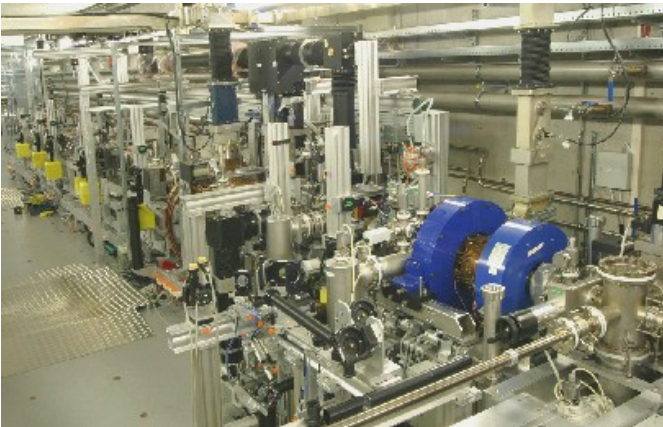


OMA Business I.

- I. Introduction: When MAMA becomes OMA ... (again)
- II. Weird Analysis of the Stochastic Uncertainty in the Old C++ MAMA
- III. On Projection Printing

Marek Otevrel

PPS 25.10.2011



What has been done

> Code finished and debugged

- Neither Gun nor cameras available.

 - > Debugging in test mode using H1.Scr5 grid picture as the signal and the grid light as replacement for the shutter

> User manual almost ready (>90%, ~16 text-pages)

- Missing (or not finished) items:

 - Some pictures (some showing old interface, some missing).

 - “*The Projection Window Concerns*” chapter missing.

 - A chapter / “cook-book” on “*How to add a dispersive section*”

 - Final text check and arrangement to be done.



> Same (or similar) features as in the old MAMA (basis):

- The basic idea and way of analysis (except for the uncertainty (?))
- Analogic basic design of charts and GUIs
- The “Single projection” and the “Phase scan” measurement modes.

> Difference from the old MAMA (details)

- No “Scan (dipole)” mode (needed?): dipole is always kept constant.
- No systematic error treatment (needed?).
- Automatic saving of settings (LEDA, HEDA1...).
- Can be used for both vertical (LEDA, HEDA1) and horizontal (HEDA2) dispersive sections.
- Any frame grabber can be used.
- Background subtraction: the **envelope** method (old MAMA: the **average** method).
- Baseline subtraction always performed in the “Single projection” mode (can be changed to be optional, if desired).
- Printing to logbook: more parameters shown (Idip, Imain, Statistics, NoP, SP-Pforw, Power, Reflection).
- Separate statistics setting for the “Single projection” and the “Phase scan” measurement modes.
- More convenient calibration process.
- More convenient way how to add/change a dispersive arm.
- ... (More advanced options can be set in the **Config files**.)



Overview: Main window

The screenshot displays the OteTool: OMA software interface. The window title is "OMA" and the menu bar includes "File", "Edit", "View", "Insert", "Tools", "Desktop", "Window", "Help", and "Expret".

OteTool: OMA
Version 1.1
19.10.2012

Options

Path: /docs/measure/LongPhSp/2012/Momentum/20121019M
Change Dir.

SCAN: Save 2D pictures
 SCAN: Save projections
 GRAB: Save 2D pictures

Configurations

LEDA (dropdown) | FG4S.Prosilica (dropdown)
Adjust Screen Position | Adjust Area of Interest

Grab Pictures

Statistics:
Scan: 7 (+/-)
Grab: 15 (+/-)
Background: 5 (+/-)

Grab | Save
Print to logbook

Magnets

Phase Scan Plot

A 2D plot with both x and y axes ranging from 0 to 1. The plot area is currently empty.

