

KIC 007210749

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})
007210749-01	OBS	7828.01	17.585742	138.790351	471.4	3.620	7.4	7.0	1.00	5780	2.50	57.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007210749-01	OBS	FP	0.13	0	0	1	0	CENT_RESOLVED_OFFSET

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

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

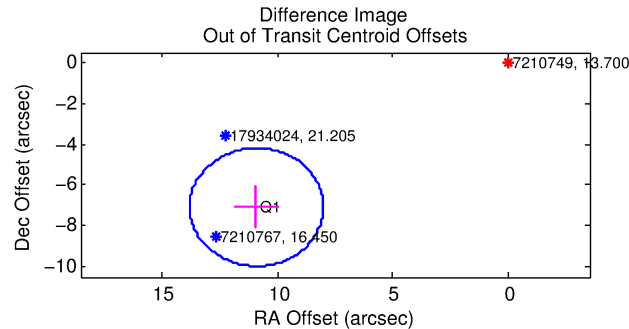
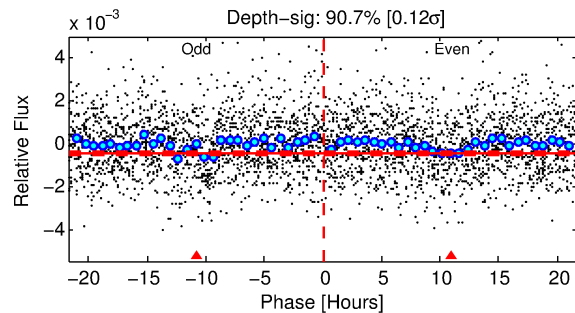
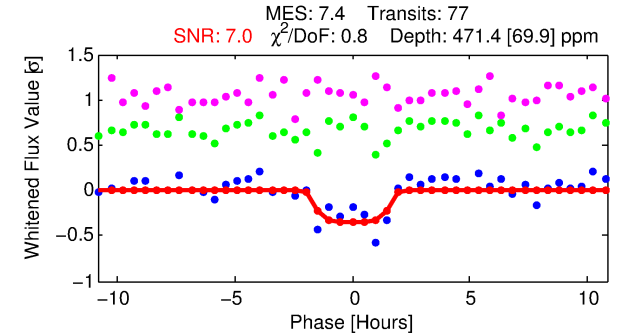
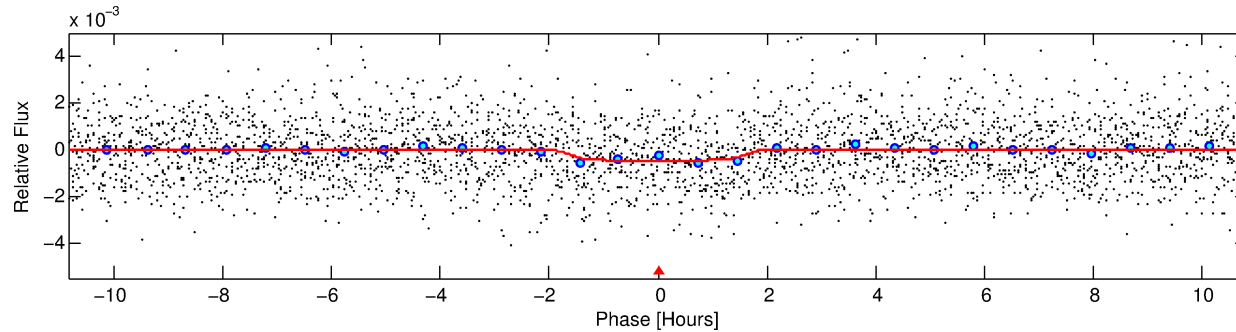
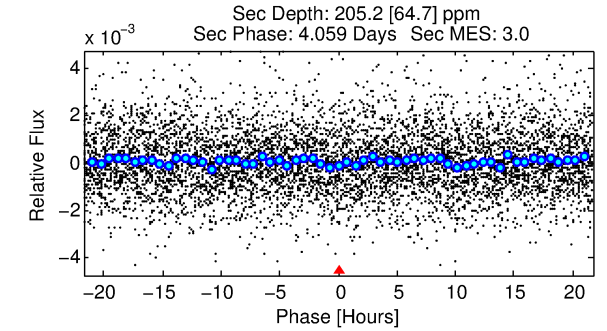
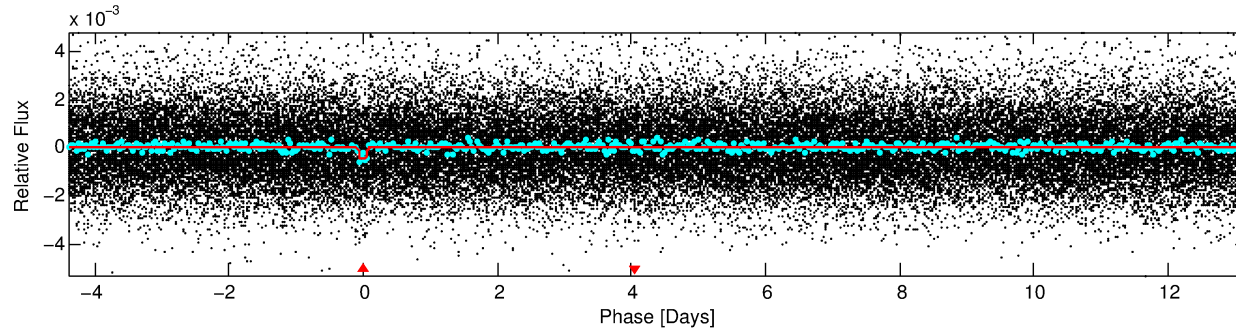
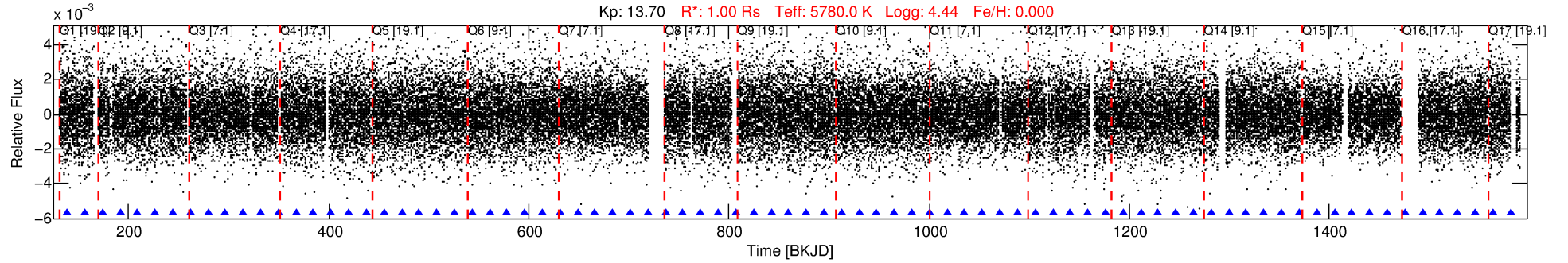
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007210749-01

No Significant Match Found

DV One-Page Summary

KIC: 7210749 Candidate: 1 of 1 Period: 17.586 d



DV Fit Results:

Period = 17.58574 [0.00026] d
Epoch = 138.7904 [0.0121] BKJD
Rp/R* = 0.0229 [0.0158]
a/R* = 20.53 [64.32]
b = 0.86 [0.96]
Seff = 57.07 [0.00]
Teff = 701 [0] K
Rp = 2.50 [1.73] Re
a = 0.1324 [0.0000] AU
Ag = 316.62 [448.64] [0.70σ]
Teffp = 4571 [1619] K [2.39σ]

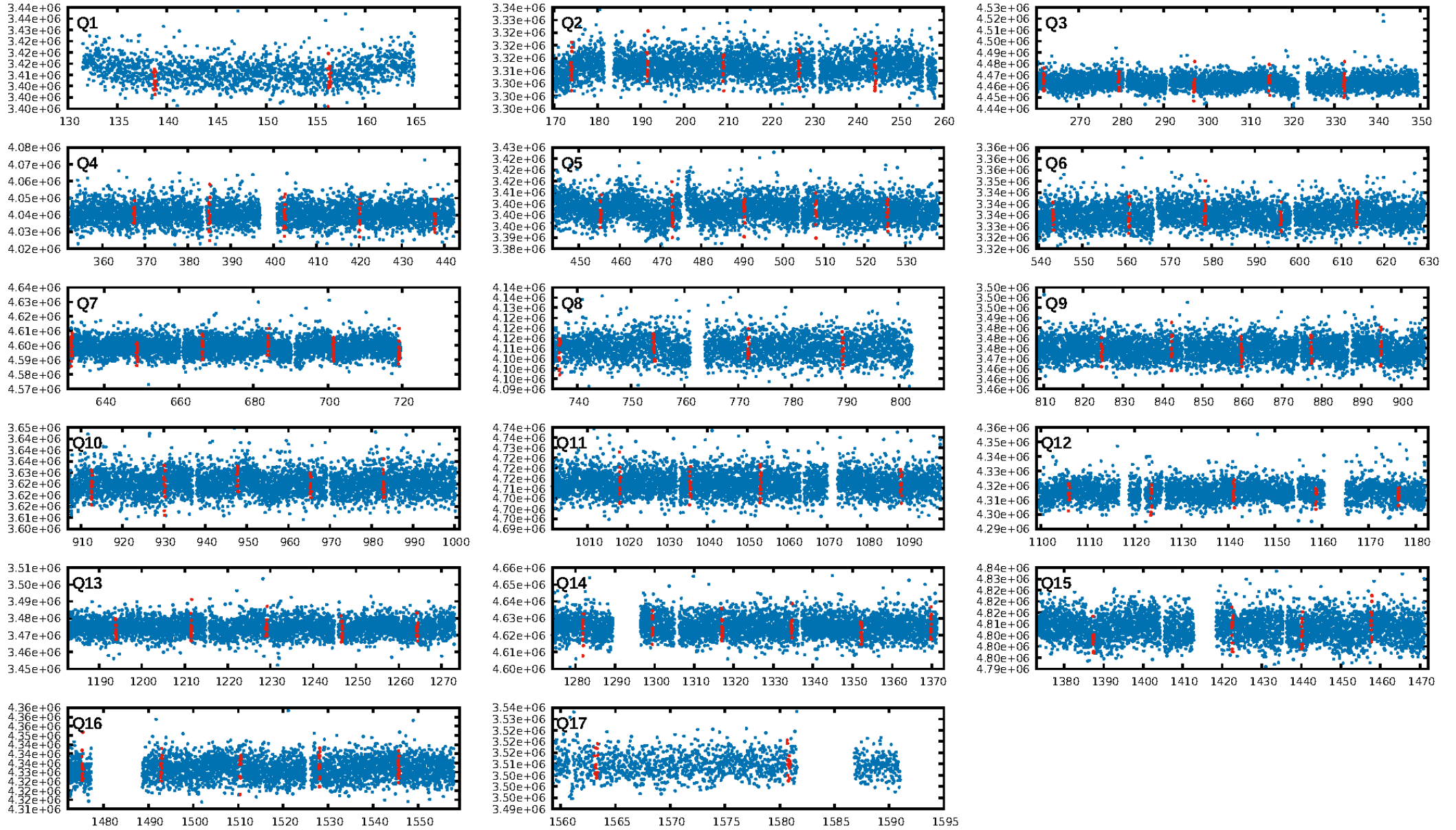
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.09e-14
RollingBand-fgt: 1.00 [73/73]
GhostDiagnostic-chr: -2.175
Centroid-sig: 19.3%
Centroid-so: 3.912 arcsec [5.71σ]
OotOffset-rm: 13.004 arcsec [13.50σ]
KicOffset-rm: 1.813 arcsec [1.87σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 0.10 [1/10]
DiffImageOverlap-fno: 1.00 [17/17]

