



pypartmc 1.5.0

✓ Latest version

pip install pypartmc

Released: Mar 15, 2025

Python interface to PartMC

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Stars: 26

Forks: 14

Open issues: 54

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Maintainers



daquino2



slayoo

Unverified details

These details have **not** been verified by PyPI

Meta

- License: GPL-3.0
- Author: [PyPartMC team](#) ([see https://github.com/open-](#)

Project description



PyPartMC

PyPartMC is a Python interface to [PartMC](#), a particle-resolved Monte-Carlo code for atmospheric aerosol simulation. Development of PyPartMC has been intended to remove limitations to the use of Fortran-implemented PartMC. PyPartMC facilitates the dissemination of computational research results by streamlining independent execution of PartMC simulations (also during peer-review processes). Additionally, the ability to easily package examples, simple simulations, and results in a web-based notebook allows PyPartMC to support the efforts of many members of the scientific community, including researchers, instructors, and students, with nominal software and hardware requirements.

Documentation of PyPartMC is hosted at <https://open-atmos.github.io/PyPartMC>. PyPartMC is implemented in C++ and it also constitutes a C++ API to the PartMC Fortran internals. The Python API can facilitate using PartMC from other environments - see, e.g., Julia and Matlab examples below.

For an outline of the project, rationale, architecture, and features, refer to: [D'Aquino et al., 2024 \(SoftwareX\)](#) (please cite if PyPartMC is used in your research). For a list of talks and other relevant resources, please see [project Wiki](#). If interested in contributing to PyPartMC, please have a look a the [notes for developers](#).

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Python 3 Linux macOS Windows Jupyter

Installation

Using the command-line `pip` tool (also applies to conda environments)

```
pip install PyPartMC
```

Note that, depending on the environment (OS, hardware, Python version), the pip-install invocation may either trigger a download of a pre-compiled binary, or trigger compilation of PyPartMC. In the latter case, a Fortran compiler and some development tools including