							2003		2004		005	I
ID 1	WBS	Milestone	Baseline Date	Forecast Date	Actual Date	4	1 2 3 4	1	2 3 4	1 2	3 4	4
1	2.2	Software	Tue 10/1/02	Tue 10/1/02	NA	•						'
2	LCG M.	POOL/SEAL Prototype Release	Wed 7/30/03	Wed 7/30/03	Wed 7/30/03							
3	LCG M.	LCG-1 Deployment	Sun 8/31/03	Sun 8/31/03	Sun 8/31/03			<u> </u>				
4	ATLAS M.	Computing Model Paper	Fri 12/31/04	Fri 12/31/04	NA							
5	ATLAS M.	ATLAS Computing TDR & LCG TDR	Sat 7/30/05	Sat 7/30/05	NA)
6	2.2.1	Coordination	Tue 10/1/02	Tue 10/1/02	NA							
7	2.2.1.1	S/W Project Coordination	Tue 10/1/02	Tue 10/1/02	NA			_				
11	2.2.1.2	Data Mgt Coordination	Tue 10/1/02	Tue 10/1/02	NA			_				
15	2.2.2	Core Services	Tue 10/1/02	Tue 10/1/02	NA			—				
16	2.2.2.1	Framework	Tue 10/1/02	Tue 10/1/02	NA							
20	LCG M.	SEAL v1 Release	Mon 6/30/03	Mon 6/30/03	Mon 6/30/03							ĺ
21		New Particle Data Service	Tue 9/30/03	Tue 9/30/03	Tue 9/30/03		(
22		Support for Multiple Threads	Tue 9/30/03	Tue 9/30/03	Tue 9/30/03							
23		Proto Python Object Browser	Tue 9/30/03	Tue 12/30/03	Tue 12/30/03		(△				
24		Support for Python Scripting	Tue 9/30/03	Tue 9/30/03	Tue 9/30/03							
25		Integration of Pool Persistency Service	Tue 9/30/03	Sat 11/15/03	Sat 11/15/03							
26		Pile-Up Support for Full Detect. Simulat	Tue 9/30/03	Tue 3/30/04	NA			<u> </u>	\Diamond			
27		Support for Multi Input Streams	Tue 9/30/03	Sat 11/15/03	Sat 11/15/03		(ľ			
28		Integration of Seal Plug-in service	Tue 12/30/03	Thu 9/30/04	NA		_	T*/				
29		Integrate SEAL	Tue 3/30/04	Thu 9/30/04	NA			-		>		
30		Object Browser Integrated with Analysis	Tue 3/30/04	Tue 3/30/04	NA					Ĭ		
31		Pile-up Support for DC2 Production	Tue 3/30/04	Tue 3/30/04	NA							
32		Support for Unit Testing	Tue 3/30/04	Tue 3/30/04	NA							
33		Support for Reconstruction on Demand	Tue 3/30/04	Thu 12/30/04	NA					\Diamond		
34		Prototype Event Mixing Framework	Tue 3/30/04	Tue 3/30/04	NA							
35	1	Integration with LSF Batch System	Tue 3/30/04	Tue 3/30/04	NA							
36	1	Physics Analysis Requirements ID	Tue 3/30/04	Tue 3/30/04	NA							
37	1	Event Mixing Framework Validated	Wed 6/30/04	Wed 6/30/04	NA							
38		Pile-up Support for DC2 Production Val	Wed 6/30/04	Wed 6/30/04	NA							
39		Integration with Job Management	Wed 6/30/04	Wed 6/30/04	NA							
40	1	Evaluate Mech for Job Config/History D	Wed 6/30/04	Wed 6/30/04	NA							

								2003		<u> </u>	2004	,		200		\dashv
ID 41	WBS	Milestone Evaluate Scope of Seal Integration	Baseline Date Wed 6/30/04	Forecast Date Wed 6/30/04	Actual Date NA	4	1	2 3	4	1	2 3	4	1	2	3 4	4
		-										Ž				
42		Physics Analysis Tools Prototype	Wed 6/30/04	Wed 6/30/04	NA											
43		Integration of Seal plug-in Mechanism	Thu 9/30/04	Thu 9/30/04	NA							\subseteq				
44		Synchronize Gaudi Release with LHCB	Thu 9/30/04	Thu 9/30/04	NA							\subseteq				
45		Support Physics Analysis	Thu 9/30/04	Thu 9/30/04	NA							\bigcirc				
