

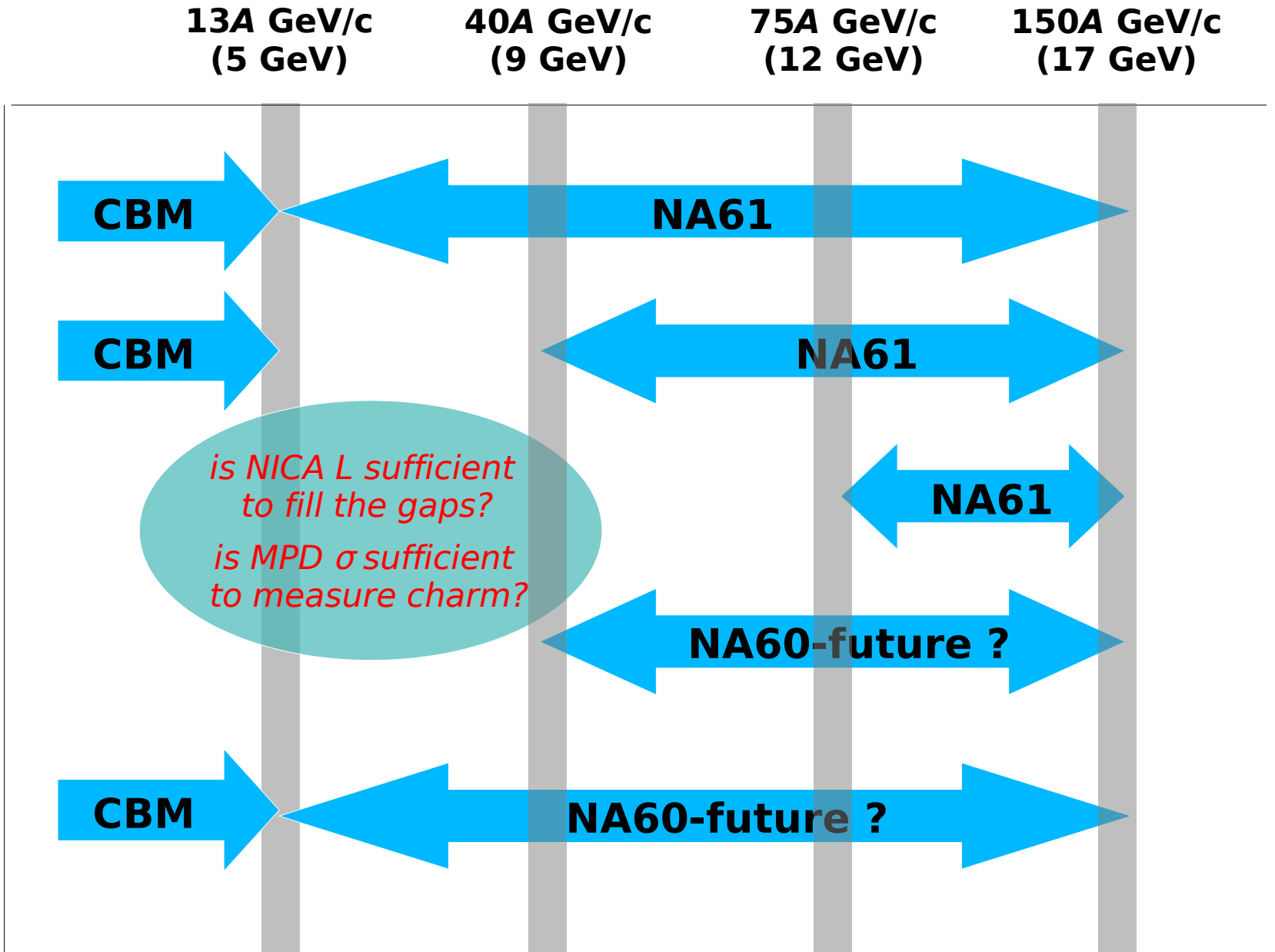
# Identifying measurements unique for MPD at NICA

*M.G., Dubna, October 31, 2013*

Running and future programmes  
relevant for planning of MPD at NICA  
(experiments, lab momentum range and  
by when main results should be published):

- SPS (NA61 and NA60+): 13A-150A GeV/c (< 2020)
- RHIC (STAR BES I and BES II): 13A-400A GeV/c (<2020)
- CBM (SIS-100): <13A GeV/c (<2025)

# single particle spectra



Note, in the case of single particle spectra one can partly/fully correct for a limited acceptance using forward-backward and rotational symmetries

# fluctuations correlations

13A GeV/c  
(5 GeV)

40A GeV/c  
(9 GeV)

75A GeV/c  
(12 GeV)

150A GeV/c  
(17 GeV)

fluctuations, correlations  
acc < (<<)50%

**CBM**

**NA61**

**STAR**

fluctuations, correlations  
acc  $\approx$  100%

*NICA L is sufficient  
(study of bulk properties)  
is MPD acceptance sufficient ?*

Note, in the case of fluctuations/correlations  
One can not correct for a limited acceptance  
using forward-backward and rotational symmetries

## MPD at NICA

Fluctuation Laboratory

### FlucsLab

100% acceptance

Low event rate sufficient

Minimum bias trigger

Charm Laboratory

### CharmLab

Mid-rapidity acceptance

High event rate need

Simple central trigger

At CERN we have had always two experiments  
(NA49-NA50/60 or NA61-NA60-future).

Are two experiments needed at NICA ?