

KIC 009087580

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})
009087580-01	OBS	7924.01	0.770651	131.835713	73.9	1.427	10.0	10.2	0.74	5058	0.78	1359.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009087580-01	OBS	PC	0.98	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.

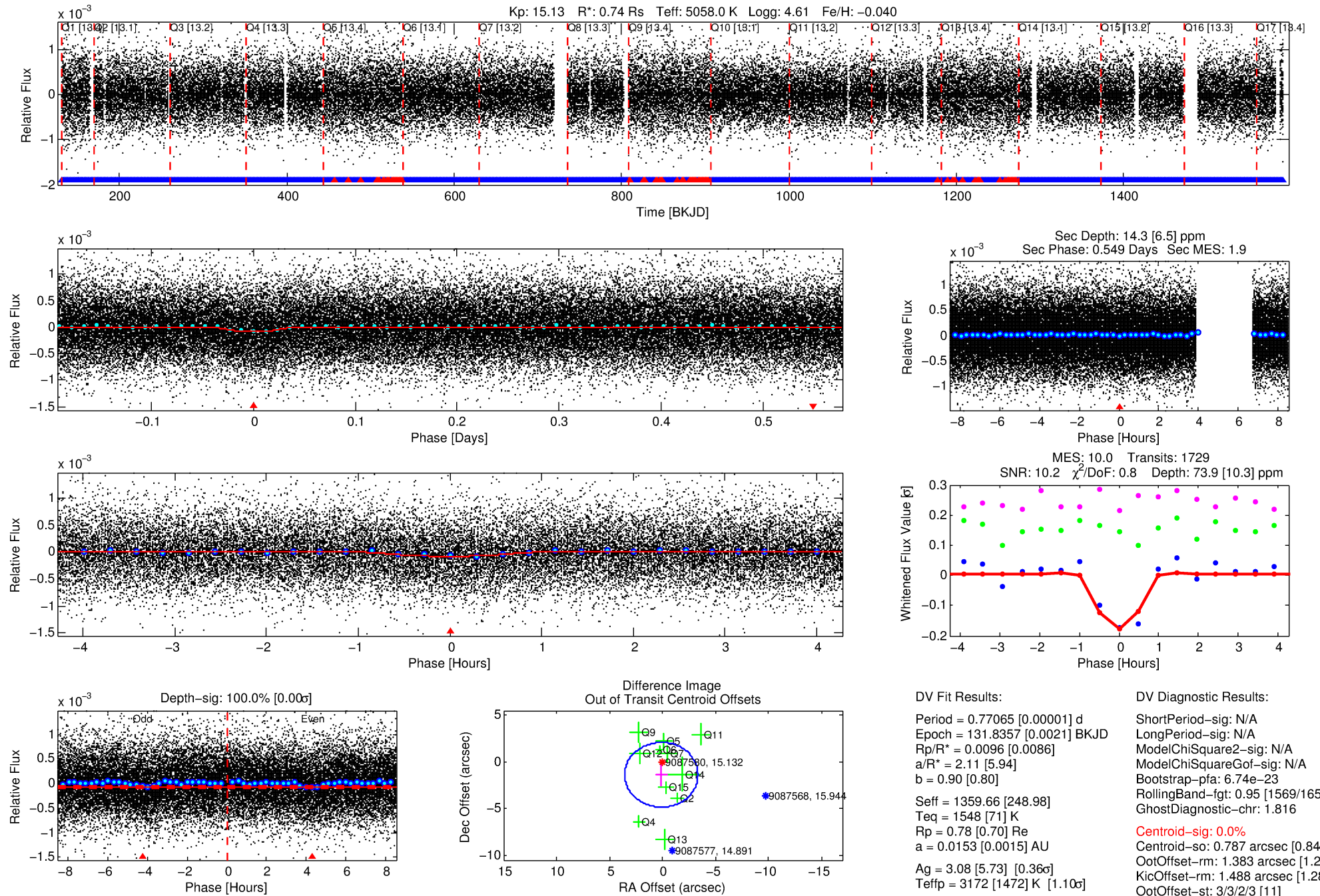
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009087580-01

No Significant Match Found

DV One-Page Summary

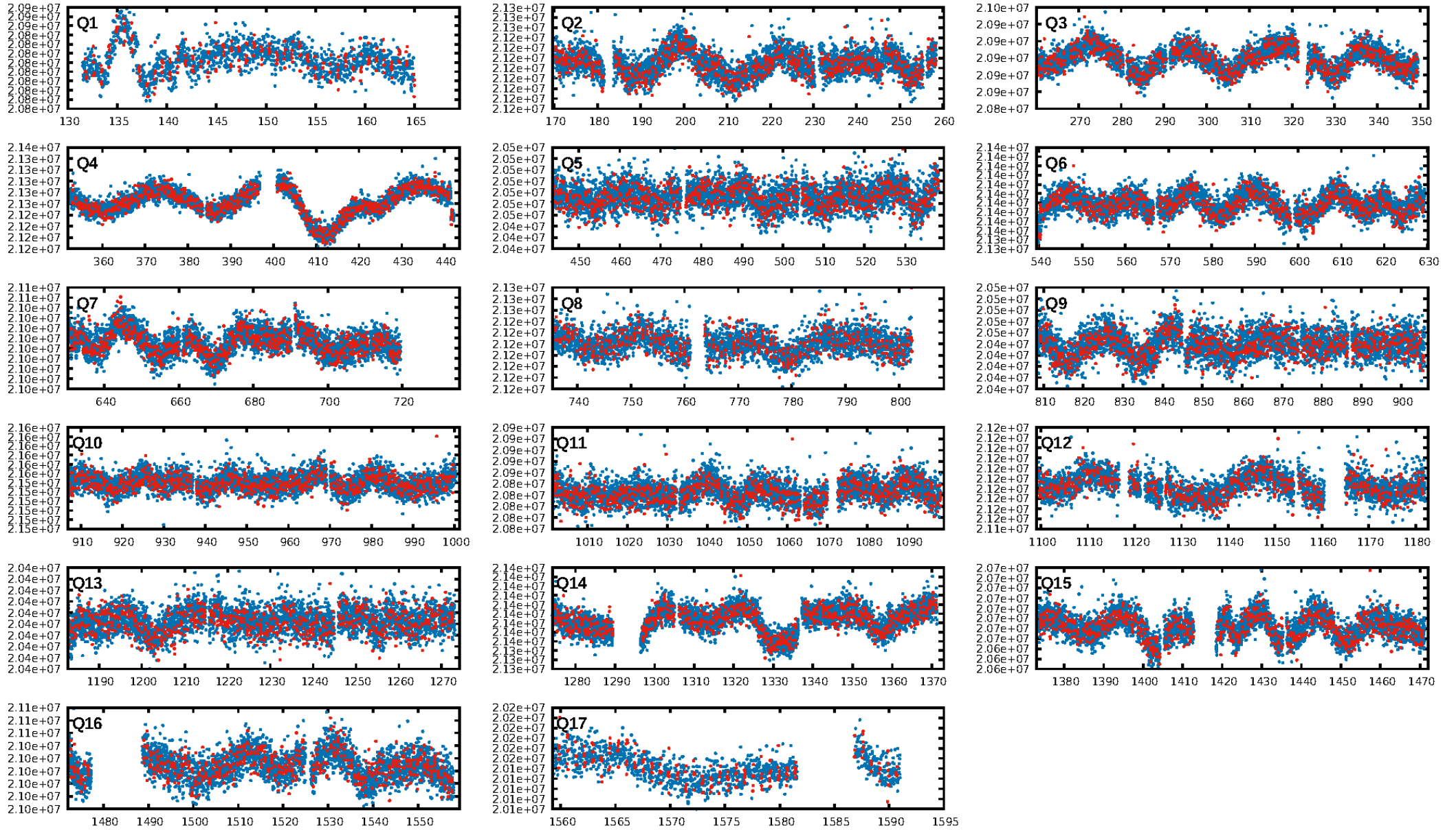
KIC: 9087580 Candidate: 1 of 1 Period: 0.771 d



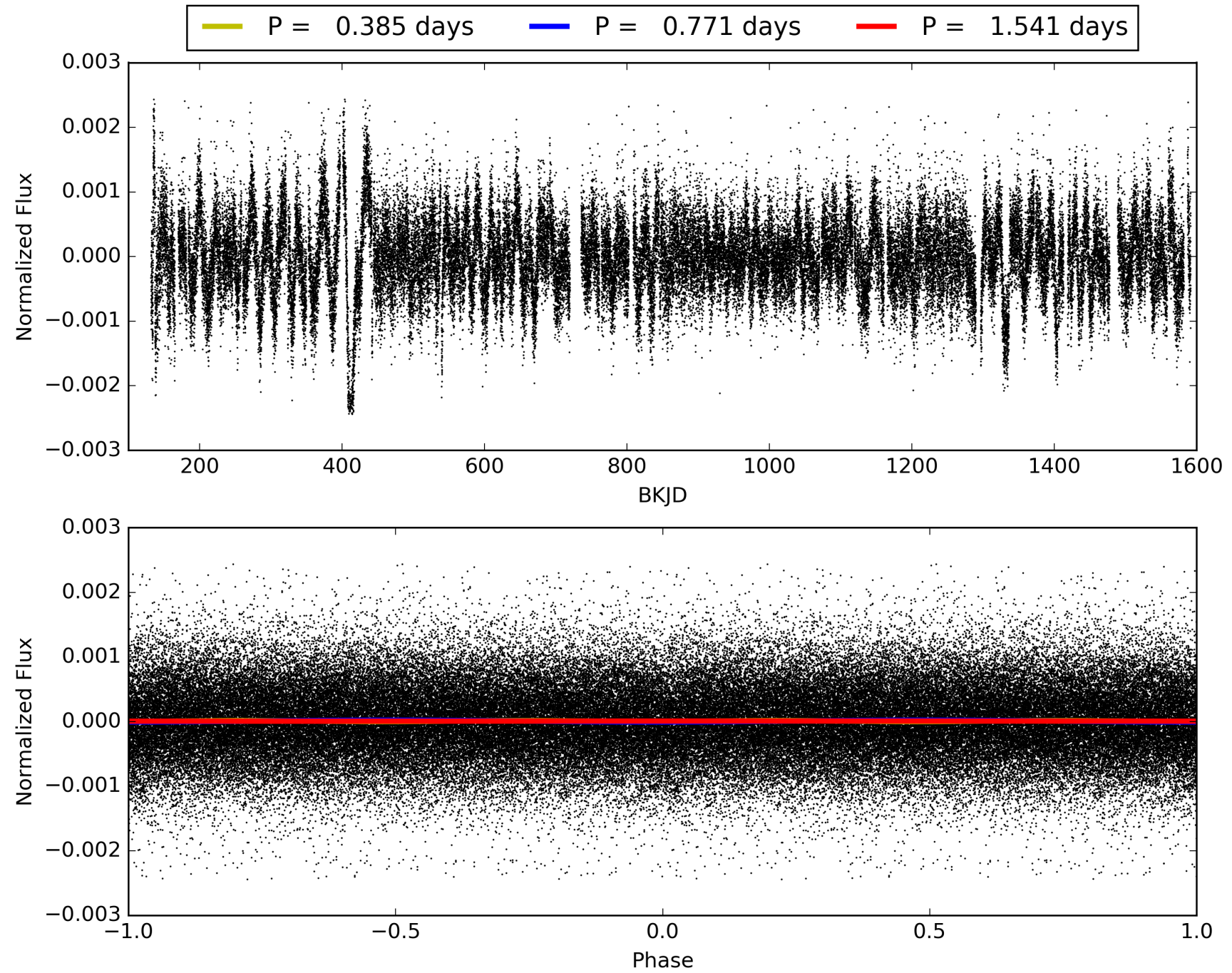
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:31:40 Z

