

KIC 007704028

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})
007704028-01	OBS	No	0.767274	132.272914	20.7	5.136	12.3	9.6	2.07	6230	0.97	18924.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007704028-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV

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

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

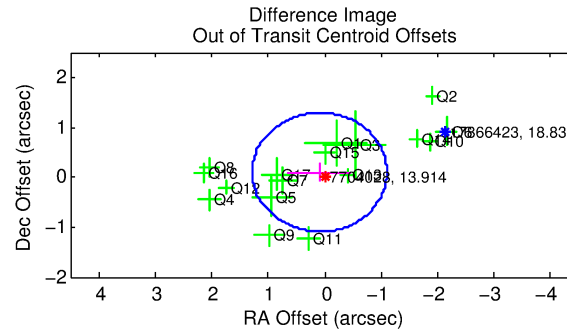
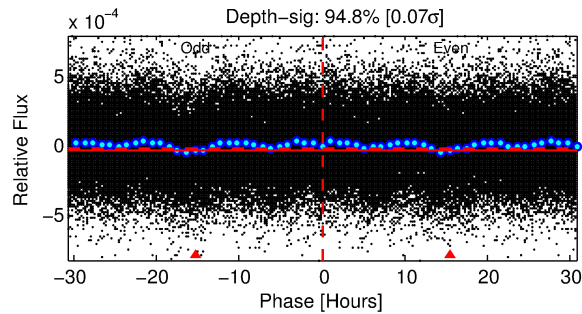
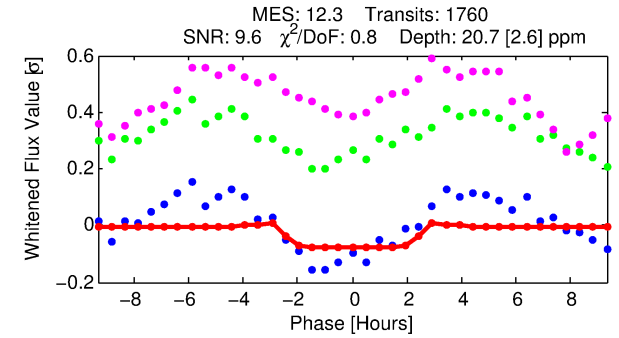
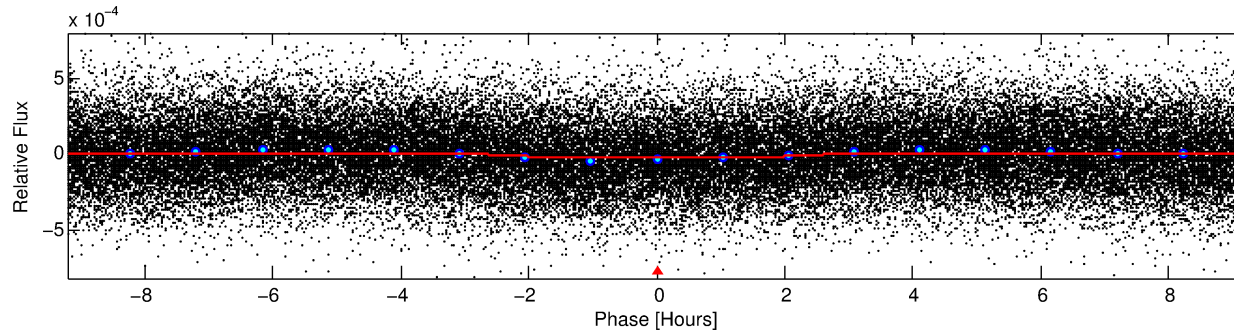
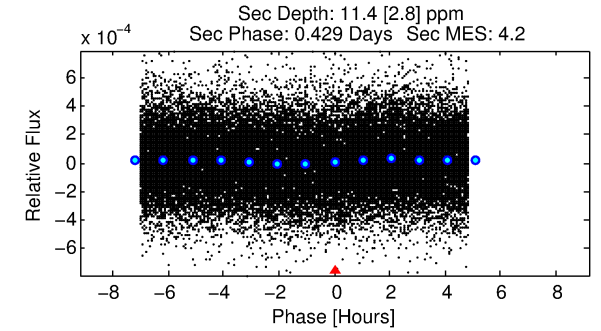
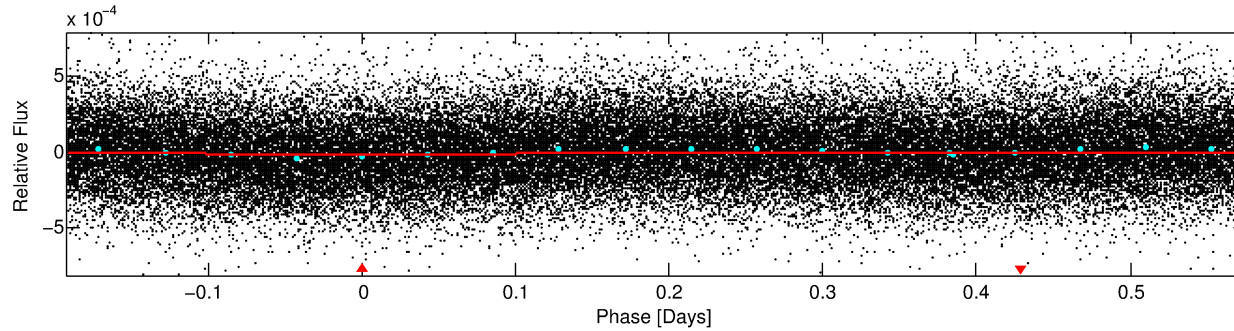
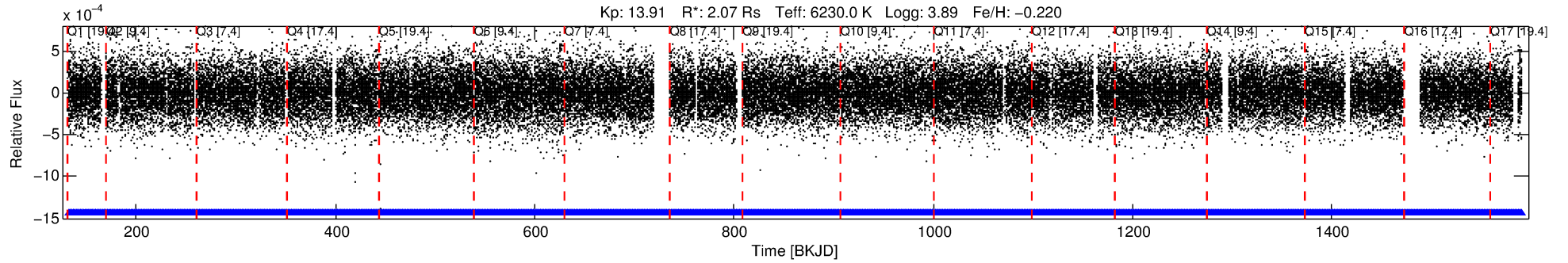
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007704028-01

No Significant Match Found

DV One-Page Summary

KIC: 7704028 Candidate: 1 of 1 Period: 0.767 d



DV Fit Results:

Period = 0.76727 [0.00001] d
Epoch = 132.2729 [0.0052] BKJD
Rp/R* = 0.0043 [0.0030]
a/R* = 1.24 [1.55]
b = 0.50 [5.43]
Seff = 18924.85 [15143.95]
Teq = 2991 [598] K
Rp = 0.97 [0.81] Re
a = 0.0175 [0.0083] AU
Ag = 2.02 [3.28] [0.31σ]
Teffp = 5514 [1968] K [1.23σ]

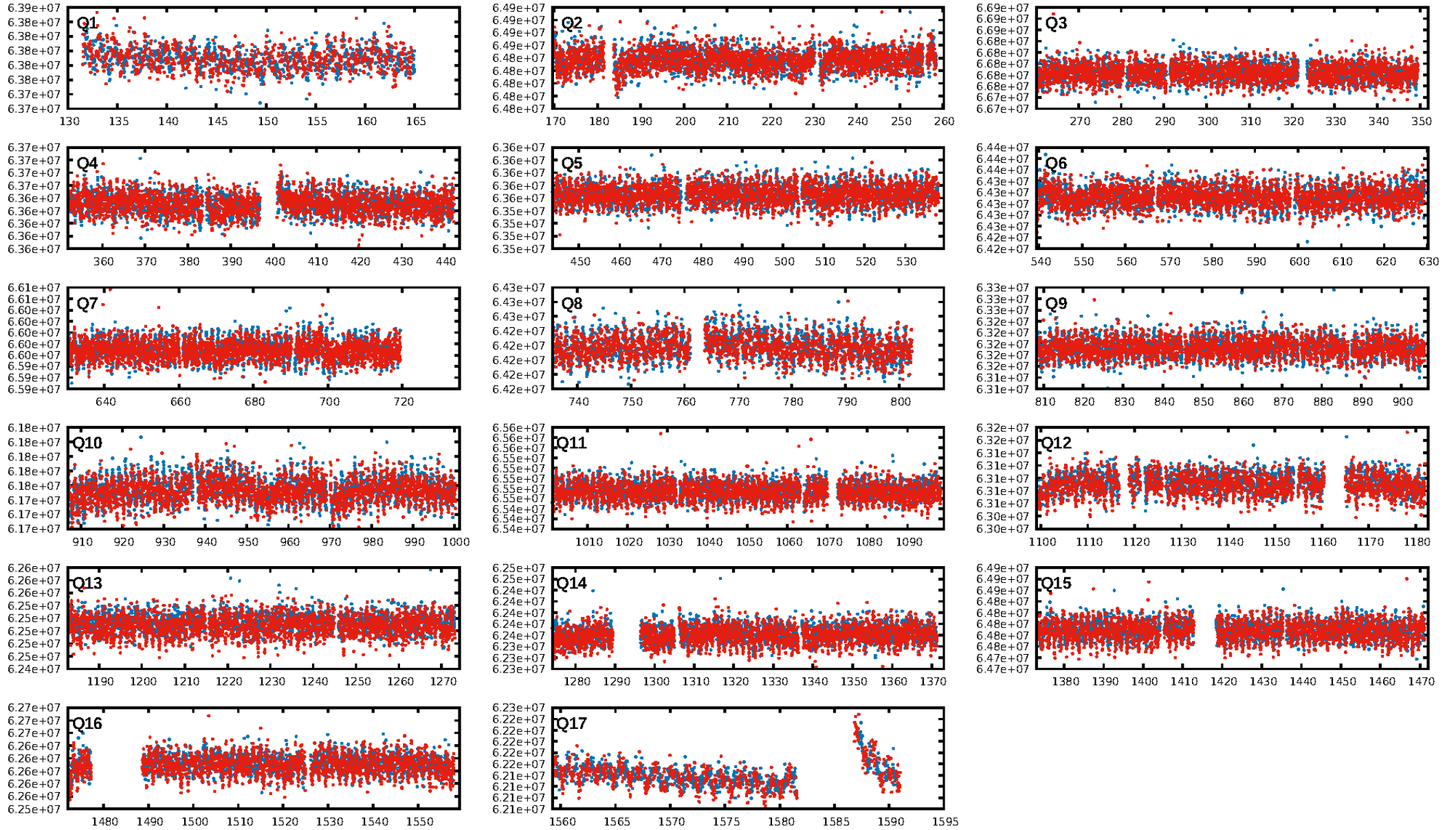
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 9.58e-17
RollingBand-fgt: 1.00 [1680/1680]
GhostDiagnostic-chr: 2.026
Centroid-sig: 4.4%
Centroid-so: 1.280 arcsec [1.44σ]
OotOffset-rm: 0.132 arcsec [0.33σ]
KicOffset-rm: 0.093 arcsec [0.38σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

