SNEWS Article for RASC Handbook

The last nearby supernova, SN1987A, discovered by Canadian astronomer Ian Shelton, was an event of exceptional scientific importance. Even after 35 years, it is being studied and is yielding rich, new astrophysical information.

The next galactic (or nearby) supernova will be a once-in-a-lifetime experience, highly anticipated by both scientists and the public. With the great advancements in instrumentation, it has the potential to yield an unimaginable treasure of new scientific insights based-on professional and amateur astronomical observations.

The SuperNova Early Warning System (SNEWS) is an international collaboration of particle physics experiments dedicated to providing an early-warning alert of the next galactic supernova. The detection of a burst of supernova neutrinos in multiple experiments will generate a prompt SNEWS alert, that will precede the visible SN outburst by minutes to hours. This will allow professional and amateur astronomers to ready their ground- and space-based observatories for the first photons to arrive. SNEWS is also preparing tools and information for both scientists and the public in advance of that great day. As well, SNEWS is collaborating with citizen-scientist organizations, such as the AAVSO, to provide interested observers the opportunities to participate in pro-am research projects, such as a campaign to regularly monitor SN candidate stars and to volunteer to be supernova first responders.

For more information, please check out the SNEWS web-page at https://snews2.org/.

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