

6.10: Spherical Systems

The spherical system contains non-crystallographic point groups with more than one axis of revolution. These groups, therefore, contain an infinity of axes of revolution (or isotropy axis). There are two groups in the spherical system:

Hermann-Mauguin symbol	Short Hermann-Mauguin symbol	Schönfliess symbol	order of the group	general form
∞A_{∞}	2∞	K	∞	sphere filled with an optically active liquid
$\infty \frac{A_{\infty}}{M} C$	$m\bar{\infty}, \frac{2}{m}\bar{\infty}$	K_h	∞	stationary sphere

History

The groups containing isotropy axes were introduced by P. Curie (1859-1906) in order to describe the symmetry of physical systems (Curie P. (1884). *Sur les questions d'ordre: répétitions*. *Bull. Soc. Fr. Minéral.*, **7**, 89-110; Curie P. (1894). *Sur la symétrie dans les phénomènes physiques, symétrie d'un champ électrique et d'un champ magnétique*. *J. Phys. (Paris)*, **3**, 393-415.).

See also

Section 10.1.4 of *International Tables of Crystallography, Volume A*

Section 1.1.4 of *International Tables of Crystallography, Volume D*

This page titled [6.10: Spherical Systems](#) is shared under a [CC BY 4.0](#) license and was authored, remixed, and/or curated by [Online Dictionary of Crystallography](#) via [source content](#) that was edited to the style and standards of the LibreTexts platform.