

# Accessibility to astronomical data and services to all

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**Virtual IVOA Interop Meeting, 25-28 May 2021**  
**Education IG Session, May 26**





# Context

SCIENCE MISSIONS EUROPEAN SPACE AGENCY SCIENCE & TECHNOLOGY SIGN IN

space & astronomy research accessibility 2020

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**SARA2020**

30 November, 2 & 4 December 2020, on-line event hosted by the European Space Astronomy Centre (ESAC)

Space science and astronomy organisations around the world engage professionals in the exploitation of the scientific data generated by space missions and ground-based astronomy facilities. They also involve information technology experts in the development of software tools needed for this purpose. In addition to this, these organisations also help train students and young professionals in every aspect of the technical implementation and scientific exploitations of such space and astronomy projects.

In particular, these organisations strive to make their data archives and on-line resources accessible to all academic and professional researchers, and to work seamlessly with them regardless of their condition.

In this context, ESA, IAU, ESO and SKAO are teaming up to organise a workshop on the links between space science and astronomy, inclusion and disability. A first on-line event will consist of three non-consecutive daily sessions on 30th November, 2nd and 4th December 2020. A follow-up workshop will take place in April 2021 at the European Space Astronomy Centre, ESAC, near Madrid, Spain, and it will be the first of a series of workshops focusing on diversity and inclusion aspects in this professional community.

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## One of the workshop topics:

**Getting everyone connected:** software and hardware interfaces that make a difference for professionals and students with **disabilities** in on-line work; making **online accessible to everyone** around the World.

I have not participated but i was contacted by Francesca Primas to know if accessibility and technology issues for people with disabilities were discussed at IVOA.

# □ IVOA

- **Interoperability** : useful standards and protocols
- This huge work is one of the keys of the **Accessibility**... but in the sense of **FAIR** !
- It sounded great to me to introduce a **noble human concern** in addition to the usual Scientific and technological concerns. And to start looking for solutions to make it happen.
- We may already have some of the keys for the **Accessibility** in the sense of “**to all**” (We are not starting from scratch).

# □ And now ?

- A wide field of **investigation**
  - Variety of data and services: textual, numerical, images (how to use Aladin if I am blind), etc.
- Using a Braille device, a voice interaction, etc.
  - Enough ? It helps but we could probably take into account **accessibility upstream**, at the beginning of developments, of data display and services design
  - We have **so much technologies**: AI, TalkBack, Seeing AI, etc.
  - A **chance**: we have **IVOA standards and protocols**: Provenance, MOCS, Semantics works (just examples)
  - => not only data but **data++**

## □ And concretely ?

- A six month study will start in September 2021 with a student to
  - learn about disabilities
  - draw up an initial inventory of the accessibility of CDS data and services for people with disabilities
  - find solutions to improve the existing
  - set up upstream new ways of presenting data and services, developing interfaces and tools
- Towards an inclusive CDS ?
- Unrealistic and too hard ? Hard, yes but it is a first step

# □ Proposal, Question and Conclusion

- The unrealistic part would be to do it **alone**.
- I propose to discuss it, to gather all the experiments (in Astronomy and other fields) and ideas (Slack channel, small workshops, SARA 2021? ...)
- It concerns potentially a **large panel** of IGs/WGs.
- Is Education IG the **right** place ?
- Conclusion: a **virtuous work** which will benefit to all, with or without disabilities