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

TCE 009087580-01, PDC Light Curves

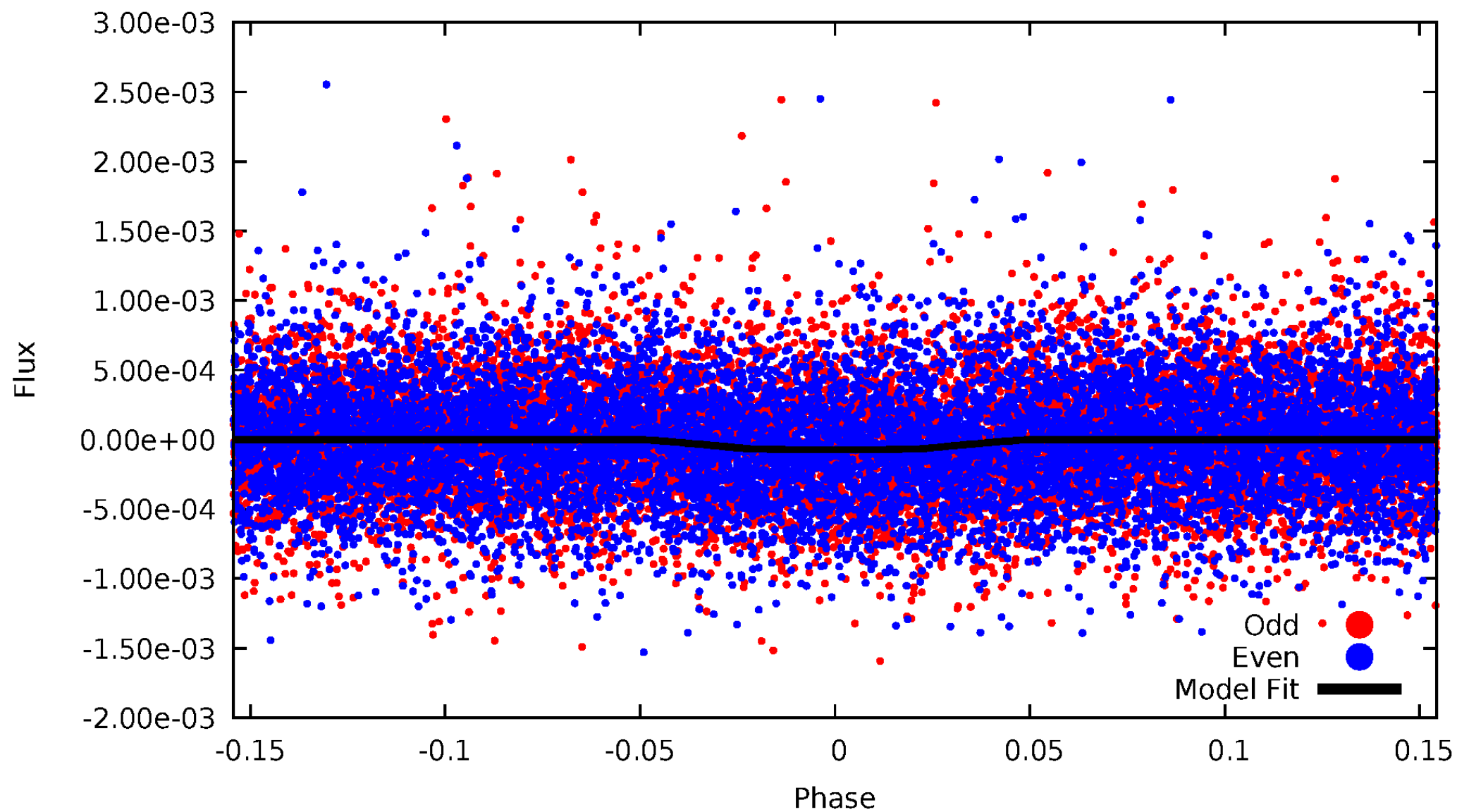


TCE 009087580-01



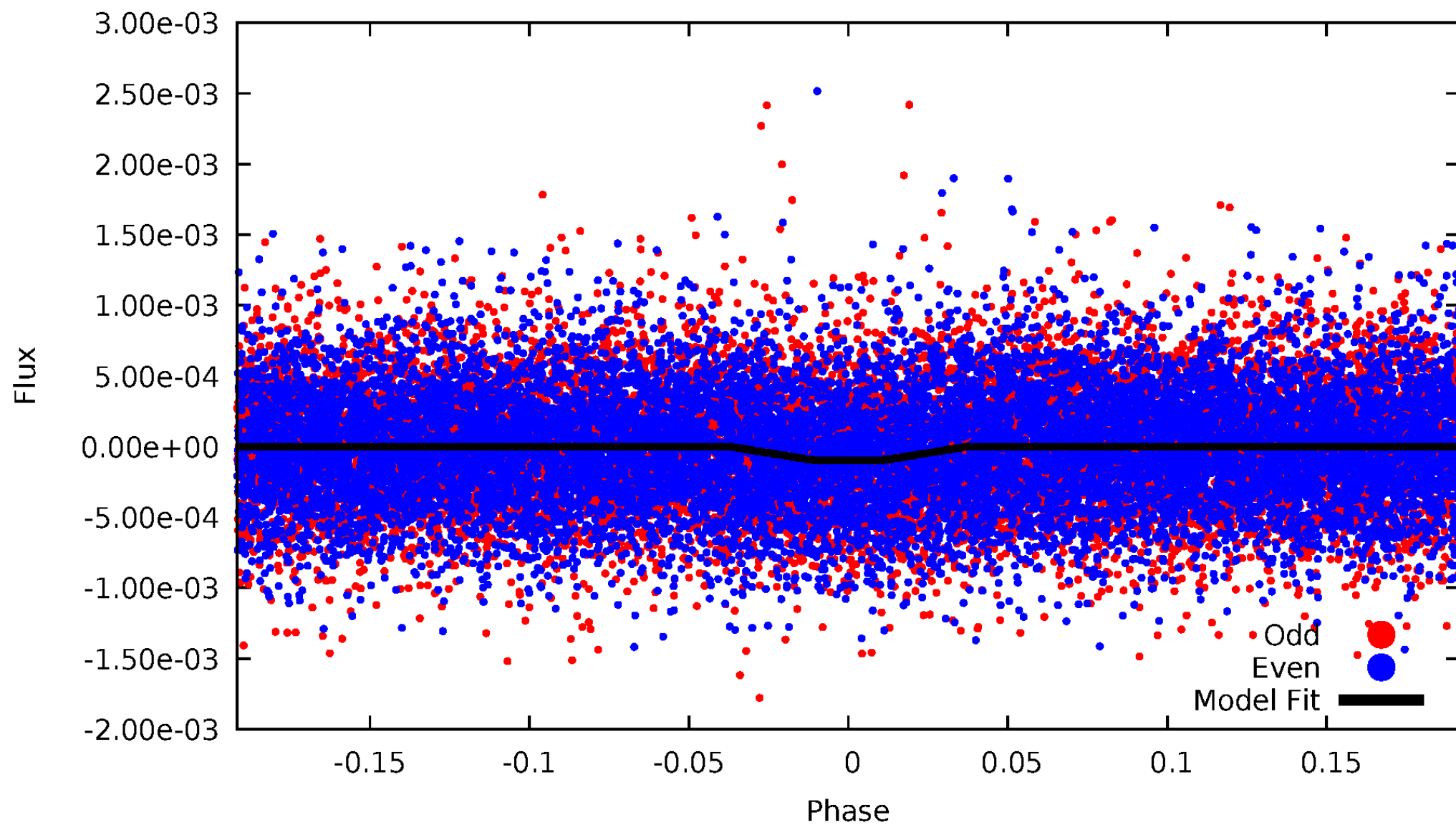
DV Odd/Even

TCE 009087580-01

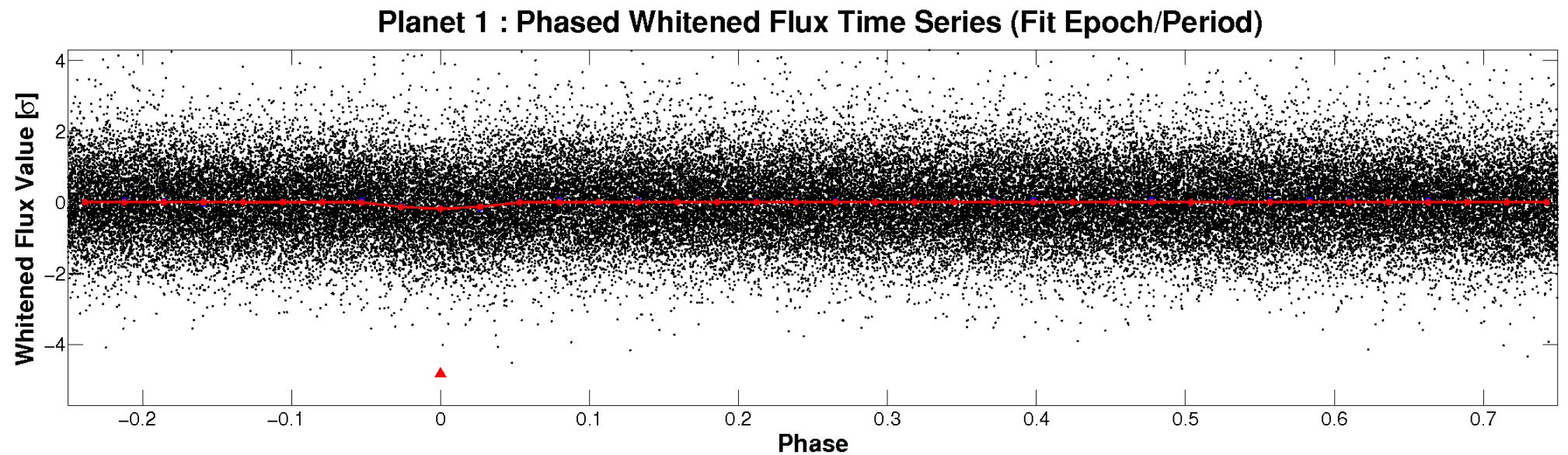
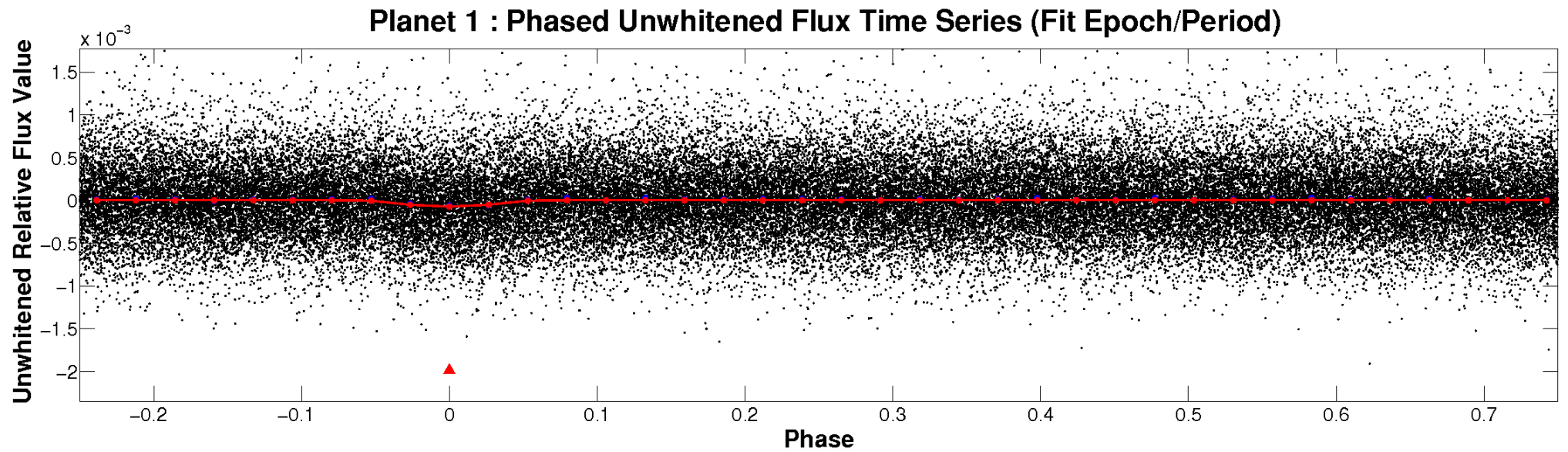


