

Tutorial for accessing and using the NuCodeComp Digital Platform

User Level

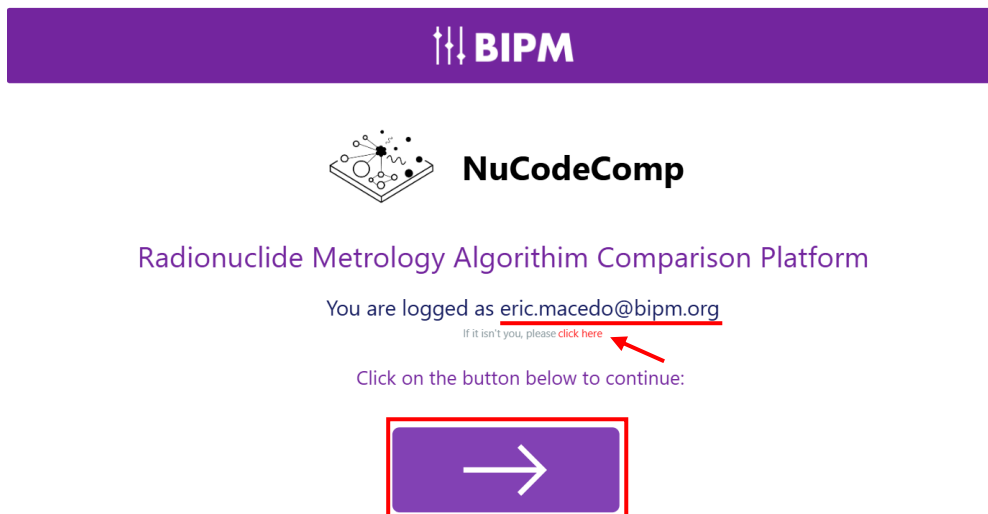
1 Presentation

The NuCodeComp - The Radionuclide Metrology Algorithm Comparison Platform is a software to centralize, manage, and analyse information from the Algorithm Comparisons. These comparisons are based on the distribution of list-mode digital data. List-mode consists of structured data [according to IEC 63047:2021] obtained experimentally or by Monte Carlo simulation.

If you can access the NuCodeComp via Power Apps, chapters 2 to 5 present the step-by-step instructions to interact with the platform. If you don't have access, the instructions for uploading your results by Microsoft Forms are in the chapter 6.

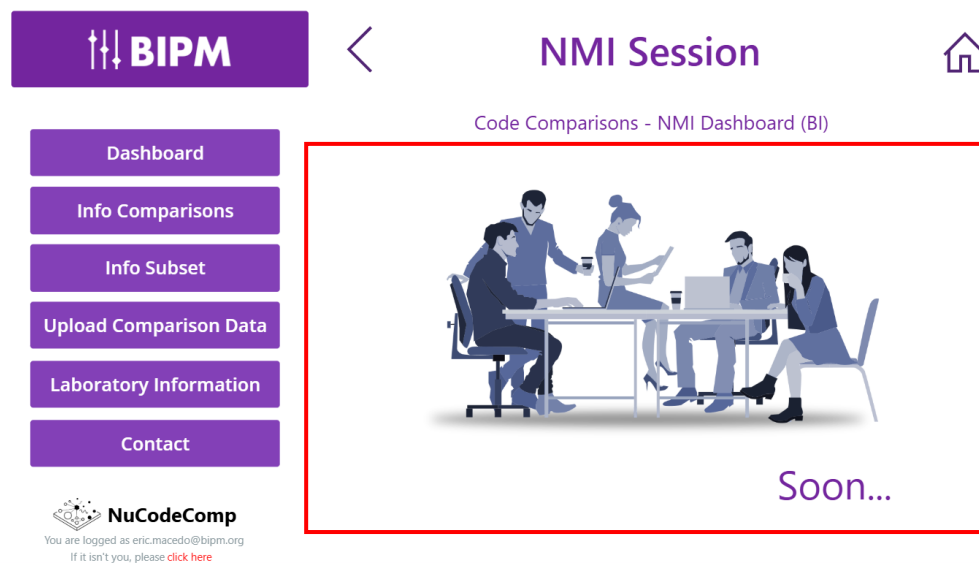
2 Start Page and Dashboard

The start page of the NuCodeComp is shown below. It has the automatic access information for the NMI. To access the application, click on the purple button with the arrow.



If the presented e-mail is not yours or a dark blue button appears for you, please click on the red term “click here”.

