A general ideal multifragmentation kinematics algorithm for nuclear physics, a binary reaction approach.

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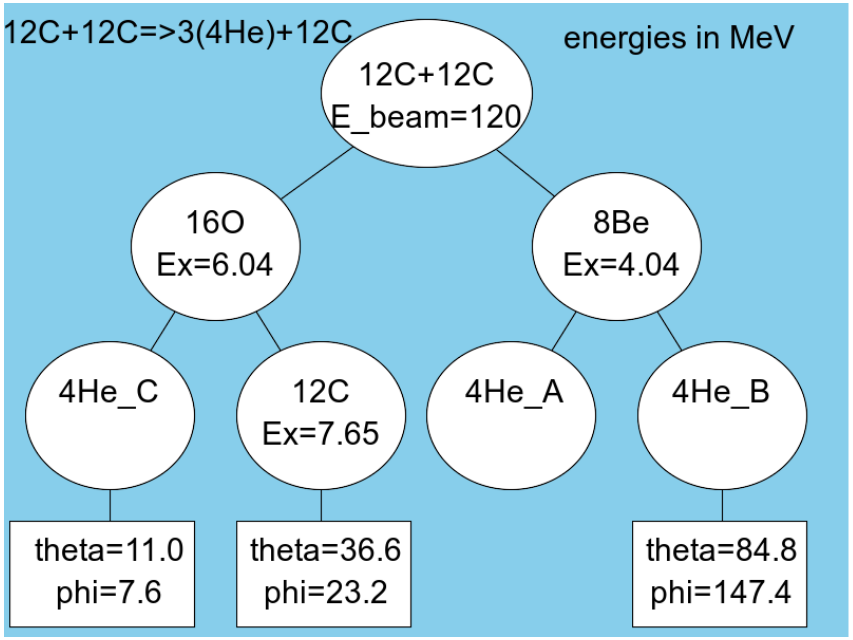
We need a data structure (a tree) to do this. Then somehow do kinematics on the tree.

BRT and solutions



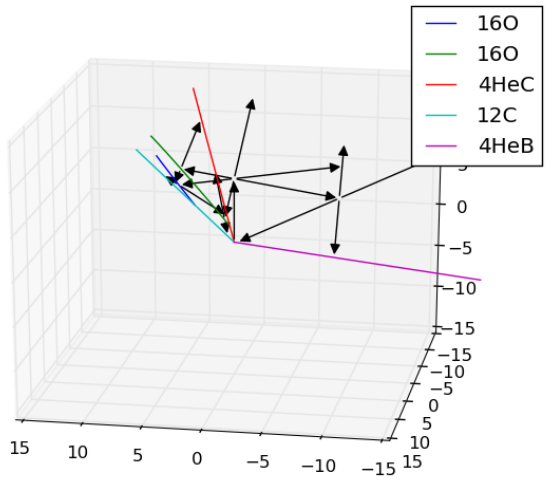
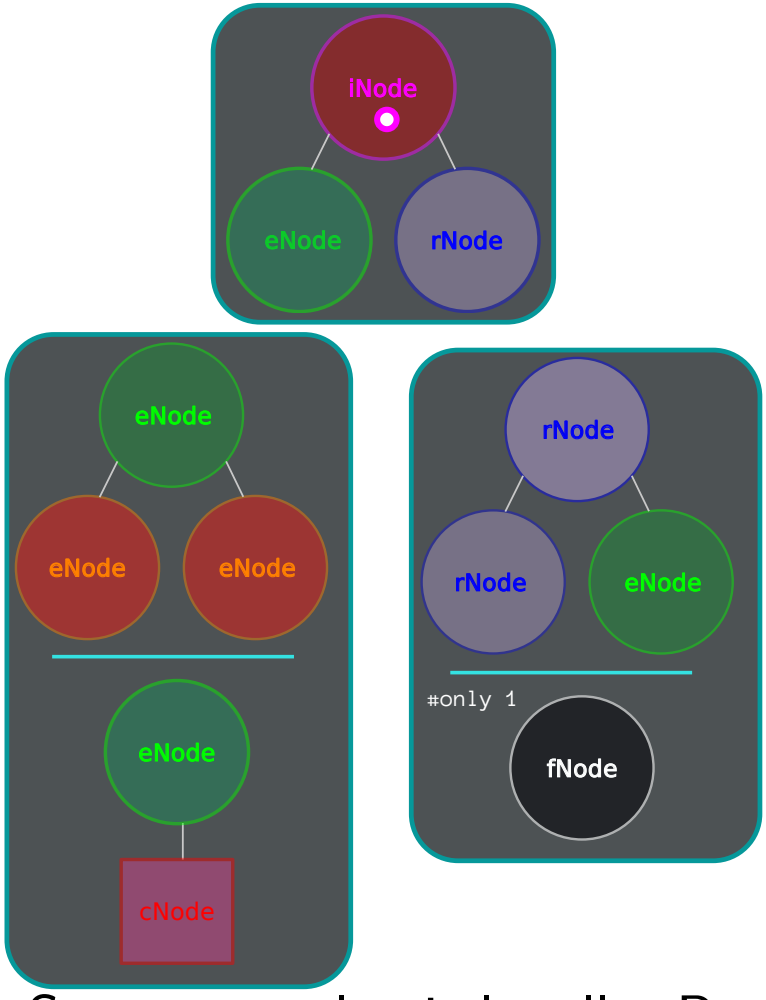


Figure: Look at the gif

To solve the BRT is to assign to every node at least one lab velocity (or also v_cm) vector.