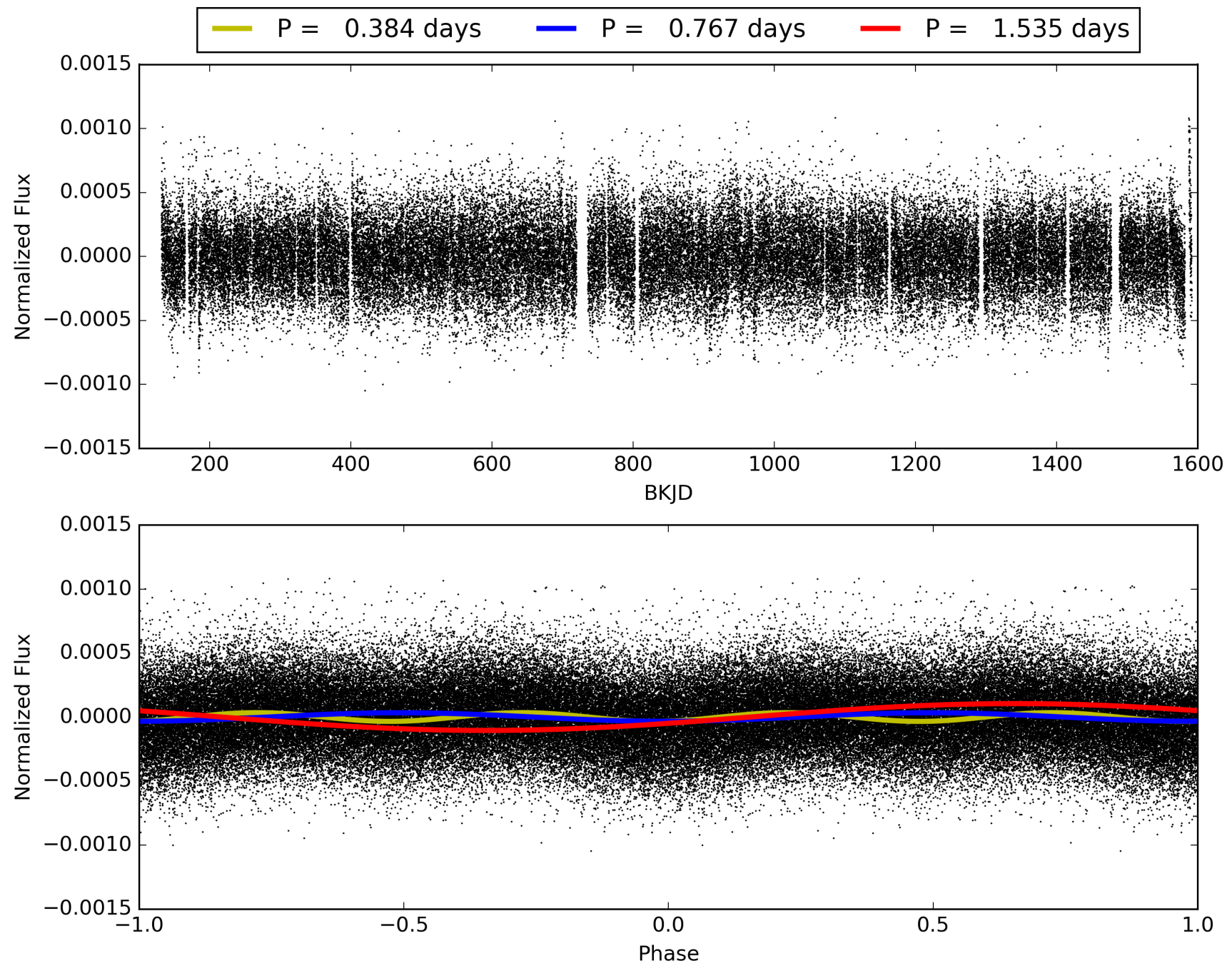
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:21:37 Z

