**Arctic Weather Satellite**

|  |  |  |
| --- | --- | --- |
| MUSIC | Video | Text |
| 001 10:00:00:00 10:02:28:07  \* FROM CLIP NAME: epic-trailer-music-SBA-300539626.wav ©Storyblocks | 001 10:00:00:00 10:00:01:23  \* FROM CLIP NAME: aerial-view-of-the-glacier-merdalsjokull-with-volcanic-ash-in-iceland-copter-flying-SBV-315612685-4K.mp4 ©Storyblocks  002 10:00:01:23 10:00:04:08  \* FROM CLIP NAME: slow-motion-of-a-massive-glacier-in-the-arctic-SBV-308608667-4K.mp4 ©Storyblocks  003 10:00:04:08 10:00:06:20  \* FROM CLIP NAME: amazing-view-of-a-snowy-north-or-south-pole-the-ice-blocks-close-up-camera-moving-l-SBV-336499594-4K.mp4 ©Storyblocks  004 10:00:06:20 10:00:09:02  \* FROM CLIP NAME: winter-landscape-in-pallas-yllastunturi-national-park-lapland-finland-SBV-348715829-4K.mp4 ©Storyblocks  005 10:00:09:02 10:00:11:12  \* FROM CLIP NAME: snow-weather-climate-concept-snow-storm-mountains-strong-wind-winter-arctic-weather-SBV-346410809-4K.mp4 ©Storyblocks  006 10:00:11:12 10:00:14:00  \* FROM CLIP NAME: aerial-of-car-driving-in-winter-paradise-in-norway-surrounded-by-snow-and-trees-SBV-348749271-4K.mp4 ©Storyblocks  007 10:00:14:00 10:00:17:20  \* FROM CLIP NAME: aerial-view-of-falling-snow-in-the-residential-area-kingersheim-mulhouse-alsace-fra-SBV-348907153-4K.mp4 ©Storyblocks  M2 AX 050.0 00:00:11:08  008 10:00:17:20 10:00:21:01  \* FROM CLIP NAME: aerial-above-epic-huge-steel-ship-breaks-ice-by-bow-of-ship-and-floats-in-large-sea-SBV-338898068-4K.mp4 ©Storyblocks  009 10:00:21:01 10:00:26:03  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE ANIMATIONS- IMPROVING ARCTIC AND GLOBAL WEATHER FORECASTS.mp4 ©ESA/Mlabspace | **The effects of the climate crisis are felt more acutely in the Arctic than anywhere else on the planet. The weather in the Arctic is not only severe, but it changes extremely quickly. More frequent data are urgently needed to improve weather forecasts for this susceptible polar region.**  **Enter ESA’s Arctic Weather Satellite – a brand new mission to show exactly how this can be achieved.**  **GRAPHICS: ARTIC WEATHER SATELLITE** |
|  | 010 10:00:26:03 10:00:41:21  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE ANIMATIONS- ARCTIC WEATHER SATELLITE REVEALED.mp4 ©ESA/Mlabspace  011 10:00:41:21 10:00:58:22  \* FROM CLIP NAME: Interview **Graeme Mason.** m4v ©ESA  012 10:00:58:22 10:01:09:04  \* FROM CLIP NAME: Interview **Ville Tuomas Kangas**.m4v ©ESA  013 10:01:09:04 10:01:26:15  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE ANIMATIONS- ARCTIC WEATHER SATELLITE IN ACTION.mp4  014 10:01:26:15 10:01:42:16  \* FROM CLIP NAME: Interview **Daniele Gherardi.**m4v ©ESA | SOUNDBITES:  **Graeme Mason: Meteorological Programmes Manager, ESA** The Arctic Weather Satellite embarks a passive microwave radiometer that measures radiation from the Earth's surface and also from various different layers in the atmosphere, which will allow atmospheric temperature and humidity profiles to be derived. While this measurement technique and technologies have been well known for several decades, AWS, the Arctic Weather Satellite, will embark new instruments with new frequencies, and it is these new frequencies and capabilities that will be demonstrated on the Arctic Weather Satellite. [30.1s]  **Ville Tuomas Kangas: Arctic Weather Satellite Project Manager, ESA** The Arctic Weather Satellite will measure temperature and humidity profiles from the ground to up to 20 km altitude, and over one second it will scan about 2000-km swath. So, in one second it will provide a large amount of data for the end users, which