

FORM TO SPECIFY INPUT DATA  
FOR WIND-VELOCITY MODEL ULOGZ2

A logarithmic wind profile of the atmospheric boundary layer neglecting Coriolis forces. The eastward wind is given by

$$u_{\phi} = \frac{u_*}{k} \ln \frac{z}{z_0} \quad \text{for} \quad z > z_0 e$$

$$u_{\phi} = \frac{u_*}{k} \frac{z}{z_0 e} \quad \text{for} \quad z \leq z_0 e ,$$

where  $z = G(r, \theta, \phi)$  is determined by the terrain model and is the height above or some kind of distance from the terrain, depending on the terrain model, and  $r$  is the radial coordinate of the ray point.

Specify--

the model check for ULOGZ2 = 6.0 (W100)

the input data-format code =            (W101)

an input data-set identification number =                      (W102)

an 80-character description of the wind velocity profile:

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the reference wind speed,  $u_*$  =                      km/s, m/s (W103)

von Kármán's constant,  $k$  =                      (W104) (.35 recommended)

the roughness height,  $z_0$  =                      km (W105)

OTHER MODELS REQUIRED: Any wind-perturbation model. Use NPWIND if no perturbation is desired.

( $\overline{uw} = -u_*^2$  is the surface stress at the ground.)