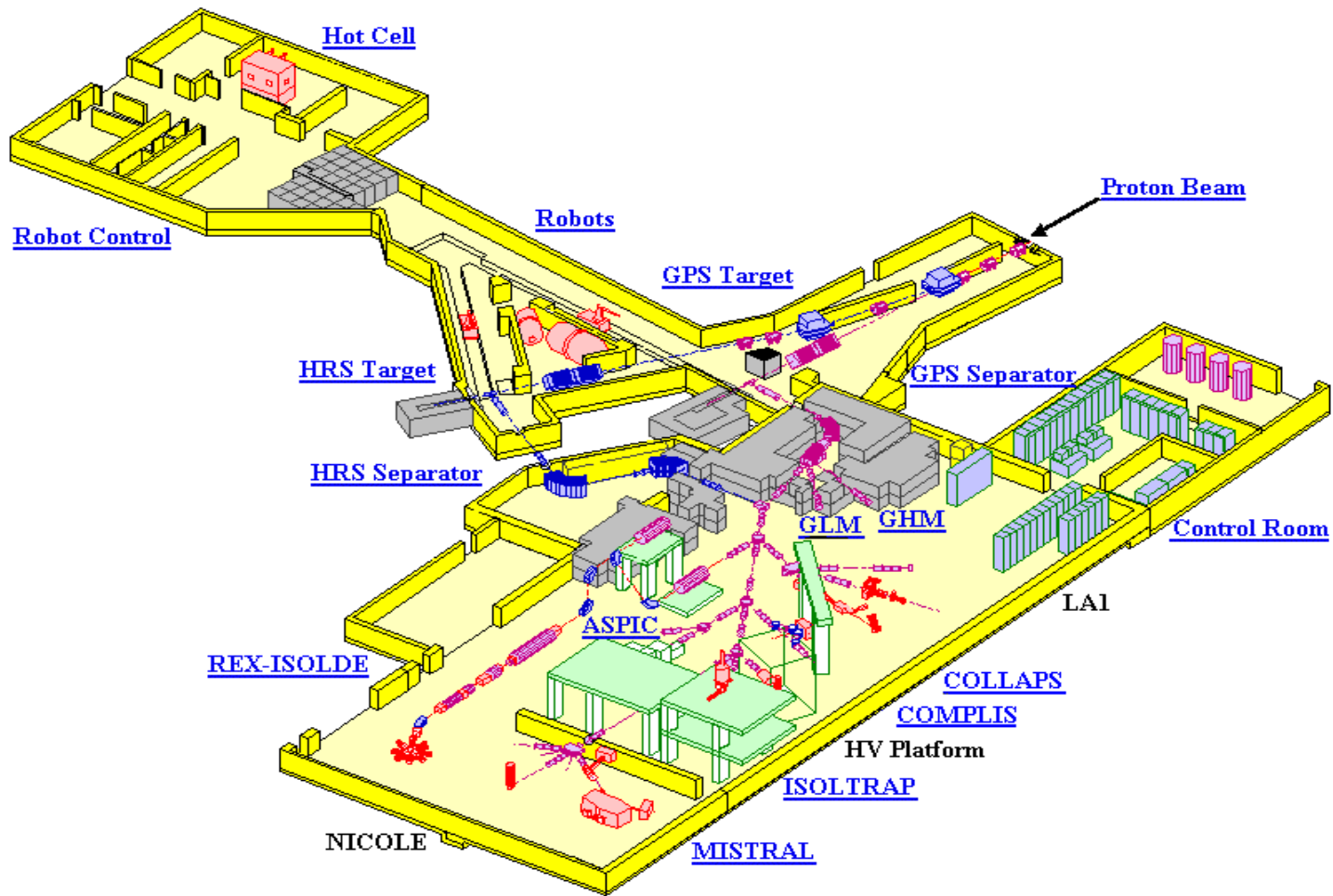