

KIC 007204237

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})
007204237-01	OBS	No	1.554843	132.665387	79.0	13.801	8.8	12.2	2.25	8273	2.43	19585.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007204237-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED

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

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

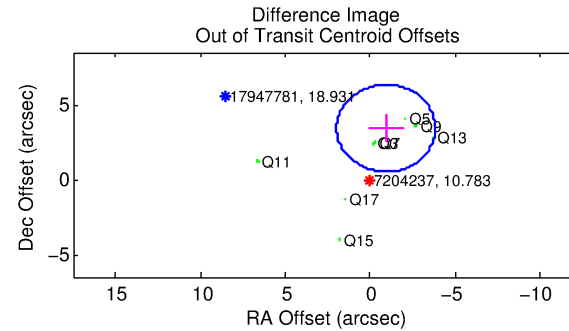
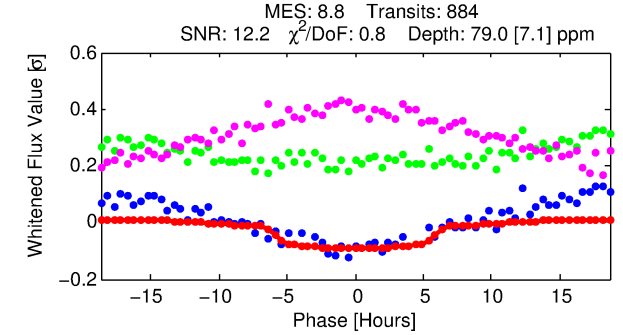
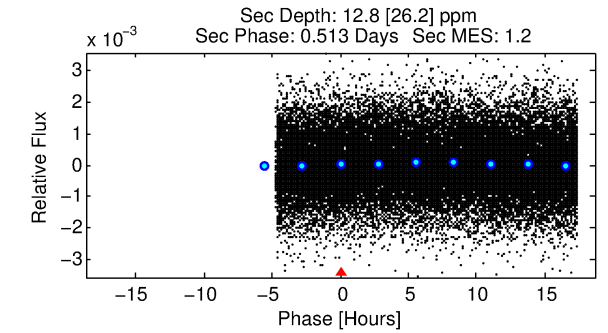
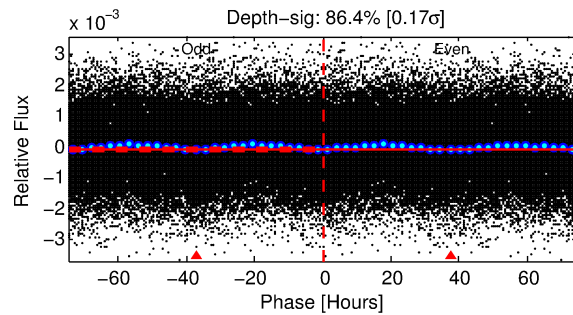
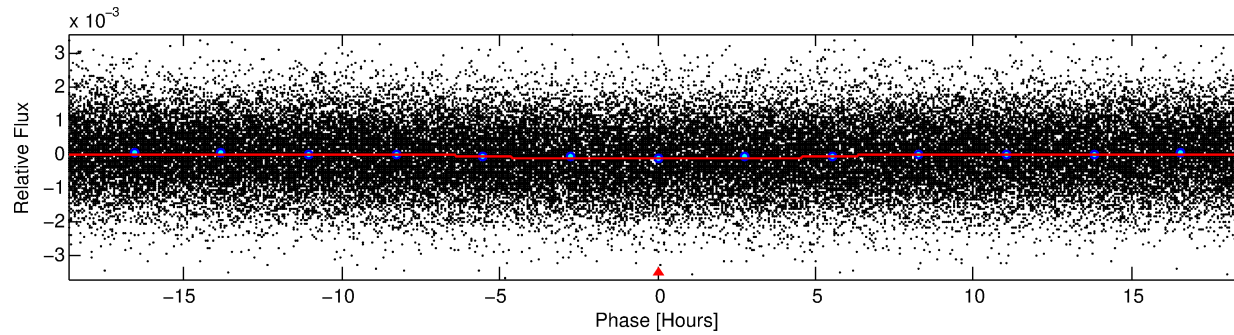
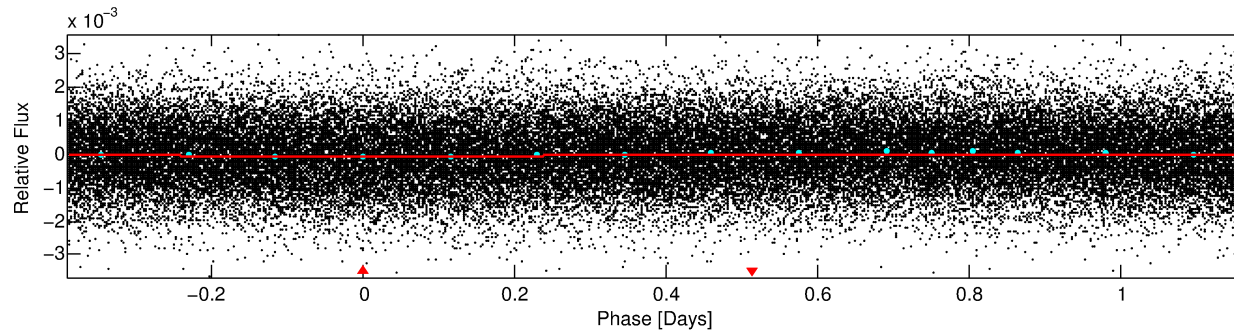
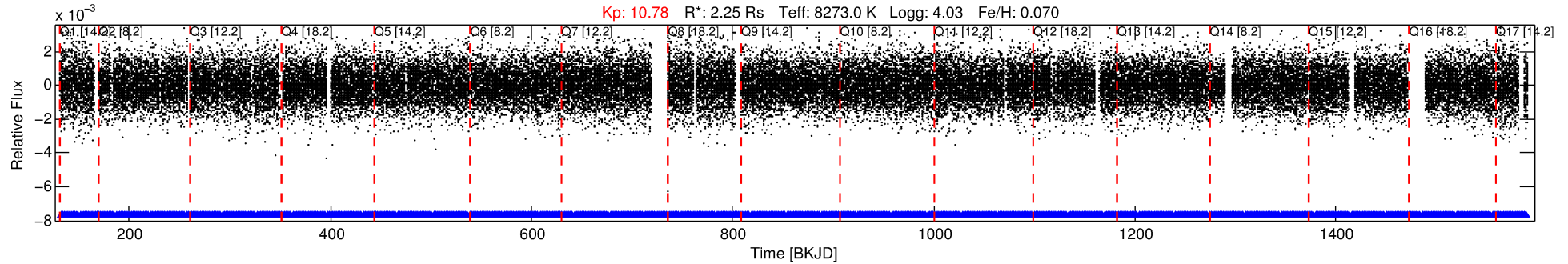
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007204237-01

No Significant Match Found

DV One-Page Summary

KIC: 7204237 Candidate: 1 of 1 Period: 1.555 d



DV Fit Results:

Period = 1.55484 [0.00004] d
Epoch = 132.6654 [0.0184] BKJD
Rp/R* = 0.0099 [0.0008]
a/R* = 1.02 [0.02]
b = 0.94 [0.05]
Seff = 19585.46 [7200.93]
Teq = 3017 [277] K
Rp = 2.43 [0.71] Re
a = 0.0330 [0.0076] AU
Ag = 1.29 [2.70] [0.11 σ]
Teff = 4974 [2569] K [0.76 σ]

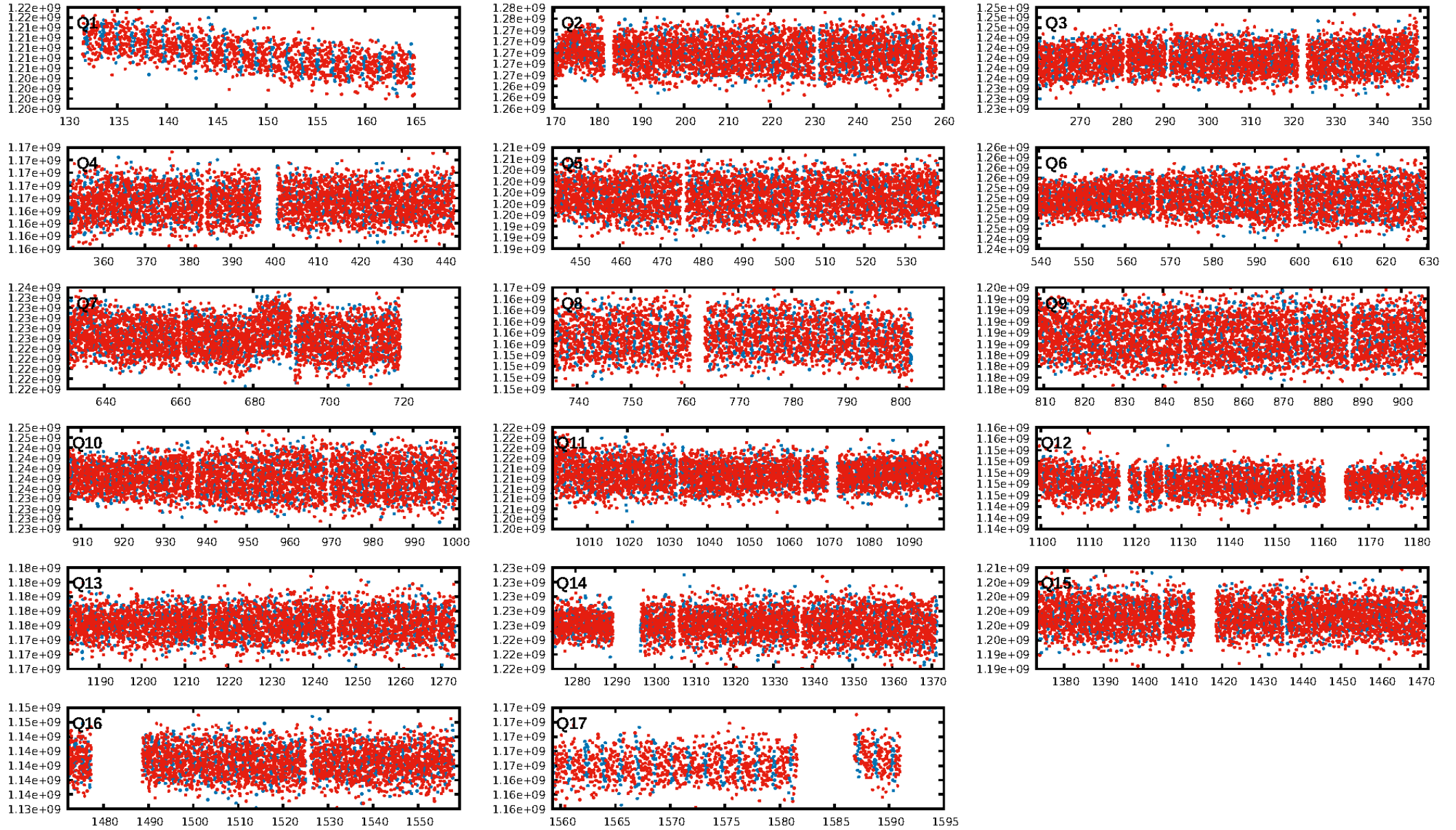
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [845/845]
GhostDiagnostic-chr: 2.965
Centroid-sig: 0.0%
Centroid-so: 1.109 arcsec [8.01 σ]
OotOffset-rm: 3.552 arcsec [3.67 σ]
KicOffset-rm: 3.822 arcsec [3.53 σ]
OotOffset-st: 0/4/0/4 [8]
KicOffset-st: 0/4/0/4 [8]
DiffImageQuality-fgm: 0.38 [3/8]
DiffImageOverlap-fno: 1.00 [17/17]

