

KIC 007702705

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})
007702705-01	OBS	No	4.026912	134.976967	168.5	30.307	8.6	9.1	10.80	6732	14.15	39793.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007702705-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED

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

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

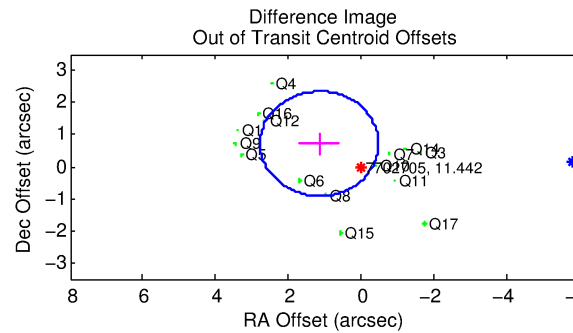
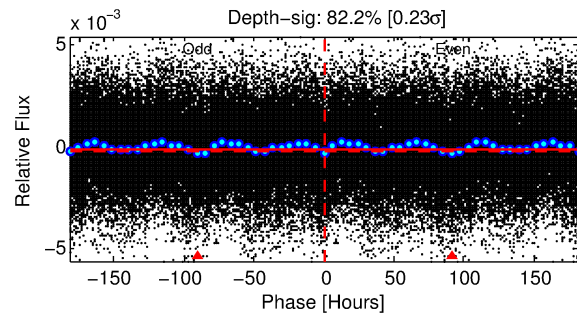
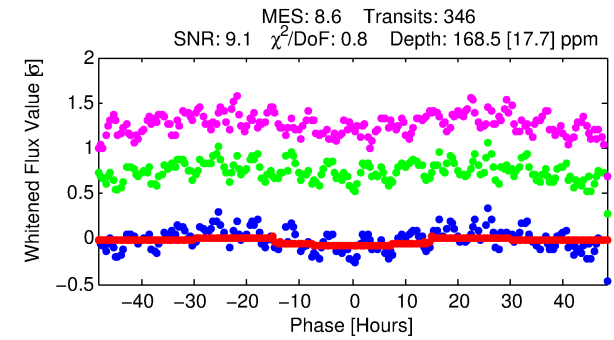
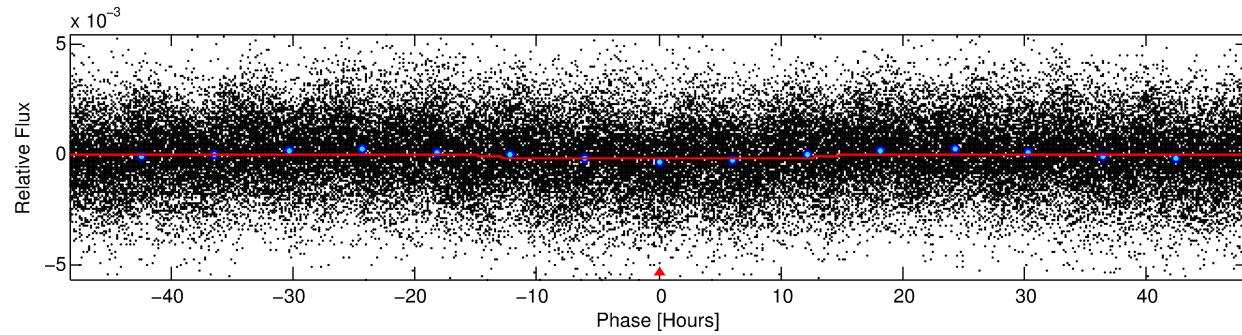
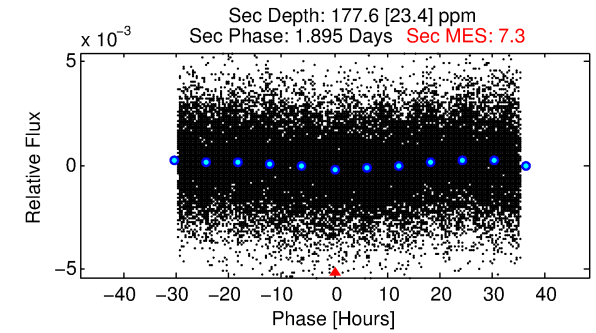
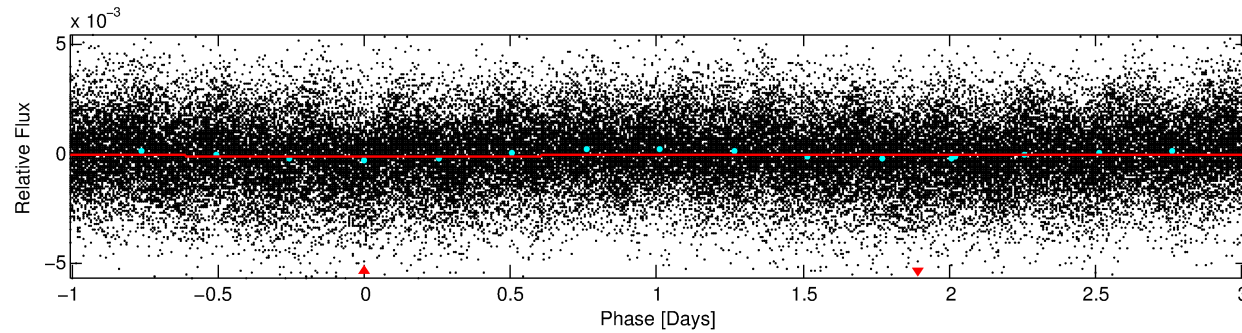
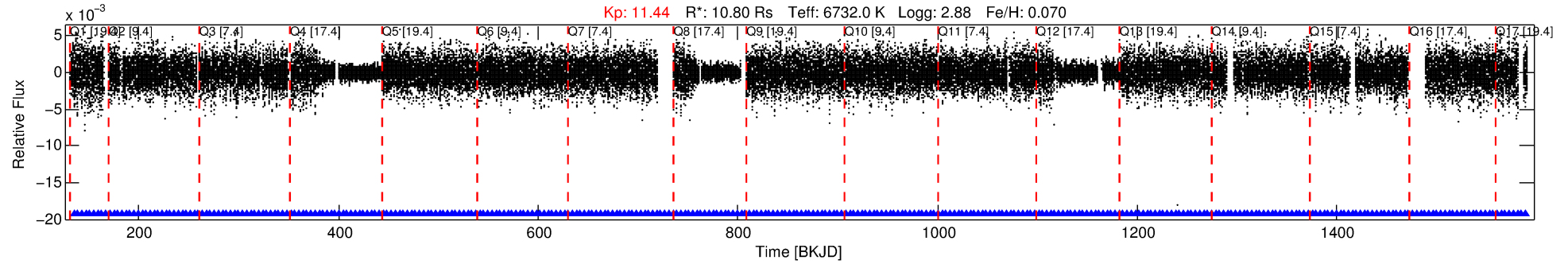
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007702705-01

No Significant Match Found

DV One-Page Summary

KIC: 7702705 Candidate: 1 of 1 Period: 4.027 d



DV Fit Results:

Period = 4.02691 [0.00007] d
Epoch = 134.9770 [0.0088] BKJD
Rp/R* = 0.0120 [0.0023]
a/R* = 1.21 [0.37]
b = 0.18 [5.40]
Seff = 39793.96 [46561.98]
Teq = 3601 [1054] K
Rp = 14.15 [7.44] Re
a = 0.0734 [0.0315] AU
Ag = 2.63 [1.99] [0.82σ]
Teffp = 7092 [1872] K [1.63σ]

