# IRRADIATION DEVICE USING IONIZING RADIATION, PARTICULARLY FOR RADIOTHERAPY AND/OR RADIOBIOLOGY

The present invention relates to an irradiation device using ionizing radiation, particularly for radiation therapy and/or radiation biology. Said irradiation device is characterized in that it simultaneously includes: at least one means (MER) for emitting ionizing radiation; at least one dosemonitoring means (MCD); at least one means for detecting an ionizing radiation dose (MDD); and at least one monitoring and control system (SCC). The means (MER, MDD, MCD) and said system (SCC) are also intelligently interconnected therebetween so as to engage with one another and form an intelligent monitoring and adjustment loop, such as to controllably, precisely and desirably produce strong doses of ionizing radiation of at least 0.01 Gy, having a precision within at least one 1 Gy but preferably 1 n Gy, in strong dose rates up to 1000 Gy/s with power within a range of 1 to 50 Me V in very brief time intervals of at least 0.1 μs, preferably 1 ms.

Figure 1