

Golem #16 - from #40420 to #43695

Mariánská 2024

Vojtěch Svoboda

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# Articles

-  Mácha, Petr et al. (Aug. 2023). "Spontaneous formation of a transport barrier in helium plasma in a tokamak with circular configuration". In: *Nuclear Fusion* 63.10, 104003. DOI: [10.1088/1741-4326/acf1af](https://doi.org/10.1088/1741-4326/acf1af).
-  Pokorný, M., P. Macha, and V. Svoboda (2023). "Magnetic field simulations of the GOLEM tokamak via the NICE code". In: *Journal of the ASB Society*, 26–34. DOI: [10.51337/JASB20231206003](https://doi.org/10.51337/JASB20231206003).
-  Sarancha, G. et al. (2023). "Remote Plasma Physics Research and Teaching by Example of Turbulence Study at the University-Scale Tokamak GOLEM". In: *Fusion Science and Technology* 79.4, 432–445. DOI: [10.1080/15361055.2022.2148842](https://doi.org/10.1080/15361055.2022.2148842). URL: <https://doi.org/10.1080/15361055.2022.2148842>.

# Proceedings

-  Cerovsky, J. et al. (Apr. 2023). "Runaway electron studies via HXR spectroscopy at Golem, COMPASS and TCV". In: *European Conference on Plasma Diagnostics*. Rethymno. URL: [http://golem.fjfi.cvut.cz/wiki/Presentations/Conferences/ECPD/5th\\_Rethymno\\_2023/poster.pdf](http://golem.fjfi.cvut.cz/wiki/Presentations/Conferences/ECPD/5th_Rethymno_2023/poster.pdf).
-  Chlum, J. et al. (2023). "Tokamak GOLEM for fusion education - chapter 14". In: vol. *Europhysics conference abstracts*.
-  Ivanov, V. et al. (2023). "Runaway electrons measurements by ECE on the GOLEM tokamak". In: vol. *Europhysics conference abstracts*.

# Bachelor projects & Master thesis

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<http://golem.fjfi.cvut.cz/wiki/Presentations/Students/MasterThesis/23MalecStepan.pdf>.
-  Jan Buryanec (2023). "Stabilizace proudu plazmatem na tokamaku Golem". Bachelor project. URL:  
<http://golem.fjfi.cvut.cz/wiki/Presentations/Students/BachelorProjects/23BuryanecJan.pdf>.
-  M. Vanakova (2023). "Studium oscilací magnetického pole na tokamaku Golem". Bachelor project. URL:  
<http://golem.fjfi.cvut.cz/wiki/Presentations/Students/BachelorProjects/23VanakovaMarie.pdf>.

-  M. Pokorný (2023). "Měření a simulace polohy plazmatu na tokamaku GOLEM". High School Students' Professional Activities SOČ. URL: <http://golem.fjfi.cvut.cz/wiki/Presentations/Students/HighSchoolActivities/23PokornyPolohaPlazmatu.pdf>.

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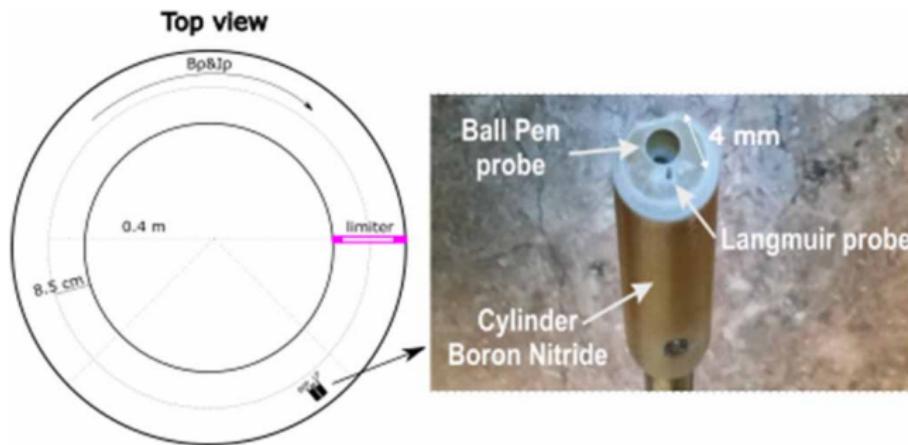
- Plasma edge studies

4 Education

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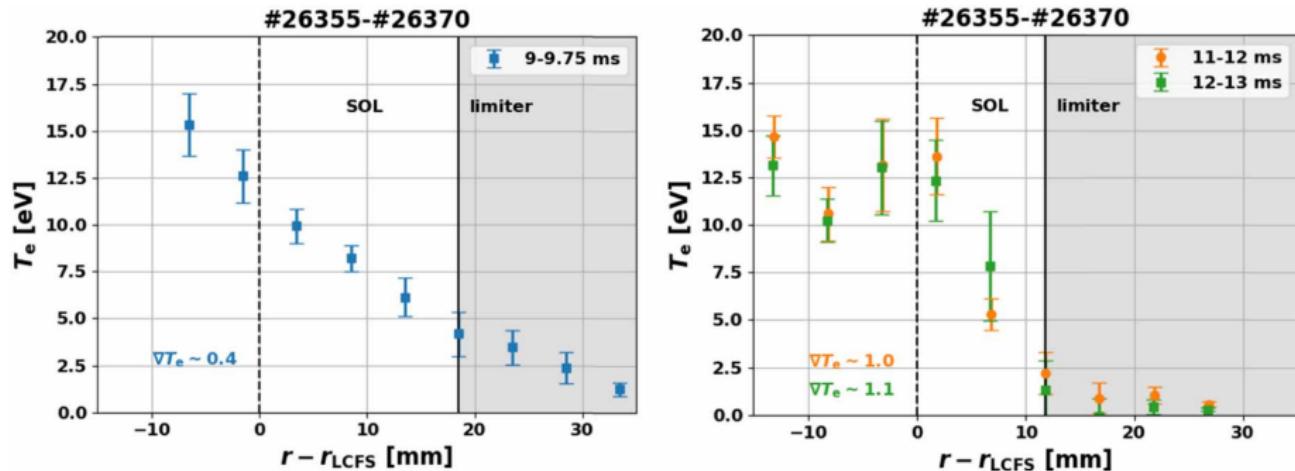
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# Spontaneous formation of a transport barrier in helium plasma in a tokamak with circular configuration



**Figure:** Left—the experimental arrangement for the combined probe measurements with limiter configuration, top view. Right—the photo of the combined ball-pen (diameter 4 mm) and Langmuir probe (diameter 1 mm) head. Mirnov coil ring consisting of 4 coils is placed around the limiter. The magnetic field and the plasma current are clockwise oriented.

# Spontaneous formation of a transport barrier in helium plasma in a tokamak with circular configuration



**Figure:** Radial profiles of electron temperature before (left) and during (right) the transport barrier formation. The strong gradient of electron temperature is observed at 11–13 ms.

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## Generally

- UA training
- After the COMPASS shutdown ... the only tokamak far wide.
- Fast spectrometry on specific lines.
- High resolution Fast spectrometry on specific lines (with Matěj T.).

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