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Update on Code Validation and Verification MILES TURNER, Dublin City University, Ireland — If computer simulation is an important tool for low-temperature plasma physicists, as most believe, then the correctness of the models and codes that are used must be a matter of concern. Correctness in this context is something in need of demonstration. Modern methodologies for demonstrating code and model correctness are usually called "Verification and Validation" or V&V. Verification refers to the process of testing a code, in other words showing that the code accurately solves the mathematical model that it purports to embody. Validation tests the mathematical model against reality, by comparison with experiments. Clearly, verification must precede validation, and both are (ideally) required before a code can be accepted as an accurate tool. This paper reports on progress in applying the techniques of V&V in low-temperature plasma physics. The main tools of V&V will be discussed, together with the outstanding difficulties that remain in applying these methods to the problems of low-temperature plasma physics.

Miles Turner
Dublin City University, Ireland

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