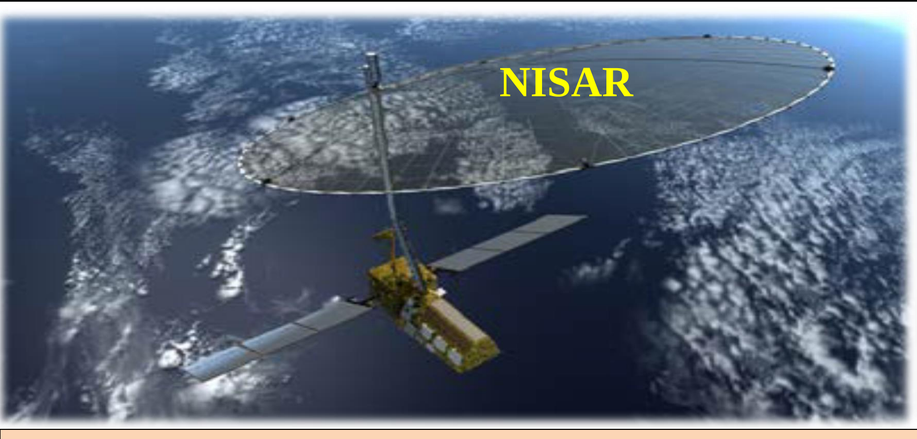

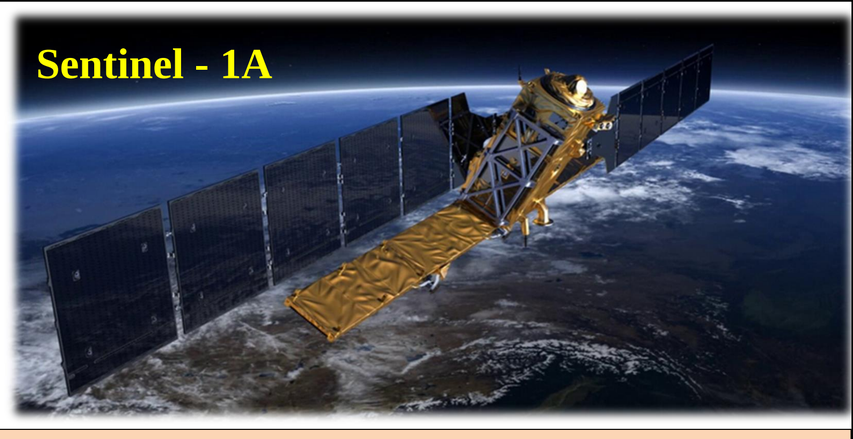

Microwave Remote Sensing Studies of Earth and Moon

Department of Remote Sensing

Discovery of palaeo-channels under the sand sheet of Thar Desert, Rajasthan

Fig. 1 Palaeo-channel identified in southern part of Barmer district, Rajasthan

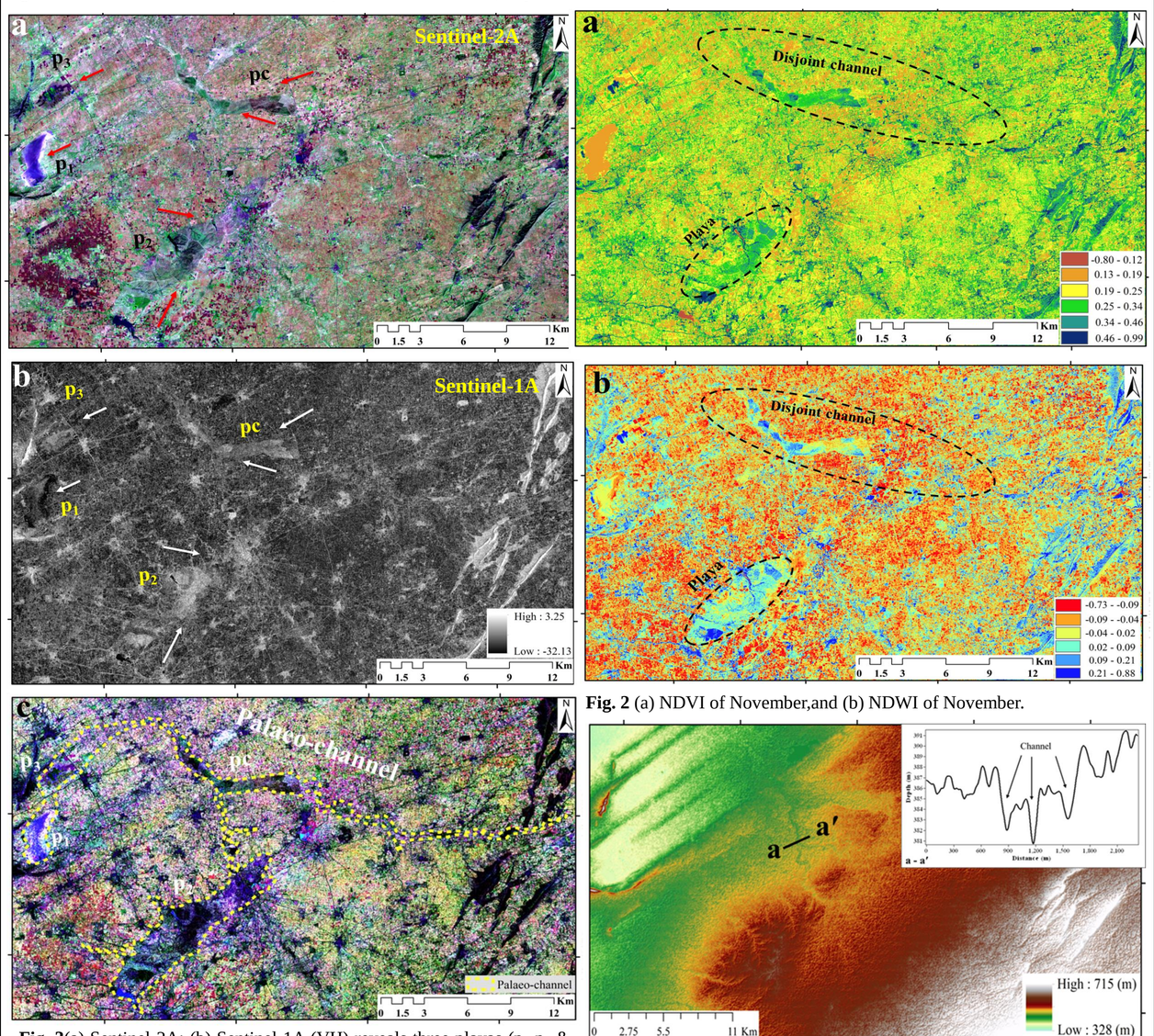

Fig. 3(a) Sentinel-2A; (b) Sentinel-1A (VH) reveals three playas (p_1, p_2, & p_3), and a disjoint channel (pc) marked by arrows; (c) fused image of Sentinel-2A and Sentinel-1A

Fig. 2 (a) NDVI of November,and (b) NDWI of November.

Fig. 4 Topographic profile (a-a′) generated using SRTM-DEM across the detected palaeo-channel

