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December 16, 2016 www.aiaahouston.org/history_technical_committee/#news **AIAA Houston Section History technical committee**

Beyond Time: French Caver Michel Siffre and NASA Born in 1939, Notable Cave Endurance Stays (Science Experiments): 1962, 1972 (in Texas), 2000

[Philippe Mairet] Michel Siffre is a French speleologist. He has often remained inside cave dwellings for long periods of time, away from any reference to the passage of time. In 1972, he conducted different experiments of that type before descending to the bottom of Midnight Cave (Texas, USA), where he remained, exceptionally, for 205 days. This achievement was realized in collaboration with specialists from NASA Johnson Space Center. It made it possible to better understand

Michel Siffre has made a significant contribution to chronobiology. He studied human rhythms out of time (with no external reference to the passage of time), but also analyzed sleep and its different phases, notably through EEG studies.

YouTube video links featuring Michel Siffre:

Link 1: Published on Jul 6, 2016, Michel SIFFRE au 14ème Festival de l'Aventure des Angles, Ses impressions sur le Festival. (9:09 minutes: seconds.) Michel Siffre speaks in French about this Festival. 2016. Link 2: Clamouse (34) sous terre avec Michel Siffre, grotte de Clamouse. [Underground with Michel Siffre. Clamouse Cave.] He helped NASA during the Apollo program. Today (2012), he has the feeling his is a little bit forgotten. Michel Siffre appears in this video speaking in French. An excellent video (2:06 minutes: seconds).

Link 3: (9:25 minutes: seconds) Michel Siffre, born in 1939, returns to Clamouse Cave in the year 2000 for another long stay Beyond Time (Hors du Temps). He narrates this video, including a short video of his 1962 Beyond Time adventure. Link 4: (1:25 minutes: seconds) British Movietone. No sound. Excellent video. 1962. Michel Siffre makes that first long stay in a cave in 1962. AP. Associated Press.

[Below: A photo caption from Spiegel Online.]

An idea for NASA: Michel Siffre, then 21 years old, after a cave expedition in 1960. Two years later, the young man came up with the crazy idea of staying in the darkness of an underground grotto for a month - and he even woke up this self- Interest of NASA, for which he spent four months in a Texas cave in 1972. The NASA wanted to find out whether the sleep rhythm, altered by darkness and isolation, could help their astronauts endure long night shifts in a confined space.





Michel Siffre. Hors du temps : L'expérience du 16 juillet 1962 au fond du Gouffre de Scarasson par celui qui l'a vécue

Beyond Time, The July 16, 1962 experience at the bottom of the Scarasson Cave by the Man Who Lived It. Michel Siffre. (Amazon in France.)



Above: Beyond Time, The Heroic Spent in Darkness and Solitude in a Cave 375 Feet Underground. (1964, McGraw-Hill, from Amazon).



Above: The 1993 book. Discoveries in the Caves of the Maya, by Michel Siffre. <u>Image</u>: www.priceminister.com.

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Above: Using this YouTube link, we find an excellent color video recording of Michel Siffre talking in English in 1972 about his stay in Midnight Cave near Del Rio Texas USA. He appears in the last 3 minutes of this 6-minute video.

[Below: From Cabinet Magazine in 2008 (<u>www.cabinet.org</u>)] Your first subterranean isolation experiment took place in 1962, the same year that the Cuban Missile Crisis made the world starkly aware of the importance of bomb shelters, and a year after Yuri Gagarin first entered space. How did those two events change the way we think about the underground?

I came at the right time. It was the Cold War, and we knew nothing about the human sleep cycle in outer space. Not only was there a competition between the US and Russia to put men into space, but France had also just begun its nuclear submarine program. French headquarters knew nothing about how best to organize the sleep cycle of submariners. This is probably why I received so much financial support. NASA analyzed my first experiment in 1962 and put up the money to do sophisticated mathematical analysis.

