

KIC 007281864

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})
007281864-01	OBS	No	0.566766	131.833789	11.9	3.882	10.3	6.1	0.99	6072	0.34	6400.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007281864-01	OBS	FP	0.00	1	0	0	1	LPP_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—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.

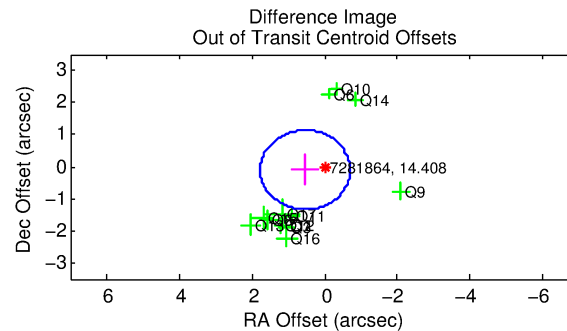
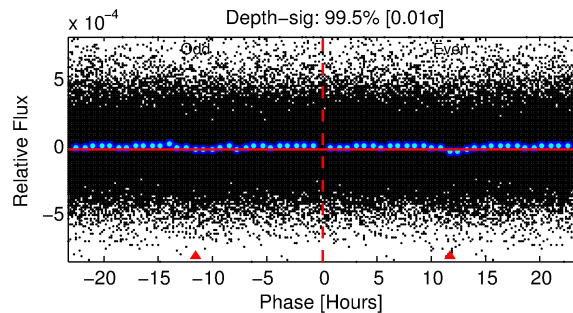
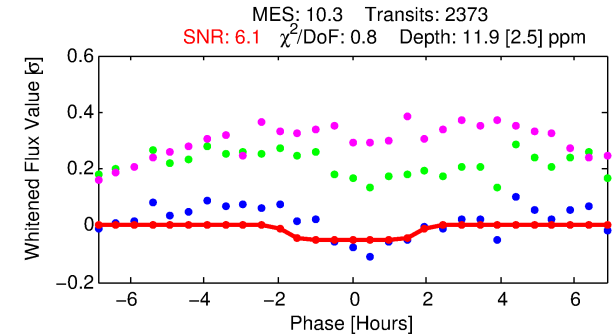
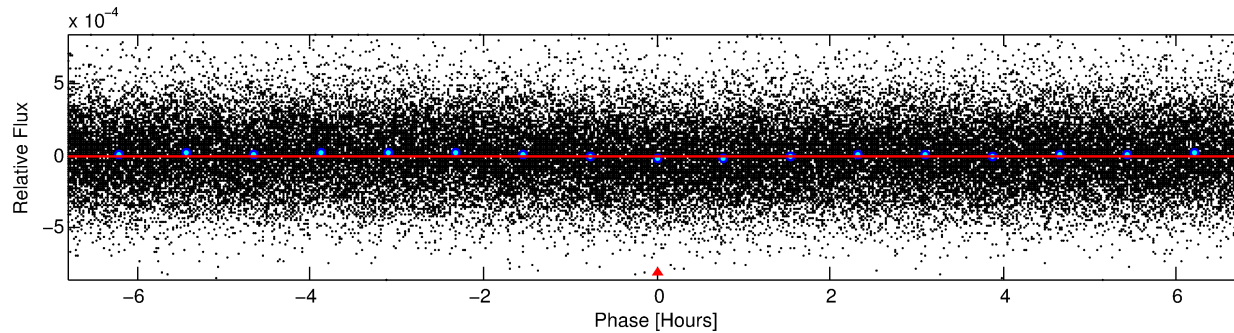
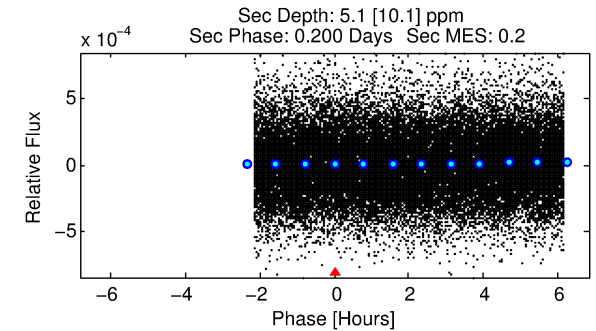
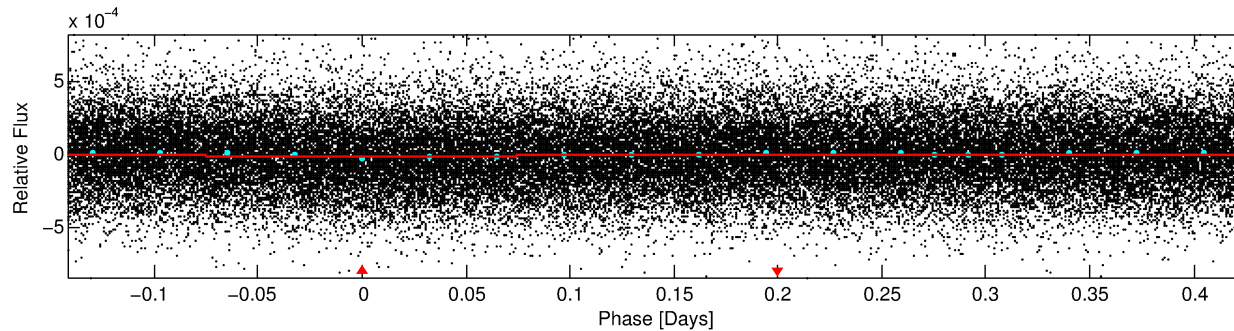
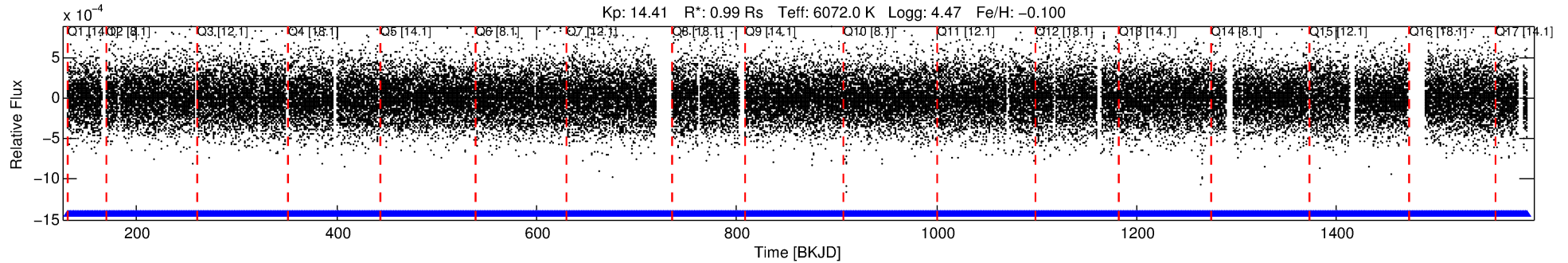
Ephemeris Match Information For 007281864-01

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
007281864-01	7281864	RR-Lyr-pri	7198959	1:1	985.2	107	223	7.86	14.41	51941.00	Direct-PRF	0	3.66	24.72

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: 7281864 Candidate: 1 of 1 Period: 0.567 d



DV Fit Results:

Period = 0.56677 [0.00002] d
Epoch = 131.8338 [0.0076] BKJD
Rp/R* = 0.0032 [0.0060]
a/R* = 1.26 [4.26]
b = 0.31 [26.95]
Seff = 6400.11 [2765.04]
Teq = 2281 [246] K
Rp = 0.34 [0.66] Re
a = 0.0136 [0.0039] AU
Ag = 4.38 [18.78] [0.18σ]
Teffp = 5101 [5446] K [0.52σ]

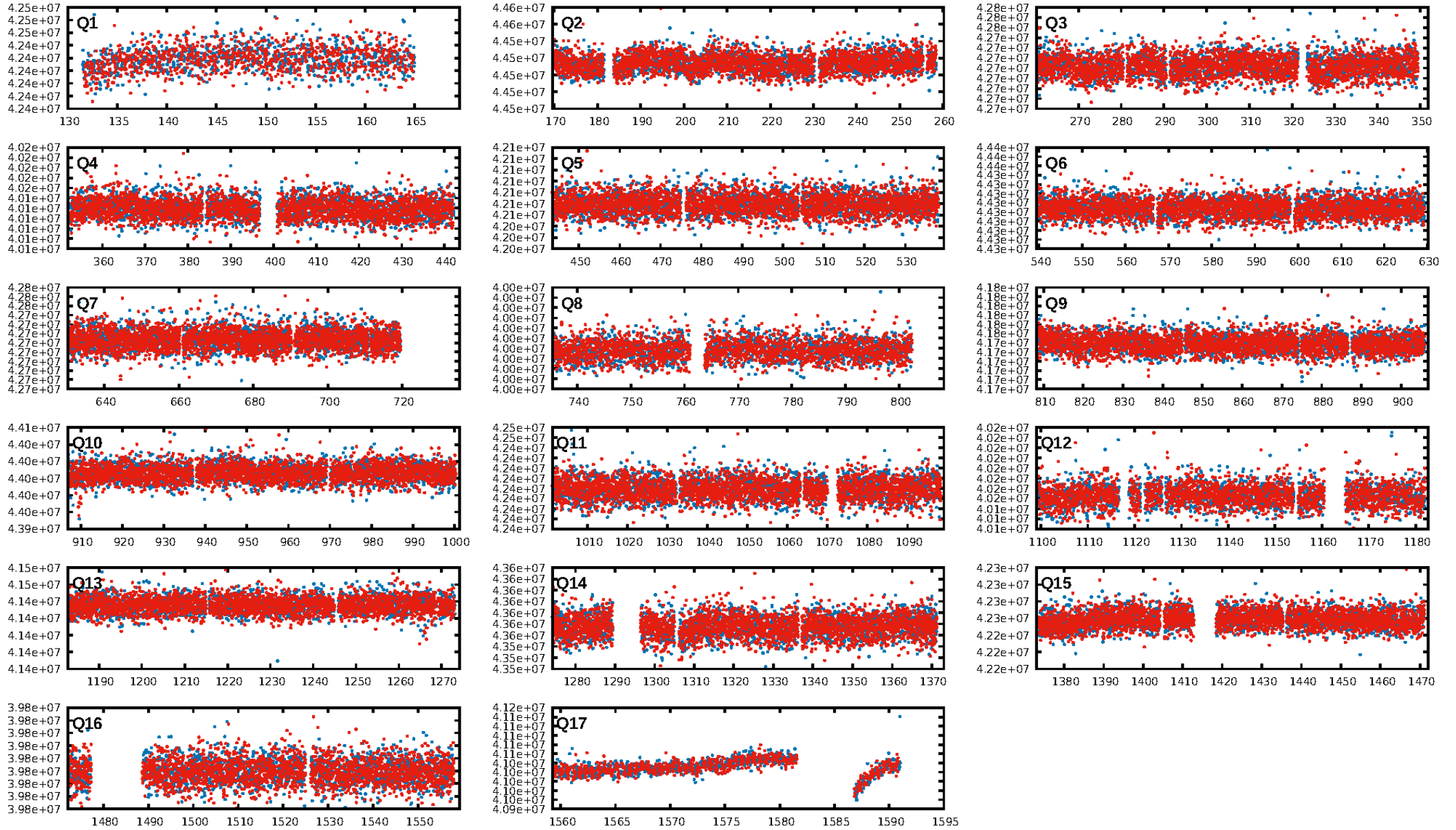
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.50e-15
RollingBand-fgt: 1.00 [2267/2267]
GhostDiagnostic-chr: 0.3
Centroid-sig: 2.0%
Centroid-so: 3.343 arcsec [1.52σ]
OotOffset-rm: 0.548 arcsec [1.33σ]
KicOffset-rm: 0.558 arcsec [1.28σ]
OotOffset-st: 3/4/3/3 [13]
KicOffset-st: 3/4/3/3 [13]
DiffImageQuality-fgm: 0.46 [6/13]
DiffImageOverlap-fno: 1.00 [17/17]