SAR and optical image fusion for lithology discrimination

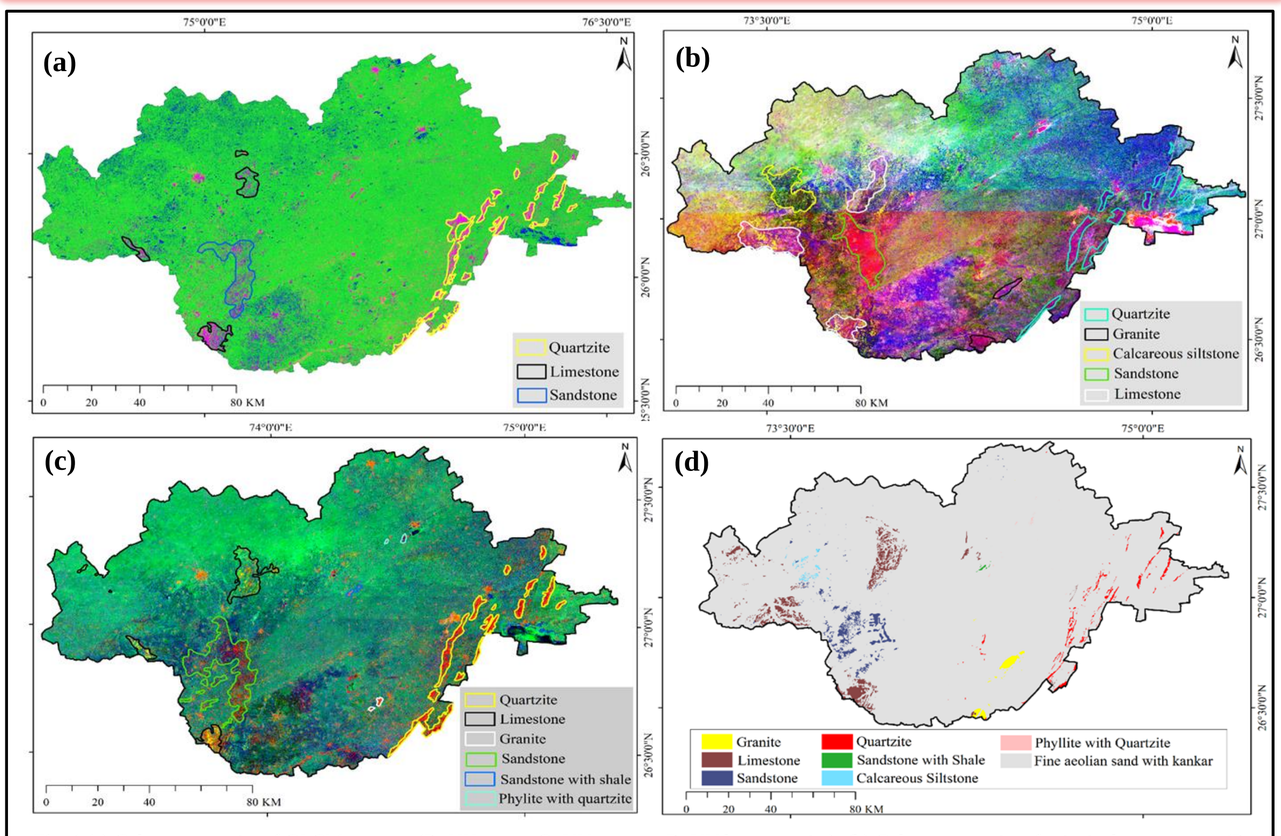

Fig. 1 (a) Colour composite of GLCM textures (R: VH-mean, G: VV-entropy, B: VV-homogeneity); (b) Colour composite of principal components (R: PC2, G: PC1, B: PC5); (c) Colour composite of PCA and GLCM (R: VH- mean, G: PC1, B: VV- contrast), and (d) Lithology map of Nagaur district, Rajasthan (Prepared after Bhukosh, GSI)

Some field photographs of Thar Desert, Rajasthan

Development of a new model-based Scattering Power Decomposition algorithm (7SD)

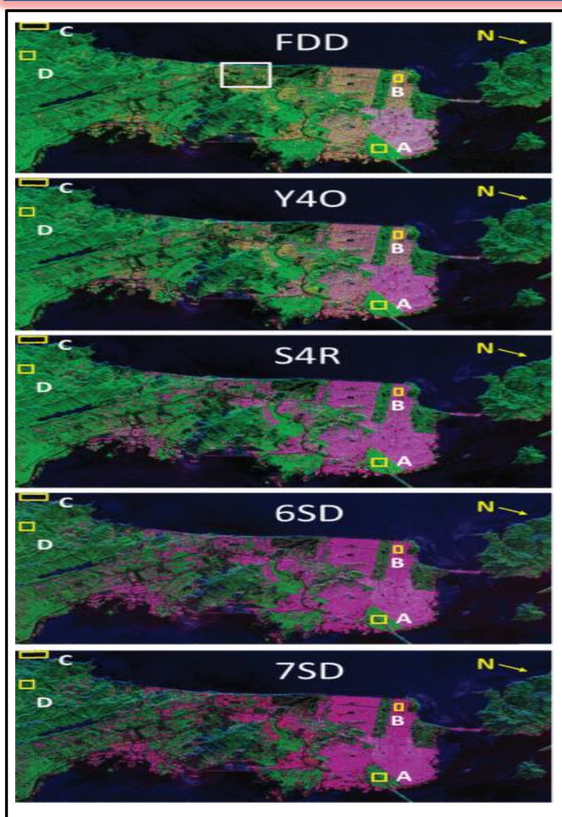

Fig. 1 RGB composites of different decomposition images of ALOS-2/PALSAR-2 of San Francisco, CA, USA