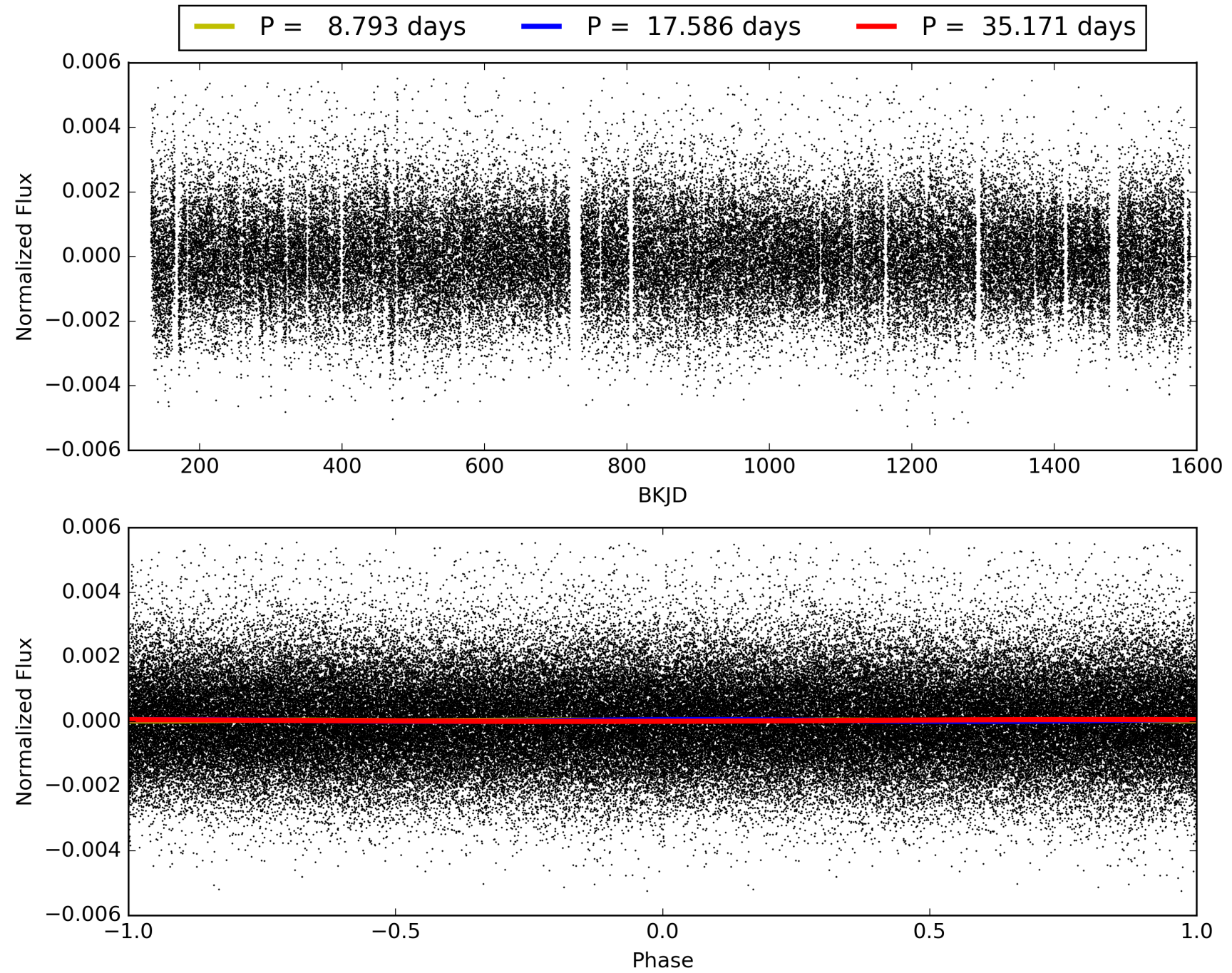
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:26:17 Z

