

## Technical Page

This proposal has not been submitted before.

Proposal Type: Short  
 General Category: Astronomy  
 Sub-Category: Spectroscopy  
 Observation Category: Extragalactic  
 Total Time Requested: 3 Hours  
 Minimum Useful Time: 0.5

**Proposal Title:** Sumo Puff: Tidal Debris or Disturbed Ultra-Diffuse Galaxy?

*ABSTRACT:*

This short proposal requests 3 hours to observe the very interesting diffuse stellar cloud “Sumo Puff” to attempt to constrain its distance and gas fraction using the HI spectral line. Sumo Puff is not visible in Sloan Digital Sky Survey images, and was recently discovered in deep Subaru data. It is ultra low surface brightness, and appears very extended. However, its nature is poorly understood since optical redshift measurements are impractical at this low surface brightness. Thus, this proposal aims to attempt to detect HI emission in Sumo Puff, constraining its distance, and its formation scenarios. Though HI may not be detected, the potential payoff is worth the short investment of telescope time.

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### Remote Observing Request

- Observer will travel to AO
- Remote Observing
- In Absentia (instructions to operator)

### Instrument Setup

L-wide

### Atmospheric Observation Instruments:

**Special Equipment or setup:** none

### RFI Considerations

## **Frequency Ranges Planned**

1340-1420

This proposal requires coordination with Punta Salinas radar within the band 1222-1381 MHz..

This proposal requires coordination with GPS L3 at 1381 MHz.