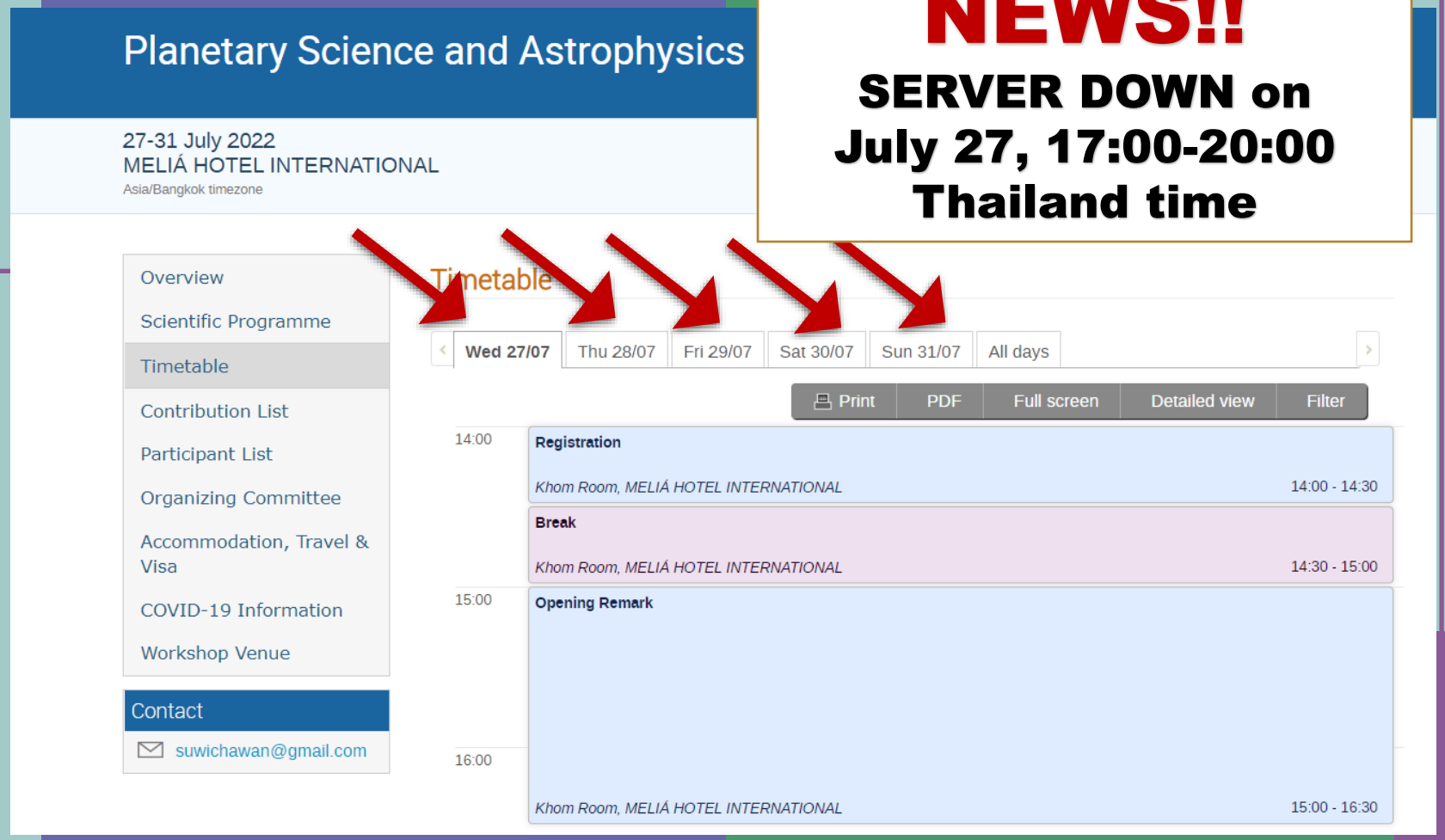
HANDS-ON PREPARATION
JULY 27, 2022

CHECK THE UPDATE OF THE CLASS MATERIALS

Link:

https://indico.narit.or.th/event/165/timetable/#20220727



BREAKING NEWS!!