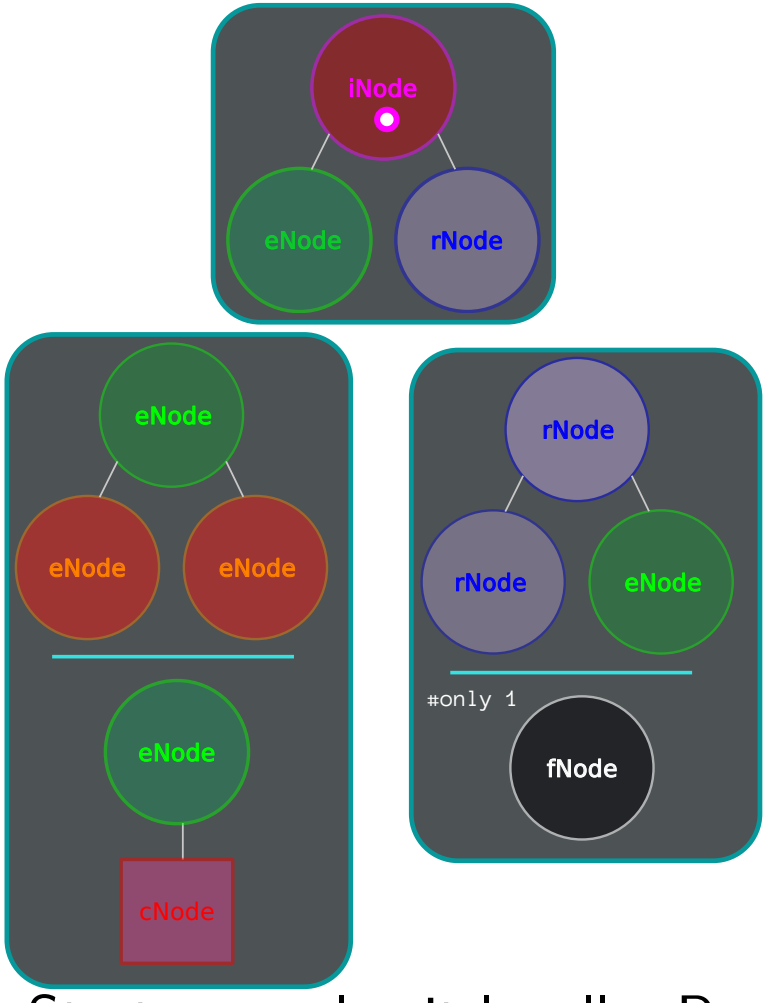
BRT structure



- essentially 2 types of structures.
- self similar.
- leaf structure.

Strategy: solve it locally. Propagate info between nodes.

BRT structure



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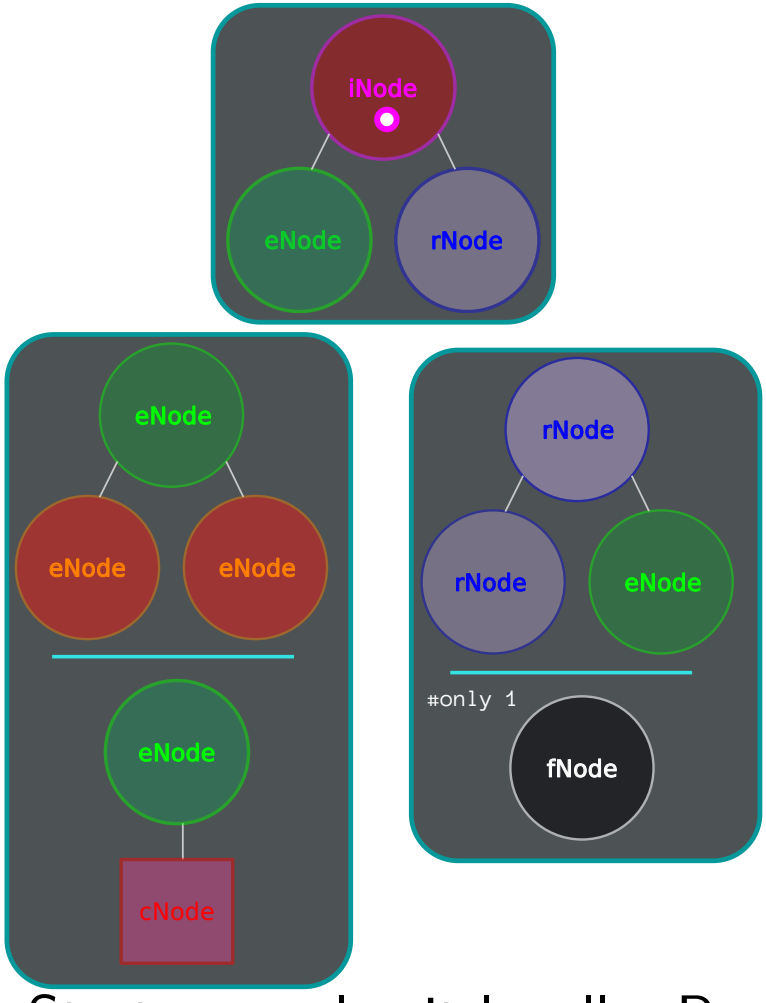
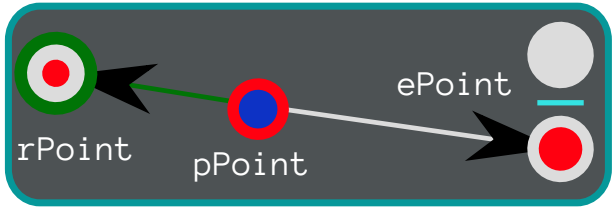