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

TCE 007704028-01, PDC Light Curves

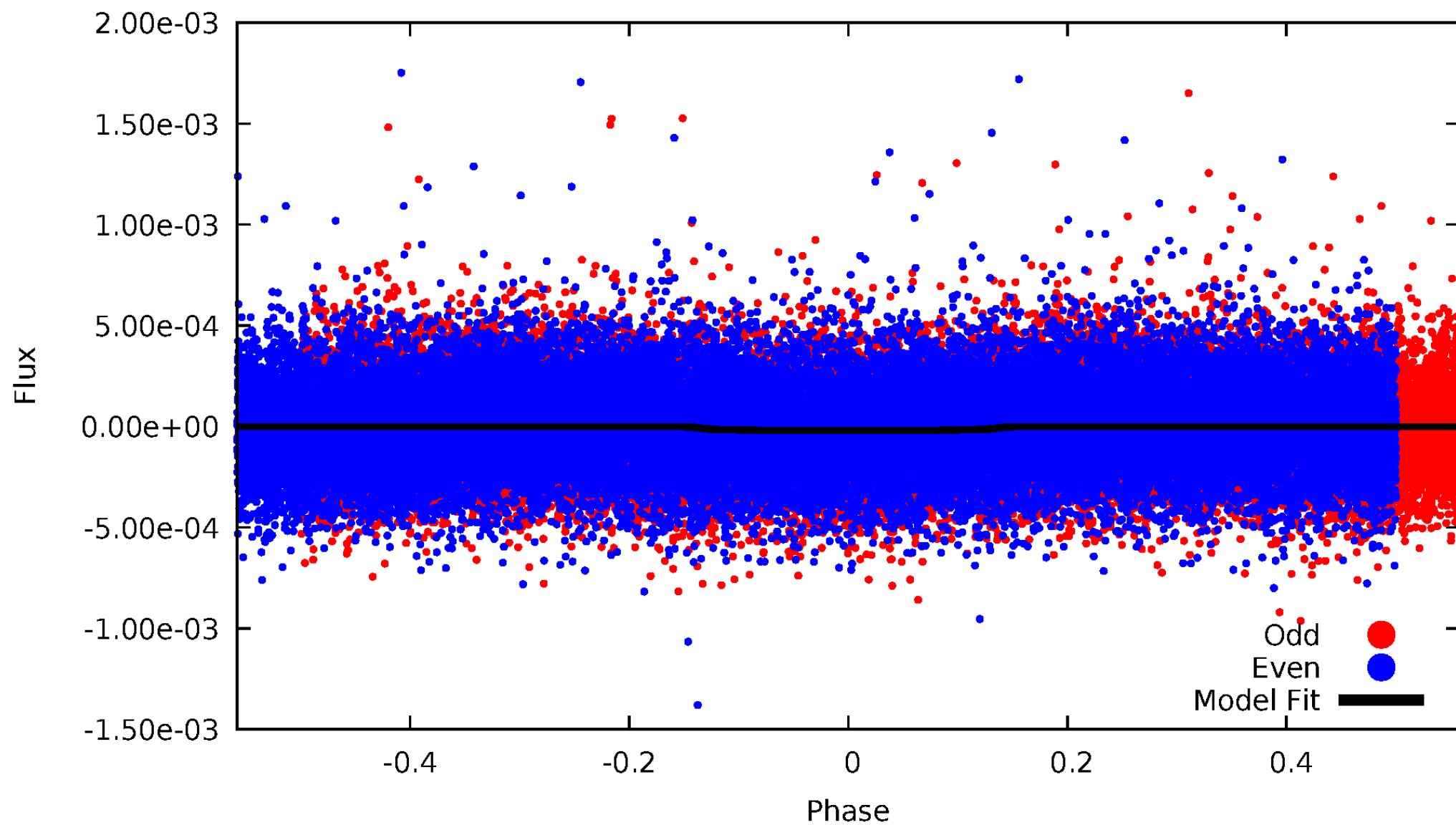


TCE 007704028-01



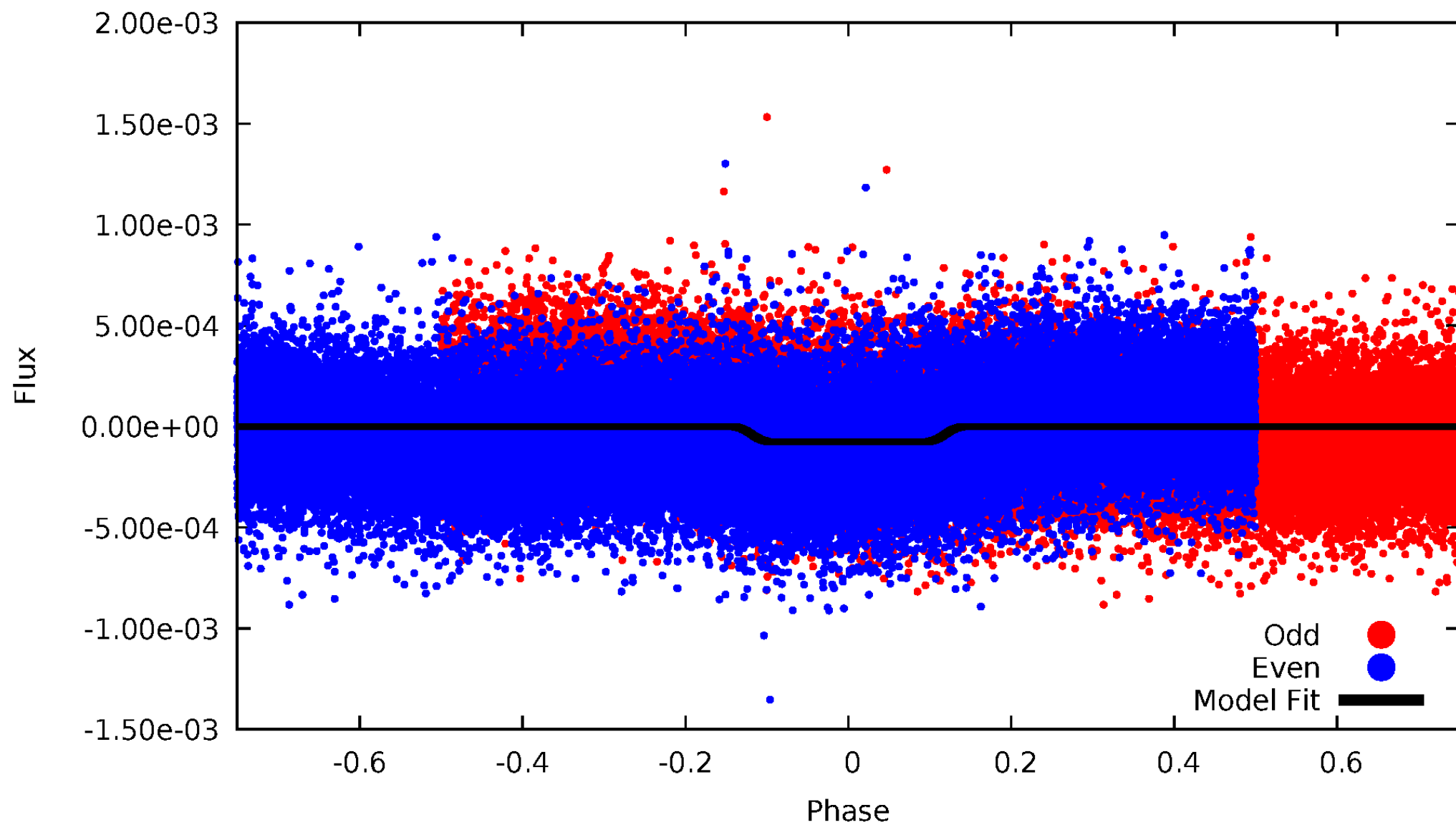
DV Odd/Even

TCE 007704028-01

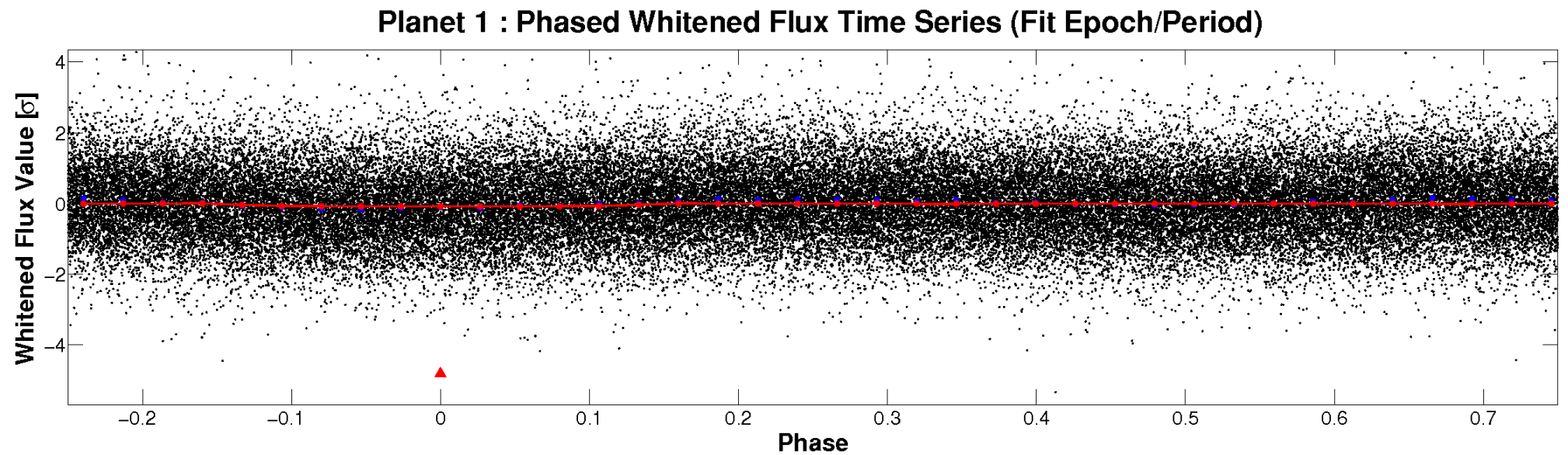
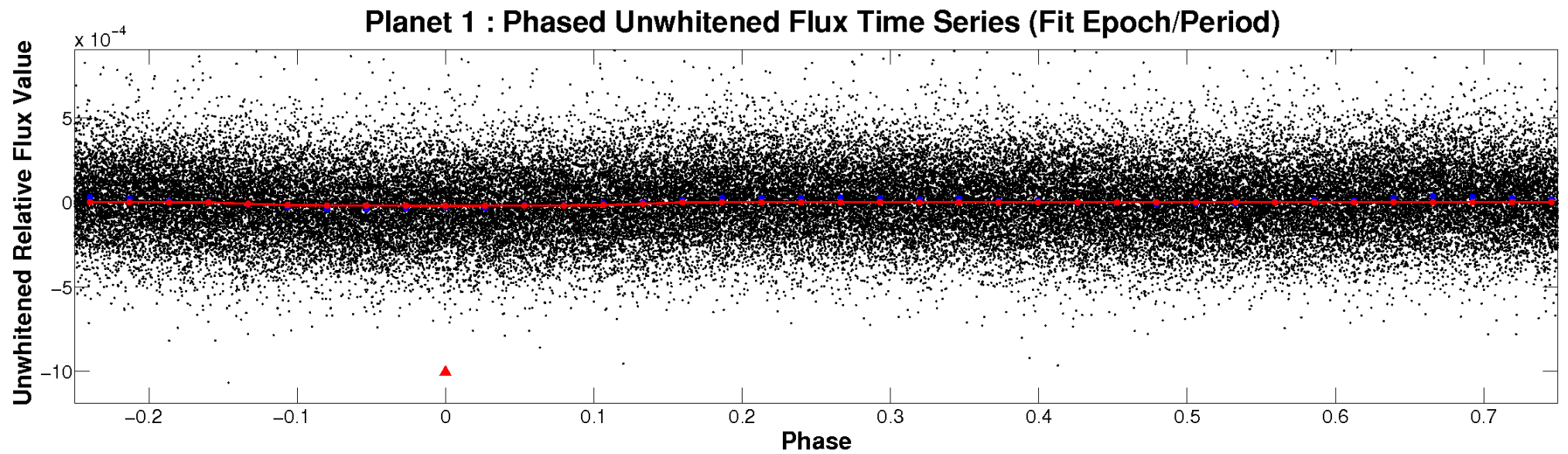


