RadioNet support for Short Term Missions (staff exchange)

Application form

STM INFORMATION	
APPLICANT 'S NAME	KRISTAPS VEITNERS
APPLICANT'S AFFILIATION	*Ventspils International Radio astronomy Center (VIRAC)*
HOST INSTITUTE	*ASTRON (Netherlands Radio Astronomy Centre)* Contact person: *Marco Iacobelli* Email:iacobelli@astron.nl
DATE OF THE STM	*16.09 -20.09*
TOTAL COST OF STM	*900 EUR*
OTHER SOURCES OF FUNDING	

Request *(max. 2,5 pages without signature part)*

Topic	Improving accessibility of archived LOFAR data
Proposed work	The applicant is developing a stand alone software tool to automatize and improve LOFAR data selection and retrieval. The tool will be made available to the user community. The applicant will also be exposed to data analysis. The goal of the proposed visit is to finalize the coding/testing phase, to develop documentation and release it. Finally the tool will be adopted in a pilot project to re-process data of the LOFAR MSSS survey (DOI: 10.1051/0004-6361/201425210).
Cross-disciplinary	*As VIRAC technical workers have relatively small experience with LOFAR data processing using AIPS, CASA, LOFAR specific tools and since in 2020 VIRAC will have LOFAR station, VIRAC will need LOFAR data experts.* *This work is important for continuing the effort of transfer of knowledge related to LOFAR data processing, analysing data from LOFAR station, interpreting data, and doing science.*
Impact	*New generation of radio interferometers (such as LOFAR) provide large (several TBs) datasets. Data access and data processing is therefore a complex process, that contains many steps and automation is of utmost importance to enabling scientific exploitation.* *In the framework of the master thesis project of the applicant, we want to provide a user friendly software tool aimed to automatize data selection, staging and retrieval from the LOFAR archive*
Curriculum Vitae	First name, last name: Kristaps Veitners Birth data: September 16, 1995 Education: 27/06/2019 Diploma of the first level professional higher education with the qualification of "Programmer" University of Latvia, faculty of computing, Rīga (Latvia) ~~Current employment:~~ Astronomy technician at Ventspils International Radioastronomy Center (Ventspils University of Applied Sciences)

	Current employment: Astronomy technician at Ventspils International Radioastronomy Center (Ventspils University of Applied Sciences) Projects: "Evolution of Organic Matter in the Regions of Star and Planet Formation (OMG)", 2019-2021 ERAF "Chemical effects of cosmic-ray induced heating of interstellar dust grains". No1.1.1.2/VIAA/1/16/194 ; 2019-2020.

Privacy Policy: With signing this template and applying for RadioNet funding, I accept the Privacy Policy of RadioNet, which is based on the EU General Data Protection Regulation (GDPR).

Place & Date: Rīga, 23.05.2019 Signature of the applicant: K. Vēsiņa

23.05.2019 K. Vēsiņa Date and Signature of the applicant	I confirm that the proposed STM is in compliance with the agenda of my organisation 01.07.2019 Date and Signature of the director of the home institute /INDRA DEDZE/

RadioNet has received funding from the EU's Horizon 2020 research and innovation programme under grant agreement No 730562

Object: Letter of reference for applicant Kristaps Veitners

Dear Members of the Selection Committee,

As involved in the master thesis project of Janis Steinbergs I had the opportunity to collaborate with his colleague Kristaps Veitners. Kristaps recently completed his bachelor's degree program as a programmer at the faculty of computing, University of Latvia. In May Kristaps attended in Leiden the LOFAR science workshop. Thus I had the opportunity to have a deeper interaction with Kristaps. My impression is positive due to Kristaps good academic education as well as his enthusiasm and interest in scientific research activities.

Presently Kristaps is an Astronomy technician at Ventspils International Radioastronomy Center (VIRAC). Starting in 2020 VIRAC will have a LOFAR operational station, thus VIRAC will need LOFAR data experts. Currently VIRAC technical staff has relatively shallow expertise with LOFAR data handling. Therefore he has been involved in the ongoing project of his colleague Janis Steinbergs master graduation programme. The project has been setup to develop a software tool for improving accessibility of archived LOFAR data by automatising the LOFAR data staging and retrieval steps. The software tool will be made available to the user community.

The main goal of this collaboration is to continue and improve the transfer of knowledge that was started under the BALTICS (Building on Advanced LOFAR Technology for Innovation, Collaboration, and Sustainability) education program. By visiting ASTRON in September Kristaps will contribute to finalize the coding/testing phase and the development of the documentation. He will also focus on interferometric principles and LOFAR data reduction. Indeed we will use the tool in a pilot project to re-process data of the LOFAR MSSS survey.

Therefore I warmly recommend Kristaps application for a support to his visit at ASTRON.

Please do not hesitate to contact me for any further information.

Yours Sincerely,

Marco Iacobelli

Dr. Marco Iacobelli

LOFAR telescope scientist

ASTRON Netherlands Institute for Radio Astronomy

e-mail: iacobelli@astron.nl | phone: +31 (0)521 595 786