

INTERNATIONAL MASTERCLASSES HANDS ON PARTICLE PHYSICS

Moderators' orientation

Uta Bilow, TU Dresden
CERN, 22.02.2017



You will be sitting here!



EDU 33-R-016



IPHC 3 Amphi - Strasbourg



TU Dortmund



MC-UppsalaUniversity-Uppsala-SE



Ankara METU



"HU Inst.f.Physik"

Typical situation:

- 2 moderators
- 5 groups of students (16-19 y)



Students are

- exhausted
- excited

They expect

- physics results are discussed
- questions can be asked
- meet groups from other countries

Challenges

- English is often not their mother tongue
- sometimes shy to speak
- groups should predefine speakers, but...
- sometimes poor sound quality
- not used to listen to Vidyo sound

To meet the challenge:

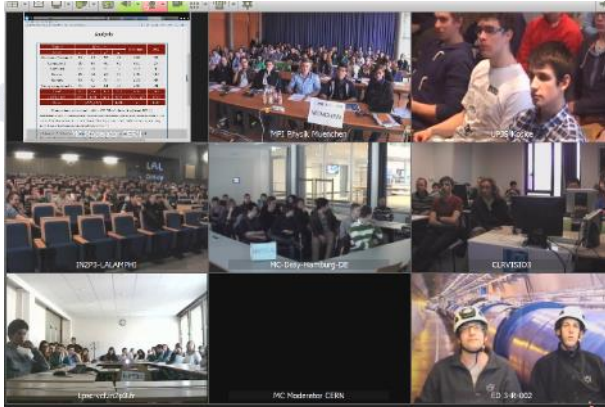
- this training
- moderators work in pairs
- strict agenda
- rich documentation
- rooms prepared
- support by Vidyo team

Concept of Masterclasses / IMC

- High school students (15 – 19) are invited to a university or research lab as „scientists for one day“
- Introductory talks (standard model, detectors, accelerators)
- Hands-on: measurement with LHC data (ATLAS, CMS, ALICE, LHCb)
- International video conference (3 – 5 groups + CERN/
Fermilab)
 - Combination of results
 - Discussion
 - Q&A
 - Quiz
- Organized by IPPOG



Sample Agenda



LOCAL TIME:

8:30 - 9:00

9:00 - 10:00

10:30 - 11:30

12:00 - 13:00

13:00 - 15:00

15:00 - 16:00

16:00 - 17:00

ACTIVITY:

registration & welcome

introduction to Particle Physics

second talk or tour

lunch

data analysis

local combination + discussion

videoconference with CERN
or Fermilab



IMC17

- Worldwide effort, coordinated by TU Dresden and Ken Cecire, QuarkNet/U.Notre Dame
- 2017: 1.3. – 11.4.2017
- 59 VCs at CERN, 21 at Fermilab



Schedule

	Mon, Mar 06	Tue, Mar 07	Wed, Mar 08	Thu, Mar 09	Fri, Mar 10
topic	VC 1: ATLAS Z	VC 1: ATLAS W	VC 1: ATLAS Z	VC 1: ATLAS Z	VC 1: ATLAS W
	Marseille	Valencia	London Queen Mary	Naples	Dresden
	Krakow	Mainz	Bologna	Zaragoza	Braga U Minho
	Belgrade	Genoa	Vila Real	Athens NTU	Trencin
	Anncy	Lund	Naples	Bragança	Marseille
		Erlangen	Uppsala	Tarnow	Rabat
topic	VC 2: ALICE S.P.	VC 2: LHCb	VC 2: CMS	VC 2: LHCb	VC 2: CMS
	Nantes	Ferrara	Lyon	Cincinnati McAuley	Osijek
	Vienna SMI	Heidelberg	Cyprus	Marseille	Lyon
	San Luis Obispo	Perugia	Madrid CIEMAT	Valencia	Debrecen
	St. Petersburg	Marseille	Split	Genoa	Palaiseau
		Bologna	Rome Sapienza	Milano Bicocca	São Paulo SPRACE

Moderators 2017:

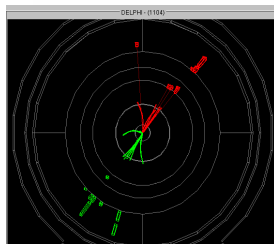
	Andreas Albert (CMS)		Mike Albrow (CMS)		Muhammad Alhroob (ATLAS)		Mahmoud Alstaty (ATLAS)
	Paula Alvarez (LHCb)		Friederike Bock (ALICE)		Elvire Bouvier (CMS)		Lorenzo Capriotti (LHCb)
	Ina Carli (ATLAS)		Adrian Carmona (Theory)		Mirko Casolino (ATLAS)		Maria Cepeda (CMS)
	Leo Cerda (ATLAS)		André David (CMS)		Francesca Dordei (LHCb)		Mike Fenton (ATLAS)
	Alejandro Gomez (CMS)		Julia Gonski (ATLAS)		Rebeca Gonzalez Suarez (CMS)		Despina Hatzifotiadiou (ALICE)
	Michael Hauschild (ATLAS)		Alexander Held (ATLAS)		Thibaud Humair (LHCb)		Roland Jansky (ATLAS)
	Jason Kamin (CMS)		Henning Kirschenmann (CMS)		Katharine Leney (ATLAS)		Chris Martin (ATLAS)
	Pedja Milenovic (CMS)		Marcus Morgenstern (ATLAS)		Stefanie Morgenstern (ATLAS)		David Morse (CMS)

and more! Not enough space to show ...

