DART Phase 1 Task Schedule (Priority 1 = essential, 2 = important, 3 = desirable)

Table 1: Infrastructure and Support

Task Description	Due	Who?	Effort	Priority	Status
1A. Establish CVS Repository	3/1	TH	2 weeks	1	Done 2/26
1B. Web-based documentation for CVS Repository	3/1	TH	1 week	2	Done 2/26
1C. Coding style specification and example, should include version output, CVS auto-update for documentation, etc.	4/2	TH, JA	2 weeks	1	4/2
1D. Establish documentation format, coordinate with code repository	4/16	TH, JA	1 week	2	
1E. Establish requirements for compilation tools for assimilation tools	4/9	TH	1 week	2	
1F. Implement mechanism for compilation of assimilation tools	4/16	TH	2 weeks	2	
1G. Establish user's guide format	5/14	JA, TH	1 week	2	
1H. User's guide for CVS repository		TH	1 week	2	Done, 3/14
1J. User's guide overview of DART	4/23	JA	1 week	2	
1K. User's guide to views of DART for different users	6/4	JA	2 weeks	2	
1L. Web-based code documentation coordinated with CVS repository (i.e. documentation for what's been checked out and compiled)	4/23	TH	2 weeks	2	
1M. Future plans document	6/11	JA	1 week	3	
1N. Specifications for external access (web-based)	6/11	TH, JA	1 week	3	

Table 2: Observations

Task Description	Due	Who?	Effort	Priority	Status
2A. Specification for class hierarchy supporting class obs_sequence	4/4	JA	1 week	1	
2B. Specification for observation definition file format	4/23	TH, JA	1 week	1	
2C. Specification for observation space output file format (tightly coupled to 2B	4/23	TH, JA	1 week	1	
2D. Specification for observation file input (tightly coupled to B and C)	4/23	TH, JA	1 week	1	
2E. Alpha implementation of 2A-D for 1 dimensional (cyclic) domains, tested in L96 model context	5/9	JA, TH	2 weeks	1	
2F. Specification for observation definition specification tools basic suite	5/14	SA, JA	2 weeks	1	
2G. Alpha implementation of 2A-D for 2 dimensional spherical domain	5/23	JA, TH	2 weeks	2	
2H. Alpha implementation of 2F for 1 dimensional cyclic domains	5/28	JA, SA	2 weeks	1	
2J. Alpha implementation of 2A-D for 3 dimensional spherical domains	6/6	JA, TH	3 weeks	1	
2K. Specification for extending 2J to support limited domain in 3 dimensions; specific target WRF regional experiments	?		2 weeks	3	
2L. Demonstrate 2F in L96	6/18	All	1 week	1	
2M. Implement subset of 2F for spherical domain point observations (should work either 2 or 3 dimensional)	6/18	JA, SA	2 weeks	1	
2N. Implement subset of 2F for one or more non-point observations in spherical domain; suggested targets satellite radiance or doppler radar	?		2 weeks	2	

Table 2: Observations

Task Description	Due	Who?	Effort	Priority	Status
2O. Specification for simple graphical interface to observation definition specification tools (2F)	5/28	SA	1 week	1	
2P. Specification for coordinating targeting methods with DART	7/9	JA	1 week	2	
2Q. Implement simple subset of 2O	6/11	SA	2 weeks	1	
2R. Complete documentation for observation classes	6/4	JA	1 week	2	
2S. Complete documentation for instances of observation class and associated observation set specification tools	6/18	All	2 weeks	2	

DART Phase 1 Task Schedule (Priority 1 = essential, 2 = important, 3 = desirable)

Table 3: Models

Task Description	Due	Who?	Effort	Priority	Status
3A. Specify base model minimum requirements plus desirable extended interfaces	4/4	JA	1 week	1	
3B. Specification for assim_model ‘wrapper’ class	4/4	JA	1 week	1	
3C. Specification for state output files	4/16	TH, JA	1 week	1	
3D. Specify time management requirements for assim_model_class	4/4	JA	1 week	1	

