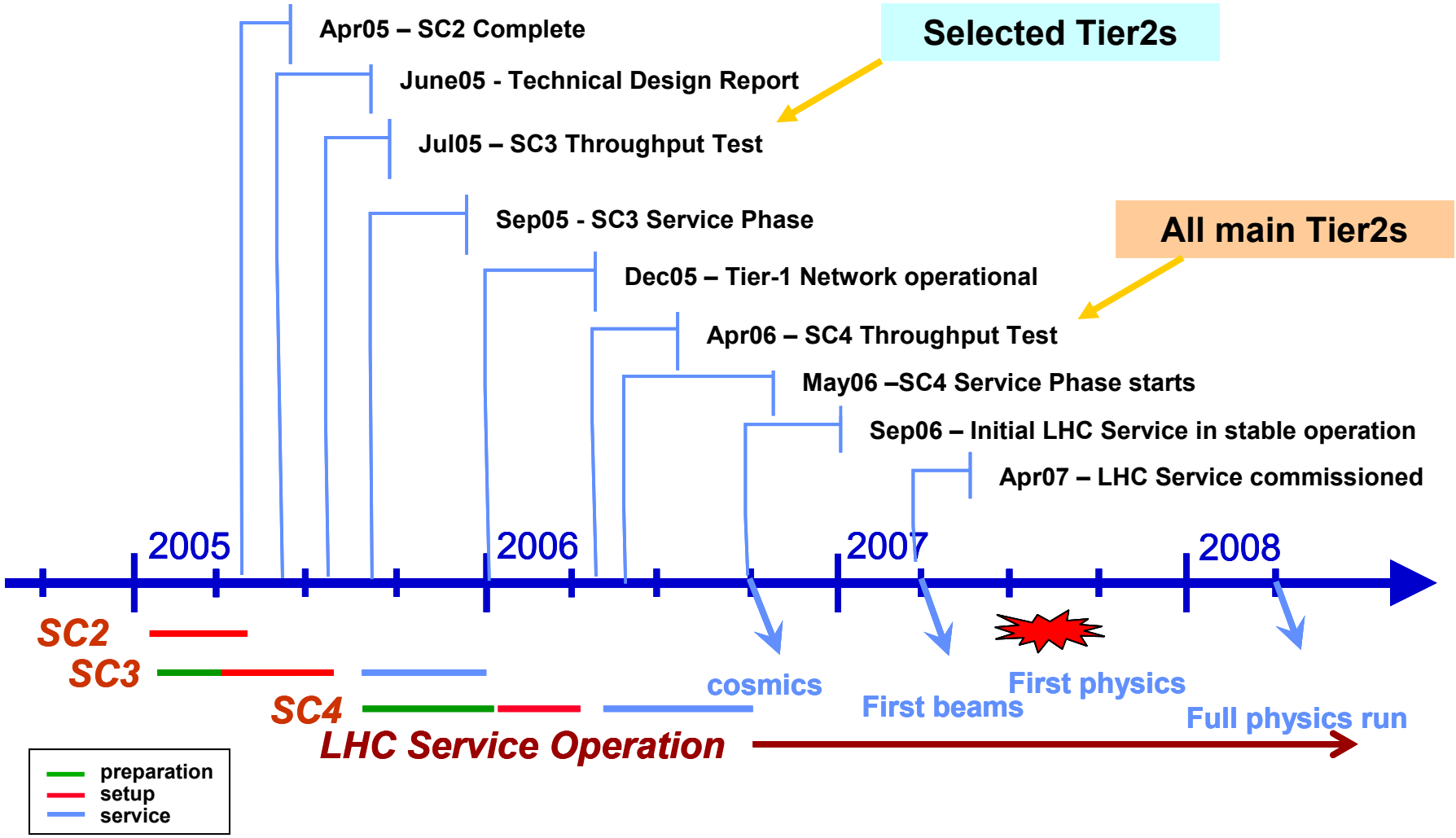
LCG Deployment Schedule



The Problem (or at least part of it…)

- SC1 – December 2004
- SC2 – March 2005

Neither of these involve T2s or even the experiments – just basic infrastructure

- SC3 – from July 2005 involves 2 Tier2s
  - + experiments' software + catalogs + other additional stuff
- SCn – completes at least 6 months prior to LHC data taking. Must involve all Tier1s and ~all Tier2s

- Not clear how many T2s there will be

- Current estimate: **100** – a ***huge*** number to add!
  - ALICE: 15? ,ATLAS: 30, CMS: 25, LHCb: 15; overlap?

Tier2 Roles

- Tier2 roles vary by experiment, but include:
  - **Production of simulated data;**
  - **Production of calibration constants;**
  - Active role in [end-user] analysis

➢ **Must also consider services offered to T2s by T1s**

  - e.g. safe-guarding of simulation output;
  - Delivery of analysis input.

- No fixed dependency between a given T2 and T1
  - But 'infinite flexibility' has a cost…

T2 Functionality

(At least) two distinct cases:

- Simulation output
  - This is relatively straightforward to handle
  - Most simplistic case: associate a T2 with a given T1
    - Can be reconfigured
    - Logical unavailability of a T1 could eventually mean that T2 MC production might stall
  - More complex scenarios possible
    - But why? **Make it as simple as possible, but no simpler…**
- Analysis
  - Much less well understood and likely much harder…

T1/T2 Roles

Tier1

- Keep certain portions of RAW, ESD, sim ESD
- Full copies of AOD + TAG, calibration data
- Official physics group large scale data analysis
- ALICE + LHCb:
  - also contribute to simulation

Tier2

- Keep certain portions of AOD and full copies of TAG for real + simulated data
  - LHCb: sim only at T2s
- Selected ESD samples
- Produce simulated data
- General end-user analysis

Based on "T1 Services for T2 Centres" document

(Just type this into Google)