1162-20-71 **Elijah Bodish*** (ebodish@uoregon.edu), University of Oregon, Department of Math, 1222 Univ of Oregon, Eugene, OR 97403. *Web Calculus and Tilting Modules in Type C_2.*

Using Kuperberg's B_2/C_2 webs, and following Elias and Libedinsky, we describe a "light leaves" algorithm to construct a basis for the space of morphisms between arbitrary tensor products of fundamental representations for $\mathfrak{sp}_4$ (and the associated quantum group). Our argument has very little dependence on the base field, and we leverage this to interpret Kuperberg's webs as a diagrammatic presentation for the monoidal category of tilting modules. Finally, we define a new diagrammatic category which we argue is equivalent to both the monoidal category $\mathrm{Rep}(\mathbb{C}^\times \rtimes \mathbb{Z}/2)$ and the semisimplification of the category of tilting modules for $\mathcal{U}_q^{\mathbb{Z}}(\mathfrak{sp}_4)$ at a primitive third root of unity. (Received August 23, 2020)