ECGI simulations: potential maps of selected 2-dipoles sources

Figures 1 – 36 display potential maps for 2-dipoles sources where one dipole is fixed in $\vec{r_0} = (\rho_i, \varphi_0, z_i)$ and other dipoles are on the outer circle of the current source plane – $\vec{r}_{ik} = (\rho_i, \varphi_0 + k * \Delta\varphi_i, z_i)$, where $k = 1, 2, \ldots N_i$ (see, Section 2.2, Table 3 and Fig. 4 in *ECGI_simulations.pdf*).

We denote below each map numbers of both dipoles followed by their directions and locations in cylindrical coordinate system.

Axial plane ($z = 300$), radial distance ($\rho = 40$)

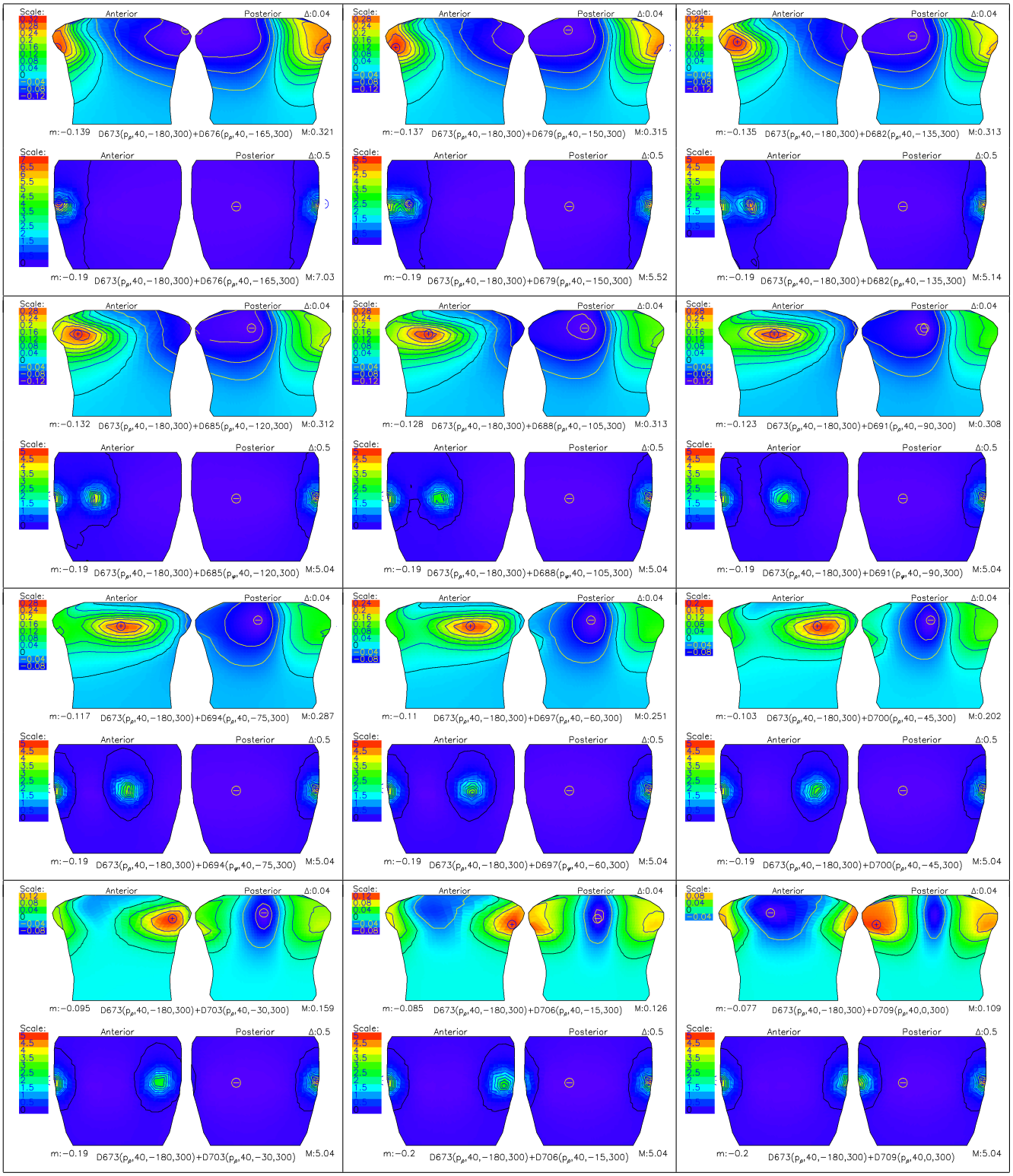

Fig. 1: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 300$ mm and radial distance $\rho = 40$ mm. Parallel dipoles oriented in the radial direction ($\vec{p}_\rho$).

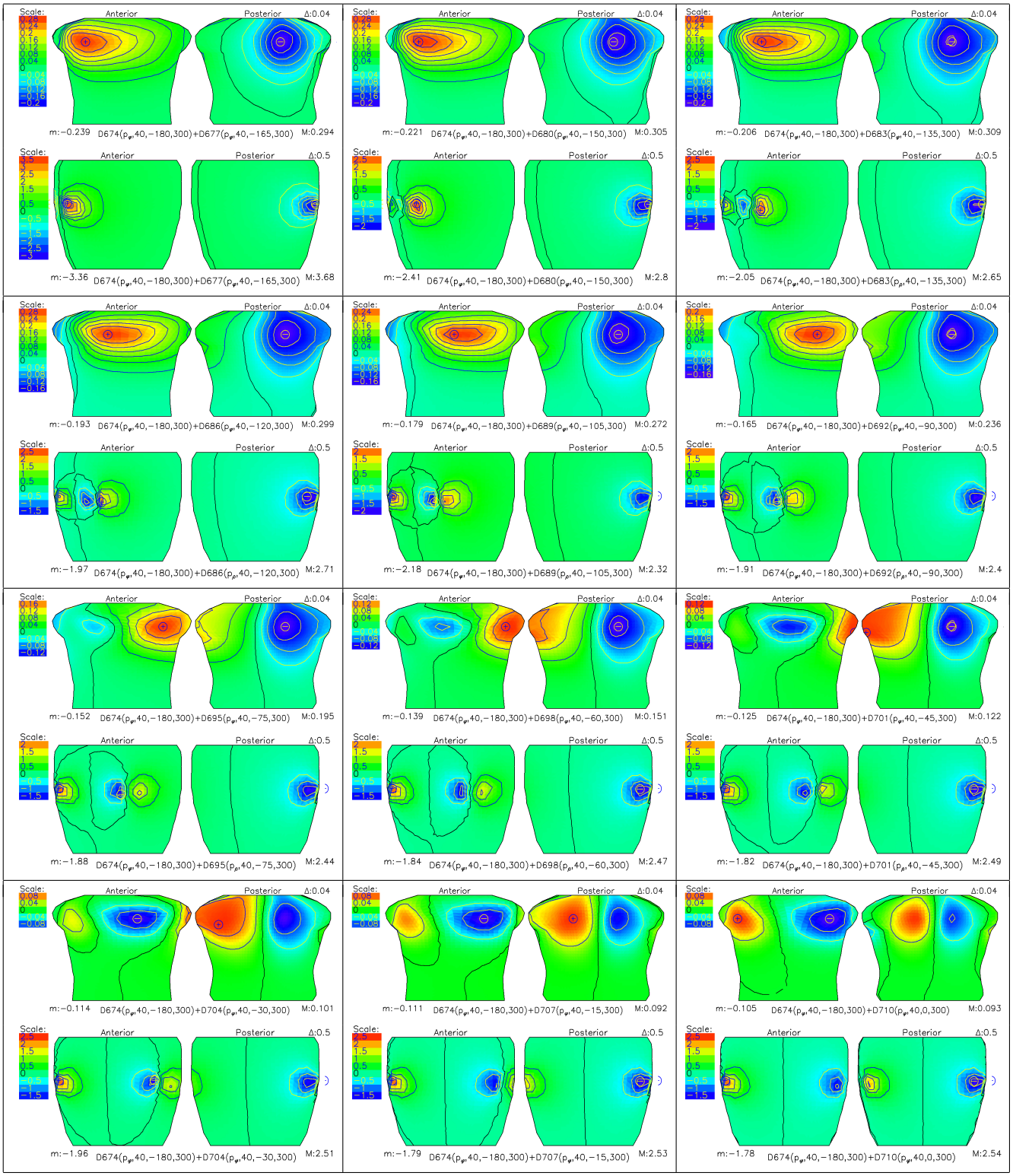

Fig. 2: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 300$ mm and radial distance $\rho = 40$ mm. Parallel dipoles oriented in the tangential direction ($\vec{p}_\varphi$).

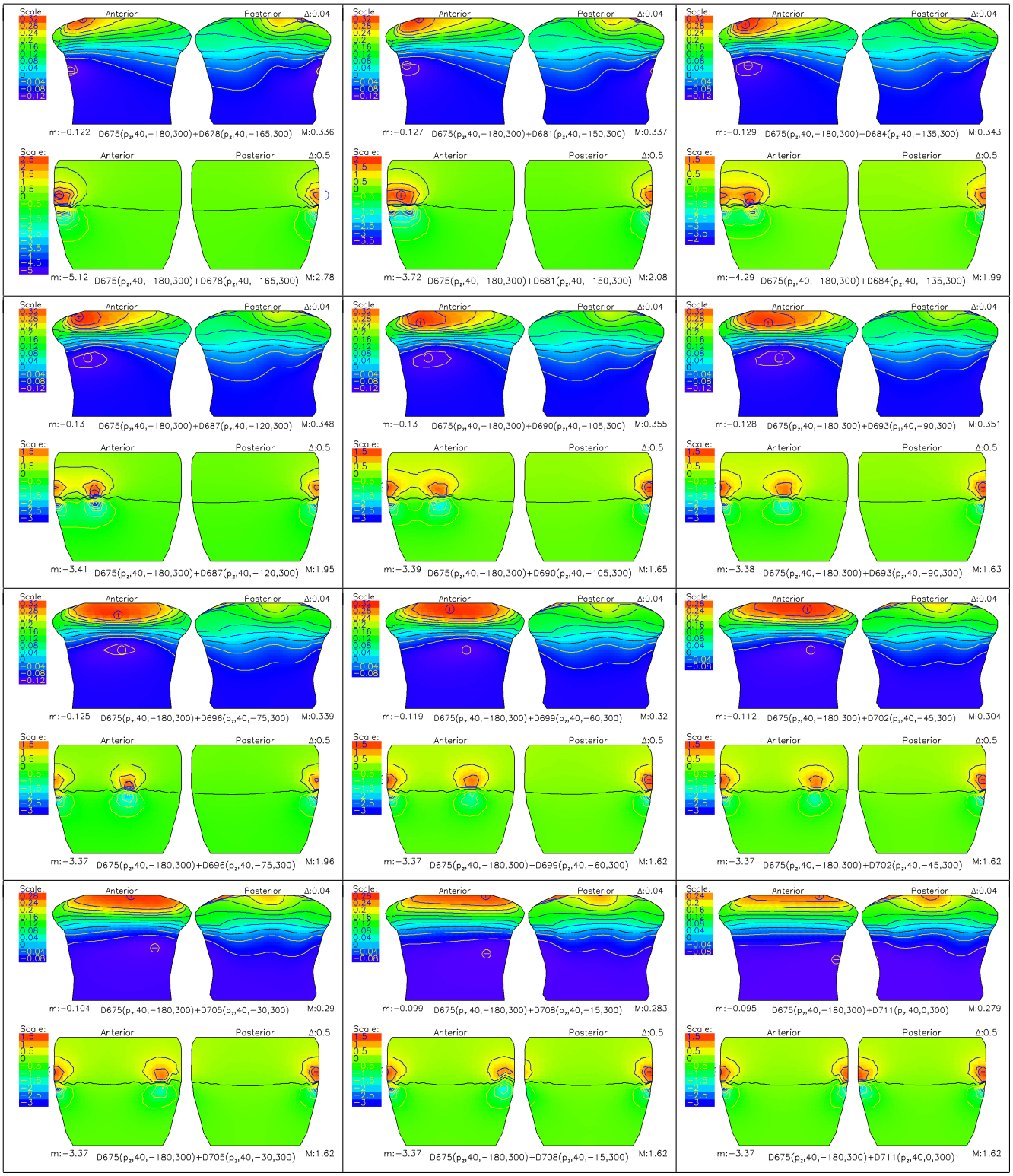

Fig. 3: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 300$ mm and radial distance $\rho = 40$ mm. Parallel dipoles in the vertical direction ($\vec{p}_z$).

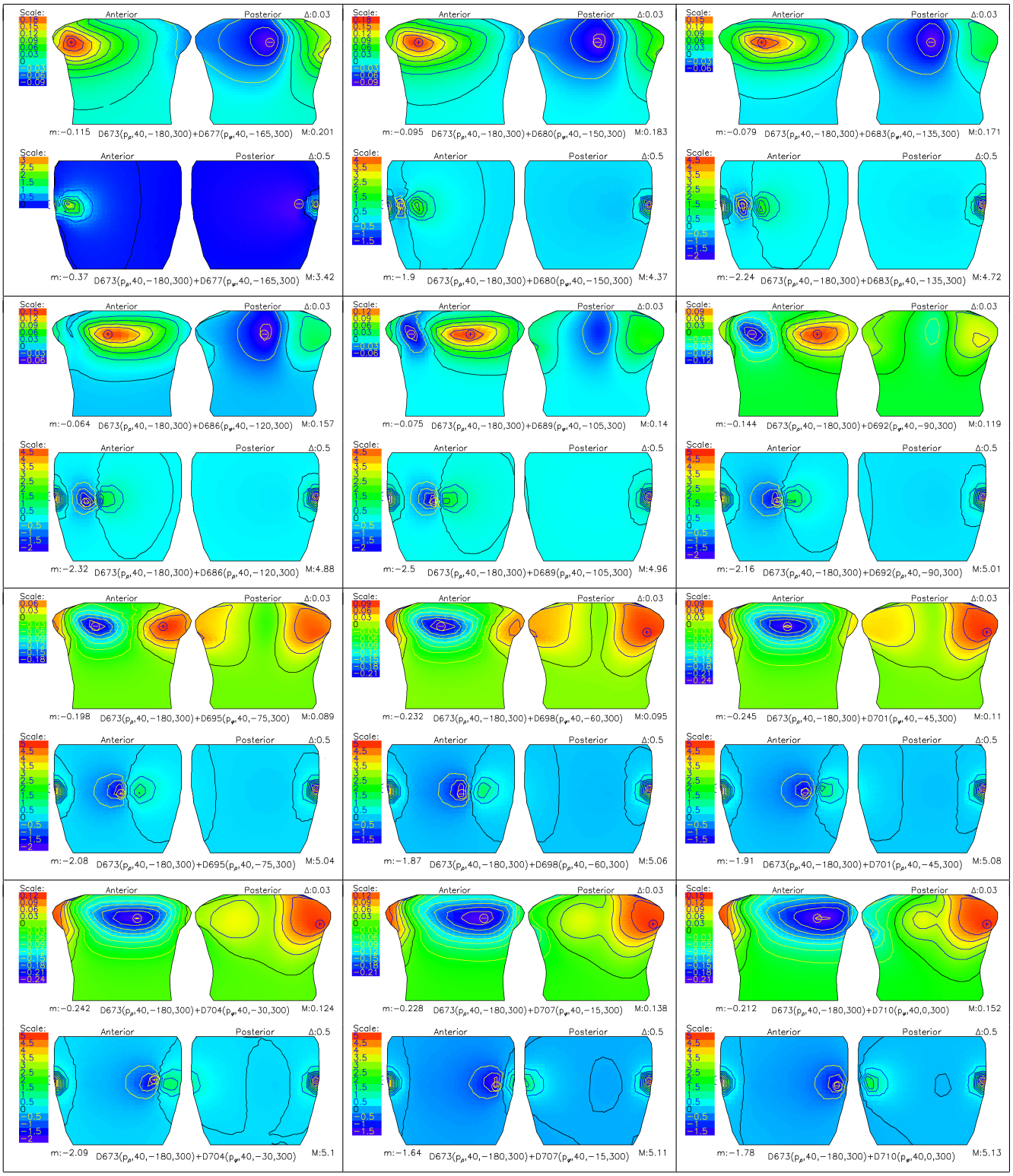

Fig. 4: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 300$ mm and radial distance $\rho = 40$ mm. Orthogonal dipoles, the first one is oriented in the radial direction ($\vec{p}_\rho$) and others are oriented in the tangential direction ($\vec{p}_\varphi$).

