

KIC 007281311

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})
007281311-01	OBS	No	0.566761	131.841813	32.3	3.595	10.4	6.3	0.99	6014	0.58	6029.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007281311-01	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—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.

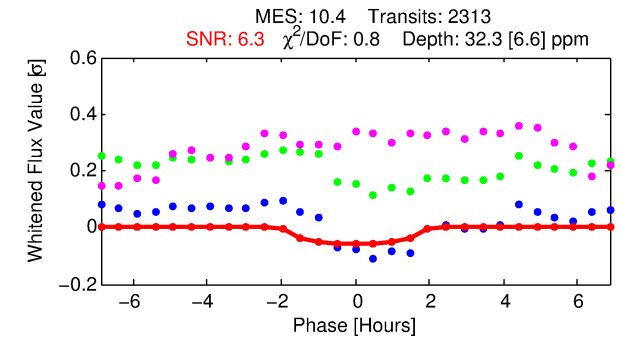
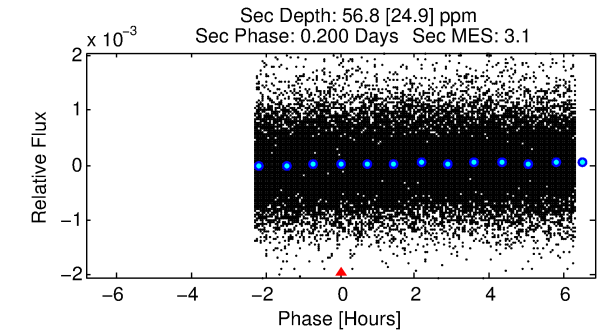
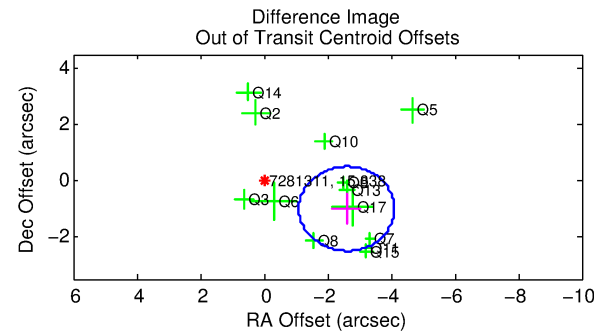
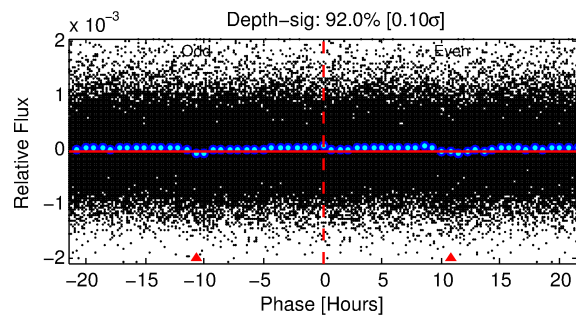
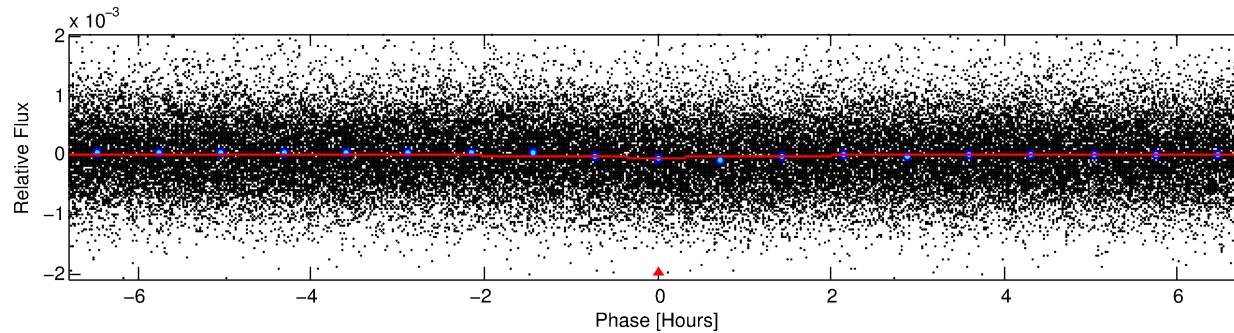
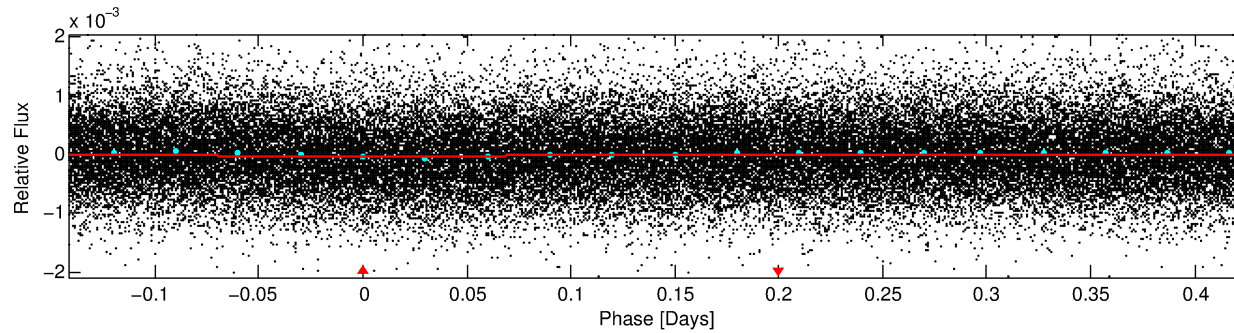
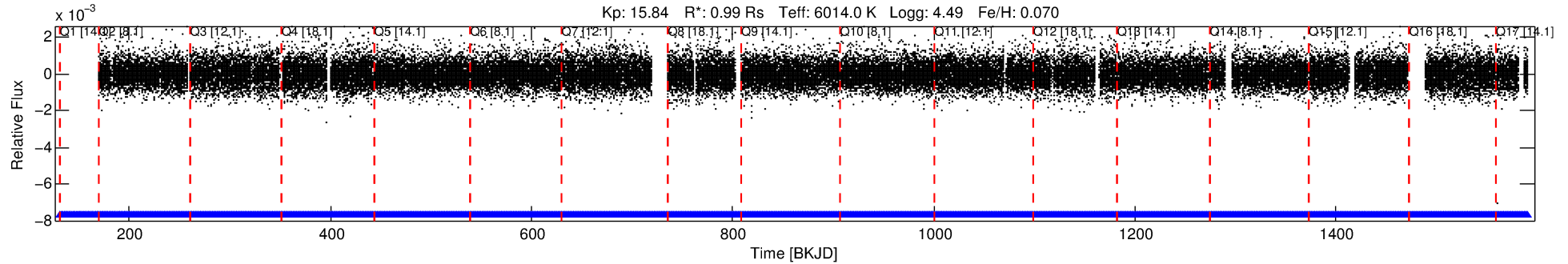
Ephemeris Match Information For 007281311-01

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
007281311-01	7281311	RR-Lyr-pri	7198959	1:1	513.6	44	121	7.86	15.84	19478.00	Direct-PRF	0	2.72	24.00

Notes: P₁:P₂ 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. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ 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: 7281311 Candidate: 1 of 1 Period: 0.567 d



DV Fit Results:

Period = 0.56676 [0.00002] d
Epoch = 131.8418 [0.0068] BKJD
Rp/R* = 0.0053 [0.0076]
a/R* = 1.28 [3.34]
b = 0.50 [10.16]
Seff = 6029.95 [2496.23]
Teq = 2247 [233] K
Rp = 0.58 [0.85] Re
a = 0.0138 [0.0036] AU
Ag = 17.89 [52.16] [0.32 σ]
Teffp = 7145 [5172] K [0.95 σ]

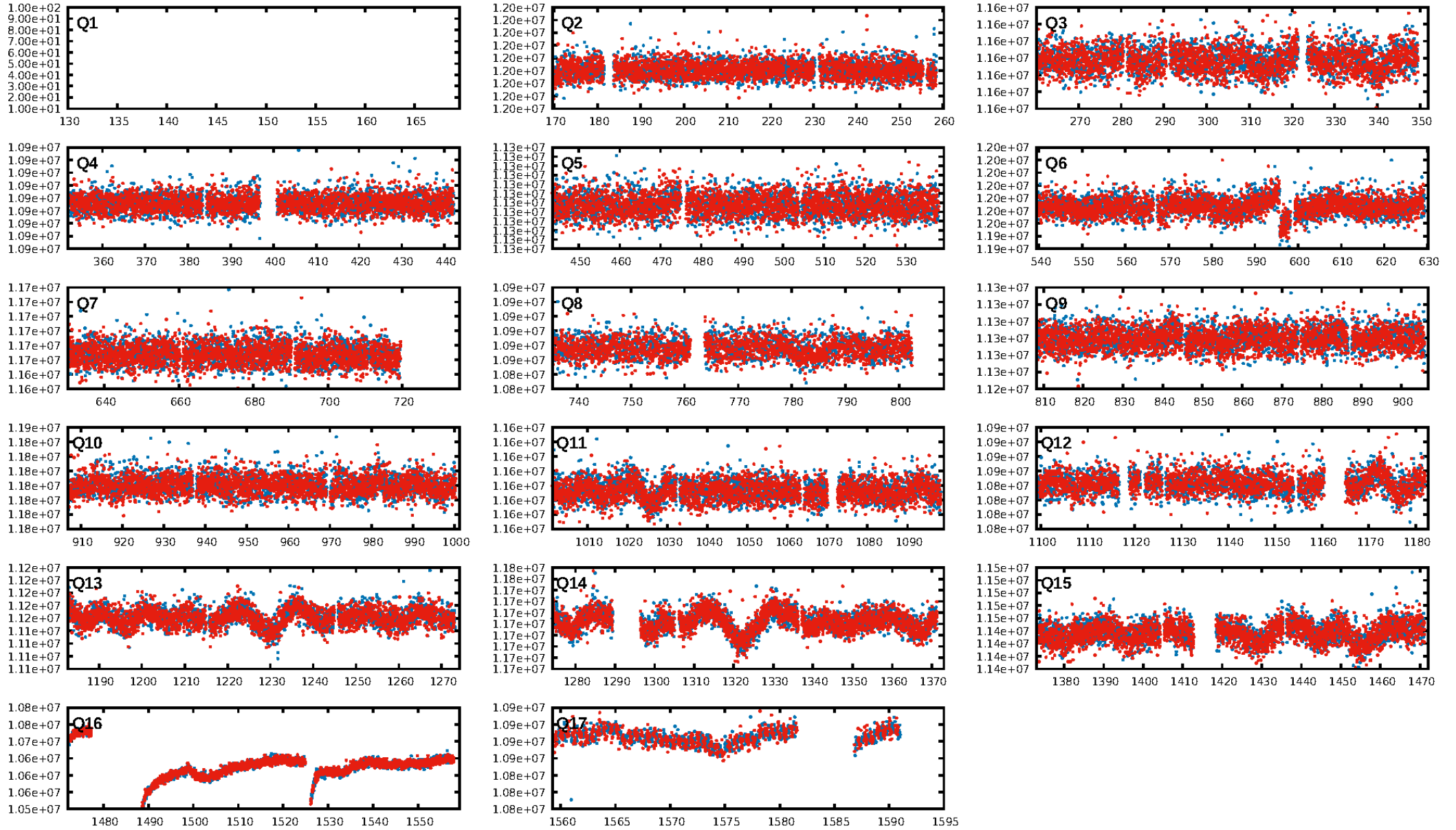
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.80e-19
RollingBand-fgt: 1.00 [2266/2266]
GhostDiagnostic-chr: -0.1769
Centroid-sig: N/A
Centroid-so: 0.910 arcsec [0.36 σ]
OotOffset-rm: 2.787 arcsec [5.56 σ]
KicOffset-rm: 2.834 arcsec [5.18 σ]
OotOffset-st: 4/4/1/4 [13]
KicOffset-st: 4/4/1/4 [13]
DiffImageQuality-fgm: 0.00 [0/13]
DiffImageOverlap-fno: 1.00 [16/16]