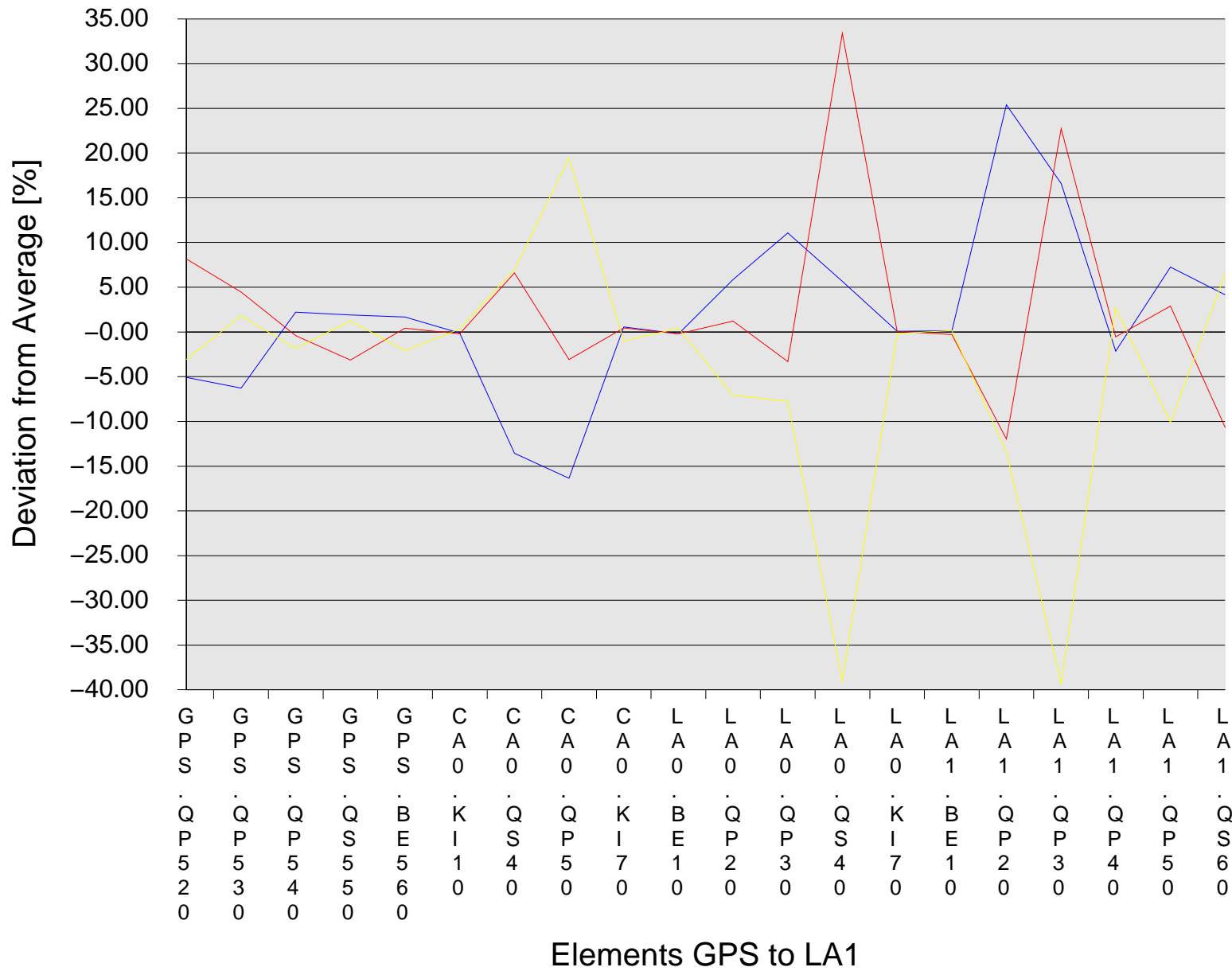# Objective/Goals

