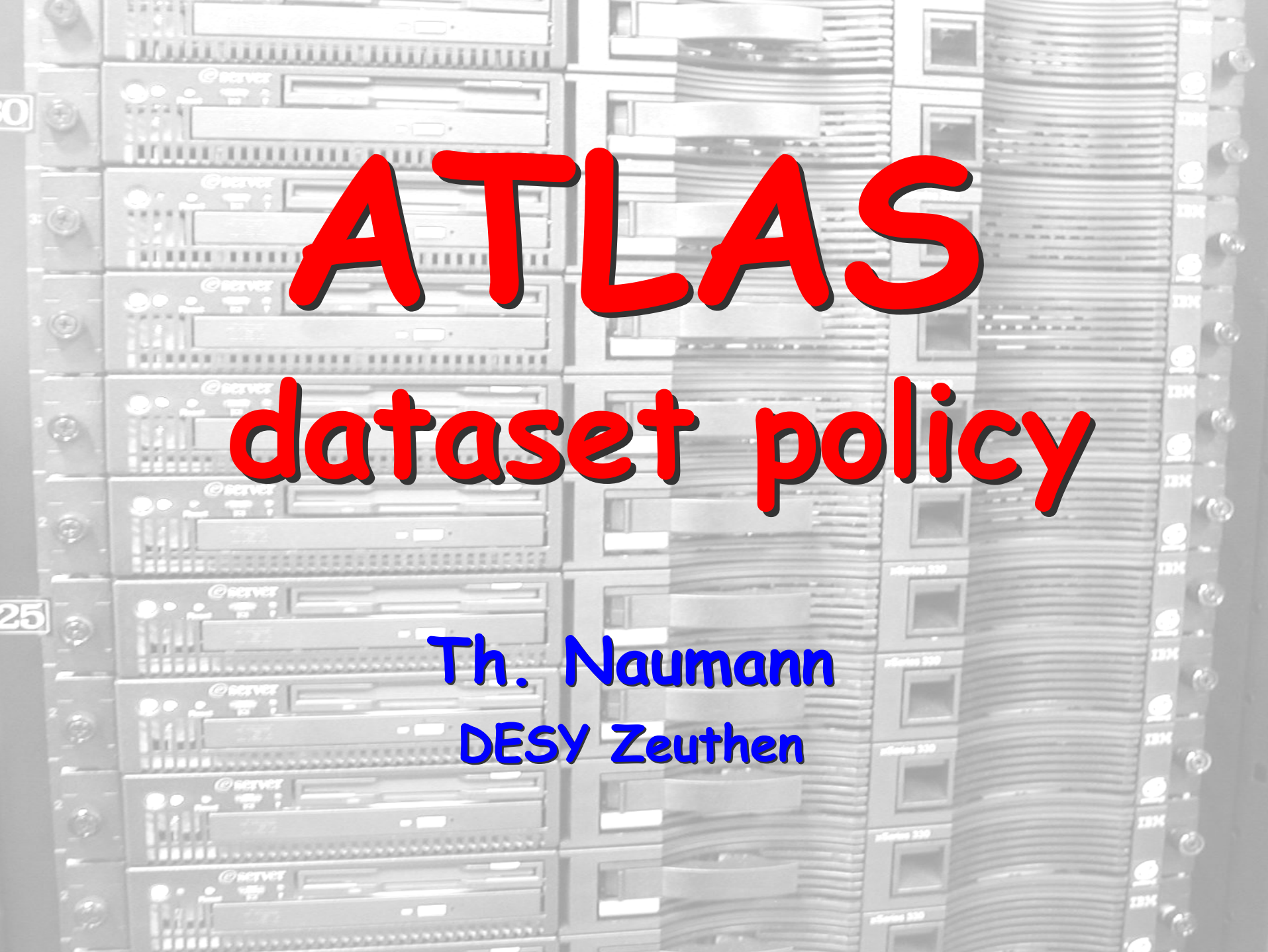


The background of the slide is a grayscale photograph of several server racks. The racks are filled with various electronic components, including circuit boards and cooling fans. Some of the components have labels like '@server' and 'IBM'. The text 'ATLAS dataset policy' is overlaid on the image in a large, bold, red font with a black outline. The word 'ATLAS' is in a larger font size than 'dataset policy'.

