GALSYNTH
a WEB interface for GRASIL

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Motivation

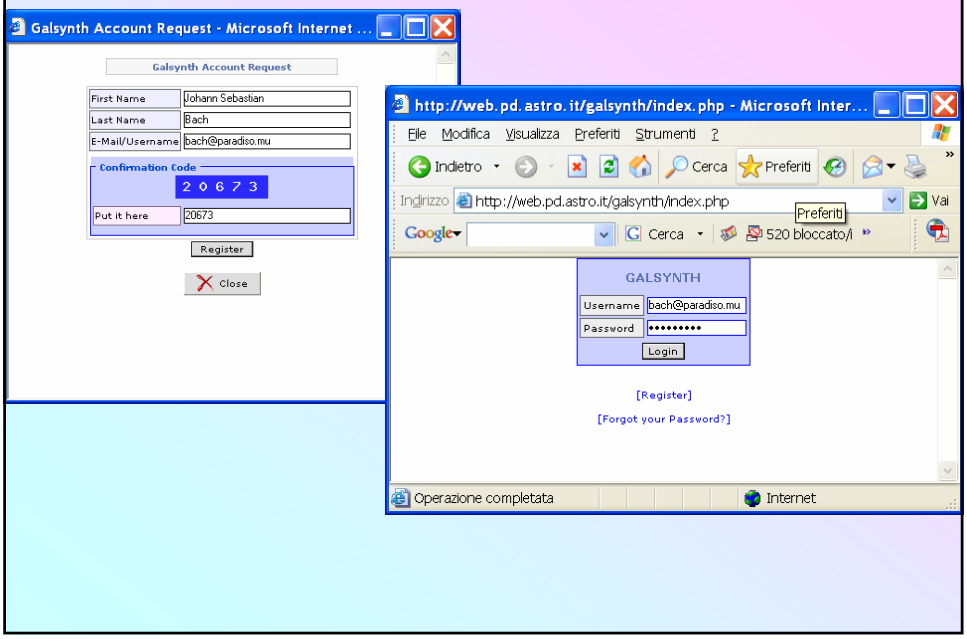
- GRASIL is a complex model with tens of parameters, thus difficult to use quickly. Much easier to use BC…
- vital to have a WEB interface to
  1. guide the user
  2. allow use without compilation/installation
  3. provide computing power

GALSYNTH

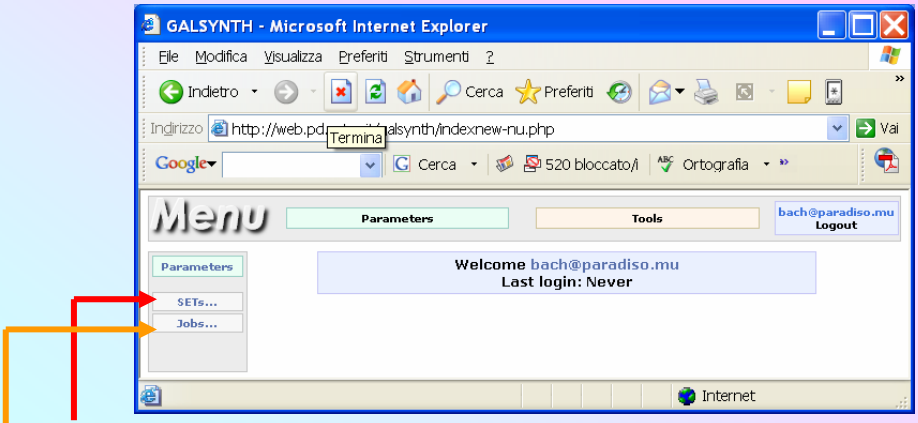
the web interface

- After login, users access their own workspaces
- Interactive editing of parameters, with explanations and bound checking (3 levels)
- Sets of parameters can be saved, modified, reused. Sets include the possibility of iteration over parameters (many models)
- The user defines jobs that will be executed on a pool of application servers (at present 3 PCs, easy to add more…provided made available)
- When job completed, user is notified and can download the results of all models packed in one archive (which remains also on the WEB server)

