

On-site activities

TALKS

Talks 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.

- **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
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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

- *All ages, 1 loop @ 500 metres*
 - *Remember to bring your trainers!*
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RELAX & CONNECT

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):

Movie watching

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).

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.

PLAY, VISIT, LEARN

Stations in B01 atrium (for all)

ESS General

1. **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.

2. **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?

3. **Match the flags**

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

4. **Name that scientist!**

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

Test yourself against the clock!

5. **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?

Technology

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

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

3. **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!

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

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...

Stations in D01 instrument hall – suitable for age 7+, 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

1. **Copper plating:** How can electricity move metals?
2. **Skittle chromatography:** Separate the colours of your favourite sweets using chemistry
3. **Diffraction with lasers:** Use a laser to study how scientists look at small structures using diffraction
4. **Hidden shapes:** How can you figure out the structure of something that you can't even see?

Our Data

1. **MolAR:** Manipulate molecules in Augmented Reality
2. **Fourier transform your face:** Does what it says on the tin
3. **Shoot a molecule with NERF neutrons:** Let loose and see those atoms interact. Can you a detector catch them?

Kids lab – Suitable for children up to 10

1. **Dress up as a scientist:** Be a lab scientist, or wear full PPE to work on installations in our experimental halls
2. **Chlorophyll lab:** Our friends from Vattenhallen will show you how Bees see green plants using Ultra Violet light
3. **Looking closely at Materials:** What do you see if you start looking really closely at things that are really small?
4. **Seeing the invisible:** Different types of light reveal different things. What can you find?
5. **What would you look at if you had a giant microscope?** ESS is the microscope of the future. When you're a grown up, what would you want to look at if you had the world's most powerful microscope to see the tiniest things imaginable?
6. **Magic sand:** Make your own magic sand to take home and play with
7. **Waterbeads:** Make and play with your own waterbeads in our Kids Lab!
8. **Peek inside:** Take a look at our long instrument hall where hundreds of scientists will come to do experiments every year!

Outside on the car park behind B01

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!

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

Accelerator walk (12+)

Three time slots: 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.