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

TCE 007210749-01, PDC Light Curves

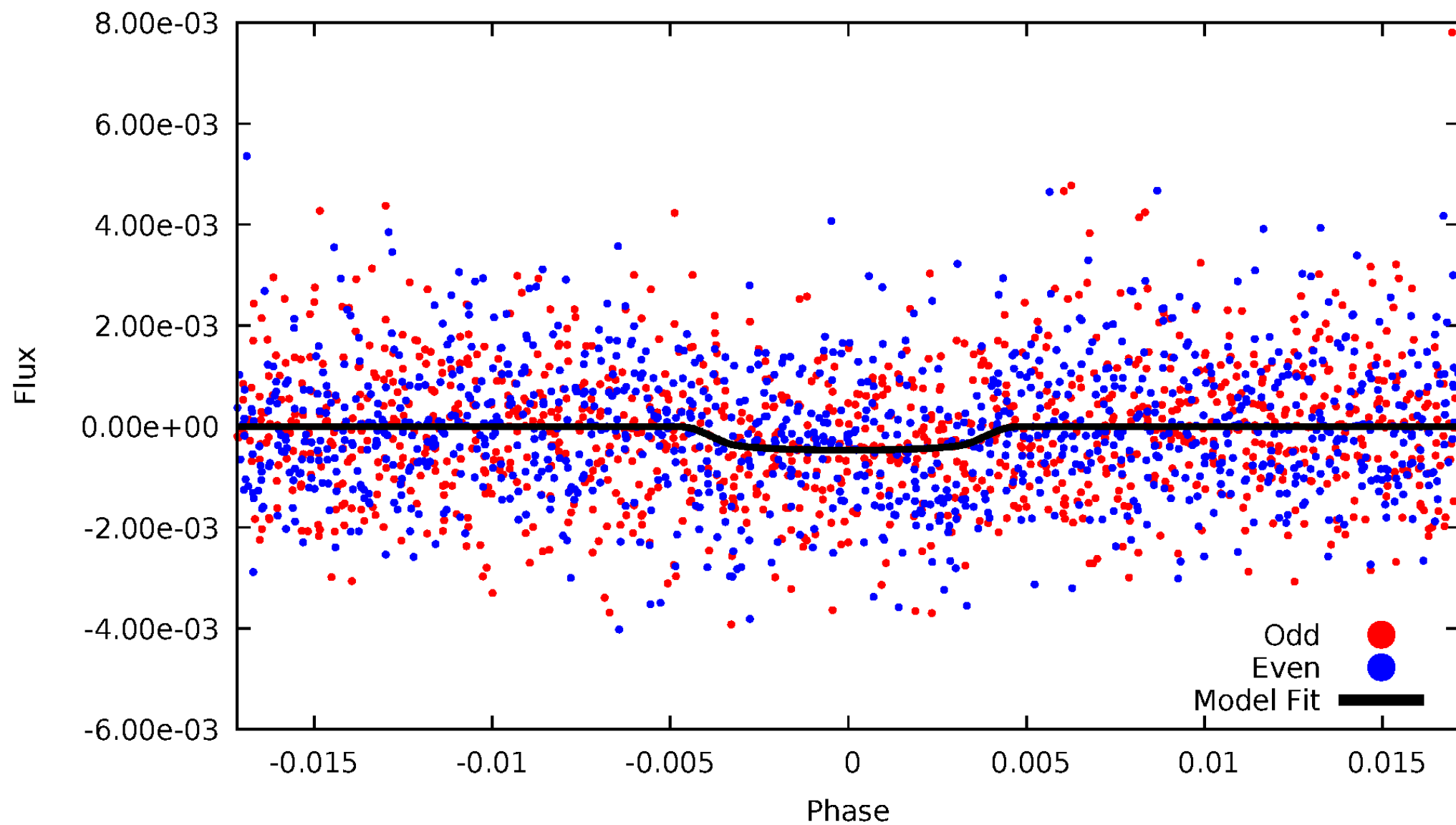


TCE 007210749-01



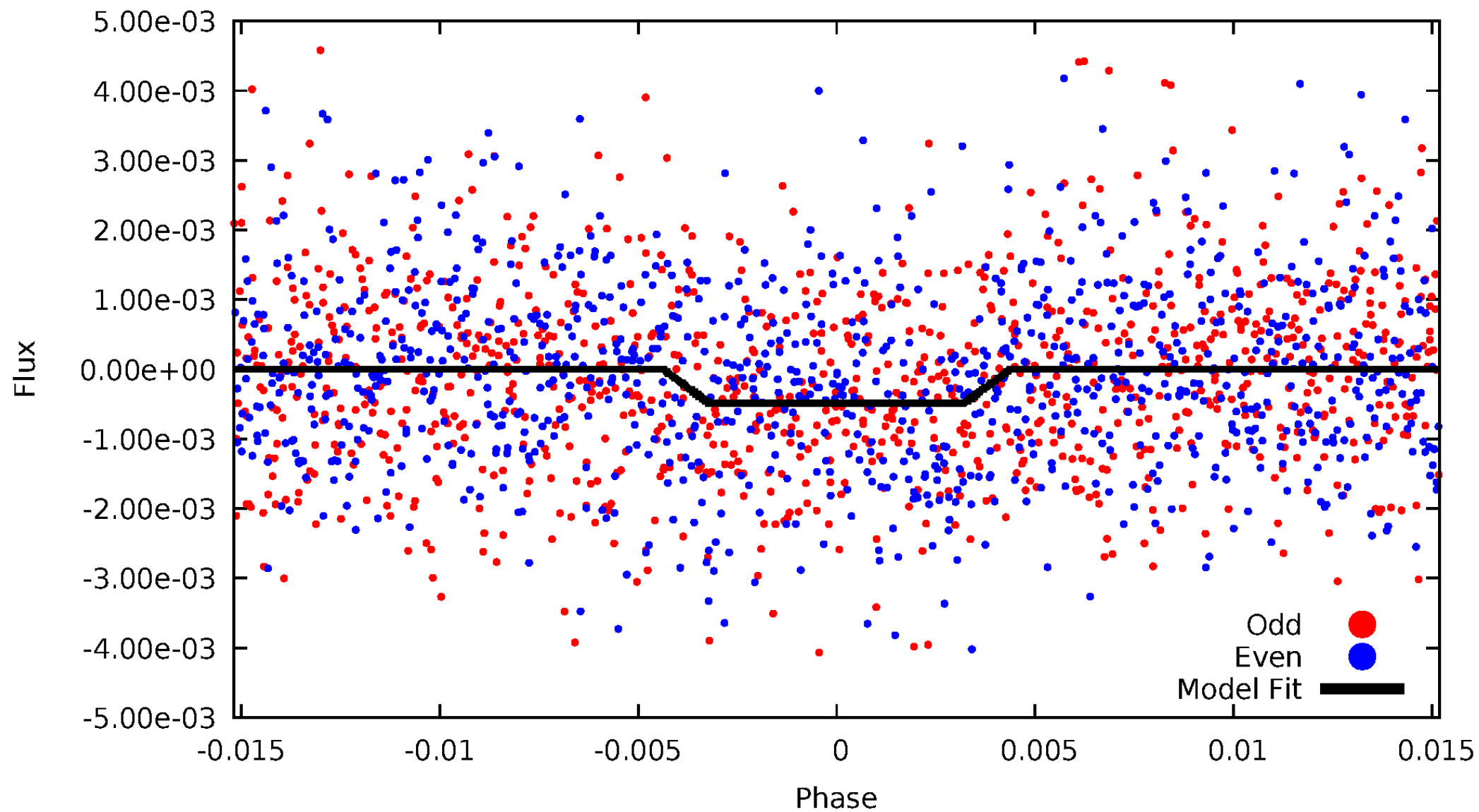
DV Odd/Even

TCE 007210749-01



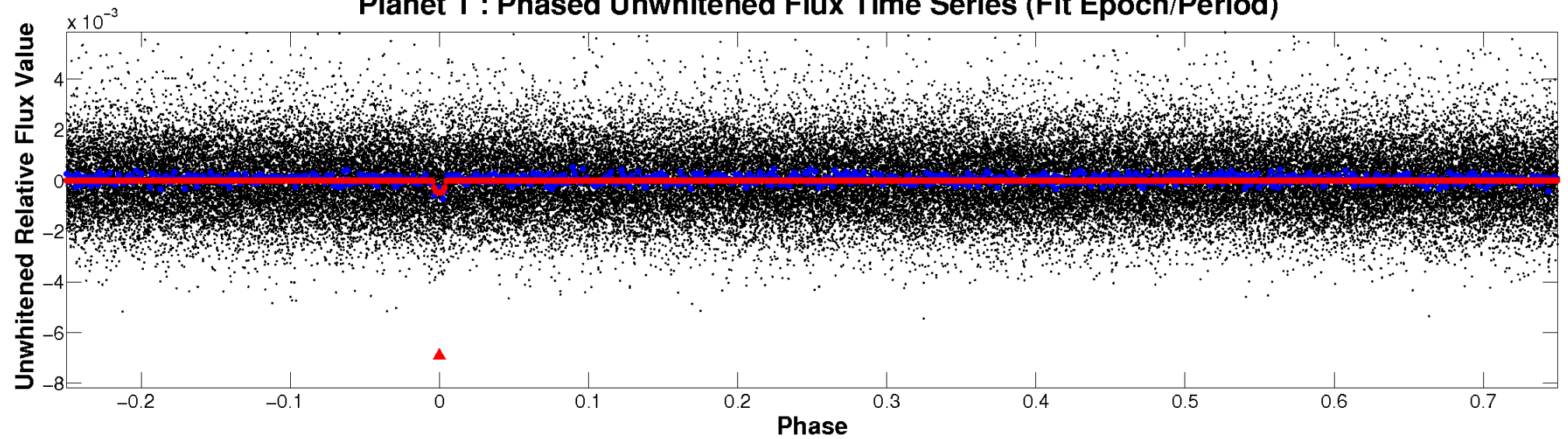
ALT Odd/Even

TCE 007210749-01

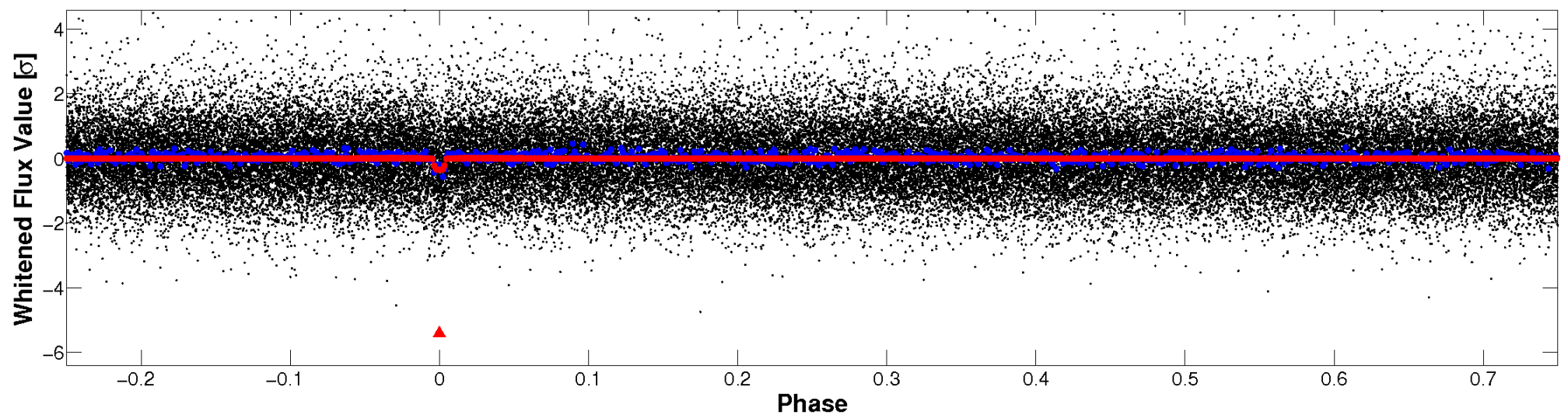


Non-Whitened Vs. Whitened Light Curve

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

