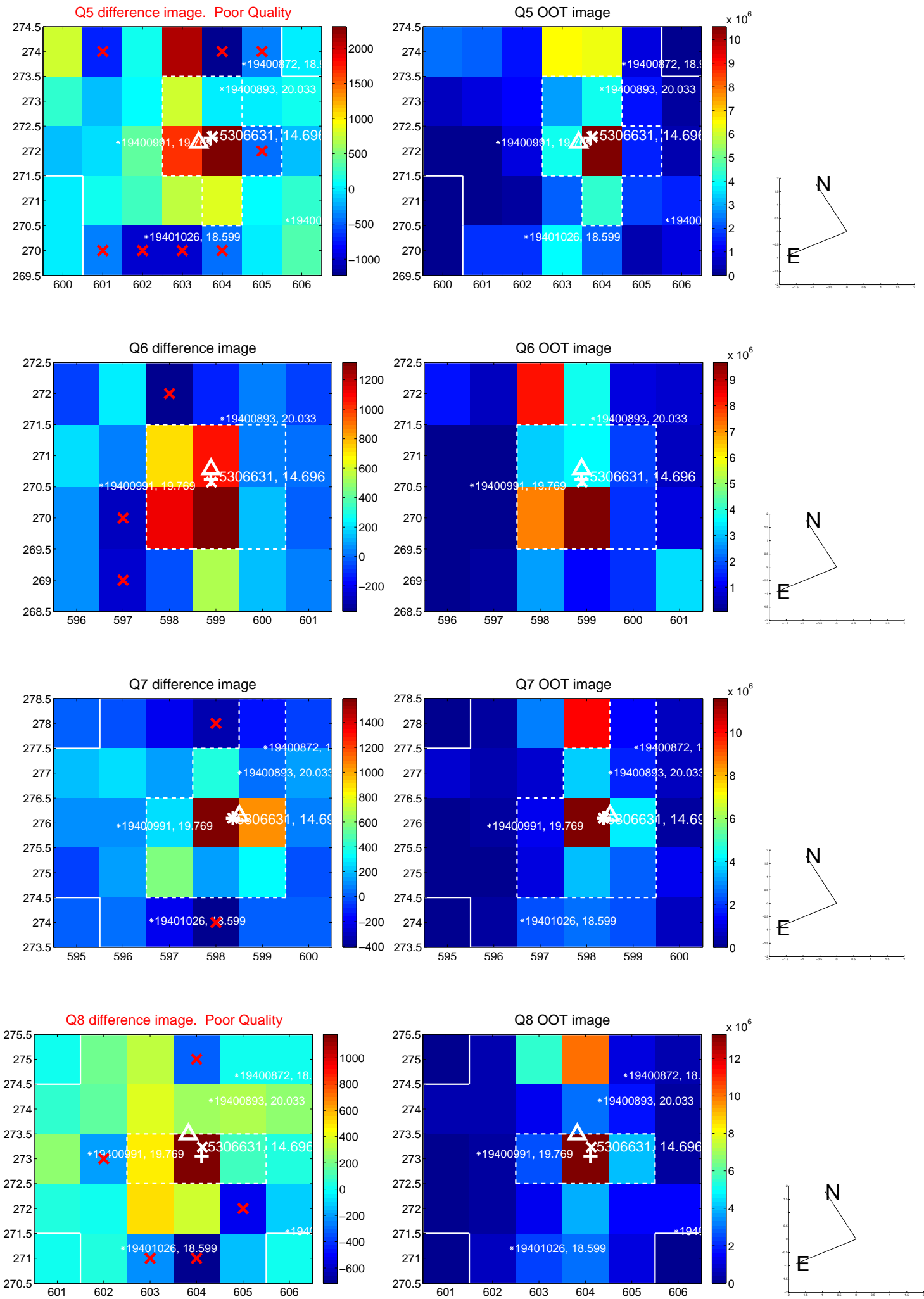


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

