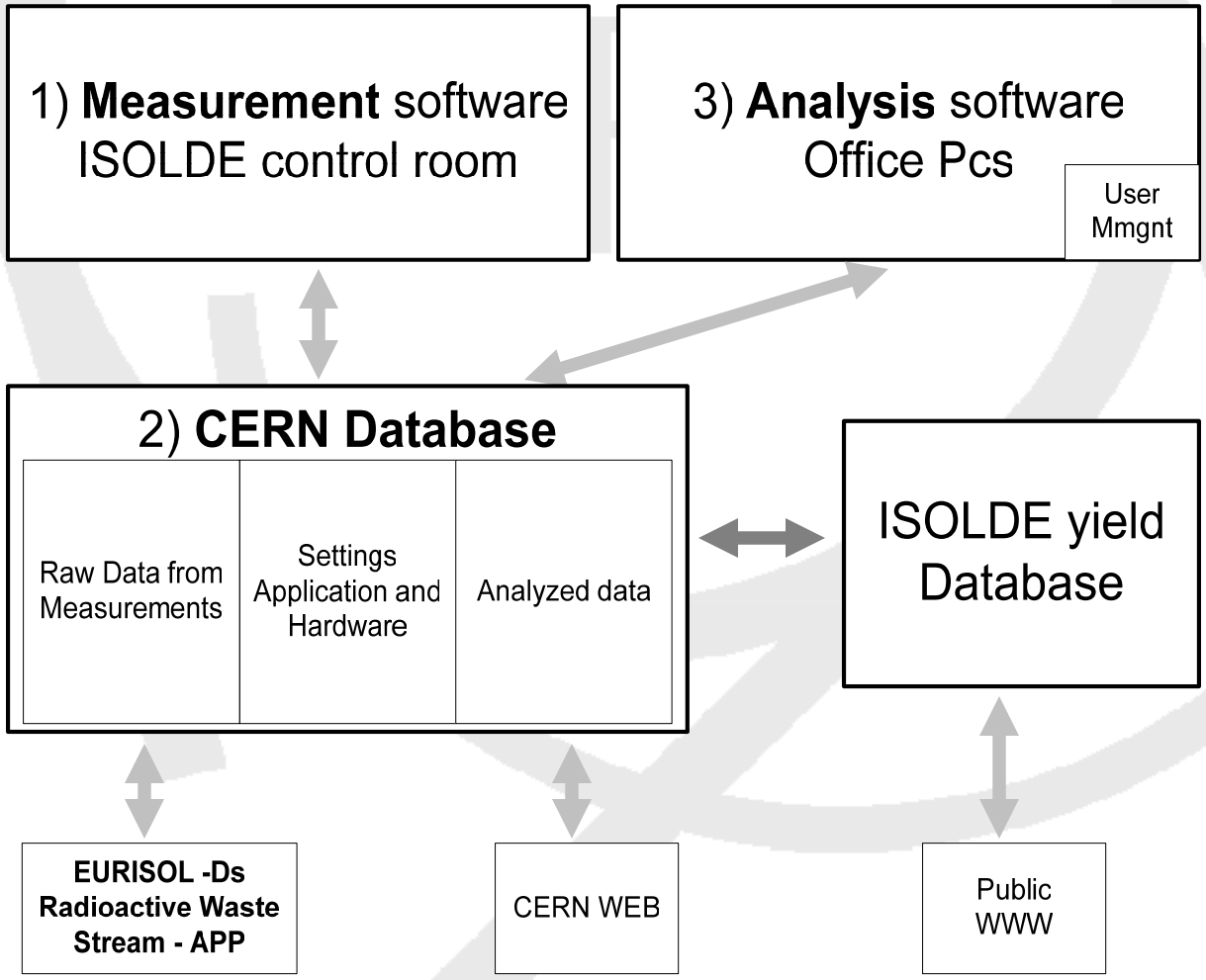
Automating yield measurements and database storage

(First Step of CERN database)

Eller Martin, AB-ATB-IF
Computer Science

martin.eller@cern.ch

System components



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Measurement Software 1/4

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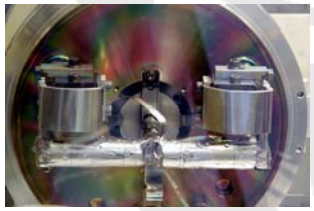
Implemented within the PS control environment

Record data:



