

Welcome to PSI



**Swiss National
Science Foundation**

This workshop is funded by the SNSF through the Ambizione Grant of FH.

Our sincere thanks go out to ...

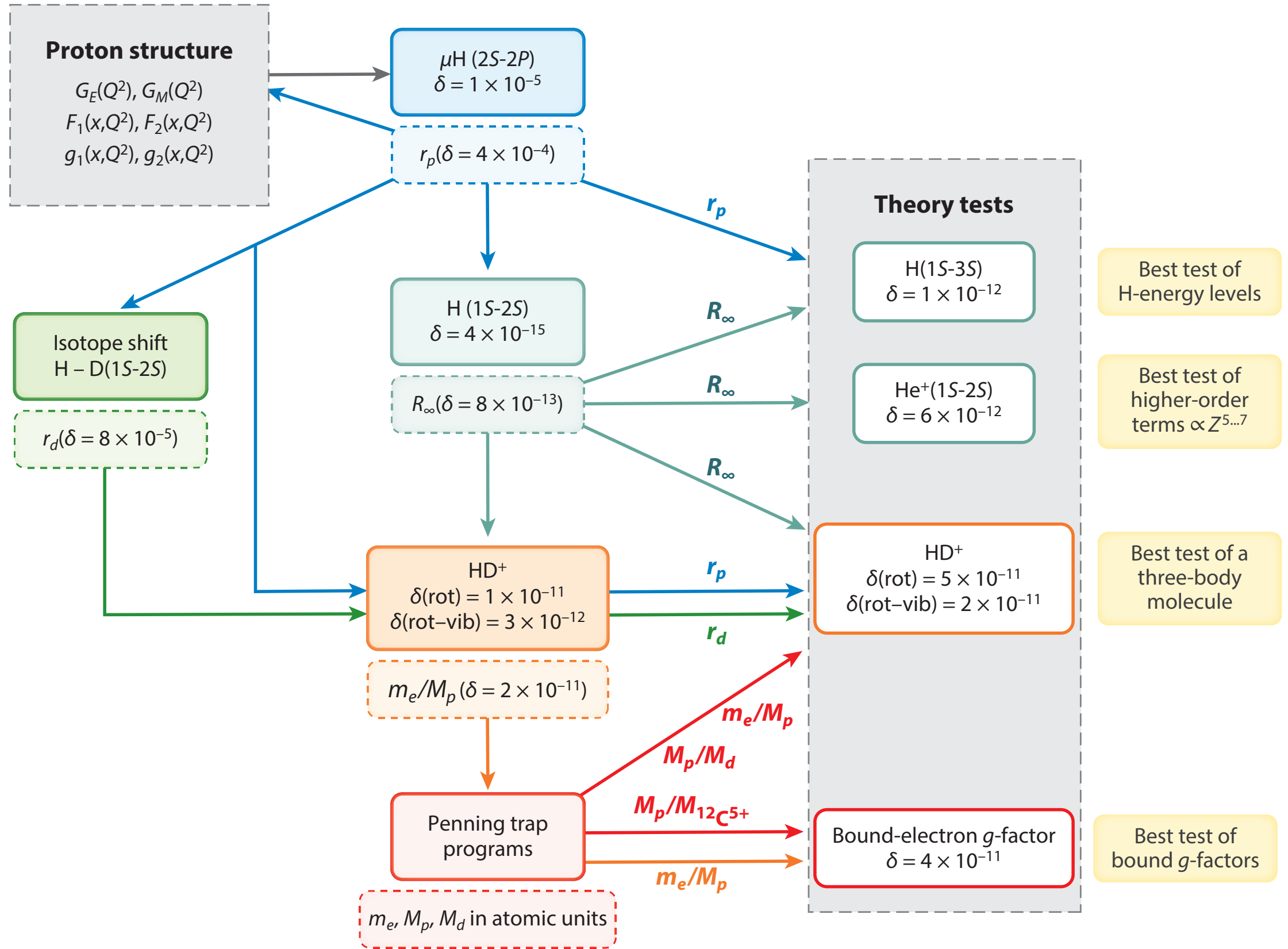
Anita Govaerts Van Loon (conference secretary)

Bernhard Lauss

Stefan Ritt

Vladyslava Sharkovska (IT & Zoom support)