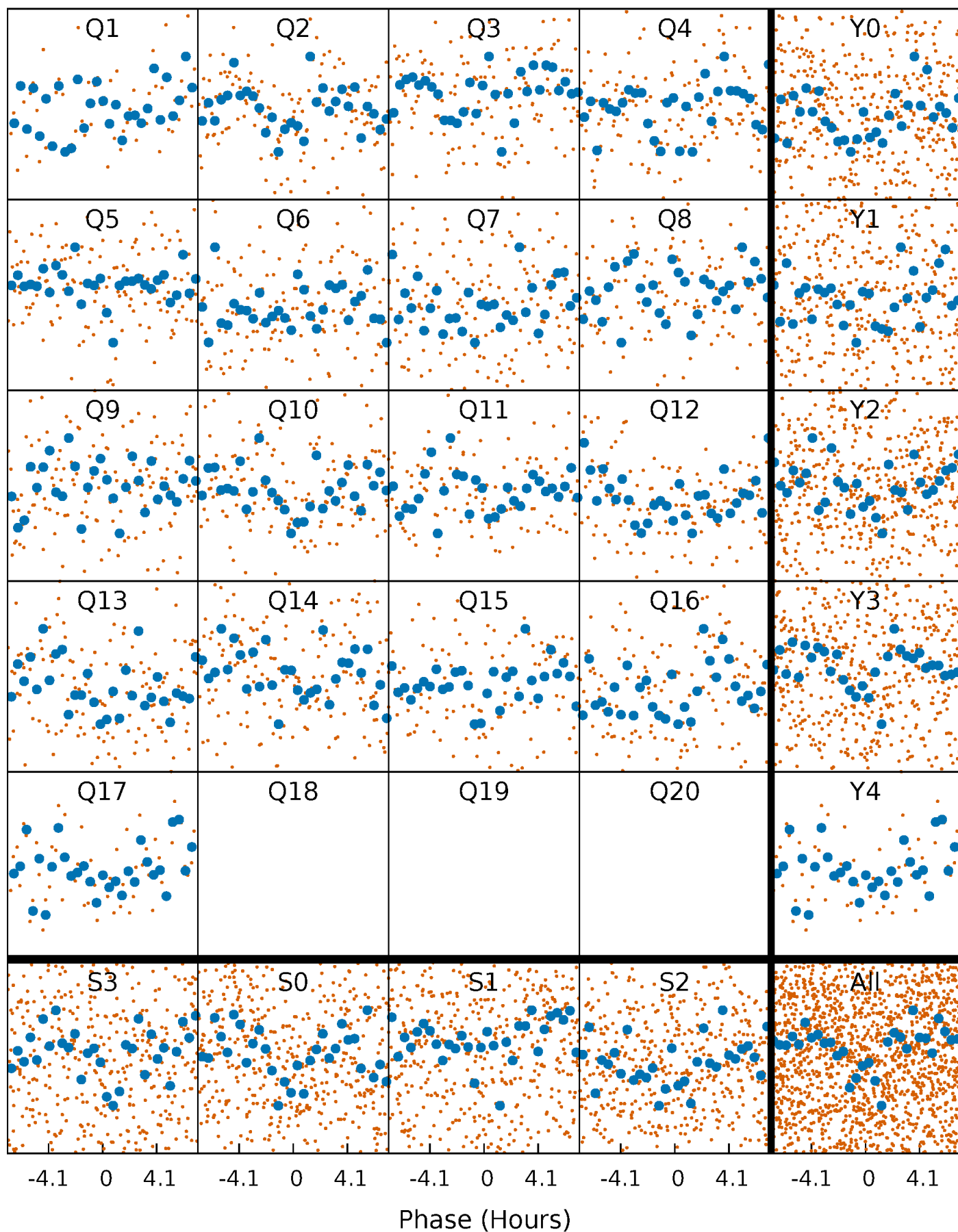


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



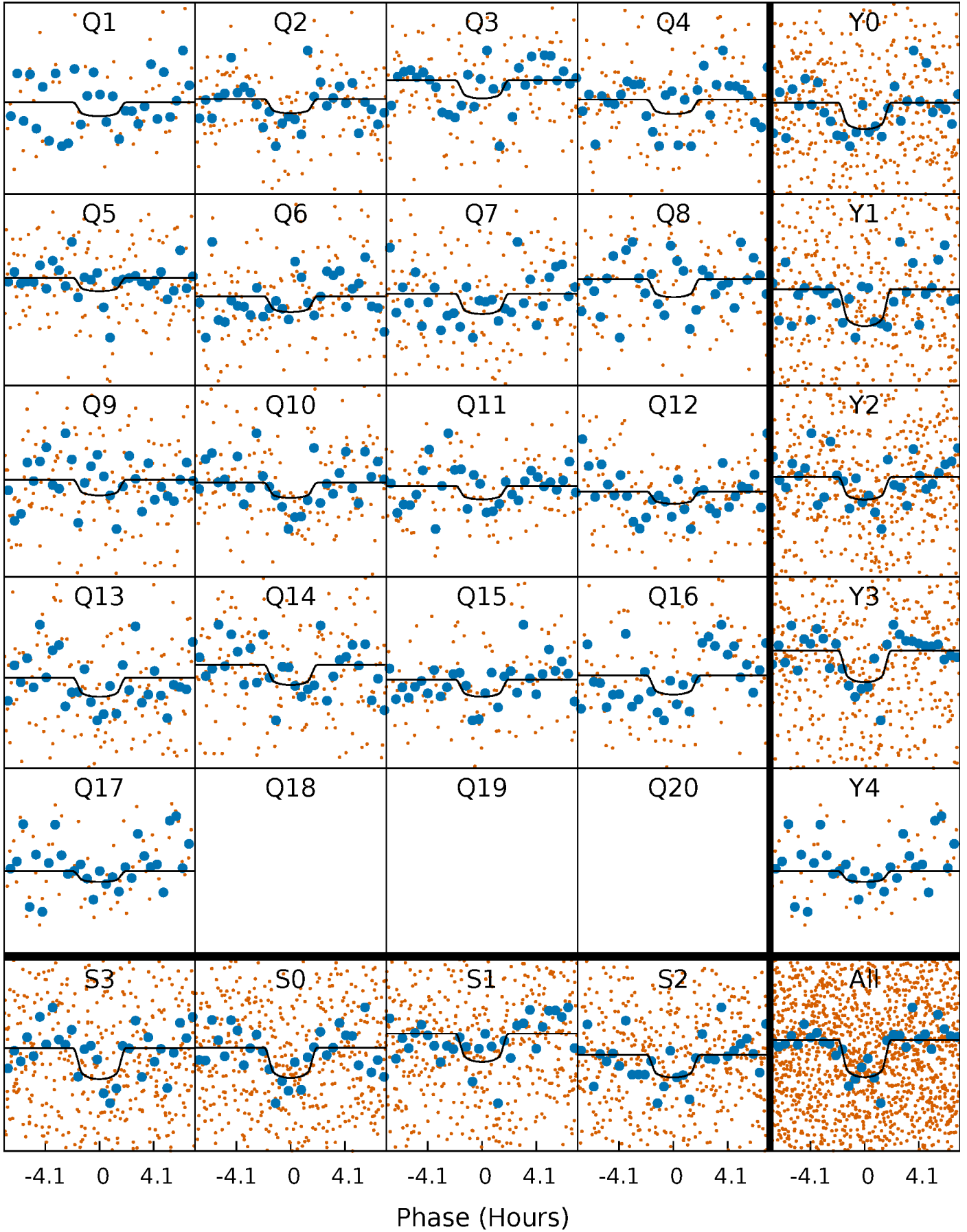
PDC Quarter-Phased Transit Curves

TCE 007210749-01 P= 17.585742 Days $T_0=138.790351$ (BKJD)



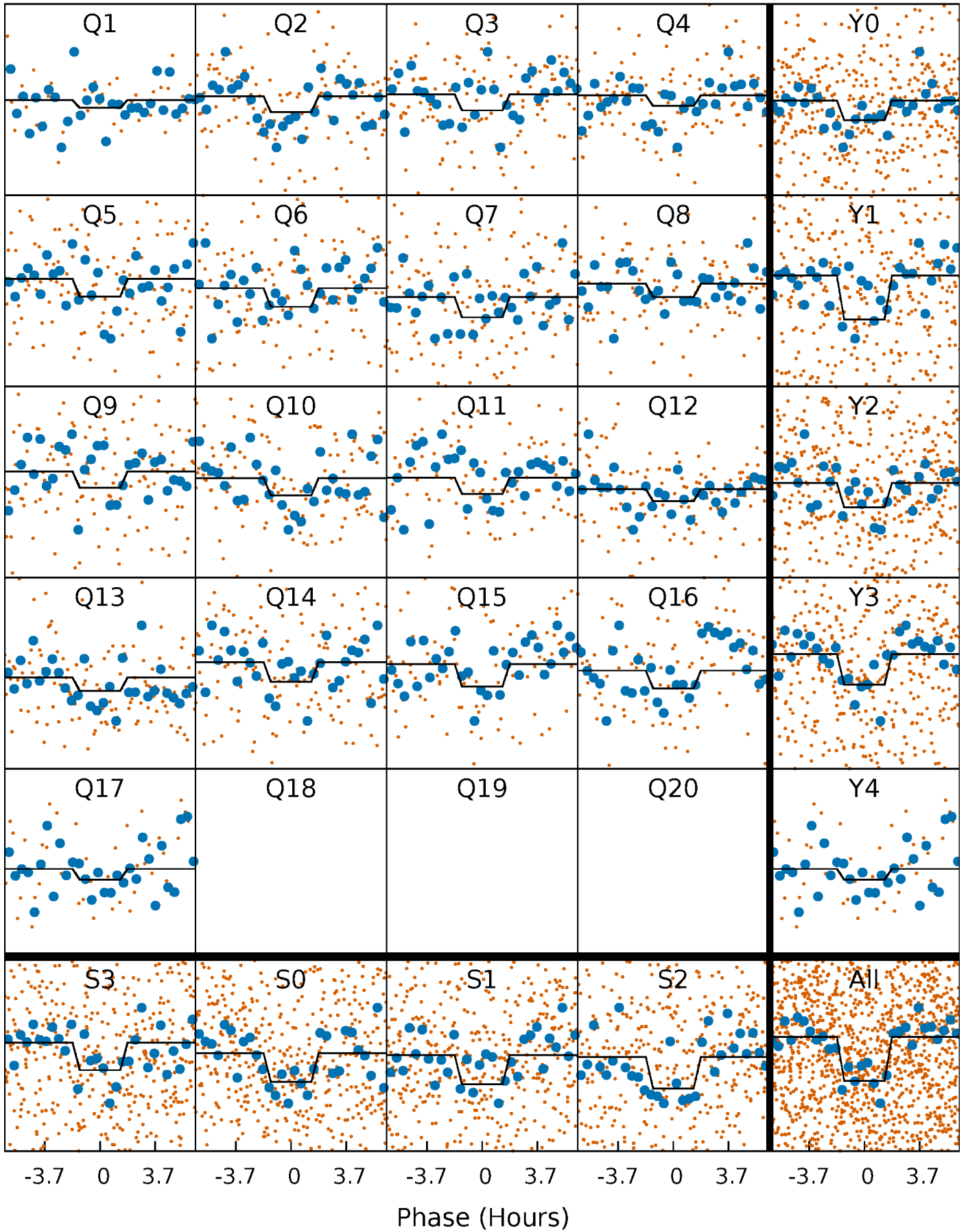
DV Quarter-Phased Transit Curves

TCE 007210749-01 P= 17.585742 Days $T_0=138.790351$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