46		History & Property Mech Integ with Job	Thu 12/30/04	Thu 12/30/04	NA									\geq		
47		Support for Reconstruction on Demand	Thu 12/30/04	Thu 12/30/04	NA									\geq		
48	2.2.2.2	EDM Infrastructure	Tue 10/1/02	Tue 10/1/02	NA								_	•		
52		Prototype Support for Integer Keys	Tue 9/30/03	Wed 6/30/04	NA						<	\rangle				
53		Enforcement of RTF Recommemdation	Tue 9/30/03	Sun 11/30/03	Sun 11/30/03				7	$\overline{\ }$	•					
54		Support for Writing out Conditions Obje	Tue 9/30/03	Tue 3/30/04	NA				7	<u> </u>						
55		Performance optimizations	Tue 9/30/03	Tue 9/30/03	Tue 9/30/03						ľ					
56		Integration with Pool-Cache Manager	Tue 9/30/03	Wed 6/30/04	NA				7	$\overline{\ \ }$	1 <	>				
57		Support for Object Pool	Tue 9/30/03	Tue 9/30/03	Tue 9/30/03							•				
58		Proto Support for Composite, Bi-Direction	Tue 9/30/03	Tue 3/30/04	NA				7	$\overline{\ \ }$						
59		Multi Thread Support	Tue 12/30/03	Tue 12/30/03	Tue 12/30/03					\Box	Ď					
60		Supp for Persistent Inter-Object Relatio	Tue 12/30/03	Tue 3/30/04	NA					7	\wedge					
61		Performance Optimizations	Tue 12/30/03	Tue 12/30/03	Tue 12/30/03						Ď					
62		Support for History Objects	Tue 3/30/04	Thu 9/30/04	NA								>			
63		Support for Reconstruction on Demand	Wed 3/3/04	Thu 12/30/04	NA							Ĭ		>		
64		Support for Persistent Inter-Object Rela	Wed 3/3/04	Tue 3/30/04	NA								~			
65		Support for Integer Keys	Wed 6/30/04	Wed 6/30/04	NA							$\hat{\ }$				
66		Integration with Pool-Cache Manager	Wed 6/30/04	Wed 6/30/04	NA							\[\]				
67		Integrate Data Store with Physics Analy	Wed 6/30/04	Wed 6/30/04	NA							Ž				
68		Integrate CLID Database Generation w	Wed 6/30/04	Wed 6/30/04	NA							7				
69		Data Objects Fully Accessible from Scr	Thu 9/30/04	Thu 9/30/04	NA								>			
70		Support for History Objects	Thu 9/30/04	Thu 9/30/04	NA								7			
71		Support for Reconstruction on Demand	Thu 12/30/04	Thu 12/30/04	NA							L		\rangle		
72	2.2.2.3	Detector Description	Tue 10/1/02	Tue 10/1/02	NA									1		
76		Material Services	Wed 7/30/03	Mon 6/30/03	Mon 6/30/03	`	7		4		1	~				
77		Full Integration of Muon System	Wed 7/30/03	Mon 6/30/03	Mon 6/30/03											

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WBS	Milestone	Baseline Date	Forecast Date	Actual Date	4	1	2	3 4	1	2	
	Full Description of ATLAS Detector	Tue 9/30/03	Mon 9/1/03	Mon 9/1/03				•			
9	"Tiny" HEP Transforms	Tue 9/30/03	Tue 9/16/03	Tue 9/16/03				1			
)	Magnetic Field Description	Tue 9/30/03	Sat 11/15/03	Sat 11/15/03						>	
1	Runge-Kutte Integrators	Tue 9/30/03	Mon 6/30/03	Mon 6/30/03							
2	GeoG4 Conversion Available	Tue 12/30/03	Tue 12/30/03	Tue 12/30/03					ſ	•	
3	Detect Descrip Fitted to Time Depende	Tue 3/30/04	Tue 3/30/04	NA						\Diamond	
4	Native Geo Model Mat'l Integ Service	Tue 3/30/04	Tue 3/30/04	NA						$\overline{\Diamond}$	
5	Automatic Class Detection	Tue 3/30/04	Tue 3/30/04	NA							
