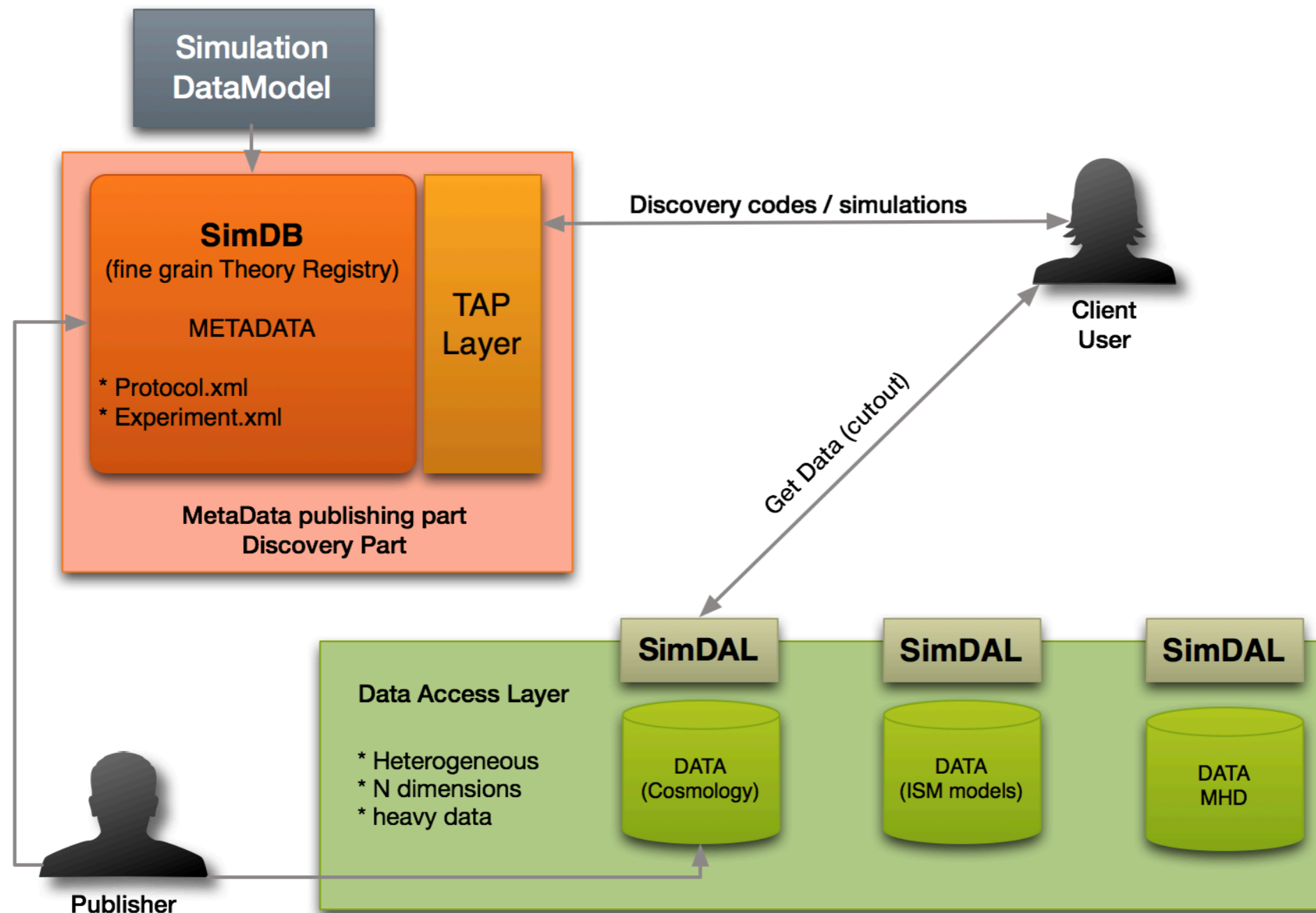# Theory I.G.
Opening session

Franck Le Petit

Theory I.G. so far

Simulation DataModel : approved
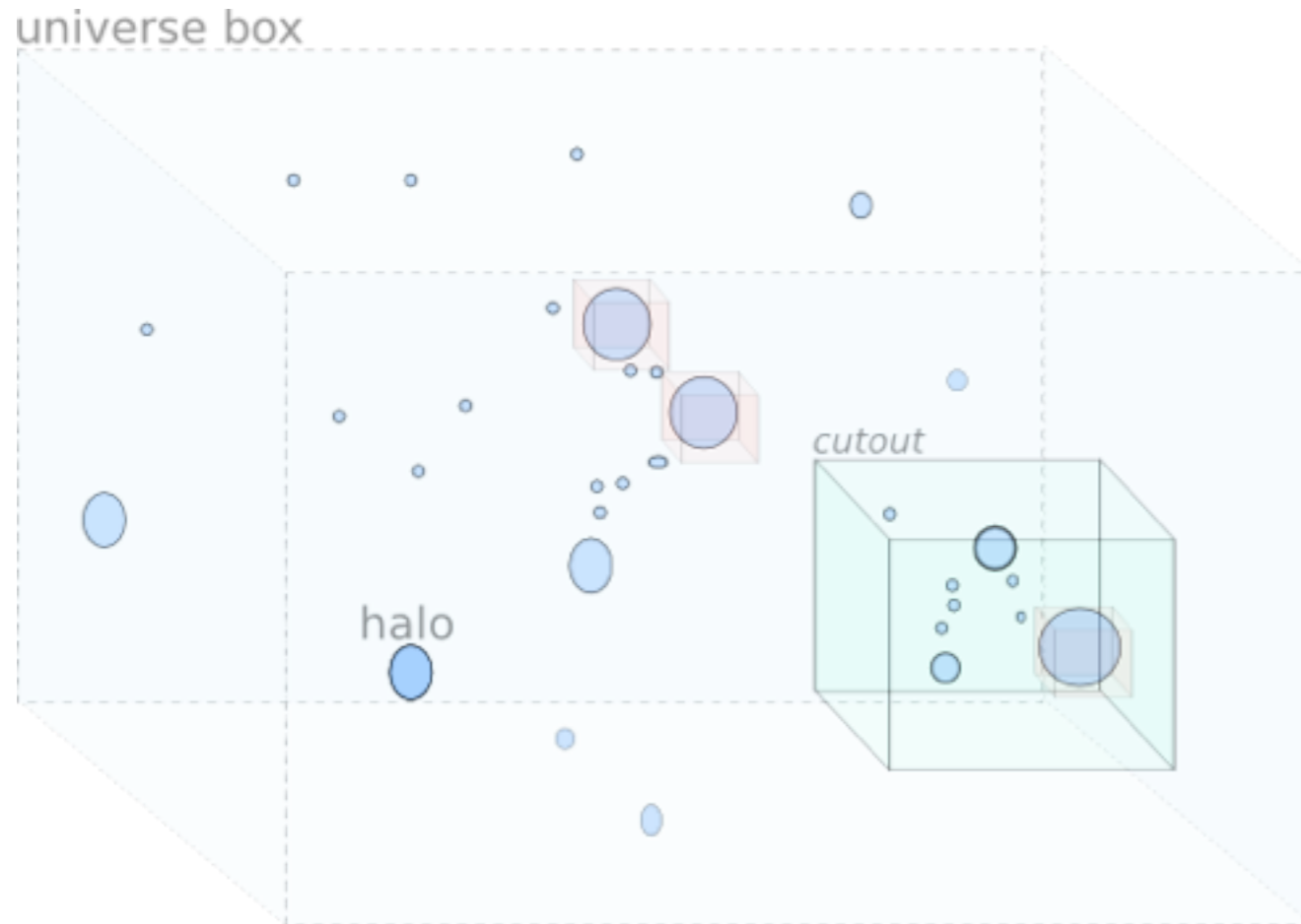
Requirements (Urbana InterOp) :
- **SimDB**   : Fine grain Theory registry publish and discover simulations (datasets)
- **SimDAL** : Access protocol to retrive data

SimDAL : Extraction of raw data

SimDAL W.D in preparation

- **cutout**

universe box

cutout

halo

Examples for 3D + time simulations

Get the raw data (particles) in the box :
$0 < x < 15$
$3 < y < 8$
$2 < z < 4$

Get the raw data (particles) of halos :
$M_{halo} > M_0$

Example for microphysics simulations

For a cloud model extract line intensities :
- CO (3-2)
- CO (4-3)
- H_2 0-0 S(2)

Status of SimDAL W.D.
- **first proposition for the main function : cutout**
  - Discussion with DAL W.G. this week

SimDB : Publish experiments / datasets and Discover them

Tests of implementations in Heidelberg

- Cosmological simulations
- Microphysics simulations

One of the conclusions :

- Ontology of Astronomical Objects may not be precised enough for Theory

*Example : Search for **diffuse clouds** models for Herschel observation interpretation*

=> Discussions with the Semantics W.G.

Theory I.G. sessions

No Theory I.G. sessions, but :

- **Apps 1** : SKOS concepts in VO-Tables
  Date   : Tuesday 23 - 11h30

  Goal : Find a solution to have SKOS concepts in VO-Tables

- **Semantics** : Ontology of astronomical objects
  Date   : Thursday 25 - 11h

  Goal : How to make evolve the ontology of astronomical objects for Theory requirements ?

- **Theory / DAL discussions** :

  Goal : Are the choices done for cutout in SimDAL in agreement with DAL protocols ?