

Vertical velocity profiles		
Mean		
rR	density (RA)	$\bar{\rho}$
rU	u, x-component of the velocity (RA)	\bar{u}
rV	v, y-component of the velocity (RA)	\bar{v}
rW	w, z-component of the velocity (RA)	\bar{w}
rP	π dynamic, reduced pressure (RA)	$\bar{\pi}$
rT	T , caloric temperature (RA)	\bar{T}
re	e , internal energy (RA)	\bar{e}
rh	h , enthalpy (RA)	$\overline{e + (\Gamma_0 - 1)Ma^2 \frac{p}{\rho}}$
rs	s , entropy (RA)	\bar{s}
rB	B , buoyancy (RA)	\bar{B}
fU	u, x-component of the velocity (FA)	$\langle u \rangle$
fV	v, y-component of the velocity (FA)	$\langle v \rangle$
fW	w, z-component of the velocity (FA)	$\langle w \rangle$
fT	T , caloric Temperature (FA)	$\langle T \rangle$
fe	e , internal energy (FA)	$\langle e \rangle$
fh	h , enthalpy (FA)	$\left\langle e + (\Gamma_0 - 1)Ma^2 \frac{p}{\rho} \right\rangle$
fs	s , entropy (FA)	$\langle s \rangle$
Fluctuations		
Tke	Turbulence kinetic energy	$\overline{\frac{1}{2}u_i' u_i'}$
Rxx	Reynolds stress R_{11}	$\overline{u'u'}$
Ryy	Reynolds stress R_{22}	$\overline{v'v'}$
Rzz	Reynolds stress R_{33}	$\overline{w'w'}$
Rxy	Reynolds stress R_{12}	$\overline{u'v'}$
Rxz	Reynolds stress R_{13}	$\overline{u'w'}$
Ryz	Reynolds stress R_{23}	$\overline{v'w'}$
rP2	Pressure fluctuation (RA)	$\overline{\pi'\pi'}$
rR2	Density fluctuation (RA)	$\overline{\rho'\rho'}$
rT2	Temperature fluctuation (RA)	$\overline{T'T'}$
fT2	Temperature fluctuation (FA)	$\langle T'T' \rangle$
re2	internal energy fluctuation (RA)	$\overline{e'e'}$
fe2	internal energy fluctuation (FA)	$\langle e'e' \rangle$
rh2	enthalpy fluctuation (RA)	$\overline{h'h'}$
fh2	enthalpy fluctuation (FA)	$\langle h'h' \rangle$
rs2	Entropy fluctuation (RA)	$\overline{s's'}$
fs2	Entropy fluctuation (FA)	$\langle s's' \rangle$
DerivativeFluctuations		
U_y1		$\overline{\partial_y u}$
V_y1		$\overline{\partial_y v}$
W_y1		$\overline{\partial_y w}$
U_ii2		
U_x2		$\overline{(\partial_x u')^2}$
U_y2		$\overline{(\partial_y u')^2}$
U_z2		$\overline{(\partial_z u')^2}$
V_x2		$\overline{(\partial_x v')^2}$
V_y2		$\overline{(\partial_y v')^2}$
V_z2		$\overline{(\partial_z v')^2}$
W_x2		$\overline{(\partial_x w')^2}$
W_y2		$\overline{(\partial_y w')^2}$
W_z2		$\overline{(\partial_z w')^2}$
U_x3		$\overline{(\partial_x u')^3}$
U_y3		$\overline{(\partial_y u')^3}$
U_z3		$\overline{(\partial_z u')^3}$
V_x3		$\overline{(\partial_x v')^3}$
V_y3		$\overline{(\partial_y v')^3}$
V_z3		$\overline{(\partial_z v')^3}$
W_x3		$\overline{(\partial_x w')^3}$
W_y3		$\overline{(\partial_y w')^3}$
W_z3		$\overline{(\partial_z w')^3}$
U_x4		$\overline{(\partial_x u')^4}$
U_y4		$\overline{(\partial_y u')^4}$
U_z4		$\overline{(\partial_z u')^4}$
V_x4		$\overline{(\partial_x v')^4}$
V_y4		$\overline{(\partial_y v')^4}$
V_z4		$\overline{(\partial_z v')^4}$
W_x4		$\overline{(\partial_x w')^4}$
W_y4		$\overline{(\partial_y w')^4}$
W_z4		$\overline{(\partial_z w')^4}$
Vorticity		
Wx	Vorticity (x-component)	$\overline{\partial_z v - \partial_y w}$
Wy	Vorticity (y-component)	$\overline{\partial_x w - \partial_z u}$
Wz	Vorticity (z-component)	$\overline{\partial_y u - \partial_x v}$
Wx2	Fluctuation of x-Vorticity	$\overline{\partial_z v' - \partial_y w'}$
