

20 th RDMS CMS Conference

Russia and Dubna Member States CMS Collaboration

I.Golutvin

Opening

Introductory talk

12 September, Tashkent, Uzbekistan



**First of all I would like to express many thanks
to**

**Prof. Bekhzod Yuldashev – Prezident of the Academy of
Sciences of Uzbekistan**

**for
kind invitation and support of this
Jubilee Conference
in
Uzbekistan**



Welcome

**all the participants who came with us to Tashkent
to attend
the
20th Annual RDMS CMS Conference**

**Special thanks
to
Speakers!**



Tashkent-Samarkand

Uzbekistan, 12-15 September 2018

Conference dedicated to new physics results, Future Physics beyond the LHC era, and the CMS Detector Upgrade, including Endcap Calorimetry

Registration: <http://rdms2018.jinr.ru/>

Contacts: Bekhzad.Yuldashev@cern.ch, frdept@academy.uz, zekie@inp.uz, Anatoli.Zarubin@cern.ch

Co-chairs: I.Golutvin (JINR), B.Yuldashev (INP, UAS)

Deputy-chair: G.Kozlov (JINR)

Scientific secretary: A.Zarubin (JINR)

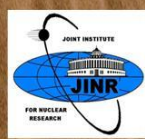
Organising Committee: R.Khalmuradov, S.Mirzaev, I.Sadykov, M.Tashmetov (INP UAS), T.Donskova, M.Gavrilenko, V.Korenkov, I.Semenyushkin, S.Shmatov (JINR), E.Boos (MSU), V.Kim (PNPI), I.Vankov (INRE BAS)

Program Committee: V.Matveev (JINR) - Co-chair, K.Borras (DESY) - Co-chair,

J.Butler (Fermilab), R.Carlin (Padova), M.Danilov (MEPhI), I.Dremin (LPJ), V.Gavrilov (ITEP), S.Gninenko (INR), I.Golutvin (JINR), B.Grinev (Ukraine), N.Krasnikov (INR), A.Khvedelidze (Georgia), L.Levchuk (KPTI), L.Litov (SU), L.Malgeri (CERN), M.Mannelli (CERN), A.Sirunyan (Armenia), Yu.Skovpen (NSU), J.Suares (Belarus), R.Tenchini (Pisa), G.Tonelli (Pisa), N.Tyurin (IHEP), A.Vorobyov (PNPI), A.Zarubin (JINR), B.Yuldashev (INP, UAS)

Organizers:

Uzbekistan Academy of Sciences, Institute of Nuclear Physics (Tashkent), Samarkand State University (Samarkand), JINR (Dubna), CERN (Geneva)