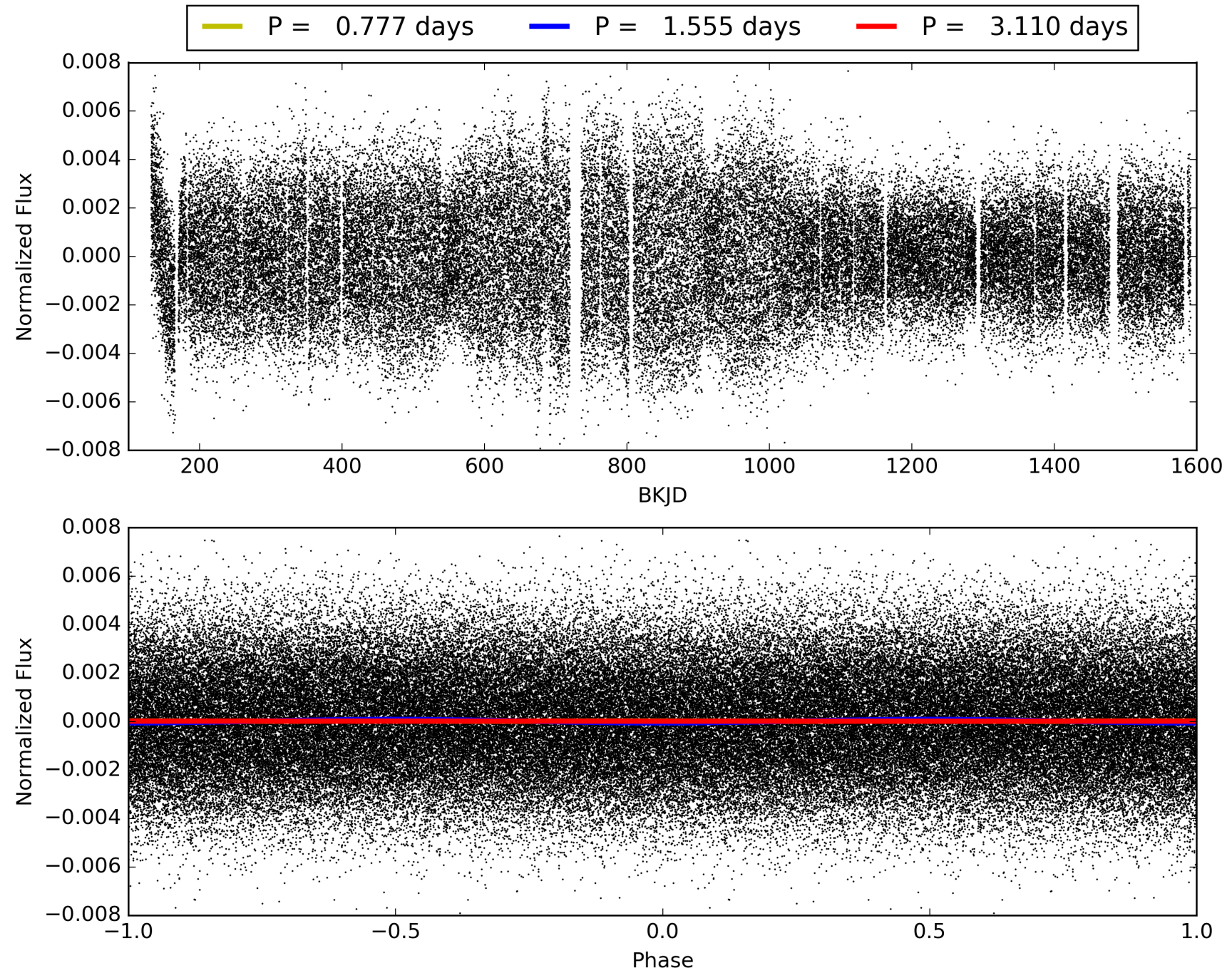
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:37:17 Z

