

# AMASE-P Critical Design Review Meeting (Dec 2-5, 2025)

- **Dates:** 9:00am -6:00pm from 2 Dec 2025 to 5 Dec 2025
- **Location:** [University of Chicago Hong Kong Campus](#)
- **Address:** 168 Victoria Rd, Pok Fu Lam, Hong Kong Island, Hong Kong SAR, China
- **Hotel:** Hotel JEN Hong Kong
- **Transportation:** Bus will be arranged between Hotel JEN and the meeting site everyday. There will be a UChicago logo on the bus window for easy identification. For those who are not staying at Hotel JEN, you can take a local bus. See [Notes on transportation](#)
  - **Dec 2:**
    - 8:30 am Hotel JEN drop-off area → UChicago HK Campus (27-seater x 1);
    - 5:45 pm UChicago HK Campus → Hotel JEN (27-seater x 1)
  - **Dec 3:**
    - 8:30 am Hotel JEN drop-off area → UChicago HK Campus (27-seater x 1)
    - 1:30 pm UChicago HK Campus → CUHK Science Centre North Block (27-seater x 2)
    - 6:00pm CUHK Science Centre → Club One Riviere (60-seater)
    - 8:30 pm Club One Riviera → Kowloon Town MTR -> Hotel JEN (60 seater)
  - **Dec 4:**
    - 8:30 am Hotel JEN drop-off area → UChicago HK Campus (27-seater x 1)
    - 5:45 pm UChicago HK Campus → Hotel JEN (27-seater x 1)
  - **Dec 5:**
    - 8:30 am Hotel JEN drop-off area → UChicago HK Campus (27-seater x 1)
    - 5:15 pm UChicago HK Campus → Hotel JEN (27-seater x 1)
- **Contact:** Renbin Yan ([rbyan@cuhk.edu.hk](mailto:rbyan@cuhk.edu.hk))

## Review Panel

**David Law**, Space Telescope Science Institute (*Co-Chair*)

**Christy Tremonti**, University of Wisconsin

**Sebastian Sanchez**, Universidad Nacional Autónoma de Mexico

**Emily Wisnioski**, Australian National University

**Roberto Abraham**, University of Toronto

**John Wilson**, University of Virginia (*Co-Chair*)

**Thomas Herbst**, Max Planck Institute for Astronomy

**Graham Murray**, Durham University

**Will Saunders**, Macquarie University

**Nick MacDonald**, University of California Observatories (document review only)

## Block Schedule

|             | Tue(2 Dec)                  | Wed(3 Dec)              | Thu(4 Dec)           | Fri(5 Dec)           |
|-------------|-----------------------------|-------------------------|----------------------|----------------------|
| 9:00-10:30  | Survey and Science Overview | SRD Topic IV            | Instrument Topic III | Survey Design II     |
| 10:30-11:00 | Coffee Break                | Coffee Break            | Coffee Break         | Coffee Break         |
| 11:00-12:30 | SRD Topic I                 | SRD Topic V and Summary | Instrument Topic IV  | Review Panel Summary |
| 12:30-14:00 | Lunch                       | Lunch                   | Lunch                | Lunch                |
| 14:00-15:30 | SRD Topic II                | Instrument Topic I      | Survey Design I      | AMASE Team Meeting I |
| 15:30-16:00 | Coffee Break                | Coffee Break            | Coffee Break         | Coffee Break         |

|             | <b>Tue(2 Dec)</b> | <b>Wed(3 Dec)</b>   | <b>Thu(4 Dec)</b>       | <b>Fri(5 Dec)</b>     |
|-------------|-------------------|---------------------|-------------------------|-----------------------|
| 16:00-17:30 | SRD Topic III     | Instrument Topic II | Software Infrastructure | AMASE Team Meeting II |

## Meeting Program

- As we will record the presentations via Zoom over the 4 days, everyone will need to use the laptop at the venue to present. Please send the presentation file in PPT or PDF format to Zhuo Cheng ([chengzphy@gmail.com](mailto:chengzphy@gmail.com)) at least 1 day before your presentation.

