The 'Graduiertenkolleg' on the Magellanic Clouds and other Dwarf Galaxies at the Universities of Bochum and Bonn

K.S. de Boer, on behalf of past and present
stipendiats, supervisors, and members

Abstract

The GRK was conceived in the early 1990s and was funded as of 1993. Being in its final year, the history of and developments in the GRK are reviewed.

1 Structure of a 'Graduiertenkolleg'

The organisational structure *Graduiertenkolleg* (GRK) was created by the *Deutsche Forschungsgemeinschaft* (DFG) to strengthen interaction among doctoral students and their supervisors within university research groups. Financed by the DFG and the local state government, a GRK provides stipendia for a fixed period of 3 years to up to 15 doctoral students, including generous support for travel, meetings, and guests. One of the goals is to bring together varied disciplines to investigate a given research area while another goal is to stimulate students and staff to complete the work for their PhD in a period approaching just 3 years. Such GRKs may be extended with further 3 years two times.

2 Establishing the Bonn-Bochum GRK

After extensive deliberations among the colleagues in the astronomical institutes of the universities in the state of *Nordrhein-Westfalen* (NRW) about the topic for a GRK, the choice ultimately fell on the Magellanic Clouds (MCs). These two dwarf galaxies are of large general interest to astronomy while also a considerable body of expertise on stars and stellar populations, the interstellar medium, and the kinematics was present in the participating institutes. The institutes included the *Radioastronomisches Institut* and the *Sternwarte* of the University of Bonn and the *Astronomisches Institut* of the Ruhr-University in Bochum.

The final research proposal was edited by U. Mebold (Bonn), after earlier versions by K. Rohlfs and Th. Schmidt-Kaler (Bochum). It was exceptional in the sense that it combined **researchers from two universities**. The proposal included plans for regular meetings of the participants from Bochum and Bonn. It was approved and in 1993 our GRK could start with stipendia for 9 PhD students. After the first period of three years an first extension in extended form was granted, with a subject that was widened to include research on DGs. This was followed by the third three year period, which now comes to an end.

3 Development of the GRK

1993-1995:

"The Magellanic Clouds and their interaction with the Milky Way"
9 PhD stipendia
Spokesperson: U. Mebold (Bonn)
Supervisors: J. Dachs, J.V. Feitzinger, R. Hanuschik, K. Rohlfs, Th. Schmidt-Kaler (Bochum), and K.S. de Boer, W. Hirth, U. Klein, W. Kundt, U. Mebold, T. Richtler, W. Seggewiß (Bonn)

The research aimed at the Magellanic Clouds with lots of stellar investigations, some on interstellar matters, and some on gas of the Milky Way halo including the Magellanic Stream. Special attention was given to the interaction of the Galaxy, the LMC and the SMC, and the traces of that interaction in all three galaxies. It was felt that other dwarf galaxies (DGs) ought to be included to give our studies on the structure of the MCs a broader perspective.

In total 13 joint meetings took place. Locations included the outpost Observatory 'Hoher List' of the Sternwarte, the *Internationales Begegnungszentrum* in Bochum, as well as other small conference centres.

1996-1998:

"The Magellanic Clouds and other Dwarf Galaxies; Astrophysics of small Galaxies"
12 PhD stipendia, 2 Postdoctoral fellowships
Spokesperson: U. Klein (Bonn),Vice-spokesperson: R. Hanuschik (Bochum)
Supervisors: R. Chini, R.-J. Dettmar, J.V. Feitzinger, R. Hanuschik, R. Schlickeiser (Bochum), and K.S. de Boer, U. Klein, U. Mebold, T. Richtler, W. Seggewiß (Bonn)

The MCs continued to be the main interest, now intensifying the studies of their interstellar material, while DGs slowly gained the prominent place they deserve due to the prominent rôle they play in the bottom-up scenario of galaxy evolution. With that development, also questions about the nature and distribution of dark matter became important.

In this period we had 16 joint meetings including guests. Locations ranged from the *Internationales Begegnungszentrum* in Bochum, the institutes in Bonn and further modest conference centres. The January meetings now mostly took place in the Physikzentrum Bad Honnef.

In January 1998 the GRK organised an international conference held in the *Physikzentrum in Bad Honnef*. 74 participants from all over the world joined in presentations and discussions and the proceeding were published ('The Magellanic Clouds and other Dwarf Galaxies', edited by Richtler & Braun (see `http//"www.astro.uni-bonn.de/~webgk"`).

1999-2001:

"The Magellanic System, Galaxy Interaction and the Development of Dwarf Galaxies"
12 PhD stipendia, 2 Postdoctoral fellowships
Spokesperson: K.S. de Boer (Bonn), Vice-spokesperson: R. Chini (Bochum)
Supervisors: D.J. Bomans, R. Chini, R.-J. Dettmar, S. Hüttemeister, R. Schlickeiser (Bochum), and K.S. de Boer, A. Heithausen, U. Klein, U. Mebold, P. Schneider, W. Seggewiß (Bonn)

Studies of the MCs continued but research on DGs dominated the efforts of the GRK. These now included studies of the total mass in DGs (rotation curves and dark matter) as well as interactions with the environments.

During this period there will be a total of 16 meetings expected, including an international conference presented in these proceedings. The present international conference takes again place in the *Physikzentrum in Bad Honnef*. Since it likely is the last conference of this kind within the current GRK (funding will formally end by the end of 2001), the present report about the origins and evolution of this GRK is included in these proceedings.

Over the years, the GRK got rejuvenated continuously. In particular the PhD students came into the GRK and left, some to enter postdoc positions at other astronomy centres, some for challenging positions elsewhere in society. But also at the supervisor level changes took place. Th. Schmidt-Kaler, K. Rohlfs and J. Dachs of Bochum retired and had R.-J. Dettmar and R. Chini as successors. On the more theoretically oriented side R. Schlickeiser (Bochum) and P. Schneider (Bonn) joined the GRK. Also with the junior supervisory staff changes took place: R. Hanuschik (Bochum) left to ESO and T. Richtler (Bonn) left for Chile while recent additions were S. Hüttemeister (Bochum) and A. Heithausen (Bonn).

4 Thanks

We, the stipendiats, the supervisors, and the members are grateful to the DFG and the State Government of NRW for having granted this GRK-118. We owe them a lot in terms of research opportunities, research successes, and pleasure in our work. We are also grateful to our university administrations for the unfailing support of our endeavours.