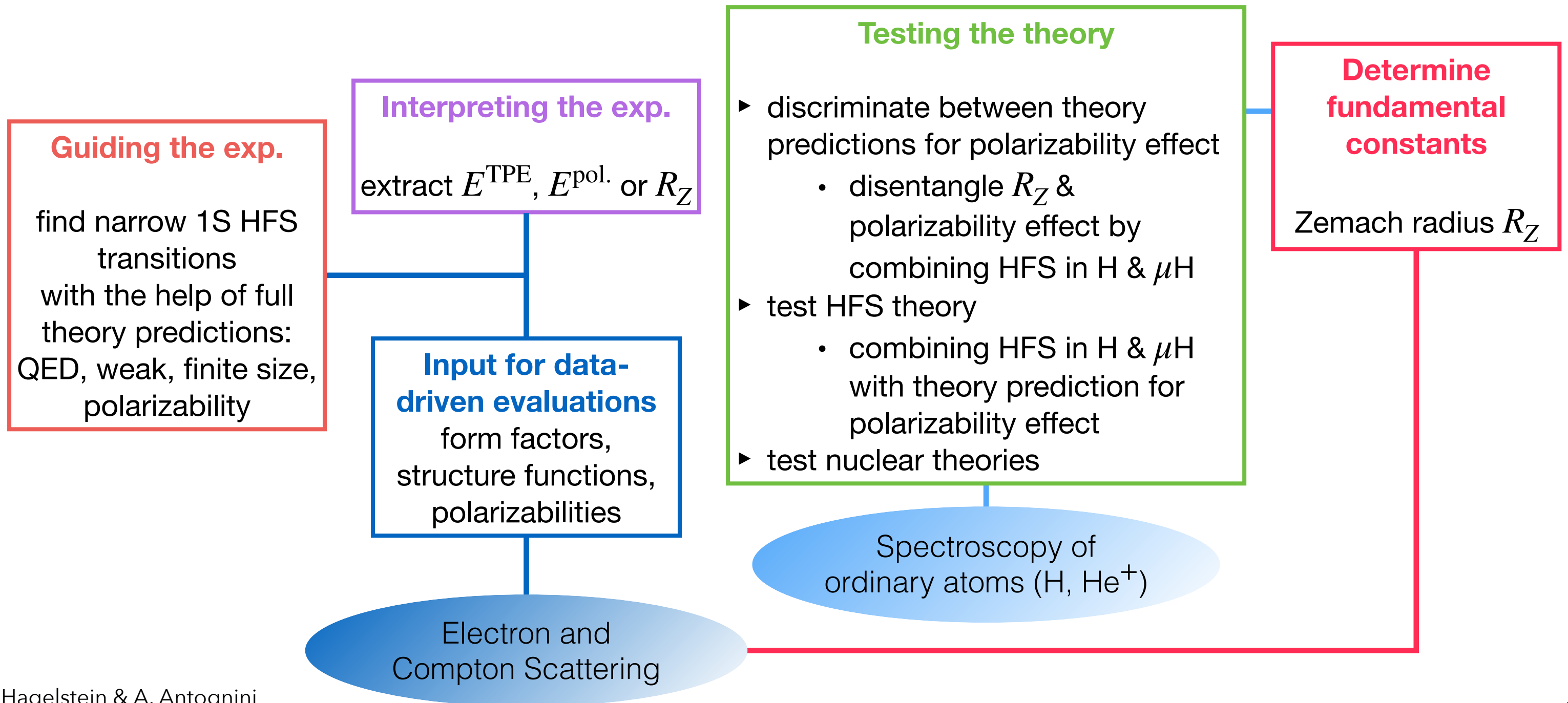
Combining μH , H , He , HD^+ , Penning trap measurements



Hyperfine splitting

Theory: QED, ChPT, data-driven dispersion relations, ab-initio few-nucleon theories

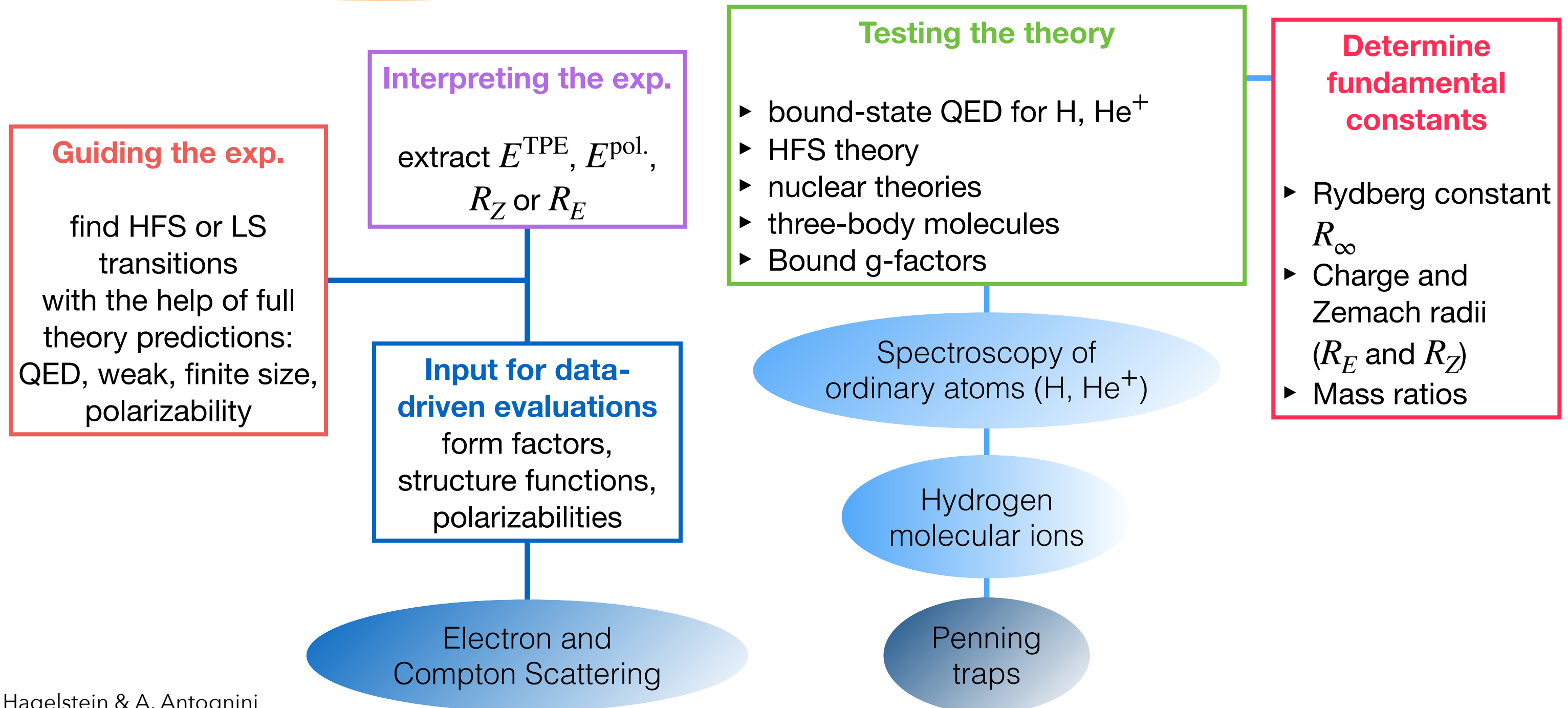
Experiment: HFS in μH , μHe^+ , ...



