

KIC 008572324

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})
008572324-01	OBS	No	1.382995	131.909078	39.6	12.467	10.5	15.3	1.54	7365	1.12	7772.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008572324-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—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.

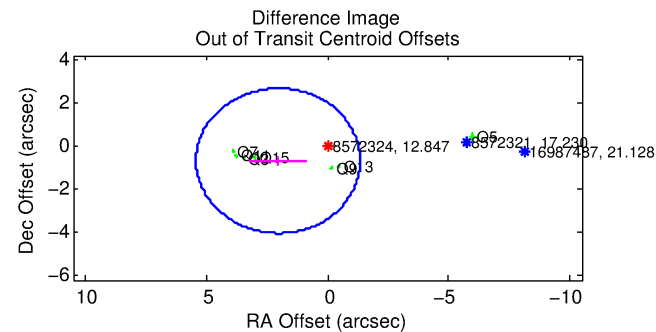
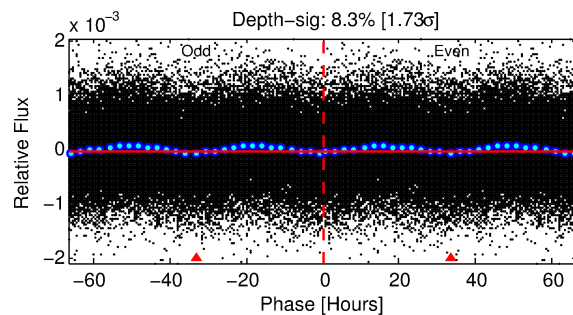
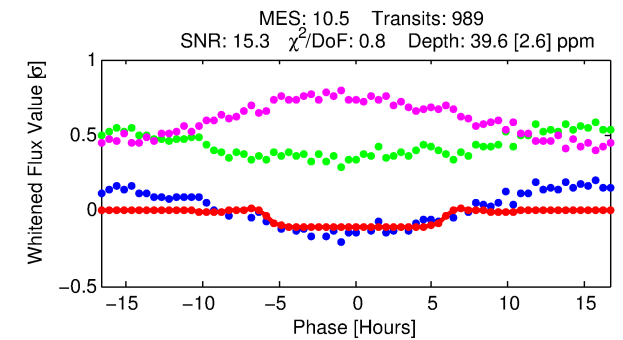
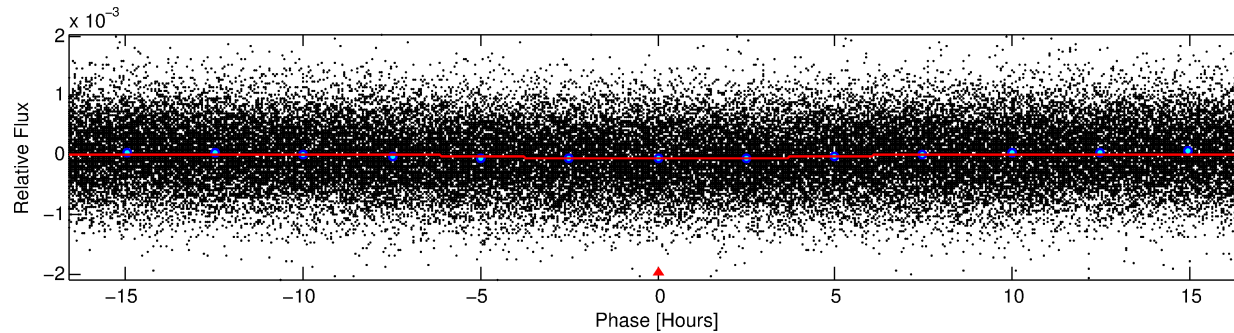
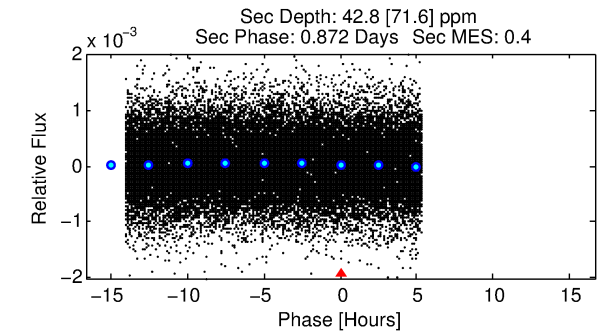
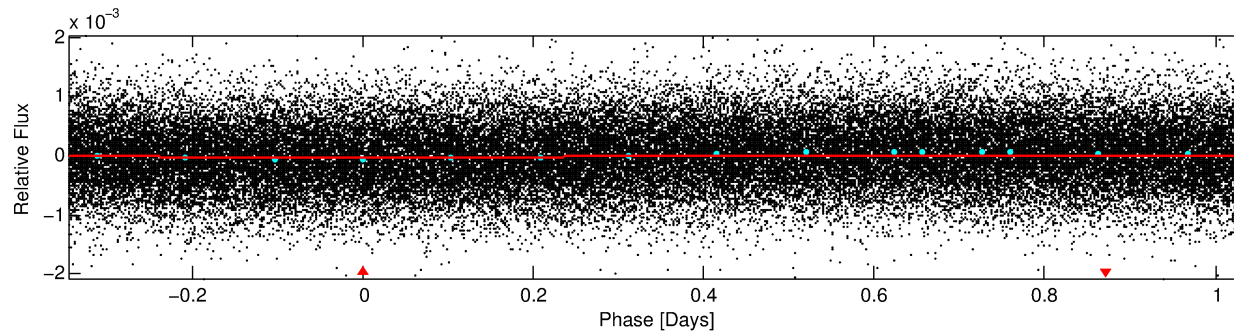
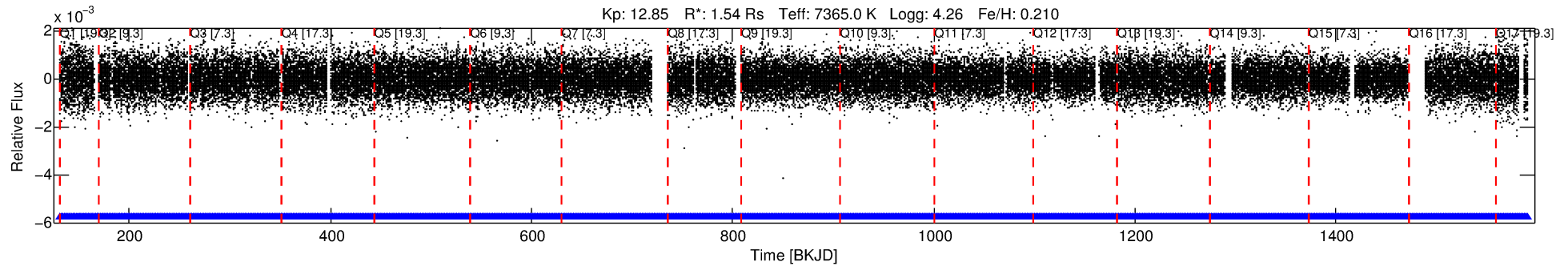
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008572324-01

No Significant Match Found

DV One-Page Summary

KIC: 8572324 Candidate: 1 of 1 Period: 1.383 d



DV Fit Results:

Period = 1.38300 [0.00002] d
Epoch = 131.9091 [0.0078] BKJD
Rp/R* = 0.0067 [0.0012]
a/R* = 1.02 [0.05]
b = 0.90 [0.24]
Seff = 7772.26 [3762.00]
Teff = 2394 [290] K
Rp = 1.13 [0.47] Re
a = 0.0284 [0.0088] AU
Ag = 14.99 [26.53] [0.53σ]
Teffp = 7284 [3138] K [1.55σ]

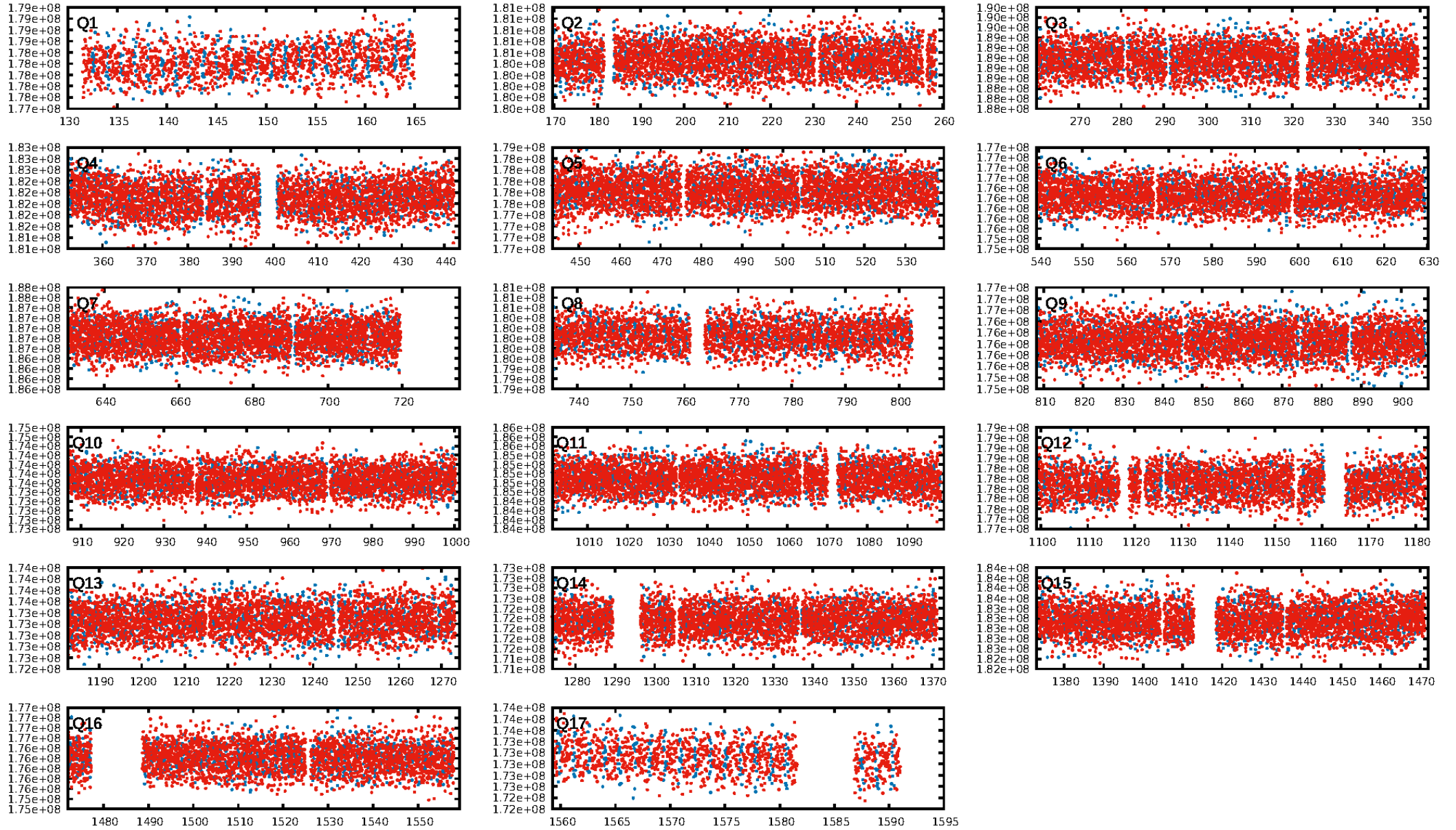
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [943/943]
GhostDiagnostic-chr: 3.32
Centroid-sig: 0.0%
Centroid-so: 0.474 arcsec [1.35σ]
OotOffset-rm: 2.149 arcsec [1.91σ]
KicOffset-rm: 2.057 arcsec [1.74σ]
OotOffset-st: 0/4/0/3 [7]
KicOffset-st: 0/4/0/3 [7]
DiffImageQuality-fgm: 0.57 [4/7]
DiffImageOverlap-fno: 1.00 [17/17]

