

MusicBox

MusicBox is a simple box model which has been developed to support the [Model-Independent Chemistry Module \(MICM\)](#). MICM is the NCAR reinvestment project to create a unique chemistry module that can be implemented in any atmosphere model used at NCAR. It demonstrates the solution of gas-phase kinetics in a box model. The kinetics are specified in a web application, locally known as the [Chemistry Cafe](#). This first version of MusicBox is a simplified code base upon which future development can take place. While it runs and produces meaningful results, this preliminary version is not expected to support scientific investigations.

The ability to work with various models has been achieved by utilizing the [Common Community Physics Package \(CCPP\) Framework](#) initially developed by the Global Model Test Bed Team of the Developmental Testbed Center under sponsorship of NOAA. The first release of MICM contains the ability to run "3 component", "terminator" or "user-defined" chemistry.

It is important to note that this version of MusicBox is using a slightly modified version of the CCPP(V2). It is expected that the CCPP support infrastructure will be evolving and while the general plug-and-play philosophy will remain the same, the actual implementation details may change dramatically.

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MusicBox User and Developer's Guide

- The [Quick Start](#) guide includes:
 - Downloading [MusicBox](#) and [MICM](#) from GitHub
 - Collecting the environmental conditions file
 - Building and running the downloaded code
- [Modifying code and Chemistry is addressed elsewhere](#):
 - [MICM - Chemistry Schemes](#)
 - [Input/Output \(Francis\)](#)
 - [Creating a New \(Saved\) Chemistry Configuration](#)
 - [Adding a New Scheme](#)