

INTERNATIONAL MASTERCLASSES HANDS ON PARTICLE PHYSICS

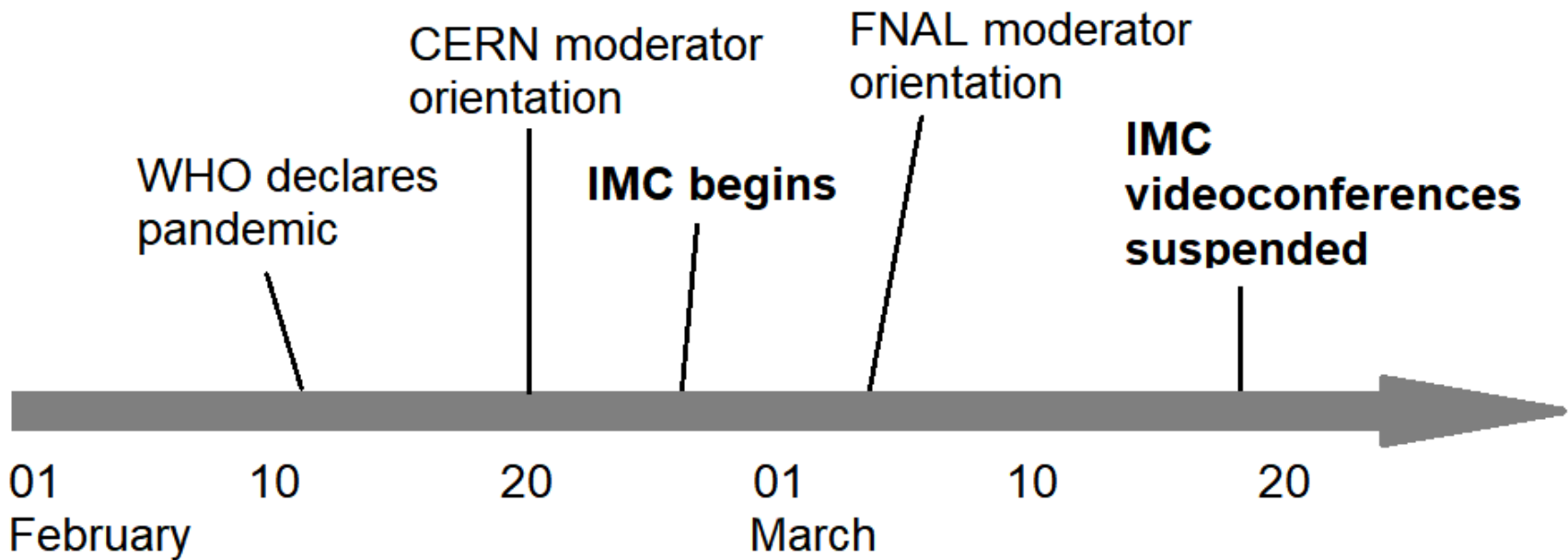
Coping with COVID
Uta Bilow + Ken Cecire

IPPOG meeting online
07.05.2020



COVID-19 and IMC

Timeline



COVID-19 and IMC

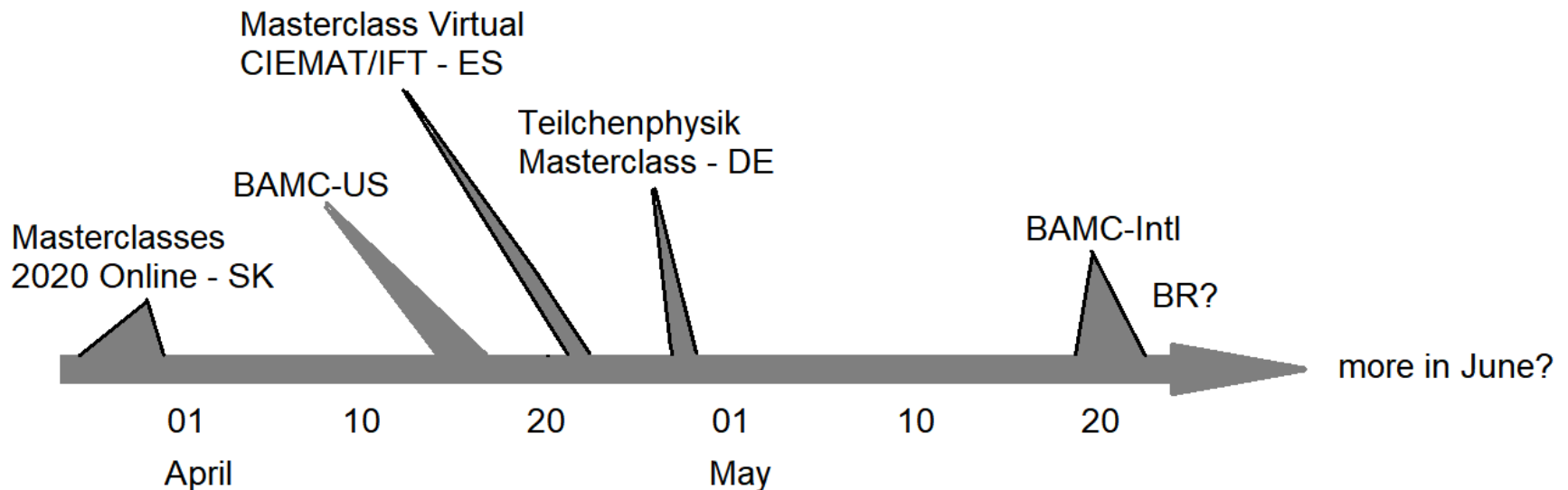
Please note several cancelations, indicated by ~~strikethrough~~. Most are due to COVID-19.

