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<b>230</b>	04/11/73	Operations Plan for SSL, Berkeley: Electron-Positron Flight October 1972	G. Smoot, C. Orth, A. Buffington
<b>231</b>	04/09/73	Operations Plan for Electron-Positron Flight SSCM #7	G. Smoot, C. Orth, A. Buffington
<b>232</b>	04/13/75	Reflect: A Subprogram to Remove Rear Reflections in SSCM #5	G. Sessler
<b>233</b>	05/17/73	Test Loading of SSCM Camera While in a Spacesuit	A. Buffington
<b>234</b>	xx/xx/xx	A Monte Carlo Computer Program for Nuclear-Electromagnetic Cascade Simulation	C. Orth
<b>235</b>	06/15/73	Proposed Measurement of the Cosmic Black-Body Radiation Near the Coma Cluster	R. Muller
<b>236</b>	06/19/73	Cosmic Black-Body Radiation: Aether Drift and the Shape of the Universe	R. Muller

<b>237</b>	02/xx/73	Miscellaneous Thoughts Upon the Problem of Making Direct Observations of Planetary Systems Around Nearby Stars	A. Buffington
<b>238</b>	07/11/73	A Use of Fragmentation Parameters in Cosmic Ray Studies	A. Buffington
<b>239</b>	07/16/73	Black Body Anisotropy: Systematic Biases from Oxygen and Water Vapor	R. Muller
<b>240</b>	08/08/73	Elimination of Atmospheric Distortion for Optical Astronomy	R. Muller
<b>241</b>	09/10/73	Aether Drift and the Isotropy of the Universe: A Proposed Measurement Utilizing the Primordial Black Body Radiation	R. Muller, G. Smoot, T. Mast
<b>242</b>	09/24/73	Effect of Temperature on Photomultiplier Tube Gain	K. Gibson
<b>243</b>	09/25/73	$Be^{10}$ – The Radioactive Cosmic Ray Tracer	A. Buffington, C. Orth, G. Smoot
<b>244</b>	10/08/73	Computer Simulation of the Flexible Telescope Mirror	A. Buffington, R. Muller
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<b>246</b>	10/24/73	The Cosmic Microwave Radiation Background	G. Smoot, R. Muller, T. Mast
<b>247</b>	10/29/73	Further Analysis of the Flexible Telescope Mirror	R. Muller, A. Buffington
<b>248</b>	10/31/73	Calibration of the Cosmic Ray Electron Measuring Technique	A. Buffington
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<b>250</b>	02/19/74	The Electrical Resistivity of Copper and Other Metals as a Function of Temperature	G. Smoot
<b>251</b>	03/11/74	Diffraction Pattern of Minimum Redundancy Arrays	A. Buffington
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<b>253</b>	03/15/74	Lightning Hazards for Parametric Amplifier Diodes	C. Orth
<b>254</b>	03/28/74	Flight Report for Electron-Positron Flight, SSCM #7	A. Buffington, G. Smoot, C. Orth
<b>255</b>	04/16/73	Bryan Cartwright's Laser Backscatter Scheme	F. Crawford
<b>256</b>	03/20/74	Poor Man's Wave Theory Guide	F. Crawford
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<b>258</b>	05/23/74	Computer Studies of Acquisition of Dim Stars by the Rubber Mirror	F. Crawford
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<b>260</b>	08/23/74	A Search for 1-cm Radiation from a Source in Aquila	A. Buffington, C. Orth
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<b>270A</b>	10/01/75	HEAO Superconducting Magnetic Spectrometer, HEAO BCR-5 Thermal Model Cryostat	J. Yamada, G. Smoot, B. Pope
<b>271</b>	03/10/75	Engineering Development Model for Aether Drift Experiment	H. Dougherty
<b>272</b>	04/09/75	3 Degree Kelvin Anisotropy Experiment: Control Systems	T. Mast, A. Buffington
<b>273</b>	04/17/75	Magnetic Shielding for the Isotope Experiment	A. Buffington, D Heine
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<b>278</b>	05/16/75	Kinematics on Some Lepton Events	F. Crawford
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<b>284</b>	07/07/75	Tilt Detector: Possible Designs	F. Crawford
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<b>288</b>	08/04/75	Use of the $1/\beta^2$ Dependence of Scintillation Light to Separate the <i>Be</i> Isotopes	C. Orth, A. Buffington
<b>289</b>	08/04/75	Magnetic Shielding Re-Visited	A. Buffington, C. Orth
<b>290</b>	08/11/75	Bevatron Test of Isotope Counter	C. Orth, A. Buffington
<b>291</b>	08/19/75	How Pistoning a Mirror Affects Image	F. Crawford
<b>292</b>	08/22/75	Monopole Dynamics	F. Crawford
<b>293</b>	08/15/75	Operations Plan for Isotope Flight SSCM #8	A. Buffington, C. Orth, G. Smoot
<b>294</b>	08/29/75	Where Next for the Flexible Telescope?	F. Crawford
<b>295</b>	09/09/75	Flight Report - SSCM #8 - Launch Failure	A. Buffington
<b>296</b>	09/15/75	Considerations for the Safe Operation of the HEAO Thermal Model Cryostat and Superconducting Magnet	G. Smoot
<b>297</b>	09/16/75	What Happens if you Try to Correct Tilt Errors by Pistoning	F. Crawford
<b>298</b>	09/22/75	Constraint Relations Between Pistoning and Tilt	F. Crawford
<b>299</b>	09/25/75	Status Report - 3 Degree Kelvin Blackbody Radiation U-2 Experiment Data Processing	J. Aymong

