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EARTH OBSERVATION SYMPOSIUM (B1)
Future Earth Observation Systems (2)

Author: Mr. Elad Sagi
Israel Aerospace Industries. Ltd., Israel, esagi@iai.co.il

Mr. Giancarlo Natale Varacalli
Italy, varacalli@asi.it

Dr. Maria Lucia Magliozzi
Italy, marialucia.magliozzi@e-geos.it

Dr. Tal Feingersh
Israel Aerospace Industries. Ltd., Israel, tfeingersh@iai.co.il

Mr. Stefano Signorile
Telespazio S.p.A., Italy, stefano.signorile@telespazio.com

Dr. Gil Tidhar
Israel, tidhar.gil@gmail.com

Mr. Avia Kafri
Israel, kafri.avia@gmail.com

Mr. Andrea Pietropaolo
Thales Alenia Space Italia, Italy, andrea.pietropaolo@thalesaleniaspace.com

Mr. Claudio Catallo
Italy, Claudio.Catallo@thalesaleniaspace.com

Mr. Meir Chen
Israel, mechen@iai.co.il

Mr. Andrea Cisbani
Selex Galileo, Italy, andrea.cisbani@galileoavionica.it

Mr. Marco Baroni
Italy, marco.baroni@selex-es.com

Mr. Demetrio Labate
Selex Galileo, Italy, demetrio.labate@selexgalileo.com

Mr. Ron Nadler
Elbit Systems, Electro Optics, ELOP Ltd., Israel, ron@elop.co.il

Mr. Arie Leizer
Elbit Systems, Electro Optics, ELOP Ltd., Israel, arie.leizer@elbitsystems.com

Mr. Patrizio Tempesta
Telespazio S.p.A., Italy, patrizio.tempesta@telespazio.com

SHALOM – SPACE-BORNE HYPERSPECTRAL APPLICATIVE LAND AND OCEAN MISSION

Abstract

Space-borne Hyper Spectral Imaging (HSI) missions such as EO-1's Hyperion, HICO, CHRIS-PROBA and TACSAT-3 Artemis have established the utility and advantages of Hyperspectral image acquisition

from low earth orbit. Further missions already in various implementation stages such as PRISMA, EnMap and HISUI would further improve on past missions by suggesting higher SNR, incorporation of higher resolution PAN (or MS) imagers and improved throughput through increased data link rates and on board memory.

SHALOM (Space-borne Hyperspectral Applicative Land and Ocean Mission) is a study co-funded and managed by the Italian Space Agency (ASI) and the Israeli Space Agency (ISA) for a next generation Hyperspectral space-borne imaging mission that will push the boundaries further into a commercial service class by providing yet higher ground resolution, higher daily area coverage, short revisit times, precise geo-location and distribution of added value products to end-users. Such scaling up of performance and services is shown to be possible by means of using proven agile S/C bus OPTSAT-3000 configuration (as e.g. used in ISA-CNES Ven μ S program), large aperture and high throughput optics, ASI's PRISMA program building blocks and resulting know-how with a grating based spectrometer, and accumulation of understanding and knowhow of the scientific work done to date world wide with space-borne and air-borne HSI image acquisition analysis.