

Lunar Base Design Workshop – 10 to 21 June 2002

Workshop Managers: Bernard Foing (Scientist), Barbara Imhof (Architect), Susmita Mohanty (Industrial Designer), Hans Jurgen Rombaut (Architect), Hans Schartner (Architect), Paul van Susante (Civil Engineer), Jim Volp (Astrophysicist)

Participating Organizations: ESA - ESTEC, MoonFront, LUNEX, The Institute For Design And Building Construction VUT, ESCAPE*spHERE, Lunar Architecture

WORKSHOP PROGRAMME					
	LECTURE SESSIONS [Lectures by Workshop Managers and Invited Experts] Each Lecture ~ (approx.) 30 – 50 minutes			WORKSHOP DESIGN SESSIONS [Design Assignments, Conceptualization, Ideation, Research, Reviews, Critiques and Discussions]	
WEEK 1					
10.6.-16.6.2002					
DAY 1 - 10.6.2002	Introduction by the Workshop TEAM <u>Introduction to Design Briefs/Case Studies</u>	1,0	14.00 - 16.30 one hour break ESCAPE room	<u>Brainstorming Phase</u> Break the Workshop participants into 3 to 4 design teams. Have an initial brainstorming session.	2,5
9.00- 10.00 Fresnel-2 room					
10.00- 11.00 Fresnel-2 room	1. "Lunar Missions - Opportunities for Robotic and Human Exploration" Speaker: Bernard Foing	1,0	16.30 - 18.00	Afternoon: Tour of ESTEC Facilities	1,5
11.00- 12.00 Fresnel 2	2. " Past and Future Mission Scenarios" Speaker: Wendell Mendell	0,5			
12.00- 13.00 Fresnel-2 room	2. " Crew Psychology on Long-Duration Missions" Speaker: Jim Kass	1,0			
	Σ	3,5		Σ	4,0
DAY 2 - 11.6.2002	1. " Architectural Strategies" Speaker: Gregor Eichinger	1,0	14.00 - 14.30 one hour break Fresnel-2 room	5. "Space Physiology" Speaker: Didier Schmitt	0,5
9.00 - 10.00 Fresnel-2 room					
10.00 - 11.00 Fresnel-2 room	2. "Space Habitability Issues & Human Factors" Speaker: Susmita Mohanty	1,0	14.30 - 15.00 Fresnel-2 room	Discussion	0,5
11.00-12.00 Fresnel-2 room	3. "Lunar Characteristics and Construction Consequences" Speaker: Paul van Susante	1,0	15.00 - 15.30 Fresnel-2 room	6."Lunar Resouce Utilisation" Speaker: Paul van Susante	0,5

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12.00-13.00 Fresnel 2	4. " Life-Support Systems for Moon & Mars" Speaker: Christophe Lasseur	1,0	16.00 - 17.30 Fresnel-2 room	"Apollo Program" Speaker: Harrison Schmitt, Scientist, Apollo Astronaut	1,5
			19.00	Welcome Reception Harrison Schmitt, Wubbo Ockels, Franco Ongaro, Bernard Foing, Didier Schmidt and others	
		Σ 4,0			Σ 4,5
DAY 3 - 12.6.2002 9.00- 10.30 ESCAPE room	<u>Information Collection & Analysis Phase</u> Table discussions with the Workshop TEAM	1,5	15.30 - 16.00 Fresnel-1 room	1. "Lunar Real Estate" Speaker: Virgiliu Pop	0,5
10.30 - 13.00 ESCAPE room	<u>Conceptualization and Ideation Phase</u> Teams start working on their design briefs	1,5	16.00 - 16.30 Fresnel-1 room	2. "Lunar Architecture" Speaker: Hans Jurgen Rombaut	0,5
14.00 - 15.30 one hour break ESCAPE room	<u>Refine/Revise/Refocus the Design Brief based on the teams' findings</u> Table discussions with the Workshop TEAM	1,5	16.45 - 17.15 Fresnel-1 room	3. "BIOPLEX" Speaker: Barbara Imhof	0,5
			17.15 - 17.45 Fresnel-1 room	4. "Interior Design of the Crew Rescue Vehicle (CRV) " Speakers: Cecilia Hertz	0,5
		Σ 4,5			Σ 2,0
DAY 4 -13.6.2002 9.00 - 13.00 ESCAPE room	<u>Continue Conceptualization and Ideation Phase</u> Teams continue to develop design concepts	4,0	14.00- 16.30 one hour break ESCAPE room 16.30 – 18.30	<u>Continue Conceptualization & Ideation Phase</u> Teams continue working on their design concepts Work on design, build models	4,5
		Σ 4,0			Σ 4,5