Registration and login



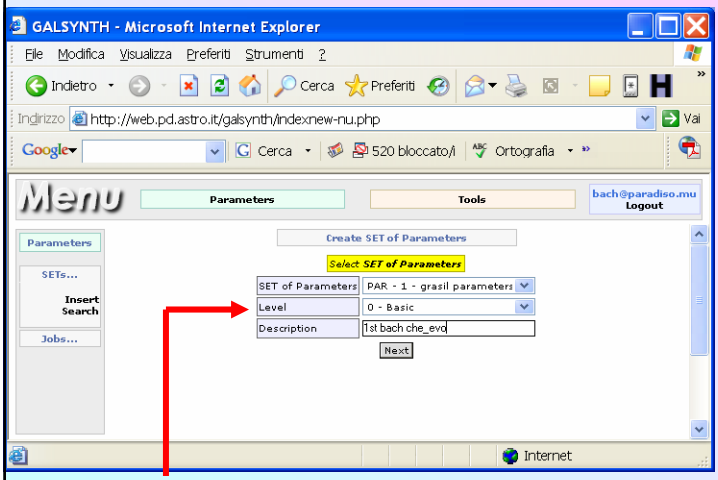
Users access their own workspaces



SETs are sets of input parameters for the codes (CHE sets for CHE_EVO or PAR sets for GRASIL), including definitions of possible iterations on parameters

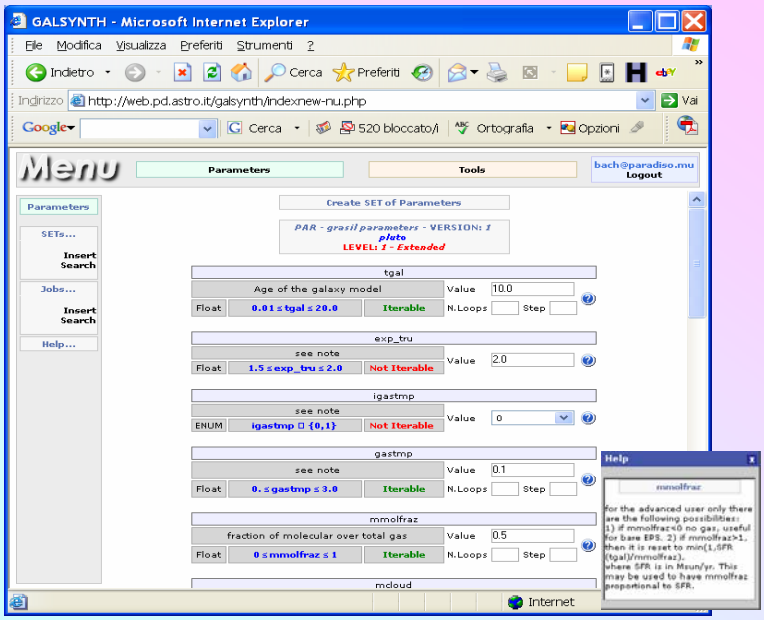
Jobs are batch executions of CHE_EVO+GRASIL sequence according to selected SETs

SET definition I

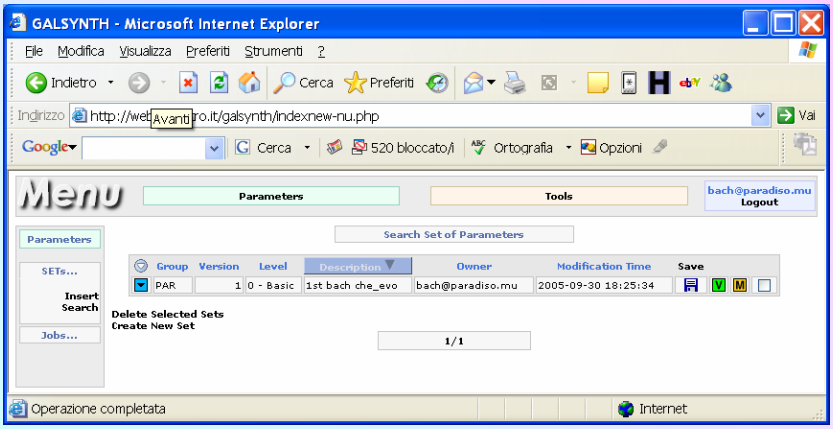


Three Levels, the higher the more parameter to set and the greater the allowed range

