Erratum: Antiferromagnetic spin canting and magnetoelectric multipoles in h-YMnO$_3$ [Phys. Rev. Research 5, 013203 (2023)]

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As pointed out by Lovesey in Ref. [1], the magnetic space group $P6_3'cm'$ mentioned in the original paper does not produce a net nonzero contribution of the $\langle G_3^3 \rangle$ projection of the magnetoelectric octupole tensor in the (0,0,1) Bragg peak. Indeed, contrary to what was claimed, the space group used in our calculation was $P3$. This is a result of the specific antiferromagnetic canting we have applied on the Mn magnetic moments along the **c** direction. The main magnetic dipole component is unchanged but among the higher-order multipoles, the nonzero octupole tensor component becomes $\langle G_0^3 \rangle$.

The experimental part as well as the methodology for extracting the higher-order multipoles from the total signal remain unchanged.

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[1] S. W. Lovesey, Axial and polar magnetism in hexagonal YMnO$_3$, Phys. Rev. B **108**, 104412 (2023).