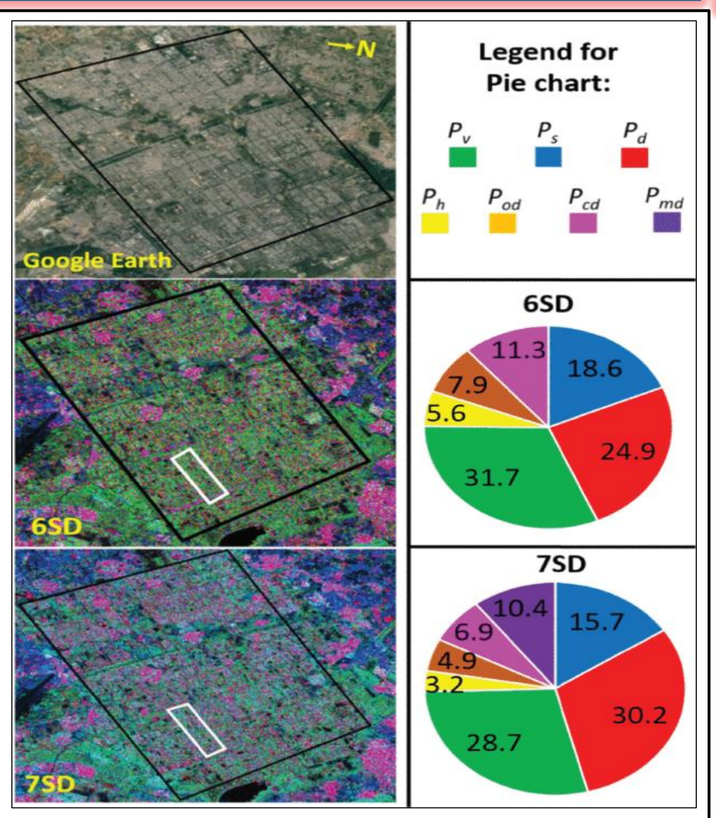

Fig. 2 Comparison of two bands (L-band and S-band) of RGB composite decomposition (6SD and 7SD) images of Kaufbeuren, Germany, acquired by F-SAR on June 8, 2010.

Land use/land cover classification in Jharia coalfields using SAR data

Fig. 1 Classified outputs: a) HV images of August 2007 and September 2007 and AVNIR-2; b) HH images of December 2007 and February 2008 and AVNIR-2; c) HV images of August 2007 and September 2007 and AVNIR-2; d) HV of August 2007 and September 2007 and AVNIR-2

Detection of hidden impact craters in the south polar region of Moon using Chandrayaan-2 DFSAR data

