1154-05-1745 **Stefaan De Winter*** (sgdewint@mtu.edu), Michigan Technological University, Dept. Mathematical Sciences, Houghton, MI 49931. *Maximal arcs and special point sets in partial geometries.* Preliminary report.

Maximal arcs of Mathon type in $\mathrm{PG}(2, 2^h)$ form the largest class of known maximal arcs. These arcs are constructed by gluing disjoint conics on a common nucleus together. In this talk I will show how these maximal arcs can be interpreted as point sets with nice combinatorial properties in a certain partial geometry, each conic of the arc corresponding to a point in the special point set. This model is interesting in its own right, as it allows an alternative way to study Mathon maximal arcs, but is also interesting as it provides some hope for generalizing Mathon's construction. (Received September 16, 2019)