



Report from the Short Term Mission – STM

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Report:

1. TOPIC

The Kinematics study of M81 galaxy group

2. PROPOSED AND PERFORMED WORK

The visit to the MPIfR mm- and sub-mm group headed by Prof. Karl Menten was to reduce four epochs of astronomical VLBI data (code BB364), which is part of an on-going project aimed at deriving for the first-time ever the proper motion of M81 group -galaxies M81 and M82 by employing the phase-referencing technique. Having worked with AIPS software in data reduction, I was introduced to a python developed ParseITongue based option of working with AIPS. The scripting skill were valuable in ensuring consistency in the results obtained and also easy option to handle data when working over the server. During the period of the visit, modalities were set-up to allow for data analysis on the mm & sub-mm group server from home town. I was familiarized with necessary skills on accessing server and working remotely.

3. CROSS-DISCIPLINARITY

The python scripting skills is a powerful tool in data analysis across the disciplines. Managing to interface it with the traditional data analysis softwares and codes makes data handling and presentation to be more versatile.

The ability to access and work over the server is a necessary skill across all disciplines. It not only expands the collaborative scope but also allow for developing countries to work with the state of art equipment located at their collaborative institutions at a lower investment cost.

4. IMPACT

The possibility of collaborations with partners on remote server is a valuable asset to my department which has not been very well equipped on HPC and data storage. We normally share the experiences after a visit, when I shared the development, many of my colleagues were excited about this option of advancing research. One such case, I advised a PhD student who was struggling to run Quantum Espresso on local computers by interconnecting them and increasing the RAM to have a mini supercomputer. The challenge of disk space persisted and has since taken to online HPC option to run his work. Moreover, Kenya Education Network (KENET) has also taken to offering virtual server to Kenyan researchers handling big data and simulations.

5. PUBLICATIONS

Noted with Thanks

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