Interplay with theory & other experiments

Theory: QED, ChPT, data-driven dispersion relations, ab-initio few-nucleon theories, LQCD

Experiment: HFS in μH , μHe^+ , ...
LS in μH , μD , μHe^+ , ...

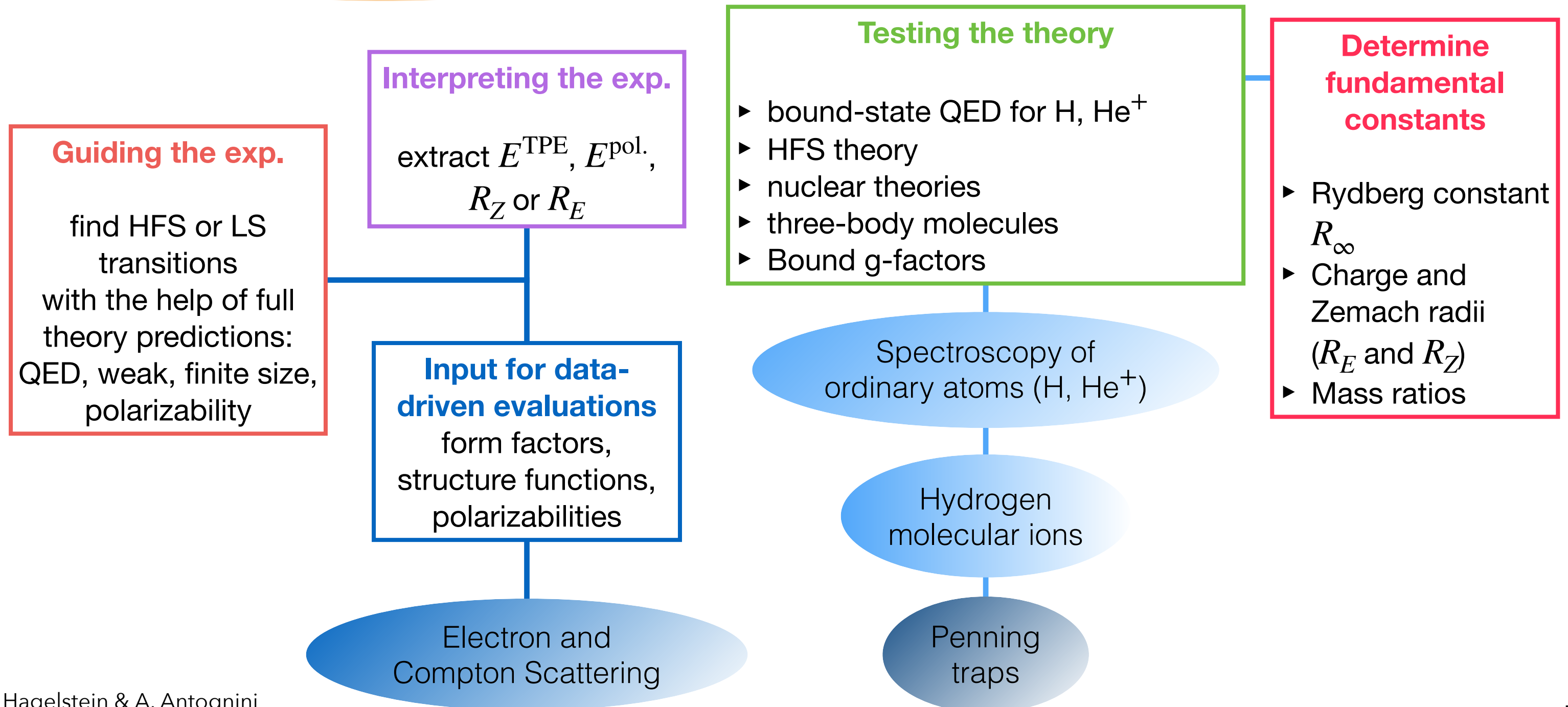


Workshop Agenda

HFS Theory

Theory: QED, ChPT, data-driven dispersion relations, ab-initio few-nucleon theories, LQCD