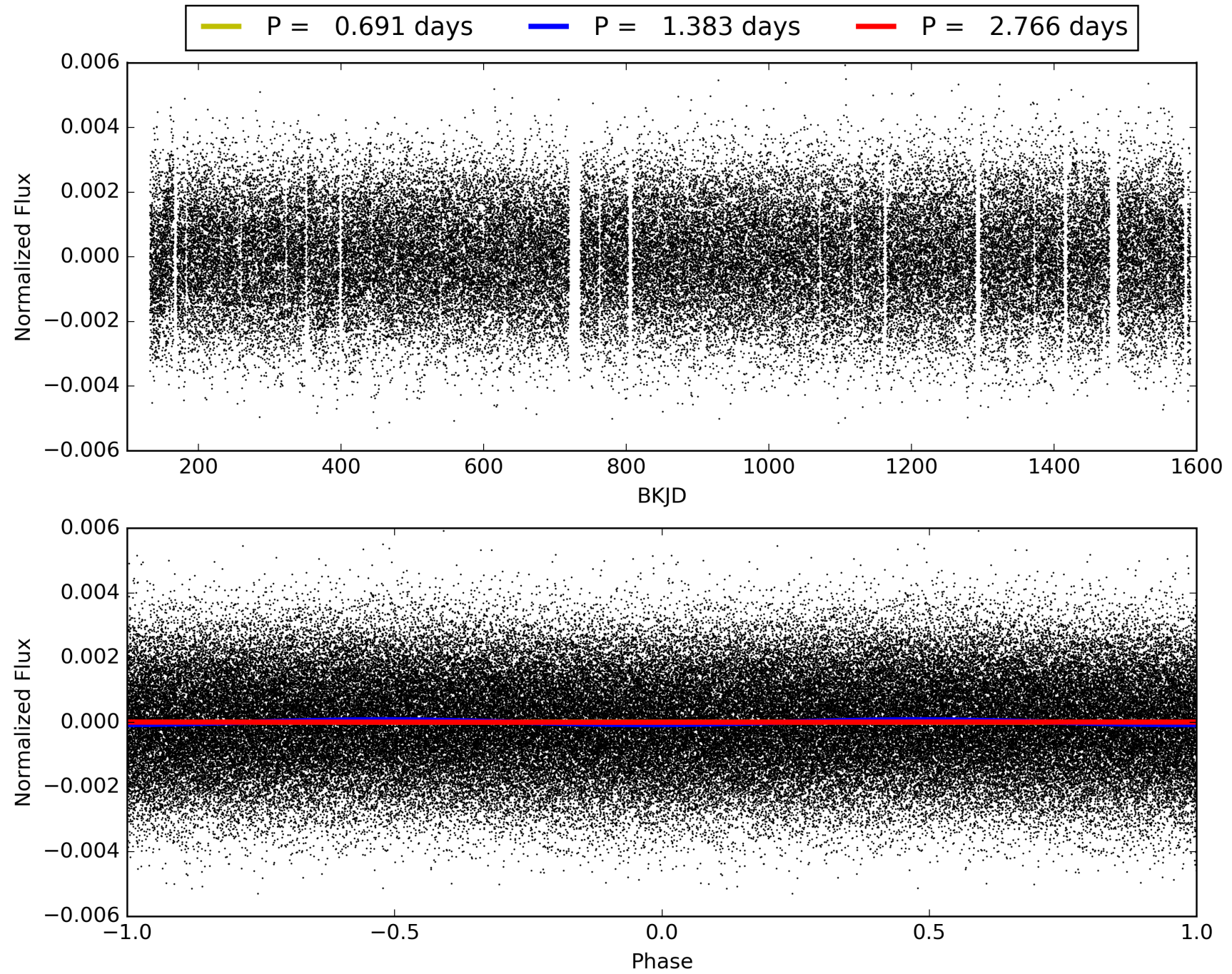
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:24:11 Z

