

From experiment to exploitation

Sound and music in GDR science fiction films

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In the following article, I examine the audio layer of two science fiction films made in the German Democratic Republic. The selected titles are: *DER SCHWEIGENDE STERN* (GDR/PL 1960), directed by Kurt Maetzig, and *IM STAUB DER STERNE* (GDR 1976), directed by Gottfried Kolditz. In the opening section, I will outline the concept of ›utopischer Film‹ in the context of a socialist state, and I will recall the most important titles and composers. Next, I will discuss three scenes from both films, chosen as the most representative and innovative. My main goal is to compare how different methods of sound and music production have led to completely contrasting aesthetics approaches, from experimentation in ›musique concrète‹ style to exploitation of popular genres.

The choice of these two films is motivated by several reasons. Firstly, they both share a similar starting point: the receipt of a mysterious extraterrestrial signal and the subsequent dispatch of a mission. Secondly, more than a dozen years between their premieres means a completely different context of the Cold War space race. Thirdly, this temporal distance also allows us to observe the evolution of the genre and sound production technology. Fourthly, the audio layer in these two titles plays a key role in shaping the depicted world, going beyond the standard function of music or sound. Furthermore, in both cases, the renowned composers employed a variety of inspirations, sources and instruments. Finally, the novel on which the first film is based and the screenplay of the second bring interesting clues for sound design.

GDR-Poland co-production *DER SCHWEIGENDE STERN* in many ways is the true pioneer of the science fiction genre in the Eastern Block. Andrzej Markowski created an immense soundtrack, with orchestral prologue and epilogue and a variety of ambiguous electronic atmospheres and effects between. I will focus particularly on the latter, showing the methods of the Polish Radio Experimental Studio engineers and interpreting it in the

context of Stanisław Lem's novel. Another point of reference will be Michel Chion's theory of audio-vision, my own interviews and interpretations by other researchers.

The second case study is devoted to *IM STAUB DER STERNE*, which represents the decline of science fiction in the GDR, this time co-produced with Romania. The sound layer features a lot of electronic effects, computer speech synthesis and the Subharchord synthesiser. Above all, however, Karl-Ernst Sasse's music as well as costumes and props refer to the popular genres of his time, which can be interpreted in the spirit of exploitation strategies. The primary sources for this title will be Kolditz's original screenplay, archival interviews and production documents.

Context

The science fiction genre gained importance in the Eastern Bloc countries during the Cold War for at least a few reasons. One of them was its capacity to spin visions of a better future, which in Germany translated into the terms ›utopische Literatur‹ and ›utopischer Film‹ (cf. Fisher 2014). Political and social themes appear in many titles produced in the 1950s to the 1980s in the Soviet Union, East Germany, Czechoslovakia and Poland. Secondly, science fiction provided a platform for presenting groundbreaking technologies in the space race – both real and imagined. It is a genre that looks to the future rather than dwelling on the problems of the past, bygone regimes and systems (cf. Pepliński 2025). Thirdly, even in the reality of subsidised film industries in socialist countries, decision-makers sometimes expected the accounting books to balance. Science fiction allowed the propaganda message to be dressed up in the attractive (sometimes tight and shiny) costume so it could have the potential to influence the masses, i. e. the desired ›Massenwirksamkeit‹ (cf. Heiduschke 2013).

The main production company in the German Democratic Republic was DEFA (Deutsche Film AG/German Film Stock Corporation). Already in the post-war years, its heads realised that even the most politically correct films attracted far fewer viewers than trivial entertainment imported from behind the Iron Curtain. The response to audience demand was therefore to be domestic melodramas, youth films and a subgenre specific to the GDR, namely ›Indianerfilme‹. In this context, science fiction was also used, although it

posed some budgetary challenges. Hence, the feature film DER SCHWEIGENDE STERN and the educational film DIE REISE NACH KOSMATOM (GDR/PL 1962, Manfred Gussmann, Janusz Star) were produced in co-production with Poland. The later EOLOMEA (GDR 1973, Herrmann Zschoche) was the result of a collaboration with Bulgaria, while IM STAUB DER STERNE (GDR 1976, Gottfried Kolditz) was coproduced with Romania.

Thanks to the many years of effort by screenwriter Joachim Hellwig and writer Claus Ritter, a DEFA futurum Arbeitsgruppe was formed in 1971 (cf. Fritzsche 2006). Apart from workshops, screenplays and music videos (so-called ›Discofilme‹), only a few feature films were ultimately produced within its framework, including two works by Kolditz: IM STAUB DER STERNE and DAS DING IM SCHLOSS (GDR 1979). However, the director had already encountered the science fiction genre earlier, in SIGNALE – EIN WELTRAUMABENTEUER (GDR/PL 1970). The last ›utopischer Film‹ made in the GDR – but after the dissolution of DEFA futurum – was BESUCH BEI VAN GOGH (GDR 1985, Horst Seemann). Karl-Ernst Sasse was responsible for the soundtrack in all three of Kolditz's works, and Andrzej Markowski in two Polish-German co-productions – that's another reason to choose titles with their music as most representative for the genre. Finally, jazz veteran Günther Fischer wrote the entertaining music for EOLOMEA (one of the first in his cinema career), and Seemann not only directed but also composed the music for his film.