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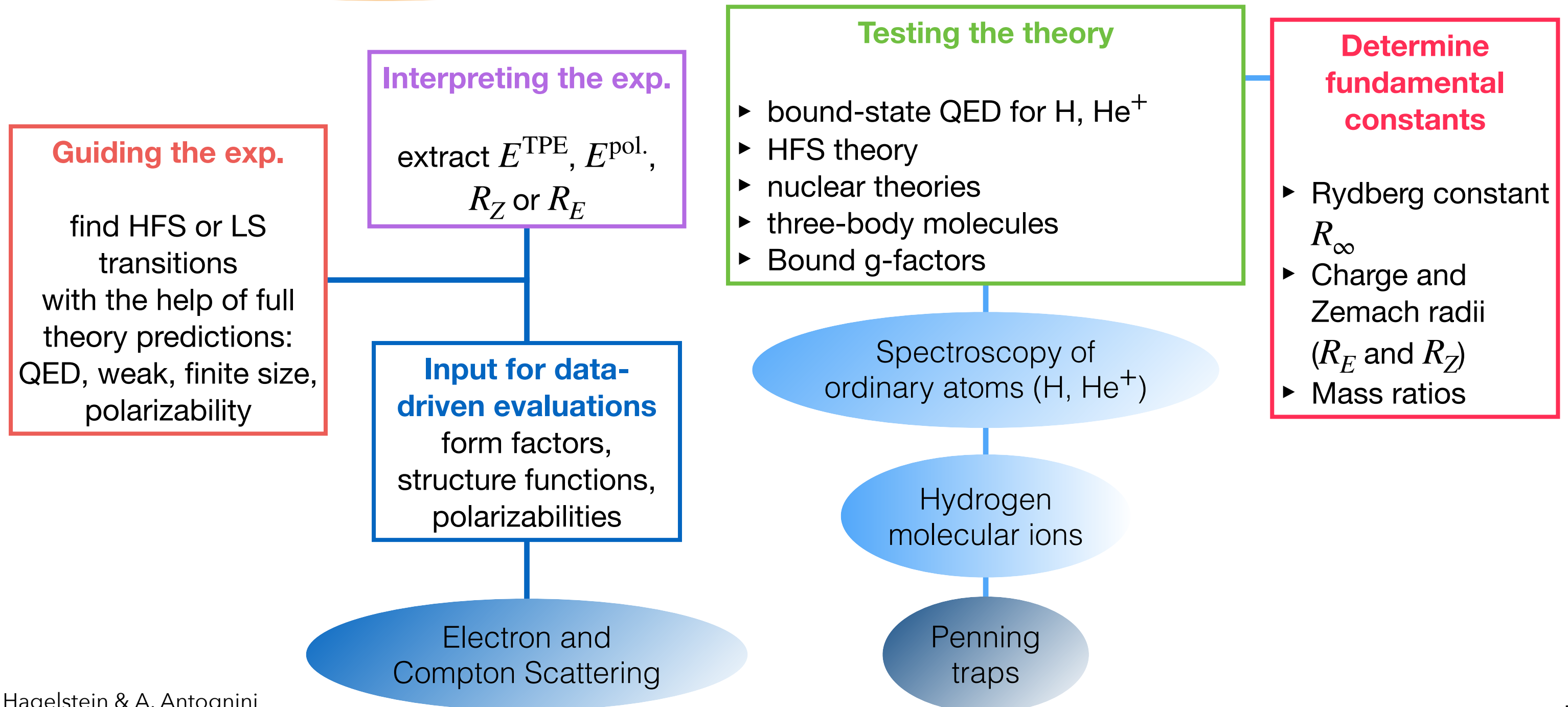
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HFS experiments

