

4th Quarterly Issues Report*

October 1, 2022 – December 31, 2022

*KSLU over-the-air broadcast signal went silent May 27, 2022 under STA # 0000190921. Program operations continue online at www.KSLU.org until Hurricane Ida-related repairs are made to broadcast facility.

PROGRAM - STEM Radio

Science, Technology, Engineering, Math. That's STEM Radio, a daily show that focuses on some interesting STEM topic. Host Dr. Rhett Allain is an associate professor of physics at Southeastern Louisiana University as well as a science consultant for shows like MythBusters and MacGyver. STEM Radio airs Monday through Friday at 8:55 a.m., just before World Café.

DATE	TIME	TOPIC
		<i>Energy Misconceptions</i>
10/3/22	3:00	Does wind energy cause cancer and is it dangerous to birds? We discuss the ROI on wind energy and wind's energy footprint.
10/4/22	3:00	What is clean coal? We talk about carbon capture and methods for removing sulfur dioxide, nitrogen oxide and mercury.
10/5/22	3:00	We compare the energy footprint of wind, solar and coal.
10/6/22	3:00	Are wind and solar too expensive? We discuss the costs associated with wind, solar and hydro.
10/7/22	3:00	How does nuclear power factor into our discussions this week?
		<i>Artificial Intelligence</i>
10/10/22	3:00	We take a brief look at the current state of AI.
10/11/22	3:00	Our discussion looks back at the history of AI.
10/12/22	3:00	What does the future hold for AI?
10/13/22	3:00	Our discussion on AI delves into the ethical. Is AI good or bad?
10/14/22	3:00	Will AI take your job?
		<i>Optics and Vision</i>
10/17/22	3:00	We discuss what happens when you are in a completely dark room.
10/18/22	3:00	What causes the colors in a sunset? We also discuss green sparks.
10/19/22	3:00	We've all seen the blurred lines of a heat wave, but what exactly cause the distortion associated with a mirage?
10/20/22	3:00	You may have created a pinhole camera in junior high. We discuss the science behind it.
10/21/22	3:00	Mirrors reflect what is in front of them, but exactly how much of yourself can you see in a mirror?
		<i>The Physics of Scuba Diving</i>

10/24/22	3:00	Under Pressure – What is pressure? Pressure units? Atmospheric pressure? Pressure at depth? What does a regulator do and how does it compare to breathing through a snorkel?
10/25/22	3:00	We discuss temperature and thermal conductivity, wet suits and dry suits.
10/26/22	3:00	Decompression – the problem with oxygen and nitrogen.
10/27/22	3:00	How is your vision affected?
10/28/22	3:00	We discuss the future of scuba diving. Could we possibly get rid of tanks?
		<i>Space Q&A (Re-run)</i>
10/31/22	3:00	Is there gravity in space? What causes gravity? Why do astronauts float?
11/1/22	3:00	What is a black hole? Do black holes suck up everything?
11/2/22	3:00	Could you live on Mars?
11/3/22	3:00	Are we really made of star material?
11/4/22	3:00	How big is the universe? What is the Big Bang?
		<i>Radioactivity</i>
11/7/22	3:00	We discuss the nature of the atom and isotopes.
11/8/22	3:00	We discuss the discovery of electrons, protons and neutrons.
11/9/22	3:00	What everyday items are radioactive? (ex. Bananas, smoke detectors, Fiesta ware plates)
11/10/22	3:00	What is carbon dating and how does it work?
11/11/22	3:00	We discuss the dangers that lurk in WWII shipwrecks.
		<i>History of Social Media</i>
11/14/22	3:00	Where did it all begin? What is Arpanet?
11/15/22	3:00	We discuss the first generation of social media platforms.
11/16/22	3:00	Is social media good or bad? Should it be censored?
11/17/22	3:00	We discuss Elon Musk's purchase of Twitter, his plans and how Twitter data has been used to predict events.
11/18/22	3:00	What is the future of social media? What about bots?
		<i>Black Holes at the Center of the Galaxy</i>
11/21/22	3:00	What is at the center of the Milky Way? (not the candy bar)
11/22/22	3:00	What exactly is a black hole?
11/23/22	3:00	Why radio telescopes? What exactly are they and how do they work?
11/24/22	3:00	How do you see a black hole?
11/25/22	3:00	Why do we study black holes? We study things just because – and sometimes that's good.
		<i>What Can We See with the Webb Telescope</i>
11/28/22	3:00	We discuss space telescopes. It's all about the air – mountains are better and Louisiana is bad.
11/29/22	3:00	We compare the Hubble Telescope and the James Webb Space Telescope.
11/30/22	3:00	Extra-terrestrial farming – how would it work on other planets?