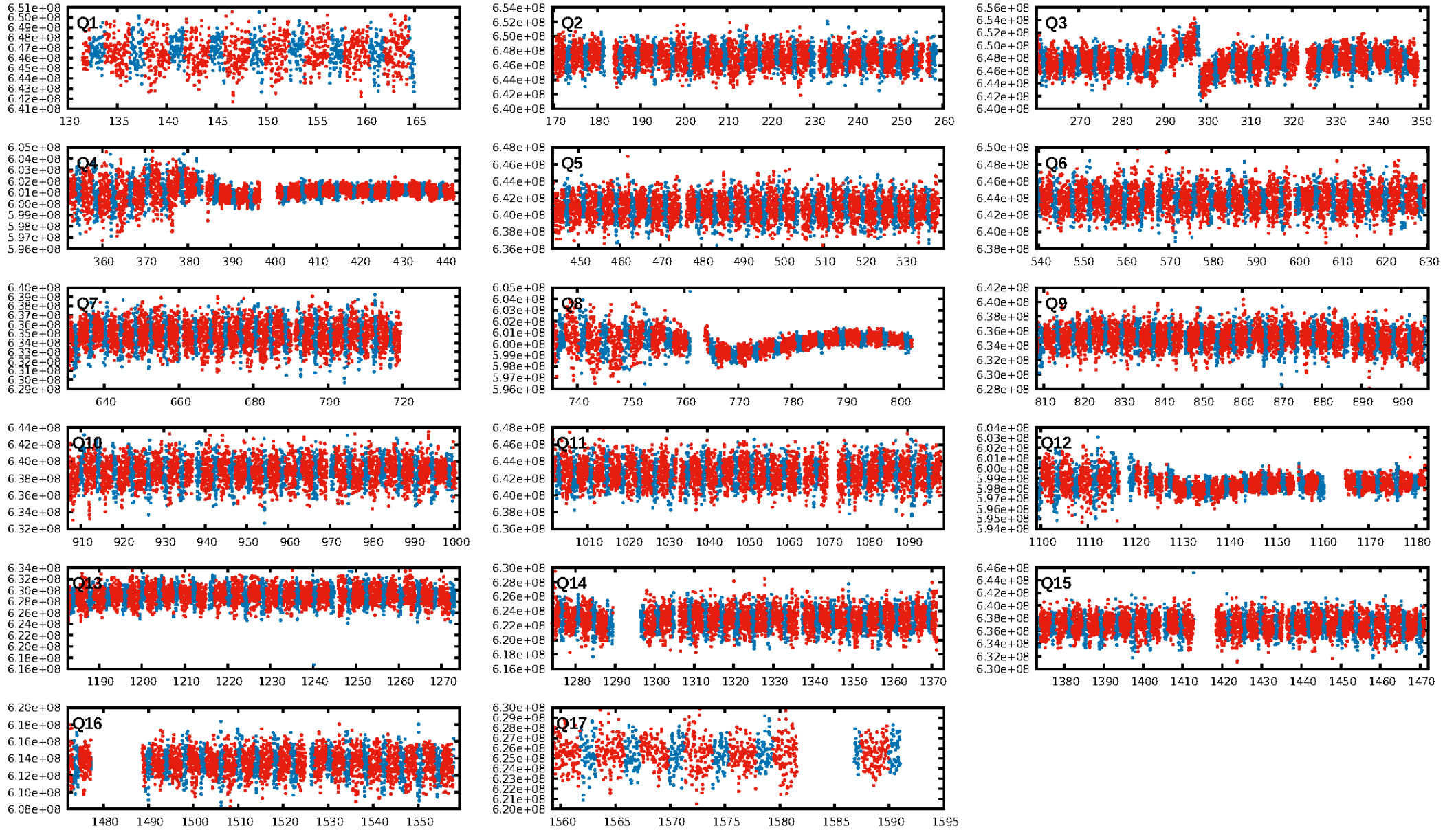
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [330/330]
GhostDiagnostic-chr: 0.8378
Centroid-sig: 0.0%
Centroid-so: 0.276 arcsec [3.31σ]
OotOffset-rm: 1.353 arcsec [2.49σ]
KicOffset-rm: 1.414 arcsec [2.79σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.93 [14/15]
DiffImageOverlap-fno: 1.00 [17/17]

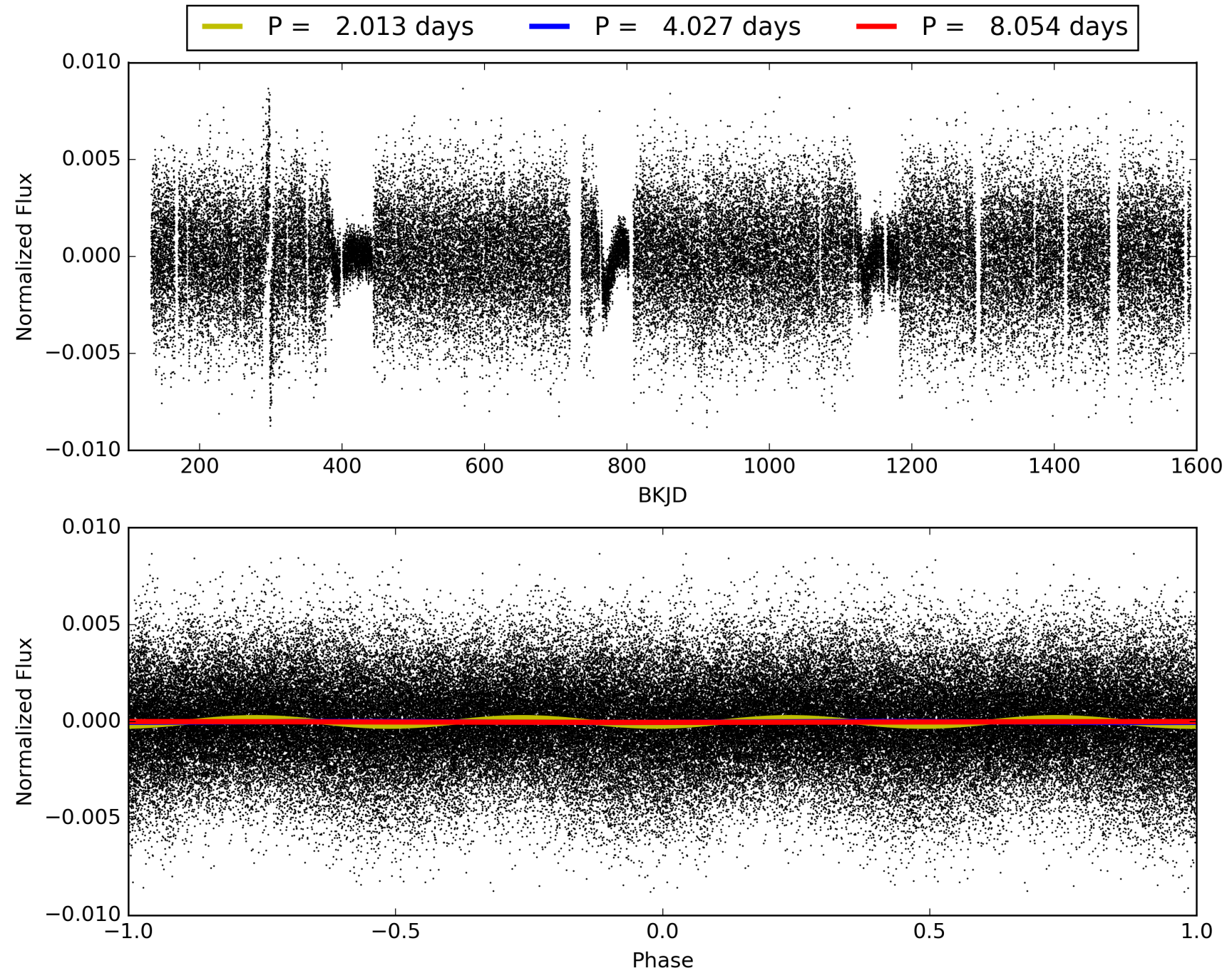
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:33:22 Z