is not going to be possible with traditional means. These measurements that Arctic Weather Satellite provides are also the two most important measurements for weather forecasts, which are the temperature and humidity. [00:01:06][26.3]  **Daniele Gherardi: System Manager for Arctic Weather Satellite, ESA** The real innovation is Arctic Weather Satellite instrument – it is the miniaturising of the technology. We achieved to reduce the size of the instrument by one fifth. So, today, the size of the whole Arctic Weather Satellite is equivalent to an instrument in a traditional metrological mission. [00:01:57][21.2]I |
|  | 015 10:01:42:16 10:01:47:17  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE - GVS FROM VIBRATION TEST AT IABG.mp4 ©ESA  016 10:01:47:17 10:01:52:12  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE - GVS FROM VIBRATION TEST AT IABG.mp4 ©ESA  017 10:01:52:12 10:01:57:10  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE - GVS FROM VIBRATION TEST AT IABG.mp4 ©ESA | **ESA has embraced the concept of New Space to build this mission, a concept that means the development m**ust **be done fast and within a very tight budget.** |
|  | 018 10:01:57:10 10:02:04:07  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE - GVS FROM VIBRATION TEST AT IABG.mp4 ©ESA  019 10:02:04:07 10:02:16:07  \* FROM CLIP NAME: Interview **Graeme Mason.** m4v ©ESA  020 10:02:16:07 10:02:20:10  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE - VIBRATION TEST AT IABG.mp4 ©ESA  021 10:02:20:10 10:02:27:10  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE - VIBRATION TEST AT IABG.mp4 ©ESA  022 AX V C 00:10:20:06 00:10:25:19 10:02:27:10 10:02:32:23  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE - VIBRATION TEST AT IABG.mp4 ©ESA | **Graeme Mason:** [00:00:38] New Space covers a wide range of definitions, from small educational nanosats to large commercial in-orbit services. With respect to Arctic Weather Satellite, it covers a short development timescale, three years, rapid turnaround times and quick decision making. And also less systematic use of standard space requirements and a greater reliance on commercially available products. In addition, the Arctic Weather Satellite was developed for a fraction of the cost of a traditional large satellite. |
| 002 10:02:30:10 10:04:26:21  \* FROM CLIP NAME: epic-and-emotion-SBA-300555631.wav ©Storyblocks | 023 10:02:32:23 10:02:37:22  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE - VIBRATION TEST AT IABG.mp4 ©ESA  024 10:02:37:22 10:02:43:12  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE - VIBRATION TEST AT IABG.mp4 ©ESA | **The fact that the Arctic Weather Satellite is ready for liftoff within three years is a testament to what can be achieved taking the New Space approach.** |
|  | 025 10:02:43:12 10:02:55:03  \* FROM CLIP NAME: Interview **Graeme Mason.** m4v ©ESA | **Graeme Mason**: [00:01:15] I consider that the Arctic weather satellite has already demonstrated its success in successfully developing the satellite ready for launch within a three-year schedule and an approximately €40 million budget. [00:01:27][11.9] |
|  | 026 10:02:55:03 10:02:58:03  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE - SOLAR ARRAY DEPLOYMENT AT IABG.mp4 ©ESA  027 10:02:58:03 10:03:00:16  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE - SOLAR ARRAY DEPLOYMENT AT IABG.mp4 ©ESA  028 10:03:00:16 10:03:03:06  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE - SOLAR ARRAY DEPLOYMENT AT IABG.mp4 ©ESA  029 10:03:03:06 10:03:05:11  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE - SOLAR ARRAY DEPLOYMENT AT IABG.mp4 ©ESA  030 10:03:05:11 10:03:09:15  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE - SOLAR ARRAY DEPLOYMENT AT IABG.mp4 ©ESA | **If the Arctic Weather Satellite performs well, it will pave the way to a full constellation of satellites called EPS-Sterna that ESA will build on behalf of Eumetsat.** |
