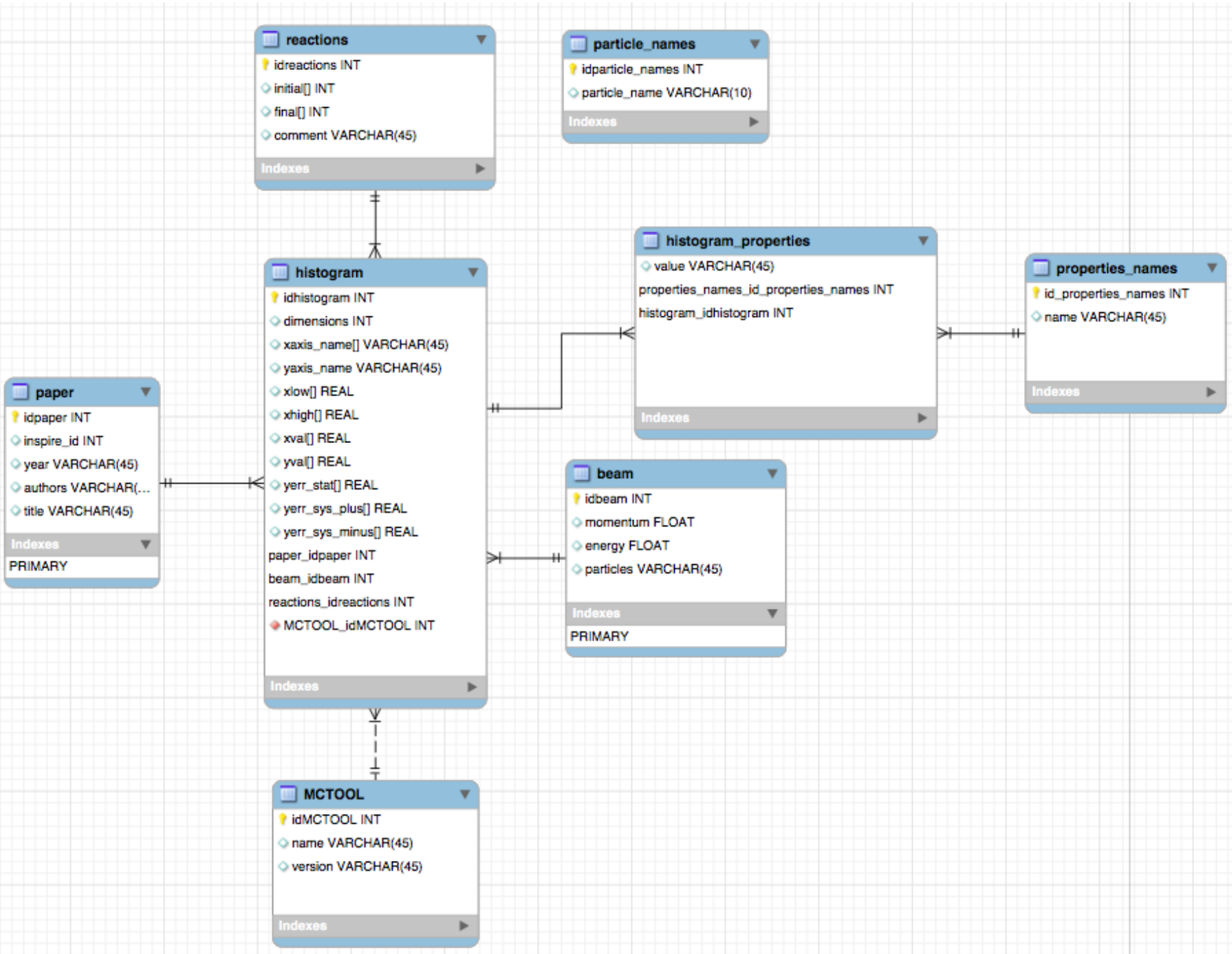
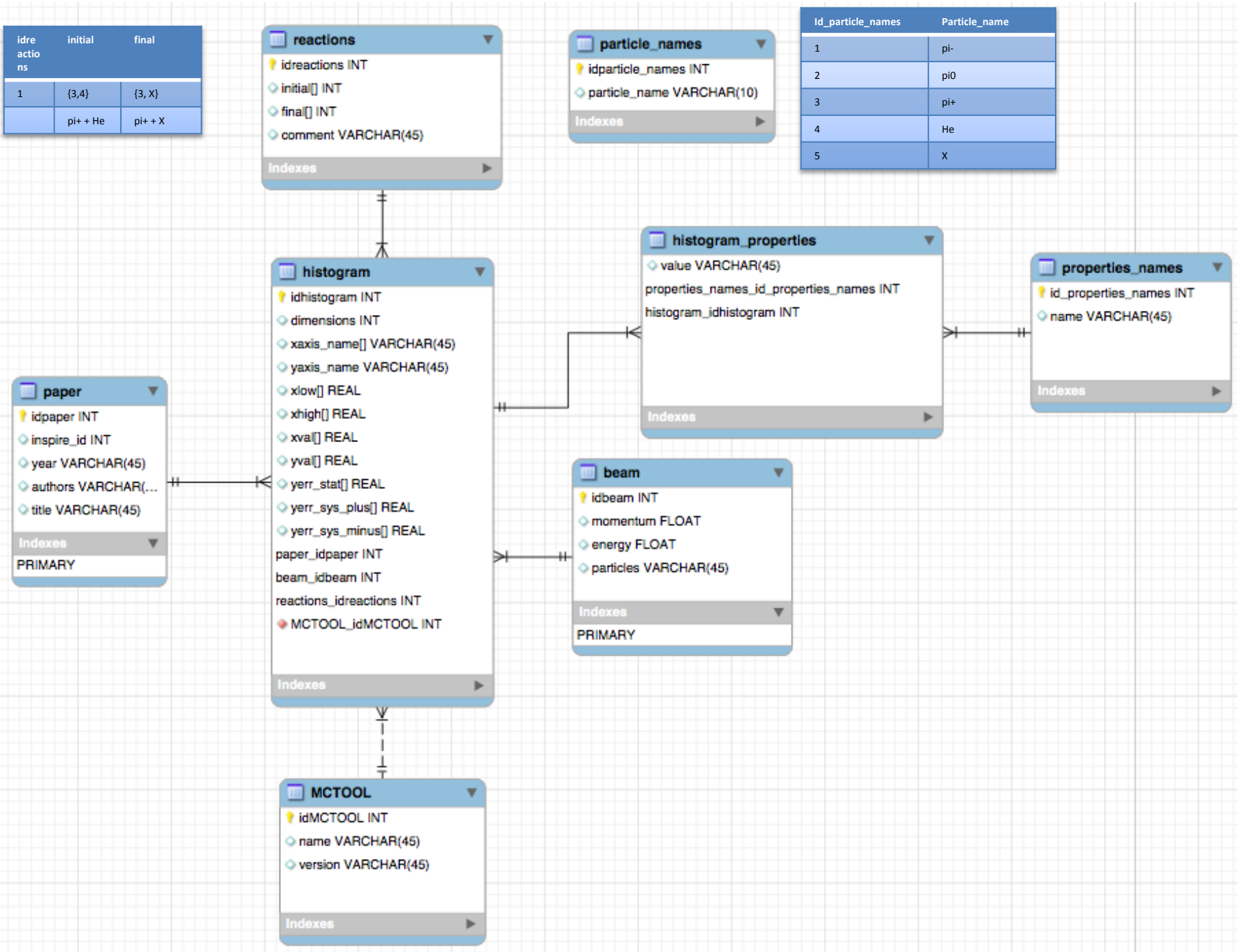
db schema

