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| From: ARM8 | ENAV23-3.2.3 |
| To: ENG9/ENAV23 | 26 October 2018 |

LIAISON NOTE

Proposed light characteristic for Mobile AtoN

# Introduction

As part of the work to develop the concept of Mobile Aids to Navigation (MAtoN), a demonstration was given to ARM8 following trials of possible distinctive and unique light characteristics undertaken by the GLA Research and Development Department (GRAD) in the UK. A potential light characteristic is described below and feedback from other IALA Committees is sought.

# Details of trials

Earlier work on the development of a light character suitable for MAtoN, clearly recognisable as different to existing components of the IALA Maritime Buoyage System (MBS), had suggested the use of a flickering light. Bench trials had been undertaken using a flicker rate of up to 20Hz, and a software tool developed allowing a test light’s character to be varied rapidly during field trials.

It was decided to use a yellow light as a development of the Special Mark within the IALA MBS, as a Mobile AtoN light will not provide specific information regarding the nature of a hazard and the correct side on which to pass the mark.

Field trials were undertaken on the evening of 11 October 2018, with the test light approximately 2.7 NM from a group of observers, in an area with numerous other types of AtoN and background / rival lights.

Initial observations noted that the 10 to 20Hz flickering lights did not show well at this distance compared with laboratory tests. Subsequent experimentation suggested that a flicker frequency of 5Hz was more obviously different to existing lights.

A composite character of three flickering flashes, followed by 2 conventional (rectangular) flashes, is an effective light and obviously different to existing light characters. This character can be described as:

Flicker 1s + eclipse 0.7s (x 2)

Flicker 1s + eclipse 0.5s

Flash 1s + eclipse 0.5s

Flash 1s + eclipse 3s

A demonstration of this character is viewable on the IALA LinkedIn web page and the ARM8 website.

The GLA test results report will be submitted as an input to ENG9 and ENAV23.

# Requested action

Other organisations are encouraged to note these trials, undertake similar trials and propose alternative flash characters for the marking of Mobile AtoN. Any such proposals will be considered by the ARM Committee and, if necessary, comparative trials of all proposals will be arranged.

Feedback is sought from IALA Committees prior to ARM9 in April 2019. It is intended to finalise a MAtoN Guideline at ARM10.

GRAD is requested to forward trial report to ENG9, ARM9 and ENAV23