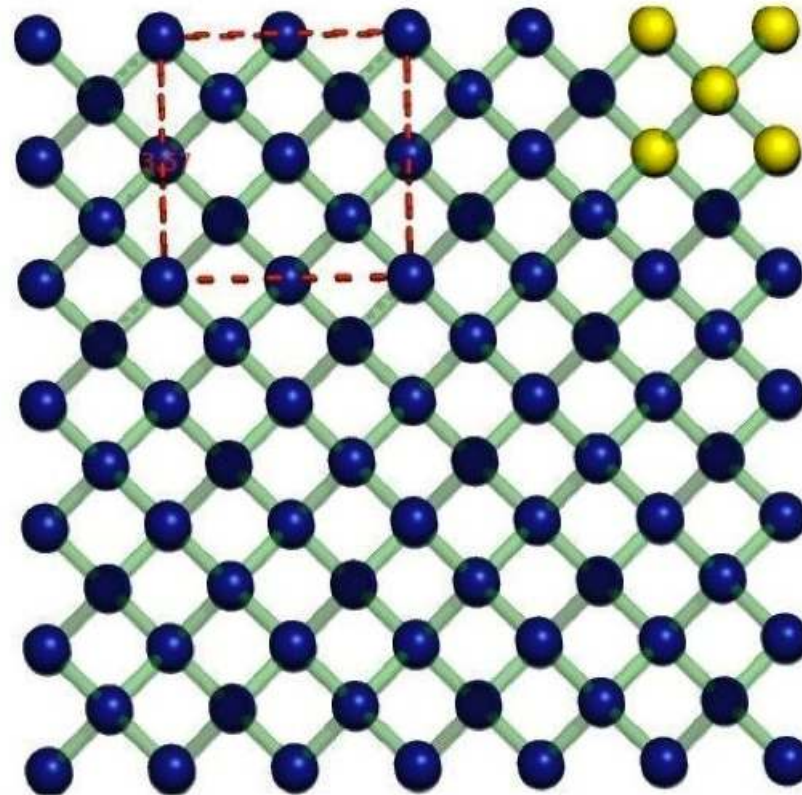


Welcome & News

2nd ADAMAS WS



ADVANCED DIAMOND ASSEMBLIES

Objectives-HP3 WP16 ADAMAS

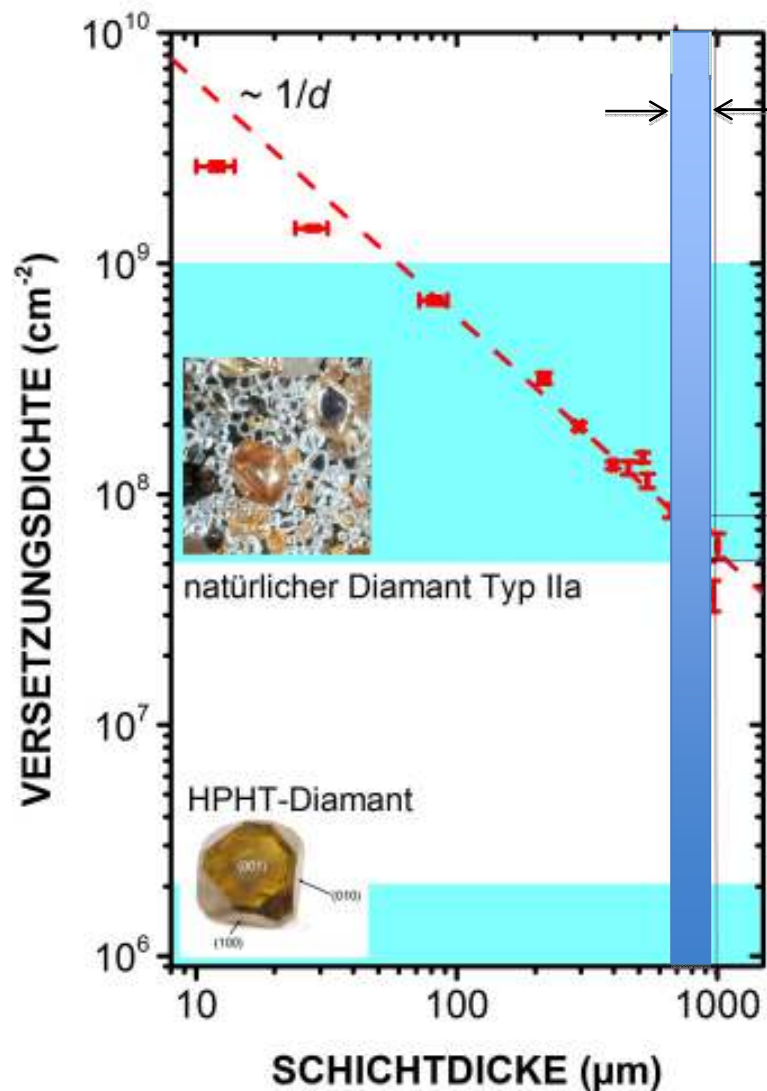
Main goal

Advanced diamond assemblies (DOI):
low mass, large area, and radiation hard -
for Tracking and TOF in FAIR experiments.

