

Structure of experiment and the Experiment/Facility divide (some thoughts)

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Fermilab

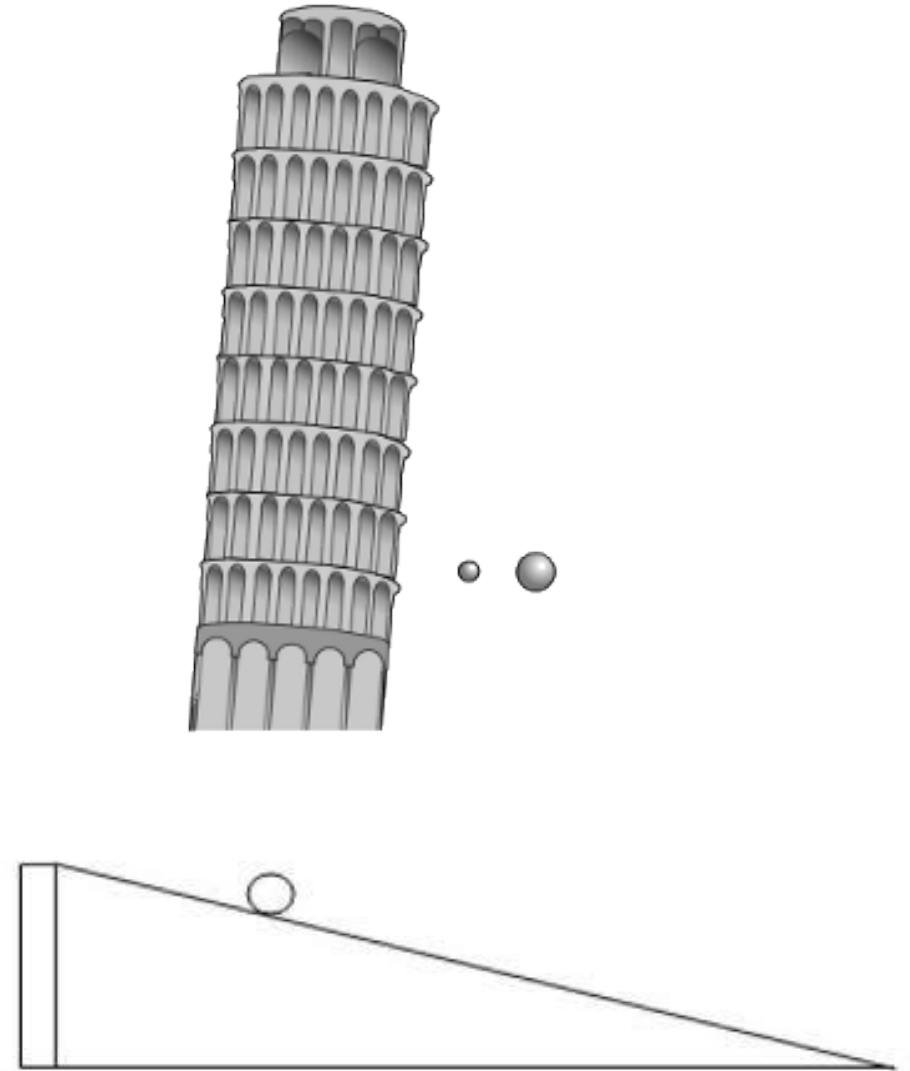
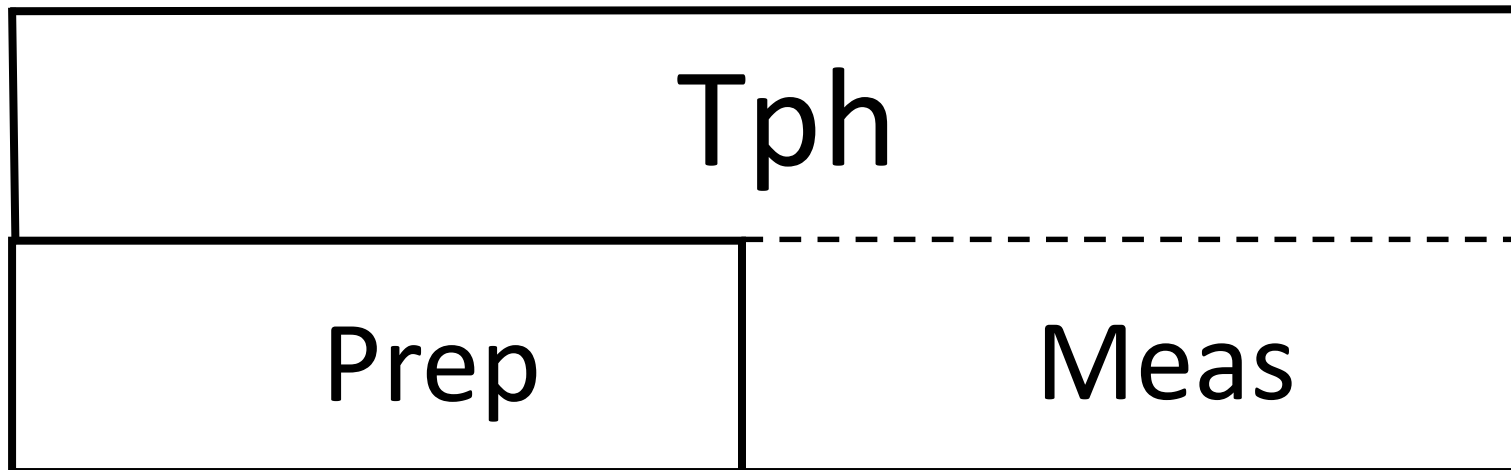
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Outline