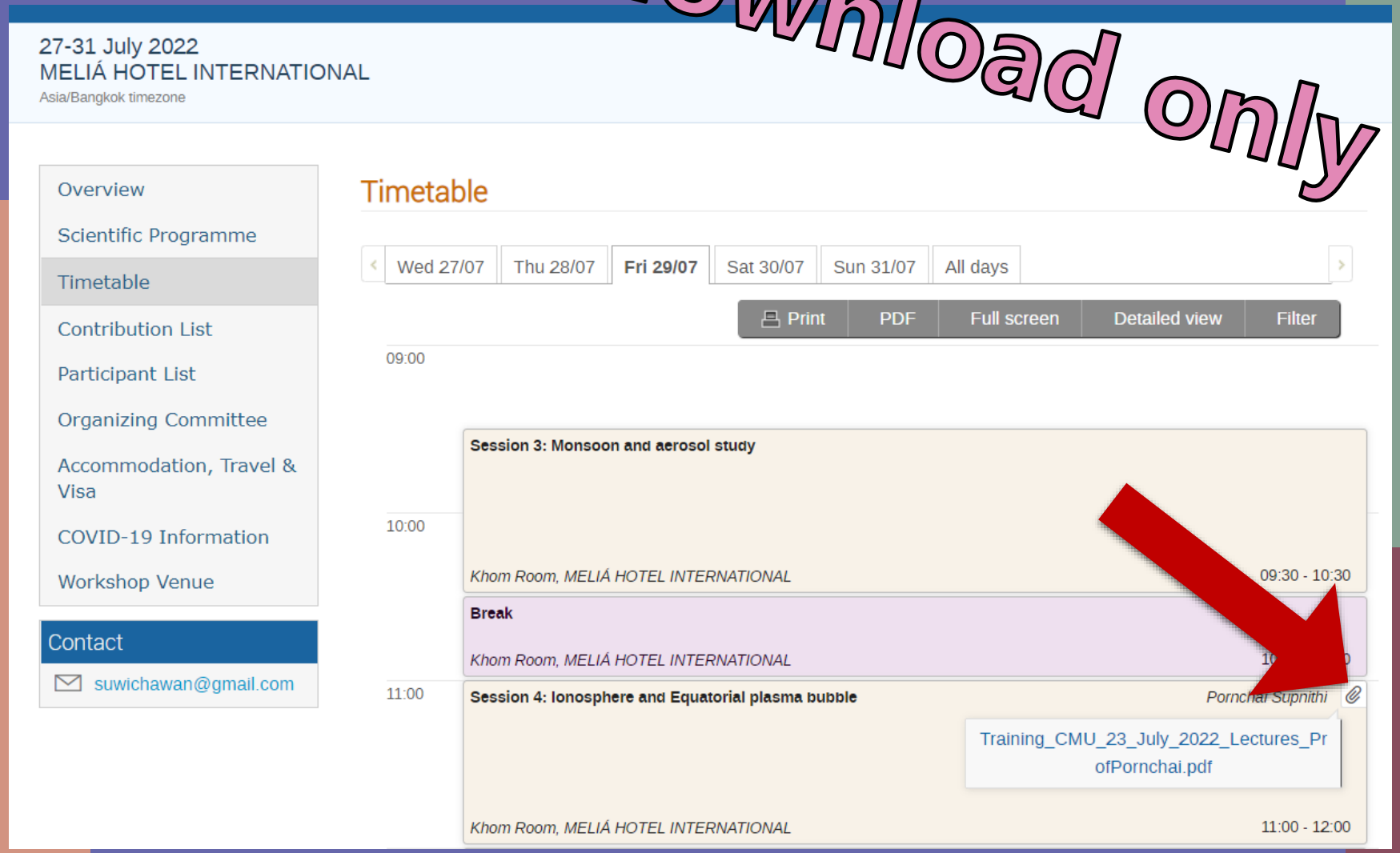
SERVER DOWN on July 27, 17:00-20:00 Thailand time

DOWNLOAD THE MATERIALS 1

Quick-download only

1. Go through each session and download the materials

1.1 “Left click” at the clipper sign, and download all Lecture Note.



