

TEMPO at Sitting Bull College

PROGRESS TOWARD AN ATMOSPHERIC SCIENCE PROGRAM

PRESENTATION BY DR. GARY HALVORSON

TO THE TEMPO SCIENCE TEAM MEETING, JUNE 2, 2021

Sitting Bull College – who we are

- ▶ SBC is a Tribal College located in the Standing Rock Sioux Reservation in North Dakota.
- ▶ We received a NASA MUREP MIRO grant to develop an Atmospheric Science program.
- ▶ Established the Great Plains First Facility for Atmospheric Research and Education (FIARE) (sittingbull.edu/fiare).
- ▶ We are developing an Atmospheric Science academic program with both undergrad and graduate courses.
- ▶ We are developing a research program which is tied to the TEMPO mission.



Education

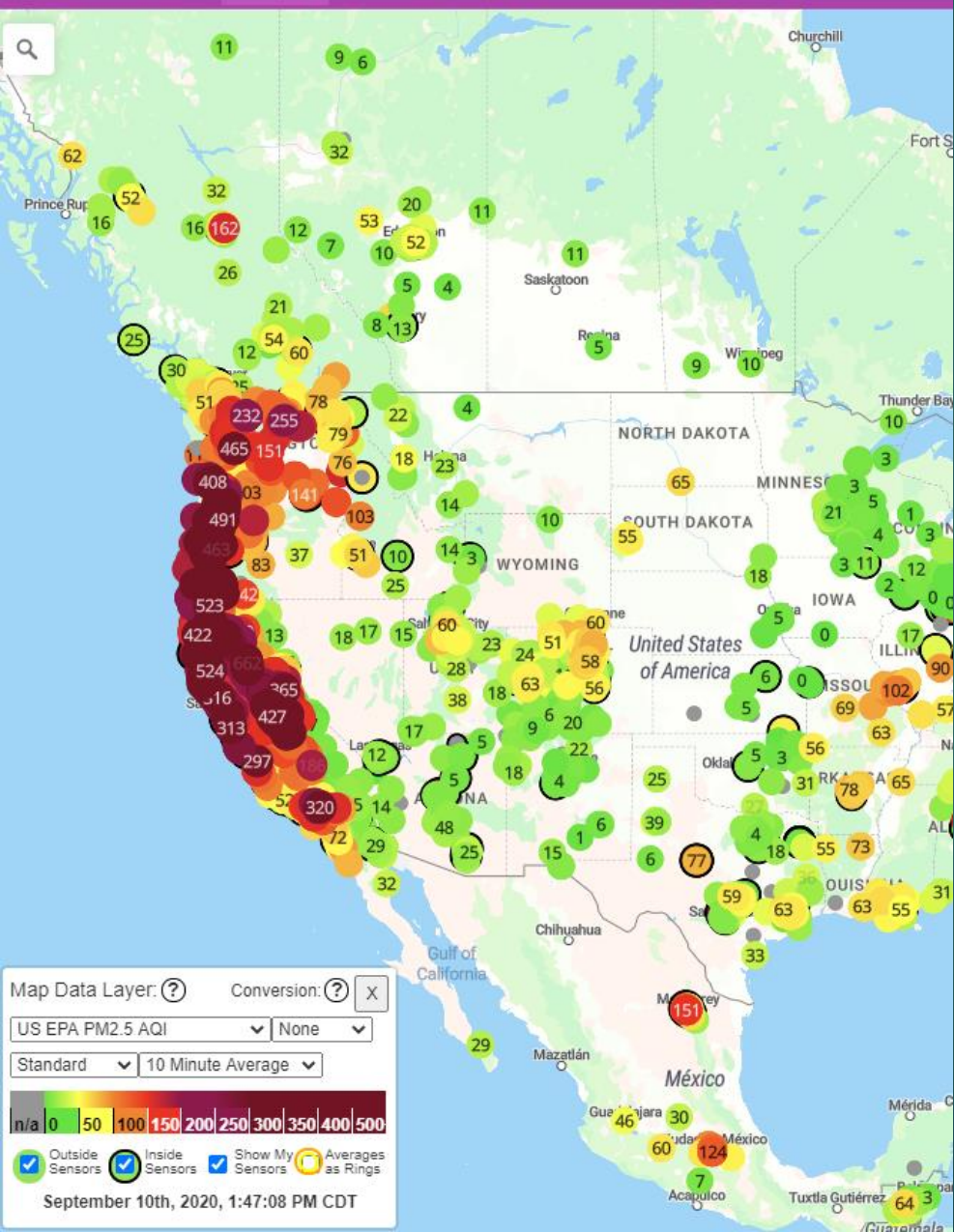
- ▶ Education – as part of AS, BS and MS degrees in Environmental Science.