DER SCHWEIGENDE STERN (1960)

DER SCHWEIGENDE STERN is based on Stanisław Lem's first novel, *Astronauci* (*The Astronauts*, 1951; German translation *Planet des Todes*, 1954). The plot begins with the discovery of a damaged reel at the site of an extraterrestrial shipwreck. After decoding it, it turns out to have originated from Venus, but attempts at radio communication are unsuccessful (hence the working title »Venus antwortet nicht«). An international and interracial team is sent to the planet on a scientific mission aboard the Soviet ship Kosmokrator. After many adventures during the flight, landing and on the surface of Venus, it turns out that the local civilisation had planned to invade Earth, but had itself fallen victim to its own weapons of mass destruction.

The dramatic start to the space race between East and West provided an important backdrop for the film. Between 1957 and 1960 only, USSR launched the first intercontinental ballistic missile, the first artificial satellite (emitting a famous »bip« signal from orbit), the first lunar and heliocentric spacecrafts, not to mention several dogs revolving around Earth (not all survived though). The rapid acceleration of the space race was, in fact, putting the producer under considerable pressure, as were reports of a biopic about the rocket genius Wernher von Braun being made in West Germany at the same time.¹

The proposal for co-production based on Lem's novel came from the Polish side as early as 1957, but after many twists and turns, it was the East German participation that proved decisive, both in terms of budget and the production team. That's why the direction of *DER SCHWEIGENDE STERN* was entrusted to professor Kurt Maetzig, the creator of the two-part revolutionary epic *ERNST THÄLMANN* (GDR 1954 and 1955). DEFA provided a studio in Babelsberg for special effects, although some Polish artists were responsible for set and sound design or music. By the end of the 1950s, conductor and composer Andrzej Markowski had already collaborated with leading directors of the Polish school, such as Andrzej Wajda and Andrzej Munk (cf. Topolski 2022). He loved experiments, producing sounds on test projection equipment (*HISTORIA JEDNEGO MYŚLIWCA*, PL 1957, Hubert Drapella) or coming up with an etude on the subjective sound perception (*A WALK IN THE OLD CITY OF WARSAW*, PL 1958, Andrzej Munk).

Markowski proposed dividing the audio layer in *DER SCHWEIGENDE STERN* into orchestral music (assigned only to the prologue and epilogue on Earth) and electronic atmospheres or sound effects (used in most scenes on the *Kosmokrator* and Venus). He realised the latter together with engineer Krzysztof Szlifirski at the newly opened Polish Radio Experimental Studio (PRES) in Warsaw. Founded by musicologist Józef Patkowski in 1957 – shortly after similar studios were established in Paris, Milan and Cologne – it soon became the leading centre of its kind in the Eastern Bloc (cf. Crowley et al. 2019).

¹ This film, *I AIM AT THE STARS* (WERNHER VON BRAUN – ICH GREIFE NACH DEN STERNEN, USA/D 1960, J. Lee Thompson), was eventually released in the summer of 1960, i. e. half a year after *DER SCHWEIGENDE STERN*.

The high-budget and pioneering film brought with it numerous technological innovations. In addition to colourful Agfacolor film and the wide Totalvision format, the sound was mixed using the 4-Kanal-Magnetton system. In this high-quality format, in addition to the three channels assigned to the speakers behind the screen, there was also a so-called ›effects track‹. It enabled the spatial distribution of selected sounds on the speakers in the auditorium (cf. Hüningen 2011), although today it is difficult to determine exactly which effects from *DER SCHWEIGENDE STERN* were broadcast in this way – and how many theaters actually were equipped for it (most likely not a single one in Poland at that time). According to sources, Markowski was not present at the final mixing and later complained about the balance between dialogue, effects and music (cf. Pepliński 2020).

I will focus here on three most innovative and aurally poignant scenes. The first key moment in the plot is the deciphering of the message from the Venusian reel. Lem wrote in *The Astronauts* that ›the language of the ›report‹ resembled, as it turned out, not so much speech as unusual music, because what corresponds to earthly words appeared in it as if in various ›tonalities‹« (Lem 1970, 24).² In the control room, ›high-pitched buzzing‹ can be heard, and the speaker emits the Latin names of the elements found on Earth. In the film, there are even more sounds: from the atmosphere of the room itself, through processed voices, to electronic modulations. In his article Dariusz Brzostek focuses on the act of decoding and human voice (Brzostek 2016, 10):

»[...] An electronic sound of an as yet untranslated message comes from the loudspeakers – reminiscent of modulated sine waves. [...] Of course, it is difficult to distinguish the message itself from the electronic noise in the communication channel, although it is easy to notice intriguing regularities in the form of repeating sound sequences – suggesting their meaningful nature. The biggest change in the soundtrack, however, concerns the very ›reading of the message‹, which in the film is entrusted to the electron brain itself, speaking with a human voice, albeit significantly modified by electronic sound effects to give it an ›inhuman‹, ›cybernetic‹ and, ultimately, futurological character. Here, a ›post-human‹ intelligent mechanism reads out an ›inhuman‹ message from another world to humanity.«

