

KIC 004136253

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})
004136253-01	OBS	No	0.791040	132.207184	40.7	7.622	7.6	7.3	0.72	5169	0.45	1390.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004136253-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS

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

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

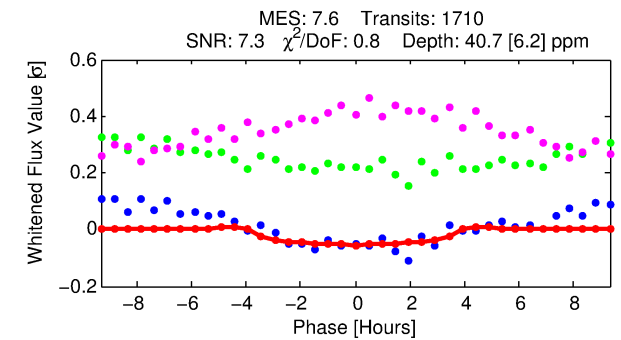
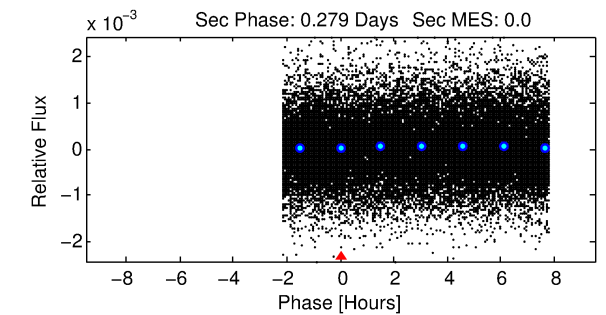
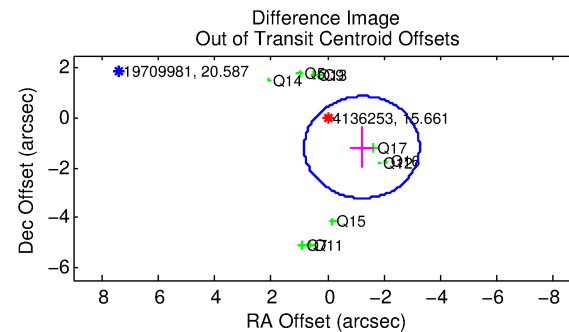
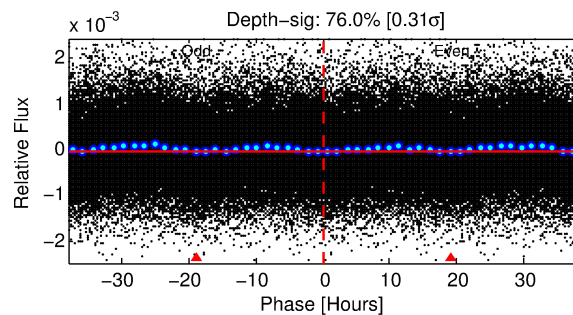
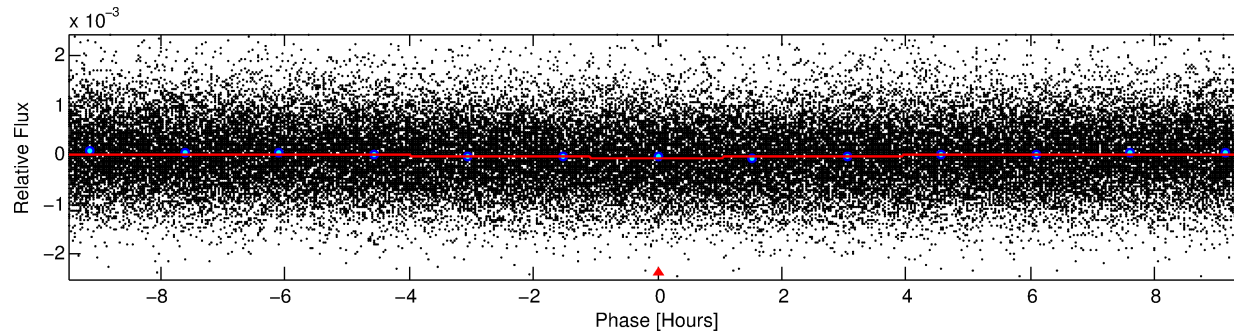
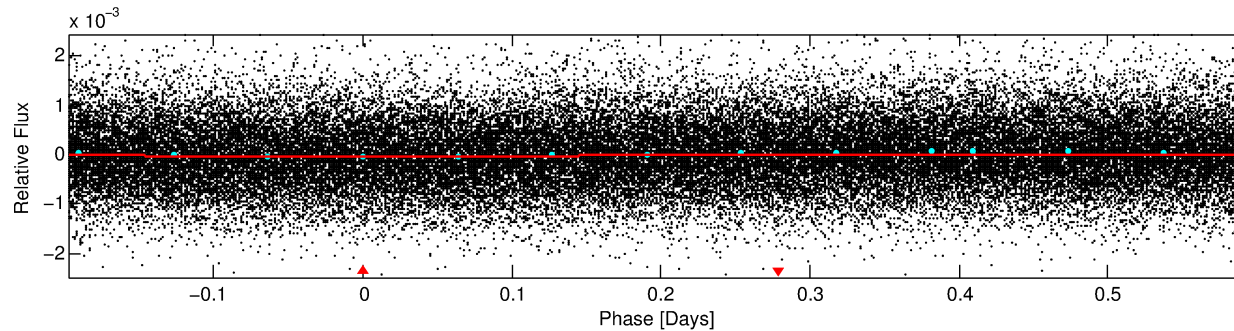
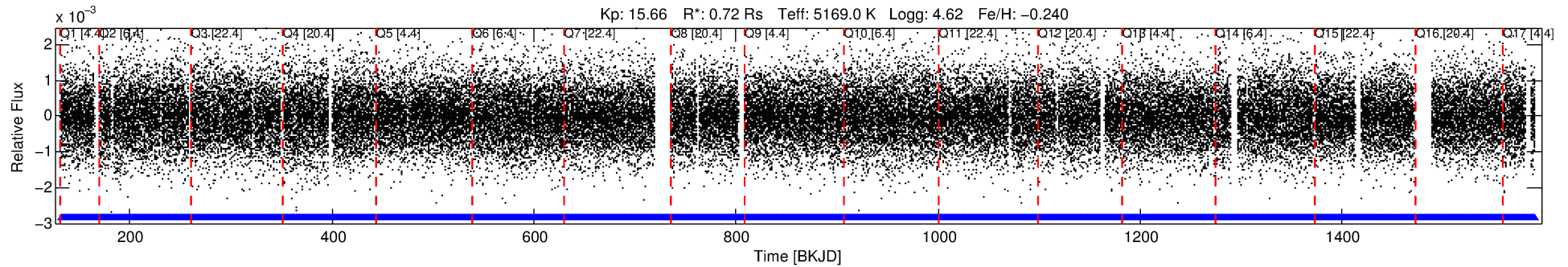
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004136253-01

No Significant Match Found

DV One-Page Summary

KIC: 4136253 Candidate: 1 of 1 Period: 0.791 d



DV Fit Results:

Period = 0.79104 [0.00002] d
Epoch = 132.2072 [0.0115] BKJD
Rp/R* = 0.0057 [0.0083]
a/R* = 1.06 [0.56]
b = 0.04 [127.65]
Seff = 1390.00 [271.86]
Teq = 1557 [76] K
Rp = 0.45 [0.66] Re
a = 0.0155 [0.0017] AU
Ag = N/A
Teffp = N/A

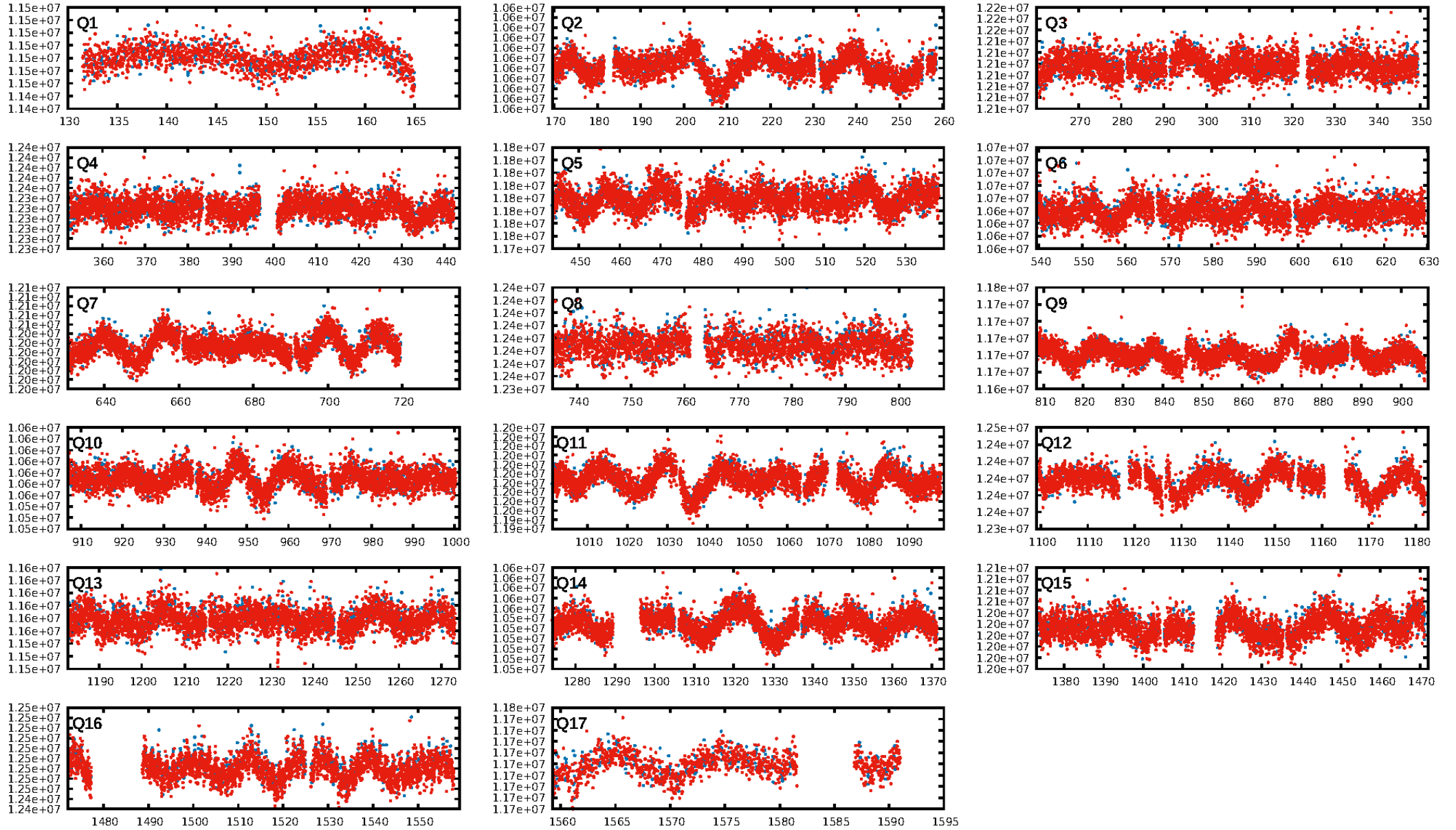
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1632/1632]
GhostDiagnostic-chr: 0.7412
Centroid-sig: 0.0%
Centroid-so: 6.995 arcsec [3.99 σ]
OotOffset-rm: 1.696 arcsec [2.49 σ]
KicOffset-rm: 1.806 arcsec [2.95 σ]
OotOffset-st: 1/3/2/4 [10]
KicOffset-st: 1/3/2/4 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 1.00 [17/17]

