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Erratum

X-ray emission from young stars in the Tucanae association

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Due to a computational error in the bolometric correction the L_x/L_{bol} ratios given in Table 2 of the paper are wrong. The same applies to upper limits to L_x/L_{bol} for X-ray undetected members of the Tucanae association (Table 3 in the original paper).

Generally, the values given in the paper are too large. As far as the detections are concerned, in all (but three cases) the error is within a factor of 2, i.e. within the uncertainties produced by the count rate error, the uncertainty in the count rate to luminosity conversion, and the X-ray variability. For two of the RASS detections, namely HIP 1910 and HIP 107345, the change in L_{bol} after the correction is significantly higher than that.

Table 1. Corrected values for $\log(L_x/L_{bol})$ of RASS detected candidate members of the Tucanae association.

Designation	$\log(L_x/L_{bol})$
RASS detected probable Tuc Members	
HIP 1481	−4.14
HIP 1910	−3.40
HIP 2729	−3.20
HIP 92680	−3.50
HIP 93815	−4.10
HIP 99803	−4.49
HIP 105388	−3.35
HIP 105404	−3.16
HIP 107345	−3.33
HIP 107947	−4.03
HIP 108195	−4.91
PPM 366328	−3.51
HIP 116748	−3.37
RASS detected improbable Tuc Members	
HIP 103438	−4.81

Table 2. Corrected values for $\log(L_x/L_{bol})$ of candidate members of the Tucanae association which are not detected by the RASS.

Designation	$\log(L_x/L_{bol})$
Non-detected probable Tuc Members	
HIP 1993	< -3.72
HIP 2484	< -6.39
HIP 2487	< -6.17
HIP 2578	< -6.90
HIP 95261	< -5.97
HIP 95270	< -4.74
HIP 100751	< -8.00
HIP 104308	< -5.24
HIP 118121	< -5.65
Non-detected improbable Tuc Members	
HIP 459	< -4.54
HIP 1399	< -3.90
HIP 93096	< -4.31
HIP 94051	< -5.02
HIP 94858	< -7.02
HIP 94997	< -3.90
HIP 95302	< -4.84
HIP 97705	< -6.27
HIP 101636	< -4.67
HIP 101844	< -3.62
HIP 104256	< -4.55
HIP 107806	< -4.92
HIP 109612	< -4.27
HIP 114236	< -6.98

The new, correct values for all Tucanae stars (detected and undetected) are given in two tables below. As a consequence of these corrections the values plotted in Fig. 3

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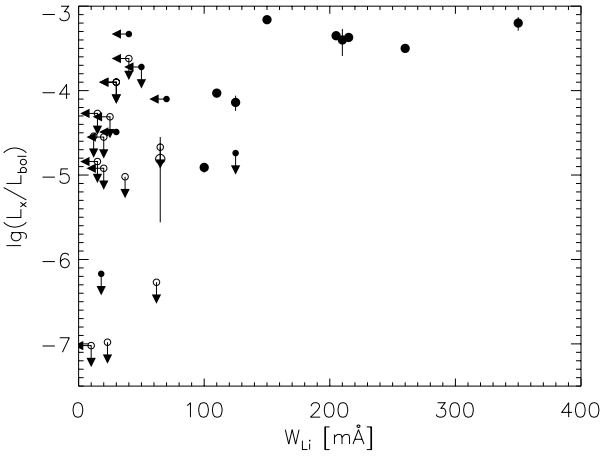

Fig. 1. Correlation between the X-ray to bolometric luminosity ratio and the equivalent width of lithium after correction of the $L_{\rm x}/L_{\rm bol}$ values.

of the paper have changed. The figure below is the updated version of Fig. 3 from the paper. The correlation between the lithium equivalent width and $L_{\rm x}/L_{\rm bol}$ is preserved. But the saturation limit is now closer to the "canonical" value for late-type stars of $\log(L_{\rm x}/L_{\rm bol}) = -3$.

We note that for HIP 118121, listed as a non-detected star in our Table 3 of the paper, there is a detection in the Faint Star Catalogue (FSC) at a distance of $\sim 15''$. However, due to a nearby brighter source the count rate given for this source in the FSC (0.06 cps) is not reliable, and the source appears to be extended. Our detection procedure has not detected this source because it has been designed to specialize on point sources.

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