ALT Odd/Even

TCE 007704028-01

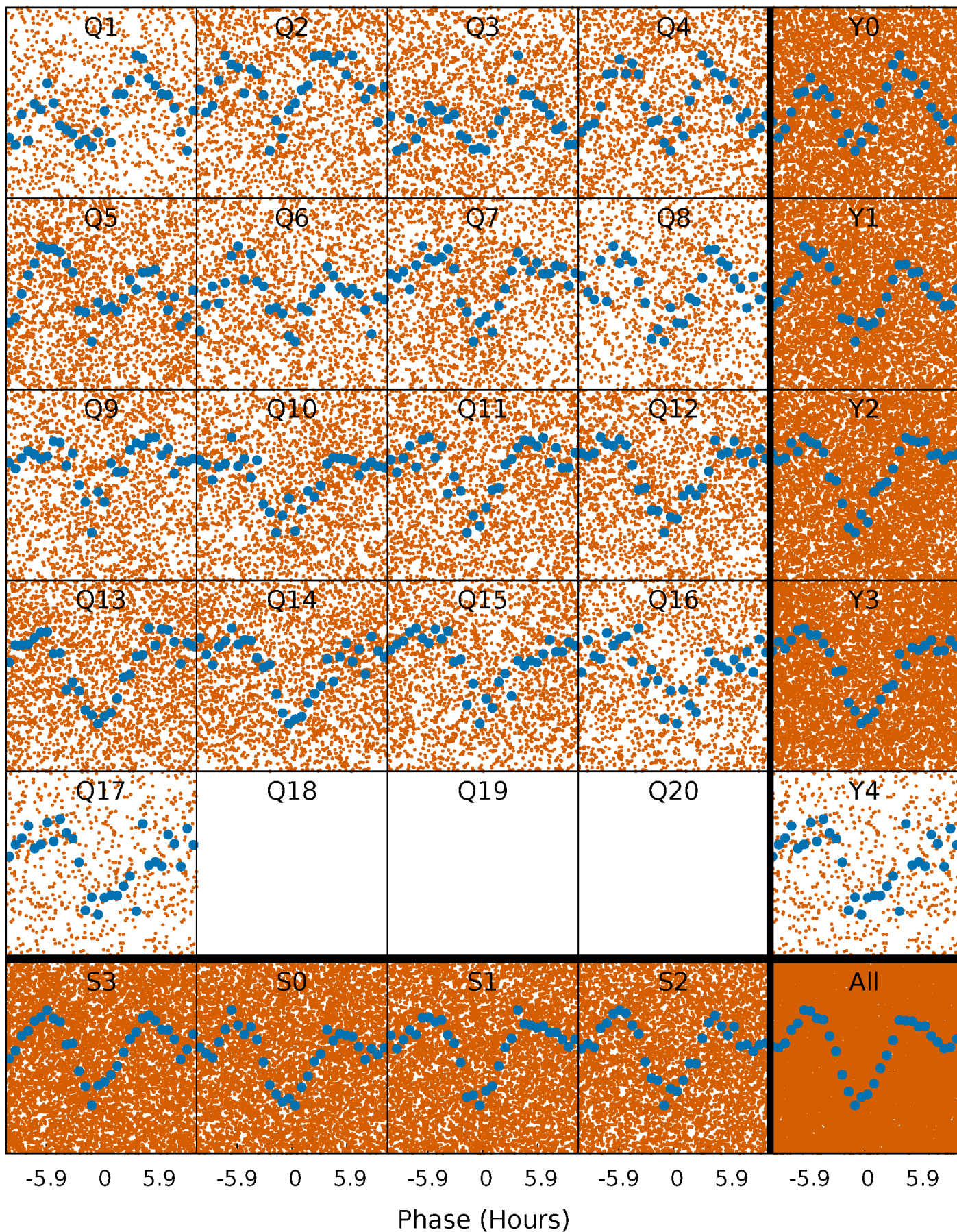


Non-Whitened Vs. Whitened Light Curve



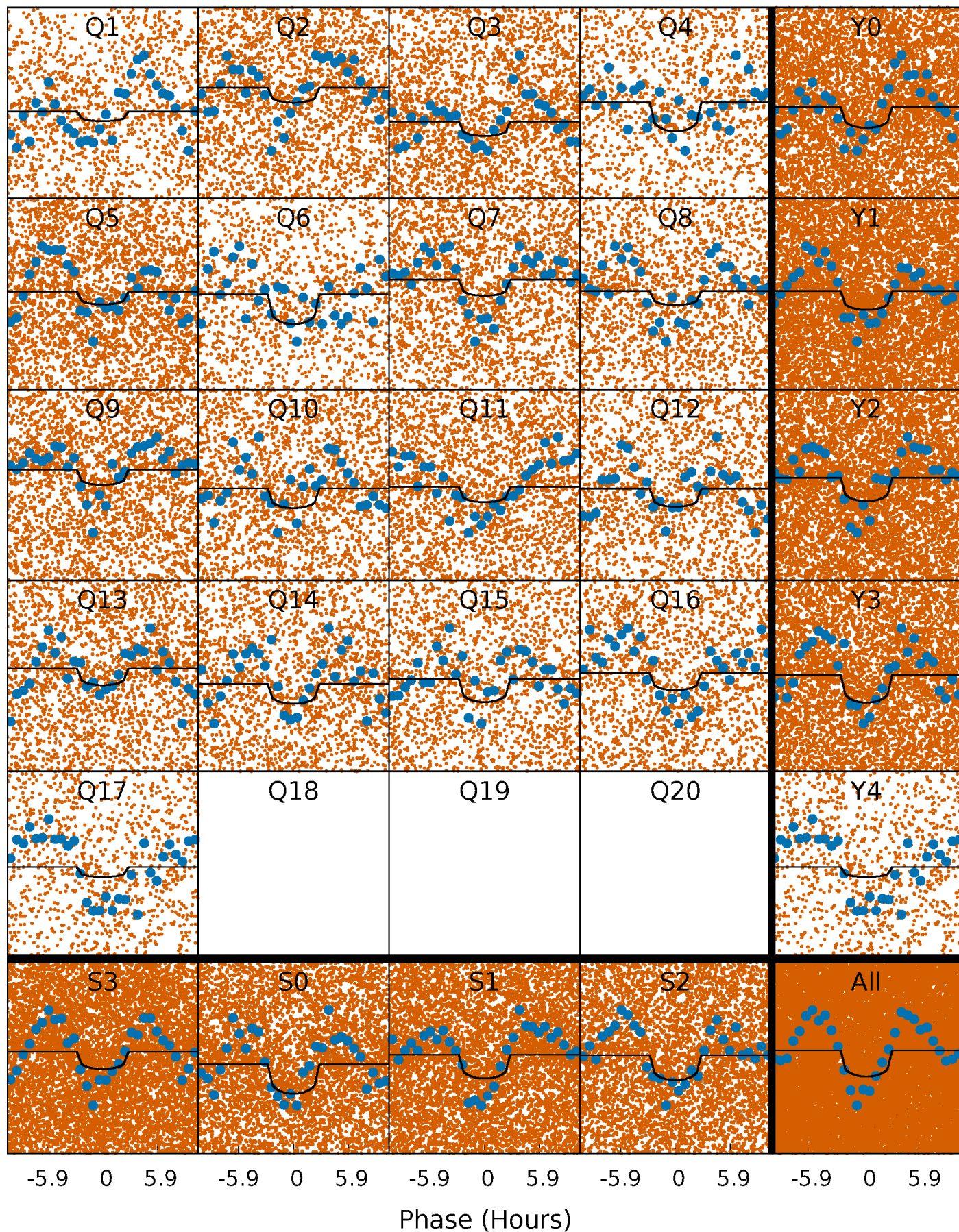
PDC Quarter-Phased Transit Curves

TCE 007704028-01 P= 0.767274 Days $T_0=132.272914$ (BKJD)



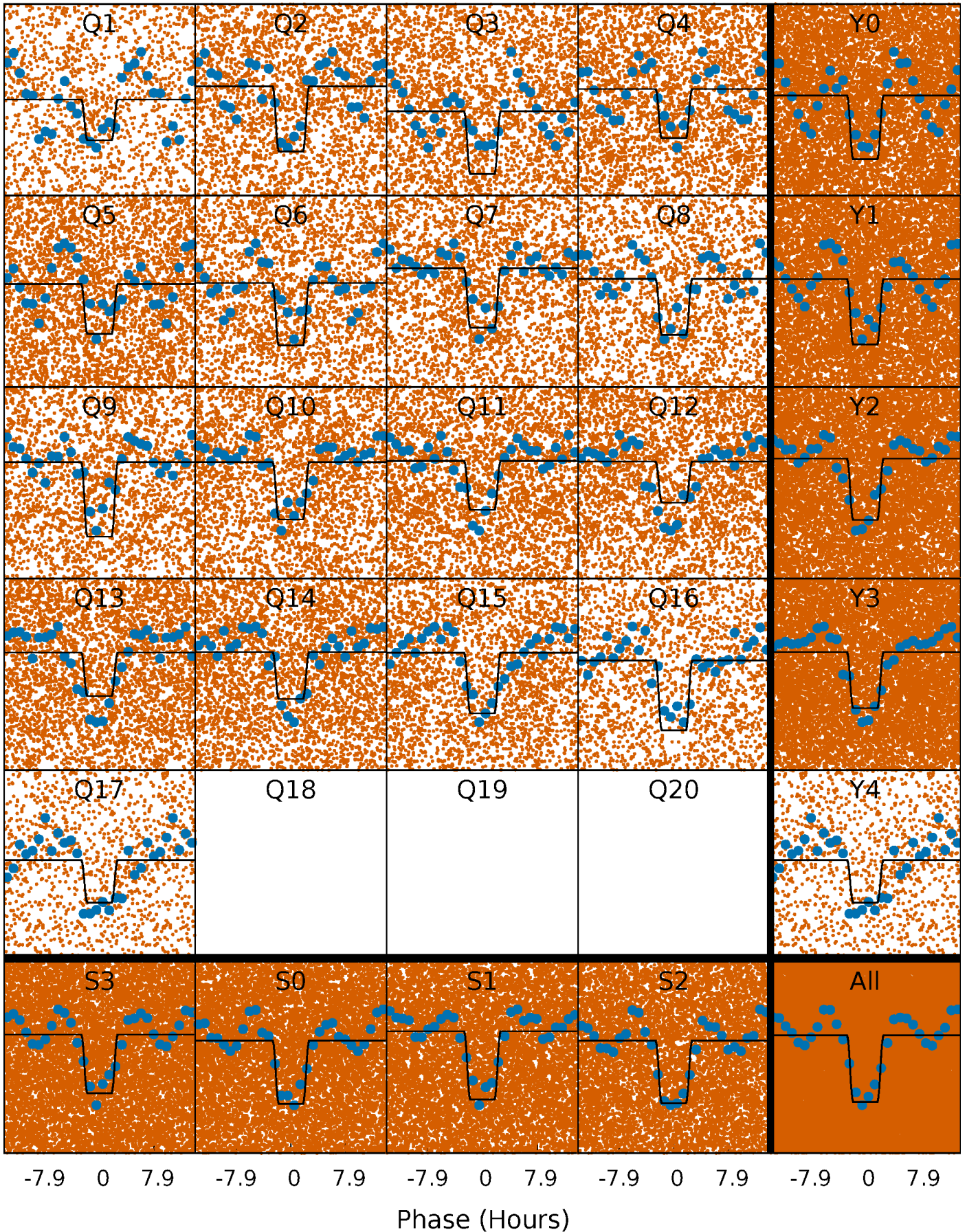
DV Quarter-Phased Transit Curves

TCE 007704028-01 P= 0.767274 Days $T_0=132.272914$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