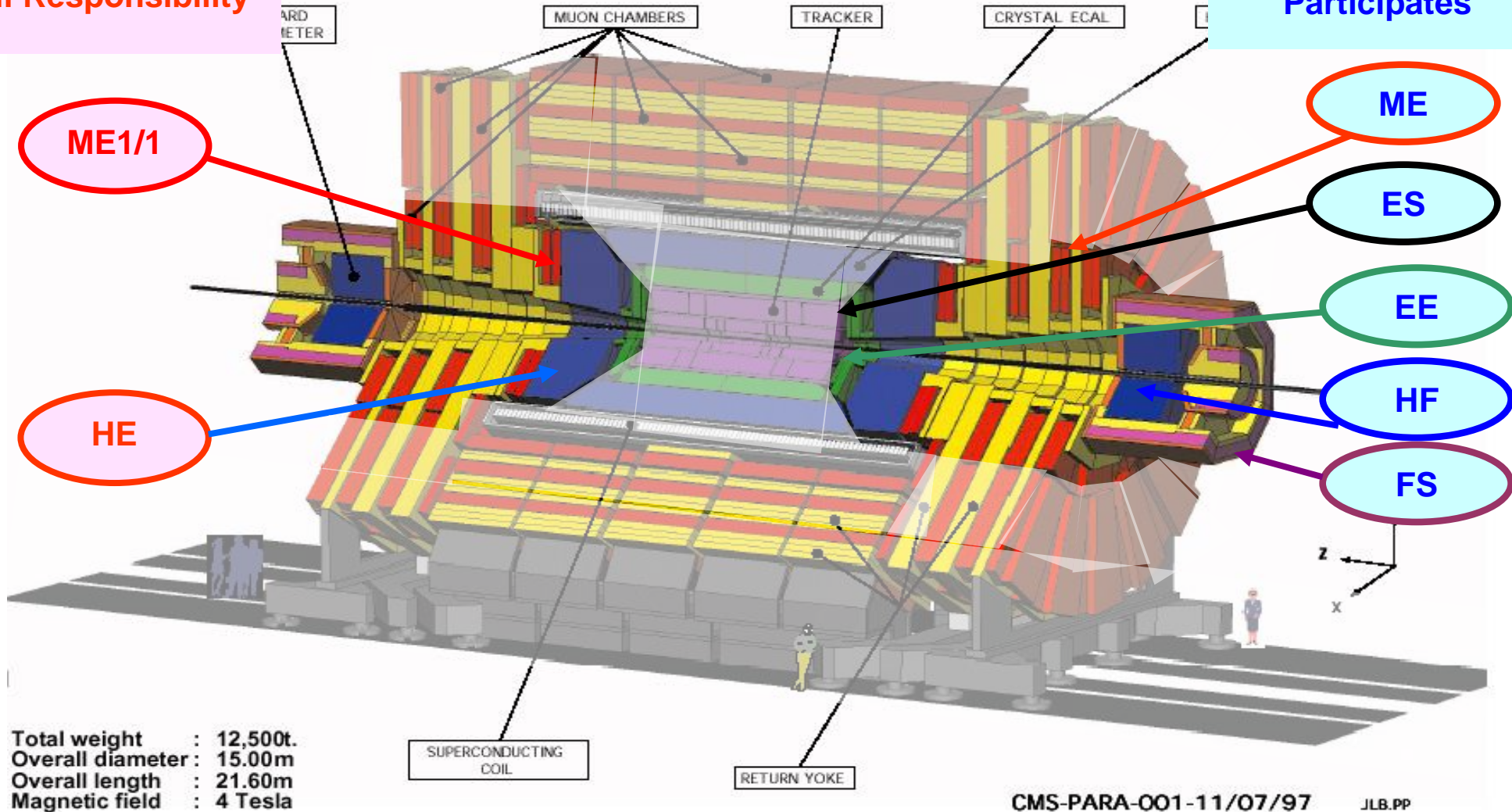
CERN, Geneva	I-IV	1995-1999
ITEP, Moscow,	V	2000
MSU, Moscow,	VI	2001
Protvino,	VII	2002
Dubna,	VIII	2003
Minsk,	IX	2004
Gatchina,	X	2005
Varna,	XI	2006
Minsk,	XII	2008
Dubna,	XIII	2009
Varna,	XIV	2010
Alushta,	XV	2011
Erevan,	XVI	2013
Dubna,	XVII	2014
Varna,	XVIII	2015
Varna,	XIV	2016
Tashkent-Samarkand,	XX	2018

Present CMS Configuration

CMS Compact Solenoidal Detector for LHC

RDMS bears
Full Responsibility

RDMS
Participates



Total weight : 12,500t.
Overall diameter : 15.00m
Overall length : 21.60m
Magnetic field : 4 Tesla



Huge RDMS Contribution to CMS construction, operation, data taking and analysis

RDMS scientists invented new detectors and developed their wide application

The present CMS status will be presented in overviews talks of K.Borras and J.Batler

**All CMS physics results
reported by now have been
obtained at this apparatus**



During long CMS way we lost many brilliant RDMS physicists



***Vitali Kaftanov, Petr Moissenz, Viktor Konoplyanikov,
Anton Volodko, Vlado Genchev, Igor Gramenitsky,
Dmitry Smolin, Sergey Rusakov, Vladimir Roinishvili,
Victor Kryshkiv, Pavel Sorokin, Nikolai Shumeiko, Elena
Tikhonenko***

***who made important contribution to the CMS
Experiment and its achievements in frontier
Physics***



Main Achievement of CMS and ATLAS - discovery and investigation of neutral Higgs Boson

- **December 2011** **evidence of new boson with mass of 125 GeV**
 - at 7 TeV for 5.1 fb⁻¹ with $\sim 3 \sigma$
- **July 2012** **discovery of new boson with mass of 125 GeV**
 - at 7, 8 TeV for 5.1, 5.3 fb⁻¹ with $\sim 5 \sigma$

Higgs to bosons and fermions coupling constant measurements:

- **August 2017** **$H \rightarrow \tau\tau$**
 - at 7, 8, 13 TeV for 5.1, 19.7, 35.9 fb⁻¹
- **April 2018** **$H \rightarrow tt$**
 - at 13 TeV for 35.9 fb⁻¹
- **August 2018** **$H \rightarrow bb$**
 - at 13 TeV for 35.9 fb⁻¹

Talk of G.Tonelli at Physics result morning session I

Topics

to discuss at this Conference



12 September, Wednesday

CMS new physics results and near-term perspectives

Presentation of Russian edition of Book A.Nisatti and G.Tonelli «The Discovery of the Higgs Boson at the LHC»



