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Arbitrary amplitude ion-acoustic solitary waves in electronegative plasmas with electrons featuring Tsallis distribution

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Highlights :

-Arbitrary amplitude ion- acoustic solitary waves are addressed.

-Electronegative plasmas are considered.

-A new Sagdeev potential is analyzed.

- Different types of experimental electronegative plasmas are discussed.

- Our plasma model supports the coexistence of rarefactive and compressive solitary waves.