

# Fifth workshop on "Perceiving the Emergence of Hadron Mass through AMBER@CERN" (EHM2021/9)

Wednesday 21 April 2021 - Friday 30 April 2021

Perceiving the Emergence  
of Hadron Mass through

**AMBER@CERN**

27 April to 30 April 2021  
CERN, Geneva - Switzerland



## Book of Abstracts



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Day I - Introduction / 7

## **Introductory talk**

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Day I - Introduction / 8

## **Probing EHM with AMBER**

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Approved measurements / 9

## **Charged proton-radius measurement**

Corresponding Author: alexey.dzyuba@cern.ch

Approved measurements / 10

## **Antiproton cross-section measurements for Dark Matter search**

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Approved measurements / 11

## **Probing the pion's parton structure at AMBER**

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Envisaged measurements / 12

## **Probing the kaon's parton structure at AMBER Phase-2**

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Envisaged measurements / 13

## **Measuring excitation spectra in $K \pi \pi$ final states with AMBER Phase-2**

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Envisaged measurements / 14

## **Measuring the Primakoff reaction and $F_{\{K2\pi\}}$ with AMBER phase-II**

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Day I - / 15

## **Can AMBER Phase-2 access the charge radius of pion or/and kaon?**

**Corresponding Author:** jan@tum.de

Day I - / 16

## **Can AMBER Phase-2 access Moments of pion/kaon Distribution Amplitudes in Diffractive Scattering?**

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Day II / 17

## **Lattice QCD for AMBER**

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## **Meson DFs from Lattice QCD**

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Day III / 19

## **Pion DAs in AMBER**

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Day II / 20

## **EHM via Meson GPDs**

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Day II - / 21

## **Basic EHM from Lattice QCD**

Corresponding Author: jonivar@thphys.nuim.ie

Day II - / 22

## **Pion structure as a problem in Minkowski space**

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Day II - / 23

## **Basis light-front quantisation**

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Day II - / 24

## **Discussion**

Day III / 25

## **NNPDFs for meson structure**

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Day III / 27

## **Accessing pion's large-x gluon by fixed-target charmonium production**

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Day III / 28

## **EHM via meson light-front wave functions - Part 1**

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## **EHM via meson light-front wave functions - Part 2**

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Day II / 30

## **High-energy factorization for DY with new TMD (unintegrated) PDFs**

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## **Discussion**

Day IV / 32

## **EHM and the spectrum of light mesons**

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Day IV / 33

## **EHM as revealed by the spectra of baryons with heavy quarks**

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Day IV / 34

## **Synergies with EHM at Jlab**

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**Day III / 35**

## **Model independent extraction of hadron radii**

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**Day IV - Round table / 36**

## **Round-table discussion**

Wolf-Dieter Nowak / Craig Roberts

Stephane Platchkov

Vincent Andrieux

Andrii Maltsev

Boris Grube

Jan Friedrich

Oleg Denisov

...

and all other participants