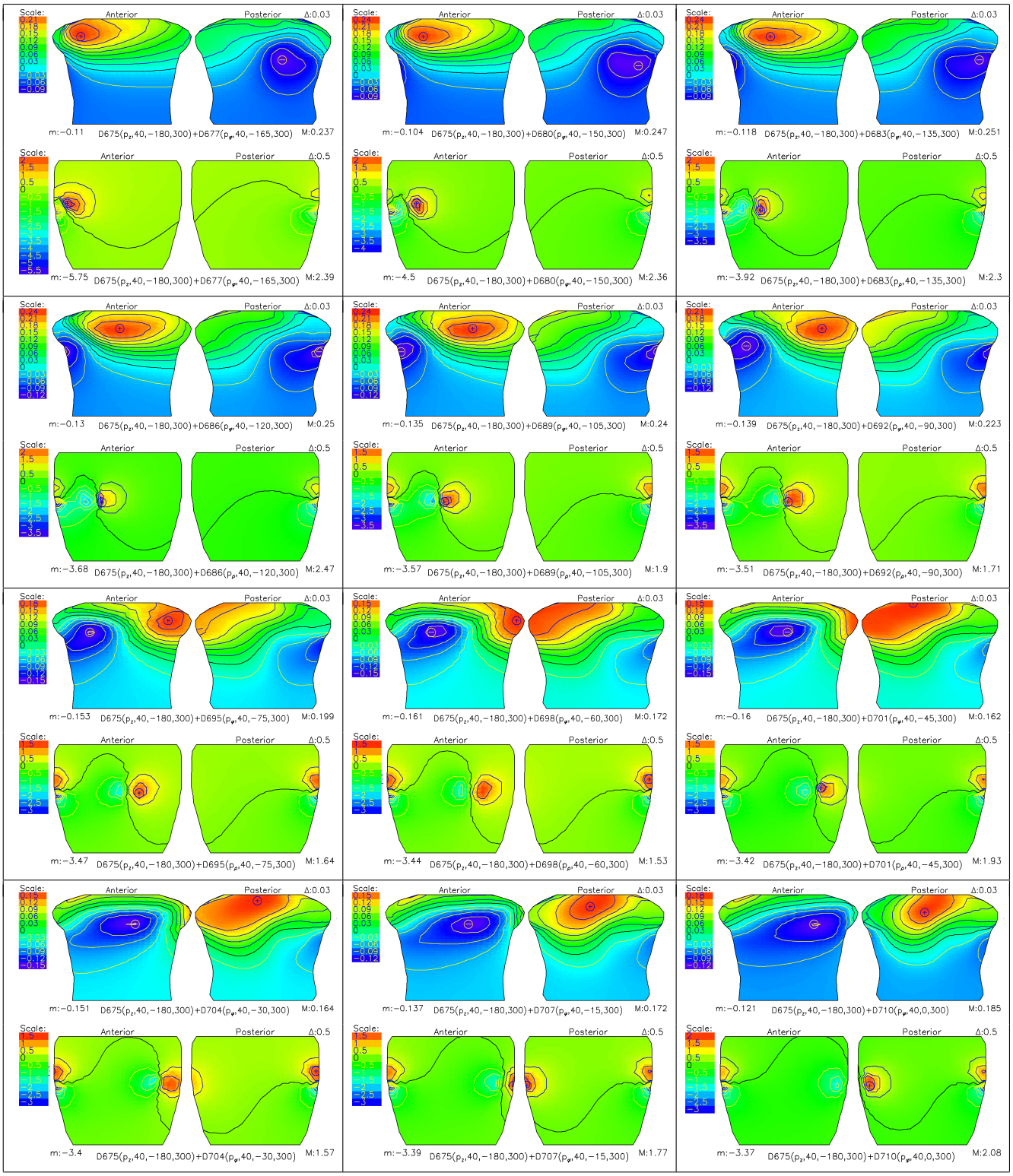

Fig. 5: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 300$ mm and radial distance $\rho = 40$ mm. Orthogonal dipoles, the first one is in the vertical direction ($\vec{p}_z$) and others are oriented in the tangential direction ($\vec{p}_\varphi$).

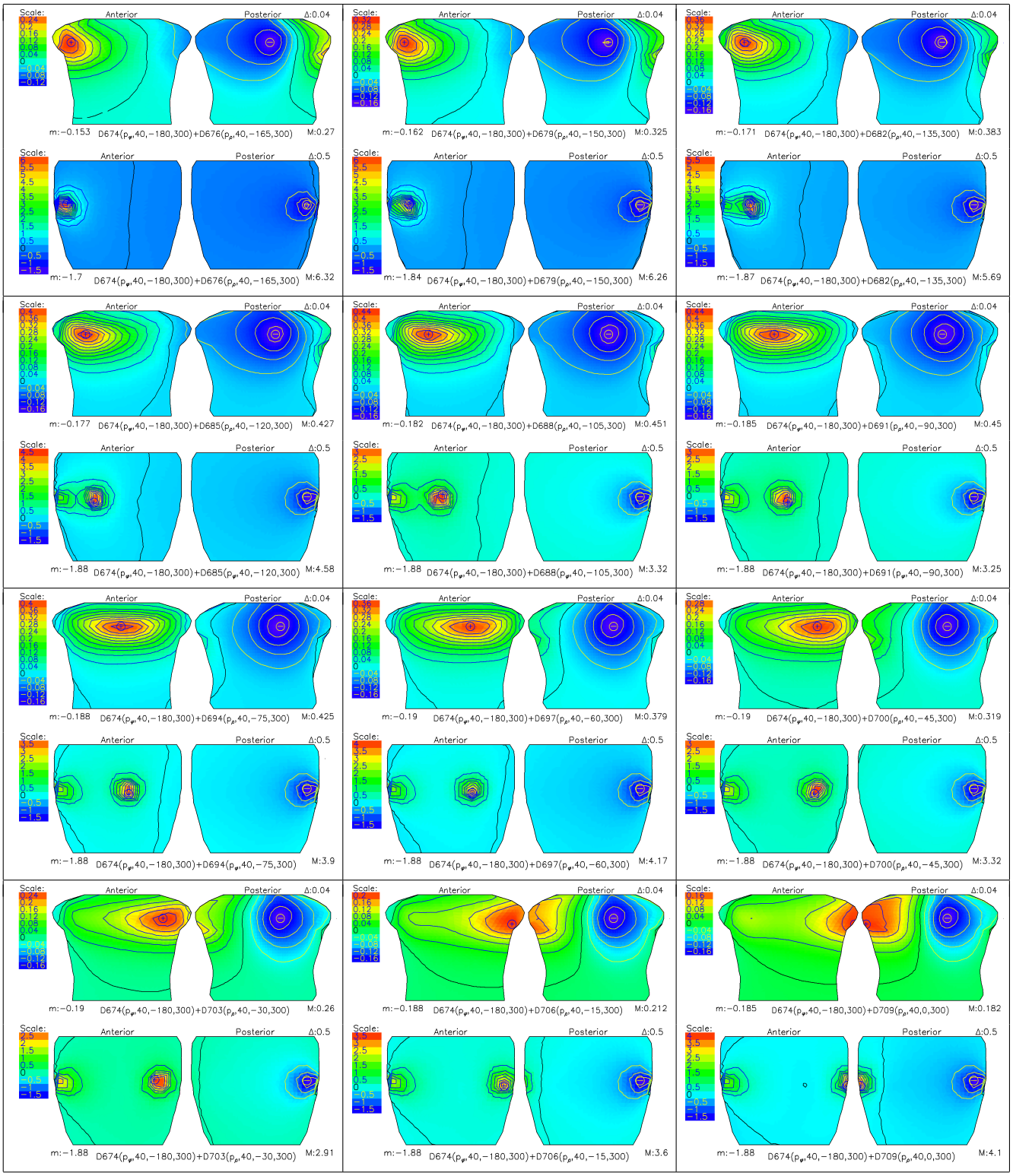

Fig. 6: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 300$ mm and radial distance $\rho = 40$ mm. Orthogonal dipoles, the first one is oriented in the tangential direction ($\vec{p}_\varphi$) and others are oriented in the radial direction ($\vec{p}_\rho$).

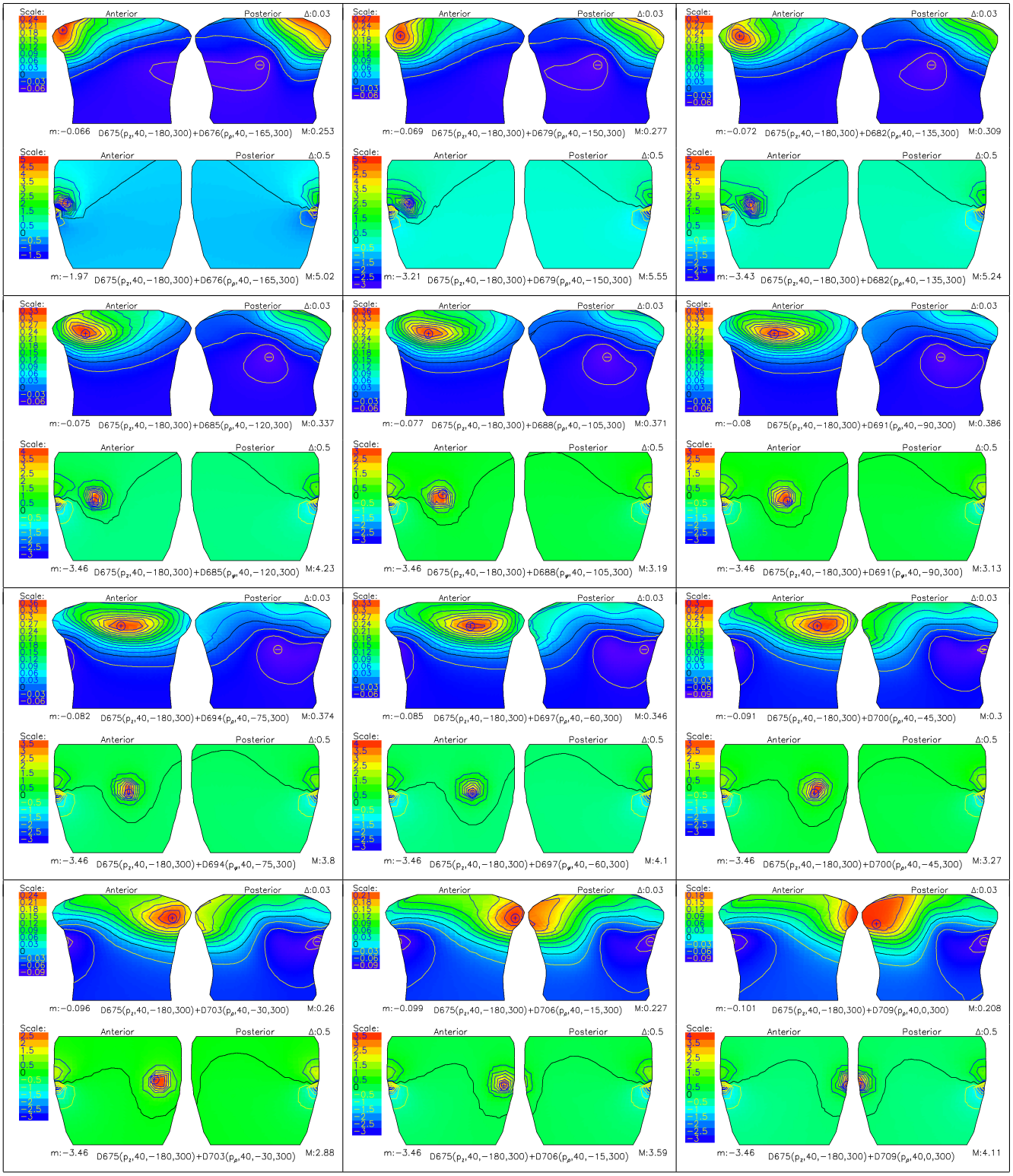

Fig. 7: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 300$ mm and radial distance $\rho = 40$ mm. Orthogonal dipoles, the first one is oriented in the vertical direction ($\vec{p}_z$) and others are oriented in the radial direction ($\vec{p}_\rho$).

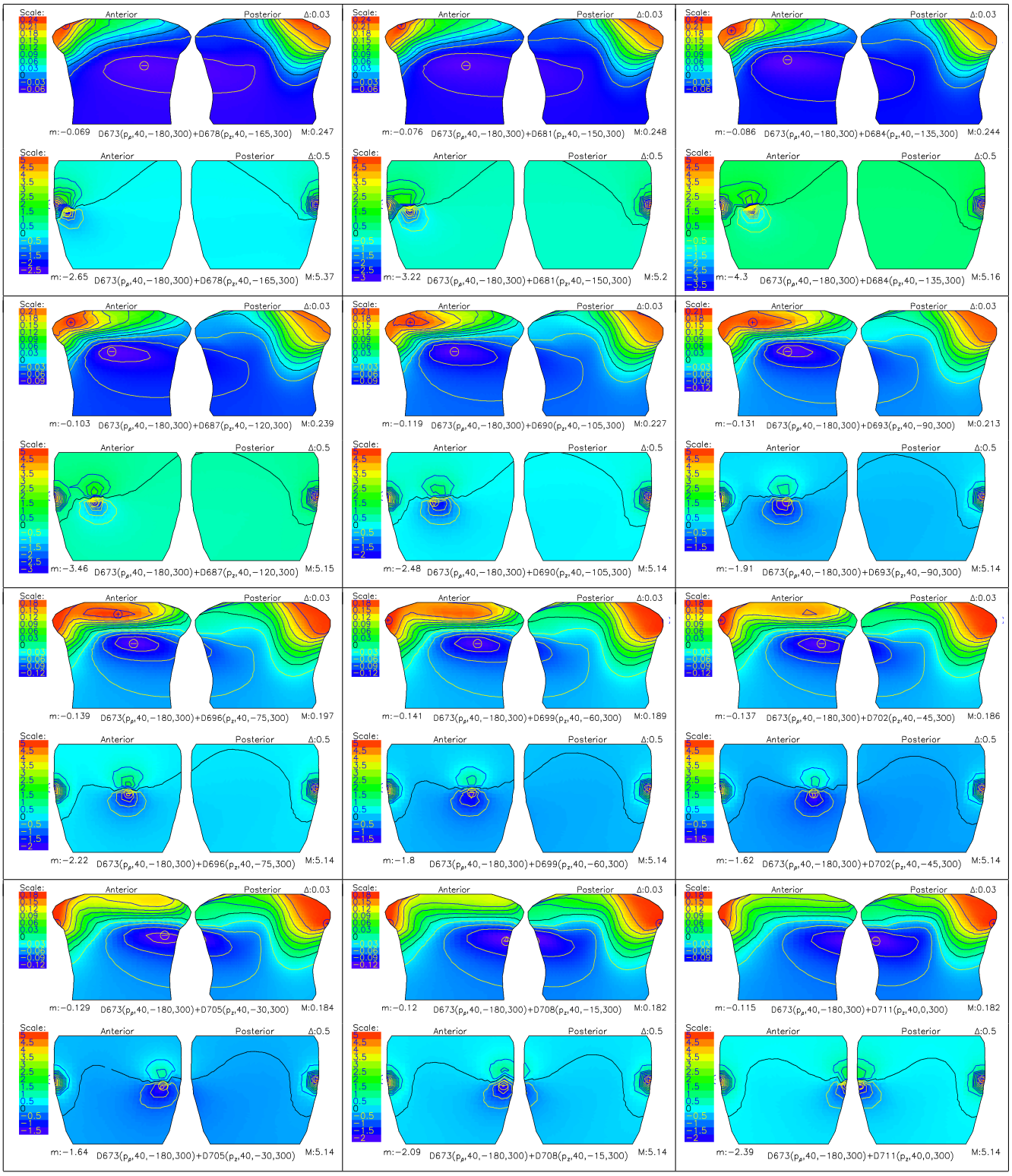

Fig. 8: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources in the axial plane $z = 300$ mm and radial distance $\rho = 40$ mm and radial distance $\rho = 40$ mm. Orthogonal dipoles, the first one is oriented in the radial direction ($\vec{p}_\rho$) and others are oriented in the vertical direction ($\vec{p}_z$).

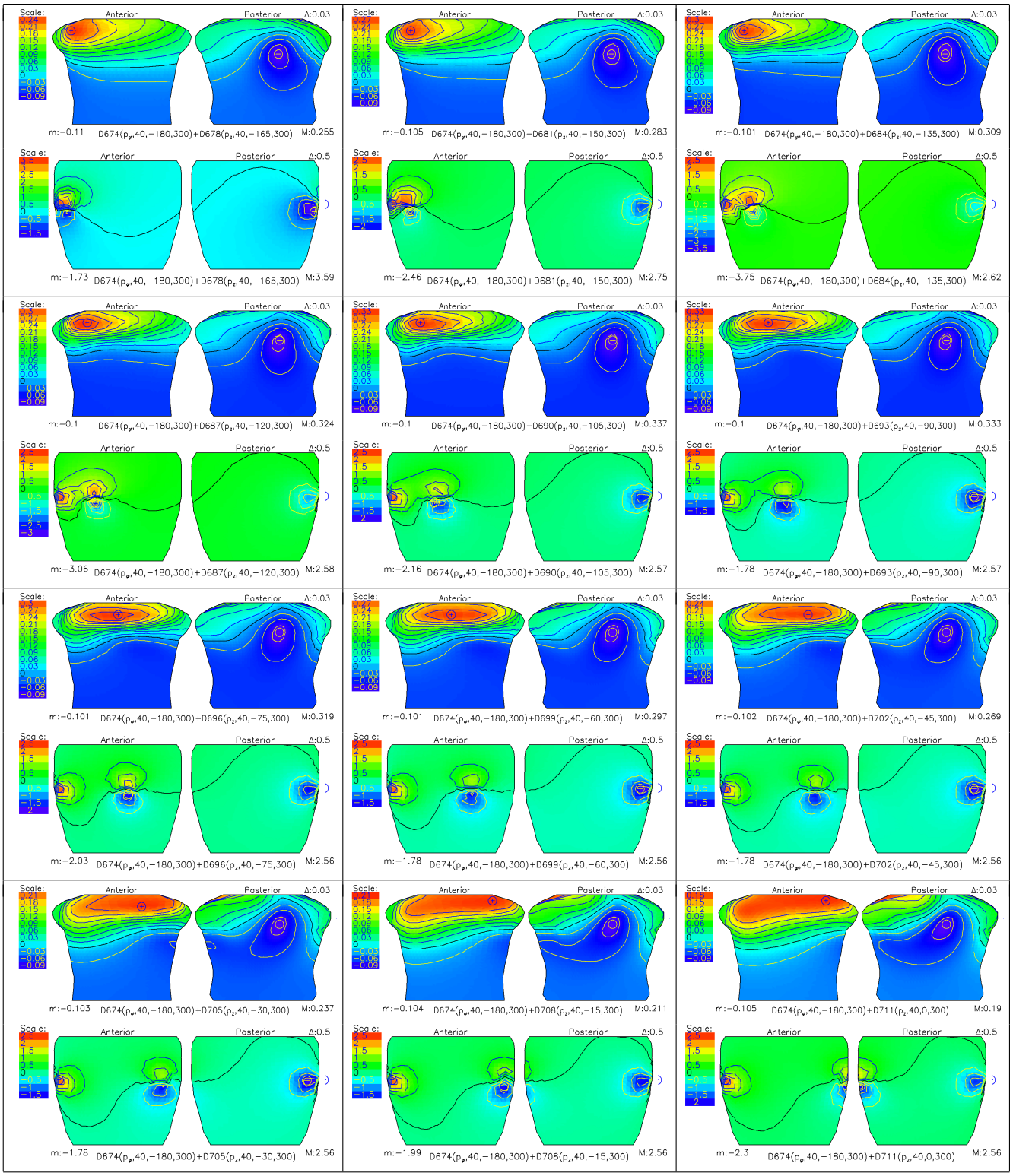

Fig. 9: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 300$ mm and radial distance $\rho = 40$ mm. Orthogonal dipoles, the first one is oriented in the tangential direction ($\vec{p}_\varphi$) and others are oriented in the vertical direction ($\vec{p}_z$).

