

# THE COHOMOLOGY RING OF THE GKM GRAPH OF A FLAG MANIFOLD

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If a closed smooth manifold  $M$  with an action of a torus  $T$  satisfies certain conditions, then a labelled graph (called a GKM graph)  $\mathcal{G}_M$  is associated with  $M$ , which encodes a lot of geometrical information on  $M$ . For instance, the “cohomology” ring  $\mathcal{H}_T^*(\mathcal{G}_M)$  of  $\mathcal{G}_M$  is defined combinatorially and often isomorphic to the equivariant cohomology of  $M$ . In this talk, we determine the ring structure of  $\mathcal{H}_T^*(\mathcal{G}_M)$  directly when  $M$  is a flag manifold of classical type.

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