Construction of an Advanced Software Tool
for Planetary Atmospheric Modeling

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Summary:

Scientific model-building can be a time intensive and
painstaking process, often involving the development of large
complex computer programs. Despite the effort involved,
scientific models cannot be distributed easily and shared with
other scientists. In general, implemented scientific models are
complicated, idiosyncratic, and difficult for anyone but the
original scientist/programmer to understand. We propose to
construct a scientific modeling software tool that serves as an
aid to the scientist in developing, using and sharing models.
The proposed tool will include an interactive intelligent
graphical interface and a high-level domain-specific modeling
language. As a testbed for this research, we propose to develop
a software prototype in the domain of planetary atmospheric
modeling.
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