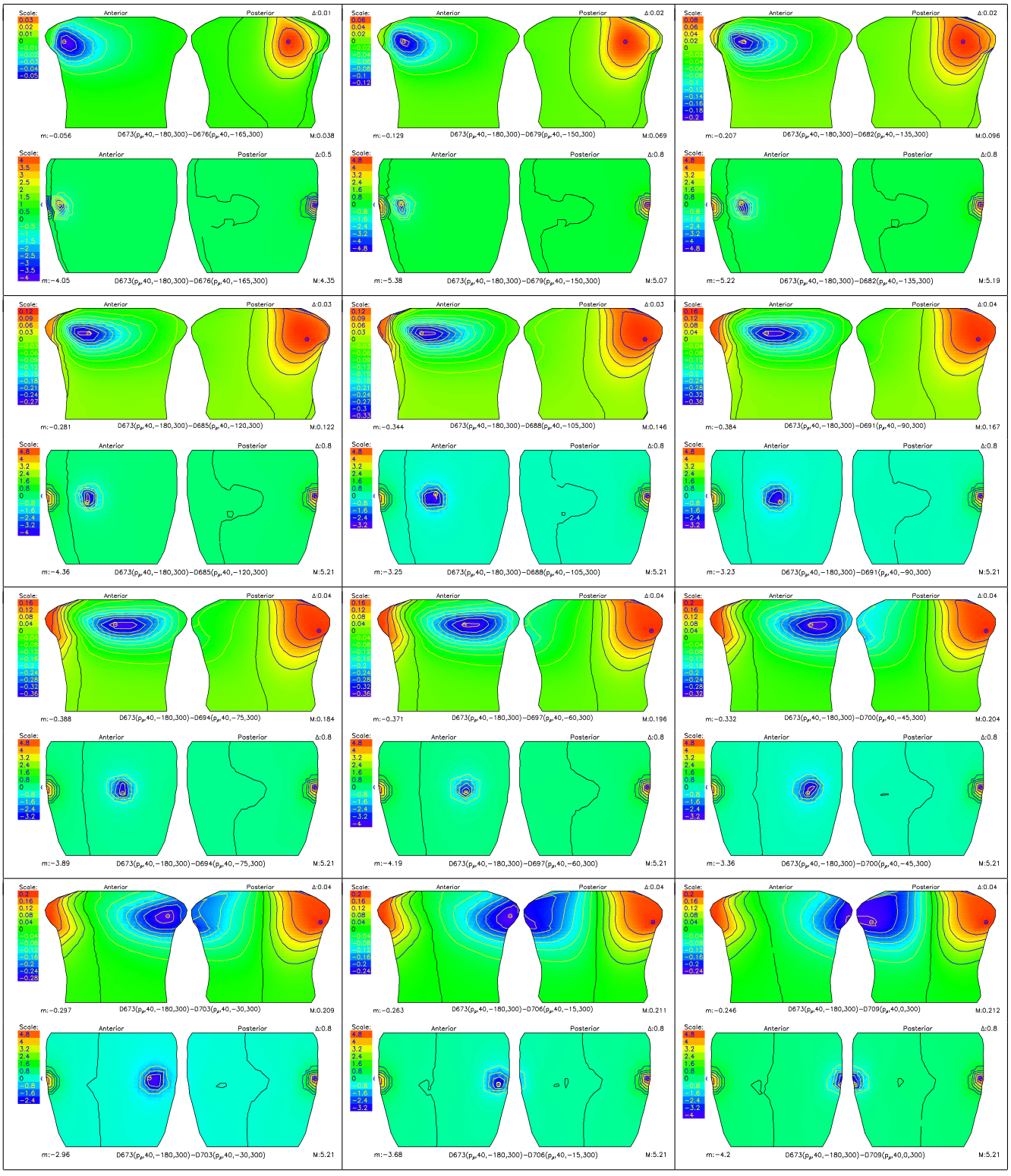

Fig. 10: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 300$ mm and radial distance $\rho = 40$ mm. Anti-parallel dipoles, the first one oriented in the radial direction ($\vec{p}_\rho$) and others in the opposite direction ($-\vec{p}_\rho$).

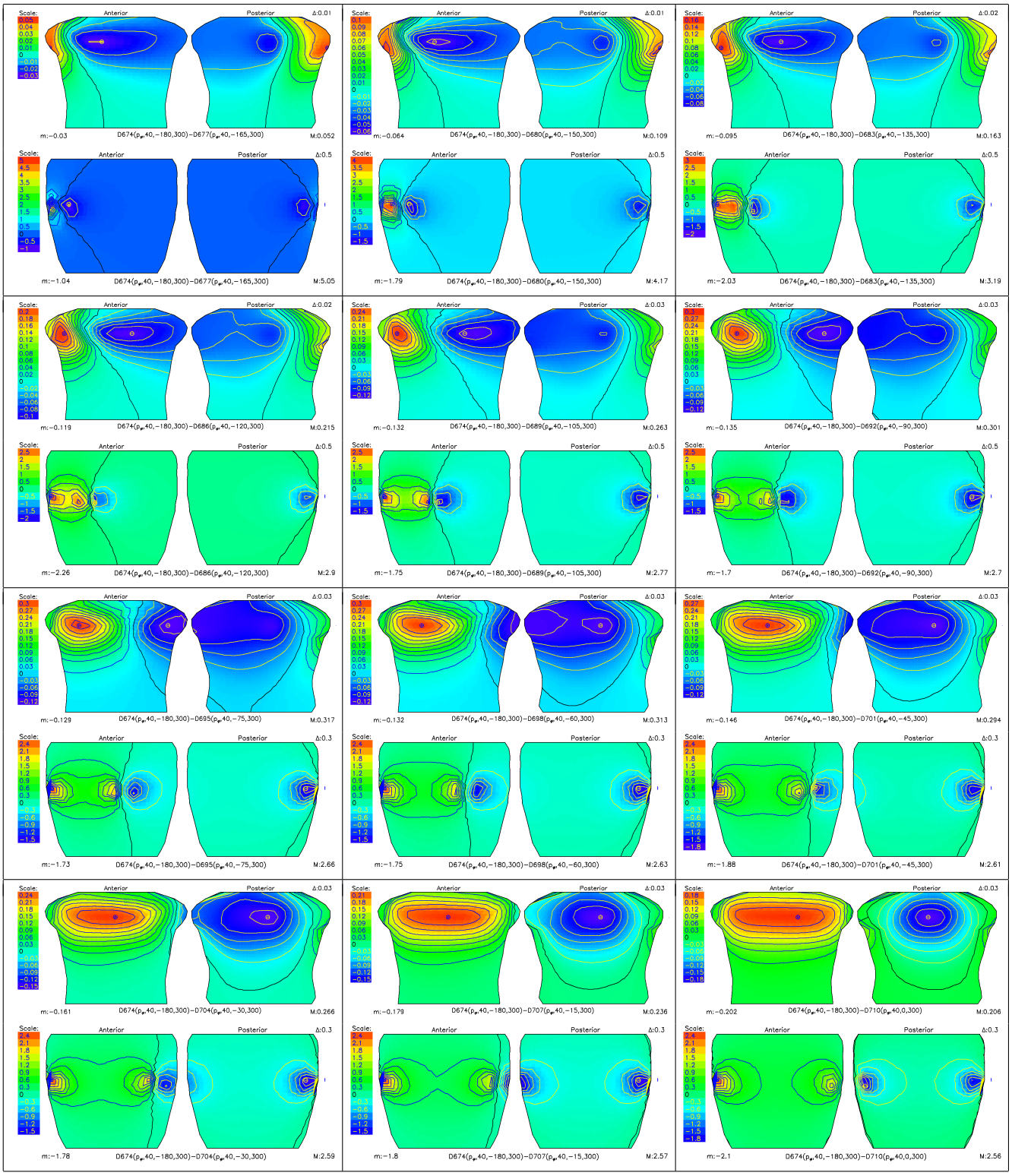

Fig. 11: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 300$ mm and radial distance $\rho = 40$ mm. Anti-parallel dipoles, the first one oriented in the tangential direction ($\vec{p}_\varphi$) and others in the opposite direction ($-\vec{p}_\varphi$).

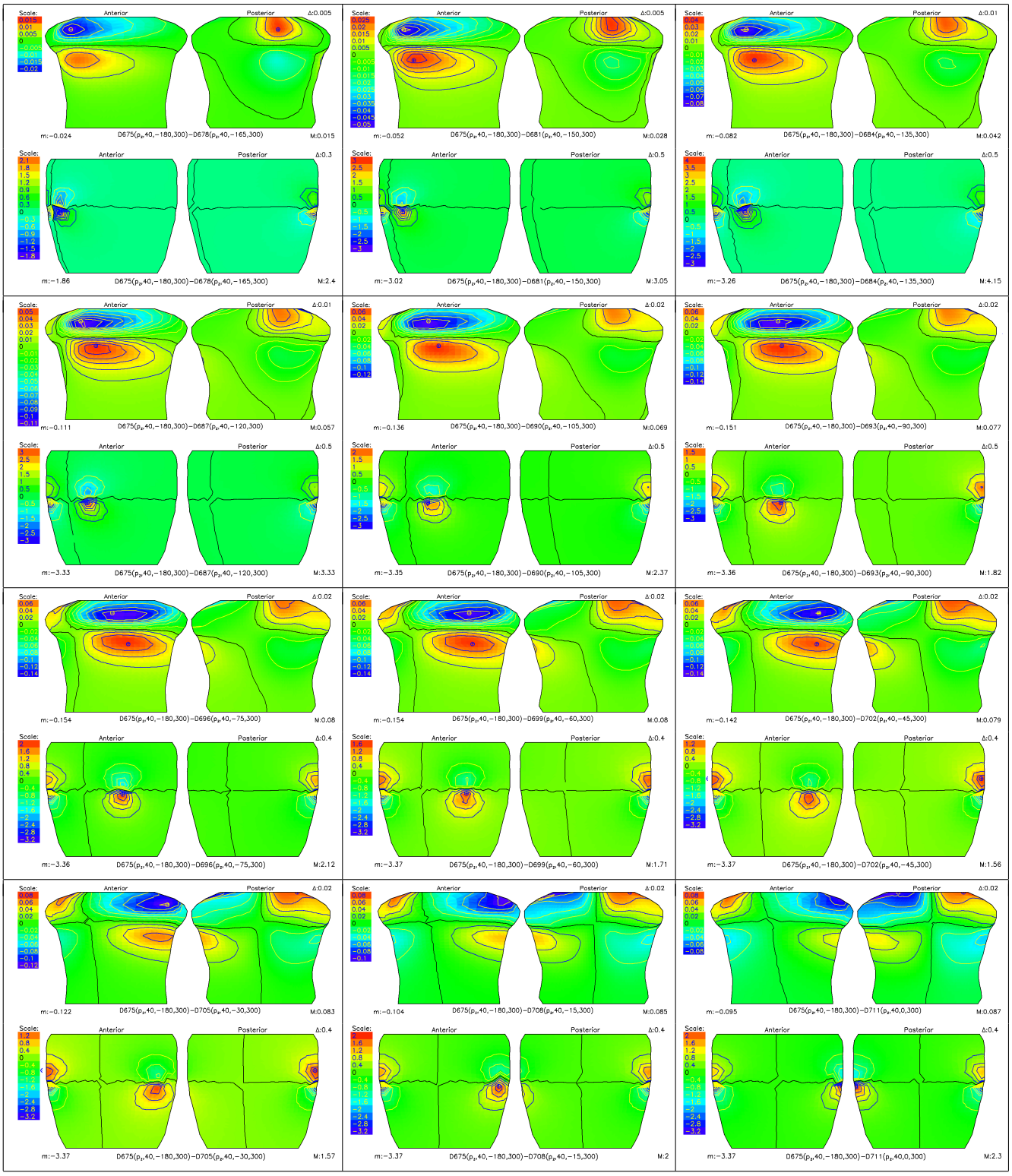

Fig. 12: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 300$ mm and radial distance $\rho = 40$ mm. Anti-parallel dipoles, the first one in the vertical direction ($\vec{p}_z$)) and others in the opposite direction ($-\vec{p}_z$).

Axial plane ($z = 270$), radial distance ($\rho = 30$)

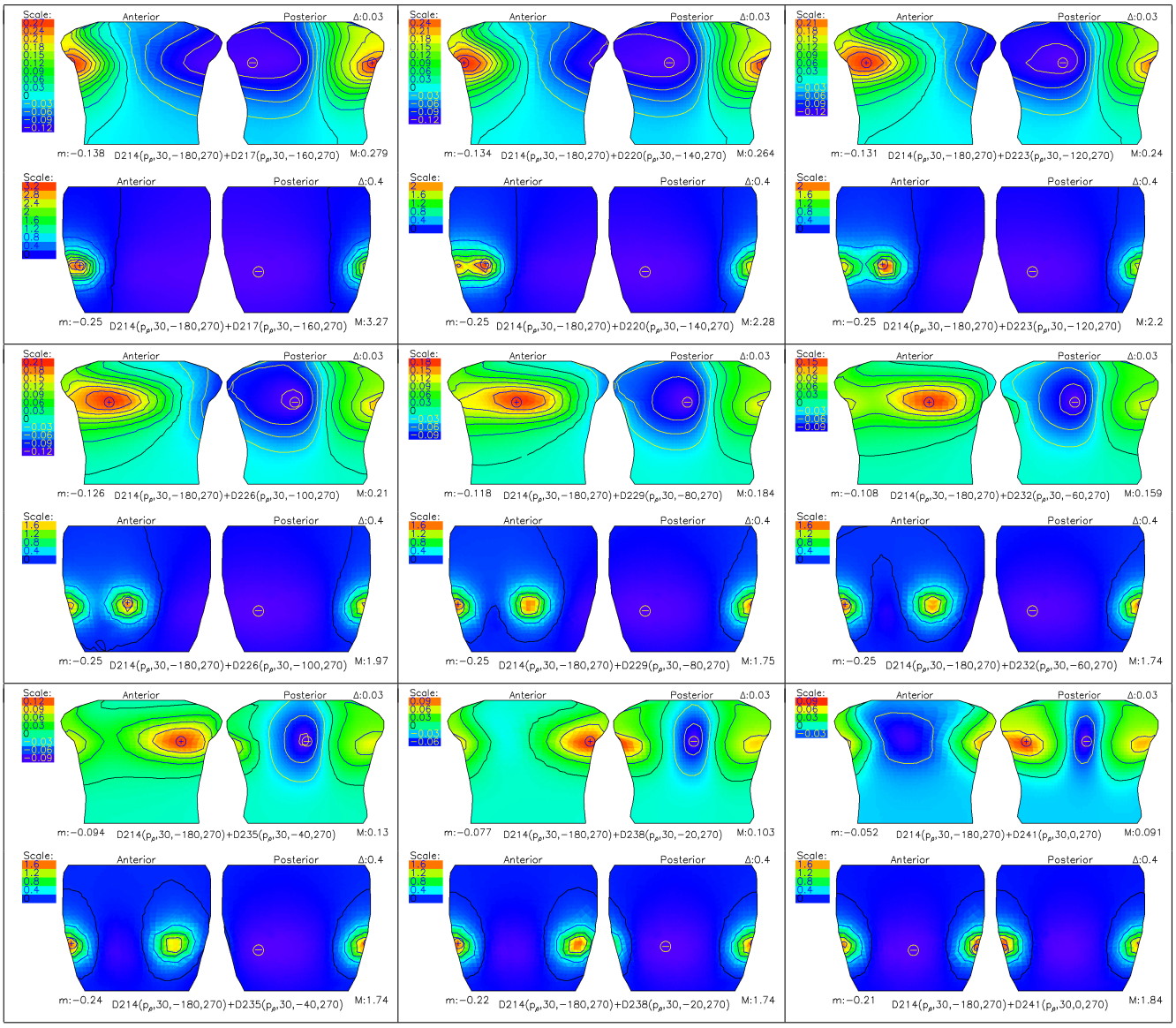

Fig. 13: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 270$ mm and radial distance $\rho = 30$ mm. Parallel dipoles oriented in the radial direction ($\vec{p}_\rho$).

