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

Table 1: Infrastructure and Support

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

Table 2: Observations

Task Description	Due	Who?	Effort	Priority	Status
A. Specification for class hierarchy supporting class obs_sequence	4/4	JA	1 week	1	
B. Specification for observation definition file format	4/23	TH, JA	1 week	1	
C. Specification for observation space output file format (tightly coupled to 2B	4/23	TH, JA	1 week	1	
D. Specification for observation file input (tightly coupled to B and C)	4/23	TH, JA	1 week	1	
E. Alpha implementation of 2A-D for 1 dimensional (cyclic) domains, tested in L96 model context	5/9	JA, TH	2 weeks	1	
F. Specification for observation definition specification tools basic suite	5/28	SA	2 weeks	1	
G. Alpha implementation of 2A-D for 2 dimensional spherical domain	5/23	JA, TH	2 weeks	2	
H. Alpha implementation of 2F for 1 dimensional cyclic domains	6/11	SA	2 weeks	1	
J. Alpha implementation of 2A-D for 3 dimensional spherical domains	6/6	JA, TH	3 weeks	1	
K. Specification for extending 2J to support limited domain in 3 dimensions; specific target WRF regional experiments	?		2 weeks	3	
L. Demonstrate 2F in L96	6/18	All	1 week	1	
M. Implement subset of 2F for spherical domain point observations (should work either 2 or 3 dimensional)	6/25	SA	2 weeks	1	
N. 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
O. Specification for simple graphical interface to observation definition specification tools (2F)		SA	1 week	1	
P. Specification for coordinating targeting methods with DART	7/9	JA	1 week	2	
Q. Implement simple subset of 2P			2 weeks	1	
R. Complete documentation for observation classes	6/4	JA	1 week	2	
S. 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
A. Specify base model minimum requirements plus desirable extended interfaces	4/4	JA	1 week	1	
B. Specification for assim_model ‘wrapper’ class	4/4	JA	1 week	1	
C. Specification for state output files	4/16	TH, JA	1 week	1	
D. Specify time management requirements for assim_model_class	4/4	JA	1 week	1	

Table 3: Models

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

Table 4: Assimilation Algorithms

Task Description	Due	Who?	Effort	Priority	Status
A. Specification for assimilatoin space output files			1 week	1	
B. Implement 4A			2 weeks	1	
C. Implement basic EAKF consistent with observation and model classes			1 week	1	
D. Specification for implementation of 4D variational methods			3 weeks	2	
E. Specification for graphical interfaces to support simple assimilation experiments			2 weeks	1	
F. Implement 4D			3 weeks	1	
G. Additional filter variants implemented			1 week	2	
H. Documentation for general assimilation classes			1 week	2	
J. Documentation for specific filter methods			1 week	2	
K. Specification of mechanism for dynamic OSSE's and targeted observation experiments			1 week	2	

Table 5: Diagnostic Output

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