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

TCE 007702705-01, PDC Light Curves

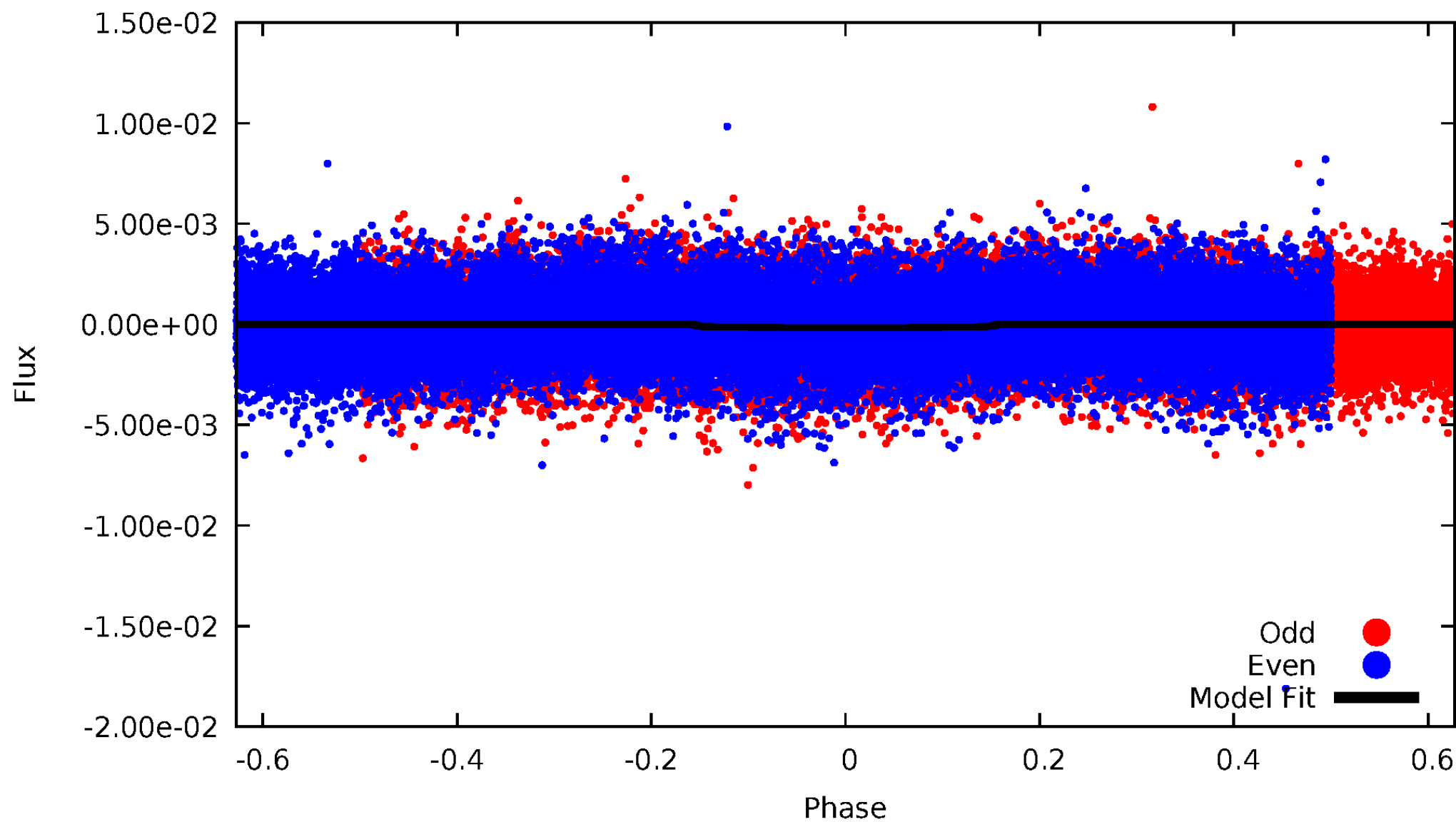


TCE 007702705-01



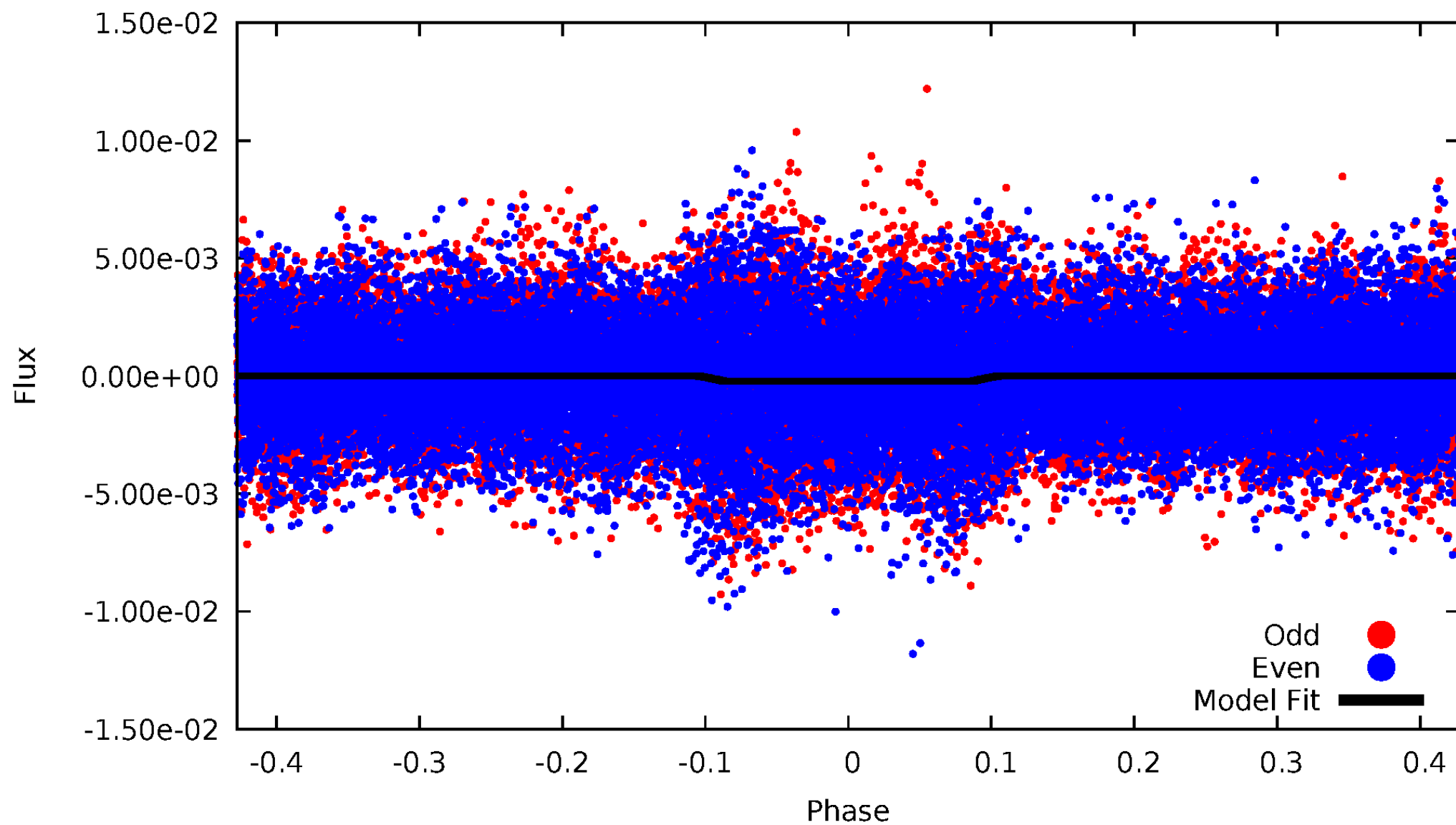
DV Odd/Even

TCE 007702705-01



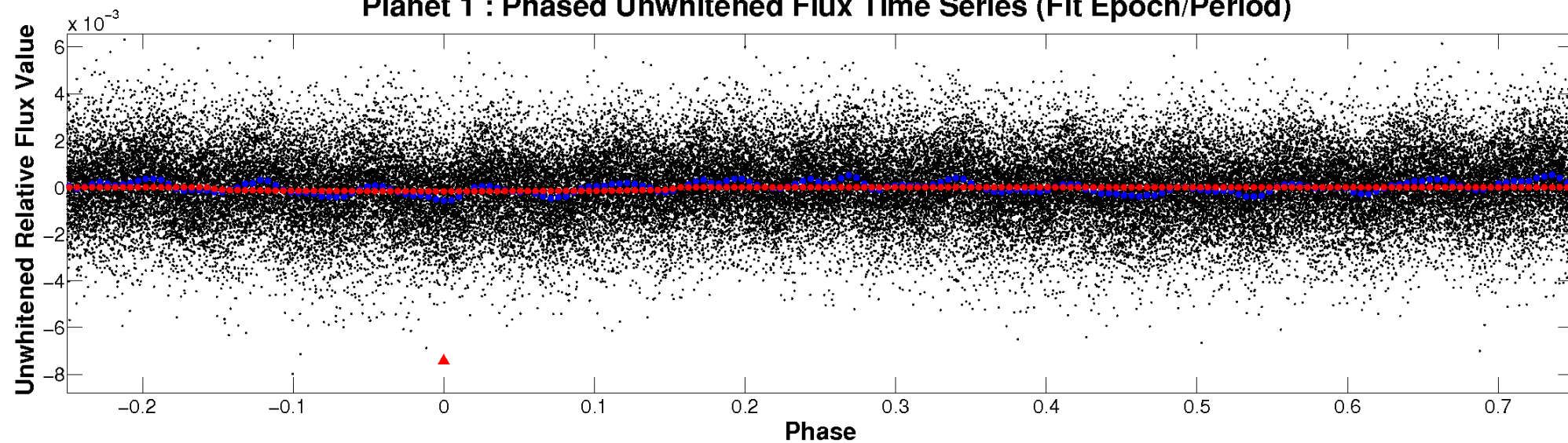
ALT Odd/Even

TCE 007702705-01

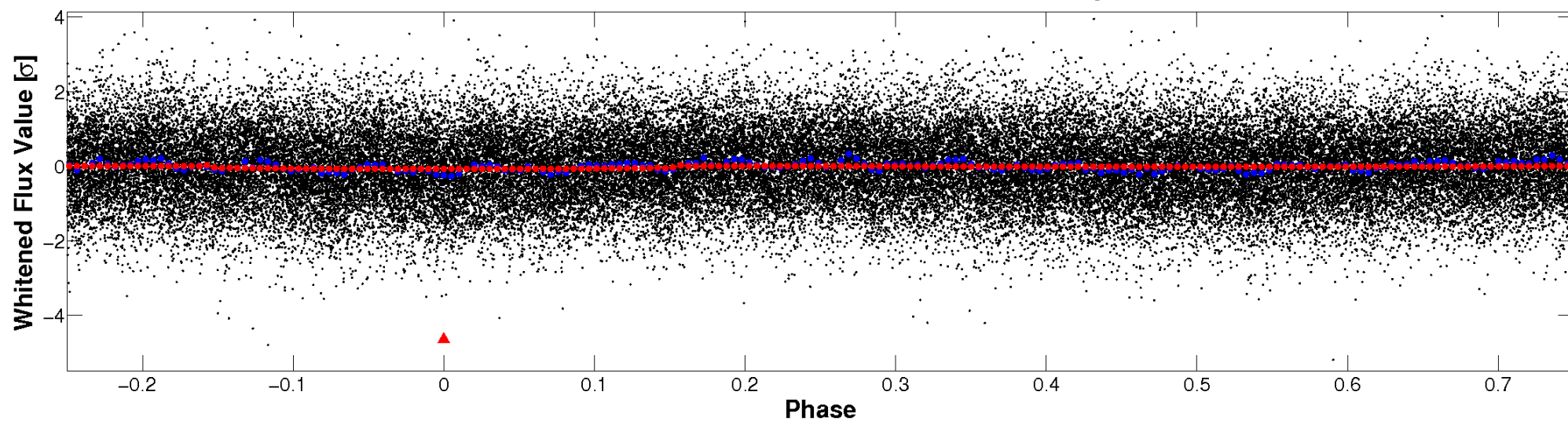