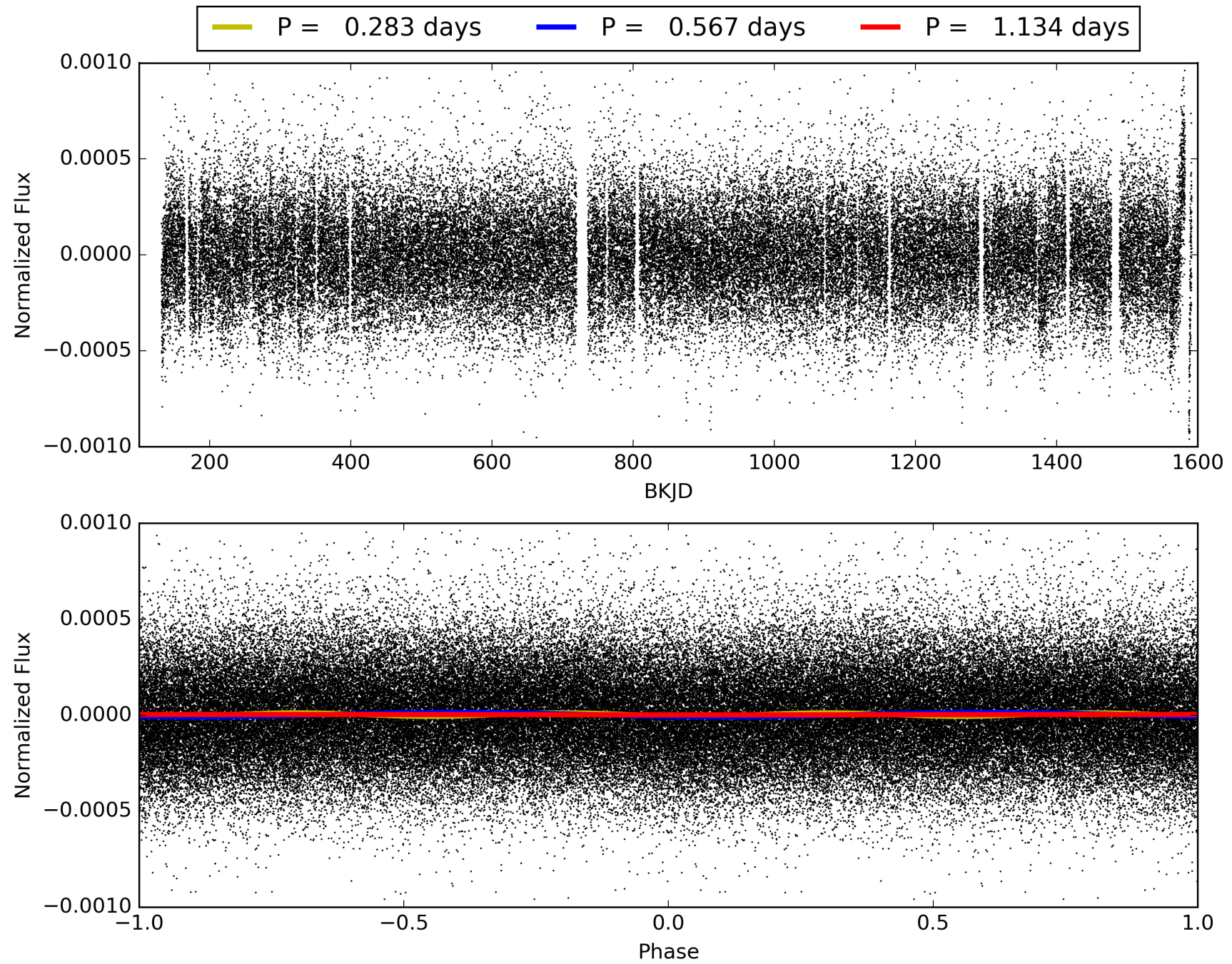
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:35:37 Z

