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Parliamentary Papers

CORRESPONDENCE RELATIVE TO THE SLAVE TRADE

[1857 [2281] [2282] VOL XLIV Sess II]

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AND WITH FOREIGN MINISTERS
IN ENGLAND TOGETHER WITH
REPORTS FROM THE ADMIRALTY
RELATIVE TO THE SLAVE TRADE
[CLASS A AND CLASS B]

Slave Trade

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ACCOUNTS AND PAPERS:

TWENTY-ONE VOLUMES.

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SLAVE TRADE.

Session

30 April — 28 August 1857.

VOL. XLIV.

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PHYSICS DEPARTMENT

PHYSICS 551 - QUANTUM MECHANICS
LECTURE 10: ANGULAR MOMENTUM

ANGULAR MOMENTUM

The angular momentum operator is defined as $\mathbf{L} = \mathbf{r} \times \mathbf{p}$. The components of angular momentum are $L_x = y p_z - z p_y$, $L_y = z p_x - x p_z$, and $L_z = x p_y - y p_x$. The commutation relations are $[L_x, L_y] = i\hbar L_z$, $[L_y, L_z] = i\hbar L_x$, and $[L_z, L_x] = i\hbar L_y$.

ANGULAR MOMENTUM

The total angular momentum squared operator is $L^2 = L_x^2 + L_y^2 + L_z^2$. The eigenvalues of L^2 are $\hbar^2 l(l+1)$ and the eigenvalues of L_z are $\hbar m$, where l is the orbital quantum number and m is the magnetic quantum number.