ATLAS

dataset policy

Th. Naumann
DESY Zeuthen



ATLAS DDM operations



"ATLAS Distributed Data Management operations"

ATLAS note draft v1.1 03/08/06:

Barberis, Chudoba, Jezequel, Kennedy, Klimentov,
Liko, Nevski, Olszewski, Perini, Poulard

- specifies ATLAS C-TDR from 04/07/05
more realistic user estimates
- useful to better define
ATLAS-D + DESY T2 requests (HD 21.9.)
- discuss only T2



LHC startup



Stage 1

Initial commissioning
43x43 to 156x156, $N=3 \times 10^{10}$
no or partial squeeze

$$L = 3 \times 10^{28} - 2 \times 10^{31}$$

Stage 2

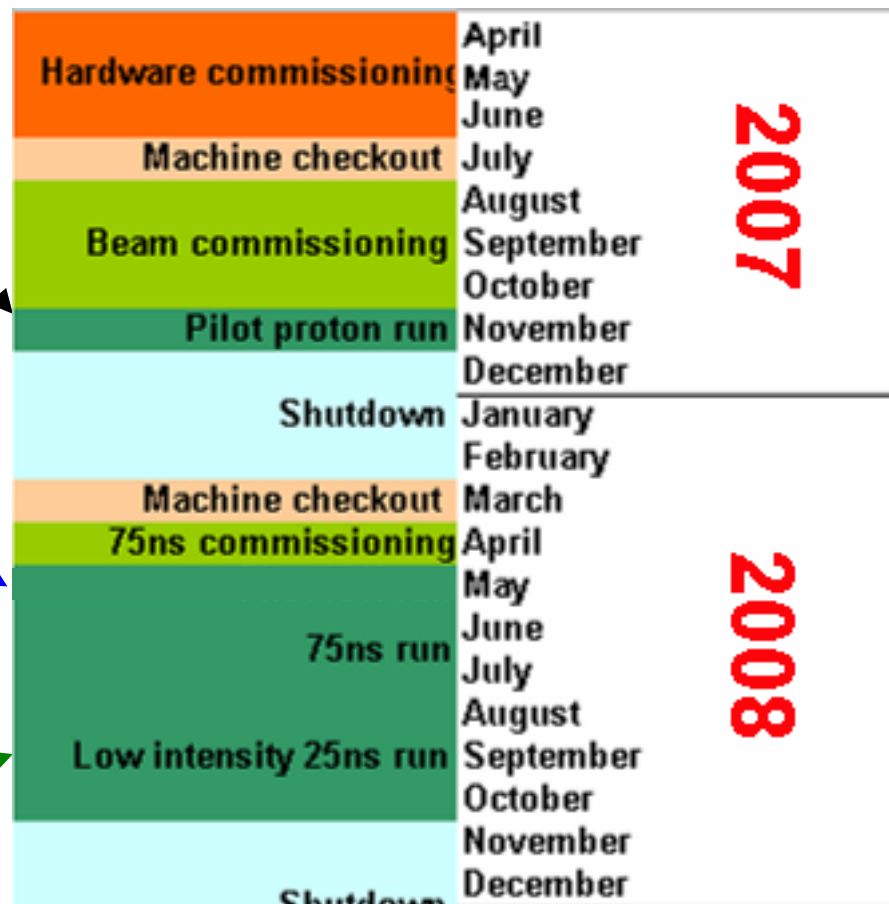
75 ns operation
936x936, $N=3-4 \times 10^{10}$
partial squeeze

$$L = 10^{32} - 4 \times 10^{32}$$

Stage 3

25 ns operation
2808x2808, $N=3-5 \times 10^{10}$
partial to near full squeeze

$$L = 7 \times 10^{32} - 2 \times 10^{33}$$





Event flow



ATLAS Computing TDR:

	RAW	ESD	AOD	TAG	MC ¹
size / evt	1.6 MB	0.5 MB	0.1 MB	1 kB	2 MB
space / 10 ⁹ evts	1600 TB	500 TB	100 TB	1 TB	400 TB
rate / 100 Hz			10 MB/s		

2008: 100 Hz * 1/3 y = 10⁹ evts
full: 200 Hz * 1/2 y = 3 10⁹ evts 1 y = 3 10⁷ s

1) MC: 20% of real , RAW+ESD = 2 MB

later assume:

- 2 reco + 2 MC versions
- 30 T2's



Storage



- **T0**: RAW archive, calibration + express + 1st pass reco
ESD, AOD, TAG to T1

- **T1**: RAW subset: store, reprocess
ESD, AOD, TAG: T1-T1 mirror copy
MC RAW+ESD from T2 cloud