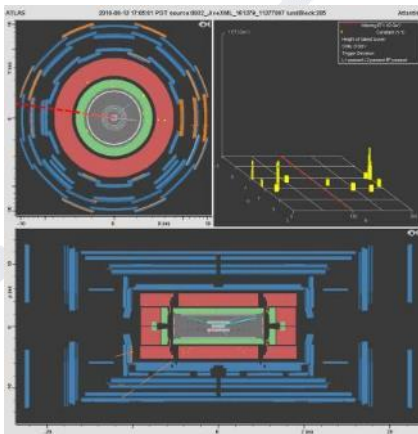
www.physicsmasterclasses.org/index.php?cat=schedule#moderators

e-group ippog-masterclass-moderators@cern.ch

Brief History of IMC



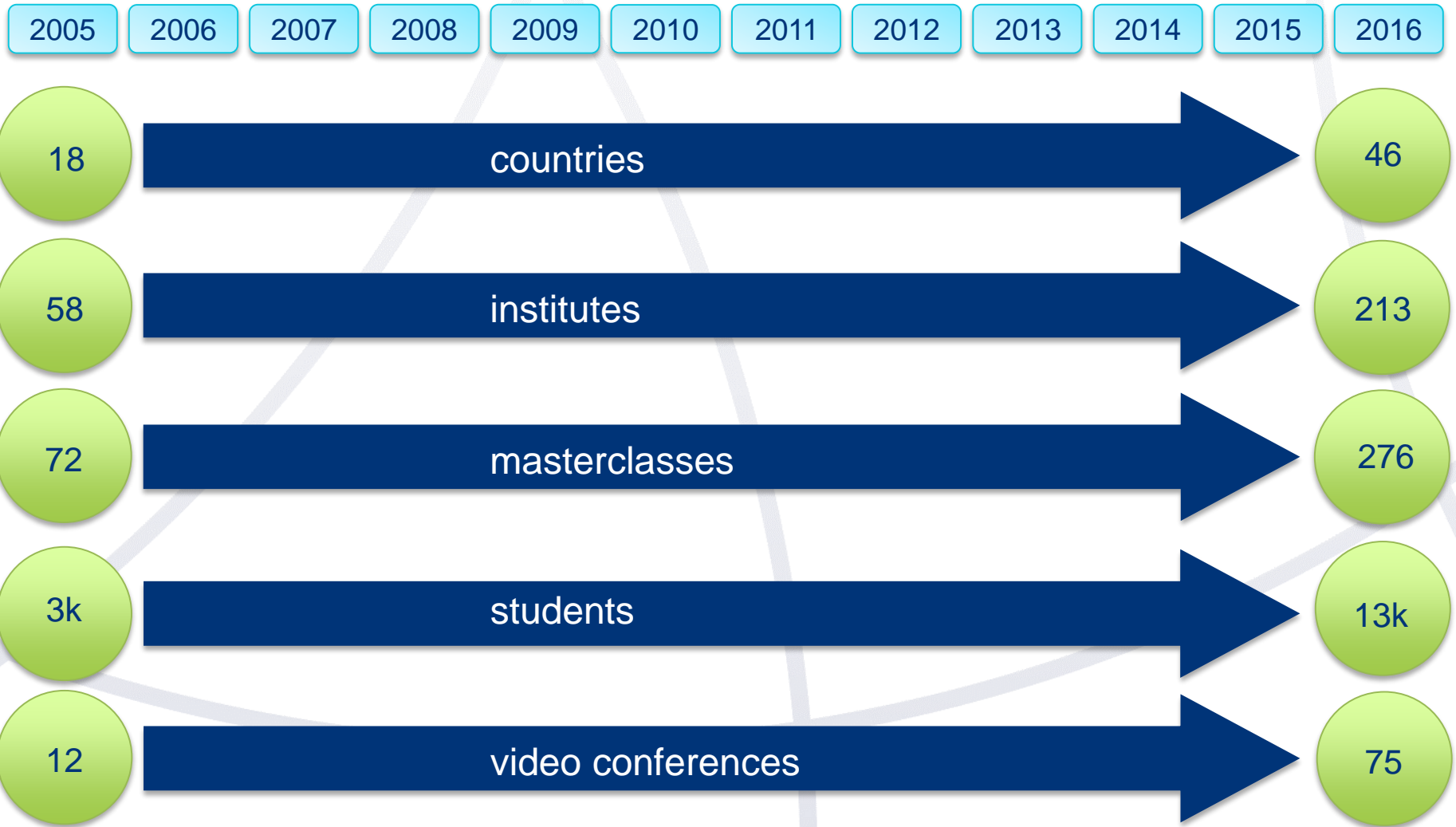
- Idea from UK, 1996 (R. Barlow et al.)
- 1997: 1. Masterclass in UK with 7 institutes
- 1998 nationwide uptake
- 2005: Adopted by EPPOG/IPPOG for all Europe
- Use of LEP data
 - OPAL Identifying Particles
 - DELPHI Hands on CERN
- 2006: U.S. joined program (QuarkNet)
- 2011: LHC-based Masterclasses only
- 2014: all 4 LHC experiments



<http://cerncourier.com/cws/article/cern/55890> (How it all begun)
<http://cerncourier.com/cws/article/cern/57305> (MC in the LHC era)



...and how it has grown since then



Enjoy your sessions!



Thank you for being part of IMC17!

