

TF08—BSM Model Building

Conveners:

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July 30, 2020 Theory Frontier Town Hall Kick-off Meeting

**This is the first Snowmass with a Theory Frontier,
already a big achievement**

**The goal of Theory Frontier is to make sure that TH is
perceived as vibrant, exciting, and worthy of funding**

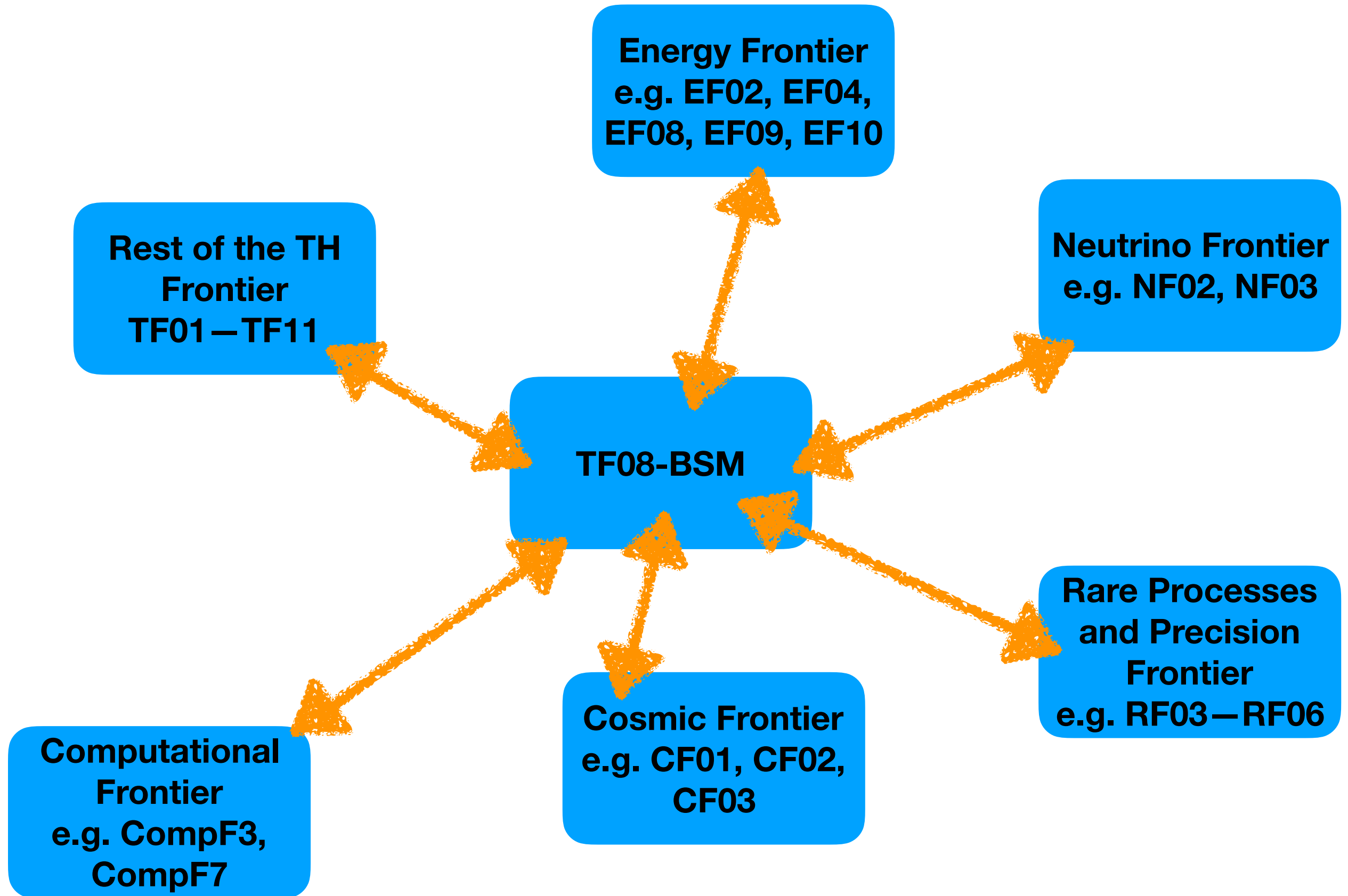
**TF08: Advertise exciting directions in BSM, impact on
other areas of HEP, long-term questions and recent
developments**

Many questions need BSM answers

- ✱ **Origin of dark matter**
- ✱ **Origin of fermion masses**
- ✱ **Dark energy**
- ✱ **Baryon asymmetry**
- ✱ **Naturalness, unification, string pheno**
- ✱ **Portals to new sectors**
- ✱ **Experimental anomalies**
- ✱ **....**

Addressing these puzzles has lead to many new ideas, new pheno, new experiments/searches, and will continue to do so.

TF has intersections with many other Frontiers, BSM doubly so



How to participate

- Let us know (email/Slack/Twitter/Facebook/Carrier Pigeon) what topics are missing
- “Letter of Interest” (<2 page) May have overlap with other groups. Can be submitted anytime, but earlier is better :)
- White papers (~10 pages)
- Virtual workshop?
- Follow TF, TF08, and other Frontiers through <https://snowmass21.org>



Some questions for you

How best to discuss benefit of BSM model building to HEP community?

Workshop?

What topics are missing, what should be removed?

What relevant ongoing Snowmass activities are you involved in?

What would you like the outcome of this process to be?

???

THE TRUTH IS OUT THERE



\mathcal{L}_{BSM}

