The GAVO **Göttingen AG Puzzler**

GERMAN ASTROPHYSICAL
VIRTUAL OBSERVATORY

Hint 1

The quickest way to have a powerful query interface to TGAS is to look for it in TOPCAT's TAP window.

In there, you can do queries in ADQL. In ADQL, whenever you have a problem involving averages, histograms, or the like, don't download the whole data, just use GROUP BY. More on that on http://docs.g-vo.org/adql/html/page010.html.

Oh: You can, of course, group by multiple columns. . .

Puzzler hints with brief demos at every coffee break Tuesday and Wednesday.

Hint 2

To compute averages in ADQL, use the `AVG(whatever)` aggregate function.

(An aggregate function is one that takes a set of things and returns a value – just like `COUNT(*)`.)

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Hint 3

TOPCAT – the tool that does what you want with tables – has a cool, if somewhat hidden plot mode for arrows: In the *Plane Plot*, select the *Form* tab, spot the *+Forms* button and hit *Add XYVector* from there.

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Hint 4

For experts, the ARI-Gaia and the GAVO DC TAP services will even let you group by healpix – check the Service tab in the Metadata pane of the Use Service tab in that window to figure out which user defined function to use. But note that you don't *have* to use healpixes to solve this, its would just add a nice touch.

The GAVO DC TAP service even has an example for this.

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