1035-37-1988  Parousia Rockstroh* (Parousia.r@gmail.com), Department of Mathematics, 301 Platt Boulevard, Harvey Mudd College, Claremont, CA 91711, and David Brown, Department of Mathematics, 953 Danby Road, Ithaca College, Ithaca, NY 14850. Angular-Asymmetric Binary Branching Trees.

An angular-asymmetric binary branching tree is a fractal tree with two distinct branching angles: $\theta_1$ and $\theta_2$. The properties of these trees are explored. In particular, a method for calculating the maximal height of an angular-asymmetric binary branching tree is developed using $\theta_1$ and $\theta_2$ as well as a scaling ratio $r$ as parameters. The result is proved by induction on the $n$-th level canopy of the fractal tree and results in an efficient analytic method for calculating maximal tree height for the case $\theta_1 = n\theta_2$ where $n \in \mathbb{Z}^+$. (Received September 21, 2007)