Choice of location for the new RF cavities installation (new scheme after summer-2003 shutdown)

A. Drozhdin

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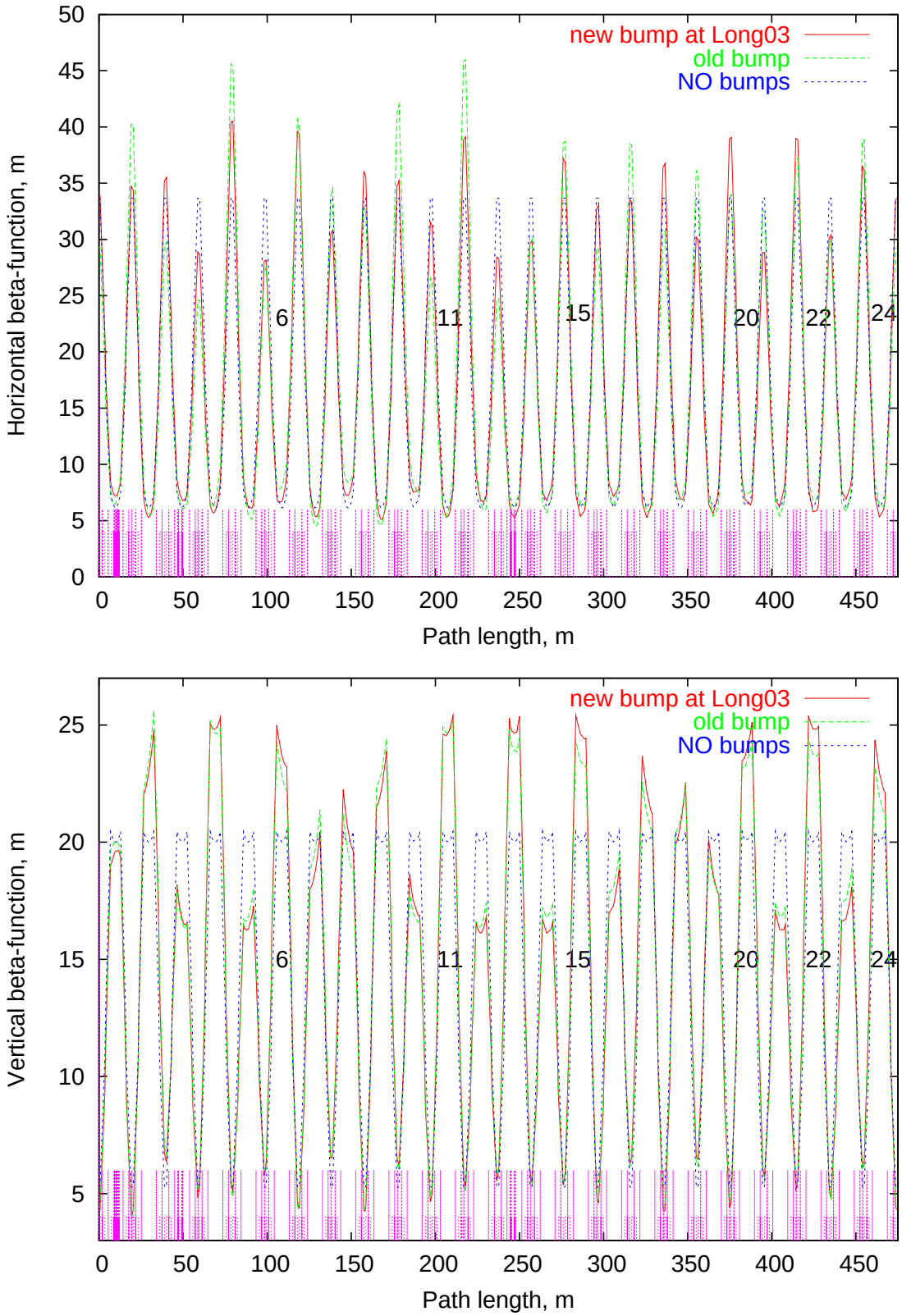

Figure 1: Booster horizontal (top) and vertical (bottom) β functions without injection and extraction bumps, with existing bumps and with new bump at Long03.