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

TCE 008572324-01, PDC Light Curves

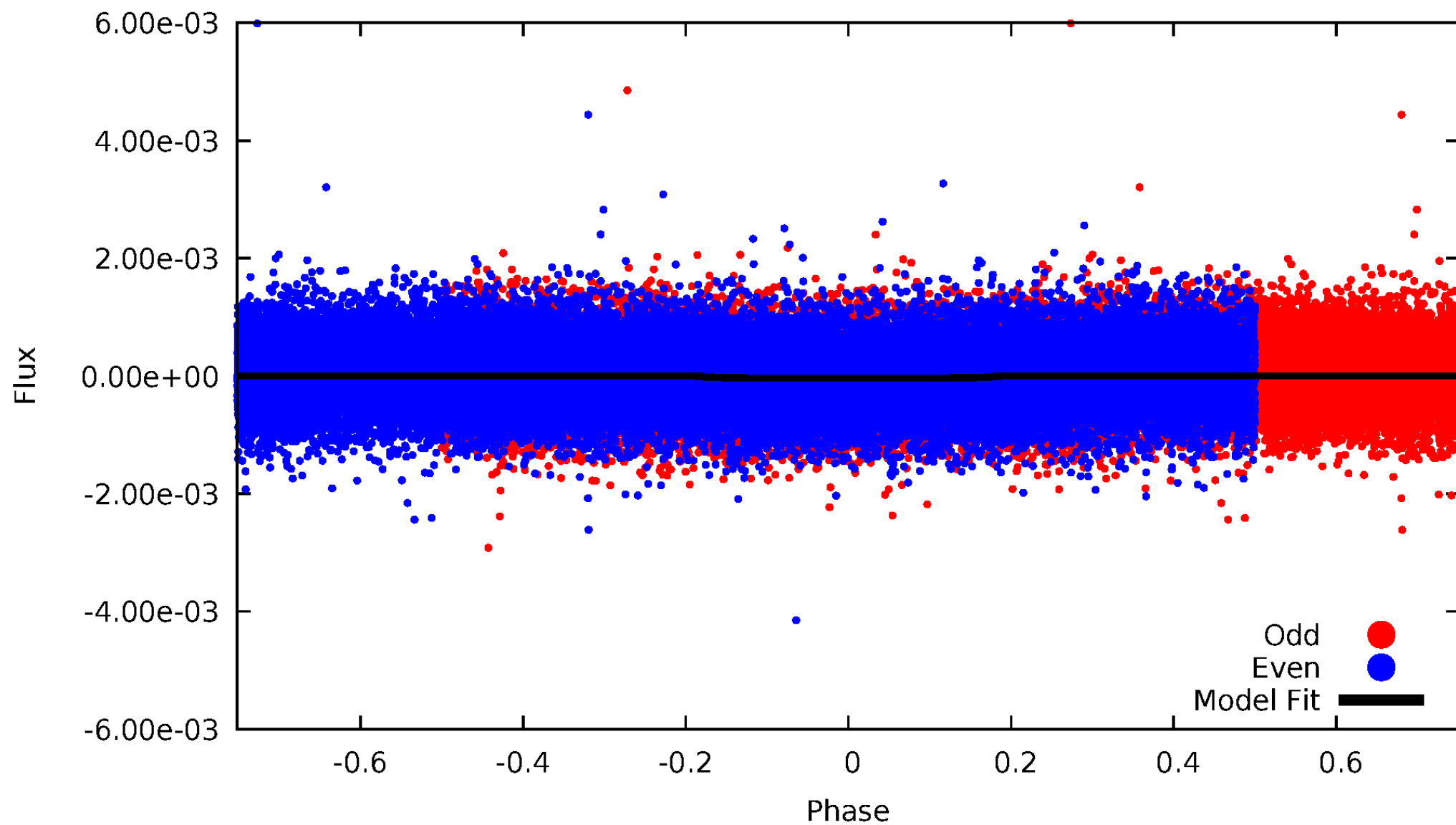


TCE 008572324-01



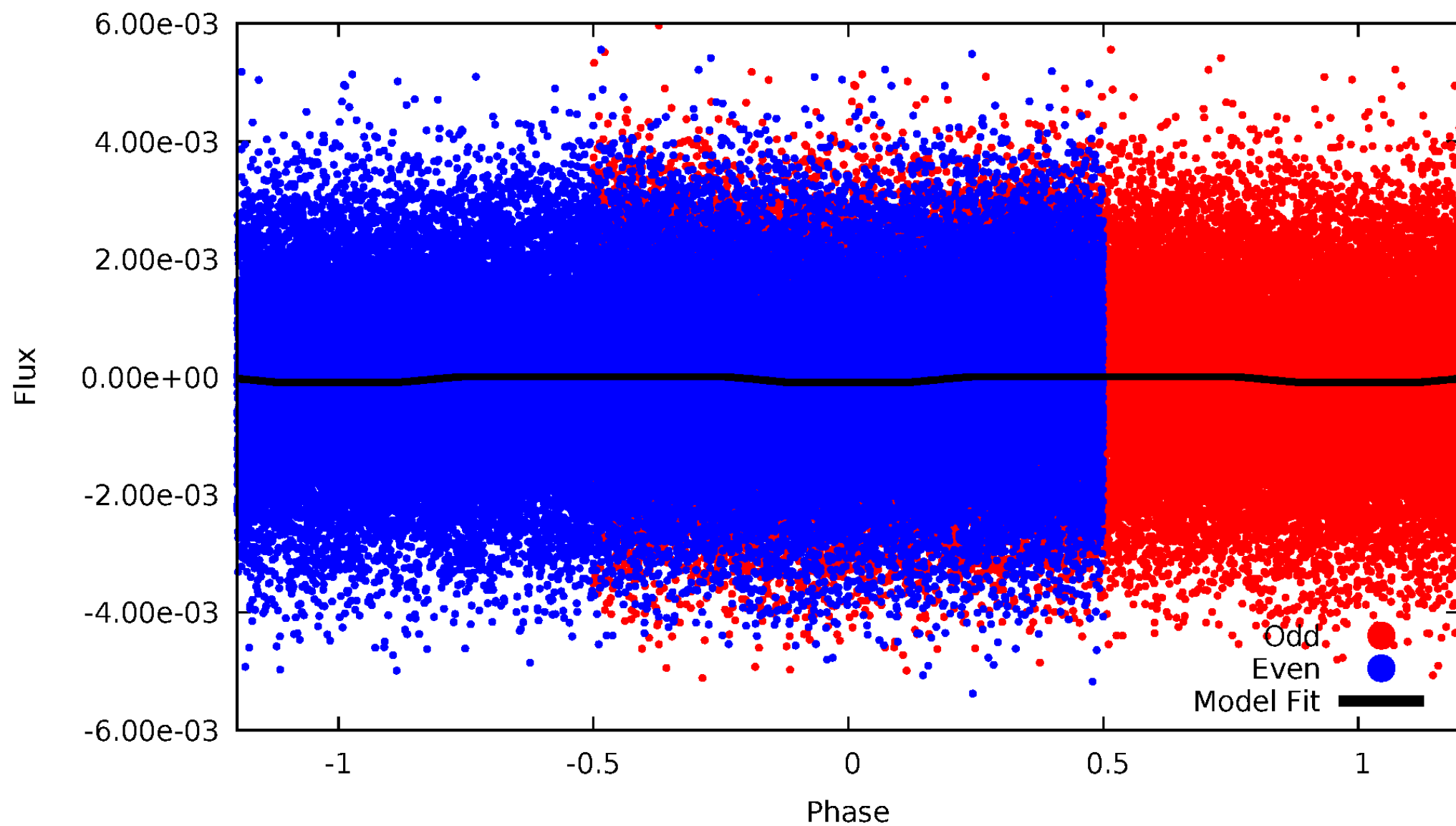
DV Odd/Even

TCE 008572324-01

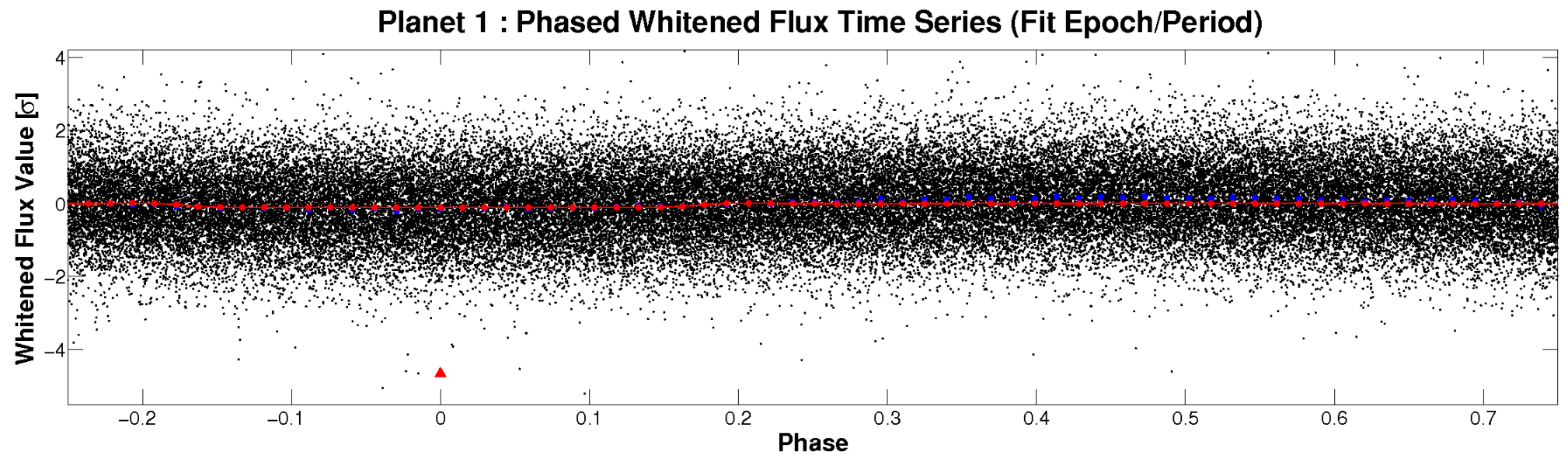
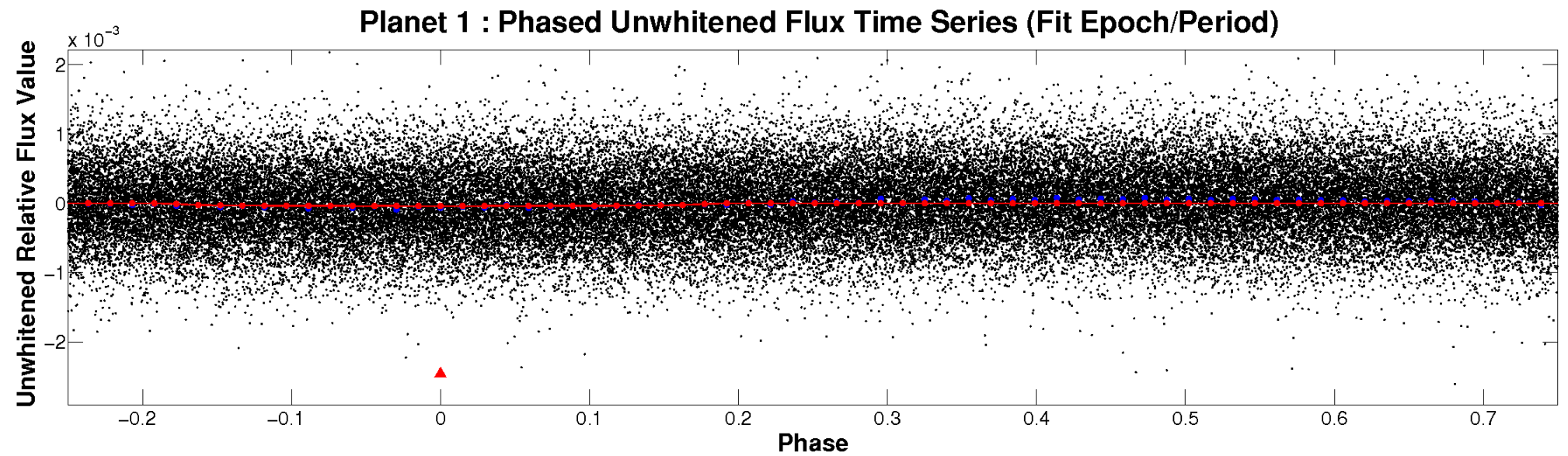