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

TCE 007204237-01, PDC Light Curves

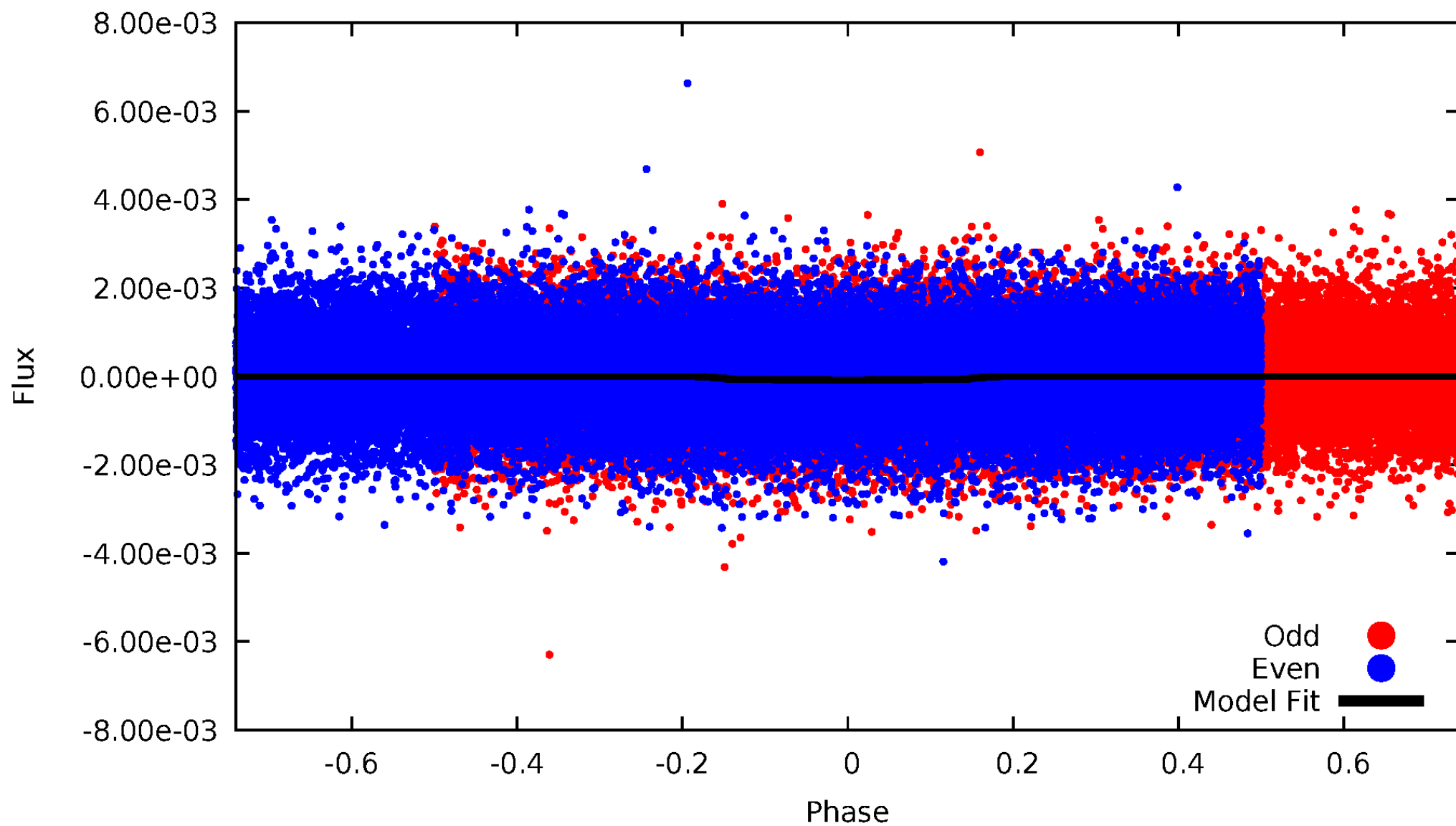


TCE 007204237-01



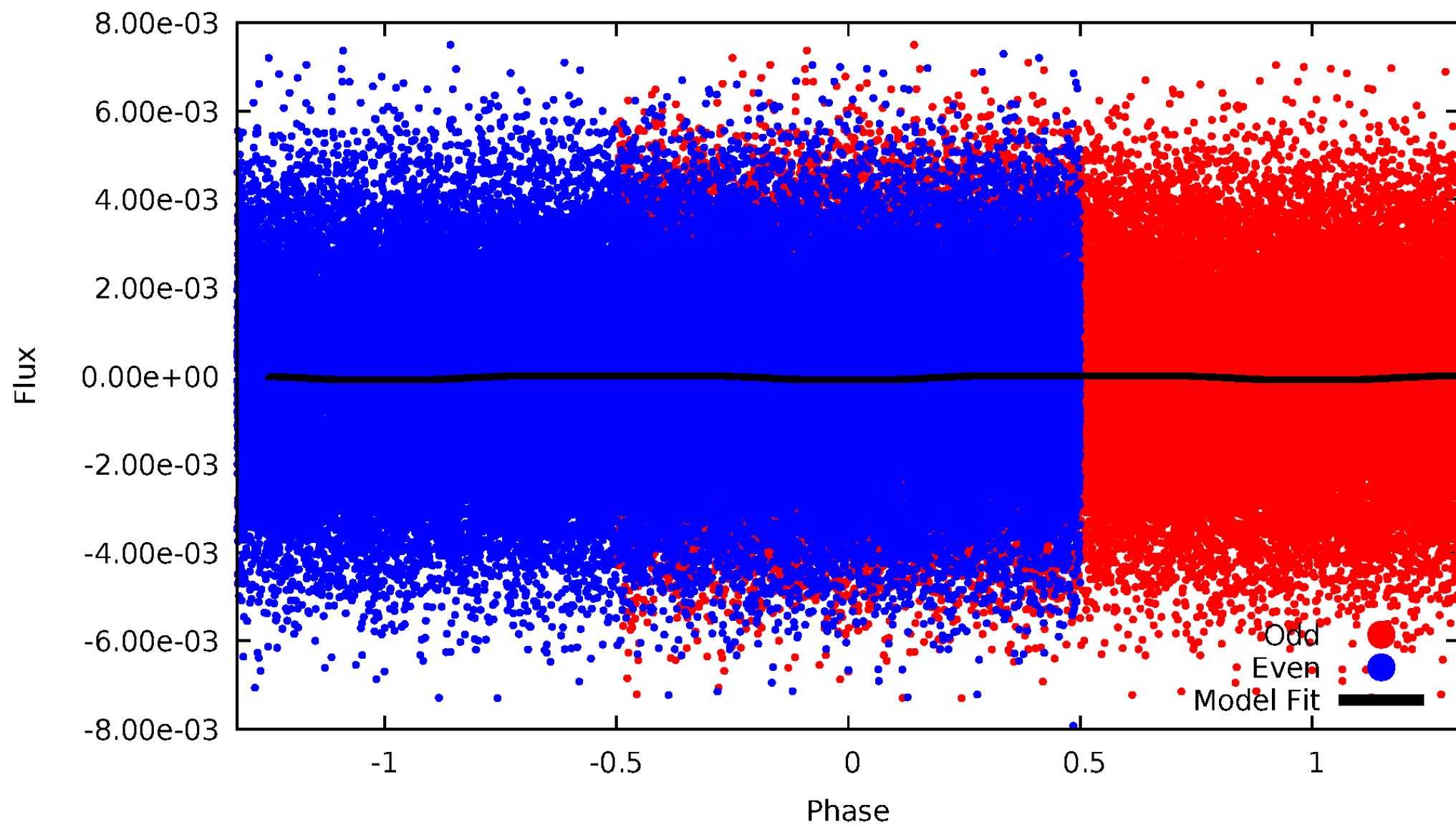
DV Odd/Even

TCE 007204237-01

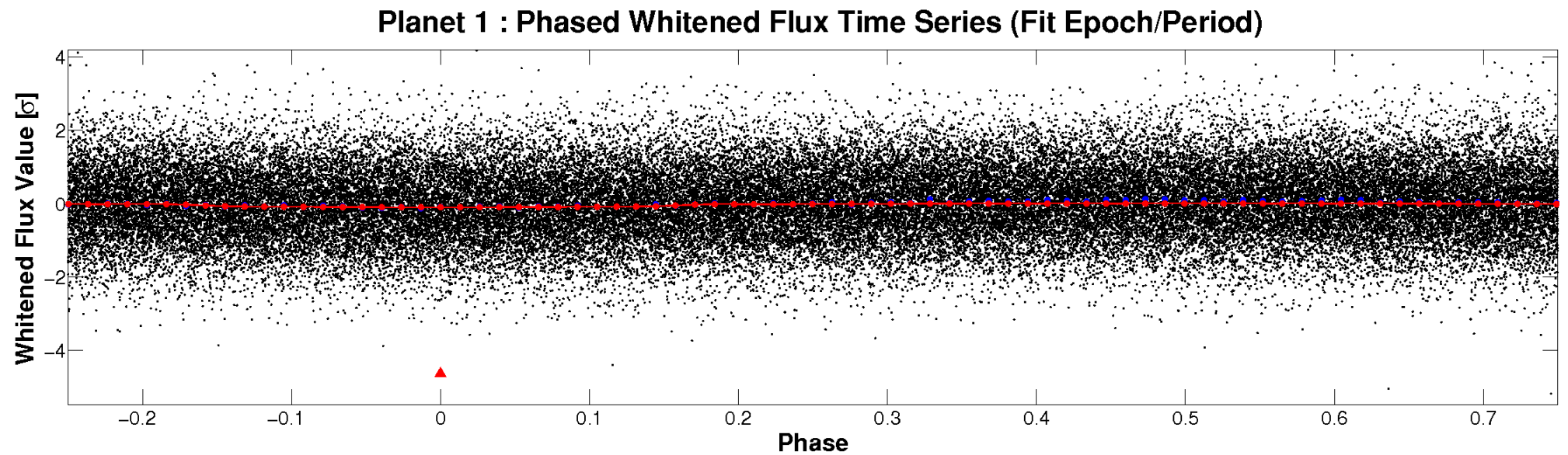
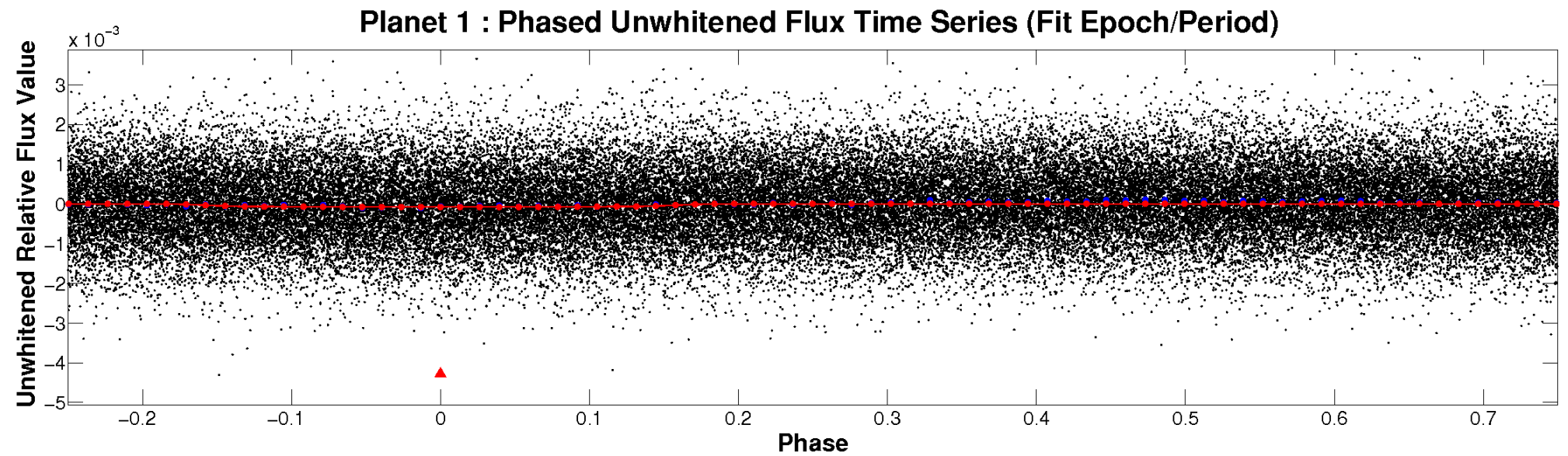