Study the possibility to run beams with nominal optics

- Better understanding of beam transport (also in case of problems)
- Find possible improvements
- Faster set–up of beam for the experiments
- Better transmission
- Mats' dream: ABS

Beamline Layout

Beamline settings

Deviation from Average [%]

35.00
30.00
25.00
20.00
15.00
10.00
5.00
-0.00
-5.00
-10.00
-15.00
-20.00
-25.00
-30.00
-35.00
-40.00

GPS.QPS520
GPS.QPS530
GPS.QPS540
GPS.QSS550
GPS.BE560
CA0.KI10
CA0.QS40
CA0.QP50
CA0.KI70
LA0.BE10
LA0.QP20
LA0.QP30
LA0.QSS40
LA0.KI70
LA1.BE10
LA1.QP20
LA1.QP30
LA1.QP40
LA1.QP50
LA1.QSS60

Elements GPS to LA1

Tools

Programs like:

- GIOS
- Cosy infinity

Input needed:

- Ion source emittance
- Geometrical details on the layout
- Geometrical details on the beamline elements
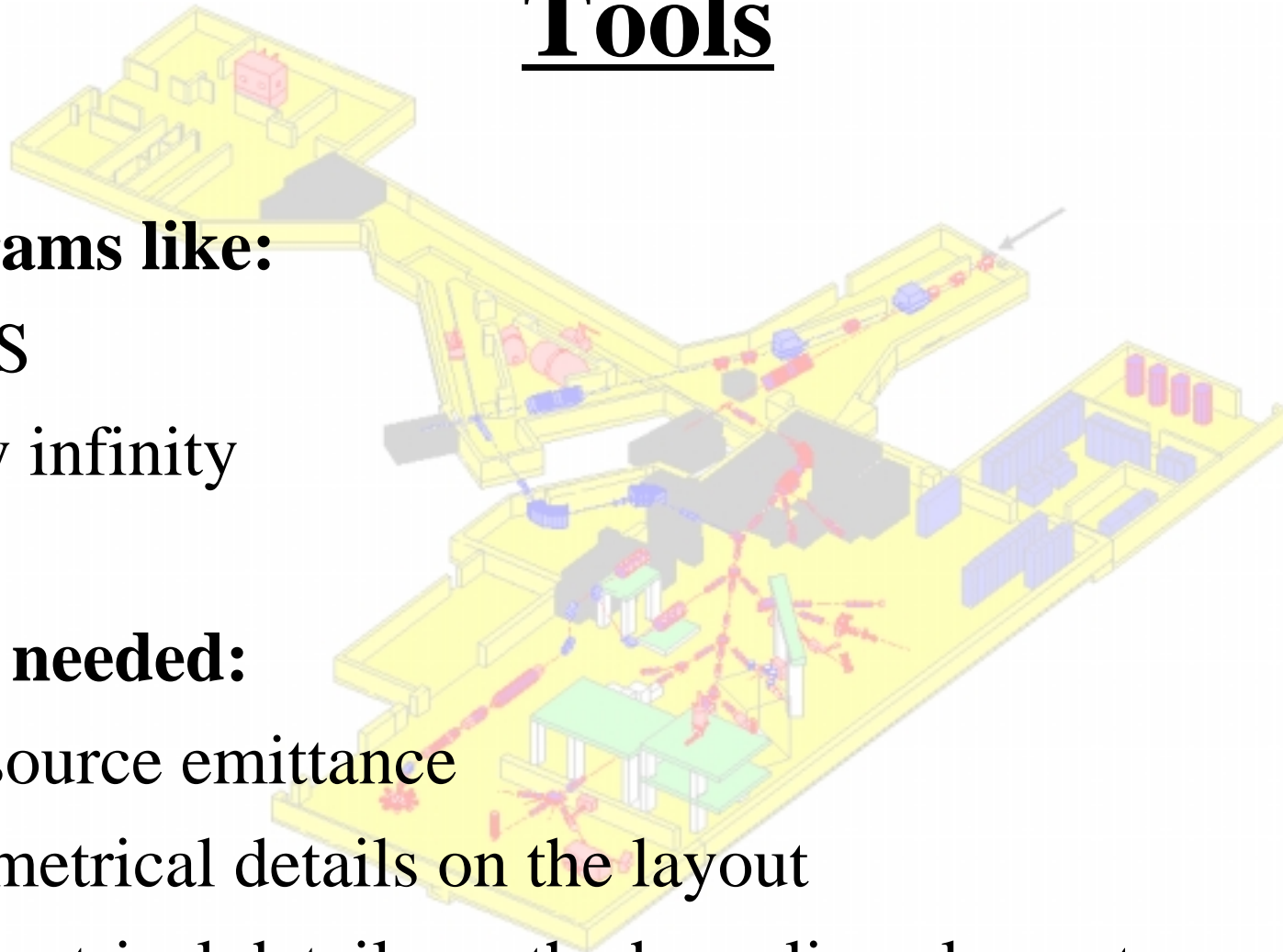
Actions