ALT Odd/Even

TCE 008572324-01

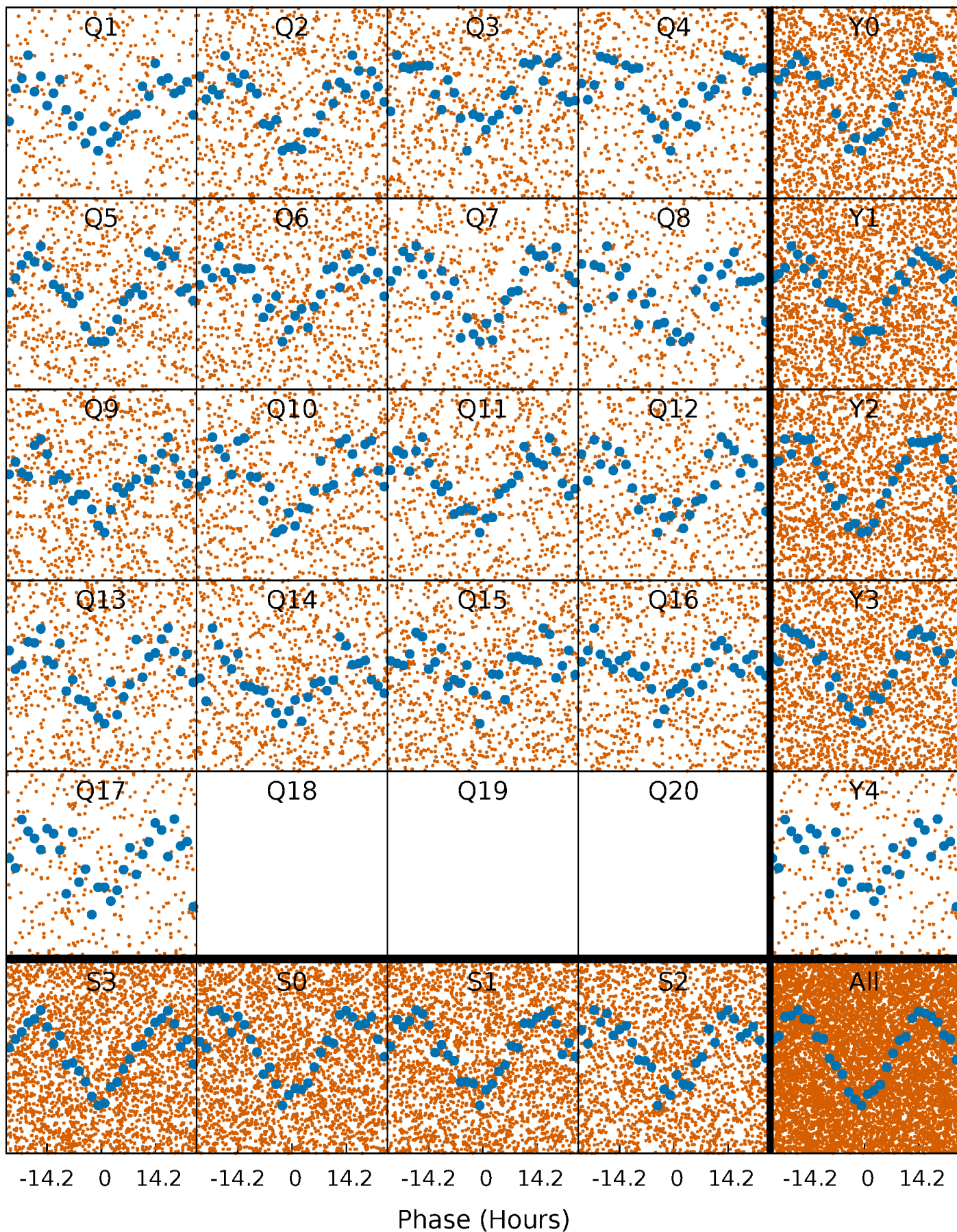


Non-Whitened Vs. Whitened Light Curve



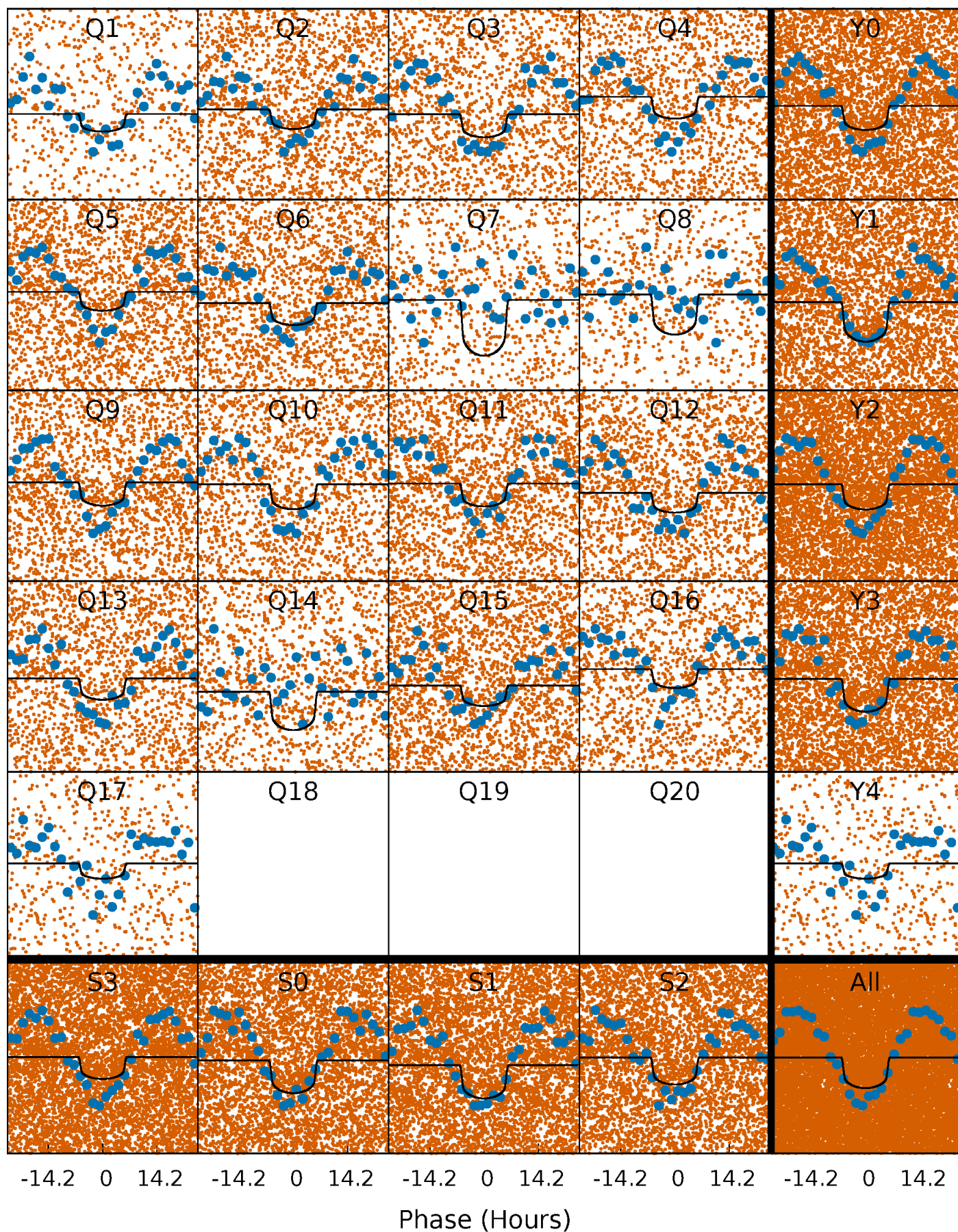
PDC Quarter-Phased Transit Curves

TCE 008572324-01 P= 1.382995 Days $T_0=131.909078$ (BKJD)



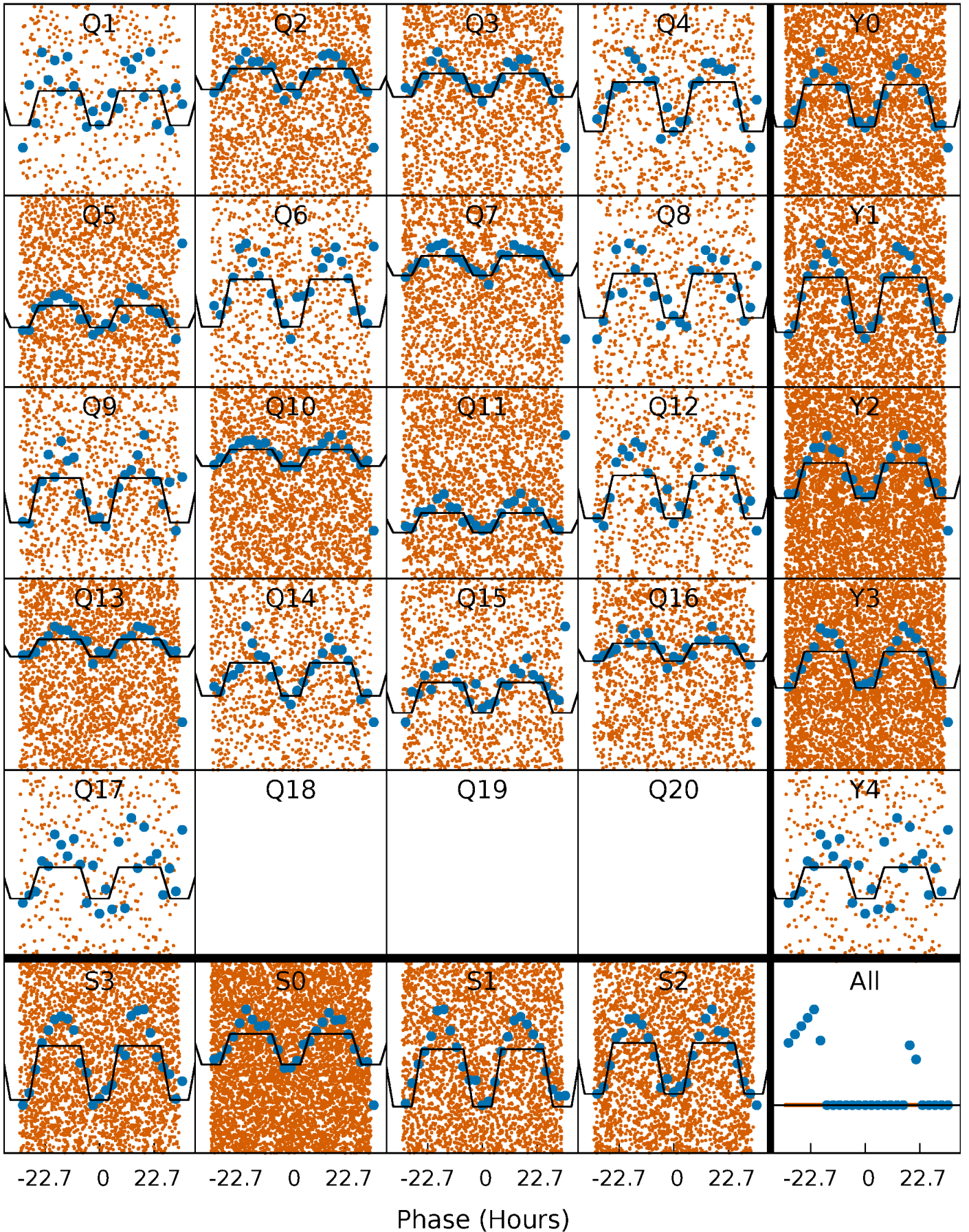
DV Quarter-Phased Transit Curves

TCE 008572324-01 P= 1.382995 Days $T_0=131.909078$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

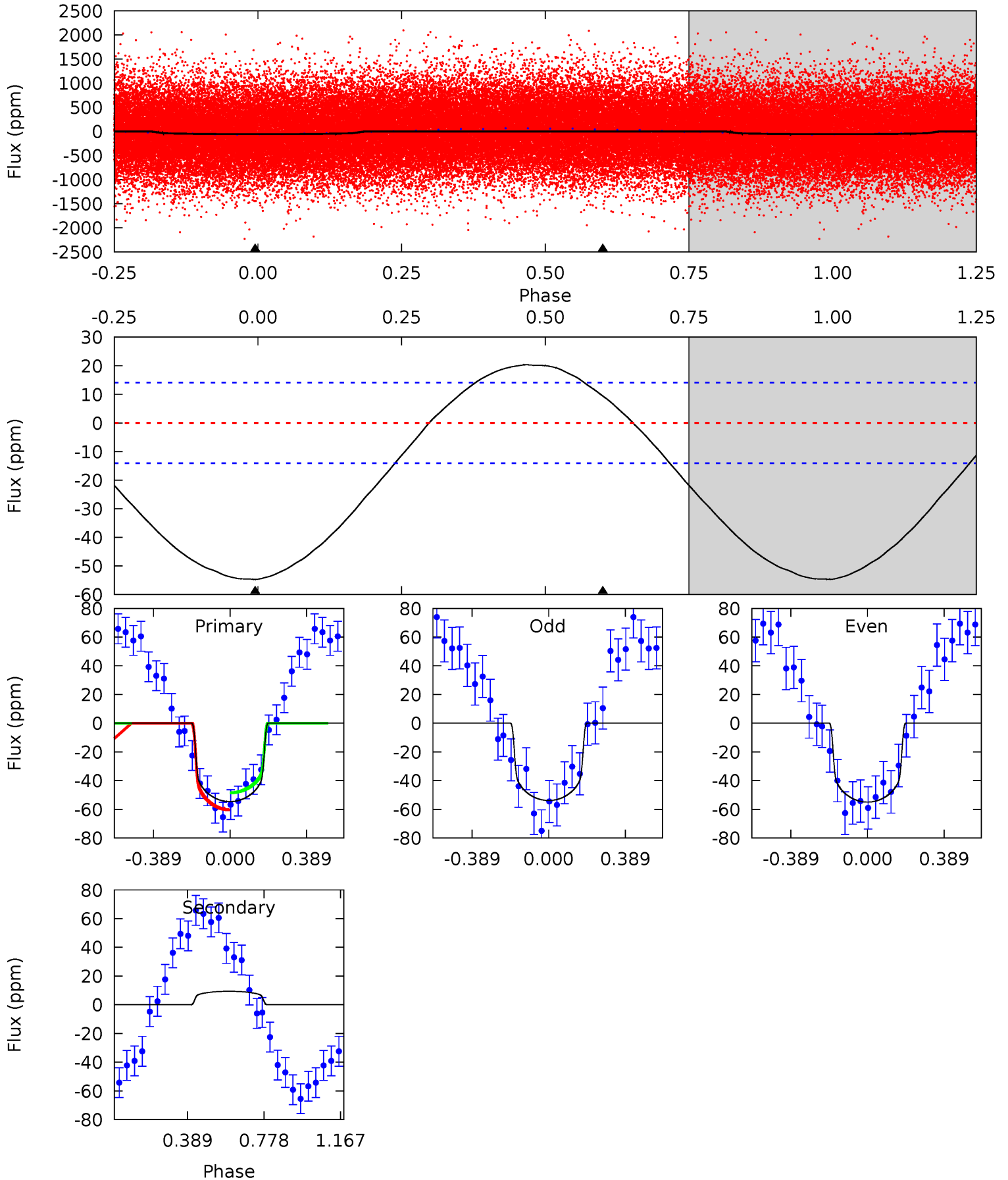
TCE 008572324-01 P= 1.382888 Days $T_0=131.933373$ (BKJD)