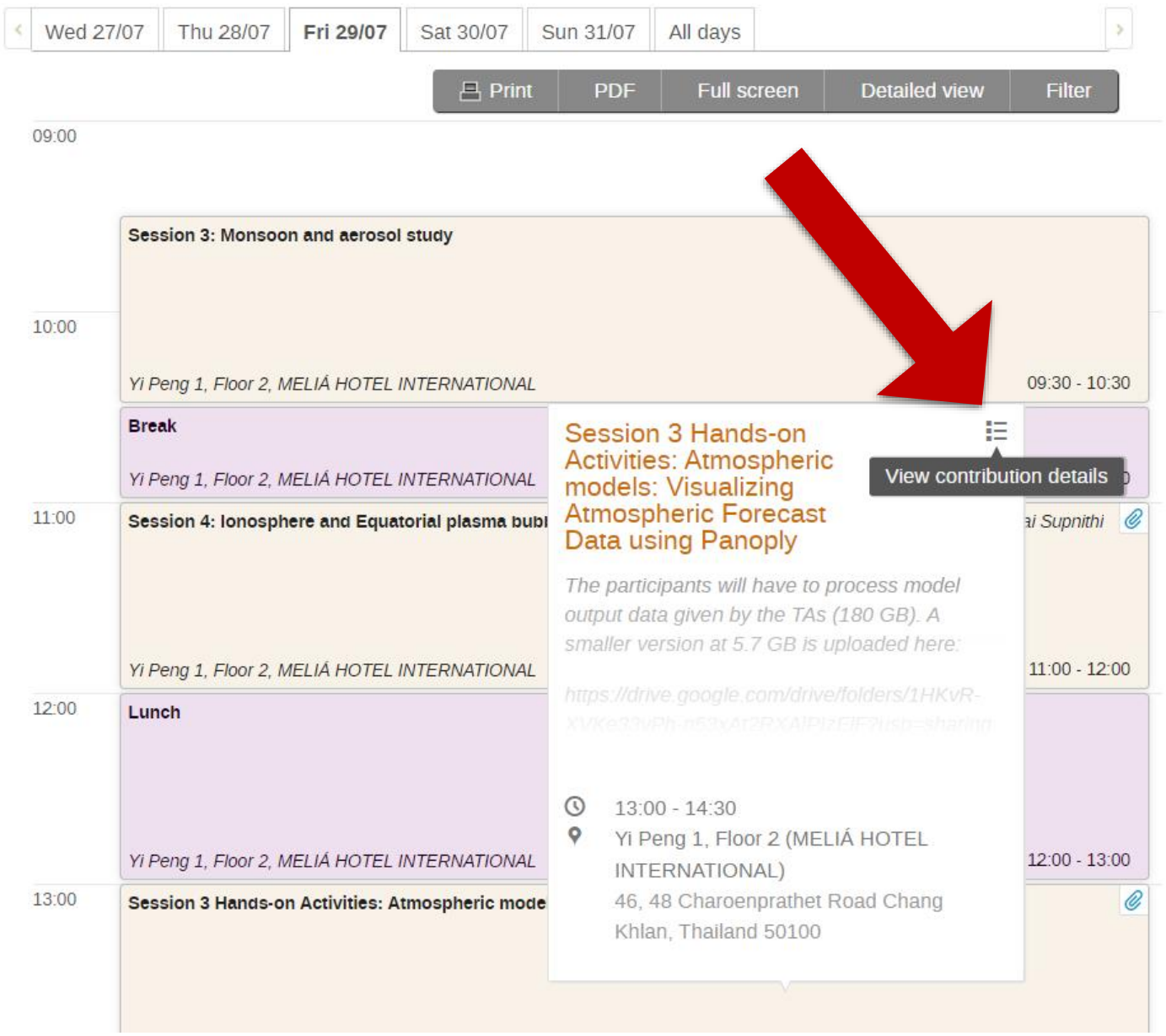
DOWNLOAD THE MATERIAL 1

1.2
"Left click" at the clipper sign, and download all the data.

