

Colombian Network on High Energy Physics: Input on Theoretical HEP



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CONHEP

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Colombian Network on High Energy Physics

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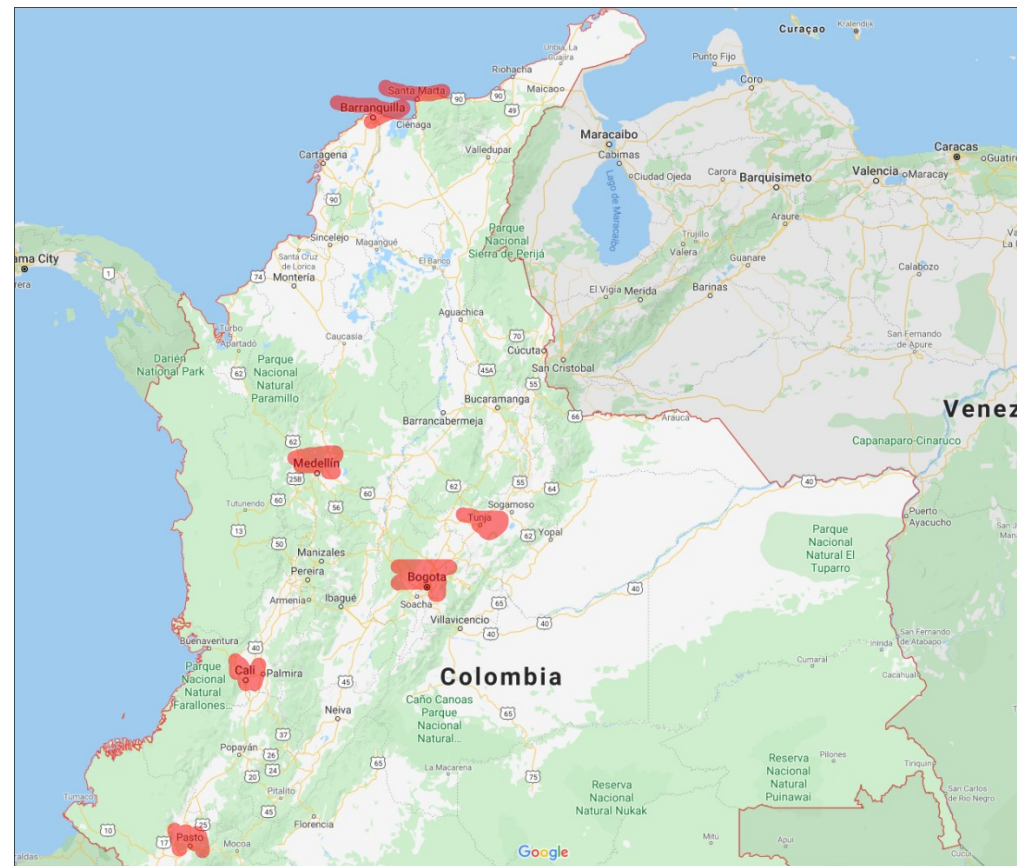
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Dark Matter and Dark Sectors

- DM production in the early Universe
WIMPs, FIMPs, SIMPs, ALPs...
- DM production at colliders
SUSY, general dark sectors, HNL @ CMS, ATLAS, DUNE
VBF, ISR jets...
- DM connections
Neutrinos, inflation...
- N -body simulations
- Astro and cosmological probes
- DM direct and indirect detection
Absent in Colombia → big issue!
- Phenomenology of Neutrinos
- Phenomenology @ LHC

Cosmology

- Inflation
- Reheating
- Modified gravity
- Non-Gaussianity
- Primordial gravitational waves
- Large scale structures
- Dark energy
- Experimental front: only DESI!

Hadron and Flavor Physics

- Electroweak extensions
- Discrete and global symmetries
- Flavored bound states
- Flavor changing neutral currents
- Lepton universality violation in B meson decays
- Production and spectroscopy of Heavy Flavors at CMS

CONHEP annual events



Virtual event

Nov. 30 to Dec. 4, 2020

<https://indico.cern.ch/e/comhep5>



CoCo 2o2o: Cosmology in Colombia

Virtual event

Sep. 23 - 25, 2020

<https://indico.cern.ch/e/coco2020>



MOCa 2019: Materia Oscura en Colombia

Virtual event

Oct. 7 - 8, 2020

<https://indico.cern.ch/e/MOCa2020>

**¡Muchas
gracias!**