### Tuesday, 2 Dec 2025

| Time         | Speaker   | Presentation Title   |
|--------------|---|--|
| Session I:   | <b>Chair: Hsiao-Wen Chen</b>  |  |
| 9:00-9:10    | Address by Mark Barnekow, the Executive Director of the Univ. of Chicago Hong Kong Campus |  |
| 9:10-9:50    | Renbin Yan  | <a href="#">AMASE-P Project Overview (30min + 10min Q&amp;A)</a>   |
| 9:50-10:30   | Yuguang Chen  | <a href="#">Science Motivation Overview (30min + 10min Q&amp;A)</a>  |
| 10:30-11:00  | Coffee Break  |  |
| Session II:  | <b>Chair: Cheng Li</b>  |  |
| 11:00-11:20  | Zheng Zheng   | The Transition from Dust-Obscured to Optically Visible Hii Regions (12 min + 8 min)                              |
| 11:20-11:40  | Tsang-Keung Chan  | <a href="#">Pre-Supernova Feedback in Hii Regions (12 min + 8 min)</a>   |
| 11:40-12:00  | Wei Zhang   | <a href="#">Tracking the Evolution of Optically Visible Hii Regions (12 min + 8 min)</a>                         |
| 12:00-12:20  | Zongnan Li  | <a href="#">The Origin of Giant Hii Regions in M31 and M33 (12 min + 8 min)</a>                                  |
| 12:20-12:40  | Xuan Fang (remote)  | Planetary Nebulae as Probes of Stellar and Galactic Evolution (12 min + 8 min)                                   |
| 12:40-2:00   | Lunch on campus (1:15-2:00: Tour of the Historical Heritage Site)                         |  |
| Session III: | <b>Chair: Yuguang Chen</b>  |  |
| 2:00-2:20    | Fuheng Liang (remote)   | Probing Wolf-Rayet Feedback with High-Resolution IFU Spectroscopy (12 min + 8 min)                               |
| 2:20-2:40    | Ping Zhou   | <a href="#">Investigating supernova remnant interaction with the interstellar medium (12 min + 8 min)</a>        |
| 2:40-3:00    | Zongnan Li  | <a href="#">The Ionization Mechanism of LIERs (12 min + 8 min)</a>   |
| 3:00-3:20    | Yifei Jin   | Physical Conditions and Ionization Mechanisms of Diffuse Ionized Gas (12 min + 8 min)                            |
| 3:20-3:50    | Coffee Break  |  |
| Session IV:  | <b>Chair: Mandy Chen</b>  |  |
| 3:50-4:10    | Lin Lin (remote)  | Stellar Bow-Shocks as Probes of Star-ISM Interaction (12 min + 8 min)  |
| 4:10-4:30    | Tao Jing  | <a href="#">Disentangling Shock-Cloud Interactions in the Criss-Cross Nebula (12 min + 8 min)</a>                |
| 4:30-5:00    | Xihan Ji  | <a href="#">Resolving the Abundance Discrepancy &amp; Empirical Validation of Photoionization Models (20+10)</a> |
| 5:00-5:20    | Yifei Jin   | <a href="#">Using supernova remnant and nebula to calibrate shock models (12 min + 8 min)</a>                    |
| 5:20-5:30    | Discussion for Day 1  |  |

### Wednesday, 3 Dec 2025

| Time       | Speaker                   | Presentation Title |
|------------|---------------------------|--------------------|
| Session V: | <b>Chair: Yanmei Chen</b> |                    |

