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## **New SSMs confronted with helioseismic and solar neutrino data**

*Thursday 31 August 2023 16:15 (15 minutes)*

We calculate a new generation of Standard Solar Models (B22-SSMs) that implement state-of-the-art constitutive physics and updated sets of solar surface abundances, like e.g. those presented by Amarsi & Grevesse 2021 (AAG21) and by Magg, Bergemann et al. 2022 (MB22).

We compare the new SSMs predictions with helioseismic data and solar neutrino results and we also discuss the implications of the recent measurement of CNO neutrino signal performed by Borexino.

We show that MB22 abundances substantially alleviate the so-called solar composition problem, i.e. the the puzzling mismatch between the helioseismic constraints and SSMs prediction arisen in the early 2000s that had defied all attempted solutions in the form of non standard stellar physics.

### **Submitted on behalf of a Collaboration?**

No

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