Date/time CT	Institutes	Measurement	Indico page	Moderator(s)	Staff	Location
Thu 12 Mar/09:30	Benha, Santiago de Compostela, Tbilisi	CMS		Albrow	Glover	
Thu 12 Mar/10:30	Rochester-Canandaiuga	MINERvA		Fine	Cecire	
Thu 12 Mar/15:00	DeKalb, Notre Dame	ATLAS		Dittmer	Glover	
Thu 12 Mar/21:00	Tijuana	CMS		Yu	Gatz*	
Fri 13 Mar/21:00	Hanoi	CMS		Yu	Cecire	videoconference canceled
Sat 14 Mar/10:00	Beja, Covilha, Faro, Heraklion	ATLAS		Adelman, Damera	Cecire	videoconference canceled
Sat 14 Mar/14:00	Hermosillo, Medellin	CMS		Gerber	Cecire	
Sat 14 Mar/21:30	Punahou, Singapore, Zhongli	CMS		Dann	Cecire	
Wed 18 Mar/09:00	Benha, Notre-Dame	CMS		Hall	Glover*	videoconference canceled

By 18th March, IMC masterclass videoconferences were canceled.

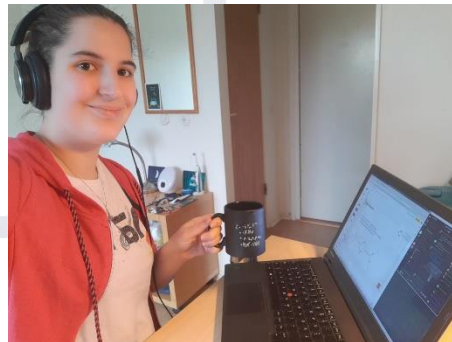
Drought...and response

- Virtual Masterclass in Slovakia
- QuarkNet builds remote-learning CMS masterclass – Big Analysis of Muons in CMS (BAMC) in U.S.
- CIEMAT/IFT stages remote CMS masterclass in Spain
- Netzwerk Teilchenwelt builds remote ATLAS W-path masterclass
- More



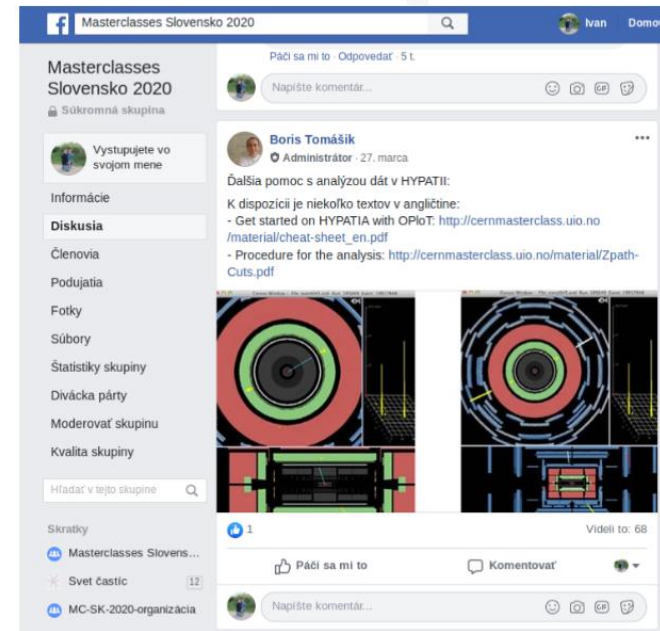
Remote ATLAS-Masterclass in Germany

- Organized by University Bonn (B. Valeriani-Kaminski, M. Hansen)
- 28./29. April (afternoons) <https://indico.cern.ch/event/910423/>, via Zoom
- Mailing to teachers: 20 students subscribed within 2 days, (> 20 on waiting list)
- 3 tutors (PhD students)
 - Live lectures
 - Data analysis in breakout rooms
- All material adapted (tally sheet online, quiz with kahoot)
- Instructions for use of Zoom, installation of Minerva sent beforehand