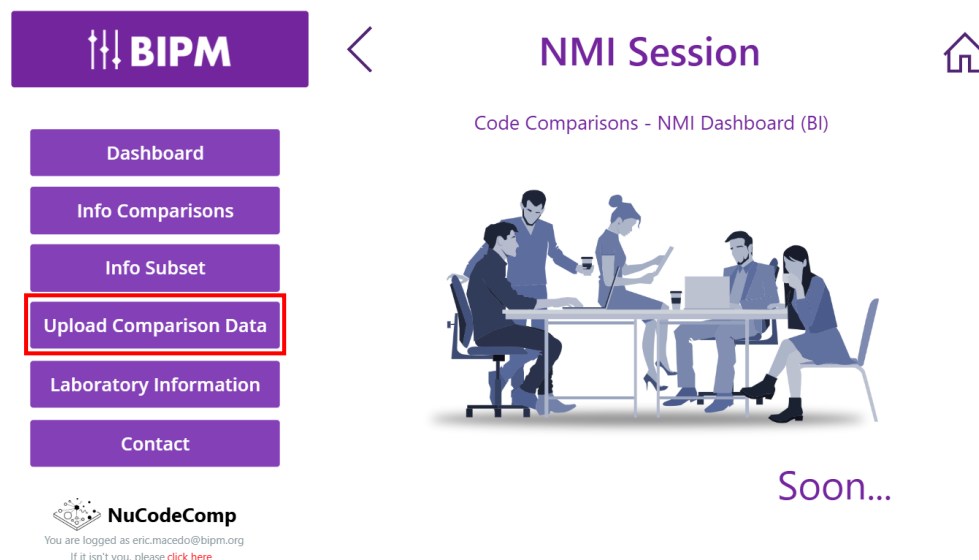
The main screen (*Dashboard*) will appear for you.



On this screen (under development), you will have access to a BI visualization showing your results, a comparison of metadata with other laboratories, and some historical information about the Code Comparisons.

3 Result Upload

The main function is the result upload. You must access “Upload Comparison Data” by clicking the highlighted buttons on the left menu.



You start selecting the comparison on the gallery. Note that the only active comparisons where the user is part of the board are shown.

The screenshot shows the 'NMI Session' page with the 'Upload Comparison Data' button highlighted. The 'NMI Comparison selection' tab is active, displaying a list of comparisons:

Comparison	Type of measurement	Status
BIPM.RI-II--P1	4πβ-γ	(Closing: 29/07/2024) Status: Active
BIPM.RI-II--P2	TDCR	(Closing: 29/07/2024) Status: Active
BIPM.RI-II--P3	TDCR	(Closing: 29/07/2024) Status: Active

Navigation buttons: Dashboard, Info Comparisons, Info Subset, Upload Comparison Data, Laboratory Information, Contact.

NuCodeComp logo and login info: You are logged as eric.macedo@bipm.org. If it isn't you, please [click here](#).

The next step is to fill out and confirm the “NMI Global results” form.

The screenshot shows the 'NMI Global results' tab. The form is for comparison BIPM.RI-II--P1, Type of measurement 4πβ-γ. Fields include:

- Laboratory: BIPM
- Activity Estimation Software: [dropdown]
- Standard Uncertainty of the Activity: [input] Bq (D-SI)
- Dead time of beta events: [input] ns (D-SI)
- Counting Software: [dropdown]
- Activity Value: [input] Bq (D-SI)
- Relative std. unc. from the efficiency estimation: [input] %
- Type of averaging: Unweighted

Navigation buttons: Dashboard, Info Comparisons, Info Subset, Upload Comparison Data, Laboratory Information, Contact.

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The next step is to complete and confirm the “NMI Specific results” form from the subsets processing. Note that the gallery correspondent item is checked as you fill out one subset result.

The screenshot shows the 'NMI Specific results' tab. The form is for comparison BIPM.RI-II--P1, Title runCCTBck. Fields include:

- Count rate of beta events: [input] s⁻¹ (D-SI)
- Standard uncertainty of counts rate of beta events: [input] s⁻¹ (D-SI)
- Count rate of gamma events: [input] s⁻¹ (D-SI)
- Standard uncertainty of count rate of gamma events: [input] s⁻¹ (D-SI)

