

# 15th International Workshop on Heavy Quarkonium

## **QWG 2022**

26 – 30 September 2022

GSI Helmholtzzentrum für Schwerionenforschung GmbH  
Planckstr. 1, 64291 Darmstadt, Germany

<https://indico.gsi.de/event/QWG2022>

### **BULLETIN No. 2, Sep. 2022**

#### GENERAL INFORMATION

In the last couple of years, numerous discoveries and new results have been achieved in the heavy quark sector, especially in the energy regime of charmonium, and the true nature of most of the new states is still under investigation. The Quarkonium Working Group has been founded to intensify the scientific exchange and collaboration between experiment and theory in quarkonium physics in order to solve the puzzles and improve the understanding in terms of QCD.

The 15th International Workshop on Heavy Quarkonium is organised by the Helmholtz Academy Hesse for FAIR, supported by the Hadronphysics department of GSI Helmholtzzentrum für Schwerionenforschung GmbH. It will be held at the GSI Helmholtzzentrum für Schwerionenforschung GmbH, Planckstr. 1, 64291 Darmstadt, Germany.

#### SCIENTIFIC PROGRAM

The workshop covers recent results in the field, including the impact on and from theory, as well as projections for results to be expected from upcoming facilities. The various sessions will be dedicated to and address the following topics:

- Spectroscopy
- Decays
- Production
- Standard Model Measurements
- Quarkonium in Media
- Beyond the Standard Model
- Automated Calculations and Interface to Monte Carlo

## CONFERENCE WEBSITE

Various information about the workshop, including overview, timetable, traveling from and to GSI as well as the first and this second bulletin, are available on the conference Indico website at <https://indico.gsi.de/event/QWG2022/>.

## COVID-19 MEASURES

The following Covid-19 rules are mandatory in Germany / on GSI campus:

- Use of medical/FFP2 masks in public transportation, GSI canteen and the lecture hall.

People not willing or not being able to wear a mask unfortunately are excluded from attending the talks in the lecture hall on-site.

Everybody is encouraged to do Covid-19 antigen rapid self-tests periodically during the conference week on a voluntarily basis. Free antigen-tests as well as FFP2-masks will be available at the conference desk.

## PUBLIC TRANSPORTATION

The traffic association in the Rhein-Main area is “RMV” (<https://www.rmv.de/c/en/homepage>). There you can find connections and book tickets online (smartphone app “RMV Rhein-Main-Verkehrsverbund”) also for the whole week. There is a bus stop directly in front of the GSI campus named “Darmstadt-Wixhausen Merianstraße/GSI”. Do not get off the bus already at “Merianstraße” but stay until you reach GSI campus (where the bus makes a U-turn).

## TAXI TRANSPORT

There is the possibility to get a discount for a taxi transport, e.g. from the airport with the company “TAXI - Top Transfer” (<http://www.toptransfer.de>, +49 6150 86066). Mention that you are participant of “QWG2022” when calling a taxi to get the discount. Leaving your mobile phone number for pickup is helpful for the driver. *You should book at least 48h in advance.*

## GSI CAR PARK

Private cars can be parked in the GSI parking garage free of charge. It is possible to enter between 7:30 and 14:00 every day during the workshop week. Exit is possible any time.

## ACCESS TO CAMPUS

The access procedure to enter the campus is as follows:

- Upon first arrival at GSI, leave the bus and enter the small gate building at the right corner of the parking lot. You will need to show a photo-ID to enter the campus.
- After registration for the rest of the week, you just need to show your QWG2022-badge (and wait until your name is checked in a list) whenever you enter or leave the campus.

## REGISTRATION

The registration for the workshop will be possible on Monday morning between 8:15 and 9:30 before the first session, and in principle anytime else during the week. We recommend to register as early as possible since it simplifies access to the campus as described above.