|  | 031 10:03:09:15 10:03:22:07  \* FROM CLIP NAME: Interview **Ville Tuomas Kangas**.m4v ©ESA | **Ville Tuomas Kangas**  [00:01:31] So, the Arctic Weather satellite is the prototype for the future constellation. And the constellation will provide frequent revisit times of the Arctic region that is today not available from any other means. |
|  | 032 10:03:22:07 10:03:26:02  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE ANIMATIONS- ARCTIC WEATHER SATELLITE REVEALED.mp4 ©ESA  033 10:03:26:02 10:03:29:18  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE ANIMATIONS- ARCTIC WEATHER SATELLITE IN ACTION.mp4 ©ESA  034 10:03:29:18 10:03:32:12  \* FROM CLIP NAME: METEOSAT THIRD GENERATION - IMAGER 1 ANIMATIONS- MTG-I1 LAUNCH SEQUENCE.mp4 ©ESA  035 10:03:32:12 10:03:36:08  \* FROM CLIP NAME: METOP- THE POWER OF THREE- METOP-C ANIMATIONS.mpg ©ESA | **Once in orbit, the mission will begin to shine, delivering new data for weather forecasting, and complementing the geostationary Meteosat and polar-orbiting MetOp series of meteorological missions.** |
|  | 036 10:03:36:08 10:03:46:04  \* FROM CLIP NAME: Interview **Graeme Mason.** m4v ©ESA  037 10:03:46:04 10:03:50:02  \* FROM CLIP NAME: clouds-over-the-winter-mountains-and-a-grass-roof-time-lapse-SBV-318018267-4K.mp4 ©storyblocks  038 10:03:50:02 10:03:53:06  \* FROM CLIP NAME: sunset-over-the-norwegian-mountain-with-glacier-field-SBV-338075265-4K.mp4 ©storyblocks  039 10:03:53:06 10:04:03:23  \* FROM CLIP NAME: Interview **Graeme Mason.** m4v ©ESA | **Graeme Mason**:  [00:03:19] It is intended that the data from the Arctic Weather Satellite will be used operationally by the European Meteorological Services, and as such the data will contribute to both global and Arctic regional weather forecasts. However, the much larger impact will come from the subsequent constellation, which will provide much more frequent, revisits over the polar regions, which will open the door for new now-casting applications over the Arctic. |
|  | 040 10:04:03:23 10:04:07:07  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE - SOLAR ARRAY DEPLOYMENT AT IABG.mp4 ©ESA  041 10:04:07:07 10:04:11:02  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE - SOLAR ARRAY DEPLOYMENT AT IABG.mp4 ©ESA  042 10:04:11:02 10:04:13:24  \* FROM CLIP NAME: cargo-ship-sailing-on-frozen-sea-in-extreme-winter-conditions-aerial-shot-sailing-i-SBV-331224821-4K.mp4 ©Storyblocks  043 10:04:13:24 10:04:16:14  \* FROM CLIP NAME: northern-lights-in-the-lofoten-SBV-330844674-4K.mp4 ©Storyblocks  044 10:04:16:14 10:04:20:09  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE ANIMATIONS- ARCTIC WEATHER SATELLITE IN ACTION.mp4 ©ESA/Mlabspace  045 10:04:20:09 10:04:26:09  \* FROM CLIP NAME: ARCTIC WEATHER SATELLITE ANIMATIONS- ARCTIC WEATHER SATELLITE OVER SCANDINAVIA.mp4 ©ESA/Mlabspace | **So, a lot hinges on the prototype Arctic Weather Satellite, but it is envisaged that the full constellation will ensure a future that brings faster weather forecasts for the Arctic, and beyond.** |
|  | 046 10:04:26:09 10:04:38:18  \* FROM CLIP NAME: OUTRO 4K - Landscape - copyright+additional credits.mp4 ©ESA | **ESA OUTRO** |
|  | 10:04:38:18 | **END** |