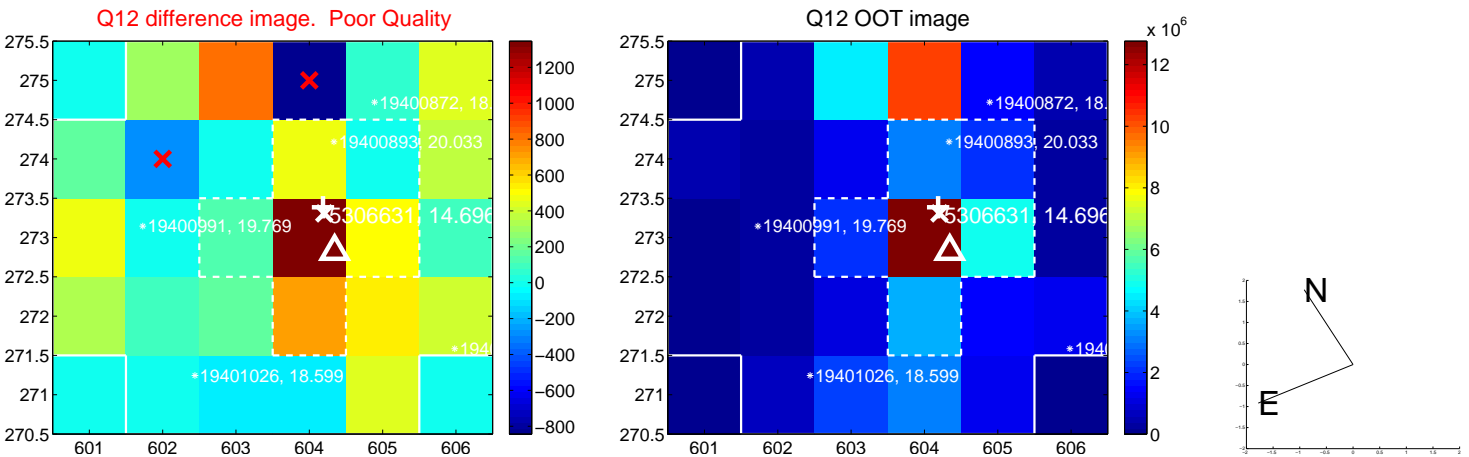
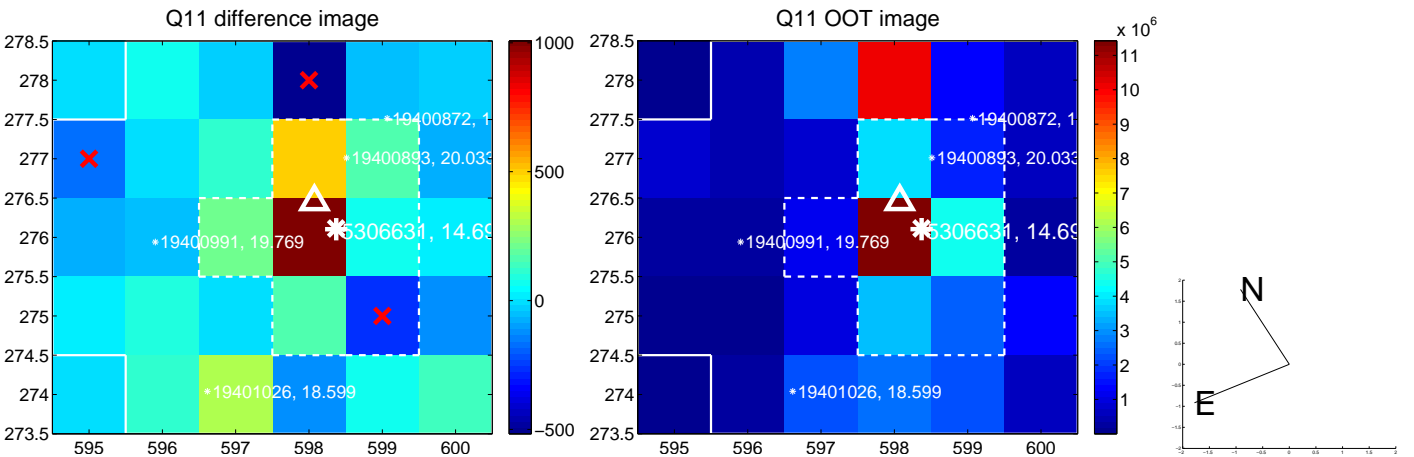
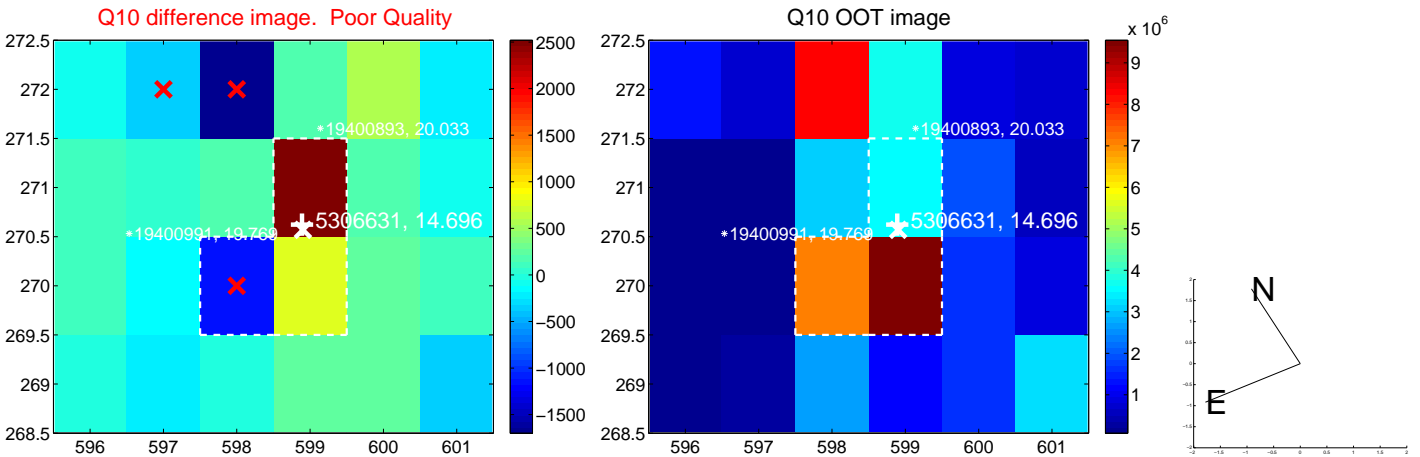
