

# Heavy Ion Physics : Hard Probes

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We will review the status of current understanding of the physics with hard probes in ultra-relativistic nucleus-nucleus collisions. After some general introduction and review of the status in pp collisions we will deal specifically with:

- (i) parton energy loss and jet quenching
- (ii) production and hadronization of heavy quarks
- (iii) quarkonia, color screening and deconfinement
- (iv) photons

Finally, we will present first results on hard probes from the just completed p-Pb running.