

## Constraints on the evolution of the mafic-ultramafic rock suites of selected Mesoarchean greenstone belts of western Dharwar craton, southern India

K. PATRA<sup>1</sup>, R. ANAND<sup>1\*</sup>, S. BALAKRISHNAN<sup>2</sup>, J.K. DASH<sup>2</sup> AND N.G. TOM<sup>3</sup>

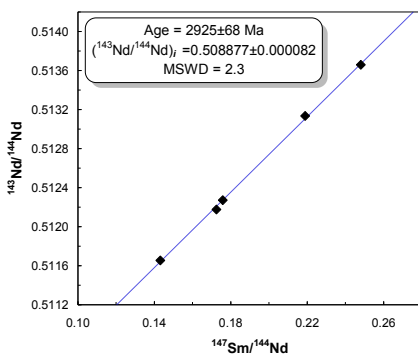
<sup>1</sup>Department of Applied Geology, Indian School of Mines, Dhanbad, India

(\*correspondence: anandrajagopal78@gmail.com)

<sup>2</sup>Department of Earth Sciences, Pondicherry University, Puducherry, India

<sup>3</sup>Geological Survey of India, Shillong, India

The western Dharwar craton exposes Mesoarchean mafic-ultramafic rock suites belonging to the Sargur group. Debate exists if these rocks were emplaced in plume-related setting or if they are remnants of magmatism produced under subduction-type settings. The occurrence of the ultramafic rock units as thin slivers, linear belts and dismembered enclaves interspersed within the vast intrusive TTG gneisses may also indicate an Archean analogue for Phanerozoic-type ophiolite complexes as suggested by Furnes *et al.* [1]. New precise Sm-Nd isotope data from less altered mafic-ultramafic rocks of the Nuggihalli greenstone belt suggest younger ages for the supracrustal rocks of Sargur affinity as compared to the existing age data. The primitive mantle normalized trace element patterns for the mafic-ultramafic rocks from several greenstone belts indicate significant Nb negative anomaly indicating a possible subduction-type setting for their emplacement.



[1] Furnes *et al.* (2015) *Gond. Res.* **27**, 649-685.