

KIC 007031753

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})
007031753-01	OBS	No	0.566703	131.927154	7.6	3.611	10.1	2.2	0.86	5818	0.24	4397.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007031753-01	OBS	FP	0.00	1	0	1	1	LPP_DV—HALO_GHOST—EPHEM_MATCH

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.

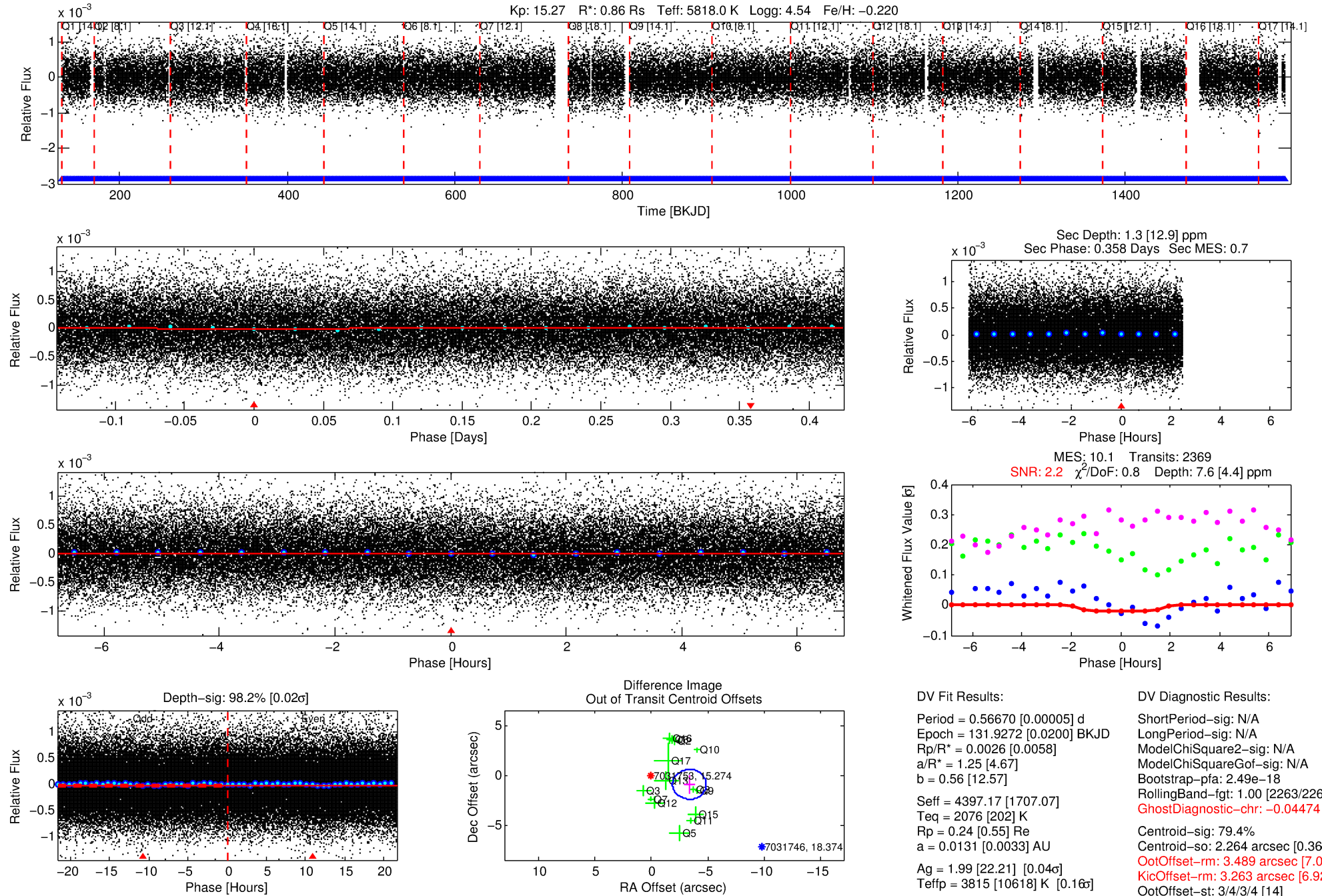
Ephemeris Match Information For 007031753-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007031753-01	7031753	RR-Lyr-pri	7198959	1:1	941.8	116	-207	7.86	15.27	77912.00	Direct-PRF	0	3.03	9.88

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7031753 Candidate: 1 of 1 Period: 0.567 d



DV Fit Results:

Period = 0.56670 [0.00005] d
Epoch = 131.9272 [0.0200] BKJD
Rp/R* = 0.0026 [0.0058]
a/R* = 1.25 [4.67]
b = 0.56 [12.57]
Seff = 4397.17 [1707.07]
Teff = 2076 [202] K
Rp = 0.24 [0.55] Re
a = 0.0131 [0.0033] AU
Ag = 1.99 [22.21] [0.04 σ]
Teffp = 3815 [10618] K [0.16 σ]

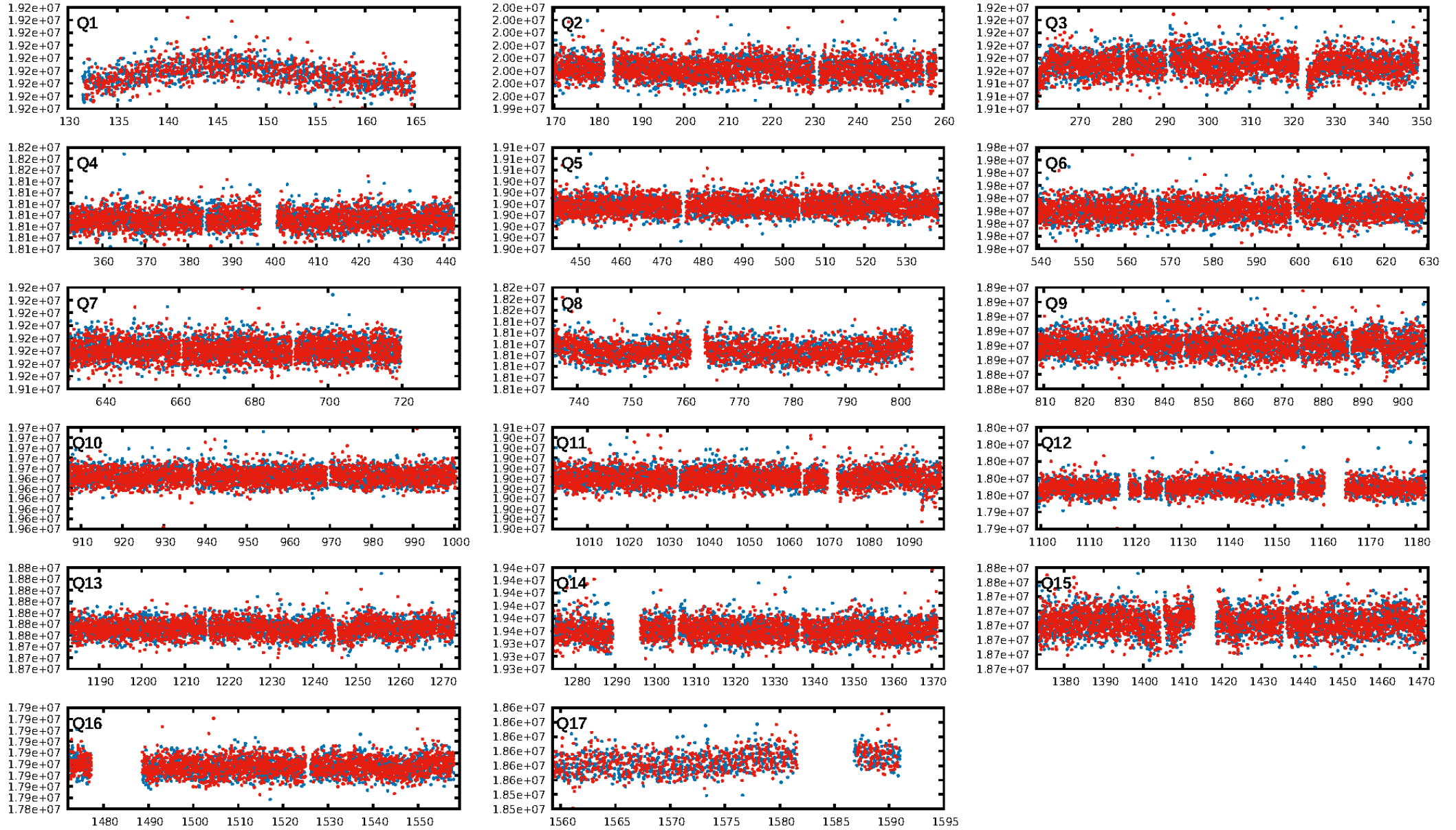
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.49e-18
RollingBand-fgt: 1.00 [2263/2263]
GhostDiagnostic-chr: -0.04474
Centroid-sig: 79.4%
Centroid-so: 2.264 arcsec [0.36 σ]
OotOffset-rm: 3.489 arcsec [7.01 σ]
KicOffset-rm: 3.263 arcsec [6.92 σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 0.21 [3/14]
DiffImageOverlap-fno: 1.00 [17/17]

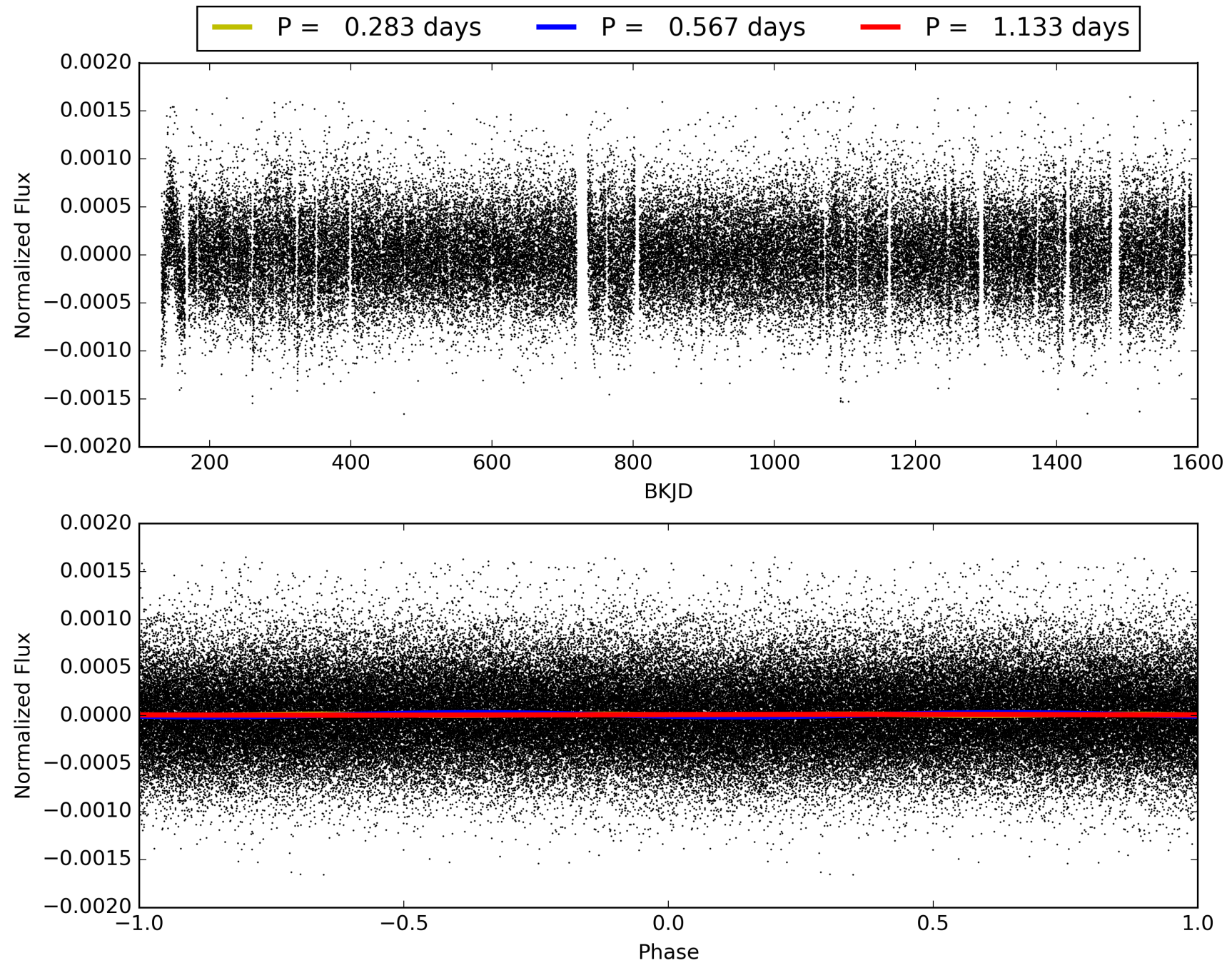
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 14:51:31 Z