Table 3: Models

Task Description	Due	Who?	Effort	Priority	Status
3E. Implement all model classes for L96	5/2	JA	2 weeks	1	
3F. Select complete low-order model suite	5/7	JA	1 week	2	
3G. Select global model capable of real data use	5/14	JA, TH	1 week	1	
3H. Implement low-order model suite	5/14	JA, TH	2 weeks	2	
3J. Implement 2 dimensional model on sphere	?		2 weeks	2	
3K. Implement global model	6/11	JA, TH	4 weeks	1	
3L. Determine requirements for graphical interface to control model parameters for assimilation purposes	6/18	SA	1 week	1	
3M. Document model and assim_model classes	6/18	JA, TH	1 week	2	
3N. Documentation for available low order models	6/20	JA	1 week	2	
3O. Documentation for global model	6/25	JA, TH	2 weeks	2	
3P. Documentation for 2 dimensional model on sphere	?		1 week	3	
3Q. Determine if WRF DA interfaces are mature enough to include in demo; conditional milestone to include WRF	6/18	JA	2 weeks	3	
3R. Demonstration of low order 1 dimensional systems for various user views	6/21	JA, TH	1 week	1	
3S. Demonstration of 3 dimensional model for various user views including limited use of real data	7/11	All	3 weeks	1	
3T. Final operational demo	7/23	All		1	

Table 4: Assimilation Algorithms

Task Description	Due	Who?	Effort	Priority	Status
4A. Specification for assimilation space output files	5/7	TH, JA	1 week	1	
4B. Implement 4A	5/21	TH, JA	2 weeks	1	
4C. Implement basic EAKF consistent with observation and model classes	5/23	JA, TH	1 week	1	
4D. Specification for implementation of 4D variational methods	6/11	???	3 weeks	2	
4E. Specification for graphical interfaces to support simple assimilation experiments (see 3L)	6/18	SA	2 weeks	1	
4F. Implement 4E	6/25	SA, JA	3 weeks	1	
4G. Additional filter variants implemented	?		1 week	2	
4H. Documentation for general assimilation classes	6/18	JA	1 week	2	
4J. Documentation for specific filter methods	6/25	JA	1 week	2	
4K. Specification of mechanism for dynamic OSSE's and targeted observation experiments	7/9	JA	1 week	2	

Table 5: Diagnostic Output

Task Description	Due	Who?	Effort	Priority	Status
5A. Specification for basic and extended suite of graphical diagnostic output	4/18	JA	2 weeks	1	
5B. Specification of simple graphical interface to basic diagnostics	6/25	SA, TH	2 weeks	1	
5C. Implement 5A	6/11	TH, JA	2 weeks	1	
5D. Implement 5B	7/16	SA	3 weeks	1	
5E. Implement extended suite of graphical diagnostics	?	SA	2 weeks	2	
5F. Explore mechanisms for web-based access to diagnostics for archived assimilation experiments	7/16	All	1 week	3	

Table 6: Comprehensive

Task Description	Due	Who?	Effort	Priority	Status
1A. Establish CVS Repository	3/1	TH	2 weeks	1	Done 2/26

Table 6: Comprehensive

Task Description	Due	Who?	Effort	Priority	Status
1B. Web-based documentation for CVS Repository	3/1	TH	1 week	2	Done 2/26
1H. User's guide for CVS repository		TH	1 week	2	Done, 3/14
1C. Coding style specification and example, should include version output, CVS auto-update for documentation, etc.	4/2	TH, JA	2 weeks	1	4/2
2A. Specification for class hierarchy supporting class obs_sequence	4/4	JA	1 week	1	
3A. Specify base model minimum requirements plus desirable extended interfaces	4/4	JA	1 week	1	
3B. Specification for assim_model 'wrapper' class	4/4	JA	1 week	1	
3D. Specify time management requirements for assim_model_class	4/4	JA	1 week	1	
1E. Establish requirements for compilation tools for assimilation tools	4/9	TH	1 week	2	
3C. Specification for state output files	4/16	TH, JA	1 week	1	
1D. Establish documentation format, coordinate with code repository	4/16	TH, JA	1 week	2	
1F. Implement mechanism for compilation of assimilation tools	4/16	TH	2 weeks	2	
5A. Specification for basic and extended suite of graphical diagnostic output	4/18	JA	2 weeks	1	
1L. Web-based code documentation coordinated with CVS repository (i.e. documentation for what's been checked out and compiled)	4/23	TH	2 weeks	2	
1J. User's guide overview of DART	4/23	JA	1 week	2	
2B. Specification for observation definition file format	4/23	TH, JA	1 week	1	