Create input files

Measurement of beam emittance

Measurement of the effective length of the quadrupoles

Exchange with Rick Baartman from Triumf

Options for Improvements

- Change voltages of beamline elements

- Change polarity of beamline elements

- Change position of beamline elements

- Suppress/add beamline elements

- Change design of beamline elements
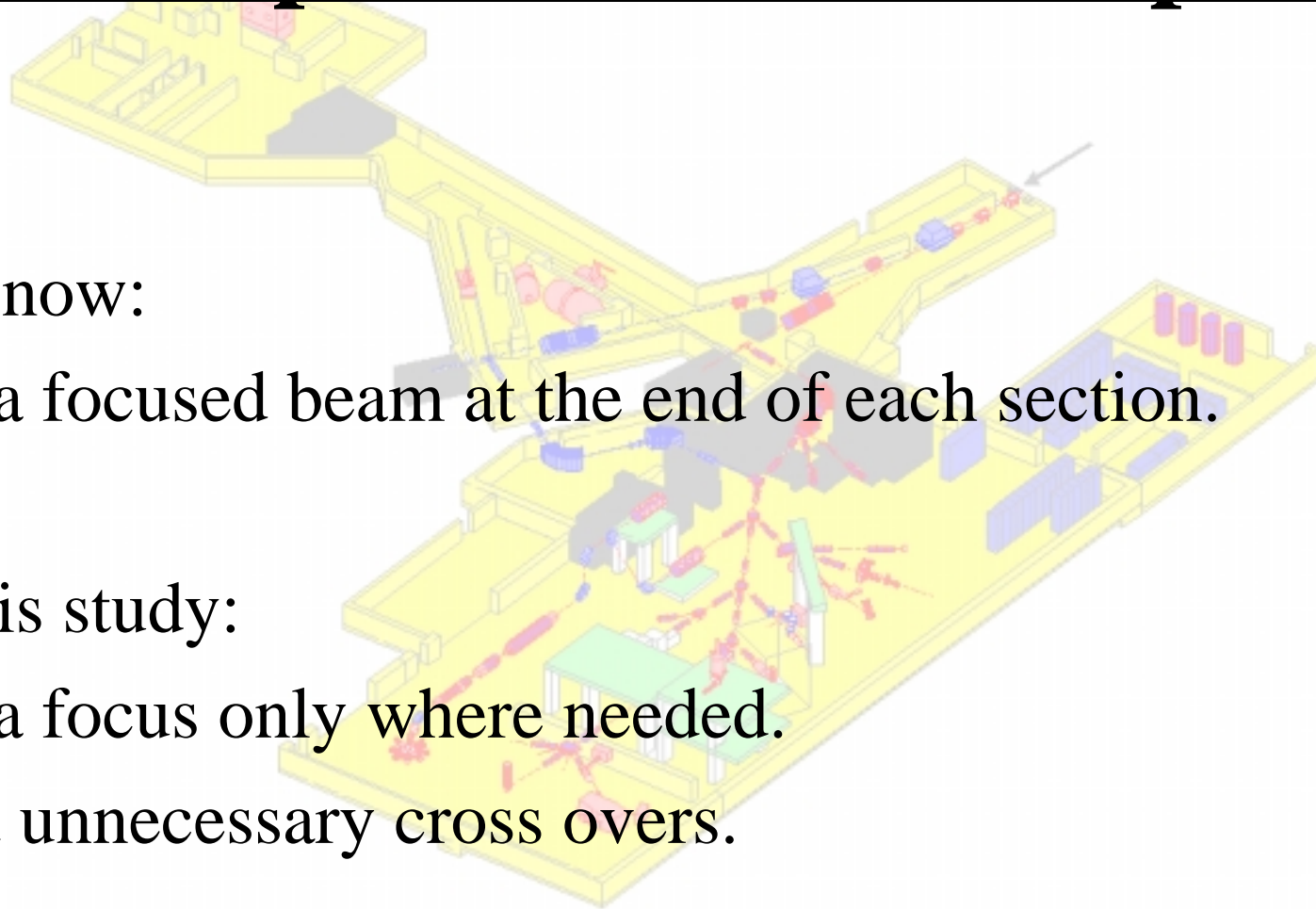
Concept for Beam Transport

