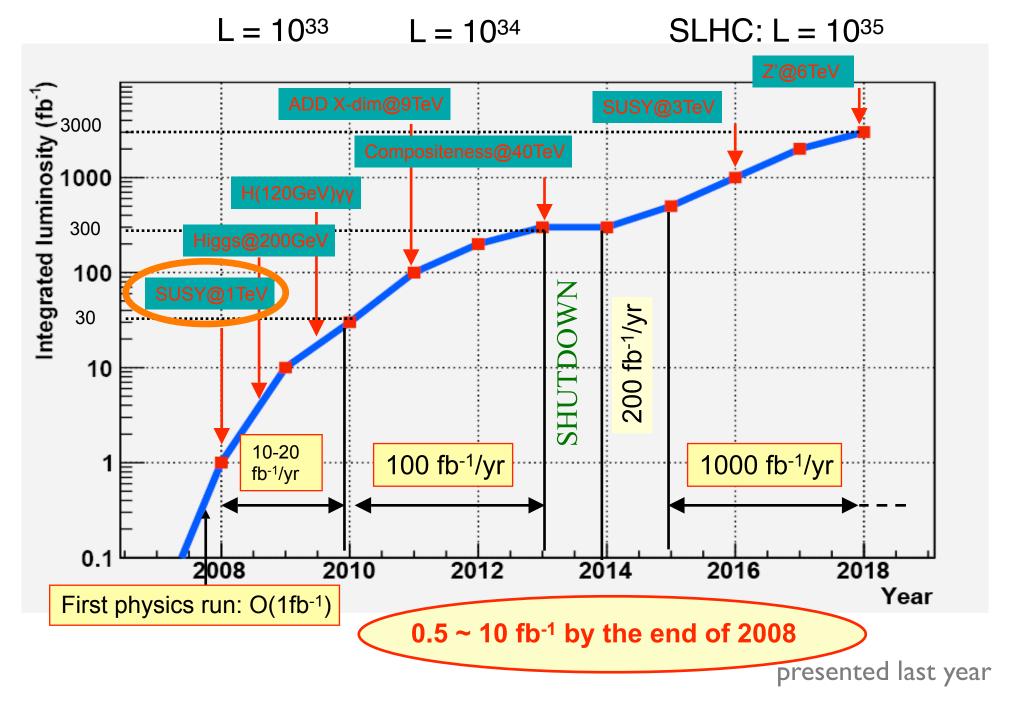
MEG Experiment

Status and prospects

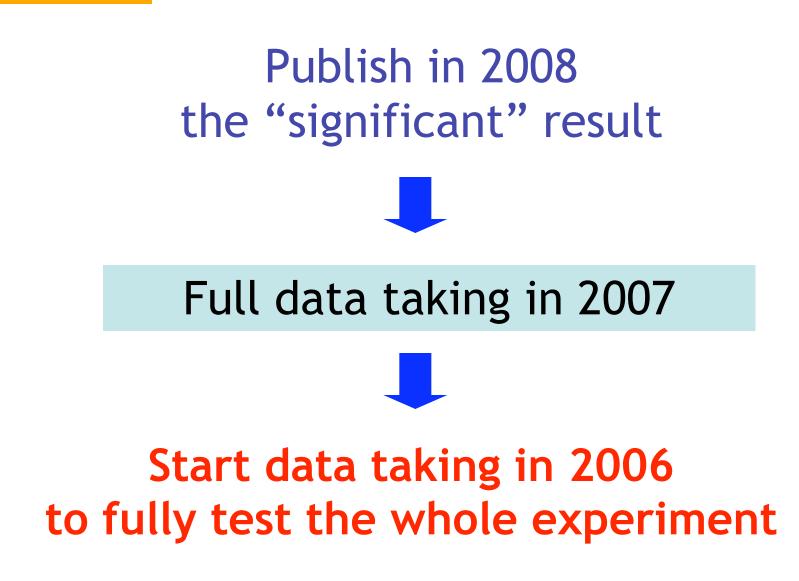
Our goal:

