

CelFilter: a Sky-oriented service for registries

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1. There are 3 targets, ie, a multi-target cone-search query
2. No specific resources are specified, ie, it is a knowledge discovery, global query.
3. The query involves catalogues (objects) and archives (observations)

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- A registry service may tell us which services can answer multi-target cone-search queries, if so, send one query, if not, send three queries...
- A registry should let us choose catalogue services and archive services. No problem here.
- A registry should contain information of sky coverage of catalogues and archives in the form of a bounding box: $(\alpha_{min}, \delta_{min}), (\alpha_{max}, \delta_{max})$. But... **Q: is this enough?**

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- An efficient method to quickly determine if a catalogue contains possible matches before invoking a DBMS is highly desirable.
- Such method will succeed if the sky is divided into "small" tiles and the number of objects per tile becomes part of the catalogue's metadata.

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- A catalogue sky coverage can be harvested by registries. Internally, it is represented in binary form.

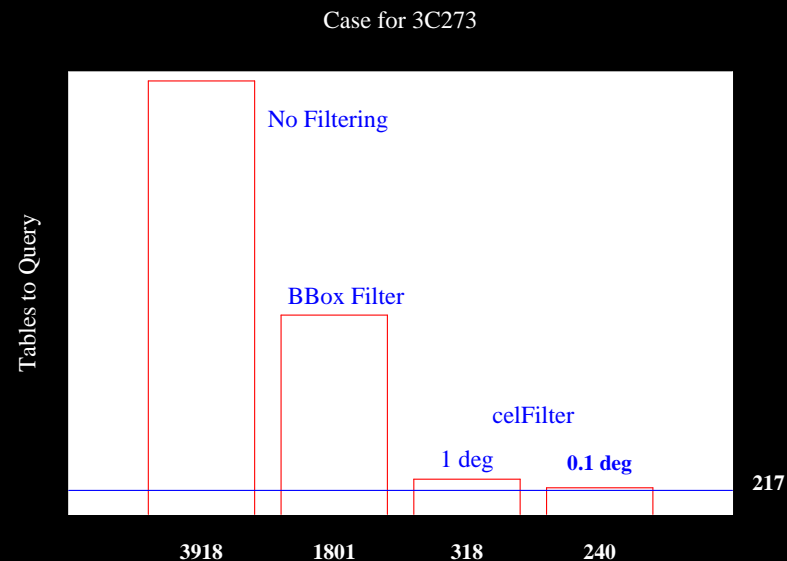
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- A skyCoverage mask is computed from the list of targets using the same method but considering the search radii.

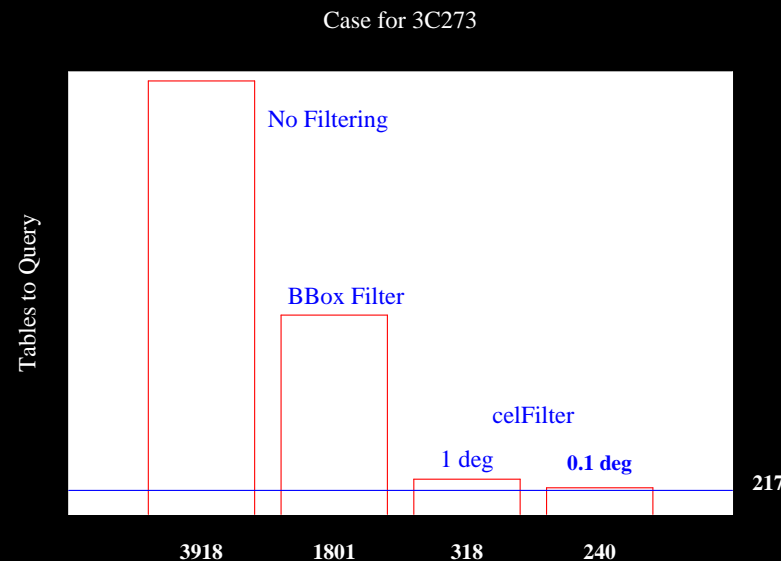
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- <http://barbara.star.le.ac.uk/~pfo/celFilter.html>