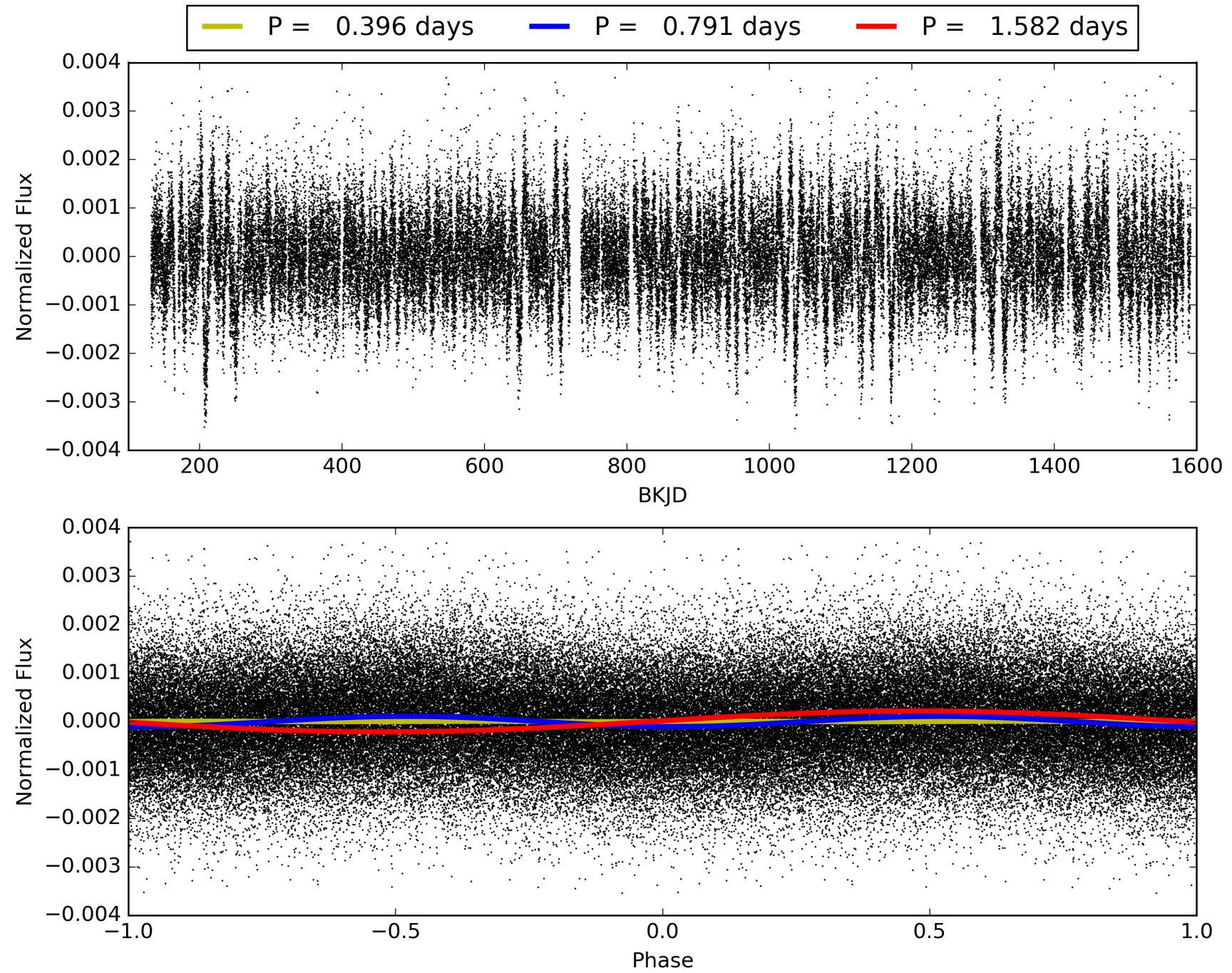
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:47:41 Z

