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## Distribucija temperature u aktivnom regionu Sunčeve površine

Cilj rada je utvrđivanje temperaturne raspodele u i oko aktivnog regiona Sunčeve površine. Metod se zasniva na poređenju posmatranog intenziteta sa intenzitetima koje predviđaju MARCS modeli za fiksnu površinsku gravitaciju i hemijski sastav, a različite efektivne temperature. Za analizu su korišćeni snimci sa HINODE/SOT instrumenta. Odnos intenziteta dva piksela, koji predstavljaju deo Sunčeve površine, snimljenih u dva različita filtera istih koordinata je poređen sa MARCS modelima različitih temperatura sa ciljem da se zaključi efektivna temperatura odgovarajućih delova Sunčeve površine. Ova metoda je dala rezultate koji nisu konzistentni sa prethodnim, pa je intenzitet svakog piksela, u CaII3968 i G band filterima, poređen sa srednjim intenzitetom mirnog Sunca. Pretpostavljeno je da je temperatura mirnog Sunca 5777 K. Na osnovu tako dobijenih temperatura napravljena je mapa temperature kao i histogram raspodele temperature za ceo posmatrani region. Nakon analize podataka, zaključeno je da se isti slažu sa vrednostima dobijenim drugim metodama.

## Temperature Distribution in an Active Solar Region

The aim of project is to determine temperature distribution in and around an active region of the Solar surface. The method is based on the comparison of observed intensity with intensity that was predicted by MARCS model for fixed surface gravity and chemical composition, but for different effective temperature. Images used for analysis were taken with the HINODE/SOT instrument. The ratio between two pixels, which represent a part of the Solar surface, taken in two different filters, with the same coordinate, is compared with the MARCS models of different temperature with the aim of concluding the effective temperature of two corresponding parts of the Solar surface. This method gave results that are not consistent with previous measurements, so the intensity of each pixel in CaIIH3968 and G band filters was compared with the average intensity of the quiet Sun. It is assumed that the temperature of the quiet Sun is 5777 K. Based on the obtained temperature, a map of temperature was created as well as the histogram of temperature for the whole observed region. The analysis of data showed that the temperatures obtained with this method are similar to results obtained with other methods.

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