In turn, Daniel Muzyczuk (2017, 136), describing this scene, refers to the category of ›syncretic acousmator‹, coined by Louis Niebur as typical of early science fiction films. The synchronous juxtaposition of images of futuristic machinery with a modulated voice is intended to create the illusion that the reel itself generates these sounds. Niebur himself

² The translations of the original Polish and German texts here and below are my own.

juxtaposes two concepts taken from Michel Chion's audio-visual dictionary: ›synchresis‹ and ›acousmator‹. The latter refers to a bodiless character represented in the diegesis solely by voice or sound, such as the computer in ALPHAVILLE (FR 1965, Jean-Luc Godard). In the case of DER SCHWEIGENDE STERN and the scene in the control room, this character would be the Venusians themselves, whom we never see on screen.³

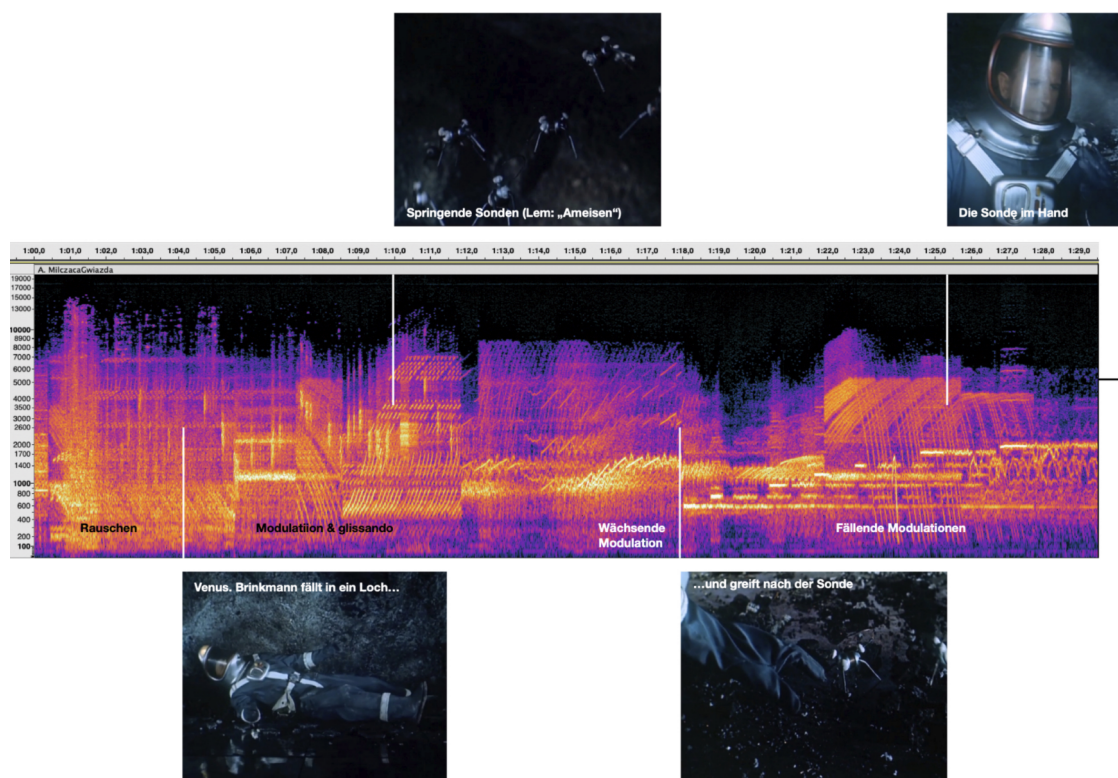


Figure 1: Scene with probes: shots combined with audio spectrograms. © Topolski 2024

The next chosen scene shows pilot Brinkmann encountering Venusian probes in the form of flying metal ›ants‹, which he initially mistakenly took for living beings. Lem mentions in *The Astronauts* that they emit squeaks and broken sounds, which intensify when the cosmonaut grabs one of them. In DER SCHWEIGENDE STERN, the probes, jumping merrily on visible strings, are embodied thanks to the modulated sounds from PRES (Figure 1). The capture of one of the ›ants‹ is rendered by a series of rising sinusoidal tones, as if of increasing excitement.

³ Another Eastern European film using this concept is PLANETA BUR (USSR 1962, Pavel Klushantsev) which features a mysterious acousmatic voice and is also set on Venus.

As Szlifirski recalls (cf. Topolski 2022), many of the source sounds for DER SCHWEIGENDE STERN were recorded in the laboratories of the Wojskowa Akademia Techniczna [Military University of Technology] – at that time a rather mysterious and inaccessible place. There, the engineer recorded the noise of a wind tunnel (Kosmokrator engines) and heated, bubbling aviation oils (plasma on Venus). This brings to mind the contemporary practice of French ›musique concrète‹, based on so-called ›sound objects‹ and their subsequent studio processing. Years later, Michel Chion, a composer from this circle, wrote some seminal books on the relationship between sound and image in cinema, including *Audio-vision* or *Film, a Sound Art*. He introduced there, among other things, the term ›rendering‹, which means conveying the material qualities of represented objects or people through sound (Chion 2009, 488):