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

TCE 007281864-01, PDC Light Curves

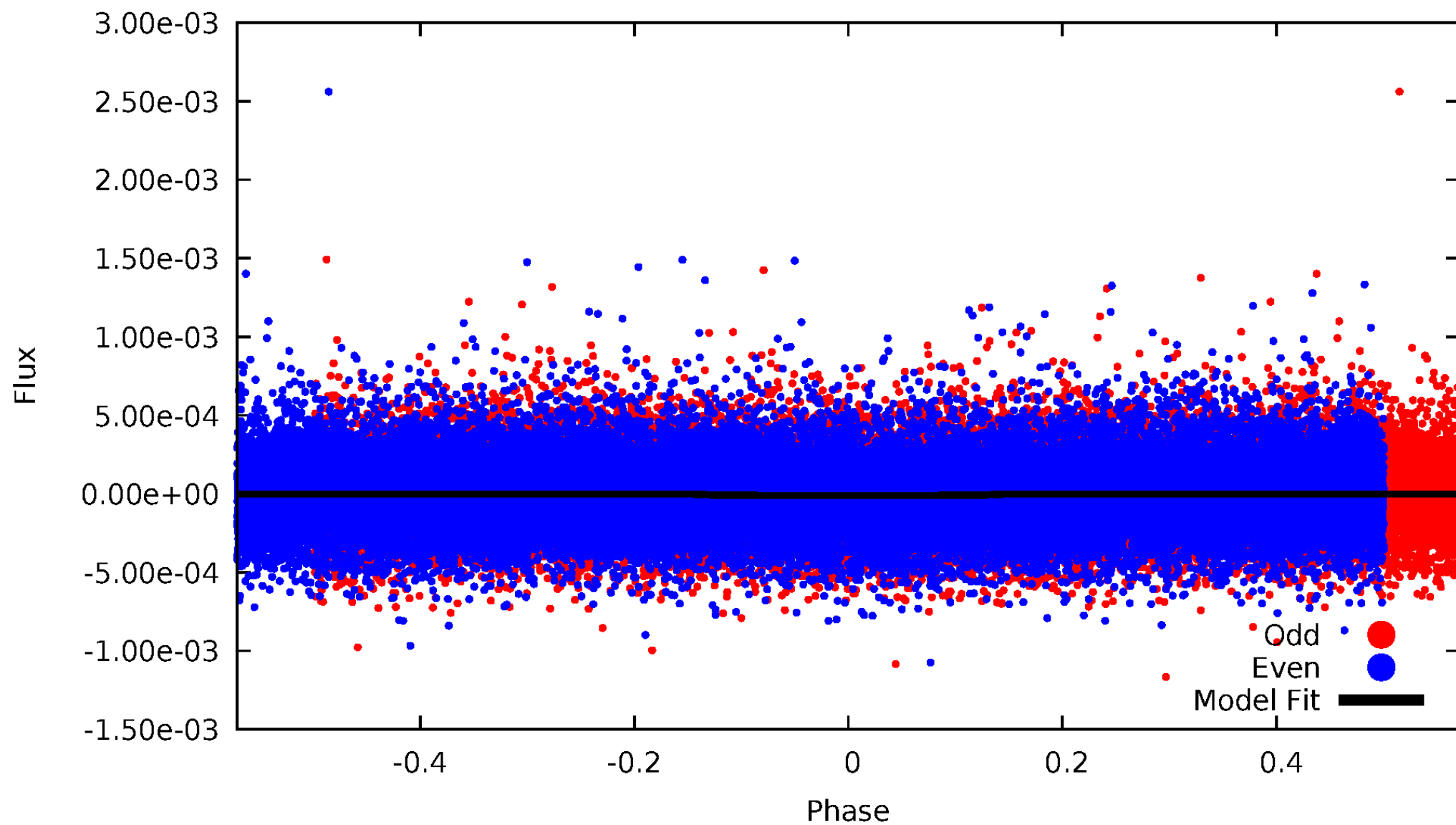


TCE 007281864-01



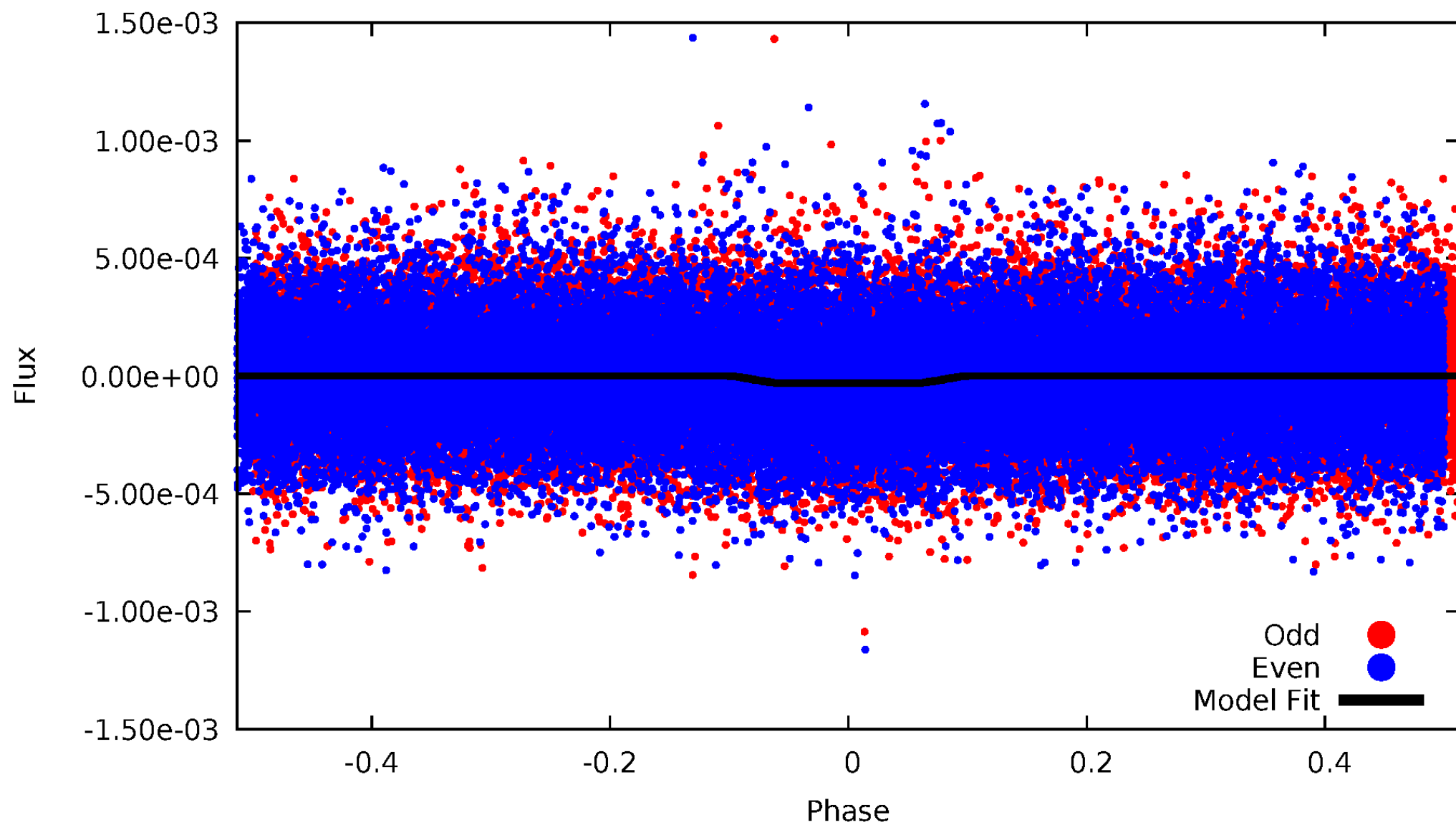
DV Odd/Even

TCE 007281864-01

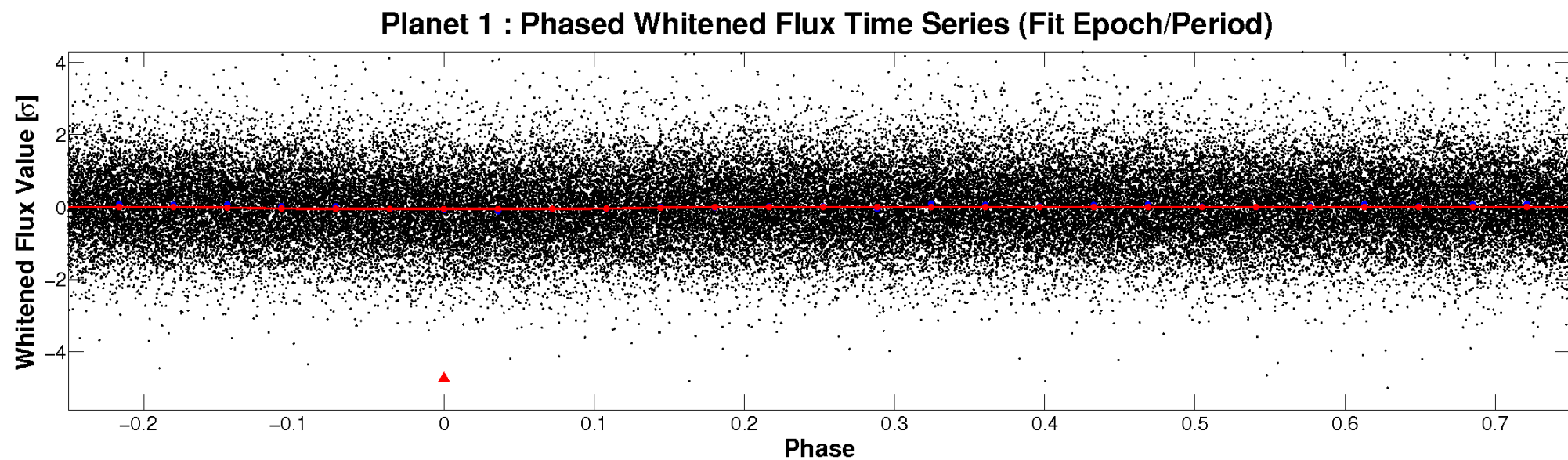
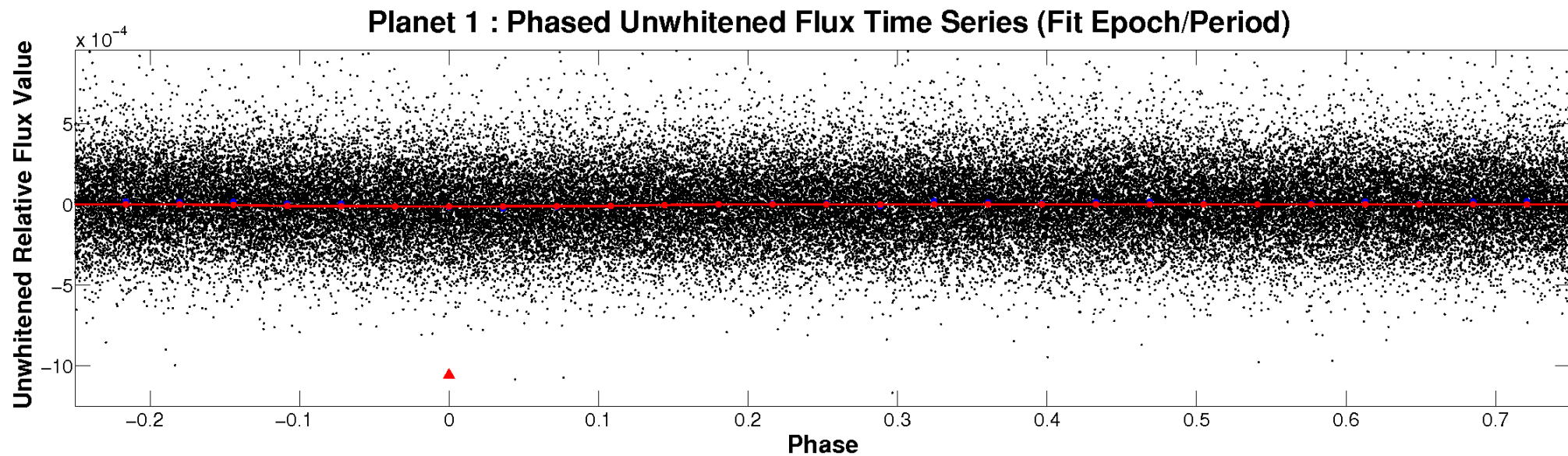


ALT Odd/Even

TCE 007281864-01

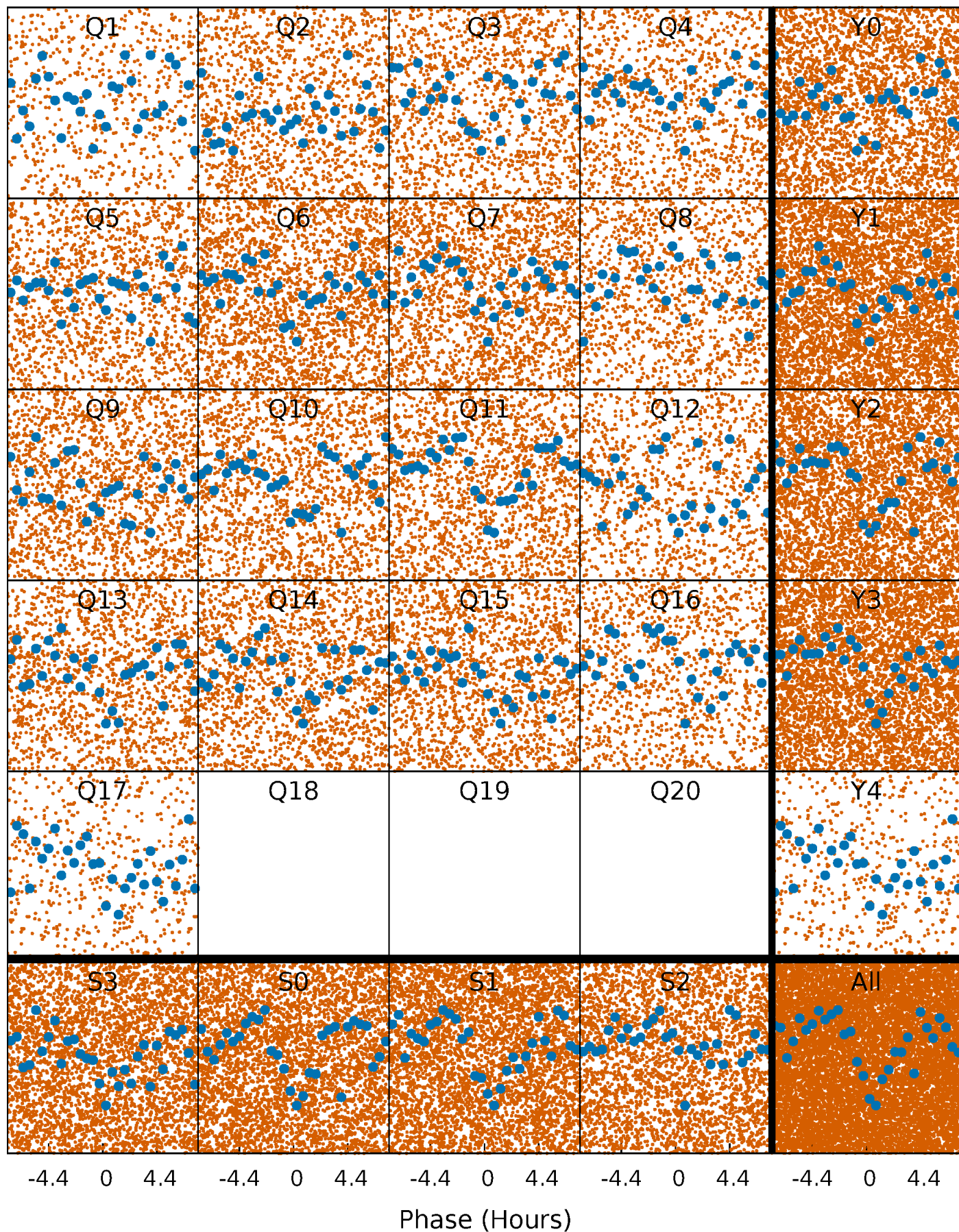


Non-Whitened Vs. Whitened Light Curve



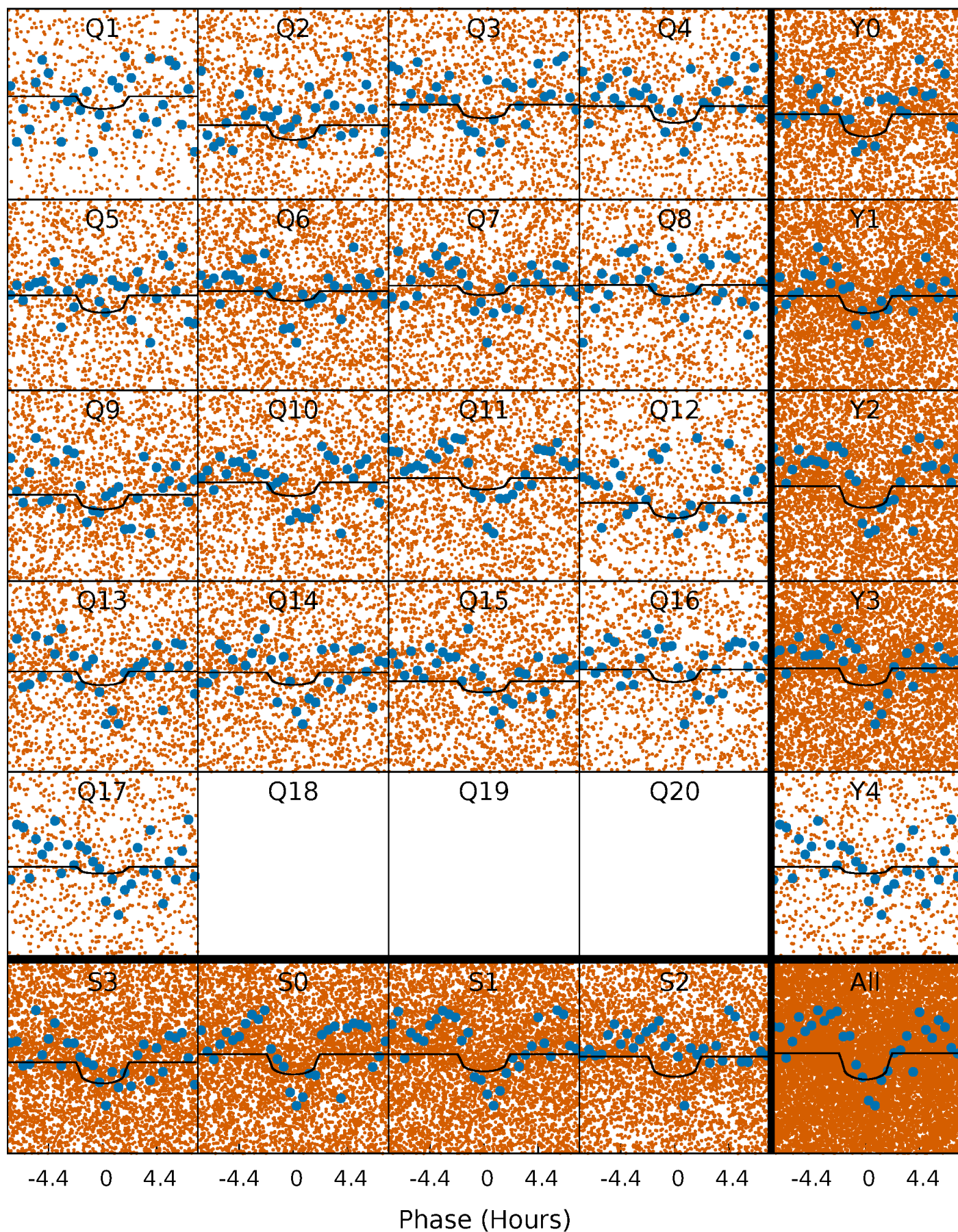
PDC Quarter-Phased Transit Curves

TCE 007281864-01 P= 0.566766 Days $T_0=131.833789$ (BKJD)



