

Solicitation Title: The *Living with a Red Dwarf* Program
Solicitation Deadline: January 31st, 2020
Solicitation Sponsor: Drs. Scott Engle and Edward Guinan
Solicitation Funding: External (grants)

Solicitation Summary:

We are seeking a Villanova undergraduate student (possibly two, depending on funding) for the summer research opportunity to analyze newly obtained and archival X-ray – to – optical observations of K- and M-type main sequence stars (dwarfs). Analyses would include determining the X-ray and/or UV emissions of these stars, as well as stellar flare-rates, to gauge the stars' ages and the radiation environments of any hosted exoplanets. Depending on exactly when observations are carried out and made available, this project can include reduction and analysis of X-ray data from the *XMM*, *Chandra* and *NICER* missions in addition to photometric observations from ground-based telescopes and surveys to look for flares and stellar rotation.

Solicitation Requirements:

The research position is open to all Villanova undergraduates that are majoring in astronomy or a closely related field. Applicants need to provide:

- a current CV that highlights commitment to excellence in the applicant's current field of study;
- a 3-page proposal that discusses the scientific background and proposed work timeline;
- a 1-page narrative on expected outcomes and procedures; and
- a 1-page personal statement that conveys the suitability and interest of the applicant.

To apply for this position, interested students need to submit their applications by the deadline in the form of a single pdf document. Only electronic submissions are accepted; email your applications to scott.engle@villanova.edu. Any applications received after the deadline will be returned without review.

Solicitation Documents:

In order to prepare a strong proposal, the following sources might be useful

- Research papers describing the [overall program](#) and some [more recent results](#)

In addition to these, applicants are encouraged to use their own sources of information.

Solicitation Outcome Announcement:

The review of solicitation material will begin on Feb 1, 2020 and a short-list will be assembled by Feb 14, 2020. The highest-ranking candidate will be informed and offered a position. In the event that the highest-ranking candidate accepts the position, the solicitation will be closed. Otherwise the position will be offered to the next highest ranking applicant until the position is filled.