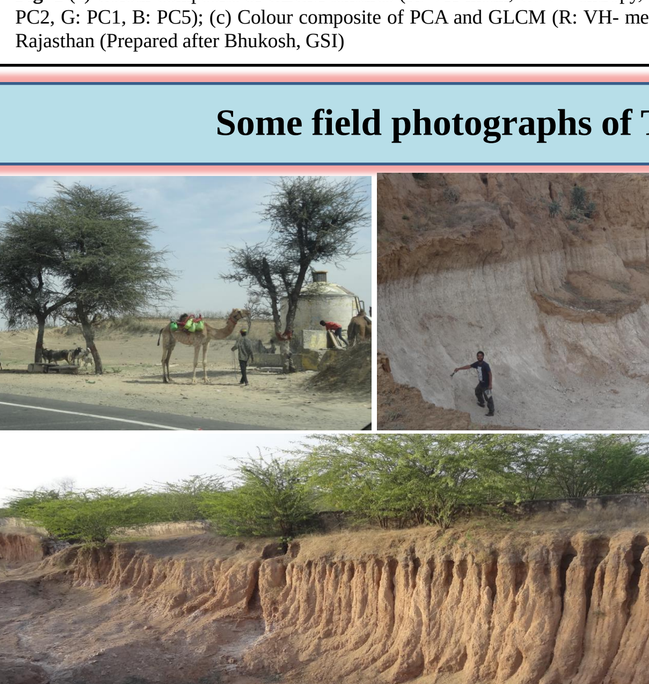

Fig. 1 Permanently Shadowed Region within the South Pole of Moon

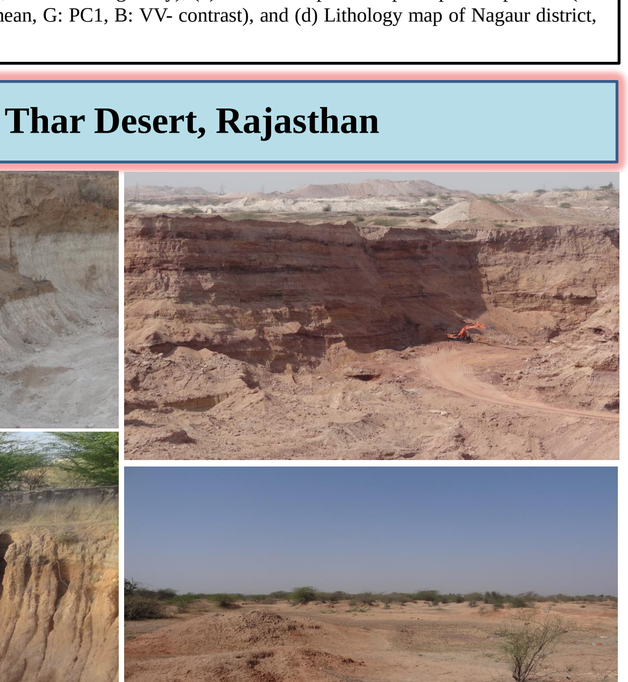

Fig. 2 PSR craters of south polar region of Moon

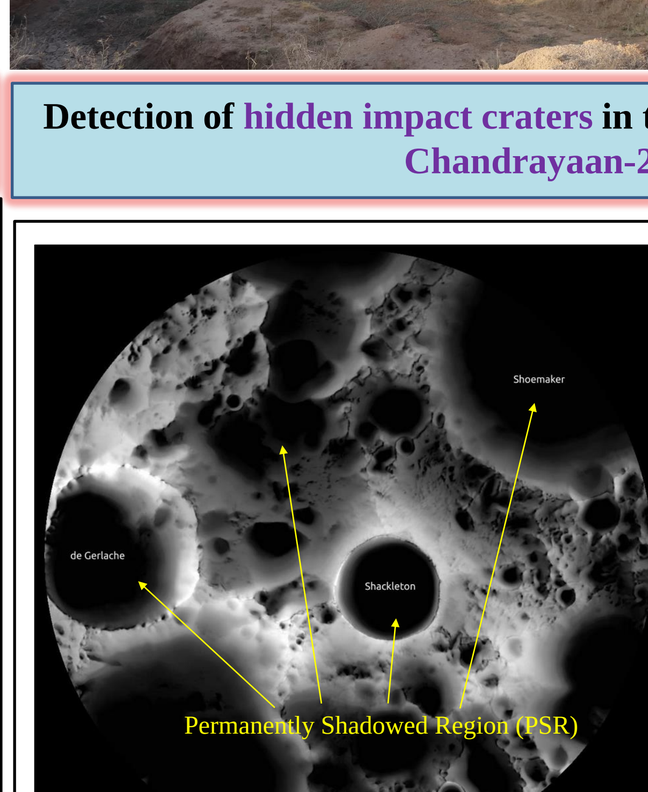

Fig. 3 Representation of PSR that lies inside Cabeus crater in Selene, and calibrated DFSAR scene

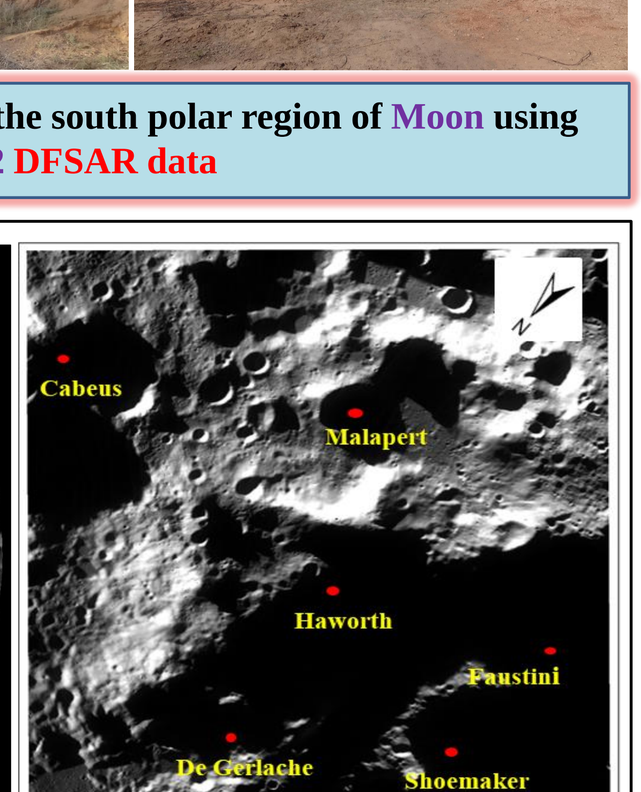

Fig. 4 Topographic map of south polar region of Moon

- World's first Dual Frequency Synthetic Aperture Radar (DFSAR) on-board Chandrayaan-2 data used to detect hidden craters in PSR of Moon
- Impact craters and other structural geological features are clearly visible in DFSAR data which are extremely difficult to identify from optical images (Fig.3)

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