»The film spectator recognizes sounds to be truthful, effective and fitting not so much if they reproduce what would be heard in the same situation in reality, but if they render (convey, express) the feelings associated with the situation. (This occurs at a barely conscious level for film viewers have a fairly crude and mediate understanding of cinema's figurative nature.) The materialising indices are the sound's details that cause us to ›feel‹ the material conditions of the sound source, and refer to the concrete process of the sound's production. They can give us information about the substance causing the sound – wood, metal, paper, cloth – as well as the way the sound is produced – by friction, impact, uneven oscillations, periodic movement back and forth, and so on.«

According to Chion's definition, the sounds of the ›ants‹ in DER SCHWEIGENDE STERN render their agility and liveliness. Towards the end of the scene (Figure 1), they evoke associations with exotic, nimble creatures, a sort of monkeys. Since the film's premiere, this sound has been perceived as comical and out of keeping with the film's serious tone. Alicja Helman criticised the second scene analysed here in *Ekran* magazine (Helman 1960, 2):

»Electronic music was supposed to be an additional attraction, but it either harms the film by causing unintended humorous effects (the scene with the beetles) or belongs to the so-called ›inaudible‹ category, i. e. it is not noticed at all.«

Many years later Nina Noeske in one of her articles on electronic music in science fiction shared this impression (Noeske 2019, 69f.):

»[...] even a kind of ›mickey-mousing‹ is possible at the journey's destination, Venus: the sounds made by the small, insect- and robot-like creatures on the planet seem almost comical, particularly when they appear to be laughing at the crew member.«

In the third selected scene – when one of the scientists plays a recording from the Venusian memory crystals – the novel turns out to be much more interesting than the film (Lem 1970, 243f.):

»There was a dull hum, a crackling, then a few unpleasant, rapidly falling whistles. Suddenly, a melody flowed from the loudspeaker. Dark, focused, violent and full of dread. It did not inspire fear, but was fear itself; fear was in it like in the giant skeletons of Jurassic reptiles, frozen in a monstrous spasm, as if caught by a stream of molten lava and frozen forever in a pose of unspeakable pain and terror. It was like those giant bones that were no longer spines and ribs, no longer part of life, but not yet limestone, part of the dead world. Like them, it was at once bizarre, repulsive – and familiar, giving the impression of being almost human ...«

In DER SCHWEIGENDE STERN, this scene is treated briefly, and the terrifying melody itself is not so very different from many of the PRES sound effects previously used (Brzostek 2016, 12). Nina Noeske emphasised the uncertain origins of the sounds in DER SCHWEIGENDE STERN, pointing out its resemblance to FORBIDDEN PLANET (USA 1956, Fred M. Wilcox) (Noeske 2023, 256f.):

»In this film, too, it is often unclear whether the sound is part of the diegesis: particularly when the recurring sounds of electronic devices, monitors, on-board computers and control centres, the different layers seem to blend together seamlessly. At times, the rhythmic regularity of the technological sounds gives them the character of a composition. [...] The only elements that clearly belong to the diegetic sphere are the voices of the Venusian inhabitants, which, however, can only be heard through the ›translation‹ of corresponding technical devices into sound waves [...] these sounds – sine waves and noises, both partly imbued with reverb – have nothing human about them.«

In her final sentence Noeske interestingly contradicts Lem's intentions, as quoted before in the passage from *Astronauts*: »melody giving the impression of being almost human ...« (Lem 1970, 244). This is one of many auditory challenges in DER SCHWEIGENDE STERN: Markowski's and Szlifirski's atmospheres appear to function similarly as the ›electronic tonalities‹ by Bebe and Louis Barron created for FORBIDDEN PLANET (cf. Leydon 2004). In both of these titles from opposite sides of the Iron Curtain – created in 1956 and 1960 respectively, without any connection – the bold idea of sound design that influences the perception of the world is represented. Both the ambient of the planet and the sounds made by vehicles or robots, as well as the ›musical‹ motifs (such as the melody mentioned above), have a similar electroacoustic source. This makes it quite difficult to

differentiate between these layers and functions, as Philip Hayward and Natalie Lewandowski noted in their article on *DER SCHWEIGENDE STERN* (Hayward/Lewandowski 2010, 197):

»Throughout the Venusian sequence, Markowski and Szlifirski represent the environment and active components of the planet using electronic music and sound effects that eschew conventional ambiances, mechanical noises and/or musical formulae to produce an integrated alien acoustic realm. This results in a highly impressionist representation of the planet. Instead of a soundscape that comprises discrete (pseudo-)ambient sounds, sonic signifiers of alien technologies and/or musical accompaniments in a combined sound mix, a range of electronic tonalities fulfil these various functions. Even the environmental activities of the planet are rendered with (and accentuated by) electronic signifiers (such as lightning being accompanied by electronic ›whipcrack‹ noises). This leads to an uncertainty. [...] Are they the ambient sounds of the planet? Of hidden technologies and/or aliens? Or simply the sounds that accompany the explorer's passage?«

In a favourable reading of *DER SCHWEIGENDE STERN*, this ambiguity of the sound's status can be appreciated as an affective strategy towards the audience, causing its interest and uncertainty. In a more critical reading, however, it becomes a perceptual challenge, noted right after the premiere of film. Horst Knietzsch criticised the excess of electronic effects in *Neues Deutschland* (Knietzsch 1960, 4):⁴