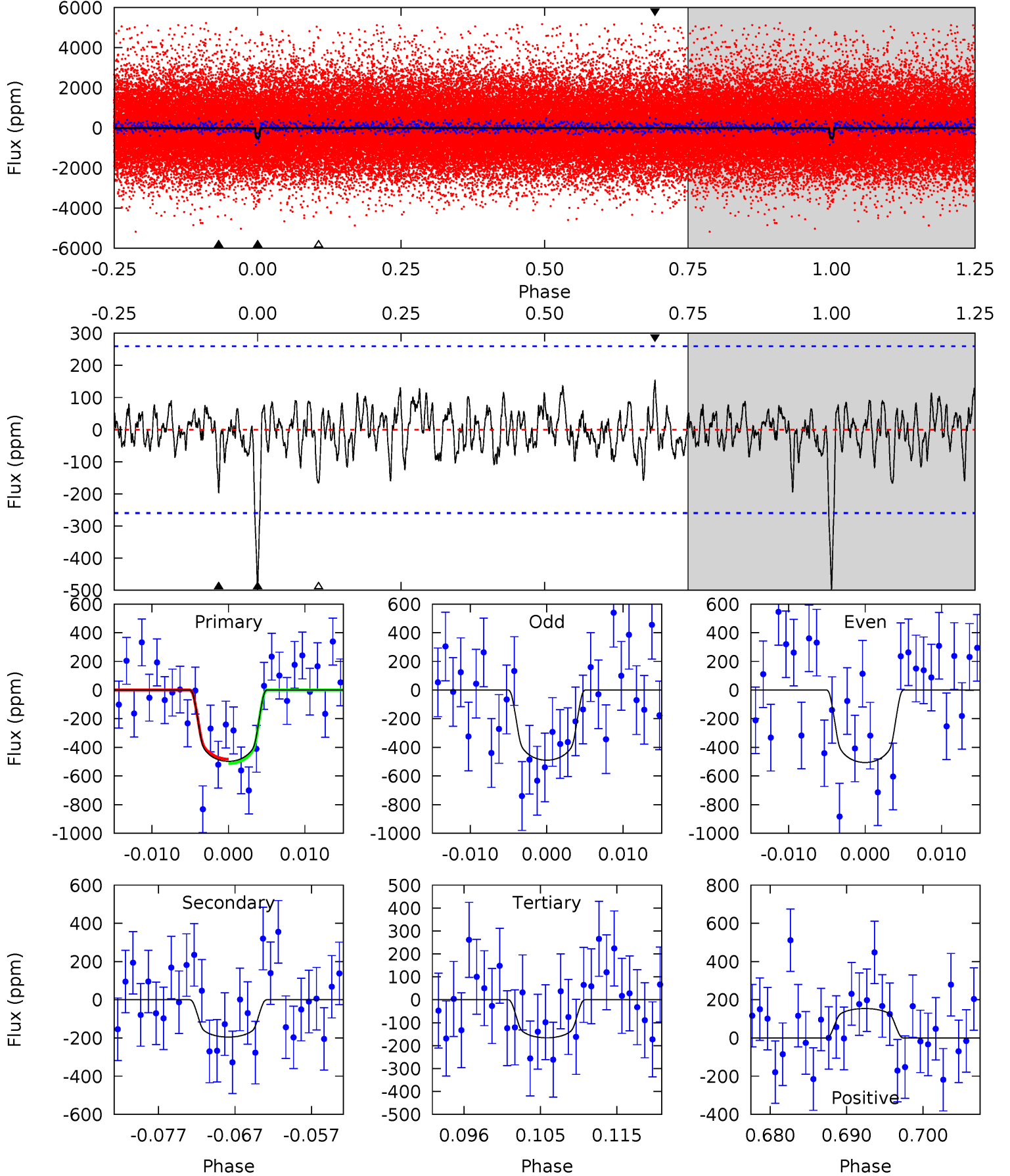
TCE 007210749-01 P= 17.585781 Days $T_0=138.788469$ (BKJD)



DV Model-Shift Uniqueness Test

007210749-01, $P = 17.585742$ Days, $E = 121.204609$ Days

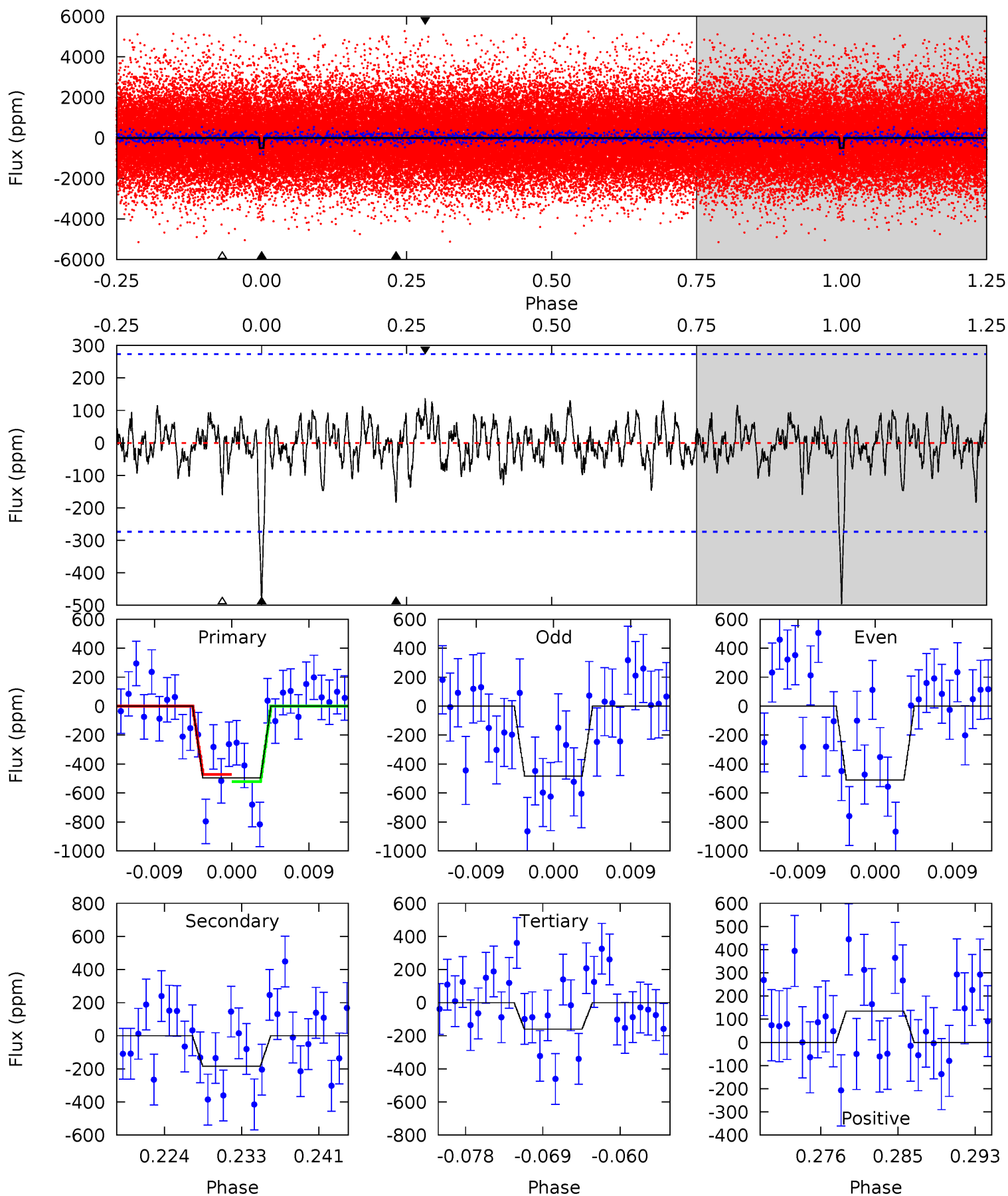
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.65	3.79	3.22	2.98	5.03	2.59	1.05	6.43	6.67	0.57	0.80	0.16	0.93	0.24	0.30



Alt Model-Shift Uniqueness Test

007210749-01, $P = 17.585781$ Days, $E = 121.202688$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.18	3.40	2.96	2.49	5.05	2.63	0.94	6.22	6.69	0.44	0.91	0.24	1.00	0.21	0.46



Stellar Parameters For KIC 007210749

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 007210749-01 / KOI 7828.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-195 ± 52	$2.59^{+1.63}_{-1.39}$	979^{+50}_{-42}	4583^{+1885}_{-795}	285^{+966}_{-191}
Alt.	-184 ± 54	$2.47^{+1.82}_{-1.41}$	981^{+47}_{-41}	4568^{+2283}_{-842}	263^{+1316}_{-174}

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

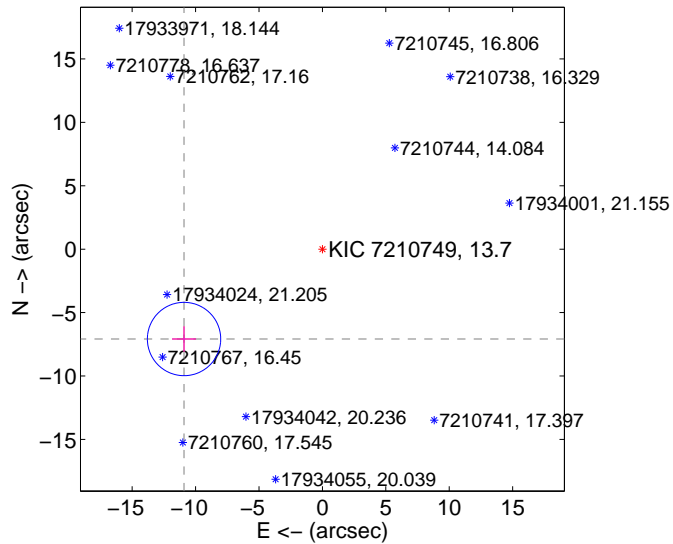
Supplemental centroid analysis for 007210749-01. Kepler magnitude: 13.70. Transit SNR 7.00

There are 1 quarters with good PRF difference image offsets

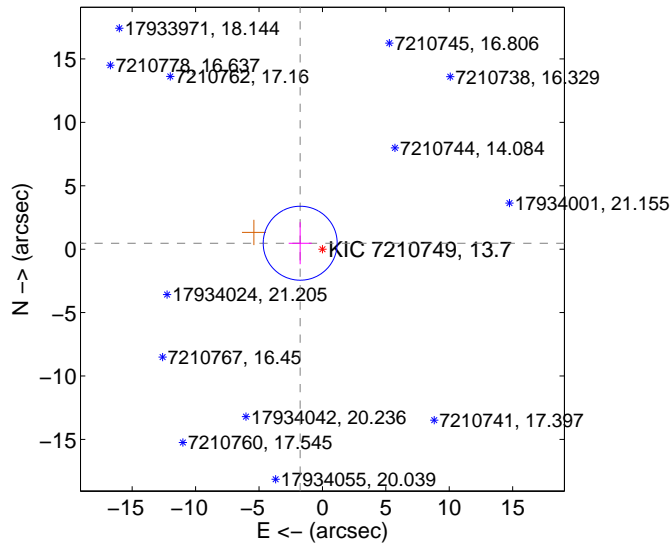
The OOT PRF centroid is offset from the target star catalog position by about 10.05 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	13.004 ± 0.963	13.50	10.905 ± 0.946	-7.083 ± 1.003
PRF-fit source offset from KIC position	1.813 ± 0.972	1.87	1.751 ± 0.903	0.469 ± 1.654
photometric centroid source offset	3.91 ± 0.69	5.71	-2.55 ± 0.61	2.97 ± 0.74

