



21st Asian Physics Olympiad
May 17-24, Taipei, Taiwan

Second CIRCULAR

21st Asian Physics Olympiad, Taipei, (17-24 May, 2021)

Dear Colleagues

To facilitate the communication among Leaders and the Local Organizing Committee, we will use the "**Microsoft Teams**" throughout the whole program of the 21st Asian Physics Olympiad (21st APhO). Three official "Microsoft Teams" accounts will be provided for each delegation team (with two accounts for the two leaders and another one account for the cohort of eight students). To team up every one of us at this critical Covid-19 pandemic period, we cordially appreciate your support and kind cooperation for using "**Microsoft Teams**" in the following important scheduled events or meetings (from May 17 to May 24):

1. Opening and Closing Ceremonies;
2. Communication while doing Translation and taking Exam;
3. International Board Meeting;
4. Students Social Activities (May 21).

Our IT-Manager will be sending you the login information soon. You can also find the tutorials on the web: <https://docs.microsoft.com/en-us/learn/teams/> .

This Circular presents (A) Program of the 21st APhO with major events and scheduled time; (B) Regulations about Translation and Examination; and (C) information about the delegation students' online social event titled "*Connecting Physics Beyond Borders*".

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A: Program

Program of the 21st Asian Physics Olympiad.

Please note that the scheduled time of all 21st APhO-events is based on the UTC+8



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time zone. Leaders can find the time difference between local time and UTC+8 on the website <https://www.timeanddate.com/time/map/>.

| Date | Event | Notes |
|---------------------------|--|--|
| March To Mid-April | Formal Registrations | APhO 2021(https://apho2020.tw/) |
| Mid-April | Registration Ends | Preparation and Test of Internet communication |
| Beginning of May | Translation practice Starts | The ExamTools system opens for translation practice. |
| May 17 (Mon) | Internet Connection and Trouble Shooting. Opening Ceremony | Opening Ceremony: 13:00PM~15:00 PM (UTC+8) “Microsoft Teams” |
| May 18 (Tue) | Internet Communications with Leaders. Leaders: Preparation of Translation Room and Exam room. | The first session is from 10:00 to 12:00 (UTC+8). The second session is from 13:00 to 15:00 (UTC+8) “Microsoft Teams” |
| May 19 (Wed) | Leader: Translate Theoretical Problems | It starts at 8:00 AM (UTC+8) or 12:00 PM (UTC+8), depending on the location of participating teams. “Microsoft Teams” |
| | Students: Take Theoretical Exam | It starts at 13:00 PM (UTC+8) or 17:00 PM (UTC+8), depending on the location of participating teams. “Microsoft Teams” |
| May 20 (Thur) | Leader: Translate the Experiment Problems | It starts at 8:00 AM (UTC+8) or 12:00 PM (UTC+8), depending on the location of participating teams. “Microsoft Teams” |
| | Students: Take Experiment Exam | It starts at 13:00 PM (UTC+8) or 17:00 PM (UTC+8), depending on the location of participating teams. “Microsoft Teams” |
| May 21 (Fri) | Grading and upload the scores | Online Students’ Social Activities <i>“Connecting Physics Beyond Borders”</i> “Microsoft Teams” |



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|---------------------|-----------------------------|--|
| May 22 (Sat) | Moderation | Schedule will be announced during the competition. “Microsoft Teams” |
| May 23 (Sun) | International Board Meeting | From 13:00 PM ~15:00 PM (UTC+8) “Microsoft Teams” |
| May 24 (Mon) | Closing Ceremony | From 13:00 PM ~15:00 PM (UTC+8) “Microsoft Teams” |

Online video conferencing software, **“Microsoft Teams”**, will be used for the Opening and Closing Ceremony.

B: Translation and Examination

Note :

1. Room for translation and room for the examination should be at different builds or different levels of the same build, and they can be the conference room, meeting room, university laboratory, or school classroom.
2. Leaders also need to prepare the Exam Supervisors' meals from May 19th to 20th. Leaders need to pay the hotel fee for the Exam Supervisors if staying in the hotel is necessary during the examination period.
3. A personal computer or notebook with Windows 10 operating system (8GB-RAM at least) is required to run the experiment simulation program.
4. The software **“Microsoft Teams”** will be used to communicate during the Translation period and to monitor the students' Exams.

Time for Translation and examination are both 5 hours each. Please refer to the following Tables; all the participating teams are divided into two sessions. One session starts to do the translation at 8 AM of UTC+8 time zone, and the other session starts at 12 PM of UTC+8 time zone. Students will take the exam right after the translation ends.