12/1/22	3:00	Why do they used infrared and how far back in time can they see?
12/2/22	3:00	Can you look at the Earth? Are they just giant spy telescopes?
		<i>Light & Color</i>
12/5/22	3:00	What is light?
12/6/22	3:00	How do humans perceive light and what would happen if you were in a completely dark room?
12/7/22	3:00	What are the primary colors of light? Does the same apply to paint?
12/8/22	3:00	We discuss hidden images with colors and filters.
12/9/22	3:00	What exactly is infrared light?
		<i>History of Measuring Time - Clocks</i>
12/12/22	3:00	What is time and how do we measure it? What about ancient people? Why does it only go one direction?
12/13/22	3:00	We discuss time-keeping devices – wall clocks, pocket watches and atomic sync clocks.
12/14/22	3:00	We discuss modern time – adding seconds every year, Daylight Savings time and how is Easter calculated.
12/15/22	3:00	How does Stonehenge fit in with all of this?
12/16/22	3:00	We discuss different concepts for timekeeping – candle clock, water clock, geological clock, carbon dating.
		<i>Physics in your Smart Phone</i>
12/19/22	3:00	How does the GPS in your phone function?
12/20/22	3:00	We discuss the use of LED lights.
12/21/22	3:00	We discuss Hall Effect Sensors and Accelerometers.
12/22/22	3:00	We discuss the use of face ID and infrared.
12/23/22	3:00	What is a cosmic ray detector?
		<i>Important Stuff for the Future</i>
12/26/22	3:00	Will robots take our jobs?
12/27/22	3:00	How serious are the effects of climate change?
12/28/22	3:00	Will we see more pandemics?
12/29/22	3:00	We discuss genetic engineering.
12/30/22	3:00	What would a government look like on Mars?

The Best of Our Knowledge

WAMC's long-running program on education, research and ideas now airs on KSLU.

DATE	TIME	SHOW #	TOPIC
10/22/2022	30:00	1674	The Best of Our Knowledge, WAMC's long-running program on education, research, and ideas, has a new host. On the next episode, WAMC's Lucas Willard will explore a virtual painting and learn about a university course that examines doing...nothing!
10/29/2022	30:00	1675	On this episode of The Best of Our Knowledge, we'll learn more about a report from the Open Space Institute that examines how to make the great outdoors accessible to all. Host Lucas Willard speaks with OSI's Kathy Mosher. We'll explore New York State's definition of a sound and basic education, with a report from WMHT's Dan Clark. And we'll have a taste test with potato chip historian Alan Richer.
11/5/2022	30:00	1676	On this episode of The Best of Our Knowledge, we'll learn about a new anthology of creative writings by incarcerated individuals in Northern New York. And, in a seasonal project, attempt pressing apple cider at home.
11/12/2022	30:00	1677	On this episode of The Best of Our Knowledge, host Lucas Willard will speak with Darren Reisberg, who was recently inaugurated as Hartwick College's 11th president. And The Best of Our Knowledge's Jody Cowan will report on how some institutions are looking to connect graduating students with industry to address the labor shortage.
11/19/2022	30:00	1678	On this episode of the Best of Our knowledge, we'll attend naturalization ceremonies for new Americans – to hear from some of the country's newest citizens and to speak with high school students who hosted a ceremony as part of their education on government. And a \$50 million endowment will support Bard College's new Native American and Indigenous Studies program.
11/26/2022	30:00	1679	On this episode, host Lucas Willard will speak with Cate Larsen, a geologist and science communicator based in upstate New York, about how social media can play a critical role in education. And The Best of Our Knowledge's Ian Pickus will speak with scientist Lija Treibergs, who is embarking on a three-month trip to Antarctica.

