

The German section of the International Virtual Observatory Alliance, GAVO, operates a data center which is integrated into the Virtual Observatory.

It is there as a publishing platform for **your data and your results**. So, if you want to ensure that people can locate and use your work – both long and short term –, read on.

What is a data center?

A data center within the Virtual Observatory makes sure that

- data can be retrieved in formats that tools can easily understand,
- it can be found using standard descriptions and identifiers, using a one-stop site (the registry), and of course
- queried conveniently,
- researchers can find out where pieces of data came from and how they were processed,
- results remain accessible even after a project ends or a researcher decides to enter a different field (“curation”).

What type of data do you work with?

Images, spectra, catalogues, simulation results – you name it, we'll get it into the VO.

Why should I entrust you with my valuable data?

Because it *is* valuable and it would be a shame if it got lost due to aging storage media, mishaps, or simply neglect. After all, it might contain just the bit of information that is missing for some other great research, possibly years from now. On top of that, we may improve the way you (and, possibly later, others) access your data.

But this will be a lot of work, won't it?

Not really. Basically, in addition to the data itself we need a description of the data – where it came from, what has been done to it, what individual pieces of information mean. Have a look at the data checklist on <http://vo.uni-hd.de/odoc> to find out what we would like to have.

I've got my data posted on my website already.

Well, that's fine. But what will happen if you relocate? And can people easily run a query on VizieR and crossmatch it with your data? Can they run SDSS-style ADQL queries? Will they find your data amongst all the mess that is returned by Google?

Having data available in standard formats with quality metadata really helps all interested parties. This is even more true when the new huge surveys of tomorrow come rolling in. With them, the sheer size of the primary data sets mandates that you will have to remotely select the 0.01% of the data that is relevant to the question at hand.

This means moving the smarts as well as auxiliary data the smarts build on to the data. That is what the VO is about, and that is what you let people do when you let us put your data into the VO.

I'm convinced – what should I do?

Talk to us at our booth, or send a mail to gavo@ari.uni-heidelberg.de describing what you want us to publish for you.

Also check <http://www.g-vo.org> or call ++49 6221 54 1837.

ct	raw_object	telescope	startTime
1	2,451300E6	2,449872E6	SCIENCE Q2237+0305
2	2,451300E6	2,449872E6	SCIENCE Q2237+0305
3	2,451300E6	2,449872E6	SCIENCE Q2237+0305
4	2,451300E6	2,449872E6	SCIENCE Q2237+0305
5	2,451300E6	2,449872E6	SCIENCE Q2237+0305
6	2,451300E6	2,449874E6	SCIENCE Q2237+0305

APO 3.5m
AZT 22
Liverpool Telescope

AND
Telescope

The Virtual Observatory (VO)

To get an idea what the VO is all about, have a look at *VOExplorer*, a program that could be described as “Google for astronomical data”, and then some.

Or, in more formal words, Hanisch and Quinn* define the VO as “a system in which the vast astronomical archives and databases around the world, together with analysis tools and computational services, are linked together into an integrated facility” and elaborate:

“By providing the tools to assemble and explore massive data sets quickly, the VO will facilitate and enable a broad range of science. It will make practical studies which otherwise would require so much time and resources that they would be effectively impossible. Federating massive data sets over a broad range of wavelengths, spatial scales, and temporal intervals will be especially fruitful. This will minimize the selection effects that inevitably affect any given observation or survey and will reveal new knowledge that is present in the data but cannot be recognized in any individual data set.”

Do not be intimidated by the term “large data sets” – even if you are just looking for a single piece of data, the VO may already have it, and locating it is easier than you may think.

GAVO

The German Astrophysical Virtual Observatory (GAVO) is the German partner in the international effort of creating a global Virtual Observatory (VO) network. GAVO aims to provide a platform to support modern astronomical research in Germany by providing fast and easy access to as well as rapid publication of astronomical data archives and related documentation worldwide as well as software tools for exploiting this data.

GAVO is supported by the German Ministry for Research (BMBF) and is open to all interested astronomers.

Currently participating at GAVO are:

- Zentrum für Astronomie der Universität Heidelberg (ZAH)
- Max-Planck-Institut für extraterrestrische Physik (MPE), Garching
- Astrophysikalisches Institut Potsdam (AIP)
- Argelander-Institut für Astronomie (AIfA), Bonn
- Institut für Astronomie und Astrophysik der Eberhard-Karls-Universität (IAAT), Tübingen
- Technische Universität München (TUM)
- Max Planck Digital Library, München



Your data
is too
valuable
for this



or this



* <http://www.ivoa.net/pub/info/TheIVOA.pdf>