

QUIVER REPRESENTATIONS AND SCATTERING DIAGRAMS

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ABSTRACT. Given a quiver Q , possibly equipped with a potential W , Bridgeland associates a “stability scattering diagram” $D(Q, W)$ which encodes information about the representation theory of the pair (Q, W) and has deep connections to cluster algebras and mirror symmetry. I will explain this construction and provide some examples. Time-permitting, I’ll discuss my work with Ben Davison on positivity properties of the quantum scattering diagram and my work with Fan Qin and Qiyue Chen on the behavior of $D(Q, W)$ when taking coverings of (Q, W) .