# Details on the First HAMTV ARISS Contact in 7 Years

On October 18, 2025, the Amateur Radio on the International Space Station (ARISS) program achieved a significant milestone: the first ARISS school contact utilizing HAMTV (Ham Television, or Digital Amateur Television on S-band) since the transmitter failed in 2018. This event marked the successful reactivation and integration of live video feeds into an ARISS QSO, enhancing the educational experience for participants by allowing real-time visual interaction with the astronaut aboard the ISS. The contact was part of the global Jamboree On The Air (JOTA) event, which promotes amateur radio among youth.

**Key Event Details**

- **Date and Time**: Saturday, October 18, 2025, at 10:49 AM BST (09:49 UTC). The ISS pass lasted approximately 9-10 minutes, typical for such contacts.
- **Participants**:
- **Ground Side**: Scouts from the 1st Radford Semele Scout Group in Radford Semele, Warwickshire, UK. Around 20-30 young participants, including Cubs, Scouts, and leaders, took turns asking pre-approved questions via VHF uplink (145.800 MHz FM voice).
- **ISS Side**: NASA astronaut Jonny Kim (KJ5HKP), a physician, Navy SEAL, and flight engineer on Expedition 72. He responded to questions on topics like life in microgravity, STEM careers, and the role of amateur radio in space.
- **Technical Setup**:
- **Uplink**: Standard ARISS VHF audio (145.800 MHz) from the ground station at Radford Semele, operated by local mentors and the ARISS UK team.
- **HAMTV Downlink**: S-band digital video transmission at 2395 MHz (DATV format, 720p resolution). This was the first live use of the reinstalled HamTV transmitter, which had been out of service for repairs.
- **Ground Reception**: A network of ARISS-affiliated stations across Europe (e.g., in the UK, Italy, and Germany) received the signal. The British Amateur Television Club (BATC) merged feeds from multiple stations for a high-quality composite stream, reducing dropouts and improving coverage.
- **Pre-Contact Testing**: On the preceding ISS pass (likely October 17), the HamTV system transmitted a test color bar pattern to verify functionality, confirming the transmitter's stability after its July 29, 2025, reactivation.

**What Made This Special**

- **Historical Context**: The HamTV system, developed by ESA and installed on the ISS's Columbus module in 2013, enabled the world's first HamTV school contact in 2016 (at the Royal Masonic School for Girls, UK). However, it malfunctioned in 2018 due to hardware issues. The unit was removed during a SpaceX Cargo Dragon mission in 2024, repaired on Earth, and reinstalled on July 29, 2025, with initial carrier tests succeeding shortly after.

- **Educational Impact**: Students waved to the camera, and Kim demonstrated zero-gravity maneuvers (e.g., floating upside down), visible live via HamTV. This added a visual "wow" factor to the audio QSO, inspiring STEM interest. Questions focused on astronaut training, space food, and radio's role in emergencies.
- **Public Viewing**:
- Merged HamTV video (showing the ISS interior and Kim interacting) is available on YouTube: Merged HamTV Feed.
- ARISS provided a live webcast combining audio, telemetry, and video at live.ariss.org/hamtv/, with contributions from BATC's merger system.
- **Reception Challenges and Success**: Early signals were strong over Europe, with minimal interference. Enthusiasts using high-gain antennas (e.g., 1.2m dishes) reported clear video for up to 6 minutes. The event was hailed as "brilliant" by the UK's Radio Society of Great Britain (RSGB), noting the scouts' excitement in waving to Kim.

**Broader Implications**

This contact paves the way for more HamTV-enhanced ARISS events, potentially increasing global participation. ARISS is now soliciting ground stations to join the HamTV network (contact: hamtvops@ariss-i.org). For reception guides, check BATC's wiki at wiki.batc.org.uk/HAMTV_from_the_ISS. The next ARISS proposal window for 2025-2026 contacts opens October 6, 2025