

iCRADA discussion

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Preamble

- ▶ **We would like to sincerely thank Rolf, Lari, and other people for preparing iCRADA v0 draft between Japan and JLab.**
- ▶ **After reading the draft, we (Hideto Enyo, Tomohiro Uesaka, Yasuyuki Akiba, Yuji Goto, Taku Gunji, and ePIC-Japan CC members) have some suggestions and things to check.**
- ▶ **We would like to bring 6 points here (and if needed, further detailed discussion will follow).**

1: About singers

- ▶ MEXT usually does not sign any agreements (ex, ATLAS).
 - ▶ Research Institutes or researchers are delegated for the agreements.
- ▶ Therefore, for the iCRADA, signers will be RIKEN and/or U-Tokyo.

JEFFERSON SCIENCE ASSOCIATES, LLC
UNDER ITS U.S. DEPARTMENT OF ENERGY CONTRACT
TO MANAGE AND OPERATE
THOMAS JEFFERSON NATIONAL ACCELERATOR FACILITY (JLAB)

(HEREINAFTER “LABORATORY”)

AND

~~THE MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY (MEXT)~~
RIKEN AND THE UNIVERSITY OF TOKYO WHICH REPRESENT ALL THE JAPANESE
INSTITUTIONS PARTICIPATING IN THE EIC PROJECT

(HEREINAFTER “PARTICIPANTS”)

LABORATORY AND PARTICIPANT COLLECTIVELY REFERRED TO |

AS THE “PARTIES” AND SEPERATELY AS A “PARTY”

2: Mentioning US-Japan cooperation

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- ▶ Since MEXT does not sign the document, we would like to mention about the relationship between MEXT and RIKEN/U-Tokyo; that this is based on US-Japan science and technology cooperation and under this cooperation, RIKEN/U-Tokyo will lead EIC project (and sign the iCRADA).
- ▶ The MOU/iCRADA on RBRC is based on Japan-US cooperation. Therefore, similarly, we would like to mention the Japan-US agreement on iCRADA.

ARTICLE II: STATEMENT OF WORK, TERM, FUNDING AND COSTS

A. [The Parties intend for their cooperation under this ICRADA to be complementary to, but not subject to or part of, their respective Governments' cooperation under, the Agreement between the Government of Japan and the Government of the United States of America on Cooperation in Research and Development in Science and Technology signed on June 20, 1988, renewed and extended in 1993, 1998, 1999, 2004, and 2014, respectively, and the Implementing Arrangement between the Science and Technology Agency of Japan and the DOE in the Field of Basic Science and Technology signed on May 3, 1996, and automatically renewed in April 2002, ***, and ***, between the Ministry of Education, Culture, Sports, Science and Technology of Japan ("MEXT") and the DOE]

A. The Parties will define the objectives and scope of work for this ICRADA through a series of individual Project specific (and subproject specific) Task Orders that will each have a statement of work to be performed, a budget (including costs and payments), net benefits statement, and any additional or modified terms applicable to each Project. Subject to the budgetary approval by the Japanese Government, each Task Order will be required to be executed by the Parties and approved by DOE. Once fully executed and approved, Task Orders will become legally binding parts of the ICRADA and will be added as Annexes (e.g. A-1, A-2, A-3 etc.).

B. [RESERVED]

3: JLab and BNL iCRADA

- ▶ **We understand that we will have two iCRADA (JP-JLab and JP-BNL) and the details of the cooperation with each Lab will be described in each iCRADA ANNEX. Is that correct?**
- ▶ **If so, we would like to prepare both iCRADA at the same time. The reasons are:**
 - ▶ **We believe that there is more to be done through cooperation with BNL than with JLab. This can be the case for bTOF and ZDC.**
 - ▶ **We believe that the existence of RBRC will become an important infrastructure for promoting cooperation in the EIC. This is one of the reasons why we think that the area covered by iCRADA with BNL will be larger.**
 - ▶ **We should consider and construct task orders for JP, JLab, and BNL together.**

4: Task Order in ANNEX

- ▶ We want to have an ANNEX (Task Order) for each SUBSYSTEM (i.e. three ANNEX – bTOF, ZDC, and SRO). This is possible?
 - ▶ One of the reasons is that it is foreseen that we will collaborate with JLab a lot from the beginning for SRO but for bTOF/ZDC, we suppose to collaborate with BNL a lot rather than JLab.
 - ▶ In this case, the possible signers would be:
 - ▶ U-Tokyo (Taku Gunji) as budget responsible person for three subsystems
 - ▶ Hiroshima (Kenta Shigaki) as bTOF project lead in Japan
 - ▶ RIKEN (tbc) as ZDC project lead in Japan
 - ▶ U-Tokyo (Taku Gunji) or U-Osaka (will join in ePIC hopefully soon) as SRO lead in Japan

5: Equipment property

- ▶ We need to be very careful about the equipment property and removal of the property from the facility.
- ▶ Once our property is integrated with the US Facility, such a property will be under control of US Laboratory and we are OK to be responsible for maintenance of our property during the operation. However, when they are no longer needed, we would like them to **be abandoned in place**. If this is applicable, we believe we are not responsible for the removal and/or maintenance of the abandoned properties. This is what we had in PHENIX.

6: Task Order boundaries

- ▶ bTOF, ZDC, and SRO are based on the international collaboration and not only one country but many countries join the construction.
- ▶ We have to define the boundaries for responsibilities between involved countries before we determine the task orders?
 - ▶ In task order, if we say “Develop the final fabrication design and engineering packages for the AC-LGAD sensors including the fabrication and post-processing of the wafers, the bump bonding of the readout ASICs electronics on those sensors, and the module integration and assembly towards the Time-Of-Flight systems in the barrel region” as Japanese task order, what other countries (ex, Korea – plans to commit to bTOF) can write in their iCRADA?
 - ▶ What JP writes in the document should not influence other countries’ iCRADA?