



**Einladung  
zum  
Physikalischen Kolloquium  
Montag, 09.11.2015  
16:15 Uhr in N24/H13**



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**On the development of microwave methods for environmental diagnostics**

Although microwave diagnostics date back to the early 20<sup>th</sup> Century, the development was delayed, mainly due to the lack of suitable technology. Furthermore the awareness about the potentials of radar and radiometry had to be developed. Since the time of World War II the developments in both science and technology have advanced our understanding enormously, leading to a large number of remote-sensing methods and tools. Today microwave radiometers on satellites provide meteorologists with key information needed in weather forecasts, and weather radars have become indispensable tools for nowcasting. In my talk I will introduce the physics and methodologies of microwave and infrared radiometry. Then I will concentrate on examples, I have been involved with. They include the search for microwave signatures in the terrestrial cryosphere as well as for atmospheric water in the troposphere. I will illustrate some of the potentials, but also indicate its limitations. Today much of this work is linked with satellite projects, e.g. for the European Space Agency (ESA). Appealing challenges continue to attract interested researchers.

Ab 16.00 Kaffee, Tee und Kekse vor dem Hörsaal H13,  
Organisation: Prof. Dr. F. Jelezko, Tel. 23750;  
Host: Prof. Dr. O. Marti Tel. 23011, off.: 23010