

determinada a região com explosão em curso. Apresentamos aqui uma solução de transmissão e divulgação destes dados em ambientes distribuídos e interface web através de uma aplicação inteligente de controle de fluxo e armazenagem. As rotinas de exibição gráfica foram desenvolvidas de acordo com padrões de uso para a web priorizando usuários de baixo tráfego. Estas já encontram-se em funcionamento e disponíveis na Internet numa página de testes para avaliação pelo público científico e interessados em geral. A partir desses resultados, já é possível a visualização das explosões solares medidas diretamente na fonte e transferidas sobre uma banda estreita e instável, através de um acesso via LinkSatélite. Sua taxa de atualização de minutos supera as metodologias anteriores, feitas por envio de arquivos únicos de hora em hora e é equivalente às observadas em outros sistemas similares disponíveis atualmente.

## PAINEL 152

### HOW THE SHAPE AND THE THICKNESS OF THE SOLAR TACHOCLINE INFLUENCE THE LATITUDINAL DISTRIBUTION OF MAGNETIC FIELDS IN A KINEMATIC SOLAR DYNAMO MODEL

**Gustavo Guerrero, Elisabete M. de Gouveia Dal Pino**  
IAG/USP

Recently, a number of works on kinematic solar dynamo model have obtained results that are in good agreement with the observations. These models are able to reproduce the main features of the large scale solar magnetic cycle, like the polarity inversion within the 11 year-cycle, the sunspot distribution in a belt of 35 degrees around the solar equator, the magnitude of both toroidal and poloidal magnetic fields, and even the phase difference in the inversion of polarities between these two fields. However, there is still a number of unsolved questions related to these models. One of the main problems is the inappropriate development of strong toroidal magnetic field in high latitudes. This has been partially solved by Nandy & Choudhuri (2002) by assuming a meridional circulation penetrating into the radiative core. An alternative model (Guerrero & Muñoz, 2004) has shown that this is not a general result but depends on the choice of the diffusion, buoyancy, alpha effect and meridional circulation profiles. In a more recent work we have included in our model a prolate tachocline, instead of the spherical one generally assumed in all previous works, in order to investigate the effects of this geometry on the morphology of the magnetic fields. We have found that when employing a prolate profile in the differential rotation term only, this produced a maximum intensity of the toroidal magnetic fields in the observed latitudes. However, when the same prolate profile was applied also to the poloidal magnetic source, the diffusion and meridional circulation terms of the equations, we recovered the same previous results obtained for the spherical geometry. This suggested the possibility that the tachocline thickness could in

fact be varying with the latitude. In this work we explore this possibility.

## PAINEL 153

### MULTIWAVELENGTH OBSERVATIONS OF A CORONAL HOLE

**Felipe Ramos Hald Madsen<sup>1</sup>, R. Ramesh<sup>2</sup>, S. Ananthakrishnan<sup>3</sup>, P. Subramanian<sup>2</sup>, José Roberto Cecatto<sup>1</sup>, Hanumant Shankar Sawant<sup>1</sup>**

1 - INPE

2 - Indian Institute of Astrophysics

3 - NCRA/TIFR

Coronal Holes are large scale structures in the Solar Corona in which the density and temperature are lower than the Quiet Sun levels. They trace the structure of the large scale "open" magnetic field and are the sources of the high speed solar wind, playing an important role in the space weather. We observed a depression in the radio brightness associated with a CH on the solar disk on 06/04/2005 at 150 MHz with the Giant Metrewave Radio Telescope (GMRT). Using Soft X-Rays(SXR) and Extreme Ultra-Violet(EUV) images together with the map obtained from the GMRT data, we study the structure of this CH. The density and temperature inside the CH are studied through the use of radio data at 115 MHz from the Gauribidanur Radioheliograph (GRH) and at 150 MHz from GMRT. The results for the radio counterpart to this CH are presented and discussed, focusing on the comparison of its position and size as determined from EUV and SXR with the parameters determined from the GMRT map and on the determination of plasma parameters from the GRH map. It is shown that the shift in the position of the CH in different wavelengths can be explained by a projection effect, for which we estimate the radial distance between the sources at each wavelength. We also present an estimate of temperature and density inside the radio counterpart to this CH.

## PAINEL 154

### NOVO SISTEMA ÓPTICO E PRIMEIRAS MEDIDAS DE ATIVIDADE SOLAR EM 10 MICRONS

**Arline Maria Melo<sup>1,2</sup>, Rogério Marcon<sup>2</sup>, Pierre Kaufmann<sup>1,2</sup>, Amauri Shossei Kudaka<sup>1</sup>, Adolfo Marun<sup>3</sup>, Pablo Pereyra<sup>3</sup>, Jean Pierre Raulin<sup>1</sup>, Hugo Levato<sup>3</sup>**

1 - CRAAM/Mackenzie

2 - UNICAMP

3 - Complejo Astronómico El Leoncito

Resultados que vêm sendo obtidos com o Telescópio Solar Submilimétrico, SST, em 212 e 405 GHz indicaram a necessidade de estender medidas solares no infravermelho médio e distante para melhor caracterização dos espectros e