Non-Whitened Vs. Whitened Light Curve

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

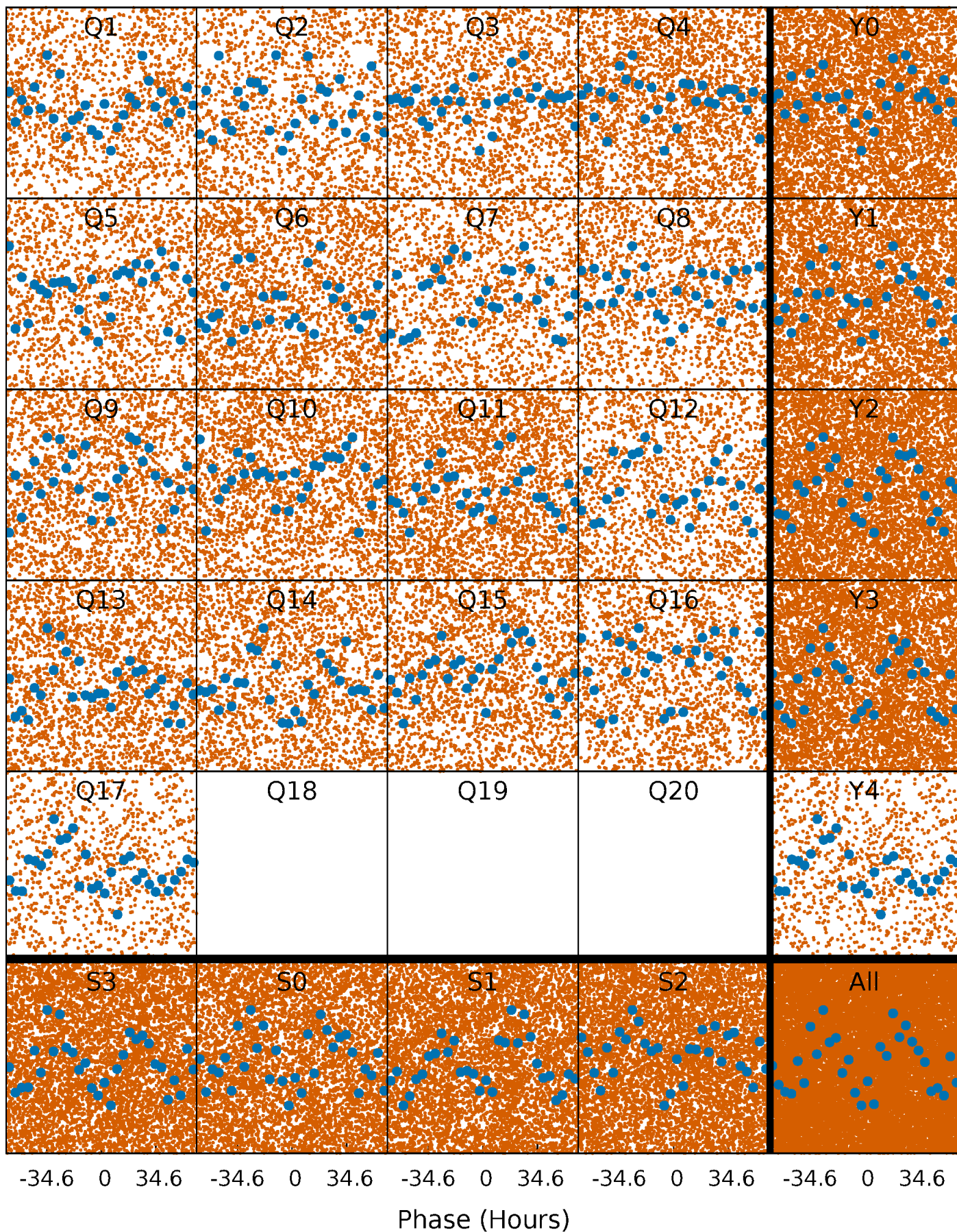


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



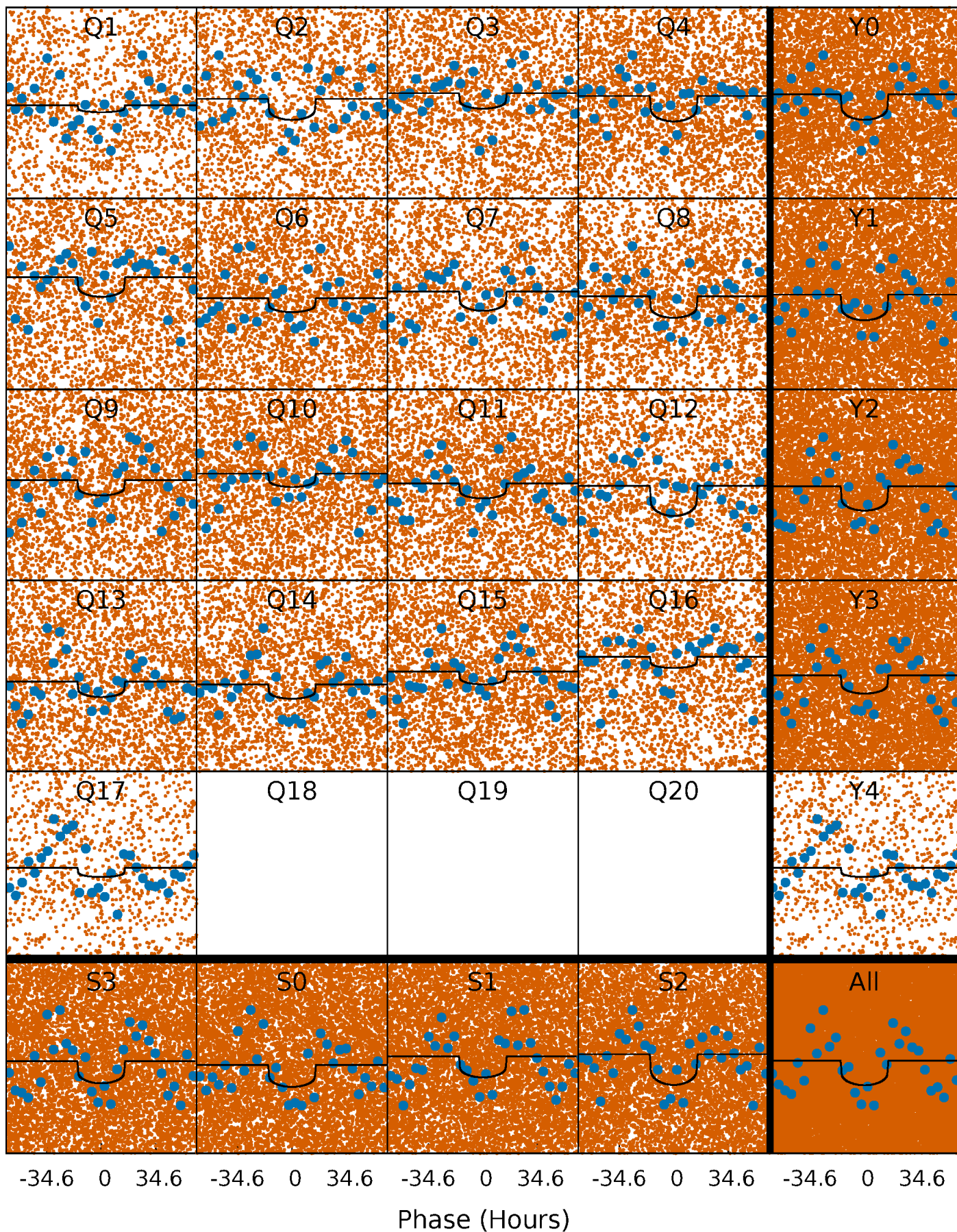
PDC Quarter-Phased Transit Curves

TCE 007702705-01 P= 4.026912 Days $T_0=134.976967$ (BKJD)