DV Model-Shift Uniqueness Test

008572324-01, P = 1.382995 Days, E = 130.526083 Days

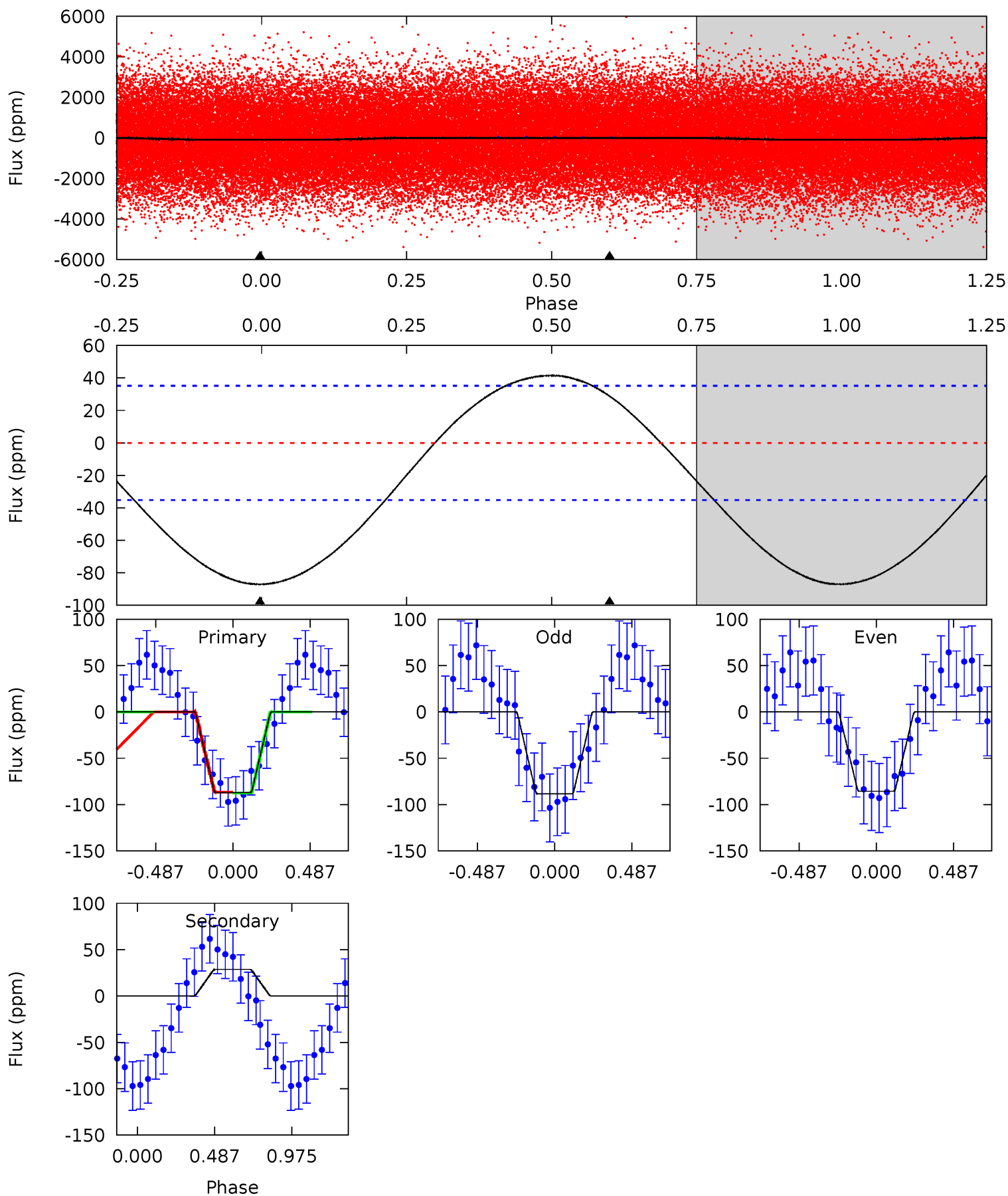
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	-2.85	0	0	4.27	0.86	1.93	16.5	16.5	-2.85	-2.85	0.17	0.96	0.27	1.80



Alt Model-Shift Uniqueness Test

008572324-01, P = 1.382888 Days, E = 130.550485 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	-3.45	0	0	4.22	0.69	1.35	10.4	10.4	-3.45	-3.45	0.17	1.09	0.32	0.06



Stellar Parameters For KIC 008572324

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7365^{+206}_{-353}	$4.265^{+0.060}_{-0.240}$	$0.210^{+0.150}_{-0.400}$	$1.542^{+0.575}_{-0.192}$	$1.610^{+0.214}_{-0.214}$	$0.618^{+0.201}_{-0.348}$
	+3%/-5%	+1%/-6%	+71%/-190%	+37%/-12%	+13%/-13%	+32%/-56%
Source	KIC0	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 008572324-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	9 ± 3	$1.19^{+0.29}_{-0.26}$	3413^{+301}_{-190}	-5060^{+486}_{-635}	$-2.778^{+1.212}_{-2.189}$
Alt.	29 ± 8	$1.71^{+0.38}_{-0.28}$	3405^{+283}_{-208}	-5484^{+471}_{-509}	$-4.153^{+1.601}_{-2.498}$

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 $A_{obs} \gg 1.0$

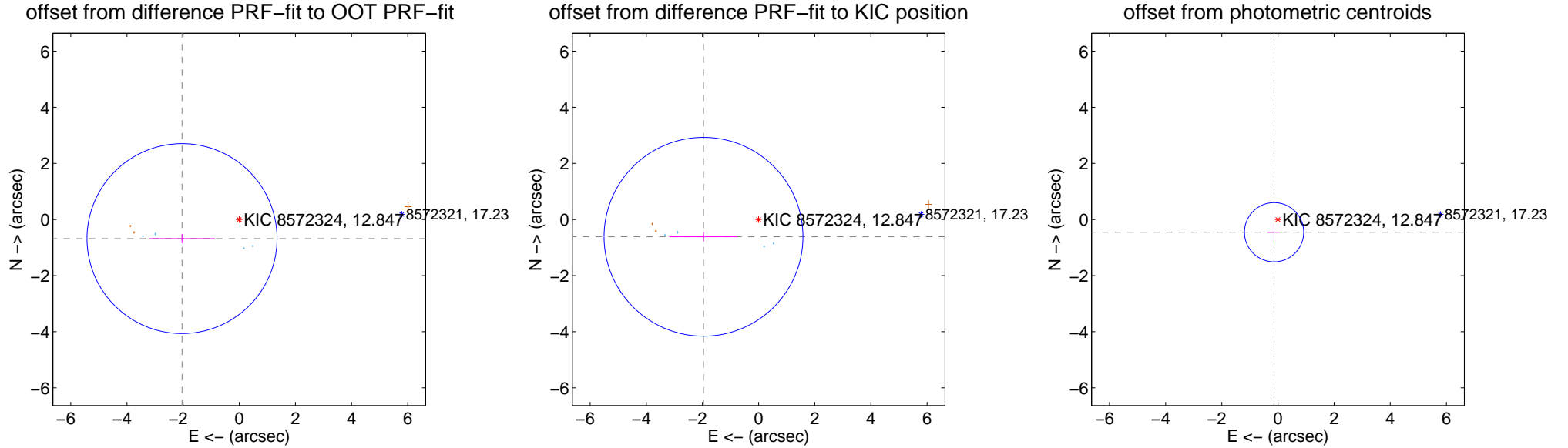
DV Centroid Data

Supplemental centroid analysis for 008572324-01. Kepler magnitude: 12.85. Transit SNR 15.33

There are 4 quarters with good PRF difference image offsets

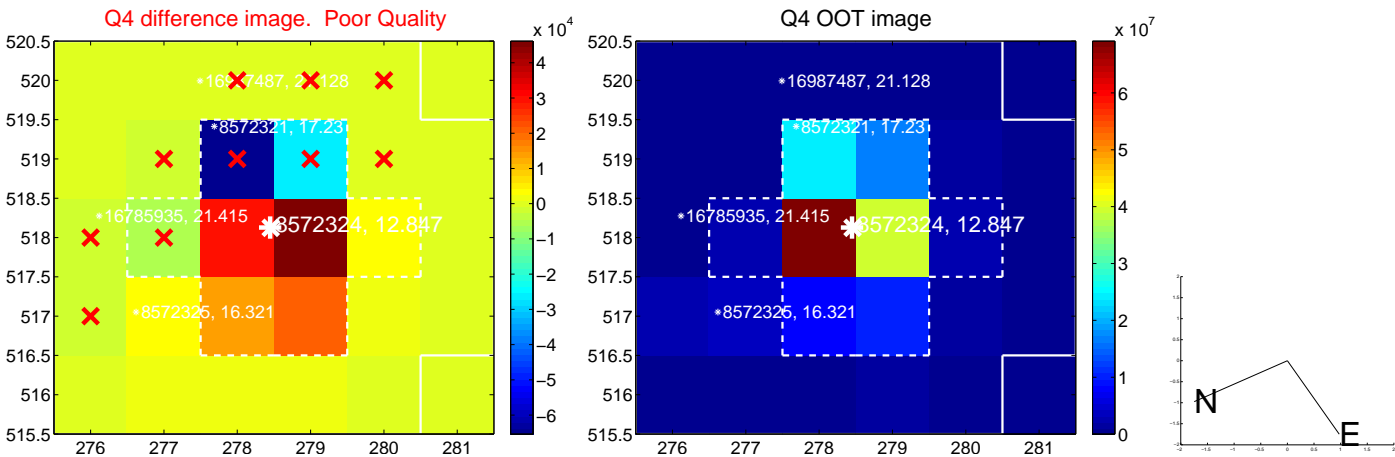
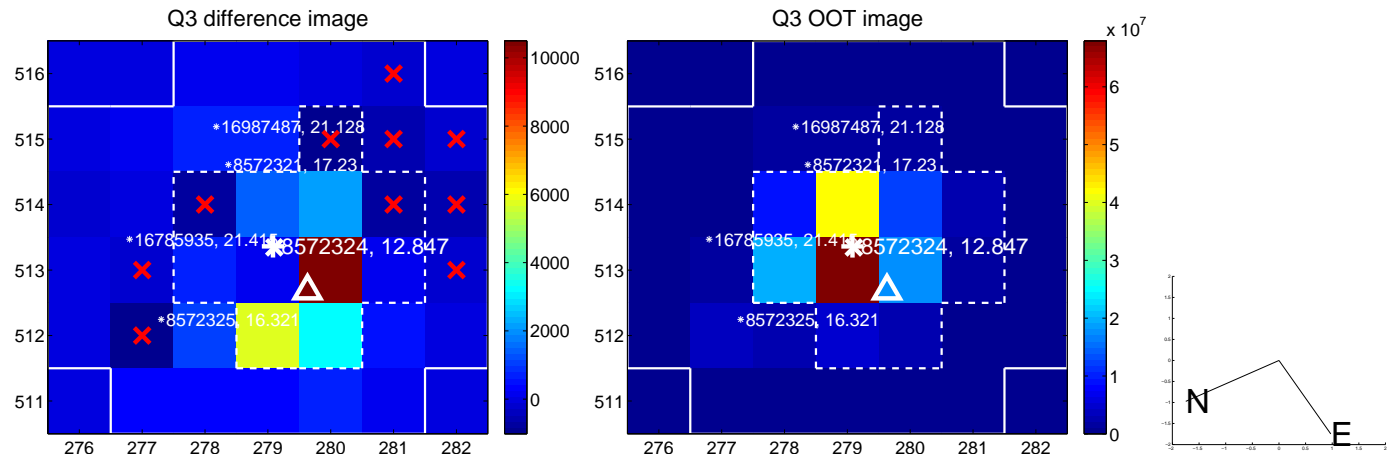
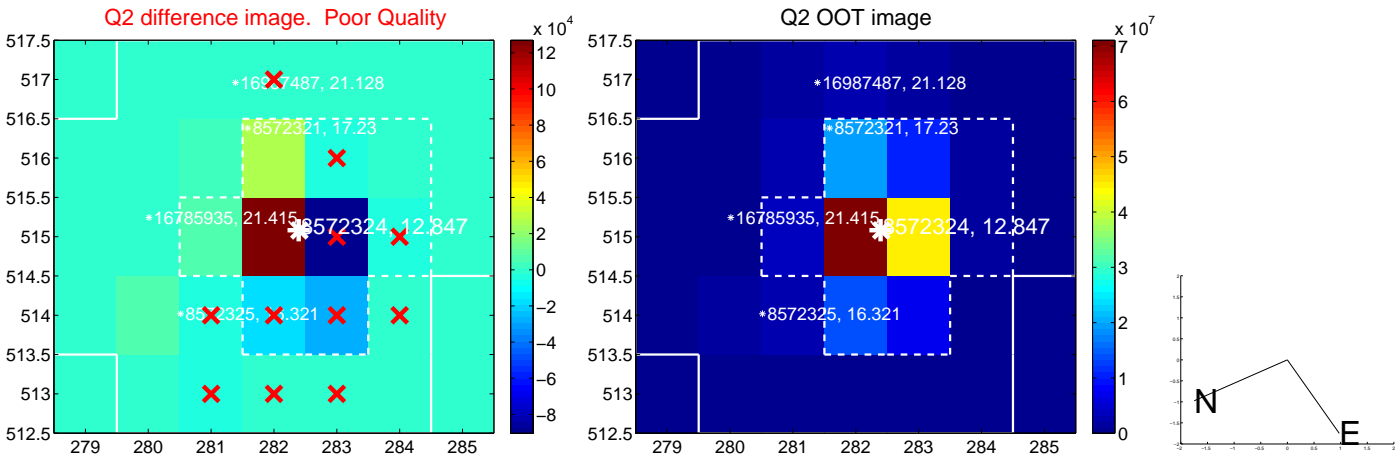
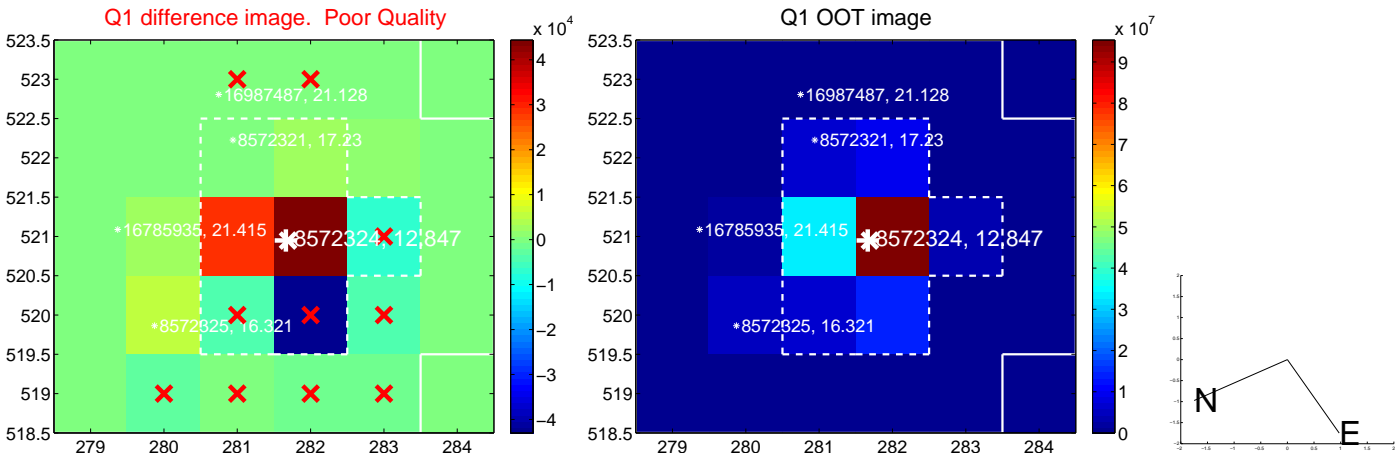
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.149 ± 1.128	1.91	2.039 ± 1.172	-0.681 ± 0.167
PRF-fit source offset from KIC position	2.057 ± 1.181	1.74	1.963 ± 1.215	-0.616 ± 0.167
photometric centroid source offset	0.47 ± 0.35	1.35	0.14 ± 0.22	-0.45 ± 0.36