Up to now:
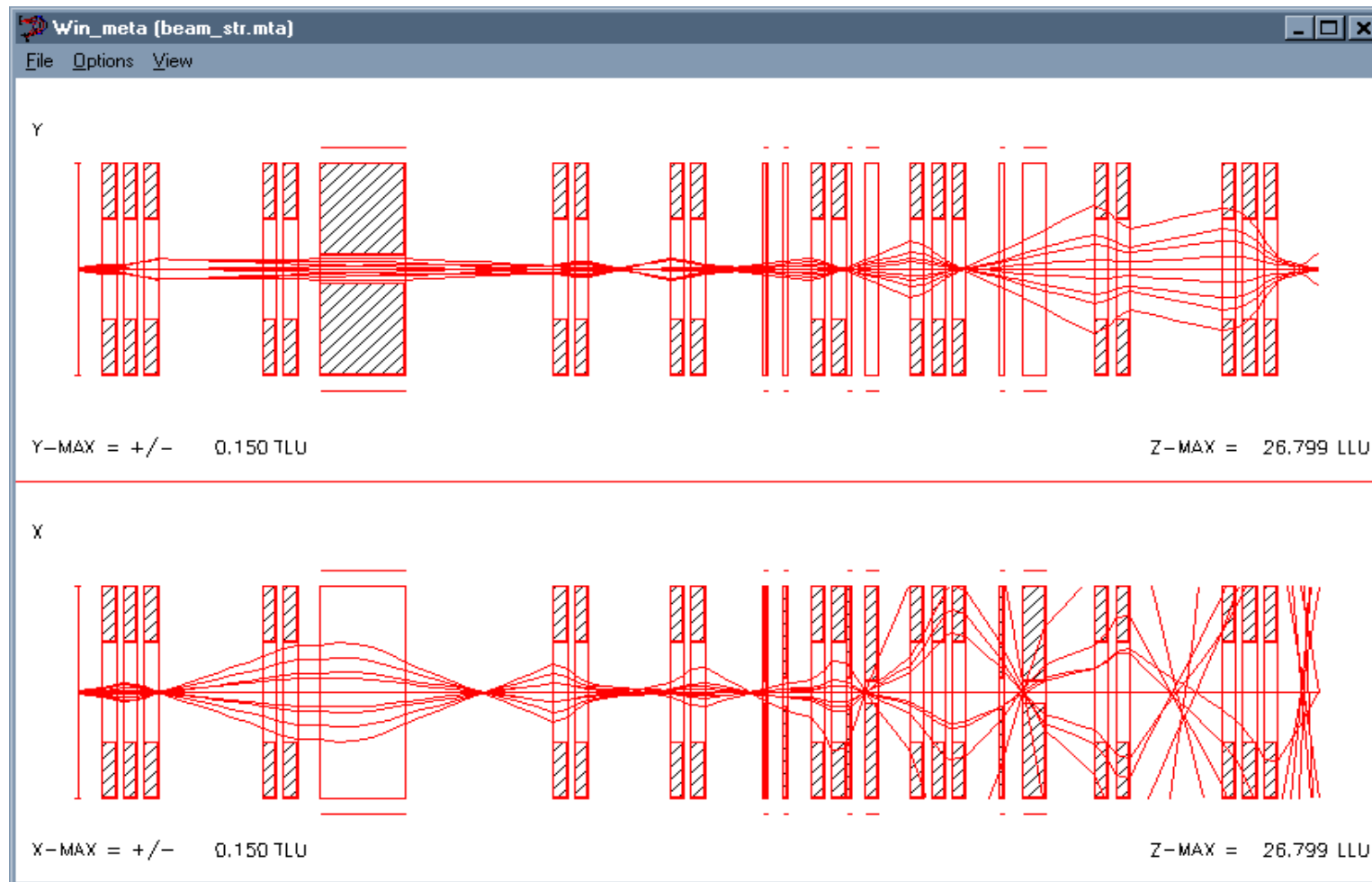
Have a focused beam at the end of each section.

