

Beam Lifetime in ELETTRA, C.J. BOCCHETTA,
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The beam lifetime in ELETTRA is dominated by
Touschek scattering. In modifying the beam
characteristics, i.e. the emittance coupling and the
excitation level of longitudinal coupled bunch
instabilities, the beam lifetime can be varied over a
wide range and adjusted to the need of the users.
Relaxed machine conditions correspond to a long
lifetime with reduced beam quality, whereas a highly
optimised machine goes in parallel with a reduced
lifetime. Measurements of the beam lifetime in
ELETTRA under various operating conditions were
carried out in order to separate the relative
contributions to the overall lifetime. A comparison
with the theory is performed.