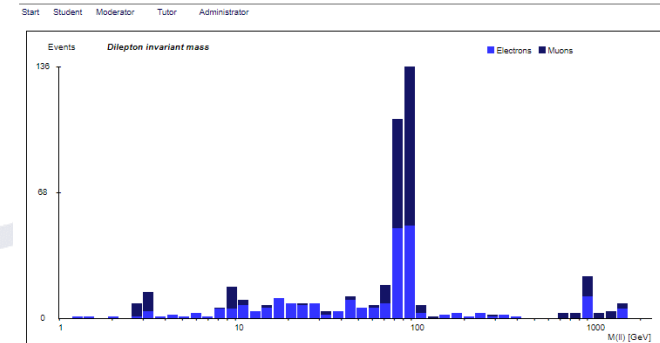


Virtual Masterclass in Slovakia

- Preparatory group formed on *12th March* with 5 organizers from 4 universities
- Organized on Facebook (79 members)
- Lecture on YouTube (66 viewed)
- Sent instructions for HYPATIA and data assignments to students
- 10 volunteers tutored students online
- 10 students uploaded results and took part in the final videoconference



OPlOT – MasterClass – Combination for Slovakia Online on March 30



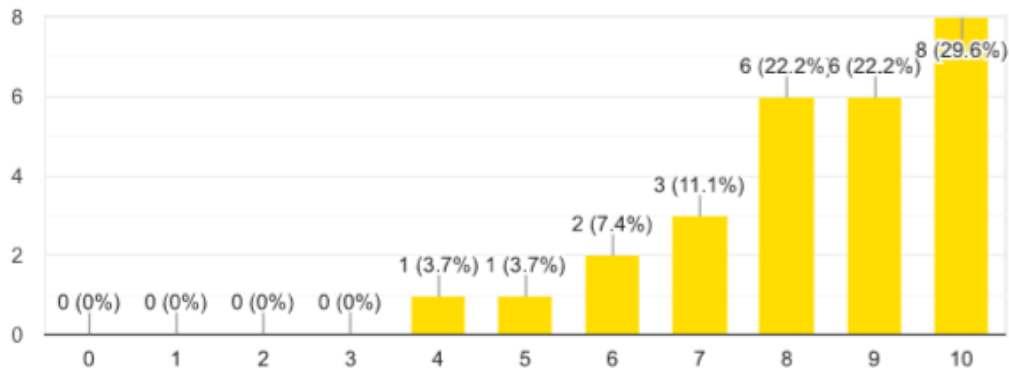
CIEMAT/IFT Masterclass

- CMS masterclass, all on 23rd April
- 84 students + teachers, 10 tutors
- CMS virtual visit via Google Earth
- Videoconference on Zoom, quiz via kahoot
- Well-received by students



Puntuación de 0 a 10 la experiencia

27 responses



BAMC Masterclass in U.S. (mostly)

- Simplified CMS measurement to muons-only
- Online support to students:
 - Student page with 4 screencasts
 - SM/CMS webinar, 15 April
 - Teachers coach online
- Online support to teachers
 - Teacher page
 - Q&A videocons
- Culmination: final webinar, 17 April
 - 2 QuarkNet staff
 - 3 moderators
 - 180 participants
- > 11K events analyzed

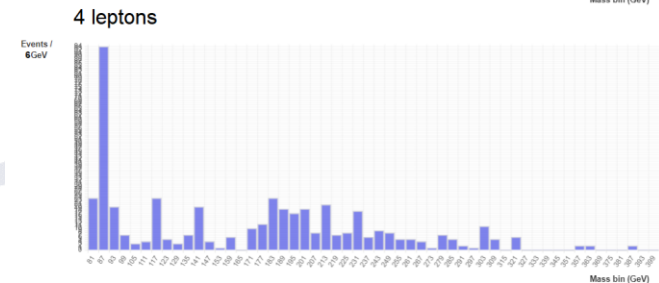
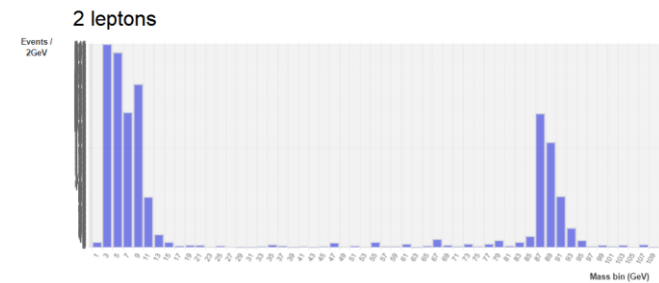
07.05.2020

BAMC Masterclass – International

- Same measurement and structure with small improvements due to April teacher feedback
- SM/CMS webinar, 19 May
- At least two culminating webinars, 21-22 May
- As of 7 May,
 - > 100 teacher registrations
 - > 1000 students
 - We have a (wonderful) challenge.
- Teacher page, <http://cern.ch/go/KtX6>:
 - Details
 - Link to results
 - Links to recordings



11,470 events analyzed; $W^+/W^- = 1.334$



Next

- Videoconference days in June?
- Lessons
 - It can be done!
 - Zoom is very effective (tools, connectivity)
 - Can scale up with online tools
 - Multiple solutions
- IMC has more lessons to consider looking to 2021