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Hints of an electroweak phase transition and electroweak baryogenesis?

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We know from the discovery of the Higgs boson that electroweak symmetry is broken through the Higgs mechanism, but we expect this should be restored at high temperatures in the early universe. Thus we believe the matter in the universe underwent a dramatic change of state as the universe cooled down. Electroweak phase transitions have many important consequences, for example if strongly first order they may provide an explanation of the baryon asymmetry of the Universe and could produce observable gravitational waves. I will talk about some interesting recent developments related to these possibilities. This includes looking at whether the signal from pulsar timing arrays could originate from a supercooled electroweak phase transition and if there may already be a hint of successful electroweak baryogensis coming from flavour anomalies.

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