Table 6: Comprehensive

Task Description	Due	Who?	Effort	Priority	Status
2C. Specification for observation space output file format (tightly coupled to 2B	4/23	TH, JA	1 week	1	
2D. Specification for observation file input (tightly coupled to B and C)	4/23	TH, JA	1 week	1	
3E. Implement all model classes for L96	5/2	JA	2 weeks	1	
3F. Select complete low-order model suite	5/7	JA	1 week	2	
4A. Specification for assimilation space output files	5/7	TH, JA	1 week	1	
2E. Alpha implementation of 2A-D for 1 dimensional (cyclic) domains, tested in L96 model context	5/9	JA, TH	2 weeks	1	
1G. Establish user's guide format	5/14	JA, TH	1 week	2	
2F. Specification for observation definition specification tools basic suite	5/14	SA, JA	2 weeks	1	
3G. Select global model capable of real data use	5/14	JA, TH	1 week	1	
3H. Implement low-order model suite	5/14	JA, TH	2 weeks	2	
4B. Implement 4A	5/21	TH, JA	2 weeks	1	
4C. Implement basic EAKF consistent with observation and model classes	5/23	JA, TH	1 week	1	
2G. Alpha implementation of 2A-D for 2 dimensional spherical domain	5/23	JA, TH	2 weeks	2	
2H. Alpha implementation of 2F for 1 dimensional cyclic domains	5/28	JA, SA	2 weeks	1	
2O. Specification for simple graphical interface to observation definition specification tools (2F)	5/28	SA	1 week	1	
1K. User's guide to views of DART for different users	6/4	JA	2 weeks	2	

Table 6: Comprehensive

Task Description	Due	Who?	Effort	Priority	Status
2R. Complete documentation for observation classes	6/4	JA	1 week	2	
2J. Alpha implementation of 2A-D for 3 dimensional spherical domains	6/6	JA, TH	3 weeks	1	
2K. Specification for extending 2J to support limited domain in 3 dimensions; specific target WRF regional experiments	?		2 weeks	3	
1M. Future plans document	6/11	JA	1 week	3	
1N. Specifications for external access (web-based)	6/11	TH, JA	1 week	3	
2Q. Implement simple subset of 2O	6/11	SA	2 weeks	1	
5C. Implement 5A	6/11	TH, JA	2 weeks	1	
4D. Specification for implementation of 4D variational methods	6/11	???	3 weeks	2	
3J. Implement 2 dimensional model on sphere	?		2 weeks	2	
3K. Implement global model	6/11	JA, TH	4 weeks	1	
3L. Determine requirements for graphical interface to control model parameters for assimilation purposes	6/18	SA	1 week	1	
3M. Document model and assim_model classes	6/18	JA, TH	1 week	2	
2S. Complete documentation for instances of observation class and associated observation set specification tools	6/18	All	2 weeks	2	
2L. Demonstrate 2F in L96	6/18	All	1 week	1	
2M. Implement subset of 2F for spherical domain point observations (should work either 2 or 3 dimensional)	6/18	JA, SA	2 weeks	1	

Table 6: Comprehensive

Task Description	Due	Who?	Effort	Priority	Status
4E. Specification for graphical interfaces to support simple assimilation experiments (see 3L)	6/18	SA	2 weeks	1	
4H. Documentation for general assimilation classes	6/18	JA	1 week	2	
3Q. Determine if WRF DA interfaces are mature enough to include in demo; conditional milestone to include WRF	6/18	JA	2 weeks	3	
3N. Documentation for available low order models	6/20	JA	1 week	2	
3R. Demonstration of low order 1 dimensional systems for various user views	6/21	JA, TH	1 week	1	
3O. Documentation for global model	6/25	JA, TH	2 weeks	2	
3P. Documentation for 2 dimensional model on sphere	?		1 week	3	
5B. Specification of simple graphical interface to basic diagnostics	6/25	SA, TH	2 weeks	1	
4F. Implement 4E	6/25	SA, JA	3 weeks	1	
4G. Additional filter variants implemented	?		1 week	2	
4J. Documentation for specific filter methods	6/25	JA	1 week	2	
2N. Implement subset of 2F for one or more non-point observations in spherical domain; suggested targets satellite radiance or doppler radar	?		2 weeks	2	
4K. Specification of mechanism for dynamic OSSE's and targeted observation experiments	7/9	JA	1 week	2	
2P. Specification for coordinating targeting methods with DART	7/9	JA	1 week	2	

Table 6: Comprehensive

Task Description	Due	Who?	Effort	Priority	Status
3S. Demonstration of 3 dimensional model for various user views including limited use of real data	7/11	All	3 weeks	1	
5D. Implement 5B	7/16	SA	3 weeks	1	
5E. Implement extended suite of graphical diagnostics	?	SA	2 weeks	2	
5F. Explore mechanisms for web-based access to diagnostics for archived assimilation experiments	7/16	All	1 week	3	
3T. Final operational demo	7/23	All		1	