



## Infopackage for PLANCKS preliminaries

This document is for you, if you are considering or planning on organising a preliminary for PLANCKS 2019. There is also some general information if you just want to participate.

Other places to find information include:

IAPS homepage: <https://www.iaps.info/>

PLANCKS 2019 homepage: <http://www.plancks-2019.sdu.dk/>

PLANCKS 2019 facebook page: <https://www.facebook.com/PLANCKS2019/>

## About PLANCKS

### Introduction

The *Physics League Across Numerous Countries for Kick-ass Students* (PLANCKS) was first held in the Netherlands by *Studenten Physica in Nederland* (SPIN), the Dutch umbrella association for physics study associations, as they decided to organize this international competition with the help of the *International Association of Physics Students* (IAPS). The first edition of PLANCKS took place in May 2014 in Utrecht, and since then PLANCKS is held annually in May.

PLANCKS is a theoretical physics competition for bachelor and master students. It is a three-day event containing an opening symposium, the contest itself, and filled to the brim with numerous excursions and social activities, where the participants are encouraged to discover the research environment and culture of the hosting country. It provides physics students from all over the world with the opportunity to get in touch with each other. The intention is to increase international collaboration, host social activities and stimulate the personal development of individual contestants. By bringing physics students from various parts of the world together, a setting to exchange ideas and experiences, and to challenge each other, is created.

### The competition

Participants of PLANCKS compete in teams consisting of three to four bachelor or master students. The teams will, preferably, be comprised of students from the same country. During the competition they will answer challenging theoretical physics questions, designed to both challenge and entertain the competitors. Each country can submit a limited number of teams. Some countries organize preliminaries, and the winners of these preliminaries will participate in PLANCKS, while other countries select the interested participants at random. If you are interested in organizing a preliminary in your country, please contact the organizing committee of PLANCKS, and we will provide you with all the information needed.



The problems are written by professors and cover different fields of physics. For example, questions about cradles, glaciers, particle physics, slinkies, graphene, beamsplitters, skyrmions, wind drift of icebergs, laser cooling, and oil and gas production have arisen in the previous editions, with even more areas of study being added to this years' competition.

## Important information for preliminaries

### Amount of teams from each country:

Each country can send two teams. If the preliminary in you country had more than 14 teams this year (for PLANCKS 2019) or last year (for PLANCKS 2018), you are entitled to send 3 teams. The Netherlands can send 3 teams because they won the 2018 edition of PLANKCS.

### Price

The participation fee for PLANKCS 2019 will be no more than 60 € per participant. There will be a possibility of two extra days (Thursday and Monday). The fee for these will be of the order of 25 € each.

### Deadlines

Registration for preliminaries opens November 1st and closes mid March.

First round of registration for individual teams opens December 1st and closes around January 31th.

Second round of registration for individual teams opens in the beginning of February and closes mid March

When a preliminary registers, registration for individual teams from that country closes.

If more individual teams than allowed register during the first round of registration, we highly recommend you to organise a preliminary. We can help you with sharing problems with other preliminaries (see "Linking Preliminaries"). If this is not possible the seats will be decided by a draw.

If more individual teams than allowed register during the second round of registration, we recommend you to organise a preliminary. If no such reasonable preliminary can be organised, the seats will be decided by a draw. Here the teams that registered during the first round have priority.



## Linking Preliminaries

We recommend you link your preliminaries with other countries to ease the burden of producing problems. A spreadsheet with information about other preliminaries is available here:

[https://docs.google.com/spreadsheets/d/1mZ\\_AOVZiT5aBMRC-IVYaIgf2z1NzBGpCsD-isEzuXEQ/edit#gid=0](https://docs.google.com/spreadsheets/d/1mZ_AOVZiT5aBMRC-IVYaIgf2z1NzBGpCsD-isEzuXEQ/edit#gid=0)

We especially recommend working together with the UK preliminary which will be held 23th of January 2019. If you want to do a preliminary on weekdays, Portugal will hold their preliminary sometime during March 1st-4<sup>th</sup> 2019.

## Problem examples

We recommend the problems during your preliminary resembles the type of problems on the PLANCKS competition. Example problems and solutions can be found here:

2017 problems: [https://issuu.com/gerharddorn/docs/plancks\\_example\\_folder](https://issuu.com/gerharddorn/docs/plancks_example_folder)

2016

problems: [https://drive.google.com/file/d/1Hv5vuSKy\\_CoBfRpAypK4spxhUPDWqYDK/view?usp=sharing](https://drive.google.com/file/d/1Hv5vuSKy_CoBfRpAypK4spxhUPDWqYDK/view?usp=sharing)

2016 solutions: [https://drive.google.com/file/d/1ZUXxjFW3ad12\\_iXDpX9Vpzlflf--akFe/view?usp=sharing](https://drive.google.com/file/d/1ZUXxjFW3ad12_iXDpX9Vpzlflf--akFe/view?usp=sharing)

2015

problems: <https://drive.google.com/file/d/1FY7K2jtbawSn3IFF37VGkxISC3PGuUfK/view>

2015 solutions:

[https://drive.google.com/file/d/11tUAR\\_xiFb4STOdcVp-Lm7123Lg9RA8Z/view](https://drive.google.com/file/d/11tUAR_xiFb4STOdcVp-Lm7123Lg9RA8Z/view)

2014 problems: <http://2014.plancks.org/exercisebooklet.pdf>

2014 solutions: <http://2014.plancks.org/answerbooklet.pdf>