

Project: "Studies of Baryonic Matter at the Nuclotron (BM@N)"

Addendum to the physics program: "Probing Short-Range-Correlations"
(SRC)

for 2017-2021

Theme 02-0-1065-2007/2019

Development of the JINR Basic Facility for Generation of Intense Heavy Ion and Polarized Nuclear Beams Aimed at Searching for the Mixed Phase of Nuclear Matter and Investigation of Polarization Phenomena at the Collision Energies up to $\sqrt{s} = 11$ GeV/n

List of organizations and participants

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Project leaders:

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Deputies:

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T. Aumann (Technische Universität Darmstadt)

DATA OF SUBMISSION OF THE PROJECT TO SO & IC OFFICE _____

DATA OF THE LABORATORY STC DOCUMENT NUMBER 28.04.2017

DATA OF PRESENTATION OF PHYSICS MOTIVATION – 31.03.2017, Round
Table at the Workshop on «Study of high density nuclear matter with hadron beams»,
Weizmann Institute of Science, Rehovot

Time schedule and requested resources for the realization of the project:
 "Studies of Baryonic Matter at the Nuclotron (BM@N)" and the addendum
 to the physics program: "Probing Short-Range-Correlations (SRC)"

Detectors / subsystems / facilities	Required resources kUSD /	2017	2018	2019	2020	2021
Detector prototypes	130	30	30	30	20	20
Central GEM tracker	1920	470	610	630	190	20
Outer tracker	240	100	100	20	10	10
ToF system	260	220	10	10	10	10
ZDC calorimeter	50	10	10	10	10	10
T0 detector	60	20	10	10	10	10
Si detector	260	110	80	50	10	10
ECAL calorimeter	230	90	90	30	10	10
Trigger system BMN	50	10	10	10	10	10
Trigger upgrade SRC	60	20	10	10	10	10
Recoil detector	50	10	10	10	10	10
STS detector	1830	150(*)	150(*)	200(*)	680(*)	650(*)
Experimental zone BMN	280	80	80	80	20	20
Infrastructure SRC	70	30	10	10	10	10
DAQ +computing BMN	490	90	100	100	100	100
DAQ upgrade SRC	50	10	10	10	10	10
Control system	50	10	10	10	10	10
Budget Costs BMN	5900	1400	1300	1200	1100	900
Budget Costs SRC	180	60	30	30	30	30
Total Costs kUSD	6080	1460	1330	1230	1130	930
Nuclotron hours, BMN	7700	1100	-	2200	2200	2200
Nuclotron hours, SRC	2800	400	-	800	800	800
Nuclotron hours, Total	10500	1500	-	3000	3000	3000
Labor OP hours, BMN	5000	1000	1000	1000	1000	1000
Labor OP hours, SRC	600	200	100	100	100	100
Labor OP hours, Total	5600	1200	1100	1100	1100	1100
Labor KB hours, BMN	2500	500	500	500	500	500
Labor KB hours, SRC	600	200	100	100	100	100
Labor KB hours, Total	3100	700	600	600	600	600

(*) plus resurces from Mega Science project and grants

Project leader:



M.N.Kapishin

Estimate of expenditures on the project
 "Studies of Baryonic Matter at the Nuclotron (BM@N)" and the addendum to the
 physics program: "Probing Short-Range-Correlations (SRC)"

Designation of the articles of the straight expenditures	Total resource	1 year 2017	2 year 2018	3 year 2019	4 year 2020	5 year 2021
Accelerator hours, BM@N	7700	1100	-	2200	2200	2200
Accelerator hours, SRC	2800	400		800	800	800
Accelerator hours, Total	10500	1500		3000	3000	3000
Laboratory OP hours, BM@N	5000	1000	1000	1000	1000	1000
Laboratory OP hours, SRC	600	200	100	100	100	100
Laboratory OP hours, Total	5600	1200	1100	1100	1100	1100
Laboratory KB hours, BM@N	2500	500	500	500	500	500
Laboratory KB hours, SRC	600	200	100	100	100	100
Laboratory KB hours, Total	3100	700	600	600	600	600
Equipment, materials kUSD BM@N	5900	1400	1300	1200	1100	900
Equipment, materials kUSD SRC	180	60	30	30	30	30
Equipment, materials kUSD, Total	6080	1460	1330	1230	1130	930
Traveling expenses, kUSD BM@N including:	500	100	100	100	100	100
a) to the countries of the other currencies	250	50	50	50	50	50
b) in the ruble zone	150	30	30	30	30	30
c) by the protocols	100	20	20	20	20	20
Traveling expenses, kUSD, SRC including:	120	24	24	24	24	24
a) to the countries of the other currencies	75	15	15	15	15	15
b) in the ruble zone	25	5	5	5	5	5
c) by the protocols	20	4	4	4	4	4
Altogether according to the straight expenditures, kUSD, BM@N	6400	1500	1400	1300	1200	1000
Altogether according to the straight expenditures, kUSD, SRC	300	84	54	54	54	54

Project leader:
M.N.Kapishin



Director of the laboratory:
V.D.Kekelidze



Chief economist of the laboratory
G.G.Volkova



Sheet of the Project Approvals

“Studies of Baryonic Matter at the Nuclotron (BM@N)”
and the addendum to the physics program:
"Probing Short-Range-Correlations (SRC)"

for 2017-2021

Theme 02-0-1065-2007/2019

Theme leaders: V.D.Kekelidze, A.S.Sorin,

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APPROVED BY THE DIRECTOR OF JINR

«__»____2017

(Signature)

(date)

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CHIEF SCIENTIFIC SECRETARY

«__»____2017

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LABORATORY DIRECTOR

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«4»*mar* 2017

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APPROVED

PAC FOR PARTICLE PHYSICS

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