

Strong-2020, NA2-Small-x: Physics at the LHC and future DIS experiments

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“Saturation and Diffraction at the LHC and the EIC” Online ECT* workshop
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Strong2020 project

- ▶ Strong 2020: Horizon 2020 research and innovation programme project (grant agreement No 824093), “Integrating and opening research infrastructures of European interest”
- ▶ Period 6/2019 – 5/2023
- ▶ Total funding 10M€
- ▶ 44 institutions, 32 WP’s: “Transnational access” (TA), “Virtual access” (VA), “Networking activities” (NA) and “Joint research activities” (JRA)
- ▶ Funds access to labs and ECT*
- ▶ One of “Network activities” is our:
NA2-Small-x: Physics at the LHC and future DIS experiments

Physics

- ▶ Task 1: Nuclear PDFs
 - ▶ LHC (and other new) data in nuclear PDF fits
 - ▶ Connections to future DIS experiments: EIC and LHeC
- ▶ Task 2: New NLO-based precision phenomenology in CGC and BFKL
 - ▶ NLO BK: HERA fits, EIC, collinear improvement, JIMWLK equation
 - ▶ Properties of BFKL equation, NLO cross sections
- ▶ Task 3: TMDs at small x
 - ▶ Comparisons, relation between TMD vs HEF, iTMD vs CGC
 - ▶ Towards NLO in small- x TMD's
- ▶ Task 4: Multi-particle correlations & Thermalization.
 - ▶ Initial stage (vs hydro) collectivity in azimuthal correlations
 - ▶ CGC and thermalization in heavy ion collisions

Small-x network

Members (initially)

- ▶ Ben-Gurion
- ▶ CNRS (École Polytechnique, IPhT/CEA and LPT/Orsay)
- ▶ Consenza
- ▶ CTU Prague
- ▶ ECT*
- ▶ Firenze
- ▶ Granada
- ▶ Groningen
- ▶ Jyväskylä
- ▶ Krakow INP & JU
- ▶ UAM Madrid
- ▶ Regensburg
- ▶ Santiago
- ▶ Warsaw NCBJ

Use of funding

- ▶ Florian Cougoulic; joint postdoc JyU + USC, ~12 months from S2020
- ▶ Victor Vila: joint postdoc CNRS-IFJ PAN, ~24 months from S2020
- ▶ Travel money 64k€ \implies Most of this still unused, and some available via JyU and USC for members of institutes not receiving funds directly from S2020, e.g. for next summer's ECT* workshop.