ALT Odd/Even

TCE 007204237-01

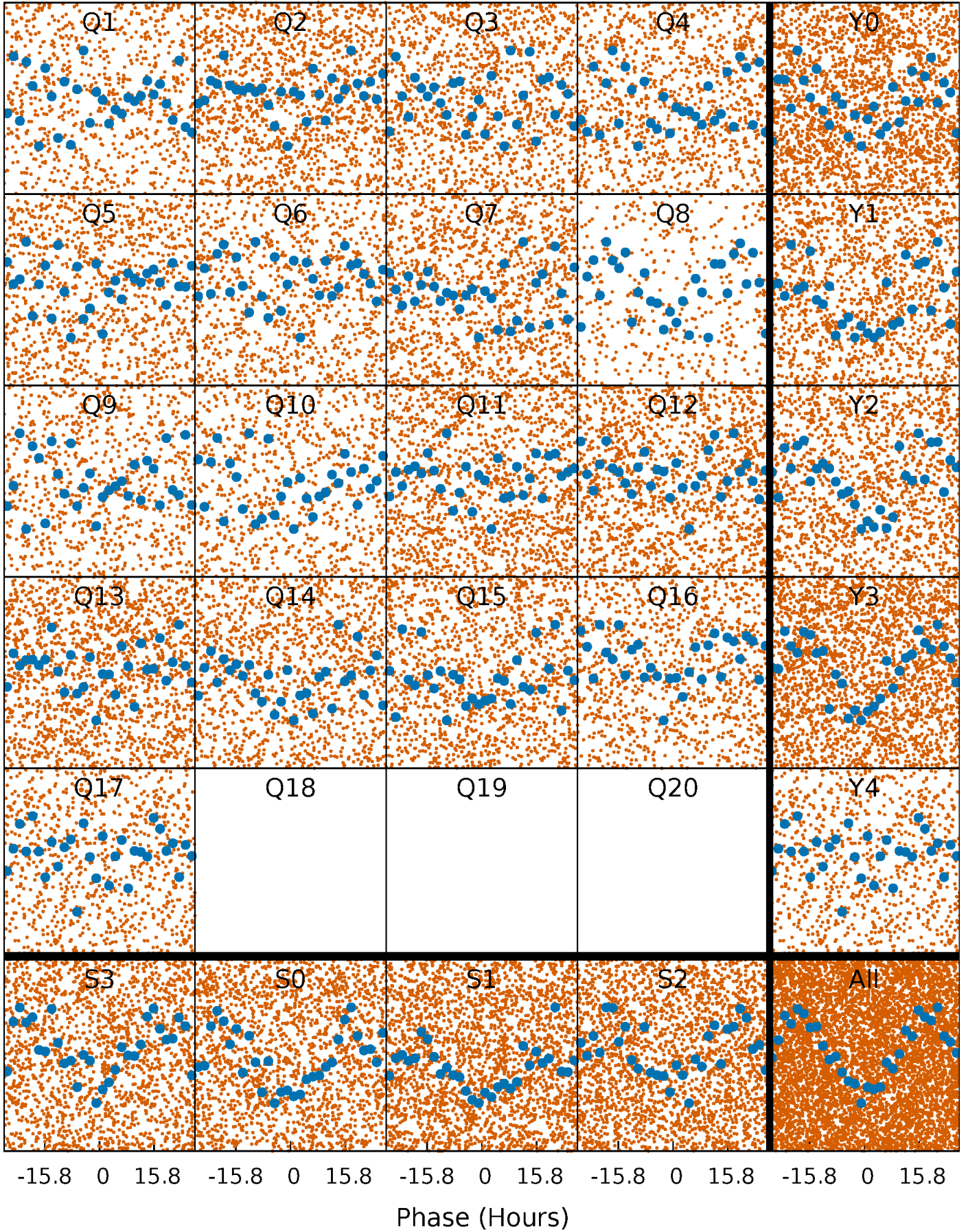


Non-Whitened Vs. Whitened Light Curve



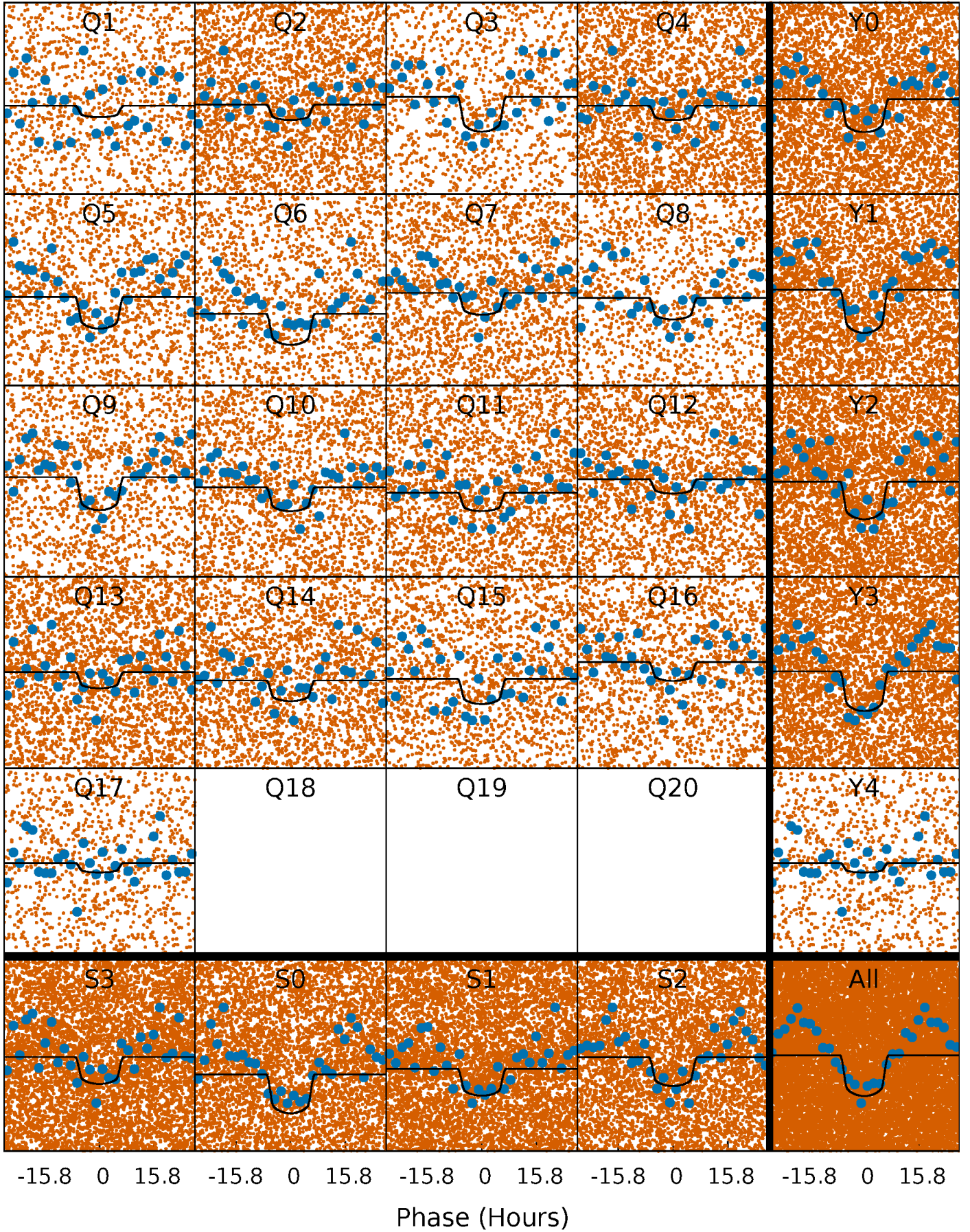
PDC Quarter-Phased Transit Curves

TCE 007204237-01 P= 1.554843 Days $T_0=132.665387$ (BKJD)



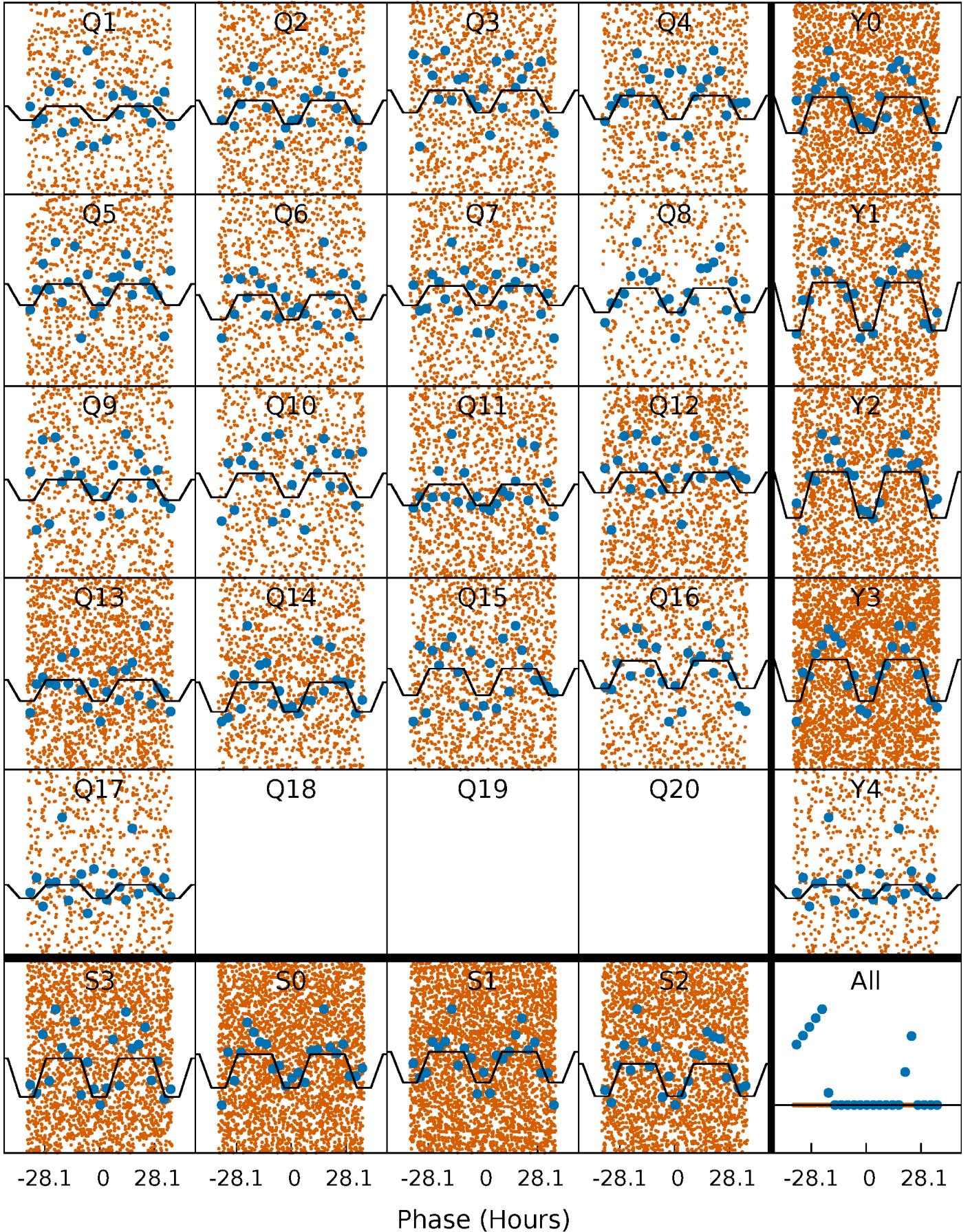
DV Quarter-Phased Transit Curves

TCE 007204237-01 P= 1.554843 Days $T_0=132.665387$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