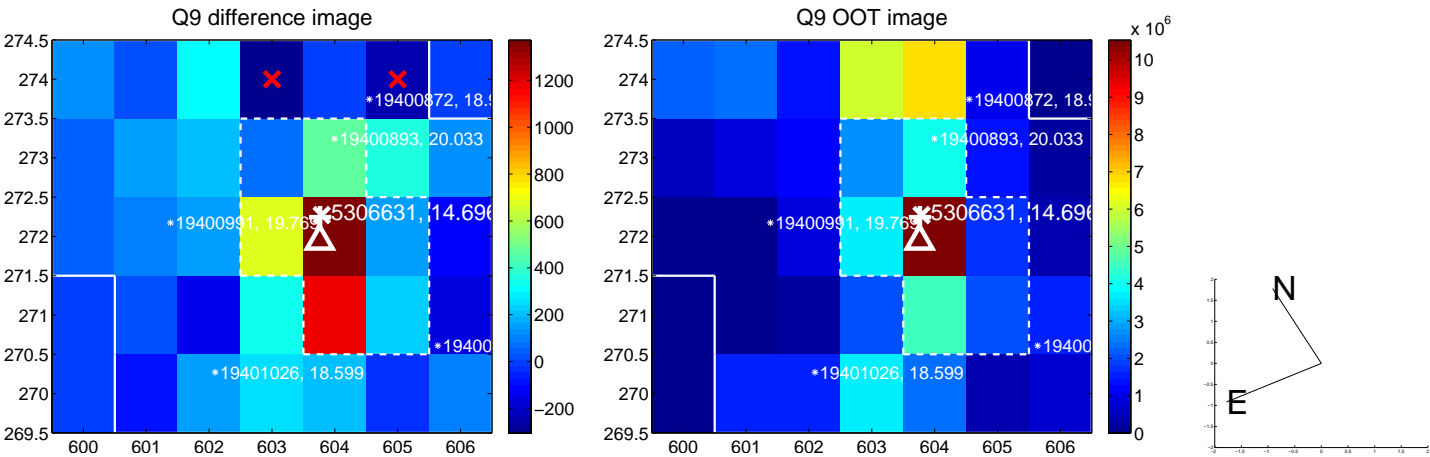
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