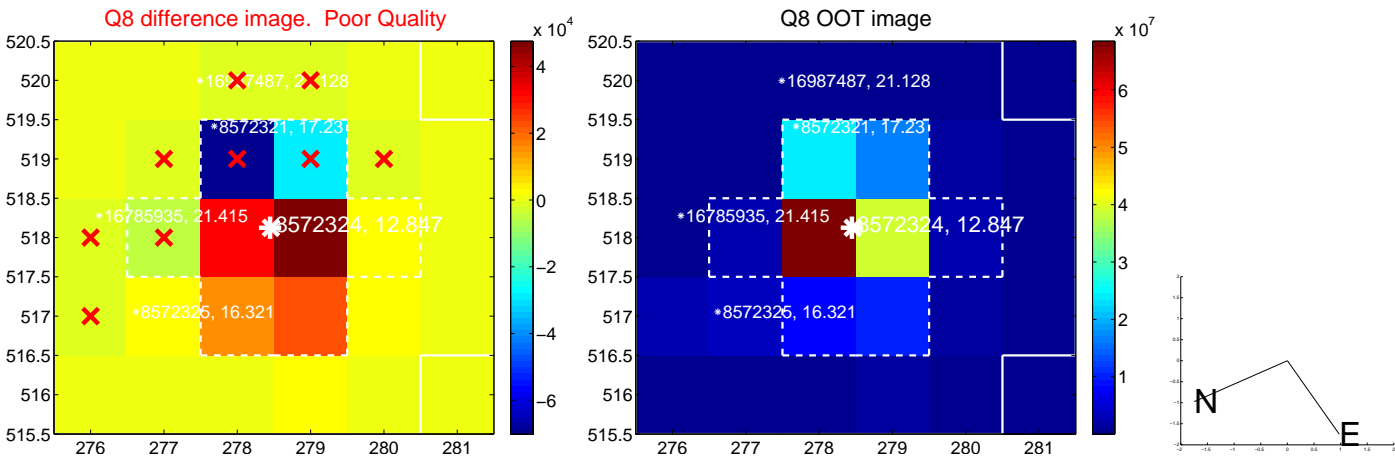
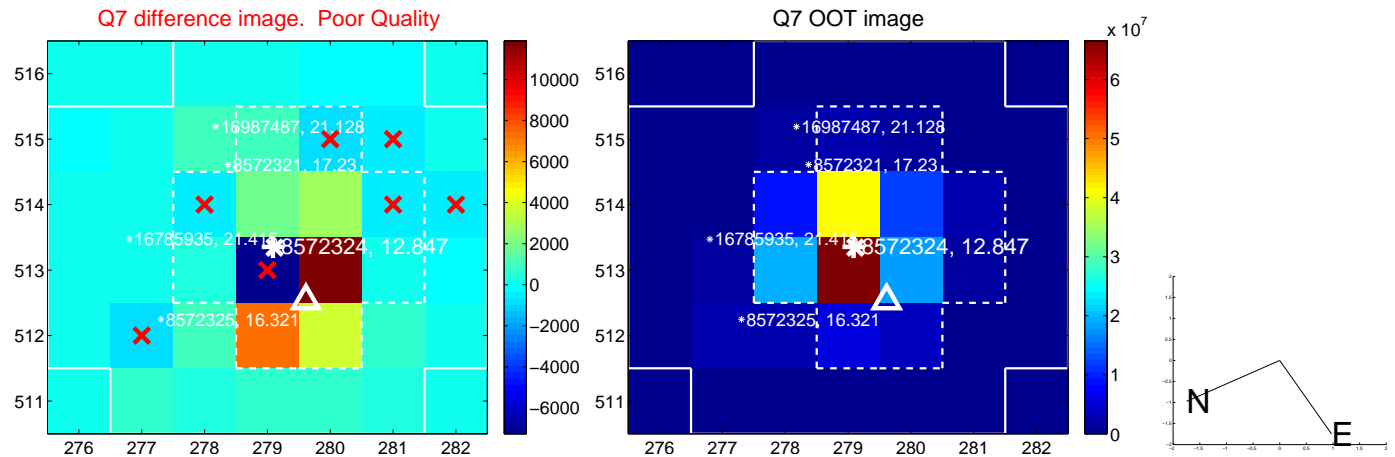
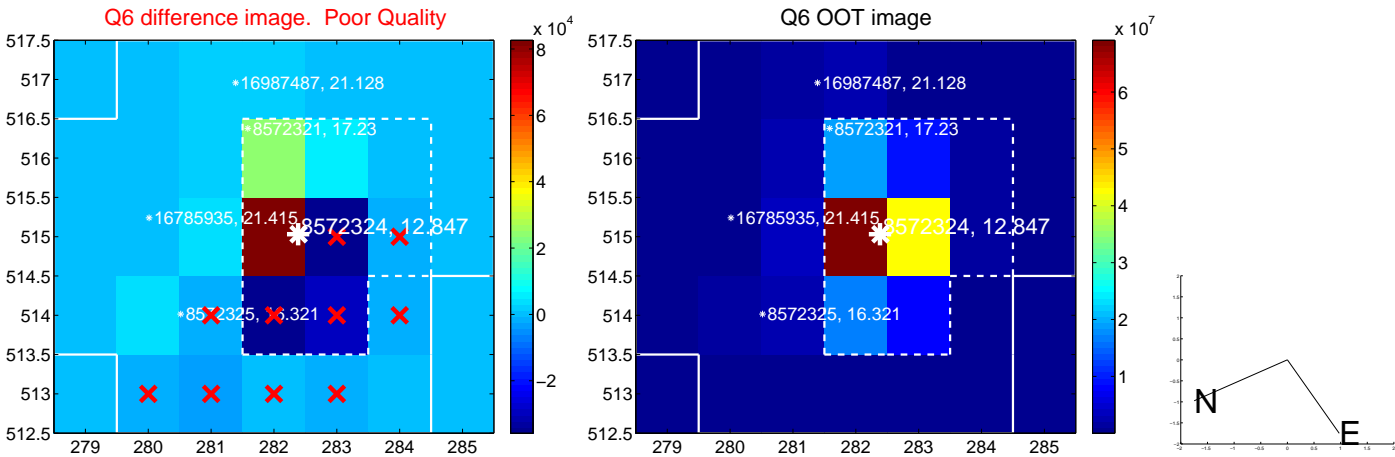
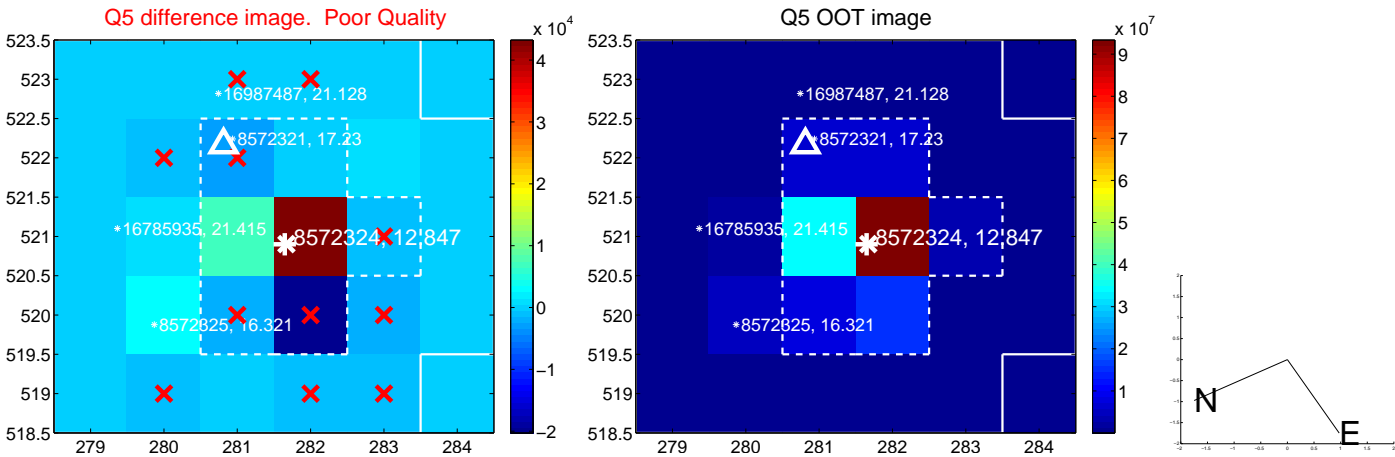