6	Accelerated Access to Geometry Tree	Tue 3/30/04	Tue 3/30/04	NA							
7	Geometry Configuration Design Comple	Wed 6/30/04	Wed 6/30/04	NA							\bigcirc
3	Native GeoModel Mat'l Integration Serv	Wed 6/30/04	Wed 6/30/04	NA							
9	Geometry Configuration System Availal	Wed 6/30/04	Wed 6/30/04	NA							
2.2.2.4	Graphics	Tue 10/1/02	Tue 10/1/02	NA	•						
1	Integration of Graphic Tools	Tue 3/30/04	Tue 3/30/04	NA	`						
5	Real Time Histogramm Displays for Mo	Tue 3/30/04	Tue 3/30/04	NA							
3	Deployment of Graphics for use in 2004	Tue 3/30/04	Tue 3/30/04	NA							
7 2.2.2.5	Analysis Tools	Tue 10/1/02	Tue 10/1/02	NA	•						
1	Deploy Analysis Framework with Basic	Tue 3/30/04	Tue 3/30/04	NA	`						
2 2.2.2.6	Grid Integration	Tue 10/1/02	Tue 10/1/02	NA	•						V
6	Prototype Implementation for Grid Moni	Tue 9/30/03	Wed 6/30/04	NA							\Diamond
7	Integration with Ganga	Tue 9/30/03	Wed 6/30/04	NA					$\overline{\wedge}$		Ŏ
8	Integ with Distributed File Replicatioin S	Tue 3/30/04	Tue 3/30/04	NA					T	\Diamond	~
9 2.2.3	Database	Tue 10/1/02	Tue 10/1/02	NA	•						
0 ATLAS M.	ATLAS Release with POOL Based Persister	Wed 7/30/03	Wed 7/30/03	Wed 10/15/03	`			\Diamond			
1 2.2.3.1	Database Services & Servers	Tue 10/1/02	Tue 10/1/02	NA	•				. •		
5	Prototype Access Control for Early POC	Tue 3/30/04	Tue 3/30/04	NA	`						
6	Replication Mach for Database-Res Da	Tue 3/30/04	Tue 3/30/04	NA							
7	Embedded Server Support & Extraction	Wed 6/30/04	Wed 6/30/04	NA							\Diamond
8	Evaluation of Distributed Oracel Deploy	Thu 9/30/04	Thu 9/30/04	NA							
9 2.2.3.2	Common Data Management	Tue 10/1/02	Tue 10/1/02	NA	•						
3 LCG M.	Initial POOL Deployment on LCG-1	Sat 7/12/03	Sat 7/12/03	Sat 7/12/03	`	Ĭ					

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ID 124	WBS	Milestone	Baseline Date	Forecast Date	Actual Date	4	1	2	3 4	. 1	2 3	3 4	1	2	3	
124		Initial Suite of ATLAS POOL Acceptanc	Wed 7/30/03	Tue 3/30/04	NA NA)	\Diamond					
125		POOL Conversion Service Prototype D	Wed 7/30/03	Mon 6/2/03	Mon 6/2/03)						
126		POOL Conversion Service Ready	Wed 7/30/03	Fri 10/10/03	Fri 10/10/03											
127		Athena Mechanisms for Write Control	Tue 9/30/03	Wed 10/1/03	Wed 10/1/03											
128		Athena/POOL Object Issues Resolved	Tue 9/30/03	Sun 2/15/04	NA						\Diamond					
129		Athena/SEAL Plug-In Issues Resolved	Tue 9/30/03	Fri 10/10/03	Fri 10/10/03											
130		POOL Enhancements to Supp ATLAS	Tue 9/30/03	Sun 2/15/04	NA						\Diamond					
131		POOL/SEAL Machinery Incorporated	Tue 9/30/03	Fri 11/14/03	Fri 11/14/03						•					
132		SEAL/Athena Class ID Strategy Defined	Tue 9/30/03	Tue 3/30/04	NA						\Diamond					
133		Athena I/Fs for Physical Placement Ctrl	Tue 9/30/03	Tue 6/1/04	NA					$\overline{\wedge}$		\Diamond				
134		Athena/POOL Support Delivered	Tue 9/30/03	Thu 7/1/04	NA					$\overline{\wedge}$		\Diamond				