Target

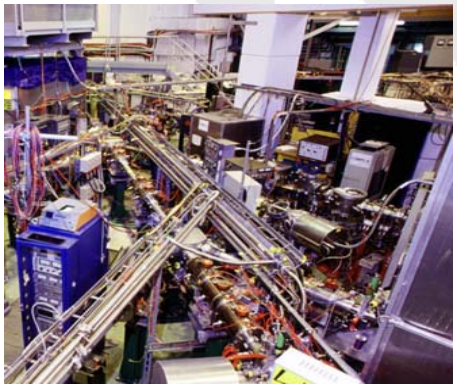
Target temp, Line temp

Proton counter

Separator Magnet

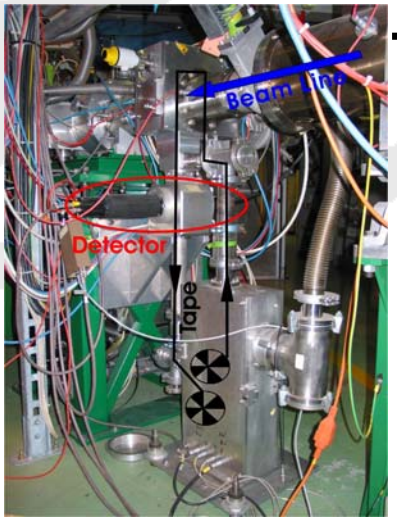
Mass

Control / Record:



Beam lines

Beam gates



Tape Station

move Tape,
acquire data

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Measurement Software 2/4

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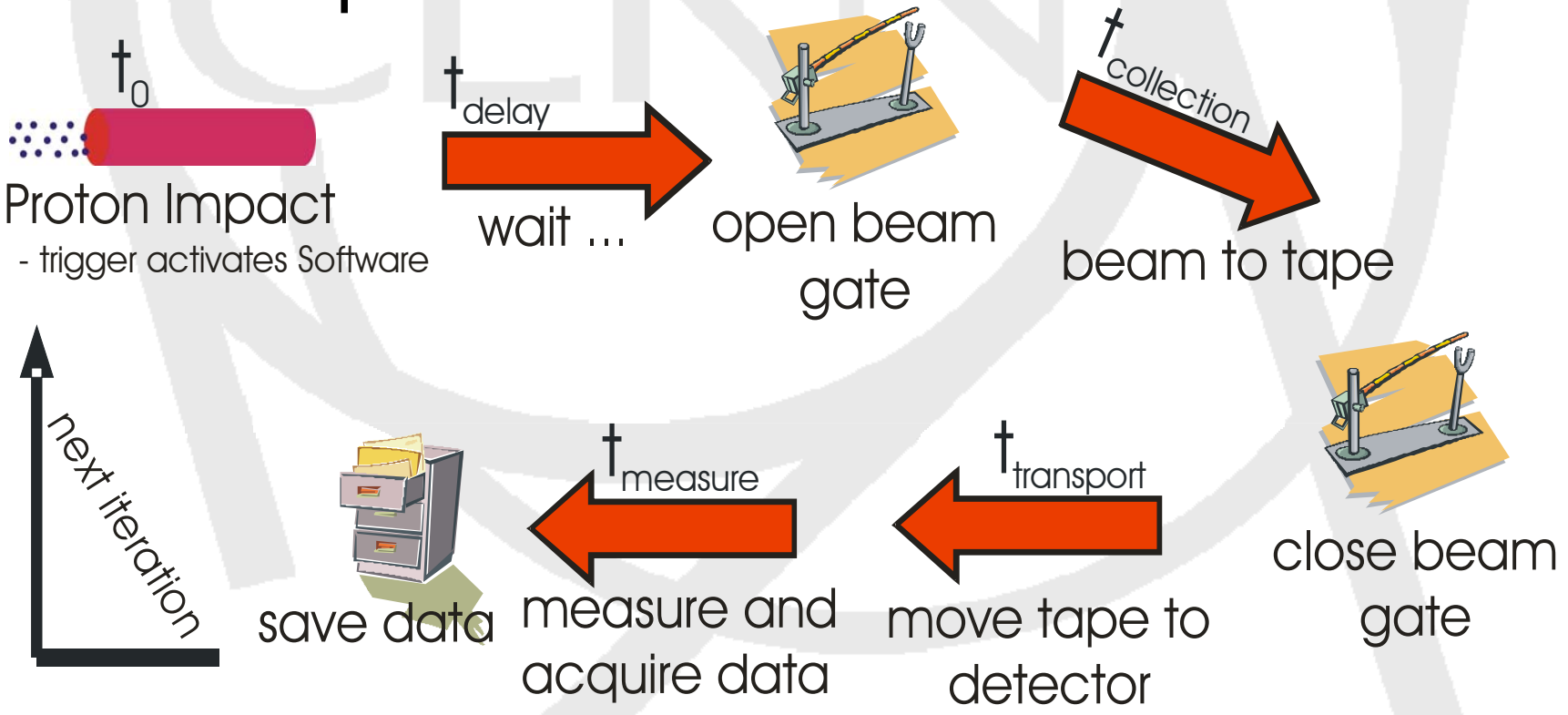
Time sequence of measurement



