

ENERGY SCAN PROGRAM WITH LIGHT IONS

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● WHY ?

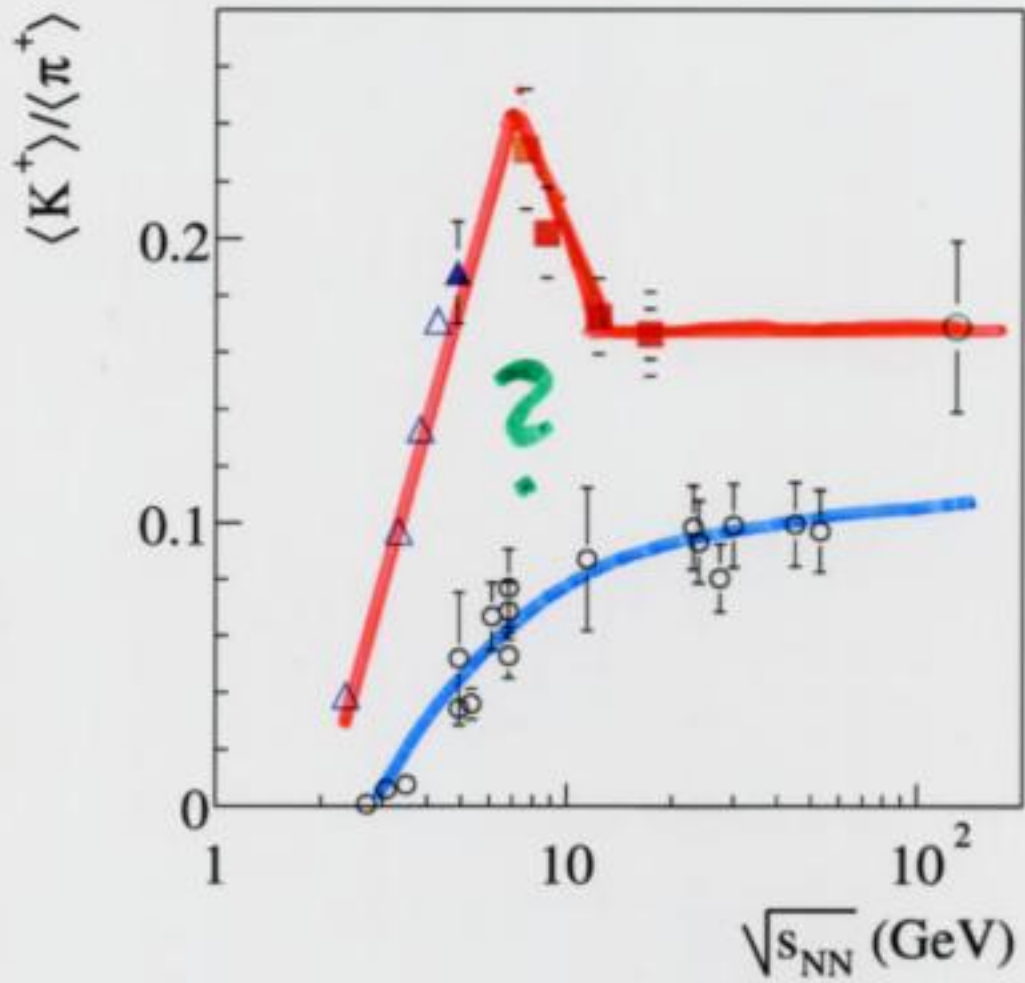
● ● EXISTING DATA

● ● ● WHAT IS NEEDED ?

● ● ● ● WHO / WHERE / WHEN CAN DO IT ?

● ● ● ● A POSSIBLE NA49 STRATEGY

WHY ?



OBVIOUS, IMPORTANT QUESTION:

HOW DOES THE EXCITATION FUNCTION
EVOLVE FROM $f(\sqrt{s}, p+p)$ TO
 $f(\sqrt{s}, Pb+Pb)$??

FIRST RESULTS FROM SPS AND AGS SUGGEST
FAST SATURATION WITH A



NEED FOR ENERGY SCAN WITH LIGHT IONS

EXISTING DATA

NA48: 40 A GEV C+C Si+Si

158 A GEV C+C Si+Si

NA35: 200 A GEV S+S

AGS: 14.6 A GEV/c Si+ Al/Si

JINR: 4.5 A GEV/c 'O+Ne'

● ● ● **WHAT IS NEEDED?**

C+C AND Si+Si
AT 20, 30, 80 (10?) A GEV

+ p+p AT 10, 20, 30, 40, 80 GEV

●●●● WHO/WHERE/WHEN CAN DO IT?

- NA49, CERN, THIS + NEXT YEAR(S)
- CBM, GSI+, IN \approx 10 YEARS ?
- BRAHMS+PHOBOS, RHIC, NEXT YEARS ??
- DUBNA-XXX, DUBNA COLLIDER, IN 10 YEARS ???

●●●●● A POSSIBLE NA49 STRATEGY

- A PROPOSAL FOR A NEW PROJECT
- MAY 2003 (SPSC)
- Si-RUN THIS YEAR (2003)
20 DAYS, 5 ENERGIES:
10, 20, 30, 80 A GEV
- C-RUN, 2004, 20 DAYS, 4 ENERGIES
- P-RUN 2004 xxx DAYS, 5 ENERGIES
- + OTHER SPS EXPERIMENTS ?
(NA45, NA57, NA60)