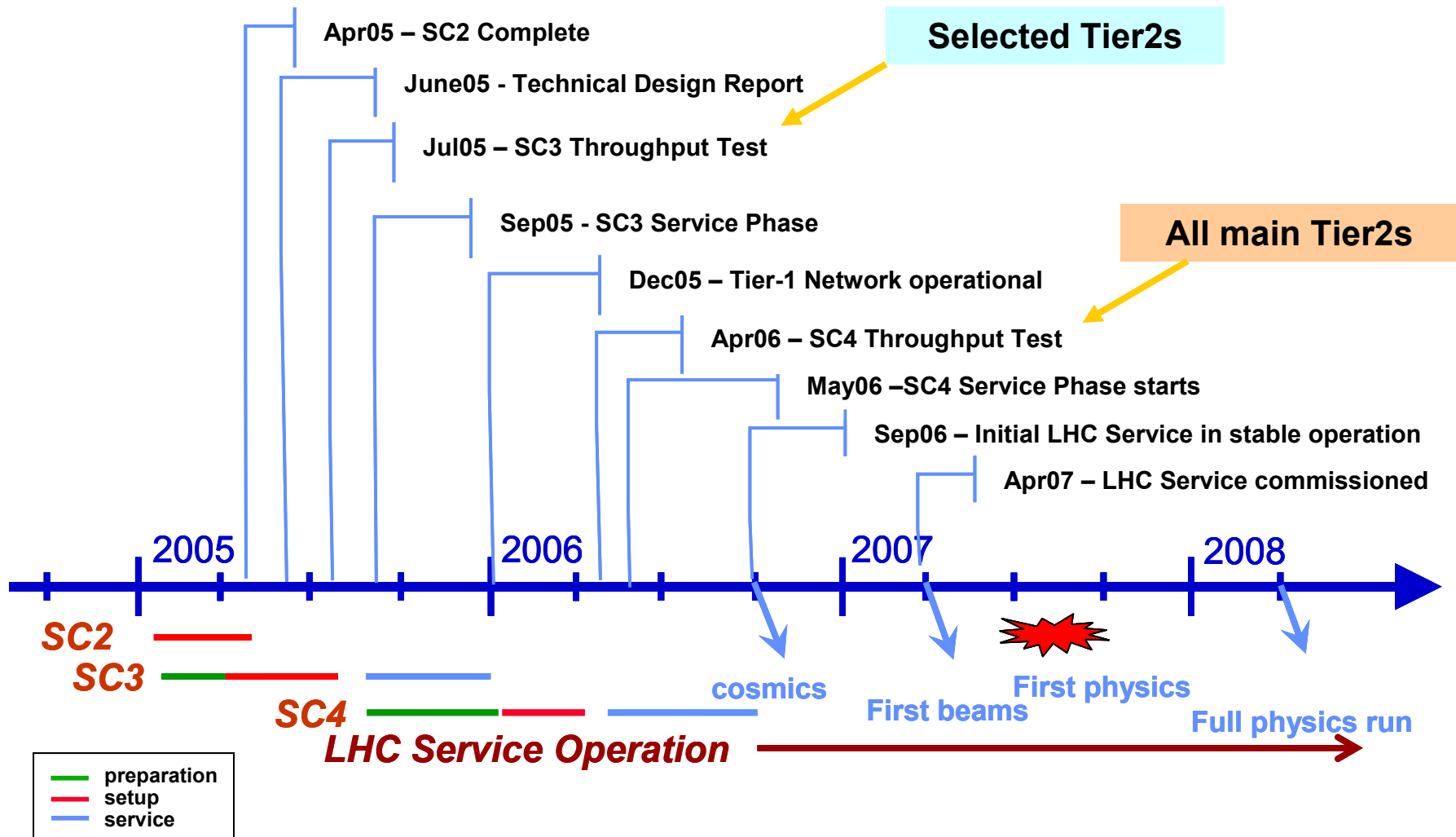




LCG Deployment Schedule





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)