1) For the non-classical Griffiths-Schmid variety attached to $SU(2,1)$, I have explained during my talk that we have three families of embedded Shimura curves (associated to the two Levi embeddings $U(1,1) \subset SU(2,1)$ and to the Sym$^2$ map : $U(1,1) \to SU(2,1)$). They are horizontal subvarieties. It would be interesting to determine if there are any other horizontal curves, and to study their properties.

2) Automorphic forms on $SU(2,1)$ associated to non-holomorphic discrete series give a zero restriction to the above Shimura curves. On the contrary they should contribute to the cohomology of the projective lines which are embedded in the Griffiths-Schmid variety (such $\mathbb{P}^1$ also appeared in Colleen Robles’ talk). It would be very interesting to study such restrictions and to see whether they have some arithmetic properties. This ”integration on cycles” for automorphic cohomology can be generalized to a large class of Mumford-Tate domains and has already been considered by several people (Wells, Wolf...).