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

TCE 007031753-01, PDC Light Curves

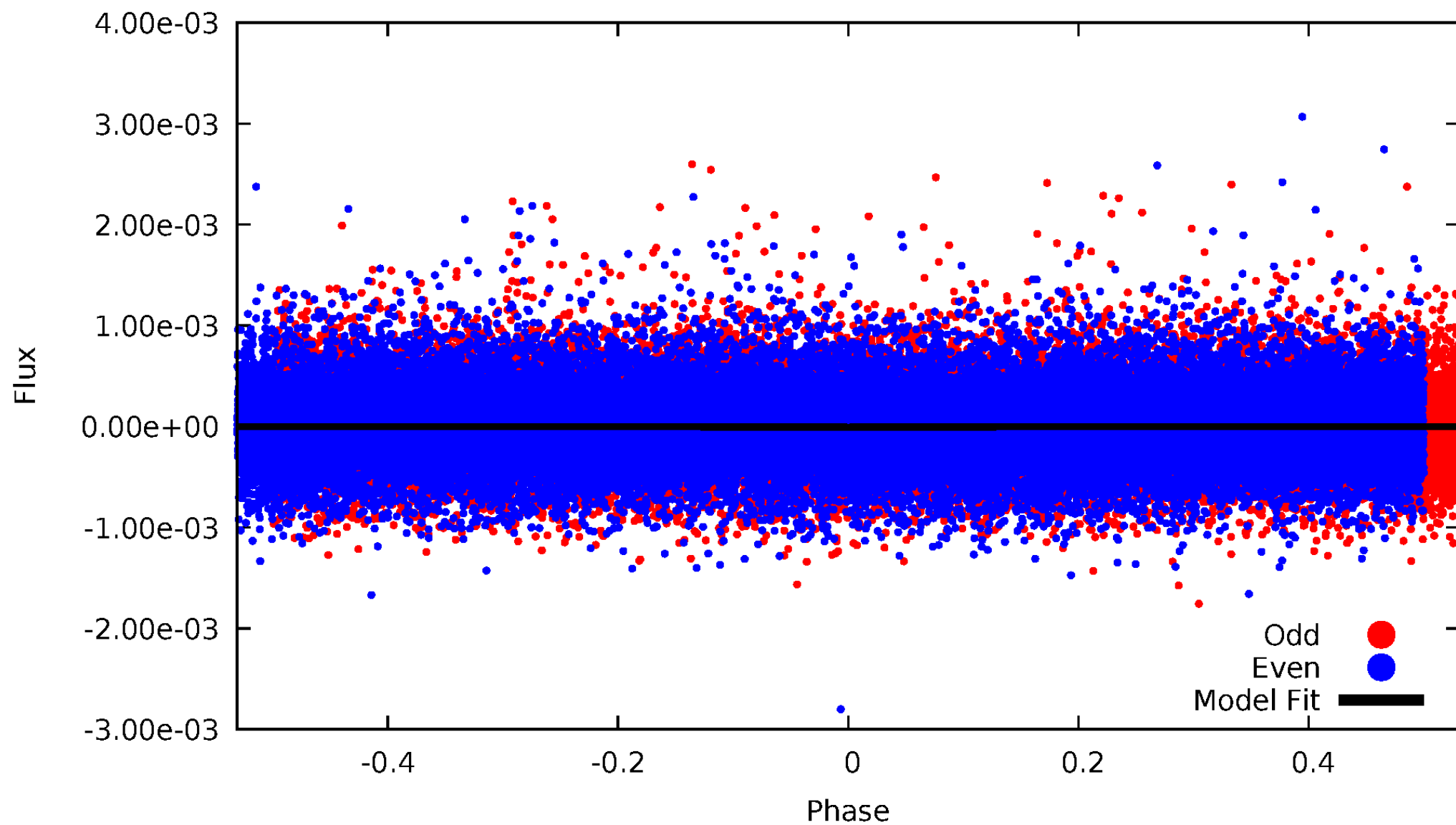


TCE 007031753-01



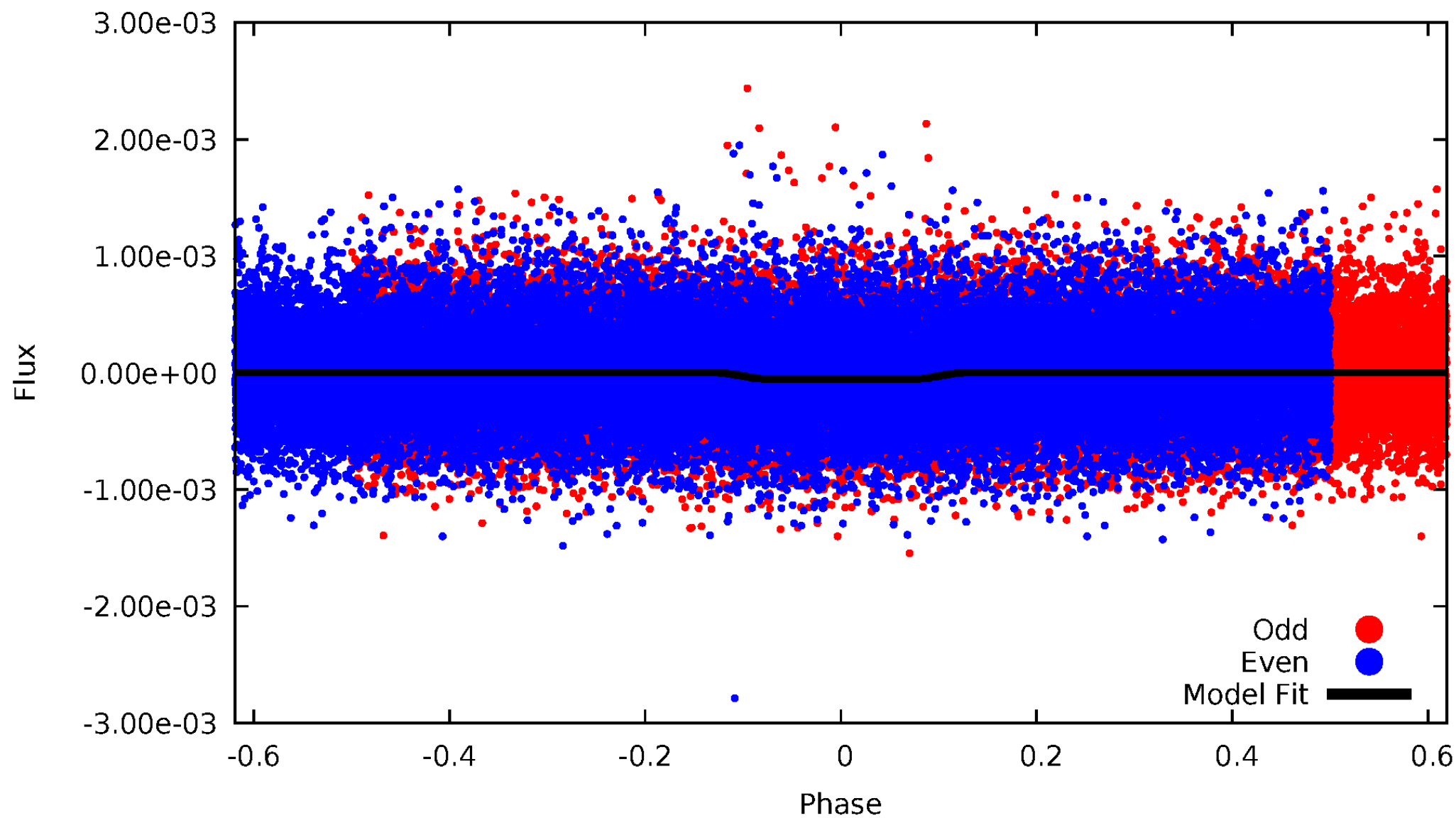
DV Odd/Even

TCE 007031753-01



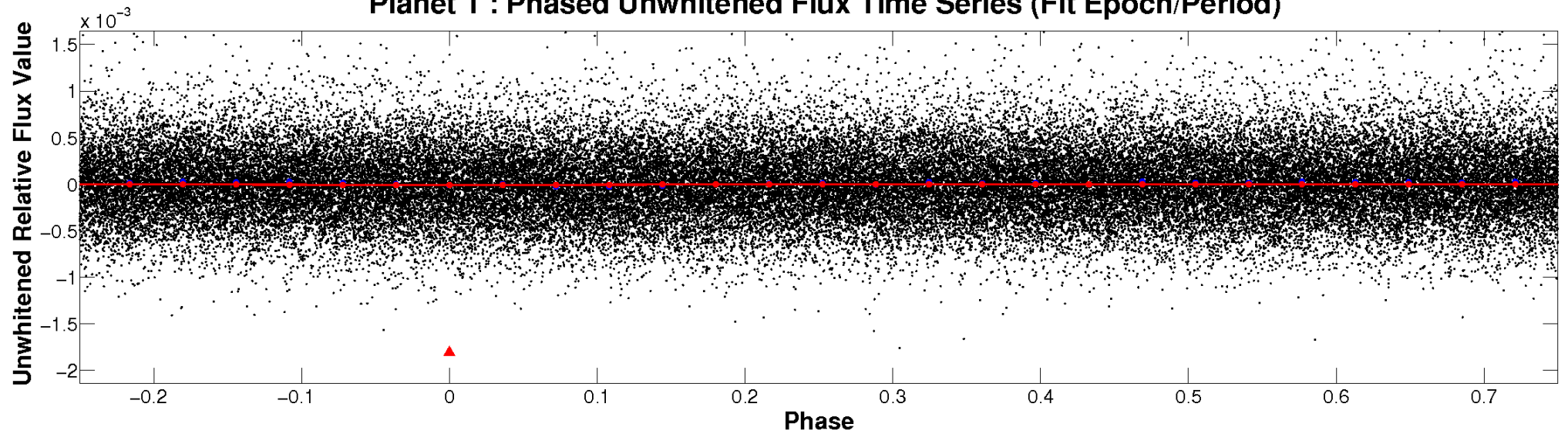
ALT Odd/Even

TCE 007031753-01

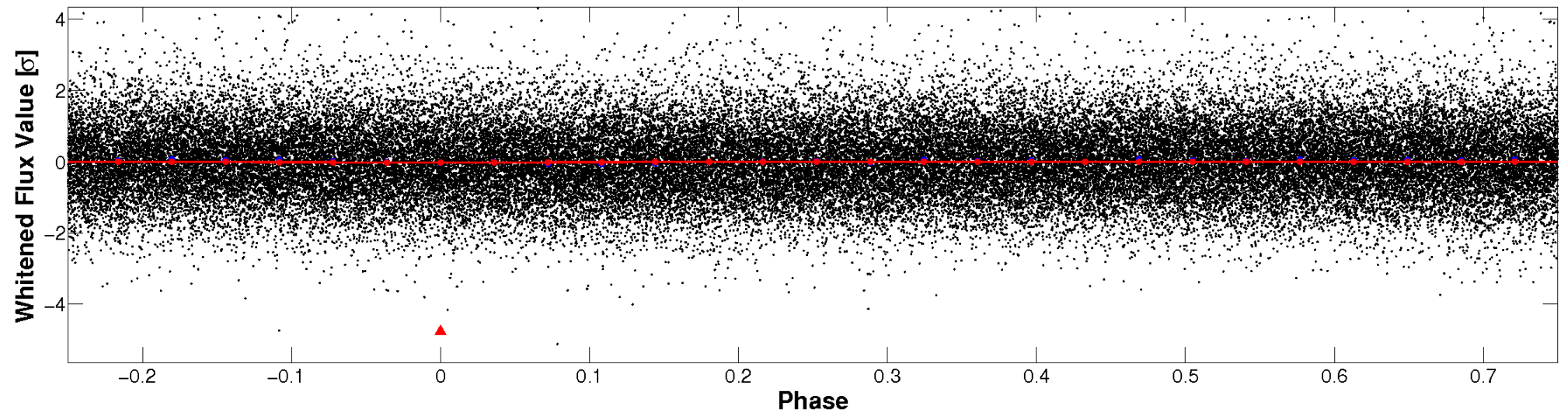