ALT Odd/Even

TCE 009087580-01

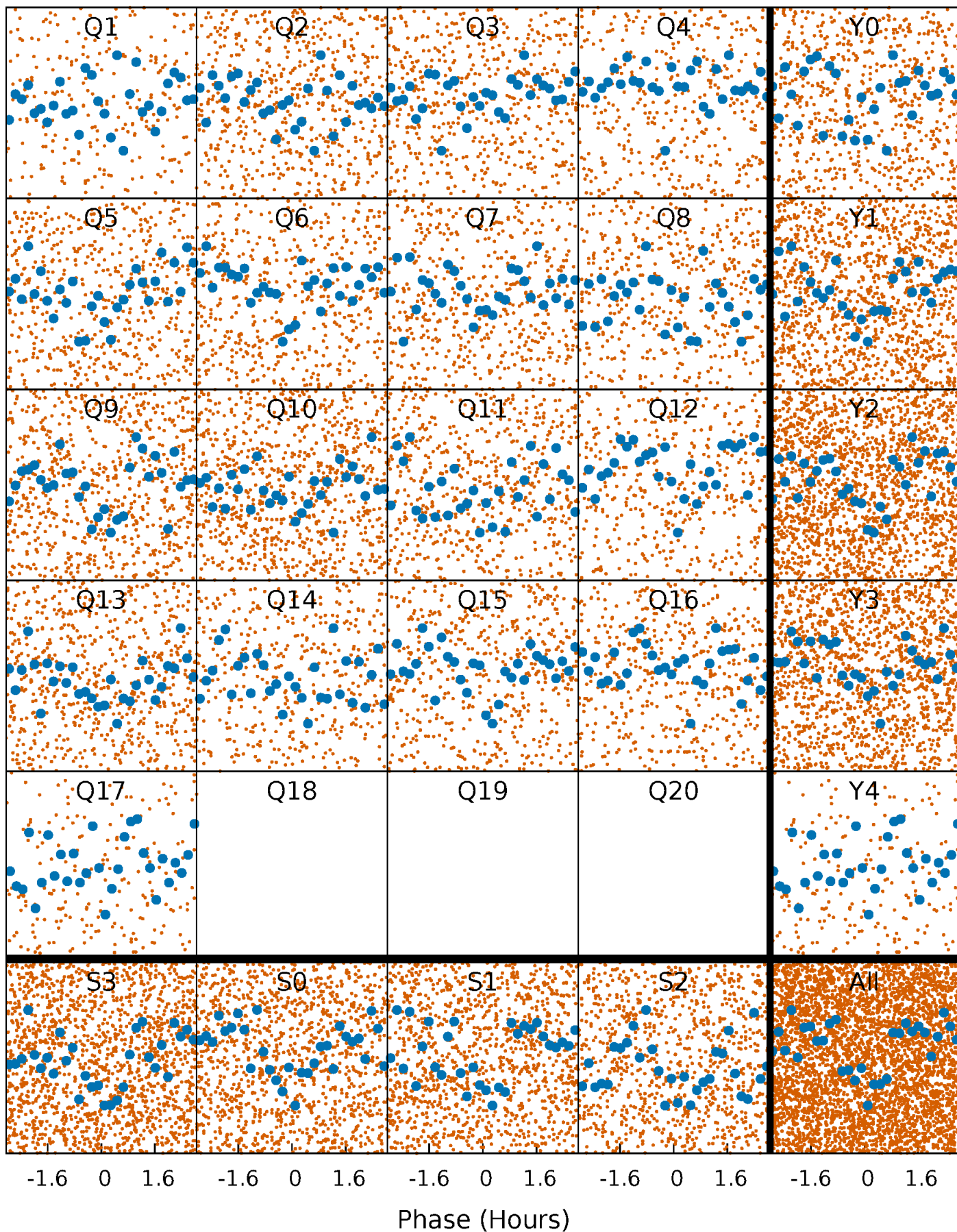


Non-Whitened Vs. Whitened Light Curve



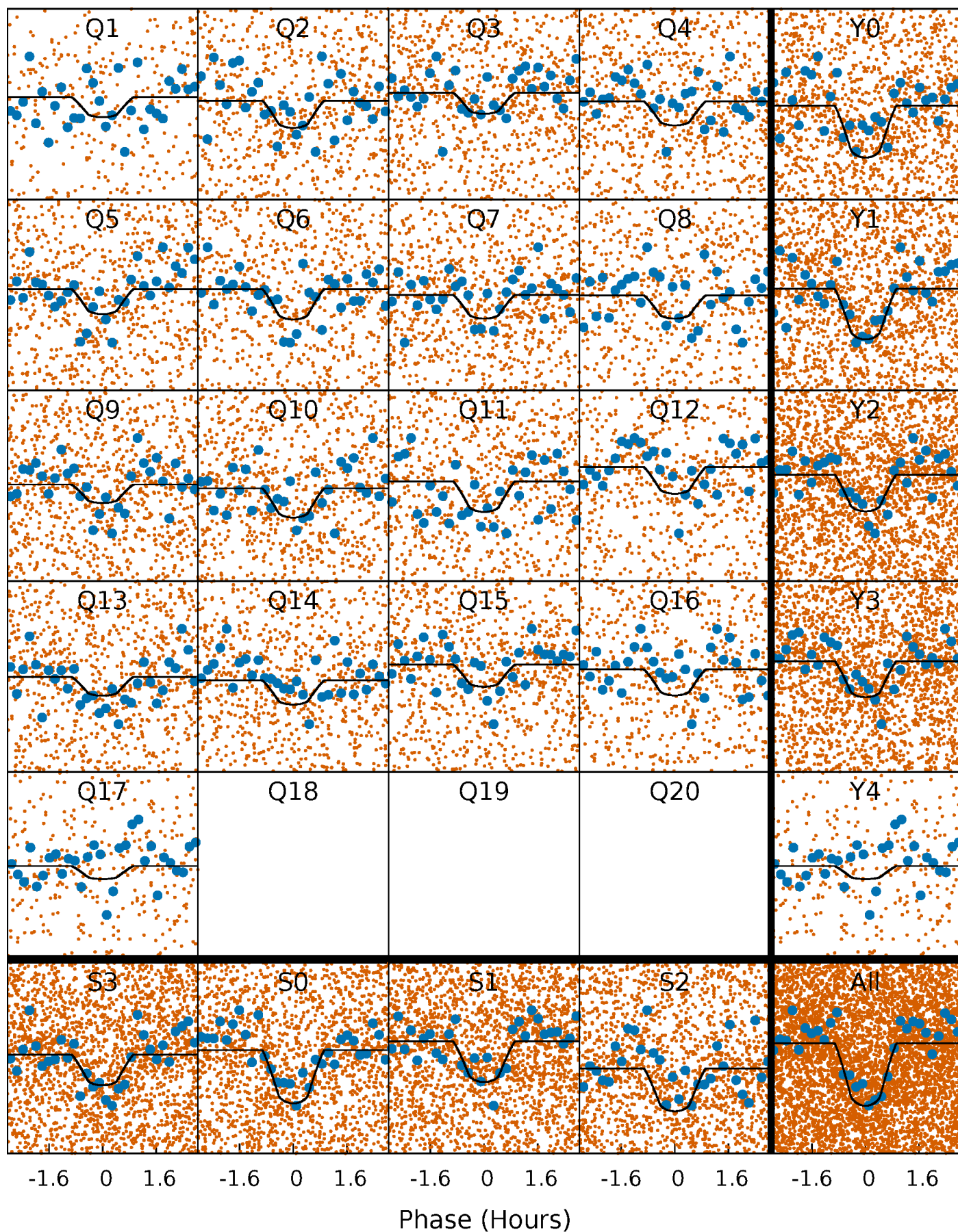
PDC Quarter-Phased Transit Curves

TCE 009087580-01 P= 0.770651 Days $T_0=131.835713$ (BKJD)