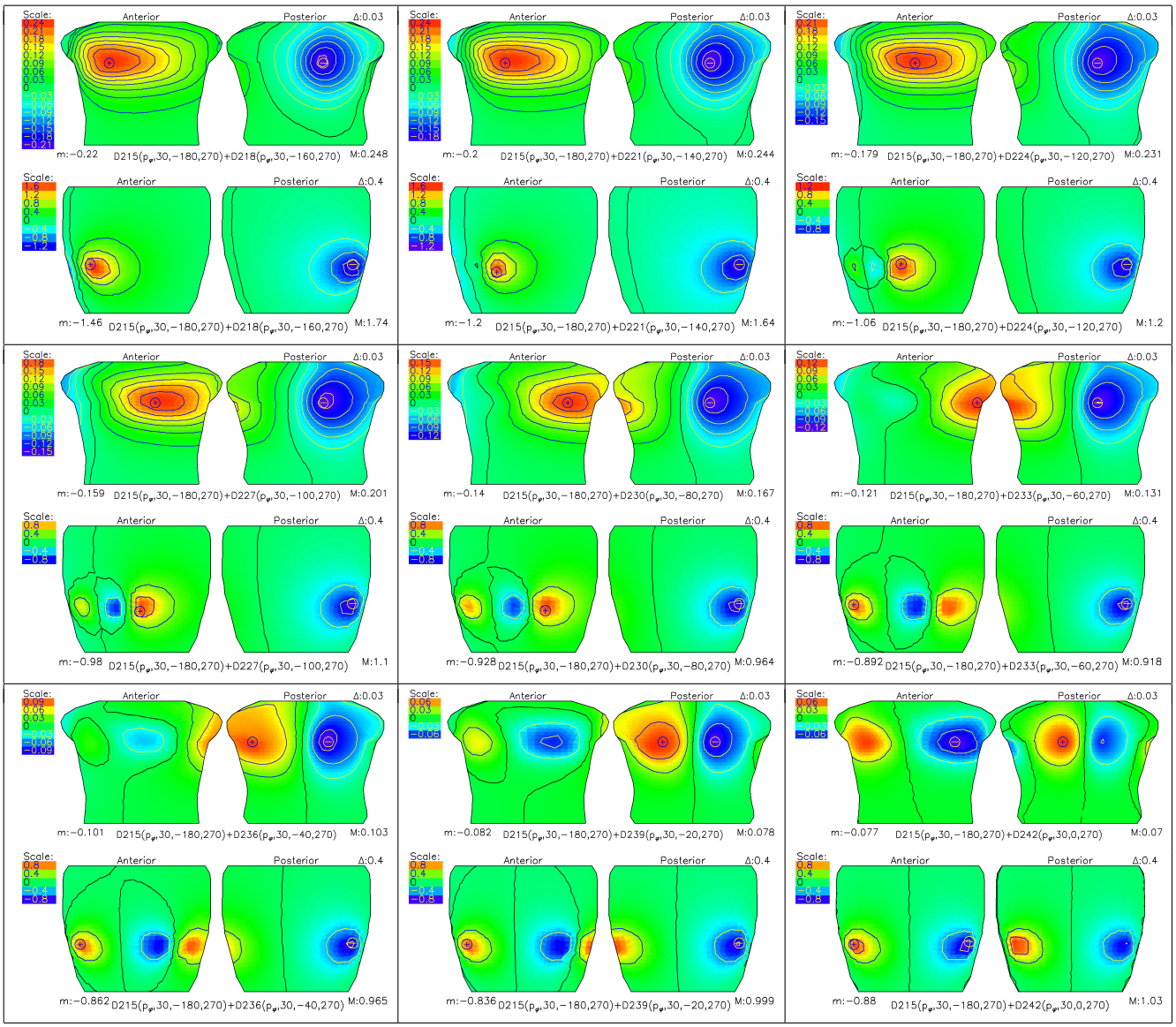

Fig. 14: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 270$ mm and radial distance $\rho = 30$ mm. Parallel dipoles oriented in the tangential direction ($\vec{p}_\varphi$).

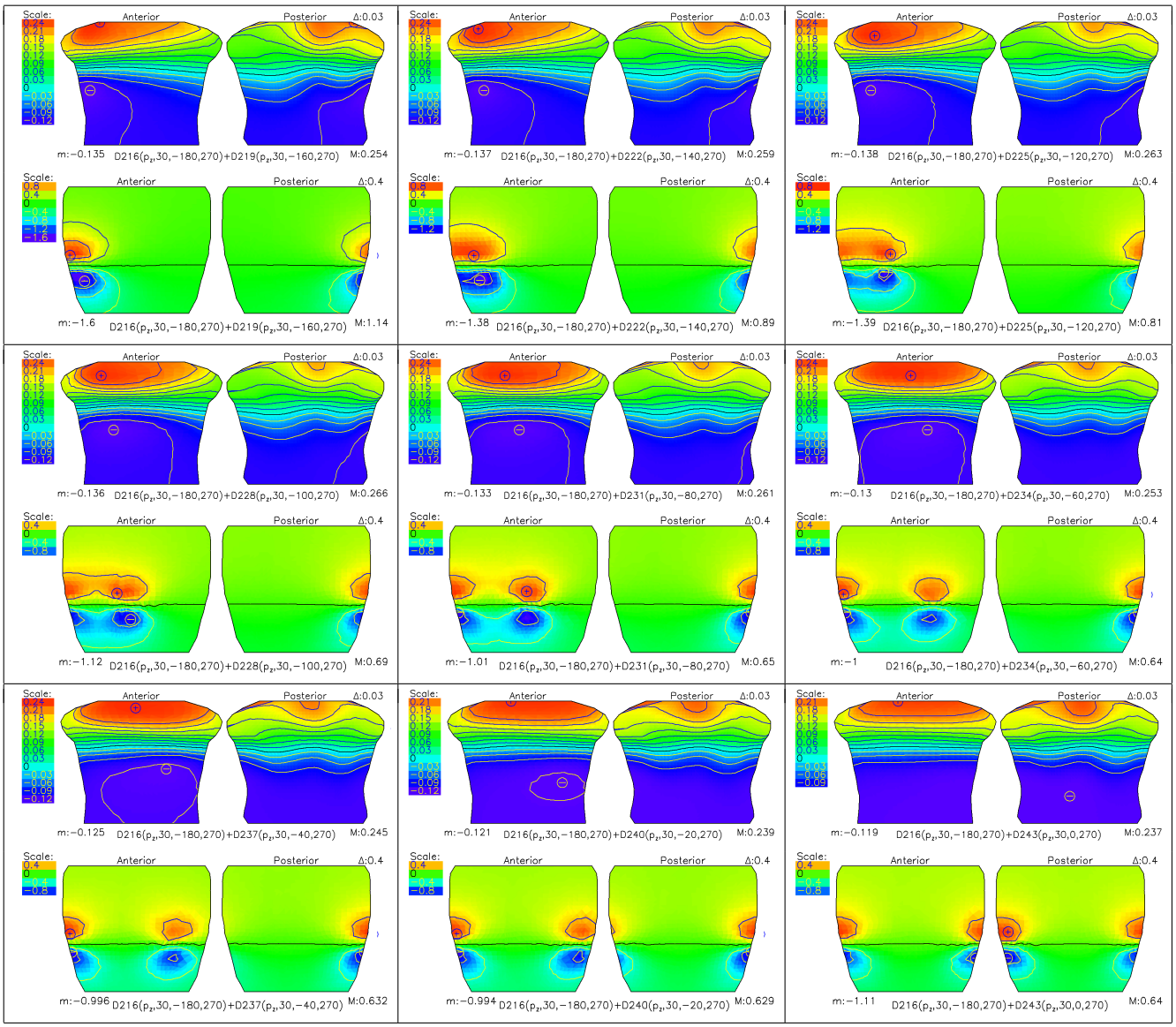

Fig. 15: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 270$ mm and radial distance $\rho = 30$ mm. Parallel dipoles oriented in the vertical direction (along the polar axis).

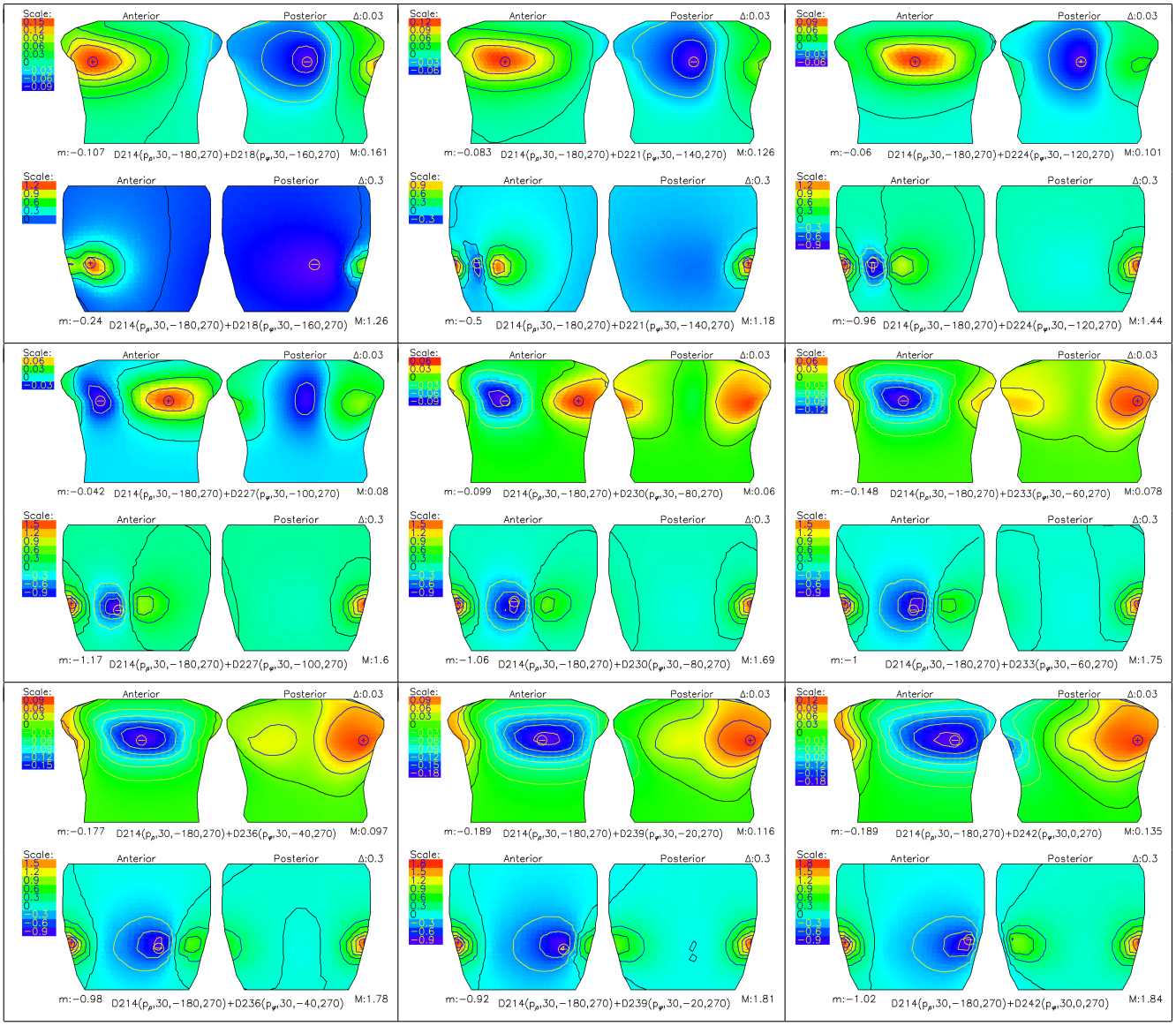

Fig. 16: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 270$ mm and radial distance $\rho = 30$ mm. Orthogonal dipoles, the first one is oriented in the radial direction ($\vec{p}_\rho$) and others are oriented in the tangential direction ($\vec{p}_\varphi$).

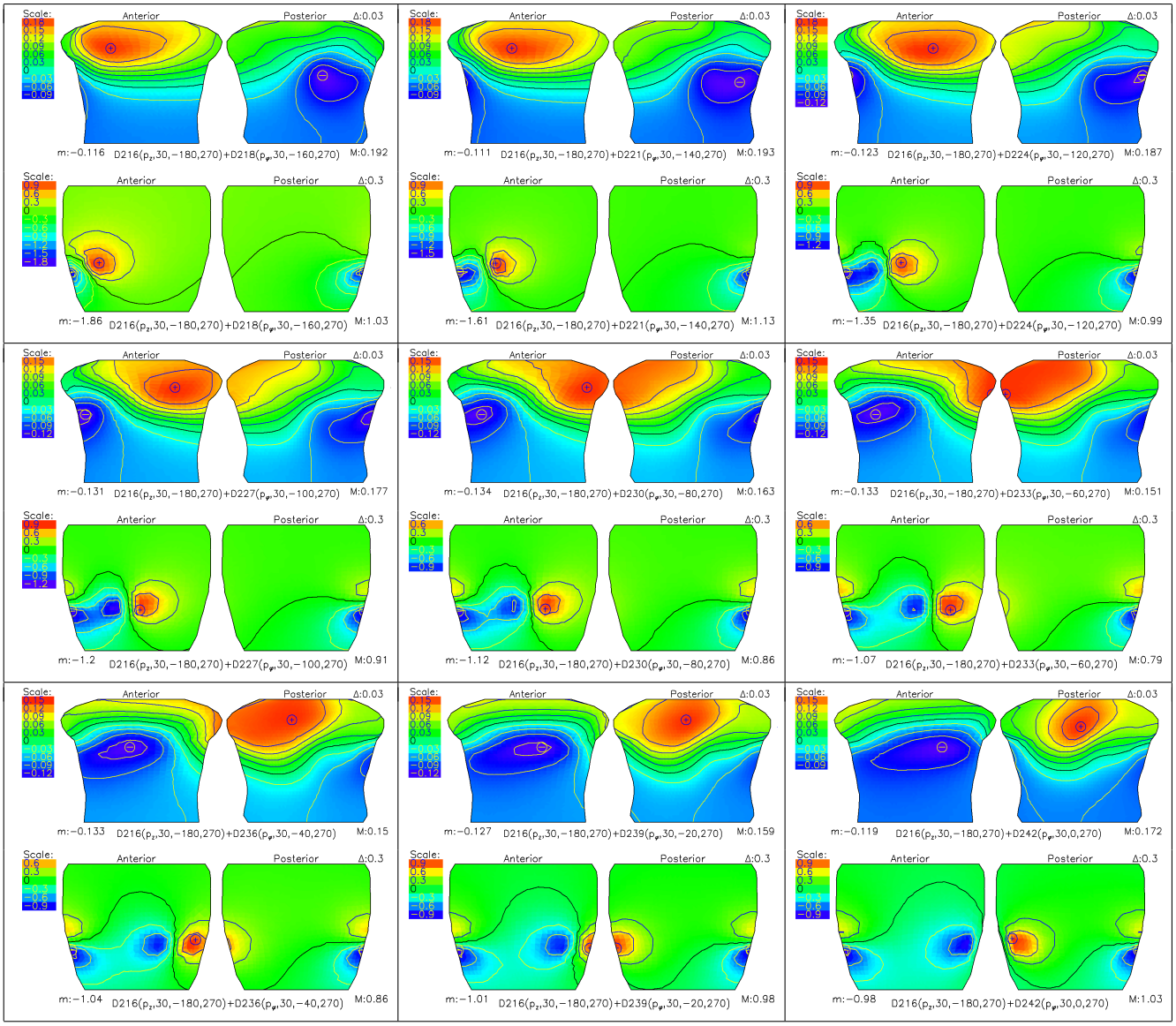

Fig. 17: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 270$ mm and radial distance $\rho = 30$ mm. Orthogonal dipoles, the first one is oriented in the vertical direction ($\vec{p}_z$) and others are oriented in the tangential direction ($\vec{p}_\varphi$).

