1. Introduction.-

It is not always easy to solve the problem of approximating a function $y(x)$ of which a discrete set of approximate values is known if the degree of reliability with which they are known is uncertain.

In particular it is often impossible to apply its result to numerical derivation. It is moreover particularly inefficient to determine an approximation of a function by an exact fitting of the available data when the function $y(x)$ one wishes to approximate is known at many points of the interval.

It is then clearly preferable to consider the majority of the given values rather than to choose an arbitrary set, composed of the smallest number of discrete values necessary to determine a set of conditions.

In this note we present a method of computation that improves the precision of the data y_i which approximate a differentiable function at same points x_i, $(i = 0,1,...n)$ and which computes the values taken at the points x_i $(i = 0,1,...,n)$ by the derivative $y'(x)$.

The method we propose uses both the quadrature formulas that connect the values of the derivative of a function to the values of the function itself and Cook's method [1].

The present method has been developped in order to determine the energy level of a trapping centre in a semiconductor by studying the trapped charge.

It has been tested on some analytical functions, tabulated at points that differed from the true values by less than 1%.