GYRE Polytrope (POLY) Format

POLY-format files store data describing a polytrope in an HDF5-format file. The attributes of the root group contain global parameters, while 1-D datasets contained within the root group specify the structure data on a grid of n points extending from center to surface. These attributes and datasets are defined as follows:

Variable	Object name	(A)ttribute / (D)ataset	Object datatype	Definition
n_{poly}	n_poly	A	H5T_IEEE_F64LE	Polytropic index
Γ_1	Gamma_1	A	H5T_IEEE_F64LE	$(\partial \ln p / \partial \ln \rho)_{\mathrm{ad}}$
n	n	A	H5T_STD_I64LE	Number of grid points
ξ	xi	D	H5T_IEEE_F64LE	Independent variable in Lane-Emden equation
Θ	Theta	D	H5T_IEEE_F64LE	Dependent variable in Lane-Emden equation
$\mathrm{d}\Theta/\mathrm{d}\xi$	dTheta	D	H5T_IEEE_F64LE	—
Ω	Omega_rot	D	H5T_IEEE_F64LE	Rotation angular velocity