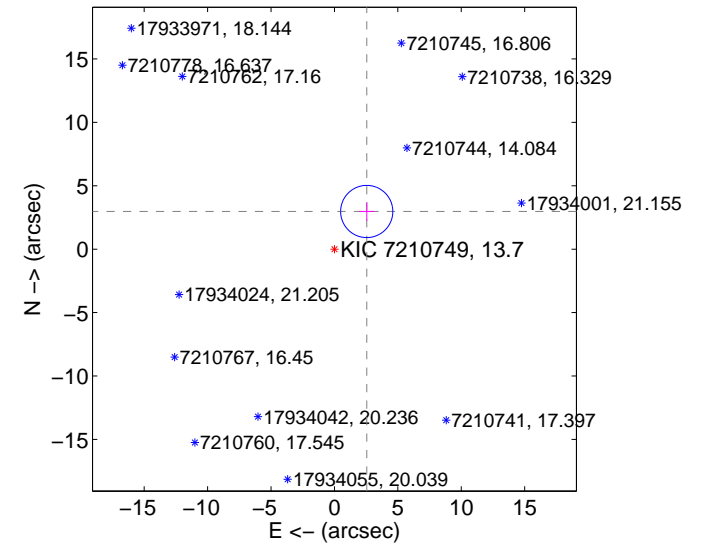
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

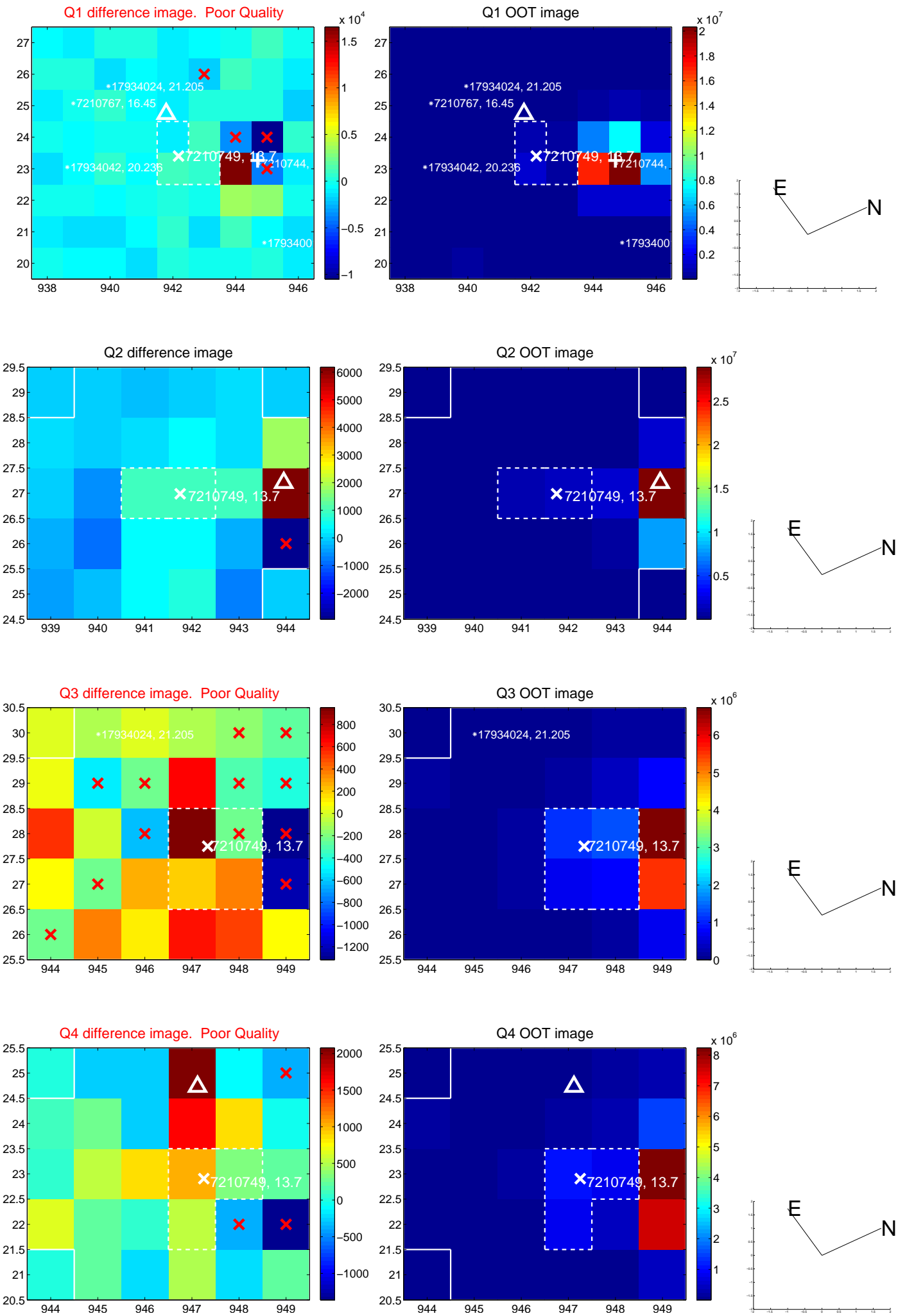


offset from photometric centroids

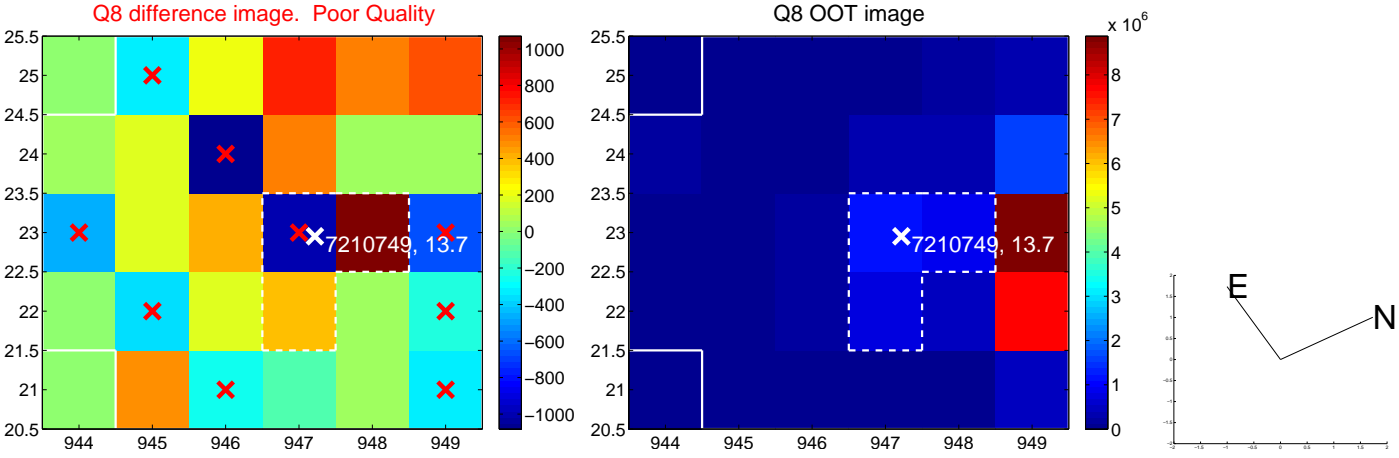
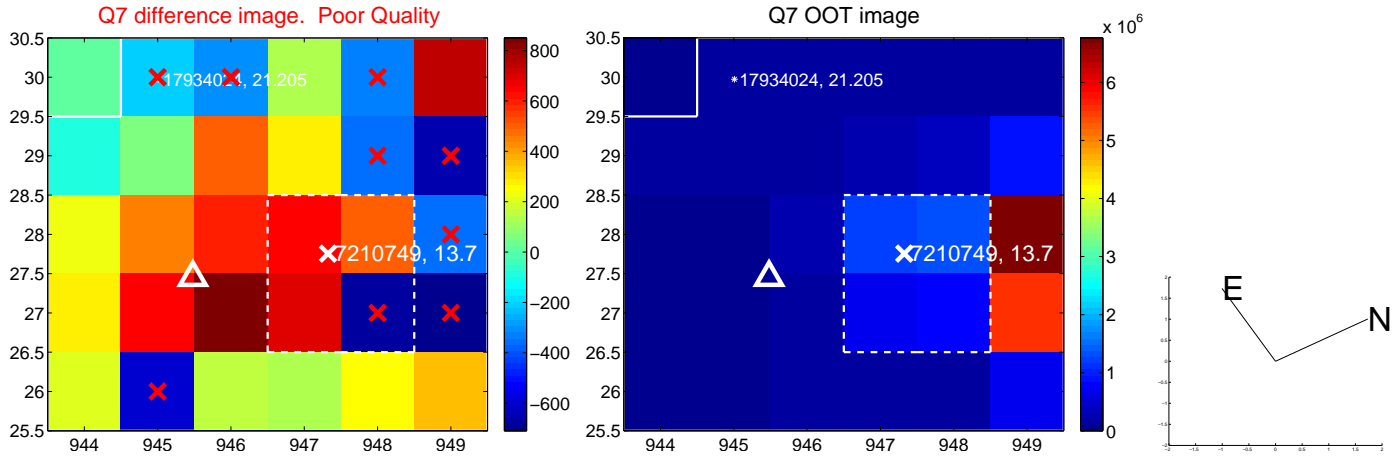
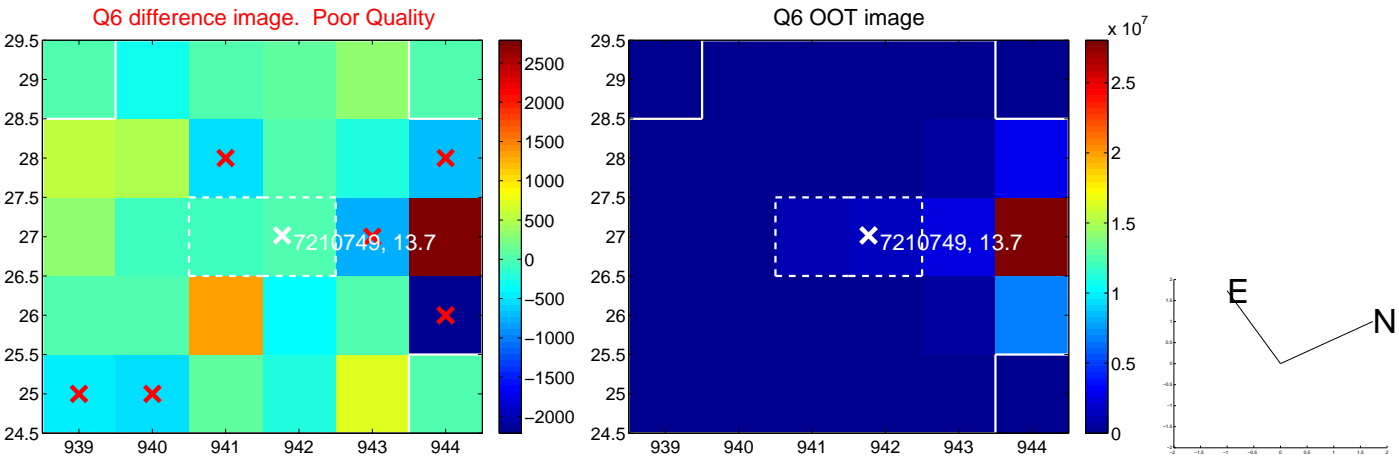
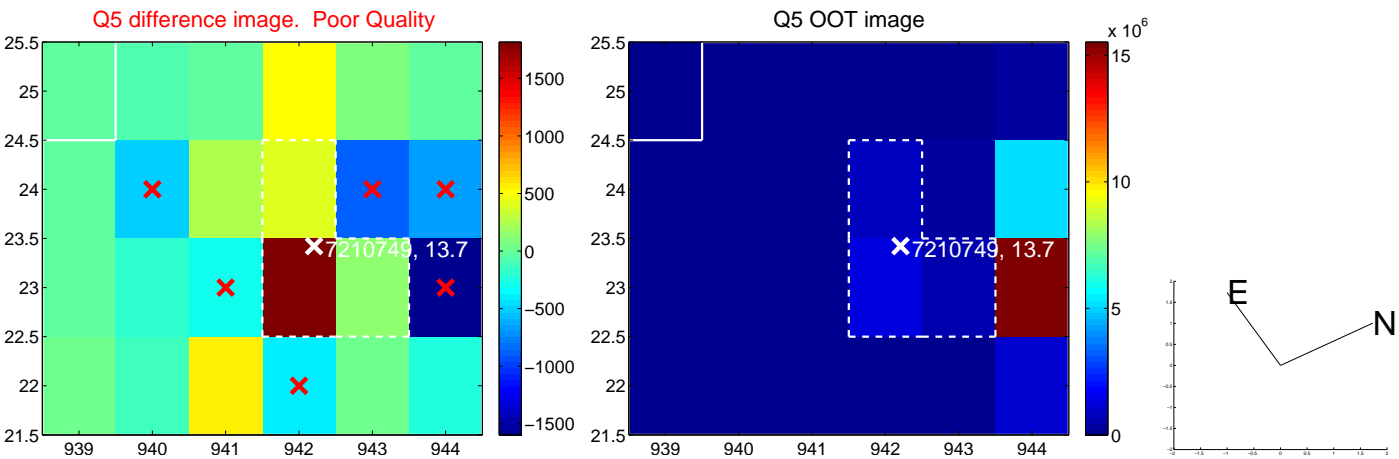