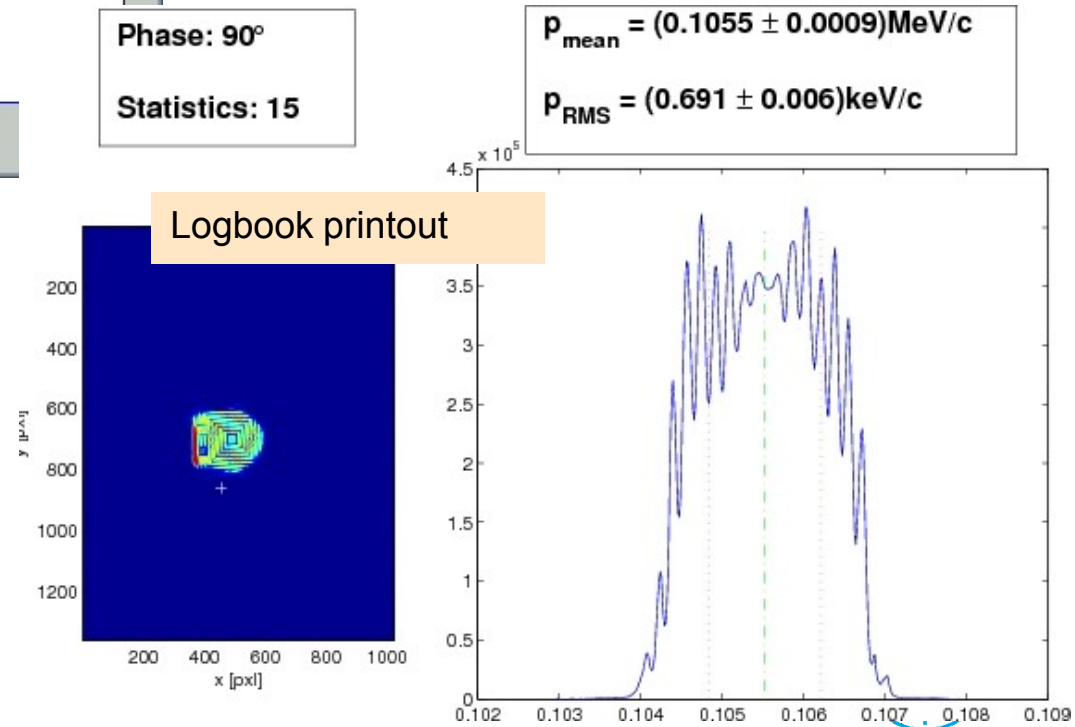
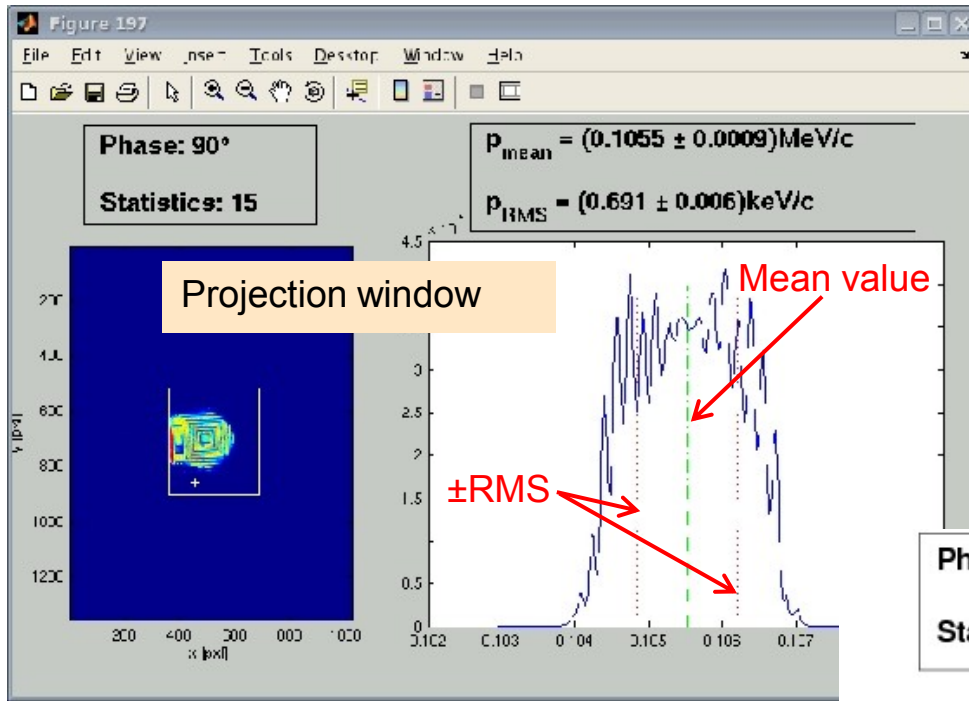
Phase Settings