The translation and exam will be held in one day. For theory, it will be on May 19th, and the experiment will be on the next day (May 20th); moderation will take place on May 22nd.

The Regulation for the examination;

1. **All students have to stay in a room with the two Exam Supervisors when the translation starts.** Leaders also need to arrange a few people to help the



Exam Supervisors during the whole period, such as scanning the written Exam papers to PDF files and upload the PDF files.

- 2. No communication between students and those people who work on the translation is allowed.**
3. Students taking the Exam have to have a camera for internet monitoring, and 21st APhO LOC can monitor the students online while taking the Exam.
4. The Exam room has to have eight tables, and one for each student. The distance between the nearby two tables is at least 2 meters away.
5. Two Exam Supervisors will get the sealed envelopes of the Exam Paper from leaders right after the Translation ended. Exam Supervisors help distribute the Exam Paper to the students, and each student has to check the student code on the envelope.
6. Theoretical Exam is similar to the on-site Exam, and the same rules of the on-site Exam apply. During the period, any student leaving the room (for example, go to the toilet) has to report to the Exam Supervisor, and the student will be accompanied by one of the Exam Supervisors to leave the Exam room. Leaders need to prepare the placards, such as Toilet, Question and Water placards.
7. The theoretical Exam is similar to the on-site Exam, and students do not need the computer. For the experiment exam, each student has to have a PC-computer or notebook (Windows 10 with, at least, 8 Gb RAM) to operate the experiment simulation software to collect experimental data.
8. At the end of the Exam, Exam Supervisors will ask students to stop, and students have to put all the papers into the envelopes accordingly.
9. The leader shall find people to scan students' Exam Papers into PDF files and upload them. In the meanwhile, the log file of the simulation will be collected and upload to the cloud.
10. The room has to be equipped with a photocopier(s) and an internet connection to upload the scanned Exam Papers.

Translation on May 19th and 20th:

The Table I and II are the list of Teams and the schedule for the translation.

Table I: The first session of Translation time arrangement for both Theory and Experiment on May 19th & 20th.

| Team | time zone | Translation Starts (Local Time) | Translation Ends (Local Time) | Translation Starts (UTC+8 Time Zone) | Translation Ends (UTC+8 Time Zone) |
|-------|-----------|---------------------------------|-------------------------------|--------------------------------------|------------------------------------|
| Japan | UTC+9 | 9:00 AM | 14:00 PM | 8:00 AM | 13:00 PM |



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|-----------|-------|---------|----------|---------|----------|
| China | UTC+8 | 8:00 AM | 13:00 PM | 8:00 AM | 13:00 PM |
| Hong Kong | UTC+8 | 8:00 AM | 13:00 PM | 8:00 AM | 13:00 PM |
| Macao | UTC+8 | 8:00 AM | 13:00 PM | 8:00 AM | 13:00 PM |
| Mongolia | UTC+8 | 8:00 AM | 13:00 PM | 8:00 AM | 13:00 PM |
| Taiwan | UTC+8 | 8:00 AM | 13:00 PM | 8:00 AM | 13:00 PM |
| Taiwan2 | UTC+8 | 8:00 AM | 13:00 PM | 8:00 AM | 13:00 PM |
| Malaysia | UTC+8 | 8:00 AM | 13:00 PM | 8:00 AM | 13:00 PM |
| Singapore | UTC+8 | 8:00 AM | 13:00 PM | 8:00 AM | 13:00 PM |
| Indonesia | UTC+7 | 7:00 AM | 12:00 PM | 8:00 AM | 13:00 PM |
| Thailand | UTC+7 | 7:00 AM | 12:00 PM | 8:00 AM | 13:00 PM |
| Vietnam | UTC+7 | 7:00 AM | 12:00 PM | 8:00 AM | 13:00 PM |

Table II: The second session of Translation time arrangement for both Theory and Experiment on May 19th & 20th.