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

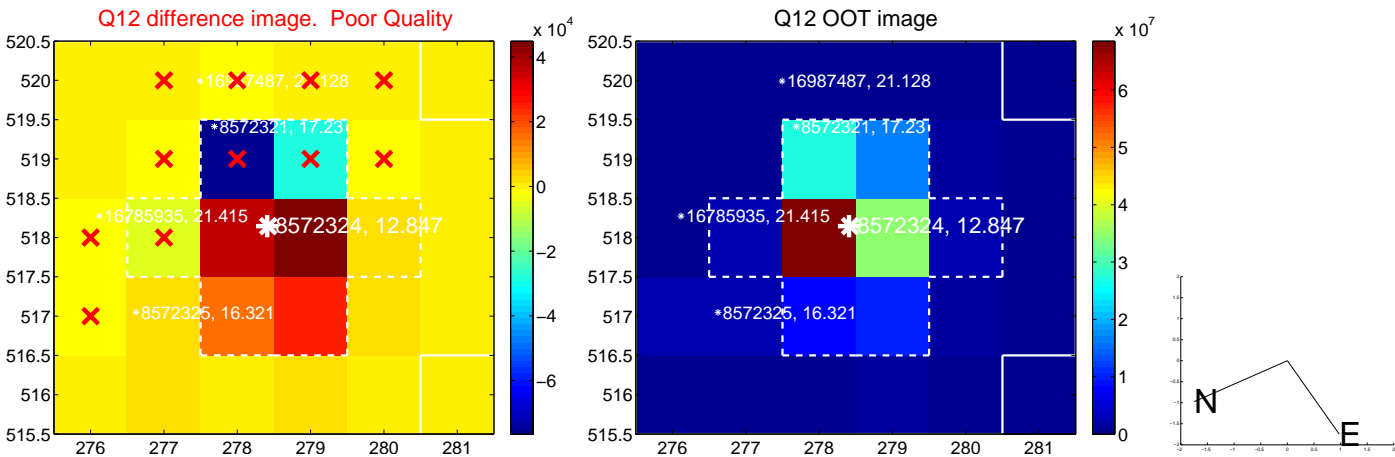
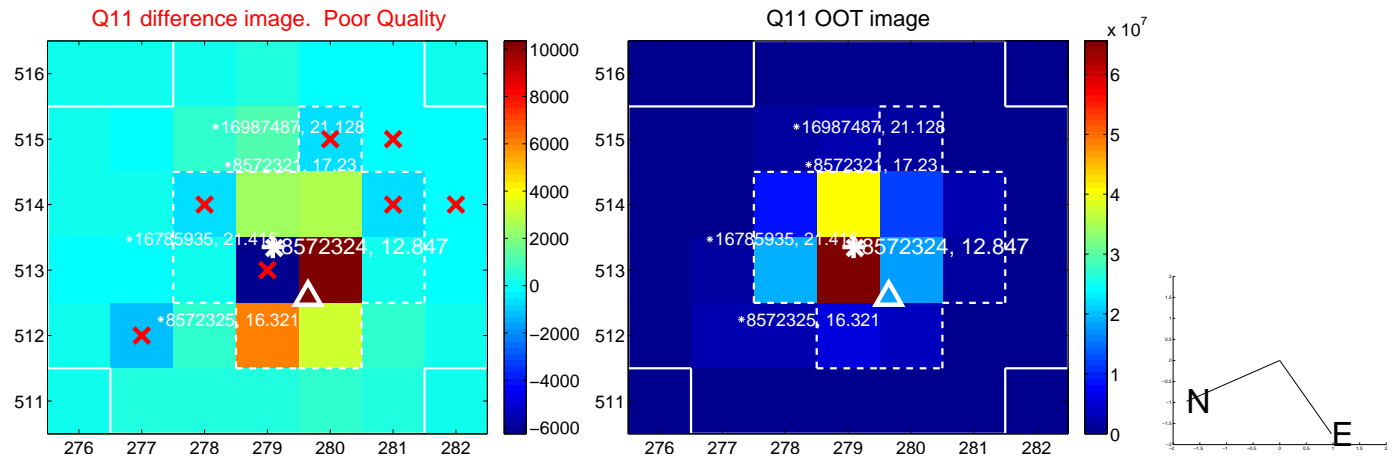
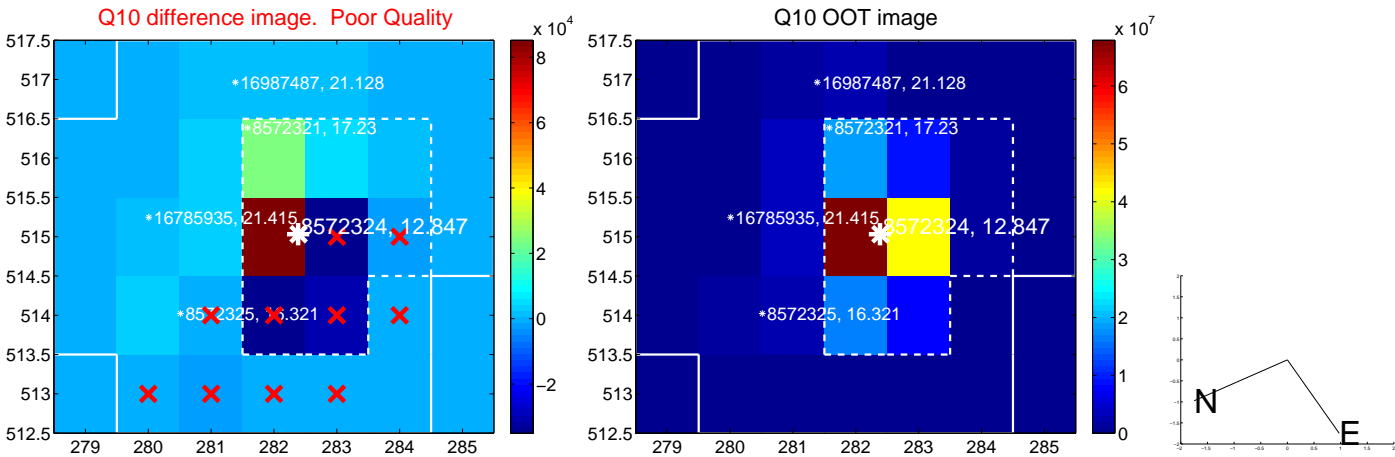
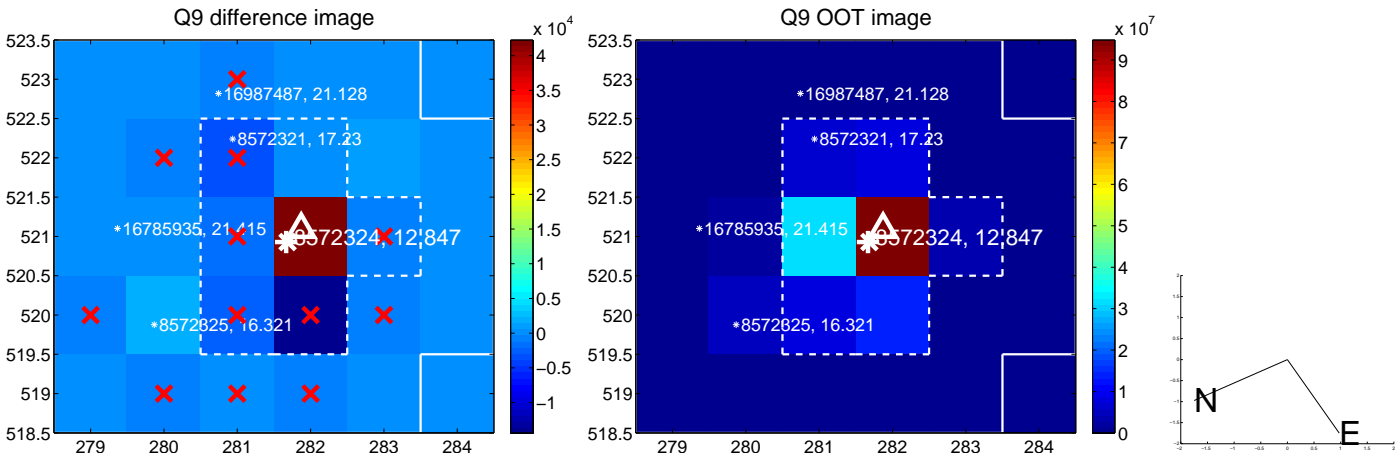
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



