

*Hallelujah I Love Her So*

$$1 = G$$

Ray Charles

The left diagram shows a vertical line at  $1/3$  and a horizontal line at  $1/4$ . The region to the left of  $1/3$  is divided into three parts: a top part labeled  $6$ , a middle part labeled  $5$ , and a bottom part labeled  $1$ . The region to the right of  $1/3$  is divided into two parts: a top part labeled  $3$  and a bottom part labeled  $2$ . The region to the right of  $1/4$  is divided into two parts: a top part labeled  $1$  and a bottom part labeled  $6$ . The region to the right of  $1/3$  is labeled  $4$  and  $\#4^0$ .

The right diagram shows a vertical line at  $1/3$  and a horizontal line at  $1/4$ . The region to the left of  $1/3$  is divided into three parts: a top part labeled  $6$ , a middle part labeled  $5$ , and a bottom part labeled  $1$ . The region to the right of  $1/3$  is divided into two parts: a top part labeled  $3$  and a bottom part labeled  $2$ . The region to the right of  $1/4$  is divided into two parts: a top part labeled  $1$  and a bottom part labeled  $6$ . The region to the right of  $1/3$  is labeled  $4$  and  $\#4^0$ .

The diagram illustrates the decomposition of the tensor product of two irreducible representations of  $SU(3)$ . The top row shows the decomposition of the product of two fundamental representations ( $3$  and  $\bar{3}$ ) into a singlet ( $1$ ) and an octet ( $8$ ). The bottom row shows the decomposition of the product of two octet representations ( $8$  and  $8$ ) into a singlet ( $1$ ), an octet ( $8$ ), and a 27-plet ( $27$ ). The diagrams use vertical lines to represent the  $SU(3)$  weight space and horizontal bars to represent the multiplicity of each weight state.

2. Fine

Diagram illustrating the decomposition of the tensor product of two irreducible representations of the Lie algebra  $\mathfrak{so}(4)$ . The left side shows the tensor product of the representation with highest weight 4 (labeled 4) and the representation with highest weight  $4^O$  (labeled  $\#4^O$ ). The right side shows the decomposition into irreducible representations with highest weights 1,  $1^7$ , and 2.