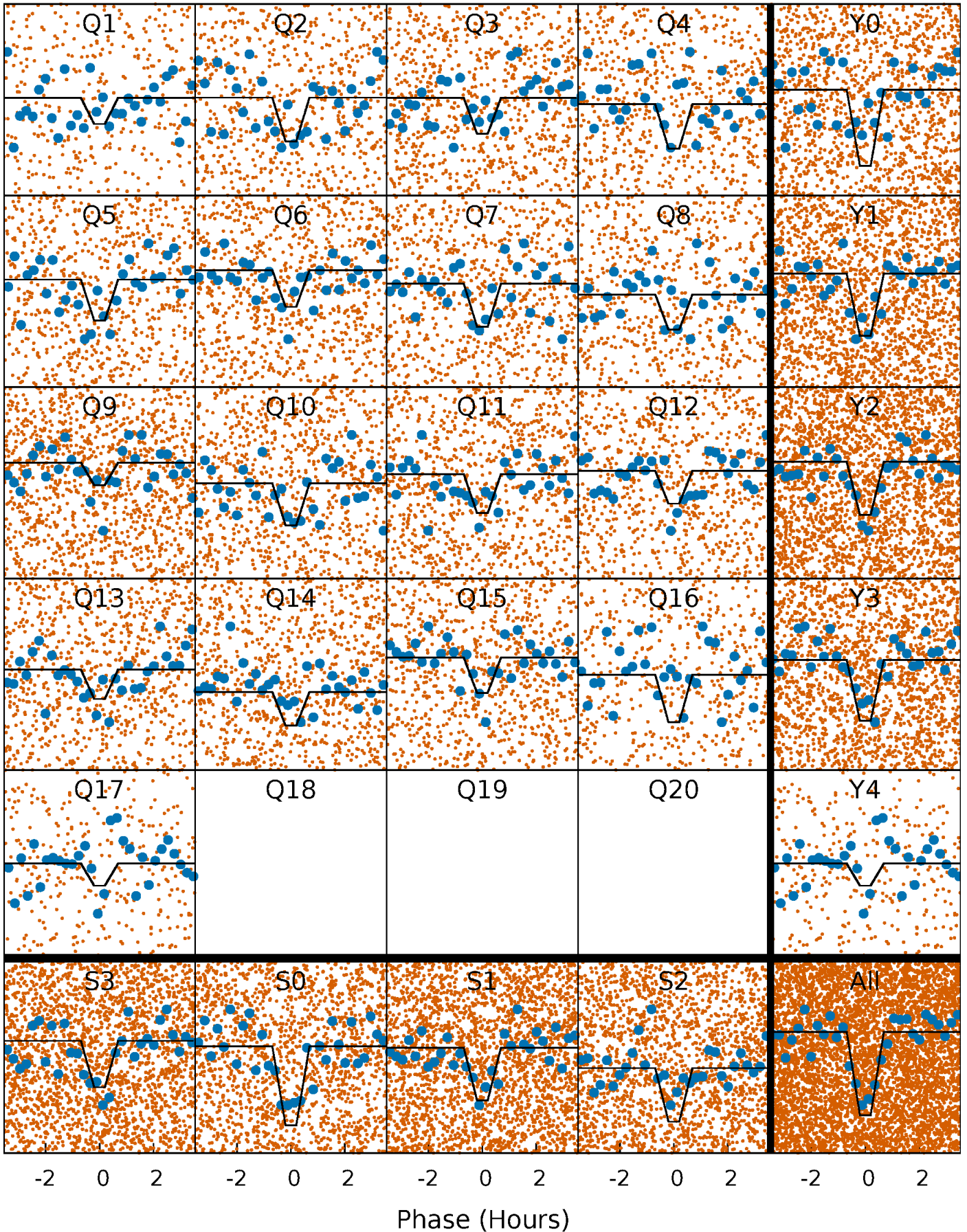
DV Quarter-Phased Transit Curves

TCE 009087580-01 P= 0.770651 Days $T_0=131.835713$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

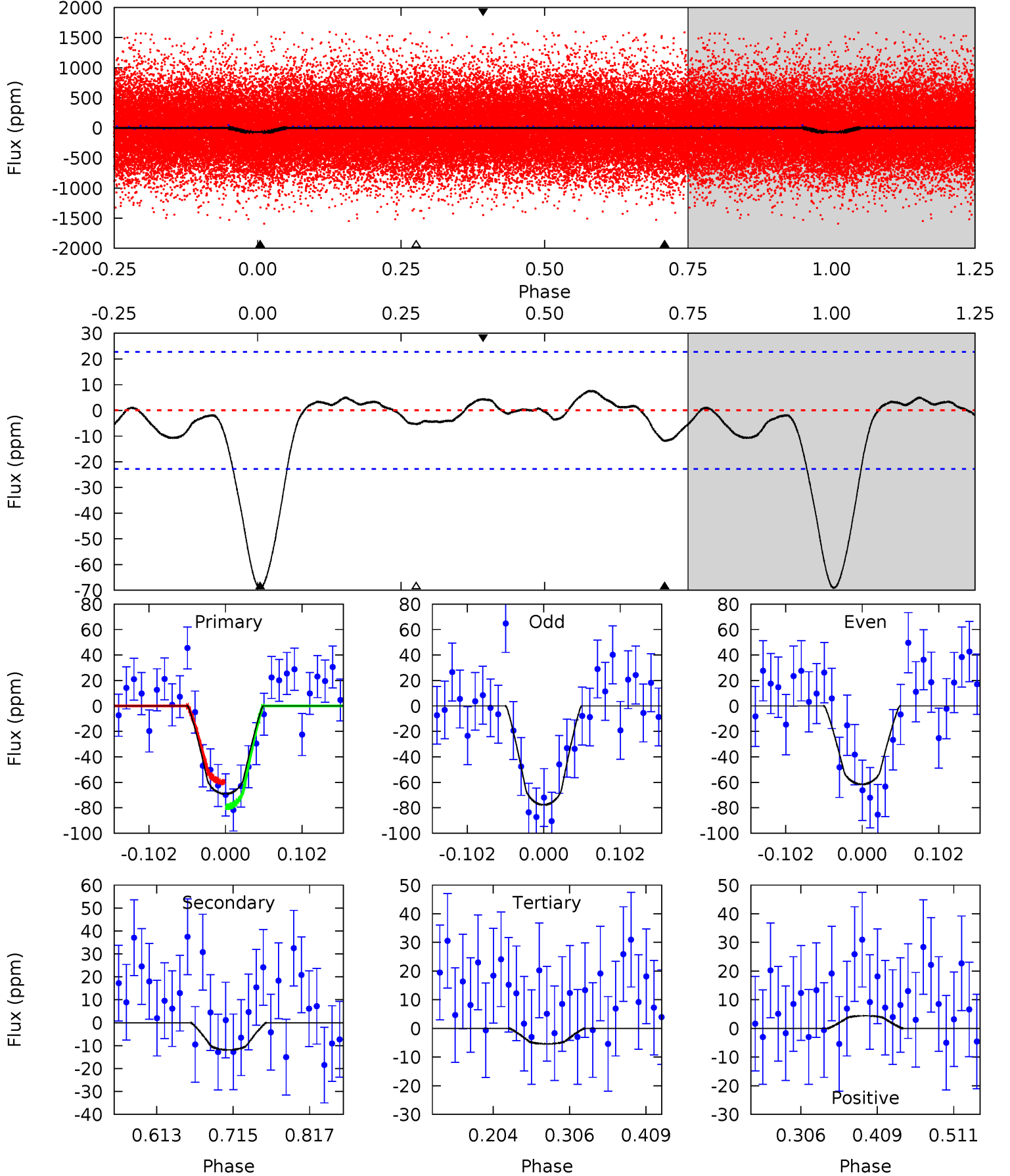
TCE 009087580-01 P= 0.770658 Days $T_0=131.831859$ (BKJD)



DV Model-Shift Uniqueness Test

009087580-01, P = 0.770651 Days, E = 131.065062 Days

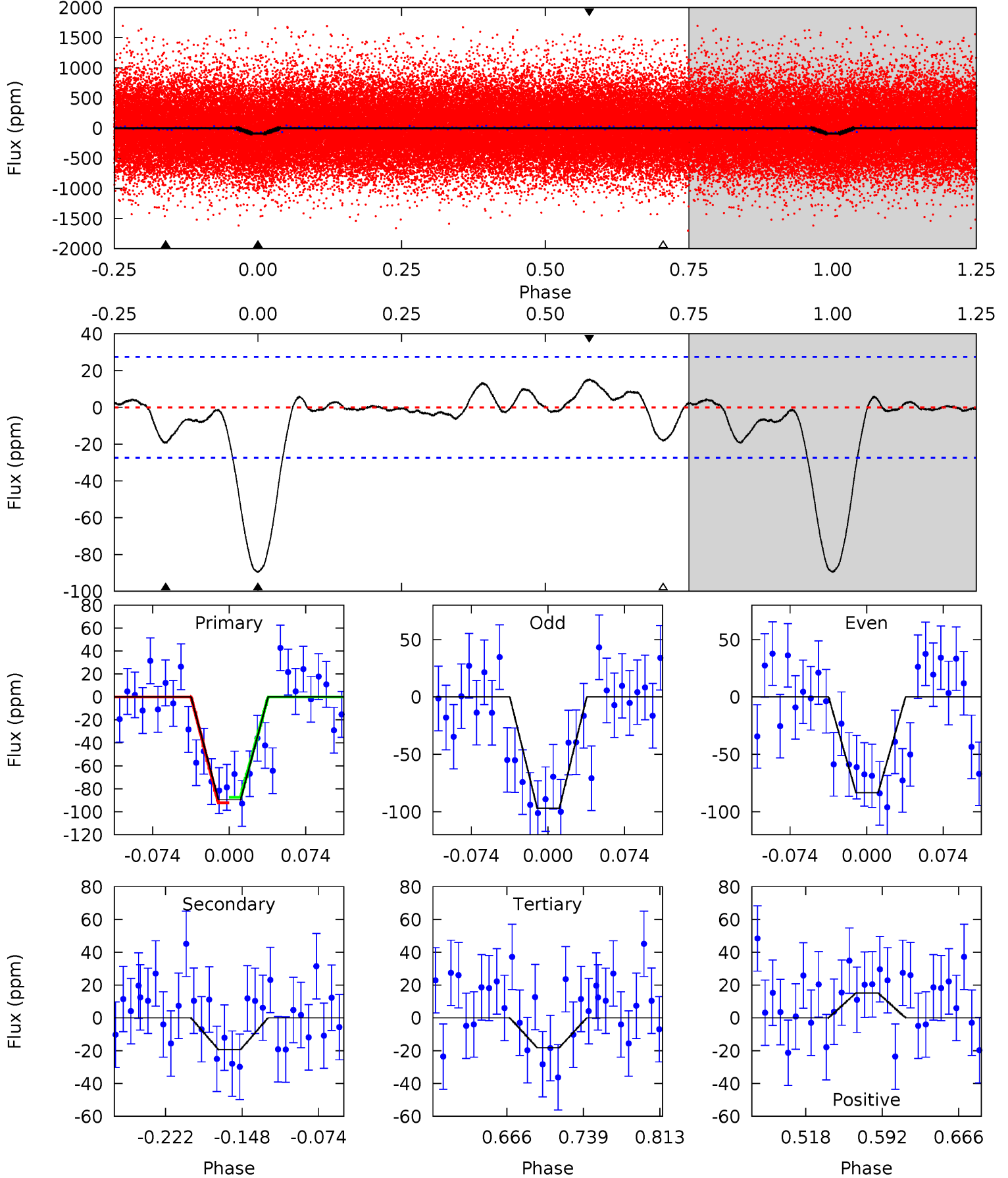
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	2.38	1.08	0.88	4.56	1.63	0.91	12.8	13.0	1.30	1.50	1.62	0.96	0.10	1.95