A "significant" result before any LHC discovery

LHC Luminosity Profile



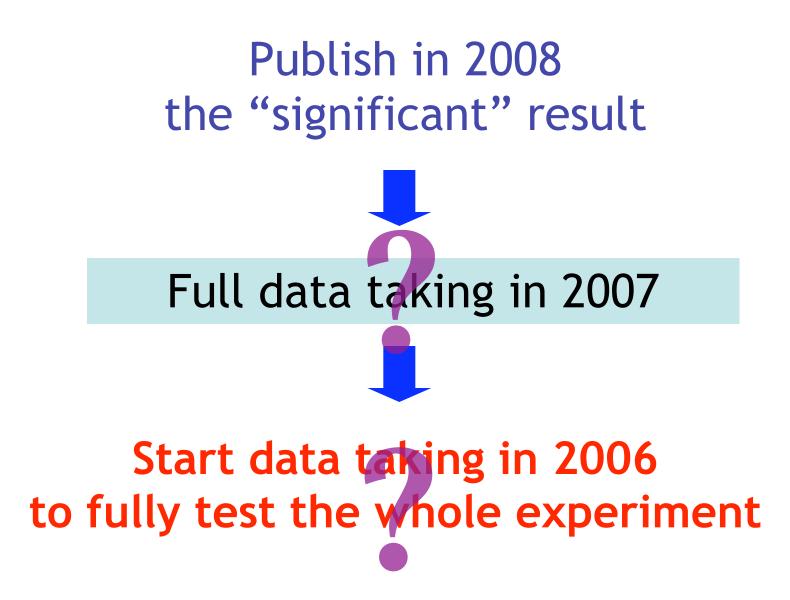












MEG schedule 2006

		Offine production	Splitter production		JS endcap setup									ve beam line	Gotta experiment	Jun Gräßul
			Trigger instal Splitter instal Elec. integration (partial) Elec. int											Beam setup1	MEG beam time2	Aug
	Nal mover instal		(partial) Elec. integration (full) DAQ install & setup	DS endo	US endcap install					US N2Bag install US TICP installation	Gas system install	DC+Target assemb		Beam setup2		Sep
3				DS endcap setup4 O		-	US TO		-		ſ	ble DC+Target install test DC+Target install (80Cs) DC test/cor	g			Öct
Nal elec. setup			DAO test	DS endcap install			US TC cabling DS TC cabling	DS TICP install	US TH	DS N2 bag install DS N2 bag leak test	Gas system test 2nd	Il test Install (80Cs) DC cabling DC test/condition	DC production2	Beam APD Install & survey Beam commissioning	DC/TC test/tun	Nov
LH2 target install		ľ		-		TC laser install	DS TICZ install		TICZ installation		2nd half DC install	0	-	1		Dec

- Installation coordination by Wataru
- Run coordination by Malte

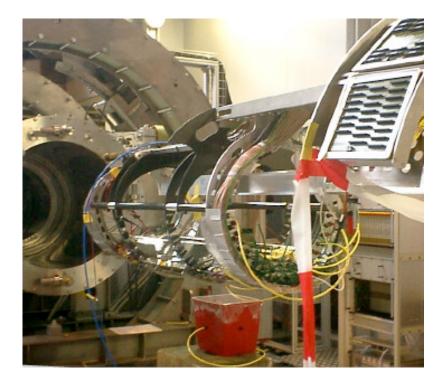
MEG schedule 2006

	Offine production	Splitter production		JS endcap setup											ve beam ine	MEG	Gotta experiment	Jun ^{Qr}
		Trigger install Splitter install Elec. Integration (partial) Elec. int										P			Beam setup1	MEG beam bine2		Aug
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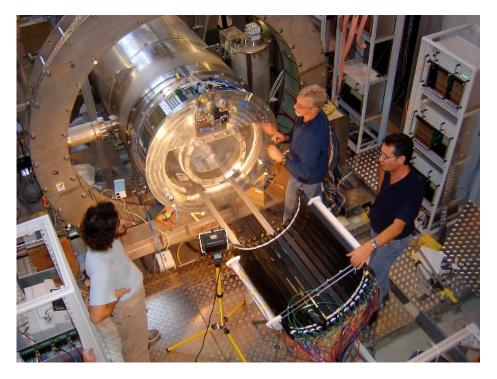
- Installation coordination by Wataru
- Run coordination by Malte