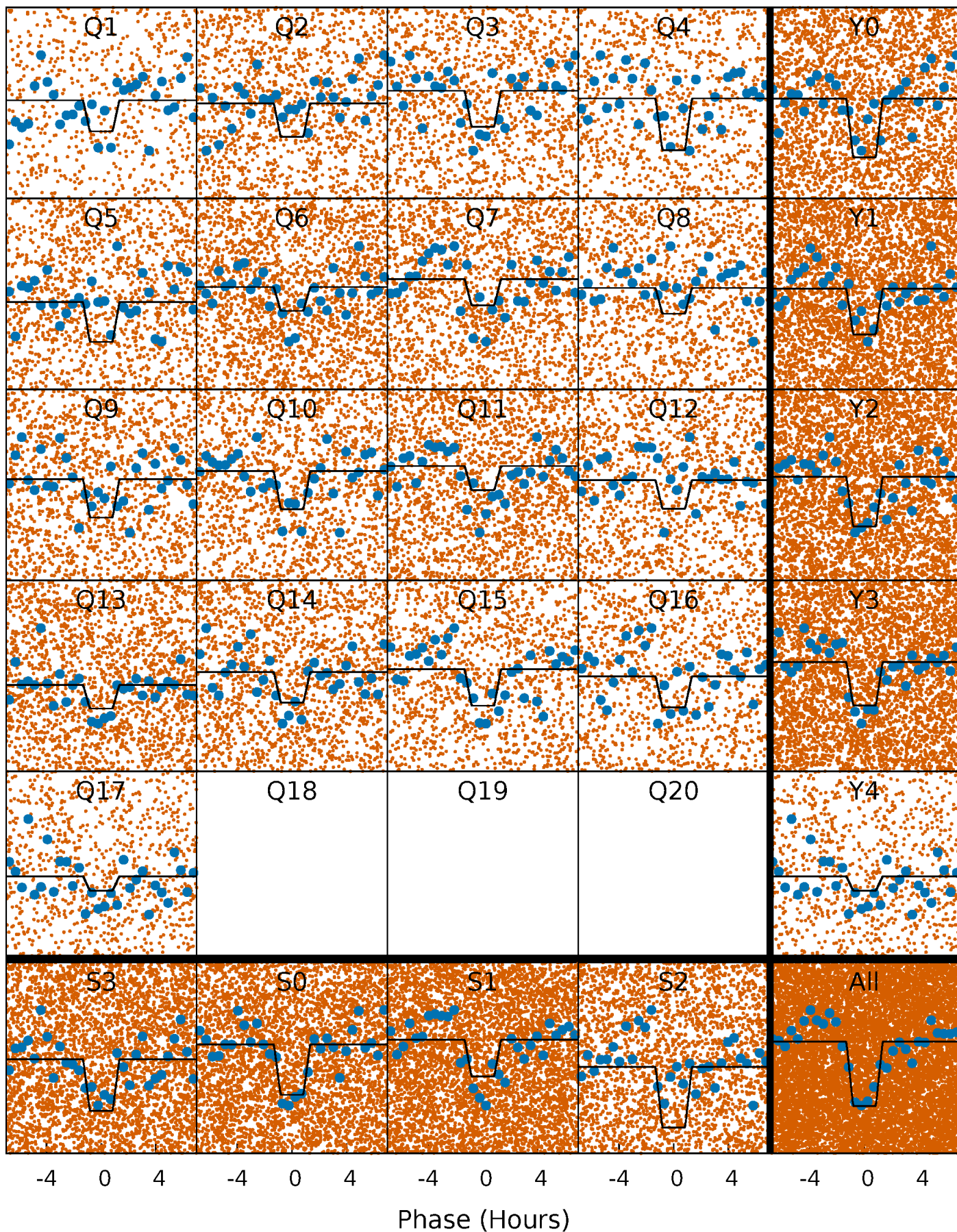
DV Quarter-Phased Transit Curves

TCE 007281864-01 P= 0.566766 Days $T_0=131.833789$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

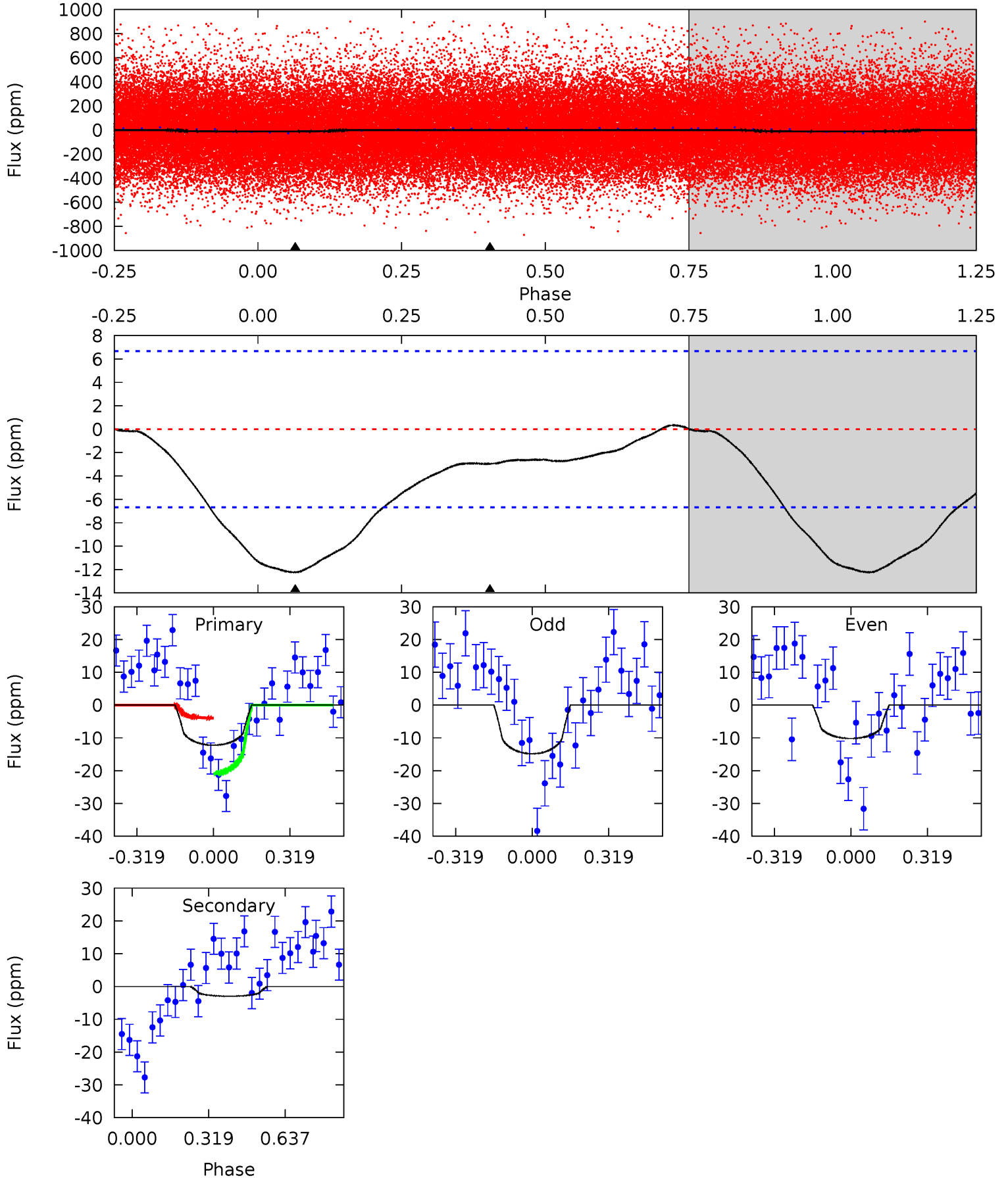
TCE 007281864-01 P= 0.566795 Days $T_0=131.811574$ (BKJD)



DV Model-Shift Uniqueness Test

007281864-01, P = 0.566766 Days, E = 131.267023 Days

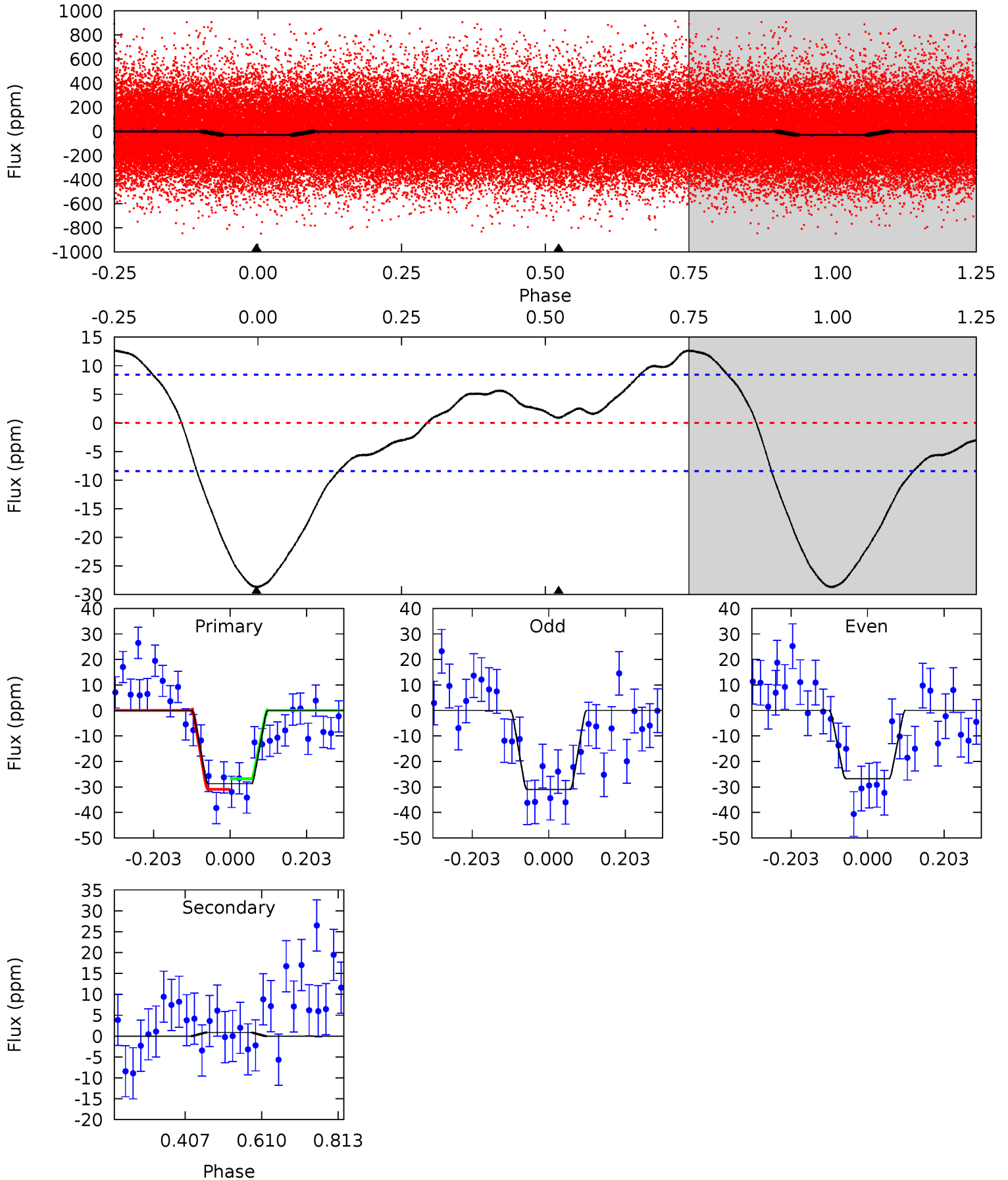
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.92	1.92	0	0	4.32	1.00	0.14	7.92	7.92	1.92	1.92	1.51	0.98	0.03	5.51



