



The Thursday Thing

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What Can We Learn From High Resolution Spectroscopy Of Exotic X-rays?

When exotic particles (pions, muons, antiprotons) are captured by a neutral atom, a new, highly excited bound system is formed. The de-excitation occurs in the beginning mainly by Auger electron ejection, while further on predominantly characteristic X-rays are emitted. By means of high resolution spectroscopy of these photons, exciting information about fundamental physics can be extracted.

After introducing some general considerations and the experimental set-up, the study of pionic X-rays will be discussed in detail. In this experiment the primary goal was the precision determination of the pion mass leading to stringent consequences for the muon neutrino.

Date: Thursday, May 10, 2001

Place: MacNaughton 222

Time: 12:30 p.m.

Cookies will be served. Don't forget your lunch.