More figures on AFTER@LHC

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Target	ρ (g.cm^{-3})	A	$\mathscr{L}$ (μb^{-1}.s^{-1})	$\int \mathscr{L}$ (pb^{-1}.yr^{-1})
Sol. H_2	0.09	1	**26**	**260**
Liq. H_2	0.07	1	**20**	**200**
Liq. D_2	0.16	2	**24**	**240**
Be	1.85	9	**62**	**620**
Cu	8.96	64	**42**	**420**
W	19.1	185	**31**	**310**
Pb	11.35	207	**16**	**160**

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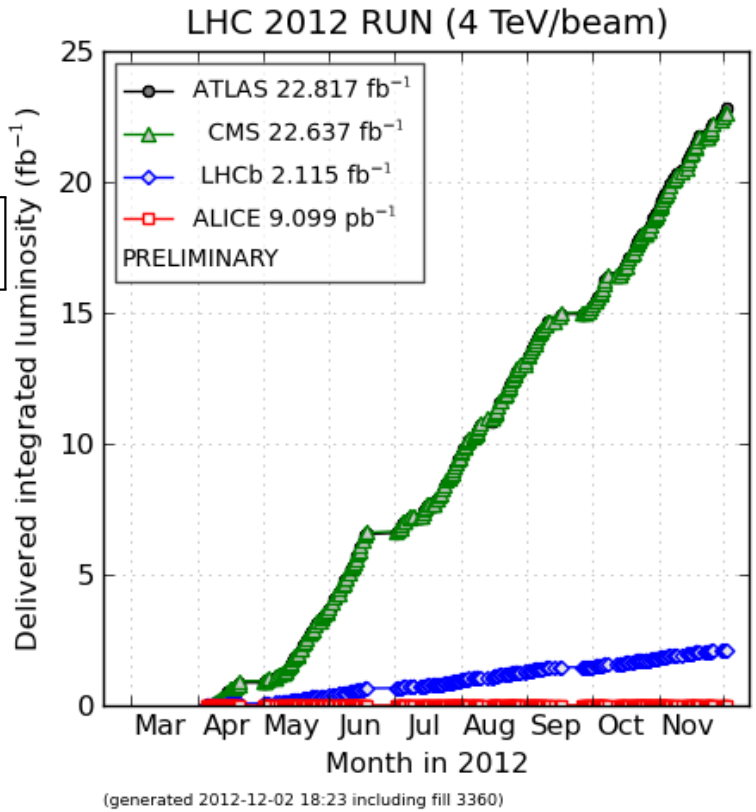
a luminosity comparable to the LHC itself !



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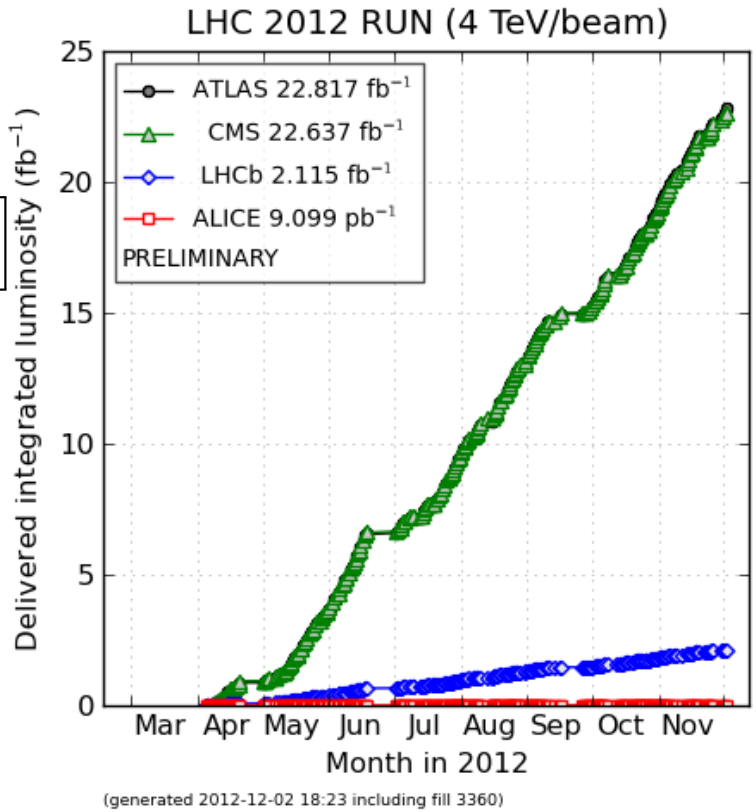