<b>300</b>	07/31/75	Photographic Documentation of the HEAO Thermal Model Cryostat and Superconducting Magnet ( <i>missing</i> )	B. Pope, G. Smoot, J. Yamada
<b>301</b>	10/03/75	HEAO Thermal Model Cryostat - Airesearch Manufacturing Company Progress Report and Test Plans ( <i>missing</i> )	J. Yamada, G. Smoot, B. Pope
<b>302</b>	10/14/75	Electrical Circuit Specifications for the 3 Degree Kelvin Anisotropy Experiment	G. Smoot, J. Gibson
<b>303</b>	10/16/75	Data Acquisition Controller and Tape Recorder for Aether Drift Experiment	R. Lane, J. Aymong
<b>304</b>	10/27/75	HEAO Thermal Model Cryostat and Superconducting Magnetic Electrical-Mechanical Print and Publication List	J. Yamada, G. Smoot
<b>305</b>	10/30/75	Intensity Calibrations on Laser, Vega, Peck (Mercury) Source and Zirconium	F. Crawford
<b>306</b>	11/01/75	Thermal Analysis for U-2 Aether Drift Experiment	G. Smoot
<b>307</b>	11/12/75	The Contribution of Video Detector Noise to the System Noise of the 33 GHz Parametric Amplifier	M. Gorenstein
<b>308</b>	12/05/75	Overall Steering of Image ( <i>missing</i> )	F. Crawford
<b>309</b>	12/16/75	Understanding Observations of $\mu$ Cassiopeia	C. Orth
<b>310</b>	12/15/75	Relative Intensity Enhancement of $\mu$ Cassiopeia B Via Detection at Longer Wavelengths	C. Orth
<b>311</b>	01/07/76	Aether Drift Experiment Pilot's Control	G. Smoot
<b>312</b>	03/10/76	UCB/Raven Operations Document	C. Orth, A. Buffington
<b>313</b>	05/xx/76	Data Processing for the U-2 Aether Drift Experiment	J. Aymong, R. Lane
<b>314</b>	05/xx/76	SASS Restart for Isotope Experiment - I. SASSCAL Grid Remeasurement	A. Buffington, J. Aymong
<b>315</b>	05/22/76	Aether Drift Schedule May-June 1976	M. Gorenstein
<b>316</b>	06/23/76	SSCM #9 Flight Failure Report	C. Orth
<b>317</b>	06/28/76	SSCM #9 Crush Pad Design	C. Orth
<b>318</b>	09/13/76	How to Continue Our Search for Antinuclei	C. Orth
<b>319</b>	07/04/76	Radioisotope Dating With a Cyclotron	R. Muller

