

Report of the RCNP Collaboration Research Network (RCNP-COREnet)					
COREnet043			PI: OTA Shinsuke		
1	Title of research		Research on novel perspectives in nuclear superfluidity		
2	List of Participants (Name and affiliation)		Shinsuke OTA (RCNP)		
			Kenichi YOSHIDA (RCNP)		
			Masahiro DOZONO (Kyoto University)		
			Masayuki MATSUO (Niigata University)		
			Susumu SHIMOURA (RCNP / RIKEN / CNS)		
3	Period of research		FY2023 - FY2024		
4	Main location of collaboration implementation		RCNP		
5	Publication list (Please include DOI if available)	Articles			
		Talks	"Experimental studies for nucleon pair condensation", Microscopic approach from pair correlation to pair condensation, 4-6 Sept, 2023, RCNP, Osaka		
			"Triplet-odd pairing in finite nuclei", Microscopic approach from pair correlation to pair condensation, 4-6 Sept, 2023, RCNP, Osaka		
	"Measurement of highly-excited neutron-pair vibration", Microscopic approach from pair correlation to pair condensation, 4-6 Sept, 2023, RCNP, Osaka				
	"核子多体系の凝縮相の解明にむけた実験的研究の進展", 日本物理学会シンポジウム「極限非平衡現象から探る宇宙における物質と構造の創生」, 2024年3月18日-21日, オンライン				
6	Description of the results and outputs		How the superfluidity and superconductivity in nucleonic matter can be realized is under investigation by the theoretical and experimental studies. The measurement of the neutron-pair removal reaction (4He,6He) on 120Sn shows the new transition strength at highly excited region, which enables us to estimate the pair polarizability. The measurement of the proton-neutron-pair removal reaction (4He 6Li) on		
7	Amount of budget implemented (for internal use only)		5340JPY		

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