Quickstart Instructions for DVODE.F90

- **Compiling DVODE.F90**
  1. DVODE.F90 is a Fortran 90 extension of the f77 DVODE.F ODE solver of Brown, Byrne, and Hindmarsh from the LLNL ODEPACK suite. It incoporates additional options from other solvers in ODEPACK most notably ones from LSODES and LSODAR. It also incoporates a Fortran 90 translation of the Harwell MA28 routines for sparse Jacobians. The three Fortran 90 modules that constitute DVODE.F90 are contained in the distribution file vode_double_m.f90. Compile this file using commands appropriate for your Fortran 90 compiler.
  2. Compile, link, and execute the program example1.f90. The last line in the output file example1.dat should be: "No errors occurred." Compare your results in example1.dat with those in Save_example1.dat.
  3. Repeat Step 2 for the program example2.f90. Compare your results in example2.dat with those in Save_example2.dat.
  4. Refer to the demonstration programs available from the DVODE.F90 support page for examples which illustrate the various features and options available in DVODE.F90. If your compiler complains about argument and array declarations in the user subroutines, refer to example1.f90 and example2.f90 to see how to declare the INTENT of the subroutine arguments.

- **Documentation**
  1. The distribution file vode_double_m.f90 contains a detailed documentation prologue for DVODE.F90.
  2. The DVODE.F90 support page contains a break down of the documentation prologue by major task.

- **Changing Working Precision**
  1. The distribution file contains a double precision version of DVODE.F90. If you wish to use it in single precision change the selected precision in a statement at the very beginning of the file.

- **Web Support Page**
  1. The source code, demonstration programs, and other material for DVODE.F90 is located at:
     http://www.radford.edu/∼thompson/vodef90web.html

- **Contact Information**
  1. Please contact the authors if you have any questions concerning DVODE.F90:
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  2. Note that Alan Hindmarsh is not involved with the distribution or support of DVODE.F90. *Please do not bug him with questions about DVODE.F90.*