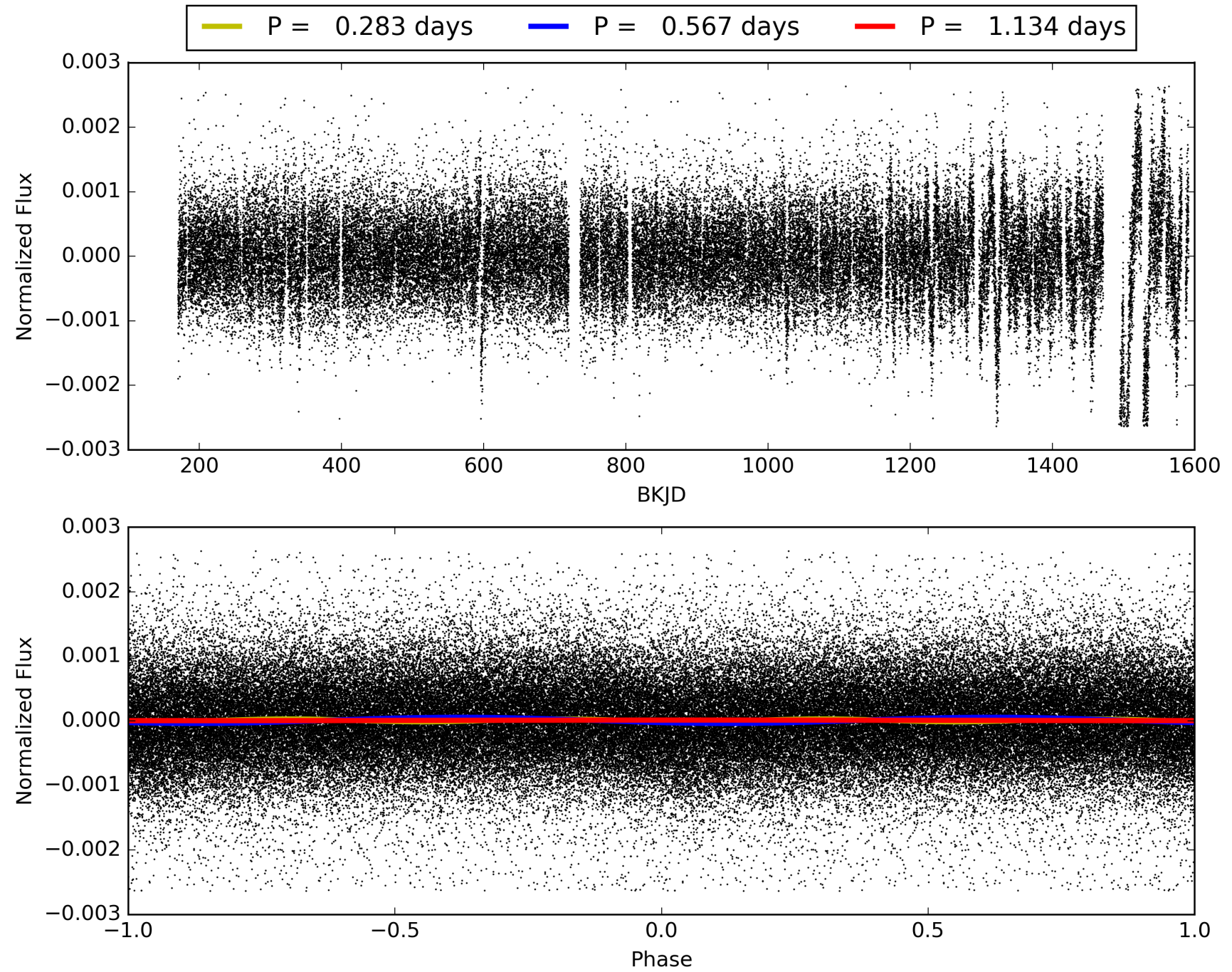
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:57:31 Z