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

TCE 004136253-01, PDC Light Curves

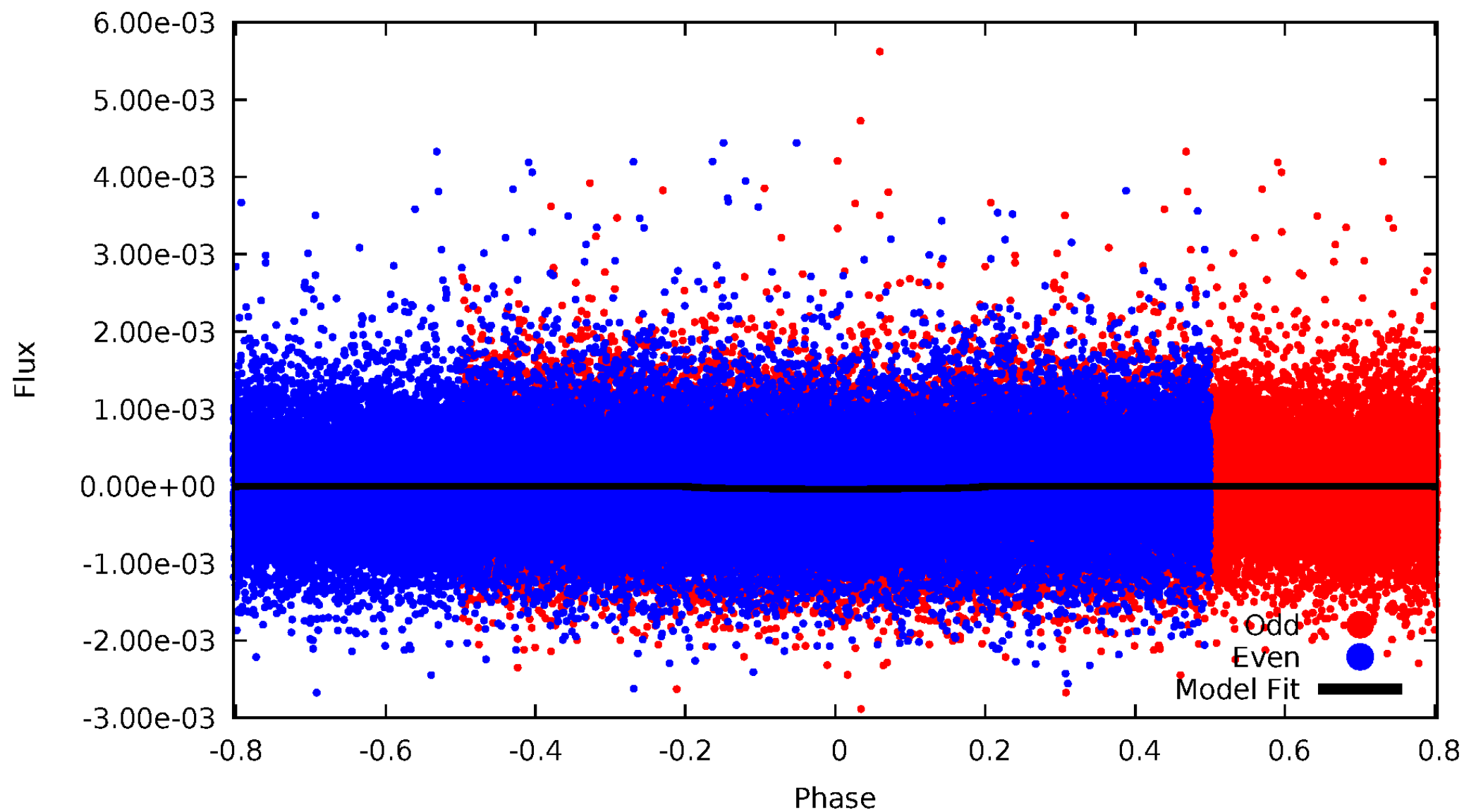


TCE 004136253-01



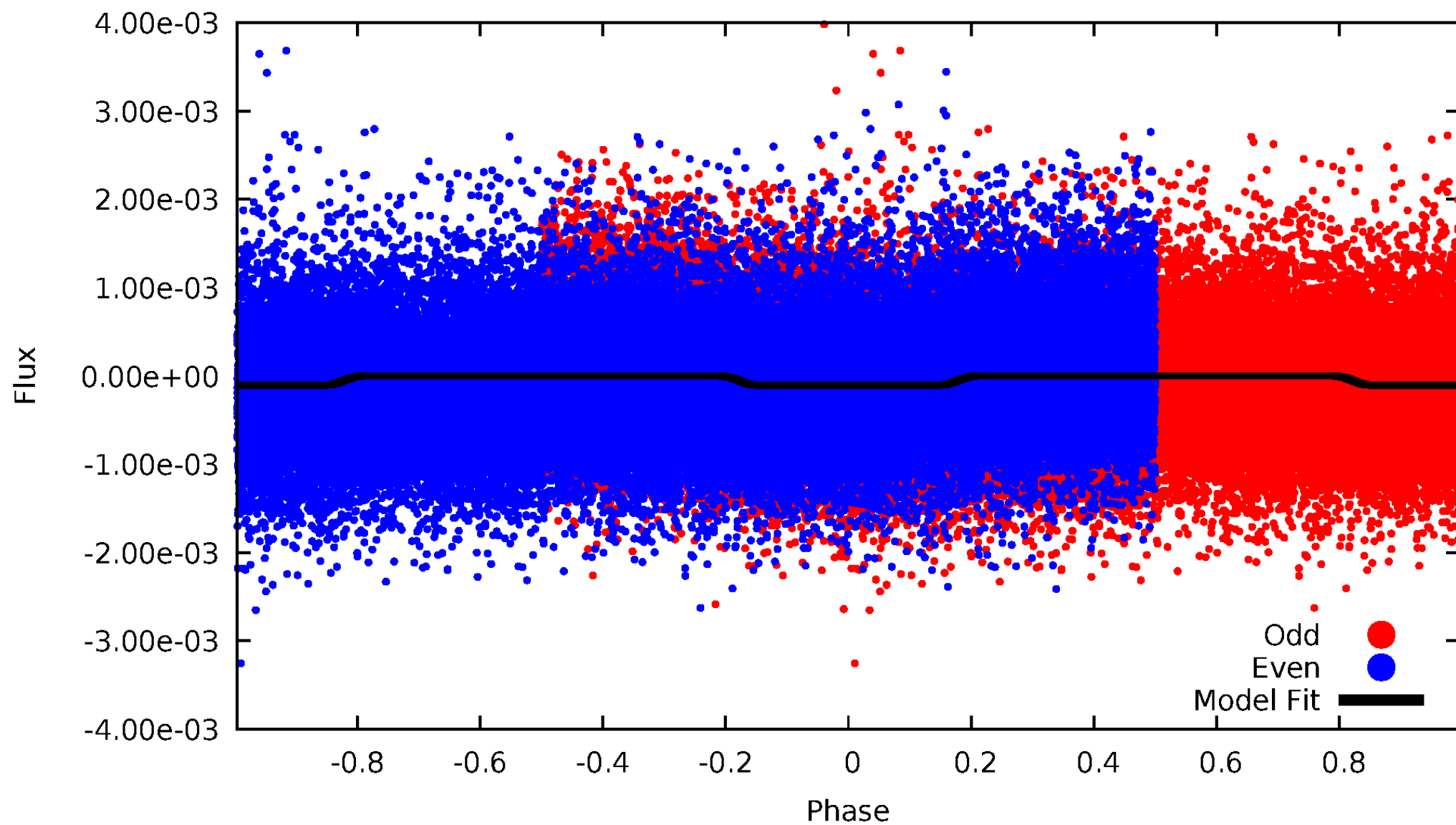
DV Odd/Even

TCE 004136253-01



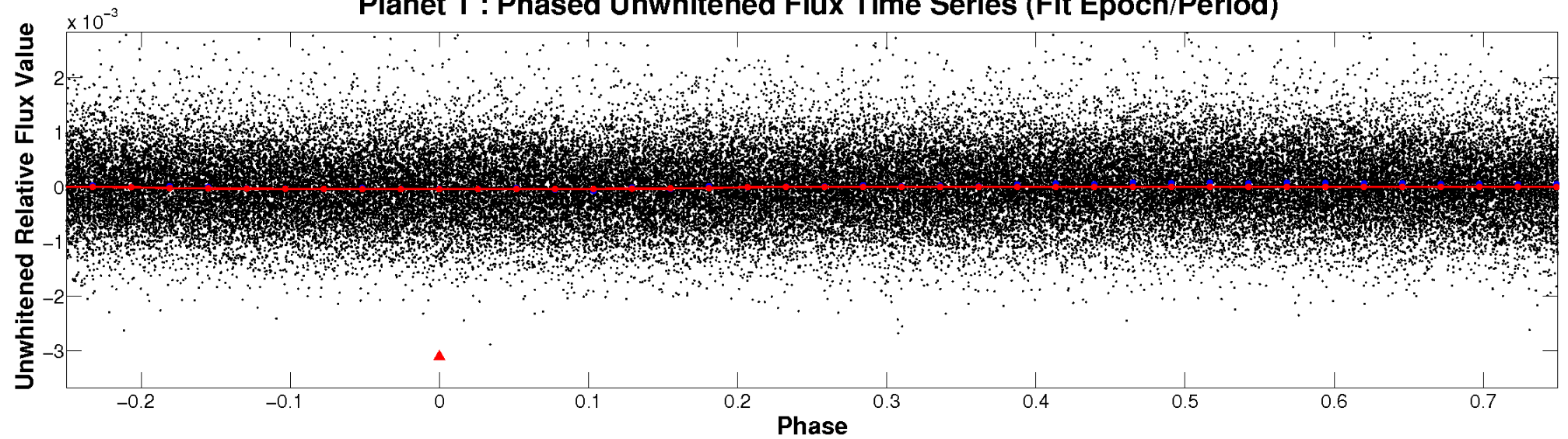
ALT Odd/Even

TCE 004136253-01

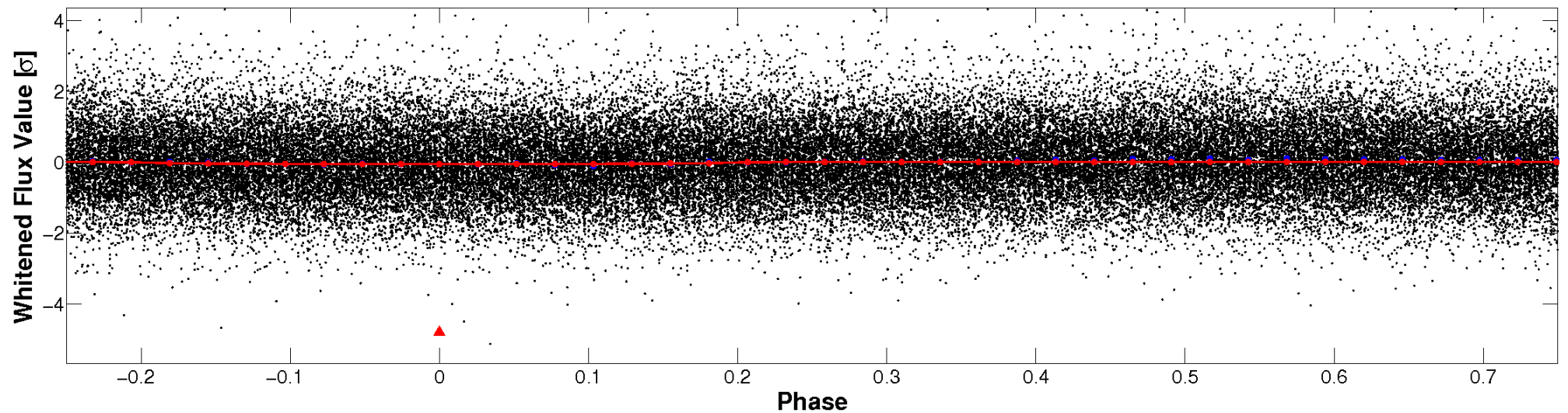


Non-Whitened Vs. Whitened Light Curve

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

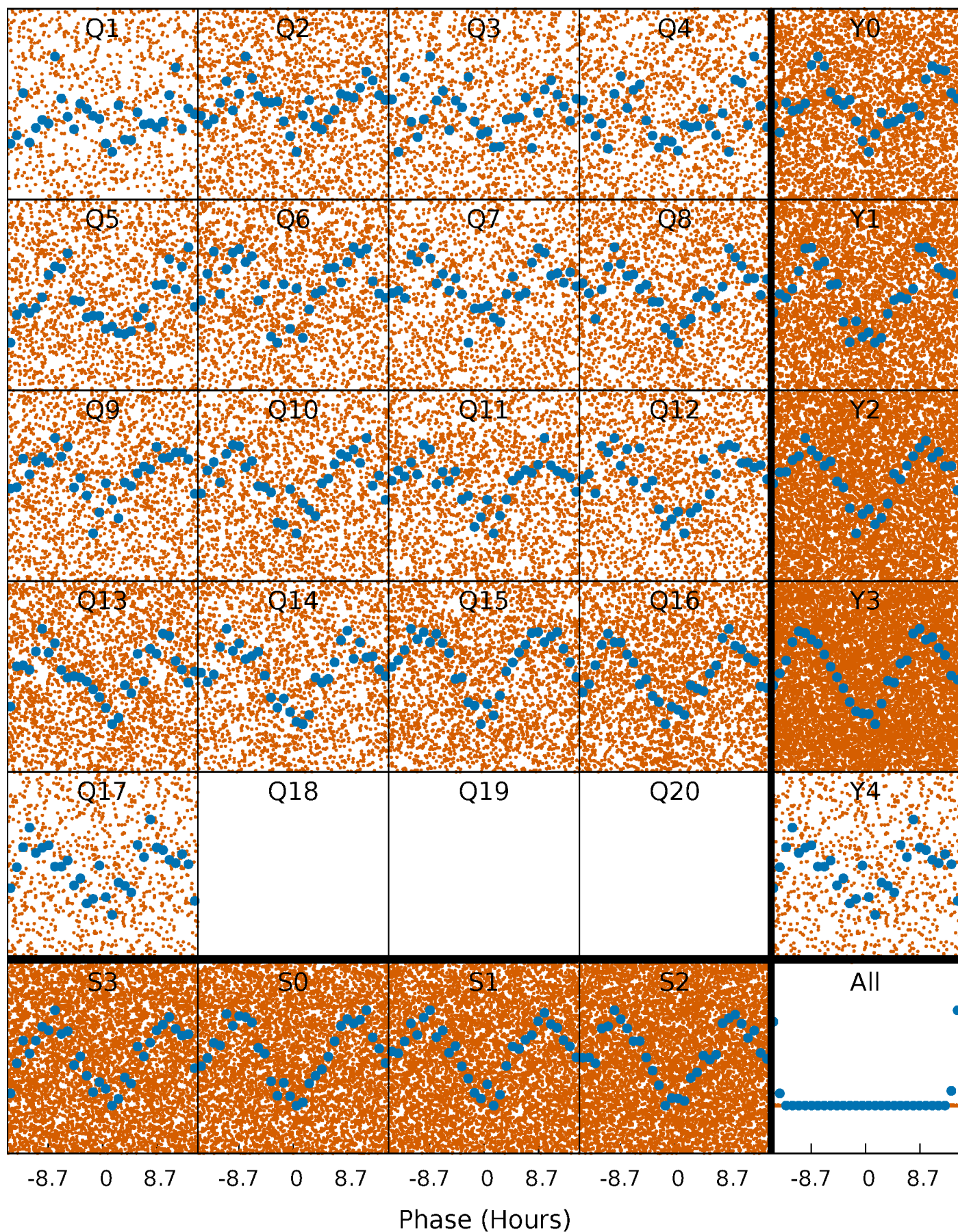


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



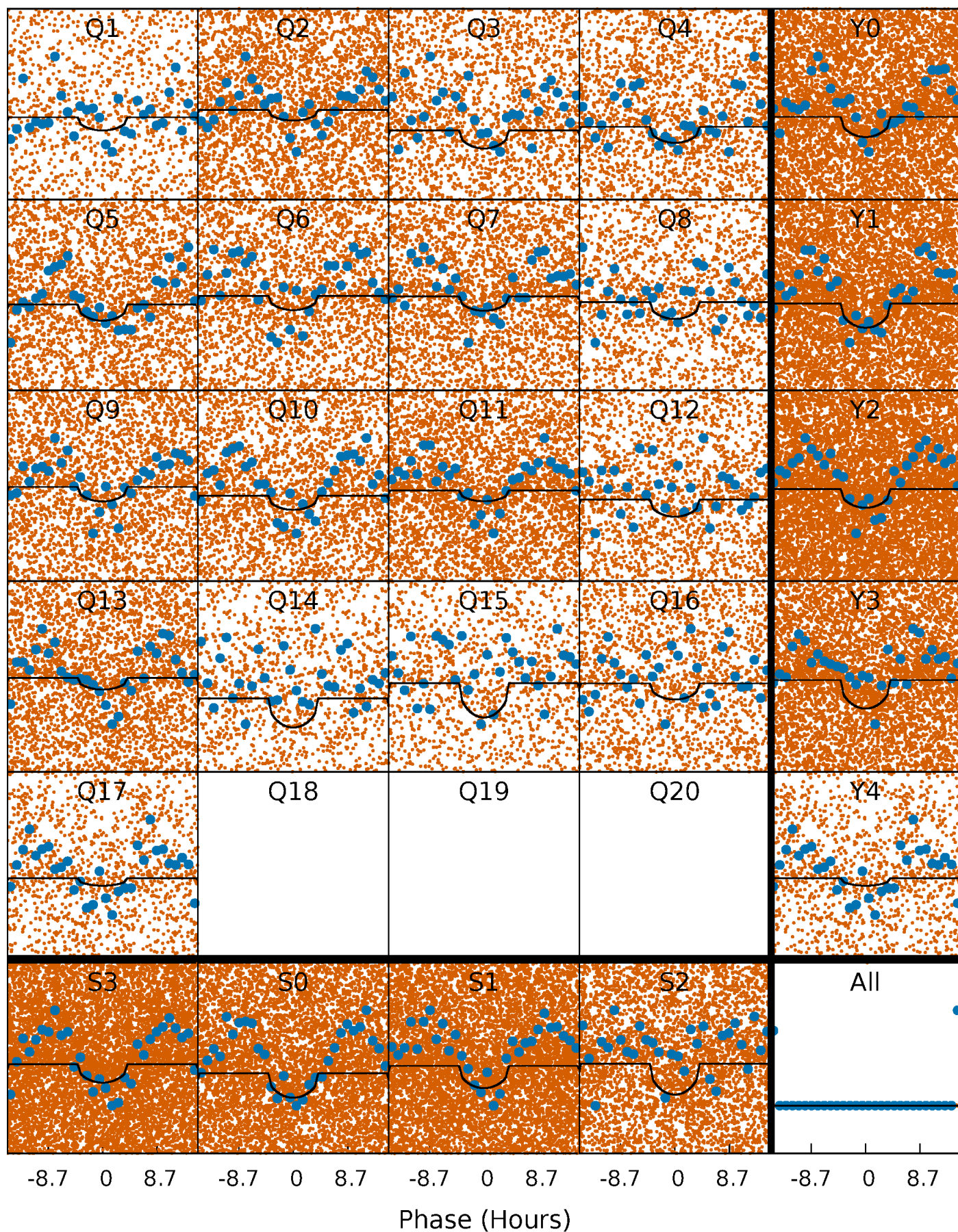
PDC Quarter-Phased Transit Curves

TCE 004136253-01 P= 0.791040 Days $T_0=132.207184$ (BKJD)



