

Rules of the Road for Use of the Model of Absorption BY D- and E-Region of HF Signals with Normal Incidence (AbbyNormal)

The AbbyNormal model is a physics-based D and E region model with an absorption module for HF signals between 1 and 30 MHz. The AbbyNormal model provides specifications of HF absorption on a spatial global grid. The primary inputs are geophysical indices and the GOES satellite measurements of solar x-rays. The primary outputs are:

- Integrated absorption in (db) of a single, vertical transit of a 5MHz HF signal, which can be related to any frequency by $5^2/f^2$ where f is frequency in MHz
- Integrated Pedersen conductance (mho)
- Integrated Hall conductance (mho)

The development of the time-dependent D and E region model called AbbyNormal has been extensive and involved physics-model construction, verification, and validation. Space Environment Corporation (SEC), Providence, Utah makes AbbyNormal available to the Community Coordinated Modeling Center (CCMC) for various purposes and applications where these Rules of the Road pertain to its use. SEC intends to continue to improve AbbyNormal and to use it for proposals, scientific, technical, and commercial purposes. Therefore, in order for both SEC and potential user's to achieve their goals, these Rules of the Road are applicable for use of all versions of AbbyNormal;

1. AbbyNormal model and output cannot be included in any proposal that will compete against an SEC proposal.
2. All proposals using AbbyNormal or any of its components must be coordinated with the AbbyNormal Principal Investigator at SEC.
3. Users cannot modify AbbyNormal or any of its components, including scripts, without approval of the AbbyNormal Principal Investigator.
4. AbbyNormal source code cannot be released to, or seen by, users without approval of the AbbyNormal Principal Investigator.
5. If the AbbyNormal results are used in a publication or presentation, we request that the authors acknowledge CCMC and AbbyNormal model developers. The authors should contact the AbbyNormal developers for the purpose of publications. You may wish to offer co-authorship, or model owners may request co-authorship at their discretion.
6. SEC will fully support and cooperate with the CCMC in its implementation and maintenance of AbbyNormal.
7. The AbbyNormal Rules of the Road must be posted on the CCMC web site.

AbbyNormal stands for the Absorption Model of HF Signals of Normal Incidence and all versions of AbbyNormal.

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