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

TCE 007281311-01, PDC Light Curves

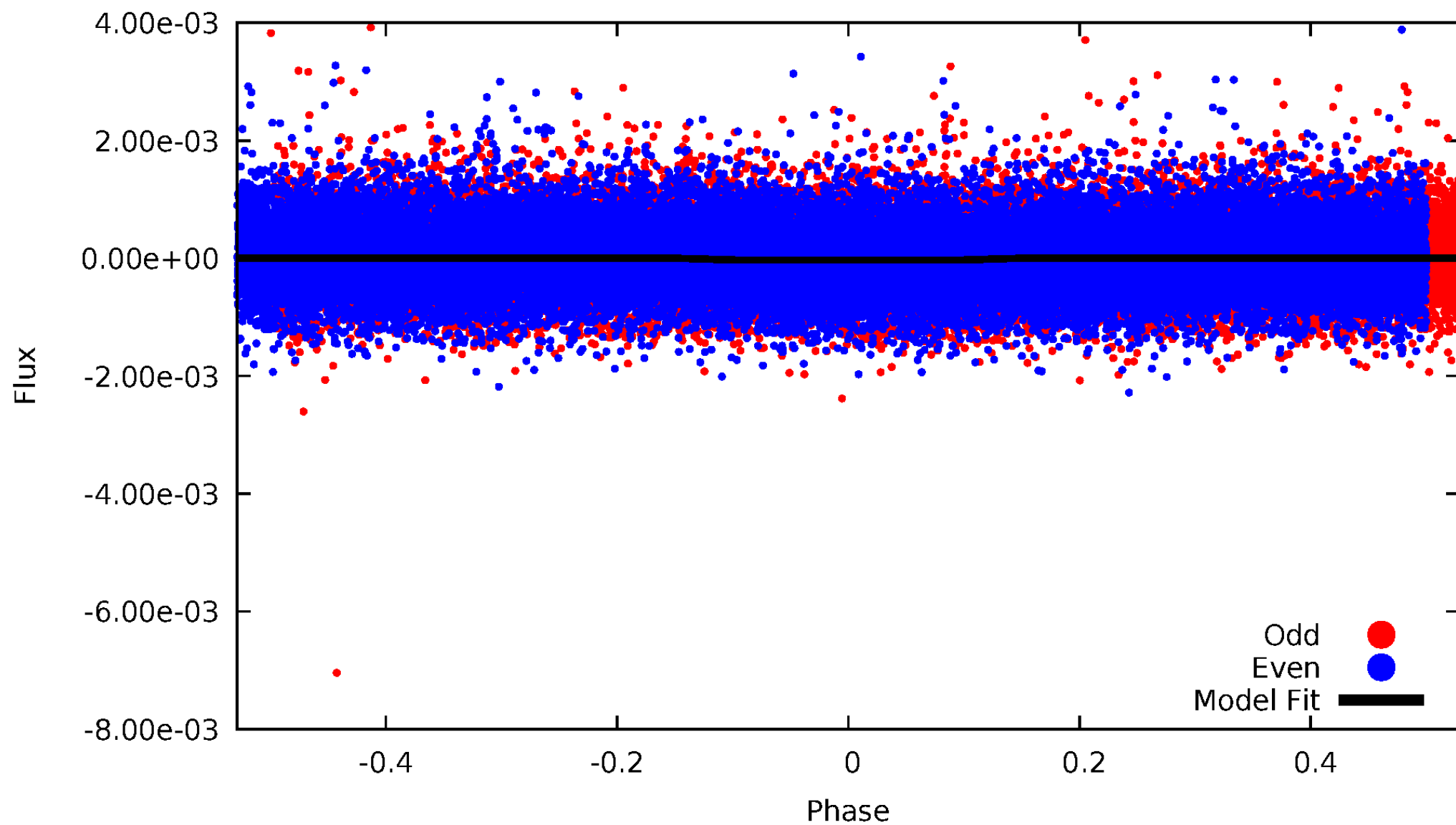


TCE 007281311-01



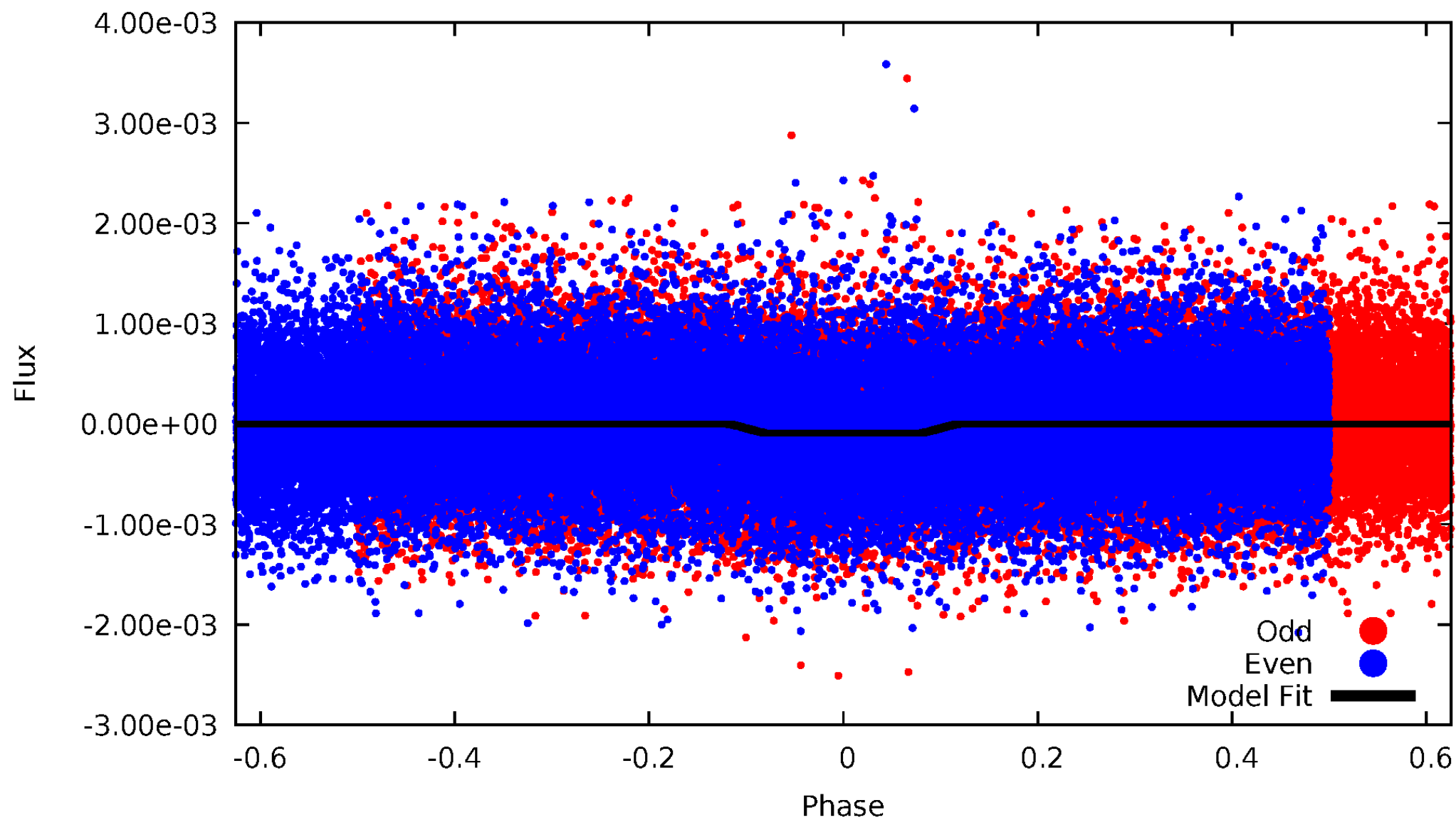
DV Odd/Even

TCE 007281311-01



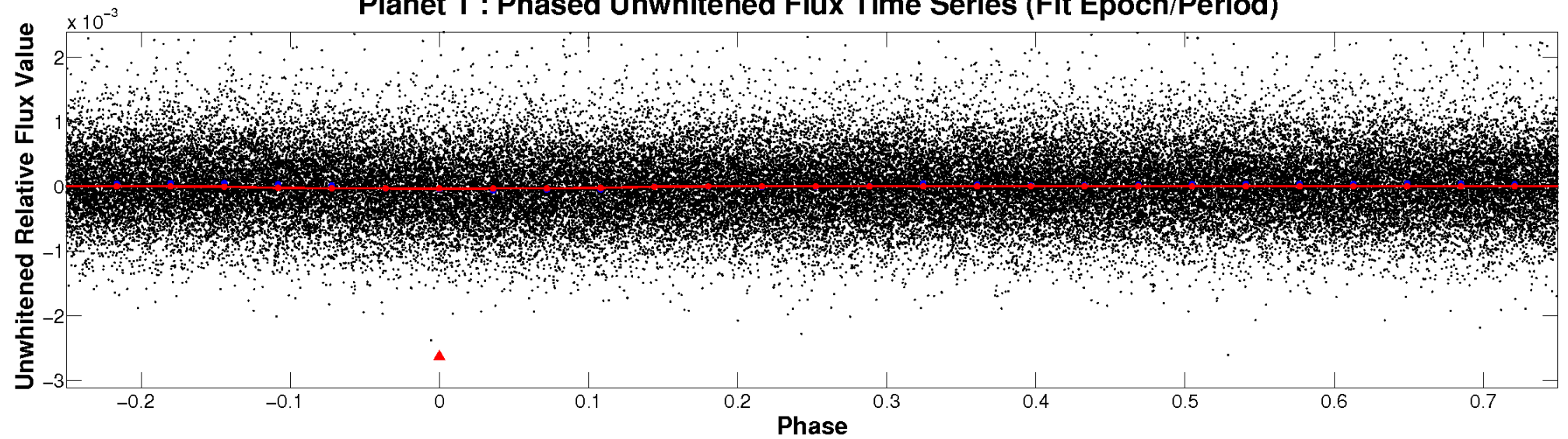
ALT Odd/Even

TCE 007281311-01

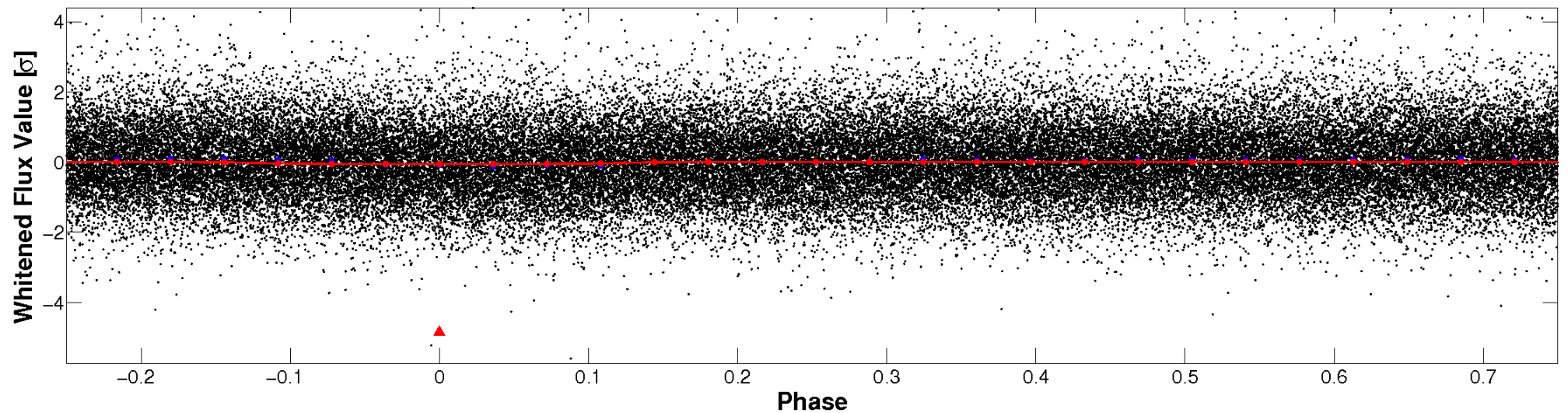


Non-Whitened Vs. Whitened Light Curve

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

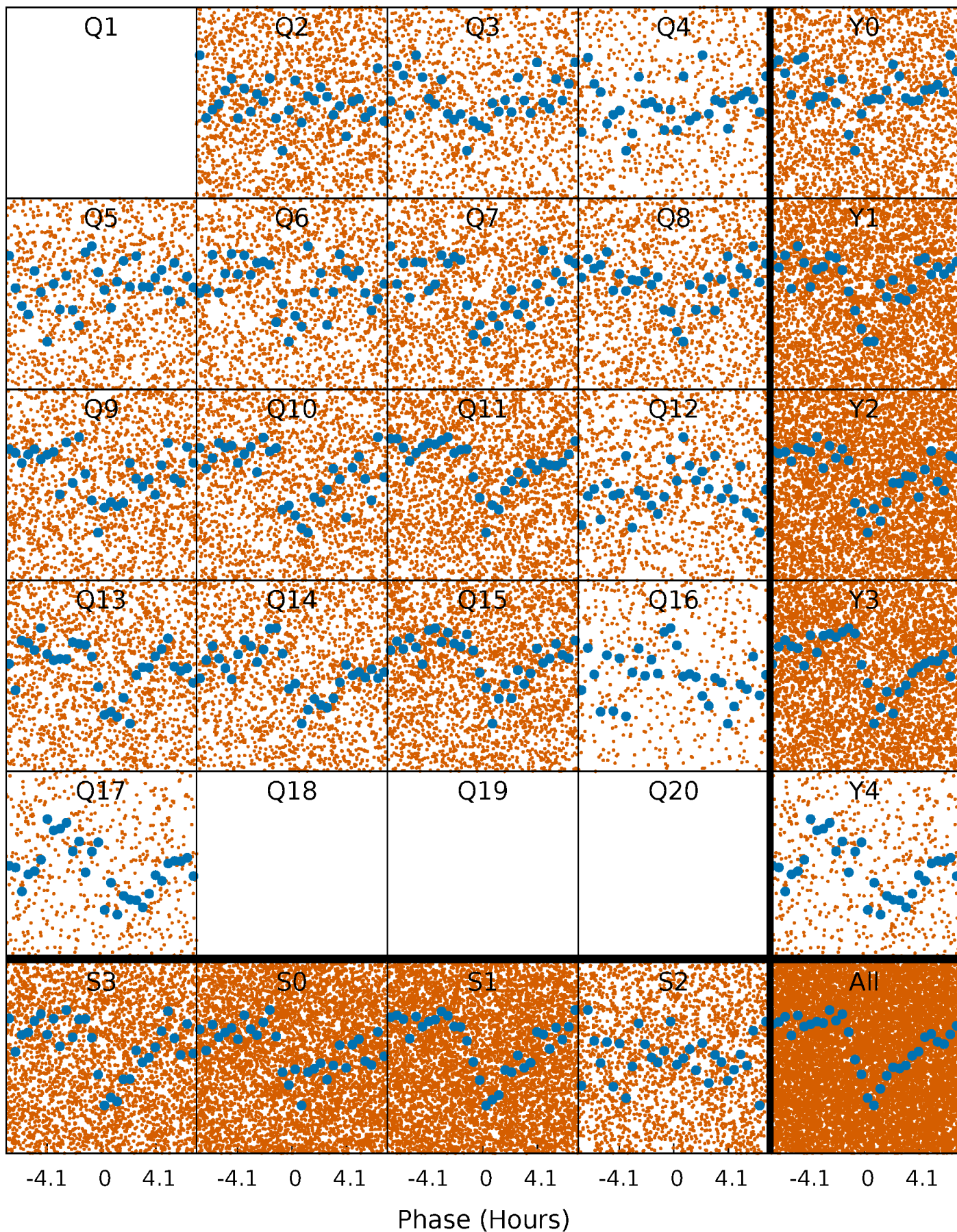