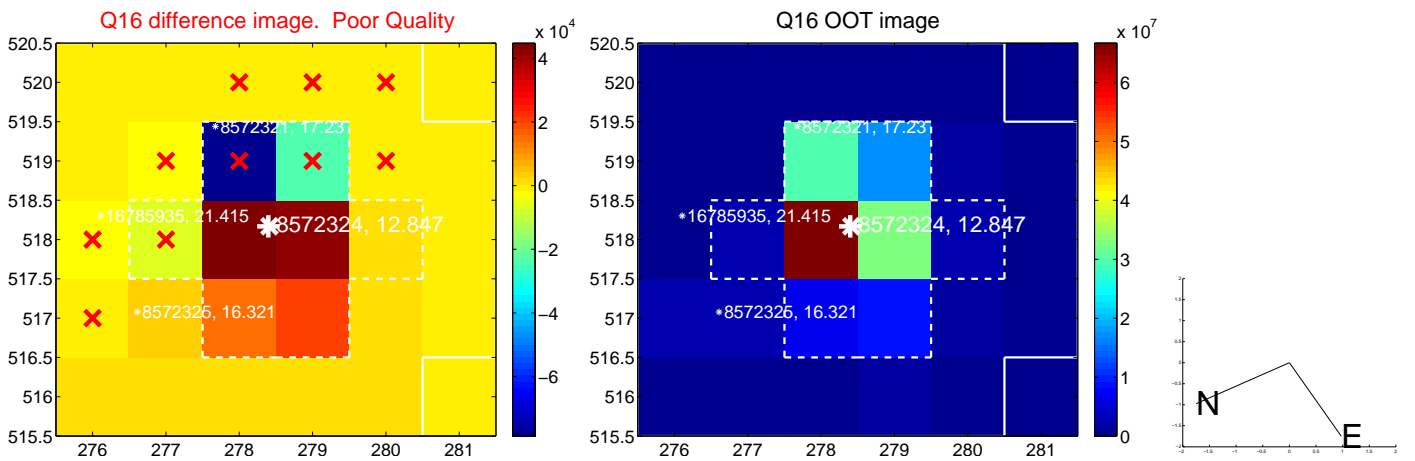
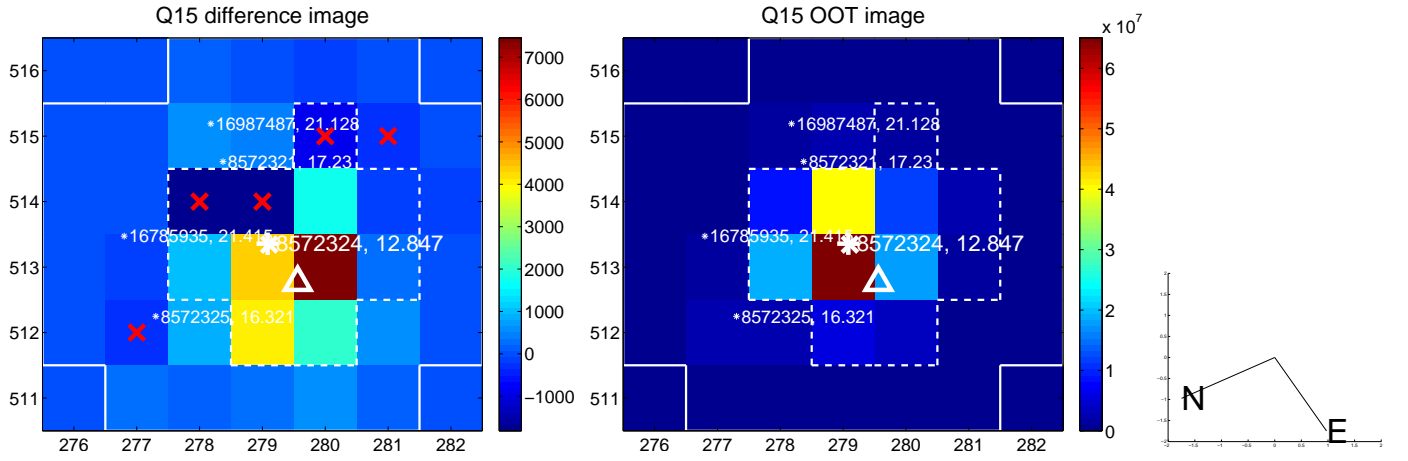
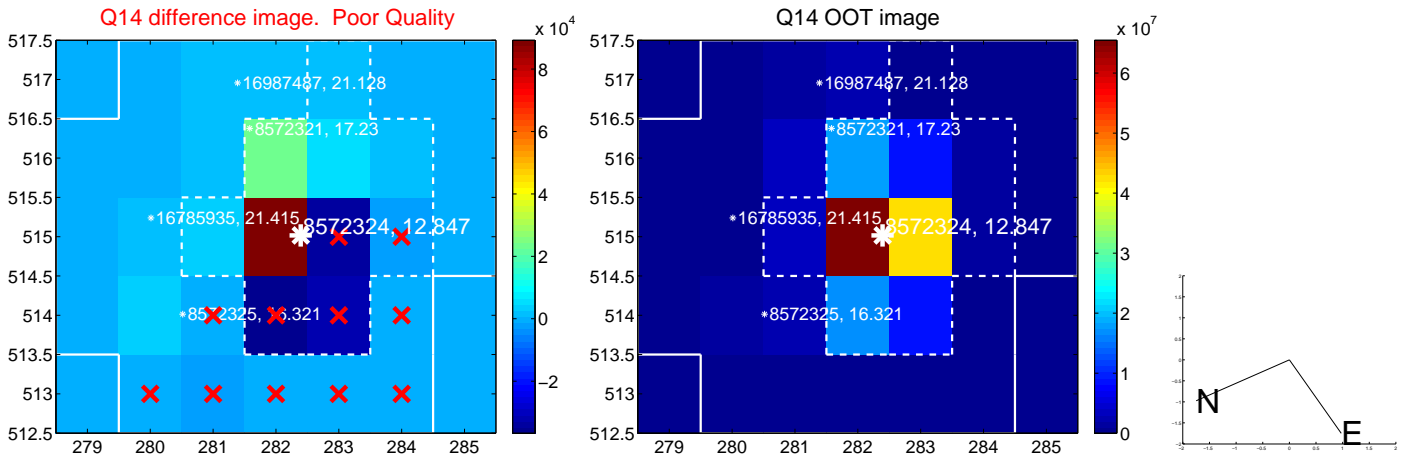
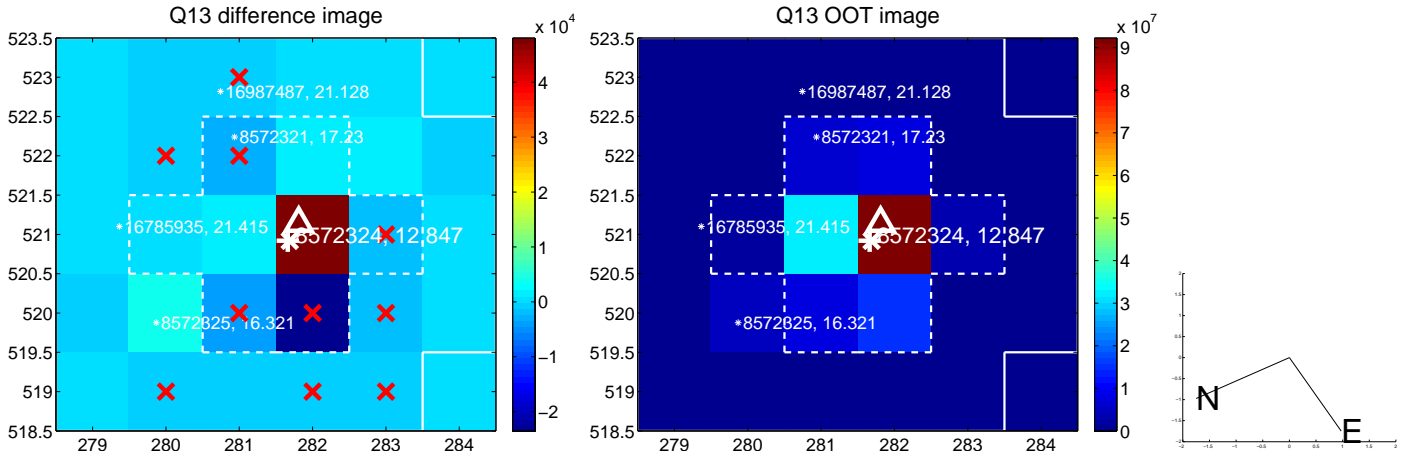
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



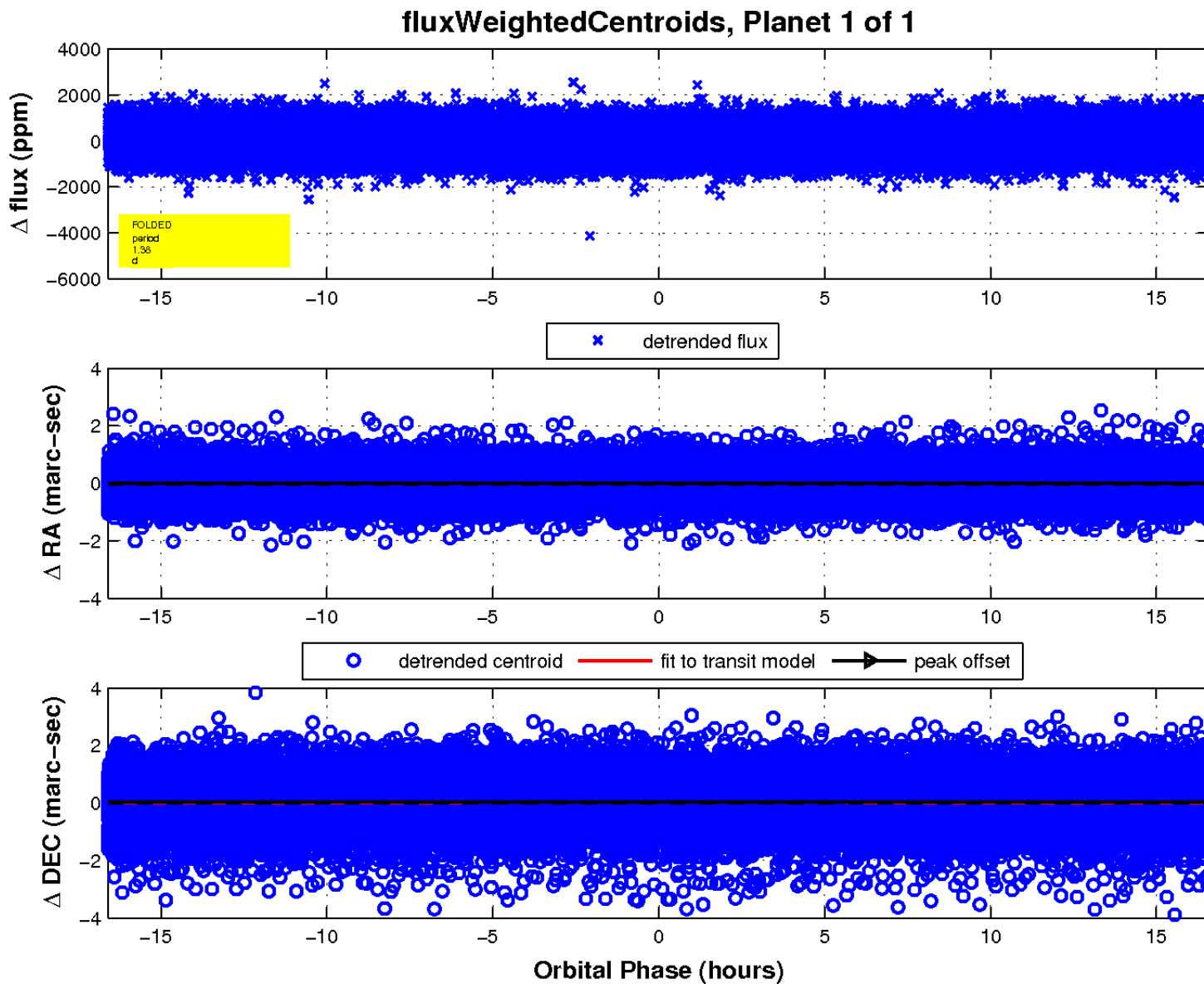
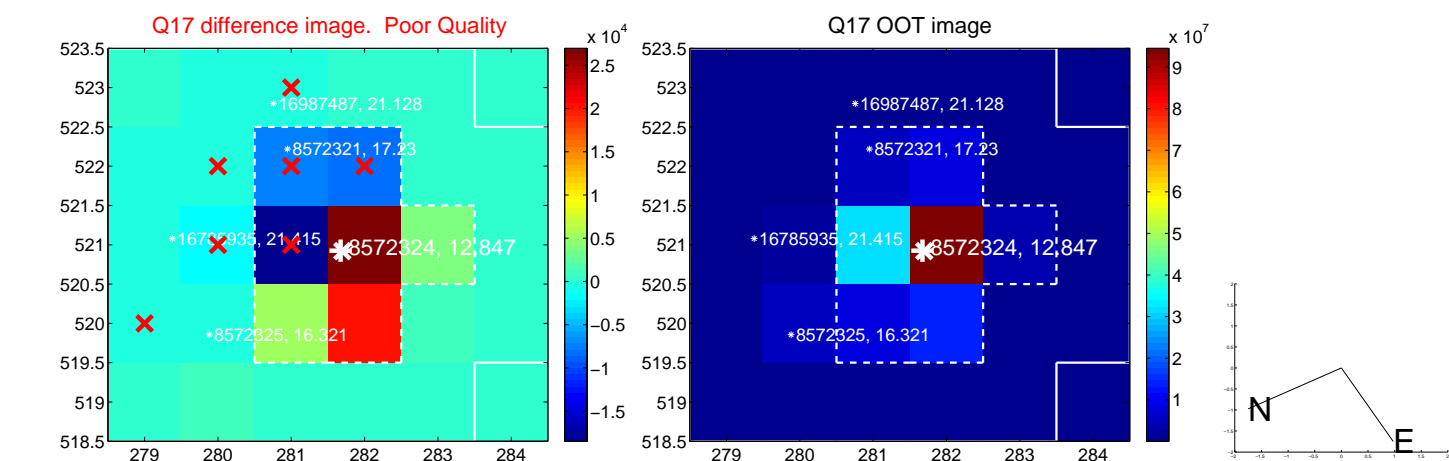
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

