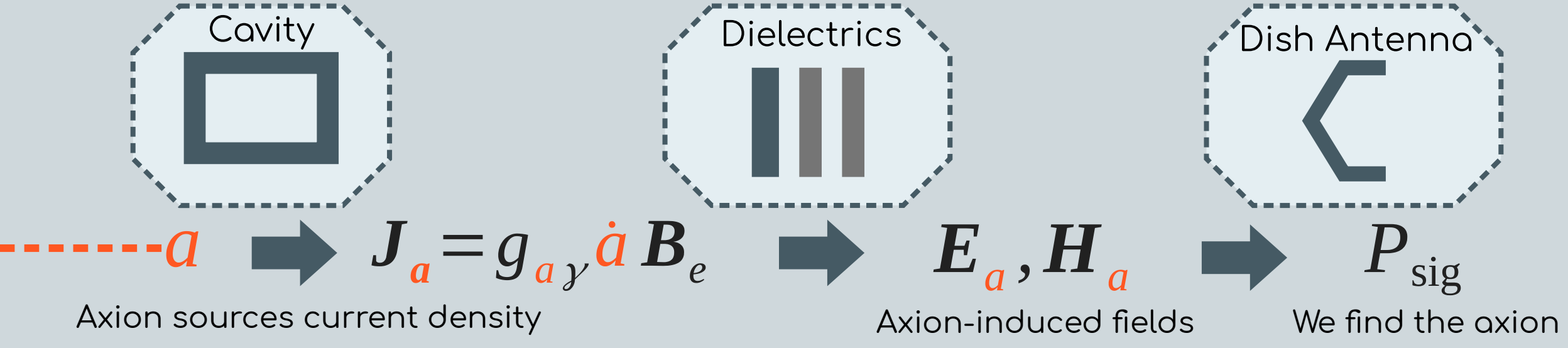
Axion Haloscope Calibration from Reciprocity



No detection?

Axion-induced fields cannot be measured

How can we still constrain axion parameters?

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$\boldsymbol{J}_R \rightarrow \boldsymbol{E}_R, \boldsymbol{H}_R$

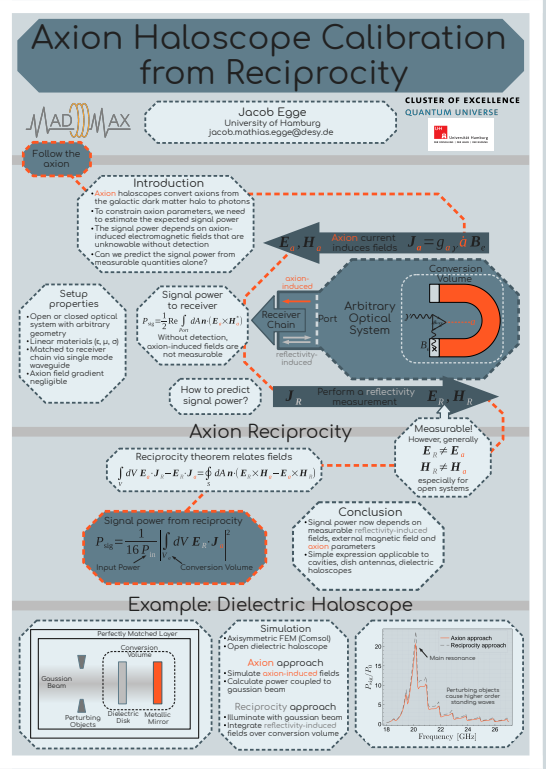
Excite haloscope from the outside
(reflection/transmission measurement)

However, generally
$\boldsymbol{E}_R \neq \boldsymbol{E}_a$
$\boldsymbol{H}_R \neq \boldsymbol{H}_a$

Reciprocity Theorem

Signal Power
- measurable fields
- simple and elegant

Poster #57



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