»The music is debatable. Reduced to accompanying technical processes, it must lead to impoverishment. Thus, the music essentially served only to musically accompany technical processes in the film. The music by Polish composer Andrzej Markowski did not fulfil its essential task of emphasising human thought and feeling.«

Hence the symptomatic decision of US pirate ›distributors‹, who in 1962 re-edited the film and distributed it as *FIRST SPACESHIP ON VENUS*. Hugo Grimaldi, who supervised the process of this illegal ›adaptation‹, decided that more orchestral music should be added to the extraterrestrial scenes, contrary to Andrzej Markowski's idea. For this purpose, stock music by Walter S. Greene, Hans J. Walter and others was used – skilled craftsmen, but not credited in the end credits.

The three analysed scenes – decoding the Venusian reel, meeting the probes and listening to the memory crystals – demonstrate the significant differences between Stanisław Lem's descriptions of sounds and the realisation of Andrzej Markowski and Krzysztof Szlifirski, as well as the critical reception at the time of the premiere of *DER SCHWEIGENDE*

⁴ This accusation is all the more serious given that it was the communist party's official newspaper.

STERN and much later. The ambiguity of the electroacoustic sources, the acousmatic sounds and the audio rendering (sometimes even similar to ›mickey-mousing‹) combine to create a state of uncertainty among viewers of the film. Conversely, 70 years after its release, the film continues to stand out from other productions of the era thanks to its bold sound design, which replaces many of the stereotypical roles of film music. With its experimental basis similar to concrete and electroacoustic music, it succeeds in representing a futuristic vision of exploring a dead, non-human civilisation.

IM STAUB DER STERNE (1976)

In the mid-1970s, the Americans took the lead in the Space Race with the first probe in history to explore the entire Solar System and beyond. Over the course of the decade, however, the Soviets managed to land on Mars and Venus, and subsequently obtain images of their surfaces. 1975 also saw the landmark joint Soyuz-Apollo crewed flight that changed the dynamics of the rivalry ever since. Further probes from the Pioneer and Mariner series, as well as Venera and Mars, were launched into space – the conquest had entered a routine phase. Similarly in Eastern German science fiction, while DER SCHWEIGENDE STERN represents a period of painstaking experimentation, IM STAUB DER STERNE seems to be a sign of exhaustion, both in form and content.

Director Gottfried Kolditz, invited to participate in the DEFA futurum project, was the author of two popular ›Indianerfilme‹ (SPUR DES FALKEN, GDR 1968; APACHEN, GDR 1973), each of which had a sequel. Earlier, he had also achieved box office success with a musical comedy (REVUE UM MITTERNACHT, GDR 1962) and an adventure film for children (DIE GOLDENE JURTE, GDR/MNG 1961). The mid-1970s in East German culture was opening up to Western genres that had previously been banned. In 1973, the 10th World Festival of Youth and Students was organised in East Berlin, where over 25,000 guests from 140 countries partied to the rhythms of rock and beat music (cf. Pepliński 2025). These styles would become an important reference point for composer Karl-Ernst Sasse, as would the entire ›youth‹ culture for the costume and choreography designers of IM STAUB DER STERNE.

The original script, developed at DEFA since 1972, tells the story of the mission of the Cynro 19/4 spacecraft. After receiving a distress signal and a long flight, it lands on the planet TEM 4 (hence the working title »Hilfe für TEM 4«). However, the inhabitants deny the call for help and welcome the newcomers with a party full of attractions, creating an illusion of normality. Only then does Suko, the navigator of Cynro, accidentally discover the entrance to a mine where the Temians have herded the colonised Turians from their home planet. The predominantly female team faces a dilemma: whether and how to intervene in the class injustices on TEM 4. When the Temians finally force Cynro 19/4 to leave, only Commander Akala remains on the planet's surface.

Karl-Ernst Sasse had previously collaborated with Gottfried Kolditz on numerous occasions, including his »Indianerfilme« and his »utopischer Film« debut, *SIGNALE – EIN WELTRAUMABENTEUR*. In his own words, he was a »Bestellkomponist« (cf. Miersch 2003), flexible with commissions and aesthetics, collecting several hundred soundtracks to his credit. He encountered the theme of space early in his career, in the educational short film *DAS KOSMISCHE ZEITALTER HAT BEGONNEN* (GDR 1960, Jürgen Thierlein). The audio layer of *IM STAUB DER STERNE* – in contrast to *DER SCHWEIGENDE STERN* – has clearly separated sublayers of music (ballads and dances), sound (atmospheres and effects) and speech (sometimes synthetic or distorted). The original script for *IM STAUB DER STERNE* already contains a number of terms suggesting specific sound effects or musical styles (cf. Kolditz 1975). In my analysis, I will focus on three scenes which I have selected on the basis of their originality and their representativeness of the film.