- ❑ Improvement of **DOI growth processes** (UA)
- ❑ **Enlargement of detector-grade sample areas**
- ❑ Development of **dedicated BB FEE, incl. ASICs**
(GSI)

Improvement of DOI growth process

Reducing the dislocation density



$d_{\text{DET}} \sim 300 \mu\text{m}$

(UA)

M. Schreck, C. Stehl,
M. Fischer, S. Gsell



dislocation densities
< 10⁸ / cm²

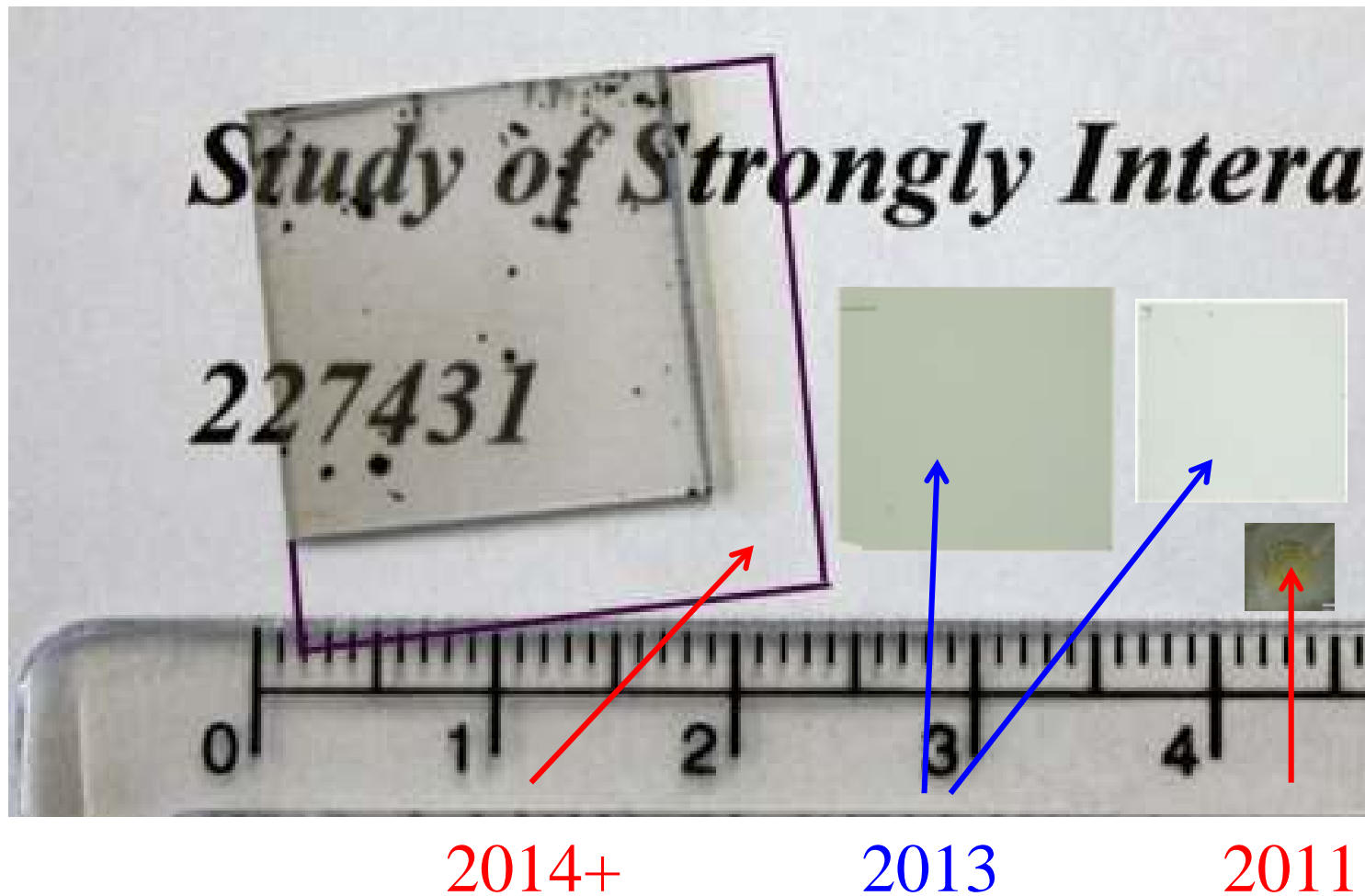


... further decrease
by ELO expected

Details in Session II: M. Mayr

DOI plates for sensor applications

Enlargement of sample area

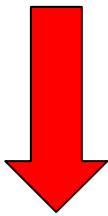


Electronic properties in Session III, EBe

Development of dedicated BB ASIC

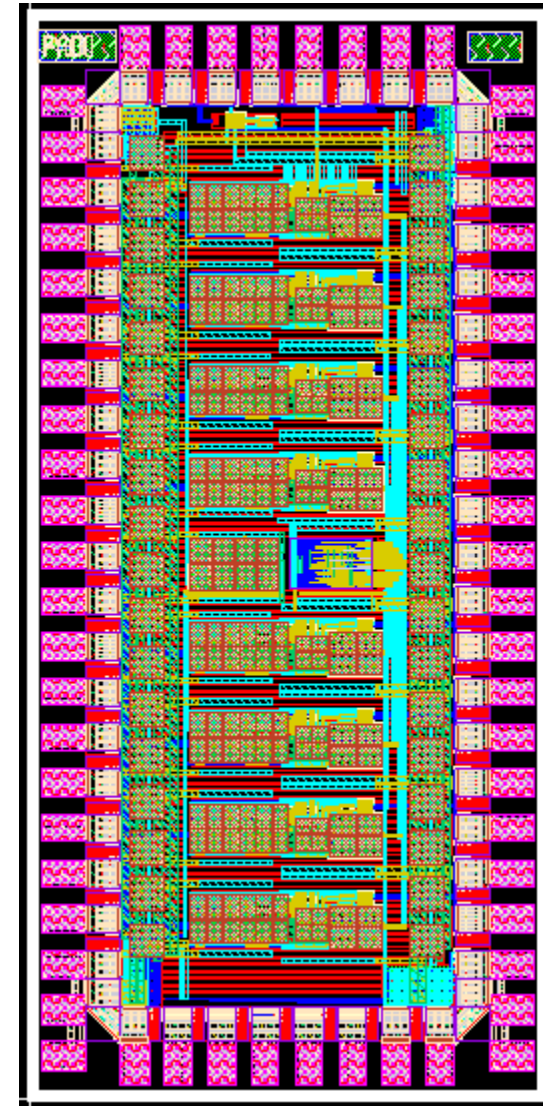
PADI – 8 / PADI-8d →

for MIP time measurements
in the 50ps range



8 channel fast
Preamplifier & Discriminator
180 nm CMOS technology

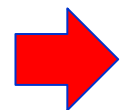
*Details later on by
Mircea Ciobanu, ISS*



Other Involved Institution (OII)

New Diamond Detector Technologies

- ❑ Large Area Continuous Position-Sensitive DD
(ISS, CEA, GSI)
- ❑ 3D Diamond Detectors (CEA, UManchester)
Session II, A. Oh
- ❑ Silicon-on-Diamond (SOD) devices (UFlorence)
Session II, S. Sciortino; S. Lagomarsino



1st Periodic Report (PR1) subm. June 2013

Summary - Achievements/ To do

Diamond Material

- ❑ DOI material properties improving: hole drift almost perfect, electron drift problematic.
- ❑ ELO procedures to be further systematically developed.
- ❑ Scaling up of the sample area.

BB ASICs

- ❑ PADI 8: Submission, lab. and beam tests of DOI_PADI-8 assembly (next beam time possibility at GSI)

The ADAMAS Project is a bit delayed but still very promising.

Carlo Guaraldo