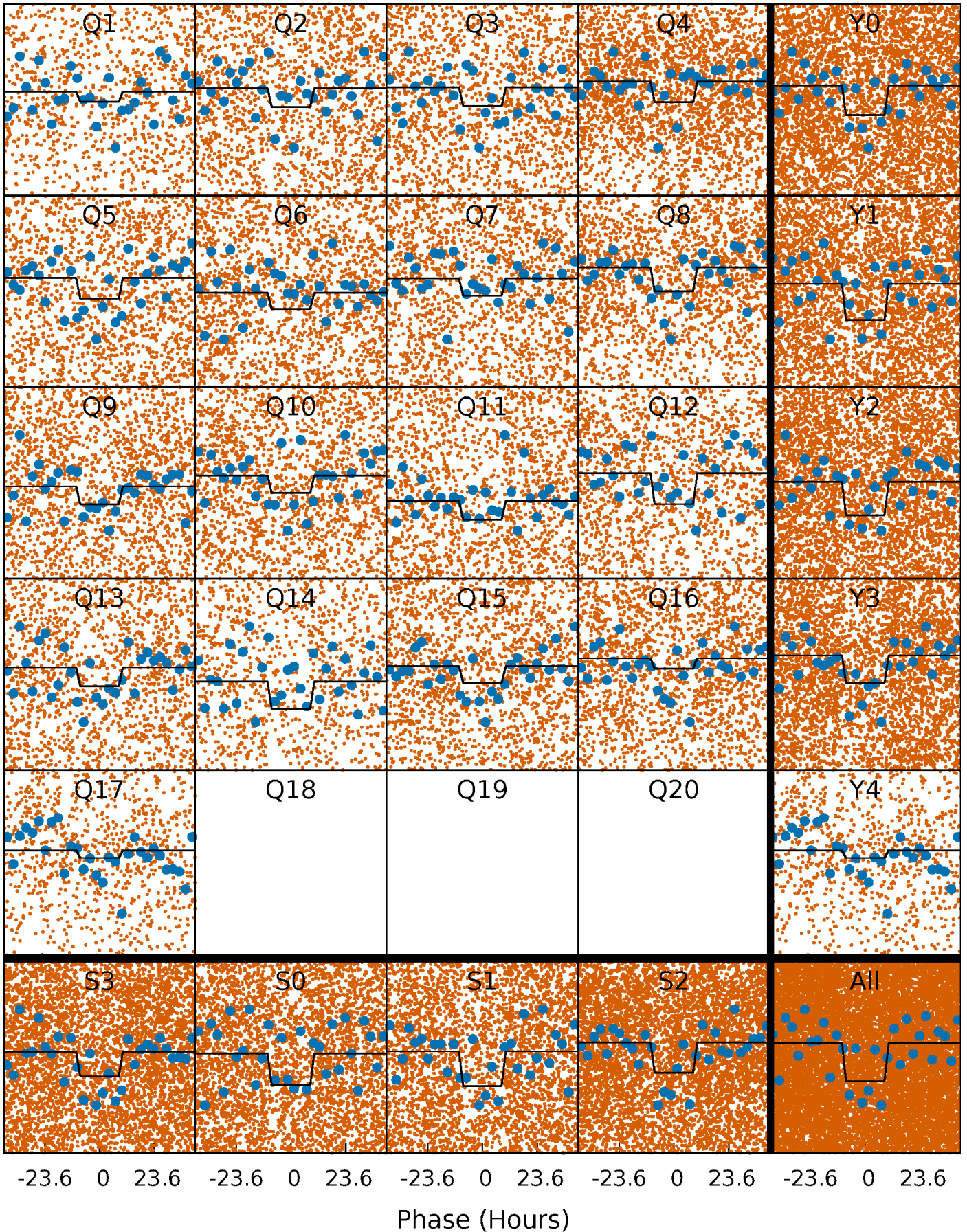
DV Quarter-Phased Transit Curves

TCE 007702705-01 P= 4.026912 Days $T_0=134.976967$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

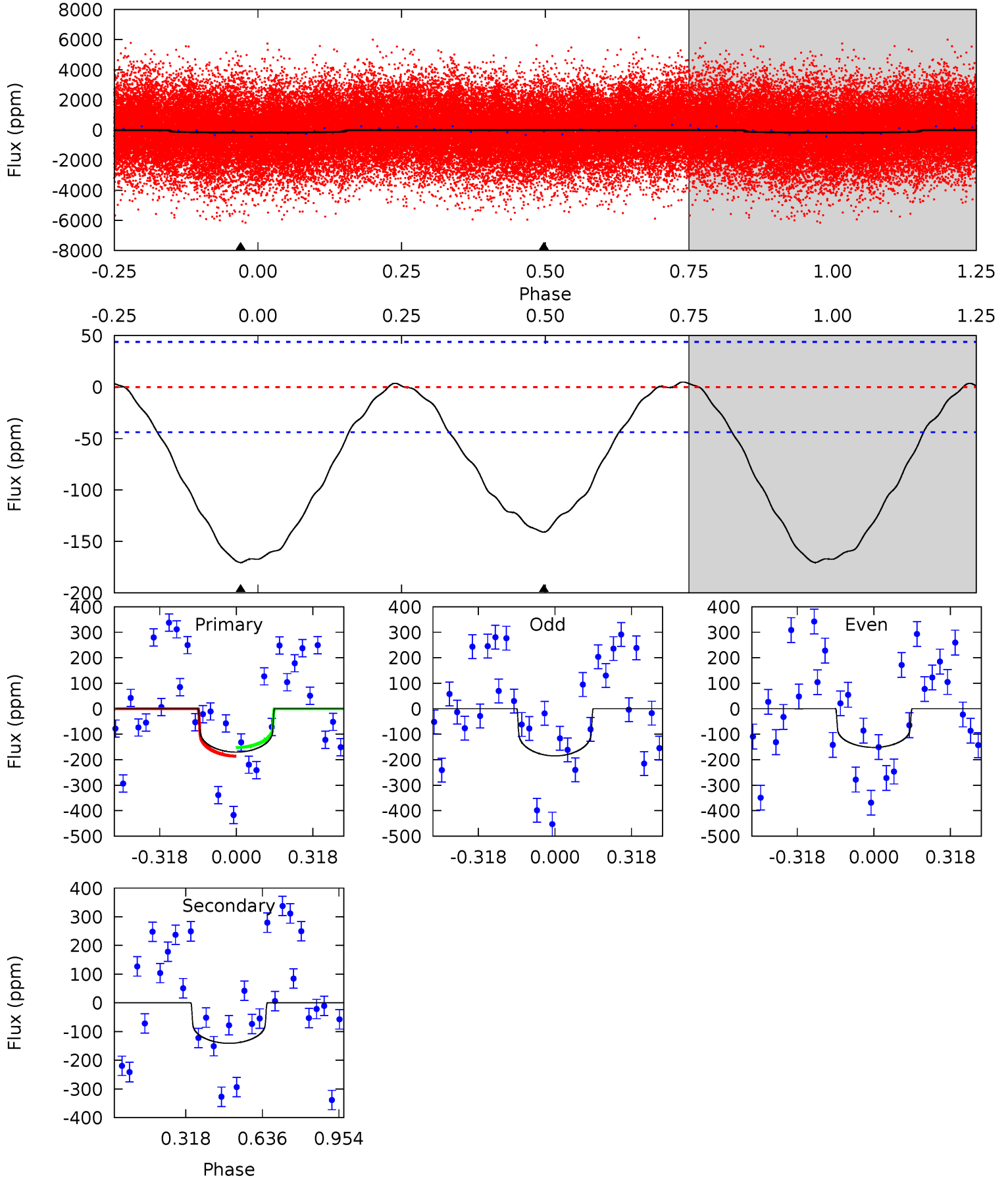
TCE 007702705-01 P= 4.027014 Days $T_0=134.947438$ (BKJD)



DV Model-Shift Uniqueness Test

007702705-01, P = 4.026912 Days, E = 130.950055 Days

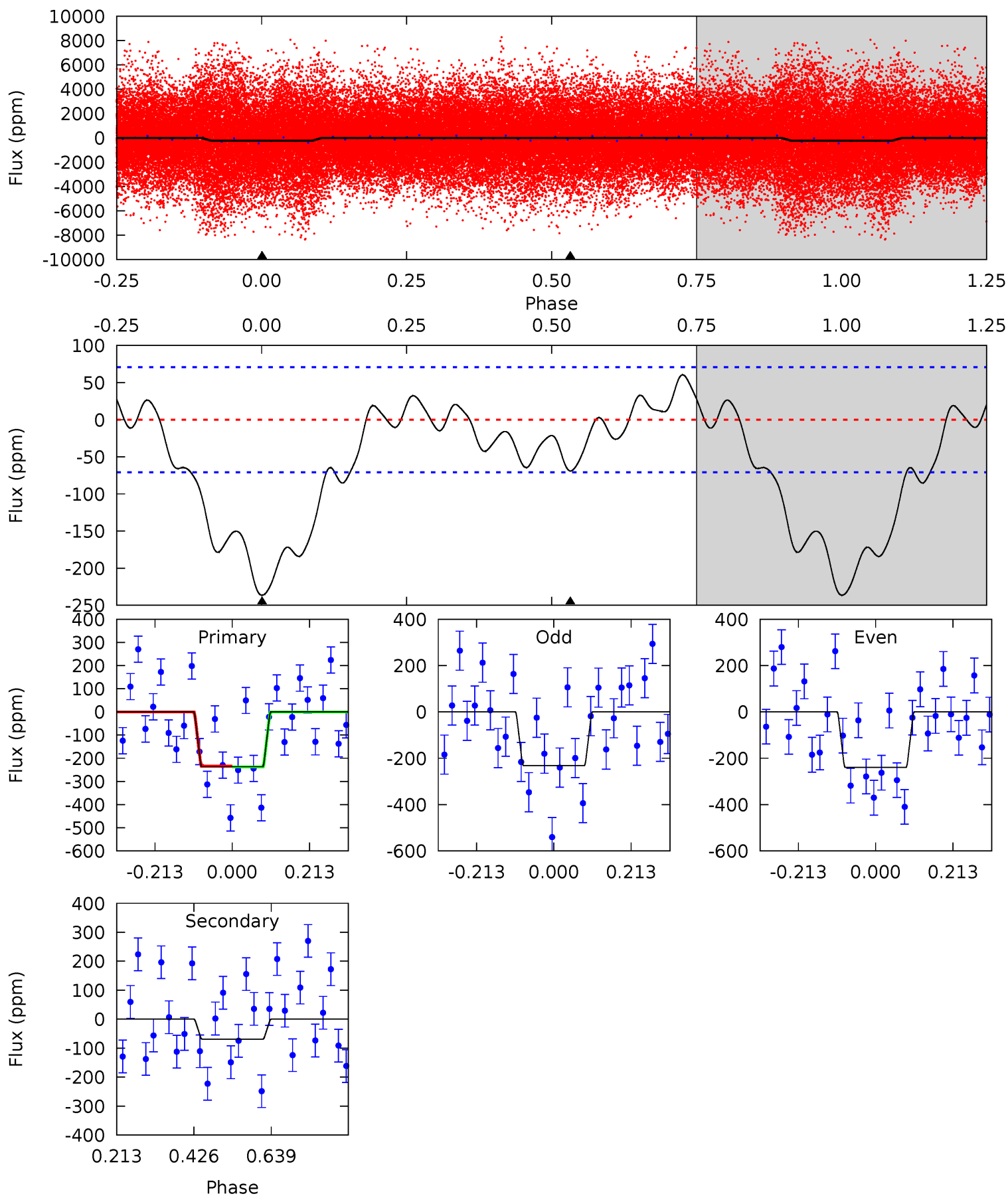
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	13.9	0	0	4.32	1.00	0.55	16.8	16.8	13.9	13.9	1.63	1.10	0.03	1.57