| Time   | Speaker   | Presentation Title   |
|--|---|--|
| 9:00-9:40  | Zhijie Qu   | Spatial distribution of the ionized cool CGM<br>Kinematics and energy transfer in the cool CGM<br>Microphysics in High-Velocity Clouds and the Magellanic Stream (25+15) |
| 9:40-10:00   | Zongnan Li  | Mapping Outflows in Nearby AGN and Starburst Galaxies (12 min + 8 min)   |
| 10:00-10:20  | Zesen Lin   | AMASE Panoramic Survey Initiative (12 min + 8 min)   |
| 10:20-10:40  | Tao Jing  | AMASE Simulation and Mock Data (12 min + 8 min)  |
| 10:40-11:10  | Coffee Break  |  |
| Session VI:  | <b>Chair: Renbin Yan</b>                                  |  |
| 11:10-11:40  | Cheng Li  | AMASE Key Observables, Requirements, and Summary (20+10)   |
| 11:40-12:00  | Panel Closed-door Discussion                              |  |
| 12:00-12:30  | Panel Feedback and Discussion with the Science Team       |  |
| 12:30-1:30   | Lunch on campus   |  |
| 1:30   | Bus departing for CUHK                                    |  |
| 2:20-2:50  | JC STEM Lab Tour for Review Panel and Executive Committee |  |
| Meeting Location for this afternoon: Science Centre L1 |   |  |
| Session VII:   | <b>Chair: Yuguang Chen</b>                                |  |
| 3:00-3:30  | Steven Hui  | Spectrograph design with the custom optics, responses on the issued raised before. (15+15)   |
| 3:30-4:00  | Qingjiu Chen  | Spectrograph opto-mechanics and alignment plan. (15+15)  |
| 4:00-4:30  | Coffee Break  |  |
| Session VIII:  | <b>Chair: Renbin Yan</b>                                  |  |
| 4:30-5:00  | Ruoyu Zhou  | 0.8m corrector design (15+15)  |
| 5:00-5:30  | Yutong Qiao   | MLA optimization, tolerance stack-up, & alignment plan (15+15)   |
| 6:00-8:30  | Banquet at Club One Riviera                               |  |
| 8:30   | Bus for MTR and JEN Hotel                                 |  |

#### Thursday, 4 Dec 2025

| Time         | Speaker                                      | Presentation Title                                     |
|--------------|--|--|
| Session IX:  | <b>Chair: Steven Hui</b>                     |  |
| 9:00-9:40    | Qingjiu Chen                                 | Fiber Cable Design (10+10)<br>Enclosure Design (10+10) |
| 9:40-10:30   | Ruoyu Zhou                                   | Calibration System (10+10)<br>Control System (10+10)   |
| 10:30-11:00  | Coffee Break                                 |  |
| Session X:   | <b>Chair: Hsiao-Wen Chen</b>                 |  |
| 11:00-11:20  | Renbin Yan                                   | Project Management and Schedule                        |
| 11:20-11:40  | Panel Closed-door Discussion                 |  |
| 11:40-12:30  | Panel Feedback and Discussion with the Group |  |
| 12:30-2:00   | Lunch  |  |
| Session XI:  | <b>Chair: Zhijie Qu</b>                      |  |
| 2:00-2:20    | Jichen Zhang                                 | Observing Strategy (10+10)                             |
| 2:20-2:40    | Mandy Chen                                   | PSF Characterization and Image Registration (10+10)    |
| 2:40-3:20    | Zhuo Cheng                                   | Survey Scheduling (20+20)                              |
| 3:20-3:50    | Coffee Break                                 |  |
| Session XII: | <b>Chair: Yifei Jin</b>                      |  |
| 3:50-4:50    | Guangquan Zeng                               | Data Reduction Pipeline (25+25)                        |
| 4:50-5:10    | Yee Ching Lam                                | Metadata Storage (10+10)                               |
| 5:10-5:30    | Discussion for Day 3                         |  |