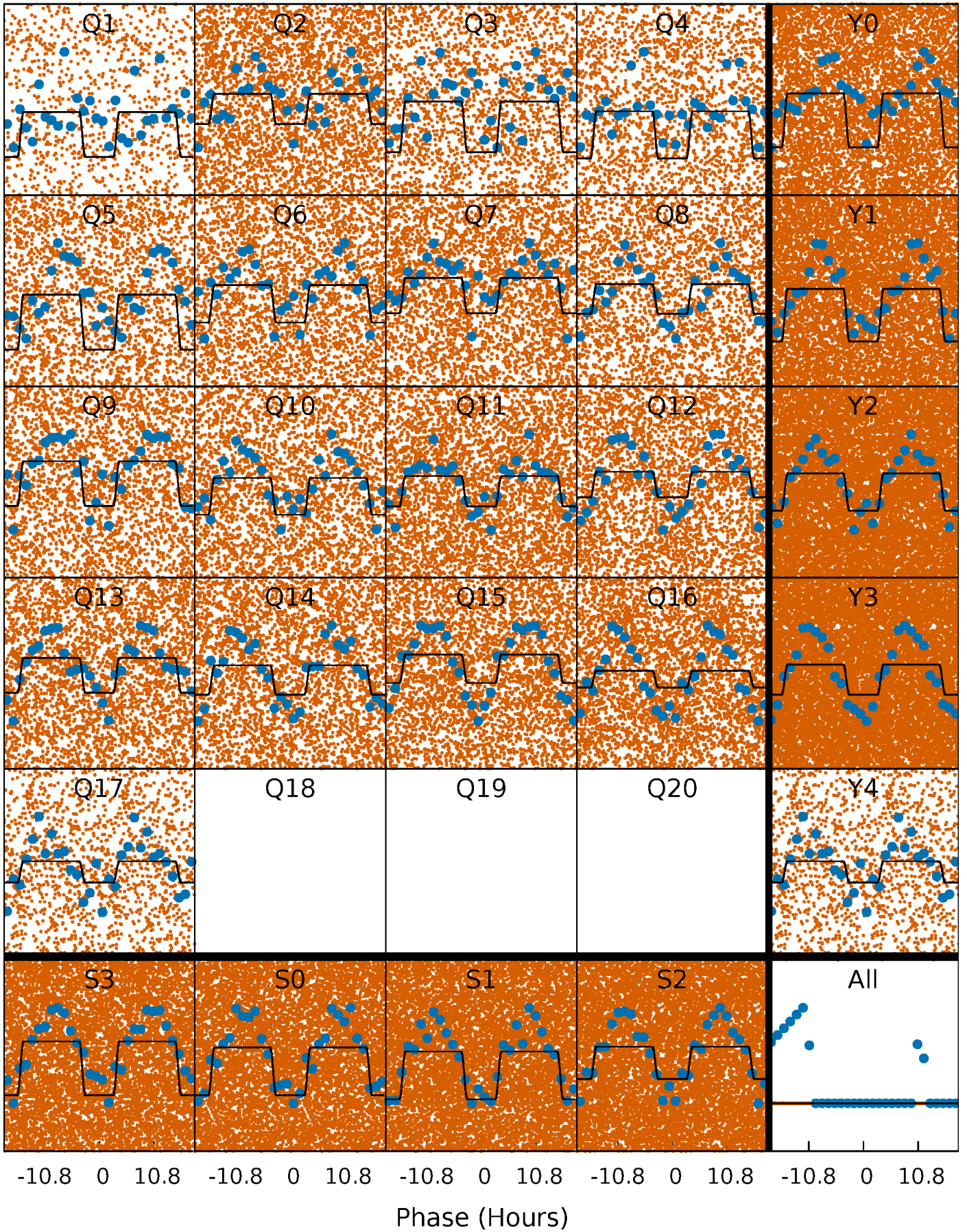
DV Quarter-Phased Transit Curves

TCE 004136253-01 P= 0.791040 Days $T_0=132.207184$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

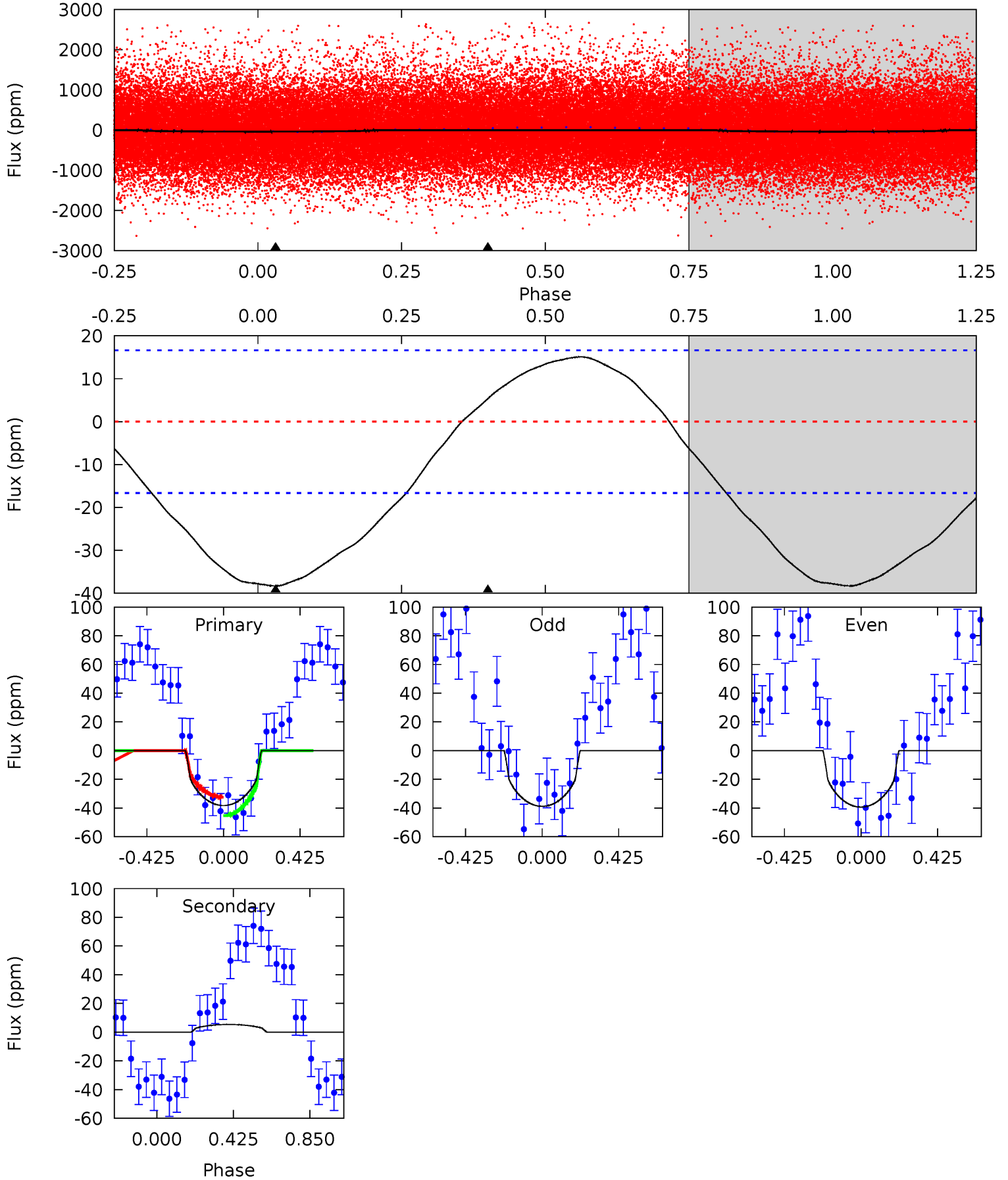
TCE 004136253-01 P= 0.791078 Days $T_0=132.173758$ (BKJD)



DV Model-Shift Uniqueness Test

004136253-01, P = 0.791040 Days, E = 131.416144 Days

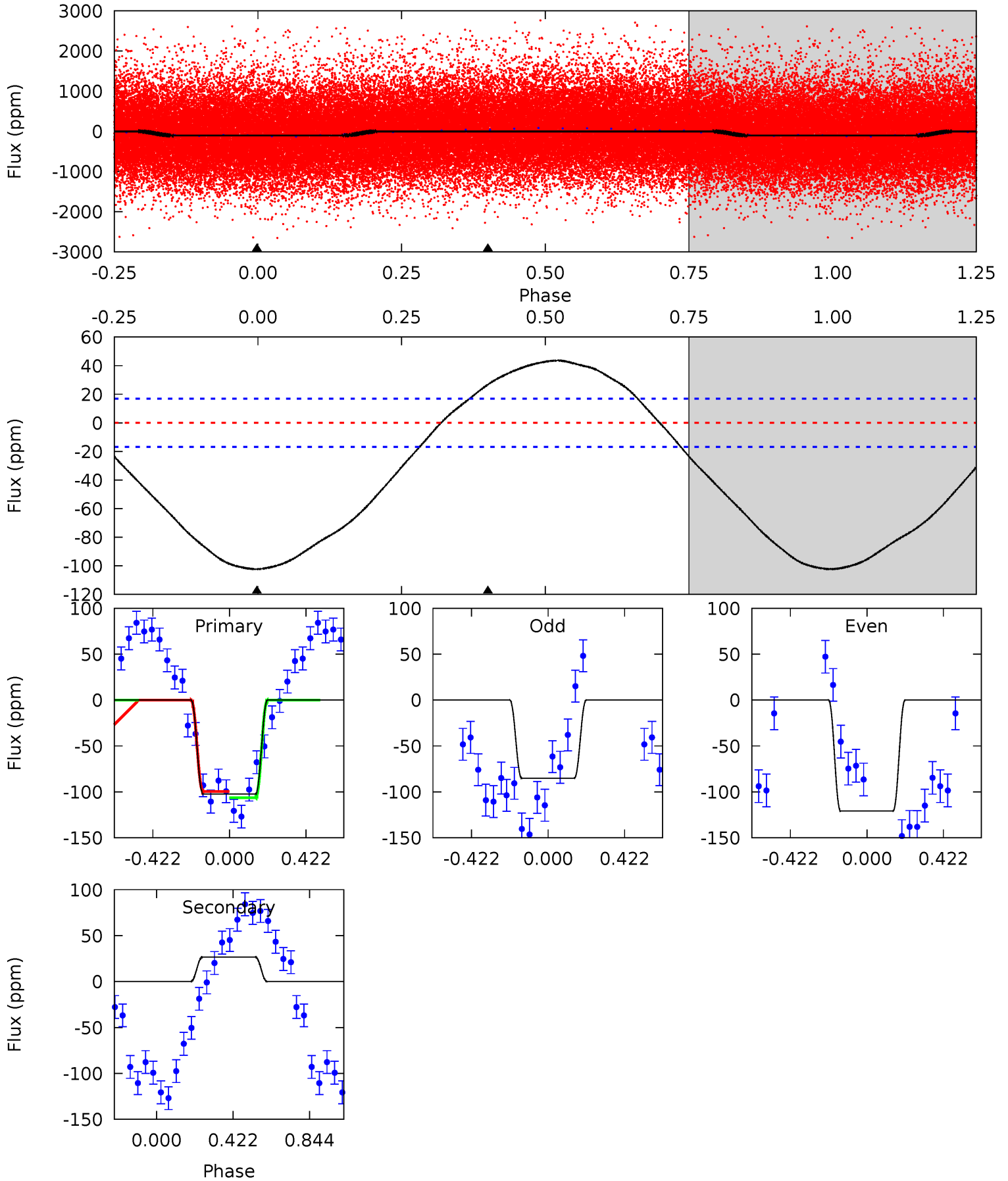
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.79	-1.37	0	0	4.25	0.80	1.28	9.79	9.79	-1.37	-1.37	0.07	0.91	0.28	1.67