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

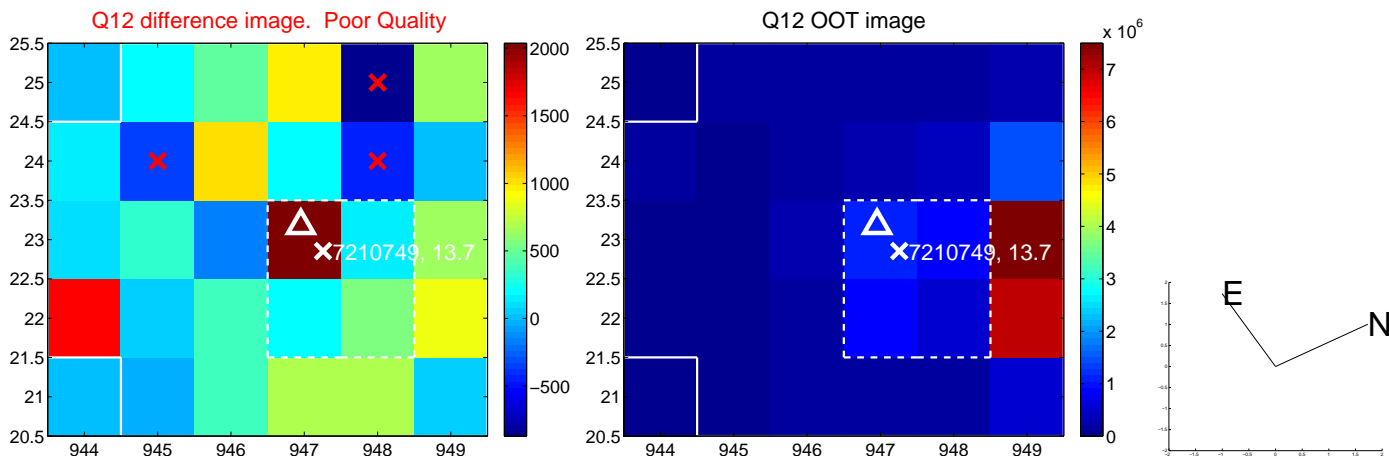
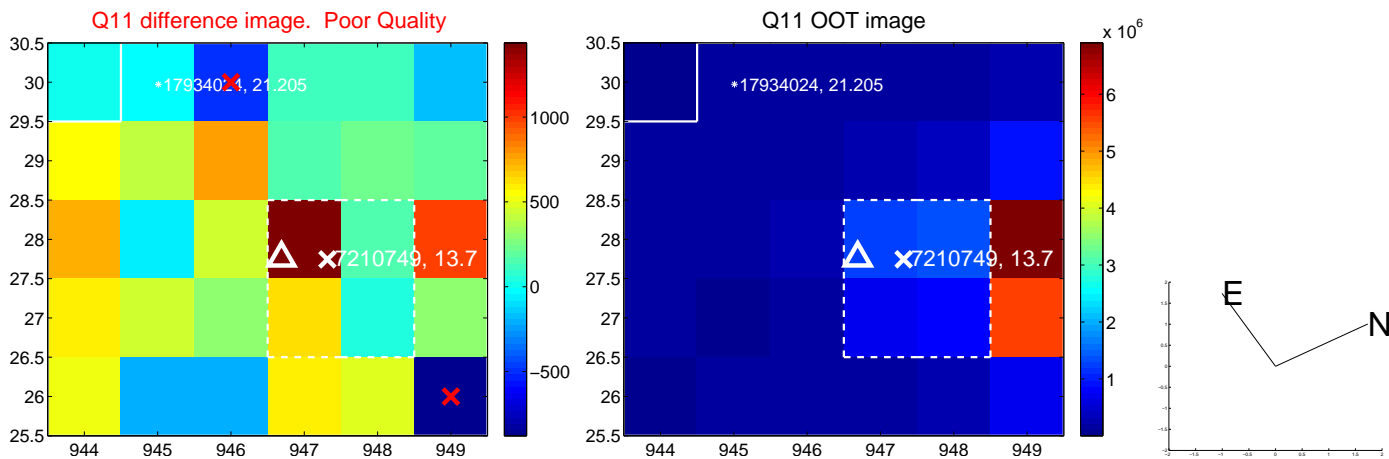
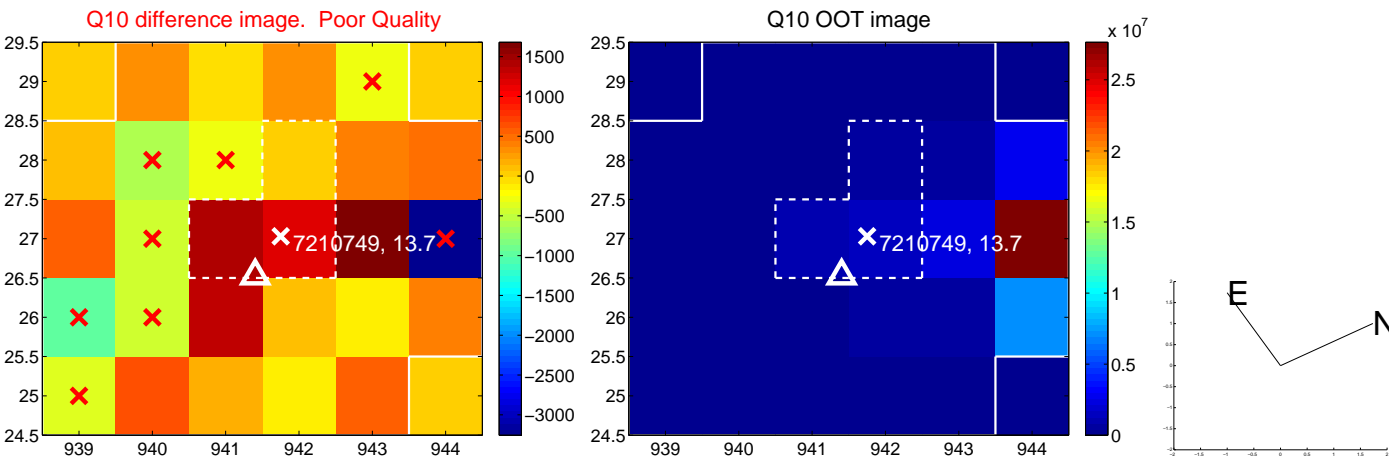
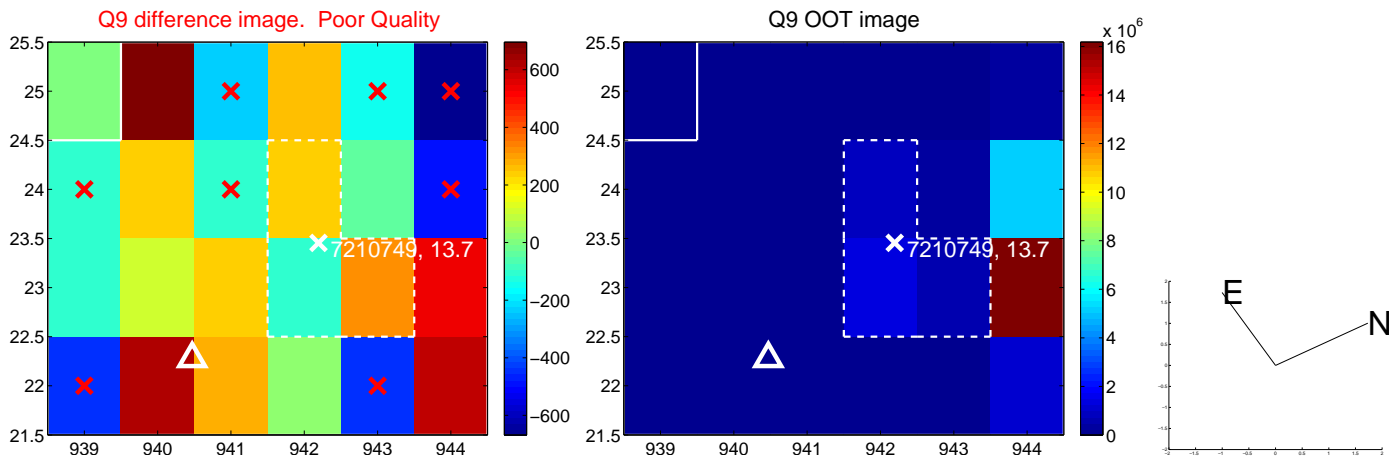
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



