

JUMPING JIVE



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Deliverable D7.3

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Project JUMPING JIVE WP7 – The VLBI Science Case

Deliverable D7.3

The leaders of WP7 in the project held a f2f meeting in Bologna on 21-23 January 2019 to assemble all the material collected by the chapter coordinators identified during the meeting held in Zaandam on 28/2-1/3/2018 (see deliverable D7.2).

1.Preparatory Activity

Between Deliverable 7.2 and the present deliverable a number of actions took place. In particular, two main meetings took place with the VLBI users' community to ensure that the VLBI Science Case is as inclusive as possible in terms of:

- Scientific coverage
- Involvement of the community
- Geographical coverage.

1.1.SS11 at EWASS 2018

A special session (SS11) was organized at the European Week of Astronomy and Space Science held in Liverpool in the week 3-6 April 2018. The title of the session was ***Exploring the Universe: a European vision for the future of VLBI***. It by invitation only and included 11 talks. The programme and the pdf presentations can be found at the link:

http://www.jive.eu/jumpingjive/doku.php?id=vlbi_future:meetings:ewass18 .

Figure 1 captures a few moments at EWASS. On the top left Professor Heino Falcke during his presentation at SS11.



Figure 1

The meeting turned out to be very successful, with an average attendance of about 40-50 people throughout the day, and excellent presentations.

It led to a very constructive discussion: further topics were identified and included in the science coverage of the document, and a few more experts were included in the writing team.

After the meeting, each chapter coordinator was sent the macros to be used for the document.

1.2.EVN Vision Discussion at the 14th EVN Symposium

The 14th EVN Symposium was held in Granada in the week 8-11 October 2018. The meeting was extremely successful, with over 130 participants, and 4 days full of presentations of outstanding results obtained with the EVN. The programme can be visited on web at:

<http://evnsymp2018.iaa.es/content/program>.

Figure 2 is the 14th EVN Symposium conference picture.



Figure 2

The EVN Vision Discussion took place on October 9th. It was fully attended, the lively discussion was extremely useful for the purpose of the document and led to the addition of a few more missing items in the document. A few more radio astronomers volunteered to join the process.

2.The f2f meeting in Bologna

M. Lindqvist, Z. Paragi and T. Venturi met at the Istituto di Radioastronomia (INAF) in Bologna in the days 21-23 January 2019 to produce the first version of the VLBI Science Case document.

The main goals of the meeting were the following:

- Collect the material received by the chapter coordinators and their team, go through it and harmonize the style and layout of each chapter;
- Extract the information on the required technological developments and suggested operational improvements in the European VLBI Network to fulfill the proposed science;
- Develop a proposal for the short version of the document, the so called “glossy version”, to be presented for comments and input to the Consortium Board of Directors.

Following the items above, during the three days the coordinators went through the material received and prepared the first version of the document, which consists of three main parts:

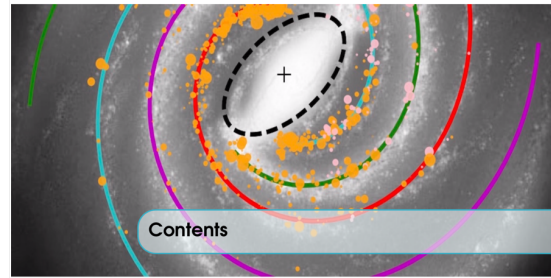
- Chapter 1 includes an overview of the main present and upcoming facilities in the radio and other bands, and prospects for the technological framework;
- Chapters 2 to 7 are the scientific chapters, with a scientific coverage going from cosmology to Earth science, and space and planetary science applications;
- Chapter 8 is an executive summary and provides the future directions of the European VLBI Network as envisaged by the Consortium Board of Directors of the EVN.

The front page, index of the document and full list of authors are reported in the following figures.



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Figure 4. Full index of the document and list of chapter coordinators and contributors

The document was sent to each chapter coordinator for further comments, considering that some editing was necessary. After the final feedback from them, the current version was sent to the Board of the EVN Directors for comments.

Some remarks are important. In particular:

- The title of the document is still preliminary;
- The summary of the suggested technological developments and operational improvements is still missing;
- The executive summary and prospects for the EVN are still preliminary and not included in the document yet.

3.Feedback from the EVN Consortium Board of Directors and Future Steps

The document was discussed at the EVN Consortium Board of Directors, held in Bologna on May 16th, 2019. The outcome of the discussion may be summarized as follows:

- No missing scientific items were reported. Y. Kovalev asked to ensure that the scientific part of the VLBI-Gaia science is properly highlighted;
- It has been suggested to solicit feedback from the Chinese and Russian representatives in the EVN;
- It has been requested that the names of the CBD Directors are explicitly reported in the document;
- It has been requested that the WP leaders draft a first version of Chapter 8, to start the iteration among the Directors;
- It has been decided that the “glossy version” should reach funding agencies and not the general public.

All the above comments will be taken care of by the WP7 coordinators. The first draft of Chapter 8 will be sent to the Directors by the end of July, and a second very advanced version of the document will be ready for the next EVN CBD meeting, which will be held in Dwingeloo in November 2019.