Complete session review

Download the materials 1

Left click at the session and Left click on the top right corner, at the tab “view contribution detail”



Session 3 Hands-on Activities: Atmospheric models: Visualizing Atmospheric Forecast Data using Panoply

29 Jul 2022, 13:00

1h 30m

Yi Peng 1, Floor 2 (MELIÁ HOTEL INTERNATIONAL)

Description

The participants will have to process model output data given by the TAs (180 GB). A smaller version at 5.7 GB is uploaded here:

https://drive.google.com/drive/folders/1HKvR-XVKe33vPh-n53xAt2RXAIPIzEIF?usp=sharing

Also in this session, the participants need to download the Panoply software from:

https://www.giss.nasa.gov/tools/panoply/

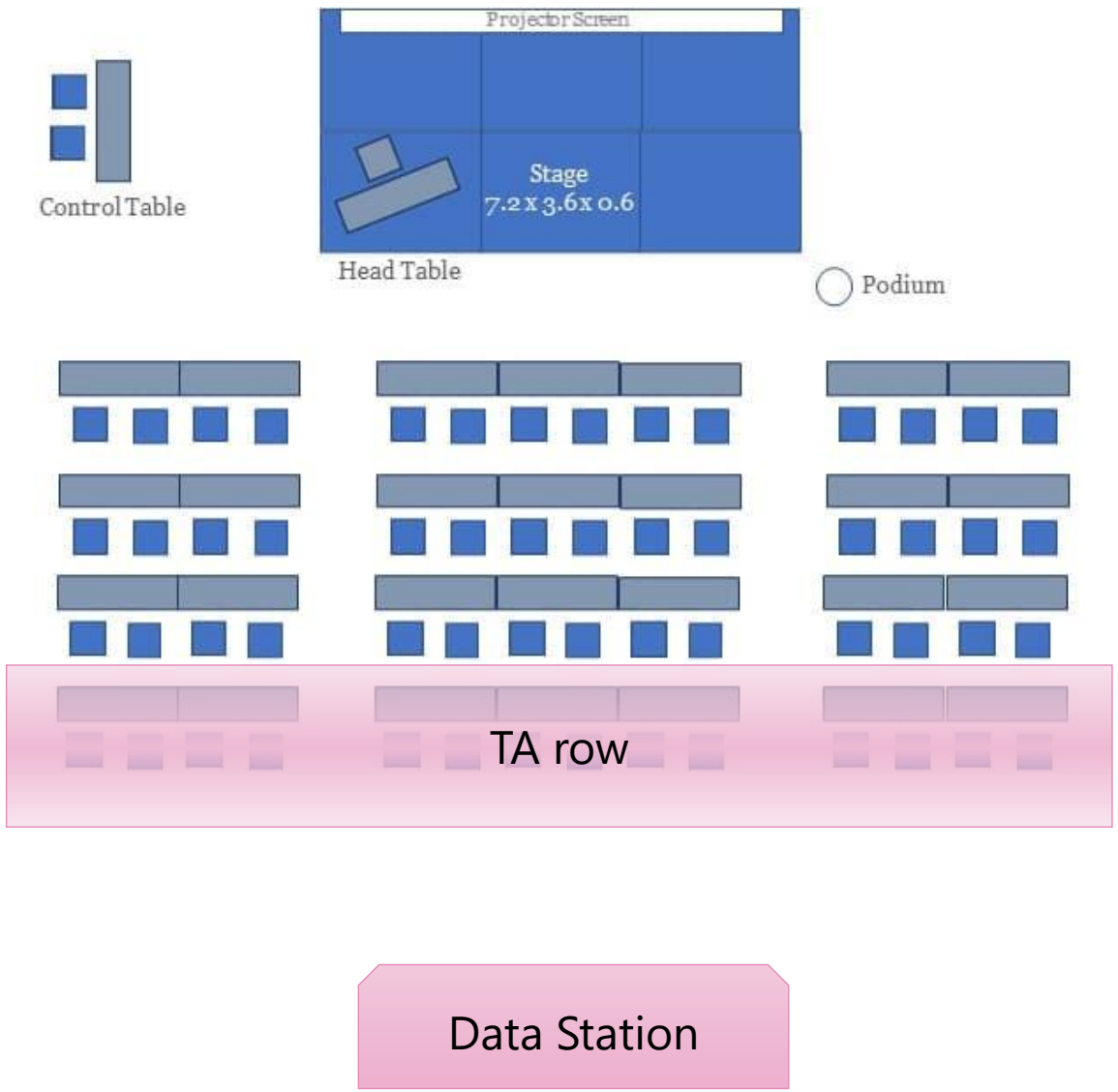
Presentation Materials

Panoply_starter_guide_v2.pdf

Not only the data, guideline file, but also some instruction may be given.

DOWNLOAD THE MATERIAL 2

2. Visit the Data Station
Note: could be a long line, please visit only when
- The data is too big
- The data is not available online.
- Not convenient to download by yourselves



Session Highlights

Thursday July, 28

Timetable

Wed 27/07 | **Thu 28/07** | Fri 29/07 | Sat 30/07 | Sun 31/07 | All days

Print | PDF | Full screen | Detailed view | Filter

09:00

Session 1: Exoplanet atmospheric study using the transmission spectroscopy technique
Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 09:30 - 10:30

10:00

Break
Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 10:30 - 11:00

11:00

Session 2: Spectroscopy and Photometry of Exoplanet Atmospheres Research NETwork (SPEARNET)
Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 11:00 - 12:00

13:00

Session 1 Hands-on Activities: TESS transit light curve
Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 13:00 - 14:30

14:00

Break
Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 14:30 - 15:00

15:00

Session 2 Hands-on Activities: TESS transit light curve
Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 15:00 - 16:30

16:00

“Exoplanet day”

Friday July, 29

Timetable

Wed 27/07 | Thu 28/07 | **Fri 29/07** | Sat 30/07 | Sun 31/07 | All days

Print | PDF | Full screen | Detailed view | Filter

09:00

Session 3: Monsoon and aerosol study
Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 09:30 - 10:30

10:00

Break
Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 10:30 - 11:00

11:00

Session 4: Ionosphere and Equatorial plasma bubble *Pornchai Supnithi*
Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 11:00 - 12:00

13:00

Session 3 Hands-on Activities: Atmospheric models: Visualizing Atmospheric Forecast Data using Panoply
Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 13:00 - 14:30

14:00

Break
Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 14:30 - 15:00

15:00

Session 4 Hands-on Activities: Ionosphere and Equatorial plasma bubble: computer analysis
Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 15:00 - 16:30

16:00

"ATM & Ionospheric day"

Some tips

Friday July, 29

Session 3 Hands-on Activities: Atmospheric models: Visualizing Atmospheric Forecast Data using Panoply

The participants will have to process model output data given by the TAs (180 GB). A smaller version at 5.7 GB is uploaded here:

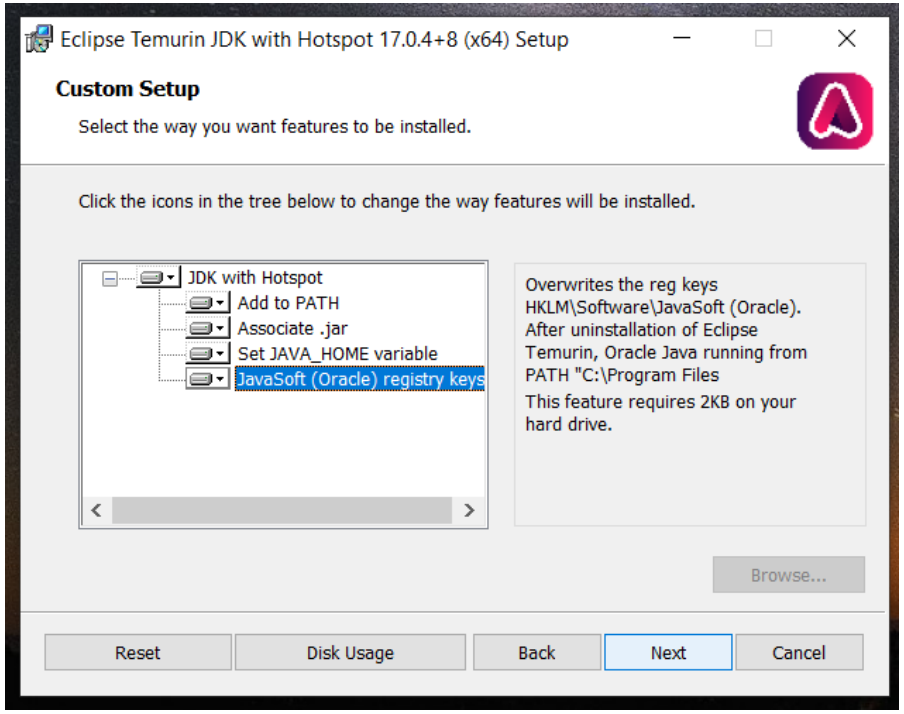
https://drive.google.com/drive/folders/1HKvR-XVKe33vPh-n53xAt2RXAlPlzElF?usp=sharing

13:00 - 14:30

Yi Peng 1, Floor 2 (MELIÁ HOTEL INTERNATIONAL)
46, 48 Charoenprathet Road Chang Khlan, Thailand 50100

1. Java 11 is needed before you can run Panoply.

2. Java 11 installation: THE MUST!!! Custom setting.



Follow the guide

Panoply_starter_guide_v2.pdf

3. Running the 180 GB file!!!!, you might need external hard drive.

More tips

Friday July, 29

Session 4 Hands-on Activities: Ionosphere and Equatorial plasma bubble: computer analysis

In this session, we will to study the characteristics of Slant TEC and Vertical TEC (VTEC) at Chiangmai GNSS station and compare with the TEC from the IRI model. In addition, we will invistigate the Kp index (disturbance to Earth's magnetic filed) on those

15:00 - 16:30

Yi Peng 1, Floor 2 (MELIÁ HOTEL INTERNATIONAL)
46, 48 Charoenprathet Road Chang Khlan, Thailand 50100

Model Output is in Excel format you can display them with

- **MATLAB**
- **Excel**
- **Computer language: C, Python, etc.**

15:00

16:00

Session 4 Hands-on Activities: Ionosphere and Equatorial plasma bubble: computer analysis

Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL

Training_CMU_23_July_2022_Hand_on_session_ProfPornchai.pdf

Data

TEC_CHM_DOY_130_2022 - Edit.xlsx

TEC_CHM_DOY_163_2022 - Edit.xlsx

TEC_CHM_DOY_169_2022 - Edit.xlsx

TEC_CHM_Jun_176_2022 -Edit.xlsx

Saturday July, 30

Wed 27/07 | Thu 28/07 | Fri 29/07 | **Sat 30/07** | Sun 31/07 | All days

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09:00

Session 5: Introduction of geomagnetic substorm
Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 09:30 - 10:30

10:00

Break
Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 10:30 - 11:00

11:00

Session 5 Hands-on Activities: CEF and possible on-demand analysis tools e.g., NASA CDAWeb
Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 11:00 - 12:00

12:00

Lunch

Long lunch!!

13:00

Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 12:00 - 13:45

Session 6: High latitude electrodynamics: The asymmetric connection to space

14:00

Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 13:45 - 14:30

Break
Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 14:30 - 15:00

15:00

Session 6 Hands-on Activities: High-school level outreach projects

tip: Direct calculation, follow the instruction step-by-step

16:00

Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 15:00 - 16:30

"Substorm Day"

Some tips

Saturday July, 30

Session 7 Hands-on Activities: Online resources for atmospheric compositions during geomagnetic substorm

11:00 - 12:00

Yi Peng 1, Floor 2 (MELIÁ HOTEL INTERNATIONAL)
46, 48 Charoenprathet Road Chang Khlan, Thailand 50100

1. open both the presentation file and a browser on a computer at the same time so that we can copy and paste the addresses of the websites.
2. **CHOSE data type first**!! Before click **submit**!!