**Towards a
HadronPhysics project
in Horizon 2020**

Spokespersons Meeting - Frascati, 27-28 May 2013



2. Road map to prepare a proposal for Horizon 2020

Publication by the EU of the first Calls in Horizon 2020

01 January 2014

Delivery to Bruxelles of the proposal for Horizon 2020, if Integrating Activities are included in first Calls

**Estimated
31 March 2014**

2 September 2014

Dead line to the community to deliver the proposed activities for Horizon 2020

Estimated
15 November 2013

1 March 2014

Oral presentation of the proposed activities

Estimated
30 November 2013

25-27 March 2014

Start of the work of the Steering Committee (HP3 Management Board plus the appointed new project coordinator) to draft the proposal.

The work includes, in particular

- selection of the proposed activities
- definition of the dimensions of the consortium
- budget allocations

April-July 2014

Estimated beginning

Excerpts from letter of the coordinators, 11. December 13

.... We consider it useful to have a preliminary idea of the interests of the community towards Horizon 2020, which we would put on the www-site, which contains also all the general information: <http://horizon.hadronphysics.eu>

... we would like to know, obviously with all the uncertainty that this early request implies:

- -- -- -- whether proposals are planned to be submitted
- -- -- -- the title of the proposed work package
- -- -- -- the spokesperson and the leading institution
- -- -- -- the involved organizations.

We would appreciate to receive replies before Christmas.

Looking forward to your proposals and with the best wishes for the holidays,

Ulrich Wiedner and Carlo Guaraldo