Alt Model-Shift Uniqueness Test

004136253-01, P = 0.791078 Days, E = 131.382680 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.8	-6.73	0	0	4.25	0.80	3.27	25.8	25.8	-6.73	-6.73	4.54	1.05	0.30	0.84



Stellar Parameters For KIC 004136253

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5169^{+153}_{-153}	$4.620^{+0.033}_{-0.083}$	$-0.240^{+0.300}_{-0.300}$	$0.723^{+0.097}_{-0.057}$	$0.807^{+0.065}_{-0.098}$	$3.013^{+0.468}_{-0.808}$
	+3%/-3%	+1%/-2%	+125%/-125%	+13%/-8%	+8%/-12%	+16%/-27%
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 004136253-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	5 ± 4	$0.62^{+0.61}_{-0.42}$	2202^{+83}_{-86}	-3333^{+542}_{-1518}	$-1.488^{+1.277}_{-13.020}$
Alt.	27 ± 4	$0.87^{+0.67}_{-0.51}$	2202^{+95}_{-80}	-3890^{+563}_{-1709}	$-4.563^{+3.097}_{-22.017}$

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

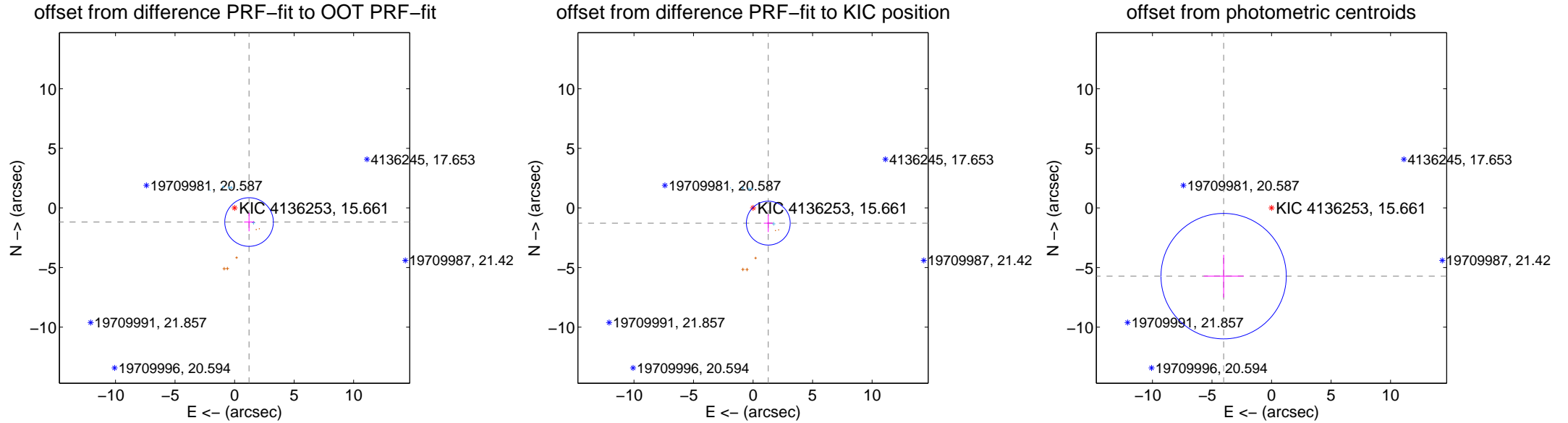
DV Centroid Data

Supplemental centroid analysis for 004136253-01. Kepler magnitude: 15.66. Transit SNR 7.26

There are 5 quarters with good PRF difference image offsets

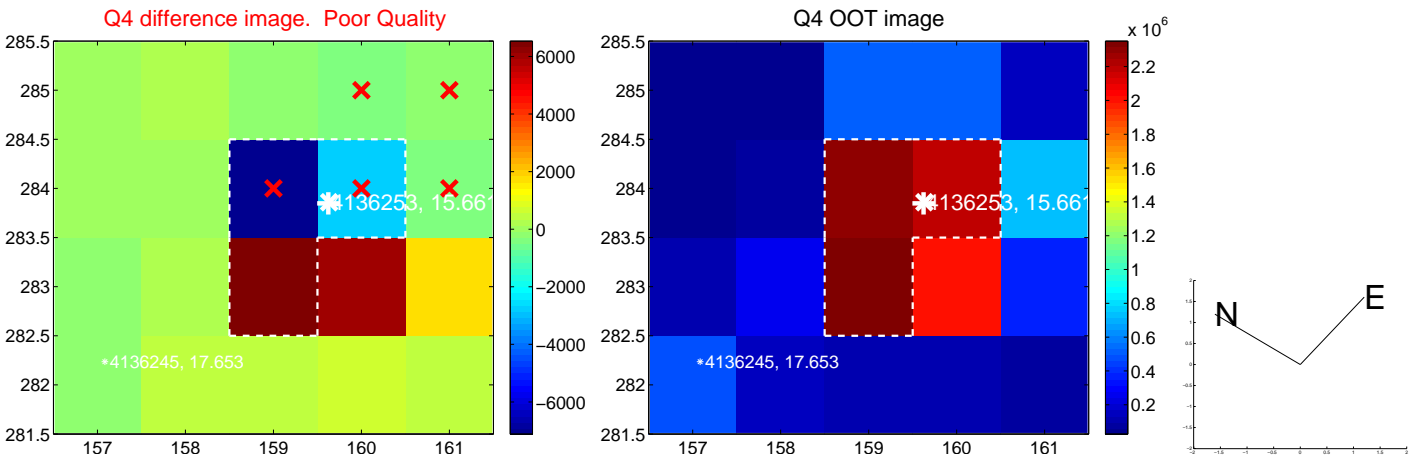
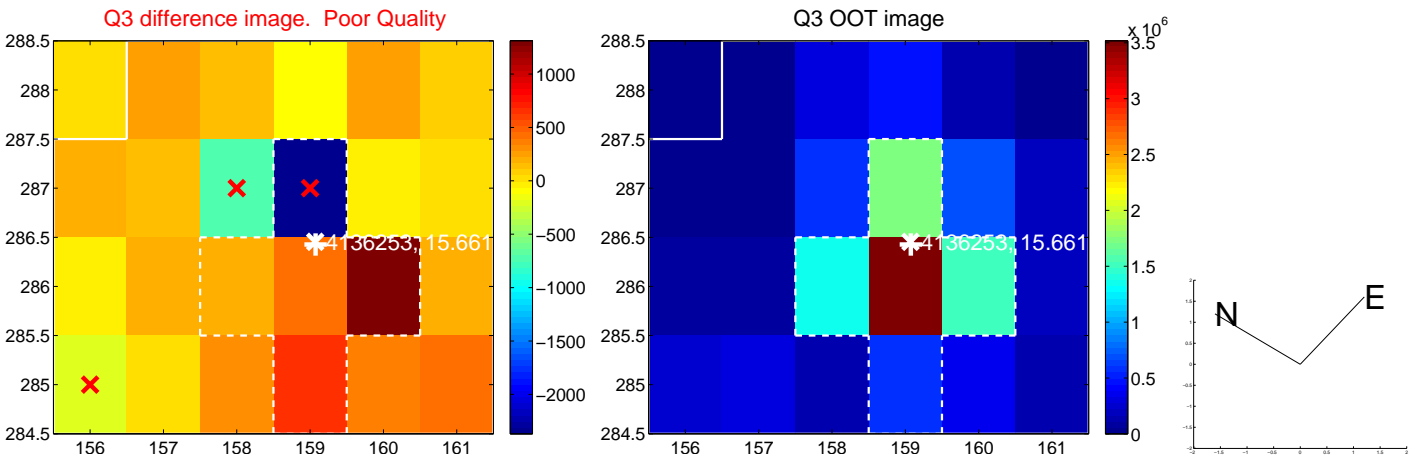
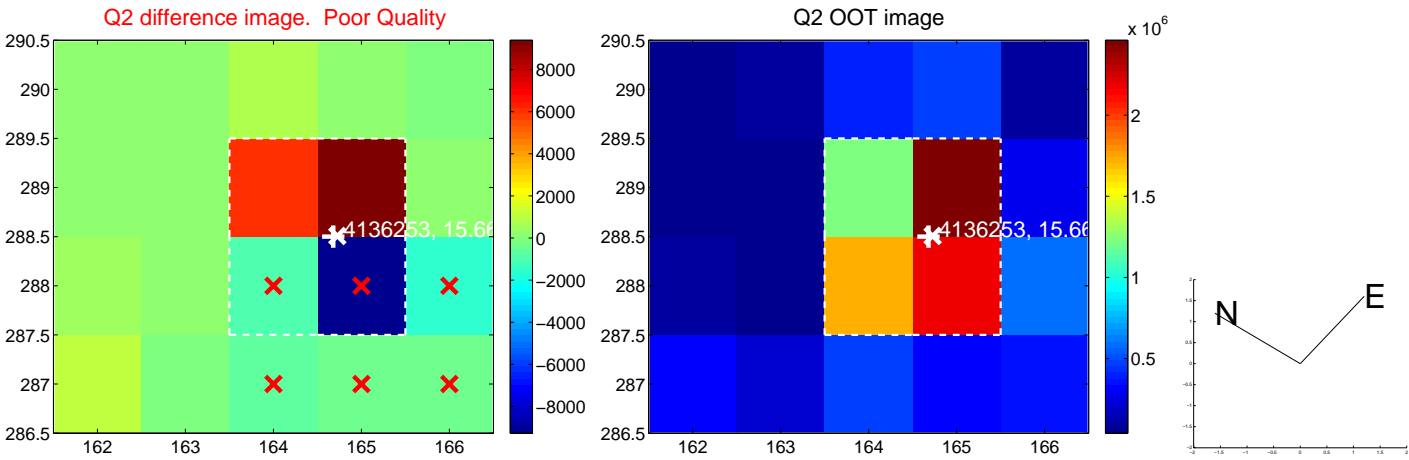
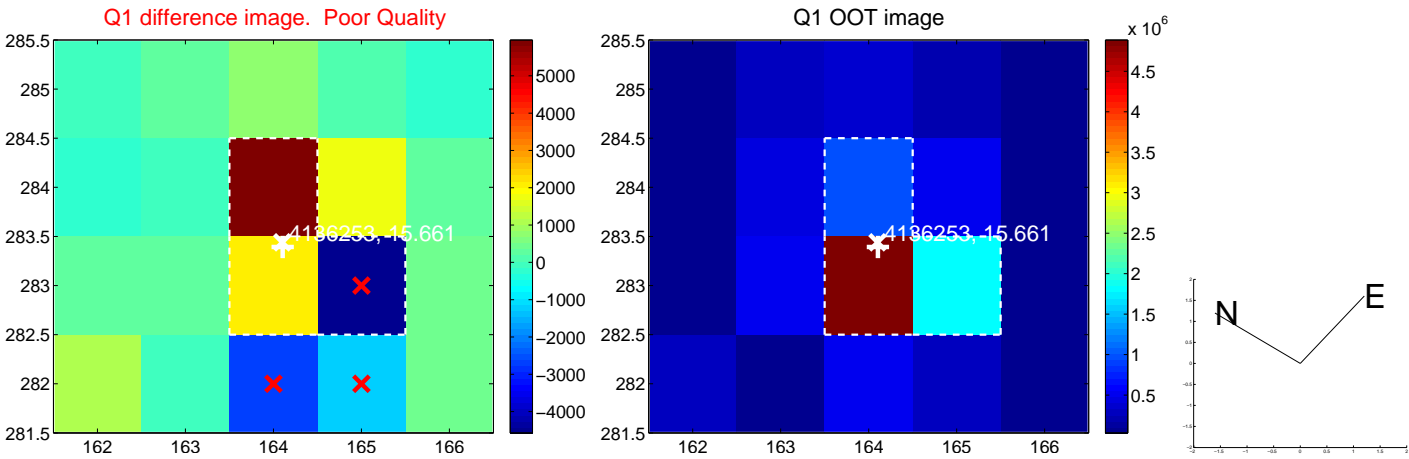
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.696 ± 0.680	2.49	-1.217 ± 0.421	-1.182 ± 0.776
PRF-fit source offset from KIC position	1.806 ± 0.613	2.95	-1.280 ± 0.376	-1.274 ± 0.746
photometric centroid source offset	6.99 ± 1.75	3.99	4.02 ± 1.67	-5.72 ± 1.79