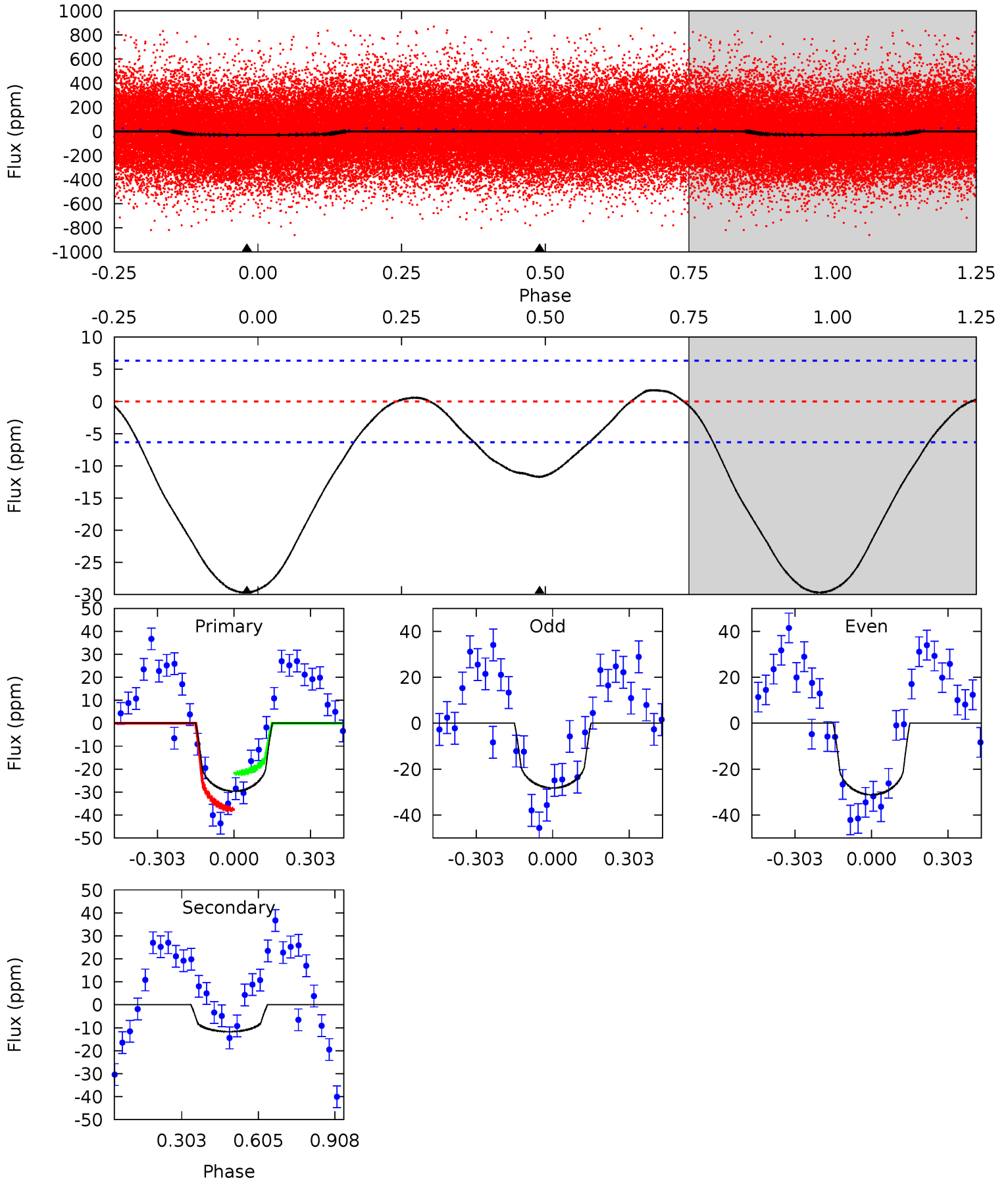
TCE 007704028-01 P= 0.767306 Days $T_0=132.228055$ (BKJD)



DV Model-Shift Uniqueness Test

007704028-01, P = 0.767274 Days, E = 131.505640 Days

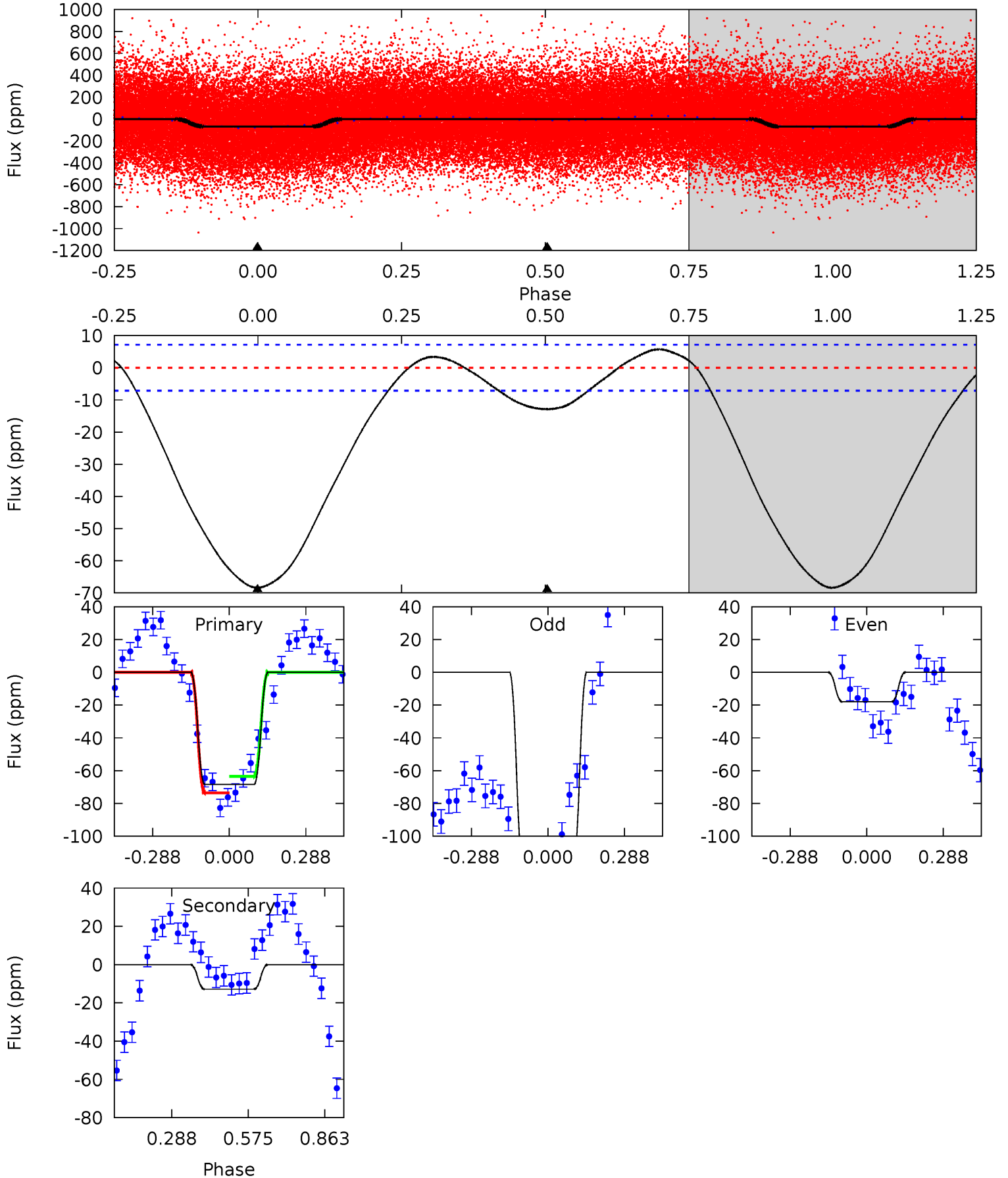
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.2	7.99	0	0	4.33	1.03	0.62	20.2	20.2	7.99	7.99	0.98	1.01	0.06	5.36



Alt Model-Shift Uniqueness Test

007704028-01, P = 0.767306 Days, E = 131.460749 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.5	7.81	0	0	4.34	1.06	1.94	41.5	41.5	7.81	7.81	30.1	1.07	0.08	2.98



Stellar Parameters For KIC 007704028

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6230^{+180}_{-225}	$3.889^{+0.472}_{-0.118}$	$-0.220^{+0.300}_{-0.300}$	$2.071^{+0.514}_{-0.955}$	$1.211^{+0.198}_{-0.242}$	$0.192^{+0.823}_{-0.085}$
	+3%/-4%	+12%/-3%	+136%/-136%	+25%/-46%	+16%/-20%	+429%/-44%
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 007704028-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-12 ± 1	$0.93^{+0.65}_{-0.56}$	4069^{+320}_{-523}	5194^{+3331}_{-1137}	$2.287^{+11.955}_{-1.500}$
Alt.	-13 ± 2	$1.79^{+0.73}_{-0.69}$	4059^{+306}_{-506}	3766^{+963}_{-1071}	$0.665^{+1.107}_{-0.337}$

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 $A_{obs} \gg 1.0$

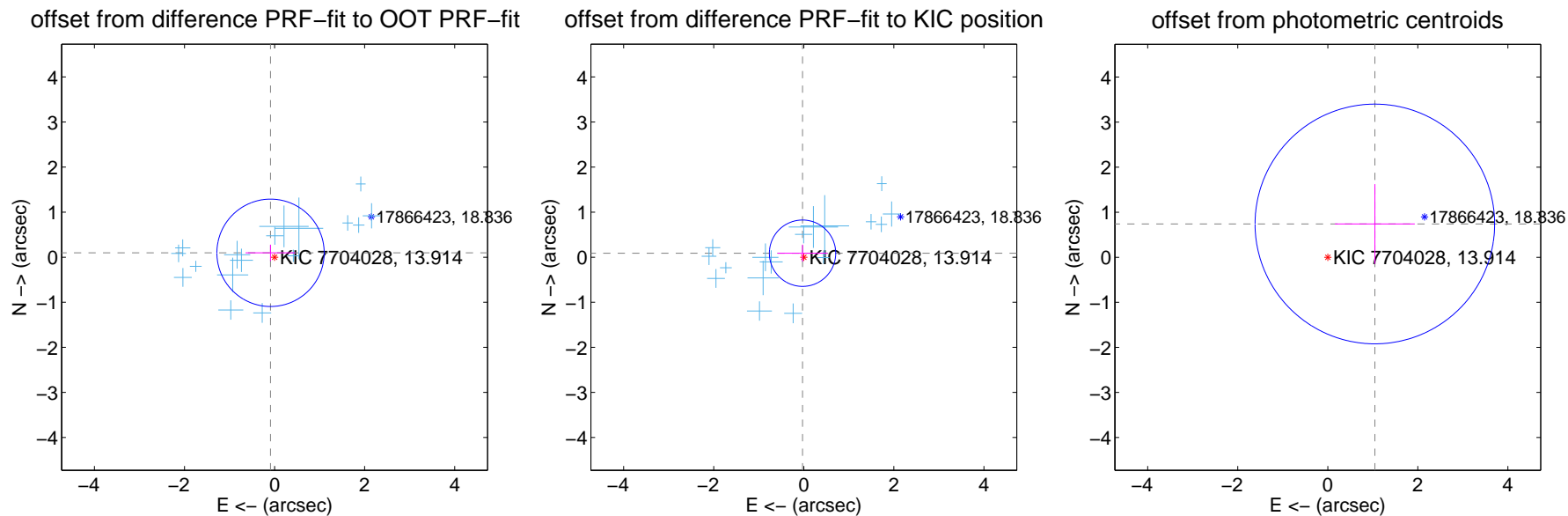
DV Centroid Data

Supplemental centroid analysis for 007704028-01. Kepler magnitude: 13.91. Transit SNR 9.57