13 September, Thursday

**Long-term future plans of the LHC
and other machines**

**Perspectives on Physics in the HL-
LHC era and beyond**



14 September, Friday

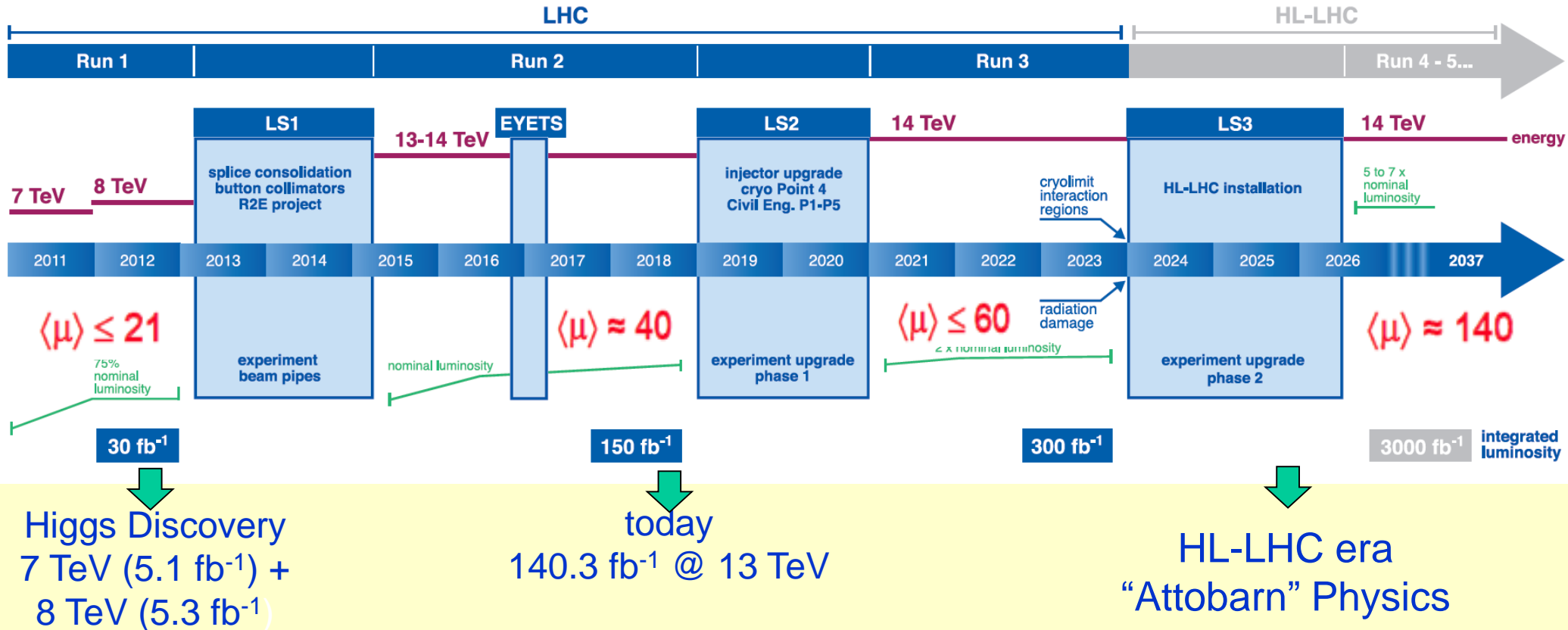
**Trip to Samarkand and Public lectures
at the Samarkand State University with
wide participation of students**



15 September, Saturday

CMS Phase II Upgrade with focus at HGCAL

LHC / HL-LHC Plan





15 September, Saturday

We hope the discovery potential of upgraded CMS Detector will be considerably increased, and

We expect the new generation of CMS physicists will make significant progress in our knowledge of structure of the matter

The main goal of the meeting - to help to optimize a strategy of future investigations at CMS after Upgrade

Have a nice meeting!



Important Announce

Dear Speakers!

The Proceedings will be published.

In a month after the Conference
the text of about 5-7 pages (in agreement with
organizers) should be delivered to:

Anatoli.Zarubin@cern.ch

**either in MS Word or LaTeX
(see template at conference site).**



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Uzbekistan, 12-15.09.2018

12 September, Wednesday

- CMS new physics results and near-term perspectives.

13 September, Thursday

- Long-term future plans of the LHC and other machines.
- Perspectives on Physics in the HL-LHC era and beyond.

14 September, Friday

- Trip to Samarkand with a lectures at the Samarkand State University with a wide participation of students.

15 September, Saturday

- Perspectives on the CMS Phase II Upgrade and Detector in the Long-term.
- On RDMS participation in HGCal.

Agenda:

<https://indico.cern.ch/event/754760/timetable>
pswd: RDMS2018