



Universidade Presbiteriana  
**Mackenzie**

Pró-Reitoria de Pesquisa e Pós-Graduação  
Coordenadoria Geral de Pós-Graduação Stricto Sensu

**Visit of Prof. Vladimir Makhmutov  
Head of Solar Physics and Cosmic Ray Laboratory  
Lebedev Physical Institute, Russian Academy of Sciences  
Jan. 28 – Feb. 02, 2019  
Project: “Space Weather” PROJ-CAPESPRINT1035531P**

On February 1st, 2019, Prof. Vladimir Makhmutov from Lebedev Physical Institute (LPI, Russian Academy of Sciences, RAS) visited Mackenzie Presbyterian University invited by the Sciences and Geospatial Applications Program and the Centro de Rádio Astronomia e Astrofísica do Mackenzie (CRAAM). On this date, Prof. Makhmutov presented **“Research Activities at Solar Physics and Cosmic Ray Laboratory: Status of the collaboration with CRAAM and the future Sun-Terahertz Experiment”**. The event took place at Mackgraphe Auditorium at 4 pm.

CRAAM and LPI are collaborating in Solar Physics and Solar-Terrestrial relationship for about 20 years.


The Solar-T, a prototype of the Sun-Terahertz experiment - the first of its kind – was built by CRAAM, launched by NASA at the McMurdo American base in Antarctica on January 18, 2016 onboard a stratospheric balloon. The balloon was designed to circumnavigate Antarctica at 40,000 meters high for a period of thirty days. One of the results of Solar-T was the detection of the quiet-Sun disk emission at two frequencies not yet explored, of 3 and 7 terahertz.

In front of the excellent results obtained by Solar-T, LPI decided to propose to the Russian Space Agency ROSCOSMOS a space mission named Sun-Terahertz, which phase B was already approved in March of 2019. Sun-Terahertz will cover the Sun emission from the submillimeter range at 0.2 THz to mid-InfraRed (MIR) at 15 THz using 8 different sensors. Therefore, we expect important clues on the nature of solar flares and atmospheric models with the operation of the future Sun-Terahertz. CRAAM and the UPM will participate to this new challenge, with some sensor acquisition, testing and assembling.

Announcement of Prof. Makhmutov seminar

0 CENTRO DE RÁDIO ASTRONOMIA E ASTROFÍSICA MACKENZIE (CRAAM)  
E O PROGRAMA DE PÓS GRADUAÇÃO EM CIÊNCIAS E APLICAÇÕES  
GEOSPACIAIS (CGE) APRESENTAM A PALESTRA

**RESEARCH ACTIVITY OF THE  
SOLAR AND COSMIC RAY PHYSICS  
LABORATORY OF THE LPI:**  
status of the collaboration with CRAAM/Mackenzie and future  
SUN-TERAHERTZ space experiment



Palestrante:  
**Vladimir Makhmutov**  
(Lebedev Physical Institute)

01 DE FEVEREIRO/2019 ÀS 16H  
LOCAL: AUDITÓRIO DO MACKGRAPHE