135		Athena/POOL Supp for Write Multi Stre	Tue 9/30/03	Sun 2/15/04	NA					$\overline{\wedge}$	\Diamond	Ť				
136		Content Definition I/F Defined	Tue 9/30/03	Tue 3/30/04	NA					$\overline{\wedge}$	ľ					
137		Database Supp Sufficient	Tue 12/30/03	Tue 3/30/04	NA					T	1					
138		Consistent Approach to Schema Defin.	Tue 3/30/04	Tue 3/30/04	NA						ĪÀ					
139		Content Characterization/Aggregation N	Tue 3/30/04	Tue 3/30/04	NA											
140		Strategy for Transaction Granularity	Tue 3/30/04	Tue 3/30/04	NA											
141		Support for Multiple Transaction Contex	Wed 6/30/04	Wed 6/30/04	NA							\Diamond				
142		Schema Evolution Requirements Define	Wed 6/30/04	Wed 6/30/04	NA	-						$\overline{\wedge}$				
143		Support for placement Control	Thu 9/30/04	Thu 9/30/04	NA											
144		Test Suite for Prototype POOL Schema	Thu 9/30/04	Thu 9/30/04	NA	-						Κ				
145		Support for Cross-Type Conversion	Thu 12/30/04	Thu 12/30/04	NA							_		\searrow		
146	2.2.3.3	Event Store	Tue 10/1/02	Tue 10/1/02	NA	•	_									
147		AthenaSEAL/POOL Demonstrably Cap	Tue 9/30/03	Sun 2/15/04	NA	ì				\triangle	\Diamond		`			
151		Persistent Event Header Navig Model [Tue 9/30/03	Tue 3/30/04	NA					\overline{A}	$\stackrel{\smile}{\sim}$					
152		Implicit/Explicit Collection Model for ES	Tue 3/30/04	Tue 3/30/04	NA					\top	I					
153		Support for Collection-Level and Subsa	Tue 3/30/04	Tue 3/30/04	NA											
154		Model for DC2 ESD and AOD Organiza	Tue 3/30/04	Tue 3/30/04	NA											
155		Deep Copy Support for Event Extraction	Wed 6/30/04	Wed 6/30/04	NA							\triangle				
156		Depth-of-copy Support for Event Extrac	Thu 9/30/04	Thu 9/30/04	NA								\			
157		Unique EDO Identification Infrastructure	Thu 9/30/04	Thu 9/30/04	NA								\times			

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ID 158	WBS	Milestone Database Support for Express Streams	Baseline Date Thu 12/30/04	Forecast Date Thu 12/30/04	Actual Date NA	4	1	2	3 4	1	2	3 4	1	2	3	4 ′
		· · ·												2		
159	2.2.3.4	Non-Event Data Management	Tue 10/1/02	Tue 10/1/02	NA				^							
163		NOVA Support for Materials	Wed 7/30/03	Tue 3/30/04	NA						\Diamond					
164		Conditions Data Accessible to Athena A	Wed 7/30/03	Fri 8/15/03	Fri 8/15/03					•						
165		Documentation for Registering POOL F	Tue 9/30/03	Sat 11/15/03	Sat 11/15/03				($\bigcirc \blacklozenge$						
166		Documented Procedures Readable	Tue 9/30/03	Sun 11/30/03	Sun 11/30/03				($\bigcirc \P$	>					
167		Support for Multi IOV Databases	Tue 9/30/03	Sun 2/15/04	NA				(\Diamond					
168		IOV Database Support	Tue 9/30/03	Mon 9/15/03	Mon 9/15/03				•							
169		IOV I/F for Controlling Preload, Global/L	Tue 9/30/03	Sun 2/15/04	NA				ſ	$\overline{\wedge}$	\Diamond					
170		Generalized Support for NOVA loading	Tue 12/30/03	Tue 3/30/04	NA				•	\top (^ \					
171		Support for Retrieval and Iteration	Tue 3/30/04	Tue 3/30/04	NA						ĪÀ					