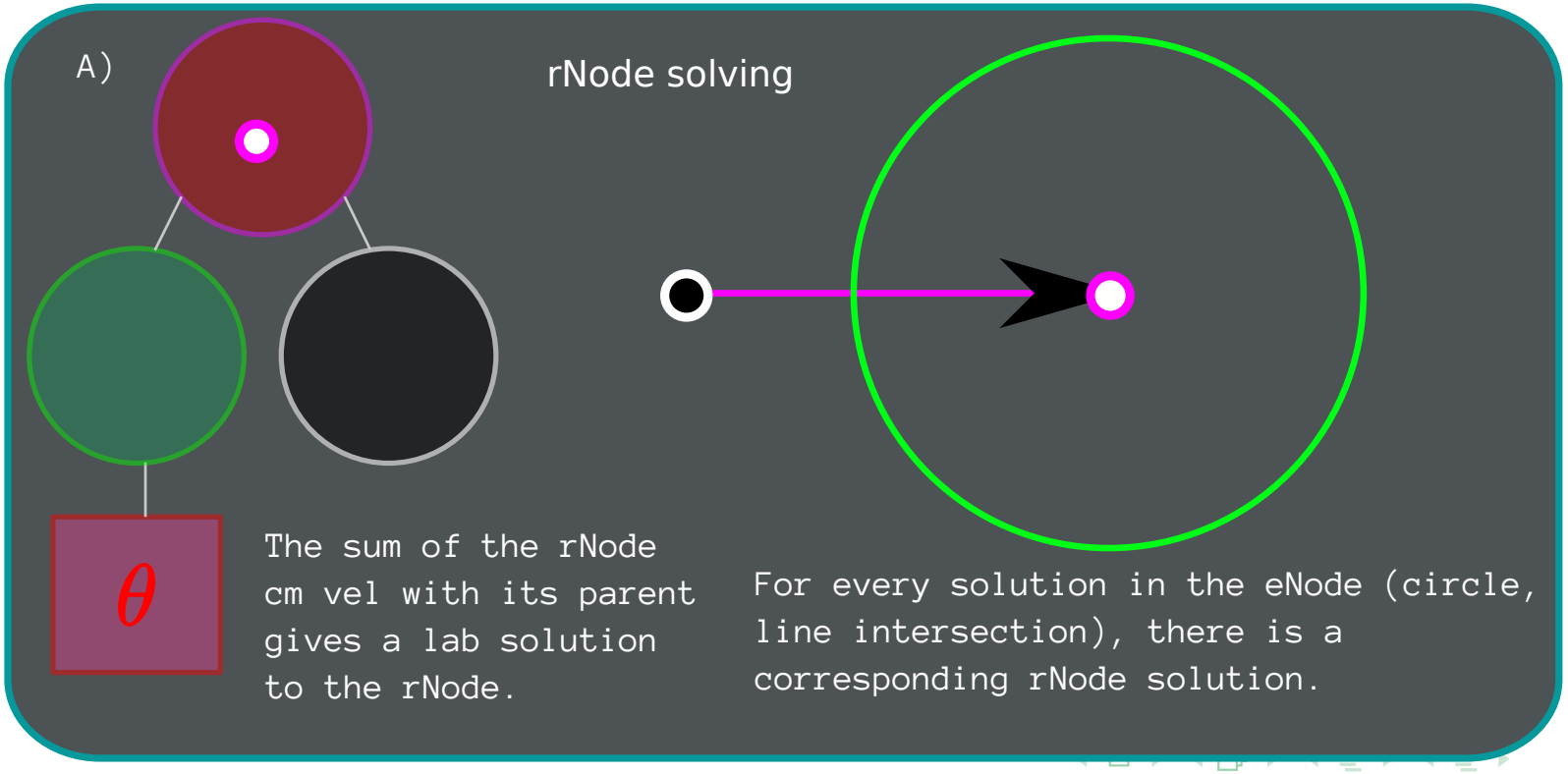
- essentially 2 types of structures.
- self similar. We'll need recursion.
- leaf structure.

Strategy: solve it locally. Propagate info between nodes. We'll assume that it was previously solved in the cm system.

binary example

We must abstract into node notation.





