

<u>Notation</u>	<u>Meaning</u>
$;$	- Covariant derivative
$,$	- Partial derivative
$( )'$	- Covariant derivative of $( )$ with respect to unit time-like vector $u^a$
$\mathcal{L}_u$	- Lie derivative with respect to $u^a$
$J_u$	- Jaumann derivative with respect to $u^a$
$( )$	- Symmetrization
$[ ]$	- Antisymmetrization
$c$	- Velocity of light
$G$	- Gravitational constant
$p$	- Pressure of the fluid in its rest frame
$\rho^*$	- Density of disordered radiation field.
$u^a$	- flow vector
$\textcircled{D}_a$	- Complexion of a vector
$g_{ab}$	- Fundamental tensor
$\sigma_{ab}$	- Shear tensor of $u_a$
$w_{ab}$	- Rotation tensor of $u_a$
$\Theta_{ab}$	- Strain tensor of $u_a$
$\Theta$	- Expansion of $u_a$
$\gamma_{ab}$	- Three dimensional projection tensor.
$E^{ab}$	- Electric type gravitational field.
$H^{ab}$	- Magnetic type gravitational field.

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$C_{abcd}$	-	Weyl tensor
$p^{ab}$	-	Pressure tensor
$u^a$	-	Acceleration vector
$\epsilon^{ijkl}$	-	Levi-civita symbol
$\eta^{ijkl}$	-	Levi-civita tensor
$\eta_{ijkl}$	-	$(-g)^{1/2}\epsilon_{ijkl}$

$k, \sigma, \rho, \tau, \nu, \mu, \lambda, \alpha, \beta, \gamma, C$  Spin coefficients.

$\phi_{00}, \phi_{01}, \phi_{02}, \phi_{10}, \phi_{11}, \phi_{12}, \phi_{20}, \phi_{21}, \phi_{22}$  Ricci scalars.

$\psi_0, \psi_1, \psi_2, \psi_3, \psi_4$  - Tetrad components of  $C_{abcd}$ .

$D, \Delta, \delta, \bar{\delta}$  - Intrinsic derivative operators.