Akira Miyazaki's contribution to WP2: background

- Education: Experimental particle physics (UTokyo)
- PhD (2014): 200 GHz gyrotrons for testing Quantum Electrodynamics with positronium hyperfine structure (supervisor Shoji Asai);
- CERN-Japan Fellow (2014-2017): 100 MHz superconducting accelerating cavities HIE-ISOLDE (CERN-PH-SME-ISO)
- Research associate in the University of Manchester (2017-2018): fundamental physics of superconducting cavities and HIE-ISOLDE commissioning (CERN-BE-RF-SRF)
- Researcher in Uppsala University (2019-2022): Site acceptance test of 352 MHz ESS Double-Spoke resonator cryomodules (prepared in IJCLab, tests in Uppsala); 30 GHz dark photon experiments with KIT & CERN
- Research engineer in CNRS/IN2P3/IJCLab (2023-): Super conducting cavities (PERLE/FCC/ILC/ESS) & 20 GHz axion experiments (MADMAX)

My view: classical and quantum microwave technology
→ particle accelerator & condensed matter physics → particle physics

AM's contribution to WP2: period, tasks, impact

Irène Joliot-Curie Laboratoire de Physique des 2 Infinis

<u>Secondment 1 in 2024</u>

01/07/2024-15/07/2024: SRF cavities for ILC-ITN

- Joining cold tests of medium grain 1.3 GHz cavities at KEK
- Discussion on the next test of IJCLab's cavities at KEK (supported by FJPPN)
- LCWS2024 tutorial lecture on "ILC accelerator and its physics background"
- LCWS2024 presentation on "SRF programs towards High-Q/High-G cavities in IJCLab"

<u>Secondment 2 in 2024</u>

20/08/2024-07/09/2024: SRF cavities for PERLE/FCC

- Discussions with JLAB for further collaborations on PERLE accelerator
- Discussions with Fermilab for the FCC collaboration
- LINAC2024 invited plenary talk on "The quest for high-Q/high-Gradient SRF cavities"

- Huge impacts on consolidation of international collaboration of SRF in IJCLab
- Akira Miyazaki becomes the key name of multiple projects using SRF cavities
- Lectures and talks improved my visibility **outside** the SRF community