

**PERBANDINGAN RESPON PANTULAN METODE KOREKSI  
ATMOSFERIK FLAASH, QUAC, DAN DOS PADA CITRA LANDSAT 8  
OLI TERHADAP ESTIMASI *TOTAL SUSPENDED SOLID* WADUK  
GAJAH MUNGKUR WONOGIRI**

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**ABSTRAK**

Waduk Gajah Mungkur Wonogiri merupakan waduk yang mengairi Sungai Bengawan Solo dengan laju sedimentasi yang sangat tinggi. *Total suspended solid* dapat dikenali dari pantulan optis melalui Citra Landsat 8 *Operational Land Imager* (OLI). Data penginderaan jauh pada kondisi atmosferik tertentu mampu mempengaruhi nilai piksel. Pengaruh tersebut harus diminimalisir dengan koreksi atmosferik baik koreksi atmosferik absolut maupun relatif. Metode koreksi atmosferik FLAASH, QUAC, dan DOS memiliki pendekatan yang berbeda-beda. Penelitian ini bertujuan untuk membandingkan respon pantulan spektral tiap metode koreksi atmosferik FLAASH, QUAC, dan DOS terhadap estimasi TSS.

Perbandingan pola pantulan menunjukkan saluran coastal, biru, hijau, dan merah memiliki pola pantulan hampir sama dengan data pengukuran spektrometer dan berbeda di saluran inframerah dekat. Berdasarkan uji statistik transformasi B1/B3 paling optimal pada seluruh metode koreksi atmosferik, QUAC memiliki korelasi tertinggi sebesar -0,601, diikuti dengan FLAASH -0,582, dan DOS -0,579. Hasil uji akurasi menunjukkan FLAASH 55,55% dengan SEE 21,1 mg/l, QUAC 54,58% dengan SEE 21,60 mg/l, dan DOS sebesar 55,95% dengan SEE 20,95 mg/l. Estimasi TSS seluruh Waduk Gajah Mungkur Wonogiri berdasarkan metode koreksi atmosferik FLAASH 386,13 ton/m<sup>3</sup>, QUAC 397,18 ton/m<sup>3</sup>, dan DOS 382,06 ton/m<sup>3</sup>.

**Kata kunci :** *Respon Pantulan, FLAASH, QUAC, DOS, Total Suspended Solid*

**COMPARISON OF REFLECTANCE RESPONSE OF ATMOSFERIC  
CORRECTION FLAASH, QUAC, AND DOS IN LANDSAT 8 OIL IMAGE  
ON TOTAL SUSPENDED SOLID ESTIMATION OF MUNGKUR  
WONOGIRI RESERVOIR**

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***ABSTRACT***

Gajah Mungkur Reservoir Wonogiri is reservoir which irrigates the Bengawan Solo River with a very high sedimentation rate. Total suspended solids can be identified from optical reflections through Landsat 8 Operational Land Imager (OLI) imagery. Remote sensing data in certain atmospheric conditions can affect pixel values. The effect must be minimized by atmospheric correction both absolute and relative atmospheric correction. The atmospheric FLAASH, QUAC, and DOS correction methods have different approaches. This study aims to compare the spectral reflection response of each FLAASH, QUAC and DOS atmospheric correction method to TSS estimates.

Comparison of reflection patterns shows coastal, blue, green, and red channels having a reflection pattern almost the same as spectrometer measurement data and different in the near infrared channel. Based on the optimal B1 / B3 transformation statistical test for all atmospheric correction methods, QUAC has the highest correlation of -0.601, followed by FLAASH -0.582, and DOS -0.579. The accuracy test results showed FLAASH 55.55% with SEE 21.1 mg/l, QUAC 54.58% with SEE 21.60 mg/l, and DOS at 55.95% with SEE 20.95 mg/l. TSS estimation of all Gajah Mungkur Reservoir in Wonogiri is based on FLAASH 386.13 ton/m<sup>3</sup> atmospheric correction method, QUAC 397.18 ton/m<sup>3</sup>, and DOS 382.06 ton/m<sup>3</sup>.

**Keywords:** Reflection Response, FLAASH, QUAC, DOS, Total Suspended Solid