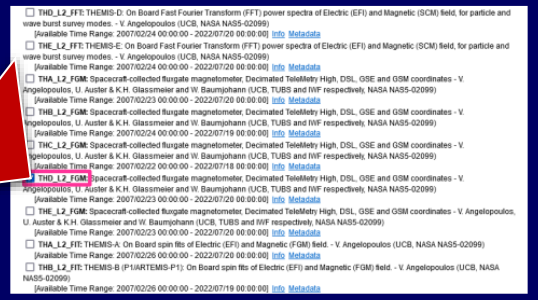
Follow the step-by-step guideline

220730_psa_ws_thailand_hands-on_miyashita.pdf

■ How to Use CDAWeb (2)

(2) Select data set.

- **Click "Click here to CLEAR All checkboxes".**
- **Select "THD_L2_ESA" and "THD_L2_FGM".**
- **Click the "Submit" button.**



Sunday July, 31

Wed 27/07 | Thu 28/07 | Fri 29/07 | Sat 30/07 | **Sun 31/07** | All days

Print | PDF | Full screen | Detailed view | Filter

09:00

Session 7: Atmospheric compositions and related space missions

Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 09:30 - 10:30

10:00

Break

Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 10:30 - 11:00

11:00

Session 7 Hands-on Activities: Online resources for atmospheric compositions during geomagnetic substorm

Follow the guideline

Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 11:00 - 12:00

13:00

Closing Remark

14:00

Yi Peng 1, Floor 2, MELIÁ HOTEL INTERNATIONAL 13:00 - 14:30

Participation Certificate REQUIREMENT

The **participation certificates** will be given to the participants who either

- Join the workshop **ONLINE** and signup for the lecture sessions and hands-on sessions via Google form (twice, daily) not less than **80%** of all sessions.

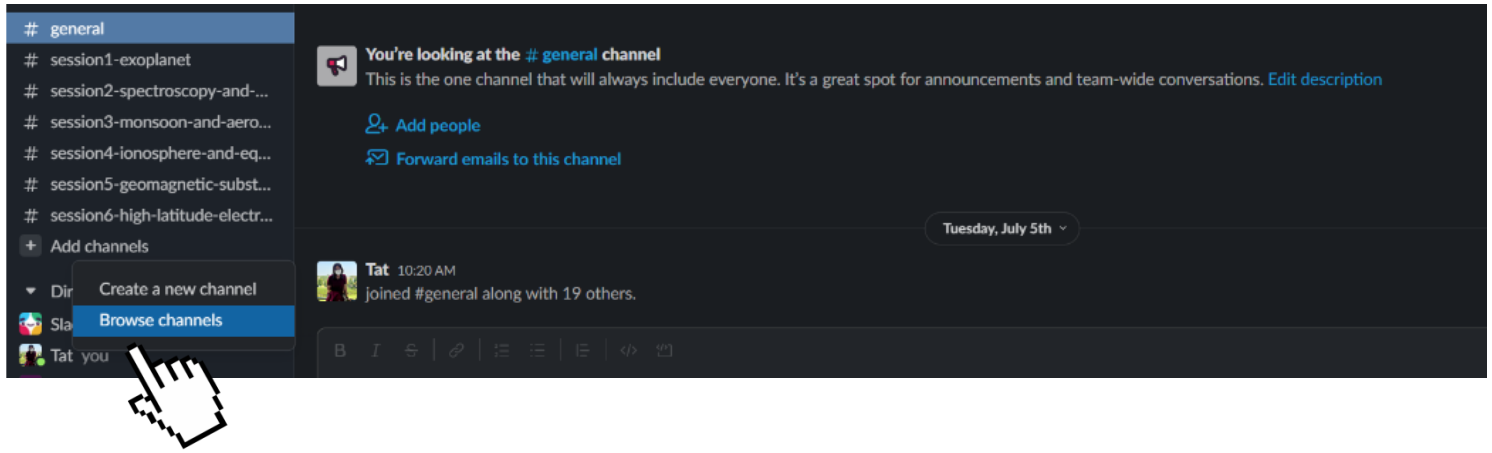
- Join the workshop **ONSITE** and signup at the registration table (twice each day) for not less than **80%** of all sessions.