Non-Whitened Vs. Whitened Light Curve

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

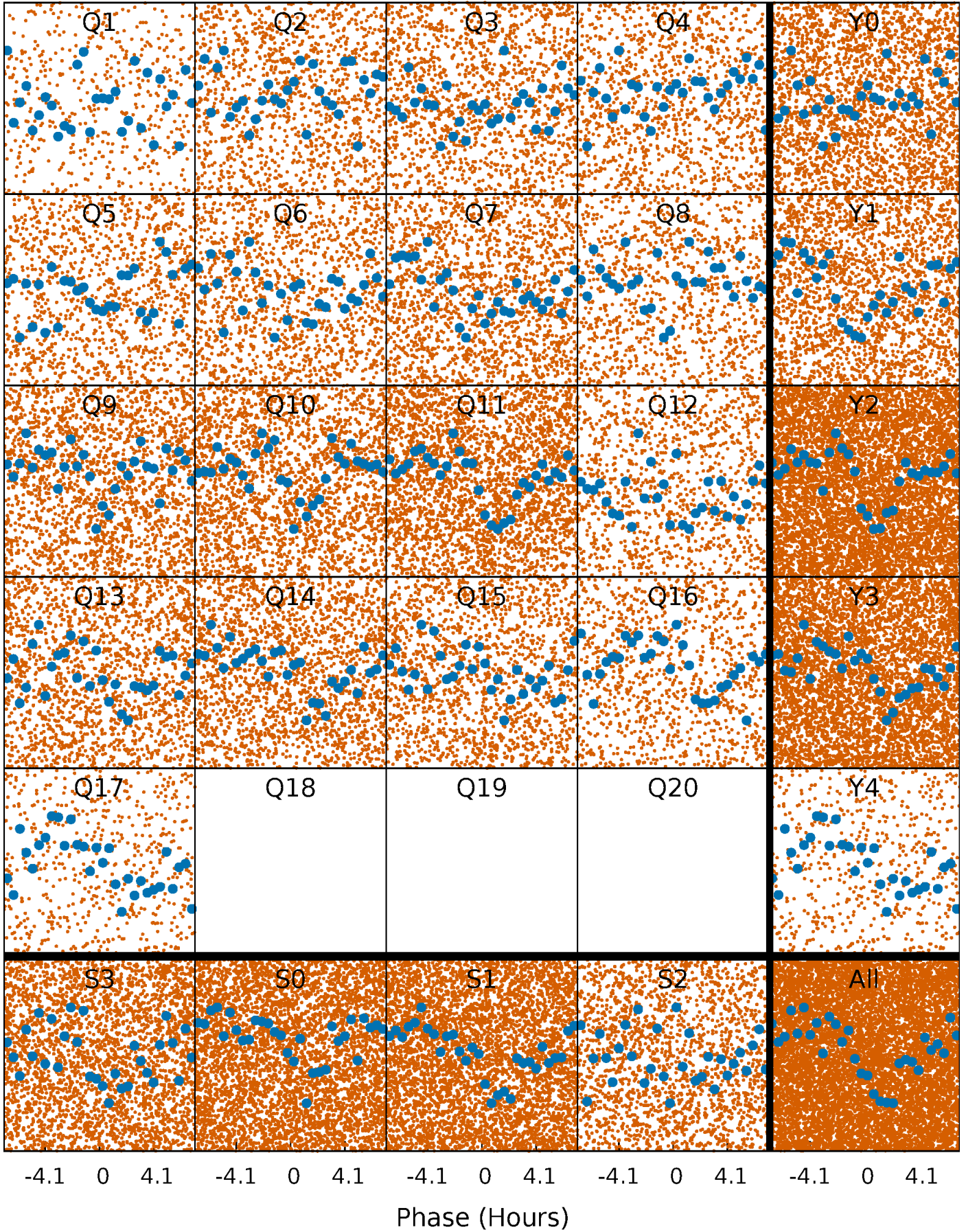


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



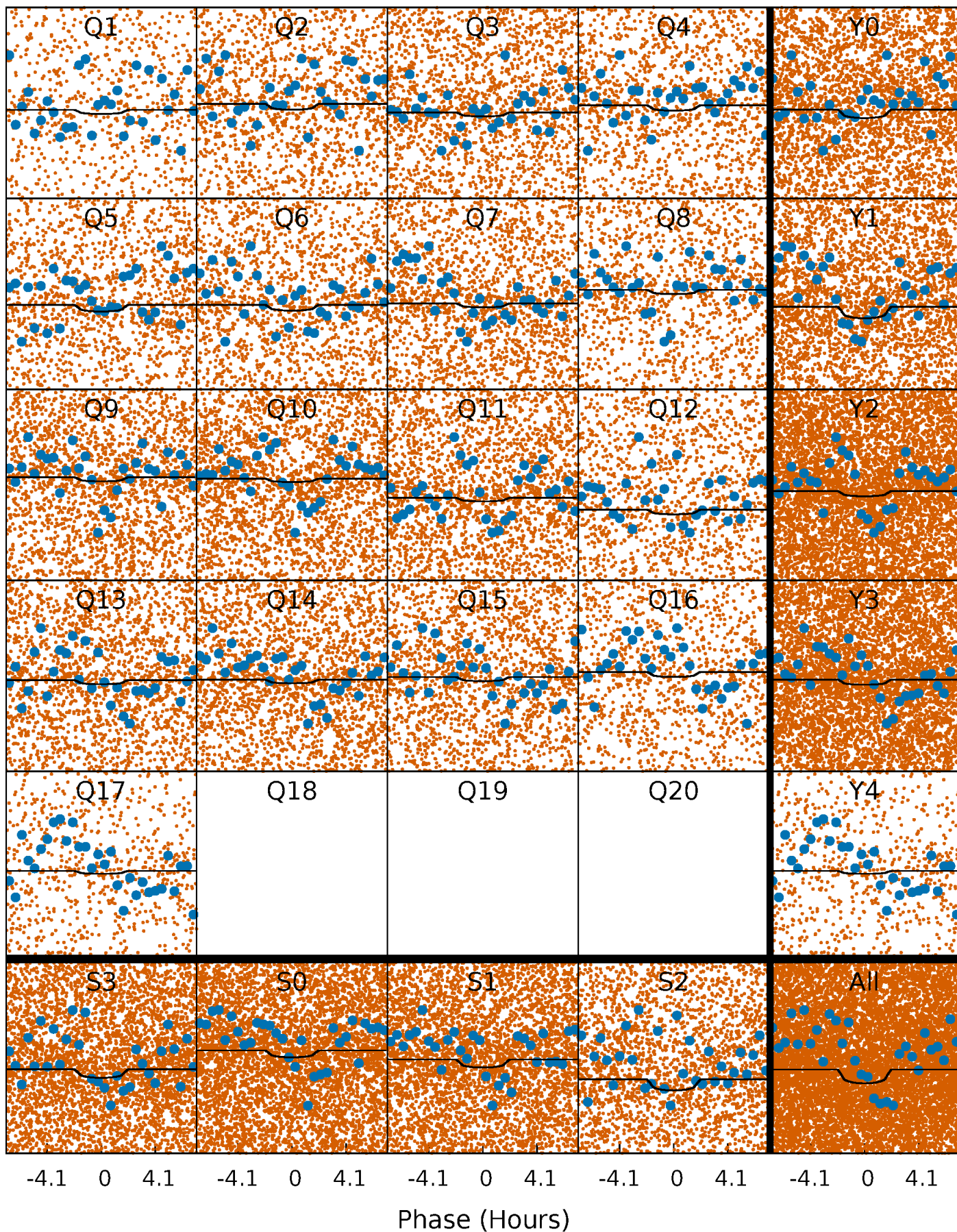
PDC Quarter-Phased Transit Curves

TCE 007031753-01 P= 0.566703 Days $T_0=131.927154$ (BKJD)



