Procedures for using and accessing simulation codes submitted to the Community Coordinated Modeling Center

The CCMC's mission is to assist model developers in the evolution, testing, and validation of state-of-the-art research codes for space physics simulations. The CCMC makes the output of these models broadly available to the global scientific community, and supports the transition of validated and verified simulation codes to federal program offices, to US operational space weather forecasting agencies in the Department of Defense and NOAA, and to authorized government contractors. The following policies provide guidance for model developers, as well as for CCMC management, staff, and advisory bodies, in order to accomplishing this mission.

1. Code acceptance and public access

As the primary and preferred method of acceptance, the CCMC Science and Operations Working Groups will review and recommend candidate codes based on their technical quality and relevance to the CCMC mission. However, considering the CCMC's broad mandate, codes may occasionally be submitted directly by model developers to the CCMC without additional coordination, and accepted at the CCMC Steering Committee's discretion. While this will rarely occur, the CCMC Steering Committee reserves the right to consider all available codes from any source.

Model developers who consent to review and assessment by the CCMC Working Groups, as well as to open and free public access to their models' output after acceptance, will always have priority for acceptance over those that do not consent to such review and access. In any case, public access to a model's output will not be provided until the CCMC Steering Committee has formally accepted the code, CCMC staff members have successfully adapted the code to CCMC hardware, and the owner has verified proper installation at the CCMC.

Model developers must understand that:
- submission of a model to the CCMC constitutes explicit permission by the model developer for public access to CCMC-supervised model runs and output, and
- simulation results (including metrics and validation studies) obtained with models residing at the CCMC will be made routinely available to the scientific and operational communities as an ongoing activity, until or unless the model developer explicitly revokes such permission in writing.

2. Code modifications

The CCMC staff will be permitted to modify model codes **ONLY** for the following purposes:
- adapting models to CCMC-specific hardware;
- converting model output formats to CCMC-specific formats; and
- converting model input formats to CCMC-specific formats.

Such modifications are construed to be necessary for routine installation purposes only. By default, submitting a model constitutes consent by the developer for minor code modifications to be made on site by CCMC staff for these purposes, in consultation with the developer and in accordance with the CCMC mission. These modifications will be carefully documented and the information provided to model owners. Any other code modification, for any other purpose, is forbidden without prior approval from the model owners.

3. Code validation and verification

In collaboration with model owners, the CCMC staff will perform validation and verification studies with the models residing at the CCMC. These studies may be science-based validations or metrics-based analyses, and results may be disseminated as stated in Paragraph 1.

4. Source code dissemination

All codes resident at CCMC are protected from unauthorized access or unintentional dissemination. By default, CCMC may **NOT** distribute source code to **ANY** entity. Exceptions to this non-distribution policy will be made only at the model owner's explicit request, and must be consistent with the CCMC's resources and mission. If such model distributions occur, preference will be given to disseminating those models that the model owner agrees can be transferred to US federal agencies and their contractors, in addition to any other entity requested by the owner.

5. Termination of model support

The CCMC can discontinue support and public access to a model, based on availability of resources and mission priorities as determined by the CCMC Steering Committee, taking into account CCMC Working Group recommendations. Model owners will be notified at least six months prior to any such termination of model support at the CCMC.

6. Community research

The CCMC provides the global science community with free access to results of state-of-the-art space science and space environment simulations, and by doing so, enables broad collaborations with benefits for all. As members of the science community, CCMC staff will also have access to model results, governed by the same rules that apply to all users.

The science community is presumed to police itself through peer review on matters of intellectual honesty and scientific integrity. However, the CCMC requests that users notify the CCMC and model owners before using any model results for publication or submitting proposals. The CCMC also requests that model owners be properly acknowledged in all public presentations and publications. A model owner may provide a preferred attribution or reference statement that should be cited by all CCMC users of a specific model. These statements will be posted conspicuously on the CCMC web site.

7. Other agreements between model owners and the CCMC

The set of policies and procedures established in Paragraphs 1-6 above is meant to evolve to satisfy future requirements. Past experience has shown that the CCMC staff, in close collaboration with model developers, can help advance the capabilities of models resident at the CCMC. The qualitative and quantitative nature of such future interactions is unpredictable. As necessary, therefore, and prior to the acceptance of any model, the CCMC may discuss with model developers additional policies that may interest either party. At the request of the model owner, additional agreements may be executed in writing. The CCMC staff will adhere to any such agreement during the entire period of a model's residence at the CCMC.

Flexibility and discretion in interpreting evolving needs will be an underlying principle of this document. In close coordination with the model developers, the CCMC Working Groups, and the broader science community, the CCMC Steering Committee may change and adapt these policies over time as required, in order to accomplish the CCMC's mission.