How to prepare yourself for the COLTRIMS ALS beamtime

Here are some tools that will help you:

a) Introduction to the big picture:
Ask for the beamtime logbook in case you did not receive an email. This logbook is a WORD file which is created well before the beamtime and contains the basic ideas and questions of the experiments. It may come with some papers or references.
Do some literature search yourself:
http://apps.webofknowledge.com/
for instance try to:
find cross sections and check cross section of background events
find break-up channels
find potential curves
find electron energy distributions and KER
find electron angular distributions and beta parameters

b) Get familiar with the hardware and software:
See an ALS experiment example:
http://amo-csd.lbl.gov/downloads/TimurOsipovPhDThesis.pdf

Assembly, operation and optimization of detectors, power supplies, amplifiers, constant fraction modules, COBOLD data acquisition etc.: http://www.roentdek.com/manuals/

Voltage divider simulation:
http://falstad.com/circuit/

COLTRIMS spectrometer simulation:
http://amo-csd.lbl.gov/downloads/COLTRIMS.xls
for instance try to find a field geometry that collects the lightest and fastest ions and high energetic electrons with full detection angle. You may find suggestions for appropriate configurations in the logbook.

Safety in general at LBNL:
http://amo-csd.lbl.gov/downloads/SafetyWatchList.pdf
http://amo-csd.lbl.gov/safety.php

Explanation and Hazards of the COLTRIMS endstation:
http://amo-csd.lbl.gov/downloads/IHAD_COLTRIMS.pdf
http://amo-csd.lbl.gov/downloads/COLTRIMSUpload Files.zip

Offline analysis:
http://amo-csd.lbl.gov/downloads/RootAndLMF2ROOT.pdf
http://amo-csd.lbl.gov/downloads/LMF2ROOT.pdf
http://amo-csd.lbl.gov/downloads/Analysis-ToDo-List.pdf

c) Overview of tasks during the beamtime
Moving and setting up of the apparatus:
http://amo-csd.lbl.gov/downloads/COLTRIMS%20Plan%20BL11.pdf
http://www.youtube.com/watch?v=sC6wLRIGol4&feature=youtu.be

Preparing the setup for the beamtime-break and restarting it afterwards:
http://amo-csd.lbl.gov/downloads/COLTRIMS%20BREAK.pdf

Disassembly of the COLTRIMS setup:
http://amo-csd.lbl.gov/downloads/DisassembleCOLTRIMS.pdf

d) Get familiar with important people's names:
find phone numbers and offices here: http://www.lbl.gov/ds/

CSD safety manager:	Jerry Bucher
ALS safety manager:	James Floyd
Experiment safety coordinator:	David Malone
Gas safety:	Doug Taube
Gases at Building 7:	Gary Giangrasso
Gas Regulators:	Jamie Abenojar
ALS Shop at Building 7:	Todd Anderson
Telescope and Stands:	Harry Meyer
Cooling Water:	James Borsos
User Machine Shop:	Kurt Krueger
Crane Issues:	Mike Wisherop
Electrical Maintenance:	Tim Kuneli
>50V Electrician:	Steve Cooper
NIM Electronics Repair:	Eric Henson
PC Hardware Support:	Tim Kellog
Vacuum Tech:	Frank Zucca
Vacuum Tech (night shift):	Steve Klingler
Vacuum Tech and Rigger:	Denis Hull
Rigger and Floor Drilling/Seismic:	Monroe Thomas
Beamline 4 Scientist:	Elke Arenholz
Beamline 6 Scientist:	Marc Hertlein
Beamline 6 Scientist:	Ernie Glover
Beamline 6 Technician:	Bruce Rude
Beamline 7 Scientist:	Eli Rotenberg
Beamline 10 Scientist:	Alex Aguilar
Beamline 10 Scientist:	David Kilcoyne
Beamline 11 Scientist:	Tolek Tyliszczak
Beamline 11 Scientist:	Hendrik Bluhm
Beamline 11 Scientist:	David Shuh