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Hirotschi Abo* (abo@uidaho.edu), 875 Perimeter Drive, MS 1103, Moscow, ID 83844-1103. *On the discriminant of a section of a vector bundle*. Preliminary report.

The main purpose of the talks is to discuss the variety formed by global sections of a vector bundle on projective space whose zero scheme is singular. We call such a variety the discriminant locus of a global section of the vector bundle (or just the discriminant of the vector bundle).

The discriminant locus of a vector bundle can be very naturally considered as a generalization of the classical discriminant of a polynomial in one variable, i.e., a polynomial in the coefficients which vanishes at the polynomial whenever it has a multiple root. It is very natural to ask "What is the dimension of the discriminant of a vector bundle? What about the degree?" The discriminant locus of a line bundle is also naturally identified with the dual variety of the Veronese variety, and hence its dimension and degree are already known. The focus of this talk is therefore on the discriminant locus for a vector bundle of higher rank. In this talk, I plan to show that the discriminant locus of a so-called the Schwarzenberger type bundle (STB) is an irreducible hypersurface. I also plan to discuss how the geometry of a non-singular curve associated with STB helps us find the degree of such a hypersurface. (Received September 01, 2016)