



News from Virgo



B. Mours

LIGO-G050444-00-Z

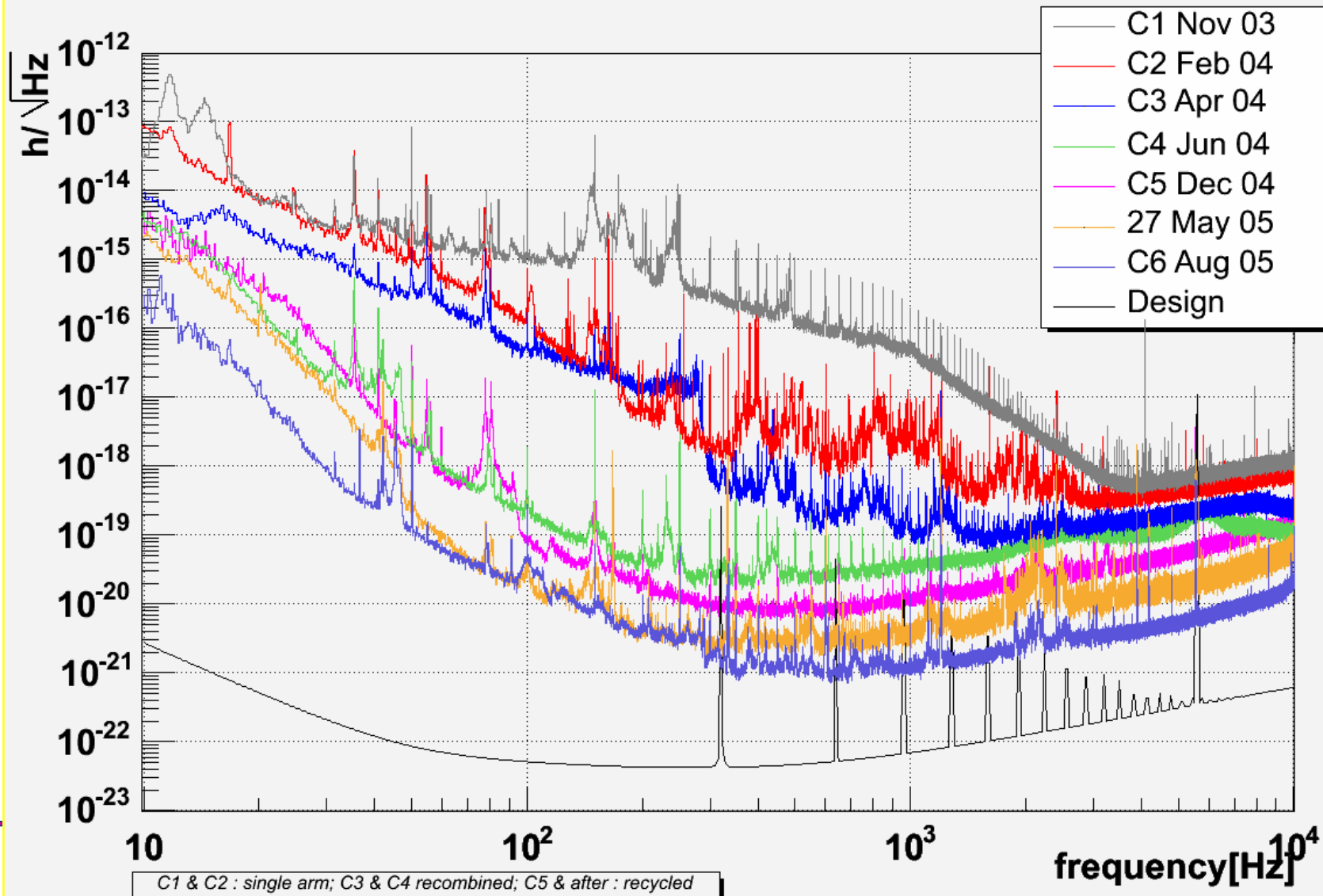


Virgo Recent Progress

- First lock in recycled configuration:
 - ◆ October 2004
- C5 run: December 2004;
 - ◆ Recycled and “Recombined” modes
- 2005 Commissioning activities:
 - ◆ Alignment:
 - » Drift controls using wavefront sensing now on all d.o.f.
 - ◆ Automation
 - ◆ Control upgrades, robustness (“jumps”),
 - ◆ Noise hunting
- Summer shutdown preparation
 - ◆ New “injection” (bench, PR mirror, ISYS alignment)
- Data analysis preparation
 - ◆ Study C-run data
 - ◆ Collaborative data analysis (LIGO-Virgo, Bar-Virgo)



