

§16. Hyper ALADDIN

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The ALADDIN database (system) has been designed and proposed for quick distribution of the recommended atomic and molecular data.¹⁾ For this purpose, the data is written in ASCII codes, and FORTRAN subroutines are prepared for data access, which is applicable to user's program. The term ALADDIN is used as the data itself, data format and the interface program.

This is a Macintosh HyperCard version of the ALADDIN. Although the database ALADDIN has been available on large computers, workstations and PCs,²⁾ it is hard to say widely applied. The main reason for this is the atomic data are referred only by specialists on diagnostics or computer simulations, who do not care whether the data are written in ASCII or not. The ALADDIN database now covers wide range of processes of ionization, excitation, charge transfer, sputtering yield, photon absorption etc., which are recommended for practical use. And every data can be retrieved and evaluated by a simple procedure. The HyperALADDIN has of course graphical interface, and the user can confirm the validity of the data by visually comparing each of them.

The HyperALADDIN is a HyperCard stack, and it is started by simply clicking the icon. Figure 1 is a opening menu in which available databases are listed. After selecting the database a list of each process is shown in the next menu. When a process is chosen, the ALADDIN form of data is shown now (Fig. 2). By clicking the Graph button, the reaction coefficients are evaluated in the table and are plotted dynamically on the graph. (Fig. 3). In order to save stack size it is inevitable to see and wait how the graph is plotted. After finishing it, the user can Return previous card or Quit HyperALADDIN or jump to Home stack.

This is an introduction to the ALADDIN database. The data itself and the evaluated x-y data are written in characters. The user can pick up data by usual Copy & Paste method. The ALADDIN data has a common format, and it is applicable to the user's program.

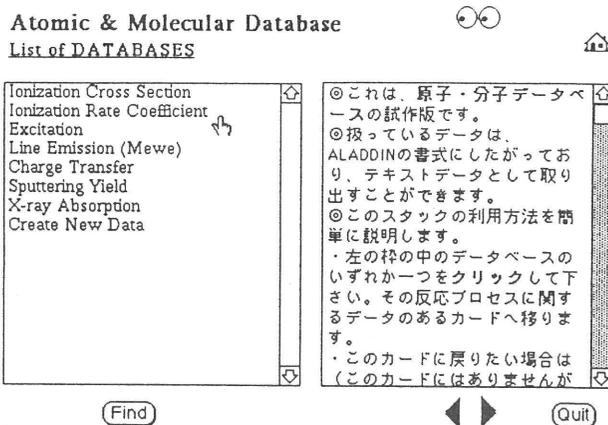


Fig.1 Opening view of the HyperALADDIN. Available databases are shown for selection.

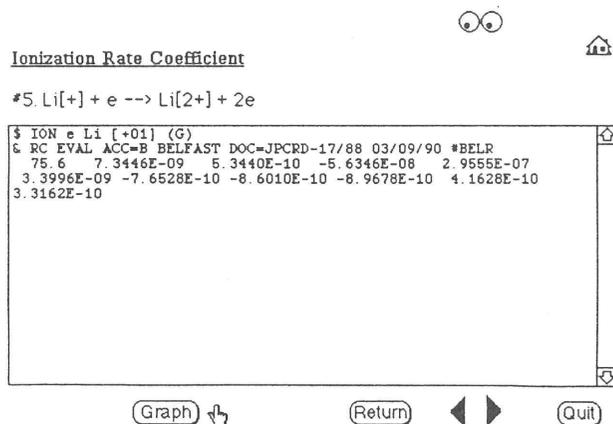


Fig.2 Each data is stored in the ALADDIN format.

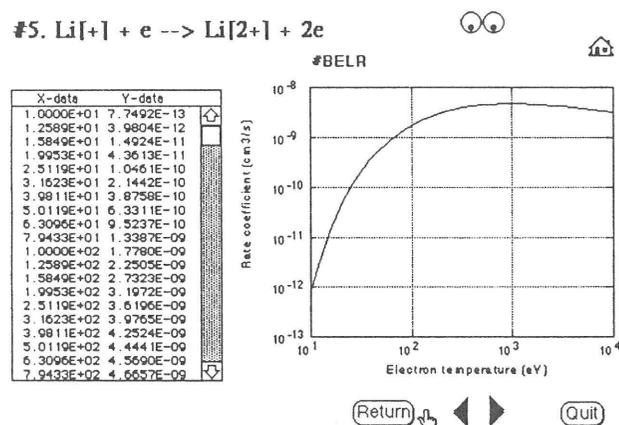


Fig.3 By clicking the GRAPH button, the coefficients are evaluated and listed in the table. Simultaneously they are plotted on the graph.

References

- 1) "ALADDIN Manual", IAEA-NDS-AM-17 (1989).
- 2) K. Takasugi et.al., Ann. Report NIFS, 213 (1991/92).