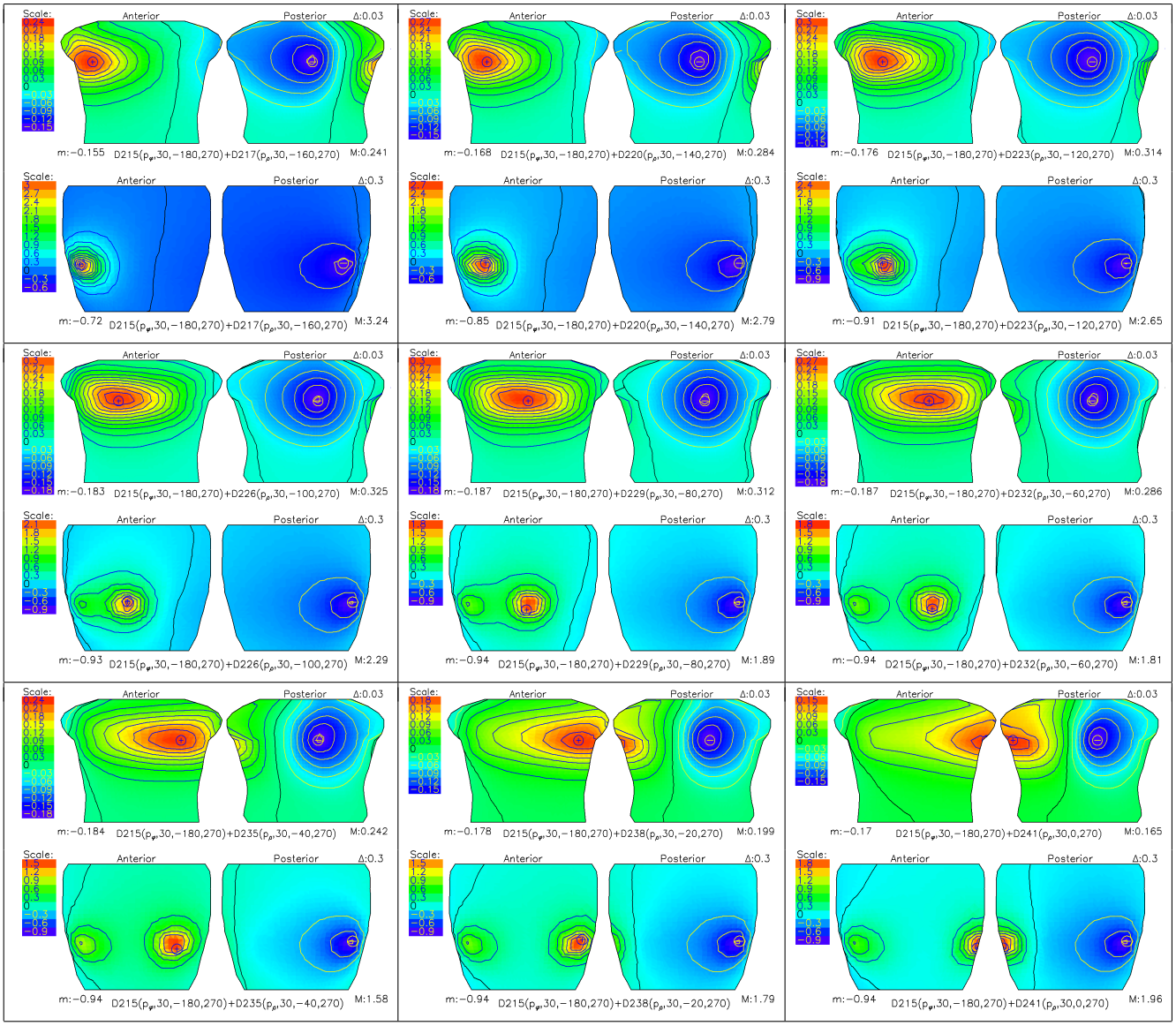

Fig. 18: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 270$ mm and radial distance $\rho = 30$ mm. Orthogonal dipoles, the first one is oriented in the tangential direction ($\vec{p}_\varphi$) and others are oriented in the radial direction ($\vec{p}_\rho$).

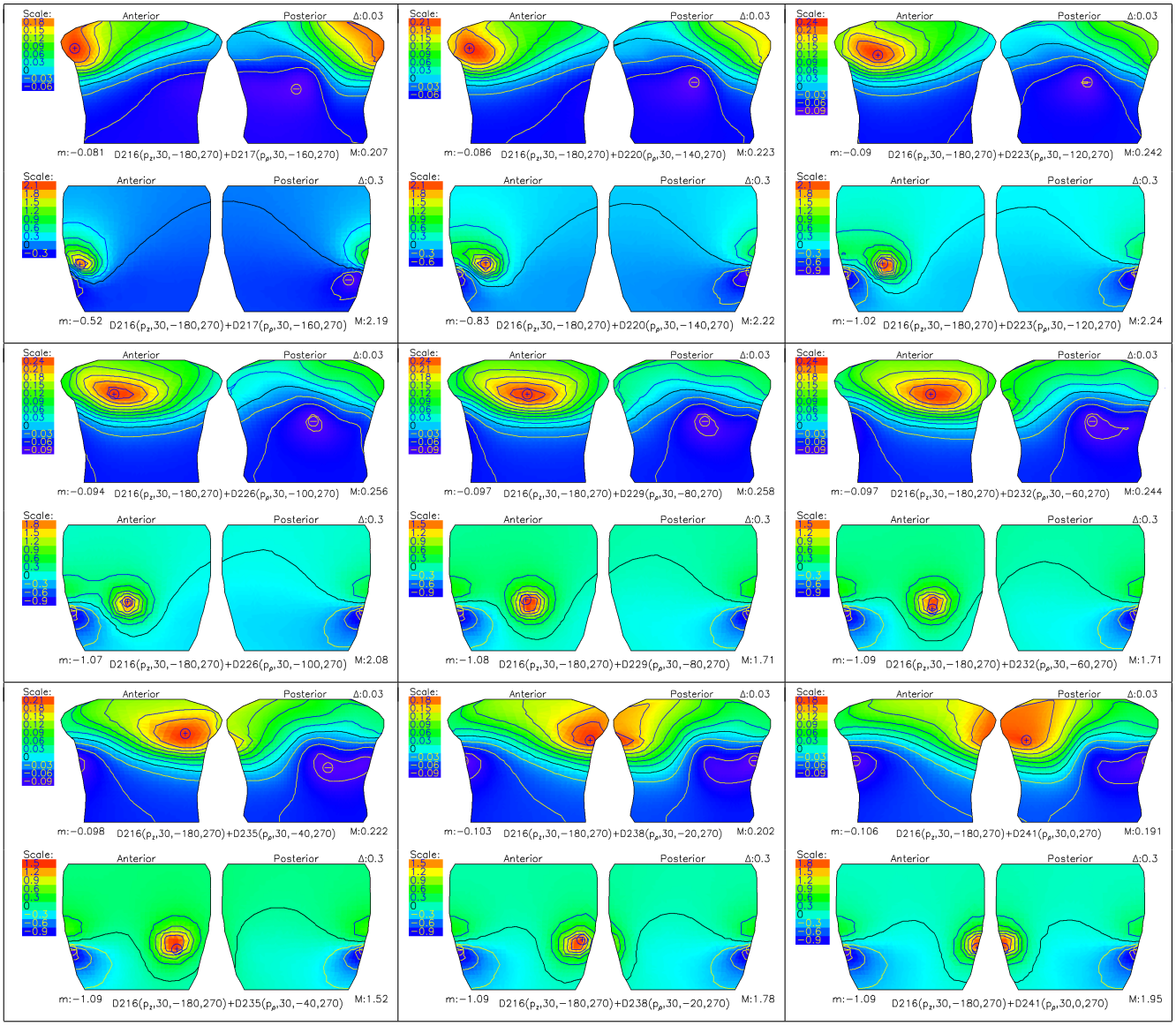

Fig. 19: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 270$ mm and radial distance $\rho = 30$ mm. Orthogonal dipoles, the first one is oriented in the vertical direction ($\vec{p}_z$) and others are oriented in the radial direction ($\vec{p}_\rho$).

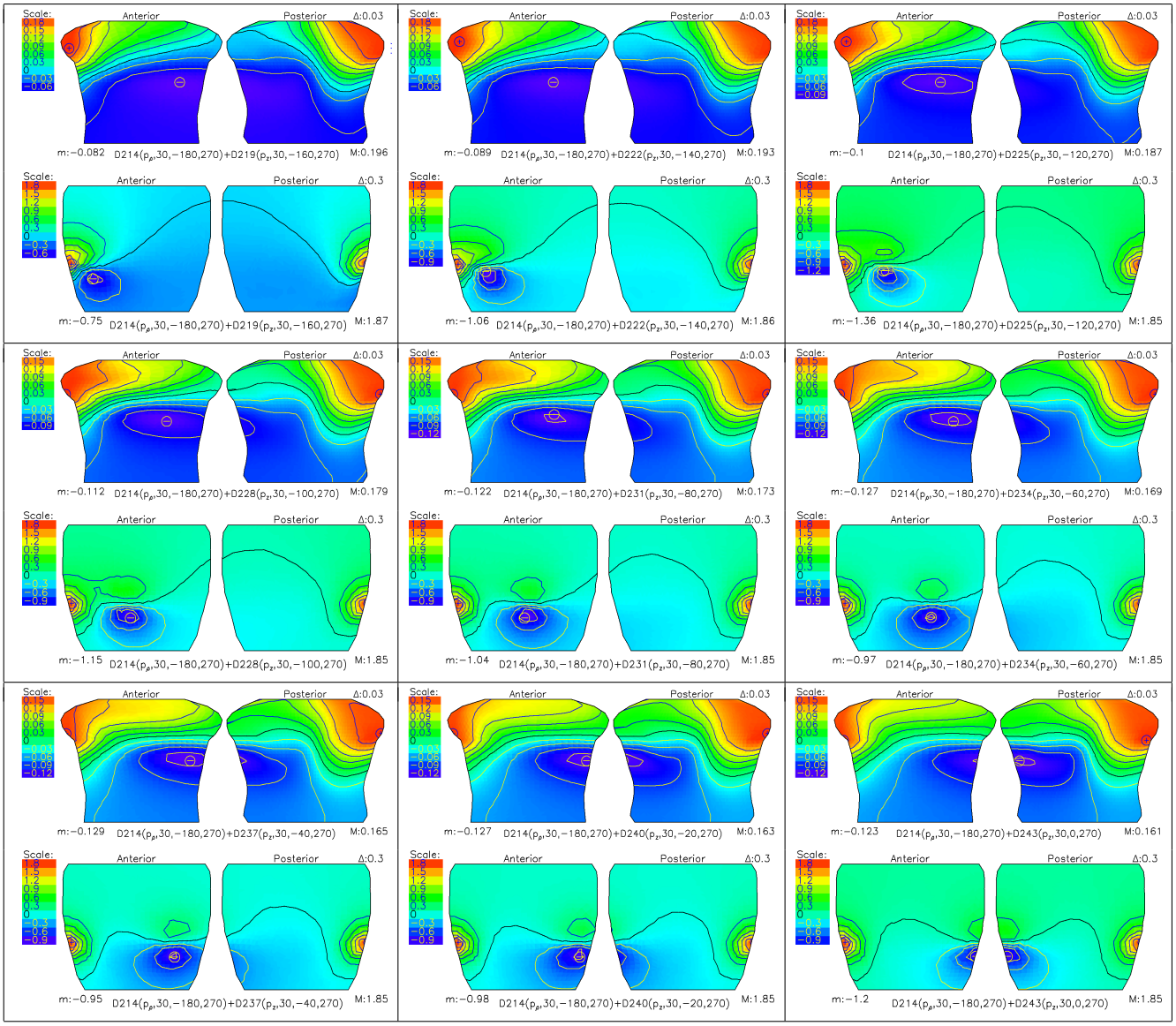

Fig. 20: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 270$ mm and radial distance $\rho = 30$ mm. Orthogonal dipoles, the first one is oriented in the radial direction ($\vec{p}_\rho$) and others are oriented in the vertical direction ($\vec{p}_z$).

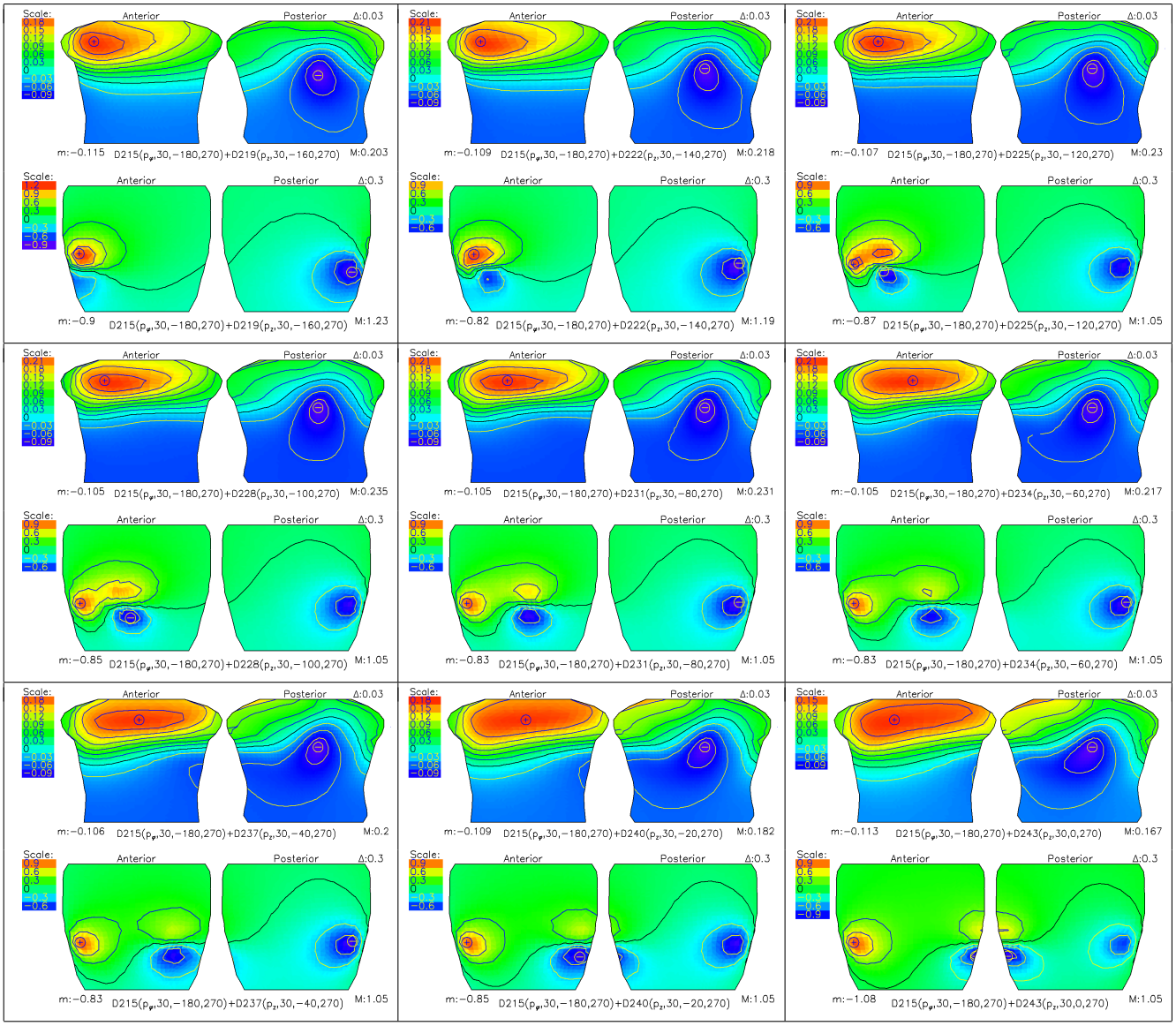

Fig. 21: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 270$ mm and radial distance $\rho = 30$ mm. Orthogonal dipoles, the first one is oriented in the tangential direction ($\vec{p}_\varphi$) and others are oriented in the vertical direction ($\vec{p}_z$).

