



10991 - Light Echoes from SN 2006X in M100

Cycle: 15, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

0 Total Orbits Used

ABSTRACT

We propose a minimal investment of spacecraft time to discover and confirm a light echo from Supernova 2006X in M100, the closest Type Ia in many years. Our spectroscopic and photometric data indicate that this SN sits behind a large amount of interstellar dust likely to produce a strong echo signal. This is one of very few cases where we will be able to study the three-dimensional environment of a SN Ia in full detail, and begin to understand how environmental effects play into the evolutionary and observational factors which influence the utility of SN Ia as standard candles for probing cosmology. We propose an efficient program to definitively detect (or not) a light echo of reasonable signal strength, to confirm that it is an echo by demonstrating apparent superluminal motion if it exists, to map the three-dimensional geometry of the reflecting interstellar structures, and to detail the reflectance properties of the dust which can be used to constrain its grain size and composition distribution.

OBSERVING DESCRIPTION

Proposal 10991 - Overview

TBD