Wy2	Fluctuation of y-Vorticity	$\overline{\partial_x w' - \partial_z u'}$
Wz2	Fluctuation of z-Vorticity	$\overline{\partial_y u' - \partial_x v'}$
RxxBudget		
Rxx.t	Time-rate of change of R_{11}	$\overline{\partial_t R_{11}}$
Bxx	buoyancy production	$2b_x \overline{u'B'}$
Cxx	advection in y-direction	$-\bar{v} \ \overline{\partial_y u' u'}$
Pxx	shear-production	$-2 \ \overline{u' v' \ \partial_y \bar{u}}$
Exx	viscous dissipation	
PIxx	pressure-velocity correlation Π_{11}	$2 \ \overline{u' p'}$
Fxx	Coriolis production	$2f_y \overline{u' w'}$
Txxy_y	divergence of T_{112} turbulent transport	$\overline{\partial_y R_{112}}$
Txxy	vertical transport T_{112}	$\overline{u' u' v' - 2\nu \partial_y (u - \langle u \rangle)}$
Gxx	pressure variable-density term	0
Dxx	viscous variable-density term	
RyyBudget		
Ryy.t	Time-rate of change of R_{22}	$\overline{\partial_t R_{22}}$
Byy	buoyancy production of Ryy	$2b_y \overline{v'B'}$
Cyy	advection in y-direction	$\bar{v} \ \overline{\partial_y v' v'}$
Pyy	shear production	$-2v' v' \partial_y \bar{v}$
Eyy	viscous dissipation	
PIyy	pressure-velocity correlation Π_{22}	$2\overline{v' p'}$
Fyy	Coriolis production	0
Tyyy_y	divergence of T_{222} turbulent transport	$\overline{\partial_y R_{222}}$
Tyyy	vertical transport T_{222}	$\overline{v' v' v' + 2v' p' - 2\nu (\partial_y v)(v - \langle v \rangle)}$
Gyy	pressure variable-density term	$2(\bar{v} - \langle v \rangle) \partial_y \bar{p}$
Dyy	viscous variable-density term	
RzzBudget		
Rzz.t	Time-rate of change of R_{33}	$\overline{\partial_t R_{33}}$
Bzz	buoyancy production	$2b_z \overline{w'B'}$
Czz	advection in y-direction	$-\bar{v} \ \overline{\partial_y w' w'}$
Pzz	shear production	$-2v' w' \partial_y \bar{w}$
Ezz	viscous dissipation	
PIzz	pressure-velocity correlation Π_{33}	$2\overline{w' p'}$
Fzz	Coriolis production of Rzz	$-2f_y \overline{u' w'}$
Tzzy_y	divergence of T_{332} turbulent transport	$\overline{\partial_y R_{332}}$
Tzzy	vertical transport T_{332}	$\overline{w' w' v' - 2\nu (\partial_y w)(w - \langle w \rangle)}$
Gzz	pressure variable-density term	0
Dzz	viscous variable-density term	
RxyBudget		
Rxy.t	Time-rate of change of R_{12}	$\overline{\partial_t R_{12}}$
Bxy	buoyancy production	$b_x \overline{u' B'} + b_y \overline{v' B'}$
Cxy	advection in y-direction	$-\bar{v} \overline{\partial_y u' v'}$
Pxy	shear production	$-\overline{u' v' \partial_y \bar{v} - v' v' \ \partial_y \bar{u}}$
Exy	viscous dissipation	
PIxy	pressure-velocity correlation Π_{12}	$\overline{p' \ (\partial_y u - \partial_x v)}$
Fxy	Coriolis production of Rxy	$\overline{f_y v' w'}$
Txxy_y	divergence of T_{122} turbulent transport	$\overline{\partial_y R_{122}}$
Txxy	vertical transport T_{122}	$\overline{u' v' v' + u' p'}$
Gxy	pressure variable-density term	$(\bar{u} - \langle u \rangle) \partial_y \bar{p}$
Dxy	viscous variable-density term	
RxzBudget		
Rxz.t	Time-rate of change of R_{13}	$\overline{\partial_t R_{13}}$
Bxz	buoyancy production	$b_x \overline{u' B'} + b_z \overline{w' B'}$
Cxz	advection in y-direction	$-\bar{v} \ \overline{\partial_y u' w'}$
Pxz	shear production	$-\overline{u' w' \ \partial_y \bar{w} - v' w' \ \partial_y \bar{u}}$