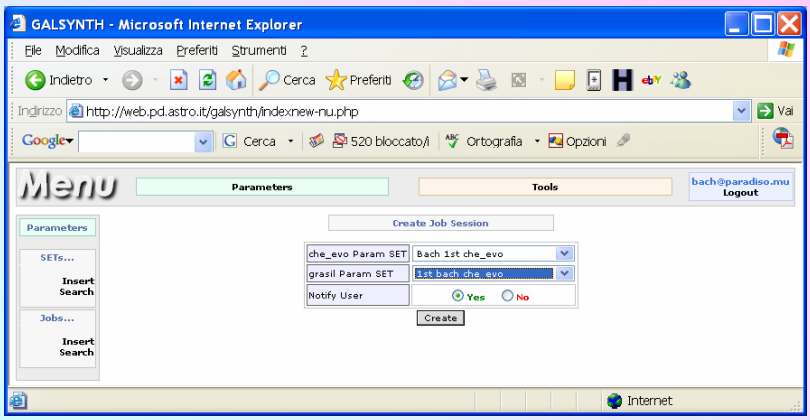
SET definition II



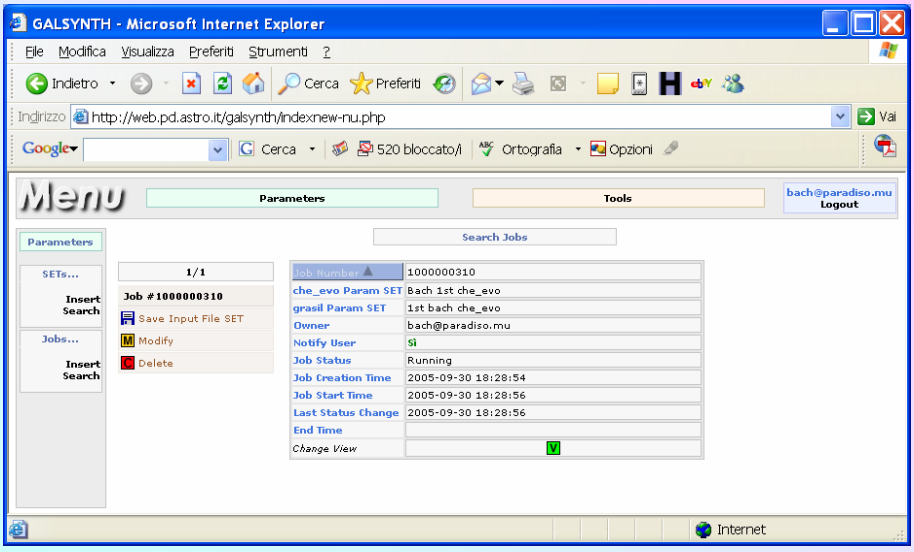
SET defined



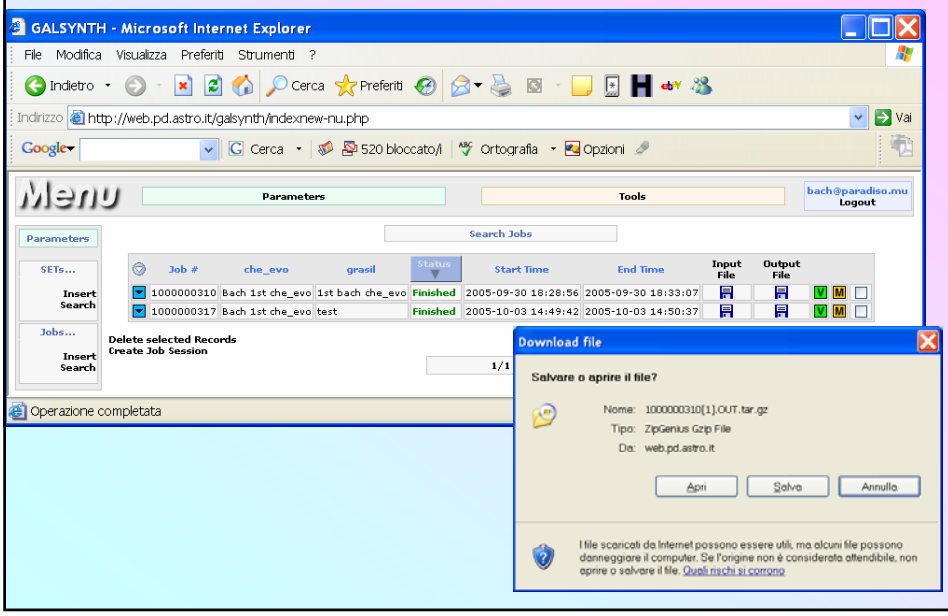
JOB creation



Job Status



Jobs list and results donwnload



Naming of files

The .tar.gz output files of a job consisting of iterations on n parameters, contains a set of files for each specific GRASIL model, with names in the format