There are 17 quarters with good PRF difference image offsets

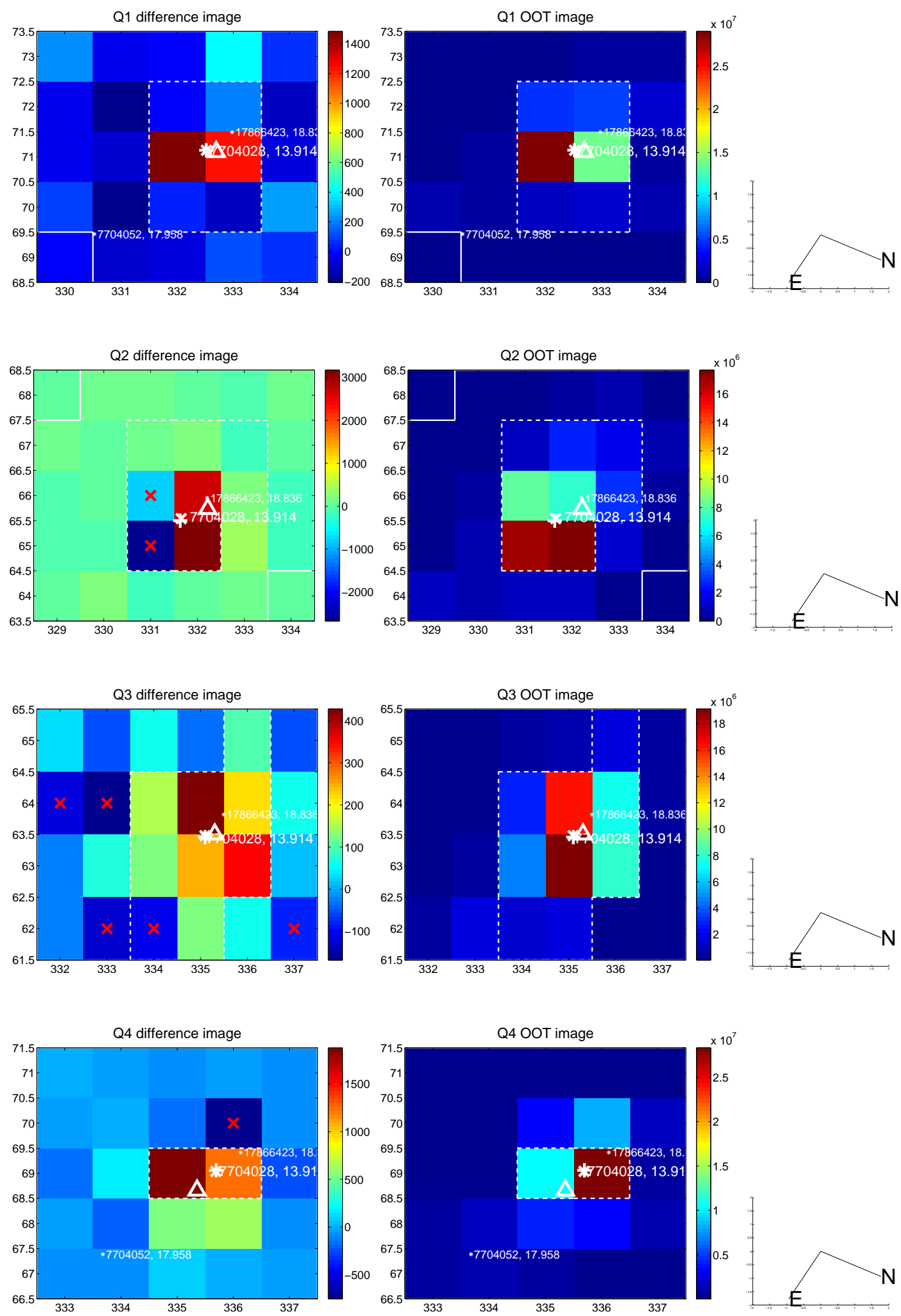
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.132 ± 0.397	0.33	0.090 ± 0.553	0.098 ± 0.181
PRF-fit source offset from KIC position	0.093 ± 0.245	0.38	0.028 ± 0.557	0.089 ± 0.189
photometric centroid source offset	1.28 ± 0.89	1.44	-1.04 ± 0.89	0.74 ± 0.89