172		Generation of transient NovaObject Cla	Tue 3/30/04	Tue 3/30/04	NA											
173		NOVA Schema Definition Consistent wi	Wed 6/30/04	Wed 6/30/04	NA							\Diamond				
174		Support for Multiple IOV Databases, wit	Wed 6/30/04	Wed 6/30/04	NA							$\overline{\Diamond}$				
175	2.2.3.5	Collections, Catalogs and Metadata	Tue 10/1/02	Tue 10/1/02	NA	Ī						Ť				
179		Pool Event Collections Useable in Athe	Wed 7/30/03	Wed 7/30/03	Wed 7/30/03							•				
180		Collection Cataloging Deployed	Tue 9/30/03	Tue 3/30/04	NA				رى	\wedge						
181		Athena I/F for Write/Reading	Tue 9/30/03	Tue 3/30/04	NA				ſ	$\overline{\wedge}$	ľò					
182		Mach for Including Navig. Metadata	Tue 9/30/03	Tue 3/30/04	NA				($\overline{\wedge}$	ľŎ					
183		Collection Merging Deployed	Tue 12/30/03	Tue 3/30/04	NA				L	\top (1 Š					
184		Athena I/F/ Read/Write Access	Tue 12/30/03	Tue 12/30/03	NA					(₫ ×					
185		Proto Tag Database/Metadata Capabili	Tue 12/30/03	Tue 3/30/04	NA					($^{\wedge}$					
186		Magda/RLS Integ/Migration Demon	Tue 12/30/03	Sun 2/15/04	NA					(
187		RLS Proto Deployed in ATLAS	Tue 12/30/03	Sun 2/15/04	NA						~ <u>~</u>					
188		Workshop to Agree on Strategy for DC-	Tue 12/30/03	Tue 3/30/04	NA						$\overline{\ \ \ }$					
189		Collect Replic./Distrib. Infra Deployed	Tue 3/30/04	Tue 3/30/04	NA						$\top \overset{\times}{\wedge}$					
190		Support for Collection Subsetting	Tue 3/30/04	Tue 3/30/04	NA											
191		Integ of Collect Supp & Bookkeeping	Tue 3/30/04	Tue 3/30/04	NA											
192		Collect Building and Aggregation Strate	Tue 3/30/04	Tue 3/30/04	NA											
193		Content Categories/Aggregates Repres	Wed 6/30/04	Wed 6/30/04	NA							\triangle				
194		Attribute Lists Capable of Supporting Fi	Wed 6/30/04	Wed 6/30/04	NA							\times				

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ID	WBS	Milestone	Baseline Date	Forecast Date	Actual Date	4	1	2	3 4	1	2 3	4	1	2	3 4	. 1
195	2.2.4	Application Software	Tue 10/1/02	Tue 10/1/02	NA	•										
199		Full Simul of ATLAS Detect in GEANT4	Tue 9/30/03	Wed 9/10/03	Wed 9/10/03											
200		Update of Mat'l Amounts in GEANT3 Detect	Tue 9/30/03	Mon 12/1/03	Mon 12/1/03				($\bigcirc lack$	>					
201		Geo Model Based Detect Descrip Used	Tue 9/30/03	Tue 3/30/04	NA				(
202		Proto Definition of ESD	Tue 12/30/03	Tue 3/30/04	NA						\bigcirc					
203		Proto Definition of AOD	Tue 12/30/03	Tue 3/30/04	NA						\bigcirc					
204		Proto Defin of Event-Level Physics	Tue 12/30/03	Tue 3/30/04	NA						$\land \Diamond$					
205		Pile-Up Demonstrated in Athena	Tue 12/30/03	Tue 3/30/04	NA						$\land \diamond$					
206		1st Release of Full Chain of S/W	Tue 12/30/03	Wed 12/17/03	Wed 12/17/03					1						
207		RTF Recommendations Implemented	Tue 12/30/03	Wed 6/30/04	NA						T <	\supset				
208	ATLAS M.	ATLAS Complete GEANT4 Validation	Tue 12/30/03	Tue 3/30/04	NA					7	$\land \diamond$	Ť				
209		Mix of Simul Data into Bytestream Files	Tue 3/30/04	Tue 3/30/04	NA					-	TÀ					