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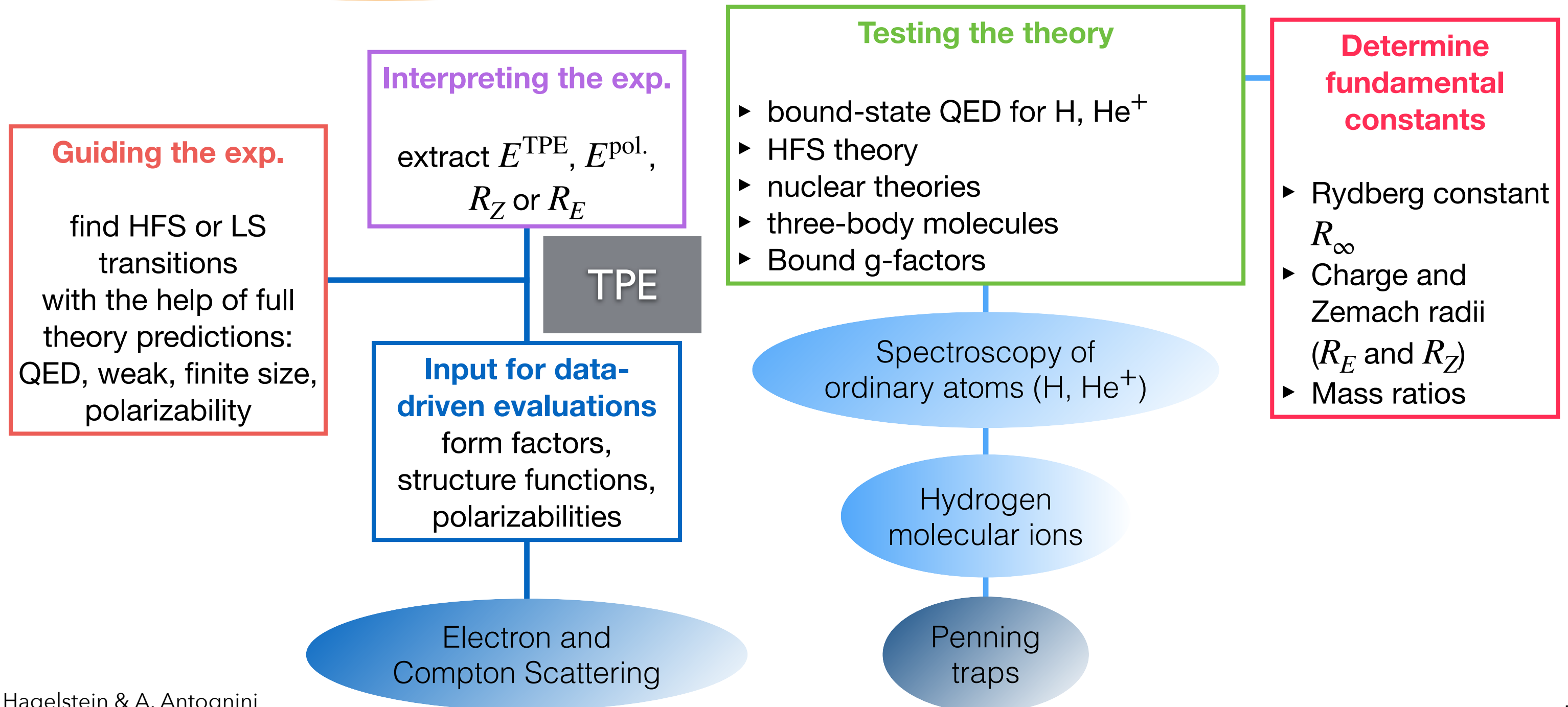
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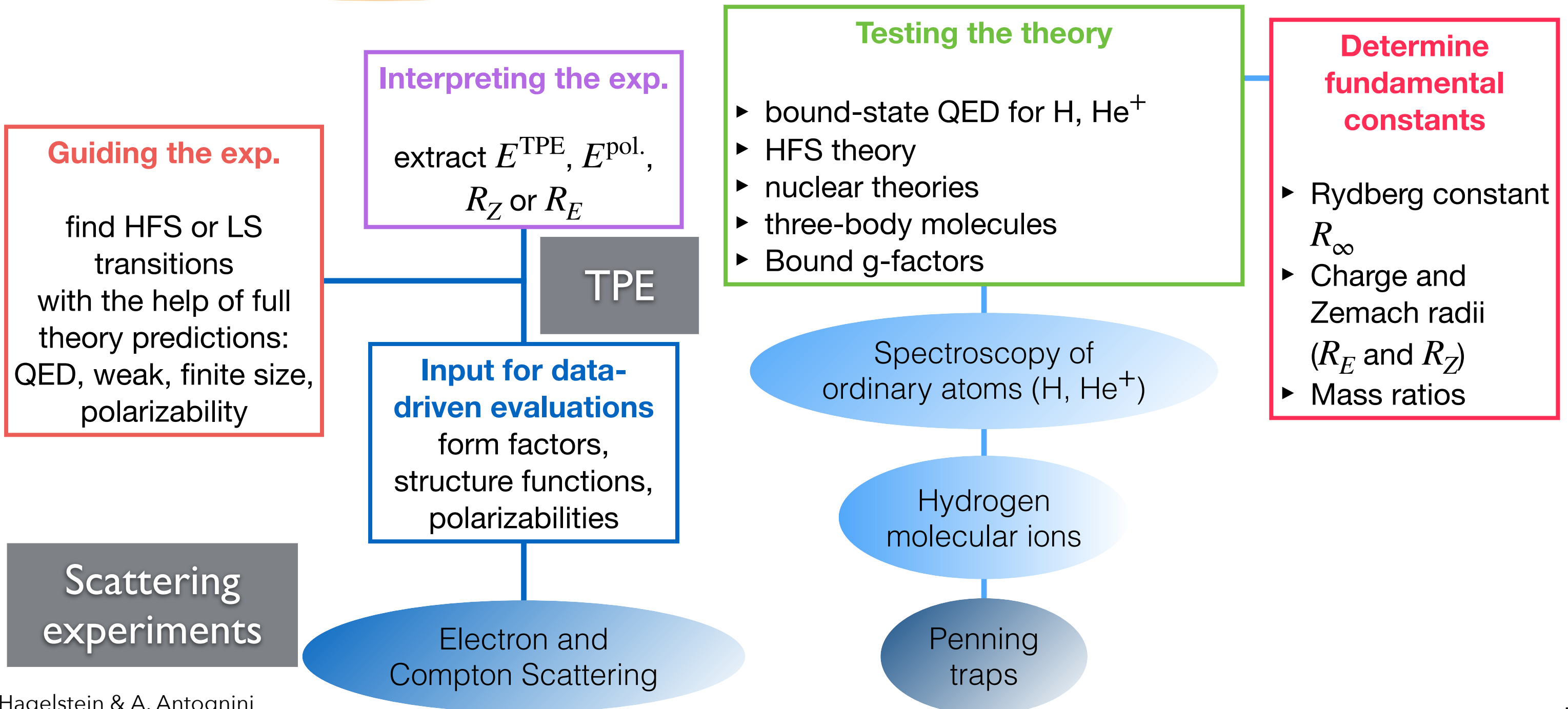