Alt Model-Shift Uniqueness Test

007702705-01, P = 4.027014 Days, E = 130.920424 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	4.29	0	0	4.40	1.25	0.95	14.7	14.7	4.29	4.29	0.24	1.29	0.20	0.11



Stellar Parameters For KIC 007702705

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6732^{+411}_{-1646}	$2.884^{+0.360}_{-0.090}$	$0.070^{+0.050}_{-0.300}$	$10.801^{+1.326}_{-5.304}$	$3.255^{+0.170}_{-1.617}$	$0.004^{+0.013}_{-0.001}$
	+6%/-24%	+12%/-3%	+71%/-429%	+12%/-49%	+5%/-50%	+354%/-30%
Source	SPE4	SPE4	SPE4	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007702705-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-141 ± 10	$13.09^{+3.51}_{-3.61}$	4599^{+713}_{-1022}	6102^{+1179}_{-1294}	$2.369^{+1.854}_{-0.845}$
Alt.	-69 ± 16	$16.21^{+3.89}_{-4.21}$	4611^{+715}_{-1084}	4294^{+859}_{-958}	$0.776^{+0.566}_{-0.303}$

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

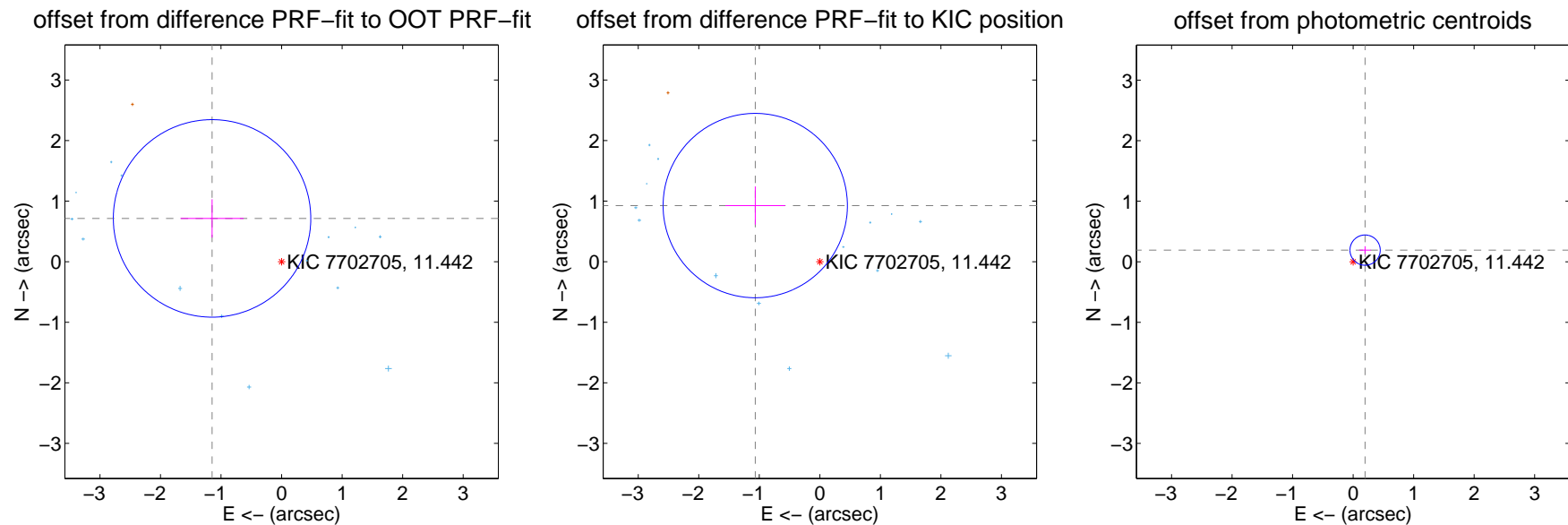
DV Centroid Data

Supplemental centroid analysis for 007702705-01. **Kepler magnitude: 11.44.** Transit SNR 9.10

There are 14 quarters with good PRF difference image offsets

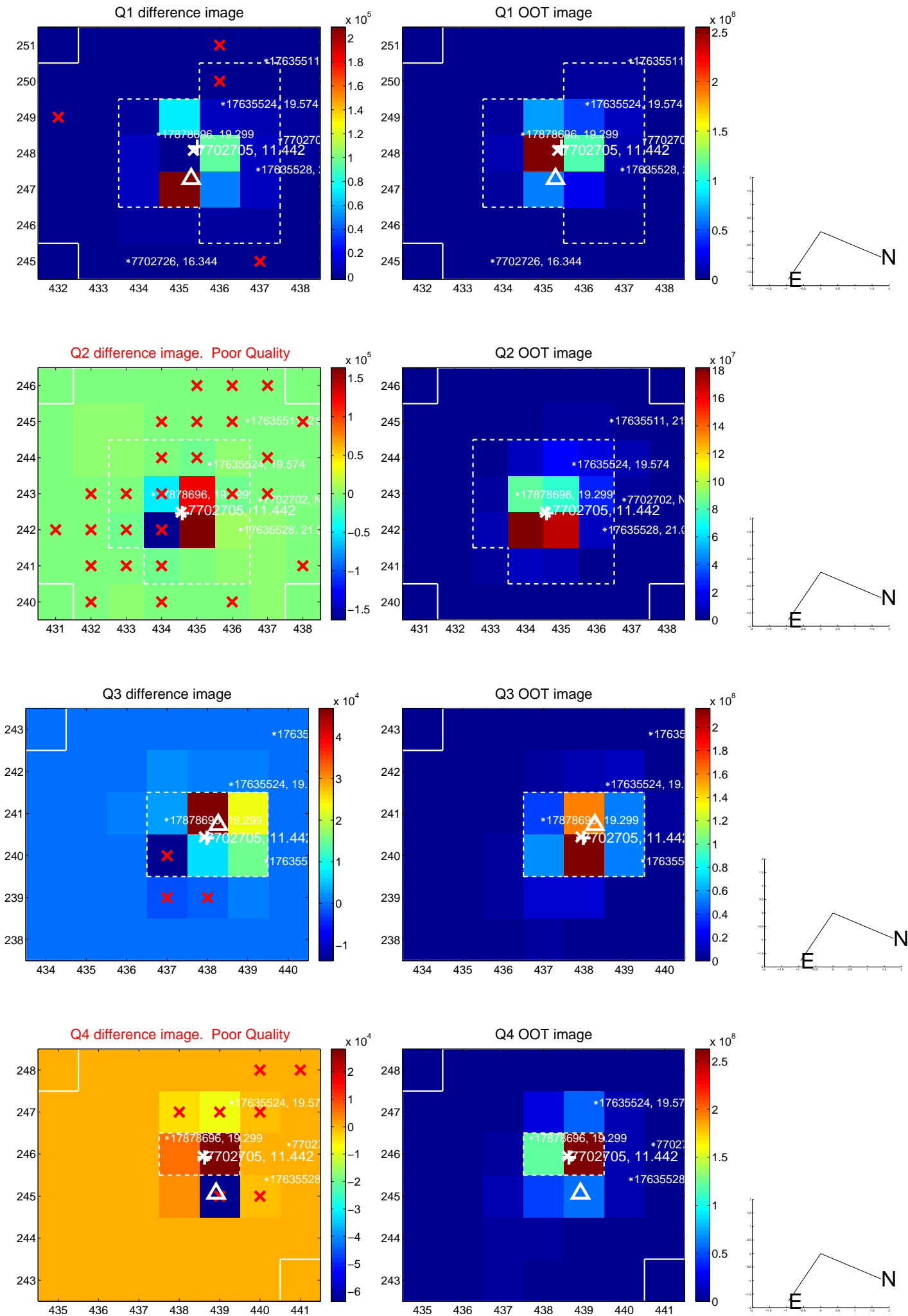
The direct PRF centroid is offset from the target star catalog position by about 0.41 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.353 ± 0.544	2.49	1.149 ± 0.522	0.715 ± 0.317
PRF-fit source offset from KIC position	1.414 ± 0.508	2.79	1.067 ± 0.492	0.927 ± 0.316
photometric centroid source offset	0.28 ± 0.08	3.31	-0.20 ± 0.10	0.19 ± 0.06