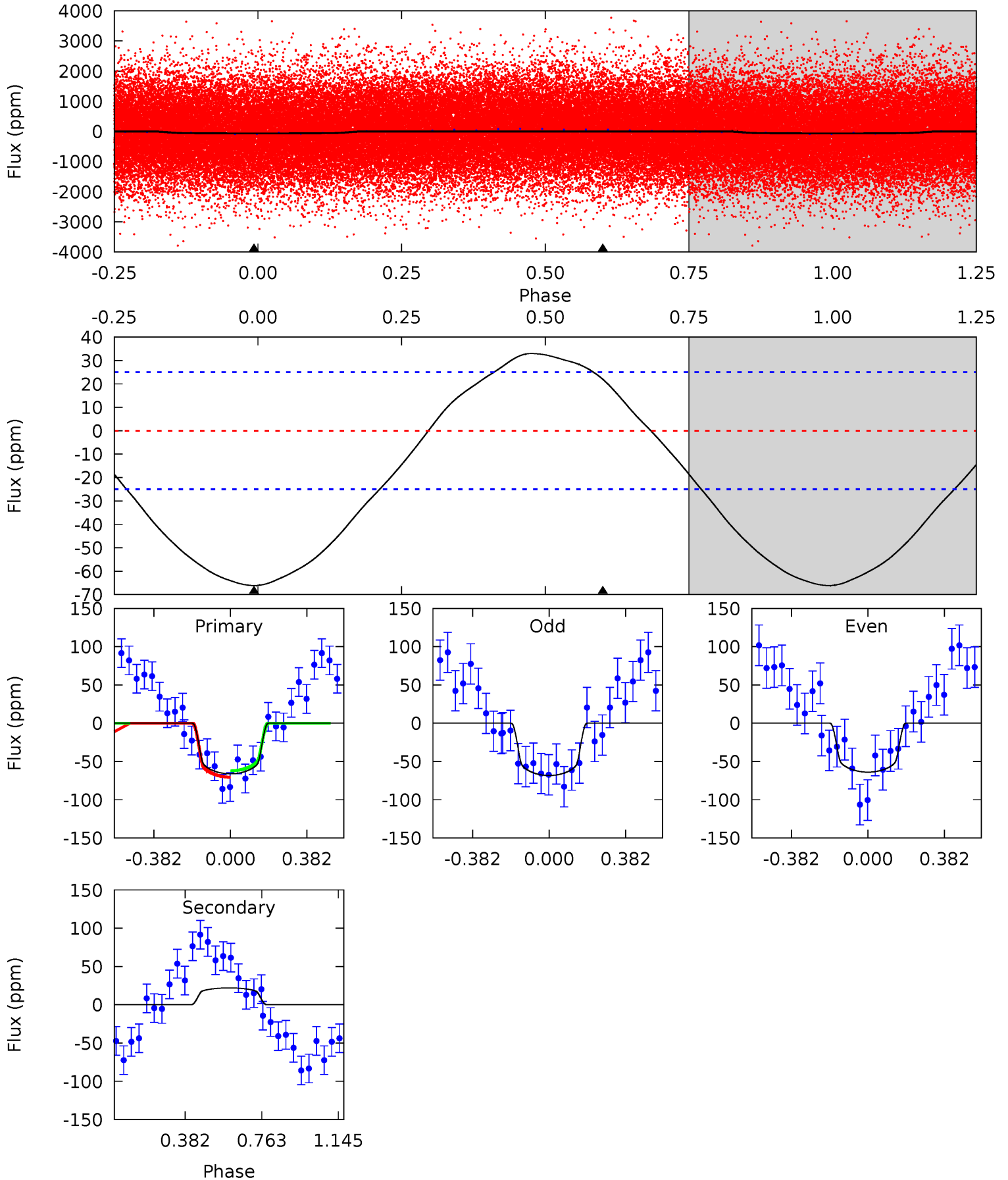
TCE 007204237-01 P= 1.554779 Days $T_0=132.699830$ (BKJD)



DV Model-Shift Uniqueness Test

007204237-01, P = 1.554843 Days, E = 131.110544 Days

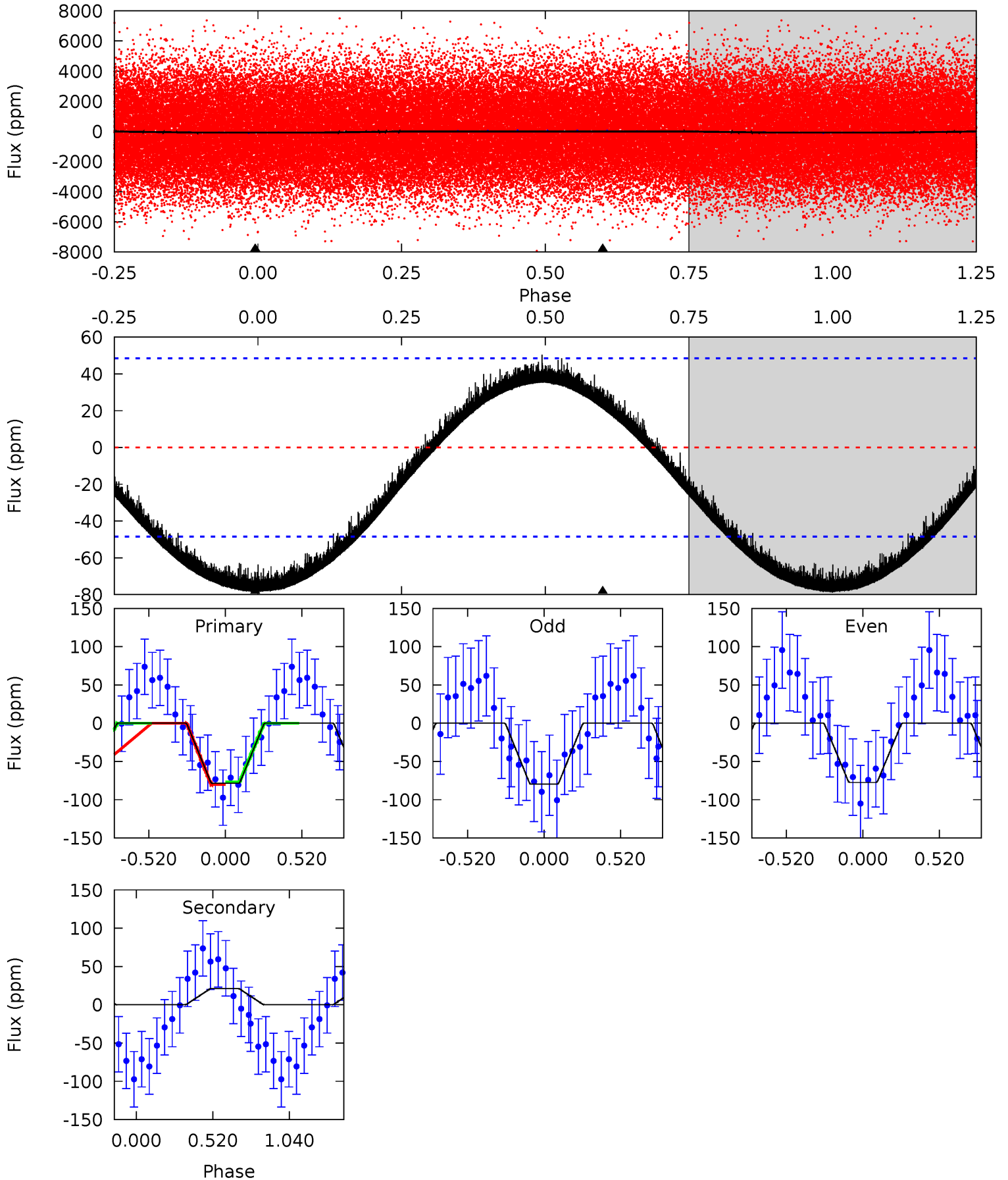
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	-3.76	0	0	4.28	0.87	1.55	11.3	11.3	-3.76	-3.76	0.39	1.02	0.33	0.72



Alt Model-Shift Uniqueness Test

007204237-01, P = 1.554779 Days, E = 131.145051 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.80	-1.84	0	0	4.21	0.64	0.85	6.80	6.80	-1.84	-1.84	0.10	0.64	0.39	0.15



Stellar Parameters For KIC 007204237

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8273^{+226}_{-340}	$4.029^{+0.176}_{-0.128}$	$0.070^{+0.250}_{-0.550}$	$2.254^{+0.423}_{-0.634}$	$1.982^{+0.295}_{-0.479}$	$0.244^{+0.265}_{-0.095}$
	+3%/-4%	+4%/-3%	+357%/-786%	+19%/-28%	+15%/-24%	+109%/-39%
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 007204237-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	22 ± 6	$2.42^{+0.39}_{-0.39}$	4176^{+276}_{-273}	-5651^{+401}_{-437}	$-2.198^{+0.730}_{-1.075}$
Alt.	21 ± 12	$2.33^{+0.34}_{-0.38}$	4202^{+275}_{-295}	-5754^{+869}_{-669}	$-2.339^{+1.397}_{-1.667}$

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

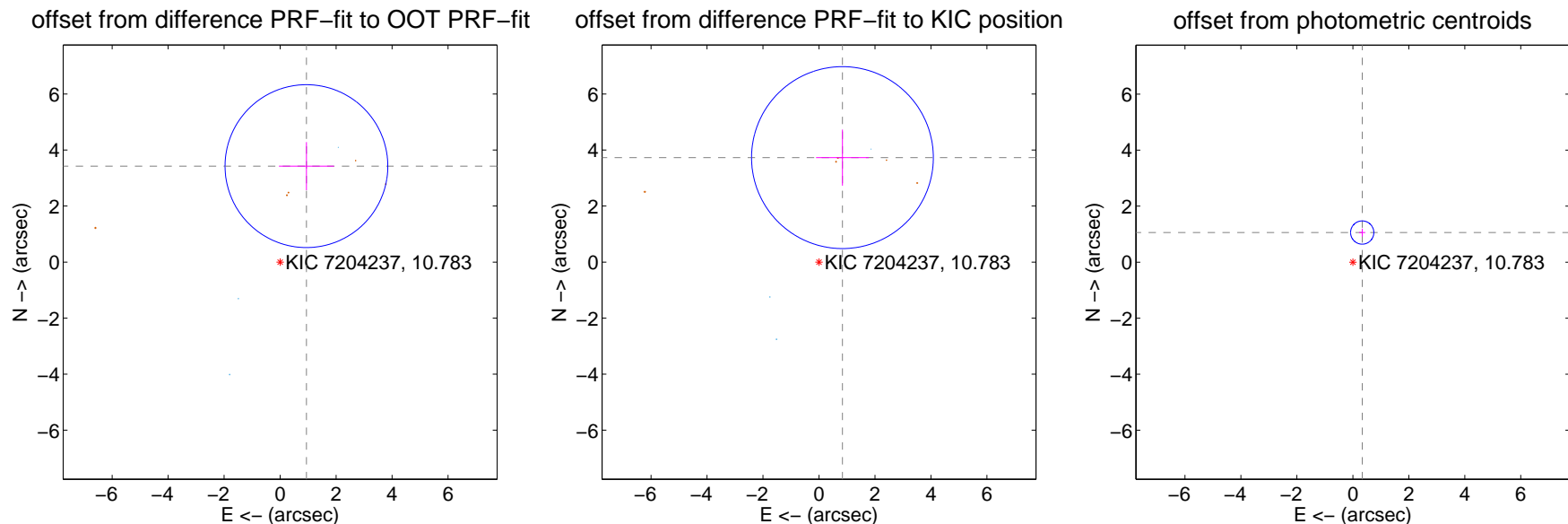
DV Centroid Data

Supplemental centroid analysis for 007204237-01. **Kepler magnitude: 10.78.** Transit SNR 12.15

