



# 1<sup>st</sup> Kibo Robot Programming Challenge



A meteor crashed to the International Space Station (ISS) and the air is leaking somewhere in the ISS.

Create your own program to operate the Astrobee / Int-Ball and stop the air leakage in the ISS.

Get your program uplinked immediately!

※This is a fiction and is not happening in real time.

# **About the Kibo Robot Programming Challenge**

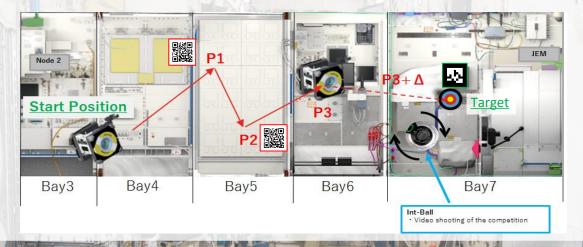
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The Kibo Robot Programming Challenge(Kibo-RPC) is an educational competition to solve various given problems by using real robots (Astrobee) in the International Space Station (ISS).

This program is hosted by Japan Aerospace Exploration Agency (JAXA) in cooperation of National Aeronautics and Space Administration (NASA).

#### **Game Rules**

- Create your own program to control NASA's Astrobee
- Move the Astrobee from the start position to the P3 using the QR code at the P1 and P2.
- Find the target at the P3 and stop at the appropriate distance from the target using the AR tag.
- Use an image processing algorithm to illuminate the center of the target with a laser pointer.
- Scores are calculated based on the time to complete the game, accuracy of the target illumination, etc.



## Event Schedule(Tentative)

- ➤ Initial release of simulation environment: November 20<sup>th</sup> 2019.
- Preliminary Round: Between April and June 2020. Hosted by domestic space agency.
- ISS Final Round: Around September 2020. (Held with connecting ISS and Tsukuba Space Center.)

## **Entry Qualification**

- 1.Students up to graduate school in Kibo-ABC member country\* expressing the participation in the Kibo-RPC can apply for the competition. Please check Kibo-RPC HP for your country's participation in the Kibo-RPC. Foreign students and immigrants are also eligible.
  - \* Participation of students from U.S.A is also under coordination.
- 2.A team is comprised of more than 3 members.

For more information at Kibo-RPC HP: <a href="http://iss.jaxa.jp/en/kuoa/krpc/">http://iss.jaxa.jp/en/kuoa/krpc/</a> General contact point: Kibo-RPC secretariat (E-mail: Z-KRPC@ml.jaxa.jp)

#### Memo

## **Kibo-ABC member countries:**





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Kibo-ABC member countries: Australia, Indonesia, Japan, Malaysia, New Zealand, Philippines, Rep. of Korea, Singapore, Thailand, Vietnam Kibo-ABC URL: <a href="http://iss.jaxa.jp/en/kuoa/kibo\_abc/">http://iss.jaxa.jp/en/kuoa/kibo\_abc/</a>