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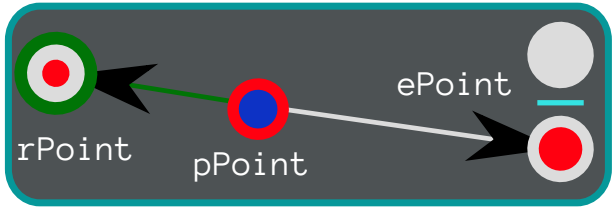
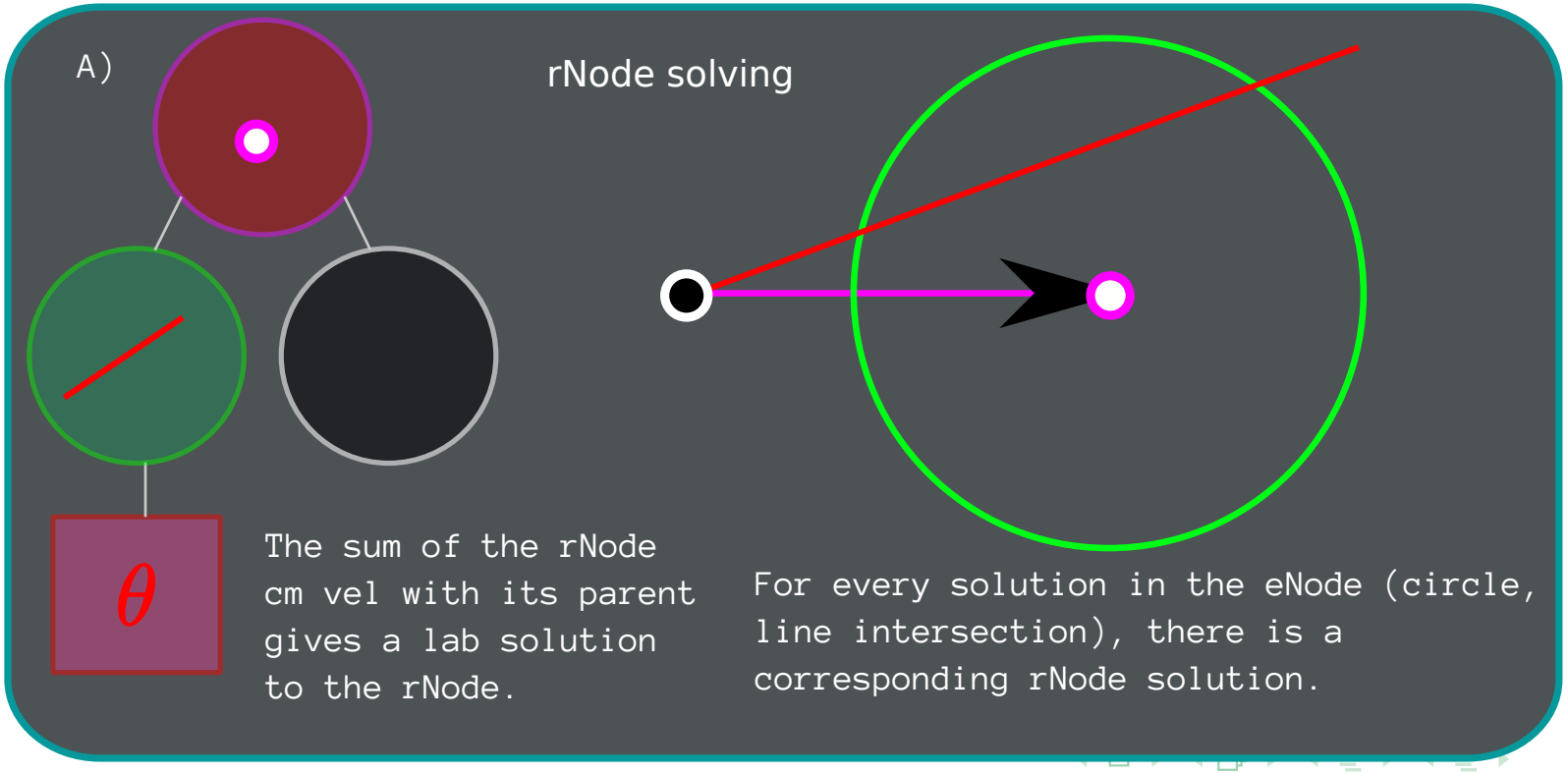
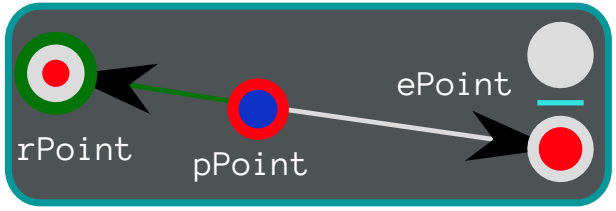
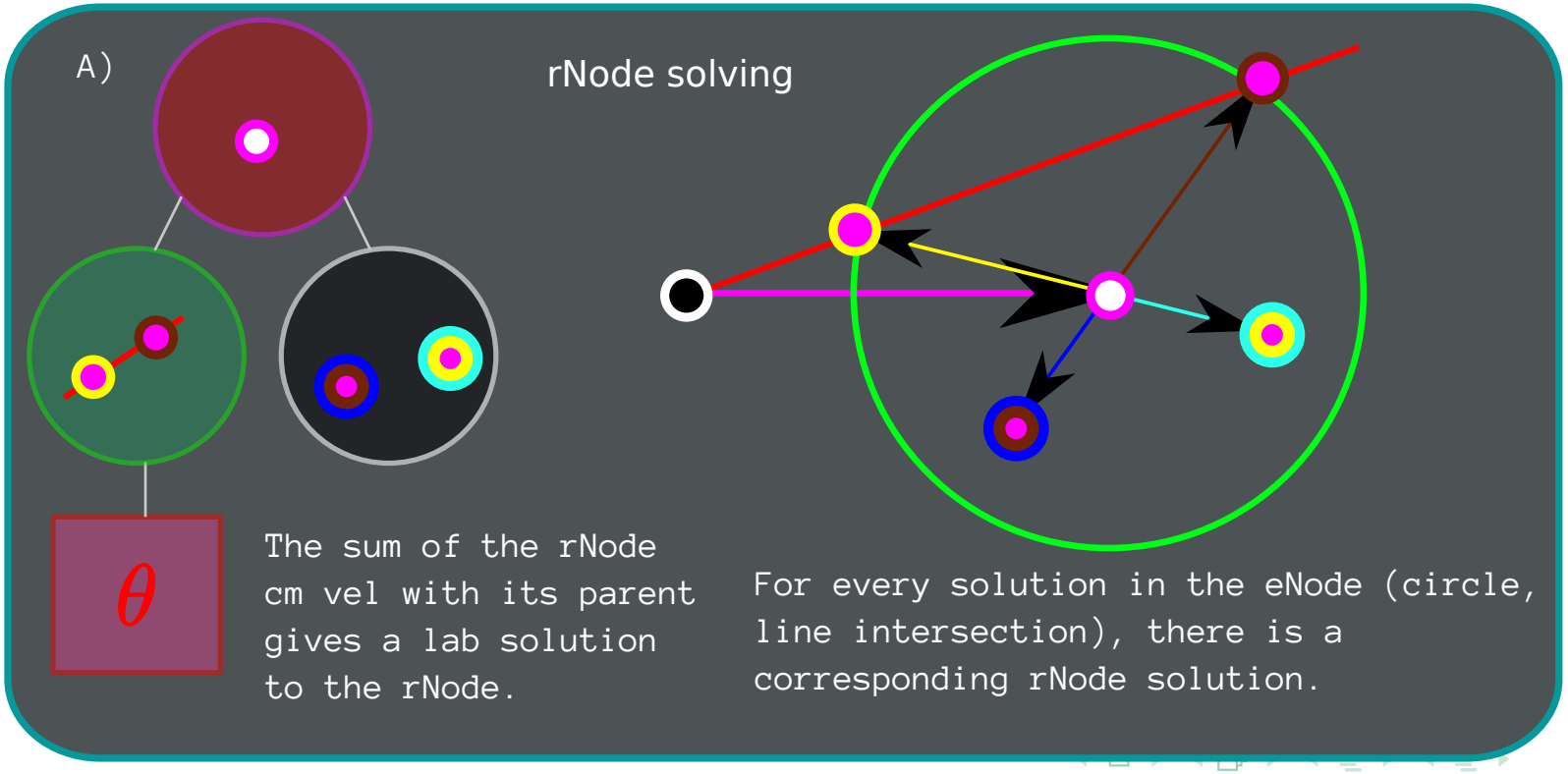