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Measurement Software 3/4

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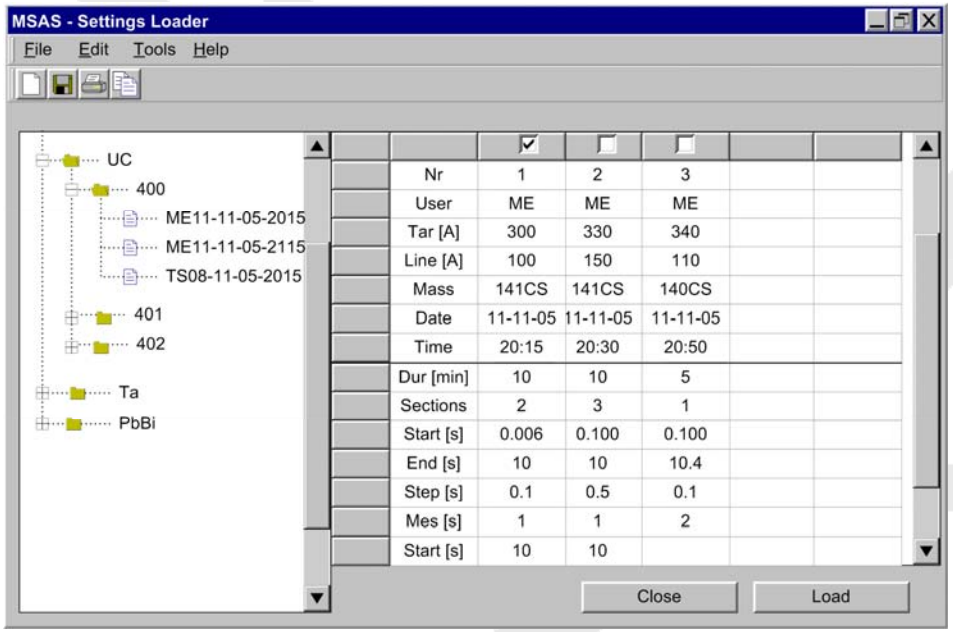
- Identify measurement (Date, Operator, Targetnr,..)
- Fill in settings (get parameters from database)
- Store settings to database



Prototype User Interface

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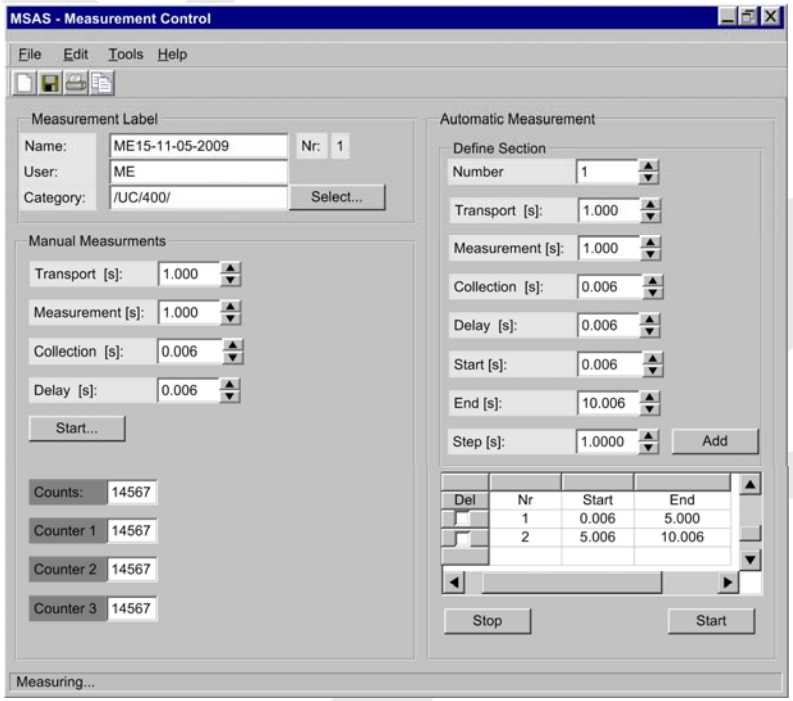
Measurement Software 4/4

