

Friends & Family Day



Saturday, 24 August 2024 - Saturday, 24 August 2024

ESS site

Scientific Programme

Learning activities in B01

Welcome & Quiz walk

Don't know where to start? Start here! We'll give you a copy of the quiz walk answer sheet and a pen, and set you on your way.

When you've done the quiz walk, come back to collect your instant prize, and to be in with the chance of winning a grand Kitchen Club Hamper.

ESS as a big science collaboration

What is your neutron dream?

An opportunity to dream your neutron dream.

What do you hope will come out of ESS 30 years into the future?

Match the flags

How well do you know the in-kind members of ESS and other international collaborations?

Name that scientist!

Can you correctly match the important scientific figure with their discovery?

Test yourself against the clock!

3D walkthrough of the facility

See the exact place your ESS family member or friend works on our comprehensive 3D map of the facility. What else can you find lurking here?

Talks

Talks will take place every hour in Tycho Brahe (10.15–14.15), Each will last approx. 30 mins with time for questions. There will be a short pause between each.

Anticipated list of talks and speakers (tbc):

- **10:15:** About ESS, and why it matters

Andrew Jackson

- **11:15:** How the ESS facility works

Kevin Jones

- **12:15:** About ESS, and why it matters

Pascale Deen

- **13:15:** The Ultimate ESS/Big Science Collaboration Quiz (with prizes)

Mark Robinson

- **14:15:** How the ESS facility works

Kevin Jones

Technology

Target wheel: Look at a section of the target wheel up close, and a brick made of tungsten – how heavy is it?

Choppers: How do you chop up a beam of neutrons?

Control systems: Did you know ESS will be constantly monitored and controlled by a huge complex Integrated Control System? Now's your chance to have a go!

Neutron Beam Port: Get up close to a real neutron beam port. You know you want to...

Build a linear accelerator

Build a linac!

See if you have the skills and knowledge of linear accelerators to build a model that will let balls speed up – not slow down – as they are carried along a linear track.

It's a lot harder than it sounds...

Kids Lab

Suitable for children up to 10

Dress up as a scientist

Be a lab scientist, or wear full PPE to work on installations in our experimental halls

Chlorophyll lab with Vattenhallen

Our friends from Vattenhallen will show you how Bees see green plants using Ultra Violet light

Crafts - Looking closely at materials

What do you see if you start looking really closely at things that are really small?

Different types of light reveal different things. What can you find?

Make your own magic sand and water beads

Make your own magic sand to take home and play with

Make and play with your own waterbeads in our Kids Lab!

Take a peek into E01 - our long instrument hall

Take a look at our long instrument hall where hundreds of scientists will come to do experiments every year!

The science behind ESS - in D01 (designed for age 7+ including teenagers and adults)

The Target

You can't go inside, but we'll show you how the target wheel looks – more or less – and you can have a go at constructing the shielding needed to keep it safe

The science

Copper plating: How can electricity move metals?

Skittle chromatography: Separate the colours of your favourite sweets using chemistry

Diffraction with lasers: Use a laser to study how scientists look at small structures using diffraction

Hidden shapes: How can you figure out the structure of something that you can't even see?

Our data

MolAR: Manipulate molecules in Augmented Reality

Fourier transform your face: Does what it says on the tin

Shoot a molecule with NERF neutrons: Let loose and see those atoms interact Can you a detector catch them?

Accelerator Tours (for age 12 and over)

10:30, 12:15 & 14:00

Access to the accelerator tunnel is restricted to those aged 12 and over, and to 50 people at a time, with a queuing system.

Please also note the following important information if you wish to come to the accelerator.

Please make sure that everyone in your group:

- Is aged 12 years or older
- Has sturdy footwear (no high heels, no sandals)
- Can easily climb a flight of stairs
- Understands and respects the rules:
 - stay with your ESS host
 - don't touch anything
 - follow the instructions of our guides in the tunnel
 - in case of an alarm, evacuate through the nearest emergency exit

Visiting times

10:30 - 11:30

12:15 - 13:15

14:00 - 15:00

Entrance: via the HEBT Loading bay, as indicated on the map, then down a narrow flight of stairs and along a narrow corridor.

Exit: via emergency exit 4, up a similar flight of stairs.

A member of ESS staff at the HEBT entrance will check the badges of visitors over 11.

Accelerator staff members will be there to help at the entrance and emergency exits, and will be situated along the tunnel to answer questions and explain the accelerator.

Social activities

The quiz walk can be paused at any time to eat, drink, rest and/or join one of the 'social' activities in the conference area in the Main Building (B01)

Fun Run

Fancy kicking off your visit in an active way? A friendly run/walk to discover part of the site - not a race, just a bit of fun. Fun music at the start, small gift at the finish.

11:00 & 13:30

o All ages, 1 loop @ 500 metres

o Remember to bring your trainers!

Big vehicles

We use many big vehicles at ESS. If you've always wanted to see how it feels to sit in the driver seat of a forklift or a spider crane, or to be inside a truck, come give it a go!

Adults must monitor their children closely while on/in the vehicles

Giant bubbles & construction pipes

Our friends from Vattenhallen are bringing everything you need to make giant construction models, and bubbles that you can climb inside!

Community book exchange

Run out of good books? Pro low waste movement? Bring some books you enjoyed and would like to give away or swap.

All genres welcome - separate section for children's books in all languages.

Children's chill out TV zone

Tired of noise and intensity? Head to the chill and quiet zone for kids and parents in Conference Lounge Area in the Main Building (B01).

Science-related and nature movies will be shown for the entire duration of the event (NB: mostly in Swedish).

Picnic Area

Soak up the last of the Swedish sunshine (we hope!) and relax and chat with your colleagues and friends. Bake something nice at home and share it with others! We will provide a picnic area with Kubb game, soap-bubbles and blankets to sit on.

You can bring a picnic and eat in one of the designated areas:

- On a picnic blanket near the outdoor gym (we provide the blankets!) or
- in the food tent behind the restaurant

If you are bringing a picnic:

- No glassware
- No alcohol

Please dispose of waste after your picnic