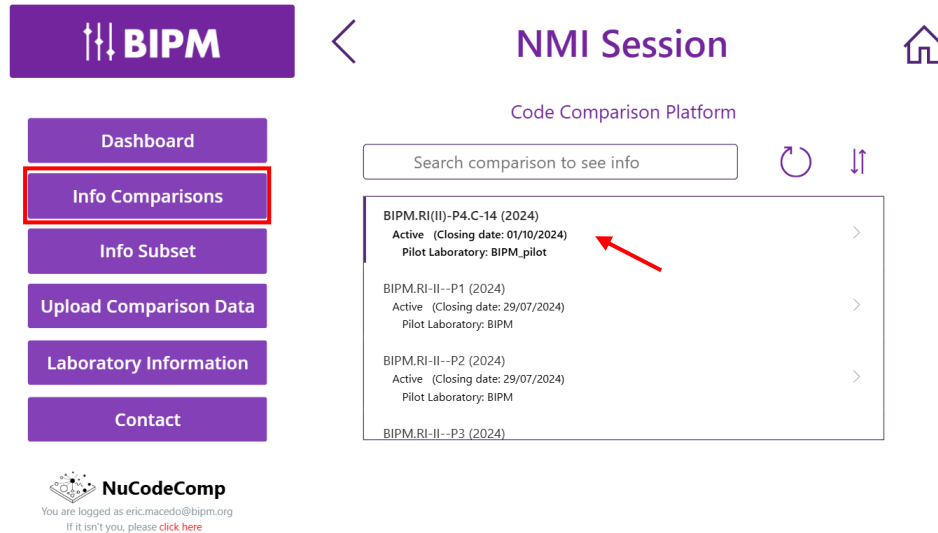
Navigation buttons: Dashboard, Info Comparisons, Info Subset, Upload Comparison Data, Laboratory Information, Contact.

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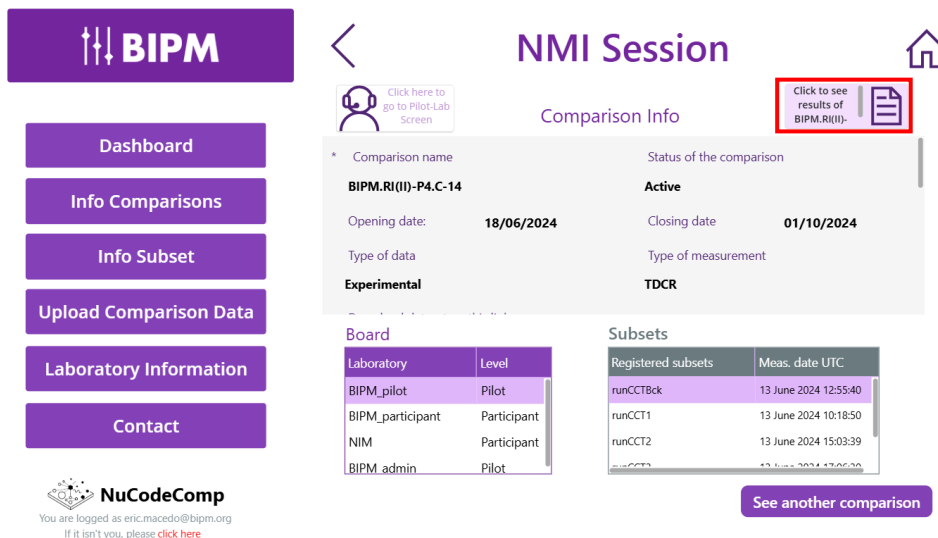
You can confirm the form submission when all of them are filled out.

4 Comparison and result view


To see the comparison information must access “Info Comparisons” by clicking the highlighted button on the left menu. The “Info Comparisons” browser page shows all comparisons you were/are part of. To access the comparison info, select the comparison by clicking on it in the gallery.




You can see your comparison results by clicking on the highlighted button on the top right-hand.



When you are in the Result page, you can also access the subset results for that comparison or even change the comparison to view.


BIPM

[Dashboard](#)
[Info Comparisons](#)
[Info Subset](#)
[Upload Comparison Data](#)
[Laboratory Information](#)
[Contact](#)


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NMI Session


Results

Comparison selected **BIPM.RI-II--P2**
☐ Off


Comparison	Type of measure...	Laboratory	Degree of equival...	True/Reference V...	Activity
BIPM.RI-II--P1	TDCR	BIPM			BIPM C

[See selected result](#)

Click to see
 SUBSET results of
 BIPM.RI-II--P2
 


BIPM

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NMI Session

Comparison

BIPM.RI-II--P1
☒ On

Laboratory **BIPM**

Title	Comparison	Laboratory	4p_count_rate_an...	4p_count_rate_be...	4p_c...
runCCTBck	BIPM.RI-II--P1	BIPM			
runCCT1	BIPM.RI-II--P1	BIPM			

The results of all laboratories in the comparison will be made available on NuCodeComp/*Dashboard* page, after and according to the report publication.