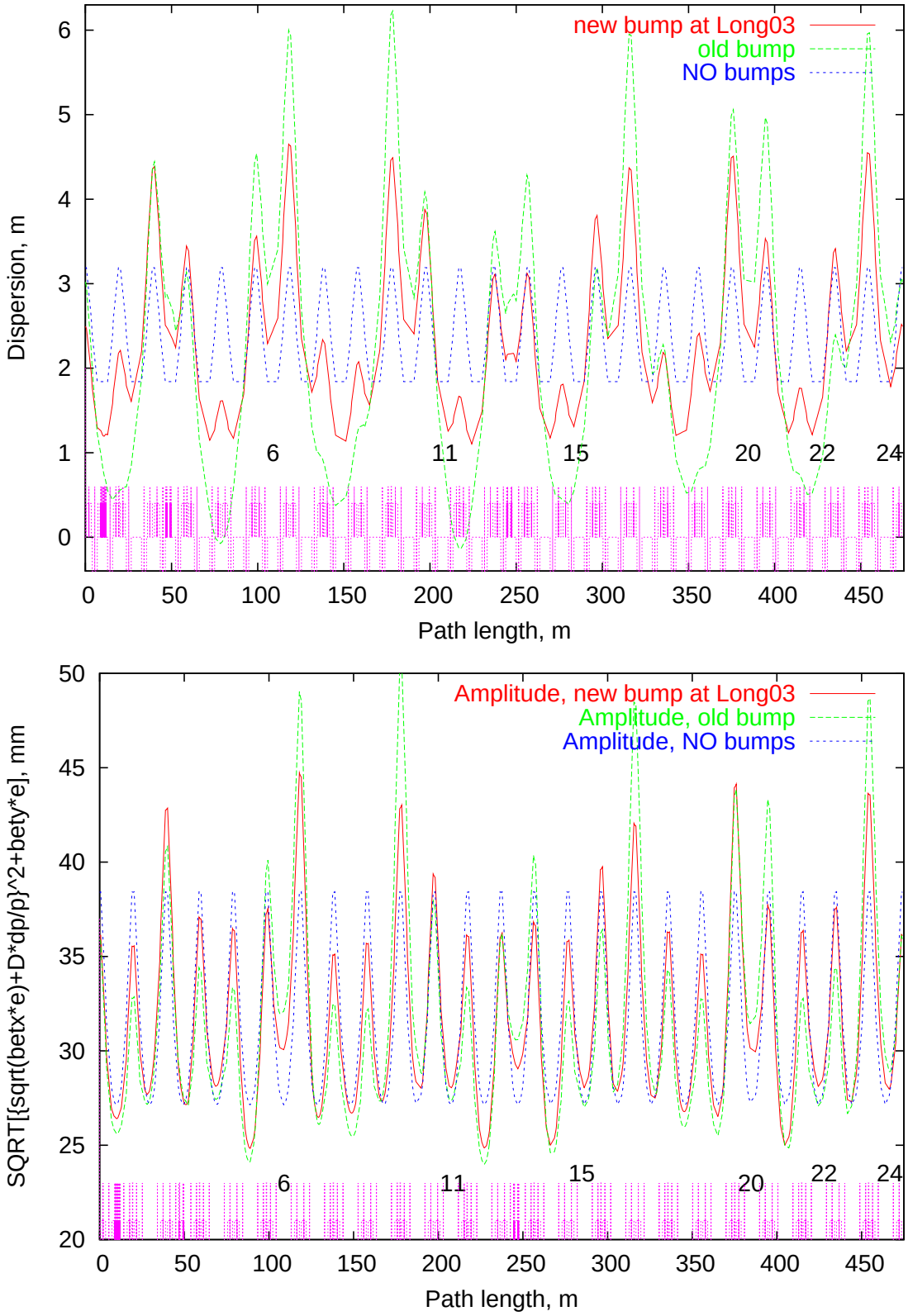

Figure 2: Booster dispersion (top) and amplitude function $SQRT[(sqrt(\beta_x \cdot \varepsilon) + D \cdot dp/p)^2 + \beta_y \cdot \varepsilon]$ (bottom) without injection and extraction bumps, with existing bumps and with new bump at Long03. 95% normalized emittance $\varepsilon_{norm} = 15(mm \cdot mrad)$, $dp/p = 0.003$.

