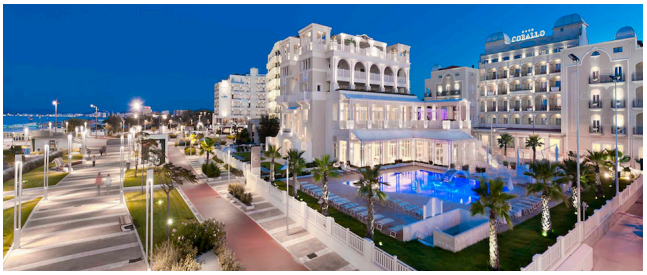

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Optical properties of corundum crystals after electron beam exposure

Tuesday, 6 June 2023 18:16 (1 minute)

Cherenkov effect is well-known phenomenon and finds a broad application in physics including beam diagnostics [1]. Corundum crystals irradiated by charged particles are often used as Cherenkov light source. Corundum radiators may significantly change their optical properties during extensive exploitation with particle beams that would influence Cherenkov light intensity. In this report we investigated optical properties of corundum crystals before and after irradiation by electron beams. Obtained results shows that crystals' transmittance decreases for low frequencies, and increases for high frequencies.

References

1. Alekseev, B. A., Vukolov, A. V., Konusov, F. V., Pavlov, S. K., Potylitsyn, A. P., Uglov, S. R., ... & Burachenko, A. G. (2023). Cherenkov Radiators Based on Diamond and Corundum Crystals. Physics of Particles and Nuclei Letters, 20(1), 38-41.

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