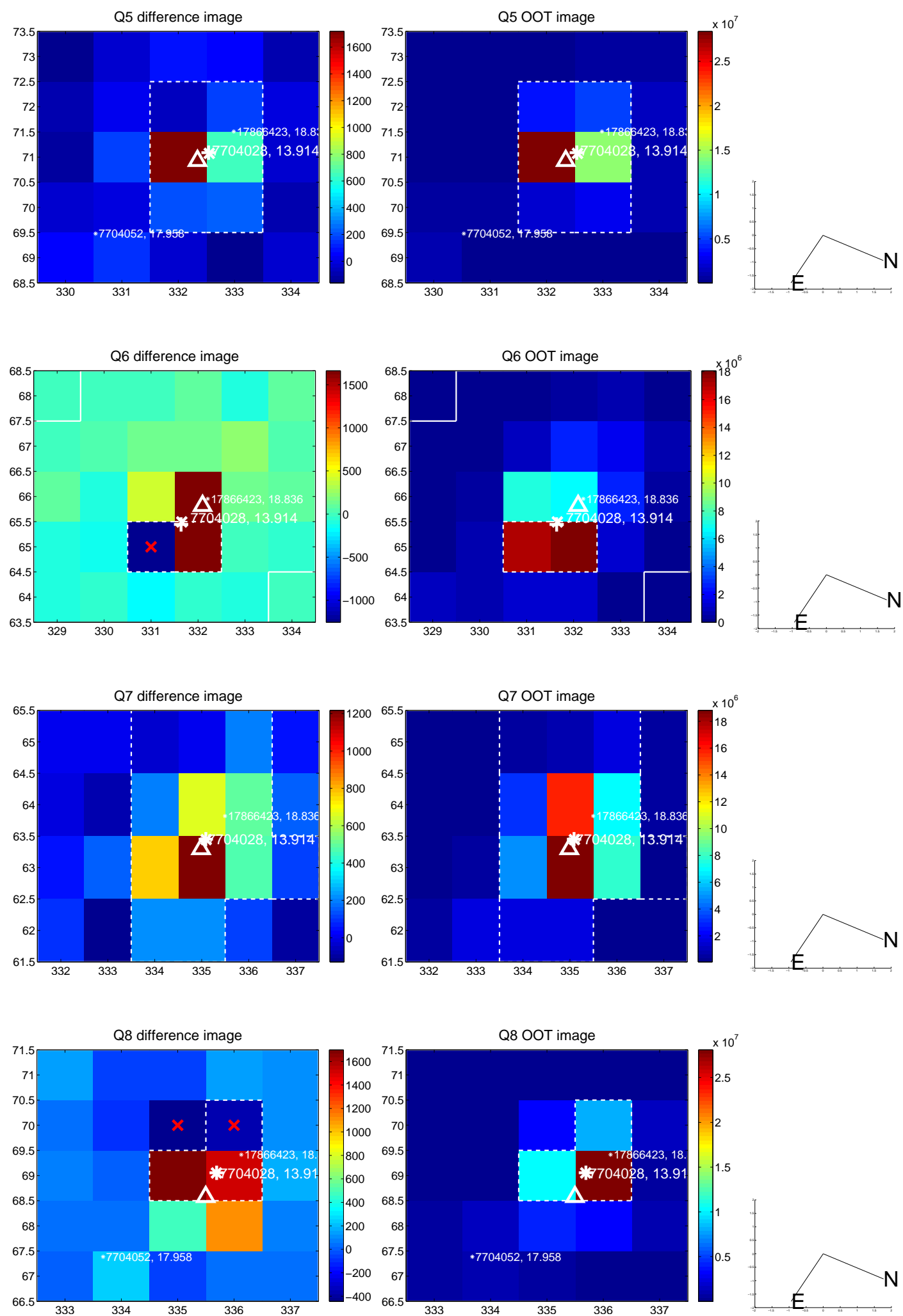


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

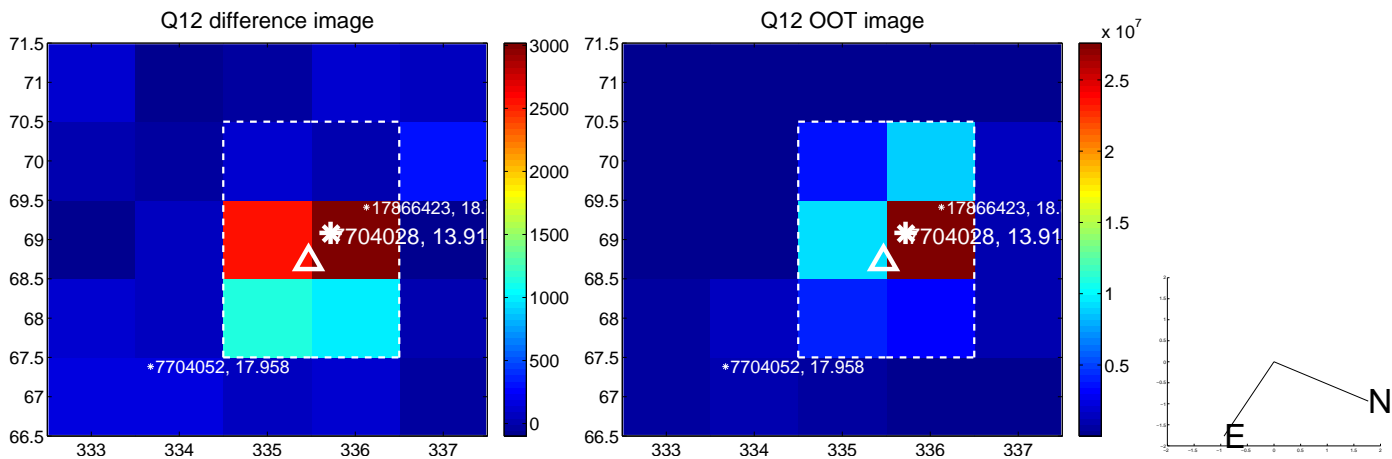
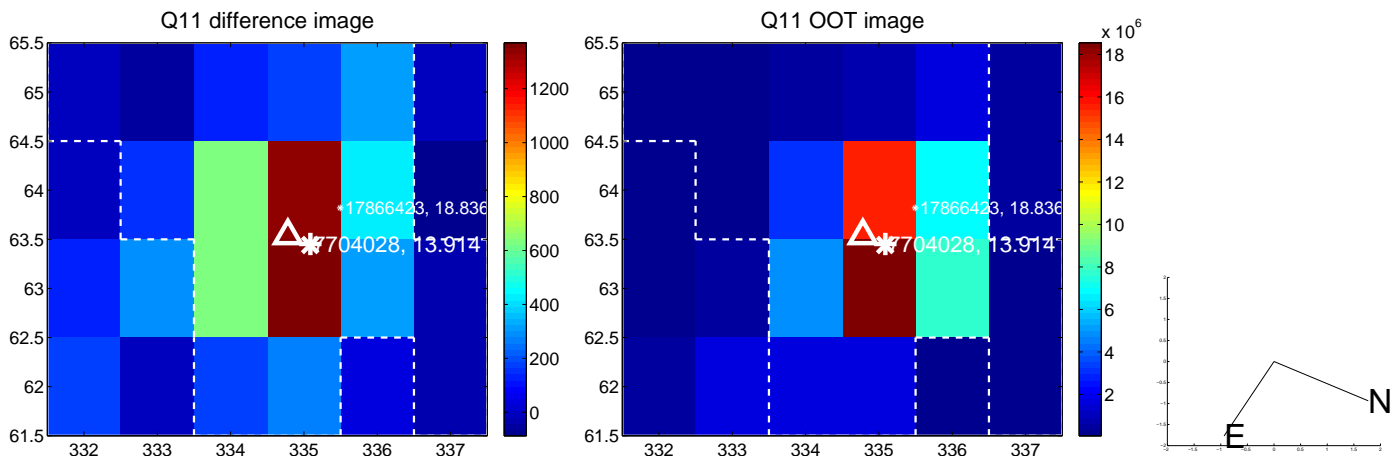
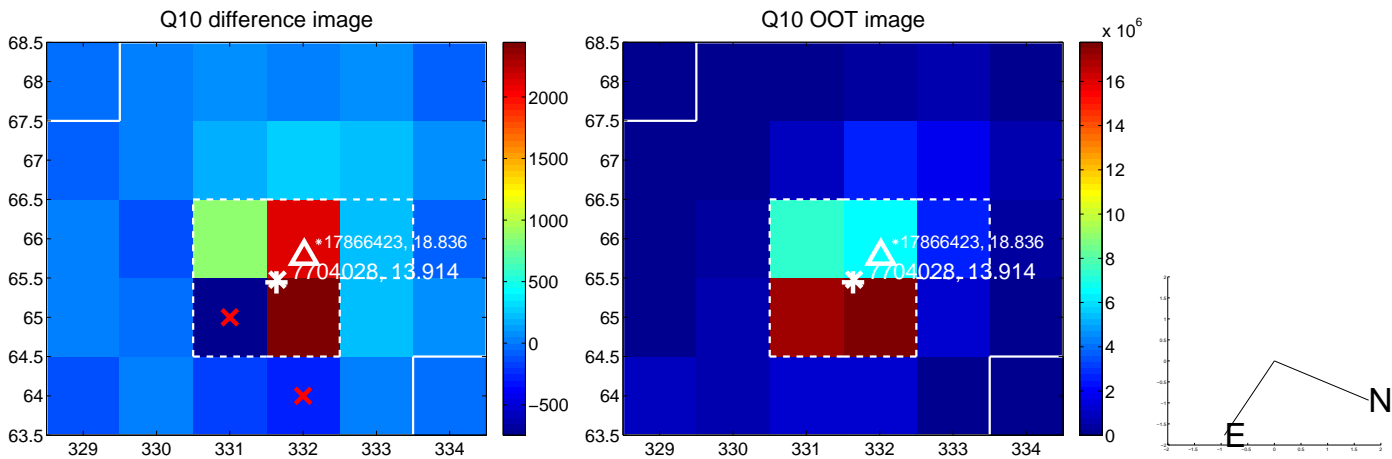
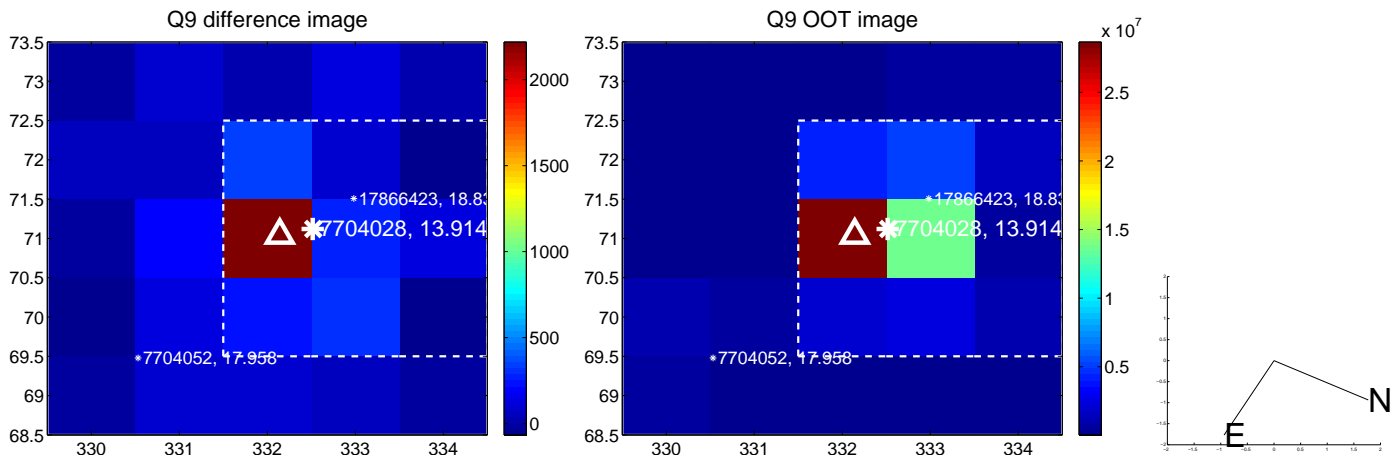
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



