Contribution Title:	ADS/CFT AND GENERALIZED COMPLEX GEOMETRY
Authors:	M. Gabella, J. P. Gauntlett, E. Palti, J. Sparks, D. Waldram
Presenting author:	Sparks J.
Affilation:	University of Oxford
E-mail:	sparks@maths.ox.ac.uk
Invited speaker:	Topical session
YRS seminar:	NO

We study the most general supersymmetric AdS_5 solutions of type IIB supergravity that are dual to $\mathcal{N} = 1$ superconformal field theories (SCFTs) in $d = 4$. Such solutions have associated six-dimensional geometries that generalize Calabi-Yau cone geometry. We identify generalized vector fields dual to the dilatation and R-symmetry of the dual SCFT and show that they are generalized holomorphic on the cone. We carry out a generalized reduction of the cone to a transverse four-dimensional space and show that this is also generalized Hermitian. When the five-form flux is non-vanishing, the cone is symplectic and we relate this to the generalized geometry. The symplectic structure can be used to obtain Duistermaat-Heckman type integrals for the central charge of the dual SCFT and the conformal dimensions of operators dual to BPS wrapped D3-branes. We illustrate these results using the Pilch-Warner solution.