12/3/2022	30:00	1680	On this episode, host Lucas Willard will visit the FLOCKArt mobile gallery at an upstate New York school to speak with the artists, teachers, and students that are bringing art to young learners in a new way. And The Best of Our Knowledge's Jim Levulis will speak with staff at Fort Ticonderoga about the fort's recent acquisition of thousands of historic artifacts.
12/10/2022	30:00	1681	On this episode, students at an upstate New York High School get a primer on international relations during a visit with U.S. and Korean officials. Host Lucas Willard with Skidmore College astrophysicist Mary Odekon NASA's Artemis program and the concept of retro-futurism. And The Best of Our Knowledge's Dave Lucas reports on the role machine learning could have in predicting the next pandemic.
12/17/2022	30:00	1682	On this episode, we'll learn more about the Hudson Mural Project, an initiative now in its third year that encourage school age children and community residents to explore the concept of self and city. In addition to speaking with a visual artist involved with the Hudson Mural Project, we'll also listen to a sound poem produced as of the 2022 project.
12/24/2022	30:00	1683	Cazenovia College, a small private institution in Cazenovia, New York, announced on December 7th, 2022 that it would close after the spring 2023 semester. As the college prepares for closure, we'll speak with Cazenovia College President David Bergh and a third-year student about their upcoming last semester at the college.
12/31/2022	30:00	1684	On this episode, host Lucas Willard will speak with Katie Bisset, a survivor of the 2012 Sandy Hook school shooting, about a tenth anniversary remembrance she recently organized at Siena College in Loudonville, New York. We'll also learn about an upcoming webinar series focused on addressing mental health in education.

The Book Show

DATE	TIME	SHOW #	TOPIC
10/22/2022	30:00	1787	Andrea Barrett, a Pulitzer Prize finalist, is the author of the new book "Natural History: Stories" The collection connects the lives of the family of scientists, teachers and innovators that she has featured in her writing throughout her career.
10/29/2022	30:00	1788	George Saunders is an American great, a writer who continues to astound, evolve and get deeper. His new book, "Liberation Day," is his first collection of stories since his National Book Award finalist "Tenth of December" was published eight years ago.
11/5/2022	30:00	1789	Pulitzer Prize-finalist and best-selling author Barbara Kingsolver's new novel, "Demon Copperhead" re-imagines Charles Dicken's "David Copperfield" set in West Virginian Appalachia at the beginning of the opioid epidemic.
11/12/2022	30:00	1790	John Irving has written some of the most acclaimed books of our time, among them: "The World According to Garp," "A Widow for One Year," "A Prayer for Owen Meany" and "The Cider House Rules." He now returns with his first novel in seven years "The Last Chairlift."
11/19/2022	30:00	1791	Celeste Ng is the bestselling author of "Little Fires Everywhere." Her new novel, "Our Missing Hearts," is about a mother's unbreakable love in a world consumed by fear. Bird's mother was a Chinese American poet who disappeared. When Bird is 12, he embarks on a journey to put together the pieces, aided by an underground network of librarians.
11/26/2022	30:00	1792	Jennifer Egan's new novel, "The Candy House," is a sibling novel to her Pulitzer-Prize and National Book Critics Circle-winning "A Visit from The Goon Squad." It asks big questions about the totalizing and flattening effects of digital culture, privacy, and surveillance. It is a place where people can upload their actual memories, and let other people live in theirs.
12/3/2022	30:00	1793	#1 New York Times bestselling author John Grisham returns to Mississippi for his latest legal thriller "The Boys from Biloxi," The story of two sons of immigrant families who grow up as friends but ultimately find themselves on opposite sides of the law.
12/10/2022	30:00	1794	Sheila Heti is a philosopher of modern experience, and she has reimagined what a book can hold. In her latest, Pure Colour, she

			presents a contemporary bible, an atlas of feeling, and an absurdly funny guide to the great (and terrible) things about being alive.
12/17/2022	30:00	1795	Booker Prize-winning author John Banville's new novel "Singularities" tells a playful, multilayered story of nostalgia, life and death, and quantum theory.
12/24/2022	30:00	1796	Bestselling author Nick Hornby is an icon in American pop culture and his latest brings his signature wit and appeal to his first nonfiction book in many years, "Dickens and Prince: A Particular Kind of Genius." In it, he studies the cosmic link between these two unlikely creative geniuses.
12/31/2022	30:00	1797	Emily St. John Mandel is the award-winning, best-selling author of "Station Eleven" and "The Glass Hotel" She returns with a novel of art, time, love, and plague that takes the reader from Vancouver Island in 1912 to a dark colony on the moon 500-years later, unfurling a story of humanity across centuries and space. Her new book is "Sea of Tranquility."

