

ILCSC Report



ALCPG Workshop, Eugene

Jonathan Bagger

ILCSC Chair

19 March 2011

State of the ILC



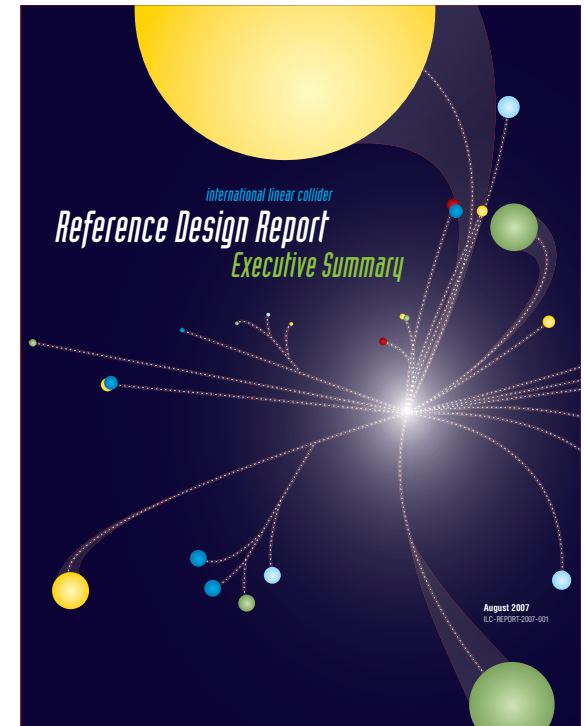
- Because of you, “the state of the ILC is strong”



GDE and RD



- The GDE and RD are making great strides towards producing the TDR and DBD
 - ◆ Magnificent progress! On track for end of 2012...
- The ILCSC is discussing how to join them to maximum effect with the PIP and CPDG
 - ◆ Thank you for your thoughtful comments on the CPDG!



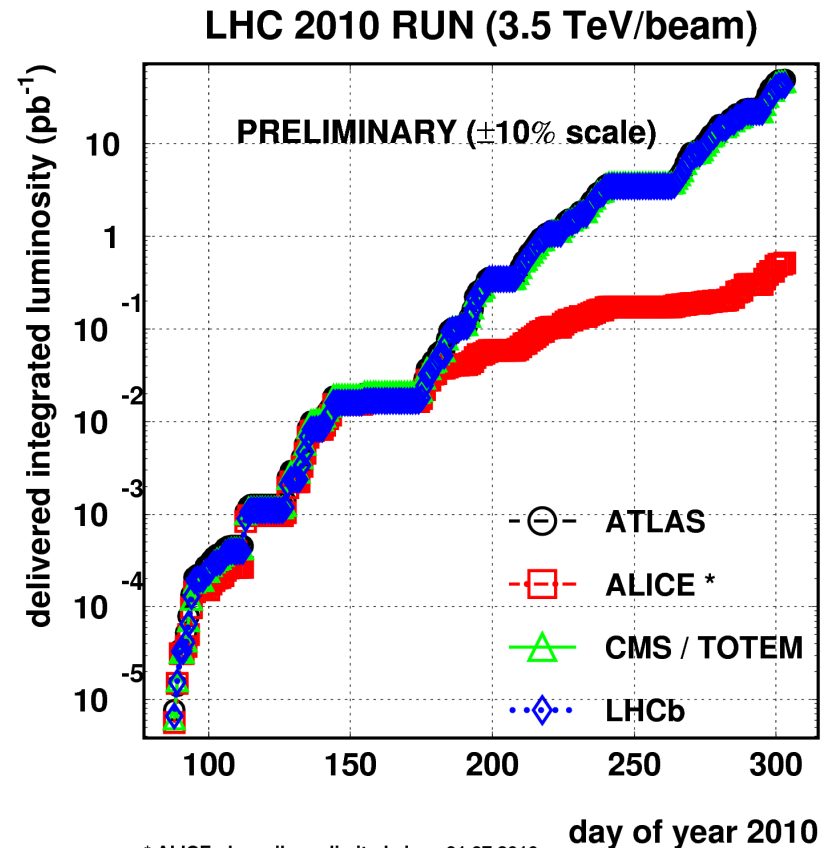
LHC Performance



- In the background, the LHC continues to perform beautifully

2010/11/05 08.34

- ◆ Luminosity is accumulating rapidly...
- ◆ Extended run: 7 TeV through end of 2012 with $\sim 5 \text{ fb}^{-1}$ per experiment

