

Benchmark Proposal: Title of the benchmark

The title should be concise and descriptive.

Contributors

List of contributors' name(s), affiliation(s), and contact email(s) of the proposer(s). Optionally ORCID, GitHub handle, or project link

Tags

Official `FireBench` tags (list available at the end of this page)

It is recommended to add one *Metric type* tag, at least one *Model context* tag, and at least one *Application context* tag.

These tags are important for referecing the proposed benchmark.

Optional free tags or keywords are welcome.

Short description

A 1-2 sentence overview of the benchmark goal, scope, and what is being tested.

Detailed description

It should contain:

- Scientific background and motivation.
- Description of the modeled process or scenario.
- Relevance of the benchmark to real-world application or theoretical exploration.
- Diagrams/schematics of the benchmark are welcome.

Data description

- Input data:

- Description of required input dataset (terrain, fuels, weather, etc.).
- Indicate availability (Open source, proprietary with access restriction, not yet available). Open source is preferred.

- Indicate if data is provided with the benchmark, if it can be access upon request for running the benchmark (under which conditions), and and if the data can be integrated within `FireBench` directly.
- Expected output data:
 - Defined expected output fields and format
 - Ground truth availability (if applicable). Indicate if this data is provided with the benchmark or available upon request (under which conditions), and and if the data can be integrated within `FireBench` directly.

Initial conditions and configuration

- Detailed description of the initial setup.
- Simulation parameters or constant
- Timeline or duration of the benchmark
- Mesh properties

Metrics definition

- Definition of primary metrics (RMSE, bias, runtime, etc.) and derived metrics (burned area agreement, time to ignition, statistical comparison of plumes, etc.)
- Usage of existing `FireBench` post processing tools (or need for tools)
- Units and interpretation.

Publication status

- Is this benchmark:
 - linked to a publication (in review, published, preprint)?
 - embargoed until a specific date?
- Citation to use (if applicable)

Licensing and Use Terms

- License for any data or code provided
- Attribution and reuse policy

Additional notes

Optional: Benchmark difficulty

Optional indicator for difficulty to run this benchmark:

- low: fast/approximate, educational or conceptual
- medium: realistic inputs, moderate compute
- high: high fidelity, coupled models, research grade