

ASSESSMENT OF GENERAL ELECTROMAGNETIC FIELD EXPOSURE FROM SELECTED CELLULAR MOBILE BASE STATIONS IN KOLHAPUR, INDIA

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ABSTRACT

In today's day to day life, the mobile phone is essential to every person that's why the use of mobile phone is increased tremendously in daily life; as, base stations are controlling the mobile phones activity and as they are situated in dense population areas in the city. There are great worries about the electromagnetic field exposure (EMF) from cellular base stations as they are situated in residential areas. The paper presents the assessment of general EMF exposure from cellular base stations and its analysis in terms of power density and electric field. As and when this information is published on the website the society and people will come to know the intensity of EMF exposure in surrounding areas of base stations. The average power density and electric field from base stations were recorded as 2412.16 microwatt/m² and 1634.07 mv/m. Results shows that the power density decreases as distance increases.. Cellular Mobile Base Stations (CMBS) 4, 10, 11, 12 are having highest contribution to electromagnetic field exposure. The average height of the mobile tower base station is found to be 125 feet. And average antennas mounted on the mobile tower were around 16. All measured EMF exposure levels were well below the reference level set by (Department of Telecom) DoT and (International Commission for Non-Ionizing Radiation Protection) ICNIRP. The goal of the paper is to measure the EMF exposure from base stations and publish the information on website for common people.

KEYWORDS: *Power Density, Cellular Mobile Base Station, Electromagnetic Field Exposure, Cellular Mobile Communication, and Handoff*