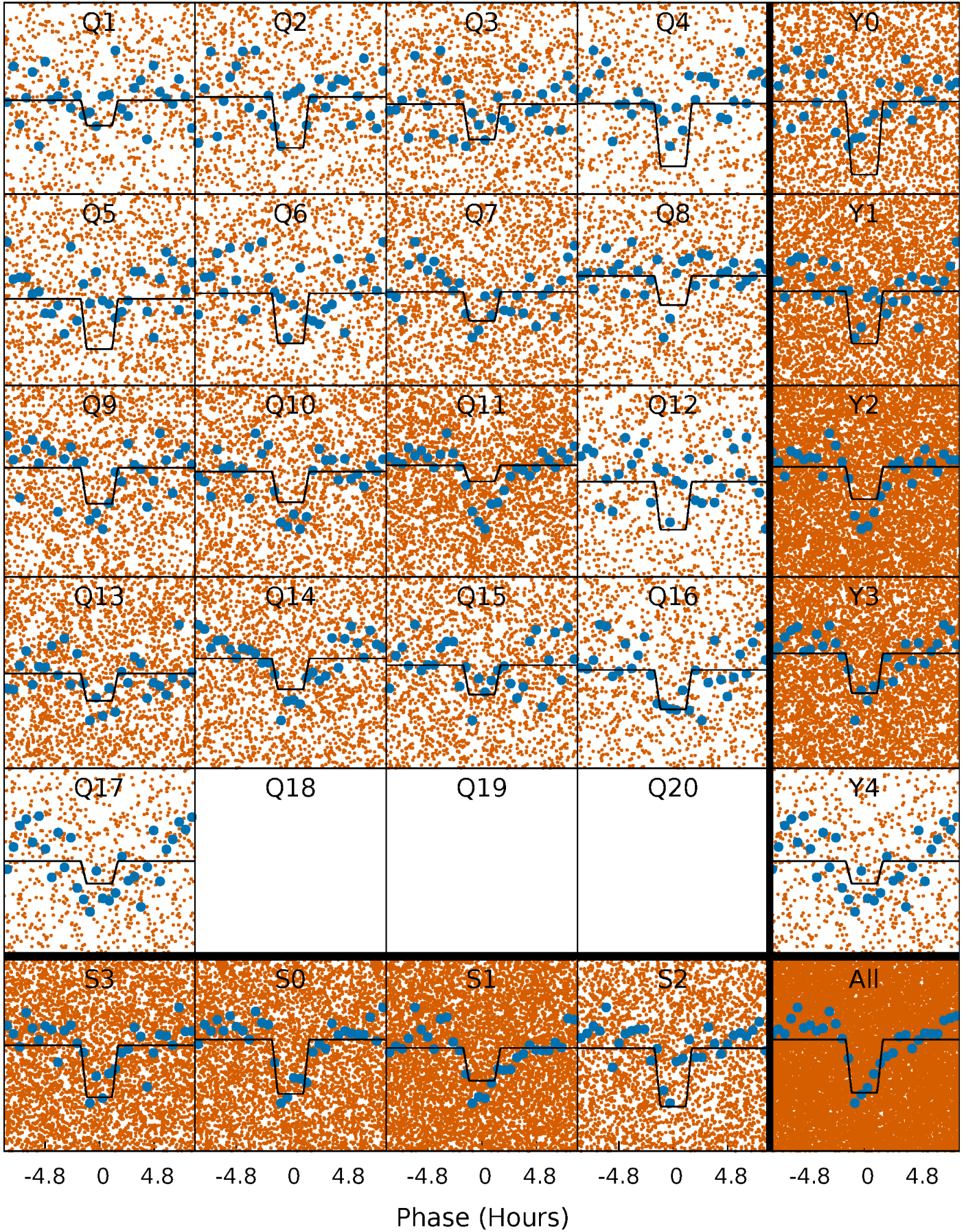
DV Quarter-Phased Transit Curves

TCE 007031753-01 P= 0.566703 Days $T_0=131.927154$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

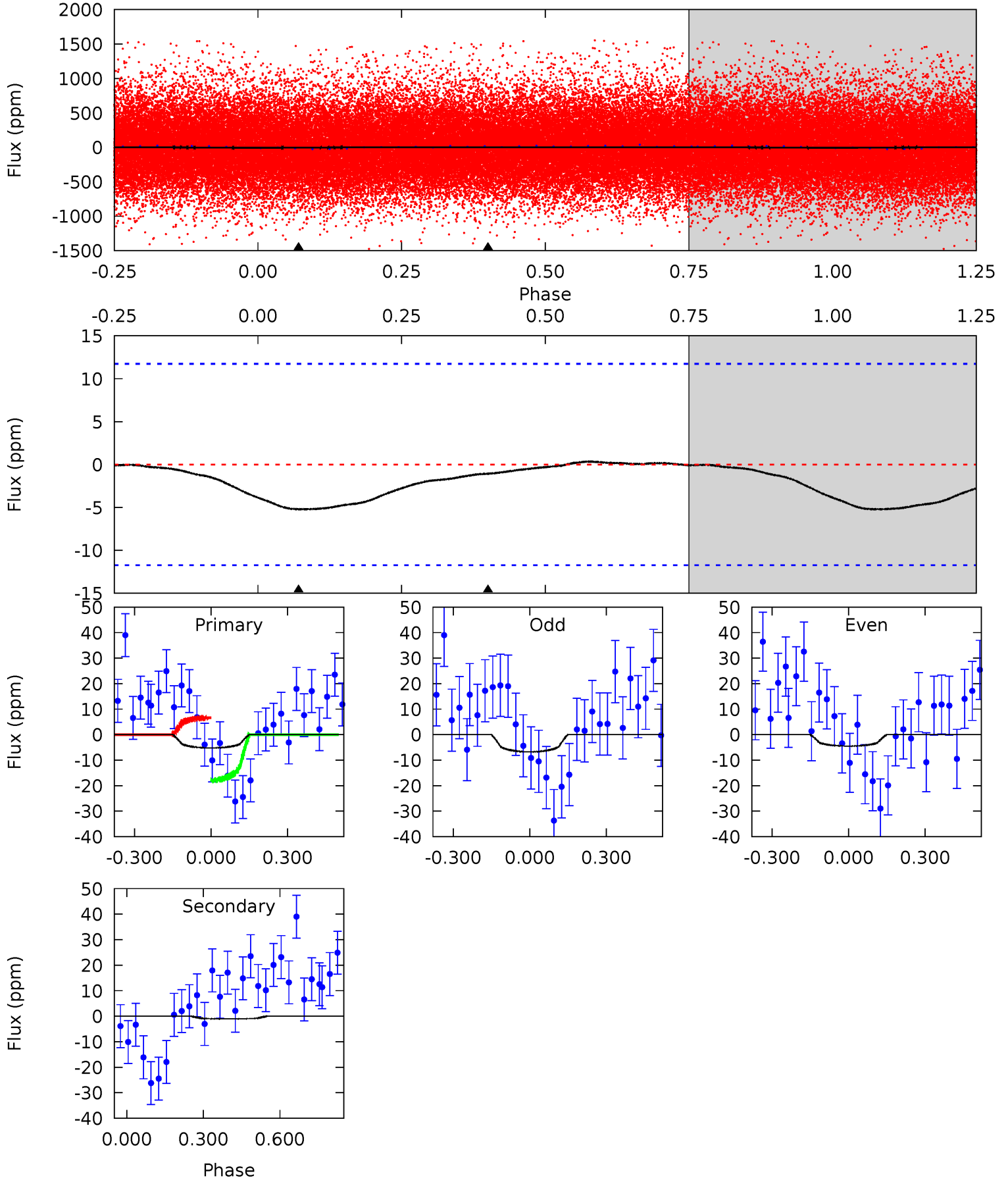
TCE 007031753-01 P= 0.566795 Days $T_0=131.825276$ (BKJD)



DV Model-Shift Uniqueness Test

007031753-01, P = 0.566703 Days, E = 131.360451 Days

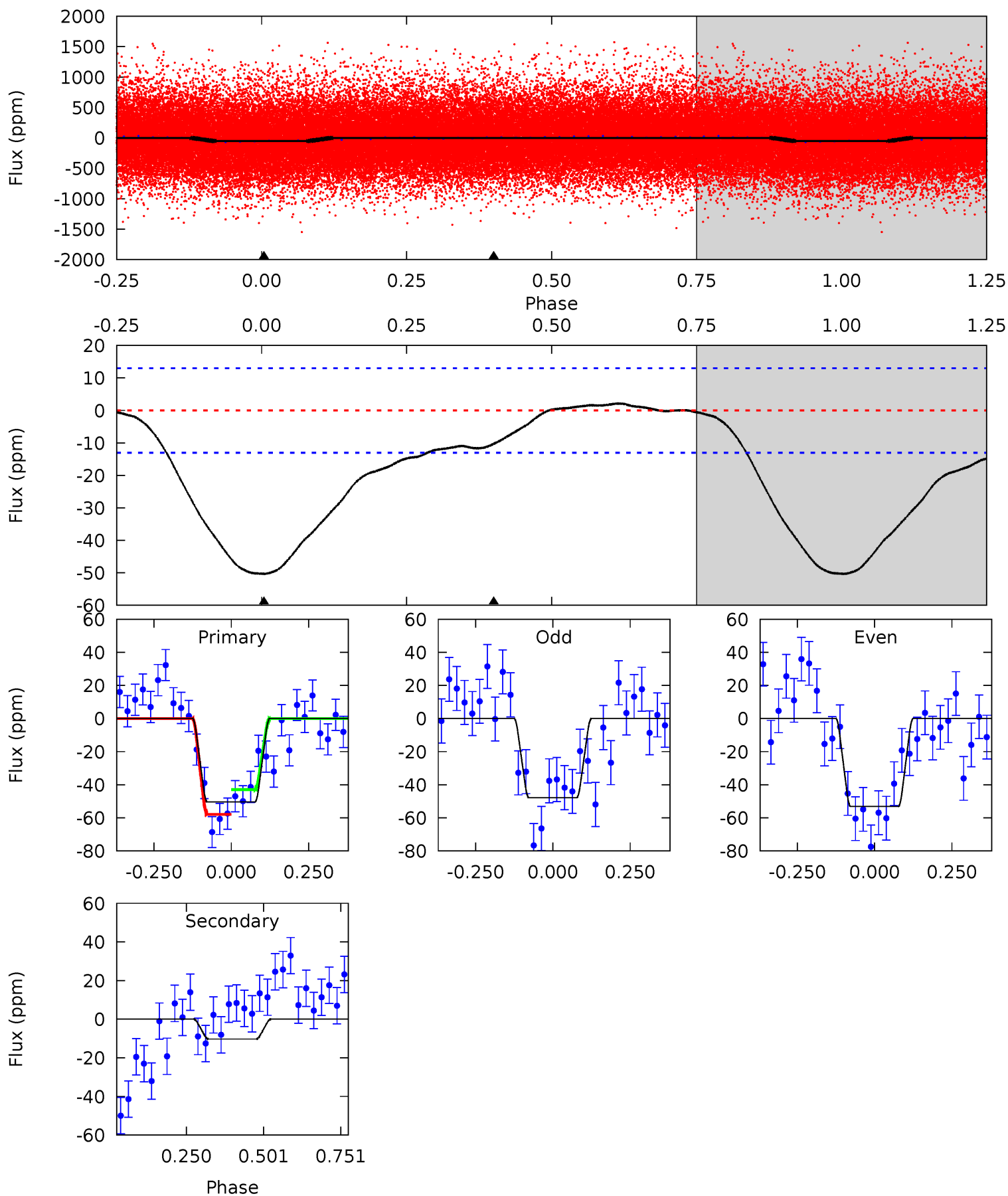
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.92	0.39	0	0	4.33	1.04	0.03	1.92	1.92	0.39	0.39	0.42	0.40	0.06	2.07



