1049-05-179   **Anton Dochtermann*** (`anton.dochtermann@gmail.com`), Institut fuer Mathematik MA 6-2, TU Berlin, Strasse des 17. Juni 136, 12047 Berlin, Germany, and **Michael Joswig** and **Raman Sanyal**. *Cellular resolutions of monomial ideals from coarse tropical type decompositions.*

In analogy with the (oriented) matroid ideals of Novik, Postnikov, and Sturmfels, we construct cellular resolutions of monomial ideals associated to arrangements of tropical half-spaces. For us, the generators of the ideals are given by the 'coarse type' decomposition of tropical space determined by the arrangement. These coarse type ideals (and their Alexander duals) are related to other well-studied objects, and in particular we use our methods to show that every fine mixed subdivision of the dilated simplex $n\Delta_{d-1}$ supports a minimal resolution of the nth power of the homogeneous maximal ideal in $k[x_1, ..., x_d]$. (Received March 03, 2009)