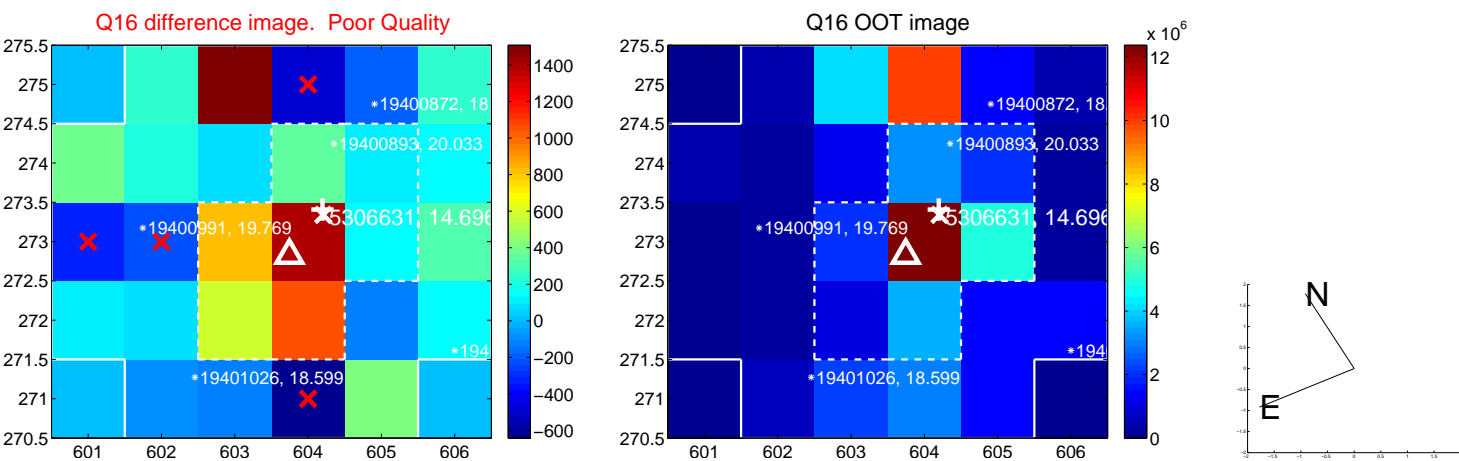
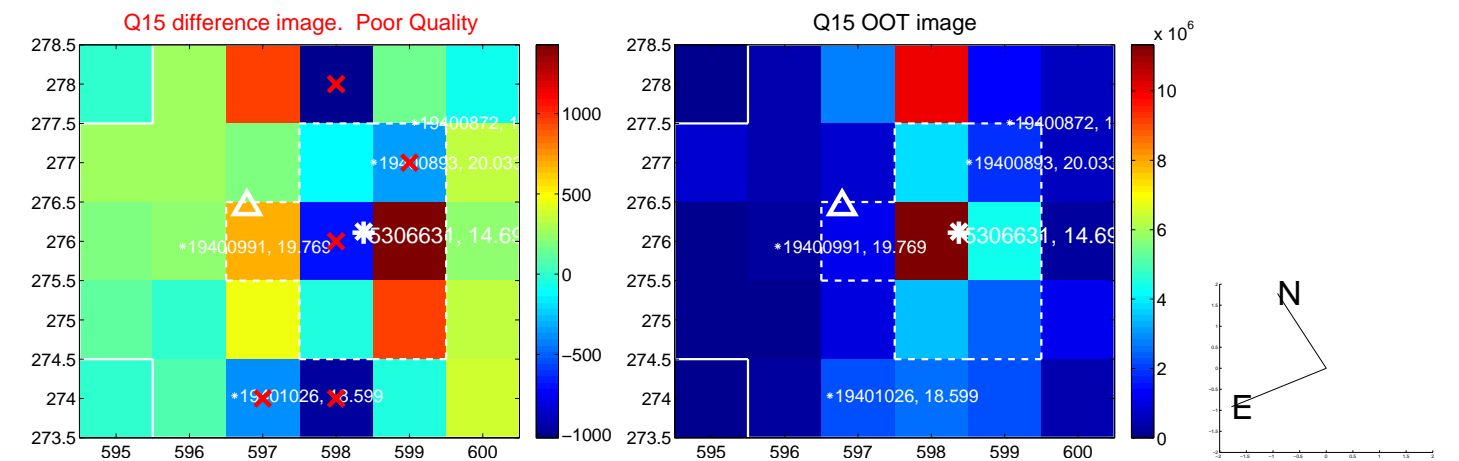