Axial plane ($z = 270$), radial distance ($\rho = 30$)

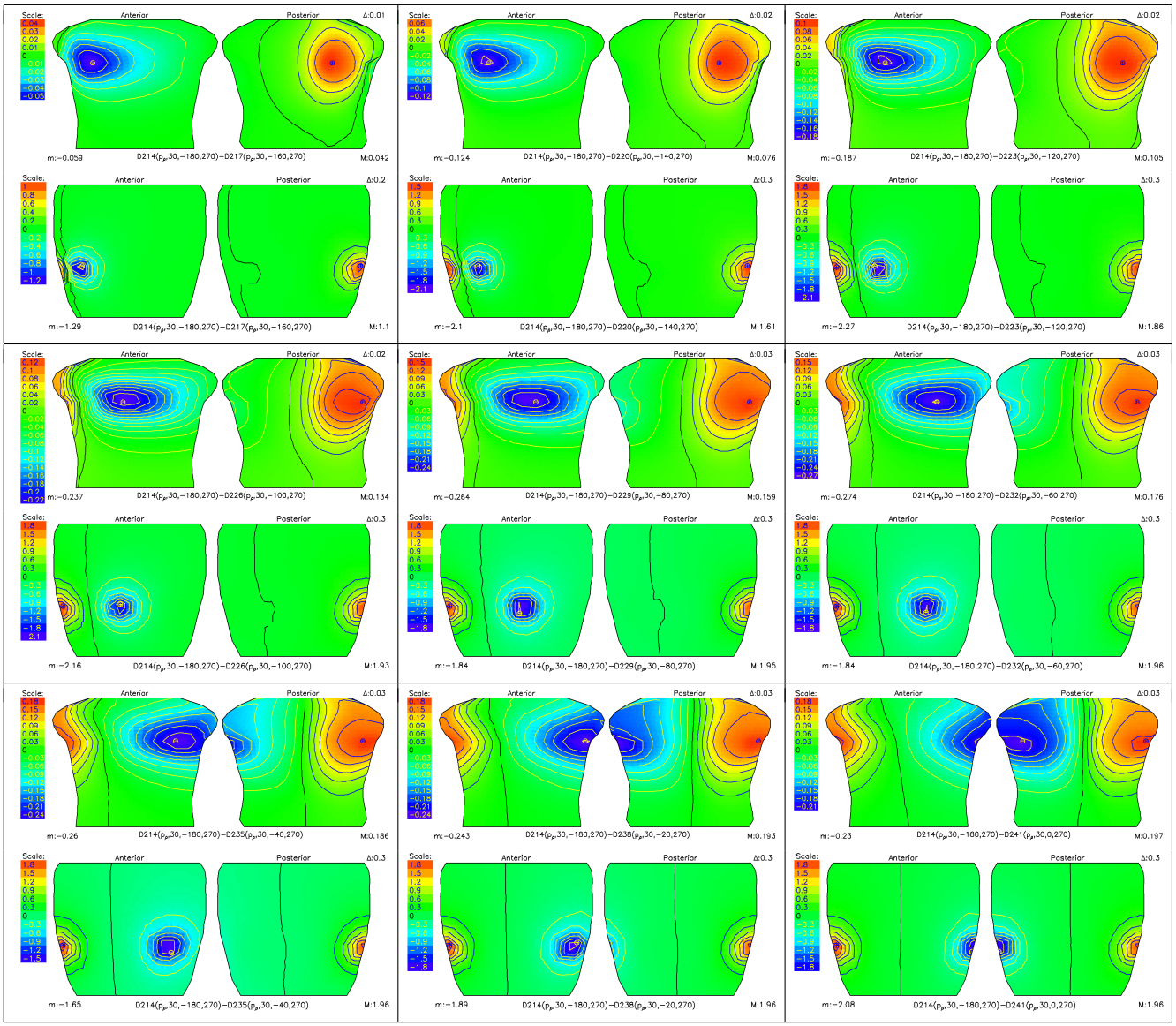

Fig. 22: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 270$ mm and radial distance $\rho = 30$ mm. Anti-parallel dipoles, the first one oriented in the radial direction ($\vec{p}_\rho$) and others int opposite direction ($-\vec{p}_\rho$).

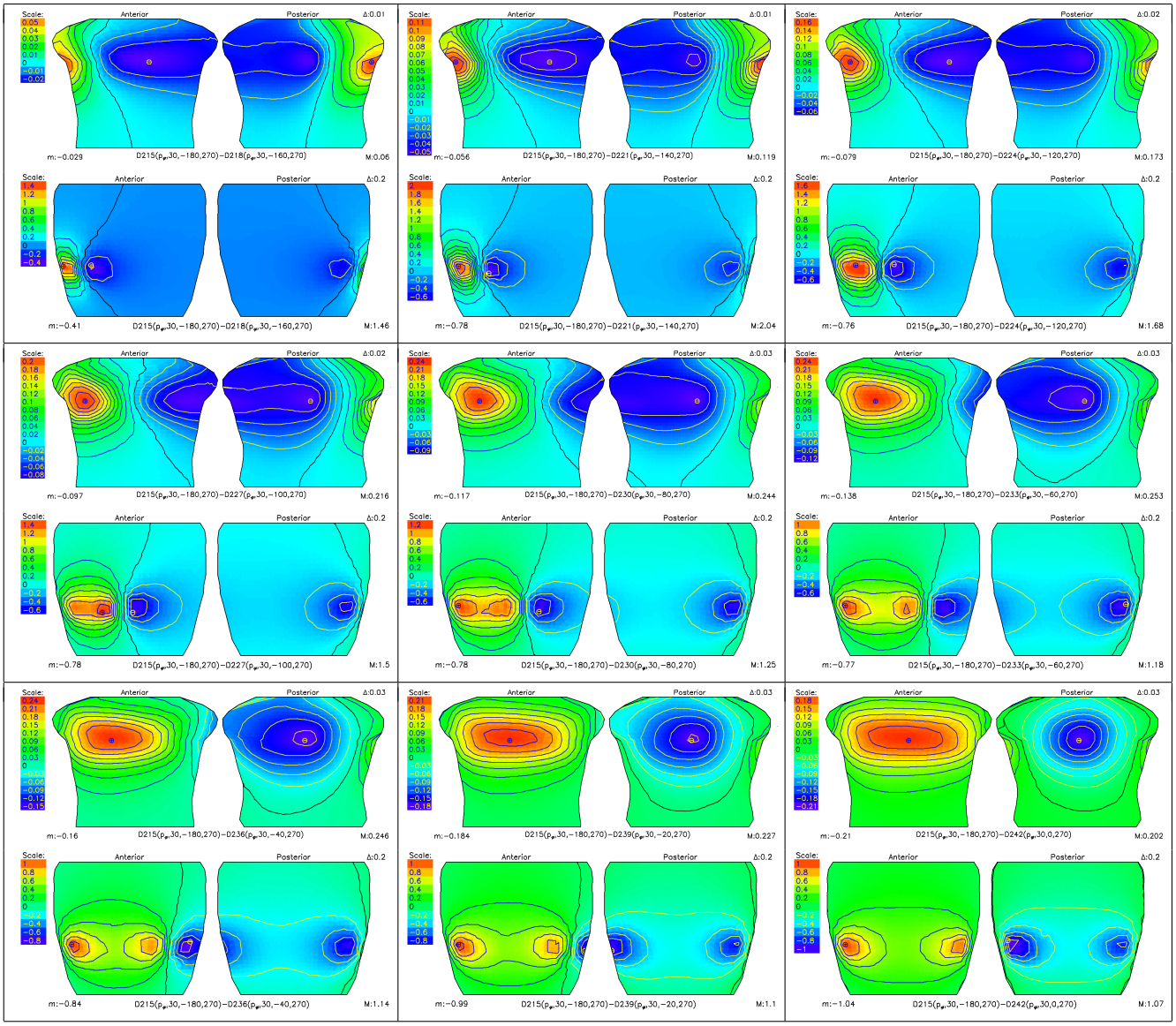

Fig. 23: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 270$ mm and radial distance $\rho = 30$ mm. Anti-parallel dipoles, the first one oriented in the tangential direction ($\vec{p}_\varphi$) and others in the opposite direction ($-\vec{p}_\varphi$).

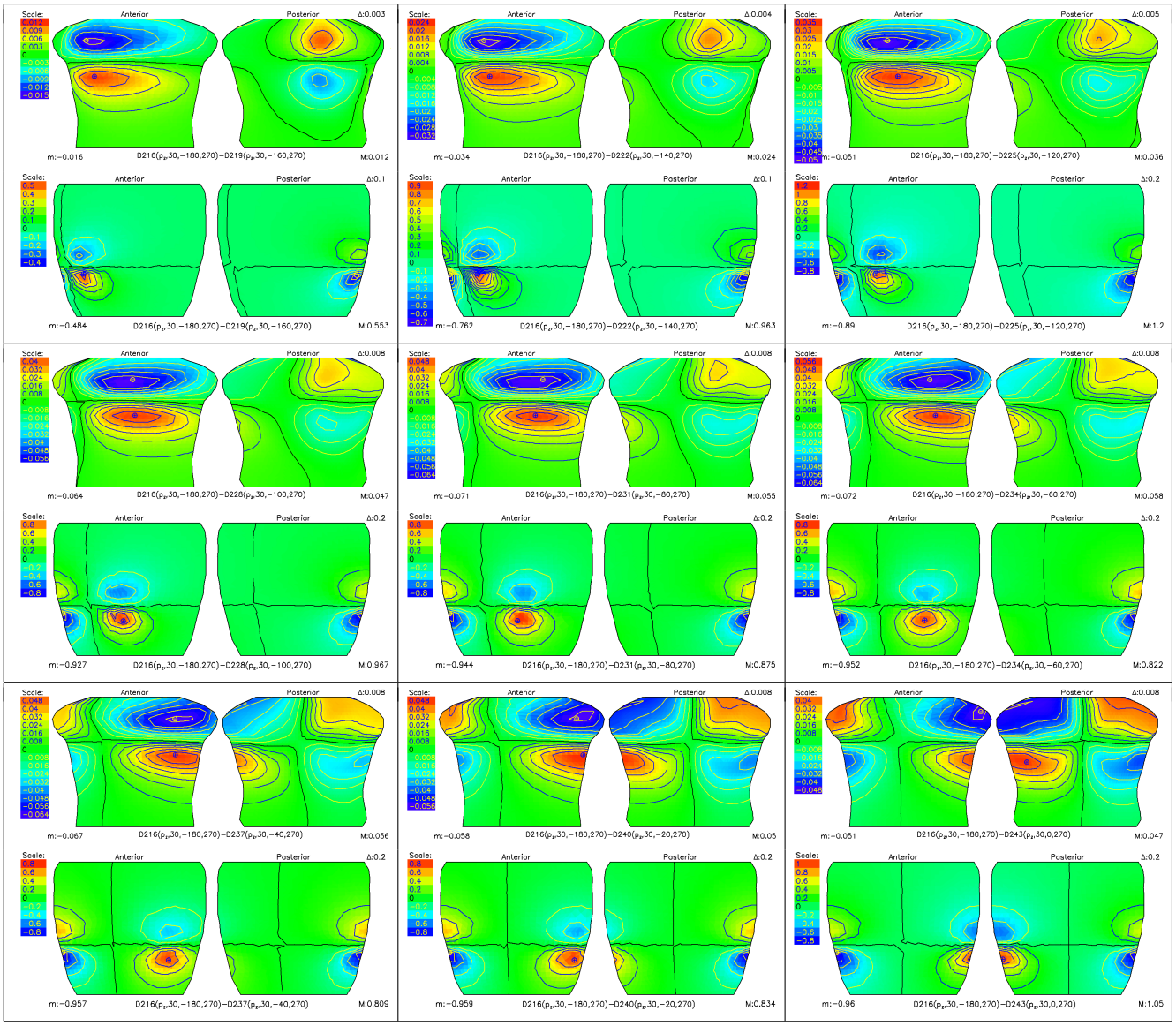

Fig. 24: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 270$ mm and radial distance $\rho = 30$ mm. Anti-parallel dipoles, the first one oriented in the vertical direction ($\vec{p}_z$) and others in the opposite direction ($-\vec{p}_z$).

Axial plane ($z = 260$), radial distance ($\rho = 20$)

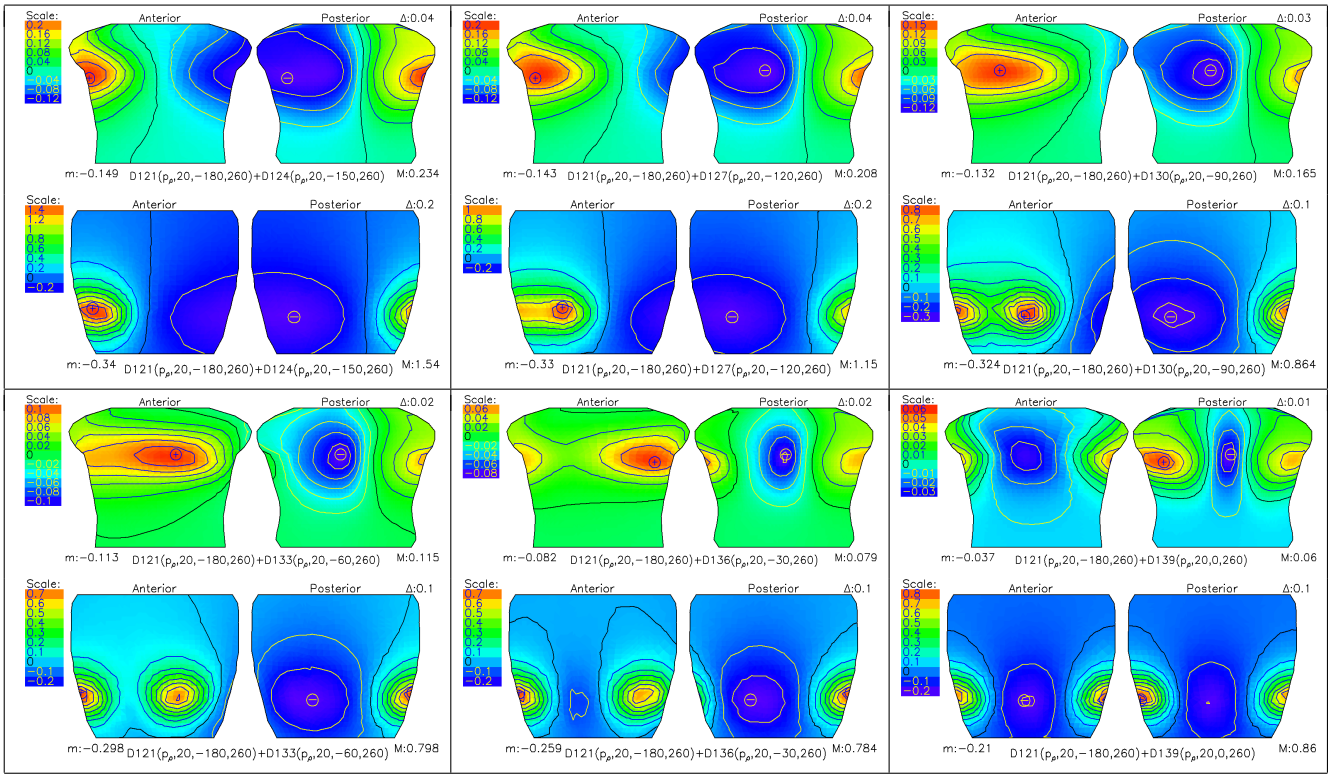

Fig. 25: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 260$ mm and radial distance $\rho = 20$ mm. Parallel dipoles oriented in the radial direction ($\vec{p}_\rho$).

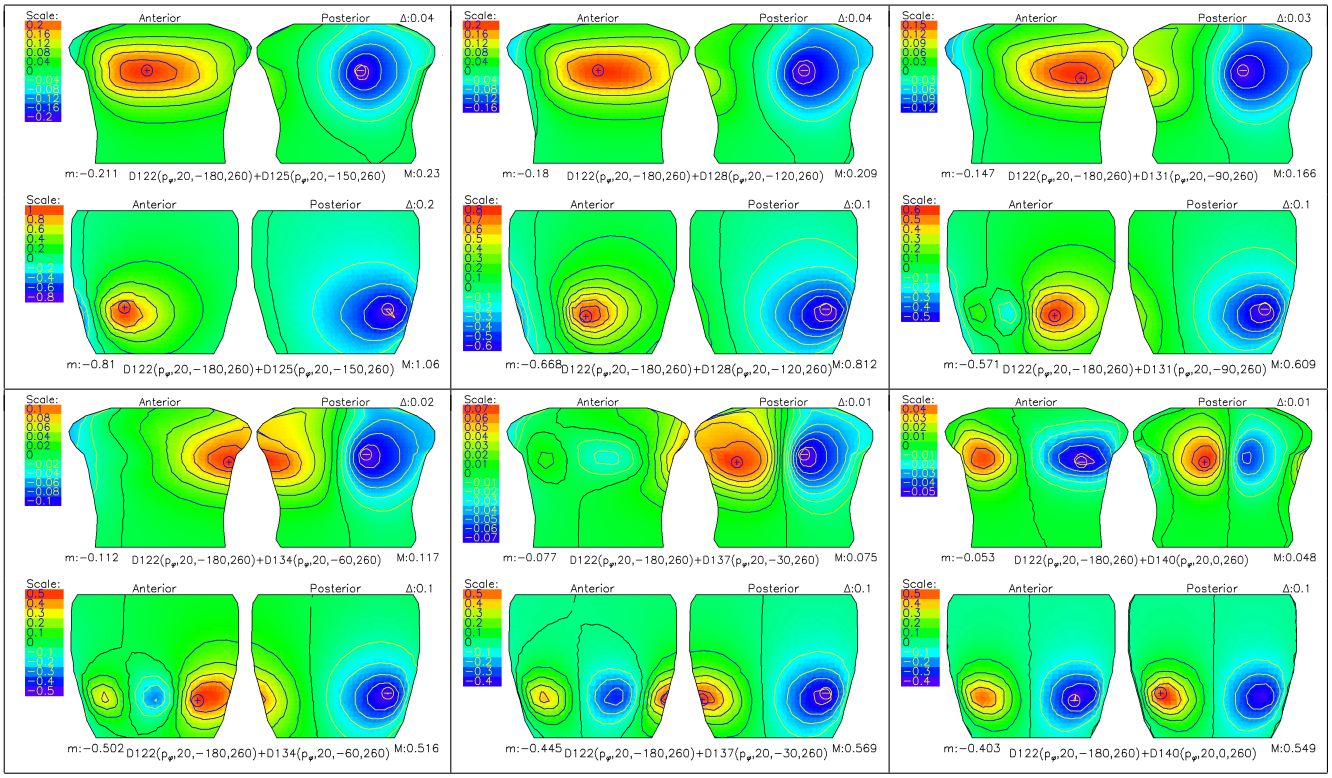

Fig. 26: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 260$ mm and radial distance $\rho = 20$ mm. Parallel dipoles oriented in the tangential direction ($\vec{p}_\varphi$).