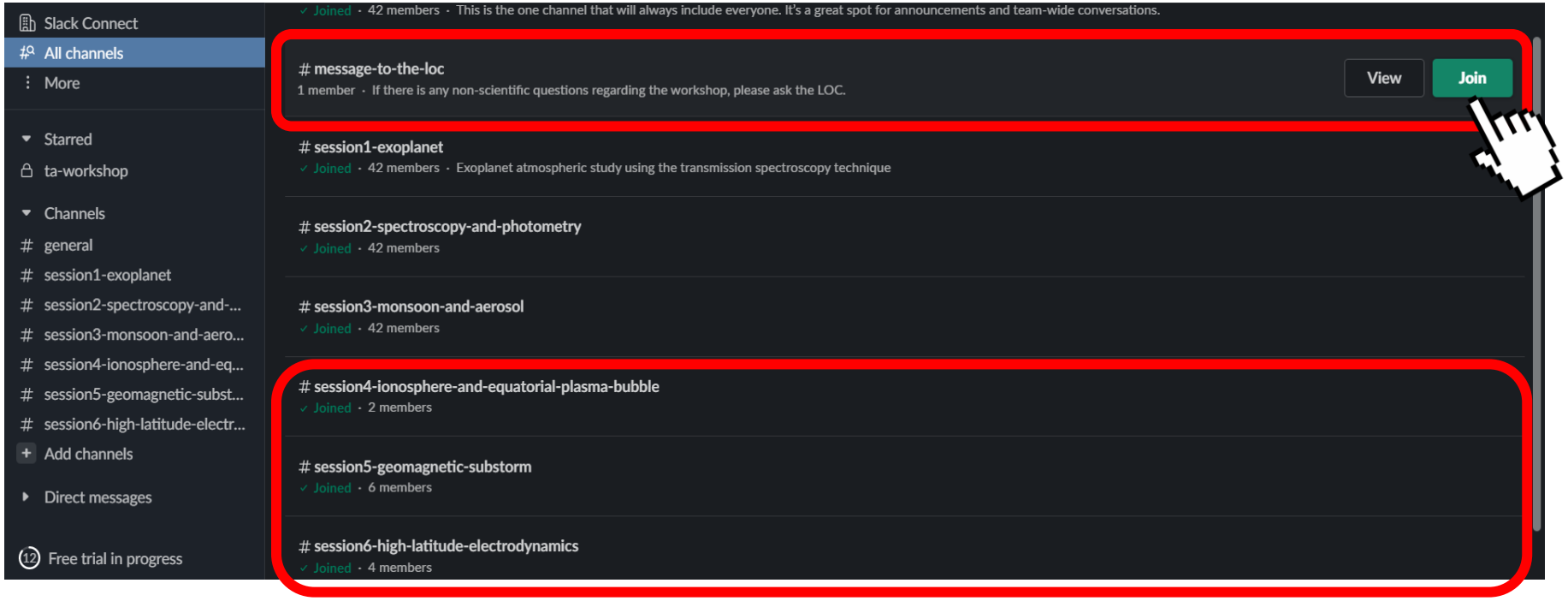
Giving as a google link and QR in ZOOM meeting at the beginning of Morning and Afternoon sessions every day, starting from July 28 to July 31.

Signup at the registration table at the beginning of Morning and Afternoon sessions every day, starting from July 28 to July 31.

SLACK Application Notice

Channels for session 4, 5, and 6 are created. You can join by go to Add channels → Browse channels. Then click to join each session.





If anyone has a general question except lecture, you can join the channel **message to the loc** and leave your question there.

If you have any questions, please

1. Ask any LOCs and the TAs
2. Post your question in the SLACK application
3. Ask via zoom (raised your hand, and wait for the MC to notify) or post your question in the comment section in the zoom meeting.