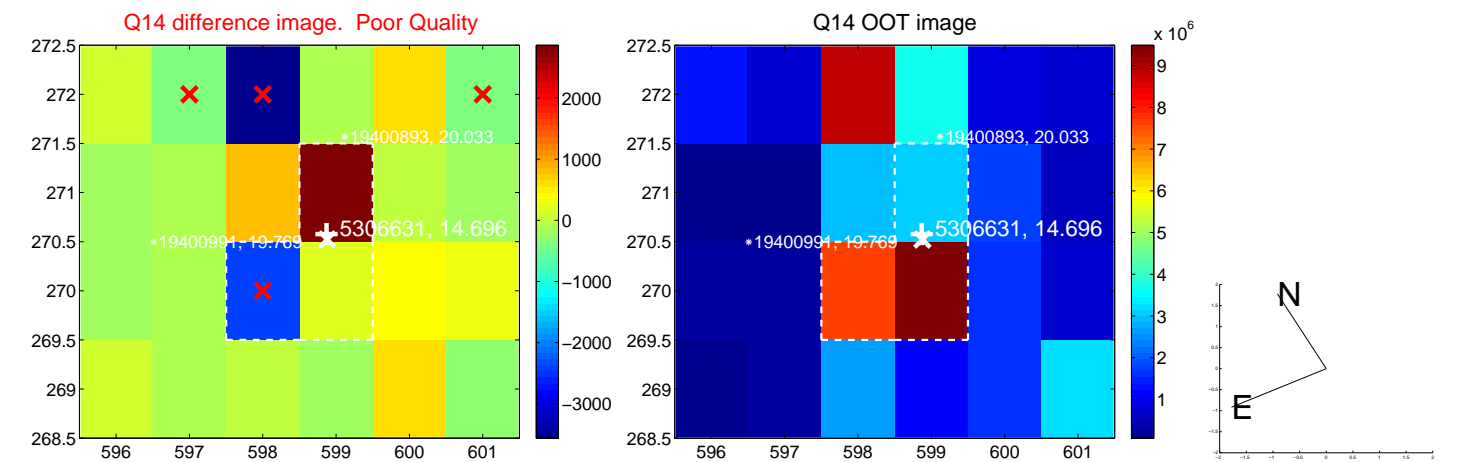
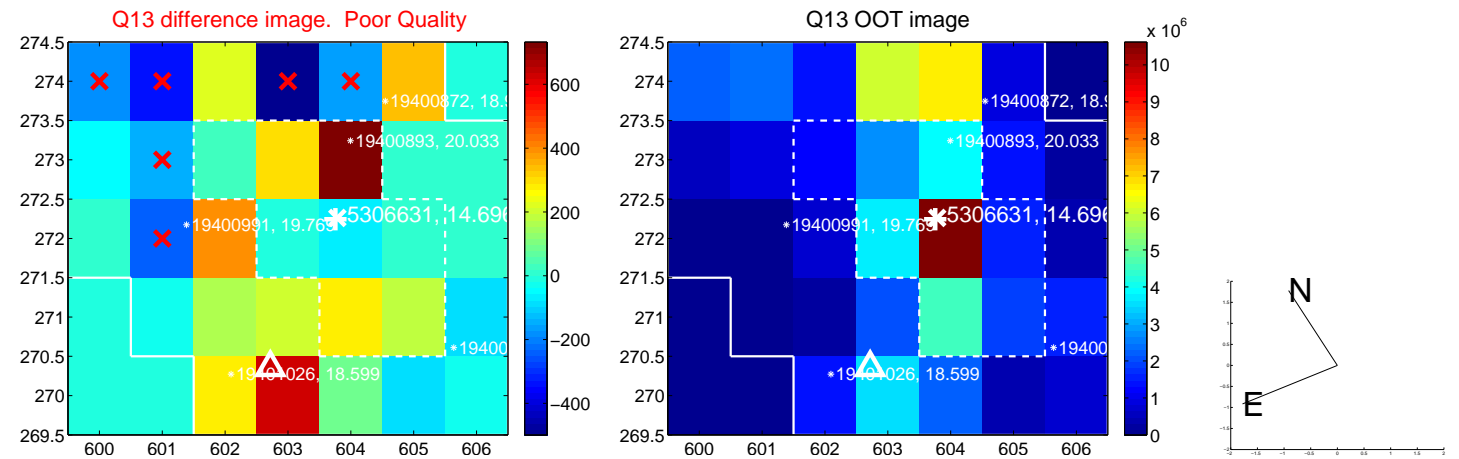
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