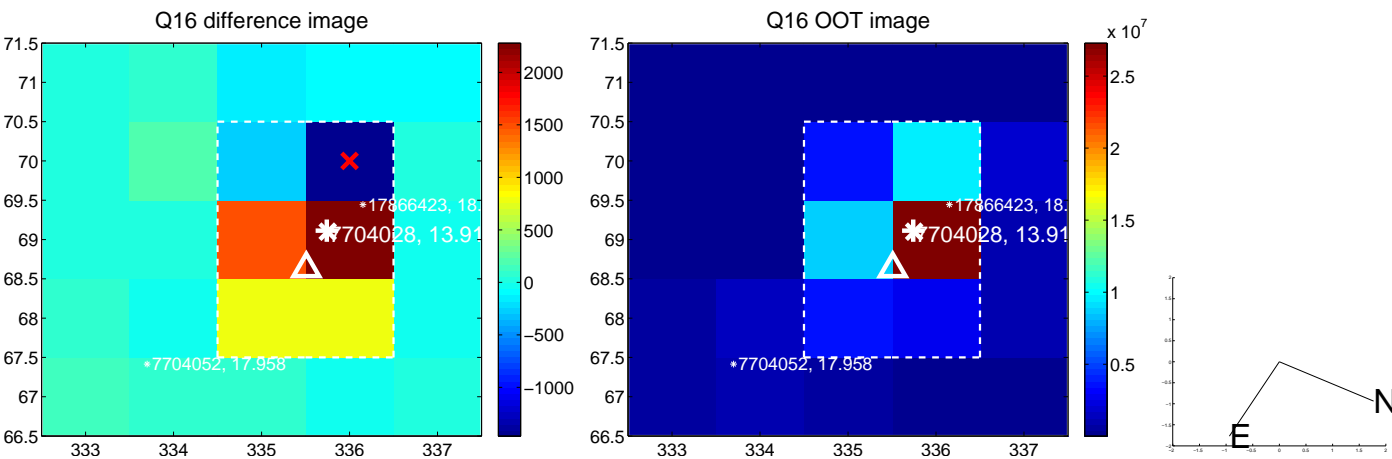
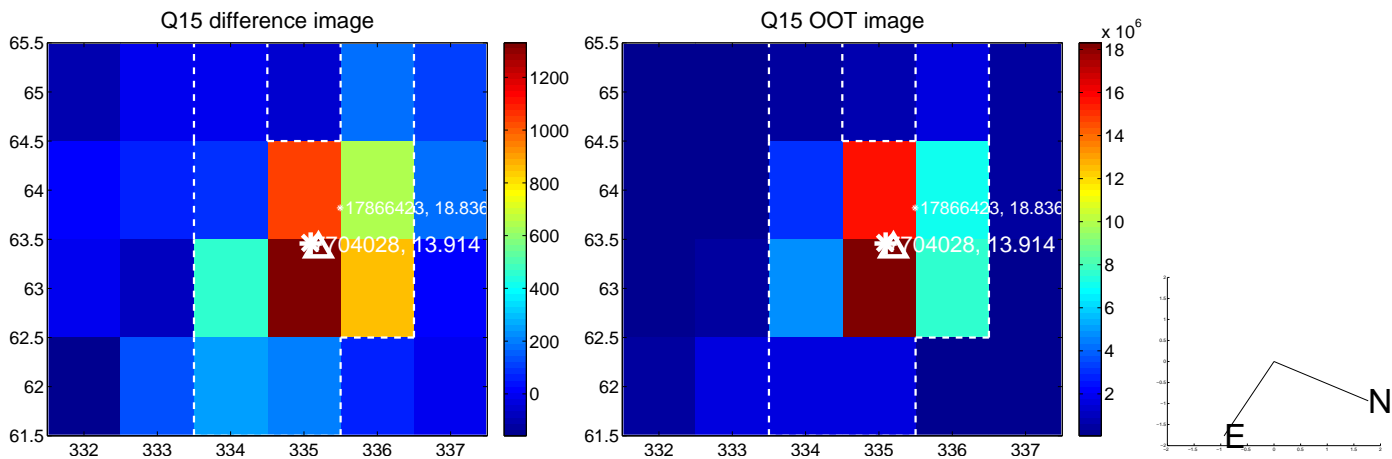
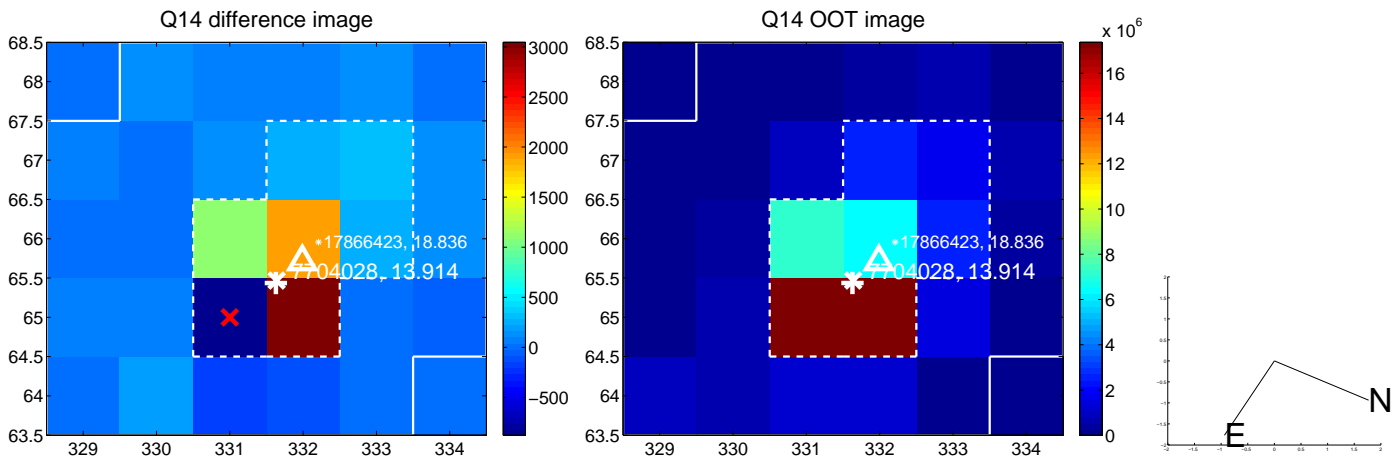
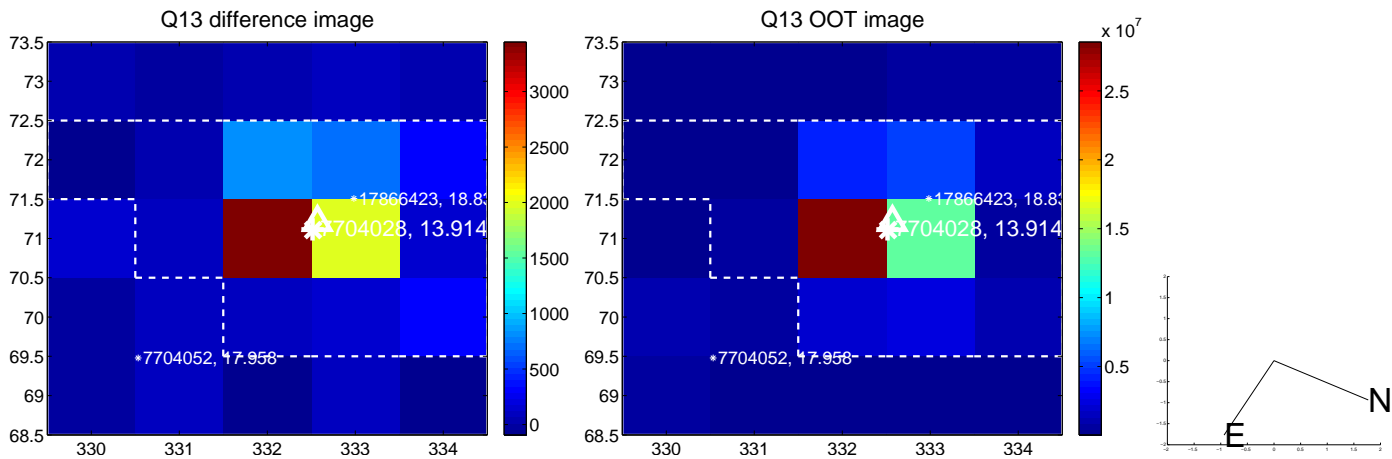
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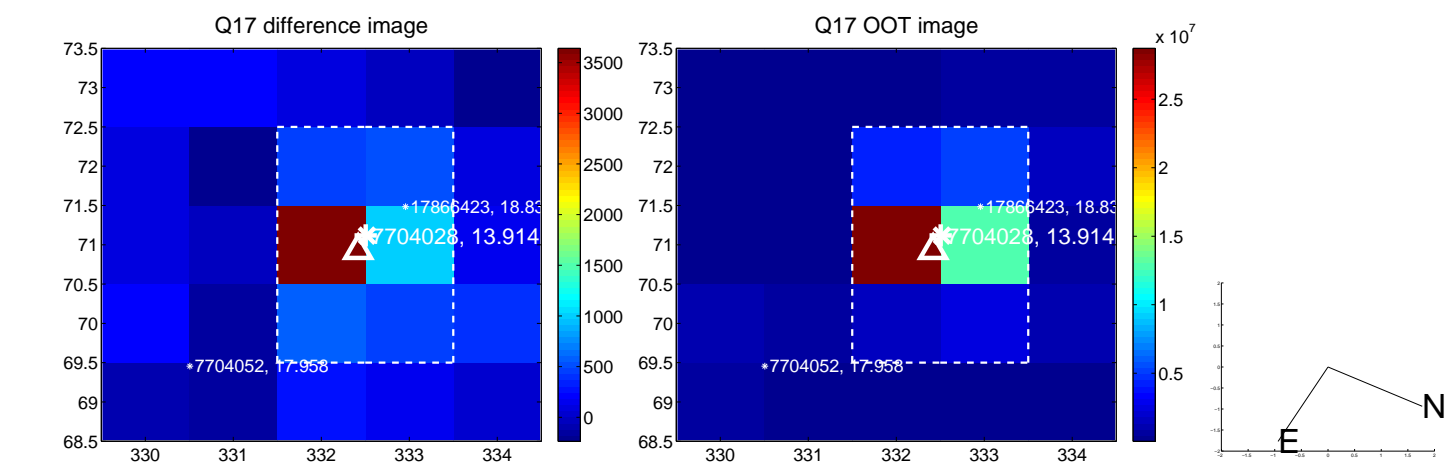
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



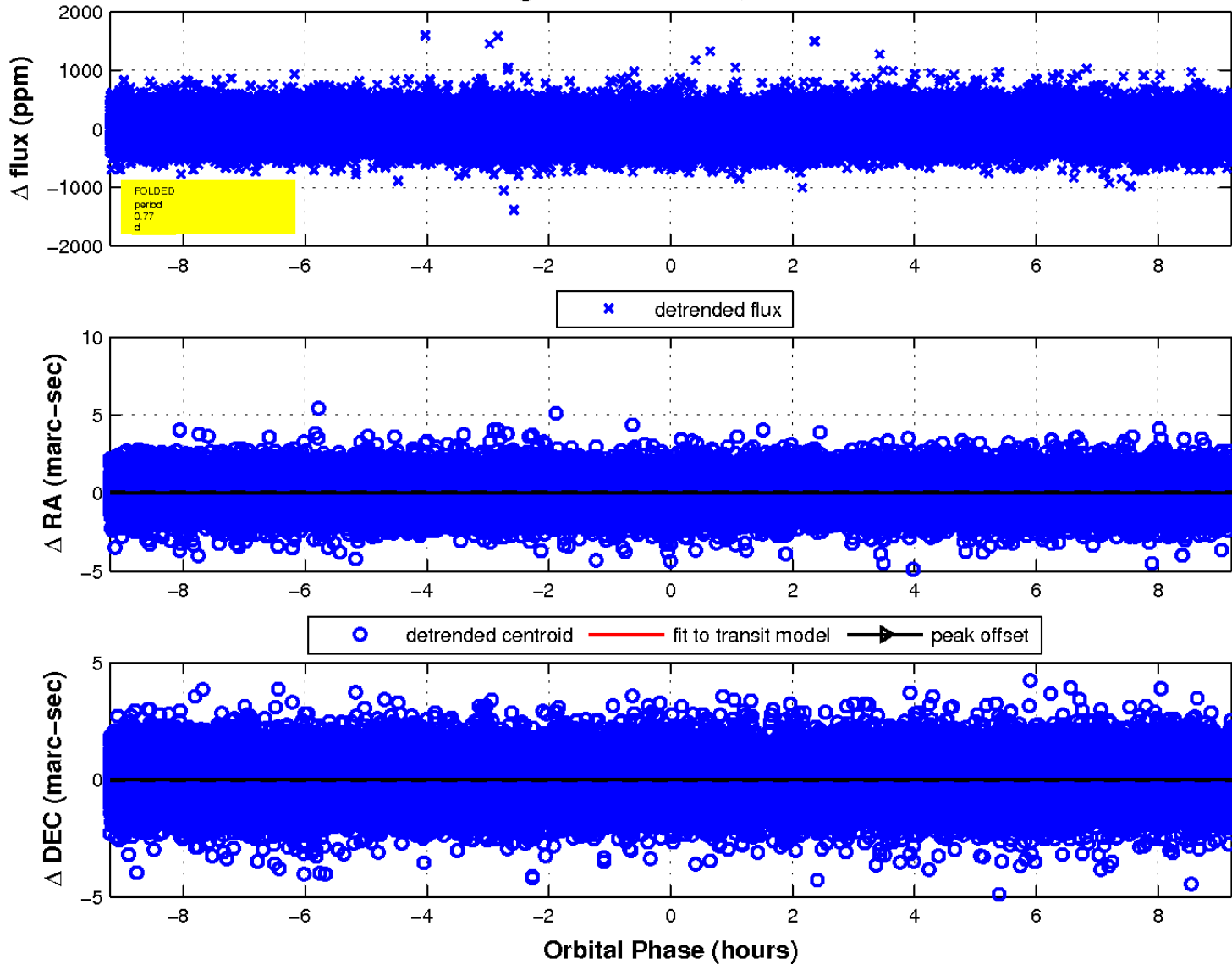
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