- Structure of classic experiment
- Structure of complex contemporary experiment
- Possibilities of the Experiment/Facility demarcation
- Summary

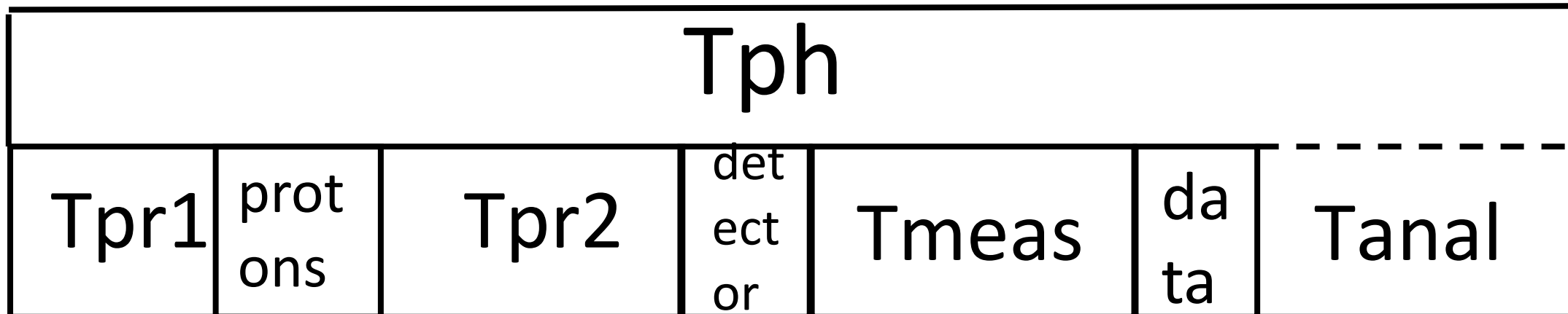
Classic experiment

- Galileo acceleration experiment, inclined plane experiment
- Tph- theory of phenomenon
- Preparation, measurement – operations.
- Balls did not require instrumental theory.