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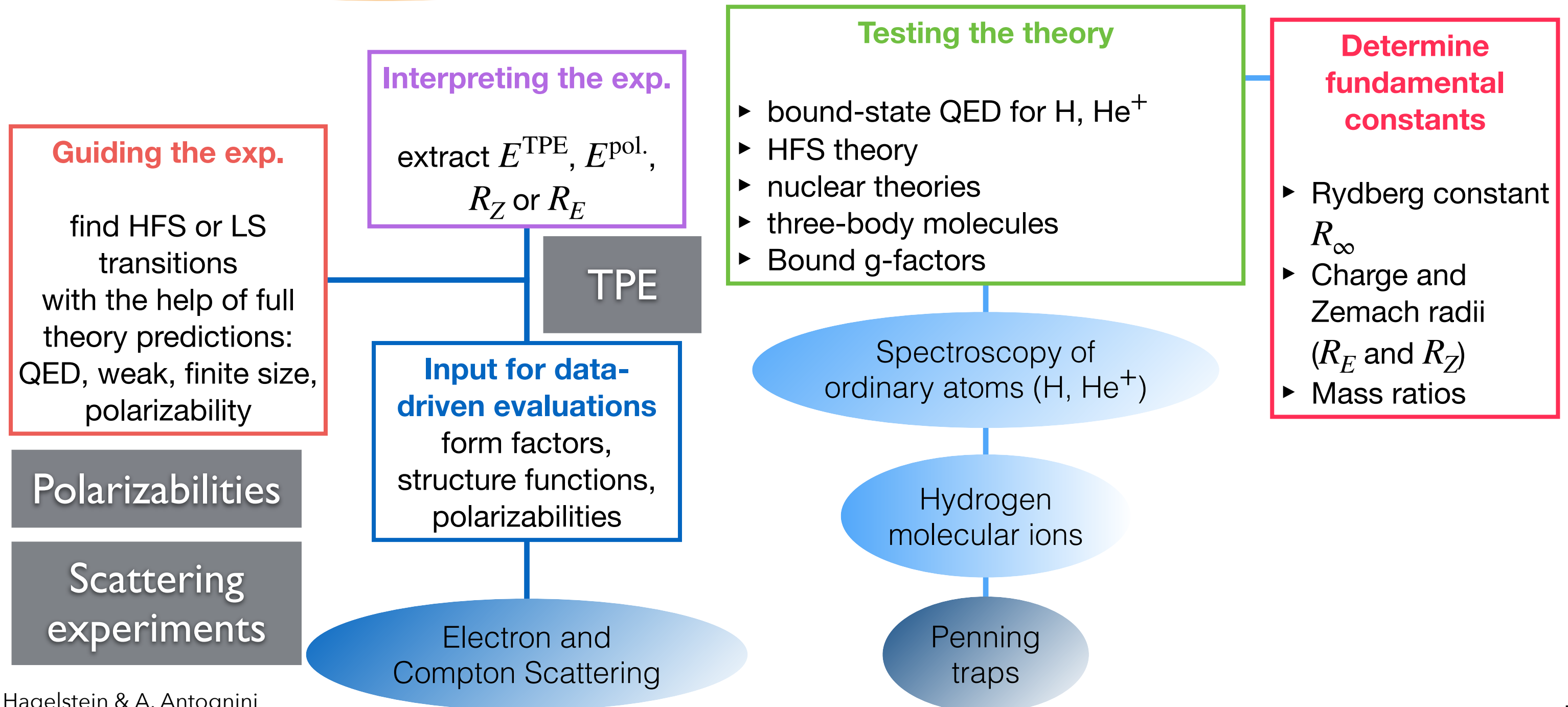
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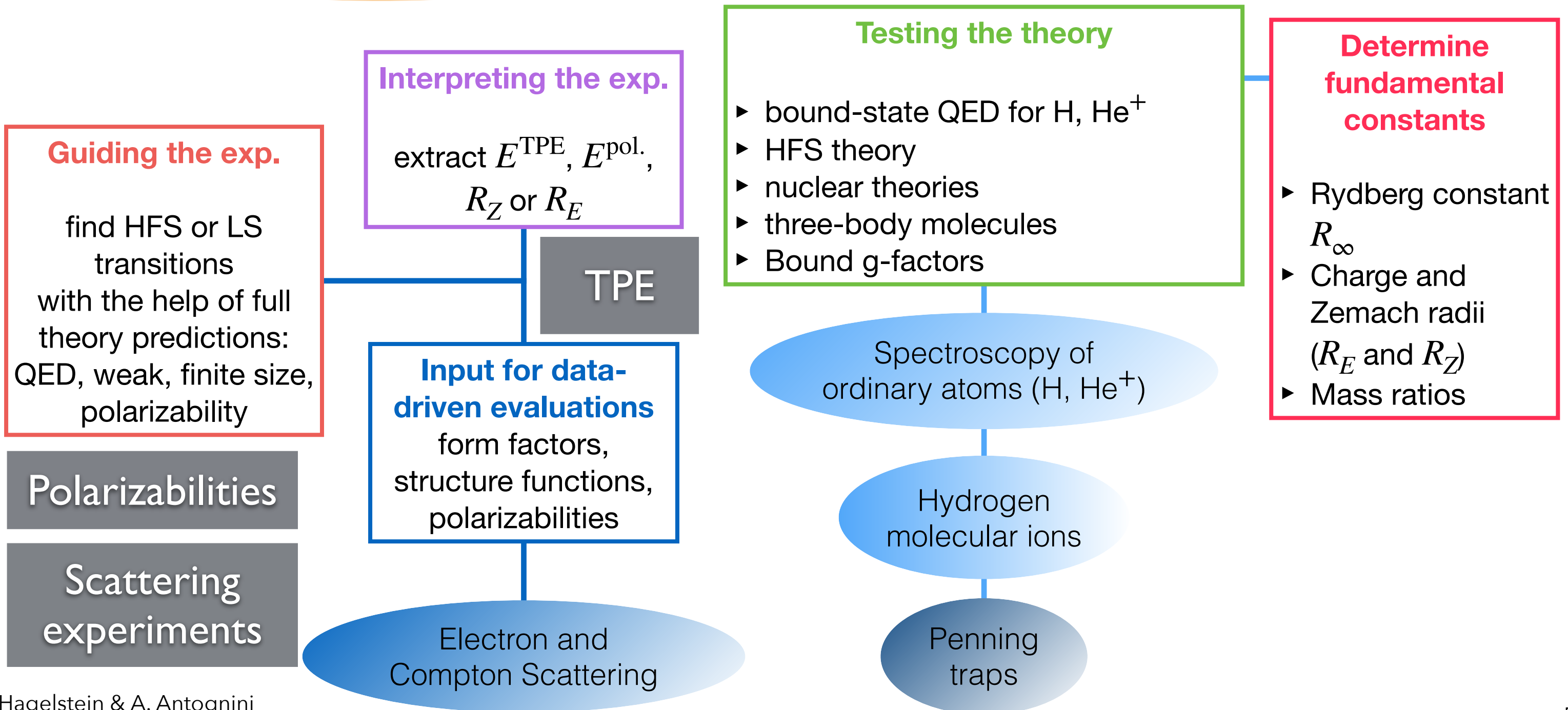
HFS experiments

