

FORMAT for reading a summary file (.sum) in AeroDyn, for use with Bladed-Style FF binary files

T/F indicates a LOGICAL input value

NUM indicates a numeric (REAL, floating-point) input value

The file name must end in “.sum” and have the same root name as the binary file. The words in **bold red font** are required (AeroDyn looks for those key words), and they must appear in the order listed below. There may be other lines mixed in the file, with the exception that the 3 lines following UBAR *must* be the TI parameters.

The file should look like this:

T/F **CLOCKWISE**
NUM **HUB HEIGHT**

NUM **UBAR** (if the character “=” exists, it must precede the numeric entry; the lines with TI must be the next 3 lines)
NUM TI(u) (if the characters “=” or “%” exists, the numeric entry must follow the “=” and precede the “%”; e.g., [TI(u) = 12.42 %])
NUM TI(v) (if the characters “=” or “%” exists, the numeric entry must follow the “=” and precede the “%”; e.g., [= 12.42 %])
NUM TI(w) (if the characters “=” or “%” exists, the numeric entry must follow the “=” and precede the “%”; e.g., [= 12.42 %])

NUM **HEIGHT OFFSET** (optional; if the character “=” exists, it must precede the numeric entry)

The Clockwise flag is used to determine which way the lateral dimension of the grids was written to the binary file, i.e., does it start on the right or the left?

UBar and the TI values are used for normalizing the binary data (the TI need not be the actual turbulence intensities; UBar must be within 0.1 m/s of the mean FF wind speed contained in the binary file)

Height Offset—calculated by $\text{HeightOffset} = \text{HH} - \text{GridBase} - \text{FFZHWid}$ —is used to allow grids that are not centered vertically on the turbine hub-height.