## Friday, 5 Dec 2025

| Time                        | Speaker  | Presentation Title                     |
|-----------------------------|--|--|
| Session XIII:               | <b>Chair: Xihan Ji</b>                                     |  |
| 9:00-9:30                   | Sabyasachi Chattopadhyay / Renbin Yan                      | Sky Subtraction (15+15)                |
| 9:30-10:00                  | Renbin Yan   | Flux Calibration (15+15)               |
| 10:00-10:30                 | Panel Closed-door Discussion                               |  |
| 10:30-11:00                 | Coffee Break   |  |
| Session XIV:                | <b>Chair: Cheng Li</b>                                     |  |
| 11:00-12:00                 | Panel Feedback and Discussion with the Group               |  |
| 12:00-12:15                 | Review Meeting Summary                                     |  |
| 12:30-1:30                  | Lunch on campus  |  |
| <b>AMASE-P Team Meeting</b> | <b>(Reviewers are welcome to join, but it is optional)</b> |  |
| Session XV:                 | <b>Chair: Zongnan Li</b>                                   |  |
| 2:00-2:30                   | Cheng Li & Yuguang Chen                                    | Next Step for the Science Team         |
| 2:30-3:00                   | Zhuo Cheng & Jichen Zhang                                  | Observing Strategy & Survey Scheduling |
| 3:00-3:30                   | Renbin Yan & Sabyasachi                                    | Sky subtraction and flux calibration   |
| 3:30-4:00                   | Coffee Break   |  |
| Session XVI:                | <b>Chair: Zheng Zheng</b>                                  |  |
| 4:00-4:30                   | Guangquan Zeng & Yee-Ching Lam                             | Data Reduction Pipeline                |
| 4:30-5:00                   | Buffer Time / End of Meeting                               |  |

## Participants

| Title | Name - Last | Name - First | Institution                         | Country/Region   | Title/Position               | Remark               |
|-------|-------------|--------------|-------------------------------------|------------------|------------------------------|----------------------|
|       | Abraham     | Roberto      | University of Toronto               | Canada           | Professor                    | Remote Participation |
| Prof. | Chan        | Tsang Keung  | The Chinese University of Hong Kong | Hong Kong, China | Professor                    |                      |
|       | Chen        | Mandy        | Caltech & Carnegie Observatories    |                  | Postdoc                      |                      |
| Dr.   | CHEN        | Qingjiu      | The Chinese University of Hong Kong | Hong Kong        | Mechanical Engineer          |                      |
| Prof. | Chen        | Hsiao-Wen    | The University of Chicago           | USA              | Professor                    |                      |
| Dr.   | Chen        | Yanmei       | Nanjing University                  | China            | Professor                    |                      |
|       | Chen        | Yuguang      | The Chinese University of Hong Kong | Hong Kong        | Research Assistant Professor |                      |
| Dr.   | Cheng       | Zhuo         | The Chinese University of Hong Kong | Hong Kong        | Postdoc                      |                      |
| Mr.   | Chi         | Yi-Heng      | Nanjing University                  | China            | Postgraduate                 |                      |
| Dr.   | Fang        | Xuan         | NAOC                                | China            | Professor                    | Remote Participation |
| Dr.   | Herbst      | Tom          | Max Planck Institute for Astronomy  | Germany          | Research Group Leader        |                      |