Alt Model-Shift Uniqueness Test

007281864-01, P = 0.566795 Days, E = 131.244779 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	-0.45	0	0	4.41	1.27	3.71	15.0	15.0	-0.45	-0.45	1.11	0.99	0.31	1.08



Stellar Parameters For KIC 007281864

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6072^{+162}_{-198}	$4.470^{+0.056}_{-0.224}$	$-0.100^{+0.250}_{-0.350}$	$0.988^{+0.336}_{-0.105}$	$1.050^{+0.139}_{-0.139}$	$1.536^{+0.454}_{-0.874}$
	+3%/-3%	+1%/-5%	+250%/-350%	+34%/-11%	+13%/-13%	+30%/-57%
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 007281864-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3 ± 2	$0.65^{+0.57}_{-0.44}$	3258^{+236}_{-167}	3353^{+2277}_{-6333}	$0.616^{+5.197}_{-0.479}$
Alt.	1 ± 2	$0.82^{+0.60}_{-0.53}$	3261^{+250}_{-157}	-3424^{+508}_{-719}	$-0.086^{+0.239}_{-0.930}$

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

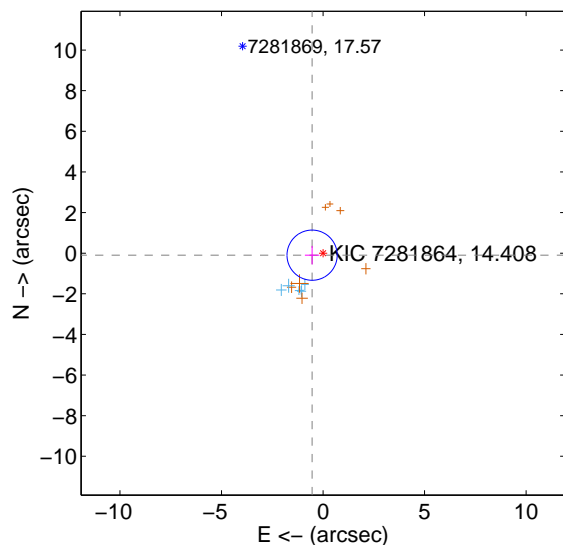
Supplemental centroid analysis for 007281864-01. Kepler magnitude: 14.41. Transit SNR 6.12

There are 6 quarters with good PRF difference image offsets

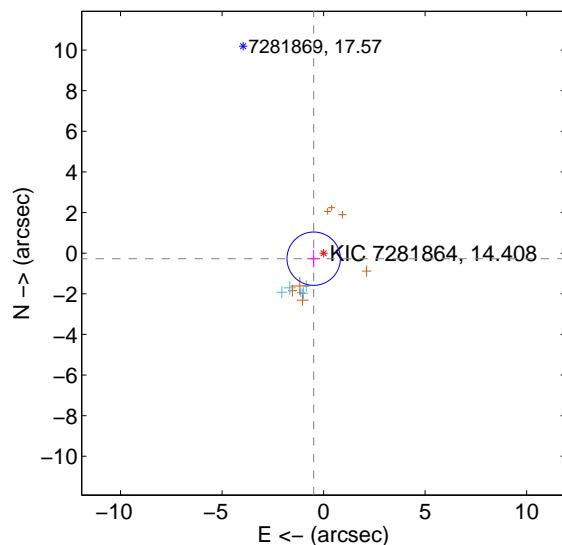
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.548 ± 0.412	1.33	0.539 ± 0.354	-0.099 ± 0.459
PRF-fit source offset from KIC position	0.558 ± 0.438	1.28	0.488 ± 0.314	-0.271 ± 0.434
photometric centroid source offset	3.34 ± 2.19	1.52	1.98 ± 2.24	-2.69 ± 2.17

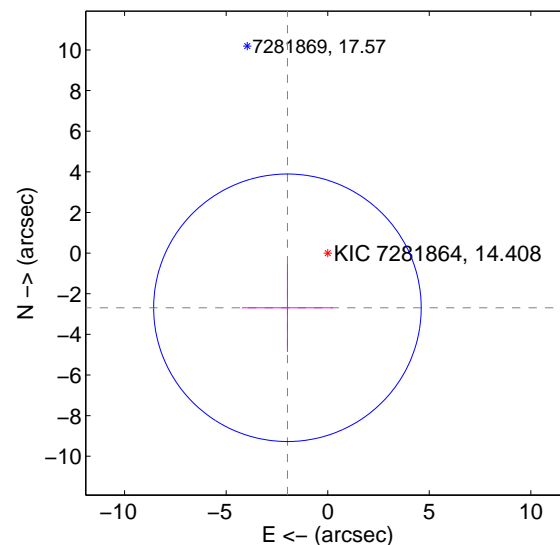
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

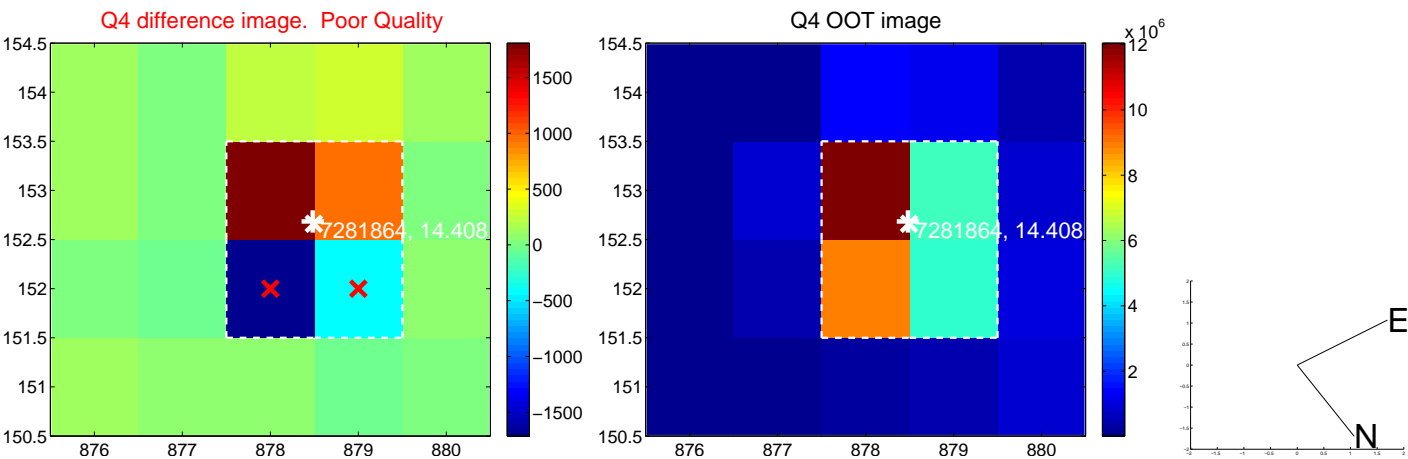
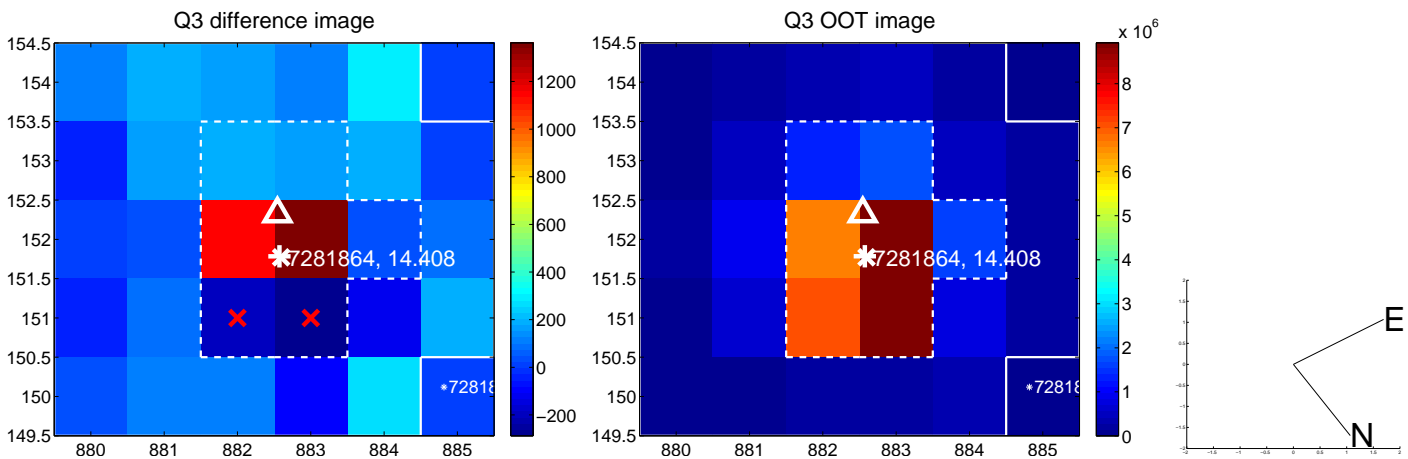
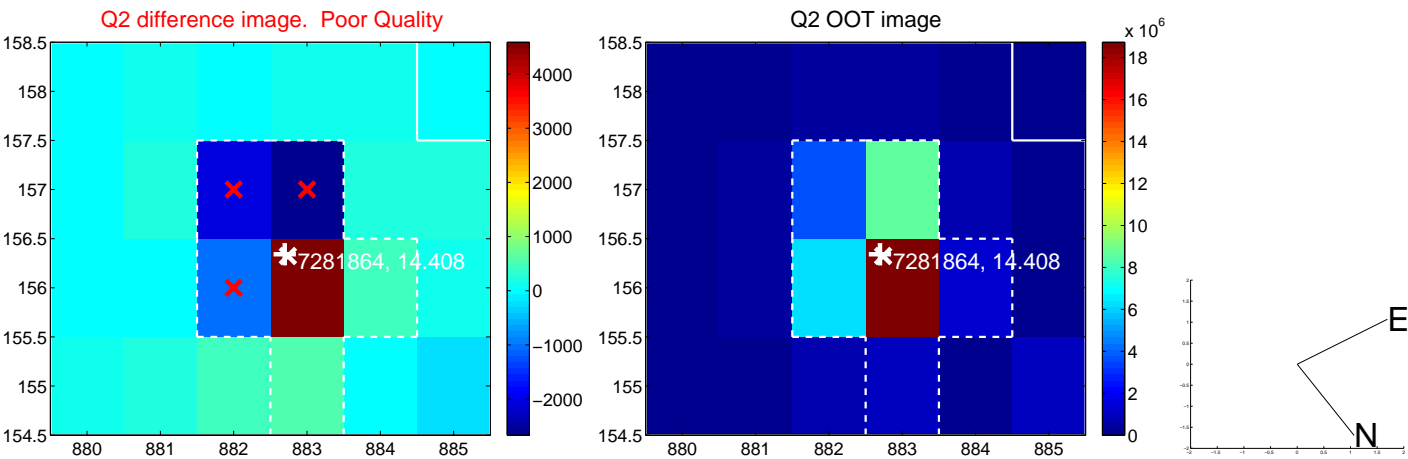
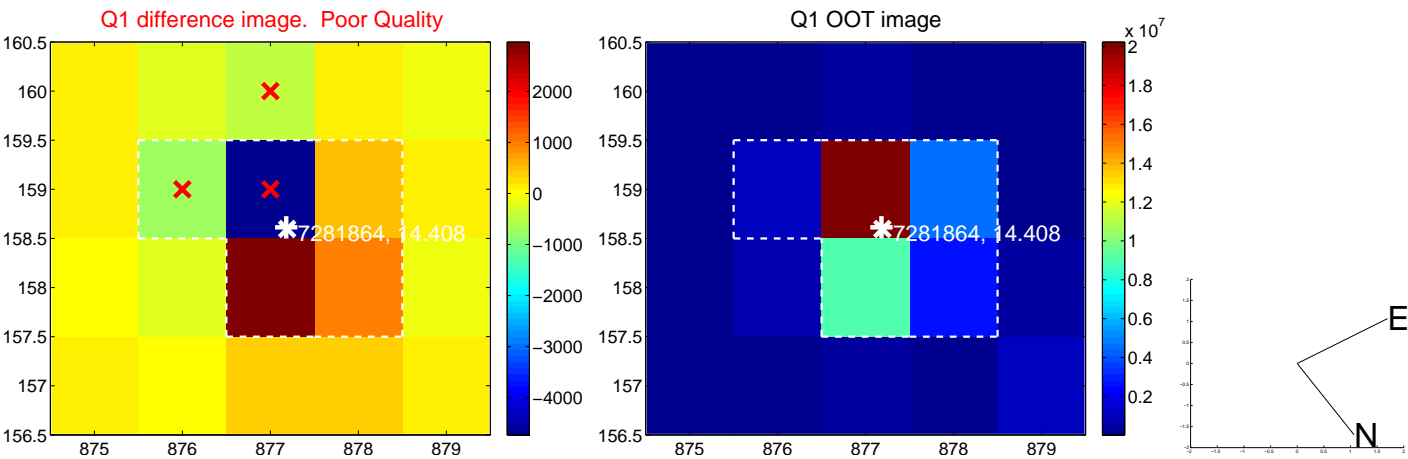