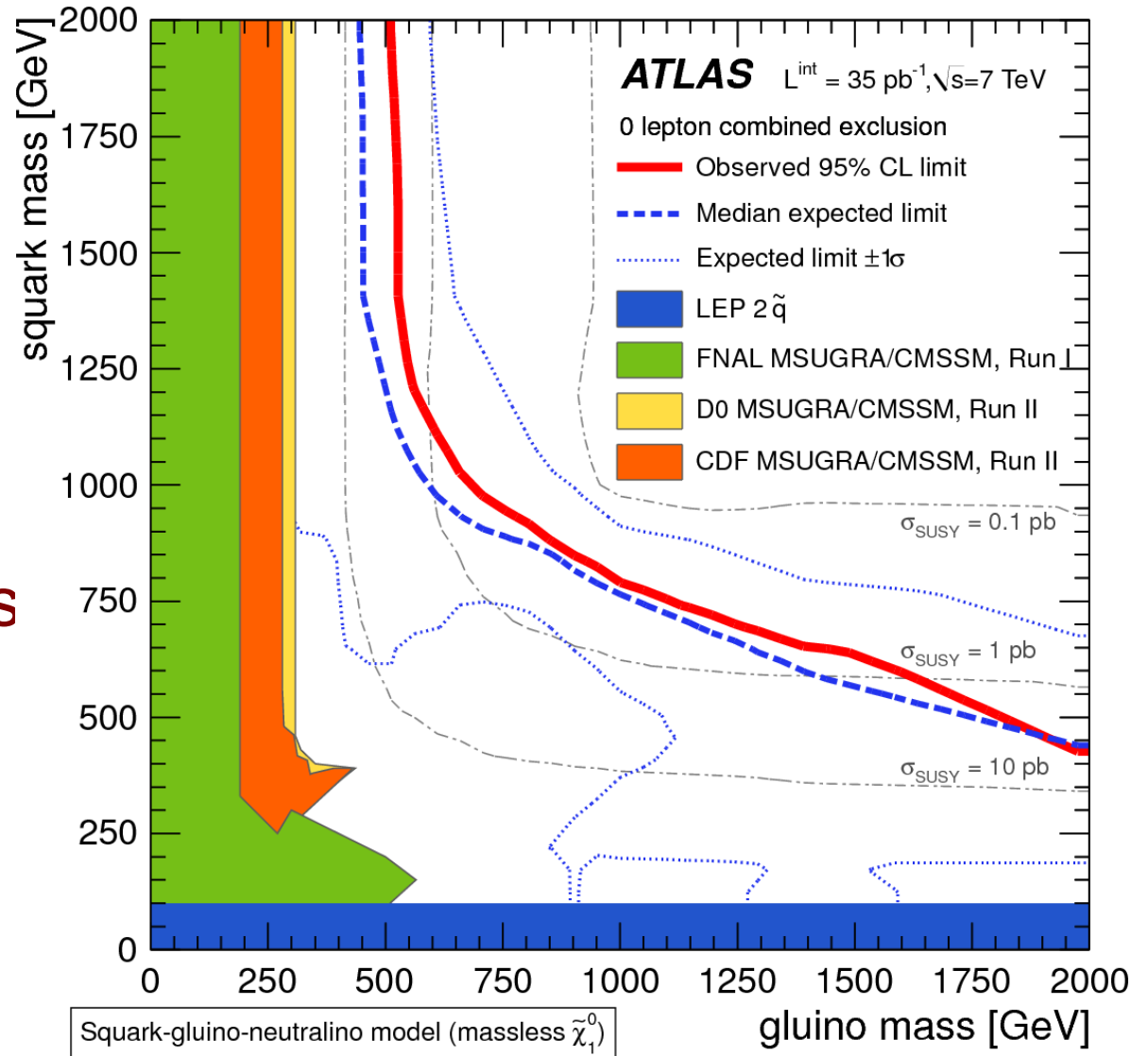


* ALICE : low pile-up limited since 01.07.2010

LHC Reach



- Even at 7 TeV, the LHC has tremendous reach!
- The day of reckoning draws near...



