

Action Number: CA21106
Room Title: WG2 – WISPs Dark matter and Cosmology
Rapporteur(s): Christoph Weniger
<p>Meeting Participants interested in contributing to the topic:            Maria Paola Lombardo, Marco Gorghetto, Miha Nemevšek, Salim Çerçi, María Benito Castaño, Nick Rodd and others  <i>(Only for the groups discussing Grant Awarding, Science Communication plan and Stakeholder Engagement – WGs information on the e-COST platform.)</i></p>
<p><b>What is our main goal?</b></p> <p>The general goal of the WP is to study how to best probe axion, sterile neutrino and other WISP dark matter with cosmological observables. This entails:</p> <ul style="list-style-type: none"> <li>• Better understanding of axion dark matter production and evolution in the early and late Universe, using numerical and semi-analytic techniques.</li> <li>• Studying gravitational wave signatures, e.g. through string decay.</li> <li>• Cosmological constraints on mixed hot/cold dark matter models.</li> <li>• Signatures of warm dark matter or sterile neutrinos in large-scale structure, stellar streams, strong lensing</li> <li>• Machine learning-based interpretation of cosmological data</li> </ul>
<p><b>How can we achieve it?</b></p> <ul style="list-style-type: none"> <li>• Kick-off meeting to discuss scope of this WP2, connection to WP3, and models/experiments/signatures of interest.</li> <li>• Schedule regular (monthly?) discussion meetings.</li> <li>• Invite experts (interdisciplinary) to talk about backgrounds, data analysis, simulations</li> </ul>
<p><b>Which resources do we need?</b>  <i>(e.g. budget, use of networking tools, different expertise etc.)</i></p> <ul style="list-style-type: none"> <li>• (Interdisciplinary) working group meeting in person</li> <li>• Maybe targeted training event, as part of general COST training event?</li> <li>• Strategic STSMs</li> </ul>
<p><b>What are the next steps?</b></p> <ul style="list-style-type: none"> <li>• Make sure the EU community is aware of the COST action and interested people are included</li> <li>• Setting up mailing list (is this already there?)</li> <li>• Schedule “kick-off meeting”</li> </ul>