There are 3 quarters with good PRF difference image offsets

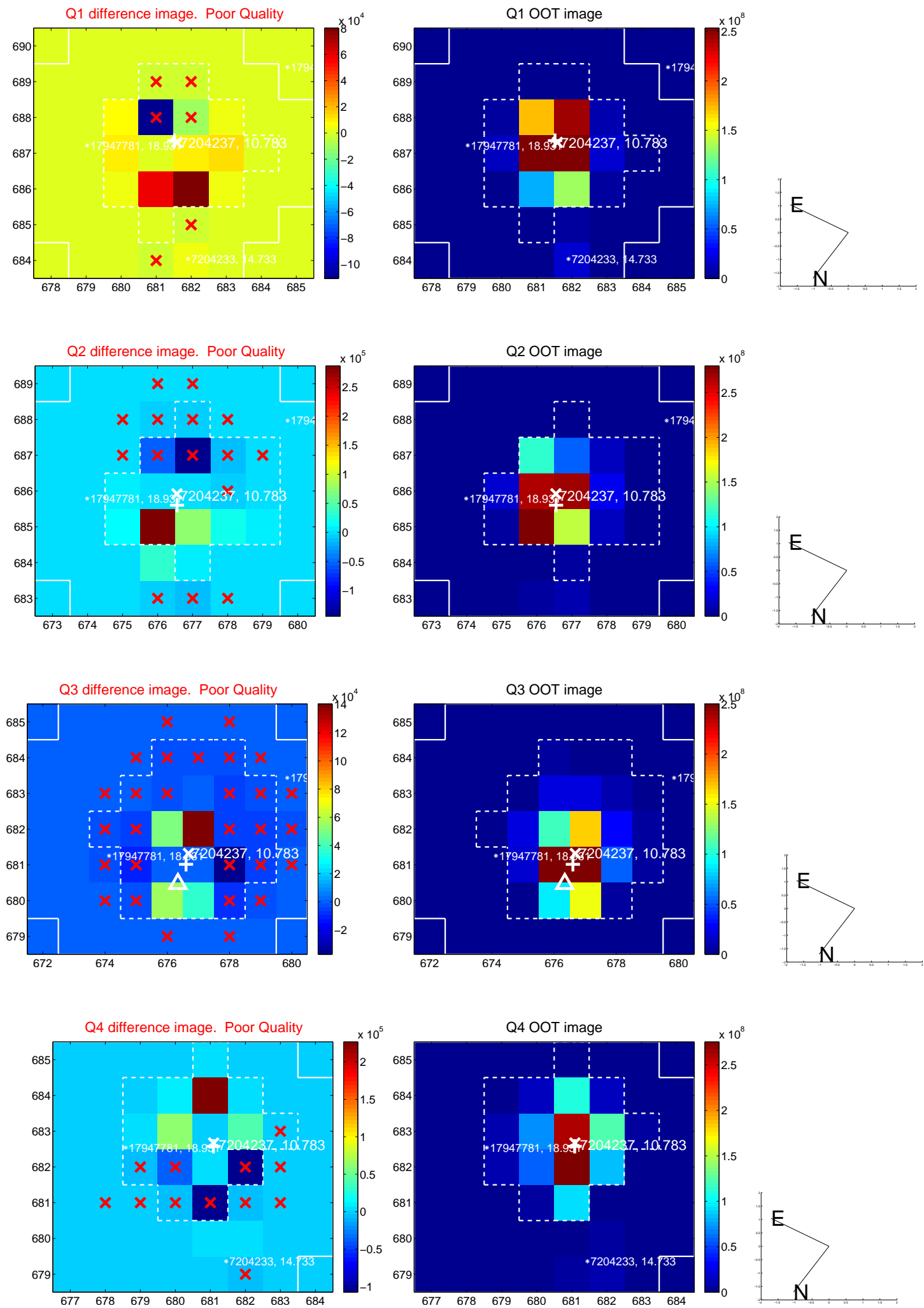
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.552 ± 0.969	3.67	-0.941 ± 0.983	3.425 ± 0.859
PRF-fit source offset from KIC position	3.822 ± 1.082	3.53	-0.838 ± 0.941	3.729 ± 1.001
photometric centroid source offset	1.11 ± 0.14	8.01	-0.33 ± 0.11	1.06 ± 0.14

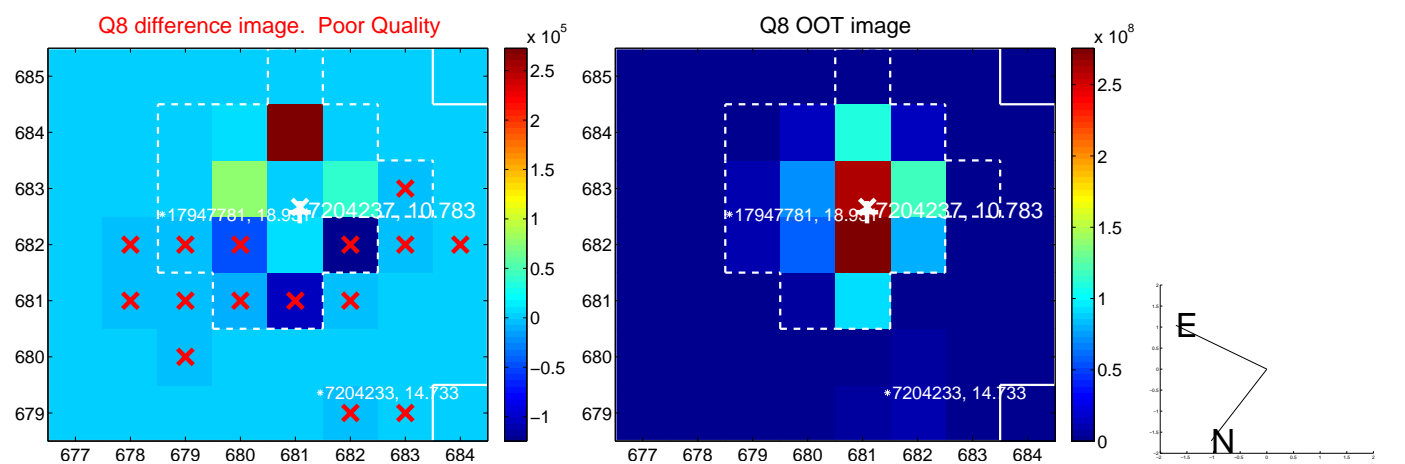
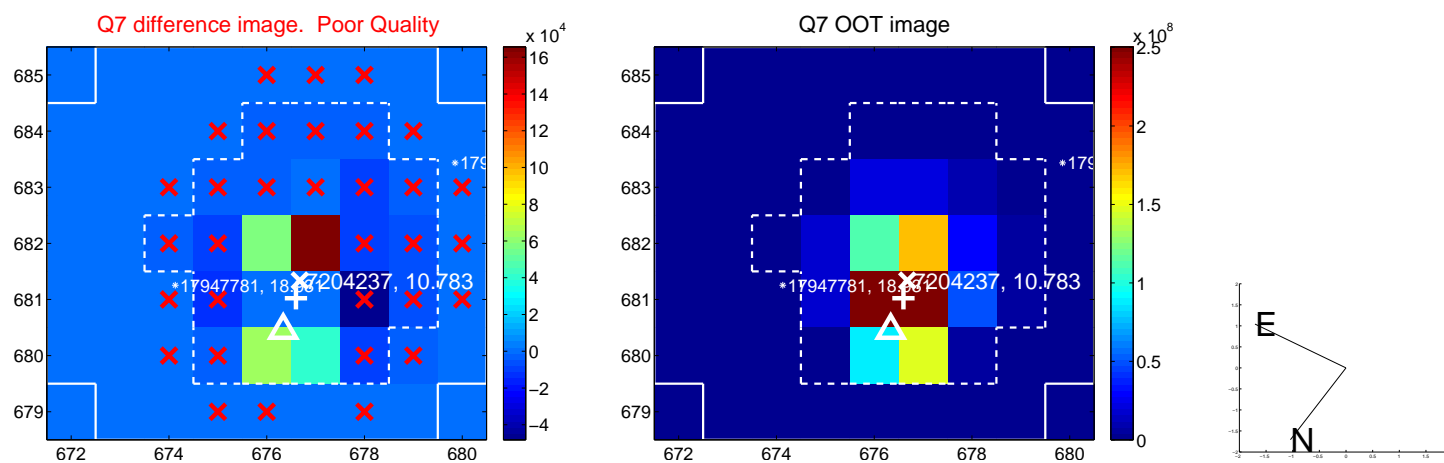
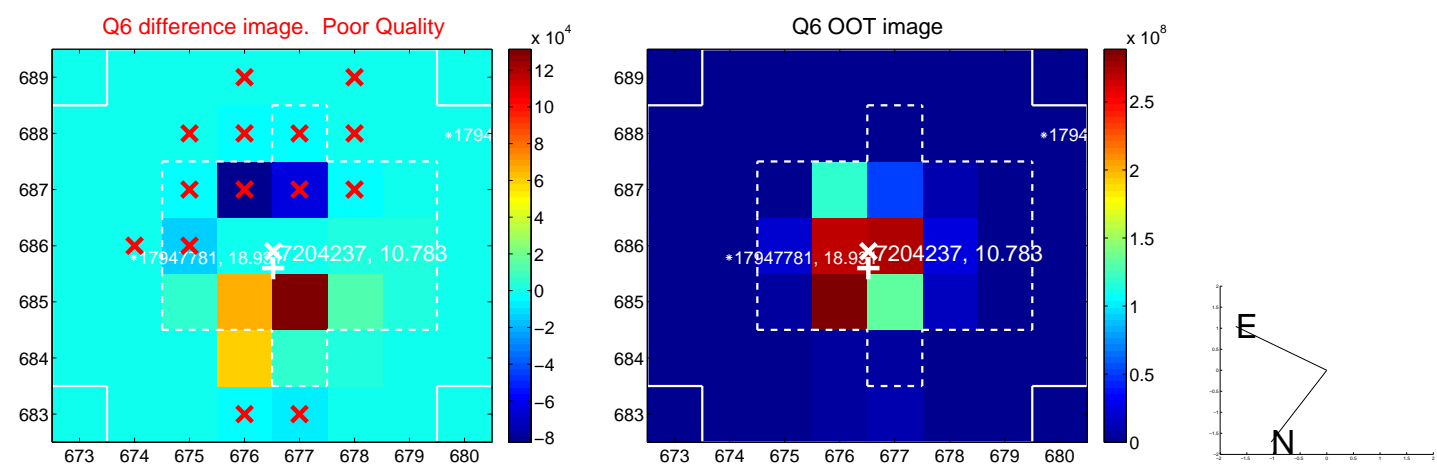
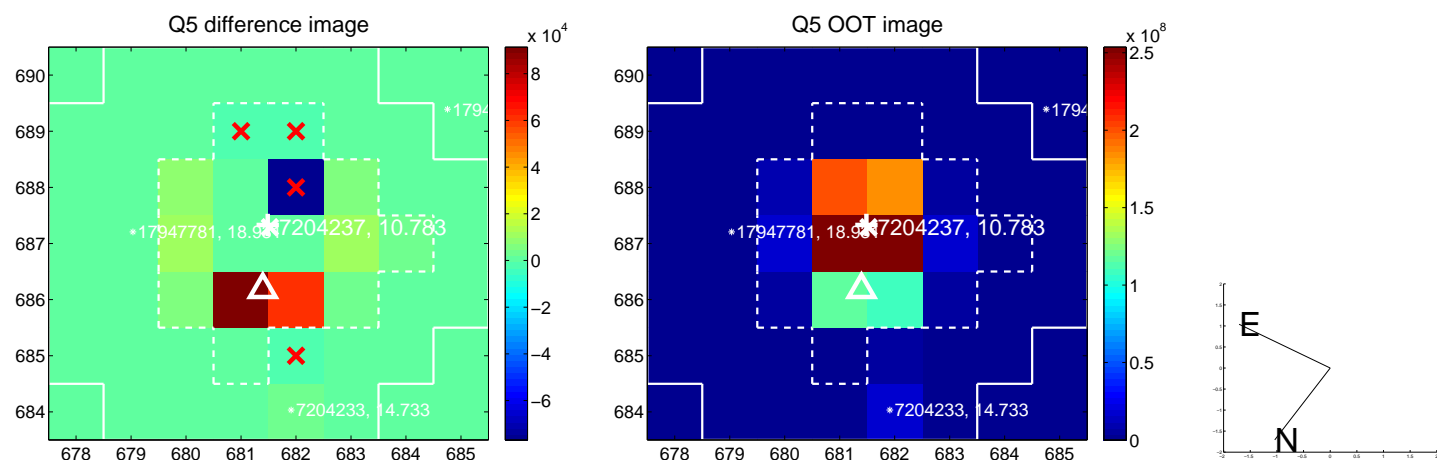