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



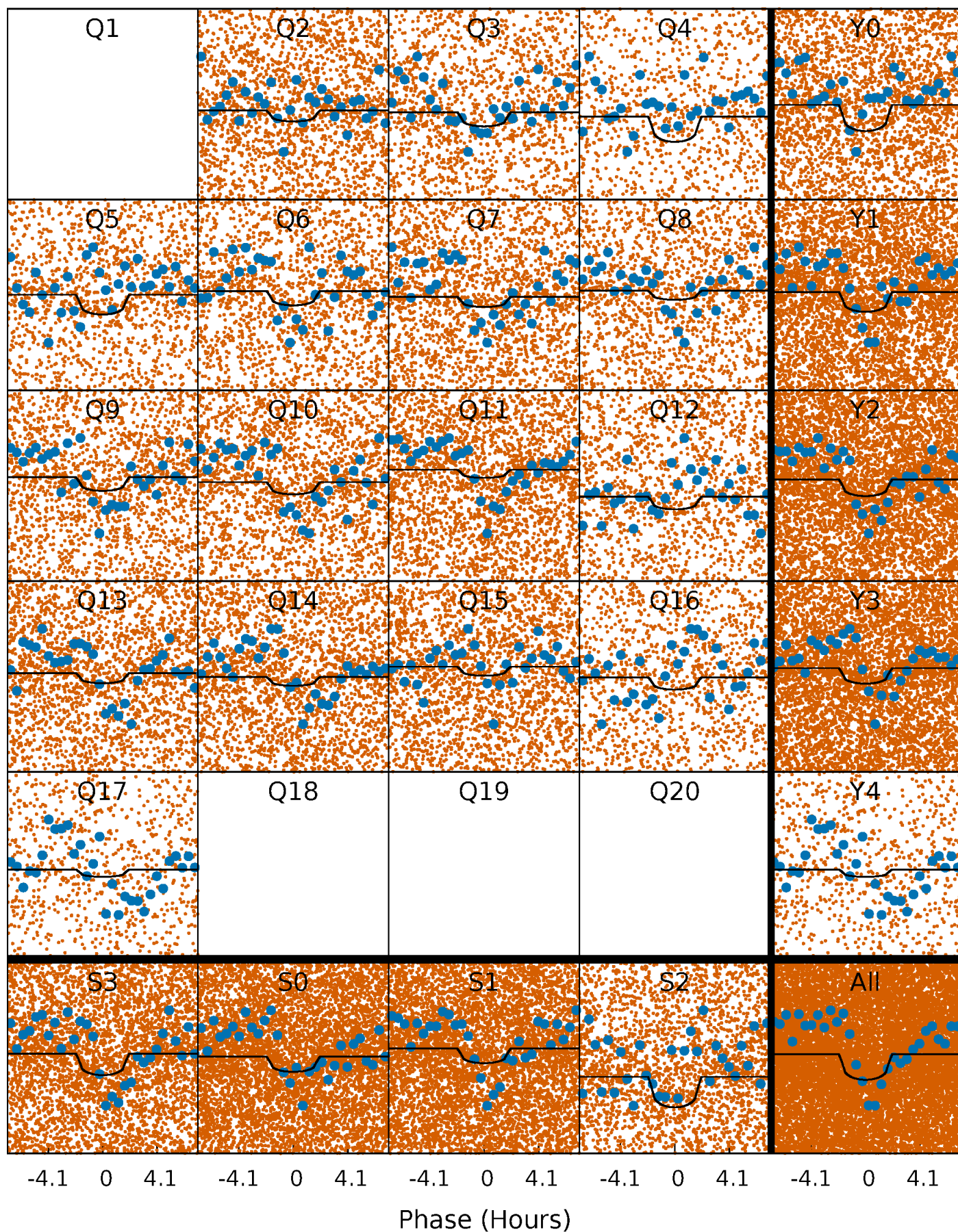
PDC Quarter-Phased Transit Curves

TCE 007281311-01 P= 0.566761 Days $T_0=131.841813$ (BKJD)



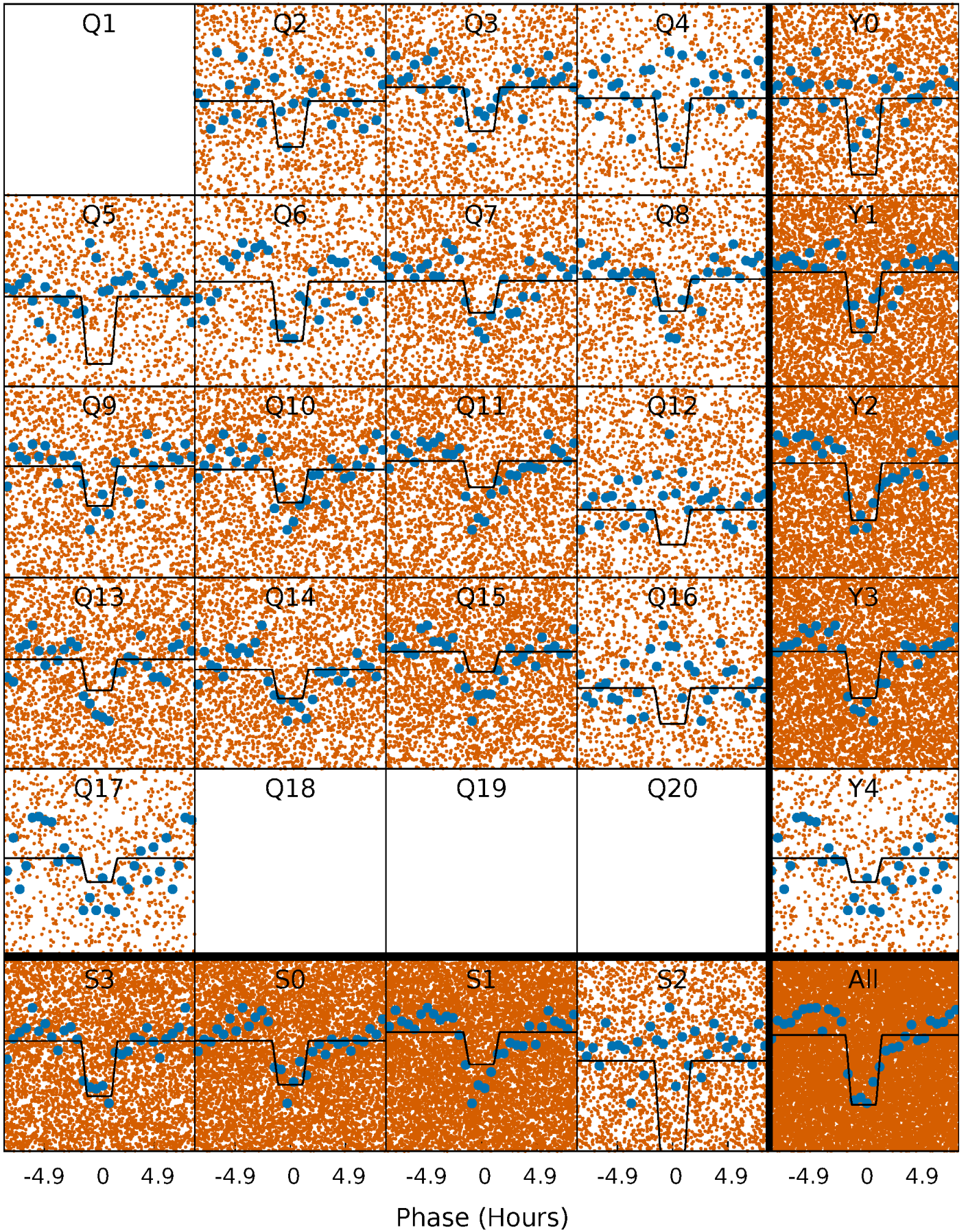
DV Quarter-Phased Transit Curves

TCE 007281311-01 P= 0.566761 Days $T_0=131.841813$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

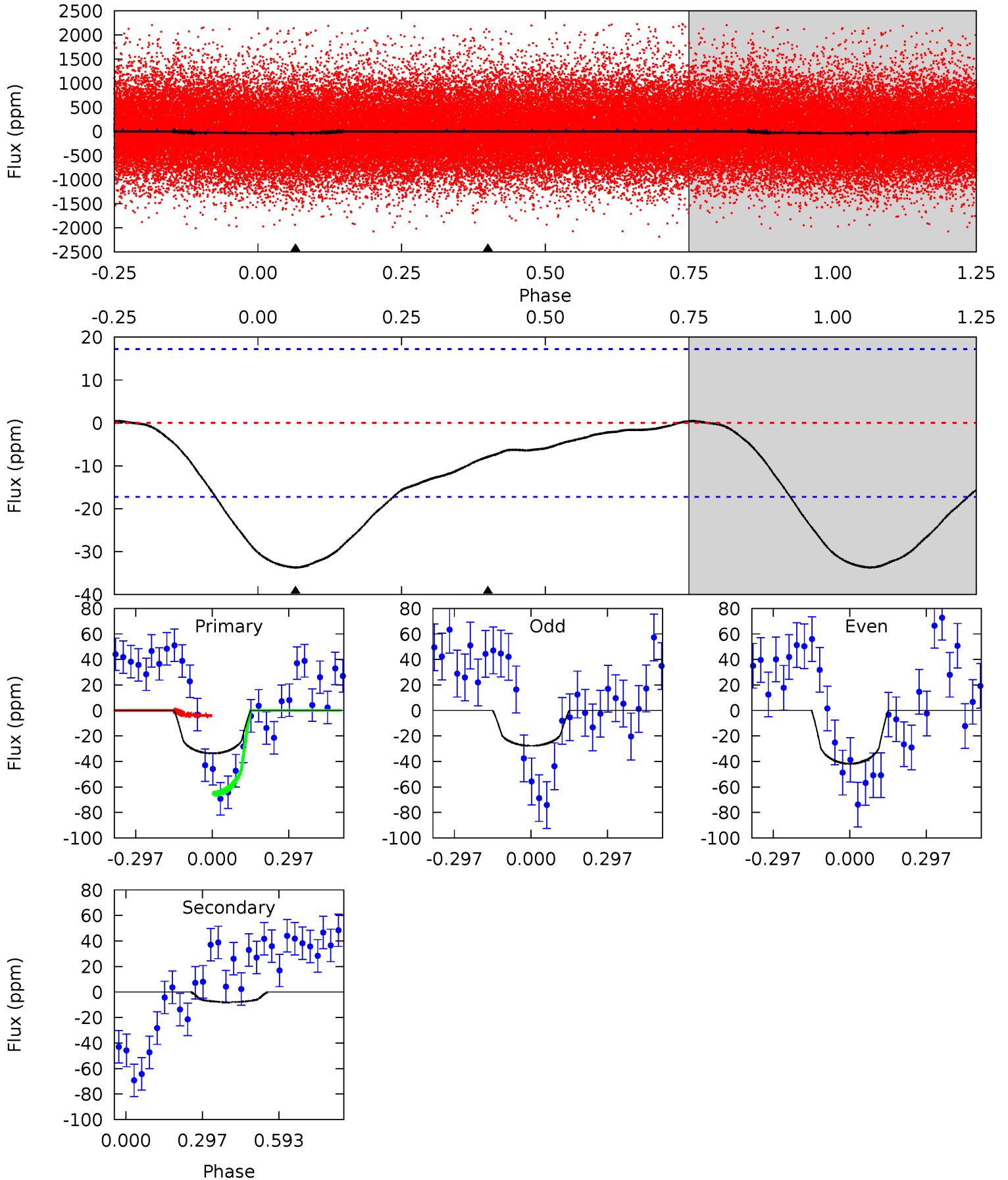
TCE 007281311-01 P= 0.566801 Days $T_0=131.815187$ (BKJD)