In the prologue of *IM STAUB DER STERNE*, the distorted images of the galaxy are accompanied by low-register modulations with a high tone. They also continue during the general shot of the Cynro 19/4 ship, and after moving inside, the Pilotron computer's messages read by a speech synthesiser can be heard. It appears repeatedly later in this location, and depending on the context, different colours and registers of the artificial voice are used. According to documents preserved in the Bundesarchiv⁵, on 15 January 1976, producer Klein made an urgent request to use a speech synthesiser to the Arbeitsgruppe Sprachkommunikation für Informationstechnik at Dresden University of Technology. In

⁵ See the folder of *IM STAUB DER STERNE*, archive no. DR117/26660.

response, on 9 February, engineer Naumberger attached a contract for »voice synthesis preparation, phonetic voice transcription, transcription optimisation, voice production« on magnetic tape. In DER SCHWEIGENDE STERN, the electron brain and the Omega robot communicated with a processed human voice – in IM STAUB DER STERNE, commercial services provided by the TU Dresden were used. That means not only the change in technology, but in aesthetics as well, moving towards the inhumane.

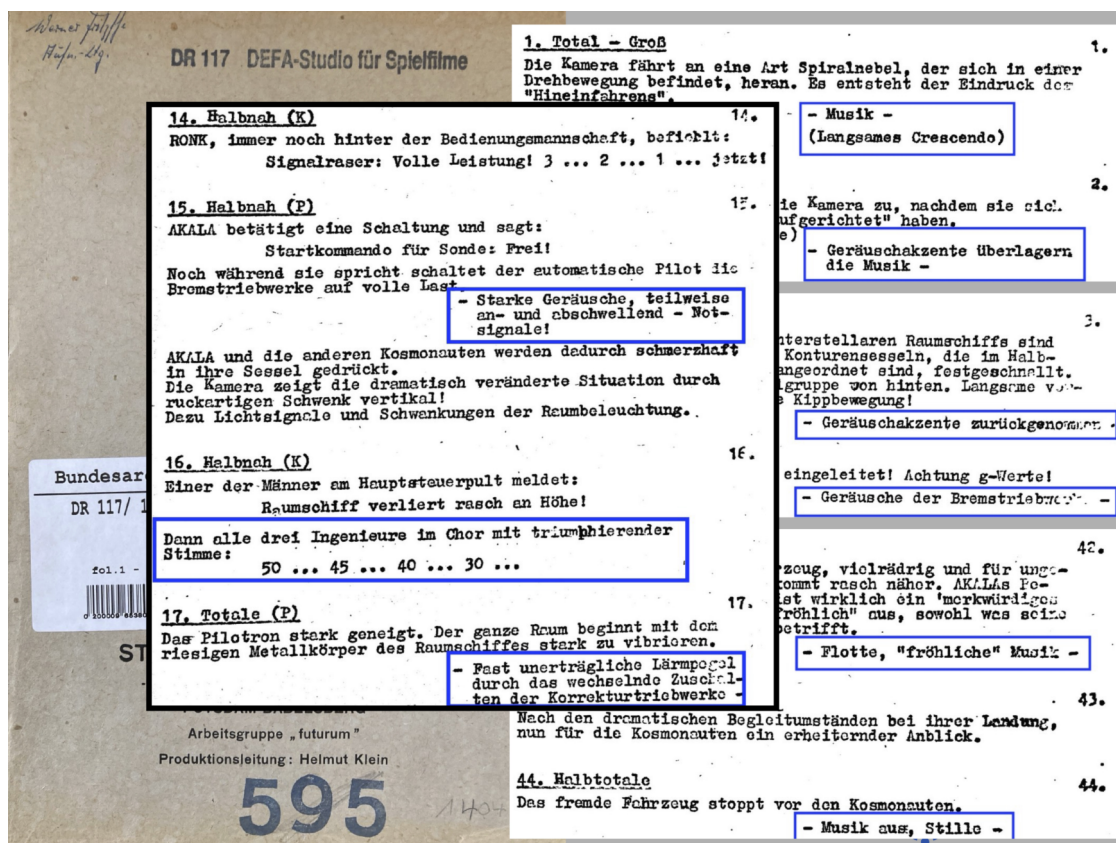


Figure 2: Collage of sound descriptions from Kolditz's script (Bundesarchiv, archive no. DR117)

Returning to the prologue, the atmosphere on the Cynro 19/4 Pilotron bridge is multi-layered and dynamic, with chirping impulses and growing noises, among other things. The Temans interfere with the landing vehicle's equipment, causing pulsating alarm sounds and rhythmic crackling (Figure 2). The crew switches to manual control and the shots from inside the ship move into general shots of the desert landscapes of the planet TEM 4. Against the backdrop of the opening credits, the romantic guitar ballad »Das

Licht« plays: »Wie schnell ist das Licht? / Schneller ist mein Gedanke / Siehst du diesen Stern weit? / Mein Gedanke ist dort und hier / Sein Licht ist bei dir und mir ...«⁶

The lyrics of the song are deliberately not related to the plot of the film or even science fiction in general, to support its radio distribution. The singer is Ruth Hohmann, a legend of East German jazz, accompanied by the Jürgen Erbe Chor, repeating the last words of the verses. The use of her recognisable voice⁷ for the opening song had obvious promotional value (called *exploit*). DEFA used a similar strategy in *EOLOMEA*, where Günther Fischer wrote a couple of catchy numbers – reminiscent of genres such as westerns and romance – and the whole film ends with a jazzy vocalise. This marketing strategy from 1970s differs a lot from the one used at times of *DER SCHWEIGENDE STERN*, where the orchestral overture could have hardly achieved a ›Massenwirksamkeit‹ intended by the producer.

