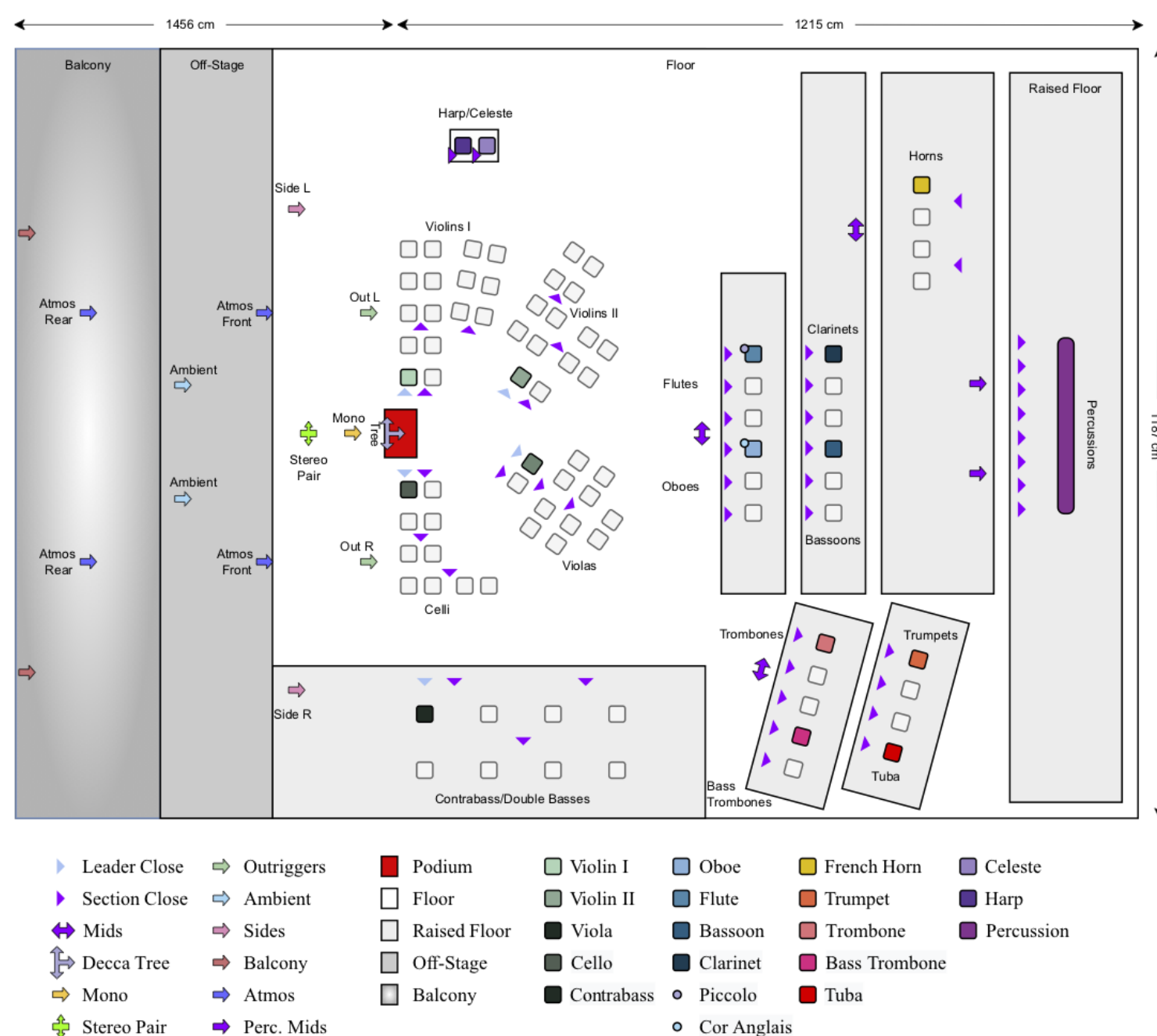


# Music Ensemble Separation

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## Finding

Permutation invariant training not only enables separating mixtures of identical instruments in a label agnostic fashion, but also allows separation of unseen instruments with the assumption that each source is monophonic.

## Question

How do you define source separation? Ideally you should be able to separate any sonic event in an audio recording. If we assume each monophonic event as a source, could we ideally have universal source separation? How do we train a model with variable number of output nodes that are dynamically activated based on the level of polyphony in the mixture?