<par name 1>@<par value 1>_…. <par name n>@<par value>_.<extension>

Example (job with iteration on etastart, mmolfraz and tgal) :

etastart@0.055_mmolfraz@0.8_tgal@7_.spe

Results I…

WinEdt 5.3 - [C:\Documents and Settings\gian\Desktop\etastart@0.055_mmolfraz@0.8_tgal@7.spe]

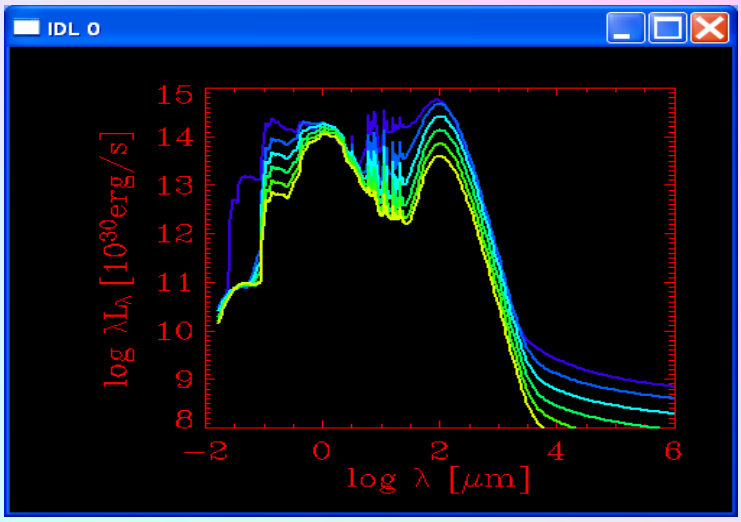
File Edit Search Insert Document Project Tools Macros Accessories Options Window Help

etastart@0.055_mmolfraz@0.8_tgal@7.spe

```
# Angle average
# (1): Wavelength in Angstrom
# (2): Cirrus emssion
# (3): Starlight extincted by MCs only
# (4): Starlight extincted
# (5): MCs emission
# (6): Total
# (7): Starlight unextincted
# (8): Subcomponent unextincted
# (9): Subcomponent extincted
# Notes:
# 1. luminosities in 1e30 erg/s/A
# 2. subcomponent in cols. 8,9 is bulge for composite models
# otherwise = cols. 7,4 resp.
#     1          2          3          4          5          6          7
  168.7      0.000     0.1837E+09 0.1069E+09  0.000     0.1069E+09 0.2466E+10 0.2466E+10 0.1069E+09
  184.5      0.000     0.2219E+09 0.1277E+09  0.000     0.1277E+09 0.2472E+10 0.2472E+10 0.1277E+09
  201.8      0.000     0.2675E+09 0.1528E+09  0.000     0.1528E+09 0.2534E+10 0.2534E+10 0.1528E+09
  220.8      0.000     0.3079E+09 0.1739E+09  0.000     0.1739E+09 0.2840E+10 0.2840E+10 0.1739E+09
  241.5      0.000     0.3443E+09 0.1923E+09  0.000     0.1923E+09 0.1559E+11 0.1559E+11 0.1923E+09
  264.1      0.000     0.3651E+09 0.2014E+09  0.000     0.2014E+09 0.1601E+11 0.1601E+11 0.2014E+09
  288.9      0.000     0.3821E+09 0.2081E+09  0.000     0.2081E+09 0.1529E+11 0.1529E+11 0.2081E+09
  316.0      0.000     0.3867E+09 0.2079E+09  0.000     0.2079E+09 0.1569E+11 0.1569E+11 0.2079E+09
  345.7      0.000     0.3773E+09 0.2003E+09  0.000     0.2003E+09 0.1569E+11 0.1569E+11 0.2003E+09
```

? A 1:1 428 Wrap Indent INS LINE Spell DATA:UNIX -src WinEdt.prj

Result II…



A completely imaginary galaxy SED at 1,3,5,7,9,11 Gyr