Parameter ... SP Phase Gun (dropdown)
Phase: From... 94 (+/-) To ... 98 (+/-)
Phase: Step ... 1 # steps 5

START SCAN
Abort
Print | Save



Overview: Projection window



Overview: Scan plot logbook printout

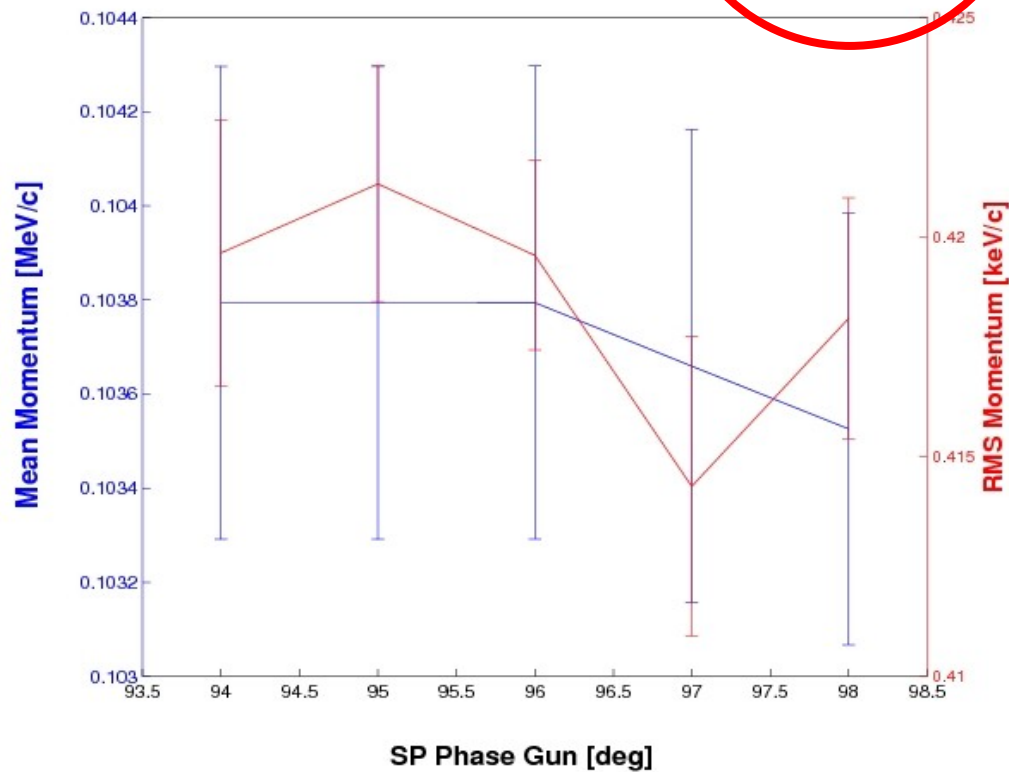
Measured at: LEDA

$\langle p \rangle_{\max} = (0.1038 \pm 0.0005) \text{MeV/c at } 96^\circ$

$p_{\min}^{\text{RMS}} = (0.414 \pm 0.003) \text{keV/c at } 97^\circ$

$I_{\text{main}} = -0.0\text{A}$
 $I_{\text{dip}} = -0.000248\text{A}$
7 statistics
-88 pulses
LT = -888%
SP-Pforw = 15.0
Power = 0.00MW
Reflection = 0%%

Measurement parameters



> Next steps

- Finish the user manual
- Windows version
- Discussions and upgrades

THANX!