offset from photometric centroids

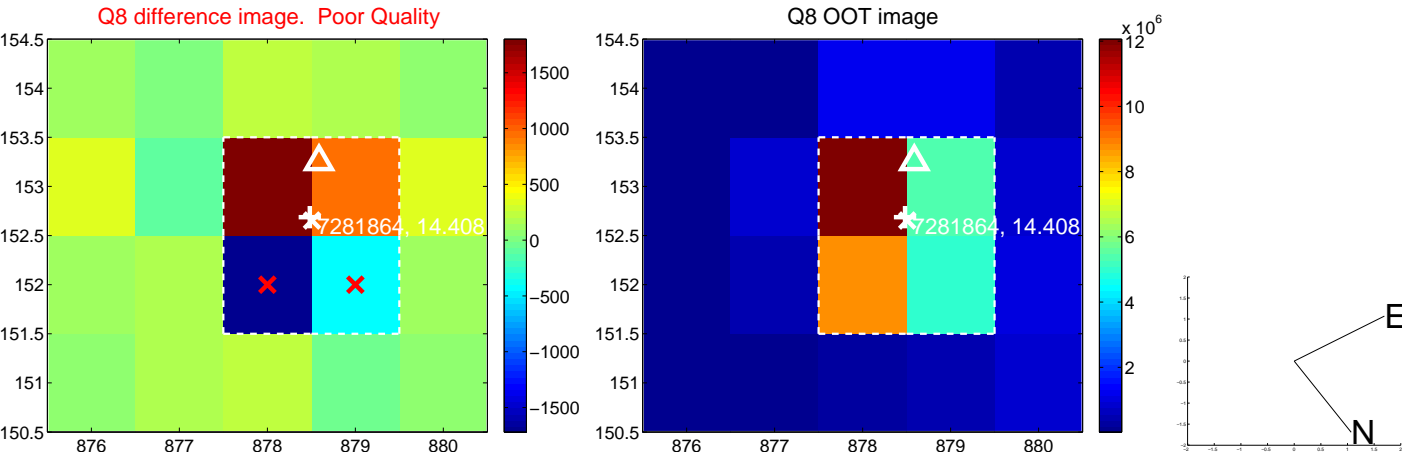
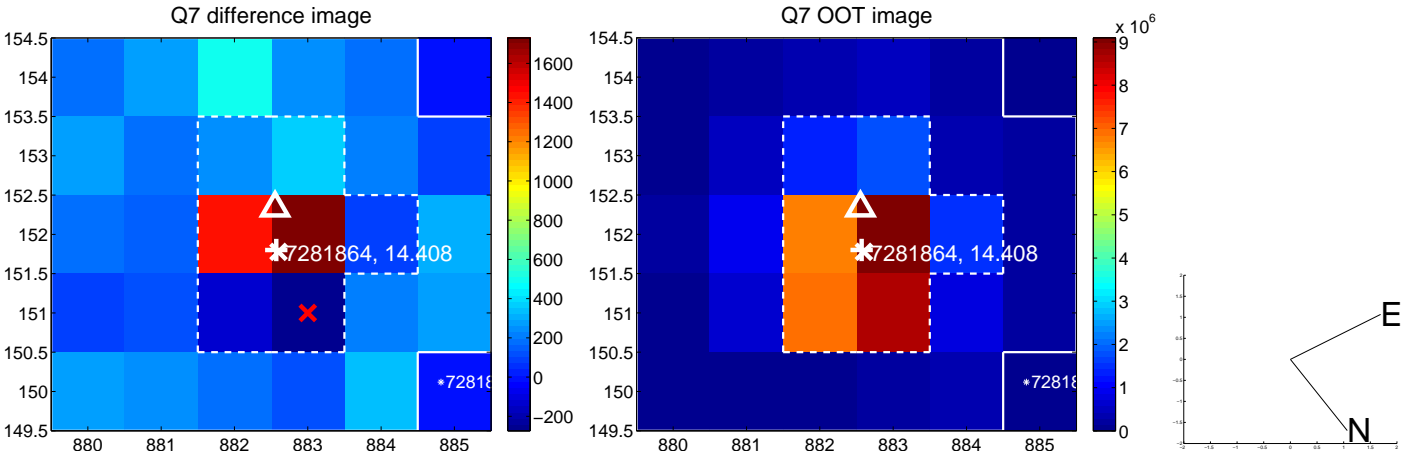
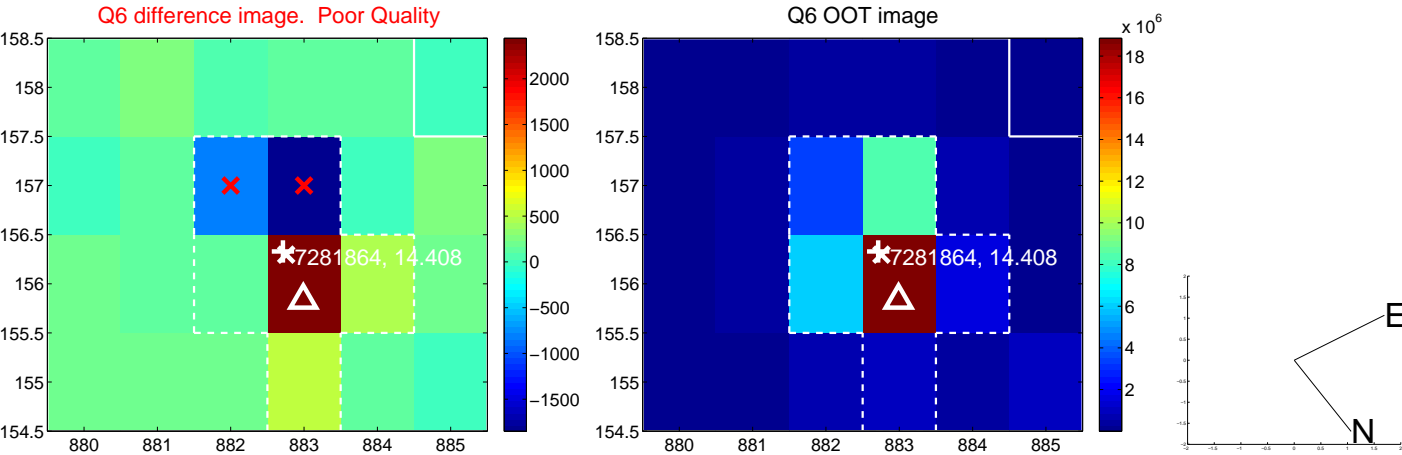
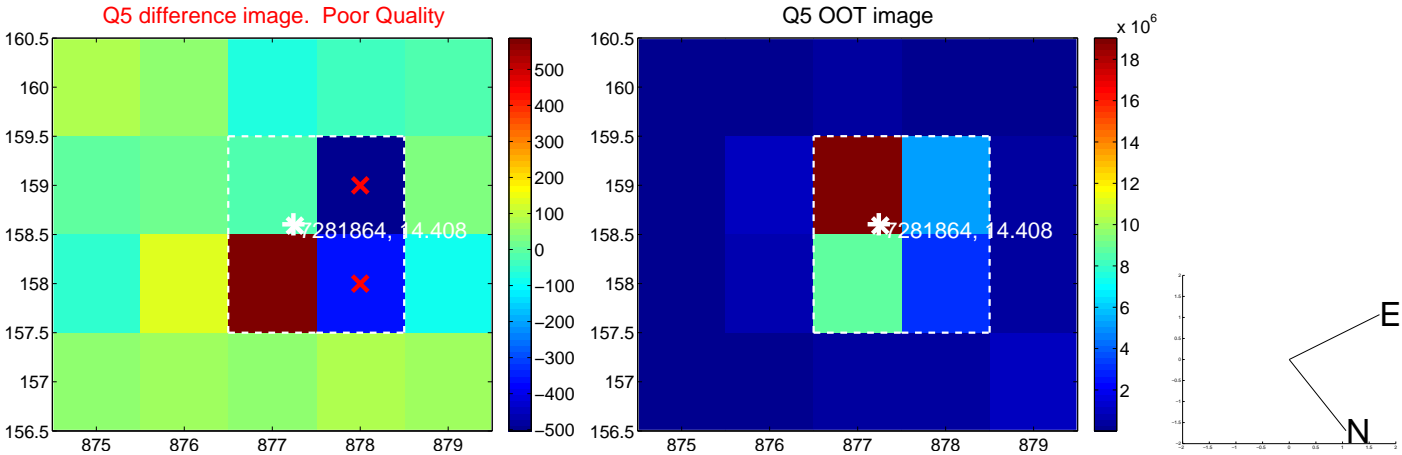