DV Model-Shift Uniqueness Test

007281311-01, P = 0.566761 Days, E = 131.841813 Days

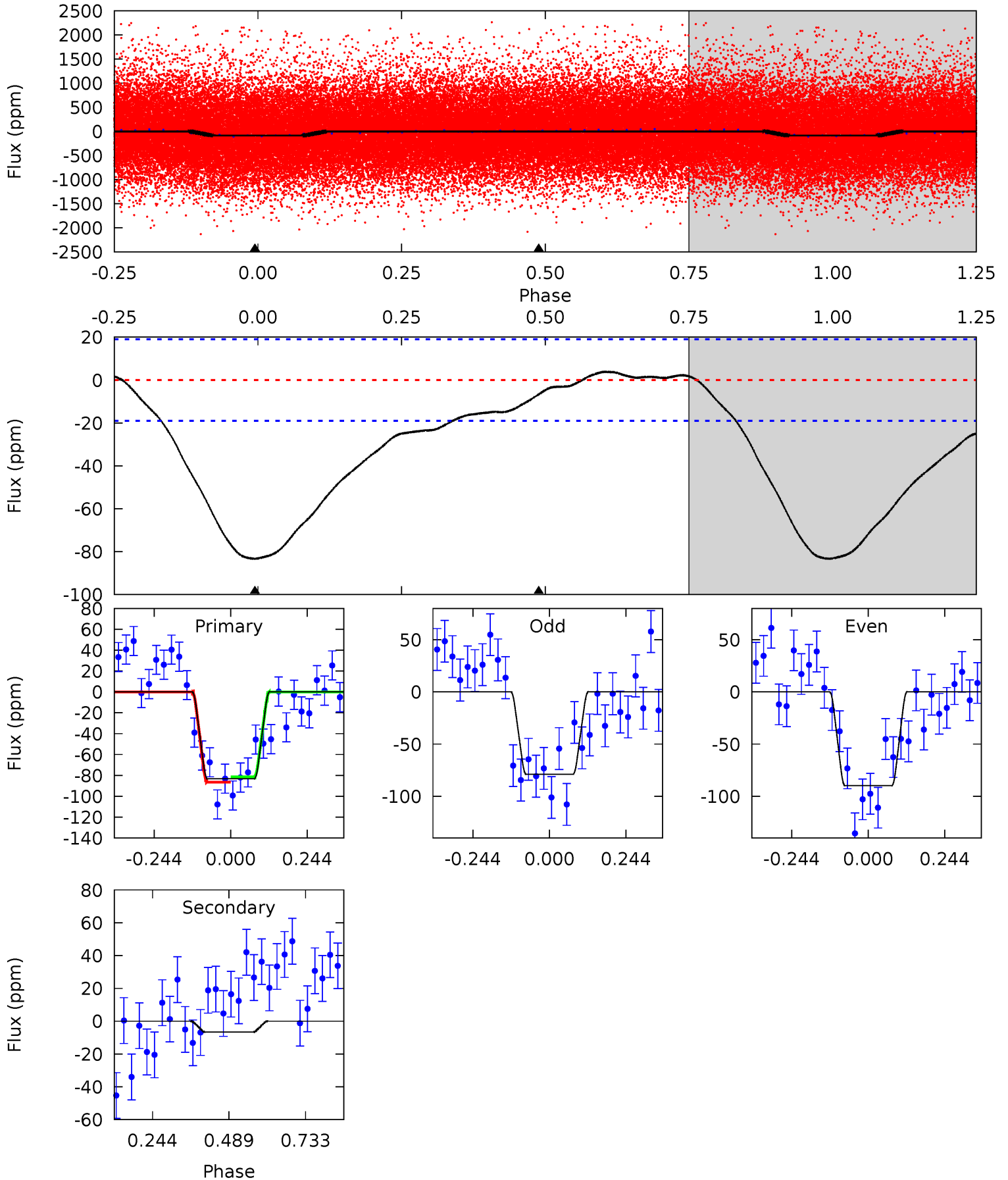
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.48	1.99	0	0	4.33	1.04	0.16	8.48	8.48	1.99	1.99	1.78	1.09	0.01	7.71



Alt Model-Shift Uniqueness Test

007281311-01, P = 0.566801 Days, E = 131.815187 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	1.54	0	0	4.37	1.16	3.18	19.2	19.2	1.54	1.54	1.25	0.89	0.04	0.59



Stellar Parameters For KIC 007281311

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6014^{+211}_{-253}	$4.486^{+0.052}_{-0.208}$	$0.070^{+0.250}_{-0.300}$	$0.993^{+0.302}_{-0.101}$	$1.101^{+0.130}_{-0.145}$	$1.584^{+0.428}_{-0.808}$
	+4%/-4%	+1%/-5%	+357%/-429%	+30%/-10%	+12%/-13%	+27%/-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 007281311-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-8 ± 4	$0.88^{+0.74}_{-0.58}$	3206^{+226}_{-185}	3659^{+2469}_{-6331}	$0.988^{+7.589}_{-0.772}$
Alt.	-7 ± 4	$1.26^{+0.86}_{-0.75}$	3207^{+229}_{-182}	2773^{+1713}_{-5854}	$0.409^{+2.030}_{-0.317}$

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 $A_{obs} \gg 1.0$

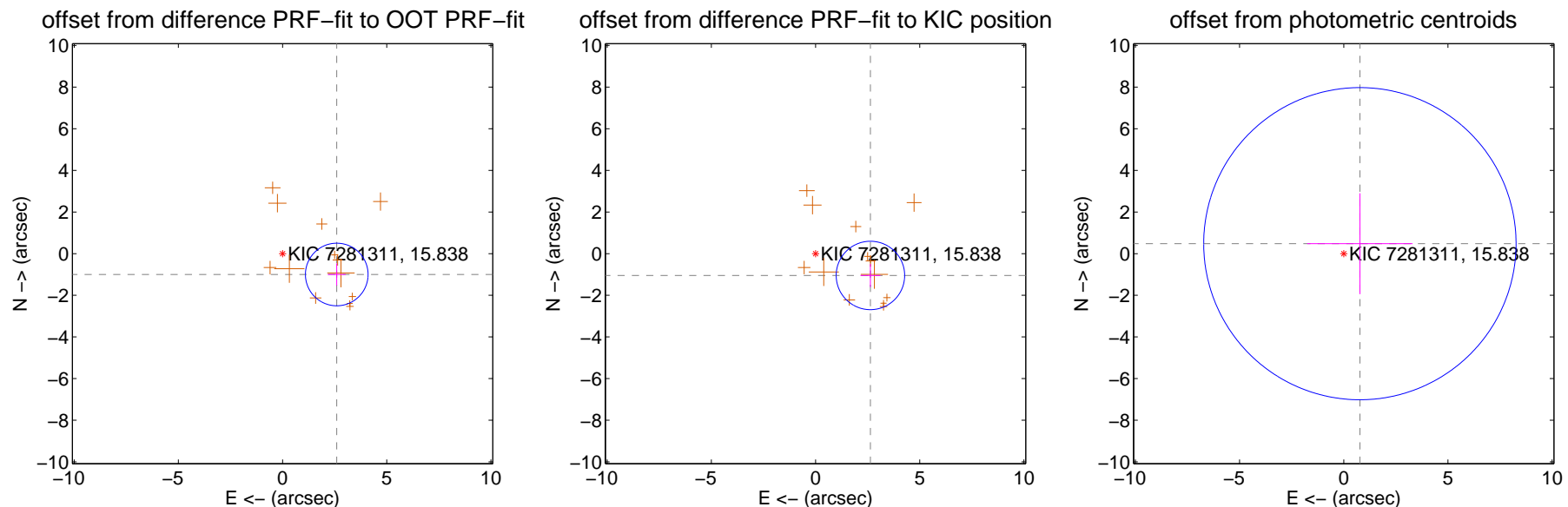
DV Centroid Data

Supplemental centroid analysis for 007281311-01. Kepler magnitude: 15.84. Transit SNR 6.28

There are 0 quarters with good PRF difference image offsets

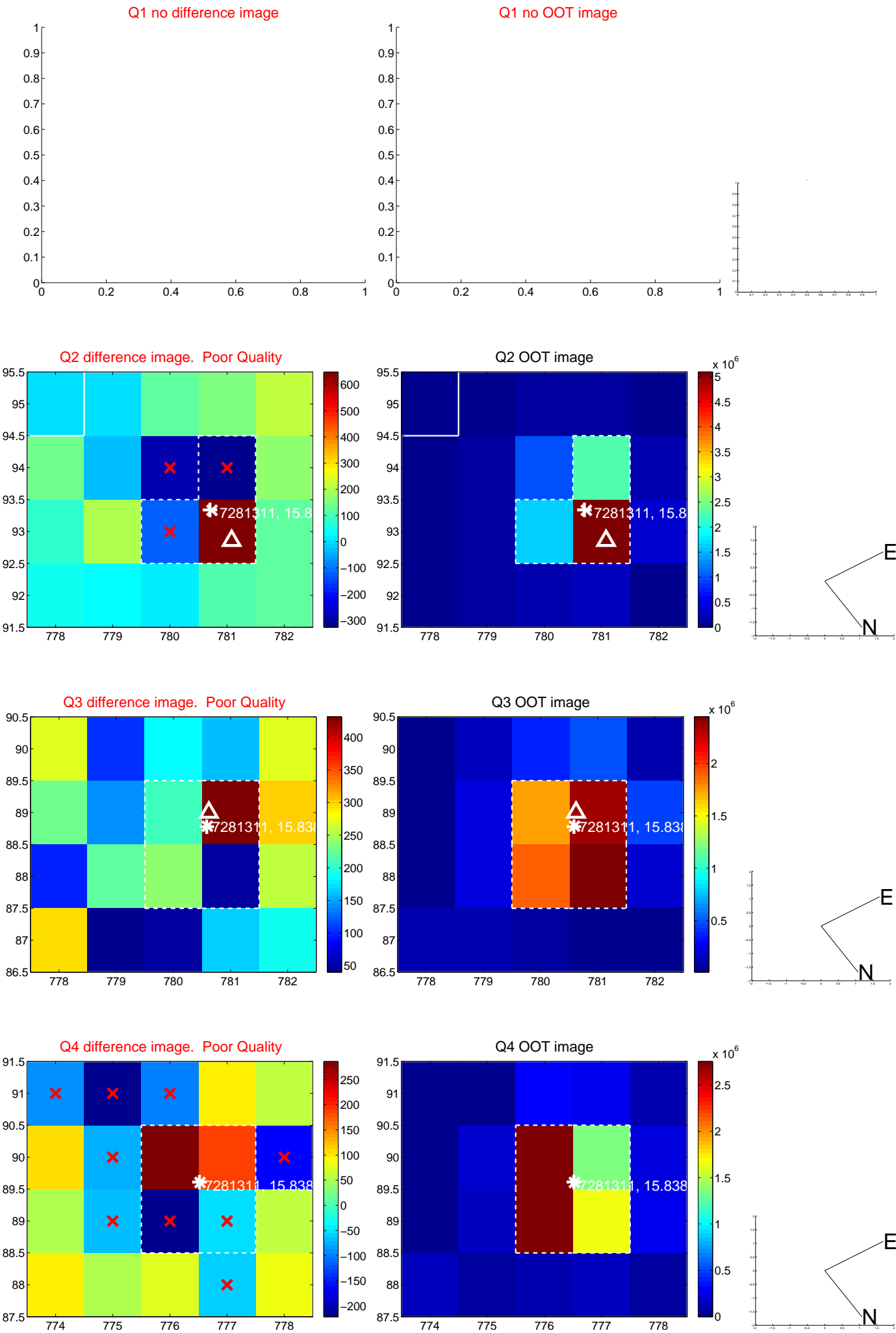
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.787 ± 0.501	5.56	-2.601 ± 0.427	-1.001 ± 0.529
PRF-fit source offset from KIC position	2.834 ± 0.548	5.18	-2.634 ± 0.478	-1.047 ± 0.555
photometric centroid source offset	0.91 ± 2.50	0.36	-0.77 ± 2.53	0.48 ± 2.42

