

ASTR 3520
Astronomical Observations and Instrumentation II: Spectroscopy
Fall 2007

Lab 5:
Proposal Due 9 October 2007
Presentation Due: Last week of classes

Purpose:

The main exercise in this class will be your semester project. You can use data from the 24" SBO telescope, from the VLA, or data obtained during our field trip to Apache Point Observatory. Our field trip will occur from Sunday, 28 October till Friday, 2 November. On Tuesday, 2 October, you were to hand me a paragraph outlining your project. Next Tuesday, I want a "formal" proposal similar in format to proposals you would submit to any observatory.

I hope one group takes on the analysis of the radio data we will obtain in 4 weeks at the VLA. The target is the M82 star-burst nucleus.

The proposal elements are:

A one-line descriptive title:

List of authors (students; No more than 3 per group):

Abstract: A concise statement of your goals, which instrument you will use, and the problem you are solving.

The Science Justification:

Introduction:

A one paragraph description of the scientific context of your project. Why is it interesting, how does it fit into the big picture of modern astronomy?

Project Description:

Describe what you propose to observe. Describe the target, list its position, magnitude of flux, size, etc. Describe what instrument you will use and in what mode you will use it.

Technical feasibility:

Present an exposure time calculation for your instrument settings. Estimate how much time you will need, including calibration exposures, overheads, and target acquisition.

Analysis Strategy:

Describe who will do what with the data.

Target tables:

List targets with their properties, including coordinates and fluxes.

Instrument parameters:

List the gratings, cal lamps, pixel scales, resolutions, etc that went into the exposure time estimation.

For each target provide a finder chart that you will need to use at the telescope or target acquisition.