Alt Model-Shift Uniqueness Test

007031753-01, P = 0.566795 Days, E = 131.258481 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	3.46	0	0	4.37	1.15	0.15	16.9	16.9	3.46	3.46	0.88	0.91	0.04	2.50



Stellar Parameters For KIC 007031753

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5818^{+156}_{-174}	$4.542^{+0.048}_{-0.204}$	$-0.220^{+0.300}_{-0.300}$	$0.858^{+0.252}_{-0.084}$	$0.937^{+0.110}_{-0.110}$	$2.088^{+0.405}_{-1.055}$
	+3%/-3%	+1%/-4%	+136%/-136%	+29%/-10%	+12%/-12%	+19%/-51%
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 007031753-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1 ± 3	$0.51^{+0.45}_{-0.34}$	2961^{+201}_{-137}	-2634^{+7236}_{-1133}	$0.205^{+3.501}_{-0.944}$
Alt.	-10 ± 3	$0.82^{+0.54}_{-0.46}$	2954^{+197}_{-131}	3799^{+1584}_{-969}	$1.476^{+6.085}_{-1.017}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

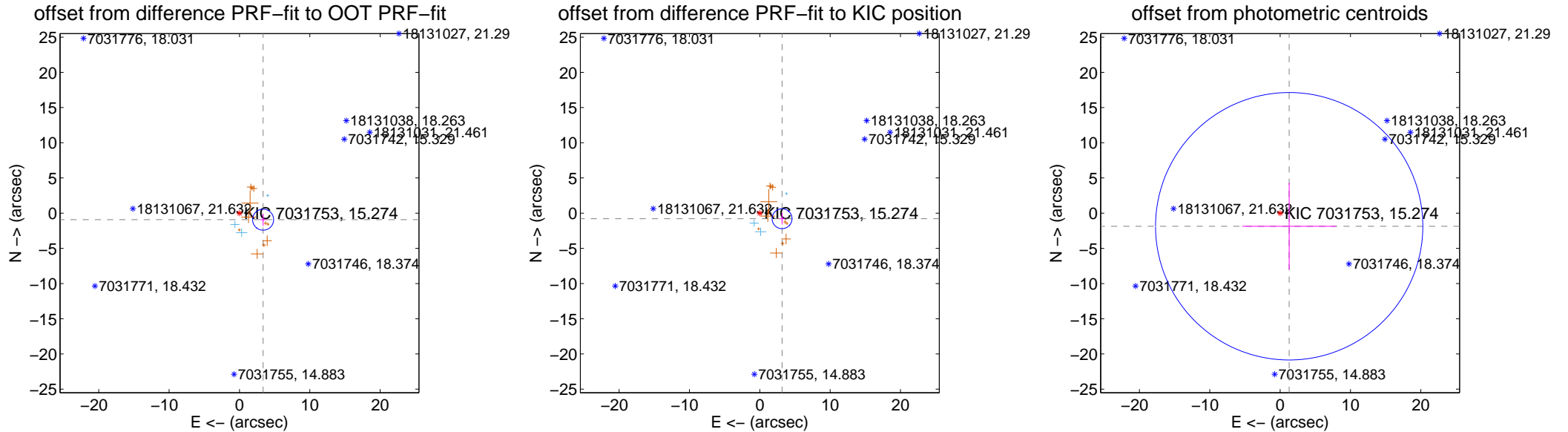
DV Centroid Data

Supplemental centroid analysis for 007031753-01. Kepler magnitude: 15.27. Transit SNR 2.18

There are 3 quarters with good PRF difference image offsets

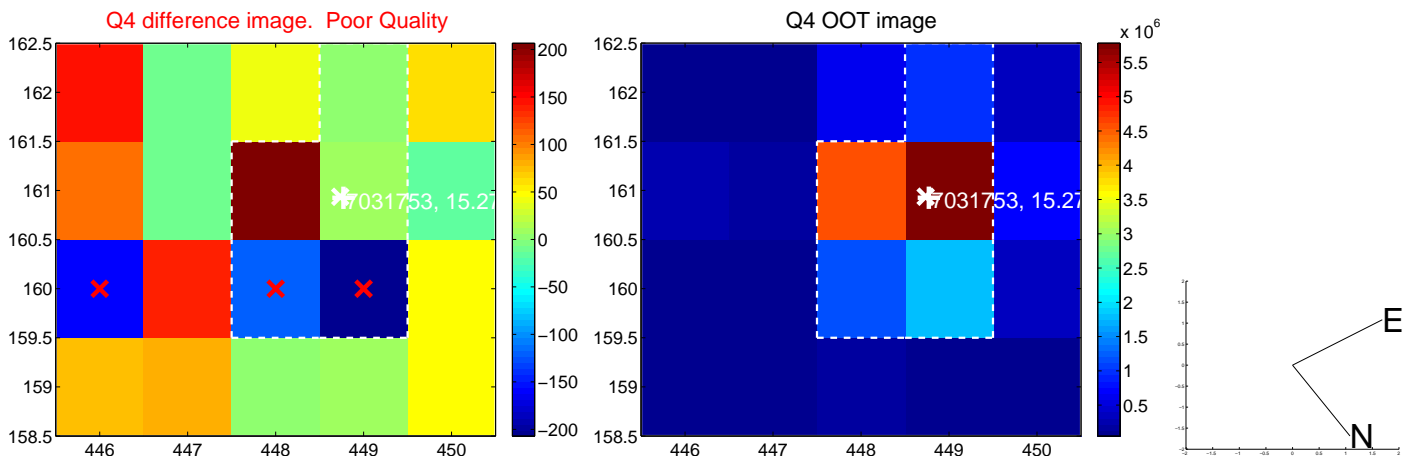
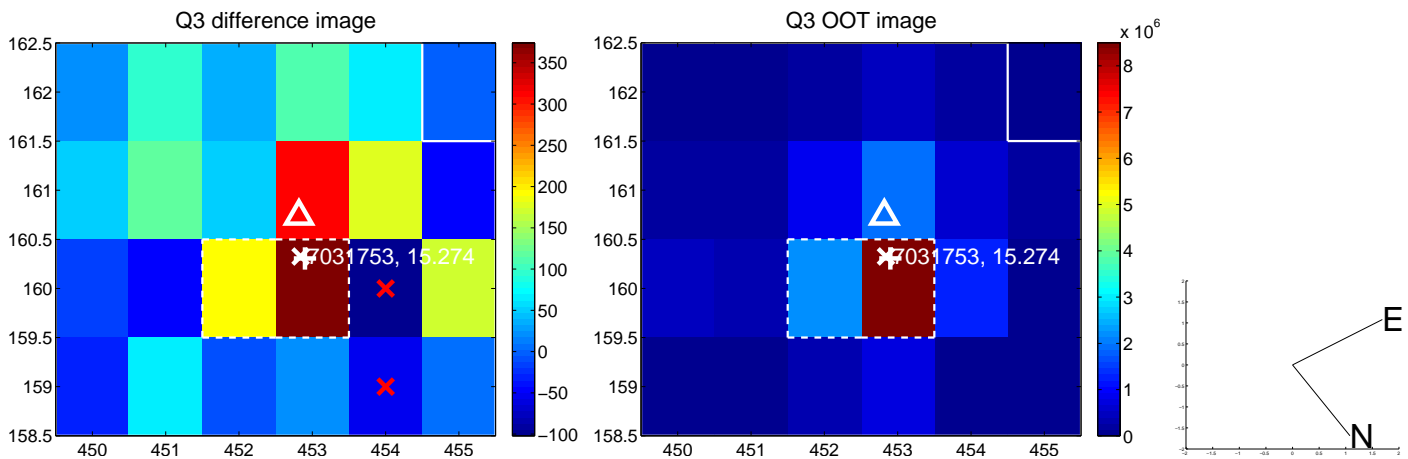
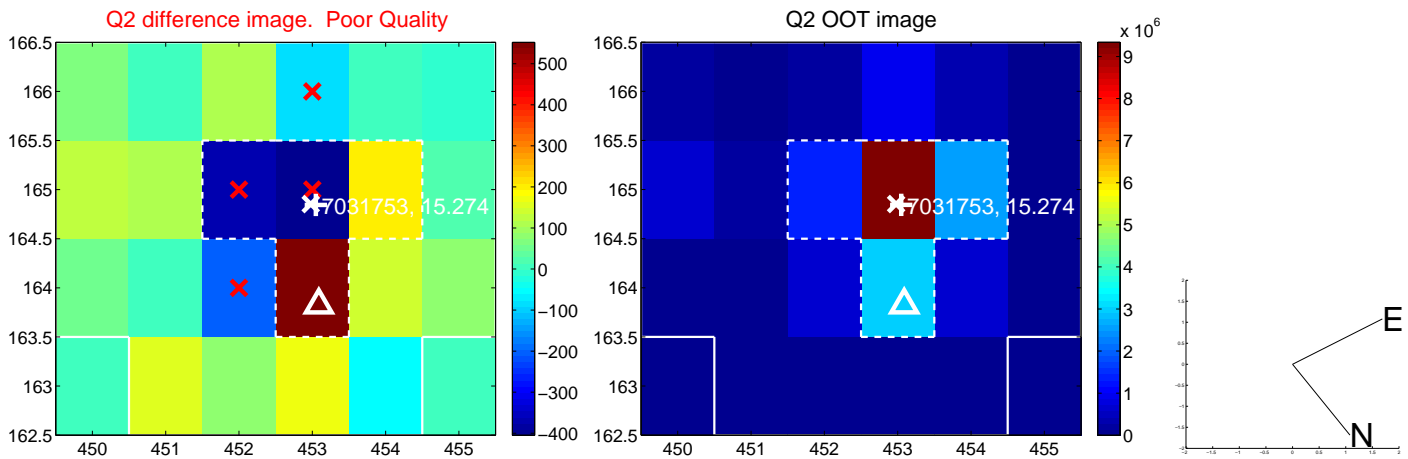
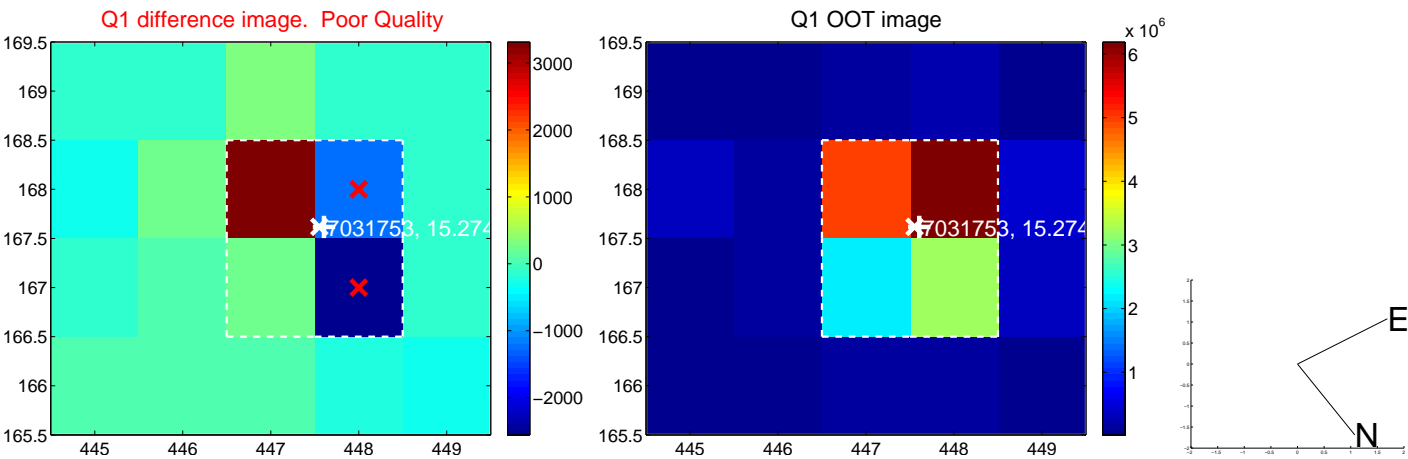
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.489 ± 0.498	7.01	-3.364 ± 0.413	-0.926 ± 0.874
PRF-fit source offset from KIC position	3.263 ± 0.472	6.92	-3.167 ± 0.408	-0.787 ± 0.825
photometric centroid source offset	2.26 ± 6.33	0.36	-1.29 ± 6.68	-1.86 ± 6.16