Strange Universe with Bob Berman

DATE	TIME	SHOW #	TOPIC
10/22/2022	2:30	237	Two of the five brightest stars, Canopus and Vega, are antipodal to each other on the celestial sphere. So when Vega becomes the north star 12,000 years from now, Canopus will then be the south star. And what a spectacular situation – having a dazzling, zero magnitude luminary marking each of our poles.
10/29/2022	2:30	238	The third-most-common gas we breathe is Argon. Argon, the gas inside the round, hot light bulbs that used to be everywhere, was discovered by a Scot, William Ramsay, who eventually won the Nobel Prize for his work with gases. Tune in to hear what else Ramsay has discovered and its influence on shopping.
11/5/2022	2:30	239	The greatest sky experiences are often accompanied by excitement and shouts. But a lunar eclipse rarely creates such a reaction. So a realistic expectation of the eclipse next

			Monday night, November 7, might be “fascinating” rather than “mind-blowing.” Still, it’s very cool to see the Moon enter our planet’s normally-invisible shadow. The shadow’s round shape proves we really live on a ball. And during totality almost everyone marvels at the Moon’s strange reddish color.
11/12/2022	2:30	240	Lunar eclipses appear best through binoculars or just the naked eye. The full moon is never a good telescope target, and hosting Earth’s blurry-edged shadow doesn’t help much. It’s not terrible, like macaroni salad, but Earth’s shadow edge is fuzzy, and fuzzy is not a good thing through a telescope.
11/19/2022	2:30	241	Everyone knows the terms waxing and waning, and usually know a waxing Moon gets fatter each night while a waning Moon gets thinner. But relatively few of your friends could look at a moon and instantly tell whether it’s a waxing or a waning one. So let’s make it easy. The waxing moon is lit up on the right. It’s the moon you see during the weeks before full moon. It’s also the moon that’s already out when darkness falls, so it’s the one seen by the most people. The dinnertime moon.
11/26/2022	2:30	242	For the next month, Mars hovers at its closest to us, which it briefly does only every two years. Its closest approach happens the first day of December. But since Mars doesn’t change much from night to night, there’s no need to wait. You can go out the next clear evening. Mars is that super bright star low in the east at 7 p.m., with even brighter Jupiter far to its right. If you have a telescope also check out Saturn, the lowest star in the west.
12/3/2022	2:30	243	The only two disks in our sky, the moon and sun, both appear the same size. This is true nowhere else. It alone creates total solar eclipses. In just a few tens of millions of years, the slowly spiraling-away moon will look too small to cover up the sun. Total solar eclipses are only happening now, when humans are around.
12/10/2022	2:30	244	This is the week of Mars. Its opposition – when it’s exactly the opposite the sun in our sky – is this Thursday. Its closest and brightest happened a few days ago. And this Wednesday night, December 7th, it closely meets the Full Moon. We’ll also hear what Mars has been up to.
12/17/2022	2:30	245	Tuesday night, December 13, we’ll see the year’s finest meteor shower. These are the Geminids, and they deliver a

			meteor a minute. And you start seeing them as early as 8 p.m. No need to wait for midnight like with those other rich showers. And the Moon will be absent, giving us perfect dark skies if you're away from cities and artificial lights.
12/24/2022	2:30	246	The public is obsessed with planets beyond our solar system. One team announced finding a planet orbiting the nearest star system, Alpha Centauri, with the putative planet orbiting Alpha's companion, the much smaller and dimmer star known as Proxima. Its nearness at only 4.2 light-years has generated excited talk about sending a space probe.
12/31/2022	2:30	247	Dec. 26 around 5 p.m. you'll see a lovely, low crescent Moon meeting a moderately bright star in the southwest, which is the planet Saturn. Then Dec. 29 look high up to see the half Moon floating right next to the night's most brilliant star, which is the planet Jupiter. They'll be out until midnight, with an eye-catching loveliness that has no controversy at all.