**Meeting:** 1002, Pittsburgh, Pennsylvania, SS 9A, Special Session on Multivariate Hypergeometric Functions: Combinatorial and Algebro-Geometric Aspects

1002-33-203 **Mikael Passare*** (passare@math.su.se), Matematiska Institutionen, Stockholms Universitet, SE-10691 Stockholm, Sweden. *Hypergeometric series and discriminant amoebas.*

The *amoeba* of a polynomial $f$ is equal to the image of the zero set of $f$ under the logarithmic mapping $(z_1, ..., z_n) \mapsto (\log|z_1|, ..., \log|z_n|)$, whereas the *coamoeba* of $f$ is the corresponding image under the argument mapping $(z_1, ..., z_n) \mapsto (\arg|z_1|, ..., \arg|z_n|)$. We shall explain how one can give a complete description of the domains of convergence of the various power series expansions of an $A$-hypergeometric function in terms of the amoeba of the corresponding $A$-discriminant. Similarly, the co-amoeba of the $A$-discriminant can be used to determine the domains of convergence of the Mellin-Barnes integrals that represent the given $A$-hypergeometric function. (Received September 14, 2004)