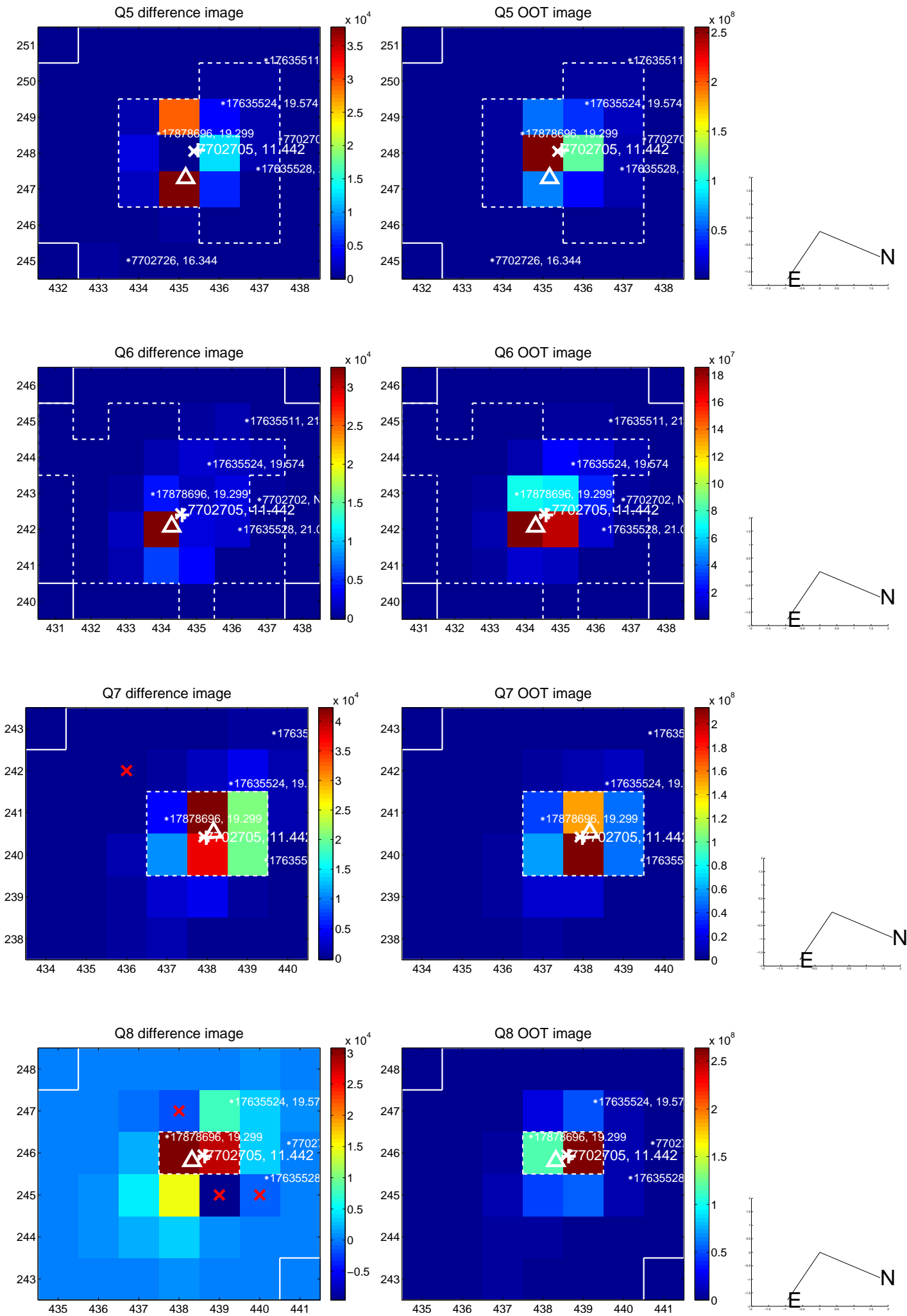


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

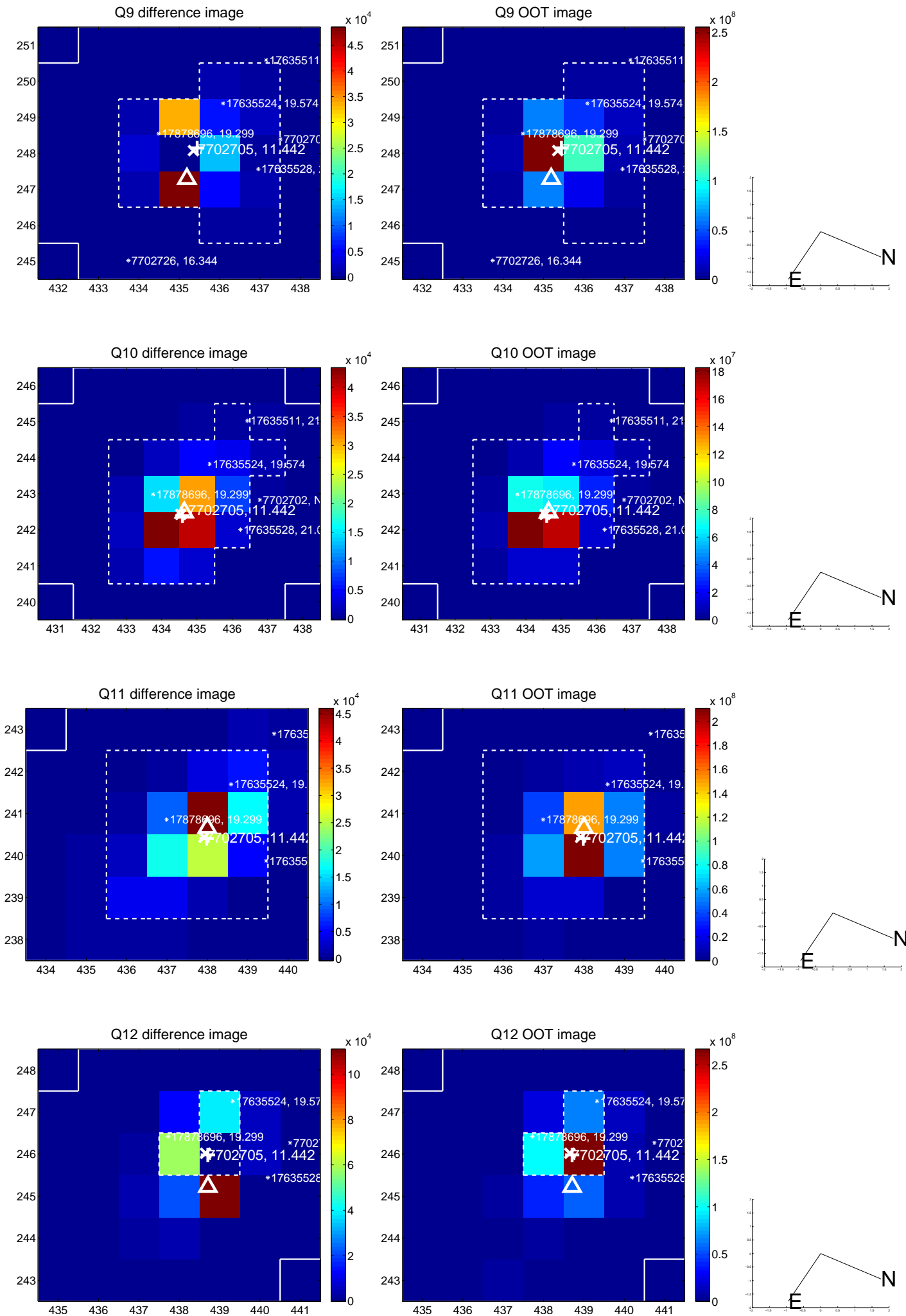
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