We developed three undergrad courses and four graduate courses in Atmospheric Science

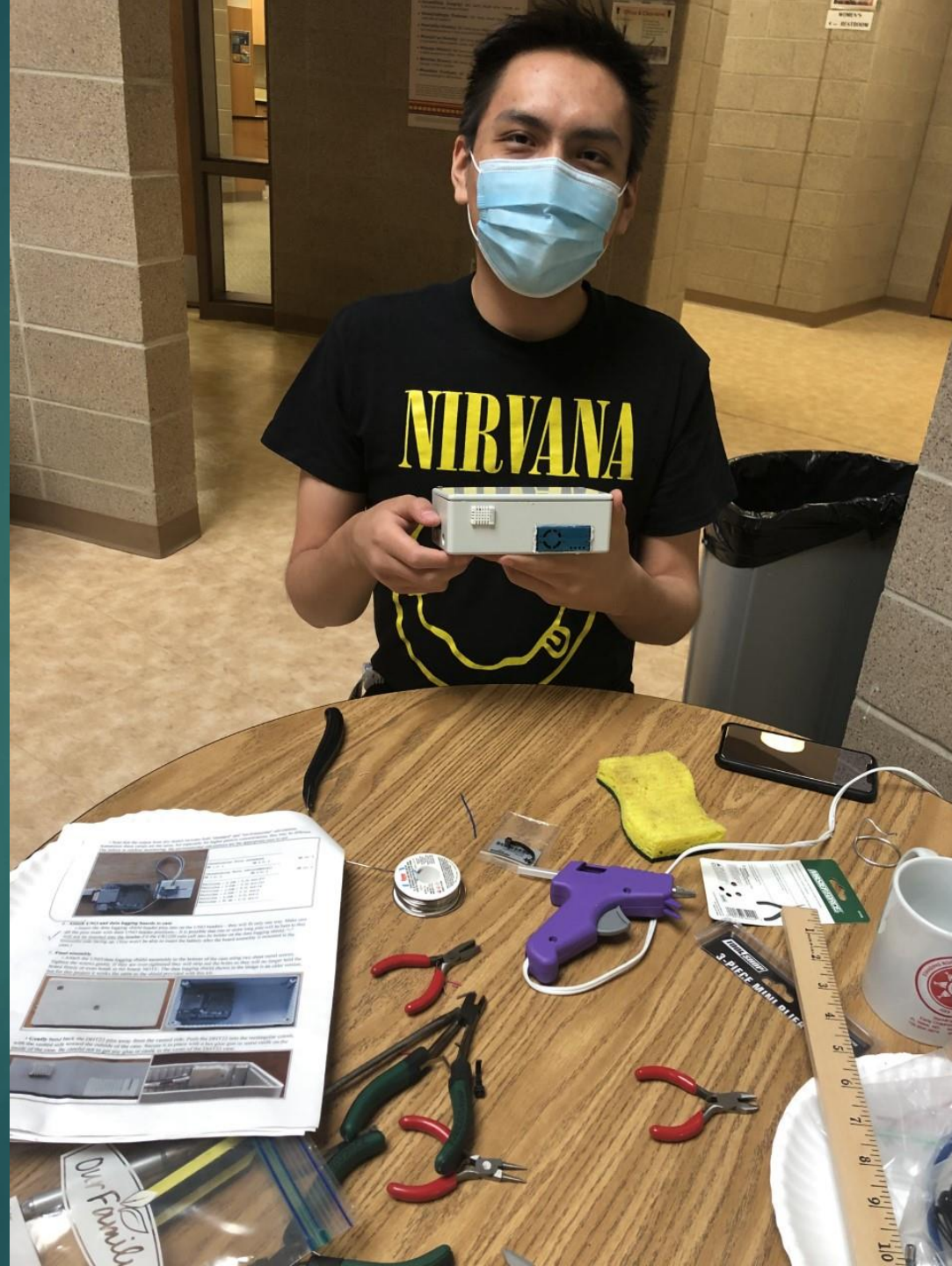
We recruited 6+ students for our MS degree. Two of them remain and are doing well. Covid-19 was the main problem. Five NASA Interns last year and three starting this summer.

A PhD student from UND taught the courses. We are looking for a Atmospheric Science Instructor to teach and develop the research program. If interested contact me gary.halvorson@sittingbull.edu.









TEMPO Research

- ▶ New research science building is under construction. Instrumentation will be mounted on the roof of this building.
- ▶ Instrumentation will include: in situ O_3 , NO_2 , $PM_{2.5}$, ozone sondes, Met station, ceilometer, Pandora, aironet.
- ▶ The three NASA Interns will begin training in the use of atmospheric instrumentation and data from the ceilometer and Pandora.
- ▶ We are working with TEMPO Team scientists to help us develop this research program.





The Future

- ▶ Provide research opportunities for our graduate students in atmospheric science.
- ▶ Continue training our students and faculty in the use of atmospheric instrumentation to the point where we are self sufficient.
- ▶ Integrate some of our research into NASA research programs.
- ▶ Hire atmospheric scientists to continue the program.
- ▶ Expand this program to other Tribal Colleges.