## **Fortran Interfaces for JEDI**

Although the lower level code in JEDI does not have to be in Fortran, in many cases it will be. These pages describe the highest level Fortran interfaces required by JEDI for a Fortran implementation. A complete implementation requires all the classes but some applications can run with a subset.

The interfaces defined here are the ones that will be called by the JEDI interface layer. All data should be passed by interface (no global variables) or be private to a given type and contained in the object. The use of common interfaces will ensure easy sharing of high level application code between partners without modifications. The interfaces below are the minimum requirement for the JEDI layer but each implementation could can define its own additional methods, although their use should be limited to internal purposes.

Unit tests will be developed and implemented for each method.

Interfaces are described by general area of interest:

- Model Space entities
- Observation Space entities
- Other Data Structures
- Model interfaces
- Observation Operators interfaces
- Errors and Error Covariances