D. Konstantinov


reactions
idreactions INT
initial[] INT
final[] INT
comment VARCHAR(45)
Indexes
particle_names
idparticle_names INT
particle_name VARCHAR(10)
Indexes
histogram_properties
value VARCHAR(45)
properties_names_id_properties_names INT
histogram_idhistogram INT
Indexes
properties_names
id_properties_names INT
name VARCHAR(45)
Indexes
histogram
idhistogram INT
dimensions INT
xaxis_name[] VARCHAR(45)
yaxis_name VARCHAR(45)
xlow[] REAL
xhigh[] REAL
xval[] REAL
yval[] REAL
yerr_stat[] REAL
yerr_sys_plus[] REAL
yerr_sys_minus[] REAL
paper_idpaper INT
beam_idbeam INT
reactions_idreactions INT
MCTOOL_idMCTOOL INT
Indexes
paper
idpaper INT
inspire_id INT
year VARCHAR(45)
authors VARCHAR(...
title VARCHAR(45)
Indexes
PRIMARY
beam
idbeam INT
momentum FLOAT
energy FLOAT
particles VARCHAR(45)
Indexes
PRIMARY
MCTOOL
idMCTOOL INT
name VARCHAR(45)
version VARCHAR(45)
Indexes


idreactions
initial
final
1
{3,4}
{3, X}
pi+ + He
pi+ + X
reactions
idreactions INT
initial[] INT
final[] INT
comment VARCHAR(45)
Indexes
particle_names
idparticle_names INT
particle_name VARCHAR(10)
Indexes
Id_particle_names
Particle_name
1
pi-
2
pi0
3
pi+
4
He
5
X
histogram
idhistogram INT
dimensions INT
xaxis_name[] VARCHAR(45)
yaxis_name VARCHAR(45)
xlow[] REAL
xhigh[] REAL
xval[] REAL
yval[] REAL
yerr_stat[] REAL
yerr_sys_plus[] REAL
yerr_sys_minus[] REAL
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title VARCHAR(45)
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energy FLOAT
particles VARCHAR(45)
Indexes
PRIMARY
MCTOOL
idMCTOOL INT
name VARCHAR(45)
version VARCHAR(45)
Indexes

- The schema is a bit complicated but this will help us to keep eye on db content and avoid the situation that we have now as:

  pi+, pion+; “+” and “on”; with spaces and without spaces;

  Instead we can have additional field with synonyms (“particle_names” table)

- **Viability** of the DB depends on well organized structure and we have to define a procedure how to populate the database:
  - Input format;
  - Input parser;
  - Consistency checker;
  - Physisc and Technical administrators;