- **T2**: MC production, analysis
 - AOD all real (shared in T2 cloud ?) 200 TB /y
 - all MC (shared in T2 cloud ?) 40 TB /y
 - RAW+ESD for small (10%?) local analysis 100 TB /y
 - RAW+ESD MC prod. buffer for ~1 month 1 TB
 - TAG 2 TB
 - conditions DB n TB

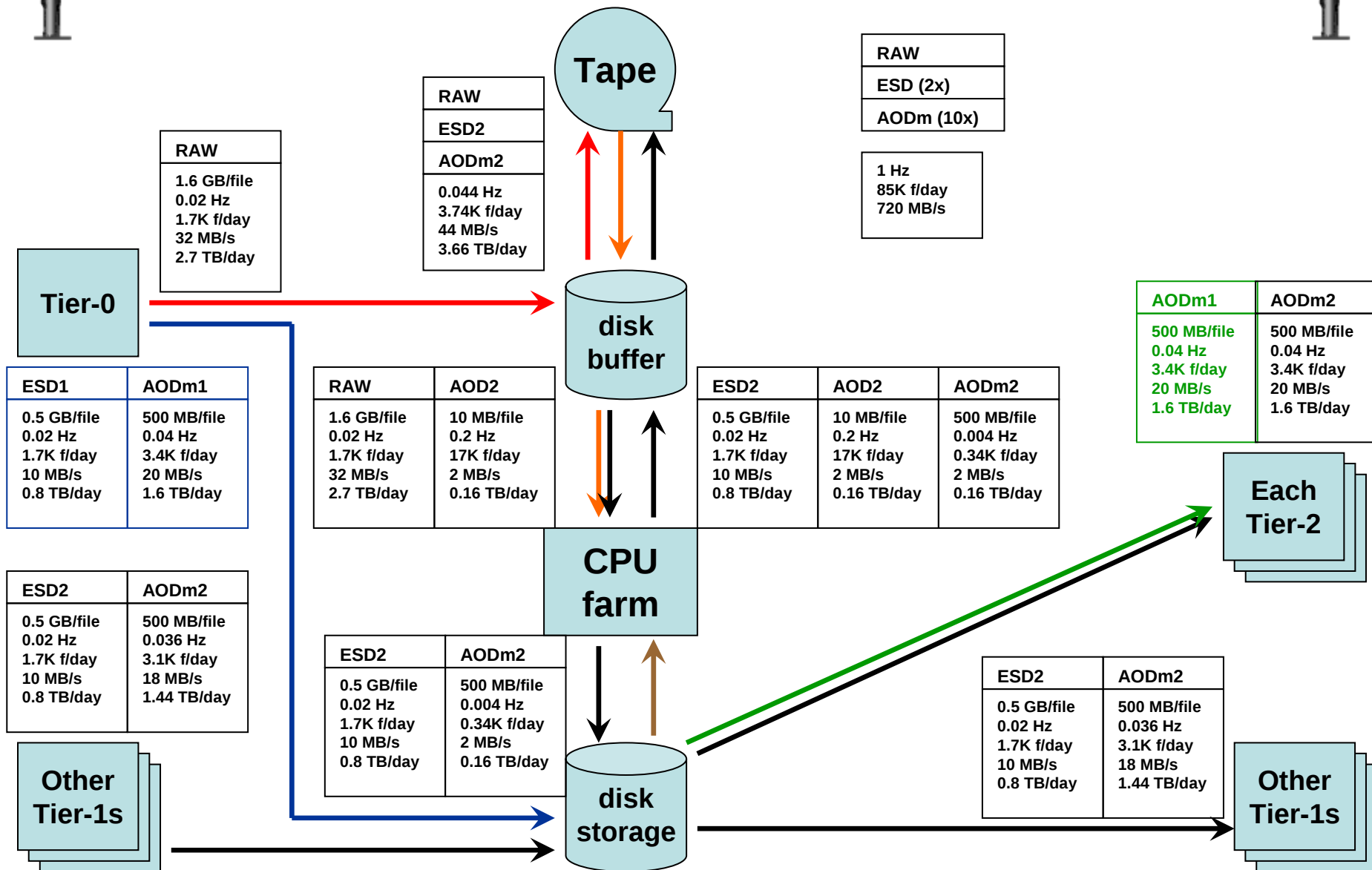
2008: ~ 350 TB

- LHC Grid Comp. MoU 18/01/06:

ATLAS DESY	2008:	340 TB
	2009:	570 TB



ATLAS Tier 1 Data Flow 2008



No MC data !