Heavier
(Muonic)
Atoms

HFS
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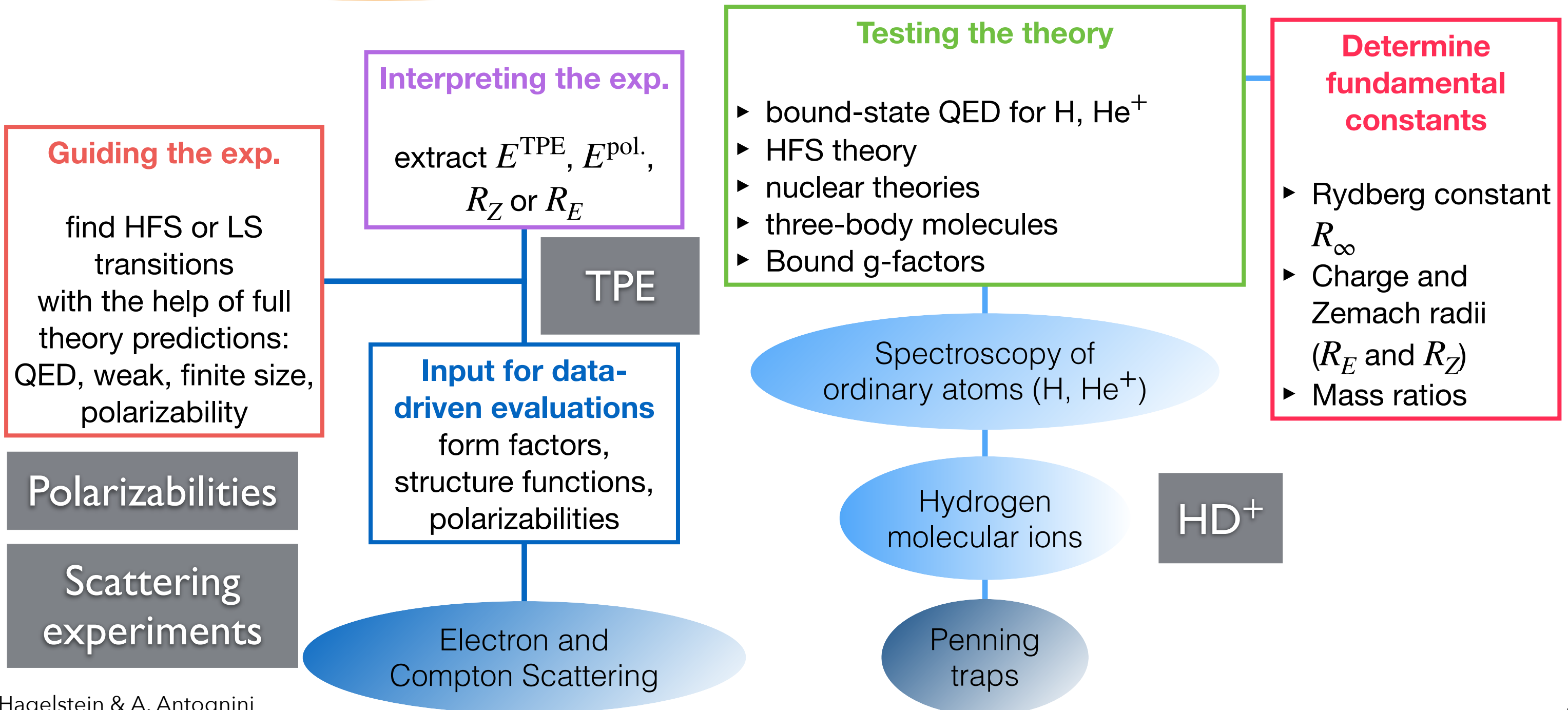
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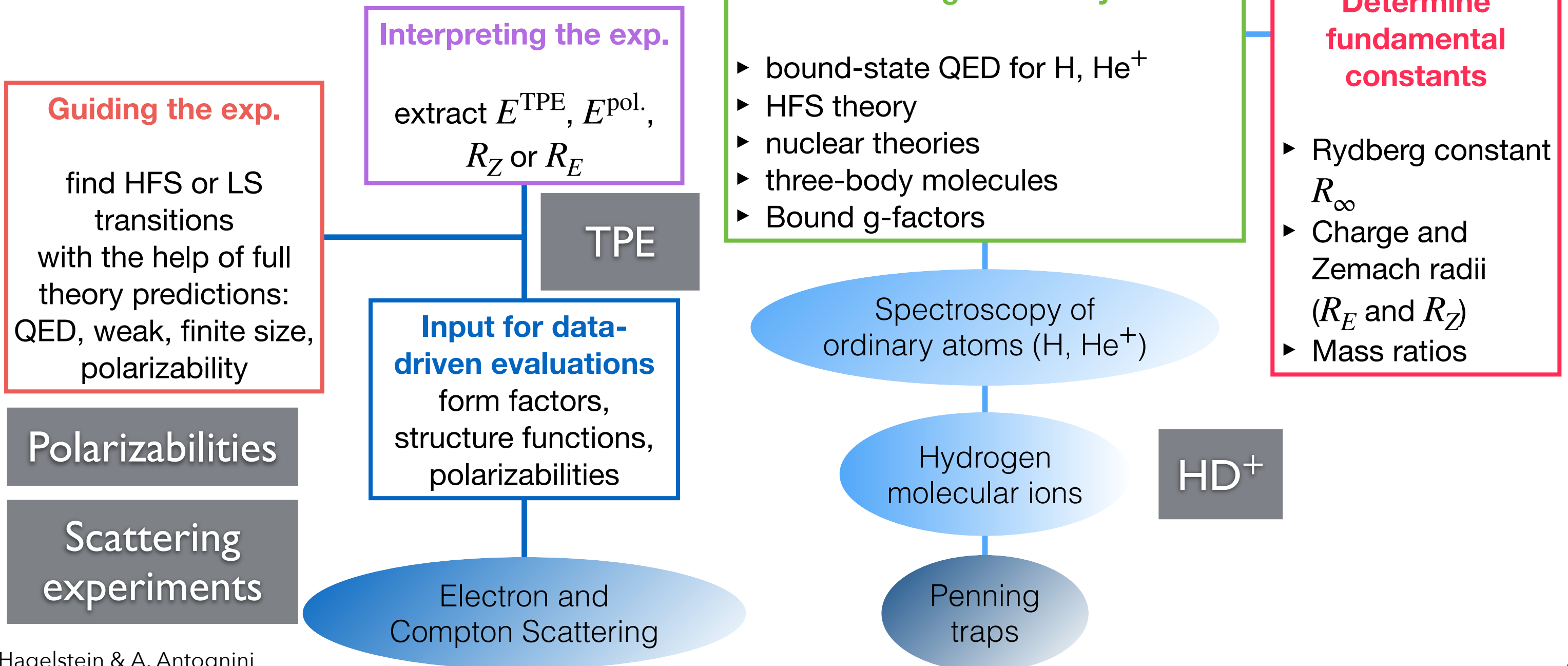
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BSM

