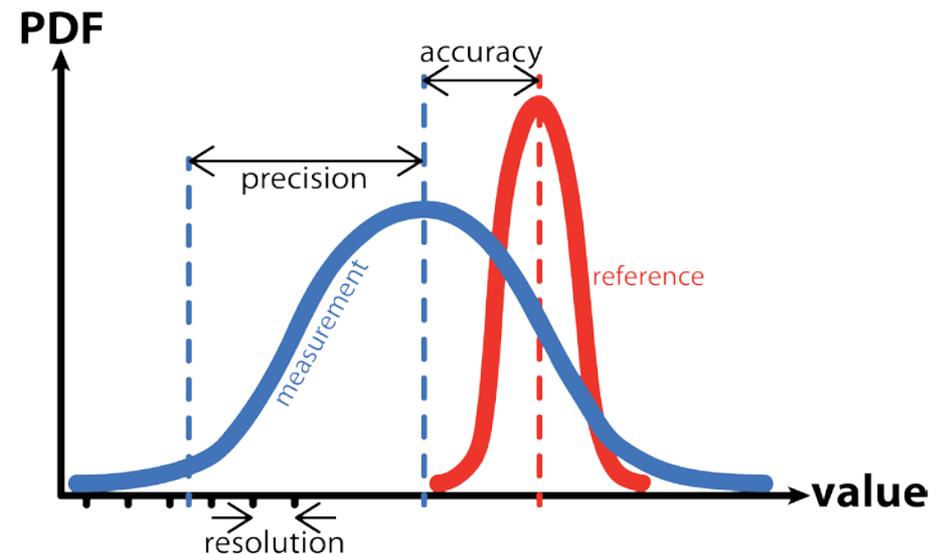


# Uncertainties in ARM data products

- Obtaining knowledge of the spread of possible values around a single point of a retrieval is often more difficult than the retrieval.
- Many retrievals are non-linear/variational so error can only really be estimated by Monte-Carlo.
- Uncertainties include carried error from the original data stream, assumptions in the retrieval, numerical error and natural, system intrinsic variability (over sample both in space and time).



# Uncertainties in ARM data products

- How do ASR data users use uncertainty, in a time of limited resources what is good enough (expert opinion vrs numerical study).
- What data providers are actively studying uncertainties, how to propagate these and represent these in VAPS?