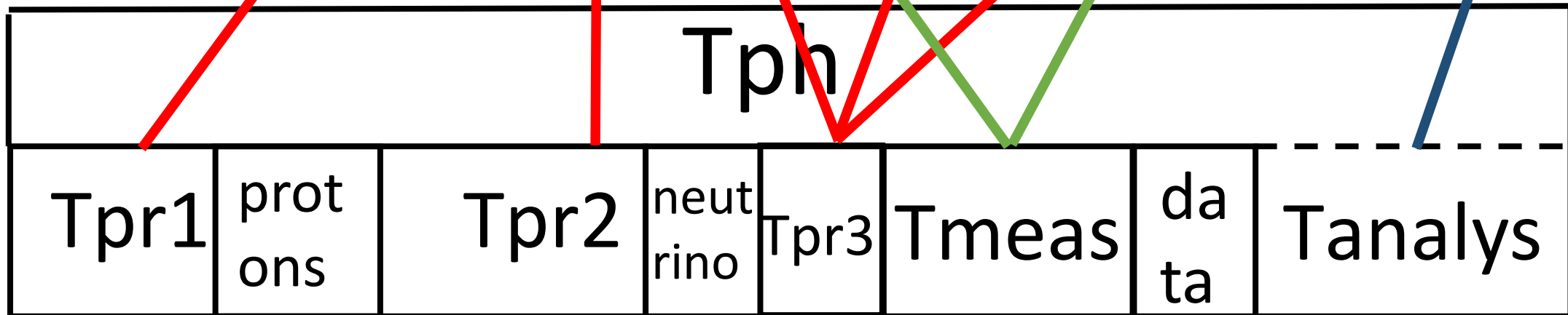
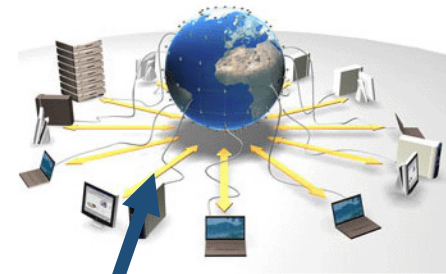
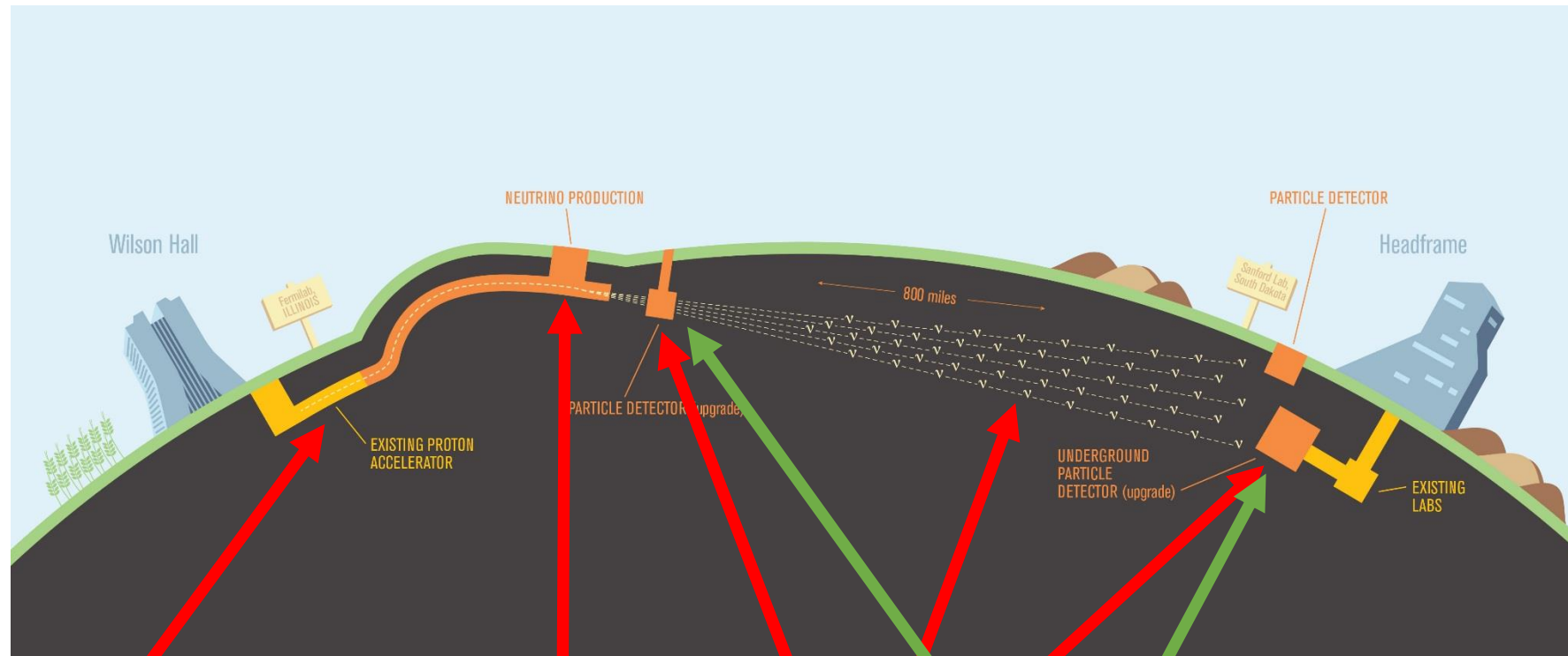
Complex (accelerator-based) experiment

- Tpr – instrumental theories of preparation
- Tmeas – instrumental theories of measurement
- Tanal – instrumental theories of data analysis