<b>320</b>	07/30/76	Direct Vision Prism for Correcting Atmospheric Dispersion	F. Crawford
<b>321</b>	08/05/76	Visual Color Filter for Flexible Telescope	F. Crawford
<b>322</b>	08/01/76	Report on First Flight of Aether Drift Program	M. Gorenstein, G. Smoot
<b>323</b>	08/09/76	Dry Ice Cooling of Photomultipliers for Rubber Mirror	S. Pollaine
<b>323R</b>	08/17/76	Dry Ice Cooling of Photomultipliers for Rubber Mirror (revised)	S. Pollaine
<b>324</b>	08/12/76	Least Squares Choice for Mirror Slope Variable	F. Crawford
<b>325</b>	08/13/76	Orthonormal Discrete Polynomial Mirror Functions	F. Crawford
<b>326</b>	08/20/76	Fast Steering Circuits and Orthonormal Mirror Circuits	F. Crawford
<b>327</b>	09/10/76	Walsh Functions for Six Mirrors	F. Crawford
<b>328</b>	10/13/76	A Proposed Search for Anti Iron Cosmic Rays	L.W. Alvarez
<b>329</b>	09/15/76	Analysis of Dimmest Limiting Magnitudes for Various Flexible Telescope Systems	A. Buffington
<b>330</b>	09/30/76	A Study of the "Dilute Emulsion" Method for Extending the Search for Antimatter	A. Buffington, G. Smoot, C. Orth
<b>331</b>	10/02/76	A New Method of Searching for Cosmic Ray Antimatter	A. Buffington
<b>332</b>	10/22/76	The Effect on Image of Incorrect Mirror Tilts	F. Crawford
<b>333</b>	12/21/76	The Opacity of Dust on Black Body Radiation	S. Pollaine
<b>334</b>	01/19/77	An Equatorial Mount, Outdoor Building, and Fast Steering System for the Flexible Telescope	A. Buffington, F. Crawford, S. Pollaine
<b>335</b>	01/31/77	MODCOMP Cassette Processing	J. Aymong
<b>336</b>	02/07/77	CDC 7600 Cassette Data Processing ( <i>missing, replaced by memo 338</i> )	J. Aymong
<b>337</b>	02/28/77	Moon: Calibration and Background	G. Smoot
<b>338</b>	03/08/77	7600 U-2 Data Processing	J. Aymong



**Some of the Alvarez Group Physics Memos written before 1966 have HAPPE content.**

- 503** 05/04/64 Study of High-Energy Interactions Using a “Beam” of Primary Cosmic Ray Protons  
L.W. Alvarez
- 504** 04/29/64 Proposed Experimental Techniques for Use in High-Altitude Particle-Physics  
Experiments W. Humphrey
- 535** 03/08/65 Preliminary Study of Nuclear-Emulsion Measurement Techniques  
W. Humphrey, G. Meisner
- 537** 01/19/65 Automatic Emulsion Scanning W. Humphrey, F. Neu
- 540** 02/09/65 Balloon-Flight Electronics F. Neu, R. Smits
- 635** 10/04/67 The High-Energy Cosmic-Ray Electron Spectrum and Small Superconducting  
Magnet for High-Altitude Cosmic-Ray Experiments J. Anderson
- 790** 08/23/74 A Search for 1-cm Radiation from a Source in Aquila A. Buffington, C. Orth

**One of the Alvarez Group Programming Memos also has HAPPE content.**

- P-219** 07/xx/71 An Outline of the DDP-24 SASS Automatic Scanning Program for the High  
Altitude Particle Physics Program M. Leavitt