LHC Physics



- The riddle of electroweak symmetry breaking will be solved at the Terascale...

Search for the Higgs Particle

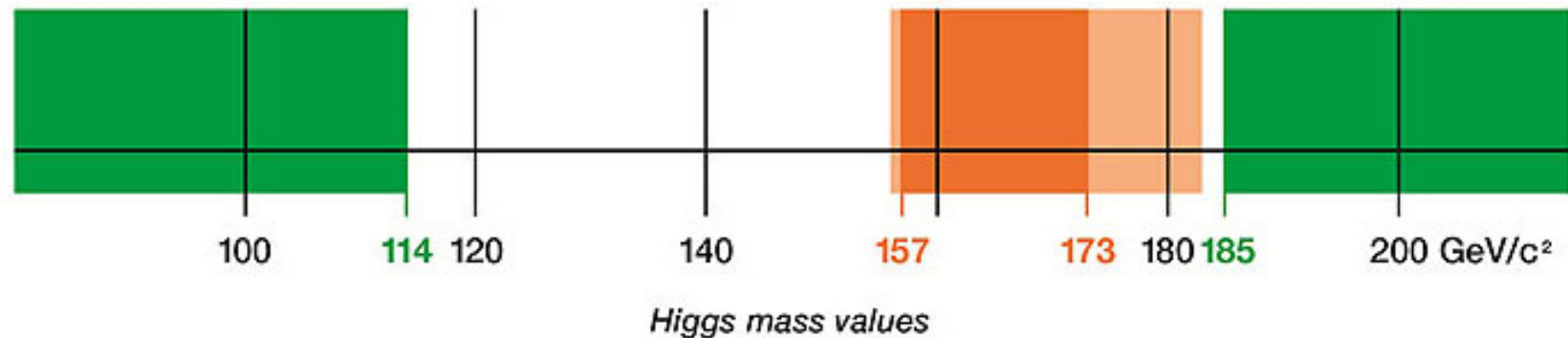
Status as of March 2011

90% confidence level
95% confidence level

Excluded by
LEP Experiments
95% confidence level

Excluded by
Tevatron
Experiments

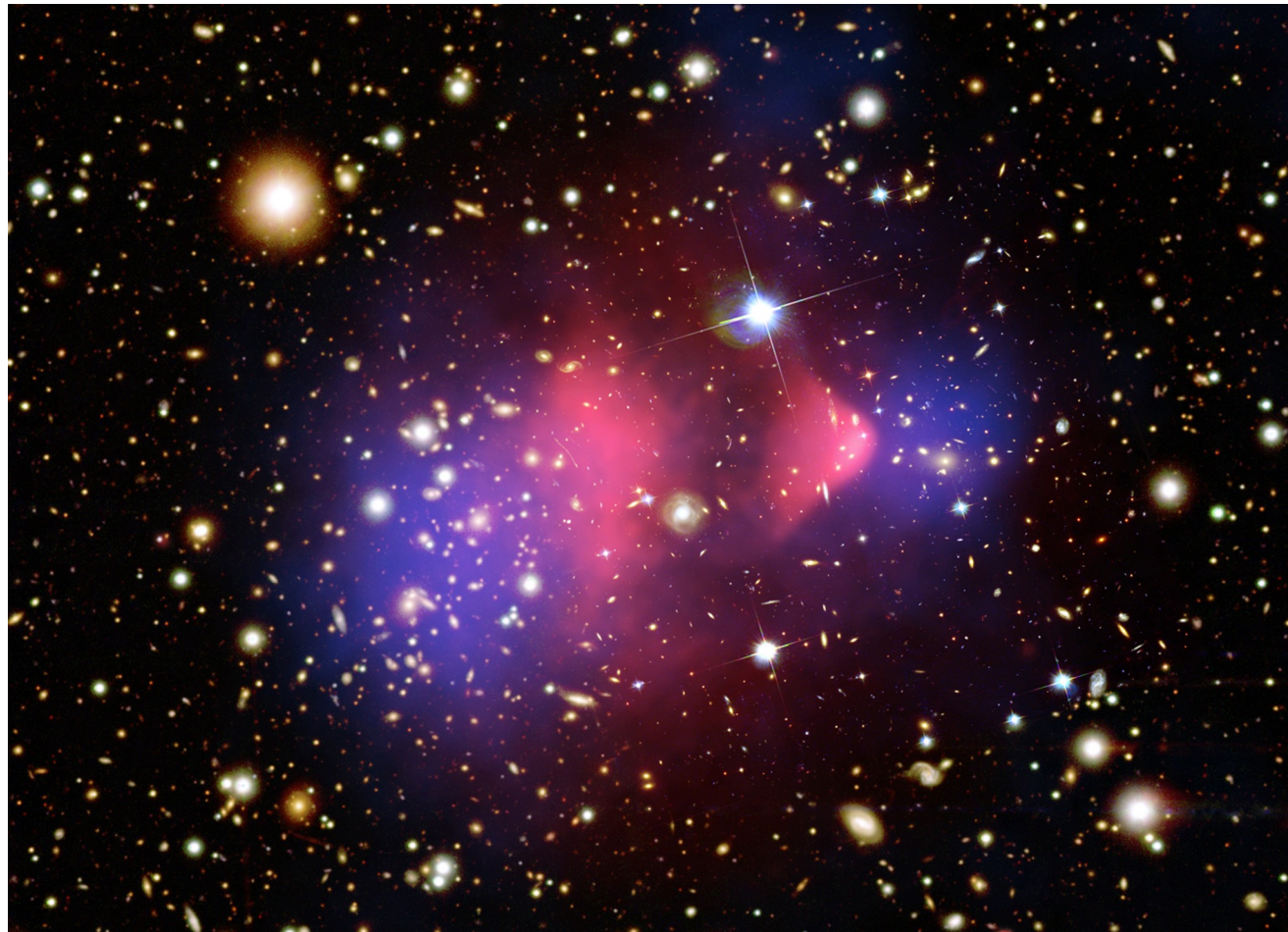
Excluded by
Indirect Measurements
95% confidence level



LHC Physics



- Perhaps even the mystery of the dark matter...



Terascale



- There is no doubt that the LHC will light the Terascale...
- We must prepare now to be ready for what awaits us...
 - ◆ By 2012 if we are lucky – or later if we are not...



ILC Governance



- The year 2012 also looms large for the question of ILC governance...
 - ◆ That is the year the ILCSC, GDE and RD will all disappear, having successfully completed their mandates
 - ◆ So the question I bring before you today is:

What should take their place?

ILC Governance



- We need a new governance system, one that is
 - ◆ *Distributed* enough to be robust against localized disruptions in funding
 - ◆ *Organized* enough to keep ILC R&D moving coherently
 - ◆ *Nimble* enough to be able to respond quickly if one country is willing to propose hosting
 - ◆ *Stable* enough to keep the ILC progressing until we have LHC results
 - ◆ *Flexible* enough to build towards one LC community, integrating CLIC when the time is right

ILC Governance



- The new system needs to preserve the best features of the GDE/RD...
 - ◆ Strong people with superb leadership driving a coherent program backed by global consensus
 - With the ability to make difficult decisions and have them stick
- While at the same time take the project to a whole new level...
 - ◆ In a very difficult political environment...

ILC Governance



- The new organization cannot be the GDE/RD
 - ◆ The GDE and RD will have achieved their goals
- So what might work?