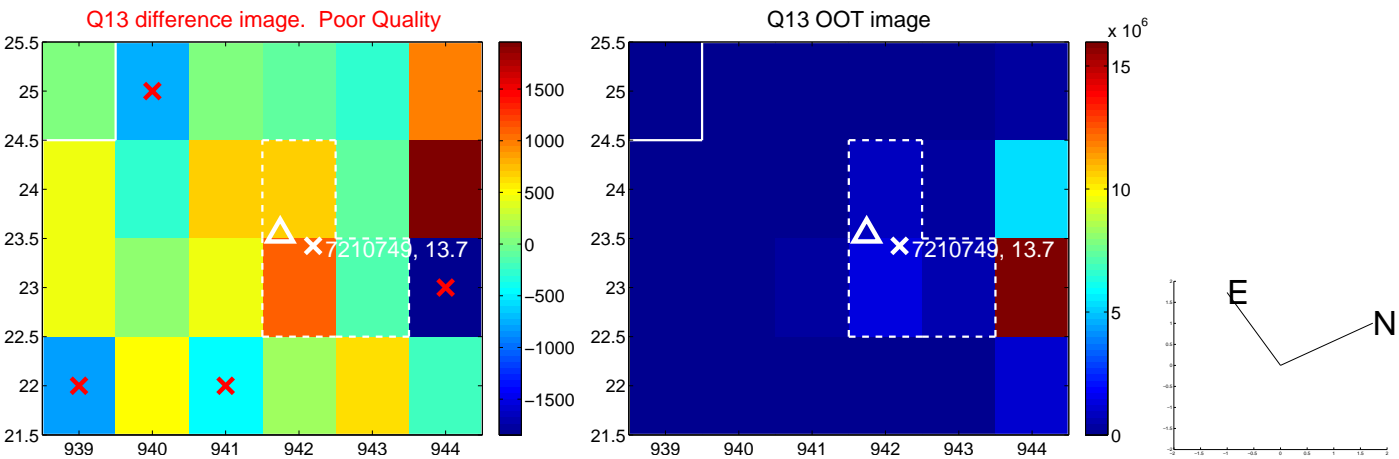
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



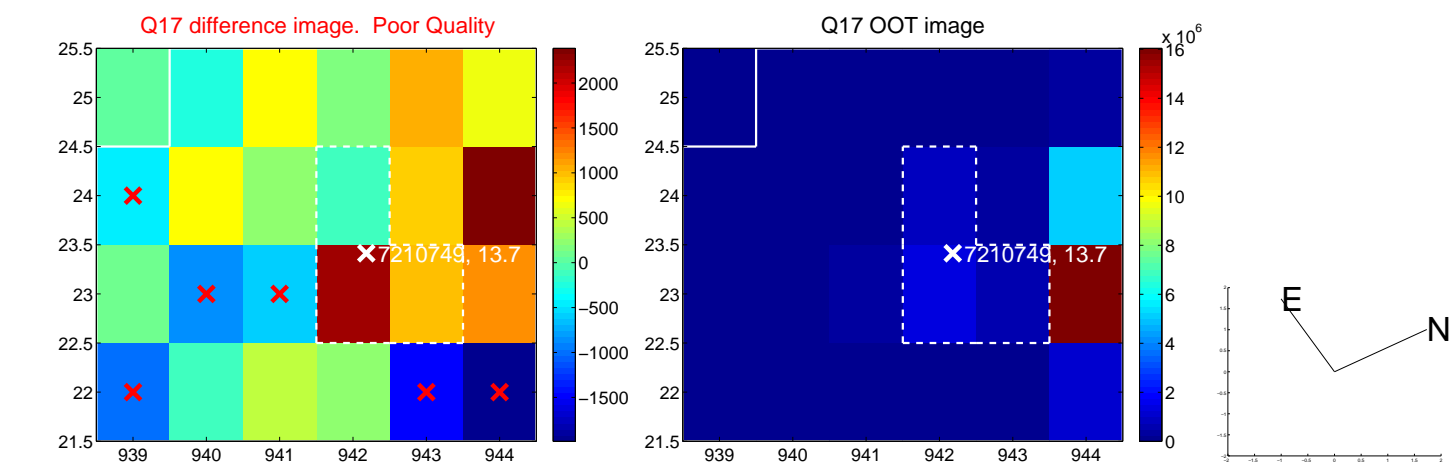
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



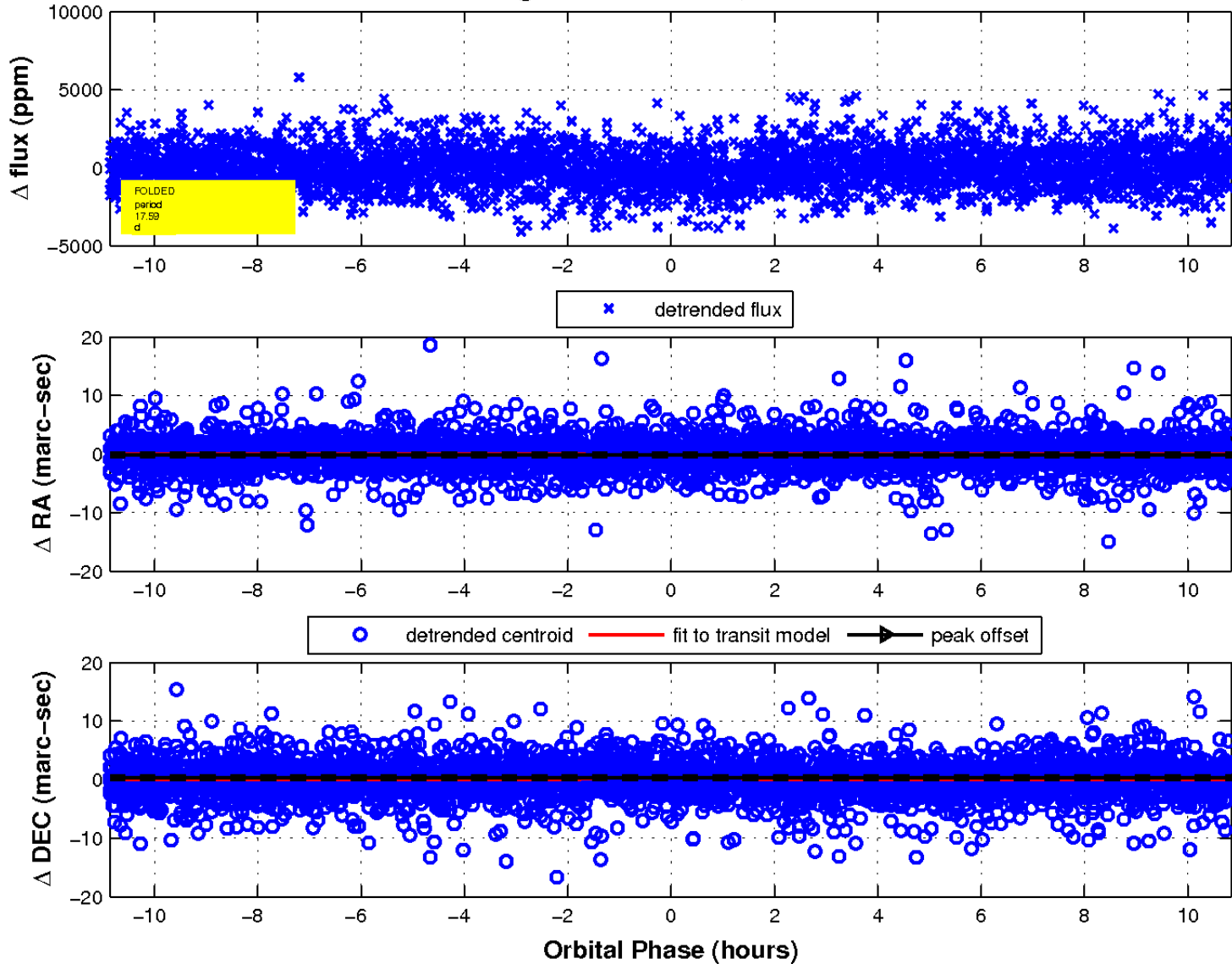
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