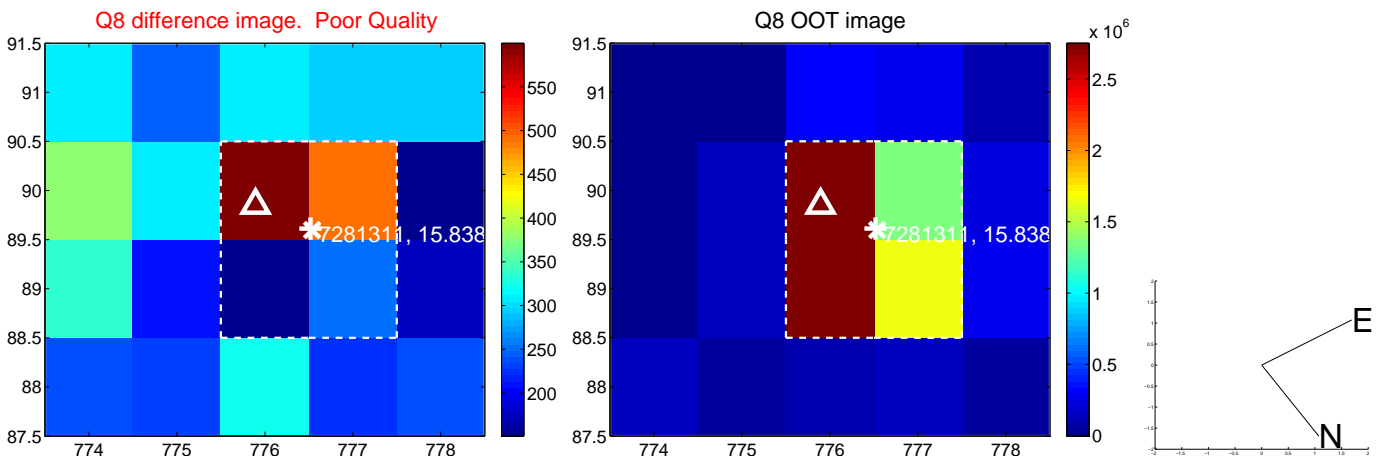
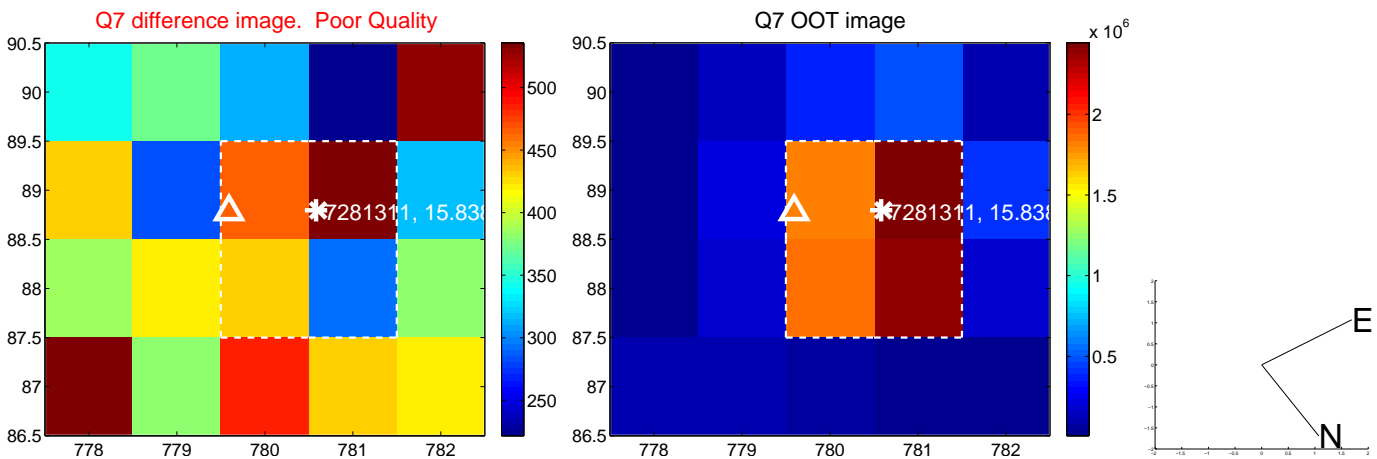
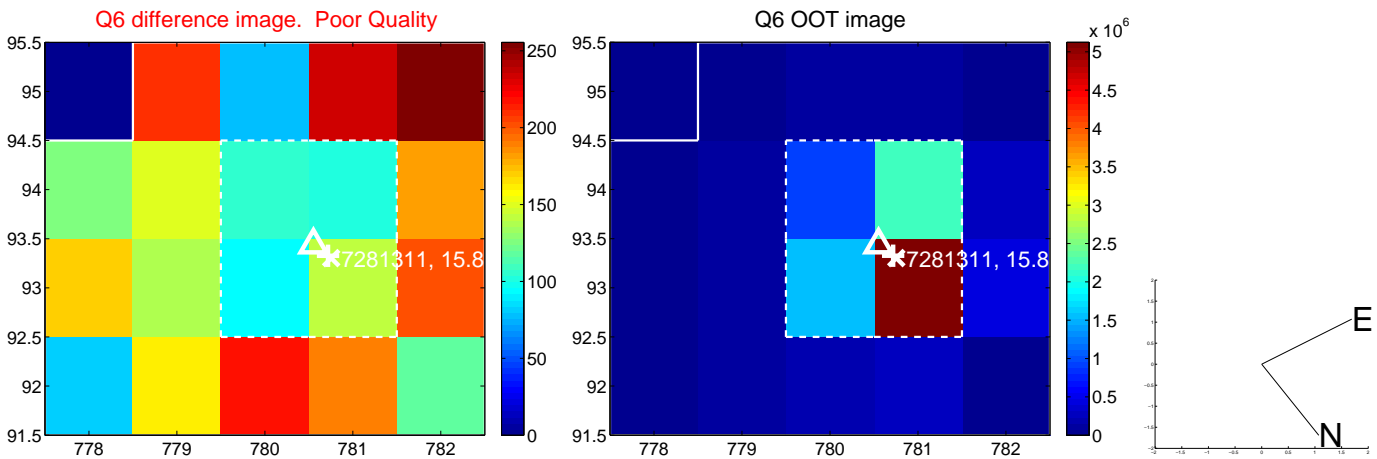
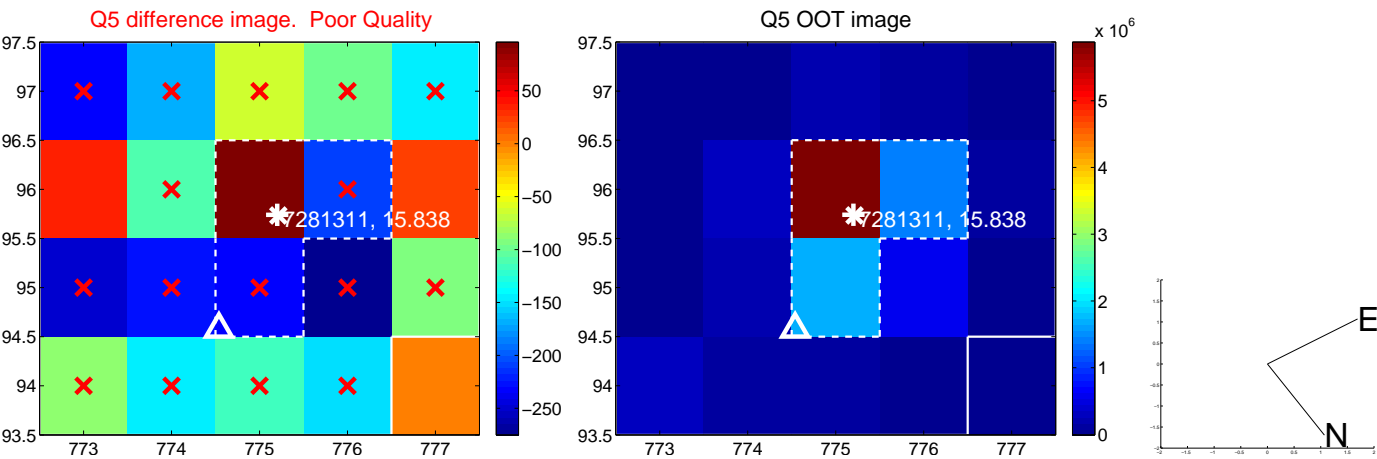