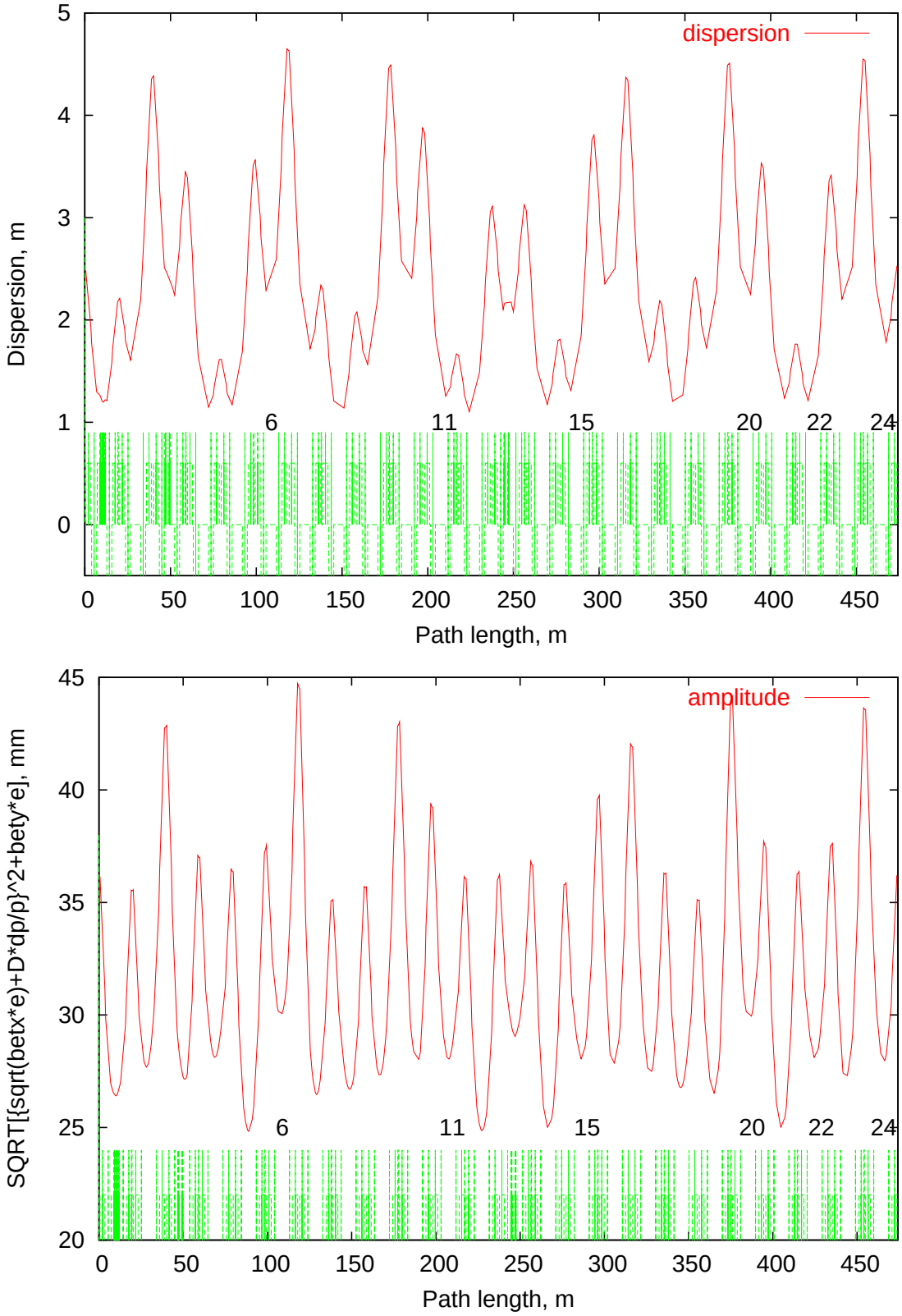

Figure 3: Booster dispersion (top) and amplitude function $SQRT[(sqrt(\beta_x \cdot \varepsilon) + D \cdot dp/p)^2 + \beta_y \cdot \varepsilon]$ (bottom) with new bump at Long03. 95% normalized emittance $\varepsilon_{norm} = 15(mm \cdot mrad)$, $dp/p = 0.003$.