## BUS PICKUP FROM CITY-CENTRE HOTELS

There is a bus transport available from the city centre to GSI for participants who had signed up for this during online registration. The bus has the company name “Milli Reisen” on it. The bus schedule every day will be

- 7:45 : Moxy Hotel / Best Western Plus
- 8:00 : Mathildenplatz 19 (500m walk from central Luisenplatz)
- 8:30 : Hotel/Restaurant “Weißer Schwan”

*The bus does not wait for you, so be there 5 min in advance!* The transport back in the evening (Tue, Thu and Fri) will be shortly after the lectures. There will also be a transfer back to city centre after the reception on Monday at 21:30, and after the dinner from restaurant “Weißer Schwan” on Wednesday at 22:30. (Bus pickup map: <https://mapfling.com/qtj96kb>)

## POSTER PRESENTATIONS

Posters can be mounted in a dedicated room in the canteen (right hand side of entrance) any time from Monday on and can stay there during the whole week. During the coffee breaks on Tuesday morning (10:40) and Thursday afternoon (15:55) the presenters are kindly asked to be around their poster for discussion and questions.

## SOCIAL EVENTS

The following social events (all free of charge) will take place during the conference week:

- Mon. 19:00: Reception in GSI canteen. For participants with booked bus transfer, there will be a bus going to DA city centre at 21:30.
- Tue. 13:40: Bus tour to FAIR construction site
- Wed. 19:00: Conference dinner at “Weißer Schwan” in DA-Arheilgen. Bus transfer from Weißer Schwan to DA city centre will be at 22:30

## BUS TOUR TO FAIR CONSTRUCTION SITE

The bus tour to the FAIR construction site will start in front of the main building at 13:45h and will last about 30 min. Since the full tour is a round trip on the bus, there is no need for special clothing or anything else.

## CONFERENCE DINNER AT “WEISSER SCHWAN”

The conference dinner starts at around 19:00 on Wednesday evening and takes place at

- Hotel/Restaurant “Weißer Schwan”, Frankfurter Landstraße 190, 64291 Darmstadt-Arheilgen, Phone: +49 6151 371702

To reach the place from GSI by public transportation:

- Take “*Bus G*” from GSI (starting e.g. at 18:14, 18:44) and get off at “*DA-Arheilgen Dreieichweg*”.
- Enter “*Tram 4*” (18:23, 18:53) and leave at “*DA-Arheilgen Messeler Straße*” (2<sup>nd</sup> stop from “*Dreieichweg*”), which is just in front of the restaurant.
- The ticket price is € 2.35, the ride takes about 12 min in total.
- From bus stop “*Dreieichweg*”, the distance to “*Weißer Schwan*” is less than 1 km, so it is also possible to walk.
- For other connections take a look at <https://www.rmv.de/c/en/homepage>

The distance from GSI to “*Weißer Schwan*” is about 3.5 km, so it could even be reached by walking directly.

## GROUP PHOTO

A group photo will be taken right at the beginning of the lunch break on Wednesday, meeting point is between the canteen building and GSI guest house. Details will be announced at the end of the session before.

## INTERNET ACCESS

Wireless internet access is continuously available around the conference site, either via the "eduroam" access service, or via free "GSI-FAIR-Guest-WiFi". To use the latter, just connect and click "Accept" (the terms and conditions). Because of IT-security reasons, "GSI-FAIR-Guest-WiFi" has a couple of port/service restrictions, but http(s) and e-mail work.

## LOCAL ORGANISATION COMMITTEE

Frank Nerling (Chair)	HFHF, Campus Frankfurt, GSI, Germany
Klaus Götzen	GSI, Germany
Udo Kurilla	GSI, Germany
Anja Meergans	GSI, Germany
Daniel Mohler	TU Darmstadt, GSI, Germany
Marc Wagner	GU Frankfurt, Germany

Supported by:	
Matthias Lutz	GSI, Germany
Klaus Peters (GSI Contact)	GSI, GU Frankfurt, Germany

## QWG CONVENERS

Geoffrey Bodwin	ANL, USA
Nora Brambilla	TU München, Germany
Roberto Mussa	Torino INFN, Italy
Vaia Papadimitriou	FNAL, USA
Antonio Vairo	TU München, Germany