

# Journal Club: 3rd session: 11.Nov 2019,16:30

**TOPIC: Inelastic Particle Collisions, Jets and Jet Reconstruction**

## **Material:**

- A: ALICE Collaboration, Eur. Phys. J. C65 (2010) 111-125 (arXiv:0911.5430v3)**  
**B: Martin, A. D. Et al, IPPP/12/39; DCPT/12/78 (arXiv:1206.2124v1)**  
**C: Gavin P. Salam, Eur. Phys. J. C67:637-686, 2010 (arXiv:0906.1833v2)**

## **Topics for discussion:**

- 1) What are diffractive particle interactions?**
- 2) Why may diffractive interactions be problematic for identifying the hard scattering process in particle collisions?**
- 3) What is the basic principle of iterative cone jet algorithms?**
- 4) What is infrared and collinear (un)safety?**
- 5) What is the basic principle of sequential recombination jet algorithms?**
- 6) What is the difference between the  $k_t$  and the anti- $k_t$  algorithm?**

**Comment: Question 1 & 2 are to be understood in a qualitative way, don't focus on theoretical derivations.**