

PROPOSAL FOR PROJECT (Category I) AT RCNP

Dec. 2020

TITLE:

Title title

SPOKESPERSON:

Full Name Spokes Person
 Institution Department of Physics, xxxxx University
 Title or Position Professor
 Address Adress
 Phone number +81-6-6879-8900
 FAX number +81-6-6879-8899
 E-mail a@rcnp.osaka-u.ac.jp

RESEARCH COLLABORATION:

Full Name	Institution	Title or Position
First Member	Department of Physics, xxxx University	(P)
Second Member	Department of Physics, xxxx University	(P)
	.	(AP)
	.	(AP)
	.	(AP)

RESEARCH PERIOD: 3 years (From Mar. 2021 to Feb. 2024)**RESOURCES OF RCNP TO BE UTILIZED:**

GRAND RAIDEN Spectrometer and its DAQ system
 A Germanium detector and MCA

BEAM LINE AND REQUIREMENTS:

Ring : WS course

Beam time

Installation time without beam 3 days(for each beam time)
 Development of device 1 days
 Test running time for experiment 4 days(incl. γ ray measurement with a Ge detector)
 Data runs 13 days

Beam requirements

Type of particle polarized p
 Beam energy 400 MeV
 Beam intensity ≤ 10 nA
 Other requirements energy resolution ≤ 200 keV
 halo-free, small emittance

SAFETY CONTROLLED ITEMS:

- a laser
- a flammable gas such as hydrogen, methane, ethane etc. except for the gases used for the VDC of Grand-RADIDEN and the PPAC at EN-course
- a gaseous or liquid target
- beryllium
- chemicals
- un-sealed radio-isotopes
- other materials or equipment to be controlled

TITLE:
Title title

SPOKESPERSON: Spokes Person

SUMMARY OF THE PROPOSAL

Summary.

DETAILED DESCRIPTION OF PROPOSED RESEARCH

Scientific motivation of

BUDGET PLAN

One of the collaborators FM is supported by KAKENHI Grant-in-Aid for Scientific Research (C) from FY2020 to FY2022. The Spokesperson SP has applied for KAKENHI Grant-in-Aid for Scientific Research (A) starting from FY2021. Part of the cost to accomplish the research project is expected to be supported by RCNP. Another source of the budget is

The detail of the budget and its source is summarized as follows:

Item	Detail	Amount	Source
Experimental expenses			
	Chamber gas	50,000 yen	KAKENHI
	Liq. N ₂	50,000 yen	RCNP
	Target (enriched ⁴⁸ Ca)	200,000 yen	RCNP
Travel expenses			
	from Tokyo to RCNP	400,000 yen	KAKENHI
	from Kyoto to RCNP	50,000 yen	RCNP
Total		750,000 yen	
Expected RCNP support		250,000 yen	