In *IM STAUB DER STERNE*, electronic impulses and pulsations reappear only at the end of the ballad »Das Licht« and the credits, clearly distinguished as diegetic sounds. Karl-Ernst Sasse produced them mainly with the help of a rare East German synthesiser, the Subharchord, built in 1960s.⁸ Unlike Western instruments based on harmonic series, Gerhard Steinke's invention used subharmonic tones (cf. Steinke 2020). And again, comparing two films, while in *DER SCHWEIGENDE STERN* all electroacoustic sounds were produced in a time-consuming process in PRES with recording, filtering and modulating, in *IM STAUB DER STERNE* all it took was a few buttons and knobs (on the instrument invented a dozen years before).

As Sasse recalled years later in a conversation with Manfred Miersch (Miersch 2003),

»The Subharchord was a very user-friendly device. The only disadvantage, in contrast to the Trautonium, was the glissando effect, which had to be operated separately with a switch. [...] My work on the Subharchord is not electronic music, but rather electronic effects that I needed for a secondary medium, i. e. applied electronics in that sense. When I was making *SIGNALE ...*, I watched Kubrick's 2001 [A SPACE ODYSSEY] with the director [Kolditz] in secret. Not because of the music, which was by Strauss, Ligeti, etc., but because we were interested in how electronic sounds were used!«

⁶ »How fast is light? / My thoughts are faster / Can you see that star far away? / My thoughts are there and here / Its light is with you and me ...«

⁷ Previously heard in the ›Indianerfilm‹ *DIE SÖHNE DER GROSSEN BÄRIN* (GDR 1966, Josef Mach).

⁸ Most likely model II, installed in Hörspielproduktion at Funkhaus Nalepastraße in Berlin.

Maybe such a user-friendly way of producing sound means it was perceived alike by the audience. In Nina Noeske's opinion sounds of technology in *IM STAUB DER STERNE* work in a relaxing way, as the »second nature«, also because their source is clear and visible, in contrast to *DER SCHWEIGENDE STERN* (Noeske 2023, 256).

The most striking differences between the two films analysed are revealed in the inclusion of popular music in a number of scenes in *IM STAUB DER STERNE*. The hosts of the planet TEM 4 invite the newcomers from Cynro to a lavish party. The almost all-female crew appear dressed in tight red leather jumpsuits. Tables laden with doughnuts, as well as aerosol drinks, snakes and scantily clad dancers await them. All that is accompanied by rhythmic electronic music mixing disco and rock, with a strong guitar riff and rattling drums. Then, each of the Cynrians is subjected to a ›mental blockade‹ that alters their minds by exposing them to special rays. This procedure is rendered aurally by a synthetic rattle, present from the beginning of the scene, but now abstracted from the rest of the sounds and amplified (later, the Temans cynically refer to it as ›music treatment‹). Disco returns, now with more orchestral splendour, but still danceable.

In later scenes, when Suko – the only one absent from the party and clear-headed – tries to remind other cosmonauts of the purpose of their mission, a similar reaction is repeated. They clutch their heads as the sound pulsates, reminiscent of this ›mental blockade‹. After talking to the navigator, the cosmonaut My locks herself in the cabin, turns on the music from the console, but is overcome by a feeling of weakness and a rattling sound – after which she begins to dance naked, recreating the gestures she learned from Temans at the party. Sebastian Pepliński wrote about these motifs in his extensive doctoral thesis on utopian cinema in the GDR (Pepliński 2025, 335):

»The most easily noticeable layer of intertextual references in the film are those that can not only be seen but also heard – and then associated with DEFA's new musical, film and disco experiments. *IM STAUB DER STERNE* very clearly corresponds to the trend characteristic of the 1970s, which consisted, among other things, in ›surrounding‹ the narrative with a compilation soundtrack, slowing down the action with scenes that brought the musical appeal of the work to the fore, and introducing sounds associated with the synthesiser aesthetics of new domestic beat music (and were intended to lead to a kind of marriage between the cinema experience and the disco experience). The best example of these attempts can be seen in the recurring visual motif of scantily clad or completely naked women dancing: both the dancers from the planet TEM 4, who are ›controlled‹ by the Boss, and the cosmonaut My from the Cynro 19/4 spacecraft.«

Similar »compilation soundtracks« with futuristic sets and costumes appear in the short film essay *LIEBE 2002* (GDR 1972, Joachim Hellwig), which was a milestone for DEFA's vision of the future. Just as *SIGNALE* referred to *2001: A SPACE ODYSSEY*, here the set design and costumes clearly draw on *A CLOCKWORK ORANGE* (UK/USA 1971, Stanley Kubrick). Both Kubrick films premiered a year or two before the GDR films and were watched at secret screenings in DEFA (cf. Spiegel 2019). In the long dance sequence in *LIEBE 2002*, quotations from Baroque operas are mixed with krautrock and disco. At one point, a computer booth appears, which helps people find partners, similar to modern dating apps. Its operations is rendered by electroacoustic modulations and a speech synthesiser, similar to the one used in *IM STAUB DER STERNE*.