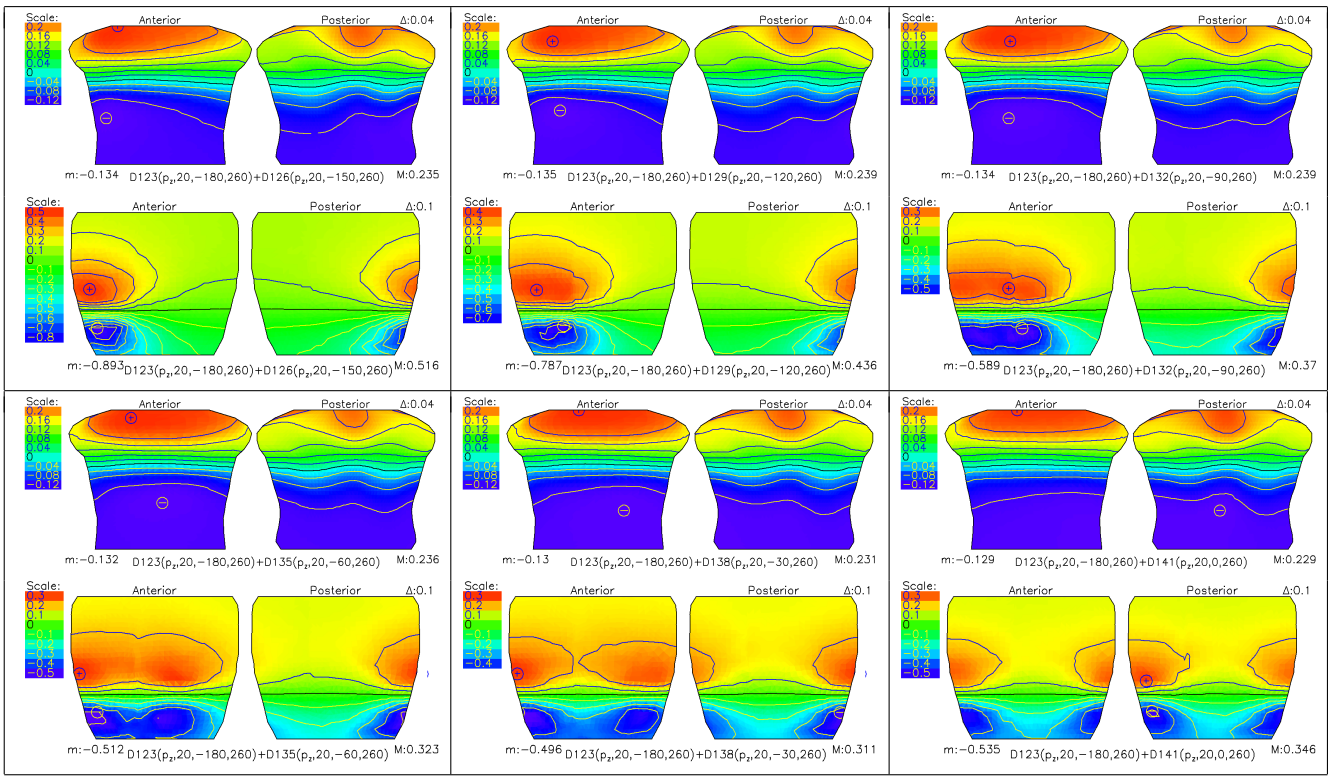

Fig. 27: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 260$ mm and radial distance $\rho = 20$ mm. Parallel dipoles oriented in the vertical direction (along the polar axis).

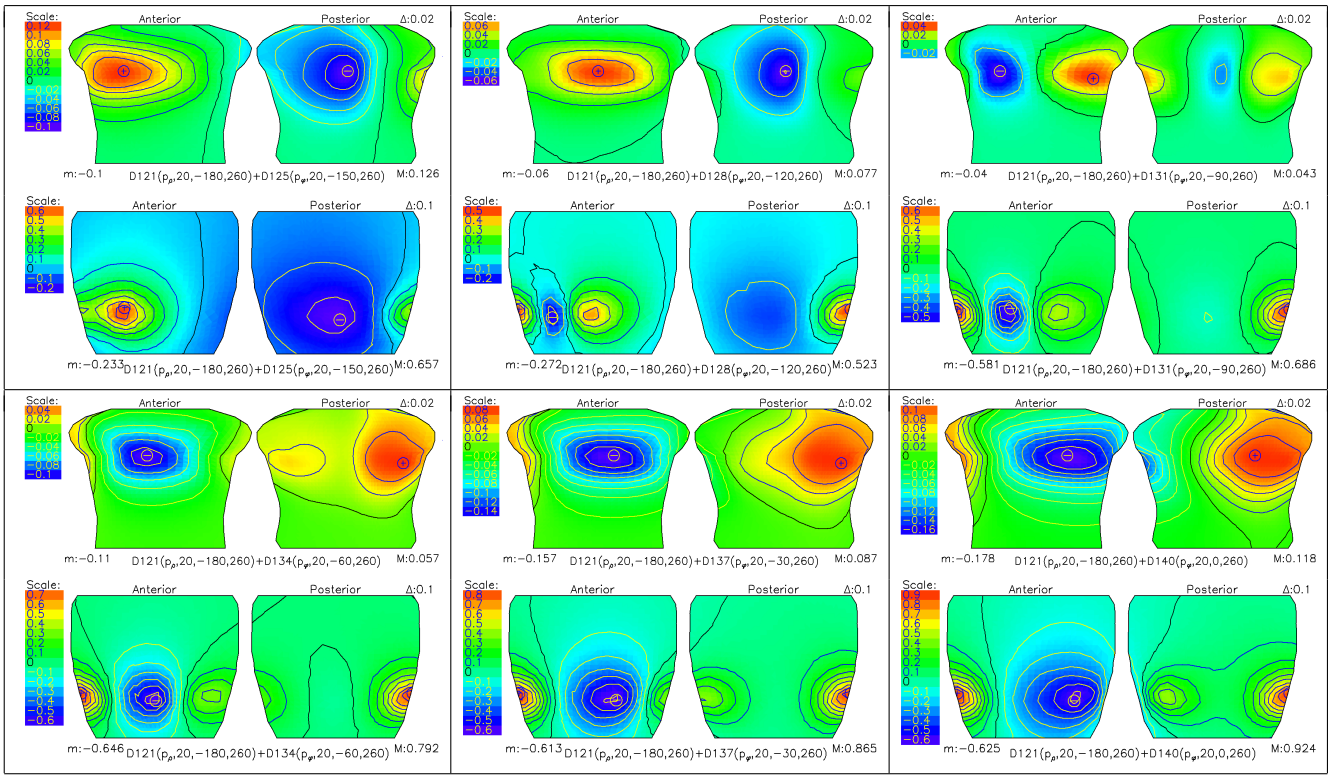

Fig. 28: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 260$ mm and radial distance $\rho = 20$ mm. Orthogonal dipoles, the first one in the radial ($\vec{p}_\rho$) and others in the tangential direction ($\vec{p}_\varphi$).

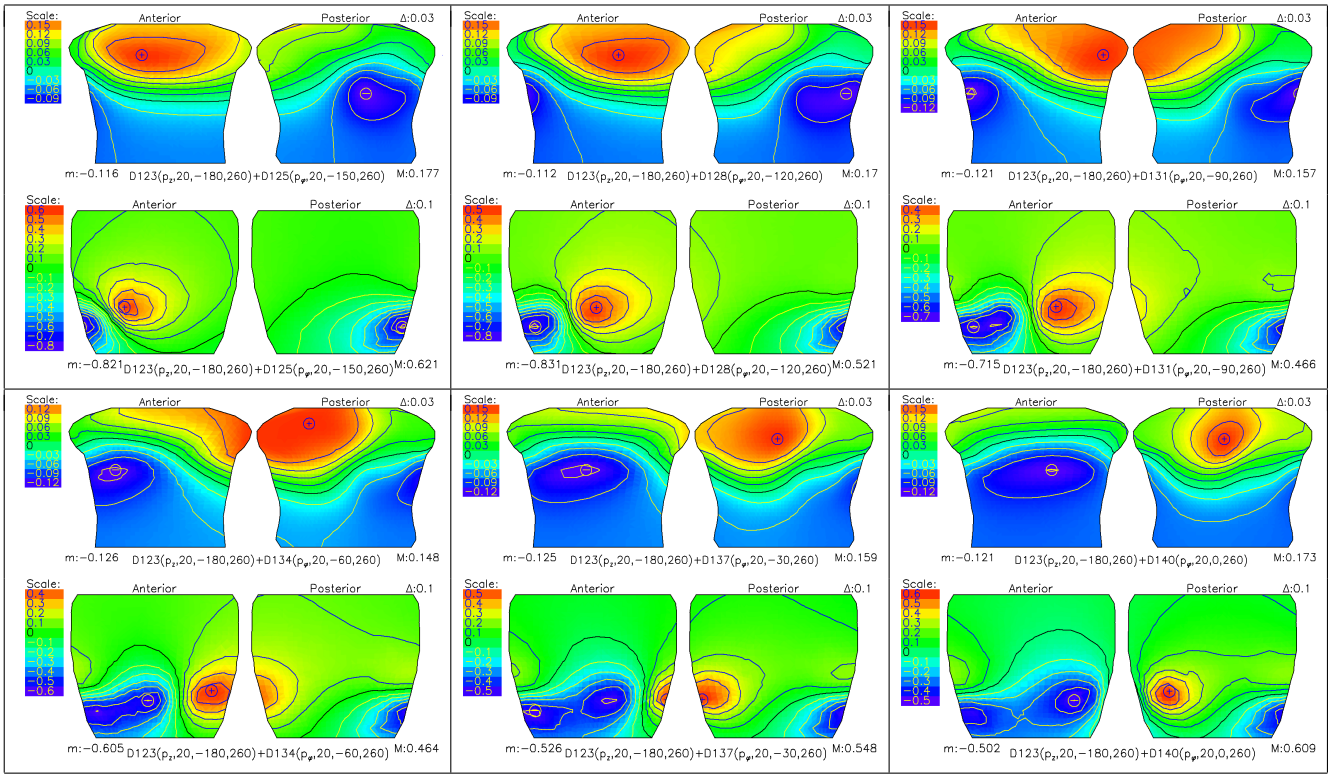

Fig. 29: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 260$ mm and radial distance $\rho = 20$ mm. Orthogonal dipoles, the first one in the axial ($\vec{p}_z$) and others in the tangential direction ($\vec{p}_\varphi$).

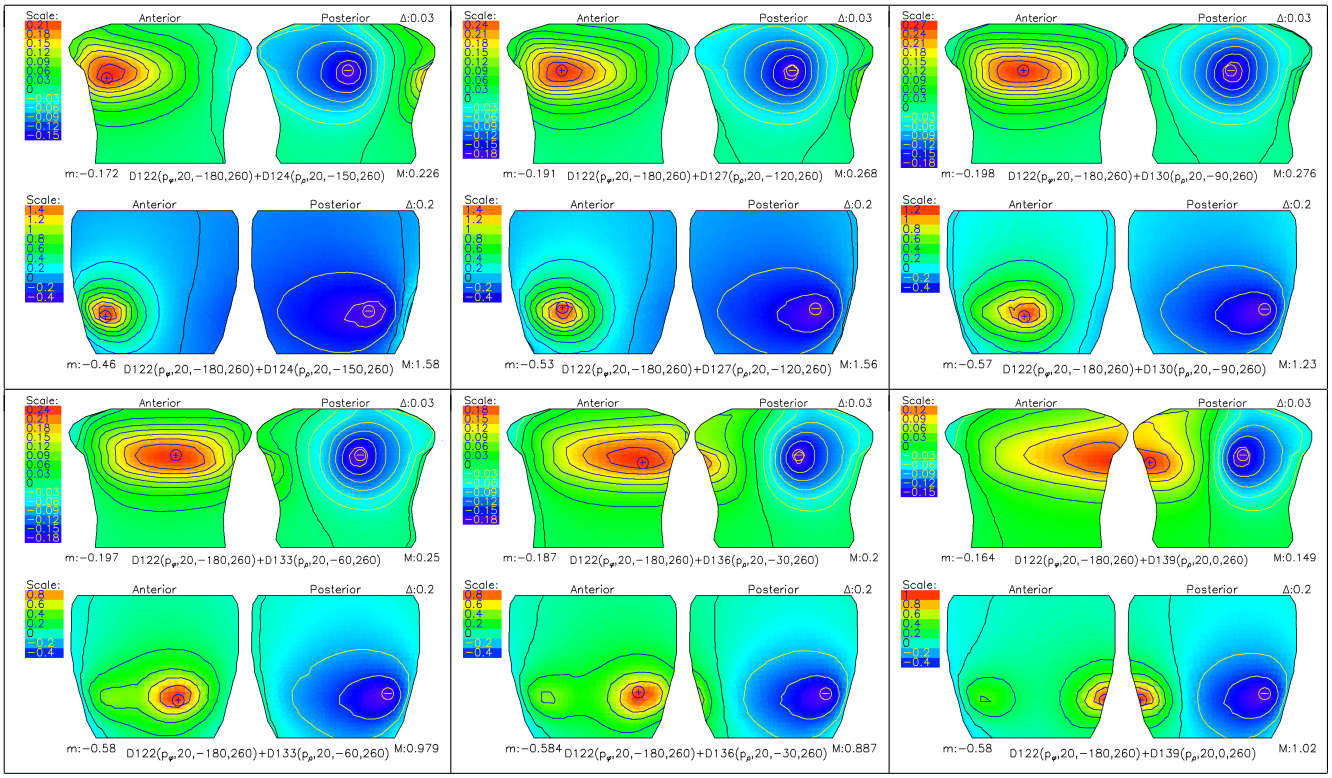

Fig. 30: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 260$ mm and radial distance $\rho = 20$ mm. Orthogonal dipoles, the first one in the tangential direction ($\vec{p}_\varphi$) in others in the radial direction ($\vec{p}_\rho$).

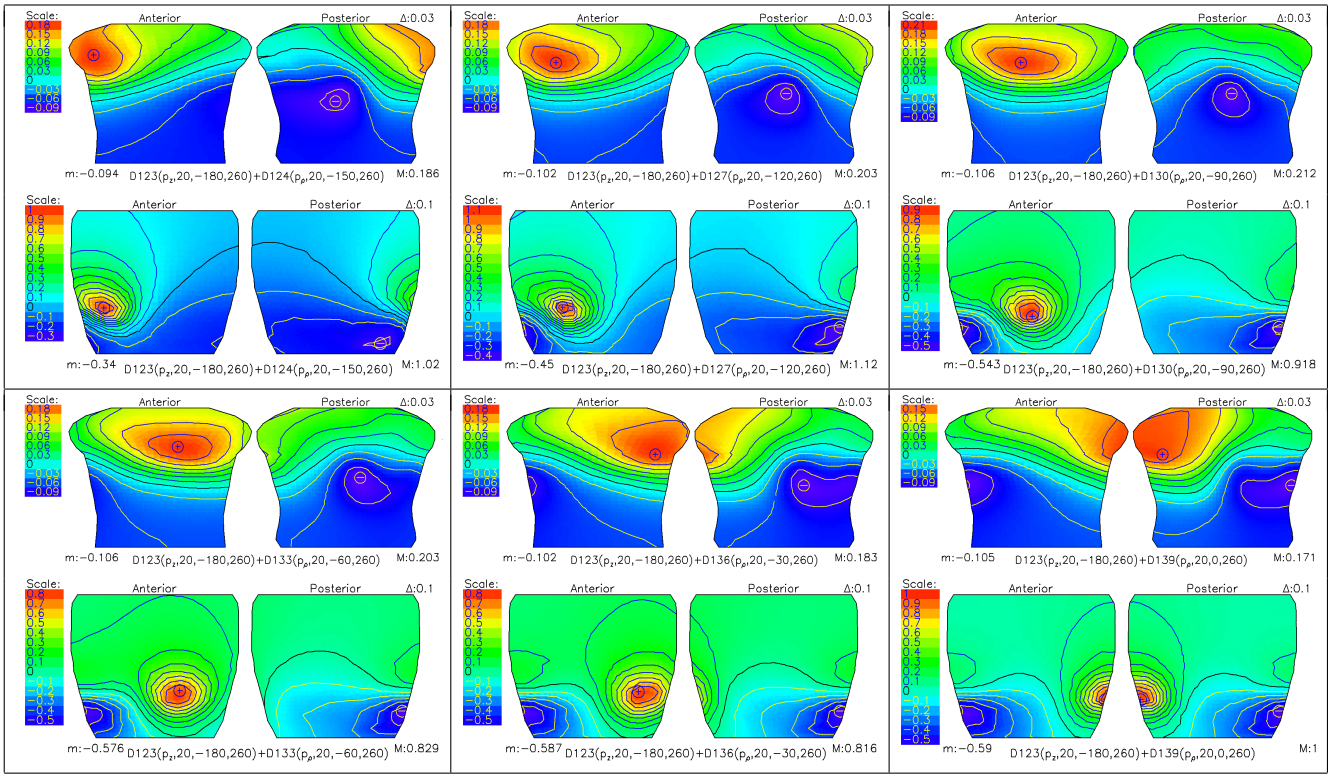

Fig. 31: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 260$ mm and radial distance $\rho = 20$ mm. Orthogonal dipoles, the first one in the axial direction ($\vec{p}_z$) in others in the radial direction ($\vec{p}_\rho$).