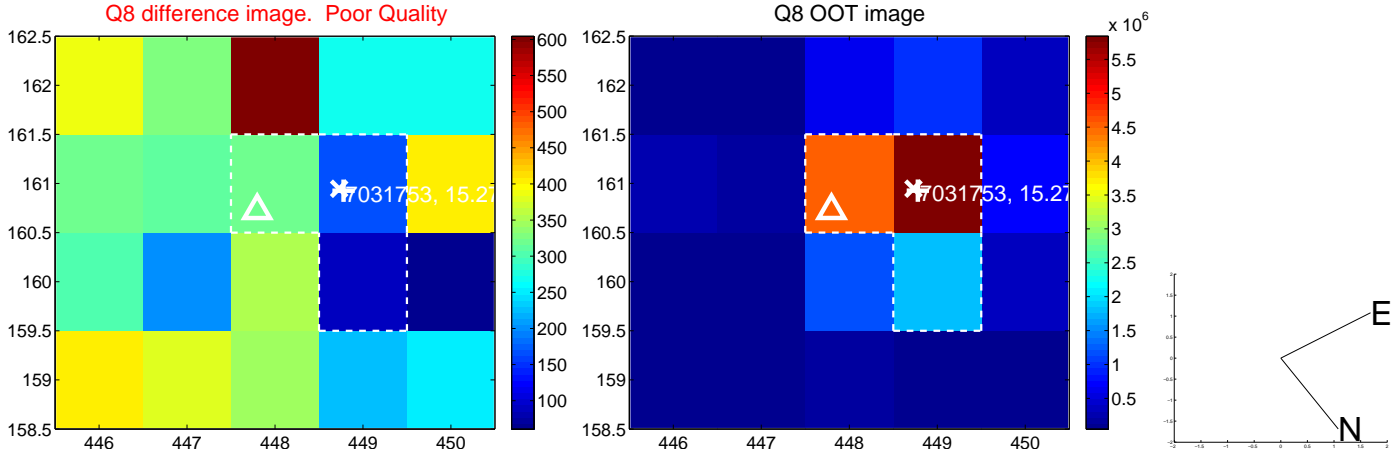
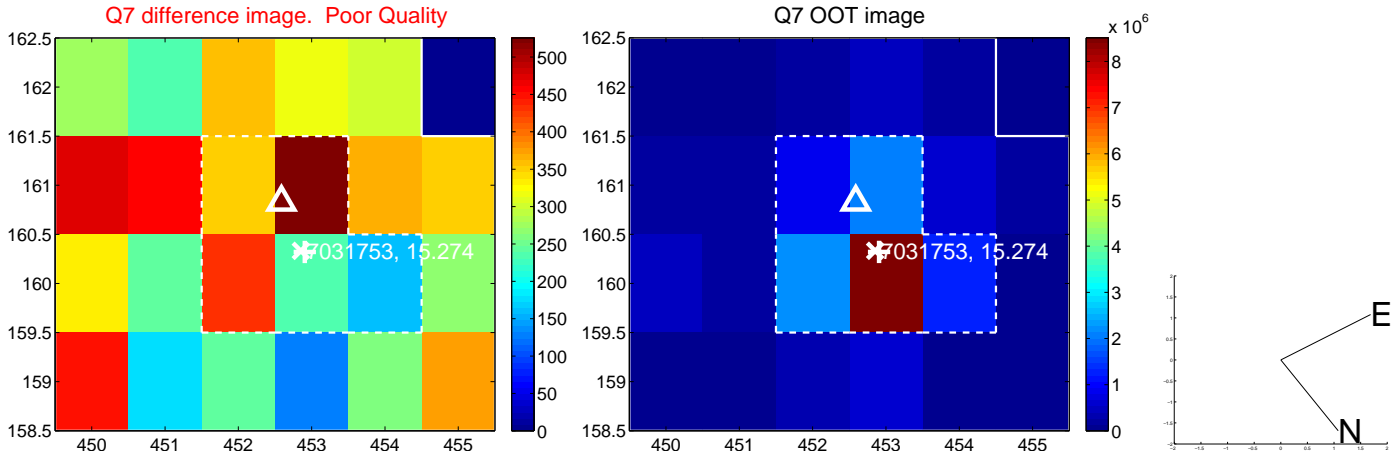
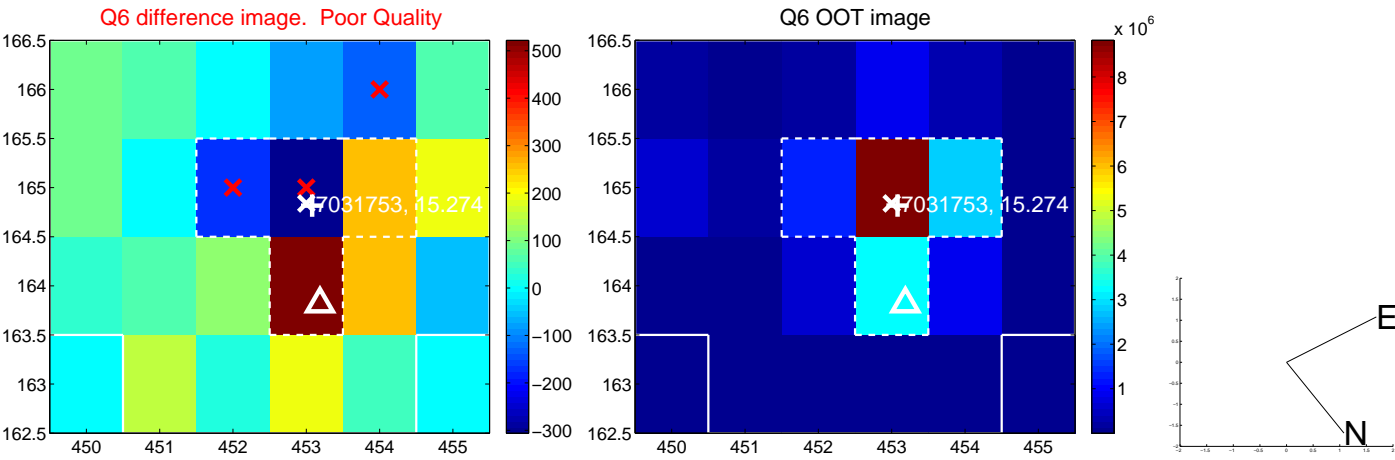
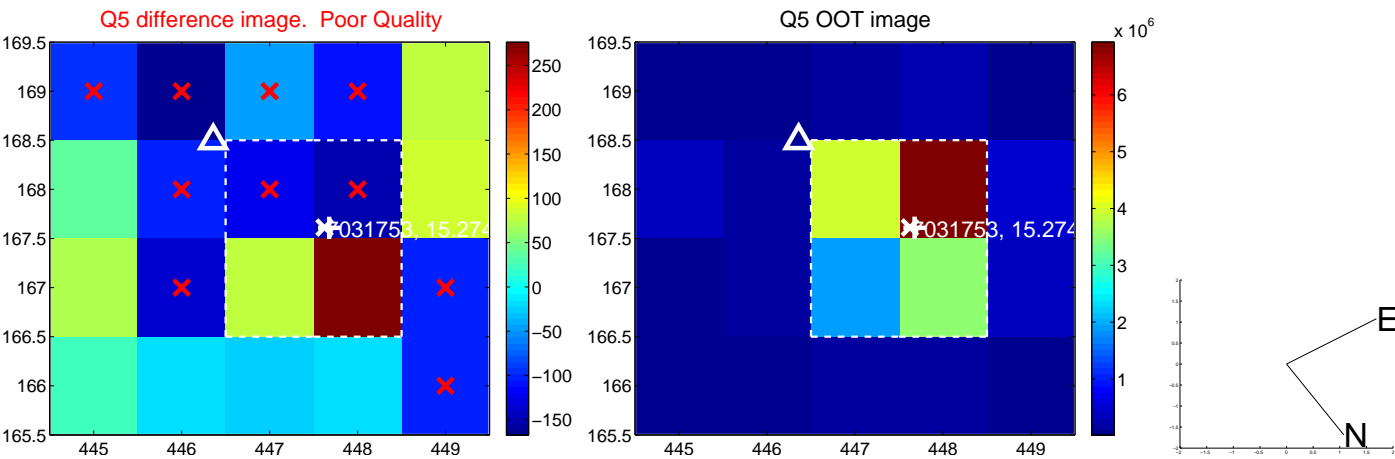