Alt Model-Shift Uniqueness Test

009087580-01, P = 0.770658 Days, E = 131.061201 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	3.27	3.07	2.56	4.63	1.79	1.09	12.1	12.6	0.20	0.71	1.15	0.90	0.14	0.41



Stellar Parameters For KIC 009087580

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5058^{+151}_{-136}	$4.610^{+0.030}_{-0.075}$	$-0.040^{+0.300}_{-0.300}$	$0.739^{+0.086}_{-0.058}$	$0.827^{+0.050}_{-0.093}$	$2.884^{+0.449}_{-0.724}$
	+3%/-3%	+1%/-2%	+750%/-750%	+12%/-8%	+6%/-11%	+16%/-25%
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 009087580-01 / KOI 7924.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-12 ± 5	$0.86^{+0.74}_{-0.53}$	2190^{+71}_{-80}	3277^{+1419}_{-784}	$1.985^{+12.303}_{-1.461}$
Alt.	-19 ± 6	$0.91^{+0.68}_{-0.59}$	2187^{+84}_{-76}	3539^{+1766}_{-703}	$3.095^{+20.552}_{-2.184}$

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

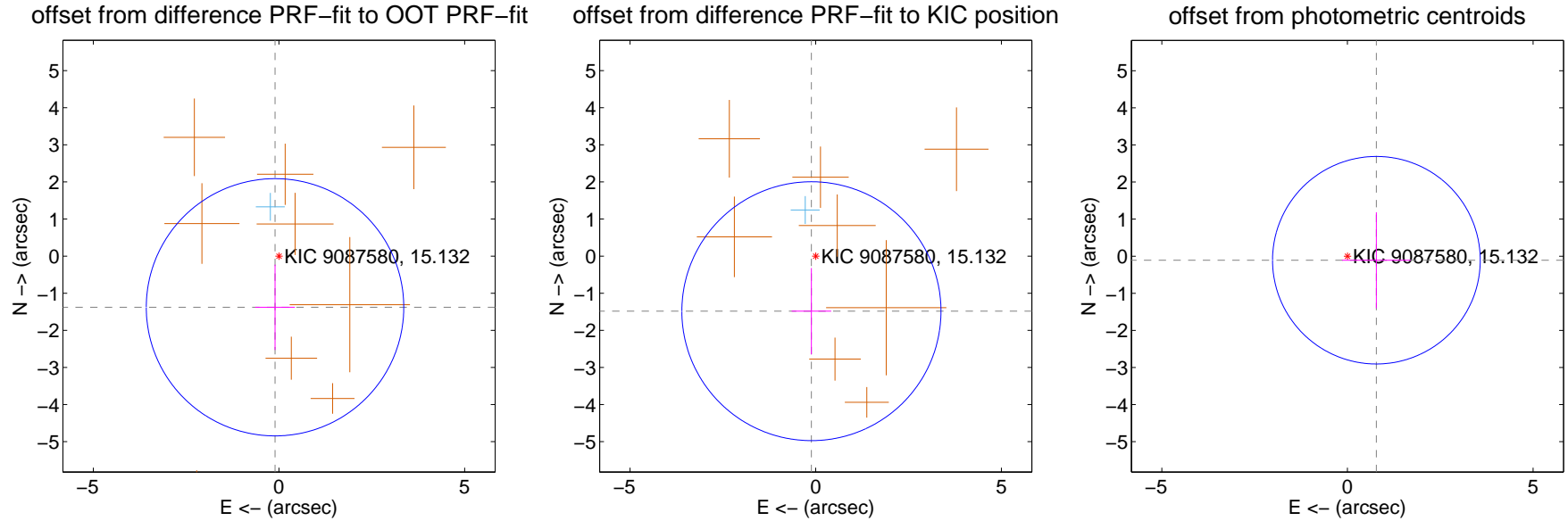
DV Centroid Data

Supplemental centroid analysis for 009087580-01. Kepler magnitude: 15.13. Transit SNR 10.24

There are 1 quarters with good PRF difference image offsets

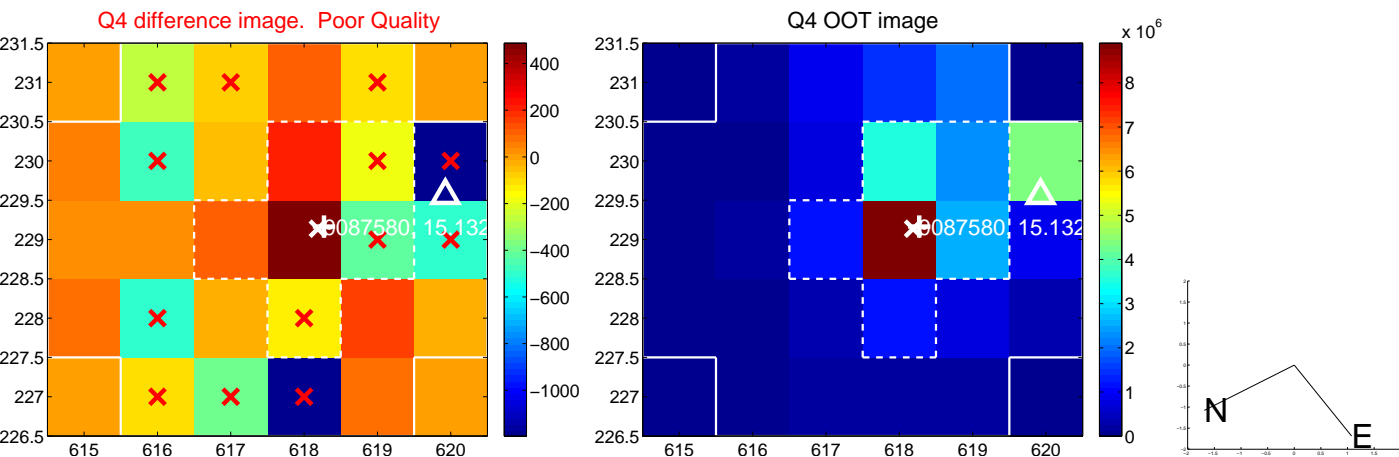
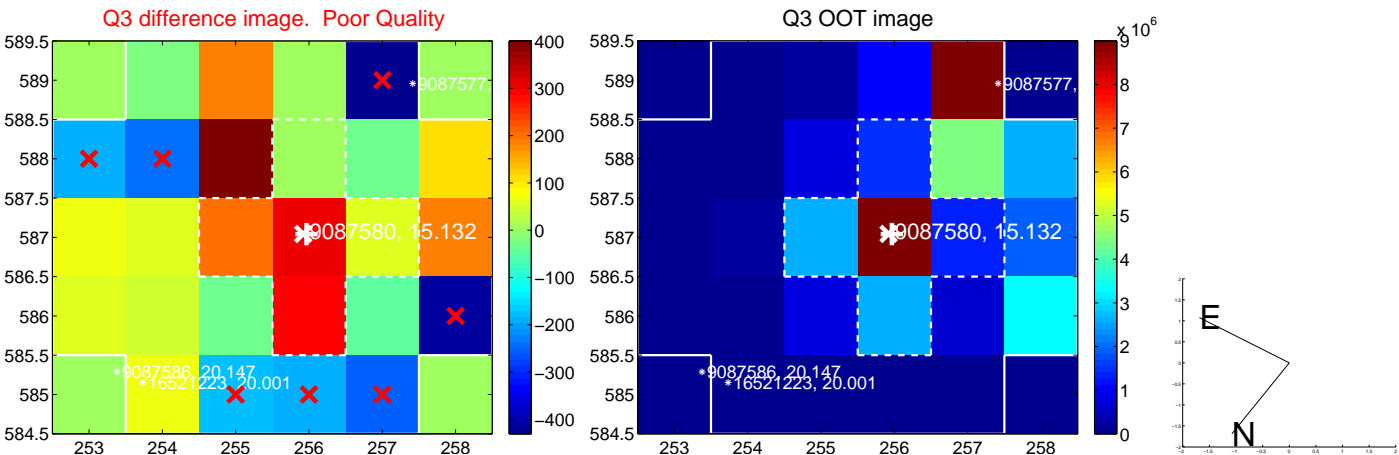
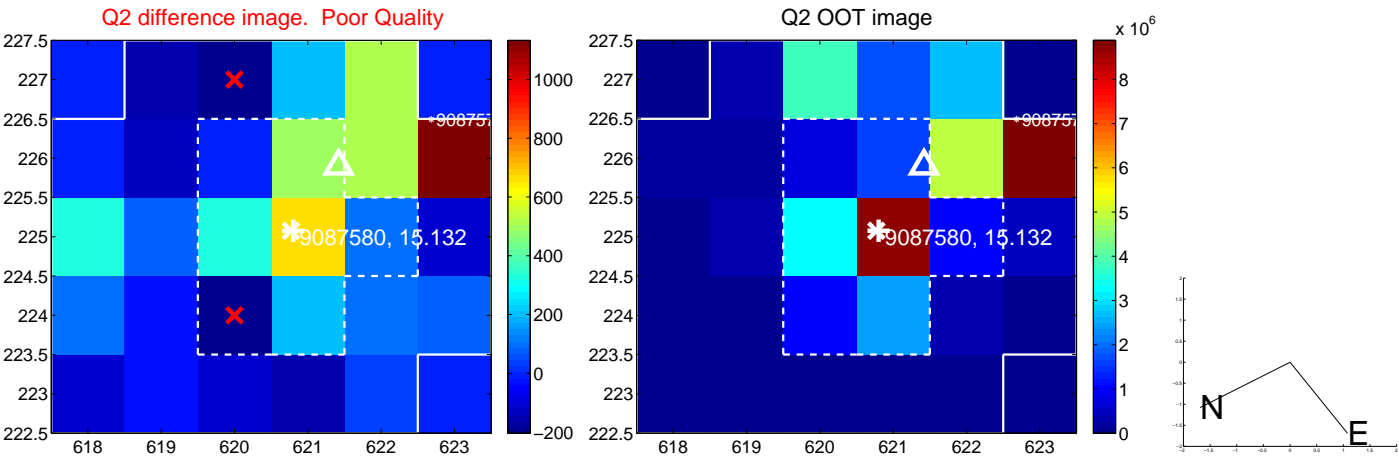
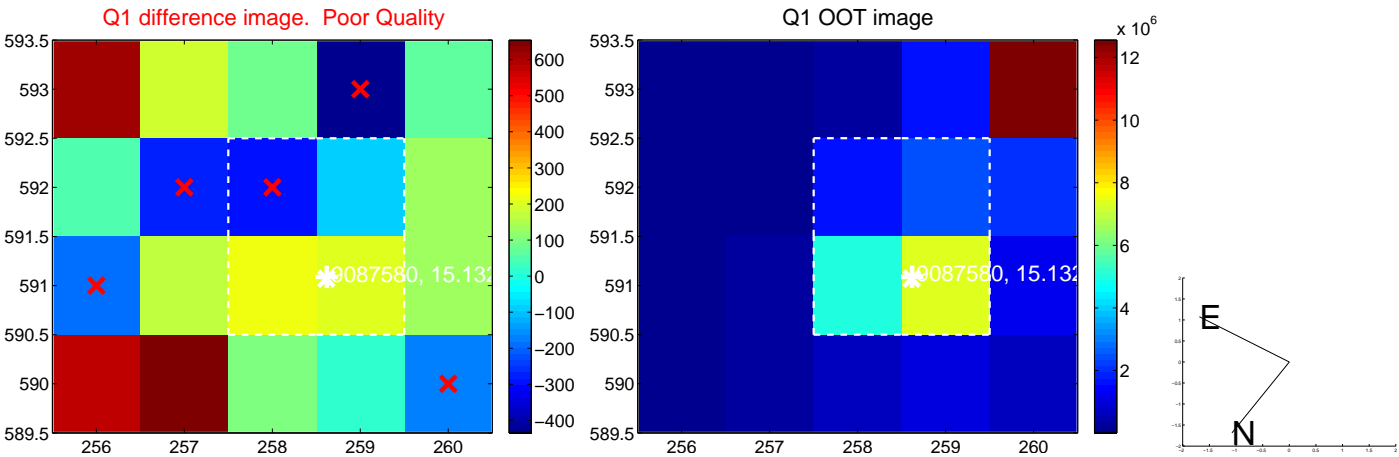
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.383 ± 1.156	1.20	0.107 ± 0.534	-1.378 ± 1.150
PRF-fit source offset from KIC position	1.488 ± 1.163	1.28	0.116 ± 0.532	-1.484 ± 1.163
photometric centroid source offset	0.79 ± 0.93	0.84	-0.78 ± 0.92	-0.11 ± 1.30

