RCNP EXPERIMENT E200

PROPOSAL FOR EXPERIMENT AT RCNP

25 July 2002

TITLE: Continuing Investigation of the *Isoscalar* Giant Dipole Resonance

SPOKESPERSONS:

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EXPERIMENTAL GROUP :

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RUNNING TIME:

Total running time not including beam preparation	5 days

BEAM LINE:

BEAM REQUIREMENTS:

Type of particle	^{4}He
Beam energy	400 MeV
Beam intensity	2 nA
Other requirements	beam must be halo-free
	highest stability over several days is required

BUDGET: Summary of budget expenses

Experimental expenses	0 yen

RCNP EXPERIMENT E200

TITLE: Investigation of the charged-particle decay of the *Isoscalar* Giant Dipole Resonance and the *Isovector* Giant Quadrupole Resonance

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SUMMARY OF THE PROPOSAL

The proposed measurements aim at investigating the Isoscalar Giant Dipole Resonance (ISGDR) in detail. As part of RCNP experiment E151, we have investigated the compressional-mode giant resonances in several medium- and heavy-mass nuclei (^{58}Ni, ^{90}Zr, ^{116}Sn, ^{144,148,152,154}Sm, and ^{208}Pb). The purpose of the proposed measurements is to extend the investigation to the lighter nuclei, ^{40}Ca and ^{28}Si, in order to develop systematics of the ISGDR (and GMR) over the entire range of the periodic table, in conjunction with complementary measurements on ^{12}C, ^{16}O, and ^{24}Mg, being carried out by the Kyoto group.