

XII.A. TUTORIAL

A series of computer exercises has been developed as an aide to persons wishing to learn how to run SAMMY. Novice users are urged to work their way through the entire series of exercises in numerical order; experienced SAMMY users may find particular exercises helpful when beginning to use an unfamiliar feature.

Files for each exercise are located in a separate subdirectory; instructions for the exercise are given in the text file README.FIRST, located in that subdirectory. The author's results from running the exercise are in subdirectory "answers".

Table XII A.1 explains which SAMMY features are addressed in the examples. Note that each example assumes that the user has knowledge of features described in earlier examples. Also note that the first example (ex000) teaches the use of the ORNL plotting packages FORODF [JC78] and RSAP [RS03]. (The RSAP code is not yet available for public release.) For users at facilities not using these plotting packages, this example should be modified.

Table XII A.1. Computer exercises for the student

No.	Description of feature emphasized in this example
000	Use of plotting package FORODF
001	Simple one-resonance nonfissile nucleus; capture experiment
002	Fissile nucleus, several resonances; capture experiment
003	Different kinds of cross sections
004	$l > 0$ (s, p, d waves); $I > 0$
005	Doppler broadening
006	Resolution broadening (Gaussian)
007	Resolution broadening (ORR)
008	Resolution broadening (RPI)
009	Normalization
010	Backgrounds
011	More than one channel radius
012	Multiple nuclides within a single sample
013	Uncertainties on parameters
014	Angular distributions
015	Sequential vs. simultaneous fitting of data
016	Sequential fitting of three data sets; parameter covariance matrix as input
017	Several data sets; varying data-reduction parameters
018	Data covariances (implicit and explicit)
019	Self-shielding and multiple-scattering corrections to capture yields
020	Integral quantities
021	Almost real data: W transmission with many complications
022	Almost real data: ^{235}U . How to do an evaluation
023	Finding input errors
024	Run program LADDER
025	Run program SAMDIS
026	Create ENDF File 2
027	Running SAMMY with ENDF files for input