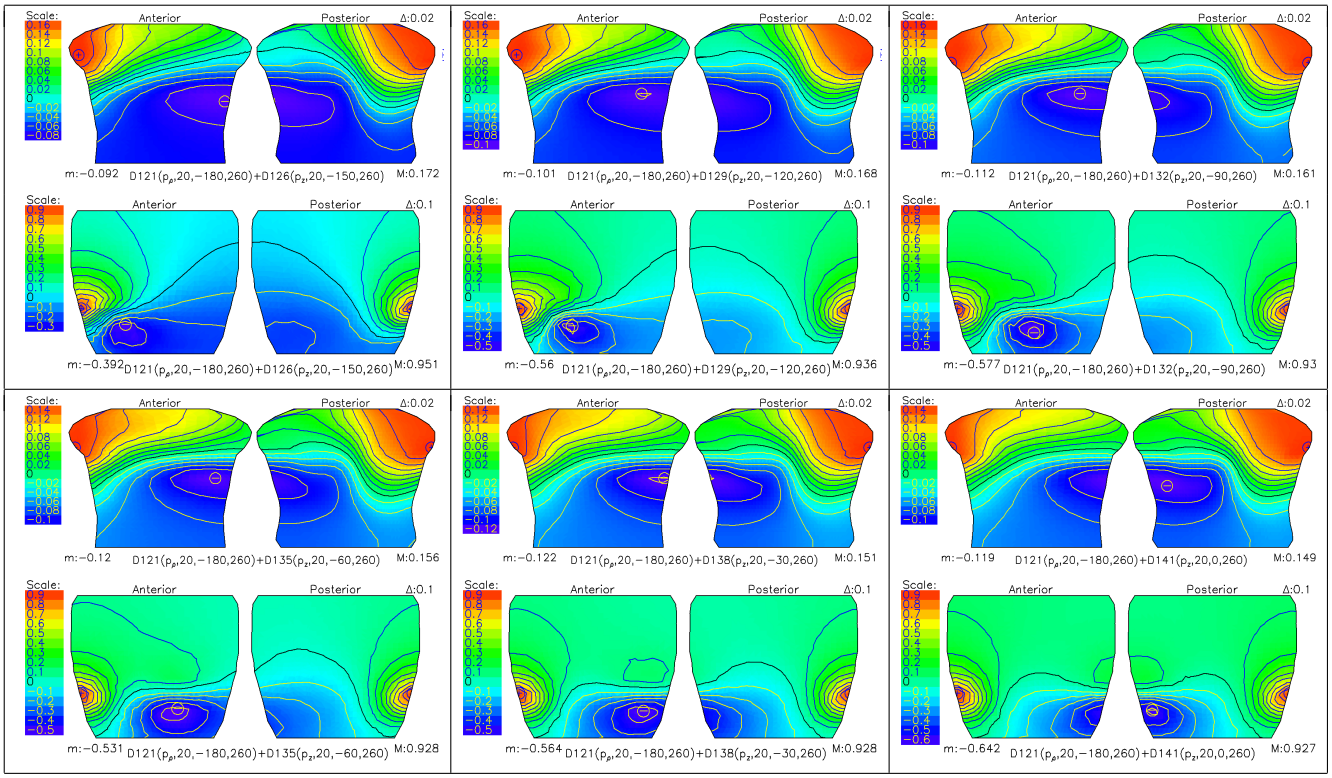

Fig. 32: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 260$ mm and radial distance $\rho = 20$ mm and radial distance $\rho = 20$ mm. Orthogonal dipoles, the first one is oriented in the radial direction ($\vec{p}_\rho$) and others are oriented in the vertical direction ($\vec{p}_z$).

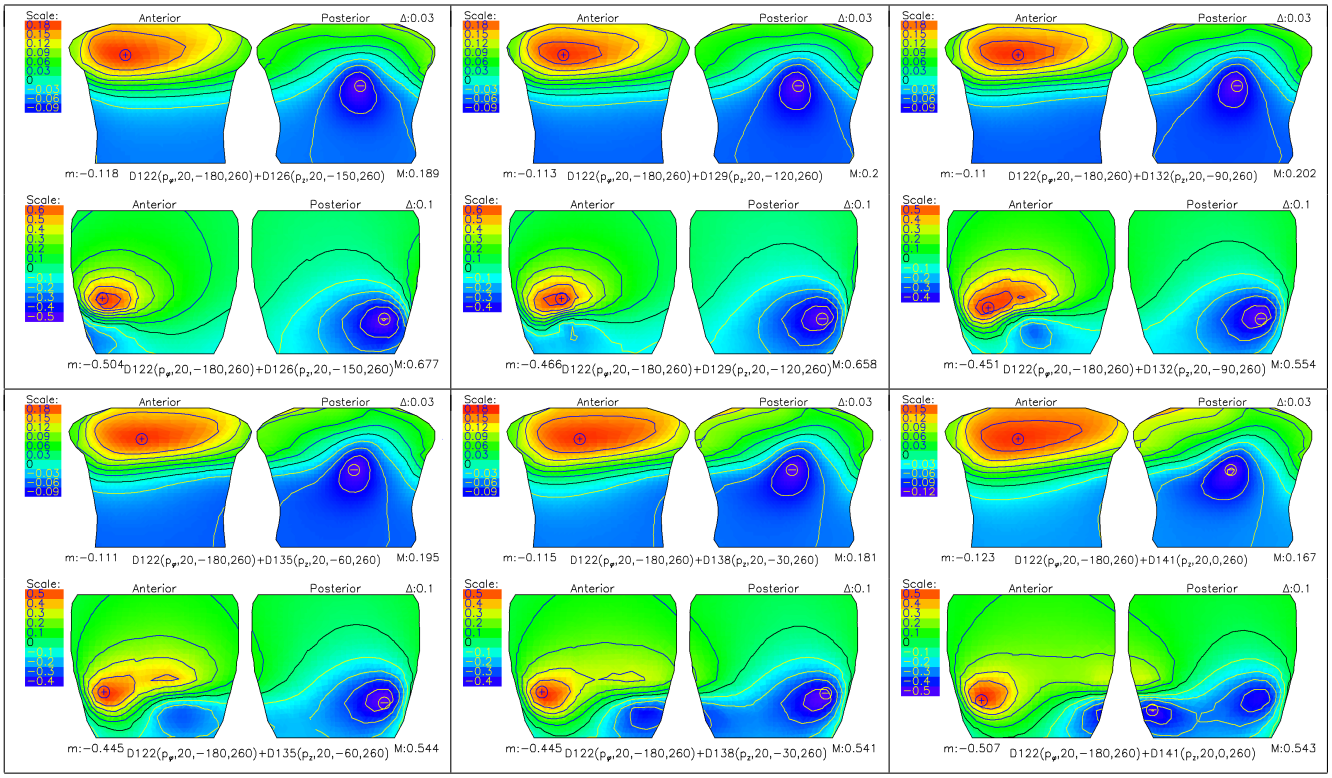

Fig. 33: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 260$ mm and radial distance $\rho = 20$ mm. Orthogonal dipoles, the first one is oriented in the tangential direction ($\vec{p}_\varphi$) and others are oriented in the vertical direction ($\vec{p}_z$).

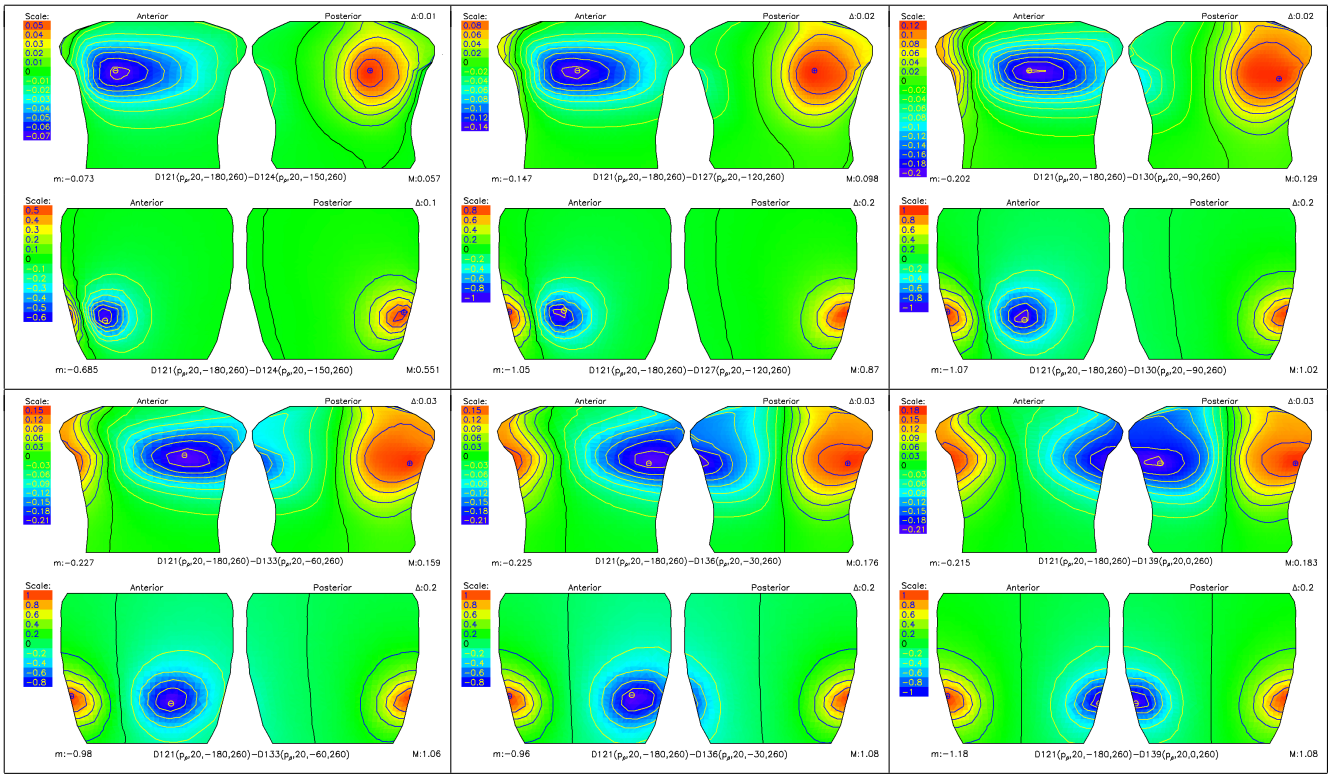

Fig. 34: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 260$ mm and radial distance $\rho = 20$ mm. Anti-parallel dipoles, the first one is oriented in the radial direction ($\vec{p}_\rho$) and others in the opposite direction ($-\vec{p}_\rho$).

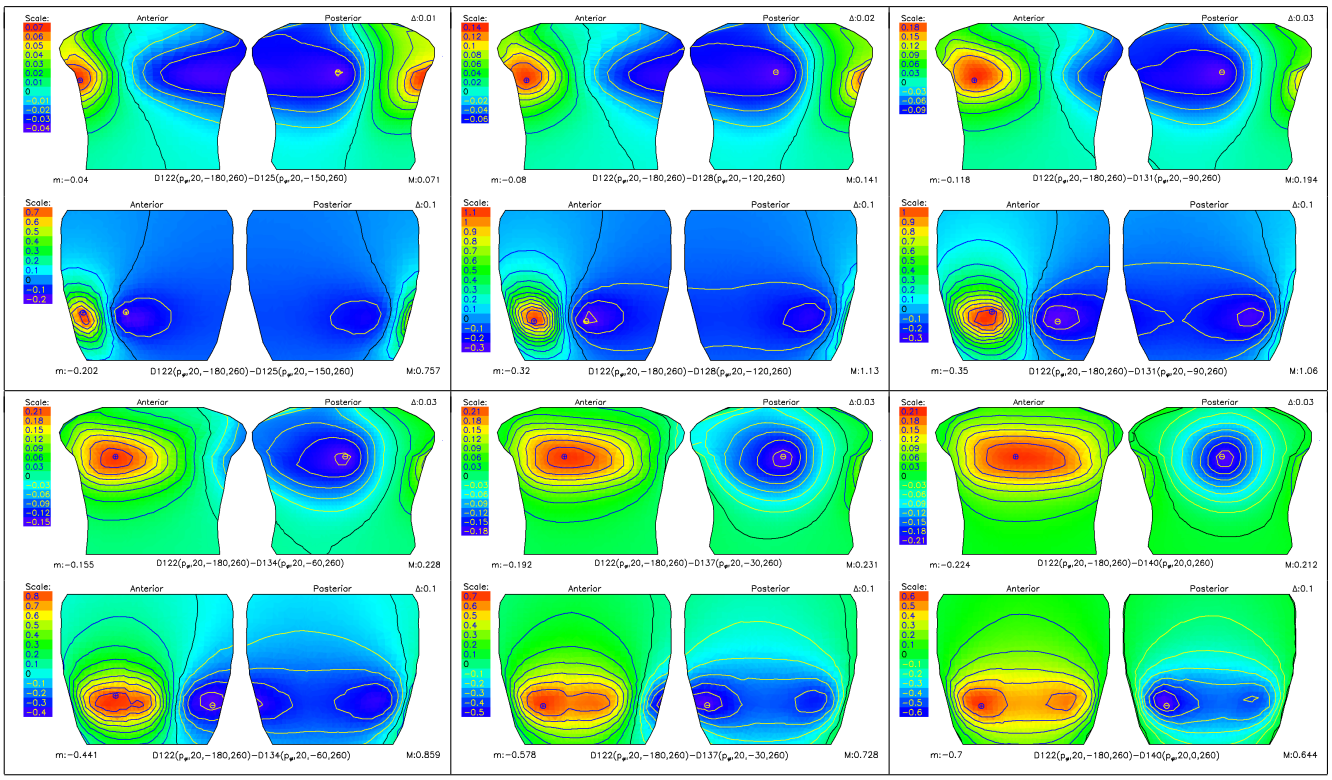

Fig. 35: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 260$ mm and radial distance $\rho = 20$ mm. Anti-parallel dipoles, the first one is in the tangential direction ($\vec{p}_\varphi$).

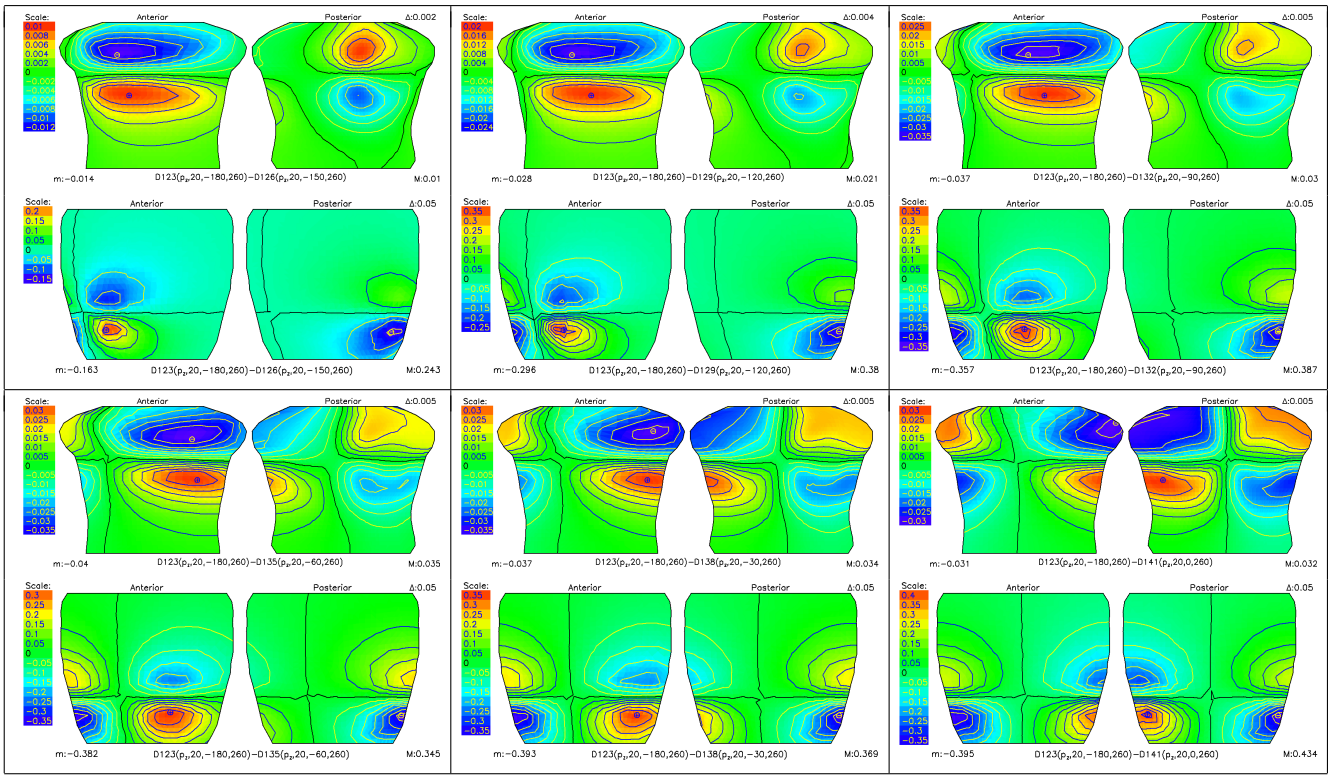

Fig. 36: Anterior and posterior views of tank and cage potential distributions for 2-dipoles sources, both positioned in the axial plane $z = 260$ mm and radial distance $\rho = 20$ mm. Anti-parallel dipoles, the first one is in the vertical direction ($\vec{p}_z$) and others in the opposite direction ($-\vec{p}_z$).