

Highlights of the year

Ximo Poveda (IFIC, CSIC-UV) **TileCal-IFIC End of Year Meeting** December 16th, 2025



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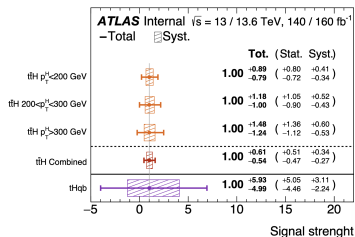
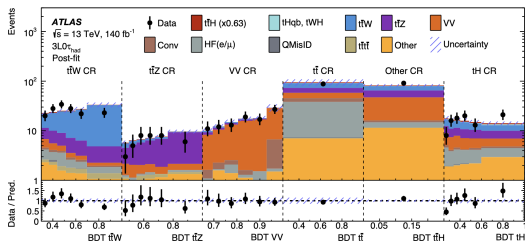


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This year: ATLAS Physics

- Legacy Run 2 $H \rightarrow \tau\tau$ published: [JHEP 03 \(2025\) 010](#)
- Electron DNN paper made good progress, to be wrapped up next year
- Run 2 $t\bar{t}H$ multilepton paper out! [arXiv:2510.23755](#)
 - Massive analysis (7 channels, 49 regions, 225 bins) condensed in 37 pages (needed to find quite some time to make it shorter...)
 - I presented the analysis in Higgs 2025 plenary → Lots of discussion with CMS
- Run 2+3 $t\bar{t}H/tH H \rightarrow \tau\tau$ analysis in full swing:
 - and receiving attention (“[Miracle on \$\mu_{tH}\$ street?](#)” at the Physics workshop)
 - EB requested, should be out by spring



This year: non-ATLAS Physics

- Prometeo project for FCC calorimeter studies (together with CIEMAT researchers) → ATENEA Group
- Will give support during 4 years for the group to grow and build a research line towards the future after HL-LHC, and strengthen our contributions to DRD-Calo and DRD7
- Super nice+quick logo/[website](#) by Alberto
- First presentations in [Madrid](#) and at CPAN (Ana), should be at full speed next year



This year: other stuff...

UNIVERSITAT ID VALÈNCIA  Facultat de Física

Máster en Física Avanzada

Especialidad en Física Nuclear y de Partículas



Trabajo Fin de Máster

STUDY OF THE HIGGS BOSON YUKAWA
COUPLINGS USING RUN 3 ATLAS DATA

Ana Arranz Asensi



UNIVERSITAT ID VALÈNCIA

Leptons, top quarks and Higgs bosons in ATLAS:
Electron identification with neural networks and
 $t\bar{t}H$ measurements

Tesis Doctoral
Enrique Vallente Moreno

Institut de Física Corpuscular (IFIC), CSIC - Universitat de València
Departament de Física Atòmica, Molecular i Nuclear
Programa de Doctorat en Física - 3136

Supervisor:
Dr. Josep Poveda Torro
Prof. Luca Pott

València, Octubre de 2025

- Finished my term in the ATLAS Publication Committee:
 - Reviewed 20 papers and 96 proceedings
- ASFAE project finishing with the year → Reports
- Head of IFIC Experimental Unit:
 - Enjoying Board meetings and related topics
 - Suggestions / complaints? Just let me know
- Ana's Master thesis (with Run 3 data!)
- Enrique's PhD thesis in "public reporting period"
→ Anticipated highlight for next year

Merry Christmas!

Looking forward to 2026