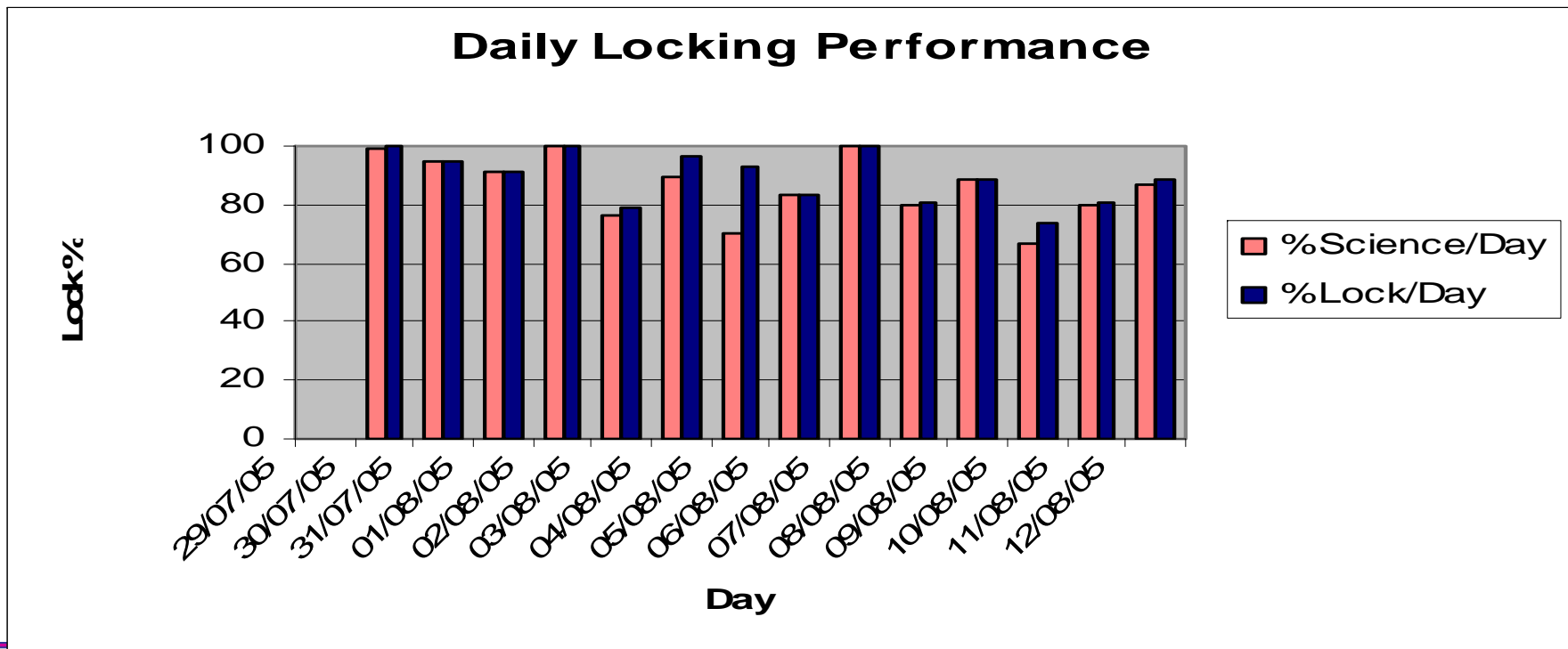
Sensitivity evolution





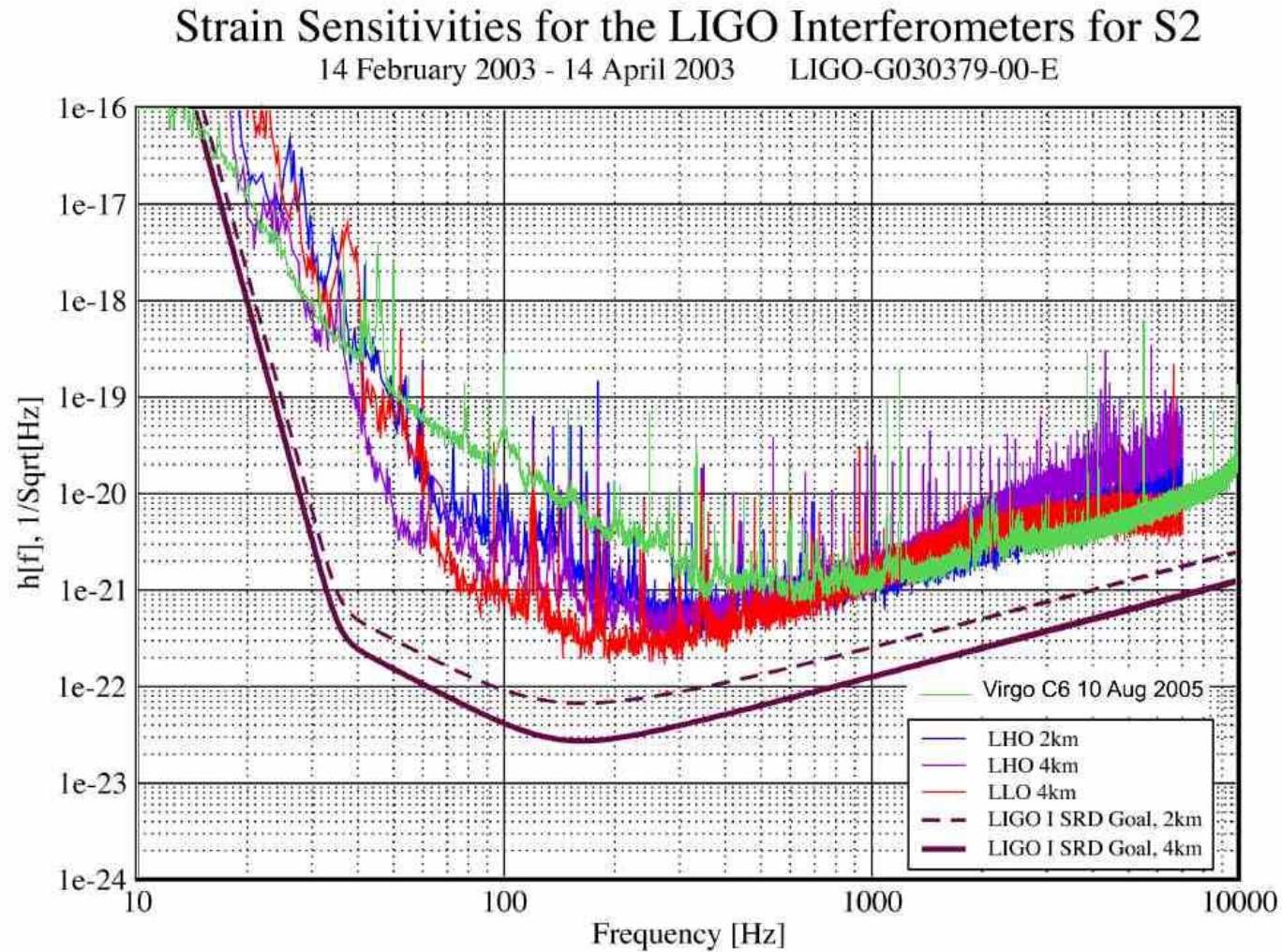
C6 run

- July 29 – August 13
- Duty cycles:
 - ◆ Locking: 89%
 - ◆ Science mode: 86%





Virgo compared to LIGO-S2





Next steps

- Sept-Dec 05: “Injection” shutdown
 - ◆ 2-3 months of work
 - » New injection bench; → Power should go up by a factor 10
 - » New recycled mirror: → Better controls
 - » Miscellaneous changes
 - ◆ Followed by the new injection system commissioning
- 2006: Commissioning + some commissioning runs
 - ◆ Alignment, controls,...
 - ◆ A science run by the end of 2006 (coincidence with LIGO-S5) ?
- 2007
 - ◆ Observation/Commissioning/Upgrade time
- 2008-9: Virgo +
 - ◆ 50W laser, New electronic, New mirrors ? (not yet decided)
- 2011(?): Advanced Virgo
 - ◆ 200W laser? New beam geometry? New mirrors?...