

Presentation of Anton Andonov.

I would like to tell about our (Gizo Nanava and myself) work accomplished in Dubna during four months and we present our site which is only a part of this work, and demonstrate possibilities which this site supplies for the users.

The main idea of creation of this site is three fold:

1) To collect in a good order everything that was inherited by our group from the so-called “form support” of the book “The Standard Model in the Making” created by Dima Bardin and Giampiero Passarino while their work on the book;

2) To create an appropriate environment for a subsequent inclusion of new results in the field of precision calculations for modern and future experiments;

3) To provide a possibility for physicists working in this field in different institutions to work together in Internet environment with two minimal conditions: availability of Internet connection and of an ordinary browser.

You may see this site at brg.jinr.ru.

The operational system on which this site is placed, is a PC-Linux (Slacware v.7.0). The web-server type is APACHE. Moreover, on the same PC the server for Relation type of Database is installed, namely “mySQL”.

For the work of the system we created several databases in which all the necessary information is stored and appropriate relations among these databases were created.

We have one database for programs, one – for **form** procedures (*.prc files), one – for diagrams and one – for “help”.

The most important part of the system, is the **form** kernel which consists of **form** compiler and several standard **form** procedures.

In order to manipulate this form-kernel a PERL-environment was created through which both the compilation itself and any other system operations are performed.

Communication between web-server and PERL – **form** kernel tandem

is realised (performed) by means of PHP. By the same means we perform the connection between web-server and database server.

Graphic interface was written on PHP and partly on JAVA.

Now I will demonstrate several concrete examples (possibilities of what can be done in this site).

Firstly, the site has a working area where a user may write her/his code in form or FORTRAN. You may use for your form codes several standard procedures for calculation of different processes in the Standard model, QED and QCD. (One or two procedures are demonstrated.)

One should not “include” these procedures in the code, it is necessary to simply `#call procedurename(argumentlist)`.

Moreover, we have here several example-programs which shows how these procedures can be used. For every example-program one may get help and see which diagrams does it compute.

We also have general help which shows how one should build your own expressions in the brg-stile. Every brg user has an access to all programs which are stored in the database and one may search for these programs by various criteria. You may modify a code, compile it, and save in the database with another name. You may use this code when you work next time in the site and your code will be accessible to other users also.

In order to add a code to a data base one should fill in a simple form.

And the last possibility about which I'd like to say is that you can get an on-line help in real time from other users working in this site in the same time. You may discuss and write together a code and compile the result of this discussion at any moment. These discussions are protocolled and added to a database every day and every user may search for them.

The site in the state of development and any suggestions are welcome.

Now I let the scene to my colleague, Gizo Nanava, who will tell you about relevant physics.