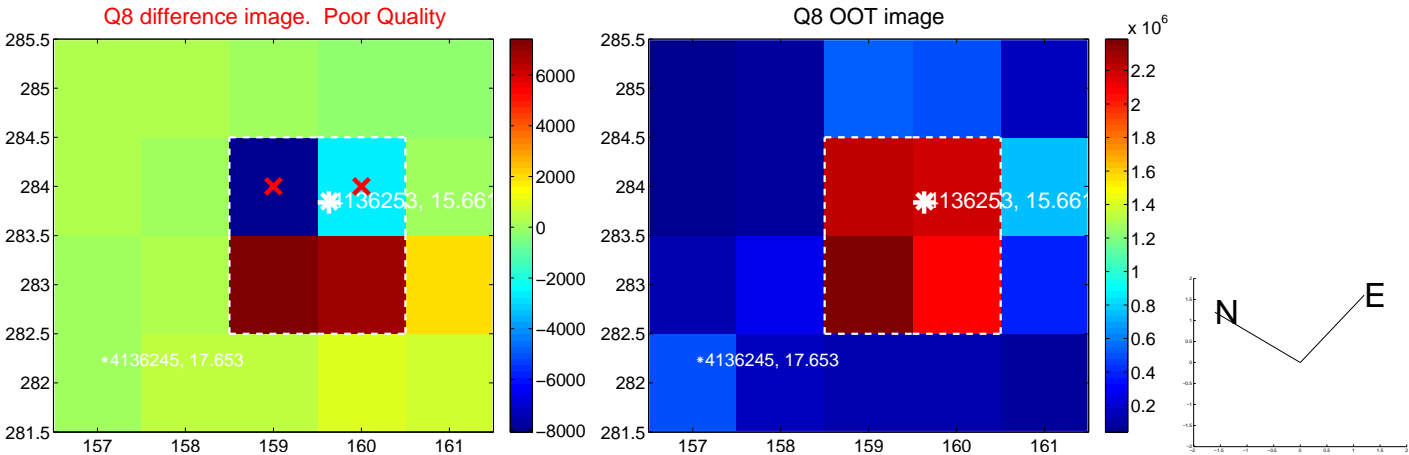
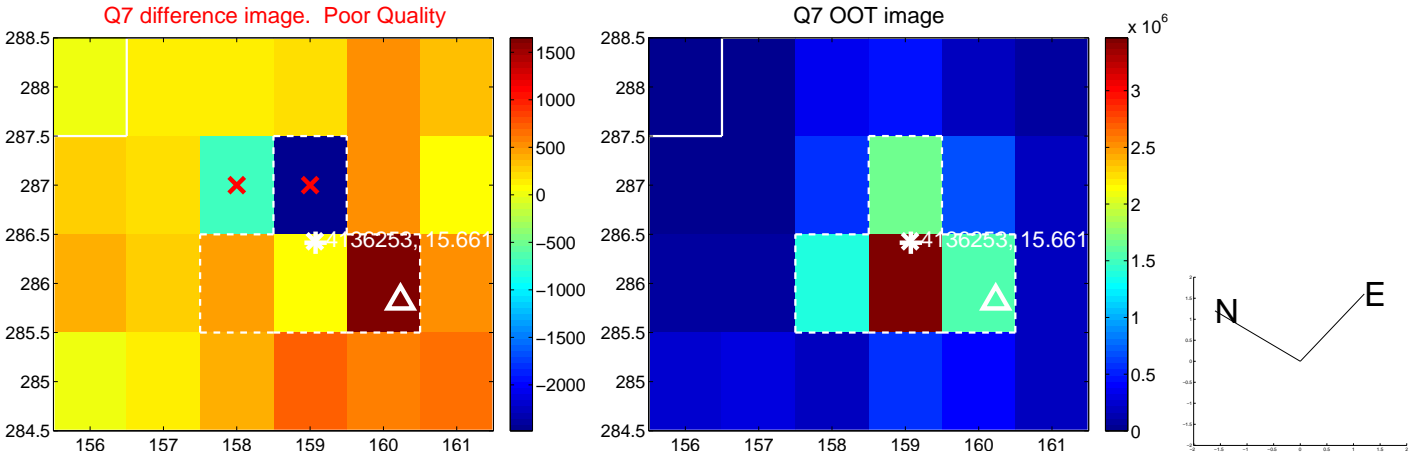
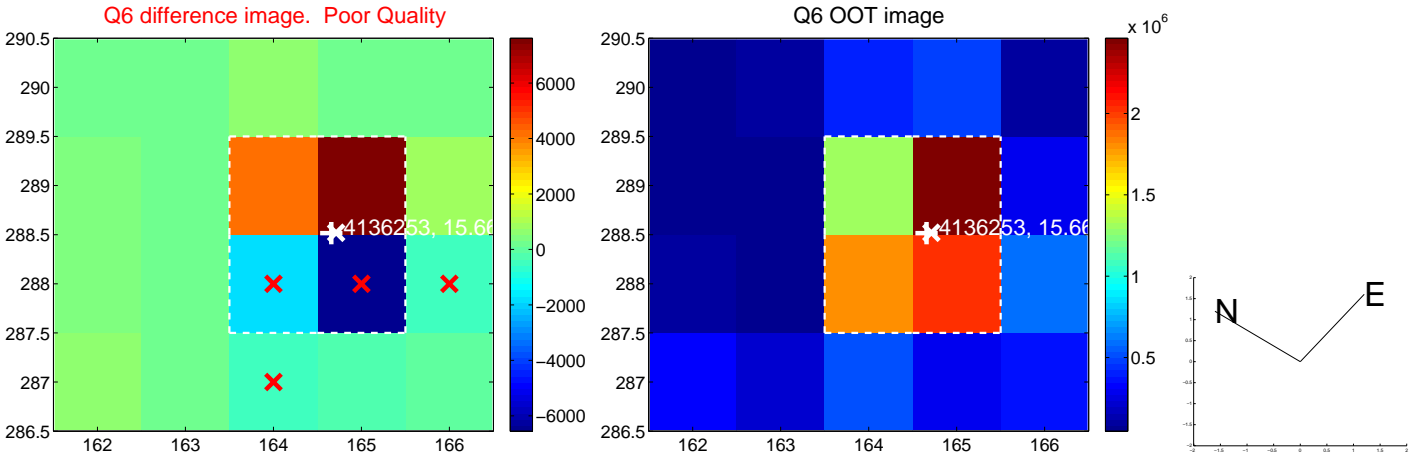
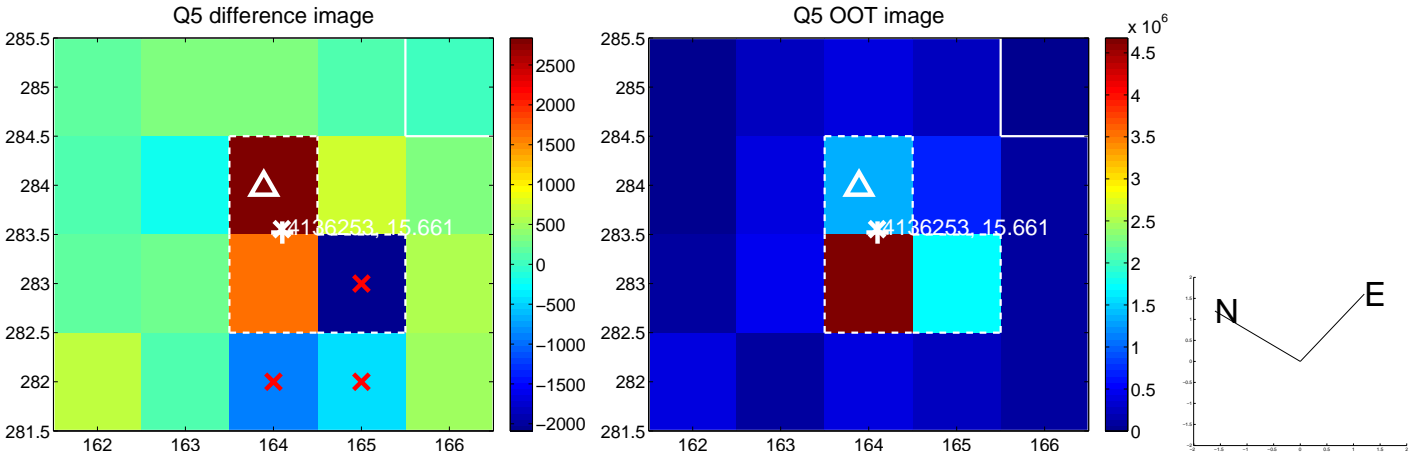