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

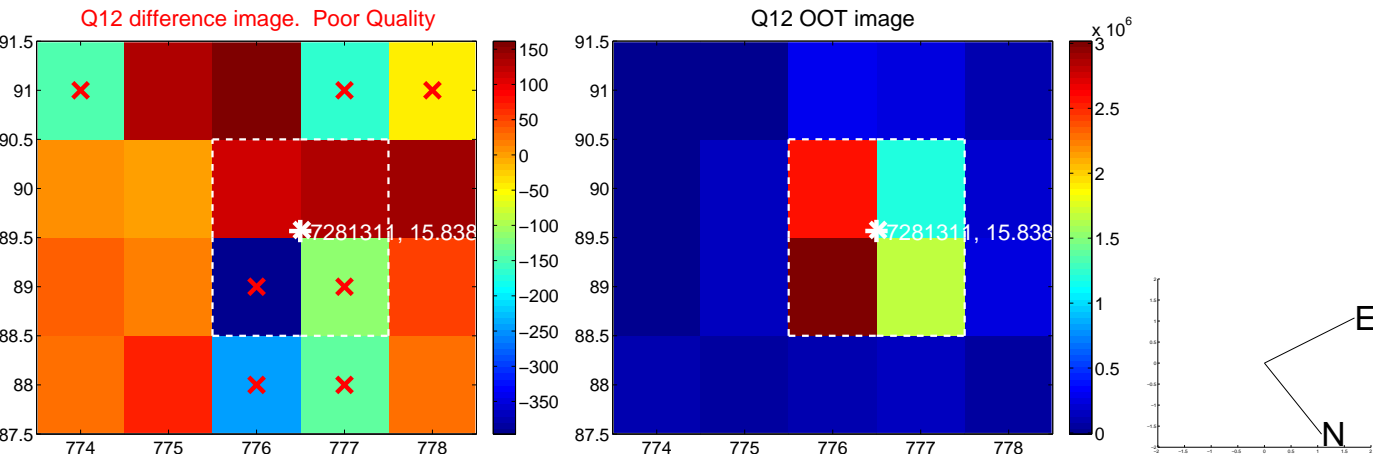
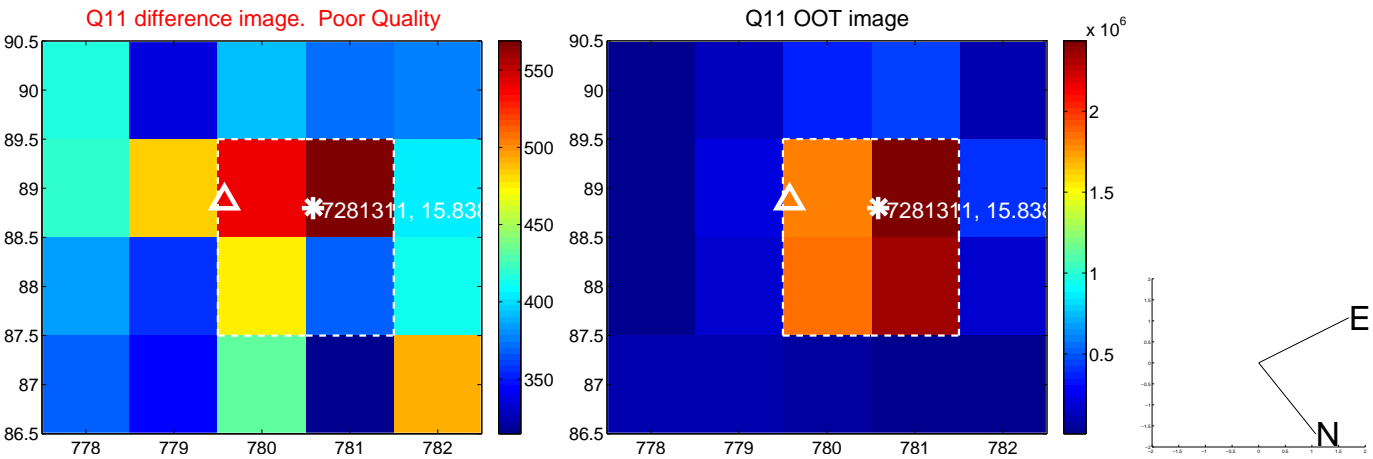
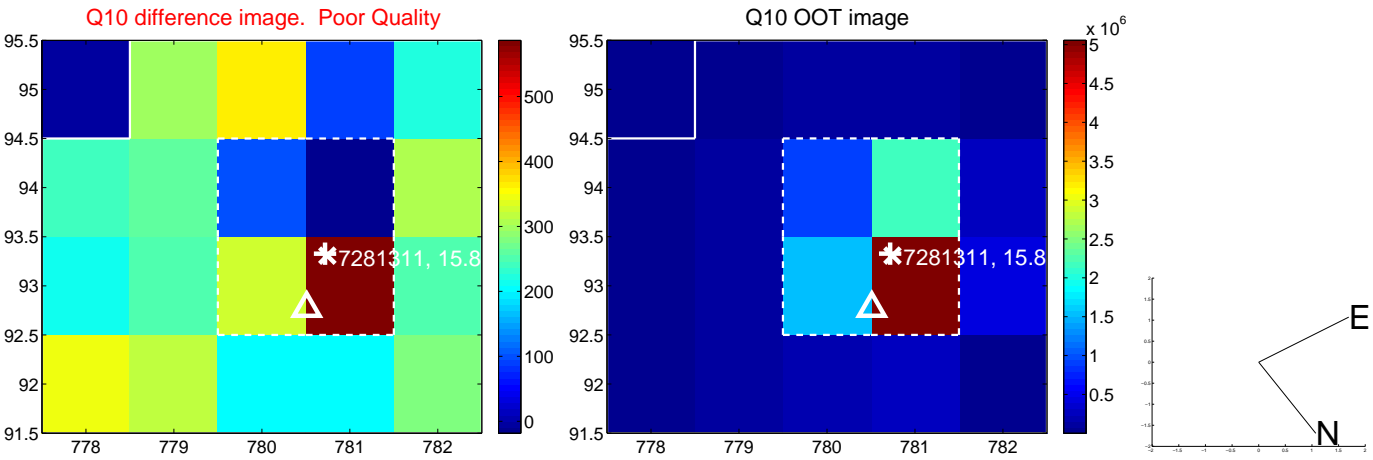
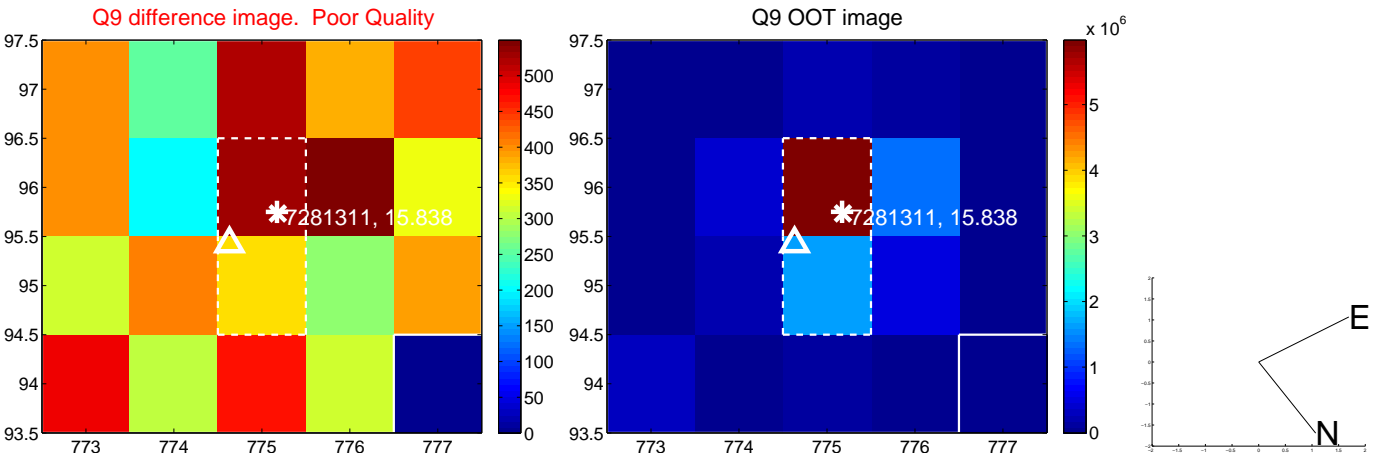
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