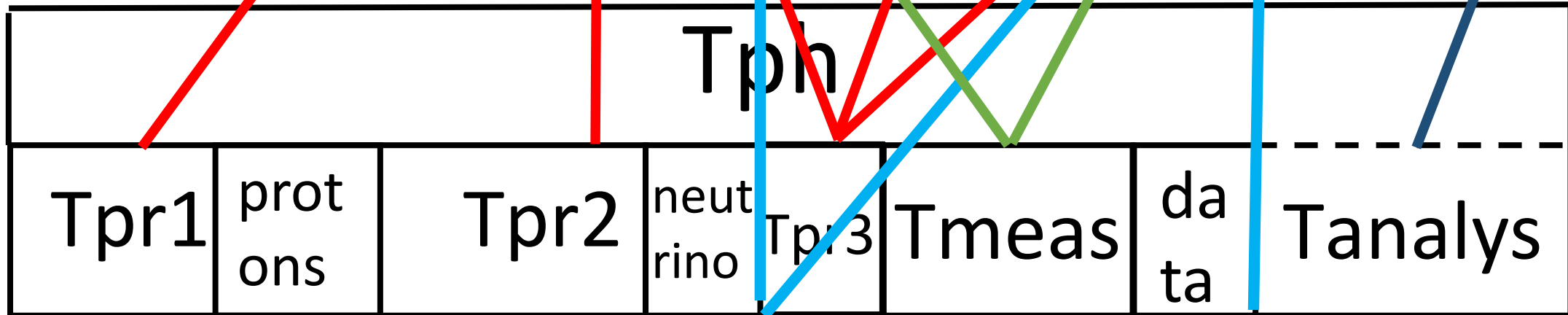
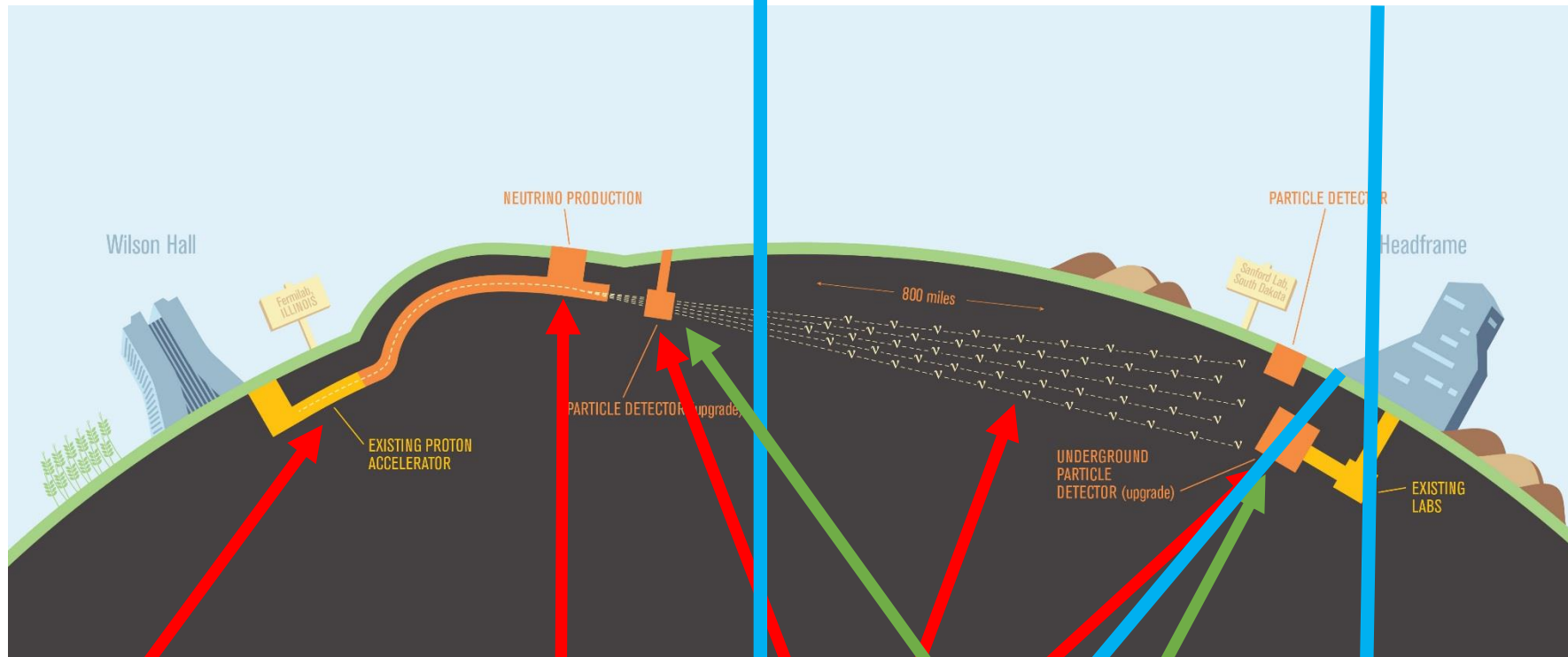
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Summary

- The operational scheme suggests that current division between the collaboration and the facility (despite technically necessary) seems to be just one possibility (from the viewpoint of knowledge production) and in principle can be supplemented by two additional ones: between **detectors** and counters (**triggers**), and between **data production** and **analysis**.
- Nevertheless, in order to be consistent with the classical model (as theory is), interests and activities, the scope of an experimental collaboration needs to **comprise all stages** of preparation, measurement and data analysis.