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

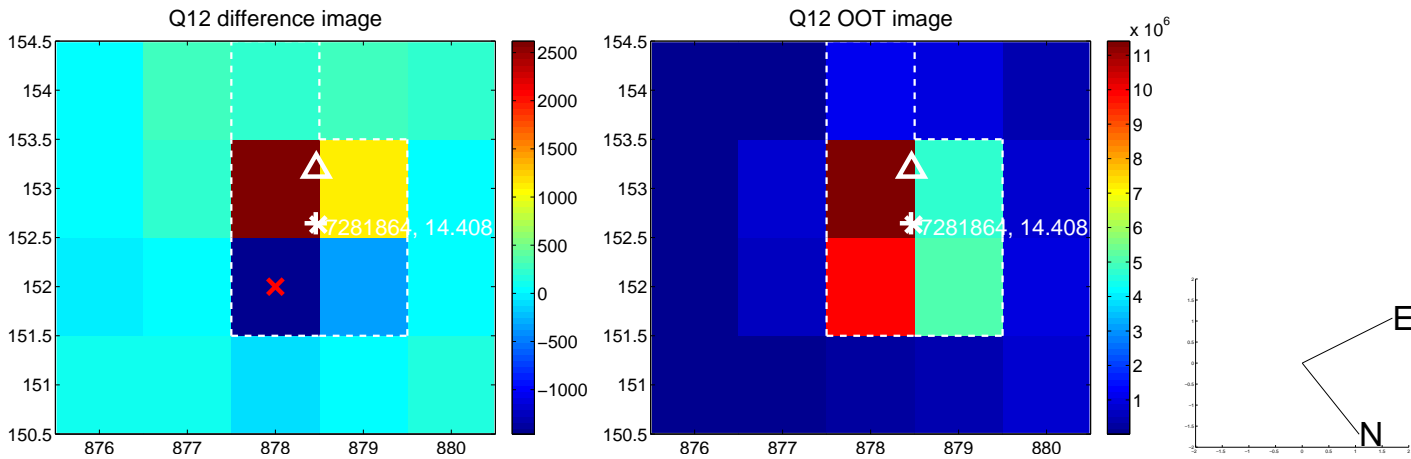
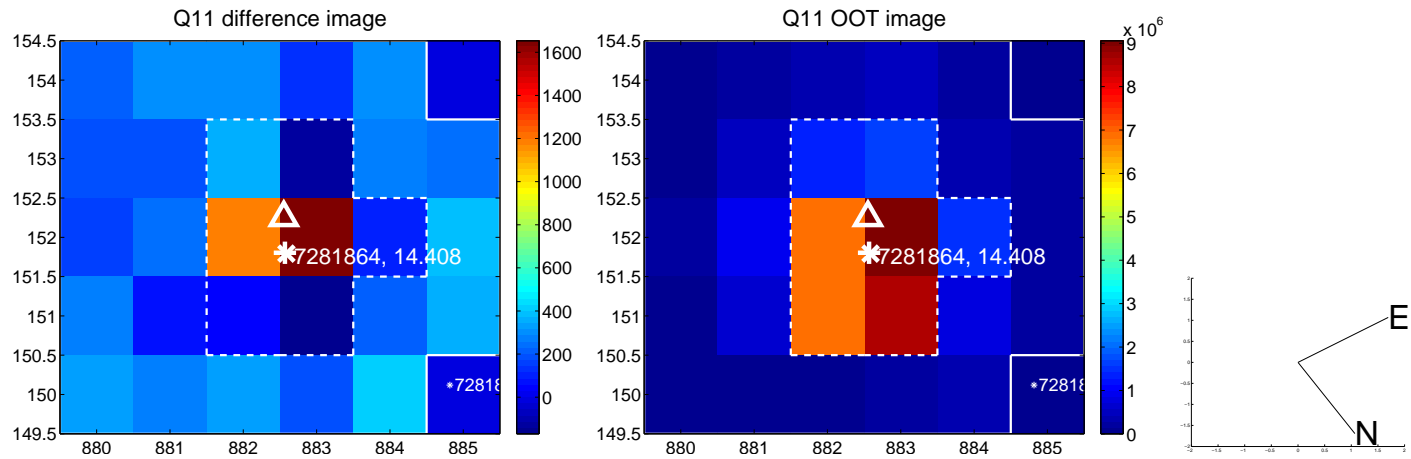
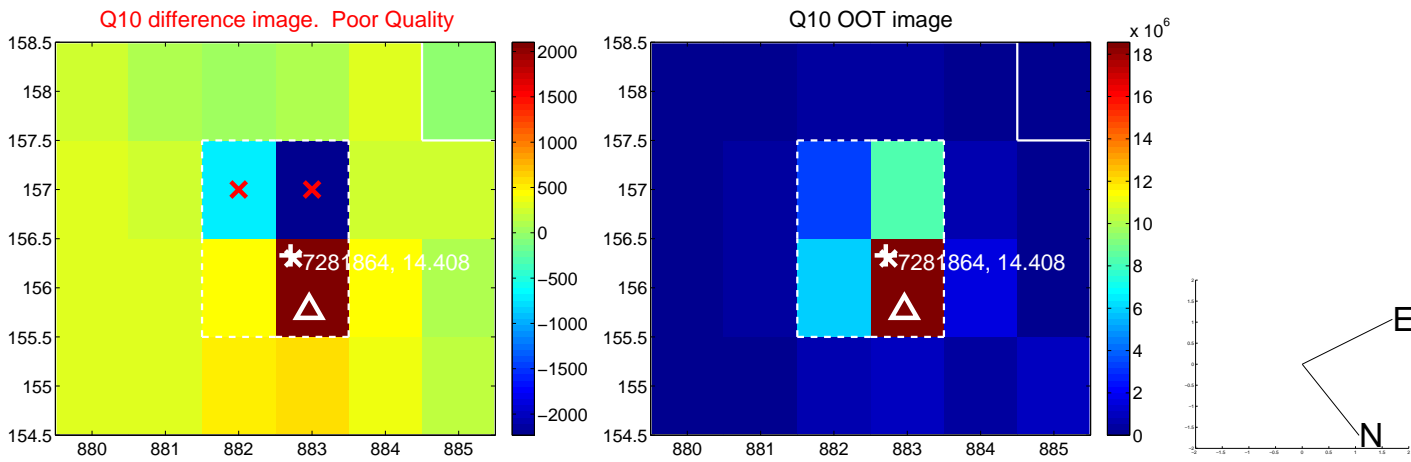
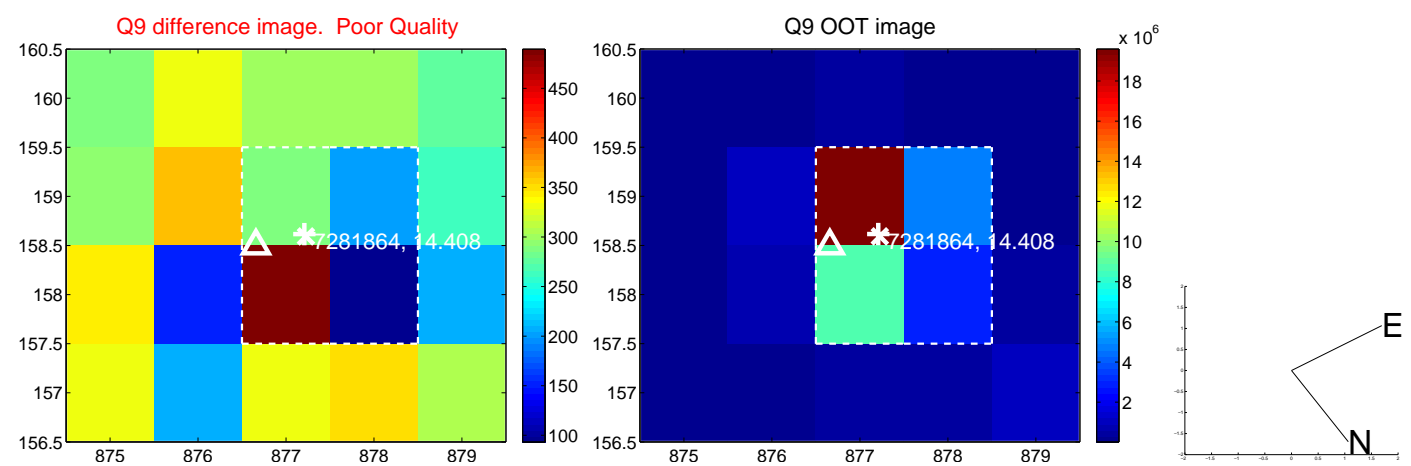
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