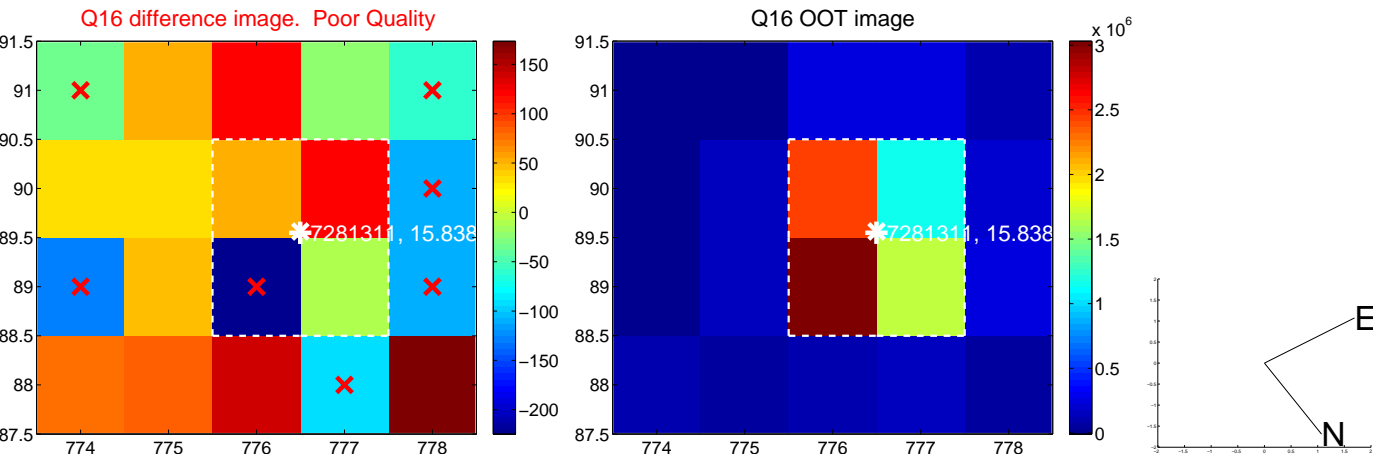
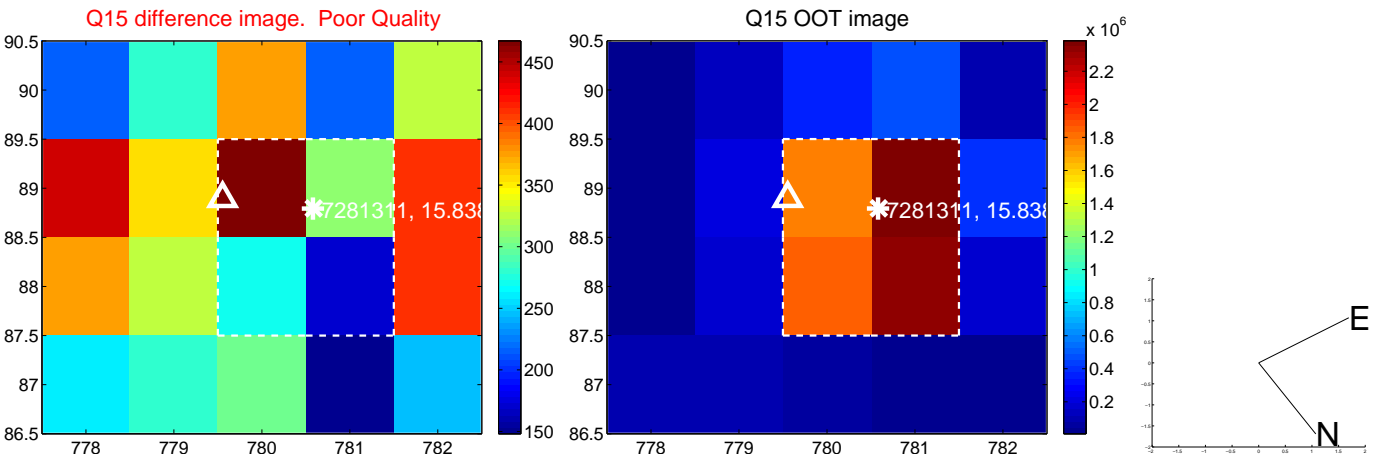
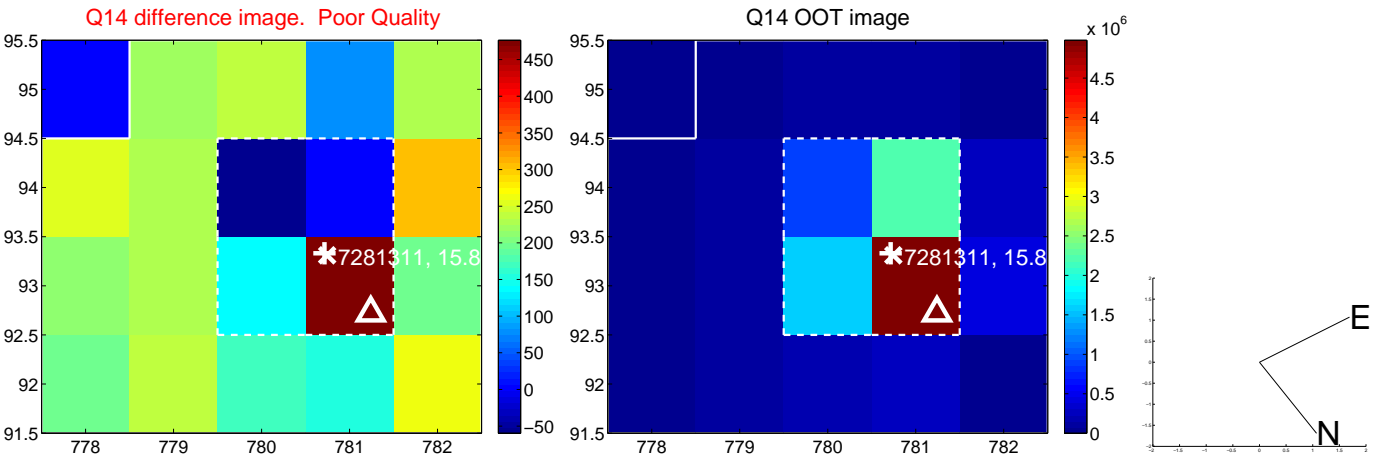
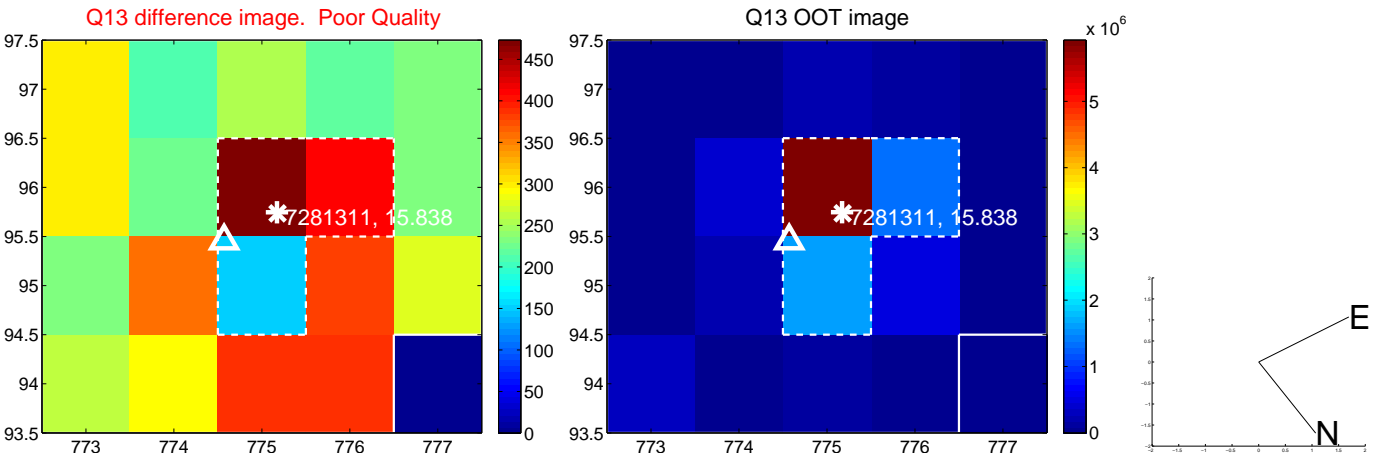
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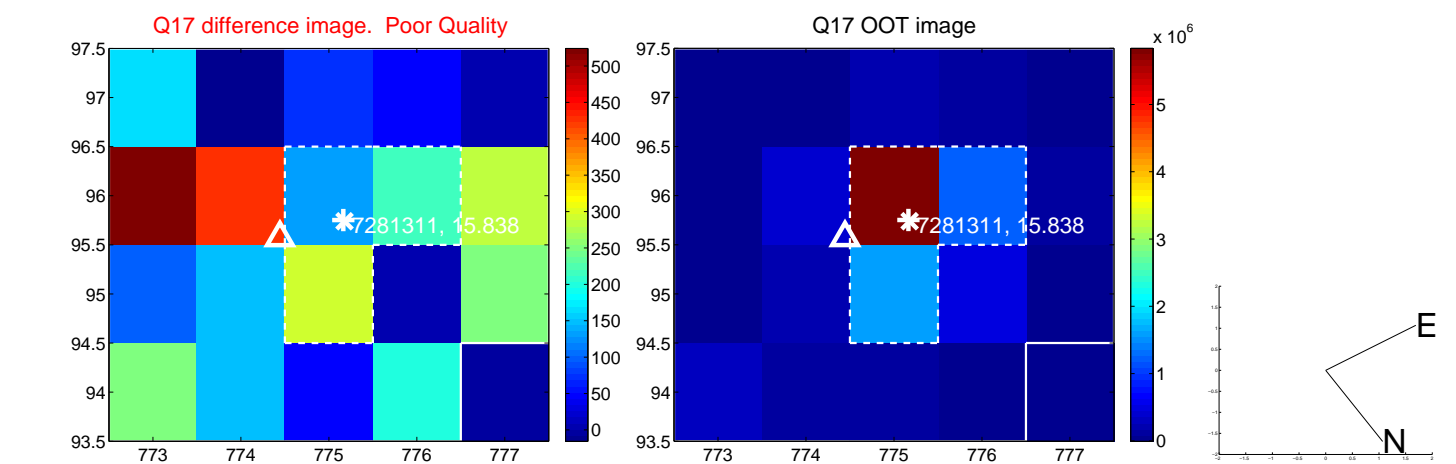
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



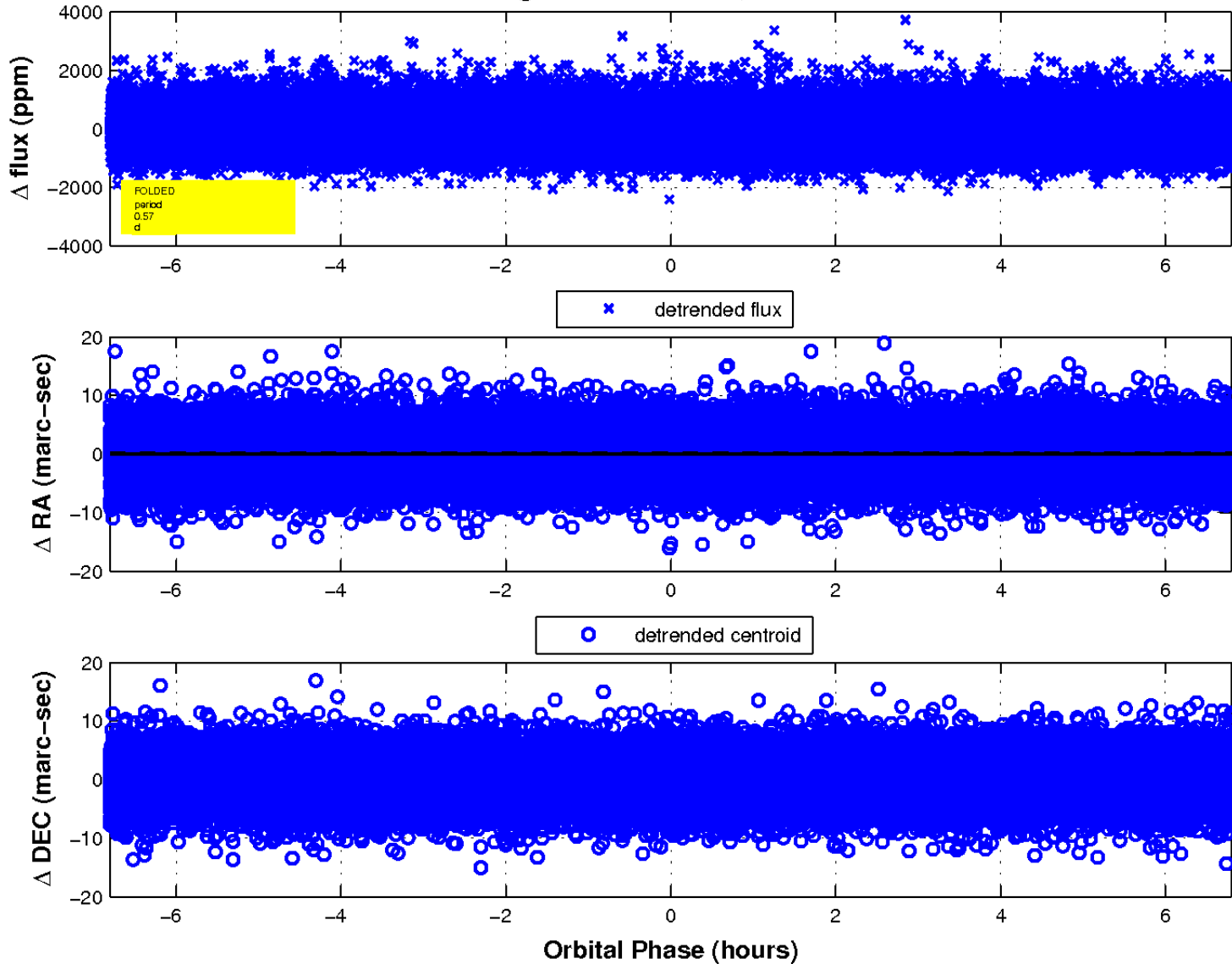
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