binary example

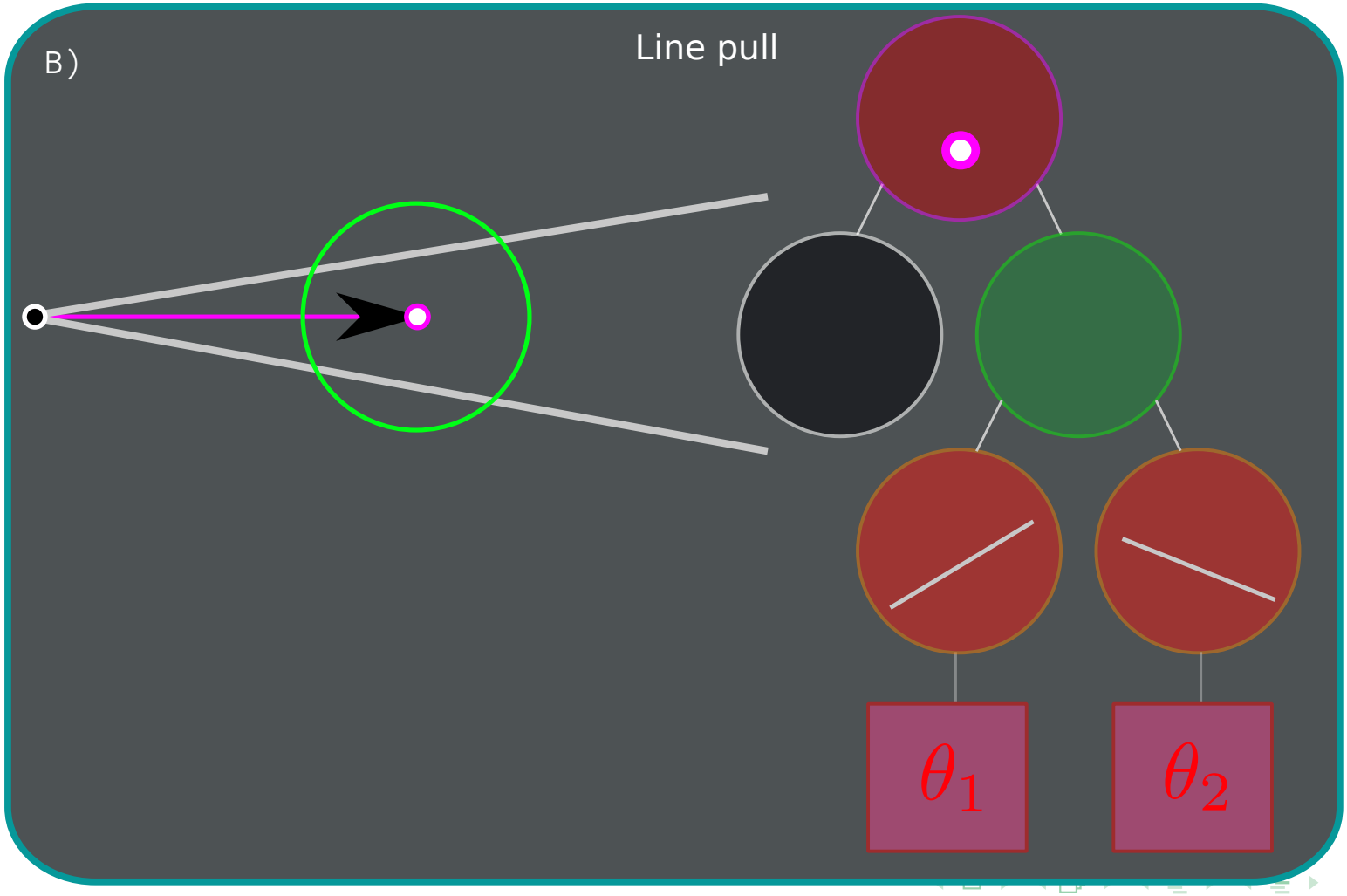
We must abstract into node notation. Two solutions.