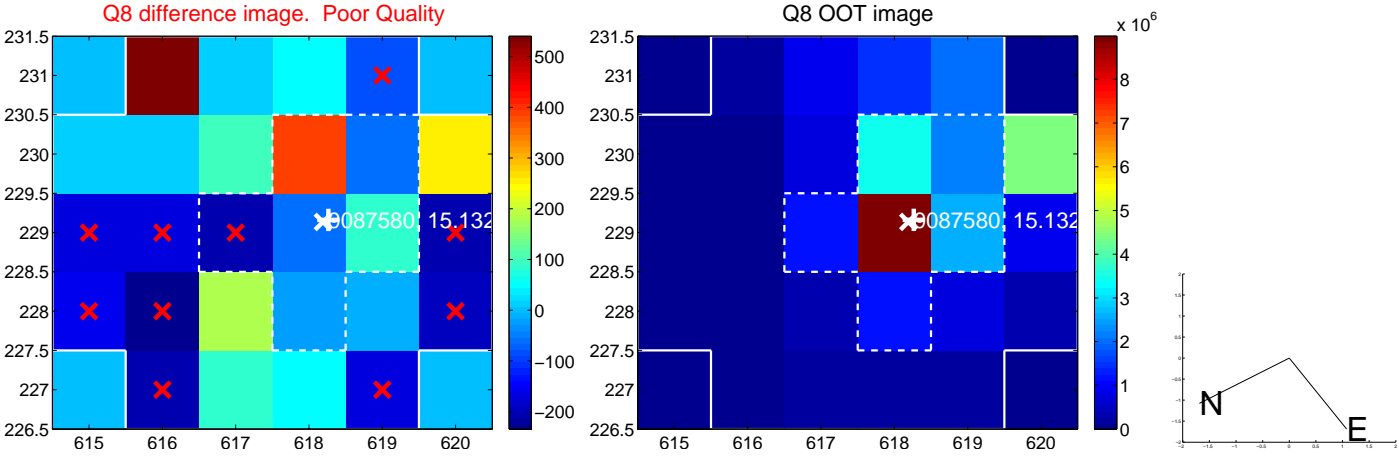
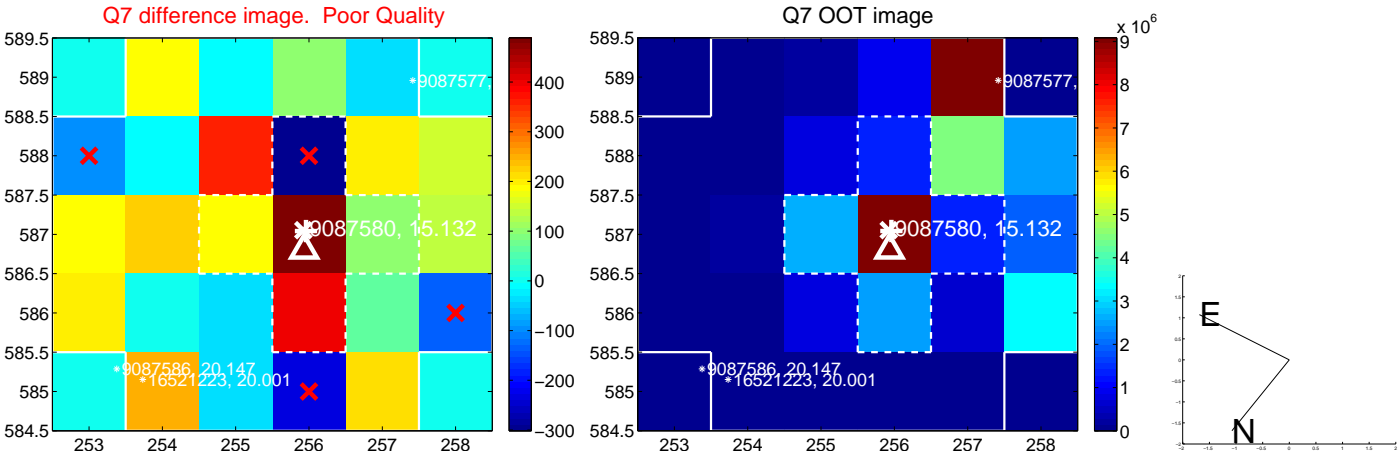
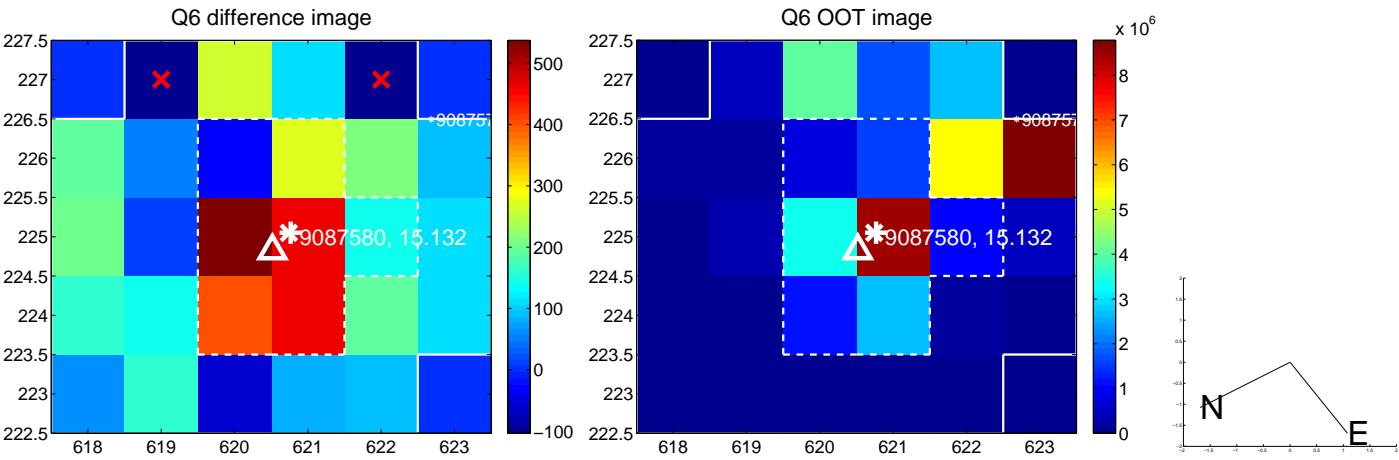
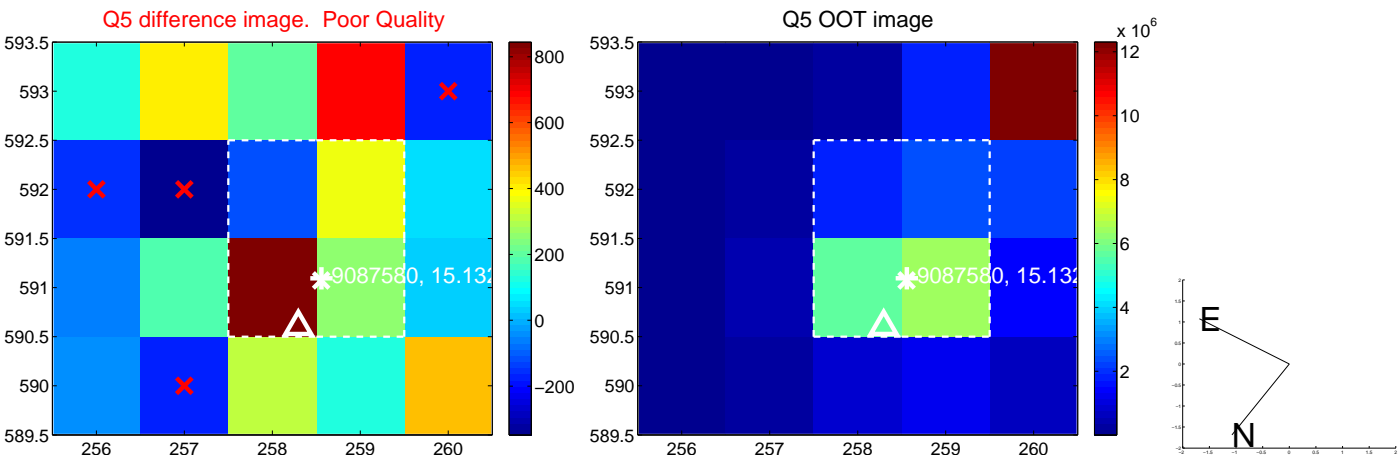