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

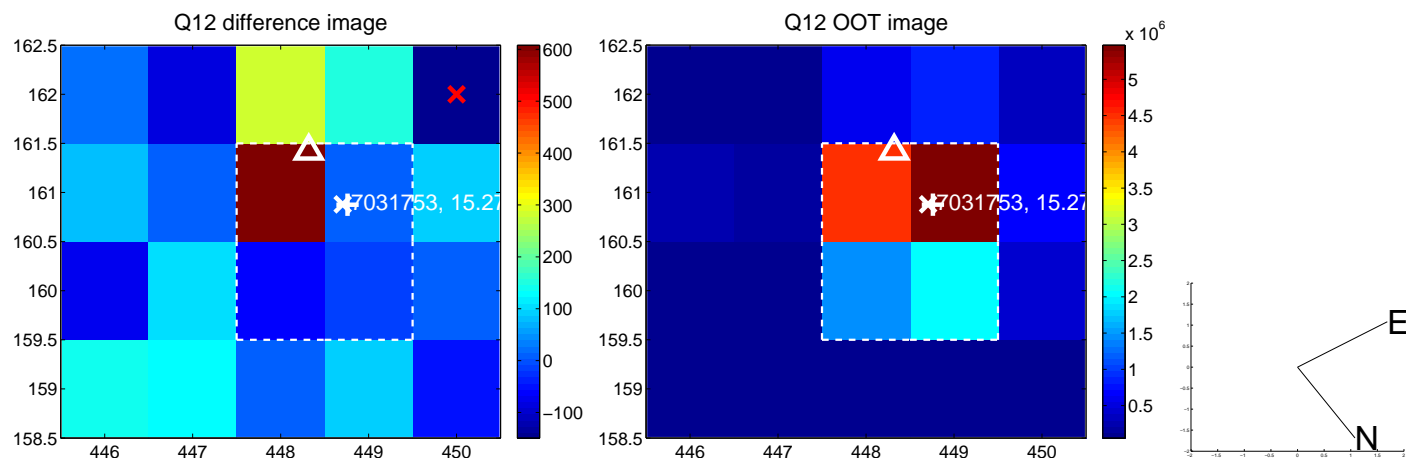
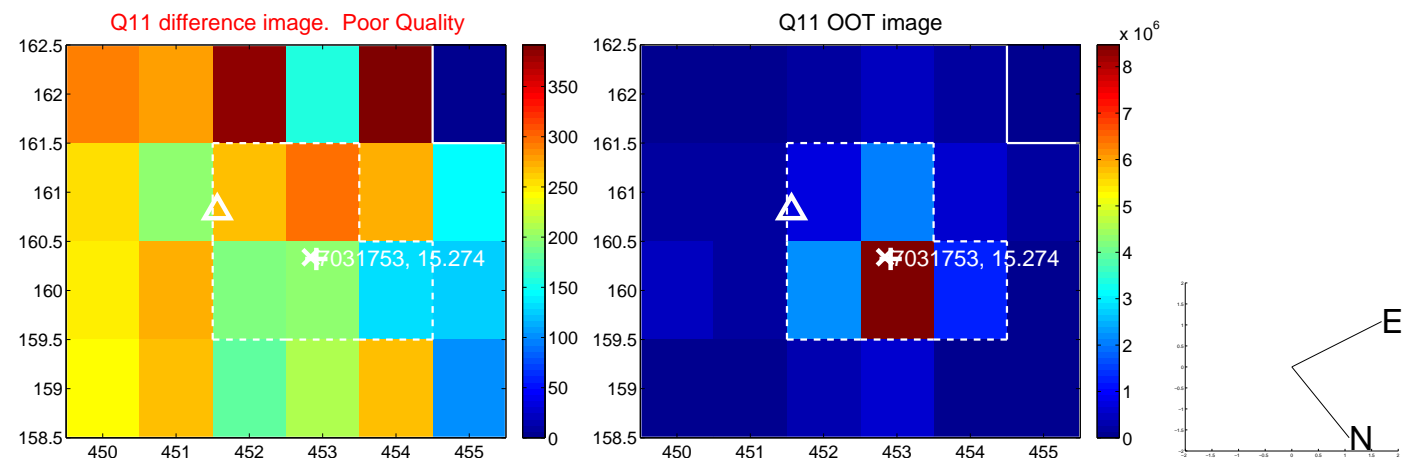
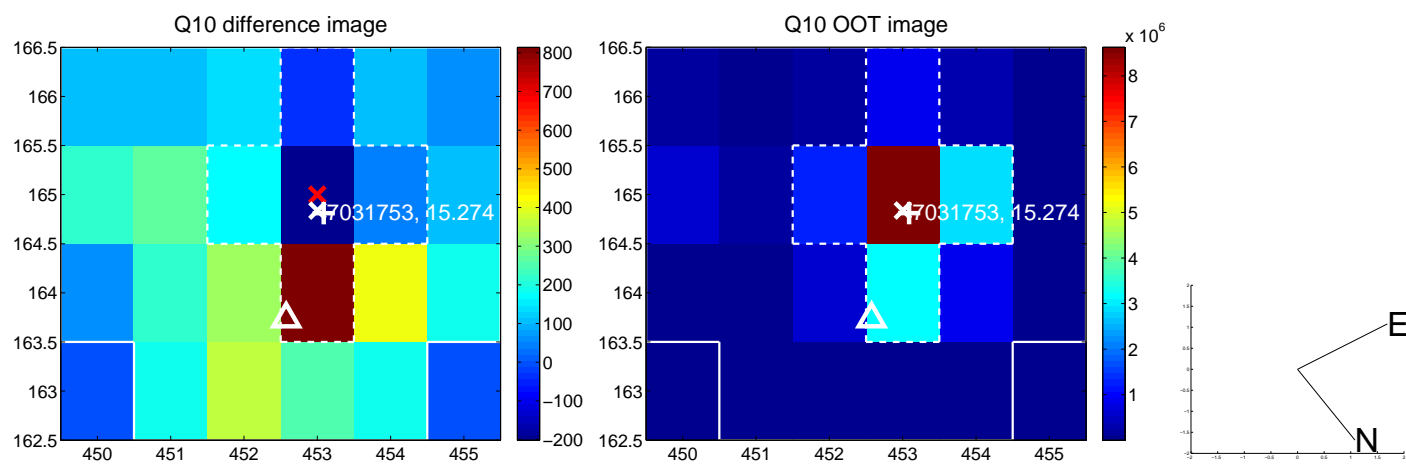
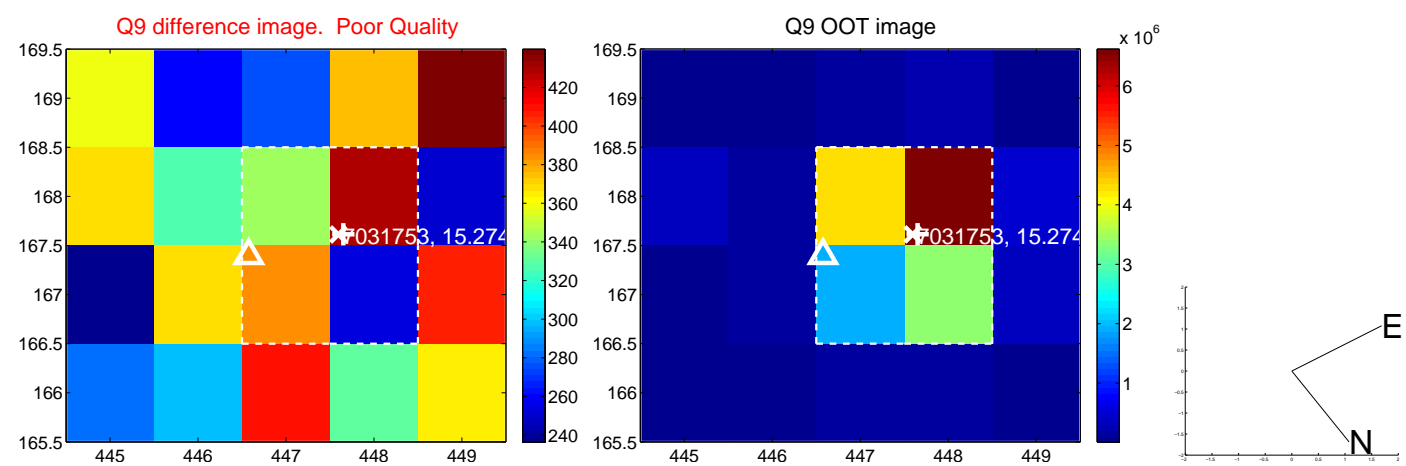
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