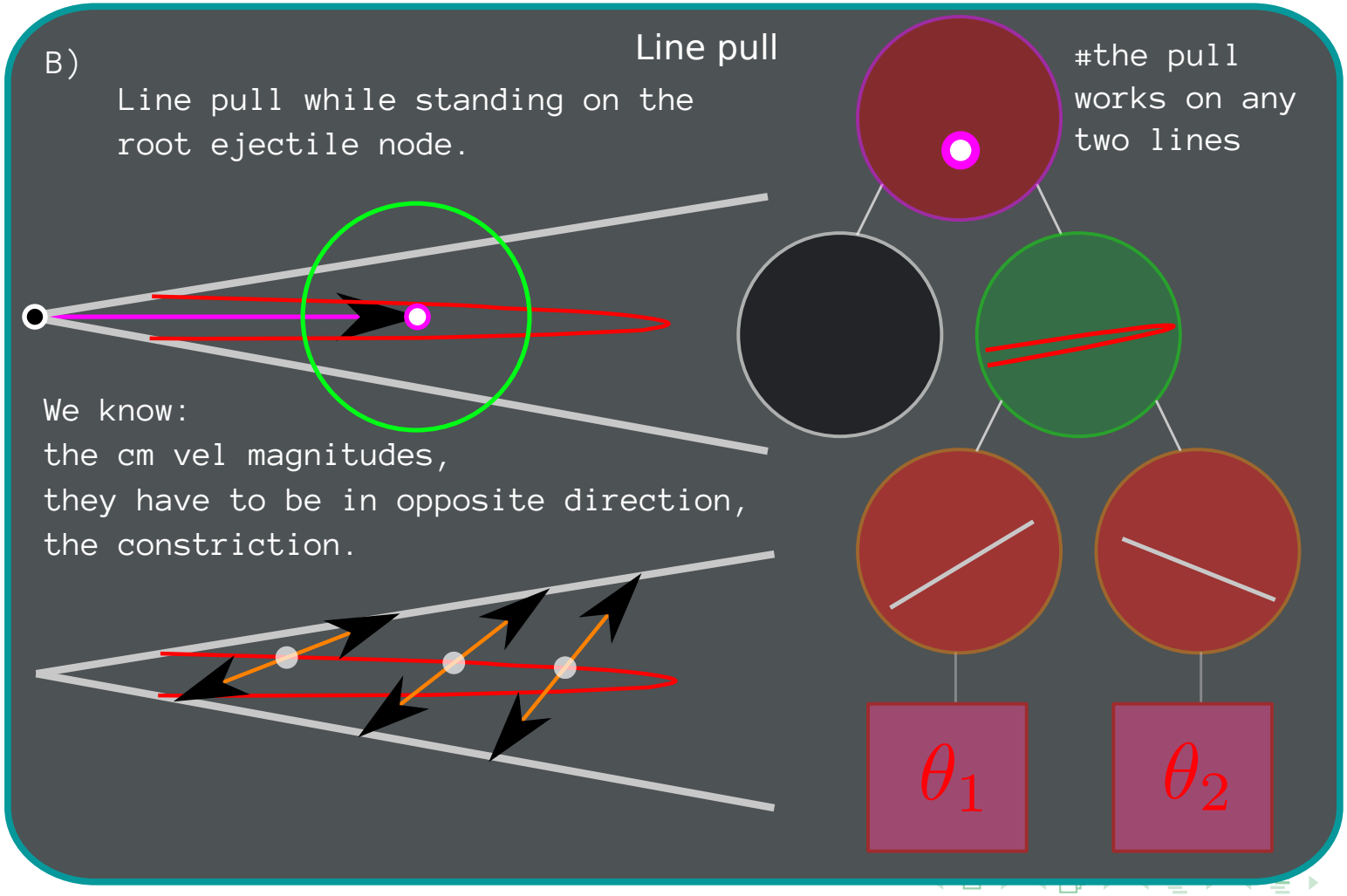
ternary example

intersect with what?!