1. If new measurement: Operator sets parameter
   Else: values imported from database
2. Perform measurement according to settings
3. Send measured data to database



Prototype User Interface

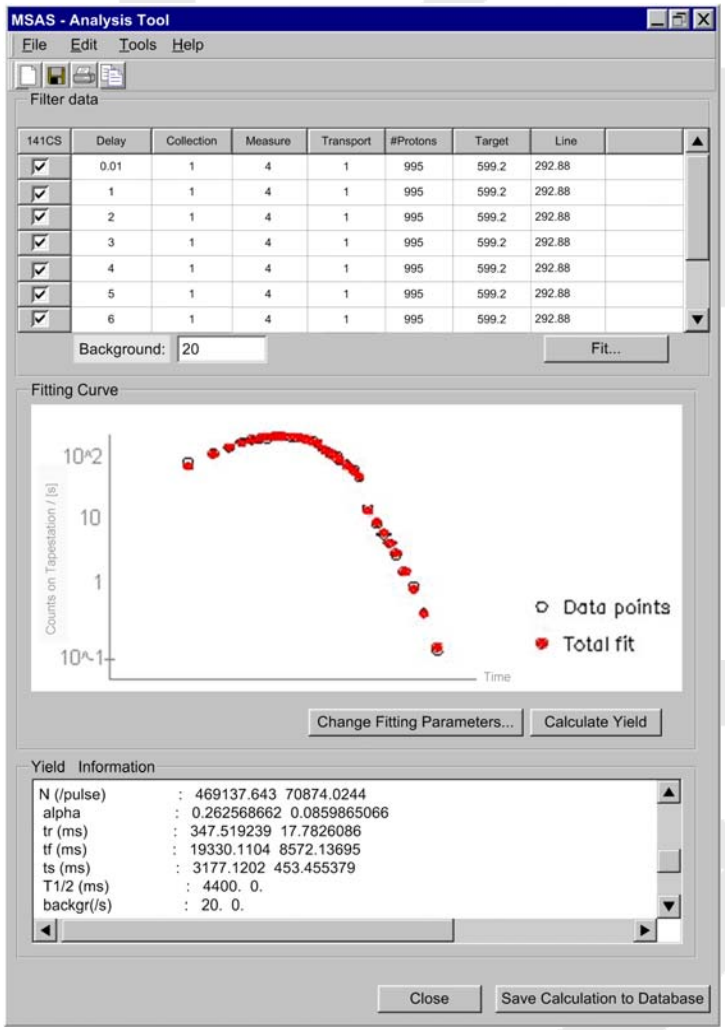
martin.eller@cern.ch

CERN Database

- Centrally managed
- Backup and updates
- Fast and powerful
- Many tools for connecting to data
- **Complies** with new network security policy at CERN

martin.eller@cern.ch

Analysis tool



1. Check quality of values

2. Fit release curve

3. Calculate Yield

martin.eller@cern.ch

Further end-user software

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- ISOLDE yield database
- EURISOL-DS Task 3
- Web pages for internal use

- We welcome your propositions!

martin.eller@cern.ch

Benefits

- Automatic measurements
- Organized and secure data storage
- Faster & easier analysis of data
- Access to different levels of data
  - Fast and appropriate yields
  - Official data after publication (ISOLDE yield db)

martin.eller@cern.ch

Summary / message

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- Faster and more reliable release / yield measurements
- More reliable storage policy
- New user-friendly measurement and analysis software
- Software which enables different levels of access (ISOLDE yield db, internal use, restricted)

martin.eller@cern.ch

Schedule

- April 06 – Measurement software test
- July 06 – Database + db connection
- End 06 – Analysis software + external connections
- Run 07 – Final tests & operational use

martin.eller@cern.ch