| Team | time zone | Translation Starts (Local Time) | Translation Ends (Local Time) | Translation Starts (UTC+8 Time Zone) | Translation Ends (UTC+8 Time Zone) |
|----------------------|-----------|---------------------------------|-------------------------------|--------------------------------------|------------------------------------|
| Bangladesh | UTC+6 | 10:00 AM | 15:00 PM | 12:00 PM | 17:00 PM |
| Kazakhstan | UTC+6 | 10:00 AM | 15:00 PM | 12:00 PM | 17:00 PM |
| Kyrgyzstan | UTC+6 | 10:00 AM | 15:00 PM | 12:00 PM | 17:00 PM |
| Uzbekistan | UTC+5 | 9:00 AM | 14:00 PM | 12:00 PM | 17:00 PM |
| Tajikistan | UTC+5 | 9:00 AM | 14:00 PM | 12:00 PM | 17:00 PM |
| Azerbaijan | UTC+4 | 8:00 AM | 13:00 PM | 12:00 PM | 17:00 PM |
| United Arab Emirates | UTC+4 | 8:00 AM | 13:00 PM | 12:00 PM | 17:00 PM |
| Russia | UTC+3 | 7:00 AM | 12:00 PM | 12:00 PM | 17:00 PM |
| Saudi Arabia | UTC+3 | 7:00 AM | 12:00 PM | 12:00 PM | 17:00 PM |
| Turkey | UTC+3 | 7:00 AM | 12:00 PM | 12:00 PM | 17:00 PM |
| Israel | UTC+3 | 7:00 AM | 12:00 PM | 12:00 PM | 17:00 PM |
| Romania | UTC+3 | 11:30 AM | 12:00 PM | 16:30 PM | 17:00 PM |
| Moldova | UTC+3 | 7:00 AM | 12:00 PM | 12:00 PM | 17:00 PM |

Examination on May 19th and 20th:

Each student has to have a win-10 pc, and 8GB ram to run the experiment simulation program. We will let students download the program before the exam. The program is the executable file. At the end of the exam, scan the written exam paper and upload it to the cloud. We will also ask the people to upload the log file of the simulation program.



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For the experiment exam, each student has to have a PC-computer or notebook (Windows 10 with, at least, 8 Gb RAM) to operate the experiment simulation software to collect experimental data.

Table III: The first session of Exam Time arrangement for both Theory and Experiment on May 19th & 20th.

| Team | time zone | Exam Starts (Local Time) | Exam Ends (Local Time) | Exam Starts (UTC+8 Time Zone) | Exam Ends (UTC+8 Time Zone) |
|-----------|-----------|--------------------------|------------------------|-------------------------------|-----------------------------|
| Japan | UTC+9 | 14:00 PM | 19:00 PM | 13:00 PM | 18:00 PM |
| China | UTC+8 | 13:00 PM | 18:00 PM | 13:00 PM | 18:00 PM |
| Hong Kong | UTC+8 | 13:00 PM | 18:00 PM | 13:00 PM | 18:00 PM |
| Macao | UTC+8 | 13:00 PM | 18:00 PM | 13:00 PM | 18:00 PM |
| Mongolia | UTC+8 | 13:00 PM | 18:00 PM | 13:00 PM | 18:00 PM |
| Taiwan | UTC+8 | 13:00 PM | 18:00 PM | 13:00 PM | 18:00 PM |
| Taiwan2 | UTC+8 | 13:00 PM | 18:00 PM | 13:00 PM | 18:00 PM |
| Malaysia | UTC+8 | 13:00 PM | 18:00 PM | 13:00 PM | 18:00 PM |
| Singapore | UTC+8 | 13:00 PM | 18:00 PM | 13:00 PM | 18:00 PM |
| Indonesia | UTC+7 | 12:00 PM | 17:00 PM | 13:00 PM | 18:00 PM |
| Thailand | UTC+7 | 12:00 PM | 17:00 PM | 13:00 PM | 18:00 PM |
| Vietnam | UTC+7 | 12:00 PM | 17:00 PM | 13:00 PM | 18:00 PM |

Table IV: The second session of Exam Time arrangement for both Theory and Experiment on May 19th & 20th.

| Team | time zone | Exam Starts (Local Time) | Exam Ends (Local Time) | Exam Starts (UTC+8 Time Zone) | Exam Ends (UTC+8 Time Zone) |
|----------------------|-----------|--------------------------|------------------------|-------------------------------|-----------------------------|
| Bangladesh | UTC+6 | 15:00 PM | 20:00 PM | 17:00 PM | 22:00 PM |
| Kazakhstan | UTC+6 | 15:00 PM | 20:00 PM | 17:00 PM | 22:00 PM |
| Kyrgyzstan | UTC+6 | 15:00 PM | 20:00 PM | 17:00 PM | 22:00 PM |
| Uzbekistan | UTC+5 | 14:00 PM | 20:00 PM | 17:00 PM | 22:00 PM |
| Tajikistan | UTC+5 | 14:00 PM | 20:00 PM | 17:00 PM | 22:00 PM |
| Azerbaijan | UTC+4 | 13:00 PM | 18:00 PM | 17:00 PM | 22:00 PM |
| United Arab Emirates | UTC+4 | 13:00 PM | 18:00 PM | 17:00 PM | 22:00 PM |
| Russia | UTC+3 | 12:00 PM | 17:00 PM | 17:00 PM | 22:00 PM |
| Saudi Arabia | UTC+3 | 12:00 PM | 17:00 PM | 17:00 PM | 22:00 PM |
| Turkey | UTC+3 | 12:00 PM | 17:00 PM | 17:00 PM | 22:00 PM |