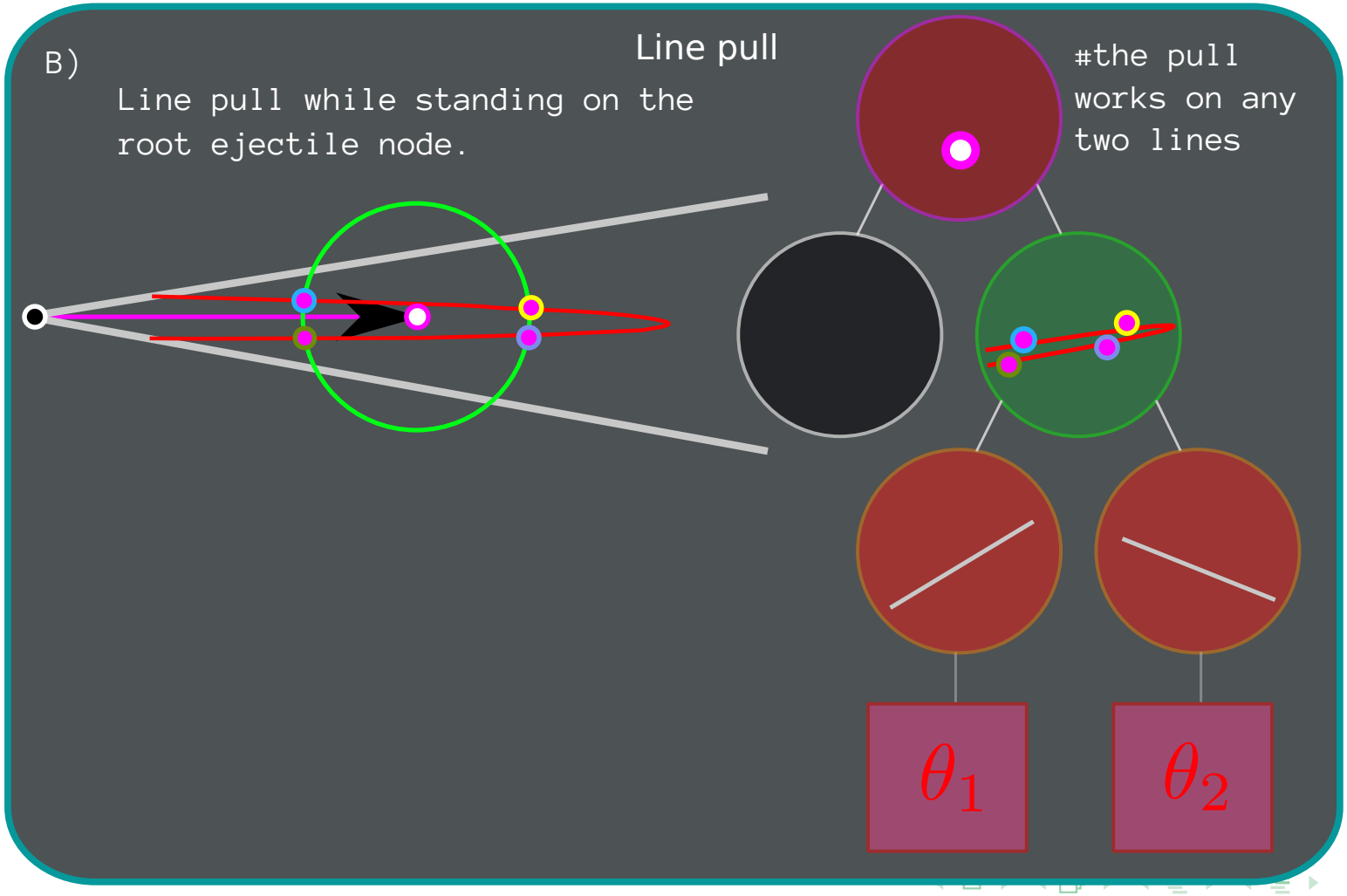
ternary example

gifAnim



ternary example

4 solutions?!



ternary example

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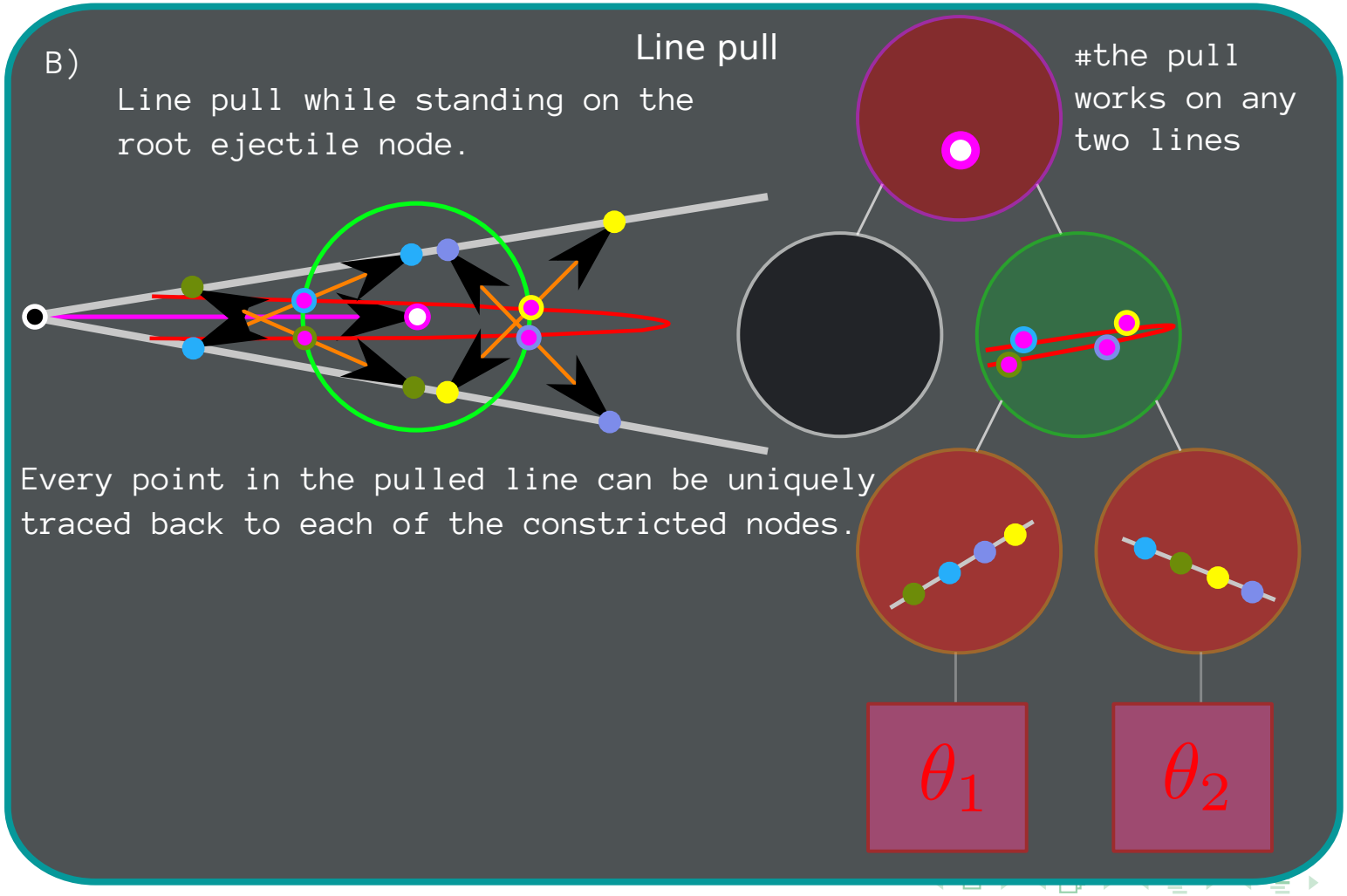