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

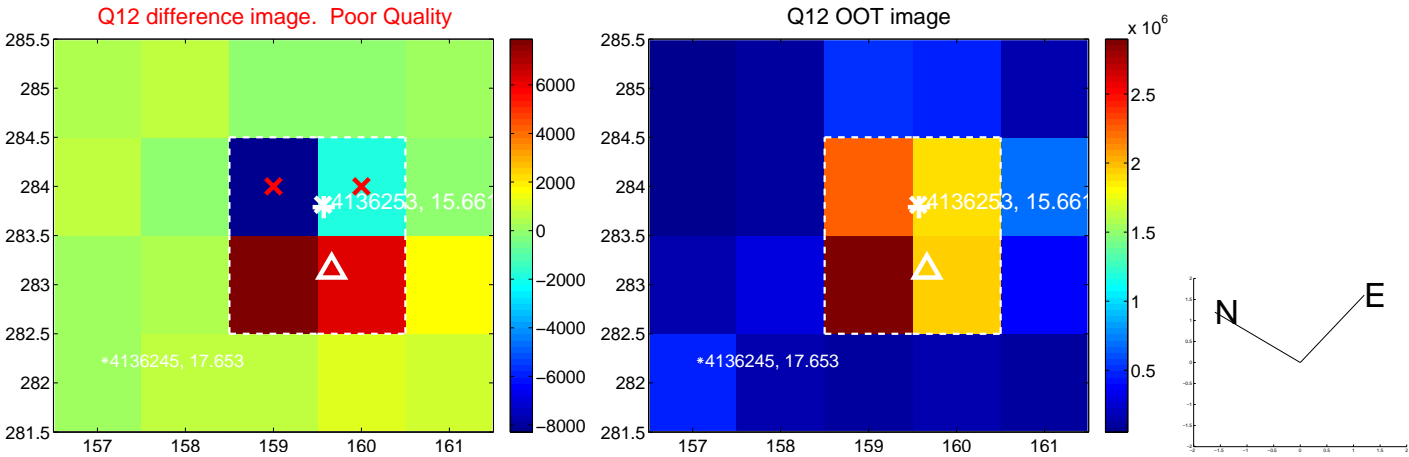
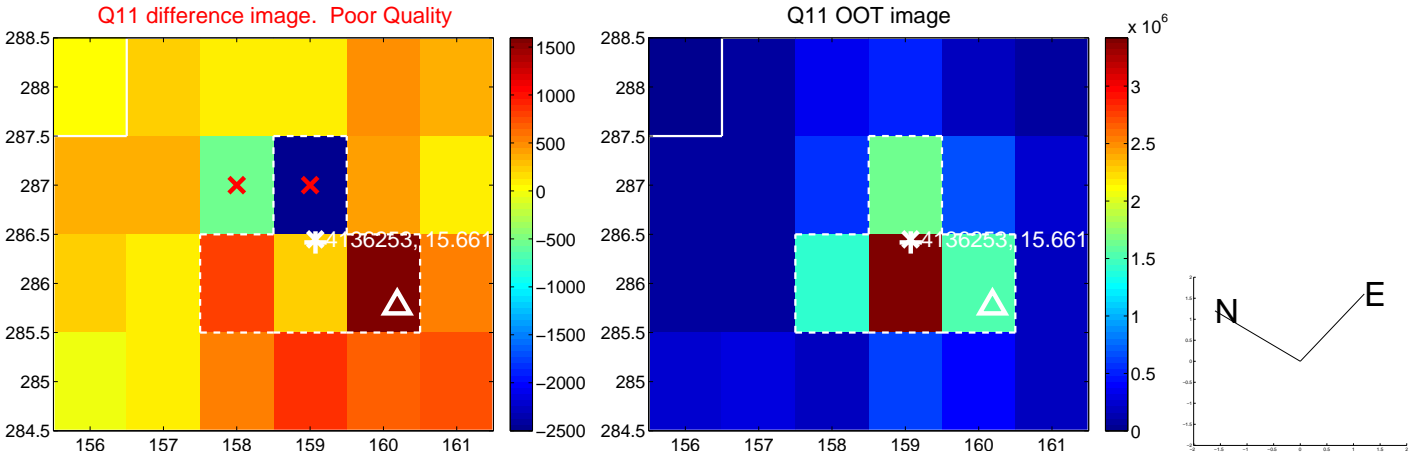
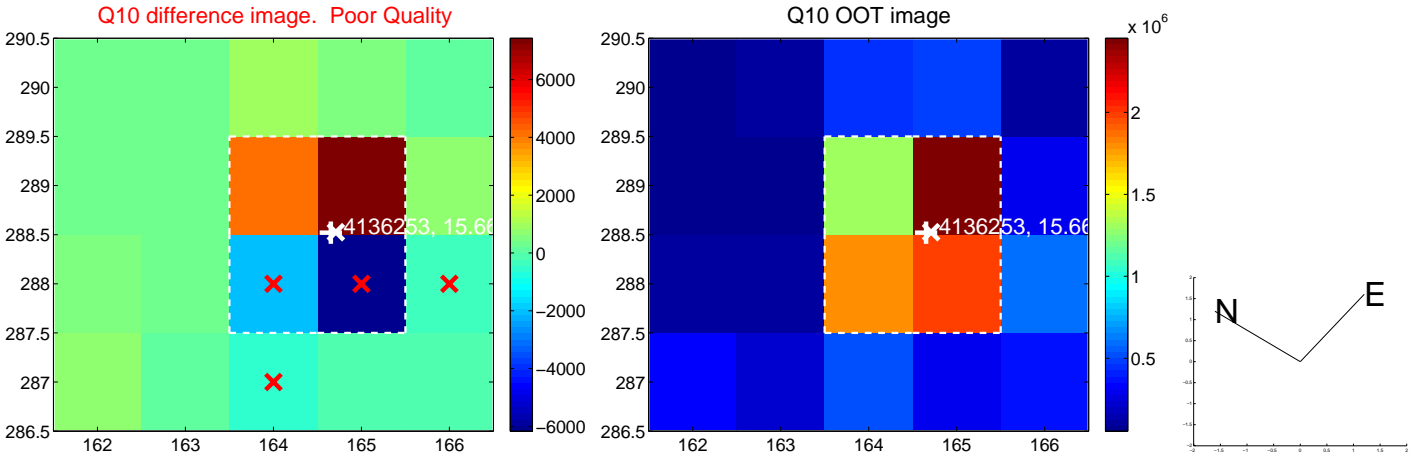
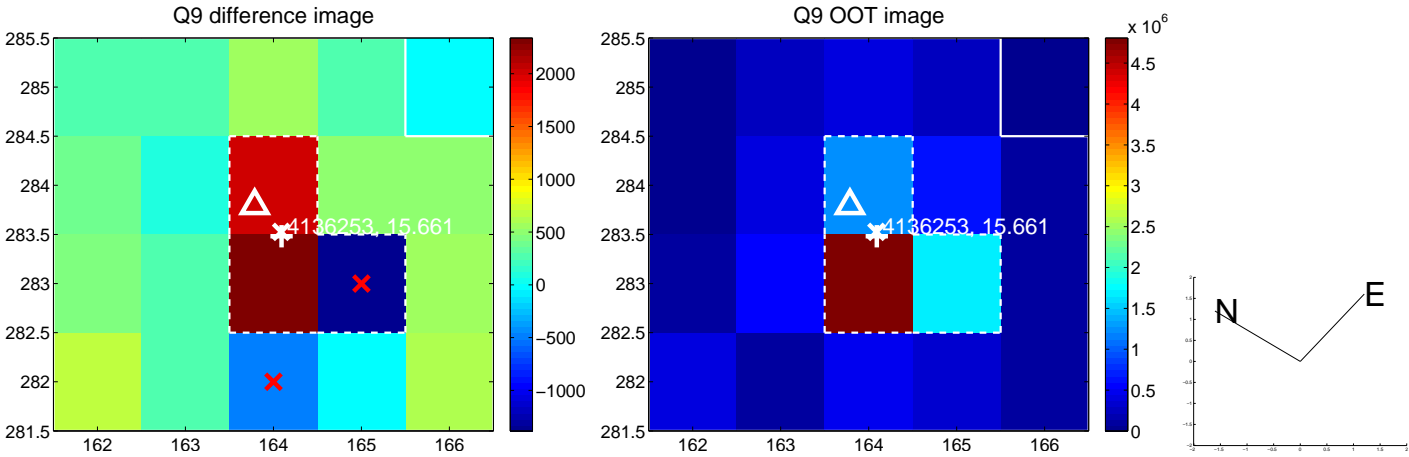
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