210		GEANT4 Simulation Validated	Tue 3/30/04	Tue 3/30/04	NA											
211		Initial Implementation of GEANT4 Simulation	Tue 3/30/04	Tue 3/30/04	NA											
212		Combined TestBm Simul & Monit S/W Valida	Tue 3/30/04	Fri 4/30/04	NA											
213		Reading of Hits and Digits from POOL Files	Tue 3/30/04	Tue 3/30/04	NA											
214		Extract Module Alignment Constants	Tue 3/30/04	Tue 3/30/04	NA											
215		Initial Implementation of ESRAT Completed	Wed 6/30/04	Wed 6/30/04	NA											
216		Initial Implementation of AOD and ESD Avai	Wed 6/30/04	Wed 6/30/04	NA							Š				
217		Support for Alignment in Readout Elements	Wed 6/30/04	Wed 6/30/04	NA							Š				
218		Intial Combined TestBeam Monitoring Runni	Wed 6/30/04	Wed 6/30/04	NA							Ž				
219		Initial Implementation of Combined TestBear	Wed 6/30/04	Wed 6/30/04	NA											
220		Combined TestBeam Event Display Availabl	Wed 6/30/04	Wed 6/30/04	NA							Ž				
221		Access to Alignment in Reconstruction	Thu 9/30/04	Thu 9/30/04	NA								>			
222		Second Version of Combined TestBeam Imp	Thu 9/30/04	Thu 9/30/04	NA								>			
223	ATLAS M.	ATLAS Release 8	Tue 3/30/04	Tue 3/30/04	NA											
224	ATLAS M.	Combined Test Beams	Wed 6/30/04	Wed 6/30/04	NA							$\hat{}$				
225	2.2.5	Software Support	Tue 10/1/02	Tue 10/1/02	NA	ı						<u>~</u>		J		
229		Development for ATLAS Releases	Wed 7/30/03	Wed 7/30/03	Wed 7/30/03	`	Ĭ						•			
230		POOL Integration	Wed 7/30/03	Wed 7/30/03	Wed 7/30/03											
231		Testing Releases with New Compiler Versio	Wed 7/30/03	Fri 12/31/04	NA								\wedge	>		

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								20	03			20	004			200	5	
ID	WBS	Milestone	Baseline Date	Forecast Date	Actual Date	4	1	2	3	4	1	2	3	4	1	2	3	4 1
232		Support for Nightly Builds of ATLAS S/W	Wed 7/30/03	Wed 7/30/03	Wed 7/30/03				(lack								
233		Make Use of New Reconstruct.Tests project	Wed 7/30/03	Fri 12/12/03	Fri 12/12/03				(\triangle	•							
234		Start Regular Nightly Builds of LCG S/W	Wed 7/30/03	Sun 8/10/03	Sun 8/10/03				(
235		Release Version 2.0 of NICOS	Tue 9/30/03	Mon 12/1/03	Mon 12/1/03							•						
236		Continue to Provide S/W Support	Tue 9/30/03	Tue 9/30/03	Tue 9/30/03													
237		Support of US ATLAS MySQL Server	Tue 9/30/03	Tue 9/30/03	Tue 9/30/03													
238		Improve Informative Web Pages	Tue 9/30/03	Tue 9/30/03	Tue 9/30/03													
239		Continue to Support ATLAS,LCG and assoc	Tue 3/30/04	Tue 3/30/04	NA								\Diamond					
240		Support of Nightly Build at CERN, BNL, LCC	Tue 3/30/04	Tue 3/30/04	NA								$\overline{\bigcirc}$					
241		Improve Appearance of Web Pages with res	Tue 3/30/04	Tue 3/30/04	NA													
242		Contribution, Upgrades, and Maintenance of	Tue 3/30/04	Tue 3/30/04	NA								\Diamond					
243		Integrate CppUnit in ATLAS Nightly Build Sy	Wed 6/30/04	Wed 6/30/04	NA								_ <	\langle				