

# LIP Dark Matter Group

## Future

- **Participation in LZ and Migdal experiments**
  - main focus on data analysis
  - LZ will last mainly until 2027
- **XLZD Consortium** for 3<sup>rd</sup> generation DM experiment based on a ~80 t liquid xenon detector
  - Present main focus on  $0\nu 2\beta$  decay of Xe-136

## Main challenges:

- To secure funding for the participation in LZ/XLZD
- To get FCT signing the MoU for XLZD (2024 -2025?)
- To attract more PhD students!

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## SWOT analysis

<b>Strengths</b>	<ul style="list-style-type: none"><li>• A team with strong expertise on the various aspects involved in a direct detection of dark matter experiment</li><li>• The group holds 9 key coordination positions, including the <b>LZ data analysis coordination</b> (P Brás)</li></ul>
<b>Weaknesses</b>	<ul style="list-style-type: none"><li>• Difficulty in attracting MSc and PhD students</li></ul>
<b>Opportunities</b>	<ul style="list-style-type: none"><li>• Extend our expertise;</li><li>• Open the possibility of participating in cutting-edge projects</li><li>• Attract students.</li></ul>
<b>Threats</b>	<ul style="list-style-type: none"><li>• <b>No funding after May 2024!</b></li><li>• <b>No funding in the near future</b> (there will be even less chances of getting funding for fundamental physics projects than before)</li><li>• No way to secure researchers of the team ( we lost 2 in 2024).</li></ul>