DC+TC Run

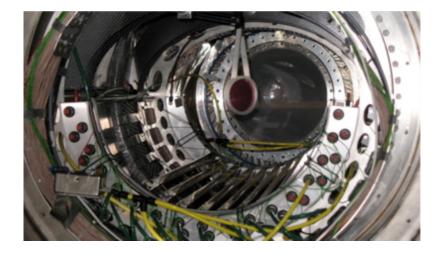
Detector Installation



Drift Chambers (8 out of 16)



Timing Counters (bars, not fibers)



Stopping Target

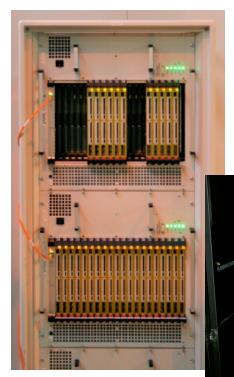
Gas Control System (Cobra+DC)

 $N_2 Bag$





Trigger & Splitter

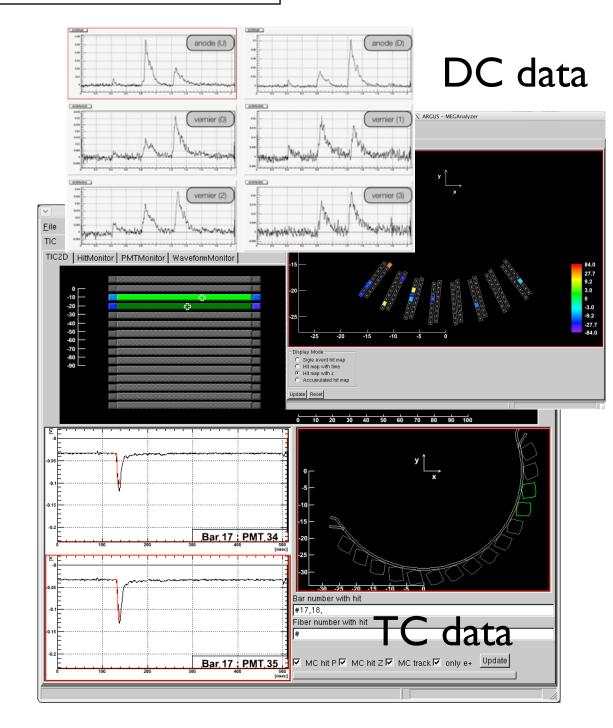




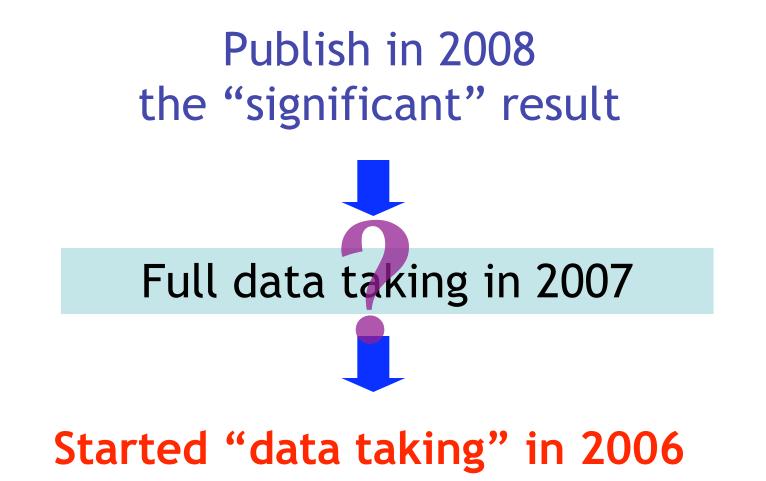


Online PCs

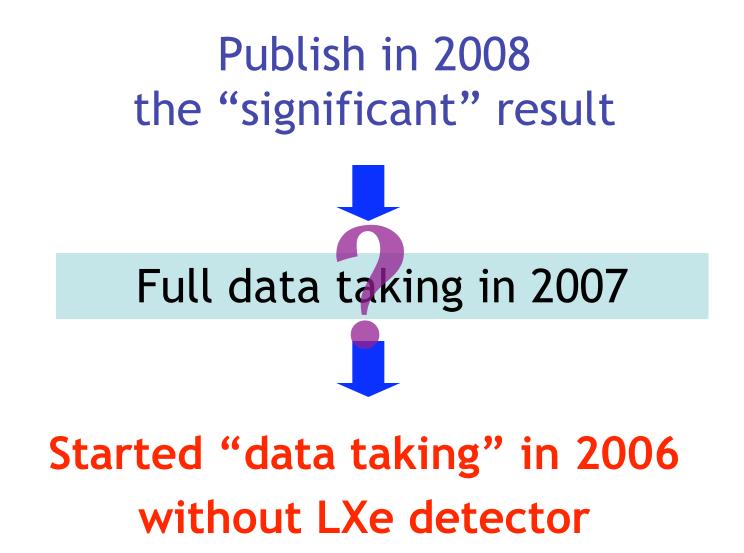
Data Acquisition



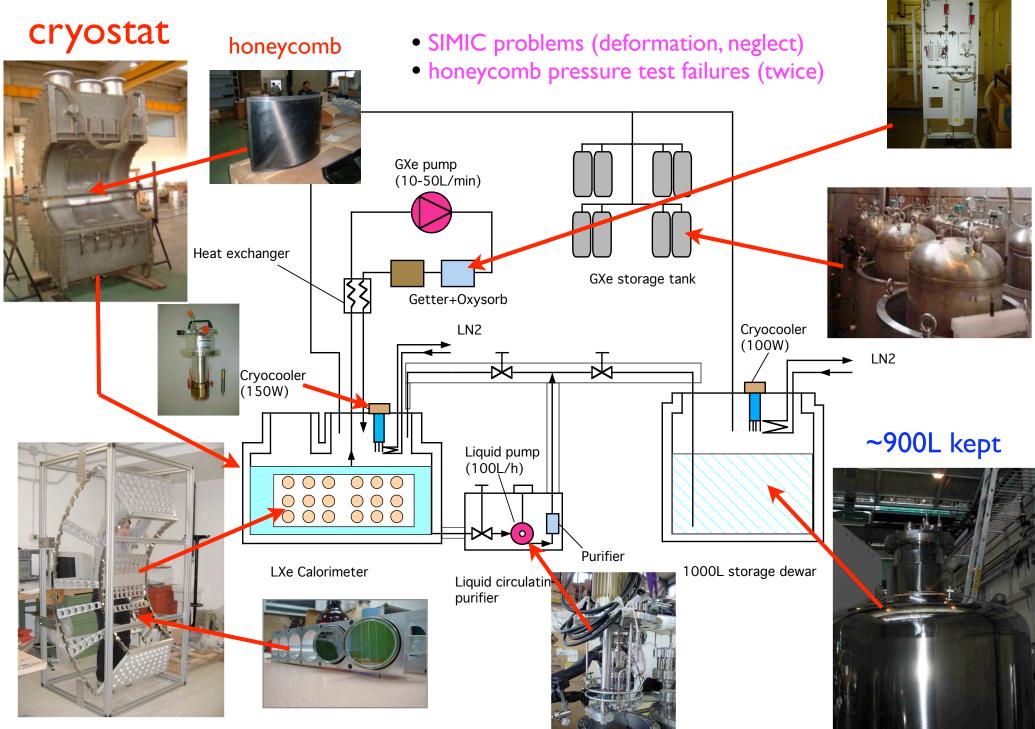








Status of the LXe detector



Tasks & Problems

gas leakage build / rebuild the chambers track reconstruction code still missing

TC much higher rate than expected - PMT life fiber detectors (APD electronics) & laser system redesign & build N2 bags further tests/calibration at Frascatti matching with DC tracks

LXe

honeycomb window ready this week - pressure test C-W will arrive earlier! - testing mid-April

Trigger/DAQ

data rate limited at 5Hz (full detector) - toward 100Hz? DRS3 probably not for 2007

Computing

add more resources ~300kCHF - expect >50% paid by PSI data size reduction (9MB/event)