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

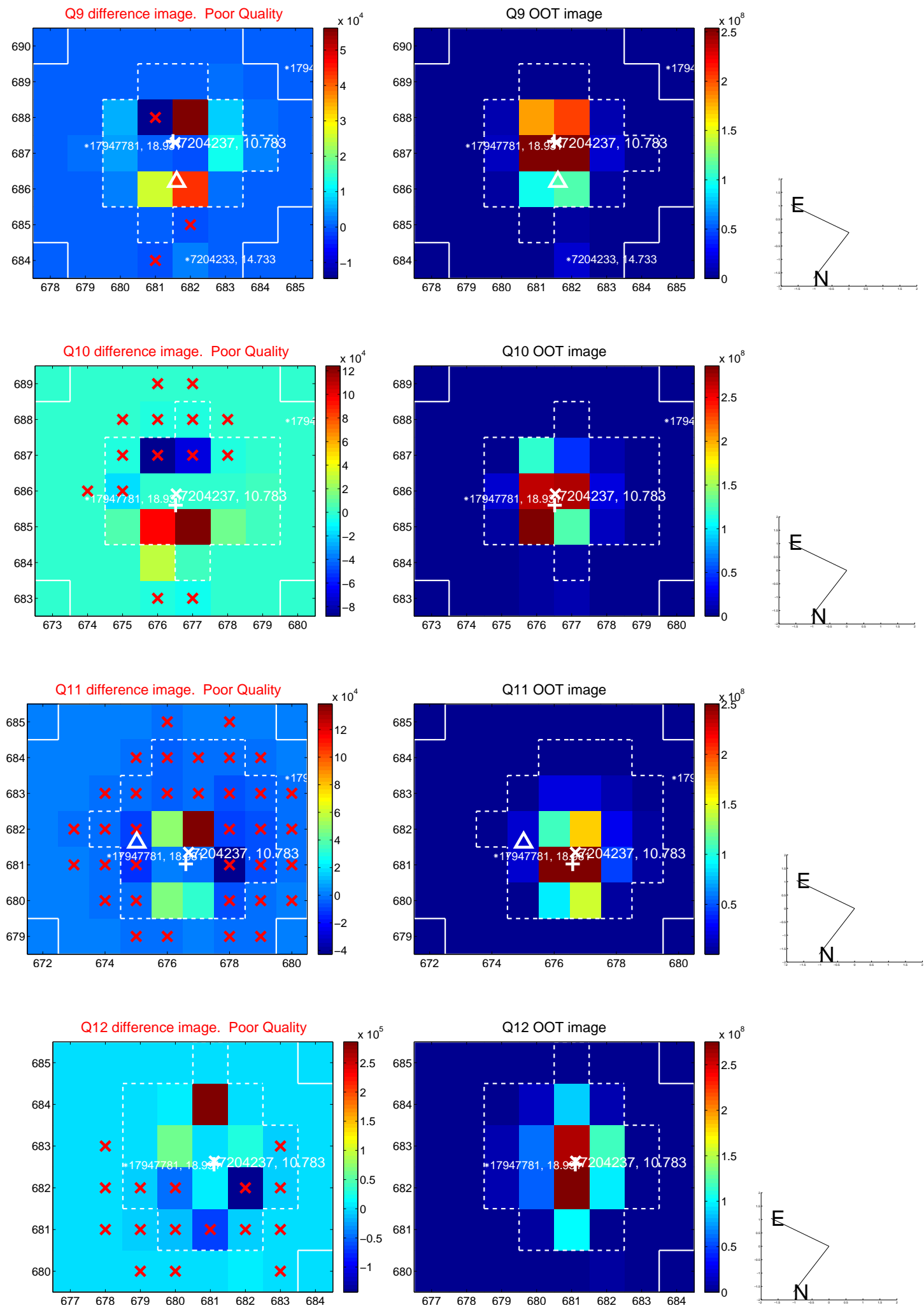
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



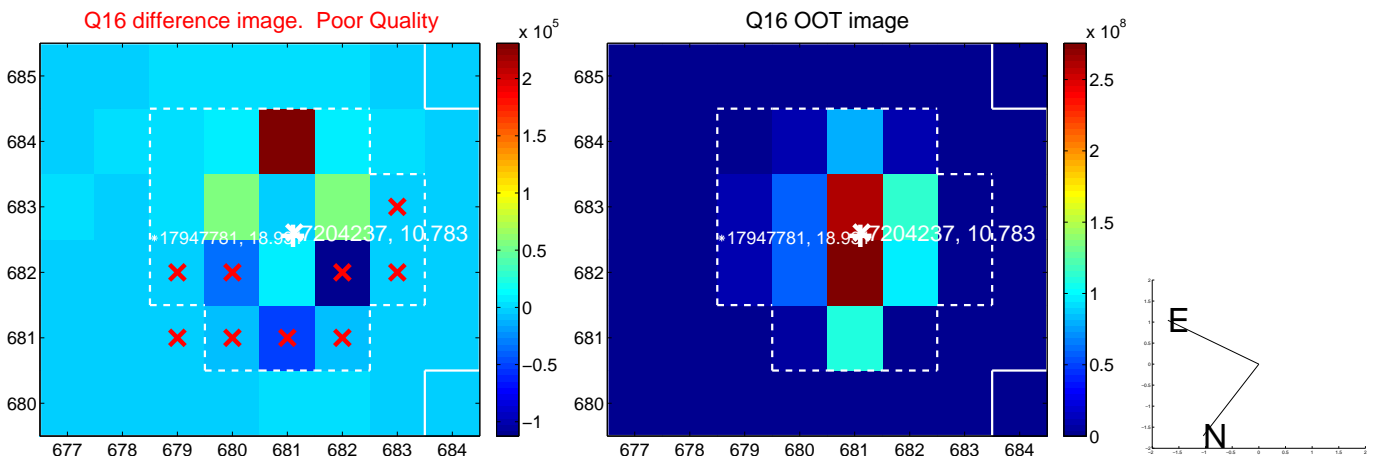
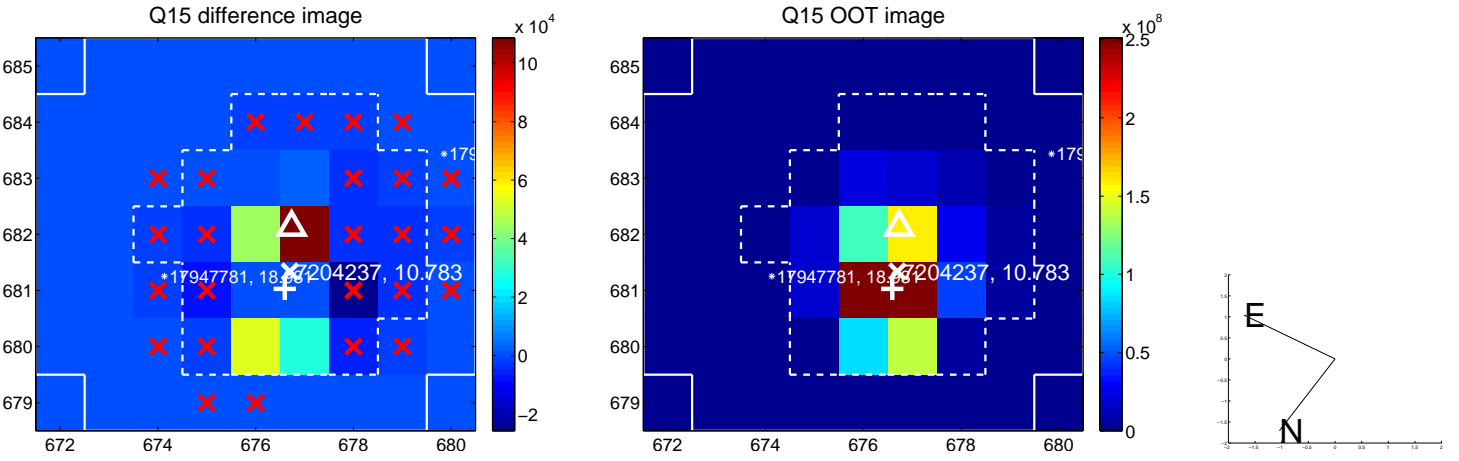
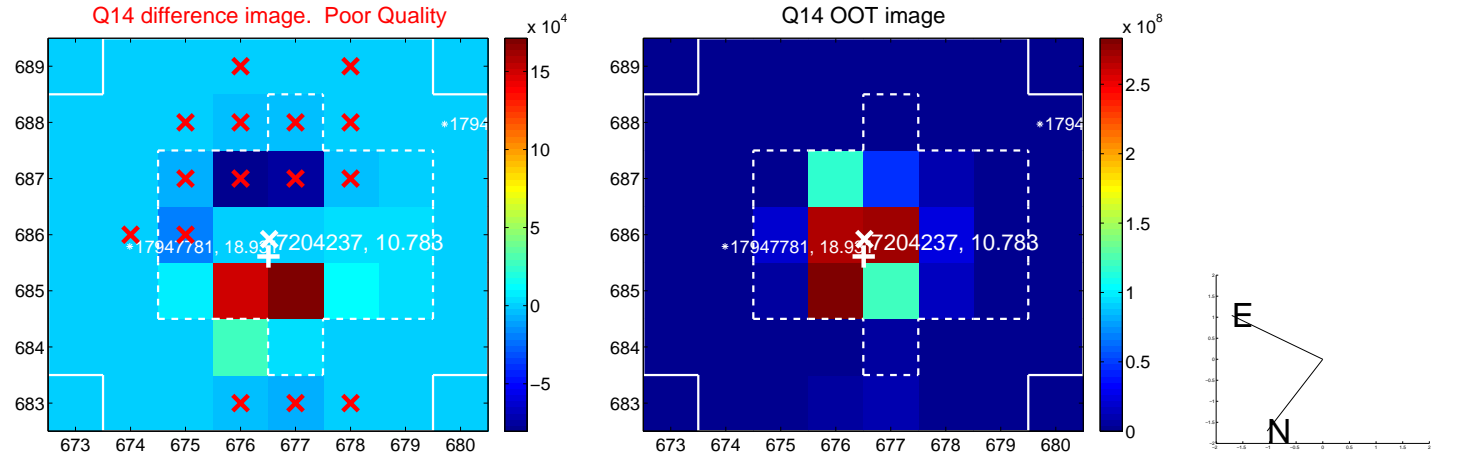
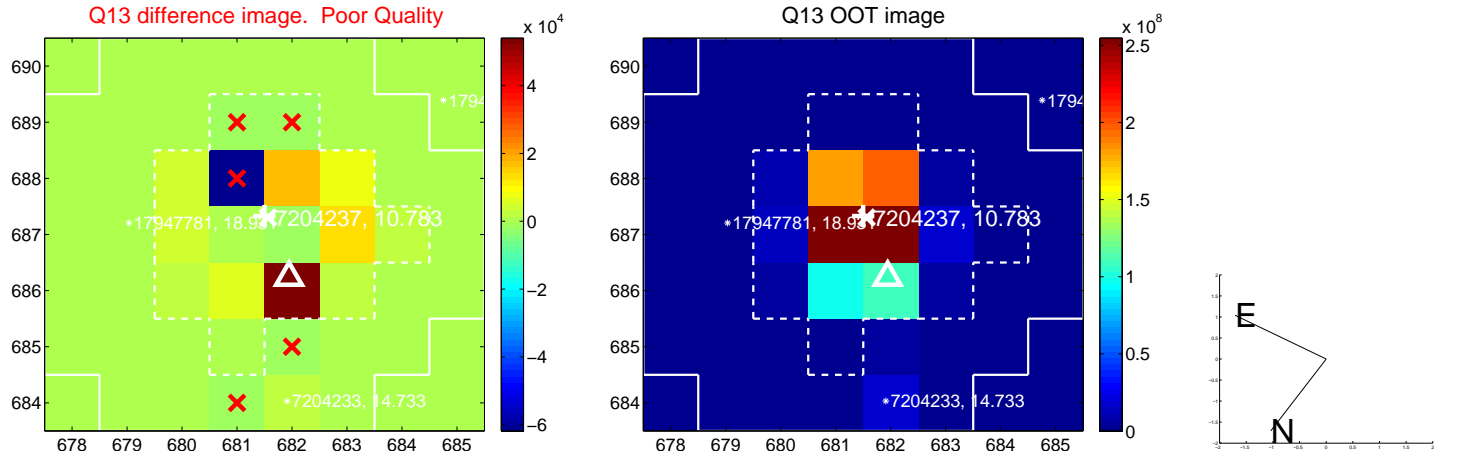
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