For this study:
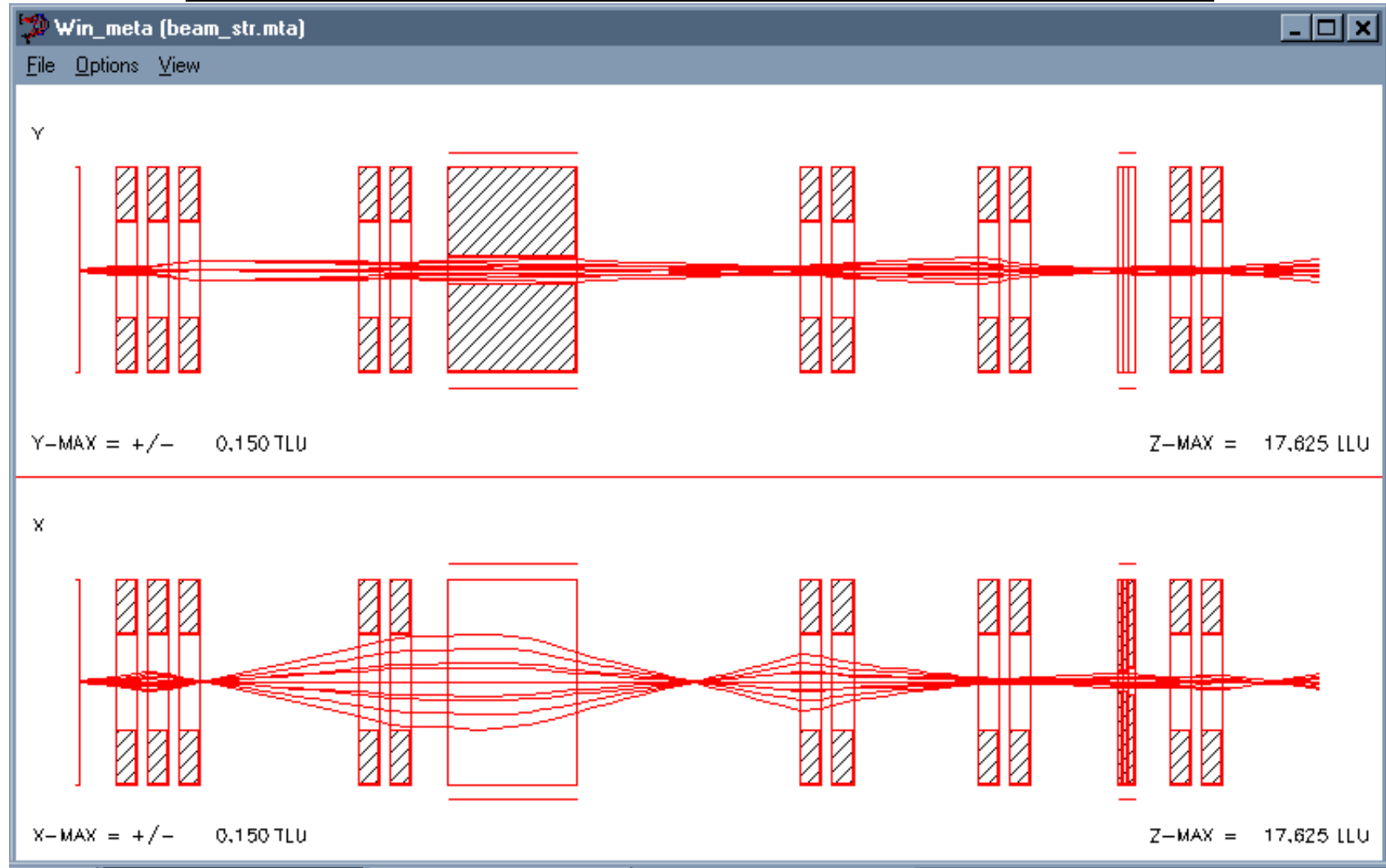
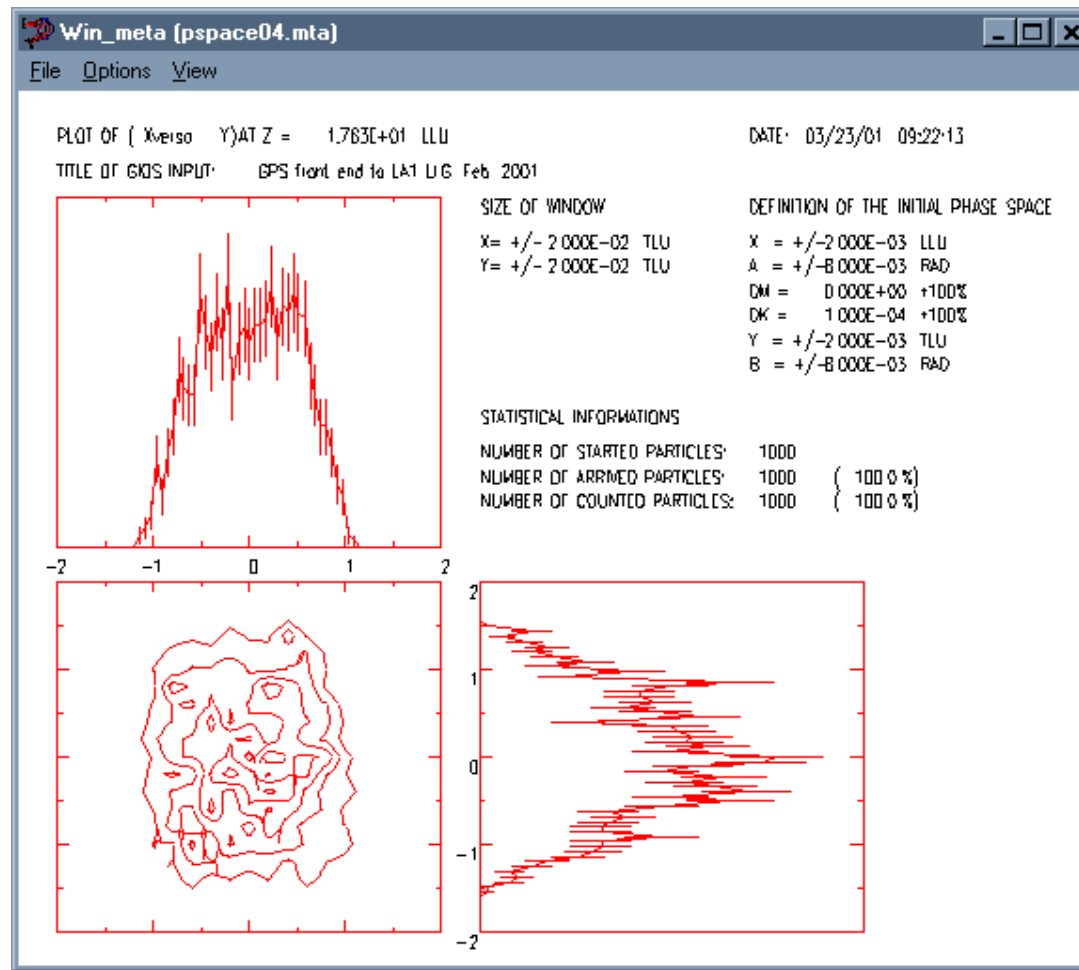Have a focus only where needed.