Such a combination of disco aesthetics and science fiction seems most evident in the scene of the first conversation between Akala, commander of Cynro 19/4, and the Temian Boss. He sits behind a console full of colourful lights and hidden keyboard: first he turns on a simple beat, then plays a synthesiser melody. The Boss then plays with speeding up and distorting the motif, accompanied by accelerated and looped projections of dancing figures. »Sometimes I play with this for hours on end. Don't you want to try it? A good playmate is priceless«, he urges his guest to join him behind the console. Nina Noeske writes more on the that scene (Noeske 2019, 75):

»a sort of keyboard, a childish toy, this is both an instrument of power and torture, through which he also exercises erotic control over the women of the oppressed people: he dictates their dance movements and clothing. The unnaturalness of the scene is heightened by the ›unnaturalness‹ of the synthesiser sound.«

The German researcher reads it as a sign of music madness, comparing it to the famous ›excessive machine‹ from *BARBARELLA* (FR/IT 1968, Roger Vadim) – the organ-like box intended to drive people insane from orgiastic pleasure caused by sounds.⁹ Actually, the latter film could be seen as a valid counterpoint here, as it plays with science fiction clichés, mixing with the highly erotic image of Jane Fonda as the main character.

Similar exaggeration and camp was typical of the Italian *giallo* horror films and Japanese *pinku eiga* erotica popular in the 1970s and many others before (like biker films in US in 1950s). Retrospectively these genres and aesthetics were named the *exploitation*

⁹ Another parallel is that both machines are used by men to control women.

movies – low-budget productions packed with scenes of violence, sex or nudity and strangeness, to attract viewers (cf. Schaeffer 1999). Utopian films produced at around the same time by DEFA only ventured in a similar direction, most boldly in the dance scenes in *LIEBE 2002* and *IM STAUB DER STERNE*. The ubiquitous snakes, kitschy costumes and synthesiser music in the latter one definitely go beyond the aesthetics of Eastern science fiction cinema – approaching Western comic adaptations such as *BARBARELLA* or *FLASH GORDON* (UK/USA 1980, Mike Hodges). Nina Noeske brought one more context into her reading of the second scene analysed here (Noeske 2019, 73):

»The grand celebration to which the spaceship crew is invited in *IM STAUB DER STERNE* is a kind of orgy featuring [...] unmistakably oriental-style music; during the crew's reception, the music is appropriately introduced by the hissing of a snake. The film's party scene, featuring numerous, partly scantily clad dancers, in which euphoric substances are clearly also involved, is visually and acoustically reminiscent of the aesthetic of the James Bond films of that era. In the GDR of the mid-1970s – a politically stifling era – this form of orientalist eroticism and exoticism must certainly have seemed appealing.«

These last terms are often mentioned as components of the *exploitation* aesthetics. The three analysed scenes – the landing of the ship, the reception of the Cynro team, and Akala's conversation with the Boss of TEM 4 – show many ways of incorporating popular music into the science fiction genre. From the jazz ballad to disco beats, it served the marketing goals of the producer, to attract audiences from different circles and to exploit popular taste. *IM STAUB DER STERNE* could serve here as an example of very clear distinction between diegetic (electronic) sounds and (popular) music that greatly facilitates the perception. These atmospheres and effects were produced in conventional or even commercial way, by means of speech synthesis or Subharchord instrument. Nevertheless Sasse conceived some remarkable sounds like the Boss' keyboard or mental blockage rattle that could be read in context of the sonic warfare concept (Goodman 2000).

Summary

The use of popular references in *IM STAUB DER STERNE* can most easily be interpreted as a symptom of the decline of the genre – which began on a high note, with the pacifist message of *DER SCHWEIGENDE STERN*. On the other hand, it can also be seen as a refreshing departure from the stiff didacticism of the former title. The electronic sound-

scapes of Venus and the disco parties at TEM 4 prove surprisingly bold and ambiguous compared to the official musical aesthetics of the Polish People's Republic or the German Democratic Republic. As Hayward and Lewandowski suggest in the article cited above, the science fiction entourage sometimes allowed for escape from socialist duties.

This time it led to avant-garde experiments (in DER SCHWEIGENDE STERN) or exploitation strategies (in IM STAUB DER STERNE). From this perspective, paradoxically, the two titles have a lot in common, even though they differ so much in terms of production. The laborious attempts in the spirit of concrete music from the late 1950s (Polish Radio Experimental Studio) give way to the freedom to use many available means in 1970s (the Subharchord instrument, speech synthesis, disco beats, jazz ballad). In both cases, however, Markowski and Sasse clearly played with sounds, testing various transformations and combinations.

The laboratory-like musical decoding of the reel, the acousmatic traces of the Aliens, the rendering of lively probes, and the ambiguous status of sounds on Venus are still inspiring elements of DER SCHWEIGENDE STERN today. Similarly, disco dances, the musical treatment of the ›mental blockage‹ and the synthesiser beats in IM STAUB DER STERNE could seem fresh from camp or queer perspective. Does sound age better than images after all?

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