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

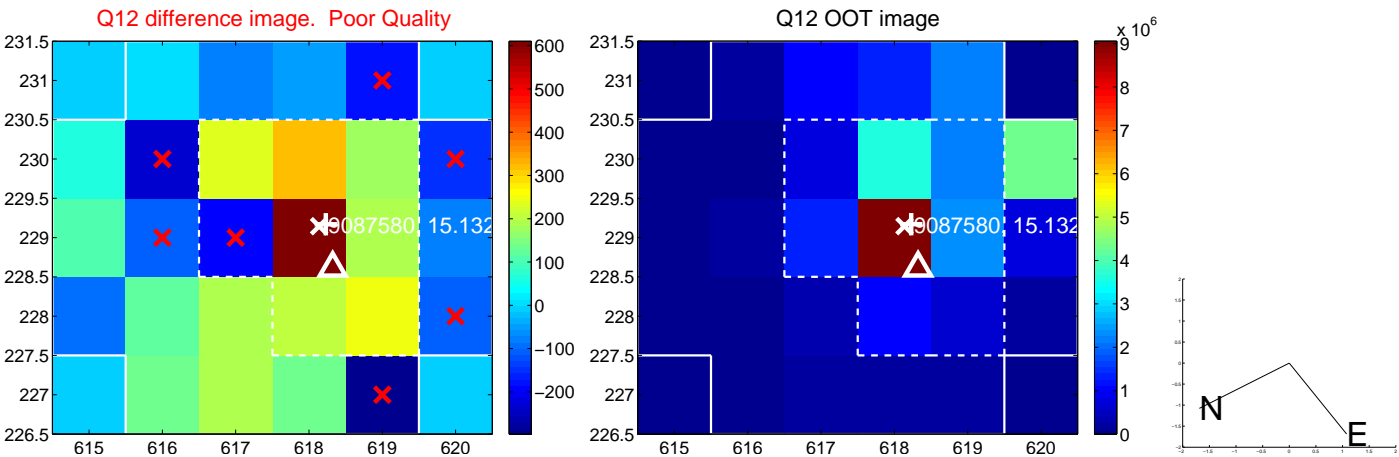
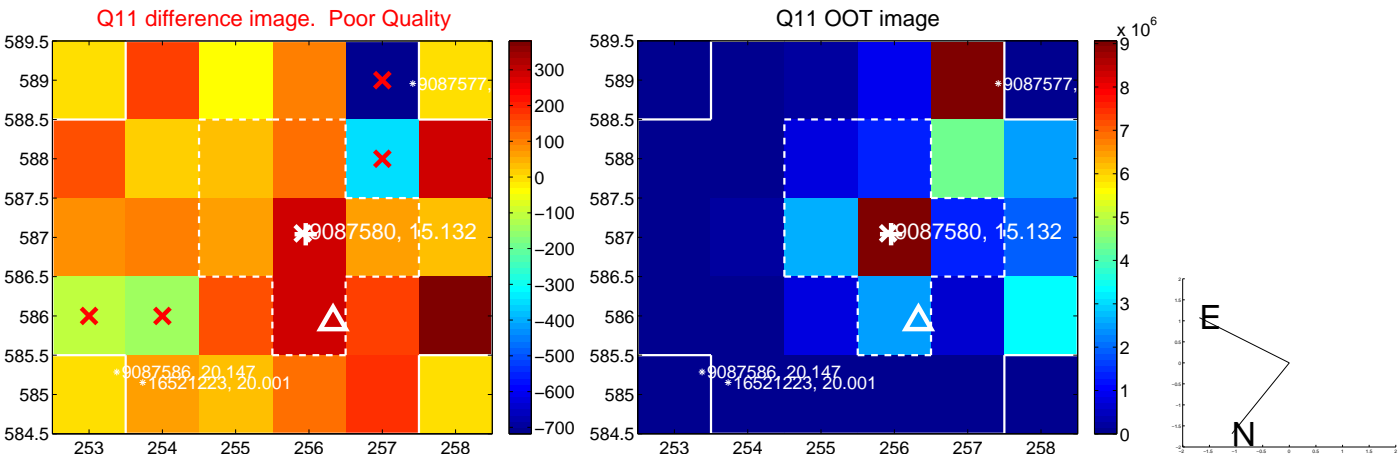
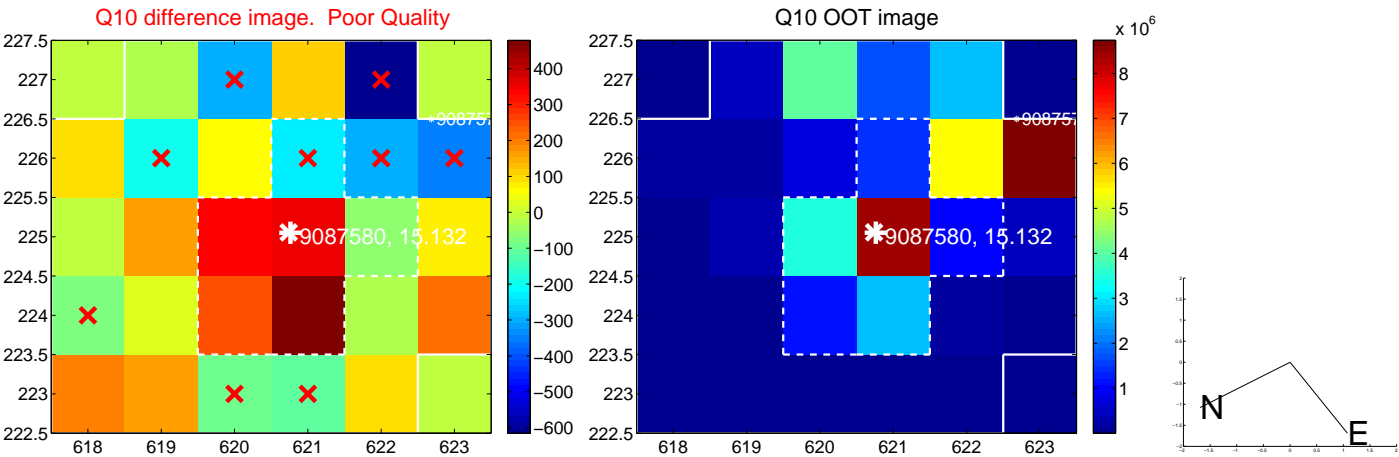
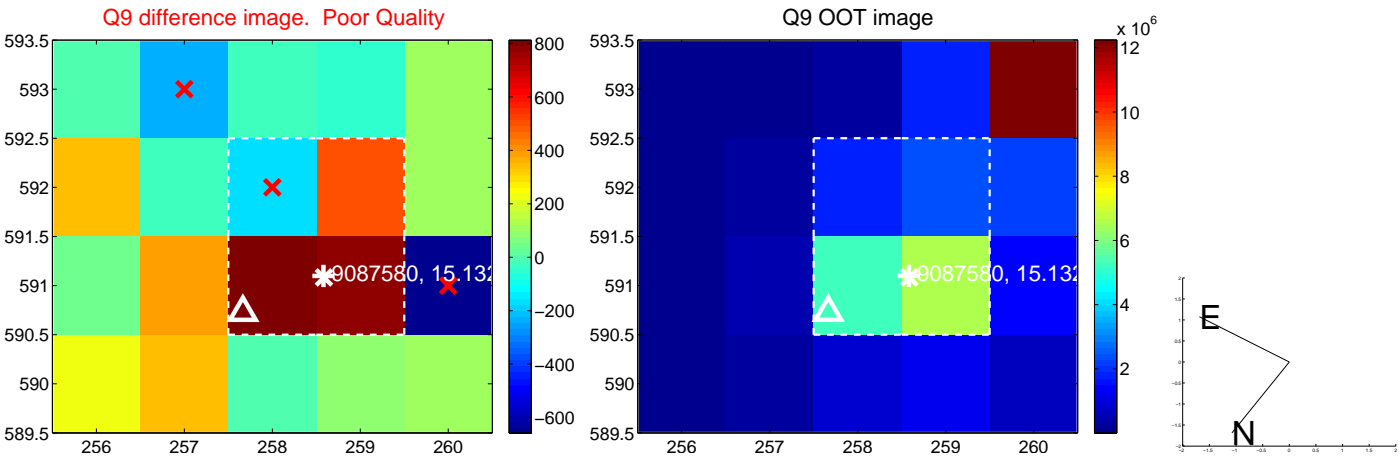
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