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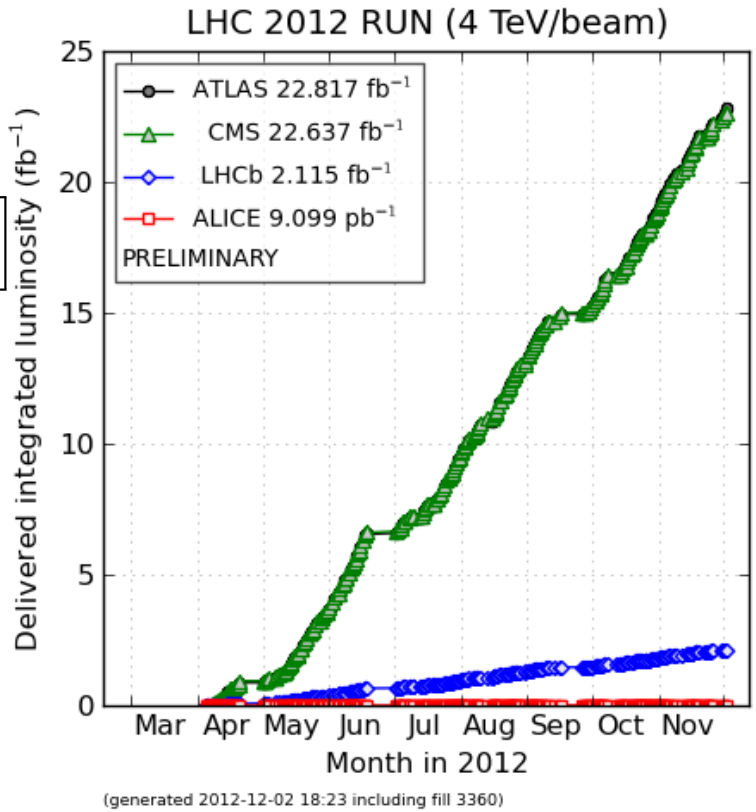

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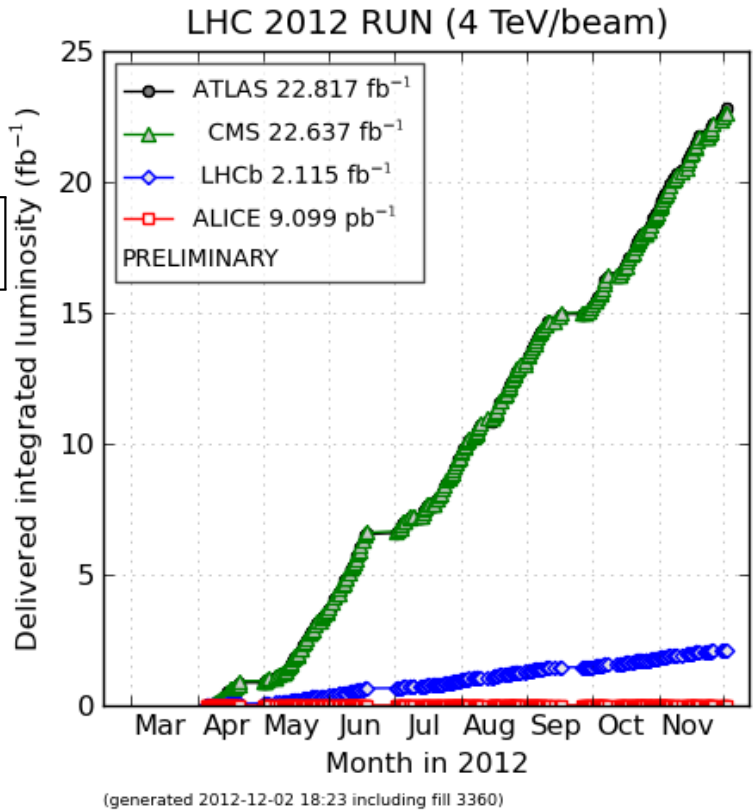
- Lumi for Pb runs in the backup slides

  (roughly 10 times that planned for the LHC)



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  $\Phi_{beam} = 2 \times 10^5$ Pb s^{-1}, $\ell = 1$ cm (target thickness)

- Integrated luminosity $\int dt \mathscr{L} = \mathscr{L} \times 10^6$ s for Pb
- Expected luminosities with 2×10^5Pb s^{-1} extracted (1cm-long target)

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- Planned lumi for PHENIX Run15AuAu 2.8 nb^{-1} (0.13 nb^{-1} at 62 GeV)
- Nominal LHC lumi for PbPb 0.5 nb^{-1}

A few figures on the (extracted) proton beam

- Beam loss: $10^9\ p^+\mathrm{s}^{-1}$
- Extracted intensity: $5 \times 10^8\ p^+\mathrm{s}^{-1}$ (1/2 the beam loss) **E. Uggerhøj, U.I Uggerhøj, NIM B 234 (2005) 31**

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  - the crystal sees 2808×11000 s^{-1} $\simeq 3.10^7$ bunches s^{-1}
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- similar figures for the Pb-beam extraction

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  37 % no coll., 37 % 1 coll., 26 % 2 coll.
- For $\mathscr{L} = \frac{1}{10}\mathscr{L}_{max}$, $\mu = 0.1$ thus
  90.5 % no coll., 9 % 1 coll., 0.5 % 2 coll.
  (ratio 1 coll. vs. 2 coll. : better)

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- Would a better collimation of the LHC beam, by reducing the halo, decrease the flux of extracted particles ?
- Is it possible to extract during the beam-energy ramp ?
  for Pb, from $\sqrt{s_{NN}} = 19$ GeV up to 72 GeV.