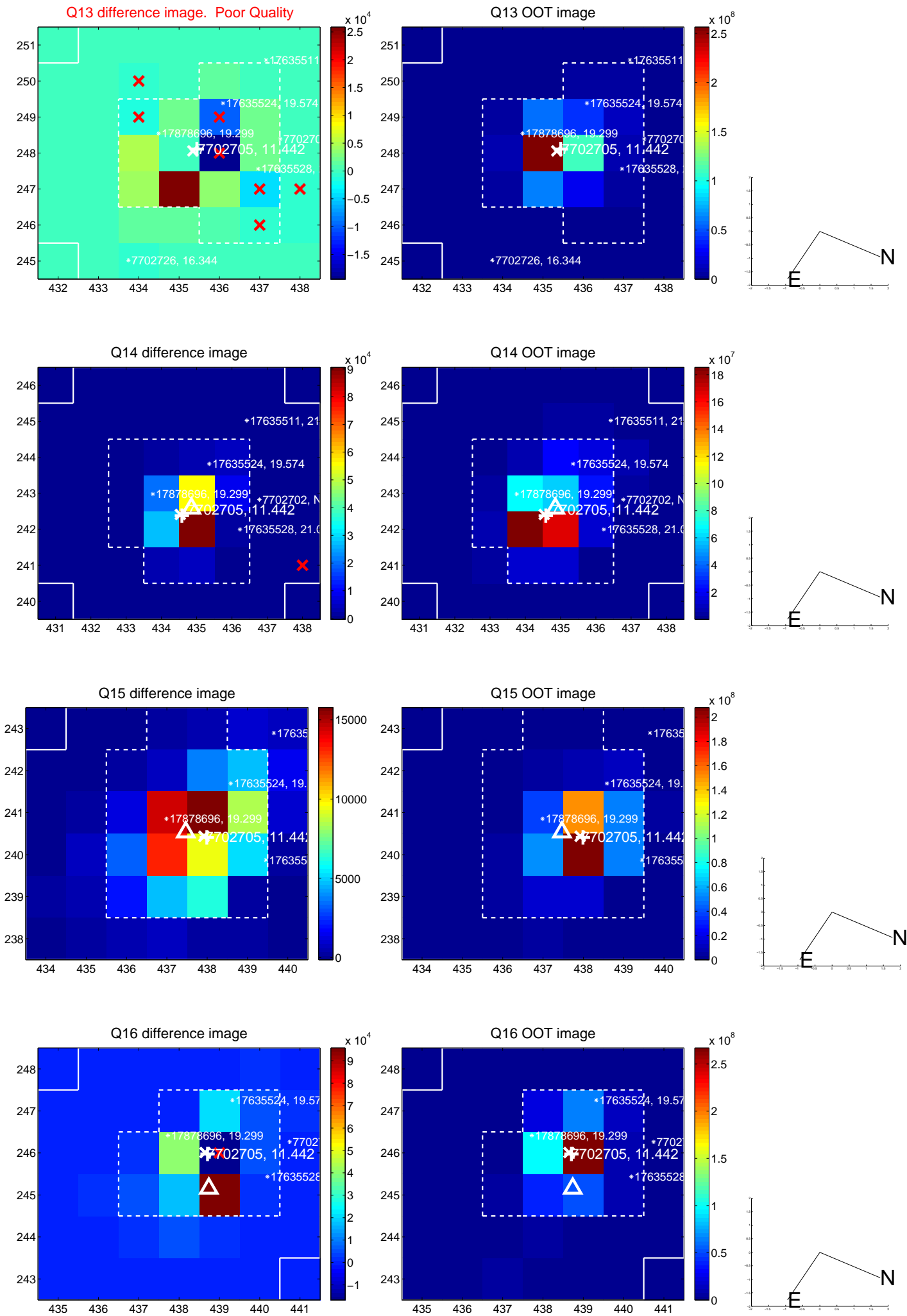
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



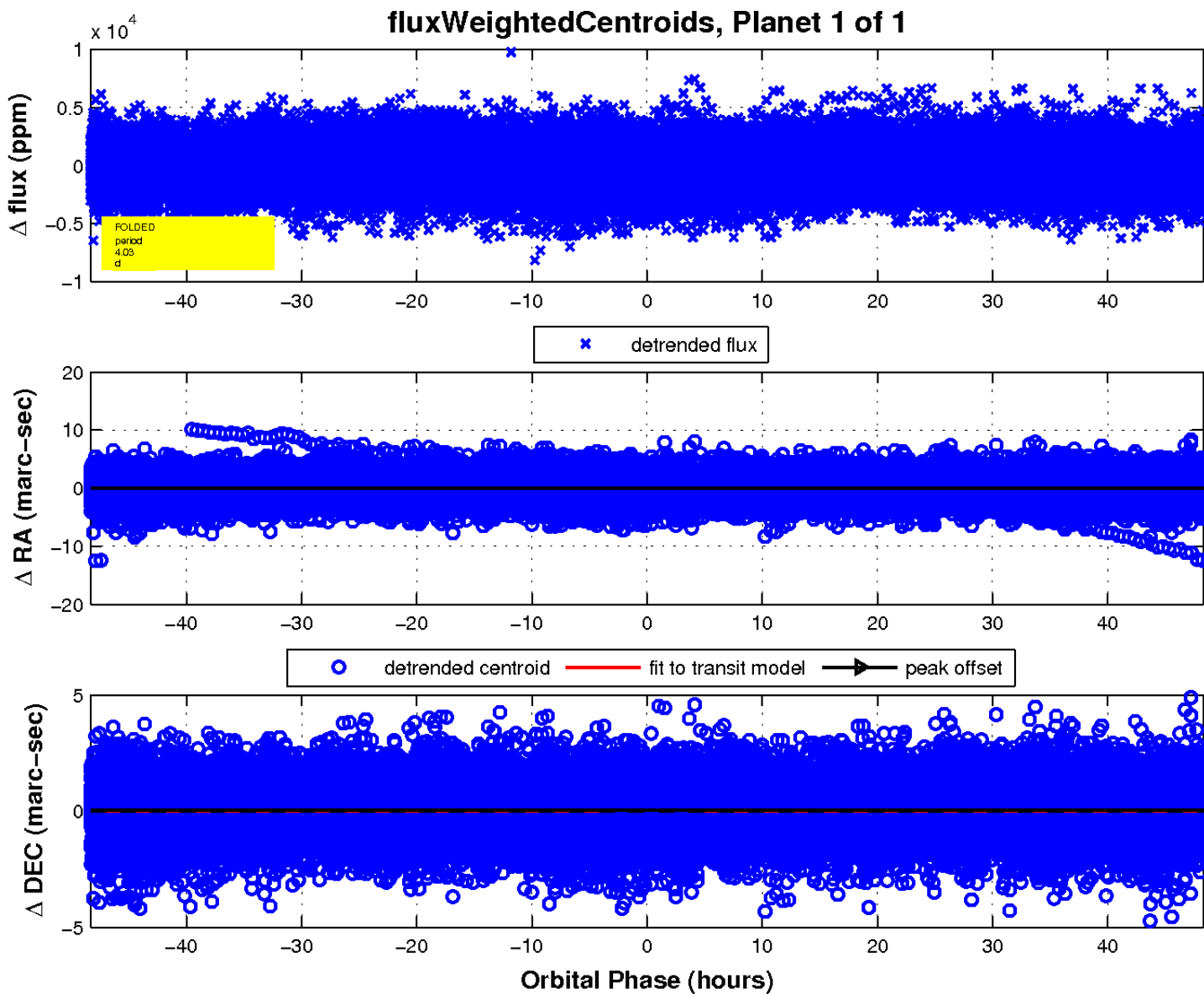
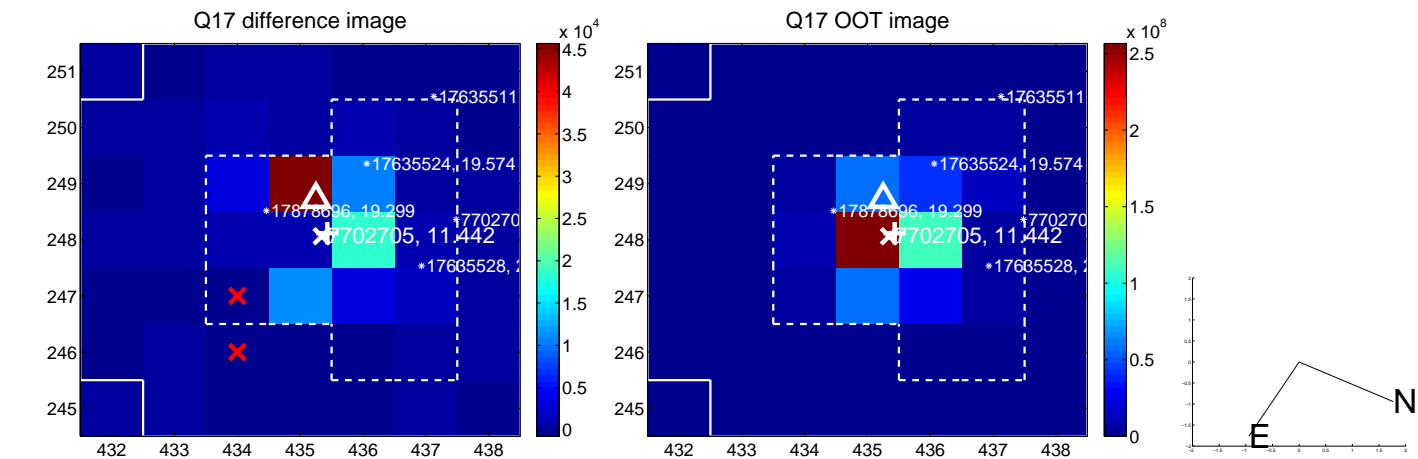
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UKIRT Image

Declination