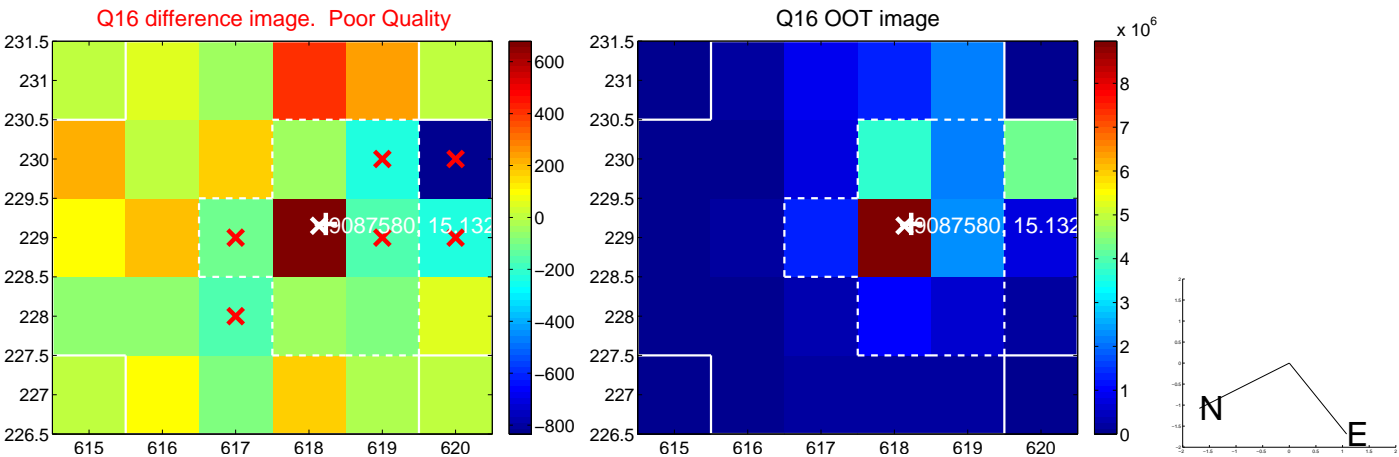
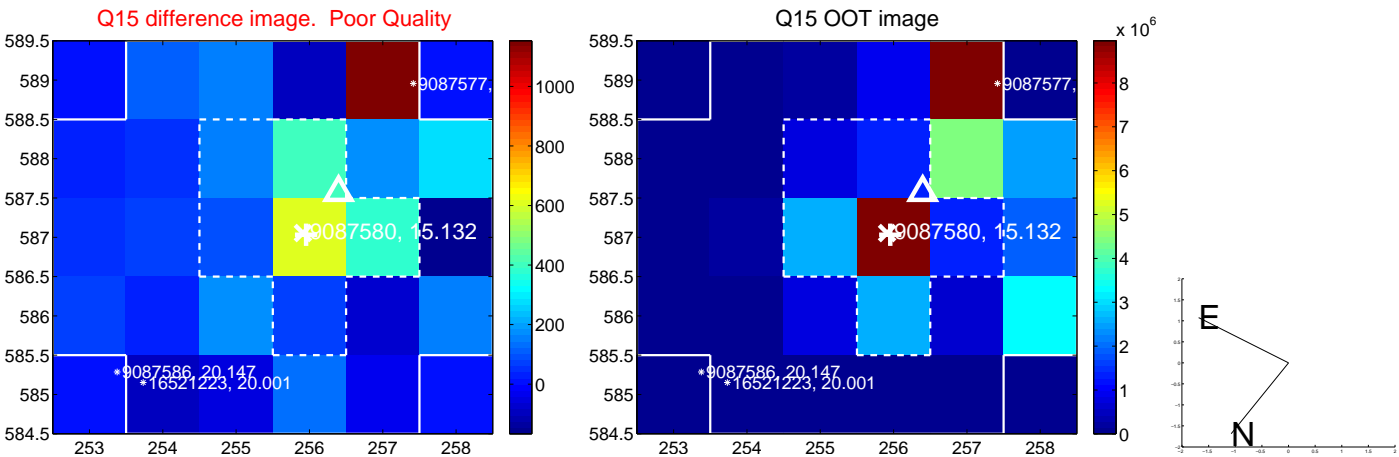
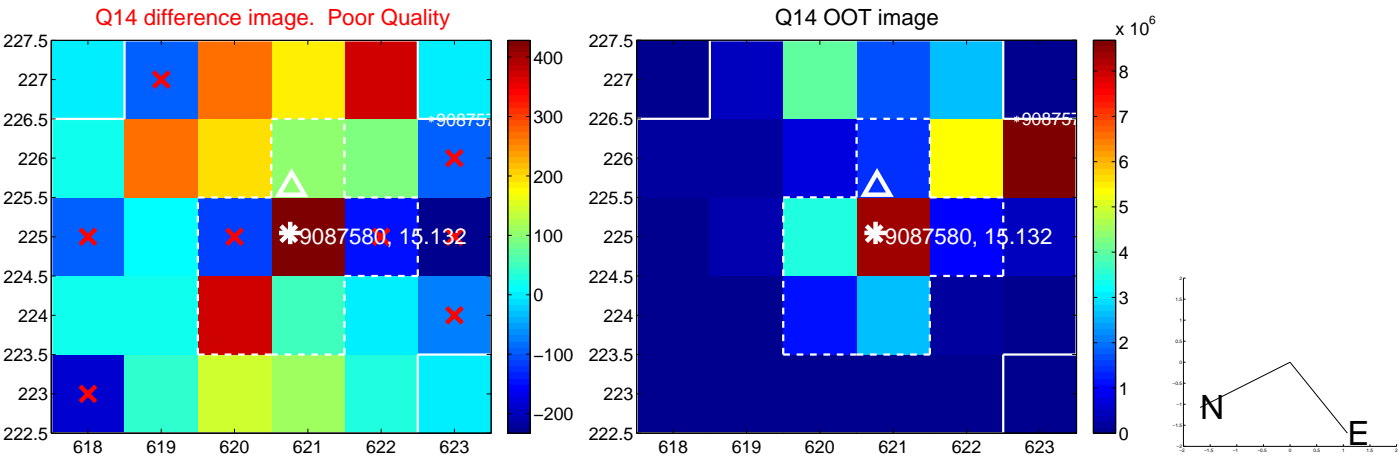
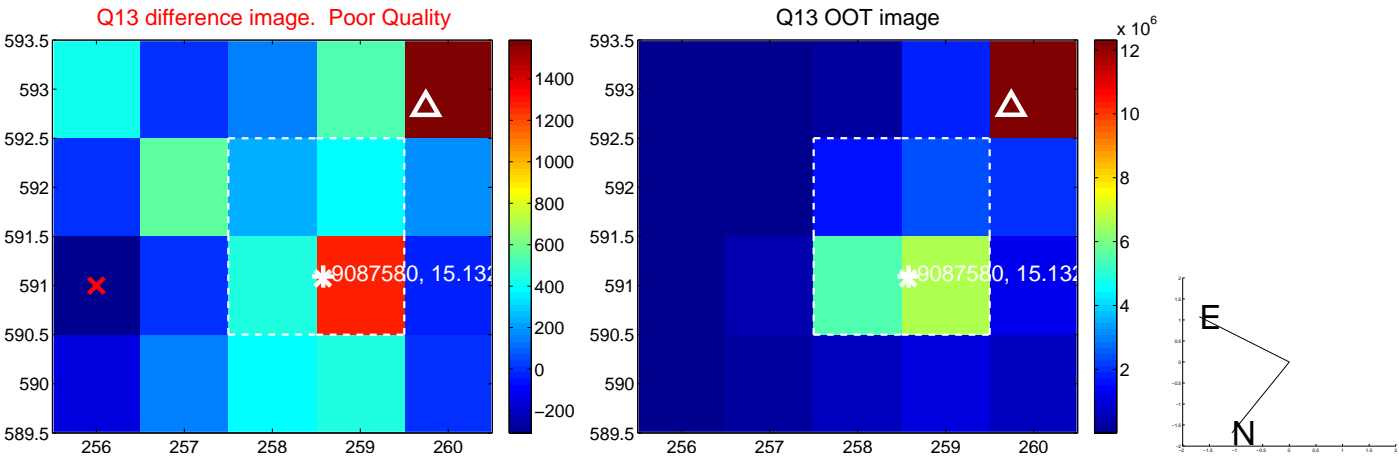
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



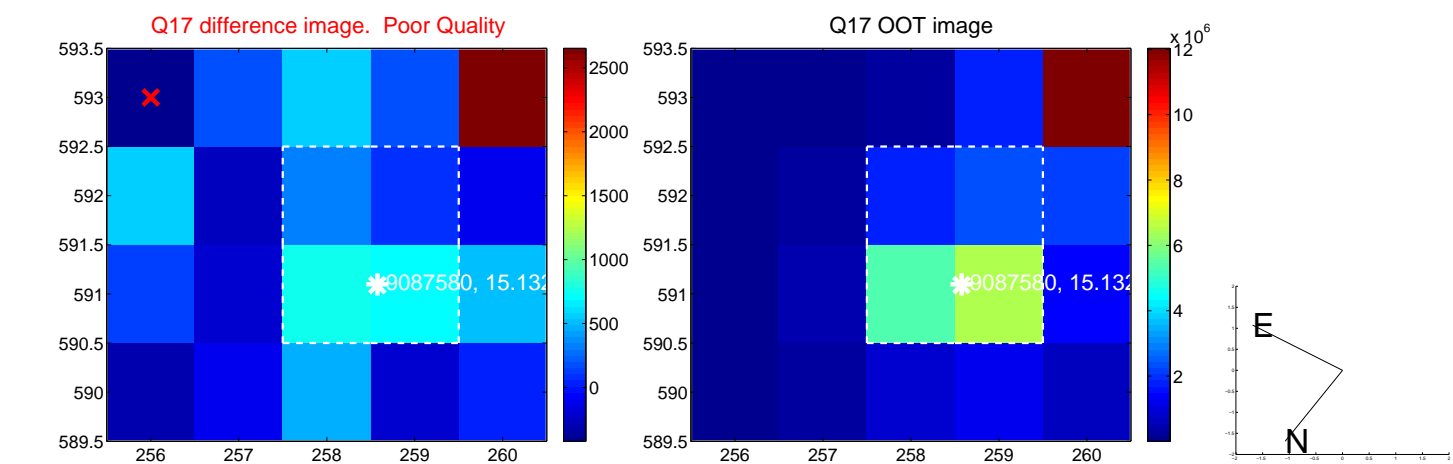
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



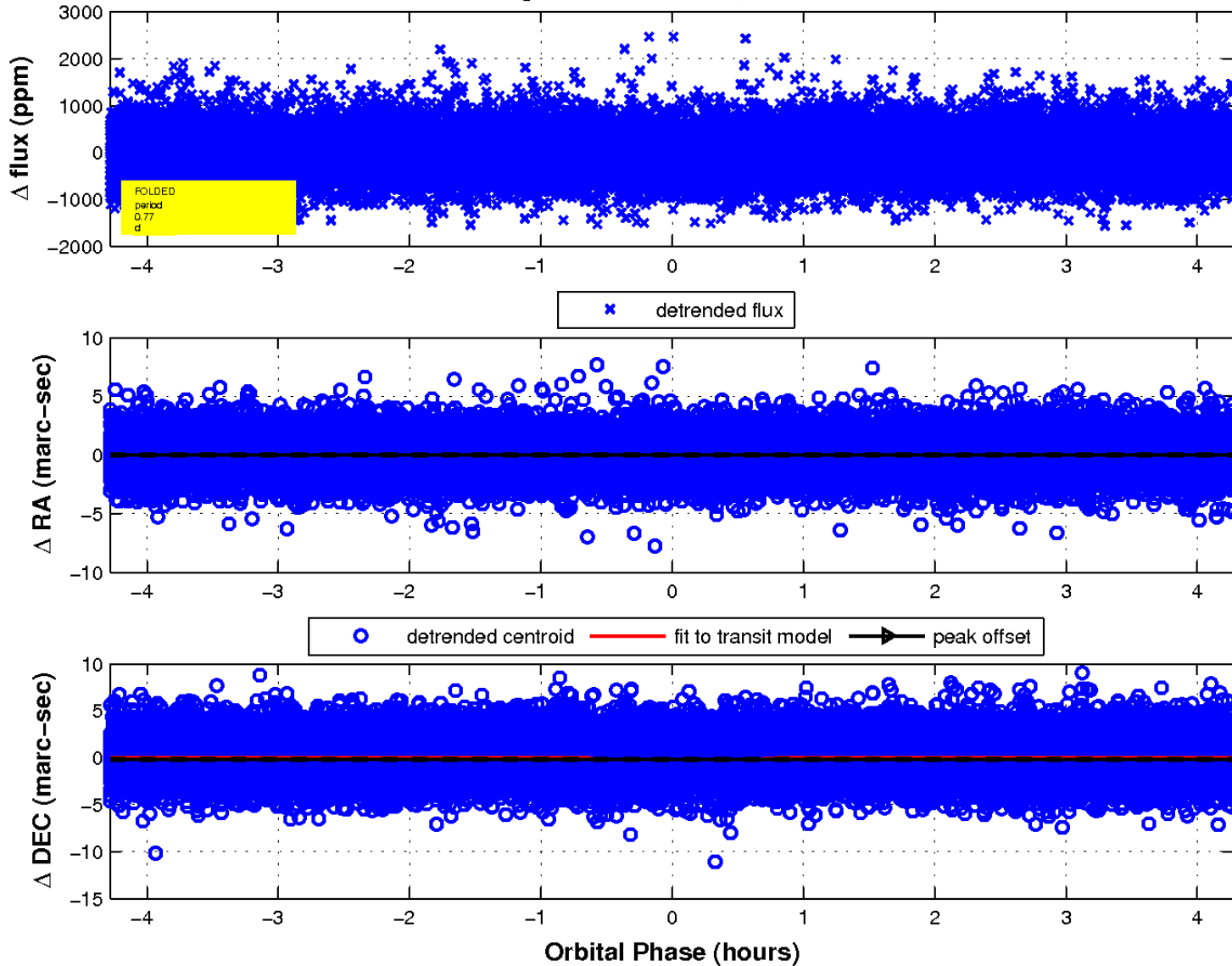
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