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<p>DAY 5 - 14.6.2002 9.00- 12.00 ESCAPE room</p>	<p>Preparation Review</p>	<p>3,0</p>	<p>12.00- 15.00 ESCAPE room</p>	<p>Critique Day Presentation: Teams present design concepts and ideas EXPERT REVIEWERS FOR THE PANEL Bernard Foing Norbert Frischauf James Kass Wendell Mendell Maria Perino George Scoon Didier Schmitt Andreas Vogler Workshop TEAM</p>	<p>4,0</p>
			<p>15.00- 16.00</p>	<p>"Space Architecture of the Munich Design Group" Speaker: Andreas Vogler</p>	
	<p style="text-align: right;">Σ</p>	<p>3,0</p>		<p style="text-align: right;">Σ</p>	<p>6,0</p>
				<p>"Stargazing Night" @ Weekend with Norbert Frischauf</p>	

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WEEK 2				
17.6.- 20.6.2002				
DAY 1 - 17.6.2002 9.30 – 11.00	VISIT of the planetary simulation testbed facilities Speaker: Michel van Winnendael	1,5	11.00 - 18.30 one hour break Einstein room	Review, Critique & Evaluate of design concepts. Final evaluation and selection of concepts Work on design, build models Table discussions with the Workshop TEAM
		Σ 1,5		Σ 6,5
DAY 2 - 18.6.2002 09.00 - 10.00 Einstein room	"Lunar Visions " Speaker: Wubbo Ockels	1,0	10.00- 13.00 one hour break Einstein room	Detailing chosen concepts and preparing presentation material Work on design, build models Table discussions with the Workshop TEAM
14.00 – 15.00	"ESA Concurrent Design Facility (CDF) & Upcoming Workshop" VISIT of the CDF Facilities Speaker: Eric Trottemant	1,0	15.00 – 18.30 Einstein room	Detailing chosen concepts and preparing presentation material Work on design, build models Table discussions with the Workshop TEAM
		Σ2,0		Σ 6,5
DAY 3 - 19.6.2002 9.00 – 10.00 Einstein room	" Challenges of Human Planetary Exploration" Speaker: Franco Ongaro	1,0	10.00- 18.30 one hour break Einstein room	Detailing chosen concepts and preparing presentation material Work on design, build models Table discussions with the Workshop TEAM
		Σ1,0		Σ 7,5
DAY 4 - 20.6.2002			9.00- 18.30 one hour break Einstein room	Detailing chosen concepts and preparing presentation material Work on design, build models Table discussions with the Workshop TEAM
				Σ 8,5

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DAY 5 - 21.6.2002		9.00- 12.00 one hour break	Final preparations – Presentation Panels, Documentation etc.
		13.00- 18.30 Einstein room	Final Presentation EXPERT REVIEWERS FOR THE PANEL Bernard Foing Norbert Frischauf James Kass Carl Koppeschaar Franco Ongaro Wubbo Ockels Helmut Richter Didier Schmitt George Scoon The Workshop TEAM
			Farewell Dinner & Party
	ΣΣ	23,5	ΣΣ
			56,5