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The pion polarisability and more measurements on chiral dynamics at COMPASS

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COMPASS has recently completed the analysis of pion Compton scattering measured via the Primakoff effect. From the first available data set, the pion polarisability is determined with unprecedented precision. It is in agreement with the expectation from chiral perturbation theory, and in tension with the previous dedicated measurements that suggested a value about twice as large. The multi-purpose setup of COMPASS allowed, at the same time, the recording of pion-photon reactions that contain more pions in the final state. Their link to chiral dynamics will be discussed as well. Meanwhile a large follow-up data set has been taken, and is under analysis. The prospects for the gain in precision and for an extended analysis will be given.

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