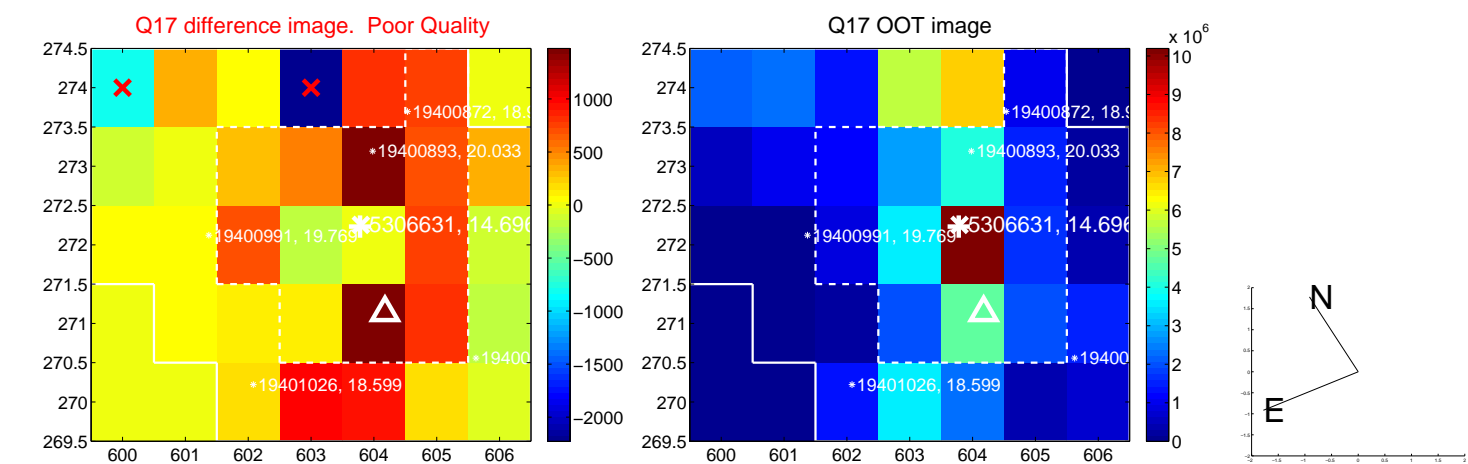
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