D. Barberis, Mumbai, Feb 06



Data Flow



• T1 -> T2:

AOD: DDM operators accept preferences,
but full AOD to be shared in T2 cloud (DESY take all?) 24 MB/s

small local ? RAW+ESD real + MC 10 MB/s

private user subscription, storage separate from MC prod.

TAG + cond.DB: subscribed to T2's by DDM operators ~ MB/s

• T2 -> T1:

RAW, ESD, AOD MC production, buffered <1 MB/s

automatic registration in central DDM DB

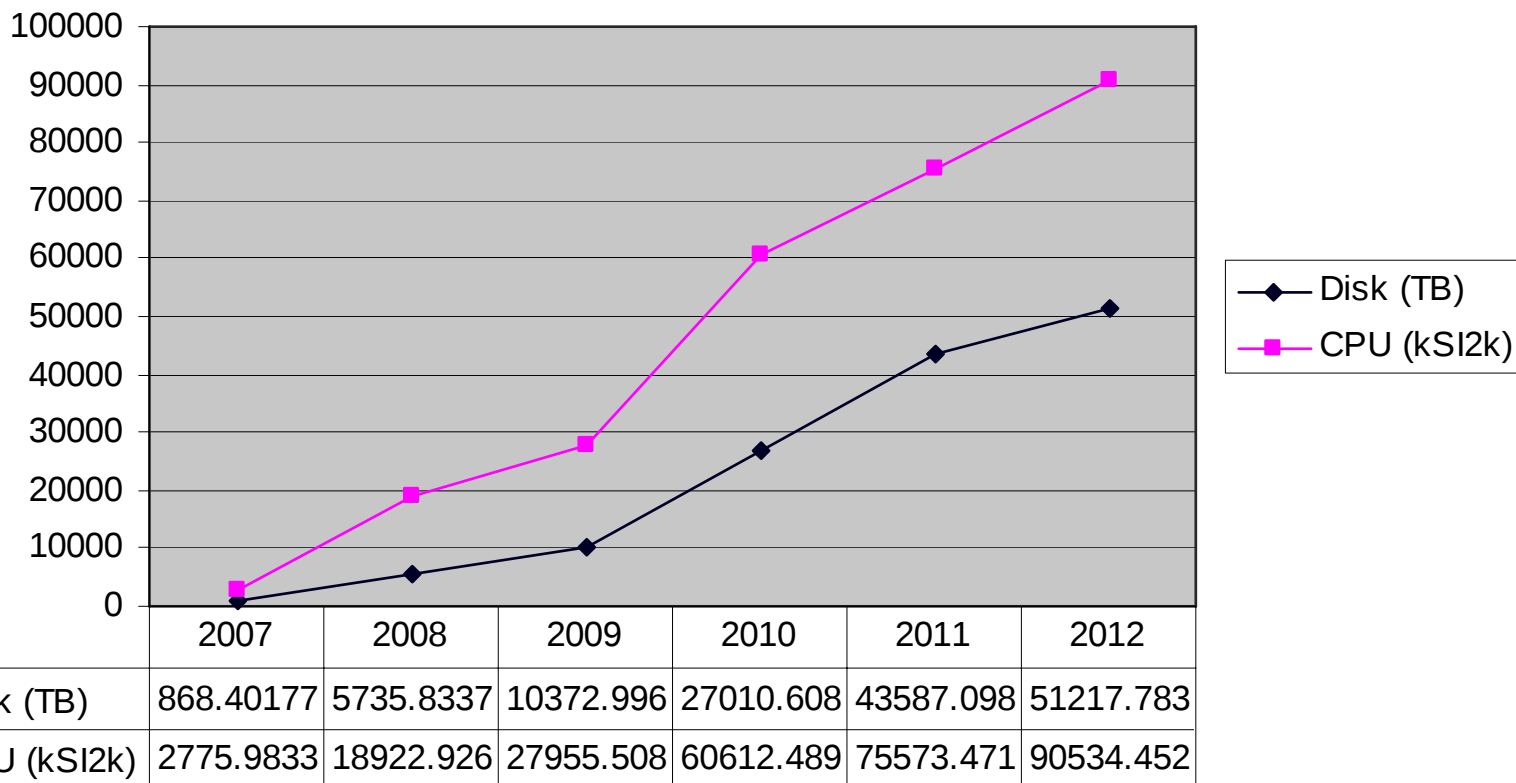
calibrations



ATLAS new T2 resources



New T2 Evolution



**R.Jones: ATLAS T2 resource recalculation for ICB, 14/08/06
to be discussed at s/w week 11.-15.9.**