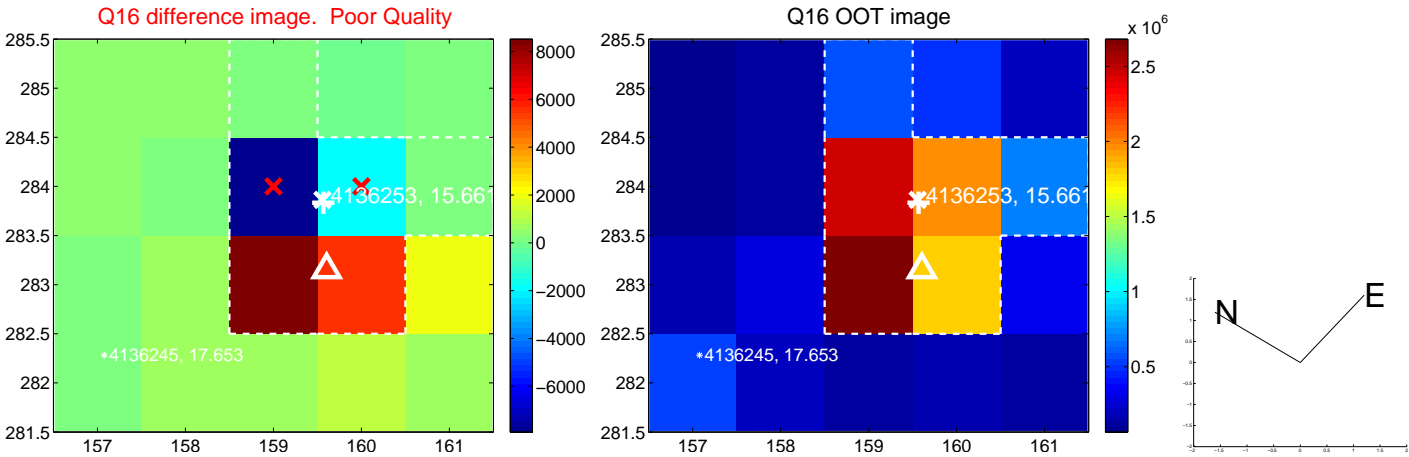
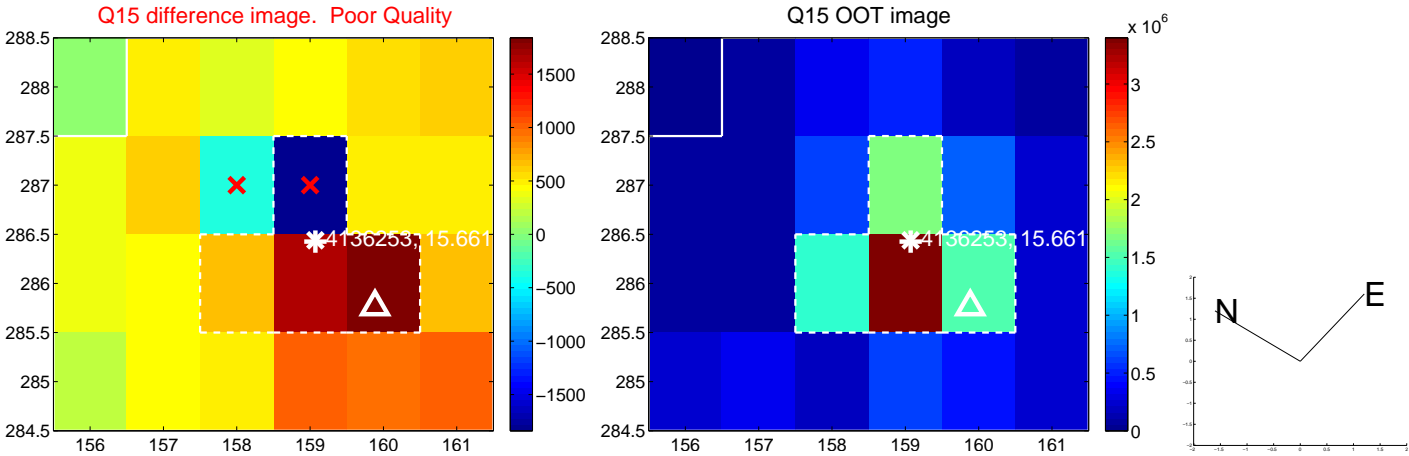
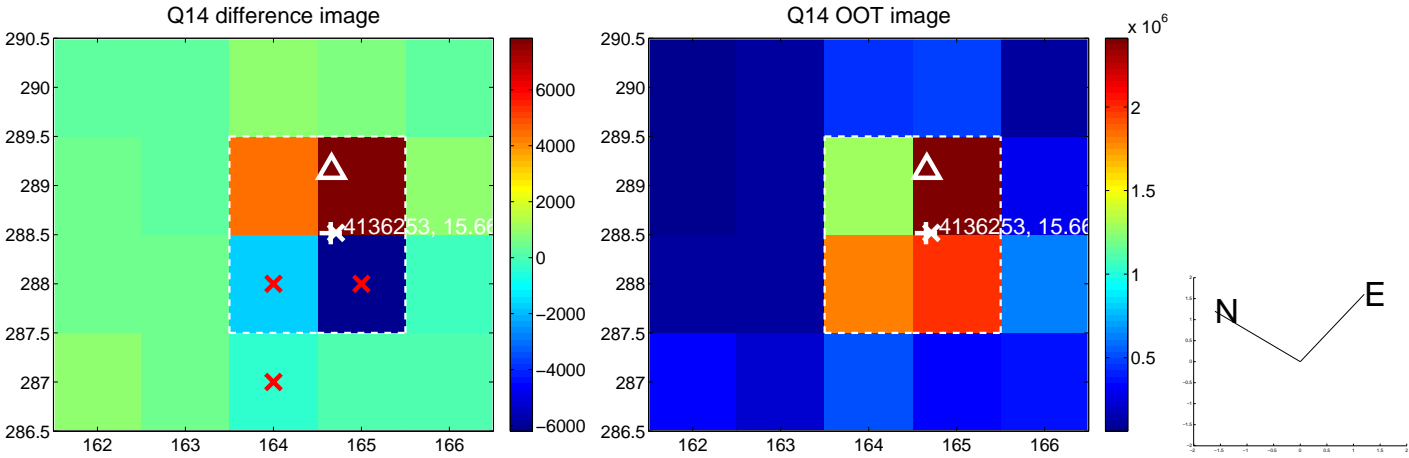
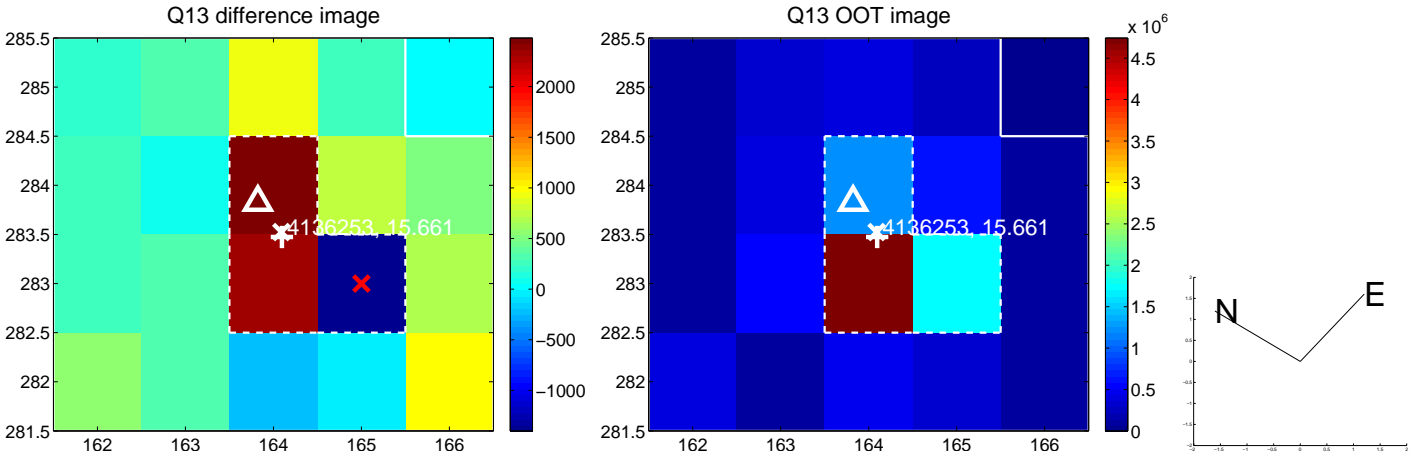
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



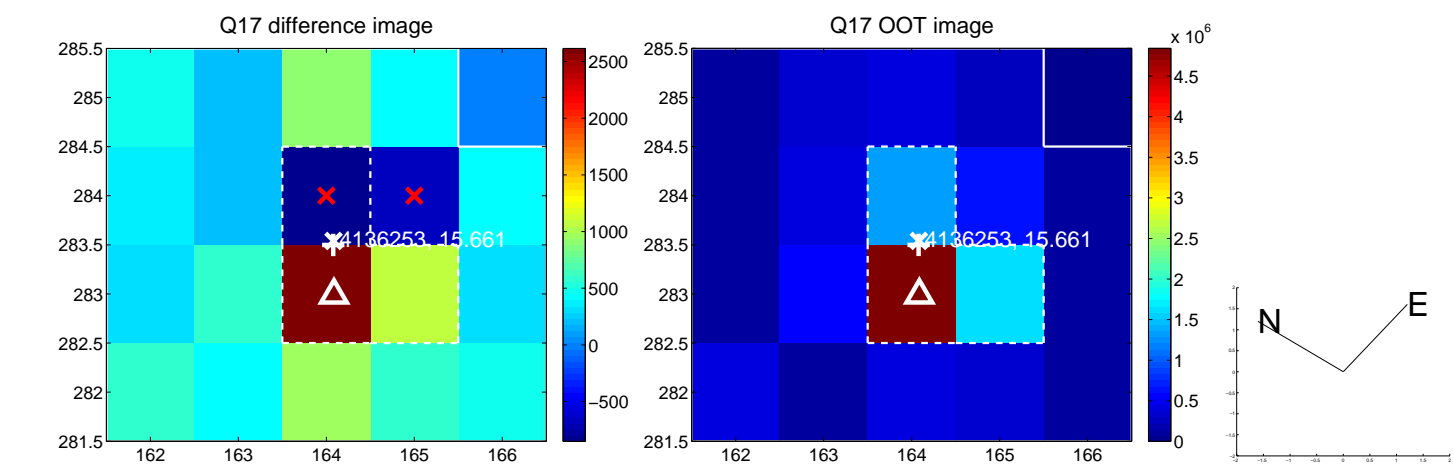
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



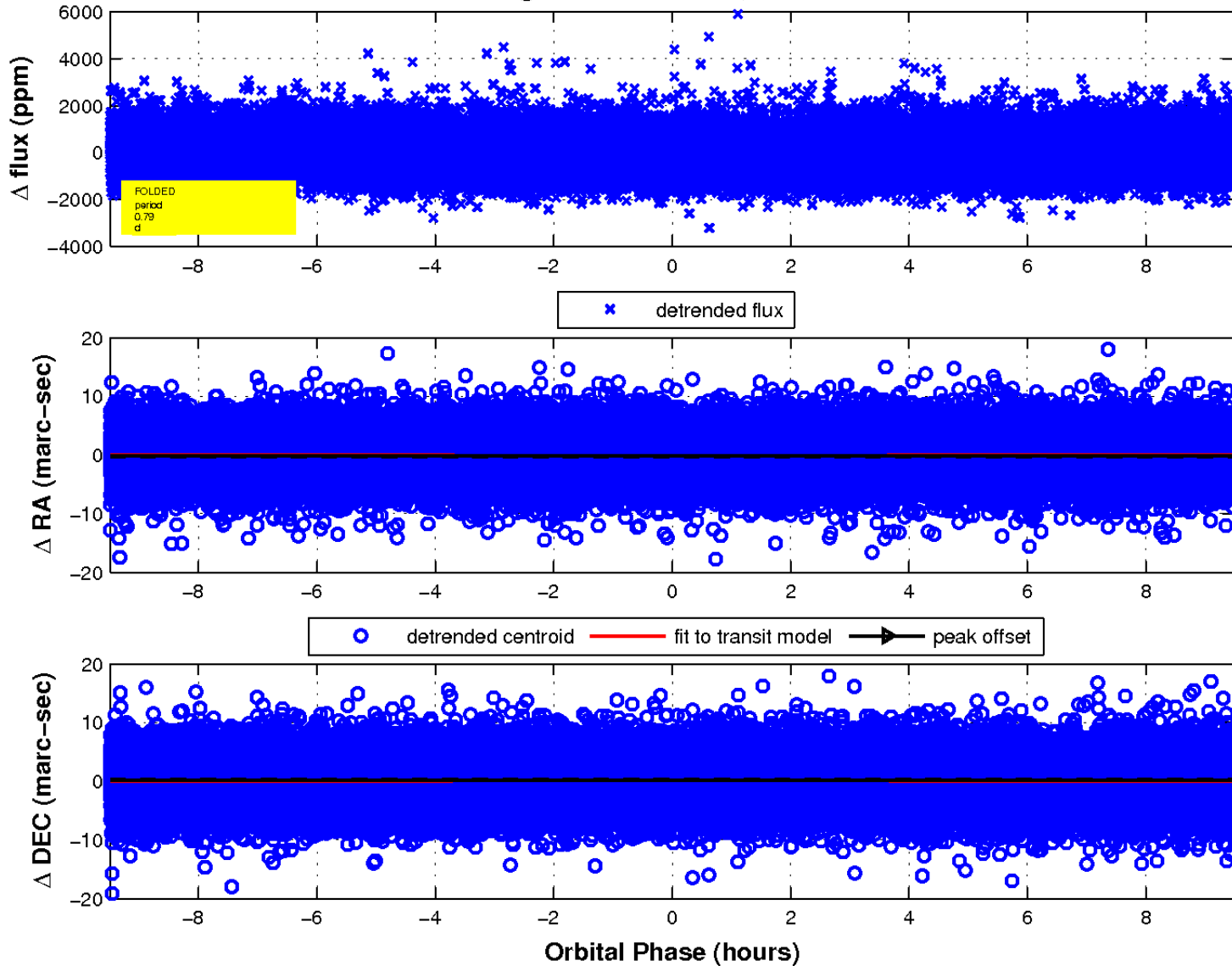
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