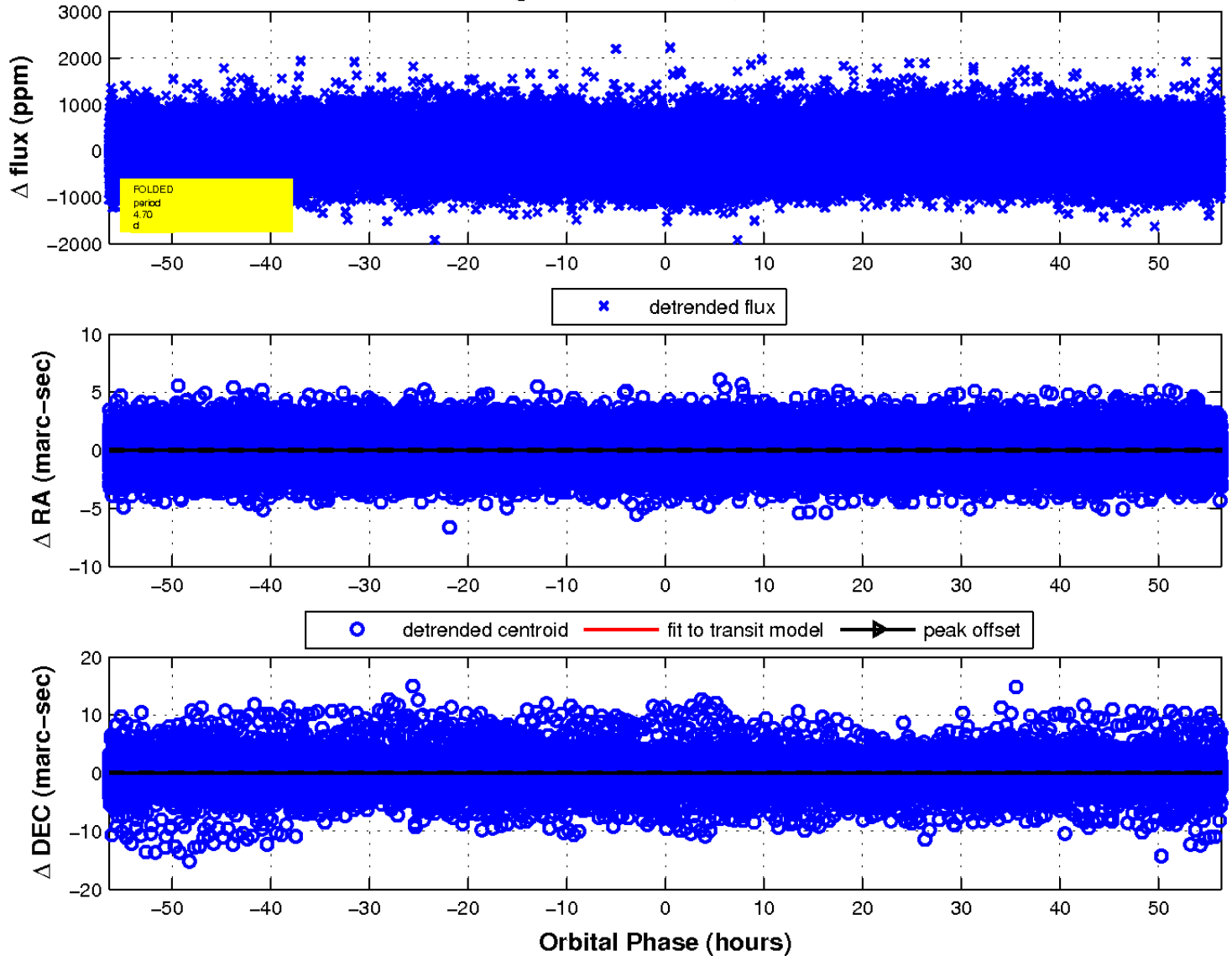
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