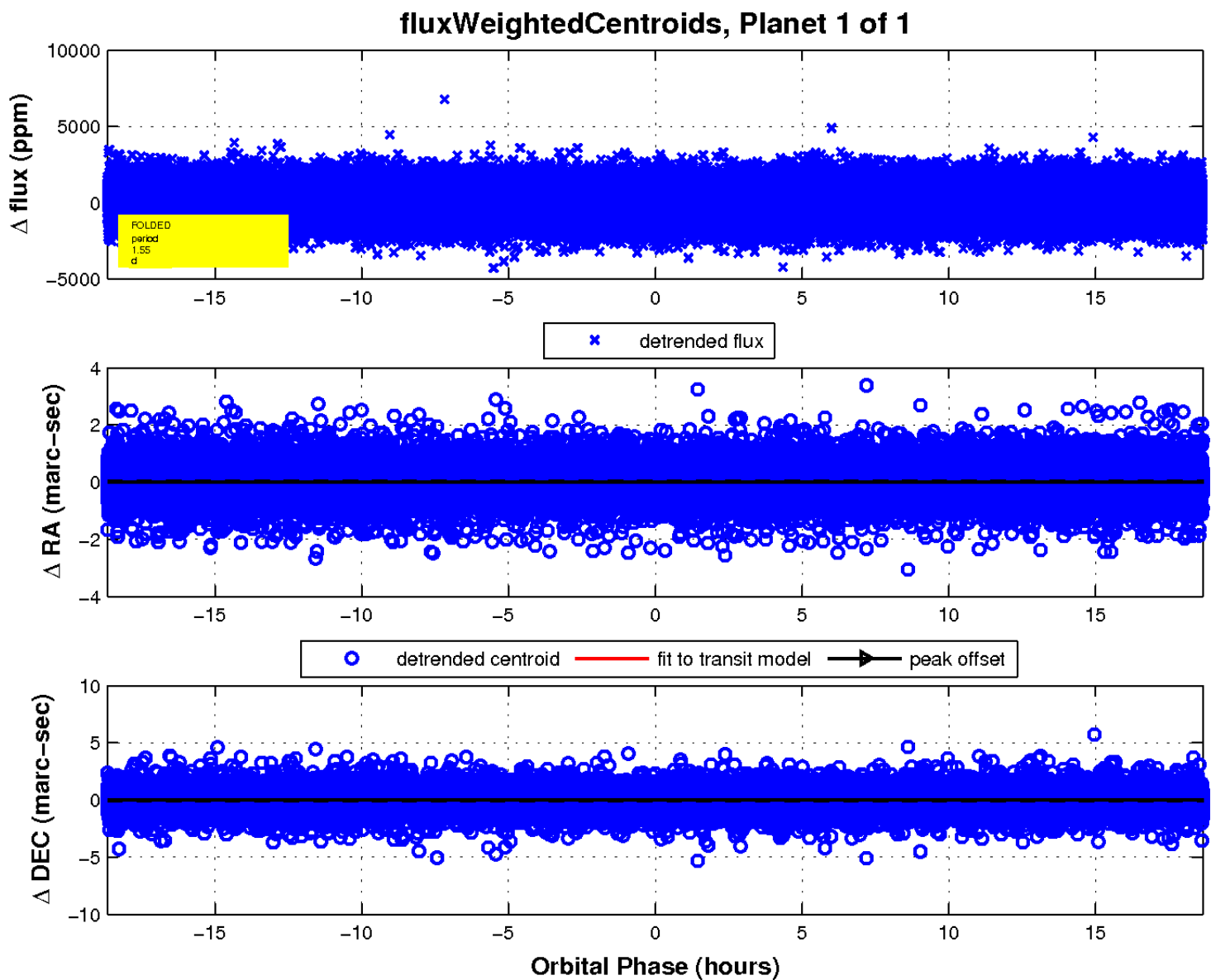
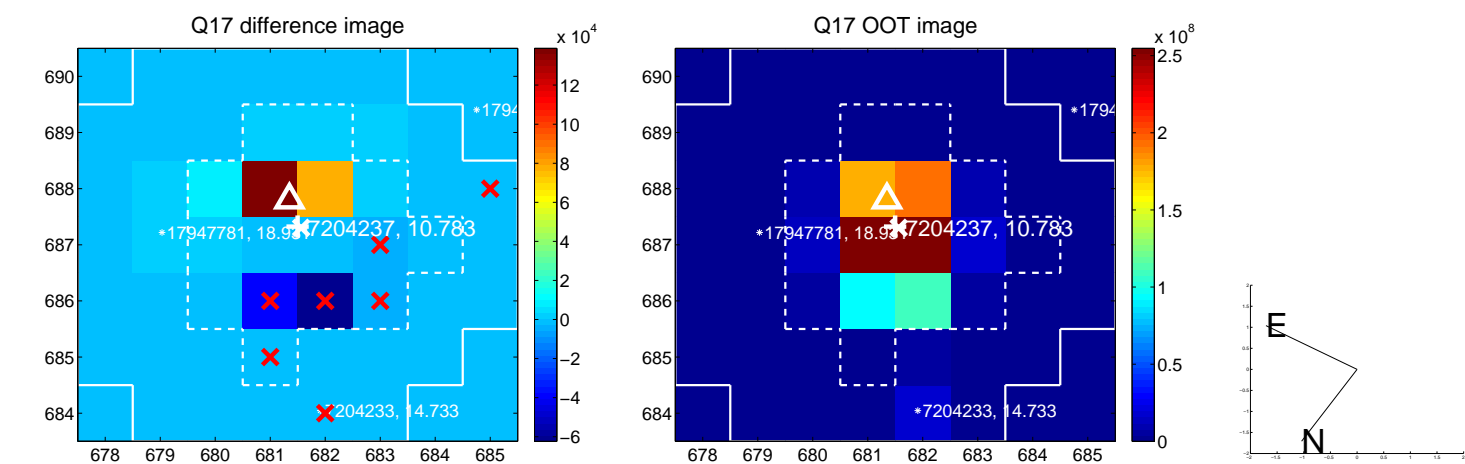
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UKIRT Image

Declination