| <b>Title</b> | <b>Name - Last</b> | <b>Name - First</b> | <b>Institution</b>  | <b>Country/Region</b> | <b>Title/Position</b>  | <b>Remark</b>        |
|--------------|--------------------|---------------------|---|-----------------------|------------------------|----------------------|
| Mr.          | Hui                | Chit Ho             | The Chinese University of Hong Kong                               | HKSAR                 | Optical Engineer       |                      |
| Dr.          | Ji                 | Xihan               | University of Cambridge   | United Kingdom        | Postdoc                |                      |
| Mr.          | Jing               | Tao                 | Tsinghua University   | China                 | Postgraduate           |                      |
| Dr.          | Jin                | Yifei               | Westlake University   | Hong Kong             | Postdoc                |                      |
|              | LAM                | Yee Ching           | The Chinese University of Hong Kong                               | Hong Kong             | Postgraduate           |                      |
| Dr.          | Law                | David               | STScI   |                       | Associate Astronomer   |                      |
| Prof.        | Li                 | Cheng               | Tsinghua University   | China                 | Professor              |                      |
| Dr.          | Li                 | Zongnan             | National Astronomical Observatory of Japan                        | Japan                 | Postdoc                |                      |
|              | Lin                | Lin                 | SHAO  | China                 | Associate Researcher   | Remote Participation |
| Dr.          | LIN                | ZESSEN              | Zhengzhou University  | China                 | Associate Professor    |                      |
| Dr.          | Liang              | Fuheng              | Heidelberg University   | Germany               | Postdoc                | Remote Participation |
|              | Matthew            | Bershady            | University of Wisconsin   | USA                   | Professor              | Remote Participation |
| Mr.          | Murray             | Graham              | Durham University   | United Kingdom        | Senior Research Fellow |                      |
|              | Peng               | Ziming              | The Chinese University of Hong Kong                               | Hong Kong             | Postgraduate           |                      |
| Mr.          | Qiao               | Yutong              | The Chinese University of Hong Kong                               | Hong Kong             | Postgraduate           |                      |
| Dr.          | Qu                 | Zhijie              | Tsinghua University   | China                 | Assistant Professor    |                      |
| Prof.        | Sabyasachi         | Chattopadhyay       | University of Hawaii  | USA                   | Assistant Professor    | Remote Participation |
| Prof.        | Sanchez            | Sebastian F.        | Instituto de astronomia - Universidad Nacional Autónoma de Mexico | Mexico                | Professor              |                      |
| Mr.          | Smith              | Michael             | University of Wisconsin   | United States         | Research Engineer      |                      |
|              | Tremonti           | Christy             | University of Wisconsin   | USA                   | Professor              | Remote Participation |
| Dr.          | Wei                | Peng                | Xinjiang Astronomical Observatory, Chinese Academy of Sciences    | China                 | Assocoated professor   |                      |
|              | Will               | Saunders            | Macquarie University  | Australia             | Instrument Scientist   | Remote Participation |
| Dr.          | Wilson             | John                | University of Virginia  | United States         | Senior Scientist       |                      |
| Dr.          | Wisnioski          | Emily               | Australian National University                                    | Australia             | Associate Professor    |                      |
| Mr.          | Wong               | Wai Kiu Ricky       | The Chinese University of Hong Kong                               | Hong Kong             | Postgraduate           |                      |

| Title | Name - Last | Name - First | Institution                                   | Country/Region   | Title/Position      | Remark |
|-------|-------------|--------------|---|------------------|---------------------|--------|
| Prof. | Yan         | Renbin       | The Chinese University of Hong Kong           | Hong Kong, China | Professor           |        |
| Ms.   | YUE         | Shiyu        | The Chinese University of Hong Kong           | Hong Kong        | Postgraduate        |        |
| Dr.   | Zeng        | Guangquan    | The Chinese University of Hong Kong           | Hong Kong        | Postdoc             |        |
| Prof. | Zhang       | Huanian      | Huazhong University of Science and Technology | China            | Professor           |        |
| Mr.   | Zhang       | Jichen       | The Chinese University of Hong Kong           | Hong Kong, China | Student             |        |
| Dr.   | Zhang       | Wei          | NAOC  | China            | Associate Professor |        |
|       | Zhang       | Yu           | Xinjiang Astronomical Observatory             | China            | Professor           |        |
|       | Zheng       | Zheng        | NAOC  | China            | Dr.                 |        |
| Dr.   | Zhou        | Ping         | Nanjing University                            | China            | Associate Professor |        |
| Mr.   | Zhou        | Ruoyu        | The Chinese University of Hong Kong           | Hong Kong        | Postgraduate        |        |

## Local Transportation Information

[Notes on transportation](#)

## Remarks

- **No parking space** is available at the UChicago Hong Kong Campus.
- WiFi will be available for all participants. We will put out the login details at the venue.

## Acknowledgements

Funding for the AMASE-P Project is provided by the Hong Kong Jockey Club Charities Trust through the JC STEM Lab of Astronomical Instrumentation and Jockey Club Spectroscopy Survey System, The Chinese University of Hong Kong, and the National Science Foundation of China.

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