ILCSC is considering proposing that ICFA create a transitional organization to guide the ILC until a construction decision is made

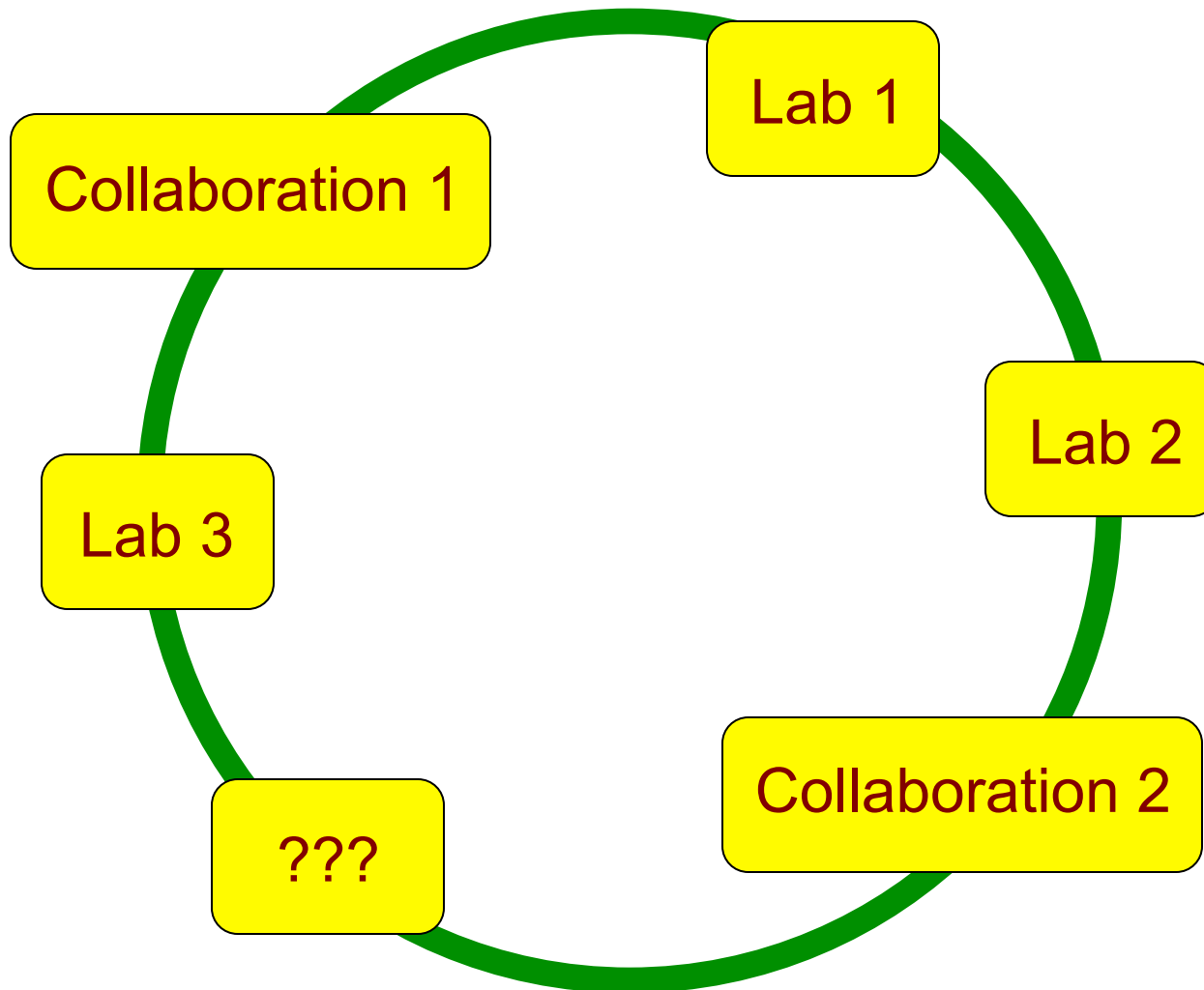


ILC Governance

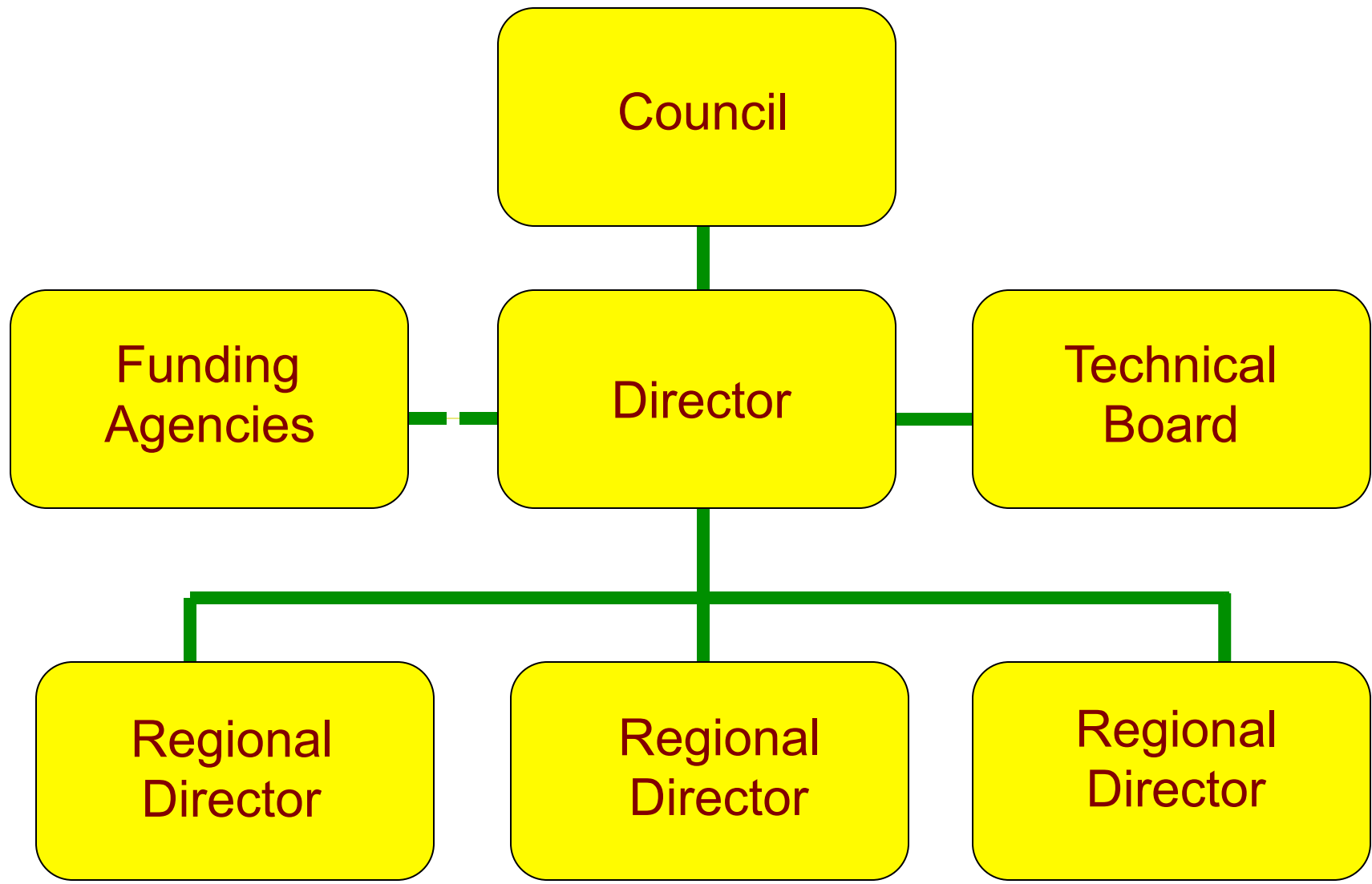


- This linear collider organization would be modeled on the “Multinational Laboratory” approach discussed in the CPDG
 - ◆ Such an organization would necessarily be transitional
- The members of the organization might be different in each country or region
 - ◆ Each country or region has different funding mechanisms available to it

Linear Collider Consortium



Linear Collider Consortium



Questions – LCSGA



- Who can join the consortium?
- Should there be a lead laboratory?
- What is a workable governance structure?
- How can coherence be achieved?
- Should accelerators and detectors be brought together?
- How might CLIC be included?
- ...

-
- Suggestions? Comments? Please contact
 - ◆ Jonathan Bagger
 - ◆ Juan Fuster, Tatsuya Nakada
 - ◆ Jie Gao, Sachio Komamiya
 - ◆ Satoshi Ozaki, Harry Weerts
 - The Americas contribution will be developed by the LCSGA, chaired by Paul Grannis