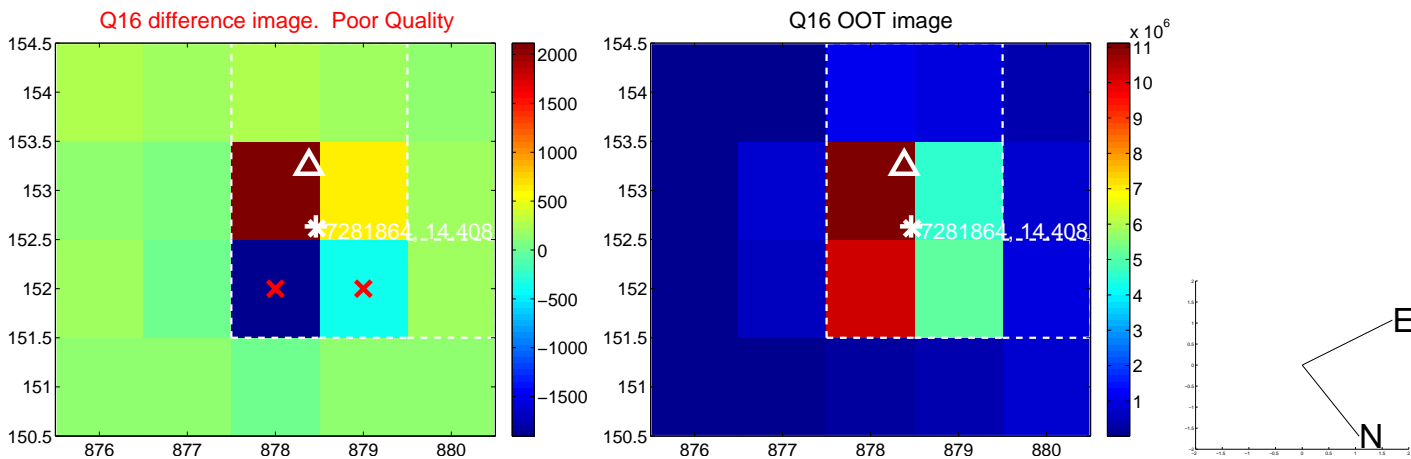
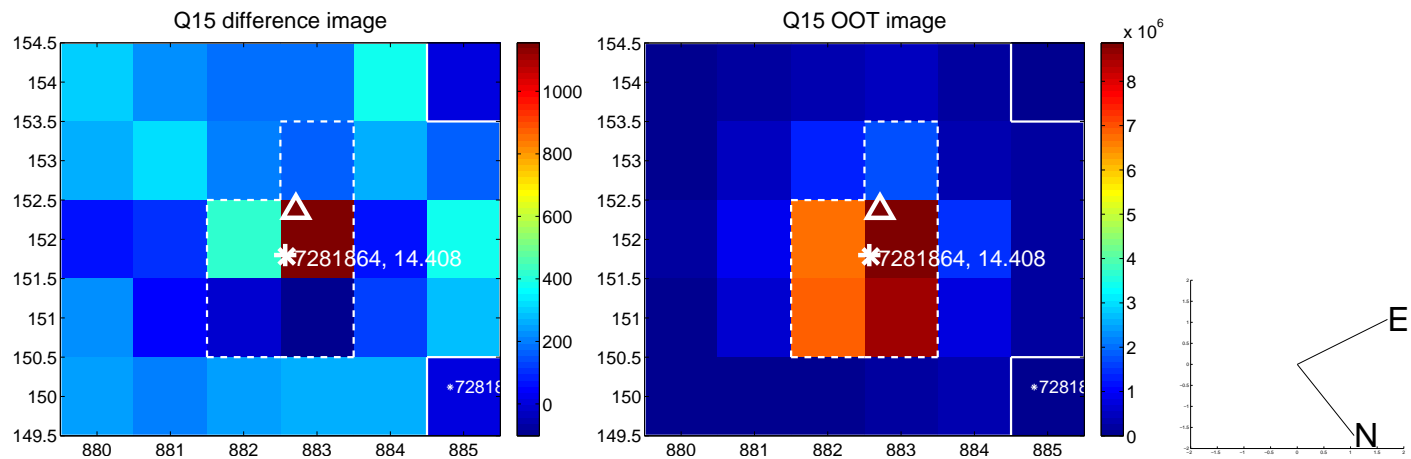
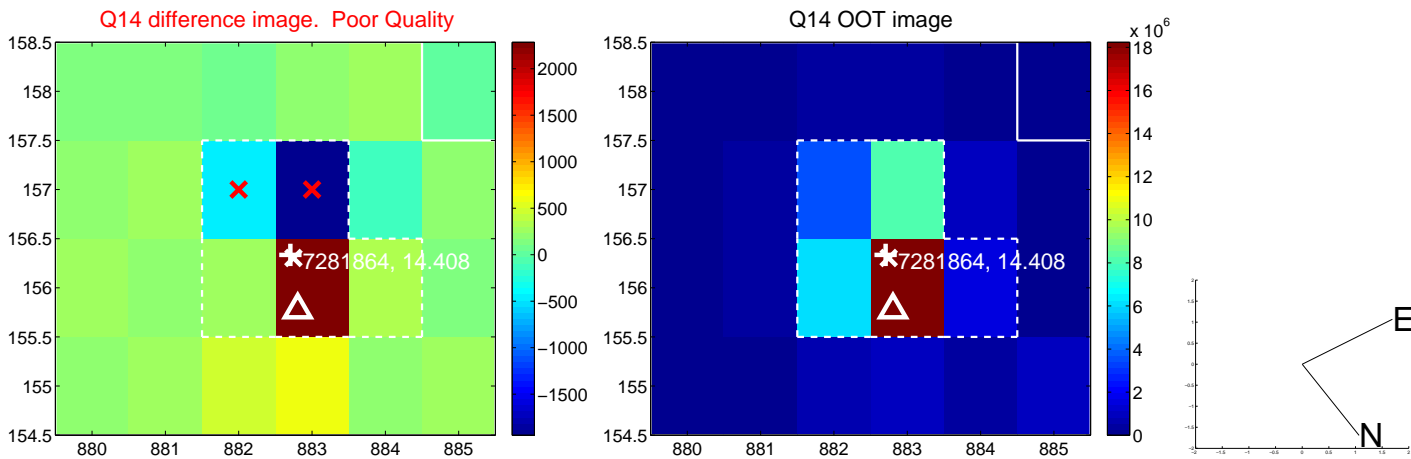
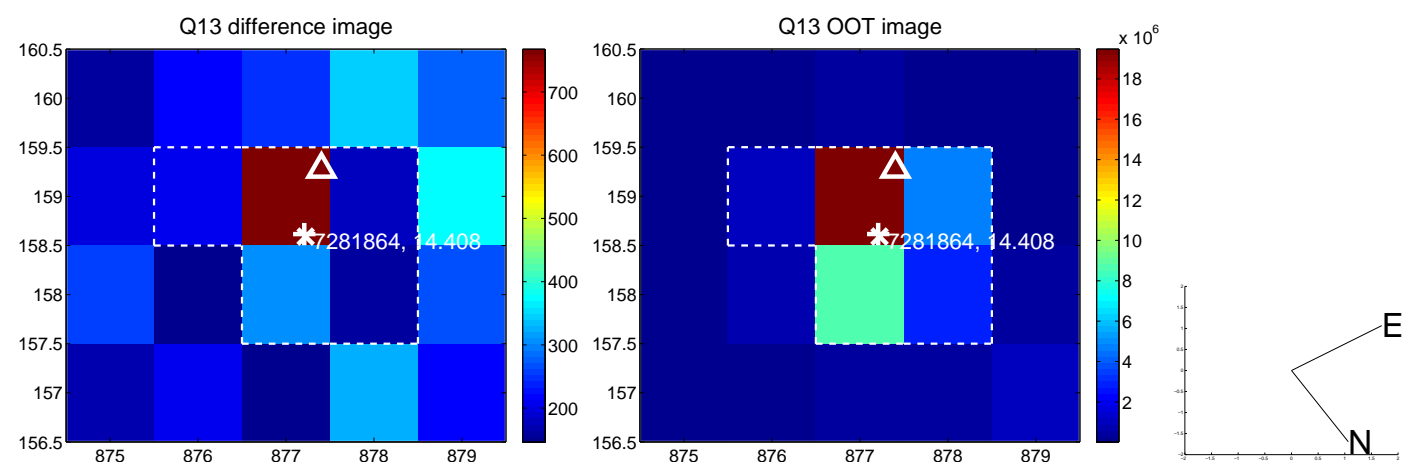
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



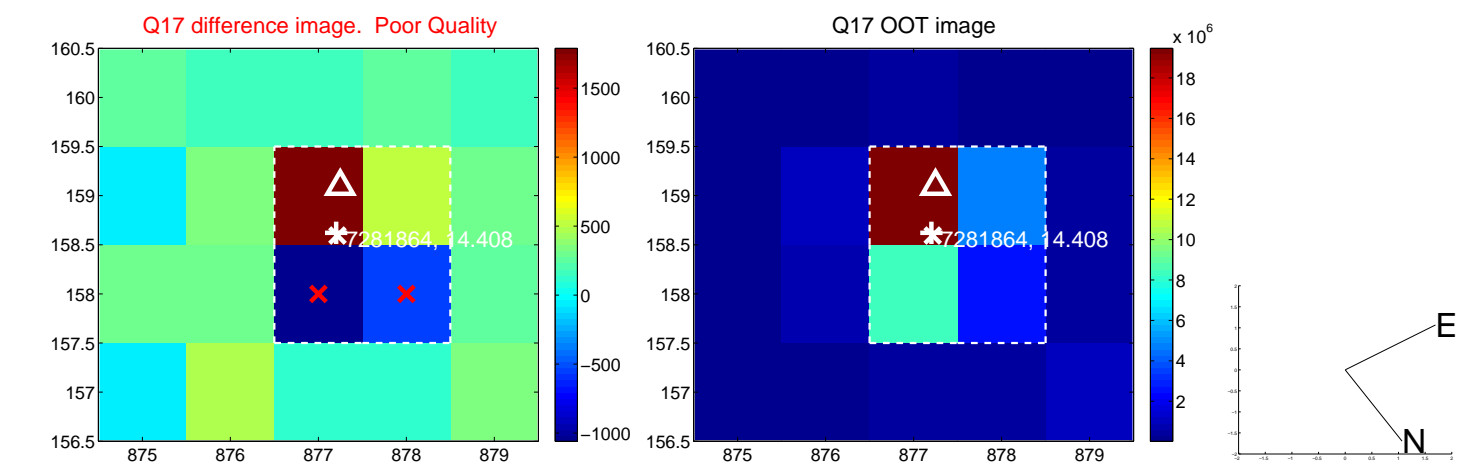
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



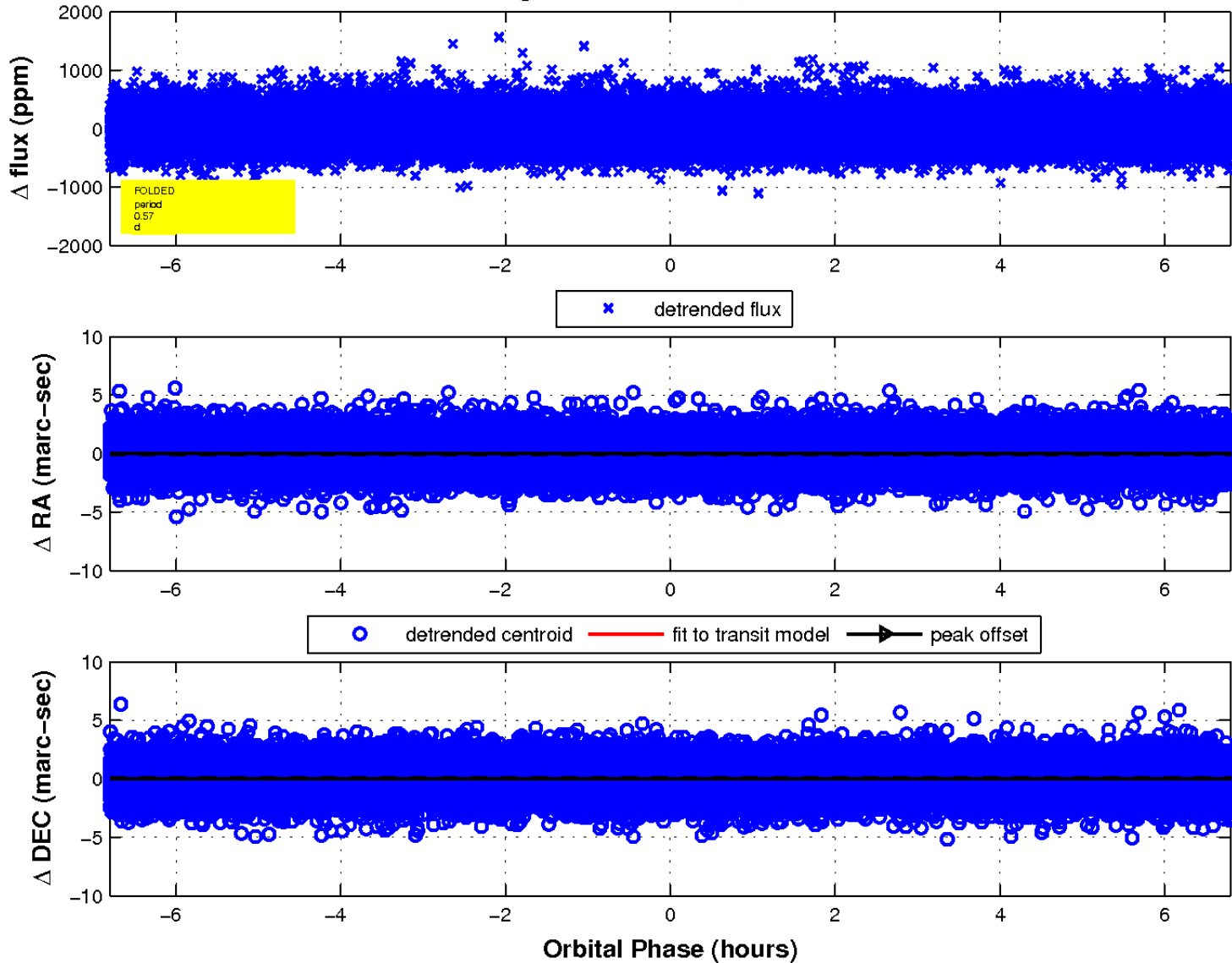
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

