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Migrating PHENIX databases from object to relational model

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To benefit from substantial advancements in Open Source database
technology and ease deployment and development concerns with
Objectivity/DB, the Phenix experiment at RHIC is migrating its principal
databases from Objectivity to a relational database management system
(RDBMS). The challenge of designing a relational DB schema to store a
wide variety of calibration classes was
solved by using ROOT I/O and storing each calibration object opaquely as
a BLOB (Binary Large OBject). Calibration metadata is stored as
built-in types to allow fast index-based database search. To avoid a
database back-end dependency the application
was made ODBC-compliant (Open DataBase Connectivity is a standard
database interface). An existent well-designed calibration DB API
allowed users to be shielded from the underlying database technology
change. Design choices and experience with transferring a large amount
of Objectivity data into relational DB will be presented.

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