

Summary Chapter ~~4~~ 3

Hadron-Hadron-Interactions

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Contents



3.1 Why experiments with pion beams are important

3.2 Remarks on hadron systems

3.2.1 Meson-meson systems

3.2.2 Meson-baryon systems

3.2.3 Baryon-baryon systems

3.2.4 Dibaryons

3.2.5 Hypernuclei

Contents



3.3 Scattering parameters from production reactions

3.3.1 Scattering lengths from threshold cusps

3.3.2 Dispersive analysis of short ranged production reactions

3.4 Femtoscopy

3.4.1 General aspects

3.4.2 Femtoscopy in small reaction systems

3.4.3 Final-state meson-baryon interactions in weak non-leptonic decays of hyperons and charmed hadrons

3.5 Hadron interaction through Lattice QCD: principles and progress

To Dos



- 3.2.4 Dibaryons:
 - Moved back into chapter 3
 - Needs some revisions still (Mikhail Bashkanov)
- 3.2.5 Hypernuclei:
 - Charmed (hyper)nuclei: shortened and updated (Benjamin)
Discussion under theory aspects (?)
 - Feasibility studies: $pp \rightarrow p \Lambda_c^+ D_0$

To Dos



- 3.4.2 Femtoscopy in small systems:
 - Beyond Koonin-Pratt: smoothness-approximation not valid in small systems at low $\sqrt{s}$
 - Paper by Epelbaum et al.: potentials depend on basis of wavefunction
 - More detailed discussion of issues (Hanna)
 - Contributions by Dimitar to be integrated (online meeting next Mon.)
 - Updated figures (Daniel)
 - Highlight opportunities at FAIR: high statistics, multi-differential measurements
- 3.4.3 Final-state meson-baryon interactions ...
 - Should not be part of femtoscopy section
- 3.5 Hadron interaction through Lattice QCD: principles and progress
 - Move to tools section

Other



- Revise introduction (highlights + selling points)
- Synergies among pillars: heavy-ion $\Rightarrow$ femtoscopy + hypernuclei
- Cross references to Chap. 7 / 8 to be added
- Feasibility studies: $pp \rightarrow KK \Lambda \Lambda$
- Final clean-up, shortenings, check acronyms