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Why are we here?

from puzzle to PRECISION



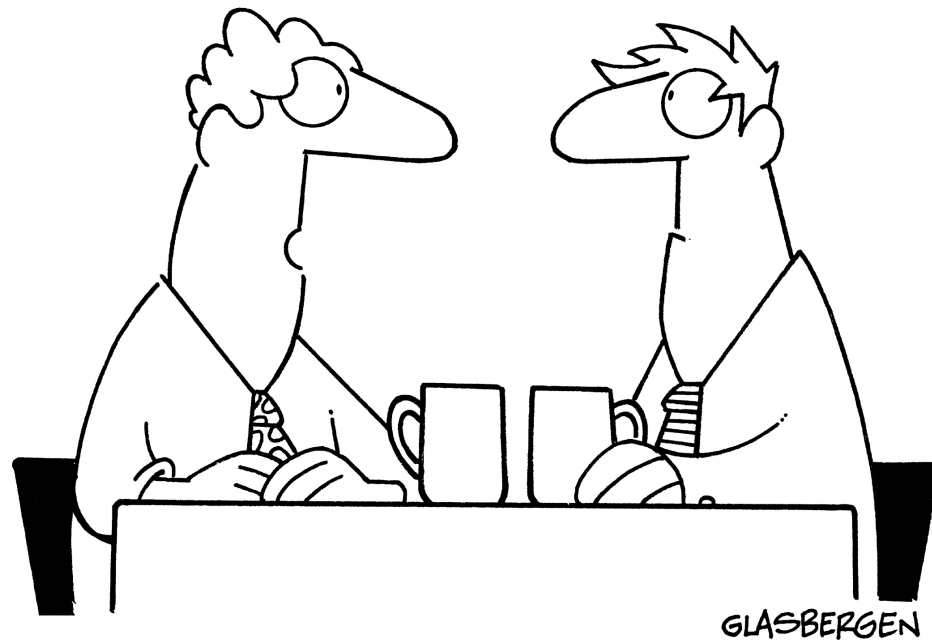
- Several experimental activities ongoing and proposed:
 - 1S hyperfine splitting in μH and μHe^+ (CREMA, FAMU, J-PARC)
 - Improved measurement of Lamb shift in μH , μD and μHe^+ possible ($\times 5$)
 - Medium- and High-Z muonic atoms
- Theory support is needed

MUONIC ATOM THEORY INITIATIVE

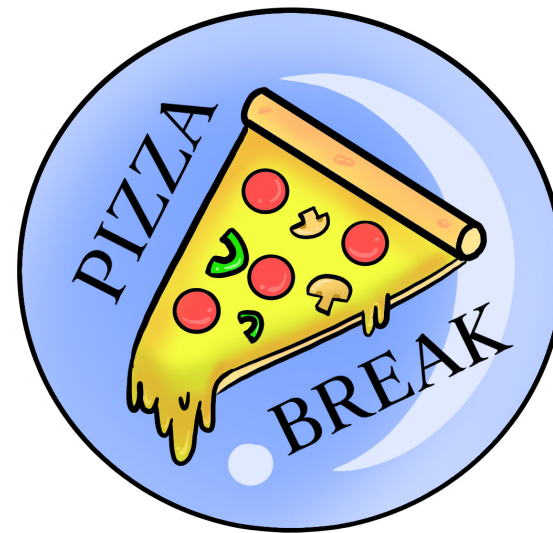
No useless plenary discussions but

Coffee, Lunch, Dinner, Bowling, BBQ

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**“Goofing off is harder than it looks.
After the fourth cup of coffee, it’s very
difficult not to accomplish something!”**



“I’m sick and tired of you taking credit for my work!”