5 Laboratory information

The NMI can edit its registered information and view registered SOFTWARES by clicking on “Laboratory Information” button on the left menu panel. To manage contributors and user information, the BIPM admin responsible must be contacted.

BIPM < NMI Session

Laboratory Info

Acronym	Name	Responsible	RMO	website
BIPM_pilot	International Bureau of Weights and Measures	Romain Coulon...	INTERNATIONAL	https://www.bipm.org

* Acronym of Laboratory: BIPM_pilot

* Laboratory Name: International Bureau of Weights and Measures

Responsible: E. Macedo

RMO: INTERNATIONAL

Softwares

Software	Version	Laboratory	Application
BIPM CR	v_1.2.3	BIPM_pilot	Counting Rate
BIPM ActSW	v_0.1	BIPM_pilot	Activity Estimation

Lab contributors

If you wish to change responsible or contributor information, please send an e-mail to admin.

NuCodeComp
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If it isn't you, please [click here](#)

The NMI can create and edit software information by clicking on the “Manage software” button. The screen shown below will appear for that purpose.

BIPM < NMI Session

Laboratory Info

Edit selected software

Software selected: BIPM CR

Software: BIPM CR

Version: v_1.2.3

* Laboratory: BIPM_pilot

Application: Counting Rate

Link to software:

DOI of software:

Attachments: There is nothing attached.

NuCodeComp
You are logged as eric.macedo@bipm.org
If it isn't you, please [click here](#)

6 Accessing by Microsoft Forms

If you do not have direct access, you can upload your results using Microsoft Forms. To use this option, you must register in the Counting Comparison SharePoint group by providing the required registration information as specified in item 1.5 (“Registering”) of the comparison protocol.

All necessary information will be sent by email, and the following instructions are important to keep in mind:

- The comparison information will be provided via an HTML link and displayed as shown in the image below. It is essential to copy and paste the fields with fixed values (such as Comparison and Measurement Type) and those with predefined choices (as indicated in the field description).

Comparison: alpha1

Data Type: Experimental

Status: Active

Measurement Type: $4\pi\beta\text{-}\gamma$

Comparison Method Code: 4P-LS-BP-NA-GR-CO

Opening Date: 2025-04-01

Closing Date: 2025-06-10

Dataset: [Download](#)

Reference Acronym (KC): BIPM.RI(II)-K1.Co-60

Reference Link (KCDB): [View](#)

Reference Date: 2020-09-30T10:00:00Z

Measurement Device: BIPM 4PI(LS)Beta-Gamma counter

Sampling Rate: 500 Hz

Resolution: 14 bits


Discriminator Type: Edge

Service Category (SIDF): <https://si-digital-framework.org/kcdb-sc/RI/RAD-1.3.1>

PK Acronym: alpha1

- In the "Laboratory" field, enter the laboratory acronym "BIPM."
- In the "Counting Software" and "Activity Estimation Software" fields, provide the NAME and version as specified in the protocol, item 1.5 ("Registering").

The comparison form for uploading results will be sent via a link. The fields in the form will be displayed as shown in the image below:



alpha1: Comparison Results

This Form is intended to update the comparison results alternatively to accessing the NuCodeComp platform (via Microsoft Power Apps).

Hi Digital RI, when you submit this form, the owner will see your name and email address digital.ri@bipm.org

Comparison *

Default: alpha1

Enter value here

Type of measurement *

Default: $4\pi\beta\text{-}\gamma$

Enter value here

Laboratory *

Participants: BIPM_pilot, NIM, LABPROSAUD/IFBA, NPL, NIST

Enter value here

Counting Software

Enter value here

Counting Software Version

Enter value here

Activity Value *

Enter a number

Activity Unit (D-SI) *

Bq

Standard Uncertainty of Activity *

Enter a number

Uncertainty Propagation

Options: variance propagation with covariance, variance propagation without covariance, Monte-Carlo method, GUM

Enter value here

Activity Estimation Software

Enter value here

Activity Estimation Software Version

Enter value here

Type of Averaging

Options: unweighted, weighted mean, other

Enter value here

Extrapolation Type

Options: linear, quadratic, weighted, unweighted, other

Enter value here

Count Rate Correction

Options: Campion, Müller, Müller + live-time, Smith, live-time, other

Enter value here