## Particles - Classification - Hadrons 14 February 2020 10.07 Hadrons - particles that feel the strong force Hadrons Source Hadrons Mesons Mesons Mesons and all baryons Leto Leto Leto Mesons Leto Leto Mesons Mesons Leto Mesons Mesons Leto Mesons Mesons Mesons Leto Mesons Mes

## **Baryon Number**

This is the number of baryons in an interaction. It is conserved and so the total baryon number never changes.

Protons and neutrons have a baryon number of +1, while the antibaryons have a number of -1. Particles that are not baryons have a baryon number of 0

Neutrons decay into protons (when there are too many of the cf protons in a nucleus or when they are on their own...)

Baryon number is +1 on each side

## Mesons

There are loads of mesons, but you don't need to know about many - just pions and kaons. They are hardons, and have a baryon number of 0 - obv - they are not baryons 'Pions are the lightest mesons and come in 3 versions:

T, T°, T+

Kaons are heavier, and less stable with a short half life and decay into pions. Again there are different versions:

KT, KO

Mesons and baryons interact via the strong force