Exz	viscous dissipation	
PIxz	pressure-velocity correlation Π_{13}	$\overline{p' \ (\partial_z u - \partial_x w)}$
Fxz	Coriolis production	$\overline{f_y (w' w' - u' u')}$
Txzy_y	divergence of T_{132} turbulent transport	$\overline{\partial_y R_{132}}$
Txzy	vertical transport T_{132}	$\overline{u' w' v'}$
Gxz	pressure variable-density term	0
Dxz	viscous variable-density term	
RyzBudget		
Ryz.t	Time-rate of change of R_{23}	$\overline{\partial_t R_{23}}$
Byz	buoyancy production	$b_y \overline{v' B'} + b_z \overline{w' B'}$
Cyz	advection in y-direction	$-\bar{v} \overline{\partial_y v' w'}$
Pyz	shear production	$-\overline{v' v' \ \partial_y \bar{w} - v' w' \ \partial_y \bar{v}}$
Eyz	viscous dissipation	
PIyz	pressure-velocity correlation Π_{23}	$\overline{p' \ (\partial_z v - \partial_y w)}$
Fyz	Coriolis production	$-\overline{f_y u' v'}$
Tyzy_y	turbulent transport divergence	$\overline{\partial_y R_{232}}$
Tyzy	vertical transport T_{232}	$\overline{v' w' v' + w' p'}$
Gyz	pressure variable-density term	$(\bar{w} - \langle w \rangle) \partial_y \bar{p}$
Dyz	viscous variable-density term	
TkeBudget		
Tke.t	Time-rate of change of Tke	$\overline{\partial_t \frac{1}{2} R_{ii}}$
Tke	Turbulence kinetic energy	$\frac{1}{2} \overline{R_{ii}}$
Buo	buoyancy production of Tke	$\frac{1}{2} \overline{B_{ii}}$
Con	advection in y-direction	$\frac{1}{2} \overline{C_{ii}}$
Prd	shear production	$\frac{1}{2} \overline{P_{ii}}$
Eps	dissipation	$\frac{1}{2} \overline{E_{ii}}$
Pi	pressure-velocity correlation	$\frac{1}{2} \overline{\Pi_{ii}}$
Trp	sum of transport terms	$\frac{1}{2} \overline{T_{ii2}}$
Trp1	transport due to triple correlation terms	$\overline{u_i' u_i' v'}$
Trp2	transport by pressure-velocity correlation	$2\overline{v' p'}$
Trp3	viscous transport	$-2\nu \overline{(\partial_y u_i)(u_i - \langle u_i \rangle)}$
Trp1_y	divergence of triple correlations	$\overline{\partial_y u_i' u_i' v'}$
Trp2_y	divergence of pressure-velocity correlltion	$2\overline{\partial_y v' p'}$
Trp3_y	divergence of viscous transport	$-2\nu \overline{\partial_y (\partial_y u_i)(u_i - \langle u_i \rangle)}$
G	pressure variable-density term	$\frac{1}{2} \overline{G_{ii}}$
D	viscous variable-density term	$\frac{1}{2} \overline{D_{ii}}$
Phi	Mean viscous dissipation rate	
UgradP		$\overline{u_i \partial_{x_i} p}$
HigherOrder		
rU3		
rU4		
rV3		
rV4		
rW3		
rW4		
Acoustics		
gamma		
C2		
Rho_ac		
Rho_en		
T_ac		
T_en		
M.t		
rRP		
rRT		
RhoBudget		
RhoFluxX		
RhoFluxY		
RhoFluxZ		
RhoDil1		
RhoDil2		
RhoTrp		
RhoProd		
RhoConv		$-\bar{v} \overline{\partial_y \rho' \rho'}$
Stratification		
Pot	potential energy	
rRref	background density profile	
rTref	background temperature profile	
BuoyFreq_fr	buoyancy frequency	
BuoyFreq_eq	buoyancy frequency	
LapseRate_fr	lapse rate	
LapseRate_eq	lapse rate	
PotTemp		
PotTemp.v		
SaturationPressure		
rPref	background pressure profile	
RelativeHumidity		
Dewpoint	dewpoint temperature	
LapseRate_dew		
Roughness		
eps_0	Fluid fraction (grid-based approach)	
eps_1	Solid fraction (grid-based approach)	
eps_f	Fluid fraction (volume-based approach)	
eps_s	Solid fraction (volume-based approach)	