Tasks & Problems

gas leakage build / rebuild the chambers track reconstruction code still missing

Ready in mid-June

• TC

much higher rate than expected - PMT life fiber detectors (APD electronics) & laser system redesign & build N2 bags further tests/calibration at Frascatti matching with DC tracks

LXe

honeycomb window ready this week - pressure test ryostat delivery C-W will arrive earlier! - testing mid-April in mid-April

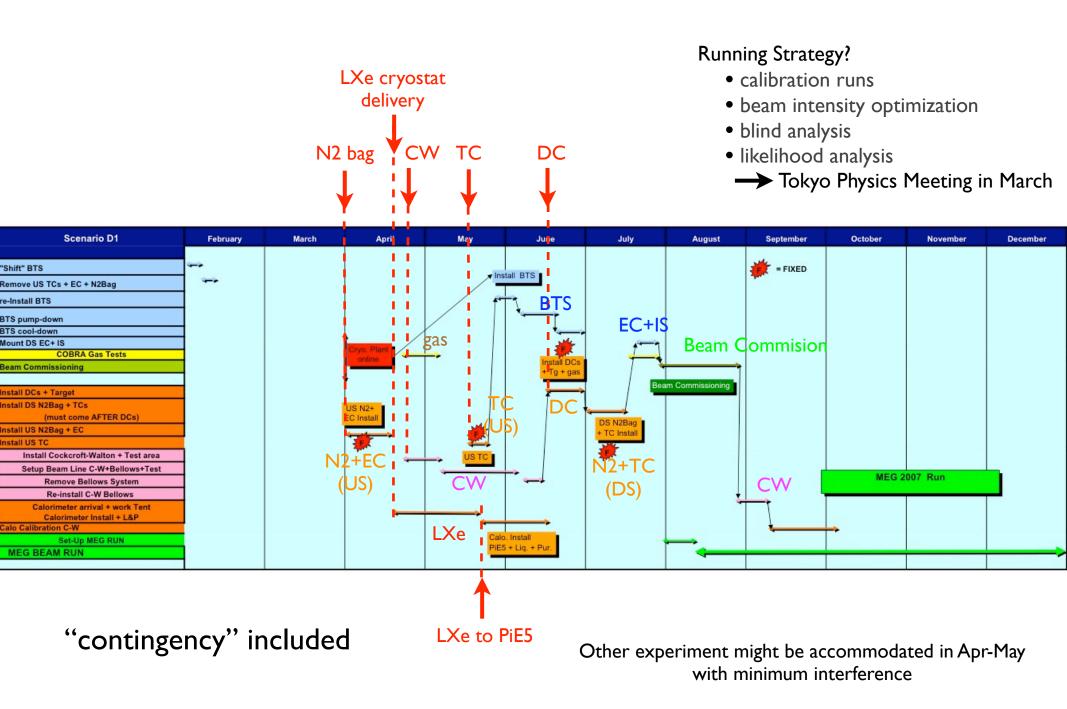
Trigger/DAQ

data rate limited at 5Hz (full detector) - toward 100Hz? DRS3 probably not for 2007

Computing

add more resources ~300kCHF - expect >50% paid by PSI data size reduction (9MB/event)

MEG schedule 2007





Publish in 2008 the "significant" result



Hopeful for full data taking in 2007

Started "data taking" in 2006 without LXe detector

Background and Sensitivity

Gamma Energy (%) Gamma Timing Gamma Position (mm) Gamma Efficiency (%) e+ Timing (nsec) e+ Momentum (%) e+ Angle (mrad) e+ Efficiency (%) Muon Decay Point (mm) Muon Rate (10⁸/sec) Running Time (10⁷sec) Accidental Rate (10⁻¹⁴) **# Accidental Events** 90% CL Limit (10⁻¹³)

Measured Simulation 4.5-5.0 ~0.15 4.5-9.0 >40 0.1 0.8 10.5 needs reevaluation + info from '06 data 90 2.1 0.25-0.35 under intensive study 4.0 with "2007 setup" 1.9-3.0 0.6 0.9 - 1.4

Updated number should be available after Physics Meeting in Tokyo, March 29-30