| | | | | | |
|---------|-------|----------|----------|----------|----------|
| Israel | UTC+3 | 12:00 PM | 17:00 PM | 17:00 PM | 22:00 PM |
| Romania | UTC+3 | 12:00 PM | 17:00 PM | 17:00 PM | 22:00 PM |
| Moldova | UTC+3 | 12:00 PM | 17:00 PM | 17:00 PM | 22:00 PM |

C. Online Students' Social Activities

On the 21st of May, LOC will host a students' activity. The event is called "Connecting Physics Beyond Borders".

On behalf of the hosting committee, we are excited to announce one highlight "junior scientists' social event" for the upcoming 21st Asian Physics Olympiad (May 17~May 24, 2021). This online Trivia Game event "**Connecting Physics Beyond Borders**" is created for all 2021 APhO participants as a social communication platform not only to enjoy learning new things in a fun way but also to exchange intercultural understanding about scientific knowledge from each other. Whoever joins this online challenging game will be like carrying along the Olympic torch all the way in search of wisdom together and will discover new ideas, acquire physics knowledge related to other disciplinary fields, build friendship and teamwork, and develop intercultural communication skills.

To echo the post-Covid-19 era emphasizing the need for global solidarity and international collaboration, we cordially invite you all to join us for this online event on May 21st (Friday): to be, to know, to care, to share and to play! Owing to the numbers and time differences among participating countries, **we will divide all the teams into three different group sessions** (see the tentative time schedule below). The top three winning country teams for each group session will be awarded an exclusive prize from our hosting committee while ALL the game participants will receive an additional Certificate of Participation for this particular virtual event! Shall you have any questions or concerns, please do not hesitate to contact us. Once again, we sincerely await your fullest support for this unique virtual learning journey full of pleasure, adventure and insights.

We will provide student a "Microsoft Teams" account for join the online Trivia Game event: "**Connecting Physics Beyond Borders**". Students can get the account from the Leaders.

The schedule of the "**Connecting Physics Beyond Borders**" is the following: (the schedule time is based on the time zone of UTC+8, that is the Taipei time)



2021 APhO Trivia Game: Connecting Physics Beyond Borders

~to be, to know, to care, to share and to play~

Date: May 21 (Friday)

Online Meet Link: TBA

| | Session 1 | | | Seccion 2 | | | Session 3 | | |
|---|---------------------|-------|-------|---------------------|-------|-------|----------------------|-------|-------|
| | 10:00-11:00 (UTC+8) | | | 13:00-14:00 (UTC+8) | | | 15:00-16:00 (UTC+8) | | |
| 1 | Singapore | UTC+8 | 10:00 | Israel | UTC+3 | 08:00 | Russia | UTC+3 | 10:00 |
| 2 | China | UTC+8 | 10:00 | Kyrgyzstan | UTC+6 | 11:00 | Saudi Arabia | UTC+3 | 10:00 |
| 3 | Mongolia | UTC+8 | 10:00 | Bangladesh | UTC+6 | 11:00 | Moldova | UTC+3 | 10:00 |
| 4 | Taiwan 2 | UTC+8 | 10:00 | Kazakhstan | UTC+6 | 11:00 | Turkey | UTC+3 | 10:00 |
| 5 | Malaysia | UTC+8 | 10:00 | Thailand | UTC+7 | 12:00 | Romania | UTC+3 | 10:00 |
| 6 | Hong Kong | UTC+8 | 10:00 | Indonesia | UTC+7 | 12:00 | Azerbaijan | UTC+4 | 11:00 |
| 7 | Macao | UTC+8 | 10:00 | Vietnam | UTC+7 | 12:00 | United Arab Emirates | UTC+4 | 11:00 |
| 8 | Japan | UTC+9 | 11:00 | Taiwan 1 | UTC+8 | 13:00 | Uzbekistan | UTC+5 | 12:00 |
| | | | | | | | Tajikistan | UTC+5 | 12:00 |

Up-to-Date Information: The Coronavirus has a strong effect on our daily life, and we hope every one of you is in good health.