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## Dilepton production at SIS energies with the GiBUU transport model

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We investigate dilepton production at SIS energies with the GiBUU transport code [1] in a resonance model approach. In a first step, we fix the model parameters via dilepton spectra from elementary NN collisions (as measured by the DLS and HADES collaborations). We argue that a large part of the so-called 'DLS puzzle' is due to an improper understanding of the elementary reactions, and that the elementary HADES data can only be explained by the inclusion of 'baryonic' contributions, e.g. via a coupling of the baryonic resonances to the  $\rho$  meson [2].

Further we show that light nuclear systems such as C+C and p+Nb can be described in first approximation by a 'vacuum' cocktail and without significant in-medium modifications. On the other hand, there are indications that the dilepton spectra of heavier systems such as Ar+KCl exhibit major medium effects, signaled by a clear excess over the vacuum sources [3]. We conclude by discussing possible scenarios which could explain such an excess in systems like Ar+KCl and Au+Au.

[1] <http://gibuu.physik.uni-giessen.de>

[2] J. Weil et al., arXiv:1203.3557 [nucl-th] (2012).

[3] G. Agakishiev et al., Phys. Rev. C 84, 014902 (2011).

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