

F17.4.12 VOLUME DATA

VOLUME DATA ... If volumes are needed (for calculating fission densition, fluxes, etc.), then the data necessary to determine them are entered.

READ VOLU VOLUME PARAMETERS **END VOLU**

The VOLUME PARAMETERS include specifying the type of calculation to determine the volumes, and additional parameters needed for the selected type. The default type is NONE, i.e., no volume calculation will be done, and the volumes will be arbitrary. No other data is needed for this type. The type of volume calculation is specified as

TYPE= *vcalc* where *vcalc* can have the values

NONE	(default) No volume calculation, volumes are arbitrary
TRACE	A trapezoidal integration will be performed.
RANDOM	A Monte Carlo integration will be performed.
READ	Volumes will be read in.

XP=	<i>xp</i>	The plus x face of the encompassing cuboid.
XM=	<i>xm</i>	The minus x face of the encompassing cuboid.
YP=	<i>yp</i>	The plus y face of the encompassing cuboid.
YM=	<i>ym</i>	The minus y face of the encompassing cuboid.
ZP=	<i>zp</i>	The plus z face of the encompassing cuboid.
ZM=	<i>zm</i>	The minus z face of the encompassing cuboid.

These are used when **TYPE=TRACE** or **RANDOM** is specified. The code can calculate a correct encompassing cuboid for most global unit boundaries, but inputing values allows limiting where volumes will be calculated, or allows calculating volumes for cases where **KENO-VI** is unable to determine a surrounding cuboid.

NRAYS= *ntotal* The number of intervals used in the trapezoidal integration (default - 100000).

BATCHES= *nloop* The number of batches to be used in the Monte Carlo integration (default - 500).

POINTS= *nplp* The number of points per batch used in the Monte Carlo integration (default - 1000).

SAVEVOLS= *savol* The logical unit number to write the calculated volumes on.

IFACE= *fname* The face of the enclosing cuboid that the trapezoidal integration will be done over. **KENO-VI** will integrate over the face with the smallest area by default. This allows specifying a different face.

READVOLS= *vol* The user specified volumes are input using the options of a free form array read. The first entry is the number of volumes that will be specified. One volume is required for each media record in the geometry data. The data are terminated by the end of the VOLUME block, so this keyword must be the last keyword entered. If **TYPE** has not been set, it will be set to **READ** when this keyword is encountered. Other **TYPE**'s are invalid.