*c*GENIE WORKSHOP: A Hitchhikers Guide to the Black Arts of Earth system modelling
('or why you should not want know what is in a sausage')
26th + 27th February 2013; Caltech

Day 1 (Tuesday 26th Feb.) – Earth system modelling for 'newbies'[*]

START (ca. 11 am)

- **Introduction to (Earth system) modelling and *c*GENIE**
  Brief introduction to numerical and Earth system modelling and the short course.
- *Session I+II* **– Getting started**
  Accessing the computing cluster; installing and compiling *c*GENIE; *c*GENIE directory structure ('where everything is').
  Command-line operation; how to submit jobs to a cluster queue.
  Concept of a 'restart'; experiment started from 'cold' vs. from end of previous run.
  Time-series, time-slice (2D and 3D) output; integration intervals and specification of frequency of data saving. Panoply and MATLAB visualization resources.
  Setting up experiments: configuration files and setting parameter values.
  Exploring the behaviour of the Earth system: climate hysteresis and tipping points, and 'Snowball Earth'.

END (ca. 4 pm)

Day 2 (Wednesday 27th Feb.) – Getting your hands dirty

START (ca. 10 am)

- *Session III* **– 'Poking the climate beast'**
  Applying geochemical 'forcings' (flux and restoring boundary conditions).
  Tracing ocean circulation.
  Exploring the stability of the Atlantic meridional overturning circulation (AMOC).
- *Session IV* **– Poking the carbon cycle**
  CO_2 emissions and future ocean acidification.
  Role of deep-sea sediments.
  Diagnosing carbon cycling and preformed nutrients.

END (ca. 4 pm)

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[*] [Google it]