

Mixing parameter tools 1.0

Documentation

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This is a short documentation of the `MixingParameterTools` add-on for `Mathematica`. We describe the functions which allow to extract the mixing parameters from mass and Yukawa matrices in some detail, and briefly explain our conventions. There is also some information concerning the installation.

Contents

1 Short description and comments

This is the documentation of the `MixingParametersTools` add-on which contains the `MPT3x3.m` package. It provides various tools allowing for the extraction of physical parameters from mass and Yukawa matrices.

This package comes along with the paper [hep-ph/0501272](https://arxiv.org/abs/hep-ph/0501272).

2 Installation

2.1 Automatic installation (UNIX/Linux only)

Execute `MixingParameterTools.installer` and you are done.

```
sh MixingParameterTools.installer
```

The package is copied to `~/.Mathematica/Applications/MixingParameterTools`. The documentation and an example notebook are placed in a subdirectory of the working directory, which is called `MixingParameterTools`.

2.2 Semi-automatic installation (UNIX/Linux only)

Unpack the archive `MixingParameterTools.tar.gz`.

```
tar -xvzf MixingParameterTools.tar.gz
```

Then go to the directory `MixingParameterToolsInstall` and execute the script `install.sh`.

```
cd MixingParameterToolsInstall
./install.sh
```

This copies the package to `~/.Mathematica/Applications/MixingParameterTools`. The documentation and an example notebook are placed in a new subdirectory of the working directory called `MixingParameterTools`. Hence, the folder `MixingParameterToolsInstall` can be deleted now.

2.3 Installation by hand

In order to install the package manually, the archive `MixingParameterTools.tar.gz` has to be unpacked first. Under UNIX/Linux, type

```
tar -xvzf MixingParameterTools.tar.gz
```

On Windows systems, a program like WinZip can be used. Then one has to move the directory `MixingParameterTools` from the folder `MixingParameterToolsInstall` to the directory where the `Mathematica` add-ons are located, e.g.

```
mv MixingParameterToolsInstall/MixingParameterTools \  
~/Mathematica/Applications/
```

Under Windows XP, the path to the add-on directory should be something like `Application Data\Mathematica\Applications`. The documentation and an example notebook can be found in

`MixingParameterToolsInstall/Doc/MixingParameterTools/`.