

Proposal Submission Form



EUROPEAN COMMISSION
7th Framework Programme on
Research, Technological
Development and Demonstration

**Marie Curie Mobility Actions
Initial Training Networks(ITN)**

A1

Proposal Number

000000

Proposal Acronym

TRANSNET

General Information on the Proposal

Proposal Title

The Transverse Structure of the Proton

Marie Curie action-code

Initial Training Networks (ITN)

Scientific Panel

Physics

Duration in months

48

Call identifier

FP7-PEOPLE-2007-1-1-ITN

Keywords (up to 200 characters)

Physical sciences, Particle physics, Quark and gluon structure of hadrons, High energy scattering experiments.

Abstract (up to 2000 characters)

In the programme we study aspects of the quark and gluon structure of hadrons and its implications in related fields. Quantum chromodynamics (QCD) is the theory that describes the strong interactions of quarks and gluons, the constituents of hadrons, such as the protons and neutrons (nucleons) that form all the atomic nuclei. Although the microscopic theory is known, its consequences are far from being understood; this is evident when it comes to understanding the outcome of experiments involving hadrons. In the proposed programme, early-stage researchers will be trained to solve outstanding open questions on the transverse structure of hadrons, where polarization and intrinsic motion of the constituents play a role.

Experimental activities on hadron physics are done in worldwide collaborations at a number of large-scale and smaller-scale facilities in Europe, the USA and Japan. Theoretical activities are pursued in a large number of universities and research institutes. European physicists are key players in many of these collaborations. Right now, with the start of the Large Hadron Collider at CERN, physicists will be able to probe deeper into matter and forces than ever before and a transfer of knowledge and expertise in many areas is vital, one of them being the QCD structure of hadrons.

This proposal intends to build and strengthen the interactions between experiment and theory through a well-structured programme of training and knowledge transfer activities. The early-stage researchers will work within groups that engage in research at the forefront of hadron physics covering a broad spectrum of research topics. The researchers will learn a variety of experimental, analytical, computational and theoretical research methods from experienced leading researchers in nuclear physics, particle physics and astrophysics; they will acquire skills that are important not only in state-of-the-art research but also in many other high technology sectors of our society.

Has a similar proposal been submitted to a Marie Curie Action under this or previous RTD Framework Programmes?

no

IF YES

Programme name(s) and year

Proposal number(s)

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Does this proposal include any of the sensitive ethical issues detailed in the Research Ethical Issues table of Part B?

no