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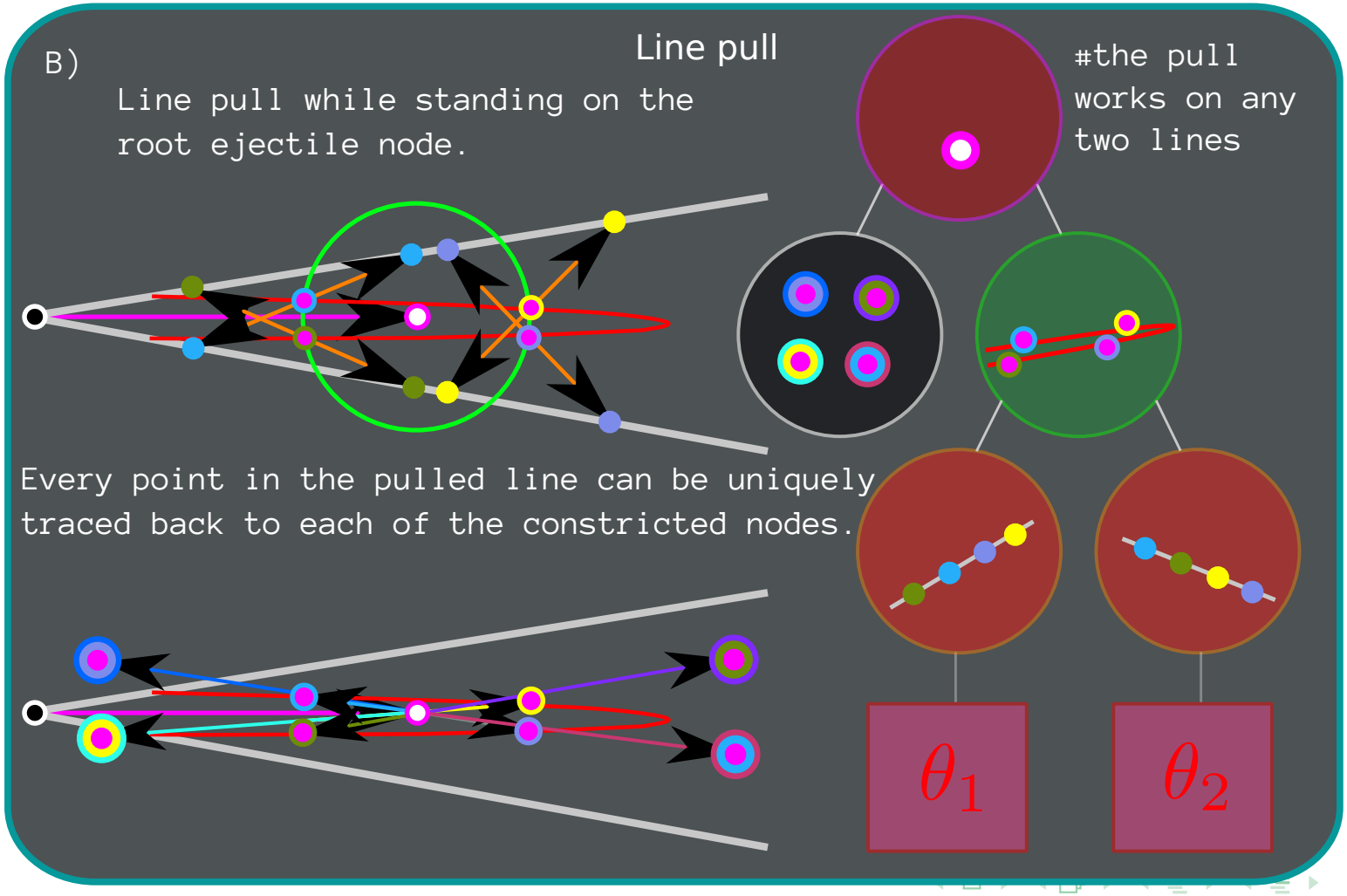
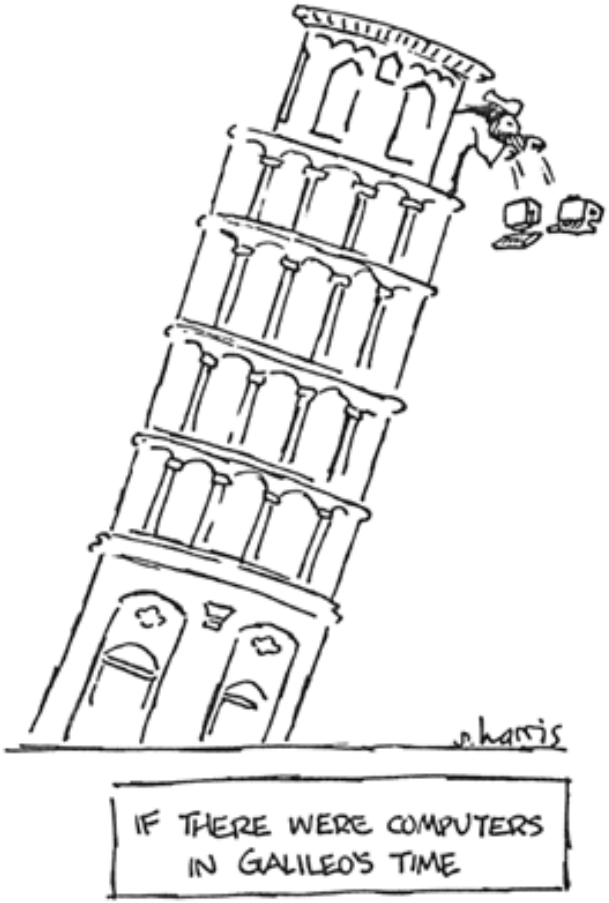


Come to my poster!!



- Generalization of the algorithm.
- Experimental data of a ternary reaction (PRC). 4 solution case.
- Software (still in alpha).
- Discuss more generalizations.
- Discuss potential applications.