Avoid unnecessary cross overs.

GIOS calculation to LA1(old)

ISOLDE consolidation sub project Radioactive Beam Transport   Uwe Georg, March 2001, #8
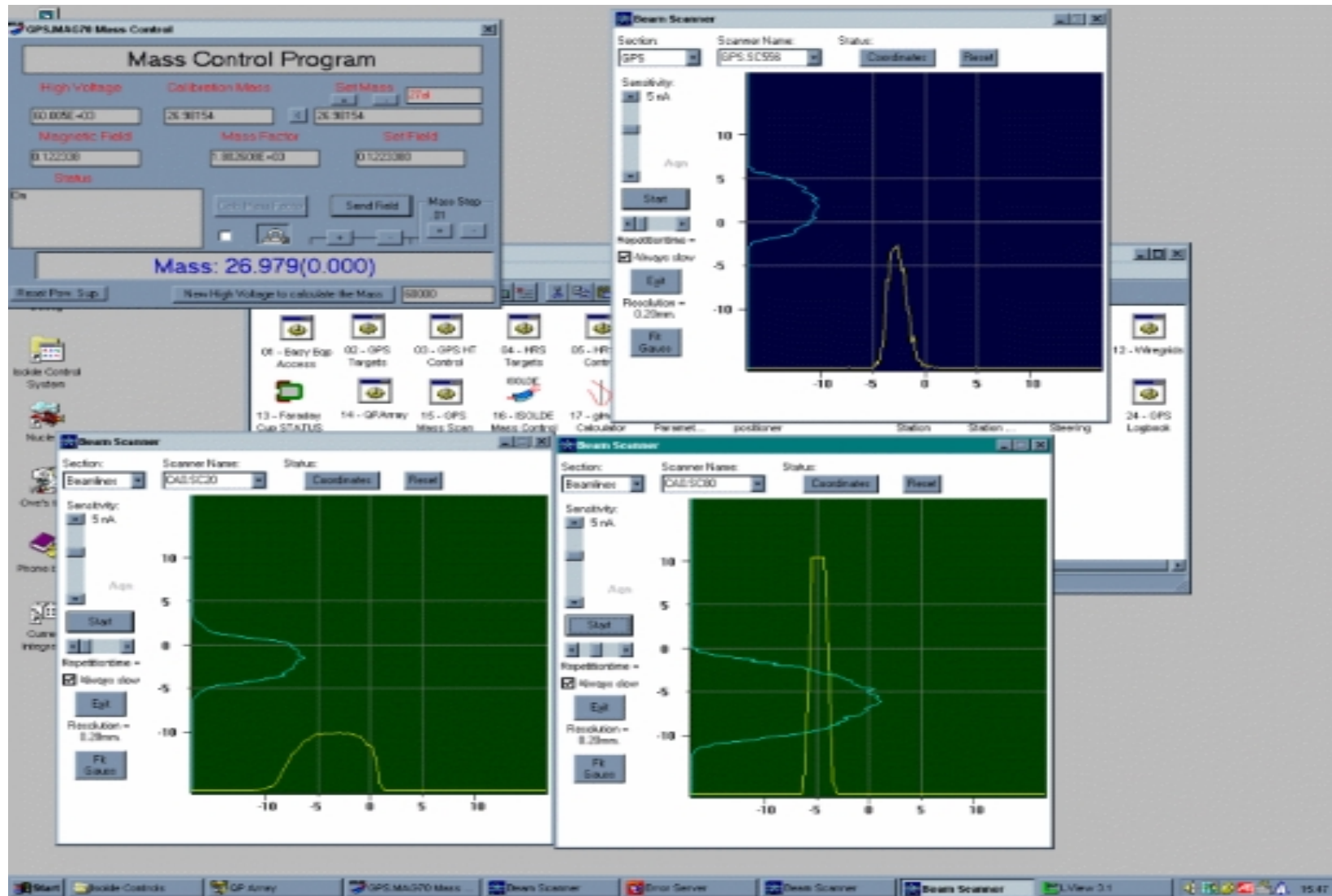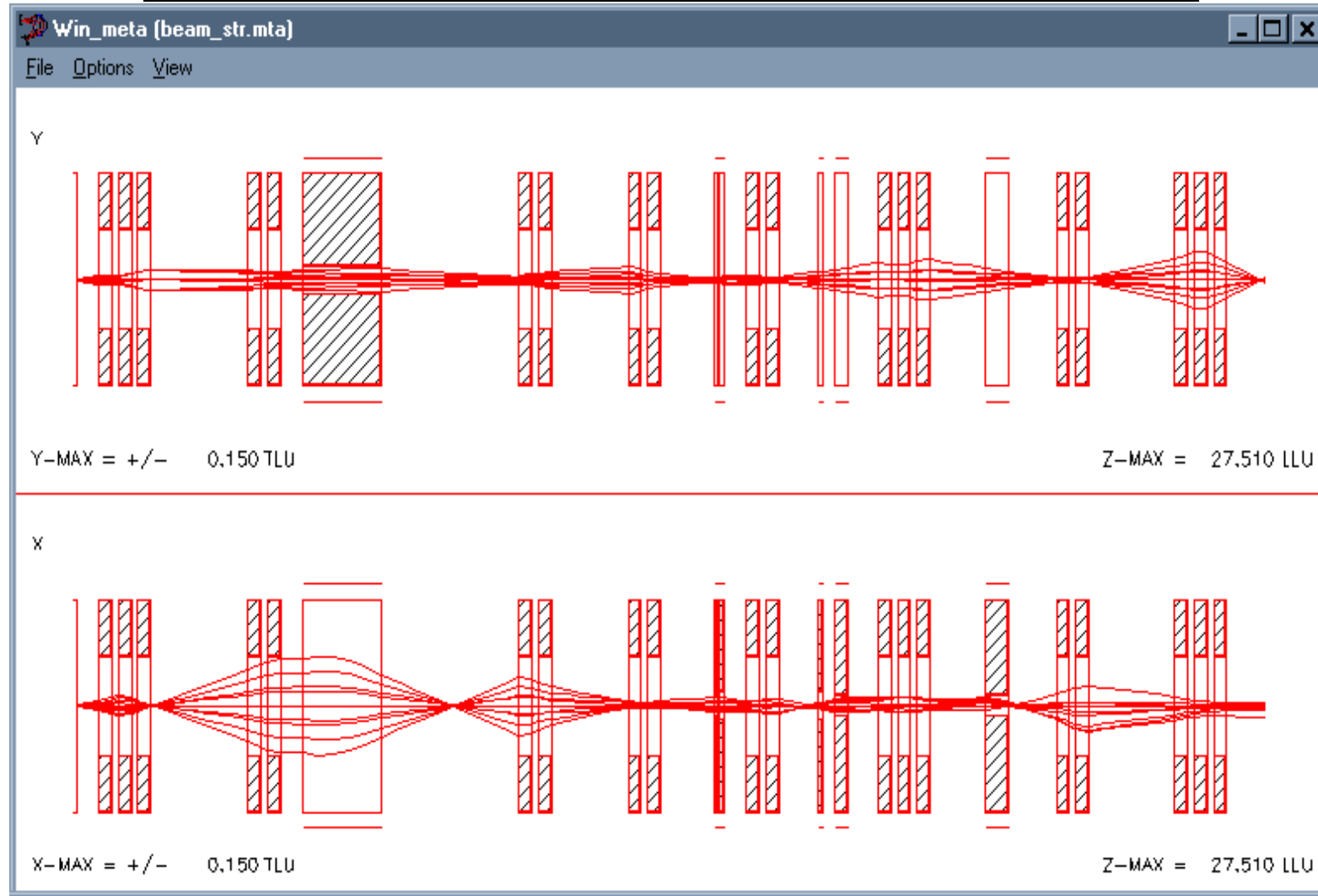
GIOS calculation to CA0

GIOS calculation CA0.SC80

Beam images GPS––––>CA0

GIOS calculation to LA1

<u>Conclusion/Open Questions</u>

Important input parameters are still missing!

The concept of less cross overs and sharp focusing looks promising!

BUT:

How much can we trust in the calculation?

How much can we really gain?