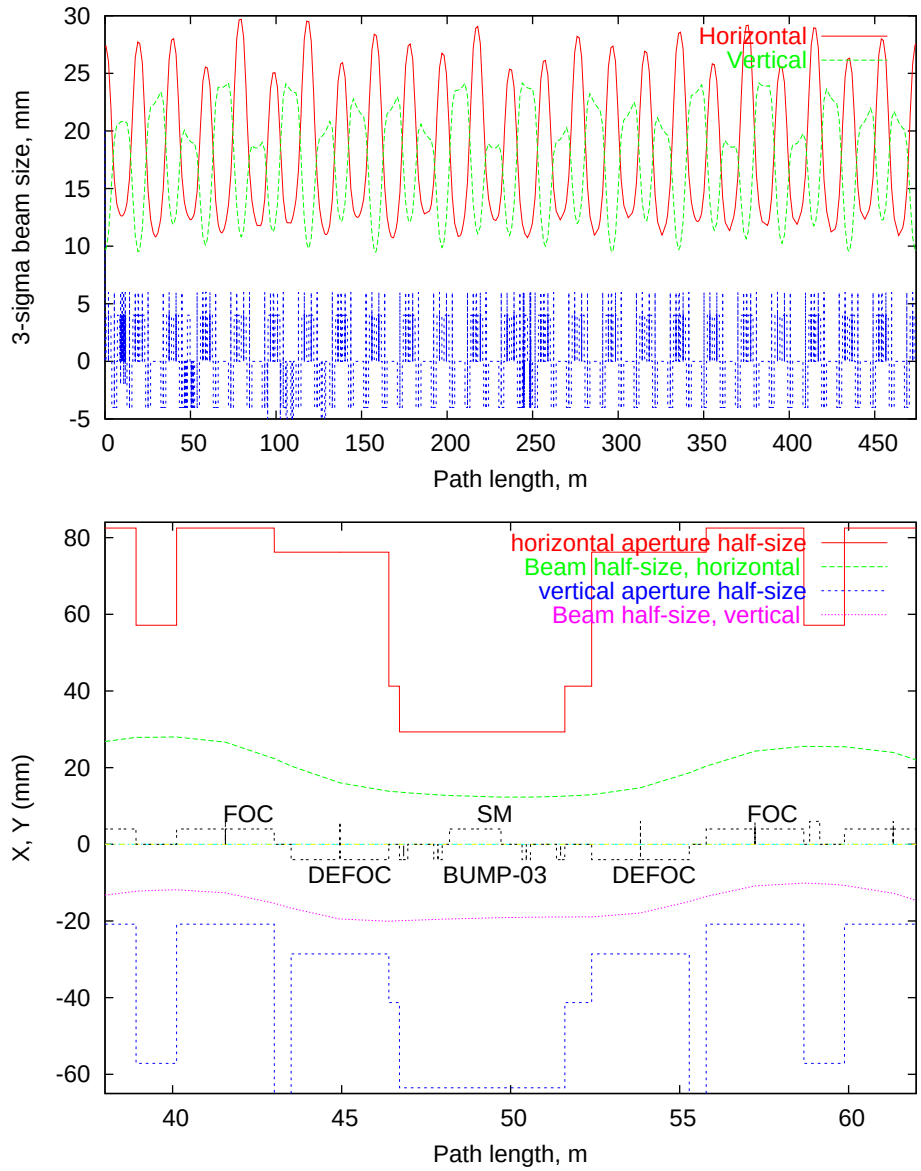

Figure 4: Beam half-size at 95% emittance of 15 mm.mrad (top) and aperture of the cell No.03 (bottom).