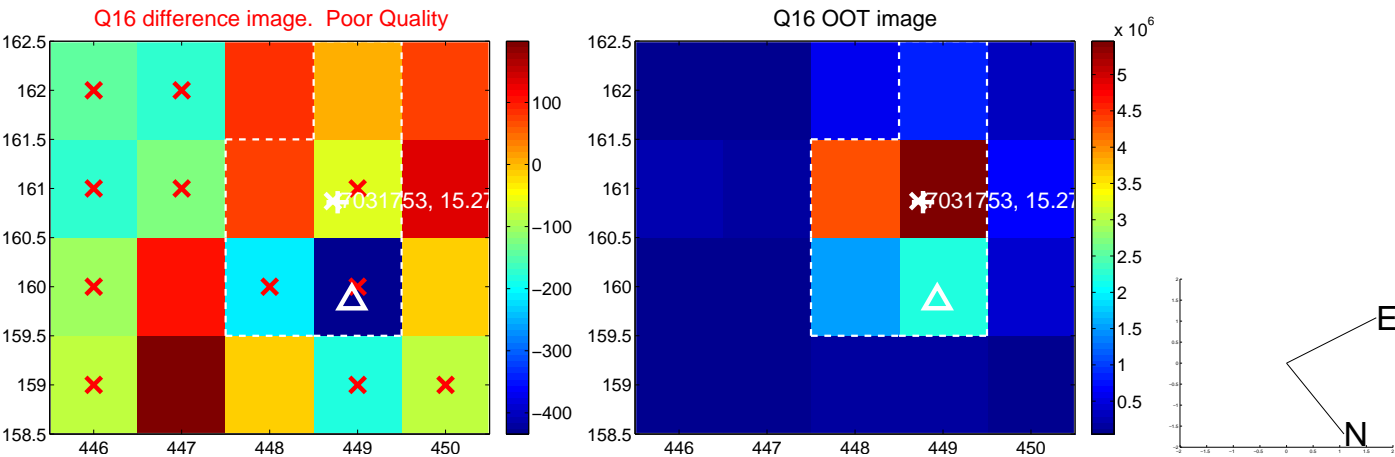
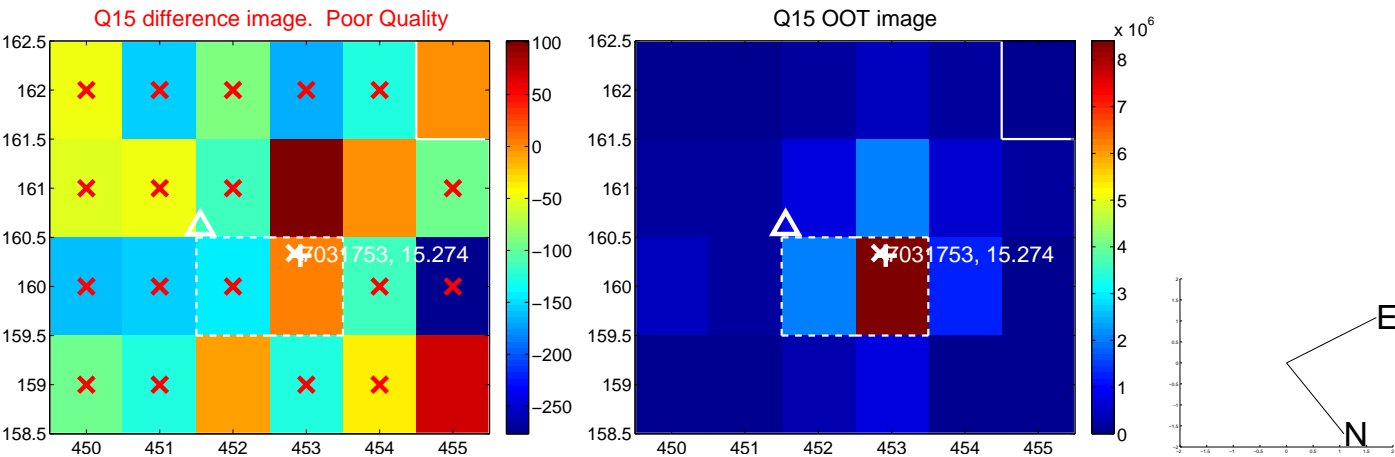
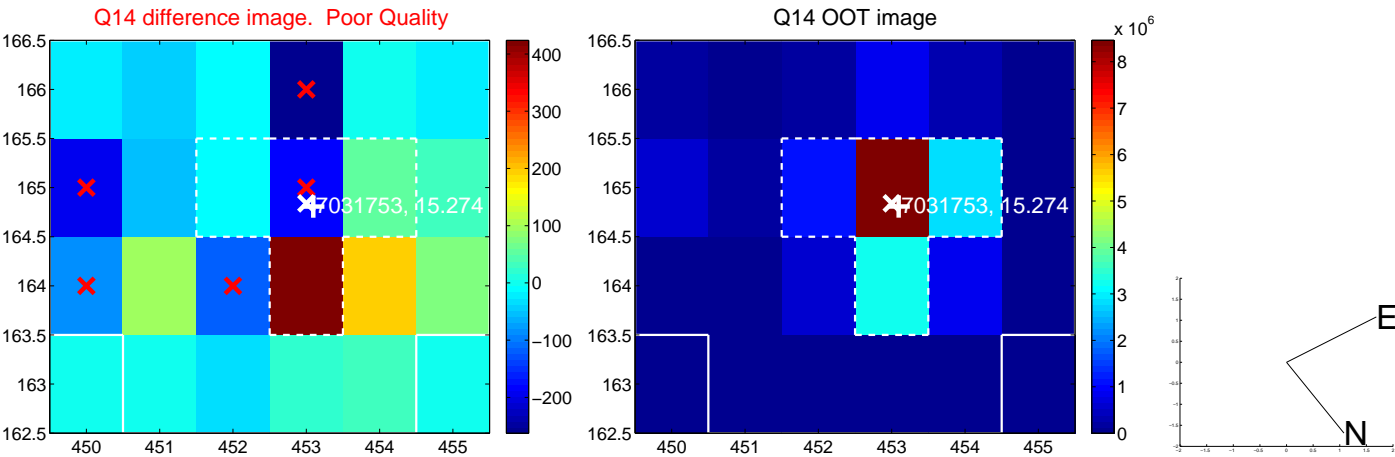
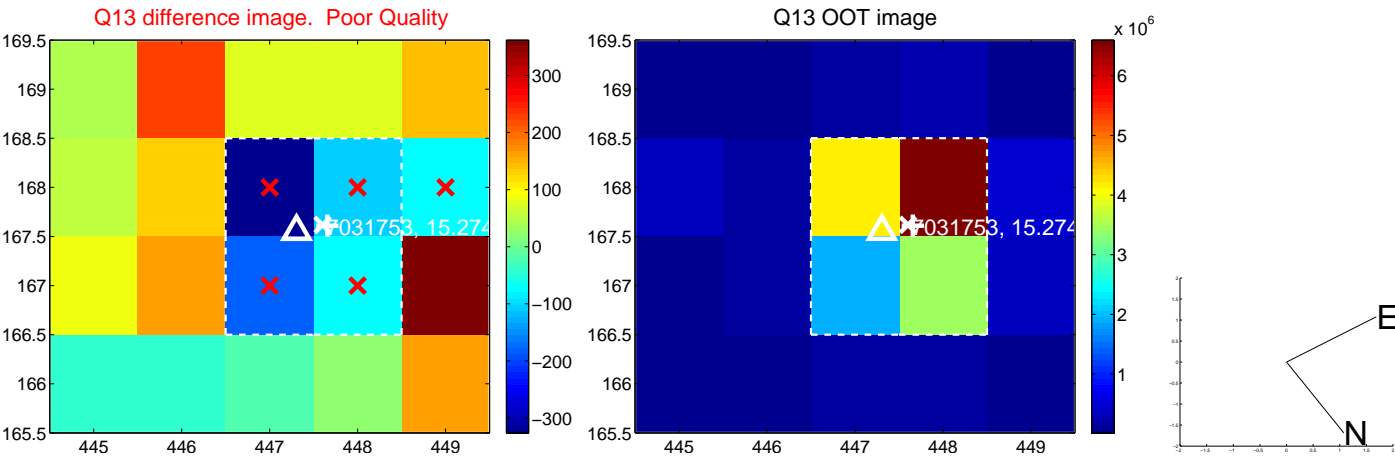
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



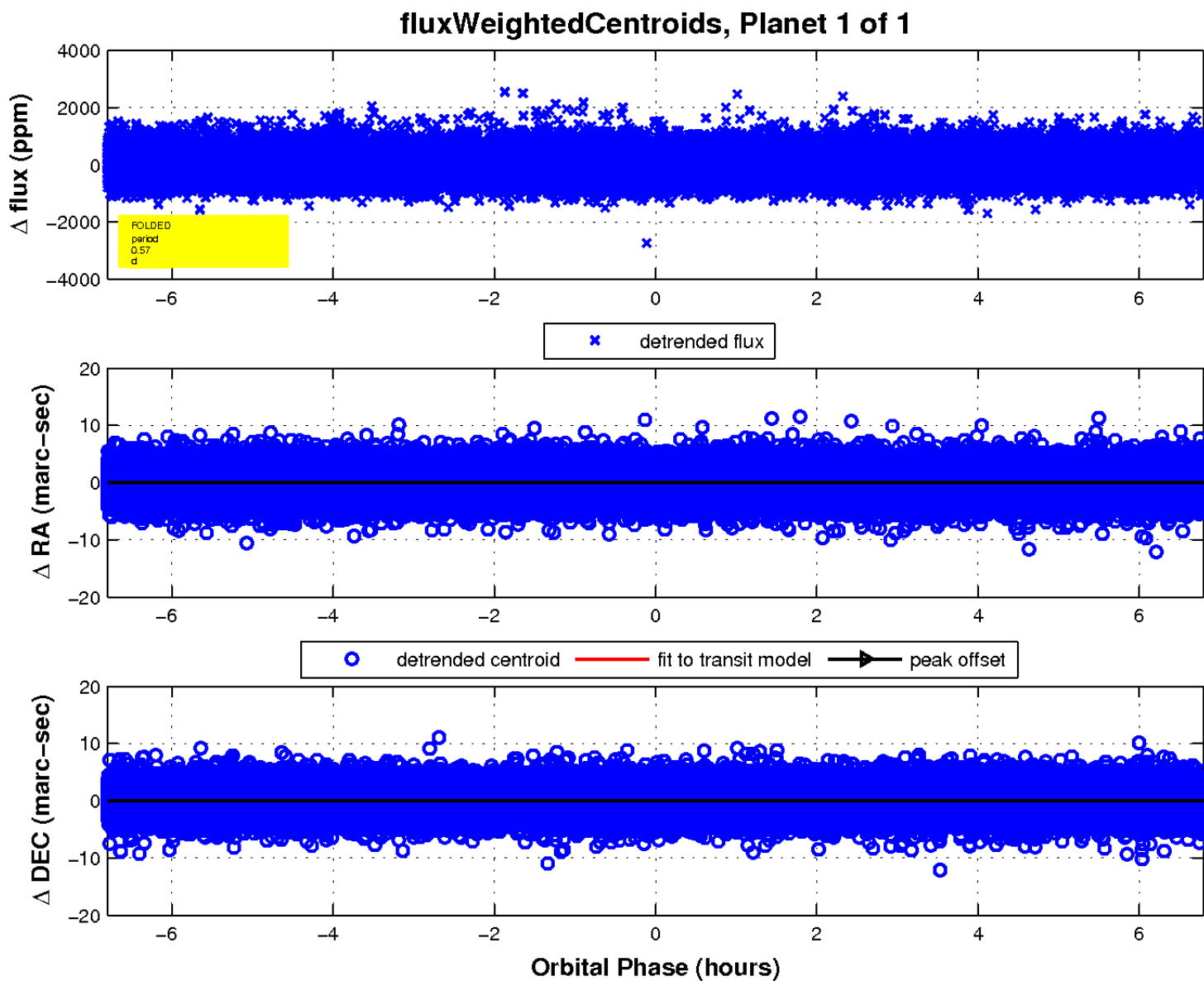
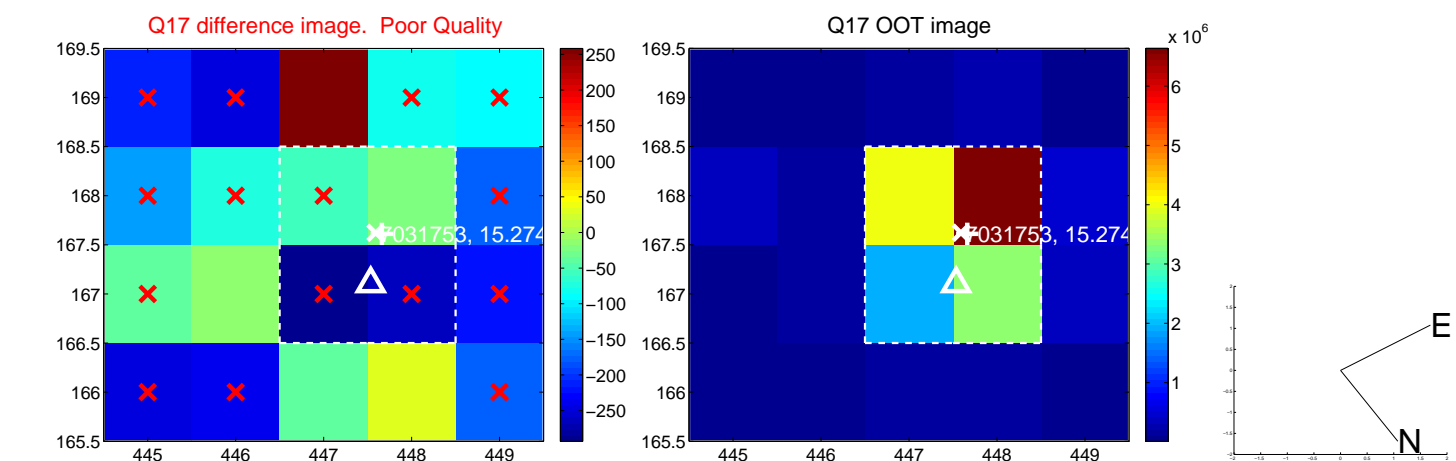
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

