

Optical mapping using membrane potential-sensitive fluorescent dyes provides a means of recording electrical activation on the heart surface with high spatial resolution. However, in order to interpret these data, it is necessary to correct for artifact introduced by heart wall motion. This paper describes a novel ratiometric technique that enables electrical activity on the heart surface to be reconstructed in the absence of pharmacological uncouplers commonly used to minimize heart wall motion. The new technique brings the advantage of ratiometry which is commonly used on single fiber system also to the 2D video system.